

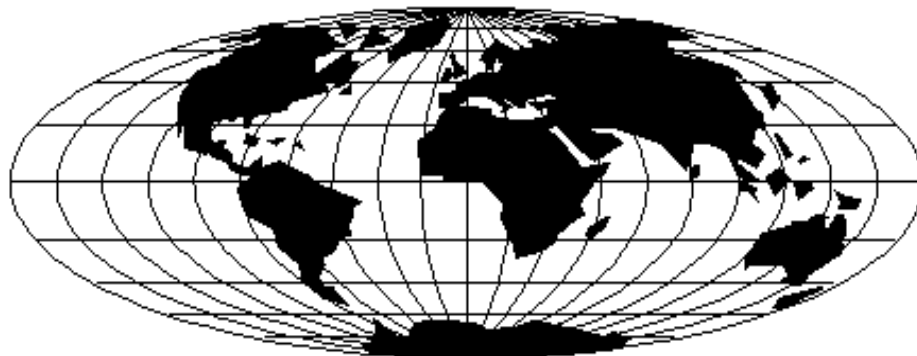


**SK-408  
Hybrid Telephone System**

**General Description • Installation & Maintenance**

**Programming Forms Manual**

**Key Telephone Master User's Guide**



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## **Notification**

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## IMPORTANT SAFETY INSTRUCTIONS

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### Installation Safety Precautions:

1. Never install telephone wiring during a lightning storm.
2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
3. Never touch un-insulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.

The TransTel SK-408 utilizes a 3 prong grounding power supply cord. This cord is not to be attached to any building surfaces. When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Read and understand all instructions.
2. Follow all warnings and instruction marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on the bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home or office, consult your dealer or local power company.
8. This product is equipped with a three wire grounding type plug, a plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding type plug.
9. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
10. Do not overload wall outlets and extension cords as this can result in the risk of fire or electric shock.
11. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
12. To reduce the risk of electric shock, do not disassemble this product, but take it to a qualified service man when some service or repair work is required. Opening or removing covers may expose you to dangerous voltages or other risks. Incorrect reassembly can cause electric shock when the appliance is subsequently used.
13. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - A. When the power supply cord or plug is damaged or frayed.
  - B. If liquid has been spilled into the product.
  - C. If the product has been exposed to rain or water.
  - D. If the product does not operate normally by following the operating instructions. Adjust only those control, that are covered by the operating instructions because improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
  - E. If the product has been dropped or the cabinet has been damaged.
  - F. If the product exhibits a distinct change in performance.
14. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.,
15. Do not use the telephone to report a gas leak in the vicinity of the leak.

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**SAVE THESE INSTRUCTIONS**

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**TransTel Model SK-408  
Hybrid Telephone System  
General Description - Installation - Programming Forms Manual**

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## General Description - Introduction

The General Description section contains an easy to understand overview of the TransTel® SK-408 Hybrid Telephone System. It is the intent of this document to provide both technical and non technical readers with information pertaining to the system building blocks, capabilities, key highlights, electrical, physical and environmental characteristics of the TransTel SK-408 Hybrid Telephone System.

## FCC Rules and Regulation

In compliance with the requirements of Part 68 of the Federal Communications Commission Rules and Regulations for connection of terminal system equipment to the telephone network and for your convenience, the following information is presented.

### FCC Registration Number

The TransTel SK-408 is registered with the FCC in a dual registration capacity enabling the system to operate as a key system only or as a hybrid system. The FCC Registration Numbers are 3A7TAI-24615-KF-E for key systems registration and 3A7TAI-24616-MF-E for hybrid operation.

### Ringer Equivalence Number

Ringer Equivalence 0.38B.

<b>Notification of the Telephone Company</b>
Customers connecting terminal equipment to the telephone network shall, upon request of the Telephone Company, inform the Telephone Company of the particular line(s) to which such connection is made, the FCC registration number and ringer equivalence number (REN) of the registered terminal equipment.
The REN is useful to determine the quantity of devices you may connect to your telephone line and still have all of those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN's of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

<b>Direct Connection to a Party-Line or Coin Operated Telephone Line is Prohibited.</b>
---

<b>Incidence of Harm to the Telephone Lines</b>
Should terminal equipment cause harm to the Telephone Network, the Telephone Company shall, where practical, notify the customer that service may be temporarily discontinued. However, where prior notice is not practical, the Telephone Company may temporarily discontinue service, if such action is reasonable in the circumstances. In case of such un-notified temporary discontinuance of service, the Telephone Company shall:
(a) Promptly notify the customer of such temporary discontinuance of service.
(b) Afford the customer the opportunity to correct the situation which gave rise to the temporary discontinuance.
(c) Inform the customer of the right to bring a complaint to the FCC pursuant to the procedures set out in Subpart E of Part 68 of FCC Telephone Equipment Rules.



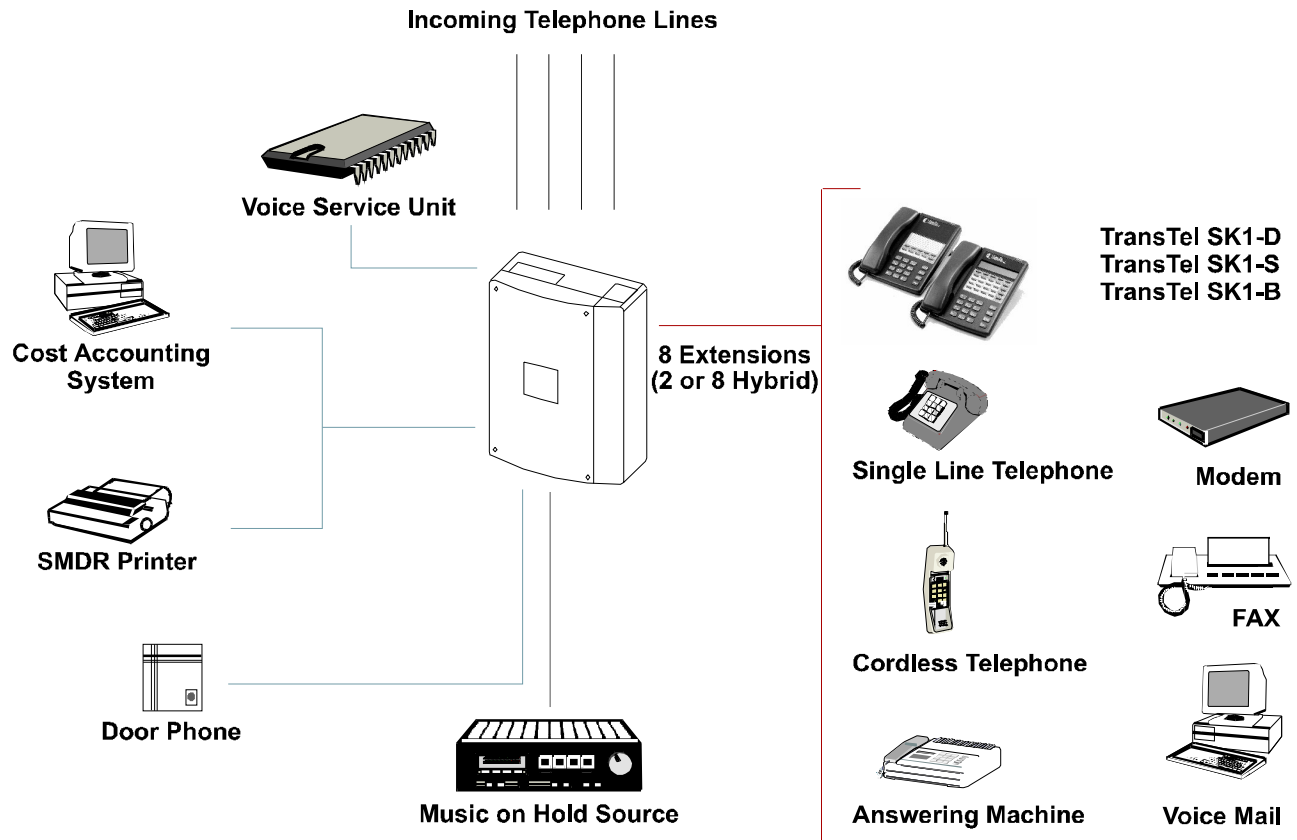
<b>Compatibility of the Telephone Network and Terminal Equipment.</b>	
(a)	Availability of telephone interface information.
	Technical information concerning interface parameters and specifications not specified in FCC Rules, including the number of Ringers which may be connected to a particular line, which is needed to permit Terminal Equipment to operate in a manner compatible with Telephone Company communications facilities, shall be provided by the Telephone Company upon customer's request.
(b)	Changes in Telephone Company Communications Facilities, Equipment, Operations and Procedures.
	The Telephone Company may make changes in its communications facilities, equipment, operations or procedures where such action is reasonably required in the operation of its business and is not inconsistent with the rules and regulations in FCC Part 68 of the FCC Rules and Regulations. If such changes can be reasonably expected to render any customer Terminal Equipment incompatible with Telephone Company Communications Facilities, or require modification or alteration of such Terminal Equipment, or otherwise materially affect its use or performance, the customer shall be given adequate notice in writing to allow the customer an opportunity to maintain uninterrupted service.

<b>Radio Frequency Interference</b>	
	This equipment generates and uses radio frequency energy and if not installed and used properly and in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type-tested and found to comply with the limits for a Class A computing device in accordance with the specification in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, this is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
	<ul style="list-style-type: none"> <li>Re-orient the receiving antenna.</li> <li>Relocate the equipment with respect to the receiver.</li> <li>Move the equipment away from the receiver.</li> <li>Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.</li> </ul>

---

## Description

The SK-408 is an advanced hybrid telephone system employing a microprocessor stored program and digitally controlled solid state space-division switching. The SK-408 system is specifically designed for small business as well as residential applications. At the forefront of the system's design is a universal concept to adapting and connecting with a variety of communications devices. Productive TransTel Key Telephones offer thoughtfully designed productive feature access to keep you connected with one another and customers. TransTel technology leads the industry in providing for compatibility with devices such as fax machines, answering machines, cordless phones, computer modems and other office/home equipment.



Key highlights of the SK-408 series include:

### Economy and Efficiency

The base system is equipped to support two (2) CO lines and eight (8) stations. The system may be expanded to a maximum of four (4) CO lines. Station cards may be selected to allow practically any combination ranging from all TransTel Electronic Sets to all industry standard Single Line Telephone sets, with any combination of the two types.

Two of the 8 station ports may be converted to full hybrid operation or all 8 station ports as desired. In addition to being cost effective at the initial phase and for expanding to its maximum capacity, the SK-408 system also is economical to operate as it consumes about the same amount of electricity as a 60 watt light bulb at full configuration. A maximum of 4 CO lines and 8 Extensions can be accommodated. This allows a wide variety of applications for the system to work effectively.

**Easy Installation**

- "Factory Ready" - All SK-408 Telephone systems are "ready to go" right out of the box. A well thought out default database is factory installed on each system which meets the needs for most installations. This alleviates hours of on site time, minimizing installation costs for both dealer and customer.
- "Small & Compact" - The Key Service Unit's small size takes little space for installation and is about the size of a legal piece of paper.

**Easy Maintenance**

- Solid-state design minimizes trouble and eliminates periodic maintenance.
- Easy Expansion. Various Interface Cards for simple, modular expansion.
- Versatile programming and options for ease of selection.
- Database Battery Back Up - Customer data is backed up when the power is turned off and back on. Batteries can periodically be replaced with power on using commercially available replacements.
- Battery Back Up (System Operation) - SK-408 systems can be equipped with an optional battery back up which keeps the system operational for up to 4 hours in the case of a commercial power failure.
- Customer Care Programming - Customers and service personnel can easily communicate and perform programming right over the telephone. TransTel telephone systems allow programming and voice conversations to co-exist at the same time.

**Flexibility of System Applications**

Unlike other conventional systems in the SK-408 size range, the installer will find an unprecedented range of customer database programmability. In "system parameters" there are extensive options for various timing settings related to features. An array of parameters are programmable for signaling options on outside lines and internal single line telephone sets. The installer may Enable/Disable many system wide features. And in class of service, there are over 20 options for each station providing maximum flexibility for nearly any application.

**Keypad/Single Line Flexibility**

The SK-408 has the ability to support proprietary Superkey<sup>®</sup> Electronic Telephones and/or conventional industry standard single line sets. Single Line interfaces support both DTMF and rotary dial phones.

**Dual Port Capability**

When the hybrid station card (B1-SLC-2 or B1-SLC-8) is installed on the system, customers have the option of connecting either an Electronic Key Telephone or a Single Line Set or both. This is particularly useful in offices equipped with computers that have modems, fax machines, personal answering machines or simply an executive office that would like to have two phones with the same extension number.

---

## Liquid Crystal Display

The SK-408 Series Telephone Model SK1-D is equipped with a large, easy to read LCD display. The LCD is 32 characters total, comprised of 2 rows by 16 characters each. This LCD provides an invaluable tool for simplifying the use of the telephone by identifying the calling extension by name, outside lines by name and self prompting displays for feature access. Station feature usage is made simple with the help of the LCD display. Continuous prompting information is displayed during calls so that users know what to do and when to do it.

### 32-character LCD Display shows:

- Time
- Dialed telephone number
- Voice Mail Messages
- CO Line Names
- Last Number Redial
- Speed dial number
- Last number dialed
- The status of operation/function
- Absent messages
- Speed Dial Directory
- Calling Party Name
- Input data during system data entry

### TransTel Telephone Model SK1-D



## System Specifications

### System Capacities / Maximum

CO/PABX Lines	4
Key Telephones (Maximum)	8
Single Line Phones(Maximum)	8
Power Failure Transfer Phone	4
Control Relay	1
External Input Sensor	1
Intercom Paths (Local)	3
Doorphone	1
External Music	1
Speed dial	Total 600 sets for Private/System Speed Dial.
Private Speed Dial	20 sets per station(Max.)
System Speed Dial	600 sets (Max.)

### Electrical Specifications

CONTROL SYSTEM	Stored Program
CPU	8 /16 bit CPU
SWITCHING METHOD	SDM (Space Division Matrix)
POWER REQUIREMENTS	
	100 - 120 V AC, (50/60Hz) 0.9 AMPS
	210 - 230 V AC, (50/60Hz) 0.45 AMPS
Dedicated AC line and a good earth ground for power supply	
POWER FAILURE	
System operation for 180 minutes (full load) or for 4 hours (normal load) by installing batteries (with two 12 V DC batteries 6.5 AH for each)	
POWER DISSIPATION	
Common Equipment Unit	(idle) 21 W (full) 56 Watts
Each Telephone	
Electronic Sets	2.8 Watts, maximum
Single Line Telephone	1.25 Watts
DIALING	
Outward	Dial Pulse - 10 pps (Pulses Per Second), DTMF
Internal	Dial Pulse - 10 pps (Pulses Per Second) / DTMF / Digital

MAXIMUM LOOP RESISTANCE/IMPEDANCE	
Key Telephone	Less than 40 ohms 22 AWG / 1,240 feet
Single Line telephone	Less than 800 ohms 22 AWG / 24,780 feet
Doorphone	Less than 40 ohms
Music Source Input Impedance	600 ohms
Maximum Input	0.775 VRMS
INTERNAL RELAY CONTACTS	
Type	SPST
Rating	3 AMP, 110VAC/220VAC
Function	Door Switch, Music on Hold, etc
CABLE REQUIREMENTS	
CO/PABX Line	Twisted 1 Pair (2 wires)
Key Telephone	Twisted 2 Pair (4 wires)
Doorphone	Twisted 1 Pair (2 wires)
Door Switch	Twisted 1 Pair (2 wires)
External Music Source	Twisted 1 Pair (2 wires)
Single Line Telephone	Twisted 1 Pair (2 wires)

#### Mechanical Specifications (Key Service Unit)

CABINET DIMENSIONS		
233mm W	76mm D	290mm H
9.17"	2.99"	11.4"
WEIGHT	2.3 Kg (Configuration: 2 x 8)	
	5.0 lbs	

#### Mechanical Specifications (Battery Back Up Housing)

CABINET DIMENSIONS		
15.5" W	3.0" D	5.75" H
WEIGHT	With Batteries -16 lbs Without Batteries- 4 lbs.	
Mounting Screws	12.25" center to center	

#### Environmental Specifications

	OPERATING CONDITIONS	STORAGE CONDITIONS
Temperature	0° to 45° C (32° to 113° F)	-40° to 66° C (-40° to 150° F)
Humidity	10 to 95% relative non-condensing	10 to 95% relative non-condensing

## Features

### System Features

Account Code Capability	Intercom
Attendant Console Assignment	Intercom Single Digit Assignment
Attendant Overflow	Intercom Ring / Voice Select
Automatic Line Access	Host PABX Access
Automatic Line Search	Hot line
Automatic Ringdown	Intercom Dialing Restriction
Automatic Wake-up	Line Group Assignment
Battery Backup Memory	Loud Bell Assignment
Battery Charger	Multiple Attendant Consoles
Behind PABX Operation	Multiple Trunk Groups
Centrex Operation	Night Transfer
Class Of Service	On Call Programming
CO Line Groups	Paging
CO Line Hunting	Internal
CO Line Name Programming	Zone
CO Line Ring Types	Meet Me
Linear	Password Assignment
Common Audible	DISA
Circular	System programming
Hunt	Toll Override
Console Assignment	Pause
Day/Night Service	Pick Up Groups
Manual/Automatic Switch	Power Fail Transfer
Dial 9 Group	Security Code
Direct In Line	Single Digit Dialing
Dial By Name	Station Group Assignment
Dial Mode Selection(DP/DTMF)	Station Hunting
Dial Pulse to DTMF Conversion	Station Lock
Distinctive Ringing	System Speed Dial and Personal Speed Dial
DTMF Signaling	System Date & Time Setting
Dual Port Capability	System Time-Reminder Service
End to End Signaling	Telephone Directory
Easy Installation and Operation	Toll Control
Flash (Programmable)	Day / Night
Flexible Expansion	Tone to pulse dialing
Flexible Ringing Assignment	Trunk Queuing
Flexible Key Group Assignment	Trunk to trunk connections
Flexible Number Plan 2,3 or 4 Digit	Uniform Call Distribution
Flexible Time Format 12/24 Hour	Voice Mail Compatibility
Forced Account Code Assignment	

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## Station Features

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Advisory Messages	External Call Forwarding
System	Flash (Open Loop Timed Flash)
Personal	Hands-free Answer Back
Access to System Programming	Hearing Aid Compatibility
Account Code Capability	Headset Compatibility
Auto Hold	Hold (Exclusive / System)
Auto Hold Recall	Hold Recall
Automatic Call Back	I Hold Indication
Automatic Answer-Intercom	I Use Indication
Automatic Line Access	Intercom
Automatic Redial	Intercom ring / voice interchange
Automatic Volume Increase	Intercom Step Call
Brokers Call	Intercom Voice Announce
Call Duration Timer (LCD Phones)	Last Number Redial
Call Waiting	Message Waiting
Call Forwarding	On Hook Dialing
All Calls	Prime Line Select
Busy	Privacy
No Answer	Privacy Release
Busy / No Answer	Private Line
External	Pulse/Tone Conversion
Call Pickup	Ring Frequency Selection
Call Split	Ringing Line Preference
Call Transfer	Saved Number Redial
Calling Name Display (LCD Phones)	Speed Dialing
Calling Number Display (LCD Phones)	Station Lock / Unlock
Camp On	Station Monitor
Chain Dialing	Store Speed Dial/DSS Number
Conference	Timed Reminder Service
Dial By Name (LCD Phones)	System
Dial Access to Attendant	Station
Direct Station Selection	Toll Restriction Override
Doorphone Access	Trunk Queuing
Do Not Disturb (DND)	Volume Control
Dual Color LED's	Handset
Duration Time Display (LCD Phones)	Speaker
Executive Override (Barge-In)	Ringer

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## Optional Features

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Automated Attendant	Music On Hold
Battery Backup (System)	Relay Control
Direct Inward System Access (DISA)	RS232
Doorphone / Door Latch	Security Sensor/Door Open Indication
Dual Port Operation	Station Message Detail Record (SMDR)
External Music Source	Voice Mail



## Parts & Peripherals

### System Modules

<i>Model</i>	<i>Description</i>
SK-408	Key Service Unit, Power Supply (2 Trunks and 8 Key Telephone Ports)
B1-TKC	Expanded Trunk Card (2 Trunks)
B1-SLC/2	Hybrid Station Interface Card (2 Hybrid Ports)
B1-SLC/8	Hybrid Station Interface Card (8 Hybrid Ports)
B1-RGU	Ring Generator Unit

### Type of Phones

<i>Model</i>	<i>Description</i>
SK1-D	Multifunction Key Telephone. Includes 32 character LCD display, speakerphone, headset jack, 29 keys for feature access, DSS, CO Lines and speed dial.
SK1-S	Multifunction Key Telephone. Includes speakerphone, headset jack, 29 keys for feature access, DSS, CO Lines and speed dial.
SK1-B	Multifunction Key Telephone. Basic telephone with monitor function for handsfree dialing. 12 keys for feature access DSS, CO Lines or speed dial.
SK1-WMK	Wall Mount Kit for SK1 Series Telephones

### Peripheral Devices

<i>Model</i>	<i>Description</i>
B1-DPU	Door Phone - 2 Wires
BCAB/A	Battery Box without Batteries
BCAB/B	Battery Box with Batteries

### Optional Interface Cards

<i>Model</i>	<i>Description</i>
B1-VSC	Voice Service Card - Auto Attendant, Wake-up, Message Waiting
B1-MSC	Relay/Sensor/External Music Interface/Door Phone Interface
B1-MSC/R	RS232/Relay/Sensor/Door Phone Interface/External Music Interface
B1-CKC	Calendar/Clock Card

## System Installation - Introduction

This section provides directions for installing the system and optional equipment. The installation must be performed by qualified service personnel.

