

SIEMENS

SIMATIC PC

Panel PC IL 77

QuickStart

Introduction

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the device

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This manual applies to devices with the order
numbers 6AG71...

Edition 10/2004

A5E00327597-01

Safety Guidelines

This manual contains notices which you should observe to ensure your own personal safety as well as to avoid property damage. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring to property damage only have no safety alert symbol.



Danger

indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Warning

indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Caution

used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Caution

used without safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Notice

used without the safety alert symbol indicates a potential situation which, if not avoided, may result in an undesirable result or state.

When several danger levels apply, the notices of the highest level (lower number) are always displayed. If a notice refers to personal damages with the safety alert symbol, then another notice may be added warning of property damage.

Qualified Personnel

The device/system may only be set up and operated in conjunction with this documentation. Only qualified personnel should be allowed to install and work on the equipment. Qualified persons are defined as persons who are authorized to commission, to earth, and to tag circuits, equipment and systems in accordance with established safety practices and standards.

Intended Use

Please note the following:



Warning

This device and its components may only be used for the applications described in the catalog or technical description, and only in connection with devices or components from other manufacturers approved or recommended by Siemens.

This product can only function correctly and safely if it is transported, stored, set up and installed correctly, and operated and maintained as recommended.

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Disclaimer of Liability

We have checked the contents of this manual for agreement with the hardware and software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in the manual are reviewed regularly, and any necessary corrections will be included in subsequent editions. Suggestions for improvement are welcomed.

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Introduction

The SIMATIC Panel PC is an industry-standard PC platform for demanding tasks in the field of PC-based automation.

The SIMATIC Panel PC provides detailed documentation in 5 languages in PDF format. The documentation is available on the supplied "Documentation & Drivers" CD and consists of the following parts:

- File "Panel_PC_IL_77_qs_<language code>.pdf", Panel PC IL 77, QuickStart: This document is in the directory "Documents\<language>".
- File "Panel_PC_IL_77_ba_<language code>.pdf", Operating Instructions Panel PC IL 77 in the directory "Documents\<language>"

Language codes	Language
d	German
e	English
s	Spanish
f	French
i	Italian

The CD-ROM drive is optional and only available once the device has been switched on. This is why the first steps for commissioning the device are described in this booklet. You are also supported by screen dialogs during commissioning.

Notice

Carry out the tasks in the sequence described. Please follow all safety instructions.

Read the documentation thoroughly once you have completed the commissioning. Please read carefully all safety informations and general notes.

Unpacking and connecting the device

2.1 General safety notes



Warning**Emergencies**

If the device malfunctions, remove the power cable immediately and contact your nearest customer service representative. Malfunctions can occur when the operator controls or power cable are damaged or when liquids or foreign objects penetrate the device.

Electrical Connection



Warning

Unplug the device before every intervention and after disconnecting it from the power supply.

Avoid contact with network lines and data transmission lines during thunderstorms, and do not connect any lines during this time.

High frequency radiation

Caution**Unintentional operating situation**

High frequency radiation, e.g. from cell phones, can cause unintentional operating situations under some circumstances. For more details, consult the technical data in the "EMC Requirements" chapter.

Handling and disposal of lithium batteries



Warning**Danger of explosion and the release of harmful substances!**

Do not throw lithium batteries into fire, do not solder onto the cell body, do not open, do not short circuit, do not reverse pole, do not heat above 100 °C, dispose of according to regulations, and protect from direct sunlight, moisture and condensation.

Replace lithium batteries with the same brand or a brand recommended by the manufacturer.

Dispose of used lithium batteries individually as hazardous waste in accordance with the local regulations.

2.2 Unpacking and checking the delivery unit

Procedure

1. Upon delivery, check the packaging for damage incurred during transport.
2. If any transport damage is present at the time of delivery, lodge a complaint at the shipping company in charge. Have the shipper confirm the transport damage immediately.
3. Unpack the device.

Caution

Do not lay the device on its back. This may damage optical drives.

