

# **Manual, CIMREX Tools**

## Foreword

This manual presents installation and handling of CIMREX Tools.

Beside this manual, the following manuals are also available:

- CIMREX-terminals and CIMREX PROG, Manual

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All examples in this manual are used solely to promote understanding of how the program works and its operation. Beijer Electronics AB take no responsibility if these examples are used in real applications.



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# 1 Introduction

CIMREX Tools is a program package for Windows for transferring data files and system programs between the personal computer and the terminal. The program works under Windows 9x/2000/Me and NT.

The package contains the following programs.

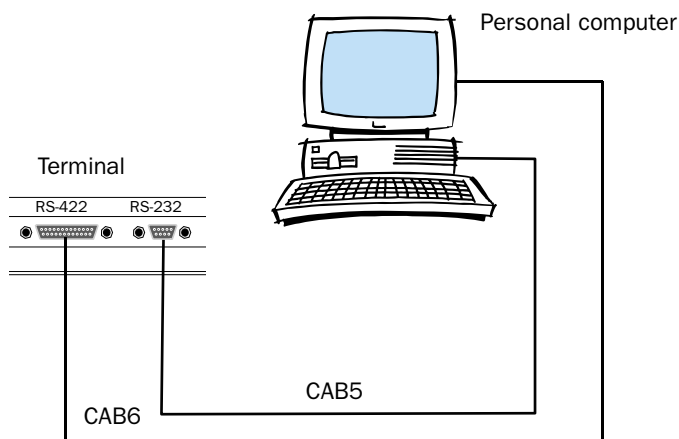
- CIMREX Tools File Transfer - Program for transferring trend curves, alarm list and recipe data between the terminal and a personal computer.
- CIMREX Tools System Loader - Program for loading a system program (OS) to the terminals.
- CIMREX Tools Connect - Program for handling modem settings for modem connection between a personal computer and a terminal and also program for handling Passthrough mode communication between a personal computer and a controller system via the terminal.
- CIMREX Tools FTP Client - Program for transferring trend curves, alarm lists, recipe data, html files, Java applets and bitmaps between a personal computer and a terminal via FTP (File Transfer Protocol).

## 2 Installation

The CIMREX Tools is supplied on a CD. Place the CD in your CD ROM drive and the setup of the programs will start automatically. If not, call up **RUN** from the **Start** menu and type D:\setup.exe (assuming D: is your CD drive name). Choose to install CIMREX Tools by clicking on the name and follow the instructions.

The setup will create icons to the CIMREX Tools programs in the CIMREX group. You will find the CIMREX Tools programs by clicking on **Start/Program/CIMREX**. The manual can be read directly from the CD by clicking on **Manuals**.

### 2.1 Connecting the terminal to a personal computer



Use the cable recommended in the driver manual for the selected controller system for connecting the controller system to the terminal.

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**Note!**

The power should be switched off during the connecting procedure.

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### 3 File Transfer

The program CIMREX Tools File Transfer is used for transferring recipes, alarm lists and trend files between the terminal and a personal computer.

Choosing **Start/Program/CIMREX/File Transfer** starts the software.

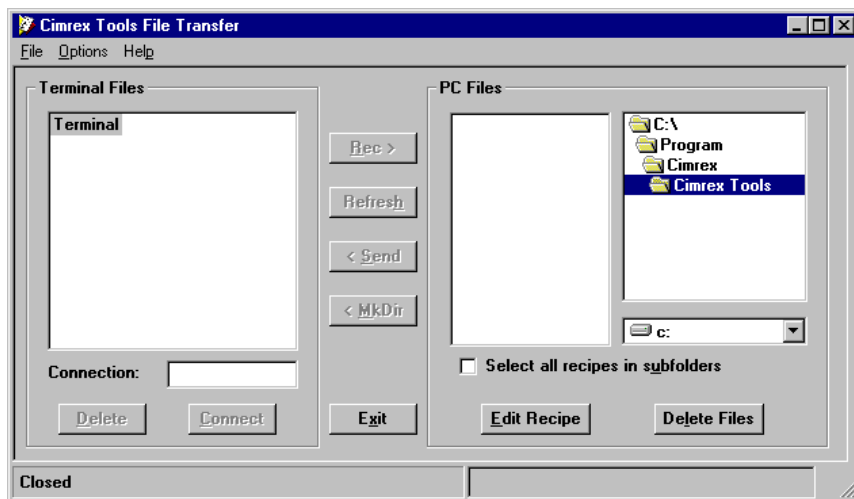
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**Note!**

The terminal must be running and connected to the personal computer.

