Aztech
TOTAL POWER PERFORMANCE

DSL TURBO 900 Package

Version 1.0

Ethernet ADSL *High Speed* Modem
with **Network Card**
User's Manual

(Configured for Broadband Service)

Product warranty does not apply to damage caused by lightning, power surges or wrong voltage usage.

Contents

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Chapter 1

Introducing DSL TURBO 900 Package

This section gives a brief introduction of DSL TURBO 900 features and its specifications.

1.1   Overview

Congratulations on your purchase of DSL TURBO 900 package!

DSL TURBO 900 package comes with a *NC1100 10base-T Network Interface Card (NC1100 NetCard)* and a *DSL TURBO 900 ADSL Bridge Modem (DSL TURBO 900)*.

NC1100 NetCard is a 10base-T PCI Network Card, offering 32-bit data path that highly improves data transfer rate. The support of the full duplex function allows simultaneous transmission and reception on the twisted-pair link to a full duplex Ethernet switching hub. This feature not only increases the channel bandwidth from 10 to 20 Mbps, but also avoids degrading performance due to channel contention characteristic of the Ethernet Media Access Control CSMA/CD protocol.

DSL TURBO 900 uses the latest communication technology, ADSL (Asymmetric Digital Subscriber Line) that offers faster and uninterrupted Internet access. It allows use of real-time, interactive multimedia and broadcast-quality for services such as video-on-demand, collaborative computing and distance learning.

DSL TURBO 900 is capable of data rate in both Full-Rate and G.Lite, with **Full Rate transmission at up to 8 Mbps downstream, 640 Kbps upstream[1]** and **G.Lite transmission at up to 1.5 Mbps downstream, 512 Kbps upstream[1]**. Major features include the following:

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[1]   The actual downstream and upstream rates will depend on the service package offered by your ADSL Service Provider.

ADSL Protocols Support

To ensure the broadest customer reach, DSL TURBO 900 features multiple data encapsulation formats for DSL transport over ATM PVCs, including the widely supported ADSL protocol **RFC 1483 (Ethernet Over ATM)**.

Compatibility (Interoperability)

Multimode ADSL support: ANSI T1.143 Issue 2, ITU-T G.992.1 (G.dmt) and G.992.2 (G.Lite). DSL TURBO 900 uses discrete Multi-tone (DMT) line encoding scheme which is also used by major ADSL equipment manufacturers, thus further guarantees interoperability with network service providers worldwide.

1.2   DSL TURBO 900 Features

1.2.1   Front View

ADSL Transmits LED (TX)
Lights up when the ADSL Line is transmitting data.

ADSL Status LED (LINK)
Lights up when the ADSL Line is established.

ADSL Receive LED (RX)
Lights up when the ADSL Line is receiving data.

Ethernet Activity LED (ACT)
Lights up when the Ethernet is transmitting/receiving data.

Power LED (PWR)
Lights up when Power switch is pressed **ON**.

Ethernet Link LED (LINK)
Lights up when the Ethernet link is established.

1.2.2   Rear View

Power Connector (DC IN)
To connect to your Mains supply

Power Switch (PWR)
To power on or off the modem.
I - indicates ON position
0 - indicates OFF position

Ethernet Jack (ETHERNET)
10Base-T Ethernet jack (RJ-45) to connect
to your Ethernet card or Hub.

Serial Port (SERIAL)
9-pin serial port for local network management

Line Jack (LINE)
Telephone jack (RJ-11) to connect to the
ADSL Line

Phone Jack[2] (TEL)
Telephone jack (RJ-11) to connect to the
Telephone Handset

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[2]   This optional connection provides easy access to your Telephone set while working near the
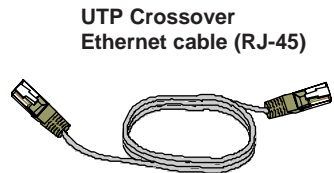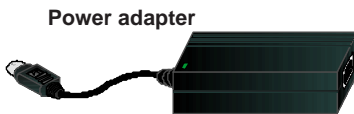modem.

Chapter

2

Before You Begin

This chapter contains information that you need to know before setting up your DSL TURBO 900 package. It is important that you go through them.

2.1   DSL TURBO 900 Package

Ensure that you have the following items in your package. For any missing item, please contact your dealer immediately.

DSL TURBO 900

NC1100 NetCard

DSL TURBO 900 Installation CD

DSL TURBO 900 User's Manual

Power adapter

UTP Crossover Ethernet cable (RJ-45)

Power cable

Telephone cable (RJ-11)
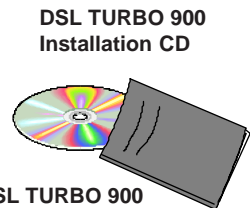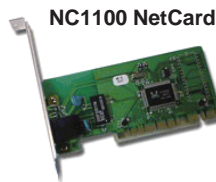
2.2 Minimum System Requirements [3]

Make sure that your computer meets the following requirements before you start your installation.

- Pentium MMX 233MHz or equivalent

- 30MB free hard disk space [4] for system files and modem driver (Windows CD-ROM may be required during installation, depending on your system configurations.)

- Operating System: Windows® 98 / 98 Second Edition / Me

2.3 Operating Environment

For optimum performance, ensure that DSL TURBO 900 operates within the following operating environment.

2.3.1 Temperature

Operating   :   10° to 45° Celsius
                    50° to 113° Fahrenheit

Non-Operating   :   -25° to 70° Celsius
                    -13° to 158° Fahrenheit

2.3.2 Humidity

Operating   :   30% to 80% Relative Humidity (Non-Condensing)
Non-Operating   :   10% to 95% Relative Humidity (Non-Condensing)

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[3] The information listed are minimum system requirements needed to install your ADSL modem. Please check and ensure that your system also meets the minimum system requirements set by the ISP you subscribed to. Your system should meet the higher requirements of the two.

[4] Additional free hard disk space may be required for your Internet Service Provider (ISP) installation program and browser installation. Please check with your ISP.

2.4 Safety Precaution

2.4.1 For NC1100 NetCard

- Do not remove your card from its protective bag until you are ready to install it.

- Always try to hold your card by its edges. Avoid touching any electronic components on your card.

- Static electricity can cause permanent damage to your card. To prevent such a damage, you must ground yourself during the installation:

   » Use a grounding strap - a coiled wire with a clip at one end and an elastic strap at the other. Wear the strap around your wrist and attach the clip to any non-painted metal surface of your computer chassis.

   » If you do not have a grounding strap, touch any non-painted surface of your computer chassis before you begin installation, and again every minute or so until the installation is completed.

2.4.2 For DSL TURBO 900

- Switch off the modem and adapter when the modem is not in use.

- During times of lightning/thunderstorms, do not use the modem.

- Keep the modem away from water and direct sunlight.

- Do not introduce any foreign material to the modem through the ventilation slits (e.g. by dropping foreign items or poking into the slits).

2.5 Installation Notes

- The graphics and screens illustrations shown in this easy start may differ from what you see in your system, but the steps still apply.

- A Philips screwdriver is required for installation of your Network Card.

- The documentation for your computer should come in handy during the Network Card installation. Have it ready by your side.

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Chapter
3

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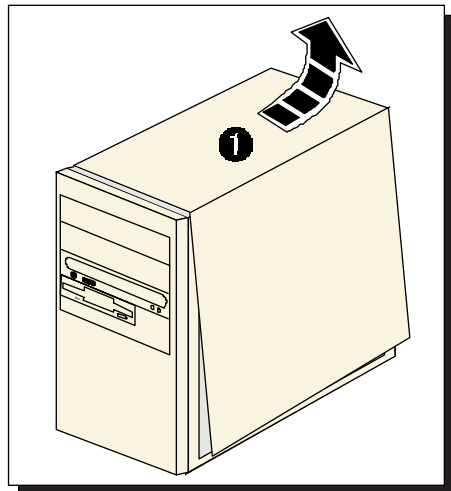
Setting Up
NC1100 NetCard

This chapter contains information on installing your NetCard and its drivers. Verification steps are also included to ensure correct installation.

Power off your computer and any connected devices before installing your card!

3.1   Installing NC1100 NetCard

❶ Remove the cover of your computer.
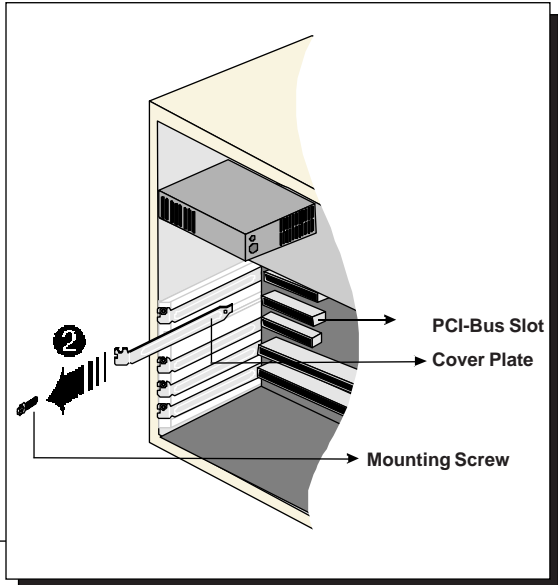
❷ Locate an available PCI-Bus slot and remove its cover plate, if required.

