

Administrator's Guide

X₃₂ - 3270

X₅₂ - 5250

Emulation for Motif

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UniCon Software GmbH

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TABLE OF CONTENTS

1	Before You Begin	4
1.1	Who Should Use This Manual.....	4
1.2	About This Guide.....	4
1.3	Conventions and Abbreviations.....	4
1.4	Finding More Information.....	5
1.5	X32/X52 on the World Wide Web.....	5
1.6	Overview.....	6
2	Getting Started	7
2.1	System Requirements.....	8
2.2	Installation Procedure.....	8
2.3	Removing.....	8
2.4	Starting.....	8
2.5	Main Window.....	9
2.6	Closing.....	10
3	Licensing	11
3.1	Licensing Using the Scout eL Management Tool.....	12
3.2	Licensing at the Thin Client.....	12
3.3	No License.....	12
4	Connections and Sessions	13
4.1	Configuration File.....	14
4.2	Connection Parameters.....	15
4.3	Session Parameters.....	16
4.4	Connecting.....	17
4.5	Disconnecting.....	17
5	Programming Key Functions	18
5.1	Programmable Keys (P Keys).....	19
5.2	User Keys (B Keys).....	21
5.3	Keyboard Mapping.....	22
5.4	Keyboard.....	23
6	X32/X52 Functionality	24
6.1	Copy and Paste.....	25
6.2	Cursor Options.....	25
6.3	Colors.....	26
	Attribute Function.....	26
6.4	Printing.....	27
6.5	Fonts.....	29
6.6	? Help Menu.....	29
6.7	Resource File.....	29
7	Troubleshooting	31
7.1	Diagnosis.....	31
7.2	Screen.....	31
7.3	Save Configuration File As.....	32
8	Appendix	33
8.1	Screen Size.....	33
9	I N D E X	34

1 Before You Begin

1.1 Who Should Use This Manual

This manual is for system administrators responsible for installing, configuring and using X32/X52 on a Linux system. This manual assumes knowledge of:

- As a stand-alone program: the operating system Linux (SuSE 7.0 or equivalent Red Hat version)
- As an eLux plug-in: the Embedded Linux (eLux[®]) software

1.2 About This Guide

This documentation presents step-by-step directions on how to install, configure and use the X32 – 3270 and X52 – 5250 emulations for Motif as either a stand-alone program or as a plug-in on a Thin Client running eLux software. Information in this manual is valid for both stand-alone and plug-in programs. When X32/X52 as a stand-alone program differs from X32/X52 as an eLux plug-in, this is noted.

Due to the widespread use of X32/X52 on Thin Clients running eLux, pictures are of the X32 emulation as an eLux plug-in. When the X52 emulation differs from X32 in appearance or function, this is noted.

For convenience, the manual is divided into the following sections:

Chapter	Description
1 Before You Begin	Manual conventions, overview of X32/X52 functions and features
2 Getting Started	System requirements, detailed instructions on installing and starting X32/X52
3 Licensing	How to enter a license
4 Connections and Sessions	Connecting and disconnecting sessions, setting connection and session parameters
5 Programming Key Functions	Programmable keys, user keys, keyboard mapping, releasing IBM functions
6 X32/X52 Functionality	Copy and paste, cursor options, color options, printing, changing font size, saving data transfer to diagnosis files

1.3 Conventions and Abbreviations

Conventions

The following are text formats and symbols that appear in the manual:

Convention	Description
→	Refers to a procedure.
>	Move to a menu.
“ ... ”	Quotation marks refer to screen text and text in pop-up dialog boxes.

ALL UPPERCASE	Represents keyboard keys (for example, ENTER, F4, CTRL).
Bold	Indicates boxes and buttons, column headings, dialog box titles, lists, menu names and menu commands and new terms.
Courier New	The Courier New font represents entries you can type at the command line and directory names.
<Italics>	Indicate a placeholder for information or parameters that you must enter. As an example, if the procedure asks you to type <IP address>, you must type the actual IP address. Italics can also refer to book titles.

Commonly-Used Abbreviations

The following are terms that appear in the manual:

Abbreviation	Description
IP address	Internet Protocol address. IP addresses are represented in four 3-digit groups separated by periods. <i>Example:</i> 192.45.85.1
TCP	Transmission Control Protocol

1.4 Finding More Information

This manual contains conceptual information, installation and configuration instructions for X32/X52 as a stand-alone program and as an eLux plug-in. Additional information is available from the following sources:

- The *X32 – 3270 / X52 -- 5250 for Motif Administrator's Guide* for previous releases of X32 and X52
- The *eLux Administrator's Guide* for information on using X32/X52 as a plug-in with the Thin Client software Embedded Linux (eLux®), which generates the configuration file automatically
- The *Felics Administrator's Guide* for information on the license server

This guide as well as other X32/X52 documentation is available in Adobe PDF format. It can be found in the following locations:

- The documentation folder on your eLux CD-ROM
- The product documentation library at www.mylux.com

1.5 X32/X52 on the World Wide Web

UniCon offers online technical support at www.unicon-ka.de. This includes the following:

- PDF versions of the documentation
- Downloadable software
- The latest updates and hotfixes for download
- A list of supported hardware

To access the site you must complete a one-time, free registration.

1.6 Overview

What is X32/X52?

For everyone who wants to have a high-capacity UNIX workstation or an X terminal as a multifunctional workplace, X32/X52 now offers easier and more comfortable access to OS390/AS400. Our UNIX products can be used on all market-relevant UNIX systems.

- X32 for Motif is a complete emulation of a connection independent 3270 terminal.
- X52 for Motif is a complete emulation of a connection independent 5250 terminal.

This manual describes in detail how to configure and use the 3270/5250 emulations. Please be aware that UniCon TCP/IP coupling products (currently X32, X52, X97) installed as stand-alone programs require the Felics license server for dynamic licensing. (See section 2.2 Installation Procedure for information on installing Felics.)

X32/X52 Features

X32/X52 offer the following features:

- Printing hard copies, local hard copies, screen shot or to file
- 20 programmable keys that can easily be managed using the P Key Editor
- 20 user-defined keys that can easily be managed using the B Key Editor
- User-defined foreground and background colors
- Status line displaying line status, transaction state and cursor position
- System bar displaying connection name, time and connection state
- One-step connection using a mouse click
- Dynamic fonts
- Saving data transfer files for diagnosis
- Printing on a bypass line from an OS390 host

2 Getting Started

This chapter contains the introductory information you need to get X32/X52 running.

Note This chapter contains installation information for X32/X52 as a stand-alone program. If you are using the emulation as an eLux plug-in, skip to section 2.5.

Section	Description
2.1 System Requirements	Operating system requirements needed to run X32/X52
2.2 Installation Procedure	Step-by-step instructions on how to extract X32/X52 from x32.tar/x52.tar and the different files that will be installed
2.3 Removing	How to remove X32/X52
2.4 Starting	How to start X32/X52 using command-line parameters
2.5 Main Window	A detailed description of the different screen elements
2.6 Closing	How to close X32/X52

2.1 System Requirements

X32/X52 has the following minimum system requirements:

- Stand-alone: Linux operating system (SuSE 7.0 or higher, or Red Hat 7.0)
X11 server
- Plug-in: Embedded eLux (eLux®)

2.2 Installation Procedure

Note The following section describes the installation procedure for X32/X52 as a stand-alone program. Installing X32/X52 as an eLux plug-in is done using the image definition file (*.idf). See the *eLux Administrator's Guide* and the *Elias Administrator's Guide* for more details. If you are using X32/X52 with eLux, please skip to section 2.5.

The installation file X32/X52 is available on the Internet. Download x32.tar/x52.tar from www.unicon-ka.de (click on "Service"). You need a password to download software. To obtain a password, please contact vertrieb@unicon-ka.de.

To install X32/X52, extract the archives on the root file system "/". Example:

```
cd /
```

```
tar xvf /tmp/x32.tar (or the disk drive as installed on your machine)
```

After installation, all files are found in /usr/u97.

Connecting to the Felics License Server

If you have not yet installed the UniCon license server, install it now (see the Felics manual). It is not included in the tar file. You must download it from www.unicon-ka.de (click on "Service"). You need a password to download software. To obtain a password, please contact vertrieb@unicon-ka.de.

Using the program /usr/felics/brandli (UNIX) or REMBRAND (Windows), enter the X32/X52 licenses you purchased.

Licensing information entered using Felics is valid for all UniCon terminal emulations (X32, X52, X97).

2.3 Removing

Note The following section describes the removal procedure for X32/X52 as a stand-alone program. Removing X32/X52 as an eLux plug-in is done using the image definition file (*.idf). See the *eLux Administrator's Guide* and the *Elias Administrator's Guide* for more details.

