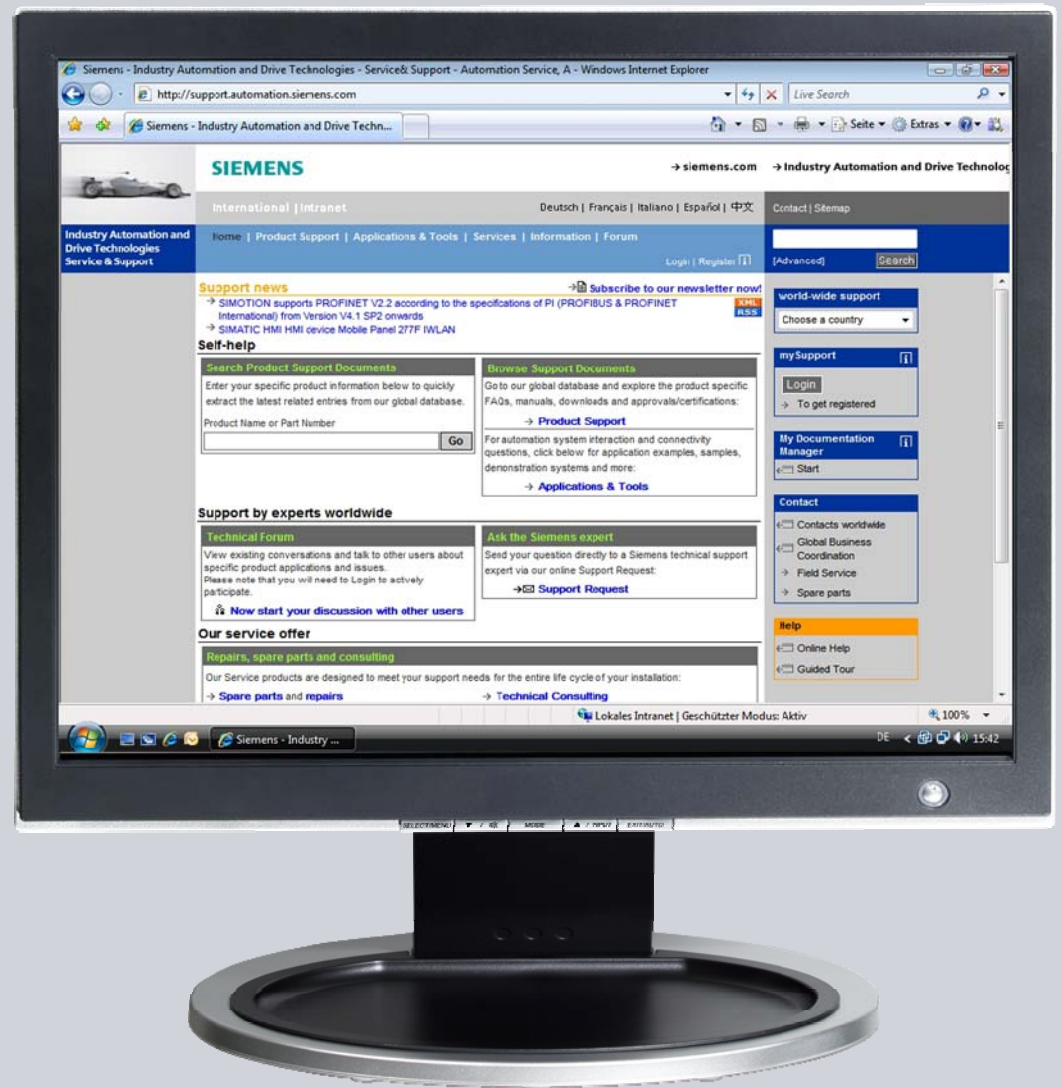


Operating system update with ProSave

ProSave

FAQ • July 2008



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Question

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Question

How do you do an operating system update (OS update) on operator panels with ProSave?

Answer

Follow the instructions and notes listed in this document for a detailed answer to the above question.

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1 Operating system update with ProSave

Below is a summary of how to do an operating system update with ProSave.

