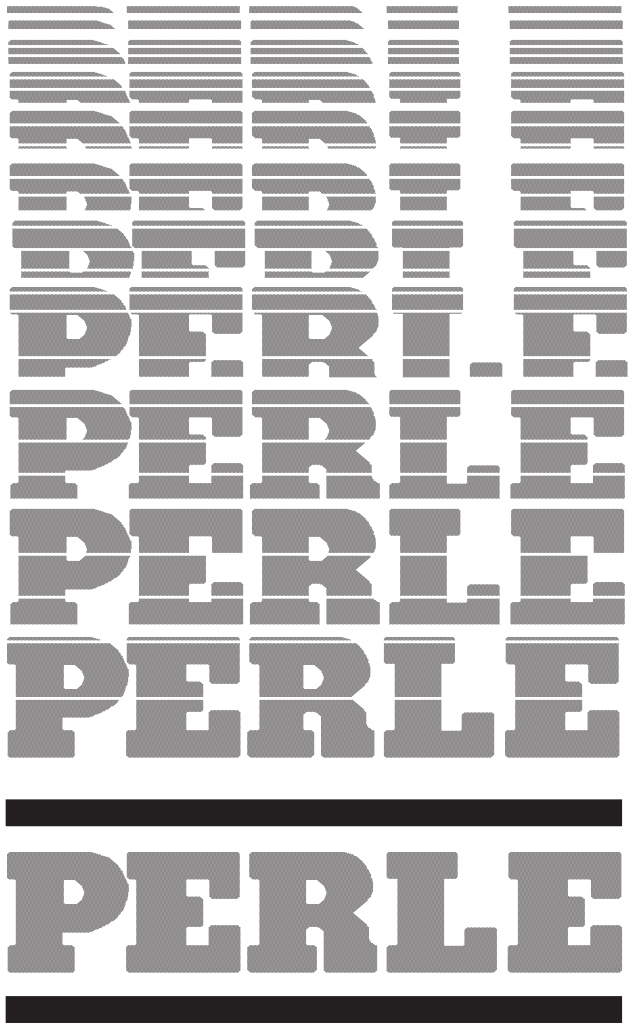


prllogo2.pcx

Friday, April 2nd, 1992

App. A Correction

Part number

Table of Contents

APPENDIX C
C

INSTALLATION

The Perle Model 3i Protocol Converter can connect up to seven ASCII devices to a standard Twinaxial port on an IBM System/3X computer. Each device may be attached either directly, or remotely through the use of asynchronous modems.

The Model 3i can be attached to the System/3X computer through:

- One of the workstation controller ports with a standard Twinaxial cable;
- A Perle 8294/8394/394 controller; or,
- An IBM 5294/5394 controller.

The Model 3i can share the computer port with other Twinaxial devices by using the cable--through feature.

2.1 Supported Devices

The Model 3i provides connections for terminals, printers and PCs. In addition, PCs or terminals may have auxiliary printers.

Terminal Support 2.1.1

The Model 3i supports a variety of terminal types. For a complete list of the terminal types supported, see Appendix B.

Terminals may be run at 300, 600, 1200, 2400, 4800, 9600, 19200, 38400 baud.

Printer Support 2.1.2

The Model 3i supports a number of different printers. For a complete list of the printers supported, see Appendix C.

It should be noted however that due to limitations in some ASCII printers not all features of the emulated printers will be supported on all ASCII printers.

Personal Computer Support 2.1.3

Personal Computers running terminal emulators that are compatible with the terminal types listed in Appendix B. Packages such as PerleTALK, Crosstalk, Procomm, Dectek, etc. can be used for terminal emulation.

IBM Device Emulation 2.1.4

The Model 3i emulates the following IBM devices:

- 5251 Model 11 Display Station
- 5291 Display Station
- 5292 Model 1 Display Station

- 3180 Model 2 Display Station
- 5256 Model 3 Printer
- 5224 Model 2 Printer
- 5225 Model 4 Printer
- 5219 Model D1 Printer
- 4214 Model 2 Printer
- 3812 Model 2 Printer

Character Set Support

The Model 3i supports the following character sets:

- US
- Multinational
- UK
- Canadian French
- Denmark
- Finland
- France
- Germany
- Italy
- Sweden
- Swiss/French
- Swiss/German
- Spain

2.2 Operating Environment

This section contains information on the environmental requirements of the Model 3i.

2.2.1 Electrical Requirements

The Model 3i has a universal input power supply that will accept input voltages between 90 and 260 VAC at 50/60 Hz.

Other electrical specifications for the Model 3i are:

Voltage	115 VAC	220 VAC
Phase	1	1
Current	0.25 A (MAX)	0.19 A (MAX)
Watts	17 W (MAX)	17 W (MAX)
Heat Output	58 BTU/hr	58 BTU/hr

Each Model 3i has a three--wire power cord that includes an equipment ground wire. Be sure that correctly grounded receptacles are located within reach of the power cord and out of traffic areas.

The Model 3i will operate satisfactorily using normal power. There are, however, many outside sources that can cause transient electrical noise signals or voltage level variations that may affect system operation.

Typical sources of such electrical noise are:

- Air conditioning devices,
- Electrostatic copying machines,
- Electric welders,
- Large brush--type motors, and
- Elevators.

Avoid using electrical circuits that are shared with any of the above equipment.

2.3 Environmental Requirements

The following environmental conditions must be maintained to provide proper operation and reliability.

Temperature	10 to 30C
	(50 to 85^{o}F)
Maximum Wet Bulb	25C (77^{o}F)
Relative Humidity	20 to 80%

The maximum heat output of the Model 3i is 150 BTU/hour.

Static 2.3.1

With low humidity levels, static charges generated (usually during the winter season) by movements of people, carts, furniture, paper, etc. are more readily stored in certain types of floors, floor coverings and furniture. These charges may be high enough that, if discharged by contact with another person or object, they will create a static shock. If discharged on or near data processing or other electronic equipment, these charges can cause interference.

To minimize electrostatic discharge, avoid the following:

- High--resistance floor surface material;
- Carpeting that does not have antistatic properties;
- Plastic seat coverings; and,
- Low humidity.

Avoid environments where particulate, liquid and gaseous atmospheric contaminants exist. Such environments can cause corrosion of copper and other metals used in computer systems. Extended corrosive growth in any computer system can produce electrical short circuits or contact failure that can result in system malfunctions.

In addition, systems should not be placed in high traffic areas such as hallways and aisles.

Electromagnetic Interference

Avoid placing a system in an area of high electromagnetic interference that can be radiated or conducted.

Such areas may exist within 500 meters (1650 feet) of radio frequency sources (transmitting antennas, AM, FM, TV and two--way radio or radar) and within 50 meters (165 feet) of certain industrial machines (induction heaters, arc welders, etc.), and high energy power lines. Other sources of electromagnetic interference may include transformers, power distribution panels and certain electrical heating systems.

Power supplies in printers and other data processing equipment can also cause display screen interference. To avoid this type of interference, maintain a minimum distance of 1 metre (3 feet) between display stations and printers or other data processing equipment.

2.4 Placement

The Model 3i should be placed to allow for adequate service clearance.

In addition, the following guidelines should be followed:

- Place the Model 3i so you can see the LED display and work with both a display station and the Model 3i's diskette drive at the same time; and,
- Do not place anything heavy on top of the Model 3i.

Due to the limitations of the Twinax cable, please observe the following:

- If the Model 3i is at the end of a cable to the System/3X or AS/400, the total length of Twinax cable between the Model 3i and the System/3X cannot exceed 5000 feet (1525 meters); or
- If Cable--Thru is being used, the total distance between the System/3x or AS/400 and the device at the end of the connection cannot exceed 5000 feet (1525 meters).

Minimum Clearances

The following minimum clearances are required for proper operation and cooling of the Model 3i:

Left	(2 inches)	5 cm
Right	(2 inches)	5 cm

Left and right are determined based on facing the front of the unit.

2.5 Installation Procedure

After completing the installation and configuration procedure, Perle recommends that you backup your configured Model 3i disk.
This can be done on any IBM PC or compatible with a 3.5" (720K) disk drive.
USE THE DOS DISKCOPY COMMAND to perform the backup.
For more information, see your DOS manual.

This section provides instructions and information for installing the Model 3i for the first time. This means that the Model 3i has the factory--set default values. If this is not the first time your Model 3i has been installed, the default values may be restored (see section 4.2).

Although the terminal can be connected directly to the Model 3i or remotely through modems, first time users are advised to use a directly connected terminal for initial configuration. (This simplifies installation as well as initial problem detection.)

The default configuration parameters have been chosen so that many users will be able to use the Model 3i without re--configuring the settings. It is advisable to check the defaults shown below to determine if the factory settings conform to your installation environment.

Figure 5--1 illustrates the rear panel of the Model 3i. Refer to this diagram during the installation process.

Default Hardware Settings

The hardware factory defaults are:

Cable--Thru	1
Config Mode	N
All DCE/DTE settings	DCE

Backpanl.pcx

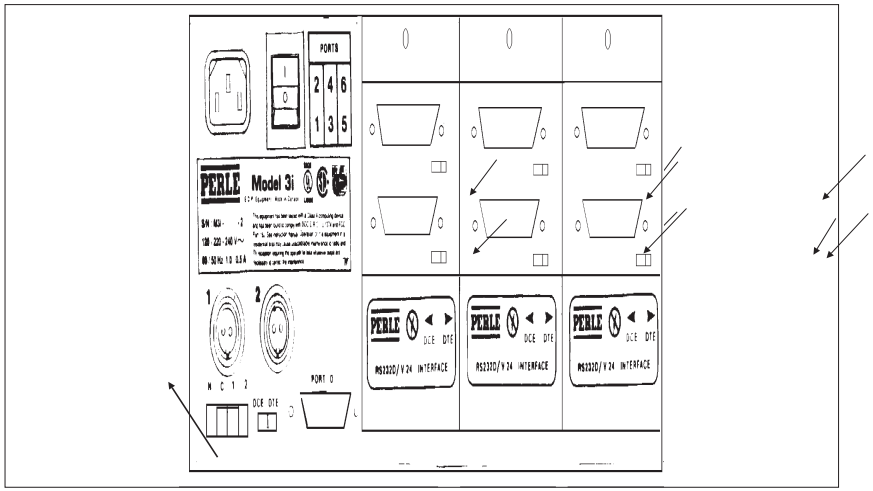


Figure 2 - 1DCE/DTE SWITCH LOCATION

Equipment Requirements

The following equipment is necessary for the installation:

- An IBM System/36, System/38 or AS/400 computer with an available work station controller interface or a work station with an available Cable--Thru port (the termination switch must be disabled).
- Model 3i Protocol Converter
- An ASCII device or PC with terminal emulation supported by the Model 3i
- RS--232D cable to connect the Model 3i and the terminal. The RS--232D Cable is used to connect the asynchronous terminal (or printer) to the Model 3i. The cable used must meet the following requirements:
  - It must be a straight--thru cable for direct connection. (Cross--over cables may be used for modem elimination installations, if required. Otherwise, cross--over is provided by the **DTE/DCE switch**.)

- The recommended cable pin configuration is pins 1 through 8 and 20. At a minimum, the cable must support pins 2, 3,and 7. If a cable with the minimum configuration is used, the device ready configurator option must be set to NONE.
- The Model 3i requires a male DB25 connector.

- An appropriate length of standard Twinaxial cable to connect to the System/3X interface.

Installation Procedure 2-513

1. Plug the supplied power cord into the Model 3i and into an appropriate AC outlet. Use only a grounded outlet—do not use adapters.
2. Set the **DCE/DTE Switch** for the port you intend to use to configure the Model 3i (normally Port 0) to the DCE position for direct connection of the terminal.

   As shown in Figure 1--1, each port has its own DCE/DTE switch.

3. Plug the power cord of the terminal into an appropriate outlet.

4. Connect the RS--232D cable to the terminal's main port. Connect the other end to Port 0 of the Model 3i.

5. Set the terminal to **No Parity, 8 Data Bits, 1 Stop Bit**. Select any baud rate which is supported by the Model 3i.

   For more information on setting up the terminal, refer to the section on your specific terminal.

6. Connect one end of the Twinax cable to the Twinax Port 1 on the rear panel of the Model 3i.

7. Connect the other end of the Twinax to either the System/3X or AS/400 work station interface, or to the cable through port of another IBM work station.

   The Twinax port of the Model 3i can be attached to the System/3X or AS/400 host computer by connecting it:

   - Directly to the Twinaxial port on the host computer, using a 100 ohm Twinax cable.
   - To the Cable--Thru port of an IBM work station, in turn connected to the IBM computer. If this is used, the Termination switch on the IBM work station must be disabled.
   - To an IBM 5251 Model 12, IBM 5294, IBM 5394, Perle 8294 or Perle 394 remote work station controller, .

   The Model 3i also provides a Cable--Thru port for downstream attachment of additional IBM work stations.

8. Set the Cable--thru Switch on the rear panel of the Model 3i as appropriate for the installation environment. If there are other devices downstream (using the Cable--Thru port), then set the switch to the 2 position. If no other work stations are connected, use the 1 position.

9. Insert the System Disk into the disk drive.

10. Power on the Model 3i and terminal.

    The Power light on the front panel of the Model 3i should come on and show Green. If it does not come on, check the power cords and outlets to make sure they were connected properly. If it comes on Red, there is a fault (see Chapter 7).

The System light on the front panel comes on Red. When the self--test is complete, the System light turns Green. If the System LED turns red and remains on, this indicates a system error. These errors are discussed in Chapter 7.

11. Wait while the Model 3i performs its self tests and the disk drive light goes out, indicating that the unit has completed the load process.

12. Depress the AUTOBAUD key sequence for your terminal as defined in Appendix C. The Model 3i is initially set for AUTOBAUD. The AUTOBAUD key sequence sets the correct baud rate for the Model 3i. The AUTOBAUD key sequence is **Return** or **Enter** on most terminals.

    If the terminal was plugged in after power up or if power was cycled on the terminal, you may need to depress the AUTOBAUD key a few more times to enable the terminal to reset the communication line error and perform autobaud sensing.

    The following Model 3i message should appear on the device.

Perle Model 3i -- Vxx.xxX MMM DD YYYY

where **Vxx.xxX** is the Model 3i version number and **MMM** is the month, **DD** the date and **YYYY** the year of the latest revision.

If this message does not appear:

- Verify that the Port 0 front panel **DSR** and **DTR** lights are on, and that the **TXD** light flashes with each **Return**. If not, check the terminal connections.
- If the **I/O Fault** indicator flashes, the terminal is not set up properly. Check the parity, data length, etc. settings of the terminal. If the I/O Fault light comes on as a result of a cable connection problem or power cycling on the terminal, the error condition will reset itself after the eighth character entered.

For more information on the front panel indicators, see the following section.

The Model 3i and terminal are now communicating. Refer to Chapter Three to configure the Model 3i for your requirements.

2.6 Model 3i Front Panel Indicators

The front panel of the Model 3i includes the following:

PORT Indicator Lights 2.6.1

There are 7 banks of 6 lights. The banks are labeled PORT 0, PORT 1, PORT 2 ... PORT 6 and display the communications status of each ASCII port. Each light in an individual group indicates the status of one of the 5 major signals on the RS--232 ports and is labeled accordingly:

TX	Transmit Data Indicator
DT	Data Terminal Ready
ER	Error
RX	Receive Data
DS	Data Set Ready
CD	Data Carry Detect/Ring Indicator

TWINAX LEDs 2.6.2

The seven TWINAX LEDs indicate the communications status of the Twinax line, with one LED for each workstation address.

SYSTEM LED 2.6.3

The SYSTEM LED displays the results of the power--on diagnostics or indicates a serious problem detected during operation. The SYSTEM LED is green for SYSTEM when operating normally, or red for TROUBLE. The SYSTEM LED also is red (TROUBLE) when the POWER LED is red.

POWER LED 2.6.4

This displays the status of the power supply output.

Red indicates there is a problem. Green indicates that the power supply output is normal.

Use of these indicators is described in more detail in Chapters 3 through 5.

CONFIGURING THE MODEL 3i

The configuration process is used to establish the operating characteristics for all the ports, and to change the operational parameters of each work station. It may also be used to establish language translation tables as well as defining new keyboard input sequences.

The Model 3i comes with a default configuration that is stored in the default configuration files on the disk. This permits the user or support personnel to access any port on the Model 3i, load the configuration and modify it as appropriate. Thereafter, changes can be made to the configuration by using an ASCII display terminal attached to one of the asynchronous ports and entering Configuration Mode.

All Configuration Mode functions are performed using a series of interactive menus that display the available parameters and the current settings for each.

The default configuration can be restored using the procedure described in Section 4.2. This can only be done when the Model 3i is powered on in **Config.** mode. The default configuration is stored as a separate file on the system disk and is not modifiable by the user.

To protect against accidental re--configuration, entry into the Configuration Mode is protected by a password.

4.1 Configuration Background Information

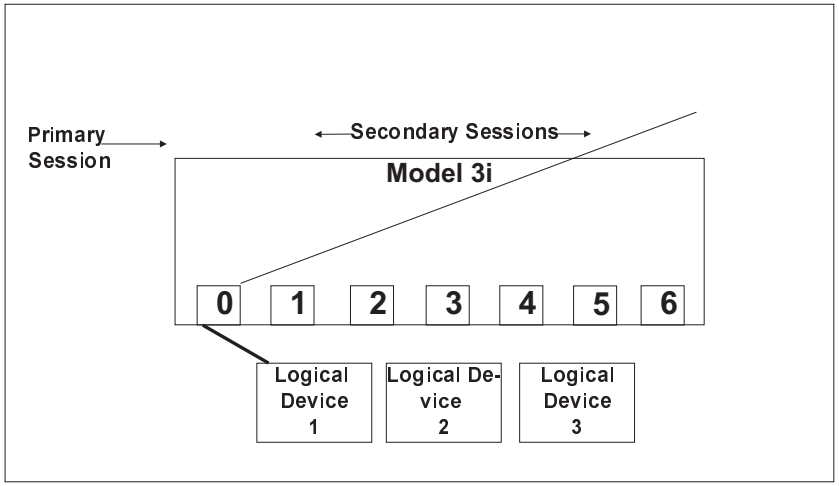


Figure 4 - 2 MODEL 3i WITH MULTIPLE SESSIONS

In order to be able to configure the Model 3i, it is important that you understand the Model 3i and its relationship with both the host and the devices it supports.

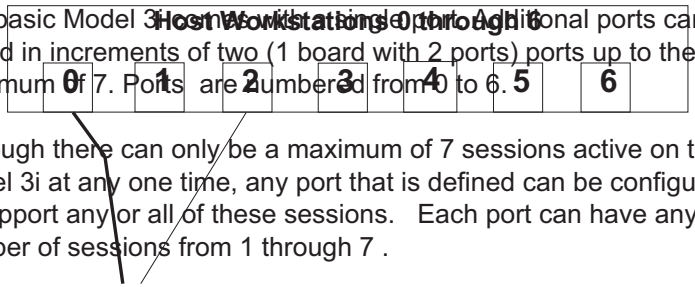
As the following drawing illustrates, the Model 3i is capable of providing access for up to 7 host logical workstation addresses through from 1 to 7 ports. In fact, thanks to the Model 3i's Multi--Session feature, a single device appears to the host as multiple devices.

Before proceeding, in order to clarify Multi--Session for those who may be unfamiliar with the concept, the following terms are used to refer to various aspects of the Multi--Session environment:

Session	This describes a logical connection between a host workstation and a logical device.
Logical Device	This is connected to a workstation. A physical device connected to a port acts as multiple logical devices, one for each session on that port.
Primary Session	This is the first session on any port. This session is special because it is required in a multi--session environment and must use a display type device. Anything that happens to the primary session happens to all sessions.
Secondary Session	Sessions 2 through 7 on a port.

The Workstation addresses are the logical addresses that are known to the host. Each workstation is defined as supporting a specific type of IBM device emulation and a designated language with which it interacts with the device. Note that, if desired, one of the workstations can be allocated to an external device that does not use the Model 3i (e.g. Cable--Thru). This workstation is then unavailable for other use.

The basic Model 3i comes with a single port. Additional ports can be added in increments of two (1 board with 2 ports) ports up to the maximum of 7. Ports are numbered from 0 to 6.



Although there can only be a maximum of 7 sessions active on the Model 3i at any one time, any port that is defined can be configured to support any or all of these sessions. Each port can have any number of sessions from 1 through 7 .

If a port is configured to support more than one session, Session 1 for that port is automatically designated as the Primary Session. Each session configured on each port is specified as being one of the four session types: Display, Printer, Auxiliary Printer or None. In addition, each port has associated with it a specific device type and host workstation address/group name, as well as other information about the port configuration. If more than one session is to be configured on a port, the Primary Session must be a Display. Otherwise, additional sessions cannot be defined.

The workstation addresses become associated with the physical ports on the Model 3i or with sessions either during the configuration process or during the connect mode sequence.

Chapter 5 contains more information on how to use the multiple session capabilities of the Model 3i.

