HPTurbo1

85 Mbps High Speed HomePlug Ethernet Embedded Transient Voltage Surge Suppressor

HPTURBOWALL

85 Mbps High Speed HomePlug Ethernet Bridge

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WARNING

HIGH VOLTAGE is used in the equipment. No user repairable parts, user is never to open device. Failure to observe safety precautions may result in electric shock to user.

Note…
Check voltages before connecting equipment to power supplies. Applying incorrect voltage may result in damage to equipment.

Important Safety Instructions

Please read these instructions carefully:

1) Unplug the **HPTurbo1** or **HPTURBOWALL** 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 **HPTurbo1** or **HPTURBOWALL** near water.

3) The **HPTurbo1** or **HPTURBOWALL** should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation provided.

4) The **HPTurbo1** or **HPTURBOWALL** 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) Plug the **HPTurbo1** or **HPTURBOWALL** directly into a 120V AC wall outlet. Do not use an extension cord between the **HPTurbo1** or **HPTURBOWALL** and the AC power source.

6) Do not attempt to service the **HPTurbo1** or **HPTURBOWALL** yourself, as opening or removing covers may expose you to dangerous voltage points or other risks as well as void the product warranty. Refer all servicing to qualified service personnel only.

7) Unplug the **HPTurbo1** or **HPTURBOWALL** 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

The **HPTurbo1** is a combination HomePlug Ethernet Adapter and Home Networking Protector providing total surge protection for the computer system including its peripherals such as modems, scanners, monitors, printers and routers. The HPTurbo1 also incorporates an Ethernet HomePlug® circuit which provides data networking over existing AC wiring. Traditional surge protectors interfere with data transmitted over AC wiring utilizing HomePlug® technology.

The **HPTURBOWALL** is an 85 Mbps High Speed HomePlug Ethernet Bridge which operates on the HomePlug Powerline Specification 1.0 standard. The HPTURBOWALL allows multiple home desktops and notebooks to be networked to share Internet connections, printers, files, and play games without additional wiring. The installation of the HPTURBOWALL only requires that a 10/100Mbps network adapter is installed on the computer.

Connecting multiple computing devices together to establish a Local Area Network is as simple as 1-2-3 with the **HPTurbo1** and **HPTURBOWALL** devices. Whether you are connecting two computers together or extending your existing network, the **HPTurbo1** and **HPTURBOWALL** comes with drivers for the most popular operating systems: Windows 98SE, 2000, ME, XP, and Vista.

All devices are designed and manufactured to meet's high quality standards and industry organizations' (i.e. HomePlug Powerline Alliance, IEEE, FCC, and UL) rigorous specifications and world-class quality standards.

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.