- The operating system of the operator panel depends on the version of WinCC flexible and ProTool used.
You should do an operating system update whenever the operating system of the operator panel does not match the software version used. Information on this is available in [section 1.1](#).
- If no operable operator panel image exists on the operator panel, you can only update the operating system by means of a reset to factory settings.
Information on this is available in [section 1.2](#) and [section 1.3](#).
- If you have questions on establishing the connection or problems with the operating system update, please refer to [chapter 2](#) and [chapter 3](#) respectively.

1.1 Operating system update (OS update)

Please proceed as follows to perform an operating system update.

Table 1-1

No.	Procedure
1.	Setting the PG/PC interface In the SIMATIC Manager, you select the menu command Tools > Set PG/PC Interface... and set interface parameter assignment used, for example, CP 5512 (PROFIBUS).
2.	Make transfer settings on the operator panel Make the corresponding transfer settings on the operator panel and then switch the operator panel to Transfer mode.
3.	Establish cable connection Connect the operator panel to the PG/PC with an appropriate connection cable (according to the transfer setting selected).
4.	ProSave Start ProSave via "Start > SIMATIC > ProSave > ProSave".
5.	In the ProSave menu bar you select the General menu and define the device type and connection.
6.	Switch to the " OS Update " menu in the menu bar. Now, by default, an Image version appropriate for your operator panel is displayed. Note: Make sure that the correct Image path is set. This applies, in particular, if WinCC flexible and ProTool are installed jointly on your computer (see also section 2.2).
7.	Click on the " Device status " button.

No.	Procedure
	A connection is established between "ProSave" and the "operator panel".
8.	After the connection has been established successfully, the current image version of the operator panel is displayed. Click on the " Update OS " button. The operating system update is started.
9.	Transfer the project After the installation is complete, the "Control Panel" is displayed on the operator panel. For a subsequent project transfer, you first make the required transfer settings. For Touch operator panels, you should calibrate the screen beforehand under "Control Panel > OP > Touch".
10.	Now you can transfer the configuration.

1.2 Resetting the operating system to the factory settings via the "Reset to factory settings" function and PPI Multi Master cable

Proceed as follows to reset an operator panel to the factory settings.

Table 1-2

No.	Procedure
1.	Backup of licenses and authorizations Before resetting your operator panel to the factory settings, make sure that there are no licenses or authorizations on the operator panel. Information on this is available in Entry ID: 27005215
2.	Make transfer settings on the operator panel No transfer settings need to be made on the operator panel.
2.	Switch off the power supply for the operator panel.
3.	Establish cable connection Connect the operator panel to the PG/PC using an appropriate RS232/PPI multi-master cable or USB/PPI multi-master cable. Settings on the USB/PPI multi-master cable The USB/PPI multi-master cable ("E-Stand 05") does not have any DIP switches and can be used for project transfer as from WinCC flexible 2005 SP1. Settings on the RS232/PPI multi-master cable For the operating system update you must set the fifth DIP switch to the ZERO position (PPI/Freeport). All other DIP switches are not relevant for operating system updates on an operator panel.