4.2 Default Configuration

The default configuration settings are:

Port Definition

Device Type	ANSI
Changeable?	Yes
Workstation Address	0
Changeable?	Yes

Session Type	Display
Baud Rate	Autobaud
Bits per Character	8
Parity	None
Stop Bits	1
Handshaking Method	XON

Workstation Definition

Device Emulation	5251
Reconnect Time Limit	0
Changeable?	No
Language	US
Connect Password	
Reconnect Password	
Inactivity Time Limit	None
Changeable?	No

Each of these settings and their meaning is described in more detail in sections 4.4 and 4.5.

The default configuration can only be restored when the configuration switch is set to **"C"**. The procedure to restore the default configuration is as follows:

1. Set the Configuration switch on the back of the Model 3i (see below) to the C position and power the Model 3i OFF and then ON again.

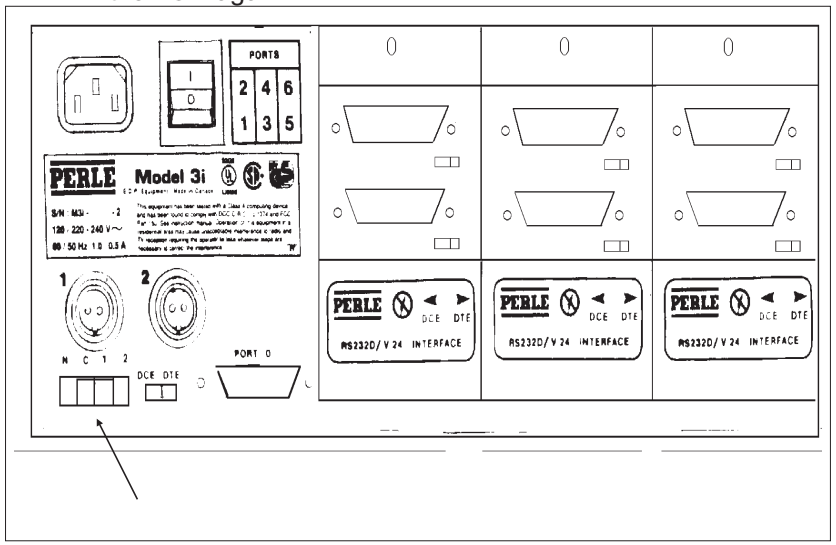


Figure 4 - 3 CONFIGURATION SWITCH ON BACKPANEL

Backpanl.pcx

This causes the default configuration to be re--loaded. You can now modify the existing configuration or proceed to step 2 to overwrite the existing configuration with the default configuration.

If you power on with the switch in the **C** position, the word "Config mode" will appear at the top of all configuration screens.

2. Select option 7 from the Main Configuration Menu.

   This causes the default configuration to be saved over the existing configuration.

4.3 Entering Configuration Mode

Note: Only one device can be in Configuration Mode at any one time.

The procedure to enter Configuration Mode will vary depending on whether or not your terminal already has a 5250 session.

If your terminal already has a session on the Model 3i:

1A. Enter the Configuration Mode Key Sequence.

In the default configuration, this is ESC ESC C.

The Password Screen then appears. Proceed to step 6.

If your terminal does not yet have a session on the Model 3i:

1B. Power on the Model 3i and a terminal. Proceed to step 2.

2. Depress the AUTOBAUD key sequence (see Appendix C -- usually **Enter** or **Return**) twice to establish the baud rate.

The System ID screen then appears, showing the software version number and the software revision date:

```
Perle Model 3i -- Vxx.xxX MMM DD YYYY
```

where **Vxx.xxX** is the Model 3i version number, MMM is the month, **DD** the date and **YYYY** the year of the latest revision.

The first time anyone connects to the Model 3i, the following message appears:

```
1=ENGLISH, 2=FRANCAIS, 3=DEUTSCH, 4=ITALIANO, 5=ESPANOL ===>
```

At this point you must pick the language in which you want all messages and prompts to appear when you are in the configurator. Select the appropriate number and press Enter. The following message will appear:

(n) Connected to port x

where **n** is the session number, and **x** the port number.

3. Press the **Space Bar** to continue and the following prompt appears:

(n) Enter Device type (XXXX):

XXXX is the device type currently defined for this session. For the default configuration, the device type is ANSI.

4. If you are using a terminal that is compatible with this device type, depress the AUTOBAUD key sequence. Otherwise, enter the terminal ID for your terminal.

   Typing **?** displays all valid terminal types.

5. When the prompt,

(n)Enter Work Station Address/Group (0):

appears, enter:

config

to go into Configuration mode.

6. The first time you enter Configuration Mode, the following screen will appear:

screen03.pcx

```
M3i                        Configurator Keyboard Country

 Type choice, press Enter.

 1.   US             15.  UK             29.  UK8
 2.   MULTINTL       16.  MULTINTL8
 3.   BELG.          17.  BELG8
 4.   CANADA F.      18.  CANADA F8
 5.   DANMARK        19.  DANMARK8
 6.   SUOMI          20.  SUOMI8
 7.   FRANCE         21.  FRANCE8
 8.   DEUTSCH.       22.  DEUTSCH8
 9.   ITALIA         23.  ITALIA8
 10.  NEDER.         24.  NEDER8
 11.  NORGE          25.  NORGE8
 12.  PORTUGAL       26.  PORTUGAL8
 13.  ESPANA         27.  ESPANA8
 14.  SVERIGE        28.  SVERIGE8

 Selection
 ===>

 F3=Exit
 Improper keyboard country choice may cause incorrect text display
```

Figure 4 - 4 CONFIGURATOR KEYBOARD COUNTRY SCREEN

Note: If your keyboard supports ISO--8859--1 tables (8--bit terminals) you should choose the country code with the suffix 8, For example, you should choose “UK8" for a UK keyboard that supports ISO--8859--1.

Once you have entered the Keyboard Country, the Password Screen will appear:

Screen01.pcx

```
M3i

                          Password Request


          Enter Password. . . . . .


 F3=Exit
```

Figure 4 - 5 PASSWORD SCREEN

If this is the first time you have entered Configuration mode or if a password has not been specified, simply press **Enter** to proceed to the next screen.

Otherwise, type in the password and press **Enter**.

The Main Configuration Menu is then displayed.

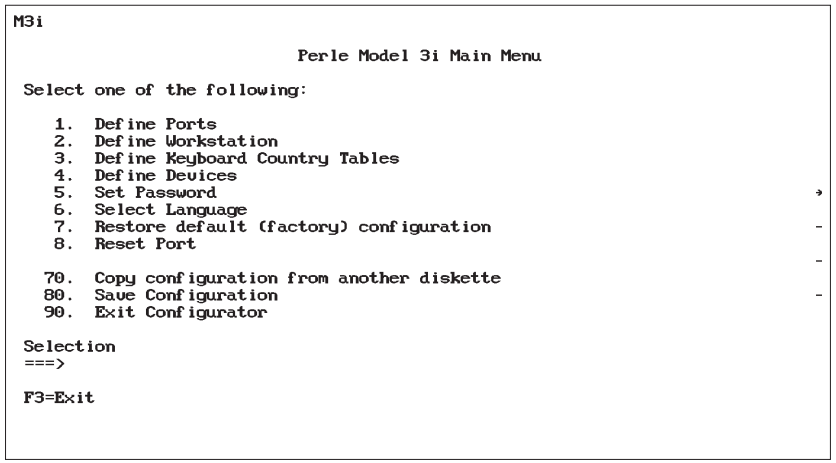


Figure 4 - 6 MAIN CONFIGURATION MENU

Screen04.pcx

Note: the system is designed to behave like a 5250 and from this point on, all keyboard and screen functions behave as described in the 5250 Terminal User's Guide.

The Main Configuration Menu provides access to the various configuration options, including:

- Define Ports
- Define Workstation Address
- Define Keyboard Country Tables
- Define Device
- Set Password
- Select Language
- Restore Default Configuration
- Reset Port

- Copy configuration from another diskette
- Save Configuration
- Exit Configuration

Each of these configuration options is discussed in greater detail in the other sections of this chapter.

When the operator selects an option from this menu, the correct input screens or sub--menus appear as necessary.

Configuration Mode Screens

When the Configuration screens appear, all of the fields are filled in with the current settings. If this is the first time the screen appears, the settings are the default settings.

To get a list of the valid options available for the current field, press **F4** (**CMD--4**) or refer to Appendix C for the sequence required for your terminal. Note that F4 is valid only for fields that have a variable number of responses. For example, F4 may also be used on the Device field on the Port Configuration Screen because additional devices can be defined.

Once a screen is displayed, the operator can move around the screen at will. When all the desired changes have been made, pressing the Enter key will indicate to the Model 3i to accept all the changes.

Configuration Mode Keys

While in Configuration Mode, the keyboard functions like a 5250 keyboard and the following commands will function accordingly. (Refer to Appendix C for the corresponding keys on your terminal):

Key	Function
Enter	Accept and validate the current screen, and save the changes.
Home	Go to first field on screen.

Cursor Up, Cursor Down, Cursor Right and Cursor Left	Move cursor around the page.
Roll Up and Roll Down	Move the screen up and down (where appropriate)
Character Backspace	Backspace
Field Advance	Advance to next field
Field Backspace	Retreat to previous field
New Line	Advance to the leftmost field of the next line with fields
Field Exit	Advance to next field (and erase everything after the cursor on current field)
Delete	Delete a character
Erase Input	Erase all input fields
Error Reset	Unlock keyboard
Insert	Enter insert mode
CMD--4	Display list of valid options for that field.
CMD--3	Exit and go to previous screen (discard all changes)

4.4 Changing the Port Definitions

The configuration of the physical ports that are installed in the unit can be changed by setting the various communications parameters as well as modifying the operating characteristics of the port.

Procedure 4.4.1

To change the port configuration:

1. With the Main Configuration Menu displayed, type **1** to select the Define Ports option and press **Enter**.

   The Port Request Screen appears with Port 0 shown opposite the Port Number prompt.

Screen05.pcx

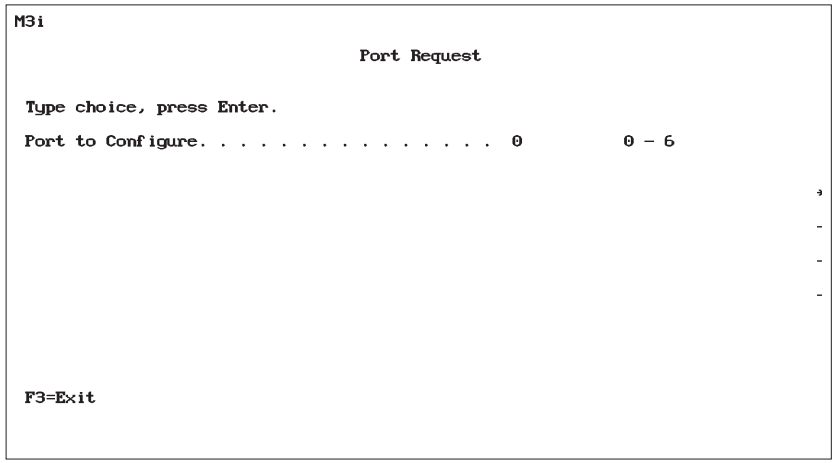


Figure 4 - 7 PORT REQUEST SCREEN

2. Type in the number of the port to be defined and press **Enter**.

   The Port Definition Screen is then displayed.

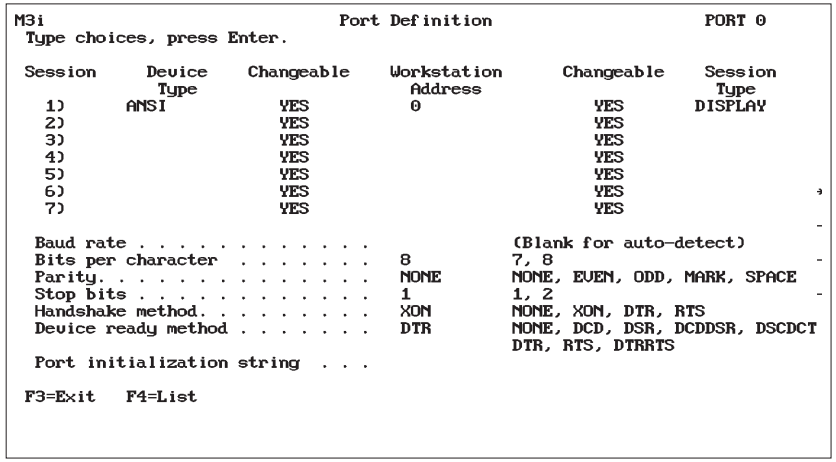


Figure 4 - 8 PORT DEFINITION SCREEN

Screen06.pcx

This screen allows the port to be configured to support up to 7 distinct and simultaneous sessions. For each session, it requests the following information:

Device Type

The terminal (or printer) ID which corresponds to the device being used. The device types include all those for which Perle supplied drivers, as well as those modified by the user.

The default device type is ANSI.

Pressing **F4** (**CMD4**) lists all the valid device types. Appendices C and D also contain lists of the valid device types.

Workstation Address

The Workstation Address is the address or group name with which the host is to communicate in this session. Workstation addresses can be associated with a group to permit dynamic selection of the address at connect time. Press **F4** for a

complete list of the groups that have been defined.

If a group name is specified in this field, or in response to a Connect Mode prompt, at connect time the Model 3i finds the first available workstation address with the same group name. This feature can be used to group similar workstation types so that users dialling in are guaranteed of getting the proper type of workstation.

Note that all workstations in a group must have the same configuration.

The default Workstation Address is 0.

Valid responses are 0 through 6 or a character name of up to eight characters.

Changeable

In addition to defining the information for each session, the Port Definition Screen controls whether or not the Device Type and Workstation Address can be varied by the user at connect time.

If the user is to be allowed to modify the Device Type modified at connect time for a particular session, the word YES must be entered in the Changeable field just to the right of the Device Type for that session. If the Workstation Address can be modified at connect time for a particular session, the word YES must be entered in the Changeable field just to the right of the

Workstation Address for that session.

If a printer device type is selected, the changeable parameters cannot be overridden at connect time.

Session Type

The Session Type indicates the type of session being configured.

The default Session Type is Display.

The valid Session Types are:

Printer

Display

Auxiliary

PCS400

PCS400SC

This field must be filled in. If the Session Type is blank, then the session is not defined and the Model 3i will not attempt to connect the session.

To define multiple sessions for a port, the primary session must be defined.

The primary session (Session 1) cannot be defined as an auxiliary session.

If the primary session is defined to be a Printer or PCS400 type, then the remaining sessions must not be defined.

If the primary session is defined to be a Display or PCS400SC type, then other sessions may be defined.

The Port Definition Screen also controls the following communication parameters for the port:

Baud Rate

The Baud Rate is the speed at which information is exchanged between the device and the Model 3i port.

Any of the following baud rates can be specified: 300, 600, 1200, 2400, 4800, 9600, 19200 and 38400. In addition, the field can be left blank to indicate that the baud rate is to be detected automatically by the Model 3i.

The blank setting (for AUTOBAUD) is not valid if running the primary printer session or a PCS400 session.

Bits per Character

Specifies the number of data bits per character, excluding the parity bit. This must be set to match the data format of the attached terminal or printer.

Valid responses are 7 or 8.

Parity

This determines the type of parity checking employed. The value entered here must agree with the method used by the terminal or printer.

Valid responses are NONE, ODD, EVEN, MARK (the parity bit is always 1) and SPACE (the parity bit is always 0).

The NONE setting implies that no parity bit is sent. All others imply that one parity bit is included for each character.

Stop Bits

This controls the number of stop bits per character. It must be set to agree with the attached terminal or printer. Valid settings are 1 or 2.

The stop bit(s) is not included in the number of bits per character value.

Handshaking Method

This parameter determines the method by which the Model 3i and the device will pace each other. The options are NONE, XON, DTR and RTS.

If NONE is selected, pacing is not done between the Model 3i and the device.

If XON(XOFF) is selected, the Model 3i and the device will not use any hardware signals to pace each other. Pacing will be done by the software.

If DTR or RTS is selected, the hardware signals used for pacing by the Model 3i and the device depend on the setting of the DTE/DCE switch for the port, as shown in the following tables:

Port Switch	Model 3i Driver	Device Driver
DTE	DTR	CTS
DCE	CTS	DTR

Table 4 - 1 DTR OPTION TABLE

Port Switch	Model 3i Driver	Device Driver
DTE	RTS	CTS
DCE	CTS	RTS

Table 4 - 3 RTS OPTION TABLE

Device Ready Method

This parameter specifies the method by which the Model 3i and the device indicate that they are powered on and ready to communicate.

The valid responses are:

In DTE Mode -- NONE, DCD, DSR, DCDDSR (DCD and DSR), DSCDCT(DSR and DCD and CTS)

In DCE Mode -- DTR, RTS and DTRRTS (DTR and RTS).

If NONE is selected, hardware signals are not used to indicate whether the device or Model 3i is ready. The device is assumed to be ready on power up.

Option	Port Switch	Model 3i Ready Signals	Device Ready Signals
DCD	DTE	DTR+RTS[1]	DCD
DSR	DTE	DTR+RTS[1]	DST
DCDDSR	DTE	DTR+RTS[1]	DCD+ DSR
DSCDCT	DTE	DTR+RTS[1]	DCD+ DSR+ CTS
DTR	DCE	DSR+DCD+CTS[2]	DTR
RTS	DCE	DSR+DCD+CTS[2]	RTS
DTRRTS	DCE	DSR+DCD+CTS[2]	DTR+ RTS

[1] If either DTR or RTS is used in flow control, it is not

Table 4 - 2 DEVICE READY OPTIONS

Most directly connected devices require this parameter to be set to DTR and most dial--up (i.e. modem attached) configurations require it to be set to DCDDSR.

Note: The DSCDCT setting can be used with modems and will have the following characteristics. When DSR is activated the port initialization string is sent out. If both DCD and CTS do not become activated within 45 seconds a disconnect is forced. All disconnects with this setting will be 60 seconds long. All other settings have 3 second disconnects.

The following chart illustrates how the remaining options are used to indicate device ready:

Port Initialization String

The Port Initialization String is used to set intermediary devices (those between the terminal and the Model 3i) to a known state. This would normally be done during a half--connect. For example, when in DTE mode, if the DSR signal has become active before the DCD is active, this string would be sent out. The Port Initialization String can be used to set up modems, switches, etc. The Port Initialization String is only used if the DCDDSR or DSCDCT options are selected for the Device Ready Method and a string actually appears in this field. Otherwise, the contents of the string are ignored.

Control codes can be entered in the form:

<ccc>

where **ccc** is any valid control character designation such as NUL, SOH, etc. See Appendix E for a complete list.

Spaces within the string are entered by using the Space Bar but, if a space is required at the end of the string, it is indicated by <SP>.

Control codes can also be entered in the following form:

<xxx>

where **xxx** is the decimal value of any valid control code or character (0--255). Note: to enter '<' in a string, type '<<'.

3. Enter the desired Port Definition information, using the Configuration Mode keys to move around the screen.

4. Press **Enter** when all the desired changes have been entered.

   The Port Request Screen re--appears, with the Port Number increased by one.

5. To continue to configure additional ports, simply press **Enter**, and repeat steps 3 and 4 until all the desired port definitions have been entered.

6. When you have configured all the ports desired, press **F3 or Enter** (with the cursor in a blank port field) to return to the Main Configuration Menu.

All configuration settings are stored in memory until explicitly stored to disk. See section 4.9.

CAUTION

Changes made to the Port Definition will not take effect until:

A) The reconfigured port has been reset using the "Reset Port" command (see Section 4.10).

or

B) The configuration has been saved (See Section 4.9, "Save Configuration") and the Model 3i has been powered off and then on again.

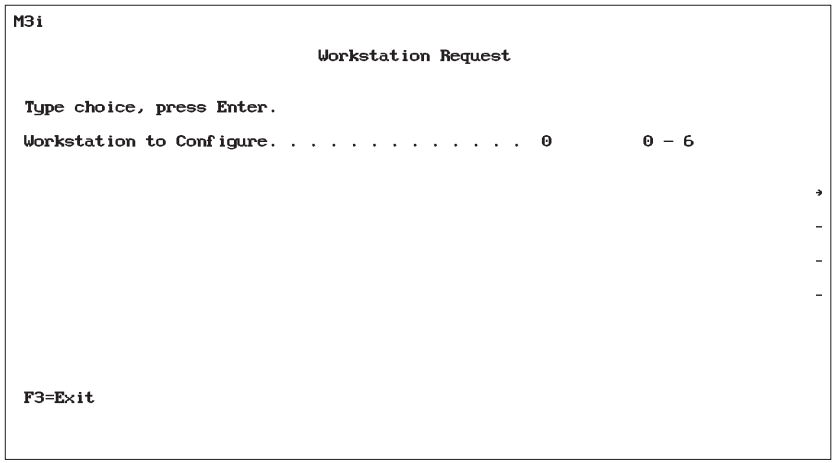


Figure 4 - 9 WORK STATION REQUEST SCREEN

Screen07.pcx

4.5

Screen08.pcx

```
M3i                          Workstation Definition                    WS 0

 Type choice, press Enter.

  Device emulation . . . . . .  5251       F4 - List
  Keyboard country name  . . .  US         F4 - List

  Reconnect time limit . . . .  0          Changeable . . .  NO
  Connect password . . . . . .

  Inactivity time limit  . . .  NONE       Changeable . . .  NO
  Associated group . . . . . .

  Pseudo lead-in characters  .  0000
  Pseudo termination character  24

  Echo suppression . . . . . .  NO

  Session Initialization String:


 F3=Exit
```

Figure 4 - 10 WORKSTATION DEFINITION SCREEN

Defining the Workstation Addresses

In configuring the Model 3i, Workstation Addresses and accompanying characteristics must be assigned for every workstation attached to the system.