To remove, delete all the installed files in /usr/u97 (see section 2.2, "Installation Procedure"). Example:

```
cd /usr
```

```
rm -rf u97
```

2.4 Starting

Stand alone: Before starting X32/X52, check that the program directory of X32/X52 contains the environment variable PATH (by default, /usr/u97/bin). The first time X32/X52 starts, the directory .xemu is created in the user directory and the configuration files from the central data directory (/usr/u97/data) are copied to .xemu. The following command line parameters can be entered:

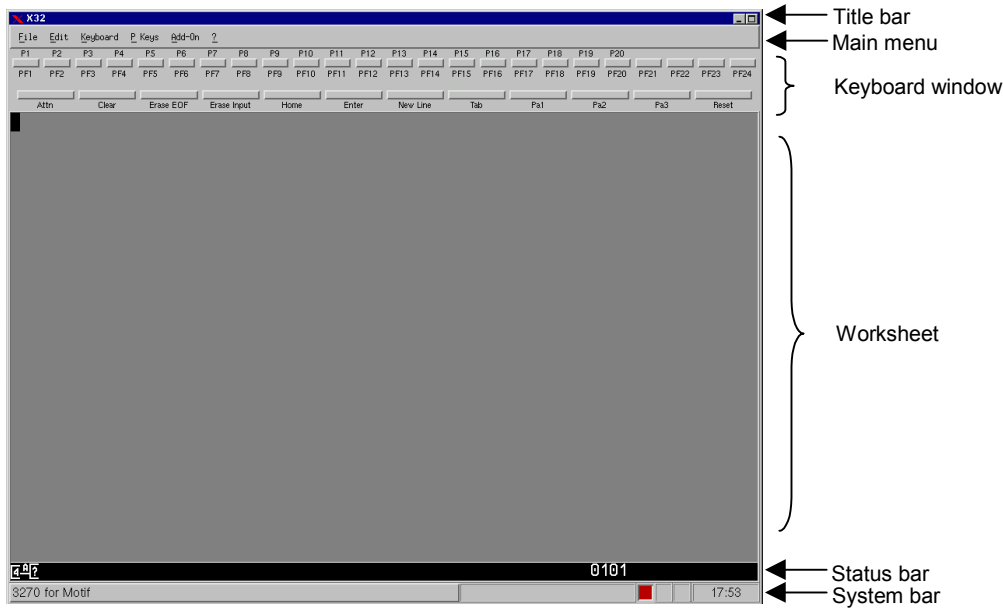
```
call: x32 -c <configuration file>
```

-c (optional) The name of a configuration file can be entered here. By default, X32/X52 uses the configuration file 3270.cfg/5250.cfg in the directory \$HOME/.xemu (see section 4.1 Configuration File). Do not enter a path or add the extension ".cfg" when calling a configuration file from the command line.

eLux plug-in: To start X32/X52 as an eLux plug-in, use the **Configuration** and **Application** tabs of the eLux starter. See the *eLux Administrator's Guide* for more information.



2.5 Main Window

Starting X32/X52 displays the main window, which contains the following elements:



Title Bar

Displays the session name, if a session name has been set (see “Session name” in section 4.3 Session Parameters, page 17).

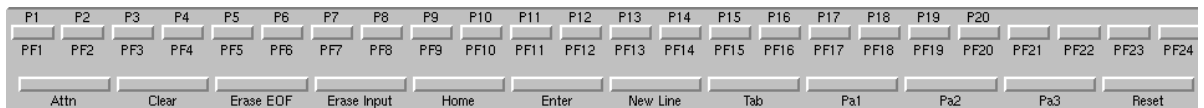
The two buttons in the right-hand corner adjust screen size. As a stand-alone program, the minimize button  minimizes the screen. (As an eLux plug-in, the minimize button works only when the eLux taskbar is turned on in the eLux starter: **Setup > Desktop > Taskbar**.) The full screen width button  toggles between full screen and the font width set in fonts, page 28.

Main Menu



The main menu contains six menus: **File**, **Edit**, **Keyboard**, **P Keys**, **Add-On** and **? Help**. To open a menu, click with the mouse. To navigate using the keyboard, press ALT and the underlined letter - for example, ALT + F for “File”.

Keyboard Window



The keys displayed are a copy of the 3270/5250 terminal keyboard and can be activated directly by clicking with the left mouse button. The keyboard is shown if the menu command **Add-On > Keyboard window** has been activated.

Worksheet

Click with the left mouse button to move the cursor to any position the application mask allows.







The NILS (array of dots) are shown if the menu command **Add-On > Show NILS** has been activated. The copy and paste feature is described in section 6.1 Copy and Paste.

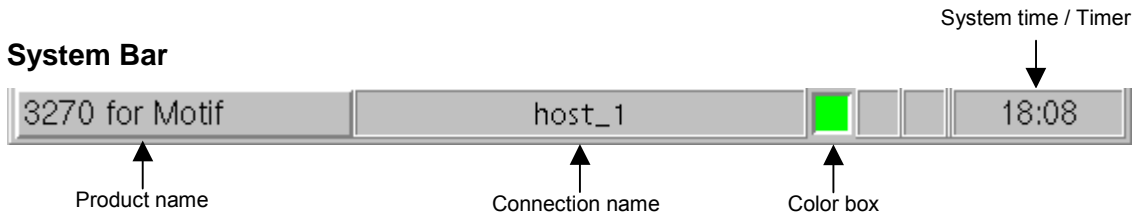
Status Line



The status line displays the line status when connected to a host. In addition, it displays the address of the cursor position (in the format: yyxx) if the menu command **Add-On > Show cursor position** has been activated.

Status Line Symbol Meaning

-  Input locked by host, wait until next message from host
-  A host response is running
-  User error, press Reset
-  Caps lock
-  Insert
-  Shift



Displays the product name, connection name, field mode (displayed for numerical fields) and time (licensed products) or timer (for products that are not yet licensed). The color box shows the state of the connection.

- red no connection
- yellow trying to connect
- green connection established

Quick connect: Double-click using the left mouse button on the color box to connect or disconnect.

2.6 Closing

To close X32/X52, use the file command **File > Close** or the keyboard equivalent ALT + 4.

ELux plug-in: Always close the emulation from within the application. Do not use the **Disconnect** button in the eLux starter when connected to a host! The LU name remains occupied!

3 Licensing

X32/X52 is a licensed product that must be purchased. As a stand-alone program, licensing takes place via the Felics license server. See section 2.2 Installation Procedure for more information.

This chapter describes the licensing procedure for X32/X52 as an eLux plug-in.

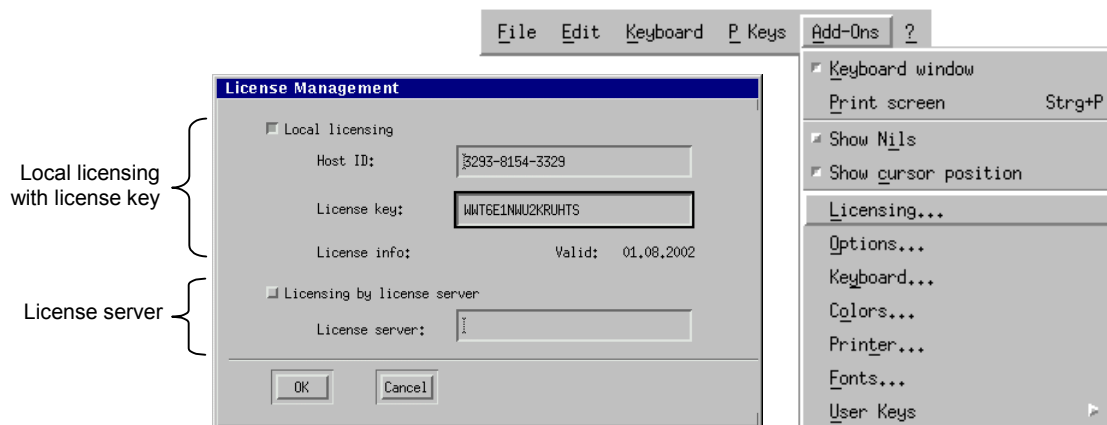
Section	Description
3.1 Licensing Using the Scout eL Management Tool	How to use the Scout eL management tool to enter an X32/X52 license
3.2 Licensing at the Thin Client	How to use the X32/X52 emulation to enter a license server or a limited validity license key
3.3 No License	How to use X32/X52 without a license for testing purposes

3.1 Licensing Using the Scout eL Management Tool

If you use the Scout eL management tool, the easiest way to enter a license is using Scout eL. Enter the X32/X52 license using Scout eL menu command: **Options > License information**. (See the *Scout eL Administrator's Manual* for step-by-step instructions on how to enter licenses.) When using Scout eL, the license is automatically transferred to the emulation and the X32/X52 menu command **Add-On > Licensing** is disabled.

3.2 Licensing at the Thin Client

To enter a license at the Thin Client, you must start the emulation. Open the **License Management** dialog box using the X32/X52 menu command **Add-On > Licensing**.



Local Licensing

For testing purposes, you can obtain a license key from UniCon with limited validity. Enter the local license key using the X32/X52 menu command **Add-On > Licensing**. The duration of the testing period is displayed after "Valid" (dd.mm.yyyy).

License Server

If your organization uses a Felics license server, enter the license server name (or IP address).

3.3 No License

X32/X52 is a licensed product that must be purchased. However, by default it can be used for 15 minutes with full functionality without a license for testing purposes. The 15 minutes begin when you connect to a host. The time remaining is displayed in the status line (bottom right-hand corner).

After 15 minutes, a message appears saying your time has expired. The status line changes to red lettering on a black background for 30 seconds. This additional time is provided to allow you to log off from the host before the emulation ends.

4 Connections and Sessions

This chapter describes the how to establish and end a connection, and the required session and connection parameters.

Section	Description
4.1 Configuration File	A description of the configuration file (3270.cfg/5250.cfg), and how to open and save.
4.2 Connection Parameters	A detailed description of how to set connection parameters (3270.tcp/5250.tcp).
4.3 Session Parameters	A detailed description of how to set session parameters.
4.4 Connecting	Mouse, menu and keyboard commands for establishing a session.
4.5 Disconnecting	Mouse, menu and keyboard commands for disconnecting a session.