No.	Procedure
	<div data-bbox="539 389 1225 703" style="text-align: center;"> <p>The diagram shows a row of eight DIP switches labeled 8 through 1 from left to right. Switch 5 is highlighted in yellow and has a red rectangular box around it. The top of the switches is labeled '0' and the bottom '1'.</p> </div> <p data-bbox="496 763 1337 797">The DIP switch settings are marked with 0 and 1 on the cable housing.</p> <p data-bbox="496 835 568 864">Note:</p> <p data-bbox="496 869 1350 931">If you reset the operating system to the factory settings, you cannot use all the communication connections and cables.</p> <p data-bbox="496 936 1294 999">Information on which cable you can use for which operator panel is available in section 2.1.2.</p>
4.	<p data-bbox="496 1010 608 1039">ProSave</p> <p data-bbox="496 1043 1203 1077">Start ProSave via "Start > SIMATIC > ProSave > ProSave".</p>
5.	<p data-bbox="496 1088 1331 1151">In the ProSave menu bar you select the General menu and define the device type and connection.</p> <p data-bbox="496 1155 1355 1245">For a PPI connection you select "Serial" as the connection type. You do not have to set the baud rate on the multi-master cable for an operating system update.</p>
6.	<p data-bbox="496 1256 1091 1290">Switch to the "OS Update" menu in the menu bar.</p> <p data-bbox="496 1294 1355 1357">Now, by default, an Image version appropriate for your operator panel is displayed.</p> <p data-bbox="496 1395 568 1424">Note:</p> <p data-bbox="496 1429 1027 1462">Make sure that the correct Image path is set.</p> <p data-bbox="496 1467 1299 1529">This applies in particular if WinCC flexible and ProTool are installed jointly on your computer (see also section 2.2).</p>
7.	<p data-bbox="496 1536 1331 1599">Check the "Reset to factory settings" check box or the "Boot" check box (in earlier versions of ProSave).</p> <p data-bbox="496 1637 568 1666">Note:</p> <p data-bbox="496 1671 1321 1733">If the "Reset to factory settings" check box is not displayed, refer to section 3.2.</p>
8.	<p data-bbox="496 1749 1355 1845">Click on the "Update OS" button and switch the operator panel back on. A connection is established between "ProSave" and the operator panel and the operating system update is started.</p>
9.	<p data-bbox="496 1861 1355 1924">After transfer of the data, "ProSave" requests you to reboot the operator panel (switch off and on).</p> <p data-bbox="496 1928 1235 1962">The operator panel then performs additional installation steps.</p>
10.	<p data-bbox="496 1962 751 1995">Transfer the project</p>

No.	Procedure
	<p>After the installation is complete, the "Control Panel" is displayed on the operator panel.</p> <p>For a subsequent project transfer, you first make the required transfer settings.</p> <p>For Touch operator panels, you should calibrate the screen beforehand under "Control Panel > OP > Touch".</p>
11.	Now you can transfer the configuration.

1.3 Resetting the operating system to the factory settings via Ethernet connection

Below we take the example of an MP 377 Touch to show how to reset an operator panel to the factory settings via Ethernet.

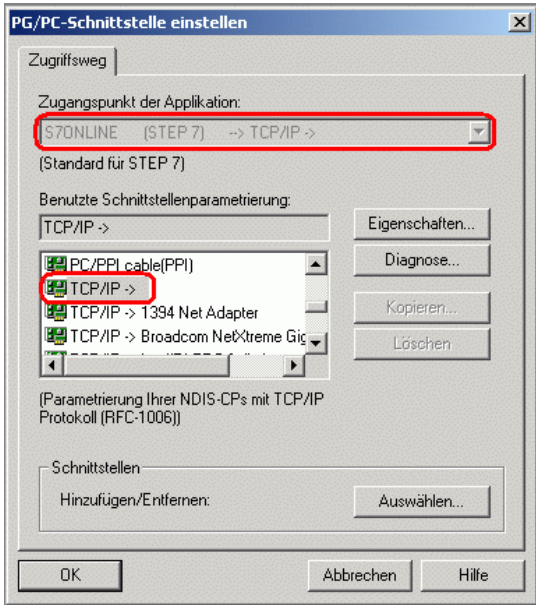
Note

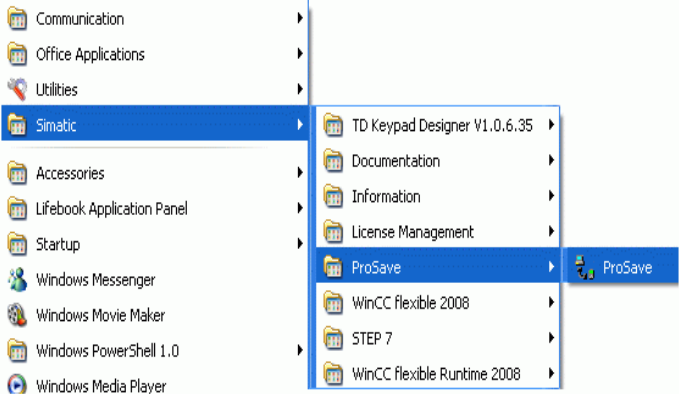
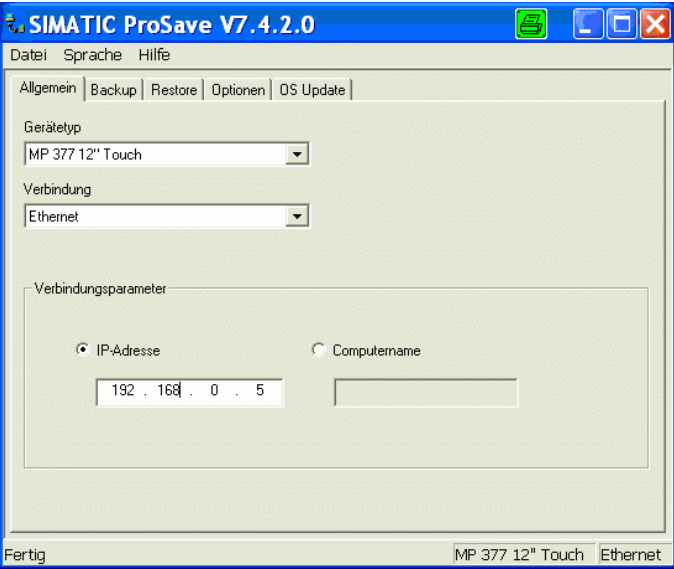
MP 377 operator panels with the Image version installed for **WinCC flexible 2008** and higher (Image version as from V01.00.02.00_01.83) have the new parameter "Prepare for Reset".

