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About This Manual

The TT erm for Linux User Guide is a comprehensive document designed to help you work easily and efficiently with Turbosoft’s TT erm for Linux terminal emulation package. This manual is relevant to version 1.2 and above.

Organization of this Manual

The TT erm for Linux User Guide is divided into four parts:

Part One - Basic Concepts

Chapter 1  Introduction. A brief description of the TT erm for Linux product, system requirements and installation process.

Chapter 2  Getting Started. How to connect your machine to a remote host and the basic steps required to work with TT erm for Linux.

Part Two - Advanced Operation

This section offers more detail on the menus and options that make up the TT erm for Linux package. It provides a detailed reference guide for these components.

Chapter 3  File menu. The standard operations: opening and saving session definition files, print and print setup utilities.

Chapter 4  Edit menu. Selecting, copying, clearing and pasting regions.

Chapter 5  View menu. Operations related to the TT erm for Linux screen and interface.

Chapter 6  Actions menu. All the operations carried out by TT erm for Linux: connecting, disconnecting captures and terminal control.

Chapter 7  Help Menu. User help, licensing and related functions.

Part Three - Profile Configuration

A profile is a set of configuration options that is used to generate a session to a host. This section covers all features related to creating, editing or importing a profile in TT erm for Linux.

Chapter 8  Session Preferences. Configuring session related preferences.

Chapter 9  Display. Setting up the TT erm for Linux window format and scroll history parameters.

Chapter 10  Printer. Specifying how the printer handles a print job.

Chapter 11  Working with Macros. Macro format, host initiated macros, examples.

Chapter 12  Communications. Setting up the type of communications (transport) module.

Chapter 13  Emulations. Configuring your required emulation.
Chapter 14  **Keyboard.** Remapping the keyboard.

Chapter 15  **Character Mapping.** Editing and creating character mappings and languages sets.

Chapter 16  **Colors.** Creating and changing the color scheme.

Chapter 17  **Miscellaneous.** Other TTerm for Linux configuration options.

Chapter 18  **Hotspots.** Creating mouse driven terminal events.

**Part Four - Appendices**

Appendix A  **Glossary**

Appendix B  **Customer Support**

**How to use this Manual**

The structure of this manual is largely based on the organization of the TTerm for Linux menus. For example, **Chapter 3 File Menu**, covers all the options on the **File** menu, with each option under a main heading. All the menus are documented in this manner in **Part Two - Advanced Operation**, with the exception of the **Configure** menu.

The **Configure** menu is described in **Part Three - Profile Configuration**. Each chapter in **Part Three** covers one section of the Profile configuration menu options.

The information provided in **Parts Two** and **Part Three** is closely linked to the options available under the TTerm for Linux menu. Chapter order mirrors that of the options available under each menu.

The first-time user of TTerm for Linux will probably find it necessary to read the complete section related to the operation that they are performing. In application hints are also available in many configuration areas of TTerm for Linux. These display when hovering over an input field.

This manual assumes some familiarity with the Linux operating system. The screenshots in this document are taken from OpenSUSE and appearances may vary slightly depending on your Linux distribution. If you have any suggestions regarding this guide, please contact Turbosoft. Refer to **Appendix B** for contact details.
Conventions

To assist you to read and understand this guide we have used a number of conventions:

**Conventions**

TTerm for Linux is Turbosoft's terminal emulation product for Linux®.

*Device* refers to any hardware device capable of running TTerm for Linux.

*Tile* is the TTerm for Linux term for a dialog box.

Lower case bold courier typeface indicates things you need to type, such as `./setup`.

Courier typeface indicates a filename or directory name, such as `~/.tterm/data`.

All keys are shown in upper case courier typeface and bracketed. For example, the Shift key is shown as `[SHIFT]`; the Escape key is `[ESC]`.

Tips, warnings and other important pieces of information are displayed on a gray background with an icon as shown below.

Hints, tips and other important pieces of information are displayed like this.

A sequence of simultaneous key strokes is indicated with an underscore. For example, `[ALT_F8]` is the sequence generated when the `[ALT]` key is held down while `[F8]` is pressed.

**Bold** typeface indicates menus, menu options, tile titles, tile options, tile fields and buttons. For example, click on the *Colors...* button on the *Configure IBM 5250 tile* then select *Blink*.

Where a step by step procedure is presented each action will be sequentially numbered 1, 2, 3 and so on.

Where a configuration option is described its default value is given in brackets. For example: **Horizontal scroll bar (Auto hide)**

An underscore in a bolded word such as, *File*, refers to a menu item which can also be called using the short cut key sequence `[ALT_F]`. This feature is not available on every option but a large number of relevant menu locations do offer a short cut key.

A multi-level menu option is displayed with an angle bracket between items, for example *File > Exit* indicates that the *Exit* option is available as a sub item of the *File* menu.
Online Resources

This manual is a dynamic document which is constantly evolving. While we do our best to ensure this manual contains the latest and most accurate information you may wish to use our online support center to find the latest tips and problem solving documentation. You can access support resources, installation downloads and other resources online at:

https://www.ttwin.com/support

Registration is required, valid maintenance holders should contact their Turbosoft representative to obtain full access to maintenance entitlements.
Chapter 1: Introduction

A brief overview of the TTerm for Linux product, system requirements and installation process.
What is TTerm for Linux?

TTerm for Linux is Turbosoft's offering for superior terminal emulation software for Linux operating systems. Supporting over 80 terminal types and numerous communications protocols, it is a complete host connectivity solution.

Features Highlights

**Single Product Terminal Coverage**
TTerm for Linux includes terminal emulations for more terminals within one package. No need to switch products to get different emulations.

**Reduce Keystrokes with Keyboard Macros**
Single keystrokes can do complex tasks. TTerm for Linux allows you to map macros to keys (including alpha keys in various shift states). These macros will do the work for you. Reduced keystrokes means less time to do the job, and a more accurate result.

**Scroll History**
TTerm for Linux increases productivity in many ways. Its Scroll History allows you to review information that has rolled off the screen, and use cut and paste to move this into and out of other applications such as spreadsheets and word processors.

**Multiple Sessions**
TTerm for Linux allows you to run as many sessions as you need to the one host system or to many. What's more each session can be configured independently to your requirements.

**64 bit**
TTerm for Linux is available as a native 64 bit application.

**Data security**
Security to be an essential part of a terminal session and as such, TTerm for Linux supports industry standard encryption.

**Screen enhancing features**
Give your system a 'make-over' and extend it's life through the use of 'hot spots', macros and toolbars.
**System Requirements**

TTerm for Linux supports the following 64 bit distributions:

- Ubuntu 16+
- Red Hat 7+
- CentOS 7+
- Suse 12 SP2+
- OpenSuse 42+

Other distributions are available on request.

**Hardware Requirements**

- Approximately 50MB of free disk space.
- A network connection.

**Installation**

**Suse/OpenSuse/CentOS/Red Hat**

1. Run `sudo rpm -i TTermForLinux-Dist-x.x-x.x86_64.rpm`
2. You will find the TTerm for Linux shortcut in the Internet section of your applications menu.
3. You are now ready to begin working with TTerm for Linux.

**Ubuntu**

1. Run `sudo dpkg -i TTermForLinux-x.x.x.x-Dist_amd64.deb`
2. You will find the TTerm for Linux shortcut in the Internet section of your applications menu.
3. You are now ready to begin working with TTerm for Linux.

**Uninstalling TTerm for Linux**

**Suse/OpenSuse/CentOS/Red Hat**

To uninstall TTerm for Linux you should follow the standard software uninstallation process for your operating system. For example `rpm -qa | grep TTermForLinux | xargs sudo rpm -e`

**Ubuntu**

To uninstall TTerm for Linux you should follow the standard software uninstallation process for your operating system. For example `sudo dpkg --remove ttermforlinux`
Licensing TTerm for Linux

Licensing TTerm for Linux is a two step process, uploading a license certificate and then activating that certificate.

A license certificate is provided by Turbosoft or a Turbosoft distributor in the form of a `.key` file. If you do not have a license file but have purchased TTerm for Linux please contact your Turbosoft representative or visit your download area on support.ttwin.com to obtain your license file.

To import the license select Help > About from the program menu and select the License tab. Click the Upload License button and locate your license file.

Once successfully imported TTerm for Linux will attempt to activate the license automatically.

License Activation

License activation is a one time process which stamps a license certificate with a unique identifier and completes the licensing process. There are two activation methods, in program activation (online) or manual activation (offline).

In Program Activation

In Program Activation of a license is the default method and is an automated, transparent process.

When a license file is added to TTerm for Linux the program will attempt to automatically submit the file to the Turbosoft license servers where it will be stamped and returned to the installation. Once the license is activated TTerm for Linux will be fully licensed and functional.

In situations where a TTerm for Linux installation has limited or no access to external networks In Program Activation will not be possible as TTerm for Linux will not be able to directly communicate with the Turbosoft license servers.

In such a scenario TTerm for Linux will report the license activation as incomplete and offer manual activation as shown in Figure 1.1 (following page.)

Manual Activation

Where an In Program Activation attempt has failed TTerm for Linux will provide an intermediate license file (.act). Manually activating a license requires downloading this file and then uploading it to a Turbosoft web page from an device that has internet access. The file will then be processed and returned for upload back into TTerm for Linux.

When a valid license has been uploaded into TTerm for Linux but has not yet been activated TTerm for Linux will function in a fully licensed state for a grace period of seven (7) days. During this time the activation must be completed or TTerm for Linux will revert to an unlicensed state.
Figure 1.1. To manually activate TTerm for Linux, download an .act file.

To manually activate TTerm for Linux follow these steps:

1. Click Download .act (Offline Activation) to retrieve an .act file as shown in Figure 1.1.
2. Save the resulting .act file.
3. Copy this file to a computer or device that has internet access.
4. Open a browser to http://mercury.twin.com/ttermforlinux
5. Fill out the activation form selecting the .act from the local device. Once completed the form will return a direct link to download the activated license file, optionally, enter an email address where the newly activated certificate will also be sent.
6. Select the Retrieve Certificate File button to submit the activation form.

A link will then be presented which will download a new .key certificate file and, if email details were entered in step 5, the file will also be sent to the nominated email address.

Transfer the file to the device running TTerm for Linux to complete the process.

1. Start TTerm for Linux and select Help > About from the program menu.
2. Select the License tab, click the Upload License button and locate the activated .key file.

The license file details will be loaded into TTerm for Linux and display as valid. TTerm for Linux is now licensed and fully functional.
Chapter 2: Getting Started

How to connect your machine to a remote host and the basic steps required for getting started with TTerm for Linux.
Getting Started

TTerm for Linux defines a **profile** as a set of configuration options that is used to generate a session to a host. When the TTerm for Linux application is opened it will display the **Profile Directory**, a list of all available saved profile configurations. On installation this will be limited to a single, preconfigured profile titled **Default**.

The **Default** profile may be edited or duplicated but it may not be deleted. When creating a new profile, it is used as a template and its settings are copied across to the new profile.

![Figure 2.1 The Profile Directory, showing the default profile.](image)

When creating a new profile, TTerm for Linux prefills configuration options using the default profile as a template. You might find it useful to edit the default profile if, for example, you intend on creating a number of profiles with slight variations in their configuration.
Quick Configuration

Before initiating a connection there are a few pieces of information you will need in order to complete a successful connection to a host system.

Firstly, you need to know what sort of terminal you wish to emulate. TTerm for Linux supports numerous emulations and you will need to know which one to choose in order to successfully interact with your host applications.

Next, you need to know how you are going to communicate with the host system. You will need to know what method of communications your host is expecting, as well as your host address and any related settings that you require.

This information, along with any other settings that you require, should be available from your System Administrator.

Once you have this information create a new profile by clicking the Create New Profile button at the bottom of the Profile Directory as shown in Figure 2.1.

This will create a new profile prefilled with settings from the current Default profile.

Click the Open for Editing button on the tile that appears to open the Profile Editor. Access to different configuration options such as Character Mapping, Color Configuration and Keyboard mapping and more are available via the Profile Editor.

![Figure 2.2. The Profile Editor](image)

The Summary section lists the basic settings for a profile such as the profile Name, Description, Host Address, Emulation type and Communications transport. Clicking the Edit button that appears alongside these items opens the relevant detail section for further editing.
The **Default** profile is configured to use a VT220 emulation. To switch to a different emulation select the **Edit** button on the **Emulation** summary field as shown in **Figure 2.2** or simply click **Emulation** from the left column of the **Profile Editor**.

![Figure 2.3. Emulation Configuration](image)

Upon selecting a different emulation TTerm for Linux will display a new set of configuration options specific to the selected terminal below.

![Figure 2.4. Communications Configuration](image)

The communications module may be modified in a similar manner to the emulation either by selecting **Communications** from the left column of the **Profile Editor** or clicking the **Edit** button in the communications summary field.
The **Remote Host Address** field defines the host name or IP address of the system the profile will attempt to connect to. If left blank, TTerm for Linux will prompt for a host address when a connection attempt is made.

TTerm for Linux offers a wide range of configuration options for accurate terminal emulation, however in many cases the default options are suitable and you may not need to edit outside the basic settings denoting host address, communications transport and emulation type.

Please refer to Part Three of this document for more in depth detail on how to configure TTerm for Linux.

**Saving Your Settings**

Once the required emulation and communication settings are selected, be sure to save the configuration for future use. Select **Save** to finish editing or **Save and Connect** to retain the profile settings and connect to the host immediately.

**Connecting**

To initiate a connection select the Profiles Directory tab (if the Profiles Directory is hidden, make it visible by selecting **View > Profile Directory** from the program menu) and click the **Connect** button alongside the desired profile.

Alternately, whilst viewing an open session tab select the **Action > Connect** menu function on the desired session tab or click the connect icon from the program toolbar.

**Disconnecting**

A TTerm for Linux session may be disconnected from the host computer in a number of different ways, usually as a result of the user logging out from the host computer.

To manually disconnect, you may select the **Action > Disconnect** function from the TTerm for Linux menu as shown in **Figure 2.5** or click the disconnect icon from the program toolbar.

**Figure 2.5. Disconnecting.**
Chapter 3: File Menu

The standard operations: Import profiles and saving startup sessions, print and print setup.
File Menu

The File menu contains commands associated with importing and saving configuration profiles and printer operations.

![TTerm for Linux File Menu](image)

**Figure 3.1. TTerm for Linux File Menu**

**Import Profiles**

Selecting this option will open a File Browsing window, where you can select a previously exported profile or group of profiles (*.ttexp). Profiles can be imported into TTerm for Linux from a number of sources:

- Another TTerm for Linux installation
- Turbosoft's Windows® Terminal Emulator TTWin 4 (version 4.8.4.4634 or above)
- Turbosoft's HTML5 terminal emulator TTerm Connect (all versions).

On opening the file the **Import Profiles** tile will be displayed (see **Figure 3.2**, following page), listing the profile and profile resources available for importing.

Select the item(s) you wish to import and click the **Import** button.
You can also import a profile via the Profiles Directory tab by clicking the Import from File button.

![Import Profiles - ttwin4.ttxp](image)

Figure 3.2. Import Profile options.

**Save as Startup**

The Save as Startup menu option saves the currently open tabs as a layout. The next time TTerm for Linux is started the tabs and associated profiles will be loaded.

**Print...**

Selecting the Print... menu option activates the Print Screen tile. The Current Printer is displayed at the top of the Print Screen tile.

- **Text to print**
  - **Entire screen (default):** The entire contents of the current screen are sent to the defined printer.
  - **Selected text only:** This option is only available when a region of the screen has been selected.

You can select text by left clicking and dragging the mouse across a region. The selected area will be visible by a shaded background.

**Close print run**

Selecting the Close print run option closes any active print run.

This is used when 'print through' is employed in an emulation. The Close print run command sends any outstanding, buffered data to your printer and then closes down the print job.

Unless a profile is configured with the setting General > Printer > Keep print job open set to on, this option is grayed out. See Chapter 10 for more detail on this setting.
Print setup...

Selecting the **Print setup...** command activates the **Printer Setup** tile. This directly interfaces with the Linux print setup, and allows you to specify and configure your preferred printer.

Exit TTerm

Selecting the **Exit** option closes the TTerm for Linux program.

⚠️ Once you have completed your work on the remote host, it is good practice to log out FIRST or close down the connection to the remote host before exiting the TTerm for Linux program.
Chapter 4: Edit Menu

Selecting, copying, clearing & pasting regions.
Edit Menu

The Edit menu covers commands dealing with the manipulation of terminal content. When viewing the Profile Directory tab the options available in this menu are disabled.

![Edit Menu](image)

**Figure 4.1. Edit Menu**

**Copy**

The Copy command will copy a selected region to the clipboard for later use by the Paste command. The region to be copied is selected by dragging the mouse while either the left or [SHIFT] and left mouse button is held down.

**Cut**

When using IBM block mode terminals, this option allows you to cut text from unprotected fields directly to the clipboard.

**Paste**

The Paste command will insert, at the current position of the cursor, the contents of the clipboard.

**Select display**

The Select display command will select the full contents of the currently displayed TTerm for Linux session window.
Select all

The Select all command will select the contents of the current TTerm for Linux session window and the entire scroll history buffer.

Clear display

To clear the contents of the current display region, use the Clear display command. After the display area is cleared the cursor is positioned at the top left corner of the screen.

Clear all

To clear the entire contents of the current scroll history buffer along with the current display region, use the Clear all command.

After the display is cleared the cursor is positioned at the top left corner of the screen.

Clear history

To clear the contents of the scroll history buffer only, use the Clear history command.
Chapter 5: View Menu

Operations related to the TTerm for Linux screen and interface.
View Menu

The View menu controls aspects of the program appearance.

Profile Directory (on)

The Profile Directory allows users to easily create, import or edit existing session profiles. This menu option shows or hides the profile directory tab. If the Session Panel is visible (see the following page) the Profile Directory will be shown as button at the top of the session panel.

Toolbar (on)

Controls the display of the program Toolbar. Uncheck if you do not wish to display the Toolbar.
**Status Bar (on)**

Controls the display of the program Status bar, displayed at the bottom of the program window. Uncheck if you do not wish to display the Status Bar.

**Session Panel (on)**

The Session panel displays small graphic versions of each currently open session allowing you to easily switch between active sessions. If the View > Profile Directory option is set to on the Profile Directory will be shown as button at the top of the session panel.

If a session is disconnected the preview in the session panel will be tinted red.

![Session Panel](image)

*Figure 5.2. Session Panel (highlight added).*

**Full Screen**

Select Full screen to enable full screen mode, this will expand the TTerm for Linux terminal display area to entirely fill your device screen. Once you have selected Full Screen this becomes the default mode.

To deselect full screen mode right click your mouse on the screen to display a pop up menu and uncheck the Full screen option.
Chapter 6: Actions Menu

All the operations carried out by TTerm for Linux: connecting, disconnecting, captures and terminal control.
**Actions Menu**

The **Actions** menu controls terminal activity such as connecting to and disconnecting from a host system.

Figure 6.1. Actions Menu

**Connect**

Selecting the **Connect** menu item will initiate an attempt to connect to a host (either a tile requesting host details will appear or the host detail specified in your profile configuration will be used). If a connection is successful the **Connect** menu item toggles to read **Disconnect**.

**Ensuring Clean Disconnections**

To prevent a user from closing the TTerm for Linux program or an active session without first logging off from the remote host set the following parameter in any profile: **General > Session Setting > Allow manual disconnect**

This will not allow the program or session to be closed whilst a host connection remains active.

Note that this feature requires the host to support a disconnection as opposed to, for example, simply re-displaying a login prompt, and failure to do so may prevent the user from closing the TTerm for Linux program or session.

**Capture**

A capture is a feature of TTerm for Linux where all communications between TTerm Connect and a remote host are logged to a file (*.cap*). Selecting the **Capture** menu item activates the **Capture** tile where an output file can be specified.

> The capture file is buffered, and is not immediately written to disk. Attempting to capture a problem which causes your PC to hang or reboot may not be successful.
Upon selecting **OK** to start the capture the **Capture** menu option toggles to **Stop Capture**. To close the capture file select the **Stop Capture** option.

### Break

Selecting **Break** sends a break signal to the remote host. A break is a time delay signal transmitted to the remote host used to interrupt the remote computer, overriding any other task it may be executing.

### Unlock flow control

Selecting **Unlock flow control** unlocks flow control between your PC and the remote host. Occasionally your PC and the remote host can lose synchronization of their flow control status. This stops the screen from updating. **Unlock flow control** overcomes this problem.

### Reset terminal

Selecting **Reset terminal** option resets the terminal. This is to clear garbage characters that appear on screen, due to line noise etc. The **Reset terminal** command clears the screen, puts the cursor in the home position and resets the emulation parameters to their default settings.
Chapter 7: Help Menu

Product version, licensing and related functions.
Help Menu

The Help menu provides access to product version and license detail.

About

Selecting this menu option displays the program about tile. This provides access to detailed information on the program version and the licensing options.

About:
The About tab provides information on the overall program version and a link to the Turbosoft website. This version information should be quoted in dealings with Turbosoft support staff.

![About TTerm Linux](image)

**Figure 7.1 TTerm for Linux About Tile.**

Version:
The Version tab provides more in-depth product version information including version information on various program components. This version information should be quoted in dealings with Turbosoft Support staff.
License:
The License tab displays information about the status of the current TTerm for Linux license.

A licensed version of TTerm for Linux will display the licensee name, a serial number and a status entry of 'valid' as shown below.

![License Information](image)

*Figure 7.2 TTerm for Linux License information, in evaluation mode.*

For information on how to license TTerm for Linux please refer to Chapter 1.

License Information

The License Information menu option opens the about tile with the License tab in focus as shown in Figure 7.2
Chapter 8: Session Preferences

Configuring Session based preferences.
Session Preferences

Session preferences control connect and disconnect options along with other session dependent options.

To configure session preferences select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, selecting **More > Edit** on the profile of your choice.

Select **General** from the **Profile Editor**. **Session Settings** will be displayed as shown below.

![Session Preferences Configuration](image)

**Figure 8.1. Session preferences configuration.**

**Auto connect on startup (on)**

Deselect this if you do not want TTerm for Linux to automatically connect to the host when launched.

**Startup Macro (**)**

As soon as TTerm for Linux is loaded, prior to attempting to initiate a connection to a nominated host, the **Startup Macro**, is executed.

**Connect Macro (**)**

If the **Auto connect on startup** option is selected AND a connection to the remote host succeeds, the **Connect Macro** is then executed. E.g. the string \p010username\r\p010password\r equates to \p010: pause 1 second, username\r: send the username and enter/return, \p010: pause 1 second, password\r: send the password and enter/return.
How to Automate Login

You can use the connect string session preference and a macro to automate the login process. If combined with an Auto connect on startup setting of on, TTerm for Linux will automatically connect and login to your host when launched. To automate the login process complete the following steps:

1. Select Configure > Edit Current Profile from the program menu or, from the Profile Directory, selecting More > Edit on the profile of your choice
2. Select General from the Profile Editor.
3. In the Connect Macro item enter the login details follow by the emulation keys in braces, a pause at the beginning will give the host time to respond. For example:

\p010UserName(Return)\p010Password(Return)

The above macro will pause for 1 second send the username, send the [RETURN] key, then pause for another second, send the Password, then send a second [RETURN] key. For a list of macro options refer to Chapter 11.

The name of the {Return} key may change depending on the emulation being used.

