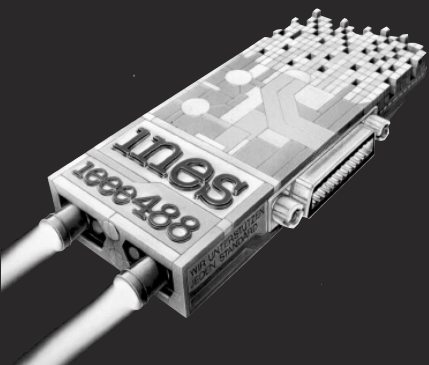


# Getting Started



# Hardware installation guide



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This manual is intended to be a quick start installing an ines GPIB board for Microsoft®<sup>1</sup> Windows®operating systems. For a more detailed description of the installation see section 'Getting Help'.

## General Note

If there is already ines GPIB software installed on your system, remove it before installing the latest version (see section 'Deinstallation').

## Getting Help

The ines GPIB Driver CD contains an online manual. This manual includes a detailed description of the installation process for each ines GPIB board. The online manual will be installed automatically during the ines setup program. If there are problems during installation, it is possible to install the online manual separately. In this case, start the setup program from the help directory on the CD.

## Deinstallation

The deinstallation should be done with the card inserted!  
Start 'UnInstall ines IEEE488.2'.  
Windows®95/98 and Windows®2000: remove the card from the Device Manager.  
Remove the card.

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## GPIB-PCMCIA (11.001.00)

### Microsoft® Windows® 95/98

#### System requirements

- PC compatible computer
- PCMCIA Slot Type II or Type III
- Windows®95 or Windows®98 Version 4.00.xx or greater with enabled PCMCIA support

#### Installation

- The installation requires the Windows 95/98 PCMCIA support running.
- Insert the installation CD into your CD-ROM drive and insert the card into a PCMCIA slot.
- Windows recognizes the new hardware. Choose 'Driver provided by hardware manufacturer' and follow the instructions.

**Note:** The installation routines of some Windows versions cannot differentiate between Windows 95 and Windows 2000 drivers. Make sure to install the Windows 95 driver.

- After the Hardware Wizard has finished, you will be prompted to restart Windows.
- During the restart, the ines setup program will be raised automatically to complete the installation.

**Note:** It may happen that Windows suggests a wrong installation path. Correct the path in that case to D:\win95\pcmcia (if your CD-ROM drive has drive letter D:).

- Follow the instructions of the installation program.

### Microsoft® Windows® 2000

#### System requirements

- PC compatible computer
- PCMCIA Slot Type II or Type III
- Windows®2000

#### Installation

- The installation requires the Windows PCMCIA support running.
- Insert the installation CD into your CD-ROM drive and insert the card into a PCMCIA slot.

- Windows recognizes the new hardware. Let the Hardware Wizard search for a driver and choose CD-ROM as source.  
**Note :** If 'igpibw95.inf' was found instead of 'igpib2000.inf', you have to check 'Install one of the other drivers' to be able to choose the Windows 2000 driver.
- After the Hardware Wizard has finished, execute Win2000\pcmcia\Setup.exe from the installation CD.
- Follow the instructions of the installation program.

### Microsoft® Windows NT®

#### System requirements

- PC compatible computer
- PCMCIA Slot Type II or Type III
- Windows NT® Version 4.0

#### Installation

- Insert the PCMCIA card into a PCMCIA slot before turning on the computer and starting Windows.
- The installation requires the Windows PCMCIA service running.
- Execute Win\_NT40\pcmcia\Setup.exe from the installation CD.
- Follow the instructions of the installation program.

### Microsoft® Windows® 3.x

#### System requirements

- PC compatible computer
- PCMCIA Slot Type II or Type III
- Realmode Cardservices Version 2.1 or higher
- Windows®3.1x

#### Installation

- The installation under Windows 3.x requires properly configured Cardservices version 2.1 or higher running on your system. The Cardservices are a part of the system and are not included in the ines package.
- Start Windows and insert the card into a PCMCIA slot.
- Execute Win31\pcmcia\Setup.exe from the installation CD.
- Follow the instructions of the installation program.

