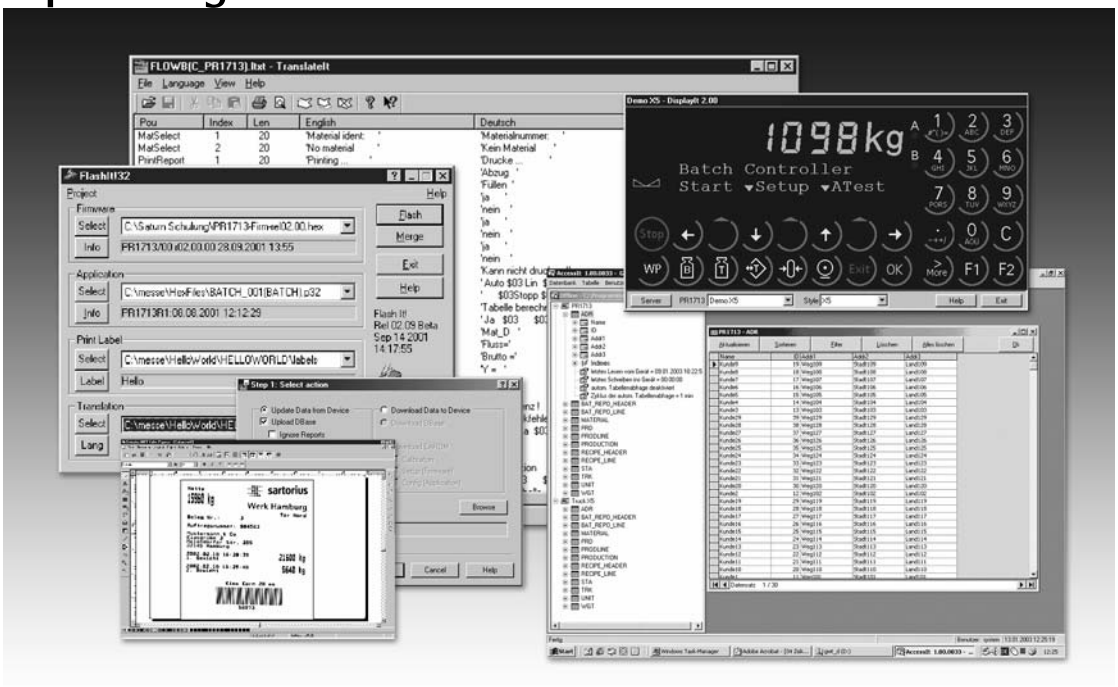
PR8001/01
PowerTools

Operating Manual



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For PR5510

For PR5610 / PR1713

For PR5710

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1 GENERAL INTRODUCTION

The PowerTools provide powerful functions for smooth commissioning and trouble-free operation of the System Controllers already during installation and commissioning. Our experienced specialists have developed a multitude of practical function packages which facilitate the on-site tasks considerably.

The PowerTools programs are applicable to the following instruments:
- PRO Controller
- BATCH Controller
- BULK Controller
- FILL Controller
- FLOW Controller
- IBC Controller
- LOG Controller
- TRUCK Controller
- PHASE Controller
- PR1713

1.1 Other manuals

This manual describes the operation of the individual PowerTools programs.

We expect that you are in possession of the manuals for the PC, for Windows, for the connected batch controllers and for Nice Label Express. If you have questions concerning fundamental subjects, please, refer to the Windows literature. This operating manual deals only with PowerTools-specific subjects.

For the technical details of configuration and installation, please, refer to the system documentation of the connected batch controllers and to the detailed documentation of the used instruments and programs. The operation is described in the manuals for the applications of the relevant controllers.

1.2 Safety instructions

The PowerTools applications are installed on the hard disk of the PC, which need not be opened for this purpose. The PC with the PowerTools and PR5510 / PR5610 / PR5710 / PR1713 are electrical apparatus which may be operated only by trained personnel. Maintenance and repair may be done only by trained and authorized personnel (familiar with the implied hazards). Before opening, the instruments must be disconnected from the supply voltage, because live parts risk being exposed. Detailed information is given in the instrument manuals.

1.3 Instructions for unpacking

Scope of delivery: PowerTools is delivered on a CD together with the operating manual in electronic forms. Special hint for unpacking: Do not use sharp or pointed objects for unpacking.

1.4 Disposal

CDs are special waste. Please, note the regulations of your local disposal company.

1.5 Copyright note

PowerTools

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All rights reserved. Sartorius Hamburg GmbH
Meiendorfer Str. 205
22145 Hamburg

1.6 Trade marks, brands

MS-DOS, MS-Windows, Windows NT, Windows 2000, Windows XP and MS-Access are registered trademarks of Microsoft Corporation.

All other brand or product names are trade names or registered trade names of their respective manufacturer or holder.

1.7 Exemption from liability

The PowerTools programs are state of the art. No warranty is taken for correctness, mainly in connection with the third-party software and hardware required for operation of this program.

The manufacturer is not liable for damage caused by other parts of the installation or by incorrect use of these programs.

The above conditions are recognized by using the program.

1.8 Risk consideration

For the case of trouble, sufficient protection against damage (e.g. EMERGENCY OFF) must be provided in the system.

During PowerTools installation, the folders are copied into Windows directories. When doing this, already existing folders with the same name risk to be overwritten. This means that e.g. language-specific messages of other programs can be lost. Moreover, other programs can be an obstacle or a cause of trouble for PowerTools operation. Smooth operation can be expected only in a computer environment which fully meets the above specifications.

1.9 Licence information

All parts of the content of the PowerTools CD are protected by copyright. All parts of programs AccessIt and PR1792 OPC server are copyright-protected and may not be used without licence. For transmitting information via/to the instrument using the OPC server, a corresponding licence in the instrument must be provided. For using AccessIt, the licence for AccessIt and OPC server is required.
The licence is instrument-specific, i.e. the instrument board number is required when ordering. When using together with the controller, the licence numbers for PR1792/20 and PR1792/13 must be entered into the instrument in menu item [Setup]-[License Setup]-[Add] (see chapter 3.3).

1.10 Activating other programs

Using **AccessIt and PR1740** on the PC simultaneously is not possible.

Installing an **earlier DisplayIt version after** installation of AccessIt is not permissible.

1.11 System prerequisites

The PowerTools do not make any special requirements on the PC configuration. Before installing the PowerTools, however, you should ensure that the computer is operated with operating system Windows NT, Windows 2000 or Windows XP. Moreover, the PC should have at least 1 free serial interface (e.g. COM1) or 1 Ethernet card with 10 Mbits/sec.

2 INSTALLING THE SOFTWARE

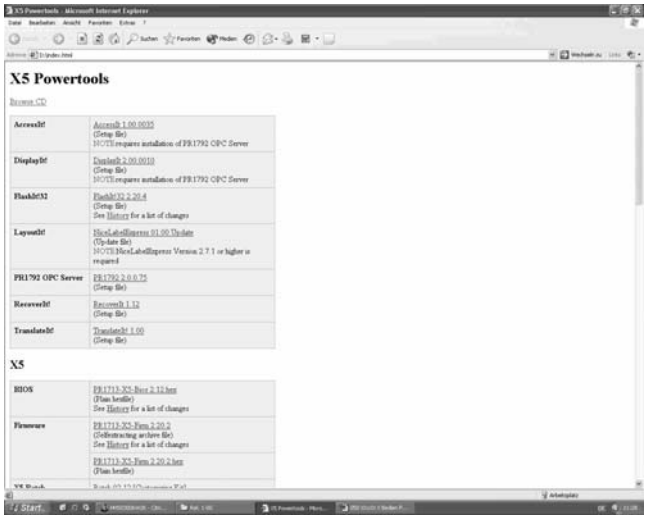
For installation, Windows log-in with administrator privileges is required. If necessary, consult your system administrator. To avoid conflicts during access to system files during installation, close all other programs or applications before installing the PowerTools on your PC.
The set-up programs for installation of PowerTools and PR1792 OPC server are stored on the CD.
The set-up program will unpack compressed files and copy them into a new directory (installation directory) with the ".exe" program and with sub-directories on the PC.
De-installation is possible via [Start]-[Control-Panel]-[Add / Remove Programs].
By re-installation of the application, installation of missing files or correction of installation errors are possible. The re-installation procedure is analogous to the program installation.

The technical prerequisites on the PC for installation of PowerTools are listed in chapter 1.11. Please, note also the risk consideration, see chapter 1.8.

Insert the PowerTools CD into the CD/DVD drive.

A new browser (new window) with headline "X5 PowerTools" will be opened.

In this window, you can select and tick the individual PowerTools applications.

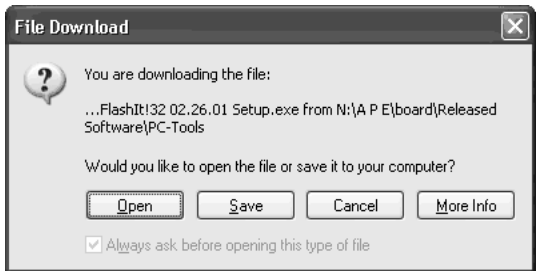


Note:
Unless the PowerTools browser is called up automatically after inserting the PowerTools CD, double-click on icon workstation, click on the icon of the CD/DVD drive with the right mouse key and select [Open]. Now, a survey of the CD (CD/DVD browser) content is displayed and you can open the folder of any program by double clicking. Double click on the file with name extension ".exe" (e.g. „FlashIt!32 2.20.4 Setup.exe"), in order to start the installation of the relevant PowerTools program and follow the instructions for installation displayed on the monitor.

Driver "ewdrv_01.exe" is installed automatically.
This drive is required for building up the communication between controller and PC via Ethernet. If you have installed a personal firewall (e.g. included in the Microsoft XP Service Pack 2 installation), you have to enable the access to this driver.

2.1 Installing FlashIt

Click on "FlashIt!32 X.XX.X" in the PowerTools browser. This window will be opened. Click on [Open]. Dependent on system settings, a warning is displayed immediately. Confirm again by clicking on [Open].

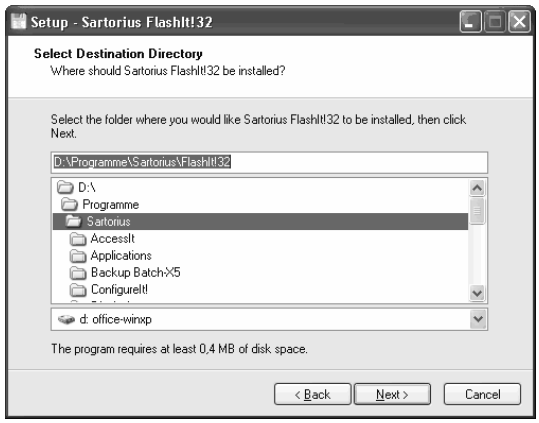


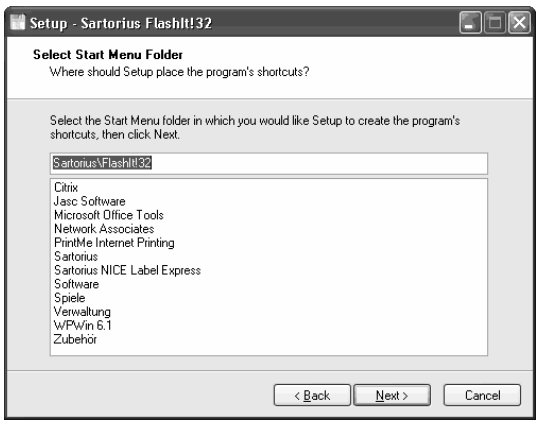
Unless the PowerTools browser opens automatically, double click on file "FlashIt!32 X.XX.X Setup.exe". in folder FlashIt!32 in the CD/DVD.

The following window is displayed.
Click on [Next].

Read the licence agreement carefully and click on "I accept the agreement" for consent to the licence agreement. This is the prerequisite for continuing the installation.
Now, click on [Next].

In dialogue field "Select Destination Directory", you can select the folder in which you want to install the installation and program files.
For changing the pre-defined installation path, click on button [Browse].
Click on button [Next] to continue the installation.





In this mask, you can select a FlashIt program shortcut for the start menu, which can be found in [Start]-[All Programs]-and e.g. [Sartorius]-[FlashIt!32].
Click on [Next] to continue the installation. In this case, the program copies all files into the defined folder and prepares the program set-up and the set-up icons.

If it should be necessary to change the settings, click on button [Back] to return to the previous mask.
Click on button [Cancel] to cancel the installation.
Click on [Install], if you want to realize the installation.

Click on [Finish] for exit from the set-up.

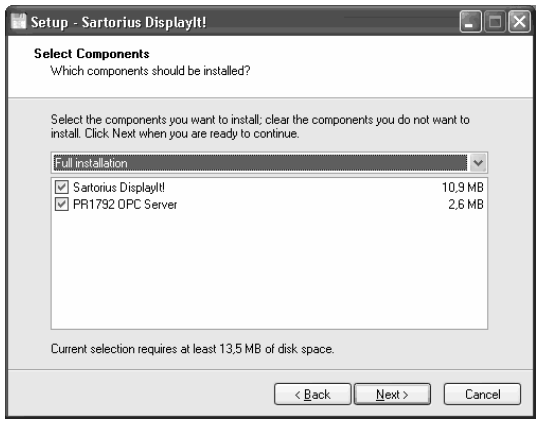
You can activate checkbox "View FlashIt!32 History.txt" for display of changes in the installed software compared to earlier versions. In this case, a text editor is opened.

2.2 Installing DisplayIt

The installation of AccessIt and DisplayIt requires installation of the PR1792 OPC server (also contained on the PowerTools CD)!
AccessIt and DisplayIt use the PR1792 OPC server for communication with the X4/X5/X6 and PR1713 controller.

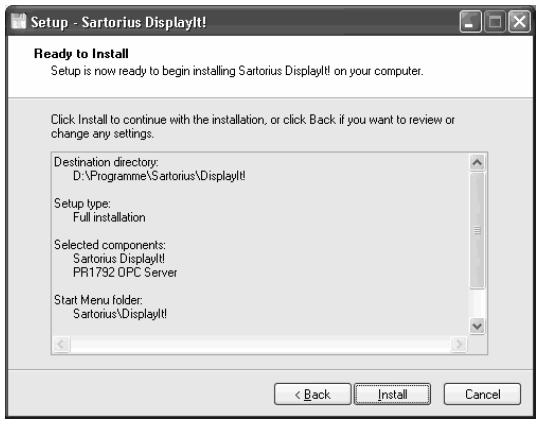
The installation of DisplayIt is analogous to the installation of FlashIt, see chapter 2.1.

Additionally, the following window appears:



Click on [Next] to install programs DisplayIt and PR1792 OPC Server (="Full installation").

If the PR1792 OPC server is also contained on the PowerTools PC, de-activate the relevant checkbox before clicking on [Next].



If it should be necessary to change any settings, click on button [Back] to return to the previous mask.
Click on button [Cancel] to cancel the installation.
Click on [Install] to realize the installation.

If you have selected installation option "Full installation", the following window is displayed. For installation of the PR1792 OPC server, proceed as described in chapter 2.1.

Note:
Driver "ewdrv_01.exe" is installed automatically with DisplayIt.
This driver is required to build up the communication between controller and PC via Ethernet. If you have installed a personal firewall (installed e.g. with Microsoft XP Service Pack 2), you have to enable the access to this driver.

2.3 Installing AccessIt

The installation of AccessIt and DisplayIt requires the installation of the PR1792 OPC server (also contained on the PowerTools CD)!
AccessIt and DisplayIt use the PR1792 OPC server for communication with the X4/X5/X6 and PR1713 controller.

The installation is analogous to the installation of FlashIt and DisplayIt, see chapter 2.1 and 2.2.

2.4 Installing the PR1792 OPC server

The installation is analogous to the installation of FlashIt, see chapter 2.1

2.5 Installing TranslateIt

The installation is analogous to the installation of FlashIt, see chapter 2.1.

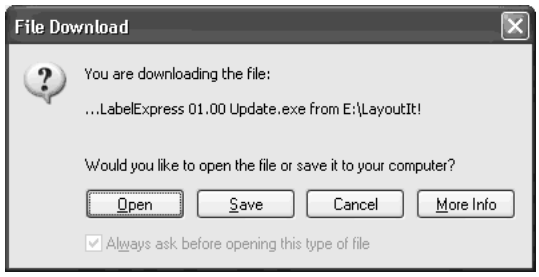
2.6 Installing RecoverIt

The installation is analogous to the installation of FlashIt, see chapter 2.1.

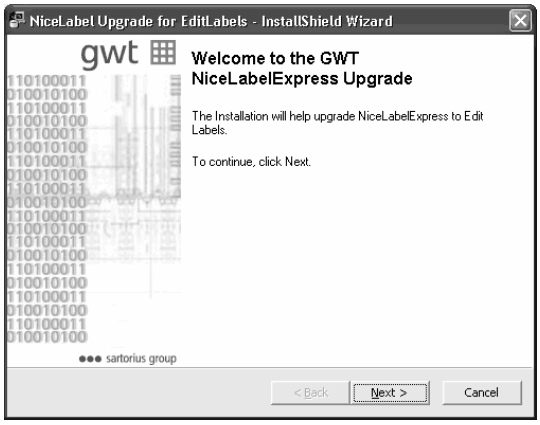
2.7 Installing LayoutIt

LayoutIt can be installed only, if PR1750/NT and Nice Label Express version 2.7.1 or higher are provided on the PC.
With Nice Label Express version 2.8 and higher, the installation of LayoutIt is omitted, because LayoutIt is already integrated in Nice Label Express from this version.

Click on "Nice Label Express 1.00 Update" in the PowerTools browser. The window shown opposite is displayed. Click on [Open].



Click on [Next].



Finish the installation by clicking on [Ok].

3 CONTROLLER CONFIGURATION

3.1 Connection of controller and PowerTools PC

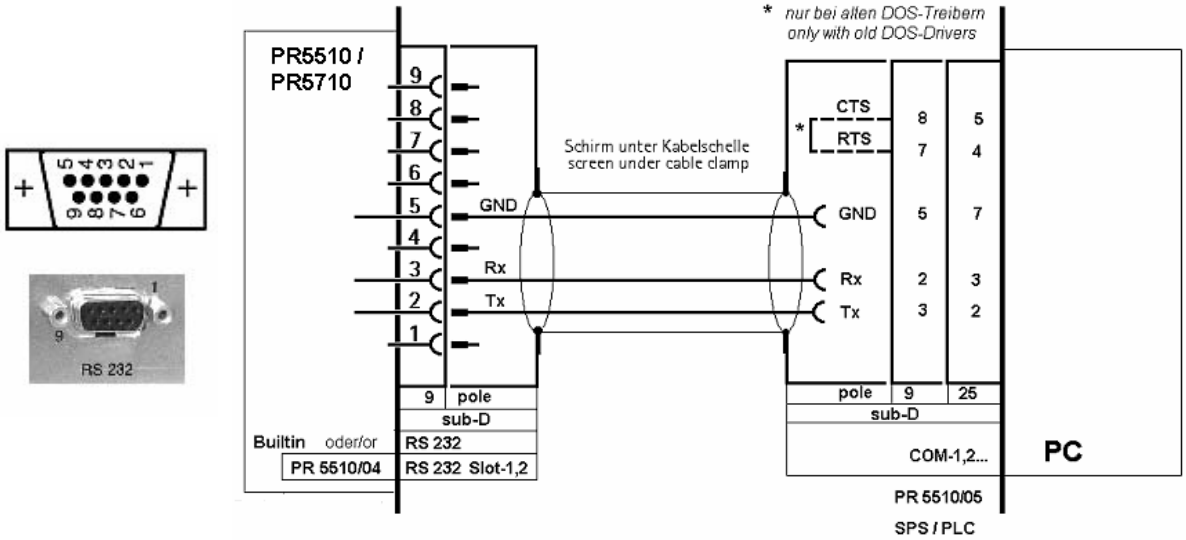
For working with the PowerTools, controller and PowerTools PC must be connected via the "Builtin" (or an RS-232) interface, or via Ethernet.
Please, note that only programs "FlashIt", "AccessIt" and "DisplayIt" can be used via an Ethernet interface.

3.1.1 Connection via RS-232 cable

The simplest case of communication between the PowerTools PC (Com1/Com2) and a controller is the communication by means of the RS-232 (V-24) interface and a cable.

Connect the controller via a serial line with the PC at Com1 or Com2. For this, use e.g. interface "Builtin" (or an RS-232 interface) at the controller for connection of the RS-232 cable.

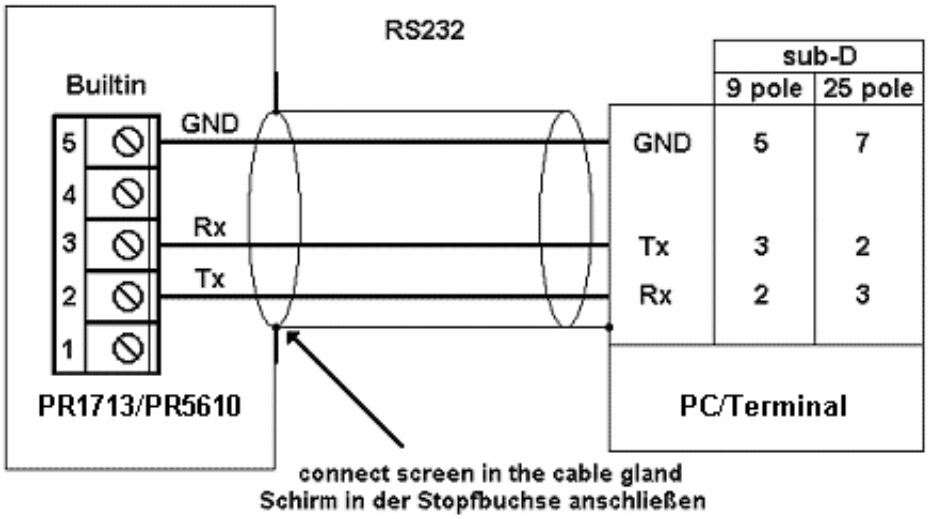
3.1.1.1 RS-232 cable at the X4 & X6 controller



Note that the PIN allocation (PIN 2, 3) with 9/25-pole connectors is different.
Pre-fabricated "serial" cables from the computer accessories can be used.
Description: 9-pole D-sub connector/socket, V24-connecting/extension cable 1:1, not null modem.

3.1.1.2 RS-232 cable at the PR1713 & X5 controller

The terminal block for interface Builtin is located on circuit board 1



3.1.2 Connection via RS-485 cable

Alternatively, the connection via a bus system for sender and receiver is possible. For this, RS485 (for max. 16 controllers) is used. The bus system is superior to an RS-232 point-to-point connection and permits considerably higher speed (up to 19600 Baud) over large distances. A special plug-in card or a converter at the PC can be used. The documentation of the connected instruments contains more details and a circuit diagram. The BUS circuitry must be as specified in the documentation.

3.1.3 Connection via Ethernet

When using the Ethernet connection, the IP address must be entered as ComPort into the OPC server (see chapter 3.3.2). Take care that the IP address is identical with the instrument address.
In X4/X5/X6 & PR1713, the address can be defined in menu [Setup]-[Network parameter]. More details on the configuration of [Network Parameter] are given in the instrument installation manuals and in the "X4 Network & fieldbus installation manual".

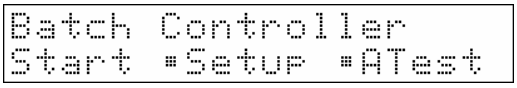
3.2 Communication

For working with AccessIt, DisplayIt and RecoverIt, the communication must be switched on with each controller. For this, the following controller settings are required (see also chapter 3).

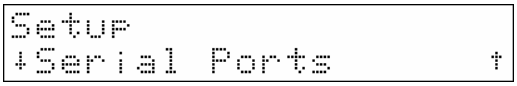
Short-form survey

[Setup]-[Serial Ports]-[Builtin RS-232]...	[Protocol]:	[EW-COM V3]
	[Baudrate]:	[19k2]
	[Bits]:	[8]
	[Parity]:	[Even]
	[Stopbits]:	[1]
	[Slave-ad]:	[A]

Detailed survey

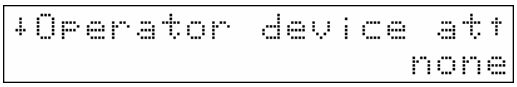


Start the controller. Press [Setup].

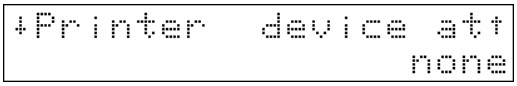


Scroll to sub-menu [Serial Ports] using ↑ / ↓. Open menu item [Serial Ports] with OK. To leave a menu item, press Exit. When you have made a change, a prompt, if you want to store the changes is displayed when leaving the menu item.

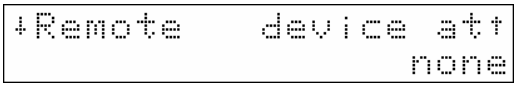
Make sure that...



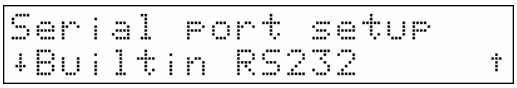
[Operator device at] is set to [none] rather than to the Builtin RS-232 interface.



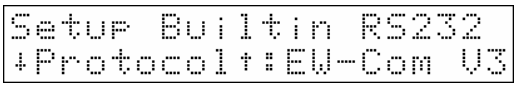
[Printer device at] is set to [none] rather than to the Builtin RS-232 interface.



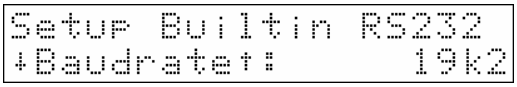
[Remote device at] is set to [none] rather than to the Builtin RS-232 interface.