1.1 Networking Application Examples

- **Workstation with Internet connection over an ADSL/Cable modem**

WWW

INTERNET

ADSL/CABLE MODEM

HPTURBOWALL

OR

HPTURBO1

HOME ELECTRICAL WIRING

HPTURBOWALL

OR

HPTURBO1

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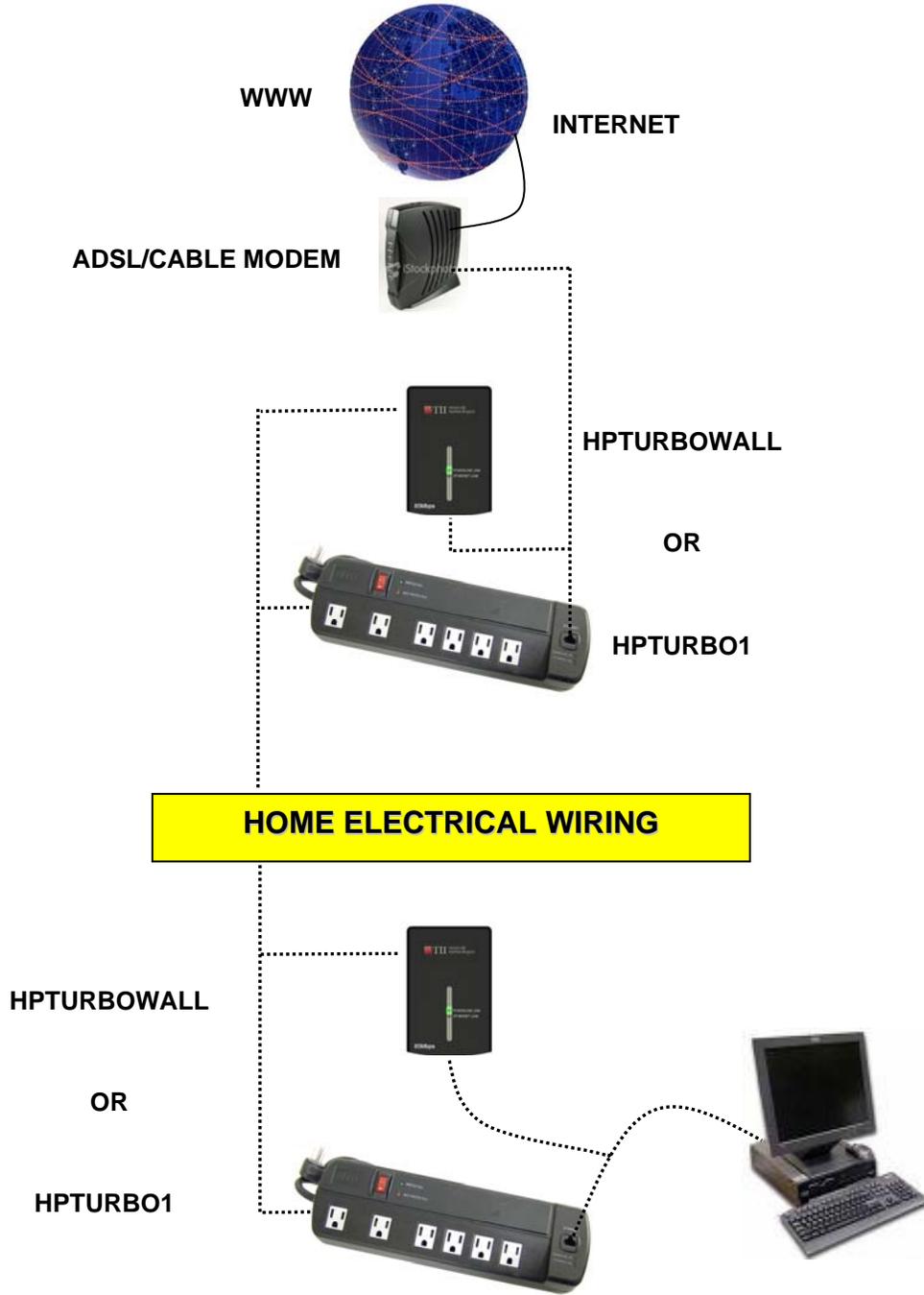
