

# **PERCEPTION 4000**

## **MAINTENANCE & ADMINISTRATION MANUAL** **Release 2.0**

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**PERCEPTION 4000**

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## GENERAL DESCRIPTION

The PERCEPTION 4000 system provides various Maintenance and Administration (M&A) commands. These commands print out notification on potential or actual component failures, system usage reports, database reports, and diagnostic reports. The commands also allow you access to database attributes and system control parameters for modification purposes. A local or remote maintenance port is used to input the commands.

The Man-Machine Interface (MMI) referred to in this document is the means by which the user interacts with the M&A console. Through this interaction, you may define facility access, feature access, and terminal attributes for voice stations, data stations, attendant consoles, and trunks. In addition, you may monitor system features, reports, and alarm conditions.

This manual assumes that the M&A command user has a good working knowledge of telecommunications terms, technology, and the needs of end users. We recommend that you attend and successfully complete one of the courses on the PERCEPTION 4000 product line, at the technical level, prior to performing maintenance or administrative operations.

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## PURPOSE

This manual is meant to help maintenance and administrative personnel gain an understanding of the PERCEPTION 4000 M&A commands used for defining system features and hardware.

For more information regarding your system hardware or interfacing with the PERCEPTION 4000 PBX system, refer to the PERCEPTION 4000 *Database Programming Manual*, *Installation and Troubleshooting Manual*, *Installation Provisioning Manual*, and *Installation Site Guide*.

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## ORGANIZATION

This manual is divided into four main sections. The first section provides an overview of the Man-Machine Interface operation. Step-by-step instructions are provided, detailing how to initiate an M&A session, use the on-line help feature, and invoke M&A commands. Section two shows several examples of M&A operations to assist you in understanding MMI operation. The third section lists and describes the M&A commands. Section four lists all system error and information messages.

Appendices provide additional information such as listings of valid field parameters, and listings of commands, both by their ASCII character abbreviations, and their their M&A feature numbers.

---

## HOW TO USE THIS MANUAL

To understand the operation of the M&A console, we recommend that you read through Chapter 1. In this section, procedures show you how to:

- Initiate an M&A session
- Login to the system
- Invoke commands
- Use formatting and control keys
- Move between command levels

- Access on-line help menus
- Enter data in the Data Entry, Setup, and Interactive modes
- Perform ADD, DELETE, MODIFY, and DISPLAY operations
- Terminate an M&A session

Once you are familiar with MMI and the console operation, Chapter 2 reinforces what you have learned. After reviewing the sample operations, you will be ready to proceed with actual command interaction.

### CONVENTIONS USED IN THE MANUAL

In the chapters that follow, several types of notation have been used to differentiate between operations, fields, data entry, and keys.

- Maintenance and administration operations appear in all capital letters:

ADD, DELETE, MODIFY, DISPLAY

- Fields, which appear in Data Entry and Setup modes, are printed with quotation marks around them in descriptive text:

The "EQUIP #" field...

or

"AUTH CODE" is a required field.

- Field parameters, or data input, are shown bolded and capitalized:

When set to **YES**, an audible alarm goes off...

or

When **ASY** is entered .....

- Bolded, capitalized words enclosed in the less than (<) and greater than (>) signs signify keys on the M&A console keyboard:

<**CONTROL-D**>

<**RETURN**>

<**TAB**>



## SECURITY LEVELS

PERCEPTION 4000 Maintenance and Administration (M&A) has four different levels of security:

- Manufacturer (Toshiba)
- Vendor/distributor
- End-user
- Tenant levels

Access to each operational level is determined by an M&A user's security password. A separate security password can be assigned to each level. Each command in the M&A system is assigned to a particular category of information on one of the four security levels.

An M&A user can access any M&A commands that are assigned to his/her level of security, as well as those commands that are available to any lower security levels. Access to specific operations within commands can also be defined. For example, one M&A user may be allowed to modify command data, while another M&A user may only be allowed to display existing information.

The privilege hierarchy follows the order above: Toshiba personnel have the most capabilities, while tenants have the least. Higher privilege levels may modify/display the security codes of any level below them.

1. Press **<RETURN>**.

---

## INITIATING AN M&A SESSION

The **<RETURN>** key acts as an "enter information" control and is pressed to initiate an M&A session. This key is also pressed after each command or user response to a prompt to indicate the end of data input. All keys other than the **<RETURN>** key are ignored while the M&A system is idle.

### LOGIN

1. After pressing the **<RETURN>** key, the message, "SECURITY CODE=", displays.
2. Enter your security code and press **<RETURN>**. The prompt "COMMAND=" displays.

Before accessing M&A commands, you must login to the system with an assigned security code, or "password". After pressing the **<RETURN>** key to initiate an M&A session, the screen displays the message, "SECURITY CODE=". Type in your password. Note that the cursor does not move, nor is the password displayed on the screen.

If an invalid password is entered, an error message displays. After a third unsuccessful attempt to login, the M&A system ignores input from the requesting device for a period of three minutes. This measure is taken to prevent an unauthorized user from breaking the security codes to gain access to the system.

## CHANGE LOG

The Change Log file records all modifications made to the system at the maintenance console, and all feature registrations such as Call Forwarding destinations, Do Not Disturb, etc. These modifications are collected into a temporary buffer. Contents of the buffer are saved into a Change Log file when the buffer becomes full, when the day changes (i.e., midnight of each day), or when a logout from an M&A session occurs, either from a logout command or when the M&A terminal times out due to inactivity.

When the Change Log file reaches 80 to 85 percent capacity, a warning message appears on the maintenance console alerting the system administrator of the condition. If 90 percent capacity is reached, a warning message is printed for every "buffer-to-file" movement. These messages allow the administrator to make plans to perform a file consolidation, which permanently records all of the changes and modifications.

Upon performing a file consolidation, the Change Log file is written to the system disk for permanent storage, and then cleared. At the next system start-up, the modified database on the system disk is loaded into memory and the Change Log file is ready to record any new changes.

---

## ON-LINE HELP

1. Press <?>.

If assistance is required while in an M&A session, press the "?" (**SHIFT-/**) key. The present level of operation determines what appears on the display screen. The first level of operation, the Command Level, provides four different categories of assistance:

- Command Category
- MMI Tutorial
- System Messages
- Control Keys

### COMMAND CATEGORY

To find information on a specific command, select the Command Category option. A list of available categories based on your security level displays on the screen. This display is in the form of a menu. Select a category and the system produces a "Command List." After choosing a command, a menu displays offering general information or specific operational information. The menu hierarchy continues with the Operation Level and finally to specific fields within each operation.

### MMI TUTORIAL

This category gives a brief explanation of M&A commands.

### SYSTEM MESSAGES

The system provides error and information messages during an M&A session. The System Messages category explains the format used for these messages.

### CONTROL KEYS

The M&A program provides control key operation to perform various functions, such as **<CONTROL-D>** to delete a field. The Control Keys Help option lists the control sequences and their functions.

Refer to the *"HELP Operation"* section later in this chapter for more detailed information on the many levels of assistance available to you.

---

## COMMAND INVOCATION

1. "COMMAND=" **XXXXXX**...
2. Press **<RETURN>**.

To invoke a command, respond to the "COMMAND=" prompt with the appropriate command identifier, then press the **<RETURN>** key. The command identifier is a multi-key input that consists of a three-digit identifier or a command keyword. As an example, the I/O Port Assignment command is identified as either **415** or as **I/O\_PORT\_ASSIGN**.

#### Using a Numeric ID

```
COMMAND=415 <C/R>
COMMAND NAME: I/O_PORT_ASSIGN
OPERATION=
```

#### Using a Command Keyword

```
COMMAND=I/O_PORT_ASSIGN <C/R>
COMMAND NUMBER: 415
OPERATION=
```

If a command keyword is used, only the characters that make the keyword unique are required. Since the keyword for command 414 (I/O Port Configuration Assignment) is **I/O\_PORT\_CONFIG**, when entering this command, **I/O\_PORT\_C** must be entered to differentiate it from **I/O\_PORT\_ASSIGN**.

The identifier cannot be used as part of any other input and must be terminated with the **<RETURN>** key. A command identifier is available at the "COMMAND=" prompt level only.

The system verifies the level of access for the requested command and, if permitted, accesses the command and prompts you for the operation type: "OPERATION=". After entering the operation to be performed, the system again checks the access level. If you are permitted **READ\_ONLY** access, then **DISPLAY** and **?** (**HELP**) will be the only operations available.

Standard operations include:

ADD  
DELETE  
MODIFY  
DISPLAY  
? (HELP)

Additional operations exist for special diagnostic and maintenance commands:

|         |                      |          |
|---------|----------------------|----------|
| ALARMS  | CREATE               | INSTALL  |
| BACKUP  | ENABLE               | REMOVE   |
| RESTORE | DISABLE              | PASSWORD |
| BUSY    | FORMAT               | RESET    |
| IDLE    | FREE                 | SETUP    |
| COMPARE | INIT (Initialize)    | SWAP     |
| COPY    | INS (In Service)     | SWITCH   |
| COUNTS  | OOS (Out-of-Service) |          |

Once you have entered an operation keyword, the system displays a command header, which is comprised of a set of fields that are separated by a “|” symbol. These fields form columns in which the data is to be entered. Figure 1-1 shows the command header for the Area Code Restriction command.

**Figure 1-1**

TRGN | DRL | TYPE | AC | AC | AC | AC | AC | ...

#### Command Header

The command header also acts as a guide and prompts you as to what information is expected in each field.

---

## PREDEFINED KEYS

Predefined keys are provided to give you added power. These keys include Formatting Keys and Control Keys.

### FORMATTING KEYS

Formatting keys consist of either a single key, (i.e., <TAB>) or a combination of keystrokes, (i.e., <SHIFT-2>). These keys are used to:

- Move between command input fields.
- Correct the input line.
- Abort long printouts/displays.
- Move between operations.
- Terminate a data input line.

The following paragraphs describe the formatting keys used in the

implementation of PERCEPTION 4000 M&A commands.

### Carriage Return

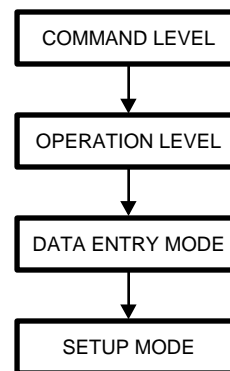
**<C/R>**, **<RETURN>**, or **<ENTER>** is a single key entry used to indicate the end of data input and to automatically execute a command. It is available at all levels of the command hierarchy.

### Escape

**<ESC>** is a multi-key entry which consists of the keys **<SHIFT-2>** on a standard keyboard. **<ESC>** is used to abort from the current hierarchy level to the next level up, or to cancel (correct) the current line of input. For example, during a DISPLAY operation, **<ESC>** is used to abort the display of a large set of data (i.e., halt the printout of a list of items).

*NOTE: An <ESC> key on standard keyboards does not equate to an escape operation.*

The system's hierarchy levels are illustrated in the following figure.



**Figure 1-2**  
**Hierarchy Levels**

An exception to this hierarchical order is the DISPLAY command, which moves directly from the Operation level to Setup mode, thereby bypassing Data Entry mode. Discussion of Data Entry and Setup modes can be found later in this chapter.

The **<ESC>** key is available at all levels of the command hierarchy except at the Command Level.

Pressing the **<ESC>** key while the cursor is at the beginning of a 'clear line' moves you back to the previous level of operation. A 'clear line' occurs after each hierarchical prompt or when the cursor is at the far left field in Data Entry and Setup modes. If **<ESC>** is entered in Data Entry or Setup mode, an informational message displays indicating that the current input line was aborted.

Note that the system displays a message indicating what the current

hierarchical level is:

COMMAND=  
OPERATION=  
DATA ENTRY MODE:  
SETUP MODE:

Certain rules apply to use of the <ESC> key. Rules 1 and 2 apply to escapes within loop fields; Rule 3 applies at all times; and Rule 4 applies only when the resource is unavailable for modification/removal.

Rule 1 Pressing <ESC> while in the interactive mode in a loop operation provides two options:

- To continue the current loop operation, skipping this entry.  
or
- To abort the current loop operation.

If the current loop operation is not the prime loop, after <ESC> is pressed, the system asks whether to continue with prime loop entries, or to abort the prime loop. Figure 1-3 illustrates use of the <ESC> key in a multi-loop operation.

Figure 1-3

```

COMMAND = 401
COMMAND NAME: DICTATION_ASSIGN
OPERATION = ADD
CONFIRM EACH MODIFICATION (YES/NO) = NO
GRP# | DEV | EQUIP# | NAME |
<CONTROL-P>
SETUP MODE:
PRIME LOOP 2:      1:
7          8 <CR>
PRIME ENTITIES TO BE ADDED: 6
ENDING VALUE: 7
CONTINUE (C/R), ABORT (<ESC>) = <C/R>
INTERACTIVE MODE:
GRP# | DEV | EQUIP # | NAME |
2    1    60401 <C/R>
2    2    <ESC>
  
```

### ESCAPE Key Loop Operation

The system asks whether the current loop (DEV) should be aborted or should continue:

CONTINUE (C/R) OR ABORT THE SECOND LOOP (<ESC>) = <ESC>

Pressing <C/R> continues the operation, skipping this entry. Pressing <ESC> aborts the loop and displays the following message:

CONTINUE (C/R) OR ABORT THE PRIME LOOP (<ESC>) = <ESC>  
DATA ENTRY MODE:

The operation is aborted and the system returns to Data Entry mode.

- Rule 2 Pressing <ESC> on a 'clear line' moves the hierarchical level up one level, such as from Setup mode to Data Entry mode, from Data Entry mode to the OPERATION level, or from the OPERATION level to the COMMAND level.
- Rule 3 Whenever you abort from data input or halt the system from carrying out a task, such as displaying a report, an abort message displays confirming that the request has been carried out.
- Rule 4 If an entity is unavailable at the time of a modification/removal request, the system asks whether a "FORCE TO IDLE" or a "WAIT WHEN IDLE" state should be posted. If "FORCE TO IDLE" is selected, the entity is made idle and the modification/removal request is carried out. If "WAIT WHEN IDLE" is selected, the system waits for the entity to become idle, and then carries out the modification/removal request. An <ESC> may be performed to abort the waiting process and display a message giving the options to force or abort the operation. Pressing <ESC> again aborts the request and places the console in Data Entry mode.

Operation of the <ESC> key within Data Entry and Setup modes is described below.

#### ■ Data Entry Mode

1. On a 'clear line' - takes you back to the OPERATION level.
2. Within an input line - lets you re-enter the current input line.

#### ■ Setup Mode

1. On a 'clear line' - takes you back to Data Entry mode.
2. Within an input line - lets you re-enter the current input line (if a loop is not started or from a loop field).
3. Within a loop field on an input line - aborts the current loop and goes to the next higher loop or to Data Entry mode.

Refer to the example, "How to Use the <ESC> Key" in Chapter 2 for further information on using <ESC> in the various levels of commands.

### Tab

**<TAB>** is a single key entry used to terminate input in the current field and to move to the first column of the next field. This key is the same as pressing **<CONTROL-I>**. A **<TAB>** may also be entered to skip fields when entering data in Data Entry or Setup modes.

### Immediate Help (?)

**<?>** is implemented the moment it is pressed. Its function is to store the input entered so far, display an information menu based on both the command hierarchy and/or field that the question mark was entered in, process the help request, redisplay the data entered prior to the help request, and continue to accept input. The operation is available at all levels of the command hierarchy. Chapter 2 illustrates several HELP operations.

### CONTROL KEYS

Special control keys have been defined to expand the power of the Man-Machine Interface (MMI). When entering a control sequence, hold the **<CONTROL>** key down while pressing the second key. Control keys and their functions are described below.

#### Control-D

**<CONTROL-D>** deletes the original contents of a field in a MODIFY operation. However, not every field in the MODIFY operation has the delete option. Each command specifies which fields accept **<CONTROL-D>** input.

#### Control-P

**<CONTROL-P>** is used to enter Setup mode from Data Entry mode. Within Setup mode you may establish a set of conditions/instructions that the system will use to perform the current operation, such as adding a group of stations with identical parameters.

#### Control-S

**<CONTROL-S>** stops the display on the output device. The command does not abort the process; it provides a method to halt the output, examine it, and then resume it (with a **<CONTROL-Q>**) without affecting the system. This command is available in all levels of the command hierarchy, but is most often used during a DISPLAY operation.

#### Control-Q

**<CONTROL-Q>** resumes output that was halted when the **<CONTROL-S>** keys were pressed. This command is available at all levels of the command hierarchy, but is most often used during a DISPLAY operation.



### Control-F

**<CONTROL-F>** is used in Data Entry or Setup mode to duplicate the value used in the same field on the previous input line. After entering **<CONTROL-F>** the system automatically displays the value and tabs over to the next available field in the operation. In Setup mode, this control sequence is used on the second line of data input.

### Control-R

**<CONTROL-R>** is used in Data Entry or Setup mode to duplicate the values from the previous input line for the remaining fields on the current input line. The system automatically displays the values under each of the remaining fields. In Setup mode, this control sequence is used on the second line of data input.

### Control-W

**<CONTROL-W>** redisplay the most recent system prompt and/or command header and the current line of input. The command is implemented immediately but does not affect the current line of input. If the cursor is on a 'clear line' then only the system prompt or command header is displayed. If **<CONTROL-W>** is entered within an operation, the command header displays along with the current input line. This command is available at all levels of the command hierarchy. Several **<CONTROL-W>** operations are illustrated in Chapter 2 under "*How to Use the <CONTROL-W> Command*".

---

## FIELD PARAMETER INPUT

M&A commands accept various forms of data input. These data types are listed as: Keyword, Decimal, Decimal with fixed length, Hexadecimal, Text, Dialing Digits, Dialing Digits plus \* and #, DN Type, or EQ Type. The following paragraphs describe these data types along with the various field parameters used in the M&A commands.

Note that HELP messages for individual operations display what specific data type is expected for each field.

Appendix A provides a complete listing of valid field parameter input characters.

### KEYWORD

A keyword field parameter is composed of a letter or digit followed by up to 19 additional letters, digits, or the "\_" character. A keyword must contain at least the minimum number of characters that will uniquely distinguish it from the other keywords defined for the selected field. For example, if the keywords for a field are: **AAA**, **AAB**, **ABB**, and **BBB**, the minimum

characters that could be entered to select each keyword are: **AAA**, **AAB**, **AB**, and **B** respectively.

### **DECIMAL**

The decimal field parameter is composed of a set of digits (**0** to **9**). The maximum number of digits permitted is unique to the command and the operation.

### **DECIMAL WITH FIXED LENGTH**

This field parameter indicates that a fixed amount of digits must be input. For example, in the System Speed Calling Assignment command (CMD 402), the "INDX" field requires a three-digit code, with valid input of 001 to 999. All three digits must be entered to be valid.

### **HEXADECIMAL**

The hexadecimal field parameter is composed of a set of digits (**0-9**) and/or the letters: **A**, **B**, **C**, **D**, **E**, or **F**.

### **TEXT**

A text field parameter is composed of a set of ASCII characters (digits, letters, and/or symbols), with the exception of the comma (,), hyphen (-), and colon (:). As an example, in the ACD Agent Assignment command (CMD 356), the format for the "NAME" field is zero to nine ASCII characters in length including spaces and punctuation.

### **DIALING DIGITS**

Dialing digits include the numbers **0** to **9**, and specify a destination number. The maximum number of digits permitted is unique to the command and the operation.

### **DIALING DIGITS PLUS \* AND #**

In addition to the numbers **0** to **9**, the characters **\*** and **#** are used when programming telephone functions, such as dial tone detection and timed pauses.

### **DN TYPE**

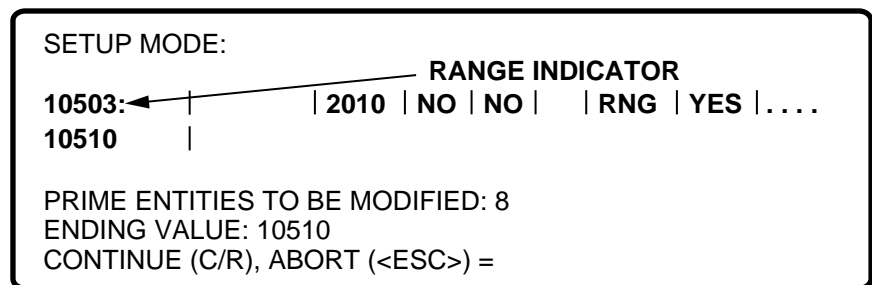
The Directory Number (DN Type) field parameter is the same as the dialing digits field parameter.

## EQ TYPE

Each line or trunk is assigned to a circuit on a line card. The Equipment Number field parameter (EQ Type) defines the hardware location of the connection, and is five or six digits in length. The first one or two digits (1 to 10) represent the shelf number; the next two digits represent the card slot number; and the last two digits represent the circuit number.

## RANGE INDICATOR

The range indicator (:) terminates input in a field and indicates that the next line of input will contain the upper/lower range value of the field. This parameter is used in numeric data fields and only in Setup mode. After entering the range indicator, the cursor positions itself in the next field and waits for data input.



**Figure 1-4**  
**Range Indicator**

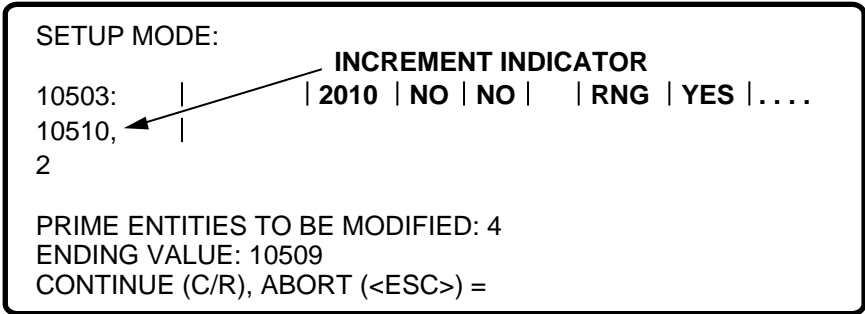
If the range value on the second line is less than the range value on the first input line, the system re-arranges the low and high values internally and displays them incrementally.

The default increment for a field is determined by the system. To change the increment value, enter a comma after the range value in the second input line, and enter the increment value on the third line (see the following section entitled "*Increment Indicator*").

In addition, range indicators may define the bounds of loop fields versus displaying a 'range' of values. DELETE and DISPLAY operations may use ranges, whereas other operations may use looping.

## INCREMENT INDICATOR

The increment indicator (,), used in Setup mode, terminates input in a field and indicates that the next line of input will contain the value to use to increment the field. This parameter is only used in fields with range indicators and must be entered after the range value in the second input line. The default value is 1. Figure 1-5 illustrates an increment operation.



**Figure 1-5**  
**Increment Indicator**

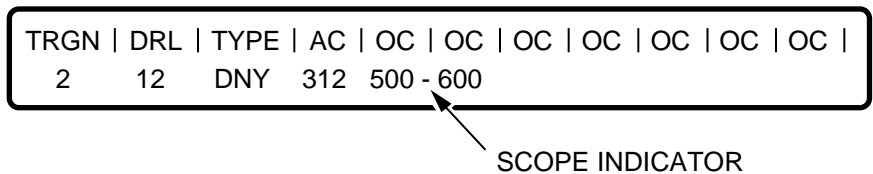
If the increment value being used does not match the last value when the range cycle completes, the system displays how many operations will take place and what the last value will actually be. The option of aborting the requested sequence or continuing the operation is given. In a DISPLAY operation, however, after entering the increment indicator, the system automatically displays the requested information without any notification of number of entities to be displayed or ending value.

The (,) acts like a <TAB> key in that it automatically moves the cursor to the beginning of the next field if another loop field is in the command header.

**SCOPE INDICATOR**

The scope indicator (-) terminates input in a field and indicates that the input value in the next field will contain the upper/lower value of the field. This parameter is used in ADD and DELETE operations.

As an example, the Area/Office Code Restriction Tables (CMD 339) may use the scope indicator as shown in Figure 1-6.



**Figure 1-6**  
**Scope Indicator**

The scope indicator includes all office codes from **500** to **600** in area code **312**.

Differences between the scope and range fields are:

- Increment of the scope field is always 1.
- The scope parameter is used in both the Data Entry and Setup modes. However, the range field can only be used in Setup mode.

- Scope input is not allowed in a DISPLAY operation, though output may appear in scope-type format.

### FIELD INDICATOR

The field indicator (|) is displayed by the system and is used as a field separation indicator to aid in lining up the cursor under the proper field. All input lines within an operation terminate with the field indicator displayed.

### UNDEFINED DATA INDICATOR

The undefined data indicator (.) is used by the system during report displays to indicate fields for which no data has been defined. The character occurs in non-text, optional input or locked fields and displays across the entire field, as shown in the "EXT" field in the Station Assignment command (CMD 330) in Figure 1-7.

| EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT   | RNG | COS | ... |
|---------|--------|------|-----|----|----|-------|-----|-----|-----|
| 10401   | 5001   | 2010 | 1   | NO | NO | ..... | RNG | 3   | ... |
| 10402   | 5002   | 2010 | 1   | NO | NO | ..... | RNG | 3   | ... |

UNDEFINED  
DATA INDICATORS

**Figure 1-7**  
**Undefined Data Indicator**

### COMMAND PROMPT

The command prompt (=), which is displayed by the system, acts as a ready indicator notifying you that the system is ready to receive input. This indicator is not a field parameter. The prompt is used at the COMMAND and the OPERATION hierarchical levels, as illustrated in the following figure.

COMMAND PROMPT

```
COMMAND = 330
COMMAND NAME: STA_ASSIGN
OPERATION = ADD
```

COMMAND PROMPT

**Figure 1-8**  
**Command Prompt**

## MOVING BETWEEN COMMAND LEVELS

Various methods are available for moving between the levels of commands in an M&A session.

- To go from the COMMAND level to the OPERATION level, enter the three-digit command identifier or the command keyword and press **<RETURN>**.
- To go from the OPERATION level into Data Entry mode, enter the operation desired, such as ADD, DELETE, or MODIFY, and press **<RETURN>**.
- To go into Setup mode, press **<CONTROL-P>** on a 'clear line' while in Data Entry mode.
- On a 'clear line' in Setup mode, press **<ESC>** to return to Data Entry mode in ADD, DELETE, and MODIFY operations.
- On a 'clear line' in Data Entry mode, press **<ESC>** to return to the "OPERATION=" prompt.
- To go to the "COMMAND=" prompt level, press **<ESC>** at the "OPERATION=" prompt.

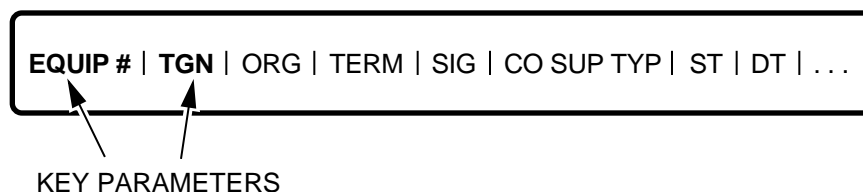
Access to each command and operation is restricted based on your security code. If access to a *command* is denied, the system displays an error message and returns to the "COMMAND=" prompt. If access to an *operation* is denied, the system displays an error message and returns to the "OPERATION=" prompt.

---

## ROW/FIELD OPERATION FORMAT

The following is a general explanation of the row/field operation format. Certain operations may vary from this explanation in one or more particulars, and exceptions are mentioned in the appropriate command/operation description.

Operations in row/field format use one or more entities, called key parameters. Examples of key parameters include directory numbers, equipment numbers, and group numbers. Figure 1-9 shows the key parameters (EQUIP # and TGN) in the row/field format for the "Trunk Assignment" command (CMD 313).



**Figure 1-9**  
**Key Parameters**

After selecting a specific command and operation, the system may ask a series of questions based on the operation. Once these are answered, a command header is displayed. The command header, as shown in Figure 1-9, serves as both a prompt and a guide. The column headings denote categories of attributes relevant to the selected command and operation.

At this point, you are in Data Entry mode (Setup mode for the DISPLAY operation). From Data Entry mode you may request HELP, enter the desired data one entity at a time, or go to Setup mode by using the **<CONTROL-P>** command.

The response to the command header is a command line which consists of entries in the fields designated by the command header. The command line may be up to 80 characters long and consist of a single row of information in Data Entry mode and up to three rows in Setup mode (as illustrated in Figure 1-10).

```

DATA ENTRY MODE:
10405 |      | 2020 | <C/R>

<CONTROL-P>
SETUP MODE:

10506: |      |      |      |      |      | NO |      | 15 | ...
10516, |
2

```

**Figure 1-10**  
**Example of Data Entry/Setup Mode**

The exact length of input depends on the length and number of fields in the command header.

To move from one field to the next, press the **<TAB>** key or use one of the two automatic duplicate data commands (**<CONTROL-F>** or **<CONTROL-R>**). When any of these keys are used to move to the next field, a vertical bar (|) displays between the two fields and the cursor moves to the first column of the next field; or, the remaining fields are duplicated and the carriage return is automatically implemented, depending on the control sequence entered.

When the command line is complete, press **<RETURN>** to enter the information into the system. In Setup mode, the line is examined to determine if additional information is to be entered. For example, one of the entries in a field might end with a ":" which indicates that the upper/lower range value will be entered on the next command line. The system waits for the next command line input and then examines it. If still more input is expected, the system will again wait for input. This continues until all input has been entered or there is an error in the command line.

The system evaluates the command line for correctness only after the entire line has been entered, and, if incorrect, indicates the specific field entries that are invalid.

You can request the system to redisplay the command header by entering a **<CONTROL-W>** without additional input under the first field. Figure 1-11 illustrates operation of a **<CONTROL-W>** entry.

```

DATA ENTRY MODE:

10404 | 5016 |
10405 |      | 2020 | <CONTROL-W>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...
10405  |      | 2020 |
```

**Figure 1-11**  
Example of **<CONTROL-W>** Display

In a DISPLAY operation, by entering a **<TAB>** and a **<RETURN>** on the 'clear line' under the command header, all information for the command is displayed. See the first example in Chapter 2 under "Examples of DISPLAY Operations" for an illustration of **<TAB>** key operation.

Help is available for an operation by pressing **<?>** after the "OPERATION=" prompt. For detailed information about the data expected for a field, select the summary option from the HELP menu.

In general, the following operations are available for each command: ADD, DELETE, MODIFY, and DISPLAY.

---

## DATA ENTRY MODE

1. At the "COMMAND=" prompt , enter the command keyword or numeric ID.

The "OPERATION=" prompt appears.

2. Enter the operation type.

Data Entry mode is activated.

*NOTE: If a DISPLAY operation is entered, the system automatically goes into Setup mode, bypassing Data Entry mode.*

In this mode, data is entered on a single entity basis. A command header is displayed upon entering Data Entry mode from the "OPERATION=" prompt. Ranges and increments are not allowed, but scope-type input is allowed. A single line of input is used to indicate the modifications to be made to the entity. The modification takes place immediately after the **<RETURN>** key is pressed (if the input line passes the validation checks). All fields that are required to have input in them for this command must be entered on this single input line, as illustrated in Figure 1-12.

```

DATA ENTRY MODE:

TRGN | DRL | TYPE | AC | OC | OC | OC | OC | OC | OC | OC |
 2   | 12  | DNY  | 312 | 500 - 600 <CR>
```

**Figure 1-12**  
Example of Data Entry Mode



You may correct a line of input or abort by using the <ESC> key. If <ESC> is entered on a 'clear line', the system exits the current operation and goes to the "OPERATION=" prompt level. Refer to Chapter 2 for examples of Data Entry mode operation.

---

## SETUP MODE

1. On a 'clear line' in Data Entry mode, press <CONTROL-P>.

Setup mode is activated.

In Setup mode, you may enter ranges, increments, and/or fixed values. The system uses these entries to automatically assign values to some or all of the fields. Up to three lines of data may be entered in Setup mode. Valid input is listed with each command description in Chapter 3. If an incorrect range or value is entered, an error message appears.

Upon completion of all instruction lines necessary to perform the operation, the system validates any ranges entered, displays how many repetitions of the first loop will take place, indicates what the final value for the first loop's range will be, and prompts whether these conditions match the request. Figure 1-5 (under *"Increment Indicator"*) illustrates a Setup mode operation.

If you do not abort from Setup mode at this time, the system may prompt you for additional conditions based on the operation, such as whether to confirm the modification prior to performing it. The system then automatically performs the operation.

The following are rules for Setup mode:

### RANGES

- |        |   |
|--------|---|
| Rule 1 | Ranges must remain within the scope of the controlling loop in ADD, DELETE, MODIFY, and DISPLAY operations. |
| Rule 2 | In a DISPLAY operation, ranges are used as a limiting factor in fixed form numeric field(s).                |

In the following figure, entries in the "EQUIP #" field apply to Rule 1, while entries in the "PRM DN" field apply to Rule 2.

```

SETUP MODE:

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...

10101: | 5005:
10502 | 5035 | <CR>

10404  5015  2010  1  NO NO  ...  RNG  3  ...
10405  5016  2020  2  NO NO  ...  RNG  2  ...
10501  5025  2010  1  NO NO  ...  RNG  3  ...
10502  5035  2010  1  NO NO  ...  RNG  2  ...

```

**Figure 1-13**  
Use of Ranges

Only "EQUIP #"s **10101** through **10502** with a "PRM DN" between **5005** and **5035** display.

#### FIXED VALUES

In ADD and MODIFY operations, fixed values cannot be changed interactively. For example, Figure 1-14 illustrates an ADD operation where Add-on modules 1 and 2 (A1 and A2) and Data Security (SEC) are set to **NO** for equipment numbers being added to the system. In addition, the "RNG" field is set to **RNG** for all devices. When the command is executed, these fields cannot be modified. To make any changes, you must re-enter the device "EQUIP #" to be changed and enter the appropriate data.

```

SETUP MODE:

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...

10505: |      |      |      | NO | NO |      | RNG | <C/R>
10510 <C/R>

10505  5065  2020  2  NO NO  ...  RNG  2  ...
10506  5076  2020  2  NO NO  ...  RNG  2  ...
10507  5085  2020  2  NO NO  ...  RNG  2  ...
10508  5095  2010  1  NO NO  ...  RNG  3  ...
10509  5105  2020  2  NO NO  ...  RNG  2  ...
10510  5115  2010  1  NO NO  ...  RNG  3  ...

```

**Figure 1-14**  
Fixed Values - ADD Operation

In a DISPLAY operation, fixed values are used as limiting factors in any attribute or loop field. Figure 1-15 illustrates a fixed value entry in a DISPLAY operation.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...
10501: |         |     |     |     |     |     |     |     | <C/R>
10510 <C/R>

10505   5065   2020   2   NO NO ... RNG 2 ...
10506   5076   2020   2   NO NO ... RNG 2 ...
10507   5085   2020   2   NO NO ... RNG 2 ...
10508   5095   2010   1   NO NO ... RNG 3 ...
10509   5105   2020   2   NO NO ... RNG 2 ...
10510   5115   2010   1   NO NO ... RNG 3 ...

```

**Figure 1-15**  
Fixed Values - DISPLAY Operation

Only "EQUIP #"s between **10501** and **10510** are displayed.

If an **<ESC>** is entered in the middle of an input line in Setup mode, the current input line is ignored, an abort message is displayed, and the cursor moves to the far left column on the next line.

### INTERACTIVE MODE

Setup mode is interactive in an ADD operation. When adding a number of stations/equipment with the same parameters, this mode assists in speeding up the process. The first line of input includes the parameters to be set for all of the stations/equipment being added. Figures 1-16 and 1-17 illustrate interactive mode operation.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...
10507: |         | 2010 | 1 | NO | NO |     |     | 3 | ...
10509 | <C/R>

PRIME ENTITIES TO BE ADDED: 3
ENDING VALUE: 10509
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

CONFIRM EACH ADD (YES/NO) = NO <C/R>

10507   *

```

\* The cursor stops here and waits for input.

**Figure 1-16**  
Interactive Mode (1)

Enter the "PRM DN" and press <TAB>. The cursor moves to the next valid empty field (RNG) and waits for input. After each empty field is filled in or tabbed over (->), the system fills in the balance of the input line with predefined values and moves the cursor to the end of the line. Press <C/R> and the cursor automatically positions itself in the first column under the "PRM DN" field for the next "EQUIP #".

```

10507 5065 -> 2010 NO NO ... -> YES 3 ... <C/R>
10508 5069 -> 2010 NO NO ... -> YES 3 ... <C/R>
10509 5085 -> 2010 NO NO ... -> YES 3 ... <C/R>

DATA ENTRY MODE:

```

**Figure 1-17**  
**Interactive Mode (2)**

Looping within the operation is carried out by the MMI. You are not permitted to alter a loop sequence while in the Interactive mode.

The <ESC> key may be used to correct a line of input or abort from a loop. Refer to the "Formatting Keys" section earlier in this chapter for more complete details on use of the <ESC> key.

If Interactive mode completes naturally, or aborts because of an error condition or use of the <ESC> key, the system automatically goes to Data Entry mode.

*NOTE: A message displays every time a transition from one mode to another occurs, or when the <ESC> key is pressed.*

Refer to Chapter 2 for examples of Setup mode operations.

---

## ADD OPERATION

1. At the "OPERATION=" prompt, enter **ADD**.
2. Press <RETURN>.

Upon entering **ADD** at the "OPERATION=" prompt, the system goes into Data Entry mode and displays the command header. In this mode, single entity/attribute adds may be performed. Figure 1-18 is an example of an ADD operation for the Miscellaneous Device Assignment command (CMD 400).

```

DEV   | EQUIP # | USAGE |
AM02  | 011207 | ACD   | <C/R>

```

**Figure 1-18**  
**ADD Operation**

The option of going into Setup mode in an ADD operation is available for most M&A commands by pressing <CONTROL-P> from a 'clear line' state. In this mode you may define a sequence of installations that are to be

performed automatically by the system. The data entered at this level determines if any interactive entry will take place.

Once all input of command lines have been made, the system automatically performs the operation. If ranges were entered in any of the loop fields, the system first displays a message as to how many entities will be added and then asks whether a confirmation prompt should appear after every loop is incremented.

If you select the confirmation option, each command line is displayed, followed by a prompt asking whether or not you wish to perform the install as listed. An example of this, using the Station Assignment command, (CMD 330) is illustrated in Figure 1-19.

```
10507      5065 -> 2010 NO NO  ->  -> YES 3 ... <C/R>
(YES/NO) =
```

**Figure 1-19**  
**ADD Confirmation**

Upon completion, the system automatically returns to Data Entry mode. Note that any error condition encountered aborts the system to Data Entry mode. Refer to Chapter 2 for examples of the ADD operation.

---

## DELETE OPERATION

1. At the "OPERATION=" prompt, enter **DELETE**.
2. Press **<RETURN>**.

Upon entering the DELETE operation from the "OPERATION=" prompt, the system goes into Data Entry mode and displays the appropriate command header. Single entity/attribute deletions may be performed in this mode. If the entity is unavailable for removal, the system displays the message shown in Figure 1-20.

```
EQUIPMENT IN USE:
1.      FORCE TO IDLE
2.      WAIT FOR IDLE
<ESC>  CANCEL REMAINING REMOVAL REQUESTS

ACTION =_
```

**Figure 1-20**  
**DELETE Operation - Busy Options**

The option of going into Setup mode in a DELETE operation is available for most M&A commands by pressing **<CONTROL-P>** from a 'clear line' state. In this mode you may define a sequence of deletions that are to be performed automatically by the system. Upon completing input of all command lines, the system automatically executes the commands. If ranges were entered in any of the loop fields, the system displays how

many entities will be deleted, displays the ending value, and prompts to continue or abort, as illustrated in Figure 1-21.

```

<CONTROL-P>
SETUP MODE:

10503: |
10505  |

PRIME ENTITIES TO BE DELETED: 3
ENDING VALUE: 10505
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN |
10503

(YES/NO) = Y <C/R>

```

**Figure 1-21**  
**DELETE Confirmation**

Enter **YES** if this station is to be deleted, or **NO** if this station is to be saved, then press **<RETURN>**. Once all command lines have been executed, the system automatically goes to Data Entry mode.

If an entity is in use or busy, the system displays the options to 'Force to Idle', 'Wait for Idle', or 'Cancel Remaining Removal Requests'. If "WAIT FOR IDLE" is selected, the system waits for the entity to become idle, and then carries out the removal request. An **<ESC>** may be performed to abort the waiting process and display a message giving the options to force or abort the DELETE operation. Pressing **<ESC>** again aborts the request and places the console in Data Entry mode.

An error condition also aborts the operation and returns the session to Data Entry mode, as determined by each command/operation.

Refer to Chapter 2 for examples of the DELETE operation.

---

## MODIFY OPERATION

1. At the "OPERATION=" prompt, enter **MODIFY**.
2. Press **<RETURN>**.

"CONFIRM EACH  
MODIFICATION (YES/NO) ="

"DISPLAY ORIGINAL VALUES  
(YES/NO) ="

When first entering the MODIFY operation from the "OPERATION=" prompt, the system asks whether to confirm each modification and whether the Original/New values for the entity (primary field) should be displayed. After entering a **YES** or **NO** in response to these inquiries, press **<RETURN>**. The command header displays and the system enters Data Entry mode.

Individual field modifications may be performed in this mode. Both the entity and at least one other field must be entered. When input is completed, press **<RETURN>** to automatically execute the modifications.

"DISPLAY NEW VALUES  
(YES/NO)="

If the entity is unavailable for the modification, the system responds with the options shown in Figure 1-22.

```

1.      FORCE TO IDLE
2.      WAIT FOR IDLE
<ESC>  CANCEL REMAINING MODIFICATION REQUESTS

ACTION =_

```

**Figure 1-22**  
**MODIFY Operation - Busy Options**

The option of going into Setup mode in a MODIFY operation is available for most M&A commands by pressing **<CONTROL-P>** from a 'clear line' state. In Setup mode, you may define a sequence of modifications that are to be performed automatically by the system. Note that **interactive data entry is not permitted** in a MODIFY operation.

Upon completing input of all command lines in Setup mode, the system automatically executes the commands, displaying each command line as it is executed, if specified. If an entity is in use or busy, the program halts and displays the options to wait, skip, or force the modification. If "WAIT FOR IDLE" is selected, the system waits for the entity to become idle, and then carries out the modification. An **<ESC>** may be performed to abort the waiting process and display a message giving the options to force or abort the MODIFY operation, as illustrated in Figure 1-23. Pressing **<ESC>** again aborts the request and places the console in Data Entry mode.

```

1.      FORCE TO IDLE
<ESC>  ABORT THE MODIFICATION

ACTION =_

```

**Figure 1-23**  
**MODIFY Operation - Wait Options**

If the **<ESC>** key is entered prior to modification of the waiting entities, the system cancels the modification request for those entities. Once all command lines have been executed, the system automatically goes to Data Entry mode.

If an error condition occurs, the system asks whether to continue with the next modification or to abort the operation and return the session to Data Entry mode.

Refer to Chapter 2 for examples of the MODIFY operation.

## DISPLAY OPERATION

1. At the "OPERATION=" prompt, enter **DISPLAY**.
2. Press **<RETURN>**.

Upon entering the DISPLAY operation from the "OPERATION=" prompt, the appropriate command header displays and the system goes into Setup mode, bypassing Data Entry mode. In Setup mode, you may define a sequence of entities that are to be displayed on the output device. After completing input of the command lines and pressing **<RETURN>**, the system automatically executes the commands. If ranges are entered in any of the fields, the system uses these values to limit the scope of the search algorithm. Figure 1-24 illustrates a DISPLAY operation.

| SETUP MODE: |        |             |     |    |    |       |     |           |     |                    |
|-------------|--------|-------------|-----|----|----|-------|-----|-----------|-----|--------------------|
| EQUIP #     | PRM DN | TYPE        | PAT | A1 | A2 | EXT   | RNG | COS       | ... |                    |
|             |        | <b>2020</b> |     |    |    |       |     | <b>1:</b> |     | <b>&lt;C/R&gt;</b> |
|             |        |             |     |    |    |       |     | <b>9</b>  |     | <b>&lt;C/R&gt;</b> |
| 10405       | 5015   | 2020        | 2   | NO | NO | ..... | RNG | 3         | ... |                    |
| 10504       | 5055   | 2020        | 2   | NO | NO | ..... | RNG | 2         | ... |                    |
| 10513       | 5166   | 2020        | 2   | NO | NO | ..... | RNG | 2         | ... |                    |
| 10514       | 5170   | 2020        | 2   | NO | NO | ..... | RNG | 3         | ... |                    |

**Figure 1-24**  
**DISPLAY Operation**

In this example, all 2020-type devices with a Class of Service between 1 and 9 are displayed.

Any values entered in Setup mode must exactly match the configuration for the entity in order for the entity to be displayed. Only entities in which every condition matches are displayed.

The system automatically returns to Setup mode after listing the requested data. **<ESC>** may be pressed at any time to cancel the display and return to Setup mode.

Pressing the **<TAB>** and **<RETURN>** keys on a 'clear line' causes all information in the database for the command to display.

Refer to Chapter 2 for more examples of the DISPLAY operation.

---

## HELP OPERATION

1. Press **<?>**.

The HELP operation is a menu driven hierarchical system of text information. Each level of the hierarchy contains more detailed information than the preceding level. Access to the HELP feature is via the **<?>** control key. When this key is entered, the system interrupts the current input and



goes into a HELP menu. Upon exiting the HELP operation, the system redisplay the last input line up to the interruption (<?> entry) and allows you to resume input at that point.

### HELP HIERARCHY STRUCTURE

The hierarchy of the HELP operation follows the same hierarchy as the Maintenance Console Operation in that there are three distinct levels of access and capability:

- Command Selection
- Operation Selection
- Parameter Selection

After each selection is made from a menu, a new menu displays with a set of options. These options note specific details about the selected menu item, or additional information regarding a specific operation, entity, or attribute display. To access an adjacent hierarchical level, you must move back up the hierarchy to the point from which the path to the new item may be accessed. Access to commands is based on the security code entered at login time.

### Release Number, Version Number, and Date

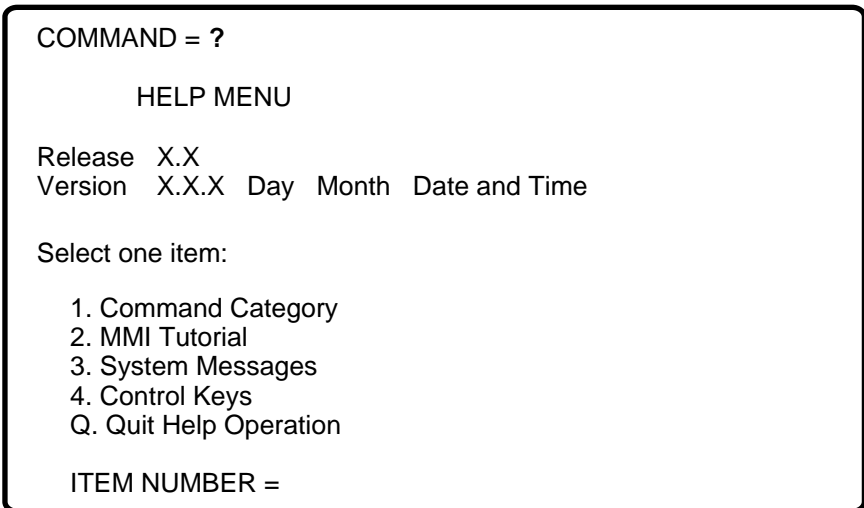
This information indicates the current release number, version number, date, and time that the system program module was created, and displays along with each HELP menu, as illustrated in the following figure.

|  |
|--|
| Release X.X<br>Version X.X.X Day Month Date and Time |
|--|

**Figure 1-25**  
**Release, Version, Date**

### Command Selection Level

The Command Selection level, accessed by pressing the <?> key after the "COMMAND=" prompt, provides access to a list of command categories, plus other pertinent information. See Figure 1-26.



**Figure 1-26**  
**HELP Menu, Command Level**

The Command Category provides a list of the available categories, such as administrative commands, station commands, trunk commands, or maintenance commands. The system only displays help for those commands which you are authorized to access, as based on your entered security code. The lists of command categories, commands, and operations in the menus are adjusted accordingly. Once a specific command is selected, the system loads the overlay file for the command from the disk.

#### **Operation Selection Level**

This help level, as illustrated in Figure 1-27, provides information about operations and field parameters available for the selected command.

The system only displays help for those operations which you are authorized to access, based on your entered security code. The lists of operations and fields in the submenus are adjusted accordingly. Information about other commands is not available from this level.

```

OPERATION = ?

      HELP MENU

Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

      Command ID: (cmd366)

1. ADD
2. DELETE
3. MODIFY
4. DISPLAY
5. Field Parameters
Q. Quit Help Operation

ITEM NUMBER =

```

**Figure 1-27**  
**HELP Menu, Operation Level**

#### Parameter Selection Level

This help level provides specific information about the selected field. Figure 1-28 shows a parameter-level help screen.

```

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | ...
11101  | 4220   | 2010 | 1   | ?

Add-On Module Number 1 (A1)
Type:      Keyword
Value:     Not allowed
Format:    N/A
Keyword:   NO - No Add-On
           M1 - Add-On module 20 keys type
           M2 - Add-On module 60 keys type
Required:  ADD operation only for PERCEPTION 40xx telephone types
Range:     Not allowed
Loop Field: Not allowed

```

**Figure 1-28**  
**HELP Screen, Row/Field Level**

Information about other operations or commands is not available from this level of the help hierarchy.

Refer to Chapter 2 for more examples of the HELP operation.

## TERMINATING AN M&A SESSION

1. At the "COMMAND=" prompt, enter **LOGOUT** or **0**.
2. Press **<RETURN>**.

To terminate a session and return the M&A system to the idle state, enter **LOGOUT** or **0** (zero) in response to the "COMMAND=" prompt and then press the **<RETURN>** key. The system responds with a logout message. If you leave the terminal without logging out, the system terminates the session after approximately one to thirty minutes (depending on the system parameter) and automatically displays an information message.

Examples of how to use the Maintenance and Administration (M&A) Man-Machine Interface (MMI) are presented in this chapter. The Station Assignment command is used to illustrate the various operations.

## STATION ASSIGNMENT (CMD 330)

The Station Assignment command is the primary command in assigning stations to the system. This command defines the station's prime directory number, establishes linkage to a hardware circuit, instructs the system on what type of station this is (digital, electronic, analog single-line) and defines terminal-level and prime-line attributes. The Station-Level Parameter Assignment command (CMD 329) is also required to complete fundamental station information. Multi-line devices also require the Station Feature Key Assignment command (CMD 331) for further definition.

Attributes defined/modified with this command include:

|                                    |         |
|------------------------------------|---------|
| Equipment Number                   | EQUIP # |
| Prime Directory Number             | PRM DN  |
| Station Type                       | TYPE    |
| Add-on Module #1 (20/60 key)       | A1      |
| Add-on Module #2 (20/60 key)       | A2      |
| Analog Extension                   | EXT     |
| Ring Option                        | RNG     |
| Data Security                      | SEC     |
| Class of Service                   | COS     |
| Destination Restriction Level      | DRL     |
| Facility Restriction Level Profile | FRL     |
| LCR Queue Priority Level           | QPL     |
| Answer Position                    | ANSPOS  |
| Station Group Number               | GRP     |
| Station Owner's Name               | NAME    |
| Department Name                    | DEPT    |

### NOTES:

1. If the station's "TYPE" field is an ID10 or ID20 (digital telephone with DIU), the station must be assigned to a DSTI card configured for 2B operation, thereby allowing for simultaneous voice and data communications.
2. If the station's "TYPE" field is a 2010 or 2020 (digital telephone without DIU), the station may be assigned to a DSTI card configured for 1B or 2B operation. When installed on a DSTI card configured for 2B operation, a '2B' device (ID10 or ID20) must already be assigned to the card.
3. If a 10-key or 20-key digital telephone is selected in the "TYPE" field (2010 or 2020) and installed on a DSTI card configured for 2B operation, the circuit's data channel is ignored by the system.
4. In a MODIFY operation, a '2B' device may not be changed to a '1B' device.

**PERCEPTION 4000** **EXAMPLES**

**OPERATIONS**

Available operations:   ADD  
                               DELETE  
                               MODIFY  
                               DISPLAY  
                               ? (HELP)

The following sections describe the function and required data fields for each operation. Abbreviations used include:

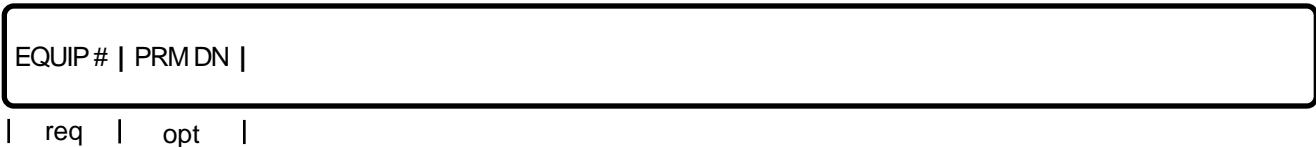
- req     - Data is **required** in this field.
- opt     - Data is **optional** in this field.
- locked - This field is not available for modification.

**ADD**



The ADD operation assigns a station port to a spare equipment port location. You are required to enter the minimum amount of data that defines the station port. The directory number (PRM DN) selected must meet the constraints established for prime directory numbers. Loops are permitted so that you may set up large numbers of station ports with one operation.

**DELETE**



This operation changes a station port to a spare equipment port. The equipment number is required. Looping is allowed in the "EQUIP #" field to expedite the deletion of large numbers of ports. If the station has secondary directory numbers assigned to its line(s) or key(s), all of the secondary directory numbers must be removed through the Station Feature Key Assignment command (CMD 331) prior to performing this operation. The station must also be removed from group associations such as hunting, speed calling, ACD, etc. If the station's "TYPE" is an **ID10** or **ID20** (digital telephone with integrated DIU), the data station must be deleted first.



For an EKTl or XSTl card, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

### Prime Directory Number (PRM DN)

TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 KEYWORD: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

### Station Type (TYPE)

TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 VALUE: Not allowed  
 KEYWORDS: 2010 - 10-key digital telephone  
 2020 - 20-key digital telephone  
 ID10 - 10-key digital telephone with Digital Interface Unit  
 ID20 - 20-key digital telephone with Digital Interface Unit  
 ANLG - Analog telephone  
 ANMW - Analog telephone with Message Waiting  
 AVMS - Analog VMS port  
 EK01 - Electronic telephone with 1 line key and 3 fixed keys  
 EK10 - Electronic telephone with 10 flexible keys and 4 fixed keys  
 EK20 - Electronic telephone with 20 flexible keys and 4 fixed keys  
 EK2D - Electronic telephone with 20 flexible keys, 4 fixed keys, and display  
 DK10 - DKT digital telephone with 10 flexible keys  
 DK1D - DKT digital telephone with 10 flexible keys and display  
 DK20 - DKT digital telephone with 20 flexible keys  
 DK2D - DKT digital telephone with 20 flexible keys and display  
 REQUIRED: ADD operation only  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

### Pattern Number of Template for Position of Feature Keys (PAT)

TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed



**First Add-on Module Type (A1)**

TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 VALUE: Not allowed  
 KEYWORDS: M1 - 20-key Add-on Module  
           M2 - 60-key Add-on Module (three 20-key modules)  
           NO - No Add-on Module  
 REQUIRED: ADD operation for digital telephones only  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

**Second Add-on Module Type (A2)**

TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 VALUE: Not allowed  
 KEYWORDS: M1 - 20-key Add-on Module  
           M2 - 60-key Add-on Module (Reserved for future use)  
           NO - No Add-on Module  
 REQUIRED: ADD operation for digital telephones only  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

**Analog Extension (EXT) (Reserved for future use)**

TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 VALUE: Not allowed  
 KEYWORDS: EXT - Digital Telephone Extension  
           NON - Non-extension  
 REQUIRED: ADD operation (for analog telephones only)  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

**Ringling Option (RNG)**

TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 VALUE: Not allowed  
 KEYWORDS: RNG - Ring (All devices default to RNG when added to the system.)  
           NRG - No Ring  
 REQUIRED: ADD operation (For analog telephones with an extension)  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

**Class of Service (COS)**

TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 64  
 KEYWORDS: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**Destination Restriction Level (DRL)**

TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16  
 KEYWORDS: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**Facility Restriction Level Profile (FRL)**

TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32  
 KEYWORDS: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**Queue Priority Level (QPL)**

TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 KEYWORDS: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**Answer Position (ANSPOS)**

TYPE: DN Type / Keyword  
 FORMAT: 1 to 5 digits / Predefined ASCII characters  
 VALUE: 0 to 99999 / NON  
 KEYWORDS: NON - No answer position is selected  
 REQUIRED: N/A  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**PERCEPTION 4000****EXAMPLES****Station Group Number (GRP)** (Reserved for future use)

TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16  
 KEYWORDS: Not allowed  
 REQUIRED: ADD operation only  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP FIELD: Not allowed

**Station Name (NAME)**

TYPE: Text  
 FORMAT: 0 to 9 ASCII characters (excluding a colon [:], comma [,], or dash [-])  
 VALUE: Text  
 KEYWORDS: Not allowed  
 REQUIRED: N/A  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

**Department Name (DEPT)**

TYPE: Text  
 FORMAT: 0 to 4 ASCII characters (excluding a colon [:], comma [,], or dash [-])  
 VALUE: Text  
 KEYWORDS: Not allowed  
 REQUIRED: N/A  
 RANGE: Not allowed  
 LOOP FIELD: Not allowed

---

**EXAMPLES OF ADD OPERATIONS**

When first entering an ADD operation the system is in Data Entry mode. In this mode installations of individual stations are performed. A complete command line, without ranges or automatic increments, must be entered. Note that "EXT" and "GRP" are locked fields and are therefore skipped over by the system. In the first example, the ADD operation is selected and the system immediately goes into Data Entry mode. The example continues with some basic installations.

**NOTES:**

1. Each input line is terminated with a Carriage Return (<C/R>), not shown.
2. User entered data is shown in **Boldface** type.
3. An arrow (->) indicates a <TAB>.

**PERCEPTION 4000** **EXAMPLES**

```

OPERATION = ADD <C/R>

(Data Entry Mode)

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10503 | 5055 | 2010 | 1 | NO | NO | | RNG | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE 1 | ACCT |

ENTER NEW LINE
10505 | 5052 | 2020 | 1 | NO | NO | | -> | 2 | 2 | 1 | 2 | 1000 | | EXAMPLE 2 | ACCT |
    
```

**Figure 2-1**  
**ADD Operation - Data Entry Mode**

To go from Data Entry to Setup mode, enter a **<CONTROL-P>** on a 'clear line'. If ranges are used, the option is available to confirm each add while the system executes the commands. If any of the required fields are left empty, the cursor goes to the first column in the empty field and waits for data input. Upon execution of all commands, the system automatically returns to Data Entry mode.

```

<CONTROL-P>
SETUP MODE:

10507: | | 2010 | NO | NO | | -> | YES | 3 | 5 | 4 | 3 | 1000 | | | PRCH |
10509

PRIME ENTITIES TO BE ADDED: 3
ENDING VALUE: 10509
CONTINUE (C/R), ABORT (<ESC>) = <C/R>
CONFIRM EACH ADD (YES/NO) = YES <C/R>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10507 | 5065 | 2010 | 1 | NO | NO | | -> | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE A | PRCH |

10507 | 5065 | 2010 | 1 | NO | NO | | RNG | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE A | PRCH |

(YES/NO) = Y <C/R>

10508 | 5069 | 2010 | 1 | NO | NO | | -> | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE B | PRCH |
10508 | 5069 | 2010 | 1 | NO | NO | | RNG | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE B | PRCH |

(YES/NO) = Y <C/R>

10509 | 5085 | 2010 | 1 | NO | NO | | -> | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE C | PRCH |
10509 | 5085 | 2010 | 1 | NO | NO | | RNG | 3 | 5 | 4 | 3 | 1000 | | EXAMPLE C | PRCH |

(YES/NO) = Y <C/R>

DATA ENTRY MODE:

ENTER NEW LINE
    
```

**Figure 2-2**  
**ADD Operation - Setup Mode with Confirmation**

**PERCEPTION 4000****EXAMPLES**

In the following example, four stations are added to the system, all having the same attributes. "PRM DN" is the only field requiring individual data entry. This operation does not request confirmation after each addition.

```

<CONTROL-P>
SETUP MODE:
<CONTROL-W> (Optional)
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10511: |          | 2010 | 1   | NO|NO|    | -> | 3   | 6   | 5   | 2   | 1002  |    |    |    |
10514 |          |
PRIME ENTITIES TO BE ADDED: 4
ENDING VALUE: 10514
CONTINUE (C/R), ABORT (<ESC>) = <C/R>
CONFIRM EACH ADDITION (YES/NO) = NO <C/R>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10511 | 5170   | 2010 | 1   | NO|NO|    | RNG | 3   | 6   | 5   | 2   | 1002  |    |    |    |
10512 | 5169   | 2010 | 1   | NO|NO|    | RNG | 3   | 6   | 5   | 2   | 1002  |    |    |    |
10513 | 5168   | 2010 | 1   | NO|NO|    | RNG | 3   | 6   | 5   | 2   | 1002  |    |    |    |
10514 | 5167   | 2010 | 1   | NO|NO|    | RNG | 3   | 6   | 5   | 2   | 1002  |    |    |    |
DATA ENTRY MODE:

```

**Figure 2-3**  
**ADD Operation - Setup Mode without Confirmation**

In the following example, four stations with varying attributes are added to the system. The cursor automatically goes to the first column in each field requiring data input. After entering data, press the <TAB> key to go to the next field. This operation does not request confirmation after each addition.

```

<CONTROL-P>
SETUP MODE:
<CONTROL-W> (Optional)
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10601: | | | | | | | | | | | | | | | |
10604 | | | | | | | | | | | | | | | |

PRIME ENTITIES TO BE ADDED: 4
ENDING VALUE: 10604
CONTINUE (C/R), ABORT (<ESC>) = <C/R>
CONFIRM EACH ADDITION (YES/NO) = NO <C/R>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10601 | 5601 | 2010 | 1 | NO | NO | -> | 15 | 8 | 5 | 2 | 1002 | | STA 5601 | ACCT |
10602 | 5602 | 2010 | 1 | NO | NO | -> | 3 | 6 | 4 | 2 | 1002 | | STA 5602 | ACCT |
10603 | 5603 | 2020 | 2 | NO | NO | -> | 3 | 6 | 4 | 1 | 1004 | | STA 5603 | ADMN |
10604 | 5604 | 2020 | 2 | NO | NO | -> | 1 | 2 | 1 | 1 | 1004 | | STA 5604 | ADMN |

DATA ENTRY MODE:
ENTER NEW LINE
<ESC>
OPERATION =

```

**Figure 2-4**  
**ADD Operation - Setup Mode - Individual Entries**

## EXAMPLES OF DELETE OPERATIONS

Minimum information essential to the DELETE operation is the equipment number. When first entering a DELETE operation the system is in Data Entry mode. In this mode removal of individual stations is performed. The equipment number, without ranges or automatic increments, must be entered.

### NOTES:

1. Each input line is terminated with a Carriage Return (<C/R>), not shown.
2. User entered data is shown in **Boldface** type.

```

OPERATION = DELETE <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = Y <C/R>
EQUIP # | PRM DN |
10503   |           |
10503   |           |
(YES/NO) = YES <C/R>

ENTER NEW LINE
10504   |           |
10504   |           |
(YES/NO) = YES <C/R>

ENTER NEW LINE
10507   |           |
EQUIPMENT IN USE:
1.      FORCE TO IDLE
2.      REMOVE WHEN IDLE
<ESC>  CANCEL REMAINING REMOVAL REQUESTS

ACTION = 2 <C/R>

ENTER NEW LINE

```

**Figure 2-5**  
**DELETE Operation - Data Entry Mode**

To go from Data Entry to Setup mode, enter a **<CONTROL-P>** on a 'clear line'. If ranges are used, the option is available to confirm each DELETE operation while the system executes the commands. Upon completion of all removals, the system automatically returns to Data Entry mode. Note that an error condition or an 'abort' operation causes the system to return to Data Entry mode also.

```

<CONTROL-P>
SETUP MODE:
10503: |
10505 |
PRIME ENTITIES TO BE DELETED: 3
ENDING VALUE: 10505
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN |
10503 |
(YES/NO) = Y <C/R>

10504 |
EQUIPMENT IN USE:
1. FORCE TO IDLE
2. REMOVE WHEN IDLE
<ESC> CANCEL REMAINING REMOVAL REQUESTS

ACTION = 2 <C/R>

10505 |
(YES/NO) = Y <C/R>

```

**Figure 2-6**  
**DELETE Operation - Setup Mode**

The system waits for EQUIP # 10504 to become idle. If the entity continues to be busy, press the **<ESC>** key. After a period of time, the following message appears:

```

EQUIPMENT BUSY:
1 FORCE
<ESC> ABORT

ACTION = 1 <C/R>

ENTER NEW LINE
<ESC>

OPERATION =

```

**Figure 2-7**  
**DELETE Operation - Setup Mode - Forced Idle**

Equipment number 10504 is forced to the idle state and deleted.



## EXAMPLES OF MODIFY OPERATIONS

Minimum data essential for the modification of a station device is the equipment number and data for at least one other field. Modifications are made only in those fields where data is entered. All other fields remain unchanged. In the following examples minimum data has been included. In the examples, the "EXT" and "GRP" fields are locked fields and therefore left blank.

When first entering a MODIFY operation the system is in Data Entry mode. In this mode modifications to individual stations are performed. The system asks whether confirmation is required for each modification, and whether the original and/or new values should be displayed. In Data Entry mode a complete command line, without ranges or automatic increments, must be entered.

### NOTES:

1. Each input line is terminated with a Carriage Return (<C/R>), not shown.
2. User entered data is shown in **Boldface** type.
3. An arrow (->) indicates a <TAB>.

```

OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = NO <C/R>
DISPLAY ORIGINAL VALUES = NO <C/R>
DISPLAY NEW VALUES = NO <C/R>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10401 | | | | NO | NO | | | 5 | | 2 | | | | | M | EXAMPLE | DOC |

ENTER NEW LINE
10402 | | | | | | | | 3 | 1 | | | | | | |

ENTER NEW LINE
10405 | | 2020 |

ENTER NEW LINE
<ESC>

```

**Figure 2-8**  
**MODIFY Operation - Data Entry Mode**

To go from Data Entry to Setup mode, enter a <CONTROL-P> on a 'clear line'. Upon completion of all modifications, the system automatically returns to Data Entry mode.

```

OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = YES <C/R>
DISPLAY ORIGINAL VALUES = YES <C/R>
DISPLAY NEW VALUES = YES <C/R>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
<CONTROL-P>
SETUP MODE:
<CONTROL-W> (Optional)
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10507: |      |      |      |      |      |      | -> |      | 15 |      |      | 1003 |      |      |
10510
PRIME ENTITIES TO BE MODIFIED: 4
ENDING VALUE: 10510
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
OLD:
10507   5085   2020   2    NO NO ... RNG  2   2   1   2   1000   ... STA 10507
NEW:
10507   5085   2020   2    NO NO ... RNG  2   15  1   2   1003   ... STA 10507
(YES/NO) = YES <C/R>
OLD:
10508   5095   2010   1    NO NO ... RNG  3   5   4   6   1000   ... STA 10508
NEW:
10508   5095   2010   1    NO NO ... RNG  3   15  4   6   1003   ... STA 10508
(YES/NO) = YES <C/R>
OLD:
10509   5105   2010   1    NO NO ... RNG  3   5   4   6   1000   ... STA 10509
NEW:
10509   5105   2010   1    NO NO ... RNG  3   15  4   6   1003   ... STA 10509
(YES/NO) = YES <C/R>
OLD:
10510   5115   2010   1    NO NO ... RNG  3   5   4   6   1000   ... STA 10510
NEW:
10510   5115   2010   1    NO NO ... RNG  3   15  4   6   1003   ... STA 10510
(YES/NO) = YES <C/R>
DATA ENTRY MODE:
ENTER NEW LINE
<ESC>

```

**Figure 2-9**  
**MODIFY Operation - Setup Mode (1)**

In Figure 2-9, modifications were made to equipment numbers 10507 through 10510. The "DRL" and "ANSPOS" fields were changed to **15** and **1003** respectively. Original and new values were displayed, and a confirmation was requested after each modification was made.

**PERCEPTION 4000****EXAMPLES**

In the final MODIFY operation example, three entities are modified with confirmation for each modification and display of original values. Display of new values is not requested.

```

OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = YES <C/R>
DISPLAY ORIGINAL VALUES = YES <C/R>
DISPLAY NEW VALUES = NO <C/R>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
<CONTROL-P>
SETUP MODE:
<CONTROL-W> (Optional)
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10512: |      |      |      |      |      |      |      |      |      |      |      | 1003 |      |      |
10514 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
PRIME ENTITIES TO BE MODIFIED: 2
ENDING VALUE: 10514
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
OLD:
10512   5165   2010  1   NO NO ... RNG  3   6   5   2   1002   ...
(YES/NO) = YES <C/R>
OLD:
10513   5166   2020  2   NO NO ... RNG  2   5   1   4   1002   ...
(YES/NO) = YES <C/R>
OLD:
10514   5170   2020  2   NO NO ... RNG  2   5   1   4   1002   ...
(YES/NO) = YES <C/R>
DATA ENTRY MODE:

ENTER NEW LINE
<ESC>
OPERATION =

```

**Figure 2-10**  
**MODIFY Operation - Setup Mode (2)**

## EXAMPLES OF DISPLAY OPERATIONS

All fields in a DISPLAY operation are optional. Data that is output in a DISPLAY report is controlled by setting conditions in any of the optional fields. All of the conditions specified must be met before the 'equipment' displays on the output device.

Ranges may be entered in each of the numeric fields to set lower and upper limits to the values that are to be displayed. If no data is entered, the minimum and maximum values for the field are set automatically. A single number may be entered in a numeric field, thereby limiting output to equipment that matches the number for that field. For fields that expect 'keywords' such as the "TYPE" field, if no data is entered the system displays all types. If data is entered in this field, then only equipment matching the 'keyword' displays.

**PERCEPTION 4000****EXAMPLES**

For 'text' fields, like the 'keyword' fields, if no data is entered, the match is always successful. If data is entered, the characters entered must exactly match a subset of the characters stored for the equipment. For example, by entering **AD** in the "DEPT" field in the following examples, all stations with the department name of ADMN display. If the character sequence entered exactly matches the same sequence of characters within the text string stored for the equipment, the entire text string is considered as having been matched and the equipment is displayed (if all other conditions have been successfully matched). Leading and trailing spaces are ignored.

To display a complete listing of the data base, enter a **<TAB>** and press **<RETURN>**. The following figures illustrate various DISPLAY operations.

**NOTES:**

1. Each input line is terminated with a Carriage Return (**<C/R>**), not shown.
2. User entered data is shown in **Boldface** type.

```

OPERATION = DISPLAY <C/R>
SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
<TAB> | <C/R>
10401   5001   2010   1   NO NO ... RNG 3  5  2  3  1000   ... MOD EXMPL DOC
10402   5002   2010   1   NO NO ... RNG 3  1  4  3  1000   ... STA 10402 DOC
10403   5003   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10403 DOC
10404   5016   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10404 ADMN
10405   5015   2020   2   NO NO ... RNG 3  5  4  3  1000   ... STA 10405 ADMN
10501   5025   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10501 ADMN
10502   5035   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10502 ADMN
10503   5045   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10503 ACCT
10504   5055   2020   2   NO NO ... RNG 2  2  1  2  1000   ... STA 10504 ADMN
10505   5065   2020   2   NO NO ... RNG 2  2  1  2  1000   ... STA 10505 ACCT
10506   5075   2020   2   NO NO ... RNG 2  2  1  2  1000   ... STA 10506 ACCT
10507   5085   2020   2   NO NO ... RNG 2  15  1  2  1003   ... STA 10507 PRCH
10508   5095   2010   1   NO NO ... RNG 3  15  4  6  1003   ... STA 10508 PRCH
10509   5105   2010   1   NO NO ... RNG 3  15  4  6  1003   ... STA 10509 PRCH
10510   5115   2010   1   NO NO ... RNG 3  15  4  6  1003   ... STA 10510 MFG
10511   5125   2010   1   NO NO ... RNG 3  5  4  3  1000   ... STA 10511 MFG
10512   5165   2010   1   NO NO ... RNG 3  6  5  2  1003   ... STA 10512 ENG
10513   5166   2020   2   NO NO ... RNG 2  5  1  4  1003   ... STA 10513 ENG
10514   5170   2020   2   NO NO ... RNG 2  5  1  4  1003   ... STA 10514 ENG
10515   5185   2010   1   NO NO ... RNG 3  6  5  2  1003   ... STA 10515 ACCT
10516   5186   2020   2   NO NO ... RNG 2  5  1  4  1003   ... STA 10516 ACCT
SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |

```

**Figure 2-11**  
**DISPLAY Operation - Complete Database List**

**PERCEPTION 4000****EXAMPLES**

In the following example, all entities with **NO** "SEC", a "DRL" of **15**, and "ANSPOS" **1003** display.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
        |        |      |     |    |    |     |     |    | 15 |    |    | 1003  |    |     |     |
10507   5085   2020  2   NO NO ... RNG  2   15  1  2   1003   ... STA 10507 PRCH
10508   5095   2010  1   NO NO ... RNG  3   15  4  6   1003   ... STA 10508 PRCH
10509   5105   2010  1   NO NO ... RNG  3   15  4  6   1003   ... STA 10509 PRCH
10510   5115   2010  1   NO NO ... RNG  3   15  4  6   1003   ... STA 10510 MFG

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | SEC | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |

```

**Figure 2-12**  
**DISPLAY Operation - Specific Attributes Selected**

Figure 2-13 illustrates use of ranges in DISPLAY operations. In the first example, "PRM DNs" in the range **5005** to **5055** display. In the second example, equipment numbers between **10401** and **10505** having an "FRL" of **1** and an "ANSPOS" of **1000** display.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
        | 5005: |      |     |    |    |     |     |    |    |    |    |    |    |    |     |     |
        | 5055 |      |     |    |    |     |     |    |    |    |    |    |    |    |     |     |
10404   5016   2010  1   NO NO ... RNG  3   5  4  3   1000   ... STA 10404 ADMN
10405   5015   2020  2   NO NO ... RNG  3   5  4  3   1000   ... STA 10405 ADMN
10501   5025   2010  1   NO NO ... RNG  3   5  4  3   1000   ... STA 10501 ADMN
10502   5035   2010  1   NO NO ... RNG  3   5  4  3   1000   ... STA 10502 ADMN
10503   5045   2010  1   NO NO ... RNG  3   5  4  3   1000   ... STA 10503 ACCT
10504   5055   2020  2   NO NO ... RNG  2   2  1  2   1000   ... STA 10504 ADMN

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10401: |        |      |     |    |    |     |     |    |    | 1  |    | 1000  |    |     |     |
10505 |        |      |     |    |    |     |     |    |    |    |    |    |    |    |     |     |
10504   5055   2020  2   NO NO ... RNG  2   2  1  2   1000   ... STA 10504 ADMN

```

**Figure 2-13**  
**DISPLAY Operation - Ranges/Fixed Values (1)**

Note that only one entity between **10401** and **10505** has an "FRL" of **1** and an "ANSPOS" of **1000**.

**PERCEPTION 4000** **EXAMPLES**

The following example displays all 2020-type stations with data security and a COS between 1 and 9.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
        |         | 2020 |     |    |    |    |    | 1: |    |    |    |    |    |    |     |
        |         |     |     |    |    |    |    | 9  |    |    |    |    |    |    |     |
10405   5015   2020   2   NO NO ... RNG 3   5   4   3   1000   ... STA 10405 ADMN
10504   5055   2020   2   NO NO ... RNG 2   2   1   2   1000   ... STA 10504 ADMN
10513   5166   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10513 ENG
10514   5170   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10514 ENG
10516   5186   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10516 ACCT
    
```

**Figure 2-14**  
**DISPLAY Operation - Ranges/Fixed Values (2)**

In the final example, a subset of the current text entries is entered in the "NAME" field to display all entities with a name beginning with **STA 105**.

```

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
        |         |     |     |    |    |    |    |    |    |    |    |    |    |     | STA 105 |
10501   5025   2010   1   NO NO ... RNG 3   5   4   3   1000   ... STA 10501 ADMN
10502   5035   2010   1   NO NO ... RNG 3   5   4   3   1000   ... STA 10502 ADMN
10503   5045   2010   1   NO NO ... RNG 3   5   4   3   1000   ... STA 10503 ACCT
10504   5055   2020   2   NO NO ... RNG 2   2   1   2   1000   ... STA 10504 ADMN
10505   5065   2020   2   NO NO ... RNG 2   2   1   2   1000   ... STA 10505 ACCT
10506   5075   2020   2   NO NO ... RNG 2   2   1   2   1000   ... STA 10506 ACCT
10507   5085   2020   2   NO NO ... RNG 2   15  1   2   1003   ... STA 10507 PRCH
10508   5095   2010   1   NO NO ... RNG 3   15  4   6   1003   ... STA 10508 PRCH
10509   5105   2010   1   NO NO ... RNG 3   15  4   6   1003   ... STA 10509 PRCH
10510   5115   2010   1   NO NO ... RNG 3   15  4   6   1003   ... STA 10510 MFG
10511   5125   2010   1   NO NO ... RNG 3   5   4   3   1000   ... STA 10511 MFG
10512   5165   2010   1   NO NO ... RNG 3   6   5   2   1003   ... STA 10512 ENG
10513   5166   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10513 ENG
10514   5170   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10514 ENG
10515   5185   2010   1   NO NO ... RNG 3   6   5   2   1003   ... STA 10515 ACCT
10516   5186   2020   2   NO NO ... RNG 2   5   1   4   1003   ... STA 10516 ACCT

SETUP MODE:
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
<ESC>
OPERATION =
    
```

**Figure 2-15**  
**DISPLAY Operation - Subset of Text Entry**



The following example shows escape operations while in Setup mode. In the first instance, <ESC> aborts the current MODIFY request and returns the system to Data Entry mode. The second <ESC> operation aborts the current line of data input and returns the cursor to a 'clear line' while remaining in Setup mode.

```

OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = NO <C/R>
DISPLAY ORIGINAL VALUE = YES <C/R>
DISPLAY NEW VALUE = NO <C/R>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
<CONTROL-P>
SETUP MODE:
10507: | | | | | | | | 15 | | | | 1003 | | | | |
10510 |
PRIME ENTITIES TO BE MODIFIED: 4
ENDING VALUE: 10510
CONTINUE (C/R), ABORT (<ESC>) = <ESC>
G00401 - Operation Aborted

DATA ENTRY MODE:

ENTER NEW LINE
<CONTROL-P>
SETUP MODE:
<CONTROL-W> (Optional)
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10512: | | | | | | | | | | | | | 1003 | | | <ESC>
Input Line Aborted

10514: |
10516 |
PRIME ENTITIES TO BE MODIFIED: 3
ENDING VALUE: 10516
CONTINUE (C/R), ABORT (<ESC>) =

```

**Figure 2-17**  
 <ESC> Key - MODIFY Operation, Setup Mode

In a DELETE operation, when the system encounters an "Equipment In Use" situation, you have the option of forcing the equipment to the idle state, waiting until the equipment becomes idle, or canceling the remaining removal requests by pressing <ESC>.

If "WAIT FOR IDLE" is selected, the system waits for the entity to become idle, and then carries out the removal request. An <ESC> may be performed to abort the waiting process. After pressing the <ESC> key, a timeout occurs and a message displays giving the options to force or abort the DELETE operation. Pressing <ESC> again aborts the request and places the console in Data Entry mode. Figure 2-18 illustrates <ESC> key usage in DELETE operations.



**PERCEPTION 4000****EXAMPLES**

```

OPERATION = DELETE <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = NO <C/R>
EQUIP # | PRM DN |
<CONTROL-P>
SETUP MODE:
10503: |
10505
PRIME ENTITIES TO BE DELETED: 3
ENDING VALUE: 10505
CONTINUE (C/R), ABORT (<ESC>) = <ESC>

DATA ENTRY MODE:
ENTER NEW LINE
<CONTROL-P>
SETUP MODE:
10503: |
10505
PRIME ENTITIES TO BE DELETED: 3
ENDING VALUE: 10505
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN |
10504
EQUIPMENT IN USE:
1. FORCE TO IDLE
2. REMOVE WHEN IDLE
<ESC> CANCEL REMAINING REMOVAL REQUESTS

ACTION = <ESC>

DATA ENTRY MODE:
ENTER NEW LINE
<CONTROL-P>
SETUP MODE:
10509: |
10516 |
PRIME ENTITIES TO BE DELETED: 8
ENDING VALUE: 10516
CONTINUE (C/R), ABORT (<ESC>) = <C/R>

EQUIP # | PRM DN |
10513
EQUIPMENT BUSY:
1. FORCE TO IDLE
2. REMOVE WHEN IDLE
<ESC> CANCEL REMAINING REMOVAL REQUESTS

ACTION = 2 <C/R> .... <ESC>

10513
EQUIPMENT BUSY:
1. FORCE TO IDLE
<ESC> ABORT OPERATION

ACTION = <ESC>

DATA ENTRY MODE:
ENTER NEW LINE
<ESC>
OPERATION =

```

**Figure 2-18**  
**<ESC> Key - DELETE Operation, Setup Mode**

## HOW TO USE THE <CONTROL-W> COMMAND

In this example, the MODIFY operation is used to demonstrate how to use the "Refresh Last Prompt" command (<CONTROL-W>). If entered on a 'clear line', the command redisplay the command header. If the command is entered within an input line, both the command header and the current input line are redisplayed. The mode in which the command is entered is not altered. <CONTROL-W> is useful in displaying the command header prior to producing a report or to reaffirm the location of a particular field. The following figures illustrate <CONTROL-W> operation.

```

OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = YES
DISPLAY ORIGINAL VALUES = NO
DISPLAY NEW VALUES = NO
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10404 | 5016 | | | | | | | | | | | 1003 | |
(YES/NO) = Y <C/R>

ENTER NEW LINE
10405 | | | 2020 | <CONTROL-W>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
10405 | | | 2020 | 2 | *

```

\* The cursor would be relocated here after redisplaying the header and current input line.

Figure 2-19  
<CONTROL-W> Operation - Data Entry Mode

```

ENTER NEW LINE
<CONTROL-P>
SETUP MODE:
<CONTROL-W>
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |

```

Figure 2-20  
<CONTROL-W> Operation - Setup Mode

---

## HELP EXAMPLES

Following are several examples to illustrate the various HELP levels.

### COMMAND SELECTION LEVEL

The first set of figures illustrate a typical HELP session with the entry point from the COMMAND selection level.

```
COMMAND = ?
```

**Figure 2-21**  
**Entry into HELP Operation - Command Level**

The system immediately goes into HELP operation mode.

```
HELP MENU
```

```
Release X.X
Version X.X.X Day Month Date and Time
```

```
Select one item:
```

- 1. Command Category
- 2. MMI Tutorial
- 3. System Messages
- 4. Control Keys
- Q. Quit Help Operation

```
ITEM NUMBER = 1 <C/R>
```

**Figure 2-22**  
**HELP Menu - Command Level**

```
HELP MENU
```

```
Release X.X
Version X.X.X Day Month Date and Time
```

```
Select one item:
```

- |                              |                          |
|------------------------------|--------------------------|
| 1. ADMINISTRATION            | 2. APPLICATION PROCESSOR |
| 3. LCR                       | 4. ATTENDANT             |
| 5. DATA                      | 6. DIAGNOSTIC            |
| 7. DIALING                   | 8. FAULT                 |
| 9. LOGOUT                    | 10. MAINTENANCE          |
| 11. NETWORK                  | 12. RESTRICT             |
| 13. STATION                  | 14. SYSTEM               |
| 15. TRUNK                    | 16. UTILITY              |
| Q. Quit Help Operation       |                          |
| U. Go Up One Hierarchy Level |                          |

```
ITEM NUMBER = 5 <C/R>
```

**Figure 2-23**  
**Command Categories**

Item 5 (DATA) produces a list of the names and identifiers for every command available for the selected category.

```

                                HELP MENU

Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

  1. DATA_ASSIGN                (360)
  2. DATA_HUNTING              (366)
  3. DATA_INT_PARAMETERS       (361)
  4. DATA_STA_PARAMETERS       (362)
  5. HIGH_USAGE_DATA           (368)
  6. MODEM_POOL_ASSIGN         (347)
  7. NAME_DIALING              (367)
  Q. Quit Help Operation
  U. Go Up One Hierarchy Level

ITEM NUMBER = 2 <C/R>

```

**Figure 2-24**  
**List of Specific Commands**

At this point the command overlay may need to be loaded from the disk into the system. Therefore, there may be a slight delay, unless the selected command has already been loaded.

```

                                HELP MENU

Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

  Command ID: (cmd366)

  1. General Information
  2. Operations
  Q. Quit Help Operation
  U. Go Up One Hierarchy Level

ITEM NUMBER = 1 <C/R>

```

**Figure 2-25**  
**Specific Command Main Menu**

Data Hunting Assignment Command (cmd366)  
 - to ADD, DELETE, MODIFY, and DISPLAY Data Hunt groups

Coverage:  
 Data Hunt Group Number, Group Name, Pilot Directory Number  
 Member Number, and Member Directory Number

Dependency:  
 1) Prerequisite commands:  
   - Data Station Assignment (cmd360)  
 2) This command may be needed by:  
   - Name Dialing Assignment (cmd367)

**Figure 2-26**  
**General Command Information**

#### HELP MENU

Release X.X  
 Version X.X.X Day Month Date and Time

Select one item:

Command ID: (cmd366)

- 1. General Information
- 2. Operations
- Q. Quit Help Operation
- U. Go Up One Hierarchy Level

ITEM NUMBER = Q <C/R>  
 COMMAND =

**Figure 2-27**  
**Exit from HELP Operation**

#### OPERATION SELECTION LEVEL

The following examples show a typical HELP session with the entry point from the OPERATION selection level. If the command overlay needs to be loaded from the disk into the system, there may be some delay, unless the selected command has already been loaded.

COMMAND = DATA\_HUNTING <C/R>  
 COMMAND NUMBER: 366  
 OPERATION = ?

**Figure 2-28**  
**Entry into HELP Operation - Operation Level**

The system immediately goes into the HELP operation mode.

```

                                HELP MENU

Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

    Command ID: (cmd366)

    1. ADD
    2. DELETE
    3. MODIFY
    4. DISPLAY
    5. Field Parameters
    Q. Quit Help Operation

ITEM NUMBER = 3 <C/R>

```

**Figure 2-29**  
**Command Operations Menu**

```

MODIFY:
  — To modify a data hunt group or attributes for group

Form:

GRP # | NAME | PILOT DN | MEM # | MEM DN |
◀ req ▶|◀..... opt .....▶| opt ---▶  opt  |

```

**Figure 2-30**  
**MODIFY Operation Information**

The notation under the "MEM #" and "MEM DN" fields (OPT ---> OPT) indicates that a relationship exists between the two fields. If data is entered in the "MEM #" field, data must be entered in the "MEM DN" field. If the "MEM #" field is left empty, data must not be entered in the "MEM DN" field.

```
                                HELP MENU
Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

    Command ID: (cmd366)

    1. ADD
    2. DELETE
    3. MODIFY
    4. DISPLAY
    5. Field Parameters
    Q. Quit Help Operation

ITEM NUMBER = 5 <C/R>

                                HELP MENU
Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

    Command ID: (cmd366)

    1. ADD      Field Parameters
    2. DELETE   Field Parameters
    3. MODIFY   Field Parameters
    4. DISPLAY  Field Parameters
    Q. Quit Help Operation
    U. Go Up One Hierarchy Level

ITEM NUMBER = 3 <C/R>
```

**Figure 2-31**  
**Field Parameter Menus**

```

                                HELP MENU

Release  X.X
Version  X.X.X Day  Month  Date and Time

Select one item:

  Command ID: (cmd366)

  1. GRP #
  2. NAME
  3. PILOT DN
  4. MEM#
  5. MEM DN
  Q. Quit Help Operation
  U. Go Up One Hierarchy Level

ITEM NUMBER = 2 <C/R>
```

**Figure 2-32**  
**MODIFY Operation - Field Parameter Menu**

```

Data Hunt Group Name (NAME)
Type:      ASCII
Value:     Text
Format:    0 to 9 ASCII characters
Keyword:   Not allowed
Required:  N/A
Range:     Not allowed
Loop Field: Not allowed

- Delete token (^D) is allowed in a MODIFY operation
- The Data Hunt Group Name does not need to be specified for a Data Hunt Group
```

**Figure 2-33**  
**Field Parameter Description**



## HELP MENU

Release X.X  
Version X.X.X Day Month Date and Time

Select one item:

Command ID: (cmd366)

1. GRP #
2. NAME
3. PILOT DN
4. MEM #
5. MEM DN
- Q. Quit Help Operation
- U. Go Up One Hierarchy Level

ITEM NUMBER = U <C/R>

## HELP MENU

Release X.X  
Version X.X.X Day Month Date and Time

Select one item:

Command ID: (cmd366)

1. ADD Field Parameters
2. DELETE Field Parameters
3. MODIFY Field Parameters
4. DISPLAY Field Parameters
- Q. Quit Help Operation
- U. Go Up One Hierarchy Level

ITEM NUMBER = U <C/R>

## HELP MENU

Release X.X  
Version X.X.X Day Month Date and Time

Select one item:

Command ID: (cmd366)

1. ADD
2. DELETE
3. MODIFY
4. DISPLAY
5. Field Parameters
- Q. Quit Help Operation

**Figure 2-34**  
**Stepping Up the Hierarchy Levels**

## PARAMETER SELECTION LEVEL

This example shows a typical HELP session with the entry point from the parameter selection level; MODIFY operation. Upon entry of the "?", the system immediately goes into HELP operation mode and automatically displays information for that field. You may tab over to any field that is not locked for HELP information.

```

COMMAND = 330 <C/R>
COMMAND NAME: STA_ASSIGN
OPERATION = MODIFY <C/R>
CONFIRM EACH MODIFICATION (YES/NO) = NO
DISPLAY ORIGINAL VALUES = YES
DISPLAY NEW VALUES = YES
EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
11101  | 4220   | ?

```

Station Type (TYPE)

Type: Keyword

Value: Not allowed

Format: N/A

Keyword: 2010 - 10-key digital telephone  
2020 - 20-key digital telephone  
ID10 - 10-key digital telephone with DIU  
ID20 - 20-key digital telephone with DIU  
ANLG - Analog telephone  
ANMW - Analog telephone with Message Waiting  
AVMS - Analog telephone with VMS port  
EK01 - Electronic telephone with 1 line key and 3 fixed keys  
EK10 - Electronic telephone with 10 flexible keys and 4 fixed keys  
EK20 - Electronic telephone with 20 flexible keys and 4 fixed keys  
EK2D - Electronic telephone with 20 flexible keys, 4 fixed keys, and display  
DK10 - DKT digital telephone with 10 flexible keys  
DK1D - DKT digital telephone with 10 flexible keys and display  
DK20 - DKT digital telephone with 20 flexible keys  
DK2D - DKT digital telephone with 20 flexible keys and display

Required: ADD operation only

Range: Not allowed

Loop Field: Not allowed