## **GPIB-PCI (12.001.00 / 12.002.00)**

### **Microsoft® Windows®95/98**

#### **System requirements**

- PC compatible computer
- Windows®95 or Windows®98 Version 4.00.xx or greater

#### **Installation**

- Insert the PCI Card into a free PCI slot, turn on the computer and start Windows.
- Insert the installation CD into your CD-ROM drive.
- Windows recognizes the new hardware. Choose 'Driver provided by hardware manufacturer' and follow the instructions.  
**Note:** The installation routines of some Windows versions cannot differentiate between Windows 95 and Windows 2000 drivers. Make sure to install the Windows 95 driver.
- After the Hardware Wizard has finished, the ines setup program will be raised automatically to complete the installation. It may happen that Windows suggests a wrong installation path. Correct the path in that case to D:\win95\pci (if your CD-ROM drive has drive letter D:).
- Follow the instructions of the installation program.

### **Microsoft® Windows®2000**

#### **System requirements**

- PC compatible computer
- Windows®2000

#### **Installation**

- Insert the PCI card into a free PCI slot, turn on the computer and start Windows.
- Insert the installation CD into your CD-ROM drive.
- Windows recognizes the new hardware. Let the Hardware Wizard search for a driver and choose CD-ROM as source.  
**Note:** If 'igpibw95.inf' was found instead of 'igpib2000.inf', you have to check 'Install one of the other drivers' to be able to choose the Windows 2000 driver.

- After the Hardware Wizard has finished, the ines setup program will be raised automatically to complete the installation. It may happen that Windows suggests a wrong installation path. Correct the path in that case to D:\win2000\pci (if your CD-ROM drive has drive letter D:).
- Follow the instructions of the installation program.

### **Microsoft® Windows®NT**

#### **System requirements**

- PC compatible computer
- Windows NT® Version 4.0

#### **Installation**

- Insert the PCI card into a free PCI slot, turn on the computer and start Windows.
- Execute Win\_NT40\pci\Setup.exe from the installation CD.
- Follow the instructions of the installation program.

# GPIB-PCW/GPIB-HS-NT+/GPIB-AT (04.002.02/04.002.02 iGPIB/05.002.00 ISA-Bus)

## Microsoft® Windows®95/98

### System requirements

- PC compatible computer
- 8 bit ISA slot (GPIB-PCW/GPIB-HS-NT+) respectively 16 bit ISA slot (GPIB-AT)
- Windows®95 or Windows®98 Version 4.00.xx or greater

### Introduction

The hardware installation under Windows®95 is the same as under Windows®98. In the following text, 'Windows®95' will be used for both operating systems.

Run the hardware installation under Windows®95 before inserting the board into the computer.

Windows®95 will assign the resources like I/O address, interrupt channel and DMA channel while running the add new hardware wizard.

The illustrations included in this document are referring to the installation of an ines GPIB-PCW board. If you are installing an ines GPIB-HS-NT+ or GPIB-AT board, there will be a few minor differences between the illustrations and your display.

### Installation

#### *Add New Hardware Wizard*

Open the '**Control Panel**' and start '**Add New Hardware**'.



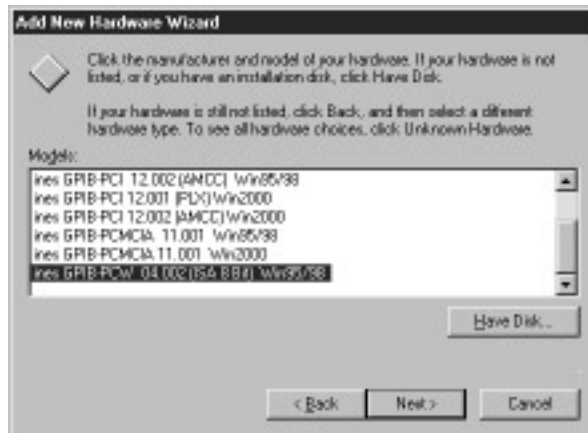
Click '**Next**', to start the installation. Answer to '**Do you want Windows to search for your new hardware?**' with '**No**' and click '**Next**'. If you already have installed an ines board, there will be an '**ines GPIB**' entry in the listbox '**Hardware types**'. If this entry exists, choose it. Otherwise choose '**Other devices**'. Click '**Next**'.