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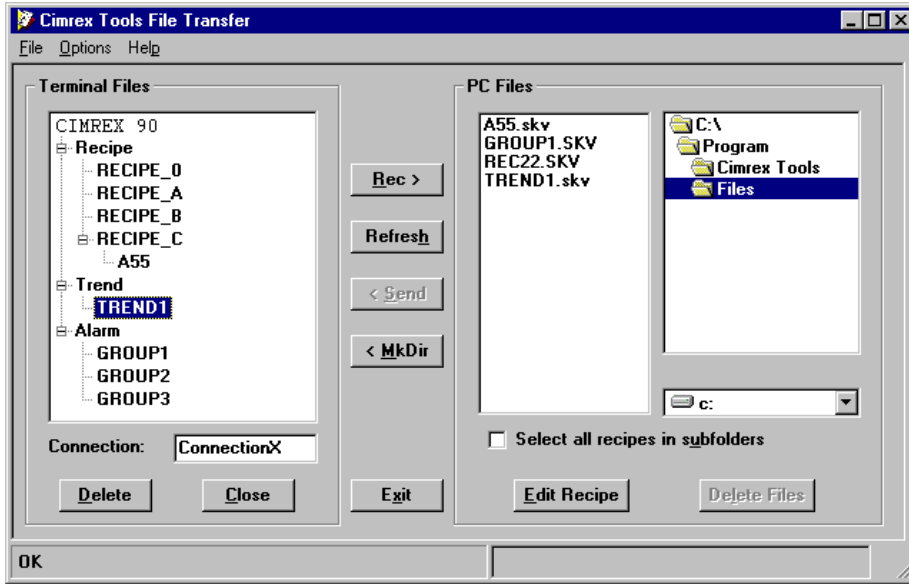
When the program is activated the following dialog is displayed.



Select **File/Save Settings** to save the currently selected drive and subdirectory as default setting in PC Files.

### 3.1 Transfer files from the terminal

The files in the terminal, trend, recipe files and alarm groups, are displayed in the **Terminal Files** window. You can transfer a separate file or all files in a directory (folder). Select the file or directory and press the **Rec** button to transfer the files to the personal computer.



#### Refresh

The function **Refresh** is used to update the windows **Terminal Files** and **PC Files**.

#### Make directory

In the **Recipe** directory it is possible to create new directories. Select the **Recipe** directory and press the button **Mkdir**. Enter the name for the new directory in the dialog (maximum 8 characters) and press **OK**.

#### Select directories/files

Select all directories and files by marking the uppermost directory, the directory named as the terminal. If you mark the directory **Recipe**, **Trend** or **Alarm** you select all files in the marked directory. You can also select separate files.



Click on the + character to open a directory and show underlying directories and files.

Click on the - character to close a directory.

With the **Delete** function you can delete files in the terminal.

## 3.2 Transfer files to the terminal

The files in the personal computer are displayed in the **PC Files** window. Only recipe files can be transferred to the terminal. Click on the files in the **PC Files** window to select one or more files. Select the **Recipe** directory in the **Terminals Files** window. Then press **Send** to transfer all marked files to the terminal. The function **Delete Files** is used to delete selected files in the **PC Files** window.

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### Note!

It is only the recipe files that can be transferred from the personal computer to the terminal.

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## 3.3 Edit recipes

The function **Edit Recipe** is used to edit (create) recipe files. Select the recipes file in the **PC Files** window and press **Edit Recipe**.

### Menu commands

New Recipe	Clear all fields and start a new recipe.
Open Recipe	Opens an existing recipe.
Save Recipe	Save the recipe to disk.
Open Template	Opens an existing template.
Save Template	Save the template text to a template file.
Convert recipe	Convert this recipe to new format 2.
Exit	Closes the edit dialog.
Help	Display help file.

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### Note!

The setting **File/Save Extended Format** should not be checked when using FTP transfer.

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## Functions

Delete Row	Delete a row in the recipe.
Insert Row	Insert a new row in the recipe.
Exit	Closes the edit dialog.

## Format 1

Format 1 is used in older terminal versions (older version of recipe). The recipe data is show in the 2 rightmost columns.

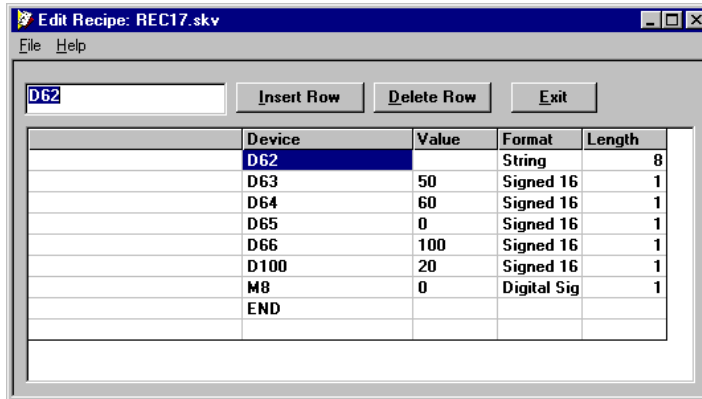
A text for the recipe can be entered in the first column. This text can be saved to a file (template file) and then automatically be shown when the recipe is edited.

	D0	38
	D1	38
	D2	0
	D3	0
	END	

## Format 2

Format 2 is used in current terminal versions.