4. Click Save to retain these settings. Refer to Chapter 2 for information on saving a profile.

Reset emulation on connect (off)

Selecting this clears the screen prior to connecting to your host.

Reset emulation on disconnect (off)

Selecting this clears the screen on exiting your host session.

Allow manual disconnect (on)

Allows user to disconnect without logging off from the host first.

Disconnect Macro ()

Runs a macro string when the user presses the disconnect button. This macro needs to include a disconnect command otherwise the disconnect will be aborted.
**Action on disconnect (Notify)**

When a session is disconnected from the remote host (logout, \[CTRL_D\], exit, quit etc) TTerm for Linux can do a number of things:

**No action**
The connection is quietly closed. On disconnection the session remains open in a disconnected state.

**Notify**
A message will appear stating that the connection has been disconnected. The user is given the option to **Do Nothing, Close Session Window** or **Reconnect**.

**Reconnect**
Causes TTerm for Linux to reconnect to the host.

**Exit**
Closes the session tab without any notification.

**Shutdown Macro ()**

Runs a macro string when the user closes the session tab. This macro needs to include a close command otherwise the close will be aborted.
Chapter 9: Display

Configuring the TTerm for Linux window format and scroll history parameters.
Display

Display options can be configured to alter the appearance of the TTerm for Linux terminal display.

To configure display preferences select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, selecting **More > Edit** on the profile of your choice.

Select **General** from the **Profile Editor**. Scroll down to **Display Settings** as shown below.

![Profile Editor - default](image)

*Figure 9.1. TTerm for Linux display configuration.*

**Cursor Configuration**

**Cursor visible (on)**
Deselect this option if you have an application where the cursor must be invisible.

**Cursor blink (on)**
Sometimes locating your cursor on the screen can be a daunting task. Setting the cursor to blink makes finding it easy.
**Cursor shape (standard mode) (Horizontal Line)**
The actual shape of the cursor can be set to suit particular applications running on your remote system. The cursor styles available for normal operation are:

- **Small Block**: A half height block filling the lower half of a character.
- **Full Block**: A full character solid block.
- **Horizontal Line**: An underscore character.
- **Vertical Line**: A centred horizontal full character height line.

**Cursor shape (insert mode) (Horizontal Line)**
The actual shape of the cursor can be set to suit particular applications running on your remote system. The cursor styles available when in insert mode are:

- **Small Block**: A half height block filling the lower half of a character.
- **Full Block**: A full character solid block.
- **Horizontal Line**: An underscore character.
- **Vertical Line**: A centred horizontal full character height line.

**Scroll History Configuration**

**History enabled (on)**
The scroll history facility enables information that has scrolled off the top of the screen to be viewed. Check to enable the scroll history feature.

**Copy to history on a screen clear (on)**
Copies the content of the screen to history once a clear screen has been sent.

**Retain colors and attributes (on)**
When deselected, information once scrolled off the screen is only saved as ASCII text. When selected, all screen colors or attributes are retained through the scroll history.

**Lines to Retain (20,000)**
The number of lines to keep in the scroll history.

**Jump scroll (Unlimited)**
Select from the drop down to set the scroll rate. For example, a setting of 4 lines, for example, will cause the display to be updated whenever 4 lines have been scrolled. Available options are:

- Unlimited
- Page
- 1 lines
- 2 lines
- 4 lines
- 8 lines
- 16 lines
- 32 lines
- 64 lines
Chapter 10: Printer

Specifying how the printer handles a print job.
Printer Configuration

In order to simplify printing operations, the TTerm for Linux printer configuration provides the facility to send print control sequences over and above that which is offered in the standard printing environment.

To configure printer preferences select Configure > Edit Current Profile from the program menu or, from the Profile Directory, selecting More > Edit on the profile of your choice.

Select General from the Profile Editor. Scroll down to Printer as shown below.

![Printer Configuration](image)

*Figure 10.1 Printer configuration.*

The printer options are as follows:

**Paper Size (Printer Default)**

Selecting from a list of available document sizes. Selecting Printer Default will use the paper size as configured by default.

**Orientation (default)**

Printer orientation options are:

- **Default**: Uses the orientation as configured for the printer by default.
- **Portrait**: Overrides the printer default orientation to portrait.
- **Landscape**: Overrides the printer default orientation to landscape.
Font Size (10)

Set a font size for printer output in points. The standard TTerm for Linux terminal font will be used.

Characters Per Line (0)

Set the number of characters per line. A maximum value is suggested based on the font size selected in Font Size.

Lines Per Page (0)

Set the number of lines per printed page. A maximum value is suggested based on the font size selected in Font Size.

Print Directory ()

Set a directory for printer output.

Diagnostic Level (0)

Higher is more verbose.

Log File ()

Specify a file for log output.

Print in raw data mode (off)

Printing raw data involves the print job data stream being sent directly to your selected printer with no TTerm for Linux intervention. When printing in raw data mode, the Process LFs, Process CRs and Wrap lines longer than the page width options will have no effect.

Keep print job open (off)

There may be times when you need to close the print job manually. This can be done through TTerm for Linux. If this option is selected, the Close print run option becomes available on the File menu to close the print job.

Print Job Close Delay (5)

Specify time in seconds to keep print job open.
Margin Units

Set the paper margin unit of measurement. Options are:

- Inches
- Centimetres

Margins (millimeters)

Left margin (25)
The page left margin in millimeters.

Top Margin
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Bottom Margin
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Left Margin
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Right Margin
Valid settings are from 0.10cm/0.039" to 20cm/7.874"
Chapter 11: Macros

An overview of the extended macro language in TTerm for Linux.
**TTTerm for Linux Macro Language**

Macros can be simply described as a string that provides the ability to execute several operations consecutively from one initiating action. This is done by constructing the macro from a combination of text and "tokens", these "tokens" representing such functions as ASCII control codes, emulation keys, predefined TTerm for Linux functions and so on.

**Format**

A TTerm for Linux macro consists of standard text which is sent to the host, with embedded tokens. The tokens are either translated into text (e.g. \r) or perform an action (e.g. pause).

**Macro Tokens**

Tokens can be grouped into three main categories:

- C-Style text replacements
- Brace enclosed tokens
- TTTWin Version 3 compatibility tokens

**C-Style Replacement Tokens**

These tokens start with a backslash and translate to a single character value.

<table>
<thead>
<tr>
<th>Token</th>
<th>Character Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>\r</td>
<td>13, 0x0D (CR)</td>
</tr>
<tr>
<td>\n</td>
<td>10, 0x0A (LF)</td>
</tr>
<tr>
<td>\t</td>
<td>9, 0x09 (TAB)</td>
</tr>
<tr>
<td>\b</td>
<td>8, 0x08 (BS)</td>
</tr>
<tr>
<td>\f</td>
<td>12, 0x0C (FF)</td>
</tr>
<tr>
<td>\xnn</td>
<td>Translates to the hex code nn. Can be 2 to 4 digits, giving values from 0 to 0xFFFE</td>
</tr>
</tbody>
</table>
| \c     | Removes any special meaning from the character c. E.g. \\
|        | \ = The backslash character            |
|        | \{ = The character { rather than the start of a brace token. |
TTerm for Linux Version 3 Compatibility Tokens

These tokens are implemented for compatibility with version 3 of TTerm for Linux.

<table>
<thead>
<tr>
<th>Token</th>
<th>Character Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>\e'name'</td>
<td>Replaced with the value of the environment variable name. For example, \e PATH would return your current PATH settings.</td>
</tr>
<tr>
<td>\E'vi'</td>
<td>Execute an external command. If no absolute path is provided TTerm for Linux will use the system path.</td>
</tr>
<tr>
<td>\pnnn</td>
<td>Pause the macro where nnn is in tenths of a second.</td>
</tr>
<tr>
<td>\m</td>
<td>Move the terminal cursor to the current mouse position.</td>
</tr>
<tr>
<td>\v'name'</td>
<td>Replace 'name' with Password or LoginName, the variables from the User Details parameter described in Chapter 17.</td>
</tr>
<tr>
<td>\U'url'</td>
<td>Launch the default browser with the given url.</td>
</tr>
</tbody>
</table>

Brace Enclosed Tokens

These tokens are enclosed in curly braces {}. They are can be further broken down into one of the following types:

- Function calls (e.g. {.Connect()})
- Flow control statements (e.g. {%if(r=0)%})
- Emulations keys (e.g. {F1})

Function Calls

The following are in addition to numerous macro functions which replicate program menu items.

<table>
<thead>
<tr>
<th>Function</th>
<th>Parameters</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>{.ClearScreen()}</td>
<td></td>
<td>Clears the screen. ‘r’ register left unchanged.</td>
</tr>
<tr>
<td>{.Ch(value)}</td>
<td>value = ASCII Decimal code</td>
<td>Sends ASCII Character</td>
</tr>
<tr>
<td>{.Connect()}</td>
<td></td>
<td>Attempts to connect. Result placed in ‘r’ register</td>
</tr>
<tr>
<td>{.Disconnect()}</td>
<td></td>
<td>Attempts to disconnect. Result placed in ‘r’ register</td>
</tr>
<tr>
<td>{.EditClearAll()}</td>
<td></td>
<td>Clear All.</td>
</tr>
<tr>
<td>Function</td>
<td>Parameters</td>
<td>Action</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>{.EditClearDisplay()}</code></td>
<td></td>
<td>Clear the Display.</td>
</tr>
<tr>
<td><code>{.EditClearHistory()}</code></td>
<td></td>
<td>Clear the History.</td>
</tr>
<tr>
<td><code>{.EditSelectAll()}</code></td>
<td></td>
<td>Select All.</td>
</tr>
<tr>
<td><code>{.EditSelectDisplay()}</code></td>
<td></td>
<td>Select the Display.</td>
</tr>
<tr>
<td><code>{.EmBreak()}</code></td>
<td></td>
<td>Send a Break</td>
</tr>
<tr>
<td><code>{.EmReset()}</code></td>
<td></td>
<td>Reset the emulation.</td>
</tr>
<tr>
<td><code>{.EmUnlockFlow()}</code></td>
<td></td>
<td>Unlock Flow Control</td>
</tr>
<tr>
<td><code>{.EnvVar(var)}</code></td>
<td>var = name of an environment variable</td>
<td>Sends the value of the environment variable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘r’ register left unchanged.</td>
</tr>
<tr>
<td><code>{.FileNewDefault()}</code></td>
<td></td>
<td>Opens a new session, prompting the user for a session file to load.</td>
</tr>
<tr>
<td><code>{.FileNewFilename(&quot;var&quot;)}</code></td>
<td>var = filename</td>
<td>Opens a new session using the specific configuration file.</td>
</tr>
<tr>
<td><code>{.EnvVar(var)}</code></td>
<td></td>
<td>Shows a message box with OK &amp; Cancel buttons. Cancel button exits the macro.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘r’ register left unchanged.</td>
</tr>
<tr>
<td><code>{.Pause(period)}</code></td>
<td>period = pause time in tenths of a second</td>
<td>Pauses macro execution.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘r’ register left unchanged.</td>
</tr>
<tr>
<td><code>{.URL(&quot;url&quot;)}</code></td>
<td>url = URL to launch</td>
<td>Launch the default browser with the given URL.</td>
</tr>
<tr>
<td><code>{.UserVar(&quot;var&quot;)}</code></td>
<td>var = ’Password’ or ’LoginName’, the variables from the User Details parameter described in Chapter 17.</td>
<td>Sends the value of the property. ‘r’ register left unchanged.</td>
</tr>
</tbody>
</table>
### Flow Control Statements

<table>
<thead>
<tr>
<th>Label</th>
<th><code>{name}</code></th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>goto</td>
<td><code>{%goto :label}</code></td>
<td></td>
</tr>
<tr>
<td>if</td>
<td><code>{%if(expr)} .. </code>%endif`</td>
<td>expr = a restricted boolean expression. See below.</td>
</tr>
<tr>
<td>while</td>
<td><code>{%while(expr)} .. </code>%wend</td>
<td>expr = a restricted boolean expression. See below.</td>
</tr>
<tr>
<td>exit</td>
<td><code>{%exit}</code></td>
<td>Exits a macro</td>
</tr>
</tbody>
</table>

### Restricted Boolean Expressions

A limited boolean expression restricted to the form

\[
<\text{ident}> <\text{op}> <\text{const}_{\text{value}}>
\]

where

- `<\text{ident}>` = a variable identifier. Currently only the result register ‘r’ is recognized.
- `<\text{op}>` = One of =, <>, <, >, <=, >=
- `<\text{const}_{\text{value}}>` = a numeric constant.

### Emulations Keys

Brace enclosed tokens consisting of a single identifier are interpreted as emulation keys.

- `{F1}` `{Enter}`

### Macro Examples

Tries to connect and shows a message box if successful.

```plaintext
{.Connect()}{%if(r=0)}{.MsgBox("Connected!")}{%endif}
```

Continually displays a message box until the cancel button is pressed.

```plaintext
{:start}{.MsgBox("Hello")}{%goto :start}
```

Connects and logs in.

```plaintext
{.Connect()}{%if(r>0)}{.MsgBox("Connect failed")}{%exit}{%endif}mylogin
n{Pause(20)}mypassword
```
Host Initiated Macros

This section only applies if you are able to modify applications or write programs for your host.

It is possible to automatically trigger events in TTerm for Linux in response to sequences sent from the host. One way to do this is to use a host initiated macro.

The first step is to set up a macro trigger sequence in TTerm for Linux. Sending the trigger sequence from the host is dependent upon the host’s operating system. You will need to be familiar with the operating system on your host.

For example in a UNIX environment you can use an `ECHO` command in a shell script.

If, after consulting your operating system literature, you require further assistance please contact Turbosoft for guidance.

**Defining Host Initiated Macros**

To configure these settings select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, selecting **More > Edit** on the profile of your choice.

Select **General** from the **Profile Editor**. Scroll down to **Host Initiated Macros** as shown below.

![Figure 13.1 TTerm for Linux host macro configuration.](image-url)

**Figure 13.1 TTerm for Linux host macro configuration.**
Macro Settings

Macro Prefix/Trigger sequence
The trigger sequence is defined with the Macro prefix string. It is recommended that you define a sequence that is unlikely to occur. For this reason ESC is not a good character to start the sequence. An example trigger sequence is \x1f~, where \ indicates that the next two characters are a hex value, i.e., 1F.

When the trigger sequence is detected in the host data stream, TTerm for Linux will take one of several actions depending on the data which immediately follows the trigger sequence.

- One of up to ten predefined local macros can be executed. These are defined in Macro 0 through Macro 9.
- The host may append a delimited macro to the trigger sequence which will be executed by TTerm for Linux.
- Alternately, the host can append content to the trigger sequence in the form of a text macro.

This feature opens up many possibilities for greater host interaction, particularly where a host system may dynamically create and send a macro to the TTerm for Linux client.

Macro timeout (200)
Enter the maximum time allowed to execute a macro, shown in milliseconds.

For information on using macros to automate a login, refer to Chapter 8 - Session Preferences.

Interpretation of the Input Stream

When running the session, TTerm for Linux scans the input stream for the trigger sequence defined with the Macro prefix or trigger string. On recognizing the trigger, TTerm for Linux looks for the next character and responds as follows:

<table>
<thead>
<tr>
<th>Character</th>
<th>Response</th>
</tr>
</thead>
</table>
| MacroN    | TTerm for Linux executes the predefined macro N. For example the host could send the following string to TTerm for Linux.  
\x1f~1  
Where MacroN equals 1 and Macro1 is defined in TTerm for Linux as: 
Macro1=cd ~\n\p020ls -las\n  
This sequence would do the following when triggered:  
\n\p020 change to the user's home directory  
\n\p020 pause for 2.0 seconds  
\n\p20ls -las\n generate an extended directory listing |
<table>
<thead>
<tr>
<th>Character</th>
<th>Response</th>
</tr>
</thead>
</table>
| **mString** | Executes a macro defined by *String* that includes a start and end delimiter. For example the host could send the following string to TTerm for Linux: 
\x1f~m\x01cd ~\n\p020ls -las\n\x01

and TTerm for Linux would perform the same operation as the stored macro above. |
Macro Assistant

The Macro Assistant allows for text strings and Macros to be created via a graphical interface, it can be launched from several places within TTerm for Linux, most notably from the Keyboard Mapping section of the Profile Editor. Selecting either the String/Macro option when mapping a key will display the button "Assist". Pressing this button initiates the Macro Assistant.

![Profile Editor - default]

This interface allows the elements of the Macro to be selected from a list of valid entries and for the resulting string to be easily viewed, understood and modified if required. In addition the Macro Assistant ensures that the elements of the Macro are correctly entered and formatted.

![Figure 13.2 The 'Assist' button will launch the macro assistant]

This interface allows the elements of the Macro to be selected from a list of valid entries and for the resulting string to be easily viewed, understood and modified if required. In addition the Macro Assistant ensures that the elements of the Macro are correctly entered and formatted.
Raw Macro Text

This dialog box is used to display the text of the Macro in question. As the Macro is created the display reflects the changes that are made. In addition the Macro text can be edited directly, and any changes that are made are interpreted and listed in the Token Details section of the tile.

Token List

Shown on the left of the Macro Assistant tile, this list identifies each of the token of the macro, displaying the type of token and its value. If you select a token of the Macro from this list, such as the Function token shown selected in Figure 13.3, its Token Details will be displayed to the right of the list.

Tokens of the Macro can be rearranged by selecting the appropriate entry and using the up and down arrow buttons to adjust its location. By default a blank text token is placed in this list when the Macro Assistant is started.

Token Types

Several different component types are available in the Macro Assistant. These include:

Text
This is used to enter standard text.

Character
This is used to enter either special characters such as LF, CR etc or to enter hexadecimal values. See Macro Commands for details.
**Emulation key**
This is used to add a predefined Emulation key to the Macro. The Emulation keys that are available to the Macro are dependent on the currently selected emulation module, and a key that is available in one module may not be valid in a different module.

**Function**
This is used to execute a macro function.

**Function (classic)**
This is used to execute a TTWin version 3 compatibility token.

**If statement**
This is used to start an If statement routine. If statements allow the execution of statements based on a condition.

**EndIf statement**
This is used to state that the end of the If statement has been reached.

**While statement**
This is used to start a While statement routine. The While statement executes a group of statements in a loop as long as a condition remains true.

**Wend statement**
This is used to state that the end of the While statement has been reached.

**Goto statement**
The Goto statement transfers the execution of the script to a specified line (Label) within the same procedure.

**Break statement**
This is used to Break from a statement.

**Exit statement**
This is used to perform an Exit from a statement.

**Label**
This is used as a line reference for transfer of execution used in a Goto statement.

**Parameters**

**Insert**
The Insert button is used to add a new token to the Macro, causing it to be placed after the highlighted entry in the Token List. When selected, a list of valid token types is displayed. Once a token type is chosen, an entry is placed in the Token List and the Token Details for that token type is displayed to the right of the tile. This can then be used to set the appropriate values for that component.
Delete
The Delete button removes the selected component from the Token List, and therefore from the Macro. If only one token is listed when the Delete button is pressed, that token is removed and a blank text component is added.
Chapter 12: Communications

Selecting and configuring profile communications (transport).
Communications Configuration

The communications configuration determines the method of connection to your remote host and ensures all data transmission is accurate and dependable.

Selecting a Communications Module

To configure the communications transport for the profile of your choice select Configure > Edit Current Profile from the program menu or, from the Profile Directory, select More > Edit on the desired profile.

Select Communications from the Profile Editor. Configuration options will be displayed as shown in Figure 12.1.

![Figure 12.1 Configuring Communications](image)

To choose a different communications transport select from the drop down list of available communications modules in the Select Communications option.

Upon changing the communications type the options under Connection will populate with options specific to the new selection. Options for each communications module are described on the following pages.
**HP NS/VT**

Hewlett Packard's Network Services/Virtual Terminal protocol.

**Connection**

Remote host address ()
The name or IP address of the remote host you wish to connect to.

**Advanced**

Local NS nodename ()
The NS name of the Local PC, used to identify the terminal to the remote host. Consists of three labels representing host.department.organisation i.e. PC31.DEV.TURBOSOFT.

Use custom prompt (off)
When enabled the prompt string sent by the host is replaced by the users customized string.

Custom prompt (HP:)
Enter a custom prompt string. Maximum length 8 characters.

Stream mode (on)
The TTerm for Linux VT protocol supports the newer Stream Mode connection as well as the standard Message Mode. Enable this option to try to establish a Stream Mode connection first, if it fails HP NS/VT will automatically fall back to Message Mode.

Display diagnostics (off)
Enabling this feature displays various diagnostic messages during connection establishment.

Silent Errors (off)
When set to on this disables notification of TCP stack errors.
SSH – Secure Shell

Connection

Remote host address()
The Name or the IP address of the remote host you wish to connect to.

Prompt for host (if blank)
Deselect this if you do not wish TTerm for Linux to prompt you for a host name or IP address. Options include:

► Never
► If Blank: prompts the end user for a host when the Remote Host Address configuration option is not specified.
► Always: will prompt the user and prefill the tile with any entry supplied in Remote Host Address.

Remember host on successful connect (on)
On a successful connection to a host the host name is retained on the connection tile for subsequent connection attempts.

Prompt user for password (on)
When set to off keyboard interactive mode is enabled.

Port No (22)
Assign a port number for this connection. The default is 22, as this is the port that is reserved for SSH communications.

Use TCP IPv6 (off)
Select if you wish to enable IPv6 support.

User Details

Login name ()
Enter the default login username.

Password ()
Enter the password for the login username.

Please consider your corporate security guidelines prior to implementing the User Details entries.

Authentication key file ()
RSA private key.
Authentication key pass-phrase ()
Optional key pass-phrase.

Enable FIPS-140-2 mode (off)
Sets mode to FIPS-140-2 complaint.

Terminal

Override Terminal Type (off)
T Term for Linux will automatically supply the most appropriate Terminal Type for the SSH connection. You may need to override this depending on your host’s SSH support.

Terminal Type ()
The SSH protocol allows the terminal to inform the host or the host to ask the terminal for a terminal type identifier (such as VT220), to allow the host to correctly setup terminal-specific variables such as the codes to clear the screen.

This setting is used when Override Terminal Type is set to on.

Security

Strict Security (off)
If selected the host RSA key must match the key listed in the known hosts file.

Miscellaneous

Enable Window Size (on)
When set to on T Term for Linux will notify the host when local changes are made to the terminal row and column sizing. Some hosts may not support this feature and in such cases it is recommended that Enable Window Size be set to Off.

Keep Alive (seconds) (0)
This setting is typically used for dial on demand connections, e.g. DSL. During a period of inactivity T Term for Linux will poll the host to keep the connection alive. The poll interval is defined in seconds.
Telnet

Connection

Security (none)
- **None**: no security enabled (standard Telnet).
- **SSL**: uses SSL encryption. By default SSL3 is used, for other options see the Security section below.
- **SSH Tunnel**: SSH session with Telnet extensions.

Remote host address ()
Enter the IP address of the remote host you wish to connect to.

Use TCP IPv6 (off)
Select if you wish to enable IPv6 support.

Port No (23)
This is an integer that identifies the destination within the remote host. 23 is reserved for Telnet.

Username ()
Enter the username for the SSH service (optional). This option is utilized when Security is set to Telnet over SSH.

Password ()
Enter the password for the SSH service (optional). This option is utilized when Security is set to Telnet over SSH.

