ENGLISH

Network Starter Kit PCI

User's Manual

Version 1.0

Copyright

Liability

The manufacturer accepts no liability for any explicit or implicit guarantees, including but not limited to the guarantees for saleability and suitability pertaining to a given objective with respect to the software, the enclosed product manual or manuals and written documentation and all other hardware included. The manufacturer reserves the right to modify or improve its product without prior warning or acknowledgement of any kind to third parties.

The manufacturer accepts no liability for any ensuing or accidental damages, including damages resulting in any form of business or commercial forfeiture on the strength of use of the product.

All company and product names are trademarks or registered trademarks of the relevant owners.

ENGLISH

Contents

1. Introduction

1.1 General

This manual describes the installation and operation of the Network Starter Kit PCI. No special knowledge is required for installation.

Conventions in this manual:

'Control panel'	Software term; this is usually shown on the screen.
<Return>	Key that has to be pressed on the keyboard.
[c:\setup]	A command that is to be entered using the keyboard.

Important information is given in the layout shown directly below:

Note: *Switch the computer off before opening it.*

1.2 Safety First

Please read the following instructions carefully:

1. Do not undertake any maintenance tasks on the computer while it is still running.
2. Prevent personal injury and damage to equipment by unplugging the computer from its power source.
3. The computer must be connected to a suitable, grounded power socket to avoid the risk of electrical shock and other dangers via the network.

2. Description

The Network Starter Kit PCI consists of several components that you can use to set up a network. This manual describes how to set up a network between two computers, both of which are running Microsoft Windows 95 or Windows NT 4.0.

The Network Starter Kit PCI has the following components:

- 2 x Trust PCI Ethernet network card with driver disk
- 2 x STP cable
- 1 x 5 port hub
- User's manual

3. Network Card Hardware Installation

3.1 Network Card Installation

Proceed as follows:

1. Switch off the computer and all the peripheral equipment.
2. Make a note of where all cables and cords are connected to the computer, and disconnect them.
3. Remove the cover from your PC (if necessary, refer to your PC user's manual).
4. Select an available expansion slot and remove the back plate. Make sure you place the network card in the correct type of slot. PCI slots are usually white, while ISA slots are usually black.
5. Carefully insert the Ethernet adapter in the expansion slot and press it in firmly. Secure the retaining bracket with the screws from the back plate.
6. Replace the computer cover and reconnect all cables.

3.2 Testing the Network Card

Note: *If Windows NT is installed on your computer without MS-DOS, you must have an MS-DOS starting disk to be able to use the configuration program.*

The computer must be started in safe mode so you can test the network card. Proceed as follows:

Windows 95

1. Switch on the computer.
2. Press **<F8>** until the 'Windows 95 Start Menu' appears.
3. Choose 'Safe mode command prompt only'.

Windows NT

1. Switch on the computer.
2. Choose ‘MS-DOS’ or ‘Microsoft Windows’ as operating system. If you select the latter option, make sure that only MS-DOS is started, not Windows.

Continuation of Procedure

1. Insert the driver disk of the network card in drive A.
2. Type [a:] **<enter>**.
3. Type [CD CONFIG] **<enter>**.
4. Type [EZPCI] **<enter>**. The configuration program now starts.
5. Select ‘F2. Card Diagnosis’.
6. Select ‘F1. Card Initialisation and Test’. A number of important components of the network card are now tested. Because the network cabling has not yet been connected, the ‘Media connection check’ will give an ‘ERROR’ message. However, if one of the other components gives ‘ERROR’ instead of ‘PASSED’, your system could have an address or I/O conflict, or the card could be defective. In that case, contact your dealer.
7. Return to the main menu and select ‘F10. Exit’.