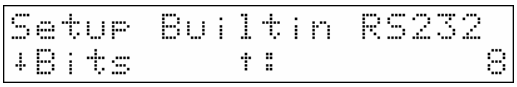
Press ↑ / ↓ to select [Serial Port setup]. Press ↑ / ↓ to select the serial port for loading and press OK. In this example, the [Builtin RS-232] interface is selected.



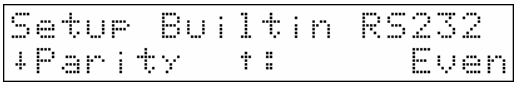
[Protocol] is displayed on the second text line. Confirm with OK. Press ← / → to select protocol [EW-COM V3].



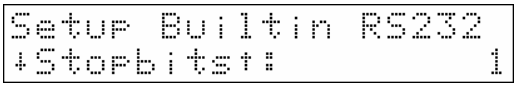
Press ↑ / ↓ to select the [Baudrate] and press OK. Set the Baudrate to 19k2 with ← / →.



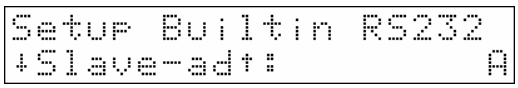
The number of bits is 8 (cannot be changed).



Parity is even (cannot be changed).



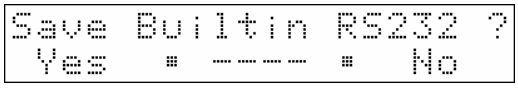
The number of stop bits is 1 (cannot be changed).



Press ↑ / ↓ to select [Slave-ad]. Set the "Slave-ad" to [A] with key 2 and confirm it with OK.

The slave address is the instrument address for the serial bus (e.g. RS-485, RS-422). We will use the built-in RS-232 interface so that only one instrument per serial line can be used.

Press Exit.



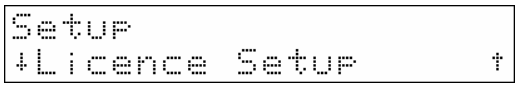
If you have made changes, a prompt if you want to store the changes is displayed. Confirm by pressing [YES]. Leave the [Serial Ports] menu with Exit.

3.3 Connection between Controller and AccessIt (OPC server)

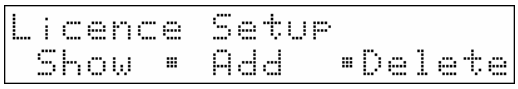
3.3.1 Licence input

Prerequisite for connection between controller and AccessIt (not relevant for the remaining PowerTools):

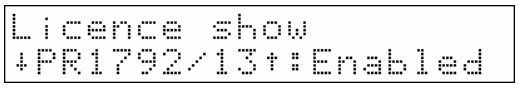
- PR1792/13 software licence for the OPC server must be provided in the instrument.
- PR1792/20 AccessIt licence must be provided in the controller.
- PR1792 OPC server and AccessIt were installed already on the PC.



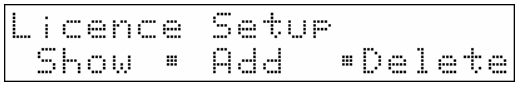
Press ↑ / ↓ to select [Licence Setup] and press OK.



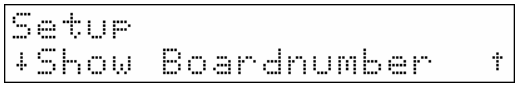
Ensure that the PR1792/13 OPC server licence and the PR1792/20 AccessIt licence are activated: Press [Show].



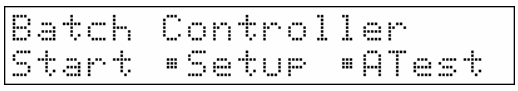
If [Disabled] is displayed, the licence is not activated.



You can request the **licence number from Sartorius Hamburg** (see chapter 1.9). The licence can be entered with [Add].



Note that you need the board number to get a licence. See menu item [Setup]-[Show Boardnumber].



Press Exit, until the application name is displayed (e.g. "Batch Controller") or until you are at the topmost menu level.

3.3.2 Starting the PR1792 OPC server

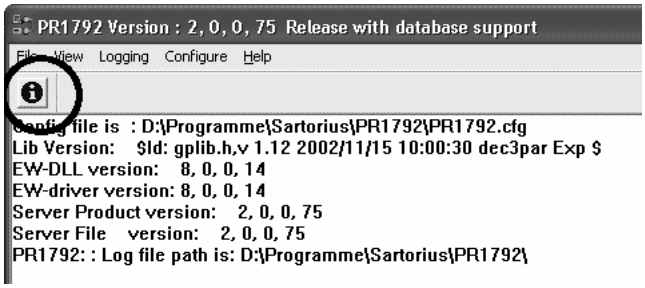
This step is required only for working with DisplayIt or AccessIt.

The PR1792 OPC server is started automatically by an OPC client (i.e. DisplayIt & AccessIt) or manually by the operator for configuring the interface.

Start PR1792: [Start]-[All Programs]-[Sartorius]-[PR1792]-[PR1792 OPC Server]

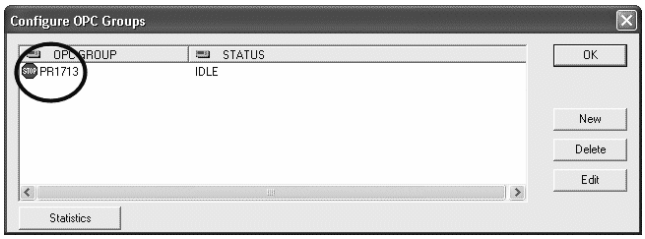
When the program is active, the OPC server icon is shown at the bottom right in the system "tray".

At first, you have to configure the OPC group for the controller for which you want to use programs AccessIt or DisplayIt. A separate OPC group must be defined for each instrument. The OPC server is delivered already with one standard group which is configured as "PR1713".

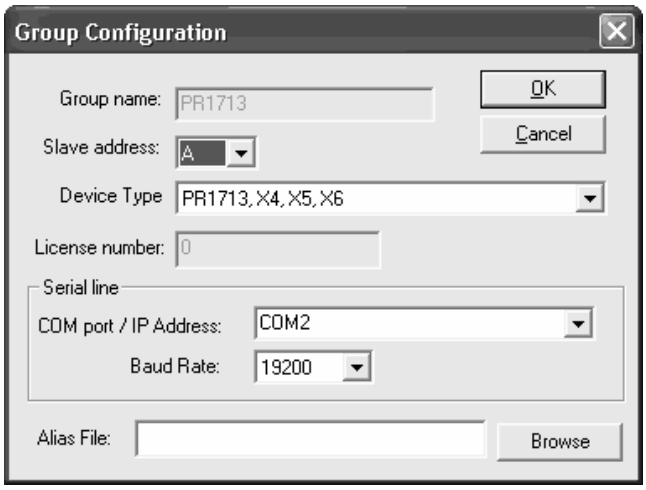


Press button Info.
Alternatively, you can select menu [Configure]-[Show / Edit Group Configuration].

The "Configure OPC Groups" window starts.
Click on group "PR1713" and press [Edit].
Alternatively, you can also click on [New], if you want to set up a new group rather than working with an existing group.
Click on [Delete] to delete the marked OPC group.
Press [Ok] to leave this dialogue window.



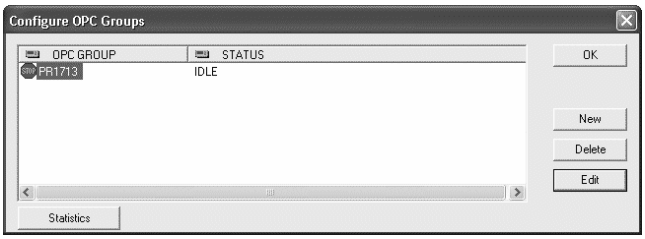
- Define a group name in field "Group name", if you have clicked on [New] instead of [Edit] at the previous step
- Select slave address "A".
- Select device type "PR1713, X4, X5, X6".
- Select the COM port at which you have connected the serial cable or enter the IP address for communication via Ethernet.
- Finally, select Baudrate "19200".



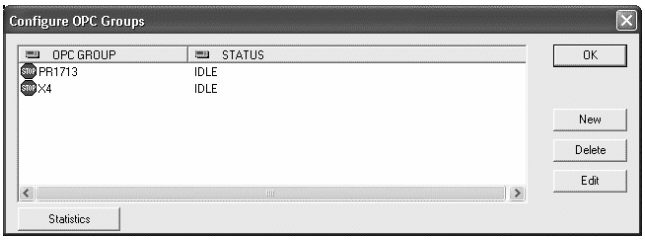
It is very important to make these settings correctly, otherwise, the OPC server won't communicate with the instrument.

Note:
The setting must correspond with the adjustments in the X4/X5/X6 or PR1713 controller (see chapter 3).

Now, "Configure OPC Groups" should look exactly like shown above. As you can see, the status of the "PR1713" group is "IDLE" , because no OPC client is connected.



If you have set up a new group in addition to the existing one, further groups are displayed accordingly.



Note:
Note that a second program was started ("ewdrv_01.exe"). This is a low level communication server. So, please, don't close this program. Whenever you restart PR1792, it will try to restart "ewdrv_01.exe" as well.
If you use a personal firewall, you have to enable the access to this driver.

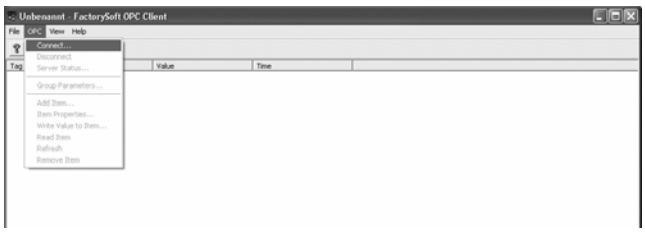
3.3.3 Starting the OPC client

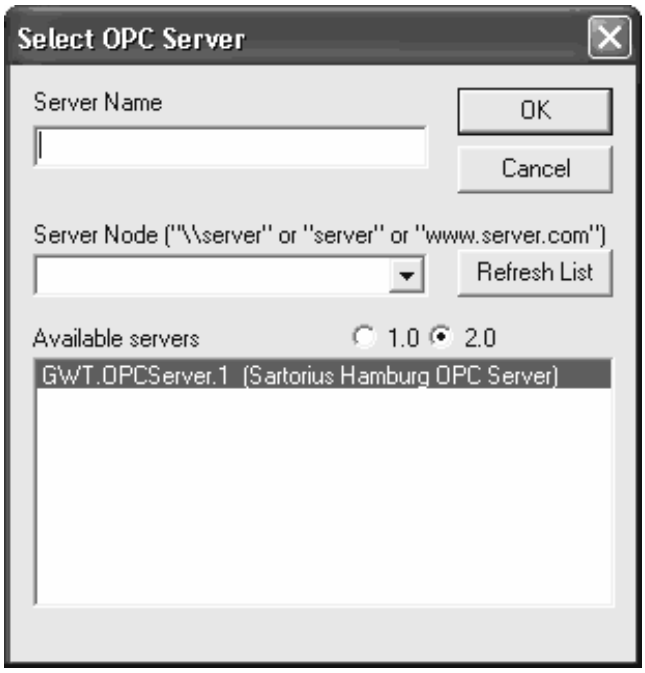
This step is required only for working with DisplayIt or AccessIt and the configuration should be tested in the OPC group.

If you test the OPC group configuration directly with e.g. DisplayIt, you can skip this chapter. When DisplayIt is running, i.e. the weight is displayed, the relevant OPC group is configured correctly in the OPC server.

The OPC server can be tested also with an OPC client application. Start the OPC client: [Start]-[All Programs]-[Sartorius]-[PR1792]-[OPC-Client]

Click on [OPC]-[Connect].



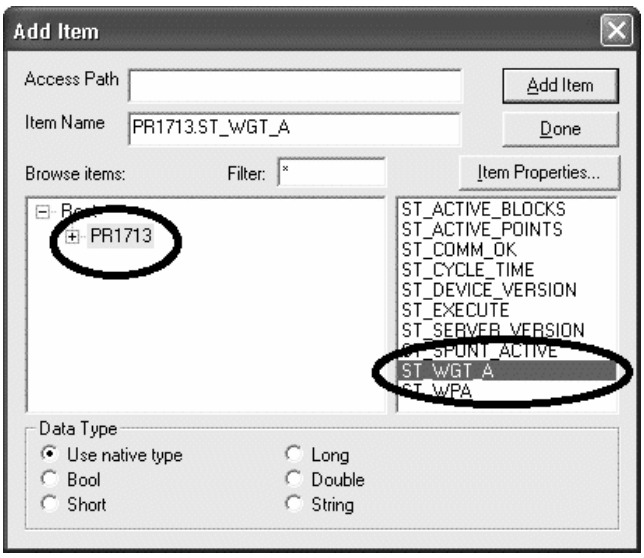


Click on server "GWT.OPCServer.1" and then on [Ok].

Unless an error message is displayed, you are connected with the PR1792 OPC server, otherwise you have to check the settings made on the PR1792 OPC server and on the controller (see chapter 3 and 3.3.2).

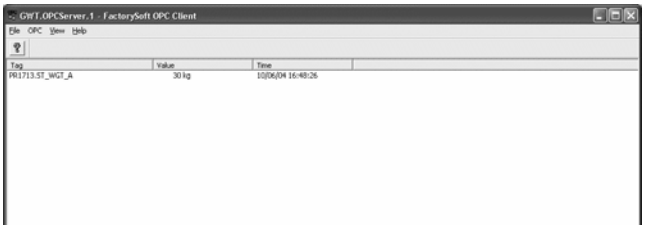
Next, add an "Item" by clicking on [OPC]-[Add Item] in the menu.

Click on "PR1713" (or on the group, if you have set up a new group) in "Browse items:".
A list of pre-defined items is displayed right of it. Double click on the pre-defined item [ST_WGT_A] and then on [Done].



Note:
A complete item name comprises the group name ("PR1713" in this case), a dot (".") and the local item name (e.g. "ST_WGT_A"). "ST_WGT_A" is a pre-defined item which contains a character string with the actual weight data.

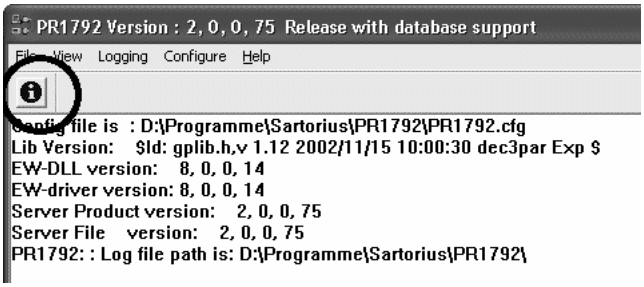
When you see a weight value, the OPC connection is successful and you can proceed with the next step.



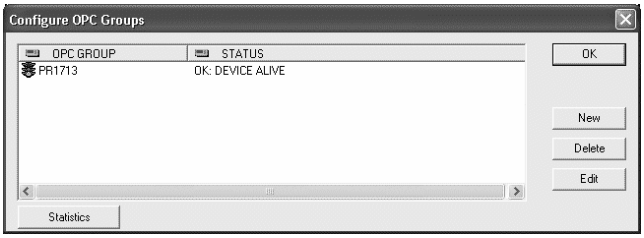
Please, note that the values change from "Bad" into the actual weight values. Column "Time" shows the last time stamp (the time at which the value changed last was received).

Please, have a look at PR1792 window "Configure OPC Groups". (The OPC server icon is displayed at the bottom right in the system "tray" . Double click on it to display the window.)

Click on button "Info".



Note that the controller group status has changed from "IDLE" into "OK: DEVICE ALIVE" and that the traffic light is green. If the traffic light is red, the connection is not correct. Have a look at the PR1792 main window for error messages.



Note:
For further information related to OPC server or OPC client, see the PR1792/00 OPC server manual.

3.3.4 Error messages

If this error message is displayed, check once again, if...

- licence PR1791/13 in the controller is activated.
- the RS-232 cable is plugged in correctly.
- you have selected the right COM port.
- the settings in the controller in [Setup]-[Serial Ports]-[Builtin] are correct.
- an OPC group was set up
- the OPC configuration is correct.

4 FLASHIT

The Sartorius FlashIt program permits loading (flashing) of

- BIOS,
- firmware,
- applications (projects),
- various print-outs and
- various languages.

It can be used for easy loading (flashing) of software releases and updates for instruments PR1713, PR1730, X4, X5 & X6 without having to make hardware changes (EPROMS).
Firmware and applications are provided on the PowerTools CD and on our Internet site www.sartorius.com.

The required data can be selected in the program. 4 selection windows in which the data can be selected are provided for this purpose. The parameters are set automatically in the instruments. Connection via serial interface or via Ethernet can be selected.

Right behind button "Info", information related to the current file selection is displayed.

When opening the dropdown lists right of [Select] a history of the files used last is displayed.

Click on [Flash] to load the selected data into the controller.

Click on [Merge] to merge firmware, application, print label and TranslateIt text file into one file.

Click on [Exit] to finish FlashIt.

A help function is available for support. It can be started by clicking on [Help].

4.1 Application

Instruments PR1713, X4, X5 & X6 can be equipped with different programs by the manufacturer. Moreover, free programming based on IEC 61131 is possible.

4.1.1 BIOS

The BIOS (Basic Input Output System) is a program developed by Sartorius, which handles the basic instrument functions.

4.1.2 Firmware

The instrument firmware is provided for conversion of the weight value, display and all other weight data monitoring functions. It is developed only by Sartorius and is available only in object format for loading into an instrument.

4.1.3 Application

Normally, applications are sold as complete packages with BIOS and firmware by Sartorius. Changes / extensions or new applications can be created by the customer only using Sartorius programming tool PR1750 and must be loaded into the instrument by means of FlashIt. Access to the instrument firmware functions by the applications is via a defined program interface.

4.2 Flashing from instruments

Flashing (program upload into the instrument) is only possible by means of the FlashIt program provided by Sartorius. The possibilities for program loading dependent of the CAL switch position are described below.

On the standard instrument, program flashing with the CAL switch closed is not possible. When the CAL switch is open, BIOS, firmware and application can be flashed into the instrument.

	Flashing		
CAL switch	BIOS	Firmware	Application
	Not possible	Not possible	Not possible
	Possible	Possible	Possible

4.3 Flashing a new firmware

Step 1: Controller settings

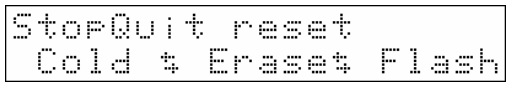
Connect the controller with the PC at Com 1 or Com 2 via a serial cable. For this purpose, use interface "Builtin" (or a RS-232 interface) at the controller for connection of the RS-232 cable.
Open the boot menu. Go to the boot menu by:

- pressing Stop when switching on the controller
- pressing keys Stop and Exit or Stop and Quit with PR1713 (dependent on system setting in the controller in [Setup]-[Software Parameter]-[Reset on stop+exit])
- menu [Setup]-[Reboot]-[Bios], wait, until messages "Doing Bios..." and "Bios ready" are displayed.

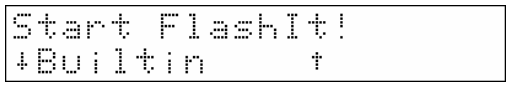
Note:
Note that returning to the uppermost menu level might be possible in the boot menu only by means of cold start, erase or flash. There is no other possibility.

- A cold start deletes all programs and tables stored in RAM.
- Erase deletes all data and licences stored in EAROM (controller reset to default), when the CAL switch is open.

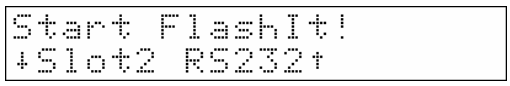
Further hints are given in the relevant installation manual.



Press [Flash].



The controller is ready for flashing.

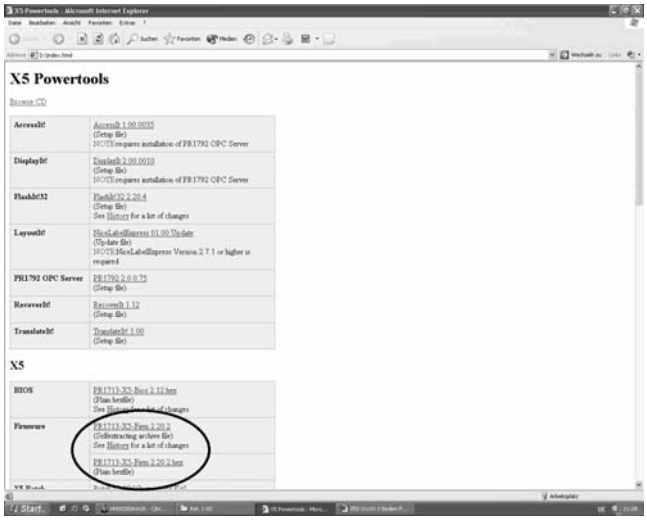


If the serial port [Builtin] is not free, ↓ or ↑ and OK can be pressed to select the RS-232 interface (available only, if a serial I/O card PR1713/04 or PR5510/04 is fitted). For flashing via Ethernet, select [Ethernet] (see chapter 4.11).

Step 2: Settings on the PC

Insert the PowerTools CD into the CD/DVD drive.

Option 1



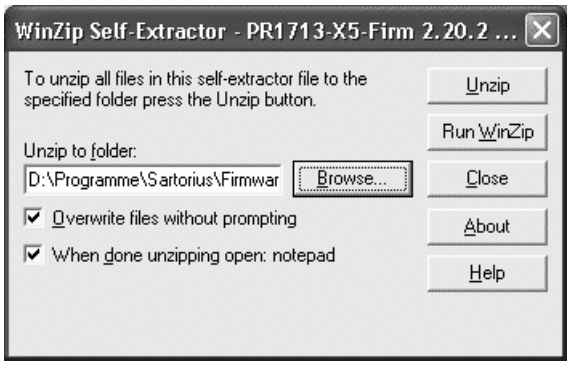
Now, a new browser (new window) with headline "PowerTools" is opened.

Click on "PR1713-X5-Firm X.XX.X" and then on [Open].

Alternatively, you can click on firmware file "PR1713-X5-Firm X.XX.X.hex", see Option 2.

Note:
If the PowerTools browser is not displayed automatically after inserting the PowerTools CD, double click on icon workstation, click on the icon of the CD/DVD drive with the right mouse key and select [Open]. Now, a survey of the CD contents (CD/DVD browser) is displayed. Double click on folder "X5" and then on folder "Firmware". Double click on file "PR1713-X5-Firm X.XX.X Archive.exe".

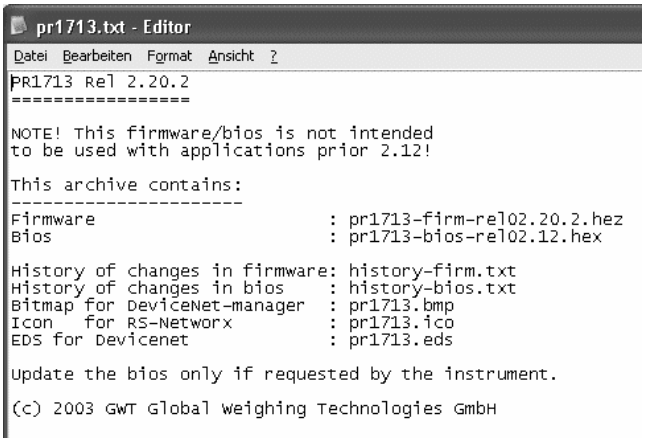
A self-extracting file is opened. Confirm it with [Ok].



Click on [Browse], or directly enter a path in the input field left beside button [Browse] to select a directory for extraction of the data. Subsequently, click on [Unzip].

Click on [Ok]. Extraction was completed successfully.

A text editor is opened automatically. The extracted data are displayed.
Close the text editor via [File]-[Exit]. The text editor can be called up at any time in the extraction path.



Now, the firmware file is on the PC. Flashing into the controller can be done using FlashIt.

Option 2

Alternatively, you can click on firmware file "PR1713-X5-Firm X.XX.X.hex" and store the file. Double click on file "PR1713-X5-Firm X.XX.X.hex" for direct firmware flashing. FlashIt starts automatically and the firmware is selected already in FlashIt.

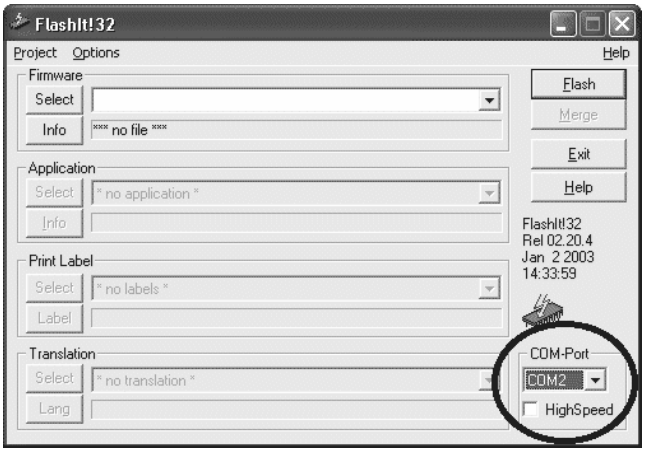
Step 3: FlashIt settings

Now, FlashIt!32 must be started on the connected PC: [Start]-[All Programs]-[Sartorius]-[FlashIt!32]-[FlashIt!] or double click on on the desktop, if any. You can also start FlashIt by double clicking on a ".hex"- and ".p32" file.

Select the COM port at which the controller is connected via the RS-232 cable (COM2 in this example) or select "Network" for IP input.