- **Networking for Online Gaming.**

WWW

INTERNET

ADSL/CABLE MODEM

HPTURBOWALL

OR

HPTURBO1

HOME ELECTRICAL WIRING

HPTURBOWALL

OR

HPTURBO1

GAMING SYSTEM
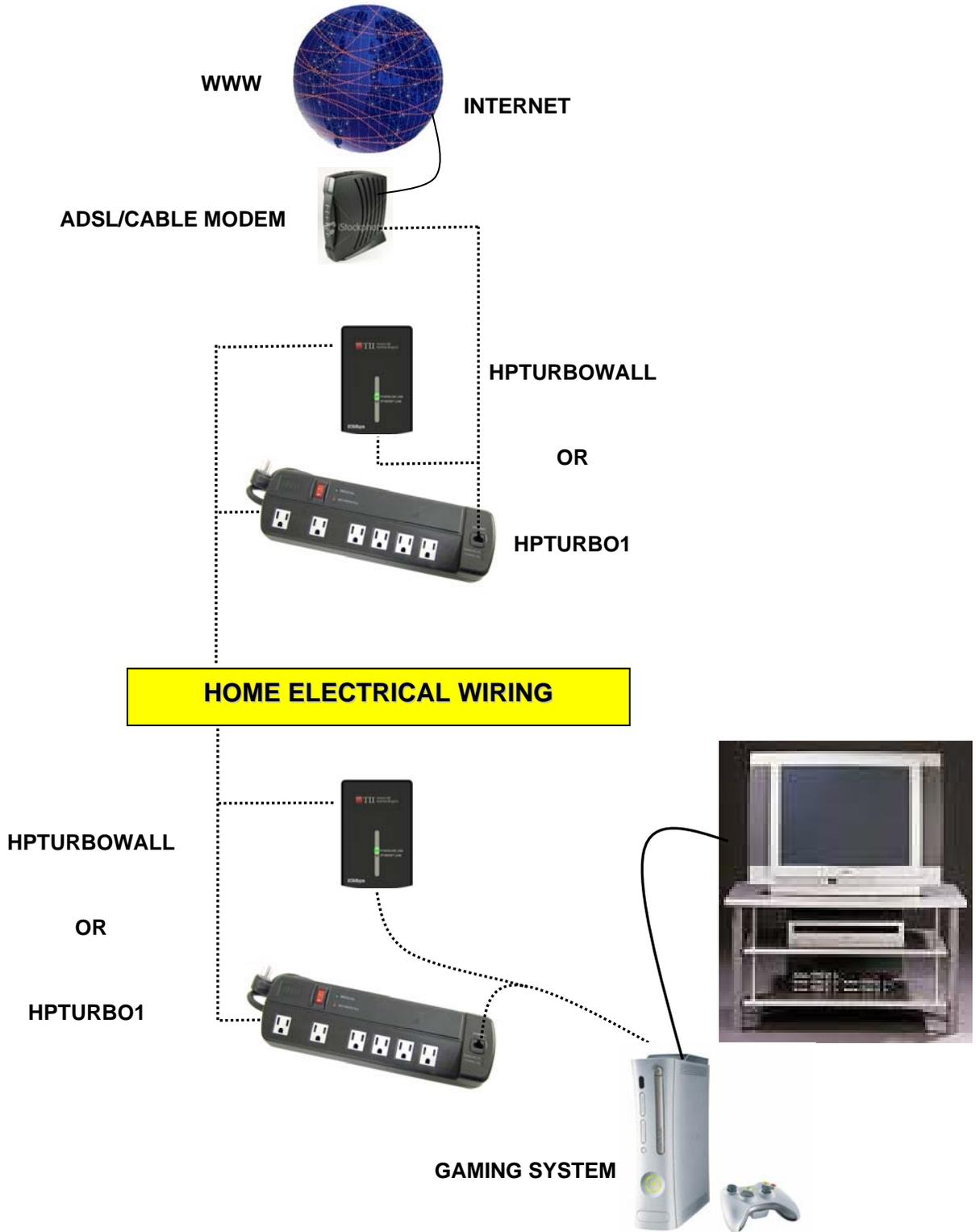
- **Networking for several work stations with IP- STV and one Internet connection over an ADSL/Cable modem router**.