```

EQUIP # | PRM DN | TYPE | PAT | A1 | A2 | EXT | RNG | COS | DRL | FRL | QPL | ANSPOS | GRP | NAME | DEPT |
11101  | 4220   | *

```

**Figure 2-35**  
**Parameter Level HELP Screen**

You may now complete the MODIFY operation for the STATION\_ASSIGN command, or abort and return to the "OPERATION=" command level.

The PERCEPTION 4000 Maintenance & Administration (M&A) commands are detailed in this chapter.

---

## COMMAND FORMAT

Commands are presented in the following format:

### COMMAND NAME (NUMERIC ID)

The numeric ID following the command name is a three-digit identifier used to call up the command on the M&A console. A brief description follows the command name line. The command keyword and category name are then listed. Note that commands may be addressed by either their keyword or their numeric ID.

Command Keyword:           An alternative input used to call up the command on the M&A console

Category Name:             Specifies the command category, such as a Station, Trunk, or Attendant Console command

### PREREQUISITE COMMANDS

Any commands that must be executed prior to the current command are listed in this section. For example, before programming the ACD Group Parameter Assignment command (CMD 357), the ACD group number must be assigned with the ACD Group Assignment command (CMD 355). Therefore, CMD 355 is listed as a prerequisite for CMD 357.

### OPERATIONS

Each applicable operation is explained, and the row/field-level command header for the operation is illustrated. Parameters for the command are designated as required (req), optional (opt), locked, or output only.

### PARAMETERS

Each field parameter is defined in this section. The field's type of input is listed, such as decimal input, text, keywords, etc. Additional information includes input format, values, whether the field is a loop field, and whether ranges are permitted in this field. All commands having a MODIFY operation and no ADD operation contain default values. However, not all commands with ADD operations have defaults.

### SYSTEM ERROR MESSAGES

Error and information messages pertaining to the command are listed in this section. These messages include indications of incorrect input, informational matter, and system messages. A complete listing of all system error messages appears in Chapter 4.

**COMMENTS** (Optional)

This optional section provides additional information pertinent to the command.

**RELATED COMMANDS** (Optional)

Commands which may be required to achieve full realization for a given application are listed. For example, in the Announcement Pattern Assignment command (CMD 353), announcement pattern numbers are assigned and defined for up to 50 patterns. Since these pattern numbers may be used in the ACD Group Parameter Assignment command (CMD 357), CMD 357 is listed under related commands for CMD 353.

**COMMAND NOTATIONS**

The following abbreviations, symbols, or notations are used in the commands:

|             |   |  |
|-------------|---|--|
| req         | = | Data is required in this field.  |
| opt         | = | Data is optional in this field.  |
| output only | = | Data is displayed in this field. Input is not accepted.  |
| locked      | = | This field is reserved for future use.   |
| --->        | = | Indicates that a relationship exists between a secondary key and one or more attributes. A secondary key must be entered if the related attribute is being selected. |

**MAINTENANCE & ADMINISTRATION COMMANDS**

Following is a list of the M&A commands for Man-Machine Interface (MMI) operation. Appendix B lists the commands by their Numeric IDs.

| Command Name                                | Numeric ID | Command Keyword      |
|---|------------|----------------------|
| Account Code Assignment                     | 348        | ACCOUNT_CODE_ASSIGN  |
| ACD Agent Assignment                        | 356        | ACD_AGENT_ASSIGN     |
| ACD Group Assignment                        | 355        | ACD_GROUP_ASSIGN     |
| ACD Group Parameter Assignment              | 357        | ACD_PARAMETERS       |
| ACD Status Display and Remote Logout        | 358        | ACD_DISP_LOGOUT      |
| Alarm/Fault Display and Reset               | 160        | ALM/FAULT_DISP/RESET |
| Announcement Pattern Assignment             | 353        | ANNOUNCEMENT_PAT     |
| Area Code Restriction Tables                | 341        | AC_RESTRICT          |
| Area/Office Code Restriction Tables         | 339        | AC/OC_RESTRICT_TBL   |
| Attendant Feature Key Assignment            | 371        | ATT_KEY_ASSIGN       |
| Attendant Group Assignment                  | 372        | ATT_GROUP_ASSIGN     |
| Attendant Incoming Call Priority Assignment | 373        | CALL_PRIORITY_ASSIGN |
| Attendant Password Assignment               | 375        | ATT_PASSWORDS        |
| Attendant Position Assignment               | 370        | ATT_POSITION_ASSIGN  |
| Authorization Code Assignment               | 349        | AUTHORIZATION_CODES  |
| Autodial Number Display                     | 324        | AUTO_DIAL_DISP       |

## PERCEPTION 4000

## COMMANDS

|   |     |                      |
|---|-----|----------------------|
| Call Forwarding Destination Display           | 325 | CALL_FORWARD_DISP    |
| Call Pickup Group Assignment                  | 346 | CALL_PICKUP          |
| Canned Text/Advisory Message Creation         | 328 | MESSAGE_ASSIGN       |
| Class of Service Assignment                   | 334 | CLASS_OF_SERVICE     |
| Clock Provider Assignment                     | 417 | CLOCK_PROVIDER       |
| Clock Reset                                   | 121 | CLOCK_RESET          |
| Common Carrier Assignment                     | 344 | COMMON_CARRIERS      |
| Coordinated Numbering Plan Assignment         | 303 | CNP_ASSIGN           |
| Country Code Assignment                       | 335 | CC_ASSIGN            |
| Country Code Restriction Tables               | 338 | CC_RESTRICT          |
| Crash Dump Display                            | 164 | CRASH_DUMP_DISP      |
| Data Hunting Assignment                       | 366 | DATA_HUNTING         |
| Data Interface Parameter Assignment           | 361 | DATA_INT_PARAMETERS  |
| Data Station Assignment                       | 360 | DATA_ASSIGN          |
| Data Station Parameter Assignment             | 362 | DATA_STA_PARAMETERS  |
| Data Structure Display                        | 167 | DATA_STRUCTURE_DISP  |
| Data Structure Display 2                      | 169 | DATA_STRUCTURE_DISP2 |
| Destination Restriction Level Assignment      | 337 | DRL_ASSIGN           |
| Device Service Status                         | 208 | DEVICE_STATUS        |
| Dialing Definition                            | 317 | DIALING_DEFINITION   |
| Dictation Group/Machine Assignment            | 401 | DICTION_ASSIGN       |
| DID/CCSA/DNIS ACD Parameter Assignment        | 359 | DID/CCSA/DNIS_ACD    |
| DID/CCSA/DNIS DISA LDN Assignment             | 315 | DID/CCSA_DISA        |
| DID/CCSA/DNIS LDN Assignment                  | 316 | DID/CCSA_LDN         |
| DID/CCSA/DNIS Trunk Group Assignment          | 314 | DID/CCSA_TG_ASSIGN   |
| Digital Carrier Channel Assignment            | 413 | DIGITAL_CARRIER      |
| Disk File Manipulation                        | 152 | FILE_MANIPULATION    |
| DTMF Receiver Assignment                      | 416 | DTMF_RECEIVER_ASSIGN |
| Emergency Call Destination Assignment         | 345 | EMERGENCY_CALL       |
| Exception Restriction Tables                  | 340 | EXCEPT_RESTRICT      |
| Facility Restriction Level Profile Assignment | 387 | FRLP_ASSIGN          |
| File Consolidation                            | 153 | FILE_CONSOLIDATION   |
| File Dump                                     | 151 | FILE_DUMP            |
| Forced Account Code Toll-free Tables          | 352 | FAC_TF_TABLE         |
| Group Speed Calling List Assignment           | 351 | GROUP_SC_LIST        |
| Group Speed Calling Member Assignment         | 350 | GROUP_SC_MEMBERS     |
| High Usage Data Destination Assignment        | 368 | HIGH_USAGE_DATA      |
| I/O Port Assignment                           | 415 | I/O_PORT_ASSIGN      |
| I/O Port Configuration Assignment             | 414 | I/O_PORT_CONFIG      |
| Initiate Switchover                           | 102 | SWITCHOVER           |
| Interchangeable Office Code Table             | 318 | IOC_TABLE            |
| Intercom Group Member Display                 | 333 | INTERCOM_DISPLAY     |
| Internal Call Alternate Routing Assignment    | 374 | INT_CALL_ALT_ROUTING |
| ISDN Channel Group Assignment                 | 423 | CGN_ASSIGN           |
| ISDN Channel Group Hunting                    | 424 | CGN_HUNTING          |
| ISDN IPRC and IPRI Card Assignment            | 422 | IPRC_IPRI_ASSIGN     |
| ISDN Service Min/Max Assignment               | 425 | SERVICE_MIN/MAX      |
| ISDN Trunk Group Parameter Assignment         | 421 | ISDN_TRK_GRP_PARA    |
| LCR Area Code Routing Assignment              | 381 | AC_ROUTING           |
| LCR Area/Office Code Routing Assignment       | 382 | AC/OC_ROUTING        |
| LCR Country Code Routing Assignment           | 380 | CC_ROUTING           |

|  |     |                        |
|--|-----|------------------------|
| LCR Digit Translation Profile Assignment | 386 | LCR_DIGIT_PROFILES     |
| LCR Routing Table Assignment             | 383 | LCR_ROUTE_ASSIGN       |
| LCR Special Routing Assignment           | 384 | LCR_SPECIAL_ROUTING    |
| LCR/Authorization TZ Change Assignment   | 343 | LCR/AUTH_TZ            |
| Label Print                              | 312 | LABEL_PRINT            |
| Logical Line Call Forward Assignment     | 322 | LLINE_CALL_FORWARD     |
| M&A Security Level and Access Assignment | 403 | M/A_SECURITY_ASSIGN    |
| Memory Test                              | 144 | MEMORY_TEST            |
| Miscellaneous Device Assignment          | 400 | MISC_DEVICE_ASSIGN     |
| Modem Pool Assignment                    | 347 | MODEM_POOL_ASSIGN      |
| Name Dialing Assignment                  | 367 | NAME_DIALING           |
| Night Bell Assignment                    | 405 | NIGHT_BELL_ASSIGN      |
| Numbering Plan Assignment                | 300 | NUMBERING_PLAN         |
| Patch Report                             | 143 | PATCH_REPORT           |
| Private/Hotline Assignment               | 332 | PVT/HOT_ASSIGN         |
| Redundancy Selection Assignment          | 410 | REDUNDANCY_ASSIGN      |
| SMDR Configuration Assignment            | 409 | SMDR_ASSIGN            |
| Secondary Line Appearances Display       | 327 | SECONDARY_LINE_DISP    |
| Station Assignment                       | 330 | STA_ASSIGNMENT         |
| Station Feature Key Assignment           | 331 | STA_KEY_ASSIGN         |
| Station Feature Key Pattern Assignment   | 320 | STA_KEY_PATTERN        |
| Station Hunting Assignment               | 342 | STA_HUNTING            |
| Station-Level Parameter Assignment       | 329 | STA_PARAMETERS         |
| System DISA Security Code Assignment     | 321 | DISA_CODES             |
| System Holiday Assignment                | 404 | HOLIDAY_ASSIGN         |
| System Inventory                         | 210 | SYS_INVENTORY          |
| System Number Summary                    | 326 | SYS_NUM_PLAN           |
| System Option Flag Assignment            | 408 | SYS_OPTION_ASSIGN      |
| System Speed Calling Assignment          | 402 | SYS_SC_ASSIGN          |
| System Timer Assignment                  | 407 | SYS_TIMER_ASSIGN       |
| T-1 Clock Provider Selection Assignment  | 412 | T1_CLOCK_ASSIGN        |
| Terminal Maintenance                     | 206 | TERMINAL_MAINT         |
| Time Activated Command Programming       | 110 | TIME_ACT_COM           |
| Time Zone Assignment                     | 336 | TZ_ASSIGN              |
| Timeout Routing Destination Assignment   | 323 | TIMEOUT_ROUTING        |
| Trace Setup                              | 168 | TRACE_SETUP            |
| Traffic Measurement Object Assignment    | 902 | TRAFFIC_OBJECT         |
| Traffic Measurement Setup Assignment     | 900 | TRAFFIC_SETUP          |
| Traffic Measurement Time Zone Assignment | 901 | TRAFFIC_TIME_ZONE      |
| Trunk Assignment                         | 313 | TK_ASSIGN              |
| Trunk Group Assignment                   | 310 | TG_ASSIGN              |
| Trunk Group Parameter Assignment         | 420 | TG_PARAMETER           |
| Trunk Group Routing Assignment           | 307 | TG_ROUTING             |
| Trunk Group Toll-free Tables             | 311 | TG_TF_TABLES           |
| Trunk Hunting Assignment                 | 309 | TRUNK_HUNTING          |
| Trunk PP Parameter Change                | 364 | TRUNK_PARAMETER_CHANGE |
| Trunk Routing Assignment                 | 308 | TRUNK_ROUTING          |
| Trunk-to-Trunk Connection Assignment     | 305 | TRUNK_CONNECTIONS      |
| UCD Group Assignment                     | 354 | UCD_GROUP_ASSIGN       |
| UNP Routing Assignment                   | 302 | UNP_ROUTING            |
| Uniform Numbering Plan Assignment        | 301 | UNP_ASSIGN             |
| Voice Paging/Code-Call Assignment        | 319 | VP/CC_ASSIGN           |

## ACCOUNT CODE ASSIGNMENT

The Account Code Assignment command is used to display, add, or delete assigned system account codes.

Command Keyword: ACCOUNT\_CODE\_ASSIGN

Category Name: Station

### PREREQUISITE COMMANDS

Numbering Plan Assignment CMD 300

### OPERATIONS

Available operations: ADD  
DELETED  
DISPLAY

The function and required data fields for each operation are described as follows:

ADD

ACCOUNT CODE | ACCOUNT CODE | ACCOUNT CODE | ACCOUNT CODE |

|<..... req .....>|<..... opt .....>|

This operation is used to add account codes to the system's database table.

DELETE

ACCOUNT CODE | ACCOUNT CODE | ACCOUNT CODE | ACCOUNT CODE |

|<..... req .....>|<..... opt .....>|

This operation is used to delete account codes from the system's database table. If **ALL** is entered in the first field, then all account codes will be removed. Confirmation must be given prior to the removal of the account codes.

## ACCOUNT CODE ASSIGNMENT (CMD 348)

**PERCEPTION 4000****COMMANDS**

## DISPLAY

|   |
|---|
| ACCOUNT CODE   ACCOUNT CODE   ACCOUNT CODE   ACCOUNT CODE |
|---|

◀..... opt .....▶

This operation is used to display account codes in the database table. If **<TAB>** is entered in the first field, then all account codes in the database will be displayed.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **ACCOUNT CODE**  
 TYPE:            Decimal  
 FORMAT:         All account codes must have the same length (length is defined in CMD 300)  
 VALUE:          Up to a maximum of 15 digits  
 RANGE:          Not allowed

Keyword:        **ALL**           - All account codes will be deleted (for DELETE operation only)

This field is used to add, delete, or display the system's account codes. In ADD operation, the entry of new account codes will add them to the system database. Each entered account code must be the length assigned in CMD 300. In DELETE operation, either specific account codes can be entered for deletion, or the keyword **ALL** can be entered to delete all account codes at once. If **ALL** is entered, then the system will ask for a confirmation prior to actually deleting the codes. In DISPLAY operation, a **<TAB>** can be entered to display all assigned account codes, or a prefix can be entered to display a specific group of account codes. For example, to display all account codes that begin with the numbers "20," simply enter **20** in the first "ACCOUNT CODE" field.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

C34800 - No match  
 C34801 - Account code already defined  
 C34802 - Account code not found  
 C34803 - No space  
 C34804 - Account code's length does not agree with preassigned length (CMD 300)  
 C34805 - Invalid account code  
 I34806 - Accessing and sorting



**ACD AGENT ASSIGNMENT (CMD 356)**

The ACD Agent Assignment command assigns agent ID codes and names to an Automatic Call Distribution (ACD) group. In addition, the command defines whether the agent may perform an intra-ACD group call pickup, and whether a given agent may be picked up by another agent in the same group.

Command Keyword:       ACD\_AGENT\_ASSIGN

Category Name:         Station

**PREREQUISITE COMMAND**

ACD Group Assignment (CMD 355)

**OPERATIONS**

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

GRP# | AGT | PU1 FLAG | PU2 FLAG | COS | DRL | FRLP | QPL | NAME |

◀..... req .....▶

The ADD operation adds an Agent ID code, call Pick-up flag, call Picked-up flag, and Agent's name to the specified ACD Group Number. The COS, DRL, FRLP, and QPL fields are assigned to determine an agent's outgoing call placement capabilities.

**DELETE**

GRP# | AGT |

◀.... req ....▶

This operation deletes an Agent ID code (call Pick-up flag, call Picked-up flag, and the Agent's name) from the specified ACD Group Number.

ACD AGENT ASSIGNMENT (CMD 356)

MODIFY

GRP# | AGT | PU1 FLAG | PU2 FLAG | COS | DRL | FRLP | QPL | NAME |

◀.....req.....▶|◀.....opt.....▶

This operation modifies the call Pick-up flag, call Picked-up flag, and/or the Agent's name of the specified Agent ID and ACD Group Number.

DISPLAY

GRP# | INDEX | AGT | PU1 FLAG | PU2 FLAG | COS | DRL | FRLP | QPL | NAME |

| opt | locked |◀.....opt.....▶

The DISPLAY operation shows the status of the Call Pick-up Flag, Call Picked-up Flag, Agent's Name, and the Agent ID of the ACD Group Number. The "INDEX" field is an output only field and does not accept data input.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **GRP#** (ACD Group Number)
- TYPE:            Decimal
- FORMAT:         1 or 2 digits
- VALUE:           1 to 32 (or up to maximum system configuration)
- LOOP:            Allowed (Primary loop for ADD and DISPLAY operations)
- RANGE:           Not allowed

The "GRP #", assigned by the ACD Group Assignment command (CMD 355), is required for ADD, DELETE, and MODIFY operations. This is a loop field in DISPLAY and ADD operations. If a <TAB> is entered in this field in a DISPLAY operation, all agents in all ACD groups are displayed.

- FIELD:           **AGT** (Agent Identification Code)
- TYPE:            Decimal with fixed length / Keyword
- FORMAT:         3 digits / Predefined ASCII characters
- VALUE:           000 to 999
- LOOP:            Allowed (Secondary loop for a DISPLAY operation)
- RANGE:           Not allowed

Keyword: ALL

This field represents the ID codes which are used for referencing each agent. The "AGT" field is

required for ADD, DELETE, and MODIFY operations. This is a loop field in a DISPLAY operation. If a <TAB> is entered, any existing table of Group Numbers and Agents displays. In a DELETE operation, if **ALL** is entered, all agent IDs in the specified group are removed.

FIELD: **PU1 FLAG** (Call Pick-up Flag One)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Pick-up is allowed  
 DNY - Pick-up is denied

Agents are allowed or denied access to the Intra-group Call Pickup feature with this field. "PU1 FLAG" is required in an ADD operation, and optional in MODIFY and DISPLAY operations.

FIELD: **PU2 FLAG** (Call Pick-up Flag Two)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Pick-up is allowed  
 DNY - Pick-up is denied

This field defines whether an agent's call may be picked up by another agent in the same group, and is required for an ADD operation and optional for MODIFY and DISPLAY operations.

FIELD: **COS** (Agent Class of Service)  
 TYPE: Decimal  
 FORMAT: 2 digits  
 VALUE: 1 to 64  
 RANGE: Allowed for DISPLAY operation only  
 LOOP: Not allowed

This field should be defined when a new agent is added, by using the ADD operation. If no value is entered in this field, then the default value of 64 will be assigned.

FIELD: **DRL** (Agent Destination Restriction Level)  
 TYPE: Decimal  
 FORMAT: 2 digits  
 VALUE: 1 to 16 (or up to maximum system configuration)  
 RANGE: Allowed for DISPLAY operation only  
 LOOP: Not allowed

This field should be defined when a new agent is added, by using the ADD operation. If no value is entered in this field, then the default value of 16 will be assigned.

FIELD: **FRLP** (Agent Facility Restriction Level Profile)  
 TYPE: Decimal  
 FORMAT: 2 digits  
 VALUE: 1 to 32 (or up to maximum system configuration)  
 RANGE: Allowed for DISPLAY operation only  
 LOOP: Not allowed

## ACD AGENT ASSIGNMENT (CMD 356)

**PERCEPTION 4000****COMMANDS**

This field should be defined when a new agent is added, by using the ADD operation. If no value is entered in this field, then the default value of 32 will be assigned.

FIELD: **QPL** (Agent Queue Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 RANGE: Allowed for DISPLAY operation only  
 LOOP: Not allowed

This field should be defined when a new agent is added, by using the ADD operation. If no value is entered in this field, then the default value of 8 will be assigned.

FIELD: **NAME** (Agent Name)  
 TYPE: Text  
 FORMAT: 0 to 9 ASCII characters (including spaces and punctuation)

Each agent ID code may be assigned an agent name which appears on displays and reports. This field is required for an ADD operation, and is optional for MODIFY and DISPLAY operations.

FIELD: **INDEX** (Index Number)  
 TYPE: Decimal (Output only)  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 128

This 'output only' field appears in a DISPLAY operation only and is for the convenience of the M&A supervisor. The number acts as a counter, its value does not indicate an actual position or set any priority for data entered in this command.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C35600 - Agent identification code is already assigned
- C35601 - Agent identification code is not found
- C35602 - Number of agents exceeds the configured allowance
- C35603 - Group number's LCPU number is not defined
- C35604 - Group number is not defined
- C35605 - No agent identification code was assigned in ACD group
- C35606 - Agent identification code is still login
- C35607 - Cannot delete group; member(s) are still login

## ACD GROUP ASSIGNMENT (CMD 355)

The Automatic Call Distribution (ACD) Group Assignment command defines various ACD group attributes as well as provides the system with information about group and queue size so memory may be allocated. Up to 32 ACD groups may be assigned in the system.

Command Keyword:       ACD\_GROUP\_ASSIGN

Category Name:         Station

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described as follows:

#### ADD

|  |
|--|
| GRP#   PILOT DN   NAME   SUP PWD   GRP MON   MAX TERMS   MAX CALLS |
|--|

◀.....req.....▶ | opt | ◀.....req.....▶

This operation adds an ACD group and specifies several group attributes. Except for the "NAME", all of the attributes are required when defining a new group. The "PILOT DN" is a unique number which must not conflict with any other numbering plan in the system. Looping is permitted for the "GRP#" field since the ADD operation has the 'interactive mode' feature. Various fields can be entered interactively.

#### DELETE

|      |
|------|
| GRP# |
|------|

| req |

This operation deletes an ACD group which has already been defined in the system. The "GRP#" field is required. After entering this field, a confirmation message is given before deletion of the group. Looping is allowed for this field. A DELETE operation is available only when the group is in after-shift mode.

ACD GROUP ASSIGNMENT (CMD 355)

MODIFY

|  |
|--|
| GRP#   PILOT DN   NAME   SUP PWD   GRP MON   MAX TERMS   MAX CALLS |
| req   ←.....opt.....→  |

This operation modifies the attributes of an ACD group. "GRP#" is the only required field and can be specified in ranges. The remaining fields are optional and do not accept range input. At least one of the optional fields must be entered to perform a MODIFY operation.

DISPLAY

|  |
|--|
| GRP#   PILOT DN   NAME   SUP PWD   GRP MON   MAX TERMS   MAX CALLS |
| ←.....opt.....→  |

This operation displays ACD group attributes that are related to this command. Looping is allowed in the "GRP#" field and ranges are permitted in the "MAX TERMS" and "MAX CALLS" fields. If a <TAB> is entered in the first field, all of the ACD groups along with their attributes are displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **GRP#** (ACD Group Number)
- TYPE:            Decimal
- FORMAT:         1 or 2 digits
- VALUE:           1 to 32 (or to the maximum system configuration)
- LOOP:            Allowed in ADD, DELETE, and DISPLAY operations

This field defines the ACD group number and is required for ADD, DELETE, and MODIFY operations. Values are from 1 to 32. If a <TAB> is entered for this field in a DISPLAY operation, the existing table of Group Numbers displays.

When assigning ACD group numbers, it is important to note the relationship between these numbers and the PERCEPTION 4000 System's Local Central Processing Units (LCPUs). The correct assignment of these numbers will help ensure that ACD calls are not dropped when a system is equipped with redundant processing and a system switchover occurs.

ACD agent stations are installed in the system via the Station Assignment command (CMD 330). After a station has been installed, it has an identifying equipment number (e.g., 40108), indicating the Modular Line/Trunk Unit (4), the card slot (01), and the circuit (08) to which it is assigned. A station's assigned equipment number determines the LCPU (1 ~ 3) which controls it, since each LCPU in the system controls specific Modular Line/Trunk Units (shelves). This relationship is detailed in the following table:

## ACD GROUP ASSIGNMENT (CMD 355)

**PERCEPTION 4000****COMMANDS**

| LCPU(X) | Modular Line/Trunk Units (Shelves) Controlled by LCPU(X) |
|---------|--|
| 1       | 1 ~ 4  |
| 2       | 5 ~ 8  |
| 3       | 9 ~ 10   |

The number of LCPUs used in a system determines how various ACD groups are supported. Each agent station must be assigned to an ACD group that is supported by the agent station's own LCPU. The agent station's equipment number (identifying shelf number) must correlate with its supportive LCPU and its assigned agent group number. The relationship between LCPUs, ACD groups, and shelves is as follows:

| System Size   | LCPU1<br>Shelves Supported:<br>1 ~ 4   | LCPU2<br>Shelves Supported:<br>5 ~ 8  | LCPU3<br>Shelves Supported:<br>9 ~ 10  |
|---------------|--|---|--|
| 1 LCPU System | ACD Groups Supported:<br>1 ~ 32<br>(All groups are supported by LCPU1)                                   |   |  |
| 2 LCPU System | ACD Groups Supported:<br>1<br>3<br>5<br>7<br>↓<br>31<br>(All odd-numbered groups are supported by LCPU2) | ACD Groups Supported:<br>2<br>4<br>6<br>8<br>↓<br>32<br>(All even-numbered groups are supported by LCPU2) |  |
| 3 LCPU System | ACD Groups Supported:<br>1<br>4<br>7<br>10<br>13<br>16<br>19<br>22<br>25<br>28<br>31                     | ACD Groups Supported:<br>2<br>5<br>8<br>11<br>14<br>17<br>20<br>23<br>26<br>29<br>32                      | ACD Groups Supported:<br>3<br>6<br>9<br>12<br>15<br>18<br>21<br>24<br>27<br>30 |

## ACD GROUP ASSIGNMENT (CMD 355)

**PERCEPTION 4000****COMMANDS**

The following three examples should help illustrate the relationship between LCPUs, ACD groups, and agent station equipment numbers (shelves).

- EXAMPLE 1:**
- Agent station's equipment number = 40108
  - Number of LCPUs in system = 1
  - (Station is supported by LCPU1)
  - Assign agent station to any ACD group 1 ~ 32.
- EXAMPLE 2:**
- Agent station's equipment number = 40108
  - Number of LCPUs in system = 2
  - (Station is supported by LCPU1)
  - Assign agent station to any odd-numbered ACD group 1 ~ 31.
- EXAMPLE 3:**
- Agent station's equipment number = 40108
  - Number of LCPUs in system = 3
  - (Station is supported by LCPU1)
  - Assign agent station to ACD group number 1, 4, 7, 10, 13, 16, 19, 22, 25, 28, or 31.

FIELD: **PILOT DN** (Pilot Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 LOOP: Not allowed  
 RANGE: Not allowed

The ACD group pilot number is defined with this field. This is the only entry point into the ACD group. The number must not conflict with other numbers and access codes in the system's numbering plan, and must not have a physical device counterpart.

FIELD: **NAME** (Group Name)  
 TYPE: Text  
 FORMAT: 0 to 9 ASCII characters

An optional group name may be assigned to each ACD group. This name is displayed by the internal calling party (if display equipped) and may be up to nine alphanumeric ASCII characters in length. Embedded spaces are allowed.

FIELD: **SUP PWD** (Supervisor Password)  
 TYPE: Dialing Digits  
 FORMAT: 1 to 8 digits  
 VALUE: 0 to 99999999  
 LOOP: Not allowed  
 RANGE: Not allowed

Each ACD group may be configured with an ACD supervisor. Generally, the supervisor monitors and assists agents via his/her telephone. The "SUP PWD" field defines the password the supervisor must enter when logging into the ACD group.



FIELD:       **GRP MON** (Supervisor Intergroup Monitor Flag)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   YES - Supervisor intergroup monitor feature enabled  
               NO  - Supervisor intergroup monitor feature disabled

A supervisor is allowed to monitor agents in other groups. This capability provides the supervisor with a listen-only path. An optional low warning tone can be provided to the agent-side of the call only if defined so in the system database (refer to the System Option Flag Assignment command, CMD 408).

FIELD:       **MAX TERMS** (Maximum Number of Agent Terminals)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 64 (or to the maximum system configuration)  
 LOOP:       Not allowed  
 RANGE:      Allowed in a DISPLAY operation only

This field, along with the next field (MAX CALLS), allocates memory for the ACD group. The "MAX TERMS" field sets the upper limit for the number of agents that belong to the group.

FIELD:       **MAX CALLS** (Maximum Number of Calls Handled Simultaneously)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 100  
 LOOP:       Not allowed  
 RANGE:      Allowed in a DISPLAY operation only

This field defines the number of calls that may be handled by a group (including queued, ringing, and connected calls).

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C35500 - ACD Group is already defined
- C35501 - ACD Group is not defined
- C35502 - Pilot directory number conflicts with another DN or access code
- C35503 - Check value of maximum calls
- C35504 - Not enough free LDNs
- C35505 - Number of active calls exceeds allowable maximum
- C35506 - Some agents are still active/login; wait and try again later
- C35507 - Agent(s) are login but in unavailable mode; try again later
- C35508 - Supervisor password digits can only be 0 - 9
- C35509 - Check input in fields 2 through 7
- D35510 - Add customer group DB failed in LCPU
- D35511 - Change password failed in LCPU
- D35512 - Change monitor flag failed in LCPU
- D35513 - Change maximum terminal failed in LCPU

ACD GROUP ASSIGNMENT (CMD 355)

**PERCEPTION 4000**

**COMMANDS**

- D35514 - Add group/supervisor LDN failed in LCPU
- D35515 - Not enough space to add agent LDNs in LCPU
- D35516 - Write pilot DN failed in LCPU
- D35517 - Write group to LCPU mapping failed in LCPU
- D35518 - Remove agent LDN failed in LCPU
- D35519 - Remove pilot DN failed in LCPU
- C35520 - Supervisor is still active/logged in
- C35521 - Supervisor/Agents are still active/logged in

**COMMENTS**

A DELETE operation in this command removes all data input through the ACD Agent Assignment command (CMD 356) and the ACD Group Parameter Assignment command (CMD 357).

**RELATED COMMANDS**

- ACD Agent Assignment (CMD 356)
- ACD Group Parameter Assignment (CMD 357)
- Authorization Code Assignment (CMD 349)
- Internal Call Alternate Routing Assignment (CMD 374)
- Station Hunting Assignment (CMD 342)
- System Option Flag Assignment (CMD 408)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)

## ACD GROUP PARAMETER ASSIGNMENT (CMD 357)

The ACD Group Parameter Assignment command provides numerous ACD group-related information to the system.

Command Keyword:       ACD\_PARAMETERS

Category Name:           Station

### PREREQUISITE COMMAND

ACD Group Assignment (355)

If data is entered in the "DAY DEST" and/or "NIT DEST" fields, then an appropriate command may be required for assignment of the ACD group, UCD group, or voice directory number:

- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)
- Station Hunting Assignment (CMD 342)
- UCD Group Assignment (CMD 354)

If data is entered in the "AP#" field, the following command are required:

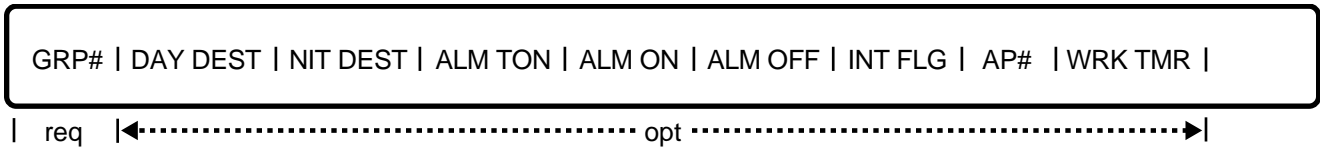
- Announcement Pattern Assignment (CMD 353)
- Miscellaneous Device Assignment (CMD 400)

### OPERATIONS

Available operations:   MODIFY  
                          DISPLAY

The function and required data fields for each operation are described as follows:

#### MODIFY



This operation modifies the attributes of the specified ACD group. "GRP#" is a required field, while all remaining fields are optional.



## ACD GROUP PARAMETER ASSIGNMENT (CMD 357)

**PERCEPTION 4000****COMMANDS**

the "ALM TON" field. When set to **YES**, an audible alarm goes off when a certain queue size is exceeded. In addition, the LED associated with the supervisor's **<ALARM>** flexible feature key lights up when an alarm condition occurs. Pressing the **<ALARM>** key disables the audible alarm, but continues to display the LED indication until the queue size drops below a lower threshold setting. If the audible alarm is not shut off by the supervisor, the alarm would continue until the lower threshold was met. If this field is set to **NO**, the LED indication is still provided by the system.

FIELD: **ALM ON** (Queue-size Threshold to Turn the Alarm On)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 100  
 DEFAULT: 0

This field determines the upper threshold which must be passed to cause an alarm. The value entered (1 to 100) indicates the number of calls waiting in queue that will cause an alarm condition. Note that this field must not exceed the value entered in the "MAX CALLS" field in the ACD Group Assignment command (CMD 355). The "ALM ON" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **ALM OFF** (Queue-size Threshold to Turn the Alarm Off)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 100  
 DEFAULT: 0

This field sets the lower threshold which must be met to turn off the queue-size alarm. The value entered must be low enough as to not allow the alarm to be enabled and disabled quickly on a continuing basis. Call holding time, work time, and the number of agents should be configured when determining the alarm threshold levels. The "ALM OFF" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **INT FLG** (Internal Call Restriction Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 DEFAULT: ALW

Keywords: ALW - Internal calls are allowed to the ACD group  
 DNY - Internal calls are denied to the ACD group

This flag determines whether internal calls and internal call transfers are permitted to a given ACD group. If set to **DNY**, only direct trunk calls or those calls transferred by the attendant are allowed to enter the ACD group.

FIELD: **AP#** (Announcement Pattern Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 50  
 DEFAULT: 1

## ACD GROUP PARAMETER ASSIGNMENT (CMD 357)

**PERCEPTION 4000****COMMANDS**

This field defines which announcement pattern will be used by this ACD group for calls which are being held in queue (refer to the Announcement Pattern Assignment command, CMD 353). The pattern defines what announcements, music, etc. are presented to a caller waiting in queue for the next available ACD agent.

FIELD:           **WRK TMR** (After Call Work Timer)  
TYPE:            Decimal  
FORMAT:          1 to 3 digits  
VALUE:           0 to 255 (seconds)  
DEFAULT:         0

This field assigns the number of seconds the system waits immediately following the end of an ACD call before presenting another waiting call to the ACD agent. By holding the next call, the system provides the agent with free time to fill out forms and perform paperwork associated with each call. During this period the agent is unavailable for calls. This period is referred to as 'work time'. If work time is not desired, this timer should be set to zero.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C35700 - Check ACD group number
- C35701 - Check day time overflow destination
- C35702 - Check night time overflow destination
- C35703 - Alarm-on Q-size exceeds the allowable maximum
- C35704 - Alarm-off Q-size exceeds the allowable maximum
- C35705 - Alarm-on value should be greater than Alarm-off value
- C35706 - Announcement pattern number is not defined
- C35707 - Announcement pattern is not for ACD use

**RELATED COMMANDS**

- Miscellaneous Device Assignment (CMD 400)
- Station Feature Key Assignment (CMD 331)

## ACD STATUS DISPLAY AND REMOTE LOGOUT (CMD 358)

**PERCEPTION 4000****COMMANDS****ACD STATUS DISPLAY AND REMOTE LOGOUT (CMD 358)**

The ACD Status Display and Remote Logout command allows an ACD supervisor to display logged-in information about one or more ACD agents or ACD supervisors. Logged-in agent information that is displayed includes the agent's name, identification code, ACD group number, logged-in location (the prime directory number and station equipment number of the utilized station), key method (dedicated or traveling), and current status (idle, busy, or logout pending). Logged-in supervisor information includes the supervisor's ACD group number, prime directory number, station location, and current status.

This command also allows an ACD supervisor to remotely logout one or more ACD agents. The remote logout operation can be performed regardless of the agent's current status. If remote logout is performed while an agent is busy, then the logout will not take effect (is pending) until the busy status ends.

Command Keyword:           ACD\_DISP\_LOGOUT

Category Name:             ACD

**PREREQUISITE COMMANDS**

ACD Group Assignment (CMD 355)

ACD Agent Assignment (CMD 356)

**OPERATIONS**

Available operations:

DISPLAY  
LOGOUT

The function and required data fields for each operation are described as follows:

DISPLAY

|   |
|---|
| TYPE   GRP#   AGT   NAME   PRM DN   EQUIP#   DED/TRA   STATUS |
|---|

| req | ←.....opt .....▶|

This operation is used to display logged-in information about one or more ACD agents or ACD supervisors. Display information applies only to logged-in agents and supervisors; no data is displayed for those agents/supervisors who are not currently logged in. The "TYPE" field in this operation is required. If a <TAB> is entered in the "GRP" field, information regarding all logged-in agents and or supervisors will be displayed.

## ACD STATUS DISPLAY AND REMOTE LOGOUT (CMD 358)

**PERCEPTION 4000****COMMANDS**

## LOGOUT

GRP# | AGT# |

|◀..... req .....▶|

This operation is used to logout a specific ACD agent or all agents contained in an ACD group. If the keyword **ALL** is entered in the "AGT" field, all agents in the specified group will be logged out.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

|         |                              |      |                                   |
|---------|------------------------------|------|-----------------------------------|
| FIELD:  | <b>TYPE</b>                  |      |                                   |
| TYPE:   | Keyword                      |      |                                   |
| FORMAT: | Preassigned ASCII characters |      |                                   |
|         | Keyword:                     | AGT  | - Agent type                      |
|         |                              | SUP  | - Supervisor type                 |
|         |                              | BOTH | - Both agent and supervisor types |

The "TYPE" field is used for DISPLAY operation only. By entering the appropriate keyword, all currently logged-in ACD agents and/or supervisors will be displayed.

|         |  |
|---------|--|
| FIELD:  | <b>GRP#</b> (ACD Group Number)         |
| TYPE:   | Decimal                                |
| FORMAT: | 1 or 2 digits                          |
| VALUE:  | 1 - 32 (based on system configuration) |
| RANGE:  | Not allowed                            |
| LOOP:   | Not Allowed                            |

The "GRP#" field is required to perform ACD agent or supervisor logout operation.

|         |  |
|---------|--|
| FIELD:  | <b>AGT</b> (Agent Identification Code) |
| TYPE:   | Decimal                                |
| FORMAT: | 3 digits                               |
| VALUE:  | 000 - 999                              |
| RANGE:  | Not allowed                            |
| LOOP:   | Allowed in DISPLAY operation only      |

The "AGT" field is required to perform remote logout. In the DISPLAY operation, the "AGT" field does not apply when "TYPE" is assigned as supervisor (**SUP**).

|         |  |
|---------|--|
| FIELD:  | <b>NAME</b>  |
| TYPE:   | Text   |
| FORMAT: | 0 - 9 characters in length, including spaces and punctuation |

The "NAME" field applies only in the DISPLAY operation when "TYPE" has been assigned as agent (**AGT**). This



## ACD STATUS DISPLAY AND REMOTE LOGOUT (CMD 358)

**PERCEPTION 4000****COMMANDS**

field does not apply when "TYPE" has been assigned as supervisor (**SUP**).

FIELD:           **PRM DN** (Prime Directory Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 5 digits  
 VALUE:          000 - 999  
 RANGE:          Allowed in DISPLAY operation only

This field indicates the prime directory number of the station at which the ACD agent or ACD supervisor is currently logged in.

FIELD:           **EQUIP#** (Equipment number of station at which agent/supervisor is logged in)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          10101 to 101416  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not Allowed

This field indicates the equipment number of the station at which that ACD agent or ACD supervisor is currently logged in. The first one or two digits of the displayed equipment number represent the shelf number; the second two digits represent the card slot number; and the last two digits represent the circuit number on the utilized circuit card.

FIELD:           **DED/TRA** (Key Method—Dedicated/Traveling)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keyword:        DED   -     Agent used the LOG key on the station to login  
                   TRA   -     Agent used the prime line key and the ACD access code to login

This field does not apply in the DISPLAY operation when "TYPE" has been assigned as supervisor (**SUP**).

FIELD:           **STATUS** (Logged-in Status)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keyword:        IDLE   -     Available or unavailable  
                   BUSY   -     Talking or in After Call Work mode  
                   PEND   -     Logout Pending

This field indicates the current status of the logged-in ACD agent or supervisor station.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

C35801 - Group number is not defined  
 C35802 - Agent identification number is not found  
 C35803 - Agent has logged out  
 C35804 - Supervisor is not found

ACD STATUS DISPLAY AND REMOTE LOGOUT (CMD 358)

**PERCEPTION 4000**

**COMMANDS**

- C35805 - Failed to read prime directory number
- C35806 - Failed to read device number
- C35807 - Failed to read supervisor LDN
- C35808 - Failed to read supervisor STN
- C35809 - Agent is not logged in

## ALARM/FAULT DISPLAY AND RESET (CMD 160)

The Alarm/Fault Display and Reset command displays the current status of alarm indicators (red, green and orange LEDs) on the system panel, displays the current and/or previous system fault/alarm peg count buffer(s), and resets the peg count buffer. The status of these alarm indicators is either ON or OFF which indicates whether or not the system is operating under normal conditions. Faults that cause an alarm to be turned ON can be viewed by this command. Alarm indicators can also be reset with this command.

The system maintains two buffers, one for the current time period and the other for the previous period. These buffers keep peg counts of the faults on every severity level, up to the maximum of 32 levels. An alarm turns ON if a corresponding fault is encountered. Once an alarm is turned ON, it remains ON until the fault is recovered or a switch-over operation takes place.

Command Keyword:       ALM/FAULT\_DISP/RESET

Category Name:         Fault

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   ALARMS  
                              RESET  
                              COUNTS

The function and required data fields for each operation are described in this section.

#### ALARMS

|  |
|--|
| NORM   MJ-1   MJ-2   MN   RMC   TEMP   PFT |
|--|

|◀..... output only .....▶|

This operation displays the current status of seven alarm indicators on the system panel. The status of these alarm indicators is either ON or OFF indicating whether or not the system is operating under normal conditions. No input data is required; all of the fields are used for output only. A **<TAB>** must be entered to activate this operation.

#### RESET

A RESET operation performs the following functions:

- Time stamps the current system date and time indicating the end of the current peg-count buffer.
- Copies the current buffer to the previous buffer.

ALARM/FAULT DISPLAY AND RESET (CMD 160)

- Clears the current buffer.
- Time stamps the current buffer indicating the beginning of a new peg-count.

No header is provided, and no input data is required. However, a <TAB> must be entered to activate this operation.

COUNTS

|  |
|--|
| BUFFER   START DATE   START TIME   END DATE   END TIME   SEV LEVEL   PEG COUNT |
| opt   ◀.....output only .....▶   |

This operation displays the current and/or previous system fault/alarm peg count buffer(s). Input of the Current/Previous Buffer field is optional. When both buffers are to be displayed, enter a <TAB> and/or press <RETURN>. To display a specific buffer, enter a valid keyword (**CUR** for the Current buffer and **PRE** for the Previous buffer). The remaining fields are output fields only.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **NORM** (System Operation Status)  
 TYPE:        Output only (either ON or OFF)  
 LED:         Green

When this alarm is ON, the system is operating under normal conditions. When OFF, the system is in off-line mode, or a fault has occurred.

FIELD:       **MJ-1** (Major Alarm One)  
 TYPE:        Output only (either ON or OFF)  
 LED:         Red

If this alarm is ON, it indicates that a critical external condition has occurred. If a Power, Emergency, or Temperature alarm turns ON, this indicator turns ON also.

FIELD:       **MJ-2** (Major Alarm Two)  
 TYPE:        Output only (either ON or OFF)  
 LED:         Red

This indicator turns ON if one of the following internal conditions occurs:

1. System bus timeout occurred due to the MCPU, LCPU, TSW, or disk access.
2. Watchdog timer timeout.
3. System switchover.
4. MCPU clock failure.
5. Main processor (MCPU) failure.
6. Main memory failure.

## ALARM/FAULT DISPLAY AND RESET (CMD 160)

**PERCEPTION 4000****COMMANDS**

7. Time switch failure.
8. Tone generator failure.
9. Memory space (buffer) is full and unavailable for a time period exceeding the predefined time threshold (e.g. exceeded N minutes).
10. Shelf processor failure.
11. Shelf memory failure.
12. Data highway failure.
13. More than 33% of the TDM hiways on two shelves have failed.
14. Initial system load or automatic reload failed.
15. Handshake between the MCPU and LCPU failed.
16. Download from MCPU to LCPU failed.
17. Any kind of disk failure.
18. Communications between the MCPU and miscellaneous cards failed.
19. Application processor failure.

FIELD: **MN** (Minor Alarm)  
 TYPE: Output only (either ON or OFF)  
 LED: Orange

This indicator turns ON whenever one of the following conditions is encountered:

1. Control component failure - due to one of the following conditions:
  - Performance of any service device is reduced below 66% of its full capacity.
  - Downloading or handshaking from a PC to the terminal controller has failed.
  - PC initialization has failed.
  - Less than 33% of the TDM hiways on two shelves have failed.
  - Memory allocation for working space (e.g. buffer or queue) has failed.
  - Inconsistent data is detected.
  - An unexpected interruption has occurred.
  - The stack overflowed (e.g. caused by endless recursive procedure calls).
  - An attempt to access memory through an invalid pointer has occurred (caused by incorrect pointer allocation or release).
  - An attempt was made to execute an invalid instruction.
2. Peripheral device failure - due to one of the following conditions:
  - More than 8% but less than 33% of installed equipment of the same type on one shelf has failed.
  - More than 8% but less than 33% of installed equipment of the same type on the whole system has failed.
3. Miscellaneous failure - due to one of the following conditions:
  - An L/T shelf power unit has failed.
  - A disk file is full (e.g. fault log file or change log file).

FIELD: **RMC** (Remote Supervision Status)  
 TYPE: Output only (either ON or OFF)  
 LED: Green

## ALARM/FAULT DISPLAY AND RESET (CMD 160)

**PERCEPTION 4000****COMMANDS**

When the "RMC" indicator turns ON, it indicates that local/remote maintenance work is in progress.

FIELD: **TEMP** (Temperature Failure Alarm)  
 TYPE: Output only (either ON or OFF)  
 LED: Red

If the cabinet temperature passes the system shut-down threshold, this indicator turns ON.

FIELD: **PFT** (Power Failure Transfer Alarm)  
 TYPE: Output only (either ON or OFF)  
 LED: Red

When the "PFT" indicator is OFF, the power supply is operating under normal conditions. If a power failure transfer occurs, this indicator turns ON.

FIELD: **BUFFER**  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CUR - Current Buffer  
 PRE - Previous Buffer

The Current/Previous Buffer field is an optional field. By entering a <TAB> and/or <RETURN>, both the current and the previous buffers display.

FIELD: **START DATE/TIME** (Date/Time to Start Counting)  
 TYPE: Decimal (Output only)  
 FORMAT: MMDDYY HHMM  
 VALUE: MM is the month from 01 to 12  
 DD is the day from 01 to 31  
 YY is the year from 00 to 99  
 HH is the hour from 00 to 23  
 MM is the minute from 00 to 59

These fields contain the date and time of the system clock showing the time the specified buffer began updating its peg-count counters. Data in these fields is used to compare with data in the "END DATE/TIME" fields to determine the duration of the associated buffer. The "START DATE/TIME" of the Previous Buffer is either IPL time (Initial Program Load) or the date and time of the previous RESET operation. On the Current Buffer, however, this data is the date and time of the most recent RESET operation. Refer to Figure 3-1 later in this section.

FIELD: **END DATE/TIME** (Date/Time to Stop Counting)  
 TYPE: Decimal (Output only)  
 FORMAT: MMDDYY HHMM  
 VALUE: MM is the month from 01 to 12  
 DD is the day from 01 to 31  
 YY is the year from 00 to 99  
 HH is the hour from 00 to 23  
 MM is the minute from 00 to 59

These fields contain the date and time of the system clock showing the time the specified buffer updated its peg-count counters. Data in these fields is used to compare with data in the "START DATE/TIME" fields to determine the duration of the associated buffer. The "END DATE/TIME" of the Previous Buffer is the date and time of the most recent RESET operation. On the Current Buffer, this data is the system's current date and time. Refer to Figure 3-1 later in this section.

FIELD: **SEV LEVEL** (Fault Severity Level)  
 TYPE: Decimal (Output only)  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32

This field, which appears in a COUNTS operation only, contains the specific severity level index number associated with each counter in the "PEG COUNT" field, and is generated automatically by the system. Refer to the Severity Level Table later in this section.

FIELD: **PEG COUNT** (Count of the Corresponding Fault)  
 TYPE: Decimal (Output only)

Data in this field corresponds to the data in the "SEV LEVEL" field. When faults are encountered in any of the 32 Fault Severity Levels, those faults are counted and displayed in the "PEG COUNT" field opposite the corresponding level in the "SEV LEVEL" field. For example, if seven faults are encountered at Severity Level 3, then the "SEV LEVEL" output would be 3 and the "PEG COUNT" output would be 7.

Data in this field increments by one automatically when a fault is detected in the current peg-count buffer and the associated alarm LED turns ON. This field appears in a COUNTS operation only.

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C16000 - Database recovered
- C16001 - Alarm display request failed
- C16002 - Alarm reset request failed
- C16003 - Alarm reset timeout

## COMMENTS

Alarm indicators on the on-premises alarm panel are turned ON whenever a corresponding alarm on the local alarm panel is ON.

### Severity Level Table

There are 32 severity levels reserved for fault messages generated by the corresponding module (maintenance, diagnostic, operational tasks). A specific severity level number is included in each error message to describe the error category. Following is a list of the severity levels.

## ALARM/FAULT DISPLAY AND RESET (CMD 160)

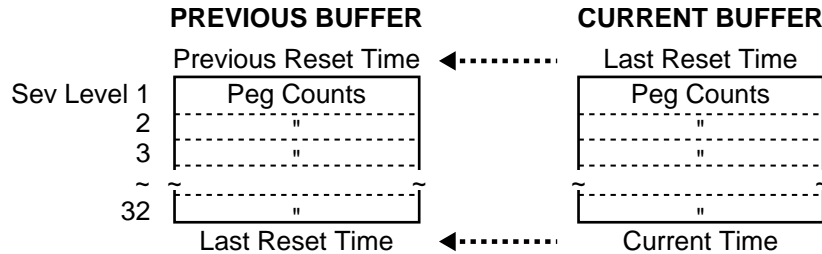
**PERCEPTION 4000****COMMANDS**

| Severity Level | Definition  |
|----------------|---|
| 001            | MJ alarm turns ON when failure occurs once and executes EMA (emergency procedures)                            |
| 002            | MN alarm turns ON when failure occurs once and executes EMA   |
| 003            | MJ alarm turns ON when failure occurs 5 times and executes EMA  |
| 004            | MJ alarm turns ON when failure occurs 30 times and executes EMA   |
| 005            | MJ alarm turns ON when failure occurs 40 times and executes EMA   |
| 006            | MJ alarm turns ON when failure occurs 50 times and executes EMA   |
| 007            | MJ alarm turns ON when failure occurs 0x7fff times and executes EMA   |
| 008            | MJ alarm turns ON when failure occurs once; if it happens 5 times, then DDCC becomes out of service           |
| 009            | Both MJ and MN alarms turn ON when failure occurs once  |
| 010            | MJ alarm turns ON when failure occurs once  |
| 011            | Not defined   |
| :              | :   |
| 015            | Not defined   |
| 016            | MN alarm turns ON when failure occurs once and executes EMA if this failure occurs 5 times continually        |
| 017            | MN alarm turns ON when failure occurs once and executes EMA if this failure occurs N times continually        |
| 018            | MN alarm turns ON when failure occurs once and MJ alarm turns ON if this failure occurs 100 times continually |
| 019            | MN alarm turns ON when failure occurs once; if it happens 5 times, then DDCC becomes out of service           |
| 020            | MN alarm turns ON when failure occurs once  |
| 021            | Not defined   |
| :              | :   |
| 028            | Not defined   |
| 029            | Only failure message  |
| 030            | Information message for result of some process  |
| 031            | Not defined   |
| 032            | Not defined   |

**Reset Time and Fault Peg Count Buffers Format**

When the system first comes up (power-on), two buffers are allocated to keep the peg count of the faults whenever they are detected. Detected faults are kept in the current peg count buffer at the appropriate severity level, and transferred to the previous peg count buffer whenever the fault reset is initiated by a RESET operation. There are 32 counters associated with 32 severity levels per buffer. A RESET operation moves the current fault peg count buffer to the previous buffer, clears the current buffer, and updates the RESET date and time for later use to determine the duration of the Current/Previous buffer period.





**Figure 3-1**  
**Previous/Current Buffers**

**NOTES:**

1. Both the "Last" and the "Previous Reset Time" fields are the system clock at IPL time (Initial Program Load) when the system first powers-up. All counters associated with the 32 severity levels, in both the Current and Previous buffers, are initialized to 0.
2. When a fault is detected, the corresponding counter of the Current buffer updates (increments by 1).
3. Whenever a RESET is performed, by this command, the Current buffer moves to the Previous buffer. The "Last Reset Time" and the system's Current Time become the "Previous Reset Time" and "Last Reset Time" of the Previous buffer respectively.

**Peg-Count Counter Size/Overflow**

When a peg-count counter overflows, the buffer retains the highest count number for each severity level, the overflow flag ignores any additional counts, and the Fault Log/Print feature receives a warning message.

ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

### ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

The Automatic Call Distribution (ACD) and Uniform Call Distribution (UCD) features both have queuing capabilities which offer the caller the chance to hear recorded announcements and Music-on-Hold a number of times at preset intervals and in different sequences. This capability can be tailored for each group, thereby allowing announcements to provide caller-sensitive material. The Announcement Pattern Assignment command (CMD 353) provides the means by which these patterns may be defined and applied to all desired groups.

Command Keyword:       ANNOUNCEMENT\_PAT

Category Name:         Station

#### PREREQUISITE COMMAND

Miscellaneous Device Assignment (CMD 400)

#### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|     |      |       |      |     |       |      |     |       |      |     |     |
|-----|------|-------|------|-----|-------|------|-----|-------|------|-----|-----|
|     | RING | ANN 1 | INT1 | #1  | ANN 2 | INT2 | #2  | ANN 3 | INT3 | #3  | 2&3 |
| AP# | TIME | NUM   | TIME | CYC | NUM   | TIME | CYC | NUM   | TIME | CYC | CYC |

| req | opt | req | ◀..... opt .....▶

This operation adds announcement patterns to the system. "AP#" and "ANN 1 NUM" are required fields.

#### DELETE

|     |
|-----|
| AP# |
|-----|

| req |

This operation deletes an announcement pattern from the system. "AP#" is a required field.

## ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|     |      |       |      |     |       |      |     |       |      |     |     |
|-----|------|-------|------|-----|-------|------|-----|-------|------|-----|-----|
|     | RING | ANN 1 | INT1 | #1  | ANN 2 | INT2 | #2  | ANN 3 | INT3 | #3  | 2&3 |
| AP# | TIME | NUM   | TIME | CYC | NUM   | TIME | CYC | NUM   | TIME | CYC | CYC |

| req | ◀..... opt .....▶

This operation modifies the attributes of an announcement pattern. "AP#" is a required field, while the remaining fields are optional.

## DISPLAY

|     |      |       |      |     |       |      |     |       |      |     |     |
|-----|------|-------|------|-----|-------|------|-----|-------|------|-----|-----|
|     | RING | ANN 1 | INT1 | #1  | ANN 2 | INT2 | #2  | ANN 3 | INT3 | #3  | 2&3 |
| AP# | TIME | NUM   | TIME | CYC | NUM   | TIME | CYC | NUM   | TIME | CYC | CYC |

◀..... opt .....▶

This operation displays announcement patterns. All of the fields are optional. "AP#" is a loop field. If a <TAB> is entered in this field, all announcement patterns are displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **AP#** (Announcement Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:           1 to 50  
 RANGES:         Not allowed  
 LOOP:            Allowed in a DISPLAY operation only

The system supports up to 50 announcement patterns. The pattern number acts as an index which provides linkage to ACD and UCD groups (refer to the ACD Group Parameter Assignment command - CMD 357, and the UCD Group Assignment command - CMD 354).

FIELD:           **RING TIME** (Length of the Ring)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:           1 to 60 (seconds)  
 RANGE:           Not allowed  
 LOOP:            Not allowed

The "RING TIME" is the length of time the caller receives ringback tone before an announcement plays.

## ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

**PERCEPTION 4000****COMMANDS**

FIELD:           **ANN 1 NUM** (Announcement Number 1)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters  
 RANGE:          Not allowed  
 LOOP:           Not allowed

Keywords:        AM01 ~ AM64

This field, required in an ADD operation, defines which announcement machine will be used to provide the first announcement.

FIELD:           **INT1 TIME** (Interval of Time Between Announcements)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 120 (seconds)  
 RANGE:          Not allowed  
 LOOP:           Not allowed

This field defines in seconds how long Music-on-Hold (or quiet tone if Music-on-Hold is not provided by the system) plays before cycling back to Announcement Number 1 or proceeding on to Announcement Number 2. The "INT1 TIME" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD:           **#1 CYC** (Number of Cycles of Announcement Number 1)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          0 to 9 or 00 to 09  
 RANGE:          Not allowed  
 LOOP:           Not allowed

This field defines the number of times Announcement Number 1 is cycled. The maximum definable number of cycles is nine. If this field is set to zero, the system cycles Announcement Number 1 and the Interval of Time Between Announcements indefinitely. If this field is left undefined, the announcement plays only one time.

If a definite number of cycles is defined and there is no definition for Announcement Number 2, the system continues to keep the caller connected to Music-on-Hold or quiet tone. The "#1 CYC" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD:           **ANN 2 NUM** (Announcement Number 2)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:        AM01 ~ AM64

This field defines which announcement machine will be used to provide the second announcement, and may only be defined if "ANN 1 NUM" is defined. The "ANN 2 NUM" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation. If a delete is performed in this field, the next two fields (INT2 TIME and #2 CYC) must also be deleted.

## ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

**PERCEPTION 4000****COMMANDS**

FIELD:           **INT2 TIME** (Interval of Time Between Announcements)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 120 (seconds)  
 RANGE:          Not allowed  
 LOOP:           Not allowed

This field defines in seconds how long Music-on-Hold (or quiet tone if Music-on-Hold is not provided by the system) plays before cycling back to Announcement Number 2 or proceeding on to Announcement Number 3. The "INT2 TIME" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD:           **#2 CYC** (Number of Cycles of Announcement Number 2)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          0 to 9 or 00 to 09  
 RANGE:          Not allowed  
 LOOP:           Not allowed

This field defines the number of times Announcement Number 2 is cycled. The maximum definable number of cycles is nine. If this field is set to zero, the system cycles Announcement Number 2 and the Interval of Time Between Announcements (INT2 TIME) indefinitely. If this field is left undefined, the announcement plays only one time.

If a definite number of cycles is defined and there is no definition for Announcement Number 3, the system continues to keep the caller connected to Music-on-Hold or quiet tone. The "#2 CYC" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD:           **ANN 3 NUM** (Announcement Number 3)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:    AM01 ~ AM64

This field defines which announcement machine will be used to provide the third announcement, and may only be defined if "ANN 2 NUM" was defined. The "ANN 3 NUM" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

If this field is not entered or is to be deleted, the "INT3 TIME" and "#3 CYC" fields must not be entered.

FIELD:           **INT3 TIME** (Interval of Time Between Announcements)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 120 (seconds)  
 RANGE:          Not allowed  
 LOOP:           Not allowed

## ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

**PERCEPTION 4000****COMMANDS**

This field defines in seconds how long Music-on-Hold (or quiet tone if Music-on-Hold is not provided by the system) plays before cycling back to Announcement Number 3 or proceeding to cycle both announcement numbers 2 and 3 again. The "INT3 TIME" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **#3 CYC** (Number of Cycles of Announcement Number 3)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 0 to 9 or 00 to 09  
 RANGE: Not allowed  
 LOOP: Not allowed

This field defines the number of times Announcement Number 3 is cycled. The maximum definable number of cycles is nine. If this field is set to zero, the system cycles Announcement Number 3 and the Interval of Time Between Announcements (INT3 TIME) indefinitely. If this field is left undefined, the announcement plays only one time. The "#3 CYC" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **2&3 CYC** (Cycle Announcements 2 and 3)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 0 to 9 or 00 to 09  
 RANGE: Not allowed  
 LOOP: Not allowed

Providing "#3 CYC" is not set for infinite cycling, this field cycles announcements 2 and 3 (including their respective music times and cycling instructions) for up to nine times or indefinitely. If set to a defined cycle, music or quiet tone is provided indefinitely upon cycle completion. The announcements are cycled infinitely if zero is entered.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C35300 - Pattern already exists
- C35301 - Pattern is not defined
- C35302 - Input announcement 2
- C35303 - Input announcement 3
- C35304 - Enter both announcements
- C35305 - Deletion of announcement 2 is not allowed
- C35306 - Deletion of announcement 3 is not allowed
- C35307 - Delete all information regarding announcement 2
- C35308 - Delete all information regarding announcement 3
- C35309 - Announcement number is not defined
- C35310 - Memory for patterns is at system maximum
- C35311 - Number of announcement machines exceeds system maximum

## ANNOUNCEMENT PATTERN ASSIGNMENT (CMD 353)

**PERCEPTION 4000****COMMANDS****COMMENTS**

If the Announcement 1 cycle is set to zero, the remaining fields regarding Announcements 2 and 3 are ignored if entered.

If the Announcement 2 cycle is set to zero, the remaining fields regarding Announcement 3 are ignored if entered.

If the "2&3 CYC" field is entered, both the "ANN 2 NUM" and "ANN 3 NUM" fields must be entered or in the database.

If Announcement 2 or 3 is to be deleted, the interval time and cycle for that announcement must be deleted also.

Announcement 2 cannot be entered unless Announcement 1 is entered or already exists in the database.

Announcement 3 cannot be entered unless Announcement 2 is entered or already exists in the database.

If music is to be presented to the caller with no announcements, only the first "INT TIME" field needs to be filled in and the "#1 CYC" field set to infinite cycling.

**RELATED COMMANDS**

- ACD Group Assignment (CMD 355)
- ACD Group Parameter Assignment (CMD 357)
- DID/CCSA Trunk Group Assignment (CMD 314)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)
- UCD Group Assignment (CMD 354)

AREA CODE RESTRICTION TABLES (CMD 341)

**AREA CODE RESTRICTION TABLES (CMD 341)**

The Area Code Restriction Tables contain a list of area codes which may be allowed or denied depending on the specified "TYPE". This is the means by which calling into entire area codes can be controlled. Area code tables are defined for each Trunk Restriction Group/Destination Restriction Level combination (but not when either "TRGN" or "DRL" = 1). Trunk Restriction Groups and DRLs are assigned through the Trunk Group Assignment command (CMD 310).

Each table may be specified as an **ALW** (allow) or **DNY** (deny) table. This way the fewest number of codes can be entered and accomplish the same purpose. For example, if all area codes but two are to be allowed, it is easier to build a deny table and enter only two codes versus building an allow table and entering all but two codes.

Command Keyword: AC\_RESTRICT

Category Name: Restrict

**PREREQUISITE COMMANDS**

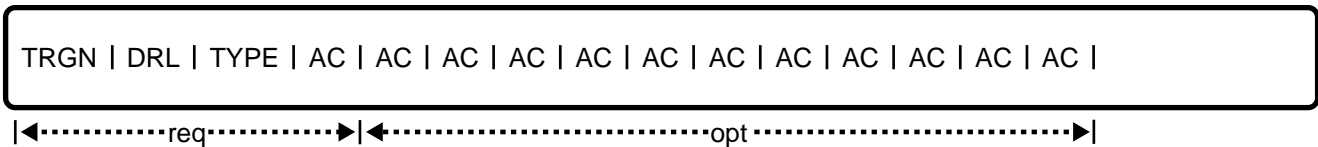
There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
 DELETE  
 DISPLAY

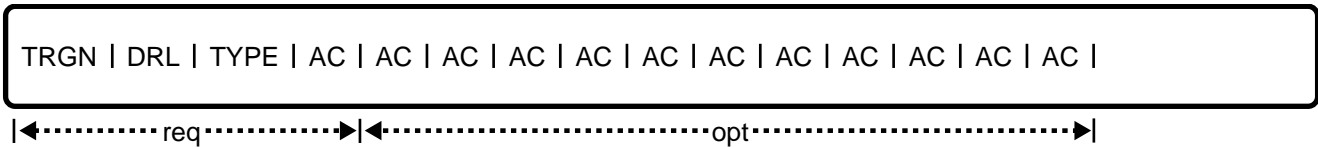
The function and required data fields for each operation are described in this section.

ADD



This operation adds area code(s) to the Area Code Restriction table for a specific TRGN/DRL. Ranges are permitted in the "TRGN" and "DRL" fields. The "TYPE" field can be changed only when all of the area codes are deleted from the table.

DELETE





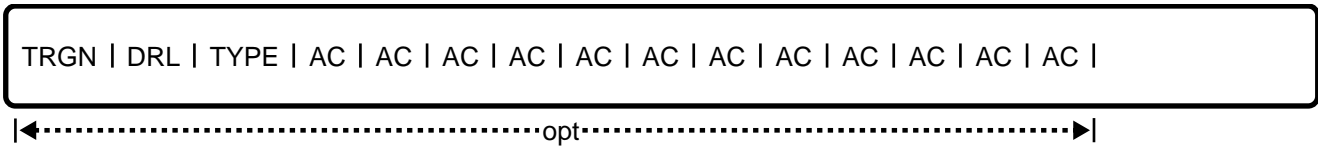
AREA CODE RESTRICTION TABLES (CMD 341)

**PERCEPTION 4000**

**COMMANDS**

This operation deletes area code(s) from the Area Code Restriction table. Ranges are permitted in the "TRGN" (or "DRL") field when deleting the same area code in several Area Code Restriction tables.

DISPLAY



This operation displays one or more Area Code Restriction tables. Input for all of the fields is optional. If no data is entered in any of these fields, all of the Area Code Restriction tables in the system display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TRGN** (Trunk Restriction Group Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 2 to 8 (or to the maximum number of trunk groups configured in the system)  
 LOOP: Primary loop field, and allowed in all of the operations.

This field assigns restriction numbers to trunk groups. Note that Trunk Restriction Group 1 is defined as "unrestricted" and recommended for TIE trunk groups and trunk interfaces to peripheral auxiliary equipment.

FIELD: **DRL** (Destination Restriction Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 2 to 16 (or to the maximum system configuration)  
 LOOP: Secondary loop field, and allowed in all of the operations.

When "DRL" is 1, all calls are allowed regardless of which Trunk Restriction Group Number (TRGN) is in use. Therefore, there is no Area/Office Code Restriction table associated with it. Refer to the Destination Restriction Level Assignment command (CMD 337) for information on DRLs.

FIELD: **TYPE** (Area Code Restriction Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Listed area codes are allowed  
 DNY - Listed area codes are denied

The "TYPE" field defines whether area codes are accessible to the caller. If **ALW** (or **DNY**) is entered, calls to the area codes listed are allowed (or denied).

AREA CODE RESTRICTION TABLES (CMD 341)

**PERCEPTION 4000**

**COMMANDS**

FIELD: **AC** (Area Code)  
TYPE: Decimal with fixed length  
FORMAT: 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
VALUE: 200 to 919  
RANGE: Allowed in a DISPLAY operation

Area codes entered in this field are either allowed or denied depending on the keyword entered in the "TYPE" field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34100 - Check trunk restriction group number range
- C34101 - Area code(s), Ni..Nj are already in table
- C34102 - Area code(s), Ni..Nj are not in table

**RELATED COMMAND**

Area/Office Code Restriction Tables (CMD 339)

## AREA/OFFICE CODE RESTRICTION TABLES (CMD 339)

**PERCEPTION 4000****COMMANDS****AREA/OFFICE CODE RESTRICTION TABLES (CMD 339)**

The Area/Office Code Restriction Tables contain a list of area and office codes which may be allowed or denied depending on the specified "TYPE". This is the means by which local and long distance dialing (according to North American Dialing Plan conventions) can be controlled. Area code/office code tables are defined for each Trunk Restriction Group/ Destination Restriction Level combination (but not when either "TRGN" or "DRL" = 1). Trunk Restriction Groups and DRLs are assigned through the Trunk Group Assignment command (CMD 310).

Each table may be specified as an **ALW** (allow) or **DNY** (deny) table. This way the fewest number of codes can be entered and accomplish the same purpose. For example, if all office codes but two are to be allowed, it is easier to build a deny table and enter only two codes versus building an allow table and entering all but two codes.

Command Keyword: AC/OC\_RESTRICT\_TBL

Category Name: Restrict

**PREREQUISITE COMMANDS**

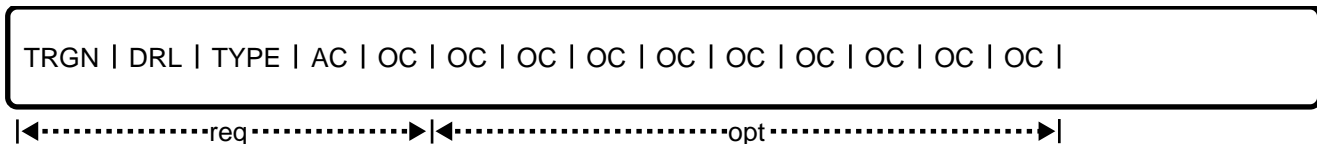
There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described as follows:

ADD



This operation adds area and office codes to the Area/Office Code Restriction table. Ranges are permitted both in the "TRGN" and "DRL" fields when adding the same area and office codes for several DRLs in a trunk restriction group, or in the same DRL for several trunk restriction groups. Ranges are also permitted in the "OC" fields.

## AREA/OFFICE CODE RESTRICTION TABLES (CMD 339)

**PERCEPTION 4000****COMMANDS**

## DELETE

|  |
|--|
| TRGN   DRL   TYPE   AC   OC   OC   OC   OC   OC   OC   OC   OC   OC   OC |
|--|

|◀.....req.....▶|◀.....opt.....▶|

This operation deletes area/office codes from the Area/Office Code Restriction table. Ranges are permitted when deleting a number of area and office codes. When using ranges, a confirmation is requested before deleting any of the codes.

## DISPLAY

|  |
|--|
| TRGN   DRL   TYPE   AC   OC   OC   OC   OC   OC   OC   OC   OC   OC   OC |
|--|

|◀.....opt.....▶|

This operation displays the Area/Office Code Restriction table. If no data is entered in any of the optional fields, all of the Area/Office Code Restriction tables are displayed. Ranges are permitted in all fields except the "TYPE" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TRGN** (Trunk Restriction Group number)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          2 to 8 (or to the maximum number of trunk groups configured in the system)  
 LOOP:           Primary loop field, and allowed in all of the operations

This field assigns restriction numbers to trunk groups. Note that Trunk Restriction Group 1 is defined as "unrestricted", and is recommended for TIE trunk groups and trunk interfaces to peripheral auxiliary equipment.

FIELD:           **DRL** (Destination Restriction Level)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          2 to 16 (or to the maximum system configuration)  
 LOOP:           Secondary loop field, and allowed in all of the operations

When "DRL" is 1, all calls are allowed regardless of what trunk restriction group number (TRGN) is used. Refer to the Destination Restriction Level Assignment command (CMD 337) for information on DRLs.

FIELD:           **TYPE** (Office Code Restriction Type)  
 TYPE:            Keyword

## AREA/OFFICE CODE RESTRICTION TABLES (CMD 339)

**PERCEPTION 4000****COMMANDS**

FORMAT: Predefined ASCII characters

Keywords: ALW - Allow access to listed office codes  
DNY - Deny access to listed office codes

The "TYPE" field defines whether area codes are accessible to the caller. If the keyword, **ALW** is entered, all of the office codes in this Area/Office Code Restriction table are allowed to be accessed. Otherwise, they are denied.

FIELD: **AC** (Area Code)  
TYPE: Decimal with fixed length  
FORMAT: 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
VALUE: 200 to 919  
LOOP: Third loop field, and allowed in all of the operations

Each area code may have some office codes allowed and some denied. The Area/Office Code Restriction table can be represented by a list of either allowed or denied codes. For example, if most office codes in an area code are allowed, with a few exceptions, it is easier to enter a listing of denied ("TYPE" = **DNY**) office codes, rather than inputting a listing of allowed ("TYPE" = **ALW**) office codes.

FIELD: **OC** (Office Code)  
TYPE: Decimal with fixed length  
FORMAT: 3 digits in the form NXX (Where N = 2 to 9, and X = 0 to 9)  
VALUE: 200 to 999  
RANGE: Allowed in a DISPLAY operation  
SCOPE: Allowed in ADD and DELETE operations

Office codes entered in this field are either allowed or denied depending on the keyword entered in the "TYPE" field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33900 - Check trunk restriction group number range
- C33901 - Area code/office code table undefined
- C33902 - Office code NNN is incorrect
- I33903 - Area code/office code table is full
- C33904 - Dash should not be used in last scope field N
- C33905 - Missing data in scope type field of field N

**RELATED COMMAND**

Area Code Restriction Tables (CMD 341)

## ATTENDANT FEATURE KEY ASSIGNMENT (CMD 371)

**PERCEPTION 4000****COMMANDS****ATTENDANT FEATURE KEY ASSIGNMENT (CMD 371)**

Each attendant console in the system has twenty-four flexible feature keys which may be defined for an array of various functions. This command (CMD 371) modifies or displays the definitions of those feature keys for one or more specified attendant consoles.

Although all types of keys may be assigned to the attendant console, it is important to note that unless the attendant has access to certain trunk groups or features in their Class of Service definition (CMD 334), use of the key may be denied by call processing once the key is assigned to the console.

Command Keyword:       ATT\_KEY\_ASSIGN

Category Name:           Attendant

**PREREQUISITE COMMANDS**

Attendant Group Assignment (CMD 372)

(The Attendant Group Assignment command is required if ICI keys are assigned to the attendant console.)

Attendant Position Assignment (CMD 370)

Numbering Plan Assignment (CMD 330)

**OPERATIONS**

Available operations:   MODIFY  
                              DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

ATT DN | POS | DEF 1 | DEF 2 |

◀.....req.....▶ | opt |

This operation modifies the definitions of feature keys for one or more attendants. Ranges are not permitted in any of the fields. A MODIFY operation may be performed only when the attendant is in the "position busy" mode.

**DISPLAY**

ATT DN | POS | DEF 1 | DEF 2 |

| req | ◀.....opt.....▶

## ATTENDANT FEATURE KEY ASSIGNMENT (CMD 371)

**PERCEPTION 4000****COMMANDS**

This operation displays the definitions of feature keys of one or more specified attendants. Entering a directory number in the "ATT DN" field lists previously defined or undefined feature keys on the attendant console. For viewing a specific key, the key position must be entered. Ranges are permitted in the "POS" field only.

**PARAMETERS**

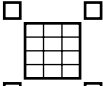

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **ATT DN** (Attendant Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGE:      Not allowed  
 LOOP:       Not allowed

Each attendant has a unique directory number which must not conflict with any other numbering plan in the system.

FIELD:       **POS** (Key Assignment Position Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 24  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Allowed

Each feature must be assigned to a key position. Following is a matrix showing the flexible feature key positions on the attendant console.

|    |    |    |   |    |    |    |
|----|----|----|---|----|----|----|
| 1  | 2  | 3  |   | 13 | 14 | 15 |
| 4  | 5  | 6  |  | 16 | 17 | 18 |
| 7  | 8  | 9  |   | 19 | 20 | 21 |
| 10 | 11 | 12 |  | 22 | 23 | 24 |

FIELD:       **DEF 1** (Key Assignment Definition 1)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   ADL    - Autodial  
               AEE    - Attendant End-to-End Signaling  
               BLF    - BLF (Busy Lamp Flag) Control  
               CC     - Code Calling Access  
               CCMM   - Code Calling Retrieval (Meet Me)  
               CONF   - Eight Party Conference  
               HELP   - HELP key  
               ICI     - Incoming Call Identification  
               LND     - Last Number Redial  
               OVF     - Attendant Overflow Control  
               PR\_A    - Attendant Parked Page Retrieval  
               PR\_S    - Voice Paging Retrieval-System

## ATTENDANT FEATURE KEY ASSIGNMENT (CMD 371)

**PERCEPTION 4000****COMMANDS**

PRGM - Program Mode Key  
 SYSD - System Speed Dialing  
 SPLT - Split  
 SPVS - Supervise  
 TGAC - Trunk Group Access Code  
 UNA - Night Answer Access  
 UND - Undefined  
 VP\_E - Voice Paging Access-Emergency  
 VP\_S - Voice Paging Access-System  
 VP\_Z - Voice Paging Access-Zone  
 VPMM - Voice Paging Retrieval-Zone (Meet Me)

This field provides the feature key definition. A total of 10 feature keys may be assigned as Incoming Call Identification (ICI) keys. ICI keys are defined at the attendant group level through the Attendant Group Assignment command (CMD 372).

The <**SPLT**>, <**CONF**>, <**VP\_Z**> (if an <**ADL**> key is used) and <**SPVS**> keys should be assigned; otherwise, attendant traffic handling is not at its fullest potential.

The number of keys assigned to multiple key features (Autodial and Trunk Group Access Code) is limited to 20.

FIELD: **DEF 2** (Key Assignment Definition 2)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUES: 1 to 10 (ICI keys)  
 0 to 9 or 00 to 99 (CC, CCMM, VP\_Z)  
 1 to 3 digits (TGAC)  
 RANGE: Not allowed

Secondary key definition information is provided in this field, such as trunk access codes for trunk group keys or zone numbers for code calls or voice paging. These definitions must comply with the postdialing digit length as defined in the Numbering Plan Assignment command (CMD 300).

Data in this field is required only if the **CC**, **CCMM**, **VP\_Z**, **TGAC**, or **ICI** keyword is entered in the "DEF 1" field. The relationship between the data in the "DEF 1" field and this field is described as follows:

| <u>"DEF 1" Field</u> | <u>"DEF 2" Field</u>               |
|----------------------|------------------------------------|
| CC                   | 0-9 or 00-99    Zone Number*       |
| CCMM                 | 0-9 or 00-99    Zone Number*       |
| VP_Z                 | 0-9 or 00-99    Zone Number*       |
| TGAC                 | 1 to 3 digits    Trunk Access Code |
| ICI                  | 1-10            ICI Number         |

\* If assigning a general access key, the zone number is optional and must be manually input by the attendant after pressing the feature key. Valid ranges for zone numbers depend on the length of the "LEN PD1" setting in the Numbering Plan Assignment command (CMD 300). If



## ATTENDANT FEATURE KEY ASSIGNMENT (CMD 371)

**PERCEPTION 4000****COMMANDS**

"LEN PD1" is set to **1**, ranges are from 0 to 9; if set to **2**, ranges are from 00 to 99.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C37100 - Invalid attendant directory number
- C37101 - An access code is required in DEF 2 field
- C37102 - Invalid incoming call number
- C37103 - Attendant directory number has not been defined
- C37104 - Invalid zone number
- C37105 - DEF 1 and DEF 2 exceeds the allowable maximum
- C37106 - DEF 1 and DEF 2 have already been defined
- C37107 - The specified incoming call key does not exist
- C37108 - DEF 1 and DEF 2 do not match
- C37109 - Autodial keys exceed the allowable maximum
- C37110 - An ICI category number is required in DEF 2 field

ATTENDANT GROUP ASSIGNMENT (CMD 372)

**ATTENDANT GROUP ASSIGNMENT (CMD 372)**

The PERCEPTION 4000 supports up to 30 attendant groups. Any number of attendants may belong to an attendant group (up to the system maximum number of consoles); however, an attendant position may belong to only one attendant group. The attendant group must be defined prior to assigning individual attendant consoles and their related information. Attendant positions are assigned using the Attendant Position Assignment command (CMD 370)

Attendants belonging to an attendant group share the call load presented to the group via the attendant group directory number. Incoming call priority for all attendants in the group is defined at the attendant group level.

Command Keyword:       ATT\_GROUP\_ASSIGN

Category Name:         Attendant

**PREREQUISITE COMMAND**

Night Bell Assignment (CMD 405)       (If data is entered in the "OVF DEST" field, this command is required.)

**OPERATIONS**

Available operations:   ADD  
                           DELETE  
                           MODIFY  
                           DISPLAY

The function and required data fields for each operation are described in this section.

ADD

GRP# | ATG DN | NAME | OVF TMR | OVF DEST | ICI NO | ICI CAT | CALLS |

◀.....req.....▶ | opt |   opt .....▶ opt |   opt ...▶ opt |   opt |

This operation creates one or more attendant groups in the PERCEPTION 4000 system. The attendant group number and directory number must be unique. The attendant group directory number must not conflict with any numbering plan in the system. A loop is permitted when adding a number of attendant groups with the same attributes.

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

## DELETE

|               |
|---------------|
| GRP#   ATG DN |
|---------------|

|     |     |     |     |  |
|-----|-----|-----|-----|--|
| req | ... | ▶   | opt |  |
| opt | ◀   | ... | req |  |

This operation removes an attendant group from the PERCEPTION 4000 system. Entering either the attendant group number or attendant directory number is sufficient. All of the attendants in an attendant group must be removed before deleting the group. When the last attendant of an attendant group is removed, the status of that attendant group must be changed accordingly. Looping is permitted when deleting a number of attendant groups, however a confirmation is requested by the system before it deletes each group.

## MODIFY

|  |
|--|
| GRP#   ATG DN   NAME   OVF TMR   OVF DEST   ICI NO   ICI CAT |
|--|

|     |     |     |     |  |     |  |     |       |   |     |  |     |     |   |     |  |
|-----|-----|-----|-----|--|-----|--|-----|-------|---|-----|--|-----|-----|---|-----|--|
| req | ... | ▶   | opt |  | opt |  | opt | ..... | ▶ | opt |  | opt | ... | ▶ | opt |  |
| opt | ◀   | ... | req |  |     |  |     |       |   |     |  |     |     |   |     |  |

This operation changes the attributes of one or more attendant groups. Entering data in either the "GRP#" or the "ATG DN" field is sufficient in a MODIFY operation. If data is entered in both of these fields, and if the "ATG DN" does not match the one in the database, the directory number attributes are not allowed to be changed and the input line is rejected. If this occurs, use the DELETE operation to delete the "ATG DN", then use the ADD operation to enter a new directory number. Looping is permitted when modifying a number of attendant groups.

## DISPLAY

|  |
|--|
| GRP#   ATG DN   NAME   OVF TMR   OVF DEST   ICI NO   ICI CAT   CALLS |
|--|

|   |       |     |       |   |
|---|-------|-----|-------|---|
| ◀ | ..... | opt | ..... | ▶ |
|---|-------|-----|-------|---|

This operation displays the attributes of one or more attendant groups. There are no required input data fields for this operation. If no data is entered into any of these fields, the attributes of all attendant groups in the system display. Looping is permitted in the "GRP#" field, and ranges are permitted in fields that accepts numeric input, such as the "ATG DN" and "OVF DEST" fields, with the exception of the "CALLS" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP#** (Attendant Group Number)  
 TYPE:            Decimal

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

FORMAT: 1 or 2 digits  
 VALUE: 1 to 30  
 RANGE: Not allowed  
 LOOP: Allowed in all operations

This field assigns the attendant group number.

When assigning attendant console group numbers, it is important to note the relationship between these numbers and the PERCEPTION 4000 system's Local Central Processing Units (LCPUs). The correct assignment of these numbers will help ensure that calls to the attendant are not dropped if a redundant system performs a switchover to the standby side.

Attendant consoles are installed in the system via the Attendant Position Assignment command (CMD 370). After an attendant console has been installed, it has an identifying equipment number (e.g., 40108) indicating the Modular Line/Trunk Unit (4), the card slot (01), and the circuit (08) to which it is assigned. A console's assigned equipment number determines the LCPU (1 ~ 3) which controls it, since each LCPU in the system controls specific Modular Line/Trunk Units (shelves):

| LCPU(X) | Modular Line/Trunk Units (Shelves) Controlled by LCPU(X) |
|---------|--|
| 1       | 1 ~ 4  |
| 2       | 5 ~ 8  |
| 3       | 9 ~ 10   |

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

The number of LCPUs in a system determines how many attendant groups can be supported. A 1-LCPU system supports up to ten attendant groups; a 2-LCPU system may have up to 20 attendant groups; and a 3-LCPU system may have up to 30 attendant groups. These attendant groups are allocated among the various LCPUs as follows:

| System Size   | LCPU1<br>Shelves Supported:<br>1 ~ 4  | LCPU2<br>Shelves Supported:<br>5 ~ 8   | LCPU3<br>Shelves Supported:<br>9 ~ 10  |
|---------------|---------------------------------------|--|--|
| 1 LCPU System | Attendant Groups Supported:<br>1 ~ 10 |  |  |
| 2 LCPU System | Attendant Groups Supported:<br>1 ~ 10 | Attendant Groups Supported:<br>11 ~ 20 |  |
| 3 LCPU System | Attendant Groups Supported:<br>1 ~ 10 | Attendant Groups Supported:<br>11 ~ 20 | Attendant Groups Supported:<br>21 ~ 30 |

The following three examples should help illustrate the relationship between LCPUs, attendant groups, and attendant console equipment numbers.

- EXAMPLE 1:**
- Attendant console equipment number: 30203
  - Number of LCPUs in system: 1
  - (Attendant console is supported by LCPU1)
  - Assign attendant console to any attendant group 1 ~ 10.

- EXAMPLE 2:**
- Attendant console equipment number: 60203
  - Number of LCPUs in system: 2
  - (Attendant console is supported by LCPU2)
  - Assign attendant console to any attendant group 11 ~ 20.

- EXAMPLE 3:**
- Attendant console equipment number: 90203
  - Number of LCPUs in system: 3
  - (Attendant console is supported by LCPU3)
  - Assign attendant console to any attendant group 21 ~ 30.

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

FIELD: **ATG DN** (Attendant Group Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation  
 LOOP: Not allowed

Each attendant group must be assigned a unique directory number which does not conflict with other directory numbers or any feature access codes defined in the system numbering plan. This directory number is dialed by system users to receive service from an attendant in the attendant group.

FIELD: **NAME** (Attendant Group Name)  
 TYPE: Text  
 FORMAT: 0 to 9 ASCII characters

The name of the attendant group (up to 9 ASCII characters in length) may be assigned with this field. The name displays on other attendant consoles and display equipped stations when dialing the attendant group directory number. Embedded spaces are allowed in this field.

FIELD: **OVF TMR** (Attendant Overflow Timer)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 5 to 180 (seconds)  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP: Not allowed

Data in this field determines the amount of time a call spends in the attendant call holding area before going to the overflow number. The default value is 32 seconds. The minimum and maximum overflow times are 5 and 180 seconds, respectively. This value may be adjusted in 1 second intervals. If an overflow time is entered in this field, an overflow destination must be entered in the "OVF DEST" field.

FIELD: **OVF DEST** (Overflow Destination)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: BL01 ~ BL64  
 NON - No Overflow Destination

The overflow destination field defines the night bell to which overflow calls are directed. The system supports up to 64 night bells, however overflow calls may be directed to only one night bell per attendant group. The keyword **NON** may be used in a MODIFY operation only.

FIELD: **ICI NO** (ICI Category Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10  
 RANGE: Allowed in a DISPLAY operation only

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

This field and the "ICI CAT" field define incoming call keys. A maximum of 10 ICI categories may be defined for an attendant group. During a MODIFY operation, if a number is assigned in this field, a keyword must be entered in the "ICI CAT" field.

Any ICI key definition may appear on multiple consoles within the same attendant group. These calls allow the attendant to answer the oldest call of a particular ICI category type by pressing the associated ICI key instead of answering the call via the **ANSWER** fixed key. Once the ICI categories are defined in this command, they may be placed on the various attendant consoles using the Attendant Feature Key Assignment command (CMD 371).

FIELD: **ICI CAT** (ICI Category Assignment)  
 TYPE: Keyword / Decimal with Fixed Length  
 FORMAT: Predefined ASCII characters / 3 digits  
 VALUE: 001 to 256

Keywords:   ATT       - Attendant Group Calls  
               DATT      - Directed Attendant Calls  
               EMR1     - Emergency 1  
               EMR2     - Emergency 2  
               EMR3     - Emergency 3  
               EMR4     - Emergency 4  
               ICPT     - Intercepts  
               IPC       - Interposition Calls  
               LHR      - Long Hold Recall  
               NAR      - No Answer Recall

Values:       001~256 - Trunk groups 001~256 (or to the maximum system configuration)

One ICI category is assigned to each ICI key. During a MODIFY operation, whenever an ICI key number is entered in the "ICI NO" field, one of the above keywords must be entered in this field. The same keyword cannot be assigned more than once for another ICI key.

ICI assignment is not required if the attendant group does not wish any attendants to have the ICI answering capability.

FIELD: **CALLS** (Number of Calls Per Attendant)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 2 to 32  
 RANGE: Not allowed  
 LOOP: Not allowed

The "CALLS" field defines the number of calls per attendant allowed in the attendant group call-waiting queue (including talking, parked, and ringing/in-queue calls). The total queue size is dependent on the number of attendants assigned to the same group directory number (set up with the Attendant Position Assignment command, CMD 370), and the number of calls allowed per attendant (CALLS). Note that a call that is being transferred or processed (where two or more parties besides the attendant are involved) counts as one call. The queue size can be calculated as follows:

## ATTENDANT GROUP ASSIGNMENT (CMD 372)

**PERCEPTION 4000****COMMANDS**

Attendant group call-waiting queue size = Number of attendants with the same ATG DN, times the number of calls per attendant (CALLS).

For example, if three attendants are assigned to an ATG DN, and the "CALLS" field is set to **8**, then the queue size is 3 x 8 (for a total of 24 calls waiting in queue). All three attendants in the group share the same queue, since they belong to the same Attendant Group Directory Number. However, each attendant is not restricted to only eight calls; for example, at a given time, if the number of calls in the queue is 20, then each attendant console displays 20 calls waiting.

A **<TAB>** entered in the "CALLS" field during an ADD operation defaults the field to a value of 32 (which is the maximum allowed).

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C37200 - Attendant group number has not been defined
- C37201 - Attendant group number is required
- C37202 - Attendant group DN has not been defined
- C37203 - Attendant group DN has already been defined
- C37204 - Attendant group DN is required
- C37205 - Invalid Attendant group DN
- C37206 - Invalid group name
- C37207 - Overflow timer is required
- C37208 - Invalid overflow timer
- C37209 - Overflow destination is out of range
- C37210 - Overflow destination is required
- C37211 - Invalid overflow destination
- C37212 - Incoming key number is required
- C37213 - Incoming call category has already been defined
- C37214 - Incoming call category is required
- C37215 - Invalid incoming call category
- C37216 - Attendant group number or DN is required
- C37217 - Attendant has already been defined
- C37218 - Attendant group has already been defined
- C37219 - Cannot re-assign a new value in field 8
- I37220 - Warning: Undefined night bell in field #5
- C37221 - Cannot modify attendant group directory number

**RELATED COMMANDS**

- Attendant Feature Key Assignment (CMD 371)
- Attendant Incoming Call Priority Assignment (CMD 373)
- Attendant Position Assignment (CMD 370)
- Internal Call Alternate Routing Assignment (CMD 374)
- Station Assignment (CMD 330)
- Trunk Group Assignment (CMD 310)



ATTENDANT INCOMING CALL PRIORITY ASSIGNMENT (CMD 373)

**PERCEPTION 4000**

**COMMANDS**

**ATTENDANT INCOMING CALL PRIORITY ASSIGNMENT (CMD 373)**

Each attendant group may have up to 18 levels of priority for queuing incoming calls. Each desired priority level may be assigned any number of incoming call categories. Note that assigning all 18 of the priority levels is not necessary. All categories assigned to a given priority level are queued on a first-in/first-out basis within that priority level.

Command Keyword: CALL\_PRIORITY\_ASSIGN

Category Name: Attendant

**PREREQUISITE COMMAND**

Attendant Group Assignment (CMD 372)

**OPERATIONS**

Available operations: ADD  
 DELETE  
 MODIFY  
 DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|  |
|--|
| ATG DN   RECALL   PRIORITY   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT |
| req   opt   req   .....opt.....  |

This operation assigns the recall handling option of an attendant group, and the incoming call categories to different priorities for the specified attendant group. The Attendant Group Directory Number (ATG DN) and the Priority Level (PRIORITY) are required fields, while all other fields are optional.

**DELETE**

|   |
|---|
| ATG DN   PRIORITY   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT   CAT |
| .....req .....opt.....  |

This operation deletes incoming call categories from individual priority levels of the specified attendant group. The Attendant Group Directory Number (ATG DN) and the Priority Level (PRIORITY) are required fields, while all

ATTENDANT INCOMING CALL PRIORITY ASSIGNMENT (CMD 373)

other fields are optional.

MODIFY

ATG DN | RECALL |

◀..... req .....▶

This operation is used to modify the recall type of a specific attendant console. Recalls can be directed either back to the extending individual attendant or to its attendant group.

DISPLAY

ATG DN | RECALL | PRIORITY | CAT | CAT | CAT | CAT | CAT | CAT | CAT | CAT | CAT | CAT |

| req | ◀..... opt .....▶

This operation displays the recall handling option and incoming call categories assigned to each priority level of the specified attendant group. The attendant group directory number is required for this operation, while all other fields are optional. If no data is entered in the optional fields, all incoming call categories and priority levels for the specified attendant group directory number are displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **ATG DN** (Attendant Group Directory Number)
- TYPE:            DN Type
- FORMAT:         1 to 5 digits
- VALUE:           0 to 99999
- RANGE:          Not allowed
- LOOP:            Not allowed

This field selects which attendant group is about to be defined.

- FIELD:           **RECALL** (Recall Handling Option)
- TYPE:            Keyword
- FORMAT:         Predefined ASCII characters

- Keywords:    GRP - Recall to Attendant Group
- IND - Recall to Extending Attendant

The recall handling flag determines how general recalls are handled. These may be defined to recall to the extending attendant only or recall to the attendant group. This field does not concern

## ATTENDANT INCOMING CALL PRIORITY ASSIGNMENT (CMD 373)

**PERCEPTION 4000****COMMANDS**

itself with local physical recalls such as a call recalling from a locked loop. Those calls may only be processed by the attendants themselves.

FIELD: **PRIORITY** (Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 18  
 RANGE: Not allowed  
 LOOP: Not allowed

This field sets the desired priority level for incoming calls. If first-in/first-out queuing is desired, all incoming call categories are placed in priority one, as queuing within each priority level is handled in a first-in/first-out manner.

FIELD: **CAT** (Incoming Call Category)  
 TYPE: Keyword / Decimal with Fixed Length  
 FORMAT: Predefined ASCII characters / 3 digits  
 VALUE: 001 to 256

Keywords: ATT - Attendant Group Calls  
 DATT - Directed Attendant Calls  
 EMR3 - Emergency 3  
 EMR4 - Emergency 4  
 ICPT - Intercepts  
 IPC - Interposition Calls  
 LHR - Long Hold Recall  
 NAR - No Answer Recall

Values: 001~256 - Trunk groups 001~256 (or to the maximum system configuration)

Any trunk group number or categories listed above can be assigned to a given priority level. There is no limit to the number of categories assigned to a given level, however an incoming call category may be assigned to only one priority level.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C37300 - Attendant group DN has not been defined  
 C37301 - XXXX is not defined for priority N  
 C37302 - Category has already been defined  
 C37303 - Too many categories  
 C37304 - Trunk group number has not been defined  
 C37305 - At least one category must be entered

*NOTE: In error message C37301, XXXX = EMR3, EMR4, ATT, DATT, etc.; N = 1 to 18.*

### ATTENDANT PASSWORD ASSIGNMENT (CMD 375)

The PERCEPTION 4000 system supports up to 64 attendant passwords. Each password may be assigned an identification code which identifies the attendant using the console.

Command Keyword:       ATT\_PASSWORDS

Category Name:         Attendant

#### PREREQUISITE COMMANDS

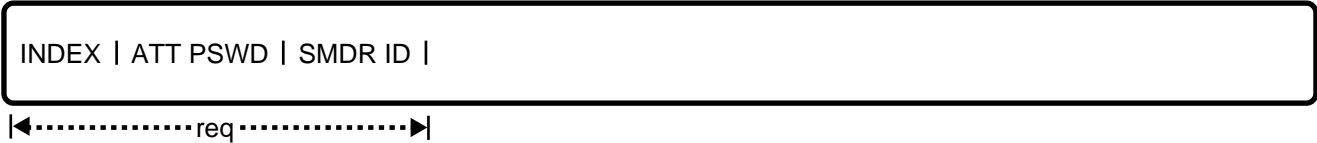
There are no prerequisites for this command.

#### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

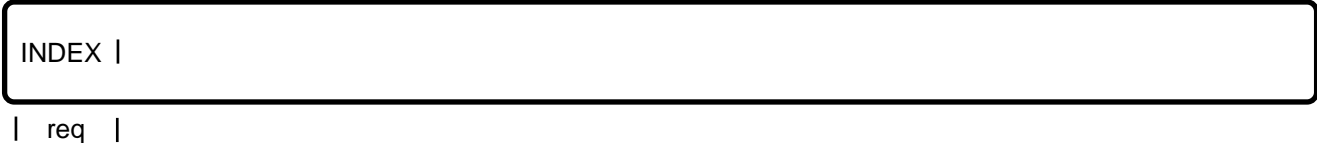
The function and required data fields for each operation are described in this section.

#### ADD



This operation adds an attendant password to the attendant password log table. The "SMDR ID" field is equivalent to an operator ID number, and must be unique for each password in the log table. Ranges and loops are not permitted in this operation.

#### DELETE



This operation deletes one or more attendant passwords from the attendant password log table. Looping is permitted when deleting a group of passwords, though a confirmation is required before each password is deleted.

## ATTENDANT PASSWORD ASSIGNMENT (CMD 375)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|       |  |          |  |         |  |
|-------|--|----------|--|---------|--|
| INDEX |  | ATT PSWD |  | SMDR ID |  |
|-------|--|----------|--|---------|--|

|  |     |  |     |        |     |  |
|--|-----|--|-----|--------|-----|--|
|  | req |  | req | .....▶ | opt |  |
|  |     |  | opt | ◀..... | req |  |

This operation changes an attendant password or SMDR ID code. The SMDR ID code is equivalent to an operator ID number, and must be unique for each password. The "ATT PSWD" or "SMDR ID" field is required, along with the "INDEX" field. Ranges and loops are not permitted.

## DISPLAY

|       |  |          |  |         |  |
|-------|--|----------|--|---------|--|
| INDEX |  | ATT PSWD |  | SMDR ID |  |
|-------|--|----------|--|---------|--|

|  |        |     |        |  |
|--|--------|-----|--------|--|
|  | ◀..... | opt | .....▶ |  |
|--|--------|-----|--------|--|

This operation displays one or more attendant passwords. If no data is entered in any of the fields, all of the attendant passwords in the attendant log table are displayed. Loop fields and ranges are permitted in this operation.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **INDEX** (Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 64  
 LOOP:           Allowed in DELETE and DISPLAY operations

"INDEX" is an entry number in the attendant password log table and is provided for the administrator's convenience. If the index number is deleted, the corresponding attendant password is removed from the table.

FIELD:           **ATT PSWD** (Attendant Password)  
 TYPE:            Text  
 FORMAT:         1 to 8 numerical characters  
 VALUE:          0 to 99999999  
 LOOP:           Not allowed  
 RANGE:          Not allowed

Passwords may be up to eight numerical characters in length. Leading and trailing zeros are significant.

## ATTENDANT PASSWORD ASSIGNMENT (CMD 375)

**PERCEPTION 4000****COMMANDS**

FIELD:           **SMDR ID** (SMDR ID Code)  
TYPE:            Decimal  
FORMAT:         1 or 2 digits  
VALUE:           0 to 99  
LOOP:            Not allowed  
RANGE:           Allowed in ADD, MODIFY, and DISPLAY operations

The SMDR identification code field assigns a one or two digit code to each password so the attendant may be identified on the SMDR call record. This code must be unique for each password; therefore it may not be used for multiple passwords.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C37500 - Index number is out of range
- C37501 - Index number has not been defined
- C37502 - Index number has already been defined
- C37503 - Attendant password has already been defined
- C37504 - Attendant password is required
- C37505 - SMDR ID has already been defined
- C37506 - SMDR ID is required
- C37507 - Attendant password or SMDR ID is required
- C37508 - Invalid attendant password

**RELATED COMMAND**

Attendant Position Assignment (CMD 370)

## ATTENDANT POSITION ASSIGNMENT (CMD 370)

The Attendant Position Assignment command installs or removes an attendant console from the PERCEPTION 4000 system. This command also modifies or displays existing attendant console attributes.

Command Keyword:       ATT\_POSITION\_ASSIGN

Category Name:         Attendant

### PREREQUISITE COMMAND

Attendant Group Assignment (CMD 372)

### OPERATIONS

Available operations:   ADD  
                           DELETE  
                           MODIFY  
                           DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|   |
|---|
| EQUIP #   ATT DN   NAME   GRP DN   COS   DRL   FRLP   QPL   ROB   EMR RNG   PSWD   TYPE   AUD |
| <..... req .....>  opt  <..... req .....>  opt  locked  |

This operation installs one or more attendant consoles in the system. The equipment number and attendant directory number must be unique and must not conflict with any other numbering plan in the system. An attendant group must be created before an attendant can be assigned to it.

#### DELETE

|                                    |
|------------------------------------|
| EQUIP #   ATT DN                   |
| req .....> opt  <br>opt <..... req |

This operation deletes an attendant console from the system. The equipment number or attendant directory number must be entered. Ranges are not permitted. A confirmation is required when removing the last attendant from an attendant group. When the last attendant of an attendant group is removed, the status of that attendant group must be changed accordingly. Deletion of an attendant position will also undefine all feature keys assigned

ATTENDANT POSITION ASSIGNMENT (CMD 370)

to that position through the Attendant Feature Key Assignment command (CMD 371).

|   |
|---|
| EQUIP #   ATT DN   NAME   GRP DN   COS   DRL   FRLP   QPL   ROB   EMR RNG   PSWD   TYPE   AUD |
| <..... req/opt .....> <..... opt .....> locked  |

This operation modifies attributes of one or more existing attendant consoles in the system. Input is required in the "EQUIP #" or the "ATT DN" field. The "ATT DN" and "GRP DN" fields may not be modified. If an entry is made in either of these fields, the entry must match the data in the database. To modify an attendant/attendant group directory number, perform a DELETE operation to delete the original directory number, then use the ADD operation to enter a new number.

DISPLAY

|   |
|---|
| EQUIP #   ATT DN   NAME   GRP DN   COS   DRL   FRLP   QPL   ROB   EMR RNG   PSWD   TYPE   AUD |
| <..... req .....>  opt  <..... req .....>  opt  locked  |

This operation displays attributes of one or more existing attendant consoles. All fields are optional. If no data is entered in any of the fields, the attributes of all of the attendant consoles in the system display. Ranges are permitted in all fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **EQUIP #** (Equipment Number)
- TYPE:           EQ Type
- FORMAT:        5 or 6 digits
- VALUE:         (0)10101 to 101316 \*
- RANGE:         Not allowed
- LOOP:          Allowed in all operations

\* Use the following chart to determine valid ranges for various types of equipment.

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

Each attendant console is assigned to a circuit on a digital line card (DSTI). The "EQUIP #" field defines the location of the connection. The first digit(s) represents the shelf number, the next two digits represent the card slot number, and finally, the last two digits represent the circuit number.



## ATTENDANT POSITION ASSIGNMENT (CMD 370)

**PERCEPTION 4000****COMMANDS**

*NOTE: Attendant consoles may only be installed on DSTI cards configured for 1B operation, and may be used to establish the 1B card configuration if it is the first assignment made to the DSTI card.*

When installing attendant consoles, it is important to note the relationship between the console's assigned equipment number, its controlling LCPU, and its assigned attendant group number. LCPU support is allocated among the PERCEPTION 4000 system's Modular Line/Trunk Units (shelves) as follows:

| LCPU(X) | Modular Line/Trunk Units (Shelves) Controlled by LCPU(X) |
|---------|--|
| 1       | 1 ~ 4  |
| 2       | 5 ~ 8  |
| 3       | 9 ~ 10   |

Those attendant consoles which are to be in the same attendant group need to be assigned to equipment locations that will be supported by the same LCPU. This is because different LCPUs support different attendant groups, as noted in the following table:

| System Size   |                                    | LCPU1<br>Shelves Supported:<br>1 ~ 4  | LCPU2<br>Shelves Supported:<br>5 ~ 8   | LCPU3<br>Shelves Supported:<br>9 ~ 10  |
|---------------|------------------------------------|---------------------------------------|--|--|
| 1 LCPU System | ATTENDANT GROUP SUPPORT ALLOCATION | Attendant Groups Supported:<br>1 ~ 10 |  |  |
| 2 LCPU System |                                    | Attendant Groups Supported:<br>1 ~ 10 | Attendant Groups Supported:<br>11 ~ 20 |  |
| 3 LCPU System |                                    | Attendant Groups Supported:<br>1 ~ 10 | Attendant Groups Supported:<br>11 ~ 20 | Attendant Groups Supported:<br>21 ~ 30 |

## ATTENDANT POSITION ASSIGNMENT (CMD 370)

**PERCEPTION 4000****COMMANDS**

FIELD:       **ATT DN** (Attendant Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

Each attendant console must be assigned a unique directory number so that the attendant can be dialed directly. This number must not conflict with any other directory numbers or feature access codes in the system's numbering plan. The "ATT DN" cannot be modified. To change the directory number, delete the original number, then add a new directory number.

FIELD:       **NAME** (Attendant Name)  
 TYPE:        Text  
 FORMAT:     0 to 9 ASCII characters

This optional field allows you to enter an attendant position name of up to nine ASCII characters. Embedded spaces are allowed. The name entered here displays on the attendant console and on display-equipped stations when individually addressing the attendant.

FIELD:       **GRP DN** (Attendant Group Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

The attendant group directory number is first defined through the Attendant Group Assignment command (CMD 372). This directory number is dialed by system users to receive service from an attendant in the attendant group. The "GRP DN" cannot be modified. To change the directory number, delete the original number, then add a new directory number.

FIELD:       **COS** (Class of Service)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 64  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

The "COS" field determines what features and facilities are available for an attendant console. The COS table is set up with the Class of Service Assignment command (CMD 334).

FIELD:       **DRL** (Destination Restriction Level)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 16 (or to the maximum system configuration)  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

The "DRL" field determines restrictions on outgoing calls. The DRL table is set up with the Destination Restriction Level Assignment command (CMD 337).

## ATTENDANT POSITION ASSIGNMENT (CMD 370)

**PERCEPTION 4000****COMMANDS**

FIELD: **FRLP** (Facility Restriction Level Profile)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP: Not allowed

The "FRLP" field establishes the relationship between the originator's' facility restriction level profile number and the facility restriction levels assigned to various routes within each least cost routing route table. The FRLP table is set up with the Facility Restriction Level Profile Assignment command (CMD 387).

FIELD: **QPL** (Queue Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP: Not allowed

The "QPL" field determines the queuing priority level for outgoing trunk calls when trunk queuing is set to 'priority queuing' with the System Option Flag Assignment command (CMD 408). Commands related to this field include the LCR Routing Table Assignment command (CMD 383) and the LCR Special Routing Assignment command (CMD 384).

FIELD: **ROB** (Ring Over Busy Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Enable Ring Over Busy signal  
 NO - Disable Ring Over Busy signal

This field enables/disables a muted ringing signal at the console when a new call comes in while the attendant is already engaged in processing a call.

FIELD: **EMR RNG** (Emergency Call Ringing Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Enable Emergency Call Ringing  
 NO - Disable Emergency Call Ringing

When an emergency call terminates at the attendant console, the console starts to ring at full volume.

FIELD: **PSWD** (Attendant Password Requirement)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Password required  
 NO - Password not required

## ATTENDANT POSITION ASSIGNMENT (CMD 370)

**PERCEPTION 4000****COMMANDS**

The attendant console may be designated to require the attendant to enter a password prior to the system allowing the console to exit the position busy mode and return to call processing. The "PSWD" field controls whether or not a password is required by the attendant. Attendant passwords are set up through the Attendant Password Assignment command (CMD 375) and must be defined to enable this feature.

FIELD:       **TYPE** (Terminal Type)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters  
 DEFAULT:    EGA

Keywords:    EGA - Enhanced Graphic Adaptor  
               EL  - Electroluminescent Display Unit

This field indicates the type of display terminal that is to be used with the PERCEPTION 4000 attendant console base unit. Either terminal type provides the attendant with the same display information, although a color EGA terminal can provide color displays.

FIELD:       **AUD** (Key Depression Audible Response)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    YES - Enable Audible Key Depression  
               NO  - Disable Audible Key Depression

This field determines whether a confirmation tone is output when a key is pressed. Currently this is a locked field set to "YES."

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C37000 - Equipment number is already assigned to another device
- C37001 - Attendant directory number has already been defined
- C37002 - Invalid attendant directory number
- C37003 - Attendant group directory number has not been defined
- C37004 - Input exceeds the number of possible attendants in the system
- C37005 - The specified attendant does not exist
- C37006 - Equipment number and directory number do not match
- C37007 - Equipment number or attendant directory number is required
- C37008 - Not a DSTI card type
- I37010 - Are you sure you want to remove last attendant from attendant group?
- I37011 - Remove this attendant?
- C37012 - Cannot assign more attendants to attendant groups
- C37013 - Cannot assign more attendants to shelves
- C37014 - Cannot modify attendant group directory number
- C37015 - Cannot modify attendant directory number
- C37016 - Attendant call queue has L calls; try again when it is M or less (L and M are values between 1 and 320)
- C37017 - Attendant call queue has N calls; try again when it is empty (N is a value between 1 and 32)

**RELATED COMMANDS**

Attendant Feature Key Assignment (CMD 371)  
Attendant Incoming Call Priority Assignment (CMD 373)  
Attendant Password Assignment (CMD 375)  
Class of Service Assignment (CMD 334)  
Destination Restriction Level Assignment (CMD 337)  
Facility Restriction Level Profile Assignment (CMD 387)  
Internal Call Alternate Routing Assignment (CMD 374)  
LCR Routing Table Assignment (CMD 383)  
LCR Special Routing Information (CMD 384)  
Station Assignment (CMD 330)  
System Option Flag Assignment (CMD 408)

AUTHORIZATION CODE ASSIGNMENT (CMD 349)

**AUTHORIZATION CODE ASSIGNMENT (CMD 349)**

The PERCEPTION 4000 supports up to 1024 authorization codes. Each authorization code changes the Class of Service definition, Destination Restriction Level, Facility Restriction Level Profile, Queue Priority Level, and answering position from what is in effect for the station, data device, attendant, DISA, or incoming TIE trunk at the time of authorization code registration. The same authorization code can be used on any device which is assigned the above attributes. The Authorization Code Assignment command adds, deletes, modifies, and displays these codes.

Command Keyword: AUTHORIZATION\_CODES

Category Name: Station

**PREREQUISITE COMMANDS**

Numbering Plan Assignment (CMD 300)

If "ANSPOS" is defined, one of the following commands may be needed:

- ACD Group Assignment (CMD 355)
- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)
- Station Hunting Assignment (CMD 342)
- UCD Group Assignment (CMD 354)

**OPERATIONS**

- Available operations:
- ADD
  - DELETE
  - MODIFY
  - DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|           |  |         |  |     |  |     |  |      |  |     |  |        |  |    |  |
|-----------|--|---------|--|-----|--|-----|--|------|--|-----|--|--------|--|----|--|
| AUTH CODE |  | SMDR ID |  | COS |  | DRL |  | FRLP |  | QPL |  | ANSPOS |  | RG |  |
|-----------|--|---------|--|-----|--|-----|--|------|--|-----|--|--------|--|----|--|

| req | opt | ◀.....req.....▶ | opt | locked |

This operation adds authorization codes to the table. All fields, except the "SMDR ID", "ANSPOS", and "S RG" fields, are required.

## AUTHORIZATION CODE ASSIGNMENT (CMD 349)

**PERCEPTION 4000****COMMANDS**

## DELETE

AUTH CODE |

| req |

This operation deletes an authorization code from the table. "AUTH CODE" is a required field.

## MODIFY

AUTH CODE | SMDR ID | COS | DRL | FRLP | QPL | ANS POS | RG |

| req | ◀.....opt.....▶locked |

This operation modifies the attributes of an authorization code. "AUTH CODE" is a required field, while the remaining fields are optional, with the exception of the "S RG" field which is a locked field.

## DISPLAY

INDEX | AUTH CODE | SMDR ID | COS | DRL | FRLP | QPL | ANS POS | RG |

| ◀.....opt.....▶locked |

This operation displays authorization codes and their attributes. Ranges are permitted in all of the fields, except the "SMDR ID" and "S RG" fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **INDEX**  
 TYPE:            Decimal  
 FORMAT:         1 to 4 digits  
 VALUE:           1 to 1024  
 RANGE:           Allowed in a DISPLAY operation only

This field is used in a DISPLAY operation only, and is for the convenience of the M&A supervisor. The PERCEPTION 4000's database does not support indexed authorization codes.

## AUTHORIZATION CODE ASSIGNMENT (CMD 349)

**PERCEPTION 4000****COMMANDS**

FIELD:           **AUTH CODE** (Authorization Code)  
TYPE:            Decimal  
FORMAT:         1 to 8 digits  
VALUE:          1 to 99999999

Each code can be up to eight digits in length (set with the "LEN PD1" field in the Numbering Plan Assignment command, CMD 300). All authorization codes must be of the same length. This field is required for ADD, DELETE, and MODIFY operations.

FIELD:           **SMDR ID** (SMDR Identification Code)  
TYPE:            Text  
FORMAT:         0 to 5 ASCII characters

Each authorization code has a corresponding SMDR identification code to identify which caller used the system without disclosing the actual authorization code, thereby breaching security. SMDR ID codes are optional and are not required.

FIELD:           **COS** (Class of Service)  
TYPE:            Decimal  
FORMAT:         1 or 2 digits  
VALUE:          1 to 64  
RANGE:          Allowed in a DISPLAY operation only

The COS table is set up with the Class of Service Assignment command (CMD 334). This field is required for an ADD operation.

FIELD:           **DRL** (Destination Restriction Level)  
TYPE:            Decimal  
FORMAT:         1 or 2 digits  
VALUE:          1 to 16  
RANGE:          Allowed in a DISPLAY operation only

The DRL table is set up with the Destination Restriction Level Assignment command (CMD 337). This field is required for an ADD operation.

FIELD:           **FRLP** (Facility Restriction Level Profile)  
TYPE:            Decimal  
FORMAT:         1 or 2 digits  
VALUE:          1 to 32  
RANGE:          Allowed in a DISPLAY operation only

The FRLP table is set up with the Facility Restriction Level Profile Assignment command (CMD 387). This field is required for an ADD operation.

FIELD:           **QPL** (Queue Priority Level)  
TYPE:            Decimal  
FORMAT:         1 digit  
VALUE:          1 to 8  
RANGE:          Allowed in a DISPLAY operation only



## AUTHORIZATION CODE ASSIGNMENT (CMD 349)

**PERCEPTION 4000****COMMANDS**

Commands related to this field include the LCR Routing Table Assignment command (CMD 383) and the LCR Special Routing Assignment command (CMD 384). This field is required for an ADD operation.

FIELD:       **ANSPOS** (Answer Position)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGE:      Allowed in a DISPLAY operation only

This field is optional, but when used, data input must be one of the following:

|                 |                  |
|-----------------|------------------|
| Attendant       | Hunt Group Pilot |
| Attendant Group | ACD Pilot        |
| Station         | UCD Pilot        |

FIELD:       **RG** (Voice/Data Restriction Group) (Reserved for future use.)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 16  
 RANGE:      Not allowed

This is a locked field. No input is accepted.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34900 - Invalid dial 0 destination
- C34901 - Invalid authorization code
- C34902 - Authorization code already exists
- C34903 - Authorization code does not exist
- C34904 - Invalid authorization code length
- C34905 - SMDR identification code maximum is 5 characters
- C34906 - Number of authorization codes has reached system maximum.

**RELATED COMMANDS**

Class of Service Assignment (CMD 334)  
 Destination Restriction Level Assignment (CMD 337)  
 Facility Restriction Level Profile Assignment (CMD 387)  
 LCR Routing Table Assignment (CMD 383)  
 LCR Special Routing Assignment (CMD 384)

**AUTODIAL NUMBER DISPLAY (CMD 324)**

**AUTODIAL NUMBER DISPLAY (CMD 324)**

This command displays the current destination numbers of preregistered Autodial keys on telephones and/or add-on modules. In addition, the command allows the system administrator to modify destination numbers on Autodial keys. Note that the Autodial keys are assigned with the Station Feature Key Assignment command (CMD 331).

Command Keyword:        AUTO\_DIAL\_DISP

Category Name:         Station

**PREREQUISITE COMMANDS**

- Station Assignment (CMD 330)
- Station Feature Key Assignment (CMD 331)

**OPERATIONS**

Available operations:    MODIFY  
                              DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**



The MODIFY operation is used to add or change a preregistered destination for a specified Autodial key. All fields are required, except for the "LS DEV" and "LS POS" fields. However, if line selection is programmed into the Autodial sequence, then data is required in both the "LS DEV" and "LS POS" fields.

**DISPLAY**



This operation displays the preregistered destinations of all Autodial keys for a specified prime directory number. The optional fields may be used to provide selected information.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **PRM DN** (Prime Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 99999  
 LOOP: Not allowed

The "PRM DN" field, which is required in both the MODIFY and DISPLAY operations, specifies the prime directory number for the device containing the Autodial keys.

FIELD: **PRM DEV** (Primary Device)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 4000 - PERCEPTION 4000 Telephone  
 EKT - Electronic Telephone  
 DKT - DKT Digital Telephone  
 AD1 - Add-on Module 1 (20-key or 60-key [60-key = three 20-key modules])  
 AD2 - Add-on Module 2 (20-key)

The "PRM DEV" field indicates the primary device containing the Autodial key to be modified or displayed. This field is required in a MODIFY operation, and optional in a DISPLAY operation.

FIELD: **ADL POS** (Autodial Key Position)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (10-key digital and electronic telephones)  
 1 to 20 (20-key digital and electronic telephones, 20-key add-on modules)  
 1 to 60 (60-key add-on module [three 20-key modules])  
 RANGE: Allowed in a DISPLAY operation

This field, which indicates the position of the Autodial key on the "PRM DEV", is required in a MODIFY operation and optional in a DISPLAY operation. The key position is programmed with the Station Feature Key Assignment command (CMD 331). Refer to Figure 3-1a for illustrations of primary device key positions.

FIELD: **LS DEV** (Line Selection Device)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 4000 - PERCEPTION 4000 Digital Telephone  
 EKT - Electronic Telephone  
 DKT - DKT Digital Telephone  
 AD1 - Add-on Module 1 (20-key or 60-key [60-key = three 20-key modules])  
 AD2 - Add-on Module 2 (20-key)

On multi-line telephones and telephones with add-on modules, a secondary line may be used by an Autodial key to place a call. The "LS DEV" field defines the device containing the secondary

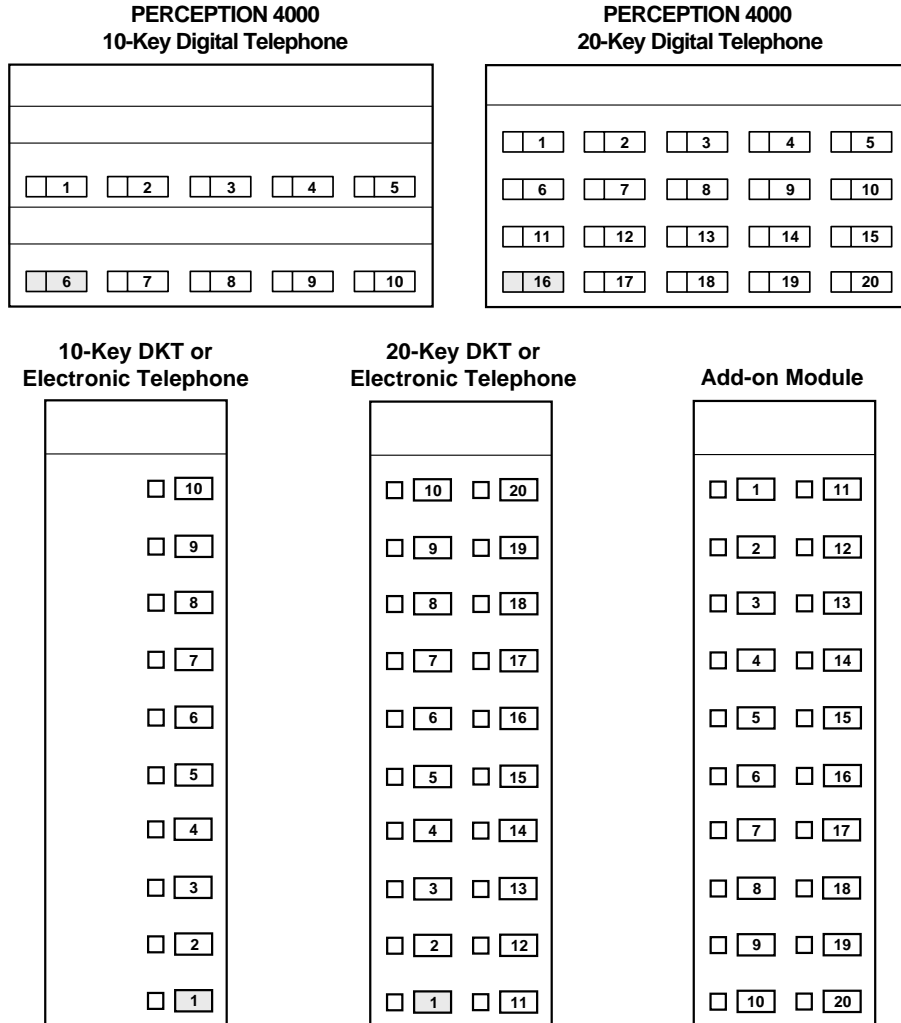
AUTODIAL NUMBER DISPLAY (CMD 324)

**PERCEPTION 4000** **COMMANDS**

line. If there is no line selection programmed into the Autodial sequence associated with the selected ADL key, this field is left blank.

FIELD: **LS POS** (Line Selection Key Position)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (10-key digital and DKT/electronic telephones)  
 1 to 20 (20-key digital and DKT/electronic telephones, 20-key add-on modules)  
 1 to 60 (60-key add-on module [three 20-key modules])  
 RANGE: Not allowed

This field, which is required if an entry is made in the "LS DEV" field, indicates the position of the prime or secondary line key on the line selection device (i.e., PERCEPTION 4000 digital telephone, electronic telephone, or add-on module).



**Figure 3-2**  
**Key Positions**

*NOTE: The shaded areas in the figures designate default prime directory number locations.*

FIELD:           **DESTINATION** (Autodial Destination Digits)  
TYPE:            Dialing Digits  
FORMAT:         1 to 24 digits  
VALUE:          0 to 9  
RANGE:          Not allowed

This field specifies the internal or external destination directory number for the specified Autodial key. Valid destinations include an attendant, station, or off-premises directory number. The "DESTINATION" is required in a MODIFY operation, and optional in a DISPLAY operation.

### **SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32400 - Terminal does not exist in LCPU
- C32401 - Directory number does not exist
- C32402 - Specified key number is not an Autodial key
- C32403 - Specified key number is out of range
- C32404 - Device type does not match with terminal type
- C32405 - Specified line selection is not a line key
- C32406 - Secondary line key position is required
- C32407 - Not an Autodial destination
- C32408 - Line selection device does not match with terminal type

## CALL FORWARDING DESTINATION DISPLAY (CMD 325)

**PERCEPTION 4000****COMMANDS****CALL FORWARDING DESTINATION DISPLAY (CMD 325)**

This command displays all of the Preregistered Call Forwarding (PRCF) keys for a specified prime directory number, or displays only the currently active Call Forwarding key. Additionally, the command specifies the Call Forwarding type and destination numbers assigned to the keys. The command also allows the system administrator to modify the destination numbers of PRCF keys, or activate/deactivate a Call Forwarding feature for a specified prime directory number. Note that Call Forward keys are assigned with the Station Feature Key Assignment command (CMD 331) and programmed by the station user.

Command Keyword:       CALL\_FORWARD\_DISP

Category Name:         Station

**PREREQUISITE COMMANDS**

Station Assignment (CMD 330)  
Station Feature Key Assignment (CMD 331)

**OPERATIONS**

Available operations:   MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

PCF/ACF | PRM DN | DEV | POS | TYPE | DESTINATION |

◀..... req .....▶◀.. req or N/A ..▶◀..... req .....▶

The MODIFY operation adds or changes the destination number of a preregistered key, or activates/deactivates call forwarding for the specified Call Forward feature ("TYPE" field). "DEV" and "POS" field input is required if a Preregistered Call Forwarding key (**PCF**) is selected in the "PCF/ACF" field. When the Active Call Forward key (**ACF**) is selected, then the "DEV" and "POS" fields are "locked;" if data is entered in either field, an error message appears.

**DISPLAY**

PCF/ACF | PRM DN | DEV | POS | TYPE | DESTINATION |

◀..... req .....▶◀..opt or N/A ..▶◀.....output only .....▶

## CALL FORWARDING DESTINATION DISPLAY (CMD 325)

**PERCEPTION 4000****COMMANDS**

This operation displays the preregistered or currently-active Call Forwarding destinations for a specified prime directory number. The optional fields may be used to provide selected information for PRCFs.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **PCF/ACF** (Preregistered/Active Call Forward Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: PCF - Preregistered Call Forward Keys  
 ACF - Active Call Forward Feature

The "PCF/ACF" field indicates the type of information to be modified/displayed: either Preregistered Call Forward (PRCF) keys for the specified prime directory number, or only the currently Active Call Forward feature. This field is required in both the MODIFY and DISPLAY operations.

FIELD: **PRM DN** (Prime Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 99999  
 LOOP: Not allowed

The "PRM DN" field, which is required, specifies the prime directory number of the device containing the Call Forward keys.

FIELD: **DEV** (Preregistered Call Forward Device)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 4000 - PERCEPTION 4000 Telephone  
 EKT - Electronic Telephone  
 DKT - DKT Digital Telephone  
 AD1 - Add-on Module 1 (20-key or 60-key [60-key = three 20-key modules])  
 AD2 - Add-on Module 2 (20-key)

The "DEV" field indicates the device containing the PRCF keys. This field is required in a MODIFY operation when **PCF** is selected in the "PCF/ACF" field. When **ACF** is selected, the "DEV" field is "locked."

FIELD: **POS** (PRCF Key Position Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (10-key digital and electronic telephones)  
 1 to 20 (20-key digital and electronic telephones, 20-key add-on modules)  
 1 to 60 (60-key add-on module [three 20-key modules])  
 RANGE: Allowed in a DISPLAY operation

## CALL FORWARDING DESTINATION DISPLAY (CMD 325)

**PERCEPTION 4000****COMMANDS**

This field indicates the position of the PRCF keys on the "DEV", and is required in a MODIFY operation when **PCF** is selected in the "PCF/ACF" field. When **ACF** is selected, the "POS" field is "locked". Refer to the Station Feature Key Assignment command (CMD 331) for illustrations of primary device key positions.

FIELD: **TYPE** (Call Forward Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CFAC - Call Forward all Calls  
 CFBN - Call Forward Busy/No Answer  
 CFNA - Call Forward No Answer

This field selects the Call Forward type assigned to the prime directory number ("PRM DN" field) for PRCF keys. If **ACF** is entered in the "PCF/ACF" field, this field is used to deactivate the currently active key by entering a **<CONTROL-D>**. In a DISPLAY operation, the "TYPE" field is an 'output only' field.

FIELD: **DESTINATION** (Call Forward Destination Number)  
 TYPE: Dialing Digits  
 FORMAT: 1 to 24 digits  
 VALUE: 0 to 9  
 RANGE: Not allowed

This field specifies the internal or external destination directory number for the specified Call Forward key. Valid destinations include an attendant, station, or off-premises directory number. The "DESTINATION" cannot be deleted; it can only be added or changed.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32500 - Terminal does not exist in LCPU
- C32501 - Directory number does not exist
- C32502 - Specified key number is not a preregistered Call Forward key
- C32503 - Key number is out of range
- C32504 - Device type does not match with terminal type
- C32505 - There is no call forward activation
- C32506 - Device is not required; enter a <TAB> in this field
- C32507 - Position number is not required; enter a <TAB> in this field
- C32508 - Device is required for PCF selection
- C32509 - Position number is required for PCF selection
- C32510 - Destination is not required; enter a <TAB> in this field
- C32511 - Destination is required
- C32512 - Not allowed to delete preregistered call forwarding
- C32513 - Destination does not exist
- C32514 - Directory number is a multiple line number
- C32515 - Directory number is an originate-only station
- C32516 - Terminal is in feature registration mode, please try again



## CALL PICKUP GROUP ASSIGNMENT (CMD 346)

The Call Pickup Group command defines memberships in the system's call pickup groups. This information is necessary for both the Group Call Pickup and the Directed Group Call Pickup features. Directed Group Call Pickup does not require the calling or called party to be assigned pickup group membership. A maximum of 512 members per system may be assigned to Call Pickup Groups.

Command Keyword:       CALL\_PICKUP

Category Name:         Station

### PREREQUISITE COMMAND

Station Assignment (CMD 330)

### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|      |  |      |  |       |  |        |  |
|------|--|------|--|-------|--|--------|--|
| GRP# |  | NAME |  | INDEX |  | MEM DN |  |
|------|--|------|--|-------|--|--------|--|

|  |     |  |     |  |                 |  |
|--|-----|--|-----|--|-----------------|--|
|  | req |  | opt |  | ◀.....req.....▶ |  |
|--|-----|--|-----|--|-----------------|--|

This operation adds call pickup group names or member directory numbers. Loops are allowed in the "GRP#" and "INDEX" fields.

#### DELETE

|      |  |        |  |
|------|--|--------|--|
| GRP# |  | MEM DN |  |
|------|--|--------|--|

|                 |
|-----------------|
| ◀.....req.....▶ |
|-----------------|

This operation deletes call pickup members. To delete all members in a group, enter the keyword **ALL** in the "MEM DN" field. Loops are allowed in the "GRP#" field.

## CALL PICKUP GROUP ASSIGNMENT (CMD 346)

**PERCEPTION 4000****COMMANDS**

## MODIFY

GRP# | NAME |

|&lt;.....req.....&gt;|

This operation modifies call pickup group names.

## DISPLAY

GRP# | NAME | INDEX | MEM DN |

|<.....opt.....>| output | opt |  
only

This operation displays call pickup group names and members. Looping is allowed in the "GRP#" field. If no data is entered in any of the fields, all of the call pickup group names and members are displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP#** (Call Pickup Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 128  
 LOOP:            Allowed in all operations

This field assigns a number to a Call Pickup Group. Up to 128 groups with a maximum of four members in each group may be defined. Note that the system allows 512 members per system with a maximum of 32 members per group. Group members must be voice stations only. Stations may belong to only one call pickup group.

FIELD:           **NAME** (Group Name)  
 TYPE:            Text  
 FORMAT:         0 to 9 ASCII characters

This field assigns a name to the designated group number. Embedded spaces are allowed.

FIELD:           **INDEX** (Member Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 32  
 LOOP:            Allowed in an ADD operation

## CALL PICKUP GROUP ASSIGNMENT (CMD 346)

**PERCEPTION 4000****COMMANDS**

Index numbers are assigned to each designated call pickup group member with this field. A call pickup search is made from the lowest index number to the highest. Thus, ordering is important, such as when a group pickup or directed group pickup is requested by a party and multiple telephones within that group are ringing, the lowest numbered (index number) ringing telephone is picked up first.

FIELD: **MEM DN** (Pickup Group Member Directory Number)  
 TYPE: DN Type / Keyword  
 FORMAT: 1 to 5 digits / Predefined ASCII characters  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation

Keyword: ALL

Assign members to a group in the order in which the group should be searched for a ringing call. This feature does not look for the longest ringing call, but rather does a sequential search of this table. In a DELETE operation, if the keyword **ALL** is entered, all of the members of the given call pickup group are deleted.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34600 - Not a station directory number
- C34601 - Table is full
- C34602 - Directory number is already in an other pickup group
- C34603 - Directory number not found
- C34604 - Directory number is already in the pickup group
- C34605 - Directory number is a private line
- C34606 - Directory number is not a prime DN
- C34607 - No space left to add new members

## CANNED TEXT/ADVISORY MESSAGE CREATION (CMD 328)

**PERCEPTION 4000****COMMANDS****CANNED TEXT/ADVISORY MESSAGE CREATION (CMD 328)**

This command is used to modify canned text and advisory message information that appears on Perception 4000 HDT2020SD telephones and on the Perception 4000 attendant console display. The command is also used to modify attendant console identification information that appears on the console's electroluminescent (EL) display unit. This is typically company-specific information, including the name, address, and telephone number of the Toshiba distributor or end-user customer. Additionally, this command is used to modify the greeting that is sent whenever a data call is connected through the Perception 4000 system.

Command Keyword:           MESSAGE\_ASSIGN

Category Name:             Station

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:    DISPLAY  
                              MODIFY

The function and required data fields for each operation are described as follows:

DISPLAY:

TYPE | INX | MESSAGE TEXT |

| req | ◀..... opt .....▶|

This operation is used to display current canned text, advisory messages, attendant EL display text, and/or the system's data call greeting.

MODIFY:

TYPE | INX | MESSAGE TEXT |

◀..... req .....▶|◀..... opt .....▶|

This operation is used to modify the contents of canned text, advisory messages, attendant console EL display text, and/or the system's data call greeting.

## CANNED TEXT/ADVISORY MESSAGE CREATION (CMD 328)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **TYPE** (Message Type)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keywords:        CAN           - Canned text  
                   ADV           - Advisory messages  
                   ATT           - Attendant EL display text  
                   DAT           - System message for data calls

This field is used to specify the type of message that is to be modified.

FIELD:           **INX** (Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 decimal digit  
 VALUE:           1 - 8 for canned text and advisory messages  
                   1 - 3 for attendant EL display text  
                   1 - 2 for system message for data calls  
 RANGE:          Not allowed  
 LOOP:            Allowed in DISPLAY operation only

This field specifies which specific text line or advisory message (1 - 8) is to be modified; which type of EL display information (1 - 3); or which system message for data calls (1 - 2) is to be modified.

FIELD:           **MESSAGE TEXT**  
 TYPE:            ASCII characters  
 FORMAT:         Canned text and advisory messages: 30 characters maximum  
                   Attendant EL display messages and system message for data calls: 70 characters maximum

This field is used to indicate: the canned text and advisory message information that will appear on Perception 4000 HDT2020SD telephones and attendant console; additional attendant EL display information; and the system message for incoming data calls.

Up to eight text messages and eight advisory messages can be programmed. Once programmed, text messages can be sent from an HDT2020SD telephone (via soft key operation) when calling another HDT2020SD telephone. A text message provides the called party with a brief message about the nature of the call (e.g., "Please see me," "Returned your Call," etc.). Text messages are displayed on the called HDT2020SD when the called party scrolls through his/her telephone messages via soft key operation.

Advisory messages can be programmed at any HDT2020SD telephone to provide calling HDT2020SD telephones or a calling attendant console about the whereabouts of the called party (e.g., "In a Meeting," "Out to Lunch," etc.). An advisory message is set at an HDT2020SD telephone via soft key operation and remains set until canceled from the station.

Attendant console EL display messages typically indicate the name, address, and telephone number of the end-user company. This information customizes the attendant console for each customer site and serves as a convenient reference for the attendant operator.

CANNED TEXT/ADVISORY MESSAGE CREATION (CMD 328)

**PERCEPTION 4000**

**COMMANDS**

The system message for data calls will be conveyed to a calling data party after connection to a data device. The system message informs the calling party that he/she has reached the appropriate destination. For example, when placing a data call to Toshiba, the message may state: "Welcome to Toshiba Data Services."

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C32800 - Invalid message length
- C32801 - Index is out of range

## CLASS OF SERVICE ASSIGNMENT (CMD 334)

Up to 64 classes of service may be defined in the system. Each Class of Service (COS) defines a set of facility and feature access capabilities. One of these classes is then assigned to each voice or data station, attendant console, and trunk group designated with DISA or an incoming TIE trunk.

Most capabilities defined by COS are useful to all of the above device/facility types. However a few are unique, such as the 'Do-not-Disturb Override' feature which may only be assigned to attendants. In these cases where the capability may be assigned to a station or data device as well, the system understands the limitation and will not allow the capability to be effected by a station user, even if it exists in its COS definition. This allows greater flexibility in the configuration of definitions.

It is suggested that the administrator go over the organizational structure of the company and develop groups of common users which logically fit together in terms of telephone needs and privilege levels. After these groups are defined and needs/privileges known, a COS definition may be assigned to each group, then the definitions may be applied to stations, consoles, etc.

Command Keyword: CLASS\_OF\_SERVICE

Category Name: System

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

ADD



This operation modifies the definition of one or more existing classes of service by adding new feature(s) to it/them. Fields 1 and 2 are required fields. Scopes are allowed in Fields 2 through 14 to facilitate the addition of a large number of features





## CLASS OF SERVICE ASSIGNMENT (CMD 334)

**PERCEPTION 4000****COMMANDS**

| Feature                                 | Decimal Value                                 |
|---|---|
| Attendant Break-in                      | 332   |
| Attendant End-to End Signaling          | 345   |
| Attendant Parked Page Retrieval         | 333   |
| Call Forward - All Calls Key            | 271   |
| Call Forward - Busy/No Answer Key       | 272   |
| Call Forward - No Answer Key            | 273   |
| Call Fwd - All Calls Register           | 295   |
| Call Fwd - Busy/No Ans Register         | 296   |
| Call Fwd - No Answer Register           | 297   |
| Call Pickup - Directed                  | 284   |
| Code Calling Access                     | 258   |
| Code Calling Retrieval                  | 267   |
| Data Privacy                            | 312   |
| Dictation Machine Access - Direct       | 264   |
| Dictation Machine Access - Group        | 263   |
| * Direct Trunk Access - Trunk Group 1   | 1   |
| * Direct Trunk Access - Trunk Group nnn | nnn (nnn is greater than 1 and less than 256) |
| * Direct Trunk Access - Trunk Group 256 | 256   |
| Do Not Disturb Key                      | 270   |
| Do Not Disturb Registration             | 288   |
| Eight Party Conference Access           | 313   |
| ISDN CPN Presentation Allowed           | 342   |
| ISDN CPN Presentation Restricted        | 343   |
| Night Answer Access                     | 269   |
| Trunk-to-Trunk Connection               | 257   |
| Trunk Verification from Station         | 334   |
| Voice Paging Access - Emergency         | 261   |
| Voice Paging Access - System            | 260   |
| Voice Paging Access - Zone              | 259   |
| Voice Paging Retrieval - System         | 266   |
| Voice Paging Retrieval - Zone           | 265   |

\* If the type of trunk group is defined as a private line, the corresponding feature number is not under COS control.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33400 - Check for a valid feature number
- C33401 - Invalid tenant number
- C33402 - Invalid Class of Service number
- C33403 - Feature number is out of range
- C33404 - Missing data in scope type field in field N

**RELATED COMMANDS**

- Attendant Position Assignment (CMD 370)
- Authorization Code Assignment (CMD 349)
- Data Station Assignment (CMD 360)
- Station Assignment (CMD 330)
- Trunk Group Assignment (CMD 310)

## CLOCK PROVIDER ASSIGNMENT (CMD 417)

The Clock Provider Assignment command is used to assign a priority level to the clock contained on the T1/DS1 Digital Trunk Interface (TTRI) card or the ISDN Primary Rate Controller (IPRC) card. The assigned priority level indicates whether the TTRI/IPRC card's clock is to always serve as the dominant clock in a networking arrangement, or if another clock is to receive preference. Preference levels ranging from 1 (highest priority) to 60 (lowest priority) can be assigned to the TTRI/IPRC clock.

Command Keyword:           CLOCK\_PROVIDER

Category Name:             System

### PREREQUISITE COMMANDS

ISDN IPRC and IPRI Card Assignment (CMD 422)  
Digital Carrier Channel Assignment (CMD 413)

### OPERATIONS

Available operations:    MODIFY  
                              DISPLAY

The function and required data fields for each operation are described as follows:

#### MODIFY

PRIORITY | CARD# |

|..... req .....|

This operation is used to change the priority level of the clock provider on TTRI or IPRI circuit cards.

#### DISPLAY

PRIORITY | CARD# | TYPE |

|..... opt .....|output only |

This operation is used to display the priority levels of the clock provider on TTRI or IPRI circuit cards.

## CLOCK PROVIDER ASSIGNMENT (CMD 417)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **PRIORITY**  
 TYPE:            Decimal/Keyword  
 FORMAT:         1 to 2 digits  
 VALUE:          1 to 60/No  
 RANGE:          Not allowed  
 LOOP:            Allowed in DISPLAY operation only

The "PRIORITY" field indicates the priority level of the clock provider on the TTRI or IPRC circuit card. Lower values indicate higher priority levels (1 is the highest priority; 60 is the lowest). An entry of **NO** indicates that no priority is assigned.

FIELD:           **CARD #**  
 TYPE:            Decimal  
 FORMAT:         3 to 4 digits  
 VALUE:          102 to 1012  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:            Not allowed

This field indicates the equipment location of the TTRI or IPRC card. The first one or two digits represent the number of the shelf containing the card (1~10), and the last two digits represent the card slot number (01~12).

FIELD:           **TYPE**  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keyword:         TTRI—T1/DS1 Digital Trunk Interface  
                   IPRC—ISDN Primary Rate Controller

This field appears only in the DISPLAY operation. No input is required.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

I41700 - Warning: Please try later; database is reserved  
 C41701 - This card is the clock provider  
 C41702 - Check card number  
 C41703 - Check priority level  
 C41704 - TTRI/IPRC card is not installed  
 C41705 - No ccd data (update ccd data by using CMD 422)  
 C41706 - To search NOT PROVIDER card, enter <TAB>

## CLOCK RESET (CMD 121)

The system's date and time may be reset or displayed with this command.

Command Keyword:      CLOCK\_RESET

Category Name:         Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   RESET  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### RESET

MON | DAY | YEAR | HOUR | MIN | SEC |

◀.....opt.....▶

This operation resets the system's date and time. All of the fields are optional. When an optional field is not specified, and a <TAB> is entered in that field, the current data is treated as the default value.

#### DISPLAY

CLOCK |

| output only |

To display the system's current date and time, press the <TAB> key and the <RETURN> key. Output is presented in the following format:

WWW MMM DD, YY hh:mm:ss

WWW = Three ASCII characters that identify the day of the week.

Note that the day of the week is calculated automatically by the system.

## CLOCK RESET (CMD 121)

**PERCEPTION 4000****COMMANDS**

|                 |                |
|-----------------|----------------|
| Mon = Monday    | Fri = Friday   |
| Tue = Tuesday   | Sat = Saturday |
| Wed = Wednesday | Sun = Sunday   |
| Thu = Thursday  |                |

MMM = Three ASCII characters that identify the month of the year

|                |                 |
|----------------|-----------------|
| Jan = January  | Jul = July      |
| Feb = February | Aug = August    |
| Mar = March    | Sep = September |
| Apr = April    | Oct = October   |
| May = May      | Nov = November  |
| Jun = June     | Dec = December  |

DD = 2 digits (01-31) day of the month  
 YY = 2 digits (00-99) last 2 digits of the current year  
 hh = 2 digits (00-23) military hour of the day  
 mm = 2 digits (00-59) minute of the hour  
 ss = 2 digits (00-59) second of the minute.

Example: Mon Apr 1, 91 10:30:25

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **MON** (Month of the Year)  
 TYPE: Keyword / Decimal  
 FORMAT: Predefined ASCII characters / 1 or 2 digits  
 VALUE: 1 to 12  
 RANGES: Not allowed

| Keywords | Decimal Values |
|----------|----------------|
| JAN      | 1              |
| FEB      | 2              |
| MAR      | 3              |
| APR      | 4              |
| MAY      | 5              |
| JUN      | 6              |
| JUL      | 7              |
| AUG      | 8              |
| SEP      | 9              |
| OCT      | 10             |
| NOV      | 11             |
| DEC      | 12             |

Input in this field may be either a keyword or a decimal value. Entering a **<TAB>** causes the current month to be treated as the default value.

FIELD:        **DAY** (Day of the Month)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       1 to 31  
 RANGE:       Not allowed

There is a maximum of 31 days per month. Entering a <TAB> in this field causes the current day to be treated as the default value.

FIELD:        **YEAR** (Last Two Digits of the Year)  
 TYPE:         Decimal with fixed length  
 FORMAT:      2 digits  
 VALUE:       00 to 99  
 RANGE:       Not allowed

This field requires a 2-digit value to indicate the last two digits of the year. Entering a <TAB> in this field causes the current year to be treated as the default value.

FIELD:        **HOURL** (Hour of the Day)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       0 to 23  
 RANGE:       Not allowed

The hour of the day is indicated in military time. For example, 1:00 PM is entered as **13**, 2:00 PM as **14**, etc. Entering a <TAB> in this field causes the current hour to be treated as the default value.

FIELD:        **MIN** (Minute of the Hour)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       0 to 59  
 RANGE:       Not allowed

Minutes are entered in this field. Entering a <TAB> causes the current minute to be treated as the default value.

FIELD:        **SEC** (Second of the Minute)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       0 to 59  
 RANGE:       Not allowed

Seconds are entered in this field. Entering a <TAB> causes the current second to be used as the default value.

CLOCK RESET (CMD 121)

**PERCEPTION 4000**

**COMMANDS**

FIELD: **CLOCK** (The System's Date and Time)  
TYPE: Output only

Entering a <TAB> and a <C/R> in this field in a DISPLAY operation causes the system's current date and time to display.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C12100 - Clock set error

**COMMENTS**

The Traffic Measurement process (CMD 901) may not be activated at the preselected activation time due to a clock reset.

The SMDR record of current calls (CMD 409) may be generated with a conflicting call duration field due to a clock reset.

The scheduled switch-over process (CMD 102) may not be activated if the clock is set to a date and time beyond the predetermined switch-over date and time.

When a clock reset is performed, the system sends a transmission to the ACD/MIS application processor resetting its clock also.



## COMMON CARRIER ASSIGNMENT (CMD 344)

The common carrier definition table defines a '10XXX' (equal access) code for each common carrier in the system, up to 10 carriers. These carriers are used by the Least Cost Routing program as required.

Command Keyword: COMMON\_CARRIERS

Category Name: Trunk

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

|                    |
|--------------------|
| INDEX   10XXX CODE |
|--------------------|

◀.....req.....▶

This operation modifies the common carrier definition table. The "10XXX CODE" field is a delete field for this operation. When modifying a carrier code, the new code must not already exist in the table.

#### DISPLAY

|                    |
|--------------------|
| INDEX   10XXX CODE |
|--------------------|

◀.....opt.....▶

This operation displays all common carriers defined for the system. Ranges are permitted in the "INDEX" field only.

## COMMON CARRIER ASSIGNMENT (CMD 344)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **INDEX** (Index Number)  
TYPE:            Decimal  
FORMAT:         1 or 2 digits  
VALUE:          1 to 10  
LOOP:            Allowed in a DISPLAY operation only

There are 10 index numbers, each of which may be assigned one equal access code.

FIELD:           **10XXX CODE** (Common Carrier Definition)  
TYPE:            Decimal with fixed length  
FORMAT:         5 digits  
VALUE:          10000 to 10999  
RANGE:          Not allowed

The first two numbers entered in this field must be a **1** followed by a **0**. This field is a delete field in a MODIFY operation.

**SYSTEM ERROR MESSAGE**

The following error message is unique to this command.

C34400 - Carrier code input already exists in database

**RELATED COMMAND**

LCR Routing Table Assignment (CMD 383)

## COORDINATED NUMBERING PLAN ASSIGNMENT (CMD 303)

**PERCEPTION 4000****COMMANDS****COORDINATED NUMBERING PLAN ASSIGNMENT (CMD 303)**

The Coordinated Numbering Plan (CNP) is one of two means provided to route calls in a private network environment. This method automatically selects the proper trunk group based on steering digits dialed by the user. To the user, the steering digits are seen as part of the total number such that they are unaware they are selecting a TIE trunk group. This command defines each TIE trunk group the steering digits select when placing a call.

Command Keyword: CNP\_ASSIGN

Category Name: Dialing

**PREREQUISITE COMMAND**

Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

TGN | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT |

◀.....req.....▶◀.....opt.....▶

This operation adds steering digits to trunk groups. Those digits may not be shared among the trunk groups.

**DELETE**

TGN | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT | STDGT |

◀.....req.....▶◀.....opt.....▶

This operation deletes steering digits for a trunk group.

## COORDINATED NUMBERING PLAN ASSIGNMENT (CMD 303)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|   |
|---|
| TGN   STDGT   STDGT   STDGT   STDGT   STDGT   STDGT   STDGT   STDGT   STDGT   STDGT |
|---|

◀-----opt-----▶

This operation displays steering digits for trunk groups. If no data is entered in any of the fields, steering digits for all of the trunk groups display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 LOOP: Allowed in a DISPLAY operation  
 RANGE: Not allowed

This field selects the trunk group number to be assigned steering digits.

FIELD: **STDGT** (Steering Digits)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 LOOP: Not allowed  
 RANGE: Allowed in a DISPLAY operation

There is no limit to the number of steering digits which may be assigned to a trunk group. A steering digit may not be shared among trunk groups. Ambiguity may not exist among steering digits or among other members of the system's numbering plan. For example, steering digits '72' and '7230', or '678' and '6782', may not co-exist in the numbering plan.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C30300 - STDGTs in fields N..N are already used
- C30301 - No space to add steering digits from field N
- C30302 - STDGTs in fields N..N are not found
- C30303 - Trunk group number is not a TIE type
- C30304 - Trunk group number is not defined
- C30305 - Trunk group number is defined as incoming (INC) type
- C30306 - Same STDGTs in fields N..N

NOTE: "N" is from 2 to 11

## COUNTRY CODE ASSIGNMENT (CMD 335)

The Country Code Definition Table defines all of the country codes that are to be used by system users. The table is initially blank and should be filled in with specific country codes. Information regarding country codes is typically included in the white pages of a local telephone directory or can be obtained from local telephone companies or long distance carriers. Once defined, the country code table should be reviewed periodically to ensure that it is up-to-date with international dialing conventions.

This table is consulted when international calls are made via direct dialing for purposes of verifying the validity of the number dialed, least cost routing, and restriction purposes.

Command Keyword: CC\_ASSIGN

Category Name: Dialing

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

CC | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC |

| req ◀.....opt ▶.....|

This operation adds country codes to the Country Code Assignment Table. Scope entries are permitted in all of the fields.

#### DELETE

CC | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC |

| req ◀.....opt ▶.....|

This operation deletes country codes from the Country Code Assignment Table. Scope entries are permitted in all of the fields.

## COUNTRY CODE ASSIGNMENT (CMD 335)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|   |
|---|
| CC   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC |
|---|

◀.....opt.....▶

This operation displays all of the country codes in the Country Code Assignment Table that meet the conditions established for each field. If no data is input in any of the fields, then all of the country codes display. To halt the display, you may press <CONTROL-S>, or press <ESC> (<SHIFT-2>) to abort the display. Ranges are permitted in all fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **CC** (Country Code)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:           1 to 999  
 RANGE:           Allowed in a DISPLAY operation  
 SCOPE:           Allowed in ADD and DELETE operations

The Country Code parameter is used by the system in the call handling process. According to the CCITT (International Telegraph and Telephone Consultative Committee), the first country code digit cannot start with a zero.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33500 - Country code(s) already exist or are invalid
- C33501 - Table full; cannot add more country code(s) at NNN
- C33502 - Country code not found
- C33503 - Check field format
- C33504 - Country code conflicts with the table

**RELATED COMMANDS**

Country Code Restriction Tables (CMD 338)  
 LCR Country Code Routing Assignment (CMD 380)

## COUNTRY CODE RESTRICTION TABLES (CMD 338)

The Country Code Restriction command contains a list of country codes which may be allowed or denied depending on the specified "TYPE". This is the means by which international direct dialing can be controlled. Country code tables are defined for each Trunk Restriction Group/Destination Restriction Level combination (but not when either "TRGN" or "DRL" = 1). Trunk Restriction Groups and DRLs are assigned through the Trunk Group Assignment command (CMD 310).

Each country code table may be specified as an **ALW** (allow) or **DNY** (deny) table. This way the fewest number of codes can be entered and accomplish the same purpose. For example, if all country codes but two are to be allowed, it is easier to build a deny table and enter only two codes versus building an allow table and entering all but two codes.

Command Keyword:       CC\_RESTRICT

Category Name:         Restrict

### PREREQUISITE COMMANDS

Country Code Assignment (CMD 335)  
Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          DISPLAY

The function and required data fields for each operation are described in this section.

ADD

|   |
|---|
| TRGN   DRL   TYPE   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC |
|---|

.....req.....
.....opt.....

This operation adds country codes to the Country Code Restriction Table. Data is required in the "TRGN", "DRL", and "TYPE" fields, along with the first "CC" field. The remaining "CC" fields are optional. Loops are permitted in the "TRGN" and "DRL" fields when adding the same country code for several DRLs in a trunk restriction group, or in the same DRL for several trunk restriction groups. Scopes are permitted in all of the "CC" fields.

COUNTRY CODE RESTRICTION TABLES (CMD 338)

DELETE

