Actiontec®

85 Mbps

MegaPlug
Ethernet Adapter
Model #: HPE400T

User Manual
Ver 1.0

Solutions for the Digital Life™

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Introduction

<div style="text-align: right; font-size: 3em;">**1**</div>

Thank you for purchasing the Actiontec MegaPlug 4-Port Hub. The MegaPlug 4-Port Hub is one of the easiest ways to enjoy home or small business networking. It operates on the MegaPlug Powerline Specification Turbo standard, providing data transfer speeds up to 85 Mbps over home AC wiring. Since home power lines are the most pervasive medium in households, with multiple outlets in every room, the MegaPlug 4-Port Hub allows multiple desktop and laptop computers to be networked easily, enabling them to share an Internet connection, printers, files, and games, without any additional wiring. If you want to take your computer networking to the next level, the Actiontec MegaPlug 4-Port Hub is sure to be one of the keys to your success.
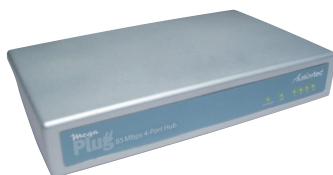
Package Contents

Make sure the following items came in this package:

- Actiontec 85 Mbps MegaPlug 4-Port Hub

- Ethernet Cable

- Power Cord

- Installation CD (includes this manual)

- Quick Start Guide

Features

- HomePlug Turbo compliant

- 85 Mbps data rate (maximum)

- 56-bit DES encryption

- Two-pronged US power plug (fits ungrounded power outlets)

- Power and Link indicators

System Requirements

- At least 1 available power outlet

- Standard home power wiring

- Computer with the following:

  · CD-ROM drive

  · IBM compatible running at 200 MHz or better

  · Windows 98SE, Me, 2000, or XP installed

  · 64 MB of RAM

  · Ethernet network Hub

  · TCP/IP installed

Getting to Know the 4-Port Hub

This section contains a quick description of the Hub's external features.

Front Panel

The Hub's front panel features six lights (LEDs):

Power Light

The Power light glows green the Hub is powered up ("On"). If the Power light is off, the Hub is powered down ("Off").

HP Light

The HP light illuminates when the Hub is connected to a MegaPlug network.

Ethernet Lights (1, 2, 3, 4)

The Ethernet lights glow green when a device is connected to the Hub via the respectively number Ethernet port.

Rear Panel

The Hub's bottom panel contains an AC port and four Ethernet port:

Ethernet Ports

The Ethernet ports (1, 2, 3, and 4) are used to connect the Hub to a computer or gateway/router via Ethernet cable.

AC IN Port

The AC IN port is used to connect Hub with an electrical wall socket via the included Power cable

Information Sticker

The information sticker (located on the bottom of the Hub) displays the MAC (Media Access Control) address, device ID, and other information about the Hub.

Technical Support

Actiontec Electronics prides itself on making durable, high-quality, high-performance products. If you need assistance, the Actiontec Technical Support Department is available all day every day to provide professional support.

Actiontec Electronics, Inc.

760 N. Mary Avenue
Sunnyvale, CA 94085

Technical Support

Phone: (USA) 1-888-436-0657
E-mail: http://support.actiontec.com/email_support/support_form.php
Internet: www.actiontec.com/support

Connecting the MegaPlug Hub

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To connect the Hub, it must be connected to a computer, plugged into a standard wall outlet, and the Configuration Utility loaded on the computer.

Connecting the Hub

To use the Hub properly, if should be plugged into electrical outlets, and devices (computers, printers, etc.) connected to them.

Connecting a Hub to a Computer

1. Get a Hub and one Ethernet cable.

2. Insert one end of the Ethernet cable into the Ethernet port of the Hub.

3. Plug the Hub into a wall outlet.

☞ *Note:* Do not plug the Hub into a UPS or power strip with surge protection. The Hub's network signal may not pass through these devices.

4. Insert the other end of the Ethernet cable into an Ethernet port on the back of a computer.

Connecting a Hub to a Router/Gateway

1. Get a Hub and one Ethernet cable.

2. Insert one end of the Ethernet cable into the Ethernet port of the Hub.

3. Plug the Hub into a wall outlet.

☞ *Note:* Do not plug the Hub into a UPS or power strip with surge protection. The Hub's network signal may not pass through these devices.

