MINI-CONTROLLER CONFIGURATION 5

5.1 Overview

The network controller in a Teklogix system performs a number of important tasks. One of these tasks is *emulation*: the translation of data between the protocol of the host computer and the protocol used by Teklogix terminals.

The data which is sent from a host computer to a terminal to provide its display, and returned to the host as a result of operations at the terminal, is called a data stream. Host computers can provide data streams of various types to their terminals.

Teklogix terminals can directly accept only two types of data stream: *TESS* and *ANSI*. TESS (Teklogix Screen Subsystem) is the proprietary data stream used by Teklogix terminals. ANSI data streams are a standard type of data stream used by wired ANSI terminals. Other types of data stream provided by the host must be converted into TESS or ANSI before Teklogix terminals can work with them. This translation is done by emulation software in a network controller.

The 9150 is equipped with emulation capabilities, allowing it to act as a mini-controller. When a 9150 is configured as a mini-controller, Teklogix terminals can emulate an ANSI, 5250 or 3274 terminal via a 9150 rather than through a 9400/9300 Network Controller.

> ⚠️ *Important:* *9150s acting as mini-controllers are designed for small, low-transaction sites. A 9400/9300 Network Controller is required for systems that support more than 50 terminals.*

Acting as a mini-controller, the 9150 can support up to 32 additional networked base stations and up to 50 terminals. A 9150 mini-controller can also manage wireless LAN configurations.

A 9150 configured as a mini-controller can support the following emulations:

- 5250 emulation using TCP/IP over an Ethernet or Token Ring LAN.

- 3274 emulation using TCP/IP over an Ethernet or Token Ring LAN.

- ANSI emulation using TCP/IP over an Ethernet or Token Ring LAN.

> 📖 *Note:* *The 9150 main parameters should first be set up as described in Chapter 3: "9150 Main Configuration".*

HOST

7030
Hand-Held
RF Terminal

9140
Wireless Gateway

8055 Vehicle-Mount
RF Terminal

9150 Wireless Gateway
Mini-Controller

ETHERNET

TCP/IP

902 MHz

802.11 / 2.4 GHz

7030 Hand-Held
RF Terminal

9150 Wireless Gateway
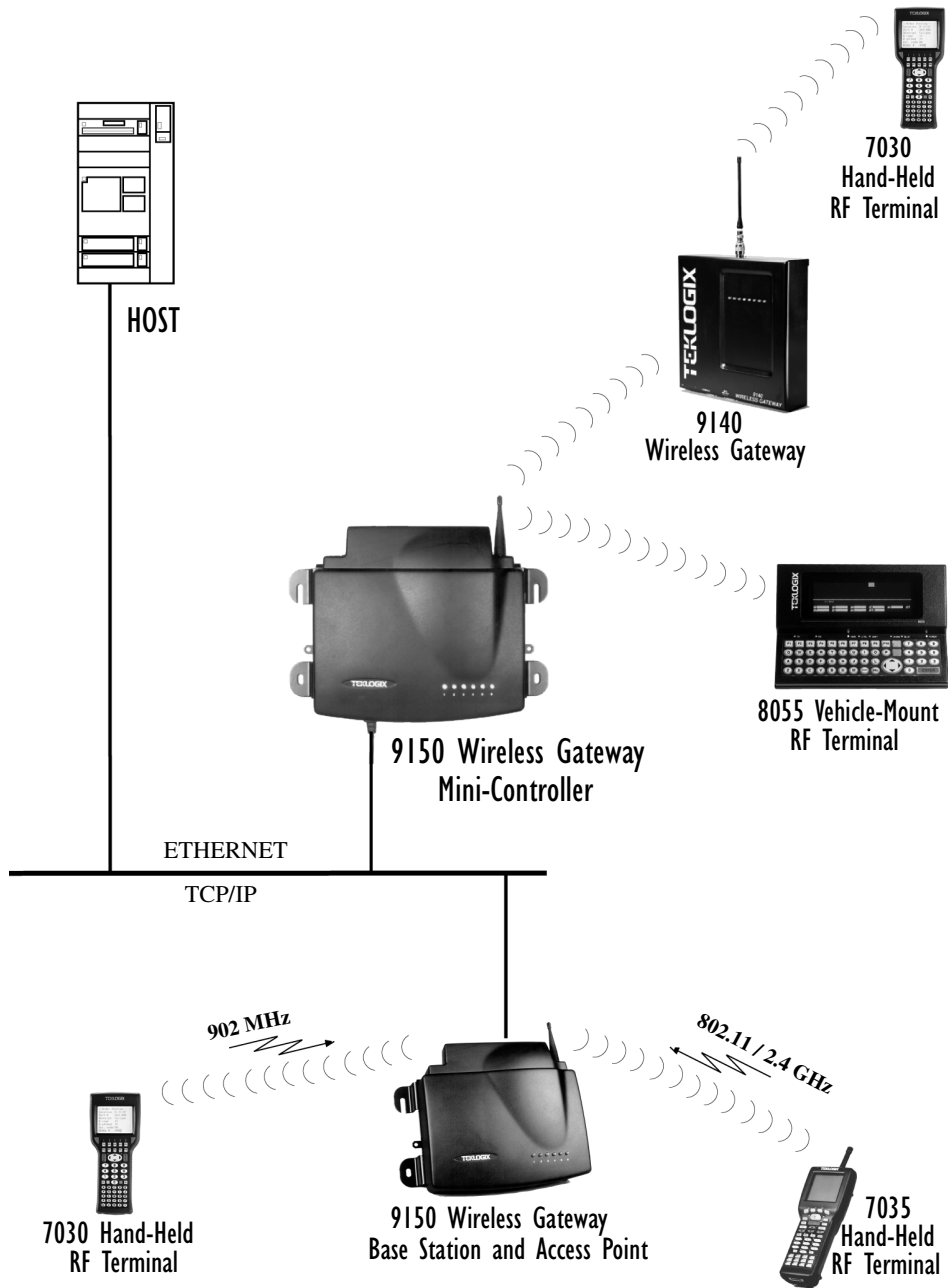Base Station and Access Point

7035
Hand-Held
RF Terminal

Figure 5.1 9150 Mini-Controller Configuration

For operation as a mini-controller, the parameters in the *Hosts* pages under *Base Station Configuration* should be set appropriately. The *Hosts* options are found on the *Configuration Main Menu* page. For information on configuring radio protocol parameters, please refer to

Teklogix 9150: Configuration Main Menu
Unit 12 [Warehouse A: Pillar 32B]

General Configuration:

Interfaces:	[1] Onboard Ethernet ▾	Configure
Users:	[1] user ▾	Configure
SNMP:		Configure
TCP/IP Parameters:		Configure
Serial Ports Parameters:		Configure

Access Point Configuration:

MAC Bridge Parameters:		Configure
Mobility Configuration:		Configure

Base Station Configuration:

Hosts:	[1] Host One ▾	Configure
Base Stations:	[#] Create New ▾	Configure
Radio Link Features:		Configure

Miscellaneous Commands:

System Info	Reboot Unit

5.2 Hosts

The drop-down menu in this option shows the host names present on the system. Up to six hosts can be supported. A "host" must be configured for each host that communicates with the 9150 mini-controller. Opening the *Configure* dialog box for a selected host lists the parameters that can be modified or deleted for that host. New hosts can be added by selecting "[#] Create New" in the drop-down menu before entering the *Configure* dialog box.

Teklogix 9150: Configure New Host
Unit 12 [Warehouse A: Pillar 32B]

Name:	Host Two
Enabled:	☑
Emulation and Protocol:	[1] 9010 / TCP/IP ▾
Terminal Range:	1 ... 32

OK   Cancel

Name

This parameter indicates the assigned host name. The host name also appears on the RF terminal when switching between hosts in a multiple-host environment.

Enabled

The *Enabled* option must be turned on (√) for terminals to communicate with this host.

Emulation and Protocol

This drop-down menu provides a list of host emulations and communication protocols supported by the 9150. Working with Teklogix terminals and base stations, the 9150 can emulate IBM 3278-2, 5251-11, and 5555-B01 terminals, as well as ANSI terminals.

Protocols are the methods by which terminals communicate with host computers over various physical media such as Ethernet, Token Ring, and serial connections, as well as radio-link connections. The 9150 supports the TCP/IP protocol.