4. Keep the packaging material in case you have to transport the unit again.
-

Notice

The packaging protects the device during transport and storage. Therefore, never dispose of the original packaging material!

5. Please keep the enclosed documentation in a safe place. You will need the documentation when you start up the device for the first time.
 6. Check the package contents for completeness and any visible transport damage. Check for completeness using the enclosed "Contents of Delivery" list.
 7. Notify the delivery service in charge immediately if the packages contents are incomplete or damaged.
-



Warning

Make sure that a damaged unit is not installed nor put into operation.

8. Note the identification information as described in the "QuickStart" document.

2.3 Noting the identification information

Procedure

1. Write down the Microsoft Windows Product Key of the Certificate of Authenticity COA in the table at the end of this section. The product key can be found at the back of the device. You will need the product key during the reinstallation of the operating system.
2. Write down the manufacturer's number SVP and the order number , e.g. "6AG71...", in the table. If repairs are necessary, the device can be identified by the service center on the basis of the SVP number and order number.

Both numbers can be found on the rating label attached to the side of the device where the power unit is located.

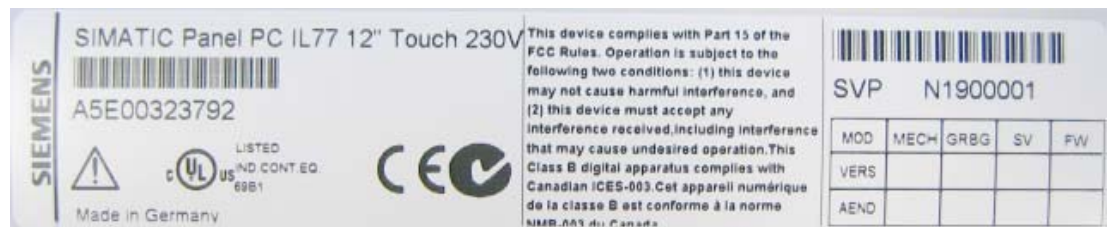



Figure 2-1 Rating label of the device, for example

3. Write down the Ethernet address of the device: The Ethernet address is located in the "Main" menu of the BIOS setup, "Hardware Options > Ethernet Address."

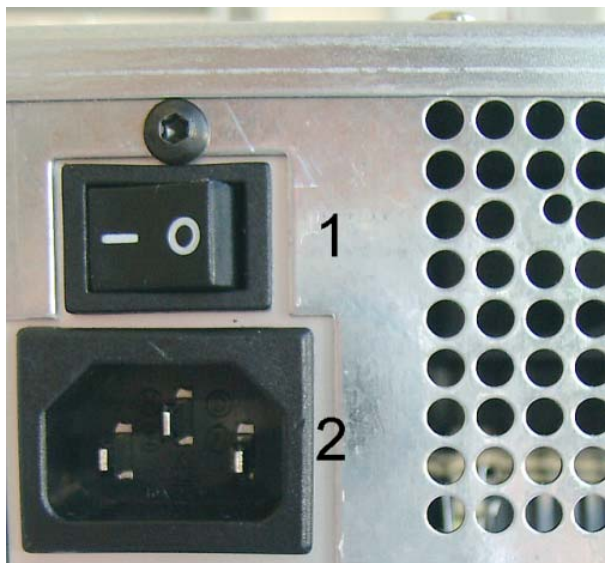
Identification		Number
1	Microsoft Windows Product Key	
2	SVP number	
3	Order No.	
10	Ethernet address	

2.4 Connectors

Interfaces

Arrangement of the ports		
	Pos	Name
	(1)	KEYBOARD
	(2)	Mouse
	(3)	USB 2.0
	(4)	COM 1
	(5)	LPT 1
	(6)	VGA
	(7)	USB 2.0
	(8)	ETHERNET
		Description
		Connection for a PS/2 keyboard
		Connection for a PS/2 mouse
		Connector for USB devices
		Serial port, 9-pin Cannon plug
		Parallel port, 25-pin Cannon socket
		VGA connection
		Connector for USB devices
		RJ 45 Ethernet connection 10/100/1000 Mbps

Power supply

Position of the IEC power connector	Description
	IEC power connector (2) for the AC power supply to the device. The maximum permitted power range is 120 V AC to 230 V AC.