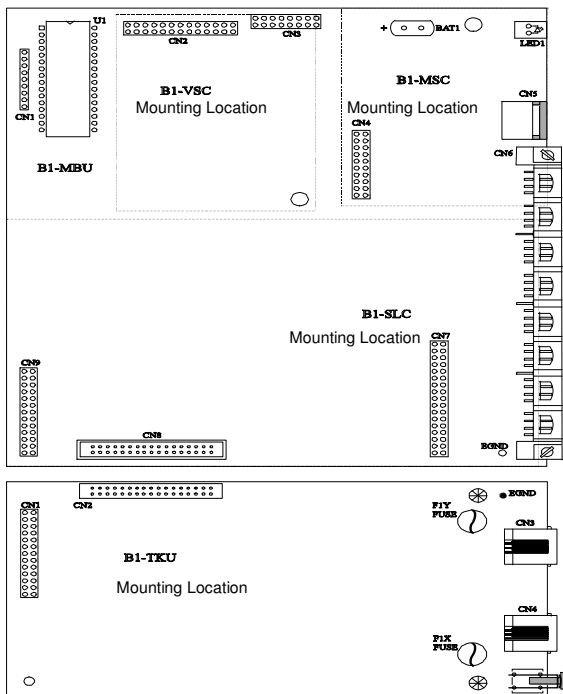
Main components of the system are:

**Key Service Unit**, which includes:

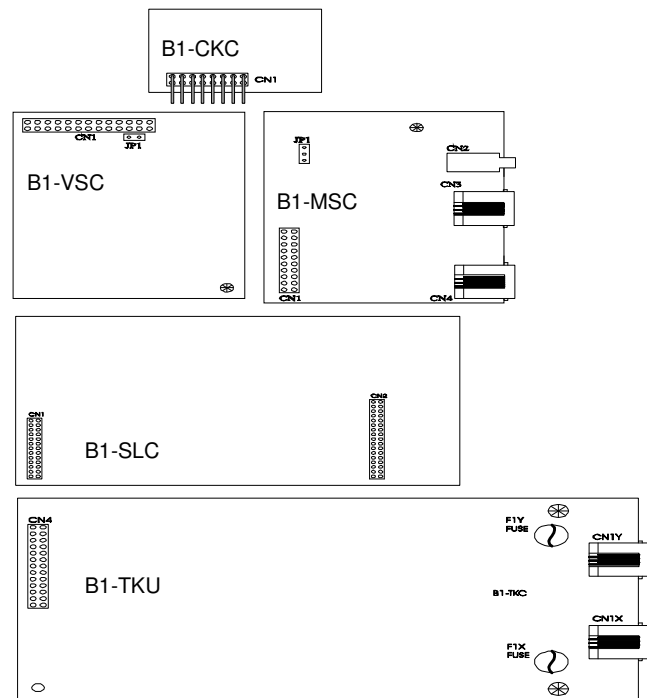
- Power Supply Unit (B1-PWU)
- Main Board Unit (B1-MBU / Common Control and eight key telephone circuits)
- Trunk Unit (B1-TKU / Two CO Lines)

- Trunk Card (B1-TKC / Two CO Lines)
- Hybrid Station Card (B1-SLC/2 or B1-SLC/8 / Converts Key telephone ports into universal ports)
- Calendar and Clock Card (B1-CKC)
- Multi-Service Card (B1-MSC or B1-MSC/R)
- Voice Service Card (B1-VSC)

**Optional Expansion Cards:**



**Key Service Unit Main Cabinet**



**Optional Expansion Boards**

**NOTE:** Please follow the directions step by step. The SK-408 system should be installed in strict accordance with this manual.

## Site Requirements

### Location

#### *Choosing The Right Environment*

- System should be installed in a clean, dry, secure location. This location must have adequate ventilation, and a temperature from 0°C to 45°C (32°F to 113°F), with 10% to 95% non-condensing relative humidity. **DO NOT** install the equipment near sources of static electricity, excessive vibration, or water. Avoid direct sunlight.

### Installation Checklist

<b>INSTALLATION REQUIREMENTS</b>	<b>VERIFICATION</b>
MOUNTING SURFACE	Flat surface with adequate space for main cabinet, power supply, wiring and optional Battery Backup cabinet.
AC LINE	AC line should be dedicated exclusively to the system.
POWER OUTLET	Power Outlet must be a 3-wire grounded outlet plug, having parallel blades and ground pin. Input power Line capacity requirements - 10 amperes.
SURGE PROTECTION	A Surge Protector is recommended on the dedicated AC line.
VENTILATION AND TEMPERATURE	Humidity: 10% to 95% relative non-condensing Temperature: 32°F to 113°F (0°C to 45°C).
EARTH GROUND	A proper ground connection. (14 AWG)
SERVICEABILITY	Lighting conditions and working space adequate for future service.

## Equipment Requirements

- **Unpack, Check and Verify Equipment** - Unpack the telephone equipment boxes and verify the contents in accordance with the packing list provided. If any discrepancies are noticed, please contact TransTel Communications.
- **Damaged Boxes** - If you notice any damage to the packages, please notify both the shipper and TransTel at once.
- **List of parts included in basic KSU box:**
  - KSU Main Cabinet
  - Power Supply
  - Mounting Template
  - Mounting Screws
  - Station Connectors
  - Spare Fuses
  - Cable Cover

---

## Installation

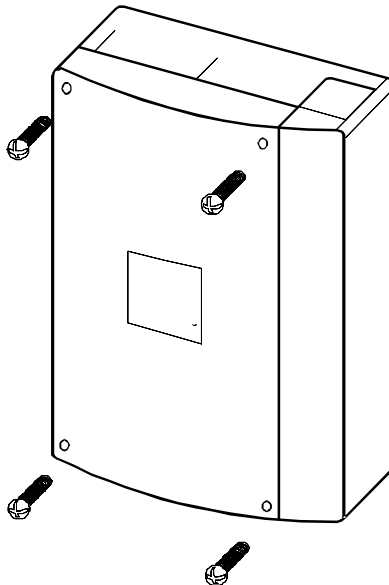
### Caution

1. **This system should be installed by qualified service personnel.**
2. **Do not install the Power Supply unless you have read the following instructions and completed all the installation and wiring.**
3. **STATIC SENSITIVE DEVICES! Please handle with care.**

### Installing expansion and optional cards

In this step you will be installing printed circuit cards on to header pins of the main board in the basic cabinet. Take your time and extra care to assure the printed circuit cards are properly aligned. After installing each option and expansion card, perform a visual inspection to assure the printed circuit card is installed properly.

1. Position the cabinet on a flat surface like a table or countertop. Avoid doing this on carpet.
2. Remove the 4 screws located at the corners of the cabinet and lift the front cover off.
3. Locate the expansion and option cards and unpack them at this time.



## Installing expansion and option cards (continued)

### ***B1-CKC- Real Time Clock Card***

Install this card on CN3 of the B1-MBU. CN3 is located just beside the small back up battery. Be sure that the component side of the B1-CKC is facing in towards the other components.

### ***B1-MSC- Multi Service Card***

Align the MSC card with CN4 of the B1-MBU. Align the hole on the right side of the MSC with the standoff. Once aligned push the MSC on the connector. Place the screw into the standoff securing the MSC card. When installed correctly the connectors should be easily accessible through the main panel.

### ***B1-VSC- Voice Service Card***

Align the B1-VSC card with CN2 of the B1-MBU and the white plastic snap on guide. Once aligned, press on the VSC until it snaps onto the guide and is firmly seated on to CN2.

### ***B1-SLC- 2 or SLC-8 Hybrid Adapter Card***

Align the B1-SLC card with CN7 and CN9 of the B1-MBU as well as the associated plastic snap on guide. Once aligned, press on the SLC until it snaps onto the guide and is firmly seated on to the connectors.

### ***B1-TKC- 2 Port CO Line Card***

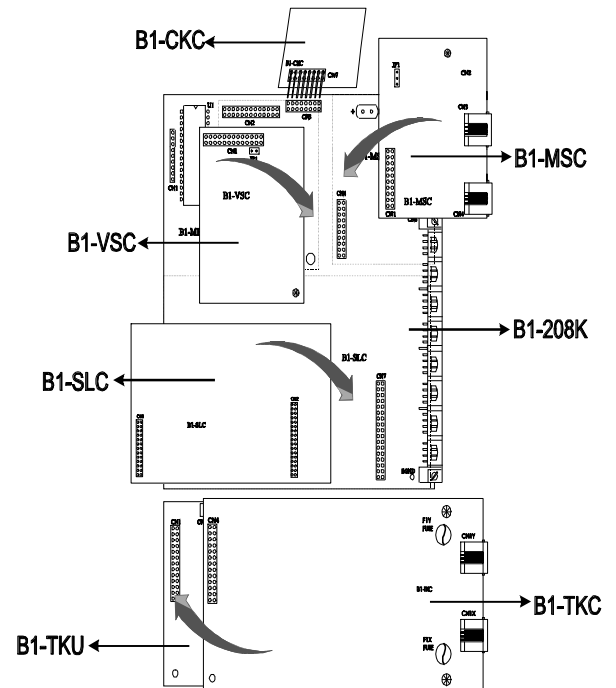
The B1-TKC card installs directly on top of the existing B1-TKC card provided for in the basic key service unit. Align the B1-TKC card up with CN1 and the 2 metal standoffs. When aligned, press the B1-TKC until it is firmly seated on CN1. Insert the 2 screws into the standoffs which will secure the B1-TKC in place.

### ***B1-RGU - Ring Generator Unit***

The ring generator installs inside the power supply unit. Remove the cover of the power supply by taking out the 4 screws located on each corner. Inside the B1-RGU are 4 screws and a connecting cable. Align the B1-RGU with the 4 holes and secure by installing the screws provided. Install the cable from the B1-RGU to the 4 pin header connector located on the B1-PWU board.

### ***Voltage Selection Check***

Make a check to assure the power supply jumper setting is for the proper voltage. (See the power supply section for details). When complete, place the power supply cover back on the power supply.



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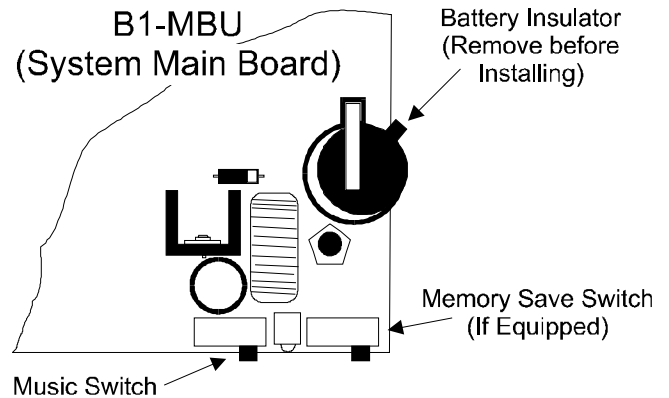
**IMPORTANT STEP- Enable the Battery Back Up.**

Remove the black insulator from the battery. The insulator needs to be removed now in order to retain programming information when the system is turned off.

**Replace Cover**

With the expansion and option cards installed and the battery insulator removed, replace the cover and install the 4 screws you removed earlier.

**This concludes the installation of expansion and option cards!**



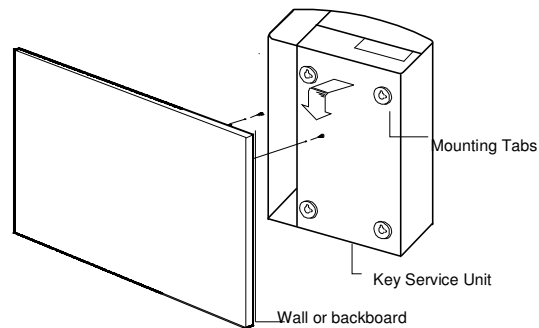
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**Installing the Equipment****Backboard**

Be sure to plan and allow enough space to mount and connect the key service unit, power supply and system battery back up if applicable.

**Key Service Unit**

Use the enclosed paper template to locate the mounting position for the Key Service Unit. Drill appropriately spaced holes and mount the KSU on the wall. When mounting the KSU, make certain that there is adequate room for the system power supply and that the connecting cable between the Power Supply and the KSU will reach the KSU. The same applies for the battery back up unit.

**Power Supply**

**Dedicate The Power Source - The power supply must be connected to a dedicated AC outlet.**

Be sure that the third wire earth ground of the AC circuit is connected to a good electrical ground. If a music source is installed, it must be connected to a separate AC circuit rather than the system's dedicated AC line cord.

**Check Your Voltage Selection Jumper**

Verify that the input voltage and input voltage jumper are correct before you power on the system. The input voltage is set according to the Customer's requirement before shipping. However it is important to verify that the setting is correct prior to initial system power up.

**Power Supply voltage options for the unit:**

100-VAC: 100 to 120 V AC (50/60Hz) or 220-VAC: 210 to 230 V AC (50/60Hz).

**Mount Power Supply**

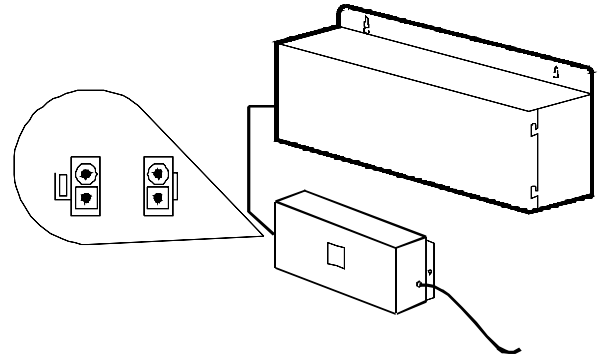
Using screws provided with the system, mount the power supply close to the KSU so that the connector reaches from the Power Supply to the KSU.

### Preparing The External Battery Backup

The Key Service Unit can have two external backup batteries in series (12 volts each) for emergency power and when a power failure takes place.

If you are installing an optional Battery Backup (SK-BCAB/B), make certain that there is adequate room for its installation. Make certain that the Battery Backup is mounted close enough to the Power Supply that the interconnecting cable between the Battery Backup and the Power Supply can connect.

**Do Not Connect the Battery Backup at this time!**



**Do Not Connect the Battery Backup at this time! Battery Backup should not be connected to the System power supply until all power up testing has been completed!**

### Charging the Battery

The rechargeable batteries are automatically charged when the KSU is plugged in. When System is in a full-load condition (four CO Trunks and eight Extensions all in use), the batteries provide a minimum of 3 hour's consecutive use. Change the batteries every two years.

### Installing or Replacing Batteries

#### Caution

**To Reduce the Risk of Fire or Injury to persons, Read and Follow these Instructions.**



1. Use only the following type and size batteries:  
12 Volt 6.5 Amp/Hour "Gel-Cell" sealed batteries (2).  
Dimensions, approximately 3 1/4" (H), 5 15/16" (W), 2 1/2" (D).  
PowerSonic model PS660 or equivalent.
2. Do not dispose of the batteries in a fire. The cell may explode. Check with local codes for possible special disposal instructions.
3. Do not open or mutilate the batteries. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
4. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

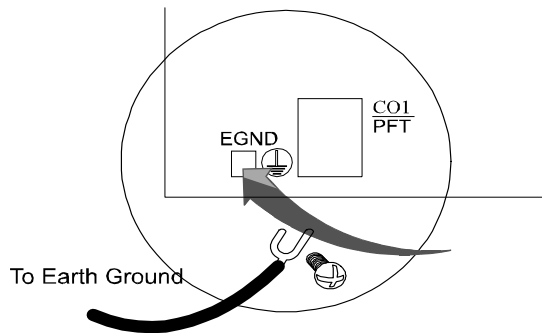
**This product is defined as a secondary battery operated device. As such, the following instructions should also be read and followed:**

1. Charge the batteries provided with or identified for use with this product only in accordance with the instructions and limitations specified in this manual.
2. Observe proper polarity orientation between the batteries and battery charger.
3. Do not mix old and new batteries in this product.
4. Do not mix batteries of different sizes or from different manufacturers in this product.

Before installing or replacing batteries, disconnect the battery supply unit to the KSU by removing the polarized battery connector at the KSU. Due to the weight of the batteries, it is advised that the battery cabinet be removed from the wall before working on it.

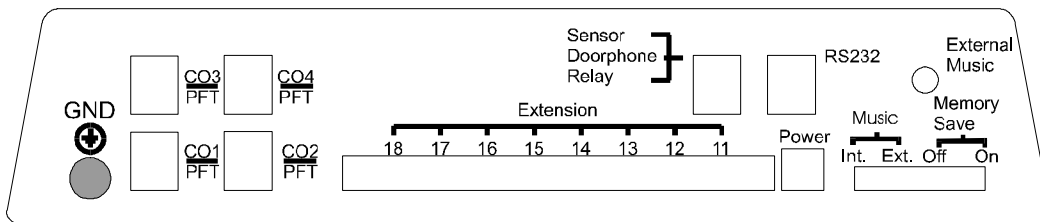
### System Ground

It is strongly recommended that the system be grounded by connecting a heavy, insulated copper wire (e.g., 14AWG or larger) between the grounding bolt on the right-lower side of the cabinet and an earth ground. Do not connect the grounding wire of the KSU to a computer, telex, or any other external device.



### KSU Connecting (Main) Panel Layout

The following illustration should be used as a reference when connecting equipment to the SK-408 KSU.