4.1 Configuration File

X32/X52 administrates all session data in a configuration file. By default this is:

- \$HOME/.xemu/3270.cfg for X32 (stand alone)
- \$HOME/.xemu/5250.cfg for X52 (stand alone)
- /setup/xemu/3270.cfg for X32 (eLux plug-in)
- /setup/xemu/5250.cfg for X52 (eLux plug-in)

This allows you to customize the emulation's appearance and behavior to your needs as well as activate the start parameters. A configuration file must contain:

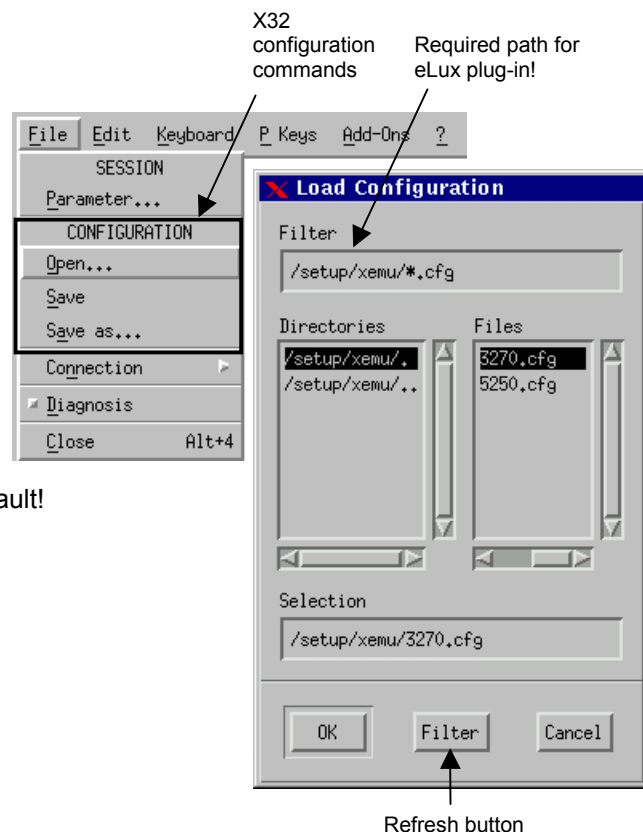
- General session parameter
- Link to a connection from the connection file. See 4.2 Connection Parameters
- Link to programmable keys (for example, 3270.pt/5250.pt). See 5.1 Programmable Keys (P Keys)
- Link to user keys (for example, 3270.bt/5250.bt). See 5.2 User Keys (B Keys)
- Link to a keyboard file (for example, 3270.kbd/5250.kbd). See 5.3 Keyboard Mapping
- Link to a trimodal keyboard file (for example, 3270tri.kbd/5250tri.kbd). See 4.3 Session Parameters, page 22.
- Link to a color file (for example, 3270.frb/5250.frb). See 6.3 Colors

Open Configuration

The menu command **File > CONFIGURATION > Open** allows you to load a different configuration file. Enter the path and configuration file name in the **Load Configuration** dialog box. When you load a configuration file, existing X32/X52 settings are deleted and any existing connection is ended.

Stand-alone: The default path is \$HOME/.xemu.

eLux plug-in: The default path is /setup/xemu. The path must be the default!



Save Configuration

The menu command **File > CONFIGURATION > Save Configuration** allows you to save the X32/X52 parameters to the currently loaded configuration file, for example, \$HOME/.xemu/3270.cfg or \$HOME/.xemu/5250.cfg for stand alone or the default /setup/xemu/3270.cfg or /setup/xemu/5250.cfg for an eLux plug-in.

Save Configuration As

Stand alone: The menu command **File > CONFIGURATION > Save as** allows you to save the settings to a new configuration file. Enter the name of the configuration file in the **Save Configuration** dialog box. You must enter the extension “.cfg”.

ELux plug-in: The path must be the default /setup/xemu.

4.2 Connection Parameters

Connection Name

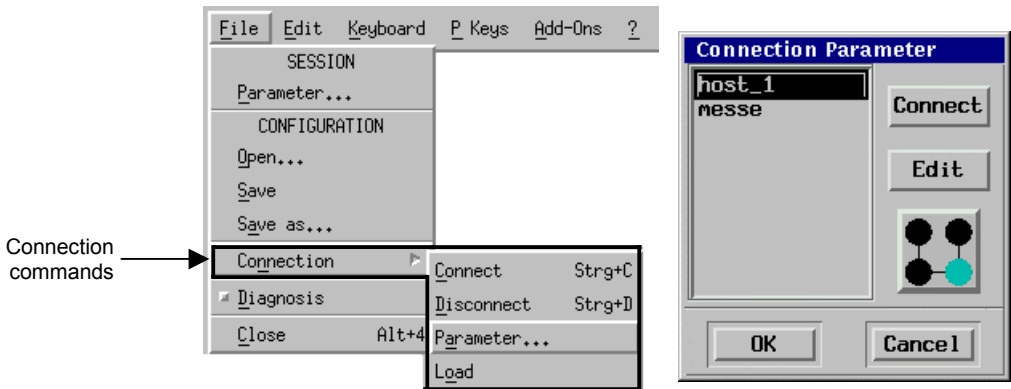
Before connecting to a host, you must define a name for the connection. All connections with the relating parameters are saved in the file 3270.tcp/5250.tcp by their names. The connection parameter file name (3270.tcp/5250.tcp) cannot be changed.

Connection Parameters

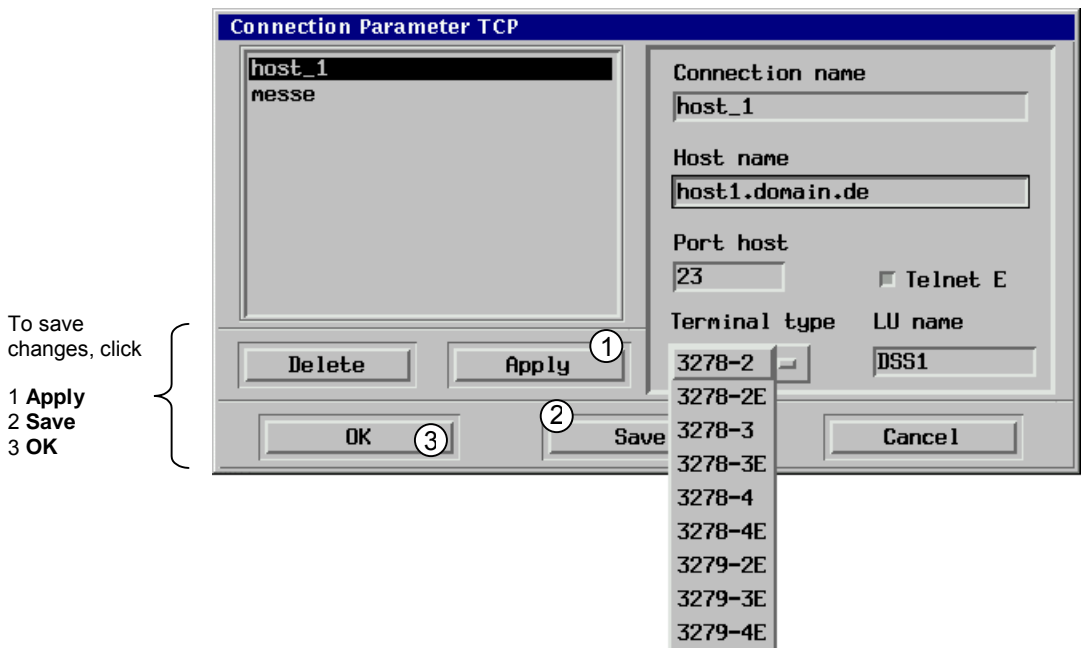
To change the parameters of a connection or to start a certain connection, use the **Connection Parameter TCP** dialog box.

→ To define parameters for a new connection:

1. Use the menu command **File > Connection > Parameter** to open the **Connection Parameter** dialog box.



2. Click **Edit** to open the **Connection Parameter TCP** dialog box.



- In the **Connection Parameter TCP** dialog box enter the following:

Connection name	Enter an arbitrary name for the connection.
Host name	Enter the name of the LAN channel adapter or a similar system. Enter the IP address only if the name is not known.
Port host	Enter the port number at which the host can be reached. Use 23 unless otherwise configured.
Terminal type	Click to select the type of emulation. See section 8.1 Screen Size, for information on the different screen sizes and 7.2 Troubleshooting for information on resolving screen distortion. Note that for terminal types with the extension “-E”, the Telnet E checkbox must be selected.
LU name	X32: Enter the LU name as provided by your host administrator. X52: Enter the device description as provided by your host administrator.
Telnet E	Click to select for the extended telnet protocol.

If you are uncertain what a parameter should be, ask your OS390/AS400 system administrator.
- Click **Apply**, **Save** and **OK**.

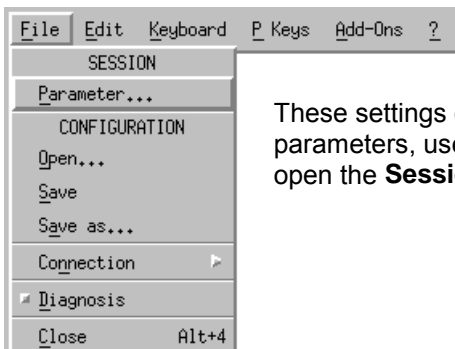
Apply transfers the settings made on the right-hand side of the dialog box to the connection list on the left-hand side, identifying them by connection name. **Save** saves your connection modifications to the file 3270.tcp/5250.tcp.

To remove a connection, in the **Connection Parameter TCP** dialog box select the connection name and click **Delete**. Click **Save** to save the changes and then **OK**.

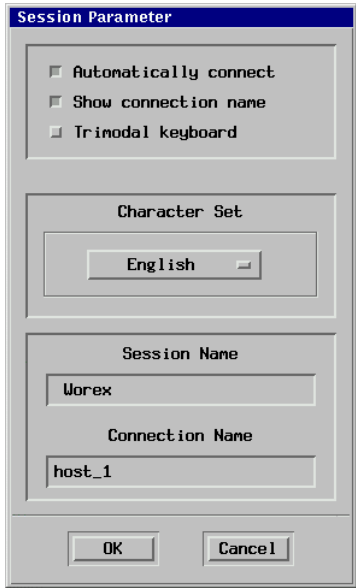
Restoring Previous Settings

The menu command **File > Connection > Load** loads the connection parameters and overwrites the current connection parameters. This allows you to restore the original settings if connection parameters were modified but not saved.

4.3 Session Parameters



These settings define data relevant to a session. To adjust the session parameters, use the menu command **File > SESSION > Parameter** to open the **Session Parameter** dialog box.