Insert the provided installation CD into the CD-ROM drive and click '**Have disk...**'



Click **'OK'**. The Window **'Models'** contains the ines drivers. Select the driver you want to install (e.g. **'GPIB-PCW Win95/98'**) and click **'Next'**.



This dialog will show the assigned resources. Note the actual settings to configure the ines board. Click **'Next'**.



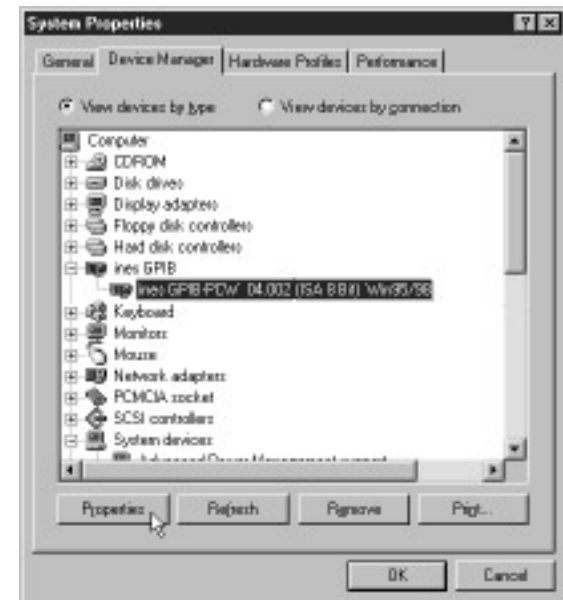
Click **'Finish'**, to complete the hardware installation. If you want to keep the actual settings answer to **'Do you want to shut down your computer now?'** with **'Yes'**. In this case you can skip the following paragraph **'Change settings'**.

### Change settings

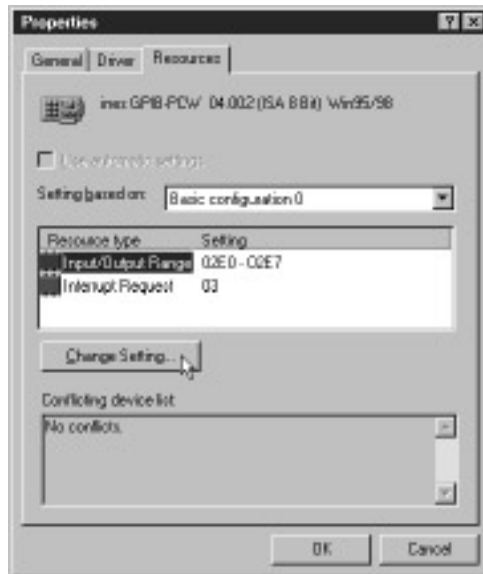
To change the actual resource settings answer to **'Do you want to shut down your computer now?'** with **'No'**. Open the folder **'System'** in the **'Control Panel'**.



Open the **'Device Manager'** by selecting it from the index on the top of the window. Click the **'+'** sign of the ines GPIB. Select the ines board and click **'Properties'**.



Select '**Resources**' from the index at the top of the window. Select the resource to be changed and click '**Change Setting...**'.



Choose a new value for the selected resource (probable resource conflicts will be displayed in the lower window). Confirm the new setting with '**OK**'. If all changes are made, note the actual settings and click '**OK**'. Answer to '**Do you want to shut down your computer now?**' with '**Yes**'.