More information on this is available in
Entry ID: [35677293](#)

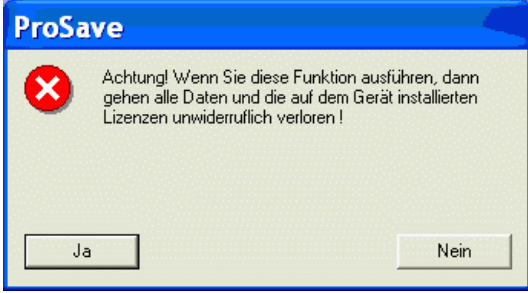
Table 1-3

No.	Procedure
1.	<p>Backup of licenses and authorizations</p> <p>Before resetting your operator panel to the factory settings, make sure that there are no licenses or authorizations on the operator panel.</p> <p>Information on this is available in Entry ID: 27005215</p>

No.	Procedure
2.	<p>Assign IP address Assign a unique IP address to your PG/PC and your operator panel. Make sure that the IP addresses are in the same subnetwork.</p> <p>Sample PG/PC IP: 192.168.0.200 Subnetwork: 255.255.255.0</p> <p>Sample operator panel IP: 192.168.0.210 Subnetwork: 255.255.255.0</p> <p>More information on how to establish an Ethernet connection between a PG/PC and an operator panel is available in Entry ID: 23800567</p>
3.	<p>Set the PG/PC interface In the SIMATIC Manager you select the menu command "Tools > Set PG/PC Interface...". Set the interface parameters used to "TCP/IP -> Your network card".</p> 
4.	<p>Make transfer settings on the operator panel No transfer settings need to be made on the operator panel.</p>
5.	<p>Keep a record of the operator panel's MAC address. Refer to section 2.3 for how to determine the MAC address.</p>
6.	<p>Switch off the power supply for the operator panel.</p>

No.	Procedure
7.	<p>Establish cable connection Connect the operator panel and the PG/PC using an Ethernet cable (cross-over or patch cable).</p>
8.	<p>ProSave Start ProSave via "Start > SIMATIC > ProSave > ProSave".</p>  <p>The screenshot shows the Windows Start menu with 'Simatic' selected. The 'Simatic' submenu is open, showing 'ProSave' as the selected option. The 'ProSave' submenu is also open, showing the 'ProSave' application icon.</p>
9.	<p>Switch to the "General" menu in the ProSave menu bar. Select the appropriate device type and define "Ethernet" as connection. For "Connection parameters" you enter the IP address of the operator panel.</p>  <p>The screenshot shows the SIMATIC ProSave V7.4.2.0 application window. The 'Allgemein' (General) tab is active. The 'Gerätetyp' (Device type) dropdown is set to 'MP 377 12" Touch'. The 'Verbindung' (Connection) dropdown is set to 'Ethernet'. Under 'Verbindungsparameter' (Connection parameters), the 'IP-Adresse' (IP address) radio button is selected, and the IP address '192.168.0.5' is entered in the text field. The 'Computername' (Computer name) radio button is unselected. The status bar at the bottom shows 'Fertig' (Finished) and 'MP 377 12" Touch Ethernet'.</p>