WWW

INTERNET

IP-STV

ADSL/CABLE MODEM

HPTURBOWALL

OR

HPTURBO1

ADSL/CABLE ROUTER

HOME ELECTRICAL WIRING

HPTURBOWALL

OR
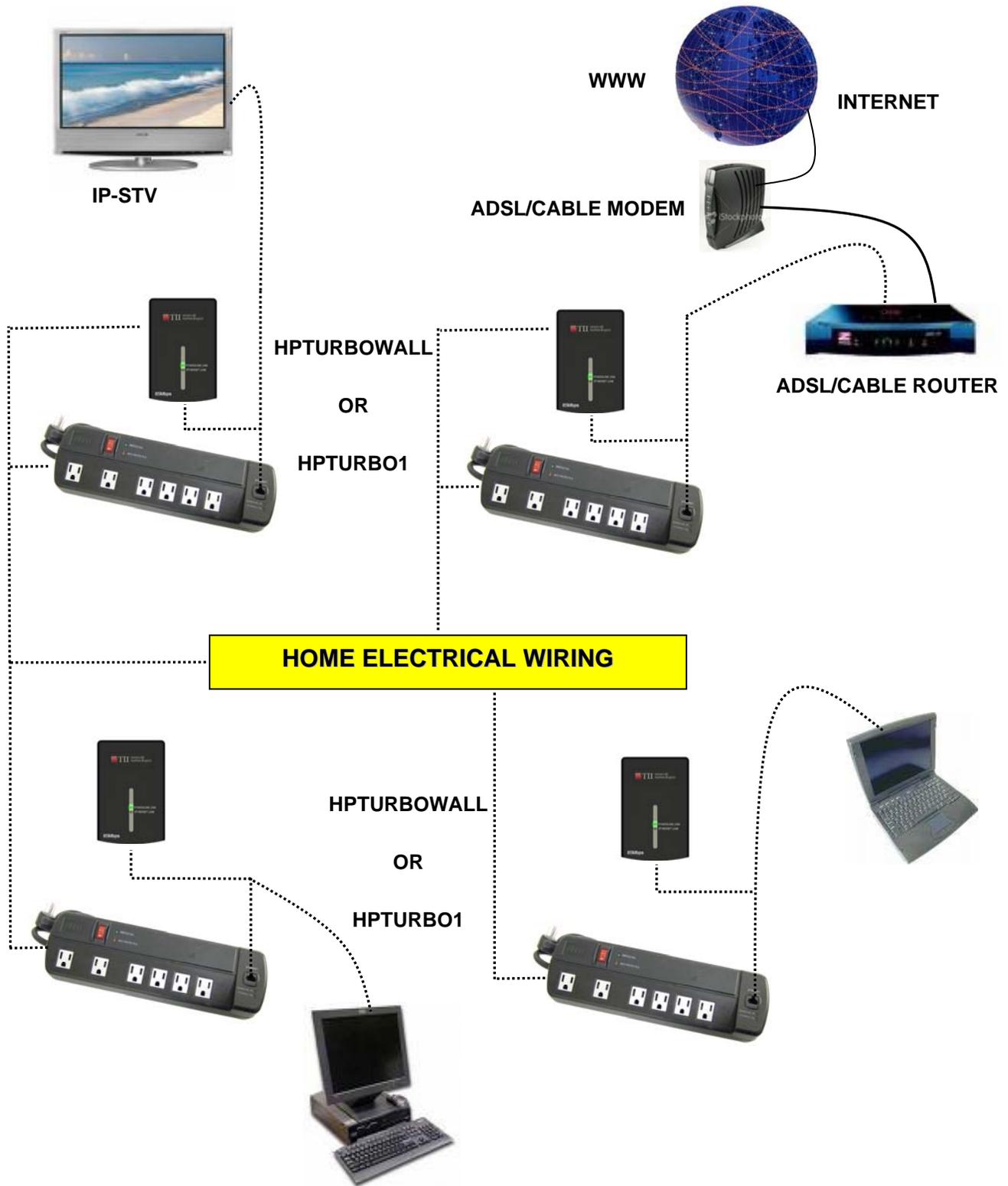
HPTURBO1

1.2 Maximum HomePlug Devices in Network

The maximum number of **HPTurbo1** and **HPTURBOWALL** products in a single-family house is theoretically 253 connections, but in practice no more than 10 devices should be transferring data simultaneously.

1.3 Package Contents

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

HPTurbo1   or   HPTURBOWALL

CAT-5 UTP Ethernet Network cable (RJ-45)   Configuration Utility Installation CD

Chapter 2 – Installation & Connection

2.1   System Requirements

HPTurbo1 and **HPTURBOWALL** products are compatible with all operating systems with an Ethernet port. Drivers are not required for this adapter. The supplied software configures the network password and operates only with Windows operating systems.

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

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

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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 & Un-installation of Configuration Utility

Windows Operating Systems

Installation:

1. Connect the **HPTurbo1** or the **HPTURBOWALL** to the computer or the device with the Ethernet cable.
2. Connect the **HPTurbo1** or the **HPTURBOWALL** to the Power Outlet.
3. Install the **Configuration Utility**. The Installation CD has an auto run feature. If the Installation CD auto run fails, please run the Setup.exe file in the CD.

4. Follow the installation wizard on screen instructions to install the utility drivers.
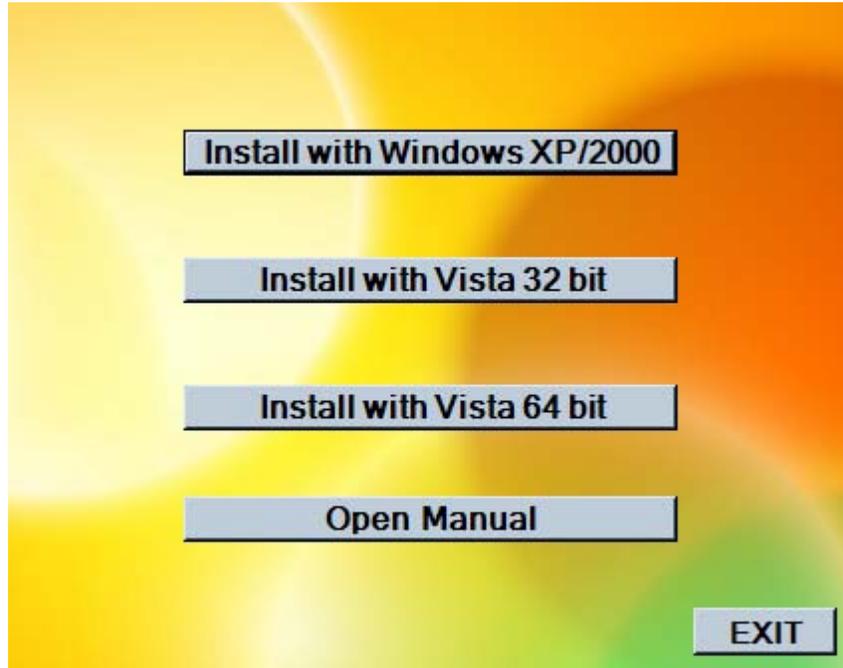
Select the appropriate operating system on your computer.