Automatically connect	Select this check box to automatically start a session when X32/X52 starts using the connection entered in Connection Name .	
Show connection name	Select this check box to display the connection name in the system bar when connected to a host.	
Trimodal keyboard	Select this check box to support the K235 keyboard.	
Character Set	Select the character set from the drop-down list to display special characters such as ñ, ü, ä, ö, [, etc. The default is ASCII.	
Session Name	The text entered in this box is displayed in the title bar.	
Connection Name	Enter one of the connection parameter configurations you defined in section 4.2 Connection Parameters. To select a connection parameter configuration, place the cursor in the box and press any key. This opens the Connection Parameter dialog box. Select the desired connection parameter configuration and click OK in the Connection Parameter dialog box. Your selection is entered automatically.	

To save your changes permanently, the X32/X52 configuration file must be saved using the menu command **File > CONFIGURATION > Save**. The **Trimodal keyboard** and **Character Set** session parameters must be configured before you open a connection to take effect.

4.4 Connecting

There are several different ways to establish a connection.

Mouse	In the status bar, double-click with the left mouse button on the red color box. This connects using the currently defined connection parameters.
Menu	Use the menu command File > Connection > Connect or File > Connection > Parameter . This opens the Connection Parameters dialog box, which lists all currently defined connection names. Select a defined connection and click Connect .
Keyboard	Press CTRL-C. Note: You must have entered a connection name in the session parameter (File > SESSION > Parameter > Connection Name) as described in section 4.3 Session Parameters and saved the configuration (File > CONFIGURATION > Save).

When a connection has been established, the status bar color box is green.

4.5 Disconnecting

There are several different ways to disconnect:

Mouse	In the status bar, double-click with the left mouse button on the green color box.
Menu	Use the menu command File > Connection > Disconnect .
Keyboard	Press CTRL-D.

When a connection has been disconnected, the status bar color box is red.

5 Programming Key Functions

This chapter describes how to program the P keys, B keys and keyboard mapping.

Section	Description
5.1 Programmable Keys (P Keys)	How to edit, load and save P keys using the P Key Editor
5.2 User Keys (B Keys)	How to edit, load and save B keys using the B Key Editor
5.3 Keyboard Mapping	How to map keyboard functions using the integrated keyboard compiler
5.4 Keyboard	How to release IBM functions

5.1 Programmable Keys (P Keys)

X32/X52 offers 20 **programmable keys** (the so-called “P keys,” P1 to P20) that can be easily mapped using the P Key Editor.

In addition, the emulation offers an additional 20 **user keys** (the so-called “B keys,” B1 to B20) that can be easily mapped using the B Key Editor (see section 5.2 User Keys (B Keys)).

Use the menu command **P Keys > Load / Save** to load or save P key mapping files (*.pt).

Loading P Keys

From X32/X52, use the menu command **P Keys > Load** to load P key mappings. The file has the extension ".pt".

Saving P Keys

From X32/X52, use the menu command **P Keys > Save** to save a P key mapping file. You must enter the extension ".pt".

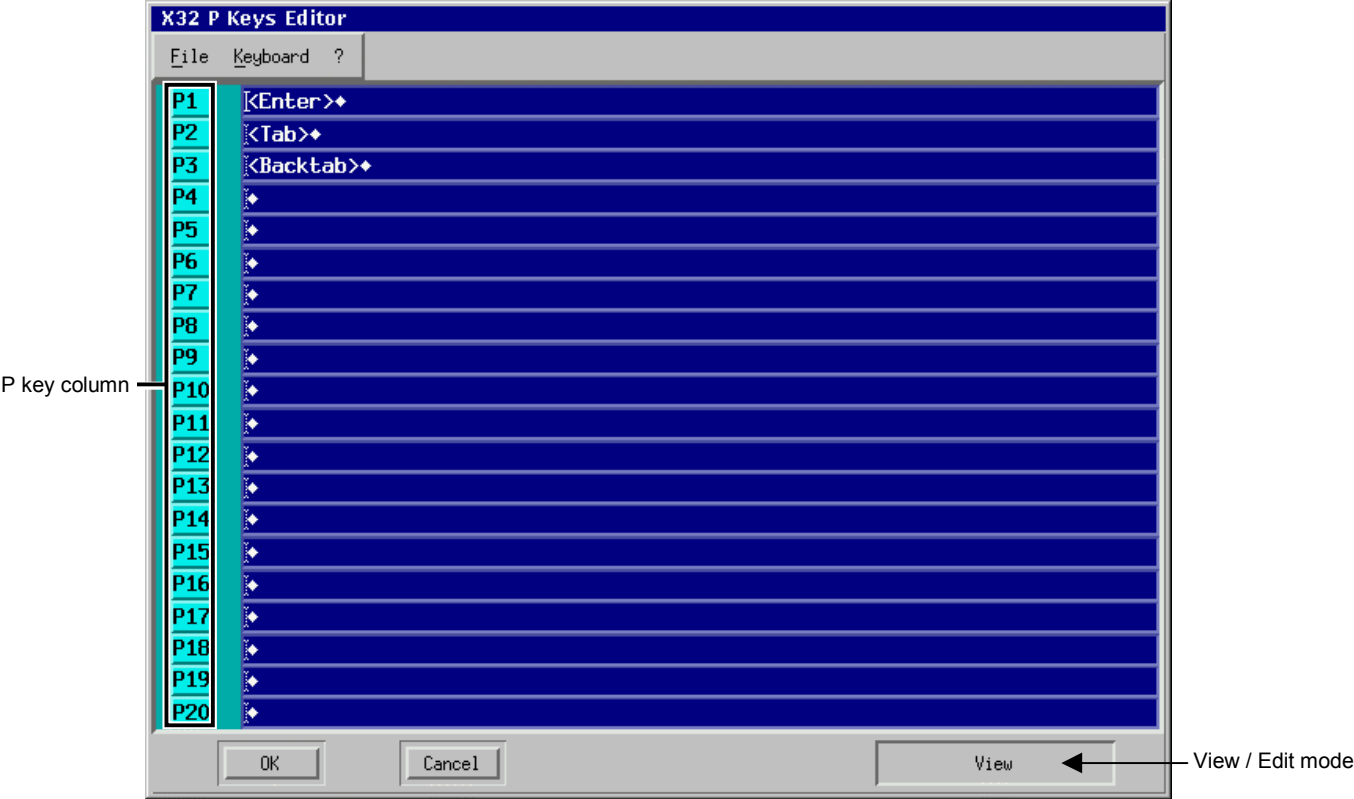
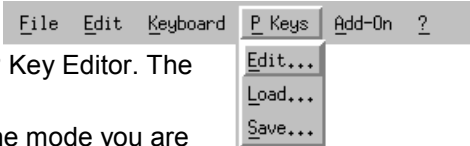
Stand-alone: The default path is \$HOME/.xemu.

ELux plug-in: The default path is /setup/xemu. The path must be the default!

P Key Editor

Use the menu command **P Keys > Edit** to open the P Key Editor. The currently defined P keys are shown.

The P Key Editor offers two modes: View and Edit. The mode you are in is shown in the lower border.



View Mode

To enter View mode, in the P Key Editor:

- click with the left mouse button on a P key in the P key column
- or press the corresponding P key on the keyboard.

The cursor jumps to the P key line, but the line is not highlighted.

In View mode you can place the cursor anywhere within the keyboard mapping and delete single characters. Cursor right and cursor left (← →) move the cursor within the current keyboard mapping. Single characters may be deleted by delete key (DEL).

Edit Mode

To enter Edit mode, in the P Key Editor:

- double-click with the left mouse button on a P key in the P key column
- or press the corresponding P key on the keyboard twice.

If you are already in the View mode, enter Edit mode with another left mouse click on the P key or pressing the P key on the keyboard again, or by means of the Insert function. (INS key)

In Edit mode, any key you press is added to the P key mapping. From within the P Key Editor, the **Keyboard** menu allows you to map IBM functions to a P key.

Each P key can save up to 512 characters. If you wish to extend this limit, the last character in a P key may be another P key to continue the first.

Return to View mode by clicking the P key again or by clicking on a different P key.

Loading P Keys

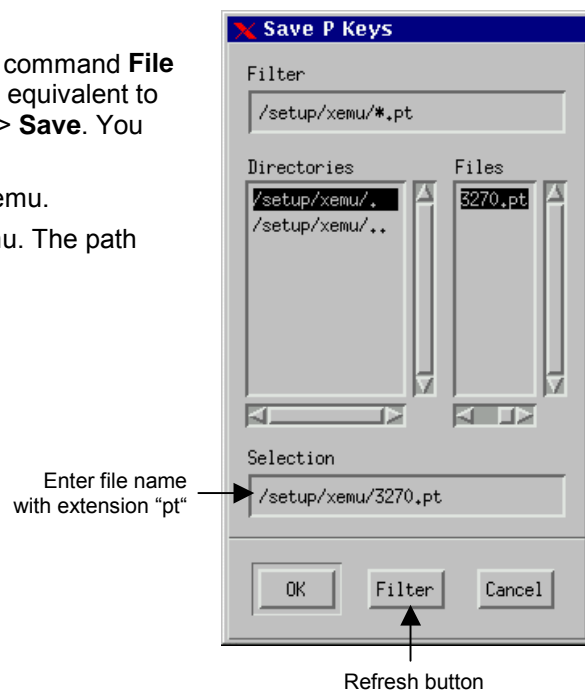
From within the P Key Editor, use the menu command **File > Load** to load P key mappings. This is equivalent to the X32/X52 main menu command **P Keys > Load**. A P keys file has the extension ".pt".

Saving P Keys

From within the P Key Editor, use the menu command **File > Save** to save a P key mapping file. This is equivalent to the X32/X52 main menu command **P Keys > Save**. You must enter the extension ".pt".

Stand-alone: The default path is \$HOME/.xemu.

ELux plug-in: The default path is /setup/xemu. The path must be the default!