The extended format of recipe file is used when the recipe file contains full text description of format as "Signed 16 bit" etc.



### Editing recipe

A comment text for the recipe can be entered in the first column. This text can be saved to a file (template file) and is then automatically shown when the recipe is edited. The recipe template file is saved as a separate file that cannot be transferred to the terminal. You can also change the values in the recipe.

The **Device** column contains the controller device that holds the data.

The **Value** column shows the actual data.

The **Format** column is a specification of how the data is presented on the terminal screen.

**Length** is a specification of the data length.

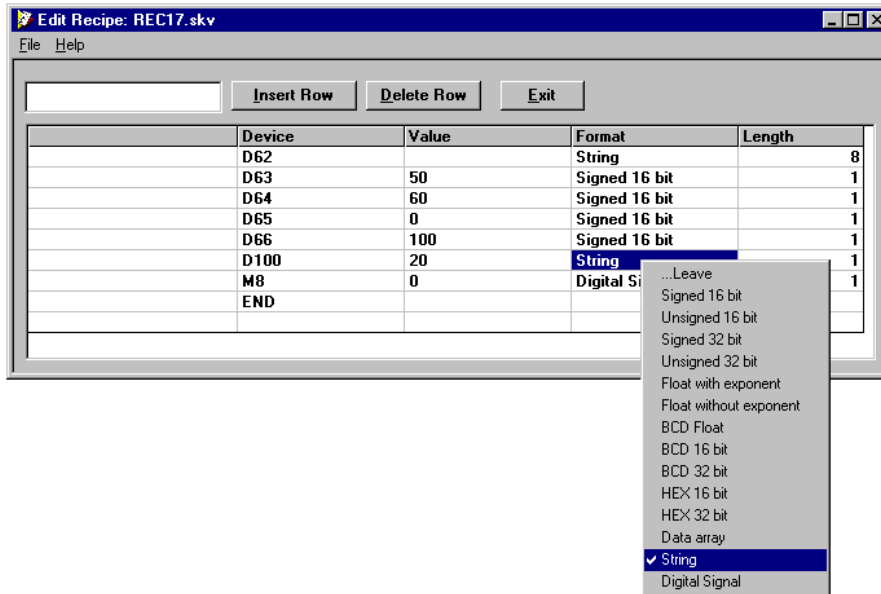
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#### Note!

Only the length for the string type can be edited. Other fields are automatically updated or are fixed.

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Click with the right mouse button in column **Format** to enter new data type.



### 3.4 Communication settings

Select **Options/Comm Settings** in CIMREX Tools File Transfer. Select **New** to define the communication settings. Here you make the settings for port, baudrate, data bits, and stop bits, parity and phone number if you want to communicate via a modem. The communication settings must be the same as in the terminal project.

**Edit Phone Number**

Name:

Phone Number:

Modem String:

TimeOut:

Port:

Baud:

Parity: ☒ None ☐ Even ☐ Odd

Bits: ☒ 8 ☐ 7

StopBits: ☒ 1 ☐ 2

Field separator: ☐ Tab ☒ Semicolon ☐ Comma

#### Name

Enter a freely defined name (a description for the settings).

#### Phone Number

Enter the phone number the modem shall call (only if you are using a modem).

#### Modem String

This parameter can not be stated in this program, only for CIMREX Tools Connect.

#### TimeOut

Timeout for the communication. The value is stated in milliseconds.

#### Port

Select communication port for the personal computer.

**Baud**

Select baudrate.

**Parity**

Select parity.

**Bits**

The number of data bits. Select 8 bits.

**StopBits**

Select number of stop bits.

**Field separator**

Select field separator type, TAB, semicolon < ; > or comma < , >. When using CIMREX Tools File Transfer it is the CIMREX Tools File Transfer that generates the files:

\*.TXT format (TAB separated values) if TAB separator is selected,

\*.SKV format (semicolon separated values) if semicolon separator is selected and

\*.CSV format (comma-separated values) if comma separator is selected.

All terminals, the programming tool and CIMREX Tools can handle TAB, semicolon or comma separator (delimiter).

When using FTP transfer will the terminal generate the TXT/SKV/CSV files.

### 3.5 Start the program via the command line

You can start the program from the command line. This makes it possible to start the program from another application.

You can enter the following commands on the command line:

*Filetran /R /W /D /RS /WS /DS /fFilename /All /Trend /Recipe /Alarm /C,x*

Use one of the following

- /R*      Receive file from the terminal
- /W*      Send file from the personal computer to the terminal
- /D*      Delete file in the terminal
- /RS*     Receive file from the terminal and stop the program when completed
- /WS*     Send file from the personal computer to the terminal and stop the program when completed.
- /DS*     Delete file in the terminal and stop the program when completed.