Keep the mounting screw to secure your card later.

PCI-Bus Slot

Cover Plate
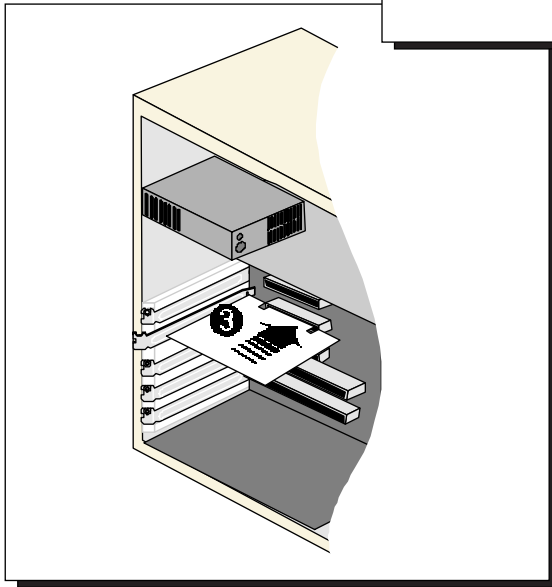
Mounting Screw

❸ Align your card with the PCI-Bus slot and firmly push it into the slot. If the card does not slide in, do not force it. Make sure that the card is aligned properly and try again.

❹ Secure your card to your computer chassis with the mounting screw.
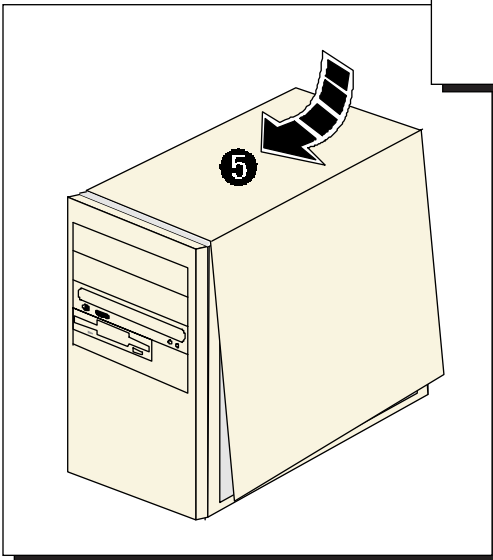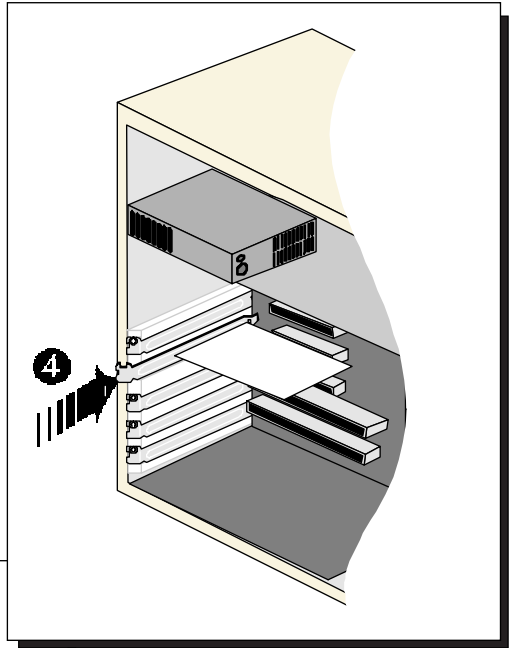
❺ Replace the cover of your computer.

This completes the NC1100 NetCard installation. Please proceed to the next section to install your NC1100 NetCard driver.

3.2 Installing NC1100 NetCard Driver

This section includes the driver installation for *Windows® Me, 98 Second Edition, 98, 95 OSR2*, *95 OSR1*, *95* and *Windows® 2000*.

3.2.1 Installing NC1100 NetCard Driver - For Windows® Me

1. Power on your computer to start Windows. Windows will auto-detect and install for you the NetCard driver that is pre-loaded in Windows® 2000.

This completes the driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying Your NC1100 NetCard*.

3.2.2 Installing NC1100 NetCard Driver - For Windows® 98 Second Edition

1. Power on your computer to start Windows. Windows will auto-detect your NetCard.

2. You will be prompted for your **Windows 98 Second Edition CD-ROM**. Place your **Windows 98 Second Edition CD-ROM** in your CD-ROM drive and click **OK**.

3. Windows will start copying the required files. Allow some time for Windows to complete the installation.

    Upon completion, you will be prompted to restart your computer. Click **Yes**.

This completes the driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying Your NC1100 NetCard*.

> **If you encounter any problems with the pre-installed driver, or if you need to perform any update of driver to your NC1100 NetCard, carry out the following steps:**

    i. From your Windows desktop, right-click on **My Computer**. Select **Properties**. Click **Device Manager** tab.

ii.   Double-click on the **Network Adapters** device. Double-click on the listed '**Realtek RTL8029(AS) PCI Ethernet NIC** [5]' and select the **Driver** tab. Click **Update Driver...** button.

iii.   You will be prompted with **Update Device Driver Wizard**. Click **Next**.

iv.   Select '**Search for the best driver for your device. (Recommended)**.' and click **Next**.

v.   Place your **DSL TURBO 900 Installation CD** in your CD-ROM drive. Select the option '**Specify a Location**' and click **Next**.
        In the text box, type '**D:\win98**' for the location of your driver and click **Next**. (Assuming your CD-ROM Drive letter is D. Else, substitute with the correct letter.)

vi.   Click **Next** again to proceed with the specified driver.

vii.   Click **Finish** to complete the driver installation.

This completes the upgrade / driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying NC1100 NetCard*.

3.2.3   Installing NC1100 NetCard Driver - For Windows® 98

1. Power on your computer to start Windows. Windows will auto-detect your NetCard.

2. You will be prompted for your **Windows 98 CD-ROM**. Place your **Windows 98 CD-ROM** in your CD-ROM drive and click **OK**.

3. Windows will start copying the required files. Allow some time for Windows to complete the installation.

    Upon completion, you will be prompted to restart your computer. Click **Yes**.

This completes the driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying Your NC1100 NetCard*.

> **If you encounter any problems with the pre-installed driver, or if you need to perform any update of driver to your NC1100 NetCard, carry out the following steps:**

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[5] Exact model name/description shown on your system may differ slightly.

i.   From your Windows desktop, right-click on **My Computer**. Select **Properties**. Click **Device Manager** tab.

ii.   Double-click on the **Network Adapters** device. Double-click on the listed '**Realtek RTL8029(AS) PCI Ethernet NIC** [5]' and select the **Driver** tab. Click **Update Driver...** button.

iii. You will be prompted with **Update Device Driver Wizard**. Click **Next**.

iv.   Select '**Search for the best driver for your device. (Recommended).**' and click **Next**.

v.   Place your **DSL TURBO 900 Installation CD** in your CD-ROM drive. Select the option '**Specify a Location**' and click **Next**.

In the text box, type '**D:\win98**' for the location of your driver and click **Next**.

(Assuming your CD-ROM Drive letter is D. Else, substitute with the correct letter.)

vi.   Click **Next** again to proceed with the specified driver.

vii. Click **Finish** to complete the driver installation.

This completes the upgrade / driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying NC1100 NetCard*.

3.2.4   Installing NC1100 NetCard Driver - For Windows® 95 OSR2

1.   Power on your computer to start Windows. Windows will auto-detect your NetCard and an **Update Device Driver Wizard** will appear.

> For Windows® 9x, you need to have ***Microsoft Dial-Up Networking, version 1.3*** installed in your system. If you already *have* it installed in your system, please proceed from **step 2**. Else, from the **Update Device Driver Wizard**, click **Cancel**.

i.   Download ***Microsoft Dial-Up Networking version 1.3*** program from the Microsoft's website: **http://www.microsoft.com**.

ii.   In the Microsoft **Search** path, enter '**Msdun13.exe**'. From the results listed, locate and select '***MSDUN13.EXE: Dial-Up Networking 1.3 Upgrade***'.

iii. Click ***Msdun13.exe*** to download the file to your harddisk. *[file size is about 2.4MBytes]*
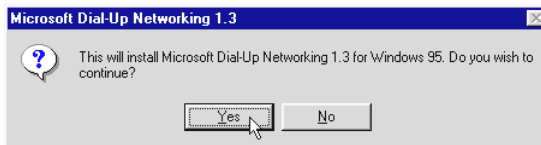
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[5] Exact model name/description shown on your system may differ slightly.

iv. From your Windows taskbar, click **Start** > **Run....** Browse to the directory where you have downloaded ***Msdun13.exe***. Select the file and click **OK.**
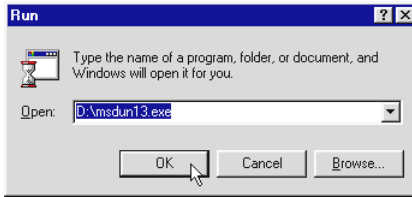
Click **OK** again.

v. Click **Yes** to proceed.

vi. At the **Microsoft TCP/IP Networking** prompt, click **OK.**

vii. When prompted to restart, click **OK.**

2. Place your **DSL TURBO 900 Installation CD** in your CD-ROM Drive and click **Next**.

3. Click **Other Locations...** to specify your driver location.

4. In the text box, type '**D:\Win95'** and click **OK.**

(Assuming your CD-ROM drive is D. Else, substitute with the correct drive letter.)
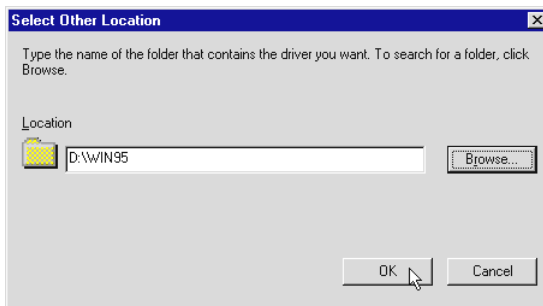
5.   Windows will prompt that it has located your driver. Click **Finish** to proceed.