Activating Changes for the Current Session

To exit the P Key Editor, click **Cancel** to discard changes or **OK** to activate the changes. When you click **OK**, the keyboard mapping is valid for the current session. To save the changes permanently, use the menu command **File > Save** from within the P Key Editor or the X32/X52 main menu command **P Keys > Save**.

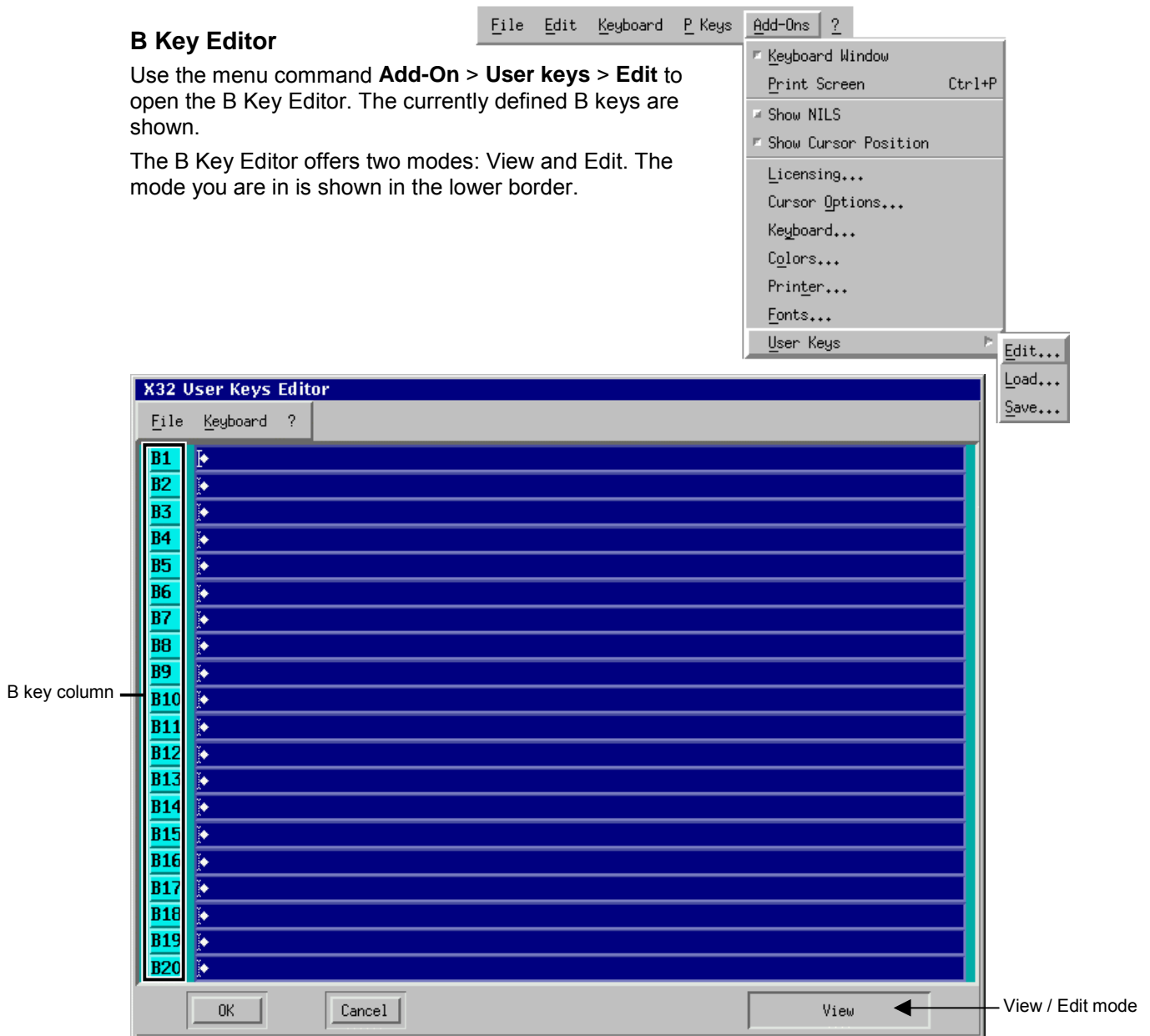
5.2 User Keys (B Keys)

The B-keys represent 20 additional P keys that can be mapped arbitrarily by the user and saved in files with the extension “.bt”.

B Key Editor

Use the menu command **Add-On > User keys > Edit** to open the B Key Editor. The currently defined B keys are shown.

The B Key Editor offers two modes: View and Edit. The mode you are in is shown in the lower border.



B keys are programmed and used identically as P keys. Using the B Key Editor is identical to using the P Key Editor (see section 5.1 Programmable Keys (P Keys)).

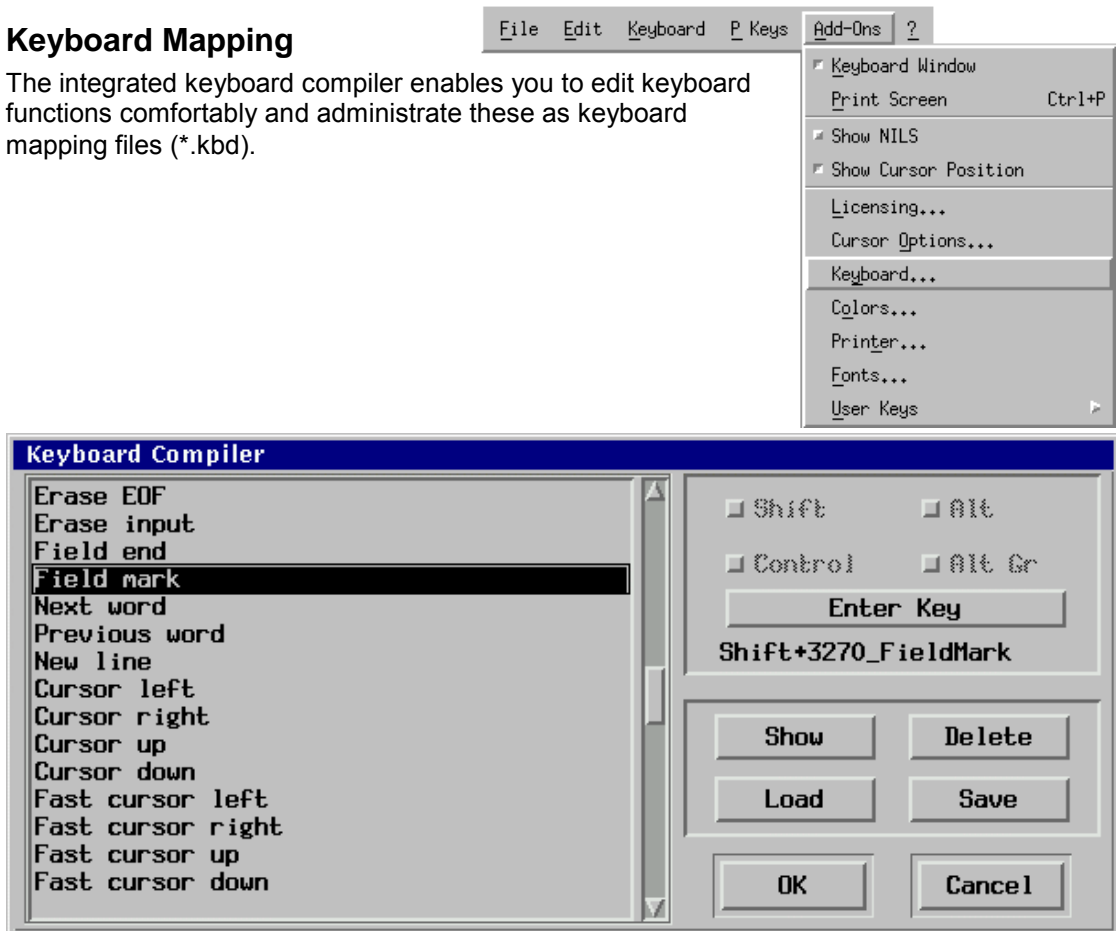
As is true for P keys, at any time B keys can be loaded (**Add-On > User keys > Load**) or saved to files (**Add-On > User keys > Save**). When saving, you must enter the extension “.bt”.

Stand-alone: The default path is \$HOME/.xemu.

ELux plug-in: The default path is /setup/xemu. The path must be the default!

5.3 Keyboard Mapping

The integrated keyboard compiler enables you to edit keyboard functions comfortably and administrate these as keyboard mapping files (*.kbd).



→ To map a key combination to a function:

1. Use the menu command **Add-On > Keyboard** to open the **Keyboard Compiler** dialog box.
2. Select the desired function (for example, “Field mark”) from the scroll-down list on the left-hand side of the dialog box. The right-hand side of the dialog box displays the corresponding key mapping (“Shift+3270_FieldMark”). No text appears if no key combination is assigned to this function.
3. Click **Enter key**. The text “Press shortcut” appears in the dialog box.
4. Press the combination of keys (shortcut) you want mapped to the function. The shortcut is displayed below “Enter Key”.
5. Click **OK**.

Local Functions

The following local functions must be mapped before they can be used.

Menu On/Off

Toggle that displays the main menu (**File, Edit, Keyboard, P Keys, Add-Ons, ? Help**).

Crosshair

Toggle that displays the crosshair. See 6.2 Cursor Options for information on configuring crosshair settings.

By default, for trimodal keyboards crosshair is mapped to the LINE key.

Hard Copy

Prints a hard copy using current printer settings. By default, hard copy is mapped to the PRINT key. See 6.4 Printing for information on configuring printer settings.