Procedure 4.5.1

To define the Workstation Addresses:

1. With the Main Configuration Menu displayed, type **2** to specify the Workstation Definition option and press **Enter**.

   The Work Station Request Screen appears with cursor opposite the Workstation to Configure prompt.

2. Type in the address of the Workstation to be defined and press **Enter**.

   The Workstation Definition Screen is then displayed.

The Work Station Definition screen defines all the parameters associated with a specific workstation address. These include:

Device Emulation: This indicates the IBM device types being emulated. The valid options are:

Terminals

5251, 5291, 5292, 3180

Printers

4214, 5256, 5224, 5225, 5219, 3812

External Devices

Select “EXT” for other Twinax devices which share a computer port with the Model 3i.

Pressing **F4** (**CMD 4**) lists the valid devices.

Keyboard Country Name This defines the name of the table that will be used in translating characters from EBCDIC to ASCII and from ASCII to 5250 keyboard scan--codes. The unit comes with several pre--defined language tables or the user may define his own.

Pressing **F4** (**CMD 4**) lists the valid languages.

Reconnect Time Limit This specifies the amount of time the user has to re--establish, through the same port, the connection to the work station address before the Perle Model 3i notifies the host and disconnects the session. This is particularly useful for dial--up applications where users may be accidentally disconnected due to poor quality lines. This

allows users to reenter the host application and continue in their application without alerting the host that anything has happened.

The time limit is measured in minutes, and may be any integer between 1 and 99. Zero (0) is used to indicate that a reconnect is not allowed. (In this case, the host is notified immediately). A blank or NONE indicates that the host is never to be notified.

Connect Password

This is requested whenever the user attempts to connect to the workstation address. A password is not allowed if the “Device Emulation” parameter has been set for a printer device.

Inactivity Time Limit

This sets the automatic time--out limit for inactive terminals. (A terminal is considered inactive if neither keyboard input, screen, or auxiliary printer output activity has occurred on any of its sessions.)

The time limit is measured in minutes, and may be any integer value between 1 and 99, 0 (or NONE) if no automatic time--out is desired. If a time--out occurs, the message Inactivity Time--out--Disconnected is displayed and the port and work station address are decoupled. If the port is dial--up, (auto--answer) the line is dropped.

Associated Group

Each workstation may have a group name associated with it. This group name may be entered when a workstation address is requested. This will result in the Model 3i searching for the first available

workstation address with that group name. Group names must not start with a number, and must be at least 2 characters long.

Pseudo Lead--in Characters

This is the sequence of characters which is used with printer sessions only and indicates that the text to follow from the controller is in transparent mode and is not to be interpreted or translated. There may be a unique sequence for each workstation. The characters are entered using the hexadecimal equivalent (Two digits must be entered.)

Pseudo Termination Char

This marks the end of the characters to be received in transparent mode (with printer sessions only).

The character is entered using the hexadecimal equivalent (Two digits must be entered.)

Changeable

The Reconnect Time Limit and the Inactivity Time Limit can be configured to permit them to be changed at sign--on. If one or more of these are to be changeable, place a YES in the box marked Changeable opposite the item that can be changed.

Echo Suppression

Echo Suppression can be turned on to disable the Model 3i from echoing characters back to your terminal. This is useful if you are connected via an X.25 network. Place a YES in the box to turn on echo suppression.

Session Initialization String

This is the string of EBCDIC characters that are to be sent to the host by a terminal session at the time of the connect.

5250 functions can be entered in the form:

<xxx>

where **xxxx** is any valid 5250 function such as ENTER, NEWLINE etc. See Appendix E for a complete list.

Spaces within the string are entered by using the Space Bar but, if a space is required at the end of the string, it is indicated by <SP>

Note: to enter '<' in a string, type '<<'.

This feature can be used to perform auto--login. The string that would be used might appear as follows:

MYID<NEWLINE>MYPASSWORD<ENTER>

3. Enter the desired Workstation Definition information, using the Configuration Mode keys to move around the screen.
4. Press **Enter** when all the desired changes have been entered.

   The Workstation Request Screen re--appears, with the next Workstation to Configure shown.
5. To continue to configure additional workstations, simply press **Enter**, and repeat steps 2 through 4 until all the desired workstation definitions have been entered.
6. When you have configured all the workstations desired and the Workstation Request Screen, press F3 or **Enter (with the cursor on a blank workstation)** to return to the Main Configuration Menu.

All configuration settings are stored in memory until explicitly stored to disk. See section 4.9.

If a workstation is reconfigured while it is in use, the new configuration does not take effect until the next time the workstation is selected and associated with a physical port. If the workstation is not in use at the time of reconfiguration, the changes take effect immediately.

4.6 Defining the Keyboard Country Table

Language Tables are translate tables that are used for obtaining the ASCII codes or 5250 keyboard scan codes required for various languages.

Should you require tables (or languages) beyond those supplied, the

Screen09.pcx

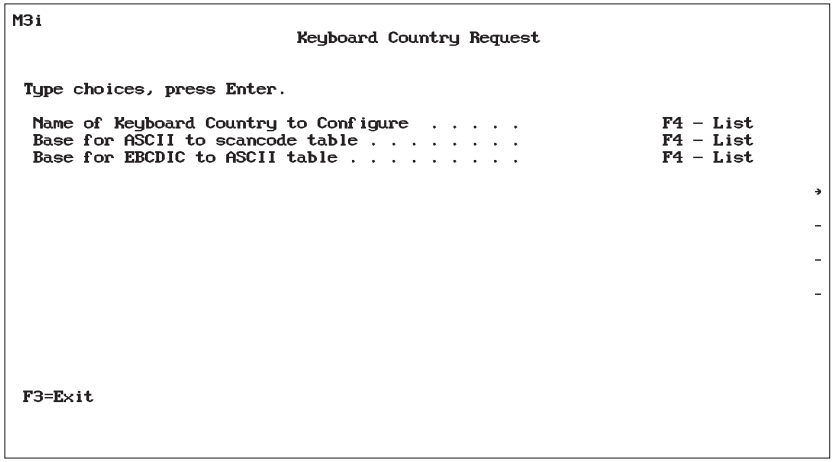


Figure 4 - 11 KEYBOARD COUNTRY REQUEST SCREEN

user has the opportunity of creating some new tables using one of the factory supplied ones as a base. Once the user has created some tables he may modify them at any time. He may however not modify any of the tables supplied by Perle. There is room for 10 user--defined tables in memory. Perle supplies the Model 3i with tables for the following languages:

- US
- MULTI (Multinational)
- Canadian French
- UK
- Denmark
- Finland

```
M3i          Keyboard Country Definition - ASCII to Key Scan Code

  Position to Modify  . . . . . .          New Value . . . . .
                                           (Add 80H for Shifted Code)
                                  FIRST DIGIT
            0   1   2   3   4   5   6   7   8   9   A   B   C   D   E   F
        0   00  00  0F  3A  B2  AA  3E  2A  00  00  0F  3A  B2  AA  3E  2A
        1   00  00  AB  31  91  A1  11  21  00  00  AB  31  91  A1  11  21
        2   00  00  9B  32  85  A4  05  24  00  00  9B  32  85  A4  05  24
        3   00  00  B3  33  83  92  03  12  00  00  B3  33  83  92  03  12
        4   00  00  B4  34  93  A5  13  25  00  00  B4  34  93  A5  13  25  +
        5   00  00  B5  35  A3  A7  23  27  00  00  B5  35  A3  A7  23  27
SECOND  6   00  00  B7  36  94  84  14  04  00  00  B7  36  94  84  14  04  -
DIGIT   7   00  00  1B  37  95  A2  15  22  00  00  1B  37  95  A2  15  22
        8   00  00  B9  38  96  82  16  02  00  00  B9  38  96  82  16  02  -
        9   00  00  BA  39  A8  A6  28  26  00  00  BA  39  A8  A6  28  26
        A   00  00  B8  9A  97  81  17  01  00  00  B8  9A  97  81  17  01  -
        B   00  00  BC  1A  98  2B  18  1C  00  00  BC  1A  98  2B  18  1C
        C   00  00  08  0E  99  2C  19  AC  00  00  08  0E  99  2C  19  AC
        D   00  00  3B  3C  87  B1  07  9C  00  00  3B  3C  87  B1  07  9C
        E   00  00  09  8E  86  B6  06  BE  00  00  09  8E  86  B6  06  BE
        F   00  00  0A  8A  A9  BB  29  00  00  00  0A  8A  A9  BB  29  00
F3=Exit
```

Figure 4 - 12 KEYBOARD COUNTRY DEFINITION SCREEN #1

- France (AZERTY)
- Germany
- Italy
- Sweden
- Swiss/French
- Swiss/German
- Spain

Note: The MULTI comes with the US keyboard implementation.

In Configuration Mode, the Model 3i also provides the capability for a new language table to be defined using an existing table as a base.

Screen11.pcx

Procedure 4.6.1

To define a new keyboard country table:

1. With the Main Configuration Menu displayed, type **3** to specify the Define Keyboard Country Table option and press **Enter**.

   The Keyboard Country Request Screen appears.

2. Type in the name of the keyboard country for which a table is being created and the name of the keyboard country table being used as a base, and press **Enter**.

   To edit an existing table, enter the name of the table to be edited in both fields.

   Pressing **F4** while on the Base field lists all Perle--supplied and user--modified keyboard countries. Choose the one you wish to use a base.

   The first Definition Screen is then displayed.

The implementation of a keyboard country encompasses the use of two tables. An ASCII to 5250 keyboard scan code table for characters going up to the controller, and an EBCDIC to ASCII translate table for characters coming from the controller.

The first Definition Screen contains the ASCII to 5250 keyboard scan code table. Characters in the table can be changed by entering the two--digit scan code (this is also the identifier of the character's location in the table) and then the correct ASCII value for the character to be associated with that scan code.

3. When all the changes to the ASCII to 5250 table have been entered, press **Enter** and the EBCDIC to ASCII translate table appears.

Pressing F3 returns you to the Keyboard Country Request screen and discards any changes.

Screen12.pcx

```
M3i                                Device Request

 Type choices, press Enter.

  Device to Configure  . . . . . .          F4 - List
  Device to use as a Base  . . . . . .      F4 - List

 F3=Exit
```

Figure 4 - 13 DEVICE REQUEST SCREEN

4. Enter the two--digit EBCDIC value of the character to be changed (this is also the identifier for the character's location in the EBCDIC --to--ASCII Table) and then the correct ASCII value to be associated with that character.

Screen13.pcx

```
M3i                          Terminal Definition

 Type choices, press Enter.

  Keyboard Sequences:

   CMD 1  <ESC>1          CMD 2  <ESC>2          CMD 3  <ESC>3
   CMD 4  <ESC>4          CMD 5  <ESC>5          CMD 6  <ESC>6
   CMD 7  <ESC>7          CMD 8  <ESC>8          CMD 9  <ESC>9
   CMD 10 <ESC>0          CMD 11 <ESC>-          CMD 12 <ESC>=
   CMD 13 <ESC>!          CMD 14 <ESC>@          CMD 15 <ESC>#
   CMD 16 <ESC>$          CMD 17 <ESC>%          CMD 18 <ESC>^
   CMD 19 <ESC>&          CMD 20 <ESC>*          CMD 21 <ESC>(
   CMD 22 <ESC>)          CMD 23 <ESC>_          CMD 24 <ESC>+

 NEXT SESSION      <ESC><ESC><SP>      SESSION 1     <ESC><ESC>1
 SESSION 2         <ESC><ESC>2         SESSION 3     <ESC><ESC>3
 SESSION 4         <ESC><ESC>4         SESSION 5     <ESC><ESC>5
 SESSION 6         <ESC><ESC>6         SESSION 7     <ESC><ESC>7

                                                          More...
 F3=Exit
```

Figure 4 - 14 DEVICE DEFINITION SCREEN #1

5. When all the changes have been entered, press **Enter** and the Keyboard Country Request Screen appears.

6. To continue to define additional Keyboard Countries, repeat steps 2 through 4 until all the desired keyboard country tables have been entered.

7. When you have configured all the language tables desired and the Keyboard Country Request Screen is displayed, press **F3 (CMD 3)** to return to the Main Configuration Menu.

All configuration settings are stored in memory until explicitly stored to disk. See section 4.9.

Keyboard Country changes do not take effect until the next time a workstation with that keyboard country defined becomes active.

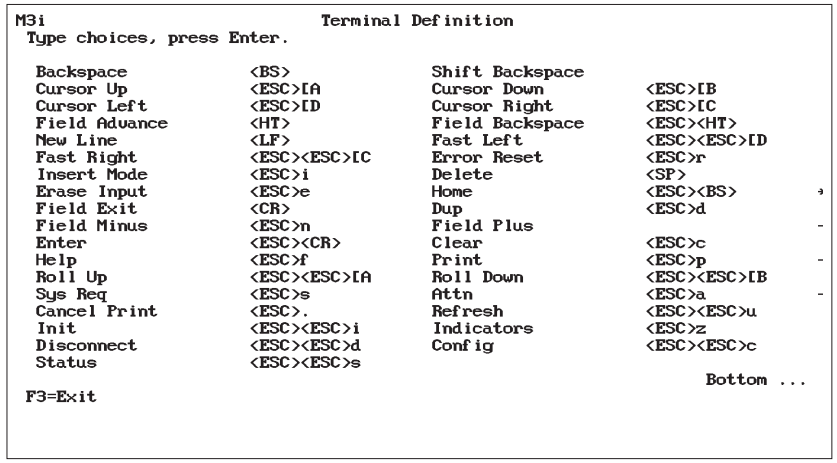


Figure 4 - 15 DEVICE DEFINITION SCREEN #2

Screen14.pcx

4.7 Defining a Device

There are a number of terminals and printers which are supported in the default configuration.

Accordingly, it is possible for the user to modify the manner in which the keyboard is used with these devices. Through the Device Definition Screen, which is accessed via the Main Configuration Screen, the user can also modify the key sequences used to emulate various 5250 functions or to move between multiple sessions on a single device.

The user modified devices are stored to disk when a save is done. In addition to the factory supplied device definitions, there is room for another 10 device definitions.

NOTE: When an existing device definition is copied, only the first key sequence will be copied to the new definition. Therefore, if more than one key sequence has been defined to perform a specific 5250 function, only the first is available in the new definition.

Procedure 4.7.1

To define a new device:

1. With the Main Configuration Menu displayed, type **4** to specify the Define Device option and press **Enter**.

   The Device Request Screen appears:

2. Type in the name of the device being defined and the name of the device being used as a base, and press **Enter**.

   To edit a user--created definition, enter the same name in both fields.

   F4 (**CMD 4**) can be used to get a list of valid devices.

   The Device Definition Screen is then displayed.

   This screen requests key sequences for:

   - Keyboard Mapping
   - 5250 Function Keys
   - Session Switching

   and other functions that are local to the Model 3i, such as:

Refresh	Refresh the display based on the internal display buffer

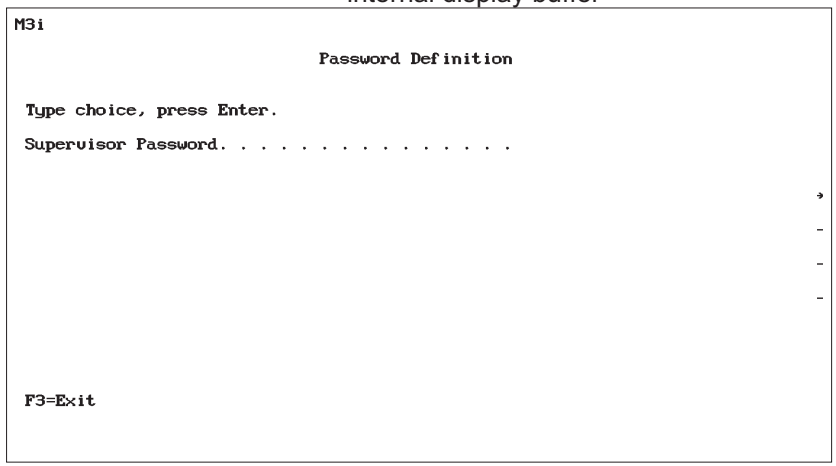


Figure 4 - 16 SET PASSWORD SCREEN

Screen15.pcx

Init	Disconnect and reconnect the host session
Indicators	Toggle status indicators on and off
Disconnect	Disconnect host session and port connection
Config	Enter configuration mode

Status Display port status information

3. Press **ROLL UP** or **ROLL DOWN** to view the other screen.
4. Control codes can be entered in the form:

   <xxx>

   where **xxx** is any valid control code designation such as NUL, SOH, etc. See Appendix E for a complete list.

   Spaces within the string are entered by using the Space Bar but, if a space is required at the end of the string, it is indicated by “<SP>”. Note: to enter '<' in a string, type '<<'.
5. When all the changes have been entered, press **Enter** and the Device Request Screen appears.
6. To continue to define additional devices, repeat steps 2 and 3 until all the desired devices have been entered.
7. When you have configured all the desired devices and the Device Request Screen is displayed, press **Enter** to return to the Main Configuration Menu.

All configuration settings are stored in memory until explicitly stored to disk. See section 4.10.

Device definition changes do not take effect until the next time the terminal is selected.

4.8 Setting the Password

To protect against accidental re--configuration or unauthorized access to system status information, the Model 3i can be password protected. If specified, this password controls access to system configuration information and is set through the Configuration Mode.

Procedure 4.8.1

To enter a new password:

1. With the Main Configuration Menu displayed, type **5** to select

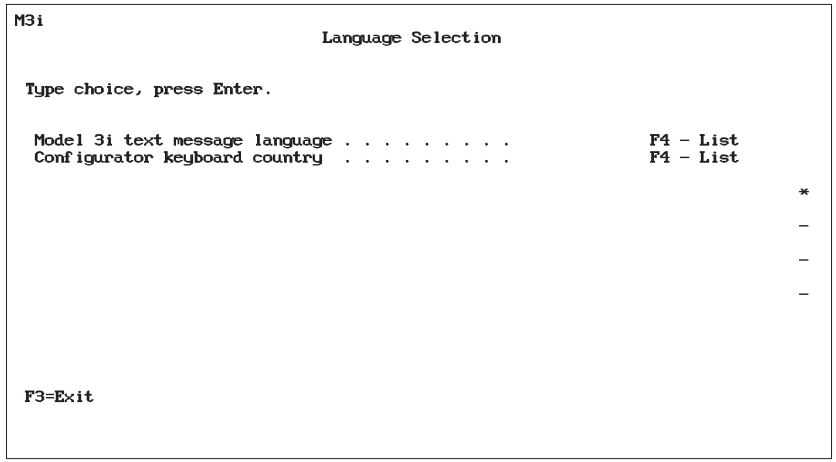


Figure 4 - 17 LANGUAGE SELECTION SCREEN

Screen16.pcx

the Set Password option and press **Enter**.

The Set Password Screen appears.

2. Type in the new password and press **Enter**.

Passwords may be up to 8 alpha or numeric characters.

Be sure to write the password information down and store it away in a secure place.

The Main Configuration Menu is then re--displayed.

All configuration settings are stored in memory until explicitly stored to disk. See section 4.10.

Password changes take effect as soon as you leave Configuration mode.

4.9 Select Language

You can change the language that messages appear in while you are in the configurator or while you are establishing a session with the host.

Procedure 4.9.1

To change the Language:

1. With the Main Configuration Menu displayed, type 6 to specify the Select Language option and press ENTER.

   The Language Selection Screen appears:

2. Type in the name of the language you want the message to appear in and press ENTER.

   F4 (Command 4) can be used to get a list of valid languages.