If you select to install with windows XP/2000, follow the installation wizard below.
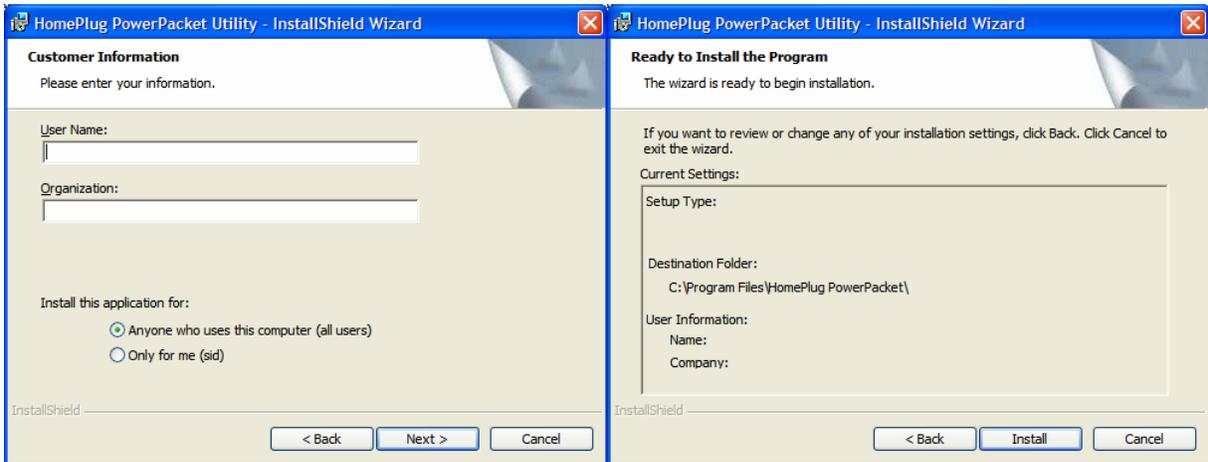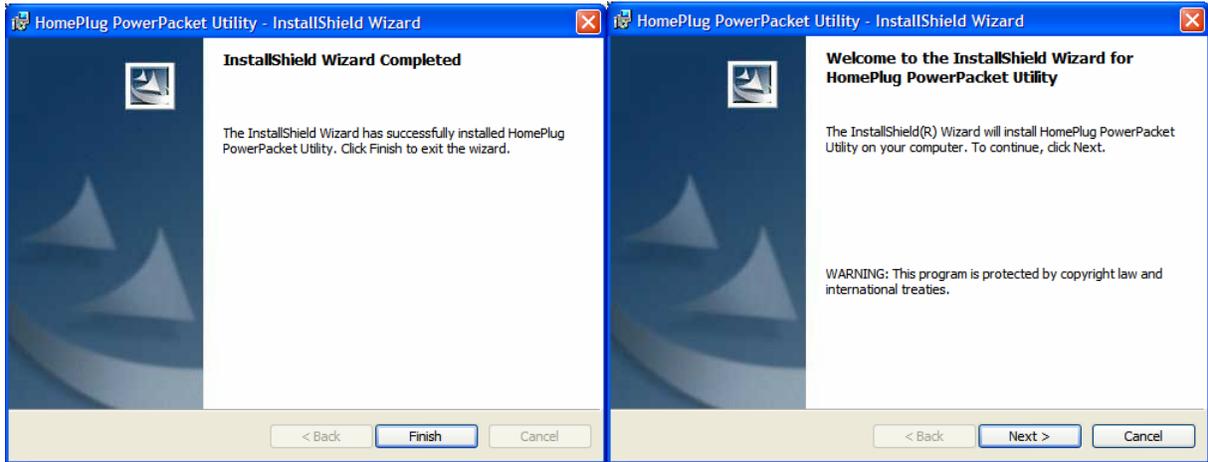
If you select to install with windows Vista 32 bit or Vista 64 bit, follow the installation wizard below.

HomePlug Power Packet Utility for Vista (x86)	HomePlug Power Packet Utility for Vista (x86)
Installation Complete	**Welcome to the HomePlug Power Packet Utility for Vista (x86) Setup Wizard**
HomePlug Power Packet Utility for Vista (x86) has been successfully installed.	The installer will guide you through the steps required to install HomePlug Power Packet Utility for Vista (x86) on your computer.
Click "Close" to exit.	
	WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel < Back Close	Cancel < Back Next >

HomePlug Power Packet Utility for Vista (x86)	HomePlug Power Packet Utility for Vista (x86)
Select Installation Folder	**Confirm Installation**
The installer will install HomePlug Power Packet Utility for Vista (x86) to the following folder.	The installer is ready to install HomePlug Power Packet Utility for Vista (x86) on your computer.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".	Click "Next" to start the installation.
Folder: C:\Program Files\HomePlug\HomePlug Power Packet Utility for Vista Browse...	
Disk Cost...	
Install HomePlug Power Packet Utility for Vista (x86) for yourself, or for anyone who uses this computer:	
○ Everyone	
● Just me	
Cancel Next >	Cancel < Back Next >

HomePlug Power Packet Utility for Vista (x86)
Installing HomePlug Power Packet Utility for Vista (x86)
HomePlug Power Packet Utility for Vista (x86) is being installed.
Please wait...
Cancel   < Back   Next >

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 HomePlug adaptors with the Ethernet cable inserted or ping test between the HomePlug adaptors is not successful, please power the HomePlug adaptors off and on again. You can also unplug the HomePlug adaptor and then plug in again in the presence of the Ethernet.