```

TRGN | DRL | TYPE | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC |
|.....req.....| opt | req |.....opt.....|
```

This operation deletes country codes from the Country Code Restriction Table. Loops and scopes are permitted when deleting a number of the tables, or a number of country codes in a Country Code Restriction Table.

DISPLAY

```

TRGN | DRL | TYPE | CC | CC | CC | CC | CC | CC | CC | CC | CC | CC |
|.....opt.....|
```

This operation displays the Country Code Restriction Table(s). All of the fields are optional. If no data is entered in any of these fields, all of the Country Code Restriction Tables display. Ranges are permitted in all of the fields except the "TYPE" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD: **TRGN** (Trunk Restriction Group Number)
- TYPE: Decimal
- FORMAT: 1 digit
- VALUE: 2 to 8 (or to the maximum system configuration)
- LOOP: Primary loop field, allowed in ADD and DELETE operations

Trunk Restriction Group 1 is defined as "unrestricted" and is recommended for TIE trunk groups. The definition of each restriction group number can be displayed by issuing a DRL\_ASSIGN command (CMD 337).

- FIELD: **DRL** (Destination Restriction Level)
- TYPE: Decimal
- FORMAT: 1 or 2 digits
- VALUE: 2 to 16 (or to the maximum system configuration)
- LOOP: Secondary loop field, and allowed in ADD and DELETE operations

When "DRL" is 1, all calls are allowed regardless of what trunk restriction group number (TRGN) is being used.



## COUNTRY CODE RESTRICTION TABLES (CMD 338)

**PERCEPTION 4000****COMMANDS**

FIELD:       **TYPE** (Table Type)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   ALW - Allow access to listed country codes  
               DNY - Deny access to listed country codes

If the keyword, **ALW** (or **DNY**), is entered, calls to any country code in this Country Code Restriction table are allowed (or denied).

FIELD:       **CC** (Country Code)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 999  
 SCOPE:      Allowed in ADD and DELETE operations  
 RANGE:      Allowed in a DISPLAY operation

Country codes entered in this field are either allowed or denied depending on the keyword entered in the "TYPE" field of the specified TRGN and DRL.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33800 - Table type does not match the table type defined originally
- C33801 - Country code(s) already exist in restricted country code table
- C33802 - Table full; cannot add more country code(s) at NNN
- C33803 - Country code is not in system country code definition table
- C33804 - Invalid trunk restriction group number
- C33805 - Invalid destination restriction level
- C33806 - Invalid country code

**RELATED COMMAND**

Destination Restriction Level (DRL) Assignment (CMD 337)

## CRASH DUMP DISPLAY (CMD 164)

**PERCEPTION 4000****COMMANDS****CRASH DUMP DISPLAY (CMD 164)**

The Crash Dump Display command displays historical system crash information, as well as virtual machine information, as enabled through the System Software Virtual Machine History command (CMD 168). The displayed information is helpful in system debugging.

Command Keyword: CRASH\_DUMP\_DISP

Category Name: Maintenance

**OPERATIONS**

Available operations: DISPLAY

The function and required data fields for each operation are described as follows:

DISPLAY:

| OBJECT | PARAMETER | BRIEF |
|--------|-----------|-------|
|        | req       | opt   |

|←..... req .....→| opt |

This operation displays historical information about system crashes or about the virtual machine specified in the System Software Virtual Machine History command (CMD 168).

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **OBJECT**  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: FPCRASH - Failure Processor Crash  
 OSCRAH - Operating System Crash  
 1CALL - One Call Initialization Crash  
 VMHIST - Virtual Machine History

FIELD:           **PARAMETER**  
 TYPE:            Keyword  
 FORMAT:          Predefined ASCII characters

|           |  |  |           |   |
|-----------|--|--|-----------|---|
| Object:   | FPCRASH<br>OSCRASH                                       |  | Object:   | 1CALL<br>VMHIST   |
| Keywords: | (S) MCPU<br>(S) LPU1<br>(S) LPU2<br>(S) LPU3<br>(S) MCOM |  | Keywords: | (S) SSC      (S) TSC      (S) ASC<br>(S) KSU1     (S) KSU2     (S) KSU3<br>(S) ACD1     (S) ACD2     (S) ACD3<br>(S) SLU1     (S) SLU2     (S) SLU3<br>(S) HDT1     (S) HDT2     (S) HDT3<br>(S) DIU1     (S) DIU2     (S) DIU3<br>(S) TTC1     (S) TTC2     (S) TTC3<br>(S) AGC1     (S) AGC2     (S) AGC3<br>(S) ATC1     (S) ATC2     (S) ATC3<br>(S) ITTC1    (S) ITTC2    (S) ITTC3<br>(S) LCOM1    (S) LCOM2    (S) LCOM3 |

Keywords are dependent on the entry in the previous field (OBJECT). The numbers in the keywords represent LCPU numbers, and the 'S' in front of the keywords designates a standby side crash dump.

FIELD:           **BRIEF**  
 TYPE:            Keyword  
 FORMAT:          Predefined ASCII characters

Keywords:        YES   - Only pertinent information is displayed  
                   NO    - All information is displayed

This field is optional. If no entry is made, the field defaults to **YES** and displays only pertinent information. After printing out the displayed information, verify the time and date stamp. If it is correct, then set this field as **NO** to display all information. Any questions or requests for information regarding display/printout data should be addressed to Toshiba Technical Support by calling (800) 777-4873.

## SYSTEM MESSAGES

The following error messages are unique to this command.

C16400 - Invalid parameter for object input  
 C16401 - MCPU database read error  
 C16402 - LCPU database read error  
 C16403 - LCPU is out of service  
 C16404 - Standby side is not installed  
 C16405 - Standby side read failed

## DATA HUNTING ASSIGNMENT (CMD 366)

**PERCEPTION 4000****COMMANDS****DATA HUNTING ASSIGNMENT (CMD 366)**

The PERCEPTION 4000 supports up to 32 data hunt groups, each of which may have up to 64 members. A data device may belong to one data hunt group only, and a data hunt group may not be a member of another data hunt group. Data hunt groups use the distributed hunting method. Only physical devices may be assigned as members.

Command Keyword: DATA\_HUNTING

Category Name: Data

**PREREQUISITE COMMAND**

Data Station Assignment (CMD 360)

**OPERATIONS**

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

GRP# | NAME | PILOT DN | MEM # | MEM DN |

| req ◀.....opt.....▶▶.....req.....▶|

This operation creates a new group or adds in a member directory number. Required fields include "GRP #", "MEM #", and "MEM DN". When creating a new group, the "PILOT DN" must be input. The member directory number is limited to being a member of only one data hunt group. Loops are allowed in the "GRP #" and the "MEM #" fields. When a new member number is added, all of the following members move one step backward accordingly.

**DELETE**

GRP# | MEM # | MEM DN |

| req ◀.....opt.....▶|

This operation deletes a data hunt group or a member directory number. The "GRP #" field is required. To delete a whole group, enter the keyword **ALL** in the "MEM #" field. Looping is allowed in the "MEM #" field.

## MODIFY

```
GRP# | NAME | PILOT DN | MEM # | MEM DN |
```

```
| req |<.....opt.....>| opt .....> opt |
```

This operation changes the "NAME", "PILOT DN", or the "MEM DN" field. An entry in "GRP #" is required. If the "MEM DN" field is being modified, the "MEM #" field must be entered.

## DISPLAY

```
GRP# | NAME | PILOT DN | MEM # | MEM DN |
```

```
<.....opt.....>
```

This operation displays all of the data hunt groups and their members that meet the conditions established in each field. Loops are permitted in the "GRP #" and "MEM #" fields. Ranges are permitted in the "MEM DN" field.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP #** (Group Number)  
 TYPE:            Decimal  
 FORMAT:          1 or 2 digits  
 VALUE:           1 to 32  
 LOOP:            Allowed in DISPLAY and ADD operations only

This field assigns a number to the data hunt group, and is the primary field for data hunt group assignment.

FIELD:           **NAME** (Group Name)  
 TYPE:            Text  
 FORMAT:          0 to 9 ASCII characters

The "NAME" field is optional, and may contain a name corresponding to the data hunt group number. This name displays to the calling party. Note that embedded spaces are allowed.

FIELD:           **PILOT DN** (Pilot Directory Number)  
 TYPE:            DN Type  
 FORMAT:          1 to 5 digits  
 VALUE:           0 to 99999

This field marks an entry point into the data hunt group. **Individual members may be directly addressed, but, if their device is busy, the system does not perform a hunting procedure.** The pilot directory number must not conflict with any other directory number or access code in the system, and is not related to any physical device.

## DATA HUNTING ASSIGNMENT (CMD 366)

**PERCEPTION 4000****COMMANDS**

FIELD:           **MEM #** (Member Index Number)  
 TYPE:            Decimal / Keyword  
 FORMAT:          1 or 2 digits / Predefined ASCII characters  
 VALUE:           1 to 64 / ALL  
 LOOPS:           Allowed in DISPLAY, ADD, and DELETE operations

The index is a tool for adding a member to a specific place in the data hunt group table. Hunting follows this ordering, from the lowest to the highest number (index number) and then wraps around to the lowest number again. Distributed hunting rules apply for idle device selection. The keyword **ALL** may be entered in a DELETE operation to remove all members in a specified group.

FIELD:           **MEM DN** (Member Directory Number)  
 TYPE:            DN Type  
 FORMAT:          1 to 5 digits  
 VALUE:           0 to 99999  
 RANGE:           Allowed in a DISPLAY operation only

The member directory number can be a member of only one data hunt group, and must be a data station number.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C36600 - Input member directory number
- C36601 - Group is already full
- C36602 - Member directory number is not defined in the system
- C36603 - Pilot directory number mismatch
- C36604 - Group name mismatch
- C36605 - Group is empty
- C36606 - Member number is not in group
- C36607 - Member directory number is not in group
- C36608 - Inconsistent member number/directory number pair
- C36609 - Pilot directory number is already in use
- C36610 - Member number is required
- C36611 - Member number is not continuous in group
- C36612 - Member directory number is already in another data hunt group
- C36613 - Cannot use this directory number
- C36614 - Input pilot directory number
- C36615 - Group name is too long
- C36616 - The data hunting member cannot be in permanent connection.
- C36617 - Failed to convert LDN to LTN.
- C36618 - Failed to send a transaction to LPU side.

**RELATED COMMAND**

Name Dialing Assignment (CMD 367)

## DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

Both integrated and Stand-alone Data Interface Units (DIUs) require a number of parameters be specified concerning data transmission and signaling. The Data Interface Parameter Assignment command assigns a number of these parameters.

Because these parameters apply not only to DIUs configured as Data Communications Equipment (DCE - those which interface directly to a printer, host computer, data terminal, etc.), but also to Data Terminal Equipment (DTE - Stand-alone DIUs used in modem pools), the primary key may be a modem pool number instead of an equipment number. This insures that all DIUs in a modem pool receive like configuration to ensure compatibility. Note that equipment numbers are still required for most DIUs acting as DCE-type equipment.

Additional parameters, mostly applicable to asynchronous mode, are defined through the Data Station Parameter Assignment command (CMD 362).

Command Keyword: DATA\_INT\_PARAMETERS

Category Name: Data

### PREREQUISITE COMMANDS

Data Station Assignment (CMD 360)

Modem Pool Assignment (CMD 347)

### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

|         |  |         |  |      |  |     |  |     |  |       |  |      |  |        |  |      |  |     |  |     |  |     |  |     |
|---------|--|---------|--|------|--|-----|--|-----|--|-------|--|------|--|--------|--|------|--|-----|--|-----|--|-----|--|-----|
| EQ/MP # |  | SYN/ASY |  | DPLX |  | EMU |  | CLK |  | SPEED |  | PRTY |  | DATA B |  | STOP |  | DTR |  | DSR |  | RTS |  | CTS |
|---------|--|---------|--|------|--|-----|--|-----|--|-------|--|------|--|--------|--|------|--|-----|--|-----|--|-----|--|-----|

|  |     |  |        |  |     |  |              |  |                 |  |
|--|-----|--|--------|--|-----|--|--------------|--|-----------------|--|
|  | req |  | locked |  | opt |  | ◀••locked••▶ |  | ◀.....opt.....▶ |  |
|--|-----|--|--------|--|-----|--|--------------|--|-----------------|--|

This operation changes data interface parameter selection of one or more data stations. "EQ/MP #" is a required field. "SYN/ASY", "EMU", and "CLK" are locked fields, while the remaining fields are optional. Loops are permitted in the "EQ/MP #" field when changing a number of data stations with the same parameter selections.

DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

DISPLAY

|   |
|---|
| EQ/MP #   SYN/ASY   DPLX   EMU   CLK   SPEED   PRTY   DATA B   STOP   DTR   DSR   RTS   CTS |
| opt   locked   ◀..... opt .....▶   locked   ◀..... opt .....▶                               |

This operation displays data interface parameters of one or more data stations. "SYN/ASY" and "CLK" are locked fields. Input in the remaining fields is optional. If no data is entered in any of these fields, the data interface parameters of all configuration profiles in the system display. Loops are permitted in the "EQ/MP #" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **EQ/MP #** (Equipment/Modem Pool Number)  
 TYPE: EQ Type / Decimal  
 FORMAT: 5 or 6 digits / 1 or 2 digits  
 VALUE: (0)10101 to 101316 (for EQ#) / 1 to 32 (for MP#)  
 LOOP: Allowed in DISPLAY and MODIFY operations

The equipment and modem pool numbers are assigned with the Data Station Assignment (CMD 360) and Modem Pool Assignment (CMD 347) commands respectively. This field selects the appropriate data device to be modified or displayed.

FIELD: **SYN/ASY** (Synchronous/Asynchronous)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: SYN - Synchronous  
 ASY - Asynchronous

This parameter defines the communication mode used to interface to the data device. Other parameters, such as speed and duplex, are necessary to completely define the communication interface of the DIU. **ASY** is the default value. This is a locked field.

*NOTE: Only asynchronous mode (ASY) is supported at this time.*

FIELD: **DPLX** (Full/Half Duplex)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: HDX - Half Duplex  
 FDX - Full Duplex

In full duplex operation, two-way data traffic can be exchanged between the DIU and the data device at the same time. In half duplex operation, only alternate data exchange is allowed. **FDX** is the default value.



## DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

**PERCEPTION 4000****COMMANDS**

FIELD: **EMU** (DTE/DCE Emulation)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DCE - DIU functions as a DCE (Data Communications Equipment)  
 DTE - DIU functions as a DTE (Data Terminal Equipment)

When **DCE** is selected, the DIU functions as a DCE (null modem) to interface to a DTE device such as a CRT. When **DTE** is selected, the DIU performs DTE logical functions over the DIU female connector. **DCE** is the default value for DCE mode, and **DTE** is the default value for DTE mode. This is a locked field in the MODIFY operation.

FIELD: **CLK** (Clock Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ICLK - Internal Clock (System's Main Clock) (Reserved)  
 XCLK - External Clock (Reserved)  
 NON - No Clock

This parameter defines the source of the transmit clock used in synchronous mode only. When **ASY** is entered in the "SYN/ASY" field, **NON** must be entered in this field. **NON** is the default value. This is a locked field.

*NOTE: Only asynchronous communications, "No Clock" is supported at this time.*

FIELD: **SPEED** (Speed Selection in bits per second [bps])  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: AUTO - Auto Detect (For asynchronous only)  
 50 - 50 bps ("")  
 75 - 75 bps ("")  
 110 - 110 bps ("")  
 300 - 300 bps ("")  
 600 - 600 bps (For asynchronous and synchronous)  
 1200 - 1200 bps ("")  
 2400 - 2400 bps ("")  
 4800 - 4800 bps ("")  
 9600 - 9600 bps ("")  
 19200 - 19200 bps ("")

This parameter defines the data transfer speed across the communications interface. When **AUTO** is selected, the DIU assumes 8 bits per character with **NO** parity, or 7 data bits plus odd/even parity detection. **AUTO** is the default value for DCE mode. For DTE mode, only **300**, **600**, **1200**, **2400**, **4800**, and **9600** are valid. **1200** is the default for DTE mode.

## DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

**PERCEPTION 4000****COMMANDS**

FIELD: **PRTY** (Parity Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: EVEN - Even parity  
 ODD - Odd parity  
 DET - Detect parity (Detect and check either odd or even parity)  
 NO - No parity (i.e., no parity check)

This parameter defines the parity used in the data character to be transmitted or received over the communications interface. **ODD**, **EVEN** or **DET** can only be used when "DATA B" is set to 7 data bits. **NO** is the default value.

FIELD: **DATA B** (Data Bit Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 7BIT - 7 data bits  
 8BIT - 8 data bits

This parameter defines the number of data bits in a single character transmitted over the communications interface. If **8BIT** is selected, **ODD**, **EVEN** or **DET** cannot be specified in the "PRTY" field. **8BIT** is the default value.

FIELD: **STOP** (Stop Bit Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 1BIT - 1 stop bit  
 2BIT - 2 stop bits

This parameter defines the number of stop bit(s) in a single character transmitted over the communications interface. **1BIT** is the default value.

FIELD: **DTR** (Detect Terminal Ready Signal Treatment)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DET - Detect DTR  
 HI - Consider DTR high at all times  
 NON - No DTR treatment

This parameter defines the treatment of the "Device Ready" condition normally provided by the DTR interface lead. For a DIU functioning as a DTE, **NON** must be selected. For a DIU functioning as a DCE, either **DET** or **HI** must be selected. **DET** is the default value for DCE mode, and **NON** is the default for DTE mode.

## DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

**PERCEPTION 4000****COMMANDS**

FIELD:       **DSR** (Data Set Ready Signal Treatment)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   DET - Detect DSR  
               HI  - Consider DSR high at all times  
               NON - No DSR treatment

This parameter defines the treatment of the Data Set Ready (DSR) signal when the DIU functions as a DTE. If the DIU is functioning as a DCE, **NON** must be selected. If the DIU is functioning as a DTE, either **DET** or **HI** must be selected. **DET** is the default value for DTE mode, and **NON** is the default for DCE mode.

FIELD:       **RTS** (Request To Send Signal Treatment)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   DET - Detect RTS  
               HI  - Consider RTS high at all times  
               NON - No RTS treatment

This parameter defines the treatment of the Request To Send (RTS) signal from the DTE. If the DIU is functioning as a DTE, **NON** must be selected. If the DIU is functioning as a DCE, either **DET** or **HI** must be selected. For full duplex operation, with the DIU functioning as a DCE, **HI** must be selected. **DET** is the default value for DCE mode, and **NON** is the default for DTE mode.

FIELD:       **CTS** (Clear To Send Signal Treatment)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   DET - Detect CTS  
               HI  - Consider CTS high at all times  
               NON - No CTS treatment

This parameter defines the treatment of the Clear To Send (CTS) signal when the DIU functions as a DTE. If the DIU is functioning as a DCE, **NON** must be selected. If the DIU is functioning as a DTE, either **DET** or **HI** must be selected. **DET** is the default value for DTE mode, and **NON** is the default for DCE mode.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C36100 - Check equipment or modem pool number
- C36101 - Check parity bit
- C36102 - Empty modem pool
- C36103 - Check DTE/DCE mode in EMU field
- C36104 - Check input in SPEED field
- C36105 - Cannot modify; EMU is in DTE mode

DATA INTERFACE PARAMETER ASSIGNMENT (CMD 361)

**PERCEPTION 4000**

**COMMANDS**

- C36106 - Cannot modify; EMU is in DCE mode
- C36107 - Check DTR field\n"
- C36108 - DIU-DCE is in permanent connection; no modification is allowed
- C36109 - The equipment number is assigned for another device or is invalid

**COMMENTS**

When one or more parameters for a modem pool ID is modified, data communication characteristics for all of the data terminals which are grouped in the same modem pool are changed.

Data parameters of a configuration profile are divided into two parts—data interface and data station parameters. The data interface parameters are defined by this command, and the data station parameters are defined by the Data Station Parameter Assignment command (CMD 362).

**RELATED COMMAND**

Data Station Parameter Assignment (CMD 362)

## DATA STATION ASSIGNMENT (CMD 360)

The Data Station Assignment command installs or removes one or more data stations from the PERCEPTION 4000 system. This command also modifies and displays the attributes of one or more data stations.

Command Keyword: DATA\_ASSIGN

Category Name: Data

### PREREQUISITE COMMANDS

Modem Pool Assignment (CMD 347)  
Station Assignment (CMD 330)

(Command 330 is required if **ITG** or **LGP** is selected in the "TYPE" field.)

### OPERATIONS

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|         |  |        |  |      |  |       |  |         |  |     |  |     |  |      |  |     |  |     |  |     |  |      |  |
|---------|--|--------|--|------|--|-------|--|---------|--|-----|--|-----|--|------|--|-----|--|-----|--|-----|--|------|--|
| EQUIP # |  | DIU DN |  | TYPE |  | AS DN |  | DEF MDM |  | COS |  | DRL |  | FRLP |  | QPL |  | DRG |  | ANS |  | NAME |  |
|---------|--|--------|--|------|--|-------|--|---------|--|-----|--|-----|--|------|--|-----|--|-----|--|-----|--|------|--|

|                  |   |  |     |  |                  |   |  |        |  |     |  |     |  |
|------------------|---|--|-----|--|------------------|---|--|--------|--|-----|--|-----|--|
| ←..... req ..... | ▶ |  | opt |  | ←..... req ..... | ▶ |  | locked |  | req |  | opt |  |
|------------------|---|--|-----|--|------------------|---|--|--------|--|-----|--|-----|--|

This operation adds one or more data stations to the system. Integrated DIUs use the same equipment number as the supporting telephone, however Stand-alone DIUs must be assigned a unique equipment number.

The equipment number and DIU directory number must be unique. The DIU directory number must not conflict with any other directory number or access code in the system.

#### DELETE

|         |  |        |  |
|---------|--|--------|--|
| EQUIP # |  | DIU DN |  |
|---------|--|--------|--|

|  |     |  |     |  |
|--|-----|--|-----|--|
|  | req |  | opt |  |
|--|-----|--|-----|--|

The DELETE operation removes one or more data stations from the system. Entering the equipment number is sufficient. When removing a number of data stations, ranges are permitted, and a confirmation is required before each data station is deleted. Removing a data station is not allowed if a data call is in progress on that station.

DATA STATION ASSIGNMENT (CMD 360)

Prior to the removal of a data station, the memberships or relationship of all logical groupings with the station must be removed first. Note that the data hunting group order is altered upon removal of a data station.

MODIFY

|         |  |        |  |             |  |                 |  |         |  |     |  |     |  |      |  |     |        |     |                 |     |  |      |  |
|---------|--|--------|--|-------------|--|-----------------|--|---------|--|-----|--|-----|--|------|--|-----|--------|-----|-----------------|-----|--|------|--|
| EQUIP # |  | DIU DN |  | TYPE        |  | AS DN           |  | DEF MDM |  | COS |  | DRL |  | FRLP |  | QPL |        | DRG |                 | ANS |  | NAME |  |
|         |  | req    |  | output only |  | ←.....opt.....→ |  |         |  |     |  |     |  |      |  |     | locked |     | ←.....opt.....→ |     |  |      |  |

This operation modifies the attributes of one or more data stations. Ranges are permitted in the equipment number field when modifying a number of data stations with the same attributes. "EQUIP #" is the only required field for this operation. In a MODIFY operation, a <CONTROL-D> may be entered to delete the current value in the "NAME" field.

DISPLAY

|                 |  |        |  |      |  |       |  |         |  |     |  |     |  |      |  |     |  |     |  |     |  |      |        |                 |  |  |  |  |
|-----------------|--|--------|--|------|--|-------|--|---------|--|-----|--|-----|--|------|--|-----|--|-----|--|-----|--|------|--------|-----------------|--|--|--|--|
| EQUIP #         |  | DIU DN |  | TYPE |  | AS DN |  | DEF MDM |  | COS |  | DRL |  | FRLP |  | QPL |  | DRG |  | ANS |  | NAME |        |                 |  |  |  |  |
| ←.....opt.....→ |  |        |  |      |  |       |  |         |  |     |  |     |  |      |  |     |  |     |  |     |  |      | locked | ←.....opt.....→ |  |  |  |  |

This operation displays the attributes of one or more data stations. All of the fields are optional, with the exception of the "DRG" field. If no data is entered in any of these fields, attributes of all data stations in the system display. Ranges are permitted in any field that accepts numeric input, such as "DIU DN", "AS DN", etc.

PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **EQUIP #** (Equipment Number)
- TYPE:           EQ Type
- FORMAT:        5 or 6 digits
- VALUE:         (0)10101 to 101316 \*
- LOOP:          Allowed in all operations

\* Use the following chart to determine valid ranges.

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

NOTE: Slot 13 is unavailable if the card is a 2B type.

## DATA STATION ASSIGNMENT (CMD 360)

**PERCEPTION 4000****COMMANDS**

Each DIU is assigned to a circuit on a digital line card (DSTI). If this is an integrated DIU, it uses the same equipment number as used by the supporting telephone, as assigned in the Station Assignment Command (CMD 330). For Stand-alone DIUs, the equipment number is defined as follows.

The first digit(s) represents the shelf number, the next two digits represent the card slot number, and the last two digits represent the circuit number.

**NOTES:**

1. *Stand-alone DIUs may be installed on DSTI cards configured for 1B or 2B operation. When installed on a DSTI card configured for 2B operation, a '2B' device must already be assigned to the card.*
2. *If installed on a DSTI card configured for 2B operation, the circuit's voice channel is ignored by the system.*

FIELD: **DIU DN** (DIU Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP: Not allowed

Each data station must be assigned a unique directory number which does not conflict with any other directory number or access code in the system. The DIU directory number is addressable only by other data stations in the system and incoming data trunk calls. This field is an output only field in a MODIFY operation.

FIELD: **TYPE** (DIU Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: SAL - Stand-alone data station  
 ITG - Integrated data station  
 LGP - Logically Paired (Reserved for future use)

This field defines the DIU as a Stand-alone or integrated device.

FIELD: **AS DN** (Associate Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

The associate directory number corresponds to the Prime Directory Number (PRM DN) entered in the Station Assignment command (CMD 330). If the DIU is integrated, the prime directory number of the digital telephone must be entered in this field.

During an ADD operation, the following relationship exists between the "TYPE" and "AS DN" fields:

## DATA STATION ASSIGNMENT (CMD 360)

**PERCEPTION 4000****COMMANDS**

| <b>"TYPE"<br/>Field</b> | <b>"AS DN" Field</b>                                   |
|-------------------------|--|
| SAL                     | "AS DN" must not be entered.                           |
| ITG                     | "AS DN" is optional; if entered, must be ITG voice DN. |

FIELD: **DEF MDM** (Default Modem Pool)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32  
 RANGE: Allowed in a DISPLAY operation only

The default modem pool defines what modem pool will automatically be selected for incoming trunk calls, either directly routed by the inward routing tables or via transfer from an attendant. This field also defines automatic modem pool selection for outgoing trunk calls unless overridden manually or preprogrammed through other M&A commands, such as the High Usage Data Destination Assignment command (CMD 368). The modem pool should be compatible with the terminating data interface unit's configuration.

FIELD: **COS** (Class of Service)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 64  
 RANGE: Allowed in a DISPLAY operation only

The Class of Service determines what features are available for a data station.

FIELD: **DRL** (Destination Restriction Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only

The Destination Restriction Level determines the restrictions on the outgoing calling pattern.

FIELD: **FRLP** (Facility Restriction Level Profile)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only

The Facility Restriction Level determines the facilities available to the caller.

FIELD: **QPL** (Queue Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 RANGE: Allowed in a DISPLAY operation only

The "QPL" field determines the queuing priority level for the DIU.



FIELD:       **DRG** (Data Restriction Group)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 16  
 RANGE:      Not allowed

The Station-to-Station restriction levels do not affect any outgoing call restrictions or incoming trunk call restrictions. (Currently this is a locked field.)

FIELD:       **ANS** (Answer Method)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **AUTO** - Auto-answer  
               **DTE**  - DTE answer method  
               **NON**  - Neither

This field determines what type of answering method the DIU will use—either **AUTO** (such as for printers), **DTE** (for devices controlling the DTR signal), or **NON** (used for interactive operation). When interfacing with a host computer port, either **AUTO** or **DTE** should be set, depending on the application.

FIELD:       **NAME** (Directory Name)  
 TYPE:        Text  
 FORMAT:     0 to 9 ASCII characters

Each data station may optionally be assigned a unique name. During a DISPLAY operation, if only the beginning part of the name is entered in this field, a list of directory names with the same beginning characters displays. Embedded spaces are allowed. In a MODIFY operation, a **<CONTROL-D>** may be entered to delete the current value.

### SYSTEM ERROR MESSAGES

- C36000 - DIU directory number conflicts with existing number or access code
- C36001 - Specified equipment number is a group member
- C36002 - No LTN is available
- C36003 - No LDN is available
- D36004 - Add DN-LDN relation failed
- D36005 - Failed to remove this DN from DA tree
- D36006 - Add DN-LDN relation failed
- D36007 - Failed to remove DN-LDN Relationship
- D36008 - Failed to release the deletion LDN
- D36009 - Failed to release the deletion LTN
- C36010 - DIU directory number does not match
- D36011 - Failed to add KSU-LDN relationship
- D36012 - Failed to add KSU member
- D36013 - Failed to remove KSU Member
- D36014 - Failed to remove KSU-LDN relationship
- C36015 - Card type does not match

## DATA STATION ASSIGNMENT (CMD 360)

**PERCEPTION 4000****COMMANDS**

- C36016 - Cannot add card to this card slot
- C36017 - Number of DIUs is up to system maximum
- C36018 - Cannot install DSTI/BSTI/PBRC in slot 12 or 14
- C36019 - Cannot install DSTI-2B in an even card slot
- C36020 - Cannot install DSTI-2B in card slots 11 - 14
- C36021 - Cannot install T1 in an odd card slot
- C36022 - Cannot install T1 in card slot 14
- C36023 - Check associated directory number input
- C36024 - DIU directory number already exists
- C36025 - Check existence of modem pool identification
- C36026 - Missing operation specified
- D36027 - LDN-to-LTN conversion failed
- C36028 - Check specified DIU directory number
- C36029 - Check specified DIU type
- C36030 - Specified data station does not exist
- C36031 - Specified equipment number is already in use
- D36032 - DIU logic pairing failed
- D36033 - Addition of LDN to KSU failed
- D36034 - Removal of LDN from KSU failed
- C36035 - Must remove SDDN key
- C36036 - Substate is not valid
- C36037 - Specified DIU does not exist
- C36038 - Data directory number already exists
- C36039 - Must assign data directory number
- D36040 - Addition of data line failed
- D36041 - Read phone attributes failed
- C36042 - Logic pair already exists
- C36043 - DDN key does not exist
- D36044 - Removal of data line failed
- D36045 - Removal of logic pair failed
- D36046 - Addition of DIU attributes failed
- D36047 - Modification of DIU attributes failed
- D36048 - Addition of DIU failed
- C36049 - Check specified equipment number
- D36050 - Removal of DIU failed
- D36051 - Directory number registration failed
- C36052 - Database has recovered
- C36053 - Recovering database
- C36054 - Equipment number has been used or reserved
- C36055 - Permanent connection exists
- C36056 - Write authorization attributes failed

**RELATED COMMANDS**

- Class of Service Assignment (CMD 334)
- Data Hunt Assignment (CMD 366)
- Data Interface Parameter Assignment (CMD 361)
- Data Station Parameter Assignment (CMD 362)
- Destination Restriction Level Assignment (CMD 337)

Facility Restriction Level Profile Assignment (CMD 387)

High Usage Data Destination Assignment (CMD 368)

Name Dialing Assignment (CMD 367)

Station Feature Key Assignment (CMD 331)

DATA STATION PARAMETER ASSIGNMENT (CMD 362)

**DATA STATION PARAMETER ASSIGNMENT (CMD 362)**

Both integrated and Stand-alone Data Interface Units (DIUs) require a number of parameters be specified concerning communication protocol. The Data Station Parameter Assignment command assigns a number of these parameters. All data station parameters are applicable to asynchronous data communication.

Because these parameters apply not only to DIUs configured as Data Communications Equipment (DCE - those which interface directly to a printer, host computer, data terminal, etc.), but also to Data Terminal Equipment (DTE - Stand-alone DIUs used in modem pools), the primary key may be a modem pool number instead of an equipment number. This insures that all DIUs in a modem pool receive like configuration to ensure compatibility. Note that equipment numbers are still required for most DIUs acting as DCE-type equipment.

Additional parameters, applicable to data transmission and signaling, are defined through the Data Interface Parameter Assignment command (CMD 361).

Command Keyword: DATA\_STA\_PARAMETERS

Category Name: Data

**PREREQUISITE COMMANDS**

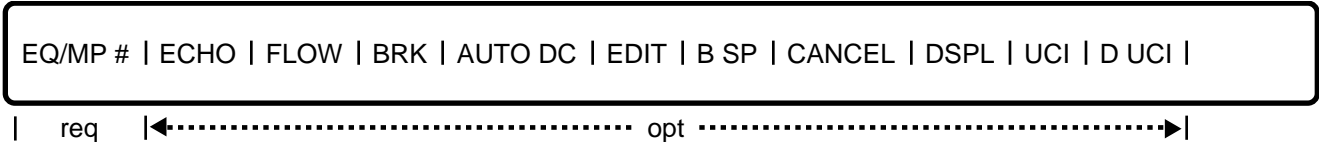
- Data Station Assignment (CMD 360)
- Modem Pool Assignment (CMD 347)

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**



This operation changes data station parameter selections of one or more data stations. Loops are permitted in the "EQ/MP #" field when changing a number of data stations with the same parameter selection.

## DATA STATION PARAMETER ASSIGNMENT (CMD 362)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|   |
|---|
| EQ/MP #   ECHO   FLOW   BRK   AUTO DC   EDIT   B SP   CANCEL   DSPL   UCI   D UCI |
|---|

◀.....opt.....▶

This operation displays data station parameters of one or more data stations. All of the fields are optional. If no data is entered in any of these fields, attributes of all data stations in the system display. Loops are permitted in the "EQ/MP #" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **EQ/MP #** (Equipment/Modem Pool Number)  
 TYPE: EQ Type / Decimal  
 FORMAT: 5 or 6 digits / 1 or 2 digits  
 VALUE: (0)10101 to 101316 (for EQ#) / 1 to 32 (for MP#)  
 LOOP: Allowed in DISPLAY and MODIFY operations

The equipment and modem pool numbers are assigned with the Data Station Assignment (CMD 360) and Modem Pool Assignment (CMD 347) commands respectively. This field selects the appropriate data device to be modified or displayed.

FIELD: **ECHO** (Local Echo Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ECHO - DIU local echo  
 NON - No local echo

This parameter defines local echo capability. Local echo selection is applicable only if the "UCI" field is **ON**. **ECHO** is the default value for DCE mode, and **NON** is the default for DTE mode and cannot be changed.

FIELD: **FLOW** (Flow Control Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CFC - Character flow control  
 NFC - No flow control  
 RCFC - RTS/CTS flow control

This parameter defines the control of data flow across the communication interface. When **NFC** is selected, flow control between data devices is transparent to the DIU. When **CFC** (or **RCFC**) is selected, the XON and XOFF character flow control (or RTS/CTS) is detected and honored by the DIU. **CFC** is the default value.

## DATA STATION PARAMETER ASSIGNMENT (CMD 362)

**PERCEPTION 4000****COMMANDS**

FIELD: **BRK** (Break Handling)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: PT - Pass through  
 PTD - Pass through then disconnect

This parameter defines treatment upon detection of a "BREAK" condition. The DIU usually detects the "breaking" (of the communications line) and relates it to the distant end. In addition, when **PTD** is selected, the DIU initiates the data call clearing sequence. **PT** is the default value.

FIELD: **AUTO DC** (Automatic Disconnect)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ENB - Enable Auto Disconnect  
 DIS - Disable Auto Disconnect

This parameter defines the disconnection criteria of the communications link between the DIU and the attached device. When **ENB** is selected, the DIU disconnects the link by turning off the DTR/DSR signal as a result of data call clearing. Also, when the DIU detects dropping of the DTR/DSR signal from the attached device, it initiates the data call clearing procedure. **ENB** is the default value.

FIELD: **EDIT** (Local Editing Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ENB - Enable Local Editing  
 DIS - Disable Local Editing

This parameter defines local editing capabilities. Local editing is applicable only when the UCI field is set to **ON**. If **ENB** is entered in this field, data entered in the "B SP", "CANCEL", and "DSPL" fields must be **001-127** (representing the associated ASCII character). **ENB** is the default value for DCE mode, and **DIS** is the default for DTE mode and cannot be changed.

FIELD: **B SP** (Backspace Character)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 127

Values: 0 - Disable function  
 1 to 127 - Character in decimal value

The Backspace function is available when local editing is enabled in the "EDIT" field. When the Backspace character is enabled, you may correct a typing error by pressing the Backspace key and then retyping the correct character. Note that a different value (except **0**) must be entered in each of the editing character fields (B SP, CANCEL, and DSPL) since more than one function may not be assigned to a key. **0** is the default value for the DIU in a modem-DIU pair. **2 (<CONTROL-B>)** is the default value for the others.

## DATA STATION PARAMETER ASSIGNMENT (CMD 362)

**PERCEPTION 4000****COMMANDS**

FIELD:       **CANCEL** (Cancel Character)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:       0 to 127

Values:       0 - Disable function  
               1 to 127 - Character in decimal value

The Cancel function is available when local editing is enabled in the "EDIT" field. When the Cancel character is enabled, you may cancel or "empty" the contents of the DIU receive buffer so that you can re-enter the input data. Note that a different value (except **0**) must be entered in each of the editing character fields (B SP, CANCEL, and DSPL) since more than one function may not be assigned to a key. **0** is the default value for the DIU in a modem-DIU pair. **24 (<CONTROL-X>)** is the default value for the others.

FIELD:       **DSPL** (Display Character)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:       0 to 127

Values:       0 - Disable function  
               1 to 127 - Character in decimal value

The Display function is available when local editing is enabled in the "EDIT" field. When the Display function is enabled, you may display the contents of the DIU receive buffer. Note that a different value (except **0**) must be entered in each of the editing character fields (B SP, CANCEL, and DSPL) since more than one function may not be assigned to a key. **0** is the default value for the DIU in a modem-DIU pair. **18 (<CONTROL-R>)** is the default value for the others.

FIELD:       **UCI** (User Command Interface)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **ON** - Enable UCI function  
               **OFF** - Disable UCI function

This field allows use of the local editing characters. When **ON** is entered in this field, Local Echo Selection, Local Editing Selection, the Backspace Character, the Cancel Character, and the Display Character are available. If this field is set to **OFF**, the previous parameters must be disabled. **OFF** is the default value for the DIU in a modem-DIU pair. **ON** is the default value for the others.

FIELD:       **D UCI** (Dial Up User Command Interface)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **ON** - Enable Dial Up UCI function  
               **OFF** - Disable Dial Up UCI function

The Dial Up UCI flag applies only in DIU-DCE mode. When the flag is **ON**, the "UCI" flag must be **ON**, DTR treatment must be **HI**, and "AUTO DC" must be **ENB**. In DTE mode, the value in this field is **OFF** and not changeable. **OFF** is the default value for the DTE/DCE modes.

## DATA STATION PARAMETER ASSIGNMENT (CMD 362)

**PERCEPTION 4000****COMMANDS****SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C36200 - Check equipment or modem pool number
- C36201 - Value in Backspace, Cancel, Display Character fields cannot be 0
- C36202 - <CR> or ^P (Control P) are reserved
- C36203 - Duplicated value in two or more fields
- C36204 - Value in local echo selection has to be NON
- C36205 - Value in local editing selection has to be DIS
- C36206 - Value in Backspace, Cancel, Display Character fields has to be 0
- C36207 - Value in Dial Up UCI field has to be OFF
- C36208 - Check local edit selection
- C36209 - Check local echo selection
- C36210 - Empty modem pool
- C36211 - Check input in Backspace Character field
- C36212 - Check input in Cancel Character field
- C36213 - Check input in Display Character field
- C36214 - Check input in UCI field
- C36215 - Check input in Dial Up UCI field
- C36216 - Check AUTO DC field
- C36217 - D UCI field conflicts with DTR setting in command 361
- C36218 - D UCI field conflicts with AUTO DC and/or UCI setting
- C36219 - DIU-DCE is in permanent connection; no modification is allowed

**RELATED COMMAND**

Data Interface Parameter Assignment (CMD 361)



## DATA STRUCTURE DISPLAY (CMD 167)

The Data Structure Display command allows an M&A user to display certain items in selected data structure blocks used by system software. This command is used to assist in the software debugging process.

Command Keyword: DATA\_STRUCTURE\_DISP

Category Name: Utility

### OPERATIONS

Available operations: DISPLAY

The function and required data fields for each operation are described as follows:

DISPLAY

TYPE | PARA 1 | PARA 2 |

|◀..... req .....▶| opt |

This operation displays specific data items in the system data structures as specified in the command fields.

### PARAMETERS

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **TYPE** (Type of data)

TYPE: Keyword

FORMAT: Preassigned ASCII characters

|           |     |                                    |
|-----------|-----|------------------------------------|
| Keywords: | STA | - Station Data                     |
|           | ACD | - Automatic Call Distribution Data |
|           | SYS | - System Information               |

The "TYPE" field specifies the type of data to display. This is a required field.

FIELD: **PARA 1** (Parameter 1)

TYPE: Decimal or keyword

FORMAT: 1 to 5 digits; preassigned ASCII characters

VALUE: 0 to 99999

RANGE: Not allowed

## DATA STRUCTURE DISPLAY (CMD 167)

**PERCEPTION 4000****COMMANDS**

Keywords:      MCPUCP - ACD call processing information on MCPU side  
                   LCPUCP - ACD call processing information on LCPU side  
                   GCB     - ACD group control block information  
                   LTN     - ACD logical terminal number information  
                   LDN     - ACD logical directory number information  
                   LSB     - LDN status block information  
                   CID     - Call ID information

This field defines a specific area of information which is used in accessing the desired station or ACD data. If **STA** is entered in the "TYPE" field, then a prime directory number should be entered (the prime directory uniquely identifies each station and is assigned to a station with the Station Assignment command [CMD 330]).

If **ACD** is selected in the "TYPE" field, then either an ACD agent ID or one of the the command's keywords should be entered.

FIELD:           **PARA 2** (Parameter 2)  
 TYPE:            Decimal or keyword  
 FORMAT:          1 to system-configured maximum; preassigned ASCII characters  
 RANGE:           Not allowed

Keywords:      BRF           - Display a small amount of information about station type  
                   DTL           - Display a more detailed amount of information about station  
   type, including a dump of related data structure areas  
                   ALL           - Display information about all ACD groups  
                   SYS           - Display ACD system-level information

The "PARA 2" field is an optional field that specifies the amount of information displayed about the selected data type. If **STA** is entered in the "TYPE" field, then either **BRF** or **DTL** can be entered in the "PARA 2" field. If not specified, the default is **BRF**. If **ACD** is selected in the "TYPE" field, and **MCPUCP** is entered in the "PARA 1" field, then either **SYS** or a specific number of ACD groups can be entered (1 to system-configured maximum); the default is **SYS**. If **LCPUCP** is entered in the "PARA 1" field, then only the **SYS** keyword can be entered; the default is **SYS**. If either **GCB**, **LTN**, or **LDN** is entered in the "PARA 1" field, then either **ALL** or a specific number of ACD groups can be entered (1 to system-configured maximum). Entries of either **LSB** or **CID** in the "PARA 1" field require no "PARA 2" field entry. All of these various entry options are summarized below:

| TYPE | PARA 1    | PARA 2           |
|------|-----------|------------------|
| STA  | 0 - 99999 | BRF, DTL         |
| ACD  | MCPUCP    | SYS, 1-max group |
| ACD  | LCPUCP    | SYS              |
| ACD  | GCB       | ALL, 1-max group |
| ACD  | LTN       | ALL, 1-max group |
| ACD  | LDN       | ALL, 1-max group |
| ACD  | 000 - 999 | ALL, 1-max group |
| SYS  | LSB       |                  |
| SYS  | CID       |                  |

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C16700 - Prime directory number does not exist
- C16701 - MCPU database Read error (LDN attributes)
- C16702 - MCPU database Read error (LPU number)
- C16703 - MCPU database Read error (SSC state number)
- C16704 - MCPU database Read error (LDN record address)
- C16705 - MCPU database Read error (SLSB record address)
- C16707 - MCPU database Read error (OFHCAMP record address)
- C16707 - MCPU database Read error (ONHCAMP record address)
- C16708 - HDT data not available for pilot directory numbers
- C16709 - Data does not exist for virtual pilot directory numbers
- C16710 - Check input in PARA 1 field
- C16711 - Check input in PARA 2 field
- C16712 - ACD group is not defined

## DATA STRUCTURE DISPLAY 2 (CMD 169)

**PERCEPTION 4000****COMMANDS****DATA STRUCTURE DISPLAY 2 (CMD 169)**

The Data Structure Display 2 command is an extension of the Data Structure Display command (CMD 167). The Data Structure Display 2 command allows an M&A user to display certain items in selected data structure blocks used by system software. This command is used to assist in the software debugging process.

Command Keyword: DATA\_STRUCTURE\_DISP2

Category Name: Utility

**OPERATIONS**

Available operations: DISPLAY

The function and required data fields for each operation are described as follows:

## DISPLAY

|                        |
|------------------------|
| TYPE   PARA 1   PARA 2 |
|------------------------|

|←.....req.....→|

This operation displays specific data items in the system data structures as specified in the command fields.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **TYPE** (Type of data)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keywords: ATT - Attendant Data

The "TYPE" field specifies the type of data to display. This is a required field.

FIELD: **PARA 1** (Parameter 1)  
 TYPE: Decimal or keyword  
 FORMAT: 1 to 5 digits; preassigned ASCII characters  
 VALUE: 0 to 99999  
 RANGE: Not allowed

Keywords: IND - Individual attendant information in MCPU and LCPU  
 LDN - Attendant LDN information in MCPU and LCPU  
 GRP - Attendant group information in MCPU and LCPU

This field defines a specific area of information which is used in accessing the desired attendant console information.

FIELD:       **PARA 2** (Parameter 2)  
TYPE:         Decimal  
FORMAT:      1 to 5 digits  
RANGE:      Not allowed

The "PARA 2" field is used to enter an attendant or attendant group directory number. If **IND** is entered in the "PARA 1" field, then an individual attendant directory number should be entered in the "PARA 2" field. If either **LDN** or **GRP** is entered in the "PARA 1" field, then an attendant group directory number should be entered in the "PARA 2" field.

### SYSTEM MESSAGES

The following error messages are unique to this command.

- C16900 - Attendant directory number has not been defined
- C16901 - Attendant group directory number has not been defined
- C16902 - Convert equipment error
- C16903 - Read LCPU data timeout
- D16904 - LCPU number does not match with the one in transaction
- C16905 - Address error (address 0xNNNNNNNNNN)
- D16906 - Read MCPU error
- D16907 - Invalid LDN

## DESTINATION RESTRICTION LEVEL ASSIGNMENT (CMD 337)

**PERCEPTION 4000****COMMANDS****DESTINATION RESTRICTION LEVEL ASSIGNMENT (CMD 337)**

Destination Restriction Levels (DRLs) control outgoing calls made via direct trunk group access. This type of dialing restriction may also be used by Least Cost Routing if set in the system options (System Option Flags command, CMD 408). The Destination Restriction Level Assignment command displays or modifies the non-toll-free call allowance or denial of DRLs in a trunk restriction group (TRGN). This command also provides information on whether or not the exceptional allow/deny, country code, area code, and area/office code tables are available for the given DRL and TRGN.

Command Keyword: DRL\_ASSIGN

Category Name: Restrict

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

TRGN | DRL | NON TF |

|<..... req .....>| opt |

This operation changes the non-toll-free call allowance/denial of one or more trunk restriction groups. Loops are permitted in the "TRGN" and "DRL" fields.

**DISPLAY**

TRGN | DRL | NON TF | EXCEPT DNY | EXCEPT ALW | CC TBL | AC/OC TBL | AC TBL |

|<..... opt .....>|<..... output only .....>|

This operation displays the non-toll-free call allowance/denial of one or more trunk restriction groups, and shows whether or not the except allowance/denial, country code, area code, and area/office code tables are available for the given "DRL" and "TRGN". No input data field is required. If no data is entered in any of the fields, all DRLs of every trunk restriction group in the system display. Ranges are permitted in the "TRGN" and "DRL" fields.

## DESTINATION RESTRICTION LEVEL ASSIGNMENT (CMD 337)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TRGN** (Trunk Restriction Group Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 2 to 8 (or to the maximum system configuration)  
 LOOP: Allowed in DISPLAY and MODIFY operations  
 RANGE: Allowed in a DISPLAY operation only

Up to seven trunk restriction groups can be defined in the system.

FIELD: **DRL** (Destination Restriction Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 2 to 16 (or to the maximum system configuration)  
 LOOP: Allowed in DISPLAY and MODIFY operations.

Values for "DRL" are from 2 to 16.

FIELD: **NON TF** (Non "Toll free" Calling Zone Allowance/Denial)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Allow non-toll-free calls  
 DNY - Deny non-toll-free calls

If **ALW** is entered, restrictions on these calls are controlled by other restriction tables. When **DNY** is entered, calls to destinations outside of the toll-free calling zone are denied.

FIELD: **EXCEPT DNY** (Exceptional Destination Restriction Denial Table)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Table exists  
 NO - Table does not exist

This field is for output only in a DISPLAY operation. Refer to the Exceptional Restriction Tables command (CMD 340).

FIELD: **EXCEPT ALW** (Exceptional Destination Restriction Allowance Table)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Table exists  
 NO - Table does not exist

This field is for output only in a DISPLAY operation. Refer to the Exceptional Restriction Tables command (CMD 340).

## DESTINATION RESTRICTION LEVEL ASSIGNMENT (CMD 337)

**PERCEPTION 4000****COMMANDS**

FIELD: **CC TBL** (Country Code Restriction Table)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Table exists  
 NO - Table does not exist

This field is for output only in a DISPLAY operation. Refer to the Country Code Restriction Tables command (CMD 338).

FIELD: **AC/OC TBL** (Area Code/Office Code Restriction Table)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Table exists  
 NO - Table does not exist

This field is for output only in a DISPLAY operation. Refer to the Area/Office Code Restriction Tables command (CMD 339)

FIELD: **AC TBL** (Area Code Restriction Table)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Table exists  
 NO - Table does not exist

This field is for output only in a DISPLAY operation. Refer to the Area Code Restriction Tables command (CMD 341).

**SYSTEM ERROR MESSAGES**

The following error message is unique to this command.

C33700 - Check trunk restriction group number range

**RELATED COMMANDS**

Area Code Restriction Tables (CMD 341)  
 Area/Office Code Restriction Tables (CMD 339)  
 Country Code Restriction Tables (CMD 338)  
 Exceptional Restriction Tables (CMD 340)  
 System Option Flag Assignment (CMD 408)  
 Trunk Group Assignment (CMD 310)  
 Trunk Group Toll-free Tables (CMD 311)



## DEVICE SERVICE STATUS (CMD 208)

The Device Service Status command places the Stand-by side, or a device on the Active or Stand-by side, in/out of service. This command also installs/removes device(s) from the system either on the Active or the Stand-by side.

Command Keyword:        DEVICE\_STATUS

Category Name:            Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:    INSTALL  
                               REMOVE  
                               INS  
                               OOS  
                               DISPLAY

The function and required data fields for each operation are described in this section.

#### INSTALL



This operation installs device(s) on the system either on the Active or the Stand-by side. At least one device must be entered in a "DEV" field. When a device is installed, it must then be placed into service with an INS operation. For the Active side of the system, LPU2, LPU3, and ETSW should be assigned, if used. If a redundant system side is being used, HDD, FDD, DDCC, MCP, LPU1, and BSW should be assigned. Also, if used on the redundant side, LPU2, LPU3, and ETSW should be assigned.

#### REMOVE



DEVICE SERVICE STATUS (CMD 208)

This operation removes device(s) from the system either on the Active or the Stand-by side. At least one device must be entered in a "DEV" field. A device must be placed out of service with an OOS operation before it can be removed from the system.

INS

SIDE | DEV |

| req | opt |

This operation puts the whole Stand-by side or a device on the Active or Stand-by side in service. To put the Stand-by side in service, enter **SBY** in the "SIDE" field and no data in the "DEV" field.

OOS

SIDE | DEV |

| req | opt |

This operation puts the Stand-by side or a device on the system out of service. To put the Stand-by side out of service, enter **SBY** in the "SIDE" field and no data in the "DEV" field.

DISPLAY

SIDE | MCPU | LPU1 | LPU2 | LPU3 | BTSW | ETSW | DDCC | HDD | FDD | MCLK | MISC |

| req | ◀..... output only .....▶|

This operation displays the status of one or all of the devices on the Active, Stand-by, or both sides. The "SIDE" field is required, while the remaining fields are output fields only. The status displays as either 'INS' if the card is installed, 'OOS' if the card is installed and configured but not synchronized, or '---' if the card is not installed and not configured.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **SIDE** (Active/Stand-by Side)
- TYPE:            Keyword
- FORMAT:         Predefined ASCII characters

Keywords: ACT - Active Side  
 SBY - Stand-by Side  
 BOTH - Both Sides  
 SIDEA - Side A  
 SIDEB - Side B

This field is required for all operations. Sides A and B are the physical locations of the processing equipment. Note that either side (A or B) may be the Active or Stand-by side.

FIELD: **DEV** (Name of a Device)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: MCPU - Main CPU & Memory  
 LPU1 - Local CPU & Memory #1  
 LPU2 - Local CPU & Memory #2  
 LPU3 - Local CPU & Memory #3  
 BTSW - Basic Time Division Switching  
 ETSW - Extended Time Division Switching  
 DDCC - Disk Drive Common Controller  
 HDD - Hard Disk Drive  
 FDD - Floppy Disk Drive  
 MCLK - Main Clock  
 MISC - Miscellaneous Card Type

For INSTALL/REMOVE Operations:

If **ACT** is entered in the "SIDE" field, only **LPU1**, **LPU2** and/or **ETSW** can be entered. If **SBY** is entered in the "SIDE" field, all of the listed keywords except **MCLK** and **MISC** can be entered.

For INS/OOS Operations:

**MCPU** can be entered only when "SIDE" is set to **SBY**. **HDD** and **FDD** can be entered regardless of which side it is. None of the remaining keywords are allowed.

FIELD: **MCPU** (Main CPU)  
 TYPE: Keyword (Output only)  
 FORMAT: Predefined ASCII characters

Keywords: INS - The card is in-service  
 OOS - The card is out of service  
 --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the MCPU card.

FIELD: **LPU1,2,3** (Local CPU #1,2,3)  
 TYPE: Keyword (Output only)  
 FORMAT: Predefined ASCII characters

## DEVICE SERVICE STATUS (CMD 208)

**PERCEPTION 4000****COMMANDS**

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

These fields, appearing in a DISPLAY operation, indicate the status of the local CPU cards.

FIELD:       **BTSW** (Basic Time Division Switching)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the BTSW card.

FIELD:       **ETSW** (Extended Time Division Switching)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the ETSW card.

FIELD:       **DDCC** (Disk Drive Controller)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the DDCC card.

FIELD:       **HDD** (Hard Disk Drive)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the HDD card.

FIELD:       **FDD** (Floppy Disk Drive)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the FDD card.

FIELD:       **MCLK** (Main Clock)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the MCLK card.

FIELD:       **MISC** (Miscellaneous Card)  
 TYPE:        Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   INS - In-service  
               OOS - Out of service  
               --- - The card is not installed and not configured

This field, appearing in a DISPLAY operation, indicates the status of the MISC card. "MISC" is the only card in a single/redundant system.

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

C20800 - Device has already been installed  
 C20801 - Device has already been removed  
 C20802 - Device is already in service  
 C20803 - Device is already out of service  
 C20804 - Cannot register device  
 C20805 - Does not match system configuration  
 C20806 - Program/data transfer  
 C20807 - No response  
 C20808 - Failed to send message to SYC  
 C20809 - Failed to set timer  
 C20810 - Stand-by side no response  
 C20811 - Regulated by SYM  
 C20812 - Failed to receive message from SYC  
 C20813 - BOTH is not an allowed keyword in this operation  
 C20814 - Stand-by side setup timeout  
 C20815 - Stand-by side is out of service

## DIALING DEFINITION (CMD 317)

**PERCEPTION 4000****COMMANDS****DIALING DEFINITION (CMD 317)**

This command defines dialing groups used in the Trunk Group Assignment command (CMD 310) and the Least Cost Routing Special Routing Assignment command (CMD 384). Dialing Group 1 is used for TIE lines and interfaces to peripheral equipment where standard dialing does not exist. Private networks many times use unconventional dialing which would require the use of Dialing Group 1.

Special dialing definition groups include the operator and long distance operator prefix, international operator prefix, IDDD access code, toll prefix, local directory assistance, telephone repair number, emergency access code, and interchangeable office code recognition.

Command Keyword: DIALING\_DEFINITION

Category Name: Dialing

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

GRP# | OPP | LOP | IOP | IAC | TP | LDA | REPR | BUS | EMR | AUX1 | AUX2 | AUX3 | IOC |

| req | ←..... opt .....→ |

This operation modifies the special dialing codes of one or more dialing definition groups. The Dialing Group Number (GRP#) is required. Ranges are permitted in the "GRP#" field.

**DISPLAY**

GRP# | OPP | LOP | IOP | IAC | TP | LDA | REPR | BUS | EMR | AUX1 | AUX2 | AUX3 | IOC |

←..... output only .....→ |

This operation displays the special dialing codes of all three dialing definition groups. No input data is required, and all the fields are output only fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **GRP#** (Dialing Group Number)  
 TYPE:        Decimal  
 FORMAT:     1 digit  
 VALUE:      2 to 4  
 RANGE:      Allowed in a MODIFY operation

The system supports three dialing groups. Dialing group 1 allows undefined dialing.

FIELD:       **OPP** (Operator Prefix)  
 TYPE:        Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT:     1 to 3 dialed digits  
 VALUE:      0 to 999  
 RANGE:      Not allowed

The default value of the operator prefix is **0**.

FIELD:       **LOP** (Long Distance Operator Prefix)  
 TYPE:        Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT:     1 to 3 dialed digits  
 VALUE:      0 to 999  
 RANGE:      Not allowed

The default value of the long distance operator prefix is **00**.

FIELD:       **IOP** (International Operator Prefix)  
 TYPE:        Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT:     1 to 3 dialed digits  
 VALUE:      0 to 999  
 RANGE:      Not allowed

The default value of the international operator prefix is **01**.

FIELD:       **IAC** (International Direct Dialing [IDDD] Access Code)  
 TYPE:        Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT:     1 to 3 dialed digits  
 VALUE:      0 to 999  
 RANGE:      Not allowed

The default value of the IDDD access code is **011**.

FIELD:       **TP** (Toll Prefix)  
 TYPE:        Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT:     1 to 3 dialed digits  
 VALUE:      0 to 999  
 RANGE:      Not allowed

The default value of the toll prefix is **1**.

## DIALING DEFINITION (CMD 317)

**PERCEPTION 4000****COMMANDS**

FIELD: **LDA** (Local Directory Assistance)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 3 dialed digits  
 VALUE: 0 to 999  
 RANGE: Not allowed

The default value of local directory assistance is **411**.

FIELD: **REPR** (Telephone Repair)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 3 dialed digits  
 VALUE: 0 to 999  
 RANGE: Not allowed

The default value of the telephone repair number is **611**.

FIELD: **BUS** (Telephone Business Office)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 999  
 RANGE: Not allowed

The default value of the telephone business office is **811**.

FIELD: **EMR** (Emergency Access)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 3 dialed digits  
 VALUE: 0 to 999  
 RANGE: Not allowed

The default value of the emergency number is **911**.

FIELD: **AUX1, 2, 3** (Auxiliary Definition 1, 2, and 3) (Reserved for future use)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 3 dialed digits  
 VALUE: 0 to 999  
 RANGE: Not allowed

These fields are for future use.

FIELD: **IOC** (Interchangeable Office Code Recognition)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ITP - Identifiable by toll prefix before area code  
 ITO - Identifiable by timeout  
 NON - No interchangeable office codes

This field defines whether interchangeable office codes exist for the trunk groups using this dialing group, and if so, how they are identified - by toll prefix usage before the area code (**ITP**) or



by timeout after 10 or 11 digits are dialed (**ITO**). Interchangeable office codes are defined as office codes which have a '0' or '1' as a middle digit, making them appear as area codes (NYX - where N is a digit 2-9, Y is the digit 1 or 0, and X is a digit 0-9). Interchangeable office codes are defined in the Interchangeable Office Code Table command (CMD 318).

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C31700 - Check dialing group number range
- C31701 - Same value exists in two or more fields

### RELATED COMMANDS

- Interchangeable Office Code Table (CMD 318)
- LCR Special Routing Assignment (CMD 384)
- Trunk Group Assignment (CMD 310)

**DICTATION GROUP/MACHINE ASSIGNMENT (CMD 401)**

The Dictation Machine Assignment command configures dictation machine groups as well as installs dictation machines on standard trunk circuits. The PERCEPTION 4000 supports up to 16 dictation machine groups; each group may be configured with a maximum of eight dictation machines.

Command Keyword:        DICTATION\_ASSIGN

Category Name:            System

**PREREQUISITE COMMAND**

Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations:    ADD  
                               DELETE  
                               DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

GRP# | DEV | EQUIP # | NAME |

◀.....req.....▶ | opt |

This operation adds a dictation machine and its device identifier to a dictation machine group. Loops are allowed in the "GRP#" and "DEV" fields.

**DELETE**

GRP# | DEV | EQUIP # |

◀.....req.....▶ | opt |

This operation deletes a dictation machine from a dictation machine group. Loops are allowed in the "GRP#" and "DEV" fields.

## DICTATION GROUP/MACHINE ASSIGNMENT (CMD 401)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|                             |
|-----------------------------|
| GRP#   DEV   EQUIP #   NAME |
|-----------------------------|

|                 |
|-----------------|
| ◀.....opt.....▶ |
|-----------------|

This operation displays the dictation machine group and its associated dictation machines. Loops are allowed in the "GRP#" and "DEV" fields. If no data is entered in any of the fields, all of the dictation groups display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP#** (Dictation Machine Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 16  
 LOOPS:          Allowed in ADD/DELETE/DISPLAY operations

This field identifies the group to be assigned. Dictation machine groups are defined in the Trunk Group Assignment command (CMD 310).

FIELD:           **DEV** (Device Identifier)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          1 to 8  
 RANGES:         Allowed in ADD/DELETE/DISPLAY operations

This field is an index numbering of the machines in the group. Note that the dictation machine groups hunt from the lowest index number to the highest, therefore if ordering is important, this sequence should be observed.

FIELD:           **EQUIP #** (Equipment Number)  
 TYPE:            EQ Type  
 FORMAT:         5 or 6 digits  
 VALUE:          (0)10101-101408 \*  
 RANGE:          Allowed in a DISPLAY operation

\* Use the following chart to determine valid ranges for dictation machines.

For BSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

## DICTATION GROUP/MACHINE ASSIGNMENT (CMD 401)

**PERCEPTION 4000****COMMANDS**

For XSTI equipment cards, the following ranges apply:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

This field assigns each dictation machine in the group to a standard analog line circuit (BSTI or XSTI) card. A trunk group supporting dictation machine group usage must also be defined, even if an analog line circuit is used (refer to the Trunk Group Assignment command, CMD 310).

FIELD: **NAME** (Dictation Machine's Device Name)  
 TYPE: Text  
 FORMAT: 0 to 9 ASCII characters

This field defines the dictation machine's device name, up to a maximum of 9 ASCII characters/numbers including punctuation and spaces.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C40100 - Check dictation machine group number range
- C40101 - Check device number range
- C40102 - Device has already been installed
- C40103 - Device not found
- C40104 - Dictation machine group is not defined
- C40105 - Card or equipment number is assigned to another device
- C40106 - Equipment number is not a dictation machine card type
- C40107 - Dictation machine's device name exceeds 14 characters
- C40108 - Remove hunting sequence before deleting dictation machine

**RELATED COMMAND**

Trunk Hunting Assignment (CMD 309)

## DID/CCSA/DNIS ACD PARAMETER ASSIGNMENT (CMD 359)

The DID/CCSA/DNIS ACD Parameter Assignment command is used to define listed directory numbers (LDNs) and their associated routing destinations. Routing choices are DID, CCSA, DNIS with a non-ISDN trunk group, and DNIS/DDI with an ISDN trunk group.

Command Keyword: DID/CCSA/DNIS\_ACD

Category Name: Trunk

### PREREQUISITE COMMANDS

Trunk Group Assignment (CMD 310)  
 Trunk Group Parameter Assignment (CMD 420)  
 DID/CCSA/DNIS Trunk Group Assignment (CMD 314)  
 DID/CCSA/DNIS LDN Assignment (CMD 316)

### OPERATIONS

Available operations:

DISPLAY  
 MODIFY

The function and required data fields for each operation are described as follows:

#### DISPLAY

TGN | LDN | IQP1 | IQP TMR | IQP2 | OVF TMR | LDN NAME |

◀..... opt .....▶

This operation is used to display the parameters of one or more existing LDNs. The DISPLAY operation requires no data input. If a <TAB> is entered in the "TGN" field, information regarding all LDNs for all trunk groups in the PERCEPTION 4000 system will be displayed.

#### MODIFY:

TGN | LDN | IQP1 | IQP TMR | IQP2 | OVF TMR | LDN NAME |

◀.... req .....▶ | ◀..... opt .....▶

This operation is used to modify the attributes of an existing LDN. Required input information includes the LDN and its associated trunk group number ("TGN").

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **TGN** (Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 256 (or maximum system configuration)  
 RANGE:          Not allowed  
 LOOP:           Allowed in DISPLAY operation only

The specified TGN must be either: a DID, CCSA, or DNIS trunk; or an ISDN trunk with DNIS/DID inward mode.

FIELD:           **LDN** (Listed Directory Number)  
 TYPE:            Decimal  
 FORMAT:         2 to 15 digits  
 VALUE:          00 to 999999999999999  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not allowed

The entered LDN must have been previously defined via the DID/CCSA LDN Assignment command (CMD 316).

FIELD:           **IQP1** (First Incoming ACD Call Queuing Priority)  
 TYPE:            Decimal  
 FORMAT:         1 to 2 digits  
 VALUE:          1 to 16  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not allowed

The "IQP1" field defines how the incoming LDN call will be treated in an ACD environment. If a value of **1** is entered in this field, then the incoming call will receive the highest level of priority and be placed at the front of the ACD queue. If **16** is entered, the call will receive the lowest level of priority treatment. Values in between 1 and 16 can be entered to provide intermediate levels of treatment. If a **<Ctrl> D** is entered in the "IQP1" field when the "IQP TMR" and "IQP2" have not been defined, then the "IQP1" value will be deleted.

FIELD:           **IQP TMR** (Incoming ACD Call Queuing Priority Timer)  
 TYPE:            Decimal  
 FORMAT:         1 to 4 digits  
 VALUE:          1 to 9999, in seconds  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not allowed

The "IQP TMR" field entry assigns the period of time that an incoming LDN call will wait in queue prior to being repositioned per the "IQP2" field entry. If "IQP2" is defined, then the "IQP TMR" must also be assigned. If a **<Ctrl> D** is entered in the "IPQ TMR" field, then both the "IQP TMR" and "IQP2" field entries will be deleted. When defined, the "IPQ TMR" value should be less than the value of the overflow timer "OVF TMR."

FIELD:           **IQP2** (Second Incoming ACD Call Queuing Priority)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 16

## DID/CCSA/DNIS ACD PARAMETER ASSIGNMENT (CMD 359)

**PERCEPTION 4000****COMMANDS**

RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

This field defines the new priority level that is assigned to an incoming LDN call after waiting in an ACD queue for a period longer than that set in the "IQP TMR" field. If the "IQP TMR" field is defined, then the "IQP2" field should also be defined. If a <Ctrl> D is entered in the "IQP2" field, then both the "IQP2" and "IQP TMR" field entries will be deleted. The entered "IQP2" value should be less than or equal to the "IQP1" value.

FIELD: **OVF TMR** (ACD Overflow Timer)  
 TYPE: Decimal  
 FORMAT: 1 to 4 digits  
 VALUE: 1 to 9999  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not Allowed

This field assigns the period of time that an incoming LDN call will wait at the new ("IQP2") priority level before being routed to an alternative destination (the assigned overflow destination for the ACD group). The "OVF TMR" value should always be greater than the "IQP TMR" value (unless the overflow timer is set at 0). If a <Ctrl> D is entered in the "OVF TMR" field, then the "OVF TMR" value will be deleted.

FIELD: **LDN NAME** (Listed Directory Number Name)  
 TYPE: Text  
 FORMAT: up to 14 ASCII characters

This field defines the name associated with the LDN. Assigned LDN names enable LDN call recipients to receive a descriptive indication of each incoming LDN call. This aids in call answering procedures and is particularly helpful in an ACD environment.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C35900 - Undefined trunk group number
- C35901 - Check trunk group number range
- C35902 - The specified LDN does not exist
- C35903 - IQP2 must be smaller than IQP1
- C35904 - Trunk type is not DID, CCSA, or DNIS
- C35905 - ISDN trunk group with DNIS/DDI inward mode is not allowed
- C35906 - Overflow timer must be greater than Queing Priority Timer
- C35907 - IQP2 field has been defined; IQP TMR should also be defined
- C35908 - IQP TMR has been defined; IQP2 field should also be defined
- C35911 - Deletion not allowed; check IQP2 and IQP TMR entries

## DID/CCSA/DNIS DISA LDN ASSIGNMENT (CMD 315)

**PERCEPTION 4000****COMMANDS****DID/CCSA/DNIS DISA LDN ASSIGNMENT (CMD 315)**

Each defined DID, CCSA, and DNIS non-ISDN trunk group, as well as each inward mode DDI/DNIS ISDN trunk may have listed directory numbers (LDNs) assigned for Direct Inward System Access (DISA). This command defines the DISA table for the trunk groups. The use of DISA enables outside callers to call the system via one of the LDNs and, after entering an optional security code and/or authorization code, to access system features and facilities.

Command Keyword: DID/CCSA\_DISA

Category Name: Trunk

**PREREQUISITE COMMANDS**

DID/CCSA/DNIS Trunk Group Assignment (CMD 314)  
Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

TGN | DISA LDN | DISA LDN | DISA LDN | DISA LDN |

|..... req .....| |..... opt .....|

This operation creates a new group or adds a DISA LDN to an existing group. Data is required in the "TGN" and the first "DISA LDN" fields. Looping is allowed in the "TGN" field.

**DELETE**

TGN | DISA LDN | DISA LDN | DISA LDN | DISA LDN |

|..... req .....| |..... opt .....|

This operation deletes a "TGN" or an "DISA LDN". Data is required in the "TGN" and the first "DISA LDN" fields. Looping is allowed in the "TGN" field. To delete the entire TGN, enter **ALL** in any of the "DISA LDN" fields.



## DISPLAY

