DYNAMIX PL-E(85)

85Mbps High Speed
HomePlug Ethernet Adapter

Quick Start

Table of Contents

All the pictures shown in this Easy Start Manual are for illustration only.

Safety Summary Messages

> ⚠️ **WARNING**
> **HIGH VOLTAGE**
>
> **is used in the equipment. Make sure equipment is properly grounded BEFORE opening. Failure to observe safety precautions may result in electric shock to user.**

> ⚠️ **CAUTION**
>
> **Check voltages before connecting equipment to power supplies. Wrong voltages applied may result in damage to equipment.**

Important Safety Instructions

Please read these instructions carefully:

1. Unplug the HomePlug Ethernet Adaptor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

2. Do not use the HomePlug Ethernet Adaptor near water.

3. The HomePlug Ethernet Adaptor should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation provided.

4. The HomePlug Ethernet Adaptor should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.

5. The HomePlug Ethernet Adaptor relies on the building's electrical installation for short-circuit (over current) protection. Ensure that a fuse or circuit breaker no larger than 120 VAC or 230 VAC (depends on the power supply type in your country) is used on the phase conductors (all current-carrying conductors).

6. Plug the HomePlug Ethernet Adaptor directly into a 120V AC or 230V AC (depends on the power supply type in your country) wall outlet. Do not use an extension cord between the adapter and the AC power source.

7. Do not attempt to service the HomePlug Ethernet Adaptor yourself, as opening or removing covers may expose you to dangerous voltage points or other risks as well as ruin the product warranty. Refer all servicing to qualified service personnel only.

8. Unplug the HomePlug Ethernet Adaptor from the wall outlet and refer the product to qualified service personnel for the following conditions:

    - If liquid has been spilled into the product.
    - If the product has been exposed to rain or water.
    - If the product does not operate normally when the operating instructions are followed.
    - If the product exhibits a distinct change in performance.

Chapter 1 – Introduction

One of the major drawbacks in setting up home network is the absence of required wiring inside the house to interconnect networked computers. In recent years several technologies have attempted to address the issue. The most prominent technology so far is the family of WIFI (802.11 X) products. Recently, however, another technology called HomePlug has come forth. It uses electrical grids, already available inside walls to transmit data from computer to computer. HomePlug technology modulates computer data in a way to enable them use power grid as a medium of transmission from point to point. Using this technology, two computers have a virtual Ethernet connection without the need to be physically connected to each other.

The HomePlug Ethernet Adaptor provides *No New Wires* ® communications to any rooms, over any powerline wires, at the speed of up to 85Mbps. It has 3 indicator lights (LEDs) and an Ethernet port. The LEDs depict the connection status, as well as other information, enabling detailed diagnosis of system malfunction. The Ethernet port is to connect to a device in the home network. The HomePlug Ethernet Adaptor has a standard power plug for connection to a power outlet. There are three main kinds of power plugs:

- (UK) – 3 pins UK plug with integrated 100-240V AC power supply.
- (EUR) – 2 pins Euro plug with integrated 100-240V AC power supply.
- (US) – 2 pins US plug with integrated 100-240V AC power supply.

Computer networking in the office or at home has the following advantages:

1. Share centrally stored data
2. Share one printer
3. Multi-access to one Internet connection
4. Multi-user games over the network.

Package Contents

Make sure that you have the following items. If any of the items is damaged or missing, please contact your dealer immediately.
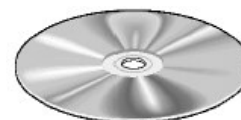

85Mbps High Speed HomePlug Ethernet Adaptor
(QTY:1 for **Single Pack** ; QTY:2 for **Twin Pack**)
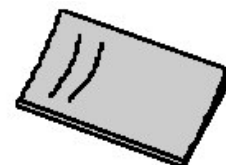
Easy Start (Qty:1)

CAT-5 UTP Straight Ethernet Network cable (RJ-45)
(QTY:1 for **Single Pack** ; QTY:2 for **Twin Pack**)

Configuration Utility Installation
CD (Qty:1)

Chapter 2 – Installation & Connection

2.1 System Requirements

HomePlug Ethernet Adaptor is applicable with all TCP/IP operating systems with Ethernet port. Drivers are not required for this adapter. But the supplied software and the network password operates only with Windows operating systems.

Your computer must meet the below mentioned minimum requirements in order to use the HomePlug Ethernet Adaptor Configuration Utility:

- Windows Operating Systems:
- Windows 98SE, Windows Me, Windows 2000 or Windows XP with Ethernet connection
- Pentium III 300 MHz MMX-Compatible PC or greater
- 128MB hard disk space and memory
- CD-ROM drive

> ⚠️ **Note…**
> **Your computer or the device to which you want to connect the HomePlug Ethernet Adaptor must have an Ethernet port, i.e. a network card or a network adaptor.**

2.2 Installation & Uninstallation of Configuration Utilty

Windows Operating Systems

Installation:

1. Connect the HomePlug Ethernet Adaptor to the computer or the device with the Ethernet cable.
2. Connect the HomePlug Ethernet Adaptor to the Power Outlet.
3. Install the Configuration Utility (PowerPacket). The Installation CD has auto run feature. If the Installation CD auto run fails, please run the **Setup.exe** file in the CD.
4. Follow the on screen instructions to install the utility drivers.