Use one of the following

- /fFilename*    File name is the name of the (recipe) file to be sent to the terminal. For */R*, */RS* file name is used without extension. For */W*, */WS* file name must include file extension (for example, file.skv).
- /All*            Receive all files from the terminal.
- /Trend*        Receive all trend files from the terminal.
- /Recipe*       Receive all recipe files from the terminal.
- /Alarm*        Receive all alarms from the terminal
- /C,x*            x is No. of setting in the phone book.

Example:

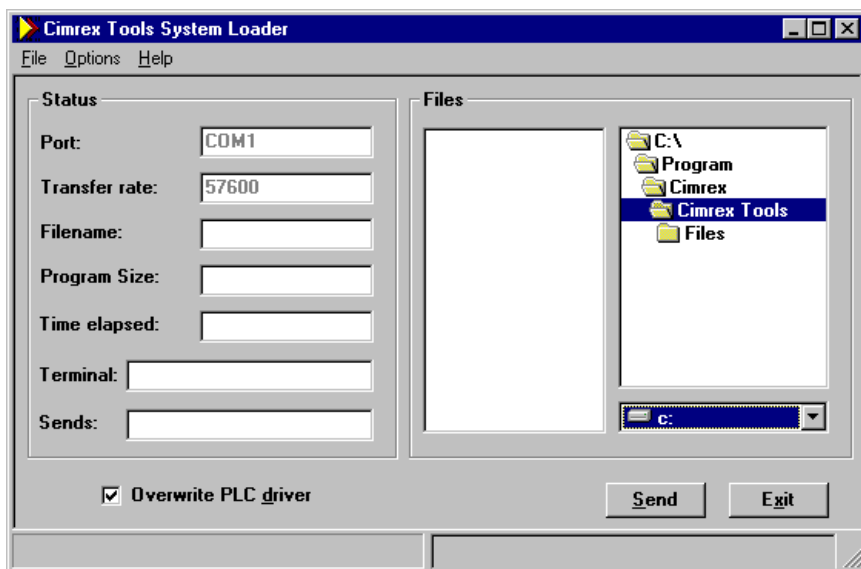
*Filetran /R /Alarm /C,3*

Get all alarm files from the terminal using phone book entry no. 3.

## 4 System Loader

This program is used to transfer a system program (operating system) to the terminals. Choosing **Start/Program/CIMREX/System Loader** starts the software.

When you start the program the following dialog is displayed.



In the **Files** window you select the system program file (extension .bin) you want to transfer to the flash memory in the terminal. Select **File/Save Settings** to save the currently selected drive and subdirectory as default setting in the **Files** window.

The **status window** shows the communication settings, the file to be transferred (Filename), the size of the program and the elapsed transfer time. The parameter **Terminal** shows current version of the system program in the terminal (after connecting) and the parameter **Sends** shows the version of the system program that you about to transfer to the terminal.

The communication settings are stated under **Options/Comm Settings**, see the section “*Communication settings*” in this chapter.



Mark **Overwrite PLC driver** if the driver in the terminal should be erased at the transfer. The driver is not erased if it is unmarked.

Select **Send** to start the transfer.

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**Note!**

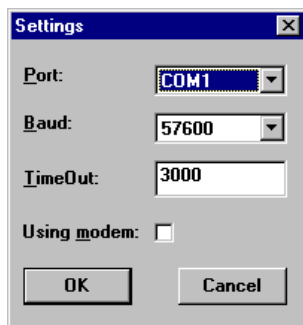
When downgrading a terminal it is important to make sure that the square “**Overwrite PLC driver**” is marked”

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## 4.1 Communication settings

### The personal computer

Under **Options/Comm Settings** you make the settings for the transfer parameters.

**Port**

Select communication port for the personal computer.

**Baud**

Select baudrate.

**TimeOut**

Timeout for the communication. The value is stated in milliseconds.

**Using modem**

Mark if you are using modem connection. Used with latest terminal version and higher transfer speed than 9 600 baud.

## The terminal

If the transfer does not start, the terminal must manually be set in sysload mode. For further information see the manual for the terminal.

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### Note!

The personal computer must be connected to a serial port on the terminal, serial or via a modem.

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## Start loading

When the terminal and the personal computer are connected and the transfer parameters are correctly set the system program can be loaded to the terminal.

Select **Send**.

The status parameters for the transfer are shown in the status window.

## 4.2 Start the program via command line

You can start the program from the command line. This makes it possible to start the program from another application.