LU Name ()
This is used to identify the terminal as an LU (Logical Unit) to an IBM Mainframe. This setting is only used when the profile utilizes an IBM 5250, 3270 or Fujitsu emulation. For more information refer to Chapter 13 - Emulations.

Associate ()
This option has no effect unless you are using the IBM3287 printer emulation. This is used to associate an existing Terminal LU (Logical Unit) to this session. For more information refer to the IBM 3287 section in Chapter 13 - Emulations.

⚠️ The LU name and Associate options are mutually exclusive.
Advanced

Prompt for host (if blank)
Deselect this if you do not wish TTerm for Linux to prompt you for a host name or IP address. Options include:

► Never
► If Blank: prompts the end user for a host when the Remote Host Address configuration option is not specified.
► Always: will prompt the user and prefill the dialog with any entry supplied in Remote Host Address.

Remember host on successful connect (on)
On a successful connection to a host the host name is retained on the connection tile for subsequent connection attempts.

Connection Attempt Timeout (seconds)
Time, in seconds, that a connection attempt will timeout in the event of a host not responding.

Keep Alive (seconds)
This setting is typically used for dial on demand connections, e.g. DSL. During a period of inactivity TTerm for Linux will poll the host to keep the connection alive. The poll interval is defined in seconds.

Option Negotiation

Initiate Negotiation (off)
A Telnet connection is generally initiated from the remote host. Selecting this option forces the Telnet negotiation to start from the TTerm for Linux end.

Show Negotiations (off)
When selected, the Telnet negotiation during the initial connection is shown.

Tn3270eEnabled (off)
Select this if you wish to enable extended attributes when using the 3270 emulation.

Security

Strict (off)
If selected the host RSA key must match the key listed in the known hosts file.

SSL
Options in the SSL configuration section are only utilized when Security is set to SSL.

SSL Enabled Protocols
Protocol options for SSL communications.

Auto select certificate (off)
TTerm for Linux will automatically use a certificate in the users name or prompt with a list where more than one certificate exists.
Certificate ()
Options for selecting and importing certificate files.

Enable Express Logon Features (tn3270e only) (off)
Enables the Express Logon Feature (ELF) for IBM TN3270 sessions. ELF is also known as Certificate Logon Feature. This configuration item is only utilized when the emulation is set to IBM 3270.

ELF Application ID ()
The application ID that the user is logging on to via Express Logon Feature (ELF). This configuration item is only utilized when the emulation is set to IBM 3270.

IBM 3270 Options
These configuration items are only utilized when the emulation is set to IBM 3270.

.Tn3270eEnabled (off)
Select this if you wish to enable extended attributes when using the 3270 emulation.

IBM5250 Options
These configuration items are only utilized when the emulation is set to IBM 5250.

User ()
Enter the username for TN5250 connections.

Password ()
Enter the password for TN5250 connections.

Encryption Required (off)
Indicates whether the user and password fields require 3DES encryption.

MSGQNAME ()
5250 environment parameter. Please refer to your host documentation.

MSGQLIB ()
5250 environment parameter. Please refer to your host documentation.

KBDTYPE ()
5250 environment parameter. Please refer to your host documentation.

CODEPAGE ()
5250 environment parameter. Please refer to your host documentation.

CHARSET ()
5250 environment parameter. Please refer to your host documentation.
IBMSENDCONFREC ()
5250 environment parameter. Please refer to your host documentation.

IBM CURLIB ()
5250 environment parameter. Please refer to your host documentation.

IBMIMENU ()
5250 environment parameter. Please refer to your host documentation.

IBMPROGRAM ()
5250 environment parameter. Please refer to your host documentation.

**General Options**

**Terminal**

**Override terminal characteristics (off)**
TTerm for Linux will automatically supply the most appropriate Terminal Type and Telnet Mode for the Telnet connection. Select this option to override the supplied Terminal Type and Telnet Mode.

**Terminal Type ()**
The Telnet protocol allows the terminal to inform the host, or the host to ask the terminal, for a terminal type identifier (such as VT100). This allows the host to correctly setup terminal-specific variables such as the codes to clear the screen. This option is only available when Override Terminal Characteristics is selected.

**Telnet Mode (NVT)**
The type of Telnet communications between your local machine and the remote host can vary depending on the type of emulation you are using. The available settings are:

- NVT
- IBM3270
- IBM5250

This option is only available when Override Terminal Characteristics is set to on.

**Send Location**

**Send Location (None)**
Sends a location identifier, valid selection types are:

- None
- String: If this option is selected the Location field entry is sent to the host.
- Hex IP
- Decimal IP

**Location ()**
If the Send Location field is set to String then the contents of Location are sent to the host. Arbitrary text may be entered into this field or combinations of the following macro tokens may be used to dynamically create a location string.
Hexadecimal IP
Decimal IP
Port number
Telnet Session ID (Not necessarily the TTerm for Linux Session Number)
User Name
Inserts the '#' character.

Miscellaneous

Binary (off)
All data is handled as 8 bit characters. There are no additional functions performed on characters such as end-of-line, or any other ASCII characters. This option is mutually exclusive with Line Mode.

CR Handling (CR NULL)
This option specifies the character(s) to be used in terminating a packet. Available options are:

- CR and NULL
- CR Only
- CR and LF

Remote Echo (on)
When selected all data must first go to the remote host, then on return it is displayed on your screen.

‘Break’ Action (Interrupt)
Set the Break Action, available selections are

- Interrupt
- Break
- Abort Output
- Sync

Enable Window Size (on)
When set to on TTerm for Linux will notify the host when local changes are made to the terminal row and column sizing. Some hosts may not support this feature and in such cases it is recommended that Enable Window Size be set to Off.
Express Logon Feature for IBM Hosts

TTerm for Linux supports Express Logon Feature (ELF) for IBM hosts. Follow the steps listed below to configure TTerm for Linux for use with ELF.

1. Open the desired profile for editing from the Profile Directory.
2. Select the Emulation item from the left column of the Profile Directory.
3. Select the IBM3270 from the Select Emulation Selection drop down list.
4. Select the Communications item from the left column of the Profile Directory.
5. Select Telnet from the Select Communications drop down list.
6. In the Telnet settings under Remote Host Address, enter your host name or address.
7. In Port Number set the port number used by your host.
8. In Security section set the Security setting to SSL.
9. In the Security > SSL section and do the following:
   - Select Certificate and then Edit.
   - Select or add the required Certificate and select OK.
10. Select the Enable Express Logon Feature (TN3270 only) and set it to On.
11. Set the ELF Application ID
12. Close the Profile Editor by clicking either Save or Save and Connect.
Chapter 13: Emulations

Configuring your required terminal emulation.
Emulation Configuration

This chapter covers emulation configuration options for the various terminals emulated by TTerm for Linux.

Selecting an Emulation Module

To configure the emulation for the profile of your choice select Configure > Edit Current Profile from the program menu or, from the Profile Directory, select More > Edit on the desired profile.

Select Emulation from the Profile Editor. Configuration options will be displayed as shown in Figure 13.1.

Figure 13.1 Configuring Communications

To choose a different emulation select from the available terminals in the Select Emulation drop down list.

Note that a selection may cover several emulations, for example the DEC VT Series module supports emulations such as the DEC VT 52, the VT100, VT220 and others. Configuration options for each of the emulation modules supported by TTerm for Linux are listed alphabetically in this chapter.
ADDS2020 Viewpoint

Personality

Emulation Personality (Native Mode)
Available modes are:

► Wyse
► Native Mode

Options

Wrap End of Line (Wrap)
► Wrap: When this item is selected and the cursor reaches the last column on a line, the cursor will be moved to the first column of the next line.
► Stop: If this item is selected then the cursor will not move and incoming characters will overwrite the last column on the screen.

Scroll Setting (Scroll)
► Scroll: When selected, the screen will scroll up upon receiving a linefeed if the cursor is on the last line of the page.
► Loop: When selected, the screen and cursor position will remain the same.

Display Status Line (on)
The ADDS 2020 terminal supports a status line across the bottom of the display region. Select this option to display the status line.

Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

► Native text set
► Native graphics set
► Monitor mode character set
► To host
ADM11

Personality

ADM Mode (ADM11 /R)
Four terminal modes are supported on the ADM11 emulation.

- ADM 11/R: Standard Pick System mode. This mode emulates most of the functions of the AWA VTE-6/R terminal.
- ADM 11/H: Hybrid mode. This emulation responds to both VTE-6/R and Prism II commands. In cases where the command codes or sequences clash, the Prism II command is executed.
- ADM 11/P: Prism II mode. Emulating the Microdata Prism II terminal.
- ADM 11 (LSI) Native mode of operation.

Display Mode

Screen Size
Select from one of the following options:

- 24x80
- 24x132

Status Line Attribute (Normal)
The ADM11 terminal supports a status line across the bottom of the display region, available formats:

- **Normal**: The status bar appears with the normal attribute settings.
- **Reverse**: The status bar appears using the reverse attribute settings.
- **Blank**: The status bar is not visible, it uses the current normal text background attribute.
- **Blink**: The status bar uses the blink attribute settings.

Options

Insert Carriage Return Between Lines (off)
This option governs whether or not a CR (carriage return) is inserted between each line of data sent to the host during a send operation.

Auto Scroll (on)
This affects the behavior of the terminal when a linefeed is issued on the last line. When selected, the screen scrolls up one line and the cursor remains on the last line. When not selected, the screen remains unchanged but the cursor wraps around to the first column of the screen.

Use Uppercase Only (off)
When selected, the keyboard will behave the same as when the [CAPS LOCK] key is on.
Disable Keyboard (except RESET)
When selected, the keyboard is disabled. All key strokes except for the RESET function will be ignored. The emulation will continue to display normally while the keyboard is disabled. When the emulation is first loaded it assumes a default state of the keyboard enabled (unlocked).

Character Mapping:
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Normal character set
- Monitor mode character set
- LSI mode graphics set
- To host
ANSI Color

Display Mode

Display Size (24x80)
Available options are:

- 24x80
- 24x132
- Custom: uses the width and height as defined in the Custom Height and Custom Width options.

Custom Height (24)
Enter the number of rows required.

Custom Width (80)
Enter the number of columns required.

Options

Warp End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Convert Incoming Line Feed to CR/LF (Received) (off)
If selected then on receipt of a linefeed (LF) from the remote host TTerm for Linux performs a carriage return (CR) as well as a linefeed.

Insert Mode (Overtype)
Available options are:

- Insert: Inserts incoming text at the position of the cursor. Existing text will be moved to the right to make space.
- Overtype: From the current cursor position overwrites text to the right on the current line.

Box Drawing Character Set (Single line)
The ANSI emulation supports two styles of box drawing characters, these are:

- Single line
- Double line

No Gaps in Underlines (on)
Select if you do not want gaps in underlines.

Use Current Attribute on Erase (on)
When selected, the current character attribute will be used when an erase operation is performed.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- English
- English (UK)
- Dutch
- Finnish
- French
- French/Canadian
- German
- Greek
- Italian
- Norwegian/Danish
- Spanish
- Swiss
- Swedish
- Cyrillic

Character Sets
Available sets for this terminal are as follows:

- ASCII
- Extended ASCII
- Graphics (single line box characters) - Single line box drawing character set.
- Graphics (double line box characters) - Double line box drawing character set.
- To host
Bull VIP7800

Display Mode

**Number of lines (Default)**
The number of lines for the display. The default number of lines is 24. The **Custom** option allows the user to specify the number of lines.

**Status Line (24)**
The default setting is 24 however, this option allows the user to specify the Status Line number.

Options

**Operating Mode (character)**
Available options are:

- **Character**
- **Text**

Initially, the terminal is set to either **Character** or **Text** mode. **Character** and **Text** modes allow the host or user to define the screen attributes and fields that become active when Form mode is activated.

**Enquiry ID (730G)**
This configuration gives the user the ability to customize the first four characters sent to the host, such as during an enquiry response. These characters act as a terminal identification string for the hosts that require custom strings to be sent.

**Convert CR to CR/LF (off)**
This option causes the [RETURN] key to generate the two bytes CR/LF, instead of the normal CR.

**Insert CR/LF Between Line Sends (off)**
This option governs whether or not a CR/LF is inserted between each line of data sent to the host during a send operation.

**Auto Tab (Immediate)**

- **Immediate**: The cursor will immediately tab to the next unprotected field once the end of the current unprotected field has been reached.
- **Delayed**: The cursor will remain at the start of the next field then on the next valid keypress, the tab operation will occur.

**Terminator (ETX)**
The character appended to the end of data sent to the host during a send operation. Options are:

- **EOT**
- **ETX**
Insert Mode (on)
When selected, all screen data received causes all data, line graphics and attributes from the cursor to the end of the line to shift right. When not selected, the data will overwrite data at the cursor position.

Roll Mode (off)
This item governs the screen behavior when the cursor is on the last line of data space (which can be line 24 or line 72 if 72-line scroll is set) and a line feed is received. If Roll mode is on, then all data will be rolled up one line and the data that was on line 1 of data space is lost. Otherwise a DATA OVERFLOW error is generated on the status line.

Echoplex (on)
When selected, data entered at the terminal is transmitted without being displayed locally. This mode is only valid when in Character mode and Local mode is toggled on. When not selected, entered data is simultaneously displayed locally and sent to the host.

Transmit on Return (off)
Provides an alternative method of transmitting data whilst in Text mode, by enabling the sending of specially-formatted data from the screen when the [RETURN] key is pressed. When this mode is disabled the [RETURN] acts as normal.

Enable Bell Sound (on)
When selected, the bell will sound if a bell character [CTRL_G] is received from the host.

Suppress Trailing Spaces (on)
This option causes the terminal to suppress trailing spaces from being sent to the host during various send operations. When not selected, all spaces are sent.

Enable 72-line Scroll Area (off)
When selected this mode sets the terminal to operate with a 72 line data space instead of the standard 24 lines. The displayable text at any time is 24 lines, which will then scroll up and down over the 72 lines available in the data space.

Display 8 bit (off)
This option is set to off by default.

Strip 8th bit (on)
This option is set to on by default.

Printer
Start Print Character Combination (CR)
This option sets the combination of characters sent to the printer before a print job. Available options are:

- CR
- CR-LF
- CR-FF
- CR-VT
End Print Character Combination (CR)
This option sets the combination of characters sent to the printer after a print job. Available options are:

- CR
- CR-LF
- CR-FF
- CR-VT

PENQ Mode (off)

When selected, a receipt of a PENQ command (printer enquiry) will disable the use of the [PRINT] key. If not selected, then the [PRINT] key will not be disabled on receipt of a PENQ.

Print Mode (All)
- All: When selected, both unprotected and protected data is sent to the printer.
- Unprotected: When selected, only unprotected data is printed.

Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Standard map
- Line graphics
- To host
Data General Series

Personality

Emulation Personality (DG470)
Available personality options are:

▶ DG210
▶ DG211
▶ DG216
▶ DG216E
▶ DG410
▶ DG411
▶ DG412
▶ DG460
▶ DG461
▶ DG462
▶ DG470

Terminal Mode

Terminal mode (DG)
Available options are:

▶ ANSI
▶ DG

Data bits (8-BIT)
Available options are:

▶ 7-BIT
▶ 8-BIT

Options

Scroll setting (Scroll)
Available scroll modes are:

▶ Stop
▶ Loop
▶ Wrap
▶ Scroll
Null Character Handling (None)
Various NULL character representations have been implemented by Data General. The default setting of None is almost always required, other options are Single or Double.

- None
- Single
- Double

Display the 81st Column (off)
When selected the screen will show the 81st column (Applicable to DG4xx personalities only).

Clear Screen on Width Change (off)
When selected, this will cause a screen clear whenever a screen change between 80 and 132 columns occurs. If history is enabled, the screen data will be saved to the scroll history buffer otherwise the data is lost.

G0 Character Set (US ASCII)
Available options are:

- KEYBOARD
- US ASCII
- WP SET
- LINEDRAW
- DG INTERNAT
- UK
- FRENCH
- GERMAN
- SWED FIN
- SPANISH
- DAN NORW
- SWISS
- KATAK G0
- KATAK G1

G1 Character Set (DG INTERNAT)
Available options are:

- KEYBOARD
- US ASCII
- WP SET
- LINEDRAW
- DG INTERNAT
- UK
- FRENCH
- GERMAN
- SWED FIN
- SPANISH
- DAN NORW
- SWISS
- KATAK G0
- KATAK G1
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to *chapter 15*.

**Character Sets**

Available sets for this terminal are as follows:

- Keyboard character set
- U.S. character set
- Word processing set
- Line drawing characters
- Data General International
- United Kingdom set
- French character set
- German character set
- Swedish/Finnish set
- Spanish character set
- Danish/Norwegian set
- Swiss character set
- Katakana G0 set
- Katakana G1 set
- To host
DEC VT Series

Display Mode

Screen Size

Lines (24)
Select to change between the following line modes:

- 24
- 36
- 48

Columns (80)
Select to change between the following column modes:

- 80
- 132

Custom Screen Size (off)
Select to enable the custom sizes as entered in the Custom Lines and Custom Columns settings.

Custom Lines (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Display Options

Status Line Display (None)
- None: The status line is not displayed.
- Indicator: The status display is always visible.
- Host writable: Host applications can write messages in place of the status line.

Enable Local Echo (off)
If selected, as a character is typed on the keyboard it is immediately echoed to your screen. If disabled, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert Mode (off)
This mode determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.
Wrap End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Enable Clear Character Retains Attributed (off)
Specifies whether a cleared character retains an attribute.

Clear Screen on Size Change (off)
When selected, this will cause a screen clear whenever a switch between 80 and 132 columns occurs. If history is enabled, the screen data is moved to the scroll history buffer, otherwise it is lost.

Responses

Answerback Message ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Operating Mode (VT400)
Select to change between the following modes:

▶ VT52
▶ VT100
▶ VT400

7 or 8 bit (7 Bit)
Select between 7 or 8 bit modes.

Terminal ID (VT 220)
Select between

▶ VT100
▶ VT101
▶ VT102
▶ VT220
▶ VT240
▶ VT320
▶ VT340
▶ VT420

Use Custom DA string (off)
Select to enable the Custom DA string function.
Custom DA string (\?64;1;2;6;7;8;9;15;21)
Enter your custom DA string.

Keyboard Configuration

Keypad Mode (Application)
Select between Application and Numeric keypad state.

► Application: Selects application keypad mode. The keypad generates application control functions.
► Numeric: Selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

Cursor Keys Mode (Normal)
The characters generated by the cursor keys depend on the state of the Cursor Keys mode.

► Normal: Causes the cursor keys to generate ANSI cursor control sequences.
► Application: Causes the cursor keys to generate application control functions.

Convert LF to CR/LF (off)
When selected, this causes a received [RETURN] to transmit as both a CR and a LF. When not selected and a [RETURN] is received only a CR is transmitted.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Lock User Defined Keys (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. To unlock the keys you must either deselect user defined keys locked option or a reset is required.

Enable Compose (off)
A compose sequence is a series of two or three keystrokes that produce a single character. Pressing the [COMPOSE CHARACTER] key starts the compose sequence.

Disable Numeric Keypad (off)
Disables application and numeric mode for the numeric keypad.

Reset Clears the Terminal Screen (off)
Reset clears the terminal screen.

Tilda and Left Quote Key (Sends escape)
This option allows the user to define the TILDA/LEFT QUOTE key (i.e., ~ / ' key) to operate either as normal or as an escape key sequence.

► Sends escape: Redefine the TILDA/LEFT QUOTE key to send an escape key sequence.
► Sends tilda/left quote: Leave the TILDA/LEFT QUOTE key as normal, i.e., LEFT QUOTE and with the SHIFT key, TILDA.
Advanced

Character Set Mode (Normal)
Select between the following character set mode:

- Normal
- DBCS
- UTF-8

CodePage (950)
Sets the code page to be used when DBCS is enabled. See also Character Set Mode.

User Preferred Character Set (DEC Supplemental)
There are two 8-bit character sets and both include the standard ASCII character set and a supplemental set.

- DEC Supplemental: DEC Multinational set.
- ISO Latin

Favor Diacritics (off)
When enabled uses European characters rather than line draw characters.

Print Extent (Print Region)
Select from the following options:

- Print Region: to send just the selected region to the printer
- Print Screen: to send entire screen contents to printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.

StripCharValue (242)
This option is set to '242' by default. Use up and down keys to adjust accordingly.

StripPrinting (off)
This option is set to off by default.

StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.

BackspaceOn (off)
This option is set to off by default.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- English
- English (UK)
- Dutch
- Finnish
- French
- French/Canadian
- German
- Greek
- Italian
- Norwegian/Danish
- Spanish
- Swiss
- Swedish
- Cyrillic
- Croatian

Character Sets
Available sets for this terminal are as follows:

- HostsNational
- ASCII
- ASCII (8-bit)
- DEC Special Graphics
- DEC Supplemental
- ISO Latin Supplemental
- DEC Technical
- To host
Fujitsu 6681

Configuration options for the Fujitsu 6681 terminal are covered by the IBM 3270 emulation. Select this emulation and refer to the section on IBM 3270 configuration in this chapter for more detail.
HP Series

Model (MODEL_70092)
Select a Hewlett Packard terminal model. Available options are:

- MODEL_2392A
- MODEL_70092
- MODEL_70094

Display

Screen Size (80 column)
Select from the two available options:

- 24 lines x 80 columns
- 24 lines x 132 columns

Start Column (1)
This is a value in the range of 1 – 80.

Smooth Scroll (off)
When selected, rolling data up and down the screen is done smoothly. When not selected (0), the scroll jumps a line at a time.

General

User Terminal ID (70092)
Select from the two available options:

- 2392A
- 70092

Operate in Block mode (off)
When not selected, the terminal operates in Character mode. In Character mode, data is transmitted a character at a time as it is entered through the keyboard. Control codes (such as CR and LF) are also transmitted.

When selected, the terminal operates in Block mode. In Block mode, data is NOT transmitted at the time it is entered through the keyboard. Instead, you transmit an entire block of data by first typing the data and then pressing the [ENTER] key. When the terminal is in Block mode, control codes (such as CR and LF) are acted upon locally but NOT transmitted with the data block.

Block Mode Send (Line)
This field specifies whether or not the terminal, when operating in Block mode, will transmit data a line at a time or a page at a time.
**Block Terminator Character (30)**
Can be any ASCII character. For data transfers between the terminal and a host computer, the terminal transmits the specified block terminator character at the end of the transfer operation.

**Field Separator Character (31)**
Must be an ASCII character. When you press the Enter key while the terminal is in block page mode and display memory contains a formatted display, the terminal automatically transmits the specified field separator character at the end of each protected field (except the final one).

**Remote (on)**
When selected, if you press an alphanumeric key the associated character code is transmitted to the host computer. When not selected (Local mode), if you press an alphanumeric key the associated character is displayed at the current cursor position on the screen. Nothing is transmitted to the host computer.

**InhDC2 (off)**
Together, InhHndShk and InhDC2 fields determine what type of handshaking is to be used when transferring blocks of data from the terminal to the host computer.

**InhHndShk (off)**
See InhDC2.

**Enable Host-Prompt (on)**
Uses a host originated user-definable character value to release the keystrokes, stored previously via Type-ahead.

**Host-Prompt Text (17)**
Decimal ASCII character value used by the host prompt.

**Type-ahead (on)**
While the keyboard is locked, keystrokes are stored and released when the keyboard is Unlocked.

**Type-ahead Size (100)**
The number of keystrokes permitted whilst keyboard is locked before the buffer fills and locked state is resumed.