**SK-408 KSU Main Panel**

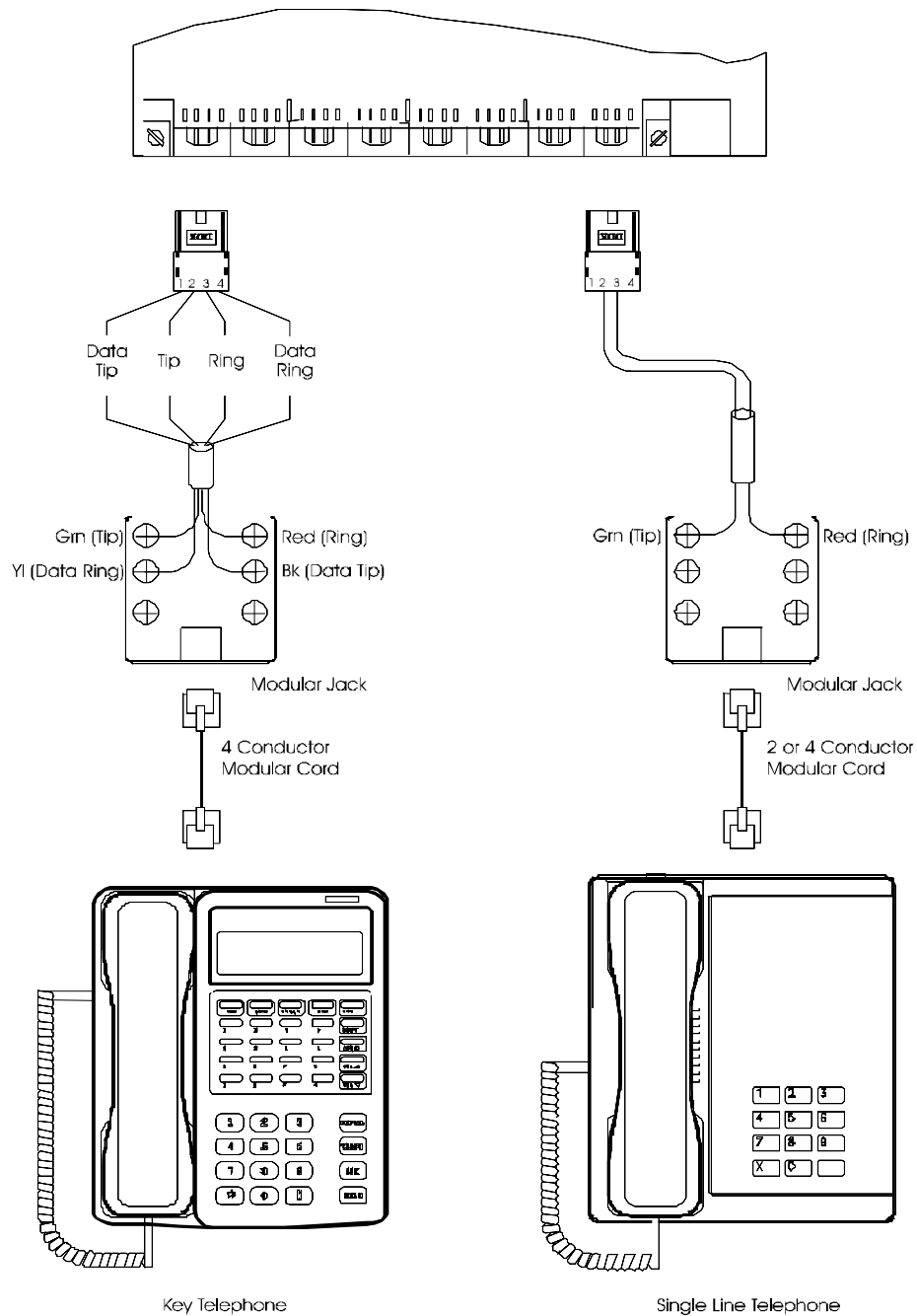
**Refer to the wiring diagram located on the inside of the cable cover for all connections**

### Connecting Stations

The station cabling for the SK-408 should be a home run from the jack to the telephone room. The termination should be at conventional 66 type connecting blocks or directly to the provided station connectors. Two pair twisted wiring is required for each station location. Attention to proper cabling will go a long way in a successful installation and minimizing service calls after installation. Some guidelines for running station cable are as follows:

- Avoid running cable parallel to fluorescent light fixtures or electrical lines not in conduit. If these obstacles are unavoidable, run the cable at right angles across them.
- Do Not run station cable inside conduit already occupied by electrical wiring.
- Do Not run station cable near equipment with electric motors or strong magnetic fields.
- Do not place station cable on the ground where it can be stepped on or rolled over by office furniture or office equipment.





### Station Connection

- A cable cover is provided with the KSU. Station cables can enter from either the top or bottom as desired. Remove one or both ends of the cover as required and route the station cable through the hole. Terminate the station wires with the connectors that are provided. The stations will connect to the KSU as shown on the main panel (above) on connector locations 11 - 18.
- Connect Tip terminal with GRN terminal(screws) of the modular jack, Ring with RED, Data Tip with BK, and Data Ring with YL.

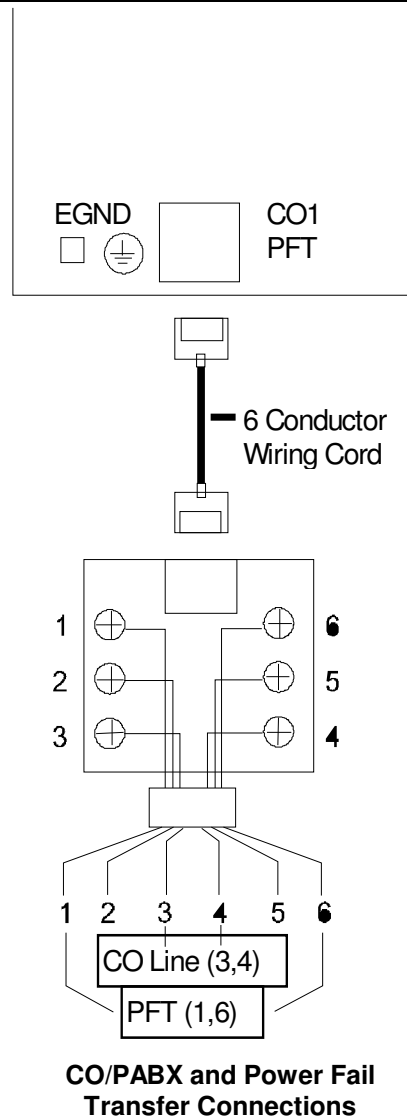
- Attention must be given to the polarities of terminals: Data Tip ( - ), Data Ring ( + ).
- 4-conductor wiring is required for Key Telephones.
- 2-conductor wiring is required for Single Line Telephones.
- Incorrect connections may cause a system malfunction or equipment failure.

**CAUTION!:** Avoid using a 4-conductor wiring cord when connecting a single line telephone. It may damage the B1-MBU or B1-SLC board if the single line telephone uses the second pair for control closure (A Lead control).

**CO/PABX and PFT(Power Failure Transfer) Connections**

Make your CO line connection to the telephone company on this connector. Pins 3 and 4 of the connector are for the CO line. Pins 1 and 6 provide output for connection to power fail transfer circuits or telephones.

- RJ-25 (6 wire) modular connector is required.
- 6-conductor wiring is required.
- **Refer to the accompanying illustration CO/PABX and Power Failure Transfer Connections:**



## Optional Cabling

Connect a 6 conductor mounting cord from the KSU to a RJ-25 modular block.

### Doorphone Connection

- One Doorphone may be connected to the SK-408 system.
- 2-conductor wiring is required.
- Connect the Doorphone to pins 2 and 5 of the RJ-25 connector.

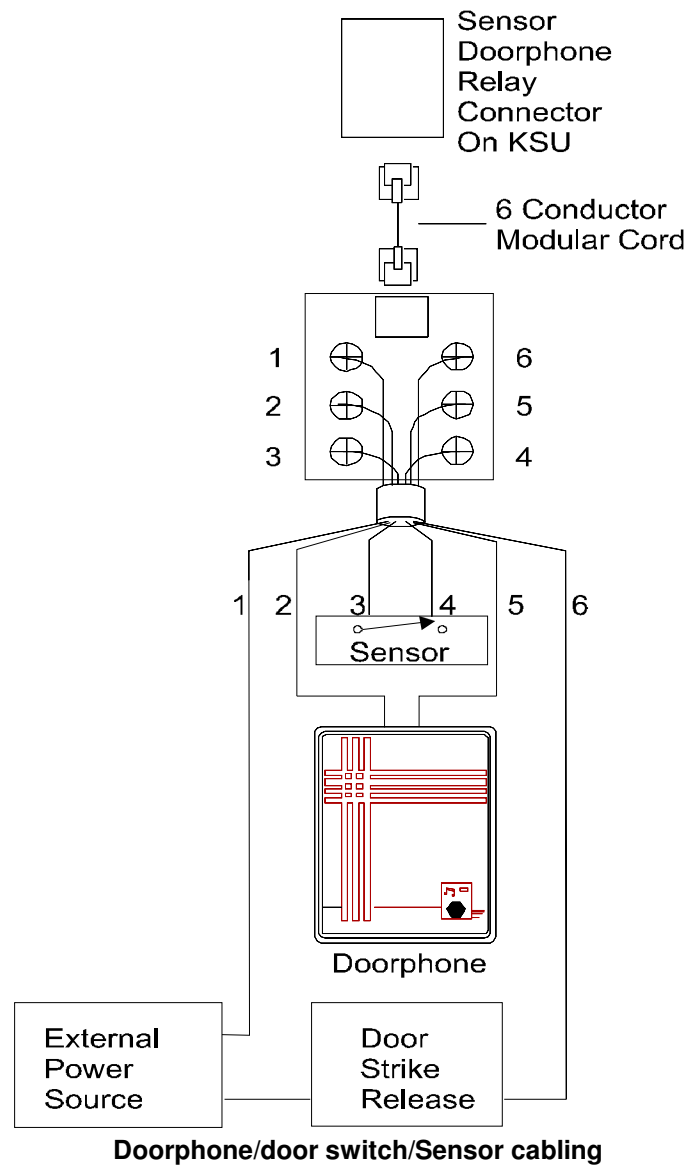
### Door Switch Connection

- One Door Switch may be used on the SK-408 system.
- 2-conductor wiring is required.
- Connect the door switch to pins 1 and 6 of the RJ-26 connector.

### Sensor Connection

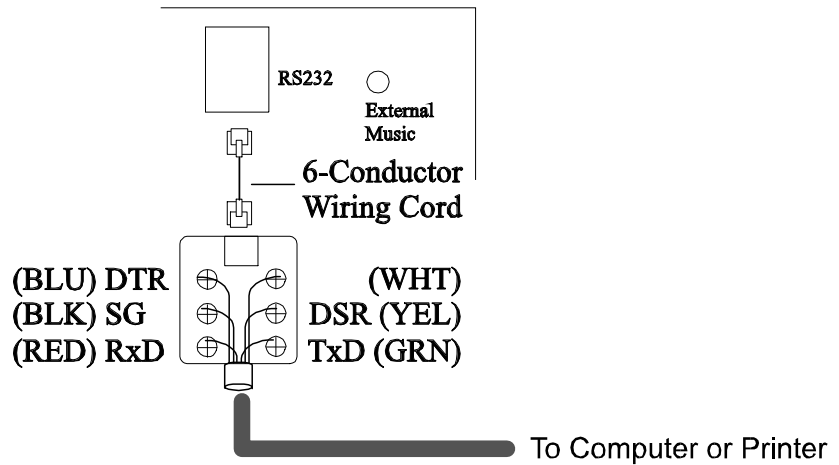
- The Sensor connector on SK-408 may be used for the External Sensor input.
- The sensor may be configured for normally open or normally closed operation.
- 2-conductor wiring is required.
- Connect the sensor to pins 3 and 4 of the RJ-25 connector.
- Refer to System Programming Form 39 -- Sensor Assignment.

**Refer to Illustration Doorphone/door switch/Sensor cabling:**



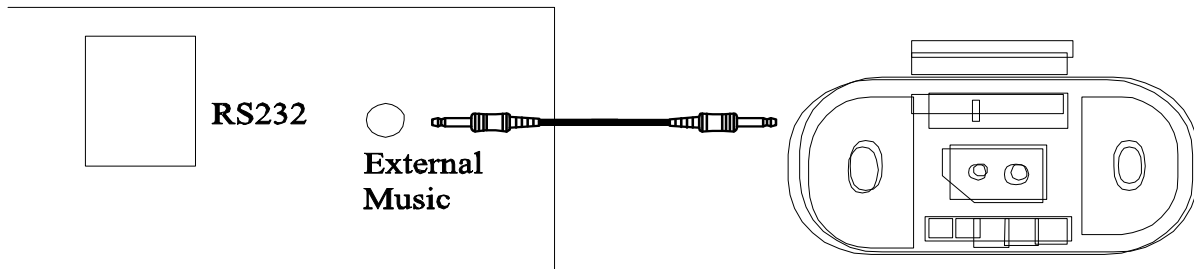
### RS232 Port Connection

Use the RJ-25 connector to terminate the RS232 cable. Then connect the RJ-25 to the KSU with a 6 conductor mounting cord. Insert the mounting cord into the connector labeled RS-232.



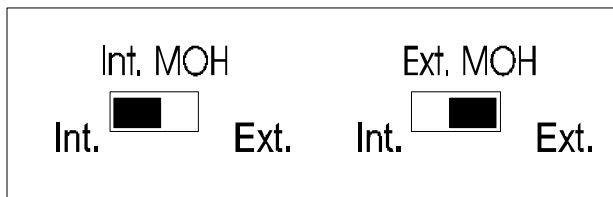
### Music on Hold Connection

- Connect the (optional) external music source to the "External Music" input labeled on the KSU.
- Use a 1/8" mini plug to connect the music source to the KSU.



### Music Source Selection

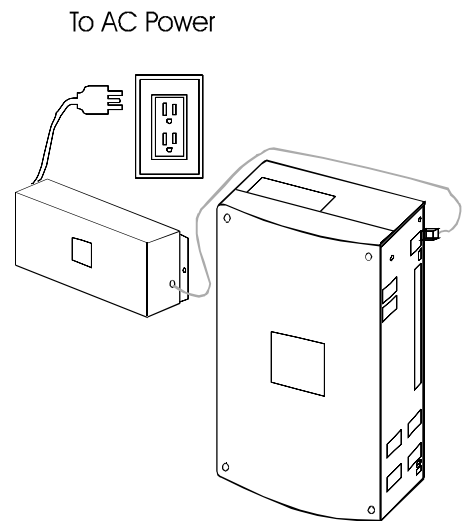
You can select the external music source or internal music by adjusting the switch on the Main panel.



## Power On and Operational Test

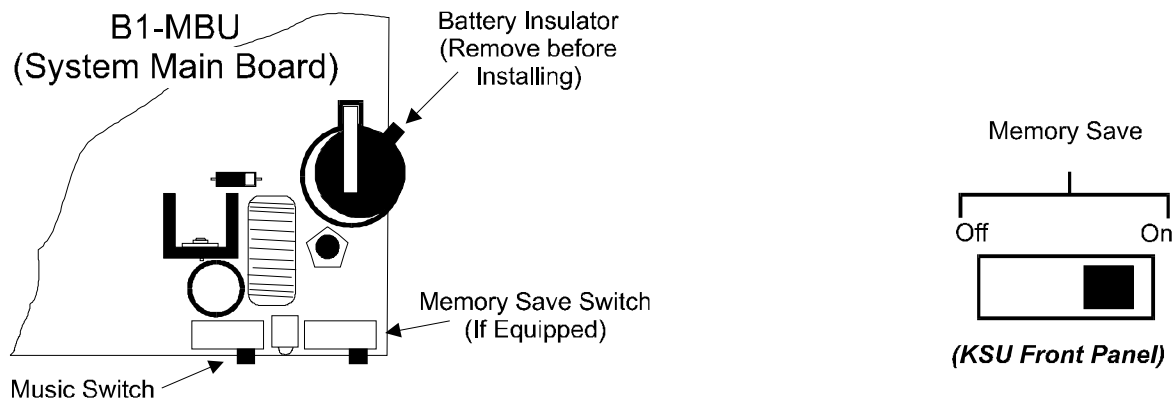
Before connecting the B1-PWU to AC power:

- Verify that input voltage and input voltage selection jumper on B1-PWU are correct before you power up the system.
- Recheck the cabling for incorrect connections, loose wires and wiring fragments that may cause short-circuits.
- (If equipped) **Place Memory Save Switch in the ON position.** If your KSU is not equipped with a Memory Save Switch, it will be necessary to remove the battery insulator from the lithium cell inside the KSU.
- Plug the power cord into a power outlet.
- Verify the system boots properly by checking the display of a telephone set.
- You may now connect the battery back up unit if applicable.



## Operational Tests

Check each telephone and CO line to verify that outgoing lines are connected properly. Check that intercom calls can be made from extension to extension.



### WARNING:

**DISCONNECT THE POWER SUPPLY FROM THE AC POWER SOURCE BEFORE WIRING OR CHANGING ANY WIRING.**

**Connect the Battery Backup AFTER AC power has been connected to the Power Supply. Disconnect Battery Backup BEFORE disconnecting AC power from the Power Supply.**

### NOTICE:

**ONCE THE SYSTEM OPERATES PROPERLY, PROCEED TO SYSTEM PROGRAMMING. (REFER TO THE SYSTEM PROGRAMMING MANUAL.)**

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## Series Model SK-408 - Programming Forms Manual

### Programming Information

This document contains the system forms required to program the SK-408 and an explanation of the parameters.

### New Systems

We recommend that all new systems have the system memory reset before system programming takes place. This ensures that any extraneous information that may be present in system memory is erased and that the system database will not be corrupt.

To Reset System Memory.

Enter System Programming :  
From an LCD equipped Superkey Electronic Telephone Set:

1. Press [PROG]. Press [7].
2. Enter Password if programmed. (New systems will not have a system password).
3. Press [SAVE].
4. LCD display will show:

PROGRAM MODE: __ (01 - 69)
-------------------------------

5. Enter [2][5]. Press [SAVE]. Display will show:

25- Reset Data 0-9 Default
-------------------------------

6. Enter [2].
7. System Database is now reset. LCD will display:

PROGRAM MODE: __ (01 - 69)
-------------------------------

8. You may commence database entry at this point, or exit system programming by pressing SPK key or by lifting and replacing the handset.

To Enter System Programming:

1. Press [PROG]. Press [7].
2. Enter Password if programmed. (New systems will not have a system password).
3. Press [SAVE].
4. LCD display will show:

PROGRAM MODE: __ (01 - 69)
-------------------------------

5. You may begin system programming at this point.

**Basic Programming Commands:**

For the first time or infrequent installer, a programming overlay is provided with each Key Service Unit. This overlay, when placed on a TransTel LCD telephone set indicates keys used during programming for easy reference. Experienced installers may program without the overlay. Both key designations are listed below.

**Note:** Keys listed between [ ] indicate the default keys shown on a telephone set. Keys listed between { } indicate keys displayed by the programming overlay. **See illustration Programming Overlay on the next page.**

These commands are active while in the system programming mode

[MSG]{SAVE} Commits the data that is showing on the LCD display into the system database.

[DND/CN]{LEFT} Moves the programming cursor to the left.

[SPD]{RIGHT} Moves the programming cursor to the right.

[SAVE]{NEXT} Moves to the next section in any multiple part form.

[PGM]{PREV} Moves to the previous section of any multiple part form.

[FWD]{PGM} Moves to the Top Level Programming Mode Display (does not save information entered into any field unless [SAVE] is pressed first).

[DSS Key 4]{Don't care} Enters a Wild Card (don't care) into Account Codes or Toll control entries. LCD will display d (lower case letter "d") to indicate don't care entry.