6.   At the prompt for computer and network names, click **OK**.

7.   Enter your computer name, workgroup and description. Click **Close**.

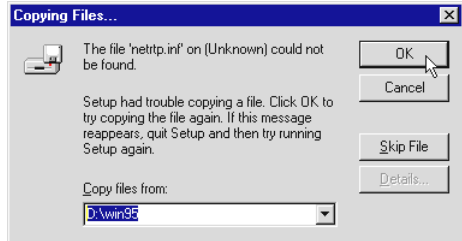8.   At the **Copying Files...** prompt, type in '**D:\Win95**' in the text box and click **OK**.

    (Assuming your CD-ROM drive is D. Else, substitute with the correct drive letter.)

9.   During the installation process, you may be prompted for your **Windows 95 CD-ROM/diskettes** for some files.

    Replace the **DSL TURBO 900 Installation CD** in your CD-ROM drive with your **Windows 95 CD-ROM** and click **OK**.

    (Or if your Windows 95 Installation comes in diskettes, insert the prompted diskette number in your floppy disk drive and click **OK**.)

10.   Upon installation completes, Windows will prompt you to restart your system. Click **Yes.**

This completes the driver installation for your NC1100 NetCard. Please proceed to section **3.3 - *Verifying NC1100 NetCard***.

3.2.5 Installing NC1100 NetCard Driver - For Windows 95 OSR1 / Windows 95

1. Power on your computer to start Windows. Windows will auto-detect your NetCard and a New Hardware Found window will appear.

> For Windows® 9x, you need to have **Microsoft Dial-Up Networking, version 1.3** installed in your system. If you already have it installed in your system, please proceed from **step 2**. Else, from the **Update Device Driver Wizard**, click **Cancel**.

i.   Download *Microsoft Dial-Up Networking version 1.3* program from the Microsoft's website: http://www.microsoft.com.

ii. In the Microsoft Search path, enter '**Msdun13.exe**'. From the results listed, locate and select '*MSDUN13.EXE: Dial-Up Networking 1.3 Upgrade*'.

iii. Click *Msdun13.exe* to download the file to your harddisk.
     [file size is about 2.4MBytes]

iv. From your Windows taskbar, click Start > Run.... Browse to the directory where you have downloaded *Msdun13.exe*. Select the file and click OK.
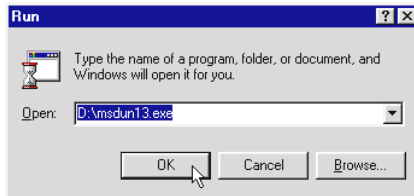
Click OK again.

v.   Click Yes to proceed.
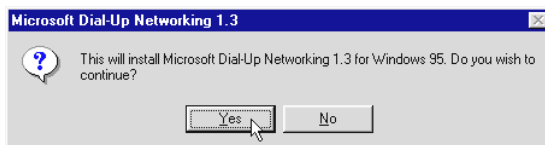
vi. At the Microsoft TCP/IP Networking prompt, click OK.

vii. When prompted to restart, click OK.

2. Select the option 'Driver from disk provided by hardware manufacturer'. Place your DSL TURBO 900 Installation CD in your CD-ROM Drive and click OK.
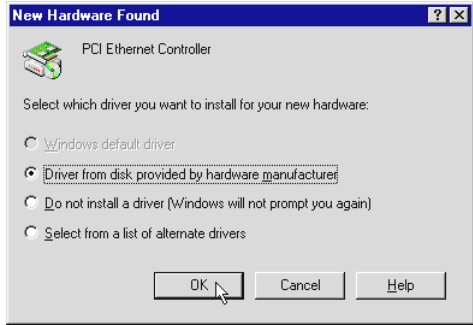
3. In the text box, type 'D:\Win95' for the location of your driver and click OK.

   (Assuming your CD-ROM drive is D. Else, substitute with the correct drive letter.)
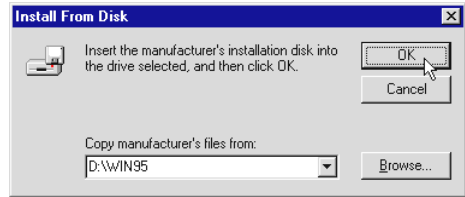
4. At the prompt for computer and network names, click OK.

5. Enter your computer name, workgroup and description. Click Close.

6. At the Copying Files... prompt, type in 'D:\Win95' in the text box and click OK.

   (Assuming your CD-ROM drive is D. Else, substitute with the correct drive letter.)
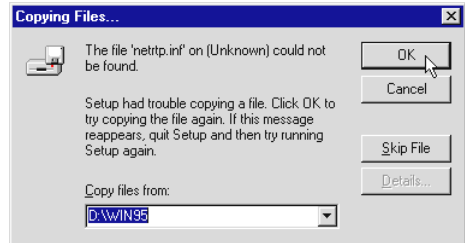
7. During the installation process, you may be prompted for your Windows 95 CD-ROM/diskettes for some files.

   Replace the DSL TURBO 900 Installation CD in your CD-ROM drive with your Windows 95 CD-ROM and click OK.

   (Or if your Windows 95 Installation comes in diskettes, insert the prompted diskette number in your floppy disk drive and click OK.)

8. Windows will again prompt for your **Windows 95 CD-ROM/diskettes**. Ensure that the indicated path to your Windows 95 CD-ROM/diskettes is correct and click OK.

9. Upon installation completes, Windows will prompt you to restart your system. Click Yes.

This completes the driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying NC1100 NetCard*.

3.2.6   Installing NC1100 NetCard Driver - For Windows® 2000

1. Power on your computer to start Windows. Windows will auto-detect and install for you the NetCard driver that is pre-loaded in Windows® 2000.

This completes the driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying Your NC1100 NetCard*.

> **If you encounter any problems with the pre-installed driver, or if you need to perform any update of driver to your NC1100 NetCard, carry out the following steps:**

    i.   From your Windows desktop, right-click on My Computer. Select Properties. Click Hardware tab and click Device Manager... .

    ii.   Double-click on the Network Adapters device. Double-click on the listed 'Realtek RTL8029(AS) PCI Ethernet NIC[5]' and select the Driver tab. Click Update Driver... button.

    iii.   From the Upgrade Device Driver Wizard, click Next.

    iv.   Select 'Search for a suitable driver for my device (recommended)' and click Next.

    v.   Place your **DSL TURBO 900 Installation CD** in your CD-ROM drive. Select the option 'Specify a Location' and click Next.

    vi.   In the text box, type '**D:\Win2000**' for the location of your driver and click Next.

         (Assuming your CD-ROM Drive letter is D. Else, substitute with the correct letter.)

    vii.   Select the option 'Install one of the other drivers' and click Next.

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[5] Exact model name/description shown on your system may differ slightly.

8.   You will be prompted which driver to install. Select 'Realtek RTL8029(AS) PCI Ethernet NIC [5]' with Provider and Manufacturer from Realtek and click Next.

9.   Click Finish.

This completes the upgrade / driver installation for your NC1100 NetCard. Please proceed to section *3.3 - Verifying NC1100 NetCard*.

[5] Exact model name/description shown on your system may differ slightly.

3.3   Verifying NC1100 NetCard

This section contains information on how to verify your NC1100 NetCard in *Windows® Me*, *98 Second Edition*, *98*, *95 OSR2*, *95 OSR1, 95 and Windows® 2000.*

3.3.1   Verifying Your NC1100 NetCard - For Windows® Me, 98 Second Edition, 98, 95 OSR2, 95OSR1, 95

1.   From your Windows desktop, right-click **Network Neighborhood** icon. Select **Properties**.

2.   Select the **Device Manager** tab. Double-click on the **Network adapters**.

You should see a description similar to '**Realtek RTL8029(AS) PCI Ethernet NIC⁵**' listed. This means that your NC1100 NetCard driver is successfully installed.