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 HPTurbo1 and HPTURBOWALL Connections & Indicator Lights

The HomePlug Ethernet Adaptors have two indicator (LEDs) and an Ethernet port.
See Figures below.
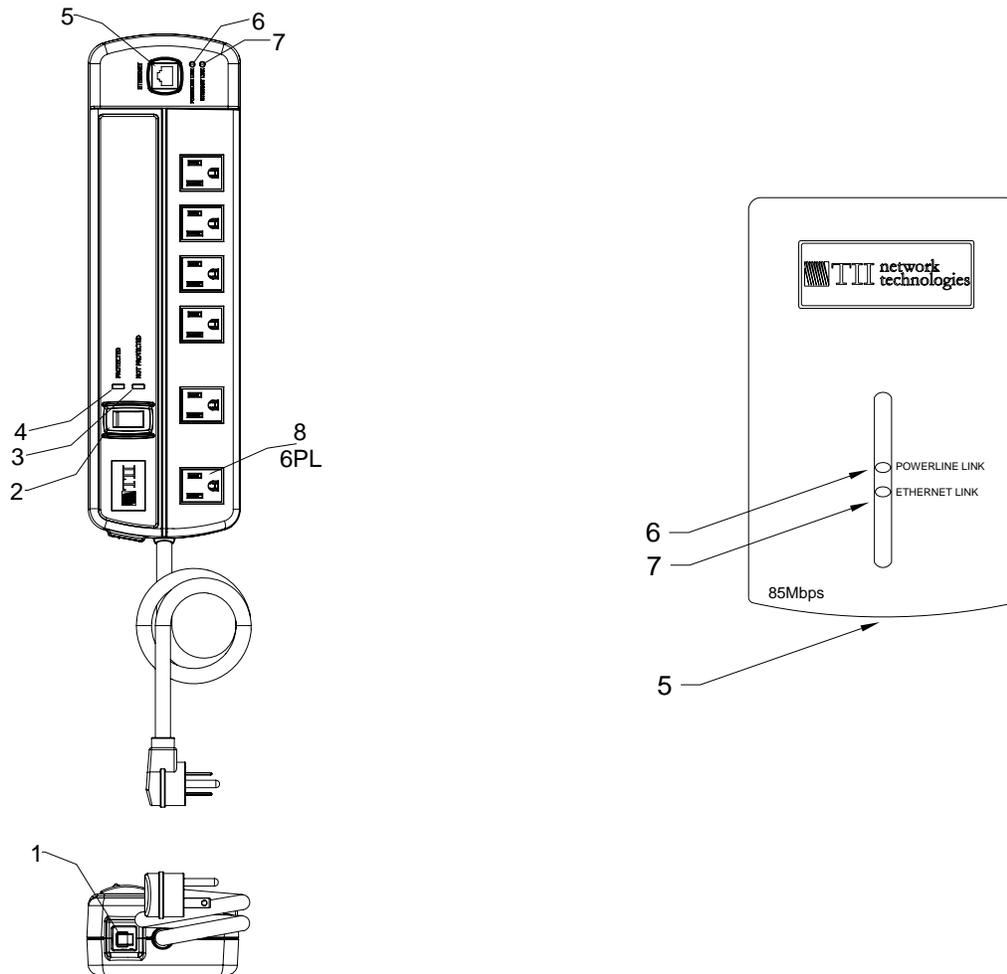
HPTurbo1		HPTURBOWALL
ITEM NO.	**FEATURE**	**DESCRIPTION**
1	Reset Fuse	Self restoring line surge suppresser fuse.
2	Power Switch	When plugged in an AC receptacle indicator lamp ON/OFF.
3	Protected	Green LED ON indicates protection circuit is operational.
4	Not Protected	Red LED ON indicates protection circuit not operational.
5	Ethernet	RJ-45 for Ethernet cable.
6	Power Line Link	LED when ON, indicates that HomePlug circuit is powered.
7	Ethernet Link	LED when ON, indicates Ethernet link established.
8	Filtered Receptacle	6 EMI filtered receptacles for preventing unwanted electrical. noise from been introduced by peripheral devices.

Chapter 3– Configuration Utility Software Features

Running the Utility with Windows XP/2000:

To run the utility, double click the Homeplug PowerPacket icon on your desktop as in Figure 1.

Figure 1

Running the Utility with Vista:

If you installed the configuration utility with Vista, go to start all programs and click on HomePlug PowerPacket.