The supported emulations with their respective protocols are:

- 9010/ TCP/IP or Serial (See page 84 for Configuration Parameters).
- 3274/Telnet (See pages 84 to 98 for Configuration Parameters).
- 5250/Telnet (See pages 99 to 112 for Configuration Parameters).
- ANSI/Telnet (See pages 113 to 121 for Configuration Parameters).

When the 9150 acts as a base station, it uses the 9010 emulation (a proprietary asynchronous protocol developed by Teklogix) to communicate with a 9300 Network Controller or a host using a Teklogix Software Development Kit (TSDK). For detailed information on configuring the 9150 as a base station, please refer to Chapter 4: "Base Station Configuration".

When the 9150 acts as a mini-controller, it uses the 3274 and 5250 emulation protocols to communicate with IBM hosts, or the ANSI emulation protocol to communicate with ANSI terminals.

Terminal Range

The values entered in this parameter designate the first and last terminals in the range of terminals that will communicate with the host. These terminal numbers are mapped to this particular host. Terminal numbers may range from **1** to **50**.

5.3 Main Host Menu

When you choose an existing host name from the *Hosts* listbox and then select the *Configure* button, the 9150 displays the *Host Menu*. The *Host Menu* presents the options for four sub-menus: *General Host Options*, *Emulation Options*, *Protocol Options*, and *Function Key Mappings*. There is also a *Main Menu* button. When you select this button, the 9150 displays the *Configuration Main Menu* page (see for an enlarged illustration).
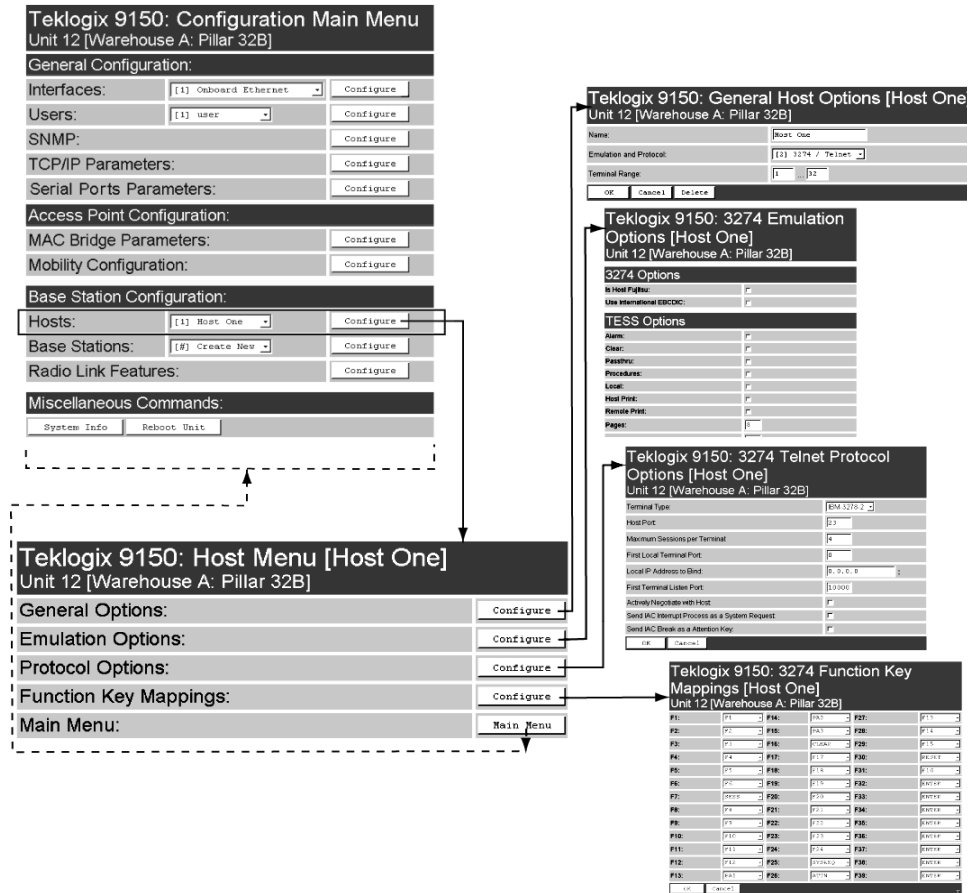

Figure 5.2 Overview Of Host Menus

As illustrated in Figure 5.2 on page 82, the four configuration sub-menus display the following options:

"General Options"

> When you select this sub-menu, the 9150 displays the *General Options* page for the host.

"Emulation Options"

> When you select this sub-menu, the 9150 displays the *Emulation Options* page for the host. This page may vary depending on the type of emulation and protocol selected for the host.

"Protocol Options"

> When you select this sub-menu, the 9150 displays the *Protocol Options* page for the host. This page may vary depending on the type of emulation and protocol selected for the host.

"Function Key Mappings"

> When you select this sub-menu, the 9150 displays the *Function Key Mappings* page for the host. This page may vary depending on the type of emulation and protocol selected for the host.

Note: *The* Function Key Mappings *parameters are not applicable to either of the 9010 emulations; the* Protocol Options *parameters do not apply to the 9010/TCP/IP emulation.*

5.3.1   General Options

In this page, you can select general options for this host connection. The host connection may also be deleted.

Teklogix 9150: General Host Options [Host One]
Unit 12 [Warehouse A: Pillar 32B]

Name:	Host One
Emulation and Protocol:	[2] 3274 / Telnet
Terminal Range:	1 ... 32

    OK   Cancel   Delete

Name

This parameter allows you to enter a name for the new host.

Emulation and Protocol

This parameter allows you to select the emulation and protocol to be used for the connection to this host. Available combinations of emulation and protocol are: **3274/Telnet**, **5250/Telnet**, **ANSI/Telnet**.

Terminal Range

This parameter allows you to specify the range of terminals which will communicate with this host. The left-hand textbox contains the lowest terminal number which is allowed to communicate with the host; the right-hand textbox contains the highest terminal number. Terminal numbers may range from **1** to **50**.

5.3.2 9010 Emulations

When the 9150 acts as a base station, it uses the 9010 protocol (a proprietary asynchronous protocol developed by Teklogix) to communicate with a 9400 or 9300 Network Controller, or a host using a Teklogix Software Development Kit (TSDK). For detailed information on configuring the 9150 as a base station, please refer to Chapter 4: "Base Station Configuration".

5.3.3 3274/Telnet

5.3.3.1 Emulation Options

The 9150 mini-controller displays this version of the *Emulation Options* page after you have selected the *3274/Telnet* emulation/protocol combination for this host connection.

With IBM 3274, or IBM 5250 emulation, the 9150 mini-controller converts the application data stream from the host to TESS (Teklogix Screen Subsystem) commands. Some of the parameters in this page govern the conversion of the host screens to TESS.

Teklogix 9150: 3274 Emulation Options [Host One]
Unit 12 [Warehouse A: Pillar 32B]

3274 Options

Is Host Fujitsu:	☐
Use International EBCDIC:	☐

TESS Options

Alarm:	☐
Clear:	☐
Passthru:	☐
Procedures:	☐
Local:	☐
Host Print:	☐
Remote Print:	☐
Pages:	8
Transmit Line:	0
AIAG:	0
Visible Match Character:	0
Hidden Match Character:	0
Serial I/O:	0
Print Line:	0
Print Form Length:	0
Barcode:	0
Entry Line:	0
Field Overhead:	5
Command Region:	0 , 0 – 0 , 0

OK   Cancel

Is Host Fujitsu

If this parameter is **enabled**, the 9150 mini-controller sends its data in Fujitsu format. Enabling this parameter causes the standard IBM formatting codes (for start of field, setting buffers, etc.) to be replaced by the codes used by Fujitsu host computers.

Use International EBCDIC

If this parameter is **enabled**, the 9150 mini-controller uses the International EBCDIC character set, swapping the positions of the **!** and **]** characters.

Alarm

When this parameter is **enabled**, terminals beep when the word "ALARM" appears on the application screen in the location specified by the *Command Region* parameter (see). The word "ALARM" should be a *display-only* field.

Note: The Command Region *parameter must be enabled for this parameter to work.*

Clear

If this parameter is **enabled**, the 9150 mini-controller creates an *empty* entry field for an entry field that is filled with spaces.