When using the connection via a serial cable, you can activate checkbox "HighSpeed" by mouse clicking. In this case, a warning message is displayed (see below). Activating "HighSpeed" accelerates data transmission considerably.

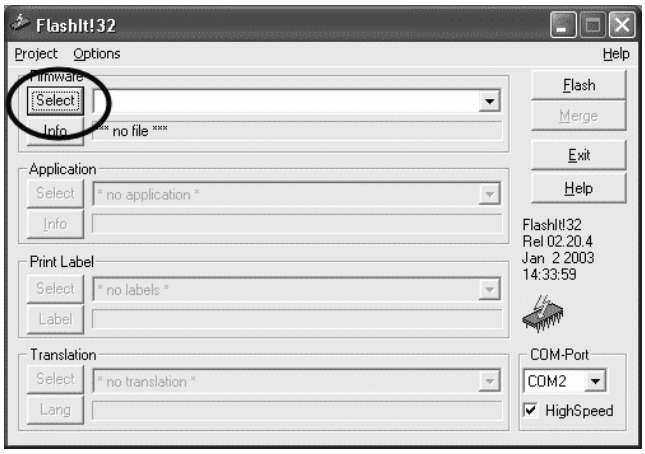
Note:
If the required COM port is not selectable, it is used by another application.



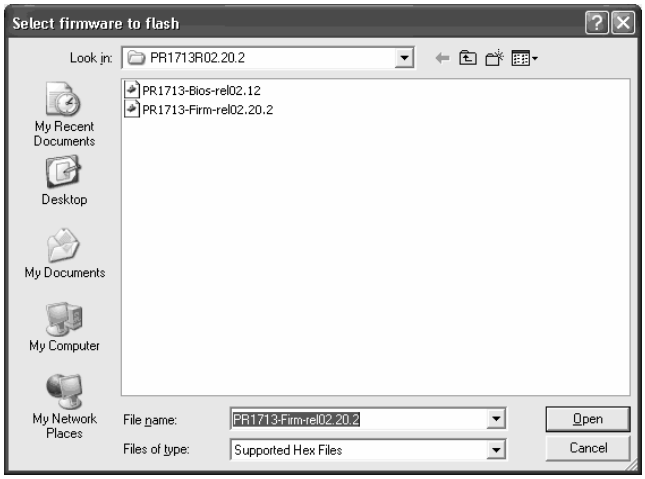
The following message is displayed.
When you have read the message and want to maintain the "HighSpeed" option, click on [Ok]. Otherwise, click on [Cancel] to continue at normal data transmission speed.

Note:
The HighSpeed option is without problems over short distances, if the controller is connected directly to the PC via a serial cable.

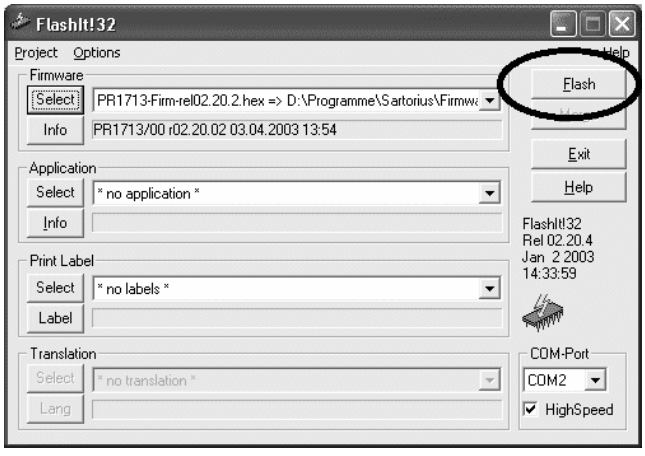
Click on [Select] to select the firmware.



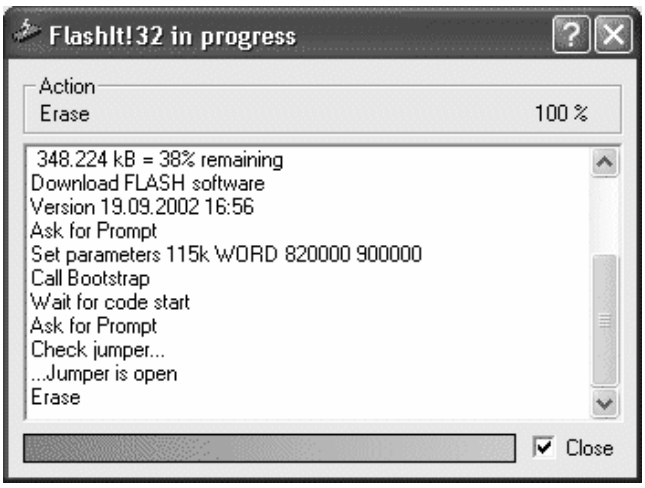
Go to the extraction folder and double click on "PR1713-**Firm**-relXX.XX.X.hex".



Now, click on [Flash] to start flashing.



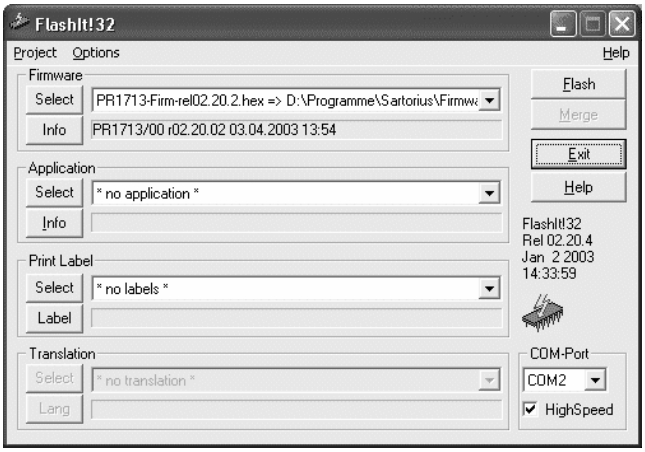
A flash status window is displayed. It is closed automatically after flashing when activating checkbox "Close".



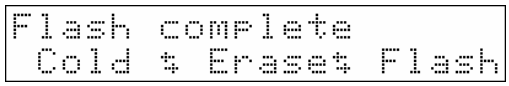
When message "No communication" or "No prompt from device" is displayed, the causes can be:

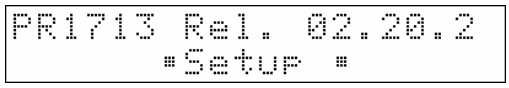
- selection of wrong COM port
- cable connection between PC and instrument missing or faulty
- controller is not in flash mode.

After successful flashing, this program window is displayed again. Flashing is finished. Click on [Exit] to terminate the program.



Step 4: Controller cold start





After flashing, a controller cold start with [Cold] is required.

A cold start is followed by the display as shown opposite dependent on instrument and firmware, unless an application was loaded into the controller so far.

4.4 Flashing an application

Flashing of an application into the controller must be preceded by flashing a firmware into the controller, if FlashIt is used for the first time, see 4.3. Application flashing is possible only now.

Step 1: Settings on the controller

See chapter 4.3.

Step 2: Settings on the PC

Insert the PowerTools CD into the CD/DVD drive.

A new browser (new window) with headline „PowerTools“ is opened.

Scroll down in the window, until you can see the names of the applications.

Proceed as described in Option 1 or in Option 2.

Option 1: Customizing kit

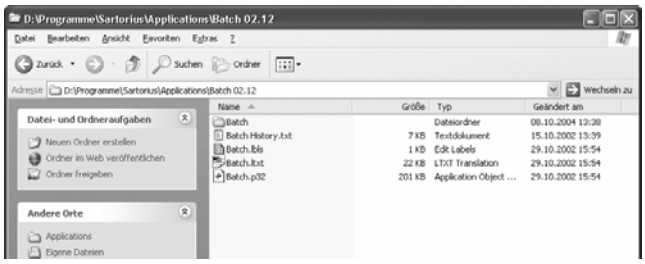
Each application program of PR5510 (X4), PR5610 (X5) or PR5710 (X6) is delivered with a "Customizing Kit“ file. Apart from the application program itself, it contains further files which pertain to this application version. All files are packed in this "customizing kit“ and must be extracted first.

Don't change the names of the unpacked files!
Don't change the structure or the names of this folder!

Click on the file with extension "[Customizing Kit]“ in the PowerTools browser to extract the provided files of the relevant application on the PC.
A self-extracting file is opened.
Proceed as described in chapter 4.3 (step 2).

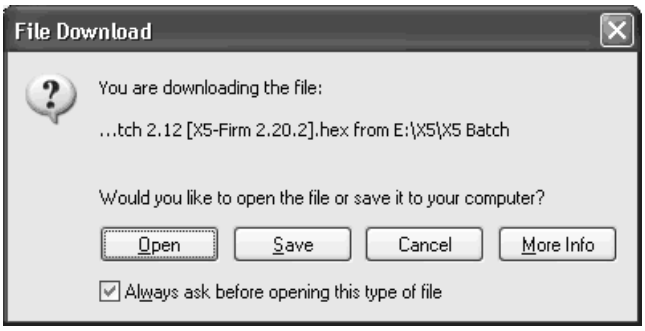
The following files are extracted:

- folder "...\Labels“ with pre-defined layout files for Nice Label Express
- .txt description of software changes
- .lbls start file for Nice Label Express
- .ltxt text file for TranslateIt
- .p32 application program (project)



Option 2: Ready to flash

Click on the file with extension "[X5-Firm X.XX.X].hex" for flashing the application directly.



The application file with extension "[X5-Firm X.XX.X].hex" is a file containing the firmware and the relevant application. I.e. one flashing operation covers firmware and application flashing.

Example:
Click on [Save] to copy the application on the PC and to flash it by double clicking (on the ".hex" file), or click on [Open] for flashing immediately. FlashIt!32 is opened automatically.

Step 3: FlashIt settings

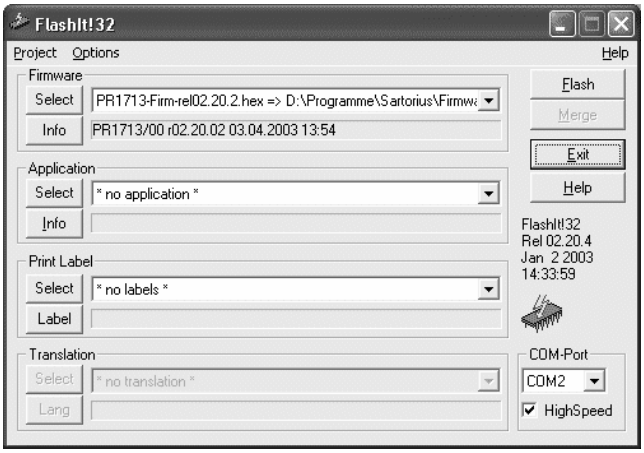
See chapter 4.3.

Option 1

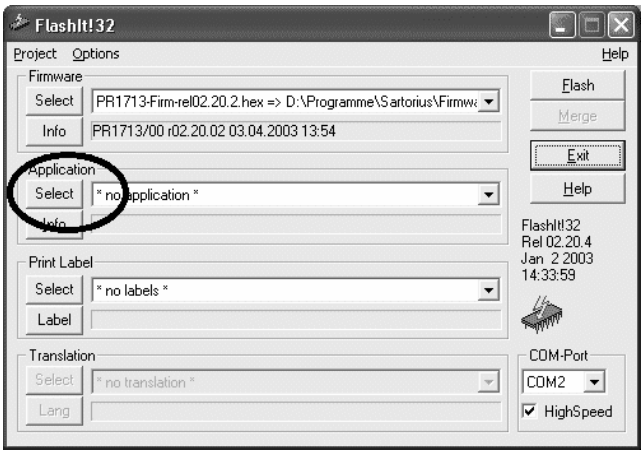
Make the settings at the "COM port" ("COM2" in this example) and for "HighSpeed" (activated in this example).

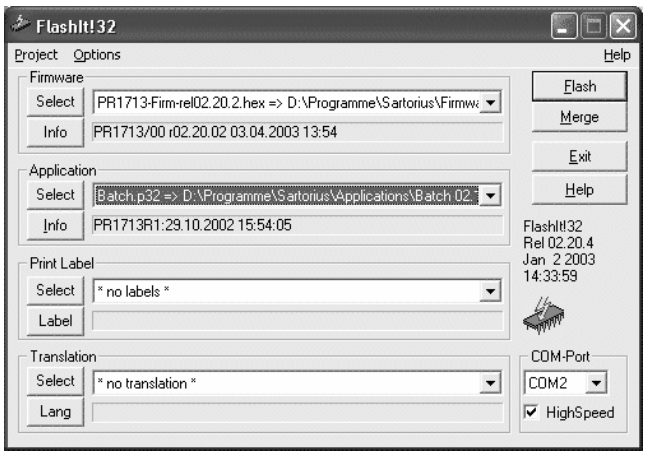
Make sure that you have selected the correct firmware in "Firmware" .

Note:
Applications can be loaded only, if the appropriate firmware is also loaded.



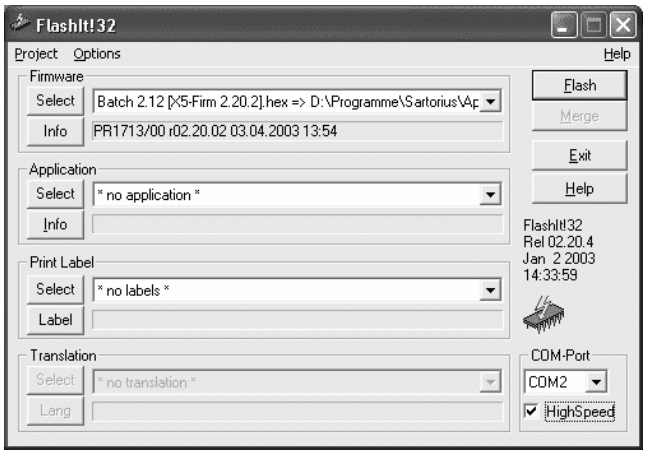
Click on [Select] under "Application" to select the application file (".p32").
Go to the extraction folder and double-click on the ".p32" file (e.g. "Batch.p32").





Now, click on [Flash] to start flashing.
Another flash status window is displayed. It closes automatically after flashing.
After successful flashing, this program window is displayed again. Click on [Exit] to close the program.

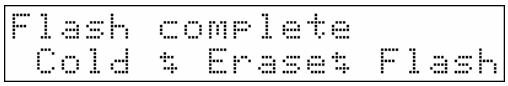
Option 2
Make the settings at the "COM port" ("COM2" in this example) and for "HighSpeed" (activated in this example).

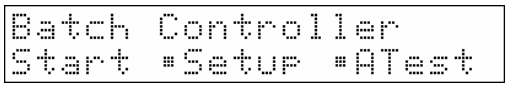


If selection window "Firmware" does not contain the required ".hex" file, click on button [Select] below "Firmware". Find the folder which contains the ".hex" file and double click on this file.

Now, click on [Flash] to start flashing.
A flash status window is displayed. It is closed automatically after flashing.
After successful flashing, this program window is displayed again. Click on [Exit] to finish the program.

Step 4: Controller cold start





After flashing, a controller cold start with [Cold] is required.

Dependent on the flashed application, a cold start is followed by the display shown opposite.

4.5 Flashing a PR1750 project

For flashing into the controller by means of FlashIt, an application (project) made with PR1750 must be converted into a ".p32" file with [Built]-[Make]in the PR1750 menu.
Subsequently, the project can be flashed into the instrument as described in chapter 4.4.

4.6 Flashing a print label

For flashing print labels for the first time, a firmware must be flashed into the controller when using FlashIt for the first time, see chapter 4.3. This is a prerequisite for flashing print labels.
For flashing the print label into the controller, at least firmware (".hex") and application (".p32") must be flashed at the same time.

Step 1: Settings on the controller

See chapter 4.3.

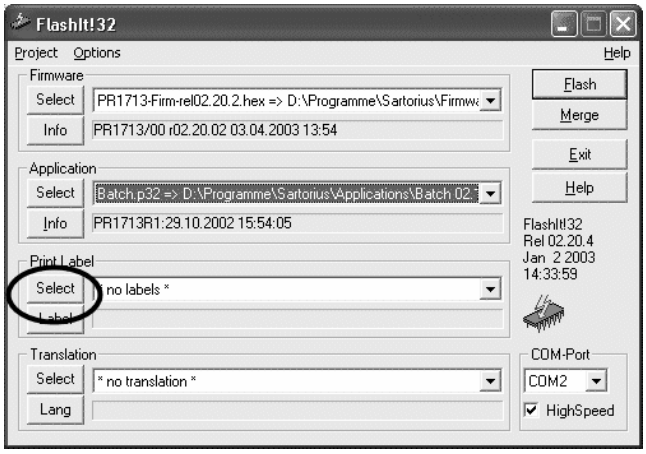
Step 2: Settings on the PC

Print label file ".lbls" exists only (i.e. it can be flashed), when the customizing kits on the PC were extracted, see chapter 4.4. For further information related to the ".lbls" file, see chapter 9.

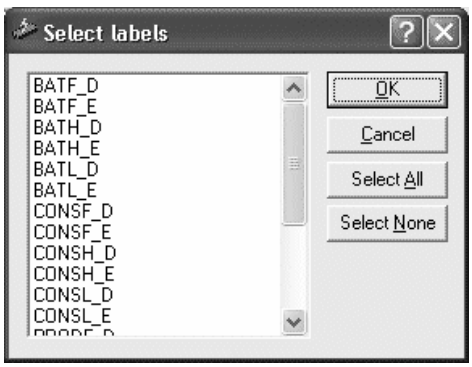
Step 3: FlashIt settings

See chapter 4.3.

Note:
Make sure that you have selected the right firmware in "Firmware" and the right application in "Application". The print label can be flashed only together with firmware and application. Additionally, the TranslateIt text file can be flashed.



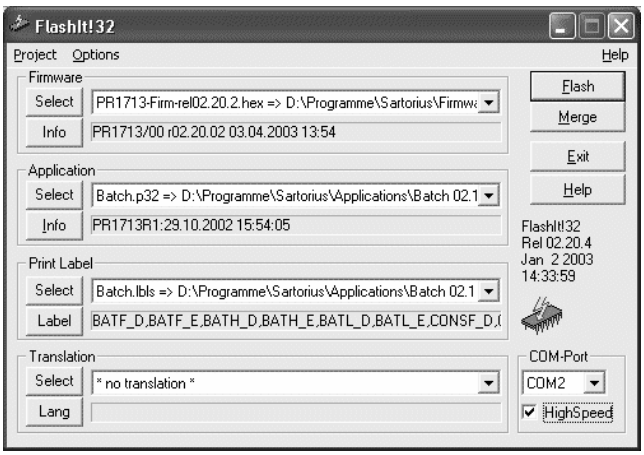
Click on [Select] below "Print Label" to select the label file (".lbls").
Go to the extraction folder of the customizing kit and double click on the .lbls file (e.g. "Batch.lbls") or open this file.



The window shown opposite is displayed.
In this window, you can select the labels edited previously with Nice Label Express.
Click on [Select All] to select all labels for flashing, [Select None] cancels your choice.
You can also mark several different labels by clicking on the relevant labels.
Click on [Ok].

Subsequently, click on [Flash] to start flashing. A flash status window is displayed and closed automatically after flashing.

After successful flashing, the program window shown opposite is displayed again. Click on [Exit] to close the program.



Step 4: Controller cold start

```
Flash complete
 Cold ↕ Erase↕ Flash
```

Flashing must be followed by a cold start of the controller with [Cold].

```
Batch Controller
Start ▪Setup ▪ATest
```

After the cold start, the following display dependent on flashed application appears.

4.7 Flashing TranslateIt files

For flashing a TranslateIt text file for the first time, a firmware must be flashed into the controller previously when using FlashIt first, see chapter 4.3. This is a prerequisite for flashing a TranslateIt text file. For flashing the TranslateIt text file into the controller, at least firmware (".hex") and application (".p32") must be flashed as well.

Step 1: Controller settings

See chapter 4.3.

Step 2: Settings on the PC

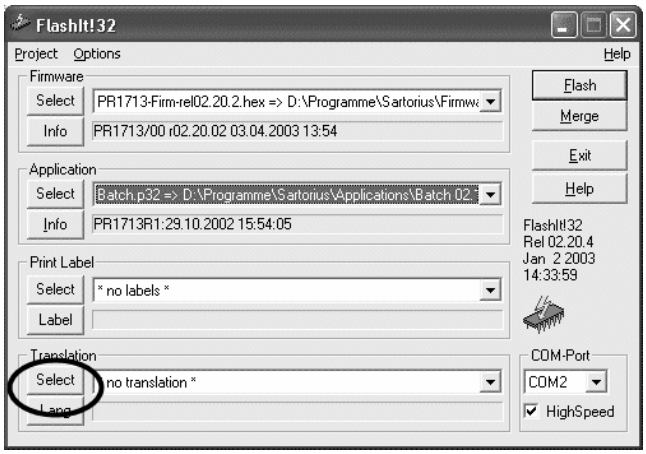
The TranslateIt text file ".ltxt" exists only (i.e. it can be flashed), if the customizing kits on the PC were extracted, see chapter 4.4. Detailed information related to TranslateIt and to TranslateIt text file editing is given in chapter 6.

Step 3: FlashIt settings

See chapter 4.3.

Note:
Make sure that you have selected the right firmware below "Firmware" and the right application below "Application". The TranslateIt text file can be flashed only together with firmware and application. Additionally, the print label can be flashed at the same time.

Click on [Select] below "Translation" to select the TranslateIt text file (".ltxt").
Go to the extraction folder and double click on the ".ltxt" file (e.g. "Batch.ltxt") or open this file.

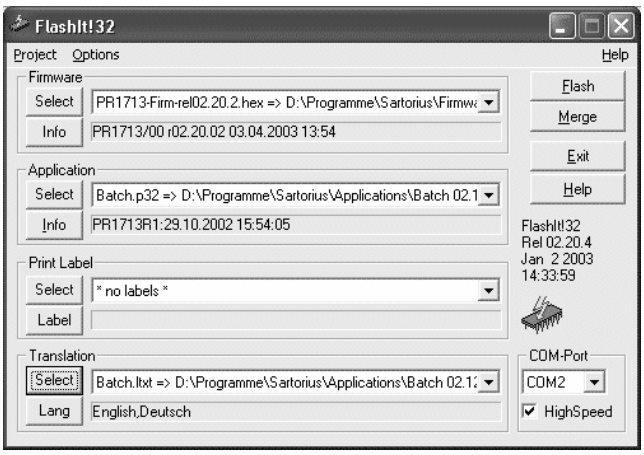


The window shown opposite is displayed.
In this window, you can select the text files or languages edited previously with TranslateIt (see chapter 6) by clicking on the relevant language.

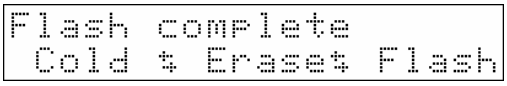
Click on [Ok].

Subsequently, click on [Flash] to start flashing. A flash status window is displayed and closed automatically after flashing.

After successful flashing, the program window shown opposite is displayed again. Click on [Exit] to close the program.



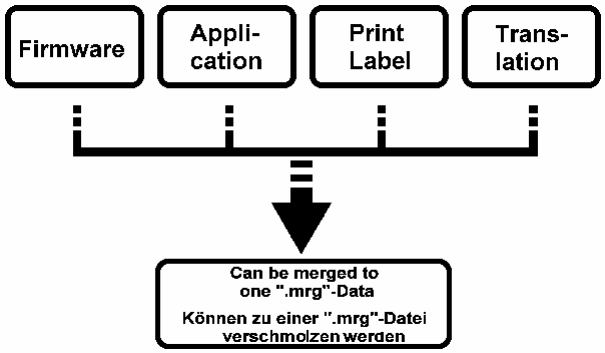
Step 4: Controller cold start



After flashing, a controller cold start with [Cold] is required.

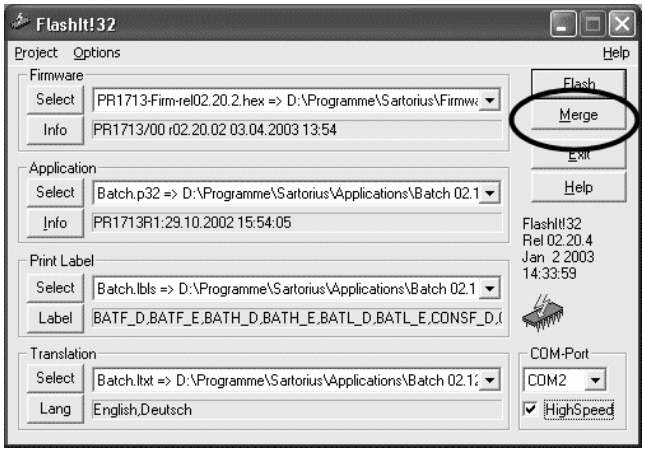
The cold start is followed by the display shown opposite dependent on flashed application.

4.8 Creating a merge file



FlashIt!32 provides the functionality for merging firmware, application, print label and TranslateIt text file into one file.

As a min. prerequisite for merging, the firmware (correct version) and the relevant application (correct version) must be selected.
In addition to firmware and application, print labels and/or TranslateIt text file can be selected for merging.
After selecting, click on [Merge].