2.5 Connecting a PS/2 mouse and keyboard

Procedure

1. Insert the cable of a PS/2 mouse into the PS/2 mouse socket.
2. Insert the cable of a PS/2 keyboard of your choice into the PS/2 keyboard socket.

Notice

Use a keyboard with a straight keyboard plug to leave room for other adjacent plugs.

Starting up the device

3.1 Overview

Checklist

Before starting up the device for the first time, go through the following checklist:

- Have you taken into account the proper ambient and environmental conditions for the device and the connected I/O modules, as described in the technical information?
- Have you learned how to connect the equipotential bonding?
- Have you learned how to connect the power supply?
- Read over this information in the respective "Connecting" chapter of the operating instructions. Please follow all guidelines.

Caution

Condensation

When transporting the device in low temperatures, ensure that no moisture gets on or in the device. This also applies if the device is subjected to extreme changes in temperature. Wait 12 hours before switching the device on.

Allow the device to slowly adjust to room temperature before commissioning the device. Do not subject the device to direct heat radiation from devices such as heaters.

I/O modules

Connect the I/O modules using shielded cable and metal plugs. Otherwise, the specified norms and specifications declared by Siemens AG are no longer valid. Fix the plugs of the interface cables to the PC housing with screws. This improves the electrical shielding.

Start up

Do not switch off the device during the start up. Otherwise parts of the software which are necessary for trouble-free operation will be lost.

Use the standard settings in the BIOS as described in the "Detailed Descriptions" chapter of the operating instructions under the section "BIOS Setup", "BIOS Setup Default Settings." Otherwise the operating system will not be installed properly.

Prerequisite

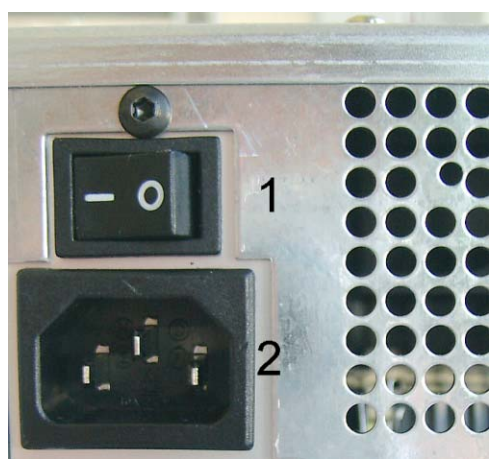
- A PS/2 mouse is connected.
- A PS/2 keyboard is connected.

Procedure

1. Switching on the device
2. Install Microsoft Windows operating system.
3. Install drivers and applications.

3.2 Operator controls

On / Off switch

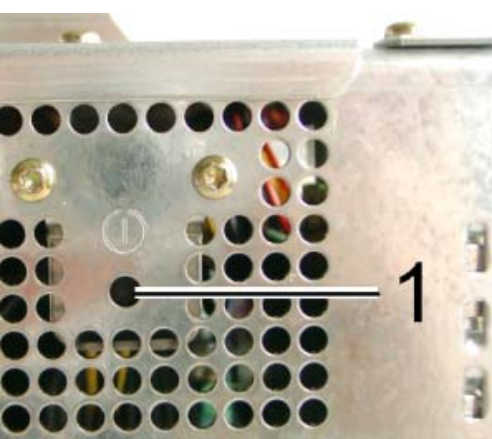
On / Off switch	Description
	The device is on when the power switch (1) is in position "0". Voltage is supplied to the device even when it is switched off.



Warning

The On / Off switch cannot be used to isolate the device from mains!