Some host applications rely on the video attributes of displayed characters to highlight fields, particularly entry fields. For example, the application screen may define all entry fields with reverse video and fill the field with spaces. This is effective on terminals that support reverse video, but on terminals that do not, it can make the field invisible since it is made up entirely of spaces.

By default, all empty entry fields displayed at the Teklogix terminal are highlighted by the "entry character" chosen in the terminal's configuration (not all Teklogix terminals support video attributes).

*Note: This operation is only performed on screens received **from the host**. Data sent **to the host** remains unaffected.*

Passthru

If this parameter is **enabled**, the 9150 allows the host to send data directly to the RF terminal's serial port. This is most commonly used for printing.

Preparing Host Screens for Pass-Through

On the screen to be sent through the terminal serial port, the word *PASSTHRU* (in capital letters) must appear on the first line, starting on the second column. The actual data to be sent to the terminal may start anywhere below the first line.

With 5250 or 3274 emulations, attributes occupy a position in the screen buffer. An attribute placed between column 2 and the end of the word "PASSTHRU" will 'push' all following characters one position to the right. Therefore, any required attributes should occupy column 1 of the first line (just preceding the word "PASSTHRU").

Example:

```
column: 1 2 3 4 5 6 7 8 9

line 1: @ P A S S T H R U @

line 2: @ P A R T :   1 2 3 4 5
```

> *where* **@** *is an attribute.*

When the 9150 is finished sending the data to the terminal's printer, it will send an *ENTER* key to the host. The host must wait for the *ENTER* key before sending any more screens (including other PASSTHRU screens) to this terminal.

> *Note: Refer to the Terminals User Manual for information about setting parameters on the terminal for pass-through.*

Procedures

If this parameter is **enabled**, the host may send TESS procedures through the 9150 to the terminals. A TESS procedure is a group of TESS commands that can be executed by the TESS *execute procedure* command.

Local

If this parameter is **enabled**, the 9150 allows the host to provide pages to be loaded as local TESS procedures in the terminals.

The local procedures are selected from a menu at the terminal. The terminals can perform these procedures when they are offline. Later when the terminals are online, they send the results of these functions to the host.

> *Note:* *The* Procedures *parameter must also be* **enabled** *for* Local *to work.*

Host Print

When this parameter is **enabled**, the host can send extra data to the terminal's screens, and instruct the terminal to print it. This is in contrast to the *Local Print* feature, where the terminal makes the initial print request.

The text that is passed to the printer is formatted into the 24 x 80 application screen. If the host can initiate the print operation, the text is printed. The 9150 identifies the additional text as a print page by the presence of the word "PRINT" (in capital letters) beginning in the 2nd column of line 13 on the 24 x 80 screen. The word "PRINT" should be defined as *display-only* text.

The print page is positioned below the terminal's display page (see the following figure). The size of the print page is always the same as the terminal's display page (assuming that in the terminal's configuration, the page length is less than 12 lines).

When *Host Print* is **enabled**, the 9150 passes the print page to the terminal after receiving the application screen from the host.
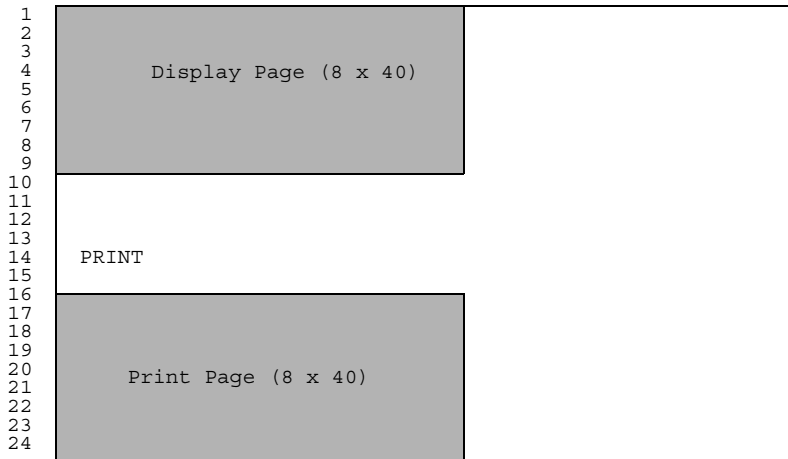
```
 1
 2
 3
 4        Display Page (8 x 40)
 5
 6
 7
 8
 9
10
11
12
13
14   PRINT
15
16
17
18
19
20        Print Page (8 x 40)
21
22
23
24
```

Figure 5.3 Application Screen With Print Page

Notes:

1. *Unlike the* Passthru *option, when using* Host Print *no escape commands can be sent to the printer.*

2. *Support for printing must be enabled at the terminal in its* Printer *command under the TESS Features menu; refer to the 7030/8055/8060 Terminals User Manual for more information.*

Remote Print

When this parameter is **enabled**, the 9150 sends the print page to a terminal when-ever the terminal requests it (by sending the "F17" function key from the terminal, or the "PRINT" key on older terminals). The 9150 sends the function response back to the host.

This is in contrast to *Host Print*, where the host makes the initial print request.

Note: *Support for printing must be enabled at the terminal. Refer to the Terminals User Manual or the Parameter Guide for more information.*

Pages

This parameter determines the number of host screens (or pages) stored at the terminal, to a maximum of **16**.

The 9150 reduces data transmitted to the terminals by using the terminal's capability to store a page of data for each screen it displays. The 9150 maintains an image of each page stored at the terminal. After receiving an application screen, the 9150 tries to match the screen with a stored page. If a similar page is already in the terminal's memory, the 9150 instructs the terminal to redisplay its copy of the page; only the necessary changes are sent from the controller. If no match is found, the complete page is sent to the terminal over the radio link.

Note: *There is a corresponding parameter on the terminal itself, and the **actual** number of saved pages will be the **smaller** of the two values.*

Transmit Line

When this feature is **enabled**, all modified data at the terminal is automatically transmitted when the operator enters data into a *transmit-upon-entry* field.

The value in this textbox specifies the line on the screen which is designated the *transmit line*. The last entry field above or on the transmit line on the screen will be identified as the *transmit-upon-entry* field. If any entry fields exist on lines below the transmit line, no entry field will be designated as the *transmit-upon-entry* field.

A value of **0** (zero) disables this feature. A value of **24** designates the *last* entry field on each application screen as *transmit-upon-entry.*

AIAG

This parameter provides auto-locate and fill for input coming from bar code readers. When bar code data is entered at a terminal, the terminal searches for "AIAG" fields on the current page that can accept the bar code data. The data preloaded into the "AIAG" field by the application program determines whether or not the bar code data is accepted.

At the 9150 mini-controller, a decimal value of an ASCII character from **0** to **127** is set to match the "AIAG Field Identifier" set at the host. A value of **0** disables this feature.

The format of the preloaded data is as follows:

```
<mode> <AIAG prefix(data)>
```

The mode character used with the command allows for different operating modes to suit various application operations. The automatic locate and fill operation applies only to data received from a bar code reader. Descriptions of the modes and AIAG prefix are listed in . **These modes are set at the host.**

Mode	Function
0	Display prefix, send prefix to host.
1	Do not display prefix, send prefix to host.
2	Display prefix, do not send prefix to host.
3	Do not display prefix, do not send prefix to host.
+4	Add 4 to above values to cause transmit to host when all AIAG fields with 4 set are filled. Function 0 is "pressed" if there are any fields with this bit set, and all fields with this bit set have been filled by operator input.
+8	Add 8 to above values to allow overwrite of previously entered data.
+16	Add 16 to above values to indicate cursor position priority for search and fill.
AIAG Prefix (data)	The text to be matched in the AIAG field.