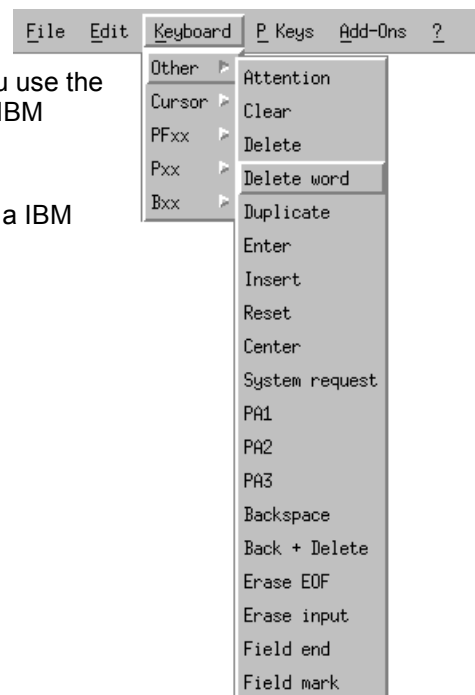
In addition, the keyboard compiler contains the following:

- Show:** Displays the entire key mapping list, which can be printed.
- Delete:** Erases the shortcut mapped to the currently selected function. Note: No confirmation box appears!
- Load:** Opens the **Keyboard File Load** dialog box, which allows you to choose the path and file name of a keyboard mapping file (*.kbd). When a keyboard mapping file is loaded, the mapping is activated within the emulation immediately. To assign a new key mapping to the emulation’s configuration, the configuration must be saved using the menu command **File > CONFIGURATION > Save**.
- Save:** Saves the current keyboard mapping to a keyboard mapping file. Note: You must enter the extension “.kbd”.
 Stand-alone: The default path is \$HOME/.xemu.
 ELux plug-in: The default path is /setup/xemu. The path must be the default!

5.4 Keyboard

When a key mapping is unknown, we recommend you use the menu command **Add-On > Keyboard** to release the IBM function.

Use the left mouse button to navigate through the hierarchically organized **Keyboard** menu. To release a IBM function, click on it with the mouse.



6 X32/X52 Functionality

This chapter describes the different features and settings of X32/X52.

Section	Description
6.1 Copy and Paste	How to copy and insert text
6.2 Cursor Options	How to set cursor and crosshair options
6.3 Colors	How to edit the foreground and background color files
6.4 Printing	How to print to a file, a local hard copy, hard copies, and the screen
6.5 Fonts	How to change the font size dynamically
6.6 ? Help Menu	How to use the help and emulation information functions
6.7 Resource File	How to set the value of certain parameters using the resource file

6.1 Copy and Paste

Note This feature is available only when the emulation is connected to a host.

This function allows you to copy data from the emulation screen (for example, article number) and insert it at another screen position or later in the work session.

→ To copy and insert text

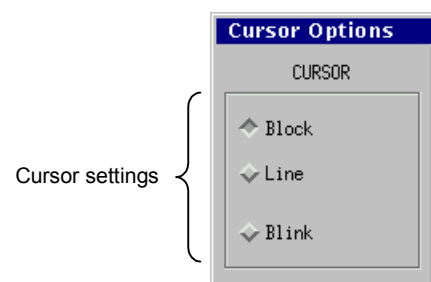
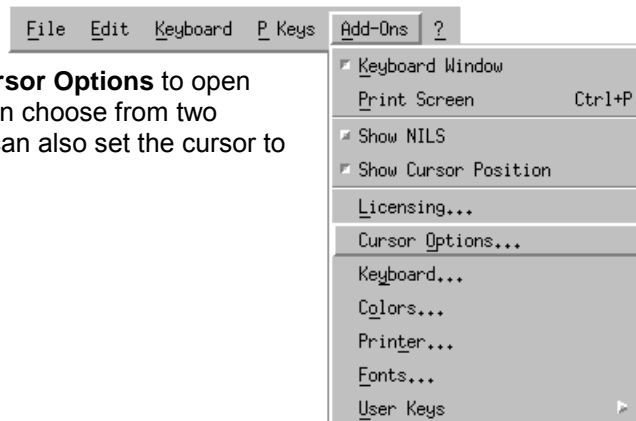
1. Use the left mouse button to select the desired text.
2. From the **Edit** menu, click **Copy**.
3. Move the cursor to the position you want to insert the text.
4. From the **Edit** menu, click **Paste**. The text is inserted, as long as the application mask permits this.

You can repeat the insertion procedure as often as you like.

6.2 Cursor Options

Cursor

Use the menu command **Add-On > Cursor Options** to open the **Cursor Options** dialog box. You can choose from two forms, a block rectangle or a line. You can also set the cursor to blink.



Crosshair

To use the crosshair function, the crosshair display control character must be mapped to a key.

→ To map crosshair to a key

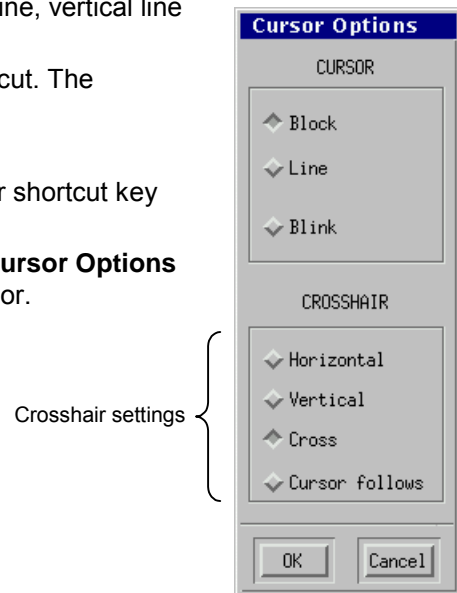
1. Use the menu command **Add-On > Keyboard** to open the Keyboard Compiler.
2. Select **Crosshair** from the left-hand window (may have to scroll down).
3. Click **Enter key**. The text “Press shortcut” appears.
4. Press a shortcut key. The text appears on the right-hand side. Click **OK**.

Trimodal keyboard: By default, crosshair is mapped to the LINE key.

→ To set the crosshair form

1. Use the menu command **Add-On > Cursor Options** to open the **Cursor Options** dialog box.
2. Select the crosshair form you want: horizontal line, vertical line or cross. Click **OK**.
3. In the worksheet, press the crosshair key shortcut. The crosshair is activated.
4. Type text. The crosshair does not move.
5. To deactivate the crosshair, press the crosshair shortcut key again.

Alternatively, select **Cursor follows** from the **Cursor Options** dialog to have the crosshair move with the cursor.

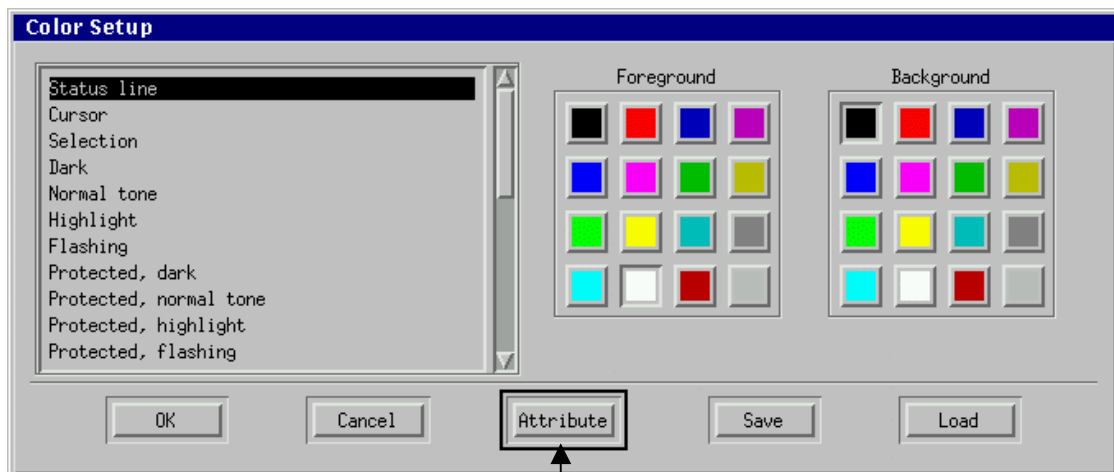
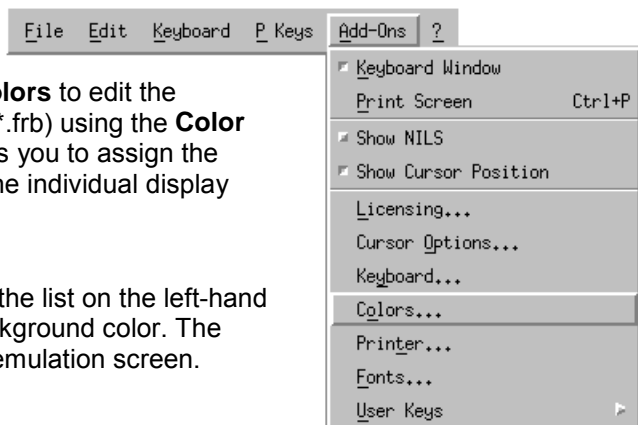


To save cursor/crosshair settings, the configuration must be saved using the menu command **File > CONFIGURATION > Save**.

6.3 Colors

Use the menu command **Add-On → Colors** to edit the foreground and background color files (*.frb) using the **Color Setup** dialog box. This dialog box allows you to assign the foreground and background colors for the individual display control characters.

Select the required field combination in the list on the left-hand side and assign the foreground and background color. The colors are mapped immediately on the emulation screen.



Attribute button

X32/X52 provides a useful automatic color attribute finder for when the field combination is unknown.

→ To use the automatic attribute finder function

1. Click **Attribute**. The **Color Setup** dialog box is hidden.
2. Move the mouse over text (do not click with the mouse!). The field combination currently assigned to the text is displayed in the system bar (bottom of the screen).
3. Click on text with the mouse. The **Color Setup** dialog box reappears and the field combination is automatically highlighted so it can easily be modified.