4. Connecting Network Cables

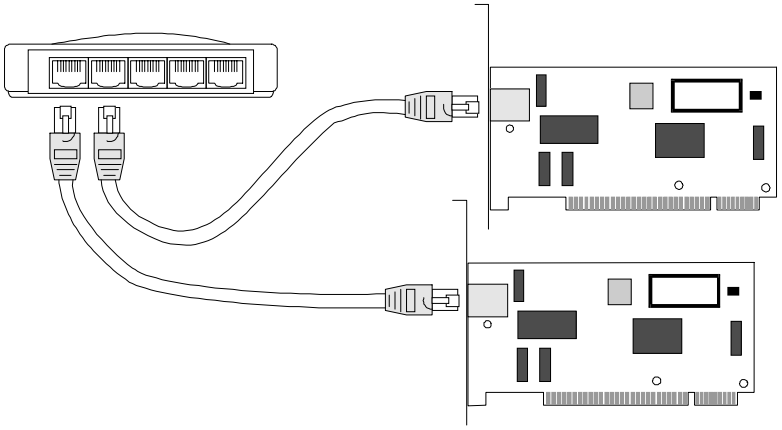


Figure 1: Connecting STP network cables

1. Switch on both computers.
2. Connect one end of one STP cable to connector 1 of the hub, and the other end to the network card.
3. Connect the other STP cable to connector 2 of the hub, and the other end to the other network card.
4. Connect the power adapter to the hub and switch it on. The LINK lights for the 1 and 2 connectors on the hub and on the network cards should now be on. If they are not on, the cables are not correctly connected, or a part is defective.

5. Network Card Software Installation

The large number of network systems available and the speed with which they change makes it impossible to provide a good written manual for the installation of all networks.

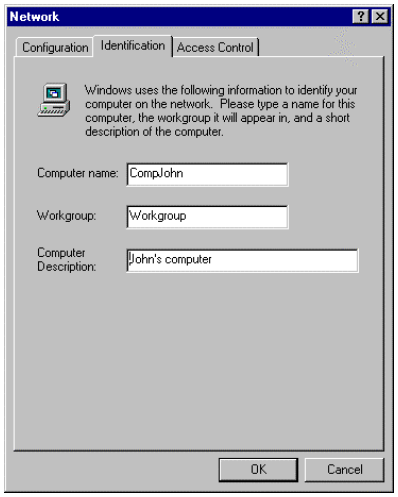
In this chapter you can read how to set up the network card under Microsoft Windows 95 and NT 4.0.

The drivers for the different network operating systems are included in separate subdirectories on the driver disk. Each directory contains a README.TXT file that describes the precise installation procedure.

5.1 Installing the Network Card under Windows 95

The Trust PCI Ethernet network card is compatible with the Plug and Play standard. The network card is therefore recognised automatically by Windows.

1. Switch the computer on and start up Windows 95.
2. Windows 95 automatically finds the network card: 'PCI Ethernet Controller'.
3. The driver for the network card is usually built in, in most versions of Windows 95. In that case the driver will be installed automatically. If the driver is not present, Windows 95 will ask for a driver. Insert the driver disk in the disk drive and select 'Driver on manufacturer's installation disk'. Type the location of the driver: [A:\WIN95]. Windows 95 then displays a window with available drivers. Select the driver and click 'OK'. The driver is installed, and Windows 95 continues to start up.



4. Once the driver is installed, Windows 95 reports that you must specify computer name and workgroup names for the computer.

5. The ‘computer name’ is the name of the computer on the network. Whenever a user requests a list of computers on the network, this is the name that is used. Use “CompJohn” or “Computer1”, for instance. Make sure that every computer in the network has a unique name; moreover, the computer name may not be the same as a workgroup name.

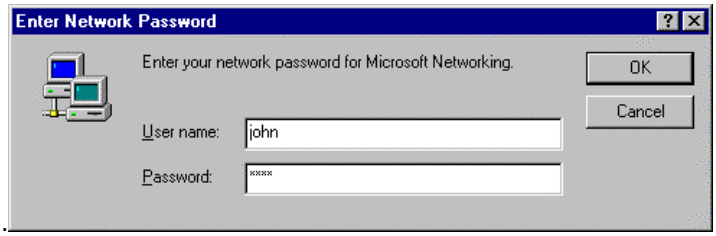
6. The ‘workgroup’ determines to which workgroup the computer is assigned. Only computers in the same workgroup can communicate with each other. So use the same name on both computers, for instance: “Workgroup”. Make sure that no computers in the network have the same name as the workgroup name.

7. The information that you can enter in ‘Computer Description’ is displayed if a user requests extra information about a computer in the network. This information is not essential, so you are not required to fill it in.