Table 5.1 Mode Functions And AIAG Prefix Description

Example:

The information in the sample screen below is defined at and sent *from* the host. It includes the "AIAG Identifier" – the tag identifying this as an AIAG field – followed by the mode, in this case Mode 0, and finally, the "AIAG Prefix" – I.
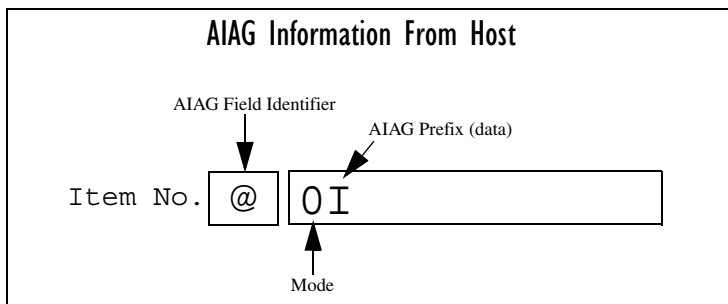

Figure 5.4 AIAG Field Sent From The Host

When the information arrives at the terminal screen, the appropriate AIAG field for the scanned information is located using the "AIAG Identifier". Because Mode 0 was set at the host, the "AIAG Prefix" – I – is displayed on the terminal screen, and when this screen is completed, the prefix will be sent back to the host.
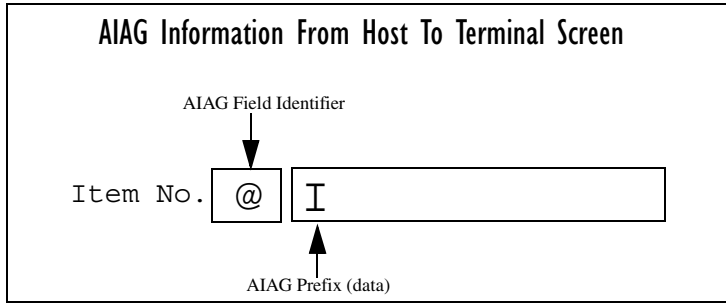

AIAG Information From Host To Terminal Screen

AIAG Field Identifier

Item No. @ I

AIAG Prefix (data)

Figure 5.5 AIAG Field Sent To The Terminal

Visible Match Character

By inserting a special ASCII character directly before an entry field, the application program distinguishes a "match field" from an entry field. For example, suppose an angle bracket "**>**" is defined for visible match fields. Inserting "**>**" immediately preceding the entry field identifies it as a match field, as illustrated below.

Part #> _____

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** disables this feature. The ASCII decimal value entered at the 9150 must coincide with the value set by the application program.

To use the *Visible Match* feature, the host computer preloads data into a match entry field; the data is visible on the terminal screen. The preloaded data sent to a terminal can consist of exact characters, special match characters or a combination of the two. Refer to Table 5.2 on page 93 for match characters recognized by Teklogix terminals.

If an entry does not match the preloaded data, the entry is displayed, the terminal beeps, and the cursor moves to the first position in the match field. The operator can either make another entry in the match field, or move the cursor to a new field.

When an entry (even one that doesn't match the preloaded data) is made in a match field, the entry is sent to the host as part of the terminal's modified data during the next transmission.

Character	Description
#	Match a number.
&	Match a letter (either case).
^	Match an uppercase letter.
_	Match a lowercase letter.
|	Match an alphanumeric character.
"	Match a letter, number or space.
?	Match a punctuation character.
'	Match any character.
:	Match all character positions in the field with the preceding character.
;	Match any remaining characters, but not necessarily the remainder of the field, with the preceding character.

Table 5.2 Match Characters

Example:

Suppose you want to preload an entry field with a part number. If the part number is known, you can preload the field with that part number. If more flexibility is needed, and the part number always begins with two alphabetic characters followed by a hyphen and four digits, the match string for the field would be: `&&-####` .

Hidden Match Character

Unlike data in a "visible match" field, the preloaded data in a "hidden match" field is *not* displayed at the terminal.

Note: *Refer to "Visible Match Character" on page 92 for detailed information about field matching.*

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** disables this feature. The ASCII decimal value entered at the 9150 must coincide with the value set by the application program.

Serial I/O

Serial I/O fields are special entry and fixed fields that accept input from and output to a serial port. The application program distinguishes this field as *Serial I/O* by preceding the field with a special character.

If this character precedes a fixed field, the data will be sent to the terminal's serial port. If it precedes an entry field, the field accepts data from the terminal's serial port.

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** (zero) disables this feature.

Print Line

This parameter allows you to enter the starting line number of the print page in the application screen. A value of **1** causes the display page to be printed; a value of **0** (zero) disables this feature.

Print Form Length

This parameter sets the printer's form length in lines. The range is **0** to **24**.

Barcode

Barcode-input-only fields are special entry fields that only accept input from a bar code reader. The application program distinguishes an entry field as *barcode-input-only* by preceding the field with a special character.

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** (zero) disables this feature.

Entry Line

This parameter contains the number of the first line displayed if there is no entry field in the upper-left portion of the screen, and if an entry field is at or below this line.

The *Entry Line* parameter allows an automatic offset within the host screen, so that the area displayed by the terminal includes an entry field that would normally be out of bounds. Normally, Teklogix terminals only display the upper-left corner of the application screen because of their smaller display size.

Field Overhead

This parameter contains the maximum number of characters allowed between two *fixed* fields which still allows the 9150 to join them into one field.

Sometimes the 9150 will join two adjacent fixed fields and then send them as one field. This reduces the overhead on the radio link.

For example, if two fields were 4 characters apart and this parameter was '5', then these fields would be joined into one.

Command Region

This parameter defines a region of the host screen which the 9150 will examine for the presence of reserved commands.

The four numbers in the *Command Region* textboxes represent the row and column addresses of the upper left corner and the lower right corner of the command region. The first textbox of each pair contains the row number; the second contains the column number. The range of row values is **0** to **24**; column values are **0** to **80**.

To define the last two lines of the host screen as the command region, for example, enter the values *23, 1* and *24, 80*.

Currently, the only command supported is *ALARM* (refer to page 86 for details on this command). When the word "ALARM" is placed anywhere within the command region, the 9150 will send a TESS *beep* command to the terminal.

5.3.3.2 Protocol Options

This page differs depending on the type of emulation and protocol selected in the *General Host Options* page. The 9150 displays this version of the *Protocol Options* page when you select the emulation/protocol combination of *3274/Telnet* for this host.

Teklogix 9150: 3274 Telnet Protocol Options [Host One]
Unit 12 [Warehouse A: Pillar 32B]

Terminal Type:	IBM-3278-2 ▾
Host Port:	23
Maximum Sessions per Terminal:	4
First Local Terminal Port:	0
Local IP Address to Bind:	0.0.0.0 :
First Terminal Listen Port:	10000
Actively Negotiate with Host:	☐
Send IAC Interrupt Process as a System Request:	☐
Send IAC Break as a Attention Key:	☐

OK   Cancel

Terminal Type

This parameter allows you to choose the type of terminal to be emulated by the 9150 for this host. At present there is only one choice of terminal for *3274/Telnet*: the **IBM 3278-2**.

Host Port

This parameter allows you to enter a host port value for the selected *3274/Telnet* host connection. The default value is **23**.

Maximum Sessions per Terminal

This parameter contains the maximum number of telnet sessions which are allowed to originate from each terminal. The range is **0** to **127**, with a default value of **4**.

First Local Terminal Port

This parameter contains the port number from which the first terminal will connect on outbound telnet sessions. The default value is **0**.

Local IP Address to Bind

This parameter contains the IP address of the network adaptor in the 9150 from which the first terminal will connect on outbound telnet sessions.

First Terminal Listen Port

This parameter specifies the first port number at which the 9150 will listen for telnet connection requests to the terminals. The default value is **10000**.

Actively Negotiate with Host

If this parameter is enabled, the 9150 negotiates with the host during setup of the telnet connection.

Send IAC Interrupt Process as a System Request

If this parameter is enabled, the 9150 sends the IAC Interrupt Process request to the host as a 3274 System Request.

Send IAC Break as an Attention Key

If this parameter is enabled, the 9150 sends the IAC Break request to the host as a 3274 Attention key.

5.3.3.3 Function Key Mappings

This page differs depending on the type of emulation selected in the *General Host Options* page. The 9150 displays this version of the *Function Key Mapping* page when you select *3274* emulation for this host.

Teklogix 9150: 3274 Function Key Mappings [Host One]
Unit 12 [Warehouse A: Pillar 32B]

F1:	F1	F14:	PA2	F27:	F13		
F2:	F2	F15:	PA3	F28:	F14		
F3:	F3	F16:	CLEAR	F29:	F15		
F4:	F4	F17:	F17	F30:	RESET		
F5:	F5	F18:	F18	F31:	F16		
F6:	F6	F19:	F19	F32:	ENTER		
F7:	SESS	F20:	F20	F33:	ENTER		
F8:	F8	F21:	F21	F34:	ENTER		
F9:	F9	F22:	F22	F35:	ENTER		
F10:	F10	F23:	F23	F36:	ENTER		
F11:	F11	F24:	F24	F37:	ENTER		
F12:	F12	F25:	SYSREQ	F38:	ENTER		
F13:	PA1	F26:	ATTN	F39:	ENTER		

OK   Cancel

Function key n

The *Function Key* parameter allows you to select a code that will be sent to the host when you press a function key on the terminal. Each function key may be chosen from the same range of possible codes; however, each function key has a different default code. The default values are shown on this page.