4. Insert the other end of the Ethernet cable into an Ethernet port on a router/gateway connected to a computer.

**5.** Insert the other end of the Ethernet cable into an Ethernet port on a router/ gateway connected to a computer.

Follow the instructions in the next section, "Installing the Configuration Utility."

Installing the Configuration Utility

After connecting the Hub, install the Configuration Utility:

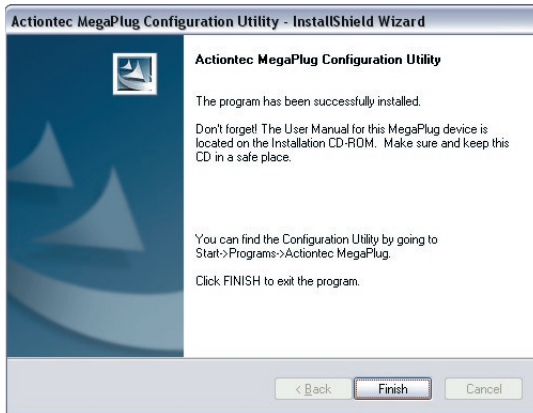**1.** Insert the Installation CD in the CD-ROM drive of the computer connected to a Hub.

2. When the "Welcome" screen appears, click **Next**.
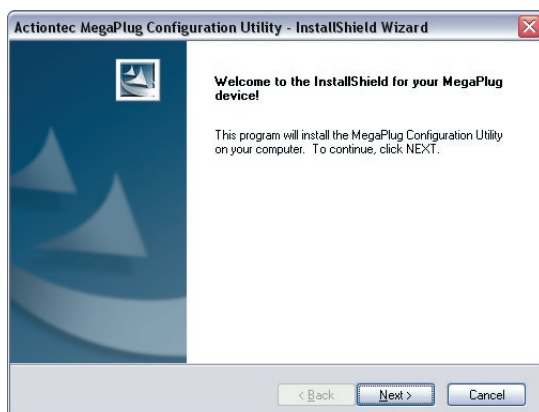
3. When the "Choose Destination Screen" appears, click **Next**.
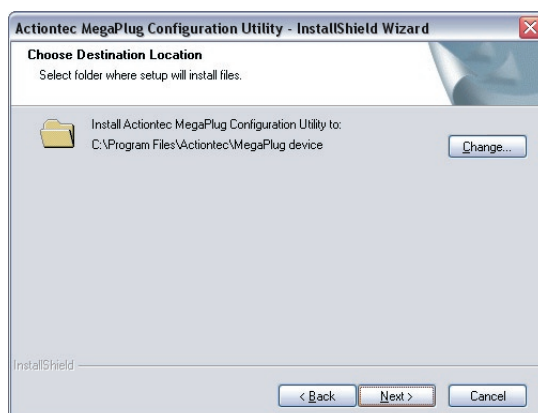
4. When this window appears, click **Finish**.

5. Repeat for other computers connected to a Hub.

The MegaPlug Hub is now connected and ready to use, and the Configuration Utility is loaded on the computers. Go to chapter 3, "Using the Configuration Utility" for information about changing the default configuration settings of the Hub.

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Using the Configuration Utility

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Once the Hub has been properly connected and installed, the user can further configure the Hub using the Actiontec MegaPlug Configuration Utility. The Utility also provides information about the network. To access the Utility:

1. Click **Start** on the desktop, then **Programs**.

2. From the Programs menu, find "Actiontec MegaPlug," then select **MegaPlug Configuration Utility**.

The Utility appears on the desktop. See the following sections for more information about the Utility's capabilities.

Quick Setup

Selecting **Quick Setup** from the row of tabs near the top of the Utility's window generates the "Quick Setup" tab.
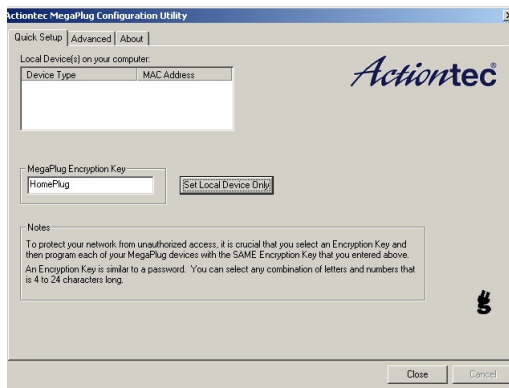
Use this tab to quickly set up security on all MegaPlug devices on the network.