[HOLD]{PAUSE} Inserts a Pause when programming a Speed Dial Entry. LCD will display p (lower case "p") to indicate a Pause entry.

[TRF/FL]{FLASH} Enters a FLASH command as part of a Speed Dial Entry. LCD will display F (upper case "F") to indicate a Flash command. Clears a digit during other entries (Passwords, etc). Same operation as [DSS Key 4] below.

[MIC]{P/T} Enters a command to convert from pulse dialing to DTMF dialing into a Speed Dial Entry. LCD will display T (upper case "T") to indicate a tone conversion command.

[VOL \*]{CHANGE} CHANGE key. Depending on form, it will cycle through available Programming parameters.

[TRF/FL]{CLR DIGIT} Enters a FLASH command as part of a speed dial number. Clears a digit during other entries (Passwords, etc). (Same as pressing [SPK] key as listed above).

[SPKR]{EXIT} Exits Programming. Returns telephone to normal idle mode.

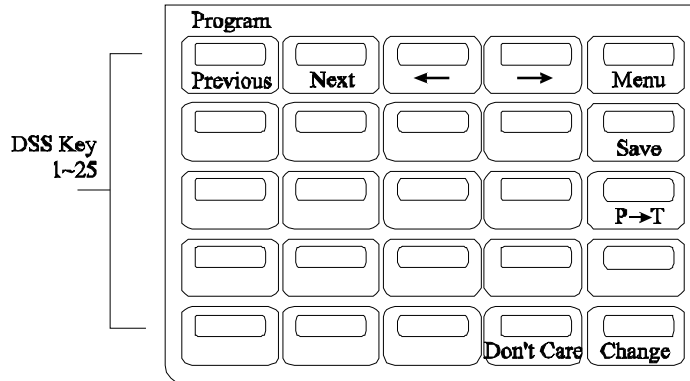
[REDIAL]{CLR ALL} Clears all digits on an entry such as speed dial or account codes.

**Alphanumeric Entry:**

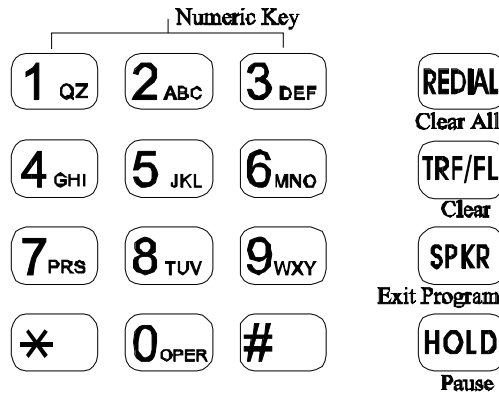
The following table indicates the capabilities of the name programming functions if they are selected on the system. System Speed Dial, Personal Speed Dial, Stations, CO Lines and Sensors may be programmed with names.

Key 1 = Q - Z - (Blank Space) - 1	Key 2 = A - B - C - 2
Key 3 = D - E - F - 3	Key 4 = G - H - I - 4
Key 5 = J - K - L - 5	Key 6 = M - N - O - 6
Key 7 = P - R - S - 7	Key 8 = T - U - V - 8
Key 9 = W - X - Y - 9	Key 0 = (Period). : & 0
Key # = ( ) \$ #	Key * = (Dash) / ! *
DSS Key 23 = Backspace Cursor (Left)	DSS Key 24 = Cursor Forward

If an entry is made that is not within valid system parameters, the Superkey system will not accept the entry when [SAVE] is pressed. The Speaker on the programming set will return a busy tone and the LCD Display will place the programming cursor under the offending entry. You may make corrections and press [SAVE] again. If multiple errors are made, the system will continue to return you to the illegal entries as others are corrected.



It is not necessary to re-enter existing information on a multi-item form. You need enter only the information that is to be changed. You may move the cursor to the left or right in order to access only the specific entry that you want to change. You may press {SAVE} without regard for the placement of the cursor on the LCD display.



**Programming Overlay**



**Form 01 - Day Ringing And Ringing Line Preference Assignment**

**Ring Type : Linear / Circular / Hunt / Private / Common See Form 35-CO-07**

Line 1		Line 2		Line 3		Line 4	
Form 01- 01-		Form 01- 02		Form 01- 03		Form 01- 04	
Item	Extension	Item	Extension	Item	Extension	Item	Extension
01		01		01		01	
02		02		02		02	
03		03		03		03	
04		04		04		04	
05		05		05		05	
06		06		06		06	
07		07		07		07	
08		08		08		08	

Any station programmed on a line will immediately be connected to it when the handset is lifted or the speaker button is pressed. It also controls ringing assignments as per form 35-CO-07 (Linear, Circular, Private, Common). The total number of stations that will ring is determined by Form 29-CO-05.

Some examples:

IF stations 11 through 18 are programmed on Form 01-01,  
 AND Form 35-CO-07 is programmed as 0,  
 AND Form 29-CO-05 is programmed as 2,  
 THEN Incoming calls on line 1 will ring ON Extensions 11 and 12 only, but any station will be directly connected to an incoming call if they lift the handset or press the speaker button.

IF stations 11 through 14 are programmed on Form 01-01,  
 AND Form 35-CO-07 is programmed as 0,  
 AND Form 29-CO-05 is programmed as 4,  
 THEN Incoming calls on line 1 will ring ON Extensions 11 through 14 AND only extensions 11 through 14 will be directly connected to an incoming call when they lift the handset or press the speaker button.

**Form 02 - Night Ringing And Ringing Line Preference Assignment**

**Ring Type : Linear / Circular / Hunt / Private / Common See Form 35-CO-08**

Line 1		Line 2		Line 3		Line 4	
Form 02- 01-		Form 02- 02		Form 02- 03		Form 02- 04	
Item	Extension	Item	Extension	Item	Extension	Item	Extension
01		01		01		01	
02		02		02		02	
03		03		03		03	
04		04		04		04	
05		05		05		05	
06		06		06		06	
07		07		07		07	
08		08		08		08	

Any station programmed on a line will immediately be connected to it when the handset is lifted or the speaker button is pressed. It also controls ringing assignments as per form 35-CO-08 (Linear, Circular, Private, Common). The total number of stations that will ring is determined by Form 29-CO-05.

Some examples:

IF stations 11 through 18 are programmed on Form 02-01,  
 AND Form 35-CO-08 is programmed as 0,  
 AND Form 29-CO-05 is programmed as 8,  
 THEN Incoming calls on line 1 will ring ON Extensions 11 through 18 and any station will be directly connected to an incoming call if they lift the handset or press the speaker button.

IF station 11 is the only station programmed on Form 02-01,  
 AND Form 35-CO-08 is programmed as 0,  
 AND Form 29-CO-05 is programmed as 1,  
 THEN Incoming calls on line 1 will ring ON Extensions 11 only AND only extension 11 will be directly connected to an incoming call when he lifts the handset or presses the speaker button.

<b>Form 03 - Door Phone Ringing Assignment Form</b>								
Form 03- Door Phone <u>01</u>								
Item	01	02	03	04	05	06	07	08
STation								

A Door phone can be programmed to ring up to eight telephone sets. The first station to answer a call from a Door phone is automatically connected to the Door phone and all other stations are excluded from the conversation.

**Note:** Door phones may not be connected to outside telephone lines. They may not be involved in any station conference. They may not be transferred.

Any station can contact the Door phone by dialing 88 for Door phone

<b>Form 04 - Console Assignment Form</b>									
Form 04- Console Group <u>01</u>					Form 04- Console Group <u>05</u>				
Item	01	02	03	04	Item	01	02	03	04
STation					STation				
Form 04- Console Group <u>02</u>					Form 04- Console Group <u>06</u>				
Item	01	02	03	04	Item	01	02	03	04
STation					STation				
Form 04- Console Group <u>03</u>					Form 04- Console Group <u>07</u>				
Item	01	02	03	04	Item	01	02	03	04
STation					STation				
Form 04- Console Group <u>04</u>					Form 04- Console Group <u>08</u>				
Item	01	02	03	04	Item	01	02	03	04
STation					STation				

Extension numbers can be put in to determine what stations will be considered system Operators. Extension numbers that appear in a group will ring when another station in the same group Dials 0. When a station dials 0, the routing is controlled by the setting of Form 41-Station-01. Please see Form 41 for more information.

**System Default has Group 01 programmed with Extensions 11, 12, 13, and 14 as system consoles.**

Form 05-01 System Parameters Form - Timers-1								
Form 05-01-	01	02	03	04	05	06	07	08
Item								
Options	0-9	0-9	0-9	0-9	0-9	0-9	0-9	0-9
Default	1	1	1	1	5	2	2	1
<b>Item 01 - Hold Recall Timer</b> When a call on hold is not retrieved prior to this setting, the station that held the call will start ringing.								
<b>Item 02 - Exclusive Hold Recall Timer</b> Same as Item 01 but applies to calls held on Exclusive Hold								
<b>Item 03 - Hold Recall Timeout</b> If Item 01 or 02 above expire, the system waits this amount of time and then rings the Attendant Console.								
0=30 seconds	1=60 seconds	2=90 seconds	3=120 seconds	4=150 seconds				
5=180 seconds	6=210 seconds	7=240 seconds	8=253seconds	9=NONE				
<b>Item 04 - Delayed DISA Access Time</b> Determines how long the system will wait before answering a CO line that is marked as a DISA line								
0=1 second	1=3 seconds	2=5 seconds	3=7 seconds	4=9 seconds				
5=16 seconds	6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds				
<b>Item 05 - Busy Reminder Tone Interval</b> Determines the length of time between muted ring signals for an electronic set when an outside call is ringing or when a call has been transferred to the set.								
0=0 seconds	1=2 seconds	2=4 seconds	3=6 seconds	4=8 seconds				
5=15 seconds	6=30 seconds	7=60 seconds	8=120 seconds	9=254 seconds				
<b>Item 06 - (Dialing) Pause Time Duration (ms. = milliseconds)</b> Time that elapses before speed dial begins dialing on an outside line. The length of time represented by a P in speed dial entries.								
0=400 ms.	1=600 ms.	2=800 ms.	3=1000 ms.	4=1200 ms.				
5=1400 ms.	6=1600 ms.	7=1800 ms.	8=2000 ms.	9=2200 ms.				
<b>Item 07 - DTMF Generation Time (ms. = milliseconds)</b> Length of DTMF signals generated by speed dial or by Electronic sets when dialing.								
0=50 ms.	1=66 ms.	2=84 ms.	3=100 ms.	4=115 ms.				
5=132 ms.	6=150 ms.	7=165 ms.	8=180 ms.	9=195 ms.				
<b>Item 08 - (No Answer) Call Forward Transfer Time</b> Time that will elapse before a call is forwarded when Call Forwarding-No Answer is active on a station.								
0=10 seconds	1=20 seconds	2=30 seconds	3=40 seconds	4=50 seconds				
5=60 seconds	6=70 seconds	7=80 seconds	8=90 seconds	9=100 seconds				

Form 05-02 System Parameters Form - Timers-2								
Form 05-02-T	01	02	03	04	05	06	07	08
<b>Item</b>								
Options	0-9	0-9	0-9	0-9	0-9	0-9	0-9	0-9
Default	3	6	1	8	4	3	2	6
<b>Item 01 - Single Line Telephone - Dial Tone Timeout</b> Length of time that the system will wait for the first digit to be dialed by a single line telephone.								
<b>Item 02 - Single Line Telephone - Inter-Digit Timeout</b> Length of time that the system waits for additional digits. Systems resources will be released after this timer.								
0=1 second	1=3 seconds	2=5 seconds	3=7 seconds	4=9 seconds				
5=16 seconds	6=31 seconds	7=61 seconds	8=121 seconds	9=255 seconds				
<b>Item 03 - Auto Redial Off Hook Duration (Wait) Timer</b> How long a station will stay off hook during the Auto Redial function.								
0=1 second	1=10 seconds	2=20 seconds	3=30 seconds	4=40 seconds				
5=50 seconds	6=60 seconds	7=70 seconds	8=80 seconds	9=90 seconds				
<b>Item 04 - Single Line Telephone Release (Disconnect) Time</b> An open loop condition longer than this parameter is considered a hang-up (disconnect).								
0=40 ms.	1=80 ms.	2=120 ms.	3=400 ms.	4=600 ms.				
5=800 ms.	6=1000 ms.	7=1200 ms.	8=1400 ms.	9=1600 ms.				
<b>Item 05 - Key Telephone Flash Timer (ms. = milliseconds)</b> This parameter determines the length of an open loop (flash) condition that will occur on a CO line when an outside flash command is given to the KSU.								
0=80 ms.	1=120 ms.	2=160 ms.	3=440 ms.	4=640 ms.				
5=840 ms.	6=1040 ms.	7=1240 ms.	8=1440 ms.	9=1640 ms.				
<b>Item 06 - Single Line Telephone (Hold) Minimum Flash Timer</b> Sets the minimum time that will be recognized as a flash by a single line telephone. Shorter interruptions will be ignored.								
0=80 ms.	1=100 ms.	2=200 ms.	3=300 ms.	4=400 ms.				
5=500 ms.	6=600 ms.	7=700 ms.	8=800 ms.	9=900 ms.				
<b>Item 07 - Minimum Ring Detection (Ring On) Timer (ms. = milliseconds)</b> Minimum ring burst that must be present for the system to detect an incoming call.								
0=120 ms.	1=160 ms.	2=240 ms.	3=360 ms.	4=440 ms.				
5=560 ms.	6=640 ms.	7=760 ms.	8=840 ms.	9=960 ms.				
<b>Item 08 - Ring Cycle (Ring Off) Timer</b> Length of time that the system must have <b>without</b> a ring signal for the system to stop internal ringing (abandoned calls).								
0=2 seconds	1=2 seconds	2=2 seconds	3=3 seconds	4=4 seconds				
5=5 seconds	6=6 seconds	7=7 seconds	8=8 seconds	9=9 seconds				

Form 05-03 System Parameters Form - Codes-1								
Form 05-03-C	01	02	03	04	05	06	07	08
<b>Code</b>								
Options	0 - 1	0 - 1	0 - 1	0 - 9	0 - 9	2 - 4	0 - 1	1
Default	0	0	0	9	0	2	0	1
<b>Code 01 - Pulse Dial - Make / Break Ratio Dial Pulse Ratio.</b>						0=33/67	1=40/60	
<b>Code 02 - Automatic CO Line Search During Speed Dial, Auto Redial, Saved Redial, etc.</b>						0=Enabled	1=Disabled	
<b>Code 03 -Intercom Call Signaling to Electronic Telephone Set)</b>						0=Voice Signaling	1=Tone Signaling	
<b>Code 04 - PABX (Centrex) Outgoing Code (Reference Form 35-CO-01)</b>						Actual Digit Programmed 0=0, 1=1, 2=2, 3=3, 4=4, 5=5, etc.		
<b>Code 05 - Toll Access Code</b>	Actual Digit Entered 0=0, 1=1, 2=2, 3=3, etc.							
<b>Code 06 - Station Number Digit Length</b>			2=2 digit length	3=3 digit length	4=4 digit length			
<b>Code 07 - SLT Dial Tone Options</b>	0= Normal Dial Tone (When Idle). Interrupted Dial tone on DND, Transfer Dial Tone or Call Forward All Calls Active Special Dial Tone presented if Message Waiting active.							
1= Interrupted Dial Tone (Idle) Normal dial tone (DND, Transfer, Call Forwarding All Calls Special Dial tone (MW Active)	2=Same as 0 except no special dial tone on MW.							
3= Same as 1 except no special dial tone on MW.								
<b>Code 08 -Doorphone Ringing Frequency.</b>	Selections from 0 through 9 are valid.							

**05-03-04 PABX ([Centrex]) Outgoing Code** determines the code that is dialed to obtain “beyond Centrex” dial tone. This is used to determine if a call is a “behind Centrex” call or a “beyond Centrex” call. It is only applicable if Form 35-CO-01 is programmed as a 1, indicating that the CO trunk is connected behind a Centrex system. In such conditions, “behind Centrex” calls will not be monitored for toll violations and SMDR purposes.

**05-03-05 (Toll Access Code)** determines the first digit that is checked for verification of a toll call. This has no effect on toll restriction within the system. It is only used to notify SMDR that a particular call is a toll call.

Form 05-04 System Parameters Form - Codes-2								
Form 05-04-T	01	02	03	04	05	06	07	08
<b>Item</b>								
<b>Options</b>	0 - 9	0 - 1	0 - 2 5 - 7	0 - 1	0	0 - 4	0 - 1	1 - 2
<b>Default</b>	0	1	0	0	0	1	0	1
<b>Item 01 - Callback Message Cancel Timer</b>					0=Non Canceling		1=1 Hour	
2=3 Hours		3=6 Hours		4=9 Hours		5=12 Hours		6=15 Hours
7=18 Hours		8=21 Hours		9=24 Hours				
<b>Item 02 - Dial 9 (Hybrid) Activation Turns on Dial 9 (pooled CO lines).</b>					0=Disable		1=Enable	
<b>Item 03 - Call Limit Type</b>								
0=Continuous Warning After Timeout (Outgoing).								
1=1 Second Warning at Duration Limit (Outgoing).								
2=1 Second Tone 10 seconds Prior to Timeout. Continuous Tone 5 seconds prior. Line is released at Timeout (Outgoing).								
5=Same as 1 above, except affects both Incoming and Outgoing.								
6=Same as 2 above, except affects both Incoming and Outgoing.								
7=Same as 3 above, except affects both Incoming and Outgoing.								
<b>Item 04 - Time Format Display</b>				0=12 Hour AM/PM		1=24 Hour 00:00-23:59		
Item 05 - Reserved								
<b>Item 06 - Speed Dial Distribution</b>								
	System	Personal		System	Personal			
0	100 Sets	500 Sets	3	400 Sets	200 Sets			
1	200 Sets	400 Sets	4	500 Sets	100 Sets			
2	300 Sets	300 Sets						
<b>Item 07 - Intercom Single Digit Dialing</b>					0=Disabled		1=Enabled	
<b>Item 08 - Message Waiting (MW) Status</b>					0= Disable All Message Waiting indications.			
1=MW Ring - Route recipient to message originator. (Day and Night)					2=MW - Route to VSU. (Day and Night)			
3=250 millisecond ring every 5 minutes. (Day and Night)					4=No MW during Night Service			
5=No MW Ringing During Night Service Route To originator during Day Service.					6=No MW During Night Service. Route to VSU during day Service.			
7=Disable 250 millisecond ring burst during night service (not currently used).								