```
TGN | DISA LDN | DISA LDN | DISA LDN | DISA LDN |
```

```
|<..... opt .....>|
```

This operation displays all trunk groups and their DISA LDN's that meet the conditions established in each field. Looping is permitted in the "TGN" field.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 LOOPS: Allowed in all operations

Valid entries are the actual trunk group numbers which were pre-defined as DID/CCSA trunk groups in the Trunk Group Assignment command (CMD 310).

FIELD: **DISA LDN** (Direct Inward System Access Listed Directory Number)  
 TYPE: Decimal / Keyword  
 FORMAT: 2 to 7 digits for DID, CCSA, or DNIS non-ISDN trunks  
 2 to 15 digits for DDI or DNIS ISDN trunks  
 Predefined ASCII characters  
 VALUE: 00 to 999999999999999 / ALL (for a DELETE operation only)  
 RANGE: Allowed in a DISPLAY operation only

This field indicates the listed directory number for the trunk group. Each DISA LDN is unique in its group. However, since trunk groups are independent of each other, each DISA LDN can be in more than one group. All the DISA LDNs in the same group have the same number of digits. For DID/CCSA/DNIS non-ISDN trunk groups, the number of digits in the "DISA LDN" field must be the same as the trunk group's digit length. The keyword **ALL** may be entered in any of the "DISA LDN" fields to delete an entire TGN.

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C31500 - Check input format in field N
- C31501 - Group is not defined as DID/CCSA
- C31502 - Length of LDN in field N does not match length sent from CO
- C31503 - Not enough space to add LDN(s)
- C31504 - Input LDN in field N is already in group
- C31505 - Input LDN in field N is not in group
- C31506 - The same LDNs exist in fields Ni...Nj

DID/CCSA/DNIS DISA LDN ASSIGNMENT (CMD 315)

**PERCEPTION 4000**

**COMMANDS**

- C31507 - Trunk group should be a non-ISDN type
- C31508 - LDN has been defined in Command 316 already

*NOTE: N is from 2 to 9.*

**COMMENTS**

Each DID/CCSA/DNIS non-ISDN trunk group and each DDI/DNIS mode ISDN trunk group can only have one LDN table.

Each LDN must be unique within its own trunk group. However, because each trunk group is independent of others, an LDN can be assigned to more than one trunk group.

All of the LDNs contained in the same DID/CCSA/DNIS non-ISDN trunk group must have the same number of digits. The length of each of these LDNs must be the same as the non-ISDN trunk group's digit length.

**RELATED COMMANDS**

- DID/CCSA/DNIS LDN Assignment (CMD 316)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)

## DID/CCSA/DNIS LDN ASSIGNMENT (CMD 316)

The DID/CCSA LDN Assignment command specifies the unique routing defined for a non-DISA Listed Directory Number (LDN). Up to 32 non-DISA LDNs are allowed per DID/CCSA/DNIS trunk group. Each LDN may be assigned unique routing for each of up to four time zones. The structure and relationships of the three route choices to each time zone to each LDN parallels that used in the Trunk Routing Assignment (CMD 308) and Trunk Group Routing Assignment (CMD 307) commands. Refer to these commands for a discussion of these relationships and parameter issues.

If an LDN for the DID/CCSA trunk group receives no definition in a time zone(s), the call will go unanswered.

Command Keyword: DID/CCSA\_LDN

Category Name: Trunk

### PREREQUISITE COMMANDS

DID/CCSA/DNIS Trunk Group Assignment (CMD 314)  
Trunk Group Assignment (CMD 310)

If a route choice is defined, the following appropriate commands may be needed:

ACD Group Assignment (CMD 355)  
Announcement Pattern Assignment (CMD 353)  
Attendant Group Assignment (CMD 372)  
Attendant Position Assignment (CMD 370)  
Miscellaneous Device Assignment (CMD 400)  
Night Bell Assignment (CMD 405)  
Station Assignment (CMD 330)  
Station Hunting Assignment (CMD 342)  
System Speed Calling Assignment (CMD 402)  
UCD Group Assignment (CMD 354)

### OPERATIONS

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

## DID/CCSA/DNIS LDN ASSIGNMENT (CMD 316)

**PERCEPTION 4000****COMMANDS**

## ADD

TGN | INDEX | LDN | TIME ZONE # | ROUTE CHOICE 1 | ROUTE CHOICE 2 | ROUTE CHOICE 3 |

|..... req .....>|..... opt .....>|

This operation creates a new group or adds a listed directory number to a group. The first five fields (TGN, INDEX, LDN, TIME ZONE #, and ROUTE CHOICE 1) are required, and the last two are optional. Loops are allowed in the "TGN" and "INDEX" fields. A loop in the "INDEX" field is used for adding several LDNs. Its value does not indicate the actual position to be added in the group. The number of digits in the "LDN" field must be the same as the DID/CCSA/DNIS non-ISDN trunk group's digit length. For ISDN trunk groups, the number of digits can range from 2 to 15 digits.

## DELETE

TGN | LDN |

|.... req ...>|

This operation deletes a "TGN" or "LDN". Both the "TGN" and the "LDN" fields are required. Looping is allowed in the "TGN" field. To delete a trunk group, enter **ALL** in the "LDN" field.

## MODIFY

TGN | LDN | TIME ZONE # | ROUTE CHOICE 1 | ROUTE CHOICE 2 | ROUTE CHOICE 3 |

|..... req .....>|..... opt .....>|

This operation changes the conversion scheme and assigned LDNs with their associated routing destinations of one or more DID/CCSA/DNIS (incoming) trunk groups. The "TGN", "LDN", and "TIME ZONE #" fields are required. Delete fields are allowed in the "ROUTE CHOICE 1/2/3" fields. The number of digits in the "LDN" field must be the same as the DID/CCSA/DNIS non-ISDN trunk group's digit length. For ISDN trunk groups, the number of digits can range from 2 to 15 digits. In a MODIFY operation, an LDN can be removed or its associated routing destination can be changed.

## DISPLAY

TGN | INDEX | LDN | TIME ZONE # | ROUTE CHOICE 1 | ROUTE CHOICE 2 | ROUTE CHOICE 3 |

|..... opt .....>|

This operation displays all trunk groups and their LDNs that meet the conditions established in each field. Loops are permitted in the "TGN", "INDEX", and "TIME ZONE #" fields. The "INDEX" field displays the actual position of the "LDN" in the database.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 LOOP: Allowed in ADD, DELETE, and DISPLAY operations

Valid entries are the actual trunk group numbers which were pre-defined as DID/CCSA/DNIS/DDI trunk groups in the Trunk Group Assignment command (CMD 310).

FIELD: **INDEX** (Index for LDN Field)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 256  
 LOOP: Allowed in DISPLAY and ADD operations

This field is used as a counter in ADD and DISPLAY operations. Its value does not indicate an actual position in a trunk group or set any priority for data entered in this command.

FIELD: **LDN** (Listed Directory Number)  
 TYPE: Decimal / Keyword  
 FORMAT: 2 to 7 digits for DID, CCSA, or DNIS non-ISDN trunks  
 2 to 15 digits for DDI or DNIS ISDN trunks  
 Predefined ASCII characters  
 VALUE: 00 to 99999999999999 / ALL (for a DELETE operation only)  
 LOOP: Not allowed

This field contains the listed directory number for the trunk group. Each "LDN" is unique in its group. However, since each trunk group is independent of each other, an "LDN" can be in more than one group. All the "LDN"s in the same group have the same number of digits. **ALL** may be entered in this field in a DELETE operation when deleting all of the listed directory numbers.

FIELD: **TIME ZONE #** (Time Zone Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 LOOP: Allowed in a DISPLAY operation only

This field contains the time zone number for each LDN entry in a group. The number specifies the routing destination. In a DISPLAY operation, this field is the third loop field in the command header.

## DID/CCSA/DNIS LDN ASSIGNMENT (CMD 316)

**PERCEPTION 4000****COMMANDS**

FIELD:           **ROUTE CHOICE 1/2/3**  
 TYPE:            Dialing Digits / Keyword  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 99999

Keywords:    AP01 ~ AN50    Announcement Pattern Number  
               BL01 ~ BL64    Night Bell Number

"ROUTE CHOICE 1" can be one of the following:

- a) Individual attendant console directory number
- b) Attendant group directory number
- c) Station number
- d) Announcement device
- e) Hunt group pilot number
- f) UCD group pilot number
- g) ACD group pilot number
- h) Night bell
- i) Speed Calling code—1 ~ 3 digit Speed Calling access code, plus desired 3-digit Speed Calling code

"ROUTE CHOICE 2" has the same options as "ROUTE CHOICE 1". *However, to utilize "ROUTE CHOICE 2", "ROUTE CHOICE 1" must be defined as an attendant or attendant group.*

"ROUTE CHOICE 3" has the same options as "ROUTE CHOICE 1", with the exception of the attendant and attendant group options. *To utilize "ROUTE CHOICE 3", both "ROUTE CHOICE 1" and "2" must be defined as an attendant or attendant group or mix thereof.*

A **<CONTROL-D>** may be entered in these fields during a MODIFY operation to delete current data. Note, however, that using a **<CONTROL-D>** is dependent on the relationships between the route choices as described above.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31600 - Group is not defined as DID/CCSA
- C31601 - Group is full
- C31602 - Group is empty
- C31603 - Check input format in field N
- C31604 - Length of input LDN is not correct
- C31605 - Input LDN is already in group
- C31606 - Input LDN is not in group
- C31607 - Input announcement pattern is undefined
- C31608 - Input night bell is undefined
- C31609 - Invalid announcement pattern
- C31610 - Invalid directory number
- C31611 - Check combination of routing destinations
- C31612 - Input any route choice

- C31613 - Input LDN time zone is already in group
- C31614 - Input LDN time zone is not found in group
- C31615 - Undefined trunk group number
- C31616 - DID/CCSA/DNIS/DDI trunk group attributes are not assigned
- I31617 - Warning: Undefined data in Route Choice
- C31618 - LDN has been defined in Command 315 already

## COMMENTS

Each DID/CCSA/DNIS non-ISDN trunk group and each DDI/DNIS mode ISDN trunk group can only have one LDN table.

Each LDN must be unique within its own trunk group. However, because each trunk group is independent of others, an LDN can be assigned to more than one trunk group.

All of the LDNs contained in the same DID/CCSA/DNIS non-ISDN trunk group must have the same number of digits. The length of each of these LDNs must be the same as the non-ISDN trunk group's digit length.

An LDN can be removed or its associated routing destination can be changed by using the MODIFY operation. Prior to making either of these modifications, ensure that no calls are either on-hold or in-progress for the LDN.

A station that is assigned to either a DID/CCSA/DNIS non-ISDN trunk or a DDI/DNIS mode ISDN trunk should not have a class of service designating Inward Restriction or Origination Only, since such a station cannot receive incoming calls.

## RELATED COMMANDS

- DID/CCSA/DNIS DISA LDN Assignments (CMD 315)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)

## DID/CCSA/DNIS TRUNK GROUP ASSIGNMENT (CMD 314)

This command is used to define DID/CCSA/DNIS non-ISDN trunk groups as well as DDI/DNIS ISDN trunk groups. Most calls are routed by the PERCEPTION 4000 system after receiving a series of digits over a DID/CCSA/DNIS/DDI trunk, and then deleting and/or appending some digits in order to route the call to a station or other terminal.

Command Keyword: DID/CCSA\_TG\_ASSIGN

Category Name: Trunk

### PREREQUISITE COMMANDS

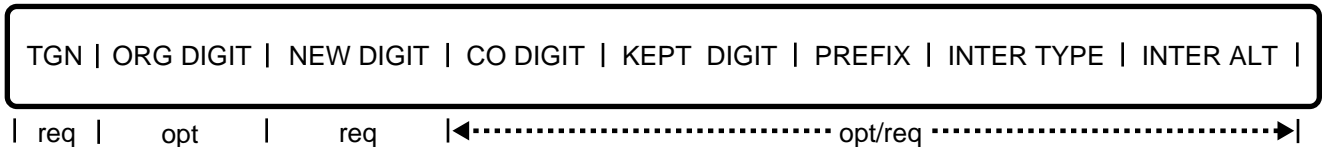
- Announcement Pattern Assignment (CMD 353)
- Attendant Position Assignment (CMD 370)
- ISDN Trunk Group Parameter Assignment (CMD 421)
- Night Bell Assignment (CMD 405)
- Trunk Group Assignment (CMD 310)

### OPERATIONS

- Available operations:
- ADD
  - MODIFY
  - DELETE
  - DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD



This operation assigns attributes to the specified DID/CCSA/DNIS/DDI trunk group. Data is required in all of the fields except the "INTER ALT" field.

#### MODIFY





## DID/CCSA/DNIS TRUNK GROUP ASSIGNMENT (CMD 314)

**PERCEPTION 4000****COMMANDS**

This operation changes the attribute(s) of one or more DID/CCSA/DNIS/DDI trunk groups. Input is required in the first field only.

## DELETE

TGN | ORG DIGIT |

|<.....req.....>|

This operation is used to delete one or more pairs of original and new digit strings for a DID/CCSA/DNIS/DDI trunk group. Both the trunk group number and the original digit string must be entered.

## DISPLAY

TGN | ORG DIGIT | NEW DIGIT | CO DIGIT | KEPT DIGIT | PREFIX | INTER TYPE | INTER ALT |

|<.....opt.....>|

This operation displays information for one or all DID/CCSA/DNIS/DDI trunk groups. Looping is allowed in the "TGN" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 LOOP: Allowed in a DISPLAY operation

Valid entries are the actual trunk group numbers which were pre-defined as DID/CCSA/DNIS/DDI trunk groups in the Trunk Group Assignment command (CMD 310).

FIELD: **ORG DIGIT** (Original Digits)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 to 7 digits or predefined ASCII characters  
 VALUE: 0 to 9999999 or Keyword NON  
 RANGE: Allowed in a DISPLAY operation only

This field applies only to DID and CCSA non-ISDN trunks and is used to specify the original digits that are received from the central office (CO). When these digits are received by the PERCEPTION 4000, they will be translated to new digits (as assigned in the "NEW DIGIT" field). Up to 32 unique pairs of original and new digits can be defined for a trunk group. If pairs of

## DID/CCSA/DNIS TRUNK GROUP ASSIGNMENT (CMD 314)

**PERCEPTION 4000****COMMANDS**

original/new digits are not required, then either a **<TAB>** or the keyword **NON** can be entered. When assigning DNIS or DDI trunk groups, enter the keyword **NON**, or skip past this field by entering a **<TAB>**.

FIELD: **NEW DIGIT** (New Digits)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 to 7 digits or predefined ASCII characters  
 VALUE: 0 to 9999999 or Keyword NON  
 RANGE: Allowed in a DISPLAY operation only

This field applies only to DID and CCSA non-ISDN trunks. When the digits received from the CO match the digits assigned in the "ORG DIGIT" field, the PERCEPTION 4000 system automatically translates the digits to assigned new values. Up to 32 unique pairs of original and new digits can be defined for a trunk group. If pairs of original/new digits are not required, then either a **<TAB>** or the keyword **NON** can be entered. However, if digits have been entered in the "ORG DIGIT" field, then new digits or **NON** must be entered. When assigning DNIS or DDI trunk groups, enter the keyword **NON**, or skip past this field by entering a **<TAB>**.

FIELD: **CO DIGIT** (Central Office Sending Digits)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 2 to 7  
 RANGE: Allowed in a DISPLAY operation only

This field specifies the predetermined number of digits to be sent by the central office. This field is not required by DNIS/DDI ISDN trunks.

FIELD: **KEPT DIGIT** (Number of Digits to be Kept)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 7 for DID/CCSA/DNIS non-ISDN trunks  
 1 to 15 for DNIS/DDI ISDN trunks  
 Predefined ASCII characters  
 RANGE: Allowed in a DISPLAY operation only

Keywords: NON - No received CO digits will be kept  
 ALL - All received CO digits will be kept

This field specifies the number of digits to be kept after receiving a digit string from the central office. For non-ISDN trunks, the value entered in this field should be less than or equal to the value entered in the "CO DIGIT" field. When entering the keyword **ALL**, all CO digits specified in the "CO DIGIT" field will be kept. When entering a **<TAB>** or the keyword **NON**, none of the specified CO digits will be kept. For ISDN trunks other than DDI/DNIS ISDN trunks, either a **<TAB>** or the keyword **NON**.

FIELD: **PREFIX** (Digit String to be Added)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 to 5 digits or predefined ASCII characters  
 VALUE: 0 to 99999 or Keyword NON  
 RANGE: Not allowed

## DID/CCSA/DNIS TRUNK GROUP ASSIGNMENT (CMD 314)

**PERCEPTION 4000****COMMANDS**

This field specifies the digit string to be added at the front of the received CO digit string. This field does not apply for DNIS trunk groups; in this case, either a <TAB> or the keyword **NON** should be entered. **NON** can also be entered as a null prefix string for other trunk types.

FIELD: **INTER TYPE** (Intercept Treatment Type)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 to 5 digits / Predefined ASCII characters  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

Keywords: AP01 ~ AP50

This field defines the device or attendant which will perform vacant number intercept treatment for the specified DID/CCSA/DNIS/DDI trunk group. Attendants, attendant groups, and announcement patterns are valid definitions. Keywords indicate announcement pattern numbers (**AP01 to AP50**), and digit input indicates an attendant or attendant group directory number (0 to 99999).

FIELD: **INTER ALT** (Alternate Intercept Treatment)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: BL01 ~ BL64

This field is used to specify an alternate intercept plan for the DID/CCSA/DNIS/DDI trunk group, if the first-choice attendant/attendant group is in the position busy mode. A night bell device number (**BL01 ~ BL64**) may be entered for the specified DID/CCSA/DNIS/DDI trunk group. No entry is needed if an announcement pattern number (**AN01 ~ AN64**) has been specified in the "INTER TYPE" field. If a <Control D> is entered in this field, then the existing alternate intercept treatment will be deleted.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31400 - Trunk group number is not a DID/CCSA type
- C31401 - Directory number listed as intercept type is not an attendant or attendant group DN
- C31402 - Announcement pattern number listed as intercept type is not available for DID treatment
- C31403 - Night bell listed as intercept alternate is not available
- C31404 - This trunk group number is already assigned
- C31405 - This trunk group number is not yet assigned
- C31406 - Remove DISA LDN member before changing CO sending digits
- C31407 - Number of deleted digits cannot exceed CO sending digits
- C31408 - Added digit string overflow
- C31409 - Original/new/kept/added digits do not apply to DNIS trunk groups
- C31410 - Original digits are not unique for this trunk group
- C31411 - Delete intercept alternate before modifying intercept treatment type
- C31412 - Number of kept digits cannot exceed the number of CO sending digits
- C31413 - Added and kept digits do not apply to DNIS trunk groups

DID/CCSA/DNIS TRUNK GROUP ASSIGNMENT (CMD 314)

**PERCEPTION 4000**

**COMMANDS**

- C31414 - CO digits are not required for an ISDN trunk group
- C31415 - Intercept treatment type must be specified
- C31416 - Original/new digit combinations are invalid
- C31417 - Original/new digits are not found
- C31418 - No space exists for original/new digits to be added for this trunk group
- C31419 - Only decimal digits (0, 1, ... 9) are allowed as original/new digits
- C31420 - Kept digits may be needed
- C31421 - Check trunk group's night bell number
- C31422 - CO digits are required for non-ISDN trunk groups

**COMMENTS**

The announcement pattern specified in the "INTER TYPE" field must have already been assigned.

The night bell specified in the "INTER ALT" field must have already been assigned.

Each trunk that is assigned to a group must already be defined as either a DID, CCSA, or DNIS non-ISDN trunk or as a DDI or DNIS ISDN trunk.

**RELATED COMMANDS**

- DID/CCSA/DNIS DISA LDN Assignment (CMD 315)
- DID/CCSA/DNIS LDN Assignment (CMD 316)
- Internal Call Alternate Routing Assignment (CMD 374)
- System Option Flag Assignment (CMD 408)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)

## DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

**PERCEPTION 4000****COMMANDS****DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)**

The Digital Carrier Channel Assignment command defines the individual channel characteristics of the T-1 carrier. The T-1 card uses 24 time slots in the system. Therefore only a trunk card, electronic telephone line card, or analog off-premises extension card can be used in the same highway with this card.

Command Keyword: DIGITAL\_CARRIER

Category Name: Trunk

**PREREQUISITE COMMAND**

Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|  |
|--|
| EQUIP #   TGN   SIG   ST   STOUT   DBNK   DT   ORG   TERM   RSPV   DISA   SPD   NAME |
|--|

|   |
|---|
| <.....req.....> <.....opt.....> <.....req.....>  opt  locked  opt |
|---|

This operation adds digital carrier channel(s) to a T-1 card. Up to 24 T-1 cards may be assigned per system. Looping is allowed in the "EQUIP #" field.

**DELETE**

|         |
|---------|
| EQUIP # |
|---------|

|     |
|-----|
| req |
|-----|

This operation removes digital carrier channel(s) from a T-1 card. The "EQUIP #" field is required, and looping is allowed. When the last trunk of a trunk group or the last channel in a T-1 card is about to be removed, a warning is given.

DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

MODIFY

|  |
|--|
| EQUIP #   TGN   SIG   ST   STOUT   DBNK   DT   ORG   TERM   RSPV   DISA   SPD   NAME |
| req   locked   ◀.....opt.....▶   |

This operation modifies a digital carrier channel's attributes. If the T-1 card that this equipment number resides on is a clock provider, it is necessary to switch the clock provider to another card before this operation can proceed (refer to the T-1 Clock Provider Selection Assignment command (CMD 412)).

DISPLAY

|  |
|--|
| EQUIP #   TGN   SIG   ST   STOUT   DBNK   DT   ORG   TERM   RSPV   DISA   SPD   NAME |
| ◀.....opt.....▶  |

This operation displays all of the digital carrier channel equipment number(s) that meet the conditions established for each field. Looping is permitted in the "EQUIP #" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD:           **EQUIP #** (Equipment Number)
- TYPE:           EQ Type
- FORMAT:        5 or 6 digits
- VALUE:         (0)10201 to 101224 \*
- LOOP:          Allowed in ADD, DELETE, and DISPLAY operations

\* Use the following chart to determine valid ranges for various types of equipment.

For TTRI equipment cards, only the even-numbered card slots are used:

| Digits            | Range                  | Hardware      |
|-------------------|------------------------|---------------|
| First digit(s)    | (0)1~10                | Shelf no.     |
| Second two digits | 02, 04, 06, 08, 10, 12 | Card slot no. |
| Last two digits   | 01~24                  | Channel no.   |

The T-1 card is placed in the second slot of the desired highway. The equipment number reflects the shelf number, slot number, and channel number.

## DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

**PERCEPTION 4000****COMMANDS**

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only

This field defines the trunk group number for the digital carrier channel. The trunk group number cannot be modified.

FIELD: **SIG** (Signaling Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: GND - Ground Start CO  
 LP - Loop Start CO  
 DID - Direct Inward Dialing  
 EM - TIE E&M Trunk  
 DMI - TIE DMI

The signaling field determines whether the digital channel emulates a loop, ground, DID, E&M TIE, or DMI TIE trunk. The signaling type must be compatible with the trunk group type. If the trunk group type is a CO, FX, or WATS line, the signaling type must be set to a ground or loop start. A DID line must be set to **DID**, E&M lines must be associated with a TIE trunk group, and DMI must be associated with a **DMI** trunk group. Note that **DMI** is not supported at this time.

FIELD: **ST** (Start Method)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: IMM - Immediate Start  
 WNK - Wink Start  
 DLY - Delay Dial  
 TIM - Timeout  
 AUT - Automatic

This field defines the start method used for the digital carrier channel. **IMM**, **WNK**, and **DLY** are used for both DID and E&M signaling. Additionally, E&M may use **TIM**. If signaling is set to **DMI**, this field defines the start method of incoming calls only. Valid options for DMI signaling are **WNK** and **AUTO**. Loop and ground start signaling uses the **TIM** start method only.

FIELD: **STOUT** (Start Method for Outgoing Calls)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: IMM - Immediate Start  
 WNK - Wink Start  
 DLY - Delay Dial  
 TIM - Timeout  
 AUT - Automatic

## DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

**PERCEPTION 4000****COMMANDS**

The outgoing-call start method field is used for DMI signaling only.

FIELD: **DBNK** (D-bank Equivalent)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: FXS - Foreign Exchange Subscriber  
 SAS - Special Access Subscriber

The "D BANK" field specifies the digital carrier channel as a Foreign Exchange Subscriber or a Special Access Subscriber. This field is only used when the channel is designated as a CO trunk (loop or ground start signaling).

FIELD: **DT** (Dial Tone)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DT - Dial Tone Return  
 STR - Silence Tone Return

This field defines whether dial tone or silence is returned. Only DMI and E&M TIE trunks can be defined for the silence option.

FIELD: **ORG** (Originating Dial Mode)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DP10 - DP 10 PPS  
 DTMF - DTMF Receiver

This field defines whether dial pulse (10 pulses per second) or DTMF signaling will be emulated by the digital carrier channel.

FIELD: **TERM** (Terminating Dial Mode)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DP10 - DP 10 PPS  
 DTMF - DTMF Receiver  
 NON - Not applicable

This field defines the terminating dial mode for the digital carrier channel, which can be dial pulse (10 pulses per second) or DTMF.

FIELD: **RSPV** (CO Supervision Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CLD - Called Party Disconnect  
 CLG - Calling Party Disconnect



## DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

**PERCEPTION 4000****COMMANDS**

EPD - Either Party Disconnect  
 NON - No Supervision

This field defines release supervision provided by the Central Office or distant switch. This information is important to the system in determining whether an unsupervised Trunk-to-Trunk connection may be formed using the digital carrier channel.

If the "SIG" field is set to **DID**, **EM**, or **DMI**, this field should be set to **NON**. If a channel terminates to a peripheral equipment device, the CO supervision type should be **NON**. "First Party Disconnect" is also referred to as "Either Party Disconnect".

FIELD: **DISA** (DISA Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - DISA flag is on  
 NO - DISA flag is off

This field flags the channel as a Direct Inward System Access trunk. Outgoing only channels cannot be designated for DISA usage.

FIELD: **SPD** (Transmission Speed) (Reserved for Toshiba Global Network System)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 16K - 16 k bps  
 64K - 64 k bps

The speed field determines the transmission speed over the channel.

FIELD: **NAME** (Channel Name)  
 TYPE: Text  
 FORMAT: 0 to 14 characters/numbers  
 LOOP: Not allowed in this field

The channel (trunk) may be assigned an optional name designation which is displayed to attendants and display station users when the trunk is accessed by or terminated to the device. The name may be up to 14 alphanumeric characters in length. Embedded spaces are allowed.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C41300 - Card type or equipment number is already in use
- C41301 - Undefined trunk group number
- C41302 - Number of trunks in trunk group number exceeds maximum
- C41303 - Trunk group number cannot be modified
- C41304 - Signaling is not compatible
- C41305 - Start method is not compatible

## DIGITAL CARRIER CHANNEL ASSIGNMENT (CMD 413)

**PERCEPTION 4000****COMMANDS**

- C41306 - Check start method for outgoing call
- C41307 - Check dial tone
- C41308 - Check the dial mode
- C41309 - DISA must have EPD or CLG release supervision
- C41310 - DISA is for incoming and bothway
- C41311 - No DISA flag for given trunk group number
- C41312 - Channel name exceeds 9 alphanumeric characters
- C41313 - Download PP data failed
- C41314 - Check input format in field 4 or 5
- C41315 - Check input format in field 8 or 9
- C41316 - Channel has already been installed
- C41317 - Undefined equipment number
- C41318 - Number of T-1 cards exceeds system maximum
- I41319 - Warning: This is the last trunk to be removed from trunk group
- C41320 - Clock provider cannot be modified
- I41320 - Warning: Equipment number is the last channel removed from T1 card
- C41321 - Remove hunting sequence before deleting trunks
- C41322 - Private feature key still exists
- I41322 - Warning: Please try later; database is reserved
- C41323 - Failed to read LCPU database
- C41324 - Trunk group number should be non-ISDN type
- I41324 - Warning: Equipment number is the last channel removed from T-1 card
- C41325 - Trunk cannot be assigned to a dictation machine trunk group
- C41326 - Clock provider cannot be deleted
- C41327 - Clock database is full
- I41328 - Warning: Please try later, database is reserved

**COMMENTS**

Channel 24 is available to the T-1 carrier only when channel-associated signaling is used.

A channel may belong to only one trunk group.

Before adding a channel to a T-1 card, the card type must first be defined as a T-1 type. There are up to 24 T-1 cards per system.

A warning will be given when the last trunk or channel of a trunk group is about to be removed from a T1 card.

**RELATED COMMANDS**

- T-1 Clock Provider Selection Assignment (CMD 412)
- Trunk Assignment (CMD 313)
- Trunk Hunting Assignment (CMD 309)

## DISK FILE MANIPULATION (CMD 152)

The Disk File Manipulation command utilizes and manages storage space on a hard disk or a floppy diskette. It also organizes files on the disks. In addition, the command provides BACKUP and RESTORE functions. The BACKUP function copies a collection of files from the hard disk to floppy diskettes for the purpose of backing up files in case of a system failure. The RESTORE function copies the files on the backup floppy diskettes back to the hard disk. The structure, content, and attributes of these restored files are those of the original files at the time they were backed up.

Command Keyword: FILE\_MANIPULATION

Category Name: Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:

- BACKUP
- RESTORE
- COMPARE
- COPY
- CREATE
- DELETE
- DISPLAY
- FORMAT
- FREE

The function and required data fields for each operation are described in this section.

#### BACKUP

|   |
|---|
| HARD DISK DRIVE   BACKUP DRIVE   RELEASE NO   FILE TYPE |
|---|

|←..... req .....→|

This operation copies the operational programs, database, change notes, and other necessary data files from the hard disk to floppy diskettes for a backup.

The BACKUP process, controlled by a utility program, writes a header to the backup diskette containing information such as the current timestamp, operator identifier, and release number. The utility program then looks for the specified file type and copies those files from the hard disk to the diskette.

When a diskette is full, a message requesting insertion of another diskette displays. Again, a header is written on the next diskette. The BACKUP process continues until all of the files are copied.

## DISK FILE MANIPULATION (CMD 152)

**PERCEPTION 4000****COMMANDS**

## RESTORE

|                                |
|--------------------------------|
| BACKUP DRIVE   HARD DISK DRIVE |
|--------------------------------|

|                   |
|-------------------|
| ◀..... req .....▶ |
|-------------------|

The RESTORE operation is also controlled by the utility program and is the reverse process of a BACKUP. It begins with reading the header on the backup diskette and displaying that information. Then, permission to continue the RESTORE process is requested. If the RESTORE process is permitted, all of the backup files are copied to the hard disk, diskette by diskette. Error messages are displayed if any errors are detected.

## COMPARE

|   |
|---|
| DRIVE1   FILENAME1   VER1   DRIVE2   FILENAME2   VER2 |
|---|

|                        |
|------------------------|
| ◌..... req .....▶  opt |
|------------------------|

This operation compares two files (4 bytes at a time) and displays the differences if any differences occur.

## COPY

|   |
|---|
| DRIVE1   FILENAME1   VER1   DRIVE2   FILENAME2   VER2 |
|---|

|   |
|---|
| ◌..... req .....▶  opt   req  ◌..... opt .....▶ |
|---|

This operation makes a duplicate copy (FILENAME2) of an existing file (FILENAME1). A COPY operation copies only one file at a time.

## CREATE

|   |
|---|
| DRIVE   FILENAME   VER   SIZE IN KBYTES |
|---|

|                   |
|-------------------|
| ◌..... req .....▶ |
|-------------------|

This operation creates a new file on the specified drive.

## DELETE

```
DRIVE | FILENAME | VER |
```

```
| req | ◀..... opt .....▶|
```

This operation removes one or more files from the specified drive. A confirmation is requested before a file is deleted. To delete a specific file, enter the drive number and filename, then press **<RETURN>**. The "VER" field is optional. To delete all files on a drive, enter the drive number and press the **<TAB>** key twice.

## DISPLAY

```
DRIVE | FILENAME | VER | TIMESTAMP | # BLOCKS | SIZE IN KBYTES |
```

```
| req | ◀..... opt .....▶|◀..... output only .....▶|
```

This operation displays a list of files on a disk, along with the creation date, total number of blocks, and file size in kilobytes of each file. The "DRIVE" field is required, and the "FILE NAME" and "VER" fields are optional. The remaining fields are output only fields.

## FORMAT

```
DISK DRIVE |
```

```
| req |
```

This operation divides a hard disk or a floppy diskette into addressable data storage areas. Any data on the disk/diskette is erased with this operation.

## FREE

```
DISK DRIVE | PERCENTAGE UNUSED | LARGEST UNUSED SEG |
```

```
|◀... opt .....▶|◀..... output only .....▶|
```

This operation provides information about storage space usage on a hard disk or a floppy diskette. Information includes the percentage of unused disk space and the size of the largest available segment.



Keywords: HDA - Hard Disk Drive of Side A  
 HDB - Hard Disk Drive of Side B  
 FDA - Floppy Disk Drive of Side A  
 FDB - Floppy Disk Drive of Side B

This field contains the logical name of a disk drive.

FIELD: **DRIVE**  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 OPERATIONS: CREATE, DELETE, DISPLAY

Keywords: HDA - Hard Disk Drive of Side A  
 HDB - Hard Disk Drive of Side B  
 FDA - Floppy Disk Drive of Side A  
 FDB - Floppy Disk Drive of Side B

This field contains the logical name of a disk drive.

FIELD: **DRIVE1, DRIVE2**  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 OPERATIONS: COPY, COMPARE

Keywords: HDA - Hard Disk Drive of Side A  
 HDB - Hard Disk Drive of Side B  
 FDA - Floppy Disk Drive of Side A  
 FDB - Floppy Disk Drive of Side B

These fields contain the logical name of a disk drive.

FIELD: **FILENAME**  
 TYPE: Text  
 FORMAT: Up to 8 ASCII characters (The first character must be a letter, i.e., A, B, ...)  
 OPERATIONS: CREATE, DISPLAY, DELETE

This field assigns a name to the specified file.

FIELD: **FILENAME1, FILENAME2** (File names on disks 1 and 2)  
 TYPE: Text  
 FORMAT: Up to 8 ASCII characters (The first character must be a letter, i.e., A, B, ...)  
 OPERATIONS: COPY, COMPARE

These fields assign names to the specified files.

FIELD: **VER** (Software release version number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 999  
 OPERATIONS: DISPLAY, CREATE, DELETE

This field is the software release version number.

## DISK FILE MANIPULATION (CMD 152)

**PERCEPTION 4000****COMMANDS**

FIELD: **VER1, VER2** (Software release version numbers on disks 1 and 2)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 999  
 OPERATIONS: COMPARE, COPY

These fields are the software release version numbers.

FIELD: **TIMESTAMP**  
 TYPE: Decimal  
 FORMAT: MM/DD hh:mm  
 VALUE: 99/99 99:99  
 OPERATIONS: DISPLAY

This is an output only field and displays the current date and time.

FIELD: **#BLOCKS**  
 TYPE: Decimal  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 99999  
 OPERATIONS: DISPLAY

Each block is 8K bytes in length. This field displays the number of 8K-byte blocks on the disk and is an output only field.

FIELD: **SIZE IN KBYTES**  
 TYPE: Decimal  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 32767  
 OPERATIONS: CREATE, DISPLAY

This is an output only field in a DISPLAY operation and a required input field in a CREATE operation.

FIELD: **PERCENTAGE UNUSED**  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 0 to 99  
 OPERATIONS: FREE

This is an output only field and displays the percentage of space available on the specified disk.

FIELD: **LARGEST UNUSED SEG**  
 TYPE: Decimal  
 FORMAT: 1 to 18 digits  
 VALUE: 0 to 999999999999999999  
 OPERATIONS: FREE

This is an output only field and displays the size of the largest available segment of unused disk space.



**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C15200 - Disk drive is out of service
- C15201 - File already exists
- C15202 - A wrong combination of drive 1 and drive 2
- C15203 - Format operation cannot be performed; the drive is in service
- C15204 - Parameter error; enter the drive field
- C15205 - Failed file consolidation while copying changelog or patchlog
- C15206 - Failed to open changelog file
- C15207 - Failed to open patchlog file
- C15208 - Failed to read changelog file
- C15209 - Failed to read patchlog file
- C15210 - File type does not match; please check floppy disk
- C15211 - Failed to mount floppy drive
- C15212 - Timer timeout
- C15218 - Display or comparison of files from standby side is not supported
- D15219 - Failed to reserve hard disk drive
- C15220 - Hard disk drive is in use; try later
- C15221 - Some files are still open; try later
- C15222 - Floppy disk drive is out of service
- C15223 - Hard disk drive is out of service
- C15224 - Not enough space left on floppy disk for file copy
- C15225 - Standby hard disk drive is out of service
- C15226 - Invalid input; to restore this disk enter (Y/N)

## DTMF RECEIVER ASSIGNMENT (CMD 416)

**PERCEPTION 4000****COMMANDS****DTMF RECEIVER ASSIGNMENT (CMD 416)**

This command installs/removes DTMF receivers in/from the system. These receivers are required for DTMF DID trunks, DISA trunks, and all single-line DTMF analog telephones.

Command Keyword: DTMF\_RECEIVER\_ASSIGN

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETED  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

SHELF # | CARD # |

|◀.....req.....▶|

This operation adds a DTMF receiver to the system. Both fields are required. Loops are not allowed in this operation.

**DELETE**

SHELF # | CARD # |

|◀.....req.....▶|

This operation removes a DTMF receiver from the system. Before the removal, a confirmation is requested. Both fields are required; and loops are not allowed.

## DISPLAY

|                  |
|------------------|
| SHELF #   CARD # |
|------------------|

|◀.....opt .....▶|

This operation displays the assigned DTMF receivers. Loops are allowed in both fields. If a <TAB> is entered in the "SHELF #" field, all of the DTMF receivers display. If a <TAB> is entered in the "CARD #" field, then all of the receivers on the specified shelf number display.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **SHELF #** (Shelf Number of DTMF Receiver)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 10  
 LOOP:           DISPLAY operation only

This field specifies the shelf number for the DTMF receiver.

FIELD:           **CARD #** (Card Number of DTMF Receiver)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 11, 13  
 LOOP:           DISPLAY operation only

This field specifies the card number for the DTMF receiver.

*NOTE: Cards 11 and 12 are installed together; an entry of 11 represents both.  
 Cards 13 and 14 are installed together; an entry of 13 represents both.*

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C41600 - Device has already been installed
- C41601 - Device not found
- C41602 - Cards 11 and 12 are installed together; input only 11
- C41603 - Cards 13 and 14 are installed together; input only 13
- C41604 - Not a DTMF receiver card type
- C41605 - A maximum of N DTMF cards can be installed

EMERGENCY CALL DESTINATION ASSIGNMENT (CMD 345)

**EMERGENCY CALL DESTINATION ASSIGNMENT (CMD 345)**

The PERCEPTION 4000 system provides four distinct emergency calling levels, each accessed by its own access code. Emergency calls are allowed routing to attendants, attendant groups, or off-premises destinations.

Command Keyword: EMERGENCY\_CALL

Category Name: Station

**PREREQUISITE COMMANDS**

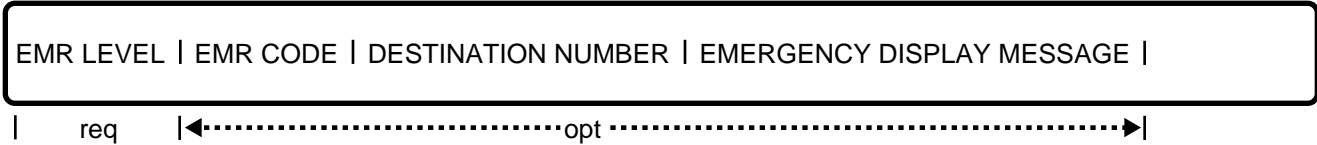
- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

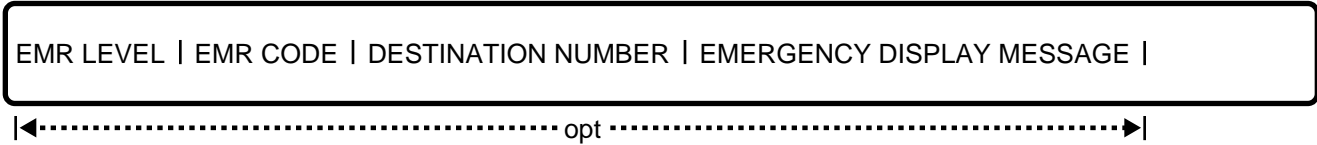
The function and required data fields for each operation are described in this section.

MODIFY



This operation changes an emergency access code, its destination number, and/or its display message for the specified emergency level (EMR LEVEL). Ranges are not permitted. For Emergency levels 1 and 2, a destination number does need not to be specified.

DISPLAY



This operation displays emergency calling levels and information pertaining to each level. Looping is allowed in the "EMR LEVEL" field.

## EMERGENCY CALL DESTINATION ASSIGNMENT (CMD 345)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **EMR LEVEL** (Emergency Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 LOOP: Allowed in a DISPLAY operation only

The emergency level numbers represent relative priority for emergency calls. **1** has the highest priority and **4** has the lowest. Priority 1 and 2 calls receive next-call-in-queue treatment at the attendant or attendant group destination.

High volume ringing is offered the attendant (or attendants) if the emergency ringing flag is enabled (see Attendant Position Assignment command, CMD 370) regardless of the console's local ringing level setting. In addition, an emergency message displays on the attendant's (or attendants') display unit(s). Priority levels 3 and 4 may be prioritized relative to other call categories for the attendant console or group as defined in the Attendant Incoming Call Priority Assignment command, CMD 373.

FIELD: **EMR CODE** (Emergency Access Code)  
 TYPE: Dialing Digits  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

Entries in this field must not conflict with other directory numbers or access codes defined in the system numbering plan.

FIELD: **DESTINATION NUMBER**  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999

Valid destinations for emergency calling are attendants and attendant groups. In the MODIFY operation, the destination number for Emergency levels 1 and 2 need not be specified. However, a destination number must be entered for Emergency levels 3 and 4.

FIELD: **EMERGENCY DISPLAY MESSAGE**  
 TYPE: Text  
 FORMAT: 0 to 30 ASCII characters

This field defines the text message that displays on the attendant console when a corresponding emergency call is made.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34500 - Access code is already in use
- C34501 - Access code not found
- C34502 - No space in code table
- C34503 - Input parameter error
- C34504 - Illegal emergency access code
- C34505 - Cannot assign this code as an emergency access code
- C34506 - Illegal emergency level
- C34507 - Not an attendant dialing digit type
- C34508 - Destination number is out of range
- C34509 - Invalid entry; must input data in fields 2 and 3
- C34510 - Destination number entry is not needed for Emergency levels 1 and 2
- I345510 - Warning: Undefined destination number
- C34511 - Emergency code is already used by another emergency level
- C34512 - Invalid entry; must input data in field 3
- C34513 - Invalid entry; must input data in field 2
- I34514 - Warning: Undefined data in field 3

**RELATED COMMAND**

Attendant Incoming Call Priority Assignment (CMD 373)

## EXCEPTION RESTRICTION TABLES (CMD 340)

Exception Restriction Tables provide a means for assigning absolute denial and/or allowance to certain numbers or groups of numbers. The command is flexible in its design, allowing you to make small or vast changes, from changing the options on a single subscriber number to more widespread changes such as implementing control over an office code regardless of area code (such as 976 numbers), or control operator access, 10XXX codes, as well as standard telephone numbers.

Command Keyword:       EXCEPT\_RESTRICT

Category Name:         Restrict

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|                                      |
|--------------------------------------|
| TYPE   TRGN   DRL   EXCEPTION NUMBER |
|--------------------------------------|

|←..... req .....→|

This operation adds destination numbers to the allowance/denial exception list of one or more trunk restriction groups. Each allowance/denial list can contain a maximum of 32 exception numbers.

#### DELETE

|                                      |
|--------------------------------------|
| TYPE   TRGN   DRL   EXCEPTION NUMBER |
|--------------------------------------|

|←..... req .....→|

This operation deletes destination numbers from the allowance/denial exception list of one or more trunk restriction groups. If **ALL** is entered in the "EXCEPTION NUMBER" field, all exception numbers for the specified "TRGN" and "DRL" are deleted.

## EXCEPTION RESTRICTION TABLES (CMD 340)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|  |
|--|
| TYPE   TRGN   DRL   INDEX   EXCEPTION NUMBER |
|--|

|     |  |        |     |       |   |  |
|-----|--|--------|-----|-------|---|--|
| req |  | ←..... | opt | ..... | → |  |
|-----|--|--------|-----|-------|---|--|

This operation displays the allowance/denial exception list of one or more trunk restriction groups. The first field is required. If no data is entered in the remaining fields, all of the lists of allowance/denial exception numbers for the specified type display. Ranges are permitted in the "TRGN", "DRL" and "INDEX" fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TYPE** (Type of List)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:    ALW - Exceptional Allowance List Type  
               DNY - Exceptional Denial List Type  
               ALL - Display Both Types (used in a DISPLAY operation only)

This field specifies whether the list is an allowance or denial list. In a DISPLAY operation, both types may be displayed with entry of the **ALL** option.

FIELD:           **TRGN** (Trunk Restriction Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE :         2 to 8 (or to the maximum system configuration)  
 RANGE:         Allowed in all operations

There are seven trunk restriction groups which can be defined in the system. Refer to the Trunk Group Assignment command (CMD 310) for assigned trunk group restriction numbers.

FIELD:           **DRL** (Destination Restriction Level)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:         2 to 16 (or to the maximum system configuration)  
 RANGE:         Allowed in all operations

The Destination Restriction Level determines the restrictions on the outgoing calling pattern. The DRL table is set up with the Destination Restriction Level Assignment command (CMD 337).

FIELD:           **EXCEPTION NUMBER**  
 TYPE:            Dialing Digits, plus X, Y, N, and T (Explained below) / Keywords  
 FORMAT:         1 to 24 digits / Predefined ASCII characters  
 RANGE:         Not allowed

Keyword:    ALL



## EXCEPTION RESTRICTION TABLES (CMD 340)

**PERCEPTION 4000****COMMANDS**

Valid digits and characters include the following:

- 0 to 9 - Dialed digits
- X - Represents any digit 0-9
- Y - Represents a 1 or 0
- N - Represents any digit 2-9
- T - Followed by one or more digits, last digit identified by a timeout

When the keyword **ALL** is entered in a DELETE operation, all exception numbers for the specified "TRGN" and "DRL" are deleted. Examples of exception numbers are as follows:

- 411 - Restricts local information
- 1XXX976XXXX - Restricts all non-local 976 numbers
- 976XXXX - Restricts local 976 numbers
- 10XXX1900XXXXXXX - Restricts all 900 area code numbers via equal access dialing
- 0T - Restricts 0+ dialing
- 011T - Restricts international direct distance dialing
- 0 - Restricts straight 'Dial 0' calls

FIELD: **INDEX** (List Index Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32  
 RANGE: Allowed in a DISPLAY operation

This field, which appears in a DISPLAY operation only, acts as a counter by totalling the number of entries in the exception lists, and is generated automatically by the system. Its value does not set any priority for data entered in the command.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34000 - Exception destination restriction list is full
- C34001 - Exception destination restriction number does not exist
- C34002 - Exception destination restriction number already exists
- C34003 - Check trunk restriction group number range
- C34004 - This key is not used for this operation
- C34005 - Illegal input

**COMMENTS**

A total of 32 exceptions are allowed for each TRGN/DRL combination. This is the maximum for the combined number of entries in the allowance and denial exception lists. For example, if 25 denial exceptions exist for a certain TRGN/DRL combination, then the maximum allowable exceptions for that same combination is 7.

**RELATED COMMANDS**

- Destination Restriction Level (DRL) Assignment (CMD 337)
- Trunk Group Assignment (CMD 310)

FACILITY RESTRICTION LEVEL PROFILE ASSIGNMENT (CMD 387)

**FACILITY RESTRICTION LEVEL PROFILE ASSIGNMENT (CMD 387)**

This command provides the definition of the relationship between the originator's Facility Restriction Level Profile (FRLP) number and the Facility Restriction Levels (FRLs) assigned to various routes within each Least Cost Routing route table. There are 32 FRLPs in the system.

FRL/FRLP relationships are used to 1) control calling party access to higher cost routes, 2) perform outgoing call restrictions, and 3) provide grade of service operations for shared tenant or resale of service applications.

Command Keyword: FRLP\_ASSIGN

Category Name: Restrict

**PREREQUISITE COMMANDS**

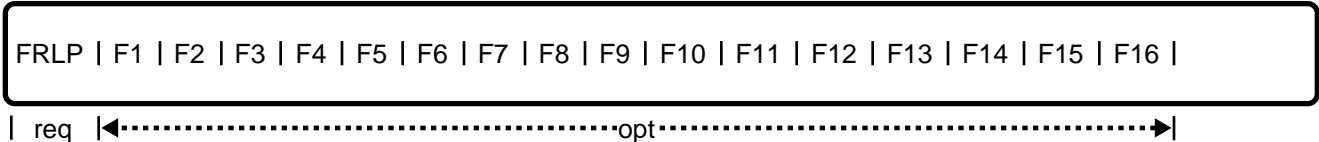
There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

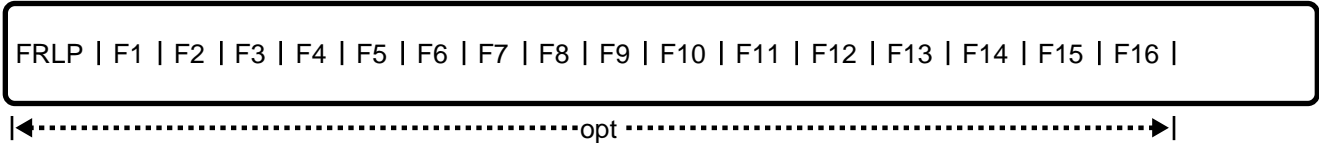
The function and required data fields for each operation are described in this section.

MODIFY



This operation modifies an FRLP number. Ranges are not permitted.

DISPLAY



This operation displays FRLP numbers. Looping is permitted in the "FRLP" field. If no data is entered, all FRLPs are displayed.

## FACILITY RESTRICTION LEVEL PROFILE ASSIGNMENT (CMD 387)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **FRLP** (Facility Restriction Level Profile Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 32 (or to the maximum system configuration)  
 LOOP:       Allowed in a DISPLAY operation

For each FRLP number used in the system, the administrator assigns all desired FRLs. When a caller with a given FRLP makes a call through Least Cost Routing, each route in the route table is checked for its respective FRL.

Routes which have an FRL defined for the caller's FRLP number allow the outgoing call. Any routes having an FRL not defined in the caller's FRLP deny the call.

FIELD:       **F1 to F16** (Facility Restriction Levels 1 to 16)  
 TYPE:        Keyword  
 FORMAT:     X (A marker)

When the keyword **X** is entered, it marks which FRL is legal. To delete an FRL field, enter a **<CONTROL-D>**.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C38700 - FRL already exists in field N  
 C38701 - FRL does not exist in field N

**RELATED COMMANDS**

Attendant Position Assignment (CMD 370)  
 Authorization Code Assignment (CMD 349)  
 Data Station Assignment (CMD 360)  
 LCR Routing Table Assignment (CMD 383)

## FILE CONSOLIDATION (CMD 153)

The File Consolidation command writes program and/or data files to the hard disk. Any changes or additions performed on the system are consolidated into the system files with this command. Additionally, a logout command or a full change log buffer on the MCPU automatically updates the files on the hard disk. This command is used on both the active and standby sides. Note that if a system switchover occurs, or the system is turned off, all files not consolidated are saved in the change log.

Command Keyword: FILE\_CONSOLIDATION

Category Name: Maintenance

### PREREQUISITE COMMAND

Memory Test (CMD 144)

### OPERATIONS

Available operations: ENABLE

The function and required data fields for each operation are described in this section.

ENABLE

| SIDE | TYPE |
|------|------|
|      |      |

|◀.....req.....▶|

This operation executes the command. If the hard disk is busy or out of service, the system outputs an error message.

### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **SIDE**  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ACT - Active Side  
 SBY - Standby Side  
 BOTH - Both Sides

This field selects the side(s) on which the file consolidation will take place.

FIELD:       **TYPE** (Data Type)  
TYPE:        Keyword  
FORMAT:     Predefined ASCII characters

Keywords:   ALL    - Program and Data  
              DATA - Data/Database Only  
              PROG - Program Only  
              NON  - Abort Request

This field designates the data-type files to be consolidated. To abort the command, enter **NON** in this field.

### SYSTEM ERROR MESSAGES

C15300 - Timeout in Command 153  
C15301 - Stand-by side is not installed  
C15302 - Timeout in stand-by side  
C15303 - Hard disk is in use; please try later

## FILE DUMP (CMD 151)

**PERCEPTION 4000****COMMANDS****FILE DUMP (CMD 151)**

The File Dump command “dumps” the contents of a file from a hard disk or floppy disk to an M&A console and/or printer.

Command Keyword: FILE\_DUMP

Category Name: Fault

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: DISPLAY

The function and required data fields for each operation are described in this section.

## DISPLAY

|                          |
|--------------------------|
| DEV   FILENAME   ADDRESS |
|--------------------------|

|◀..... req .....▶| opt |

This operation displays the contents of a file on the specified hard disk or floppy disk. Output is in both binary and ASCII format.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **DEV** (Disk Drive)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: HDA - Hard Disk Drive of Side A  
 HDB - Hard Disk Drive of Side B  
 FDA - Floppy Disk Drive of Side A  
 FDB - Floppy Disk Drive of Side B

The “DEV” field contains the logical name of a disk drive.

FIELD:           **FILENAME**  
TYPE:            Text  
FORMAT:          Up to 12 ASCII characters

The "FILENAME" identifies the file to be displayed and/or printed. To display a directory of the files on the specified "DEV", use the Disk File Manipulation command (CMD 152).

FIELD:           **ADDRESS**  
TYPE:            Hexadecimal  
FORMAT:          1 to 6 hexadecimal digits  
VALUE:           0 to FFFFFFFF

This optional field specifies where to begin the display within the file (i.e., the starting address of the specified file).

### SYSTEM ERROR MESSAGES

- C15100 - Failed to send transaction to FMS
- C15101 - Failed to mount disk
- C15102 - Failed to unmount disk
- C15103 - Failed to open file
- C15104 - Failed to close file
- C15105 - Failed to read file
- C15106 - Invalid address
- C15107 - Device is out of service
- C15108 - Display of files from standby side is not supported





## FORCED ACCOUNT CODE TOLL-FREE TABLES (CMD 352)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|  |
|--|
| AC   OC   OC   OC   OC   OC   OC   OC   OC   OC   OC |
|--|

◀.....opt.....▶

This operation displays all Forced Account Code Toll-Free table(s) that meet the conditions established for each field. All of the fields are optional. The "AC" field is a loop field, and the "OC" fields accept range input.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:            **AC** (Area Code)  
 TYPE:             Decimal with fixed length  
 FORMAT:          3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE:           200 to 919  
 LOOP:            Primary loop in a DISPLAY operation only  
 RANGE:           Not allowed

This field contains the area code for the table. Note that only one table per area code is allowed.

FIELD:            **OC** (Office Code)  
 TYPE:             Decimal with fixed length / Keyword  
 FORMAT:          3 digits in the form NXX (where N = 2 to 9, and X = 0 to 9) / Predefined ASCII characters  
 VALUE:           200 to 999  
 LOOP:            Not allowed  
 RANGE:           Allowed in a DISPLAY operation  
 SCOPE:           Allowed for ADD and DELETE operations

Keyword:   ALL (Allowed in a DELETE operation only)

In ADD and DELETE operations, the first "OC" field is required while the remaining ones are optional. Scopes are permitted in ADD and DELETE operations. To delete a group of office codes, enter **ALL** in the first "OC" field or use a scope entry.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C35200 - Scope field needs a high value
- C35201 - Scope field needs a low value
- C35202 - Scope fields need low and high values
- C35203 - Scope is not allowed in the last office code field
- C35204 - No more space to add more
- C35205 - Area code does not exist

**RELATED COMMAND**

Station-Level Parameter Assignment (CMD 329)

## GROUP SPEED CALLING LIST ASSIGNMENT (CMD 351)

**PERCEPTION 4000****COMMANDS****GROUP SPEED CALLING LIST ASSIGNMENT (CMD 351)**

The PERCEPTION 4000 system allows each speed calling group a list of up to ten destination numbers which may be accessed by all members belonging to that group. Each destination number may be up to 24 digits in length. Internal numbers are allowed, but feature access codes are not.

Command Keyword:       GROUP\_SC\_LIST

Category Name:         Station

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:   MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

GRP# | GSCC | DESTINATION NUMBER |

|◀.....req.....▶|

This operation modifies a destination number in the group speed calling list. All of the fields are required. The destination number can be deleted if a <CONTROL-D> is entered in that field. Loops are allowed in the "GRP#" and "GSCC" fields.

**DISPLAY**

GRP# | GSCC | DESTINATION NUMBER |

|◀.....opt.....▶|

This operation displays destination numbers of group speed calling lists. Loops are allowed in the "GRP#" and "GSCC" fields. If no data is entered in any of these fields, all group speed calling lists in the system are displayed.

## GROUP SPEED CALLING LIST ASSIGNMENT (CMD 351)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP#** (Group Speed Calling Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 255  
 LOOP:            Allowed in MODIFY and DISPLAY operations

This field selects the group number that is to be assigned a Group Speed Calling Code (GSCC).

FIELD:           **GSCC** (Group Speed Calling Code)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          0 to 9  
 LOOP:            Allowed in MODIFY and DISPLAY operations

This field assigns a group speed calling code to the designated group. The code represents the digits entered in the next field (DESTINATION NUMBER). Upon access to the Group Speed Calling feature, the user enters this code (the "GSCC" code) and the system automatically outputs the "DESTINATION NUMBER" digits.

FIELD:           **DESTINATION NUMBER**  
 TYPE:            Dialing Digits plus \* and #  
 FORMAT:         1 to 24 digits (including \* and #)  
 VALUE:          0 to 9, \* and #  
 RANGE:          Not allowed

Destination numbers must include a trunk group access code or the Least Cost Routing access code if an external number is required. Dial tone detection (\*\*) and timed pauses (\*n, where n = 1 to 9 seconds) are also allowed and, though composed of two characters, represent one digit of the 24 allowable.

**SYSTEM ERROR MESSAGES**

- C35100 - Check input format
- C35101 - Destination number is not defined
- C35102 - Speed dialing feature activation number cannot be a destination number
- C35103 - Group speed call code does not exist

**RELATED COMMAND**

Group Speed Calling Membership Assignment (CMD 350)

## GROUP SPEED CALLING MEMBERSHIP ASSIGNMENT (CMD 350)

**PERCEPTION 4000****COMMANDS****GROUP SPEED CALLING MEMBERSHIP ASSIGNMENT (CMD 350)**

The PERCEPTION 4000 system supports up to 255 Group Speed Calling groups which may have as many as 32 members per group. Members include voice stations and data stations only. Both voice and data terminal directory numbers cannot be in the same group. The Group Speed Calling Membership Assignment command assigns members to a group.

Command Keyword:       GROUP\_SC\_MEMBERS

Category Name:         Station

**PREREQUISITE COMMAND**

Station Assignment (CMD 330)

**OPERATIONS**

Available operations:   ADD  
                          DELETE  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|                       |
|-----------------------|
| GRP#   INDEX   MEM DN |
|-----------------------|

|◀..... req .....▶|

This operation adds a member's directory number(s) to a Group Speed Calling group. Loops are allowed in the "GRP#" and "INDEX" fields.

**DELETE**

|               |
|---------------|
| GRP#   MEM DN |
|---------------|

|◀..... req .....▶|

This operation deletes a member's directory number(s) from a Group Speed Calling group. Ranges are not allowed.

## GROUP SPEED CALLING MEMBERSHIP ASSIGNMENT (CMD 350)

**PERCEPTION 4000****COMMANDS**

DISPLAY

GRP# | INDEX | MEM DN |

| opt | output | opt |  
| only

This operation displays members and their directory numbers of Group Speed Calling group(s). Looping is allowed in the "GRP#" field. Range input is permitted in the "MEM DN" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **GRP#** (Speed Calling Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 255  
 LOOP: Allowed in ADD, DELETE, and DISPLAY operations

This field selects the group number that is to be assigned a member directory number (MEM DN).

FIELD: **INDEX** (Speed Calling Group Member Index)  
 TYPE: Decimal (Output only)  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32

The "INDEX" number is used as a counter in an ADD operation. Its value does not indicate an actual position or set any priority for data entered in this command. This is an output only field in a DISPLAY operation.

FIELD: **MEM DN** (Member Prime/Data Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation

The "MEM DN" must be a prime DN or data DN, and can only belong to one Group Speed Calling group.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C35000 - Directory number not found  
 C35001 - Not a station directory number

**GROUP SPEED CALLING MEMBERSHIP ASSIGNMENT (CMD 350)****PERCEPTION 4000****COMMANDS**

- C35002 - Table is full
- C35003 - Directory number is already in another group
- C35004 - Check input format in field 3
- C35005 - Group number is already used by voice DN
- C35006 - Group number is already used by data DN

**RELATED COMMANDS**

- Group Speed Calling List Assignment (CMD 351)
- Trunk Group Assignment (CMD 310)

HIGH USAGE DATA DESTINATION ASSIGNMENT (CMD 368)

### HIGH USAGE DATA DESTINATION ASSIGNMENT (CMD 368)

Up to 64 high usage data numbers which automatically select a modem for an outbound call are supported by the system. The High Usage Data Destination Assignment command sets up a table and assigns a modem pool number to each entry in the table. When a data call is made, the system looks at the digits dialed and searches the table for a match. If one is found, the system proceeds with the data call using the assigned modem pool group number.

Command Keyword: HIGH\_USAGE\_DATA

Category Name: Data

#### PREREQUISITE COMMAND

Modem Pool Assignment (CMD 347)

#### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY



This operation modifies the High Usage Data Destination Table. The "INDEX" field requires data input.

#### DISPLAY



This operation displays the High Usage Data Destination numbers that meet the conditions established for each field. Looping is permitted in the "INDEX" field only.



## HIGH USAGE DATA DESTINATION ASSIGNMENT (CMD 368)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **INDEX**  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 64  
 LOOP:           Allowed in a DISPLAY operation only

"INDEX" is an entry number in the High Usage Data Destination table, and is provided for the administrator's convenience. This number corresponds to the number entered in the "DESTINATION NUMBER" field. When modifying or displaying an entry in the table, this number may be entered instead of the destination number.

FIELD:           **MODEM ID** (Modem Pool Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          1 to 32  
 LOOP:           Not allowed

This field selects the modem pool number that is to be assigned to the destination number entered in the next field. The "MODEM ID" is first defined with the Modem Pool Assignment command (CMD 347). In a MODIFY operation, a **<CONTROL-D>** may be entered to delete the current value.

FIELD:           **DESTINATION NUMBER**  
 TYPE:            DN Type  
 FORMAT:         1 to 24 digits (including \* and #)  
 VALUE:          0 to 9  
 LOOP:           Not allowed

This field defines the frequently dialed data destination number, such as a network access number. The destination number should be in the NDP (North American Dialing Plan) format. In a MODIFY operation, a **<CONTROL-D>** may be entered to delete the current value.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C36800 - The high usage data destination number is already defined
- C36801 - The high usage data destination number is not defined
- C36802 - Illegal high usage data destination number

**RELATED COMMANDS**

- Name Dialing Assignment (CMD 367)
- Numbering Plan Assignment (CMD 300)



## DISPLAY

```
IOP# | TYPE | APPL | APPL | APPL | APPL | APPL | APPL | APPL | APPL | APPL | APPL | APPL |
```

```
|.....opt.....|
```

This operation displays the I/O port applications.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:        **IOP#** (I/O Port Number)  
 TYPE:         Decimal  
 FORMAT:      1 digit  
 VALUE:      1 to 4

This field selects an I/O port on the MISC card. Data input is optional in a DISPLAY operation, but required in ADD and DELETE operations.

FIELD:        **TYPE** (I/O Port Type)  
 TYPE:         Keyword  
 FORMAT:      Predefined ASCII characters

Keywords:    TTY - Maintenance and Administration Console  
               AP - Application Processor

The I/O port is assigned as either a TTY or AP type port. System defaults define ports one through three as TTY ports and port four as an AP port.

FIELD:        **APPL** (Application Usage)  
 TYPE:         Keyword  
 FORMAT:      Predefined ASCII characters

Keywords:    TTY type usage:

MA    - Maintenance Console  
 SSR   - System Status Report  
 EFR   - Error or Fault Report  
 TFR   - Traffic Report  
 SMDR - Station Message Detail Report

AP type usage:

ACD    - Automatic Call Distribution  
 VMS1  - Voice Message Status Type 1  
 VMS2  - Voice Message Status Type 2  
 VMS3  - Voice Message Status Type 3

## I/O PORT ASSIGNMENT (CMD 415)

**PERCEPTION 4000****COMMANDS**

Both TTY and AP port types (not applicable in an ADD operation):

ALL - DELETE/DISPLAY all of the applications assigned to the designated port.

For TTY-type I/O ports, the application usage field may define various combinations of **MA**, **SSR**, **EFR**, **TFR** or/and **SMDR**.

For AP-type I/O ports, the application usage field must be either ACD or VMS. Both of these applications require a dedicated I/O port and may not share that port with other devices or subsystems.

In a DISPLAY operation, this field is optional. While in ADD and DELETE operations, at least one application must be specified.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C41500 - Mismatch I/O port type
- C41501 - Mismatch port type and application
- C41502 - <ALL> is not allowed in ADD operation
- C41503 - Mismatch I/O port number and console application
- C41504 - Not allowed when deleting main console
- C41505 - Each port can have one and only one assigned AP application
- C41506 - Application already exists
- C41507 - There is no application assigned
- C41508 - SMDI is not supported; only VMS1 is available

**RELATED COMMAND**

I/O Port Configuration Assignment (CMD 414)

## I/O PORT CONFIGURATION ASSIGNMENT (CMD 414)

**PERCEPTION 4000****COMMANDS****I/O PORT CONFIGURATION ASSIGNMENT (CMD 414)**

The I/O Port Configuration Assignment command defines the protocols, timers, and controls necessary for the I/O port to communicate successfully with the outboard device.

Command Keyword: I/O\_PORT\_CONFIG

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

FCT | MCT | IOP# | TYPE | MC | MC CODE | LOT | DATA BIT | STOP | PRY | SPEED |

←..... opt .....→

This operation modifies the I/O port attributes of the MISC card. The "IOP#" field is required for all MODIFY operations that change port dependent data. If port number 1 (IOP# = 1) is selected, the "DATA BIT", "STOP", "PRY", and "SPEED" fields are locked, and dip switches on the MISC card must be updated. The "IOP#" field is not required when modifying only the "FCT" or the "MCT" field.

The "MC CODE" field contains the motor control codes (the ASCII code for turning the motor ON and OFF). This field is meaningful only when "MC" is set to **YES**. Looping is permitted in the "IOP#" field only.

**DISPLAY**

FCT | MCT | IOP# | TYPE | MC | MC CODE | LOT | DATA BIT | STOP | PRY | SPEED |

←..... opt .....→

This operation displays all I/O port attributes of the MISC card that meet the conditions established for each field. Looping is permitted in the "IOP#" field only.

## I/O PORT CONFIGURATION ASSIGNMENT (CMD 414)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **FCT** (Flow Control Timer)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 600  
 LOOP:           Not allowed  
 RANGE:          Not allowed  
 DEFAULT:        60 seconds (1 minute)

The flow control timer periodically checks the status of the TTY port to verify that it is functioning correctly. The timer is based on seconds.

FIELD:           **MCT** (Motor Control Timer)  
 TYPE:            Decimal  
 FORMAT:         1 to 4 digits  
 VALUE:          1 to 1800  
 LOOP:           Not allowed  
 RANGE:          Not allowed  
 DEFAULT:        600 seconds (10 minutes)

The motor control timer checks a device (usually a printer) to see if it has been idle for a specified period of time. When the idle time goes beyond the option set in this field, a signal is sent to the control program and the device is automatically turned OFF. The timer is based on seconds.

FIELD:           **IOP#** (I/O Port Number)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          1 to 4  
 LOOP:           Allowed  
 RANGE:          Not allowed

This field defines the I/O port number on the MISC card, and is required in a MODIFY operation for changing port dependent attributes. If port number **1** is selected, the "DATA BIT", "STOP", "PRTY", and "SPEED" fields are locked, and dip switches on the MISC card must be updated.

FIELD:           **TYPE** (Flow Control Type)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:    RCFC - RTS/CTS control method based on the Request-to-Send and Clear-to-Send signals at the hardware interface  
               DC13 - DC1/DC3 control method (i.e. XON/XOFF)  
               BOTH - Use both handshake methods listed above  
               NON  - Use no flow control

This field specifies which flow control mechanism the system uses on the specified terminal port.

## I/O PORT CONFIGURATION ASSIGNMENT (CMD 414)

**PERCEPTION 4000****COMMANDS**

FIELD: **MC** (Motor Control Setting)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Motor Control feature enabled  
 NO - Motor Control feature disabled

This field enables or disables the motor control feature. If this field is set to **YES**, the following field (MC CODE) is required. If set to **NO**, the following field is ignored.

FIELD: **MC CODE** (Motor Control Codes)  
 TYPE: Hexadecimal  
 FORMAT: 4 digits  
 VALUE: 0000 to 7F7F  
 LOOP: Not allowed  
 RANGE: Not allowed  
 DEFAULT: 0000

The motor ON/OFF codes are defined with this field. The first two digits represent the ASCII code for the motor ON command, and the second two represent the ASCII code for the motor OFF. This field is meaningful only when the preceding field (MC) is set to **YES**.

FIELD: **LOT** (Logout Timer Value)  
 TYPE: Decimal  
 FORMAT: 1 to 4 digits  
 VALUE: 1 to 1800  
 LOOP: Not allowed  
 RANGE: Not allowed  
 DEFAULT: 600 seconds (10 minutes)

The logout timer tells the system how long inactivity may exist on the terminal before forcing a logout. The timer is based on seconds.

FIELD: **DATA BIT** (Number of Data Bits)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 7BIT - Specifies 7 data bits  
 8BIT - Specifies 8 data bits

This field defines how many data bits are transmitted through the communications framing. If the "IOP#" field is set to port number **1**, the "DATA BIT" field becomes a locked field.

FIELD: **STOP** (Number of Stop Bits)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 1BIT - Specifies 1 stop bit  
 2BIT - Specifies 2 stop bits

## I/O PORT CONFIGURATION ASSIGNMENT (CMD 414)

**PERCEPTION 4000****COMMANDS**

This field defines the number of stop bits in the communications framing. If the "IOP#" field is set to port number 1, the "STOP" field becomes a locked field.

FIELD: **PRTY** (Parity Setting)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ODD - Odd parity  
 EVEN - Even parity  
 NON - No parity checking (no parity bit)

The type of parity used by the I/O port is defined with this command. If **8BIT** is selected in the "DATA BIT" field, this field must be set to **NON**. If the "IOP#" field is set to port number 1, the "PRTY" field becomes a locked field.

FIELD: **SPEED** (Baud Rate Selection)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 300 - 300 bits per second (bps)  
 1200 - 1200 bps  
 9600 - 9600 bps  
 19200 - 19200 bps

Speed selection for the I/O port is defined with this command. If the "IOP#" field is set to port number 1, the "SPEED" field becomes a locked field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C41400 - I/O port number is required  
 C41401 - Motor Control Setting field is NO  
 C41402 - Motor control code is out of range  
 C41403 - Fields 8 to 11 for IOP# 1 cannot be modified; use dip switches on MISC card

**COMMENTS**

The flow control and motor control timers affect all of the ports. They are independent of the I/O port number. In a MODIFY operation, changes to either timer do not require that the "IOP#" be specified.

All port dependent fields (TYPE ~ SPEED) require that the I/O port number be specified in the "IOP#" field.



## INITIATE SWITCHOVER (CMD 102)

The Initiate Switchover command provides the capability to manually swap sides (ACTIVE to STAND-BY) on a redundant system.

Command Keyword: SWITCHOVER

Category Name: Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: ENABLE

The function and required data fields for each operation are described in this section.

ENABLE

|            |
|------------|
| SWITCHOVER |
|------------|

|     |
|-----|
| req |
|-----|

This operation initiates the switch-over process and logs a message into the history file. If the printer option is turned ON, the message outputs to the printer.

### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **SWITCHOVER** (Switch-over from Active to Stand-by Side)

TYPE: Keyword

FORMAT: Predefined ASCII characters

Keywords: YES - Activate switch-over process

NO - Abort request

The "SWITCH OVER" field allows you to activate the process, or to abort the request.

INITIATE SWITCHOVER (CMD 102)

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C10200 - Stand-by is out of service
- C10201 - Switch-over failed
- C10202 - Set timer error
- C10203 - Switch-over time out

**COMMENTS**

The switch-over process may be set to either automatic or manual operation.

**Automatic Switch-over**

A periodic switch-over operation is handled by the Time Activated Command Programming command (CMD 110). With this command, the start time and the periodical report interval is set.

**Manual Switch-over**

The Initiate Switchover command activates a manual switch-over on a redundant system. The system's manual override switch must be in the Auto Select position in order to perform the operation.

**RELATED COMMAND**

Time Activated Command Programming (CMD 110)

INTERCHANGEABLE OFFICE CODE TABLE (CMD 318)

**PERCEPTION 4000**

**COMMANDS**

**INTERCHANGEABLE OFFICE CODE TABLE (CMD 318)**

This command builds a table of interchangeable office codes. These codes resemble area codes in that they follow the area code format (NYX), where:

- N = 2 to 9
- Y = 0 or 1
- X = 0 to 9

Interchangeable office codes must not have an area code counterpart. For example, 917 may be an office code that follows the format for area codes and yet is not an existing area code.

Office code information can be obtained from the serving central offices for all central office and foreign exchange trunks. This information should be reviewed at least every six months to ensure codes entered into the table remain unique, and to ensure no new area codes have come into existence which may nullify the uniqueness of an interchangeable office code previously defined in the table.

Command Keyword:       IOC\_TABLE

Category Name:         Station

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

- Available operations:   ADD  
                           DELETE  
                           DISPLAY

The function and required data fields for each operation are described in this section.

ADD



This operation adds Interchangeable Office Codes (IOCs) to the table. The first "IOC" field is required for an ADD operation. Scopes are permitted in all of the fields.

## INTERCHANGEABLE OFFICE CODE TABLE (CMD 318)

**PERCEPTION 4000****COMMANDS**

## DELETE

|   |
|---|
| IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC |
|---|

|                       |
|-----------------------|
| req   ◀.....opt.....▶ |
|-----------------------|

This operation deletes Interchangeable Office Codes from the table. The first "IOC" field is required for a DELETE operation. Scopes are permitted in all of the fields.

## DISPLAY

|   |
|---|
| IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC   IOC |
|---|

|                 |
|-----------------|
| ◀.....opt.....▶ |
|-----------------|

This operation displays the Interchangeable Office Codes in the table. All of the fields are optional. If a tab is entered in the first field, all of the interchangeable office codes are displayed. Ranges are permitted for this operation. If consecutive office codes exist, scope fields are output. For example, "213-218".

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

|         |   |
|---------|---|
| FIELD:  | <b>IOC</b> (Interchangeable Office Code)                                  |
| TYPE:   | Decimal with fixed length   |
| FORMAT: | 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9) |
| VALUE:  | 200 to 919  |
| LOOP:   | Not allowed   |
| RANGE:  | Allowed in a DISPLAY operation  |

In ADD and DELETE operations, the first "IOC" field is required, while the remaining fields are optional. Values are from 200 to 919: the first digit is from 2 to 9, the second must be a 1 or 0, and the last digit can be 0 to 9. Scopes are permitted in ADD and DELETE operations.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31800 - IOC table has no space
- C31801 - IOC not found
- C31802 - IOC is already assigned
- C31803 - Check format
- C31804 - Missing data in scope type field in field N
- C31805 - Dash in last scope field N

INTERCHANGEABLE OFFICE CODE TABLE (CMD 318)

**PERCEPTION 4000**

**COMMANDS**

**RELATED COMMAND**

Dialing Definition (CMD 317)

## INTERCOM GROUP MEMBER DISPLAY (CMD 333)

**PERCEPTION 4000****COMMANDS****INTERCOM GROUP MEMBER DISPLAY (CMD 333)**

The Intercom Group Member Display command displays intercom group membership(s). Intercom groups are designed to provide PERCEPTION 4000 digital telephone users with an abbreviated method of calling people within a department or designated group.

Command Keyword: INTERCOM\_DISPLAY

Category Name: Station

**PREREQUISITE COMMANDS**

Station Feature Key Assignment (CMD 331)

**OPERATIONS**

Available operations: DISPLAY

The function and required data fields for each operation are described in this section.

## DISPLAY

GRP# | ICM # | PRM DN |

|←.....opt.....→|

This operation displays all intercom groups and their members that meet the conditions established for each field. If a <TAB> and <RETURN> are input, then all intercom groups and their members are displayed. To halt the display, press <CONTROL-S>, or to abort it, press <ESC> (<SHIFT-2>). If only the intercom group number is input, then all members of the group are displayed. Loops are permitted in the group number (GRP#) and intercom member number (ICM #) fields. A range is allowed only in the prime directory number (PRM DN) field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **GRP#** (Intercom Group #)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256  
 LOOP: Allowed

The system is restricted to having at most 128 groups with 20 members per group, or 256 intercom groups with 10 members per group. The number of groups and their size can be mixed or matched in any way as long as the restriction mentioned is not violated.

## INTERCOM GROUP MEMBER DISPLAY (CMD 333)

**PERCEPTION 4000****COMMANDS**

FIELD:       **ICM #** (Intercom Group's Member #)  
 TYPE:        Decimal  
 FORMAT:     2 digits for 20 members, 1 digit for 10 members  
 VALUE:      01 to 20, or 0 to 9  
 LOOP:        Allowed

This number is used to address a station belonging to an intercom group. The intercom group's size is defined individually. That is, an intercom group can either have 10 members or 20 members depending on the particular needs of the group.

FIELD:       **PRM DN** (Member's Prime Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGES:    Allowed in a DISPLAY operation only  
 LOOP:        Not allowed

This parameter identifies the members of a multiline telephone intercom group. Only prime directory numbers are accepted as members of an intercom group.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C33301 - Invalid DN-LDN relationship  
 C33302 - Check input in field 2

**COMMENTS**

The PERCEPTION 4000 system can have a maximum of either 128 intercom groups with 20 members per group, or 256 intercom groups with ten members per group. Groups can be mixed and matched, as long as the system maximum of 2,560 members is not exceeded.

Only prime lines can be specified as intercom group members.

A station can be a member of more than one intercom group.

**RELATED COMMAND**

Station Feature Key Assignment (CMD 331)

INTERNAL CALL ALTERNATE ROUTING ASSIGNMENT (CMD 374)

### INTERNAL CALL ALTERNATE ROUTING ASSIGNMENT (CMD 374)

The Internal Call Alternate Routing command assigns, changes, and displays the alternate answering point for internal callers to attendants and/or attendant groups that are in the position busy mode. An alternate answering position may be assigned for each of four time zones.

Command Keyword: INT\_CALL\_ALT\_ROUTING

Category Name: Attendant

#### PREREQUISITE COMMANDS

- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)

At least one of the following commands is required before entering a value in an "AR TZ n" field:

- ACD Group Assignment (CMD 355)
- Announcement Pattern Assignment (CMD 353)
- Miscellaneous Device Assignment (CMD 400)
- Night Bell Assignment (CMD 405)
- Station Assignment (CMD 330)
- Station Hunting Assignment (CMD 342)
- UCD Group Assignment (CMD 354)

#### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

|   |
|---|
| ATT DN/GRP DN   AR TZ 1   AR TZ 2   AR TZ 3   AR TZ 4 |
|---|

| req | ◀..... opt .....▶ |

This operation modifies the alternate route of each time zone for the specified attendant or attendant group when it is busy. The attendant DN or attendant group DN is used as the key to perform the modifications and must be entered. If no data is entered in any of the time zone fields (AR TZ n), no modification is performed.



INTERNAL CALL ALTERNATE ROUTING ASSIGNMENT (CMD 374)

**PERCEPTION 4000**

**COMMANDS**

DISPLAY

|   |
|---|
| ATT DN/GRP DN   AR TZ 1   AR TZ 2   AR TZ 3   AR TZ 4 |
| req   ◀.....opt.....▶                                 |

This operation displays the alternate route of each time zone for the specified attendant or attendant group when it is busy. The attendant DN or attendant group DN is used as the key to perform the modifications and must be entered. All other fields are optional.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

**FIELD:** ATT DN/GRP DN (Attendant or Attendant Group Directory Number)  
**TYPE:** DN Type  
**FORMAT:** 1 to 5 digits  
**VALUE:** 0 to 99999  
**RANGE:** Not allowed  
**LOOP:** Not allowed

The attendant or attendant group directory number is assigned through the Attendant Group Assignment command (CMD 372). This is a required field in both DISPLAY and MODIFY operations.

**FIELD:** AR TZ n (Alternate Route for Time Zone 1, 2, 3, or 4)  
**TYPE:** DN Type or Keyword  
**FORMAT:** 1 to 5 digits for DN Type / Predefined ASCII characters for Keywords  
**VALUE:** 0 to 99999 Station directory number, Hunt group pilot number, UCD group pilot number, or ACD group pilot number  
**RANGE:** Not allowed  
**LOOP:** Not allowed

|           |             |                                      |
|-----------|-------------|--------------------------------------|
| Keywords: | AP01 - AP50 | Announcement Pattern Number (1 ~ 50) |
|           | BL01 - BL64 | Night Bell Device Number (1 ~ 64)    |
|           | NON         | No Alternate Route Defined           |

This field defines an alternate answering position for internal calls according to the designated time zone.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C37400 - Directory number does not exist
- C37401 - Invalid alternate directory number
- C37402 - Invalid announcement device
- C37403 - Invalid night bell device
- I37404 - Warning: Undefined data in field AR TZ #n

## ISDN CHANNEL GROUP ASSIGNMENT (CMD 423)

The ISDN Channel Group Assignment command is used to add, delete, display, or modify one or more channel groups, as well as to adjust each channel group's related time zone class, equipment number, and channel structure.

Command Keyword: CGN\_ASSIGN

Category Name: ISDN

### PREREQUISITE COMMANDS

ISDN IPRC and IPRI Card Assignment (CMD 422)

Time Zone Assignment (CMD 336)

### OPERATIONS

Available operations:

ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described as follows:

ADD

CGN | TZ CLS | EQUIP # | B STR |

| req | opt | ◀..... req .....▶|

This operation is used to add one or more channel groups and their related data. Each channel group must have an assigned time zone class ("TZ CLS"). If no data is entered for "TZ CLS," then the "TZ CLS" entry defaults to 1. Looping is permitted in the "EQUIP #" field.

DELETE

CGN | EQUIP # |

◀..... req .....▶|

This operation is used to delete one or more existing channel groups. Looping is permitted in the 'EQUIP #' field.

## ISDN CHANNEL GROUP ASSIGNMENT (CMD 423)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|     |  |        |  |         |  |       |  |        |  |         |  |
|-----|--|--------|--|---------|--|-------|--|--------|--|---------|--|
| CGN |  | TZ CLS |  | EQUIP # |  | B STR |  | H0 STR |  | H11 STR |  |
|-----|--|--------|--|---------|--|-------|--|--------|--|---------|--|

|     |  |     |  |     |  |     |  |                    |  |
|-----|--|-----|--|-----|--|-----|--|--------------------|--|
| req |  | opt |  | req |  | opt |  | ◀.....locked.....▶ |  |
|-----|--|-----|--|-----|--|-----|--|--------------------|--|

This operation is used to modify the equipment position and channel structure of a channel group. If data is entered in the "B STR" field, then "EQUIP #" data must be entered.

## DISPLAY

|     |  |        |  |         |  |       |  |        |  |         |  |
|-----|--|--------|--|---------|--|-------|--|--------|--|---------|--|
| CGN |  | TZ CLS |  | EQUIP # |  | B STR |  | H0 STR |  | H11 STR |  |
|-----|--|--------|--|---------|--|-------|--|--------|--|---------|--|

|  |                 |  |                    |  |
|--|-----------------|--|--------------------|--|
|  | ◀.....opt.....▶ |  | ◀.....locked.....▶ |  |
|--|-----------------|--|--------------------|--|

This operation is used to display one or more existing channel groups. Looping is permitted in the "CGN" and "EQUIP #" fields.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

|         |   |
|---------|---|
| FIELD:  | <b>CGN</b> (Channel Group Number)               |
| TYPE:   | Decimal   |
| FORMAT: | 1 to 2 digits                                   |
| VALUE:  | 1 to 32 (or maximum system trunk configuration) |
| RANGE:  | Allowed in DISPLAY operation only               |
| LOOP:   | Not allowed                                     |

The "CGN" entry is required in the ADD, DELETE, and MODIFY operations. In the DISPLAY operation, this is an optional field. If no entry is made, then the attributes of all assigned channel groups in the PERCEPTION 4000 system will be displayed.

More than one CGN can be assigned to an IPRC card. For example, CGN 1 can have channels from 20801 to 20810 on IPRI card 208, and CGN 2 can have channels 20811 to 20823.

The same CGN cannot be assigned to channels controlled by two different IPRC cards. For example, if CGN 1 has channels on IPRI card 208, then the channels on IPRI card 408 cannot be assigned to CGN 1. For the same reason, a CGN cannot be assigned to channels that are controlled by two different LCPUs.

|         |                                 |
|---------|---------------------------------|
| FIELD:  | <b>TZ CLS</b> (Time Zone Class) |
| TYPE:   | Keyword                         |
| FORMAT: | Predefined ASCII characters     |

## ISDN CHANNEL GROUP ASSIGNMENT (CMD 423)

**PERCEPTION 4000****COMMANDS**

Keyword: IS01 - ISDN time zone class 1  
 IS02 - ISDN time zone class 2  
 IS03 - ISDN time zone class 3  
 IS04 - ISDN time zone class 4

The "TZ CLS" entry is used to assign a channel group to a time zone class. Each class is a type of allocation plan, in which up to four different time zones can be assigned. (Time zones are assigned to classes in CMD 336). The "TZ CLS" entry applies to the entire channel group; therefore, if the channel group is used for more than one type of ISDN service, the specified time zone class will apply to all services in that channel group.

FIELD: **EQUIP #** (Equipment Number)  
 TYPE: Decimal  
 FORMAT: 10101 to 101424  
 RANGE: Not allowed  
 LOOP: Allowed in ADD, DELETE, and DISPLAY operations

The entered equipment number applies to the equipment number of the channel group's associated trunk group. The first one or two digits of the entry represent the number of the shelf containing the trunk circuit card. The second two digits represent the card number; and the last two digits represent the circuit number.

FIELD: **B STR** (B Channel Structure)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters  
 RANGE: Not allowed  
 LOOP: Not Allowed

Keyword: YES - The channel can be used for calls requiring a B channel  
 NO - The channel cannot be used for calls requiring a B channel

This field should be entered "YES" to enable calls requiring a B channel. The "NO" option is for future use.

FIELD: **H0 STR** (H0 Channel Structure)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - The channel can be used for calls requiring an H0 channel  
 NO - The channel cannot be used for calls requiring an H0 channel

This field is locked in all operations and is reserved for future use.

FIELD: **H11 STR** (H11 Channel Structure)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - The channel can be used for calls requiring an H11 channel  
 NO - The channel cannot be used for calls requiring an H11 channel

This field is locked in all operations and is reserved for future use.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42300 - Card or equipment number is already assigned to other devices
- C42301 - Invalid equipment number
- C42302 - Equipment number has already been assigned
- C42303 - Circuit number must be 1 for H11 and 1,7, 13, or 19 for H0
- C42304 - Total number of MIN AVCs exceed total channels for given CGN
- C42305 - Not allowed to delete; H0 or H11 must be set to NO
- C42306 - Invalid input; data does not match
- C42307 - Trunk group number has already been assigned
- C42308 - Channel group number is out of range
- C42309 - Data has already been assigned in database
- C42310 - Data is not assigned in database
- D42311 - B-channel is out of range
- D42312 - Channel group number is not registered
- D42313 - LDN is not available
- D42314 - LDN is not registered for this channel group number
- D42315 - LDN pool cannot support request
- D42316 - LDN status is busy
- D42317 - Channel group number is in use
- D42318 - Channel group number is not used
- D42319 - ISDN time zone class is undefined
- D42320 - Channel group number change table database is full
- D42321 - LCPU number is out of range

## ISDN CHANNEL GROUP HUNTING ASSIGNMENT (CMD 424)

**PERCEPTION 4000****COMMANDS****ISDN CHANNEL GROUP HUNTING ASSIGNMENT (CMD 424)**

The ISDN Channel Group Hunting Assignment command is used to modify or display the channel group hunting sequence between two IPRI cards. The selection of which IPRI card is searched first determines which channel groups will be searched first for an available channel. This command is also used to modify the hunting direction between channel groups/channels (from channel 1 to channel 24, or from channel 24 to channel 1).

Command Keyword: CGN\_HUNTING

Category Name: ISDN

**PREREQUISITE COMMANDS**

ISDN IPRC and IPRI Card Assignment (CMD 422)

**OPERATIONS**

Available operations:

MODIFY  
DISPLAY

The function and required data fields for each operation are described as follows:

**MODIFY**

CGN | SEQ# | IPRI | DIR |

|◀..... req .....▶| opt |

This operation is used to modify the hunting sequence between two IPRI cards, thereby affecting available channel group selection. If data is not entered in the "SEQ#" field, then data must be entered in the "IPRI" and "DIR" fields. Range and loop procedures are not permitted in the MODIFY operation.

**DISPLAY**

CGN | SEQ# | IPRI | DIR |

|◀..... opt .....▶|

This operation is used to display the hunting sequence of two IPRI cards, and therefore their assigned trunk groups/channel groups. Ranges are permitted in the "CGN" and "SEQ#" fields.

## ISDN CHANNEL GROUP HUNTING ASSIGNMENT (CMD 424)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **CGN** (Channel Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 2 digits  
 VALUE: 1 to 32 (or maximum system trunk configuration)  
 RANGE: Not allowed  
 LOOP: Allowed in DISPLAY operation only

The "CGN" entry is required in the MODIFY operation. In the DISPLAY operation, this is an optional field; if no entry is made, then the attributes of all assigned channel groups in the PERCEPTION 4000 system will be displayed.

FIELD: **SEQ#** (Sequence Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 or 2  
 RANGE: Not allowed  
 LOOP: Not allowed

The "SEQ#" field is used to assign a sequence number to the channel group. The specification of 1 or 2 actually refers to the IPRI card associated with the channel group. For example, if the channel group specified in the "CGN" field is assigned to a trunk group supported by IPRI card "1," then an entry of 1 in the "SEQ#" field indicates that this trunk group/CGN will have hunting priority over those trunk groups/CGNs supported by IPRI card "2." The default "SEQ#" value is the reverse of IPRI card installation order. For example, if IPRI card "1" was installed before IPRI card "2," then IPRI card "2" will have a "SEQ#" of 1.

FIELD: **IPRI** (Related IPRI Card Position)  
 TYPE: Decimal  
 FORMAT: 3 to 4 digits  
 VALUE: 101 to 1012  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

The "IPRI" field entry indicates the equipment number of the IPRI card associated with the channel group. The first one or two digits represent the number of the shelf in which the IPRI card is installed. The last two digits represent the card slot number.

FIELD: **DIR** (Hunting Direction)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: FRWD - Forward (from channel 1 to channel 24)  
 BACK - Backward (from channel 24 to channel 1)

This field indicates the direction used for hunting among the channel groups/channels supported by an IPRI card. The default value is Backward. Note that each IPRI card supports up to 24 channels; however a channel on one of the IPRI cards must be used as a D-channel rather than as a bearer channel. This single D-channel can support the 47 bearer channels on the two IPRI cards.



## ISDN CHANNEL GROUP HUNTING ASSIGNMENT (CMD 424)

**PERCEPTION 4000****COMMANDS****SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42400 - Channel group number does not exist
- C42401 - Sequence number does not exist
- C42402 - Invalid hunting direction
- C42403 - Invalid IPRI number
- C42404 - Sequence number is required
- C42405 - Check sequence number

## ISDN IPRC AND IPRI CARD ASSIGNMENT (CMD 422)

**PERCEPTION 4000****COMMANDS****ISDN IPRC AND IPRI CARD ASSIGNMENT (CMD 422)**

The ISDN IPRC and IPRI Card Assignment command is used to assign the ISDN Primary Rate Controller (IPRC) and ISDN Primary Rate Interface (IPRI) circuit cards. The IPRI card is responsible for the layer 1 ISDN/PRI software and hardware interface, while the IPRC card is responsible for layers 2 and 3. In addition to general card assignment or removal, this command is also used to add, delete, modify, or display the following: IPRC protocol type; layer 2 mode; HDLC inversion flag; D-channel card position; IPRI interface identifier; IPRI D4/ESF framing and line code scheme.

Command Keyword:           IPRC\_IPRI\_ASSIGN

Category Name:             ISDN

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:

ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described as follows:

ADD

|       |  |          |  |        |  |      |  |      |  |      |  |        |  |      |  |
|-------|--|----------|--|--------|--|------|--|------|--|------|--|--------|--|------|--|
| CARD# |  | PROTOCOL |  | L2MODE |  | HDLC |  | T303 |  | IPRI |  | INF ID |  | D CH |  |
|-------|--|----------|--|--------|--|------|--|------|--|------|--|--------|--|------|--|

|  |     |  |     |  |                      |  |     |  |                 |  |     |  |
|--|-----|--|-----|--|----------------------|--|-----|--|-----------------|--|-----|--|
|  | req |  | opt |  | ◀..... locked .....▶ |  | opt |  | ◀.....req.....▶ |  | opt |  |
|--|-----|--|-----|--|----------------------|--|-----|--|-----------------|--|-----|--|

This operation is used to add an IPRC card and assign it to one or two IPRI cards, and to assign each card's associated data. Required fields are the "CARD", "IPRI", and "INF ID" fields. The "PROTOCOL", "T303", and "D CH" fields are all optional when adding a second IPRI card for use with the assigned IPRC card. Both "L2MODE" and "HDLC" are locked fields.

## ISDN IPRC AND IPRI CARD ASSIGNMENT (CMD 422)

**PERCEPTION 4000****COMMANDS**

## DELETE

|              |
|--------------|
| CARD#   IPRI |
|--------------|

|           |
|-----------|
| req   opt |
|-----------|

This operation is used to delete an IPRC card. Before deleting the IPRC card, the related IPRI card(s) must be deleted from the system.

## MODIFY

|  |
|--|
| CARD#   PROTOCOL   L2MODE   HDLC   T303   IPRI   INF ID   D CH |
|--|

|     |     |                    |     |     |        |
|-----|-----|--------------------|-----|-----|--------|
| req | opt | ◀.....locked.....▶ | opt | req | locked |
|-----|-----|--------------------|-----|-----|--------|

This operation is used to change any of the following: IPRC protocol; the ISDN Layer 3 timer; IPRI card position; and the interface identifier. To change the data in the "INF ID" (IPRI Interface ID) field, the IPRI number must be specified. Locked fields in the MODIFY operation are Layer 2 mode, the HDLC inversion flag, and the D-channel card position.

## DISPLAY

|   |
|---|
| CARD#   PROTOCOL   L2MODE   HDLC   T303   IPRI   INF ID   D CH   FRAME   CODE |
|---|

|                 |                    |                 |                    |
|-----------------|--------------------|-----------------|--------------------|
| ◀.....opt.....▶ | ◀.....locked.....▶ | ◀.....opt.....▶ | ◀.....locked.....▶ |
|-----------------|--------------------|-----------------|--------------------|

This operation is used to display IPRC protocol, layer 2 mode, HDLC inversion flag, D-channel and IPRI card position, and related IPRI card data. Ranges are permitted in the "IPRI," "INF ID," and "D CH" fields.

## PARAMETERS

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

|         |                                   |
|---------|-----------------------------------|
| FIELD:  | <b>CARD#</b> (IPRC Card Number)   |
| TYPE:   | Decimal                           |
| FORMAT: | 3 to 4 digits                     |
| VALUE:  | 101 to 1014                       |
| RANGE:  | Not allowed                       |
| LOOP:   | Allowed in DISPLAY operation only |

The entered value indicates the equipment number of the IPRC card. The first one or two digits represent the number of the shelf containing the card (1 to 10) and the last one or two digits represent the number of the utilized card slot (01 to 14).

## ISDN IPRC AND IPRI CARD ASSIGNMENT (CMD 422)

**PERCEPTION 4000****COMMANDS**

FIELD:           **PROTOCOL** (Protocol Type)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keyword:        4ESS -       AT&T User Protocol  
                   5ESS -       AT&T User Protocol  
                   TPVT -       Toshiba Private Protocol (future use)

This field indicates the protocol that is used by the ISDN Primary Rate Controller (IPRC) card.

FIELD:           **L2MODE** (Layer 2 Mode)  
 TYPE:            KEYWORD  
 FORMAT:         Predefined ASCII characters

Keyword:        NEW -        Network Mode  
                   USER -       User Mode

This field remains locked in all operations. The field indicates the mode that is used for the ISDN Layer 2. Layer 2 is supported by the IPRC card.

FIELD:           **HDLC** (HDLC Inversion Flag))  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keyword:        NO -         Without HDLC inversion (Default)  
                   YES -        With HDLC inversion

This field is locked as **NO** in all operations. This coincides with the locked "CODE" field entry of B8ZS.

FIELD:           **T303** (Layer 3 Timer)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 decimal digits  
 VALUE:          2 to 255  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not allowed

This field specifies the timer that is used for ISDN Layer 3. The default value is 4 seconds. The ISDN Layer 3 is supported by the IPRC card.

FIELD:           **IPRI** (Related IPRI Card Position)  
 TYPE:            Decimal  
 FORMAT:         3 to 4 digits  
 VALUE:          101 to 1012  
 RANGE:          Allowed in DISPLAY operation only  
 LOOP:           Not allowed

This field indicates the equipment number of each IPRI card that is associated with the IPRC card. Up to two IPRI cards can be related to a single IPRC card. The value entry represents the number of the shelf (1 to 10) and the card slot (02, 04, 06, 08, 10, or 12) where the IPRI card is installed.

## ISDN IPRC AND IPRI CARD ASSIGNMENT (CMD 422)

**PERCEPTION 4000****COMMANDS**

FIELD:       **INF ID** (Interface Identifier)  
 TYPE:        Decimal  
 FORMAT:     1 digit  
 VALUE:      0 or 1  
 RANGE:      Allowed in DISPLAY operation only  
 LOOP:       Not allowed

The entered interface ID must be unique for each IPRC. If a D-channel IPRI card is used, the interface ID must be set at 0.

FIELD:       **D CH** (D-Channel Card Position)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keyword:     YES    -     IPRI card has D-channel  
               NO     -     IPRI card does not have D-channel

This field is locked in the MODIFY operation. The default value is **NO**. However, when the IPRC card and the first IPRI card are assigned, **YES** must be entered, indicating that the D-channel exists on the IPRI. If a second IPRI card is assigned to the IPRC, then a **NO** entry is allowed. At least one of the IPRI cards assigned to the IPRC card must contain the D-channel.

FIELD:       **FRAME** (IPRI Card Framing)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keyword:     D4     -       
               ESF    -     Default

This field appears only in the DISPLAY operation and is a locked field.

FIELD:       **CODE** (Line Code Scheme)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters  
 RANGE:      Not allowed  
 LOOP:       Not allowed

Keyword:     B8ZS -     Default  
               ZCS  -     

This field appears only in the DISPLAY operation and is a locked field.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42200 - IPRC card does not exist
- C42201 - Interface identifier must be unique for each IPRI card
- C42202 - IPRI card has already been assigned
- C42203 - Invalid entry; IPRC and IPRI cards have different IFG
- C42204 - Invalid entry; IPRC and IPRI cards are on different LCPU's
- C42205 - Number of IPRI cards for a given CARD# has reached maximum
- C42206 - Cannot delete D-channel IPRI; must delete non D-channel IPRI(s) first
- C42207 - Cannot delete IPRC card; must delete assigned IPRI(s) first
- C42208 - IPRC card and D-channel do not exist
- C42209 - IPRC and IPRI cards do not exist
- C42210 - Invalid IPRC card number in field 1
- C42211 - Invalid IPRI card number; IPRI port must be an even number, 02 to 12
- C42212 - Cannot have the same IPRC and IPRI card numbers
- C42213 - D-channel structure still exists
- C42214 - Number of IPRC cards has reached the system maximum
- C42215 - Clock provider has reached maximum
- C42216 - Providable IPRI card cannot be deleted
- C42217 - D-channel has already been assigned for a specific CARD#
- C42218 - Equipment number in CARD# field is not an IPRC card
- C42219 - Equipment number in IPRI field is not an IPRI card
- C42220 - Check input in field T303; mismatch with original value
- C42221 - Interface identifier is required
- C42222 - Check input in field PROTOCOL; mismatch with original value
- C42223 - IPRC protocol is required
- C42224 - Must assign D CH field for the first IPRI card
- C42225 - Check input in D CH field; mismatch with original value
- C42226 - IPRI card number is required
- C42227 - Must enter data in order to modify
- C42228 - D-channel IPRI card must have interface identifier equal to 0

## ISDN SERVICE MIN/MAX ASSIGNMENT (CMD 425)

The ISDN Service Min/Max Assignment command is used to modify or display an ISDN trunk group's bearer capability class (BCC), as well as to modify/display the minimum and maximum limits that are used for both Call-by-Call Service Selection and dedicated ISDN service.

With Call-by-Call Service Selection (that is, with non-dedicated ISDN service), the assigned minimum and maximum limits indicate how many channels in a channel group can be used for a specific ISDN service. Since a channel group can contain more than one trunk group (and thus can be used for more than one ISDN service), the setting of minimum and maximum limits provides control over channel usage. For example, within a single channel group, one trunk may be assigned to Software Defined Network while another is assigned to MEGACOM service. The careful assignment of upper and lower usage levels (MIN/MAX limits) enables automatic channel selection to be in line with actual usage of ISDN services. A higher usage of one service over another would require higher MIN/MAX levels.

With dedicated ISDN service, all channels within a dedicated service channel group are assigned to the same ISDN service. In this case, minimum and maximum limits can be set to limit user access to channels during certain time periods. For example, a maximum level of channel groups can be set at zero to prevent any channels from being accessed.

Command Keyword: SERVICE\_MIN/MAX

Category Name: ISDN

### PREREQUISITE COMMANDS

ISDN Channel Group Assignment (CMD 424)

Time Zone Assignment (CMD 336)

Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations:

MODIFY  
DISPLAY

The function and required data fields for each operation are described as follows:

## ISDN SERVICE MIN/MAX ASSIGNMENT (CMD 425)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|   |
|---|
| TGN   TIME ZONE #   MIN SVC   MAX SVC   VOC   31K   64U   64R   H0U   H0R   H11U   H11R |
|---|

|  |
|--|
| <..... req .....> <..... opt .....> <..... locked .....> |
|--|

This operation is used to modify the trunk group's ISDN bearer capability class, as well as the minimum and maximum limits for channel allocation. Range and loop operations are not permitted.

## DISPLAY

|   |
|---|
| TGN   TIME ZONE #   MIN SVC   MAX SVC   VOC   31K   64U   64R   H0U   H0R   H11U   H11R |
|---|

|  |
|--|
| <..... opt .....> <..... locked .....> |
|--|

This operation is used to display the bearer capability class and the minimum/maximum limits for one or more ISDN trunk groups. Range and loop entries are permitted.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **TGN** (Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:           1 to 256 (or maximum system trunk configuration)  
 RANGE:           Allowed in DISPLAY operation only  
 LOOP:            Allowed in DISPLAY operation only

The "TGN" entry is required in the MODIFY operation. In the DISPLAY operation, this is an optional field; if no entry is made, then the attributes of all assigned ISDN trunk groups in the PERCEPTION 4000 system will be displayed.

FIELD:           **TIME ZONE #** (ISDN Time Zone Class Number)  
 TYPE:            Decimal  
 FORMAT:         1digit  
 VALUE:           1 to 4 (or maximum system configuration)  
 RANGE:           Allowed in DISPLAY operation only  
 LOOP:            Not allowed

The "TIME ZONE #" is used to specify the time period in which the assigned minimum/maximum limits will apply. The actual day/hour time periods are defined in the Time Zone Assignment command (CMD 336). Time periods are assigned to ISDN time zone classes in the ISDN Channel Group Assignment command (CMD 424).



## ISDN SERVICE MIN/MAX ASSIGNMENT (CMD 425)

**PERCEPTION 4000****COMMANDS**

- 1 = IS01 (ISDN time zone class 1)
- 2 = IS02 (ISDN time zone class 2)
- 3 = IS03 (ISDN time zone class 3)
- 4 = IS04 (ISDN time zone class 4)

FIELD: **MIN SVC** (Minimum Number of Channels Reserved)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 47  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

The "MIN SVC" field entry indicates the number of channels within the trunk group's associated channel group, which will always be available for the trunk group's assigned ISDN service. As a general rule, the most commonly used services should have the higher minimum limit values. Note that the assigned minimum limit cannot exceed the total number of channels in the ISDN trunk group's associated channel group. Therefore, the deletion of a channel, as performed via the ISDN Channel Group Assignment command (CMD 424), should be reflected in the assigned "MIN SVC" value.

FIELD: **MAX SVC** (Maximum Number of Channels Allowed)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits or Keyword  
 VALUE: 0 TO 47  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

Keyword: **MAXV** - The maximum limit is equal to the total number of channels in the channel group

The "MAX SVC" field entry indicates the maximum number of channels within the trunk group's associated channel group, which can ever be used for the trunk group's assigned ISDN service. The entry of the keyword **MAXV** sets the maximum limit equal to the total number of channels available in the channel group. With the keyword entry, the PERCEPTION 4000 automatically adjusts the actual maximum value to correspond with any channel additions or deletions to/from the channel group. Channels are added or deleted to/from a channel group via the ISDN Channel Group Assignment command (CMD 424).

FIELD: **VOC** (Bearer Capability—Voice or Voice-grade Data)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: **YES** - Bearer capability supports speech of 3.1 KHz  
**NO** - Bearer capability does not support speech of 3.1 KHz

The "VOC" field specifies whether speech of 3.1 KHz can be transmitted over the ISDN trunk group's associated channels. If the trunk group is to be used for voice transmission, then the field entry should be YES. If the trunk group is to be used for data transmission only, the entry should be NO.

## ISDN SERVICE MIN/MAX ASSIGNMENT (CMD 425)

**PERCEPTION 4000****COMMANDS**

FIELD: **31K** (3.1 KHz Audio)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability provides audio of 3.1 Khz  
 NO - Bearer capability does not provide audio of 3.1 Khz

The "31K" field specifies whether audio of 3.1 Khz is to be provided over the ISDN trunk group's associated channels. If the trunk group is to be used for data transmission, then the field entry should be YES, to enable the transmission of modem data tones. If the trunk group is to be used for voice transmission only, the entry should be NO.

FIELD: **64U** (64K Unrestricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports modem-less data traffic  
 NO - Bearer capability does not support modem-less data traffic

The "64U" field specifies whether or not modem-less data traffic is to be supported over the ISDN trunk group. This is a locked field and is reserved for future use.

FIELD: **64R** (64K Restricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports modem-less data traffic  
 NO - Bearer capability does not support modem-less data traffic

The "64R" field is a locked field and is reserved for future use. The "64R" field specifies whether or not modem-less data traffic is to be supported over the ISDN trunk group. Restricted 64K bearer capability allocates 8 bits for signaling; thereby providing 56 bits for transmission.

FIELD: **H0U** (H0 - 384K, Unrestricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports H0 clear channel traffic  
 NO - Bearer capability does not support H0 clear channel traffic

The "H0U" field is used for H0 clear channel traffic. This field is locked in all operations and is reserved for future use.

FIELD: **H0R** (H0 - 384K, Restricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports H0 restricted channel traffic  
 NO - Bearer capability does not support H0 restricted channel traffic

The "H0R" field is used for H0 restricted traffic. This field is locked in all operations and is reserved for future use.

## ISDN SERVICE MIN/MAX ASSIGNMENT (CMD 425)

**PERCEPTION 4000****COMMANDS**

FIELD: **H11U** (H11 - 1536K, Unrestricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports H11 clear channel traffic  
 NO - Bearer capability does not support H11 clear channel traffic

The "H11U" field is used for H11 clear channel traffic. This field is locked in all operations and is reserved for future use.

FIELD: **H11R** (H11 - 1536K, Restricted Digital)  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keyword: YES - Bearer capability supports H11 restricted channel traffic  
 NO - Bearer capability does not support H11 restricted channel traffic

The "H11R" field is used for H11 restricted traffic. This field is locked in all operations and is reserved for future use.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42500 - Undefined trunk group number
- C42501 - Total number of MIN SVC exceeds total number of channels in TGN's channel group
- C42502 - Check trunk group number range
- C42503 - Undefined channel group number
- C42504 - Check time zone range
- C42505 - Total number of MAX SVC exceeds total number of channels in TGN's channel group
- C42506 - Check trunk group type
- C42507 - The total MAX SVC cannot be less than MIN SVC

## ISDN TRUNK GROUP PARAMETER ASSIGNMENT (CMD 421)

**PERCEPTION 4000****COMMANDS****ISDN TRUNK GROUP PARAMETER ASSIGNMENT (CMD 421)**

The ISDN Trunk Group Parameter Assignment command allows the attributes of one or more ISDN trunk groups to be displayed or modified. ISDN trunk group attributes include: inward mode; outgoing call number presentation flag; trunk group number's listed directory number for call number presentation; display option for incoming call; and the trunk group name. Note that the total number of ISDN trunks with DNIS/DDI inward routing mode, plus the total number of non-ISDN DID/DNIS/CCSA trunks cannot exceed 16.

Command Keyword: ISDN\_TRK\_GRP\_PARA

Category Name: ISDN

**PREREQUISITE COMMANDS**

Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations:

DISPLAY  
MODIFY

The function and required data fields for each operation are described as follows:

**DISPLAY**

|  |
|--|
| TGN   MODE   DISP   OUT CPN   CPN LDN   TRK GRP NAME |
|--|

|←..... opt .....→|

This operation is used to display the trunk attributes of one or more existing ISDN trunk groups. If no data is input in this operation, then the attributes of all trunk groups in the PERCEPTION 4000 system will be displayed. Information relating only to specific trunk groups is provided by entering each trunk group's corresponding trunk group number. Range entries are permitted in selected fields, including the Trunk Group Number ("TGN") field.

**MODIFY**

|  |
|--|
| TGN   MODE   DISP   OUT CPN   CPN LDN   TRK GRP NAME |
|--|

| req |←..... opt .....→|

## ISDN TRUNK GROUP PARAMETER ASSIGNMENT (CMD 421)

**PERCEPTION 4000****COMMANDS**

This operation is used to modify the attributes of one or more existing ISDN trunk groups. The required data input field in this operation is the Trunk Group Number ("TGN") field. Range entries are permitted in the "TGN" field.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **TGN** (ISDN Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 256 (or maximum system trunk configuration)  
 RANGE:         Allowed in DISPLAY operation only  
 LOOP:          Allowed in all operations

The "TGN" entry is required in the MODIFY operation. In the DISPLAY operation, this is an optional field. If no entry is made, then the attributes of all trunk groups in the PERCEPTION 4000 system will be displayed.

FIELD:           **MODE** (Inward Routing Mode)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

|          |      |   |   |
|----------|------|---|---|
| Keyword: | DIT  | - | Direct Inward Termination Mode—inward routing destination is based on the termination point assigned to the utilized channel group for the current time zone (set in CMD 307)   |
|          | DDI  | - | Direct Dial-in Mode—inward routing destination is based on the Called Party Number (CPN), as defined in the SETUP message   |
|          | DNIS | - | Dialed Number Identification Service—inward routing destination is based on the current time zone, as with DIT; however, unlike DIT, DNIS involves no type of digit translation |

This field indicates the inward routing procedure that will be applied to the ISDN trunk group. Calls that arrive to the trunk group will be routed according to the assigned routing procedure.

FIELD:           **DISP** (Display Option for Incoming Calls)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

|          |      |   |  |
|----------|------|---|--|
| Keyword: | NAME | - | Trunk Group Number's name  |
|          | CDPN | - | Called Party Number  |
|          | CGPN | - | Calling Party Number   |
|          | DNIS | - | DNIS Name (Requires DNIS as the "MODE" field setting)  |
|          | CGDN | - | Calling Party Number, plus the first three characters of the DNIS name (Requires DNIS as the "MODE" field setting) |

This field defines the type of information that will appear on display telephones or display screens when calls arrive over the ISDN trunk. The selected option should provide the most helpful type of information to the called party, to enable easy call identification and appropriate call answering.

## ISDN TRUNK GROUP PARAMETER ASSIGNMENT (CMD 421)

**PERCEPTION 4000****COMMANDS**

FIELD:           **OUT CPN** (Outgoing Call Number Presentation Flag)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keyword:        ALW   -     Outgoing Call Number Presentation is allowed  
                   DNY   -     Outgoing Call Number Presentation is restricted  
                   BAR   -     Outgoing Call Number Presentation is barred

This field indicates whether or not the calling party's number will be presented at the distant end. The ALW entry allows outgoing numbers to always be presented. The DNY entry restricts presentation of the calling party's number by requiring the calling station user to enter a specific access code. The BAR entry is used to eliminate the presentation of the calling party's number at all times.

FIELD:           **CPN LDN** (ISDN TGN's Listed Directory Number for Called Party Number Presentation)  
 TYPE:            Decimal  
 FORMAT:         1 to 15 digits  
 VALUE:          0 to 9; \*, and # (Delete symbol, D, is allowed in MODIFY operation)  
 RANGE:          Not allowed  
 LOOP:           Not allowed

This field indicates the directory number (Called Directory Number) that will be displayed at receiving display telephones whenever calls arrive over the ISDN trunk group.

FIELD:           **TRK GRP NAME** (Trunk Group Name)  
 TYPE:            Text  
 FORMAT:         0 to 14 ASCII characters

This field indicates the name (Trunk Group Name) that will be displayed at receiving display telephones whenever calls arrive over the ISDN trunk group. The Delete symbol (D) can be used in the MODIFY operation to delete the text entry.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42100 - Undefined trunk group number
- C42101 - Check trunk group number range
- C42102 - Non-ISDN trunk group number
- C42103 - Total DID, DNIS, CCSA type plus DDI, DNIS inward mode cannot exceed 16
- C42104 - CGDN/DNIS display option can only have DNIS/DDI as inward routing mode



## LCR AREA CODE ROUTING ASSIGNMENT (CMD 381)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|  |
|--|
| RPN   AC   AC   AC   AC   AC   AC   AC   AC   AC   AC   AC   AC   AC |
|--|

|                 |
|-----------------|
| ◀.....opt.....▶ |
|-----------------|

This operation displays one or more LCR area code table(s). If no data is entered in any of the fields, all of the area code tables in the system display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **RPN** (Route Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 100 (or to the maximum system configuration)  
 RANGE:          Allowed in a DISPLAY operation only

A route pattern number is assigned to the table which represents which least cost routing table to use based on the time zone in effect. Routing patterns are defined with the LCR Routing Table Assignment command, CMD 383.

FIELD:           **AC** (Area Code)  
 TYPE:            Decimal with fixed length  
 FORMAT:         3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE:          200 to 919  
 RANGE:          Allowed in a DISPLAY operation

The valid area code format is in the form of NYX, where N is 2 to 9, Y is either 0 or 1, and X is 0 to 9. Ranges are permitted for DISPLAY operations; and scopes are allowed in ADD and DELETE operations. The first AC field is required for ADD and DELETE operations.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C38100 - Area code is not defined for this route pattern
- C38101 - Area code is already defined for another route pattern
- C38102 - Data is needed following scope in field N

**RELATED COMMANDS**

- LCR Special Routing Assignment (CMD 384)
- LCR/Authorization TZ Change Assignment (CMD 343)
- Time Zone Assignment (CMD 336)



## LCR AREA/OFFICE CODE ROUTING ASSIGNMENT (CMD 382)

**PERCEPTION 4000****COMMANDS****LCR AREA/OFFICE CODE ROUTING ASSIGNMENT (CMD 382)**

The LCR Area/Office Code Table command displays, adds or deletes office codes from the area code for a specified route pattern number. Multiple area/office code tables may be defined, each using a different routing pattern.

Command Keyword: AC/OC\_ROUTING

Category Name: LCR

**PREREQUISITE COMMAND**

LCR Routing Table Assignment (CMD 383)

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

RPN | AC | OC | OC | OC | OC | OC | OC | OC | OC | OC | OC |

◀..... req .....▶◀.....opt .....▶

This operation adds office codes to the table by specifying the route pattern number (RPN) and area code (AC). These two fields are required and must be input. The first office code is also required for an ADD operation. Scopes are permitted in all of the "OC" fields but the last.

**DELETE**

RPN | AC | OC | OC | OC | OC | OC | OC | OC | OC | OC | OC |

◀..... req .....▶◀.....opt .....▶

This operation deletes office codes from the table by specifying the Area Code and Route Pattern number. "RPN" and "AC" are required fields and must be input. The first "OC" is required for the DELETE operation. Scopes are permitted in all of the "OC" fields but the last.

## LCR AREA/OFFICE CODE ROUTING ASSIGNMENT (CMD 382)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|  |
|--|
| RPN   AC   OC   OC   OC   OC   OC   OC   OC   OC   OC   OC |
|--|

|   |               |               |   |
|---|---------------|---------------|---|
| <table border="0"> <tr> <td>◀</td> <td>.....opt.....</td> <td>▶</td> </tr> </table> | ◀             | .....opt..... | ▶ |
| ◀   | .....opt..... | ▶             |   |

This operation displays office codes for the specified Area Code and Route Pattern number. All of the fields are optional. "RPN" and "AC" are loop fields. Ranges may be entered in any of the "OC" fields. If a **<TAB>** and **<RETURN>** are entered in the "RPN" field, the complete table displays.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **RPN** (Route Pattern Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 100 (or to the maximum system configuration)  
 LOOP: Primary loop for a DISPLAY operation only  
 RANGE: Not allowed

The routing pattern (defined with the LCR Routing Table Assignment command, CMD 383) represents which least cost routing table to use based on the time zone in effect. The "RPN" field is required for both the ADD and DELETE operations.

FIELD: **AC** (Area Code)  
 TYPE: Decimal with fixed length  
 FORMAT: 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE: 200 to 919  
 LOOP: Secondary loop for a DISPLAY operation only  
 RANGE: Not allowed

The "AC" field is required for both the ADD and DELETE operations. Values from 200 to 919 are defined as follows: the first digit ranges from 2 to 9, the second digit must be a 1 or 0, and the last digit can be 0 to 9. In a DISPLAY operation, "AC" is the secondary loop field. If a **<TAB>** is entered, all of the area codes for the specified Route Pattern Number display.

FIELD: **OC** (Office code)  
 TYPE: Decimal with fixed length  
 FORMAT: 3 digits in the form NXX (where N = 2 to 9, and X = 0 to 9)  
 VALUE: 200 to 999  
 SCOPE: Allowed in ADD and DELETE operations  
 LOOP: Not allowed  
 RANGE: Allowed in a DISPLAY operation

In ADD and DELETE operations, the first "OC" field is required, while the remaining fields are optional. Scopes are permitted in these fields to add or delete a group of office codes. In a DISPLAY operation, "OC" is optional. If a **<TAB>** is entered, all office codes for the specified area

## LCR AREA/OFFICE CODE ROUTING ASSIGNMENT (CMD 382)

**PERCEPTION 4000****COMMANDS**

code display. When ranges are used for this operation, scope fields are output. This means that if there is more than one consecutive office code for an area code, the output contains a "-". For example, an output of "223-288" includes all office codes from 223 to 288.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C38200 - Route pattern table is not defined for area code
- C38201 - Office code already exists for another route pattern/AC table
- C38202 - Route pattern is the default pattern for this area code
- C38203 - Office code tables are at system maximum; cannot add more
- C38204 - Data is needed following scope in field N

**COMMENTS**

Multiple AC/OC routing tables per area code are allowed, however unique office codes cannot be in more than one AC/OC table per area code.

**RELATED COMMANDS**

- LCR/Authorization TZ Change Assignment (CMD 343)
- Time Zone Assignment (CMD 336)

LCR COUNTRY CODE ROUTING ASSIGNMENT (CMD 380)

**LCR COUNTRY CODE ROUTING ASSIGNMENT (CMD 380)**

The LCR Country Code Routing Assignment command adds, deletes, and displays country codes (CC) for a specified route pattern number (RPN). Each route pattern number has a list of country codes assigned to it, and is required for all country codes not intended for default routing.

Command Keyword: CC\_ROUTING

Category Name: LCR

**PREREQUISITE COMMANDS**

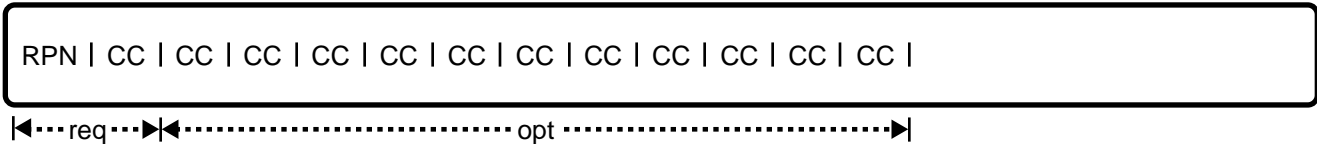
- Country Code Assignment (CMD 335)
- LCR Routing Table Assignment (CMD 383)

**OPERATIONS**

- Available operations:
- ADD
  - DELETE
  - DISPLAY

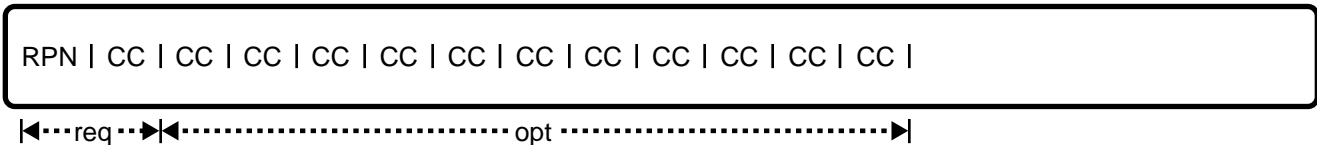
The function and required data fields for each operation are described in this section.

**ADD**



This operation adds country codes to the table by specifying the "RPN" and the "CC". The "RPN" and the first "CC" are required fields. Scopes are permitted in all of the country code fields except the last one.

**DELETE**



This operation deletes country codes from the table by specifying the "RPN" and "CC". The "RPN" and the first "CC" are required fields. Scopes are permitted in all of the country code fields except the last one.

## LCR COUNTRY CODE ROUTING ASSIGNMENT (CMD 380)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|   |
|---|
| RPN   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC   CC |
|---|

◀.....opt.....▶

This operation displays country codes for the specified "RPN". All of the fields are optional, and "RPN" is a loop field. Ranges may be entered in any of the country code fields. If a <TAB> and a <RETURN> are entered in the "RPN" field, the complete table is displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **RPN** (Route Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:           1 to 100 (or to the maximum system configuration)  
 LOOP:            Primary loop for a DISPLAY operation only  
 RANGE:           Not allowed  
 SCOPE:           Not allowed

A route pattern number is assigned to the country code table which represents which least cost routing table to use based on the time zone in effect. Routing patterns are defined with the LCR Routing Table Assignment command, CMD 383.

FIELD:           **CC** (Country Code)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:           1 to 999  
 LOOP:            Not allowed  
 RANGE:           Allowed in a DISPLAY operation only  
 SCOPE:           Allowed in ADD and DELETE operations

Country codes using the routing pattern specified in the "RPN" field are entered in the "CC" fields. The country codes must be predefined with the Country Code Assignment command (CMD 335). Multiple country code tables may be defined, each using a different routing pattern. A country code may not exist in more than one LCR country code table.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C38000 - The last field cannot be a scope field  
 C38001 - Check scope data

LCR COUNTRY CODE ROUTING ASSIGNMENT (CMD 380)

**PERCEPTION 4000**

**COMMANDS**

- C38002 - Country code is defined for another route pattern number
- C38003 - Country code(s) are not found or are invalid
- C38004 - Country code(s) already exist or are invalid
- C38005 - Number of defined country codes has reached system maximum
- C38006 - Missing data in scope type field in field N

**RELATED COMMANDS**

LCR Special Routing Assignment (CMD 384)

## LCR DIGIT TRANSLATION PROFILE ASSIGNMENT (CMD 386)

**PERCEPTION 4000****COMMANDS****LCR DIGIT TRANSLATION PROFILE ASSIGNMENT (CMD 386)**

This command modifies and displays the attributes of a Least Cost Routing (LCR) Digit Translation Profile. Profiles manipulate a dialed digit string by adding or deleting area codes or toll prefixes, or by defining new prefix and suffix strings. For example, a profile may be used for deleting an area code when a ten digit call is dialed that is to be routed over a foreign exchange line to the dialed area. Or, a profile may be defined to add a toll prefix when a ten digit number is dialed.

Command Keyword: LCR\_DIGIT\_PROFILES

Category Name: LCR

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

|   |
|---|
| PFL#   DDN   DUNP   TPTMT   OPFX   DEAC   ACTMT   PREFIX STRING   SUFFIX STRING |
|---|

| req ◀.....opt.....▶|

This operation creates/modifies the attributes of an LCR Digit Translation Profile. The "PFL#" field is required. The remaining fields are optional and can be modified by tabbing over to the field and entering new data. The "PREFIX STRING" and "SUFFIX STRING" fields are delete fields; predefined data in these fields can be deleted by entering a <CONTROL-D>.

**DISPLAY**

|   |
|---|
| PFL#   DDN   DUNP   TPTMT   OPFX   DEAC   ACTMT   PREFIX STRING   SUFFIX STRING |
|---|

◀.....opt.....▶

This operation displays the LCR Digit Translation Profiles and their attributes. If no data is entered in the "PFL#" field, all of the LCR Digit Translation Profiles in the system display (to a total of 32).

## LCR DIGIT TRANSLATION PROFILE ASSIGNMENT (CMD 386)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **PFL#** (Digit Translation Profile Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32 (or to the maximum number of time zones)  
 LOOP: Allowed in a DISPLAY operation

This field identifies the translation instruction which follows and is used to reference the instruction for the LCR Routing Table Assignment command (CMD 383). A maximum of 32 profiles may be created.

FIELD: **DDN** (Delete Dialed Number)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALL - Delete all dialed numbers  
 D01 - Delete the first dialed digit  
 D02 - Delete the first 2 dialed digits  
 :  
 D24 - Delete the first 24 dialed digits  
 K01 - Keep the last dialed digit  
 K02 - Keep the last 2 dialed digits  
 :  
 K24 - Keep the last 24 dialed digits  
 NON - No deletion (Default)

This field instructs the system to delete, keep or leave dialed digits as they are. For example, dialing certain area codes may be screened by rerouting those calls to the corporate operator.

FIELD: **DUNP** (Delete UNP Location Code)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DEL - Delete UNP Location Code  
 NON - Do not delete UNP Location Code (Default)

This field instructs the system to delete or not to delete the dialed Uniform Numbering Plan (UNP) location code. The UNP code is set up through the Uniform Numbering Plan Assignment command (CMD 301) and the UNP Routing Assignment command (CMD 302).

FIELD: **TPTMT** (Toll Prefix Treatment)  
 TYPE: DN Type / Keyword  
 FORMAT: 1 to 3 digits / Predefined ASCII characters  
 VALUE: 0 to 999

Keywords: ADD - Add Toll Prefix  
 DEL - Delete Toll Prefix (Default value for ISDN trunks)



## LCR DIGIT TRANSLATION PROFILE ASSIGNMENT (CMD 386)

**PERCEPTION 4000****COMMANDS**

A10TP - Add Toll Prefix for 10 digit DDD call  
 D7TP - Delete 7 digits' Toll Prefix  
 D7A10 - Delete 7 digits' Toll Prefix and add Toll Prefix for 10-digit DDD calls  
 NON - Leave Toll Prefix unchanged (Default value for non-ISDN trunks)

This field adds, deletes, changes or leaves the toll prefix as is. If "ADD" is selected, the value from the "TP" field in the Dialing Definition command (CMD 317) is automatically added as the toll prefix. Entry of a DN-type value in the "TPTMT" field automatically replaces the existing toll prefix.

FIELD: **OPFX** (Operator Prefix)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DEL - Delete Operator Prefix (Default value for non-ISDN trunks)  
 NON - Leave Operator Prefix unchanged (Default value for ISDN trunks)

This field instructs the system to delete or not to delete the operator prefix, which is defined with the Dialing Definition command (CMD 317).

FIELD: **DEAC** (Delete Equal Access Code)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DEL - Delete 10XXX Equal Access Code (Default value for non-ISDN trunks)  
 NON - Leave Equal Access Code unchanged (Default value for ISDN trunks)

This field instructs the system to delete or not to delete the Equal Access Code (10XXX), which is defined with the Common Carrier Assignment command (CMD 344).

FIELD: **ACTMT** (Area Code Treatment)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ADD - Add Area Code  
 DEL - Delete Area Code  
 NON - Leave Area Code unchanged (Default)

This field adds the home area code, deletes the area code, or leaves the existing area code as is.

FIELD: **PREFIX STRING**  
 TYPE: Dialing Digits plus \* and #  
 FORMAT: Up to 20 digits  
 VALUE: 0-9, #, \*

A string of digits is defined with this field. Up to 20 digits are prefixed to a dialed number with this field. Entry of a <CONTROL-D> in a MODIFY operation deletes data from this field. The default value is a NULL string.

## LCR DIGIT TRANSLATION PROFILE ASSIGNMENT (CMD 386)

**PERCEPTION 4000****COMMANDS**

FIELD:           **SUFFIX STRING**  
TYPE:            Dialing Digits plus \* and #  
FORMAT:          Up to 20 digits  
VALUE:           0-9, #, \*

A string of digits is defined with this field. Up to 20 digits are appended to a dialed number with this field. Entry of a **<CONTROL-D>** in a MODIFY operation deletes data from this field. The default value is a NULL string.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C38600 - Check Digit Translation Profile Number
- C38601 - Check Delete Dialed Number
- C38602 - Check Delete UNP Location Code
- C38603 - Check Toll Prefix Treatment
- C38604 - Check Operator Prefix
- C38605 - Check Delete Equal Acce Code
- C38606 - Check Area Code Treatment
- C38607 - Check Toll Prefix Digits
- C38608 - Check Toll Prefix Treatment Length

**RELATED COMMANDS**

- Common Carrier Assignment (CMD 344)
- Dialing Definition (CMD 317)
- LCR Area Code Routing Assignment (CMD 381)
- LCR Area/Office Code Routing Assignment (CMD 382)
- LCR Country Code Routing Assignment (CMD 380)
- LCR Routing Table Assignment (CMD 383)
- LCR Special Routing Assignment (CMD 384)
- UNP Routing Assignment (CMD 302)
- Uniform Numbering Plan Assignment (CMD 301)

## LCR ROUTING TABLE ASSIGNMENT (CMD 383)

The LCR Routing Table Assignment command defines up to 100 routing tables. Each table contains up to eight routes that are examined for an available trunk circuit to place the call. Trunks within each table are generally placed in order from least costly to most expensive. In addition, a warning tone flag may be inserted in the routing table to advise the caller that a more costly route has been accessed.

Command Keyword: LCR\_ROUTE\_ASSIGN

Category Name: LCR

### PREREQUISITE COMMANDS

Common Carrier Assignment (CMD 344)  
 Facility Restriction Level Profile Assignment (CMD 387)  
 LCR Digit Translation Profile Assignment (CMD 386)  
 Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations: ADD  
 DELETE  
 MODIFY  
 DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|      |  |         |  |     |  |        |  |     |  |      |  |      |  |           |  |
|------|--|---------|--|-----|--|--------|--|-----|--|------|--|------|--|-----------|--|
| TBL# |  | ROUTE # |  | TGN |  | CARR # |  | FRL |  | WARN |  | PFL# |  | CALL TYPE |  |
|------|--|---------|--|-----|--|--------|--|-----|--|------|--|------|--|-----------|--|

|  |   |               |   |  |     |  |     |  |     |  |     |  |
|--|---|---------------|---|--|-----|--|-----|--|-----|--|-----|--|
|  | ← | .....req..... | → |  | req |  | opt |  | req |  | opt |  |
|--|---|---------------|---|--|-----|--|-----|--|-----|--|-----|--|

This operation creates routing table(s) and specifies the order of search, or adds route(s) to an existing routing table. When adding a new route, the "TGN", "FRL", and "PFL#" must be entered, and the "ROUTE #" is resequenced. If no data is entered in the "WARN" field, the warning tone flag is not set. The first route choice cannot be assigned a warning tone. If a <TAB> is entered in the "CARR #" field, the carrier number defaults to "Not Defined".

#### DELETE

|      |  |         |  |
|------|--|---------|--|
| TBL# |  | ROUTE # |  |
|------|--|---------|--|

|  |   |               |   |  |
|--|---|---------------|---|--|
|  | ← | .....req..... | → |  |
|--|---|---------------|---|--|

## LCR ROUTING TABLE ASSIGNMENT (CMD 383)

**PERCEPTION 4000****COMMANDS**

The DELETE operation deletes route(s) from an existing routing table. When deleting a specific route, the remaining routing index is resequenced. For example, after deleting route #2, the current route #3 becomes route #2.

## MODIFY

|   |
|---|
| TBL#   ROUTE #   TGN   CARR #   FRL   WARN   PFL#   CALL TYPE |
|---|

|◀.....req.....▶|◀.....req.....▶|

This operation modifies the definition of a route in an existing routing table. If a <CONTROL-D> is entered in the "CARR #" field, the carrier number is deleted.

## DISPLAY

|   |
|---|
| TBL#   ROUTE #   TGN   CARR #   FRL   WARN   PFL#   CALL TYPE |
|---|

|◀.....opt.....▶|

This operation displays LCR routing tables and their related definitions of routes. If no data is entered in the "TBL#" field, all LCR routing tables in the system are displayed.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TBL#** (LCR Routing Table Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 100 (or to the maximum system configuration)  
 LOOP:           Allowed in all operations

The "TBL#" field contains the index number referenced by the routing pattern. Up to 100 route tables may be defined in the system, depending on the system configuration. This field is required for all operations except a DISPLAY operation.

FIELD:           **ROUTE #** (Route Number)  
 TYPE:            Decimal / Keyword  
 FORMAT:         1 digit / Predefined ASCII characters  
 VALUE:          1 to 8  
 LOOP:           Allowed in ADD and DISPLAY operations

Keyword:        ALL

## LCR ROUTING TABLE ASSIGNMENT (CMD 383)

**PERCEPTION 4000****COMMANDS**

The system examines available routes for outgoing calls, starting from the lowest numbered route to the highest. Therefore, ordering is important; the lowest numbered route should be the least costly and, as the route number rises, the routes should become more expensive.

The keyword **ALL** is used for deleting all routes in the same routing table.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation

The "TGN" field specifies the trunk group to be used to place the outgoing call. The trunk group must be a bothway or outgoing only trunk group and must be for network access (that is, not for paging, dictation machines, etc.). The Trunk Group number cannot be duplicated among routes within one routing table. This field is required for an ADD operation.

FIELD: **CARR #** (Carrier Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10  
 LOOP: Allowed in a DISPLAY operation

The Carrier Number field calls up the indicated equal access number when a call is placed over a long distance carrier other than the facility's primary carrier. If a carrier number is defined, the system gets the appropriate 10XXX code from the Common Carrier table (CMD 344, Common Carrier Assignment) and outpulses it to the central office prior to outpulsing the destination number.

FIELD: **FRL** (Facility Restriction Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16  
 RANGE: Allowed in a DISPLAY operation

The Facility Restriction Level (FRL) number controls caller access to certain routes in the route table while allowing access to others. This is accomplished through the relationship defined between a caller's Facility Restriction Level Profile (FRLP) and the route's FRL. This relationship is established in the FRLP command (CMD 387). The "FRL" field is required for an ADD operation.

FIELD: **WARN** (Warning Tone Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Warning Tone Flag is ON  
 NO - Warning Tone Flag is OFF

The Warning Tone field provides a warning tone to users when a route about to be examined is considered a high cost route. Any route may be flagged, with the exception of the first route

## LCR ROUTING TABLE ASSIGNMENT (CMD 383)

**PERCEPTION 4000****COMMANDS**

choice, which is always considered least costly. Any number of routes may be flagged in a given route table, however, only one warning tone is issued to a caller regardless of how many high cost routes are examined. The caller's queue priority level (QPL) is flagged to allow/deny the caller to receive a warning tone when one is encountered. (Refer to the LCR Special Routing Assignment command, CMD 384.)

FIELD: **PFL#** (Translation Profile Number)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 or 2 digits; predefined ASCII characters  
 VALUE: 1 to 32; Keyword NONE  
 LOOP: Allowed in a DISPLAY operation

The "PFL#" field defines which digit translation profile should be used for manipulation of a dialed number. These profiles add or delete area codes and toll prefixes, or define new prefix and suffix strings. Entering the keyword **NONE** for non-ISDN trunks indicates no digit translation. For ISDN trunks, an entry of **NONE** indicates no digit translation except the deletion of operator prefix, toll prefix, international toll prefix, and equal access code. Refer to the LCR Digit Translation Profile Assignment command (CMD 386). The "PFL#" field is required for an ADD operation.

FIELD: **CALL TYPE** (Call Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 LOOP: Not allowed

Keywords: NAT - National  
 INT - International  
 SUB - Subscriber  
 UNK - Unknown

The "Call Type" field is required for ISDN trunks and refers to the type of ISDN service being used. If a <Control D> is entered in this field, the call type will be deleted. For non-ISDN trunks, skip this field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C38300 - Check warning flag
- C38301 - Check trunk group number
- C38302 - Check range of table number, route number, or trunk group number
- C38303 - Check range of carrier number
- C38304 - Routing tables are full
- C38305 - Route not found
- C38306 - Check range of translation profile number
- C38307 - Trunk group number is not defined
- C38308 - Check next route warning flag
- C38309 - Incoming trunk groups are not allowed
- C38310 - Private line trunk groups are not allowed
- C38311 - Non-ISDN trunks do not require call type
- C38312 - ISDN trunks require call type

**RELATED COMMANDS**

- LCR Area Code Routing Assignment (CMD 381)
- LCR Area/Office Code Routing Assignment (CMD 382)
- LCR/Authorization TZ Change Assignment (CMD 343)
- LCR Country Code Routing Assignment (CMD 380)
- LCR Special Routing Assignment (CMD 384)

LCR SPECIAL ROUTING ASSIGNMENT (CMD 384)

**LCR SPECIAL ROUTING ASSIGNMENT (CMD 384)**

The LCR Special Routing Assignment command provides the system with a dialing definition to reference whenever a call is placed via LCR. For seven digit dialing it defines one home area code for all calls placed through LCR so that the proper area/office or area code table may be screened for call routing.

In addition, this table provides default routing for numbers dialed which are not found in LCR code tables. It defines a route pattern for special numbers such as operators and N11 numbers. For private networks using a Uniform Numbering Plan (UNP), this command provides default routing for network calls not found in the UNP Routing Assignment (CMD 302). Finally, the command defines the relationship between queueing priority levels and warning tone presentation.

Command Keyword: LCR\_SPECIAL\_ROUTING

Category Name: LCR

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

MODIFY

LCR DIAL PLAN | LCR HAC | DEF RPN | SPC RPN | UNP RPN | QPL | WARN |

←.....opt.....→ | opt ←... opt |

This operation modifies related information of the LCR dial plan number. If the warning tone flag of the queue priority level is to be changed, data must also be entered in the "QPL" field, otherwise the default or existing value of the warning tone is used.

DISPLAY

LCR DIAL PLAN | LCR HAC | DEF RPN | SPC RPN | UNP RPN | QPL | WARN |

←.....opt.....→



This operation displays information about LCR routing.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **LCR DIAL PLAN** (LCR Dial Plan Number)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          2, 3, or 4  
 LOOP:           Not allowed  
 RANGE:          Not allowed

The LCR dialing plan field selects one of the defined dialing definitions for all LCR calls. The value entered must be 2, 3, or 4 since dialing definition 1 is undefined and is used for TIE lines.

FIELD:           **LCR HAC** (LCR Home Area Code)  
 TYPE:            Decimal with fixed length  
 FORMAT:         3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE:          200 to 919  
 LOOP:           Not allowed  
 RANGE:          Not allowed

This field identifies the area code where the switch is located, and is needed so seven digit calls may be analyzed by the area/office and/or area code tables for proper route selection.

FIELD:           **DEF RPN** (Default Route Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 100 (or to the maximum system configuration)  
 LOOP:           Not allowed  
 RANGE:          Not allowed

This field defines which route pattern will be used for all international, 10 and 1+10 digit, and 7 and 1+7 digit calls that are not found in any of their respective LCR code tables.

FIELD:           **SPC RPN** (Special Default Route Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 100  
 LOOP:           Not allowed  
 RANGE:          Not allowed

The "SPC RPN" field defines what route pattern is used for 0, 0+, 00+, 01+, and N11 call routing.

FIELD:           **UNP RPN** (UNP Default Route Pattern Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 100 (or to the maximum system configuration)

## LCR SPECIAL ROUTING ASSIGNMENT (CMD 384)

**PERCEPTION 4000****COMMANDS**

LOOP: Not allowed  
 RANGE: Not allowed

This field routes UNP calls that have no match in the UNP routing tables.

FIELD: **QPL** (Queue Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 LOOP: Allowed  
 RANGE: Not allowed

This field and the "WARN" field are interrelated. If a "QPL" value is entered, then a keyword must be entered in the "WARN" field. Together, these fields define whether a warning tone is heard by a caller when a more costly route is accessed if the least costly route is unavailable.

FIELD: **WARN** (Warning Tone Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Warning Tone Enabled  
 NO - Warning Tone Disabled

If the keyword **YES** is entered, the warning tone is enabled. The warning tone route is defined in the LCR Routing Table Assignment command, CMD 383.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C38400 - Routing pattern number is not within range  
 C38401 - QPL entry is required  
 C38402 - Invalid request type

**RELATED COMMANDS**

Dialing Definition (CMD 317)  
 LCR Routing Table Assignment (CMD 383)  
 Station Assignment (CMD 330)  
 Trunk Group Assignment (CMD 310)  
 UNP Routing Assignment (CMD 302)

## LCR/AUTHORIZATION TZ CHANGE ASSIGNMENT (CMD 343)

**PERCEPTION 4000****COMMANDS****LCR/AUTHORIZATION TZ CHANGE ASSIGNMENT (CMD 343)**

The LCR/Authorization TZ Change Assignment command sets up tables that allow you to change the COS, DRL, FRLP, and QPL based on the current time zone. Additionally, this command defines for each route pattern the LCR route tables which are to be used in each time zone.

Command Keyword: LCR/AUTH\_TZ

Category Name: Administration

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

|      | ORG DEF/ | TZ1         | TZ2         | TZ3         | TZ4         |
|------|----------|-------------|-------------|-------------|-------------|
| TYPE | RPN      | NEW DEF/TBL | NEW DEF/TBL | NEW DEF/TBL | NEW DEF/TBL |

◀.....req.....▶◀.....opt.....▶

This operation modifies the attributes of one of the tables mentioned above. "TYPE" and "ORG DEF/RPN" are required fields, while the remaining fields are optional.

**DISPLAY**

|      | ORG DEF/ | TZ1         | TZ2         | TZ3         | TZ4         |
|------|----------|-------------|-------------|-------------|-------------|
| TYPE | RPN      | NEW DEF/TBL | NEW DEF/TBL | NEW DEF/TBL | NEW DEF/TBL |

| req ◀.....opt.....▶

This operation displays all or part of one of the five tables. "TYPE" is a required field, while the remaining fields are optional. If a <TAB> is entered in the "ORG DEF/RPN" field, the complete table for the specified table type is displayed. Loops are permitted in the "ORG DEF/RPN" field.

## LCR/AUTHORIZATION TZ CHANGE ASSIGNMENT (CMD 343)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **TYPE** (Type of Table)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    COS - Class of Service Table  
               DRL - Destination Restriction Level Table  
               FRLP - Facility Restriction Level Profile Table  
               QPL - Queue Priority Level Table  
               LCR - Least Cost Routing

This field specifies the table to be modified or displayed.

FIELD:       **ORG DEF/RPN** (Original Definition for COS, DRL, FRLP, and QPL/LCR Route Pattern Number)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 100 (Dependent on Table Type)  
 RANGE:      Allowed  
 LOOP:       Allowed

This field selects the current definition or pattern number that is to be changed. Valid entries for this field depend on the "TYPE" field, and are:

|                |   |
|----------------|---|
| COS - 1 to 64  | QPL - 1 to 8                              |
| DRL - 1 to 16  | RPN - 1 to 100 (LCR Route Pattern Number) |
| FRLP - 1 to 32 |   |

FIELD:       **TZ1, 2, 3, 4 NEW DEF/TBL** (Time Zones 1 to 4: New Definition for COS, DRL, FRLP, and QPL/LCR Route Table Number)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 100 (Dependent on Table Type)  
 RANGE:      Not allowed  
 LOOP:       Not allowed

These fields assign new values to the four time zones for the selected table type. Valid entries depend on the "TYPE" field:

|                |   |
|----------------|---|
| COS - 1 to 64  | QPL - 1 to 8                              |
| DRL - 1 to 16  | RPN - 1 to 100 (LCR Route Table Number) * |
| FRLP - 1 to 32 |   |

\* The RPN option in this field defines the LCR route table number for each route pattern defined.

Entry of a **<CONTROL-D>** erases the current value. For the COS, DRL, FRLP, and QPL tables, the value defaults to the original definition number. For the RPN table, the value defaults to undefined.

## LCR/AUTHORIZATION TZ CHANGE ASSIGNMENT (CMD 343)

**PERCEPTION 4000****COMMANDS****SYSTEM ERROR MESSAGES**

The following error message is unique to this command.

D34300 - N - Invalid data at TZ1, TZ2, TZ3, or TZ4

**RELATED COMMANDS**

Class of Service Assignment (CMD 334)  
Destination Restriction Level Assignment (CMD 337)  
Facility Restriction Level Profile Assignment (CMD 387)  
LCR Routing Table Assignment (CMD 383)  
LCR Special Routing Assignment (CMD 384)  
Time Zone Assignment (CMD 336)  
UNP Routing Assignment (CMD 302)

LABEL PRINT (CMD 312)

### LABEL PRINT (CMD 312)

Key label(s) for the flexible keys on PERCEPTION 4000 digital telephones are printed with this command.

Command Keyword: LABEL\_PRINT

Category Name: Utility

#### PREREQUISITE COMMANDS

- Station Assignment (CMD 330)
- Station Feature Key Assignment (CMD 331)

#### OPERATIONS

Available operations: DISPLAY

The function and required data fields for each operation are described in this section.

#### DISPLAY



| req ←.....opt.....→|

This operation prints a digital telephone flexible key label for the specified prime directory number. Each label sheet contains three labels. In a loop function, the labels print in consecutive order, filling each sheet to the end of the loop. Each new line of input causes a form feed and begins printing labels on the first label of the next sheet. Looping is allowed in the "PRM DN" field.

#### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TYPE** (Digital Telephone Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

- Keywords:
- 2010 - PERCEPTION 4000 10-key digital telephone
  - ID10 - PERCEPTION 4000 10-key digital telephone with DIU
  - 2020 - PERCEPTION 4000 20-key digital telephone
  - ID20 - PERCEPTION 4000 20-key digital telephone with DIU

This field defines the format for the label.



LOGICAL LINE CALL FORWARD ASSIGNMENT (CMD 322)

**LOGICAL LINE CALL FORWARD ASSIGNMENT (CMD 322)**

The Logical Line Call Forward Assignment command allows the system administrator to assign, remove, or display a call-forward activation of the specified logical line directory number.

Command Keyword: LLINE\_CALL\_FORWARD

Category Name: Station

**PREREQUISITE COMMANDS**

- Coordinated Numbering Plan Assignment (CMD 303)
- Numbering Plan Assignment (CMD 300)
- Station Assignment (CMD 330)
- Station Feature Key Assignment (CMD 331)
- Trunk Assignment (CMD 313)
- Trunk Group Assignment (CMD 310)
- Uniform Numbering Plan Assignment (CMD 301)

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

MODIFY

|                                 |  |      |  |             |  |
|---------------------------------|--|------|--|-------------|--|
| DN                              |  | TYPE |  | DESTINATION |  |
| <.....req.....> <.....opt.....> |  |      |  |             |  |

This operation changes the current Call Forward type of the specified logical line directory number. If a <CONTROL-D> is entered in the "TYPE" field, the Call Forward type for the "DN" will be deleted.

DISPLAY

|                         |  |      |  |             |  |
|-------------------------|--|------|--|-------------|--|
| DN                      |  | TYPE |  | DESTINATION |  |
| req  <.....locked.....> |  |      |  |             |  |

This operation displays the current Call Forward destination of the specified logical line directory number.



## LOGICAL LINE CALL FORWARD ASSIGNMENT (CMD 322)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **DN** (Logical Line Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 99999  
 LOOP: Not allowed

The "DN" field, which is required in both the MODIFY and DISPLAY operations, specifies the registered logical line directory number.

FIELD: **TYPE** (Call Forward Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CFAC - Call Forward All Calls  
 CFBN - Call Forward Busy No Answer  
 CFNA - Call Forward No Answer

The "TYPE" identifies the type of call forwarding programmed on the specified logical line directory number. A **<CONTROL-D>** entered in this field in a MODIFY operation deletes the current setting.

FIELD: **DESTINATION** (Call Forwarding Destination)  
 TYPE: Dialing Digits  
 FORMAT: 1 to 24 digits  
 VALUE: 0 to 9  
 RANGE: Not allowed

This field specifies the Call Forwarding destination for the specified "DN." Valid destinations include an internal attendant or station directory number, and an external directory number which includes the appropriate outgoing access code, such as for Least Cost Routing, Direct Trunk Access, and private networking. The "DESTINATION" is optional in a MODIFY operation, and locked in a DISPLAY operation.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32200 - Directory number is not a logical line directory number
- C32201 - Directory number does not exist
- C32202 - Destination is not required to de-activate call forwarding
- C32203 - Destination is required
- C32204 - Destination does not exist

## M&A SECURITY LEVEL AND ACCESS ASSIGNMENT (CMD 403)

The M&A Security Level and Access Assignment command sets up or modifies login security passwords within the administrator's jurisdiction. The administrator may also review his/her own security setup, and change the security setup for commands and/or operations of a lower privileged level. Note that reviewing or changing security setups that are on the same or higher privilege levels is not permitted.

Command Keyword: M/A\_SECURITY\_ASSIGN

Category Name: Administration

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: PASSWORD  
 MODIFY  
 DISPLAY

The function and required data fields for each operation are described in this section.

#### PASSWORD (PWD)

|         |
|---------|
| SEC LVL |
| req     |

This operation assigns or re-assigns a security password for a lower hierarchical level or for the administrator. The "SEC LVL" field is required. Prompts requesting entry of a security password and verification of the new password assist in this operation. The password may be up to 15 characters, beginning with either an alpha or numeric character.

#### MODIFY

|   |
|---|
| SEC LVL   CMD   OPER   ALW   OPER   ALW   OPER   ALW   OPER   ALW   OPER   ALW   OPER   ALW |
| .....req..... .....opt.....   |

This operation modifies access to commands and/or operations for specific commands. The administrator may only modify those commands and/or operations assigned to a hierarchical level below his/her level, and may not modify his/her own capabilities. The "SEC LVL" and "CMD" fields are required.

## M&amp;A SECURITY LEVEL AND ACCESS ASSIGNMENT (CMD 403)

**PERCEPTION 4000****COMMANDS**

DISPLAY