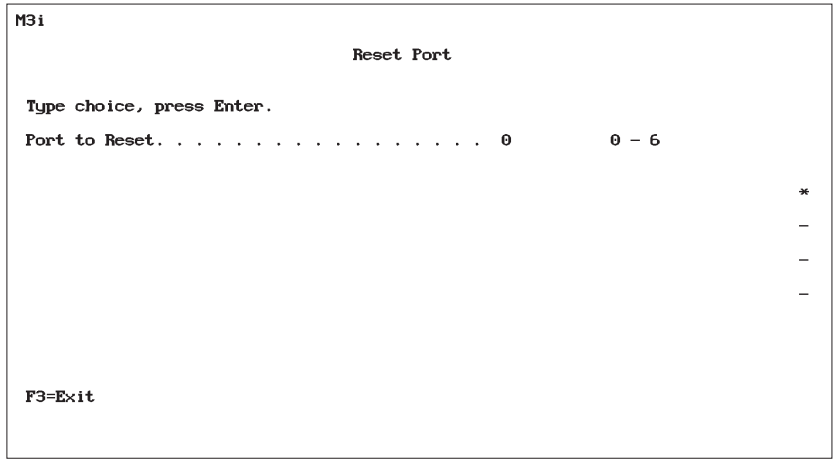


Figure 4 - 18 LANGUAGE SELECTION SCREEN

Screen18.pcx

The valid languages are:

- ENGLISH
- FRENCH
- GERMAN
- ITALIAN
- SPANISH

3. Type in the name of the Configurator Keyboard Country.

   To do this you must know what country character set your terminal is using and whether or not your terminal uses ISO--8859--1 tables (for 8 bit terminals). You may have to check your terminal users guide for this information. The following table lists some Country Character Sets and their corresponding Configurator Keyboard Countries:

Country Character Set	ISO--8859--1	Configurator Keyboard Country
US	No	US
UK	No	UK
UK	Yes	UK8
FRANCE	No	FRANCE
FRANCE	Yes	FRANCE8

F4 (Command--4) can be used to get a list of valid Configurator Keyboard Countries.

4.10

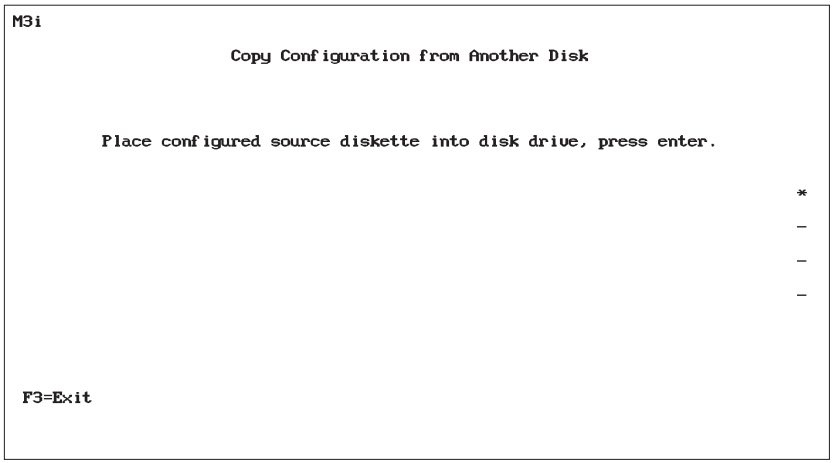


Figure 4 - 19 COPY CONFIGURATION SCREEN 1

Screen19.pcx

Reset Port

At any time, a port may be “reset”. The physical port will be re--initialized to the latest configured settings.

If a terminal is connected to this port, this will simulate a power--down of the terminal, and the terminal will re--enter connect mode.

If a modem is attached to the port, this will force the modem to hang up the line.

Procedure 4.10.1

To reset a port:

1. With the Main Configuration Menu Displayed, select **8** and press **Enter**.

   The Reset Port screen appears:

2. Type in the number of the port to be reset and press **Enter**.

   The port will then be reset.

Screen20.pcx

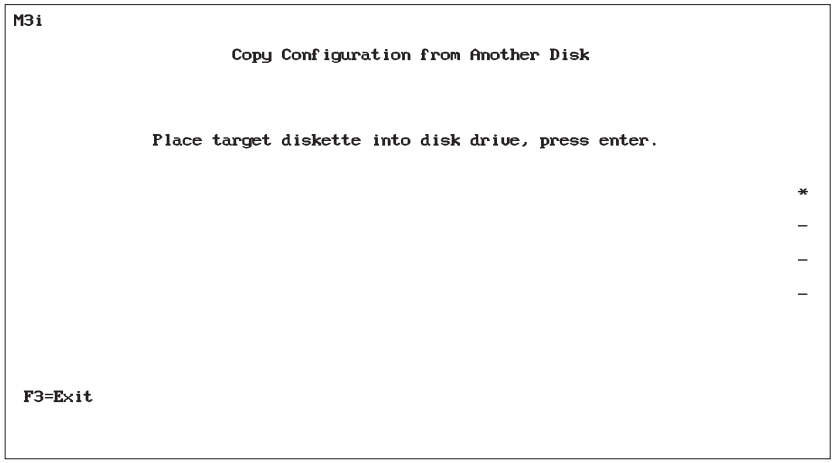


Figure 4 - 20 COPY CONFIGURATION SCREEN 2

4.11 Copy Configuration

The Copy Configuration command reads the Model 3i configuration information from a “source” Model 3i System Disk and copies it to a “target” System Disk. This eliminates the need to reboot with a different System Disks and reenter the same changes.

The Copy Configuration command can be used in the following cases:

- If you have a second, back--up copy of the **same software release** of the Model 3i System Disk, you can use this command to update the back--up copy.
- When you are upgrading to a new software release of Model 3i software, you can read the configuration information from the old System Disk and copy it to the new System Disk.

  This will also load the configuration from the old System Disk into memory. Once the configuration is copied, any device which attempts to connect to the Model 3i will be using the configuration which was copied from the old disk.

The “source” System Disk can contain any version of Model 3i system software.

The “target” System Disk must contain the same version of system software as was used to boot the Model 3i.

Procedure: 4.11.1

To copy the configuration from one Model 3i System Disk to another:

1. If you are upgrading to a new version of software, ensure that the Model 3i has been booted with the new version.
2. With the Main Configuration menu displayed, select **70** and press **Enter**.

   The following screen is displayed:

3, Place the “source” System Disk in the Model 3i's disk drive and press **Enter**.

The following message will appear:

Reading configuration information from source diskette, please wait.

Once the current configuration has been read from the source System Disk, the following screen will appear:

4. Place the “target” System Disk in the Model 3i's disk drive and press **Enter**.

   The following message will appear:

   Writing configuration information to target diskette, please wait.

   Once the current configuration has been written to the target System Disk, the Main Configuration Menu will reappear.

4.12 Save Configuration

Once all the desired changes have been entered, if they are to become permanent, they must be stored on disk.

Procedure 4.12.1

To save the configuration changes:

1. With Main Configuration Menu displayed, select **80** and press **Enter**.

   The current configuration is saved to disk and the Main Configuration Menu is displayed.

   The save is handled as a background activity so that it does not hamper regular system operation and a verification of the save is performed. This process can take more than 45 seconds. When the input indicator is cleared and the option is removed from the command line the operation is complete.

4.13 Leaving Configuration

To leave Configuration Mode entirely:

1. With the Main Configuration Menu displayed, select **90** and press **Enter.**

The current changes **are not** saved to disk and you are returned to the session from which you entered Configuration Mode.

OTHER FUNCTIONS

In addition to the configuration functions and the activities involved in routine use of the Model 3i, there are a small group of special functions which can be used in certain situations. These functions include:

- Using AS/400 PC Support
- Viewing Session Statistics
- Viewing the Error Log

Each of these function is discussed in detail in this chapter.

6.1 Using AS/400 PC Support

The Model 3i, when used with PerleTALK/400, enables the user to take advantage of the PC Support feature of the AS/400.

Pre--requisites 6.1.1

If you are going to use PC Support on the AS/400, you must have PerleTALK/400.

Configuring PC Support Mode on the AS/400 6.1.2

To configure the AS/400 in PC Support Mode:

1. If you are unfamiliar with how to set up PC Support on the AS/400, refer to the **IBM PC Support: Planning and Installation Guide** and follow the instructions for setting up to run in a Twinaxial Data Link Control (TDLC) environment.
2. Verify the settings of the PC Support Mode parameters by entering

   DSPMODD QPCSUPP

   in a screen command field and press **Enter**.

   PC Support Mode has several configurable parameters. To use PC Support Mode with PerleTALK/400 and the Model 3i, the following parameters must be set as indicated:

Parameter	Function	Required Setting
INPACING	Inbound Pacing Value	Less than or equal to 7
OUTPACING	Outbound Pacing Value	Less than or equal to 7
MAXLENRU	Maximum length of request unit	Less than or equal to 2048

   If the parameters are set correctly, proceed to the next section for information on how to configure the Model 3i for use with AS/400 PC Support.

3. **If any of these parameters are set incorrectly**, go to the AS/400 Main Menu and select the Communications option.
4. When the Communications Menu is displayed, select the Configure Communications option.
5. From the Configure Communications Menu, select the Mode option.
6. When the Mode Menu is displayed, select the Change option for QPCSUPP.

   This displays the configurable parameters.
7. Change the required field(s) and press **Enter**.

Configuring the Model 3i for AS/400 PC Support

The Model 3i requires a special configuration in order to work with a PC running AS/400 PC Support. The PC must also be running PerleTALK/400 AH software.

With version 2.0 or higher of PerleTALK/400 AH, an “autoconnect” option is provided. The exact port configuration on the Model 3i will depend upon whether or not the “autoconnect” option was selected when PerleTALK/400 AH was installed.

The following port configuration must be used if the “autoconnect” option was **NOT** selected when PerleTALK/400 AH was installed onto the PC. Only PCs running AS/400 PC Support will be able to access this port:

Field	Value
Device Type	PTALK400
Workstation Address	Must be the same workstation address as was set during the installation of the PC Support software on the PC. **This field must be completed.**
Changeable(BOTH)	No.
Session Type	PCS400
Baud Rate	Any valid setting except AUTO BAUD.

The following port configuration must be used if the “autoconnect” option **was** selected when PerleTALK/400 AH was installed onto the PC. Access to this port is not limited to PCs running AS/400 PC Support. This feature is useful if you are using hunt groups.

Field	Value
Device Type	**PT400SC**
Workstation Address	**Any workstation address.**
Changeable(BOTH)	**Yes.**
Session Type	**PCS400SC**
Baud Rate	**Any valid setting.**

2. Configure the Model 3i workstation(s) as follows:

Field	Value
Device Emulation	**PCS400**
Changeable(BOTH)	**No**
Connect Password	**Blank (no password)**

For more information on how to configure the Model 3i, refer to Chapter 4.

Configuring PerleTALK/400 AH

For information on how to configure PerleTALK/400 AH, refer to the “read.me” file which is included with the PerleTALK/400 AH software.

6.2 Viewing Session Status

The Session Status information enables the user or supervisor to quickly review the status of each device/workstation address on the Model 3i system:

To access the Session Status information:

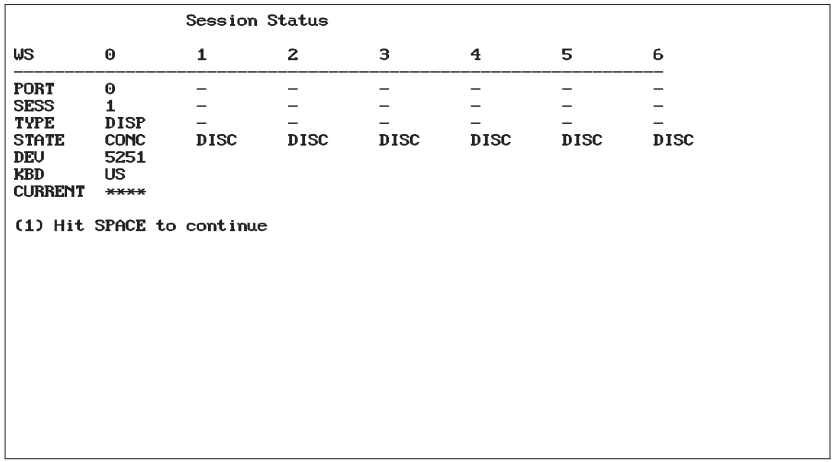


Figure 6 - 21 SESSION STATUS SCREEN

1. Enter the Session Status Key Sequence.

The Session Status Screen appears, with the following information for each workstation address:

Port # — **The number of the port on the Model 3i to which the workstation is attached.**

Sess# — **The sessions currently using the workstation address.**

Type — **The type of workstation at that address. There are three options:**

- **DISP** — **A terminal or display unit**
- **PRNT** — **A printer**

	AUX	**An auxiliary device**
	P400	**An AS/400 PC Support device**
State		**The connection status of the workstation. There are two options:**
	DISC	**The workstation is currently disconnected**
	CONC	**The workstation is connected.**
	EXT	**Reserved for external device.**
Dev(ice type)		**The type of emulated device attached to the workstation. This can be any of the valid device types listed in Chapter 1.**
KBD(Keyboard)		**The keyboard country configured for use on this workstation.**

The session you are currently using will be highlighted.

The following message appears at the bottom of the screen:

(n) Hit SPACE to continue

where n is the number of the current session.

When finished viewing the Session Status Screen, press the **Space Bar** to return to the session.

This Page is Intentionally Blank

APPENDIX C

This Appendix contains the detailed specifications for the terminal emulations supported by the Model 3i.

C.1 ANSI STANDARD 3.64

Terminal ID = ANSI

The ANSI driver differs from the VT100 driver in that it does not assume any particular type of keyboard but assumes only a keyboard with a cursor pad and Delete key. It is intended for those VT100 emulators without numeric keypad support. For ANSI 3.64/VT100 emulators supporting a numeric keypad, the VT100 driver should be used.

How to Set Up the Terminal C.1.1

Information on the setup of any terminal complying with the ANSI Standard 3.64 will depend upon the particular terminal being used.

However, the terminal must be set up to:

- Disable Line Wrap
- Disable Scrolling

Keyboard Emulation 2

Following is a table showing how an ANSI Standard 3.64 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non-- US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 5BH 41H
CURSOR DOWN	⊕		1BH 5BH 42H
CURSOR LEFT	⌊		1BH 5BH 44H
CURSOR RIGHT	⊗		1BH 5BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB / ESC B / ESC b		1BH 09H / 1BH 42H / 1BH 62H
NEW LINE	LINEFEED / CTRL+J		0AH
FAST LEFT	ESC ⌊		1BH 1BH 5BH 44H
FAST RIGHT	ESC ⊗		1BH 1BH 5BH 43H
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	ESC I / ESC i		1BH 49H / 1BH 69H
DELETE	DEL		7FH
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H

Function	Keys (US)	Non-- US	Sequence Generated
HOME	ESC BS / ESC H / ESC h		1BH 08H / 1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC N / ESC n		1BH 4EH / 1BH 6EH
FIELD EXIT	RETURN / ENTER		0DH
FIELD PLUS	(SAME AS FIELD EXIT)		
ENTER	ESC ENTER / ESC RETURN		1BH 0DH
Aid			
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	ESC F / ESC f		1BH 46H / 1BH 66H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 1BH 5BH 41H
ROLL DOWN	ESC ⊕		1BH 1BH 5BH 42H
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H

Function	Keys (US)	Non--US	Sequence Generated
CMD8	ESC 8	ESC 08	1BH 38H
CMD9	ESC 9	ESC 09	1BH 39H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
Special Host			
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
Signal			
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H

Function	Keys (US)	Non--US	Sequence Generated
Special Functions			
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H

Function	Keys (US)	Non--US	Sequence Generated
AUTOBAUD	RETURN RETURN/ ENTER ENTER		0DH 0DH

C.2 IBM 3101 Terminal

Terminal ID = IBM3101

How to Set Up the C.2.1 Terminal

Disconnect the AC Power cord from the outlet before starting the setup process.

There are 8 toggle--type switches located on the keyboard element as Group 1 switches. These switches describe the communications connect options and are set to the following values:

GROUP 1 SWITCHES	SET TO:	COMMENT
CHAR--BLOCK	CHAR	Selects TTY--compatible char. interfaces.
FDX--HDX	FDX	Full--duplex enabled.
CL422--232C	232C	Sets EIA RS--232 option.
CRTS--PRTS	PRTS	RTS held continuously high.
REV CHAN ON--OFF	REV CHAN OFF	Operations enabled without reverse channel.
LINE TURN AROUND CHARS (Sw 6--7)	CR	Set Sw 6 = 0, Sw 7 = 1
MONO--DUAL	DUAL	Set dual case character set.

There are 8 toggle switches located on the keyboard element as GROUP 2 switches. These switches describe the terminal operating characteristics and are set to the following values:

GROUP 2 SWITCHES	SET TO:	COMMENT
STOP1--STOP2	STOP 1	Set to 1 stop bit unless 110 baud rate is desired. In this case use STOP2.
PARITY	SPACE	Sw2 = 0, Sw3 = 0
	MARK	Sw2 = 0, Sw3 = 1
	ODD	Sw2 = 1, Sw3 = 0
	EVEN	Sw2 = 1, Sw3 = 1 Set switches as desired.
SENDLINE OPTION	OFF	Sets normal send function.
NULL SUPPRES--SION	OFF	Nulls are not suppressed.
TIME FILL CHARS	0	No time fill characters (Sw 7--8)set Sw7 = 0, Sw8 = 0.

There are 8 toggle switches located on the keyboard element as GROUP 3 switches. These switches describe the functional terminal operating characteristics and are set to the following values:

GROUP 3 SWITCHES	SET TO:	COMMENT
AUTO NL ON--OFF	OFF	Automatic generation of New Line disabled.
AUTOLF ON--OFF	OFF	Automatic generation of line feed disabled.
CR/CR--LF	CR	Disable automatic generation of a line feed character everytime a carriage return is keyed.

SCROLL ON--OFF	OFF	Scrolling disabled.
REVERSE VIDEO ON--OFF	As desired	Video capability is set as desired.
BLINK CURSOR ON--OFF	As desired	Cursor is set as desired.

There are 8 toggle type switches located on the keyboard element as GROUP 4 switches. These switches describe the baud rates needed for both primary and auxiliary communication interfaces. The Perle Model 3 does not support an auxiliary printer on this terminal. The following table describes how to set the desired baud rate:

I/O BAUD RATE (BPS)	SWITCH SETTINGS 1	2	3	4
9600	ON	OFF	OFF	ON
4800	ON	OFF	OFF	OFF
2400	OFF	ON	ON	ON
1200	OFF	ON	OFF	ON
600	OFF	ON	OFF	OFF
300	OFF	OFF	ON	ON
110	OFF	OFF	OFF	OFF

The baud rate set with the above switches must match the baud rate specified for the converter port to which this terminal is to be connected. If a baud rate of 110 is selected, be sure the number of stop bits is 2. (See STOP 2 switch specified in the GROUP 2 Switches.)

Reconnect the AC power cord and connect the terminal to the converter with a modem or direct connect cable, as appropriate.

Keyboard Emulation

Following is a table showing how the IBM 3101 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB ESC BS		1BH 09H / 1BH 08H
NEW LINE	ALT+J		0AH
FAST LEFT	N.A.		
FAST RIGHT	N.A.		
Special Control			
ERROR RESET	ESC R / ESC r / ERASE EOS		1BH 52H / 1BH 72H / 1BH 4AH
INSERT MODE	PF7		1BH 67H 0DH
DELETE	PF8		1BH 68H 0DH

Function	Keys (US)	Non--US	Sequence Generated
ERASE INPUT	ERASE INPUT		1BH 4BH
HOME	ALT+Home Symbol[1]		1BH 48H
Field Exit			
DUPLICATE	PF5		1BH 65H 0DH

FIELD MINUS	PF6		1BH 66H 0DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	PF4 / ESC ENTER		1BH 64H 0DH / 1BH 0DH
CLEAR	CLEAR		1BH 4CH
HELP	PF1		1BH 61H 0DH
PRINT	PF3 / ESC P / ESC p		1BH 63H 0DH / 1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 1BH 41H
ROLL DOWN	ESC ⊕		1BH 1BH 42H
CMD	ALT+X		18H
CMD1	ERASE EOL 1 / ESC 1	ESC01	1BH 49H 31H / 1BH 31H
CMD2	ERASE EOL 2 / ESC 2	ESC02	1BH 49H 32H / 1BH 32H
CMD3	ERASE EOL 3 / ESC 3	ESC03	1BH 49H 33H / 1BH 33H
CMD4	ERASE EOL 4 / ESC 4	ESC04	1BH 49H 34H / 1BH 34H
CMD5	ERASE EOL 5 / ESC 5	ESC05	1BH 49H 35H / 1BH 35H

Function	**Keys (US)**	**Non--US**	**Sequence Generated**
CMD6	ERASE EOL 6 / ESC 6	ESC06	1BH 49H 36H / 1BH 36H
CMD7	ERASE EOL 7 / ESC 7	ESC07	1BH 49H 37H / 1BH 37H

1 The home key symbol is a box enclosing an upwards diagonal arrow.

Function	Keys (US)	Non--US	Sequence Generated
CMD23	ERASE EOL _ / ESC _	ESC23	1BH 49H 5FH / 1BH 5FH
CMD24	ERASE EOL + / ESC +	ESC24	1BH 49H 2BH / 1BH 2BH
HEX	ALT+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s / PA2		1BH 53H / 1BH 73H / 1BH 62H 0DH
ATTN	ALT+A		01H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H

SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.3 IBM 3151 Terminal

Terminal ID = IBM3151

How to Set Up the 3151 Terminal

All operator selectable options are input from the keyboard into the Setup menus. There are no external switches.