5.3.4   5250/Telnet

5.3.4.1   Emulation Options

Teklogix 9150: 5250 Emulation Options [Host Three]
Unit 12 [Warehouse A: Pillar 32B]

5250 Options

Write Error Code:	Advisory text ▾
Use International EBCDIC:	☐

TESS Options

Alarm:	☐
Clear:	☐
Passthru:	☐
Procedures:	☐
Local:	☐
Host Print:	☐
Remote Print:	☐
Pages:	8
Transmit Line:	0
AIAG:	0
Visible Match Character:	0
Hidden Match Character:	0
Serial I/O:	0
Print Line:	0
Print Form Length:	0
Barcode:	0
Entry Line:	0
Field Overhead:	5
Command Region:	0 , 0 - 0 , 0

OK   Cancel

The 9150 displays this version of the *Emulation Options* page after you have selected the *5250/Telnet* emulation/protocol combination for this host connection.

With IBM 5250, or IBM 3274 emulation, the 9150 mini-controller converts the application data stream from the host to TESS (Teklogix Screen Subsystem) commands. Some of the parameters in this page govern the conversion of the host screens to TESS.

Write Error Code

If *advisory text* is selected here, the 9150 sends error codes to the terminal screen as advisory text, which is written at the bottom of the screen. If *screen text* is chosen, the 9150 sends the error codes as regular screen text.

Use International EBCDIC

If this parameter is **enabled**, the 9150 will swap the positions of the **!** and **]** characters in the EBCDIC character table.

Alarm

If this parameter is **enabled**, terminals will beep when the word "ALARM" (in capital letters) appears on the application screen, in the location specified by the *Command Region* parameter (see page 109). The word "ALARM" should be a *display-only* field.

Note: The Command Region *parameter must be* **enabled** *for this parameter to work.*

Clear

If this parameter is **enabled**, the 9150 mini-controller creates an *empty* entry field for an entry field that is filled with spaces.

Some host applications rely on the video attributes of displayed characters to highlight fields, particularly entry fields. For example, the application screen may define all entry fields with reverse video and fill the field with spaces. This is effective on terminals that support reverse video, but on terminals that do not, it can make the field invisible since it is made up entirely of spaces.

By default, all empty entry fields displayed at the Teklogix terminal are highlighted by the "entry character" chosen in the terminal's configuration (not all Teklogix terminals support video attributes). The *Clear* feature creates an empty entry field in place of an entry field filled with spaces.

*Note: This operation is only performed on screens received **from the host.** Data sent **to the host** remains unaffected.*

Passthru

If this parameter is **enabled**, the 9150 allows the host to send data directly to the RF terminal's serial port. This is most commonly used for printing.

Preparing Host Screens for Pass-Through

On the screen to be sent through the terminal serial port, the word "PASSTHRU" (in capital letters) must appear on the first line, starting on the second column. The actual data to be sent to the terminal may start anywhere below the first line.

With 5250 or 3274 emulations, attributes occupy a position in the screen buffer. An attribute placed between column 2 and the end of the word "PASSTHRU" will push all following characters one position to the right. Therefore, any required attributes should occupy column 1 of the first line (just preceding the word "PASSTHRU").

Example:

```
column: 1 2 3 4 5 6 7 8 9

line 1: @ P A S S T H R U @

line 2: @ P A R T :   1 2 3 4 5
```

*where **@** is an attribute.*

When the 9150 is finished sending the data to the terminal's printer, it will send an "ENTER" key to the host. The host must wait for the "ENTER" key before sending any more screens (including other "PASSTHRU" screens) to this terminal.

Note: Refer to the 7030/8055/8060 Terminals User Manual for information about setting parameters on the terminal for pass-through.

Procedures

If this parameter is **enabled**, the host may send TESS procedures through the 9150 to the terminals. A TESS procedure is a group of TESS commands that can be executed by the TESS *execute procedure* command.

Local

If this parameter is **enabled**, the 9150 allows the host to provide pages to be loaded as local TESS procedures in the terminals.

The local procedures are selected from a menu at the terminal. The terminals can perform these procedures when they are offline. Later when the terminals are online, they send the results of these functions to the host.

Note: *The* Procedures *parameter must also be* **enabled** *for* Local *to work.*

Host Print

When this parameter is **enabled**, the host can send extra data to the terminal's screens, and instruct the terminal to print it. This is in contrast to the Local Print feature, where the terminal makes the initial print request.

The text that is passed to the printer is formatted into the 24 x 80 application screen. If the host can initiate the print operation, the text is printed. The 9150 identifies the additional text as a print page by the presence of the word "PRINT" (in capital letters) beginning in the 2nd column of line 13 on the 24 x 80 screen. The word "PRINT" should be defined as *display-only text.*

The print page is positioned below the terminal's display page (see Figure 5.6 on page 103). The size of the print page is always the same as the terminal's display page (assuming that in the terminal's configuration, the page length is less than 12 lines).

When *Host Print* is **enabled**, the 9150 passes the print page to the terminal after receiving the application screen from the host.
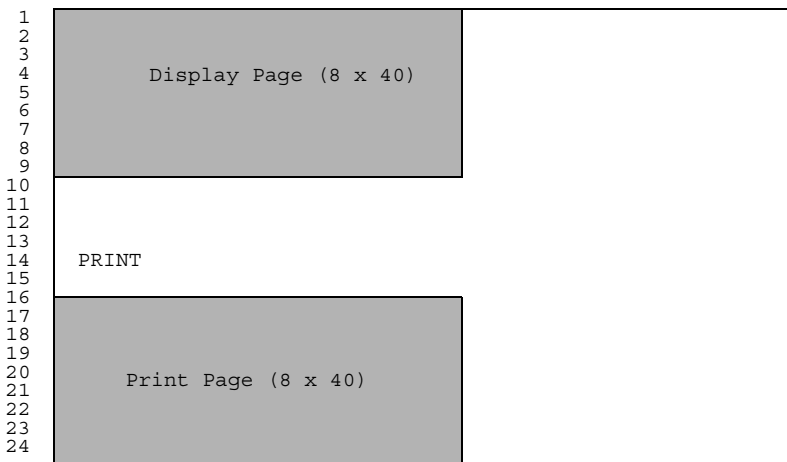
```
 1
 2
 3
 4             Display Page (8 x 40)
 5
 6
 7
 8
 9
10
11
12
13
14     PRINT
15
16
17
18
19
20             Print Page (8 x 40)
21
22
23
24
```

Figure 5.6 Application Screen With Print Page

Notes:

1. Unlike the Passthru *option, when using* Host Print *no escape commands can be sent to the printer.*

2. Support for printing must be enabled at the terminal in its Printer *command under the TESS Features menu; refer to the 7030/8055/8060 Terminals User Manual for more information.*

Remote Print

When this parameter is **enabled**, the 9150 sends the print page to a terminal whenever the terminal requests it (by sending the "F17" function key from the terminal, or the "PRINT" key on older terminals). The 9150 sends the function response back to the host.

This is in contrast to *Host Print*, where the host makes the initial print request.

Note: Support for printing must be enabled at the terminal level. Refer to the 7030/8055/8060 Terminals User Manual for more information.

Pages

This parameter determines the number of host screens (or pages) stored at the terminal, to a maximum of **16**.

The 9150 reduces data transmitted to the terminals by using the terminal's capability to store a page of data for each screen it displays. The 9150 maintains an image of each page stored at the terminal. After receiving an application screen, the 9150 tries to match the screen with a stored page.

If a similar page is already in the terminal's memory, the 9150 instructs the terminal to re-display its copy of the page; only the necessary changes are sent from the controller. If no match is found, the complete page is sent to the terminal over the radio link.