```

SEC LVL | CMD | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER | OPER |
| req | ◀.....opt.....▶

```

This operation displays the commands and/or operations allowed for the specified security level. The administrator may examine his/her own privileges or those of a lower hierarchical level. "SEC LVL" is a required field. Looping is permitted in the "CMD" field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **SEC LVL** (Security Level)  
TYPE:         Keyword  
FORMAT:      Predefined ASCII characters

Keywords:   MFG           - Manufacturer  
              DIST          - Distributor  
              USER          - User  
              TN1 to TN32 - Tenant 1 to Tenant 32

The "SEC LVL" is the primary key for this command and is required in all operations. A maximum of 35 levels may be defined. The 'Manufacturer' level is the most privileged, followed by the 'Distributor' level. The lowest privileged levels are the 32 tenant levels. Each "SEC LVL" is assigned a security password, a list of commands that it can access, and the degree of access for each command.

FIELD:       **CMD** (Command ID)  
TYPE:         Decimal with fixed length  
FORMAT:      3 digits  
VALUE:       000 to 999  
LOOP:        Allowed in a DISPLAY operation only

This field defines commands which are available for the selected "SEC LVL". Looping is allowed in this field to display several commands at once. The administrator may display only those commands at his/her own security level or any lower level(s), and modify only those commands at lower levels.

FIELD:       **OPER** (Operation Keyword)  
TYPE:         Keyword  
FORMAT:      Predefined ASCII characters

Keywords:   ADD   - Add                                 INI   - Initialize  
              ALM   - Alarm Operation                INL   - Install  
              BKP   - Backup Operation               INS   - In-Service  
              CHG   - Change                           MKB   - Make Busy

## M&amp;A SECURITY LEVEL AND ACCESS ASSIGNMENT (CMD 403)

**PERCEPTION 4000****COMMANDS**

|     |                     |      |                              |
|-----|---------------------|------|------------------------------|
| CMP | - Compare           | MOD  | - Modify                     |
| CNT | - Count Operation   | OOS  | - Out of Service             |
| CPY | - Copy              | PSWD | - Password                   |
| CRT | - Create Operation  | RES  | - Restore                    |
| DEL | - Delete            | RMV  | - Remove                     |
| DIR | - Display Directory | RST  | - Reset                      |
| DIS | - Disable           | SET  | - Set                        |
| DSP | - Display           | SHW  | - Show                       |
| ENB | - Enable            | SUP  | - Setup Operation            |
| FMT | - Format            | SWO  | - Switchover                 |
| FRE | - Free              | SWP  | - Swap                       |
| IDL | - Idle              | ALL  | - Allow/disallow the command |

This field selects or displays operations which are available for the specified command ID. Only those operations that the administrator is permitted to use may be modified. **ALL** is used to specify whether all the operations within the command are allowed or denied.

FIELD: **ALW** (Allowance)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Sets the preceding attribute to Allow  
 NO - Sets the preceding attribute to Deny

This field sets the allowance/denial attribute of a command or operation for the selected "SEC LVL." Each "ALW" field sets the attribute of the preceding operation.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C40300 - Check security level  
 C40301 - Check security password  
 C40302 - Password unchanged; auto logout  
 C40303 - Check command ID  
 C40304 - Check operation ID  
 C40305 - Check command allowance  
 C40306 - Check operation allowance  
 C40307 - Input line overflowed

**COMMENTS**

The security level affects the capabilities of the user to access commands in the Maintenance and Administration subsystem. It is also used to define accessibility within each command, i.e., whether the user may only display reports or is permitted to modify data controlled by the command.

Access levels must be set for each command. MMI uses this information to control the extent of user operations.

## MEMORY TEST (CMD 144)

When enabled, the Memory Test command reads all program and data bytes in the MCPUs and LCPUs' memory. The test checks to see if any intermediate errors are present in the memory. This command should be enabled **prior to** performing a file consolidation (CMD 153) to help ensure that the file consolidation procedure is not interrupted by an error detection. If a memory error is detected during the Memory Test procedure, then the system will perform a restart (or will perform a switchover if redundant components are used). After system operation resumes, a system error message will be sent to an on-line printer/terminal. If a restart or switchover occurs after performing the Memory Test procedure, contact Toshiba Technical Support at (800) 777-4873 for further instructions regarding error isolation and correction.

Command Keyword:       MEMORY\_TEST

Category Name:         Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operation:    ENABLE

The function and required data fields for each operation are described in this section.

ENABLE

|      |
|------|
| SIDE |
|------|

| req |

The ENABLE operation activates the memory test for the selected side(s) (either active, standby, or both sides). Note that the test takes about seven or eight minutes to complete.

### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:               **SIDE**  
 TYPE:                Keyword  
 FORMAT:             Predefined ASCII characters

MEMORY TEST (CMD 144)

**PERCEPTION 4000**

**COMMANDS**

Keywords:     ACT   - Active Side  
              SBY   - Standby Side  
              BOTH  - Both Sides

This field selects the system side(s) on which the memory test will take place.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C14400 - Map table has an error
- C14401 - Number of files exceeds the defined value
- C14402 - An error occurred when checking LCPU memory or a timeout
- C14403 - Standby is not in service

**RELATED COMMAND**

File Consolidation (CMD 153)

## MISCELLANEOUS DEVICE ASSIGNMENT (CMD 400)

**PERCEPTION 4000****COMMANDS****MISCELLANEOUS DEVICE ASSIGNMENT (CMD 400)**

This command sets up the Announcement Machine/Music-on-Hold table. The table defines the equipment number and usage for each announcement machine and Music-on-Hold device. Up to 64 announcement machines and four external Music-on-Hold sources are supported in the system.

Command Keyword: MISC\_DEVICE\_ASSIGN

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|                       |
|-----------------------|
| DEV   EQUIP #   USAGE |
|-----------------------|

◀..... req .....▶ | opt |

This operation adds an announcement machine or Music-on-Hold device to the table. The "DEV" and "EQUIP #" fields are required. The "USAGE" field defaults to **GEN** (General Intercept) for an announcement machine.

**DELETE**

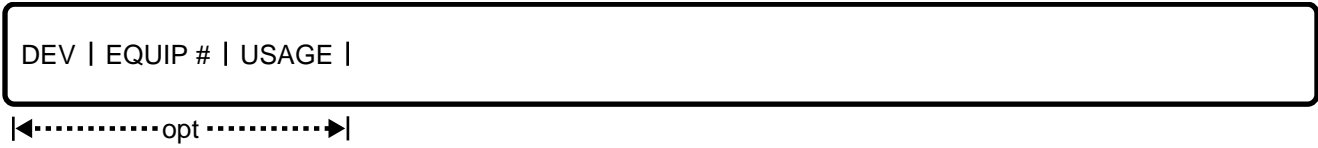
|     |
|-----|
| DEV |
|-----|

| req |

This operation deletes an announcement machine or Music-on-Hold device from the table. The "DEV" field is required.

MISCELLANEOUS DEVICE ASSIGNMENT (CMD 400)

DISPLAY



This operation displays all announcement machines and Music-on-Hold devices that meet the conditions established for each field. All of the fields are optional.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **DEV** (Device Number)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

- Keywords:    AM01 - Announcement Machine #1  
               AM02 - Announcement Machine #2  
               :                                   :  
               AM64 - Announcement Machine #64
- MS01 - Music-on-Hold Device #1  
               MS02 - Music-on-Hold Device #2  
               :                                   :  
               MS04 - Music-on-Hold Device #4

The device number field provides device type and number identification.

FIELD:           **EQUIP #** (Equipment Number)  
 TYPE:            EQ Type  
 FORMAT:         5 or 6 digits  
 VALUE:          (0)10101 to 101408 \*  
 RANGE:          Not allowed  
 LOOP:           Not allowed

\* Use the following chart to determine valid ranges for various types of equipment.

For Music-on-Hold (MOH) BSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

For Music-on-Hold (MOH) XSTI and announcement machine (ANN) EM11 cards, the following are valid ranges:



## MISCELLANEOUS DEVICE ASSIGNMENT (CMD 400)

**PERCEPTION 4000****COMMANDS**

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

For an announcement machine (ANN) EM2I card, the following ranges apply:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~06   | Circuit no.   |

This field defines the equipment number for the announcement machine or Music-on-Hold device. The equipment number is unique in the system, and must be associated with an EM1I, EM2I, or BSTI card. The first digit(s) represent the shelf number, the next two digits represent the card slot number, and finally, the last two digits represent the circuit number.

FIELD: **USAGE** (Announcement Machine Usage)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ACD - Automatic Call Distribution Announcement  
 UCD - Uniform Call Distribution Announcement  
 DID - Direct Inward Dialing Announcement  
 GEN - General Intercept  
 AUX - Other (Auxiliary)

This field contains information about the usage of each announcement machine. The default usage is **GEN**.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C40000 - Announcement machine is already in use
- C40001 - Announcement machine is not defined
- C40002 - Music-on-Hold device is already in use
- C40003 - Music-on-Hold device is not defined
- C40004 - Invalid usage
- C40005 - Equipment number is already in use
- C40006 - Invalid equipment number for BSTI card
- C40007 - Invalid equipment number for SRTI card
- C40008 - Remove system music by using Command 408
- C40009 - Announcement used in announcement pattern; remove by using Command 353

**RELATED COMMAND**

Announcement Pattern Assignment (CMD 353)

## MODEM POOL ASSIGNMENT (CMD 347)

**PERCEPTION 4000****COMMANDS****MODEM POOL ASSIGNMENT (CMD 347)**

The Modem Pool Assignment command adds, removes, modifies, and displays modem pools which may be used for incoming, outgoing, or bothway calling. The system supports up to 32 groups of 64 modems per group.

Command Keyword:       MODEM\_POOL\_ASSIGN

Category Name:         Data

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|      |  |      |  |      |  |       |  |          |  |        |  |
|------|--|------|--|------|--|-------|--|----------|--|--------|--|
| GRP# |  | NAME |  | TYPE |  | INDEX |  | MODEM EN |  | DIU EN |  |
|------|--|------|--|------|--|-------|--|----------|--|--------|--|

|  |     |  |     |  |         |  |     |                 |
|--|-----|--|-----|--|---------|--|-----|-----------------|
|  | req |  | opt |  | req/opt |  | opt | ◀.....req.....▶ |
|--|-----|--|-----|--|---------|--|-----|-----------------|

This operation adds modem pool group(s) or member(s) to the modem pool database. When adding a new group, the "GRP#", "TYPE", "MODEM EN", and "DIU EN" fields are required. When adding a new member to an existing group, the "GRP#", "MODEM EN", and "DIU EN" fields are required. Loops are permitted in the "GRP#" and "INDEX" fields.

**DELETE**

|      |  |          |  |        |  |
|------|--|----------|--|--------|--|
| GRP# |  | MODEM EN |  | DIU EN |  |
|------|--|----------|--|--------|--|

|  |     |                     |
|--|-----|---------------------|
|  | req | ◀.....req/opt.....▶ |
|--|-----|---------------------|

This operation removes existing modem pool group(s) or member(s) from the modem pool database. The "GRP#" and either the "MODEM EN" or "DIU EN" fields are required. The keyword **ALL** may be used for deletion of all of the modems or DIUs assigned to the specified group number.

## MODIFY

```
GRP# | NAME | TYPE |
```

```
| req |<.....req/opt.....>|
```

This operation modifies the modem pool group's name or type of modem pool. The "GRP#" and either the "NAME" or "TYPE" fields are required.

## DISPLAY

```
GRP# | NAME | TYPE | INDEX | MODEM EN | DIU EN |
```

```
<.....opt.....>
```

This operation displays modem pool group(s) and their member(s) that meet the conditions established for each field. Loops are permitted in the "GRP#" and "INDEX" fields for display purpose only.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:        **GRP#** (Group Number)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       1 to 32 (or to the maximum system configuration)  
 LOOP:        Allowed in ADD and DISPLAY operations

This field, the primary key for the command, assigns a number to a modem group. The system supports up to 32 groups of modems.

FIELD:        **NAME**  
 TYPE:         Text  
 FORMAT:      0 to 9 ASCII characters

This field defines the modem pool group's name with a maximum of 9 characters/numbers including punctuation and spaces. Looping is not allowed in any operations.

FIELD:        **TYPE** (Type of Call Usage)  
 TYPE:         Keywords  
 FORMAT:      Predefined ASCII characters

Keywords:    INC - Incoming Call Usage  
               OUT - Outgoing Call Usage  
               BWY - Bothway Call Usage

## MODEM POOL ASSIGNMENT (CMD 347)

**PERCEPTION 4000****COMMANDS**

This field defines the modem pool group type as being either incoming only, outgoing only, or bothway calling.

FIELD: **INDEX**  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 64  
 LOOP: Allowed in a DISPLAY operation only

Modem pools use distributed hunting, thereby allowing more even usage of system and peripheral resources. The order of hunting is defined by the "INDEX", going from the lowest to the highest number, then wrapping around to the lowest number again.

FIELD: **MODEM EN** (Modem Equipment Number)  
 TYPE: EQ Type / Keyword  
 FORMAT: 5 or 6 digits / Predefined ASCII characters  
 VALUE: (0)10101 to 101408 \*  
 LOOP: Not allowed

Keyword: ALL

\* Use the following chart to determine valid ranges for various types of equipment.

For BSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

For XSTI equipment cards, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

This field defines the modem equipment number for the designated modem pool group number. The modem and DIU equipment numbers (DIU EN) must belong to the same LCPU. The first digit(s) represents the shelf number of the BSTI or XSTI card, the next two digits represent the card slot number, and finally, the last two digits represent the circuit number. Only modem equipment numbers which are analog ports can be assigned to modem pool group(s). The keyword **ALL** may be used for deletion of all of the modems assigned to the specified group number.

FIELD: **DIU EN** (DIU Equipment Number)  
 TYPE: EQ Type / Keyword  
 FORMAT: 5 or 6 digits / Predefined ASCII characters  
 VALUE: (0)10101 to 101316 \*  
 LOOP: Not allowed

Keyword: ALL

\* Use the following chart to determine valid ranges for a DIU equipment number.

For DSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

*NOTE: Slot 13 is unavailable if the card is a 2B type.*

This field defines the data interface unit equipment number for the modem pool group member. The "DIU EN" and the "MODEM EN" must belong to the same LCPU. Only DIU equipment numbers which are digital ports can be assigned to modem pool group(s). The keyword **ALL** may be used for deletion of all of the DIUs assigned to the specified group number.

**NOTES:**

- 1. DIUs may be installed on DSTI cards configured for 1B or 2B operation. When installed on a DSTI card configured for 2B operation, a '2B' device must already be assigned to the card.*
- 2. If installed on a DSTI card configured for 2B operation, the circuit's voice channel is ignored by the system.*

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C34700 - This modem equipment number is already allocated in the system
- C34701 - This DIU equipment number is already allocated in the system
- C34702 - Modem pool member is not defined
- C34703 - Invalid modem pool index
- C34704 - Illegal pool group name
- C34705 - DIU/Modem pair must be in the same LCPU
- C34706 - Data must be entered in input fields
- C34707 - Inconsistent pool name
- C34708 - Inconsistent pool type
- C34709 - Inconsistent card type
- C34710 - No more space to add modem
- C34711 - Must enter either modem or DIU equipment number
- C34712 - Name cannot exceed nine characters
- C34713 - Must enter either name or type

## COMMENTS

A modem or DIU equipment number cannot be defined in more than one modem pool group.

All modem-DIU pairs, and all pairs within a given group must reside in the same LCPU.

MODEM POOL ASSIGNMENT (CMD 347)

**RELATED COMMANDS**

- Data Interface Parameter Assignment (CMD 361)
- Data Station Assignment (CMD 360)
- Data Station Parameter Assignment (CMD 362)
- High Usage Data Destination Assignment (CMD 368)

## NAME DIALING ASSIGNMENT (CMD 367)

The Name Dialing Assignment command adds, deletes, or displays up to 128 name strings which may be used via keyboard dialing to address internal or external data destinations.

Command Keyword:       NAME\_DIALING

Category Name:         Data

### PREREQUISITE COMMANDS

Data Hunting Assignment (CMD 366)

Data Station Assignment (CMD 360)

### OPERATIONS

Available operations:   ADD  
                          DELETE  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

NAME | DESTINATION NUMBER |

◀.....req.....▶

This operation adds the character string (name) and its translated destination number (an individual data station number or a data hunt group) to the Name Dialing table.

#### DELETE

NAME | NAME | NAME | NAME | NAME | NAME | NAME |

| req ◀.....opt.....▶

This operation deletes the character string (name) and its translated destination number (an individual data station number or a data hunt group) from the Name Dialing table. The first "NAME" field is required, while the remaining fields are optional.

## NAME DIALING ASSIGNMENT (CMD 367)

**PERCEPTION 4000****COMMANDS**

DISPLAY

| INDEX | NAME | DESTINATION NUMBER |
|-------|------|--------------------|
|       |      |                    |

◀..... opt .....▶

This operation displays the names and destination numbers in the Name Dialing table. If a <TAB> and a <RETURN> are entered in the "INDEX" field, all entries in the table display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **NAME** (Character String or Name)  
 TYPE:            Text (Alphanumeric)  
 FORMAT:         1 to 9 characters  
 LOOP:           Not allowed  
 SCOPE:          Not allowed

The first character of a name string must be an alpha character; all others may be alpha or numeric. Embedded spaces are not allowed in the construction of a name string. A maximum of 128 names (entries) are allowed in the table. The "NAME" field is required in an ADD operation. In a DELETE operation, the first "NAME" field is required, while the rest are optional.

FIELD:           **DESTINATION NUMBER**  
 TYPE:            Dialing Digits plus \* and #  
 FORMAT:         1 to 24 digits (including \* and #)  
 VALUE:          0 to 9, \*, #  
 LOOP:           Not allowed  
 RANGE:          Not allowed

An internal or external destination number is assigned to each name string. External numbers must begin with a direct trunk group access code or the Least Cost Routing access code. Pauses and dial tone detection are not recognized in this field. Feature access codes are not allowed, however, system speed call numbers are. This field is required in an ADD operation.

FIELD:           **INDEX** (Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 128  
 LOOP:           Allowed  
 RANGE:          Not allowed

This number is provided by the system during a DISPLAY operation for the administrator's convenience. The number indicates how many entries are in the Name Dialing table.



**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C36700 - Name string is already defined
- C36701 - No space to add more
- C36702 - Not found in field N
- C36703 - Check format of name string
- C36704 - Invalid destination number
- C36705 - Undefined destination number
- C36706 - This is not a DIU DN

## NIGHT BELL ASSIGNMENT (CMD 405)

**PERCEPTION 4000****COMMANDS****NIGHT BELL ASSIGNMENT (CMD 405)**

The Night Bell Assignment command assigns night bells or chimes to analog line circuits (BSTI or XSTI cards). These bells are used as Universal Night Answer devices as well as attendant overflow and alternate call termination points.

Command Keyword: NIGHT\_BELL\_ASSIGN

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETED  
DISPLAY

The function and required data fields for each operation are described in this section.

## ADD

UNA BELL # | EQUIP # |

◀.....req.....▶

This operation adds a night bell device to the system. Both fields are required. The night bell can only be connected to a BSTI or XSTI card.

## DELETE

UNA BELL # |

| req |

This operation deletes a night bell from the system.

## DISPLAY

|                      |
|----------------------|
| UNA BELL #   EQUIP # |
|----------------------|

◀.....opt.....▶

This operation displays all night bells that meet the conditions established for each field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **UNA BELL #** (Universal Night Answer Bell Number)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:    BL01 ~ BL64

This field assigns the night bell device designator.

FIELD:           **EQUIP #** (Equipment Number)  
 TYPE:            EQ Type  
 FORMAT:         5 or 6 digits  
 VALUE:          (0)10101 to 101408 \*  
 RANGE:          Not allowed

\* Use the following chart to determine valid ranges for various types of equipment.

For BSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

For XSTI equipment cards, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

This field contains the equipment number for the night bell. The first digit(s) represent the shelf number, the next two digits represent the card slot number, and finally, the last two digits represent the circuit number.

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C40500 - UNA night bell is already in use
- C40501 - UNA night bell is not defined
- C40502 - Invalid equipment number for this card type
- C40503 - Equipment number is already in use
- C40504 - Equipment number and card type mismatch

### RELATED COMMANDS

- Attendant Group Assignment (CMD 372)
- DID/CCSA/DNIS LDN Assignment (CMD 316)
- DID/CCSA/DNIS Trunk Group Assignment (CMD 314)
- Internal Call Alternate Routing Assignment (CMD 374)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Routing Assignment (CMD 308)

## NUMBERING PLAN ASSIGNMENT (CMD 300)

The Numbering Plan Assignment command assigns system feature access codes and facility access codes (trunk groups, LCR access, and networking). The command also specifies the length of the post dialing digits for certain features. In addition, the command modifies an access code for a feature number and displays access codes for one or more feature numbers.

Note that ambiguity may not exist within the system's numbering plan, including station numbers and steering digits. Ambiguity is defined where any one number is equal to the prefix of another. For example, the following numbers may **not** co-exist: 72 and 723 or 678 and 67820.

Command Keyword:       NUMBERING\_PLAN

Category Name:           Dialing

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   MODIFY  
                              DELETE  
                              DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

FNO | ACC | LEN PD1 | LEN PD2 |

| req | ◀.....opt.....▶ |

This operation changes an access code and/or post dialing digits for the specified feature. Ranges are not permitted. A trunk group access code can be deleted with this operation by entering blanks (i.e., spaces) in the "ACC" field.

#### DELETE

FNO | ACC |

| req | opt |

This operation deletes the access code of a feature. Ranges are not permitted.

NUMBERING PLAN ASSIGNMENT (CMD 300)

DISPLAY



This operation displays access codes and the lengths of the post dialing digits of one or more features. All of the fields are optional. If no data is entered in any of the fields, all feature access codes, their post dialing digit lengths, and feature names will be displayed.

PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD: **FNO** (Feature Number)
- TYPE: Decimal with fixed length
- FORMAT: 3 digits
- VALUE: 001 to 333
- RANGE: Allowed in a DISPLAY operation
- LOOP: Allowed in DELETE and MODIFY operations

| FNO | Feature Name                                      | Abbreviation |
|-----|---|--------------|
| 001 | Direct Trunk Access - Trunk Group 1               | TG001        |
| nnn | Direct Trunk Access - Trunk Group nnn (1<nnn<256) | TGnnn        |
| 256 | Direct Trunk Access - Trunk Group 256             | TG256        |
| 258 | Code Calling Access                               | CC           |
| 259 | Voice Paging Access - Zone                        | VP_Z         |
| 260 | Voice Paging Access - System                      | VP_S         |
| 261 | Voice Paging Access - Emergency                   | VP_E         |
| 262 | Call Pickup - Group                               | GPU          |
| 263 | Dictation Machine Access - Group                  | DC_G         |
| 264 | Dictation Machine Access - Individual             | DC_I         |
| 265 | Voice Paging Retrieval - Zone                     | VPMM         |
| 266 | Voice Paging Retrieval - System                   | PR_S         |
| 267 | Code Calling Retrieval                            | CCMM         |
| 269 | Night Answer Access                               | UNA          |
| 282 | Modem Pooling Access                              | MPAC         |
| 283 | Last Number Redial                                | LND          |
| 284 | Call Pickup - Directed                            | DPU          |
| 285 | Call Pickup - Directed Group                      | DGPU         |
| 286 | Camp-on Callback Cancellation                     | CBCL         |
| 287 | Swap  | SWAP         |
| 288 | Do Not Disturb Registration                       | DNDR         |
| 289 | Do Not Disturb Cancellation                       | DNDC         |
| 290 | Speed Calling - System                            | SYSD         |
| 291 | Speed Calling - Group                             | SC_G         |
| 292 | Attendant Access - Universal                      | OPER         |
| 294 | Least Cost Routing Access                         | LCR          |

## NUMBERING PLAN ASSIGNMENT (CMD 300)

**PERCEPTION 4000****COMMANDS**

|     |                                     |      |
|-----|-------------------------------------|------|
| 295 | Call Fwd - All Calls Register       | ACFR |
| 296 | Call Fwd - Busy/No Ans Register     | BNFR |
| 297 | Call Fwd - No Answer Register       | NAFR |
| 298 | Call Fwd - Cancellation             | CFCL |
| 299 | Authorization Code                  | AUTH |
| 300 | Call Hold - Analog                  | AHLD |
| 301 | Call Park - Local Access/Retrieval  | CP_L |
| 302 | Call Park - Remote Access/Retrieval | CP_R |
| 303 | Data Access by Code Dialing         | DAD  |
| 304 | Message Waiting Registration        | MW_R |
| 305 | Message Waiting Retrieval           | MW_B |
| 306 | Message Waiting Cancellation        | MW_C |
| 307 | Account Code                        | ACCT |
| 308 | Uniform Numbering Plan              | UNP  |
| 310 | UCD Available                       | UCDA |
| 311 | UCD Unavailable                     | UCDU |
| 312 | Data Privacy                        | DPVY |
| 313 | Eight Party Conference Access       | 8WY  |
| 314 | Eight Party Conference Release      | 8WYR |
| 315 | ACD Login                           | LOGI |
| 316 | ACD Logout                          | LOGO |
| 318 | ACD Available                       | ACD  |
| 319 | ACD Unavailable                     | ACDU |
| 321 | ACD Work Mode Cancellation          | CANC |
| 322 | ACD Work Unit                       | WRKU |
| 323 | ACD Intra-Group Call Pickup         | ACDP |
| 324 | ACD Assistance                      | ASST |
| 333 | Attendant Parked Page Retrieval     | PR_A |
| 334 | Trunk Verification from Station     | TRKV |
| 341 | LCD Remote Logout Agent             | RLOG |
| 342 | ISDN CPN Presentation Allowed       | CPNA |
| 343 | ISDN CPN Presentation Restricted    | CPNR |
| 345 | Attendent End-to-End Signaling      | AEE  |

The "FNO" is an index used by the system to identify the feature or facility being defined. Values 001 to 256 specify trunk groups 1 to 256 respectively, however, trunk groups 129 to 256 are reserved for systems configured above the standard default of 128. Values 257 to 333 are used for other features. These values are predefined by Toshiba and may not be modified.

FIELD: **ACC** (Access Code)  
 TYPE: Dialing Digits plus \* and #  
 Blank (for deleting a trunk group access code)  
 FORMAT: 1 to 3 dialing pad characters  
 VALUE: 0 to 9  
 RANGE: Allowed in a DISPLAY operation

Access codes listed in the numbering plan must not conflict with the station numbering plan; and each code must be unique. Any combination of digits can be an access number. The \* and # characters can be used in an access code, but must be the first character of the dialed digit string.

## NUMBERING PLAN ASSIGNMENT (CMD 300)

**PERCEPTION 4000****COMMANDS**

FIELD:           **LEN PD1** (Length of First Post Dialing Digits)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          0 to 99  
 RANGE:          Allowed in a DISPLAY operation only

This field defines the length of the first set of post dialing digits (if required for the specified feature). For example, the Zone Voice Paging Access Code, FNO 259, requires the zone number in addition to the feature access code. In this case, "LEN PD1" is the length of the zone number. If the zone number is three digits, then a **3** is entered in this field.

FIELD:           **LEN PD2** (Length of Second Post Dialing Digits)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          0 to 99  
 RANGE:          Allowed in a DISPLAY operation only

The "LEN PD2" field defines the length of the second set of post dialing digits (if required for the specified feature). For example, Code Call Dialing requires the zone number and ID code in addition to the access code. In this case, "LEN PD1" is the length of the zone number and "LEN PD2" is the length of the ID Code.

FIELD:           **NAME** (Feature Name)  
 TYPE:            Text  
 FORMAT:         A text string of up to 30 characters

| Feature Name                        | FNO | Abbreviation |
|-------------------------------------|-----|--------------|
| Account Code                        | 307 | ACCT         |
| ACD Login                           | 315 | LOGI         |
| ACD Logout                          | 316 | LOGO         |
| ACD Available                       | 318 | ACD          |
| ACD Unavailable                     | 319 | ACDU         |
| ACD Assistance                      | 324 | ASST         |
| ACD Call Pickup                     | 323 | ACDP         |
| ACD Work Unit                       | 322 | WRKU         |
| ACD Work Mode Cancellation          | 321 | CANC         |
| Attendant Parked Page Retrieval     | 333 | PR_A         |
| Attendant Access - Universal        | 292 | OPER         |
| Authorization Code                  | 299 | AUTH         |
| Call Fwd - All Calls Register       | 295 | ACFR         |
| Call Fwd - Busy/No Ans Register     | 296 | BNFR         |
| Call Fwd - No Answer Register       | 297 | NAFR         |
| Call Fwd - Cancellation             | 298 | CFCL         |
| Call Hold - Analog                  | 300 | AHLD         |
| Call Park - Local Access/Retrieval  | 301 | CP_L         |
| Call Park - Remote Access/Retrieval | 302 | CP_R         |
| Call Pickup - Directed              | 284 | DPU          |
| Call Pickup - Directed Group        | 285 | DGPU         |
| Call Pickup - Group                 | 262 | GPU          |



## NUMBERING PLAN ASSIGNMENT (CMD 300)

**PERCEPTION 4000****COMMANDS**

|   |     |       |
|---|-----|-------|
| Camp-on Callback Cancellation                     | 286 | CBCL  |
| Code Calling Access                               | 258 | CC    |
| Code Calling Retrieval                            | 267 | CCMM  |
| Data Access by Code Dialing                       | 303 | DAD   |
| Data Privacy                                      | 312 | DPVY  |
| Dictation Access - Individual                     | 264 | DC_I  |
| Dictation Access - Group                          | 263 | DC_G  |
| Direct Trunk Access - Trunk Group 1               | 001 | TG001 |
| Direct Trunk Access - Trunk Group nnn (1<nnn<256) | nnn | TGnnn |
| Direct Trunk Access - Trunk Group 256             | 256 | TG256 |
| Do Not Disturb Registration                       | 288 | DNDR  |
| Do Not Disturb Cancellation                       | 289 | DNDC  |
| Eight Party Conference Access                     | 313 | 8WY   |
| Eight Party Conference Release                    | 314 | 8WYR  |
| ISDN CPN Presentation Allowed                     | 342 | CPNA  |
| ISDN CPN Presentation Restricted                  | 343 | CPNR  |
| Last Number Redial                                | 283 | LND   |
| Least Cost Routing Access                         | 294 | LCR   |
| Message Waiting Callback                          | 305 | MW_B  |
| Message Waiting Cancellation                      | 306 | MW_C  |
| Message Waiting Registration                      | 304 | MR_R  |
| Modem Pooling Access                              | 282 | MPAC  |
| Night Answer Access                               | 269 | UNA   |
| Speed Calling - Group                             | 291 | SC_G  |
| Speed Calling - System                            | 290 | SYSD  |
| Swap  | 287 | SWAP  |
| Trunk Verification from Station                   | 334 | TRKV  |
| UCD Available                                     | 310 | UCDA  |
| UCD Unavailable                                   | 311 | UCDU  |
| Uniform Numbering Plan                            | 308 | UNP   |
| Voice Paging Access - Emergency                   | 261 | VP_E  |
| Voice Paging Access - System                      | 260 | VP_S  |
| Voice Paging Access - Zone                        | 259 | VP_Z  |
| Voice Paging Retrieval - System                   | 266 | PR_S  |
| Voice Paging Retrieval - Zone                     | 265 | VPMM  |

This field, which appears in a DISPLAY operation only, contains the predefined feature name for the corresponding feature number. A wild card may be entered in this field to display feature names that are similar. For example, by entering **MESSAGE** in this field, all names beginning with "Message" display, such as Message Waiting Callback, Message Waiting Cancellation, etc.

FIELD: **ABBR** (Feature Name Abbreviation)  
 TYPE: Predefined ASCII characters  
 FORMAT: 1 to 6 characters

This field appears only in the DISPLAY operation, and indicates the ASCII character abbreviation for each feature name.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C30000 - Invalid feature number
- C30001 - No such access code exists
- C30002 - Access code is already used by another feature
- C30003 - Input access code is out of range
- C30004 - Failed to read PD1 & PD2 from database
- C30005 - Failed to write PD1 & PD2 to database
- C30006 - Failed to remove the access code from database
- C30007 - This feature does not yet have an access code
- C30008 - Failed to recover the PD1 & PD2 from database
- C30009 - Failed to recover the access code from database
- C30010 - Feature does not need an access code
- C30011 - Input PD1 is out of range
- C30012 - Input PD2 is out of range
- C30013 - Cannot assign access code to an out of range trunk group number
- C30014 - Database for this feature is not empty
- C30015 - The verified account code length is longer than PD1
- C30016 - PD1 failed to match with Zone Number assigned in CMD319
- I30017 - PD1 has been modified, please change zone paging digit length in CMD 371

**COMMENTS**

Other numbering plans, such as the station number, ACD/UCD group pilot numbers, etc., are added and modified by other M&A commands.

Dialing digits that are not literally interpreted by the numbering plan are:

- Authorization Codes
- Account Codes
- ACD Agent ID Codes
- External Call Destination Digits (DDD, Public Data Network, etc.)
- Device Control Codes (i.e., Paging Devices)
- Hardware Test Codes (for telset or attendant testing)
- Speed Calling Codes
- Intercom Codes

Features that are accessed by a hookflash and then an access code may not have the same dialing digits as those features accessed by access codes only.

If a feature access code is changed with this command, all users in the system must be alerted to the change so they may adjust their programmed keys (i.e., Autodial keys). In addition, individual attendant console features must be updated (i.e., attendant overflow destinations).

**RELATED COMMANDS**

Numerous commands are related to the Numbering Plan Assignment command, and rather than list all of them here, the relationship is stated under the individual command.

## PATCH REPORT (CMD 143)

The Patch Report command displays a list of integrated patches in the system. This feature provides Toshiba personnel with current software status information.

Command Keyword:      PATCH\_REPORT

Category Name:        Utility

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:    DISPLAY

The function and required data fields for each operation are described in this section.

#### DISPLAY

VERSION# | PATCH ID# |

◀..... opt.....▶

This operation displays all of the integrated patches in the system. Parameter input is optional. During a DISPLAY operation, pressing <CONTROL-S> halts the display, pressing <CONTROL-Q> resumes it, and pressing <SHIFT-2> aborts the operation.

### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:            **VERSION#** (Release Version Number)  
 TYPE:            Decimal with fixed length  
 FORMAT:         3 digits  
 VALUE:           (See below)  
 RANGE:           Not allowed  
 LOOP:            Not allowed

This field displays the system's current software version number. If a value is entered, it must match the software version number exactly, i.e., 673. If the value is not known, press the <TAB> key and the value is inserted automatically.

PATCH REPORT (CMD 143)

**PERCEPTION 4000**

**COMMANDS**

FIELD:           **PATCH ID#** (Patch Identification Number)  
TYPE:            Decimal  
FORMAT:         Up to 3 digits  
VALUE:          1 to 255  
RANGE:          Allowed in a DISPLAY operation only  
LOOP:           Not allowed

The "PATCH ID#" field provides a list of all patches applied to the system's software.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C14300 - Check the release version, input is out of range
- C14301 - Check release version

## PRIVATE/HOTLINE ASSIGNMENTS (CMD 332)

The Private/Hotline Assignments command assigns a trunk access code and optional destination number for a private line or hot line. Once assigned, when the *private line* key is pressed, the system automatically seizes a trunk which is reserved for this private line and outpulses to the optional destination if programmed. When the *hotline* key is pressed, the system automatically dials a predefined destination.

Command Keyword: PVT/HOT\_ASSIGN

Category Name: Station

### PREREQUISITE COMMANDS

Station Assignment (CMD 330)  
Station Feature Key Assignment (CMD 331)

For Private Line Assignments:

Numbering Plan Assignment (CMD 300)  
Trunk Assignment (CMD 313)  
Trunk Group Assignment (CMD 310)  
Trunk Hunting Assignment (CMD 309)

### OPERATIONS

Available operations: MODIFY  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

MODIFY

|      |  |            |  |     |  |                    |  |        |  |     |  |     |  |
|------|--|------------|--|-----|--|--------------------|--|--------|--|-----|--|-----|--|
| TYPE |  | HOT/PVT DN |  | TGN |  | DESTINATION NUMBER |  | PRM DN |  | DEV |  | POS |  |
|------|--|------------|--|-----|--|--------------------|--|--------|--|-----|--|-----|--|

|                 |  |      |  |       |  |     |  |                |  |      |
|-----------------|--|------|--|-------|--|-----|--|----------------|--|------|
| ◀.....req.....▶ |  | req* |  | req** |  | opt |  | ◀...output...▶ |  | only |
|-----------------|--|------|--|-------|--|-----|--|----------------|--|------|

\* The "TGN" field is required for modification of a private line only. If data is entered in this field for a hotline, an error message displays.

\*\* The "DESTINATION NUMBER" field is required for hotlines, but optional for private lines.

This operation modifies the destination number of the private line or hotline key.

PRIVATE/HOTLINE ASSIGNMENTS (CMD 332)

**PERCEPTION 4000** **COMMANDS**

DELETE

|            |
|------------|
| HOT/PVT DN |
| req        |

This operation deletes the hot line feature on an analog telephone only. To delete a hotline or a private line on a digital telephone, use the Station Feature Key Assignment command (CMD 331).

DISPLAY

|   |
|---|
| TYPE   INDEX   HOT/PVT DN   TGN   DESTINATION NUMBER   PRM DN   DEV   POS |
| req   output only   .....opt.....   output only   opt                     |

This operation displays all telephone keys that meet the conditions established for each field.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **TYPE** (Key Type)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    PVT - Private Line  
               HOT - Hot Line

This field selects the line type, which is originally defined in the Station Feature Key Assignment command (CMD 331). If **PVT** is entered in this field in a MODIFY operation, the "TGN" field requires data input. Note that the keyword **PVT** includes both the primary and secondary private lines (PVT and SPVT) as programmed in CMD 331.

FIELD:       **INDEX** (Index Number)  
 TYPE:        Decimal (Output only)  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 256

This field is used internally as a counter for the Private/Hotline table. Its value does not indicate an actual position or set any priority for data entered in this command.

## PRIVATE/HOTLINE ASSIGNMENTS (CMD 332)

**PERCEPTION 4000****COMMANDS**

FIELD:           **HOT/PVT DN** (Directory Number for HOT/PVT Line)  
 TYPE:            DN Type  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 99999  
 RANGE:          Allowed in a DISPLAY operation

This field defines the directory number of the private/hotline. The number must be the directory number assigned to the key with the Station Feature Key Assignment command (CMD 331), or it must be the prime directory number if a single-line telephone is being configured for ringdown. The number assigned to a private line is not accessible to station direct dialing within the system. Only the attendant may direct calls to this number. Prime lines may not be used as hotlines on multiline telephones.

FIELD:           **TGN** (Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 256 (or to the maximum system configuration)

This field is valid for private line types only. Values from 1 to 256 designate the trunk group numbers which were predefined as private line trunk groups in the Trunk Group Assignment command (CMD 310).

FIELD:           **DESTINATION NUMBER**  
 TYPE:            Dialing Digits plus \* and #  
 FORMAT:         24 digits  
 VALUE:          0 to 9, \*, #

The destination number field is required for hotlines and only used for private lines if an off-premises ringdown circuit is desired. Internal destination numbers are legal entries for hotlines, but not for private lines. Off-premises numbers are legal for both types; however, a trunk or LCR access code is required for hotline off-premises numbers but should not be included in private line destinations. Normally a destination is not defined for a private line.

FIELD:           **PRM DN** (Prime Directory Number)  
 TYPE:            DN Type  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 99999  
 RANGE:          Allowed in a DISPLAY operation

The "PRM DN" field is the prime directory number of the device with the key being assigned. For single line telephones, this number must be the same DN as defined in the "HOT/PVT DN" field and must be entered.

FIELD:           **DEV** (Telephone Device Type)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords:    4000 - PERCEPTION 4000 digital telephone  
               AD1  - Add-on module  
               EKT  - Electronic telephone

## PRIVATE/HOTLINE ASSIGNMENTS (CMD 332)

**PERCEPTION 4000****COMMANDS**

STD - Standard telephone  
 DKT - DKT digital telephone

The "DEV" field is an output only field that identifies the type of device the private line or hotline resides on.

FIELD:       **POS** (Key Assignment Position Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 60

This is an output only field in a MODIFY operation and an optional field in a DISPLAY operation. The "POS" is assigned with the Station Feature Key Assignment command (CMD 331).

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33200 - Invalid directory number
- C33201 - Directory number is not consistent with the numbering plan
- C33202 - The selected trunk has been used as another private line
- C33203 - Invalid trunk access code
- C33204 - Invalid digits in the destination number
- C33205 - Prime directory number is missing
- C33206 - Invalid trunk access code
- C33207 - Invalid private trunk feature number
- C33208 - Invalid trunk group type
- C33209 - DA registration failed
- C33210 - No such hotline is assigned to this station
- C33211 - No such hotline is assigned in the system
- C33212 - No such private line exists in the system
- C33213 - No such phone device exists in the system
- C33214 - Cannot delete; need to be modified by command 331
- C33215 - This analog phone is not a hotline
- C33216 - In MODIFY operation; PRM DN field for private line is for output only
- C33217 - Must indicate trunk group number for private line
- C33218 - Destination field is required
- C33219 - TGN field is not required for hotline
- C33220 - Not a private trunk group
- C33221 - Timeout in XXX
- C33222 - Trunk group number should be non-ISDN type

**RELATED COMMANDS**

Trunk Group Routing Assignment (CMD 307)  
 Trunk Routing Assignment (CMD 308)



## REDUNDANCY SELECTION ASSIGNMENT (CMD 410)

**PERCEPTION 4000****COMMANDS****REDUNDANCY SELECTION ASSIGNMENT (CMD 410)**

In a redundant system, each Line/Trunk (L/T) shelf contains two power units. The Redundancy Selection Assignment command changes or displays the L/T shelf power unit redundancy selections and the number of L/T shelves in the system. Note that a system may have some redundant L/T shelf power units and some non-redundant.

Command Keyword: REDUNDANCY\_ASSIGN

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

```
REDUNDANCY | # L/T SHELF |
```

```
|<.....opt.....>|
```

This operation modifies the redundancy of L/T shelf power units, and the number of L/T shelves in the system. Looping is not permitted in either of the optional fields.

**DISPLAY**

```
REDUNDANCY | # L/T SHELF |
```

```
|<.....output only.....>|
```

This operation displays the redundancy selections and the number of L/T shelves in the system. Both fields are output only. To display information, press **<TAB>** and **<RETURN>**.

## REDUNDANCY SELECTION ASSIGNMENT (CMD 410)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **REDUNDANCY** (Redundancy Selections)

TYPE:            Keyword

FORMAT:         Predefined ASCII characters

Keywords:    YES - Redundant L/T Shelf Power

              NO  - Non-redundant L/T Shelf Power

This field selects the redundancy options for the L/T shelf power units. The default is **NO**.

FIELD:           **# L/T SHELF** (Number of Line/Trunk Shelves)

TYPE:            Decimal

FORMAT:         1 or 2 digits

VALUE:          1 to 10

LOOP:           Not allowed

RANGE:          Not allowed

This field specifies the number of L/T shelves in the system. The default is **1**.

**SYSTEM ERROR MESSAGES**

The following error message is unique to this command.

C41001 - Number of L/T Shelves is out of range

## SMDR CONFIGURATION ASSIGNMENT (CMD 409)

**PERCEPTION 4000****COMMANDS****SMDR CONFIGURATION ASSIGNMENT (CMD 409)**

The SMDR Configuration Assignment command defines whether the Station Message Detailed Recording logs internal and/or external calls. External calls may further have all calls or only toll calls recorded. SMDR information can be selected on a system level or on specific trunk groups.

Command Keyword: SMDR\_ASSIGN

Category Name: Application Processor

**PREREQUISITE COMMAND**

Trunk Group Assignment (CMD 310)

This command is required if an entry is made in the "TGN" field.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

TIMER | SMDR INC | SMDR OUT | TGN | INC CALLS | OUT CALLS | TOLL CALLS ONLY |

|<.....opt.....>|<.....opt.....>|

This operation modifies SMDR configuration. The "TGN" field is required if any of the three fields following it are to be modified.

**DISPLAY**

TIMER | SMDR INC | SMDR OUT | TGN | INC CALLS | OUT CALLS | TOLL CALLS ONLY |

|<.....opt.....>|

This operation displays the SMDR selection on the system level as well as trunk groups.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

## SMDR CONFIGURATION ASSIGNMENT (CMD 409)

**PERCEPTION 4000****COMMANDS**

FIELD:           **TIMER** (SMDR Threshold Timer)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:          0 to 40 seconds  
 DEFAULT:        20 seconds

The "TIMER" field defines the value of the SMDR threshold timer, which determines how long an outgoing trunk call must exist before the call is recorded. The timer is used in the absence of answer supervision by the Central Office.

FIELD:           **SMDR INC** (Incoming SMDR Recording)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters  
 DEFAULT:        NO

Keywords:    YES - Enable incoming SMDR recording  
               NO  - Disable incoming SMDR recording

This field enables/disables incoming SMDR recording.

FIELD:           **SMDR OUT** (Outgoing SMDR Recording)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters  
 DEFAULT:        NO

Keywords:    YES - Enable outgoing SMDR recording  
               NO  - Disable outgoing SMDR recording

This field enables/disables outgoing SMDR recording.

FIELD:           **TGN** (Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 256 (or to the maximum system configuration)

This field defines the trunk groups to be monitored. Ranges are allowed in both DISPLAY and MODIFY operations. The maximum trunk group number is based on the system's configuration. In a MODIFY operation, this field is required if any of the following three fields need to be changed.

FIELD:           **INC CALLS** (Screen Incoming Calls)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters  
 DEFAULT:        NO

Keywords:    YES - Screen incoming calls  
               NO  - Do not screen incoming calls

This field enables/disables incoming SMDR recording for the specified trunk group number.

## SMDR CONFIGURATION ASSIGNMENT (CMD 409)

**PERCEPTION 4000****COMMANDS**

FIELD:       **OUT CALLS** (Screen Outgoing Calls)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters  
 DEFAULT:    NO

Keywords:   YES - Screen outgoing calls  
               NO  - Do not screen outgoing calls

This field enables/disables outgoing SMDR recording for the specified trunk group number. If this field is set to **YES** (On), outgoing calls will be recorded. If set to **NO** (Off), the following field selection (for TOLL CALLS ONLY) has no effect.

*NOTE: The "TOLL CALLS ONLY" field is a subset of the "OUT CALLS" field. To record **all outgoing calls**, set "OUT CALLS" to **YES** and "TOLL CALLS ONLY" to **NO**. To record **toll calls only**, set both "OUT CALLS" and "TOLL CALLS ONLY" to **YES**.*

FIELD:       **TOLL CALLS ONLY**  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters  
 DEFAULT:    NO

Keywords:   YES - Limit SMDR recording to toll calls only  
               NO  - Do not limit SMDR recording

This field can be used to limit SMDR recording of toll calls. If this field is set to **YES**, the Forced Account Code Toll-free Tables (programmed in CMD 352) must be defined.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C40901 - Missing input after trunk group number fields  
 C40902 - Missing trunk group number input  
 C40903 - Missing input data

**RELATED COMMANDS**

Forced Account Code Toll-free Tables (CMD 352)

## SECONDARY LINE APPEARANCES DISPLAY (CMD 327)

**PERCEPTION 4000****COMMANDS****SECONDARY LINE APPEARANCES DISPLAY (CMD 327)**

The Secondary Line Appearances Display command displays the equipment number, prime directory number, telephone device name, key position, and type of multiple appearances of a line for a specified directory number.

Command Keyword:       SECONDARY\_LINE\_DISP

Category Name:         Station

**PREREQUISITE COMMANDS**

Feature Key Assignment (CMD 331)

Station Assignment (CMD 330)

**OPERATIONS**

Available operations:   DISPLAY

The function and required data fields for each operation are described in this section.

## DISPLAY

|  |
|--|
| DN   EQUIP #   PRM DN   DEV   POS   TYPE |
|--|

| req | ◀..... output only .....▶ |

This operation displays information for a specified directory number that has secondary line appearances.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:         **DN** (Directory Number)  
 TYPE:         DN Type  
 FORMAT:       1 to 5 digits  
 VALUE:        1 to 99999  
 RANGE:        Not allowed  
 LOOP:         Not allowed

The "DN" is the primary key for this command and required for the DISPLAY operation. This field uniquely identifies the voice line which is assigned by the Station Assignment command (CMD 330), the data line assigned by the Data Station Assignment command (CMD 360), and a private, hotline, secondary line, or logical line which is assigned by the Feature Key Assignment command (CMD 331).

## SECONDARY LINE APPEARANCES DISPLAY (CMD 327)

**PERCEPTION 4000****COMMANDS**

FIELD:       **EQUIP #** (Equipment Number)  
 TYPE:       EQ Type (Output only)  
 FORMAT:     5 or 6 digits  
 VALUE:      (0)10101 to 101408  
 RANGE:      Not allowed  
 LOOP:       Not allowed

This is an output only field and displays the equipment number of the prime directory number listed in the next field (PRM DN).

FIELD:       **PRM DN** (Prime Directory Number)  
 TYPE:       DN Type (Output only)  
 FORMAT:     1 to 5 digits  
 VALUE:      1 to 99999  
 RANGE:      Not allowed  
 LOOP:       Not allowed

This is an output only field and displays the prime directory number where the line (DN in Field 1) is located.

FIELD:       **DEV** (Telephone Device Name)  
 TYPE:       Keyword (Output only)  
 FORMAT:     Predefined ASCII characters

Keywords:   4000 - PERCEPTION 4000 telephone  
               AD1 - Add-on module one  
               AD2 - Add-on module two  
               AD3 - Add-on module three  
               EKT - Electronic telephone  
               STD - Standard telephone  
               DKT - DKT digital telephone

This is an output only field and displays the device type on which the line (DN in Field 1) is located. Device names are assigned with the Station Feature Key Assignment command (CMD 331).

FIELD:       **POS** (Key Position Number)  
 TYPE:       Decimal (Output only)  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 10 (10-key digital telephone)  
               1 to 20 (20-key digital and electronic telephones, and 20-key add-on modules)  
               1 to 60 (60-key add-on module [three 20-key modules])  
 RANGE :     Not allowed  
 LOOP:       Not allowed

This is an output only field and displays the key position on the secondary telephone or add-on module for the specified "DN".

FIELD:       **TYPE** (Key Assignment Type)

SECONDARY LINE APPEARANCES DISPLAY (CMD 327)

**PERCEPTION 4000**

**COMMANDS**

TYPE: Keyword (Output only)  
FORMAT: Predefined ASCII characters

Keywords: DDN - Data Line (Integrated DIU)  
HOT - Hotline  
LINE - Line Key  
LLIN - Logical Line (Not used)  
MLIN - Multiple Line  
PRM - Prime Line  
PVT - Private Trunk Line  
SDDN- Data Line (Logical Pair)  
SPVT - Secondary Private Line

This is an output only field and displays the line type for the key appearing in the "POS" field.

**SYSTEM ERROR MESSAGES**

The following error message is unique to this command.

- C32700 - Invalid directory number
- C32701 - Directory number not consistent with numbering plan
- C32702 - Timeout in 1, 2, or 3

**COMMENTS**

In the DISPLAY operation, a secondary line on an add-on module may have a key position value greater than 118. To determine the key position on the add-on module, subtract 118 from the displayed key position number. The type of add-on module is assigned in the Station Feature Key Assignment command (CMD 331).



## STATION ASSIGNMENT (CMD 330)

The Station Assignment command is the primary command in assigning stations to the system. This command defines the station's prime directory number, establishes linkage to a hardware circuit, instructs the system on what type of station this is (digital, electronic, analog single-line) and defines terminal-level and prime-line attributes. The Station-Level Parameter Assignment command (CMD 329) is also required to complete fundamental station information. Multi-line devices also require the Station Feature Key Assignment command (CMD 331) for further assignment.

### NOTES:

1. *If the station's "TYPE" field is an ID10 or ID20 (digital telephone with an integrated Data Interface Unit [DIU]), the station must be assigned to a DSTI card configured for 2B operation, thereby allowing for simultaneous voice and data communications.*
2. *If the station's "TYPE" field is a 2010 or 2020 (digital telephone without DIU), the station may be assigned to a DSTI card configured for 1B or 2B operation. When installed on a DSTI card configured for 2B operation, a '2B' device (ID10 or ID20) must already be assigned to the card.*
3. *A digital telephone with an integrated DIU (ID10 or ID20) must have the data channel programmed through the Data Station Assignment command (CMD 360).*
4. *If a 10-key or 20-key digital telephone is selected in the "TYPE" field (2010 or 2020) and installed on a DSTI card configured for 2B operation, the circuit's data channel is ignored by the system.*
5. *In a MODIFY operation, a '2B' device may not be changed to a '1B' device.*

Additional information is listed under the *COMMENTS* section at the end of this command.

Command Keyword:        STA\_ASSIGNMENT

Category Name:            Station

### PREREQUISITE COMMANDS

Attendant Group Assignment (CMD 372)  
 Attendant Position Assignment (CMD 370)  
 Station Feature Key Pattern Assignment (CMD 320)

If "ANSPOS" is set to an attendant directory number, CMDs 372 and 370 are required.  
 If a feature key pattern other than "1" is entered, CMD 320 is required.

### OPERATIONS

Available operations:    ADD  
                               DELETE  
                               MODIFY  
                               DISPLAY

The function and required data fields for each operation are described in this section.

STATION ASSIGNMENT (CMD 330)

**PERCEPTION 4000** **COMMANDS**

ADD

|  |
|--|
| EQUIP #   PRM DN   TYPE   PAT   A1   A2   EXT   RNG   COS   DRL   FRL   QPL   ANSPOS   SRG   NAME   DEPT |
| <.....req.....> <.....opt.....> locked  opt  <.....req.....> <.....opt.....> locked <.....opt.....>      |

This operation assigns a station port to a spare equipment port location. The minimum set of data that defines a station port is required. The directory number selected must meet the constraints established for prime directory numbers. Loops are permitted to expedite the establishment of large numbers of station ports. Once the station is installed, other attributes which are not covered by this command are assigned with default values automatically. Refer to the *COMMENTS* section later in this command for a listing of these attributes. The optional "PAT" field defaults to the basic key position template, Pattern #1, if a <TAB> is entered in this field.

DELETE

|                  |
|------------------|
| EQUIP #   PRM DN |
| req   opt        |

This operation changes a station port to a spare equipment port. The equipment number is required. Looping is allowed in the "EQUIP #" field to expedite the deletion of large numbers of ports. If the station has secondary directory numbers assigned to its line(s) or key(s), all of the secondary directory numbers must be removed through the Station Feature Key Assignment command (CMD 331) prior to performing this operation. The station must also be removed from group associations such as hunting, speed calling, ACD, etc. If the station's "TYPE" is an ID10 or ID20 (digital telephone with integrated DIU), the data station must be deleted first. Refer to the *COMMENTS* section later in this command for additional DELETE operation information.

MODIFY

|  |
|--|
| EQUIP #   PRM DN   TYPE   PAT   A1   A2   EXT   RNG   COS   DRL   FRL   QPL   ANSPOS   SRG   NAME   DEPT |
| req  <.....locked.....> <.....opt.....> locked <.....opt.....>   |

This operation modifies the attributes of the station equipment. The "EQUIP #" field is the only required field. The "PRM DN," "TYPE," "PAT," and "SRG" fields are locked fields and cannot be modified. Before changing attributes of a station, review the *NOTES* at the beginning of this command and the *COMMENTS* at the end.

DISPLAY

|  |
|--|
| EQUIP #   PRM DN   TYPE   PAT   A1   A2   EXT   RNG   COS   DRL   FRL   QPL   ANSPOS   SRG   NAME   DEPT |
| <.....opt.....> locked <opt> locked <.....opt.....> locked <.....opt.....>                               |

This operation displays all station equipment ports that meet the conditions established for each field. Ranges are permitted in any field that accepts numeric input, (i.e., COS, DRL, FRL, etc.). The "EQUIP #" field is the only loop field for this operation.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **EQUIP #** (Equipment Location)  
 TYPE: EQ Type  
 FORMAT: 5 or 6 digits  
 VALUE: (0)10101 to 101408 \*  
 RANGE: Not allowed  
 LOOP: Allowed in DISPLAY, ADD, and DELETE operations

\* Use the following chart to determine valid ranges for various types of equipment.

For BSTI and 1B-Channel DSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

For a 2B-Channel DSTI equipment card, the following ranges apply:

| Digits            | Range                  | Hardware      |
|-------------------|------------------------|---------------|
| First digit(s)    | (0)1~10                | Shelf no.     |
| Second two digits | 01, 03, 05, 07, 09, 11 | Card slot no. |
| Last two digits   | 01~16                  | Circuit no.   |

For an EKTl, DKTI, or XSTI card, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

Each station is assigned to a circuit on a line card. The "EQUIP #" field defines the location of the connection. The first digit(s) represents the shelf number, the next two digits represent the card slot number, and the last two digits represent the circuit number. This field is required for all operations except DISPLAY. Review the *NOTES* at the beginning of this command before adding stations to the system.

If a station is going to serve as an ACD agent position, then it is important to note the relationship between the agent's assigned equipment number, its controlling LCPU, and its assigned agent group number. LCPU support is allocated among the PERCEPTION 4000 System's Modular Line/Trunk Units (Shelves) as follows:

STATION ASSIGNMENT (CMD 330)

**PERCEPTION 4000** **COMMANDS**

| LCPU(X) | Modular Line/Trunk Units (Shelves) Controlled by LCPU(X) |
|---------|--|
| 1       | 1 ~ 4  |
| 2       | 5 ~ 8  |
| 3       | 9 ~ 10   |

When assigning agent stations in a system with redundant processing, those stations which are to be in the same ACD group need to be assigned to equipment locations that will be supported by the same LCPU. This is because different LCPUs support different ACD groups, as noted in the following table. Programming agent stations in accordance with this table will help ensure that calls are not interrupted if a system switchover occurs.

| System Size   |                                    | LCPU1<br>Shelves Supported:<br>1 ~ 4   | LCPU2<br>Shelves Supported:<br>5 ~ 8  | LCPU3<br>Shelves Supported:<br>9 ~ 10  |
|---------------|------------------------------------|--|---|--|
| 1 LCPU System | ACD AGENT GROUP SUPPORT ALLOCATION | ACD Groups Supported:<br>1 ~ 32<br>(All groups supported by LCPU1)                                       |   |  |
| 2 LCPU System |                                    | ACD Groups Supported:<br>1<br>3<br>5<br>7<br>↓<br>31<br>(All odd-numbered groups are supported by LCPU2) | ACD Groups Supported:<br>2<br>4<br>6<br>8<br>↓<br>32<br>(All even-numbered groups are supported by LCPU2) |  |
| 3 LCPU System |                                    | ACD Groups Supported:<br>1<br>4<br>7<br>10<br>13<br>16<br>19<br>22<br>25<br>28<br>31                     | ACD Groups Supported:<br>2<br>5<br>8<br>11<br>14<br>17<br>20<br>23<br>26<br>29<br>32                      | ACD Groups Supported:<br>3<br>6<br>9<br>12<br>15<br>18<br>21<br>24<br>27<br>30 |

**PERCEPTION 4000****COMMANDS**

FIELD: **PRM DN** (Prime Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

The directory number must not conflict with any other directory number, steering digit, or feature/facility access codes defined in the system's numbering plan. Ranges are allowed in a DISPLAY operation. Note that the "PRM DN" cannot be modified.

FIELD: **TYPE** (Station Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords:

- 2010 - PERCEPTION 4000 10-key digital telephone
- 2020 - PERCEPTION 4000 20-key digital telephone
- ID10 - PERCEPTION 4000 10-key digital telephone / Data Interface Unit (DIU)
- ID20 - PERCEPTION 4000 20-key digital telephone / Data Interface Unit (DIU)
- ANLG - Analog telephone
- ANMW - Analog telephone with Message Waiting
- AVMS - Analog port assigned to Voice Messaging System
- OPS - Off-premises analog station
- EK01 - Electronic telephone with 1 line key and 3 fixed keys
- EK10 - Electronic telephone with 10 flexible keys and 4 fixed keys
- EK20 - Electronic telephone with 20 flexible keys and 4 fixed keys
- EK2D - Electronic telephone with 20 flexible keys, 4 fixed keys, and display
- DK10 - DKT digital telephone with 10 flexible keys
- DK1D - DKT digital telephone with 10 flexible keys and display
- DK20 - DKT digital telephone with 20 flexible keys
- DK2D - DKT digital telephone with 20 flexible keys and display

This field defines the station type—digital, analog, electronic, etc. An analog telephone that lacks a Message Waiting lamp may be set up as an ANMW to receive a stuttered dial tone (which indicates that a message(s) is waiting). If the station is a digital telephone with or without an integrated data interface unit, then the next two fields (A1 and A2) may be defined. Review the *NOTES* at the beginning of this command before assigning a station type.

FIELD: **PAT** (Pattern Number of Template for Position of Feature Keys)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 RANGE: Not allowed  
 LOOP: Not allowed

This field selects the feature key pattern to be assigned to the station. "PAT" is a locked field in the MODIFY and DISPLAY operations. The field defaults to the basic key position template, Pattern #1, if a <TAB> is entered. Patterns are programmed with the Station Feature Key Pattern Assignment command (CMD 320).

## STATION ASSIGNMENT (CMD 330)

**PERCEPTION 4000****COMMANDS**

FIELD: **A1** (First Add-on Module Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: M1 - 20-key Add-on Module  
 M2 - 60-key Add-on Module (three 20-key modules)  
 NO - No Add-on Module

This field applies to digital telephones only, and specifies whether the station has a 20-key, 60-key, or no add-on module. A maximum of 60 keys may be added to a station, therefore, a station may be assigned one or two 20-key add-ons, or one 60-key add-on. A 60-key add-on module consists of three 20-key modules. All keys assigned to an add-on module must be deleted through the Station Feature Key Assignment command (CMD 331) before the "A1" or "A2" fields can be modified.

FIELD: **A2** (Second Add-on Module Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: M1 - 20-key Add-on Module  
 M2 - 60-key Add-on Module (Reserved for future use.)  
 NO - No Add-on Module

This field applies to digital telephones only, and specifies whether the station has a second 20-key add-on module. See "A1" for additional information on add-on modules.

FIELD: **EXT** (Analog Extension - Used for analog telephones only) (Reserved for future use)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: EXT - Digital Telephone Extension  
 NON - Non-extension

This field is reserved for future use.

FIELD: **RNG** (Ringing Option)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: RNG - Ring  
 NRG - No Ring

The ringing option field defines whether or not an analog station is rung for incoming calls. If set to **NRG**, the telephone rings for camp-on callbacks and recalls only. All devices default to **RNG** when added to the system. To modify a digital or electronic telephone, use the Station Feature Key Assignment command (CMD 331) "DEF 2" field.

FIELD:       **COS** (Class Of Service)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 64  
 RANGE:      Allowed in a DISPLAY operation only

This field, along with the next four fields, provides feature and facility access and dialing control definitions. Class of Service tables are defined with the Class of Service Assignment command (CMD 334).

FIELD:       **DRL** (Destination Restriction Level)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 16 (or to the maximum system configuration)  
 RANGE:      Allowed in a DISPLAY operation only

Destination restriction levels control outgoing calls via direct trunk group access. Restriction levels are defined with the Destination Restriction Level Assignment command (CMD 337).

FIELD:       **FRL** (Facility Restriction Level Profile)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 32 (or to the maximum system configuration)  
 RANGE:      Allowed in a DISPLAY operation only

The "FRL" field defines restrictions assigned to various routes within each least cost routing route table. Facility Restriction Level Profile relationships are defined with the Facility Restriction Level Profile Assignment command (CMD 387).

FIELD:       **QPL** (LCR Queue Priority Level)  
 TYPE:        Decimal  
 FORMAT:     1 digit  
 VALUE:      1 to 8  
 RANGE:      Allowed in a DISPLAY operation only

This field sets queuing priority for outgoing calls and is defined with the LCR Special Routing Assignment command (CMD 384).

FIELD:       **ANSPOS** (Answer Position)  
 TYPE:        DN Type / Keyword  
 FORMAT:     1 to 5 digits / Predefined ASCII characters  
 VALUE:      0 to 99999  
 RANGE:      Allowed in a DISPLAY operation only

Keyword:    NON

This optional field defines the directory number where calls made through the universal attendant access code are directed. The answer position is defined as an attendant group number, an attendant number, a station number, or a pilot number such as for hunt groups, UCD, etc. The keyword **NON** indicates that no answer position is selected and is the default value.

## STATION ASSIGNMENT (CMD 330)

**PERCEPTION 4000****COMMANDS**

FIELD:        **SRG** (Station Restriction Group Number) (Reserved for future use)  
 TYPE:         Decimal  
 FORMAT:      1 or 2 digits  
 VALUE:       1 to 16  
 RANGE:       Allowed in a DISPLAY operation only

This field is reserved for future use.

FIELD:        **NAME** (Station Name)  
 TYPE:         Text  
 FORMAT:      0 to 9 ASCII characters

This optional field allows you to enter a station name of up to nine ASCII characters. Embedded spaces are allowed. The name entered here appears on display-equipped devices when calls are directed to these devices.

FIELD:        **DEPT** (Department Name)  
 TYPE:         Text  
 FORMAT:      0 to 4 ASCII characters

This optional field identifies the department to which the device belongs. For example, **ACCT** would identify the Accounting Department and **PUR** would identify the Purchasing Department.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33000 - Specified equipment number is not available in the system
- C33001 - Specified equipment number is already being used
- C33002 - Prime directory number already exists
- C33003 - Unable to add a new directory number to database
- C33004 - Prime directory number conflicts with existing number or access code
- C33005 - Directory number is a group member
- C33006 - Add operation; DN-LDN relation failed
- C33007 - Add operation; SSC LDN MPT failed
- C33008 - Cannot delete; station is not the last member
- C33009 - Failed to remove this directory number from database
- C33010 - Failed to remove DN-LDN relationship
- C33011 - Failed to release the deleted LDN
- C33012 - Failed to release the deleted LTN
- C33013 - Failed to add new LTN to HDT database
- C33014 - Unmatched prime directory number
- C33015 - Failed to recover DA in all LCPUs
- C33016 - Failed to remove KSU member
- C33017 - Failed to remove KSU-LDN relationship
- C33018 - EXT is not yet supported; input TAB is required
- C33019 - Cannot delete; station is not last line
- C33020 - Cannot delete; read line count failed



- C33021 - Equipment number is already used by another device
- C33022 - No such station exists in the system
- C33023 - No matched card type
- C33024 - Cannot add card to this card slot
- C33025 - 10-key telephone line count exceeds system configuration limit
- C33026 - 20-key telephone line count exceeds system configuration limit
- C33027 - Failed to allocate memory for CbList/LCD Buffer
- C33028 - Station type is not changeable
- C33029 - Not allowed to install DSTI/BSTI/PBRC to slot 12/14
- C33030 - Not allowed to install DSTI-2B to an even card slot
- C33031 - Not allowed to install DSTI-2B to card slot 12-14
- C33032 - Not allowed to install T-1 to an odd card slot
- C33033 - Not allowed to install T-1 to card slot 14
- C33034 - DIU database has not been removed
- C33035 - Dial 0 destination DN does not exist
- C33036 - Failed to read ANSPOS
- C33037 - Failed to read authorization attribute
- C33038 - Failed to read phone attribute
- C33039 - Failed to read prime line attribute
- C33040 - There is no available key for adding DDN key
- C33041 - Failed to update authorization attribute
- C33042 - Failed to update phone attribute
- C33043 - Failed to update station dial 0 destination
- C33044 - Failed to update line attribute flag byte
- C33045 - Cannot change to integrated DIU; next slot is in use
- C33046 - Cannot change to integrated DIU; DSTI-2B cannot be in an even slot
- C33047 - Cannot change to integrated DIU; DSTI-2B not allowed in slot 12-14
- C33048 - Modify field EXT is not allowed; input TAB is required
- C33049 - Modify field RNG is not allowed; input TAB is required
- C33050 - Add-on module is applicable to P-4000 phone only
- C33051 - RNG is not allowed; input TAB is required
- C33052 - Add-on module #1 is required for P-4000 phone
- C33053 - Add-on module #2 is required for P-4000 phone
- C33054 - Delete all keys assigned in add-on module #2 before removing
- C33055 - Cannot read add-on key table
- C33056 - Delete all keys assigned in add-on module #1 before removing
- C33057 - Delete all keys assigned in add-on module #1 before modifying
- C33058 - Delete all keys assigned in add-on module #2 before modifying
- C33059 - Cannot allocate memory to add new add-on module
- C33060 - Cannot add VMS LDN to table
- C33061 - Cannot remove VMS LDN from table
- C33062 - Cannot add prime line attribute for this station
- C33063 - Cannot add KSU member to this station
- C33064 - Failed to read LDN from database
- C33065 - Database does not have any free available LTNs
- C33066 - Database does not have any free available LDNs
- C33067 - Failed to delete LTN from database
- C33068 - Wait for ACD agent to logout before removing
- C33069 - Failed to read message waiting queue
- C33070 - Failed to add to message waiting queue
- C33071 - Failed to remove from message waiting queue
- C33072 - Exceeds maximum message waiting allowed in the system

## STATION ASSIGNMENT (CMD 330)

**PERCEPTION 4000****COMMANDS**

- C33073 - Exceeds maximum voice mail port allowed in the system
- I33074 - Warning: Undefined data in field #13
- C33075 - Total directory numbers have reached maximum system configured
- C33076 - Cannot use pattern number; prime position is not assigned
- C33077 - Cannot use pattern number; data position is not assigned
- C33078 - Cannot use pattern number; too many autodial keys
- C33079 - Cannot use pattern number; too many preregistered call forward keys
- I33080 - Warning: Pattern number will be disregarded for single key station
- C33081 - Total number of keys on add-on module #1 and #2 cannot exceed 60
- C33082 - No more LDNs are available

**COMMENTS**

1. When a digital or electronic telephone is installed, other attributes not covered by this command are automatically assigned with default values. These attributes, listed below, are changed and/or displayed via the Station Feature Key Assignment command (CMD 331).

|  |  |
|--|--|
| Prime Line Key Position                                    | Receive Voice Announce on Prime Line   |
| Message Key Position (for multiline electronic telephones) | Receive Voice Announce via Intercom    |
| Release Key Position                                       | Automatic Answerback to Voice Announce |
| Line Preference  | Ring Over Busy                         |

Additionally, the PRM DN and Data DN (if it exists) are assigned default key positions automatically with the Station Assignment command (CMD 330).

2. To delete a station, the prime directory number as well as all of the secondary directory numbers assigned to the line(s)/key(s) on that station are checked. If the directory numbers can be removed from the station, the station is then deleted. Otherwise, an error message is given and no deletion is performed.

All appearances of a station's prime directory number on other stations must be deleted prior to the station's removal. The Secondary Line Appearances Display command (CMD 327) may be used to display all appearances of the prime directory number.

Deletion of a directory number from a station is inhibited if the directory number is the last appearance of that number in the system, and is a member of any of the following groups:

|            |              |                 |                |
|------------|--------------|-----------------|----------------|
| ACD Group  | UCD Group    | Hotline Station | Private Line   |
| Hunt Group | Pickup Group | Intercom Group  | Secondary Line |

An error message appears indicating which of the above conditions exist causing the operation to be aborted. To break the group-member relationships, use the appropriate M&A commands first and then delete the directory number from the station.

3. Station removal is not allowed unless associated data station removal is performed first. Refer to the Data Station Assignment command (CMD 360) for information on deleting a data station.
4. Station removal must be confirmed if any of the following features are actively registered by or to the station:

|                  |               |
|------------------|---------------|
| Call In Progress | Calls on Hold |
|------------------|---------------|

If one of these conditions occurs, select one of the following options:

- Cancel,
- Remove when it becomes idle (wait),
- Force removal

#### **RELATED COMMANDS**

- Call Pickup Group Assignment (CMD 346)
- Class of Service Assignment (CMD 334)
- Data Station Assignment (CMD 360)
- Destination Restriction Level Assignment (CMD 337)
- Facility Restriction Level Profile Assignment (CMD 387)
- Group Speed Calling Member Assignment (CMD 350)
- Intercom Group Member Display (CMD 333)
- Internal Call Alternate Routing Assignment (CMD 374)
- LCR Special Routing Assignment (CMD 384)
- Private/Hotline Assignment (CMD 332)
- Station Feature Key Assignment (CMD 331)
- Station Hunting Assignment (CMD 342)
- Station-Level Parameter Assignment (CMD 329)
- Terminal Maintenance (CMD 206)
- UCD Group Assignment (CMD 354)

STATION FEATURE KEY ASSIGNMENT (CMD 331)

### STATION FEATURE KEY ASSIGNMENT (CMD 331)

The Station Feature Key Assignment command defines digital and electronic telephone attributes and feature key usage for these telephone types as well as for the PERCEPTION 4000 add-on module. Before this command can be implemented, the Station Assignment command (CMD 330) must be programmed.

Command Keyword: STA\_KEY\_ASSIGN

Category Name: Station

#### PREREQUISITE COMMANDS

Data Station Assignment (CMD 360)

Command 360 is required if a data key is specified in the "TYPE" field.

Station Assignment (CMD 330)

#### OPERATIONS

Available operations: MODIFY  
DISPLAY  
SWAP

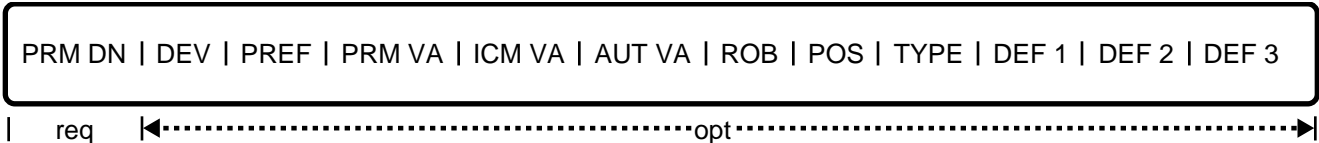
The function and required data fields for each operation are described as follows:

#### MODIFY



This operation modifies the attributes of station equipment. The Device Category (DEV) field is optional if modifications are made to phone attributes (fields "PEF" to "ROB"). If modifications are made to key attributes (fields "POS" and "TYPE," "DEF1," "DEF2," and/or "DEF3," the "DEV" field is required. Ranges are permitted in the Feature Key Position (POS) field only.

#### DISPLAY



This operation displays attributes that meet the conditions established in each field for the specified prime directory number.

## SWAP