Note:
An already merged file must not be merged again.
Always use the source file for merging:

Firmware	Firm Rel. X.XX.hex
Application	.p32
Print label	.lbls
Translation	.ltxt

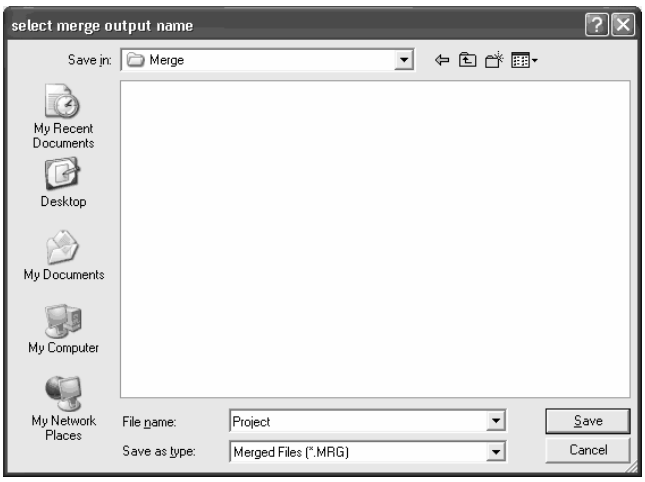
After clicking on [Merge], a status window is displayed shortly.

When message "Entry for Ressource PLC is used. Replace merged object?" or "Entry for Ressource OPR is used. Replace merged object?" is displayed, the cause can be:

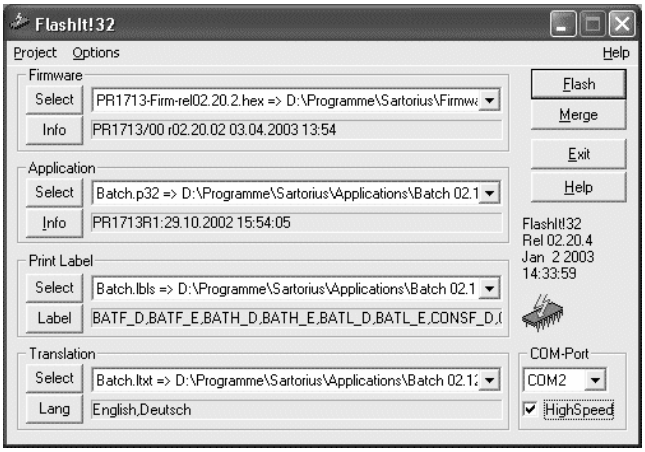
- you try to merge an already merged file.
- you try to merge an inadmissible file.
- the application file or the firmware are already used.

In this case, check your selected files.

Subsequently, a window is opened. In this window, you can specify or change the file name and the target folder for the merge file.
Now, click on [Save]. The merge file is stored in the target folder on the PC.



After successful merging, the program window shown opposite is displayed again. Click on [Exit] to close the program.



4.9 Flashing a merge file

Files merged by means of FlashIt can be flashed into the controller. Merged files are files which comprise at least firmware and application. Moreover, they can consist of firmware and application and/or print labels and/or TranslateIt text files.

Step 1: Settings on the controller

See chapter 4.3.

Step 2: Settings on the PC

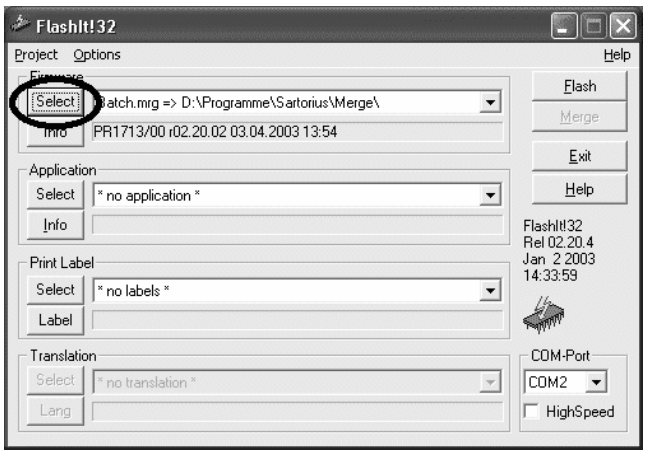
For flashing a merge file, you must have created a merge file by means of FlashIt!32 previously, see chapter 4.8, or a merge file must exist on your PC.

Step 3: FlashIt settings

See chapter 4.3.

Click on [Select] below "Firmware" .
Find the target folder in which the ".mrg" file is stored. Double click on the ".mrg" file.

Click on [Flash] to start flashing.
A flash status window is displayed and closed automatically after flashing.



Step 4: Controller cold start

```
Flash complete
 Cold % Erase% Flash
```

After flashing, a controller cold start with [Cold] is required.

```
Batch Controller
Start *Setup *ATest
```

A cold start is followed by the display shown opposite dependent on application.

4.10 Flashing a Bios file

Unless message `BIOS too old` is displayed, the BIOS must not be flashed a second time. Renew the BIOS only, if requested by the instrument.
The flash procedure must not be interrupted, because the loading program for FlashIt!32 is included in the BIOS and will be destroyed by an interruption.
In this case, the instrument must be returned to Sartorius Hamburg for repair.

Step 1: Settings on the controller

See chapter 4.3.

Step 2: Settings on the PC

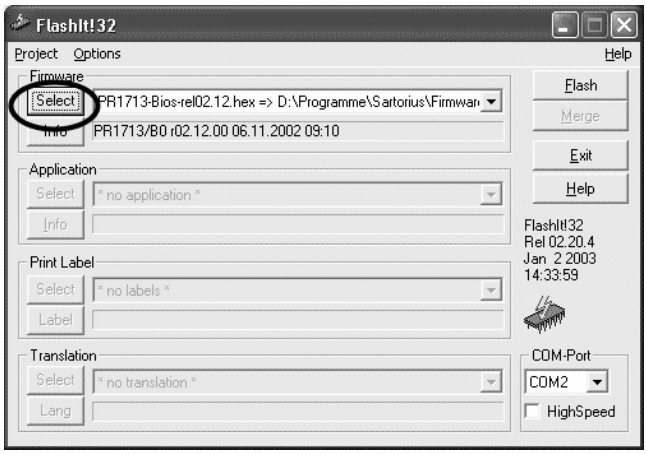
The Bios file exists only when you have extracted file "PR1713-X5-Firm 2.20.2" on the PC (see chapter 4.3)

Step 3: FlashIt settings

See chapter 4.3.

Click on [Select] below "Firmware".
Search the target folder which contains file "Bios-RelXX.XX.hex". Double click on the Bios file.

Click on [Flash] to start flashing.



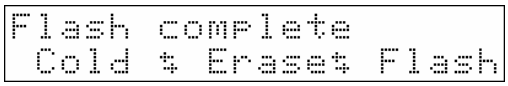
After a short time, a warning message is displayed.
Read the warnings attentively.
If you agree, click on [Ok]. Flashing is continued.
If you don't agree, click on [Cancel] in order to cancel flashing.

Note:
Renew the BIOS only when requested by the instrument.

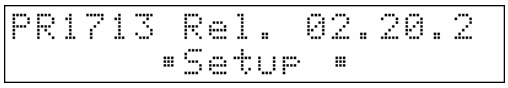
A last warning is displayed.
Bios flashing must not be interrupted, because the loading program for FlashIt!32 is included in the BIOS, otherwise, the instrument must be returned for repair.
Confirm with [Ok].

After successful flashing, the FlashIt program window is displayed again. Click on [Exit] to finish the program.

Step 4: Controller cold start



After flashing, a controller cold start with [Cold] is required.



The cold start is followed by the display shown opposite dependent on firmware, if no application was loaded into the controller so far.

4.11 Flashing via Ethernet

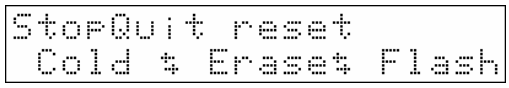
Only the differences as opposed to flashing via the Com port are described in this chapter.

For flashing via Ethernet, you need ...

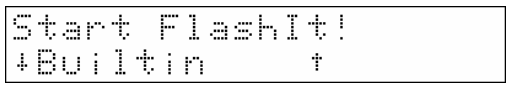
- **FlashIt version ≥ 02.26.01.**
- **for the X5 & X6 controllers: Ethernet card PR1713/14 with software release ≥ 01.14.01; update the software release, if necessary. The procedure is as described for firmware flashing (see chapter 4.3).**
- **BIOS version ≥ 3.XX in the X5 & X6 controller.**

Step 1: Settings on the controller

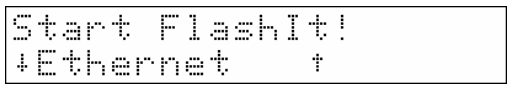
An already configured Ethernet card must be inserted in the controller (see chapter 3.1.2).



Press [Flash].



The controller is ready for flashing.



For flashing via Ethernet, select [Ethernet].

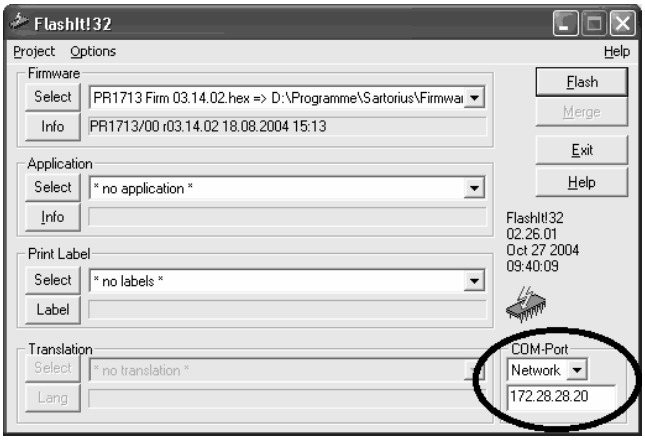
Step 2: Settings on the PC

No differences.

Step 3: FlashIt settings

See chapter 4.3.

Select "Network" in the "COM-Port" dropdown list. Specify the configured IP address of the Ethernet card below.



Note:
When message "No communication. Receive timeout" is displayed, the causes can be:

- No connection between Ethernet controller and FlashIt PC
- No Ethernet card inserted in the controller
- The Ethernet card is not configured correctly.
- A faulty IP address was entered for "Network".

Step 4: Controller cold start

No differences.

4.12 Error messages

4.12.1 FlashIt

The CAL switch is closed.

Click on [Ok] to return to the FlashIt program window.
Open the CAL switch on the Controller before flashing and re-start flashing.

Note:
When flashing, the CAL switch must be open.

When message "No communication" or "No prompt from device" is displayed, the causes may be:

- faulty COM port was selected, or
- missing or faulty cable connection between PC and instrument
- controller is not in flash mode.

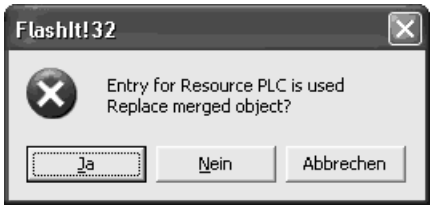
When message "No communication. Receive timeout" is displayed during flashing via Ethernet, the causes can be:

- no connection between Ethernet controller and FlashIt PC
- no Ethernet card inserted in controller
- The Ethernet card is not configured correctly.
- A faulty IP address was entered for "Network".

Click on [Cancel], when message "Entry for Ressource PLC is used. Replace merged object?" or "Entry for Resource OPR is used. Replace merged object?" is displayed during merging. The causes can be:

- You are using an already merged file.
- You are using an inadmissible file for merging.
- The application file or the firmware is already being used.

In this case, check your selected files.



4.12.2 Controller

Firmware is too old, update to X.XX	The instrument contains a more recent BIOS version or application, which is not compatible with the flashed (earlier) version. Load a compatible (new) firmware version into the instrument. **Note**: When you have extracted the customizing kits , you will find a "History.txt" file in the extraction folder. It describes, for instance, which firmware version is compatible with the extracted application.
Fatal System Error ..BIOS is too old...	A more recent firmware was flashed to an (earlier) BIOS version existing in the instrument. Flash a BIOS pertaining to the firmware into the instrument. **Note**: When flashing BIOS, it is indispensable to follow the instructions given in chapter 4.10.
Flash not possible CAL-Jumper closed	When the CAL switch is closed, the error message is output on the instrument with BIOS versions >3.12.x.

5 DISPLAYIT

Sartorius program "DisplayIt" permits direct operation of controllers in the process from a PC. DisplayIt mirrors the operator interface of the controller connected at the PC or via Ethernet directly on the PC. Direct key actuation or data input from the PC are possible by means of the mouse or using the keyboard connected to the DisplayIt PC. Communication is possible via a DDE server or via the integrated OPC server.

A connected controller is identified by an OPC group defined in the OPC server. The communication settings to be done once are stored, i.e. the communication with the controller is built up directly when calling up DisplayIt again. Selecting a controller is done in a dropdown menu on the DisplayIt operator interface. By multiple program starting, several controllers at a time can be displayed. In addition to the serial interfaces, DisplayIt can be used also via Ethernet. Operation via fieldbus is not possible.

The program can be used from firmware version 2.0.

Note:
As a prerequisite for working with DisplayIt, the OPC server must be installed and configured (see 3.3.2 and 3.3.3).
Moreover, the DisplayIt controller must be connected with the PC via an RS-232 interface or via Ethernet.

Step 1: Installation of DisplayIt & OPC server

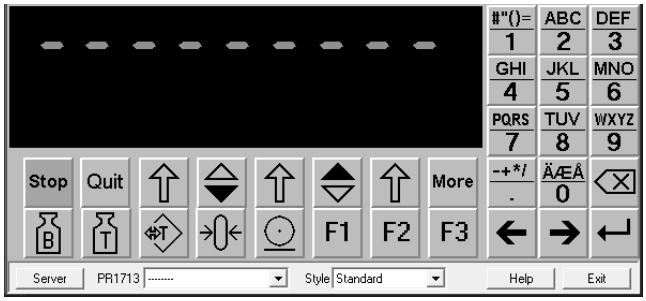
See chapter 2.2 and 2.4.

Step 2: Configuration OPC server

See chapter 3.3.2 and 3.3.3.

Step 3: Starting DisplayIt

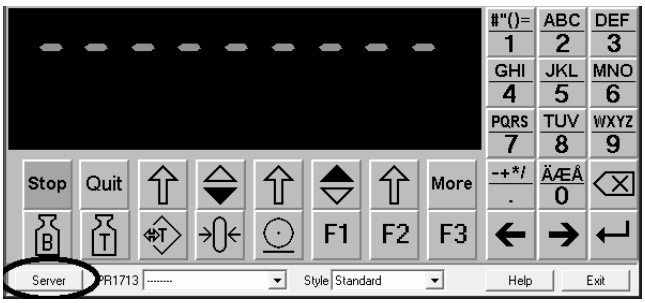
Start DisplayIt via [Start]-[All Programs]-[Sartorius]-[DisplayIt]. [Start]-[All Programs]-[Sartorius]-[DisplayIt] also permits creation of a desktop shortcut. For this, click on DisplayIt icon with the right mouse key and select [Send to]-[Desktop (create shortcut)]. Now, starting DisplayIt is possible easily and quickly by clicking on desktop icon .



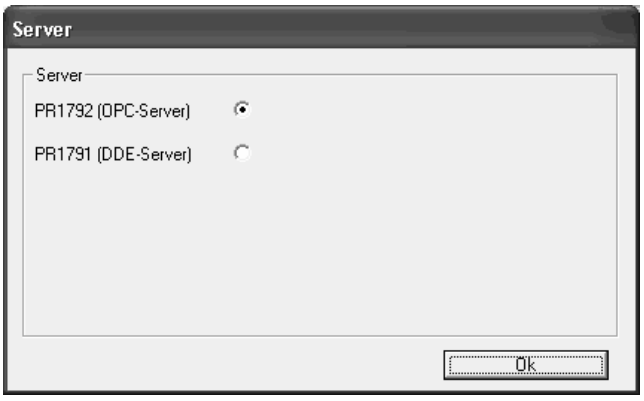
The OPC server starts automatically with the DisplayIt program start, i.e. it need not be started separately.

Note:
If you have entered a different installation path during installation, the start path mentioned above will change accordingly.

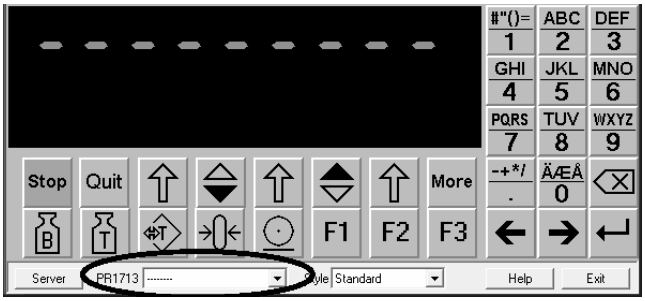
Click on button [Server], if you haven't installed an OPC server and if you rather want to use a DDE server.
In this case, dialogue window "Server" is opened.



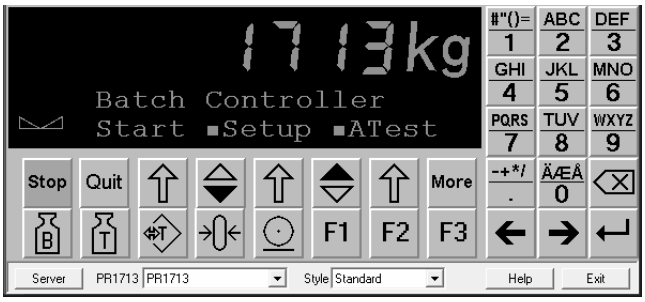
In this window, you can change between OPC und DDE server.
A DDE server already installed on the system can also be used. However, we recommend using the OPC server, because the OPC server is also started directly when starting the DisplayIt program, whilst the DDE server must be started separately.
The OPC server is activated as standard in DisplayIt, i.e. no changes are required, if you work with an OPC server.
Click on [Ok] to close dialogue window "Server" (or to confirm your entry).



Selecting a controller is done by clicking on the dropdown menu behind "PR1713" on the DisplayIt operator interface.
The choice was set up and configured previously in the OPC server (for OPC groups, see chapter 3.3.2).
For each open DisplayIt application, only one controller can be selected simultaneously.

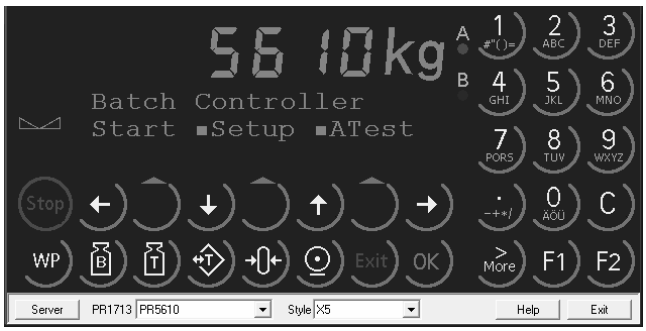


Subsequently, weight display, application name and menu of the connected controller (or of the OPC group configured in the OPC server) are displayed on the operator interface.

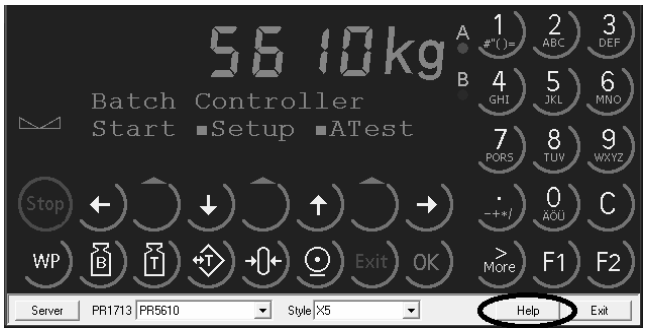


At the first program start, the PR1713 controller operator interface is displayed. In the "Style" dropdown menu, you can change between the PR1713 controller standard operator interface and the X5 controller operator interface by mouse clicking (also if an X4 or an X6 instrument is connected).

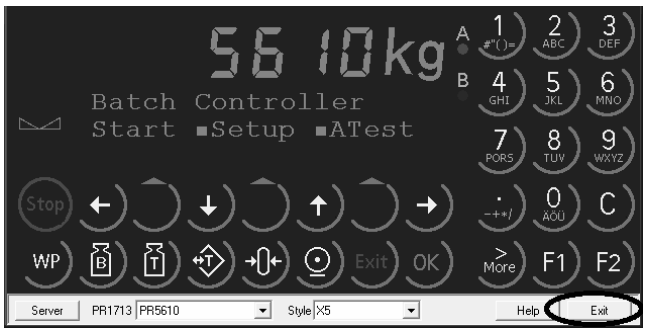
The "X5" operator interface was selected.



Click on button [Help] for hints on configuration and communication of controller, DisplayIt and OPC server.



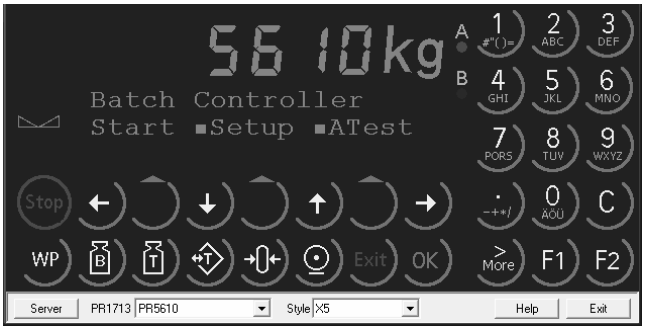
Click on [Exit] to close DisplayIt.
Closing DisplayIt won't finish the OPC server, which will continue running in the background.



To close the OPC server, double click on the OPC server icon in the system tray.
Subsequently, click on [File]-[Exit] in the OPC server menu.

5.1 Operator interface

The operator interface can be used for direct operation of controllers in the process from the DisplayIt PC.

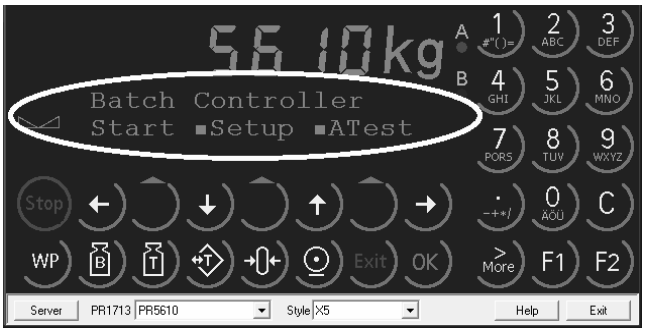


The function of the keys of the DisplayIt operator interface shown opposite is identical to the function of the keys on the controller.

You can select the keys on the DisplayIt operator interface by mouse clicking and using the keyboard.
The two methods are equivalent and can be used alternatively.

5.1.1 Operation via PC keyboard

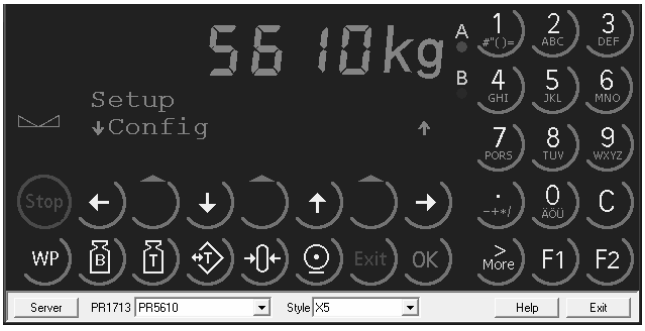
The function of the first softkey ([Start] in this example) is handled by pressing key F6 , the function of softkey ([Setup] in this example) in the middle is handled by pressing key F8 and the function of the right softkey ([ATest] in this example) is handled with F10 .



Note:
For detailed information on key allocation, see the survey given below (see chapter 5.1.1.1).

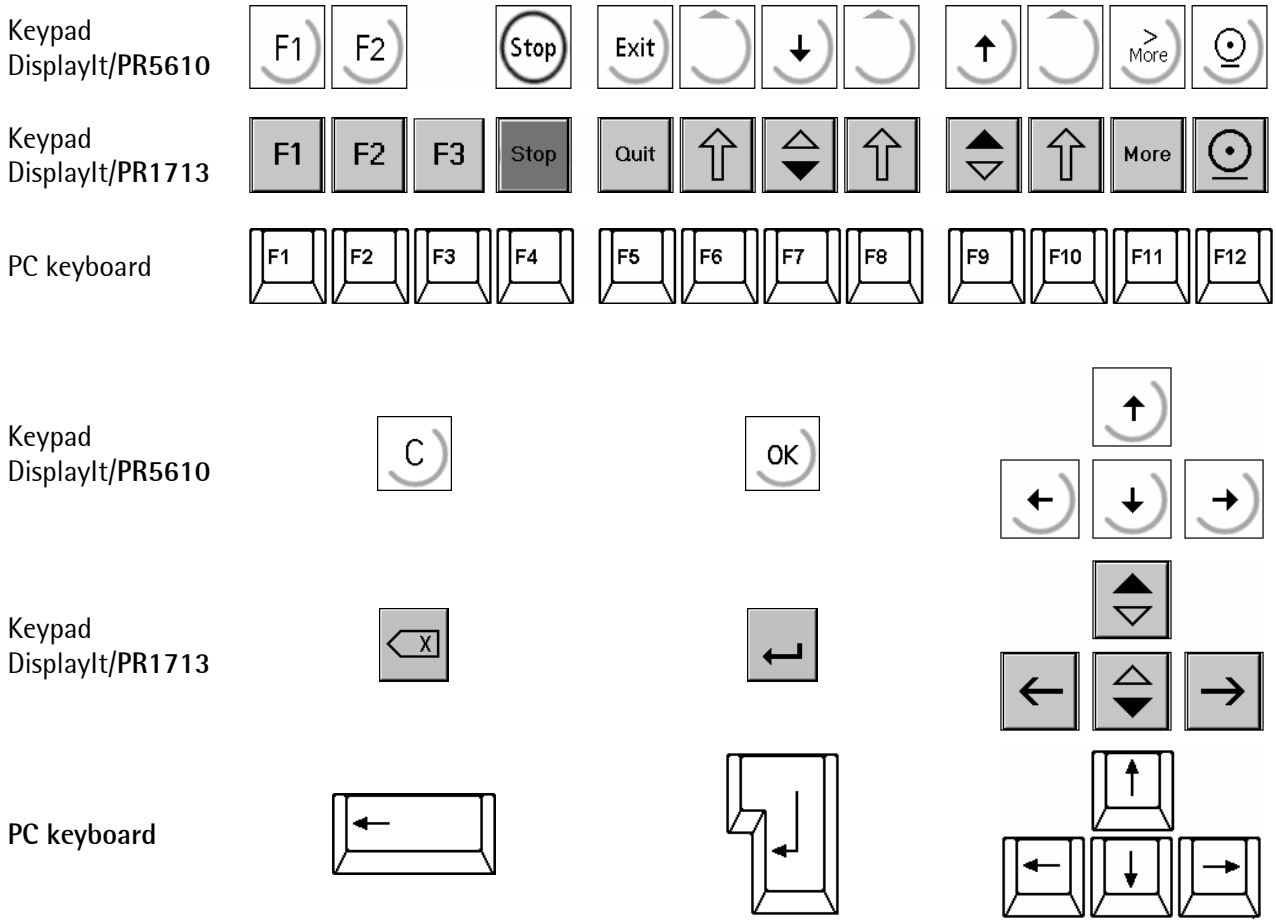
Example:
Press key F8 for [Setup] at the topmost menu level (as shown above).
Scroll up and down by pressing arrow keys / or / .