Please refer to **Page 15** for the **Configuration Utility User Guide for Windows**.

⚠ **Note…**
1. Before connecting the HomePlug Ethernet Adaptor, please note its Security ID / Device Password and keep it available for configuration of the network.
2. No drivers are required for installation of the HomePlug Ethernet Adaptor.

⚠ **Note…**
If there is no connection/link among the HomePlugs with the Ethernet cable inserted onto the HomePlugs OR the ping test among the HomePlugs are not successful, please power off and on again for the HomePlugs.
You can also plug out the HomePlugs and then plug in again with the present of the Ethernet cable.

Uninstallation:

1. To uninstall the **Configuration Utility**, go to the **Control Panel** of your system.

2. Open the **Add/Remove Programs**.

3. Select and double click on the **PowerPacket Ethernet Adapter** in the **Add/Remove Programs Properties**.

4. Follow the on screen instructions to uninstall the **PowerPacket Utility**.

2.3   Connection & Indicator Lights

The HomePlug Ethernet Adaptor has three **lights indicator** (LEDs) and an **Ethernet port**. See **Fig 1-1** below.
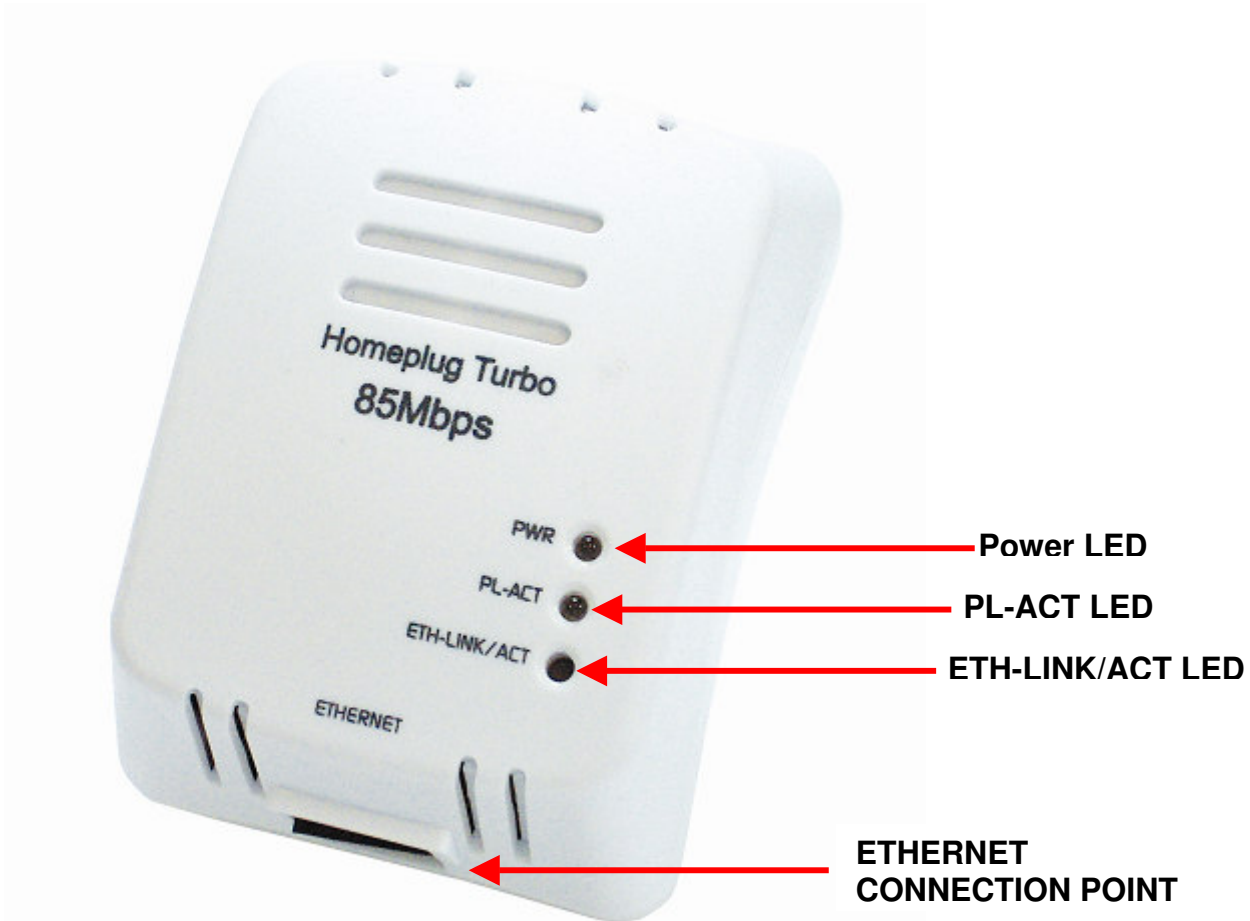

Figure 1-1 : 85Mbps High Speed Homeplug Ethernet Adapter

PWR: **Lights** up when connected to AC power supply.