3.1 Main Screen

The **Main** screen essentially provides a list of all **HPTurbo1** 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 the local **HPTurbo1** device found connected to the computer's NIC (Network Interface Card). See Figure 2**.** In this case the MAC address of device connected locally to the PC is 00:30:0A:4B:B5:C7.
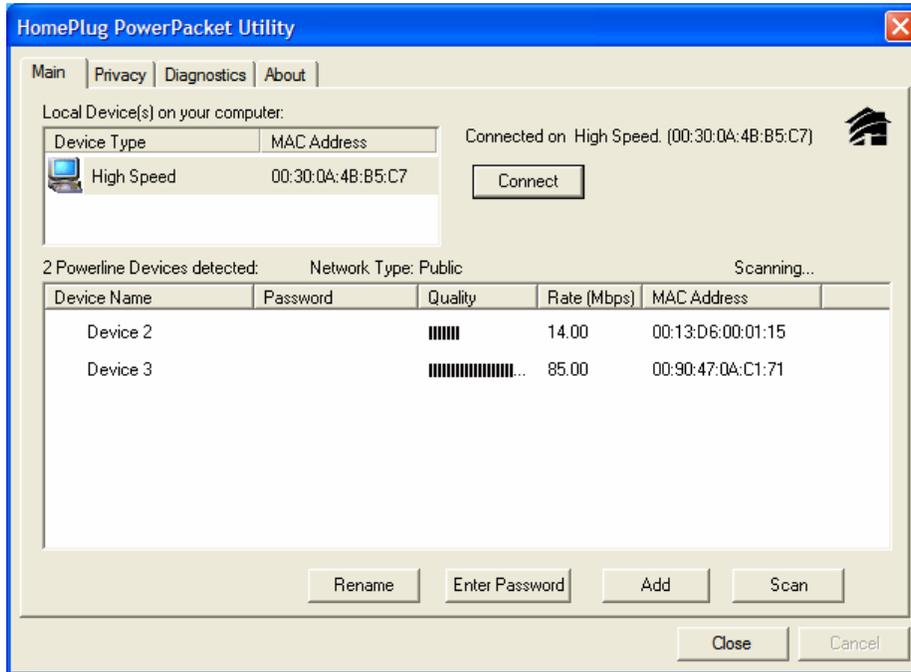
Figure 2

The lower panel displays all the HomePlug devices, identified on the current logical network (remote devices). Displayed immediately above this pane list 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.

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).

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 **HPTurbo1** and **HPTURBOWALL** internal device encryption. It is configured with the Homeplug PowerPacket **Configuration Utility** software.

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.

To set the Password of the device, first select the device by clicking on its name in the lower panel and then click on the EnterPassword button.

In this case Device 3 with MAC addresses 00:90:47:0A:C1:71 as in Figure 3.
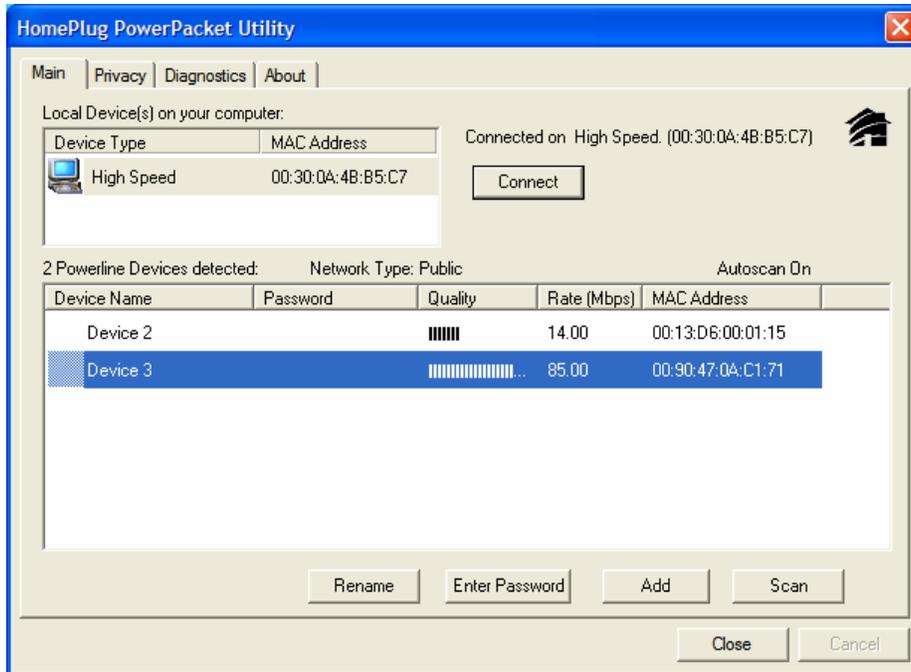
Figure 3

A dialog box will appear as shown in Figure 4 to type the password. The selected device name is shown above the field for entering the password. Hit OK after entering the 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 problem swill be presented. See Figure 5.