No.	Procedure
10.	<p>Switch to the "OS Update" menu in the menu bar. Now, by default, an Image version appropriate for your operator panel is displayed.</p> <p>Note: Make sure that the correct Image path is set. This applies, in particular, if WinCC flexible and ProTool are installed jointly on your computer (see also section 2.2).</p>
11.	<p>Check the "Reset to factory settings" check box or "Boot" check box (in earlier versions of ProSave). The "MAC address" option field is then displayed. Enter the operator panel's "MAC address" here.</p> <p>Note: If the "Reset to factory settings" check box is not displayed, refer to section 3.2.</p> <div data-bbox="496 927 1177 1496" data-label="Image"> </div> <p>Click on the "Update OS" button and switch the operator panel back on. A connection is established between "ProSave" and the "operator panel".</p>

No.	Procedure
12.	<p>You will then receive a security warning. Acknowledge it with "Yes" if you have no licenses installed on the panel.</p>  <p>If you acknowledge with "Yes", the process continues. The memory is deleted and the selected data is transferred.</p>
13.	<p>Transfer the project After the installation is complete, the "Control Panel" is displayed on the operator panel. For a subsequent project transfer, you first make the required transfer settings. In the case of Touch operator panels, you should calibrate the screen beforehand under "Control Panel > OP > Touch".</p>
14.	Now you can transfer the configuration.

2 Additional Information

2.1 Cable connection between PC and operator panel

2.1.1 Operating system update

When performing an operating system update, you can use all the communication connections supported by your operator panel.

2.1.2 Resetting the operating system to the factory settings (booting)

If you reset the operating system to the factory settings, you cannot use all the communication connections and cables.

Information on which cable you can use for which operator panel is available in the table below.

Table 2-1

Operator Panel	RS 232 Zero modem cable	RS232/PPI Multi-master cable	USB/PPI Multi-master cable	PN PiP Cross	PN Ethernet
	6ES7 901-1BF00-0XA0	6ES7 901-3CB30-0XA0	6ES7 901-3DB30-0XA0	6XV1 870-3RH20 ¹⁾	Standard Ethernet CAT5
OP 73 micro	--	X	X	--	--
TP 170 micro	--	X	--	--	--
TP 177 micro	--	X	X	--	--
C7-635 OP / TP	X	--	--	--	--
C7-636 Key / Touch	X	--	--	--	--
OP 73	--	X	X	--	--
OP 77A	--	X	X	--	--
OP 77B	X	--	--	--	--
TP 170A	X	--	--	--	--
TP 177A	--	X	X	--	--
OP 170B	X	--	--	--	--
OP 177B	--	X	--	--	--
TP 170B	X	--	--	--	--
TP 177B	--	X	--	--	--
OP 270	X	--	--	--	--
OP 277	--	X	--	--	--
TP 270	X	--	--	--	--
TP 277	--	X	--	--	--
MP 270	X	--	--	--	--
MP 277	--	X	--	--	--
MP 370	X	--	--	--	--
MP 377	--	--	--	X	X
Mobile Panel 170	X	--	--	--	--

Operator Panel	RS 232 Zero modem cable	RS232/PPI Multi-master cable	USB/PPI Multi-master cable	PN PiP Cross	PN Ethernet
	6ES7 901-1BF00-0XA0	6ES7 901-3CB30-0XA0	6ES7 901-3DB30-0XA0	6XV1 870-3RH20 ^{*)}	Standard Ethernet CAT5
Mobile Panel 177	--	X	--	--	--
Mobile Panel 277	--	X	--	--	--
KTP400 Basic mono ON	--	--	--	X	X
KTP600 Basic color DP	--	X	X	--	--
KTP600 Basic color PN	--	--	--	X	X
KTP600 Basic mono PN	--	--	--	X	X
KTP1000 Basic DP	--	X	X	--	--
KTP1000 Basic PN	--	--	--	X	X
TP1500 Basic PN	--	--	--	X	X

^{*)} For the RS232/PPI multi-master cable, you set DIP switches 1 to 3 according to the baud rate selected in ProSave. DIP switches 4 to 8 must all be set to ZERO.