### ***Installing the board***

After shutting down your system turn your computer off. Configure the jumpers and DIP switches on the board to the actual resource settings (see appendix for I/O address settings). Windows<sup>®</sup>95 requires DIP switch 8 set to ON. Insert the board into your computer and turn it on.

### **Important notice:**

**The following software installation requires a correct hardware installation done. Otherwise the installation of the drivers will fail.**

The hardware installation is now completed.

Execute Setup.exe in the proper directory on the installation CD (e.g. Win95\PCW' if the board to install is a GPIB-PCW).

Follow the instructions of the installation program.

## **Microsoft<sup>®</sup> Windows NT<sup>®</sup>/Windows<sup>®</sup>2000**

### **System requirements**

- PC compatible computer
- 8 bit ISA slot (GPIB-HS-NT+) respectively 16 bit ISA slot (GPIB-AT)
- Windows NT<sup>®</sup> Version 4.0 or Windows<sup>®</sup>2000

### **Installation**

- Configure the jumpers and DIP switches on the board to a free I/O address, interrupt channel and DMA channel (see appendix for I/O address settings).
- Insert the board into a free ISA slot, turn on the computer and start Windows.
- Execute Setup.exe in the proper directory on the installation CD (e.g. Win\_NT40\HS-NT if the board to install is a GPIB-HS-NT+).
- Follow the instructions of the installation program.

## **Microsoft<sup>®</sup> Windows<sup>®</sup>3.x**

### **System requirements**

- PC compatible computer
- 8 bit ISA slot (GPIB-PCW/GPIB-HS-NT+) respectively 16 bit ISA slot (GPIB-AT)
- Windows<sup>®</sup>3.1x<sup>®</sup>

### **Installation**

- Configure the jumpers and DIP switches on the board to a free I/O address, interrupt channel and DMA channel (see appendix for I/O address settings).
- Insert the board into the computer, turn it on and start Windows.
- Execute Setup.exe in the proper directory on the installation CD (e.g. Win31\HS-NT if the board to install is a GPIB-HS-NT+).
- Follow the instructions of the installation program.



# Appendix

## I/O address DIP switch settings ines GPIB-PCW/GPIB-HS-NT+/GPIB-AT

**Note:** If using the ines interface software, DIP switch 8 must always be ON.

HEX	DEC	sw 1	sw 2	sw 3	sw 4	sw 5	sw 6	sw 7
100	256	ON	ON	ON	ON	ON	OFF	ON
108	264	OFF	ON	ON	ON	ON	OFF	ON
110	272	ON	OFF	ON	ON	ON	OFF	ON
118	280	OFF	OFF	ON	ON	ON	OFF	ON
120	288	ON	ON	OFF	ON	ON	OFF	ON
128	296	OFF	ON	OFF	ON	ON	OFF	ON
130	304	ON	OFF	OFF	ON	ON	OFF	ON
138	312	OFF	OFF	OFF	ON	ON	OFF	ON
140	320	ON	ON	ON	OFF	ON	OFF	ON
148	328	OFF	ON	ON	OFF	ON	OFF	ON
150	336	ON	OFF	ON	OFF	ON	OFF	ON
158	344	OFF	OFF	ON	OFF	ON	OFF	ON
160	352	ON	ON	OFF	OFF	ON	OFF	ON
168	360	OFF	ON	OFF	OFF	ON	OFF	ON
170	368	ON	OFF	OFF	OFF	ON	OFF	ON
178	376	OFF	OFF	OFF	OFF	ON	OFF	ON
180	384	ON	ON	ON	ON	OFF	OFF	ON
188	392	OFF	ON	ON	ON	OFF	OFF	ON
190	400	ON	OFF	ON	ON	OFF	OFF	ON
198	408	OFF	OFF	ON	ON	OFF	OFF	ON
1A0	416	ON	ON	OFF	ON	OFF	OFF	ON
1A8	424	OFF	ON	OFF	ON	OFF	OFF	ON
1B0	432	ON	OFF	OFF	ON	OFF	OFF	ON
1B8	440	OFF	OFF	OFF	ON	OFF	OFF	ON
1C0	448	ON	ON	ON	OFF	OFF	OFF	ON
1C8	456	OFF	ON	ON	OFF	OFF	OFF	ON
1D0	464	ON	OFF	ON	OFF	OFF	OFF	ON
1D8	472	OFF	OFF	ON	OFF	OFF	OFF	ON
1E0	480	ON	ON	OFF	OFF	OFF	OFF	ON
1E8	488	OFF	ON	OFF	OFF	OFF	OFF	ON
1F0	496	ON	OFF	OFF	OFF	OFF	OFF	ON
1F8	504	OFF	OFF	OFF	OFF	OFF	OFF	ON