```
PRM DN | DEV 1 | POS 1 | DEV 2 | POS 2 |
```

```
◀.....req.....▶
```

This operation exchanges the attributes of two keys. The "DEV n" fields identify the device on which each key is located. Ranges are not permitted.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **PRM DN** (Prime Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999

This field, which is required in all operations, selects the prime directory number to be modified or displayed. The prime directory number uniquely identifies each station and is originally assigned through the Station Assignment command, CMD 330.

FIELD:       **DEV, DEV 1, DEV 2** (Device Category)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   4000 - PERCEPTION 4000 digital telephone  
              EKT - Electronic telephone  
              DKT - DKT digital telephone  
              AD1 - Add-on module 1  
              AD2 - Add-on module 2

This field identifies the device as being a digital or electronic telephone, or an add-on unit.

FIELD:       **PREF** (Line Preference)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   PRM - Prime Line  
              IDL - Idle  
              PIDL - Prime & Idle  
              PRNG - Prime & Ringing  
              RNG - Longest Ringing  
              RIDL - Ringing & Idle  
              ALL - All  
              NON - No Preference

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS**

This field defines the automatic line selection capability of the telephone based on various states. Refer to Appendix D for matrices which show how this field handles automatic line selection.

FIELD: **PRM VA** (Receive Voice Announce on Prime Line)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Voice Announce on Prime Line allowed  
 DNY - Voice Announce on Prime Line denied

This field defines whether or not a station receives voice announcements over the prime line.

FIELD: **ICM VA** (Receive Voice Announce via Intercom Line)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Voice Announce via Intercom Line allowed  
 DNY - Voice Announce via Intercom Line denied

This field defines whether or not a station receives voice announcements over the intercom line.

FIELD: **AUT VA** (Automatic Answerback to Voice Announcement)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ALW - Automatic Answerback to Voice Announcement allowed  
 DNY - Automatic Answerback to Voice Announcement denied

This field determines if the station's microphone automatically activates for automatic answerback to voice announcements when they take place. (This field should not be confused with the Automatic Answer feature.)

FIELD: **ROB** (Ring Over Busy)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Ring Over Busy enabled  
 NO - Ring Over Busy disabled

This field defines whether the station user receives a ring over busy indication when a call arrives on another line while the station user is presently engaged in a call. Ring over busy is a muted ring generated through the station's speaker and occurs only when the user is in handset mode on a line other than the one receiving the new call. In order to receive the ring over busy signal, the line being rung must be set to allow audible ringing.

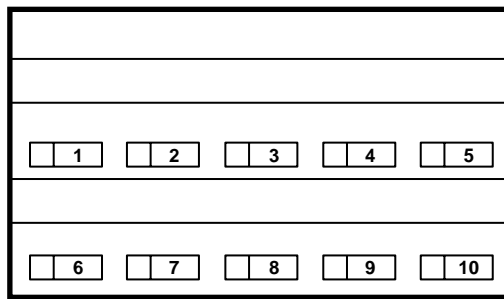
*The above parameters pertain to digital and electronic telephone configurations, with the exception of the device fields. The following fields pertain to multi-line stations as well as add-on modules.*

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

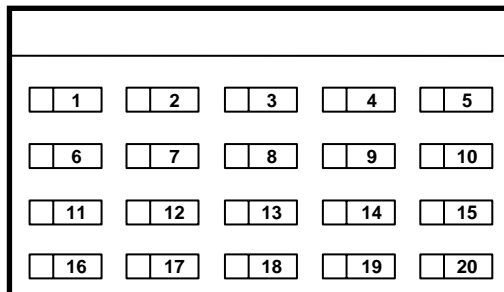
**PERCEPTION 4000****COMMANDS**

FIELD: **POS, POS 1, POS 2** (Key Assignment Position Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (10-key digital and electronic telephone)  
 1 to 20 (20-key digital and electronic telephones, 20-key add-on modules)  
 1 to 60 (60-key add-on module [three 20-key modules])  
 RANGE : Allowed in a DISPLAY operation  
 LOOP: Allowed in a MODIFY operation

The "POS" field assigns secondary keys on multi-line stations. Data entered in this field determines the "TYPE" field, which determines whether data is entered in the "DEF 1," "DEF 2," and/or "DEF 3" fields. Ranges and auto-increments are allowed in the "POS" fields for all operations. Refer to the following figures for key positions on the various devices.

**10-KEY****NOTES:**

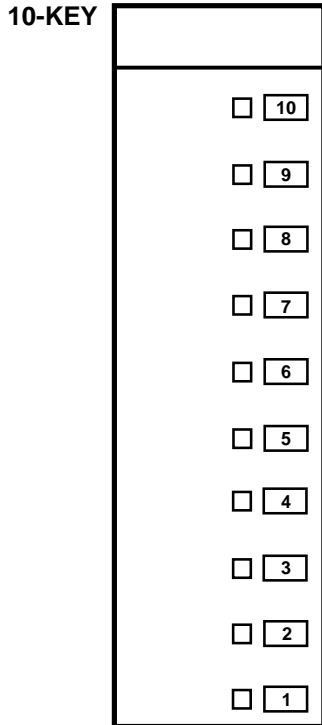
# 5 = DDN Data Directory Number, if data is used (Default)  
 # 6 = PRM DN Prime Directory Number (Default)  
 # 10 = RLS Release Key (Non-definable)

**20-KEY****NOTES:**

# 5 = DDN Data Directory Number, if data is used (Default)  
 # 16 = PRM DN Prime Directory Number (Default)  
 # 20 = RLS Release Key (Non-definable)

**Figure 3-3**  
**Key Positions - PERCEPTION 4000 Digital Telephones**

STATION FEATURE KEY ASSIGNMENT (CMD 331)



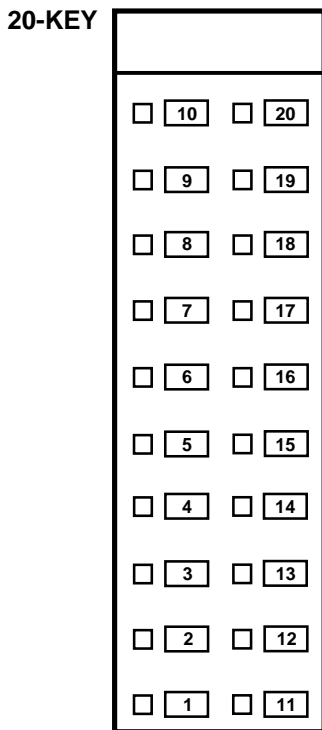
**NOTES:**

*For Electronic Telephones:*

- # 1 = PRM DN Prime Directory Number (Default)
- # 9 = RLS Release Key (Default)
- # 10 = MSG Message Waiting (Default)

*For DKT Digital Telephones:*

- # 1 = PRM DN Prime Directory Number (Default)
- # 10 = RLS Release Key (Default)



**NOTES:**

*For Electronic Telephones:*

- # 1 = PRM DN Prime Directory Number (Default)
- # 19 = RLS Release Key (Default)
- # 20 = MSG Message Waiting (Default)

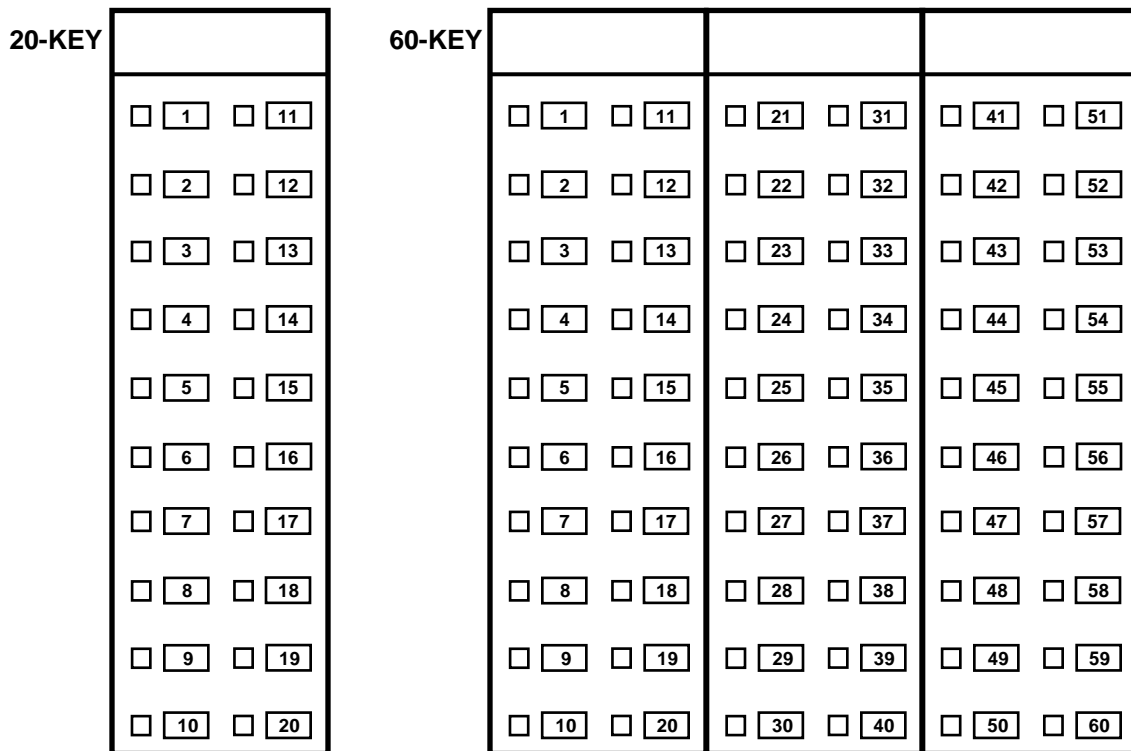
*For DKT Digital Telephones:*

- # 1 = PRM DN Prime Directory Number (Default)
- # 19 = RLS Release Key (Default)

**Figure 3-4**  
**Key Positions - Electronic and DKT Digital Telephones**



## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS**

**Figure 3-5**  
**Key Positions - AD1, AD2 Devices**

FIELD: **TYPE** (Key Assignment Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords:

- FEA - Feature Key
- LINE - Secondary Appearance Line Key
- PRM - Prime Line
- LLIN - Logical Line
- AGE - ACD Line - Agent
- SUP - ACD Line - Supervisor
- DDN - Integrated Data DN Key
- SDDN - Secondary Data DN Key
- MLIN - Multiple Line
- PVT - Private Trunk Line
- SPVT - Secondary Private Trunk Line
- HOT - Hotline
- ICM - Intercom Group
- SLU - Switch Loop Unit (Reserved for future use)
- UND - Undefined

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS**

The "TYPE" field defines the key type for the location selected in the "POS" field. Key types include feature keys, line keys, and intercom keys. Values in the "DEF 1", "DEF 2", and "DEF 3" fields are determined by the key type. If the key type is a private line or a hotline, additional information must be entered in the Private/Hotline Assignment command (CMD 332).

FIELD: **DEF 1** (Key Assignment Definition One)  
 TYPE: DN Type / Decimal / Keyword  
 FORMAT: 1 to 5 digits / Predefined ASCII characters  
 VALUE: 0 to 99999 (for LINE/HOT/PVT/SPVT/LLIN/PRM/DDN/MLIN)  
 1 to 256 (for ICM GROUP #)  
 Empty (for UND/AGE/SUP)

Keywords: For FEA (Feature Keys) Valid input for feature keys is in the form of a predefined **number** or **keyword**.

| Feature Name                        | Number | Keyword |
|-------------------------------------|--------|---------|
| ACD Alarm Key                       | 326    | ALRM    |
| ACD Assistance                      | 324    | ASST    |
| ACD Inter-Group Call Pickup         | 336    | INTP    |
| ACD Inter-Group Tap Key             | 337    | INTM    |
| ACD Intra-Group Call Pickup         | 323    | ACDP    |
| ACD Intra-Group Tap Key             | 325    | TAP     |
| ACD Log Key                         | 317    | LOG     |
| ACD Status Key                      | 320    | STAT    |
| ACD Work Mode Cancellation          | 321    | CANC    |
| ACD Work Unit                       | 322    | WRKU    |
| Account Code                        | 307    | ACCT    |
| Attendant Parked Page Retrieval     | 333    | PR_A    |
| Authorization Code                  | 299    | AUTH    |
| Autodial Key                        | 278    | ADL     |
| Automatic Answer Key                | 279    | AUTO    |
| Call Forward - All Calls Key        | 271    | CFAC    |
| Call Forward - Busy/No Answer Key   | 272    | CFBN    |
| Call Forward - No Answer Key        | 273    | CFNA    |
| Call Forward - Preregistered        | 275    | PRCF    |
| Call Park - Local Access/Retrieval  | 301    | CP_L    |
| Call Park - Remote Access/Retrieval | 302    | CP_R    |
| Call Pickup - Directed              | 284    | DPU     |
| Call Pickup - Directed Group        | 285    | DGPU    |
| Call Pickup - Group                 | 262    | GPU     |
| Camp-on Key                         | 281    | CAMP    |
| Code Calling Access                 | 258    | CC      |
| Code Calling Retrieval              | 267    | CCMM    |
| Data Privacy                        | 312    | DPVY    |
| Dictation Machine Access - Direct   | 264    | DC_I    |
| Dictation Machine Access - Group    | 263    | DC_G    |
| Do Not Disturb Key                  | 270    | DND     |
| Headset Control Key                 | 339    | HSC     |
| Headset Mode Key                    | 338    | HSM     |
| LCD Contrast Control Key            | 340    | LCDC    |

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS**

|                                 |     |      |
|---------------------------------|-----|------|
| Night Answer Access             | 269 | UNA  |
| Privacy Release                 | 268 | PRLS |
| Program Mode Key                | 274 | PRGM |
| Save and Repeat Key             | 277 | S&R  |
| Speed Calling - Group           | 291 | SC_G |
| Speed Calling - System          | 290 | SYSD |
| Swap                            | 287 | SWAP |
| UCD Available/Unavailable Key   | 309 | UCD  |
| Voice Calling Key               | 276 | VC   |
| Voice Paging Access - Emergency | 261 | VP_E |
| Voice Paging Access - System    | 260 | VP_S |
| Voice Paging Access - Zone      | 259 | VP_Z |
| Voice Paging Retrieval - System | 266 | PR_S |
| Voice Paging Retrieval - Zone   | 265 | VPMM |

The "DEF 1" field is defined based upon the key type selected in the "TYPE" field. If the key type is a line key (LINE), the "DEF 1" field may be required to enter a directory number, such as for a regular line, hotline, private line, logical line, or logical paired data key. If **ICM** is entered in the "TYPE" field, "DEF1" represents the intercom group number.

If the key type is a feature key (FEA), the "DEF 1" field is required to enter the abbreviated feature name or the feature number. Certain features can only be assigned once for the same station, such as Do Not Disturb, Call Forward, Conference, etc.

FIELD: **DEF 2** (Key Assignment Definition Two)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: RNG - Ring  
 NRG - No Ring

The "DEF 2" field is defined only when the "TYPE" is a line key and the "DEF 1" field is defined as a directory number. A ringing condition cannot be assigned to an ACD line ("AGE" and "SUP" fields). This setting does not affect Camp-on callbacks and recalls.

FIELD: **DEF 3** (Key Assignment Definition Three)  
 TYPE: Decimal with fixed lengths  
 VALUE: 0 to 9 (for ICM group of 10 members)  
 01 to 20 (for ICM group of 20 members)  
 1 to 7 (for Multiple Line (MLIN) Index)

"DEF 3" is used when the key type is an intercom line or a multiple line key. For intercom lines, the member number is assigned to the key using this field. For multiple lines, this field is optional. If a <TAB> is entered in a MODIFY operation, then the default value will be the next multiple line index number. If there are three multiple line members, and an index number greater than "4" is entered, the command will reject input and display an error message.

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS****SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C33100 - There must be only one prime DN key
- C33101 - Input was mistyped in DEF 1, DEF 2, or DEF 3 field
- C33102 - Unable to delete activated feature
- C33103 - Key position is out of range
- C33104 - Feature number is out of range
- C33105 - Directory number already exists for this station
- C33106 - Feature number already exists for this station
- C33107 - This key is reserved for the Release key
- C33108 - Number of intercom groups exceeds system configuration limit
- C33109 - Inconsistency between intercom group number and intercom number
- C33110 - Number of intercom members per group exceeds system configuration limit
- C33111 - Directory number in field ten has been used
- C33112 - Number of intercom total members exceeds system config. limit
- C33113 - A logically-paired data station is not allowed
- C33114 - SDDN key is already installed on this station
- C33115 - This is not an integrated data station
- C33116 - Original DDN key has to be deleted by Command 360
- C33117 - No DDN key exists for this station
- C33118 - This station does not exist
- C33119 - There should be only one ACD line key
- C33120 - Intercom index exists in this intercom group
- C33121 - Key position is out of range in this phone unit
- C33122 - Phone device is required when modifying the key attributes
- C33123 - Other appearances of this logical/multiple DN still exist
- C33124 - Reserved DDN key
- C33125 - Missing data
- C33126 - Inconsistent prime DN in DEF 1 field
- C33127 - Too many autodial keys
- C33128 - Too many preregistered call forward keys
- C33129 - Too many hotlines
- C33130 - Too many private lines
- C33131 - Directory number in DEF 2 field has been used for private line
- C33132 - 10-key telephone line count exceeds system configuration limit
- C33133 - 20-key telephone line count exceeds system configuration limit
- C33134 - Hotline count exceeds system configuration limit
- C33135 - Private line count exceeds system configuration limit
- C33136 - Autodial line count exceeds system configuration limit
- C33137 - Preregistered call forward count exceeds system config. limit
- C33138 - Key system unit line count exceeds system configuration limit
- C33139 - Key system unit line appearance exceeds system configuration limit
- C33140 - Exceeds MCPU system configuration limit
- C33141 - There are still secondary appearances of this private line
- C33142 - This key is reserved for the message key
- C33143 - Key system unit line appearance exceeds a maximum of 16 members
- C33144 - Key system unit member list is inconsistent with SSC
- C33145 - Device field is inconsistent with phone type

## STATION FEATURE KEY ASSIGNMENT (CMD 331)

**PERCEPTION 4000****COMMANDS**

- C33146 - Headset mode is not supported by electronic or digital key phones
- C33147 - Not enough HDT memory space for adding new line
- C33148 - Not enough KSU memory space for adding new line
- C33149 - Not enough ICM memory space for adding new line
- C33150 - No more LDNs are available
- C33151 - The DN in field 9 is a VMS DN
- C33152 - Total directory numbers have reached maximum system configuration
- C33153 - LCD contrast control is only supported by 2020 phones
- C33154 - Directory number in DEF1 is a group member
- C33155 - Last number redial is only supported by electronic telephones
- C33156 - Multiple line index in DEF3 is out of range
- C33157 - Number of multiple lines assigned to prime DN has reached maximum
- C33158 - Total line appearances on station have reached a maximum of 80
- C33159 - Directory number in DEF 1 is out of range

**COMMENTS**

Directory number removal is inhibited if any of the following features are actively registered at the selected key:

- Calls on Hold
- Call in Progress

If a private line (PVT) is assigned to a primary directory number (PRM DN), the private line must be given a new directory number. However, if a hotline is assigned, it may or may not be given a new directory number.

Command 330, the Station Assignment Command, automatically assigns default settings to the "PREF," "PRM VA," "ICM VA," "AUT VA," and "ROB" fields when first setting up new stations.

**RELATED COMMANDS**

- Intercom Group Member Display (CMD 333)
- Private/Hotline Assignment (CMD 332)
- Station-Level Parameter Assignment (CMD 329)

## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS****STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)**

The Station Feature Key Pattern Assignment command allows the system administrator to set up a template of preprogrammed key patterns for PERCEPTION 4000 multi-line telephones. For example, the default pattern (Pattern #1) determines the positions of all prime directory number, data directory number, and release keys. For electronic telephones (EKTs), the Message Waiting key is also preprogrammed with Pattern #1. Patterns 2 through 4 can be modified and programmed with additional features, such as Call Forwarding keys, ACD keys, and Autodial keys.

Command Keyword:        STA\_KEY\_PATTERN

Category Name:         Station

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:    ADD  
                               DELETE  
                               MODIFY  
                               DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|     |  |     |  |         |  |         |  |         |  |        |  |
|-----|--|-----|--|---------|--|---------|--|---------|--|--------|--|
| DEV |  | PAT |  | PRM POS |  | DDN POS |  | FEA POS |  | FEA ID |  |
|-----|--|-----|--|---------|--|---------|--|---------|--|--------|--|

◀.....req.....▶|◀.....opt.....▶| req |

The ADD operation programs Patterns 2 through 4 (PAT) for each type of telephone (DEV). The "PRM POS" field is required for the first-time addition of a given pattern number. Also, the "DDN POS" is required for the first-time addition of a given pattern number if the "DEV" is an **ID10** or **ID20**. For other devices, a <TAB> must be entered in the "DDN POS" field. The "FEA POS" is a loop field and is required when a feature key is to be assigned to the specified device.

## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS**

## DELETE

```
DEV | PAT | PRM POS | DDN POS | FEA POS |
```

```
◀.....req.....▶|◀.....opt.....▶
```

This operation deletes a pattern (Pattern #2, 3, or 4) or a key position from a pattern for the specified device. The "PRM POS" may be deleted only after the "DDN POS" and all "FEA POS" key positions are deleted. The "FEA POS" is a loop field.

## MODIFY

```
DEV | PAT | PRM POS | DDN POS | FEA POS | FEA ID |
```

```
◀.....req.....▶|◀.....opt.....▶ req |
```

Key positions for Patterns 2 through 4 are modified with this operation. If a pattern is modified after telephones have been programmed using that pattern, the modification does not affect those telephones, it affects only those telephones added after the modification.

## DISPLAY