PL-ACT: **Lights** up when detected and connected with another HomePlug adaptor within the network. **Flashes** during data transfer.

ETH-LINK/ACT: **Lights** up when connected to the Ethernet port of the computer or other Ethernet devices. **Flashes** during data transfer.

ETHERNET: 10/100 Base-T Auto-MDI/MDIX (allows either cross or straight cable) Ethernet jack (RJ-45) to connect to your Ethernet Network card or Ethernet Hub / Switch..

Chapter 3 – All About The Home Network

This chapter contains important and useful information on networks—from the configuration of your computer to examples of applications to general tips.

3.1   Configuring the Computer

Now that you have successfully connected and installed your HomePlug Ethernet Adaptor, we show you how to configure your computer correctly and how to check existing settings.

3.1.1   Windows 98 and Windows Me

1.   Open the properties of the LAN connection on the connected computers by selecting

Start ⇒ **Settings** ⇒ **Control Panel** ⇒ **Network**

2.   Click the entry for the TCP/IP protocol of the network adaptor and on **Properties.** Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialogs with **OK**.

> ⚠ **Note…**
> **If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adaptor Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under Add select 'Protocol' and click Add again. In the next dialog box under 'Manufacturer' select 'Microsoft' and under 'Network Protocol' select 'TCP/IP'.**

3.   If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer.

Under…

Start ⇒ **Settings** ⇒ **Control/Panel** ⇒ **Internet Option**

Select the 'Connections' tab and enable the 'Never dial a connection' option. Close the dialogs with **OK**.

3.1.2 Windows 2000

1. Open the properties of the LAN connection on the connected computers by selecting

Start ⇨ **Settings** ⇨ **Control Panel** ⇨ **Network and Dial-up Connections.**

Click with the right mouse button on the corresponding LAN connection and select 'Properties'.

2. Click the entry for the TCP/IP protocol of the network adaptor and on **Properties.** Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialog with **OK**.

> ⚠ **Note…**
> **If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adaptor Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under Install select 'Protocol' and click Add. In the next dialog box select 'Internet Protocol (TCP/IP)' and confirm with OK.**

3. If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer.

Under…

Start ⇨ **Settings** ⇨ **Control Panel** ⇨ **Network and Dial-up Connections**

Enable the 'Never dial a connection' option. Close the dialog with **OK**.

3.1.3 Windows XP

The Windows XP start menu can be configured in different ways. See the Windows XP documentation for more information.

1. Open the properties of the LAN connection on the connected computers.

   Select **Start** ⇨ **Control Panel** ⇨ **Network** and **Internet Connections.**

   Click with the right mouse button on the corresponding LAN connection and select 'Properties'.

2. Click the entry for the TCP/IP protocol of the network adaptor and on **Properties**. Enable the option 'Obtain an IP address automatically'. You can ignore all other options: they either remain empty or retain their default settings. Close the dialog with **OK**.

> ⚠️ **Note…**
> **If you cannot find an entry similar to 'TCP/IP' or 'TCP/IP -> Network Adaptor Name' or 'Internet Protocol (TCP/IP)', you must install the TCP/IP protocol. Under Install select 'Protocol' and click Add. In the next dialog box select 'Internet Protocol (TCP/IP)' and confirm with OK.**

3. If you use a router for Internet access, you will still need to configure it, because the router dials into the Internet, not the computer.

Under…

Start ⇨ **Settings** ⇨ **Control/Panel** ⇨ **Internet Options,**

Select the 'Connections' tab and enable the 'Never dial a connection' option. Close the dialogs with **OK**.

> ⚠️ **Note…**
> **Other Internet applications such as e-mail clients may also need this information. This generally involves changing a setting with a name like 'Connect to' or similar to 'LAN'.**

3.2 Examples Of Applications

This section demonstrates some of the application scenarios

3.2.1 Home Networking – Option 1

Workstation with Internet connection over an ADSL/Cable modem. See **Fig 1-2** below.
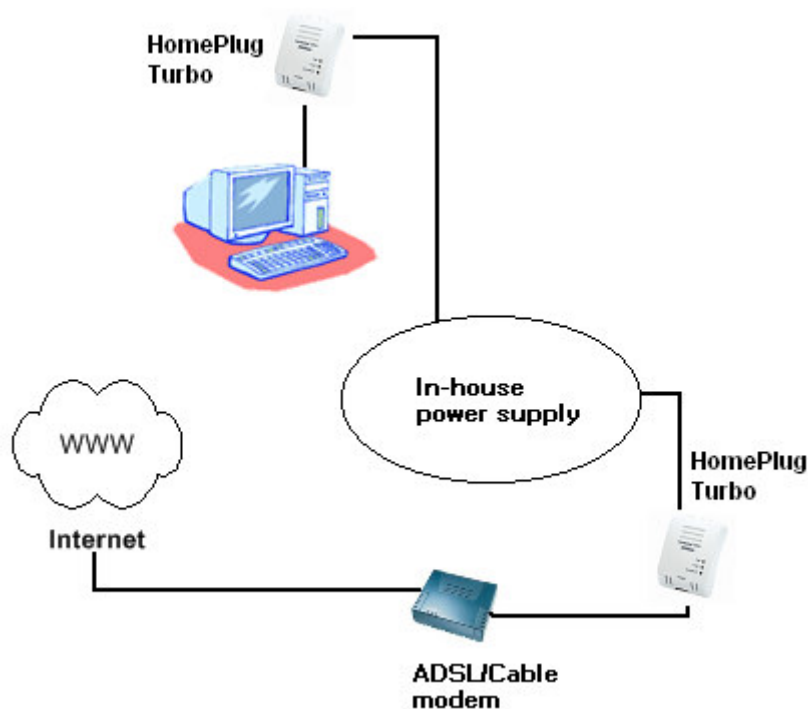