HEX	DEC	sw 1	sw 2	sw 3	sw 4	sw 5	sw 6	sw 7
200	512	ON	ON	ON	ON	ON	ON	OFF
208	520	OFF	ON	ON	ON	ON	ON	OFF
210	528	ON	OFF	ON	ON	ON	ON	OFF
218	536	OFF	OFF	ON	ON	ON	ON	OFF
220	544	ON	ON	OFF	ON	ON	ON	OFF
228	552	OFF	ON	OFF	ON	ON	ON	OFF
230	560	ON	OFF	OFF	ON	ON	ON	OFF
238	568	OFF	OFF	OFF	ON	ON	ON	OFF
240	576	ON	ON	ON	OF	ON	ON	OFF
248	584	OFF	ON	ON	OFF	ON	ON	OFF
250	592	ON	OFF	ON	OFF	ON	ON	OFF
258	600	OFF	OFF	ON	OFF	ON	ON	OFF
260	608	ON	ON	OFF	OFF	ON	ON	OFF
268	616	OFF	ON	OFF	OFF	ON	ON	OFF
270	624	ON	OFF	OFF	OFF	ON	ON	OFF
278	632	OFF	OFF	OFF	OFF	ON	ON	OFF
280	640	ON	ON	ON	ON	OFF	ON	OFF
288	648	OFF	ON	ON	ON	OFF	ON	OFF
290	656	ON	OFF	ON	ON	OFF	ON	OFF
298	664	OFF	OFF	ON	ON	OFF	ON	OFF
2A0	672	ON	ON	OFF	ON	OFF	ON	OFF
2A8	680	OFF	ON	OFF	ON	OFF	ON	OFF
2B0	688	ON	OFF	OFF	ON	OFF	ON	OFF
2B8	696	OFF	OFF	OFF	ON	OFF	ON	OFF
2C0	704	ON	ON	ON	OFF	OFF	ON	OFF
2C8	712	OFF	ON	ON	OFF	OFF	ON	OFF
2D0	720	ON	OFF	ON	OFF	OFF	ON	OFF
2D8	728	OFF	OFF	ON	OFF	OFF	ON	OFF
<b>2E0</b>	<b>736</b>	<b>ON</b>	<b>ON</b>	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>	<b>ON</b>	<b>OFF</b>
2E8	744	ON	ON	OFF	OFF	OFF	ON	OFF
2F0	752	ON	OFF	OFF	OFF	OFF	ON	OFF
2F8	760	OFF	OFF	OFF	OFF	OFF	ON	OFF
300	768	ON	ON	ON	ON	ON	OFF	OFF
308	776	OFF	ON	ON	ON	ON	OFF	OFF
310	784	ON	OFF	ON	ON	ON	OFF	OFF
318	792	OFF	OFF	ON	ON	ON	OFF	OFF
320	800	ON	ON	OFF	ON	ON	OFF	OFF
328	808	OFF	ON	OFF	ON	ON	OFF	OFF