<b>Form 05-05 System Parameters Form - Codes-3</b>								
Form 05-05-T	01	02	03	04	05	06	07	08
<b>Item</b>								
<b>Options</b>	0 - 1	0	0 - 6	0 - 9	0	1	0 - 9	0 - 9
<b>Default</b>	1	0	0	0	0	1	1	0
<b>Item 01 - Wake Up Call Signaling</b>					0=VSU		1=DND Tone	
2=Use VSU and use SMDR to print status				3=DND Tone and SMDR to print status				
Item 02 - Reserved								
<b>Item 03 - Speed Dial Unrestricted (Hundreds Group)</b>						0=000		1=100
2=200	3=300	4=400	5=500	6=600				
<b>Item 04 - Speed Dial Unrestricted (Tens Group)</b>						0=00		1=10
2=20	3=30	4=40	5=50	6=60	7=70	8=80	9=90	
<b>Item 05 - Name Function</b>		0=No Names Used				1=Display Names for Extensions		
2=Name Speed Dial. (Allow Dial by Name Speed Dial only)		3=Name Extensions & Speed Dial (Dial by Name)				5=Name Display and Dial by name for Extensions only		
7=Enable Name display and speed Dial. Enabled Dial by name for Extensions and Speed Dial								
Item 06 - Reserved								
<b>Item 07 - Auto Redial Attempts</b>					0=Disabled		1=10	
2=20	3=30	4=40	5=50	6=60	7=70	8=80	9=90	
<b>Item 08 - Auto Redial Inter-Call Timer (seconds)</b>						0=10		1=20
2=30	3=40	4=50	5=60	6=70	7=80	8=90	9=100	



<b>Form 05-06 System Parameters Form - Timer/Codes</b>								
Form 05-06-T	01	02	03	04	05	06	07	08
<b>Item</b>								
<b>Options</b>	0 - 9	0 - 9	0	0 - 1	0 - 1	0-9	0, 1, 3	0
<b>Default</b>	4	4	0	1	0	3	0	0
<b>Item 01 - Transfer Recall Timeout-Busy (seconds)</b>						0=5	1=10	
2=15	3=20	4=30	5=40	6=50	7=60	8=70	9=None	
<b>Item 02 - Transfer Recall Timeout-No Answer (seconds)</b>						0=5	1=10	
2=15	3=20	4=30	5=40	6=50	7=60	8=70	9=None	
Item 03 - Reserved								
<b>Item 04 - Polarity Reverse Detection</b>					0=Enable		1=Disable	
<b>Item 05 - Operator Access Code</b>					0 0 Operator 9 Outside Line		1 9 Operator 0 Outside Line	
<b>Item 06 -CO Disconnect Timer for ECF, Unsupervised Conference, and DISA</b>								
0=Disable		1=1 minute		2=2 minutes		3=3 minutes		4-9=4 minutes
<b>Item 07 - Single Line Telephone Hold Procedure</b>					0=Flash only			
1=Flash +[7]					3=Flash +[7] (System returns tone after Flash)			
<b>Item 08 - Station Hunting Type</b>					0=Disabled			
1=Linear Hunting					2=Circular Ring			

Form 05-07 System Parameters Form - Timer/Codes								
Form 05-07-T	01	02	03	04	05	06	07	08
Item								
Options	0 - 1	0 - 1	0	0 - 1	0 - 7	0 - 9	0	0
Default	0	0	0	0	0	0	0	0
<b>Item 01 - Intercom Step Call</b>			0=Disable			1=Enable on Busy		
2=Enable on No Answer			3=Enable on Busy and No Answer					
<b>Item 02 - SLT Calling Proof</b>					0=Disable		1=Enable	
Item 03 - Reserved								
<b>Item 04 - DISA Operator Recall Capability (No Digits Dialed)</b>								
Setting	Situation							
	No dialing after the first voice announcement from the VSU.	The VSU has announced that the called station is busy or no answer	The VSU has already announced the invalid number or a dialed number that has not been received completely.					
0=	☺	☺	☺					
1=	T	☺	☺					
2=	☺	T	☺					
3=	T	T	☺					
4=	☺	☺	T					
5=	T	☺	T					
6=	☺	T	T					
7=	T	T	T					
Note	“☺” = Transfer the incoming call to console “T”=System will announce VSU function 06 (if programmed) to the incoming call if no digits dialed timer has expired. System releases call (hangs up).	“☺”=See Form 46-ST-04 “T”=See Form 46-ST-04. If 46-ST-04 is no recall to operator, VSU function 06 will be played to the caller (if programmed). System will release call (hang up).	“☺”= System will transfer incoming caller to system operator if 05-08-07 has expired. “T”=System will play VSU function 06 (if programmed) to the caller if 05-08-07 has expired. System will release the call (hang up).					
<b>Item 05 - EKT Calling Proof</b>			0=Disable			1=Enable		
<b>Item 06 - SMDR Dialed Number Print</b>				0=Print All Digits		1=Print 1st digit		
2=Print First 2 digits.		3=Print First 3 digits		4=Print First 4 digits		5=Print First 5 digits		
6=Print First 6 digits		7=Print First 7 digits		8=Print First 8 digits		9=Print First 9 digits		

Form 05-08 System Parameters Form - Timer/Codes								
Form 05-08-T	01	02	03	04	05	06	07	08
<b>Item</b>								
Options	0 - 9	0 - 1	0 - 8	0 - 1	0 - 9	0 - 9	0-9	0
Default	5	0	0	0	7	1	7	0
<b>Item 01 - CO HUNT Interval (seconds)</b>				0=0	1=2	2=4	3=6	
4=8	5=15	6=30	7=60	8=120	9=250			
<b>Item 02 - Direct CO Access</b> Access CO lines outside of a station's Dial 9 group					0=Disable		1=Enable	
<b>Item 03 - SLT Busy Remind Tone Timer</b>				0=Disable		1=1 X Value of Form 05-01-05		
2=2 X Value of Form 05-01-05		3=3 X Value of Form 05-01-05		4=4 X Value of Form 05-01-05		5=5 X Value of Form 05-01-05		
6=6 X Value of Form 05-01-05		7=7 X Value of Form 05-01-05		7=7 X Value of Form 05-01-05		8=8 X Value of Form 05-01-05		
<b>Item 04 - DISA Operator Recall Location (No Answer)</b>					0=Recall to Console Group of Dialed Station		1=Recall to CO line Console Group.	
<b>Item 05 - SLT Feature Programming Access Code First Digit</b> (See Note Below)					0=Feature Programming of Single Line Telephones Disabled			
1=1	2=2	3=3	4=4	5=5	6=6	7=7	8=[*][#] [7]	9=[*][#] [8]
<b>Item 06 - DISA No Answer Recall Timer (seconds)</b>						0=8	1=16	
2=24	3=32	4=40	5=48	6=56	7=64	8=72	9=80	
<b>Item 07 -DISA Transfer Time (No Digits Dialed) Transfer to Console</b>				0=No Expiration Timer Invoked			1 = 1 second	
2 = 2 seconds		3 = 3 seconds		4 = 4 seconds		5 = 5 seconds		
6 = 6 seconds		7 = 7 seconds		8 = 8 seconds		9 = 9 seconds		
Item 08 - Reserved								

**Note: For example** If the setting of 05-08-05 is 1, DND is 1051.  
 If the setting is 2, DND 2051  
 If the setting is 0, Single Line Telephones cannot do programming.  
 If the setting is 8, DND is \*#7051

Form 05-09 System Parameters Form - Misc.								
Form 05-09-T	01	02	03	04	05	06	07	08
<b>Item</b>								
Options	0	0 - 1	0-9	0	0	0	0	0
<b>Default</b>	0	1	0	0	0	0	0	0
Item 01 Reserved								
<b>Item 02 - Console Automatic Queuing</b> If enabled, Dial 0 calls will queue to busy consoles. If disabled, station users dialing 0 to a busy console will hear busy tone.					0=Disable		1=Enable	
Item 03-05 Reserved								
<b>Item 06 - UCD Enable Time</b> When the Console operator or assigned ringing stations are busy, the incoming call will be answered by the VSU after the assigned time. The UCD message will be played and the caller queued to the assigned stations or Operator and placed on hold.								
0=5 seconds	1=10 seconds	2=15 seconds	3=20 seconds	4=25 seconds				
5=30 seconds	6=35 seconds	7=40 seconds	8=45 seconds	9=50 seconds				
<b>Item 07 - UCD Hold Recall Time</b> After the assigned time duration, if a station in the hunt group or the system operator has not become free, the caller will recall the VSU and VSU 2 <sup>nd</sup> UCD recording will be played. This time sets the hold value.								
0=disabled (Does not recall)	1=30 seconds	2=45 seconds	3=60 seconds	4=75 seconds				
5=90 seconds	6=105 seconds	7=120 seconds	8=135 seconds	9=150 seconds				
<b>Item 08 - UCD Duration Time</b> If a call has not been answered by a live person by the time this timer expires, the system will disconnect the outside caller.								
0=No Disconnect Timer	1=5 minutes	2=10 minutes	3=15 minutes	4=20 minutes				
5=25 minutes	6=30 minutes	7=35 minutes	8=40 minutes	9=45 minutes				

Form 05-10 Voice Mail Leading Digits								
Form 05-10-T	01	02	03	04	05	06	07	08
Item								
Default	d	d	d	d	d	d	d	d

Form 05-10-01 through 05-10-08 allows programming of treatment digits that are outpulsed over a Voice Mail port (as defined on Form 43-Port-02) when a call is routed to the Voice Mail port due to call forwarding. The information on this form is outpulsed in DTMF format, followed by the extension number of the station from where the call is forwarded. Valid entries on this form include 0-9, \*, #, p(ause), and d(on't care). All trailing entries should be filled with don't care entries. Don't care entries are programmed by pressing the TSF (transfer) key. Pause entries are entered by pressing HOLD.

**Form 05-11 System Parameters Form - Supplemental.**

Form 05-11-T	01	02	03	04	05	06	07	08
<b>Item</b>								
<b>Options</b>	0 - 1	0	0	0	0-3	0-9	0-9	0-8
<b>Default</b>	1	0	0	0	0	0	1	0
<b>Item 01 - Power Up Volume Adjust</b> When enabled, the volume level settings of electronic sets are stored in the KSU. When the power is interrupted, the system will restore the programmed settings. If disabled, electronic sets will return to their default factory set levels after a power failure.					0=Disabled		1=Enabled	
<b>Item 02 - DISA Password 24 sets</b> When enabled, forced Account Codes 17-25 through 17-48 are used as additional DISA passwords					0=Disable		1=Enable	
Item 03 Reserved								
Item 04 Reserved								
<b>Item 05 - DISA Digit Acceptance</b>					0=All special digits valid			
1=[*],[#] Special - [8],[9] Digits only					2=[8],[9] Special - [*],[#] Digits Only			
3=No Special Digits								
<b>Item 06 - DISA Transfer Count</b>					0=2	1=3	2=4	3=5
4=6	5=7	6=8	7=9	8=10	9=Infinite			
<b>Item 07 - Door Phone Ring Timer</b>					0=5 seconds		1=10 seconds	
2=15 seconds		3=20 seconds		4=25 seconds		5=30 seconds		
6=35 seconds		7=40 seconds		8=45 seconds		9=50 seconds		
<b>Item 08 - DISA Single Digit Dialing</b>					0=No Single Digit Dialing			
1=Single Digit Group 1					2=Single Digit Group 2			
3=Single Digit Group 3					4=Single Digit Group 4			
5=Single Digit Group 5					6=Single Digit Group 6			
7=Single Digit Group 7					8=Single Digit Group 8			

Form 05-12 System Parameters Form - Miscellaneous								
Form 05-12-T	01	02	03	04	05	06	07	08
<b>Item</b>								
Options	0	0	0-1	0 - 4	0-1	0	0	0
<b>Default</b>	0	0	0	4	0	0	0	0
Item 01 - Reserved								
Item 02 - Reserved								
<b>Item 03 - Exclusive Hold</b>				0=Enable		1=Disable		
<b>Item 04 - Door Relay Activation Timer</b> Determines the length of time that the door strike relay will be kept on when the door strike release is activated.				0=1 second		1=2 seconds		
2=3 seconds		3=4 seconds		4=5 seconds		5=6 seconds		
6=7 seconds		7=8 seconds		8=9 seconds		9=10 seconds		
<b>Item 05 - Voice Mail Integration Type</b>				0=Use Form 05-10 DTMF Not Muted		1=Use 10 Digit Spec. DTMF Not Muted		
2=Use Form 05-10 DTMF Muted				3=Use 10 Digit Spec. DTMF Muted		4=Same as 0.		
5=Use 10 Digit Spec. DTMF Not Muted. Does Not send Direct CO Call Code.				6=Same As 2		7=Use 10 Digit Spec. DTMF Muted. Does Not send Direct CO Call Code.		
<b>Items 06 Trunk Group Access Type</b> Determines the type of outbound hunt used to access CO lines on dial 9 access.				0=Linear Hunt		1=Circular Hunt		
<b>Items 07-08 Reserved</b>								

**Note:** 10 Digit Voice Mail integration is controlled by Form 05-12-05 provides the following information:

Internal Calls	Digit String	DISA And CO Calls	Digit String
CFWD All Calls	11- <i>STB-STA</i>	CFWD All Calls	21- <i>STB-TRK</i>
CFWD Busy	12- <i>STB-STA</i>	CFWD Busy	22- <i>STB-TRK</i>
CFWD No Answer	13- <i>STB-STA</i>	CFWD No Answer	23- <i>STB-TRK</i>
Direct Call to V-Mail Port	14- <i>STA-STA</i>	Recall to Voice Mail	25- <i>STB-TRK</i>

Direct Call From Trunk	24- <i>TRK-TRK</i>	This digit sequence is played only on incoming calls when 05-12-05 is set at a value of 1 or 3.
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*STA*=The originating station presented as 4 digits.  
*STB*=The forwarding station presented as 4 digits.  
*TRK*=The CO trunk presented as 4 digits.

**In systems using 2 digit numbering plans**, the *STA* and *STB* fields use leading digits. For example, extension 11

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is presented as 0011, extension 12 is presented as 0012, etc.

**In systems using 3 digit numbering plans**, the STA and STB fields use leading digits. For example, extension 121 is presented as 0121, extension 122 is presented as 0122, etc.

**Systems using 4 digit extension numbering** will present all four digits for STA and STB.

**TRK is provided as the two digit trunk number** (01-04 on SK-408). The field is also filled with leading zeros, so trunk 01 is presented as 0001, trunk 04 is presented as 0004, etc.

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<b>Form 06-01 Relay Assignment Form</b>
00-10

<b>Valid Settings:</b>	
00=Non-Operational (Default)	05=Station Loud Bell
01=Music On Hold	06=System Alarm
02=Door 1 Latch Release	10=All Zone Page
04=CO Line Loud Bell	



<b>Form 07 - Flexible Key Group Assignment</b>							
07 - Group ____ (01-08)				07 - Group ____ (01-08)			
Key	Function	Key	Function	Key	Function	Key	Function
01		14		01		14	
02		15		02		15	
03		16		03		16	
04		17		04		17	
05		18		05		18	
06		19		06		19	
07		20		07		20	
08		21		08		21	
09		22		09		22	
10		23		10		23	
11		24		11		24	
12		25		12		25	
13				13			

**Note:** Press Volume Down (CHANGE) to switch between DSS (Intercom), CO line, and FN (function key assignment) capability during system programming.

<b>Form 07 Key Assignment Parameters</b>			
Description	Entry	Description	Entry
CO Lines 01-08	CO:XX	Any valid Station Number	XXXX
Account Code	FN:09	Doorphone	FN:60
Call Forward	FN:53	Do Not Disturb/Conference	FN:02
Charge Inquiry	FN:19	Help List	FN:15
Check In	FN:17	Lock/Unlock	FN:14
Check Out	FN:18	Meet Me Page	FN:56
Console Set System Time	FN:50	Message Select	FN:51
Day / Night Service	FN:52	Microphone / Auto Answer	FN:04
Department Pickup	FN:35	MSG/Pulse To Tone	FN:03
Directory Dial Key	FN:62	Non-Operational	FN:00

<b>Form 07 Key Assignment Parameters (continued)</b>			
Description	Entry	Description	Entry
Page All (Internal)	FN:20	Program	FN:01
Paging Zone 1	FN:24	Save	FN:06
Paging Zone 2	FN:25	Shift Key	FN:57
Paging Zone 3	FN:26	Speed Dial Programming	FN:11
Paging Zone 4	FN:27	Speed Dial	FN:05
Paging Zone 5	FN:28	Temporary Unlock	FN:16
Paging Zone 6	FN:29	Toll Override	FN:46
Paging Zone 7	FN:30	Volume Down	FN:08
Paging Zone 8	FN:31	Volume Up	FN:07
Pickup (All Groups)	FN:36	Volume Setup	FN:10
Pickup Group	FN:37	Wake Up/Reminder Setup (Console)	FN:47
Pickup Group 1	FN:38	Wake Up/Reminder Setup (Station)	FN:48
Pickup Group 2	FN:39	Zone Paging	FN:23
Pickup Group 3	FN:40		
Pickup Group 4	FN:41		
Pickup Group 5	FN:42		
Pickup Group 6	FN:43		
Pickup Group 7	FN:44		
Pickup Group 8	FN:45		

Form 09 - System Speed Dial Assignment			
Special Characters			
HOLD=Pause (p)		MIC=Tone (T)	TRF/FL=Flash(F)
CHG Key=DSS Key #5 Toggles between Line entry, telephone number entry and name entry.			
Bin # 09-	TK: ##	Number	Name
___0			
___1			
___2			
___3			
___4			
___5			
___6			
___7			
___8			
___9			

**Note:** An indication of TK:00 will cause the system to utilize the first free line in a station's dial 9 group. An indication of 01-08 will cause the system to always select the same CO Line.

**Note:** To enter a name, press the CHG (Volume Down) key until the letter "N" appears in the upper right corner of the LCD display. Letters and numbers may be entered through the keypad. For Dial by name to operate, 05-05-05 must be enabled.

Phone numbers may not exceed 30 digits in length (including special characters). Names may be entered up to 30 characters, but will only be displayed to 16 characters.

<b>Form 10 - Single Digit Dialing Assignment</b>											
Form 10 - Single Digit Group 01						Form 10 - Single Digit Group 02					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 03						Form 10- Single Digit Group 04					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 05						Form 10- Single Digit Group 06					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					
Form 10- Single Digit Group 07						Form 10- Single Digit Group 08					
Item	01	02	03	04	05	Item	01	02	03	04	05
Station						Station					

A station with single digit dialing enabled will ring the station number programmed in Item 01 whenever that station dials 1. It will ring the station number programmed in Item 02 whenever the station dials 2, etc.

Single Digit Dialing is enabled on the system by programming Form 05-04-07 as 1 (Enable). Any station that is to utilize Single Digit Dialing must be assigned to a Single Digit Dialing Group on Form 41-STN-01.

DISA Single Digit Dialing is enabled on Form 05-11-08. The group selected will correspond to the table entry on this form. A setting on 05-11-08 of 0 disables DISA Single Digit Dialing.

<b>Form 11 Date and Time Settings</b>											
Form 11 - Date and Time											
Item	01	02	03	04	05	06					
Station											

01= Month    02=Date    03=Year    04=Hour    05=Minute    06=Day of Week

All entries are two digit, except 06 which begins with Sunday as 0, Monday as 1, Tuesday as 2, etc.

<b>Form 12 - System Alarm Schedule</b>		
Schedule:	Alarm Time (24 Hour Format 00:00-23:59)	Duration (01-98 minutes)
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		

**Note:** A duration of 00 will deactivate a system alarm  
 Time entry format: 12 midnight until 11:59 AM = 00:00 to 11:59.  
 12 Noon until 11:59 PM = 12:00 to 23:59.