```
DEV | PAT | PRM POS | DDN POS | FEA POS | FEA ID |
```

```
| req |◀.....opt.....▶
```

Key patterns are displayed on the maintenance console for the specified device (DEV). "PAT" and "FEA POS" are loop fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:        **DEV** (Telephone Device Type)  
 TYPE:         Keyword  
 FORMAT:      Predefined ASCII characters

Keywords:    2010 - PERCEPTION 4000 10-key digital telephone  
               2020 - PERCEPTION 4000 20-key digital telephone  
               EKT1 - Electronic telephone with 10 flexible keys  
               EKT2 - Electronic telephone with 20 flexible keys, with or without display  
               DKT1 - DKT digital telephone with 10 keys, with or without display

## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS**

DKT2 - DKT with 20 keys, with or without display  
 ID10 - PERCEPTION 4000 10-key digital telephone with DIU-I  
 ID20 - PERCEPTION 4000 20-key digital telephone with DIU-I

The "DEV" field identifies the type of telephone to be programmed with a template, and is required in all operations.

FIELD: **PAT** (Pattern Number of Template for Position of Feature Keys)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4 (in a DISPLAY operation)  
 2 to 4 (in an ADD, DELETE, or MODIFY operation)  
 RANGE: Not allowed  
 LOOP: Allowed in a DISPLAY operation only

This field selects the pattern to be programmed. Note that Pattern #1 may not be modified in any way. The DISPLAY operation is the only operation allowed for this pattern.

*For illustrations of key positions, refer to the Station Feature Key Assignment command (CMD 331).*

FIELD: **PRM POS** (Prime Directory Number Key Position)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (for PERCEPTION 4000 10-key digital telephones, 10-key DKTs, and 10-key electronic telephones)  
 1 to 20 (for PERCEPTION 4000 20-key digital telephones, 20-key DKTs, and 20-key electronic telephones)  
 RANGE: Not allowed  
 LOOP: Not allowed

This field defines the location of the prime directory number key on the selected device, and is required for the first-time addition for a given pattern number. Pattern #1 default values are as follows:

| "DEV" Field | "PRM POS" Field |
|-------------|-----------------|
| 2010        | 6               |
| 2020        | 16              |
| ID10        | 6               |
| ID20        | 16              |
| EKT1        | 1               |
| EKT2        | 1               |
| DKT1        | 1               |
| DKT2        | 1               |

FIELD: **DDN POS** (Data Directory Number Key Position)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (for 10-key PERCEPTION 4000 digital telephones with DIU-Is).



## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS**

RANGE: 1 to 20 (for 20-key PERCEPTION 4000 digital telephones with DIU-Is).  
 Not allowed  
 LOOP: Not allowed

This field defines the location of the data directory number key on the selected device, and is required for the first-time addition for a given pattern number. Pattern #1 default values are as follows:

| "DEV" Field | "DDN POS" Field |
|-------------|-----------------|
| ID10        | 5               |
| ID20        | 5               |

FIELD: **FEA POS** (Feature Key Position)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (for PERCEPTION 4000 10-key digital telephones, 10-key DKTs, and 10-key electronic telephones)  
 1 to 20 (for PERCEPTION 4000 20-key digital telephones, 20-key DKTs, and 20-key electronic telephones)  
 RANGE: Not allowed  
 LOOP: Allowed in ADD, DELETE, and DISPLAY operations

This field is required if a feature key ("FEA ID" field) is to be assigned to the selected device. Certain feature key positions are set up with specific feature IDs that cannot be modified or deleted for all patterns. These include the following key positions:

| DEVICE | FEATURE POSITION | FEATURE ID |
|--------|------------------|------------|
| 2010   | 10               | RLS        |
| 2020   | 20               | RLS        |
| ID10   | 10               | RLS        |
| ID20   | 20               | RLS        |
| EKT1   | 9                | RLS        |
|        | 10               | MSW        |
| EKT2   | 19               | RLS        |
|        | 20               | MSW        |
| DKT1   | 10               | RLS        |
| DKT2   | 20               | RLS        |

FIELD: **FEA ID** (Feature ID Number or Abbreviation)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 to 4 digits / Predefined ASCII characters  
 VALUE: 0 to 9999 (Feature ID Number)  
 RANGE: Not allowed  
 LOOP: Not allowed

## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS**

| Keywords: | Feature Name                        | Number | Abbreviation |
|-----------|-------------------------------------|--------|--------------|
|           | ACD Alarm Key                       | 326    | ALRM         |
|           | ACD Assistance                      | 324    | ASST         |
|           | ACD Inter-Group Call Pickup         | 336    | INTP         |
|           | ACD Inter-Group Tap Key             | 337    | INTM         |
|           | ACD Intra-Group Call Pickup         | 323    | ACDP         |
|           | ACD Intra-Group Tap Key             | 325    | TAP          |
|           | ACD Log Key                         | 317    | LOG          |
|           | ACD Status Key                      | 320    | STAT         |
|           | ACD Work Mode Cancellation          | 321    | CANC         |
|           | ACD Work Unit                       | 322    | WRKU         |
|           | Account Code                        | 307    | ACCT         |
|           | Attendant Parked Page Retrieval     | 333    | PR_A         |
|           | Authorization Code                  | 299    | AUTH         |
|           | Autodial Key                        | 278    | ADL          |
|           | Automatic Answer Key                | 279    | AUTO         |
|           | Call Forward - All Calls Key        | 271    | CFAC         |
|           | Call Forward - Busy/No Answer Key   | 272    | CFBN         |
|           | Call Forward - No Answer Key        | 273    | CFNA         |
|           | Call Forward - Preregistered        | 275    | PRCF         |
|           | Call Park - Local Access/Retrieval  | 301    | CP_L         |
|           | Call Park - Remote Access/Retrieval | 302    | CP_R         |
|           | Call Pickup - Directed              | 284    | DPU          |
|           | Call Pickup - Directed Group        | 285    | DGPU         |
|           | Call Pickup - Group                 | 262    | GPU          |
|           | Camp-on Key                         | 281    | CAMP         |
|           | Code Calling Access                 | 258    | CC           |
|           | Code Calling Retrieval              | 267    | CCMM         |
|           | Data Privacy                        | 312    | DPVY         |
|           | Dictation Machine Access - Direct   | 264    | DC_I         |
|           | Dictation Machine Access - Group    | 263    | DC_G         |
|           | Do Not Disturb Key                  | 270    | DND          |
|           | Headset Control Key                 | 339    | HSC          |
|           | Headset Mode Key                    | 338    | HSM          |
|           | LCD Contrast Control Key            | 340    | LCDC         |
|           | LCD Remote Logout Agent             | 341    | RLOG         |
|           | Night Answer Access                 | 269    | UNA          |
|           | Privacy Release                     | 268    | PRLS         |
|           | Program Mode Key                    | 274    | PRGM         |
|           | Save and Repeat Key                 | 277    | S&R          |
|           | Speed Calling - Group               | 291    | SC_G         |
|           | Speed Calling - System              | 290    | SYSD         |
|           | Swap                                | 287    | SWAP         |
|           | UCD Available/Unavailable Key       | 309    | UCD          |
|           | Voice Calling Key                   | 276    | VC           |
|           | Voice Paging Access - Emergency     | 261    | VP_E         |
|           | Voice Paging Access - System        | 260    | VP_S         |
|           | Voice Paging Access - Zone          | 259    | VP_Z         |
|           | Voice Paging Retrieval - System     | 266    | PR_S         |
|           | Voice Paging Retrieval - Zone       | 265    | VPMM         |

## STATION FEATURE KEY PATTERN ASSIGNMENT (CMD 320)

**PERCEPTION 4000****COMMANDS**

This field is required when programming a feature key. Data entry for this field is in the form of a feature "Number" or "Abbreviation." Note that certain features can only be assigned once for the same station, such as Do Not Disturb, Call Forward, Conference, etc.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32000 - Pattern 1 cannot be added, modified, or deleted
- C32001 - DDN key assignment is only allowed for ID10 or ID20 devices
- C32002 - FEA ID is a required field for FEA POS
- C32003 - FEA POS is a required field for FEA ID
- C32004 - Key position is out of range in field(s) X
- C32005 - Duplicate key position in field(s) X
- C32006 - PRM POS is required in Field 3
- C32007 - DDN POS is required in Field 4
- C32008 - There must be only one PRM POS assigned
- C32009 - There must be only one DDN POS assigned
- C32010 - Delete all FEA POS's before deleting the PRM POS
- C32011 - Delete all FEA POS's before deleting the DDN POS
- C32012 - Delete the DDN POS before deleting the PRM POS
- C32013 - Feature key position Z is a reserved key
- C32014 - Invalid key position in field X
- C32015 - Feature number is out of range
- C32016 - Feature key position has already been assigned
- C32017 - Feature ID already exists for this pattern
- C32018 - LCD contrast control is only supported by 2020 and ID20 telephones
- C32019 - Key position Z does not exist
- C32020 - Key position Z has already been used
- C32021 - Headset mode is not supported by electronic or digital key telephones
- C32022 - The deletion of PRM POS or DDN POS in setup mode is not allowed
- C32023 - Last number redial is only supported by electronic/DKT telephones
- C32024 - Missing data in field 3, 4, or 5

*NOTE: "X" = 3, 4, or 5  
"Z" = 1 through 20*

**RELATED COMMANDS**

- Station Assignment (CMD 330)
- Station Feature Key Assignment (CMD 331)

STATION HUNTING ASSIGNMENT (CMD 342)

**STATION HUNTING ASSIGNMENT (CMD 342)**

The Station Hunting Assignment command defines and modifies voice hunt groups in the system. This type of hunt group performs a serial or circular search of the members from the entry point to the end of the list. Up to 200 groups with a maximum of 16 members in each group may be defined. Note that the system allows for a maximum of 800 members. Data hunt groups are assigned via the Data Hunting Assignment command (CMD 366).

Command Keyword:        STA\_HUNTING

Category Name:            Station

**PREREQUISITE COMMAND**

Station Assignment (CMD 330)

**OPERATIONS**

Available operations:    ADD  
                               DELETE  
                               MODIFY  
                               DISPLAY

The function and required data fields for each operation are described in this section.

ADD

|  |
|--|
| GRP#   METHOD   PILOT DN   NAME   OVF DEST   MEM #   MEM DN   ENT PT |
|--|

| req | ◀.....opt.....▶▶.....req.....▶ | opt |

This operation inserts a membership directory number or pilot directory number into a station hunting group. The Hunt Group Number, Member Number, and Member Directory Number are required. The Member Directory Number is limited to being a member of only one hunt group. If the "METHOD" is specified as **SER**, the Entry Point is required. If the "METHOD" is **CIR**, the Entry Point defaults to **YES**. Looping is allowed in the "MEM #" field. Note that the addition of a specified member number moves all of the following members one step backward accordingly.

## STATION HUNTING ASSIGNMENT (CMD 342)

**PERCEPTION 4000****COMMANDS**

## DELETE

GRP# | MEM # | MEM DN |

| req ◀.....opt.....▶|

This operation removes a membership directory number. The Hunt Group Number is required. To delete all members from a Hunt Group Number, enter the keyword **ALL** in the "MEM #" field. Looping is allowed in the "MEM #" field.

## MODIFY

GRP# | METHOD | PILOT DN | NAME | OVF DEST | MEM # | MEM DN | ENT PT |

| req ◀.....opt.....▶|

This operation changes the hunt method, hunt group pilot directory number, group name, overflow destination, member directory number, or entry point attributes for a hunt group. If the method is changed from serial to circular, all of the entry points are changed to **YES** automatically, and the pilot directory number is automatically deleted. If the method is changed from circular to serial, the pilot directory number is allowed. If the member directory number or the entry point is modified, the member number must be entered. To modify group attributes, the last three fields should not be specified.

## DISPLAY

GRP# | METHOD | PILOT DN | NAME | OVF DEST | MEM # | MEM DN | ENT PT |

◀.....opt.....▶|

This operation displays all station hunt groups and their members that meet the conditions established in each field. Loops are permitted in the "GRP#" and "MEM #" fields. Ranges are permitted in the "MEM DN" field only.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **GRP#** (Hunt Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 200  
 LOOP:            Allowed in a DISPLAY operation only

FIELD:           **METHOD** (Hunt Method)  
 The system may define up to 200 station hunt groups for both the circular and serial hunt group types for voice hunting. The combined total of both hunt group types may not exceed 200 groups.

## STATION HUNTING ASSIGNMENT (CMD 342)

**PERCEPTION 4000****COMMANDS**

TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: SER - Serial Hunt Method  
 CIR - Circular Hunt Method

This field establishes whether the hunt group is circular or serial. For a circular hunt group, dialing any member directory number which is busy or in Do not Disturb (but not forwarded) results in a search for an available member in the order established with this command. The search 'wraps around' and continues searching until the called member is reached. In a circular hunt, all members are entry points.

For a serial hunt, entry into the group is generally by the pilot number. The hunt begins at the top of the list and ceases at the bottom. Various members may also be flagged as entry points. Dialing any member directory number marked as an entry point which is busy or in Do not Disturb (but not forwarded) results in a search for an available member in the order established in this command, starting at the busy member and proceeding to the end of the list. 'Wrapping' does not occur in a serial hunt.

FIELD: **PILOT DN** (Pilot Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999

This field, valid for serial hunt groups only, marks an entry point into a serial hunt group table using a virtual directory number. The number cannot be assigned to a physical equipment location, and must meet the numbering plan restrictions. The directory number cannot appear in more than one hunt group. The "PILOT DN" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **NAME** (Group Name)  
 TYPE: Text  
 FORMAT: 0 to 9 ASCII characters

The group name is provided for the benefit of users with display equipped telephones and the attendant. When the pilot number is dialed or a legal entry point is used into a serial hunt group, this information displays. For example, the group name "I SALES" would indicate this hunt group is made up of inside sales personnel. The "NAME" field can be deleted by pressing **<CONTROL-D>** in a MODIFY operation.

FIELD: **OVF DEST** (Overflow Destination)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 - Individual attendant console directory number  
 - Station number  
 - Hunt group pilot number  
 - UCD group pilot number  
 - ACD group pilot number  
 - Attendant group directory number  
 VALUE: 0 to 99999 (Termination DN)

## STATION HUNTING ASSIGNMENT (CMD 342)

**PERCEPTION 4000****COMMANDS**

FORMAT: 4 to 6 digits  
 VALUE: 1 to 3 digits, plus 3 digit speed call access and code

The overflow directory number establishes a secondary hunt or call termination point. Only one level of hunt overflow is allowed. If the destination is another hunt group which also has an overflow defined, the second group's overflow is not used. Off-premises routing is available via system speed call number entry. The "OVF DEST" field can be deleted by pressing <**CONTROL-D**> in a MODIFY operation.

FIELD: **MEM #** (Membership Index Number)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 or 2 digits / Predefined ASCII characters  
 VALUE: 1 to 16 / ALL  
 LOOP: Allowed in DISPLAY, ADD, and DELETE operations

The index number shows the order of search from the lowest to the highest number when the hunt group pilot directory number is dialed. The keyword **ALL** may be entered in this field in a DELETE operation to remove all members from a specified hunt group.

FIELD: **MEM DN** (Member Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

Member directory numbers are assigned in the sequence desired. Only voice stations are legal members of a voice hunt group. Each directory number can be set up to be an entry point, and can be a member of only one hunt group.

FIELD: **ENT PT** (Entry Point to Serial Hunt Group List)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Allow MEM DN to be entry point to serial hunt group  
 NO - Do not allow MEM DN to be entry point to serial hunt group

This field determines whether or not a member directory number can be used as an entry point into the serial hunt group list. The search starts at that directory number's position and continues down the list until the first idle directory number is found, or until the remaining members have been exhausted. For circular hunt groups, only **YES** may be entered.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C34200 - Input member directory number or entry point
- C34201 - Group is already full
- C34202 - Hunt Method field is required
- C34203 - Circular group; pilot directory number is not needed
- C34204 - Circular group; entry point must be YES
- C34205 - Member directory number is not defined in the system

## STATION HUNTING ASSIGNMENT (CMD 342)

**PERCEPTION 4000****COMMANDS**

- C34206 - Entry point should be input
- C34207 - Not allowed; the second member's entry point is NO
- C34208 - Hunt Method mismatch
- C34209 - Pilot directory number mismatch
- C34210 - Group name mismatch
- C34211 - Overflow termination mismatch
- C34212 - Group is empty
- C34213 - Member number is not in group
- C34214 - Member directory number is not in group
- C34215 - Inconsistent member number/directory pair
- C34216 - Pilot directory number is already in use
- C34217 - Overflow termination is not defined
- C34218 - Member number is required
- C34219 - Entry point of the first member must be YES
- C34220 - Member number is not continuous in group
- C34221 - Member directory number is in another hunt group
- C34222 - Cannot use this directory number
- C34223 - The input overflow termination is already used for a group
- C34224 - Pilot directory number is used as overflow in another group
- C34225 - Input pilot or member directory number is the same as overflow
- C34226 - Group name is too long
- C34227 - This hunt group is for VMS; directory number must be a VMS DN
- C34228 - This directory number is for VMS; cannot be used for this group
- C34229 - No more space left to add
- C34230 - A private line directory number cannot be used to hunt
- C34231 - Serial group; pilot directory number is required
- I34232 - Warning: Undefined data in field 5
- C34233 - Origination only station cannot be used to hunt

**COMMENTS**

When adding a new group, if the method is specified as **SER**, the virtual pilot directory number field must be entered. Otherwise, if the method is specified as **CIR**, the virtual pilot directory number field must be left empty.

When adding a member to an 'SER' hunt group, the entry point must be input. When the addition is to a 'CIR' hunt group, the entry point may be left empty or set to **YES**.

**RELATED COMMANDS**

- ACD Group Assignment (CMD 355)
- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)
- Authorization Code Assignment (CMD 349)
- Internal Call Alternate Routing Assignment (CMD 374)
- Numbering Plan Assignment (CMD 300)
- Station Feature Key Assignment (CMD 331)
- System Speed Calling Assignment (CMD 402)
- UCD Group Assignment (CMD 354)



## STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)

**PERCEPTION 4000****COMMANDS****STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)**

The Station-Level Parameter Assignment command modifies and displays station parameters including the prime directory number, voice mail retrieval destination, forced account code types, originate-/terminate-only station designation, privacy, attendant supervision, timeout routing destination index, data security, and the voice mail port number for analog telephones.

Command Keyword: STA\_PARAMETERS

Category Name: Station

**PREREQUISITE COMMAND**

Station Assignment (CMD 330)

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

|         |     |        |        |         |                 |      |  |         |  |     |  |     |  |      |  |      |  |      |  |     |  |
|---------|-----|--------|--------|---------|-----------------|------|--|---------|--|-----|--|-----|--|------|--|------|--|------|--|-----|--|
| EQUIP # |     | PRM DN |        | VM DEST |                 | TYPE |  | ORG/TER |  | PVT |  | ASD |  | TOR# |  | DID# |  | DISP |  | SEC |  |
|         | req |        | locked |         | ◀.....opt.....▶ |      |  |         |  |     |  |     |  |      |  |      |  |      |  |     |  |

This operation modifies several station parameters. The "EQUIP #" field is required; and looping is allowed in this field. The prime directory number (PRM DN) field cannot be modified.

**DISPLAY**

|                 |  |        |  |         |  |      |  |         |  |     |  |     |  |      |  |      |  |      |  |     |  |      |  |
|-----------------|--|--------|--|---------|--|------|--|---------|--|-----|--|-----|--|------|--|------|--|------|--|-----|--|------|--|
| EQUIP #         |  | PRM DN |  | VM DEST |  | TYPE |  | ORG/TER |  | PVT |  | ASD |  | TOR# |  | DID# |  | DISP |  | SEC |  | VMS# |  |
| ◀.....opt.....▶ |  |        |  |         |  |      |  |         |  |     |  |     |  |      |  |      |  |      |  |     |  |      |  |

This operation displays the station equipment ports which meet the conditions established for each field. Looping is allowed in the "EQUIP #" field.

## STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **EQUIP #** (Equipment Number)  
 TYPE:           EQ Type  
 FORMAT:         5 or 6 digits  
 VALUE:          (0)10101 to 101408  
 LOOP:           Allowed in both the MODIFY and DISPLAY operations

The equipment number is assigned with the Station Assignment command (CMD 330). This field selects the appropriate station to be modified or displayed.

FIELD:           **PRM DN** (Prime Directory Number)  
 TYPE:           Dialing Digits  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 99999  
 LOOP:           Not allowed  
 RANGE:          Allowed in a DISPLAY operation only

This field specifies the prime directory number assigned to the "EQUIP #" defined in the previous field. The "PRM DN" field is locked in a MODIFY operation.

FIELD:           **VM DEST** (Voice Mail Retrieval Destination)  
 TYPE:           Dialing Digits  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 99999  
 LOOP:           Not allowed

The voice mail retrieval destination number defines a voice mail port or hunt group pilot used for accessing the voice mail system.

FIELD:           **TYPE** (Forced Account Code Type)  
 TYPE:           Keyword  
 FORMAT:         Predefined ASCII characters  
 DEFAULT:        NON

Keywords:    ALL - All calls  
               TOLL - Toll calls only  
               NON - None

This field defines whether calls made by the user require forced account code entry or not and, if so, the type of forced account. A forced account code can be required for all outgoing calls or for toll calls only. Note that the definition of non-toll dialing for the Forced Account Code feature is defined with the Forced Account Code Toll-free Tables command (CMD 352). This feature affects all lines on the specified station, not only the prime line.

## STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)

**PERCEPTION 4000****COMMANDS**

FIELD:       **ORG/TER** (Originate- or Terminate-only Station)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **ORG** - Origination allowed and termination denied  
               **TER** - Origination denied and termination allowed  
               **BOTH** - Both origination and termination allowed (Default)

A station may be configured as allowed to receive calls only or make calls only with this field. Calls with originate-only status may still receive camp-on callbacks and recalls. Terminate-only stations may not perform a consultation hold. The "ORG/TER" field affects all voice line appearances for the defined station.

FIELD:       **PVT** (Privacy)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **YES** - Privacy enabled  
               **NO** - Privacy disabled (Default)

When set to **YES**, the Privacy feature prevents the attendant from breaking into an existing conversation.

FIELD:       **ASD** (Attendant Supervision Disable)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:    **YES** - Disable attendant supervision  
               **NO** - Enable attendant supervision (Default)

When set to **YES**, the supervisor is prevented from performing supervision (locked loop operation) of any call the station is handling.

FIELD:       **TOR#** (Timeout Routing Index)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 32  
 LOOP:       Not allowed  
 RANGE:      Allowed in MODIFY operation

The "TOR#" field selects a destination number from the Timeout Routing Assignment Table (refer to the Timeout Routing Destination Assignment command, CMD 323). When the station user goes off-hook and fails to dial, or fails to dial enough digits for a valid number, the station is routed to the predefined timeout destination number.

FIELD:       **DID#** (DID Index Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 16  
 LOOP:       Not allowed  
 RANGE:      Allowed in DISPLAY operation only

## STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)

**PERCEPTION 4000****COMMANDS**

The "DID#" field is used to specify the DID index number that applies to the telephone. This index number refers to the prefix number assigned in the System Option Flag Assignment command (CMD 408). Each prefix (index) number represents the digits that will prefix the telephone's DID number to represent an entire telephone number. This telephone number will appear at called display stations. For example, if prefix (index) number 1 is "583" and a station's DID number is "3700," then an entry of "1" in the "DID#" field, will produce a displayed number of "5833700."

FIELD: **DISP** (Outgoing Call Display Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: NAME - Trunk name  
 DLDN - Dialed number (Default)

This field is used to assign the type of call identification information that will appear at the station when placing either ISDN or non-ISDN outgoing calls. When dialing a number from a station, the dialed digits initially appear on the station's own display. After the outgoing call is recognized by the PERCEPTION 4000 system and a trunk is selected, these digits can either remain displayed or be replaced by the name of the utilized trunk/trunk group. By entering the keyword **DLDN**, the displayed digits will be maintained. By entering **NAME**, the digits will be replaced by the name of the utilized trunk/trunk group.

FIELD: **SEC** (Data Security)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Data security enabled  
 NO - Data security disabled (Default)

The security field specifies whether or not the station has data security on the prime line. If set to **YES**, break-ins or other types of monitoring are not allowed on this line. This secures the line from any interruption that could corrupt data transmission, including Call Waiting tones. This flag is normally set for analog stations which frequently connect to a modem for analog data transmission.

FIELD: **VMS#** (Voice Messaging System Port Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32  
 LOOP: Not allowed  
 RANGE: Allowed in a DISPLAY operation

The "VMS#" field identifies a voice messaging system port number for an analog telephone. The port number table is established by the Station Assignment command (CMD 330), "TYPE" field, **AVMS** option.

## STATION-LEVEL PARAMETER ASSIGNMENT (CMD 329)

**PERCEPTION 4000****COMMANDS****SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32900 - Specified equipment number is not available in the system
- C32901 - Check terminate or originate-only station
- C32902 - Check privacy
- C32903 - Check attendant supervision disable
- C32904 - Check timeout routing index
- C32905 - ORG/TER field cannot be modified; ACD agent is remotely logged in
- C32906 - Failed to read prime line attributes
- C32907 - Hunting member station cannot be assigned as originating only
- C32908 - Equipment number is assigned to another device

**RELATED COMMAND**

- Forced Account Code Toll-free Tables (CMD 352)
- Timeout Routing Destination Assignment (CMD 323)

**SYSTEM DISA SECURITY CODE ASSIGNMENT (CMD 321)**

Security codes for the Direct Inward System Access (DISA) feature are defined with this command if DISA requires security code entry (as established in the System Option Flag Assignment command, CMD 408). In addition, SMDR ID codes are assigned to defined DISA security codes.

Command Keyword: DISA\_CODES

Category Name: System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETED  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

SEC CODE | SMDR ID |

|..... req .....|

This operation defines the DISA security code and SMDR ID code. The default length of the security code is six digits.

**DELETE**

SEC CODE |

| req |

This operation deletes security codes. If the keyword **ALL** is entered, all of the codes in the DISA security code table are deleted.

## SYSTEM DISA SECURITY CODE ASSIGNMENT (CMD 321)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|            |  |          |  |         |  |
|------------|--|----------|--|---------|--|
| SEC LENGTH |  | SEC CODE |  | SMDR ID |  |
|------------|--|----------|--|---------|--|

|  |     |  |     |        |     |  |
|--|-----|--|-----|--------|-----|--|
|  | opt |  | opt | .....▶ | opt |  |
|--|-----|--|-----|--------|-----|--|

This operation modifies the length of the DISA security codes, and/or changes the SMDR ID for the specified security code. If data is entered in the "SEC CODE" field, data must be entered in the "SMDR ID" field. A MODIFY operation may not be performed if a specified security code is not in the database (i.e., a security code and SMDR ID must be added before they can be modified).

All security codes must be of the same length. **To change the "SEC LENGTH" field, delete all of the security codes**, use a MODIFY operation to change the length to a new value, and add new security codes and SMDR IDs into the system.

## DISPLAY

|            |  |       |  |          |  |         |  |
|------------|--|-------|--|----------|--|---------|--|
| SEC LENGTH |  | INDEX |  | SEC CODE |  | SMDR ID |  |
|------------|--|-------|--|----------|--|---------|--|

|  |             |   |          |        |  |
|--|-------------|---|----------|--------|--|
|  | output only | ◀ | .....opt | .....▶ |  |
|--|-------------|---|----------|--------|--|

This operation displays the DISA security code table. Looping is allowed in the "INDEX" field. If a <TAB> is entered in the "SEC LENGTH" and "INDEX" fields and no data is entered in the other fields, the complete DISA security code table displays. The "SEC LENGTH" field is an output only field in a DISPLAY operation.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **SEC LENGTH** (Security Code Length)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:           3 to 6  
 DEFAULT:         6

This field sets the number of digits required for security codes. When modifying the length of the security codes, all security codes must first be deleted. In a DISPLAY operation, this is an output only field.

FIELD:           **INDEX** (Security Code Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 or 2 digits  
 VALUE:           1 to 64  
 LOOP:            Allowed in a DISPLAY operation

## SYSTEM DISA SECURITY CODE ASSIGNMENT (CMD 321)

**PERCEPTION 4000****COMMANDS**

This field is used internally as a counter for the DISA security code table. Its value does not indicate an actual position or set any priority for data entered in this command.

FIELD:           **SEC CODE** (Security Code)  
 TYPE:            Dialing Digits / Keyword  
 FORMAT:         3, 4, 5, or 6 digits (depending on the SEC LENGTH field) / ASCII characters  
 VALUE:          0 to 9 / ALL  
 RANGE:          Allowed in a DISPLAY operation to match a partial string

Up to 64 DISA security codes may be defined. All codes must be the same length, as specified in the "SEC LENGTH" field. The keyword **ALL** is used in a DELETE operation when deleting all of the security codes in the table.

FIELD:           **SMDR ID** (SMDR ID Code)  
 TYPE:            Decimal with fixed length  
 FORMAT:         3 to 5 digits  
 VALUE:          001 to 99999

Each security code may be assigned a unique SMDR identification code. This code is 3 to 5 digits in length; it does not have to be the same length as the security code. The SMDR ID code is printed out on the SMDR call record when DISA access has been successful, and can be used to identify the calling party for accounting purposes.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32100 - Security code must be of length N
- C32101 - Table entries exceed 64
- C32102 - # or \* are not accepted as security code digits
- C32103 - Security code has been used
- C32104 - SMDR ID code has been used
- C32105 - Security code is not found
- C32106 - Check input in field(s) Ni..Nj
- C32107 - To modify security code length, enter <TAB> in fields 2 and 3
- C32108 - To modify security code length, delete all security codes first

**RELATED COMMANDS**

System Option Flag Assignment (CMD 408)  
 Trunk Group Assignment (CMD 310)



## SYSTEM HOLIDAY ASSIGNMENT (CMD 404)

This command adds/deletes/displays holidays in the System Holiday table and also changes the holiday in the table. Up to 16 holidays may be defined. If the System Administrator wants to specify specific time zones for some holidays, then it is necessary to set the appropriate time zone in the Time Zone Assignment command (CMD 336).

Command Keyword: HOLIDAY\_ASSIGN

Category Name: System

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|              |
|--------------|
| INDEX   DATE |
|--------------|

◀.....req.....▶

This operation adds holidays to the System Holiday table. Addition of a specific entry re-sequences all entries following it. Looping is allowed in the "INDEX" field.

#### DELETE

|              |
|--------------|
| INDEX   DATE |
|--------------|

| req ...▶ opt |  
opt ◀... req

This operation deletes holidays from the System Holiday table. Deletion of an entry re-sequences all entries following it. When **ALL** is entered in the "INDEX" field, all of the entries in the System Holiday table are deleted.

## SYSTEM HOLIDAY ASSIGNMENT (CMD 404)

**PERCEPTION 4000****COMMANDS**

## MODIFY

INDEX | DATE |

|&lt;.....req.....&gt;|

This operation changes a holiday in the System Holiday table.

## DISPLAY

INDEX | DATE |

|&lt;.....opt.....&gt;|

This operation displays the System Holiday table. If no data is entered, the complete table displays.

**PARAMETERS**

This section defines inputs permitted for each field. Any variations for a particular operation are noted separately.

FIELD:       **INDEX** (Index Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:       1 to 16  
 LOOP:        Allowed in ADD and DISPLAY operations

Keyword:    ALL

The index number provides a counter for the convenience of the administrator. Its value does not indicate an actual position or set any priority for data entered in this field. The holiday list is sorted according to date regardless of the order entered.

The keyword **ALL** is only used in a DELETE operation when deleting all of the entries in the system holiday table.

FIELD:       **DATE** (Holiday)  
 TYPE:        Decimal with fixed length  
 FORMAT:     4 digits  
 VALUE:       0101-1231  
 RANGE:       Allowed in a DISPLAY operation

Each date is defined using four digits in the format: MMDD

MM (Month) = 01 to 12  
 DD (Day)   = 01 to 31

The correct date and time must be set on the system's real time clock for these dates to be invoked correctly.

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C40400 - Duplicate holiday dates
- C40401 - Table entries exceed 16
- C40402 - Index number is already defined in the table
- C40403 - Invalid input data
- C40404 - Index number is not defined in the table
- C40405 - Input holiday date is not found in the table
- C40406 - Holiday date value is out of range

### RELATED COMMAND

Time Zone Assignment (CMD 336)

## SYSTEM INVENTORY (CMD 210)

The System Inventory command enables an M&A user to display a summary report of a PERCEPTION 4000 system's hardware and software configuration. This report is very helpful in troubleshooting situations, since it provides in-service/out-of-service indications of various system components. The numerical output from this command can provide precise indications of any system fault activity.

Command Keyword:       SYS\_INVENTORY

Category Name:         Utility

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   DISPLAY  
                          MODIFY

The function and required data fields for each operation are described in this section.

#### DISPLAY

TYPE |

| req |

This operation is used to display the system inventory report.

#### MODIFY

TYPE | SUPPLEMENTARY INFORMATION |

|..... req .....|

This operation is used to modify system supplementary information.

**PARAMETERS**

This section defines inputs permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **TYPE** (System Inventory Report Type)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

Keywords:        HW           - System Hardware Inventory Report  
                   SW           - System Software Inventory Report (Future Use)  
                   SUP          - System Supplementary Information Report  
                   CONF         - System Configuration Strings for PC  
                   ALL          - System Hardware, Software, Supplementary Information,  
                                   and Configuration Strings for PC Reports

This entry is necessary in the DISPLAY operation only. Items listed in the Hardware Inventory Report include the common control shelves (both active and standby sides); interface shelves (both active and standby); interface circuits; terminals (including telephones, add-on modules; attendant consoles, trunks, DIUs, DTMF receivers, announcement machines, music-on-hold devices, UNA night bells, and modem pools), and input/output port assignments (assigned to M&A devices or application processors). System operating sides are noted in the Hardware Inventory Report as A or B. Component status is noted as either INS (in service) or OOS (out of service).

The Software Inventory Report indicates item, trunk, attendant, and feature key assignments to particular LCPUs (future use). The System Supplementary Information Report reports information that has been assigned to describe a particular PERCEPTION 4000 system. For example, this report indicates assigned system identification information such as customer name; customer address/location; customer telephone number; the utilized ACD and/or voice mail system configuration; the system's power supply/battery backup configuration; and paging device/modem usage.

The System Configuration Strings for PC option provides digit strings that are used for system remote maintenance. There are four different groups of system configuration strings that can be requested: Interface Circuits with Critical Conditions; General Line/Trunk Configuration and State; General Common Control Configuration; and ACD and VMS I/O Port Assignment and State. Displayed digit strings are encoded to represent card type, port status, etc. The different digit string formats are each explained below:

I. Interface Circuits with Critical Conditions

Format = SSPPCC MM N0 N1 N2 N3 N4

where SSPPCC = the equipment number which ranges from 010101 to 101408

MM = a two digit decimal number representing the interface circuit card type as follows:

|    |   |                            |
|----|---|----------------------------|
| 00 | - | BSTI card type             |
| 01 | - | COGI card type             |
| 02 | - | DIDI card type             |
| 03 | - | DKTI card type             |
| 04 | - | 1-B channel DSTI card type |

## SYSTEM INVENTORY (CMD 210)

**PERCEPTION 4000****COMMANDS**

|    |   |                            |
|----|---|----------------------------|
| 05 | - | 2-B channel DSTI card type |
| 06 | - | EKTI card type             |
| 07 | - | DM1I card type             |
| 08 | - | EM2I card type             |
| 09 | - | IPRC card type             |
| 10 | - | IPRI card type             |
| 11 | - | PBRC card type             |
| 12 | - | TTRI card type             |
| 13 | - | XSTI card type             |
| 14 | - | No card                    |
| 15 | - | Undefined                  |
| 16 | - | Reserved                   |

N0 = the physical status of a terminal as follows:

|    |   |                                      |
|----|---|--------------------------------------|
| 00 | - | Terminal idle                        |
| 01 | - | No port processor                    |
| 02 | - | No answer                            |
| 03 | - | No match                             |
| 04 | - | In down line load process            |
| 05 | - | Down line load fault                 |
| 06 | - | Start check (trunk)                  |
| 07 | - | Made busy                            |
| 08 | - | Made busy; no port processor         |
| 09 | - | Made busy; no answer                 |
| 10 | - | Made busy; no match                  |
| 11 | - | Made busy; in down line load process |
| 12 | - | Made busy; down line load fault      |
| 13 | - | Made busy; start check (trunk)       |
| 14 | - | Miscellaneous                        |
| 15 | - | No answer; no port processor         |
| 16 | - | In down line load; no port processor |
| 99 | - | No database is assigned              |

N1 = the port state as follows:

|   |   |                                   |
|---|---|-----------------------------------|
| 0 | - | Equipment is made idle            |
| 1 | - | Equipment is made busy            |
| 2 | - | Equipment is made force made busy |
| 3 | - | Equipment is pre-blocking         |

N2 = the port make busy/idle status as follows:

|   |   |                     |
|---|---|---------------------|
| 0 | - | Made idle           |
| 1 | - | Made busy           |
| 2 | - | Make busy requested |
| 3 | - | Made idle requested |
| 4 | - | Pre-blocked         |

N3 = the card in service/out of service status as follows:

- 0 - Card is out of service
- 1 - Card is in service

N4 = the card status as follows:

- 0 - Hardware and database match
- 1 - No card installed and no database installed
- 2 - Hardware and database do not match
- 3 - Card is not installed, but database is installed

*NOTE: The SSPPCC MM N0 N1 N2 N3 N4 string will be prompted only if the equipment is in a critical state. For example, if N0=N1=N2=0, then the string will not be displayed since the equipment is considered idle.*

#### II. General Line/Trunk Configuration and State

Format = LMM NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA  
NNA BBBB BBBB

where LMM = a two digit decimal number representing the line/trunk shelf L01 through L10.

NN = a two digit decimal number representing the interface circuit card type as follows:

- 00 - BSTI card type
- 01 - COGI card type
- 02 - DIDI card type
- 03 - DKTI card type
- 04 - 1-B channel DSTI card type
- 05 - 2-B channel DSTI card type
- 06 - EKTI card type
- 07 - EM1I card type
- 08 - EM2I card type
- 09 - IPRC card type
- 10 - IPRI card type
- 11 - PBRC card type
- 12 - TTRI card type
- 13 - XSTI card type
- 14 - No card
- 15 - Undefined
- 16 - Reserved

A = a single character representing the general state of the card as follows:

- N - Not applicable
- X - Database is assigned, but no card exists
- G - Card is in good condition
- F - Card is in a fault condition
- P - Card is in a pre-fault condition

## SYSTEM INVENTORY (CMD 210)

**PERCEPTION 4000****COMMANDS**

*NOTE: A card is considered to be in a fault condition when all of its circuits are in a critical condition. A card is in a pre-fault condition when at least one of its circuits is in a critical condition. A card is in good condition if all of its circuits are in good condition.*

BBBBB = a five character digit string representing the line/trunk power state as follows:

|       |   |  |
|-------|---|--|
| ILPWU | - | Line/trunk power supply unit is in service     |
| OLPWU | - | Line/trunk power supply unit is out of service |
| XLPWU | - | No line/trunk power supply unit is installed   |

## III. General Common Control Configuration

Format = CX NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA NNA M

where CX = the common control shelf as follows:

|    |   |                             |
|----|---|-----------------------------|
| CA | - | Side A Common Control Shelf |
| CB | - | Side B Common Control Shelf |

NN = a two digit decimal number representing the common control card type as follows:

|    |   |                                       |
|----|---|---------------------------------------|
| 00 | - | Miscellaneous card                    |
| 01 | - | Main clock                            |
| 02 | - | Hard disk drive                       |
| 03 | - | Floppy disk drive                     |
| 04 | - | Main CPU and memory                   |
| 05 | - | Disk drive controller                 |
| 06 | - | Local CPU and memory one              |
| 07 | - | Local CPU and memory two              |
| 08 | - | Local CPU and memory three            |
| 09 | - | Basic time division switching card    |
| 10 | - | Extended time division switching card |
| 11 | - | Main power unit                       |
| 12 | - | No card                               |

A = a single character representing the general state of the card as follows:

|   |   |                        |
|---|---|------------------------|
| X | - | Card is not installed  |
| I | - | Card is in service     |
| O | - | Card is out of service |

M = the active/standby common control shelf as follows:

|   |   |                            |
|---|---|----------------------------|
| A | - | Active side                |
| S | - | Standby side               |
| U | - | Neither active nor standby |

## IV. ACD and VMS Input/Output Port Assignment and State

Format = XXXX N S



where XXXX = the application usage on the input/output port as follows:

ACD - Automatic Call Distribution  
 VMS1 - Voice Messaging System (BTI)  
 VMS2 - Voice Messaging System (SMDI)  
 VMS3 - Voice Messaging System (SMDIP)

N = a value from 1 to 4 representing the input/output port number

S = the status of the input/output port as follows:

U - Link up  
 D - Link down

FIELD: **INDEX** (Supplementary Index Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 25  
 RANGE: Not allowed  
 LOOP: Not allowed

The index represents the line number in the supplementary information listing. For example, line 1 (index number 1) is typically used for customer name and Line 2 (index number 2) is typically used for customer address/location. The provision of 25 different supplementary lines enables an M&A user to program a variety of system identification information.

FIELD: **SUPPLEMENTARY INFORMATION** (Supplementary Information Text)  
 TYPE: Text  
 FORMAT: ASCII characters  
 RANGE: Not allowed  
 LOOP: Not allowed

Each line of text can be used to enter a different type of information. For example, on line 1 (index number 1), enter the customer name; on line 2, enter the customer's address/location; on line 3, enter the customer's telephone number, etc. Additional information that may be desirable to add in the Supplementary Information field is the type of utilized ACD or voice mail system; the model/type of utilized power supply/battery backup equipment; and pager/modem information.

## SYSTEM NUMBER SUMMARY (CMD 326)

**PERCEPTION 4000****COMMANDS****SYSTEM NUMBER SUMMARY (CMD 326)**

The System Number Summary command enables an M&A user to request a summary of number usage within the Perception 4000 system.

Command Keyword:           SYS\_NUM\_PLAN

Category Name:             System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:

    DISPLAY  
    SHOW

The function and required data fields for each operation are described as follows:

**DISPLAY**

|                              |
|------------------------------|
| NUMBER   TYPE   DEF 1   NAME |
|------------------------------|

|<.....opt.....>|<.....locked.....>|

This operation displays system numbering plan data based on input field information. The Display operation will list all numbers, their use, and other important data such as the equipment numbers that correspond to assigned prime directory numbers.

**SHOW**

|       |
|-------|
| USAGE |
|-------|

| req |

The Show operation is used to display either all used numbers or all available numbers in the System Numbering Plan.

After selecting a "USAGE" option, the form of the SHOW operation will be:

NUMBER | NUMBER | NUMBER | NUMBER | NUMBER | NUMBER | NUMBER | NUMBER |

←.....output only.....→

## PARAMETERS

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: NUMBER  
 TYPE: Digits 0 - 9; #; \*  
 FORMAT: 1 - 5 digits  
 VALUE: # - 99999  
 RANGE: Not allowed

This field is used to specify the numbers to be displayed. If a <TAB> is entered, then all numbers in the System Numbering Plan will be displayed. Specific groups of numbers can be specified by entering prefix digits. For example, to display all numbers in the System Numbering Plan that begin with the numbers "42," simply enter "42" in this field. When entering a particular category in the "TYPE" field of this command, enter the appropriate digits (0 - 9, #, \*) to indicate the numbers to be displayed.

FIELD: TYPE  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

|           |      |                                      |
|-----------|------|--------------------------------------|
| Keywords: | ACD  | - ACD pilot number                   |
|           | ATG  | - Attendant group directory number   |
|           | ATT  | - Attendant console directory number |
|           | DDN  | - Data directory number              |
|           | DHG  | - Data hunt group pilot number       |
|           | EMR  | - Emergency access code              |
|           | FEA  | - Feature access code                |
|           | HOT  | - Hotline directory number           |
|           | LCR  | - LCR access code                    |
|           | LLIN | - Logical directory number           |
|           | PRM  | - Prime directory number             |
|           | PVT  | - Private line directory number      |
|           | STD  | - Steering digit                     |
|           | TAC  | - Trunk group access code            |
|           | UCD  | - UCD pilot number                   |
|           | UNP  | - UNP access code                    |
|           | VHG  | - Voice hunt group pilot number      |
|           | DN   | - All system directory numbers       |
|           | NDN  | - All system non-directory numbers   |

## SYSTEM NUMBER SUMMARY (CMD 326)

**PERCEPTION 4000****COMMANDS**

This field is used to specify the category of numbers to be displayed. If the keyword **DN** is entered, then all categories based on directory numbers will be displayed (all categories except FEA, LCR, STD, TAC, and UNP). If the keyword **NDN** is entered, then only non-directory number categories will be displayed (FEA, LCR, STD, TAC, and UNP).

FIELD: DEF 1 (Definition 1)  
 TYPE: Decimal  
 FORMAT: 1 to 3 decimal digits  
 VALUE: When "TYPE" is:

|      |   |
|------|---|
| ACD  | 1 - 32, representing the ACD group number   |
| ATG  | 1 - 32, representing the attendant group number   |
| ATT  | 1 - 32, representing the attendant group to which the attendant belongs                         |
| DDN  | 5 or 6 digits, representing the equipment number  |
| DHG  | 1 - 32, representing the data hunt group number   |
| EMR  | Not used  |
| FEA  | 258 to maximum feature number   |
| HOT  | 1 - 5 decimal digits, representing the hotline directory number                                 |
| LCR  | Feature number  |
| LLIN | 1 - 5 decimal digits, representing the prime directory number to which the logical line belongs |
| PRM  | 5 or 6 digits, representing the equipment number  |
| PVT  | 1- 128, representing the trunk group number   |
| STD  | 1 - 128, representing the trunk group number  |
| TAC  | 1 - 128, representing the trunk group number  |
| UCD  | 1 - 8, representing the UCD group number  |
| UNP  | Feature number  |
| VHG  | 1 to maximum number of voice hunt groups  |

Keywords: Not allowed

The "DEF 1" field specifies the category type of numbers to be displayed.

FIELD: NAME  
 TYPE: Text  
 FORMAT: For output only

The "NAME" field is a display-only field which indicates the name that has been previously assigned to a number. For example, this field will indicate the name assigned to a prime directory number or the name assigned to a trunk group.

FIELD: USAGE  
 TYPE: Keyword  
 FORMAT: Preassigned ASCII characters

Keywords: AVAIL - Print the available (unused) numbers in the system  
 USED - Print the used numbers in the system

The "USAGE" field specifies whether available or already-used numbers in the System Numbering Plan will be displayed.

**SYSTEM MESSAGES**

The following error message is unique to this command. This error message will usually appear if relationships within the system have not been adequately resolved prior to modifying an entity.

C32600 - No match

## SYSTEM OPTION FLAG ASSIGNMENT (CMD 408)

The System Option Flag Assignment command defines various options allowed in the system.

Command Keyword:       SYS\_OPTION\_ASSIGN

Category Name:         System

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:   MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

|  |
|--|
| OPTION   VALUE   OPTION   VALUE   OPTION   VALUE   OPTION   VALUE   OPTION   VALUE |
|--|

◀.....req.....▶ | opt ◀.... opt | opt ◀.... opt | opt ◀.... opt | opt ◀.... opt |

This operation modifies system options. The first "OPTION" and "VALUE" fields are required, while the remaining fields are optional. If data is entered in an "OPTION" field, data in the following "VALUE" field must also be entered.

#### DISPLAY

|  |
|--|
| OPTION   VALUE   OPTION   VALUE   OPTION   VALUE   OPTION   VALUE   OPTION   VALUE |
|--|

◀.....opt.....▶

This operation displays system options. If a <TAB> or the keyword **ALL** is entered in the first "OPTION" field, all of the system options are displayed.

### PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

## SYSTEM OPTION FLAG ASSIGNMENT (CMD 408)

**PERCEPTION 4000****COMMANDS**

FIELD:       **OPTION** (System Option)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:

|             |   |   |
|-------------|---|---|
| ACD         | - | Automatic Call Distribution   |
| ALL         | - | Used when displaying all System Option Flags  |
| CAMP        | - | DID Camp-on Flag  |
| CAMQ        | - | Camp-on Queue Preemption. If the Trunk Queuing Method (QUE) is set to <b>FIFO</b> (First In/First Out), this option (CAMQ) allows a call to preempt the last call in the camp-on queue if the queue is full. If "QUE" is set to <b>PRI</b> (Priority Queuing), the preemption is allowed if the call has a higher priority than the last call in the queue. |
| DISA        | - | DISA Security Code Required   |
| FACL        | - | Forced Account Code length to be validated  |
| IQP1        | - | First incoming ACD call queuing priority  |
| IQP2        | - | Second incoming ACD call queuing priority   |
| ISMDR       | - | Internal Call SMDR Flag   |
| LCR         | - | LCR Call Restriction Method   |
| MUSC        | - | Music-on-Hold Tone  |
| MXCM        | - | Maximum Number of Camp-on Calls   |
| NCFA        | - | No COS Feature Access Code Intercept Treatment Method (i.e., treatment caused by dialing a feature access code which is not allowed by the user's COS)  |
| NCTA        | - | No COS Trunk Access Code Intercept Treatment Method (i.e., treatment caused by dialing a trunk access code which has no user COS)   |
| PX1 - PX16- | - | Station Identification (SID) Prefix 1 to 16   |
| QUE         | - | Trunk Queuing Method  |
| RDRL        | - | Restrict DRL Intercept Treatment Method (i.e., treatment caused by dialing an outside number which is restricted by DRL)  |
| VACC        | - | Verified option flag of account code  |
| VDNI        | - | Vacant DN Intercept Treatment Method (i.e., treatment caused by dialing a number which is not in the system numbering plan)   |
| WARN        | - | Attendant/ACD Monitor Warning Tone  |

This field selects the system option to be modified or displayed. Each keyword has its own value, as entered in the "VALUE" field.

FIELD:       **VALUE** (Value of System Option)  
 TYPE:        Decimal or Keyword, depending on the option  
 VALUE:     Depends on the option (listed below)  
 RANGE:     Not allowed

For **ACD** (Automatic Call Distribution)

Keywords:   NAF - Next Available Agent First (Default)  
               MIF - Most Idle Agent First

All ACD agents must be logged out before modifying this flag.

## SYSTEM OPTION FLAG ASSIGNMENT (CMD 408)

**PERCEPTION 4000****COMMANDS**

For **CAMP** (DID Camp-on Flag)

Keywords: YES - Allow DID call to camp-on to busy station (Default)  
NO - Do not allow DID call to camp-on to busy station

For **CAMQ** (Camp-on Queue Preemption)

Keywords: YES - Allow preemption of camp-on queuing (Default)  
NO - Do not allow preemption

For **DISA** (DISA Security Code Required)

Keywords: YES - DISA Security Code required (Default)  
NO - DISA Security Code not required

For **FACL** (Forced Account Code Length to be Validated)

Keywords: DIG0 to DIG15 - Length in 0 to 15 digits  
DIG0 - Default

For **IQP1** (First Incoming ACD Call Queuing Priority)

Decimal: Value of 1 to 16  
16 - Default

For **IQP2** (Second Incoming ACD Call Queuing Priority)

Decimal: Value of 1 to 16 (cannot be greater than IQP1 value)  
Keyword: NONE - DISA security code required (Default)

For **ISMDR** (Internal Call SMDR Flag)

Keywords: YES - Enable internal call SMDR recording  
NO - Disable internal call SMDR recording (Default)

For **LCR** (LCR Call Restriction Method)

Keywords: FRLP - Facility Restriction Level Profile only (Default)  
BOTH - Destination Restriction Level (DRL) and Facility Restriction Level (FRL)

For **MUSC** (Music-on-Hold Tone)

Keywords: IMT - Internal Music Tone (Default)  
MS01 - External Music Tone 1  
MS02 - External Music Tone 2  
MS03 - External Music Tone 3  
MS04 - External Music Tone 4  
QT - Quiet Tone



For **MXCM** (Maximum Number of Camp-on Calls allowed per Station)

Decimal Value: 1 - 256 (Default = 4)

For **NCFA** (No COS Feature Access Code Intercept Treatment Method)

Keywords: AP01 to AP50 - Announcement Pattern 1 to 50  
ROT - Reorder Tone (Default)

For **NCTA** (No COS Trunk Access Code Intercept Treatment Method)

An attendant or attendant group directory number  
or

Keywords: AP01 to AP50 - Announcement Pattern 1 to 50  
ROT - Reorder Tone (Default)

For **PX1 to PX16** (Station Identification Prefix 1 to 16)

Decimal: Maximum number of defined digits for each PX (1 through 16) is 12

For **QUE** (Trunk Queuing Method)

Keywords: FIFO - First-in/First-out Queuing  
PRI - Priority Queuing (Default)

For **RDRL** (Restrict DRL Intercept Treatment Method)

An attendant or attendant group directory number  
or

Keywords: AP01 to AP50 - Announcement Pattern 1 to 50  
ROT - Reorder Tone (Default)

For **VACC** (Verified Option Flag for Account Code)

Keywords: YES - Account code will be verified (Default)  
NO - Account code will not be verified

For **VDNI** (Vacant Directory Number Intercept Treatment Method)

An attendant or attendant group directory number  
or

Keywords: AP01 to AN50 - Announcement Pattern 1 to 50  
ROT - Reorder Tone (Default)

For **WARN** (Attendant/ACD Monitor Warning Tone)

Keywords: YES - A warning tone is sent  
NO - No warning tone is sent (Default)

This field defines the value for the option listed in the previous "OPTION" field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C40800 - Option value is out of range
- C40801 - Directory number is not an attendant DN
- C40802 - Attendant group or directory number can only be used for VDNI, RDRL, or NCTA
- C40803 - External music tone does not exist
- C40804 - Option field required
- C40805 - Value field required
- C40806 - Option field is duplicated
- C40807 - Force Account code length must be defined first
- C40808 - The device for this option is not defined
- C40809 - ACD group is still on shift
- C40810 - ACD agent is still logged in
- C40814 - Maximum Camp-on value is out of range
- C40815 - FACL value is over the PDD1 length defined in CMD 300
- C40816 - Check input in value field n

## SYSTEM SPEED CALLING ASSIGNMENT (CMD 402)

**PERCEPTION 4000****COMMANDS****SYSTEM SPEED CALLING ASSIGNMENT (CMD 402)**

The System Speed Calling Assignment command defines the destination for each system speed calling number. Up to 1000 system speed calling numbers are allowed. They may be used to address internal destinations or external public/private network destinations.

Command Keyword:       SYS\_SC\_ASSIGN

Category Name:         System

**PREREQUISITE COMMAND**

Numbering Plan Assignment (CMD 300)

**OPERATIONS**

Available operations:   ADD  
                          DELETE  
                          MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

|                           |
|---------------------------|
| INDX   DESTINATION NUMBER |
|---------------------------|

◀.....req.....▶

This operation assigns a destination number to a system speed calling code. Looping is permitted in the "INX" field during this operation.

**DELETE**

|                           |
|---------------------------|
| INDX   DESTINATION NUMBER |
|---------------------------|

| req |                   opt                   |

This operation removes existing speed calling assignments. Looping is permitted in the "INX" field to expedite the deletion of blocks of speed calling numbers. When a loop is used, the system requests confirmation of the delete operation.



## SYSTEM SPEED CALLING ASSIGNMENT (CMD 402)

**PERCEPTION 4000****COMMANDS**

are unconventional in their arrangement (such as international calls) the pound sign (#) may be used to signal end of dialing to the system. Ranges are not permitted.

Functional designators are counted as one place in the 24 possible entries, even if it takes two places to define:

- \*\* - Dial Tone Detect
- \* - Pause, this key requires an additional digit (n) to follow which indicates how many seconds to delay execution of the remaining destination number. (n = 0 to 9)
- # - Indicates beginning of a feature access code or termination of the dialing digit.

Timed pauses of greater than 9 seconds can be achieved via back-to-back definitions. For example, a pause of 13 seconds could be achieved by entering \*9\*4. This would count as two of the possible 24 digits/functions.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C40200 - The speed dialing index is already defined
- C40201 - Check input format
- C40202 - Destination number is not defined
- C40203 - Speed dialing feature activation cannot be destination number

**COMMENTS**

The Trunk/LCR access codes must be defined in the system's numbering plan prior to entering them in the "DESTINATION NUMBER" field.

Speed calling access codes (group and system) cannot be used in the "DESTINATION NUMBER" field.

The destination number entered can be a pilot to any type of group or a directory number for a station, attendant, or data station.

**RELATED COMMANDS**

- ACD Agent Assignment (CMD 356)
- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)
- Data Station Assignment (CMD 360)
- Station Assignment (CMD 330)
- Station Feature Key Assignment (CMD 331)
- Station Hunting Assignment (CMD 342)
- Trunk Assignment (CMD 313)
- Trunk Group Assignment (CMD 310)
- UCD Group Assignment (CMD 354)

## SYSTEM TIMER ASSIGNMENT (CMD 407)

**PERCEPTION 4000****COMMANDS****SYSTEM TIMER ASSIGNMENT (CMD 407)**

Several features within the system require a timer, such as for recalls and tone duration. This command modifies the system's timers and displays the System Timer Table.

Command Keyword:       SYS\_TIMER\_ASSIGN

Category Name:         System

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:   MODIFY  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

| INDEX           | TIMER | NAME  |  |
|-----------------|-------|---|--|
| ◀.....req.....▶ |       | Output only when prompting for confirmation |  |

This operation modifies a timer(s) in the System Timer Table. The "NAME" is defined by Toshiba and displayed during confirmation of an entry.

**DISPLAY**

| INDEX           | TIMER | NAME        |  |
|-----------------|-------|-------------|--|
| ◀.....opt.....▶ |       | output only |  |

This operation displays a system timer(s). Looping is permitted in the "INDEX" field. If no data is entered, the complete System Timer Table displays.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **INDEX** (Timer Table Index Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 99  
 LOOP: Allowed in a DISPLAY operation

The index number identifies a specific timer. This number corresponds to the **Index #** listed in the "TIMER" field description. A DISPLAY operation also lists the current Timer Table index numbers.

FIELD: **TIMER** (Timer Value)  
 TYPE: Decimal  
 FORMAT: 1 to 5 digits  
 VALUE: 1 to 99999 in seconds (or to the maximum value; see the list below)  
 RANGE: Not allowed

Each timer has a range of values. Following are the timer index numbers, their names, ranges, defaults, and a brief description of each timer. Note that the maximum entry allowed for timer values far exceeds current needs. These values are provided to allow users flexibility in customizing their systems.

| Index # | Name                           | Value     | Default | Description  |
|---------|--------------------------------|-----------|---------|--|
| 1       | Camp-on Timer                  | 1 - 3600  | 10      | The amount of time busy tone rings before off-hook Camp-on occurs  |
| 2       | Callback Timer                 | 1 - 72000 | 8000    | The amount of time a Camp-on will exist without a callback before being automatically cancelled by the system                                |
| 3       | Success Tone Duration          | 1 - 3600  | 5       | The length of time success tone is heard   |
| 4       | LCR Warning Tone Duration      | 1 - 3600  | 5       | The length of time expensive route warning tone is heard   |
| 5       | Station Callback Ring Duration | 1 - 3600  | 15      | The amount of time a Camp-on callback will ring a station before cancelling the station Camp-on  |
| 6       | Trunk Callback Ring Duration   | 1 - 3600  | 15      | The amount of time a Camp-on callback will ring a station before ceasing to wait for the next attempt or before cancelling the trunk Camp-on |

## SYSTEM TIMER ASSIGNMENT (CMD 407)

**PERCEPTION 4000****COMMANDS**

| Index # | Name                           | Value     | Default | Description   |
|---------|--------------------------------|-----------|---------|---|
| 7       | Trunk Callback Interval Timer  | 1 - 14400 | 300     | The amount of time between Camp-on callbacks due to no-answer conditions at the station being rung  |
| 8       | Long Hold Recall               | 1 - 3600  | 120     | The length of time a call will sit on hard hold before recalling to the station   |
| 9       | Reorder Tone Timer             | 1 - 3600  | 20      | The amount of time reorder tone will be given before station lockout or off-hook idle occurs  |
| 10      | UNA Bell No Answer Timer       | 1 - 3600  | 300     | The amount of time a call rings at the night bell before being dropped  |
| 11      | Unscreened RBT Timer           | 1 - 3600  | 60      | The maximum amount of time that an unscreened transfer will go unanswered before recalling to the initiating party                                  |
| 12      | Call Forward - No Answer Timer | 1 - 3600  | 30      | The amount of time that a call rings at a station before forwarding - applicable to Call Forward No Answer and Call Forward Busy/No Answer features |
| 13      | Recall No Answer Timer         | 1 - 3600  | 30      | The amount of time that a trunk recall will ring at a station before recalling to the attendant   |
| 14      | Park Recall Timer              | 1 - 3600  | 120     | The amount of time that a call may remain parked before recalling to the park originator  |
| 15      | Overflow Timer                 | 1 - 3600  | 120     | The time a call will remain in the attendant queue before overflowing to a secondary location   |
| 16      | Analog Hold Timer              | 1 - 3600  | 5       | The length of time a call will sit on hard hold before recalling to the station   |
| 17      | Camp-on RBT Timer              | 1 - 3600  | 180     | The maximum amount of time that a Camp-on transfer will go unanswered before recalling to the initiating party                                      |
| 30      | Detect Dial Tone Timer         | 1 - 3600  | 15      | The amount of time a CO trunk detects dial tone   |



## SYSTEM TIMER ASSIGNMENT (CMD 407)

**PERCEPTION 4000****COMMANDS**

| Index # | Name                              | Value    | Default | Description   |
|---------|-----------------------------------|----------|---------|---|
| 31      | Interchangeable Office Code Timer | 1 - 3600 | 4       | The amount of time the system waits for additional digits after receiving seven digits. If the timer expires before receiving more digits, the first three digits are treated as an office code. If more digits are received before the timer expires, then the first three digits are treated as an area code. |
| 33      | Voice Page Recall Timer           | 1 - 3600 | 120     | The amount of time a parked call due to a meet-me paging attempt will remain parked before recalling to the initiator   |
| 34      | Code Call Recall Timer            | 1 - 3600 | 120     | The amount of time a parked call due to a meet-me code-call attempt will remain parked before recalling to the initiator  |
| 35      | LED Error Flashing Duration       | 1 - 3600 | 5       | The length of time the red LED flashes when an error occurs while programming a feature or a key  |
| 36      | Supervisor Warning Tone Timer     | 1 - 3600 | 1       | The amount of time that a warning tone sounds during an attendant break-in function   |
| 37      | Announcement Release Timer        | 1 - 3600 | 180     | The amount of time that incoming trunk calls that have no routing and are intercepted by an announcement machine are held before the call is disconnected   |
| 38      | Attendant BLF Timer               | 1 - 3600 | 5       | Interval of time between scans of the system to update the Busy Lamp Field on the attendant console to the current state  |
| 39      | Attendant Forced PB Timer         | 1 - 3600 | 30      | The amount of time allowed for the attendant to answer incoming calls. If an incoming call is not answered before this timer expires, the attendant console goes to the position busy state.  |
| 40      | Break-in Warning Tone Timer       | 1 - 3600 | 1       | The amount of time that a warning tone sounds during an attendant break-in function (Use #36 when modifying the warning tone.)  |

## SYSTEM TIMER ASSIGNMENT (CMD 407)

**PERCEPTION 4000****COMMANDS**

| Index # | Name   | Value    | Default | Description   |
|---------|--|----------|---------|---|
| 41      | ACD Call Ring No Answer Timer                      | 0 - 3600 | 20      | The amount of time that a call rings at an ACD station before the system redirects the call to another ACD agent. If none is available, the call rings again at the original ACD agent's station. If the timer expires before the agent answers, that station is placed into the Unavailable mode and the call is disconnected. |
| 42      | Station/Attendant ACD Queue Priority Advance Timer | 0 - 9999 | 0       | The amount of time that a caller to a station or attendant console must wait in the ACD queue before the caller's priority level is increased.  |
| 43      | Station/Attendant ACD Overflow Timer               | 0 - 9999 | 0       | The amount of time that a caller to a station or attendant console must wait in the ACD queue before overflow to another groups will be attempted.  |

FIELD: **NAME** (Timer Name)  
 TYPE: Text  
 LENGTH: Up to 60 ASCII characters

The "NAME" field is an output only field, which is coded into the database and not changeable. Refer to the "TIMER" field for a list of current timer names.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C40700 - Timer value is out of range
- C40701 - Specified timer is not defined
- C40702 - ACD advance timer should be less than overflow timer

## T-1 CLOCK PROVIDER SELECTION ASSIGNMENT (CMD 412)

**PERCEPTION 4000****COMMANDS****T-1 CLOCK PROVIDER SELECTION ASSIGNMENT (CMD 412)**

The T-1 Clock Provider command allows you to manually switch the clock provider to the primary or other reference, depending on where it currently resides. This feature must be enabled with the Digital Carrier Channel Assignment command (CMD 413) before the command can be executed.

Command Keyword: T1\_CLOCK\_ASSIGN

Category Name: Trunk

**PREREQUISITE COMMAND**

Digital Carrier Channel Assignment (CMD 413)

**OPERATIONS**

Available operations: SWITCH

The function and required data fields for each operation are described in this section.

SWITCH

|              |
|--------------|
| CLK PROVIDER |
|--------------|

|     |
|-----|
| req |
|-----|

This operation manually switches the clock provider to the primary reference (1) if the current clock provider is a lower priority reference (2 to 60), or switches to another reference if the current clock provider is the primary reference.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **CLK PROVIDER** (T-1 Clock Provider)

TYPE: Keyword

FORMAT: Predefined ASCII characters

Keywords: PRIMARY - Primary Reference  
OTHER - Other Reference

This field manually switches the T-1 clock provider between the primary reference (1) and other references (2 to 60). The T-1 clock provider feature must be enabled with the Digital Carrier Channel Assignment command (CMD 413) before this command can be executed.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C41200 - Check Clock Provider
- I41201 - Warning: Please try later, database is reserved

## TERMINAL MAINTENANCE (CMD 206)

The Terminal Maintenance command is used to make equipment or terminal ports busy or idle, and to display the state of these ports.

Command Keyword:        TERMINAL\_MAINT

Category Name:           Maintenance

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations:    BUSY  
                               IDLE  
                               DISPLAY  
                               SHOW

The function and required data fields for each operation are described in this section.

#### BUSY

EQUIP # |

| req |

This operation sets a terminal to the busy state. Looping is permitted.

#### IDLE

EQUIP # |

| req |

This operation sets a terminal to the idle state. When the equipment number and a carriage return are entered, the system displays a prompt confirming the 'make idle' request. Looping is permitted.

DISPLAY



This operation displays terminal status information. Loops are permitted in the "EQUIP #" and "POS" fields.

SHOW



The SHOW operation displays 'snapshots' of the current status of the selected equipment number over a specified period of time, or for a specified number of times. For example, the status of "EQUIP #" 011101 can be displayed continually for a quarter of an hour; or it can display up to 999 snapshots. Any equipment status changes are shown on the display screen as they occur. Note that if the system is congested, the SHOW operation runs slowly, producing fewer snapshots.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

- FIELD: **EQUIP #** (Equipment Number)
- TYPE: EQ Type
- FORMAT: 5 or 6 digits
- VALUE: (0)10101 to 101408 \*
- LOOP: Allowed in BUSY, IDLE, and DISPLAY operations

\* Use the following chart to determine valid ranges for various types of equipment.

For BSTI, PBRC, DKTI, and 1B-DSTI equipment cards, the following ranges apply:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01~16     | Circuit no.   |

For a 2B-DSTI equipment card, the following ranges apply:

| Digits            | Range                  | Hardware      |
|-------------------|------------------------|---------------|
| First digit(s)    | (0)1~10                | Shelf no.     |
| Second two digits | 01, 03, 05, 07, 09, 11 | Card slot no. |
| Last two digits   | 01~16                  | Circuit no.   |

For an EKTl, DKTI, DIDI, XSTI, EM1I, and COGI card, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

For an EM2I card, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~06   | Circuit no.   |

For a TTRl or IPRI card, the following ranges are valid:

| Digits            | Range                  | Hardware      |
|-------------------|------------------------|---------------|
| First digit(s)    | (0)1~10                | Shelf no.     |
| Second two digits | 02, 04, 06, 08, 10, 12 | Card slot no. |
| Last two digits   | 01~24                  | Circuit no.   |

For an IPRC card, the following ranges are valid:

| Digits            | Range     | Hardware      |
|-------------------|-----------|---------------|
| First digit(s)    | (0)1~10   | Shelf no.     |
| Second two digits | 01~11, 13 | Card slot no. |
| Last two digits   | 01        | Circuit no.   |

This field designates an equipment number. The first digit(s) represents the shelf number, the next two digits represent the card slot number, and the last two digits represent the circuit number.

FIELD: **CARD** (Equipment Card Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: 1DSTI - 1-B channel DSTI card  
 2DSTI - 2-B channel DSTI card  
 BSTI - BSTI card  
 COGI - COGI card

## TERMINAL MAINTENANCE (CMD 206)

**PERCEPTION 4000****COMMANDS**

|        |   |
|--------|---|
| DIDI   | - DIDI card                             |
| DKTI   | - DKTI card                             |
| EKTI   | - EKTI card                             |
| EM1I   | - EM1I card                             |
| EM2I   | - EM2I card                             |
| IPRC   | - IPRC card                             |
| IPRI   | - IPRI card                             |
| PBRC   | - PBRC (DTMF) card                      |
| TTRI   | - TTRI card                             |
| XSTI   | - XSTI card                             |
| NOCARD | - No card                               |
| UND    | - Undefined                             |
| RSVD   | - Reserved card, circuit cannot be used |

This field displays what type of card the equipment is assigned to.

FIELD: **TRML** (Terminal Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords:

|      |   |
|------|---|
| 2010 | - 10-key PERCEPTION 4000 digital telephone                                |
| 2020 | - 20-key PERCEPTION 4000 digital telephone                                |
| AD1  | - Add-on Module #1  |
| AD2  | - Add-on Module #2  |
| AM   | - Announcement Machine  |
| ANLG | - Analog Telephone  |
| ANMW | - Analog Telephone with Message Waiting                                   |
| ATT  | - Attendant   |
| AVMS | - Analog VMS Port   |
| B_CH | - ISDN B-channel terminal   |
| BL   | - UNA Night Bell  |
| D_CH | - ISDN D-channel terminal   |
| DID  | - Direct Inward Dialing Trunk   |
| DIU  | - Data Station  |
| DK10 | - DKT with 10 keys and no display   |
| DK1D | - DKT with 10 keys and display  |
| DK20 | - DKT with 20 keys and no display   |
| DK2D | - DKT with 20 keys and display  |
| DM   | - Dictation Machine   |
| DTMF | - DTMF Receiver   |
| EK01 | - Electronic telephone with 1 line key and 3 fixed keys                   |
| EK10 | - Electronic telephone with 10 flexible keys and 4 fixed keys             |
| EK20 | - Electronic telephone with 20 flexible keys and 4 fixed keys             |
| EK2D | - Electronic telephone with 20 flexible keys, 4 fixed keys, and a display |
| EM1  | - EM Type 1 Trunk   |
| EM2  | - EM Type 2 Trunk   |
| GND  | - Ground Start Trunk  |
| ID10 | - 10-key PERCEPTION 4000 Digital Telephone with DIU                       |
| ID20 | - 20-key PERCEPTION 4000 Digital Telephone with DIU                       |
| LP   | - Loop Start Trunk  |



LTIE - Loop Start TIE Trunk  
 MDM - Modem Pool  
 MPD - Modem Pool DIU  
 MS - Music-on-Hold Device  
 OPS - Off-premises Station  
 T1 - T1 Trunk

The "TERMINAL" field defines the type of terminal that is associated with the equipment number.

FIELD: **PHY S** (Physical Status of the Equipment)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DLLF - Down Line Load Fault  
 DLNP - In Down Line Load; No Port Processor  
 INDL - In Down Line Load Process  
 MBDF - Made Busy; Down Line Load Fault  
 MBDL - Made Busy; In Down Line Load Process  
 MBNA - Made Busy; No Answer  
 MBNM - Made Busy; No Match  
 MBNP - Made Busy; No Port Processor  
 MBST - Made Busy; Start Check (Trunk)  
 MBSY - Made Busy  
 MISC - Miscellaneous  
 NANP - No Answer; No Port Processor  
 NANS - No Answer  
 NMCH - No Match  
 NOPP - No Port Processor  
 STCH - Start Check (Trunk)  
 TIDL - Terminal Idle

This field specifies the hardware (or physical) state of the equipment.

FIELD: **PRT S** (Status of the Equipment Port)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: FMKB - Equipment was forced into a make busy state  
 IDL - Equipment was made idle  
 MKB - Equipment was made busy  
 NODB - Equipment has either no software database, or has a mixed hardware and software status  
 PRBK - Equipment is pre-blocking

This field specifies the software status of the equipment.

FIELD: **PBI S** (Port Make Busy/Idle Status)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

## TERMINAL MAINTENANCE (CMD 206)

**PERCEPTION 4000****COMMANDS**

Keywords: IDL - Made Idle  
 IREQ - Make Idle Requested  
 MKB - Made Busy  
 MREQ - Make Busy Requested  
 PRBK - Pre-blocked

This field displays the Make Busy/Idle status of the equipment port. The **IREQ** and **MREQ** keywords indicate that a request to Make Idle/Make Busy has been sent, but a response has not been received back. The **IDL** and **MKB** options indicate that the request has been carried out. **PRBK** signifies that a Make Busy request has been sent to a port that is in the talking state, and that port will go into a Make Busy state when the call is terminated.

FIELD: **POS** (Key Assignment Position Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 10 (For 10-key PERCEPTION 4000 digital telephones, 10-key DKT telephones, and 10-key electronic telephones)  
 1 to 20 (For 20-key PERCEPTION 4000 digital telephones, 20-key DKT telephones, 20-key electronic telephones, and 20-key add-on modules)  
 1 to 60 (For 60-key add-on module [three 20-key modules])  
 LOOP: Allowed in a DISPLAY operation only

This field specifies a station's key position, as defined in the Station Feature Key Assignment command (CMD 331), and applies to digital and electronic telephones, add-on modules, and digital telephones with DIUs.

FIELD: **TYPE** (Key Assignment Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: AGE - ACD Line, Agent  
 DDN - Data Line (Integrated DIU)  
 HOT - Hotline  
 ICM - Intercom Group  
 LINE - Secondary Line Appearance  
 LLIN - Logical Line  
 MLIN - Multiple Line  
 PRM - Prime Line  
 PVT - Private Trunk Line  
 SPVT - Secondary Private Trunk Line  
 SUP - ACD Line, Supervisor

The "TYPE" field defines the key type for the location listed in the "POS" field. Key types are assigned with the Station Feature Key Assignment command (CMD 331).

FIELD: **DN** (Directory Number)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Not allowed  
 LOOP: Not allowed

This field displays the directory number assigned to a given station key position, as defined in the Station Feature Key Assignment command (CMD 331).

FIELD: **TS** (Terminal Layer's State)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 999  
 RANGE: Not allowed  
 LOOP: Not allowed

The "TS" field is an output only field used by Toshiba personnel for diagnosing software status. For attendant consoles, this field represents the state of ATC virtual machines. For trunks, this field represents the state of TTC virtual machines. For stations, this field represents the state of HDT virtual machines. For ISDN terminals, this field represents the state of ITTC virtual machines.

FIELD: **GS** (Group Layer's State)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 999  
 RANGE: Not allowed  
 LOOP: Not allowed

The "GS" field is an output only field used by Toshiba personnel for diagnosing software status. For attendant consoles, this field represents the state of AGC virtual machines. For stations, this field represents the state of KSU virtual machines. For ISDN trunks, this field represents each channel's made busy/made idle state in ITTC virtual machines.

FIELD: **SS** (Server Layer's State)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 999  
 RANGE: Not allowed  
 LOOP: Not allowed

The "SS" field is an output only field used by Toshiba personnel for diagnosing software status. For attendant consoles, this field represents the state of ASC virtual machines. For trunks, this field represents the state of TSC virtual machines. For stations, this field represents the state of SSC virtual machines.

FIELD: **AT&T** (AT&T Maintenance Mode)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 0 to 999  
 RANGE: Not allowed  
 LOOP: Not allowed

The "AT&T" field is an output only field used by Toshiba personnel for diagnosing software status.



## TIME ACTIVATED COMMAND PROGRAMMING (CMD 110)

**PERCEPTION 4000****COMMANDS****TIME ACTIVATED COMMAND PROGRAMMING (CMD 110)**

The Time Activated Command Programming command sets timers for automatic activation or deactivation of maintenance and/or diagnostic functions. The command also displays the current time activation set-up status of each function. Pre-determined maintenance functions are activated at the specified date and time. Audit functions are activated based on their specified relative interval time.

Command Keyword:       TIME\_ACT\_COM

Category Name:         Diagnostic

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations:   ENABLE  
                          DISABLE  
                          DISPLAY

The function and required data fields for each operation are described in this section.

**ENABLE**

|   |
|---|
| TYPE   FNC NAME   START TIME   INTERVAL |
|---|

◀.....req.....▶◀.....opt.....▶

This operation programs the automatic activation of the specified maintenance or diagnostic function. Once this operation is executed, the specified functions are activated at the desired time.

**DISABLE**

|                 |
|-----------------|
| TYPE   FNC NAME |
|-----------------|

◀.....req.....▶

This operation cancels automatic activation of functions set by the ENABLE operation by removing activation timer(s) from the operating system's timer queue. The function type and name are required.

## TIME ACTIVATED COMMAND PROGRAMMING (CMD 110)

**PERCEPTION 4000****COMMANDS**

## DISPLAY

|   |
|---|
| TYPE   FNC NAME   START TIME   INTERVAL |
|---|

|<.....req.....>|<.....opt.....>|

This operation displays the time activation set up for the specified function. The function type and name are required.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TYPE** (Type of Function)

TYPE:            Keyword

FORMAT:          Predefined ASCII characters

Keywords:    MAIN - Maintenance Function  
               DIAG - Diagnostic Function  
               BOTH - Both Maintenance and Diagnostic Functions (Allowed in a DISPLAY operation only)

This field indicates the type of function to be enabled, disabled, or displayed.

FIELD:           **FNC NAME** (Function Name)

TYPE:            Keyword

FORMAT:          Predefined ASCII characters

Keywords - Maintenance Functions:

CMCK - Compares the contents in memory to the contents of the corresponding file on the hard disk. If there is a mismatch, the system prints out an error message.  
 FBKP - Performs a program/data file consolidation. A consolidation is performed on both sides if the system is redundant.  
 SWO - Initiates a system switch-over.  
 ALL - All of the above (Allowed in a DISPLAY operation only)

Keywords - Diagnostic Functions:

LPWR - Checks the power on the line/trunk shelves.  
 MISC - Checks communications between the MISC card and the MCPU and LCPU.  
 MPWR - Checks the operational status of the stand-by side in a redundant system.  
 PPWR - Audits status of the port processor cards and terminals.  
 TEMP - Checks the system's operating temperature.  
 ALL - All of the above (Allowed in a DISPLAY operation only)

## TIME ACTIVATED COMMAND PROGRAMMING (CMD 110)

**PERCEPTION 4000****COMMANDS**

The entry in this field must correspond to the type of function entered in the "TYPE" field. The keyword **ALL** is available only in a DISPLAY operation. Before entering **LPWR**, adjust the parameters of the Redundancy Selection Assignment command (CMD 409) to fit the configuration of the PERCEPTION 4000 system being worked on.

FIELD:       **START TIME** (Activation Start Time)  
 TYPE:        Decimal with fixed length  
 FORMAT:     4 digits in the form HHMM (HH=hour, MM=minutes)  
 VALUE:      0000 to 2359   (Maintenance functions only)  
 DEFAULT:    Maintenance Function: Current Programmed Time  
               Diagnostic Function: Current Time  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

A **<TAB>** key entry indicates the default time is to be used as input data. However, data entered in this field is treated differently based on the specified "TYPE" and operation. For maintenance functions, a **<TAB>** key entry defaults to the current setup time, otherwise, data entered in this field replaces the current setup time. For diagnostic functions, any input in this field other than a **<TAB>** is ignored; the default current clock is used and the following message displays: "*DATA INPUT to START TIME FIELD IS IGNORED.*"

FIELD:       **INTERVAL** (Interval Time)  
 TYPE:        Decimal  
 FORMAT:     1 to 4 digits  
 VALUE:      Maintenance Function: 1 to 31 Days  
               Diagnostic Function: 0030 to 3600 Seconds  
 DEFAULT:    Maintenance Function: 1 day  
               Diagnostic Functions  
               MPWR: 0005 seconds  
               All others: 0030 seconds  
 RANGE:      Allowed in a DISPLAY operation only  
 LOOP:       Not allowed

For maintenance functions, a **<TAB>** key entry defaults to a one (1) day interval between function activation, otherwise, data entered replaces the current setup. For diagnostic functions, a **<TAB>** key entry sets a 30 second interval between operations, otherwise, data entered replaces the current setup.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C11000 - Keyword combination error
- C11001 - Set timer error
- I11002 - Warning: Data entered in Activation Start Time field is ignored
- C11003 - Interval time is out of range
- C11004 - This item is not registered
- C11005 - Input activation start time is out of range
- C11006 - Start time conflicts with switch-over start time

**RELATED COMMANDS**

- Clock Reset (CMD 121)
- Disk File Manipulation (CMD 152)
- Initiate Switchover (CMD 102)



## TIME ZONE ASSIGNMENT (CMD 336)

The Time Zone Assignment command defines different time zones (1 to 4) for each day of the week and holidays. This information is used by the following tables for all outbound and inbound calls:

1. LCR Time Zone Table
2. Inward Routing Time Zone Table
3. COS/DRL/FRL/Queue Priority Time Zone Table
4. ISDN Time Zone Class 1 Table
5. ISDN Time Zone Class 2 Table
6. ISDN Time Zone Class 3 Table
7. ISDN Time Zone Class 4 Table

These tables change LCR routing of calls, inward routing of calls, and the COS, DRL, FRL, and Queue Priority Level of configured stations, based on the day of the week and time of day.

Command Keyword: TZ\_ASSIGN

Category Name: Administration

### PREREQUISITE COMMANDS

There are no prerequisites for this command.

### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

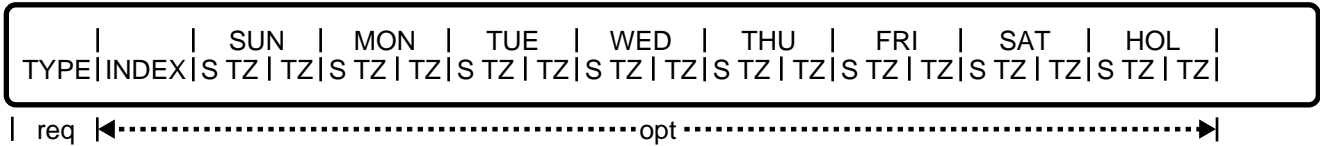
|  |
|--|
| TYPE   INDEX   WEEK DAY   START TIME   TIME ZONE # |
|--|

◀.....req.....▶      opt .....▶ opt      |

This operation modifies the attributes of the seven prementioned tables. The first three fields are required, while the remaining fields are optional. If, however, an entry or deletion (<CONTROL-D>) is made in the "START TIME" field, an entry or deletion must also be made in the "TIME ZONE #" field. A time zone may be deleted only if it is the last one of the day. All start times for each day must be in ascending order.

TIME ZONE ASSIGNMENT (CMD 336)

DISPLAY



This operation displays various time zone table information based on the specified input data. The "TYPE" field is required, while the remaining fields are optional. Looping is permitted in the "INDEX" field. The "S TZ" field is the start time which is in the form HHMM (HH is the hour, MM is the minute).

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TYPE** (Type of Table)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

- Keywords:
- COS - COS/DRL/FRLP/QPL Time Zone Table
  - INW - Inward Routing Time Zone Table
  - LCR - LCR Time Zone Table
  - IS01 - ISDN Time/Day Change Definition Table (Class 1)
  - IS02 - ISDN Time/Day Change Definition Table (Class 2)
  - IS03 - ISDN Time/Day Change Definition Table (Class 3)
  - IS04 - ISDN Time/Day Change Definition Table (Class 4)

This field specifies the table to be modified or displayed.

FIELD:           **INDEX** (Index Number)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          1 to 4 (or to the maximum number of time zones)  
 LOOP:           Allowed in DISPLAY operation  
 RANGE:          Not allowed

This field is an index number used for the convenience of the administrator. The value varies according to the maximum number of time zones configured.

FIELD:           **WEEK DAY** (Day of Week or Holiday)  
 TYPE:            Keyword  
 FORMAT:         Predefined ASCII characters

Keywords: SUN - Sunday  
 MON - Monday  
 TUE - Tuesday  
 WED - Wednesday  
 THU - Thursday  
 FRI - Friday  
 SAT - Saturday  
 HOL - Holiday

This field selects the day of the week (or a holiday) that is to be modified. In a DISPLAY operation, each day/holiday displays in the header with subfields.

FIELD: **START TIME** and **S TZ** (Start Time for each Time Zone)  
 TYPE: Decimal with fixed length  
 FORMAT: 4 digits in the form HHMM (where HH = hour and MM = minutes)  
 VALUE: 00 to 23 (HH = 24 hours/day in military time)  
 00 to 59 (MM = 60 minutes/hour)  
 LOOP: Not allowed  
 RANGE: Not allowed

The "START TIME" and "S TZ" fields indicate the starting time for the specified time zone. The first two digits represent the hour of the day in military time (00 to 23), and the last two digits represent the minute (00 to 59). All start times for each day must be in ascending order. The ending time is the minute before the next starting time. If no further starting time is entered for the day, the last time zone is carried over to the next day.

FIELD: **TIME ZONE #** and **TZ** (Time Zone Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 LOOP: Not allowed  
 RANGE: Not allowed

This field assigns a time zone number for the starting time entered in the previous field (START TIME or S TZ). In a MODIFY operation, if an entry or deletion (<CONTROL-D>) is made in the "START TIME" field, an entry or deletion must also be made in the "TIME ZONE #" field.

If the time zone for ISDN is not specified, then this parameter will default to Zone 1, which will apply for all 24 hours for all ISDN tables (ISO1 ~ ISO4).

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C33600 - Check time for time change
- C33601 - Time zone number must be input
- C33602 - Start time must be input
- C33603 - Check time change number
- C33604 - Entry into this time change number cannot be done; check previous
- C33605 - Deletion of this time change cannot be done; check next
- C33606 - Must delete both start time and zone number for the time change

## TIME ZONE ASSIGNMENT (CMD 336)

**PERCEPTION 4000****COMMANDS****COMMENTS**

The following is an example of a Time Zone Table.

| <b>Index#</b> | <b>Monday</b> | <b>Time</b> | <b>Zone</b> | <b>Time Zone Duration</b>   |
|---------------|---------------|-------------|-------------|-----------------------------|
| 1             |               | 0800        | 1           | 8:00 AM to 4:59 PM          |
| 2             |               | 1700        | 2           | 5:00 PM to 10:59 PM         |
| 3             |               | 2300        | 3           | 11:00 PM to 7:59 AM Tuesday |

| <b>Index#</b> | <b>Tuesday</b> | <b>Time</b> | <b>Zone</b> | <b>Time Zone Duration</b> |
|---------------|----------------|-------------|-------------|---------------------------|
| 1             |                | 0800        | 1           | 8:00 AM to 4:59 PM        |
| 2             |                | 1700        | 2           | 5:00 PM to 10:59 PM       |
| 3             |                | 2300        | 3           | 11:00 PM to ...           |

As shown, time zones may overlap from one day to the next (Zone 3).

**RELATED COMMANDS**

Class of Service Assignment (CMD 334)  
 Destination Restriction Level Assignment (CMD 337)  
 Facility Restriction Level Profile Assignment (CMD 387)  
 LCR/Authorization TZ Change Assignment (CMD 343)  
 LCR Routing Table Assignment (CMD 383)  
 System Holiday Assignment (CMD 404)

## TIMEOUT ROUTING DESTINATION ASSIGNMENT (CMD 323)

**PERCEPTION 4000****COMMANDS****TIMEOUT ROUTING DESTINATION ASSIGNMENT (CMD 323)**

The Timeout Routing feature allows a call to be routed to a preselected location if the user times out while dialing. This feature is activated if the user fails to dial or fails to dial enough digits for a valid number. Up to 32 destination locations can be selected in the system. Each station can be programmed to route to one of these 32 locations in a time-out condition. If the destination location is undefined or deleted, the caller will receive Reorder Tone when the time-out occurs.

This command allows you to modify the destination location, which can be an internal station number, a logical line, an attendant or attendant group, or a hunt group pilot DN.

Command Keyword:       TIMEOUT\_ROUTING

Category Name:           Administration

**PREREQUISITE COMMANDS**

|   |   |
|---|---|
| Attendant Group Assignment (CMD 372)    | (The prerequisite commands depend upon the destination number.) |
| Attendant Position Assignment (CMD 370) |   |
| Station Assignment (CMD 330)            |   |
| Station Hunting Assignment (CMD 342)    |   |

**OPERATIONS**

Available operations:   MODIFY  
                              DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

|       |  |                    |  |
|-------|--|--------------------|--|
| INDEX |  | DESTINATION NUMBER |  |
|-------|--|--------------------|--|

◀..... req .....▶

The MODIFY operation allows you to change a destination number in the Timeout Routing Assignment Table. Both the "INDEX" and the "DESTINATION NUMBER" fields are required. The destination number can be deleted if a <CONTROL-D> is entered in that field. Loops are not allowed in either field.

## TIMEOUT ROUTING DESTINATION ASSIGNMENT (CMD 323)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|       |  |                    |  |
|-------|--|--------------------|--|
| INDEX |  | DESTINATION NUMBER |  |
|-------|--|--------------------|--|

◀.....opt.....▶

This operation displays the destination numbers assigned to the Timeout Routing Assignment Table. Parameter input is optional. Looping is allowed in the "INDEX" field, however, if no data is entered in this field, all assigned index options are displayed.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **INDEX** (Timeout Routing Index Number)  
 TYPE:        Decimal  
 FORMAT:     1 or 2 digits  
 VALUE:      1 to 32  
 LOOP:       Allowed in a DISPLAY operation

This field specifies the Timeout Routing Index Number assigned to a station, and corresponds to the "TIMEOUT INDEX" field in the Station-Level Parameter Assignment command (CMD 329). Valid entries are from 1 to 32.

FIELD:       **DESTINATION NUMBER** (Destination Directory Number)  
 TYPE:        Dialing Digits  
 FORMAT:     1 to 5 digits  
 VALUE:      0 to 99999  
 RANGE:      Allowed in a DISPLAY operation  
 LOOP:       Not allowed

This field identifies a specific destination for its associated "INDEX" number. Valid destinations include an internal station, a logical line, an attendant/attendant group, a hunt group pilot directory number, or an emergency access code. During a MODIFY operation, if a <**CONTROL-D**> is entered, the destination number will be deleted.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C32301 - DN must be an ATT/ATT GRP, Station, Hunt Group Pilot DN, or Emergency Access Code
- C32302 - No DN is found for the given INDEX

**RELATED COMMANDS**

Station-Level Parameter Assignment (CMD 329)

## TRACE SETUP (CMD 168)

The Trace Setup command is used to enable a historical output regarding a virtual machine within the PERCEPTION 4000 system. Once enabled, the PERCEPTION 4000 system will begin to collect virtual machine operating information in a designated system buffer. Collected information can be displayed via the Crash Dump Display command (CMD 164). A key on the PERCEPTION 4000 attendant console can be assigned to initiate the data collection procedure. When this key is pressed, the system will begin collecting information on the virtual machine that has been specified via the ENABLE operation. Termination of the data collection procedure requires programming input (the attendant console key does not toggle on/off operation).

Command Keyword: TRACE\_SETUP

Category Name: MAINT

### OPERATIONS

Available operations:

ENABLE  
DISPLAY  
SETUP  
SHOW

The function and required data fields for each operation are described as follows:

#### ENABLE

MCPU | LPU1 | LPU2 | LPU3 |

|←.....opt.....→|

This operation is used to specify the virtual machine about which historical information is desired.

#### DISPLAY

MCPU | LPU1 | LPU2 | LPU3 |

| tab |←.....locked.....→|

This operation displays the virtual machine that was selected through the ENABLE operation. Note that actual historical information about this virtual machine is provided via the Crash Dump Display command (CMD 164).

## TRACE SETUP (CMD 168)

**PERCEPTION 4000****COMMANDS**

## SETUP

TYPE | DN | POS |

|←.....req.....→|

This operation is used to assign a key on the PERCEPTION 4000 attendant console for the manufacturer (Toshiba) to start the virtual machine data collection procedure. Note that this key is not also used to end the data collection procedure; to end the procedure, an entry of NON in the "SHOW" field is required.

## SHOW

TYPE | DN | POS |

| tab |←...locked...→|

This operation is used to display the attendant console directory number and the key position that were setup to begin the virtual machine history collection procedure.

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **MCPU** (Main Central Processing Unit)

TYPE: Keyword

FORMAT: 3 ASCII characters

|           |     |                            |
|-----------|-----|----------------------------|
| Keywords: | APH | - Application handler      |
|           | CFM | - Command file management  |
|           | IOC | - Input/output control     |
|           | MDL | - MCPU download to cards   |
|           | MFS | - MCPU fault supervisor    |
|           | MSC | - MCPU system control      |
|           | MSM | - MCPU system management   |
|           | MTF | - MCPU traffic measurement |
|           | NON | - No setting               |

The keyword entry in the "MCPU" field specifies the MCPU virtual machine that will be monitored for historical data.

FIELD: **LPU1** (Local Processing Unit 1)

TYPE: Keyword

FORMAT: 3 ASCII characters



|           |     |                            |
|-----------|-----|----------------------------|
| Keywords: | DTF | - Data traffic measurement |
|           | LDL | - LCPU download to cards   |
|           | LFS | - LCPU fault supervisor    |
|           | LSC | - LCPU system control      |
|           | LSM | - LCPU system management   |
|           | LPC | - Logic pair control       |
|           | LTF | - LCPU traffic measurement |
|           | NON | - No setting               |

The "LPU1" field entry specifies the virtual machine related to Local Central Processing Unit 1, which will be monitored for historical data.

FIELD: **LPU2** (Local Processing Unit 2)  
 TYPE: Keyword  
 FORMAT: 3 ASCII characters

|           |     |                            |
|-----------|-----|----------------------------|
| Keywords: | DTF | - Data traffic measurement |
|           | LDL | - LCPU download to cards   |
|           | LFS | - LCPU fault supervisor    |
|           | LSC | - LCPU system control      |
|           | LSM | - LCPU system management   |
|           | LPC | - Logic pair control       |
|           | LTF | - LCPU traffic measurement |
|           | NON | - No setting               |

The "LPU2" field entry specifies the virtual machine related to Local Central Processing Unit 2, which will be monitored for historical data.

FIELD: **LPU3** (Local Processing Unit 3)  
 TYPE: Keyword  
 FORMAT: 3 ASCII characters

|           |     |                            |
|-----------|-----|----------------------------|
| Keywords: | DTF | - Data traffic measurement |
|           | LDL | - LCPU download to cards   |
|           | LFS | - LCPU fault supervisor    |
|           | LSC | - LCPU system control      |
|           | LSM | - LCPU system management   |
|           | LPC | - Logic pair control       |
|           | LTF | - LCPU traffic measurement |
|           | NON | - No setting               |

The "LPU3" field entry specifies the virtual machine related to Local Central Processing Unit 3, which will be monitored for historical data.

FIELD: **TYPE** (Device Type)  
 TYPE: Keyword  
 FORMAT: 3 ASCII characters

|           |     |   |
|-----------|-----|---|
| Keywords: | ATT | - Attendant console                         |
|           | STA | - Station (option not available—future use) |

## TRACE SETUP (CMD 168)

**PERCEPTION 4000****COMMANDS**

The "TYPE" field entry should be **ATT**. The **STA** option is for future use. The specified device is that which is to contain the key that starts the data collection procedure.

FIELD: DN (Directory Number of Device Type)  
TYPE: Decimal  
FORMAT: 1 to 5 digits  
VALUE: 1 to 99999

Enter the directory number of the device (attendant console) that is to contain the key that starts the data collection procedure.

FIELD: POS (Key Position Number)  
TYPE: Decimal or Keyword  
FORMAT: 1 to 2 digits  
VALUE: 1 to 24

Keywords: NON - Disable key operation

When programming an attendant console key for data collection initiation, specify the position number of the desired key on the console. To disable key operation or to disable the data collection procedure, enter the keyword **NON**.

**SYSTEM MESSAGES**

The following error messages are unique to this command.

C16800 - Attendant directory number already exists  
C16801 - Not an individual attendant directory number  
C16802 - Attendant directory number does not exist

**RELATED COMMANDS**

Crash Dump Display (CMD 164)

TRAFFIC MEASUREMENT OBJECT ASSIGNMENT (CMD 902)

**PERCEPTION 4000**

**COMMANDS**

**TRAFFIC MEASUREMENT OBJECT ASSIGNMENT (CMD 902)**

The Traffic Measurement Object Assignment command defines the types of objects to be tracked (attendant groups/trunk groups), and specifies the attendant group/trunk group numbers to be measured. In addition, traffic measurement can be set up to track all trunk groups. Up to 32 objects can be assigned for traffic measurement.

Command Keyword: TRAFFIC\_OBJECT

Category Name: Application Processor

**PREREQUISITE COMMANDS**

|                                      |  |
|--------------------------------------|--|
| Attendant Group Assignment (CMD 372) | (Prerequisite commands depend upon the "TYPE" selections.) |
| Trunk Assignment (CMD 313)           |  |
| Trunk Group Assignment (CMD 310)     |  |

**OPERATIONS**

Available operations: ADD  
 DELETE  
 DISPLAY  
 INIT

The function and required data fields for each operation are described in this section.

ADD

TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ

| req | ←.....opt .....→

This operation adds new objects to the Traffic Measurement Object Table, up to a total of 32 objects. To add a new object, its "TYPE" must be specified. The "OBJ" may or may not be required based on the "TYPE."

DELETE

TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ | TYPE | OBJ |

| req | ←.....opt .....→

This operation deletes an object from the table. The "TYPE" must be specified, while the "OBJ" may or may not be required based on the "TYPE."

## TRAFFIC MEASUREMENT OBJECT ASSIGNMENT (CMD 902)

**PERCEPTION 4000****COMMANDS**

## DISPLAY

|  |
|--|
| TYPE   OBJ   TYPE   OBJ   TYPE   OBJ   TYPE   OBJ   TYPE   OBJ   TYPE   OBJ   TYPE   OBJ |
|--|

◀.....output only .....▶

This operation displays the Traffic/Feature Measurement Object Table. The table displays automatically after entering a <TAB> and a <CARRIAGE RETURN>.

## INIT

|            |
|------------|
| INITIALIZE |
|------------|

|     |
|-----|
| req |
|-----|

This operation initializes the object table. Before erasing the table, the system requests confirmation of the operation. Once executed, a message displays confirming initialization.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **TYPE** (Type of Traffic)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   ATG - Attendant Group  
               TGN - Trunk Group  
               TRTL - Total for All Trunks

This field specifies the types of objects for which traffic measurement is to be performed. The **ATG** and **TGN** fields require an "OBJ," while the **TRTL** option does not. The **TRTL** option provides a total for all trunk groups that are defined in the system.

FIELD:       **OBJ** (Traffic Object - Group)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 30 for Attendant Groups (or to the maximum system configuration)  
               1 to 256 for Trunk Groups (or to the maximum system configuration)

The "OBJ" field specifies which group selected in the "TYPE" field is to be tracked. The **TRTL** option does not require an "OBJ" field entry.

FIELD:       **INITIALIZE** (Initialize Traffic Measurement Table)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

## TRAFFIC MEASUREMENT OBJECT ASSIGNMENT (CMD 902)

**PERCEPTION 4000****COMMANDS**

Keywords: YES - Perform Initialization  
NO - Cancel Initialization Request

This field initializes, or erases, all of the Traffic/Feature Measurement Object Tables. The system requests confirmation before performing the operation. Once a **YES** is entered, a message displays confirming initialization.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C90200 - Check Objects: M, M
- C90201 - N objects too many; input not accepted
- C90204 - Initialization complete
- C90205 - Maximum A:X
- C90206 - Minimum value for A:X
- C90207 - Object not found
- C90208 - Not allowed to enter data in OBJ field for TRTL type

*NOTE:* M = 1 to 14.

N = 1 to 7.

A is a keyword (TGN or ATG).

X is the maximum value of the system configuration for the keyword, i.e., if the system has a total of 5 attendant groups, any value above 5 is rejected in the **OBJ** field for attendant groups.

**RELATED COMMANDS**

- Traffic Measurement Setup Assignment (CMD 900)
- Traffic Measurement Time Zone Assignment (CMD 901)

TRAFFIC MEASUREMENT SETUP ASSIGNMENT (CMD 900)

### TRAFFIC MEASUREMENT SETUP ASSIGNMENT (CMD 900)

The Traffic Measurement Setup Assignment command activates/deactivates the traffic measurement system feature. In addition, the command selects the output device for system reports. This command is used in conjunction with the Traffic Measurement Time Zone Assignment command (CMD 901) and the Traffic Measurement Object Assignment command (CMD 902).

Command Keyword: TRAFFIC\_SETUP

Category Name: Application Processor

#### PREREQUISITE COMMANDS

There are no prerequisites for this command.

#### OPERATIONS

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

##### MODIFY

|     |     |      |    |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |
|-----|-----|------|----|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|
|     |     | DISP |    | Z01 |   | Z02 |   | Z03 |   | Z04 |   | Z05 |   | Z06 |   | Z07 |   | Z08 |   | Z09 |   | Z10 |   | Z11 |   | Z12 |   | Z13 |   | Z14 |   | Z15 |   | Z16 |   |
| A/D | DEV | SZ   | EZ | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R |

|-----opt-----|

This operation modifies the attributes of the Traffic Measurement Setup Table. All of the fields are optional.

##### DISPLAY

|     |     |      |    |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |     |   |
|-----|-----|------|----|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|
|     |     | DISP |    | Z01 |   | Z02 |   | Z03 |   | Z04 |   | Z05 |   | Z06 |   | Z07 |   | Z08 |   | Z09 |   | Z10 |   | Z11 |   | Z12 |   | Z13 |   | Z14 |   | Z15 |   | Z16 |   |
| A/D | DEV | SZ   | EZ | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R | A   | R |

|-----output only-----|

This operation displays a Traffic Measurement Setup Table. The table displays automatically after entering a <TAB> and a <CARRIAGE RETURN>.

## TRAFFIC MEASUREMENT SETUP ASSIGNMENT (CMD 900)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **A/D** (Activate/Deactivate)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: ON - Traffic Measurement is turned ON  
 OFF - Traffic Measurement is turned OFF

This field sets a "master flag" to activate/deactivate the traffic measurement feature. When set to **OFF**, the feature is turned OFF for all 16 time zones, even if a **Y** is entered in a "Znn A R" field to turn traffic measurement ON. When "A/D" is set to **ON**, each time zone may be activated/deactivated on an individual basis.

FIELD: **DEV** (Output Device)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: TTY - Report format is in TTY printer format for serial I/O port  
 AP - Report format is in AP format for AP interface

This field selects the format and output device for the reports. The output device may be either a printer (TTY) or an onscreen display (AP).

FIELD: **DISP SZ** (Starting Time Zone for Real Time Display)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16

A traffic report may be displayed at any time. This field specifies the beginning time zone for the report.

FIELD: **DISP EZ** (Ending Time Zone for Real Time Display)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16

This field specifies the ending time zone for on demand display.

FIELD: **Znn A R** (Activation Flag & Reporting Flag for a specific Time Zone)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: Y Y - Turn ON Traffic Measurement & Report  
 N N - Turn OFF Traffic Measurement & Report  
 Y N - Turn ON Traffic Measurement & Turn OFF Report  
 N Y - Turn OFF Traffic Measurement & Turn ON Report (Release 2.0 supported)

TRAFFIC MEASUREMENT SETUP ASSIGNMENT (CMD 900)

Up to sixteen time zones (Z01 to Z16) may be defined for traffic measurement each day (see the Traffic Measurement Time Zone Assignment command, CMD 901). Traffic measurement may be turned ON for a specified time zone during the day with/without report output, or turned OFF completely.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C90000 - Check input
- D90001 Failed to send transaction to TF

**RELATED COMMANDS**

- Traffic Measurement Object Assignment (CMD 902)
- Traffic Measurement Time Zone Assignment (CMD 901)



## TRAFFIC MEASUREMENT TIME ZONE ASSIGNMENT (CMD 901)

**PERCEPTION 4000****COMMANDS****TRAFFIC MEASUREMENT TIME ZONE ASSIGNMENT (CMD 901)**

The Traffic Measurement Time Zone Assignment command modifies and displays the Traffic Measurement Daily Time Zone Table. The table may have a maximum of 16 time zones.

Command Keyword: TRAFFIC\_TIME\_ZONE

Category Name: Application Processor

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**MODIFY**

TZ1 | TZ2 | TZ3 | TZ4 | TZ5 | TZ6 | TZ7 | TZ8 | TZ9 | TZ10 | TZ11 | TZ12 | TZ13 | TZ14 | TZ15 | TZ16 |

◀.....opt.....▶

This operation changes the starting time of the traffic measurement (TM) time zone(s).

**DISPLAY**

TZ1 | TZ2 | TZ3 | TZ4 | TZ5 | TZ6 | TZ7 | TZ8 | TZ9 | TZ10 | TZ11 | TZ12 | TZ13 | TZ14 | TZ15 | TZ16 |

◀.....output only.....▶

This operation displays the current Traffic Measurement Daily Time Zone Table. The table displays automatically after entering a <TAB> and a <CARRIAGE RETURN>.

## TRAFFIC MEASUREMENT TIME ZONE ASSIGNMENT (CMD 901)

**PERCEPTION 4000****COMMANDS****PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TZ1** to **TZ16** (Traffic Measurement Time Zones 1 to 16)  
 TYPE: Decimal / Keyword  
 FORMAT: 3 or 4 digits (H(H)MM, where H(H) = hour and MM = minutes)  
 Predefined ASCII characters  
 VALUE: 0 to 23 (H(H) = 24 hours/day in military time)  
 00, 15, 30, or 45 (MM = minutes in quarter hour increments)  
 LOOP: Not allowed  
 RANGE: Not allowed

Keyword: **AUTO** - Automatic generation of starting times for time zones

This field modifies or displays the starting time for individual time zones. For decimal entries, the first digit(s) represents the hour of the day in military time (0 to 23), and the last two digits represent the minute in quarter hour increments (00, 15, 30, and 45). All start times must be in ascending order from "TZ1" to "TZ16." Note that it is not necessary to define all time zones.

In a MODIFY operation, if a **<CONTROL-D>** is entered, the stored value is deleted and the field is treated as an empty field.

The keyword **AUTO** may be entered in any time zone (TZ) field. When entered, it automatically adds one hour, based on the previous time zone, to all following empty fields. If all the preceding TZs are empty, the field in which **AUTO** is entered defaults to 000.

If **AUTO** is entered in the "TZ1" field and the other TZ fields are empty, the start time in "TZ1" becomes 000 (the default value), and all subsequent TZ fields increment by one hour. For example, "TZ2" = 100, "TZ3" = 200, ... TZ16 = 1500.

If **AUTO** is entered in "TZi" ( $2 \leq i \leq 16$ ), the start time in the "TZi" field is based on the start time TZ (i-1). If the time in TZ(i-1) is empty, it is based on the time in TZ(i-2), and so on. For example, if all time zone fields have no values entered, except "TZ7" which had a start time of 10:45, then, by entering the keyword **AUTO** in field parameters "TZ2" and "TZ10," the following table would be established:

|     |     |     |     |     |      |     |     |     |      |      |      |      |      |      |      |
|-----|-----|-----|-----|-----|------|-----|-----|-----|------|------|------|------|------|------|------|
| TZ1 | TZ2 | TZ3 | TZ4 | TZ5 | TZ6  | TZ7 | TZ8 | TZ9 | TZ10 | TZ11 | TZ12 | TZ13 | TZ14 | TZ15 | TZ16 |
| 000 | 100 | 200 | 300 | 400 | 1045 |     |     |     | 1145 | 1245 | 1345 | 1445 | 1545 | 1645 | 1745 |

Another example would be to set the first time zone, then to select **AUTO** to set the balance.

|     |             |     |     |      |      |      |      |      |      |      |      |      |      |      |      |
|-----|-------------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| TZ1 | TZ2         | TZ3 | TZ4 | TZ5  | TZ6  | TZ7  | TZ8  | TZ9  | TZ10 | TZ11 | TZ12 | TZ13 | TZ14 | TZ15 | TZ16 |
| 600 | <b>AUTO</b> | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |

## TRAFFIC MEASUREMENT TIME ZONE ASSIGNMENT (CMD 901)

**PERCEPTION 4000****COMMANDS****SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C90100 - Times zones are overlapped
- C90101 - Times zones are not in ascending order
- C90102 - Format of minute should be 00, 15, 30, or 45
- C90103 - Check start time format; it would make last time zone exceed 2400
- C90104 - Failed to send transaction to TF

**RELATED COMMANDS**

- 902 Traffic Measurement Object Assignment (CMD 902)
- 900 Traffic Measurement Setup Assignment (CMD 900)

TRUNK ASSIGNMENT (CMD 313)

### TRUNK ASSIGNMENT (CMD 313)

The Trunk Assignment command installs or removes trunks from the PERCEPTION 4000 system. It also displays or changes the attributes of these facilities. Trunk attributes related to this command include the associated equipment number, trunk group number, dialing mode, signaling, CO supervision type, start method, DISA trunk flag, trunk termination method, and trunk name display.

Command Keyword: TK\_ASSIGN

Category Name: Trunk

#### PREREQUISITE COMMAND

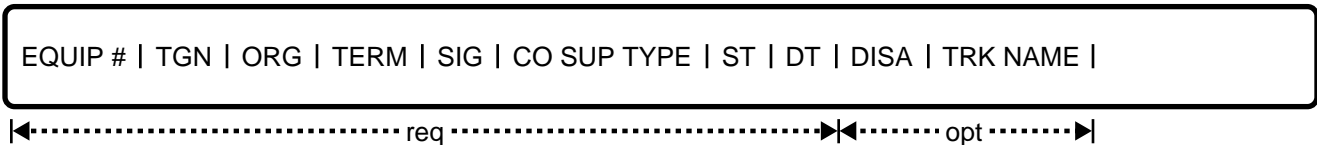
Trunk Group Assignment (CMD 310)

#### OPERATIONS

Available operations: ADD  
 DELETE  
 MODIFY  
 DISPLAY

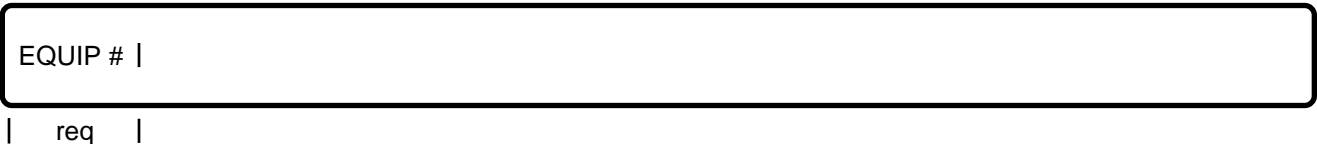
The function and required data fields for each operation are described in this section.

#### ADD



This operation installs one or more trunks to the PERCEPTION 4000 system. Ranges are permitted when installing a number of trunks in the same trunk group with identical parameters.

#### DELETE



This operation deletes one or more trunks from the PERCEPTION 4000 system. Ranges are permitted when deleting a number of trunks. However, before deleting a trunk, the trunk must be removed from its trunk hunting group (Trunk Hunting Assignment command, CMD 309). A warning is sent by the system when deleting the last trunk from a trunk group.

## MODIFY

|  |
|--|
| EQUIP #   TGN   ORG   TERM   SIG   CO SUP TYPE   ST   DT   DISA   NAME |
|--|

|              |                 |
|--------------|-----------------|
| req   output | ◀.....opt.....▶ |
| only         |                 |

This operation modifies attributes of one or more existing trunks in the system. The "TGN" field cannot be modified. To relocate a "TGN" to another trunk group, a DELETE and ADD operation must be performed. Ranges are permitted in the "EQUIP #" field when changing attributes for a number of trunks.

## DISPLAY

|  |
|--|
| EQUIP #   TGN   ORG   TERM   SIG   CO SUP TYPE   ST   DT   DISA   NAME |
|--|

|                 |
|-----------------|
| ◀.....opt.....▶ |
|-----------------|

This operation displays trunk attributes of one or more existing trunks. All of the fields are optional. If no data is entered in any of these fields, the attributes of all the trunks in the system display. Ranges are permitted in any field that accepts numeric input, such as the "EQUIP #" and "TGN" fields.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **EQUIP #** (Equipment Number)  
 TYPE:        EQ Type  
 FORMAT:     5 or 6 digits  
 VALUE:      (0)10101 to 101408 \*  
 LOOP:       Primary loop field, and allowed for all operations

\* Use the following chart to determine valid ranges for various types of equipment.

For COGI, DIDI, and EM1I cards, the following are valid ranges:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~08   | Circuit no.   |

For an EM2I card, the circuit number cannot be greater than 6:

| Digits            | Range   | Hardware      |
|-------------------|---------|---------------|
| First digit(s)    | (0)1~10 | Shelf no.     |
| Second two digits | 01~14   | Card slot no. |
| Last two digits   | 01~06   | Circuit no.   |

## TRUNK ASSIGNMENT (CMD 313)

**PERCEPTION 4000****COMMANDS**

The "EQUIP #" field defines the location of the connection to the trunk card. The first digit(s) represent the shelf number, the next two digits represent the card slot number, and finally, the last two digits represent the circuit number.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only

This field assigns a trunk group to the equipment port designated in the "EQUIP #" field. The trunk group number, which is defined with the Trunk Group Assignment command (CMD 310), cannot be modified.

FIELD: **ORG** (Originating Dial Mode)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DTMF - Dual-tone Multi-frequency  
 DP10 - Dial Pulse / 10 pulses per second  
 DP20 - Dial Pulse / 20 pulses per second

The originating dial mode is used for all outgoing and bothway trunk groups, and defines whether DTMF or dialpulse sending is used over the circuit.

FIELD: **TERM** (Terminating Dial Mode)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DTMF - Dual-tone Multi-frequency  
 DP10 - Dial Pulse / 10 pulses per second  
 DP20 - Dial Pulse / 20 pulses per second  
 NA - Not Applicable

The terminating dial mode is primarily for DID, CCSA, and incoming TIE trunk calls, and defines what type of sending the PERCEPTION 4000 system can expect to receive from the distant end. This field is not applicable for outgoing only trunk groups.

FIELD: **SIG** (Signaling)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DID - Direct Inward Dialing  
 EM1 - E&M Type 1  
 EM2 - E&M Type 2  
 GND - Ground Start  
 LP - Loop Start  
 LTIE - Loop TIE Start

The signaling field defines the type of signaling to be used by the trunk circuit. This signaling must be consistent with the type of trunk interface card installed, which in turn must be compatible with the signaling used by the serving central office.

FIELD: **CO SUP TYPE** (Central Office Supervision Type)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: CLD - Called Party Disconnect  
 CLG - Calling Party Disconnect  
 EPD - Either Party Disconnect (also called First Party Disconnect)  
 NON - No Supervision

This field determines the type of release supervision provided by the central office for a given trunk circuit. The release supervision is considered by the system whenever a Trunk-to-Trunk connection is requested in order to prevent trunk lockups. Refer to the Trunk-to-Trunk Connection Assignment command (CMD 305) for further information on trunk connections.

If the "DISA" field is set to **YES**, this field must be set to **CLG** or **EPD**.

All peripheral equipment interfacing to trunk circuits should have this field set to **NON**, indicating there is no release supervision.

FIELD: **ST** (Start Method)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DLY - Delay Dial  
 DT - Dial Tone  
 IMM - Immediate Start  
 TIM - Timing Start  
 WNK - Wink Start

The start method field is used for TIE trunks connecting different systems. The use of this field requires a knowledge of the other systems' signaling scheme, therefore coordination between administrators is important. If this field is set to **IMM**, the originating and terminating dial mode types must not be **DTMF**. **TIM** is required for loop start trunks.

FIELD: **DT** (Dial Tone)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DT - Dial Tone Returned  
 STR - Silent Tone Returned

The dial tone field is used in private network applications and determines whether the PERCEPTION 4000 system returns dial tone or silence to the calling end before the distant end begins to send digits.

## TRUNK ASSIGNMENT (CMD 313)

**PERCEPTION 4000****COMMANDS**

FIELD:        **DISA** (Direct Inward System Access Flag)  
 TYPE:         Keyword  
 FORMAT:      Predefined ASCII characters

Keywords:    YES - The trunk allows DISA  
               NO  - The trunk does not allow DISA

The Direct Inward System Access flag determines whether incoming or bothway trunks allow access to the DISA feature. Outgoing only trunks cannot be designated for DISA usage.

FIELD:        **TRK NAME** (Trunk Name)  
 TYPE:         Text  
 LENGTH:      0 to 14 ASCII characters

Each trunk circuit may optionally be assigned a name which may be up to 14 ASCII characters in length. This name appears on display-equipped stations and attendant consoles when connected to this trunk.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31300 - Trunk is not found in system
- C31301 - Trunk is already installed
- C31302 - Start method not compatible
- C31303 - DISA is not for TIE, private lines, or outgoing trunks
- C31304 - Undefined trunk group number
- C31305 - Card or equipment number is already assigned to other devices
- C31306 - No DISA flag for given trunk group number
- C31307 - Exceeds maximum trunks allowed in trunk group
- D31308 - Trunk group cannot be modified
- C31309 - Check data in TERM field
- C31310 - Signaling is not compatible
- D31311 - Download PP data failed
- C31312 - Silence tone returned only for TIE
- C31313 - Private feature key still exists
- C31314 - IMM start cannot have DTMF dial mode
- C31315 - DISA must have EPD or CLG release supervision
- C31316 - Removed hunting sequence before deleting trunk
- C31317 - Trunk name is up to 9 characters
- I31318 - Warning: N is the last trunk to be removed from trunk group M
- C31319 - Failed to read LCPU database
- C31320 - Trunks exceed the limit for LCPU-n (n = 1, 2, or 3)
- C31321 - Trunk group number should be a non-ISDN type
- C31322 - Trunk cannot be assigned to a dictation machine trunk group
- C31323 - Remove voice paging zones related to this trunk before deletion



**COMMENTS**

When installing a trunk in the database, if the physical circuit does not exist, the trunk should be marked as 'MADE BUSY' by using the Terminal Maintenance command (CMD 206).

A trunk can belong to one and only one trunk group.

Prior to removing a trunk, the trunk must first be removed from its trunk group.

User confirmation is required when deleting a number of trunks.

**RELATED COMMANDS**

- Numbering Plan Assignment (CMD 300)
- Private/Hotline Assignment (CMD 332)
- Trunk Hunting Assignment (CMD 309)
- Trunk PP Parameter Change (CMD 364)
- Trunk Routing Assignment (CMD 308)
- Trunk-to-Trunk Connection Assignment (CMD 305)

TRUNK GROUP ASSIGNMENT (CMD 310)

## TRUNK GROUP ASSIGNMENT (CMD 310)

The Trunk Group Assignment command creates or deletes trunk groups in the PERCEPTION 4000 system. This command also modifies or displays general attributes of one or more trunk groups, including the channel group (for ISDN trunks), trunk type, restriction group number, dialing definition group number, Class of Service, Destination Restriction Level, Facility Restriction Level Profile, Queuing Priority Level, answer position, trunk group home area code, answer supervision, and recall destination.

Command Keyword: TG\_ASSIGN

Category Name: Trunk

### PREREQUISITE COMMANDS

If data is entered in the "ANSPOS" field, then an appropriate command may be required for assignment of the attendant DN, attendant group DN, station DN, hunt group pilot, UCD pilot, or ACD pilot.

### OPERATIONS

Available operations: ADD  
 DELETE  
 MODIFY  
 DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|   |
|---|
| TGN   CGN   TYPE   USE   RG   DG   COS   DRL   FRLP   QPL   ANSPOS   SRG   SUP   RCLDN   HAC   GF |
| req   opt   ◀.....req.....▶ ◀.....opt.....▶  locked  ◀.....opt.....▶ locked                       |

This operation creates one or more trunk groups in the system. Ranges are permitted when adding a number of trunk groups with the same type and attributes. Note that the "S RG" and "GF" fields are locked fields.

#### DELETE

|                      |
|----------------------|
| TGN   CGN   TYPE     |
| req  ◀.....opt.....▶ |

This operation deletes one or more trunk groups from the system. The "TGN" field is required. Ranges are permitted when deleting a number of trunk groups, however, confirmation is requested by the system before deleting a group. Note that all trunks in a trunk group must be deleted before deleting the group.



## TRUNK GROUP ASSIGNMENT (CMD 310)

**PERCEPTION 4000****COMMANDS**

FIELD:       **TYPE** (Trunk Type)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

## For Non-ISDN Trunks:

Keywords:    AUX   - Auxiliary Use  
               CC     - Code Call  
               CCSA  - Common Channel Signaling Arrangement  
               CO     - Central Office  
               DID    - Direct Inward Dialing  
               DM01 to  
               DM16  - Dictation Machine groups 1 to 16.  
               DNIS  - Dialed Number Identification Service  
               FX     - Foreign Exchange  
               PVT   - Private Line or Trunk  
               TIE    - TIE Line  
               VPG   - Voice Paging  
               WATS  - Wide Area Telecommunication Service

## For ISDN Trunks:

Keywords:    ACCU  - ACCUNET Switched Digital Services  
               ATAT  - AT&T Long Distance Service—A shared use, two-way, premise-to-premise service that uses the public switched network to transmit and receive voice and data  
               IMC8  - International AT&T MEGACOM 800 service  
               INCW  - INWATS—Provides OUTWATS-like pricing and services for incoming calls  
               MAXW  - MAXWATS—A WATS-like offering; with MAXWATS, user's calls are billed at the highest WATS band subscribed to by the user  
               MC     - AT&T MEGACOM—An AT&T service that provides unbanded long distance services using special access from an AT&T node  
               MC8   - AT&T MEGACOM 800—An AT&T service that provides unbanded 800 service using special access from an AT&T node  
               MQST  - Multiquest—900 service  
               OUTW  - OUTWATS—A voice-grade service that provides both voice and low-speed data transmission capabilities from the user's location to defined service areas commonly referred to as bands  
               POTS  - Plain Old Telephone Service—Supports 3/7/10 international calls and equal access operator-related calls  
               PSDN  - Private Software Defined Network  
               SDN   - Public/Global Software Defined Network

The "TYPE" field identifies non-ISDN and ISDN trunk group usage. With non-ISDN trunk groups, trunk use can be specified as CCSA, CO, DID, DNIS, FX, TIE, WATS, or other auxiliary uses. An **AUX** entry can be used for any standard loop start or ground start trunk interface and is used to support out board equipment. The CO, FX, and WATS types are interchangeable. For ISDN trunk groups, the specified trunk use is the supported ISDN service—MEGACOM 800, Long Distance Service, etc.

## TRUNK GROUP ASSIGNMENT (CMD 310)

**PERCEPTION 4000****COMMANDS**

FIELD: **USE** (Trunk Use)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: INC - Incoming  
 OUT - Outgoing  
 BWY - Bothway

Each non-ISDN and ISDN trunk group is defined as an incoming, outgoing, or a bothway trunk group. DID, MC8, IMC8, and MQST trunks are incoming only.

FIELD: **RG** (Restriction Group Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8 (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation only

This field applies to both non-ISDN and ISDN bothway or outgoing trunk groups. DID, MC8, IMC8, and MQST trunks; dictation devices; announcement devices; and auxiliary trunk groups do not require trunk restriction.

Trunk restriction groups represent a set of trunk groups which have similar dialing restrictions placed on them due to cost factors and sensible dialing practices. For example, an FX line terminating in Dallas from Los Angeles would be prohibited from placing local calls in Los Angeles. The FX trunk groups to the Dallas area should be bundled together in one restriction group, while regular CO lines terminating to the serving central office in Los Angeles might be grouped together in another. Trunk restriction groups 2 through 8 may be used for this bundling purpose.

Restriction group 1 is reserved for use by TIE trunks and interfaces to peripheral equipment where unconventional dialing patterns are used and where absolute unrestricted dialing for all parties is required.

FIELD: **DG** (Dialing Definition Group Number)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 4  
 RANGE: Allowed in a DISPLAY operation only

This field applies to both non-ISDN and ISDN trunk groups. Dialing groups define characteristics for similar central offices. These definitions include various operator and toll prefixes, as well as N11 numbers and interchangeable office code recognition. Dialing definitions are defined with the Dialing Definition command (CMD 317). Group 1 is undefined and recommended for TIE trunk groups and trunk groups where no digit analysis or restriction is necessary.

## TRUNK GROUP ASSIGNMENT (CMD 310)

**PERCEPTION 4000****COMMANDS**

FIELD: **COS** (Class of Service)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 64  
 RANGE: Allowed in DISPLAY operation only

This field, along with the next three fields, is required for non-ISDN/ISDN TIE trunks and DISA trunks. Together, the three fields provide feature and facility access and dialing control definitions for the specified trunk. Class of Service tables are defined with the Class of Service Assignment command (CMD 334).

FIELD: **DRL** (Destination Restriction Level)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16 (or to the maximum system configuration)  
 RANGE: Allowed in DISPLAY operation only

This field, required for TIE and DISA trunks, controls outgoing calls via direct trunk group access. When DRL is 1, all calls are allowed regardless of what Restriction Group number (RG) is in use. Restriction levels are defined with the Destination Restriction Level Assignment command (CMD 337).

FIELD: **FRLP** (Facility Restriction Level Profile)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32 (or to the maximum system configuration)  
 RANGE: Allowed in DISPLAY operation only

This field, required for TIE and DISA trunks, defines restrictions assigned to various routes within each least cost routing route table. Restriction levels are defined with the Facility Restriction Level Profile Assignment command (CMD 387).

FIELD: **QPL** (Queue Priority Level)  
 TYPE: Decimal  
 FORMAT: 1 digit  
 VALUE: 1 to 8  
 RANGE: Allowed in a DISPLAY operation only

This field, required for TIE and DISA trunks, sets queuing priority for outgoing calls and is defined with the LCR Special Routing Assignment command (CMD 384).

FIELD: **ANSPOS** (Answer Position)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Not allowed

This field is used by both non-ISDN and ISDN trunk groups. The answer position field defines the directory number to which calls made via the universal attendant access code are directed. These are normally 'Dial 0' internal calls. '0' may be redefined as any legal directory number in the system numbering plan (Numbering Plan Assignment command, CMD 300).

The destination can be an attendant DN, attendant group DN, station DN, hunt group pilot, UCD pilot, or ACD pilot. This field is required for TIE trunks and DISA supporting trunk groups.

FIELD: **S RG** (Station Restriction Group Number) (Reserved for future use)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16  
 RANGE: Allowed in a DISPLAY operation only

This field defines internal station-to-station calling capabilities. This is a locked field and reserved for future use.

FIELD: **SUP** (Answer Supervision)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: YES - Answer supervision is enabled  
 NO - Answer supervision is disabled

The Answer Supervision field applies to both non-ISDN and ISDN trunk groups. The field entry tells the PERCEPTION 4000 system whether or not answer supervision is supplied to the system from the network after a call is answered. This field is useful for Station Message Detail Report (SMDR) records to know when to start billing the call. Otherwise the call is charged when the SMDR threshold timer expires, regardless of whether the call was answered immediately or never answered.

For ISDN trunks, Answer Supervision should be entered as **YES**. If a **<TAB>** is entered when assigning an ISDN trunk group via the ADD operation, then Answer Supervision will default to **YES**.

FIELD: **RCL DN** (Recall Destination Directory Number)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only

This field applies to both non-ISDN and ISDN trunk groups. The CO/FX/WATS/DID/CCSA trunks must have a recall destination directory number. This number can be either an attendant DN, an attendant group DN, or a station DN. If a **<CONTROL-D>** is entered in this field, the RCL directory number is deleted.

FIELD: **HAC** (Trunk Group's Home Area Code)  
 TYPE: Dialing Digits (i.e., 001 is not the same as 01 or 1)  
 FORMAT: 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE: 200 to 919  
 RANGE: Allowed in a DISPLAY operation only

This field applies to both non-ISDN and ISDN trunk groups. The trunk group has a home area code assigned to it which is used by the outgoing call restriction process for seven digit calls over a desired facility. The area/office and exceptional restriction tables are checked to see if the call is

## TRUNK GROUP ASSIGNMENT (CMD 310)

**PERCEPTION 4000****COMMANDS**

allowed or denied based on the trunk restriction group and calling entity's destination restriction level.

TIE trunks do not require an HAC entry. If a <CONTROL-D> is entered in this field, the HAC is deleted.

FIELD: **GF** (Global Net Flag)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters  
 DEFAULT: N

Keywords: Y = Enable global network access  
 N = Disable global network access

The "GF" field activates/deactivates access to the Global Network system, and is used only with the Toshiba Proprietary Global Network. This field applies only to non-ISDN trunks and is a locked field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31000 - Undefined trunk group number
- C31001 - Trunk group number is already defined
- C31002 - Check trunk group number range
- C31003 - HAC entry is required for outgoing and bothway trunks
- C31004 - Remove all trunks in trunk group first
- C31005 - Need RG, DG, HAC, and TF#
- C31006 - DID/INCW/MC8/IMC8/MQST trunks are incoming only
- C31007 - TIE needs COS, DRL, FRLP, QPL, and ANSPOS
- C31008 - Check answer position DN
- C31009 - No HAC or TF# needed for TIE
- C31010 - Only CO, FX, and WATS type can be interchanged
- C31011 - Remove all trunks and trunk-to-trunk connections first
- I31012 - Warning: TIE needs answer position
- C31013 - Recall DN must be an attendant group DN
- I31014 - Warning: CO/FX/WATS/CCSA/DID need RCL destination
- C31015 - Dictation machine should be bothway or outgoing type
- I31016 - Warning: LCR routes still exist in table
- I31017 - Warning: Steering digits still exist
- C31018 - Remove LCR routes before adding private trunks
- C31019 - Remove steering digits before adding private trunks
- C31020 - Remove trunks before modifying USE
- C31021 - Private trunk can only be bothway or outgoing
- C31022 - CGN field is required for ISDN trunk groups
- C31023 - CGN field should not be entered for non-ISDN trunk groups
- C31024 - Not allowed to modify trunk group type in field 3
- C31025 - Cannot delete trunk group number; CGN mismatch
- C31026 - Total DID, DNIS, CCSA type, plus DDI, DNIS inward mode cannot exceed 16
- C21027 - ISDN channel group number is not assigned
- C21028 - Duplicate trunk group type for the assigned channel group number



- C31029 - Incompatible trunk group type for the assigned channel group number
- I31030 - Warning: Undefined data in field #N
- C31031 - Not allowed to modify ISDN trunk group usage in field 4
- C31032 - OUTW/MAXW/MC trunks are outgoing only
- C31033 - HAC is needed for CO/FX/PVT/WATS/ISDN outgoing/bothway trunks

## COMMENTS

All of the trunks contained within a trunk group must be individually deleted before the trunk group can be deleted.

When the last trunk of a trunk group is removed, the status of the trunk group must be changed accordingly. Status may be indicated by a flag that denotes the empty trunk group.

The total number of DID, DNIS, and CCSA non-ISDN trunk groups, plus the total number of DDI/DNIS trunk groups must be less than or equal to 16.

For outgoing trunks, bothway trunks, and dictation machine groups to operate correctly, trunks belonging to these groups must have trunk hunting sequences defined using the Trunk Hunting Assignment command (CMD 309). This applies even if the trunk group has only one trunk, as in the case of private line trunk groups.

## RELATED COMMANDS

- Class of Service Assignment (CMD 334)
- Destination Restriction Level Assignment (CMD 337)
- Dialing Definition (CMD 317)
- Dictation Group/Machine Assignment (CMD 401)
- DID/CCSA DISA LDN Assignment (CMD 315)
- DID/CCSA LDN Assignment (CMD 316)
- DID/CCSA Trunk Group Assignment (CMD 314)
- Facility Restriction Level Profile Assignment (CMD 387)
- ISDN Trunk Group Parameter Assignment (CMD 421)
- LCR Routing Table Assignment (CMD383)
- Numbering Plan Assignment (CMD 300)
- Private/Hotline Assignment (CMD 332)
- SMDR Configuration Assignment (CMD 409)
- Traffic Measurement Object Assignment (CMD 902)
- Trunk Assignment (CMD 313)
- Trunk Group Parameter Assignment (CMD 420)
- Trunk Group Routing Assignment (CMD 307)
- Trunk Hunting Assignment (CMD 309)
- Trunk PP Parameter Change (CMD 364)
- Trunk-to-Trunk Connection Assignment (CMD 305)
- Voice Paging/Code-Call Assignment (CMD 319)

## TRUNK GROUP PARAMETER ASSIGNMENT (CMD 420)

**PERCEPTION 4000****COMMANDS****TRUNK GROUP PARAMETER ASSIGNMENT (CMD 420)**

The Trunk Group Parameter Assignment command allows the attributes of one or more non-ISDN or ISDN trunk groups to be displayed or modified. Trunk group attributes include: translation profile number; toll-free table number; incoming call ACD queue priority level; incoming call ACD queue priority timer; next incoming call ACD queue priority level; and ACD overflow destination.

Command Keyword: TG\_PARAMETER

Category Name: Trunk

**PREREQUISITE COMMANDS**

Trunk Group Assignment (CMD 310)

**OPERATIONS**

Available operations:

DISPLAY  
MODIFY

The function and required data fields for each operation are described as follows:

**DISPLAY**

TGN | PLF# | TF# | TF# | TF# | IQP1 | IQPTMR | IQP2 | OVFTMR |

←.....opt.....→

This operation is used to display the trunk attributes of one or more existing trunk groups. If no data is input in this operation, then the attributes of all trunk groups in the PERCEPTION 4000 system will be displayed. Information relating only to specific trunk groups is provided by entering each trunk group's corresponding trunk group number. Range entries are permitted in selected fields, including Trunk Group Number and Translation Profile Number.

**MODIFY**

TGN | PLF# | TF# | TF# | TF# | IQP1 | IQPTMR | IQP2 | OVFTMR |

| req | ←.....opt.....→

## TRUNK GROUP PARAMETER ASSIGNMENT (CMD 420)

**PERCEPTION 4000****COMMANDS**

This operation is used to modify the attributes of one or more existing trunk groups. Data input is required only in the "TGN" field; other fields are optional. Range entries are permitted in the "TGN" field.

Form:

**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or maximum system trunk configuration)  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Allowed in all operations

The "TGN" entry is required in the MODIFY operation. In the DISPLAY operation, this is an optional field. If no entry is made, then the attributes of all trunk groups in the PERCEPTION 4000 system will be displayed.

FIELD: **PFL#** (Profile Number)  
 TYPE: Decimal or Keyword  
 FORMAT: 1 to 2 digits; preassigned ASCII characters  
 VALUE: 1 to 32  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

Keyword: NON - No translation profile number is assigned

This field is used to assign a translation profile number to each trunk group. This field applies to both non-ISDN and ISDN trunk groups. The default value for this field is NON.

FIELD: **TF#** (Toll-free Table Number)  
 TYPE: Decimal  
 FORMAT: 1 to 2 digits  
 VALUE: 1 to 16 (or maximum system configuration)  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

This field applies to both non-ISDN and ISDN trunk groups. Up to three defined toll-free area/office code tables can be assigned to a trunk group. A table number can be entered in each of the provided "TF#" programming fields. If **<Control> D** is entered, the entered "TF#" value will be deleted. The toll-free area/office code tables are defined by using CMD 311.

FIELD: **IQP1** (Incoming ACD Call Queuing Priority)  
 TYPE: Decimal  
 FORMAT: 1 to 2 digits  
 VALUE: 1 to 16 (1 is the highest priority; 16 is the lowest priority)  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not Allowed

## TRUNK GROUP PARAMETER ASSIGNMENT (CMD 420)

**PERCEPTION 4000****COMMANDS**

This field applies to both non-ISDN and ISDN trunk groups. The positioning of an ACD call into the ACD queue depends on the assigned priority level of the trunk used to route the call. ACD calls routed over high-priority trunks (such as 1) will be positioned at the front of the ACD queue and will be the first calls to be sent to available ACD agents. Conversely, ACD calls routed over low priority trunks (such as 16) will be positioned at the end of the ACD queue and will be sent to available ACD agents only after all ACD calls with higher priorities are handled.

When a trunk group is first assigned via the Trunk Group Assignment command (CMD 310), the "IQP1" value defaults to 1. Alterations to this value are made via the "IQP1" field in CMD 420. An "IQP1" value cannot be deleted by using the Delete symbol; it must be a valid value of 1 to 16.

FIELD: **IQP TMR** (Incoming ACD Call Queing Priority Timer)  
 TYPE: Decimal  
 FORMAT: 1 to 4 digits  
 VALUE: 1 to 9999, in seconds  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

This field applies to both non-ISDN and ISDN trunk groups. The "IQP TMR" field defines the time (in seconds) that an incoming ACD call can wait in the ACD queue for an available ACD agent. Once this timer expires, the ACD call will be repositioned in the ACD queue as determined by its assigned "IQP2" priority level. This field should be defined if an "IQP2" value is assigned. If **<Control> D** is entered, then both the "IQP TMR" and "IQP2" values will be deleted.

FIELD: **IQP2** (Second Incoming ACD Call Queing Priority)  
 TYPE: Decimal  
 FORMAT: 1 to 2 digits  
 VALUE: 1 to 16 (1 is the highest priority; 16 is the lowest priority)  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

This field applies to both non-ISDN and ISDN trunk groups. The "IQP2" priority level is the new priority level assigned to an incoming ACD call that has waited in the QCD queue longer than allowed by the incoming ACD call queuing priority timer ("IQP TMR"). Once this timer expires, the waiting ACD call is repositioned in the ACD queue depending on its new priority level. Note that the "IQP2" priority level must be greater than the "IQP1" priority level (i.e., the numeric value of "IQP2" must be less than "IQP1"). If the "IQP2" field is assigned a value, then both the "IQP1" and "IQP TMR" fields must also be assigned. If **<Control> D** is entered in the "IQP2" field, then both the "IQP2" and "IQP TMR" values will be deleted.

FIELD: **OVF TMR** (ACD Overflow Timer)  
 TYPE: Decimal  
 FORMAT: 1 to 4 digits  
 VALUE: 1 to 9999, in seconds  
 RANGE: Allowed in DISPLAY operation only  
 LOOP: Not allowed

This field applies to both non-ISDN and ISDN trunk groups. The OVF TMR value represents the overall time (in seconds) that an incoming ACD call can wait in the ACD queue. This assignment is independent of the trunk group's assigned priority value(s) and the ACD call queuing priority

## TRUNK GROUP PARAMETER ASSIGNMENT (CMD 420)

**PERCEPTION 4000****COMMANDS**

timer ("IQP TMR"). Once the ACD overflow timer ("OVF TMR") expires, the waiting ACD call will be routed to a preassigned overflow destination, as assigned via the ACD Group Parameter Assignment command (CMD 357). Note that the "OVF TMR" value must be greater than that of the "IQP TMR."

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C42000 - Undefined trunk group number
- C42001 - Check trunk group number range
- C42002 - Incoming trunks cannot be toll-free
- C42003 - Check toll-free number
- C42004 - Toll-free is not required for TIE trunks
- C42005 - Duplicated TF# table
- C42006 - Toll-free table overflow; cannot add more
- C42007 - IQP2 should be less than IQP1
- C42008 - IQP1 timer and IQP2 should be entered together
- C42009 - ACD overflow timer should be greater than IQP TMR

**RELATED COMMANDS**

DID/CCSA/DNIS DISA LDN Assignment (CMD 315)  
DID/CCSA/DNIS LDN Assignment (CMD 316)  
DID/CCSA/DNIS Trunk Group Assignment (CMD 314)  
LCR Routing Table Assignment (CMD 383)  
Private Line/Hotline Assignment (CMD 332)  
SMDR Configuration Assignment (CMD 409)  
Trunk Assignment (CMD 313)  
Traffic Measurement Object Assignment (CMD 902)  
Trunk Group Routing Assignment (CMD 307)  
Trunk Hunting Assignment (CMD 309)  
Trunk-to-Trunk Connection Assignment (CMD 305)  
Voice Paging/Code Call Assignment (CMD 319)

## TRUNK GROUP ROUTING ASSIGNMENT (CMD 307)

**PERCEPTION 4000****COMMANDS****TRUNK GROUP ROUTING ASSIGNMENT (CMD 307)**

The Trunk Group Routing Assignment command provides a means of routing incoming trunk calls, with the exception of DID, CCSA, DISA, and inbound TIE trunks. When a call arrives on a trunk, the Trunk Routing Table is checked to see if unique routing is defined for the trunk in the active time zone. If not, the Trunk Group Routing Table is examined for routing instructions for that trunk group as defined for the time zone that is active. If no definition exists at either the trunk or trunk group level for the time zone used, the caller receives CO ringback indefinitely.

This command provides up to three routing destinations at the trunk group level for the given time zone.

Command Keyword: TG\_ROUTING

Category Name: Trunk

**PREREQUISITE COMMANDS**

Time Zone Assignment (CMD 336)  
Trunk Assignment (CMD 313)  
Trunk Group Assignment (CMD 310)

Depending on the route choices, appropriate commands from the following list may be required for assignment.

ACD Group Assignment (CMD 355)  
Announcement Pattern Assignment (CMD 353)  
Attendant Group Assignment (CMD 372)  
Attendant Position Assignment (CMD 370)  
Miscellaneous Device Assignment (CMD 400)  
Night Bell Assignment (CMD 405)  
Station Assignment (CMD 330)  
Station Hunting Assignment (CMD 342)  
System Speed Calling Assignment (CMD 402)  
UCD Group Assignment (CMD 354)

**OPERATIONS**

Available operations: MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

## TRUNK GROUP ROUTING ASSIGNMENT (CMD 307)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|     |        |          |          |          |  |
|-----|--------|----------|----------|----------|--|
|     | TIME   | ROUTE    | ROUTE    | ROUTE    |  |
| TGN | ZONE # | CHOICE 1 | CHOICE 2 | CHOICE 3 |  |

◀.....req.....▶|◀.....opt.....▶

This operation changes the routing destinations of one or more trunk groups. The "TGN" and "TIME ZONE #" fields are required, while the route choice fields are optional. Ranges are permitted in the "TGN" field when modifying a number of trunk groups with the same routing destinations. All calls "ON HOLD" or "IN PROGRESS" must be completed before a MODIFY operation may be performed.

## DISPLAY

|     |        |          |          |          |  |
|-----|--------|----------|----------|----------|--|
|     | TIME   | ROUTE    | ROUTE    | ROUTE    |  |
| TGN | ZONE # | CHOICE 1 | CHOICE 2 | CHOICE 3 |  |

◀.....opt.....▶

This operation displays routing destinations of one or more trunk groups. All of the fields are optional. If no data is entered in any of these fields, the routing destinations of all the trunk groups in the system display. Ranges are permitted in all fields.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **TGN** (Trunk Group Number)  
 TYPE:            Decimal  
 FORMAT:         1 to 3 digits  
 VALUE:          1 to 256 (or to the maximum system configuration)  
 LOOP:           Primary loop field, and allowed in all operations

This field specifies the trunk group number to be defined. The number is previously assigned with the Trunk Group Assignment command (CMD 310).

FIELD:           **TIME ZONE #**  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          1 to 4  
 LOOP:           Allowed in all operations

Inbound routing destinations can be varied from time zone to time zone. This field specifies the time zone to be defined.

FIELD:           **ROUTE CHOICE 1/2/3**  
 TYPE:            Dialing Digits / Keyword  
 FORMAT:         1 to 5 digits / 4 to 6 digits

## TRUNK GROUP ROUTING ASSIGNMENT (CMD 307)

**PERCEPTION 4000****COMMANDS**

VALUE: 0 to 99999 / Speed Access Code + Index

Keywords: AP01 ~ AP50      Announcement Pattern Number  
 BL01 ~ BL64      Night Bell  
 NON              No Routing

"ROUTE CHOICE 1" can be one of the following:

- a) Individual attendant console directory number
- b) Attendant group directory number
- c) Station number
- d) Announcement pattern number
- e) Hunt group pilot number
- f) UCD group pilot number
- g) ACD group pilot number
- h) Speed calling codes (System speed calling access code plus system speed calling index number)
- i) Night bell
- j) No routing (May be used for Route Choice 1 only)

"ROUTE CHOICE 2" has the same options as "ROUTE CHOICE 1." *However, to define "ROUTE CHOICE 2," "ROUTE CHOICE 1" must be defined as an attendant or an attendant group which is found to be unavailable (in the Position Busy mode).*

"ROUTE CHOICE 3" has the same options as "ROUTE CHOICE 1," with the exception of the attendant and attendant group options. *To define "ROUTE CHOICE 3," both "ROUTE CHOICE 1" and "2" must be defined as an attendant or attendant group or mix thereof, with both route choices "1" and "2" unavailable due to console or attendant group Position Busy mode.*

In cases where the attendant or attendant group is in the Position Busy mode, the call is routed to the second choice. If the second choice is an attendant or attendant group in the Position Busy mode, the call is routed to the third choice. Depending on what Route 3 is defined as, other call processing may be performed by hunting, UCD, ACD, or call forwarding.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C30700 - Undefined trunk group number
- C30701 - Check trunk group number range
- C30702 - Undefined night bell
- C30703 - Undefined announcement machine
- C30704 - Check time zone number range
- C30705 - Check directory number
- C30706 - Check combination of routing destinations
- C30707 - Check trunk use
- C30708 - Check trunk type
- C30709 - Check announcement machine usage



TRUNK GROUP ROUTING ASSIGNMENT (CMD 307)

**PERCEPTION 4000**

**COMMANDS**

C30710 - NON is allowed for Route Choice 1 only  
I30711 - Warning, Undefined data in Route Choice #n

**RELATED COMMANDS**

Time Zone Assignment (CMD 336)  
Trunk Routing Assignment (CMD 308)

TRUNK GROUP TOLL-FREE TABLES (CMD 311)

### TRUNK GROUP TOLL-FREE TABLES (CMD 311)

Up to 16 toll-free area/office code tables may be defined for the system's trunk groups. These tables define the toll-free zone around a serving central office. Up to three tables may be assigned to any given trunk group. These tables are used by the outgoing call restriction process for a given trunk restriction group and calling device destination restriction level.

The Trunk Group Toll-free tables are optional for outgoing call management, but provide a convenient shorthand method for allowing only toll-free calls over certain facilities by certain calling entities.

Command Keyword: TG\_TF\_TABLES

Category Name: Trunk

#### PREREQUISITE COMMANDS

There are no prerequisites for this command.

#### OPERATIONS

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

TBL# | AC | OC | OC | OC | OC | OC | OC | OC | OC | OC | OC | OC |

◀.....req.....▶◀.....opt.....▶

This operation defines new area/office code toll-free tables and adds entries to them. Since it is possible for one or more tables to have the same area code, the table number is required to uniquely identify it. Ranges are permitted in the "TBL#" field. The office code fields allow scope entries.

#### DELETE

TBL# | AC | OC | OC | OC | OC | OC | OC | OC | OC | OC | OC |

◀.....req.....▶◀.....opt.....▶

## TRUNK GROUP TOLL-FREE TABLES (CMD 311)

**PERCEPTION 4000****COMMANDS**

This operation deletes entries in the area/office code toll-free tables. When all entries within a table are deleted, the table automatically becomes free. Since it is possible for one or more tables to have the same area code, the table number is required to uniquely identify it. Ranges are permitted in the "TBL#" and "AC" fields. The office code fields allow scope entries.

## DISPLAY

|   |
|---|
| TBL#   AC   OC   OC   OC   OC   OC   OC   OC   OC   OC   OC |
|---|

|◀.....opt.....▶|

This operation displays all area/office code toll-free table(s), or entries within the table(s), that meet the conditions established for each field. Ranges are allowed in all fields.

**PARAMETERS**

This section defines inputs permitted for each field. Any variations for a particular operation are noted separately.

FIELD: **TBL#** (Table Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 32 (or maximum configuration number)  
 LOOP: Allowed in all operations

This field represents the Trunk Group Toll-free Table number.

FIELD: **AC** (Area Code)  
 TYPE: Decimal with fixed length  
 FORMAT: 3 digits in the form N Y X (where N = 2 to 9, Y = 0 or 1, and X = 0 to 9)  
 VALUE: 200 to 919  
 LOOP: Allowed in DISPLAY and DELETE operations

This field represents the area code.

FIELD: **OC** (Office Code)  
 TYPE: Decimal with fixed length  
 FORMAT: 3 digits in the form NXX (N = 2 to 9, X = 0 to 9)  
 VALUE: 200 to 999 inclusive  
 RANGE: Allowed in a DISPLAY operation  
 SCOPE: Allowed in ADD and DELETE operations

This field represents the office code. All office codes listed in these tables are toll-free. The first "OC" field is required in ADD and DELETE operations.

### SYSTEM ERROR MESSAGES

The following error message are unique to this command.

- C31100 - The table is not in use
- C31101 - Invalid table number
- C31102 - Invalid office code high bound
- C31103 - Invalid office code low bound
- C31104 - Invalid office code range
- C31105 - Area code does not match table number
- C31106 - Scope data must have low and high bounds in fields
- C31107 - Scope data must have high bound in field
- C31108 - Scope data must have low bound in field
- C31109 - Scope data is not allowed in the last field
- C31110 - Database update failed; software error
- C31111 - Area code is needed when first creating table

### RELATED COMMANDS

Trunk Group Assignment (CMD 310)—The Trunk Group Assignment command assigns the toll-free AC/OC tables defined here to each trunk group created.

## TRUNK HUNTING ASSIGNMENT (CMD 309)

Trunk hunting determines the type and order of hunting that is performed by the system when a trunk group is selected to make an outbound call. This command adds/modifies the hunting method, adds/deletes hunting sequence numbers of trunks in a trunk group, and displays the hunting method and hunting sequence numbers. This command must be performed for all outgoing and bothway trunk groups as well as dictation machine and private line trunk group members.

Command Keyword: TRUNK\_HUNTING

Category Name: Trunk

### PREREQUISITE COMMANDS

Dictation Group/Machine Assignment (CMD 401)

Command 401 is required if a Dictation Machine group trunk type is selected in the "TGN" field.

Trunk Assignment (CMD 313)

Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

TGN | TYPE | SEQ# | EQUIP # |

| req | opt | ◀.....req.....▶ |

This operation adds a hunting method or sets a hunting sequence for trunks in a trunk group. Loops are allowed in the "TGN" and "SEQ#" fields. When adding a specific sequence number for an equipment circuit, all following equipment numbers are re-sequenced automatically.

#### DELETE

TGN | TYPE | SEQ# | EQUIP # |

| req | opt | req | opt |

TRUNK HUNTING ASSIGNMENT (CMD 309)

This operation deletes a trunk from the trunk hunting group. When deleting a specific sequence number, all of the following trunks are re-sequenced automatically. If the keyword **ALL** is entered in the "SEQ#" field, all the trunks in the trunk hunting group are deleted.

MODIFY

TGN | TYPE |

◀..... req .....▶

This operation modifies the hunting method for trunk groups. Ranges are permitted in the "TGN" field.

DISPLAY

TGN | TYPE | SEQ# | EQUIP # |

◀.....opt.....▶

This operation displays the hunting method and sequence of trunks in a trunk hunting group(s). Ranges are permitted in the "TGN" and "SEQ#" fields. If no data is entered in the "SEQ#" field, all equipment numbers for the given trunk group display.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 LOOP: Allowed in all operations except DELETE

This field specifies the trunk group number to be defined. The number is previously assigned with the Trunk Group Assignment command (CMD 310).

*NOTE: Incoming only trunk groups are not allowed PBX-side trunk hunting assignment.*

FIELD: **TYPE** (Hunting Method)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: DIST - Distributed method  
 TERM- Terminal method

Distributed and terminal hunting methods are available on the PERCEPTION 4000 system. The distributed hunting method attempts to seize a trunk from the trunk group by remembering which circuit was last used for an outgoing call, and then connecting the user to the next idle trunk in

sequence. This method has the primary advantage of distributing traffic evenly to all circuits, thereby prolonging hardware equipment life.

Terminal hunting is used in situations where glare (sometimes referred to as collision) may be a problem. Glare occurs usually on loop-start trunks when an inbound call simultaneously seizes the same trunk being used to perform an outbound call. Thus two parties are connected with each other accidentally. When setting up terminal hunting, inbound traffic ordering should be from the 'top down', while outbound traffic ordering should be from the 'bottom up'. This eliminates the chance of glare.

*NOTE: Dictation machine groups only support the terminal hunting method.*

FIELD: **SEQ#** (Hunting Sequence Number)  
 TYPE: Decimal  
 VALUE: 1 to 64  
 KEYWORD: ALL (Used in DELETE operation only)  
 LOOP: Allowed in ADD/DISPLAY operation

This field defines the sequence in which the system hunts through the trunks for outgoing calls for the specified trunk group. Sequence numbers are reordered automatically when a trunk is added to or deleted from the trunk group.

FIELD: **EQUIP #** (Trunk Equipment Number)  
 TYPE: EQ Type  
 FORMAT: 5 or 6 digits  
 VALUE: (0)10101 to 101408  
 RANGE: Allowed in a DISPLAY operation

The equipment number is assigned with the Trunk Assignment command (CMD 313). This field selects the appropriate trunk to be added, deleted, or displayed in the trunk hunting feature.

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C30900 - Trunk group number not found
- C30901 - Undefined trunk group number
- C30902 - Trunk group number is out of range
- C30903 - Sequence number already exists
- C30904 - Hunting method mismatch
- C30905 - Check trunk use (incoming trunk)
- C30906 - Check type of trunk
- C30907 - Invalid input
- C30908 - Undefined sequence number
- C30909 - Unsuitable sequence number
- C30910 - Equipment number mismatch
- C30911 - No sequence number is defined
- C30912 - Hunting method required
- C30913 - Equipment is not installed
- C30914 - Equipment number can only have a maximum of eight circuits
- C30915 - Dictation machine can only use terminal hunt

TRUNK PP PARAMETER CHANGE (CMD 364)

**TRUNK PP PARAMETER CHANGE (CMD 364)**

The Trunk PP Parameter Change command is used to modify or display the settings that are assigned to each trunk. Such parameters include start check error time, interdigit timers, dial width, dial time, dial tone width, busy tone width, and disconnect timers.

Command Keyword: TRUNK\_PARAMETER\_CHANGE

Category Name: Trunk

**PREREQUISITE COMMANDS**

Trunk Group Assignment (CMD 310)  
Trunk Assignment (CMD 313)

**OPERATIONS**

Available operations:

- MODIFY
- DISPLAY

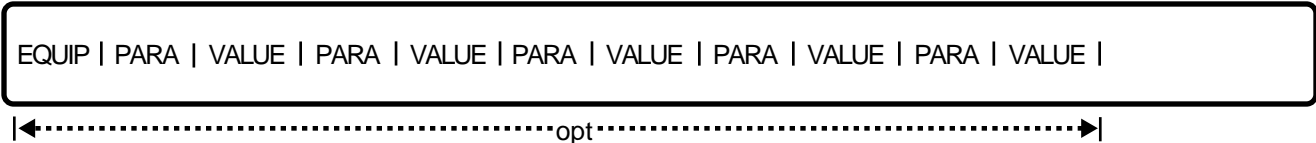
The function and required data fields for each operation are described as follows:

MODIFY



This operation modifies the parameters of a specified trunk. "EQUIP NUM" is a required field and must be input. All remaining fields are optional. If any of the "PARA" fields are entered, the corresponding value field must also be entered. The first "PARA" and "VALUE" fields are required for this operation.

DISPLAY



This operation displays trunk parameter values. EQUIP NUM is a loop field. All fields for this operation are optional and may not be input. The following header text is displayed while in the DISPLAY operation.



**PARAMETERS**

This section defines input permitted for each field. Any variations for a particular operation are noted separately.

FIELD:           **EQUIP** (Equipment number)  
 TYPE:            Decimal  
 FORMAT:         6 digits  
 VALUE:          010101 to 121416  
 LOOP:           Allowed in both MODIFY and DISPLAY operations

This field indicates the equipment number of the trunk that is to be changed or displayed. The first two digits represent the number of the shelf containing the trunk circuit card; the next two digits represent the card slot number; and the last two digits represent the circuit number.

FIELD:           **PARA** (Parameter to be changed)  
 TYPE:            Keyword  
 FORMAT:         Preassigned ASCII characters

**KEYWORDS:**

CKERR    -   Number of start check errors  
 CKTIM    -   Start check error time  
 1TIME    -   First interdigit timer  
 2TIME    -   Second interdigit timer  
 DLWDT    -   Dial width  
 DLTIM    -   Dial time  
 GDTIM    -   Guard time  
 DTONW    -   Dial tone on width  
 DTOFW    -   Dial tone off width  
 SDTON    -   Secondary dial tone on width  
 SDTOF    -   Secondary dial tone off width  
 BTONW    -   Busy tone on width  
 BTOFW    -   Busy tone off width  
 DISHC    -   Disconnect time for E&M line or HIC open time for loop line

FIELD:           **VALUE** (Value of the parameter)  
 TYPE:            Decimal  
 FORMAT:         1 to 5 digits  
 VALUE:          0 to 10200  
 RANGE:         Not allowed  
 LOOP:           Not allowed

The values in this field depend on the parameter input. The values are as follows:

|       |   |      |   |       |              |
|-------|---|------|---|-------|--------------|
| CKERR | - | 1    | - | 100   | seconds      |
| CKTIM | - | 1000 | - | 10000 | milliseconds |
| 1TIME | - | 2    | - | 40    | seconds      |
| 2TIME | - | 2    | - | 40    | seconds      |
| DLWDT | - | 80   | - | 600   | milliseconds |
| DLTIM | - | 80   | - | 600   | milliseconds |
| GDTIM | - | 440  | - | 10200 | milliseconds |

## TRUNK PP PARAMETER CHANGE (CMD 364)

**PERCEPTION 4000****COMMANDS**

|       |   |     |   |       |              |
|-------|---|-----|---|-------|--------------|
| DTONW | - | 40  | - | 10200 | milliseconds |
| DTOFW | - | 40  | - | 10200 | milliseconds |
| SDTON | - | 40  | - | 10200 | milliseconds |
| SDTOF | - | 40  | - | 10200 | milliseconds |
| BTONW | - | 40  | - | 10200 | milliseconds |
| BTOFW | - | 40  | - | 10200 | milliseconds |
| DISHC | - | 160 | - | 10200 | milliseconds |

**SYSTEM MESSAGES**

The following error messages are unique to this command.

- C36400 - Check start check error range
- C36401 - Check start check error time range
- C36402 - Check first interdigit timer range
- C36403 - Check second interdigit timer range
- C36404 - Check dial width range
- C36405 - Check dial time range
- C36406 - Check guard time range
- C36407 - Check dial tone on width
- C36408 - Check dial tone off width
- C36409 - Check secondary tone on width
- C36410 - Check secondary tone off width
- C36411 - Check busy tone on width
- C36412 - Check busy tone off width
- C36413 - Check disconnect time/HIC open time
- C36414 - Equipment is not a trunk
- C36415 - Invalid keyword entered
- C36416 - Must input the parameter value
- C36417 - Must input the parameter number
- C36419 - All millisecond input must be in multiples of 40
- C36420 - Equipment number can only have a maximum of eight circuits

**COMMENTS**

Guard time must be greater than the disconnect time for E&M trunk or HIC open time for LOOP trunk.

**RELATED COMMANDS**

Trunk Assignment (CMD 313)  
Trunk Group Assignment (CMD 310)

## TRUNK ROUTING ASSIGNMENT (CMD 308)

The Trunk Routing Assignment command provides a means of routing incoming trunk calls, with the exception of DID, CCSA, DISA, and inbound TIE trunks. When a call arrives on a trunk, the Trunk Routing Table (CMD 308) is checked to see if unique routing is defined for the trunk in the active time zone. If not, the Trunk Group Routing Table (CMD 307) is examined for routing instructions for that trunk group as defined for the time zone that is active. If no definition exists at either the trunk or trunk group level for the time zone used, the caller receives CO ringback indefinitely.

This command provides up to three routing destinations for the given time zone.

Command Keyword: TRUNK\_ROUTING

Category Name: Trunk

### PREREQUISITE COMMANDS

Trunk Assignment (CMD 313)  
 Trunk Group Assignment (CMD 310)  
 Time Zone Assignment (CMD 336)

Depending on the route choices, appropriate commands from the following list may be required for assignment.

ACD Group Assignment (CMD 355)  
 Attendant Group Assignment (CMD 372)  
 Attendant Position Assignment (CMD 370)  
 Announcement Pattern Assignment (CMD 353)  
 Miscellaneous Device Assignment (CMD 400)  
 Night Bell Assignment (CMD 405)  
 Station Assignment (CMD 330)  
 System Speed Calling Assignment (CMD 402)  
 UCD Group Assignment (CMD 354)

### OPERATIONS

Available operations: MODIFY  
 DISPLAY

The function and required data fields for each operation are described in this section.

#### MODIFY

|         |        |          |          |          |  |
|---------|--------|----------|----------|----------|--|
|         | TIME   | ROUTE    | ROUTE    | ROUTE    |  |
| EQUIP # | ZONE # | CHOICE 1 | CHOICE 2 | CHOICE 3 |  |

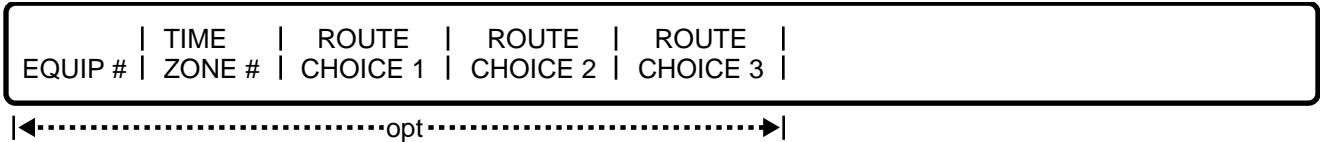
◀..... req .....▶▶..... opt .....▶▶

TRUNK ROUTING ASSIGNMENT (CMD 308)

**PERCEPTION 4000** **COMMANDS**

This operation changes the routing destinations of one or more trunks. The "EQUIP #" and "TIME ZONE #" fields are required, while the route choice fields are optional. Ranges are permitted in the "EQUIP #" field when modifying a number of trunks with the same routing destinations. When performing a MODIFY operation, the specified trunk may not have any calls "ON HOLD" or "IN PROGRESS".

DISPLAY



This operation displays the routing destinations of one or more trunks. All of the fields are optional. If no data is entered in any of these fields, the routing destinations of all the trunks in the system display. Ranges are permitted in all fields.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **EQUIP #** (Equipment Number)  
 TYPE:           EQ Type  
 FORMAT:        5 or 6 digits  
 VALUE:         (0)10101 to 101408  
 LOOP:          Primary loop field, and allowed in all operations.

The equipment number is assigned with the Trunk Assignment command (CMD 313). This field selects the appropriate trunk to be modified or displayed.

FIELD:           **TIME ZONE #**  
 TYPE:           Decimal  
 FORMAT:        1 digit  
 VALUE:         1 to 4  
 LOOP:          Allowed in a DISPLAY operation only

Inbound routing destinations can be varied from time zone to time zone. This field specifies the time zone to be defined.

FIELD:           **ROUTE CHOICE 1/2/3**  
 TYPE:           Dialing Digits / Keyword  
 FORMAT:        1 to 5 digits / 4 to 6 digits  
 VALUE:         0 to 99999 / Speed Access Code + Index

|           |             |                             |
|-----------|-------------|-----------------------------|
| Keywords: | AP01 ~ AP50 | Announcement Pattern Number |
|           | BL01 ~ BL64 | Night Bell                  |
|           | NON         | No Routing                  |

"ROUTE CHOICE 1" can be one of the following:

- a) Individual attendant console directory number
- b) Attendant group directory number
- c) Station number
- d) Announcement call treatment pattern number
- e) Hunt group pilot number
- f) UCD group pilot number
- g) ACD group pilot number
- h) Speed call codes (System speed calling access code plus system speed calling index number)
- i) Night bell
- j) No routing (may be used for Route Choice 1 only)

"ROUTE CHOICE 2" has the same options as "ROUTE CHOICE 1". *However, to define "ROUTE CHOICE 2", "ROUTE CHOICE 1" must be defined as an attendant or an attendant group which is found to be unavailable (in the Position Busy mode).*

"ROUTE CHOICE 3" has the same options as "ROUTE CHOICE 1", with the exception of the attendant and attendant group options. *To define "ROUTE CHOICE 3", both "ROUTE CHOICE 1" and "2" must be defined as an attendant or attendant group or mix thereof, with both route choices "1" and "2" unavailable due to console or attendant group Position Busy mode.*

In cases where the attendant or attendant group is in the Position Busy mode, the call is routed to the second choice. If the second choice is an attendant or attendant group in the Position Busy mode, the call is routed to the third choice. Depending on what Route 3 is defined as, other call processing may be performed by hunting, UCD, ACD, or call forwarding.

## SYSTEM ERROR MESSAGES

The following error message are unique to this command.

- C30800 - Specified trunk is not in the system
- C30801 - Specified equipment number is not a trunk device
- C30802 - Undefined night bell
- C30803 - Undefined announcement machine
- C30804 - Check time zone number range
- C30805 - Check directory number
- C30806 - Check combination of routing destinations
- C30807 - Outgoing trunk group does not have routing
- C30808 - Check trunk type
- C30809 - NON is allowed for Route Choice 1 only
- C30810 - Check announcement machine usage
- C30811 - Only display operation is allowed for private trunk
- C30812 - Equipment number can only have a maximum of eight circuits
- I30813 - Warning: Undefined data in ROUTE CHOICE n field

## RELATED COMMAND

Station Hunting Assignment (CMD 342)

TRUNK-TO-TRUNK CONNECTION ASSIGNMENT (CMD 305)

## TRUNK-TO-TRUNK CONNECTION ASSIGNMENT (CMD 305)

The Trunk-to-Trunk Connection Assignment command contains two tables which allow or deny trunk connections between incoming, outgoing, and bothway trunks. These tables are the Attendant Capability Table and the Station Connectivity Table.

Command Keyword: TRUNK\_CONNECTIONS

Category Name: Trunk

### PREREQUISITE COMMAND

Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations: ADD  
 DELETE  
 DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|   |
|---|
| APPL   TYPE   TGN/TYPE A   ORG DIRECT   TGN/TYPE B   ORG DIRECT |
| ◀.....req.....▶   |

This operation adds one or more entries into the Trunk-to-Trunk connection tables. Input is required in all fields.

#### DELETE

|   |
|---|
| APPL   TYPE   TGN/TYPE A   ORG DIRECT   TGN/TYPE B   ORG DIRECT |
| req   opt   req   ▶.....opt.....▶                               |

This operation deletes one or all entries from the Trunk-to-Trunk connection tables. If the keyword **ALL** is entered in the "TGN/TYPE A" field, all the Trunk-to-Trunk connections are deleted. A confirmation is requested by the system before a deletion occurs.

## TRUNK-TO-TRUNK CONNECTION ASSIGNMENT (CMD 305)

**PERCEPTION 4000****COMMANDS**

DISPLAY

|   |
|---|
| APPL   TYPE   INDEX   TGN/TYPE A   ORG DIRECT   TGN/TYPE B   ORG DIRECT |
|---|

|                       |
|-----------------------|
| req   ←.....opt.....→ |
|-----------------------|

This operation displays the Trunk-to-Trunk connection tables. If no input is entered in the "INDEX" field, depending on the data in the "APPL" field, the Station's Connectivity Table or the Attendant's Capability Table displays. Ranges are allowed in any field that accepts numeric input.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **APPL** (Application Usage)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   ATT - Attendant's Capability Table  
               STA - Station's Connectivity Table

The table to be added to, deleted, or displayed is selected with this field.

FIELD:       **TYPE** (Table Type)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   ALW - Trunk-to-trunk connection allowed  
               DNY - Trunk-to-trunk connection denied

Trunks are defined by setting the table definition as an allow or deny table, whichever will require the shorter definition. For example, you may wish to deny only those calls which are incoming 800 calls connected to all other outbound or bothway trunk groups. It would be simpler to build a deny table than to build an allow table for all other possibilities.

Once the "TYPE" field is selected as an allow or deny table, then all assignments of new Trunk-to-Trunk connections must be of the same type.

FIELD:       **INDEX** (Index Number)  
 TYPE:        Decimal  
 FORMAT:     1 to 3 digits  
 VALUE:      1 to 160 (or to the maximum system configuration)  
 LOOP:       Allowed in a DISPLAY operation only

This field acts as a counter in a DISPLAY operation. Its value does not set any priority for data entered in this command.

FIELD:       **TGN/TYPE A or B** (Trunk Group or Type of Trunk)  
 TYPE:        Decimal / Keyword

## TRUNK-TO-TRUNK CONNECTION ASSIGNMENT (CMD 305)

**PERCEPTION 4000****COMMANDS**

FORMAT: 1 to 3 digits / Predefined ASCII characters  
 VALUE: 1 to 256 trunk groups (or to the maximum system configuration)  
 RANGE: Allowed in a DISPLAY operation

Keywords - Trunk Types:

AUX - Auxiliary  
 CC - Code Call  
 CCSA - Common Control Switching Arrangement  
 CO - Central Office  
 DIC - Dictation Machine  
 DID - Direct Inward Dialing  
 FX - Foreign Exchange  
 PVT - Private Line or Trunk  
 RPG - Radio Page  
 TIE - Inter-PBX Communication  
 VPG - Voice Paging  
 WATS - Wide Area Telecommunication Service  
 ALL

Each Trunk-to-Trunk connection may be defined by either trunk group numbers, trunk group types, or a combination of both. Decimal values 1 to 256 represent the trunk group numbers, and the keywords represent the trunk group types. Trunk groups 129 to 256 are reserved for systems configured above the standard default of 128. Note that trunk groups are subsets of trunk types. When the keyword **ALL** is entered in a DELETE operation, all entries in the denial/allowance table are deleted.

FIELD: **ORG DIRECT** (Direction of Origination)  
 TYPE: Keyword  
 FORMAT: Predefined ASCII characters

Keywords: INC - Incoming  
 OUT - Outgoing  
 BWY - Both Incoming and Outgoing

Each facility specified may be defined as pertaining to incoming only, outgoing only, or bothway call types.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

C30500 - Redundant entry: connection is already defined  
 C30501 - Number of trunk groups of this type exceeds available entries  
 C30502 - Undefined trunk type  
 C30503 - Undefined trunk group  
 C30504 - Check trunk group number range  
 C30505 - Parameter is out of range  
 C30506 - This connection is not registered  
 C30507 - The attendant table type is different



## TRUNK-TO-TRUNK CONNECTION ASSIGNMENT (CMD 305)

**PERCEPTION 4000****COMMANDS**

- C30508 - The station table type is different
- C30509 - Field input error

**COMMENTS**

A denial to perform a Trunk-to-Trunk connection in one's Class of Service definition absolutely prevents the connection. Also, if release supervision does not allow the connection, it is denied. Attendants may, however, place the call on a locked loop automatically, thus allowing manual supervision of the call and preventing potential trunk lockups.

Removal of a trunk group/type from the system must be preceded by the removal of the corresponding entry in these tables.

For stations, connections between pairs of trunk types/groups not inhibited by their denial tables are still subject to the supervisory requirement. For instance, if neither party involved in a Trunk-to-Trunk connection has release supervision, the connection will not be made.

**RELATED COMMANDS**

- Attendant Group Assignment (CMD 372)
- Attendant Position Assignment (CMD 370)
- Trunk Assignment (CMD 313)

### UCD GROUP ASSIGNMENT (CMD 354)

The PERCEPTION 4000 system may be configured with up to eight Uniform Call Distribution (UCD) groups. This command defines UCD group members and provides information pertinent to group operation.

Command Keyword: UCD\_GROUP\_ASSIGN

Category Name: Station

#### PREREQUISITE COMMANDS

- Announcement Pattern Assignment (CMD 353)
- Miscellaneous Device Assignment (CMD 400)
- Station Assignment (CMD 330)

#### OPERATIONS

- Available operations:
- ADD
  - DELETE
  - MODIFY
  - DISPLAY

The function and required data fields for each operation are described in this section.

##### ADD

|  |
|--|
| GRP#   PILOT DN   NAME   OVF DEST   AP#   OVF TMR   INDEX   MEM DN |
|--|

| req | ←.....opt.....→ | req |

This operation adds member directory numbers to the specified UCD group number. If the group is being defined for the first time, the "PILOT DN" and "AP#" fields are required; otherwise, these fields are optional. The "INDEX" field is a counter for the convenience of the administrator.

##### DELETE

|  |
|--|
| GRP#   MEM DN   MEM DN   MEM DN   MEM DN |
|--|

←.....req.....→ | ←.....opt.....→ |

This operation removes member directory numbers from the specified UCD group. The keyword **ALL** may be entered in the first "MEM DN" field to delete the entire UCD group.

## MODIFY

```
GRP# | PILOT DN | NAME | OVF DEST | AP# | OVF TMR |
```

```
| req | ←.....opt.....→ |
```

This operation modifies the attributes of the specified UCD group. "GRP #" is a required field, while the remaining fields are optional.

## DISPLAY

```
GRP# | PILOT DN | NAME | OVF DEST | AP# | OVF TMR | INDEX | MEM DN |
```

```
←.....opt.....→ |
```

This operation displays the attributes of the specified UCD group. All fields are optional.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **GRP#** (UCD Group Number)  
 TYPE:        Decimal  
 FORMAT:     1 digit  
 VALUE:       1 to 8  
 RANGE:       Not allowed  
 LOOP:        Allowed in a DISPLAY operation only

This field assigns a UCD group number, and is required in all operations. In a DISPLAY operation, "GRP#" is a loop field. If a <TAB> and <RETURN> are entered, all eight groups display.

FIELD:       **PILOT DN** (Pilot Directory Number)  
 TYPE:        DN Type  
 FORMAT:     1 to 5 digits  
 VALUE:       0 to 99999  
 RANGE:       Not allowed  
 LOOP:        Not allowed

The UCD group pilot number is defined with this field. This is the only entry point into the UCD group. The number must not conflict with other numbers and access codes in the system's numbering plan, and must not have a physical device counterpart.

FIELD:       **NAME**  
 TYPE:        Text

## UCD GROUP ASSIGNMENT (CMD 354)

**PERCEPTION 4000****COMMANDS**

FORMAT: 0 to 9 ASCII characters

The UCD group may optionally be assigned a group name which is displayed on calling party terminals or the attendant console. Embedded spaces are allowed. In a MODIFY operation, if a **<CONTROL-D>** is entered, this field is removed from the group.

FIELD: **OVF DEST** (Overflow Destination)  
 TYPE: DN Type  
 FORMAT: 1 to 5 digits  
 VALUE: 0 to 99999  
 RANGE: Not allowed  
 LOOP: Not allowed

The overflow destination may be defined as another UCD group. Only one overflow is allowed per call, even if the overflow group has another overflow specified. In a MODIFY operation, if a **<CONTROL-D>** is entered, this field is removed from the group. Note that this field is optional in all operations.

FIELD: **AP#** (Announcement Pattern Number)  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 50  
 RANGE: Not allowed  
 LOOP: Not allowed

This field selects one of the 50 announcement pattern numbers defined in the system. (Refer to the Announcement Pattern Assignment command, CMD 353.) The pattern number describes how the call is treated while waiting in queue (announcements, music, etc.).

FIELD: **OVF TMR** (Overflow Timer)  
 TYPE: Decimal  
 FORMAT: 1 to 4 digits  
 VALUE: 0 to 1000  
 RANGE: Not allowed  
 LOOP: Not allowed

This field sets the time in seconds which a call must wait in queue before overflowing to the overflow destination.

FIELD: **INDEX**  
 TYPE: Decimal  
 FORMAT: 1 or 2 digits  
 VALUE: 1 to 16  
 LOOP: Allowed in ADD and DELETE operations

This field is used as a counter in ADD and DISPLAY operations. Its value does not indicate an actual position in a UCD group or set any priority for data entered in this command.

FIELD: **MEM DN** (UCD Member Directory Number)  
 TYPE: DN Type / Keyword

FORMAT: 1 to 5 digits / Predefined ASCII characters  
 VALUE: 0 to 99999  
 RANGE: Allowed in a DISPLAY operation only  
 LOOP: Not allowed

Keyword: ALL

This field assigns members to the UCD group. The directory number entered must be a prime directory number of a voice station, and may only appear in one UCD group. Logical line DNs are not allowed. In a DELETE operation, the keyword **ALL** deletes an entire UCD group.

### SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

- C35400 - Pilot directory number mismatch
- C35401 - Group name mismatch
- C35402 - Overflow destination mismatch
- C35403 - Group maximum number has been reached
- C35404 - UCD member directory number does not exist
- C35405 - UCD member directory number is not a station directory number
- C35406 - Pilot directory number must be input
- C35407 - Pilot directory number is already in use
- C35408 - Cannot use this overflow directory number
- C35409 - No UCD members exist for this group
- C35410 - Member directory number is not in this UCD group
- C35411 - Station belongs to another UCD group
- C35412 - Announcement pattern number must be input
- C35413 - Announcement pattern number is not defined
- C35414 - Announcement pattern number mismatch
- C35415 - Announcement pattern number is not for UCD use
- C35416 - Group name length is a maximum of 9 characters
- C35417 - Pilot and overflow directory numbers cannot be the same
- C35418 - Overflow timer mismatch
- C35419 - Private line directory number may not be used in UCD
- C35420 - Hotline directory number may not be used in UCD
- C35421 - Logical/Multiple line directory number may not be used in UCD
- C35422 - Total number of UCD memory blocks have reached their limit
- C35423 - Total number of UCD members have reached their limit
- I35424 - Warning: Unidentified data in field #4

### RELATED COMMANDS

ACD Group Assignment (CMD 355)  
 Authorization Code Assignment (CMD 349)  
 Internal Call Alternate Routing Assignment (CMD 374)  
 Station Hunting Assignment (CMD 342)  
 Trunk Group Routing Assignment (CMD 307)  
 Trunk Routing Assignment (CMD 308)

**UNP ROUTING ASSIGNMENT (CMD 302)**

The UNP Routing Assignment command specifies a Route Pattern Number (RPN) for the location codes defined for the network in the Uniform Numbering Plan Assignment command (CMD 301). The RPN is then used by the LCR/Authorization TZ Change Assignment command (CMD 343) to direct the call over the proper facility.

Command Keyword: UNP\_ROUTING

Category Name: Network

**PREREQUISITE COMMAND**

Uniform Numbering Plan Assignment (CMD 301)

**OPERATIONS**

Available operations: ADD  
DELETE  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

RPN | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |

|<.....req.....>|<.....opt.....>|

This operation adds UNP location codes (RNXs) to the specified Route Pattern Number (RPN) Table.

**DELETE**

RPN | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |

|<.....req.....>|<.....opt.....>|

This operation deletes UNP location codes (RNXs) from the specified Route Pattern Number (RPN) Table.

## DISPLAY