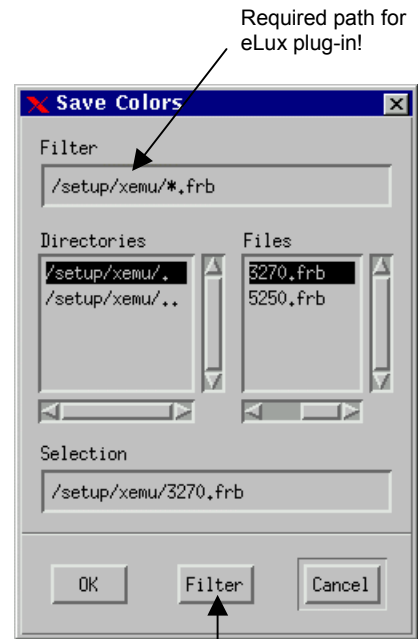
“Cursor” and “Selection” (selecting an area of text with the cursor for the copy function) cannot be reached using the color attribute finder. In this case, map them directly in the Color Setup.

Color mapping is administrated in an *.frb file, which you can load, modify or save at any time. When saving a color file, you must enter the extension “.frb”.

Stand alone: The default path is \$HOME/.xemu.

ELux plug-in: The default path is /setup/xemu. The path must be the default!

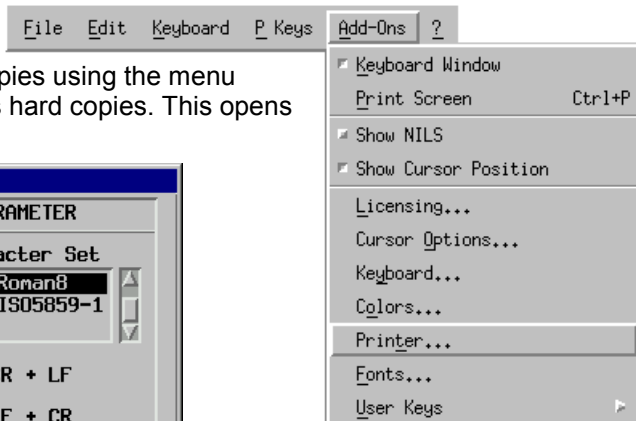
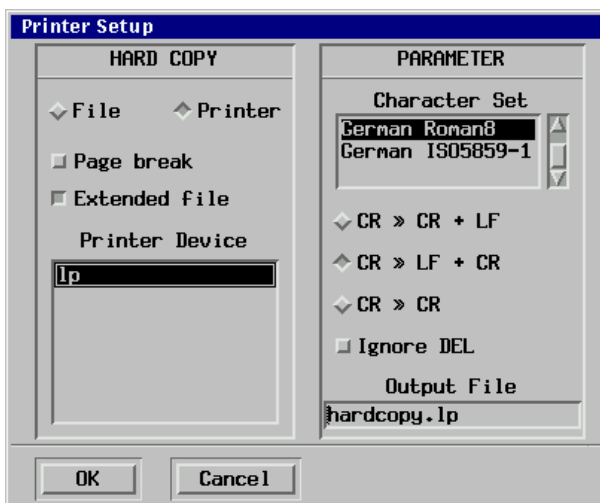
If the name of the color file has changed, the X32/X52 configuration file must be saved using the menu command **File > CONFIGURATION > Save**.



6.4 Printing

Printer Setup

In X32/X52, you can print local hard copies using the menu command **Add-On > Printer** as well as hard copies. This opens the Printer Setup.



File	Defines the output device. Click to select this checkbox to print to a file. See “Extended file” and “Output file” below.
Printer	Defines the output device. Click to select this checkbox to print to a printer.
Page break	Adds FF (form feed) to page end.
Extended file	When this checkbox is selected, when printing to a file the data is appended. Otherwise the file is truncated.
Printer Device	Displays a list of all known UNIX printers. Choose one.
Character Set	Displays a list of all character sets supported by the printer. Choose one.
CR >> CR + LF	The character CR (carriage return) will be converted into the characters CR and LF (line feed).
CR >> LF + CR	The character CR (carriage return) will be converted into the characters LF (line feed) and CR.
CR >> CR	The character CR (carriage return) will not be changed.
Ignore DEL	The character DEL will not be transmitted to the output device.
Output file	Name of the output file, if the File checkbox has been selected above. Stand alone: By default, the file is saved to \$HOME/.xemu/hardcopy.lp. ELux plug-in: By default, the file is saved to /setup/xemu/hardcopy.lp. Note Do not enter a path! The file must be printed to the default path. Do not use /tmp/<file path>!

PRINT Key Mapping

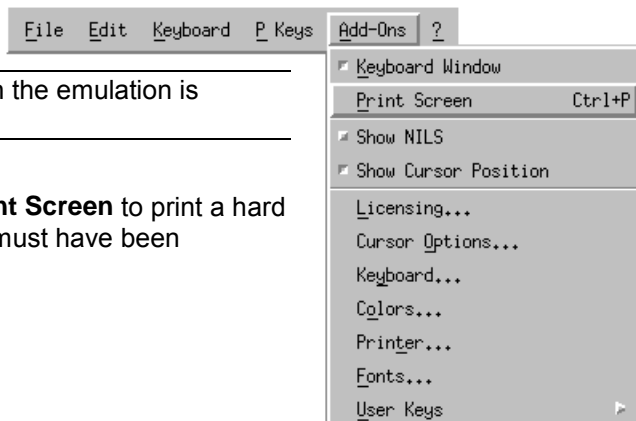
By default, the local function “hard copy” is mapped to the PRINT key (see 5.3 Keyboard Mapping). Printer settings must be configured before using the key.

Print Screen

Note This feature is available only when the emulation is connected to a host.

Use the menu command **Add-On > Print Screen** to print a hard copy of the worksheet. Printer settings must have been configured previously. See 6.4 Printing.


Keyboard shortcut: CTRL – P.

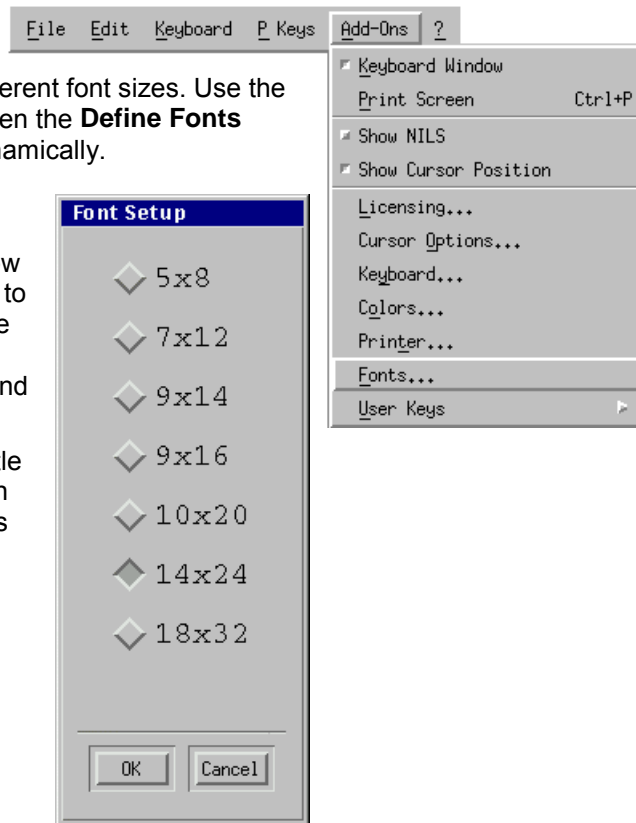


6.5 Fonts

By default, X32/X52 provides seven different font sizes. Use the menu command **Add-On > Fonts** to open the **Define Fonts** dialog box and change the font size dynamically.

When a font size is selected, the main screen size automatically adjusts to allow you to preview your selection. Click **OK** to assign the font size to X32/X52. To save your changes to the X32/X52 configuration file, use the menu command **File > CONFIGURATION > Save**.

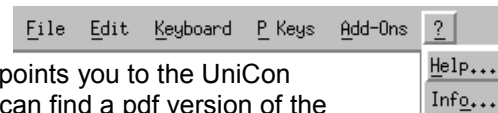
The full screen width button  in the title bar (upper right corner) toggles between full screen and the font width set in fonts (see Title Bar, page 4). In full screen mode, the font size is set automatically.



6.6 ? Help Menu

Help

Clicking ? > **Help** starts the Netscape browser and points you to the UniCon documentation page (www.mylux.com). Here you can find a pdf version of the X32/X52 manual.



Info

Clicking ? > **Info** displays the starting pop-up box which contains version information and release date.

6.7 Resource File

X32/X52 uses a resource file. In the resource file you can:

- enable/disable menus
- turn off the starting pop-up dialog box
- set the tone (beep)

eLux plug-in: The resource file is "Xdefaults" and located in the /setup area on the Thin Client. It can only be created using the Scout eL management tool.

→ To modify the resource file (eLux plug-in)

1. Open the resource file "Xdefaults" located in the Scout eL directory using a UNIX editor (for example, PFE32, included on your eLux CD).
2. Make the desired changes.
3. Transfer the resource file to the desired number of Thin Clients using the Scout eL "File List" function. See the *Scout eL Administrator's Manual* for more information.

You can use the system resource file located on the Thin Client as a template. It is located in:

```
/usr/X11R6/lib/X11/app-defaults/X32      : X32
/usr/X11R6/lib/X11/app-defaults/X52      : X52
```

Open a copy using a UNIX editor and make the desired changes. Do not edit text after the line "Do not edit below this line!"

Note When using the system resource file as a template for the emulation resource file, text below "Do not edit below this line" should not be changed!

Stand-Alone: The resource file is \$HOME/.Xdefaults and must be edited with a UNIX editor.

Following are several examples of X32 parameters.

Enabling/Disabling Menus

The first entries in the file are for menu operation and can be used to disable specific menus. For example, to disable the **File** menu:

```
! Menue File
x32.X32.appform.titlebar.datei.sensitive: False
```

Note Disabling a menu disables all menu commands contained in that menu. If you disable the **File** menu, the menu command **Close** is also disabled and the emulation can no longer be shut down!