**Type-ahead Delay (0)**
This setting gives the delay between each key when the type-ahead buffer is purged; i.e. its contents sent to the host. Measured in milliseconds.

**Local Echo (off)**
If selected, characters entered through the keyboard are displayed on the screen and transmitted to the host computer. When not selected, characters entered through the keyboard are transmitted to the host computer only. If they are to appear on the screen, the host computer must echo them back to the terminal.

**XmitFnctn (off)**
This field specifies whether the escape code functions are both executed at the terminal and transmitted to the host computer.
Inhibit End Of Line wrap (off)
This field specifies whether or not the end-of-line wrap is inhibited.

Space Overwrites/Advances (off)
This field specifies whether or not spaces entered through the keyboard will overwrite existing characters.

Transfer Escape Sequences (off)
This field controls the transfer of escape sequences to a printer, and has no effect if there is no second port.

Margin Bell (off)
This specifies whether the terminal's bell is enabled or disabled. If not selected, the bell will still sound in response to an ASCII Bell control code (decimal 7, [CTRL_G]).

Send Cursor Position (off)
When selected, if the [ENTER] key, [SELECT] or a user defined key (set to transmit) is pressed, the current cursor position is sent to the computer.

EnqACK (on)
When selected, all ENQ characters from the incoming data are stripped off and in turn responds by transmitting an ACK. When deselected, all incoming characters (including ENQ and ACK but excluding NULLS and DELS) are treated as data bytes, NULLS and DELS are stripped from the incoming data.

Insert Mode (off)
This option determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new characters replace old characters at the cursor position.

Format (off)
When selected, the terminal user can only enter data into unprotected fields.

LineModify (off)
When the terminal is in Remote mode and Character mode and you are communicating interactively with a host computer, you may sometimes enter an erroneous command string to which the computer responds with an error message. If the command string is a lengthy one and the error consists of only a few characters, it is a nuisance to have to retype the entire string. In such a case, you may instead enable Line modify mode (which temporarily switches the terminal to a special form of Block mode). You can then move the cursor to the erroneous line on the display and correct the command string. When the string is edited to your satisfaction, you retransmit the line to the host computer by pressing either the [ENTER] key or the [RETURN] key. Line modify is automatically disabled when you press either [ENTER] or [RETURN].

Modify All (off)
When the terminal is in Character mode, you can enable Modify All, which switches the terminal to a special form of Block mode. Modify All is the same as Line Modify except that it is NOT disabled when you press [ENTER] or [RETURN].
DisplayFns (off)
When selected, the terminal operates as follows. In Local mode, it displays control codes and escape sequences but does not execute them. In Remote mode, it transmits control codes and escape sequences but does not execute them locally.

Record (off)
Record mode copies from the host to the selected destination (to) device, e.g., an external printer. When the Record mode is not selected, the contents of a partially filled buffer will be sent to the destination device(s).

LogBottom (off)
Logging is a mechanism whereby data can be automatically routed to an external device e.g., a printer. With bottom logging, each time the cursor moves from one line to another, the line from which the cursor moved is sent to the external device.

LogTop (off)
When the display memory is full and another line of data is entered, the top line in the display is purged to make room for the new line. With top logging, each purged line is sent to the external device. Thus, while the line is lost from display memory, it is maintained in hard copy form.

AutoKeyboard Lock (off)
When a terminal is connected to a packet switching network (using X.25 protocol) via a controller/multiplexer, it is necessary to ensure that the packet sent is received and acted upon before another is sent (from the terminal). In order to achieve this, the keyboard must automatically lock, in such a way that it can only be unlocked by the receiving host.

8-Bit Mode (on)
This enables 8 bit data input streams.

Keyboard Settings

Use Uppercase Only (off)
This field specifies whether the terminal generates the full 128 character ASCII set or only the Teletype-compatible codes.

Destructive Backspace (off)
With Destructive Backspace, pressing [BACKSPACE] moves the cursor back one character and clears the character. Normally, [BACKSPACE] moves the cursor back one character but the character is not cleared.

Return acts as Enter (off)
This is the flag to make the [RETURN] key (on main keyboard) act like the [ENTER] key (number pad).

Convert LF to CR/LF (on)
Converts a LF to a CR/LF.

Convert TAB to Spaces (off)
When selected, the [TAB] virtual key produces the number of spaces required to reach the next tab stop to
the right. When not selected, the \texttt{[TAB]} key behaves as normal, (i.e., sends a tab character). Similarly, this flag causes \texttt{[BACK TAB]} to send out the required number of backspace characters (\texttt{^H}) to reach the nearest tab stop to the left.

**Convert Keyboard Linefeed to CR/LF (off)**
When selected a line feed control code is automatically appended to each carriage return control code generated through the keyboard.

**Numpad TAB Settings (Tab)**
Configure the number pad \texttt{[TAB]} virtual key to behave as one of the following virtual keys:

- \texttt{Tab}
- \texttt{Return}
- \texttt{Enter}

**Disable Block-mode (on)**
When not selected, the terminal operates in Character mode. In Character mode, data is transmitted a character at a time as it is entered through the keyboard. Control codes (such as \texttt{CR} and \texttt{LF}) are also transmitted. When selected, the terminal operates in Block mode. In Block mode, data is NOT transmitted at the time it is entered through the keyboard. Instead, you transmit an entire block of data by first typing the data and then pressing the \texttt{[ENTER]} key. When the terminal is in Block mode, control codes (such as \texttt{CR} and \texttt{LF}) are acted upon locally but NOT transmitted with the data block.

**For Function Keys F1 to F8**

**Key Definition**
This option allows the user to assign functions and labels of their choosing to the first eight function keys.

**Key Definition Action (Normal)**
The attribute is selected from the following options:

- **Normal**: The key definition string acts as data entered normally from the keyboard.
- **Transmit**: For transmission only. The key definition string is sent to the host. It is not echoed locally.
- **Local**: For local use only. The key definition string is sent to the screen. It is not transmitted to the host.

**Key Label 1st Line (""")**
Specify the first line of text to appear on the displayed key.

**Key Label 2nd Line (" ")**
Specify the second line of text to appear on the displayed key.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to Chapter 15.

Languages
Available languages for this terminal are as follows:

- Danish
- Dutch
- English
- English (UK)
- Finnish
- French
- French/Flemish
- French/Canadian
- German
- Italian
- Norwegian
- Spanish - European
- Spanish - Latin
- Swedish
- Swiss French/German.

Character Sets
Available sets for this terminal are as follows:

- Standard map
- Line drawing characters
- Display functions map
- ASCII
- Special graphics
- To host
IBM 3101 and IBM 3151

Terminal Mode

Emulation Personality (IBM3151)
Available personalities are:

- IBM3101
- IBM3151

Display Mode

Screen Size (24x80)
Available options are:

- 24x80
- 24x132
- 25x80
- 25x132
- Custom: uses the width and height as defined in the Custom Height and Custom Width settings.

Custom Height (24)
Enter the number of rows required.

Custom Width (80)
Enter the number of columns required.

Options

Operating mode (Echo)
- Char: Sends the character to the host and to the screen at the same time.
- Block: This option only updates the screen. The data from the screen is sent to the host only when requested by pressing the [SEND] keys or on request from the host via a READ command.
- Echo: Sends the character only to the host. The host then echoes the character to the screen.

Terminal ID ()
This can be set to any string (of up to 20 characters in length) you choose and is used by the host to identify the terminal.

Convert CR to CR/LF (off)
When selected, a linefeed is generated automatically when a carriage return is received. That is, both a carriage return and linefeed are sent to the screen. When not selected, only a carriage return is sent when one is received.
Wrap End of Line (off)
When selected, if the current cursor position is on the last column of the screen, the cursor will be moved to the first column of the next. When not selected, then the cursor will not move and incoming characters will overwrite the last column on the screen.

Force Insert Line (on)
When selected, and there is no room to insert a NULL line, the rest of the screen will be scrolled down when an insert line operation is requested. When not selected then the insert line request is ignored if there is no room.

Force Insert Character (on)
When selected and there is no room to insert a character, then space is created for the character by moving the rest of the line right. If Line Wrap is OFF or ON then the last character is dropped from either the field or the page. When not selected and there is no room to satisfy a request to insert a character then the request is ignored.

Lock Keep MDT (on)
If selected then after performing the send function MDT bit @ SEND, the MDT bit is not reset and the keyboard is locked. The only key enabled after this is the [RESET] key. If not selected then the MDT bit is reset to 0.

Send NULL to Host (off)
When selected trailing NULLs are converted to blanks when sent to the host. When not selected trailing NULLs are not sent to the host.

Linefeed Char (LF)
- LF: When selected and a linefeed is entered or received, the cursor will move to the same column on the next line.
- CR: When selected and a linefeed is entered or received, the cursor will move to the first column on the next line.

Enable Transparent Mode (on)
This option is set to on by default.

Line Turnaround Char (13)
This is used to set your line turnaround character. This character is sent to the host at the end of a data stream when a [SEND] key is pressed. The default is ASCII character 13.

Send Data Format (<Text><LTA>)
- <Text><LTA>: When selected and the [SEND] key is pressed, both text and the LTA (line turnaround) character are sent to the host.
- <AID><LTA>: The identification character followed by the line terminator is sent to the host when a [SEND] key is pressed.

Character Set Mode
Available options:
- Normal
- DBCS
- UTF-8
Code Page ()
Use up and down options to set appropriate code page.

Advanced

Scroll Setting (Scroll)
The scroll function relates to what happens when a linefeed is received and the cursor is on the last line of the screen.

► Scroll: When selected, the screen is scrolled up.
► Loop: When selected, the cursor is sent to the top of the screen.

Send Line (off)
This option is set to off by default.

Short Model Response (T)
Used to obtain the basic terminal characteristics.

XT Model Response (&(! B)
This command is used when additional information is required on the 3151. Refer to the IBM3151 Reference manual for further details.

Keyboard

Tab key (Field)
Available options are:

► Field
► Column

Send key (Page)
Available options are:

► Page
► Line

Enter key (Return)
Available options are:

► Return
► Send

Return key (Field)
Available options are:

► Field
► Newline
Newline Key (CR)
Available options are

▶ CR
▶ CR/LF

Insert Key (Toggles insert/replace mode)
Available options are:

▶ Insert SPACE
▶ Toggles insert/replace mode

G0 Character Map (ASCII)
Select from the following options:

▶ ASCII
▶ Special graphics
▶ Auxiliary Page 1
▶ Auxiliary Page 2

G1 Character Map (Special Graphics)
Select from the following options:

▶ ASCII
▶ Special graphics
▶ Auxiliary Page 1
▶ Auxiliary Page 2

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

▶ Multinational

Character Sets
Available sets for this terminal are as follows:

▶ ASCII control characters
▶ Delete character
▶ ASCII
▶ Special graphics
▶ Auxiliary Page 1
▶ Auxiliary Page 2
▶ To host
IBM 3164 Color

Display Size

Screen Size (80x24)
Available options are:

- 80x24
- 132x24
Custom: uses the width and height as defined in the Custom Columns and Custom Lines settings.

Custom Columns (80)
Enter the number of columns required.

Custom Lines (24)
Enter the number of lines required.

General

Wrap End of Line (on)
When selected and the current cursor position is on the last column of the screen, the cursor will be moved to the first column of the next. If not selected, the cursor will not move and incoming characters will overwrite the last column on the screen.

Convert CR to CR/LF (off)
When selected, a linefeed is generated automatically when a carriage return is received. That is, both a carriage return and linefeed are sent to the screen. When not selected, only a carriage return is sent when one is received.

Send NULL to Host (off)
When selected, trailing NULLs are converted to blanks when sent to the host. When not selected, trailing NULLs are not sent to the host.

Disable Set Field (off)
When selected, field attributes can not be modified by the operator. When not selected, they can be modified.

Enable Transparent Mode (on)
This controls whether or not the operator can switch to transparent mode by entering a DLE sequence from the keyboard.

Enable Prog Colors (on)
When not selected the terminal can display only the default colors of an IBM3164 terminal which are green, blue, red and white. When selected the emulation can also display black, yellow, magenta and turquoise.

Terminal ID ()
This can be set to a string (up to 20 characters in length) that the host can use to identify the IBM3164 terminal.
Trace ()
Available options are:

- Off
- Trace send
- Trace receive
- Trace all

Lock Keep MDT (on)
If selected then after performing the send function MDT bit @ SEND, the MDT bit is not reset and the keyboard is locked. The only key enabled after this is the [RESET] key. If not selected then the MDT bit is reset to 0.

Keyboard

TAB (Field)
- Field: When selected the tab stop positions defined by the field attribute character are used, instead of the column tab definitions.
- Column: When selected the column tab stop positions are used, instead of the field tab stop positions.

SEND (Page)
- Page: When selected and the [SEND] key is pressed, the contents of the current page will be sent to the host. When selected and the [SEND LINE] key is pressed then contents of the current line are sent to the host.
- Line: When selected, the [SEND] key will send the contents of the current line and the [SEND LINE] key will send the contents of the current page.

ENTER (Return)
This enables you to define the [ENTER] key as either a [SEND] or [RETURN] key.

RETURN (Field)
Available options are:

- Field
- New line

NEWLINE (CR)
- CR: Pressing the [RETURN] key will send only a carriage return when this is set to CR.
- CR/LF: When set to CR/LF it will also send a linefeed.

PRINT (Page)
This controls whether the contents of the page, screen or viewport are sent to the printer when the [PRINT] key is pressed.

INSERT (Toggle)
- Toggle: When selected, pressing the [INSERT] key will cause the terminal to go into Insert mode.
- Ins SP: When selected, pressing the [INSERT] key will insert a space character after the current cursor position.
Advanced

Scroll Mode (Loop)
The scroll function relates to what happens if a linefeed is received when the cursor is on the last line of the screen.

- **Off**: When selected, the display does not scroll.
- **Scroll**: When selected, the screen is scrolled up.
- **Loop**: When selected, the cursor is sent to the top of the screen.

Operating Mode (Echo)
This determines what happens when a key is pressed.

- **Character**: Sends the character to the host and to the screen at the same time.
- **Block**: This option only updates the screen. The data from the screen is sent to the host only when requested by pressing the [SEND] key or on request from the host via a READ command.
- **Echo**: Sends the character only to the host. The host then echoes the character to the screen.

Line End (CR/LF)

- **CR**: When selected, pressing the [RETURN] key will send only a carriage return.
- **CR/LF**: When selected, pressing the [RETURN] key will send a linefeed and a carriage return.

Send Data Format (Text[LTA])

- **Text[LTA]**: When selected and the [SEND] key is pressed, both text and the LTA (line turnaround) character are sent to the host
- **AID[LTA]**: Otherwise, it sends only the identification character followed by the line terminator.

LTA (turnaround) Char (CR)
This is used to set your line turnaround character. This character is sent to the host at the end of a data stream when a [SEND] key is pressed. Options are:

- **CR**
- **EOT**
- **ETX**
- **DC3**

Print NULL (on)
When selected, trailing NULLs are converted into blanks and sent to the printer when a print is requested. When not selected, trailing NULLs are not sent to the printer.

Print EOL (on)
When selected the defined line end character is sent to the printer at the end of each printed line. (See also Line end.)

Default FA (on)
Default field attribute enable.
**ASCII LF Ctrl (off)**
If this is selected, receiving a linefeed from either the host or the keyboard will also generate a carriage return. That is, the cursor will move to the first column of the next line. When not selected, the cursor will just move down one line.

**Number of Time Fill Chars (0)**
May be set to 0, 1, 2 or 3. This enables you to set the number of time fill characters (DELS) at the end of each line that are sent to the printer.

**Character Mapping**
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

**Character Sets**
Available sets for this terminal are as follows:

- ASCII control characters
- Delete character
- ASCII
- Special graphics
- Alternate characters
- To host
Models

Model (IBM 3279-2 24x80)
The following Fujitsu and IBM terminals are supported

- IBM 3278-2 24 x 80 display
- IBM 3278-3 32 x 80 display
- IBM 3278-4 43 x 80 display
- IBM 3278-5 27 x 132 display
- IBM 3279-2 24 x 80 display
- IBM 3279-3 32 x 80 display
- IBM 3279-4 43 x 80 display
- IBM 3279-5 27 x 132 display
- IBM DYNAMIC 62 x 160 display
- Fujitsu 6681-2 24 x 80 display
- Fujitsu 6681-3 32 x 80 display
- Fujitsu 6681-4 43 x 80 display
- Fujitsu 6681-5 27 x 132 display
- Fujitsu 6681-6 27 x 136 display

Primary Screen Rows ()
Set to 24 by default. Use the up and down controls to adjust to required number of rows.

Primary screen columns ()
Set to 80 by default. Use the up and down controls to adjust to required number of columns.

Alternate screen rows ()
Set to 62 by default. Use the up and down controls to adjust to required number of alternate rows.

Alternate screen columns ()
Set to 160 by default. Use the up and down controls to adjust to required number of columns.

Extended Attributes ()
Select to enable additional terminal characteristics.

Mode (Mode 2)
This is dependent upon your host system. It affects the handling of colors. Options available are mode 1 and 2.
Log Mode ID ()
This is a two digit number used by the host. It is required for the Telnet setup and it MUST come from your systems administrator.

Extended Data Stream (off)
This option is set to off by default.

Colors

IBM3270 Default Colors
Available colors are Black, Blue, Red, Pink, Green, Turquoise, Yellow, Deep Blue, Orange, Purple, Pale Green, Pale Turquoise, Gray, White.

Alpha (Green) Color_PA (Blue)
Numeric (Green)
Protected Numeric (Blue) Highlight Alpha (Red)
Highlight Protected Alpha (White) Highlight Numeric (Red)
Highlight Protected Numeric (White)
Green (Green)
Red (Red)
White (White)
Foreground color (Black) Background color (Cyan)

Advanced

Status Line Display (Plain)
There are three possible status lines settings:

▶ Plain
▶ Average response
▶ Last response

Enable ‘dot’ Facility (off)
This option places a dot in input fields for every character.

After Paste Reset Cursor (on)
This option is set to on by default.

Enable TypeAhead (off)
While the keyboard is locked, keystrokes are stored and released when the keyboard is unlocked.

TypeAhead Size (100)
The number of keystrokes permitted whilst keyboard is locked before the buffer fills and locked state is resumed.
Map Backslash to Yen (for Japanese) (off)
The backslash key is mapped to the Yen character for usage on Japanese host systems.

Code Page (37(US))
Select from a list of supported Code Pages:

- 37(US)
- 273(Austria/Germany)
- 277(Denmark/Norway)
- 278(Finland/Sweden)
- 280(Italy)
- 284(Spain)
- 285(UK)
- 297(France)
- 420(Arabic Bilingual)
- 423(Greek)
- 424(Hebrew)
- 500(International)
- 833(Korean Extended)
- 870(Latin2 Poland/Romania/Slovakia/Slovenia)
- 871(Iceland)
- 875(Greece)
- 880(Cyrillic Russian)
- 924(Multinational ISO Euro)
- 930(Japanese)
- 930(Japanese - Extended Katakana)
- 939(Japanese - Extended English)
- 1025(Cyrillic Belarus/Bulgaria/FYR Macedonia)
- 1026(Latin 5 Turkey)
- 1047(US Open Systems)
- 1140(Euro Belgium/Brazil/Canada-Bilingual/Netherlands)
- 1141(Euro Austria/Germany)
- 1142(Euro Denmark/Norway)
- 1143(Euro Finland/Sweden)
- 1144(Euro Italy)
- 1145(Euro Spain)
- 1146(Euro UK)
- 1147(Euro France)
- 1148(Euro International)
- 1149(Euro Iceland)
- 1155(Euro Latvia Latin 5/Lithuania/Turkey)

Enable DBCS (off)
Select to enable DBCS support (Double Byte Character Set).

DBCS/SBCS Input Mode Follows Screen Data (on)
By default TTerm for Linux will automatically toggle DBCS/SBCS mode depending on the type of field that cursor is currently positioned in. This option allows automatic DBCS/SBCS mode toggle to be disabled.
**Word Wrap Enabled (off)**
Determines whether or not this capability is permitted. Word wrapping is available in DBCS mode only.

**Word Wrap (on)**
When set to on this enables word wrapping in multiline fields. When it's disabled words spanning two lines are moved to the start of a new line in a multiple line field. For this setting to be honored Word Wrap Enabled must be set to on.

**Use Alternate Addressing (off)**
This option is set to off by default.

**Enable Screen Size Switching (off)**
Controls whether screen size changing is permitted.

**Reset Clears the Terminal Screen (off)**
If selected the screen will be cleared and the cursor is placed in the home position.

**Clear Padding (off)**
This setting determine whether if a clear is performed using a clearpad character.

**Clear Pad (0)**
The character used for padding. To be employed this setting requires the Clear Padding to be set to on.

**Insert Mode is Persistent (on)**
This option maintains the current insert mode when moving between fields. When this is setting is disabled the insert is turned off on entering a new field.

**Enable Destructive Backspace (off)**
With Destructive Backspace, pressing [BACKSPACE] moves the cursor back one character and clears the character. Normally, [BACKSPACE] moves the cursor back one character but the character is not cleared.

**Honor Numeric Field Type (off)**
When set to off TTTerm for Linux will allow any input in a field designated as numeric by the host.

---

**Printer**
These settings link a 3270 host session to an associated IBM 3287 printer session. For more information refer to the IBM 3287 section of this chapter.

**Use Associated Printer (off)**
Set to on if a IBM 3287 printer emulation is to be used in conjunction with your 3270 host session.

**AutoClose Printer (off)**
Set to on to Automatically close the printer.

**Printer Profile ()**
Select to a TTTerm for Linux profile specifying the associated 3287 session.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to *chapter 15*.

**Languages**
Available languages for this terminal are as follows:

- English (US)
- English (UK)
- Austrian/German
- Belgian
- Canadian (French)
- Danish/Norwegian
- Finnish/Swedish
- French
- Greek
- International
- Italian
- Japanese (English)
- Spanish
- Spanish Speaking

**Character Sets**
Available sets for this terminal are as follows:

- Standard character set
- Graphics character set
- ASCII to EBCDIC
- EBCDIC to ASCII
- To host
IBM 3287 (IBM Printer)

The IBM 3287 is a 3270-data-stream color printer, designed to be used in conjunction with the TTerm for Linux IBM 3270 emulation.

IBM Printer Configuration

Paper Size (Printer Default)
Selecting from a list of available document sizes.

Margin Units (Inches)
Set the paper margin unit of measurement. Options are:

- Inches
- Centimetres

Orientation (default)

Printer orientation options are:

- Default: Uses the orientation as configured for the printer by default.
- Portrait: Overrides the printer default orientation to portrait.
- Landscape: Overrides the printer default orientation to landscape.

Font Size (10)
Set a font size for printer output in points. The standard TTerm for Linux terminal font will be used.

Characters Per Line (0)
Set the number of characters per line. A maximum value is suggested based on the font size selected in Font Size.

Lines Per Page (0)
Set the number of lines per printed page. A maximum value is suggested based on the font size selected in Font Size.

Left margin (25)
The page left margin in millimeters.