*Note: There is a corresponding parameter on the terminal itself, and the **actual** number of saved pages will be the **smaller** of the two values.*

Transmit Line

When this feature is **enabled**, all modified data at the terminal will be automatically transmitted when the operator enters data into a *transmit-upon-entry* field.

The value in this textbox specifies the line on the screen which is designated the *transmit line*. The last entry field above or on the transmit line on the screen will be identified as the *transmit-upon-entry* field. If any entry fields exist on lines below the transmit line, no entry field will be designated as the *transmit-upon-entry* field.

A value of **0** (zero) disables this feature. A value of **24** will cause the *last* entry field on each application screen to be defined as *transmit-upon-entry*.

AIAG

This parameter provides auto-locate and fill for input coming from bar code readers. When bar code data is entered at a terminal, the terminal searches for "AIAG" fields on the current page that can accept the bar code data. The data preloaded into the "AIAG" field by the application program determines whether or not the bar code data is accepted.

At the 9150 mini-controller, a decimal value of an ASCII character from **0** to **127** is set to match the "AIAG Field Identifier" set at the host. A value of **0** disables this feature.

The format of the preloaded data is as follows:

`<mode> <AIAG prefix(data)>`

The mode character used with the command allows for different operating modes to suit various application operations. The automatic locate and fill operation applies only to data received from a bar code reader. Descriptions of the modes and AIAG prefix are listed in the table below. **These modes are set at the host.**

Mode	Function
0	Display prefix, send prefix to host.
1	Do not display prefix, send prefix to host.
2	Display prefix, do not send prefix to host.
3	Do not display prefix, do not send prefix to host.
+4	Add 4 to above values to cause transmit to host when all AIAG fields with 4 set are filled. Function 0 is "pressed" if there are any fields with this bit set, and all fields with this bit set have been filled by operator input.
+8	Add 8 to above values to allow overwrite of previously entered data.
+16	Add 16 to above values to indicate cursor position priority for search and fill.
AIAG Prefix (data)	The text to be matched in the AIAG field.

Table 5.3 Mode Functions And AIAG Prefix Description

Example:

The information in the sample screen below is defined at and sent *from* the host. It includes the "AIAG Identifier" – the tag identifying this as an AIAG field – followed by the mode, in this case Mode 0, and finally, the "AIAG Prefix" – I.
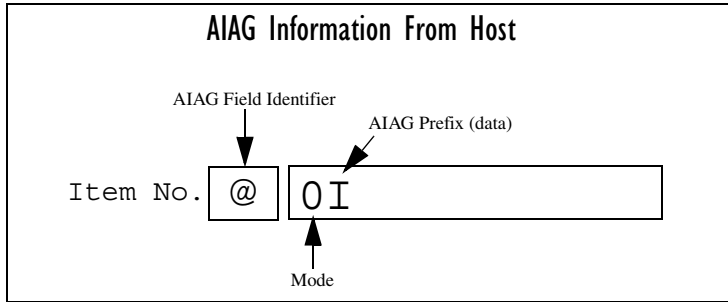
AIAG Information From Host

AIAG Field Identifier

AIAG Prefix (data)

Item No.   @   O I

Mode

Figure 5.7 AIAG Field Sent From The Host

When the information arrives at the terminal screen, the appropriate AIAG field for the scanned information is located using the "AIAG Identifier". Because Mode 0 was set at the host, the "AIAG Prefix" – I – is displayed on the terminal screen, and when this screen is completed, the prefix will be sent back to the host.
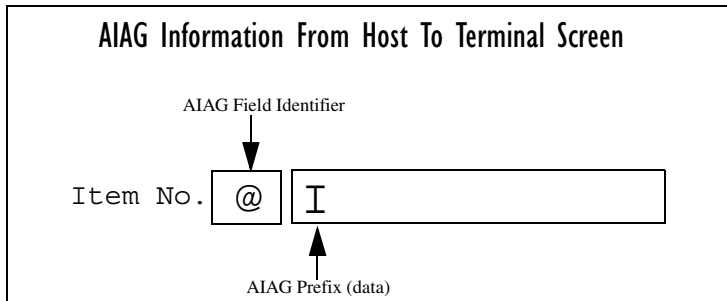
AIAG Information From Host To Terminal Screen

AIAG Field Identifier

Item No.   @   I

AIAG Prefix (data)

Figure 5.8 AIAG Field Sent To The Terminal

Visible Match Character

By inserting a special ASCII character directly before an entry field, the application program distinguishes a "match field" from an entry field. For example, suppose an angle bracket ">" is defined for visible match fields. Inserting ">" immediately preceding the entry field identifies it as a match field, as illustrated below.

Part #> _____

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** disables this feature. The ASCII decimal value entered at the 9150 must coincide with the value set by the application program.

To use the *Visible Match* feature, the host computer preloads data into a match entry field; the data is visible on the terminal screen. The preloaded data sent to a terminal can consist of exact characters, special match characters or a combination of the two. Refer to the table below for match characters recognized by Teklogix terminals.

If an entry does not match the preloaded data, the entry is displayed, the terminal beeps, and the cursor moves to the first position in the match field. The operator can either make another entry in the match field, or move the cursor to a new field. When an entry (even one that doesn't match the preloaded data) is made in a match field, the entry is sent to the host as part of the terminal's modified data during the next transmission.

Character	Description
#	Match a number.
&	Match a letter (either case).
^	Match an uppercase letter.
_	Match a lowercase letter.
|	Match an alphanumeric character.
"	Match a letter, number or space.
?	Match a punctuation character.
'	Match any character.
:	Match all character positions in the field with the preceding character.
,	Match any remaining characters, but not necessarily the remainder of the field, with the preceding character.

Table 5.4 Match Characters

Example:

Suppose you want to preload an entry field with a part number. If the part number is known, you can preload the field with that part number. If more flexibility is needed, and the part number always begins with two alphabetic characters followed by a hyphen and four digits, the match string for the field would be: `&&-####` .

Hidden Match Character

Unlike data in a "visible match" field, the preloaded data in a "hidden match" field is *not* displayed at the terminal.

Note: Refer to "Visible Match Character" on page 106 for detailed information about field matching.

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** disables this feature. The ASCII decimal value entered at the 9150 must coincide with the value set by the application program.

Serial I/O

Serial I/O fields are special entry and fixed fields that accept input from and output to a serial port. The application program distinguishes this field as *Serial I/O* by preceding the field with a special character.

If this character precedes a fixed field, the data will be sent to the terminal's serial port. If it precedes an entry field, the field accepts data from the terminal's serial port.

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** (zero) disables this feature.

Print Line

This parameter allows you to enter the starting line number of the print page in the application screen. A value of **1** causes the display page to be printed; a value of **0** (zero) disables this feature.

Print Form Length

This parameter sets the printer's form length in lines. The range is **0** to **24**.

Barcode

Barcode-input-only fields are special entry fields that only accept input from a bar code reader. The application program distinguishes an entry field as *barcode-input-only* by preceding the field with a special character.

The range for this parameter – **0** to **127** – represents the decimal values of ASCII characters. A value of **0** (zero) disables this feature.

Entry Line

This parameter contains the number of the first line displayed if there is no entry field in the upper-left portion of the screen, and if an entry field is at or below this line.

The *Entry Line* parameter allows an automatic offset within the host screen, so that the area displayed by the terminal includes an entry field that would normally be out of bounds. Normally, Teklogix terminals only display the upper-left corner of the application screen because of their smaller display size.

Field Overhead

This parameter contains the maximum number of characters allowed between two *fixed* fields which still allows the 9150 to join them into one field.

Sometimes the 9150 will join two adjacent fixed fields and then send them as one field. This reduces the overhead on the radio link.

For example, if two fields were 4 characters apart and this parameter was '5', then these fields would be joined into one.

Command Region

This parameter defines a region of the host screen which the 9150 will examine for the presence of reserved commands.

The four numbers in the *Command Region* textboxes represent the row and column addresses of the upper left corner and the lower right corner of the command region. The first textbox of each pair contains the row number; the second contains the column number. The range of row values is **0** to **24**; column values are **0** to **80**.

To define the last two lines of the host screen as the command region, for example, enter the values *23, 1* and *24, 80*.

Currently, the only command supported is *ALARM* (refer to page 100 for details on this command). When the word "ALARM" is placed anywhere within the command region, the 9150 will send a TESS *beep* command to the terminal.