(If there is a yellow exclamation mark on the network device, select the device, click on **Remove** and re-install your NC1100 NetCard driver.)
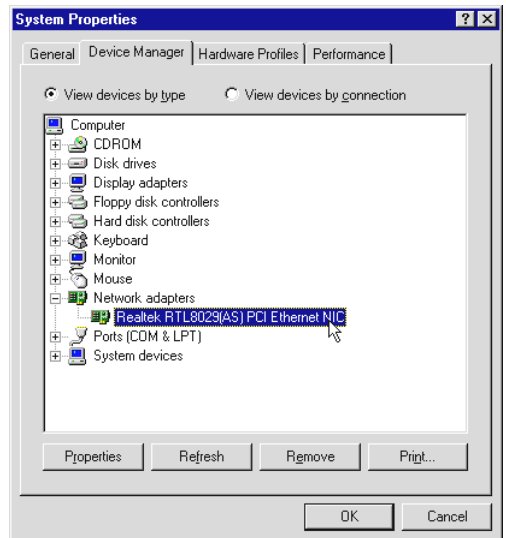
3.   For *Windows® Me, 98 Second Edition and 98 users*, please proceed to **section 3.3.3** on *LEDs description* for NC1100 NetCard.

For *Windows® 95 OSR2, 95 OSR1 and 95 users*, proceed with the following to check if **TCP/IP** is installed in your system.

i.   From your Windows desktop, right-click on **Network Neighborhood** icon. Select **Properties**.

ii. From the **Configuration** tab, check for **TCP/IP** listed (as shown on your right).

If **TCP/IP** is listed, please proceed to **section 3.3.3** on **LEDs description** for NC1100 NetCard.

If your system is not installed with TCP/IP, please carry out the following instructions:

iii. From step 3(ii), select **Realtek RTL8029(AS) PCI Ethernet NIC** [5] and click **Add**.

iv.   At the **Select Network Component Type** prompt, select **Protocol** and click **Add...**.

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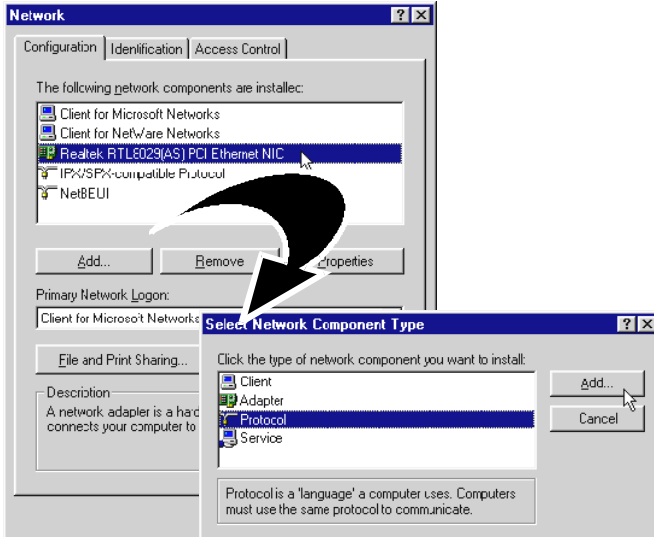
[5] Exact model name/description shown on your system may differ slightly.

v.   At the **Manufacturers** field, select **Microsoft**. At the **Network Protocols** field, select **TCP/IP**. Click **OK**.
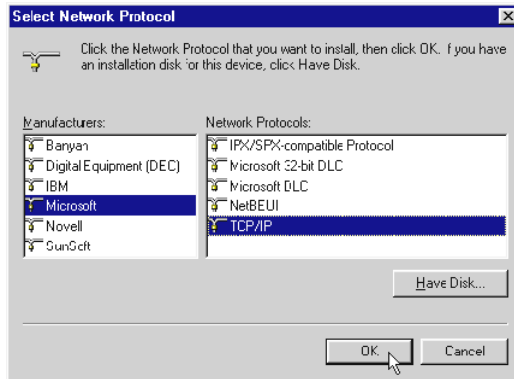
vi.   You will be prompted for your **Windows 95 CD-ROM/diskettes**. Insert your Windows 95 CD-ROM/diskettes in your CD-ROM Drive/Floppy Disk Drive and click **OK**.

Follow any on-line instructions. If you are prompted with DHCP prompt, asking if you want to see future DHCP messages, click **No**.

Upon installation completes, please proceed to **section 3.3.3** on **LEDs description** for NC1100 NetCard.

3.3.2   Verifying Your NC1100 NetCard - For Windows® 2000

1.   From your Windows desktop, right-click **My Computer** icon. Select **Properties**.

2.   Select the **Hardware** tab and click **Device Manager** button.

Double-click on the **Network adapters**. You should see a description similar to '**Realtek RTL8029 PCI Ethernet NIC** [5]' listed. This means that your NC1100 NetCard driver is successfully installed.

(If there is a yellow exclamation mark on the network device, select the device, click on **Remove** and re-install your NC1100 NetCard driver.)
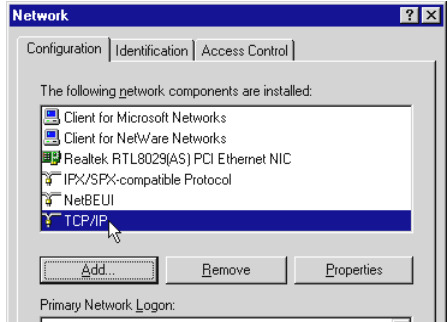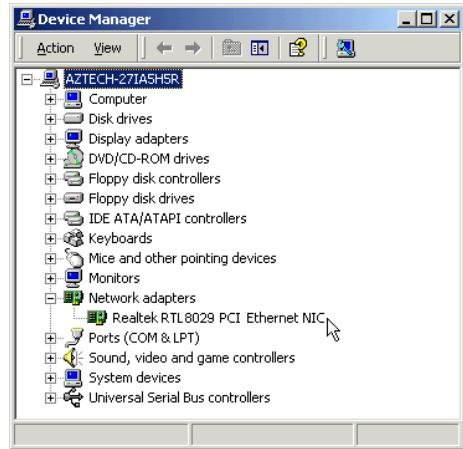
Please proceed to *section 3.3.3* on *LEDs description* for NC1100 NetCard.

3.3.3   LEDs Description

The following table explains the LEDs state for your NC1100 NetCard.

LEDs	State	Description
Link	ON OFF	the link is good there is no link
Activity	ON OFF	transmission of data is in progress no transmission of data

This completes the verification for your NC1100 NetCard. Please proceed to the next chapter on *Setting Up DSL TURBO 900*.

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[5]   Exact model name/description shown on your system may differ slightly.

Setting Up
DSL TURBO 900

*This chapter contains information on setting up DSL TURBO 900.
Verification steps are also included to ensure correct connections.*

4.1   Setup Overview

The following gives an overview of the DSL TURBO 900 setup.
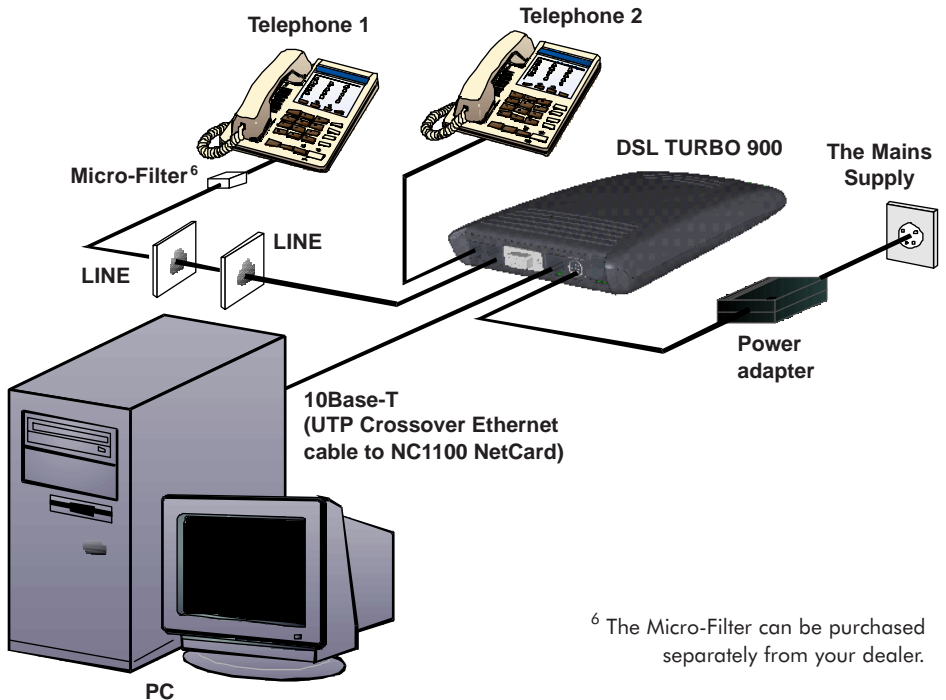
[6] The Micro-Filter can be purchased
separately from your dealer.

4.2   Connecting DSL TURBO 900

Please carry out the following steps to connect your modem to your computer.

> **Power off your computer and any connected devices before installing your modem!**

4.2.1   Connecting the UTP Ethernet Cable

Connect one end of the *Ethernet cable* to the *ETHERNET* jack on DSL TURBO 900 and the other end to the *Ethernet* jack on your NC1100 NetCard.