Top Margin ()
Valid settings are from 0.10cm/0.039” to 20cm/7.874”

Bottom Margin ()
Valid settings are from 0.10cm/0.039” to 20cm/7.874”

Left Margin ()
Valid settings are from 0.10cm/0.039” to 20cm/7.874”
Right Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

**Code Page (37(US))**
Select from a list of supported Code Pages:

- 37(US)
- 273(Austria/Germany)
- 277(Denmark/Norway)
- 278(Finland/Sweden)
- 280(Italy)
- 284(Spain)
- 285(UK)
- 297(France)
- 420(Arabic Bilingual)
- 423(Greek)
- 424(Hebrew)
- 500(International)
- 833(Korean Extended)
- 870(Latin2 Poland/Romania/Slovakia/Slovenia)
- 871(Iceland)
- 875(Greece)
- 880(Cyrillic Russian)
- 924(Multinational ISO Euro)
- 930(Japanese)
- 930(Japanese - Extended Katakana)
- 939(Japanese - Extended English)
- 1025(Cyrillic Belarus/Bulgaria/FYR Macedonia)
- 1026(Latin 5 Turkey)
- 1047(US Open Systems)
- 1140(Euro Belgium/Brazil/Canada-Bilingual/Netherlands)
- 1141(Euro Austria/Germany)
- 1142(Euro Denmark/Norway)
- 1143(Euro Finland/Sweden)
- 1144(Euro Italy)
- 1145(Euro Spain)
- 1146(Euro UK)
- 1147(Euro France)
- 1148(Euro International)
- 1149(Euro Iceland)
- 1155(Euro Latvia Latin 5/Lithuania/Turkey)

**DBCS Enabled (off)**
For use with Double Byte Character System sessions.

**Time Out (10 Seconds)**
Period in seconds, after which the print buffer is flushed if a print job has started and there is no activity from the host.
All Caps (off)
When selected all printer output is converted to upper case.

Space Lines (off),
When set to on, lines are spaced proportionally to fill the available page space.

Space Characters (off)
When set to on, characters are equally spaced to fill the entire line space.

Inhibit Separator Page (on)
Disable separator printing between consecutive print jobs.

Host Formatting ()
Handling options for SNA Character String (SCS) host formatting. Valid options are:
- Ignore: Ignore host formatting
- Apply: Apply host formatting
- Apply and save: Apply and save host formatting

PDT Printing
A PDT, or Printer Definition Table, is a file that is used to translate the IBM 3270 host datastream into a format suitable for outputting to a Windows printer, bypassing the Windows print driver. Each Printer Definition Table is created from the PDF, or Printer Definition File, specified in the setting below.

Use PDT (off)
Enable Printer Definition Tables. PDTs are disabled by default.

PDF to use ()
Specify the Printer Definition File specific to the output printer.
Initiating a 3287 Session

An IBM 3287 printing session works in conjunction with IBM 3270 host session. To make use of the printer emulation TTerm for Linux requires a 3270 and a 3287 session to be simultaneously open. To configure TTerm for Linux to automatically initiate the 3287 session when you connect to a host via 3270, follow these steps:

1. Open a new session by selecting Create New Profile from the Profiles Directory tab.
2. Selecting the IBM 3287 emulation module under the Emulation section.
3. Configure the communications by selecting the Telnet option under the Communications section. For more information on configuring communications protocol settings refer to Chapter 12 - Communications.

Ensure that the Telnet module is configured to use TN3270e (this is the default and must remain selected.) TN3270e is required for printer communications.

4. In the Telnet settings listing enter a name under Connection > Associate.
5. Click Save to save the profile.
6. Create a second profile by selecting Create New Profile from the Profiles Directory tab. Configure it to use Telnet and an IBM 3270 emulation.

Again, ensure that the Telnet module on your 3270 session is configured to use TN3270e (this is the default and must remain selected.) TN3270e is required for printer communications.

7. In the 3270 emulation settings, check the box next to Printer > Use Associated Printer.
8. Under Printer Session, set the Printer to the profile created in step 5.
9. Click Save to save the profile.

Now, when connecting to a host system using this 3270 session a second, associated 3287 session will be opened automatically using the settings specified in your saved configuration.

An alternate option is to specify an LU under the Telnet settings on your 3287 session. Connect this 3287 session to your host first and open a subsequent 3270 host session. Specify the LU of your 3287 printer where required by your host applications when initiating printing.

The LU name and Associate options are mutually exclusive.
IBM 5250

Model (IBM 3477-FC)

Support for the IBM 5250 terminal modes is extensive. Currently supported modes are:

- IBM 3179-2
- IBM 3179-220
- IBM 3180-2
- IBM 3196-A1
- IBM 3477-FG
- IBM 3477-FC
- IBM 5251-1
- IBM 5251-11
- IBM 5252
- IBM 5291-1
- IBM 5292-2
- IBM 5555-C01 (DBCS)
- IBM 5555-B01 (DBCS)
- IBM Printer. See also IBM 5250 Printer Configuration, in this chapter.

Printer Settings

Options

Enable TypeAhead (off)
While the keyboard is locked, keystrokes are stored and released when the keyboard is unlocked.

TypeAhead Size (100)
The number of keystrokes permitted whilst keyboard is locked before the buffer fills and locked state is resumed.

Dot Attribute (Dots)
Enables or disables dot attributes.

Insert Cursor Skip to Unprotected (off)
This option is set to off by default.

DBCSCodePage
Use up and down to set appropriate Code Page.
Codepage (37(US))
Select from a list of supported Code Pages. If selecting a DBCS codepage such as '930(Japanese - Extended Katakana)', '930(Japanese)' or '939(Japanese - Extended English)', please ensure that the Model is set to a DBCS capable terminal.

- 37(US)
- 273(Austria/Germany)
- 277(Denmark/Norway)
- 278(Finland/Sweden)
- 280(Italy)
- 284(Spain)
- 285(UK)
- 297(France)
- 420(Arabic Bilingual)
- 423(Greek)
- 424(Hebrew)
- 500(International)
- 833(Korean Extended)
- 870(Latin2 Poland/Romania/Slovakia/Slovenia)
- 871(Iceland)
- 875(Greece)
- 880(Cyrillic Russian)
- 924(Multinational ISO Euro)
- 930(Japanese)
- 930(Japanese - Extended Katakana)
- 939(Japanese - Extended English)
- 1025(Cyrillic Belarus/Bulgaria/FYR Macedonia)
- 1026(Latin 5 Turkey)
- 1047(US Open Systems)
- 1140(Euro Belgium/Brazil/Canada-Bilingual/Netherlands)
- 1141(Euro Austria/Germany)
- 1142(Euro Denmark/Norway)
- 1143(Euro Finland/Sweden)
- 1144(Euro Italy)
- 1145(Euro Spain)
- 1146(Euro UK)
- 1147(Euro France)
- 1148(Euro International)
- 1149(Euro Iceland)
- 1155(Euro Latvia Latin 5/Lithuania/Turkey)

DBCS Alternate codepage (37(US))
Select from a list of supported Code Pages.

- 37(US)
- 273(Austria/Germany)
- 277(Denmark/Norway)
- 278(Finland/Sweden)
- 280(Italy)
- 284(Spain)
- 285(UK)
- 297(France)
- 420(Arabic Bilingual)
- 423(Greek)
- 424(Hebrew)
- 500(International)
- 833(Korean Extended)
- 870(Latin2 Poland/Romania/Slovakia/Slovenia)
- 871(Iceland)
- 875(Greece)
- 880(Cyrillic Russian)
- 924(Multinational ISO Euro)
- 930(Japanese)
- 930(Japanese - Extended Katakana)
- 939(Japanese - Extended English)
- 1025(Cyrillic Belarus/Bulgaria/FYR Macedonia)
- 1026(Latin 5 Turkey)
- 1047(US Open Systems)
- 1140(Euro Belgium/Brazil/Canada-Bilingual/Netherlands)
- 1141(Euro Austria/Germany)
- 1142(Euro Denmark/Norway)
- 1143(Euro Finland/Sweden)
- 1144(Euro Italy)
- 1145(Euro Spain)
- 1146(Euro UK)
- 1147(Euro France)
- 1148(Euro International)
- 1149(Euro Iceland)
- 1155(Euro Latvia Latin 5/Lithuania/Turkey)

**Foreground Color (Black)**
Set to Black by default. Select the appropriate color from drop down list.

**Background Color (Cyan)**
Set to Cyan by default. Select the appropriate color from drop down list.

**TTWin Status Line (off)**
Utilize old style TTWin 5250 Status Line Display.

**Map ENTER to FIELD+ENTER (on)**
By default this item is set to on. Uncheck to set to off.

**Map Backslash to Yen (for Japanese)(on)**
The backslash key is mapped to the yen character for usage on Japanese host systems.

**Max. Packet Size Buffer (kb) (4)**
This option is set to '4' by default. Use up and down keys to adjust accordingly.

**Generate TN5250log (off)**
Select this item to enable the log file capture.
DoDebug (off)
This option is set to off by default.

Honour Numeric Field Type (on)
When set to off TTerm for Linux will allow any input in a field designated as numeric by the host.

Enable 5250 Extensions (on)
This option is set to on by default.

Allow the Host to Control the Cursor Blink state (off)
This option is set to off by default.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- Austria/Germany
- Belgium
- Canadian French
- Denmark/Norway
- Finland/Sweden
- France
- Italy
- Portugal
- Spain
- United Kingdom
- U.S./Canada/Netherlands

Character Sets
Available sets for this terminal are as follows:

- Standard character set
- ASCII to EBCDIC
- EBCDIC to ASCII
- To host
IBM 5250 Printer

The IBM 5250 Printer emulation is available by selecting IBM Printer from the list of models available under the IBM 5250 Emulation configuration. For more information refer to the IBM 5250 item in this chapter.

Function Keys

When initiated the IBM 5250 terminal display shows printer status messages such as the number of total pages and jobs spooled. The printer can be further configured through function key options F1 through F5.

**Hold (F1)**
Pauses the current print job. This option is only valid when printing is active.

**FF (F2)**
Form feed. When in a Hold condition the page will be advanced until the first print line of the next page is reached.

**Cancel (F3)**
When in a Hold condition pressing F3 sends a Cancel Print message to the host and the print buffer is cleared, halting the current print job.

**Flush (F4)**
Flush the contents of the host print buffer. The contents of the buffer are sent to the printer rather than discarded, as occurs when pressing Cancel (F3).

**Config (F5)**
Opens the IBM 5250 Printer tile with extended configuration options.

IBM Printer Configuration Tile

**Margin Units (Inches)**
Set the paper margin unit of measurement. Options are:

- Inches
- Centimetres

**Orientation (default)**
Printer orientation options are:

- **Default**: Uses the orientation as configured for the printer by default.
- **Portrait**: Overrides the printer default orientation to portrait.
- **Landscape**: Overrides the printer default orientation to landscape.

**Portrait**

**Font Size (10)**
Set a font size for printer output in points. The standard TTerm for Linux terminal font will be used.
Characters Per Line (0)
Set the number of characters per line. A maximum value is suggested based on the font size selected in Font Size.

Lines Per Page (0)
Set the number of lines per printed page. A maximum value is suggested based on the font size selected in Font Size.

Left margin (25)
The page left margin in millimeters.

Top Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Bottom Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Left Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Right Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Landscape
Font Size (10)
Set a font size for printer output in points. The standard TT erm for Linux terminal font will be used.

Characters Per Line (0)
Set the number of characters per line. A maximum value is suggested based on the font size selected in Font Size.

Lines Per Page (0)
Set the number of lines per printed page. A maximum value is suggested based on the font size selected in Font Size.

Left margin (25)
The page left margin in millimeters.

Top Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Bottom Margin ()
Valid settings are from 0.10cm/0.039" to 20cm/7.874"

Left Margin
Valid settings are from 0.10cm/0.039" to 20cm/7.874"
**Right Margin**
Valid settings are from 0.10 cm/0.039" to 20 cm/7.874"

**Platen Width (132)**
When set to on, long lines that extend beyond the right page boundary are wrapped. When set to off they are truncated.

**Platen Width (landscape) (129)**
When set to on, long pages that extend beyond the page edge boundary are continued on the following page. When set to off they are truncated.

**Suppress Truncation Marker (off)**
Set margins in centimeters for the printed page. Valid settings are from 0.10 cm to 20 cm.

**Autofeed Always (off)**
The Set Best Fitting Font button will automatically adjust the font Size to suit your selected Lines Per Page, Characters Per Line and Margin settings.

**Time Out (0)**
Period in seconds, after which the print buffer is flushed if a print job has started and there is no activity from the host.

**All Caps (off)**
When selected all printer output is converted to upper case.

**Space Lines (off)**
When set to on, lines are spaced proportionally to fill the available page space.

**Space Characters (off)**
When set to on, characters are equally spaced to fill the entire line space.

**Continue Long Lines (off)**
When set to on, long lines that extend beyond the right page boundary are wrapped. When set to off they are truncated.

**Continue Long Pages (off)**
When set to on, long pages that extend beyond the page edge boundary are continued on the following page. When set to off they are truncated.

**Inhibit Spooler Job separator (on)**
Disable separator printing between consecutive print jobs.
Host Formatting
Handling options for SNA Character String (SCS) host formatting. Valid options are:

- Ignore host formatting
- Apply host formatting
- Apply and Save host formatting

Initiating an IBM 5250 Printer Session
An IBM 5250 printing session works in conjunction with IBM 5250 host session. To make use of the printer emulation TTerm for Linux requires a 5250 host session and a 5250 printer session to be open simultaneously.

When configuring the printer profile, select the Communications section and specify a LU (Logical Unit) under the Telnet settings. Connect this printer session to your host first and open a subsequent 5250 host session. Specify the LU of your 5250 printer where required by your host applications when initiating printing.
ICL 7561

Options

7-bit Mode (on)
All data is restricted to 7 bits.

Use Session Single Character Strings (off)

Single Character start String (\x1b)

Single Character End String (\x0d)

Use Session Send Strings (off)

Send Start String ()

Send end string (\r)

Lock Keyboard (on)

TypeAhead Buffer Size (0)

Field Marker Type ([])
Valid field markers are [ ], < >, > <, ( ), none or default.

SOM Marker Type (box)
Valid Start Of Message (SOM) markers are:

- box
- vertline

Allow Consecutive Protected Fields (off)

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Default ICL Character Set
- To host
ICL VT220 Plus

Display Mode

Screen Size (24x80)
Select from the following options

- 24x80
- 24x132
- 25x80
- 25x132
- Custom: uses the width and height as defined in the Custom Rows and Custom Columns options.

Custom Rows (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Display Options

Status Line Display (None)
- None: The status line is not displayed.
- Indicator: The status display is always visible.
- Host writable: Host applications can write messages in place of the status line.

Enable Local Echo (off)
When selected, as a character is typed on the keyboard it is immediately echoed to your screen. When not selected, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert Mode (off)
This option determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.

Warp End of Line (off)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Enable Cleared Character Retains Current Attribute (off)
Clear the screen using the current attribute.

Clear on Display Size Change (on)
When selected the screen is cleared once the screen size changes.
Responses

Answerback ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Operating Mode (VT300)
Select to change between the following modes:

- VT52
- VT100
- VT300

7 or 8 bit (7 Bit)
Select either 7 or 8 bit modes as required.

Terminal ID (VT220)
Select from the following:

- VT100
- VT101
- VT102
- VT220
- VT240
- VT320
- VT340
- VT420

Custom DA String (?64;1;2;6;7;8;9)
Enter your custom DA string.

Use Custom DA String (off)
Select to enable the Custom DA string function.

Custom DApars1 ()
Use up and down keys to set.

Custom DApars2 ()
Use up and down keys to set.

Custom DArres1 ()
Use up and down keys to set.

Custom DArres2 ()
Use up and down keys to set.
Keyboard Configuration

Keypad Mode (Numeric)
The numeric keypad generates either numeric characters or control functions. Selecting Application or Numeric keypad mode, determines the type of characters. The terminal emulation when first selected, or after a reset, will be set to numeric keypad mode.

- **Application**: selects application keypad mode. The keypad generates application control functions.
- **Numeric**: selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

Cursor Keys (Normal)
The characters generated by the cursor keys depend on the state of the Cursor Keys mode.

- **Normal**: causes the cursor keys to generate ANSI cursor control sequences.
- **Application**: causes the cursor keys to generate application control functions.

Convert LF to CR/LF (off)
When selected, causes a received [RETURN] to transmit as both a CR and a LF. When not selected and a [RETURN] is received only a CR is transmitted.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the Host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Macros Ignore Keyboard Lock State (off)
This option is set to off by default.

Lock User Defined Keys (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. Once the keys are locked, to unlock you must either deselect the User defined keys locked option or a reset is required.

Disable Numeric Keypad (on)
This option is set to on by default.

Reset Clears the Terminal Screen (on)
If selected the screen will be cleared and the cursor is placed in the home position.

Tilda and Left Quote Key (Sends tilda/left quote)
This option allows the user to define the TILDA/LEFT QUOTE key (i.e., [~/] key) to operate either as normal or as an escape key.
Advanced

Character Set Mode (Normal)
Select between the following character set modes:

- Normal
- DBCS
- UTF-8

CodePage (950)
Sets the code page to be used when DBCS is enabled.

User Preferred Character Set (ISO Latin)
Two 8-bit character sets are built into the ICL VT220. These are:

- DEC Supplemental: DEC Multinational set
- ISO Latin

Both 8-bit sets include the standard ASCII character set and a supplemental set.

Favor Diacritics (on)
When enabled uses European characters rather than line draw characters.

Print Region (Print Region)
Select from the following options:

- Print region: Sends just the selected region to the printer.
- Print screen: Sends the entire screen contents to the printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.

StripCharValue (242)
This option is set to '242' by default. Use up and down keys to adjust accordingly.

StripPrinting (off)
This option is set to off by default.

StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.
BackspaceOn (off)
This option is set to off by default.

Autoscroll (off)
This option is set to off by default.

Compose (off)
This option is set to off by default.

NewLineMode (off)
This option is set to off by default.

Character mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Hosts National
- ASCII
- ASCII (8bit)
- DEC Special Graphics
- DEC Supplemental
- ISO Latin Supplemental
- DEC Technical
- ICL special graphics
- To host
Liberty Freedom One

Display Settings

Screen Size (24x80)
Select from the following options:

- 24x80
- 24x132

Truncate Lines (off)
Any characters extending past the end of line are truncated.

General Settings

Background (off)
Set to off by default. Check to set on.

Block mode (off)
When selected, no communication takes place to the host computer until the [ENTER] or [SEND] key is pressed. It does, however, respond to commands and characters received from the host.

Duplex Mode (Full)
- Full: duplex every typed character is transmitted to the host. The host must then decide what to do in response to the character it has received. In the majority of cases, it will simply echo the character back to the screen (or take some action, if it is a control character such as a carriage return).
- Half: duplex mode, character strings are displayed on the screen without waiting for the host to echo them back. The emulation also responds to characters sent from the host, displaying or executing them, as appropriate.

Insert Mode (off)
When selected, Insert mode causes text to be inserted without overwriting existing data. As new text is entered, existing text is shifted right to the next character position.

Scroll setting (Scroll)
Available scroll modes are:

- Stop
- Loop
- Wrap
- Scroll

Local Editing Only (off)
When selected, limits editing functions to the display and does not communicate them to the host system.
Allow editing on entire screen (off)
When selected, allows editing functions to operate on the entire scrolling page. When not selected, limits the effects of editing functions to the current line.

Insert character (32)
Several editing, erase, clear and scrolling functions use an insert character to clear the screen, the default insert character is ASCII 32.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- ASCII
- Graphics character set
- To host
Linux Terminal

Display Mode

Screen Size (24x80)
Select from the following options

- 24x80
- 24x132
- 36x80
- 36x132
- 48x80
- 48x132
- Custom: uses the width and height as defined in the Custom Rows and Custom Columns options.

Custom Rows (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Options

Wrap End of line (off)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Macro Bypass Kblock (off)
When set, Macros ignore the keyboard lock state. By default is set to off. Check to set to on.

Local Echo (off)
When selected, as a character is typed on the keyboard it is immediately echoed to your screen. When not selected, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert (off)
This option determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.

Autoscroll (off)
This option is set to off by default.
**ColorClear (off)**
Clear the screen using the current attribute.

**ColsModeClear (on)**
When selected the screen is cleared once the screen size changes.

**Input Mode (Normal)**
Select between the following character set modes:

- Normal
- DBCS
- UTF-8

**Answerback ()**
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the **ENQ** character.

**Operating Mode (VT400)**
Select to change between the following modes:

- VT52
- VT100
- VT400

**Control Bits (7 Bit)**
Select either 7 or 8 bit modes as required.

**Terminal ID (VT220)**
Select from the following:

- VT100
- VT101
- VT102
- VT220
- VT240
- VT320
- VT340
- VT420

**Custom DA string (?64;1;2;6;7;8;9)**
Enter your custom DA string.

**Use Custom DA string (off)**
Select to enable the **Custom DA string** function.

**Custom DApars**
Use up and down to set.
Custom DApar2
Use up and down to set.

Custom DAre1
Enter your custom string.

Custom DAre2
Enter your custom string.

KeypadApp (Numeric)
The numeric keypad generates either numeric characters or control functions. Selecting Application or Numeric keypad mode, determines the type of characters. The terminal emulation when first selected, or after a reset, will be set to numeric keypad mode.

- **Application**: selects application keypad mode. The keypad generates application control functions.
- **Numeric**: selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

CursorApp (Normal)
The characters generated by the cursor keys depend on the state of the Cursor Keys mode.

- **Normal**: causes the cursor keys to generate ANSI cursor control sequences.
- **Application**: causes the cursor keys to generate application control functions.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the Host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Macros Ignore Keyboard Lock State (off)
This option is set to off by default.

Lock User Defined Keys (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. Once the keys are locked, to unlock you must either deselect the User defined keys locked option or a reset is required.

Compose (off)
A compose sequence is a series of two or three keystrokes that produce a single character. Pressing the [COMPOSE CHARACTER] key starts the compose sequence.

Print Region (Print Region)
Select from the following options:

- **Print region**: Sends just the selected region to the printer.
- **Print screen**: Sends the entire screen contents to the printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.
Strip CharValue ()
Use up and down buttons to adjust accordingly

StripPrinting (off)
This option is set to off by default.

StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.

Backspace On (off)
This option is set to off by default.

CodePage (950)
Sets the code page to be used when DBCS is enabled.

NewLineMode (off)
This option is set to off by default.

Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- HostsNational
- ASCII
- ASCII (8 bit)
- DEC Special Graphics
- DEC Supplemental
- To host
McDonnell Douglas P12

Personality

Emulation Personality (MCDP)
Select the emulation mode:

- MCDP
- ANSI
- MF40

Display Mode

Display Size (80x24)
Select from the following:

- 24x80
- 24x132

Switching from 132 to 80 will truncate text in columns 81 to 132.

Options

Enable Function Keys (on)
When selected, this causes the standard code sequences to be generated by all function keys.

Enable Programmable Function Keys (on)
It is possible to define a different string for each of the function keys when they are used with or without the [SHIFT] key. When selected, this causes the function keys to generate the programmed string. When not selected, this causes the standard code sequences to be generated by all function keys. The strings are not cleared.

Clear All Function Keys (off)
When selected, this clears the strings defined for all the programmed function keys.

Blank Character (NUL)
Select the NUL or SPACE character to represent blanks.

Soft-reset Clear Screen (on)
This option is set to on by default.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

▶ English

Character Sets
Available sets for this terminal are as follows:

▶ US - ASCII character set
▶ MDC British character set
▶ British ASCII character set
▶ MDC National Extension set
▶ MDC Multinational Extension set
▶ MDC Graphics character set
▶ DEC Supplemental
▶ MDC Spanish National Extension set
▶ To host
Prime PT25

Display Settings

Screen Size (24x80)
Select from the following options:

- 24x80
- 24x132
- Custom: Select to enable the custom sizes as defined in Custom Rows and Custom Columns.