You can enter the following commands on the command line:

*sysload filename*

or

*sysload filename baud port*

where

**filename**    Name of the \*.bin file to send to the terminal

**baud**        The baudrate for the transfer

**port**        communication port number (COMx)

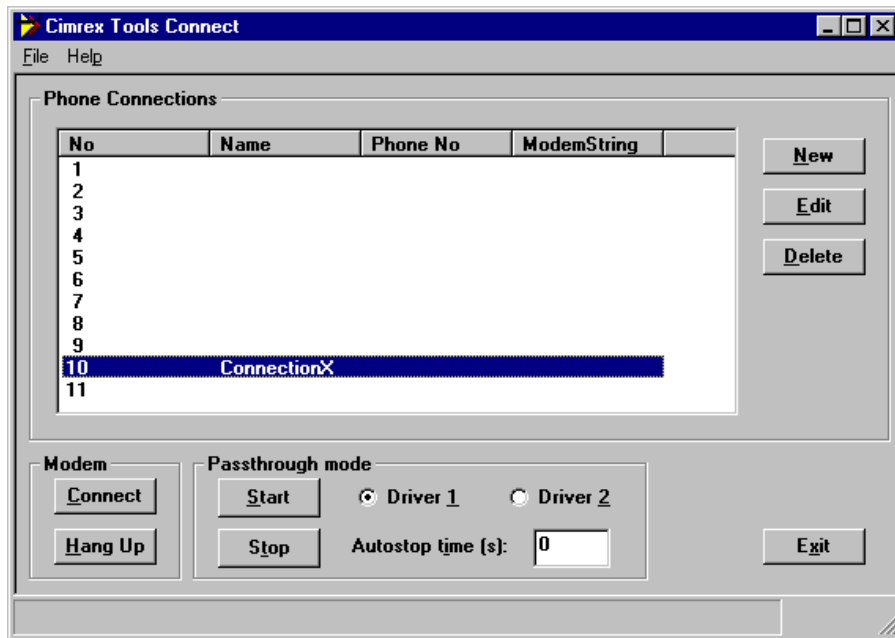
Example:

*sysload C70v400.bin 9600 1*

## 5 Connect

The program CIMREX Tools Connect is used to establish modem communication between a personal computer and a terminal with a connected controller system, and also to activate/deactivate Passthrough mode communication with the controller system, which is connected to the terminal. Transparent/Passthrough mode supports only one controller at the time.

Choosing **Start/Program/CIMREX/Connect** starts the software.



## 5.1 Phone Connections

Press **Edit** in the **Phone Connections** square to define connections. The following dialog is displayed.

**Edit Phone Number**

**Name:** ConnectionX

**Phone Number:**

**Modem String**

**TimeOut:** 5000

**Port:** COM1

**Baud:** 9600

**Parity:** ☒ None ☐ Even ☐ Odd

**Bits:** ☒ 8 ☐ 7

**StopBits:** ☒ 1 ☐ 2

**Field separator:** ☐ Tab ☒ Semicolon ☐ Comma

**OK** **Cancel**

### Name

Enter a freely defined name (a description for the settings).

### Phone Number

Enter the phone number the modem shall call. Leave field blank if modem is not used.

### Modem String

State ATM codes (init string for the modem). The following can be used for CIMREX Tools File Transfer and CIMREX Tools System Loader, otherwise see the manual for the modem.

**AT &C1 &D1 Q0 E0 &K3 S0=0 &W**

### TimeOut

The communication timeout. The value is stated in milliseconds.

### Port

Select communication port for the personal computer.

**Baud**

Select baudrate.

**Parity**

Select parity.

**Bits**

Select number of data bits.

**StopBits**

Select number of stop bits.

## 5.2 Modem handling

The program opens up the serial connection via the modem (opens up the modem connection via the serial port). Other applications can then communicate with the terminal via the serial port.

Select phone connection in the **Phone Connections** square and press **Connect** in the **Modem** square to make a connection. Press **Hang up** to disconnect.

## 5.3 Passthrough mode handling

With CIMREX Tools Connect it is possible to set the terminal to run in Passthrough mode. In Passthrough mode, the programming tool (for the connected controller system on a PC) can communicate with the controller system via the terminal.

The Passthrough mode function is common with the Transparent mode function, and supports, as Transparent mode, only one controller system, i.e. Passthrough mode can only be used at one of the terminal's communication ports. For further information about Passthrough and Transparent mode, see the manual for the terminals.

When Passthrough mode is activated and the PC is communicating with the controller system via the terminal, the communication between the terminal and the connected controller system will stop. The terminal is locked for the operator when Passthrough mode communication is in progress. The display on the terminal shows only the text "Passthrough".

The functions CIMREX Tools and Transparent/Passthrough mode must be configured in the programming tool for the terminals. The functions

must be connected to the same communication port on the terminal.

State a timeout value, **Autostop timeout (s)**. If no traffic on the communication occur within the timeout, the terminal will leave Passthrough mode and turn over to RUN-mode. If Autostop timeout is set to 0, the Passthrough mode must be switched off manually (by CIMREX Tools Connect).

Select controller system that the personal computer should communicate with, **Driver 1** or **Driver 2**.

Start Passthrough mode by clicking **Start**.

Shut down Passthrough mode communication ("Passthrough" mode in the terminal) and return to RUN mode by clicking on **Stop**.

Passthrough mode can be used both on a serial and or an Ethernet communication (needs COM/IP).