"Soft Power" key

"Soft Power" key	Description
	<p>The key has two functions:</p> <ul style="list-style-type: none">When the "Soft Power" (1) key is briefly pressed after the device has been switched on with a sharp object for example, any operating system loaded will be closed correctly and the device shut down. Caution: Wait at least 7 seconds before pressing the key a second time. The key will cause the device to reboot if pressed again.When the "Soft Power" (1) key is pressed and held for 4 seconds when the device is switched on, the device immediately shuts down. In doing so the loaded operating system may not be ended correctly. This however does not trigger a hardware reset. You can use this function to shut down the device when it no longer responds. Caution: Data may be lost. Wait at least 7 seconds before pressing the key again. The device reboots when you press the key again.

3.3 Switching on the device

Procedure

1. Plug the power plug of the supplied power supply cable in the AC power supply connector of the device.
2. Screw-mount the power plug lock (1).



Figure 3-1 Interlock the power plug

3. Interlock the power plug as shown.
4. Plug the power supply cable into a socket with a grounded protective conductor.
5. Switch on the power switch of the device.

The device starts up and boots.

Self test

After connection to the power supply, the device performs a self test. During the self test, the message "Press <F2> to enter SETUP" appears briefly.

When the self test is finished, the operating system will be loaded.

3.4 Setting up the Microsoft Windows operating system

Introduction

The setup wizard appears immediately following the startup of the device. The wizard is used to set the parameters of the operating system.

Note

The dialogs of the setup wizards differ slightly in some places for the Windows 2000 and Windows XP operating systems.

In order to change to the next dialog, click on the ">>" button. In order to change the entry in the previous dialog, click on the "<<" button.

Procedure

1. Accept the Microsoft licensing agreement.
2. Perform the regional settings of the operating system.
3. Enter the company names and user names.
4. If his PC name is already in use as you attempt to connect the device to a network: Enter a new PC name for identification.

The operating system will restart automatically.

The system settings will be updated and the desktop will be set up. The setup of the operating system is complete.

3.5 Installing drivers and applications

Introduction

After the device is restarted, different dialogs appear on the screen. Drivers and applications can be installed from these dialogs.

Additional hardware and software components

You can install and configure additional hardware and software components such as a network. For additional information, refer to the documentation of the hardware and software.

Note

The directory "c:\i386" contains special Windows components for subsequent installation.

Energy-saving mode

The "Suspend Timeout" option is disabled by default in the "Power" menu of the BIOS Setup.

Caution

Do not activate the "Suspend Timeout" option! The safe operation of the automatic plant or system is otherwise no longer guaranteed.

The "Suspend Timeout" BIOS option is not an authorized function.

Procedure

1. In the "Panel Wizard" dialog, click on the type of panel that corresponds to your device.



Figure 3-2 Panel Wizard, selection of the panel type

2. In the "Panel Wizard Touch" dialog, click on the screen size that corresponds to your device. The screen resolution will be set for your device.



Figure 3-3 Panel Wizard Touch, selection of the screen size

The next step only applies to control units with touch screen panels.

Once the screen size is selected, the wizard will search for new hardware, the touch controller. The Panel Wizard closes and the Touch-Base-9-point touch calibration appears. Carry out the following steps carefully.