To go to menu [Config], press the Enter key .



5.1.1.1 Key allocation of controller vs. PC keyboard

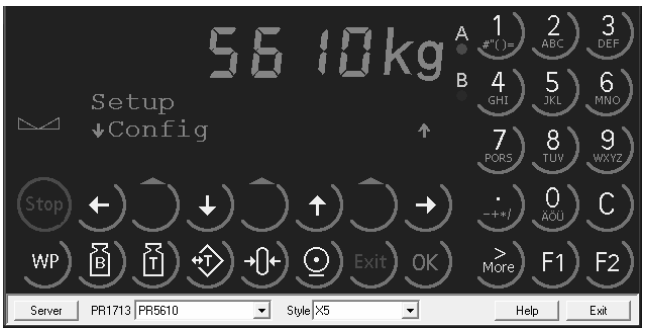
The operator interface of DisplayIt or of the controller is provided with an alphanumeric keypad. The two functions are equivalent and can be used alternatively.



5.1.2 Operation via PC mouse

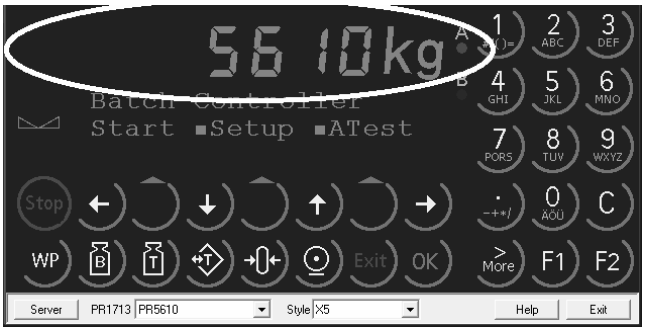
Click with the mouse on the menu you want to reach.
For handling the functions of function, menu, numeric and alphanumeric keys, click on the relevant key on the DisplayIt operator interface.

Example:
Click with the mouse on [Setup] at the topmost menu level (as shown above).
Click on the arrows on display or on arrow keys / to scroll up and down.
To go to menu [Config], click on [Config].



5.1.2.1 Alternative operator interface

By double clicking on the weight display (marked area), the window can be reduced to weight and menu display. I.e. the window can remain open for monitoring without hiding the complete screen.

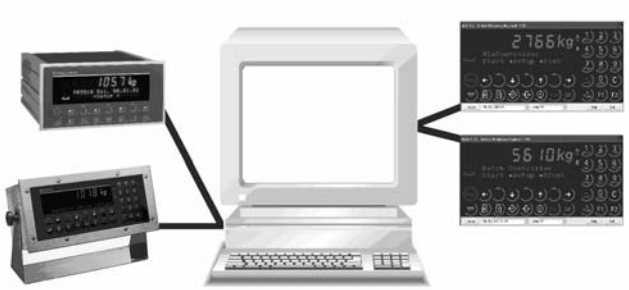


Double click on the weight display (marked area) again to return to full display of the operator interface.

Note:
The active OPC group (i.e. the active instrument) is displayed in the headline.

5.2 Operation of several DisplayIt Controllers via a PC

Several controllers can be connected at the PC directly via the serial RS-232 interface, provided that the PC has a sufficient number of free COM sockets.
Set up an OPC group for each connected controller in dialogue window "Configure OPC Groups" in the OPC server (see chapter 3.3.2). Take care to select the right COM ports for the OP groups or for the controllers connected to the PC.

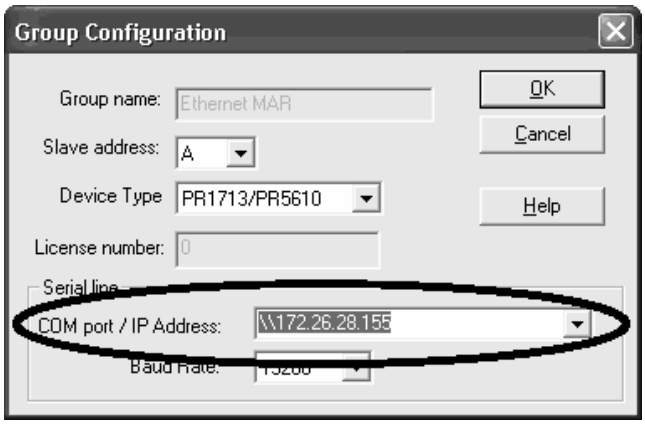


Now, several controllers can be displayed and operated simultaneously by multiple program starting. Proceed analogously as described in chapter 5 (step 3).

5.3 Operation of several DisplayIt Controllers via a network

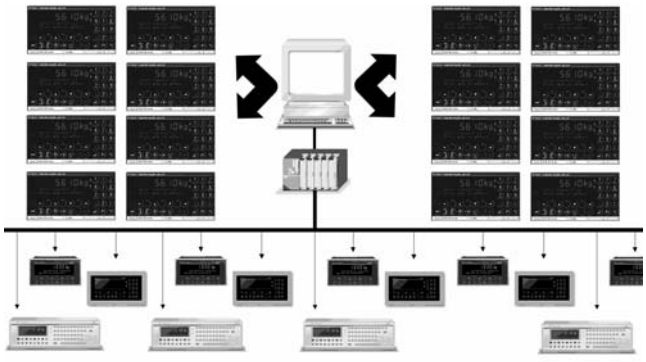
When using DisplayIt with a network, 16 controllers can be connected and displayed and operated via the PC. If a network is used, the controller can be installed anywhere in the process at the site and controlled and operated from another workstation. In case of faulty function, the controller can be checked and any changes can be made directly without time loss due to transport distances by a technician.

Set up an OPC group for each controller used in the Ethernet. For creating and configuring the OPC groups in the OPC server, proceed analogously as described in chapters 3.3.2 and 3.3.3, with the exception that you enter a valid IP address behind [COM port / IP Address].
Click on [Ok].



Note:
For connection to the Ethernet network, the controllers require an Ethernet TCP/IP card.
How to assign an IP address to the controllers is described in the relevant installation manual with PR1713, X5 and X6 and in the X4 network/fieldbus installation and operating manual for X4.

By starting DisplayIt multiple times, several controllers can be displayed simultaneously.



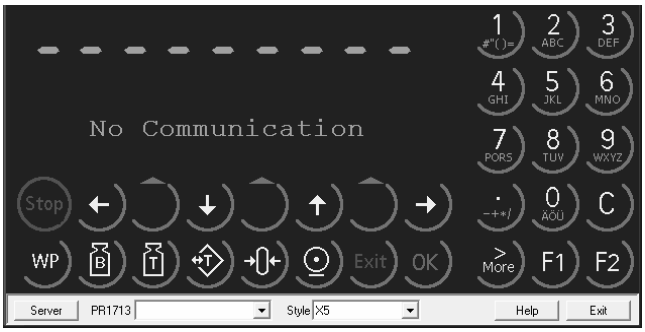
5.4 Error messages

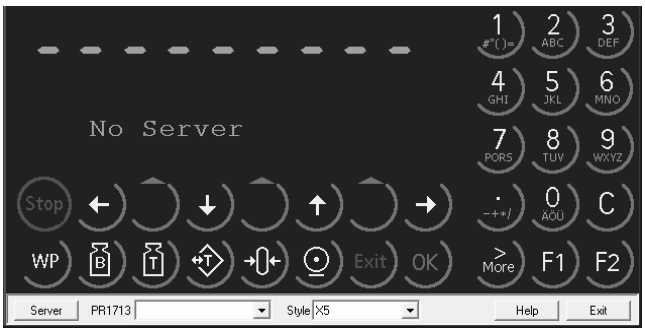
When message...

- "---------",
- "No communication",
- "No Server" or
- "ActiveX component can't create object"

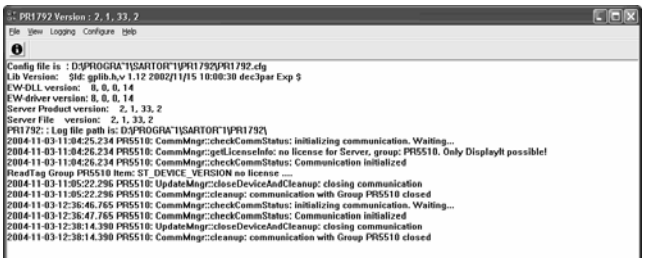
is displayed, or if selection of a controller in the "PR1713" dropdown menu is not possible, the possible causes are:

- selection of faulty COM port / faulty IP
- no or faulty cable connection between PC and instrument
- The adjustment of [Setup]-[Serial Ports]-[Builtin] in the controller are not correct.
- no OPC group was set up.
- faulty OPC configuration





Moreover, you can always check for conflicts and solutions in the OPC server protocol in case of error messages.



6 AccessIt

AccessIt makes the internal databases of instruments PR1713 / PR5510 / PR5610 / PR5710 on a PC. Hereby, AccessIt uses the tables in the controller via the OPC server.

AccessIt permits creation of Access tables on the PC with the same structure as in the instruments connected via Ethernet or serial interfaces.

Data can be read out of the instrument databases and written into the databases on the PC. Subsequently, these data are accessible by an application via ODBC/OLE DB.

AccessIt provides own functions for handling of the databases on the PC. These functions include display, changing, upload and download.

Communication with the instrument is via the PR1792 OPC server, which is included in the AccessIt scope of delivery. Separate manuals in PDF format for the OPC server and further system components to which only reference is made in this documentation are available.

Note:
As a prerequisite for working with AccessIt, AccessIt and the PR1792 OPC server must be installed on the same PC. An already installed earlier version of the PR1792 OPC server must be de-installed previously via [Start]-[Control-Panel]-[Add / Remove Programs]. Subsequently, re-installation is possible.

After installation of AccessIt, installation of an earlier DisplayIt version is not permissible!

6.1 Licence information

See chapters 1.9 and 3.3.1.

6.2 Operating principle

Data communication to the instrument is built up only, provided that the license is valid and the instrument was configured correctly (see instrument documentation). Unless a license number was entered, or if an invalid license was specified, an error message is generated by AccessIt.

An instrument is addressed by the EW protocol driver via a serial interface or a PC Ethernet connection. Data communication is handled automatically by PR1792. Plausibility checking between the instrument configured in the software and the instrument actually found at the connection is done, whereby errors (e.g. confused connectors at the PC interface) can be localized.

6.3 Installation of AccessIt & OPC server

See chapter 2.3 & 2.4.

6.4 Configuration of the OPC server

See chapter 3.3.2

6.5 Controller configuration

See chapter 3.

The instrument must be equipped with a firmware ≥ 2.20. The versions can be found in [Setup]-[Show Version]-[Firmware version] in the instrument. The latest firmware versions are available at www.sartorius.com.

Instrument set-up must be done as described in the installation.

6.5.1 Connection to the serial interface

The instruments can be connected to the PC via the built-in serial interface (Builtin) or via option PR1713/04 or PR5510/04 Serial I/O, see chapter 3.1.

6.5.2 Ethernet

The instruments can be connected to the PC via Ethernet. For this, option PR1713/14 or PR5510/14 in the instrument is required. Select the following settings (example) in [Setup]-[Network Parameter] (menu item is provided only with an Ethernet card fitted in the controller) in the instrument:

[IP address]-[192.160.0],
[Subnet mask]-[255.255.255.0],

[Default gateway]-[0.0.0.0], don't change
[Multicast address]-[224.3.0.9], don't change
[Device address]-[0], don't change.

Moreover, settings in the OPC server must be made, see chapter 3.3.2 and analogous to chapter 5.3.

The addresses are defined by your local network administrator. For further information on the installation of the Ethernet card and on the configuration, see the instrument installation manual and the manual of the Ethernet card.

6.6 Start AccessIt

Start AccessIt via [Start]-[All Programs]-[Sartorius]-[AccessIt]. You have also the possibility to create a desktop shortcut. For this, click via [Start]-[All Programs]-[Sartorius]-[AccessIt] on the AccessIt icon with the right mouse key and

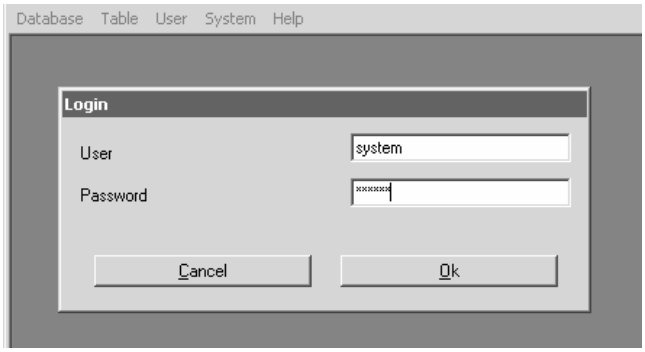
select [Send to]-[Desktop (create shortcut)]. Now, you can start AccessIt easily and quickly by double clicking on Desktop shortcut .

The OPC server starts automatically with the AccessIt program start and must not be started separately.

Note:
If you have entered a different installation path during installation, the installation path specified above will change accordingly.

AccessIt starts and the following input mask is displayed:

"User":	Specify your user name.
"Password"	Enter the password. During entry, the password is displayed with * on the monitor.



Note:
After installation or when logging in for the first time, user **system** is already configured.
Specify:

- "User": system
- "Password": system

We recommend changing the password immediately to prevent unauthorized access to the system (see chapter 6.10.1.1).

After entry, click on button [Ok] to log in with your access privileges.
Unless you want to log in, click on [Cancel].
After completing his work, a user can log out, see chapter 6.7.

6.6.1 Error message during login

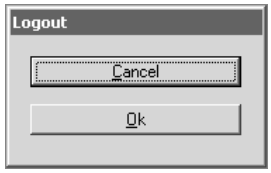
This error message is displayed, when you have entered a non-defined user, or a faulty user name. Click on [Ok] and enter the correct user name.

If you have entered a faulty password, the error message shown opposite is displayed.
Click on [Ok] and re-enter your password.

6.7 Logout

You are logged out by AccessIt, when you click on [User]-[Logout] in the AccessIt menu and confirm with [Ok].

If you don't want to log out, click on [Cancel].



6.8 AccessIt main window

All operating, report and editing functions can be reached via the menu bar. The possible functions are dependent on the access privileges and the previous history. Functions which cannot be used are displayed in gray. Dependent on access privilege, the user can open all or only defined subjects from the menu – these subjects are displayed in black letters. Access to all menu items is possible for user SYSTEM.

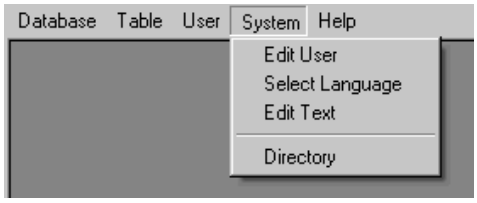
This is a picture of the main window. The icon bar contains status fields with date/time and with the logged out user.
All points of the program operation are identical with the Microsoft Windows conventions.

6.9 Menu structure

- Database
  - Online
  - Offline
  - Close
  - Remove
  - Exit
- Table
  - Remove
  - Edit
  - Upload
  - Download
  - Delete
  - Polling Table
- User
  - Login
  - Logout
  - Set Password
- System
  - Edit User
  - Select Language
  - Edit Text
  - Directory
- Help
  - Info

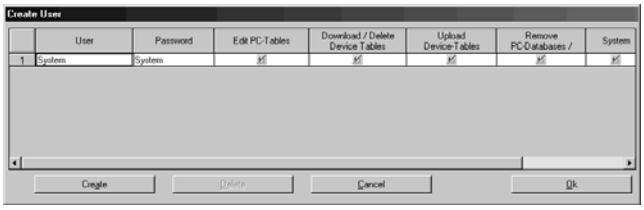
6.10 System settings

The following settings are possible:



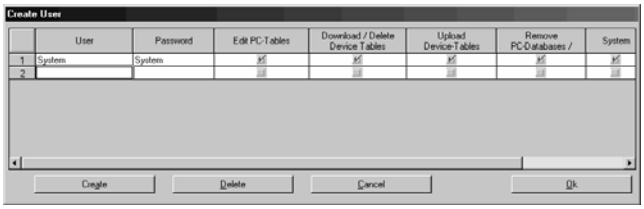
6.10.1 Edit user

Window "Create User" contains a table for definition or changing of users and their access privileges.

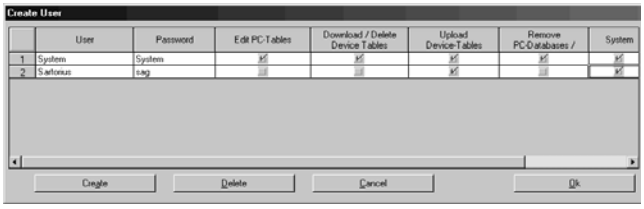


Note:
User "System" is always defined and has all access privileges. The system administrator can set up max. 20 lines for users.

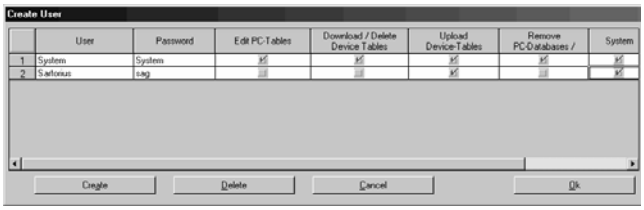
Click on button [Create] to create a new user.
In this case, a new line is added.



Specify the required user name in column "User".
Define the corresponding password.
The password is required for logging in.

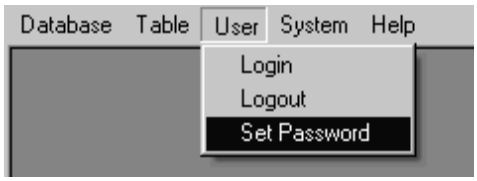


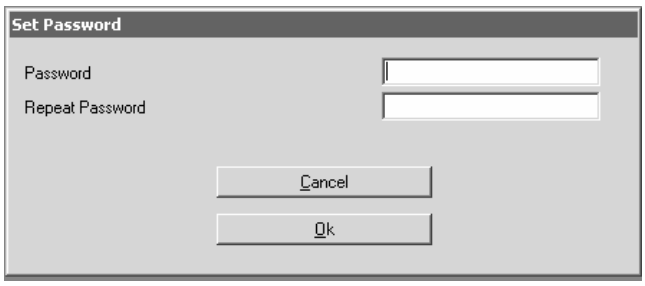
Define access privileges for the user:
The privileges are defined by activating the corresponding checkbox ☑.
If e.g. a system is not activated, button System in the main menu is displayed in gray letters.



6.10.1.1 Set Password

Click on [User]-[Set Password] in the AccessIt menu.





"Password": Specify your new password.
"Repeat Password": Repeat your password.

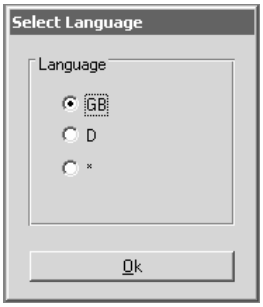
Now, click on [Ok], the old password is replaced.

The password is displayed only by spacekeepers (no plain text).
If you don't want to change your password, click on [Cancel]. After errors or cancelling, the old password remains valid.

Unless the same password was entered twice, the following error message is displayed.
Click on [Ok] and re-enter your password.

6.10.2 Select Language

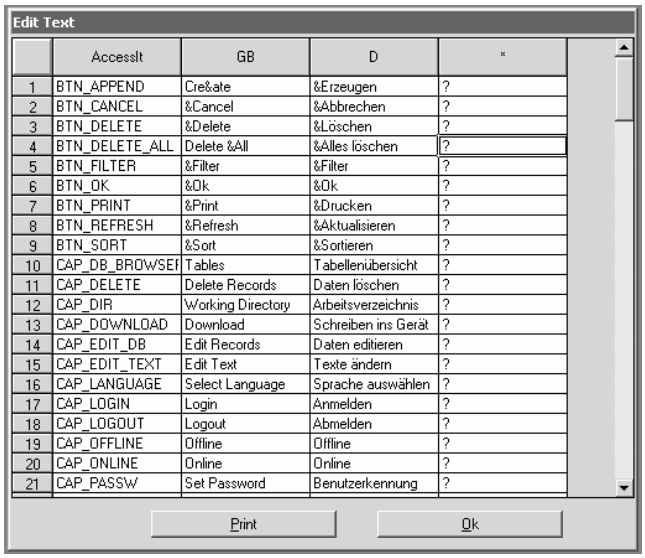
In this menu, the language (D, GB) can be changed at run-time.
The language displayed with * can be defined by changing texts (see chapter 6.10.3).
When starting AccessIt for the first time, the menu is displayed in English ("GB"). Changing over to German ("D") is possible.



6.10.3 Edit text

Changing texts is possible on by a user with [System] access privileges.

The table contains the keywords (approx. 140 in total) of the internal database with signification in English and in German.
The column marked with * can be used for entry of texts which are displayed instead of the English or German expression in the masks and hints, as soon as the language is set to *.
The character displayed as a "hotkey" (underlined on the buttons) is preceded by character "&". As to the length of the translated text, note that the button size must be sufficient.
The German and English texts can also be adapted for the application by the user.



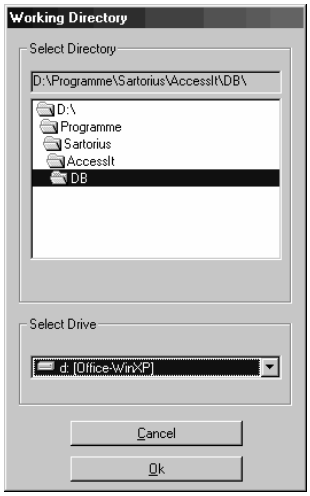
Clicking on [Print] will print out the complete table on the printer. Press [Ok] for exit from the menu. Any changes made in the table are stored.

6.10.4 Directory

In this mask, the directory for database storage can be determined.

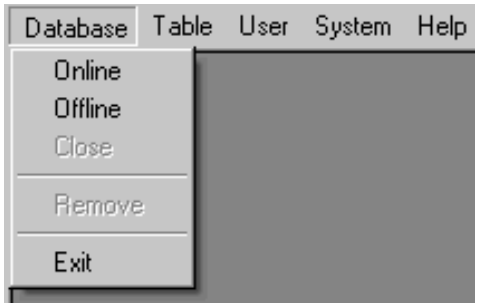
The files are stored with name extension "*.mdb" and can be opened with Windows program Access.

For test purposes, it may be purposeful to store databases for an instrument in an additional directory for editing without affect on the existing databases.



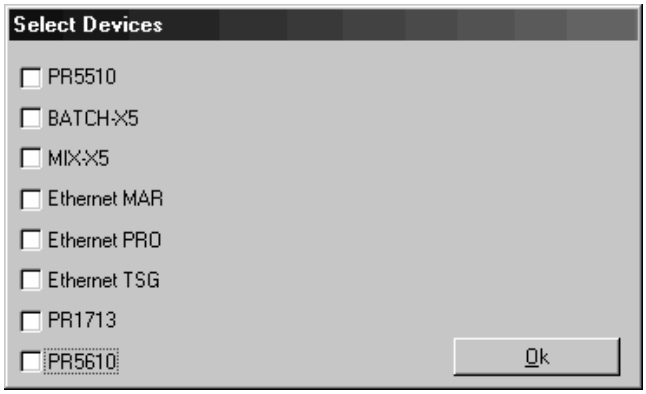
6.11 Database

Click on “Database“ in the AccessIt menu.
Click on "Online“ to select online and on "Offline“ to select offline mode (see below).