## 5.4 When to use CIMREX Tools Connect for Passthrough mode?

Passthrough mode can be used in two different ways. The terminal will automatically start Passthrough mode communication when the personal computer start to communicate with the port on the terminal that is associated with the Passthrough mode function if the terminal (the project in the terminal) is configured for Passthrough mode communication. In this case is it not necessary to use CIMREX Tools Connect to start/activate Passthrough mode in the terminal. On the other hand can CIMREX Tools Connect be used to stop/deactivate the "Passthrough" mode in the terminal. The terminal will then return to RUN mode.

The other case is when the terminal (the project in the terminal) is configured for Transparent mode communication together with support for Transparent mode in the driver. CIMREX Tools Connect can then be used to start and stop Passthrough mode communication instead of Transparent mode.

## 6 FTP Client

CIMREX Tools FTP Client is used to transfer recipes, trend files, alarm lists, html files, Java applets and bitmaps between the terminal and a personal computer via FTP (File Transfer Protocol).

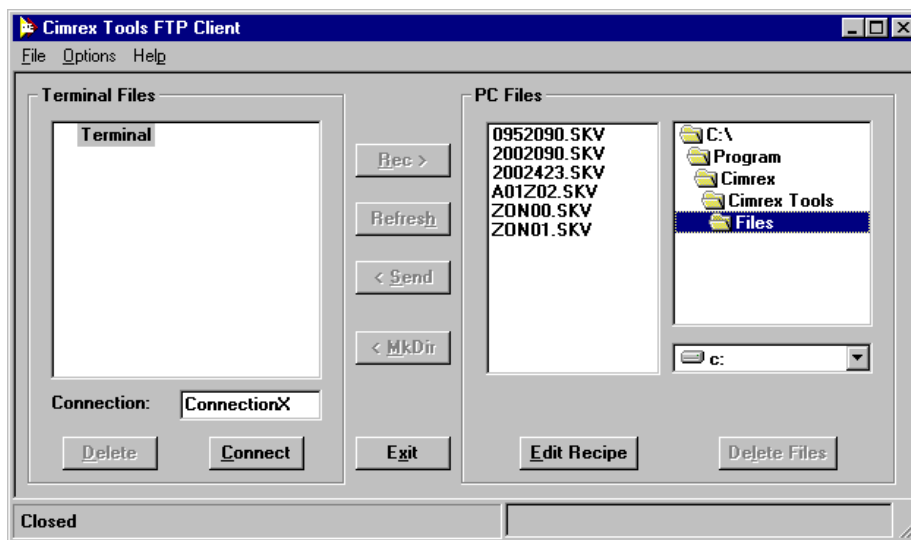
Choosing **Start/Program/CIMREX/FTP Client** starts the software.

### Note!

The terminal must be running, configured as FTP server and connected to the personal computer.

When the software is started you must define a connection. You define a connection under **Options/Comm Settings**, see the section “*Communication settings*” in this chapter.

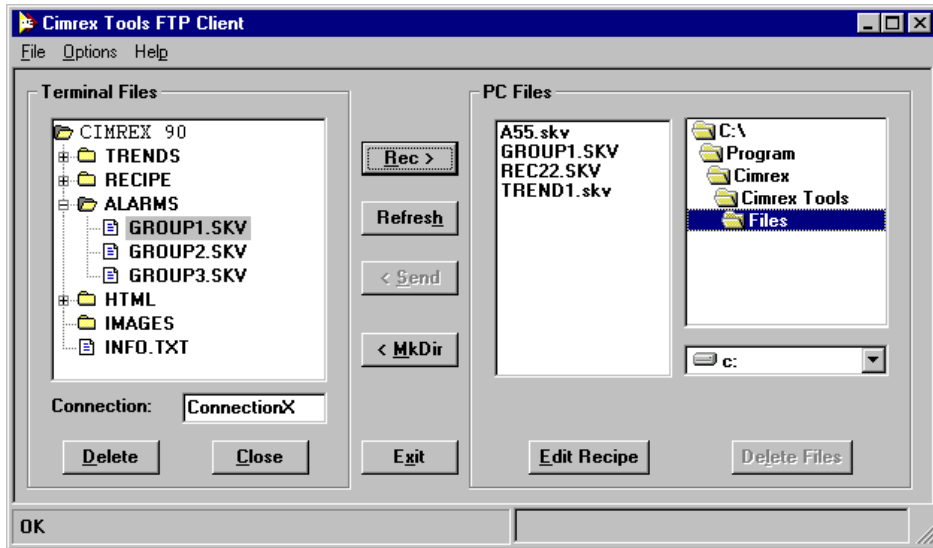
When the program is activated the following dialog is displayed. The program will show the terminal’s directory when you press the **Connect** button.



Select **File/Save Settings** to save the currently selected drive and subdirectory as default setting in the **PC Files** window.

## 6.1 Transfer files from the terminal

The files in the terminal are displayed in the **Terminal Files** window. You can transfer a separate file or all files in a directory (folder). Select the file or directory and press the **Rec** button to transfer the files to the personal computer.