Local Device(s) on Your Computer

The list displays all MegaPlug Hubs connected to the computer.

☞ *Note:* If no Hub appears in the Device List, make sure the Hub is connected properly (with the appropriate Ethernet cable) to the computer. Then, unplug the Hub, and plug it back in again. If, after performing these actions, no Hub appears in the Device List, the Hub may be defective. Contact technical support.

MegaPlug Encryption Key

Enter an encryption key in this text box to provide security for your MegaPlug network. A key is similar to a password, and can be made up of any combination of letters or numbers, from 4 to 24 characters long. Once activated, this key must be entered into a device's network configuration to join the MegaPlug network.

✍ *Important:* **All Hubs on the same network must have the same encryption key. If not, they will not be able to connect.**

Set Local Device Only

Click this button to encrypt the device selected in the "Local Device(s) on your computer" list box.

Advanced

Selecting **Advanced** from the row of tabs near the top of the Utility's window generates the "Advanced" tab.
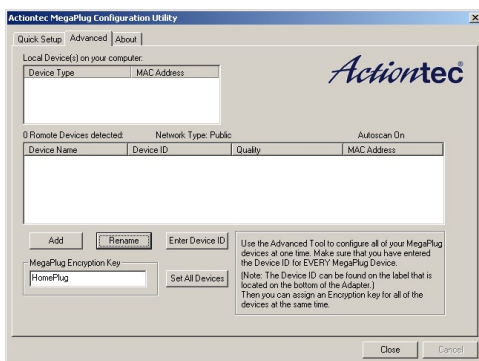
Local Device(s) on Your Computer

The list displays all MegaPlug Hubs connected to the computer.

☞ *Note:* If no Hub appears in the Device List, make sure the Hub is connected properly (with the appropriate Ethernet cable) to the computer. Then, unplug the Hub, and plug it back in again. If, after performing these actions, no Hub appears in the Device List, the Hub may be defective. Contact technical support.

Network List

The Network List (the list box at the center of the Network tab) lists all other Hubs connected to this MegaPlug network. Only Hubs with the same password as the Hub connected to this computer are shown on this list. The available Hubs are listed by their MAC addresses, and include their device name, device ID, and the quality of the connection.

Add

Clicking this button allows the user to add a MegaPlug Hub to the network. In the window that appears, enter the device name and password in the appropriate text boxes, then click **OK**.

Rename

Clicking this button allows the user to rename a MegaPlug Hub listed in the Network List. Select the device from the Network list, click **Rename**, then enter the new name.

Enter Device ID

Clicking this button allows the user to enter a MegaPlug Hub device ID. The device ID is found on the sticker attached to the Hub (see page 3).

MegaPlug Encryption Key

Enter an encryption key in this text box to provide security for your MegaPlug network. A key is similar to a password, and can be made up of any combination of letters or numbers, from 4 to 24 characters long. Once activated, this key must be entered into a devices network configuration to join the MegaPlug network.
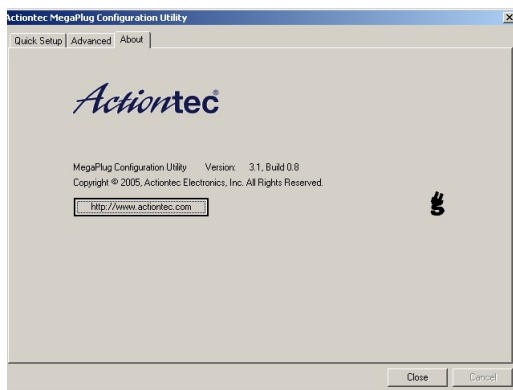
Set All Devices

Click this button to encrypt all devices on the MegaPlug network.

About

Selecting **About** from the row of tabs near the top of the Utility's window generates the "About" tab.