Custom Rows (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Options

Convert CR to CR/LF (off)
Defines how to handle received carriage return characters from the remote host. Received carriage returns can be transmitted as a carriage return or converted to carriage return and a line feed.

Wrap End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Scroll mode (Scroll)
Available scroll modes are:

- Stop
- Loop
- Wrap
- Scroll

Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Native text character set
- Native graphics character set
- To host
Prime PT250S

Display Mode

Screen mode (24x80)
Available screen mode options are:

- 24x80
- 48x80
- 27x132
- 24x160
- 25x80
- Custom: Select to enable the custom sizes as defined in the Display width and Display Height settings.

Display Width (80)
Enter the number of columns required.

Display Height (24)
Enter the number of rows required.

Options

Strip 8th Bit (on)
When selected the eighth bit on the incoming data byte is stripped.

Convert LF to CR/LF (off)
This effects how the line feed (LF) character is interpreted in receipt from the host. Normally line feed characters move the cursor down one line (possibly scrolling the screen up), and carriage return (CR) characters move the cursor to the start of the current line.

When selected, line feed characters received from the host are translated to a LF/CR sequence. When not selected, the line feed is not translated.

Auto Wrap (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When deselected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Edit Extent (Screen)
This parameter effects how much of the screen is affected by the INSERT and DELETE character commands.

- Screen: When selected, the region from the cursor to the end of the screen is moved.
- Line: When selected, the whole line to the right of the cursor position is moved.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to *chapter 15.*

**Character Sets**

Available sets for this terminal are as follows:

- Standard character set
- Alternate character set
- Line drawing font
- Block drawing font
- To host
QNX System Console

Display Mode

Display Size (24x80)
Available screen size options are:

- 24x80
- 25x80
- 24x132
- 25x132
- Custom: Select to enable the custom sizes defined in the Custom Height and Custom Width settings.

⚠️ Switching from 132 to 80 will truncate text in columns 81 to 132.

Custom Height (24)
Enter the number of rows required.

Custom Width (80)
Enter the number of columns required.

Options

Wrap End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not set incoming characters overwrite the last column until an EOL (end-of-line) character is received.

Auto Scroll (on)
This affects the behavior of the terminal when a linefeed is issued on the last line. When selected, the screen scrolls up one line and the cursor remains on the last line. When not selected, the screen remains unchanged but the cursor wraps around to the first column of the screen.

Convert CR to CR/LF (off)
Defines how to handle received carriage return characters from the remote host. When set to on received carriage returns are converted to carriage return and a line feed.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- ASCII
- Alternate set
- To host
SCO ANSI Color Console

Display

Display Size (24x80)
Available screen size options are:

- 24x80
- 24x132
- Custom: Select to enable the custom sizes defined in the Custom Rows and Custom Columns settings.

Custom Rows (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Options

Auto Wrap (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Clear Screen on Width Change (on)
When selected, this will cause a screen clear whenever a screen change between 80 and 132 columns occurs. If history is enabled, the screen data will be saved to the scroll history buffer otherwise the data is lost.

Enable Answerback (off)
Transmit the string defined within the Answerback Message String field when the ENQ character is received from the remote host.

Answerback Message String ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Printing

Disable Non-printable Chars (on)
Select to enable non-printable characters to be passed on to the printer.

Enable Special Printing (on)
This option is set to on by default.
Print Line Termination (None)
Options available include:

- None
- CR, LF
- CR/LF
- LF/CR

Printer Acknowledgement Char (13)
Decimal character value.

Enable Transparent Print (on)
Deselect if you wish to disable transparent print function.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- English
- English (UK)
- Dutch
- Finnish
- French
- French/Canadian
- German
- Greek
- Italian
- Norwegian/Danish
- Spanish
- Swiss
- Swedish (437)
- Swedish (850)
- Cyrillic

Character Sets
Available sets for this terminal are as follows:

- Low Character Set
- High Character Set
- US ASCII set
- UK ASCII set
- Graphics set
- To host
Siemens Nixdorf 97801

Display Mode

Lines (24)
Select to change between the following modes:

- 24
- 36
- 48

Columns (80)
Select to change between the following modes

- 80
- 132

Custom Screen Size (off)
Select to enable the custom sizes as defined in the Custom Lines and Custom Columns settings.

Custom Lines (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Display Modes

Status Display (None)
- **None**: The status line is not displayed.
- **Indicator**: The status display is always visible.
- **Host writable**: Host applications can write messages in place of the status line.

Enable Local Echo (off)
When selected, as a character is typed on the keyboard it is immediately echoed to your screen. When not selected, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert Mode (off)
This option determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.
Wrap End of Line (on)
This affects the behavior of the terminal when a linefeed is issued on the last line. When selected, the screen scrolls up one line and the cursor remains on the last line. When not selected, the screen remains unchanged but the cursor wraps around to the first column of the screen.

Enable Clear Character Retains Attribute (off)
Clear the screen using the current attribute.

Clear Screen on Size Change (on)
When selected the screen is cleared once the screen size changes.

Autowrap (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Responses

Answerback Message ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Operating Mode (SN97801)
Select to change between the following modes:

- VT52
- VT100
- SN97801

7 or 8 bit (7 Bit)
Select either 7 or 8 bit modes as required.

Terminal ID (SN97801)
Select from the following:

- VT100
- VT101
- VT102
- VT220
- VT240
- VT320
- VT340
- VT420
- SN97801

Custom DA string (?62;1;2;6;7;8;9)
Enter your custom DA string.
Use Custom DA string (off)
Select to enable the Custom DA string function.

Custom D^par1
Use up and down keys to set.

Custom D^par2
Use up and down keys to set.

Custom D^res1
Use up and down keys to set.

Custom D^res2
Use up and down keys to set.

Keyboard Configuration

Keypad Mode (Numeric)
The numeric keypad generates either numeric characters or control functions. Selecting Application or Numeric keypad mode, determines the type of characters. The terminal emulation when first selected, or after a reset, will be set to Numeric keypad mode.

- Application: selects application keypad mode. The keypad generates application control functions.
- Numeric: selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

Cursor Keys (Normal)
The characters generated by the cursor keys depend on the state of the cursor keys mode.

- Normal: causes the cursor keys to generate ANSI cursor control sequences.
- Application: causes the cursor keys to generate application control functions.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the Host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Convert LF to CR/LF (off)
When selected, causes a received [RETURN] to transmit as both a CR and a LF. When not selected and a [RETURN] is received only a CR is transmitted.

User Defined Keys Locked (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. Once the keys are locked, to unlock you must either deselect the User defined keys locked option or a reset is required.
Enable Compose (on)
A compose sequence is a series of two or three keystrokes that produce a single compose character. Pressing the [COMPOSE CHARACTER] key starts the composed sequence.

Reset Clears the Terminal Screen (off)
Reset clears the terminal screen.

Tilda and Left Quote key (Sends escape)
This option allows the user to define the TILDA/LEFT QUOTE key (i.e., ~/' key) to operate either as normal or as an escape key sequence.

- Sends escape: Redefine the TILDA/LEFT QUOTE key to send an escape key sequence.
- Sends tilda/left quote: Leave the TILDA/LEFT QUOTE key as normal, i.e., LEFT QUOTE and with the SHIFT key, TILDA.

Advanced

Character Set Mode (Normal)
Select between the following character set mode:

- Normal
- DBCS
- UTF-8

CodePage (950)
Sets the code page to be used when DBCS is enabled. See also Character Set Mode.

User Preferred Character Set (DEC Supplemental)
There are two 8-bit character sets and both include the standard ASCII character set and a supplemental set.

- DEC Supplemental: DEC Multinational set
- ISO Latin

Print Extent (Print Region)
Select from the following options:

- Print Region: to send just the selected region to the printer
- Print Screen: to send entire screen contents to printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.

StripCharValue (242)
This option is set to '242' by default. Use up and down keys to adjust accordingly.

StripPrinting (off)
This option is set to off by default.
StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- ISO 8859-1
- ISO 8859-2
- ISO 8859-3
- ISO 8859-4
- ISO 8859-5
- ISO 8859-7

Character Sets
Available sets for this terminal are as follows:

- HostsNational
- ASCII
- ASCII (8bit)
- DEC Special Graphics
- DEC Supplemental
- ISO Latin Supplemental
- DEC Technical
- International A
- International
- German
- Euro
- Brackets
- Facet
- IBM
- Mathematics
- Blanks
- ISO Right
- To host
Stratus V102

Personality

Compatibility Mode (tvi955)
Select tvi950 or tvi955 for compatibility with either of these emulations.

- tvi950
- tvi955

Display Mode

Screen Size (24x80)
Available screen mode options are:

- 24x80
- 24x132
- 25x80
- 25x132
- 42x80
- 42x132
- 43x80
- 43x132

Options

Duplex Mode (Full)
The mode in which the terminal communicates with the host.

- **Full**: The terminal sends characters to the host and the host then echoes them back to the screen. In this mode, the terminal and the host can transmit simultaneously.

  The VOS operating system ONLY supports Full duplex mode.

- **Half**: in half duplex mode, entered characters are displayed on the screen without being sent to the host for echo back.

Attributes Effect (page)
This determines whether display attributes apply to each line, or each page. Display attributes are set by the host software; they include invisible, blinking, reverse video, underline and intensity.

- **char**: Assigns display attributes to the character at current cursor position.
- **line**: Assigns display attributes from the current cursor position to the end of the current line.
- **page**: Assigns display attributes from the current cursor position to the end of the current page.
Background Character (Space)
On a terminal reset or screen initialization, a character referred to as the background character is used to refill the screen. Select either the Space character or the NUL character.

8-bit Mode (on)
When selected no stripping occurs. When not selected the 8th bit of every byte from the host is stripped.

Enable Status Line (on)
When selected the status line is displayed.

Default to Space (on)
An ASCII space.

Other Character (32)
The insert character can be selected from any one of the ASCII characters.

Insert Character ()
Several editing, erase, clear and scrolling functions use an insert character to clear the screen.

Auto Wrap (on)
When selected and the cursor is currently in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Auto Scroll (on)
When selected and the cursor reaches the bottom of the screen, the display page scrolls up. When not selected, the cursor jumps back up to the top of the screen.

Auto Page (off)
When selected and the cursor reaches the bottom of the screen, the cursor will jump to the next memory page. This flag overrides Auto scroll.

Enhancements Mode (off)
When selected, this option enables the sending and receiving of more control sequences than are otherwise enabled on a standard V102 terminal. When not selected, only the basic set of V102 control sequences are sent and received.

Hidden Field Attributes (off)
When selected, attributes occupy a character space. When not selected, attributes do not occupy a character space.

Insert Mode (off)
When selected, this option causes text to be inserted without overwriting existing data. As new text is entered, existing text is shifted right to the next character position.
Local Edit (off)
When selected, this option limits editing functions to the display and does not communicate them to the host system.

Block Mode (off)
When selected, no communications takes place with the host computer until the [ENTER] or [SEND] key is pressed. It does, however, respond to commands and characters received from the host.

Page Mode (off)
When selected, this allows editing functions, e.g. insert, delete etc. to operate on the entire scrolling page. When not selected, limits the effects of edit functions to the current line.

Responses
Non-printable characters (e.g., linefeed) can be included in the response strings. The format is the same as with mapping a keyboard key.

Answerback Message ()
The terminal answerback is the string supplied to the host in response to an answerback enquiry from the host, by default this is blank.

Enable Custom Terminal ID (off)
When selected, the terminal sends the answerback message to the host when the host sends the ENQ character. The message field is disabled unless this is selected.

Custom Terminal ID ()
The Terminal ID is a semi-standardised string supplied to the host during negotiations.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- ASCII
- High set
- Graphics set
- Monitor Mode set
- Multinational set
- To host
Stratus V103

Personality

Display Mode

Screen Size (24x80)
Available screen mod options are:

- 24x80
- 24x132
- 25x80
- 25x132
- 42x80
- 42x132
- 43x80
- 43x132

Compatibility Mode (tvi955)
Select from the list below for compatibility with either of these emulations.

- tvi950
- tvi955

Options

Duplex Mode (Full)
The mode in which the terminal communicates with the host.

- Full: The terminal sends characters to the host and the host then echoes them back to the screen. In this mode, the terminal and the host can transmit simultaneously.

⚠️ The VOS operating system ONLY supports Full duplex mode.

- Half: In half duplex mode, entered characters are displayed on the screen without being sent to the host for echo back.

Attributes Effect (page)
This determines whether display attributes apply to each line, or each page. Display attributes are set by the host software; they include invisible, blinking, reverse video, underline and intensity.

- Char: Assigns display attributes to the character at current cursor position.
- Line: Assigns display attributes from the current cursor position to the end of the current line.
- Page: Assigns display attributes from the current cursor position to the end of the current page.
**Background Character (Space)**
On a terminal reset or screen initialization, a character referred to as the background character is used to refill the screen. Select either the Space character or the NUL character.

**8-bit Mode (on)**
When selected no stripping occurs. When not selected the 8th bit of every byte from the host is stripped.

**Enable Status Line (on)**
When selected the status line is displayed.

**Default to Space (on)**
An ASCII space.

**Other Character (32)**
The insert character can be selected from any one of the ASCII characters.

**Insert Character**
Several editing, erase, clear and scrolling functions use an insert character to clear the screen.

**Auto Wrap (on)**
When selected and the cursor is currently in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

**Auto Scroll (on)**
When selected and the cursor reaches the bottom of the screen, the display page scrolls up. When not selected, the cursor jumps back up to the top of the screen.

**Auto Page (off)**
When selected and the cursor reaches the bottom of the screen, the cursor will jump to the next memory page. This flag overrides Auto scroll.

**Enhancements Mode (on)**
When selected, this option enables the sending and receiving of more control sequences than are otherwise enabled on a standard V103 terminal. When not selected, only the basic set of V103 control sequences are sent and received.

**Hidden Field Attributes (off)**
When selected, attributes occupy a character space. When not selected, attributes do not occupy a character space.

**Insert Mode (off)**
When selected, this option causes text to be inserted without overwriting existing data. As new text is entered, existing text is shifted right to the next character position.
**Local edit (off)**
When selected, this option limits editing functions to the display and does not communicate them to the host system.

**Block Mode (off)**
When selected, no communications takes place with the host computer until the [ENTER] or [SEND] key is pressed. It does, however, respond to commands and characters received from the host.

**Page Mode (off)**
When selected, this allows editing functions, e.g. insert, delete etc. to operate on the entire scrolling page. When not selected, limits the effects of edit functions to the current line.

**Strip outgoing (on)**
This option is set to on by default.

**Upper Info Line (on)**
This option is set to on by default.

This option is set to '2000' by default. Use up and down keys to adjust accordingly.

**Overwrite after Move (off)**
This option is set to off by default.

**Prog Key NUL substitute (0)**
This option is set to '0' by default. Use up and down keys to adjust accordingly.

**twcStatusLine (on)**
This option is set to on by default.

**Answerback message**
The terminal answerback is the string supplied to the host in response to an answerback inquiry from the host, by default this is blank.

**Enable Custom Terminal ID (off)**
When selected, the terminal sends the answerback message to the host when the host sends the ENQ character. The message field is disabled unless this is selected.

**Custom Terminal ID ()**
The Terminal ID is a semi-standardised string supplied to the host during negotiations.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- Greek

Character Sets
Available sets for this terminal are as follows:

- ASCII
- High set
- Graphics set
- Monitor Mode set
- Multinational set
- To host
Stratus V105

Display Mode

Screen Size (24x80)
Select from the following options

- 24x80
- 24x132
- 36x80
- 36x132
- 48x80
- 48x132
- Custom: uses the width and height as defined in the Custom Rows and Custom Columns options.

Custom Rows (24)
Enter the number of rows required.

Custom Columns (80)
Enter the number of columns required.

Display Options

Status Display (None)
- None: The status line is not displayed.
- Indicator: The status display is always visible.
- Host writable: Host applications can write messages in place of the status line.

Enable Local Echo (off)
When selected, as a character is typed on the keyboard it is immediately echoed to your screen. When not selected, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert Mode (off)
This option determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.

Wrap End of Line (off)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Enable Clear Character Retains Attributed (off)
Clear the screen using the current attribute.
Clear on Display Size Change (on)
When selected the screen is cleared once the screen size changes.

Responses

Answerback Message ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Operating Mode (VT300)
Select to change between the following modes:

- VT52
- VT100
- VT300

7 or 8 bit (7 Bit)
Select either 7 or 8 bit modes as required.

Terminal ID (VT220)
Select from the following:

- VT100
- VT101
- VT102
- VT220
- VT240
- VT320
- VT340
- VT420

Custom DA String (?62;1;2;6;7;8;9)
Enter your custom DA string.

Use Custom DA String (off)
Select to enable the Custom DA string function.

Custom DApar1
Use up and down keys to set.

Custom DApar2
Use up and down keys to set.

Custom DAres1
Use up and down keys to set.

Custom DAres2
Use up and down keys to set.
Keyboard Configuration

Keypad Mode (Numeric)
The numeric keypad generates either numeric characters or control functions. Selecting Application or Numeric keypad mode, determines the type of characters. The terminal emulation when first selected, or after a reset, will be set to Numeric keypad mode.

- Application: selects application keypad mode. The keypad generates application control functions.
- Numeric: selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

Cursor Keys (Normal)
The characters generated by the cursor keys depend on the state of the Cursor Keys mode.

- Normal: causes the cursor keys to generate ANSI cursor control sequences.
- Application: causes the cursor keys to generate application control functions.

Convert LF to CR/LF (off)
When selected, causes a received [RETURN] to transmit as both a CR and a LF. When not selected and a [RETURN] is received only a CR is transmitted.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the Host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Lock User Defined Keys (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. Once the keys are locked, to unlock you must either deselect the User defined keys locked option or a reset is required.

Compose Enabled (on)
A compose sequence is a series of two or three keystrokes that produce a single compose character. Pressing the [COMPOSE CHARACTER] key starts the composed sequence.

Disable Numeric Keypad (on)
Disables application and numeric mode for the numeric keypad.

ResetClear (on)
This option is set to on by default.

Tilda and Left Quote key (Sends tilda/left quote)
This option allows the user to define the TILDA/LEFT QUOTE key (i.e., [\~/\^] key) to operate either as normal or as an escape key.
Advanced

Character Set Mode (Normal)
Select between the following character set modes:

- Normal
- DBCS
- UTF-8

CodePage (950)
Sets the code page to be used when DBCS is enabled.

User Preferred Character Set (DEC Supplemental)
Two 8-bit character sets are built into the Stratus V105. These are:

- DEC Supplemental: DEC Multinational set
- ISO Latin

Both 8-bit sets include the standard ASCII character set and a supplemental set.

Favor Diacritics (on)
When enabled uses European characters rather than line draw characters.

Print Region (Print Region)
Set the default print mode.

- Print Region: Sends just the selected region to the printer.
- Print Screen: Sends the entire screen contents to the printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.

StripCharValue (242)
This option is set to '242' by default. Use up and down keys to adjust accordingly.

StripPrinting (off)
This option is set to off by default.

StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.
**BackspaceOn (off)**
This option is set to off by default.

**Autoscroll (off)**
This option is set to off by default.

**Compose (off)**
This option is set to off by default.

**NewLineMode (off)**
This option is set to off by default.

**Character Mapping**

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

**Languages**
Available languages for this terminal are as follows:

- English
- English (UK)
- Dutch
- Finnish
- French
- French/Canadian
- German
- Greek
- Italian
- Norwegian/Danish
- Spanish
- Swiss
- Swedish
- Cyrillic

**Character Sets**
Available sets for this terminal are as follows:

- HostsNational
- ASCII
- ASCII (8-bit)
- DEC Special Graphics
- DEC Supplemental
- ISO Latin Supplemental
- DEC Technical
- To host
Tandem T653X

Display Mode

Display Size (25x80)
The Tandem T653X terminal has four standard screen resolution modes:

- 25 x 40
- 25 x 80
- 28 x 132
- 28 x 66

When TTterm for Linux receives a remote host generated sequence to change resolution modes, the screen is erased and the cursor moves to the home position.

Show Status Field (on)
When selected, the status field is displayed at the bottom of the screen.

Multiple Page Display Size (10)
The Tandem T653X allows multiple page display.

Options

Operating Mode (Conversational)
The two available modes are:
- **Conversational**: Data is transmitted to the host one character at a time.
- **Block**: Data is transmitted to and from the host in blocks. **Block mode** allows the user to edit locally before sending the data to the host.

Half Duplex Mode (off)
When not selected (full duplex), characters entered on the keyboard are not processed until they are echoed back by the host.

Enable Telnet (on)
Deselect this option if a Telnet session is not required.

Sound Bell at Column Number (70)
The column at which a bell will sound.
Mode Switch Ack (off)
Set to off by default.

Disable Color Mapping (off)
Set to off by default.

Return Operates as Function Key (off)
This option is used with Block mode and determines whether the [RETURN] key is treated as an additional function key.

Disable Carriage Return on Send Key (off)
Set to off by default.

InsertMode (off)
When selected, all characters entered from the keyboard are inserted by shifting the existing characters to the right.

Enable Inline Editor (off)
Set to off by default.

Use Emulation Colors for Editor (off)
Set to off by default.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Standard map
- To host
Televideo 955

Personality

Compatibility Mode (tvi955)
Select tvi950 or tvi955 for compatibility with either of these emulations.

- tvi950
- tvi955

Display Mode

Screen Size (24x80)
Available screen mode options are:

- 24x80
- 24x132
- 25x80
- 25x132
- 42x80
- 42x132
- 43x80
- 43x132

Options

Duplex mode (Full)
The mode in which the terminal communicates with the host.

- **Full**: The terminal sends characters to the host and the host then echoes them back to the screen. In this mode, the terminal and the host can transmit simultaneously.

⚠️ The VOS operating system ONLY supports Full duplex mode.

- **Half**: in half duplex mode, entered characters are displayed on the screen without being sent to the host for echo back.

Attributes Effect (page)
This determines whether display attributes apply to each line, or each page. Display attributes are set by the host software; they include invisible, blinking, reverse video, underline and intensity.

- **char**: Assigns display attributes to the character at current cursor position.
- **line**: Assigns display attributes from the current cursor position to the end of the current line.
- **page**: Assigns display attributes from the current cursor position to the end of the current page.
Background character (Space)
On a terminal reset or screen initialization, a character referred to as the background character is used to refill the screen. Select either the Space character or the NUL character.

8-bit mode (on)
When selected no stripping occurs. When not selected the 8th bit of every byte from the host is stripped.

Enable Status line (on)
When selected the status line is displayed.

Default to Space (on)
An ASCII space.

Other Character (32)
The insert character can be selected from any one of the ASCII characters.

Insert Character ()
Several editing, erase, clear and scrolling functions use an insert character to clear the screen.

Auto Wrap (on)
When selected and the cursor is currently in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Auto Scroll (on)
When selected and the cursor reaches the bottom of the screen, the display page scrolls up. When not selected, the cursor jumps back up to the top of the screen.

Auto Page (off)
When selected and the cursor reaches the bottom of the screen, the cursor will jump to the next memory page. This flag overrides Auto scroll.