A. Enter the Setup Menu by depressing the “Setup” key (CTRL and --) set the options as follows:

Parameter Menu	Set to:	Comments
General		
Machine Mode	IBM 3151	For 3151 operation.
Screen	Normal	The whole screen is displayed in normal video
Row & Column	24x80	Screen size.
Scroll	NO	Auto scrolling is disabled
Auto LF	Off	Upon receipt of a CR only a carriage return. (and not a carriage return, linefeed) is performed by the terminal.
CRT Saver		Overriden by converter.
Line Wrap	ON	Auto linewrap is disabled.

Parameter Menu	Set to:	Comments
Communication		
Operating Mode	ECHO	ECHO (conversational) mode, with the converter handling the echo of the keyboard input.
Line Speed	As desired	
Word Length	As desired	
Parity	As desired	
Stop Bit	As desired	
Turnaround Character	CR	Line turnaround character to be sent at the end of a Send or Function key sequence or upon reception of a read type command.
Line Control	As desired	
Break Signal	As desired	
SEND NULL Supress	As desired	
Keyboard/Printer		
Enter	Return	Enter key acts as a “Return” key
Return	N.A	New line occurs when the Return key is pressed
New line	CR	Return/Enter keys generate CR character

Parameter Menu	Set to:	Comments
Send	PAGE	Selects code for "Send" key.
Insert character	N.A	Not applicable the Insert key is not used.
Line Speed	N.A	Relates to Printer.
Word Length	N.A	Relates to Printer
Parity	N.A	Relates to Printer
Stop Bit	N.A	Relates to Printer
Characters	N.A	Relates to Printer

Keyboard Emulation

Following is a table showing how the IBM 3151 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non-- US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB →		09H
FIELD BACKSPACE	← TAB		1BH 32H

Function	Keys (US)	Non--US	Sequence Generated
NEW LINE	Enter		0DH
FAST LEFT	N.A.		
FAST RIGHT	N.A.		
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	ALT INSERT		1BH 4EH
DELETE	DELETE		1BH 44H
ERASE INPUT	ESC K ESC k		1BH 4BH IB 6BH
HOME	HOME		1BH 48H
Field Exit			
DUPLICATE	ESC O ESC o		1BH 4FH 1BH6FH
FIELD MINUS	PAGE UP		1BH 4CH 0DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	SEND		1BH 38H 0DH
CLEAR	ESC V ESC v		1BH 56H 1BH 76H
HELP	PAGE DOWN		1BH 49H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ↑		1BH 1BH 41H
ROLL DOWN	ESC ↓		1BH 1BH 42H
CMD	CTRL+X		18H
CMD1	F1		1BH 61H 0DH
CMD2	F2		1BH 62H 0DH

Function	Keys (US)	Non--US	Sequence Generated
CMD3	F3		1BH 63H 0DH
CMD4	F4		1BH 64H 0DH
CMD5	F5		1BH 65H 0DH
CMD6	F6		1BH 66H 0DH
CMD7	F7		1BH 67H 0DH
CMD8	F8		1BH 68H 0DH
CMD9	F9		1BH 69H 0DH
CMD10	F10		1BH 6AH 0DH
CMD11	F11		1BH 6BH 0DH
CMD12	F12		1BH 6CH 0DH
CMD13	SHIFT+F1		1BH 21H 61H 0DH
CMD14	SHIFT+F2		1BH 21H 62H 0DH
CMD15	SHIFT+F3		1BH 21H 63H 0DH
CMD16	SHIFT+F4		1BH 21H 64H 0DH
CMD17	SHIFT+F5		1BH 21H 65H 0DH
CMD18	SHIFT+F6		1BH 21H 66H 0DH
CMD19	SHIFT+F7		1BH 21H 67H 0DH
CMD20	SHIFT+F8		1BH 21H 68H 0DH
CMD21	SHIFT+F9		1BH 21H 69H 0DH
CMD22	SHIFT+F10		1BH 21H 6AH 0DH
CMD23	SHIFT+F11		1BH 21H 6BH 0DH
CMD24	SHIFT+F12		1BH 21H 6CH 0DH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H

Function	Keys (US)	Non--US	Sequence Generated
ATTN	CTRL+A		01H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H

SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H

Function	Keys (US)	Non--US	Sequence Generated
AUTOBAUD	RETURN RETURN		0DH 0DH

C.4 IBM 3161 Terminal

Terminal ID = IBM3161

How to Set Up the C.4 Terminal

All operator selectable options are input from the keyboard into the Setup and Select menus. There are no external switches.

A. Enter the Setup Menu by depressing the “Setup” key (CTRL and SELECT). Set the options as follows:

Parameter Menu	Set to:	Comments
Machine Mode	IBM 3161	For 3161 operation.
Operating Mode	ECHO	ECHO (conversational) mode, with the converter handling the echo of the keyboard input.
Interface	RS--232C	EIARS--232interface.
Line Control	As desired	PRTS--permanent RTS (see note 3) CRTS--controlled RTS IPRTS--induced permanent RTS
Line Speed	As desired	Main / Aux. port baud rates. (110--19200 bits per sec.)
Parity	As desired	Main / Aux. ports. (Space, Mark, Odd, Even, or None)

Parameter Menu	Set to:	Comments
Turnaround Character	CR	Line turnaround character to be sent at the end of a Send or Function key sequence or upon reception of a read type command.
Stop Bit	As desired	Main / Aux ports. (1 or 2 bits)
Word Length	As desired	Main / Aux ports. (7 or 8 bits)
Response Delay	As desired	0 or 100 msec.
Break Signal	As desired	170 or 500 msec.

B. Enter the Select Menu by depressing the “Select” key. Set the options as follows:

Parameter Menu	Set to:	Comments
Enter	SEND	Enter key acts as a “Send” key.
Return	N.A.	New Line occurs when the Return key is pressed.
New Line	CR	Return / Enter keys generate CR character.
Tab	As desired	Field or Column. Overridden by the converter.
Line Wrap	OFF	Auto Line Wrap is disabled.

Parameter Menu	Set to:	Comments
Auto LF	OFF	Upon receipt of a CR, only a carriage return (and not a carriage return, line feed) is performed by the terminal.
Send	PAGE	Selects code for Send key.
Send Null	N.A.	Not applicable in Echo Mode.
Insert	N.A.	Not applicable, the “Insert” key is not used.
Trace	N.A.	Not applicable as it does not affect communication to the converter.
CRT Saver		Overridden by converter.
Scroll	OFF	Auto scroll is disabled.
Print	N.A.	Not applicable, the “Print” key is not used.
Print EOL	OFF	No end--of--line character sent to the printer by the terminal.
Line End	N.A.	Not applicable, the “Print EOL” option is disabled.

NOTES

1. The port labeled “2" on the rear of the IBM 3161 is the standard EIA interface (main port).
2. The port labeled “1" on the rear of the IBM 3161 is used for the ”Auxiliary Printer" feature. For a description of this feature, see the appropriate “User's Guide.”
3. The pacing function (flow control) on the IBM 3161/3163 main port is performed only when the communication parameter “Line Control” is set to either PRTS or IPRTS. The flow control options on the Perle Model 3 should be set to XON.

Keyboard Emulation

Following is a table showing how the IBM 3161 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non-US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB ⊗		09H
FIELD BACKSPACE	⌊TAB		1BH 42H
NEW LINE	LF		0AH
FAST LEFT		N.A.	

Function	Keys (US)	Non-- US	Sequence Generated
FAST RIGHT	N.A.		
Special Control			
ERROR	ERASE EOF /		1BH 49H /
RESET	ESC R /		1BH 52H /
	ESC r		1BH 72H
INSERT MODE	INS_LN		1BH 4EH
DELETE	DEL		1BH 51H
ERASE INPUT	ER_INP		1BH 4BH
HOME	HOME		1BH 48H
Field Exit			
DUPLICATE	DEL_LN		1BH 4FH
FIELD MINUS	SN_MSG		1BH 20H 38H 0DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	SEND		1BH 38H 0DH
CLEAR	CLEAR		1BH 4CH 0DH
HELP	JUMP		1BH 22H 41H
PRINT	ESC P /		1BH 50H /
	ESC p /		1BH 70H /
	SEND_LINE		1BH 21H 38H 0DH
ROLL UP	PA1 /ESC ⌈		1BH 21H 6EH 0DH / 1BH 1BH 41H
ROLL DOWN	PA2 /ESC ⊕		1BH 21H 6FH 0DH / 1BH 1BH 42H
CMD	CTRL+X		18H
CMD1	F1		1BH 61H 0DH
CMD2	F2		1BH 62H 0DH

Function	Keys (US)	Non--US	Sequence Generated
CMD3	F3		1BH 63H 0DH
CMD4	F4		1BH 64H 0DH
CMD5	F5		1BH 65H 0DH
CMD6	F6		1BH 66H 0DH
CMD7	F7		1BH 67H 0DH
CMD8	F8		1BH 68H 0DH
CMD9	F9		1BH 69H 0DH
CMD10	F10		1BH 6AH 0DH
CMD11	F11		1BH 6BH 0DH
CMD12	F12		1BH 6CH 0DH
CMD13	SHIFT+F1		1BH 21H 61H 0DH
CMD14	SHIFT+F2		1BH 21H 62H 0DH
CMD15	SHIFT+F3		1BH 21H 63H 0DH
CMD16	SHIFT+F4		1BH 21H 64H 0DH
CMD17	SHIFT+F5		1BH 21H 65H 0DH
CMD18	SHIFT+F6		1BH 21H 66H 0DH
CMD19	SHIFT+F7		1BH 21H 67H 0DH
CMD20	SHIFT+F8		1BH 21H 68H 0DH
CMD21	SHIFT+F9		1BH 21H 69H 0DH
CMD22	SHIFT+F10		1BH 21H 6AH 0DH
CMD23	SHIFT+F11		1BH 21H 6BH 0DH
CMD24	SHIFT+F12		1BH 21H 6CH 0DH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H

SYSTEM REQ	ESC S / ESC s / PA3		1BH 53H / 1BH 73H/ 1BH 21H 6FH 0DH

Function	Keys (US)	Non--US	Sequence Generated
ATTN	CTRL+A		01H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H

SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H

Function	Keys (US)	Non--US	Sequence Generated
AUTOBAUD	RETURN RETURN		0DH 0DH

C.5 IBM 3164 Terminal

Terminal ID = IBM3164

How to Set Up the Terminal

All operator selectable options are input from the keyboard into the Setup and Select menus. There are no external switches.

A. Enter the Setup Menu by depressing the “Setup” key (CTRL and SELECT). Set the options as follows:

Parameter Menu	Set to:	Comments
Machine Mode	IBM 3164	For 3164 operation.
Operating Mode	ECHO	ECHO (conversational) mode, with the converter handling the echo of the keyboard input.
Interface	RS--232C	EIARS--232interface.
Line Control	As desired	PRTS--permanent RTS (see note 3) CRTS--controlled RTS IPRTS--induced permanent RTS
Line Speed	As desired	Main / Aux. port baud rates. (110--19200 bits per sec.)
Parity	As desired	Main / Aux. ports. (Space, Mark, Odd, Even, or None)

Parameter Menu	Set to:	Comments
Turnaround Character	CR	Line turnaround character to be sent at the end of a Send or Function key sequence or upon reception of a read type command.
Stop Bit	As desired	Main / Aux ports. (1 or 2 bits)
Word Length	As desired	Main / Aux ports. (7 or 8 bits)
Response Delay	As desired	0 or 100 msec.
Break Signal	As desired	170 or 500 msec.

B. Enter the Select Menu by depressing the “Select” key. Set the options as follows:

Parameter Menu	Set to:	Comments
Enter	SEND	Enter key acts as a “Send” key.
Return	N.A.	New Line occurs when the Return key is pressed.
New Line	CR	Return / Enter keys generate CR character.
Tab	As desired	Field or Column. Overridden by the converter.
Line Wrap	OFF	Auto Line Wrap is disabled.

Parameter Menu	Set to:	Comments
Auto LF	OFF	Upon receipt of a CR, only a carriage return (and not a carriage return, line feed) is performed by the terminal.
Send	N.A.	Selects code for Send key.
Send Null	N.A.	Not applicable in Echo Mode.
Insert	N.A.	Not applicable, the “Insert” key is not used.
Trace	N.A.	Not applicable as it does not affect communication to the converter.
CRT Saver		Overriden by converter.
Scroll	OFF	Auto scroll is disabled.
Print	N.A.	Not applicable, the “Print” key is not used.
Print EOL	OFF	No end--of--line character sent to the printer by the terminal.
Line End	N.A.	Not applicable, the “Print EOL” option is disabled.

NOTES

1. The port labeled “2" on the rear of the IBM 3164 is the standard EIA interface (main port).
2. The port labeled “1" on the rear of the IBM 3164 is used for the ”Auxiliary Printer" feature. For a description of this feature, see the appropriate “User's Guide.”
3. The pacing function (flow control) on the IBM 3164 main port is performed only when the communication parameter “Line Control” is set to either PRTS or IPRTS. The flow control options on the Perle Model 3 should be set to XON.

Keyboard Emulation

For languages other than U.S., function key sequences shown as a two character sequence, for example “ESC 1", should be entered as a three character sequence, i.e. ”ESC 0 1".

Following is a table showing how the IBM 3164 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB ⊗		09H

Function	Keys (US)	Non--US	Sequence Generated
FIELD BACKSPACE	| TAB		1BH 32H
NEW LINE	LF		0AH
FAST LEFT		N.A.	
FAST RIGHT		N.A.	
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	INS_LN		1BH 4EH
DELETE	DELETE		1BH 51H
ERASE INPUT	ER_INP		1BH 4BH
HOME	HOME		1BH 48H
Field Exit			
DUPLICATE	DEL_LN		1BH 4FH
FIELD MINUS	SN_MSG		1BH 20H 38H 0DH
FIELD PLUS		(SAME AS FIELD EXIT)	
FIELD EXIT	RETURN		0DH
ENTER	SEND		1BH 38H 0DH
CLEAR	CLEAR		1BH 4CH 0DH
HELP	JUMP		1BH 22H 41H
PRINT	ESC P / ESC p / SEND_LINE		1BH 50H / 1BH 70H / 1BH 21H 38H 0DH
ROLL UP	UP		1BH 20H 41H
ROLL DOWN	DOWN		1BH 20H 42H
CMD	CTRL+X		18H
CMD1	F1		1BH 61H 0DH

Function	Keys (US)	Non-- US	Sequence Generated
CMD2	F2		1BH 62H 0DH
CMD3	F3		1BH 63H 0DH
CMD4	F4		1BH 64H 0DH
CMD5	F5		1BH 65H 0DH
CMD6	F6		1BH 66H 0DH
CMD7	F7		1BH 67H 0DH
CMD8	F8		1BH 68H 0DH
CMD9	F9		1BH 69H 0DH
CMD10	F10		1BH 6AH 0DH
CMD11	F11		1BH 6BH 0DH
CMD12	F12		1BH 6CH 0DH
CMD13	SHIFT+F1		1BH 21H 61H 0DH
CMD14	SHIFT+F2		1BH 21H 62H 0DH
CMD15	SHIFT+F3		1BH 21H 63H 0DH
CMD16	SHIFT+F4		1BH 21H 64H 0DH
CMD17	SHIFT+F5		1BH 21H 65H 0DH
CMD18	SHIFT+F6		1BH 21H 66H 0DH
CMD19	SHIFT+F7		1BH 21H 67H 0DH
CMD20	SHIFT+F8		1BH 21H 68H 0DH
CMD21	SHIFT+F9		1BH 21H 69H 0DH
CMD22	SHIFT+F10		1BH 21H 6AH 0DH
CMD23	SHIFT+F11		1BH 21H 6BH 0DH
CMD24	SHIFT+F12		1BH 21H 6CH 0DH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H

Function	Keys (US)	Non-- US	Sequence Generated
SYSTEM REQ	ESC S / ESC s /		1BH 53H / 1BH 73H
ATTN	CTRL+A		01H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS			
	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H

SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.6 Perle 3591 Terminal

Terminal ID = P3591

How to Set Up the Terminal

A. Use all the default operating settings for the Perle 3591.

B. Change the baud rate and other communication parameters as desired.

C. When doing the keyboard set--up, select IBM 3180 Model 2.

D. If the auxiliary printer is configured, be sure the printer is on--line.

Keyboard Emulation

For languages other than U.S., function key sequences shown as a two character sequence, for example “ESC 1", should be entered as a three character sequence, i.e. ”ESC 0 1".

Following is a table showing how the Perle 3591 keyboard is used to emulate the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	∂		08H
CURSOR UP	⌈		1BH 5BH 41H
CURSOR DOWN	⊕		1BH 5BH 42H
CURSOR LEFT	⌊		1BH 5BH 44H
CURSOR RIGHT	⊗		1BH 5BH 43H

Function	Keys (US)	Non--US	Sequence Generated
FIELD ADVANCE	⊗∞		09H
FIELD BACKSPACE	∞⌊		1BH 31H
NEW LINE	_		1BH 34H
FAST LEFT	ALT+/ ⌊		1CH 44H
FAST RIGHT	ALT+/ ⊗		1CH 43H
Special Control			
ERROR RESET	RESET		1BH 71H
INSERT MODE	INS		1BH 35H
DELETE	DEL		1BH 36H
ERASE INPUT	ERASE INPUT		1BH 76H
HOME			18H 1BH 68H
Field Exit			
DUPLICATE	DUP		1BH 32H
FIELD MINUS	ESC N / ESC n / ESC k / ALT FIELD -- / FIELD --		1BH 4EH / 1BH 6EH / 1BH 6BH / 18H 09H
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	FIELD EXIT		0DH
ENTER	FIELD + / ENTER		0AH
CLEAR	CLEAR		18H 7FH
HELP	HELP		1BH 66H
PRINT	PRINT		1BH 65H

Function	Keys (US)	Non--US	Sequence Generated
ROLL UP	SHIFT ⌈		1CH 41H
ROLL DOWN	SHIFT ⊕		1CH 42H
CMD	ALT+/		18H
CMD1	F1		1BH 19H 31H
CMD2	F2		1BH 19H 32H
CMD3	F3		1BH 19H 33H
CMD4	F4		1BH 19H 34H
CMD5	F5		1BH 19H 35H
CMD6	F6		1BH 19H 36H
CMD7	F7		1BH 19H 37H
CMD8	F8		1BH 19H 38H
CMD9	F9		1BH 19H 39H
CMD10	F10		1BH 19H 30H
CMD11	F11		1BH 19H 2DH
CMD12	F12		1BH 19H 3DH
CMD13	F13		1BH 19H 21H
CMD14	F14		1BH 19H 40H
CMD15	F15		1BH 19H 23H
CMD16	F16		1BH 19H 24H
CMD17	F17		1BH 19H 25H
CMD18	F18		1BH 19H 5EH
CMD19	F19		1BH 19H 26H
CMD20	F20		1BH 19H 2AH
CMD21	F21		1BH 19H 28H
CMD22	F22		1BH 19H 29H
CMD23	F23		1BH 19H 5FH

Function	Keys (US)	Non--US	Sequence Generated
CMD24	F24		1BH 19H 2BH
HEX	HEX		1BH 19H 60H
TEST	TEST		18H 08H
SYSTEM REQ	SYSTEM REQ		18H 73H
ATTN	ATTN		1BH 73H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	FIELD EXIT FIELD EXIT		0DH 0DH

C.7 PerleTALK

Terminal ID = PTALK

This driver should be used when using PerleTALK on a monochrome system.

How to Set Up the Terminal C.7.1

A. Set up PerleTALK to work with the Model 3i.

For more information, refer to the PerleTALK User's Manual.

Keyboard Emulation C.7.2

Following is a table showing how the keyboard is used with Perle-TALK to emulate the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
REFRESH DISPLAY	F2 F2 U / F2 F2 u / SHIFT+F2 SHIFT+F2 U / SHIFT+F2 SHIFT+F2 u		16H 16H 55H / 16H 16H 75H / 18H 18H 55H / 18H 18H 75H
INIT TERMINAL	F2 F2 I / F2 F2 i / SHIFT+F2 SHIFT+F2 I / SHIFT+F2 SHIFT+F2 i		16H 16H 49H / 16H 16H 69H / 18H 18H 49H / 18H 18H 69H
REQUEST DISCONNECT	F2 F2 D / F2 F2 d / SHIFT+F2 SHIFT+F2 D / SHIFT+F2 SHIFT+F2 d		16H 16H 44H / 16H 16H 64H / 18H 18H 44H / 18H 18H 64H

Function	Keys (US)	Non--US	Sequence Generated
CONFIG	F2 F2 C / F2 F2 c / SHIFT+F2 SHIFT+F2 C / SHIFT+F2 SHIFT+F2 c		16H 16H 43H / 16H 16H 63H / 18H 18H 43H / 18H 18H 63H
STATUS	F2 F2 S / F2 F2 s / SHIFT+F2 SHIFT+F2 S / SHIFT+F2 SHIFT+F2 s		16H 16H 53H / 16H 16H 73H / 18H 18H 53H / 18H 18H 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	See the PerleTALK User's Guide		

C.8 PerleTALK for Color Systems

Terminal ID = PTALKCLR

This driver should be used when running PerleTALK on systems with color monitors or color emulation hardware.