NC1100 NetCard

ETHERNET

Rear view of a PC

Rear view of DSL TURBO 900

UTP Crossover Ethernet cable
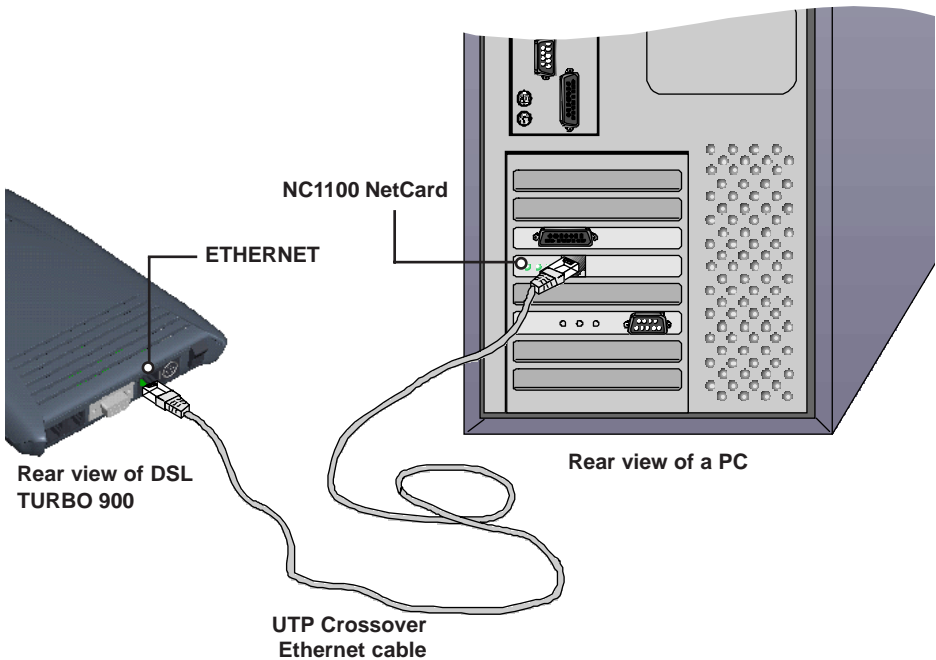
4.2.2   Connecting the Telephone cable (RJ-11)

Connect one end of the *telephone cable* to the *LINE* jack on DSL TURBO 900 and the other end to your *Telephone wall socket*.

LINE

Telephone wall socket

Telephone cable

Rear view of DSL TURBO 900
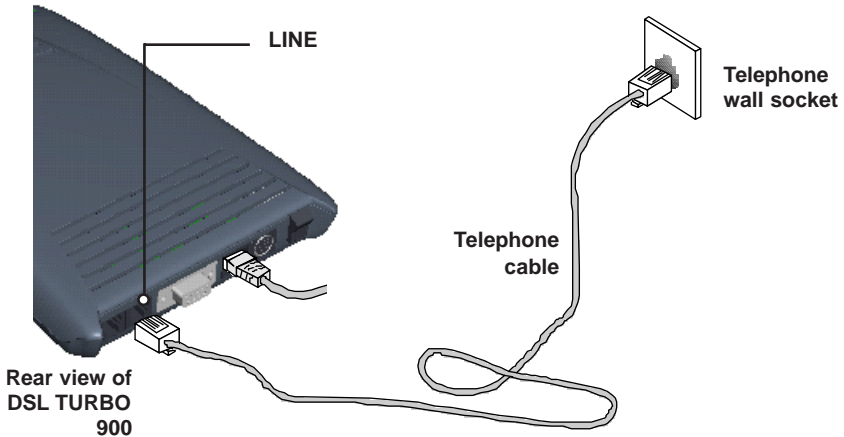
4.2.3   Connecting to a Telephone Set

*This connection is optional. The **TEL** jack provides easy access to your Telephone set while working near DSL TURBO 900.*

Connect the *Phone cable* to the *TEL* jack on DSL TURBO 900.

Telephone set

Rear view of DSL TURBO 900

TEL

Phone cable
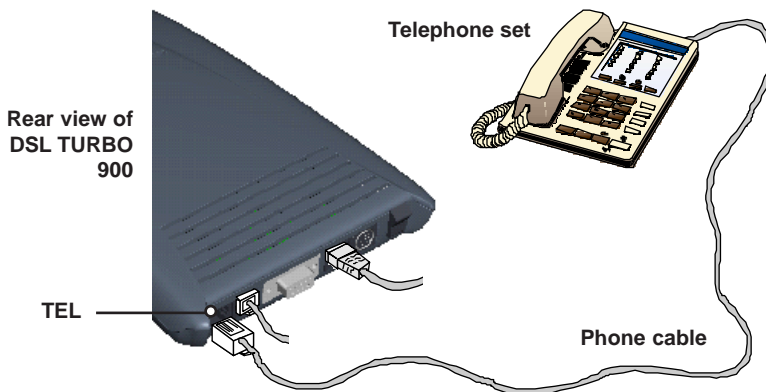
4.2.4 Connecting to The Mains

Connect the connector of the *Power adapter* to the *DC IN* on DSL TURBO 900.

Attach the jack of the *Power cable* to the *Power adapter* as shown, and the Power plug to *the Power Mains*.

DC IN

The Mains

Power adapter

Power cable

Rear view of DSL TURBO 900
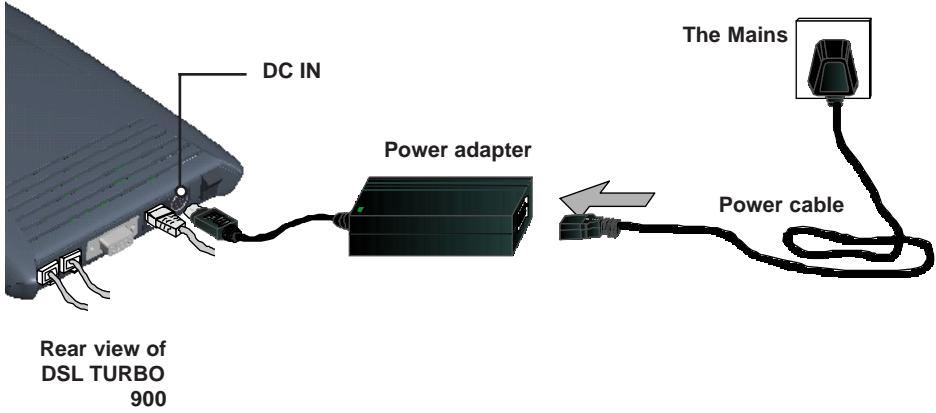
4.3   Verifying Your Connections

To verify the connections that you have done,

Power on DSL TURBO 900:
i)   On the Switch at The Mains, connected to the power adapter.
ii)   On the Switch at the rear of DSL TURBO 900.

Observe the following LEDs on your modem:

4.3.1   Power LED (PWR)

You should see this
Power LED lights up.

If your **Power LED** does not
light up, check that:

i)   the   **Mains Supply**   is
     powered on and the **Power
     switch** on the modem is at
     '**I**' position.

ii) the connection is carried
     out as described in *section
     4.2.4 - Connecting to The
     Mains*.

4.3.2   Ethernet Link LED (LINK)
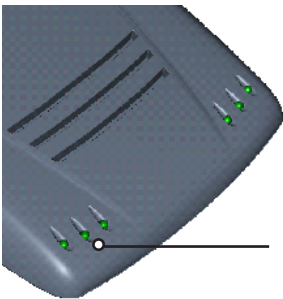
You should see this
Ethernet Link LED
lights up.

If your **Ethernet Link LED**
does not light up, check that:

i)   the connection is carried
     out as described in *section
     4.2.1 - Connecting the UTP
     Ethernet Cable*.

4.3.3   ADSL Status LED (LINK)
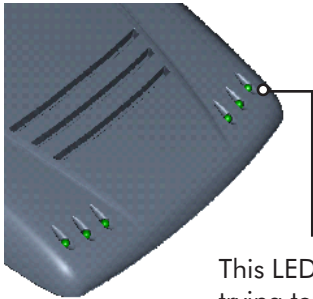
This LED will start blinking, trying to establish a connection. Once the connection is established, this LED will remain lit.

If your **ADSL Status LED** does not light up, check that:

i)   the **Mains Supply** is powered on and the **Power switch** on the modem is at '**I**' position.

ii) the connection is carried out as described in *section 4.2.2 - Connecting the Telephone cable (RJ-11)*.

If the mentioned 3 LEDs all light up, it means that your modem are successfully connected.

4.3.4   Phone connection

If you have connected a *Telephone set* to your modem, pick up the handset of the Telephone. You should hear the normal dial-tone.

(If you do not hear the normal dial-tone of a telephone, check that the connection is done as described in *section 4.2.3 - Connecting to a Telephone Set*. If your connections are correct, it may be due to a faulty phone cable that you are using.)

This completes the connections for DSL TURBO 900. Please proceed to the next chapter to install both WinPoET Dialer (for dial-up to Internet) and DSLTEST utility (for testing the functionality of DSL Turbo 900).

Chapter 5

● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

Installing WinPoET Dialer [7] & DSLTEST [8]

> The screen captures in this manual are included for your easy installation. The exact screens or screens information you see on your system may vary, depending on your system configurations. For any dissimilarities, follow closely to your online instructions.