Figure 4

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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. The dialog box allows the user to enter both a Device Name and the Device Password.

 A confirmation box will appear if the pass word was entered correctly as in Figure 5.

Figure 5

> ⚠️
> **Note…**
> The device must be present on 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.

3.3 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 Figure 6.

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> **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.
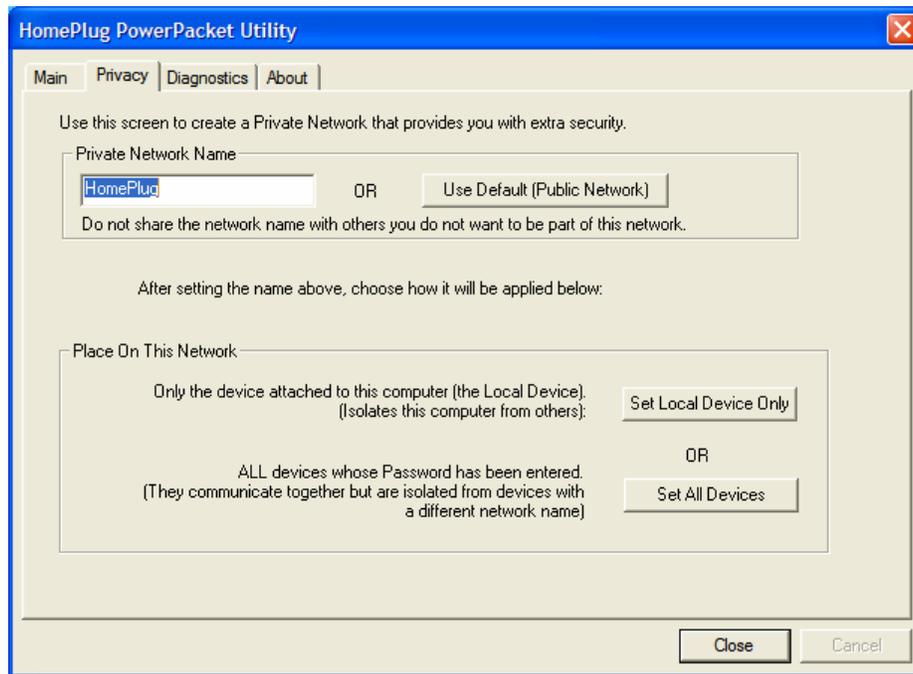
Figure 6

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.

3.4 Diagnostics Screen

The Diagnostics screen shows system information and a history of all devices seen. See Figure 7 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
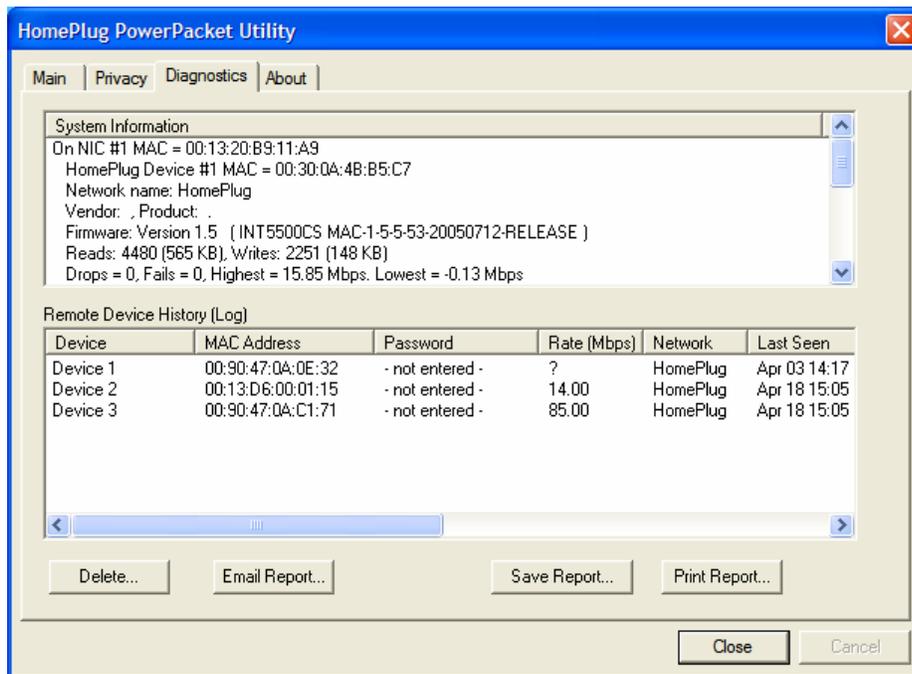
Figure 7

The lower panel contains a history of all remote devices seen on the computer, overtime. 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

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3.5 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 Figure 8.

Figure 8