### Refresh

The function **Refresh** is used to update the windows **Terminal Files** and **PC Files**.

### Delete files/directories in the terminal

Only files in the Recipe and HTML directory can be deleted (and files in the IMAGES directory for CIMREX 90 and CIMREX 91). Select the file and press **Delete**. If you select a directory and press **Delete**, ALL files in the directory will be deleted. Only empty directories in the HTML directory can be deleted.

### Make directory

In the HTML and RECIPE directory it is possible to create new (sub) directories. Select the directory where the new subdirectory is to be created. When you press the button **Mkdir** a dialog is shown. Enter the name for the directory in the dialog (maximum 8 characters) and press **OK**.



## 6.2 Transfer files to the terminal

The files are displayed in the **PC Files** window. Only files in the **RECIPE** and **HTML** directory (also **IMAGES** directory for **CIMREX 90** and **CIMREX 91**) can be transferred to the terminal. Click on the files in the **PC Files** window to select one or more files. Select destination directory in the **Terminals Files** window. Then press **Send** to transfer all marked files to the terminal. The function **Delete Files** is used to delete selected files in the **PC Files** window.

## 6.3 Edit recipes

The function **Edit Recipe** is used to edit (create) recipe files. Select the recipes file in the **PC Files** window and press **Edit Recipe**.

### Menu commands

New Recipe	Clear all fields and start a new recipe
Open Recipe	Opens an existing recipe.
Save Recipe	Save the recipe to disk.
Open Template	Opens an existing template.
Save Template	Save the template text to a template file.
Convert recipe	Convert this recipe to new format 2.
Exit	Closes the edit dialog.
Help	Display help file.

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#### Note!

The setting **File/Save Extended Format** should not be checked when using FTP transfer.

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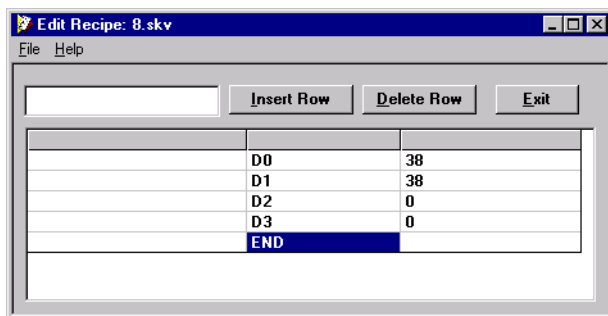
### Functions

Delete Row	Delete a row in the recipe
Insert Row	Insert a new row in the recipe.
Exit	Closes the edit dialog.

## Format 1

Format 1 is used in older terminal versions (older version of recipe). The recipe data is shown in the 2 rightmost columns.

A text for the recipe can be entered in the first column. This text can be saved to a file (template file) and then automatically be shown when the recipe is edited.



## Format 2

Format 2 is used in current terminal versions.

The extended format of recipe file is used when the recipe file contains full text description of format as "Signed 16 bit" etc.

The recipe files must be saved in an internal format suitable for the terminal when using FTP transfer, see the manual for the terminals.

Old recipes (in extended format) can be converted by opening them in the recipe editor and then save them again (with **Save Extended Format** unchecked).

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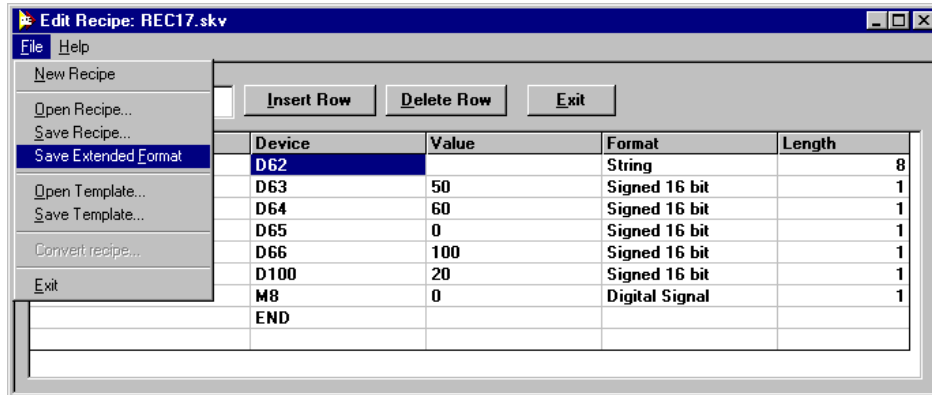
### Note!

The setting **File/Save Extended Format** should not be checked when using FTP transfer.

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## Editing recipe

A text for the recipe can be entered in the first column. This text can be saved to a file (template file) and is then automatically shown when the recipe is edited.



The **Device** column contains the controller device that holds the data.

The **Value** column shows the actual data.

The **Format** column is a specification of how the data is presented on the terminal screen.