How to Set Up the Terminal C.8.1

A. Set up PerleTALK to work with the Model 3i.

For more information, refer to the PerleTALK User's Manual.

Keyboard Emulation C.8.2

Following is a table showing how the keyboard is used with Perle-TALK to emulate the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
REFRESH DISPLAY	F2 F2 U / F2 F2 u / SHIFT+F2 SHIFT+F2 U / SHIFT+F2 SHIFT+F2 u		16H 16H 55H / 16H 16H 75H / 18H 18H 55H / 18H 18H 75H
INIT TERMINAL	F2 F2 I / F2 F2 i / SHIFT+F2 SHIFT+F2 I / SHIFT+F2 SHIFT+F2 i		16H 16H 49H / 16H 16H 69H / 18H 18H 49H / 18H 18H 69H
REQUEST DISCONNECT	F2 F2 D / F2 F2 d / SHIFT+F2 SHIFT+F2 D / SHIFT+F2 SHIFT+F2 d		16H 16H 44H / 16H 16H 64H / 18H 18H 44H / 18H 18H 64H

Function	Keys (US)	Non--US	Sequence Generated
CONFIG	F2 F2 C / F2 F2 c / SHIFT+F2 SHIFT+F2 C / SHIFT+F2 SHIFT+F2 c		16H 16H 43H / 16H 16H 63H / 18H 18H 43H / 18H 18H 63H
STATUS	F2 F2 S / F2 F2 s / SHIFT+F2 SHIFT+F2 S / SHIFT+F2 SHIFT+F2 s		16H 16H 53H / 16H 16H 73H / 18H 18H 53H / 18H 18H 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	See the PerleTALK User's Manual		

C.9 PerleTALK for the Macintosh

Terminal ID = PTALKMAC

For more information, refer to the PerleTALK for the Macintosh User's Manual.

C.10 PerleTALK 400

Terminal ID = PTALK400

This device type is only for use with PCs running AS/400 PC Support. In addition, when PerleTALK/400 AH was installed onto the PC, the “autoconnect” option (if available) must **NOT** have been selected.

If the “autoconnect” option was selected, use the PT400SC emulation (See Section C.11).

How to Set Up the Terminal

A. To use this emulation, set up PerleTALK/400 AH to work with a Model 3i.

For more information, refer to the PerleTALK User's Manual, Version 0210 or earlier.

C.11 PerleTALK 400 SC

Terminal ID = PT400SC

This device type is only for use with PCs running AS/400 PC Support. In addition, when PerleTALK/400 AH was installed onto the PC, the “autoconnect” option **MUST** have been selected.

If the “autoconnect” option was not selected, use the PTALK400 emulation (See Section C.10)

C.11.1 How to Set Up the Terminal

A. To use this emulation, set up PerleTALK/400 AH to work with a Model 3i.

For more information, refer to the “READ.ME” file, which can be found on the PerleTALK/400 AH disk.

C.12 Televideo 910 Terminals

Terminal ID = TV910

How to Set up the Terminal C.12.1

A. Disconnect the AC power cord from the outlet before opening the Televideo terminal case.

B. There are two sets of 10 switches on the Televideo 910, labeled S1 and S2. Set these switches in the following manner.

S1 (right rear)	Set to:	Comments
1 -- 4	—	Baud rate -- see chart.
5	DOWN	8 data bits
6	As desired	Send parity -- UP No parity -- DOWN Set to match converter.
7	As desired	EVEN parity -- UP ODD parity -- DOWN Set to match converter.
8	DOWN	1 stop bit (if baud rate is 110, set UP for 2 stop bits)
9	DOWN	Auto wrap off.
10	DOWN	Auto Linefeed off.

Switch	Baud Rate 1	2	3	4
9600	DOWN	DOWN	DOWN	DOWN
75	DOWN	DOWN	UP	DOWN
110	DOWN	DOWN	UP	UP
300	DOWN	UP	UP	DOWN
600	DOWN	UP	UP	UP
1200	UP	DOWN	DOWN	DOWN
2400	UP	DOWN	UP	DOWN
4800	UP	UP	DOWN	DOWN
9600	UP	UP	UP	DOWN
19200	UP	UP	UP	UP

S2 (left rear)	Set to:	Comments
1,2	DOWN	Setting switches 1 & 2 to the down position sets to standard TV910 emulation.
3	As required	50 Hz -- DOWN 60 Hz -- UP
4	As desired	DOWN = Blinking cursor UP = Steady cursor.
5	As desired	DOWN = Block cursor UP = Underline cursor.
6	UP	Full Duplex.
7	As desired	UP = White on black DOWN = Black on white

S2 (left rear)	Set to:	Comments
8	UP	No DSR.
9	DOWN	DCD connected.
10	DOWN	DTR on with terminal.

C. Replace the cover, reconnect the AC power cord and connect the terminal to the converter with a modem or direct connect cable, as appropriate.

NOTES

A. The TV910 terminal grounds the DCD signal (pin 8) unjustifiably. This causes the front panel LEDs on the Perle Model 3 to remain solidly on during operation, although the unit is still functional. Disconnect Pin 8 of your cable for proper operation of the front panel LEDs.

B. The last character on the screen (line 24, column 80) cannot be displayed. This defeats the Televideo 910 Auto--Scroll capability.

C. The Televideo 910 Auxiliary Printer feature does not function in an industry--standard manner; that is, the port select/deselect sequences that the converter sends to the terminal are incorrectly passed through to the port. These characters (“Ctrl/T” and “ESC A”) may cause incorrect printer operation if the printer interprets them as a command.

Keyboard Emulation

Following is a table showing how the Televideo 910 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions

1. Press Control key concurrently with the indicated alpha key.

2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non-- US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	DEL		7FH
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT TAB / ESC+DEL		1BH 49H / 1BH 7FH
NEW LINE	CTRL+Z		1AH
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH
Special Control			
ERROR RESET	ESC R / ESC r / CTRL+R		1BH 52H / 1BH 72H / 12H
INSERT MODE	CTRL+X I / CTRL+X i		18H 49H / 18H 69H
DELETE	CTRL+D		04H
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	HOME		1EH

Function	Keys (US)	Non--US	Sequence Generated
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC M / ESC m		1BH 4DH / 1BH 6DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	ESC ENTER		1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	ESC H / ESC h		1BH 48H / 1BH 68H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌠		1BH 0BH
ROLL DOWN	ESC ⊕		1BH 0AH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD8	ESC 8	ESC 08	1BH 38H
CMD9	ESC 9	ESC 09	1BH 39H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH

Function	Keys (US)	Non--US	Sequence Generated
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH

REQUEST DISCONNECT	**ESC ESC D / ESC ESC d**		**1BH 1BH 44H / 1BH 1BH 64H**

Function	Keys (US)	Non--US	Sequence Generated
CONFIG	**ESC ESC C / ESC ESC c**		**1BH 1BH 43H / 1BH 1BH 63H**
STATUS	**ESC ESC S / ESC ESC s**		**1BH 1BH 53H / 1BH 1BH 73H**
SWITCH TO SESSION 1	**ESC ESC 1**		**1BH 1BH 31H**
SWITCH TO SESSION 2	**ESC ESC 2**		**1BH 1BH 32H**
SWITCH TO SESSION 3	**ESC ESC 3**		**1BH 1BH 33H**
SWITCH TO SESSION 4	**ESC ESC 4**		**1BH 1BH 34H**
SWITCH TO SESSION 5	**ESC ESC 5**		**1BH 1BH 35H**
SWITCH TO SESSION 6	**ESC ESC 6**		**1BH 1BH 36H**
SWITCH TO SESSION 7	**ESC ESC 7**		**1BH 1BH 37H**
SWITCH TO NEXT SESSION	**ESC ESC <SP>**		**1BH 1BH 20H**
AUTOBAUD	**RETURN RETURN**		**0DH 0DH**

C.13 Televideo 910+ Terminals

Terminal ID = TV910+

How to Set Up the Terminal

A. Disconnect the AC power cord from the outlet before opening the Televideo terminal case.

B. This section describes how to set the terminal switches on the Televideo 910+ terminals. Although these two terminals use the same terminal driver, their switch settings vary. Therefore, the 910+ switch settings will be covered first, followed by the settings of the 912.

910+ S1 (right rear)	Set to:	Comments
1 -- 4	—	Baud rate -- see chart.
5	DOWN	8 data bits
6	As desired	UP -- Send parity DOWN -- No parity Set to match converter.
7	As desired	UP -- EVEN parity DOWN -- ODD parity Set to match converter.
8	DOWN	1 stop bit (if baud rate is 110, set UP for 2 stop bits)
9	DOWN	Auto wrap off
		10
	DOWN	Auto Linefeed off

910+ Baud Rates	Switch 1	2	3	4
9600	DOWN	DOWN	DOWN	DOWN
75	DOWN	DOWN	UP	DOWN
110	DOWN	DOWN	UP	UP
300	DOWN	UP	UP	DOWN
600	DOWN	UP	UP	UP
1200	UP	DOWN	DOWN	DOWN
2400	UP	DOWN	UP	DOWN
4800	UP	UP	DOWN	DOWN
9600	UP	UP	UP	DOWN
19200	UP	UP	UP	UP

910+ S2 (left rear)	Set to:	Comments
1	DOWN	Sets Conversational Mode.
2	DOWN	Sets Full Duplex.
3	As required	50 Hz -- DOWN 60 Hz -- UP
4	DOWN	Sets Edit Mode to Duplex.
5	As desired	UP -- Underline cursor DOWN -- Block cursor
6	UP	Sets 912/920 compatible.
7	As desired	UP -- Green on black DOWN -- Black on green

910+ S2 (left rear)	Set to:	Comments
8	UP	No DSR
9	DOWN	DCD connected
10	DOWN	DTR on with terminal

The S1 switches on the Televideo 912 back panel are used to set the baud rate for communications to the converter. The S3 switches are used to set the Printer Port baud rate. Set one of the following S1 and S3 group switches DOWN for the desired baud rates:

912 S1/S3 SWITCHES	DESIRED BAUD RATE
2	9600
3	4800
4	2400
5	1200
6	600
7	300
9	75
10	110

912 S2 (left rear)	Set to:	Comments
1	UP	Not used
2	DOWN	Set Standard Character Set.
3	UP	Sets Full Duplex.
4	As required	50 Hz -- UP 60 Hz -- DOWN

912 S2 (left rear)	Set to:	Comments
5	As desired	UP -- No Parity DOWN -- Send Parity
6	DOWN	Send 1 Stop Bit. The terminal will automatically send 2 Stop Bits if the baud rate is set to 110 bps.
7	UP	8 Data bits are defined.
8	UP	Only necessary for Rev. E and lower.
9	As desired	UP -- EVEN parity DOWN -- ODD parity.
10	As desired	UP -- Steady cursor DOWN -- Blinking cursor Rev E and lower uses jumper W25.

Note: To set the S5 switches, you must remove the terminal cover. The S5 group is near the back edge of the circuit board and is labelled as S.

912 S5	Set to:	Comments
1	UP	DSR disconnected.
2	DOWN	DCD connected.
3	OPEN	Used with Switch 4.
4	DOWN	DTR connected.
5	NOT USED	No aux printer support.
6--7	DOWN	RS--232

Note: Jumper (S4/W33) must be installed on the main circuit board to DISABLE the Auto -- New Line at column 80.

C. Replace the cover, reconnect the AC power cord and connect the terminal to the coverter with a modem or direct connect cable, as appropriate.

NOTES

A. The TV910 terminal grounds the DCD signal (pin 8) unjustifiably. This causes the front panel LEDs on the Perle Model 3 to remain solidly on during operation, although the unit is still functional. Disconnect Pin 8 of your cable for proper operation of the front panel LEDs.

B. The last character on the screen (line 24, column 80) cannot be displayed. This defeats the Televideo 910+/912 Auto--Scroll capability.

C. The auxiliary port on the Televideo 910+/912 is used for the 'Auxiliary Printer' feature. For a description of this feature, see the appropriate 'User's Guide.'

Keyboard Emulation

For languages other than U.S., function key sequences shown as a two character sequence, for example “ESC 1", should be entered as a three character sequence, i.e. ”ESC 0 1".

Following is a table showing how the Televideo 910+/912 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	DEL		7FH
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT TAB / ESC+DEL		1BH 49H / 1BH 7FH
NEW LINE	CTRL+Z		1AH
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH
Special Control			
ERROR RESET	ESC R / ESC r / CTRL+R		1BH 52H / 1BH 72H / 12H
INSERT MODE	CTRL+X I / CTRL+X i		18H 49H / 18H 69H
DELETE	CTRL+D		04H
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	HOME		1EH

Function	Keys (US)	Non-- US	Sequence Generated
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC M / ESC m		1BH 4DH / 1BH 6DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	ENTER		0DH
ENTER	ESC ENTER		1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	ESC H / ESC h		1BH 48H / 1BH 68H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌠		1BH 0BH
ROLL DOWN	ESC ⊕		1BH 0AH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD8	ESC 8	ESC 08	1BH 38H
CMD9	ESC 9	ESC 09	1BH 39H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH

Function	Keys (US)	Non--US	Sequence Generated
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH

REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H

Function	Keys (US)	Non--US	Sequence Generated
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	ENTER ENTER		0DH 0DH

C.14 Televideo 925 Terminal

Terminal ID = TV925

How To Set Up The Terminal

A. Disconnect the AC power cord from the outlet before opening the Televideo 925 case.

B. This section describes how to set the terminal switches on the Televideo 925 terminals.

Note: The Televideo 925 has a 'Setup Mode' available to the user for setting some of the terminal's options. All of these options are set either by terminal switches or by the converter initialization procedure. The user should be very careful with the use of 'Setup Mode' because any changes made may be detrimental to the terminal/converter operation.

S1 (right rear)	Set to:	Comments
1--4	—	Baud rate -- see charts.
5	DOWN	8 data bits.
6	DOWN	1 stop bit (if baud rate is 110, set UP for 2 stop bits)
7--10	—	Baud rate of aux port. -- see charts.

925 Baud Rates	Switches 1/7	2/8	3/9	4/10
9600	DOWN	DOWN	DOWN	DOWN
75	DOWN	DOWN	UP	DOWN
110	DOWN	DOWN	UP	UP
300	DOWN	UP	UP	DOWN
600	DOWN	UP	UP	UP
1200	UP	DOWN	DOWN	DOWN
2400	UP	DOWN	UP	DOWN
4800	UP	UP	DOWN	DOWN
9600	UP	UP	UP	DOWN
19200	UP	UP	UP	UP

S2 (left rear)	Set to:	Comments
1	DOWN	Duplex edit mode
2	DOWN	Non--912
3,4,5	No Parity	3=DOWN, 4=DOWN, 5=DOWN
	Odd Parity	3=DOWN, 4=DOWN, 5=UP
	Even Parity	3=DOWN, 4=UP,5=UP
	Mark Parity	3=UP,4=DOWN, 5=UP
	Space Parity	3=UP, 4=UP, 5=UP
6	UP	Normal block characters on a black screen.
7,8	UP, DOWN	Full duplex transmission
9	As required	DOWN = 50 Hz, UP = 60Hz.
10	DOWN	No auto Linefeed UP = Key Click OFF DOWN = Key Click ON.

On the 925 alone, there are 10 toggle--type switches that are only accessible by removing the terminal cover.

They are labeled as S3 switches and should be set to the following values:

925 S3 Switches	Set to:	Comments
1	As desired	UP = Key click OFF DOWN = Key click ON
2,3	DOWN	Set the language to ENGLISH
4	As desired	DOWN = Blinking cursor UP = Steady cursor
5	As desired	DOWN = Block cursor UP = Underline cursor
6	DOWN	Disable timeout blank option
7	UP	Page Attributes function enabled, Line attributes function disabled.
8	DOWN	DCD Connected.
9	UP	DSR Disconnected.
		10
	DOWN	DTR Connected.

C. Replace the cover, reconnect the AC power cord, and connect the terminal to the converter with a modem or direct connect cable, as appropriate.

NOTES

A. The 'Cursor Down' key for the Televideo 920 is CTRL+V. This differs slightly from the Televideo 925.

B. The last character on the screen (line 24, column 80) cannot be displayed. This feature defeats the Televideo Auto--Scroll capability.

C. The auxiliary port on the Televideo 925 is used for the 'Auxiliary Printer' feature. For a description of this feature, see the appropriate 'User's Guide.'

The Televideo 925 will pass through to the printer the character sequence which de--selects the auxiliary port. The printer output could be affected if the printer interprets this sequence (specifically, “ESC a”) as a command.

D. The F12 through F16 keys exist only on TV925 emulators.

Keyboard Emulation

Following is a table showing how the Televideo 925 keyboard is used to emulate of the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	DEL		7FH
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT TAB / ESC+DEL		1BH 49H / 1BH 7FH
NEW LINE	CTRL+Z		1AH
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH

Function	Keys (US)	Non--US	Sequence Generated
Special Control			
ERROR RESET	ESC R / ESC r / CTRL+R		1BH 52H / 1BH 72H / 12H
INSERT MODE	CTRL+X I / CTRL+X i		18H 49H / 18H 69H
DELETE	CTRL+D		04H
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	HOME		1EH
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC M / ESC m		1BH 4DH / 1BH 6DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	ENTER		0DH
ENTER	ESC ENTER		1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	ESC H / ESC h		1BH 48H / 1BH 68H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 0BH
ROLL DOWN	ESC ⊕		1BH 0AH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H

Function	Keys (US)	Non--US	Sequence Generated
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD8	ESC 8	ESC 08	1BH 38H
CMD9	ESC 9	ESC 09	1BH 39H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H

ATTN	ESC A / ESC a		1BH 41H / 1BH 61H

Function	Keys (US)	Non--US	Sequence Generated
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H

SWITCH TO NEXT SESSION	ESC ESC <SP>	1BH 1BH 20H
AUTOBAUD	ENTER ENTER	0DH 0DH

C.15 Televideo TV--970 Terminal

Terminal ID = TV970

How To Set Up The Terminal

All operator--selectable parameters are input from the keyboard through the TV--970 set up mode. There are no external switches.

A. To enter Set Up mode, press the SET UP key.

A Set Up Menu will appear on the terminal's screen.

To exit Set Up mode, press the SET UP key a second time.

To permanently save the reset parameter values (as opposed to allowing them to revert to previous values following the current session), enter a CTRL+S before exiting the Set Up mode.

Set the terminal's parameters as follows:

Identifier	Value	Comments
COMM	CNV	Conversational mode.
DUPLX	FDX	Full Duplex communication.
SEND/RCV	NO ECHO	Local terminal echo off.
BAUD (MAIN)	As desired	Main port baud rate.
PARITY (MAIN)	As desired	Main port parity.
DATA BITS (MAIN)	As desired	Main port word size.

STOP BIT (MAIN)	As desired	Main port stop bit(s).
RCV CTRL	As desired	Set to match flow control on converter.

Identifier	Value	Comments
XMIT CTRL (MAIN)	As desired	Set to match flow control on converter.
BAUD (PRINT)	As desired	Printer port baud rate.
PARITY (PRINT)	As desired	Printer port parity.
DATA BITS (PRINTER)	As desired	Printer port word size.
STOP BIT (PRINTER)	As desired	Printer port stop bit(s).
XMITCTRL (PRINT)	As desired	Set to match flow control on printer.
PRINT STAT	BUF/XPT	Select buffered transparent print.
INS CHAR	N.A.	The character that replaces erased data on the screen.
INS/RPL	N.A.	Insert overwrites or moves current data.
CTRL REP	PROC	Terminal processes commands recieved from the host.
AUTOPG	N.A.	Screen scrolls when cursor goes beyond 24th line.
AUTOWRAP	NO WRAP	Autowrap disabled.
EDIT BOUND	N.A.	Screen editing capability.
EDITING EXT	DSPL	Permits insert/delete to affect full screen.

Identifier	Value	Comments
HORZ EDIT	N.A.	Insert and delete commands affect data to right/left of cursor.
VERT EDIT	N.A.	Insert and delete commands affect data above/below cursor line.
AUTOTAB	N.A.	Cursor moves/does not move into a 'guarded area'.
GUARDED XFER	ALL	All areas are transmitted and printed as they are displayed.
MULTI--AREA XFER	ALL	All unguarded fields can be transmitted.
XFER TERM	FULL	Defines the data to be transferred as entire page of memory.
LN XFER	PG	Transmits through cursor or end--of--page.
XFER EXEC	DEFER	SEND key transmit sequence.
PG XFER	PG	Allows entire page to be transmitted.
CHAR/LN	132	Allows terminal to display lines of 132 characters length.
LN/PG	24	Sets terminal page length to 24 lines.
SCRN BACK	As desired	Display of light on dark or dark on light.