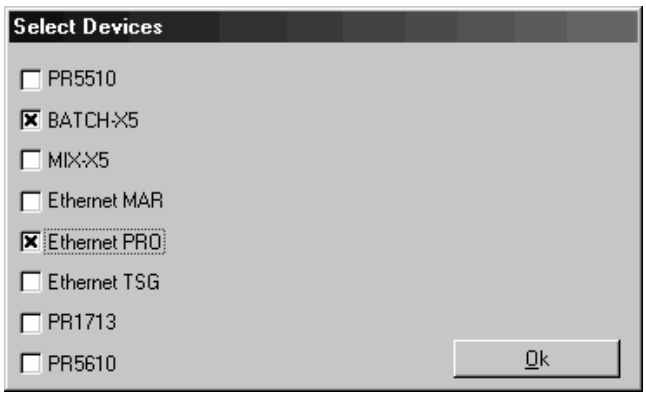


6.11.1 Online (AccessIt & Controller connection)

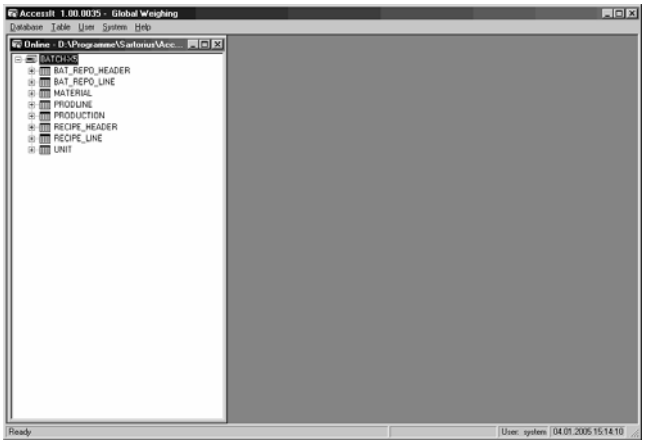
After clicking on [Database]-[Online] in the AccessIt menu, the dialogue window "Select Devices“ will appear after a short time.
In this window, all connected instruments which were set up previously in "Configure OPC Groups“ in the OPC server, will be displayed.



Select the instrument or the instruments which should have access to AccessIt, by activating the relevant checkboxes and clicking on [Ok].



Unless a PR1792/20 or PR1792/13 licence is provided in the instrument, the following error messages are displayed. In this case, AccessIt does not build up communication with the controller. Enter the required licences.



The connection to the instrument database is built up and the database tables on the PC are created. After activating [Online] by clicking on [Table]-[Upload], the tables can be transmitted into the PC database.

When selecting [Online] for the first time after AccessIt program start, the PR1792 OPC server starts automatically and is included as an icon in the Windows task bar.

6.11.2 Offline

During offline, there is no connection to the instrument, all actions are effective only for the database existing on the PC. The databases provided on the PC are displayed.

6.11.3 Close

After clicking on "Close", the online or offline connection is cancelled and the window for table editing is closed. The tables are stored automatically on the PC.

6.11.4 Remove

The database for the connected instrument is erased physically on the PC (*.mdb). As long as [Polling Table] is activated, the command is not possible.

6.11.5 Exit

Leaving the program.

6.12 Database survey

Database example for a batch controller, the material table is selected.

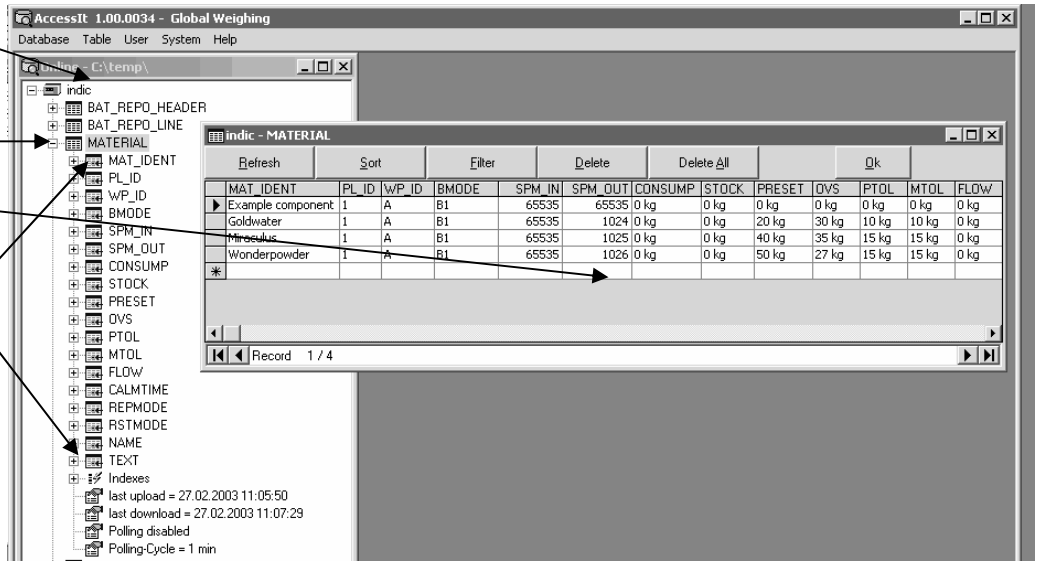
Instrument name (defined in the OPC server)

Selected table

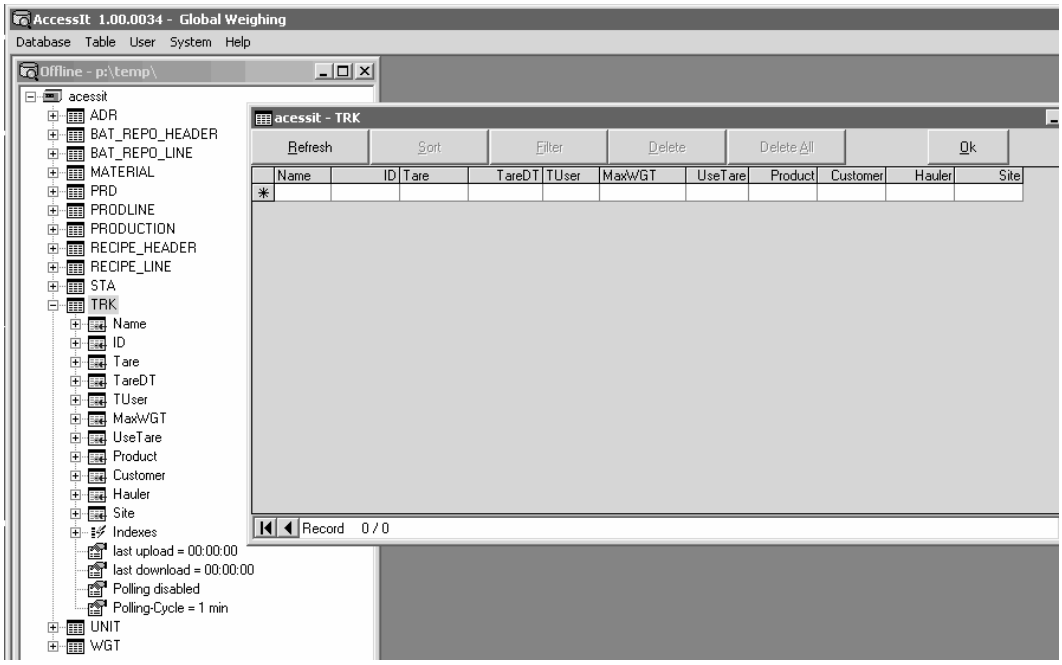
Table window

Table fields

Transfer information Polling Table



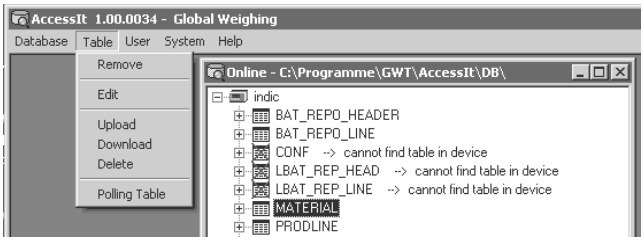
Database example for a truck controller, TRK is selected



Tables BAT_REPO_HEADER ..... RECIPE_LINE are also loaded. They are provided in the instrument, however, they are not used by application Truck-X5.

6.13 Table

As long as no database was loaded, all menu items are displayed with gray background.
In the example for the batch controller, [Database]-[Online] was followed by selection of table "Material".

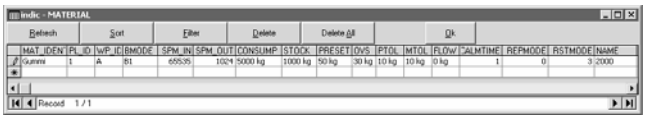


6.14 Remove

The previously selected table (MATERIAL in the example) is removed from the database. A safety prompt must be acknowledged by the operator. After the command, the table does not exist any more. For erasing, see also chapter 6.18.

6.15 Edit

The selected table in example MATERIAL can be edited with [Edit] after [Upload].
Several windows can be opened simultaneously (e.g. MATERIAL and RECIPE_LINE).



Note:
When changing text entries, take care that the field length is not exceeded. The number of characters appearing on the two-line display must not exceed 18.

The data are not checked for plausibility when changing tables. E.g. recipe lines can be provided with components which do not exist in the instrument. In this case, an error message is displayed by the instrument when handling the recipe after writing in the instrument. Generally, changing data after writing in the instrument can cause a crash.

[Refresh] The datasets from the PC database are updated for display (the datasets are not read from the instrument again!)

[Sort] A window for determination of the sorting conditions (field name) is opened. After entry, the datasets are displayed in the order of the specified field.

[Filter] A window for entry of the filter condition s opened. After entry, only the datasets which meet the filter condition are displayed. The filter condition (e.g. field names =, <, > <value>) complies with the SQL standard / WHERE condition. Text strings must be specified in ' ', e.g. MAT_ID= 'water', for date: e.g. TIMESTART <= #Month/Day/Year#.

[Delete] The marked dataset is deleted after a safety prompt.
If the database was opened with [Online] another prompt if the dataset in the instrument should be deleted is also displayed.

[Delete All]] All datasets of the table are deleted.
If the table was opened with [Online], a prompt whether the datasets in the instrument should be deleted as well is also displayed.

[Ok] The table editor window is closed.

6.16 Upload

Reads the actual data from the instrument and stores them in the PC database.

6.17 Download

Modified data can be downloaded into the instrument.

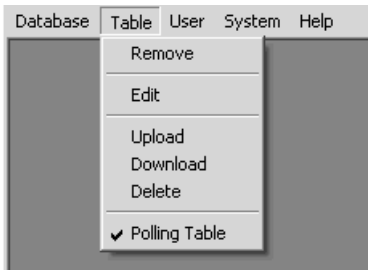
6.18 Delete

The datasets of the marked table in the database are deleted. The table continues existing.

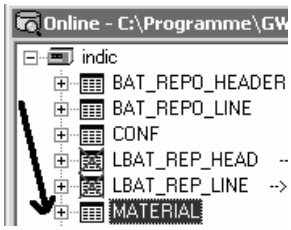
Note:
As long as Polling Table for a table is activated, [Delete] is not possible.

6.19 Polling table

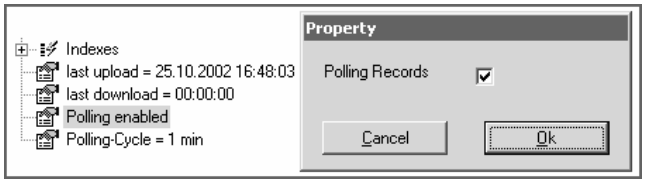
Die Polling Table can be activated/de-activated by checking. Activation and de-activation are possible only during 'Online' mode.



The datasets are uploaded cyclically from the instrument database into the PC database. Subsequently, the datasets in the instrument are deleted.
Polling details can be visualized by clicking on the + sign of the selected table:



The data polling cycle can be adjusted within 1 and 1440 min. (24 hrs).



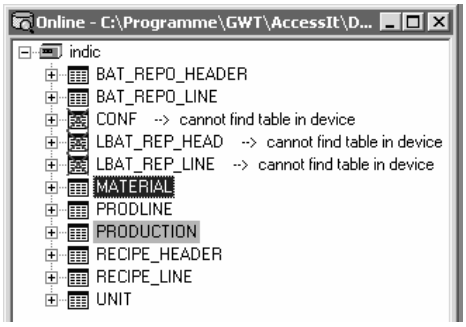
Polling Table is possible only for one table per instrument.
The user must set the cycle time according to the arising data requirements. The time for data transmission to the PC database within a cycle must be sufficient, otherwise, data are lost.

⚠ When Polling Table reading is active, parallel access to tables can cause a crash.

In the table editor, a turquoise background (b/w = gray) indicates that Polling Table for this table is activated.

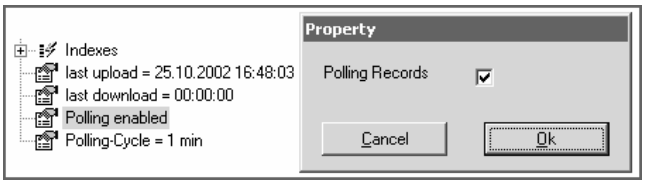
In the example, table MATERIAL
is selected: (dark blue, b/w = black)

For table PRODUCTION Polling Table is activated:
(turquoise, b/w = gray)



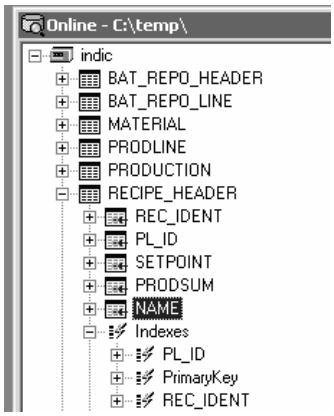
6.19.1 De-activating Polling Table

After de-activating checkbox ☐ and [Ok], automatic table polling is not effective any more. Automatic table polling can be de-activated also directly via the menu [Table].



6.20 Indexes

Indexes are keys in a table and can be used e.g. for accelerated searching.
Indexes which permit duplicating in a table or primary keys precluding duplicates can be defined.
Indexes are fixed in the instrument and must not be changed.



6.21 Annex

6.21.1 Used datatypes

BOOL	dbBoolean	
USINT	dbByte	
BYTE	dbByte	
WORD	dbLong	
UINT	dbLong	
DWORD	dbLong	
UDINT	dbDouble	
LWORD	dbText	
ULINT		- not supported
SINT	dbInteger	
INT	dbInteger	
DINT	dbLong	
LINT		- not supported
REAL	dbSingle	
LREAL	dbDouble	
TIME	dbDouble	
DATE	dbDate	
TOD	dbDate	
DT	dbDate	
STRING	dbText	
WEIGHT	dbText	
	dbText	- additional field, not visible in AccessIt (.....raw), see chapter 6.21.2.
	dbDouble	- additional field, not visible in AccessIt (.....value for calculating), see 6.21.2.
BLOB/Struct	dbMemo	

Note:
The user must take care that the entered data are purposeful.
E.g. for a TIME type field, the entry of value of 1,5555555555, which does not make sense, is possible.
With WEIGHT field type, the value must be entered always with . as a decimal separator.
BLOB/dbMemo fields should not be changed with Access.

6.21.2 Weight format

Weight values are transmitted in 3 data formats (e.g. SETPOINT, SETPOINT_value, SETPOINT_raw). The two additional tables with ....._value (dB Double) ....._raw (dB Text) are not displayed with AccessIt.

When opening databases with MS Access, the additional tables may be read only for further processing.
Modifications of the additional tables for weight values are not permissible.

7 TRANSLATEIT

Sartorius PC program "TranslateIt" offers the possibility to change all displayed texts of an application. A change can be a translation of the overall text or only an adaptation of single words. For safety reasons, firmware (i.e. [Setup] menu) texts cannot be changed.

TranslateIt lists all existing texts of an application in columns. By adding new columns, further languages are generated and can be defined. Loading the new language into the controller is done by means of program FlashIt (see chapter 4.7).

The choice of words or characters is limited by a defined character length and resolution. A line is limited to 20 characters and the resolution is 5x7 dots. This offers numerous possibilities.

The program can be used from firmware version 2.0.

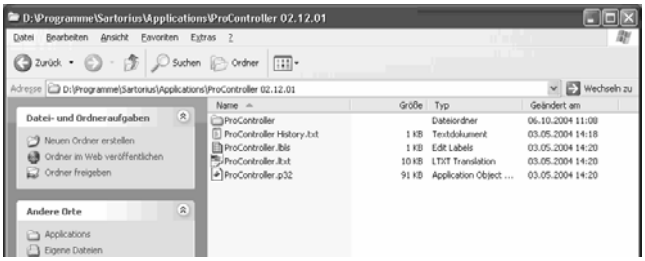
Note:
As a prerequisite for working with TranslateIt, programs TranslateIt (see chapter 2.3) and FlashIt (see 2.1) must be installed.

7.1 Extracting the customizing kits

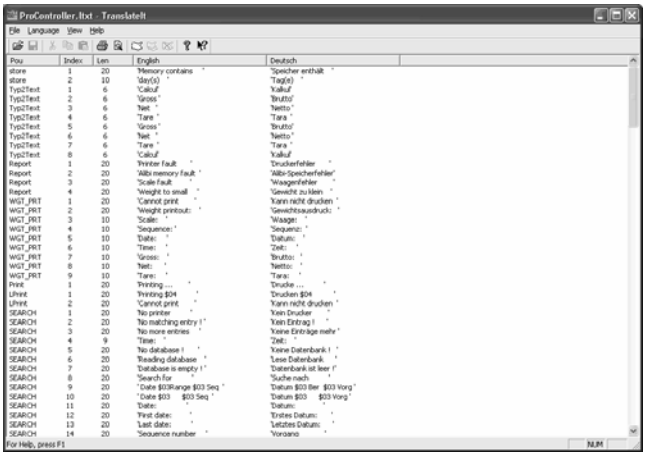
File TranslateIt ".ltxt" is stored in the customizing kits on the PowerTools CD. These customizing kits must be extracted on your PC (see chapter 4.4). The most recent application versions or customizing kits can be downloaded from Internet site www.sartorius.com.

7.2 Starting TranslateIt

To start TranslateIt, open the folder in which you have extracted the customizing kits and double click on the TranslateIt ".ltxt" file ("ProController.ltxt" in this example).



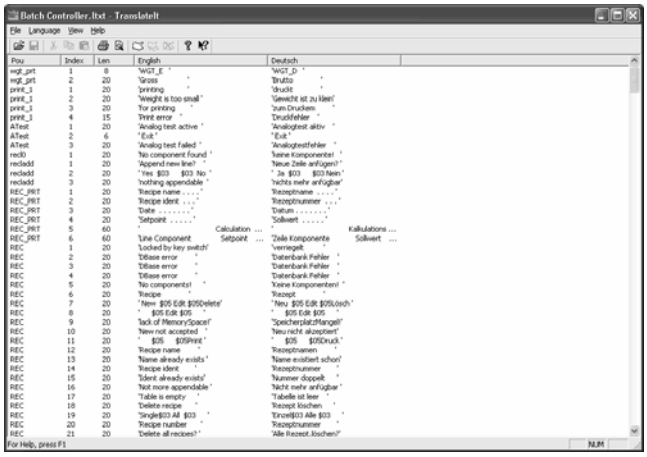
The TranslateIt start window opens.



Column "POU" (Program Organization Units):
Lists all existing programs of an application. (Example: The PRO application consists of many program parts. When pressing [Start] on the controller, one of these partial programs is executed.)
Consequently, only the application descriptions can be altered, whilst, for safety reasons, the firmware menu items cannot be changed.

Column "Index":
Contains a successive number within the relevant "POU".

Column "Len":
Contains the length of characters which must be used for translating the relevant "POU".

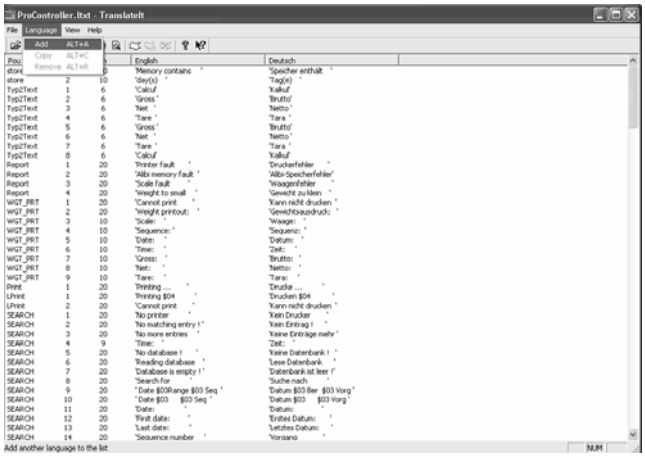


Column "English":
Contains the English translation of the relevant "POU".

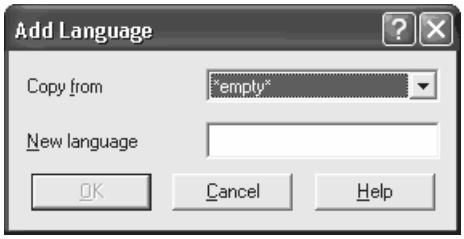
Column "Deutsch":
Contains the German translation of the relevant "POU".

Note:
The English language version is loaded into the controller automatically when flashing the ".ltxt" file, in order to ensure operation by Sartorius engineers in case of faulty translations or other languages. Columns "English" and "Deutsch" cannot be deleted or changed.

7.3 Adding a language



Click on menu item "Language" and then on "Add". Dialogue window "Add Language" is opened.

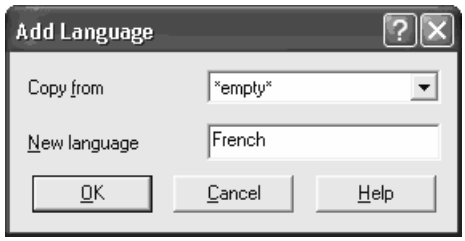


Select a language behind "Copy from" to copy an existing language into the new column. This alternative is recommended, if you want to use an already existing language as a basis for changes of existing texts, or if you don't want to translate all texts.
You can also store this field with [*empty*] to facilitate the pure translation work.

Note:
We recommend using option [*empty*] only for translating **all** texts of the application. In case some POU texts should not be translated, no text is

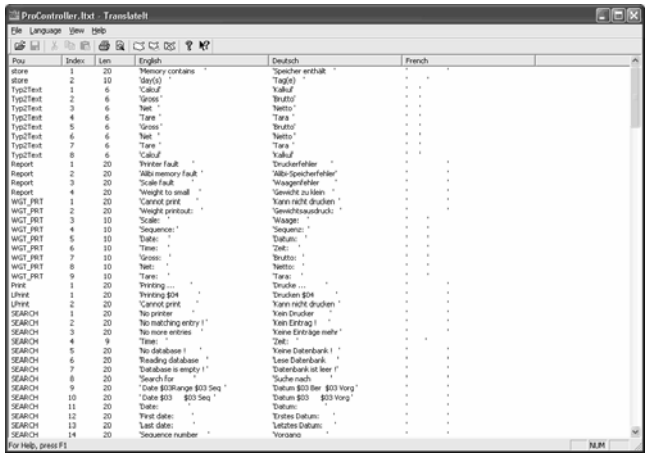
indicated in the relevant position on the controller display.

Button [Ok] can be actuated only, when the name of the new language is entered behind "New language".
This name will be displayed as headline of the column in TranslateIt.
After entry, click on [Ok] to continue configuration of the new language, or on [Cancel] if you want to cancel translation..



A new column with the new column headline (language name) was added in the start window. Dependent on whether a language was or was not selected in the previous step behind "Copy from", the copied text descriptions of the selected language are listed in the new column, or the lines of the new column remain empty.

Double click on the line the language version of which should be edited.



A new window is opened.

The name of the "POU" is displayed behind "POU" (in this example: "store").

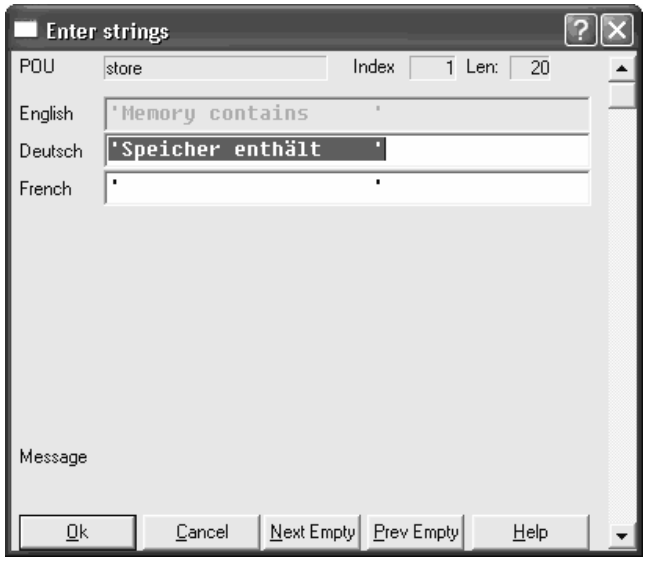
The successive number of POU "store" is displayed behind "Index".

Behind "Len:", the number of characters which must be used for language editing is displayed.

"English":
Contains the English translation of the relevant "POU". Cannot be changed, is contained as standard in file ".txt".

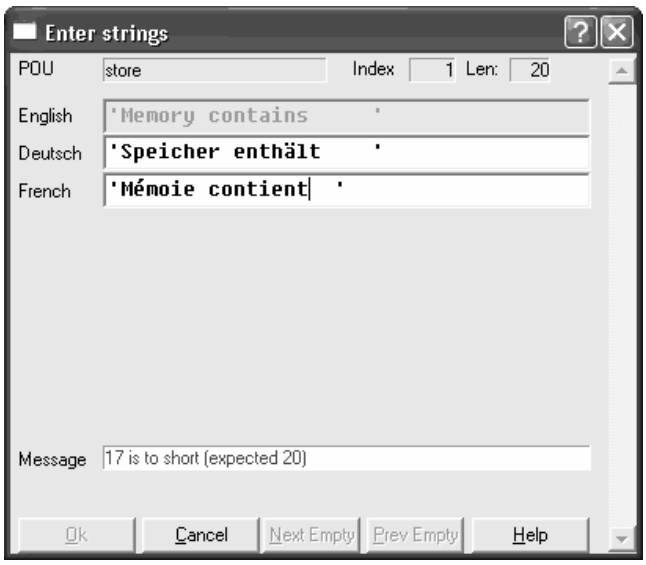
"Deutsch":
Contains the German translation of the relevant "POU". Editable, included as standard in file ".txt".