Turning off the starting pop-up dialog box

When you first start the emulation, a dialog box appears on the screen with the version number and release date. To turn off the starting pop-up dialog box, set:

```
X32.infobox: False
```

Setting tone

To set the beep values:

```
X32.volume: 60           : Volume. Allowed values: 0 to 100
X32.tone: 2000           : Frequency (in Hertz)
X32.time: 300            : Length (in milliseconds)
```

Setting Parameters for X52

X32 and X52 parameters are defined in the same Xdefaults file. To define X52 parameters, replace "x32" with "x52" in the examples above.

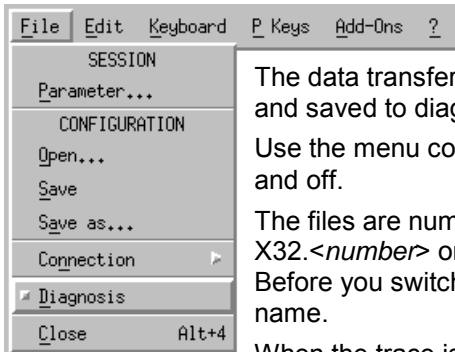
```
! Menue File           : Enabling/Disabling Menus
x52.X52.appform.titlebar.datei.sensitive: False

X52.infobox: False     : Turning off the starting pop-up dialog box

X52.volume: 60         : Setting tone
X52.tone: 2000
X52.time: 300
```

7 Troubleshooting

7.1 Diagnosis



The data transfer between X32/X52 and OS390/AS400 can be traced and saved to diagnosis files.

Use the menu command **File > Diagnosis** to switch the data trace on and off.

The files are numbered and saved in the folder /tmp. The files are named X32.<number> or X52.<number>, where <number> begins with "000". Before you switch on the diagnosis you should delete all files with this name.

When the trace is finished, the diagnosis function must be deactivated.

ELux plug-in: The emulation menu command **Diagnosis** creates the trace files. The eLux starter can be used to send these trace files to the destination of your choice (**Setup > Diagnostics > X-Emulation files**).

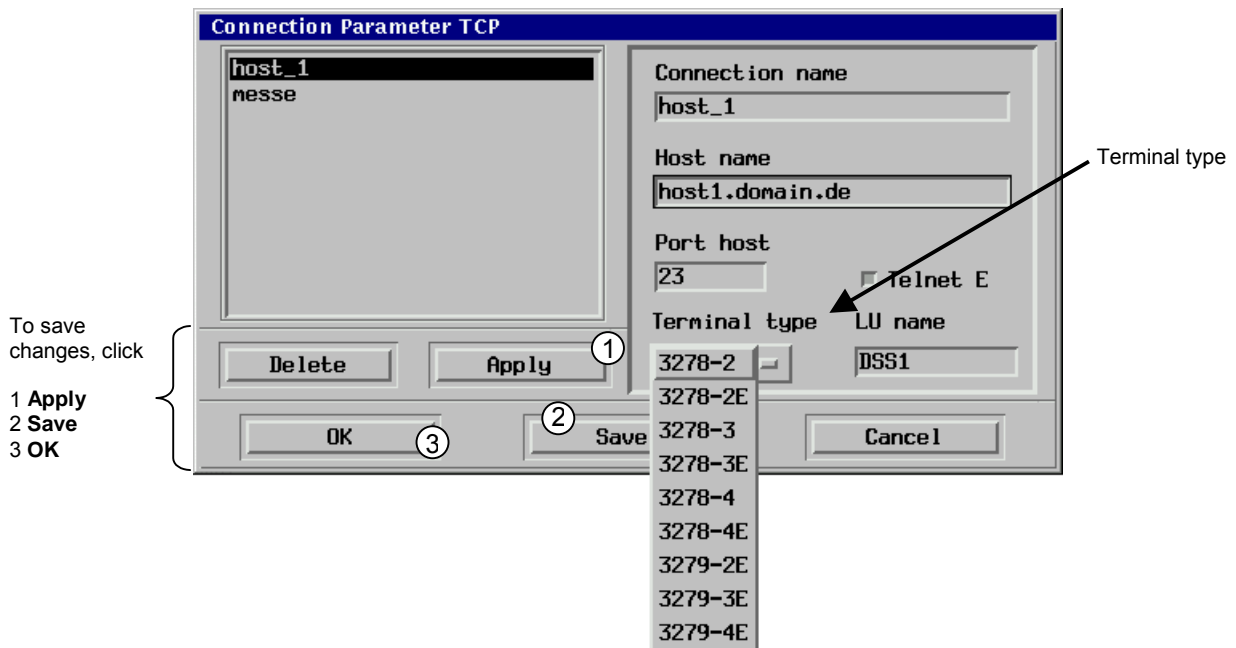
7.2 Screen

X32, Stand Alone and Plug-In

If you change the terminal type during an X32 session and continue working, you may experience screen distortion. To avoid this, when changing terminal type use the following procedure:

→ To change terminal type in X32

1. Open the **Connection Parameter TCP** dialog box using the menu command **File > CONFIGURATION > Connection > Parameter > Edit > Terminal Type**. Change the terminal type. Click **Apply > Save > OK**.



2. Save your changes to the X32 configuration file by using the menu command **File > CONFIGURATION > Save**.



3. Restart the emulation! Screen size settings are sent to the host when the emulation starts. Different emulation types have different screen sizes. If you continue to work and do not restart, you may experience screen distortions.

See 8.1 Screen Size for the different screen sizes and terminal types.

X52, Stand Alone and Plug-In

It is not necessary to restart the X52 emulation when you change the terminal type in the **Connection Parameters TCP** dialog box during a session. However, you must click **Apply > Save > OK** and you must disconnect and reconnect.

7.3 Save Configuration File As

X32/X52, Plug-In

As an eLux plug-in, by default the required configuration file path must be /setup/xemu! (This is not true for the stand-alone program.) This is due to flash size constraints on the Thin Client. If you try to save configuration files to other directories, they will not be saved. No error message will be displayed.

8 Appendix

8.1 Screen Size

The **Connection Parameter TCP** dialog box offers several terminal types with different extensions. Different extensions have a different number of lines and columns in the emulation screen. The values are given below.

3270

Terminal types 3278, 3279

Extension	Lines x Columns
-2	24 x 80
-3	32 x 80
-4	43 x 80

- 3278-2
- 3278-2E
- 3278-3
- 3278-3E
- 3278-4
- 3278-4E
- 3279-2E
- 3279-3E
- 3279-4E

5250

All terminal types are 24 x 80 except for:

Terminal Type	Lines x Columns
3477-FC	27 x 132
3477-FG	27 x 132
3180-2	27 x 132

- 3179-2
- 3196-A1
- 5292-2
- 5291-1
- 5251-11
- 3477-FC
- 3477-FG
- 3180-2

9 INDEX

A

abbreviations · 5
 about
 manual · 4
 X32/X52 · 6
 automatically connect · 17

B

B keys
 about · 21
 editor
 about · 21
 loading · 21
 saving · 21
 loading · 21
 saving · 21
 background color · 26

C

CD-ROM, documentation · 5
 character set
 keyboard · 17
 printing · 28
 closing X32/X52 · 10
 color box, system bar
 meaning of colors · 10
 using to connect · 17
 using to disconnect · 17
 colors, setting · 26
 configuration file
 about · 14
 opening · 14
 saving · 14
 saving as · 15
 what must contain · 14
 connecting
 via color box · 17
 via keyboard · 17
 via menu · 17

connection name
 connection parameters · 15
 displaying in system bar · 10, 17
 entering in session parameters · 17
 connection parameters
 configuring · 15
 connection name · 15
 restoring previous settings · 16
 conventions used in manual · 4
 copying · 25
 crosshair options · 25
 cursor options · 25
 cursor position, show in status line · 10

D

diagnosing · 31
 disconnecting
 via color box · 17
 via keyboard · 17
 via menu · 17
 display
 fonts · 29
 main window · 9

F

features, X32/X52 · 6
 fonts, changing · 29
 foreground color · 26

H

hard copy, printing · 27
 help, information on X32/X52 · 5

I

installing
 Felics license server · 8
 X32/X52
 as eLux plug-in *See eLux Administrator's Manual*

as stand-alone program · 8

K

keyboard

mapping · 22

releasing IBM functions · 23

trimodal · 17

keyboard window · 9

L

licensing

entering local license key · 12

using without license · 12

via Scout eL management tool · 12

local hard copy, printing · 27

M

main menu

about · 9

copying and pasting · 25

main window · 9

mapping keyboard · 22

menu, about · 9

N

NILS · 10

P

P keys

editor

about · 19

Edit mode · 20

loading · 20

saving · 20

View mode · 20

loading · 19

saving · 19

pasting · 25

printing

choosing character set · 28

configuring settings · 27

hard copies · 27

printing (*continued*)

local hard copies · 27

page break · 28

print screen · 28

to file · 27, 28

R

releasing IBM functions · 23

removing X32/X52 · 8

requirements, system · 8

restoring previous connection settings · 16

S

session name

displaying in title bar · 9, 17

setting · 17

session parameters

about · 16

automatically connect · 17

character set · 17

displaying connection name in system bar · 17

entering connection name · 17

setting session name · 17

trimodal keyboard · 17

starting X32/X52 · 8

status line · 10

system bar

about · 10

connection name · 17

system requirements · 8

T

title bar, about · 9

trimodal keyboard, setting · 17

troubleshooting *See* · diagnosing

U

user keys *See* · B keys

W

window

keyboard · 9

main · 9
work area · See · worksheet
worksheet · 10
copy and paste · 25
fonts · 29

X

X32/X52

X32/X52 (*continued*)

about · 6
closing · 10
features · 6
removing · 8
starting · 8
system requirements · 8