3. Briefly touch the touch screen at every cross hair.

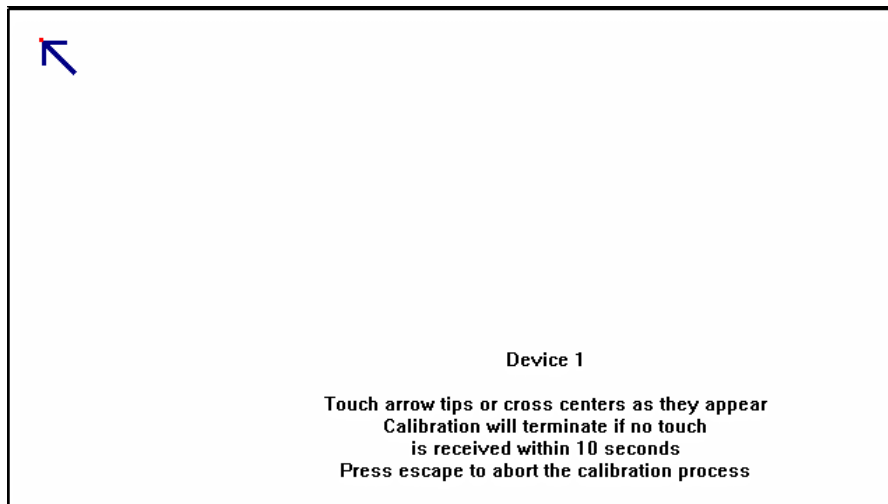


Figure 3-4 Touch screen calibration

4. The following only applies to control units with key panels: Exit the operating system session and restart the device. Otherwise the "Security features" from "KeyTools" or "KeyHook" will not be activated.



Warning

Use "KeyTools" as described in the "Additional Drivers and Applications" section of the "Operation and Configuration" chapter in the Operating Instructions.

The following applies when the "Security features" of "KeyTools" is deactivated:

When the additional function keys F13 and S16 are used, or when using your own key code table, serious malfunctions of the user software can occur because the key codes behind the function keys can also be activated by activating keys other than the configured ones.

5. No administrator password is assigned in the factory state. When the logon dialog appears the next time the device starts up, therefore, leave the field empty and close the dialog with the "OK" button.

Notice

Then configure an administrator password for security.

The installation of the drivers and applications is complete. Further information is available in the "Operation and Configuration" chapter of the operating instructions under the section "Additional Drivers and Applications."

Notice

After starting up your device, find out more about the particulars of the operating system in the chapter "Start-up" in the device's operating instructions under the section "Microsoft Windows Operating Systems". Further information is available in the chapter "Service and Maintenance" under the section "Installing Software."

Technical specifications

4.1 EMC requirements

	Standards	
EMC requirements	EN 61000-6-4 EN 61000-6-2	
Emitted interference AC	EN 55011 EN 61000-3-2 EN 61000-3-3	Class A Class D
Noise immunity: Mains borne disturbance variables on supply lines	IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-5	± 2 kV, burst ± 1 kV, surge sym ± 2 kV, surge asym
Noise immunity on signal lines	IEC 61000-4-4 IEC 61000-4-4 IEC 61000-4-5	± 1 kV, burst, length < 3 m ± 2 kV, burst, length > 3 m ± 2 kV, surge, length > 30 m
Immunity to discharges of static electricity ESD	EN 61000-4-2	8 kV with air discharge 6 kV on contact, direct/indirect Interference criterion B
Immunity to RF interference	IEC 61000-4-3 IEC 61000-4-3 IEC 61000-4-6	10 V/m 80-1000 MHz, 80 % AM 10 V/m 900 MHz und 1.89 GHz, 50 % ED 10 V 9 KHz-80 MHz
HF radiation in lines and shielded lines	EN 61000-4-6	On signal lines and data lines 150 kHz to 80 MHz: 10 V/m Modulation: 80 % AM with 1 kHz, interference criterion A
Interference immunity against magnetic fields	IEC 61000-4-8	50/60 Hz, 30 A/m effective value

4.2 Ambient and environmental conditions

EMC		
Electromagnetic compatibility (EMC)	EN 61000-6-4/EN 55022, EN 61000-6-2 / EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6	
Mechanical conditions		Tested according to
Vibration load during operation	10 to 58 Hz: 0.0007 in, 58 to 200 Hz: 0.01 oz	IEC 60068-2-6
Shock load during operation	1 g, 30 ms, 3 shocks	IEC 60068-2-27
Climatic ambient conditions		
Temperature limits		
Operation	5° C... 45° C	IEC 60068-2-1
Storage/transport	-20° F... 60° C	IEC 60068-2-14
Relative humidity limits		
Operation	5 ... 80 % at 25° C	IEC 60068-2-30
Storage/transport	5 ... 95 % at 25° C (+77° F)	IEC 60068-2-56
Temperature change	Maximum 10 K/h	
Condensation	Not permissible	
Supply air	No corrosive gases	