5.3.4.2   Protocol Options

This page differs depending on the type of emulation and protocol selected in the *General Host Options* page. The 9150 displays this version of the *Protocol Options* page when you select the emulation/protocol combination of *5250/Telnet* for this host.

Terminal Type

This parameter allows you to choose the type of terminal to be emulated by the 9150 for this host. At present there are two choices of terminal for *5250/Telnet*: the **IBM 5251-11** and **IBM 5555-B01**.

Host Port

This parameter allows you to enter a host port value for the selected *5250/Telnet* host connection. The default value is **23**.

Maximum Sessions per Terminal

This parameter contains the maximum number of telnet sessions which are allowed to originate from each terminal. The range is **0** to **127**, with a default value of **4**.

First Local Terminal Port

This parameter contains the port number from which the first terminal will connect on outbound telnet sessions. The default value is **0**.

Local IP Address to Bind

This parameter contains the IP address of the network adaptor from which the first terminal will connect on outbound telnet sessions.

First Terminal Listen Port

This parameter specifies the first port number at which the 9150 will listen for telnet connection requests to the terminals. The default value is **0**.

Actively Negotiate with Host

If this parameter is enabled, the 9150 negotiates with the host during setup of the telnet connection.

5.3.4.3　Function Key Mappings

This page differs depending on the type of emulation selected in the *General Host Options* page. The 9150 displays this version of the *Function Key Mapping* page when you select *5250* emulation for this host.

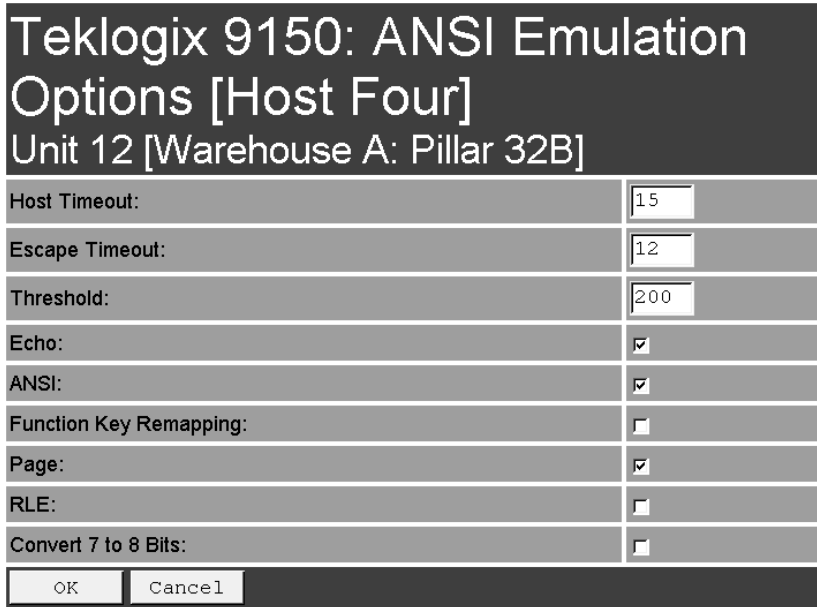| Teklogix 9150: 5250 Function Key Mappings [Host Three]						
Unit 12 [Warehouse A: Pillar 32B]						
F1:	F1	F14:	F14	F27:	F17	
F2:	F2	F15:	F15	F28:	F18	
F3:	F3	F16:	CLEAR	F29:	UP	
F4:	F4	F17:	PRINT	F30:	RESET	
F5:	F5	F18:	HELP	F31:	ENTER	
F6:	F6	F19:	F19	F32:	ENTER	
F7:	SESS	F20:	F20	F33:	ENTER	
F8:	F8	F21:	F21	F34:	ENTER	
F9:	F9	F22:	F22	F35:	ENTER	
F10:	F10	F23:	F23	F36:	ENTER	
F11:	F11	F24:	F24	F37:	ENTER	
F12:	F12	F25:	DOWN	F38:	SELECTOR	
F13:	F13	F26:	F16	F39:	ENTER	
OK	Cancel					

Function key n

The *Function Key* parameter allows you to select a code that will be sent to the host when you press a function key on the terminal. Each function key may be chosen from the same range of possible codes; however, each function key has a different default code. The default values are shown on this page.

5.3.5   ANSI/Telnet

5.3.5.1   Emulation Options

The 9150 displays this version of the *Emulation Options* page after you have selected the *ANSI/Telnet* emulation/protocol combination for this host connection.

Teklogix 9150: ANSI Emulation Options [Host Four]
Unit 12 [Warehouse A: Pillar 32B]

Host Timeout:	15
Escape Timeout:	12
Threshold:	200
Echo:	☑
ANSI:	☑
Function Key Remapping:	☐
Page:	☑
RLE:	☐
Convert 7 to 8 Bits:	☐

OK   Cancel

Host Timeout

The *Host Timeout* is the interval (in *ticks*, or 60ths of a second) between bursts of data received from the host. The range is **0** to **255**, with a default value of **15**.

If the 9150 does not receive any characters from the host after this timeout has elapsed, it assumes that the host has finished sending data and is waiting for user input (in other words, it assumes that a screen of data has been completed).

⚠ *Important:*   *The* Page *parameter (page 115) must be **enabled** in order to change the value in the* Host Timeout *parameter.*

Escape Timeout

The *Escape Timeout* is the length of time (in *ticks*, or 60ths of a second) that the 9150 will hold an "ESC" received from the host, and consider the next received byte to be part of an escape sequence. The range is **0** to **255**, with a default value of **12**.

When this timeout has elapsed, the host will have to send another "ESC" character to start an escape sequence.

Note: *This is especially important when an ESC is at the end of a data packet.*

Threshold

The *Threshold* is the minimum number of bytes of update data for the terminal screen which must be received from the host before the 9150 will store the screen as a new "saved page". The range is **0** to **999**, with a default value of **200**.

Important: *The* Page *parameter (page 115) must be* **enabled** *in order to change the value in the* Threshold *parameter.*

Echo

If this parameter is **enabled**, the 9150 uses *"Smart" Echo*. This mode reduces the amount of data sent to the terminal by decreasing the number of radio transmissions.

Ordinarily, when a character mode application is being used, each keystroke is sent to the host in one transmission, and the character is echoed by the host in another transmission. When *"Smart" Echo* is **enabled**, the 9150 will not send the host echo to the terminals if it matches the data sent from the terminal. Thus, the number of radio transmissions is reduced.

This mode also reduces or eliminates the delay between typing a character on the keyboard and displaying the character echoed by the host. The maximum number of characters waiting for echo is **25**. Any additional characters will be sent to the host but not displayed.

Notes:

1. *This parameter also determines whether an ANSI parameter query is sent to the terminal.*

2. *"Smart" Echo also needs to be enabled at the terminal (refer to the 7030/8055/8060 Terminals User Manual).*

ANSI

If this parameter is **enabled**, the 9150 uses ANSI *escape code filtering*. When escape-code filtering is **enabled**, ANSI escape codes not supported by the terminals will be filtered out of the data stream to reduce radio traffic. The terminals currently support most, if not all, standard ANSI escape sequences, so this parameter should be **disabled** in most cases.

Function Key Remapping

If this parameter is **enabled**, the 9150 remaps the function keys for this host connection as defined in the Function Key Remapping page ().

Page

If this parameter is **enabled**, the 9150 uses page saving**,** reducing data transmitted to the terminals.

The 9150 maintains an image of each page stored at the terminal. After receiving an application screen, the 9150 tries to match the screen with a stored page. If the page is already in the terminal, the 9150 instructs the terminal to redisplay its stored copy of the page; no data need be sent across the radio link for that page. If the 9150 finds no match for the page, the complete page is sent to the terminal.

Note: When page saving is enabled, the number of saved pages is that which is set on the terminal. Refer to the 7030/8055/8060 Terminals User Manual for details.

RLE

If this parameter is **enabled**, the 9150 uses run-length encoding (RLE) on the data it sends across the radio link. *RLE* compresses repeated characters going from the host to the terminal. If repeated characters are found in the data stream, the first one is sent, followed by a short escape sequence (3 or 4 characters) which tells the terminal how many times to repeat this character. In this way RLE compresses the data and decreases the total amount of radio-link traffic.

Convert 7 to 8 Bits

If this parameter is **enabled**, the 9150 converts 7-bit control sequences to their 8-bit equivalents in ANSI data streams going to the terminals. This replaces two-character escape sequences with a single equivalent character, compressing the data.