8. Press ‘OK’ to continue.

9. Windows 95 will now ask for the original Windows 95 CD-ROM. Insert the CD-ROM in the CD-ROM drive and specify where Windows 95 can find the installation files (usually D:\WIN95, assuming that the D drive is your CD-ROM drive). Windows 95 will be unable to find one file (pcind.dos). Give the following path for this: [A:\WIN95].

10. Restart the computer when Windows 95 requests this.
11. When Windows 95 has restarted, a logon window appears.

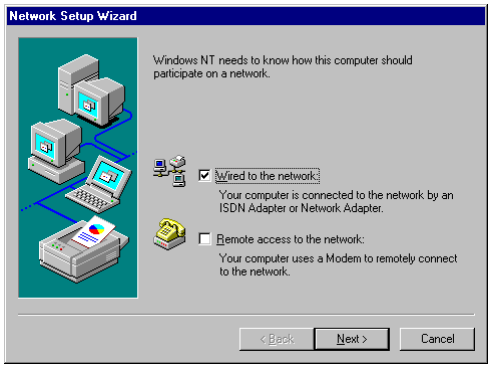


12. Type a user name, and if necessary a password, and click ‘OK’ to continue. Remember the user name and password. You need this combination in future to log on to the network whenever you start the computer.
13. Because you are a new user for Windows 95 on this computer, Windows 95 asks for confirmation of the password you just entered. Enter the password again and click ‘OK’.
14. Windows 95 starts up and you can get to work on your computer. The icon ‘Network Neighborhood’ has appeared on the desktop. Through this icon you can access other computers in the network.

5.2 Installing the Network Card under Windows NT 4.0

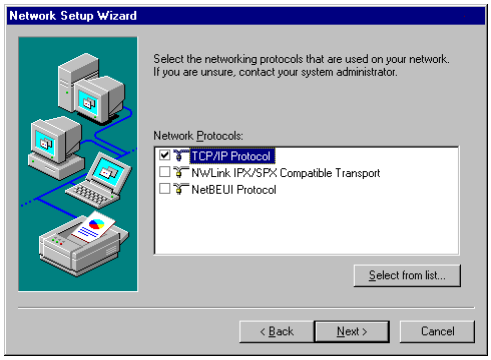
Windows NT 4.0 does not automatically recognise the network card when starting up, so you must add them manually.

1. Switch the computer on and start up Windows NT.
2. Click ‘Start’, ‘Settings’, ‘Control Panel’, and double-click on the ‘Network’ icon. In this program you create the settings for the network.



3. A message appears to inform you that the Windows NT networking has not been installed. Click ‘Yes’ to install the network support. The ‘Network Setup Wizard’ starts up.

4. Mark the check box next to ‘Wired to the network’, and click ‘Next’.



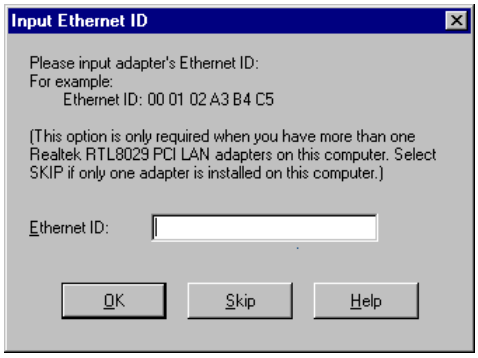
5. In this window you can specify a network card. Click ‘Start Search’. Windows will find a ‘Realtek RTL8029 PCI Adapter’. Click ‘Next’.

6. In the next window you must select a network protocol. Usually the TCP/IP check box is marked. Remove the check mark from the TCP/IP check box and place one next to NetBEUI. Click ‘Next’.

7. You do not have to change the list of ‘Network Services’. Click ‘Next’ to continue.

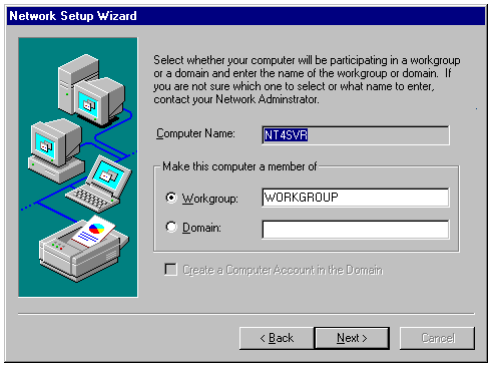
8. In the next window, click ‘Next’ to install the network components.