Sample image path in WinCC flexible

C:\Program Files\Siemens\SIMATIC WinCC flexible\WinCC flexible Images\Operator panel...

Note

The Image version of the operator panels depends on the version of WinCC flexible and ProTool used.

More information on this is available at the following links.

ProTool:

<http://support.automation.siemens.com/WW/view/de/21742389>

WinCC flexible:

<http://support.automation.siemens.com/WW/view/de/28263711>

2.3 Determining the MAC address

Operator panels that use "Ethernet" as a connection for executing the "Reset to factory settings" function need to have the MAC address specified in order to execute the function.

You can determine the operator panel's MAC address as follows.

- The MAC address is printed on the back of the operator panel (e.g. MAC-ADD.: 00-0E-8C-84-1F-87).
- When you switch on the operator panel, the MAC address is displayed during startup.
- Via the "Control Panel" of the operator panel.
TP/OP/MP/Mobile Panel: Control Panel > OP > Device
KTP/TP1500 Basic Panels: Control Panel > Profinet > Device

3 Problem Analysis

3.1 Disconnected connection when using the RS232/PPI multi-master cable

If the connection is disconnected when updating the operating system, set a lower bit rate.

If you are using high bit rates, then you must implement the RS232/PPI multi-master cable with "E-Stand 03" (development status 03) or higher.

3.2 Check box not available in ProSave

If the "Reset to factory settings" check box is not displayed, then recheck the connection settings made in ProSave. It is possible that the operator panel does not support the transfer type required for this option.

Refer here to Table 2-1 in [section 2.1.2](#).

3.3 Error message during transfer of the configuration

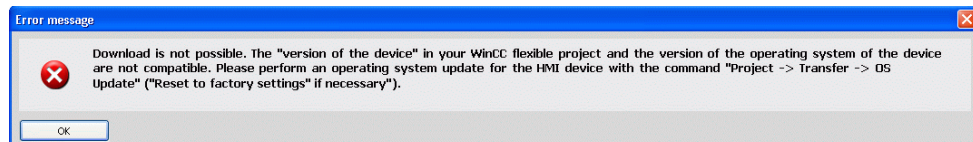
You have changed the operating system of your operator panel and during transfer of the configuration you receive the message that the operating system version of the operator panel does not match the software version used.

In this case, prior to updating the operating system, check that the image path has been set correctly and that you have selected the correct image file. Refer here to

[section 2.2](#).

Example of an error message in WinCC flexible 2008.

Figure 3-1



3.4 MP 377 "Reset to factory settings" (booting)

If the MP 377 operator panel cannot be reset to the factory settings, then check the Image version of the MP 377.

MP 377 operator panels with Image version as from

WinCC flexible 2008 (Image version as from V01.00.02.00_01.83) installed have the new parameter "**Prepare for Reset**".

In this case refer to Entry ID: [35677293](#).

Some points are given below, which you should check if no connection is established

3.5 A connection to the operator panel cannot be established

Some points are given below, which you should check if no connection is established between the operator panel and ProSave.

3.5.1 Check transfer type and address on the operator panel and in ProSave

Compare the transfer settings on the operator panel with those in ProSave.

Example:

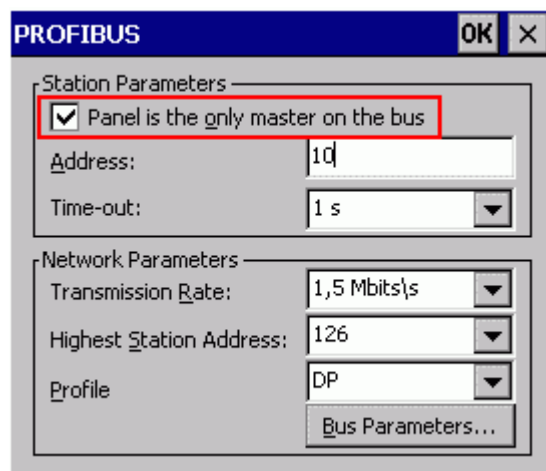
ProSave specification

Transfer via PROFIBUS;

Panel address 10

Make sure that "Panel is the only master on the bus" is checked for the transfer settings on the operator panel.