<b>Form 13 - System Passwords</b>								
d(on't care) = DSS Key 4. All other digits are entered from the station keypad.								
<b>13-01 System Programming Password</b>								
Password								
<b>Default</b>	d	d	d	d	d	d	d	d
<b>13-02 DISA Password</b>								
Password								
<b>Default</b>	3	4	7	2	d	d	d`	d
<b>13-03 Toll Override Password</b>								
Password								
<b>Default</b>	8	6	5	5	d	d	d	d
<b>13-04 Monitor Password</b>								
Password								
<b>Default</b>	d	d	d	d	d	d	d	d

<b>Form 14 - Station Message Detail Recording</b>								
Form 14 -01-	01	02	03	04	05	06	07	08
Item								
Options	0-9	0-1	0-1	0-1	0-1	00-99	0	0-1
<b>Default</b>	0	0	0	0	0	21	0	0
<b>01 - Recording Start Time</b>				0=immediate start		1=5 seconds		
2=10 seconds		3=15 Seconds		4=20 Seconds		5=25 Seconds		
6=30 Seconds		7=35 Seconds		8=40 Seconds		9=45 Seconds		
<b>02 - Record Incoming Calls</b>					0=Enable		1=Disable	
<b>03 - Record Local Calls (No Toll Access Code)</b>					0=Enable		1=Disable	
<b>04 - Record Unanswered Incoming Calls</b>					0=Enable		1=Disable	
<b>05 -Print Page Header</b>					0=Enable		1=Disable	
06 - Number of Call Records To be Printed Between Headers					00 & 01=1 Call Record			
02-99=Actual Number Of Call Records Between Headers								
Item 07 - RESERVED								
<b>Item 08 - Detect Polarity Reversal</b>					0=Enable		1=Disable	

<b>Form 17 - Forced Account Code Assignment</b>			
Special Character (DSS Key 4)=d (don't care. Any entry is satisfactory) Entries less than eight digits should have "d" in all trailing locations, (e.g., 123245ddd).			
Code#	Actual Code	Code#	Actual Code
01		25	
02		26	
03		27	
04		28	
05		29	
06		30	
07		31	
08		32	
09		33	
10		34	
11		35	
12		36	
13		37	
14		38	
15		39	
16		40	
17		41	
18		42	
19		43	
20		44	
21		45	
22		46	
23		47	
24		48	

<b>Form 18 - Toll Plan Assignment</b>				
Plan 00 - ITem	01	02	03	04
Plan 01 - ITem	01	02	03	04
Plan 02 - ITem	01	02	03	04
Plan 03 - ITem	01	02	03	04
Plan 04 - ITem	01	02	03	04
Plan 05 - ITem	01	02	03	04
Plan 06 - ITem	01	02	03	04
Plan 07 - ITem	01	02	03	04
Plan 08 - ITem	01	02	03	04
Plan 09 - ITem	01	02	03	04

If this form is used for Form 57, 58, or 59 there are no corresponding Restriction tables (i.e., Form 67, 68, or 69. If not otherwise specified on Forms 57, 58 or 59, telephones that are subject to toll plans 7,8, and 9 are unable to place any calls on CO lines.

**Note:** Each Toll Plan defines the dialing characteristics of a telephone that is assigned the corresponding Toll Plan number, (e.g., a Station that is programmed as Toll Plan 01 will be subject to the dialing patterns defined for each of the CO lines in Plan 01. Toll Plan is assigned to a station on Form 41-STN-05 for definition of Day Service Toll Plan and Form 41-STN-06 for definition of Night Service Toll Plan.



Each Toll Plan carries a default value that is equal to the plan number. For example Toll Plan 00 carries all 4 CO lines with a default value of 0. Toll Plan 01 is set by default with all values at 1, through Toll Plan 09, which carries a default value of 9.

A Toll Class must be assigned for each line within a Toll Plan.

Toll Class #	Characteristics of Toll Class
0	Unrestricted
1	Subject to Form 51 & 61
2	Subject to Form 52 & 62
3	Subject to Form 53 & 63
4	Subject to Form 54 & 64
5	Subject to Form 55 & 65
6	Subject to Form 56 & 66
7	Restricted except for entries made on Form 57
8	Restricted except for entries made on Form 58
9	Restricted except for entries made on Form 59

<b>Form 19 - Voice Service Unit Channel Assignment</b>			
Channel/Item	Function Number	Channel/Item	Function Number
19-01		19-05	
19-02		19-06	
19-03		19-07	
19-04		19-08	
<b>19-01 - 19-08=Channel Assignments</b>			
00	Non-functional (Not Programmed)		
01	DISA: Day Main Answer Greeting		
02	DISA: Dialed Extension is Busy Message		
03	DISA: Dialed Extension does Not Answer		
04	DISA: Dialed number is invalid (doesn't exist)		
05	DISA: Console (Operator) is Busy, Please Hold		
06	DISA: Timer has Expired		
07	DISA: Insufficient Digits Dialed		
08	DISA: Night Answer Main Greeting		
09	External Call Forward Reroute - Tells callers that call is being routed outside.		
10	UCD: Answer Greeting and all stations are busy.		
11	UCD: second announcement all stations are busy.		
12	UCD: All stations busy. Call timer has expired. Call will be dropped		
13	Reserved		
14	Wake Up Message		
15	SLT Message Waiting Advisory		

**To record and play voice prompts**To record and play voice prompts:

1. From the operators station, dial 86.
2. LCD display shows:

<p>VOICE PORT (1) *:REC #:PLAY</p>
--

3. The number in parenthesis indicates the voice channel number that is presently being programmed.
4. You must record your entire set of messages, one at a time. Press [\*] to record. Press 1 to stop recording and step to the next message section.
5. Repeat step 4 until you have completed all messages you wish to record.
6. To listen to your recording(s), press [#]. The selected message will play. You may step from message to message by pressing [1].

<b>Form 20 - Day/Night Service Schedule</b>			
Schedule	Day	Day Service Begin	Day Service End
20-00	Sunday		
20-01	Monday		
20-02	Tuesday		
20-03	Wednesday		
20-04	Thursday		
20-05	Friday		
20-06	Saturday		

Entries into both Day Service Begin and Day service End must be in 24 hour format:

12:00 Midnight through 11:59 AM = 00:00 through 11:59  
 12:00 Noon through 11:59 PM = 12:00 through 23:59.

Any interval not covered by Day Service is automatically Night Service:

If Day Service Begin Time is programmed as 08 00  
 and the Day Service End Time is programmed as 17 00,  
 Day service will be from 8:00 AM until 5:00 PM.

The system will be in Night Service from 12:00 Midnight until 8:00 AM and again from 5:00 until 12:00  
 Midnight.

Form 29 - Line Specifications #1									
Line	Data	01	02	03	04	05	06	07	08
Line 01									
Line 02									
Line 03									
Line 04									
Line 05									
Line 06									
Line 07									
Line 08									
Range		0-1	0-1		0-8	0-8			
Default		0	1		0	6			
01 - Reserved									
<b>02 - UCD Function Selection</b>									
0	Day Disable - Night Disable			1	Day Disable - Night Enable <sup>1</sup>				
2	Day Disable - Night Enable <sup>2</sup>			3	Day Disable <sup>1</sup> - Night Disable				
4	Day Enable <sup>1</sup> - Night Enable <sup>1</sup>			5	Day Enable <sup>1</sup> - Night Enable <sup>2</sup>				
6	Day Enable <sup>2</sup> - Night Disable			7	Day Enable <sup>2</sup> - Night Enable <sup>1</sup>				
8	Day Enable <sup>2</sup> - Night Enable <sup>2</sup>								
03 - Reserved									
<b>04 - Set Ringing Tone</b>		0=Use station's default ring			1-8=Use assigned ring cadence				
<b>05 - Incoming Call Connect</b> - Rings the number of stations listed in this parameter as per Form 01 or Form 02									
0=Ring None			1=Ring first station			2=Ring first two stations			
3=Ring first three stations			4=Ring first four stations			5=Ring first 5 stations			
6=Ring first 6 stations			7=Ring first 7 stations			8=Ring all stations			

Item 04 - Controls the incoming ring cadence. If set to 0, the incoming ring cadence will be the one selected by the telephone set user. If set to any value from 1 to 8, the cadence will follow the individual cadence and frequency combinations.

Item 05 - For examples of the operation of Item 05, please see Form 01 and 02.

- 1: Enable UCD when all stations on Form 01 (Day Service) or Form 02 (Night Service) are busy.
- 2: Enable UCD and activate UCD message after UCD-01 timer has expired, even if available stations are ringing.

Form 35 - CO Line Specifications									
Line	Data	01	02	03	04	05	06	07	08
Line 01									
Line 02									
Line 03									
Line 04									
Line 05									
Line 06									
Line 07									
Line 08									
Range		0-1	0-1	0-8	0-8	0-3	0-2	0-3	0-3
Default		0	1	0	0	3	0	0	0
<b>01 - Line Type</b>					0=CO Line		1=Behind PABX		
<b>02 - Dial Signaling Type</b>					0=Pulse		1=DTMF		
<b>03 - External Call Forwarding Location</b> (Only applicable if 35-CO-04 is programmed for External Call Forwarding)									
0=Not Active		1=Speed Dial 101		2=Speed Dial 102		3=Speed Dial 103			
4=Speed Dial 104		5=Speed Dial 105		6=Speed Dial 106		7=Speed Dial 107			
8=Speed Dial 108									
<b>04 - DISA External Call Forward Status</b>					0=Day Disable/Night Disable				
1=Day Disable/Night DISA					2=Day DISA/Night Disable				
3=Day DISA/Night DISA					4=Day Disable/Night ECF				
5=Day ECF/Night Disable					6=Day ECF/Night ECF				
7=Day DISA/Night ECF					8=Day ECF/Night DISA				
<b>05 - Line Pick Up Enable (Allows a non-ringing station to answer an incoming call)</b>									
Value	Day Operation				Night Operation				
0	Disable				Disable				
1	Disable				Enable				
2	Enable				Disable				
3	Enable				Enable				
<b>06 - Loud Bell Operation</b>					0=Inoperative				
1=Relay #1					2=Relay #2				

**Form 35** (continued)

<b>07 - Day Ring Type</b>	0=Common Audible	1=Linear	2=Circular
3=Hunt	4=Private Line		
<b>08 - Night Ring Type</b>	0=Common Audible	1=Linear	2=Circular
3=Hunt	4=Private Line		

**Note: Private Line** (35-CO-07/08) can be used when only one station is programmed as the ringing station on Form 01 or 02. When Private Line is enabled, any call forwarding programmed on the station will be honored by the incoming CO line.

<b>Form 36 - CO Line (Trunk) Groups (Dial 9)</b>				
Line Group	01	02	03	04
Group 01				
Group 02				
Group 03				
Group 04				
Group 05				
Group 06				
Group 07				
Group 08				

**Note:** Each line group may contain up to four CO lines.  
A line may be programmed in any number of Groups.

<b>Form 38 - Alternate CO Line (Trunk) Groups (Dial 87)</b>				
Line Group	01	02	03	04
Group 01				
Group 02				
Group 03				
Group 04				
Group 05				
Group 06				
Group 07				
Group 08				

**Note:** Each line group may contain up to eight CO lines.  
A line may be programmed in any number of Groups.

Form 39 - Sensor Assignment Form			
Form 39-Item-	01	02	Name
Form 39-			

Valid Options for Sensor Item Settings 39-01	
00=Disabled	
01=Latch operation	Requires either an access code to disable or will reset automatically after 10 minutes if no access code is dialed.
02=Non-Latching Operation.	Will cause alarm when activated. Will cease alarm when condition returns to normal.

Valid Idle Options for Sensor Item Settings 39-02	
00= Normally Open	01=Normally Closed

Names or labels may be programmed for each of the system sensors. This name will appear on all LCD displays whenever the respective alarm is activated. To access the name programming function, press DSS key 3 (CO Line 3) while in Form 39-Sensor. Information on how to enter alphanumeric characters is on page **CROSS REFERENCE** of this document.

All stations to be alerted by sensor activation are programmed on Form 17.

Form 40 - Station Class of Service (Part 1)								
<b>01 - Override/Barge-In Level</b>		0=Unable to Override			1-9= Can Override equal and lower numbered levels			
<b>02 - Monitor Level</b>		0=Unable to Monitor			1-9=Can Monitor lower numbered levels			
<b>03 - Call Limit Duration (See 05-04-03 for limit type)</b>		0=No Duration Limit			1-9=Actual Duration Limit Time (Minutes)			
<b>04 - Associated Loud Bell</b>		0=Disabled		1=Relay				
<b>05 - Paging Access</b>		0=Enable			1=Disable			
<b>06 - Paging Over Speaker</b>		0=Enable			1=Disable			
<b>07- Station Lock/Unlock Status</b>		0=Unlocked			1=Locked			
<b>08 - Forced Account Code</b>		00=Any Valid Account Code						
01-48=Only the corresponding Account Code (01-48) is Valid on this Set								
Form 40-STN-	01	02	03	04	05	06	07	08
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
40-_____								
Default	1	1	0	0	0	0	0	00



Form 41 - Station Specifications								
<b>01 - Group Assignment Zone Paging - Pick Up Group Station Group Single Digit Dialing Group</b>		1-8 = Valid Group Entries						
<b>02 - Flexible Key Group (EKT)</b>		1-8 = Applicable Key Group From Form 07						
<b>03 - SHIFT Key Group (EKT)</b>		0 = Disabled 1-8 = Applicable Key Group From Form 07.						
<b>04 - Dial 9 Group</b>		1-8 = Applicable Dial 9 Group From Form 36						
<b>05 - Toll Plan (Day Service)</b>		0-9 = Applicable Toll Plan						
<b>06 - Toll Plan (Night Service)</b>		0-9 = Applicable Toll Plan						
<b>07 - Port Number</b>		This parameter is not user programmable						
41-STN--	01	02	03	04	05	06	07	
41-_____							11	
41-_____							12	
41-_____							13	
41-_____							14	
41-_____							15	
41-_____							16	
41-_____							17	
41-_____							18	

Form 42 - Personal Speed Dial Table Assignment		
Default	Numerical -01	DSS -02
42-11-		
42-12-		
42-13-		
42-14-		
42-15-		
42-16-		
42-17-		
42-18-		
42-19-		
42-20-		
42-21-		
42-22-		

**Default** Information provides the basic two digit default numbering plan for the system.

**Numeric** allows you to enter the storage Bin Group that you wish to assign for a station to have numeric keypad speed dialing capability.

**DSS** permits you to enter a storage Bin Group that you wish to assign for a station to have DSS speed dialing capability on DSS keys 1 through 10.

**Note:** Entry of **00** at any location (numeric or DSS) disables speed dialing for that station of the selected type.

It is possible to assign the same storage Bin Group to more than one station. If more than one station is assigned the same Bin Group, the stations that share the Bin Group will be able to program the numbers and share the ability to use them

Form 43 - Port Assignments					
	01	02	03	User Name	Comments (Optional)
43-01-					
43-02-					
43-03-					
43-04-					
43-05-					
43-06-					
43-07-					
43-08-					
<b>01 - Station Extension Number</b>				Any valid entry: 10-69 (2 digit) 100-699 (3 digit) 1000-6999 (4 digit)	
<b>02 - Equipment Type (Recognized by the system Automatically)</b>					
0=No Equipment Connected			1=Key Telephone without LCD		
2=Key Telephone with LCD			3=Parallel Key Telephone and Single Line Set		
4=Single Line Telephone			5=DSS Console Set		
7=Key Telephone With OHVA			8=Voice Mail Port		

**Programming Station Name.** Entries may be programmed on this form. Select the STN number that you wish to program, press [CHANGE] DSS Key 5. During name entry, the numeric keypad keys will operate as alphabetical character keys. Each key will enter the letters that appear on the keycaps. The following table illustrates the entries that each key can make.

Key 1 =	Q - Z - (Blank Space) - 1	Key 2 =	A - B - C - 2
Key 3 =	D - E - F - 3	Key 4 =	G - H - I - 4
Key 5 =	J - K - L - 5	Key 6 =	M - N - O - 6
Key 7 =	P - R - S - 7	Key 8 =	T - U - V - 8
Key 9 =	W - X - Y - 9	Key 0 =	(Period). - : - & - 0
Key # =	( - ) - \$ - #	Key * =	(Dash) - / - ! - *
DSS Key 23 =	Backspace	DSS Key 24 =	Forward

Each character is indicated in order. For instance, pressing 2 will display A. Pressing it again will display B. Pressing it a third time will display C. Pressing it for the fourth time will display 2. The character that is being programmed will be underscored. Movement from character to character (left to right) is through the use of the Redial (left) and MSG (right) keys.

When the name is acceptable, press [SAVE] to store the name in system memory.

The **Comments** field is a forms only field and is for use by installation personnel.

Form 44 - Station Class of Service (Part 2)								
<b>01 - System Alarm Station</b>		0=Enable			1=Disable			
<b>02 - Call Hold</b>		0=Enable			1=Disable			
<b>03 - Call Split</b>		0=Enable			1=Disable			
<b>04 - Manual Line</b>		0=Disable			1=Enable			
<b>05 - Headset Operation</b>		0=Disable			1=Enable			
<b>06 - Default Password (System Programming Access)</b>		0=Enable			1=Disable			
<b>07 - Display Meter Pulses</b>		0=Enable			1=Disable			
<b>08 - Alarm Signaling Type</b>		0=Reserved			1=DND Tone			
44-STN--	01	02	03	04	05	06	07	08
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
44-_____								
Default	0	0	0	0	0	0	0	0

Form 45 - Station Class of Service (Part 3)								
<b>01-Intercom Dialing Restriction</b>		0=Disable			1=Enable			
<b>02-Dual Port Operation</b>		0=Disable			1=Enable			
<b>03 Ringing Volume Increase Gradually</b>		0=Disable			1=Enable			
<b>04-Trunk Access</b>		0=Trunk Access Allowed			1=Trunk Access Disallowed			
<b>05-Inter-Station Group Calling</b>		0=Enable			1=Disable			
<b>06-Accept DTMF/Dial Pulse</b>		0=DTMF or pulse			1=Dial pulse only			
<b>07-System Speed Dial Access</b>		0=All System Access			1=Only Unrestricted			
<b>08-Direct CO Access (Trunks other than Dial 9 Group)</b>		0=Disable			1=Enable			
45-STN--	01	02	03	04	05	06	07	08
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
45-_____								
Default	0	0	0	0	0	0	0	0

Form 46 - Station Class of Service (Part 4)								
<b>01 - Dial 87 Line Group</b>		0=Disabled			1-8=Group Number			
<b>02 - Message Waiting Level</b>		0=Cannot Leave Callback Messages						
1-9 -Able To leave messages for stations of equal or lesser Message Waiting Level								
<b>03 - Auto Answer Flag</b>		0= Auto Answer Manual			1=Auto Answer On/MIC Light Lit			
2=Auto Answer On/MIC Light Off		4= Auto Answer Manual/Speakerphone MIC On						
5=Auto Answer On/MIC Light Lit Speakerphone MIC On		6=Auto Answer On/MIC Light Off Speakerphone MIC On						
<b>04 - DISA Recall Capability To Operator (No Answer/Busy)</b>		0=No Recall to Operator			1=Recall on No Answer			
2=Recall on Busy		3= Recall on Busy and No Answer			5=Recall on No Answer (Forwarding station stops ringing)			
6=Recall on Busy and Stop Busy Remind Tone at Forwarding Station		7= Recall to Operator on No Answer/Busy (Stop Notification at Forwarding Station)						
05 - RESERVED								
<b>06 - Doorphone Strike Control</b>		0=Disable			1=Enable			
<b>07 - Telephone Type</b>		0=SK1			1=Reserved			
08 - RESERVED								
46-STN--	01	02	03	04	05	06	07	08
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
46-_____								
Default	0	1	0	0	0	1	2	0

<b>Form 47 - Hot Line Table</b>					
STN	SPD? (Y/N)	Location	STN	SPD? (Y/N)	Location

STN = Station Number that is being programmed as a Hot Line.

SPD? (Y/N)= Enter a Y if the Station is to be routed to an external Speed Dial Number  
 Enter a N if the Station is to be routed to another station within the Superkey system.  
 If Y is entered, when programming the system press the CHanGe key (Volume Down).  
 LCD will display SPD: 000. Enter system speed Dial number to be accessed.

Location = The station number or Speed Dial Bin number to be accessed.

---

**Form 51 - Exception (Allow) Tables**

Entry Number	Actual Entry (Up to 12 digits in Length)
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	

Entries on this form provide exception (allowances) to a condition that is restricted on Form 61.

Entries should have trailing digits set to "d"=Don't Care Digits if additional digits are to be allowed after the target digits have been entered.