Figure 1-2 : Home Networking Option 1

3.2.2 Home Networking – Option 2

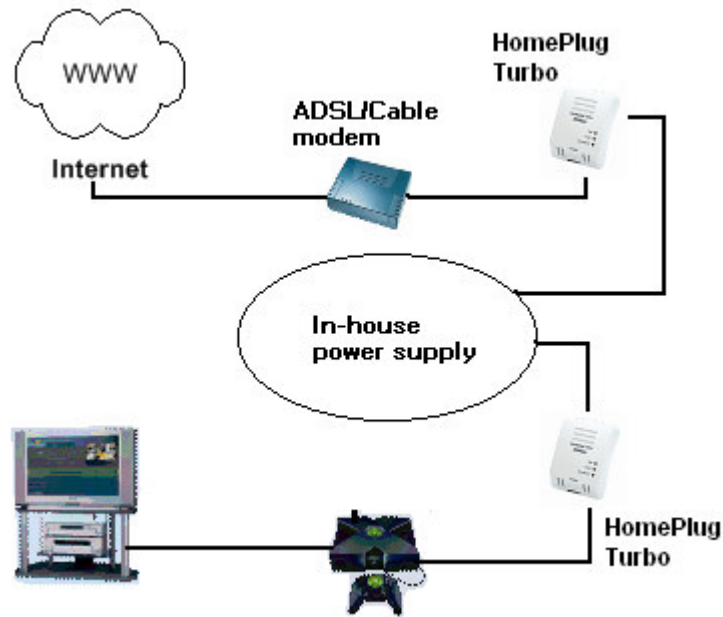Networking for Online Gaming. See **Fig 1-3** below.

Figure 1-3 : Home Networking Option 2

3.2.3 Home Networking- Option 3

Networking for several workstations with IP-STV and one Internet connection over an ADSL/Cable modem router. See **Fig 1-4** below.
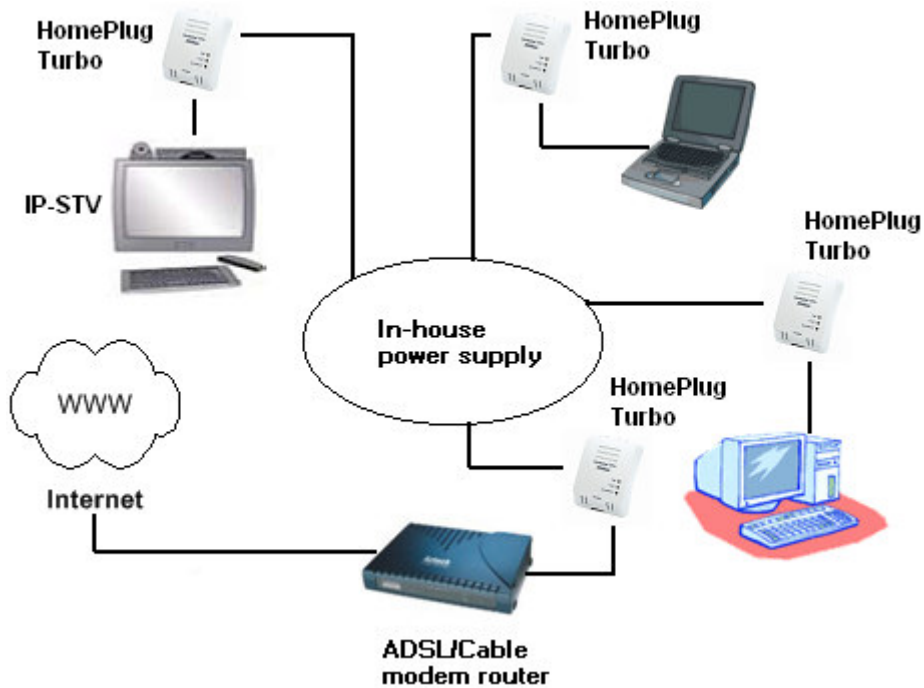