"French":
"French" is the headline of the new language. As no language was selected behind "Copy from" in dialogue window "Add language" ("*empty*"), no text is displayed in the input field of the new language.

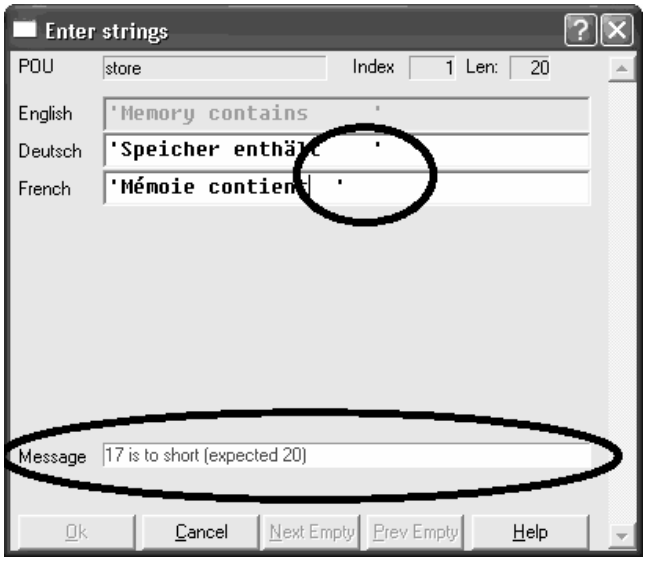


Enter an appropriate translation for your new language (in this example: French).

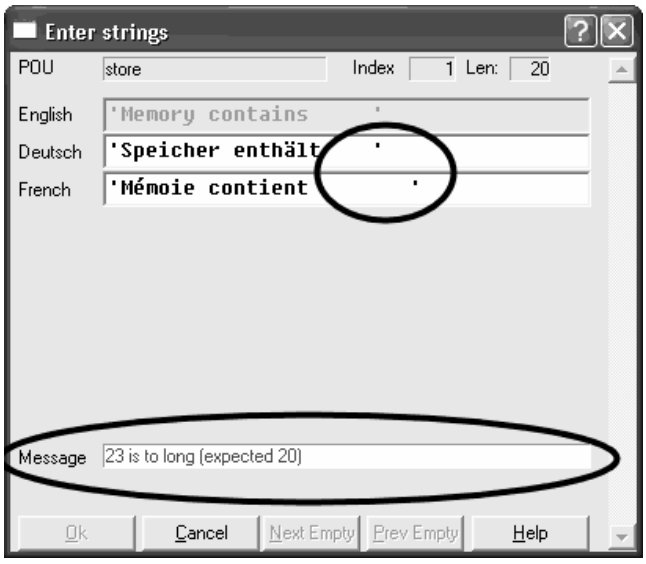
As soon as you start language editing, a dialogue is displayed at the bottom behind "Message". This dialogue provides information, if your entry is too long or too short.
For being accepted by TranslateIt, the entered number of characters must comply with the number of characters specified behind "Len:".



In this example, 17 characters were entered and 20 characters are required (see "Len:" and dialogue behind "Message") for acceptance of the entry.
This means three more spaces must be entered.



In this example, 23 characters were entered, whilst 20 characters are required (see "Len:" and dialogue behind "Message") for acceptance of the entry.
You have to remove three spaces.



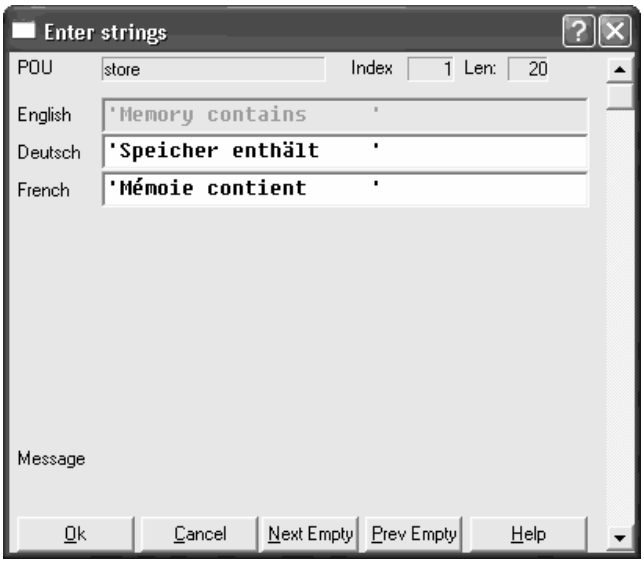
Note:
The pre-defined number of characters includes also entered spaces, i.e. you can influence the entered number of characters by inserting or removing spaces.

If the entered number of characters complies with the pre-defined number of characters, button [Ok] is enabled.

Click on [Ok] to confirm your entry and to store the data set. TranslateIt returns to the start window.

Click on [Cancel] to close the window without storing your entries.

Click on button [Next Empty] / [Prev Empty] to go to the next / return to the previous empty "POU" entry in dialogue window "Enter strings".

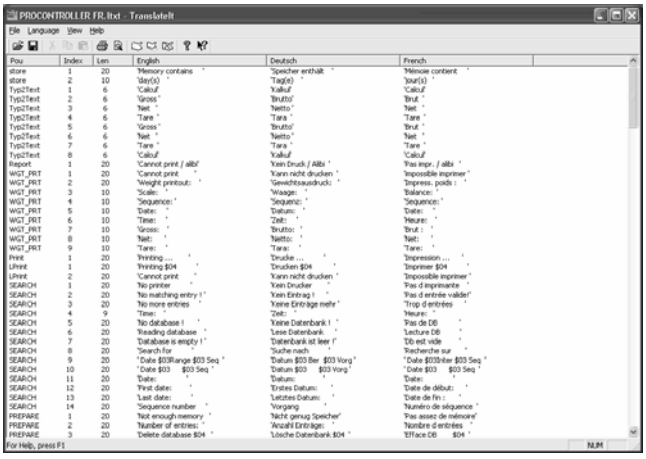


After editing or translating the POUs, click on button [Ok]. TranslateIt returns to the start window.

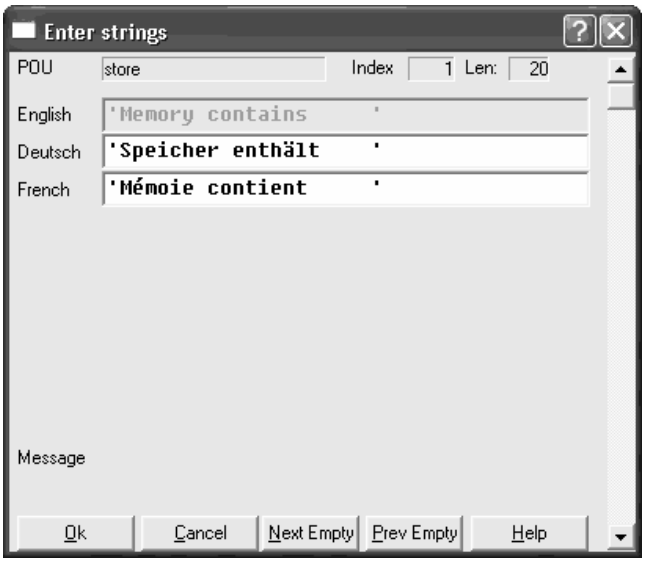
Now, store the edited TranslateIt file.

Note:
We recommend storing the file with a different name to keep the ".ltxt" source file unchanged.

Click on [File]-[Save as] in the menu and enter another file name to store this file.



7.3.1 Navigation in dialogue window "Enter strings“



If the entered number of characters complies with the pre-defined character length, button [Ok] is enabled.

Click on button [Ok] to confirm your entry and to store the data set. TranslateIt returns to the start window.

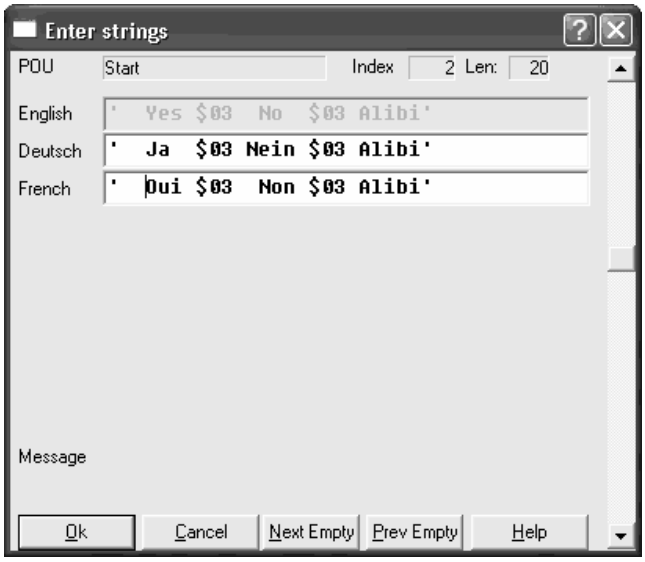
Click on [Cancel] to close the window without storing your entries.

Click on button [Next Empty] / [Prev Empty] to go to the next / return to the previous empty "POU“ entry in dialogue window "Enter strings".

Note:
Alternatively, you can also use your PC keyboard for navigation of the individual language data sets:

PC key:	**Order:**
Bild ↓	Go to next line / Gehe zum nächsten Datensatz
Bild ↑	Go to previous line / Gehe zum vorherigen Datensatz
Ctrl (Strg) + Bild ↓	Go to next line with empty string / Gehe zum nächsten leeren Datensatz
Ctrl (Strg) + Bild ↑	Go to previous line with empty string / Gehe zum vorherigen leeren Datensatz
Shift + Bild ↓	Go to next POU / Gehe zur nächsten POU
Shift + Bild ↑	Go to previous POU / Gehe zur vorherigen POU
Ctrl (Strg) + Pos1	Go to first line / Gehe zum ersten Datensatz
Ctrl (Strg) + Ende	Go to last line / Gehe zum letzten Datensatz

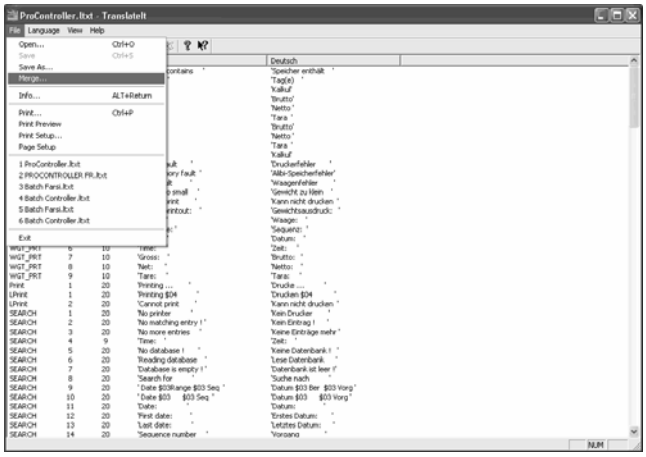
7.3.2 Entry of special characters



You can use special characters for editing prompt texts, see table below.

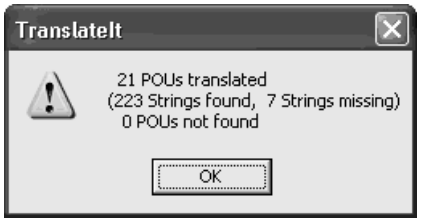
Entry	Display	
The following escapes can be used		
$$	Oui $ No $ Alibi	The $ itself
$'	Oui ' No ' Alibi	A single quote
Special character for front-panel display		
$01	Oui ↓ No ↓ Alibi	Down scroll character
$02	Oui ↑ No ↑ Alibi	Up scroll character
$03	Oui ▪ No ▪ Alibi	Single softkey indicator (no More key)
$04	Oui … No … Alibi	Small dots
$05	Oui ↕ No ↕ Alibi	More softkey indicator (with More key)

7.4 Adding a language from another ".ltxt" file

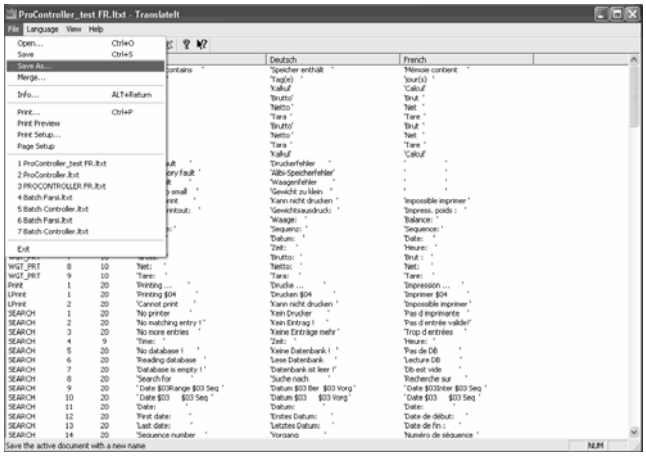


Double click on the ".ltxt" file (in this example: "ProController.ltxt"). TranslateIt starts. Click on [Datei]-[Merge] in the TranslateIt menu.

Now, search the ".ltxt" file (in this example: "PROCONTROLLER **FR**.ltxt") for taking over the languages.

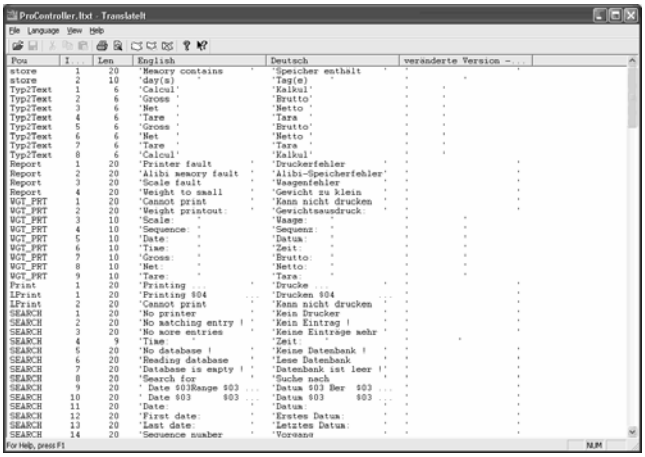


TranslateIt searches automatically for all existing languages in file "PROCONTROLLER **FR**.ltxt" and inserts the existing translations into new columns in the "ProController.ltxt" file after clicking on [Ok].



We recommend saving the edited "ProController.ltxt" file with a different name: [File]-[Save as...].

7.5 Copying an existing language

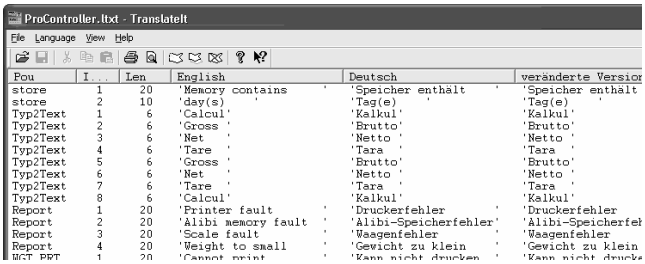


For copying an existing language into a new column, e.g. for changing texts, at least a third language column must be provided apart from English and German. If necessary, insert an **empty language column ("*empty*")** using menu item [Language]-[Add].

Click in [Language]-[Copy] in the menu, in order to copy an existing language into the empty language column.

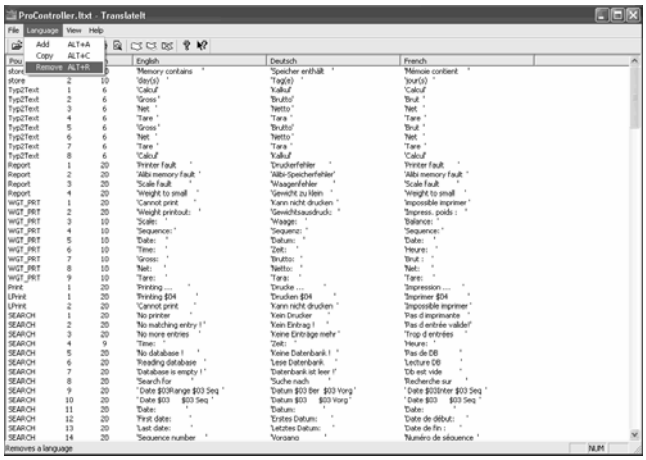
Window "Copy Languages" is opened.
Behind "Copy from", you can select the language which should be copied.
In "Copy to", you have to select the destination, i.e. the column, into which the copied language should be inserted. This column must be empty for copying.
Click on button [Ok] to confirm your entry, or on [Cancel] to cancel copying.

Now, text changes can be made in the new column.



7.6 Deleting an existing language

Click on [Language]-[Remove] in the menu.



Select the language which should be copied and click on [Ok].

You can cancel deleting by clicking on [Cancel].

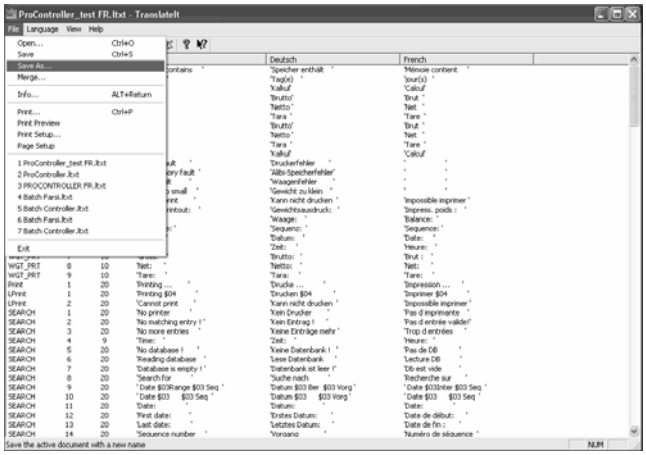
Note:
The delivered standard languages English and German cannot be deleted.

A last warning message is displayed.
This is the last possibility to cancel deleting by clicking on [Cancel].

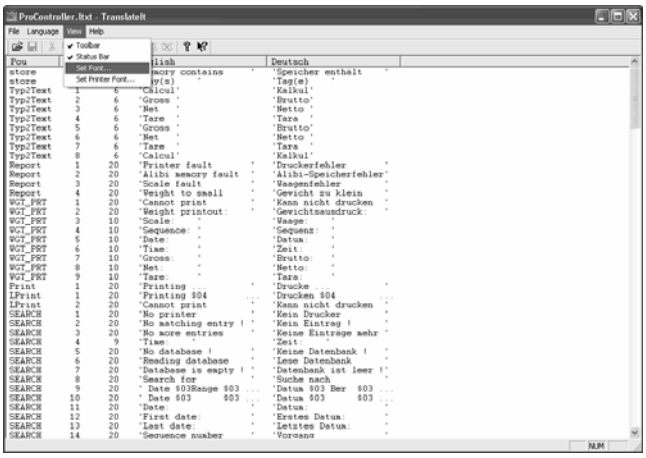
When clicking on [Ok], the selected language is deleted.

The language was deleted.

Save your ".ltxt" file, if you want to keep these changes, or close the file without storing. In this case, changes are not taken over.



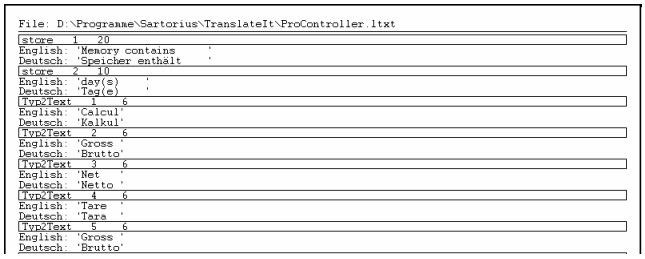
7.7 Changing the font in the TranslateIt operator interface



Font changing is possible in the TranslateIt operator interface. For this, click on [View]-[Set font...] in the menu.
Subsequently, select the required font and font size and confirm by clicking on button [Ok].

Note:
Changing the font or font size in the TranslateIt operator interface does not affect the print-out.

7.8 POU translation print-out

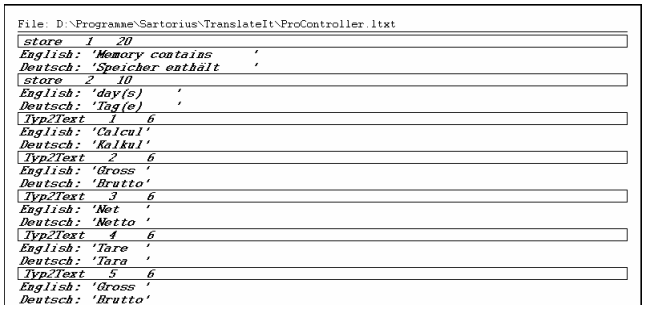


Print out the existing languages with corresponding language or text changes by clicking on [File]-[Print...] in the menu.
In the printer properties, you can make changes of print layout and print quality.

7.8.1 Adjusting the print font

Font and font size can be changed via [View]-[Setup Printer Font...] in the TranslateIt menu. Confirm your choice with [Ok].

7.8.2 Print preview



Before printing the language survey, a print preview can be opened in [File]-[Print Preview]. In this preview, font and font size are shown exactly as adjusted (see chapter 7.8.1).

7.9 Flashing the altered ".ltxt" file

See chapter 4.7.

7.10 Finishing TranslateIt

Close the program by clicking on [File]-[Exit] in the TranslateIt menu.

8 RECOVERIT

Sartorius PC program "RecoverIt" saves all settings (incl. EAROM, i.e. calibration and configuration data and all other user data in the RAM (e.g. materials, recipes, tables, ...) of the Sartorius controller in a PC file. This ensures that the operability can be restored within a few minutes in case of failure or accidental deletion of controller data.

Via the serial interface (not possible via Ethernet or fieldbus), the data are uploaded from the controller into the PC and can be stored safely. Re-configurations are not necessary.

Accordingly, data can be downloaded. After starting the program, the file with the data is selected and the communication data are checked. After a short time, the data are on the controller.

RecoverIt should be done regularly, especially before RAM or EAROM data changing.

Download of the back-up file is possible only to the same application and firmware version as used for generation of the back-up file, otherwise, the back-up file will be spoiled!
After the recover process, table structures must not be changed, otherwise, the stored back-up file will be spoiled.

Data storage on the PC is in a non-readable file format, i.e. data cannot be edited. This editing functionality will be made available in the future by tool "AccessIt".

The program can be used for data saving from firmware version 2.0.

Note:
The controller must be connected with the PC via an RS-232 interface.

8.1 Controller settings

Parameter settings on the controller are required, see chapter 3.
The controller must be at the topmost menu level, i.e. the application handling must not be running. Moreover, no other program (e.g. PR1740, PR1791 or PR1792) may make an access to the controller, i.e. it must not be active on the PC.

Note:
For EAROM back-up, a controller firmware version 2.0 or better is required.

8.2 Installing RecoverIt

See chapter 2.6

8.3 Starting RecoverIt

Start RecoverIt by clicking on [Start]-[All Programs]-[Sartorius]-[RecoverIt]-[RecoverIt] or by double clicking on desktop shortcut

, if a desktop item is provided.

A help function provides support for application RecoverIt. For this, click on button [Help].

Note:
If you have entered a different installation path during installation, the start path specified above will change accordingly.

8.4 Update Data from Device

8.4.1 Upload RAM data

Activate checkbox "Update Data from Device".

Now, you can select between complete saving of all controller RAM data or saving of individual RAM areas. The back-up file generated by RecoverIt is saved on the PC.

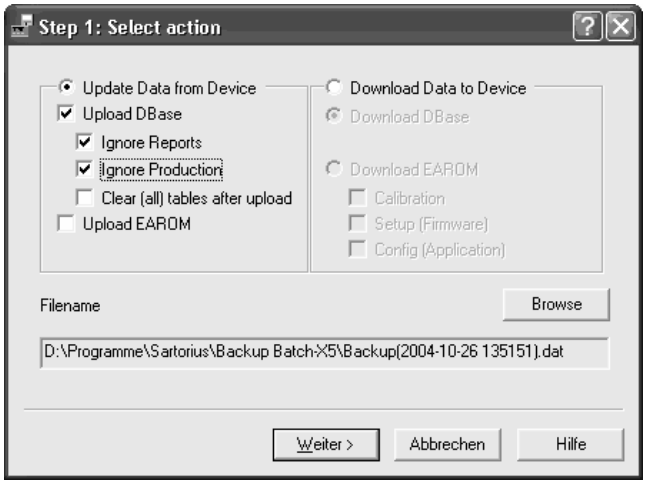
Activate checkbox "Upload DBase", if you want to save controller RAM data on the PC.

E.g. the following data are saved in RAM:

- databases
- materials
- recipes
- tables (with the batch application: material, recipe and report tables)
- reports

When activating only checkbox "Upload DBase", all RAM data (tables) are saved in the PC back-up file.

For detailed information on the data saved in RAM, see the operating manual for the application.



If you activate checkbox "Ignore Reports" additionally, the report table is not included in the back-up file.

If you activate checkbox "Ignore Production" additionally, the production table is not included in the back-up file.

You can activate checkbox "Clear (all) tables after upload". In this case, all tables in the controller will be deleted after uploading, i.e. after generation of the back-up file on the PC.

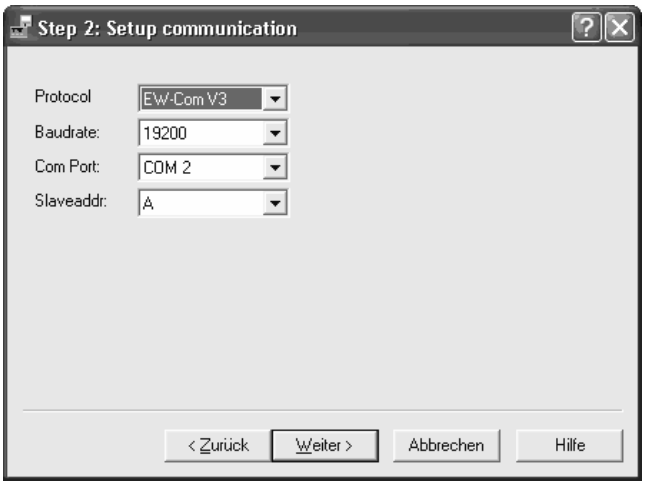
Click on button [Browse] to change or to determine the destination for storage of the back-

up file. You can also enter a different file name for the back-up file.