<b>HEX</b>	<b>DEC</b>	<b>sw 1</b>	<b>sw 2</b>	<b>sw 3</b>	<b>sw 4</b>	<b>sw 5</b>	<b>sw 6</b>	<b>sw 7</b>
330	816	ON	OFF	OFF	ON	ON	OFF	OFF
338	824	OFF	OFF	OFF	ON	ON	OFF	OFF
340	832	ON	ON	ON	OFF	ON	OFF	OFF
348	840	OFF	ON	ON	OFF	ON	OFF	OFF
358	856	OFF	OFF	ON	OFF	ON	OFF	OFF
360	864	ON	ON	OFF	OFF	ON	OFF	OFF
368	872	OFF	ON	OFF	OFF	ON	OFF	OFF
370	880	ON	OFF	OFF	OFF	ON	OFF	OFF
378	888	OFF	OFF	OFF	OFF	ON	OFF	OFF
380	896	ON	ON	ON	ON	OFF	OFF	OFF
388	904	OFF	ON	ON	ON	OFF	OFF	OFF
390	912	ON	OF	ON	ON	OFF	OFF	OFF
398	920	OFF	OFF	ON	ON	OFF	OFF	OFF
3A0	928	ON	ON	OFF	ON	OFF	OFF	OFF
3A8	936	OFF	ON	OFF	ON	OFF	OFF	OFF
3B0	944	ON	OFF	OFF	ON	OFF	OFF	OFF
3B8	952	OFF	OFF	OFF	ON	OFF	OFF	OFF
3C0	960	ON	ON	ON	OFF	OFF	OFF	OFF
3C8	968	OFF	ON	ON	OFF	OFF	OFF	OFF
3D0	976	ON	OFF	ON	OFF	OFF	OFF	OFF
3D8	984	OFF	OFF	ON	OFF	OFF	OFF	OFF
3E0	992	ON	ON	OFF	OFF	OFF	OFF	OFF
3E8	1000	OFF	ON	OFF	OFF	OFF	OFF	OFF
3F0	1008	ON	OFF	OFF	OFF	OFF	OFF	OFF
3F8	1016	OFF	OFF	OFF	OFF	OFF	OFF	OFF

INES – Innovative Elektronik Systems was founded in 1985. The first product developed by INES was an IEEE488 interface system based on the GPIB controller chip TMS 9914 ANL for the IBM-PC and all compatible computers.

Since that time, the product range has been expanded to include various IEEE488 boards, now based on the GPIB controller chips NEC 7210c and the new INES-iGPIB, for different computer bus systems such as ISA/EISA, PCI, AT-96, ISA-96, CompactPCI and PCMCIA. Included is also the driver software for most well-established operating systems in test & measurement, such as DOS® and MS-Windows®, OS/2; UNIX SCO, OSF1, AIX, XENIX, Solaris, OS/9, OS/9000, pSOS, VXWORKS, LynxOS, HP-UX and Hewlett-Packard's new SICL/TULIP standard, just to name a few.

Over the last few years, we here at INES have continuously advanced and expanded the company's export business. Today, INES is represented by distributors and OEM's in the USA and Canada, in all European countries and entire Pacific Rim.

Our INES "No-Surprise-Options" policy, means that services such as technical support and driver updates, are already included in our customers original purchase price. This gives our users the opportunity to work with the latest programming languages, without the extra costs associated with obtaining extended driver functions.

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Functionality of our products is continuously extended and improved in response to market demand, as well as the individual customer. Modifications regarding the hardware are always in correspondence with the principle of backward and forward compatibility.

Recently, we presented some strategic new developments, which include

- an IEEE488.2 controller chip series,
- the GPIB-PCMCIA card,
- the High-Speed-DAQ-PCMCIA card,
- the DMM & DAQ-PCMCIA card,
- the DMM & DAQ-PCI card,
- and our new CompactPCI product range.

We like to think, that these products reflect our technological expertise in the whole area of Test & Measurement.



Innovative Elektroniksysteme GmbH  
Göttinger Chaussee 115  
D-30459 Hannover  
Germany  
Phone +49 511-9 43 81-0  
Fax +49 511-9 43 81-22  
info@inesinc.com

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