Figure 1-4 : Home Networking Option 3

3.2.4   Home Networking – Option 4

Networking for several workstations with IP-STV and one Internet connection over an ADSL/Cable router and an ADSL/Cable modem. See **Fig 1-5** below.
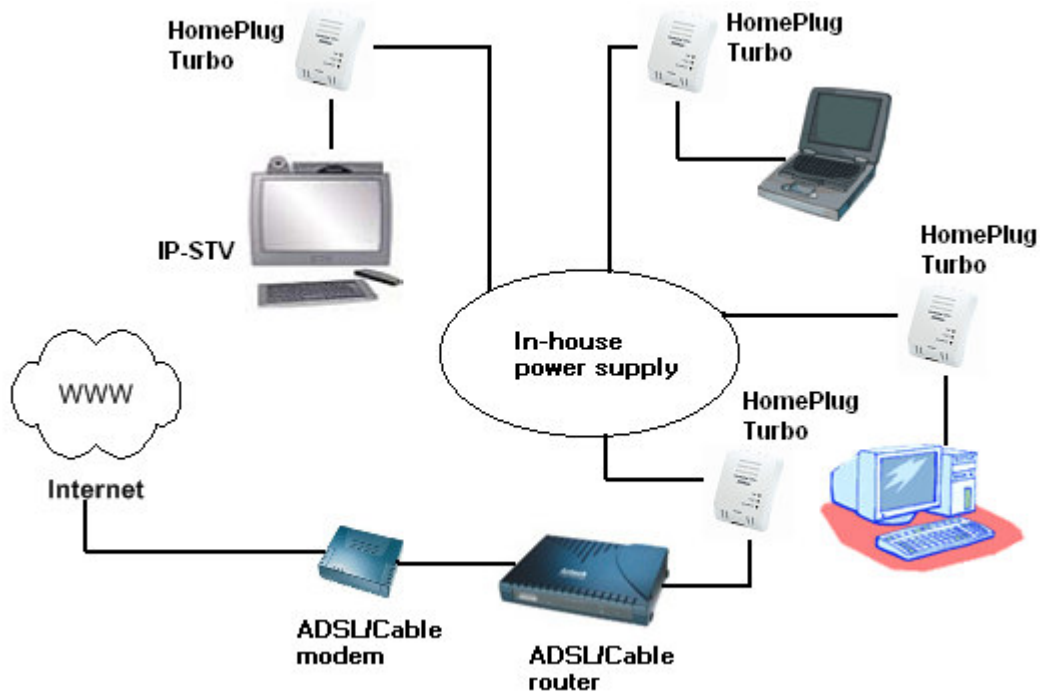

Figure 1-5 : Home Networking Option 4

3.3   Care Instructions

3.3.1   Network Volume

The maximum number of HomePlug adaptors in a single-family house is theoretically 253 connections, but in practice no more than 10 devices should be transferring data simultaneously.

3.3.2   Network Security

Normally the electric meter forms a physical barrier, i.e. only devices connected to this meter can be part of the network and benefit from the phase coupling. We strongly recommend that you use the HomePlug Ethernet Adaptor internal device encryption. It is configured with the HomePlug Ethernet Adaptor Configuration Utility (refer to **Page 15** on the **Configuration Utility User Guide for Windows**).

3.3.3 How to Use Passwords Correctly

- You can improve your security substantially by following some important rules regarding the use of passwords.

- Keep your passwords as secret as possible.

- Never write a password down nor store them in notebooks, wallets and text files in computers.

- Do not pass on your password unnecessarily.

- Select a random password. Use random strings of letters and numbers. Passwords from common language usage are not secure.

- Change the password regularly or immediately if you feel it has been compromised.

- Passwords should be changed as frequently as possible. This requires a little effort, but increases your security considerably. Even if only the slightest indication of a leak exists, the password should be changed.

⚠️ **Note…**
Always use the internal device encryption (the Private Network Name) for security. It can be configured using the HomePlug Utility (refer to Page 15 on the Configuration Utility User Guide for Windows).

Chapter 4 – Configuration Utility User Guide For Windows

Running the Utility:

To run the utility, double click the **PowerPacket Utility** icon on your desktop. See **Fig 1-6** below.

Figure 1-6 : PowerPacket Utility Icon

4.1 Main Screen

The **Main** screen essentially provides a list of all powerline devices logically connected to the computer where the utility is running. (If the status is not updated, please close and open the utility again).