1 Place the **DSL TURBO 900 Installation CD** in your CD-ROM drive. At the following prompt, click **OK**.

```
Installation                              ☒
    [icon]    This will proceed with WinPoET
              Dialer and DSLTEST Installation.
              [ OK ]        [ Cancel ]
```

2 Ensure that you have powered on DSL TURBO 900 before clicking **OK** at the prompt.

```
Checking DSL TURBO 900      ☒
    Please Check that the Modem is On!
              [ OK ]
```

---
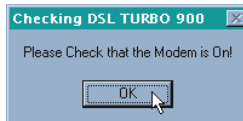
[7] WinPoET is a dial-up client that allows you to connect to the Internet. (see *Chapter 7 - Connecting to the Internet* for details)

[8] DSLTEST (Aztech DSLTEST for DSL TURBO 900) is a diagnostic utility that allows you to test your Ethernet Card, DSL TURBO 900 and your connection to the Internet. (see *Appendix C - Troubleshooting Guide, ' I am not able to connect to the Internet'* for details.)

3   For Windows® 98 Second Edition users, Windows will prompt for your Windows CD-ROM during WinPoET installation. Please have the CD-ROM by your side.

Reminder
For Windows 98 Second Edition user, please have the original Windows CD available for files copying.
OK

Click **OK**.

4   The setup program will commence. The following **Welcome** window will be prompted.

WinPoET Setup – Welcome

Welcome to the WinPoET Setup program. This program will install WinPoET on your computer.

It is strongly recommended that you exit all Windows programs before running this Setup program.

Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.

WARNING: This program is protected by copyright law and international treaties.

Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

For Help, press F1   Next >   Cancel

Click **Next**.

5   **WinPoET Setup – Software License Agreement**

Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.

END-USER LICENSE AGREEMENT FOR WIND RIVER SYSTEMS' WinPoET SOFTWARE PRODUCT

IMPORTANT! READ CAREFULLY!

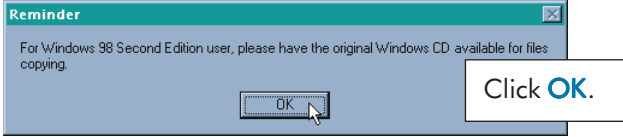NOTICE TO END-USER: CAREFULLY READ THE FOLLOWING AGREEMENT. IF YOU ... AND CONDITIONS OF THIS AGREEMENT, CLICK ACCEPT. ... CLICK CANCEL AND PROMPTLY RETURN THE ... VER SYSTEMS, INC.

...eement (EULA) is a legal agreement between you (either an ... and Wind River Systems, Inc. for the software product

Do you accept all the terms of the preceding License Agreement? If you choose Cancel, Setup will close. To install WinPoET, you must accept this agreement.

For Help, press F1   < Back   Accept   Cancel

At the **Software License Agreement** prompt, click **Accept** to proceed.

WinPoET Setup – Configuration Analysis

Setup will analyze the configuration on your computer to see if it meets the following WinPoET requirements.

1. You must have at least one Ethernet adapter with Microsoft TCP/IP protocol bound to it.

2. You must have Microsoft Dial-Up Networking and Microsoft Virtual Private Networking properly installed.

Click Next to begin the configuration analysis. Or click Cancel to end the Setup program.

6

For Help, press F1   < Back   Next >   Cancel

Click **Next** again.

ion Folder

Setup will install WinPoET in the destination folder shown below.

To install to this folder, click Next.

To install to a different folder, click Browse and select another folder.

7

Accept the default destination location and click **Next**.

Destination Folder
C:\Program Files\Ivasion\WinPoET   Browse...

For Help, press F1   < Back   Next >   Cancel
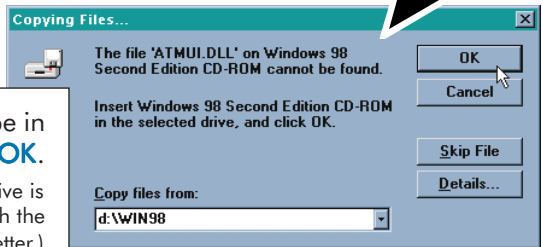
8 For Windows® 98 Second Edition users, at the following prompt, replace the **DSL TURBO 900 Installation CD** in your CD-ROM Drive with your **Windows CD-ROM** and click **OK**.

Insert Disk

❌ Please insert the disk labeled 'Windows 98 Second Edition CD-ROM', and then click OK.

OK

Copying Files...

The file 'ATMUI.DLL' on Windows 98 Second Edition CD-ROM cannot be found.

Insert Windows 98 Second Edition CD-ROM in the selected drive, and click OK.

OK
Cancel
Skip File
Details...

Copy files from:
d:\WIN98

In the text box, type in 'd:\win98' and click **OK**.

(Assuming your CD-ROM drive is labelled D. Else, substitute with the correct drive letter.)

9

WinPoET Setup - Installation Completed

Setup has finished copying files to your computer.

Before you can use the program, you must restart your computer.

○ Yes, I want to restart my computer now.

○ No, I will restart my computer later.

Remove any disks from their drives, and then clic[k]
complete Setup.

Click **Finish** to
restart your system.

For Help, press F1   < Back   Finish

Upon system restarts, you should see the following icons on your Window desktop.

WinPoET: Double-click to establish your Internet connection. See *Chapter 5 - Connecting to the Internet*.

DSLTEST: Double-click to run the diagnostic utility if you are not able to establish your Internet connection. See *Appendix C - Troubleshooting Guide on ' I am not able to connect to the Internet'*.

Proceed to *Chapter 6 - Configuring Your Ethernet Card (optional)* if you are running DSLTEST.

Proceed to *Chapter 7 - Connecting to the Internet* to establish your Internet connection.

Configuring Your Ethernet Card
(optional)

This chapter guides you on how to configure the Ethernet Card on your computer to work with DSLTEST for DSL TURBO 900.

Proceed with the following configurations only if you are running the DSLTEST utility for DSL TURBO 900.
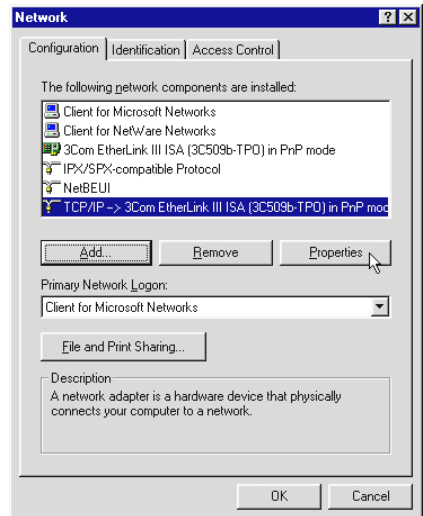
1 Power on your computer. From your Windows desktop, right-click on **Network Neighborhood**. Select **Properties**.

2 From the **Configuration** tab, select your TCP/IP protocol.

(The example shown here is **TCP/IP-> 3Com EtherLink III ISA [3C509b-TPO] in PnP mode**).
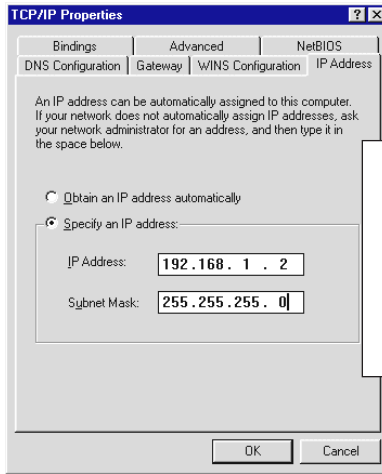
Click **Properties**.

(If you do not see the indicated networking protocol, re-install your Ethernet card.)

3   Select the **IP Address** tab.

TCP/IP Properties

| Bindings | Advanced | NetBIOS |
| DNS Configuration | Gateway | WINS Configuration | IP Address |

An IP address can be automatically assigned to this computer.
If your network does not automatically assign IP addresses, ask
your network administrator for an address, and then type it in
the space below.

○ Obtain an IP address automatically
◉ Specify an IP address:

IP Address: 192.168. 1 . 2

Subnet Mask: 255.255.255. 0

OK   Cancel

Click the option '**Specify an IP address**'.

Enter the **IP Address** as **192.168.1.2** and the **Subnet Mask** as **255.255.255.0**.

Click **OK**.

This completes your Ethernet Card configuration. Your DSLTEST utility is now ready for use. Please refer to *Appendix C - Troubleshooting Guide, 'I am not able to connect to the Internet.'* for details.

Chapter
7

Connecting to the Internet

This chapter guides you on how to establish your connection for Broadband Service.

7.1 Establishing the Connection for Broadband Service

**1** To connect to the Internet, double-click on the dial-up icon from your Windows desktop.

(This icon was generated during the installation of WinPoET software. If you do not see the icon from your Windows desktop, re-install your WinPoET Dialer as described in **Chapter 5 - Installing WinPoET Dialer & DSLTEST**.)

2 Enter your user-id@isp and password as given by your Internet Service Provider.

Select **Save password** if you want the password to be 'remembered' by your system. (You do not have to re-enter the password the next time you connect.)