The About tab displays the MegaPlug Configuration Utility version.

Troubleshooting

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This chapter contains a list of problems that may be encountered while using the MegaPlug 4-Port Hub, and techniques to solve them. Note that these techniques may not be successful in all cases. Also included is a list of frequently asked questions.

Troubleshooting

If the Hub is showing signs of trouble, before attempting any other troubleshooting procedures, plug the Hub into a working electrical wall socket.

The Power light doesn't light up after I plug the Hub into a wall outlet.

First, make sure the Hub is installed and connected correctly. Then, ensure the wall outlet is working by plugging other electric devices into it. If it is working, plug in the Hub again, and if the Power light still doesn't illuminate, try plugging it into other wall outlets. If the Hub is still experiencing this problem, contact technical support.

The Link light doesn't light up on the Hub.

If one of the Hub's Ethernet lights is not illuminating, a LAN connection is not being detected.

- Make sure the Hub is installed and connected correctly.

- Check the Hub on the computer and make sure it is enabled and working properly. Also, make sure the right type of Ethernet cable is being used.

I can't connect to the Internet or any of the other computers on the network.

- Make sure the IP address and TCP/IP protocol are set up properly for all the computers on the network, then try to ping the gateway.

- Use the Hub's Configuration Utility to detect all other Hubs on the network. Then, plug the Hubs into adjacent sockets. If the Ethernet lights still don't illuminate, contact technical support.

The Power and Link lights are on, but I can't access the router/gateway from the computer

- Try plugging the Hub in different power outlets.

- Make sure all Hubs on the network are using the same security parameters.

Frequently Asked Questions

What's the transfer speed over the Hub's network?

The Hub's network transfer speed is 85 Mbps (maximum) over a standard home power line network.

What's the estimated range of the Hub's network?

Approximately 300 meters (~985 ft.) in wall power lines (one household).

Will the Hub work in any home?

The Hub will work in any home with built-in copper wiring. It may not operate in some older homes (pre-1950) with alternate wiring.

Will the Hub's network signal pass through circuit breakers?

Yes, the Hub's network signal will pass through circuit breakers. It will not, however, pass through power transformers.

Does the Hub work with a 100 – 240V AC input ?

Yes.

Does using the Hub cause any interference with other home networking devices?

No. The Hub operates at a different frequency than other power line control devices and can co-exist with technologies such as X-10, CEBus, and LONworks.

Can my neighbor receive the Hub's network signal?

It is possible for a neighbor to receive the network signal. To prevent this, change the default 56-bit DES security encryption password on the Hub (see chapter 3).

How do I find out what the current speed and signal strength of the Hub's network is?

Run the Hub's Configuration Utility to show current speed and signal strength.

How many Hubs do I need to set up a network?

One.

To set up the Hub's network correctly, do I have to install the Configuration Utility on each computer on the network?

No, the Configuration Utility is a diagnostic and security tool. Since the Hub is fully plug-and-play compatible, it needs no software drivers to operate.

How many Hubs can be installed on the same LAN (local area network)?

Actiontec recommends using no more than 16 Hubs on one network.

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Setting Up Static IP Address

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To communicate with a MegaPlug 4-Port Hub from a computer on the network, the user may have to switch the IP address settings from DHCP-enabled to static IP, so that the computer and the Hub are on the same subnet.

To set up static IP on a computer, select the operating system and follow the instructions.

☞ *Note*: The following procedures are based on the Hub's factory default IP address. If the Hub's IP address has been changed, enter the new IP address when instructed to enter an IP address.
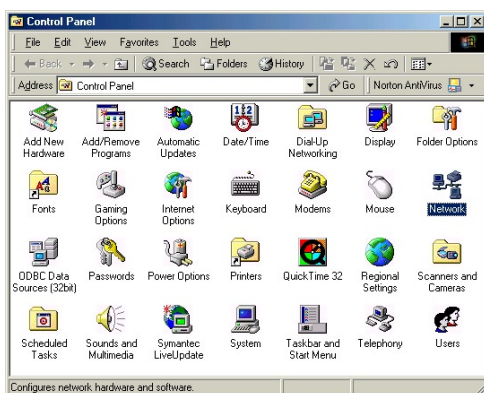