The **top panel** shows all local HomePlug devices found connected to the computer's NIC (Network Interface Card). In most cases, only one device will be seen. In situations where there are more than one device connected, such as a USB and also an Ethernet device, the user may click to select the one to manage through and then click the **Connect** button to it's right. The status area above the button indicates that your PC is connected to that same device. See **Fig 1-7**.
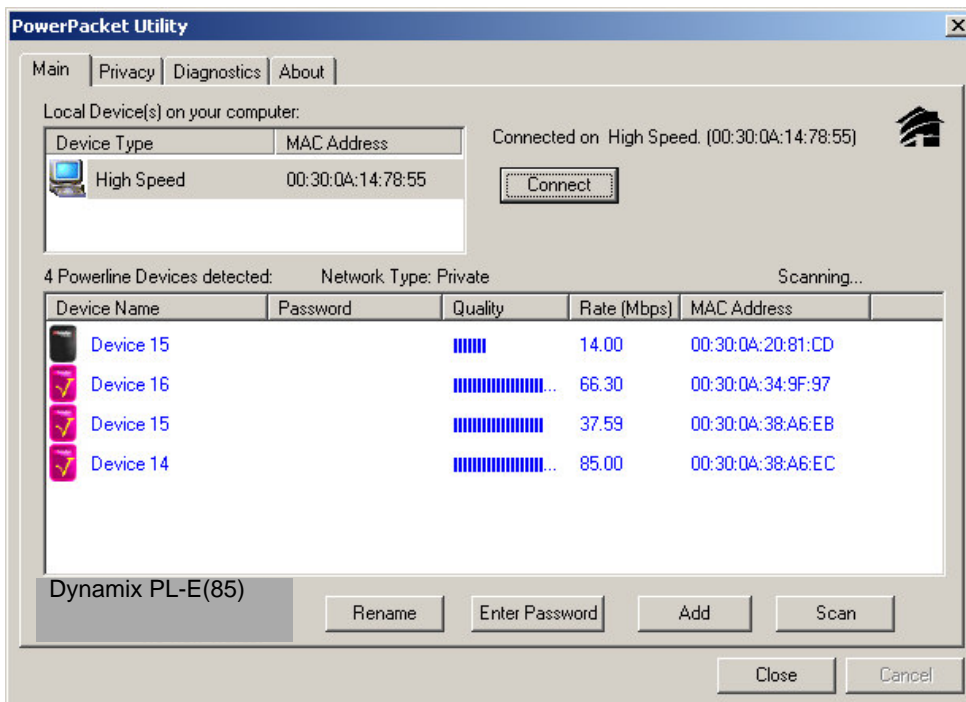
Figure 1-7 : Main Screen

The **lower panel** displays all the HomePlug devices, discovered on the current logical network (remote devices). Displayed immediately above this panel is the number of remote devices found, the type of logical network (**Public** or **Private**), and a message area that reports connectivity and scan status. The following information is displayed for each of the devices discovered that appear in the lower panel.

The **Device Name** column shows the default device name, which may be user re-defined. A user may change the name by clicking on the name and editing in-place, or by using the **Rename** button.

An icon is optionally shown with the name. A distinction in icons is made between low-speed and high-speed devices (HomePlug 1.0 and Turbo). By default, the icon is displayed with the name.

HomePlug 1.0   **HomePlug Turbo**

The **MAC Address** column shows the device's MAC address.

The **Password** column shows the user-supplied **Device Password** (initially left blank). The **Device Password** can be found on the label at the back of the unit. A user may enter the password by using the **Enter Password** button (explained below).

To set the **Password** of the device (required when creating a private network), first select the device by clicking on it's name in the lower panel and then click on the **Enter Password** button. A dialog box will appear as shown in **Fig 1-8** to type the password. The selected device name is shown above the field for entering the password. Hit **OK** after entering the new password.

A confirmation box will appear if the password was entered correctly. If a device is not found, the user will be notified and suggestions to resolve common problems will be presented.

Figure 1-8 : Device Password

The **Add** button is used to add a remote device to your network that is not on the displayed list in the lower panel, for example, a device currently on another logical network. Users are advised to locate the **Device Passwords** for all devices they wish to manage and add them to the local logical network by clicking on the **Add** button. A dialog box will appear as in **Fig 1-9**. The dialog box allows the user to enter both a **Device Name** and the **Device Password**.

A confirmation box will appear if the password was entered correctly and if the device was found. If a device is not found, the user will be notified and suggestions to resolve common problems will be presented.

Figure 1-9 : Adding Device To Network

> ⚠ **Note…**
> **The device must be present on the power line (plugged in) in order for the password to be confirmed and added to the network. If the device could not be located, a warning message will be shown.**

The **Scan** button is used to perform an immediate search of the HomePlug devices connected to the computer. By default the utility automatically scans every few seconds and updates the display.

4.2 Privacy Screen

The **Privacy** dialog screen provides a means for managing the local network and providing additional security. All HomePlug devices are shipped using a default logical network (network name), which is normally "**HomePlug**". The Privacy dialog screen allows user to make the network private by changing the network name (network password) of devices. The user can always reset a HomePlug network to the universal one (public) by entering "**HomePlug**" as the network name or by clicking on the **Use Default** button. See **Fig 1-10**.