Enhancements Mode (off)
When selected, this option enables the sending and receiving of more control sequences than are otherwise enabled on a standard V102 terminal. When not selected, only the basic set of V102 control sequences are sent and received.

Hidden Field Attributes (off)
When selected, attributes occupy a character space. When not selected, attributes do not occupy a character space.

Insert Mode (off)
When selected, this option causes text to be inserted without overwriting existing data. As new text is entered, existing text is shifted right to the next character position.

Local Edit (off)
When selected, this option limits editing functions to the display and does not communicate them to the host system.
**Block Mode (off)**
When selected, no communications takes place with the host computer until the [ENTER] or [SEND] key is pressed. It does, however, respond to commands and characters received from the host.

**Page Mode (off)**
When selected, this allows editing functions, e.g. insert, delete etc. to operate on the entire scrolling page. When not selected, limits the effects of edit functions to the current line.

**Strip outgoing (on)**
This option is set to on by default.

**Upper Info Line (on)**
This option is set to on by default.

This option is set to '2000' by default. Use up and down keys to adjust accordingly.

**Overwrite after Move (off)**
This option is set to off by default.

**Prog Key NUL substitute (0)**
This option is set to '0' by default. Use up and down keys to adjust accordingly.

**twcStatusLine (on)**
This option is set to on by default.

**Responses**

**Answerback message ()**
The terminal answerback is the string supplied to the host in response to an inquiry from the host, by default this is blank.

**Enable Terminal ID (off)**
Select this option to send a custom Terminal ID

**Terminal ID ()**
The Terminal ID is a string supplied to the host during negotiations.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- ASCII
- Graphics set
- Monitor Mode set
- Multinational set
- To host
Unisys T27

The T27 emulation provides a single-environment rendition of Unisys’ Burroughs-originated T27 terminal.

The emulation is designed for use with Telnet and Burroughs Poll/Select protocols. Selecting any communications module other than Telnet configures the emulation for raw data operation.

Personality

**Personality (T27)**
Select from the available models:

- T27
- TD830-ASCII
- TD830-NDL

Display Settings

**Screen Format (24x80)**
The T27 emulation has five standard screen resolution modes:

- 24 x 80
- 12 x 80
- 24 x 40
- 12 x 40
- 24 x 132

While possible, host-initiated resolution switching is not a normal feature of T27 operation and is not currently supported by the emulation.

**Display Status Line (on)**
When selected the status line is displayed.

**Display Application Status Line Only (off)**
Allows the sizes of the Environment Window Area and the display font to be maximized at the expense of the indications available on the second and third (Environment and System) status lines.

**Display TAB Ruler (off)**
When checked, this causes the separator line between the Environment Window Area and the first (Application) status line to display a ruler-style visual indication of tab stop settings.

**Enable Visible TAB Key Marker (off)**
TAB moves the cursor to the next tabstop or, in forms mode, to the next field. It doesn’t normally entail additional on-screen indication, however a HT marker can be written.
Enable Visible ETX marker (off)
The ETX code may be written to a page to modify Transmit behavior. The codes can optionally be displayed with a special glyph.

Enable Visible Delimiters (on)
When checked, field delimiters are shown as graphics symbols, otherwise as they are shown as space characters.

Enable Visible Data CR marker (off)
The CR code doesn’t normally produce any additional on-screen indication, however a CR marker can be written.

Enable Visible Return key marker (off)
Return doesn’t normally entail additional on-screen indication, however a CR marker can be written.

Hide Attribute Markers (on)
This option is set to on by default.

General Settings

Protocol (Telnet)
Select from Poll-Select or Telnet.

   ▶ Poll-Select
   ▶ Telnet

Insert Mode (Line Mode)
The drop down allows the default insert mode to be specified. Insert mode is not cleared upon arrow-key or other non-printing keypress. The mode can also be selected with the Insert key and, whilst in Insert Mode, can be toggled between Line Mode and Page Mode with [ALT_INSERT]. If Overtype mode is selected Line and Page modes are disabled.

Enable Type Ahead (on)
While the keyboard is locked, keystrokes are stored and released when the keyboard is unlocked.

Update Cursor After ETX Write (off)
If checked, cursor position is advanced after ETX is written.

Block Timeout Duration, ms (350)
It is necessary for the emulation to be aware when a write from the host has concluded. For Telnet communications where no protocol-based indication is available, the emulation assumes that a write is complete when a timeout period elapses after the last character is received. The timeout period can be from 1 - 999 milliseconds.

Enable Cursor Wrap (on)
When checked, cursor movement past one extent of the screen area takes the cursor to the opposite extent of the screen.
Enable Variable TABs (off)
This option is set to off by default.

Suppress LINC Header (off)
This option is set to off by default.

Number of Pages (4)
Use up and down keys to set.

Page Height (32)
Use up and down keys to set.

XMIT Sends Form Data From Home to Cursor (on)
If checked, and ignoring other influences, in Forms Mode, a transmit operation sends all data from the mobile home position to the cursor. Otherwise, the send is to end-of-page.

Auto Field Advance (on)
If checked, the cursor jumps to the next field when ever it moves past the right most character in a left-justified field.

Render Fields to End Delimiter (on)
Set to on by default.

FF Exits Forms Mode (off)
This option is set to off by default.

Sync Display to Forms and Blocking (on)
This option is set to on by default.

DC1 Function (Stay in Rcv)
▶ Stay in Rcv: The T27 terminal can interpret the DC1 code (11H) as an instruction to stay in Rcv mode at the end of a host write. It also has a Rcv Mode Hold option that provides this behavior continuously. Otherwise, at end of write, the T27 switches to Local mode. The emulation doesn’t fully implement separate Rcv, Local and Xmit modes, being always in a combined Rcv / Local mode unless transmitting. Consequently the Stay in Rcv choice has no effect other than to disable the alternate choice.
▶ Clear to EOL: DC1 causes a clear-to-end-of-line operation.

DC2 Function (Toggle Forms)
▶ Toggle Forms: The T27 can interpret the DC2 code (12H) as a command to toggle Forms Mode
▶ Advance DCP: Or to advance the DCP (host write pointer) by one position.

Expand Data CR (CR LF)
▶ CR LF: The T27 can expand a received CR (0DH) to a CR, LF pair
▶ CR: No expansion is performed.
Expand Data LF (LF)
- **CR LF**: The T27 can expand a received LF (0AH) to a CR, LF pair (ie. carriage-return, linefeed)
- **LF**: No expansion is performed.

**Keyboard Settings**

**Enable Uppercase Only (off)**
Characters entered at the keyboard are normally displayed in the case in which they are typed. This option allows them to be forced to uppercase.

**Clear-key Action (Unprotected)**
- **Unprotected**: The [CLEAR] key action can be set to clear either unprotected only
- **Clear all**: Both unprotected and protected areas.

**Enable Vertical Tab Page Advance (off)**
Allows the VT (0BH - Vertical Tab) command code to be used to execute a vertical tab. Page height must be the default 32 lines and the tabstops are at rows 1, 9, 17, 25. Otherwise, VT toggles the tabstop at the current cursor column.

**SPCFY Key Sends Page Number (off)**
The default [SPCFY] key ([CTRL_SHIFT_NUMPAD5]) action is to send cursor column and row parameters to the host. It can optionally send column, row and page.

**SPCFY Key Sends ASCII (off)**
The default [SPCFY] sequence uses binary encoding of the cursor parameters. This checkbox allows ASCII encoding to be selected.

**Return-key Form Action (Exit field)**
Return can be actioned either as positioning to the Next Line, possibly still within the current field, or as explicitly positioning beyond the current field (Exit Field).

**SO,SI Switch Character-set (off)**
When checked, the SO (0EH) and SI (0FH) codes are active as Shift-Out and Shift-In. Characters received bracketed by SI and SO command codes are translated to the corresponding high-bit-set character.

**Clear Page Clears TAB Stops**
Allows the FF (0CH - Clear Page) command code to be used to also clear variable tabstop settings.

**Backspace Destructive (off)**
This option is set to off by default.

**Byte Config Allowed (off)**
This option is set to off by default.

**RS Resets Attributes (on)**
Set to on by default.
Mouse Cursor Control (on)
This option is set to on by default.

Poll-Select

Terminal Address (00)
Edit to set the terminal address.

Passthrough Printer Address ()
Edit to set the passthrough printer address.

DCOM Early Fill (off)
If checked, the emulation interprets host data and commands as they are received, without waiting for block validation. It should normally be left unchecked. This can be particularly important for successful remote operation and also for PPT.

Fast-Select Enable (on)
This option’s current purpose is simply to allow or prevent the interpretation of Fast-Select sequences by the emulation. This behavior may change.

Group-Select Character (4)
This is the single character address that the emulation will look for when deciding whether to accept a Group Select message. Valid characters are codes 0x20 - 0x7f with the exception of 'p', 'q', 's' and 't'. Specification of an invalid character causes 0x04 to be stored.

SOH Clears Screen (off)
This option provides for an automatic Clear Page operation to be performed for each block of application data from the host. Disabled by default but often required enabled.

SOH Exits Forms (on)
This option provides for automatic exiting of Forms Mode on each new block of application data from the host.

Character Mapping
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- Standard map
- To host
UNIX ANSI Console

Personality

ANSI Mode (Interactive Unix)
Support for several different 386 UNIX products is provided within the ANSI Terminal emulation by way of the ANSI Mode option. The supported 386 UNIX products are:

- Interactive Unix
- Bell Tech. Unix
- AT&T Unix

Display Options

Display Size (80x24)
Available options are:

- 80x24
- 132x24
- Custom: uses the width and height as defined in the Custom Columns and Custom Rows options.

Custom Columns (24)
Enter the number of rows required.

Custom Rows (80)
Enter the number of columns required.

Options

Wrap End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

AutoScroll (on)
When selected and the cursor reaches the bottom of the screen, the display scrolls up. When not selected, the cursor jumps back up to the top.

Filter Incoming NULL Characters (on)
When selected, all received NULL characters are removed from the received data stream prior to passing it to the emulation.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- English
- English (UK)
- Dutch
- Finnish
- French
- French/Canadian
- German
- Greek
- Italian
- Norwegian/Danish
- Spanish
- Swiss
- Swedish
- Cyrillic

Character Sets
Available sets for this terminal are as follows:

- Low character set
- High character set
- Normal character set
- Graphics set
- To host
Wang 2110

Display Mode

Screen Size (24x80)
Available options are:

- 24x80
- 24x132
- 25x80
- 25x132
- Custom: uses the width and height as defined in the Custom Height and Custom Width settings.

Custom Height (24)
Enter the number of rows required.

Custom Width (80)
Enter the number of columns required.

Display Options

Status Line Display (None)
- None: The status line is not displayed.
- Indicator: The status display is always visible.
- Host writable: Host applications can write messages in place of the status line.

Enable Local Echo (off)
If selected, as a character is typed on the keyboard it is immediately echoed to your screen. If disabled, the entered character is sent to the remote host which in turn echoes it back. On its return the character is displayed on your screen. In this way, passwords and other sensitive information do not appear on your screen.

Insert Mode (off)
This mode determines how characters are added to the screen. When selected, the character is inserted at the cursor, moving previously displayed characters to the right. When not selected, new display characters replace old display characters at the current cursor position.

Wrap End of Line (on)
When selected and the cursor is in the last column, incoming text is written to the beginning of the next line. When not selected, incoming characters will overwrite the last column until an EOL (end-of-line) character is received.

Enable Clear Character Retains Attributed (off)
Specifies whether a cleared character retains an attribute.

Clear screen on size change (off)
When selected, this will cause a screen clear whenever a switch between 80 and 132 columns occurs. If history is enabled, the screen data is moved to the scroll history buffer, otherwise it is lost.
Responses

Answerback Message ()
The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

Operating Mode (WANG2110A)
Select to change between the following modes:

- VT52
- VT100
- WANG2110
- WANG2110A

7 or 8 bit (7 Bit)
Select either 7 or 8 bit modes as required.

Terminal ID (WANG2110A)
Select between the following:

- VT102
- WANG2110
- WANG2110A

Use Custom DA string (off)
Select to enable the Custom DA string function.

Custom DA string (?77;2;1)
Enter your custom DA string.

Custom DA string (?64;1;2;6;7;8;9;15;21)
Enter your custom DA string.

Keyboard Configuration

Keypad Mode (Numeric)
Select between Application and Numeric keypad state.

- Application: Selects application keypad mode. The keypad generates application control functions.
- Numeric: Selects numeric keypad mode. The keypad generates characters that match the numeric, period, plus, minus, star and forward-slash keys on the main keypad.

Cursor Keys Mode (Normal)
The characters generated by the cursor keys depend on the state of the Cursor Keys mode.

- Normal: Causes the cursor keys to generate ANSI cursor control sequences.
- Application: Causes the cursor keys to generate application control functions.
Convert LF to CR/LF (off)
When selected, this causes a received [RETURN] to transmit as both a CR and a LF. When not selected and a [RETURN] is received only a CR is transmitted.

Lock Keyboard (off)
When the keyboard is locked, no codes can be transmitted from the keyboard to the host. You can unlock the keyboard either by deselecting this option or resetting the terminal.

Lock User defined keys (off)
The lock parameter determines whether the downloaded key definitions are locked or not, after you load them. To unlock the keys you must either deselect user defined keys locked option or a reset is required.

Enable Compose (off)
A compose sequence is a series of two or three keystrokes that produce a single character. Pressing the [COMPOSE CHARACTER] key starts the compose sequence.

Disable Numeric Keypad (off)
Disables application and numeric mode for the numeric keypad.

Reset clears the Terminal Screen (off)
Reset clears the terminal screen.

Scancode mode (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

Advanced

Character Set Mode (Normal)
Select between the following character set mode:

- Normal
- DBCS
- UTF-8

CodePage (950)
Sets the code page to be used when DBCS is enabled. See also Character Set Mode.

User Preferred Character Set (DEC Supplemental)
There are two 8-bit character sets and both include the standard ASCII character set and a supplemental set.

- DEC Supplemental: DEC Multinational set
- ISO Latin

Favor Diacritics (off)
When enabled uses European characters rather than line draw characters.
Print Extent (Print Region)
Select from the following options:

- **Print Region**: to send just the selected region to the printer
- **Print Screen**: to send entire screen contents to printer.

Print Form Feed (off)
Send a form feed character at the end of the print job.

StripCharValue (242)
This option is set to '242' by default. Use up and down keys to adjust accordingly.

StripPrinting (off)
This option is set to off by default.

StripSingleChar (off)
This option is set to off by default.

Wang Private Keys (off)
This option is set to off by default.

DisableModeNBitsSequences (off)
This option is set to off by default.

BackspaceOn (off)
This option is set to off by default.

Autoscroll (off)
This option is set to off by default.

Compose (off)
This option is set to off by default.

NewLineMode (off)
This option is set to off by default.

Character mapping:
For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Character Sets
Available sets for this terminal are as follows:

- HostsNational
- ASCII
- ASCII (8bit)
- DEC Special Graphics
- DEC Supplemental
- To host
Wyse Series

Personality

Personality (Wyse 60)
Select from the following:

- Wyse 50+
- Wyse 60
- Wyse 350

Display Mode

Screen Size (24x80)
Available screen mod options are:

- 24x80
- 24x132
- 25x80
- 25x132
- 42x80
- 42x132
- 43x80
- 43x132
- 50x80
- 50x132
- 51x80
- 51x132

Number of Pages (4)
The Wyse terminal offers the ability to store multiple pages of information. The number of pages you require can be specified here. Each page will use part of your system memory.

Status Line Type (None)
Across the bottom of the TTerm for Linux window will be displayed various status details. There are three choices:

- **None**: Hides the status line
- **Standard**
- **Extended**

Status Line Location (Top)
Four options are available:

- **Top**
- **Bottom**
- **Top Plain**
- **Bottom Plain**
Use a separator Line

**Use a Separator Line (off)**
Check to add a separator to the status display

### Options

**Wrap End of Line (Wrap)**
This affects the behavior of the terminal when a character is inserted in the last column of the screen.

- **Stop:** The cursor remains in the last column position on the same line and all following characters overwrite into the same position.
- **Wrap:** The cursor wraps around to the first column of the next line.

**Scroll Setting (Scroll)**
This affects the behavior of the terminal when a linefeed is issued on the last line.

- **Loop:** The screen remains unchanged but the cursor loops to the first column of the screen.
- **Scroll:** The screen scrolls 1 line and the cursor remains on the last line.

**Map CR to CR/LF (off)**
This option determines the effect of received carriage return (CR) codes. When selected, all received CR codes move the cursor to the first column position on the next line i.e., it is interpreted as a CR followed by a line feed (LF). When not selected, all received CR codes simply move the cursor to the first column of the current line.

**Respond to ENQ with ACK (off)**
When selected the terminal will send an ACK character on receipt of an ENQ character from the host. When not selected the terminal will ignore ENQ characters.

You can configure **Respond to ENQ with Ack** for the Wyse 60 personality however the Wyse 50+, like the real terminal, forces SEND ACK to be selected at all times.

**Convert NULL Characters to Spaces (on)**
When selected NULLs are converted to spaces.

**Attribute Extent (Char)**
This determines the extent affected by changing the current display attribute.

- **Char:** All characters that are afterwards will have the new attribute.
- **Line:** The existing line will inherit the new attribute.
- **Page:** The entire page will inherit the new attribute.

**Clear Screen on Display Width Size Change (off)**
When selected, this will cause a screen clear whenever a screen change between 80 and 132 columns occurs. If history is enabled, the screen data will be saved to the scroll history buffer otherwise the data is lost.

**Allow Backspace to move to the previous line (on)**

Allows backspace to move back to previous line.

**Character Set Mode (Normal)**

Select from the following Character Set Mode options:

- Normal
- DBCS
- UTF-8

**CodePage()**

Sets the code page to be used when Character Set Mode is set to DBCS.

**Enable Answerback (off)**

Transmit the string defined within the Answerback Message field when the ENQ character is received from the remote host.

**Answerback Message ()**

The string specified here is used as the answerback message which is sent from the terminal to the host when the host sends the ENQ character.

**Printing CR conversion (None)**

Available options are:

- None
- Strip
- CR/LF
- LF/CR

**Printing LF conversion (None)**

Available options are:

- None
- Strip
- CR/LF
- LF/CR

**Enhanced (off)**

Set to off by default.

**Strip 8th Bit (off)**

Strips the 8th bit from the character.

**Allow Local Echo (off)**

If selected, as a character is typed on the keyboard it is immediately echoed to your screen. If disabled, the entered character is sent to the remote host which in turn echoes it back. On its return the character is dis-
played on your screen. In this way, passwords and other sensitive information do not appear on your screen.

**Colors**

To implement the large array of colors associated with a Wyse 350 terminal, this emulation takes advantage of the **Override Color** feature in the TTerm for Linux Color configuration tile. This mimics the use of attributes to associate and display colors in a Wyse 350 terminal. To aid in the set-up of the color associations, three check-boxes are available.

**Notify a Color Palette Change (off)**

Allows an administrator to know what palette, if any, is been asked for by the host application. The palette can be set-up as a color scheme in the Color configuration tile. The user can also be notified when to change the color scheme for an application when colors are important to its usage.

**Notify a Color Association Sequence (off)**

Applications sometimes add their own flavours to the standard Wyse 350 color palettes. This option allows the administrator to change the color schemes accordingly.

**Lock Write-protect Attribute to Invisible|Blink (off)**

TTerm for Linux does not have a Write-Protect as a standard overridable attribute. This option maps this attribute to a rare attribute, Invisible and Blink, to enable a color to be associated with it. Note that when this option is selected, any application request for a change of Write-Protect attribute will be ignored.

**Character Sets**

**Primary Character Set (Font Bank 0)**

Selection options available 0, 1, 2 or 3.

**Secondary Character Set (Font Bank 1)**

Selection options available 0, 1, 2 or 3.

**Font Bank 0 (G0 Char Map) (Native Mode)**

Available options include: Native Mode, Graphics Overlay, MultiNational, PC Equivalent, Standard ASCII, Graphics 1, Graphics 2, Graphics 3, Standard ANSI, ANSI Graphics or UK ANSI.

**Font Bank 1 (G1 Char Map) (MultiNational)**

Available options include: Native Mode, Graphics Overlay, MultiNational, PC Equivalent, Standard ASCII, Graphics 1, Graphics 2, Graphics 3, Standard ANSI, ANSI Graphics or UK ANSI.

**Font Bank 2 (G2 Char Map) (Native Mode)**

Available options include: Native Mode, Graphics Overlay, MultiNational, PC Equivalent, Standard ASCII, Graphics 1, Graphics 2, Graphics 3, Standard ANSI, ANSI Graphics or UK ANSI.

**Font Bank 3 (G3 Char Map) (MultiNational)**

Available options include: Native Mode, Graphics Overlay, MultiNational, PC Equivalent, Standard ASCII, Graphics 1, Graphics 2, Graphics 3, Standard ANSI, ANSI Graphics or UK ANSI.
Character Mapping

For information on how to create or alter custom languages or character sets, please refer to chapter 15.

Languages
Available languages for this terminal are as follows:

- English
- Swedish

Character Sets
Available sets for this terminal are as follows:

- Native Mode
- Graphics Overlay
- Multinational
- PC equivalent
- Standard ASCII
- Graphics 1
- Graphics 2
- Graphics 3
- Standard ANSI
- ANSI Graphics
- UK ANSI
- To host
Chapter 14: Keyboard Mapping

Remapping the TTerm for Linux keyboard.
Keyboard Mapping

Keyboard mapping in TTerm for Linux is extremely flexible and allows you to have as many different keyboard configurations as you require. You can have a different keyboard configuration for each application and/or emulation.

To assist you in the configuration of your keyboard, a standard keyboard mapping is automatically installed with each emulation. If you wish, you can customize this mapping or create your own.

With TTerm for Linux you have the ability to program just about any key to match an emulation key, to send a string or macro sequence.

Keyboard Mapping

In keyboard mapping it is important to distinguish between physical keys and emulation keys. The physical keys are the keys on the physical keyboard attached to your PC. Emulation keys are the keys found on the terminal being emulated. This may, for example, include the GOLD PF1 key on a VT220 terminal.
Configuring the Keyboard

To configure keyboard mapping select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, selecting **More > Edit** on the profile of your choice.

Select **Keyboard Mapping** from the **Profile Editor**. Configuration options will be displayed as shown in **Figure 14.1**.

![Figure 14.1 Keyboard configuration.](image)

The standard mappings are automatically set for the emulation that you have chosen. If you require an alternative keyboard mapping, please contact Turbosoft with your request. (See **Appendix B** for support contact details).

Selecting a Keyboard Map

The **Default** keyboard mapping for each emulation is read only and cannot be edited. To change a keymapping you will need to either select a mapping from the **Select a Keyboard Map** list, or create a new map set.

To create a new Keyboard Map

1. Select the **New** button, this will create a new key template based on the default key set for the selected emulation.

2. Edit the **Name** and **Description** in the Keyboard Mapping Settings section.

To copy an existing Keyboard Map

3. Select an existing set you would like to copy from the **Select a Keyboard Map** drop down list.
Select the **Duplicate** button, this will create a new key template based on the selected key set.

Edit the **Name** and **Description** in the **Keyboard Mapping Settings** section.

**To delete an existing Keyboard Map**

1. Select an existing set you would like to copy from the **Select a Keyboard Map** drop down list.
2. Select the **Delete** button, this will display a warning message requesting confirmation.
3. To continue, select the **Delete Keyboard Map button**. After deletion the profile will revert to the Default keyboard map.