Windows 98 SE

1. From the desktop, click on the **Start** button in the lower left corner.

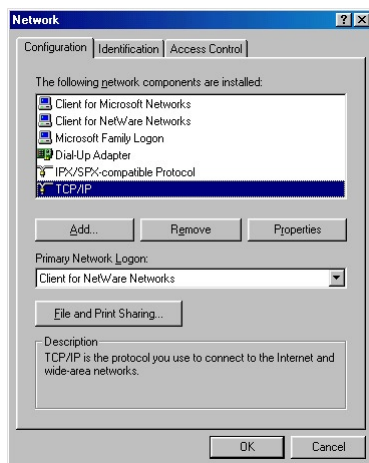**2.** From the menu that appears, select **Settings**.
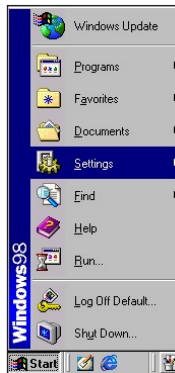
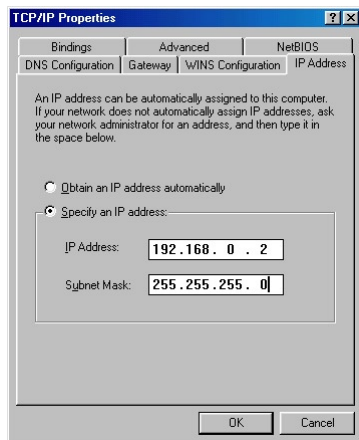**3.** Another menu appears. Select **Control Panel**.

4. When the "Control Panel" window appears, double-click **Network**.

5. The "Network" window appears. In the "The following network components are installed" list box, locate and double-click **TCP/IP**.

6. The "TCP/IP Properties" window appears. Select **IP Address**.

7. In the IP Address tab, make sure the circle next to "Specify an IP Address" is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

8. Enter the following numbers in the "IP Address" text box:
```
192.168.0.2
```
Press the space bar on the keyboard to add the periods between the numbers.

9. Enter the following numbers in the "Subnet mask" text box:

```
255.255.255.0
```

Press the space bar on the keyboard to add the periods between the numbers.

10. Click **OK**. The TCP/IP Properties window disappears.

11. In the Network window, click **OK**. The Network window disappears.

12. The "System Settings Change" window appears, asking whether the computer should be restarted. Click **Yes**.
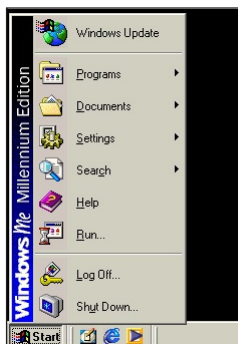

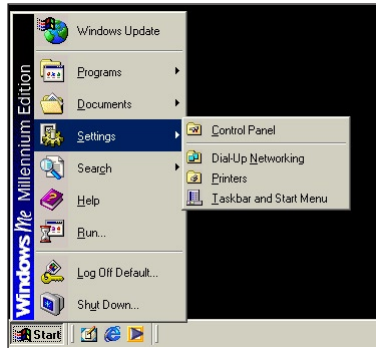The computer restarts. It is now set up with a static IP address.
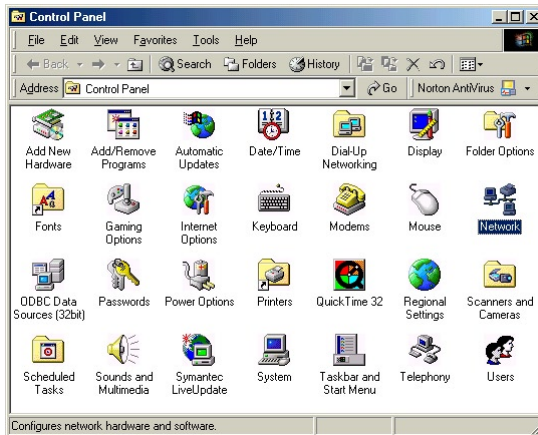
Windows Me