After defining the destination for the back-up file, click on button [Next].

Note:
The name extension of the back-up file for the RAM data is ".dat".

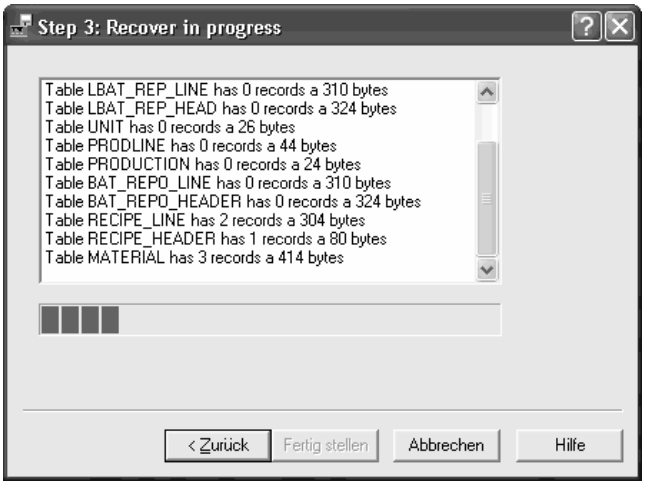
Select the parameters in dialogue window "Step 2: Setup communication":



Protocol: [EW-Com V3]
Baudrate: [19200]
Com Port: Select the PC Com port to which the controller is connected.
Slaveaddr: [A]

Subsequently, click on [Next].

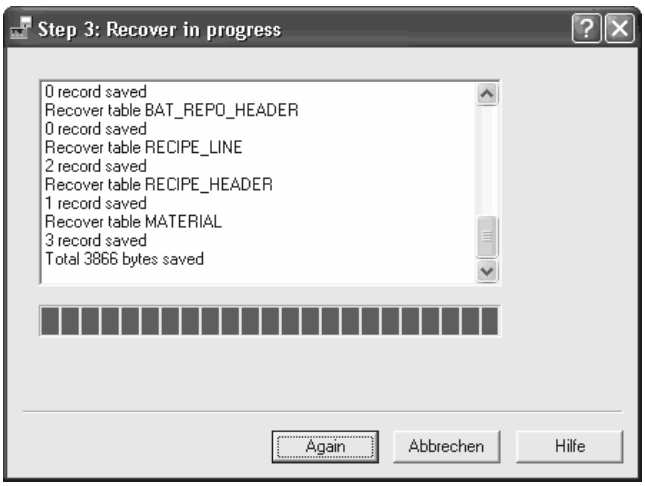
Note:
These settings must correspond with the settings made in [Setup]-[Serial Ports] on the controller (see chapter 3).



A status window is displayed.
During uploading, RecoverIt loads driver "ewdrv_01.exe" (installed automatically with RecoverIt). This load operation opens a DOS window which can be closed manually **after** uploading.

Note:
Clicking on [Cancel] during uploading will cancel uploading. No back-up file is generated.

The following warning is displayed.
Click on [No] to continue uploading, or on [Yes] to cancel RecoverIt.



To ensure successful termination of the upload operation, note hint "Total XXXX bytes saved" in the last line and the load bar.

After successful upload, you can click on button [Again] to go to the RecoverIt start window, or to cancel RecoverIt by clicking on [Cancel] (in this case, you can close DOS window "ewdrv_01.exe").

8.4.2 Upload EAROM data

Activate checkbox "Update EAROM" to save the controller EAROM data on the PC.

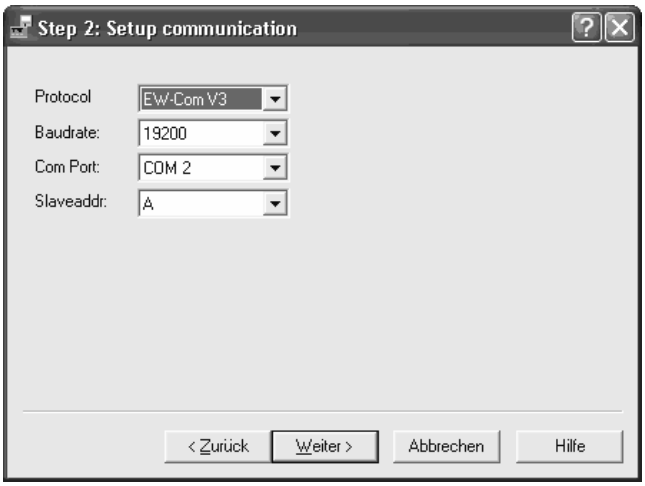
The calibration, configuration and licence data are saved in EAROM.

Click on button [Browse] to change or to determine the destination for the back-up file. Moreover, you can specify a different file name for the back-up file.

After determining the destination for the back-up file, click on button [Next].

Note:
The name extension of the back-up file for the RAM data is ".ear".

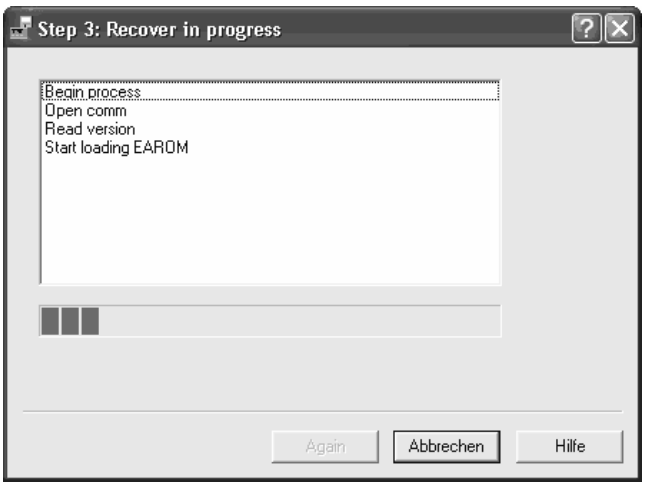
Make the parameter selections in dialogue window "Step 2: Setup communication":



Protocol: [EW-Com V3]
Baudrate: [19200]
Com Port: Select the PC Com port at which the controller is connected.
Slaveaddr: [A]

Then, click on [Next].

Note:
These settings must correspond with the settings made in [Setup]-[Serial Ports] on the controller (see chapter 3).



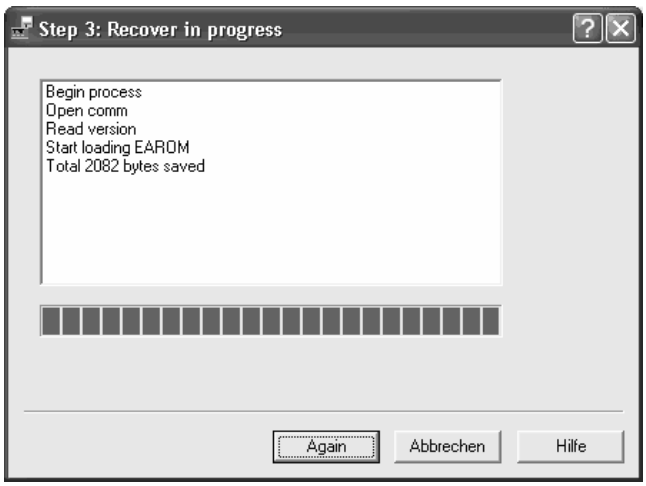
A status window is displayed.
During uploading, RecoverIt loads driver "ewdrv_01.exe" (installed automatically by RecoverIt). This loading operation opens a DOS window which can be closed manually **after** uploading.

Note:
Clicking on [Cancel] during uploading will cancel uploading. No back-up file is generated.

The following warning is displayed.
Click on [No] to continue uploading, or on [Yes] to cancel RecoverIt, i.e. uploading.

To ensure that uploading was terminated successfully, note hint "Total XXXX bytes saved" on the last line, and the progress bar.

After successful uploading, you can click on button [Again] to go to the RecoverIt start window, or on [Cancel] to cancel RecoverIt (in this case, you may close DOS window "ewdrv_01.exe").

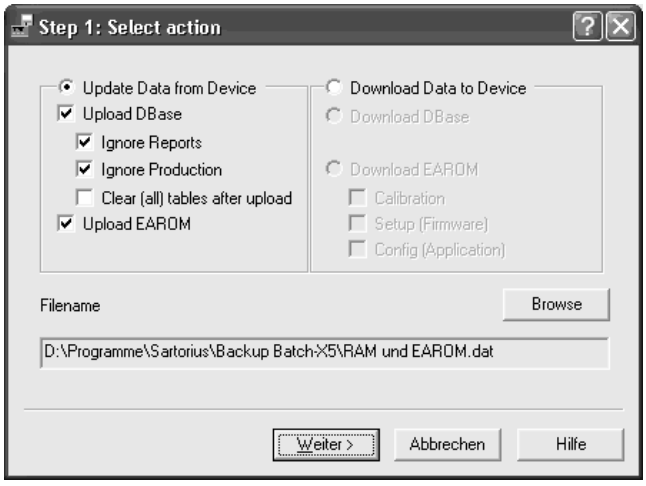


8.4.3 Simultaneous RAM & EAROM upload

For saving RAM and EAROM data simultaneously in a step on the PC, activate checkboxes "Update Data from Device", "Upload DBase" and "Upload EAROM".

Continue uploading as described in chapter 8.4 or 8.4.2.

After successful uploading, two files (".dat" and ".ear") are saved in the back-up destination folder.

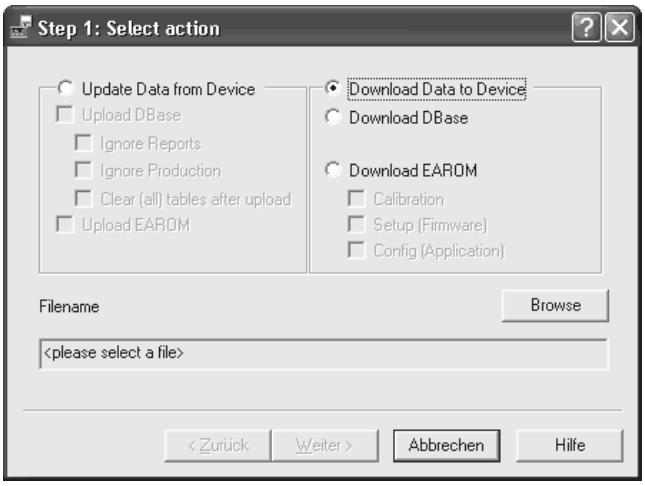


8.5 Download Data to Device

8.5.1 Download RAM data

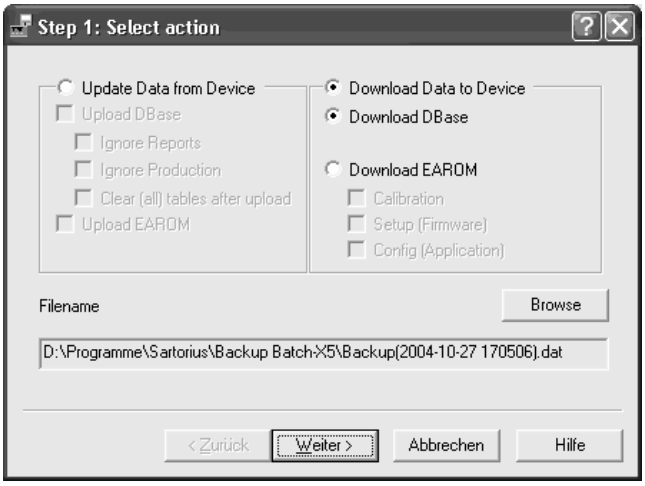
Downloading the back-up file is possible only to the same application and firmware version as used for generation of the back-up file, otherwise, the back-up file will be spoiled!
After the recover process, table structures must not be changed, otherwise the stored back-up file will be spoiled!.

Activate checkbox "Download Data to Device".



Activate checkbox "Download DBase".
Click on button [Browse] to select the back-up file which should be loaded into the controller.

After selecting the back-up file, click on button [Next].

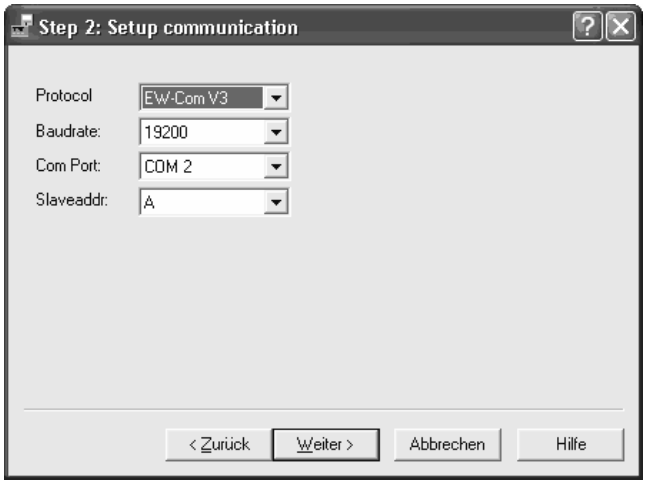


Make the parameter selections in dialogue window "Step 2: Setup communication":

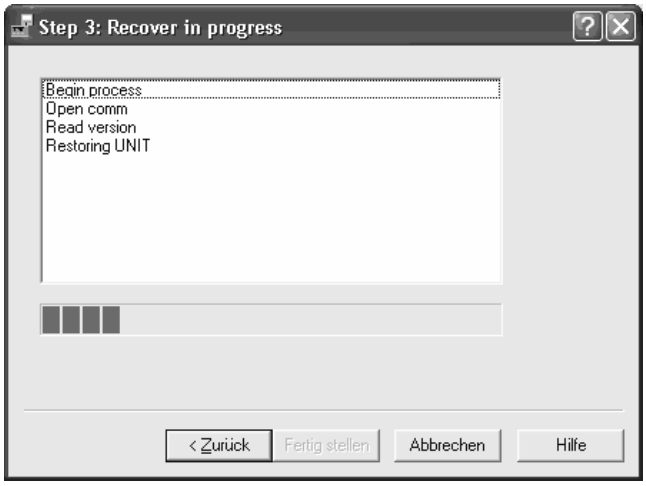
Protocol: [EW-Com V3]
Baudrate: [19200]
Com Port: Select the PC Com port to which the controller is connected.
Slaveaddr: [A]

Then, click on [Next].

Note:
These settings must correspond with the settings made in [Setup]-[Serial Ports] on the controller (see chapter 3).



A status window is displayed.
During downloading, RecoverIt loads driver "ewdrv_01.exe" (installed automatically with RecoverIt). This loading operation will open a DOS window, which can be closed manually **after** downloading.

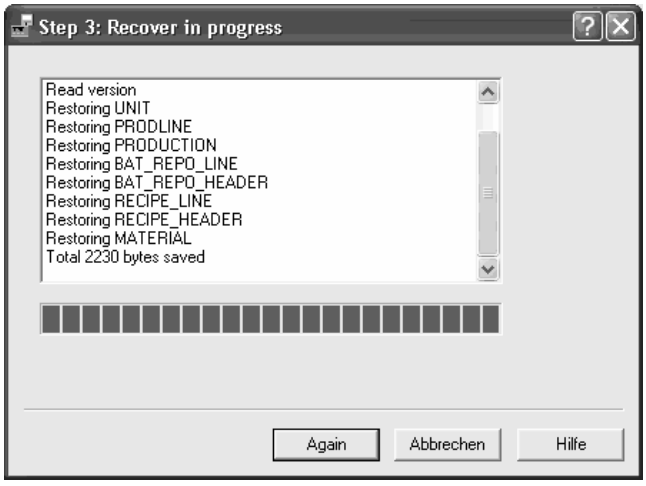


Note:
Click on [Cancel] during downloading will cancel downloading. The back-up data will not be loaded into the controller.

The following warning is displayed.
Click on [No] to continue downloading or on [Yes] to cancel RecoverIt, i.e. downloading.

To ensure successful termination of the download operation, note hint "Total XXXX bytes saved" on the last line, and the progress bar.

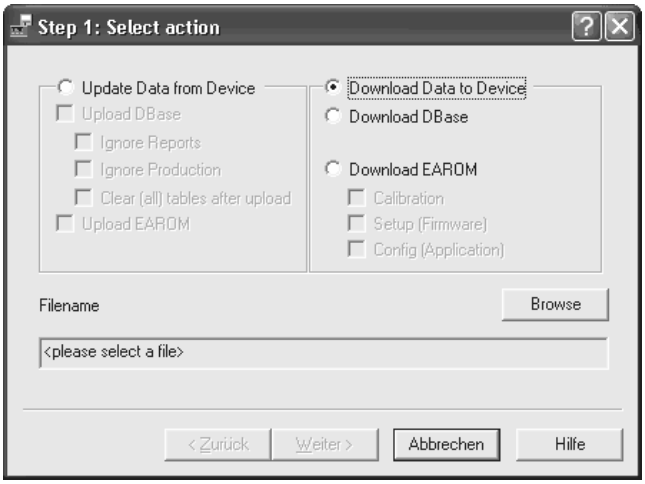
After successful downloading, you can click on button [Again] to go to the RecoverIt start window, or on [Cancel] to cancel RecoverIt (in this case, you can close DOS window "ewdrv_01.exe").



8.5.2 Download EAROM data

Downloading the back-up file is possible only to the same application and firmware version as used for generation of the back-up file, otherwise, the back-up file will be spoiled!
After the recover process, table structures must not be changed, otherwise the stored back-up file will be spoiled.

Activate checkbox "Download Data to Device".

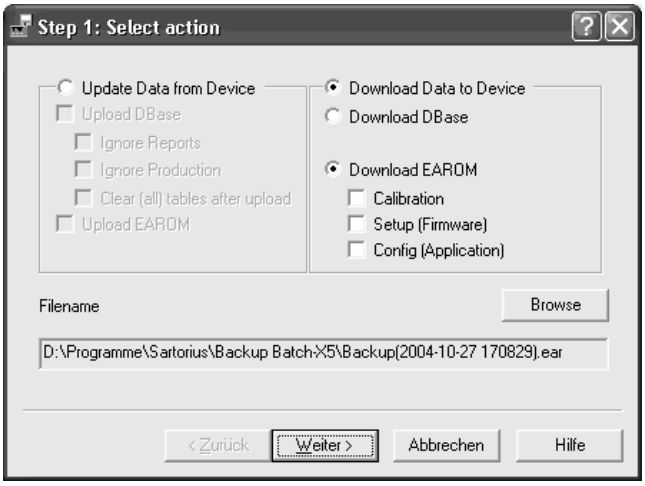


Activate checkbox "Download EAROM" to load all saved EAROM data into the controller.

Moreover, you can activate checkboxes "Calibration", "Setup (Firmware)" and/or "Config (Application)" to select which EAROM data should be loaded into the PC.

Click on button [Browse] to select the back-up file which should be downloaded into the controller.

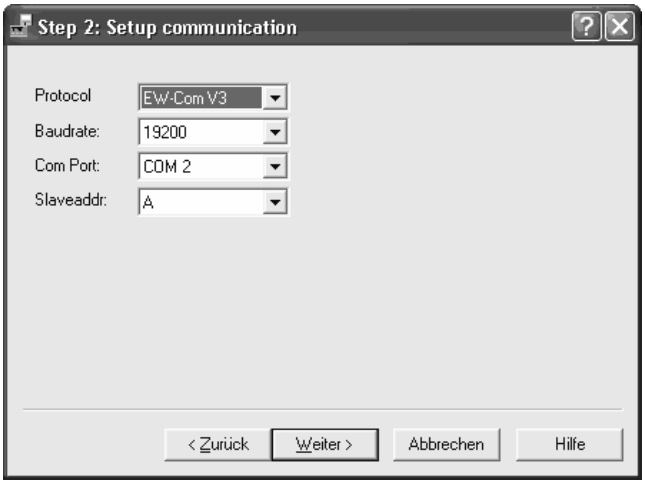
After selecting the back-up file, click on button [Next].



Make the parameter selections in dialogue window "Step 2: Setup communication":

Protocol: [EW-Com V3]
Baudrate: [19200]
Com Port: Select the PC Com port to which the controller is connected.
Slaveaddr: [A]

Subsequently, click on [Next].



Note:
These settings must correspond with the settings

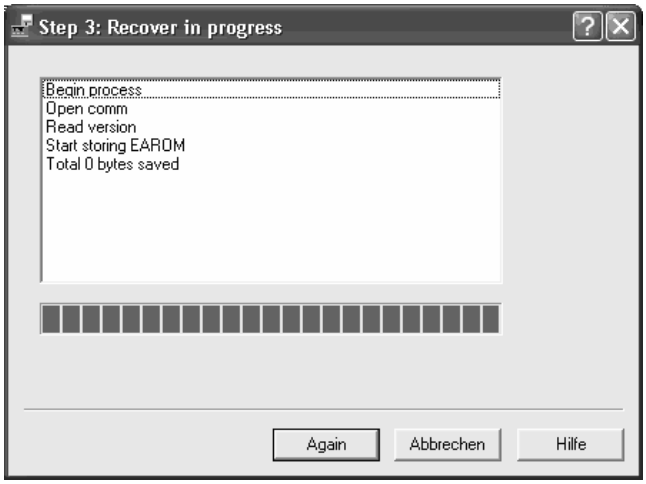
made in [Setup]-[Serial Ports] on the controller (see chapter 3).

A status window is displayed.
During downloading, RecoverIt loads driver "ewdrv_01.exe" (is installed automatically with RecoverIt). This load operation will open a DOS window which can be closed manually **after** downloading.

Note:
Clicking on [Cancel] during downloading will cancel downloading. The back-up data are not loaded into the controller.

The following warning is displayed.
Click on [No] to continue downloading or on [Yes] to cancel RecoverIt, i.e. downloading.

To ensure that downloading was terminated successfully, note hint "Total XXXX bytes saved" on the last line, and the progress bar.



After successful downloading, you can click on button [Again] to return to the RecoverIt start window, or on [Cancel] to cancel RecoverIt (in this case, you can close DOS window "ewdrv_01.exe").

8.6 Error messages

The causes of this message can be :

- wrong COM port,
- missing or faulty cable connection between PC and instrument,
- faulty cable,
- the settings in [Setup]-[Serial Ports]-[Builtin] on the controller are not correct,
- the settings in RecoverIt are not correct: e.g. faulty Baudrate, faulty slave address, etc.

If this message is displayed, a faulty protocol was selected in the controller and/or in RecoverIt. Please, use protocol [EW-COM V3].

An incomplete RecoverIt file was loaded into the instrument previously, i.e. an internal controller error was made. Make a [Cold] start at the instrument.

Note:
During [Cold] start, the RAM data are lost.

Driver "ewdrv_01.exe" is not found, or access to this driver is not enabled.

Re-start RecoverIt, and repeat the recover operation.

If the error message is displayed again, ensure that driver "ewdrv_01.exe" is on your PC (D:\WINDOWS\system32). If necessary, re-install RecoverIt to re-load the driver.

9 LAYOUTIT

Driver LayoutIt is an extension of the Sartorius Nice Label Express program for Sartorius controllers X4, X5, X6 & PR1713 and printers.

Installation of the driver permits changing of print layouts (".lbls" files) with Nice Label Express and using graphic and line printers. Apart from the well-known labels and tickets, the layouts of complete reports in A4 format, e.g. batch reports, can be determined.

The print layouts (".lbls" files) are included in the customizing kits on the PowerTools CD contained in the scope of delivery. These customizing kits must be extracted on your PC (see chapter 4.4). The most recent customizing kits can be downloaded from our Internet site www.sartorius.com.

Don't change the names of the unpacked files!
Don't change structure or names of this folder!

A standard layout file (".lbls" file) is provided in the application. If necessary, these data can be adapted to the individual requirements. Changes such as print-out of other data, use of a logo, inclusion of bar codes or print-out on a different printer are possible without programming expenditure.

9.1 Prerequisite of LayoutIt

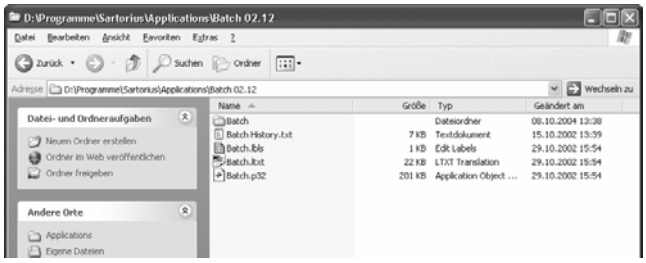
As a prerequisite for using driver "LayoutIt", a full version of the Sartorius Nice Label Express program (from version 2.71) and the Sartorius PR1750/NT programming software must be installed.
PR1750 knowledge is not necessary, because this program handles the data communication automatically.

Note:
With Nice Label Express version 2.8 and better, the installation of LayoutIt is omitted, because LayoutIt is already integrated in Nice Label Express from this version.

The program can be used for firmware version >2.0 and better.

9.2 Using LayoutIt

Open the folder in which you have extracted the customizing kits on your PC.
Double click on a ".lbls" file which should be changed. Nice Label Express opens automatically and changes can be made. The operation of Nice Label Express is explained in the short-form instructions of Nice Label Express for controllers X4, X5 & X6.
The altered print layouts are loaded into the controllers by means of program FlashIt (see chapter 4.6).



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