9. When you are asked for the Windows NT CD-ROM, insert it in the CD-ROM drive and enter the path where the Windows NT installation files are located (usually D:\I386, assuming that the D drive is your CD-ROM drive).



10. Windows then asks for an 'Ethernet ID'. Only fill this in if there is more than one network card in the computer. Click 'Skip' to continue.

11. You do not have to change the list of 'Network Bindings'. Click 'Next' to continue.



12. Click 'Next' to start the network.

13. Enter a name for the workgroup or use the default name entered. Only computers in the same workgroup can communicate with each other. So use the same name on both computers, for instance: “Workgroup”. Make sure that no computers in the network have the same computer name (this was entered when Windows NT was installed) as the workgroup name. Click ‘Next’ to continue.
14. Click ‘Finish’ to complete the installation. Then restart the computer. After the computer has been restarted, the software installation is completed.

6. Network Settings under Windows 95

This chapter describes in short the network settings under Windows 95. Procedures are, however, not described in detail. For procedures, see the Windows 95 User's manual and on-line Help.

6.1 Network Components

When you installed the network card, Windows 95 installed the following network components by default:

- Client for Microsoft networks
- Client for Netware networks
- pcind3 (the network card driver program)
- IPX/SPX compatible protocol
- NetBEUI

You can check this by clicking the Start menu, 'Settings', 'Control Panel' and double clicking on the 'Network' icon.

With these network components you can log on to a Windows (3.x/95/NT) network and on to a Novell Netware network.

Via 'Primary Network Logon' you can indicate whether you want Windows 95 to log on to a Windows network or a Novell network.

6.2 Sharing Files and Printers

In order to give other computers in the network access to the files on your computer and to your printer, you must set up several things.

6.2.1 Sharing Files

A hard disk or directory is accessible via the network through a share. A hard disk or directory must first be 'shared' in order to be accessible. Before you can make shares, you must first activate the sharing of files and printers.

You specify this in the network settings of Windows 95. Then you make a hard disk or directory shareable by indicating this in the properties of that hard disk or directory.

To access a shared hard disk or directory, you use the 'Network Neighborhood' icon on the desktop. You can assign a drive letter to a share, thus making it directly accessible from every application. You can set this up in the properties of the share.

6.2.2 Sharing Printers

Sharing printers occurs in a similar fashion as sharing files. In the printer properties you indicate that the printer is shared. Only then is the printer available on the network.

Everyone who wants to use the shared printer must install the driver of that printer. The user must specify that it is a network printer and not a local printer.

7. Network Settings under Windows NT

This chapter describes in short the network settings under Windows NT. Procedures are, however, not described in detail. For procedures, see the Windows NT User's manual.

7.1 Network Components

All network settings under Windows NT are made through the 'Network' icon in the Control Panel under 'Settings' in the Start menu.

With the installed protocol NetBEUI you can participate in a Windows network. If you want to be part of a Novell Netware network, you must install the 'NWLink IPX/SPX Compatible Transport' protocol and also the Service 'Client Service for Netware'.

The default installed parts are in most cases sufficient. If you want to add parts, see the Windows NT user manual for more information.

To manage users who are using files and/or printers on your computer, you can use the 'User manager' program. You can find this program under 'Administrative tools' in the Start menu.

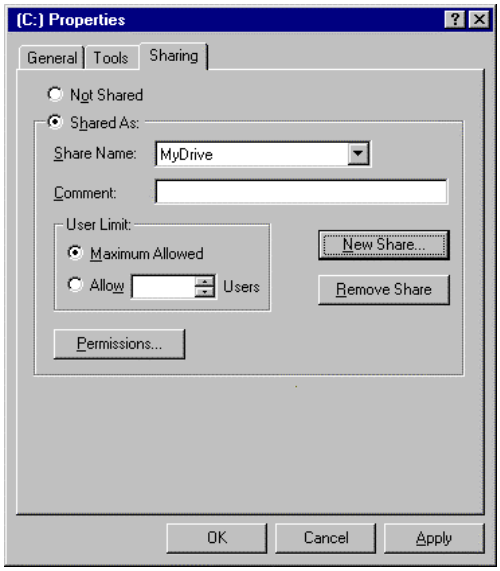
7.2 Sharing Files and Printers

In order to give other computers in the network access to the files on your computer and to your printer, you must set up several things.