1. From the desktop, click on the **Start** button in the lower left corner.

2. From the menu that appears, select **Settings**.

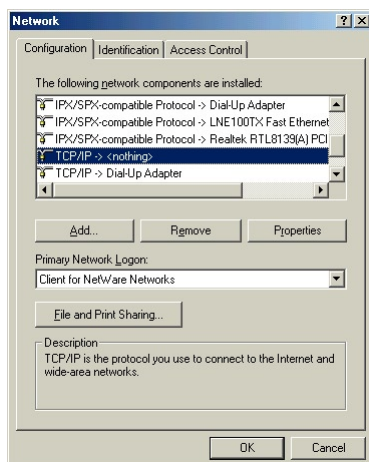**3.** Another menu appears. Select **Control Panel**.

4. When the "Control Panel" window appears, double-click **Network**.

5. The "Network" window appears. In the "The following network components are installed" list box, locate and double-click **TCP/IP**.

6. The "TCP/IP Properties" window appears. Click **IP Address**.
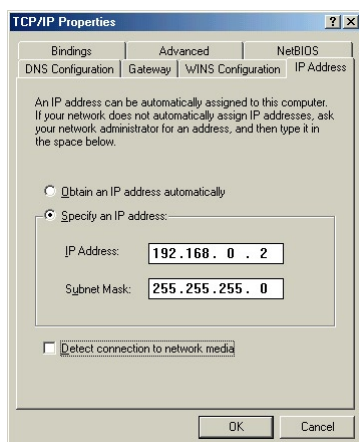
7. In the IP Address tab, make sure the circle next to "Specify an IP Address" is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

8. Enter the following numbers in the "IP Address" text box:
      `192.168.0.2`
Do not include the periods; they are automatically entered.

9. Enter the following numbers in the "Subnet mask" text box:

         `255.255.255.0`

Do not include the periods; they are automatically entered.

10. Click **OK**. The TCP/IP Properties window disappears.

11. If there is a check in the box next to "Detect connection to network media," click on it to uncheck the box.

12. In the Network window, click **OK**. The Network window disappears.

13. The "System Settings Change" window appears, asking whether the computer should be restarted. Click **Yes**.

The computer restarts. It is now set up with a static IP address.

Windows 2000

1. From the desktop, click on the **Start** button in the lower left corner.

2. From the menu that appears, select **Settings**.

3. Another menu appears. Select **Control Panel**.

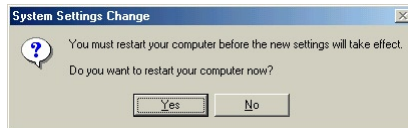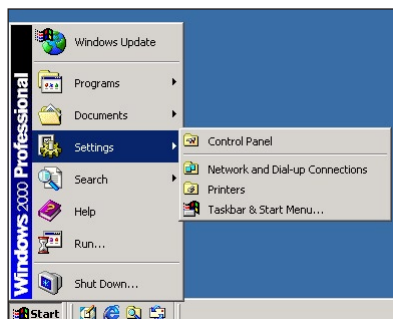**4.** When the "Control Panel" window appears, double-click **Network and Dial-up Connections**.

5. In the "Network and Dial-up Connections" window, double-click **Local Area Connection**. A number may be displayed after the Local Area Connection. If there is more than one Local Area Connection listed, locate the one that corresponds to the network card installed in the computer by finding the name of the network card in the **Device Name** column.
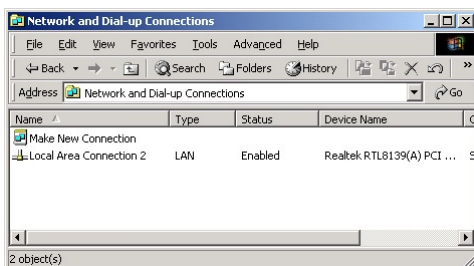
6. The "Local Area Connection Status" window appears. Select **General**, then click **Properties**.
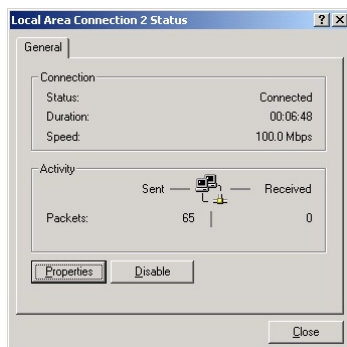
7. The "Local Area Connection Properties" window appears. Click **General**.