![Warning icon] You cannot retrieve a keyboard map once it has been deleted!

**Mapping Physical Keys**

You create mappings for physical keys in three ways, with:

- An emulation key from the current emulation, e.g., the VT220 **PF1** key.
- An emulation specific escape sequence, string or macro.

To map an emulation key, global or emulation string to a physical key or key sequence, follow these steps:

![Warning icon] You can use the **[SHIFT]**, **[ALT]** and **[CTRL]** keys together with a physical or emulation key, if required.

1. Select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, selecting **More > Edit** on the profile of your choice.
2. Select **Keyboard Mapping** from the **Profile Editor**. Configuration options will be displayed as shown in **Figure 14.2** (following page) is displayed.
3. Select the physical key, from the **PC Keyboard** list, you wish to map. The emulation key, or the string/macro currently mapped to the selected physical key is highlighted and displayed at the top of the **Emulation Keyboard** section.
4. Select one of:
   - **Emulation key**, go to step 4.
   - **String**, go to step 5.

5. Emulation key: Select the emulation key, you want to assign to the selected physical key.
You can assign an ASCII data string, an escape sequence or a macro to the physical key. Enter the string or macro in the String text box, or click the Assist button to use the Macro Assistant.

To save the mapping, click on the Map Key button.

Repeat the above steps for all the physical keys you need to map.

To save session settings you must also save the profile by selecting Save or Save and Connect.

For example, to map the ANSI BOLD escape sequence (ESC[1M) to [CTRL_F6] for the current emulation, follow these steps:

1. Click on the [CTRL] tick box and the [F6] key on the PC keyboard list.
2. Select String/Macro.
3. In the String/Macro field enter the string: \x1b[1m where \x1b represents the hex value for ESCAPE character.
4. Click on the Map Key button to save the mapping.
5. Select Save or Save and Connect.

Hex values are prefixed by \x

Figure 14.2 Mapping a key.
Removing a Mapping

Click on the Remove Mapping button to remove a mapping. Alternatively, re-map BOTH the physical key(s) and the emulation key(s).

Saving a Mapping

To save a mapping, click on the Map Key button.

You MUST also save the profile by selecting the Save or Save and Connect buttons.

Keyboards

Click on the Keyboards list to select from available keyboard layouts.
Chapter 15: Character Mapping

Editing and creating character mappings and language sets.
Character Mapping

Emulation character mapping allows the user to select the character generated for a given ASCII value by the relevant country code mapping. This ASCII value may originate from a keyboard sequence, or from a character sequence from the remote host to the local PC screen or printer. Language mappings and Character Sets may be edited in-program.

Character mapping and the process for modifying language and character sets is the same for all the emulations.

To edit a character map for the profile of your choice select Configure > Edit Current Profile from the program menu or, from the Profile Directory, select More > Edit on the desired profile.

Select Character Mapping from the Profile Editor. Configuration options will be displayed as shown in Figure 15.1

Each emulation contains a series of languages, you may select an existing language or create a new language mapping and modify the accompanying character sets to suit.

![Figure 15.1 Character Mapping configuration.](image-url)
Selecting a Character Map

The Default character mapping for each emulation is read open and cannot be edited. To change a character mapping you will need to either select a mapping from the Select a Character Map list, or create a new map set.

To create a new character map:

1. Select the New button, this will create a new key template based on the default character map for the selected emulation.
2. Edit the Name and Description in the Character Mapping Settings section.

To copy an existing character map:

1. Select the existing set you would like to copy.
2. Select the Duplicate button, this will create a new key template based on the selected key set.
3. Edit the Name and Description in the Character Mapping Settings section.

To delete an existing character map:

1. Select the existing set you would like to delete.
2. Select the Delete button, this will display a warning message.
3. To Continue, select Delete Character Map. The Default character map will be selected.

Adding a New Language Mapping

Not all languages are supplied for all emulations. If you require a language and it is not present in TTerm for Linux, please contact Turbosoft Support.

Each emulation is supplied with one or more language sets. To create a new language or custom language navigate to the Character Map section shown Figure 15.2 (following page). Click the New button to and enter a name for the new language based on the (default) settings.

Similarly, clicking the Copy button will create a new language based on the selected existing language item.
Editing a Character Map

The Character Map sections lists the Map, Unicode and Character values for the character set as shown in Figure 15.2.

![Character Map](image)

**Figure 15.2 Character Mappings.**

To edit an entry click on the desired row or item and click the Edit button. This will bring up the Edit Character Map Item tile as shown in Figure 15.3. This tile allows you to modify the values for a particular character.

![Edit Character Map Item](image)

**Figure 15.3 Editing a Character Map Item.**

**Unicode Value**
A hexadecimal Unicode value. The equivalent display character will be shown in the Character field.

**Character**
Enter a character in this field and the equivalent Unicode value will appear in the Unicode value field.
**Saving a Character Set**

Character Set changes are saved by saving the associated profile. Click the **Save** or **Save and Connect** buttons.
Chapter 16: Colors

Creating and editing a color scheme.
Color Configuration

The Color Configuration section of the Profile Editor allows you to choose or create your preferred terminal color scheme.

To configure a terminal color scheme select Configure > Edit Current Profile from the program menu or, from the Profile Directory, selecting More > Edit on the profile of your choice.

Select Colors from the Profile Editor. Color Scheme configuration options will be displayed as shown in Figure 16.1.

![Profile Editor - default](image)

Figure 16.1 Configure colors.

Color Scheme

Predefined and custom created color schemes are available by clicking on the Select a Color Scheme drop down.

New
A custom color scheme may also be created clicking the New button.

Duplicate
A custom color scheme based on an existing scheme may be created by clicking the Duplicate button.
Delete
Select this button to remove a listed color scheme that is no longer required. When a color scheme is deleted the profile will revert to a default scheme.

![Warning]
Color schemes are shared between all profiles however TTerm for Linux will not permit the deletion of a scheme in use with other profiles.

![Warning]
You cannot retrieve a color scheme once it has been deleted!

**Color Scheme Options**

**Name**
An arbitrary name for the color scheme. Text entered here is used when selecting from the Select a Color Scheme drop down item.

**Description**
An optional description of the color scheme.

**Editing Options**

**Show Configuration For**
This item specifies which emulation to show attributes for in the Attribute List item, hiding those attributes which are not relevant to the desired terminal. For example, a DEC VT220 terminal does not support the Dim attribute while a Wyse 60 terminal does.

**Show Invisible Attributes**
This option will show or hide any attribute combinations that have invisible as one of the attributes.

**Show Blink in Preview**
If set to off, text with the blink attribute will not blink in the Preview item.

**Show Invisible In Preview**
If selected, text in the Preview that has the invisible attribute will remain visible.
Emulation Attributes Configuration

Attribute List
To view or modify a terminal attribute select an item from the Attribute List. This will update the Preview below and the list of Feature Options assigned to the attribute such as **bold**, **underline**, **overline** and/or **strike-through** as well as any color overrides that have been applied.

![Profile Editor - default](image)

**Figure 16.2 Attribute configuration.**

Feature Options
The Feature Options item allows any aspect of the attribute combination to be added or removed.

Clicking a checkbox adjacent to a feature will include or exclude this feature from the current selected attribute combination. The features are:

- Blink
- Reverse
- Underline
- Bold
- Overline
- Dim
- Strike out
- Invisible
- Box
**Color Options**

This configuration option determines whether the colors used when mapping the attribute combinations are those used by the *normal* attribute, or are an independent set of colors. If selected, the colors are independent. Any change to the color set used by the normal attribute will have no effect on this attribute combination and vice versa.

*Override color must be selected before you select the new color from the Color palette.*

**Miscellaneous Color Scheme Options**

**Color palette**

The *Color Palette* represents those colors that are available for use in the color scheme, in particular for mapping attribute combinations. The actual number of colors in the palette display is fixed at 32, shown as two banks of 16.

Clicking any of the colored squares will select that palette item for editing.

*Figure 16.3 Edit Color Palette tile.*
Edit Color

R(ed), G(reen), B(lue)

The selected palette entry can be edited by directly entering red, green and blue values between 0 and 255. Alternately the color values can be adjust via the associated slider or color wheel.

Changing a palette entry will also change attributes within the color scheme where this palette entry was applied.
Chapter 17: Misc. Configuration

Other TTTerm for Linux configuration options.
Miscellaneous Configuration

To access these configuration options select Configure > Edit Current Profile from the program menu or, from the Profile Directory, selecting More > Edit on the profile of your choice.

Select General from the Profile Editor and scroll down to the relevant sections described below.

![Profile Editor - default](image)

**Figure 17.1 General configuration options, Clipboard Settings.**

Capture

Enable Capture (On)
When set, the capture function will be available within this profile. See Chapter 6 for more details on what captures are and how they are used.

Start On Connect (Off)
When set a capture will automatically commence when TTerm for Linux successfully connects with the defined remote host system. If this option is not set, a capture must be user initiated. This setting is only utilized when Enable Capture is set to on.

Capture Base Name ()
Set a common prefix to be applied to any capture files created for this profile. Time-stamp details will be appended to the filename for each capture file. This setting is only utilized when Enable Capture is set to on.
**User Details**

**LoginName ()**
This information is made available for use as a Macro variable. For more information on Macros refer to *Chapter 11.*

**Password ()**
This information is made available for use as a Macro variable. For more information on Macros refer to *Chapter 11.*

**Clipboard Settings**

**Full screen copy by default (off)**
When this option is set to on and a copy operation is performed while no text is selected, TTerm for Linux will copy the entire screen.

**Trim trailing spaces on copy (on)**
When selected deletes any spaces from the end of the selected text.

**Pause when marked (on)**
Places the screen into a paused state until marking/copy is completed.

**End-of-line text (\r)**
The character that will be appended to the end of the pasted line.

**End-of-field text ()**
The character that will be appended to the end of the pasted field.

**Field separator text ()**
The character that will be appended to the end of each pasted field.

**Start text ()**
Text which will be prepended to the pasted text.

**End text ()**
Text which is appended to the pasted text.

**Process key-macros in pasted text (off)**
When selected any macro present in the pasted text will be executed.

**Line delay (ms) (50)**
The time delay in milliseconds between each pasted lines.

**Character delay (ms) (0)**
The time delay in milliseconds between each pasted character.
Chapter 18: Hotspots

*Enhanced mouse driven terminal events.*
Hotspots

A Hotspot is an area of the terminal screen which triggers a mouse event, enabling an otherwise keyboard driven host application to work with mouse interaction.

The appropriateness of hotspots for the TTerm for Linux user will very much depend upon the nature of the applications that you are running.

In particular, if your applications are menu based then you will find that hotspots allow you to design a more user-friendly environment.

Screen Regions

The active area for a Hotspot can be either a fixed area of the TTerm for Linux display screen or dynamically determined based on the screen content.

For example, the Hewlett Packard HP2392 terminals use a fixed area across the bottom of the screen to act as status labels for the function keys. In this case, you might choose to use a Hotspot with a permanent, fixed location based on the screen coordinates of the specified status label.

![Figure 18.1. An example of a Hotspot in TTerm for Linux, in this instance enhancing the status labels on a Hewlett Packard HP2392 terminal session.](image)

Dynamically positioned hotspots are positioned based on the appearance of a particular word or character sequence displayed anywhere on the screen.

For example, the IBM3270 class of terminals are often used with host applications that use the F3 key to EXIT. The string ‘F3 = Exit’ may be located anywhere on the screen. In this case, you would use a string matched Hotspot that would look for the string “F3 = Exit”.

Hotspots can be configured to auto execute or to be activated by clicking the mouse button on the defined screen region.
Configuring Hotspots

To configure the communications transport for the profile of your choice select **Configure > Edit Current Profile** from the program menu or, from the **Profile Directory**, select **More > Edit** on the desired profile.

Select **Hotspots** from the **Profile Editor**. Configuration options will be displayed as shown in **Figure 18.2**.

![Profile Editor - default](image)

**Figure 18.2.** Hotspots configuration.

**Hotspot Set**

Different emulations or applications may require different configurations of hotspots. To accommodate this, hotspots are held as individual sets. Each set can contain as many hotspots as you require for the particular emulation/application.

Predefined and custom created hotspots sets are available by clicking on the **Select a Set** drop down.

**New**
A custom Hotspot set may also be created clicking the **New** button.

**Duplicate**
A custom Hotspot set based on an existing set may be created by clicking the **Duplicate** button.

**Delete**
Select this button to remove a listed hotspots set that is no longer required.
Hotspot sets are shared between all profiles however TTerm for Linux will not permit the deletion of a set in use with other profiles.

You cannot retrieve a Hotspot set once it has been deleted!

**Hotspot Settings**

**Name**
An arbitrary name for the Hotspot set. Text entered here is used when selecting from the *Select a Set* drop down item.

**Description**
An optional description of the Hotspot set.
Creating, Copying and Editing Hotspots

Using the drop down menu on the Hotspot Set field, select the required Hotspot set or create a new set as described on the previous page. A Hotspot set may consist of one or more individual hotspots.

To create a new Hotspot click on the New button in the Hotspots section.

To copy an existing Hotspot, select the Hotspot from the Hotspots list then click the Duplicate button.

To edit a Hotspot, select the Hotspot from the Hotspot list then scroll down to edit its settings.

When you click on either the New button to create a new Hotspot, the Duplicate button to copy a Hotspot or select an existing Hotspot, the hotspots option are update dynamically to reflect the currently selected item.

![Profile Editor - default](image)

**Figure 18.3. Configure a Hotspot.**

General Parameters

Name
Enter a name for the Hotspot.

Action / Send String
When a Hotspot is triggered the string entered here is sent to the host. This can be either a literal string or a macro string for more advanced functionality. When specifying a literal string and a carriage return is required, append a \r to the string.
For more advanced options Hotspot actions can be used to send emulation keys, trigger program menu commands and much more. The Assist button opens the Macro Assistant, for further detail on macro capabilities and how to use the Macro Assistant refer to Chapter 11 - Macros.

**Position**
The position of the Hotspot can be either **Fixed** or **Relative to Matched String**.

**Fixed**
Once configured and enabled the section of the screen will always be a Hotspot and a mouse click in this area will always trigger the Hotspot action.

**Relative to Match Text**
This indicates that TTerm for Linux is to constantly search an area of the screen to see if it contains the text declared using the Match Text option.

**Fixed Position Settings**
These fields are used to define the area in which the Hotspot is to be located for fixed position Hotspots. The screen coordinates are entered in as row and column values, along with height and width values for the Hotspot.

For example, if you are using an HP2392 emulation with fixed status labels for the function keys, F1 to F8, then you could define permanent hotspots for each status label. The status labels appear in the bottom two rows and are seven columns wide, so the coordinates for the F1 status label would be

- **Location Row**: 24
- **Location Column**: 0
- **Height (rows)**: 2
- **Width (columns)**: 8

**Specifying the Hotspot Match String**
If you select the Hotspot position to be **Match Text** then you MUST specify a **Text to Match**.

**Match Text Parameters**

**Text To Match**
The exact string that you wish to match.

**Pre Match Characters**
Any character that will always proceed the match text. The **Text To Match** is only to be matched if it follows the character specified.

**Post Match Characters**
Any character that will always follow the match text. The **Text To Match** is only to be matched if it is followed by the character specified.

**Case sensitive**
If you require the **Text To Match** to be case sensitive.
Use Wildcards (* And .)
When checked the text entered at **Text To Match** will match on wildcards. The following wildcards are valid:

- An asterisk (*) will match any text for inclusion in a Hotspot. For example a **Text To Match** entry of A*F would match the following:

  - "123 ASDFGHJK" where the * matched SD
  - "123 AFTERNOON" where the * matched no characters and AF was matched on

  Placing the (*) wildcard at the end of the **Text To Match** entry, for example an entry of AF*, will result in the Hotspot finishing on either the next **Post Match Characters** or, if no **Post Match Characters** exists, the end of the line.

- A period (.) will match on any single character. For example a **Text To Match** entry of T.E would match the following:

  - "123 TEA CAKE" where the . matched TEA
  - "123 TREE FROG" where the . matched TRE

- Combinations of asterisk (*) and period (.) wildcards are valid. For example:

  - A **Text To Match** entry of .a* would match "Easter" in the text "xyz Easter"
  - A **Text To Match** entry of 1.3.5 would match "12345" or "1A3B5"

Autoexecute
The Hotspot action will autoexecute when TTerm for Linux detects the string.

For example, the match text 'Login:' could be used to trigger the sending of a username or to execute a macro to log the user in.

Match Region
Determines the area of the terminal display in which TTerm for Linux will search for the **Text to Match**. Options are:

- Entire Screen
- Partial Screen

If the **Match Region** is set to **Entire Screen** then the **Text To Match** will search the entire terminal screen for matching text.

If **Partial Screen** is set you need to specify the area that TTerm for Linux will search. Note that screen dimensions are determined by your emulation display setting. When this option is selected, the following additional options are available:

Region Row
The terminal screen row, or topmost position where TTerm for Linux will search for the **Text to Match**.
**Region Column**
The terminal screen column, or left most position of the region where TTerm for Linux will search for the **Text to Match**.

**Height**
Height in screen rows of the region where TTerm for Linux will search for the **Text to Match**.

**Width**
Width in screen columns of the region where TTerm for Linux will search for the **Text to Match**.

**Appearance**
**Preview**
Displays a sample of what your Hotspot will look like.

**Label**
Determines the content of the Hotspot label. Available options are

- **Use Terminal Text Underneath**: when selected, TTerm for Linux will display the terminal text on the Hotspot.
- **Alternative Text**: when selected you can set your own text for the Hotspot overriding the text on the terminal screen.

**Style**
Click on the drop down menu of the **Button Style** field, then select a button style from the eight pre-defined styles. The **Preview** above will update to display a sample of the selected style...

![Profile Editor - default](image)

*Figure 18.4. Configure Hotspot appearance.*
**Setting the Hotspot Color**

The color of the Hotspot set can be adjusted to suit your preference..

Clicking the **Edit** button next to the **Background Color** or **Label Color** will display the Color selection tile..

![Choose a Background Color](image)

*Figure 18.5. Configure Hotspot colors tile.*

This tile allows you to select from a predefined color palette for the **Background** or **Label** based on the edit button clicked.

You can also modify the color palette by selecting one of the existing palette entries and replacing the selected color with a custom color.

**Saving the Hotspot Set**

Hotspots sets are saved when the profile being edited is saved. Click on the **Save** or **Save and Connect** button to save both the hotspots and profile.

**Deleting Hotspots**

To delete an individual Hotspot, simply select the Hotspot from the **Hotspot** list, then click on the **Delete** button.
Appendix A

Glossary

ANSI (American National Standards Institute) The U.S. standardization body. ANSI is a member of the International Standardization Organization (ISO)

API Application Program Interface.

ASCII (American Standard Code for Information Interchange) This is one of the methods of representing text characters inside a computer.

Attribute This is a way of enhancing characters on screen by adding features such as underline, bold or a color.

Break Signal An interrupt signal sent to the host system.

Capture A method used in TTerm for Linux, of copying to disk any incoming and outgoing information from the remote host.

Certificate Express Logon Also referred to as Express Logon Feature or ELF. Enables secure logon to hosts via tn3270e and SSL with certificates alone.

Client Any node in a networking environment that initiates a request for a network service.

CR A carriage return (CR) is a control character used to move the cursor position to the start of a line. Often used in conjunction with a line feed (LF).

DBCS Stands for Double Byte Character Set, using two-byte (16-bit) characters rather one byte (8-bit). Typically used to handle languages such as Japanese, Korean and Chinese.

Dialog box A window in a graphical user interface which requests information from the user. In this manual dialog boxes are referred to as tiles.

ELF Express Logon Feature. Enables secure logon to hosts via tn3270e and SSL with certificates alone.

Emulation When used in relation to TTerm for Linux, a program that causes the personal computer to act as if it were a particular terminal.

Field A defined data area.

FIPS Federal Information Processing Standard. FIPS-140-2 is a United States Government standard of cryptographic accreditation. This standard applies to the TTerm for Linux SSH communications module.

Flow control A technique for ensuring that the transmitting device, such as a modem, does not overload the receiving device with data. This is also known as pacing.

Function keys A special set of keys which are typically labelled F1, F2 etc. on the keyboard.
**GUI (Graphical User Interface)** A user environment that uses icons, buttons, windows and pointers etc.

**HLLAPIIBM 3270 High Level Language API.**

**HPNS** Hewlett Packard Network Services, see also NS/VT.

**Host** Machine on which applications are executed. A host may be the local machine or the remote machine connected to via Serial Communication, TCP/IP, etc.

**IRMA board** The IRMA board was an early hardware card for PC’s designed to provide 3270 host connectivity and emulation.

**IP number** A 32-bit (IPv4) or 128-bit (IPv6) address assigned to hosts using TCP/IP. This consists of a network and host code. The host port is signified by an integer and is used to identify destinations within the host, e.g., the port reserved for electronic mail.

**Key File** A TTerm for Linux license file with a .key extension, containing unique licensing information.

**LAN** Local Area Network.

**LF** A line feed (LF) is a control character used to indicate a new line. Often used in conjunction with a carriage return (CR).

**Login** The action by which you gain access to and establish your identity to a remote host.

**Node** Any device including servers and workstations that are connected to a network.

**NS/VT** Network Services / Virtual Terminal. A proprietary communications protocol developed by Hewlett Packard.

**Profile** A session configuration defined within TTerm for Linux. See Session.

**Remote host** The machine which you are communicating with, via your TTerm for Linux emulation software.

**RS232** A standard used for many serial interfaces. This standard was devised many years ago and many parts of it are not used in modern modem equipment. This has led to many different implementations of the standard.

**Serial number** A unique number allocated to each copy of TTerm for Linux software produced by Turbosoft.

**Serial port** A communications port, generally referred to as COM number. See also communications port.

**Session** A combination of one emulation and one communications protocol is called a session.

**Shift state** A sequence of simultaneous key strokes, combining the selected PC key with any of the [SHIFT], [ALT] and [CTRL] keys, to generate a unique combination. For example, [CTRL_ALT_F4].

**SBCS** (Single Byte Character Set) Character sets which use exactly one byte for each character. See also DBCS.
**SSH** (Secure Shell) A communications protocol that allows secure transmission of data.

**SSL** (Secure Sockets Layer) A protocol that provides security for communications over networks.

**TCF** The file based equivalent of a profile used in Turbosoft Windows based Terminal emulator TTWin. TCF files may be exported from TTWin in a format that TERM for Linux can import.

**Telnet** A protocol for providing terminal facilities using TCP/IP across a network.

**Tile** TERM for Linux terminology for what is commonly known as a dialog box.

**X.25** A serial base network communications protocol used for wide area networks.
Appendix B

Support

If you have a support question or issue you need assistance with we recommend firstly checking the support section of our website ([www.ttwin.com](http://www.ttwin.com)) for up to date downloads and documentation. We suggest these resources be your first stop as they provide quick answers to many common queries.

If you are still unable to resolve your issue please feel free to contact Turbosoft's support staff. Full support is extended to the holders of maintenance contracts and to those users operating TTerm for Linux under an evaluation license. To raise an issue with Turbosoft support please log in to [https://www.ttwin.com/support](https://www.ttwin.com/support) and fill out an issue form.

When describing your issue be sure to include information on the exact version of the Turbosoft product your are using. This information can be obtained by selecting **Help > About... > Version** from the program menu. See *Chapter 7* for more information.
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