Click **Connect.**
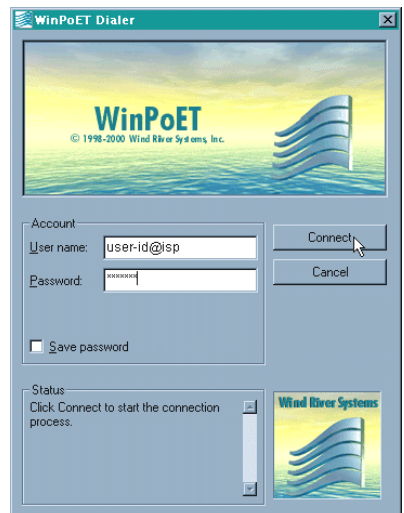
> If you are not able to establish your Internet connection, please refer to **Appendix C - Troubleshooting Guide on 'I am not able to connect to the Internet.'**

3 Upon successful connection, you should be able to see an icon ( ) displayed at the corner of your Windows taskbar.

7.2 Ready to Go!

You are now connected to the Internet.

Launch your Internet Browser (Internet Explorer / Netscape Navigator / Netscape Communicator and so on).

You may start surfing!

7.2.1 Checking the Session Connection time

Upon successful dial-up, you should be able to see an icon ( ) displayed at the corner of your Windows taskbar. Double-click on the icon. Check your connection time by looking at the Duration.
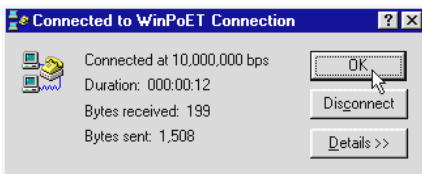
(The connection speed indicates the speed that the ADSL modem can achieved. Your actual connection speed will depend on the subscription plan that you have signed-up with your Internet Service Provider.)

7.2.2 Disconnecting from the Internet

Close your web browser. Double-click on the icon ( ). Click Disconnect.
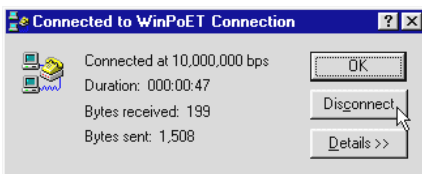
(The connection speed indicates the speed that the ADSL modem can achieved. Your actual connection speed will depend on the subscription plan that you have signed-up with your Internet Service Provider.)

Uninstalling WinPoET Dialer & DSLTEST

For Windows® 98 Second Edition users, Windows will need your Windows CD-ROM to complete the uninstallation of WinPoET software. Please have the CD-ROM by your side before proceeding.

1 From your Windows taskbar, click **Start** > **Settings** > **Control Panel**. Double-click on the **Add/Remove Programs** icon.

2 To uninstall **WinPoET Dialer**, select **iVasion WinPoET Version 2.0** and click **Add/Remove**.

Follow your on-line instructions to complete the uninstallation.
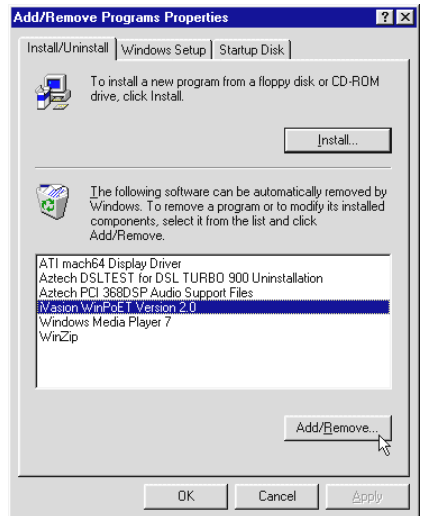
3   To uninstall **DSLTEST**, select **Aztech DSLTEST for DSL TURBO 900 Uninstallation** and click **Add/Remove**.

Follow your on-line instructions to complete the uninstallation.

Appendix

A

Technical Specifications

This chapter contains the technical specifications for your NC1100 NetCard and DSL TURBO 900. The information may be more useful for technically inclined users.

A.1   For NC1100 NetCard

A.1.1   Main Features

- Highly integrated and cost-effective single-chip ethernet controller
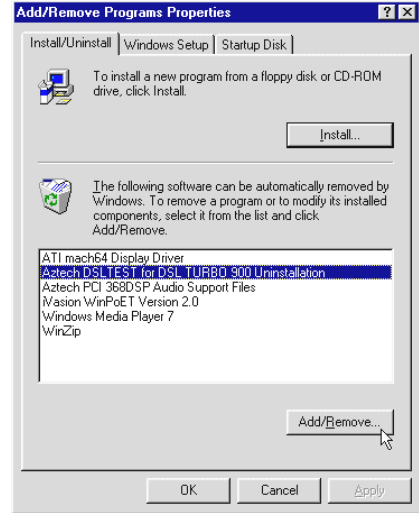- Supports 32-bit PCI Bus Master for high performance
- Compliant to PCI Revision 2.1 specification
- Compliant to Ethernet II and IEEE802.3 10 BaseT
- Half/Full duplex capability
- Supports LED pins for various network activity indications

A.1.2   Technical Data

Network Type

- **Ethernet 10BASE-T**

    IEEE 802.3 industry standard for a 10Mbps baseband CSMA/CD local area network.

A.1.3   Network Operating System

- Window® 95, Window® 98, Window® 2000
- Window NT® 3.0, NT® 3.51, NT® 4.0
- ODI driver for NetWare 3.x/4.x

- NetWare Client 32

- NDIS driver for Microsoft LAN Manager

- NDIS2 MAC drivers for DOS, OS/2

- Microsoft Windows for workgroups 3.11

- Packet Driver

- SCO Unix 4.x, 5.x drivers

- UnixWare7

A.1.4   Electrical

Power: 2Watts (max) @ 400 mA

A.1.5   Connector and Sockets

- 1 RJ-45 Non-Shielded Phone Jack

A.1.6   LED

2 Green 3.0mm LEDs:
- LINK
- ACTIVE

A.2   For DSL TURBO 900

A.2.1   Main Features

- Controller-based External ADSL Modem
- UTOPIA Specifications Level I and Level II compliant
- ANSI T1.413 issue 2, ITU-T G.992.1 (G.dmt) and G.992.2 (G.lite) compliant
- Using Discrete Multi-Tone (DMT) line encoding scheme
- Full Rate transmission at up to 8 Mbps downstream and 640 Kbps upstream[1]
- G.lite transmission at up to 1.5 Mbps downstream and 512 Kbps upstream[1]
- Rate Adaptive modem at 32 Kbps steps
- Up to 18,000 ft loop reach
- Flash ROM upgradable for future feature enhancement
- RFC1483 Bridged (Ethernet Over ATM) protocol stack support
- Remote management through Telnet console access
- TFTP Software update
- Spectral compatibility with POTs

A.2.1.1 ADSL Chipset

Using ST Microelectronics Ascot solution:

- Virata VC8410 (Helium) – ATM Communications Controller
- STLC70135 - ADSL DMT Modem and ATM Framer
- STLC70134 - ADSL Analog Front End
- 4MB Dual-ported SDRAM
- 1MB Flash ROM

A.2.1.2 Virata VC8410 (HELIUM) – ATM Communications Controller

- Built-in 48MHz ARM-based Protocol and Network Processor
- UTOPIA Level I v1.0 and Level II interface
- 10BaseT Ethernet interface with integrated PHY
- Dual-ported SDRAM Interface

---

[1]   The actual downstream and upstream rates will depend on the service package offered by your ADSL Service Provider.

- ATM Cell Header Filter
- STLC70135 Configuration Register Interface
- +3.3-volt, 208-pin PQFP

A.2.1.3 STLC70135 ADSL DMT MODEM & ATM FRAMER

- ANSI T1.413 Issue 2 standard DMT modem with embedded ATM Framer
- ITU-T G.992.1 (G.dmt) and G.992.2 (G.lite) compliant
- Standard Utopia Level I and Level II ATM Interfaces
- DMT Modulation up to maximum of 256 tones (14 bits)
- ADSL/ATM cell-specific Framing and Deframing
- Rotor and Frequency Domain Gain Correction and Equalization
- Performs DMT Modulation, Demodulation, Reed-Solomon Encoding, Bit Interleaving, and 4D Trellis Coding
- 3.3-volt, 144-pin PQFP

A.2.1.4 STLC70134 ADSL Analog Front-end

- Integrated Analog Front End (AFE) for ADSL
- High sampling rate at 8.832 MHz for both ADC and DACs
- Two (2) 12-bit DACs, One 13-bit ADC
- Differential Analog Input/Output
- Accurate continuous-time low pass filters for channel filtering
- 3.3-volt, 64-pin LQFP

A.2.2 ADSL Software Support

- ATM Transmission Convergence (TC) layer
- ATM Layer with Traffic shaping
- AAL ATM Attributes - AAL5
- RFC-1483 Bridged (Ethernet Over ATM)
- RFC-2516 PPP over Ethernet (Supported via Optional Software)
- PPTP Tunneling Protocol (when available)
- UNI 3.0, 3.1 and UNI 4.0 ATM Signaling (support for SVCS)

A.2.3   Platform Support

• Windows® 98, 98 Second Edition and Windows® Me

A.2.4   External Connectors

• 1 x RJ11 Telephone socket for ADSL line

• 1 x RJ11 Telephone socket for Telephone Handset

• 1 x RJ45 for 10Base-T Ethernet

• 1 x MiniDIN Power Connector

• 1 x On/Off Power Switch

• 9 pin Serial Port for local management

A.2.5   LED Indicators

• 1 x Power LED
• 1 x Ethernet Link Status LED
• 1 x Ethernet Activity LED
• 1 x ADSL Receive LED
• 1 x ADSL Transmit LED
• 1 x ADSL Link Status LED

A.2.6   Environmental

A.2.6.1 Temperature

Operating   :   10° to 45° Celsius
                        50° to 113° Fahrenheit

Non-Operating :   -25° to 70° Celsius
                        -13° to 158° Fahrenheit

A.2.6.2 Humidity

Operating   :   30% to 80% Relative Humidity (Non-Condensing)
Non-Operating :   10% to 95% Relative Humidity (Non-Condensing)

A.2.7   System Requirements

• Pentium MMX 233MHz or equivalent

The specifications herein are subject to change without prior notifications.