7.2.1 Sharing Files

A hard disk or directory is accessible via the network through a share. This hard disk or directory must first be 'shared' in order to be accessible. You indicate this in the properties of the hard disk or directory.

To access a shared hard disk or directory, you use the 'Network Neighborhood' icon on the desktop. You can assign a drive letter to a share, thus making it directly accessible from every application. You can set this up in the properties of the share.



7.2.2 Sharing Printers

Sharing printers occurs in a similar fashion as sharing files. In the printer properties you specify that the printer is shared. Only then is the printer available on the network.

Everyone who wants to use the shared printer must install the driver of that printer. The user must specify that it is a network printer and not a local printer.

8. Troubleshooting

Problem	Possible solution
When I test the network card with EZPCI I keep on getting the message 'ERROR'.	• Check whether the I/O address and the IRQ of the network card are being used by another card. • If the 'ERROR' message appears in the 'Media connection check', the network cable is not connected. Connect the cable and try again. • In all other instances, the network card is defective. Contact your dealer.
The 'Advanced Network Test' does not work.	• Make sure that one computer is set up as a master and one as a slave. • Check whether the network cabling is (correctly) connected. • Check whether the terminators are (correctly) connected.
There is no 'Network Neighborhood' icon on my desktop.	• Install the network card driver and make sure that the default network parts are present.
I can see other computers on the network, but I can't access them.	• Check whether the hard disk is shared. • Switch off the computer and try again after about 20 seconds.

Problem	Possible solution
I cannot see any other computers on the network.	• Check whether your workgroup name corresponds with the other computers on the network. • Check that your computer name is not the same as a workgroup name. • Check whether the IRQ and the I/O address of the network card are correct, and do not conflict with another card in the system. • Check whether the network card driver is correctly installed. Click Start, 'Settings', 'Control Panel' and then the 'System' icon. Click on the 'Device Manager' tabbed page. You should not see a yellow exclamation mark or a red cross in front of the network card. If you do, install the driver again or test the network card through EZPCI.

ENGLISH

Appendix A: 5 Port Hub User's Manual

LED indicators

PWR/COL	Green	Hub is activated
	Amber	Network collision occurred (collision of data packets)
LNK/ACT/PAR	Constantly green	Good network connection
	Flashing green	Data is being sent
	Amber	Network error has occurred

Daisy-chaining

To make a larger network, you can attach a second hub to your hub (this is called daisy-chaining). You must set connector 5 of the hub in daisy-chain mode to do this.

Switch settings:

- 5x connector 5 is a 'normal' connector to which you can connect a network card.
- 5= connector 5 is a daisy-chain connector. To complete the daisy-chaining, connect an STP cable to connector 5 of this hub and to a 'normal' connector on the next hub.

Note: *Through daisy-chaining you can connect at the most 4 hubs to each other.*

Appendix B: Technical Specifications

Cable for RJ-45 connector for 10BASE-T network

Cable type	STP, 2 twisted pairs of 22/24/26 AWG
Twists per foot	2 to 3 (at the least)
Nominal impedance	100 Ω
Maximum cable length	100m
Maximum weakening	8 to 10 dB per 100m at 10MHz

Trust PCI Ethernet

IEEE 802.3 standard	10BASE-T
Circuit connector	RJ-45
Bus characteristics	32-bits; PCI local bus specification 2.0
I/O address	BIOS assigns this to a free I/O address block
IRQ line	INTA; BIOS assigns this to a free IRQ number
RAM buffer	16 kB
boot ROM size	8 kB, 16 kB and 32 kB
Dimensions	5.20” x 3.27”
Power usage	430mA at 5V
Operating temperature	0 to 55 °C
Environmental humidity	10 to 90% non-condensed

5 port hub

IEEE 802.3 standarder:	10Base-T
Ledningskonnektor	RJ-45
Strømkonnektor	DC jack-stik
Vægt	160 gram