<b>Form 52 - Exception (Allow) Tables</b>	
Entry Number	Actual Entry (Up to 12 digits in Length)
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	

Entries on this form provide exception (allowances) to a condition that is restricted on Form 62.

Entries should have trailing digits set to "d"=Don't Care Digits if additional digits are to be allowed after the target digits have been entered.

**Form 5\_ - Exception (Allow) Tables**

Entry Number	Actual Entry (Up to 12 digits in Length)
5__-01	
5__-02	
5__-03	
5__-04	
5__-05	
5__-06	
5__-07	
5__-08	
5__-09	
5__-10	
5__-11	
5__-12	
5__-13	
5__-14	
5__-15	
5__-16	

**Note:** Please copy and use this form as required for your system.

Entries on this form provide exception (allowances) to a condition that is restricted on Form 6\_\_.

Entries should have trailing digits set to "d"=Don't Care Digits if additional digits are to be allowed after the target digits have been allowed.

<b>Form 61 - Restriction (Deny) Tables</b>	
Entry Number	Actual Entry (Up to 12 digits in Length)
61-01	
6102	
61-03	
61-04	
61-05	
61-06	
61-07	
61-08	
61-09	
61-10	
61-11	
61-12	
61-13	
61-14	
61-15	
61-16	

Entries on this form provide dialing restrictions to a telephone subject to this toll plan. If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 51. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 51 to see if a valid exception exists. An entry of "624d" will cause the system to check Form 51 for an exception of 624+additional digits. If an exception is found on Form 51, the call will be allowed. If an exception is not found, the call will be restricted.

---

**Form 62 - Restriction (Deny) Tables**

Entry Number	Actual Entry (Up to 12 digits in Length)
62-01	
62-02	
62-03	
62-04	
62-05	
62-06	
62-07	
62-08	
62-09	
62-10	
62-11	
62-12	
62-13	
62-14	
62-15	
62-16	

Entries on this form provide dialing restrictions to a telephone subject to this toll plan. If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 52. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 52 to see if a valid exception exists. An entry of "624d" will cause the system to check Form 52 for an exception of 624+additional digits. If an exception is found on Form 52, the call will be allowed. If an exception is not found, the call will be restricted.

<b>Form 6_ - Restriction (Deny) Tables</b>	
Entry Number	Actual Entry (Up to 12 digits in Length)
6__-01	
6__-02	
6__-03	
6__-04	
6__-05	
6__-06	
6__-07	
6__-08	
6__-09	
6__-10	
6__-11	
6__-12	
6__-13	
6__-14	
6__-15	
6__-16	

Entries on this form provide dialing restrictions to a telephone subject to this toll plan. If an entry is not followed by a "d"=don't care digit. The system will not consult the corresponding exception (allow) table, Form 5\_. The call will be restricted. An entry of "624" will cause a call beginning with the digits 624 to be disconnected.

If an entry is followed by a "d" digit, the system will check the exception (allow) table, Form 5\_ to see if a valid exception exists. An entry of "624d" will cause the system to check Form 5\_ for an exception of 624+additional digits. If an exception is found on Form 5\_, the call will be allowed. If an exception is not found, the call will be restricted.

Form 67 - Hunt Group Pilot Assignment					
Group Num.	Pilot Number		Group Num.	Pilot Number	
01			02		

**System Hunt Type is determined by Form 05-06-08. Please see that section of system programming.**

**Pilot Number** Indicates the Access Code that must be dialed to reach the Hunt Group. It must be a unique number (it cannot be the same as an extension). It must be within the range of valid numbers for extensions (2 digit numbering plan 10-69, 3 digit numbering plan 100-699, 4 digit numbering plan 1000-6999).

Form 68 - Hunt Group Assignment					
68-01-IT Hunt Group 1	01	02	03	04	
68-02-IT Hunt Group 2	01	02	03	04	

Entries on Form 68 must be valid extension numbers. Extensions can be entered in any order.

## Programming Cross Reference

### Programming Number

#### Incoming Calls

##### **RINGING ASSIGNMENT**

01-tk-stn	Day Ringing And Ringing Line Preference Assignment
02-tk-stn	Night Ringing And Ringing Line Preference Assignment
05-01-05	Busy Reminder Tone Interval (Off-Hook Ringing / Busy - Camp-On)
05-02-07	Ring On Timer (Minimum ring to be detected)
05-02-08	Ring Off Timer (Time to hold signal during silent period)
05-08-01	CO Hunt Interval
20-nn	Day/Night Service Schedule
35-tk-07	Day Ring Type
35-tk-08	Night Ring Type

#### Outgoing Calls

##### **DIAL [9]**

05-04-02	Dial [9] Enable/Disable
36-grp-tk	Dial [9] Group Assignment
41-stn-04	Stations Dial [9] Group Assignment

##### **PABX OUTGOING CODE**

05-03-04	Code for outside line in PABX (If trunk/trunks are served by PABX)
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##### **TRUNK SPECIFICATIONS**

05-01-06	Pause Time Duration (For Speed Dial Pauses)
05-01-07	DTMF Generation Time
05-02-05	Flash Time to CO (For Special CO Features or Centrex)
05-02-07	Ring On Time (Minimum ring signal detected)
05-02-08	Ring Off Time (Time to hold signal during silent period)
05-03-01	Make/Break Ratio
35-trk-01	Trunk Type (PABX/CO)
35-trk-02	Trunk Signaling Type (dial pulse/DTMF)

##### **SPEED DIAL**

05-01-06	Pause Duration for Speed Dial pauses
05-03-02	Automatic Trunk Search During Speed Dial, Auto Redial, Saved Redial, etc.
05-04-06	Speed Dial Distribution
05-05-03/04	Speed Dial Unrestricted
09-spd-xx	System Speed Dial Locations
42-stn-01/02	Register Memory Block for Personal Speed Dial

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**AUTO-REDIAL**

05-02-03 Auto-Redial Off Hook (wait for answer) Timer  
05-03-02 Automatic Trunk Search  
05-05-07 Auto-Redial Attempts (Quantity)  
05-05-08 Auto-Redial Time (Inter-Call) between attempts

**Intercom Calls****INTERCOM CALL SIGNALING**

05-03-03 Intercom call signaling to electronic telephone sets

**STEP CALL**

05-07-01 Intercom Step Call Type  
41-stn-01 Station Group Assignment

**DIAL TONE PATTERN**

05-03-07 SLT Dial Tone Pattern Options  
05-04-07 Intercom Single Digit Dialing  
10-grp-xx Single Digit Dialing Assignment  
41-stn-01 Station Group Assignment

**DIRECT STATION SELECT**

07-grp-key Flexible Key Group Assignment  
41-stn-02 Keyphone Flexible Key Group Assignment

**DIAL 0 (CALL OPERATOR)**

05-06-05 Operator/CO access codes  
44-stn-04 Manual Line

**INTERCOM DIALING RESTRICTION**

45-stn-01 Intercom Dialing Restriction

**Busy/During Conversation****HOLD AND HOLD RECALL**

05-01-01 Hold Recall Timer (Time until station is warned of held call)  
05-01-02 Exclusive Hold Recall Timer (Same operation as hold recall)  
05-01-03 Hold Recall Time out (Time before call is rerouted to Operator - After Hold Recall Timer has expired.)  
05-07-04 DISA Recall Capability  
05-12-03 Station ability to place call on Exclusive Hold  
44-stn-02 Station ability to hold a call

**BUSY REMIND / CAMP-ON**

05-01-05 Busy Reminder Interval (Time between notifications)

**CALL SPLIT**

44-stn-03 Call Split



**TRANSFER**

05-06-01 Transfer Recall Timer Blind transfer (Camp-On / Busy)  
 05-06-02 Transfer Recall Timer blind transfer (No Answer)  
 05-08-06 DISA No Answer Recall (To Message) Timer  
 05-08-07 DISA Transfer Time (No Digits Dialed)

**MESSAGE WAITING LEVEL**

46-stn-02 Message Waiting Level

**OVERRIDE**

40-stn-01 Override Level

**DISA**

05-01-04 Delayed DISA Access Time  
 05-07-04 DISA Recall Capability  
 05-08-04 DISA Operator Recall Location ( No Answer)  
 05-08-06 DISA No Answer Recall Timer  
 05-08-07 DISA Transfer Timer - No digits dialed  
 05-11-06 DISA Transfer Count - Console busy  
 05-11-02 DISA Password - Optional extra passwords  
 05-11-05 DISA Special Digit Acceptance  
 35-tk-04 DISA / External Call Forward Status

**DISA SINGLE DIGIT DIALING**

05-04-07 Intercom Single Digit Dialing Enable  
 05-11-08 DISA Single Digit Dialing  
 10-grp-stn Single Digit Dialing Assignment  
 20-nn Day/Night Service Schedule

**AUTOMATED ATTENDANT - VOICE SERVICE UNIT**

19-ch-fn Voice Service Unit Channel Assignments  
 46-stn-04 DISA Recall Capability (No Answer/Busy)

**Night Service**

02 Night Ringing And Ringing Line Preference Assignment  
 09-spd-nn System Speed Dial 101~109 for ECF  
 20-nn Day/Night Service Schedule  
 35-tk-03 External Call Forward Location (Speed Dial Assignment)  
 35-tk-04 DISA/ECF, Day/Night Status

**Group Assignments****CONSOLE ASSIGNMENT**

04-grp-stn Assign Stations to be consoles by group

**FLEXIBLE KEY GROUP ASSIGNMENTS**

07-grp-key Key Group Layout Assignment  
 41-stn-02 Assign stations to Key Groups

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**DIAL [9] TRUNK GROUPS**

- 36-grp-trk Assign trunks to groups for Dial [9]
- 41-stn-04 Assign stations a Dial [9] group

**DIAL [87] TRUNK GROUPS**

- 38-grp-trk Assign trunks to groups for Dial [87]
- 46-stn-01 Assign stations a Dial [87] group

**GROUP ASSIGNMENT FOR STATIONS (PAGE ZONE, PICK UP, SINGLE DIGIT)**

- 41-stn-01 Assign stations to station groups

**Call Control****TOLL RESTRICTION**

- 05-05-03 Set a portion of system speed dial for no restriction (Hundreds)
- 05-05-04 Set a portion of system speed dial for no restriction (Tens)
- 05-03-05 Toll Access Code (Usually a [1]) for SMDR only
- 18-pln-trk Assigning Toll Class by Toll Plan/Trunk used
- 41-stn-05 Station Day Toll Plan Assignment
- 41-stn-06 Station Night Toll Plan Assignment
- 51~59 Allowed (Exception) Tables for Toll classes 1~9
- 61~66 Restrict (Deny) Tables for Toll classes 1~6

**FORCED ACCOUNT CODES**

- 17-nn Creating Account Codes
- 40-stn-08 Assigning Account Codes to Stations

**CALL LIMIT**

- 05-04-03 Call Limit Type
- 40-stn-03 Call Limit Duration (Class of Service - per station)

**PASSWORDS**

- 13-01 System Programming Password (default=none)
- 13-02 DISA Password (for using a trunk on DISA call)
- 13-03 Toll Override Password
- 13-04 Password for Monitoring over DISA (default=none)

**STATION LOCK/UNLOCK**

- 40-stn-07 Station Lock/Unlock Status

**BUSY OUT A TRUNK**

- 37-tk-x Taking a trunk out of service

**INTERCOM DIALING RESTRICTIONS**

- 45-stn-01 Restrict station to station intercom dialing

**System Clock****DATE AND TIME SETUP**

- 05-04-04 12/24 hour time format

11- Set the system time  
20-nn Day/Night schedule Definition

**SYSTEM ALARM**

12-nn System Alarm Clock  
44-stn-01 Stations to include (notify) in system alarms

**WAKE UP CALLS**

05-05-01 Wake up signaling type  
19-ch-fn VSU channel Assignment

**Station Numbering**

05-03-06 Digit length selection(2, 3, or 4 digits)  
43-port-01 Station number (extension) Assignment

**Single Line Telephone**

05-02-01 Dial Tone Timeout  
05-02-02 Interdigit Timeout  
05-02-04 Hookswitch Disconnect Timer  
05-02-06 Minimum Flash Timer (used to recognize a hook switch flash for hold)  
05-04-08 Message Waiting Status Setup  
05-06-07 Single Line Telephone Hold Procedure  
05-07-02 Toll fraud Protection (Calling Proof)  
05-08-03 SLT Busy Remind Tone Timer  
05-08-05 SLT Feature Programming Access Code  
45-stn-02 Setting Single line type (VM port, Dual Port)

**Miscellaneous****MONITOR**

40-stn-02 Station Monitor Level

**PAGING**

40-stn-05 Station Paging Access  
40-stn-06 Receive Page Over Speaker  
41-stn-01 Station Page Group

**CALL FORWARD NO ANSWER TRANSFER TIME**

05-01-08 Call Forward-No Answer Timer

**HOT LINE**

09-spd-nn System Speed dial number for Hot Line use  
47-stn-xx Hot Line destination for a station

**Optional Services****DOOR PHONE & DOOR SWITCH**

03-01-ext Stations to ring upon Door Phone Activation  
05-12-04 Door Relay Activation Timer

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06-01-fn Relay Assignment (for doorphone latch release)

***Voice Mail Integration***

01 Day Ringing Assignment  
02 Night Ringing Assignment  
05-02-04 Single Line Telephone Release (Disconnect) Timer  
05-02-06 Single Line Telephone Minimum Flash Timer  
05-06-07 Single Line Telephone Hold Procedure  
05-10 Voice Mail Leading Digits  
05-12-05 Voice Mail Integration Type  
43-PO-02 Equipment Type

## TransTel Key Telephone Operation Manual.

### Introduction

This section is devoted to an explanation of the implementation and operation of TransTel electronic telephones (keysets). Included are normal functions that are available to most station users and functions that are available only to console operators.

### LED indicators

The upper right hand corner of all SK1 telephones is equipped with a multi-color LED bezel, which provides key information pertaining to the operation of the SK1 series of telephones. The following table lists the visual indications and their meanings:

Red - Continuous	Speaker is On	Red Flash - Two winks in 2 seconds	Programming or Call Forwarding
Red - Fast Flash	Ringing	Red Flash - Three winks in 2 seconds	Auto Redial in Operation
Red - Slow Flash	Message Waiting	Green - Continuous	Auto Answer Mode
Red Flash Once - Periodically	Do Not Disturb		

### Advisory Messages

*If your telephone is equipped with an LCD, you can put a message on your telephone when you are unavailable. Any other station that is equipped with an LCD will see this message on their LCD when they call your station.*

Press PGM.

Press MSG.

Enter the message number you wish to display.

You may enter information into the messages by using the numeric keypad and the forward and back keys as defined in system programming. They are listed below:

Press SAVE.

Press SPKR.

The following table indicates the capabilities of the name programming functions if they are selected on the system. System Speed Dial, Personal Speed Dial, Stations, CO Lines and Sensors may be programmed with names.



Key 1 =	Q - Z - (Blank Space) - 1	Key 2 =	A - B - C - 2
Key 3 =	D - E - F - 3	Key 4 =	G - H - I - 4
Key 5 =	J - K - L - 5	Key 6 =	M - N - O - 6
Key 7 =	P - R - S - 7	Key 8 =	T - U - V - 8
Key 9 =	W - X - Y - 9	Key 0 =	(Period). : & 0
Key # =	( ) \$ #	Key * =	(Dash) / ! *
DSS Key 23 =	Backspace Cursor (Left)	DSS Key 24 =	Cursor Forward

To cancel an advisory message:

Press PGM.  
Press MSG.  
Press SPKR.

### **Alternate Trunk Group Access (Dial 87)**

*In some applications, you may have more than one type of outside line. If you do, you will probably use this method to access your secondary lines.*

Lift the handset or Press SPKR.  
Dial 87.

You will be connected to an available line in your alternate trunk group.

### **Answering a call.**

*Why would we put an explanation of how to answer a call in this manual? Because there is more than one type of call and more than one way to answer a call, depending on system programming.*

Intercom Calls. Lift the handset or press SPKR.

Incoming Calls. *Your phone is ringing.* Lift the handset or press SPKR.

Incoming Calls. *Your phone is not ringing.*

This depends on system programming. In some instances, you may need to only lift the handset or press SPKR. In other cases, you may also need to press the line number of the incoming line.

### **Answering a Doorphone**

*You can only answer a doorphone if your station is programmed to ring when the doorphone button is pressed.*

When your telephone rings, lift the handset or press SPKR.

You will be connected to the doorphone.

*If your system is equipped with a door strike relay:*

Press 0 while talking to the doorphone. The strike release will activate, allowing security door (or other controlled area) to be accessed.

### **Answer Paging (Meet Me Page)**

*Use this when you want to talk to the person who is making the page.*

Lift the handset or press SPKR.

Dial # and \*.

You will be connected to the person who is making the page.

*If the person who made the page has hung up, you will hear busy tone.*

**Automatic Last Number Redial**

*Rather than pressing REDIAL over and over again, you can let the telephone system do it for you. This feature will repeatedly re-dial a telephone number for you. But you must be near your telephone, because this feature doesn't listen to see if the other end answers. It only stays off hook for a certain period of time (determined by system programming) and then it hangs up.....unless you lift your handset or turn on your microphone.*

After you have dialed an outside call,

Hang up.

Press SPD.

Press REDIAL. Your telephone will redial the last number called and remain off hook for at least 10 seconds (depending on system programming). And will continue to redial the number periodically for a number of times (the number of times also depends on system programming).

When the number you dialed answers, lift the handset or press your MIC key to carry on a conversation and keep the system from hanging up.

**Automatic Saved Number Redial**

*This feature is similar to Automatic Last Number Redial, but it adds the ability for you to save a number, dial some other calls and then come back to it later.*

After you have dialed an outside call,

Press SAVE. Your Display (if you have one) will show "Auto Save."

Hang up.

*You may make 1 or a hundred calls (or more if you need to...) in between.*

Press SAVE. Your telephone will redial the number you previously saved and remain off hook for at least 10 seconds (depending on system programming). And will continue to redial the number periodically for a number of times (the number of times also depends on system programming).

When the number you dialed answers, lift the handset or press your MIC key to carry on a conversation and keep the system from hanging up.

**Barge-In (Override)**

*If you need to join a conversation for any reason, this feature will let you drop in on an existing conversation. Please be aware that this option is a level controlled option (from system programming), so you may be able to override no phones, a few phones or all phones, depending on your telephone's access level. Some stations may not have access to this feature.*

Dial a station. It is busy (or in Do Not Disturb)

Press 0. If you have access, you will hear a warning tone (so will everyone else in the call) and you will be allowed into the conversation.

*You may also use this feature on a CO line if you do not have an appearance of the station you want to override.*

Lift the handset or press SPKR.

Press the busy CO line.

Press 0. If you have access, you will hear a warning tone (so will everyone else in the call) and you will be allowed into the conversation.

**Call Forwarding****To forward All calls:**

Press PGM.

Enter 1 for All Calls.

Dial the extension number where you want to forward your calls.

*Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location.*

---

**To forward busy calls:**

Press PGM

Enter 2 for Busy Conditions.

Dial the extension number where you want to forward your calls.

*Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location, when your telephone is busy.*

**To forward calls when you don't answer or are busy:**

Press PGM

Enter 3 for No Answer / Busy Conditions.

Dial the extension number where you want to forward your calls.

*Your telephone will return to idle. Your telephone is now forwarded. All calls to your station number will now ring at the forwarding location, if you do not answer your telephone or your telephone is busy.*

**Call Hold**

*You can place outside callers and internal (intercom) calls on hold.*

Press HOLD.

The caller is on hold.

*To pick up an outside line call on Hold.*

Lift the handset or press SPKR.

Press the Flashing CO line key

OR

Dial 80 plus the line number (1-4).