5.3.5.2 Protocol Options

This page differs depending on the type of emulation and protocol selected in the *General Host Options* page. The 9150 displays this version of the *Protocol Options* page when you select the emulation/protocol combination of *ANSI/Telnet* for this host.

Teklogix 9150: ANSI Telnet Protocol Options [Host Four]	
Unit 12 [Warehouse A: Pillar 32B]	
Terminal Type:	VT220
Host Port:	23
Maximum Sessions per Terminal:	4
First Local Terminal Port:	0
Local IP Address to Bind:	0.0.0.0 :
First Terminal Listen Port:	10000
TCP Session Request Key:	1
Session Cycle Key:	2
Last Active Session Key:	5
Auto-telnet/login Enable:	AUTO-TELNET/LOGIN
Auto-telnet Host:	
Auto-telnet Terminal Prompt:	Press ENTER to login.
Auto-login User ID:	
Auto-login Password:	
Auto-login User ID prompt:	gin:
Auto-login Password prompt:	word:
Auto-login failed login:	incorrect
OK Cancel	

Terminal Type

This parameter specifies the type of terminal to be emulated by the 9150, either a **VT100** or **VT200**.

Host Port

This parameter specifies the value for the host port for the selected ANSI host connection. The default value is **23**.

Maximum Sessions per Terminal

This parameter contains the maximum number of telnet sessions which are allowed to originate from each terminal. The range is **0** to **127**, with a default value of **4**.

First Local Terminal Port

This parameter specifies the port number from which the 9150 attempts a telnet connection for the first terminal. The default value is **0**.

Additional telnet sessions are assigned higher port numbers.

Local IP Address to Bind

This parameter specifies the IP address of the 9150 interface that connects to this host. It is used along with the local port numbers to create a unique socket for each terminal session.

First Terminal Listen Port

This parameter specifies the lowest port number at which the 9150 listens for telnet connections initiated by the host. The default value is **10000**.

TCP Session Request Key

This parameter contains the decimal ASCII character code of the character which will prompt the terminal to request a new ANSI terminal session. The range is **0** to **255**, with a default value of **1**.

Session Cycle Key

This parameter contains the decimal ASCII character code of the character which will prompt the terminal to display the next ANSI terminal session. The range is **0** to **255**, with a default value of **2**.

Last Active Session Key

This parameter contains the decimal ASCII character code of the character which will prompt the terminal to display the last ANSI terminal session. The range is **0** to **255**, with a default value of **5**.

Auto-telnet/login Enable

This parameter enables you to disable or enable automatic connection of telnet sessions from terminals to this host. The choices provided are: **Disable**; **Enable Auto-telnet**; **Enable Auto-telnet/login**. The default value is **Disable**.

When *Auto-telnet* is **disabled**, telnet sessions from the terminals to the host must be initiated manually from the terminals.

When *Auto-telnet* is **enabled**, the 9150 initiates one telnet session from each terminal whose terminal number is mapped to this host. Additional telnet sessions may be initiated from each terminal to the host, but they must be initiated manually.

Note: Auto-telnet sessions are only initiated for terminals which are "online" (turned on and operating properly on the Teklogix RF network).

When *Auto-telnet* and *Auto-login* are **enabled**, the 9150 initiates one telnet session from each terminal whose terminal number is mapped to this host. It then logs each session in to the host using the User ID and Password provided in this page.

Note: The User ID and Password is identical for all Auto-telnet sessions automatically logged in to this host.

Auto-telnet Host

This parameter contains the host name or IP address for the host to which the 9150 connects Auto-telnet sessions.

Note: *A host name placed in this textbox must be "resolvable" by the 9150: the 9150 must be able to obtain an IP address for it. For example, the host name may correspond to an entry in the 9150's host table, or the 9150 may be able to query a domain-name server.*

Any host name which can be used at the terminal's TCP> prompt may be used here.

Auto-telnet Terminal Prompt

This parameter contains the text presented to the user to request a login. The characters can be any ASCII string, with a **maximum of 32** characters. The default is no text, just press <ENTER> to login.

Auto-login User ID

This parameter contains the user ID presented by the 9150 to the host for the Auto-login sessions. The characters can be any ASCII string acceptable to the host, with a **maximum of 15** characters.

Auto-login Password

This parameter contains the password presented by the 9150 to the host for the Auto-login sessions. The characters can be any ASCII string acceptable to the host, with a **maximum of 15** characters.

Auto-login User ID prompt

The 9150 compares the text in this textbox to the text presented to it by the host. When they match, the 9150 assumes that the host has just sent its request for a user name, and it sends the user ID specified in the *Auto-Login User ID* parameter to the host. The characters can be any ASCII string, with a **maximum of 15** characters. The default text is **gin:** .

Note: *The match string should be as short as possible, yet long enough to uniquely identify the user-ID prompt. Do not include multi-part words separated by space characters, since some hosts send out characters other than space characters to present a space on the screen.*

Auto-login Password prompt

The 9150 compares the text in this textbox to the text presented to it by the host. When they match, the 9150 assumes that the host has just sent its request for a password, and it sends the password specified in the *Auto-Login Password* parameter to the host. The characters can be any ASCII string, with a maximum of 15 characters. The default text is **word:** .

Note: *The match string should be as short as possible, yet long enough to uniquely identify the password prompt. Do not include multi-part words separated by space characters, since some hosts send out characters other than space characters to present a space on the screen.*

Auto-login failed login

The 9150 compares the text in this textbox to the text presented to it by the host. When they match, the 9150 assumes that the host has just sent a string informing the terminal of a failed login attempt. The 9150 then presents the *Auto-telnet Terminal Prompt* on the terminal's screen to request the user to login manually. The characters can be any ASCII string, with a maximum of 15 characters. The default text is **incorrect** .

Note: *The match string should be as short as possible, yet long enough to uniquely identify the failed-login prompt. Do not include multi-part words separated by space characters, since some hosts send out characters other than space characters to present a space on the screen.*

5.3.5.3   Function Key Mappings

This page differs depending on the type of emulation selected in the *General Host Options* page. The 9150 displays this version of the *Function Key Mapping* page after you have selected the *ANSI/Telnet* emulation/protocol combination for this host connection.

Teklogix 9150: ANSI Function Key Mappings [Host Four]
Unit 12 [Warehouse A: Pillar 32B]

F1:	1b,4f,50,00,00,00,00,00
F2:	1b,4f,51,00,00,00,00,00
F3:	1b,4f,52,00,00,00,00,00
F4:	1b,4f,53,00,00,00,00,00
F5:	1b,5b,31,36,7e,00,00,00
F6:	1b,5b,31,37,7e,00,00,00
F7:	1b,5b,31,38,7e,00,00,00
F8:	1b,5b,31,39,7e,00,00,00
F9:	1b,5b,32,30,7e,00,00,00
F10:	1b,5b,32,31,7e,00,00,00
F11:	1b,5b,32,33,7e,00,00,00
F12:	1b,5b,32,34,7e,00,00,00
F13:	1b,5b,32,35,7e,00,00,00
F14:	1b,5b,32,36,7e,00,00,00
F15:	1b,5b,32,38,7e,00,00,00
F16:	1b,5b,32,39,7e,00,00,00
F17:	1b,5b,33,31,7e,00,00,00
F18:	1b,5b,33,32,7e,00,00,00
F19:	1b,5b,33,33,7e,00,00,00
F20:	1b,5b,33,34,7e,00,00,00
F21:	1b,5b,33,35,7e,00,00,00
F22:	1b,5b,33,36,7e,00,00,00
F23:	1b,5b,33,37,7e,00,00,00
F24:	1b,5b,33,38,7e,00,00,00
F25:	1b,5b,32,39,7e,00,00,00
F26:	1b,5b,34,30,7e,00,00,00
F27:	1b,5b,34,31,7e,00,00,00
F28:	1b,5b,34,32,7e,00,00,00
F29:	1b,5b,34,33,7e,00,00,00
F30:	1b,5b,34,34,7e,00,00,00

[OK] [Cancel]

Function key n

The *Function Key* parameter allows you to select a code that will be sent to the host when you press a function key on the terminal. Each function key may be chosen from the same range of possible codes; however, each function key has a different default code. The default values are shown on the screen on page 121.