Figure 3-2



More information on the topic of "transfer settings" is available at the following link.

<http://support.automation.siemens.com/WW/view/de/23802404>

3.6 Check cable connection and connector

MPI/PROFIBUS cable

Please check the following points:

- Cable connection between the operator panel and the configuration computer.
 - Check the cable for damage.
- Bus connector especially the connection of the terminating resistors.
 - Terminating resistors ON/OFF.

The following guideline value applies:

- Bus terminating resistor OFF:
 - Bus connector with "two" cables connected.
- Bus terminating resistor ON:
 - Bus connector with "one" cable connected.

More information on the topic of "bus terminating resistors" is available at the following link.

<http://support.automation.siemens.com/WW/view/de/187276>

RS232/PPI multi-master cable

When using an RS232/PPI multi-master cable, please note the switch settings.

Refer here to the entry at the following link:

<http://support.automation.siemens.com/WW/view/de/16532946>

Ethernet cable

Use a "crossed" Ethernet cable for the connection between a PG/PC and an operator panel.

If you use a "patch" cable, you need a switch in addition.

3.6.1 Check the PG/PC interface on the configuration computer

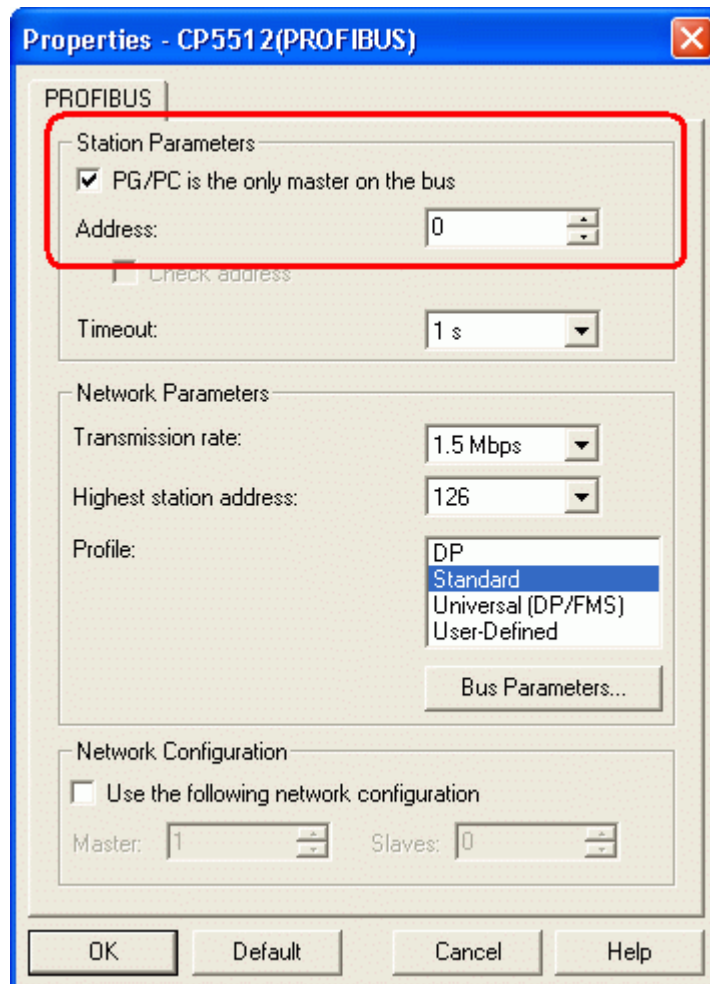
Check the PG/PC interface on your configuration computer.

- In Windows XP
 - "Start > SIMATIC > SIMATIC NET > Set PG/PC interface".
- In STEP 7
 - "Menu bar: Tools > Set PG/PC interface..."

Make sure that the node address is set to "0".

We also recommend that you check the "PG/PC is the only master on the bus" option.

Figure 3-3



4 History

Table 4-1

Version	Date	Amendments
V1.0	20.09.2008	First edition
V1.1	07.01.2009	Addition inserted
V1.2	09.07.2009	Additions to MP 377 and KTPs inserted. Tables changed.
V1.3	26.08.2010	Section 1.2 updated