**Calling the Doorphone**

*If your system is equipped with a doorphone, this is how you will call it.*

Lift the handset or press SPKR.

Dial 88 to speak to the Doorphone.

(If the doorphone is programmed with a Relay, you may activate it by dialing 0 while connected to the doorphone).

**Call Pickup**

*You can use call pickup to answer calls that are ringing at other telephones. There are a variety of types that you may choose.*

**DIRECT (EXTENSION) CALL PICKUP**

*This allows you to answer a specific station that is ringing.*

Lift the handset or press SPKR.

Press the \* key on the dial pad.

Dial the extension number of the station that is ringing.

You will be connected to the caller.

**ALL GROUP PICKUP**

*You can pick up any ringing call in the system using this method. You will pick up the oldest ringing call.*

Lift the handset or press SPKR.

Press the \* key on the dial pad.

Press 9 on the dial pad.



You will be connected to the caller.

**PICKUP WITHIN YOUR GROUP**

*This allows you to pick up telephones that are in your own station group.*

Lift the handset or press SPKR.  
Press the \* key on the dial pad.  
Press 0 on the dial pad.  
You will be connected to the caller.

**PICKUP A CALLER IN ANOTHER GROUP**

*This allows you to pick up telephones in another station group. You must know the group number that you want to answer to use this. In the SK-408, it is unlikely that you will use it, but it is available.*

Lift the handset or press SPKR.  
Press the \* key on the dial pad.  
Press 8 on the dial pad.  
Press 1 - 8 for the group that you want to pick up.  
You will be connected to the caller.

**Call Swap**

*If you want to alternate between two callers, this feature allows you to do so quite easily.*

You are speaking with the first caller.  
Press HOLD.  
The caller is on hold.  
Make a second call.  
Press SPD and then #. You will be connected to the first party. The second party will be on hold.  
  
Press SPD and then #. You will be connected to the second party. The first party will be on hold.

**Call Transfer**

*Call transfer allows you to send a call to a specific station. Most of the time when you are using TransTel Electronic sets, placing a station on hold and announcing the call to the station is all that is necessary, but instances where you need to transfer a call to a FAX machine or a computer modem, you need to use the capability.*

*Unscreened Transfer:*

Place the caller on hold by pressing the HOLD button.  
Dial the station number where the call needs to go.  
Press TRF/FL.  
The call has been successfully transferred.

*Screened Transfer:*

Place the caller on hold by pressing the HOLD button.  
Dial the station number where the call needs to go.  
Wait for the station to answer.  
Press TRF/FL.  
The call has been successfully transferred.

*If you have a DSS button for the station where you transfer the call, you do not need to press the HOLD button first. Just press the DSS button for the station where you want to transfer the call. Then you use either the Unscreened or Screened method of transfer.*

---

### **Call Waiting**

*If the station you call is busy, you can "mark" the station so that when the station becomes free, the called station will ring back to your telephone.*

When you hear busy tone, Press MSG key.

Hang up.

When the other station is free, your station will ring with a special ringing tone. When you answer, the other station will begin ringing.

### **Conference**

*You can conference any two parties, internal or outside CO lines.*

Establish your conversation with the first party.

Press HOLD to hold the first party.

Get the second party on the line.

Press DND/CN when you have the second party on the line.

You now have a three way conference.

*You can leave the conference and allow the other two parties to continue the conversation. Just press the DND/CN key before you hang up. If you don't press the key and just hang up, the other parties will be disconnected, if they are both outside lines.*

To rejoin the conference, press either CO line button and then the DND/CN key.

*If you cannot rejoin an unsupervised conference, you may not have the capability in your class of service. Check with your system administrator or check system programming to see if your override capability is enabled.*

### **Conversation monitor**

*If you need to monitor a conversation for any reason, this feature will let you observe an existing conversation. Please be aware that this option is a level controlled option (from system programming), so you may be able to override no phones, a few phones or all phones, depending on your telephone's access level. Some stations may not have access to this feature.*

Dial a station. It is busy.

Press #. If you have access, you will be connected to the station.

### **Date and Time Setting (Operator Function)**

*You must be a system operator to set the date and time.*

Press PGM.

Press HOLD

Press 7

Press MSG.

Enter the two digit month (01 - 12)

Enter the two digit date (01 - 31)

Enter the two digit year (97 - 99 or even further)

Enter the hour (00 - 24).

Enter the minute (00-59)

Enter the day of the week (0=Sunday - 7=Saturday)

Press MSG.

### **Day / Night Service Switching Setup (Operator function)**

*With this feature, you can make incoming calls ring in different places based on day time or night time. You should have a LCD equipped telephone to use this feature. It also controls the dialing (toll restriction) capabilities of*

telephones if your installer programmed it that way). Yes, you must be an operator to do this. The change from day to night service may be either automatic, or it may be under manual control of the operator.

**Selecting Manual or Automatic Switching:**

Press PGM.

Press TRF/FL.

Your telephone will display the current mode (day or night) and status (automatic or manual).

By pressing the \* key you will “toggle” between automatic and manual switching.

When you are finished, press SPKR.

**Selecting Day or Night Mode When in Manual Switching Mode:**

Press PGM.

Press TRF/FL.

You can alternate between Day Service and Night Service by pressing the TRF/FL key.

When finished, press SPKR.

OR

If you have a Day/Night button, you can achieve the same results simply by pressing the DAY/NIGHT key.

**Note:** Programming of Automatic schedules is done as a function of system programming. For more information on Automatic scheduling, see Form 20 in the Programming Forms section of this manual.

**Dialing Operator**

Lift the handset or press SPKR. (Optional when dialing the operator).

Press 0.

Your telephone will ring the operator’s station.

**Direct Trunk Access**

*Using this method, you can “punch in” to an outside line.*

Lift the Handset or Press SPKR (Optional).

Press CO trunk button.

You will be connected to the CO line you pressed (if you have access to it).

**Do Not Disturb**

*You can block incoming ringing from individual extensions, including paging announcements to them. If your telephone is in Do Not Disturb, you can still place calls and use features of the telephone. Any station that calls you and is equipped with an LCD will see “Do Not Disturb” on the LCD.*

Press DND/CN key.

The Message Light will flash. Your telephone is in Do Not disturb.

*To cancel Do Not Disturb:*

Press DND/CN key.

**Environment Monitor**

*This feature is similar to the Room Monitor, except that this can be done to a telephone without a prior setup. You can be “sneaky” about listening with this option.*

Lift handset or press SPKR.

Dial 7, 7, 4.

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Dial the extension number of the station you want to monitor.

*You will be connected to the station you want to monitor.*

**Note:** *You can only use this feature to monitor either an SK-1D or SK-1S Electronic Set.*

### **Exclusive Hold**

*Exclusive Hold allows you to place a call on hold without the worry of someone else picking it up from hold by accident. Exclusive Hold only applies to outside calls. When a call is on exclusive hold at your station, the line appears to be in use (not on hold) at all other stations.*

While you are on a call.

Press HOLD HOLD (*that's pressing HOLD twice*).

The call is placed on Exclusive Hold for your extension.

*To retrieve a caller from Exclusive Hold at your station.*

Lift Handset or press SPKR.

Press the line button that you placed on Exclusive Hold

OR

Dial 80 plus the line number that you placed on hold

You will be connected to the caller.

*To retrieve a caller from Exclusive Hold at another station. (Yes, you can get a call from another extension...but you have to make an effort to pick it up. It's difficult to pick this call up by accident).*

Press CO line button. Press HOLD.

You will be connected to that caller.

### **Flash (To an outside telephone line)**

*Use this feature to make use of telephone company services such as Call Waiting and Three way calling. Or to access Centrex features like call transfer and call conferencing.*

Press the TRF/FL key.

The outside line will receive a flash.

### **Forced Account Codes**

*If telephones are restricted within the system, this feature can allow people to enter a code and place calls on a telephone that otherwise would be restricted.*

Press PGM.

Dial 4

Enter the forced account code.

If the forced account code you dialed is recognized by the system, you will be connected to a CO line. You can then place an outgoing call.

If the system does not authorize your account code, you will hear busy tone.

### **Intercom call**

*An intercom call allows you to talk to another station within your telephone system.*

Lift Handset or press SPKR.

Dial the extension number of the station you wish to reach.

*You can reach another station by using a DSS button if you are equipped with one.*

Lift Handset or press SPKR. (Optional)

Press the DSS button of the station you want to call.

### **Last Number Redial**

*This feature lets you redial the last number you just called. It's great when you want to catch that busy number as soon as it's free!*

Lift the handset or press SPKR. (Optional)

Press REDIAL.

The last (outside) number you called will be dialed again.

### **Lock / Unlock SMDR from Console**

*If your system is equipped with an RS-232 port and is using a printer to keep a telephone log, you can temporarily suspend the output of the RS-232 port so you can change the paper on the printer or for any other reason where the printer needs to go off line. If you lock the SMDR port, calls will be stored in the SK-408 until you re-enable the port.*

Press SPKR.

Dial 7, 7, 2.

This will toggle the RS-232 port on or off.

*If you have an LCD equipped telephone, the display will show the current status of the SMDR port. If it is on, the display will show "SMDR IS UNLOCK." If it is off, the display will show "SMDR IS LOCK."*

### **Macro Keys**

*This feature will let you program your own "custom" function onto up to 4 keys on your telephone.*

Press PGM.

Press one of the assigned Macro Keys (16-19).

Dial the exact keystrokes that you want to save. (Up to 5 keystrokes)

Press the assigned Macro Key again.

### **Mute**

*Use the mute function any time you don't want the outside party to hear what you are saying.*

While you are on the handset:

Press MIC key.

The microphone on the handset will be muted. The LED on the upper right hand corner of the telephone will glow red.

Press MIC key.

The microphone on the handset will be enabled.

While you are on the speakerphone:

Press MIC key.

The microphone on the Speakerphone will be muted. The LED on the upper right hand corner of the telephone will glow green.

Press MIC key.

The microphone on the Speakerphone will be enabled.

### **Operator Set Timed Reminder or Wakeup (Remote Setup)**

*This allows the system operator to set a Timed Reminder or Wake Up call for another station within the system.*

Press PGM

Press REDIAL

Enter the extension number of the station you where you want to set up a reminder or wake up call.

---

Enter the time for the reminder (24 hour clock, please).  
Enter the type of call (01-98 for a reminder, 99 for a wakeup call).  
Press SAVE.  
Press SPKR

### ***Operator Timed Reminder or Wake Up***

Press PGM.  
Press HOLD.  
Press 8.  
Enter the time you want the reminder to occur (must be in 24 hour format).  
Enter the duration (01 through 98). That is how long you want the reminder period to be. This type of reminder will occur every day at the same time.

OR

Enter 99 for a Wake Up call. This call will occur only once, then never again.  
Press SAVE.  
Press SPKR to exit.

*To cancel:*

Press PGM.  
Press HOLD  
Press 8  
Press HOLD.

### ***Paging***

*Internal Zone*

Lift the handset or press SPKR.  
Press # and 2.  
Then press the one digit Paging Zone Code. (1-8)  
*You will be connected to the telephones in that zone.*

*All Paging*

Lift the handset or press SPKR.  
Press # and 1.

### ***Pulse To Tone Conversion***

*This feature is of use to you if you are located in an area where your telephone company does not accept DTMF (Touch Tone), This feature lets you dial DTMF (Touch-Tone) for services such as remote voice mail, bank by phone, etc.*

Press MSG key.  
Your telephone set will now dial DTMF digits instead of pulse dialing on a CO line.

### ***Room Monitor***

*If you need to listen in on another room, such as a baby's room or a secured room, you can set this function up so that any telephone in the system can monitor the room by dialing the extension number.*

At the telephone that you are going to monitor:  
Press the SPKR key or take the handset off hook.  
Dial 770.

The telephone is now in the room monitor mode. Any station can now dial the extension number of the station and be placed in the Room Monitor mode. The calling station will hear room activity. This connection will stay in place until the calling station hangs up or until the Monitored station is placed on Hook or the SPKR is turned off.

Only one station at a time can monitor a room, but the monitored station will stay in the room monitor mode until it is reset. So you can set up a monitor from one telephone and if your activities take you to another room, when you leave the first room, hang up. When you get to the next room, you can re-enter the monitor mode at the new extension, so you can go all over a building and still be able to monitor an individual room.

### **Speed Dialing**

You can use this feature to access frequently dialed telephone numbers.

Lift the handset or press SPKR.

Press SPD key.

Dial 100 through xxx (for system speed dial).

OR Dial 00 through 09 (for personal speed dial).

OR press a DSS button (for personal speed dial).

### **Speed Dial Programming**

There are three types of speed dial in the system, numeric personal speed dial, DSS personal speed dial and system speed dial. This section shows you how to program and personal speed dial if you are a regular station. If you are the system attendant (operator), your methods will be different - Please See Programming Speed Dial (Operator).

**Note:** There are three special keys that you may need to use when programming speed dial numbers. They are:

**HOLD** - When entering a speed dial number, if you press this key, the speed dial will pause for approximately 2 seconds (this time is programmable, but 2 seconds is the standard length). You may press HOLD multiple times for a longer pause.

**TRF/FL** - Pressing this button while you are entering a speed dial number will cause the system to perform a hookswitch "flash" to the outside telephone line. This may be of use if your telephone system has Centrex or special telephone company provided features.

**MW/PT** - This key will cause the telephone to stop using pulse (rotary) dialing and begin using DTMF (Touch tone). This may be useful if your telephone company doesn't recognize Touch Tone, but you need to access remote banking, paging, or voice mail services that require Touch Tone digits.

#### *Programming Personal Numeric Speed Dial*

Press PGM

Press 8 (or SPD if your telephone has a SPD button).

Press the number that you want to program (0-9).

*(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)*

Enter the telephone number you want to dial.

Press SAVE.

Press SPKR.

#### *Programming Personal DSS Speed Dial*

Press PGM

Press 8 (or SPD if your telephone has a SPD button).

Press the DSS button that you want to enter (DSS button 1 through 10).

*(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)*

Enter the telephone number you want to dial.

---

Press SAVE.  
Press SPKR.

### **Speed Dial Programming (Operator).**

#### *Programming (Operator) Personal Numeric Speed Dial*

Press PGM  
Press 8 8.  
Press the number that you want to program (0-9).  
*(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)*  
Enter the telephone number you want to dial.  
Press SAVE.  
Press SPKR.

#### *Programming (Operator) Personal DSS Speed Dial*

Press PGM  
Press 8 8.  
Press the DSS button that you want to enter (DSS button 1 through 10).  
*(If you want the speed dial number to access a specific telephone line every time it places the call, Press the MIC button and dial 0 plus the line number. Otherwise skip this step.)*  
Enter the telephone number you want to dial.  
Press SAVE.  
Press SPKR.

#### *Programming System Speed Dial Numbers*

Press PGM  
Press 8 7.  
Press the number that you want to program (100-xxx).  
Press MSG.  
*(If you want the speed dial number to access a specific telephone line every time it places the call, Press the VOLume Down button and dial 0 plus the line number. Otherwise skip this step.)*  
Enter the telephone number you want to dial.  
Press MSG.  
Press SPKR.

### **Station Lock / Unlock**

*This feature lets you lock your telephone so that no one can make unauthorized telephone calls on it. In order to unlock your telephone, you must remember the 3 digit long "password" that you enter when you lock it. You will need this to unlock your telephone. You can create any 3 digit code to lock your station, but the code to unlock it MUST be the one that you used to lock it!*

*To lock or unlock your station:*

Press PGM.  
Dial 9.  
Enter your 3 digit "password."  
Press SAVE.  
Press SPKR.

*Your telephone is now locked.*

*To temporarily unlock your station (This will allow you to make one telephone call. Then it reverts back to a locked state):*

Press PGM.  
Dial #.



Enter your 3 digit "password."  
You will be connected to the outside world. You may dial your call.  
Your telephone will revert to the locked state when you hang up.

### **Super Save Redial**

*This feature comes in handy when you call directory assistance and can't find a pencil (or paper) to write down the telephone number that you are looking for.*

You are on an outside call.  
Press SAVE. Your LCD (if you have one) will show "Auto Save"  
Enter the new telephone number (maybe the one that directory assistance gave you).  
Hang Up.

Press SAVE. The number you stored will be dialed, and your telephone will remain off hook for at least 10 seconds (depending on system programming). And will continue to redial the number periodically for a number of times (the number of times also depends on system programming).

When the number you dialed answers, lift the handset or press your MIC key to carry on a conversation and keep the system from hanging up.

### **Switching between Handsfree and Handset mode**

*If you want to switch from the handset to speakerphone....or vice versa.*

While on the handset:  
Press SPKR.  
Place the handset back in the cradle.  
You are now in Speakerphone mode.

While on the Speakerphone:  
Lift the handset.  
You are now in the handset mode.

### **Timed Reminder or Wake Up**

*With this feature, you can set an appointment reminder, that will alert you only once, or you can set a daily reminder that will happen every day at the same time (like when it's time to stop working and go home). **Note: If you are a system operator, the procedure you follow will be different. Please see Operator Timed Reminder or Wake Up.***

Press PGM.  
Press HOLD.  
Enter the time you want the reminder to occur (must be in 24 hour format).  
Enter the duration (01 through 98). That is how long you want the reminder period to be. This type of reminder will occur every day at the same time.

OR

Enter 99 for a Wake Up call. This call will occur only once, then never again.  
Press SAVE.  
Press SPKR to exit.

*To cancel:*  
Press PGM.  
Press HOLD HOLD (that's Hold....two times).

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### **Trunk Queuing**

*If you need an outside line and none are available, this feature will make sure you get one when it becomes available.*

Lift the handset or press SPKR. (Optional)

Select a CO line (either by dialing 9 or by pressing a CO line button)

Press MSG key.

Hang up.

*When the CO line (or one of the lines in your Dial 9 group) is free, your telephone will ring. When you answer it, you will be connected to the outside line.*

### **Trunk Group Access (Dial 9)**

*This is one method of getting an outside line.*

Lift the handset or press SPKR. (Optional for Dial 9)

Dial 9.

You will be connected to an available line in your dial 9 group

**Voice Service Unit (Operator Function)**

*The Voice Service Unit has up to 8 channels on which you can record up to 8 different messages. The actual number of messages that you record will be determined by how your system is programmed. This section explains how to record and playback the messages so that the system can use them. Remember, the Voice Service Unit allows a maximum of 60 seconds total recording time.*

**To Record (Operator only):**

Lift handset (we don't recommend that you make the recordings using the Speakerphone).  
Dial 86.

Dial 0

Record your message after the tone.

To stop the recording and select the next voice channel, press 1.

To record the next segment, dial 0 . Repeat as necessary.

Your LCD display will always show you which channel you are currently recording.

*Please note that you cannot record one message and then record another message at another time. When you record a message, you must record all messages, one after another. In the future, if you need to update a message, it will be necessary that you re-record all messages.*

**To Playback (Operator only):**

Lift handset or press SPKR.

Dial 86

Dial 7 to play the first message.

Press 1 to advance to the next message.

Continue the Dial 7 and Dial 1 sequence to hear all messages.

*When you are finished, either put the handset back in it's cradle or Press the SPKR button (which ever is appropriate).*

**Volume Control**

*If the person on the other end isn't quite loud enough....or is too loud!*

Press Vol UP to increase the volume level.

Press VOL DOWN to decrease the volume level.

**Volume Levels Programming (Permanent)**

*You can permanently set the volume levels on your telephone.*

Press PGM.

Press 6.

Dial 1 to set Ringing Volume.

OR

Dial 2 to set Speaker Volume.

OR

Dial 3 to set Handset volume

Press the Volume UP or Volume DOWN to reach the desired volume level.

Press PGM when finished.