⚠️ **Note…**
Changing the network name to any other name other than HomePlug will show the network type on the main screen as Private. The Network Name is between 4 to 24 characters.
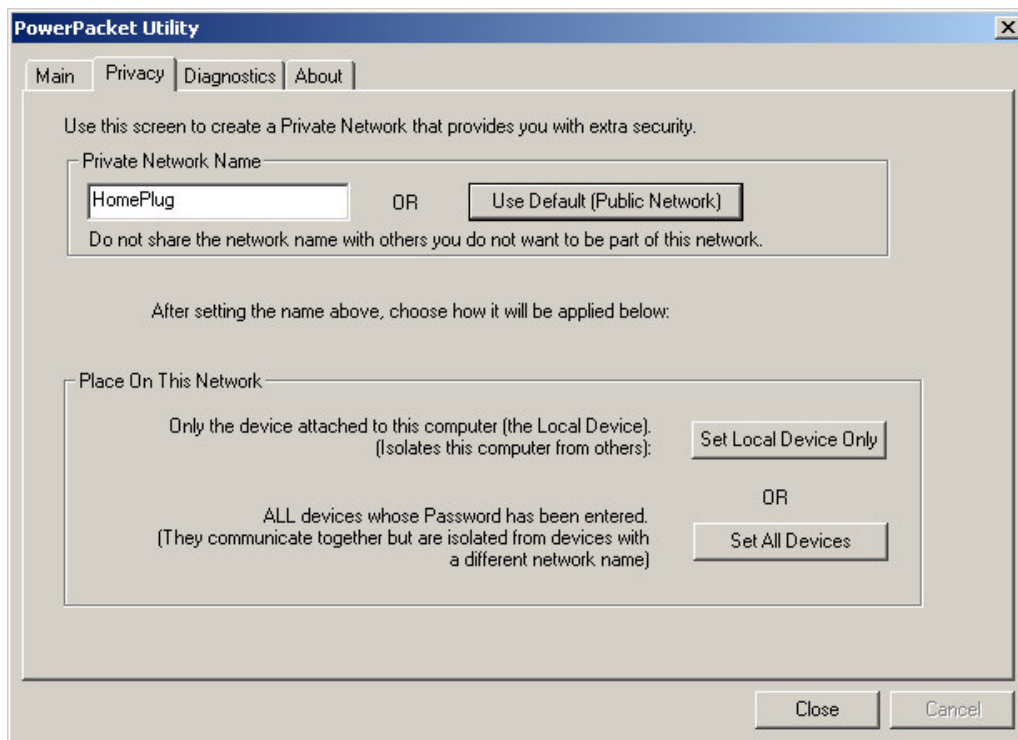

Figure 1-10 : Privacy Screen

The **Set Local Device Only** button is used to change the network name (network password) for the local device only. After doing this, all the devices seen on the Main panel prior to this will no longer be able to communicate or respond to the computer, as they will be on a different logical network. Devices previously set up with the same logical network (same network name) will appear in the device list afterward selecting this option.

The **Set All Devices** button is used to change the logical network of all devices that appear on the Main panel. The user must have entered the **Device Password** in order to set it to the new logical network. A notification message will appear to report the success of this operation.

4.3 Diagnostics Screen

The **Diagnostics** screen shows system information and a history of all devices seen. See **Fig 1-11**.

The **upper panel** shows technical data concerning software and hardware on the host computer used to communicate over HomePlug. It shall include the following:

- Operating System Type/Version
- Host Network Name
- User Name
- MAC Address of all NICs (network interface card)
- Identify versions of all Driver DLLs and Libraries used (NDIS) and optionally
- HomePlug chipset manufacturer name (Turbo Only devices)
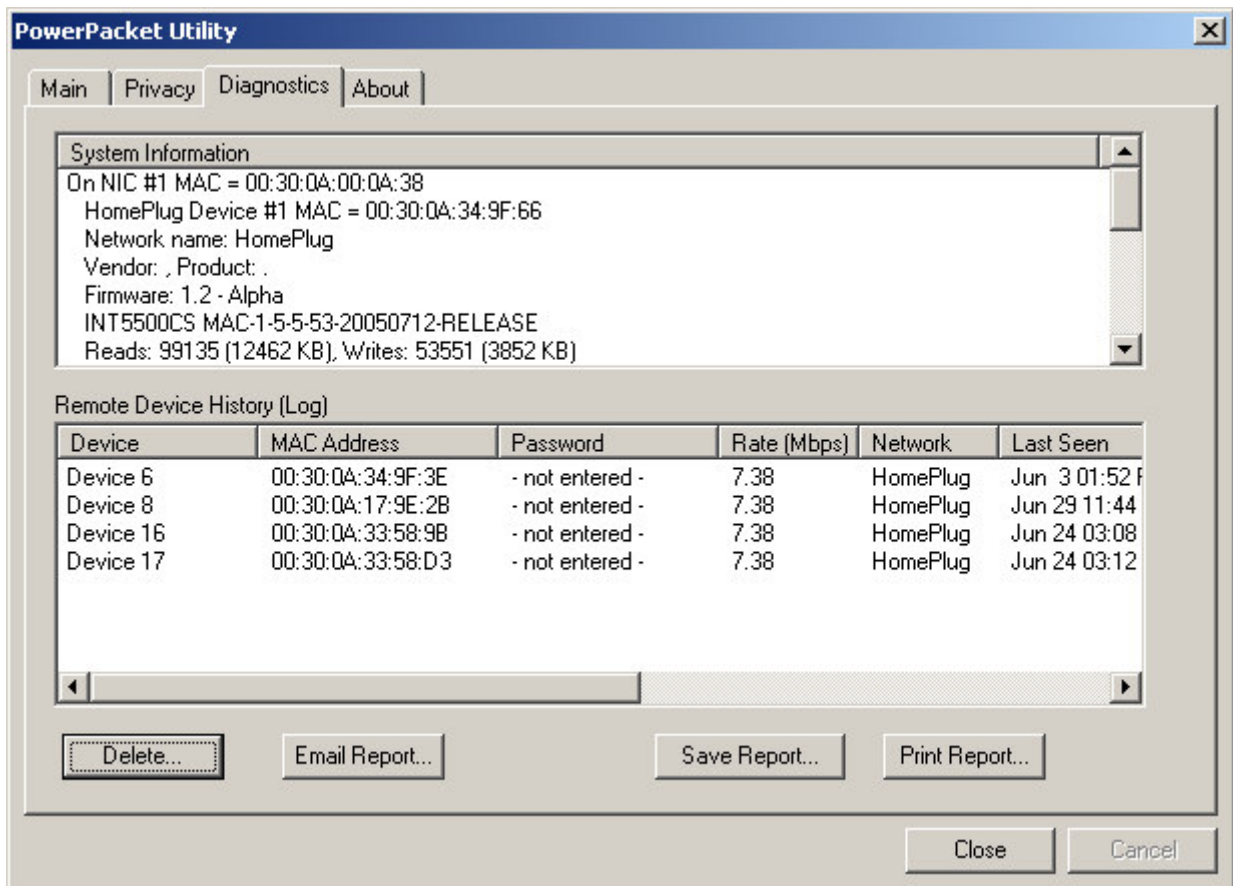- MAC Firmware Version (Turbo Only devices)
- Vendor name