**Length** is a specification of the data length.

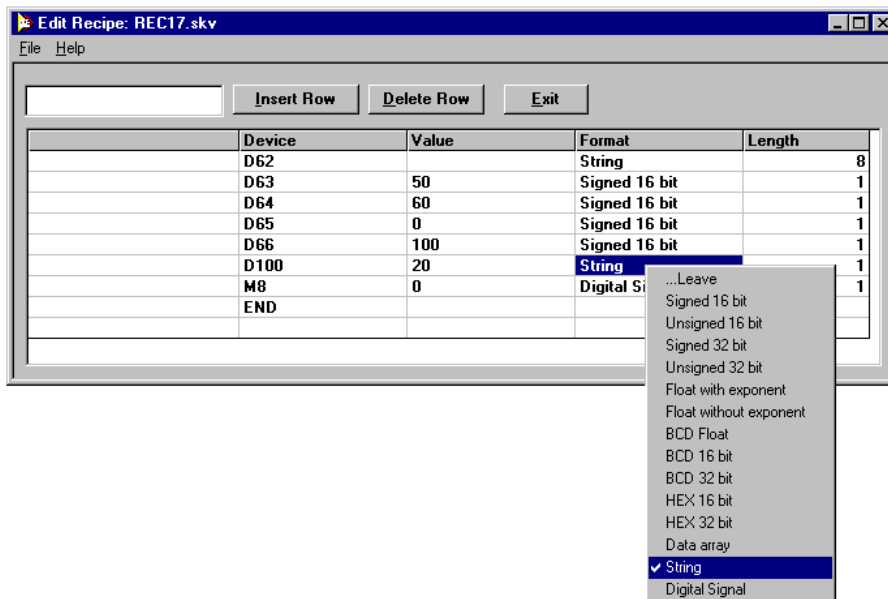
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### Note!

Only the length for the string type can be edited. Other fields are automatically updated or are fixed.

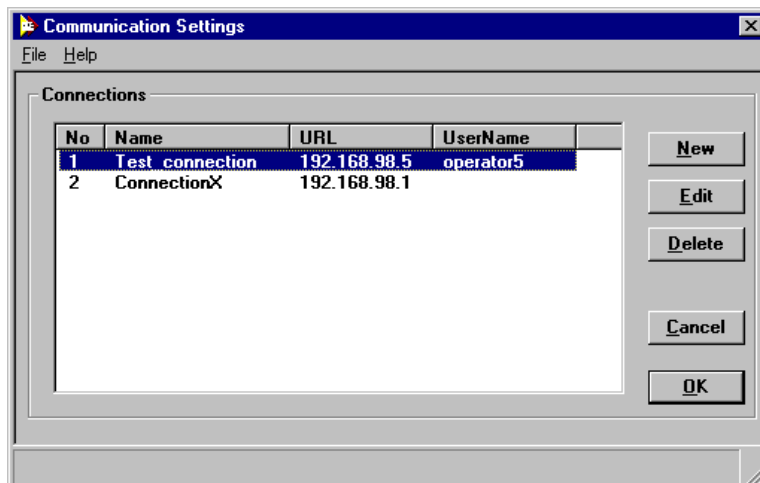
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Click with the right mouse button in column **Format** to enter new data type.



## 6.4 Communication settings

Communication settings are defined under **Options/Comm Settings**. Here you make connections with the settings for name, URL (IP address), user name, password, and proxy, binary and Passive FTP syntax.



Press the **New** button to add a new connection.

Use the **Edit** button to change the settings for the marked connection. The following dialog is then displayed.

**Edit FTP Connection**

**Name:** Test\_connection

**URL/IP-address:** 192.168.98.5

**User Name:** operator5

**Password:** 555

**Proxy (No Cern):**

**Type**

☒ Binary

☐ Ascii

☒ Passive FTP Syntax

**Field separator (Recipe Editor)**

☐ Tab ☒ Semicolon ☐ Comma

OK Cancel

### **Name**

Enter a freely defined name (a description for the settings).

### **URL/IP-address**

Enter the URL or IP address for the terminal.

### **User Name**

Enter the user name for the account on the FTP server.

### **Password**

Enter the password for the account on the FTP server.

### **Proxy (No Cern)**

Enter name of proxy server if it is used.

### **Type - Binary/Ascii**

Select binary or ASCII transfer. Default is Binary.

### **Passive FTP Syntax**

Check if Passive syntax is to be used. Marked square is default.

**Field separator (Recipe Editor)**

Only for the recipe editor (see below). Make sure that this setting is the same as in the terminal project. Select field separator type, TAB, semicolon < ; > or comma < , >. When using FTP transfer it is the terminal that generates the files:

- \*.TXT format (TAB separated values) if TAB separator is selected,

- \*.SKV format (semicolon separated values) if semicolon separator is selected and

- \*.CSV format (comma-separated values) if comma separator is selected.

When using CIMREX Tools File Transfer it is the CIMREX Tools File Transfer that generates the TXT/SKV/CSV files.