Identifier	Value	Comments
SCRN SAVER	As desired	Screen turns off after 'n' minutes if idle.

SCROLL	As desired	Terminal data display rate.
25TH LINE	As desired	Use of 25th line; blank, status, or message.
		1ST CHAR SET
	U.S.	U.S. ASCII (only setting).
2ND CHAR SET	U.K.	U.K. ASCII (only setting).
LF/NEW LN	LN FEED	LINE FEED key generates LF ,0AH. RETURN key generates CR, 0DH.
CURSOR STYLE	As desired	Manner of cursor display.
NORMAL ATTR	HIGH	Normal intensity is set to be the higher of the two intensities.
LN ATTR	NOR	Single--height, single--width character display.
POWER/HZ	As required	50 Hz or 60 Hz.
KEYCLICK	As desired	Audible or Inaudible.
BREAK KEY	IGNORE	BREAK key is ignored when pressed.

NOTES

A. The auxiliary port on the Televideo 970 is used for the 'Auxiliary Printer' feature. For a description of this feature, see the appropriate 'User's Guide.'

Keyboard Emulation 5.2

Following is a table showing how the Televideo 970 keyboard is used in emulation of the 5251 keyboard.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 5BH 41H
CURSOR DOWN	⊕		1BH 5BH 42H
CURSOR LEFT	⌊		1BH 5BH 44H
CURSOR RIGHT	⊗		1BH 5BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB / ESC B / ESC b		1BH 09H / 1BH 42H / 1BH 62H
LINEFEED	NEW LINE or CTRL+J		0AH
FAST LEFT	ESC ⌊		1BH 1BH 5BH 44H
FAST RIGHT	ESC ⊗		1BH 1BH 5BH 43H
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H

Function	Keys (US)	Non--US	Sequence Generated
INSERT MODE	ESC I / ESC i		1BH 49H / 1BH 69H
DELETE	DEL		7FH
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H

HOME	ESC BS / ESC H / ESC h		1BH 08H / 1BH 48H / 1BH 68H

Field Exit

DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC N / ESC n		1BH 4EH / 1BH 6EH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN / ENTER		0DH
ENTER	ESC ENTER / ESC RETURN		1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	ESC F / ESC f		1BH 46H / 1BH 66H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 1BH 5BH 41H
ROLL DOWN	ESC ⊕		1BH 1BH 5BH 42H
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H

Function	Keys (US)	Non--US	Sequence Generated
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H

CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H

Function	**Keys (US)**	**Non--US**	**Sequence Generated**
CANCEL PRINT	ESC .		1BH 2EH

REFRESH DISPLAY	ESC ESC U / ESC ESC u	1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i	1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z	1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d	1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c	1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s	1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1	1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2	1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3	1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4	1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5	1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6	1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7	1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>	1BH 1BH 20H
AUTOBAUD	RETURN RETURN/ ENTER ENTER	0DH 0DH

C.16TTY Device

This device permits the attachment of ASCII devices to an AS/400 or System/3X.

This driver has been set up such that all cursor positioning and attribute setting functions, as well as character echo from the controller, have been suppressed.

If desired, this driver can be used as a base for a user--defined driver that allows user--defined key mapping.

Terminal ID = TTY

Keyboard Emulation 5251

For languages other than U.S., function key sequences shown as a two character sequence, for example “ESC 1", should be entered as a three character sequence, i.e. ”ESC 0 1".

Following is a table showing how the keyboard is used with the TTY Device to emulate the 5251 keyboard.

Function	Keys	Sequence Generated
Cursor Movement		
CHARACTER BACKSPACE	BACKSPACE	08H
CURSOR UP	⌈	1BH 5BH 41H
CURSOR DOWN	⊕	1BH 5BH 42H
CURSOR LEFT	⌊	1BH 5BH 44H

Function	Keys (US)	Non--US	Sequence Generated
CURSOR RIGHT	⊗		1BH 5BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB / ESC B / ESC b		1BH 09H / 1BH 42H / 1BH 62H
NEW LINE	LINEFEED / CTRL+J		0AH
FAST LEFT	ESC ⌊		1BH 1BH 5BH 44H
FAST RIGHT	ESC ⊗		1BH 1BH 5BH 43H
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	ESC I / ESC i		1BH 49H / 1BH 69H
DELETE	DEL		7FH
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	ESC BS / ESC H / ESC h		1BH 08H / 1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC N / ESC n		1BH 4EH / 1BH 6EH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN / ENTER		0DH

	Function	Keys (US)	Non--US	Sequence Generated
	ENTER	ESC ENTER / ESC RETURN		1BH 0DH
Aid				
	CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
	HELP	ESC F / ESC f		1BH 46H / 1BH 66H
	PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
	ROLL UP	ESC ⌈		1BH 1BH 5BH 41H
	ROLL DOWN	ESC ⊕		1BH 1BH 5BH 42H
	CMD	CTRL+X		18H
	CMD1	ESC 1	ESC 01	1BH 31H
	CMD2	ESC 2	ESC 02	1BH 32H
	CMD3	ESC 3	ESC 03	1BH 33H
	CMD4	ESC 4	ESC 04	1BH 34H
	CMD5	ESC 5	ESC 05	1BH 35H
	CMD6	ESC 6	ESC 06	1BH 36H
	CMD7	ESC 7	ESC 07	1BH 37H
	CMD9	ESC 9	ESC 09	1BH 39H
	CMD8	ESC 8	ESC 08	1BH 38H
	CMD10	ESC 0	ESC 10	1BH 30H
	CMD11	ESC --	ESC11	1BH 2DH
	CMD12	ESC =	ESC 12	1BH 3DH
	CMD13	ESC !	ESC 13	1BH 21H
	CMD14	ESC @	ESC 14	1BH 40H
	CMD15	ESC #	ESC15	1BH 23H

Function	Keys (US)	Non--US	Sequence Generated
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
Special Host			
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
Signal			
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
Special Functions			
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH

REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H

Function	Keys (US)	Non--US	Sequence Generated
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN/ ENTER ENTER		0DH 0DH

C.17DEC VT--52 Terminals

Terminal ID = VT52

How To Set Up The Terminal

The terminal should be set up with the following characteristics:

- No auto--scrolling
- No auto line feed

For more information, please refer to the VT--52 User's Manual and the 'General Notes on Terminal Switch Settings' section of this document for the proper settings, or contact your Perle Systems representative.

NOTES

A. The last character on the screen (line 24, column 80) cannot be displayed. This feature is designed to defeat the VT--52 auto scroll capability.

Keyboard Emulation

Following is a table showing how the DEC VT--52 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.
3. NK indicates that the indicated key is found in the Numeric Keypad at the lower right of the keyboard (the Perle Model 3 sets the keypad to 'Alternate keypad' mode). For VT--52 terminals having no Numeric Keypad, a terminal driver (terminal Id = VT52X) is provided.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB / ESC BS		1BH 09H / 1BH 08H
NEW LINE	CTRL+J		0AH
FAST LEFT		N.A.	
FAST RIGHT		N.A.	
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	ESC I / ESC i		1BH 49H / 1BH 69H
DELETE	CTRL+D		04H
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	ESC H / ESC h		1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	CTRL/X D / CTRL/X d		18H 44H / 18H 64H

Function	Keys (US)	Non--US	Sequence Generated
FIELD MINUS	ESC N / ESC n		1BH 4EH / 1BH 6EH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	ESC RETURN		1BH 0DH
CLEAR	CTRL+C		03H
HELP	ESC F / ESC f		1BH 46H / 1BH 66H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 1BH 41H
ROLL DOWN	ESC ⊕		1BH 1BH 42H
CMD	CTRL+X		18H
HEX	CTRL+X \		18H 5CH
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H

CMD14	ESC @	ESC 14	1BH 40H

Function	Keys (US)	Non--US	Sequence Generated
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	CTRL+A		01H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H

STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.18DEC VT--100 Terminal

Terminal ID = VT100

How To Set Up The VT100 Terminal

Turn on the power switch and enable the software option switches via the keyboard (SETUP B procedure). SETUP B mode may only be entered from SETUP A mode by pressing the SETUP key twice. This mode contains a series of software keys that tailor the terminal to the operating environment of the user. The following values are recommended to interface with the Perle Model 3:

Byte 1 Switches (Bit def. from left to right)	Set to:	Comments
1 (SCROLL)	As desired	Jump or Smooth Scroll.
2 (AUTO REPEAT)	As desired	Enable auto repeat function.
3 (SCREEN)	As desired	0 = Dark background 1 = Light background
4 (CURSOR)	As desired	0 = Underline cursor 1 = Block cursor

Byte 2 Switches (Bit def. from left to right)	Set to:	Comments
1 (MARGIN BELL)	As desired	0 = Disable, 1 = Enable
2 (KEYCLICK)	As desired	0 = Disable 1 = Enable

Byte 2 Switches (Bit def. from left to right)	Set to:	Comments
3 (ANSI/VT52)	1	Disable VT--52 compatible mode.
4 (AUTO XON/XOFF)	0	Should be disabled.

Byte 3 Switches (Bit def. from left to right)	Set to:	Comments
1 (# SWITCH)	As desired	Set to # character
2 (WRAP AROUND)	0	Disableauto wrap feature.
3 (NEW LINE)	As desired	Disable new line function
4 (INTER--FACE)	0	Should be disabled.

Byte 4 Switches (bit def. from left to right)	Set to:	Comments
1 (PARITY SENSE)	As desired	0 = ODD, 1 = EVEN. This switch is only appropriate if PARITY (Bit 2) is Set.
2 (PARITY)	As desired	0 = OFF, 1 = ON. If ON is set, then the PARITY SENSE switch (Bit 1) must also be set to ODD or EVEN parity.

Byte 4 Switches (bit def. from left to right)	Set to:	Comments
3 (BITS PER CHAR)	As desired	7 or 8 bits per character.
4 (POWER)	As required	0 = 60Hz, 1 = 50Hz

B. The SETUP B mode screen contains the facility for setting the appropriate terminal baud rate. Available baud rates are: 75, 110, 300, 600, 1200, 2400, 4800, 9600 and 19.2 Kbps. Both the transmit baud rate (T SPEED) and receive baud rate (R SPEED) must be set to the same value. The baud rate specified here must match the baud rate for the converter port to which this terminal is connected. For baud rates of 75 and 110 bps, the number of stop bits must be 2.

C. Connect the terminal to the converter with a modem or direct connect cable, as appropriate.

Keyboard Emulation

Following is a table showing how the DEC VT--100 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.
3. NK denotes that the indicated key is found in the Numeric Keypad at the lower right of the keyboard (the Perle Model 3 sets the keypad to 'Alternate keypad' mode). For VT--100 terminals and all look--alike terminals which comply with ANSI Standard 3.64 but have no numeric keypad, the ANSI terminal driver is provided.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H
CURSOR UP	⌈		1BH 41H
CURSOR DOWN	⊕		1BH 42H
CURSOR LEFT	⌊		1BH 44H
CURSOR RIGHT	⊗		1BH 43H
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	ESC TAB / ESC BS		1BH 09H / 1BH 08H
NEW LINE	CTRL+J / LINEFEED		0AH
FAST LEFT	ESC ⌊		1BH 1BH 5BH 44H
FAST RIGHT	ESC ⊗		1BH 1BH 5BH 43H
Special Control			
ERROR RESET	ESC R / ESC r		1BH 52H / 1BH 72H
INSERT MODE	ESC I / ESC i		1BH 49H / 1BH 69H
DELETE	DELETE		7FH
ERASE INPUT	ESC E / ESC e		1BH 45H / 1BH 65H
HOME	ESC H / ESC h		1BH 48H / 1BH 68H

Function	Keys (US)	Non--US	Sequence Generated
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	NK -- / PF4		1BH 4FH 6DH / 1BH 4FH 53H
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	NK ENTER / PF2 / ESC RETURN		1BH 4FH 4DH / 1BH 4FH 51H / 1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	NK 1 / PF1		1BH 4FH 71H / 1BH 4FH 50H
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈		1BH 1BH 41H
ROLL DOWN	ESC ⊕		1BH 1BH 42H
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H

Function	Keys (US)	Non--US	Sequence Generated
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A OR ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH

Function	Keys (US)	Non--US	Sequence Generated
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.19DEC VT--102 Terminal

Terminal ID = VT102

This terminal driver is identical to the VT100 driver, with the exception that this driver supports an auxiliary printer. Most VT-- 100 emulators support an auxiliary printer port, and so should use this driver.

For information on keyboard emulation, and on how to set up the terminal, see the entry for VT100.

C.20DEC VT--220 Terminal

Terminal ID = VT220

How To Set Up The VT220 Terminal

A. The VT--220 terminal uses a series of Set--up screens for the selection of operating characteristics. Use of these screens is discussed in detail in the VT--220 terminal Owner's Manual. Each Set--Up screen contains a number of fields which in turn are used to establish parameter settings. The following parameter settings are suggested for use with the Perle Model 3:

Set up Screen	Field	Setting/ Comments
DISPLAY	Columns	80 columns
	Interpret/Display Controls	Interpret
	Auto Wrap	No Auto Wrap.
	Scrolling	No effect.
	Text Screen	As desired. (Selects text and background intensity)
	Text Cursor	As desired. (Display or non--display of cursor.)
	Cursor Style	As desired. (Block cursor is better with underscore fields.)
GENERAL	Mode	VT200/7--bit controls.
	User defined keys	Unlocked
	User Features	Unlocked

Set up Screen	Field	Setting/ Comments
	Keypad	Will be overridden.
	Cursor Keys	Will be overridden.
	New Line/No New Line	No New Line.
COMM	Transmit = (baud rate)	Set to match converter.
	Receive = (baud rate)	Transmit
	XOFF	128
	Bits, Parity (main port)	Set to match converter.
	Stop Bits	Set to match converter.
	Local Echo	No Local Echo.
	Port Type	EIA Port, Data Leads only
	Disconnect Delay	2s Delay
PRINTER	Speed = (baud)	As required by printer.
	Mode	Normal Print.
	Bits, Parity (aux port)	As required by printer.
	Stop Bits	As required by printer.
	Print Full Page/Scroll Reg.	Scroll region.
	Printed Data Type	Determined by type of printer attached.
	Print Terminator	No Terminator.

Set up Screen	Field	Setting/ Comments
KEYBOARD	Key Types	As determined by your application and country.
	Caps/Shift Lock	As desired.
	Auto Repeat	As desired.
	Keyclick	As desired.
	Margin Bell	As desired.
	Warning Bell	As desired.
	Break/No break	No Break.
	Auto Answerback	Off

NOTES

A. The “PR” port on the VT220 is used for the “Auxiliary Printer” feature. For a description of this feature, see the appropriate “User's Guide.” This port requires a male DB9 connector on the interface cable.

Keyboard Emulation: C210.2

Following is a table showing how the DEC VT--220 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACKSPACE		08H

CURSOR UP	⌈	1BH 5BH 41H
CURSOR DOWN	⊕	1BH 5BH 42H
CURSOR LEFT	⌊	1BH 5BH 44H
CURSOR RIGHT	⊗	1BH 5BH 43H
FIELD ADVANCE	TAB	09H
FIELD BACKSPACE	ESC BS / ESC TAB	1BH 08H / 1BH 09H
NEW LINE	LINEFEED	0AH
FAST LEFT	ESC ⌊	1BH 1BH 5BH 44H
FAST RIGHT	ESC ⊗	1BH 1BH 5BH 43H

Special Control

ERROR RESET	REMOVE / ESC R / ESC r	1BH 5BH 33H 7EH / 1BH 52H / 1BH 72H
INSERT mode	ESC I / ESC i / INSERT	1BH 49H / 1BH 69H / 1BH 5BH 32H 7EH
DELETE	RUBOUT	7FH
ERASE INPUT	ESC E / ESC e	1BH 45H / 1BH 65H
HOME	ESC H / ESC h / NK(5) / FIND	1BH 48H / 1BH 68H / 1BH 4FH 75H / 1BH 5BH 31H 7EH

Function	Keys (US)	Non--US	Sequence Generated

Field Exit

DUPLICATE	DO / ESC D / ESC d	1BH 5BH 32H 39H 7EH /

			1BH 44H / 1BH 64H
FIELD MINUS	NK(--)		1BH 4FH 6DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	ENTER		0DH
ENTER	NK(ENTER) / ESC RETURN		1BH 4FH 4DH / 1BH 0DH
CLEAR	ESC C / ESC c		1BH 43H / 1BH 63H
HELP	HELP		1BH 5BH 32H 38H 7EH
PRINT	ESC P / ESC p		1BH 50H / 1BH 70H
ROLL UP	ESC ⌈ / NEXT SCREEN		1BH 1BH 5BH 41H / 1BH 5BH 36H 7EH
ROLL DOWN	ESC ⊕ / PREV SCREEN		1BH 1BH 5BH 42H / 1BH 5BH 35H 7EH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H

Function	**Keys (US)**	**Non--US**	**Sequence Generated**
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH

CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		1BH 54H / 1BH 74H
SYSTEM REQ	ESC S / ESC s / SEL		1BH 53H / 1BH 73H / 1BH 5BH 34H 7EH
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H

Function	Keys (US)	Non--US	Sequence Generated
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H

TOGGLE INDICATORS	ESC Z / ESC z	1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d	1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c	1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s	1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1	1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2	1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3	1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4	1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5	1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6	1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7	1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>	1BH 1BH 20H
AUTOBAUD	ENTER ENTER	0DH 0DH

C.21 WYSE WY--30 Terminal

Terminal ID = WYSE30

How To Set Up The Terminal

A. Power on the terminal, then depress the SHIFT and SETUP keys simaltaneously to enter Set Up mode. Option fields appear at the top of the screen. (Refer to the terminal's User's Guide for details on use of Set up mode and how to change parameter settings.) Set each of the options as follows:

Set up Level	Parameter	Setting/Comments
1	Handshake	Set to match converter.
	Screen	As desired
	Cursor	As desired (Block preferable)
	Blink	As desired
	Mode	FDX (Full duplex mode).
2	Data Bits	Set to match converter.
	Stop Bits	Set to match converter.
	Parity	Set to match converter.
3	Baud Rate	Set to match converter.

Set up Level	Parameter	Setting/Comments
4	Block End	N.A.
	Auto NL	OFF
	CR	CR (no auto line feed).
	Autoscroll	OFF
	Lock	As Desired (Controls action of the CAPS LOCK key).
	Repeat	As Desired
5	CRT Saver	As Desired
	Protect	DIM
	Attribute	PAGE
6	Compatible Mode	WY30
	Enhance	ON
	Keypad	APPLIC (application mode).
	FKeys	REMOTE
	Test	OFF

NOTES

A. The baud rate parameter set during the terminal configuration controls both the main and aux ports.

B. The auxiliary port on the WY--30 is used for the 'Auxiliary Printer, feature. For a description of this feature, see the appropriate 'User's Guide.'

C. Numeric keypad keys, linefeed and backspace keys are all reprogrammed by the IL/5251 upon initialization. All the other programmable keys may be customized by the user.

Keyboard Emulation

Following is a table showing how the Wyse Model 30 keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	DEL		7FH
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT/TAB		1BH 49H
NEW LINE	INS LINE		1BH 45H
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH

Function	Keys (US)	Non--US	Sequence Generated
Special Control			
ERROR RESET	CTRL/R / REPLACE / DEL_LINE / ESC R / ESC r		1BH 72H / 1BH 52H / 1BH 52H / 1BH 72H
INSERT MODE	INS CHAR / INSERT / ESC I		1BH 51H / 1BH 71H
DELETE	DEL CHAR		1BH 57H
ERASE INPUT	FUNCT+R / FUNCT+8		01H 52H 0DH / 01H 72H 0DH
HOME	HOME / ESC H / ESC h		1EH / 1HB 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	NK -- / ESC N / ESC n		1BH 4EH / 1BH 4EH / 1BH 6EH
FIELD PLUS	SAME AS FIELD EXIT		01H 43H 0DH
FIELD EXIT	RETURN		0DH
Aid			
ENTER	NK ENTER / ESC RETURN		1BH 0DH
CLEAR	CLEAR PAGE / ESC C / ESC c		1BH 59H / 1BH 43H / 1BH 63H

Function	Keys (US)	Non--US	Sequence Generated
HELP	SHIFT/ HOME / F1 / SHIFT+F1		1BH 7BH / 1BH 40H ODH / 01H 60H 0DH
PRINT	ESC P / ESC p / FUNCT+P / FUNCT+p		1BH 52H / 1BH 72H / 01H 52H 0DH / 01H 72H 0DH
ROLL UP	PAGE /ESC ⌈		1BH 4AH / 1BH 0BH
ROLL DOWN	PAGE /ESC ⊕		1BH 4BH / 1BH 0AH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H

Function	Keys (US)	Non--US	Sequence Generated
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
Special Host			
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t		18H 54H OR 1BH 74H
SYSTEM REQUEST	ESC S / ESC s		1BH 53H / 1BH 73H
Signal			
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
Special Function			
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATOR	ESC Z / ESC z		1BH 5AH / 1BH 7aH
REQUEST DISCONNECT	ESC D / ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H

Function	Keys (US)	Non--US	Sequence Generated
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.22 WYSE WY--50 Terminal

Terminal ID = WYSE50

How To Set Up The WYSE Terminal

A. To enter the set up mode depress the SHIFT followed by SETUP key simultaneously. The setup menu screen should now appear. The parameters should be set as follows.