Figure 1-11 : Diagnostics Screen

The **lower panel** contains a history of all remote devices seen on the computer, over time. Devices are shown here regardless of whether or not they are on the same logical network.

- Adapter Alias Name
- Adapter MAC Address
- Adapter Password
- Adapter Last known rate
- Adapter Last Known Network
- Date device last scanned.
- Vendor

4.4   About Screen

The **About** screen shows the software version. Users are also able to activate or de-activate the Autoscan feature by clicking on the check-box under the '**Preferences**' column.. See **Fig 1-12**.
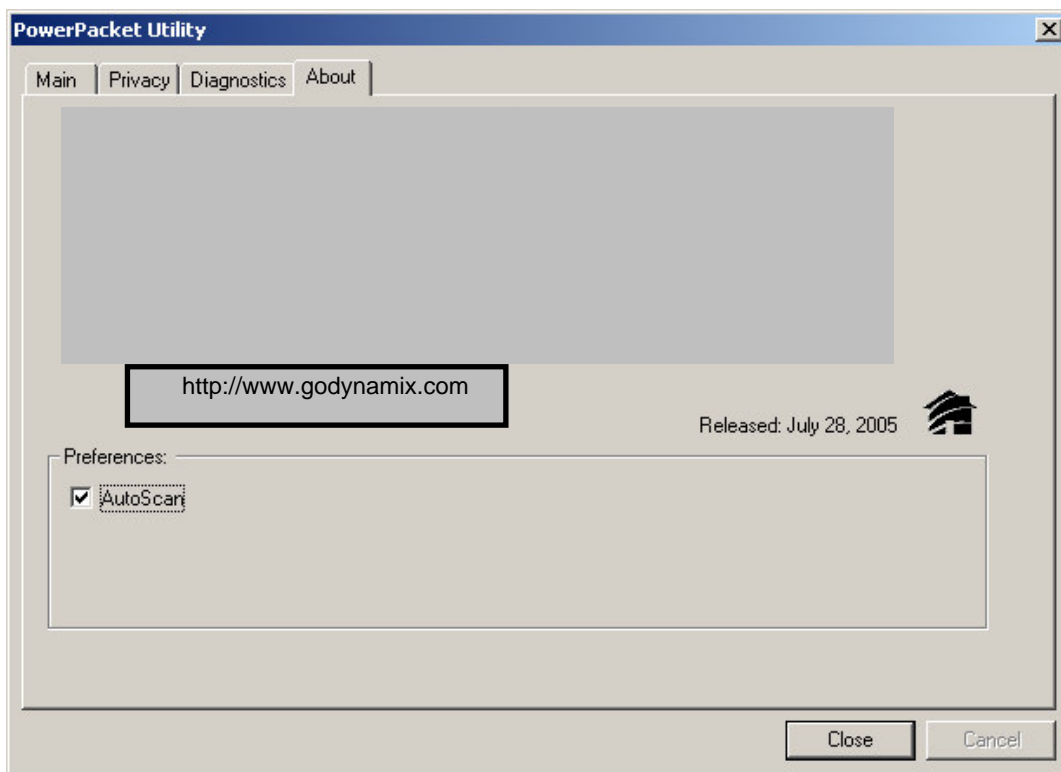

Figure 1-12: About Screen