Appendix B

Frequently Asked Questions

This section provides answers to the commonly asked questions on your ADSL modem.

What is ADSL ?

ADSL, Asymmetric Digital Subscriber Line, is a broadband communication technology designed for use on regular phone lines. It has the ability to move data over the phone lines at speeds up to 140 times faster than the analog modem available today.

Why is it called Asymmetric ?

It is called asymmetric because more bandwidth is reserved for receiving data than for sending data. This is useful because many users of the Internet receive much more data than they send.

What are the benefits of ADSL over analog modems ?

Besides the high-speed advantage, ADSL connection is always on. There is no longer a need to log on and off, no more busy signals and no more waiting for the connection to established - it is always there. On top of these, you can use the phone even when the data connection is on. You do not need to switch between surfing the Net and talking over the phone.

Will my modem constantly connect near the maximum speed ?

At ADSL speeds, the limitations depend on the performance or load of the ADSL Service Provider that you are trying to reach, as well as the line condition specific to your location.

Can I connect to Broadband Service everywhere I go?

No, you cannot. You can connect to this service, only via ADSL phone line enabled for Broadband Service provided by your Internet Service Provider (ISP).

Can I run both dial-up modem and ADSL modem ?

Yes, but it is not recommended. You may experience slowness during surfing as well as incurring additional cost of maintaining two active connections.

Do I need to use Micro-Filter when using ADSL ?

DSL TURBO 900 has a built-in Micro-Filter at the Phone jack. Thus no Micro-Filter is required between your Telephone set and the modem.

*However, if you are sharing the ADSL line with other telephone line extensions, you will need to have a Micro-Filter connected between the Telephone set and the telephone wall socket as shown in **section 3.1 - Setup Overview**.*

(The Micro-Filters can be purchased separately from your dealer.)

Can I determine which version of Dial-Up Network (DUN) is installed ?

There is no easy way to determine the version of the DUN. The safest approach is to install the DUN v1.3 downloaded from the Microsoft website.

Can I use my Broadband Service user ID to log in to 56K dial-up access on a normal telephone line using a 56K dial-up modem?

Yes, you can.

Appendix C

Troubleshooting

This section provides a step-by-step solutions to problems that you may encounter when setting up or using your ADSL modem.

I am not getting any connection. The modem Power LED lights up and the ADSL Link LED keeps blinking. (The ADSL Link LED does not remain light up.)

Power off your modem and check the following:

i)   *Ensure that the Power adapter is tightly fitted into the* **DC IN***.*

ii) *Check that the Telephone cable (RJ-11) is connected to* **LINE** *jack on your modem and not to the* **TEL** *jack.*

iii) *Power on your modem.*

If the problem still persist, please check with your ADSL Service Provider.

I am getting poor ADSL speed performance from my modem.

i)   *Ensure that the* **ADSL line** *is at least 10cm away from the* **Power adapter***. (see Figure C-1. Distance between your ADSL Line and Power adapter)*

ii) *Place your modem away from devices or appliances such as monitors, exposed computer systems (with chassis covers removed) or another modem which exhibit magnetic fields that may cause interferences to your modem line.*

iii) *Ensure that* **Micro-Filters** *are used for phone sockets that are sharing the same ADSL line.*

If your modem speed or performance is still unsatisfactory, please contact your ADSL Service Provider.
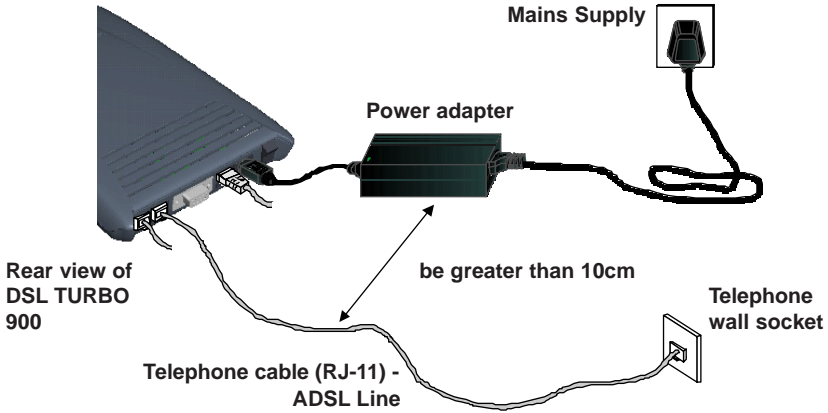
Figure C-1. Distance between your ADSL Line and Power adapter

My WinPoET dialer seems to hang at the status 'Connecting to communications device.'.

Verify the following:

i)   *your modem is connected to the ADSL line*

ii)   *the Mains Supply at the power adapter is powered on*

iii)   *the Switch on your modem is at the 'I' position.*

iv)   *the Ethernet cable is connected from your modem to your Ethernet card*

*(refer to **section 3.2 - Connecting DSL TURBO 900** for the mentioned connections)*

For any re-connections made, allow some time for system to re-establish the Internet link. If the connection still fail, please proceed with the next question, 'I am not able to connect to the Internet.' for further tests.

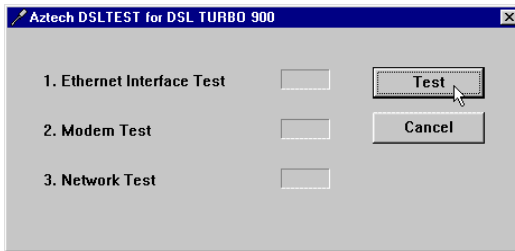**I am not able to connect to the Internet.**

Carry out the following test to verify your connections.

1. *From your Windows desktop, double-click on* **DSLTEST** *dsltest.exe icon.*

2. *Click* **Test**. *(Table C-2 gives the description of the tests.)*

Aztech DSLTEST for DSL TURBO 900		☒
1. Ethernet Interface Test		Test
2. Modem Test		Cancel
3. Network Test		

The tests listed will commence. You should get a **PASS** *for all the tests.*

Should your test(s) fails, please refer to **Table C-2** *for the solution.*

Test	Description	Result=FAIL
Interface test	To test if your driver is installed properly.	Re-install your modem driver.
Modem test	To check if your system is communicating with the modem.	Check with your Internet ADSL Service Provider.
Network test	To check if the Internet connection is ok.	

Table C-2. Test Descriptions.

1. Please ensure that you have proceeded with **Chapter 6 - Configuring Your Ethernet Card** before running DSLTEST for DSL TURBO 900.

2. **If one of the test failed, subsequent tests will be skipped. Please proceed to fix the problem first before running the test program again.**

During the installation of Client Software, the error message, 'No Microsoft TCP/IP stack installed. Please install the Microsoft TCP/IP stack in Control Panel, Network.' is prompted. *(For Windows® 95 users only)*

*You need to install Microsoft TCP/IP before installing the Client Software. Please refer to **section 3.3.2 - Verifying Your NC1100 NetCard, step 3** on the installation procedures.*

Appendix D

Technical Support

Aztech Sales Enquiries

Hotline	:	(65) 741 7211 (Marketing and Sales Department)
Email	:	sales@aztech.com.sg
Fax	:	(65) 749 1198
Working Hours	:	Monday to Friday - 0900 to 1800
		Saturday/Sunday/Public Holidays - Closed

Aztech Technical Support

(c/o AVS Computer Services Pte Ltd [8])

Hotline	:	(65) 742 9633
Email	:	service@avscs.com
Fax	:	(65) 742 9010
Working Hours	:	Monday to Friday - 0900 to 1800
		Saturday/Sunday/Public Holidays - Closed

Technical Support Considerations

Majority of enquiries can be resolved efficiently. However, there may be cases when it is beyond our technical support to assist you. We may not be able to assist you in:

- **Hardware conflicts**

    We will try to discover them and make suggestions but we are unable to repair them over the telephone.

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[8]   AVS Computer Services Pte Ltd is Aztech authorised Customer Service Center.

- **Software conflicts**

  Removal of other software and reinstalling our software may be the only solution.

- **O/S problem**

  If you encounter problems like fatal exception or illegal operation, kindly refer to your PC vendor.

- **Modifications made to your software**

  Our technical support officers are trained to support the software we provide as part of our service and they are knowledgable about a wide range of other programs. However, we are unable to support software that has been modified.

Notes