Parameters	Setting
HANDSHAKE	XONXOFF
SCREEN	80
CURSOR	AS DESIRED
BLINK	AS DESIRED
MODE	FDX
DATA BIT	AS DESIRED
STOP BIT	AS DESIRED
PARITY BIT	AS DESIRED
MODEM PORT BAUD RATE	AS DESIRED
BLK END	US/CR
AUTO NL	OFF
CR	CR
AUTO SCRL	OFF
AUX BAUD RATE	AS DESIRED
SCRL	JUMP
STATUS	ON
S. SAVER	OFF

Parameters	Setting
PROT	DIM
TEST	OFF
KEYS	US/UK
RET/ENTER	CR/CR
COMPATIBLE MODE	WY50
ENHANCE	OFF

Keyboard Emulation 2

Following is a table showing how the Wyse WY--50 AT keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	INS REPL		1BH 72H
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H

Function	Keys (US)	Non--US	Sequence Generated
FIELD BACKSPACE	SHIFT+TAB		1BH 49H
NEW LINE	SHIFT+LINE INS CHAR		1BH 45H
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH
Special Control			
ERROR RESET	F13 / CTRL+R		01H 4CH 0DH / 12H
INSERT MODE	F14		01H 4DH 0DH
DELETE	DEL		7FH
ERASE INPUT	SHIFT+LINE DEL CHAR		1BH 52H
HOME	HOME / ESC H / ESC h		1EH / 1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC --/ ESC NK --		1BH 2DH/ 1BH 2DH
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	ESC+RETURN/ ESC+NKENTER		1BH 0DH / 1BH 0DH
CLEAR	SHIFT SCRN CLR LINE		1BH 59H
HELP	SHIFT+HOME		1BH 7BH

Function	Keys (US)	Non--US	Sequence Generated
PRINT	SHIFT+PRINT SEND		01H 6FH 0DH
ROLL UP	F16/ ESC ↑ SHIFT+PREV PAGE NEXT		01H 4FH 0DH / 1BH 0BH 1BH 4AH
ROLL DOWN	F15/ ESC ↓ PREV PAGE NEXT		01H 4EH 0DH/ 1BH 0AH 1BH 4BH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H

CMD18	ESC ^	ESC 18	1BH 5EH

Function	Keys (US)	Non--US	Sequence Generated
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t / PF3		1BH 54H / 1BH 74H / 1BH 54H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H

SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.23WYSE WY--60 TERMINAL

Terminal ID = WYSE60

This terminal driver was specificall matched to work with the WYSE ASCII type keyboard.

How To Set Up The 23Terminal

A. To enter the set up mode depress the SHIFT followed by SETUP key. Main setup menu screen should appear. Options can be selected with the left and right arrow keys. They can be executed by pressing F10 key. We recommend that prior to initial setup all internal parameters are set to factory default values with RESET ALL followed by SAVE ALL option on the main menu screen. From the main setup menu screen other setup menus can be selected by pressing keys F1 through F9. Parameters on those screens except for F8--FKEYS and F9--LABELS, where the keys are selected with CTRL key and actual strings have to be typed in. Most of the functions described below can be left in a default state, several entries have to be changed to match converter and others can be adjusted to user's wishers.

Parameters/ F1--DISP	Setting/Comments
Columns	80
Lines	24
Status Line	Standard
Attributes	Char
Monitor	Off
Cursor	as desired
Background	
Page Length	as desired
Scroll speed	as desired

Parameters/ F1--DISP	Setting/Comments
Screen saver	as desired
Display cursor	On

Parameters/F2-- GENERAL	Setting/Comments
Personality	WY--60(set by converter)
Enhance	As desired
Font load	on
Comm mode	full duplex
End of line wrap	off
Send ACK	off (set by converter)
Data/printer	as wired by user
Auto scroll	off
	off
RCVD CR	CR
Monitor	off
With change clear	off

Parameters/F3-- KEYBRD	Setting/Comments
Keyclick	as desired
Keylock	caps
Key repeat	on
Return	CR
Enter	CR
Corner keys	funct

Parameters/F3--KEYBRD	Setting/Comments
Xmt limit	none
Fkey xmit limit	none
Break	irrelevant
Wyseword	off
Language	U.S.
Margin bell	as desired

Parameters/F4--MODEM	Setting/Comments
Baud rate	set to match converter or modem
Data bits/Stop bit	set to match converter
Rcv handshake	set to match converter
Parity	set to match converter
Xmit handshake	none
XPC handshake	off
Aux	as desired

Parameters/F5--AUX	Setting/Comments
As above except as noted below and for settings to match auxiliary printer settings.	
Block end	US/CR
Label	off
WPRT into	as desired

Parameters/F5-- AUX	Setting/Comments
Auto page	off
Save labels	irrelevant
Test	off

Parameters/F6-- IBM	Setting/Comments

Irrelevant.

Parameters/F7-- ASCII	Setting/Comments

Irrelevant.

Parameters/F8-- F--KEYS	Setting/Comments

Keys should be left in default (undefined) state else the key may stop functioning.

Parameters/F9-- LABELS	Setting/Comments

Labels are not affected by the Model 3i and may be defined by user.

Notes C.23.2

A. It might be useful in troubleshooting and in issuing local commands to the Model 3i to know that this terminal sends ESC code (1BH) when Shift is depressed. Unshifted sends another code which corresponds to Enter function.

Keyboard Emulation

Following is a table showing how the Wyse WY--60 ASCII keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	LOCAL BLOCK		7FH
CURSOR UP	⌈		0BH
CURSOR DOWN	⊕		0AH
CURSOR LEFT	⌊		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT+TAB		1BH 49H
NEW LINE	LINEFEED		1BH 4BH
FAST LEFT	ESC ⌊		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH

Function	Keys (US)	Non--US	Sequence Generated
Special Control			
ERROR RESET	F13 / CTRL+R		01H 4CH 0DH / 12H
INSERT MODE	F14		01H 4DH 0DH
DELETE	DEL		1BH 37H
ERASE INPUT	SHIFT LINEFEED		1BH 4AH
HOME	HOME / ESC H / ESC h		1EH / 1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC -- / PF2		1BH 2DH / 1BH 57H
FIELD PLUS	(SAME AS FIELD EXIT)		
FIELD EXIT	RETURN		0DH
ENTER	PF4 / ESC+RETURN / NK ENTER		1BH 72H / 1BH 0DH / 1BH 0DH
CLEAR	SHIFT DELETE / ESC LOCAL BLOCK		1BH 50H / 1BH 7FH
HELP	SHIFT+HOME / PF1		1BH 7BH / 1BH 51H
PRINT	SHIFT+F16		01H 6FH 0DH
ROLL UP	F16 /ESC	⌈	01H 4FH 0DH / 1BH 0BH
ROLL DOWN	F15 /ESC	⊕	01H 4EH 0DH / 1BH 0AH
CMD	CTRL+X		18H

Function	Keys (US)	Non--US	Sequence Generated
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H
CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH

Function	Keys (US)	Non--US	Sequence Generated
TEST	ESC T / ESC t / PF3		1BH 54H / 1BH 74H / 1BH 54H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H
STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H

SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

C.24WYSE WY--100 Terminal

Terminal ID = WYSE100

How To Set Up The Terminal C.24.1

A. The WYSE100 has 3 sets of Dip switches. They should be set up as follows.

	1	2	3	4	5	6	7	8
DS1	ON	ON	ON	ON	OFF	OFF	OFF	OFF
DS2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
DS3	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF

Keyboard Emulation C.24.2

Following is a table showing how the Wyse WY--60 AT keyboard is used in emulation of the 5251 keyboard.

Notes and Conventions:

1. Press Control key concurrently with the indicated alpha key.
2. Press ESC key prior to pressing the indicated alpha key.

Function	Keys (US)	Non--US	Sequence Generated
Cursor Movement			
CHARACTER BACKSPACE	BACK SPACE		7FH
CURSOR UP	⌠		0BH

CURSOR DOWN	⊕		0AH

Function	Keys (US)	Non--US	Sequence Generated
CURSOR LEFT	⎩		08H
CURSOR RIGHT	⊗		0CH
FIELD ADVANCE	TAB		09H
FIELD BACKSPACE	SHIFT+TAB		1BH 49H
NEW LINE	LINEFEED		1BH 4BH
FAST LEFT	ESC ⎩		1BH 08H
FAST RIGHT	ESC ⊗		1BH 0CH
Special Control			
ERROR RESET	F13 / CTRL+R		01H 4CH 0DH / 12H
INSERT MODE	INS REP		1BH 72H
DELETE	SHIFT DEL CHAR INS		1BH 57H
ERASE INPUT LINE ERASE			1BH 54H
HOME	HOME / ESC H / ESC h		1EH / 1BH 48H / 1BH 68H
Field Exit			
DUPLICATE	ESC D / ESC d		1BH 44H / 1BH 64H
FIELD MINUS	ESC --		1BH 2DH
FIELD PLUS	(SAME AS FIELD EXIT)		

FIELD EXIT	RETURN		0DH
ENTER	ESC+RETURN / NEWLINE		1BH 0DH / 1BH 0DH

Function	Keys (US)	Non--US	Sequence Generated
CLEAR	ESC P		1BH 50H
HELP	ESC {/ESC Q		1BH 7BH / 1BH 51H
PRINT	PRINT		1BH 40YH
ROLL UP	F16 /ESC ⌈		01H 4FH 0DH / 1BH 0BH
ROLL DOWN	F15 /ESC ⊕		01H 4EH 0DH / 1BH 0AH
CMD	CTRL+X		18H
CMD1	ESC 1	ESC 01	1BH 31H
CMD2	ESC 2	ESC 02	1BH 32H
CMD3	ESC 3	ESC 03	1BH 33H
CMD4	ESC 4	ESC 04	1BH 34H
CMD5	ESC 5	ESC 05	1BH 35H
CMD6	ESC 6	ESC 06	1BH 36H
CMD7	ESC 7	ESC 07	1BH 37H
CMD9	ESC 9	ESC 09	1BH 39H
CMD8	ESC 8	ESC 08	1BH 38H
CMD10	ESC 0	ESC 10	1BH 30H
CMD11	ESC --	ESC11	1BH 2DH
CMD12	ESC =	ESC 12	1BH 3DH
CMD13	ESC !	ESC 13	1BH 21H
CMD14	ESC @	ESC 14	1BH 40H
CMD15	ESC #	ESC15	1BH 23H

CMD16	ESC $	ESC16	1BH 24H
CMD17	ESC %	ESC 17	1BH 25H
CMD18	ESC ^	ESC 18	1BH 5EH
CMD19	ESC &	ESC 19	1BH 26H

Function	Keys (US)	Non--US	Sequence Generated
CMD20	ESC *	ESC20	1BH 2AH
CMD21	ESC (	ESC 21	1BH 28H
CMD22	ESC)	ESC22	1BH 29H
CMD23	ESC _	ESC 23	1BH 5FH
CMD24	ESC +	ESC24	1BH 2BH
HEX	CTRL+X \		18H 5CH
TEST	ESC T / ESC t / PF3		1BH 54H / 1BH 74H / 1BH 54H
SYSTEM REQ	ESC S / ESC s		1BH 53H / 1BH 73H
ATTN	ESC A / ESC a		1BH 41H / 1BH 61H
CANCEL PRINT	ESC .		1BH 2EH
REFRESH DISPLAY	ESC ESC U / ESC ESC u		1BH 1BH 55H / 1BH 1BH 75H
INIT TERMINAL	ESC ESC I / ESC ESC i		1BH 1BH 49H / 1BH 1BH 69H
TOGGLE INDICATORS	ESC Z / ESC z		1BH 5AH / 1BH 7AH
REQUEST DISCONNECT	ESC ESC D / ESC ESC d		1BH 1BH 44H / 1BH 1BH 64H
CONFIG	ESC ESC C / ESC ESC c		1BH 1BH 43H / 1BH 1BH 63H

STATUS	ESC ESC S / ESC ESC s		1BH 1BH 53H / 1BH 1BH 73H
SWITCH TO SESSION 1	ESC ESC 1		1BH 1BH 31H
SWITCH TO SESSION 2	ESC ESC 2		1BH 1BH 32H
SWITCH TO SESSION 3	ESC ESC 3		1BH 1BH 33H

Function	Keys (US)	Non--US	Sequence Generated
SWITCH TO SESSION 4	ESC ESC 4		1BH 1BH 34H
SWITCH TO SESSION 5	ESC ESC 5		1BH 1BH 35H
SWITCH TO SESSION 6	ESC ESC 6		1BH 1BH 36H
SWITCH TO SESSION 7	ESC ESC 7		1BH 1BH 37H
SWITCH TO NEXT SESSION	ESC ESC <SP>		1BH 1BH 20H
AUTOBAUD	RETURN RETURN		0DH 0DH

This Page is Intentionally Blank

APPENDIX D

D. 1 PRINTER SUPPORT

D. 1.1 Epson FX Printer

Interface	Serial RS232D	
Printer Setup	No auto LF on CR No auto skip on preforations	
Configuration	Device Type	Epson
	Session Type	Printer
	Workstation Address	As configured on the System/3X

D. 1.2 Generic Printer

Interface	Serial RS232D	
Printer Setup	No auto LF on CR No auto skip on preforations Printer must support BELL, CR, LF and BS	
Configuration	Device Type	Generic
	Session Type	Printer
	Workstation Address	As configured on the System/3X

D. 1.3 Hewlett--Packard Laser Jet Printers

Interface	Serial RS232D	
Printer Setup	Factory Defaults	
Configuration	Device Type	HPLJET or HPLAN
	Session Type	Printer
	Workstation Address	As configured on the System/3X

NOTE: Set the Model 3i Device Ready Signal on the Port Configuration to “NONE”.

IBM Proprinter D. 1.4

Interface	Serial RS2320	
Printer Setup	Factory Defaults	
Configuration	Device Type	IBMXL
	Session Type	Printer
	Workstation Address	As configured on the System/3X

Okidata 293 D. 1.5

Interface	Serial RS232D	
Printer Setup	Factory Defaults	
Configuration	Device Type	OKI293
	Session Type	Printer
	Workstation Address	As configured on the System/3X

Citoh 4000 Series D. 1.6

Interface	Serial RS232D	
Printer Setup	Enable BS	
Configuration	Device Type	CITOH
	Session Type	Printer
	Workstation Address	As configured on the System/3X

EPSON LQ Series D. 1.7

Interface	Serial RS232D	
Printer Setup	Factory Defaults	
Configuration	Device Type	EPSONLQ
	Session Type	Printer

	Workstation Address	As configured on the System/3X

IBM Quietwriter D. 1.8

Interface Serial RS232D

Printer Setup Factory Defaults

Configuration	Device Type	IBMQUIET
	Session Type	Printer
	Workstation Address	As configured on the System/3X

HP DeskJet D. 1.9

Interface Serial RS232D

Printer Setup Factory Defaults

Configuration	Device Type	HPDJET
	Session Type	Printer
	Workstation Address	As configured on the System/3X

Note: Set the Model 3i Device ready signal on the Port Configuration to “NONE”.

IBM 3812 D. 1.10

Interface Serial RS232D

Printer Setup Factory Defaults

Configuration	Device Type	IBM3812
	Session Type	Printer
	Workstation Address	As configured on the System/3X

EPSON DFX D. 1.11

Interface Serial RS232D

Printer Setup Factory Defaults

Configuration	Device Type	EPSONFX

Session Type	Printer
Workstation Address	As configured on the System/3X

MNEMONIC	COMMAND
CMD1	CMD1
CMD2	CMD2
CMD3	CMD3
CMD4	CMD4
CMD5	CMD5
CMD6	CMD6
CMD7	CMD7
CMD8	CMD8
CMD9	CMD9
CMD10	CMD10
CMD11	CMD11
CMD12	CMD12
CMD13	CMD13
CMD14	CMD14
CMD15	CMD15
CMD16	CMD16
CMD17	CMD17
CMD18	CMD18
CMD19	CMD19
CMD20	CMD20
CMD21	CMD21
CMD22	CMD22
CMD23	CMD23
CMD24	CMD24
BACK	BACKSPACE
SHBACK	SHIFT BACKSPACE
UP	UP ARROW
DOWN	DOWN ARROW
LEFT	LEFT ARROW
RIGHT	RIGHT ARROW
F_ADV	FIELD ADVANCE
F_BACK	FIELD BACK
NEWLINE	NEW LINE
FST-LEFT	FAST LEFT
FST-RIGHT	FAST RIGHT
RESET	RESET
INSERT	INSERT
DELETE	DELETE
ER_INP	ERASE INPUT
HOME	HOME
F_EXIT	FIELD EXIT
DUP	DUPLICATE
F_MINUS	FIELD MINUS
F_PLUS	FIELD PLUS
ENTER	ENTER
CLEAR	CLEAR
HELP	HELP
PRINT	PRINT
ROLLUP	ROLL UP
ROLLDOWN	ROLL DOWN
SYSREQ	SYSTEM REQUEST
ATTN	ATTENTION
TEST	TEST REQUEST
CMD	COMMAND
HEX	HEX MODE

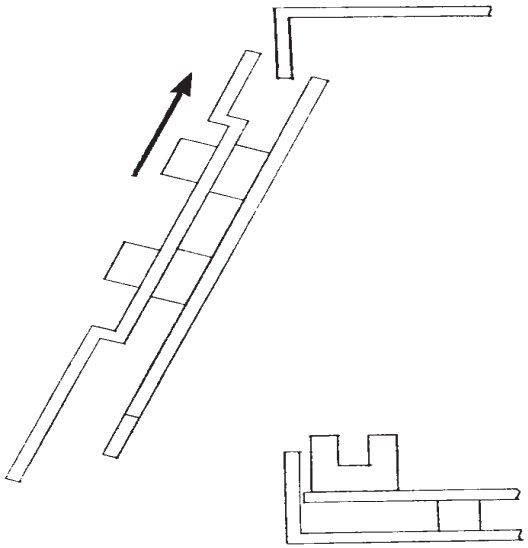


Figure F - 22 INSERTING THE EXPANSION CARD

Figa.pcx

Figb.pcx

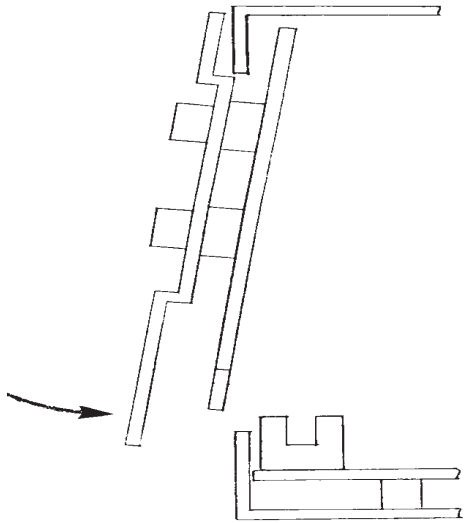


Figure F - 23 ROTATE BASE INWARD

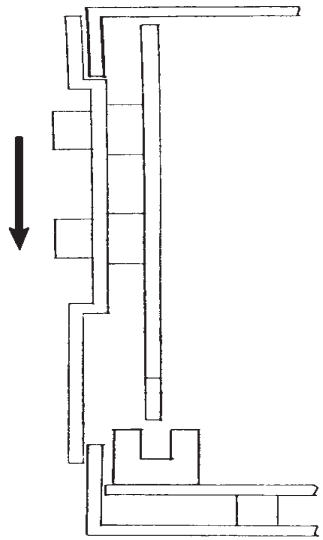


Figure F - 24 PUSH DOWN FIRMLY TO SEAT CARD

Figc.pcx

Figd.pcx

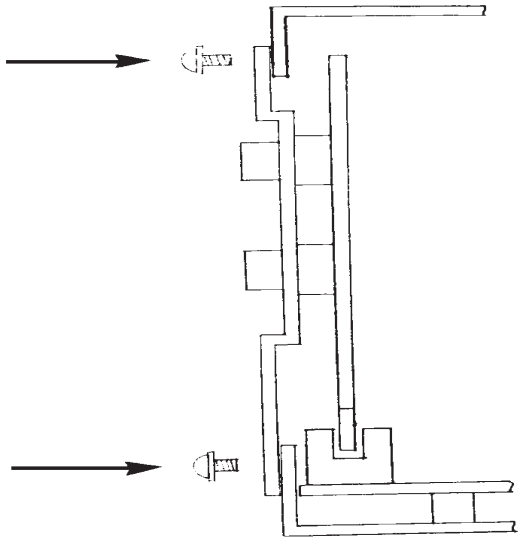


Figure F - 25 LINE UP AND TIGHTEN SCREWS

Index

This Page is Intentionally Blank