```
RPN | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |
```

```
|-----opt----->
```

This operation displays UNP location codes (RNxs) of the specified Route Pattern Number (RPN) Table. All fields are optional; and the "RPN" field is a loop field.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:        **RPN** (Route Pattern Number)  
 TYPE:         Decimal  
 FORMAT:      1 to 3 digits  
 VALUE:       1 to 100 (or to the maximum system configuration)  
 LOOP:        Primary loop for a DISPLAY operation only  
 RANGE:       Not allowed

The "RPN" field defines a pattern number used by the LCR/Authorization TZ Change Assignment command (CMD 343) to direct a call to the proper LCR routing table. Up to 16 UNP Routing Assignment Tables may be defined in the system. A routing pattern number is required for all RNxs not intended for default routing. If a <TAB> is entered in this field in a DISPLAY operation, all RPN tables of RNxs display.

FIELD:        **RNX** (Location Code for PBX Systems in the Network)  
 TYPE:         Dialing Digits / Keyword  
 FORMAT:      1 to 3 digits / Predefined ASCII characters  
 VALUE:       0 to 999  
 LOOP:        Not allowed  
 RANGE:       Not allowed

Keyword:     ALL

This field assigns location codes of other PBX systems in the Network to the specified route pattern number. In a DELETE operation, the keyword **ALL** may be entered in the first "RNX" field to delete all location codes from the table.

## SYSTEM ERROR MESSAGES

The following error messages are unique to this command.

C30200 - Check RNX input format  
 C30201 - RNX already defined  
 C30202 - No space to add more  
 C30203 - RNX not found

UNP ROUTING ASSIGNMENT (CMD 302)

**PERCEPTION 4000**

**COMMANDS**

- C30204 - Route pattern number is out of range
- C30205 - UNP location code not found in setup table
- C30206 - RNX should be 1 - 3 digits
- C30207 - RNX is not in the corresponding RPN table

**RELATED COMMAND**

LCR/Authorization TZ Change Assignment (CMD 343)



## UNIFORM NUMBERING PLAN ASSIGNMENT (CMD 301)

**PERCEPTION 4000****COMMANDS****UNIFORM NUMBERING PLAN ASSIGNMENT (CMD 301)**

The Uniform Numbering Plan (UNP) is one of two methods used by the system for private networking. This command instructs the system on the length of on-net calls, provides an identifying location code for this PBX in the network, and defines all other RNX (location) codes used in the network.

Command Keyword: UNP\_ASSIGN

Category Name: Network

**PREREQUISITE COMMANDS**

There are no prerequisites for this command.

**OPERATIONS**

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

**ADD**

RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |

| req | ←.....opt.....→ |

This operation adds PBX location codes to the PERCEPTION 4000 Network.

**DELETE**

RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |

| req | ←.....opt.....→ |

This operation deletes PBX location codes from the Network. The keyword **ALL** may be entered in the first "RNX" field to delete all location codes from the table.

## MODIFY

UNP LENGTH | HOME RNX |

|←.....opt.....→|

This operation modifies the format for the length of the location code and station numbers of the network, and the home PBX location code.

## DISPLAY

UNP LENGTH | HOME RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX | RNX |

|←.....opt.....→|

This operation displays the UNP length, the Home UNP location code, and other UNP location code(s) in the Network.

## PARAMETERS

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:           **UNP LENGTH** (Length of Location Code of PBX with Station Numbers)  
 TYPE:            Decimal  
 FORMAT:         1 digit  
 VALUE:          4 to 8  
 LOOP:           Not allowed  
 RANGE:          Not allowed

Each station in the network has a home PBX location code and a station number assigned to it. This field sets the length of the combined location code and station number. For example, the home PBX location code may be a three-digit number (734), and the station may be a four-digit number (3229). Therefore, this field would be set to **7**.

FIELD:           **HOME RNX** (Location Code for Home PBX)  
 TYPE:            Dialing Digits  
 FORMAT:         1 to 3 digits  
 VALUE:          0 to 999  
 LOOP:           Not allowed  
 RANGE:          Not allowed

Each PBX in the system is assigned a location code from 1 to 3 digits. This field assigns the location code for the home PBX.

## UNIFORM NUMBERING PLAN ASSIGNMENT (CMD 301)

**PERCEPTION 4000****COMMANDS**

FIELD: **RNX** (Location Code for Other PBX Systems in the Network)  
TYPE: Dialing Digits / Keyword  
FORMAT: 1 to 3 digits / Predefined ASCII characters  
VALUE: 0 to 999  
LOOP: Not allowed  
RANGE: Not allowed

Keyword: ALL

This field assigns location codes for other PBX systems in the PERCEPTION 4000 Network. In a DELETE operation, the keyword **ALL** may be entered in the first "RNX" field to delete all location codes from the table.

**SYSTEM ERROR MESSAGES**

The following error codes are unique to this command.

- C30100 - RNX is defined as home location code
- C30101 - One of the RNX(s) is already defined
- C30102 - No space to add more
- C30103 - One of the RNX(s) was not found
- C30104 - Check length of UNP
- C30105 - Check RNX input format
- C30106 - RNX should be 1 - 3 digits
- C30107 - Remove RPN from Command 302 table before deleting
- C30108 - Remove all RPNs from Command 302 table before deleting ALL

**RELATED COMMANDS**

Coordinated Numbering Plan Assignment (CMD 303)  
UNP Routing Assignment (CMD 302)

## VOICE PAGING/CODE-CALL ASSIGNMENT (CMD 319)

The Voice Paging/Code-Call Assignment command creates the linkage between various types of paging and the trunk group used for the hardware interface. Additionally, the command provides the translation from PERCEPTION 4000 system paging types and/or zones to control code information which is sent to out board paging equipment for zone and usage selection. The control codes are sent via in-band DTMF signaling prior to the system cutting through the paging party to the paging equipment. This action is transparent to the user.

Command Keyword: VP/CC\_ASSIGN

Category Name: Dialing

### PREREQUISITE COMMANDS

Numbering Plan Assignment (CMD 300)

Trunk Group Assignment (CMD 310)

### OPERATIONS

Available operations: ADD  
DELETE  
MODIFY  
DISPLAY

The function and required data fields for each operation are described in this section.

#### ADD

|      |        |     |                |
|------|--------|-----|----------------|
| TYPE | ZONE # | TGN | CONTROL CODE # |
|------|--------|-----|----------------|

|     |     |     |     |  |
|-----|-----|-----|-----|--|
| req | opt | req | opt |  |
|-----|-----|-----|-----|--|

This operation adds the defined attribute of the specified feature to its definition table. The "CONTROL CODE #" field is not used for the Code-Call feature. Values 1 to 128 are used as input for the Zone Paging feature. **ZERO** is the default value for the Emergency Paging and System Paging features.

#### DELETE

|      |        |
|------|--------|
| TYPE | ZONE # |
|------|--------|

|     |     |  |
|-----|-----|--|
| req | opt |  |
|-----|-----|--|

This operation removes the attribute of the specified feature from its definition table. The "ZONE #" field is applicable for the Code Call and Zone Paging features only.

## VOICE PAGING/CODE-CALL ASSIGNMENT (CMD 319)

**PERCEPTION 4000****COMMANDS**

## MODIFY

|                                      |
|--------------------------------------|
| TYPE   ZONE #   TGN   CONTROL CODE # |
|--------------------------------------|

|                       |
|-----------------------|
| req   ◀.....opt.....▶ |
|-----------------------|

This operation modifies existing attributes of the specified feature. The "TYPE" field is required for all features. The "ZONE #" field is required by the Code Call and Zone Paging features, while the remaining fields are optional. The "CONTROL CODE #" field defaults to zero for all features except for Zone Paging.

## DISPLAY

|                                      |
|--------------------------------------|
| TYPE   ZONE #   TGN   CONTROL CODE # |
|--------------------------------------|

|                       |
|-----------------------|
| req   ◀.....opt.....▶ |
|-----------------------|

This operation displays the attributes of one or all related features where the condition is established in the "TYPE" and "ZONE #" fields. If **ALL** is entered in the "TYPE" field, the system displays all the related tables.

**PARAMETERS**

Each field parameter is described in this section. Any variations for a particular operation are noted separately.

FIELD:       **TYPE** (Type of Feature)  
 TYPE:        Keyword  
 FORMAT:     Predefined ASCII characters

Keywords:   CC    - Code Call Feature  
               EPAG - Emergency Paging Feature  
               SPAG - System Paging Feature  
               ZPAG - Zone Paging Feature  
               ALL  - All of the above features

This field selects one of the Code Call or paging features of the system. The keyword **ALL** is available for a DISPLAY operation only, and is used to indicate all the related features that are to be displayed.

FIELD:       **ZONE #** (Trunk Port Code)  
 TYPE:        Decimal  
 FORMAT:     1 to 2 digits  
 VALUE:      The value depends on the "LEN PD1" field entries in the Numbering Plan Assignment command (CMD 300) for Feature Numbers (FNOs) 258 and 259 (Code Calling Access and Voice Paging Access - Zone respectively). (Note that maximum values depend on the system configuration, i.e., if there are 10 code calling devices and 10 zone paging devices, any value above 10 is invalid.)

## VOICE PAGING/CODE-CALL ASSIGNMENT (CMD 319)

**PERCEPTION 4000****COMMANDS**

- If "LEN PD1" = 1 The "ZONE #" value range is 1 to 9
- If "LEN PD1" = 2 The maximum "ZONE #" value is 32 for CC (Code Calling) and 99 for ZPAG (Zone Paging)

RANGE: Not allowed

This field represents the System Paging Zone Number or the Code Calling Access Code that is dialed following the Paging Access Code. The number of digits must correspond to the "LEN PD1" field entry following the appropriate paging type in the Numbering Plan Assignment command (CMD 300). This field is not used by the System Paging or Emergency Paging features.

FIELD: **TGN** (Trunk Group Number)  
 TYPE: Decimal  
 FORMAT: 1 to 3 digits  
 VALUE: 1 to 256 (or to the maximum system configuration)  
 RANGE: Not allowed

The trunk group number represents the trunk group to which the paging trunk circuit is assigned. There may only be one circuit per supporting trunk group. The "TGN" must be defined for the same use in the Trunk Group Assignment command (CMD 310). This field is required for Voice Zone Paging and Code Calls.

FIELD: **CONTROL CODE #** (Device Code Number)  
 TYPE: Decimal / Keyword  
 FORMAT: 1 digit / Predefined ASCII characters  
 VALUE: 0 to 9 / NON  
 RANGE: Not allowed

This field specifies the voice zone paging device to be accessed (values 0 to 9). **NON** is used with paging devices that do not support control codes. For the Emergency Paging and System Paging features, a default value of zero is required. The Code Calling feature does not use this field.

**SYSTEM ERROR MESSAGES**

The following error messages are unique to this command.

- C31900 - Invalid feature number
- C31901 - Invalid trunk group number
- C31902 - Zone number is out of range
- C31903 - <TAB> is required for zone number field
- C31904 - Missing input for zone number field
- C31905 - Missing input for Control Code Number field
- C31906 - <TAB> is required for Control Code Number field
- C31907 - Trunk group number is out of range
- C31908 - No space to add zone number
- C31909 - Zone number is already in use
- C31910 - Zone number is not in the table
- C31911 - This entry is already defined in the table
- C31912 - This entry is not defined in the table

VOICE PAGING/CODE-CALL ASSIGNMENT (CMD 319)

**PERCEPTION 4000**

**COMMANDS**

- C31913 - Trunk must be assigned to a trunk group number before update
- C31914 - Zone post digits have NOT been set, please define in CMD 300
- C31915 - Control code is out of range; should be 0 - 9 or NON

**RELATED COMMANDS**

- Attendant Feature Key Assignment (CMD 371)
- Station Feature Key Assignment (CMD 331)

Error and information messages appear on the output device alerting the user of certain conditions occurring within the system. These messages include indications of incorrect input, informational matter, and system messages. This chapter contains a description of the format used to display these messages along with a complete listing of all messages.

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## MESSAGE FORMAT

Each message contains a message ID and text. The ID consists of a leading character followed by five digits.

<Character><digit><digit><digit><digit><digit> - Text

### Leading Character

- “C” represents a special message from a particular command.
- “D” represents messages for debugging usage.
- “G” represents messages from MMI and messages common to every command.
- “I” represents FYI (For your information only) messages.
- “S” represents a system message.

### Five-digit Numbers (tttnn)

- ttt - The first three digits represent an MMI internal module ID (000 to 013) for common error messages, or the command ID (100 to 999).

#### Module IDs

- 000 - Message Dispatcher
- 001 - Command Operation
- 002 - Data Entry and Parsers
- 003 - Setup Control
- 004 - Program Control
- 005 - Training Control
- 007 - Overlay Control
- 008 - Messages common to all commands
- 009 - Post Command Processor
- 011 - Change Replay
- 012 - Change Log Control
- 013 - Change Write Control

- nn - The last two digits represent the message number.

- Text - Up to 71 ASCII characters display error or information messages.
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## COMMON ERROR MESSAGES

- C00123 - Failed to mount FD
- C00124 - Failed to open script file on FD
- C00125 - Failed to read script sub-header
- C00126 - Failed to read script file



- C00127 - Failed to close FD
- C00130 - DISPLAY/SHOW operation not allowed during FD input
- D00107 - Command operation substate is out of range
- D00128 - Incorrect record/block count in sub-header
- D00217 - DE\_CTL substate is out of range
- D00218 - Internal data structures corrupted; around field N
- D00219 - Aborted while in MKB
- D00220 - Timeout while in MKB for equipment number SSPPCC
- D00302 - SE\_CTL substate is out of range
- D00402 - Unknown error in IDLE\_PR state
- D00403 - PR\_CTL substate is out of range
- D00404 - Header ruler format error
- D00701 - Cannot open command
- D00702 - Cannot read command
- D00703 - Cannot close command
- D00704 - Cannot load command
- D00705 - LCPU command loading failed
- D00706 - Version mismatch
- D00808 - Software error
- D00809 - Please see PBX administrator
- D00810 - MCPU database Read error
- D00811 - MCPU database Write error
- D00812 - LCPU database Read error
- D00813 - LCPU database Write error
- D00814 - Failed to send message to LCPU
- D00815 - Failed to send message to Traffic virtual machine
- D00816 - Timeout while waiting for transaction from LCPU 1, 2, or 3
- D00817 - Loop failed in LCPU 1, 2, or 3
- D00818 - Invalid equipment number during conversion
- D00819 - Invalid device number during conversion
- D00820 - LCPU number is out of range
- D00821 - Invalid trunk device number during conversion
- D00822 - Memory dump to hard disk failed
- D00823 - Hard disk drive is no good
- D00824 - Cannot access hard disk file
- D00825 - Mount hard disk drive failed
- D00826 - Open change log header failed
- D00827 - Open patch log header failed
- D00828 - Open file from hard disk failed
- D00829 - Write file to hard disk failed
- D00831 - Close file from hard disk failed
- D00832 - Clear change log header failed
- D00833 - Clear patch or change log header failed
- D00834 - Found unmatched line; Nth byte in the compare buffer
- D00900 - MKI failed
- D00901 - Timeout in MKI
- D00902 - Entering CPP from CHG\_CTL with TRAPTR
- D00903 - Entering CPP from cmd with TRAPTR
- D00904 - Command load in standby failed
- D00905 - Sync. timeout; need to put SBY OUS & use ^Y

- D00906 - Command sync failed; need to put SBY OUS & use ^Y
- D00907 - Disk drive is out of service
- D01100 - Cannot create change log
- D01101 - Get header failed
- D01103 - Replay command failed
- D01104 - Replay MKB failed
- D01105 - Failed to manipulate patch log file
- D01106 - Failed to manipulate change log file
- D01107 - Synchronization change log timeout
- D01108 - Auto file consolidation cannot be performed
- D01109 - PAM switch-over/command check in process; wait then login again
- D01110 - Auto file consolidation in process; wait then login again
- D01208 - Change log sync timeout; need to put SBY OUS & use ^Y
- D01209 - Failed to manipulate patch log file
- D01300 - Timeout when writing log file
- D01301 - Failed to write to hard disk
- G00102 - Login failed
- G00103 - Privileged command
- G00104 - Check command name/ID?
- G00105 - Privileged operation
- G00106 - Check operation name/ID?
- G00108 - No such command
- G00109 - No such operation
- G00131 - Aborting from FD input
- G00202 - Must enter <tab> after data in field N
- G00203 - Only 0 - 9 (decimal) can be entered in field N
- G00204 - Only 0 - 9, #, \* (dial digit) can be entered in field N
- G00205 - Check equipment number format (ssppcc) in field N
- G00206 - Only 0 - 9, A - F (hexadecimal) can be entered in field N
- G00207 - Only 0 - 7 (octal) can be entered in field N
- G00208 - Check AC format (N-0/1-X) in field N
- G00209 - Check OC format (NXX) in field N
- G00210 - Check time format (hhmm) in field N
- G00211 - Check date Format (mmddy) in field N
- G00212 - Check input
- G00213 - Check input scope in field N
- G00214 - Check input format in field N
- G00215 - Program mode is not available
- G00216 - Loop is not available in field N
- G00221 - Check LCR; class of service is not configurable
- G00222 - Check INW; values are 1 - 100
- G00301 - Check range or increment in field N
- G00303 - Increments are not permitted in non loop fields
- G00304 - Range is not permitted in field N
- G00305 - Ranges are no longer permitted
- G00306 - Ranges and increments are no longer permitted
- G00307 - Increment is not permitted in range field
- G00400 - Already in program mode
- G00401 - Operation aborted
- G00801 - LCPU is not in service - LCPU 1, 2, or 3

- G00802 - All LCPUs are not in service
- G00803 - Check COS; values are 1 - 64
- G00804 - Check DRL; class of service is not configurable
- G00805 - Check FRL; class of service is not configurable
- G00806 - Check QPL; values are 1 - 8
- G00807 - Type mismatch
- I00100 - No activity, auto/force-logout; wait a while before login
- I00101 - Logout completed
- I00110 - Please logout and login to synchronize standby side
- I00129 - Zero record/block count in sub-header
- I00131 - Command/operation not allowed during congestion
- I00200 - No match
- I00201 - Input line aborted
- I00300 - Already in setup mode
- I00500 - Training console logged-in
- I00501 - Training console logged-out
- I00700 - Command loading in process
- I00800 - User aborted
- I00830 - Successful memory dump to hard disk
- I01200 - Change log file is 80% full
- I01201 - Change log file is full
- I01202 - Change log file is 85% full
- I01203 - Change log file is 90% full
- I01204 - Patch log file is 80% full
- I01205 - Patch log file is full
- I01206 - CHGLOG queue is full
- I01207 - PATCH LOG queue is full

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## INDIVIDUAL COMMAND ERROR MESSAGES

### CMD 102 - Initiate Switch-Over

- C10200 - Standby is out of service
- C10201 - Switch-over failed
- C10202 - Set timer error
- C10203 - Switch-over timeout

### CMD 110 - Time Activated Command Programming

- C11000 - Keyword combination error
- C11001 - Set timer error
- I11002 - Warning: Data entered in Activation Start Time field is ignored
- C11003 - Interval time is out of range
- C11004 - This item is not registered
- C11005 - Input activation start time is out of range
- C11006 - Start time conflicts with switch-over start time

### CMD 121 - Clock Reset

- C12100 - Clock set error

**CMD 143 - Patch Report**

- C14300 - Check the release version, input is out of range
- C14301 - Check release version

**CMD 144 - Memory Test**

- C14400 - Map table has an error
- C14401 - Number of files exceeds the defined value
- C14402 - An error occurred when checking LCPU memory or a timeout
- C14403 - Standby is not in service

**CMD 151 - File Dump**

- C15100 - Failed to send transaction to FMS
- C15101 - Failed to mount disk
- C15102 - Failed to unmount disk
- C15103 - Failed to open file
- C15104 - Failed to close file
- C15105 - Failed to read file
- C15106 - Invalid address
- C15107 - Device is out of service
- C15108 - Display of files from standby side is not supported

**CMD 152 - Disk File Manipulation**

- C15200 - Disk drive is out of service
- C15201 - File already exists
- C15202 - A wrong combination of drive 1 and drive 2
- C15203 - Format operation cannot be performed; the drive is in service
- C15204 - Parameter error; enter the drive field
- C15205 - Failed file consolidation while copying changelog or patchlog
- C15206 - Failed to open changelog file
- C15207 - Failed to open patchlog file
- C15208 - Failed to read changelog file
- C15209 - Failed to read patchlog file
- C15210 - File type does not match; please check floppy disk
- C15211 - Failed to mount floppy driver
- C15212 - Timer timeout
- C15218 - Display or comparison of files from standby side is not supported
- D15219 - Failed to reserve hard disk drive
- C15220 - Hard disk drive is in use; try later
- C15221 - Some files are still open; try later
- C15222 - Floppy disk drive is out of service
- C15223 - Hard disk drive is out of service
- C15224 - Not enough space left on floppy disk for file copy
- C15225 - Standby hard disk drive is out of service
- C15226 - Invalid input; to restore this disk enter (Y/N)

**CMD 153 - File Consolidation**

- C15300 - Timeout in Command 153
- C15301 - Standby side is not installed
- C15302 - Timeout in standby side
- C15303 - Hard disk is in use; please try later

**CMD 160 - Alarm/Fault Display and Reset**

- C16000 - Database recovered
- C16001 - Alarm display request failed
- C16002 - Alarm reset request failed
- C16003 - Alarm reset timeout

**CMD 164 - Crash Dump Display**

- C16400 - Invalid parameter for object input
- C16401 - MCPU database read error
- C16402 - LCPU database read error
- C16403 - LCPU is out of service
- C16404 - Standby side is not installed
- C16405 - Standby side read failed

**CMD 167 - Data Structure Display**

- C16700 - Prime directory number does not exist
- C16701 - MCPU database Read error (LDN attributes)
- C16702 - MCPU database Read error (LPU number)
- C16703 - MCPU database Read error (SSC state number)
- C16704 - MCPU database Read error (LDN record address)
- C16705 - MCPU database Read error (SLSB record address)
- C16706 - MCPU database Read error (OFHCAMP record address)
- C16707 - MCPU database Read error (ONHCAMP record address)
- C16708 - HDT data not available for pilot directory numbers
- C16709 - Data does not exist for virtual pilot directory numbers
- C16710 - Check input in PARA 1 field
- C16711 - Check input in PARA 2 field
- C16712 - ACD group is not defined

**CMD 168 - Trace Setup**

- C16800 - Attendant directory number already exists
- C16801 - Not an individual attendant directory number
- C16802 - Attendant directory number does not exist

**CMD 169 - Data Structure Display 2**

- C16900 - Attendant directory number has not been defined
- C16901 - Attendant group directory number has not been defined
- C16902 - Convert equipment error

**PERCEPTION 4000****ERROR AND INFORMATION MESSAGES**

- C16903 - Read LCPU data timeout
- C16904 - LCPU number does not match with the one in transaction
- C16905 - Address error (address 0xNNNNNNNNNN)
- C16906 - Read MCPU error
- C16907 - Invalid LDN

**CMD 206 - Terminal Maintenance**

- C20600 - Equipment is already busy
- C20601 - Equipment is already idle
- C20602 - No database exists for this equipment
- C20603 - BUSY and IDLE operations are not applicable to night bell equipment
- C20604 - Equipment number is out of range

**CMD 208 - Device Service Status**

- C20800 - Device has already been installed
- C20801 - Device has already been removed
- C20802 - Device is already in service
- C20803 - Device is already out of service
- C20804 - Cannot register device
- C20805 - Does not match system configuration
- C20806 - Program/data transfer
- C20807 - No response
- C20808 - Failed to send message to SYC
- C20809 - Failed to set timer
- C20810 - Stand-by side no response
- C20811 - Regulated by SYM
- C20812 - Failed to receive message from SYC
- C20813 - BOTH is not an allowed keyword in this operation
- C20814 - Standby side setup timeout
- C20815 - Standby side is out of service

**CMD 300 - Numbering Plan Assignment**

- C30000 - Invalid feature number
- C30001 - No such access code exists
- C30002 - Access code is already used by another feature
- C30003 - Input access code is out of range
- C30004 - Failed to read PD1 & PD2 from database
- C30005 - Failed to write PD1 & PD2 to database
- C30006 - Failed to remove the access code from database
- C30007 - This feature does not yet have an access code
- C30008 - Failed to recover the PD1 & PD2 from database
- C30009 - Failed to recover the access code from database
- C30010 - Feature does not need an access code
- C30011 - Input PD1 is out of range
- C30012 - Input PD2 is out of range
- C30013 - Cannot assign access code to an out of range trunk group number
- C30014 - Database for this feature is not empty

- C30015 - The verified account code length is longer than PD1
- C30016 - PD1 failed to match with Zone Number assigned in CMD 319
- I30017 - PD1 has been modified; please change zone paging digit length in CMD 371

**CMD 301 - Uniform Numbering Plan Assignment**

- C30100 - RNX is defined as home location code
- C30101 - One of the RNX(s) is already defined
- C30102 - No space to add more
- C30103 - One of the RNX(s) was not found
- C30104 - Check length of UNP
- C30105 - Check RNX input format
- C30106 - RNX should be 1 - 3 digits
- C30107 - Remove RPN from Command 302 table before deleting
- C30108 - Remove all RPNs from Command 302 table before deleting ALL

**CMD 302 - UNP Routing Assignment**

- C30200 - Check RNX input format
- C30201 - RNX already defined
- C30202 - No space to add more
- C30203 - RNX not found
- C30204 - Route pattern number is out of range
- C30205 - UNP location code not found in setup table
- C30206 - RNX should be 1 - 3 digits
- C30207 - RNX is not in the corresponding RPN table

**CMD 303 - Coordinated Numbering Plan Assignment**

- C30300 - STDGTs in fields Ni..Nj are already used
- C30301 - No space to add steering digits from field N
- C30302 - STDGTs in fields Ni..Nj are not found
- C30303 - Trunk group number is not a TIE type
- C30304 - Trunk group number is not defined
- C30305 - Trunk group number is defined as incoming (INC) type
- C30306 - Same STDGTs in fields Ni..Nj

**CMD 305 - Trunk-to-Trunk Connection Assignment**

- C30500 - Redundant entry: connection is already defined
- C30501 - Number of trunk groups of this type exceeds available entries
- C30502 - Undefined trunk type
- C30503 - Undefined trunk group
- C30504 - Check trunk group number range
- C30505 - Parameter is out of range
- C30506 - This connection is not registered
- C30507 - The attendant table type is different
- C30508 - The station table type is different
- C30509 - Field input error

**CMD 307 - Trunk Group Routing Assignment**

- C30700 - Undefined trunk group number
- C30701 - Check trunk group number range
- C30702 - Undefined night bell
- C30703 - Undefined announcement machine
- C30704 - Check time zone number range
- C30705 - Check directory number
- C30706 - Check combination of routing destinations
- C30707 - Check trunk use
- C30708 - Check trunk type
- C30709 - Check announcement machine usage
- C30710 - NON is allowed for Route Choice 1 only
- I30711 - Warning: Undefined data in Route Choice #n

**CMD 308 - Trunk Routing Assignment**

- C30800 - Specified trunk is not in the system
- C30801 - Specified equipment number is not a trunk device
- C30802 - Undefined night bell
- C30803 - Undefined announcement machine
- C30804 - Check time zone number range
- C30805 - Check directory number
- C30806 - Check combination of routing destinations
- C30807 - Outgoing trunk group does not have routing
- C30808 - Check trunk type
- C30809 - NON is allowed for Route Choice 1 only
- C30810 - Check announcement machine usage
- C30811 - Only display operation is allowed for private trunk
- C30812 - Equipment number can only have a maximum of eight circuits
- I30813 - Warning: Undefined data in ROUTE CHOICE n field

**CMD 309 - Trunk Hunting Assignment**

- C30900 - Trunk group number not found
- C30901 - Undefined trunk group number
- C30902 - Trunk group number is out of range
- C30903 - Sequence number already exists
- C30904 - Hunting method mismatch
- C30905 - Check trunk use (incoming trunk)
- C30906 - Check type of trunk
- C30907 - Invalid input
- C30908 - Undefined sequence number
- C30909 - Unsuitable sequence number
- C30910 - Equipment number mismatch
- C30911 - No sequence number is defined
- C30912 - Hunting method required
- C30913 - Equipment is not installed
- C30914 - Equipment number can only have a maximum of eight circuits
- C30915 - Dictation machine can only use terminal hunt



**CMD 310 - Trunk Group Assignment**

- C31000 - Undefined trunk group number
- C31001 - Trunk group number is already defined
- C31002 - Check trunk group number range
- C31003 - HAC entry is required for outgoing and bothway trunks
- C31004 - Remove all trunks in trunk group first
- C31005 - Need RG, DG, HAC, and TF#
- C31006 - DID/INCW/MC8/IMC8/MQST trunks are incoming only
- C31007 - TIE needs COS, DRL, FRLP, QPL, and ANSPOS
- C31008 - Check answer position DN
- C31009 - No HAC or TF# needed for TIE
- C31010 - Only CO, FX, and WATS type can be interchanged
- C31011 - Remove all trunks and trunk-to-trunk connections first
- I31012 - Warning: TIE needs answer position
- C31013 - Recall DN must be an attendant group DN
- I31014 - Warning: CO/FX/WATS/CCSA/DID need RCL destination
- C31015 - Dictation machine can be bothway and outgoing type
- I31016 - Warning: LCR routes still exist in table
- I31017 - Warning: Steering digits still exist
- C31018 - Remove LCR routes before adding private trunks
- C31019 - Remove steering digits before adding private trunks
- C31020 - Remove trunks before modifying USE
- C31021 - Private trunk can only be bothway or outgoing
- C31022 - CGN field is required for ISDN trunk groups
- C31023 - CGN field should not be entered for non-ISDN trunk groups
- C31024 - Not allowed to modify trunk group type in field 3
- C31025 - Cannot delete trunk group number; CGN mismatch
- C31027 - ISDN channel group number is not assigned
- C21028 - Duplicate trunk group type for the assigned channel group number
- C31029 - Incompatible trunk group type for the assigned channel group number
- I31030 - Warning: Undefined data in field #N
- C31031 - Not allowed to modify ISDN trunk group usage in field 4
- C31032 - OUTW/MAXW/MC trunks are outgoing only
- C31033 - HAC is needed for CO/FX/PVT/WATS/ISDN outgoing/bothway trunks

**CMD 311 - Trunk Group Toll-free Tables**

- C31100 - The table is not in use
- C31101 - Invalid table number
- C31102 - Invalid office code high bound
- C31103 - Invalid office code low bound
- C31104 - Invalid office code range
- C31105 - Area code does not match table number
- C31106 - Scope data must have low and high bounds in fields
- C31107 - Scope data must have high bound in field
- C31108 - Scope data must have low bound in field
- C31109 - Scope data is not allowed in the last field
- C31110 - Database update failed; software error
- C31111 - Area code is needed when first creating table

**PERCEPTION 4000****ERROR AND INFORMATION MESSAGES****CMD 312 - Label Print**

- C31200 - Not a 4010/4020 telephone prime DN
- C31201 - Timeout during print request

**CMD 313 - Trunk Assignment**

- C31300 - Trunk is not found in system
- C31301 - Trunk is already installed
- C31302 - Start method not compatible
- C31303 - DISA is not for TIE, private lines, or outgoing trunks
- C31304 - Undefined trunk group number
- C31305 - Card or equipment number is already assigned to other devices
- C31306 - No DISA flag for given trunk group number
- C31307 - Exceeds maximum trunks allowed in trunk group
- D31308 - Trunk group cannot be modified
- C31309 - Check data in TERM field
- C31310 - Signaling is not compatible
- D31311 - Download PP data failed
- C31312 - Silence tone returned only for TIE
- C31313 - Private feature key still exists
- C31314 - IMM start cannot have DTMF dial mode
- C31315 - DISA must have EPD or CLG release supervision
- C31316 - Removed hunting sequence before deleting trunk
- C31317 - Trunk name is up to 9 characters
- I31318 - Warning: N is the last trunk to be removed from trunk group M
- C31319 - Failed to read LCPU database
- C31320 - Trunks exceed the limit for LCPU-n (n = 1, 2, or 3)
- C31321 - Trunk group number should be a non-ISDN type
- C31322 - Trunk cannot be assigned to a dictation machine trunk group
- C31323 - Remove voice paging zones related to this trunk before deletion

**CMD 314 - DID/CCSA/DNIS Trunk Group Assignment**

- C31400 - Trunk group number is not a DID/CCSA type
- C31401 - Directory number listed as intercept type is not an attendant or attendant group DN
- C31402 - Announcement pattern number listed as intercept type is not available for DID treatment
- C31403 - Night bell listed as intercept alternate is not available
- C31404 - This trunk group number is already assigned
- C31405 - This trunk group number is not yet assigned
- C31406 - Remove DISA LDN member before changing CO sending digits
- C31407 - Number of deleted digits cannot exceed CO sending digits
- C31408 - Added digit string overflow
- C31409 - Original/new/kept/added digits do not apply to DNIS trunk groups
- C31410 - Original digits are not unique for this trunk group
- C31411 - Delete intercept alternate before modifying intercept treatment type
- C31412 - Number of kept digits cannot exceed the number of CO sending digits
- C31413 - Added and kept digits do not apply to DNIS trunk groups
- C31414 - CO digits are not required for an ISDN trunk group
- C31415 - Intercept treatment type must be specified

- C31416 - Original / new digit combinations are invalid
- C31417 - Original / new digits are not found
- C31418 - No space exists for original / new digits to be added for this trunk group
- C31419 - Only decimal digits (0, 1, ...9) are allowed as original / new digits
- C31420 - Kept digits may be needed
- C31421 - Check trunk group's night bell number
- C31422 - CO digits are required for non-ISDN trunk groups

**CMD 315 - DID/CCSA/DNIS DISA LDN Assignment**

- C31500 - Check input format in field N
- C31501 - Group is not defined as DID/CCSA
- C31502 - Length of LDN in field N does not match length sent from CO
- C31503 - Not enough space to add LDN(s)
- C31504 - Input LDN in field N is already in group
- C31505 - Input LDN in field N is not in group
- C31506 - The same LDNs exist in fields Ni...Nj  
(where N is from 2 to 9.)
- C31507 - Trunk group should be a non-ISDN type
- C31508 - LDN has been defined in Command 316 already

**CMD 316 - DID/CCSA/DNIS LDN Assignment**

- C31600 - Group is not defined as DID/CCSA
- C31601 - Group is full
- C31602 - Group is empty
- C31603 - Check input format in field N
- C31604 - Length of input LDN is not correct
- C31605 - Input LDN is already in group
- C31606 - Input LDN is not in group
- C31607 - Input announcement pattern is undefined
- C31608 - Input night bell is undefined
- C31609 - Invalid announcement pattern
- C31610 - Invalid directory number
- C31611 - Check combination of routing destinations
- C31612 - Input any route choice
- C31613 - Input LDN time zone is already in group
- C31614 - Input LDN time zone is not found in group
- C31615 - Undefined trunk group number
- C31616 - DID/CCSA/DNIS/DDI trunk group attributes are not assigned
- I31617 - Warning: Undefined data in Route Choice
- C31618 - LDN has been defined in Command 315 already

**CMD 317 - Dialing Definition**

- C31700 - Check dialing group number range
- C31701 - Same value exists in two or more fields

**CMD 318 - Interchangeable Office Code Table**

- C31800 - IOC table has no space
- C31801 - IOC not found
- C31802 - IOC is already assigned
- C31803 - Check format
- C31804 - Missing data in scope type field in field N
- C31805 - Dash in last scope field N

**CMD 319 - Voice Paging/Code Call Assignment**

- C31900 - Invalid feature number
- C31901 - Invalid trunk group number
- C31902 - Zone number is out of range
- C31903 - <TAB> is required for zone number field
- C31904 - Missing input for zone number field
- C31905 - Missing input for Control Code Number field
- C31906 - <TAB> is required for Control Code Number field
- C31907 - Trunk group number is out of range
- C31908 - No space to add zone number
- C31909 - Zone number is already in use
- C31910 - Zone number is not in the table
- C31911 - This entry is already defined in the table
- C31912 - This entry is not defined in the table
- C31913 - Trunk must be assigned to a trunk number before update
- C31914 - Zone post digits have NOT been set, please define in CMD 300
- C31915 - Control code is out of range; should be 0-9 or NON

**CMD 320 - Station Feature Key Pattern Assignment**

- C32000 - Pattern 1 cannot be added, modified, or deleted
- C32001 - DDN key assignment is only allowed for ID10 or ID20 devices
- C32002 - FEA ID is a required field for FEA POS
- C32003 - FEA POS is a required field for FEA ID
- C32004 - Key position is out of range in field(s) X
- C32005 - Duplicate key position in field(s) X
- C32006 - PRM POS is required in Field 3
- C32007 - DDN POS is required in Field 4
- C32008 - There must be only one PRM POS assigned
- C32009 - There must be only one DDN POS assigned
- C32010 - Delete all FEA POS's before deleting the PRM POS
- C32011 - Delete all FEA POS's before deleting the DDN POS
- C32012 - Delete the DDN POS before deleting the PRM POS
- C32013 - Feature key position Z is a reserved key
- C32014 - Invalid key position in field X
- C32015 - Feature number is out of range
- C32016 - Feature key position has already been assigned
- C32017 - Feature ID already exists for this pattern
- C32018 - LCD contrast control is only supported by 2020 and ID20 telephones
- C32019 - Key position Z does not exist
- C32020 - Key position Z has already been used

- C32021 - Headset mode is not supported by electronic telephones
- C32022 - The deletion of PRM POS or DDN POS in setup mode is not allowed
- C32023 - Last number redial is only supported by electronic/DKT telephones
- C32024 - Missing data in field 3, 4, or 5

**CMD 321 - System DISA Security Code Assignment**

- C32100 - Security code must be of length N
- C32101 - Table entries exceed 64
- C32102 - # or \* are not accepted as security code digits
- C32103 - Security code has been used
- C32104 - SMDR ID code has been used
- C32105 - Security code is not found
- C32106 - Check input in field(s) Ni..Nj
- C32107 - To modify security code length, enter <tab> in fields 2 and 3
- C32108 - To modify security code length, delete all security codes first

**CMD 322 - Logical Line Call Forward Assignment**

- C32200 - Directory number is not a logical line directory number
- C32201 - Directory number does not exist
- C32202 - Destination is not required to deactivate call forwarding
- C32203 - Destination is required
- C32204 - Destination does not exist

**CMD 323 - Timeout Routing Destination Assignment**

- C32301 - DN must be an ATT/ATT GRP, Station, Hunt Group Pilot DN, or Emergency Access Code
- C32302 - No DN is found for the given INDEX

**CMD 324 - Autodial Number Display**

- C32400 - Terminal does not exist in LCPU
- C32401 - Directory number does not exist
- C32402 - Specified key number is not an Autodial key
- C32403 - Specified key number is out of range
- C32404 - Device type does not match with terminal type
- C32405 - Specified line selection is not a line key
- C32406 - Secondary line key position is required
- C32407 - Not an Autodial destination
- C32408 - Line selection device does not match with terminal type

**CMD 325 - Call Forwarding Destination Display**

- C32500 - Terminal does not exist in LCPU
- C32501 - Directory number does not exist
- C32502 - Specified key number is not a preregistered Call Forward key
- C32503 - Key number is out of range
- C32504 - Device type does not match with terminal type
- C32505 - There is no call forward activation

- C32506 - Device is not required; enter a <TAB> in this field
- C32607 - Position number is not required; enter a <TAB> in this field
- C32508 - Device is required for PCF selection
- C32509 - Position number is required for PCF selection
- C32510 - Destination is not required; enter a <TAB> in this field
- C32511 - Destination is required
- C32512 - Not allowed to delete preregistered call forwarding
- C32513 - Destination does not exist
- C32514 - Directory number is a multiple line number
- C32515 - Directory number is an originate-only station
- C32516 - Terminal is in feature registration mode; please try again

**CMD 326 - System Number Summary**

- C32600 - No match

**CMD 327 - Secondary Line Appearances Display**

- C32700 - Invalid directory number
- C32701 - Directory number not consistent with numbering plan
- C32702 - Timeout in 1, 2, or 3

**CMD 328 - Canned Text/Advisory Message Creation**

- C32800 - Invalid message length
- C32801 - Index is out of range

**CMD 329 - Station-Level Parameter Assignment**

- C32900 - Specified equipment number is not available in the system
- C32901 - Check terminate or originate-only station
- C32902 - Check privacy
- C32903 - Check attendant supervision disable
- C32904 - Check timeout routing index
- C32905 - ORG/TER field cannot be modified; ACD agent is remotely logged in
- C32906 - Failed to read prime line attributes
- C32907 - Hunting member station cannot be assigned as originating only
- C32908 - Equipment number is assigned to another device

**CMD 330 - Station Assignment**

- C33000 - Specified equipment number is not available in the system
- C33001 - Specified equipment number is already being used
- C33002 - Prime directory number already exists
- C33003 - Unable to add a new directory number to database
- C33004 - Prime directory number in field 2 is already being used
- C33005 - Directory number is a group member
- C33006 - Add operation; DN-LDN relation failed
- C33007 - Add operation; SSC LDN MPT failed
- C33008 - Cannot delete; station is not the last member
- C33009 - Failed to remove this directory number from database

- C33010 - Failed to remove DN-LDN relationship
- C33011 - Failed to release the deleted LDN
- C33012 - Failed to release the deleted LTN
- C33013 - Failed to add new LTN to HDT database
- C33014 - Unmatched prime directory number
- C33015 - Failed to recover DA in all LCPUs
- C33016 - Failed to remove KSU member
- C33017 - Failed to remove KSU-LDN relationship
- C33018 - EXT is not yet supported; input TAB is required
- C33019 - Cannot delete; station is not last line
- C33020 - Cannot delete; read line count failed
- C33021 - Equipment number is already used by another device
- C33022 - No such station exists in the system
- C33023 - No matched card type
- C33024 - Cannot add card to this card slot
- C33025 - 10-key telephone line count is now up to system configuration limit
- C33026 - 20-key telephone line count is now up to system configuration limit
- C33027 - Failed to allocate memory for CbList/LCD Buffer
- C33028 - Station type is not changeable
- C33029 - Not allowed to install DSTI/BSTI/PBRC to slot 12/14
- C33030 - Not allowed to install DSTI-2B to an even card slot
- C33031 - Not allowed to install DSTI-2B to card slot 11-14
- C33032 - Not allowed to install T1 to an odd card slot
- C33033 - Not allowed to install T1 to card slot 14
- C33034 - DIU database has not been removed
- C33035 - Dial 0 destination DN does not exist
- C33036 - Failed to read ANSPOS
- C33037 - Failed to read authorization attribute
- C33038 - Failed to read phone attribute
- C33039 - Failed to read prime line attribute
- C33040 - There is no available key for adding DDN key
- C33041 - Failed to update authorization attribute
- C33042 - Failed to update phone attribute
- C33043 - Failed to update station dial 0 destination
- C33044 - Failed to update line attribute flag byte
- C33045 - Cannot change to integrated DIU; next slot is in use
- C33046 - Cannot change to integrated DIU; DSTI-2B cannot be in an even slot
- C33047 - Cannot change to integrated DIU; DSTI-2B not allowed in slot 12-14
- C33048 - Modify field EXT is not allowed; input TAB is required
- C33049 - Modify field RNG is not allowed; input TAB is required
- C33050 - Add-on module is applicable to P-4000 phone only
- C33051 - RNG is not allowed; input TAB is required
- C33052 - Add-on module #1 is required for P-4000 phone
- C33053 - Add-on module #2 is required for P-4000 phone
- C33054 - Delete all keys assigned in add-on module #2 before removing
- C33055 - Cannot read add-on key table
- C33056 - Delete all keys assigned in add-on module #1 before removing
- C33057 - Delete all keys assigned in add-on module #1 before modifying
- C33058 - Delete all keys assigned in add-on module #2 before modifying
- C33059 - Cannot allocate memory to add new add-on module

- C33060 - Cannot add VMS LDN to table
- C33061 - Cannot remove VMS LDN from table
- C33062 - Cannot add prime line attribute for this station
- C33063 - Cannot add KSU member to this station
- C33064 - Failed to read LDN from database
- C33065 - Database does not have any free available LTNs
- C33066 - Database does not have any free available LDNs
- C33067 - Failed to delete LTN from database
- C33068 - Wait for ACD agent logout before removing
- C33069 - Failed to read message waiting queue
- C33070 - Failed to add message waiting queue
- C33071 - Failed to remove from message waiting queue
- C33072 - Exceeds maximum message waiting allowed in the system
- C33073 - Exceeds maximum voice mail port allowed in the system
- I33074 - Warning: Undefined data in field #13
- C33075 - Total directory numbers have reached maximum system configured
- C33076 - Cannot use pattern number; prime position is not assigned
- C33077 - Cannot use pattern number; data position is not assigned
- C33078 - Cannot use pattern number; too many autodial keys
- C33079 - Cannot use pattern number; too many preregistered call forward keys
- I33080 - Warning: Pattern number will be disregarded for single key station
- C33081 - Total number of keys on add-on module #1 and #2 cannot exceed 60
- C33082 - No more LDNs are available

#### **CMD 331 - Station Feature Key Assignment**

- C33100 - There must be only one prime DN key
- C33101 - Input was mistyped in DEF 1, DEF 2, or DEF 3 field
- C33102 - Unable to delete activated feature
- C33103 - Key position is out of range
- C33104 - Feature number is out of range
- C33105 - Directory number already exists for this station
- C33106 - Feature number already exists for this station
- C33107 - This key is reserved for Release key
- C33108 - Number of intercom groups exceeds system configuration limit
- C33109 - Inconsistency between intercom group number and intercom number
- C33110 - Number of intercom members per group exceeds system configuration limit
- C33111 - Directory number in field ten has been used
- C33112 - Number of intercom total members exceeds system config. limit
- C33113 - A logically-paired data station is not allowed
- C33114 - SDDN key is already installed on this station
- C33115 - This is not an integrated data station
- C33116 - Original DDN key has to be deleted in Command 360
- C33117 - No DDN key exists for this station
- C33118 - This station does not exist
- C33119 - There should be one and only one ACD line key
- C33120 - Intercom index exists in this intercom group
- C33121 - Key position is out of range for this phone unit
- C33122 - Phone device is required when modifying the key attributes
- C33123 - Other appearances of this logical directory number still exist



- C33124 - Reserved DDN key
- C33125 - Missing data
- C33126 - Inconsistent prime DN in DEF 1 field
- C33127 - Too many autodial keys
- C33128 - Too many preregistered call forward keys
- C33129 - Too many hotlines
- C33130 - Too many private lines
- C33131 - Directory number in DEF 2 field has been used for private line
- C33132 - 10-key telephone line count exceeds system configuration limit
- C33133 - 20-key telephone line count exceeds system configuration limit
- C33134 - Hotline count exceeds system configuration limit
- C33135 - Private line count exceeds system configuration limit
- C33136 - Autodial line count exceeds system configuration limit
- C33137 - Preregistered call forward count exceeds system config. limit
- C33138 - Key system unit line count exceeds system configuration limit
- C33139 - Key system unit line appearance exceeds system configuration limit
- C33140 - Exceeds MCPU system configuration limit
- C33141 - There are still secondary appearances of this private line
- C33142 - This key is reserved for message key
- C33143 - Key system unit line appearance exceeds a maximum of 16 members
- C33144 - Key system unit member list is inconsistent with SSC
- C33145 - Device field is inconsistent with phone type
- C33146 - Headset mode is not supported by electronic or digital key telephones
- C33147 - Not enough HDT memory space for adding new line
- C33148 - Not enough KSU memory space for adding new line
- C33149 - Not enough ICM memory space for adding new line
- C33150 - No more LDNs are available
- C33151 - The DN in field 9 is a VMS DN
- C33152 - Total directory numbers have reached maximum system configuration
- C33153 - LCD contrast control is only supported by 2020 phones
- C33154 - Directory number in DEF1 is a group member
- C33155 - Last number redial is only supported by electronic telephones
- C33156 - Multiple line index in DEF3 is out of range
- C33157 - Number of multiple lines assigned to prime DN has reached maximum
- C33158 - Total line appearances on station have reached a maximum of 80
- C33159 - Directory number in DEF 1 is out of range

**CMD 332 - Private/Hotline Assignment**

- C33200 - Invalid directory number
- C33201 - Directory number is not consistent with numbering plan
- C33202 - The selected trunk has been used as another private line
- C33203 - Invalid trunk access code
- C33204 - Invalid digits in destination number
- C33205 - Prime directory number is missing
- C33206 - Invalid trunk access code
- C33207 - Invalid private trunk feature number
- C33208 - Invalid trunk group type
- C33209 - DA registration failed
- C33210 - No such hotline is assigned to this station

- C33211 - No such hotline is assigned in the system
- C33212 - No such private line exists in the system
- C33213 - No such phone device exists in the system
- C33214 - Cannot delete; needs to be modified by command 331
- C33215 - This analog phone is not a hotline
- C33216 - In MODIFY operation; PRM DN field for private line is for output only
- C33217 - Must indicate trunk group number for private line
- C33218 - Destination field is required
- C33219 - TGN field is not required for hotline
- C33220 - Not a private trunk group
- C33221 - Timeout in XXX
- C33222 - Trunk group number should be non-ISDN type

**CMD 333 - Intercom Group Member Display**

- C33300 - Invalid DN-LDN relationship
- C33301 - Check input in field 2

**CMD 334 - Class of Service Assignment**

- C33400 - Check for a valid feature number
- C33401 - Invalid tenant number
- C33402 - Invalid Class of Service number
- C33403 - Feature number is out of range
- C33404 - Missing data in scope type field in field N

**CMD 335 - Country Code Assignment**

- C33500 - Country code(s) already exist or are invalid
- C33501 - Table full; cannot add more country code(s) at NNN
- C33502 - Country code not found
- C33503 - Check field format
- C33504 - Country code conflicts with the table

**CMD 336 - Time Zone Assignment**

- C33600 - Check time for time change
- C33601 - Time zone number must be input
- C33602 - Start time must be input
- C33603 - Check time change number
- C33604 - Entry into this time change number cannot be done; check previous
- C33605 - Deletion of this time change cannot be done; check next
- C33606 - Must delete both start time and zone number for the time change

**CMD 337 - Destination Restriction Level Assignment**

- C33700 - Check trunk restriction group number range

**CMD 338 - Country Code Restriction Tables**

- C33800 - Table type does not match the table type defined originally
- C33801 - Country code(s) already exist in restricted country code table
- C33802 - Table full; cannot add more country code(s) at NNN
- C33803 - Country code is not in system country code definition table
- C33804 - Invalid trunk restriction group number
- C33805 - Invalid destination restriction level
- C33806 - Invalid country code

**CMD 339 - Area/Office Code Restriction Tables**

- C33900 - Check trunk restriction group number range
- C33901 - Area code/office code table undefined
- C33902 - Office code NNN is incorrect
- I33903 - Area code/office code table is full
- C33904 - Dash should not be used in last scope field N
- C33905 - Missing data in scope type field of field N

**CMD 340 - Exception Restriction Tables**

- C34000 - Exception destination restriction list is full
- C34001 - Exception destination restriction number does not exist
- C34002 - Exception destination restriction number already exists
- C34003 - Check trunk restriction group number range
- C34004 - This key is not used for this operation
- C34005 - Illegal input

**CMD 341 - Area Code Restriction Tables**

- C34100 - Check trunk restriction group number range
- C34101 - Area code(s), Ni..Nj are already in table
- C34102 - Area code(s), Ni..Nj are not in table

**CMD 342 - Station Hunting Assignment**

- C34200 - Input member directory number or entry point
- C34201 - Group is already full
- C34202 - Hunt Method field is required
- C34203 - Circular group; pilot directory number is not needed
- C34204 - Circular group; entry point must be YES
- C34205 - Member directory number is not defined in the system
- C34206 - Entry point should be input
- C34207 - Not allowed; the second member's entry point is NO
- C34208 - Hunt Method mismatch
- C34209 - Pilot directory number mismatch
- C34210 - Group name mismatch
- C34211 - Overflow termination mismatch
- C34212 - Group is empty
- C34213 - Member number is not in group

- C34214 - Member directory number is not in group
- C34215 - Inconsistent member number/directory pair
- C34216 - Pilot directory number is already in use
- C34217 - Overflow termination is not defined
- C34218 - Member number is required
- C34219 - Entry point of the first member must be YES
- C34220 - Member number is not continuous in group
- C34221 - Member directory number is in another hunt group
- C34222 - Cannot use this directory number
- C34223 - The input overflow termination is already used for a group
- C34224 - Pilot directory number is used as overflow in another group
- C34225 - Input pilot or member directory number is the same as overflow
- C34226 - Group name is too long
- C34227 - This hunt group is for VMS; directory number must be a VMS DN
- C34228 - This directory number is for VMS; cannot be used for this group
- C34229 - No more space left to add
- C34230 - A private line directory number cannot be used to hunt
- C34231 - Serial group; pilot directory number is required
- I34232 - Warning: Undefined data in field 5
- C34233 - Origination only station cannot be used to hunt

**CMD 343 - LCR/Authorization TZ Change Assignment**

- D34300 - N - Invalid data at TZ1, TZ2, TZ3, or TZ4

**CMD 344 - Common Carrier Assignment**

- C34400 - Carrier code input already exists in database

**CMD 345 - Emergency Call Destination Assignment**

- C34500 - Access code is already in use
- C34501 - Access code not found
- C34502 - No space in code table
- C34503 - Input parameter error
- C34504 - Illegal emergency access code
- C34505 - Cannot assign this code as an emergency access code
- C34506 - Illegal emergency level
- C34507 - Not an attendant dialing digit type
- C34508 - Destination number is out of range
- C34509 - Invalid entry; must input data in fields 2 and 3
- C34510 - Destination number entry is not needed for Emergency levels 1 and 2
- I34510 - Warning: Undefined destination number
- C34511 - Emergency code is already used by another emergency level
- C34512 - Invalid entry; must input data in field 3
- C34513 - Invalid entry; must input data in field 2
- I34514 - Warning: Undefined data in field 3

**CMD 346 - Call Pickup Group Assignment**

- C34600 - Not a station directory number
- C34601 - Table is full
- C34602 - Directory number is already in another pickup group
- C34603 - Directory number not found
- C34604 - Directory number is already in the pickup group
- C34605 - Directory number is a private line
- C34606 - Directory number is not a prime DN
- C34607 - No space left to add new members

**CMD 347 - Modem Pool Assignment**

- C34700 - This modem equipment number is already allocated in the system
- C34701 - This DIU equipment number is already allocated in the system
- C34702 - Modem pool member is not defined
- C34703 - Invalid modem pool index
- C34704 - Illegal pool group name
- C34705 - DIU/Modem pair must be in the same LCPU
- C34706 - Data must be entered in input fields
- C34707 - Inconsistent pool name
- C34708 - Inconsistent pool type
- C34709 - Inconsistent card type
- C34710 - No more space to add modem
- C34711 - Must enter either modem or DIU equipment number
- C34712 - Name cannot exceed nine characters
- C34713 - Must enter either name or type

**CMD 348 - Account Code Assignment**

- C34800 - No match
- C34801 - Account code already defined
- C34802 - Account code not found
- C34803 - No space
- C34804 - Account code's length does not agree with preassigned length (CMD 300)
- C34805 - Invalid account code
- I34806 - Accessing and sorting

**CMD 349 - Authorization Code Assignment**

- C34900 - Invalid dial 0 destination
- C34901 - Invalid authorization code
- C34902 - Authorization code already exists
- C34903 - Authorization code does not exist
- C34904 - Invalid authorization code length
- C34905 - SMDR identification code maximum is 5 characters
- C34906 - Number of authorization codes has reached system maximum

**CMD 350 - Group Speed Calling Membership Assignment**

- C35000 - Directory number not found
- C35001 - Not a station directory number
- C35002 - Table is full
- C35003 - Directory number is already in another group
- C35004 - Check input format in field 3
- C35005 - Group number is already used by voice DN
- C35006 - Group number is already used by data DN

**CMD 351 - Group Speed Calling List Assignment**

- C35100 - Check input format
- C35101 - Destination number is not defined
- C35102 - Speed dialing feature activation number cannot be a destination number
- C35103 - Group speed call code does not exist

**CMD 352 - Forced Account Code Toll-free Tables**

- C35200 - Scope field needs a high value
- C35201 - Scope field needs a low value
- C35202 - Scope fields need low and high values
- C35203 - Scope is not allowed in the last office code field
- C35204 - No more space to add more
- C35205 - Area code does not exist

**CMD 353 - Announcement Pattern Assignment**

- C35300 - Pattern already exists
- C35301 - Pattern is not defined
- C35302 - Input announcement 2
- C35303 - Input announcement 3
- C35304 - Enter both announcements
- C35305 - Deletion of announcement 2 is not allowed
- C35306 - Deletion of announcement 3 is not allowed
- C35307 - Delete all information regarding announcement 2
- C35308 - Delete all information regarding announcement 3
- C35309 - Announcement number is not defined
- C35310 - Memory for patterns is at system maximum
- C35311 - Number of announcement machines exceeds system maximum

**CMD 354 - UCD Group Assignment**

- C35400 - Pilot directory number mismatch
- C35401 - Group name mismatch
- C35402 - Overflow destination mismatch
- C35403 - Group maximum number has been reached
- C35404 - UCD member directory number does not exist
- C35405 - UCD member directory number is not a station directory number
- C35406 - Pilot directory number must be input

- C35407 - Pilot directory number is already in use
- C35408 - Cannot use this overflow directory number
- C35409 - No UCD members exist for this group
- C35410 - Member directory number is not in this UCD group
- C35411 - Station belongs to another UCD group
- C35412 - Announcement pattern number must be input
- C35413 - Announcement pattern number is not defined
- C35414 - Announcement pattern number mismatch
- C35415 - Announcement pattern number is not for UCD use
- C35416 - Group name length is a maximum of 9 characters
- C35417 - Pilot and overflow directory numbers cannot be the same
- C35418 - Overflow timer mismatch
- C35419 - Private line directory number may not be used in UCD
- C35420 - Hotline directory number may not be used in UCD
- C35421 - Logical line directory number may not be used in UCD
- C35422 - Total number of UCD memory blocks have reached their limit
- C35423 - Total number of UCD members have reached their limit
- I35424 - Warning: Unidentified data in field #4

**CMD 355 - ACD Group Assignment**

- C35500 - ACD Group is already defined
- C35501 - ACD Group is not defined
- C35502 - Pilot directory number conflicts with another DN or access code
- C35503 - Check value of maximum calls
- C35504 - Not enough free LDNs
- C35505 - Number of active calls exceeds allowable maximum
- C35506 - Some agents are still active/login; wait and try again later
- C35507 - Agent(s) are login but in unavailable mode; try again later
- C35508 - Supervisor password digits can only be 0 - 9
- C35509 - Check input in fields 2 through 7
- D35510 - Add customer group DB failed in LCPU
- D35511 - Change password failed in LCPU
- D35512 - Change monitor flag failed in LCPU
- D35513 - Change maximum terminal failed in LCPU
- D35514 - Add group/supervisor LDN failed in LCPU
- D35515 - Add agent LDNs failed in LCPU
- D35516 - Write pilot DN failed in LCPU
- D35517 - Write group to LCPU mapping failed in LCPU
- D35518 - Remove agent LDN failed in LCPU
- D35519 - Remove pilot DN failed in LCPU
- C35520 - Supervisor is still active/logged in
- C35521 - Supervisor/Agents are still active/logged in

**CMD 356 - ACD Agent Assignment**

- C35600 - Agent identification code is already assigned
- C35601 - Agent identification code is not found
- C35602 - Number of agents exceeds the configured allowance
- C35603 - Group number's LCPU number is not defined

- C35604 - Group number is not defined
- C35605 - No agent identification code was assigned in ACD group
- C35606 - Agent identification code is still login
- C35607 - Cannot delete group; member(s) are still login

**CMD 357 - ACD Group Parameter Assignment**

- C35700 - Check ACD group number
- C35701 - Check day time overflow destination
- C35702 - Check night time overflow destination
- C35703 - Alarm-on Q-size exceeds the allowable maximum
- C35704 - Alarm-off Q-size exceeds the allowable maximum
- C35705 - Alarm-on value should be greater than Alarm-off value
- C35706 - Announcement pattern number is not defined
- C35707 - Announcement pattern is not for ACD use

**CMD 358 - ACD Status Display and Remote Logout**

- C35801 - Group number is not defined
- C35802 - Agent identification number is not found
- C35803 - Agent has logged out
- C35804 - Supervisor is not found
- C35805 - Failed to read prime directory number
- C35806 - Failed to read device number
- C35807 - Failed to read supervisor LDN
- C35808 - Failed to read supervisor STN
- C35809 - Agent is not logged in

**CMD 359 - DID/CCSA/DNIS ACD Parameter Assignment**

- C35900 - Undefined trunk group number
- C35901 - Check trunk group number range
- C35902 - The specified LDN does not exist
- C35903 - IQP2 must be smaller than IQP1
- C35904 - Trunk type is not DID, CCSA, or DNIS
- C35905 - ISDN trunk group with DNIS/DDI inward mode is not allowed
- C35906 - Overflow timer must be greater than Queuing Priority Timer
- C35907 - IQP2 field has been defined; IQP TMR should also be defined
- C35908 - IQP TMR has been defined; IQP2 field should also be defined
- C35911 - Deletion not allowed; check IQP2 and IQP TMR entries

**CMD 360 - Data Station Assignment**

- C36000 - Directory number conflicts with existing number or access code
- C36001 - Specified equipment number is a group member
- C36002 - No LTN is available
- C36003 - No LDN is available
- D36004 - Add DN-LDN relation failed
- D36005 - Failed to remove this DN from DA tree
- D36006 - Add DN-LDN relation failed
- D36007 - Failed to remove DN-LDN Relationship



- D36008 - Failed to release the deletion LDN
- D36009 - Failed to release the deletion LTN
- C36010 - DIU directory number does not match
- D36011 - Failed to add KSU-LDN relationship
- D36012 - Failed to add KSU member
- D36013 - Failed to remove KSU Member
- D36014 - Failed to remove KSU-LDN relationship
- C36015 - Card type does not match
- C36016 - Cannot add card to this card slot
- C36017 - Number of DIUs is up to system maximum
- C36018 - Cannot install DSTI/BSTI/PBRC in slot 12 or 14
- C36019 - Cannot install DSTI-2B in an even card slot
- C36020 - Cannot install DSTI-2B in card slots 11 - 14
- C36021 - Cannot install T1 in an odd card slot
- C36022 - Cannot install T1 in card slot 14
- C36023 - Check associate directory number input
- C36024 - DIU directory number already exists
- C36025 - Check existence of modem pool identification
- C36026 - Missing operation specified
- D36027 - LDN-to-LTN conversion failed
- C36028 - Check specified DIU directory number
- C36029 - Check specified DIU type
- C36030 - Specified data station does not exist
- C36031 - Specified equipment number is already in use
- D36032 - DIU logic pairing failed
- D36033 - Addition of LDN to KSU failed
- D36034 - Removal of LDN from KSU failed
- C36035 - Must remove SDDN key
- C36036 - Substate is not valid
- C36037 - Specified DIU does not exist
- C36038 - Data directory number already exists
- C36039 - Must assign data directory number
- D36040 - Addition of data line failed
- D36041 - Read phone attributes failed
- C36042 - Logic pair already exists
- C36043 - DDN key does not exist
- D36044 - Removal of data line failed
- D36045 - Removal of logic pair failed
- D36046 - Addition of DIU attributes failed
- D36047 - Modification of DIU attributes failed
- D36048 - Addition of DIU failed
- C36049 - Check specified equipment number
- D36050 - Removal of DIU failed
- D36051 - Directory number registration failed
- C36052 - Database has recovered
- C36053 - Recovering database
- C36054 - Equipment number has been used or reserved
- C36055 - Permanent connection exists
- C36056 - Write authorization attributes failed

**CMD 361 - Data Interface Parameter Assignment**

- C36100 - Check equipment or modem pool number
- C36101 - Check parity bit
- C36102 - Empty modem pool
- C36103 - Check DTE/DCE field in EMU mode
- C36104 - Check input in SPEED field
- C36105 - Cannot modify; EMU is in DTE mode
- C36106 - Cannot modify; EMU is on DCE mode
- C36107 - Check DTR field
- C36108 - DIU-DCE is in permanent connection; no modification is allowed
- C36109 - The equipment number is assigned for another device or is invalid

**CMD 362 - Data Station Parameter Assignment**

- C36200 - Check equipment or modem pool number
- C36201 - Value in Backspace, Cancel, Display Character fields cannot be 0
- C36202 - <CR> or ^P (Control P) are reserved
- C36203 - Duplicated value in two or more fields
- C36204 - Value in local echo selection has to be NON
- C36205 - Value in local editing selection has to be DIS
- C36206 - Value in Backspace, Cancel, Display Character fields has to be 0
- C36207 - Value in Dial Up UCI field has to be OFF
- C36208 - Check local edit selection
- C36209 - Check local echo selection
- C36210 - Empty modem pool
- C36211 - Check input in Backspace Character field
- C36212 - Check input in Cancel Character field
- C36213 - Check input in Display Character field
- C36214 - Check input in UCI field
- C36215 - Check input in Dial Up UCI field
- C36216 - Check AUTO DC field
- C36217 - D UCI field conflicts with DTR setting in command 361
- C36218 - D UCI field conflicts with AUTO DC and/or UCI setting
- C36219 - DIU-DCE is in permanent connection; no modification is allowed

**CMD 364 - Trunk PP Parameter Change**

- C36400 - Check start check error range
- C36401 - Check start check error time range
- C36402 - Check first interdigit timer range
- C36403 - Check second interdigit timer range
- C36404 - Check dial width range
- C36405 - Check dial time range
- C36406 - Check guard time range
- C36407 - Check dial tone on width
- C36408 - Check dial tone off width
- C36409 - Check secondary tone on width
- C36410 - Check secondary tone off width
- C36411 - Check busy tone on width
- C36412 - Check busy tone off width

- C36413 - Check disconnect time/HIC open time
- C36414 - Equipment is not a trunk
- C36415 - Invalid keyword entered
- C36416 - Must input the parameter value
- C36417 - Must input the parameter number
- C36419 - All millisecond input must be in multiples of 40
- C36420 - Equipment number can only have a maximum of eight circuits

**CMD 366 - Data Hunting Assignment**

- C36600 - Input member directory number
- C36601 - Group is already full
- C36602 - Member directory number is not defined in the system
- C36603 - Pilot directory number mismatch
- C36604 - Group name mismatch
- C36605 - Group is empty
- C36606 - Member number is not in group
- C36607 - Member directory number is not in group
- C36608 - Inconsistent member number/directory number pair
- C36609 - Pilot directory number is already in use
- C36610 - Member number is required
- C36611 - Member number is not continuous in group
- C36612 - Member directory number is already in another data hunt group
- C36613 - Cannot use this directory number
- C36614 - Input pilot directory number
- C36615 - Group name is too long
- C36616 - The data hunting member cannot be in permanent connection
- C36617 - Failed to convert LDN to LTN
- C36618 - Failed to send a transaction to LPU side

**CMD 367 - Name Dialing Assignment**

- C36700 - Name string is already defined
- C36701 - No space to add more
- C36702 - Not found
- C36703 - Check format of name string
- C36704 - Invalid destination number
- C36705 - Undefined destination number
- C36707 - This is not a DIU DN

**CMD 368 - High-Usage Data Destination Assignment**

- C36800 - The high usage data destination number is already defined
- C36801 - The high usage data destination number is not defined
- C36802 - Illegal high usage data destination number

**CMD 370 - Attendant Position Assignment**

- C37000 - Equipment number is already assigned to another device
- C37001 - Attendant directory number has already been defined

**PERCEPTION 4000****ERROR AND INFORMATION MESSAGES**

- C37002 - Invalid attendant directory number
- C37003 - Attendant group directory number has not been defined
- C37004 - Input exceeds the number of possible attendants in the system
- C37005 - The specified attendant does not exist
- C37006 - Equipment number and directory number do not match
- C37007 - Equipment number or attendant directory number is required
- C37008 - Not a DSTI card type
- I37010 - Are you sure you want to remove last attendant from attendant group?
- I37011 - Remove this attendant?
- C37012 - Cannot assign more attendants to attendant groups
- C37013 - Cannot assign more attendants to shelves
- C37014 - Cannot modify attendant group directory number
- C37015 - Cannot modify attendant directory number
- C37016 - Attendant call queue has L calls; try again when it is M or less (L and M are values between 1 and 320)
- C37017 - Attendant call queue has N calls; try again when it is empty (N is a value between 1 and 32).

**CMD 371 - Attendant Feature Key Assignment**

- C37100 - Invalid attendant directory number
- C37101 - An access code is required in DEF 2 field
- C37102 - Invalid incoming call number
- C37103 - Attendant directory number has not been defined
- C37104 - Invalid zone number
- C37105 - DEF 1 and DEF 2 exceed the allowable maximum
- C37106 - DEF 1 and DEF 2 have already been defined
- C37107 - The specified incoming call key does not exist
- C37108 - DEF 1 and DEF 2 do not match
- C37109 - Autodial keys exceed the allowable maximum
- C37110 - An ICI category number is required in DEF 2 field

**CMD 372 - Attendant Group Assignment**

- C37200 - Attendant group DN has not been defined
- C37201 - Attendant group DN is required
- C37202 - Attendant group DN has not been defined
- C37203 - Attendant group DN has already been defined
- C37204 - Attendant group DN is required
- C37205 - Invalid Attendant group DN
- C37206 - Invalid group name
- C37207 - Overflow timer is required
- C37208 - Invalid overflow timer
- C37209 - Overflow destination is out of range
- C37210 - Overflow destination is required
- C37211 - Invalid overflow destination
- C37212 - Incoming key number is required
- C37213 - Incoming call category has already been defined
- C37214 - Incoming call category is required
- C37215 - Invalid incoming call category
- C37216 - Attendant group number or DN is required
- C37217 - Attendant has already been defined

- C37218 - Attendant group has already been defined
- C37219 - Cannot reassign a new value in field 8
- I37220 - Warning: Undefined night bell in field #5
- C37221 - Cannot modify attendant group directory number

**CMD 373 - Attendant Incoming Call Priority Assignment**

- C37300 - Attendant group DN has not been defined
- C37301 - NNN is not defined for priority
- C37302 - Category has already been defined
- C37303 - Too many categories
- C37304 - Trunk group number has not been defined
- C37305 - At least one category must be entered

**CMD 374 - Internal Call Alternate Routing Assignment**

- C37400 - Directory number does not exist
- C37401 - Invalid alternate directory number
- C37402 - Invalid announcement device
- C37403 - Invalid night bell device
- I37404 - Warning: Undefined data in field AR TZ #n

**CMD 375 - Attendant Password Assignment**

- C37500 - Index number is out of range
- C37501 - Index number has not been defined
- C37502 - Index number has already been defined
- C37503 - Attendant password has already been defined
- C37504 - Attendant password is required
- C37505 - SMDR ID has already been defined
- C37506 - SMDR ID is required
- C37507 - Attendant password or SMDR ID is required
- C37508 - Invalid attendant password

**CMD 380 - LCR Country Code Routing Assignment**

- C38000 - The last field cannot be a scope field
- C38001 - Check scope data
- C38002 - Country code is defined for another route pattern number
- C38003 - Country code(s) are not found or are invalid
- C38004 - Country code(s) already exist or are invalid
- C38005 - Number of defined country codes has reached system maximum
- C38006 - Missing data in scope type field in field N

**CMD 381 - LCR Area Code Routing Assignment**

- C38100 - Area code is not defined for this route pattern
- C38101 - Area code is already defined for another route pattern
- C38102 - Data is needed following scope in field N

**CMD 382 - LCR Area/Office Code Routing Assignment**

- C38200 - Route pattern table is not defined for area code
- C38201 - Office code already exists for another route pattern/AC table
- C38202 - Route pattern is the default pattern for this area code
- C38203 - Office code tables are at system maximum; cannot add more
- C38204 - Data is needed following scope in field N

**CMD 383 - LCR Routing Table Assignment**

- C38300 - Check warning flag
- C38301 - Check trunk group number
- C38302 - Check range of table number, route number, or trunk group number
- C38303 - Check range of carrier number
- C38304 - Routing tables are full
- C38305 - Route not found
- C38306 - Check range of translation profile number
- C38307 - Trunk group number is not defined
- C38308 - Check next route warning flag
- C38309 - Incoming trunk groups are not allowed
- C38310 - Private line trunk groups are not allowed
- C38311 - Non-ISDN trunks do not require call type
- C38312 - ISDN trunks require call type

**CMD 384 - LCR Special Routing Assignment**

- C38400 - Routing pattern number is not within range
- C38401 - QPL entry is required
- C38402 - Invalid request type

**CMD 386 - LCR Digit Translation Profile Assignment**

- C38600 - Check Digit Translation Profile Number
- C38601 - Check Delete Dialed Number
- C38602 - Check Delete UNP Location Code
- C38603 - Check Toll Prefix Treatment
- C38604 - Check Operator Prefix
- C38605 - Check Delete Equal Access Code
- C38606 - Check Area Code Treatment
- C38607 - Check Toll Prefix Digits
- C38608 - Check Toll Prefix Treatment Length

**CMD 387 - Facility Restriction Level Profile Assignment**

- C38700 - FRL already exists in field N
- C38701 - FRL does not exist in field N

**CMD 400 - Miscellaneous Device Assignment**

- C40000 - Announcement machine is already in use

- C40001 - Announcement machine is not defined
- C40002 - Music-on-hold device is already in use
- C40003 - Music-on-hold device is not defined
- C40004 - Invalid usage
- C40005 - Equipment number is already in use
- C40006 - Invalid equipment number for BSTI card
- C40007 - Invalid equipment number for SRTI card
- C40008 - Remove system music by using Command 408
- C40009 - Announcement used in announcement pattern; remove by using Command 353

**CMD 401 - Dictation Group/Machine Assignment**

- C40100 - Check dictation machine group number range
- C40101 - Check device number range
- C40102 - Device has already been installed
- C40103 - Device not found
- C40104 - Dictation machine group is not defined
- C40105 - Card or equipment number is assigned to another device
- C40106 - Equipment number is not a dictation machine card type
- C40107 - Dictation machine's device name exceeds 14 characters
- C40108 - Remove hunting sequence before deleting dictation machine

**CMD 402 - System Speed Calling Assignment**

- C40200 - The speed dialing index is already defined
- C40201 - Check input format
- C40202 - Destination number is not defined
- C40203 - Speed dialing feature activation cannot be dest. number

**CMD 403 - M&A Security Level and Access Assignment**

- C40300 - Check security level
- C40301 - Check security password
- C40302 - Password unchanged; auto logout
- C40303 - Check command ID
- C40304 - Check operation ID
- C40305 - Check command allowance
- C40306 - Check operation allowance
- C40307 - Input line overflowed

**CMD 404 - System Holiday Assignment**

- C40400 - Duplicate holiday dates
- C40401 - Table entries exceed 16
- C40402 - Index number is already defined in the table
- C40403 - Invalid input data
- C40404 - Index number is not defined in the table
- C40405 - Input holiday date is not found in the table
- C40406 - Holiday date value is out of range

**CMD 405 - Night Bell Assignment**

- C40500 - UNA night bell is already in use
- C40501 - UNA night bell is not defined
- C40502 - Invalid equipment number for this card type
- C40503 - Equipment number is already in use
- C40504 - Equipment number and card type mismatch

**CMD 407 - System Timer Assignment**

- C40700 - Timer value is out of range
- C40701 - Specified timer is not defined
- C40702 - ACD advance timer should be smaller than overflow timer

**CMD 408 - System Option Flag Assignment**

- C40800 - Option value is out of range
- C40801 - Directory number is not an attendant DN
- C40802 - Attendant group or directory number can only be used for VDNI, RDRL, or NCTA
- C40803 - External music tone does not exist
- C40804 - Option field required
- C40805 - Value field required
- C40806 - Option field is duplicated
- C40807 - Force Account code length must be defined first
- C40808 - The device for this option is not defined
- C40809 - ACD group is still on shift
- C40810 - ACD agent is still logged in
- C40814 - Maximum Camp-on value is out of range
- C40815 - FACL value is over the PDD1 length defined in CMD 300
- C40816 - Check input in value field n

**CMD 409 - SMDR Configuration Assignment**

- C40901 - Missing input after trunk group number fields
- C40902 - Missing trunk group number input
- C40903 - Missing input data

**CMD 410 - Redundancy Selection Assignment**

- C41000 - Number of L/T Shelves is out of range

**CMD 412 - T-1 Clock Provider Selection Assignment**

- C41200 - Check clock provider
- I41201 - Warning: Please try later, database is reserved

**CMD 413 - Digital Carrier Channel Assignment**

- C41300 - Card type or equipment number is already in use
- C41301 - Undefined trunk group number
- C41302 - Number of trunks in trunk group number exceeds maximum



- C41303 - Trunk group number cannot be modified
- C41304 - Signaling is not compatible
- C41305 - Start method is not compatible
- C41306 - Check start method for outgoing call
- C41307 - Check dial tone
- C41308 - Check the dial mode
- C41309 - DISA must have EPD or CLG release supervision
- C41310 - DISA is for incoming and bothway
- C41311 - No DISA flag for given trunk group number
- C41312 - Channel name exceeds 9 alpha-numeric characters
- C41313 - Download PP data failed
- C41314 - Check input format in field 4 or 5
- C41315 - Check input format in field 8 or 9
- C41316 - Channel has already been installed
- C41317 - Undefined equipment number
- C41318 - Number of T1 cards exceeds system maximum
- I41319 - Warning: This is the last trunk to be removed from trunk group
- C41320 - Clock provider cannot be modified
- I41320 - Warning: Equipment number is the last channel removed from T1 card
- C41321 - Remove hunting sequence before deleting trunks
- C41322 - Private feature key still exists
- I41322 - Warning: Please try later; database is reserved
- C41323 - Failed to read LCPU database
- C41324 - Trunk group number should be non-ISDN type
- I41324 - Warning: Equipment number is the last channel removed from T1 card
- C41325 - Trunk cannot be assigned to a dictation machine trunk group
- C41326 - Clock provider cannot be deleted
- C41327 - Clock database is full
- I41328 - Warning: Please try later; database is reserved

**CMD 414 - I/O Port Configuration Assignment**

- C41400 - I/O port number is required
- C41401 - Motor Control Setting field is NO
- C41402 - Motor control code is out of range
- C41403 - Fields 8 to 11 for IOP# 1 cannot be modified; use dip switches on MISC card

**CMD 415 - I/O Port Assignment**

- C41500 - Mismatch I/O port type
- C41501 - Mismatch port type and application
- C41502 - <ALL> is not allowed in ADD operation
- C41503 - Mismatch I/O port number and console application
- C41504 - Not allowed when deleting main console
- C41505 - Each port can have one and only one assigned AP application
- C41506 - Application already exists
- C41507 - There is no application assigned
- C41508 - SMDI is not supported; only VMS1 is available

**CMD 416 - DTMF Receiver Assignment**

- C41600 - Device has already been installed
- C41601 - Device not found
- C41602 - Cards 11 and 12 are installed together; input only 11
- C41603 - Cards 13 and 14 are installed together; input only 13
- C41604 - Not a DTMF receiver card type
- C41605 - A maximum of N DTMF cards can be installed

**CMD 417 - Clock Provider Assignment**

- I41700 - Warning: Please try later; database is reserved
- C41701 - This card is the clock provider
- C41702 - Check card number
- C41703 - Check priority level
- C41704 - TTRI/IPRC card is not installed
- C41705 - No ccd data (update ccd by using CMD 422)
- C41706 - To search NOT PROVIDER card, enter <TAB>

**CMD 420 - Trunk Group Parameter Assignment**

- C42000 - Undefined trunk group number
- C42001 - Check trunk group number range
- C42002 - Incoming trunks cannot be toll-free
- C42003 - Check toll-free number
- C42004 - Toll-free is not required for TIE trunks
- C42005 - Duplicated TF# table
- C42006 - Toll-free table overflow; cannot add more
- C42007 - IQP2 should be less than IQP1
- C42008 - IQP1 timer and IQP2 should be entered together
- C42009 - ACD overflow timer should be greater than IQP TMR

**CMD 421 - ISDN Trunk Group Parameter Assignment**

- C42100 - Undefined trunk group number
- C42101 - Check trunk group number range
- C42102 - Non-ISDN trunk group number
- C42103 - Total DID, DNIS, CCSA type plus DDI, DNIS inward mode cannot exceed 16
- C42104 - CGDN/DNIS display option can only have DNIS/DDI as inward routing mode

**CMD 422 - ISDN IPRC and IPRI Card Assignment**

- C42200 - IPRC card does not exist
- C42201 - Interface identifier must be unique for each IPRI card
- C42202 - IPRI card has already been assigned
- C42203 - Invalid entry; IPRC and IPRI cards have different IFG
- C42204 - Invalid entry; IPRC and IPRI cards are on different LCPU's
- C42205 - Number of IPRI cards for a given CARD# has reached maximum
- C42206 - Cannot delete D-channel IPRI; must delete non D-channel IPRI(s) first
- C42207 - Cannot delete IPRC card; must delete assigned IPRI(s) first
- C42208 - IPRC card and D-channel do not exist

- C42209 - IPRC and IPRI cards do not exist
- C42210 - Invalid IPRC card number in field 1
- C42211 - Invalid IPRI card number; IPRI port must be an even number, 02 to 12
- C42212 - Cannot have the same IPRC and IPRI card numbers
- C42213 - D-channel structure still exists
- C42214 - Number of IPRC cards has reached the system maximum
- C42215 - Clock provider has reached maximum
- C42216 - Providable IPRI card cannot be deleted
- C42217 - D-channel has already been assigned for a specific CARD#
- C42218 - Equipment number in CARD# field is not an IPRC card
- C42219 - Equipment number in IPRI field is not an IPRI card
- C42220 - Check input in field T303; mismatch with original value
- C42221 - Interface identifier is required
- C42222 - Check input in field PROTOCOL; mismatch with original value
- C42223 - IPRC protocol is required
- C42224 - Must assign D CH field for the first IPRI card
- C42225 - Check input in D CH field; mismatch with original value
- C42226 - IPRI card number is required
- C42227 - Must enter data in order to modify
- C42228 - D-channel IPRI card must have interface identifier equal to 0

**CMD 423 - ISDN Channel Group Assignment**

- C42300 - Card or equipment number is already assigned to other devices
- C42301 - Invalid equipment number
- C42302 - Equipment number has already been assigned
- C42303 - Circuit number must be 1 for H11 and 1, 7, 13, or 19 for H0
- C42304 - Total number of MIN AVCs exceed total channels for given CGN
- C42305 - Not allowed to delete; H0 or H11 must be set to NO
- C42307 - Trunk group number has already been assigned
- C42308 - Channel group number is out of range
- C42309 - Data has already been assigned in database
- D42310 - Data is not assigned in database
- D42311 - B-channel is out of range
- D42312 - Channel group number is not registered
- D42313 - LDN is not available
- D42314 - LDN is not registered for this channel group number
- D42315 - LDN pool cannot support request
- D42316 - LDN status is busy
- D42317 - Channel group number is in use
- D42318 - Channel group number is not used
- D42319 - ISDN time zone class is undefined
- D42320 - Channel group number change table database is full
- D42321 - LCPU number is out of range

**CMD 424 - ISDN Channel Group Hunting Assignment**

- C42400 - Channel group number does not exist
- C42401 - Sequence number does not exist
- C42402 - Invalid hunting direction
- C42403 - Invalid IPRI number

- C42404 - Sequence number is required
- C42405 - Check sequence number

**CMD 425 - ISDN Service Min/Max Assignment**

- C42500 - Undefined trunk group number
- C42501 - Total number of MIN SVC exceeds total number of channels in TGN's channel group
- C42502 - Check trunk group number range
- C42503 - Undefined channel group number
- C42504 - Check time zone range
- C42505 - Total number of MAX SVC exceeds total number of channels in TGN's channel group
- C42506 - Check trunk group type
- C42507 - The total MAX SVC cannot be less than MIN SVC

**CMD 900 - Traffic Measurement Setup Assignment**

- C90000 - Check input
- D90001 - Failed to send transaction to TF

**CMD 901 - Traffic Measurement Time Zone Assignment**

- C90100 - Times zones are overlapped
- C90101 - Times zones are not in ascending order
- C90102 - Format of minute should be 00, 15, 30, or 45
- C90103 - Check start time format; it would make last time zone exceed 2400
- C90104 - Failed to send transaction to TF

**CMD 902 - Traffic Measurement Object Assignment**

- C90200 - Check object in fields Mi...Mj
- C90201 - N objects too many; input not accepted
- C90204 - Initialization complete
- C90205 - Maximum A:X
- C90206 - Minimum value for A:X
- C90207 - Object not found
- C90208 - Not allowed to enter data in OBJ field for TRTL type



## FIELD PARAMETER INPUT CHARACTERS

Valid field parameter input for the Maintenance & Administration commands on the PERCEPTION 4000 are listed in this section. The "^" character denotes pressing the <CONTROL> key along with the specified key.

| ASCII Character | Description  |
|-----------------|--|
| TAB             | Skip field/no input is entered.  |
| C/R             | Carriage Return/Line Feed; indicates end of data input.                    |
| ^F              | Duplicate value used for field in previous input line.                     |
| ^P              | Enter Setup Mode.  |
| ^Q              | Resume output that was halted with a ^S.                                   |
| ^R              | Duplicate values used in the previous input line for the remaining fields. |
| ^S              | Halt display of data on the output device.                                 |
| ^W              | Refresh the display screen.  |
| SPACE           | Input/output character   |
| "               | Input/output character   |
| #               | Input/output character   |
| %               | Input/output character   |
| '               | Input/output character   |
| (               | Input/output character   |
| )               | Input/output character   |
| *               | Input/output character   |
| ,               | Auto-increment indicator   |
| -               | Scope indicator, used to separate the lower and upper values.              |
| .               | Input/output character; undefined data for field.                          |
| /               | Input/output character   |
| 0               | Input/output character   |
| 1               | Input/output character   |
| 2               | Input/output character   |
| 3               | Input/output character   |
| 4               | Input/output character   |
| 5               | Input/output character   |

|   |   |
|---|---|
| 6 | Input/output character  |
| 7 | Input/output character  |
| 8 | Input/output character  |
| 9 | Input/output character  |
| : | Range indicator, used to separate the lower and upper range values.   |
| = | Output display only, used by the system to indicate that input is expected.                                 |
| ? | Immediate Help indicator  |
| @ | Escape operation (SHIFT-2) (abort current input line, abort display of output, move up the hierarchy level) |
| A | Input/output character  |
| B | Input/output character  |
| C | Input/output character  |
| D | Input/output character  |
| E | Input/output character  |
| F | Input/output character  |
| G | Input/output character  |
| H | Input/output character  |
| I | Input/output character  |
| J | Input/output character  |
| K | Input/output character  |
| L | Input/output character  |
| M | Input/output character  |
| N | Input/output character  |
| O | Input/output character  |
| P | Input/output character  |
| Q | Input/output character  |
| R | Input/output character  |
| S | Input/output character  |
| T | Input/output character  |
| U | Input/output character  |
| V | Input/output character  |
| W | Input/output character  |

|   |  |
|---|--|
| X | Input/output character                   |
| Y | Input/output character                   |
| Z | Input/output character                   |
| [ | Input/output character                   |
| \ | Used internally to set up a keyword list |
| ] | Input/output character                   |
| _ | Input/output character                   |
| a | Input/output character                   |
| b | Input/output character                   |
| c | Input/output character                   |
| d | Input/output character                   |
| e | Input/output character                   |
| f | Input/output character                   |
| g | Input/output character                   |
| h | Input/output character                   |
| i | Input/output character                   |
| j | Input/output character                   |
| k | Input/output character                   |
| l | Input/output character                   |
| m | Input/output character                   |
| n | Input/output character                   |
| o | Input/output character                   |
| p | Input/output character                   |
| q | Input/output character                   |
| r | Input/output character                   |
| s | Input/output character                   |
| t | Input/output character                   |
| u | Input/output character                   |
| v | Input/output character                   |
| w | Input/output character                   |
| x | Input/output character                   |
| y | Input/output character                   |
| z | Input/output character                   |





## MAINTENANCE & ADMINISTRATION COMMANDS

| Numeric ID | Command Name                           | Command Keyword      |
|------------|--|----------------------|
| 102        | Initiate Switchover                    | SWITCHOVER           |
| 110        | Time Activated Command Programming     | TIME_ACT_COM         |
| 121        | Clock Reset                            | CLOCK_RESET          |
| 143        | Patch Report                           | PATCH_REPORT         |
| 144        | Memory Test                            | MEMORY_TEST          |
| 151        | File Dump                              | FILE_DUMP            |
| 152        | Disk File Manipulation                 | FILE_MANIPULATION    |
| 153        | File Consolidation                     | FILE_CONSOLIDATION   |
| 160        | Alarm/Fault Display and Reset          | ALM/FAULT_DISP/RESET |
| 164        | Crash Dump Display                     | CRASH_DUMP_DISP      |
| 167        | Data Structure Display                 | DATA_STRUCTURE_DISP  |
| 168        | Trace Setup                            | TRACE_SETUP          |
| 169        | Data Structure Display 2               | DATA STRUCTURE DISP2 |
| 206        | Terminal Maintenance                   | TERMINAL_MAINT       |
| 208        | Device Service Status                  | DEVICE_STATUS        |
| 210        | System Inventory                       | SYS_INVENTORY        |
| 300        | Numbering Plan Assignment              | NUMBERING_PLAN       |
| 301        | Uniform Numbering Plan Assignment      | UNP_ASSIGN           |
| 302        | UNP Routing Assignment                 | UNP_ROUTING          |
| 303        | Coordinated Numbering Plan Assignment  | CNP_ASSIGN           |
| 305        | Trunk-to-Trunk Connection Assignment   | TRUNK_CONNECTIONS    |
| 307        | Trunk Group Routing Assignment         | TG_ROUTING           |
| 308        | Trunk Routing Assignment               | TRUNK_ROUTING        |
| 309        | Trunk Hunting Assignment               | TRUNK_HUNTING        |
| 310        | Trunk Group Assignment                 | TG_ASSIGN            |
| 311        | Trunk Group Toll-free Tables           | TG_TF_TABLES         |
| 312        | Label Print                            | LABEL_PRINT          |
| 313        | Trunk Assignment                       | TK_ASSIGN            |
| 314        | DID/CCSA/DNIS Trunk Group Assignment   | DID/CCSA_TG_ASSIGN   |
| 315        | DID/CCSA/DNIS DISA LDN Assignment      | DID/CCSA_DISA        |
| 316        | DID/CCSA/DNIS LDN Assignment           | DID/CCSA_LDN         |
| 317        | Dialing Definition                     | DIALING_DEFINITION   |
| 318        | Interchangeable Office Code Table      | IOC_TABLE            |
| 319        | Voice Paging/Code Call Assignment      | VP/CC_ASSIGN         |
| 320        | Station Feature Key Pattern Assignment | STA_KEY_PATTERN      |
| 321        | System DISA Security Code Assignment   | DISA_CODES           |
| 322        | Logical Line Call Forward Assignment   | LLINE_CALL_FORWARD   |
| 323        | Timeout Routing Destination Assignment | TIMEOUT_ROUTING      |
| 324        | Autodial Number Display                | AUTO_DIAL_DISP       |
| 325        | Call Forwarding Destination Display    | CALL_FORWARD_DISP    |
| 326        | System Number Summary                  | SYS_NUM_PLAN         |
| 327        | Secondary Line Appearances Display     | SECONDARY_LINE_DISP  |
| 328        | Canned Text/Advisory Message Creation  | MESSAGE_ASSIGN       |
| 329        | Station-Level Parameter Assignment     | STA_PARAMETERS       |
| 330        | Station Assignment                     | STA_ASSIGN           |
| 331        | Station Feature Key Assignment         | STA_KEY_ASSIGN       |

|     |   |                        |
|-----|---|------------------------|
| 332 | Private/Hotline Assignment                    | PVT/HOT_ASSIGN         |
| 333 | Intercom Group Member Display                 | INTERCOM_DISPLAY       |
| 334 | Class of Service Assignment                   | CLASS_OF_SERVICE       |
| 335 | Country Code Assignment                       | CC_ASSIGN              |
| 336 | Time Zone Assignment                          | TZ_ASSIGN              |
| 337 | Destination Restriction Level Assignment      | DRL_ASSIGN             |
| 338 | Country Code Restriction Tables               | CC_RESTRICT            |
| 339 | Area/Office Code Restriction Tables           | AC/OC_RESTRICT_TBL     |
| 340 | Exception Restriction Tables                  | EXCEPT_RESTRICT        |
| 341 | Area Code Restriction Tables                  | AC_RESTRICT            |
| 342 | Station Hunting Assignment                    | STA_HUNTING            |
| 343 | LCR/Authorization TZ Change Assignment        | LCR/AUTH_TZ            |
| 344 | Common Carrier Assignment                     | COMMON_CARRIERS        |
| 345 | Emergency Call Destination Assignment         | EMERGENCY_CALL         |
| 346 | Call Pickup Group Assignment                  | CALL_PICKUP            |
| 347 | Modem Pool Assignment                         | MODEM_POOL_ASSIGN      |
| 348 | Account Code Assignment                       | ACCOUNT_CODE_ASSIGN    |
| 349 | Authorization Code Assignment                 | AUTHORIZATION_CODES    |
| 350 | Group Speed Calling Member Assignment         | GROUP_SC_MEMBERS       |
| 351 | Group Speed Calling List Assignment           | GROUP_SC_LIST          |
| 352 | Forced Account Code Toll-free Tables          | FAC_TF_TABLE           |
| 353 | Announcement Pattern Assignment               | ANNOUNCEMENT_PAT       |
| 354 | UCD Group Assignment                          | UCD_GROUP_ASSIGN       |
| 355 | ACD Group Assignment                          | ACD_GROUP              |
| 356 | ACD Agent Assignment                          | ACD_AGENT_ASSIGN       |
| 357 | ACD Group Parameter Assignment                | ACD_PARAMETERS         |
| 358 | ACD Status Display and Remote Logout          | ACD_DISP_LOGOUT        |
| 359 | DID/CCSA/DNIS ACD Parameter Assignment        | DID/CCSA/DNIS_ACD      |
| 360 | Data Station Assignment                       | DATA_ASSIGN            |
| 361 | Data Interface Parameter Assignment           | DATA_INT_PARAMETERS    |
| 362 | Data Station Parameter Assignment             | DATA_STA_PARAMETERS    |
| 364 | Trunk PP Parameter Change                     | TRUNK_PARAMETER CHANGE |
| 366 | Data Hunting Assignment                       | DATA_HUNTING           |
| 367 | Name Dialing Assignment                       | NAME_DIALING           |
| 368 | High Usage Data Destination Assignment        | HIGH_USAGE_DATA        |
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| 371 | Attendant Feature Key Assignment              | ATT_KEY_ASSIGN         |
| 372 | Attendant Group Assignment                    | ATT_GROUP_ASSIGN       |
| 373 | Attendant Incoming Call Priority Assignment   | CALL_PRIORITY_ASSIGN   |
| 374 | Internal Call Alternate Routing Assignment    | INT_CALL_ALT_ROUTING   |
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| 380 | LCR Country Code Routing Assignment           | CC_ROUTING             |
| 381 | LCR Area Code Routing Assignment              | AC_ROUTING             |
| 382 | LCR Area/Office Code Routing Assignment       | AC/OC_ROUTING          |
| 383 | LCR Routing Table Assignment                  | LCR_ROUTE_ASSIGN       |
| 384 | LCR Special Routing Assignment                | LCR_SPECIAL_ROUTING    |
| 386 | LCR Digit Translation Profile Assignment      | LCR_DIGIT_PROFILES     |
| 387 | Facility Restriction Level Profile Assignment | FRLP_ASSIGN            |
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| 402 | System Speed Calling Assignment               | SYS_SC_ASSIGN          |

|     |  |                      |
|-----|--|----------------------|
| 403 | M&A Security Level and Access Assignment | M/A_SECURITY_ASSIGN  |
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| 405 | Night Bell Assignment                    | NIGHT_BELL_ASSIGN    |
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| 408 | System Option Flag Assignment            | SYS_OPTION_ASSIGN    |
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| 412 | T-1 Clock Provider Selection Assignment  | T1_CLOCK_ASSIGN      |
| 413 | Digital Carrier Channel Assignment       | DIGITAL_CARRIER      |
| 414 | I/O Port Configuration Assignment        | I/O_PORT_CONFIG      |
| 415 | I/O Port Assignment                      | I/O_PORT_ASSIGN      |
| 416 | DTMF Receiver Assignment                 | DTMF_RECEIVER_ASSIGN |
| 417 | Clock Provider Assignment                | CLOCK_PROVIDER       |
| 420 | Trunk Group Parameter Assignment         | TG_PARAMETER         |
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| 422 | ISDN IPRC and IPRI Card Assignment       | IPRC_IPRI_ASSIGN     |
| 423 | ISDN Channel Group Assignment            | CGN_ASSIGN           |
| 424 | ISDN Channel Group Hunting               | CGN_HUNTING          |
| 425 | ISDN Service Min/Max Assignment          | SERVICE_MIN/MAX      |
| 900 | Traffic Measurement Setup Assignment     | TRAFFIC_SETUP        |
| 901 | Traffic Measurement Time Zone Assignment | TRAFFIC_TIME_ZONE    |
| 902 | Traffic Measurement Object Assignment    | TRAFFIC_OBJECT       |



## MAINTENANCE & ADMINISTRATION FEATURES

Features for the PERCEPTION 4000 are listed below with their feature numbers (FNOs) and key label abbreviations. Values from 1 to 256 are reserved for trunk group numbers, and values from 257 to 339 identify feature access codes and/or feature keys.

| FNO | Feature Name                                      | ABBREV |
|-----|---|--------|
| 1   | Direct Trunk Access - Trunk Group 1               | TG001  |
| nnn | Direct Trunk Access - Trunk Group nnn (1<nnn<256) | TGnnn  |
| 256 | Direct Trunk Access - Trunk Group 256             | TG256  |
| 257 | Trunk-to-Trunk Connection                         | TKTK   |
| 258 | Code Calling Access                               | CC     |
| 259 | Voice Paging Access - Zone                        | VP_Z   |
| 260 | Voice Paging Access - System                      | VP_S   |
| 261 | Voice Paging Access - Emergency                   | VP_E   |
| 262 | Call Pickup - Group                               | GPU    |
| 263 | Dictation Machine Access - Group                  | DC_G   |
| 264 | Dictation Machine Access - Direct                 | DC_I   |
| 265 | Voice Paging Retrieval - Zone                     | VPMM   |
| 266 | Voice Paging Retrieval - System                   | PR_S   |
| 267 | Code Calling Retrieval                            | CCMM   |
| 268 | Privacy Release                                   | PRLS   |
| 269 | Night Answer Access                               | UNA    |
| 270 | Do Not Disturb Key                                | DND    |
| 271 | Call Forward - All Calls Key                      | CFAC   |
| 272 | Call Forward - Busy/No Answer Key                 | CFBN   |
| 273 | Call Forward - No Answer Key                      | CFNA   |
| 274 | Program Mode Key                                  | PRGM   |
| 275 | Call Forward - Preregistered                      | PRCF   |
| 276 | Voice Calling Key                                 | VC     |
| 277 | Save and Repeat Key                               | S&R    |
| 278 | Autodial Key                                      | ADL    |
| 279 | Automatic Answer Key                              | AUTO   |
| 280 | Eight Party Conference Key                        | CONF   |
| 281 | Camp-on Key                                       | CAMP   |
| 282 | Modem Pooling Access                              | MPAC   |
| 283 | Last Number Redial                                | LND    |
| 284 | Call Pickup - Directed                            | DPU    |
| 285 | Call Pickup - Directed Group                      | DGPU   |
| 286 | Camp-on Callback Cancellation                     | CBCL   |
| 287 | Swap  | SWAP   |
| 288 | Do Not Disturb Registration                       | DNDR   |
| 289 | Do Not Disturb Cancellation                       | DNDC   |
| 290 | Speed Calling - System                            | SYSD   |
| 291 | Speed Calling - Group                             | SC_G   |
| 292 | Attendant Access - Universal                      | OPER   |
| 293 | Station Dialing                                   | STDL   |

|     |                                     |      |
|-----|-------------------------------------|------|
| 294 | Least Cost Routing Access           | LCR  |
| 295 | Call Fwd - All Calls Register       | ACFR |
| 296 | Call Fwd - Busy/No Ans Register     | BNFR |
| 297 | Call Fwd - No Answer Register       | NAFR |
| 298 | Call Fwd - Cancellation             | CFCL |
| 299 | Authorization Code                  | AUTH |
| 300 | Call Hold - Analog                  | AHLD |
| 301 | Call Park - Local Access/Retrieval  | CP_L |
| 302 | Call Park - Remote Access/Retrieval | CP_R |
| 303 | Data Access by Code Dialing         | DAD  |
| 304 | Message Waiting Registration        | MW_R |
| 305 | Message Waiting Retrieval           | MW_B |
| 306 | Message Waiting Cancellation        | MW_C |
| 307 | Account Code                        | ACCT |
| 308 | Uniform Numbering Plan              | UNP  |
| 309 | UCD Available/Unavailable Key       | UCD  |
| 310 | UCD Available                       | UCDA |
| 311 | UCD Unavailable                     | UCDU |
| 312 | Data Privacy                        | DPVY |
| 313 | Eight Party Conference Access       | 8WY  |
| 314 | Eight Party Conference Release      | 8WYR |
| 315 | ACD Login                           | LOGI |
| 316 | ACD Logout                          | LOGO |
| 317 | ACD Log Key                         | LOG  |
| 318 | ACD Available                       | ACD  |
| 319 | ACD Unavailable                     | ACDU |
| 320 | ACD Status Key                      | STAT |
| 321 | ACD Work Mode Cancellation          | CANC |
| 322 | ACD Work Unit                       | WRKU |
| 323 | ACD Intra-Group Call Pickup         | ACDP |
| 324 | ACD Assistance                      | ASST |
| 325 | ACD Intra-Group Tap Key             | TAP  |
| 326 | ACD Alarm Key                       | ALRM |
| 327 | Attendant Overflow Control Key      | OVF  |
| 328 | ICI Key                             | ICI  |
| 329 | SPLIT Key                           | SPLT |
| 330 | SUPERVISE Key                       | SPVS |
| 331 | BLF Control Key                     | BLF  |
| 332 | Attendant Break-in                  | BRK  |
| 333 | Attendant Parked Page Retrieval     | PR_A |
| 334 | Trunk Verification from Station     | TRKV |
| 335 | HELP                                | HELP |
| 336 | ACD Inter-Group Call Pick-up        | INTP |
| 337 | ACD Inter-Group Tap Key             | INTM |
| 338 | Headset Mode Key                    | HSM  |
| 339 | Headset Control Key                 | HSC  |
| 340 | LCD Contrast Control Key            | LCDC |
| 341 | LCD Remote Logout Agent             | RLOG |
| 342 | ISDN CPN Presentation Allowed       | CPNA |
| 343 | ISDN CPN Presentation Restricted    | CPNR |
| 345 | Attendent End-to-End Signaling      | AEE  |

## LINE PREFERENCE FIELD (PREF) Station Feature Key Assignment (CMD 331)

The Station Feature Key Assignment command (CMD 331) defines attributes for PERCEPTION 4000 digital and electronic telephones. Within this command, the Line Preference (PREF) field defines the way the system performs automatic line selection. The selection is based on the current state of the telephone, such as ringing on the prime line, ringing on all lines, or all lines are in the idle state.

The following matrices illustrate line selection with respect to the "PREF" setting and the station's status at the time of automatic selection. If you go off-hook or press the **SPEAKER** key while the station is on-hook idle, automatic line selection conforms to Table D-1. If you attempt direct dialing via keypad or feature keys (e.g. last number redial, autodial, etc.) while the station is on-hook idle, Table D-2 is consulted for automatic line selection.

MATRIX 1

|                                      | STATUS             |                          |   |   |                         |                        |
|--------------------------------------|--------------------|--------------------------|---|---|-------------------------|------------------------|
|                                      | IDLE,<br>ALL LINES | RINGING ON<br>PRIME LINE | RINGING ON<br>NON-PRIME LINES,<br>PRIME LINE IDLE | RINGING ON<br>NON-PRIME LINES,<br>PRIME LINE BUSY | RINGING ON<br>ALL LINES | NO RING,<br>PRIME BUSY |
| <b>PRIME LINE PREFERENCE</b>         | PRIME LINE         | PRIME LINE               | PRIME LINE  | QUIET TONE  | PRIME LINE              | QUIET TONE             |
| <b>RINGING LINE PREFERENCE</b>       | QUIET TONE         | PRIME LINE               | LONGEST RINGING LINE                              | LONGEST RINGING LINE                              | LONGEST RINGING LINE    | QUIET TONE             |
| <b>IDLE LINE PREFERENCE</b>          | PRIME LINE         | ANY IDLE LINE            | PRIME LINE  | ANY IDLE LINE                                     | QUIET TONE              | ANY IDLE LINE          |
| <b>PRIME PLUS RINGING PREFERENCE</b> | PRIME LINE         | PRIME LINE               | LONGEST RINGING LINE                              | LONGEST RINGING LINE                              | PRIME LINE              | QUIET TONE             |
| <b>PRIME PLUS IDLE PREFERENCE</b>    | PRIME LINE         | PRIME LINE               | PRIME LINE  | ANY IDLE LINE                                     | PRIME LINE              | ANY IDLE LINE          |
| <b>RINGING PLUS IDLE PREFERENCE</b>  | PRIME LINE         | PRIME LINE               | LONGEST RINGING LINE                              | LONGEST RINGING LINE                              | LONGEST RINGING LINE    | ANY IDLE LINE          |
| <b>ALL TYPES OF PREFERENCE</b>       | PRIME LINE         | PRIME LINE               | LONGEST RINGING LINE                              | LONGEST RINGING LINE                              | PRIME LINE              | ANY IDLE LINE          |
| <b>NO PREFERENCE</b>                 | QUIET TONE         | QUIET TONE               | QUIET TONE  | QUIET TONE  | QUIET TONE              | QUIET TONE             |



MATRIX 2

|                                      | STATUS             |                          |   |   |                         |                        |
|--------------------------------------|--------------------|--------------------------|---|---|-------------------------|------------------------|
|                                      | IDLE,<br>ALL LINES | RINGING ON<br>PRIME LINE | RINGING ON<br>NON-PRIME LINES,<br>PRIME LINE IDLE | RINGING ON<br>NON-PRIME LINES,<br>PRIME LINE BUSY | RINGING ON<br>ALL LINES | NO RING,<br>PRIME BUSY |
| <b>PRIME LINE PREFERENCE</b>         | PRIME LINE         | IGNORE KEY               | PRIME LINE  | IGNORE KEY  | IGNORE KEY              | IGNORE KEY             |
| <b>RINGING LINE PREFERENCE</b>       | IGNORE KEY         | IGNORE KEY               | IGNORE KEY  | IGNORE KEY  | IGNORE KEY              | IGNORE KEY             |
| <b>IDLE LINE PREFERENCE</b>          | PRIME LINE         | ANY IDLE LINE            | PRIME LINE  | ANY IDLE LINE                                     | IGNORE KEY              | ANY IDLE LINE          |
| <b>PRIME PLUS RINGING PREFERENCE</b> | PRIME LINE         | IGNORE KEY               | PRIME LINE  | IGNORE KEY  | IGNORE KEY              | IGNORE KEY             |
| <b>PRIME PLUS IDLE PREFERENCE</b>    | PRIME LINE         | ANY IDLE LINE            | PRIME LINE  | ANY IDLE LINE                                     | IGNORE KEY              | ANY IDLE LINE          |
| <b>RINGING PLUS IDLE PREFERENCE</b>  | PRIME LINE         | ANY IDLE LINE            | PRIME LINE  | ANY IDLE LINE                                     | IGNORE KEY              | ANY IDLE LINE          |
| <b>ALL TYPES OF PREFERENCE</b>       | PRIME LINE         | ANY IDLE LINE            | PRIME LINE  | ANY IDLE LINE                                     | IGNORE KEY              | ANY IDLE LINE          |
| <b>NO PREFERENCE</b>                 | IGNORE KEY         | IGNORE KEY               | IGNORE KEY  | IGNORE KEY  | IGNORE KEY              | IGNORE KEY             |

**Area Code Restriction** - The ability of the switching equipment to selectively identify 3-digit area codes, and either allow or deny passage of long distance calls to those specific area codes.

**Area/Office Code Restriction** - The ability of the switching system to selectively identify 6-digit area and office codes, and either allow or deny passage of long distance calls to those specific 6-digit codes.

**ASCII** - American Standard Code for Information Interchange.

**asynchronous transmission** - A method of transmission that allows data to be sent at irregular intervals by preceding each character with a "start bit" and following it with a "stop bit."

**attribute** - A field in the row/field level of operation that assigns a quality to the primary key field. For example, in the Station Assignment Command (CMD 330) all fields following the first field (EQUIP #) assign characteristics to the equipment number such as data security, Class of Service, Destination Restriction Level, etc.

**Automatic Call Distribution** - A PBX feature designed to evenly distribute a large number of incoming calls to an answering pool of agents.

**CCSA** - Common Control Switching Arrangement: a private switched service network (utilizing telephone company Central Office facilities) providing direct station-to-station network inward and outward dialing plus other features similar to those normally found in the public telephone network.

**CCSA access** - The compatibility of a PBX system for connection, via trunk access circuits, to private CCSA networks.

**circular hunting** - An arrangement allowing the hunting (for an available nonbusy station) to start with the called station line and then proceed in a prearranged order to test all lines in the group, completing the incoming call to the first idle station line.

**Class of Service** - A set of facility and feature access capabilities assigned to groups of common users which logically fit together in terms of telephone needs and privilege levels.

**clear line** - The state in which no automatic increments or conditions have been set by the system. You have a clean slate on which to enter data to meet the requirements of the system prompt. A 'clear line' occurs after each hierarchical prompt: "COMMAND=", "OPERATION=", and "SECURITY CODE=". In addition, a 'clear line' exists when the cursor is at the far left field in Data Entry and Setup modes.

**common carrier** - A company which furnishes public long distance services, such as AT&T.

**COS** - Class of Service.

**Data Interface Unit** - A device used to convert data signals of a transmitting data device/terminal to the internal digital format of the switching system and vice versa. The PERCEPTION 4000 accommodates both stand-alone and integrated DIUs.

**Destination Restriction Level** - Dialing restrictions which control outgoing calls made via direct trunk group access and optionally via LCR access.

**DID** - Direct Inward Dialing.

**Direct Inward Dialing** - A feature allowing incoming calls to bypass the attendant and directly ring a station or ACD pilot number.

**Direct Inward System Access** - A service which allows an outside caller the ability to dial directly into a PBX system, without attendant intervention, to gain complete access to PBX system facilities and outgoing trunk circuits (such as WATS access lines and TIE line circuits).

**DISA** - Direct Inward System Access.

**DIU** - Data Interface Unit.

**DNIS** - Dialed Number Identification Service.

**DRL** - Destination Restriction Level.

**DTMF** - Dual Tone Multi-Frequency signaling.

**entity** - An object that has meaning for a particular application. In this manual, an entity is a key parameter in the row/field level of operation, such as an "EQUIP #" or "TGN" field.

**Facility Restriction Level Profile** - Restriction levels which determine which LCR routes a specific station user has access to.

**FRLP** - Facility Restriction Level Profile.

**full duplex operation** - The simultaneous, independent transmission of data in both directions over a communications link.

**half duplex operation** - The transmission of data in either direction, but only one way at a time.

**ISDN** - Integrated Services Digital Network

**keyword** - A word predefined by the system as valid data input in the row/field level of operation. The field must be of fixed form, and may be designated as a decimal field, but not as a loop field.

**LCR** - Least Cost Routing.

**LDN** - Listed Directory Number.

**Least Cost Routing** - A feature which selects the most economical trunk facility to use for outgoing calls initiated by a station.

**Listed Directory Number** - A feature allowing incoming directory number calls on DID and CCSA trunks, that have been registered in the system, to be intercepted and routed to the attendant or designated answering position.

**loop field** - A primary field used to identify the beginning point of a set of attributes (fields) that occur more than once for an entity. The system may repeatedly execute data entry in these fields as controlled by the loop field. The ability to enter additional attributes, with the loop field incrementing automatically provides a useful tool when performing large sets of modifications. If the operation contains more than one loop field, the innermost loop is completed first, and works outward to the outer loop.

**M&A** - Maintenance and Administration.

**M&A console** - A terminal or data entry device used to change the system database (such as activation of new station lines, changes in station numbers, changes in restrictions and feature assignments, etc.), as well as perform diagnostic and other maintenance functions.

**Man-Machine Interface** - The means by which the user interacts with the PERCEPTION 4000 system through the M&A console.

**MMI** - Man-Machine Interface.

**primary field** - The first field of an operation, usually a decimal-type loop field. The value entered identifies the entity being selected for modification or display.

**QPL** - Queue Priority Level.

**Queue Priority Level** - A feature used by Least Cost Routing that determines the station placement in queue for busy trunk groups. Also defines whether a caller will receive expensive route warning tone if a route is designated as such.

**redundant system** - A second set of common control equipment which, should the main processor fail, provides automatic switchover to prevent interruption to call processing.

**serial hunting** - An arrangement setting up a pilot number as the first number in a hunt group. The hunting arrangement activates as a result of dialing the pilot number and begins at the top of the list and ceases at the bottom. Various members may also be flagged as entry points. Dialing any member directory number marked as an entry point which is busy or in Do-Not-Disturb (but not forwarded) results in a search for an available member in the order established in this command, starting at the busy member and proceeding to the end of the list. 'Wrapping' does not occur in a serial hunt.

**synchronous transmission** - A method of data transmission in which the bits are transmitted at a fixed rate. The transmitter and receiver both use the same clock signals for synchronization.

**TIE lines** - Special trunk circuits which provide voice and data communication between PBX systems.

**UCD** - Uniform Call Distribution.

**Uniform Call Distribution** - A feature by which calls are evenly distributed among group members. If a member is not presently available to take a call, the call waits in a queue and receives announcement and/or music treatment. Calls not handled in a timely manner can be routed to another location.

**Uniform Numbering Plan** - A method used by the system indicating that all station users in the network must dial the same number of digits to reach any location (end-point) in the network.

**UNP** - Uniform Numbering Plan.



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