8. In the "Components checked are used by this connection" list box, double-click **Internet Protocol** (**TCP/IP**).
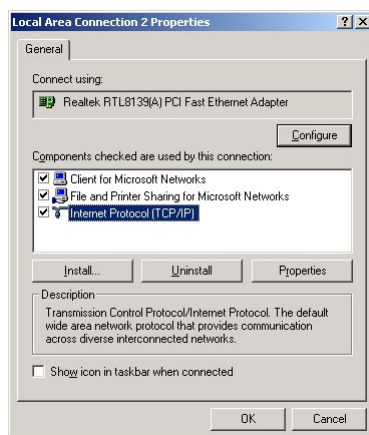
9. The "Internet Protocol (TCP/IP) Properties" window appears.
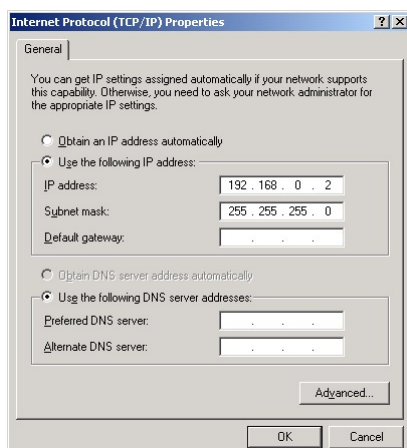
10. In the **General** tab, make sure the circle next to "Obtain an IP Address auto-matically" is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

11. Enter the following numbers in the "IP Address" text box:

```
192.168.0.2
```
Press the space bar on the keyboard to add the periods between the numbers.

12. Enter the following numbers in the "Subnet mask" text box:

`255.255.255.0`

Press the space bar on the keyboard to add the periods between the numbers.

13. Click **OK**. The "Internet Protocol (TCP/IP) Properties" window disappears.

14 In the "Local Area Connection Properties" window, click **OK**. The Local Area Connection Properties window disappears.

15. Click **Close** in the Local Area Connection Status window. The window disappears.

16. Close the Network and Dial-up Connections window by clicking on the "**x**" button at the upper right corner of the window.

The computer is now set up with a static IP address.

Windows XP

1. From the desktop, click **Start** button in the lower left corner.

2. From the menu that appears, select **Control Panel**.
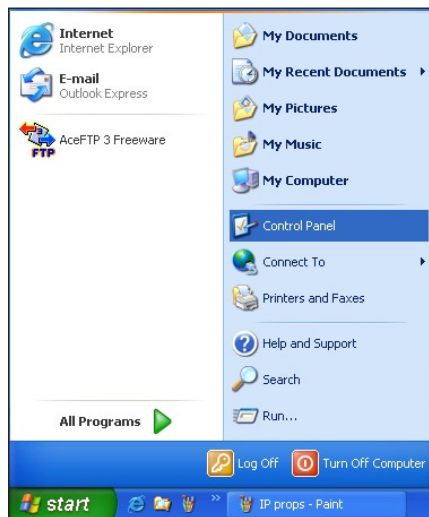
3. When the "Control Panel" window appears, double-click **Network Connections**.
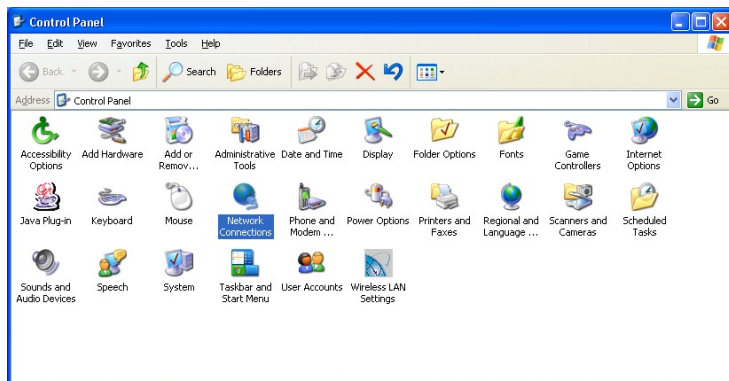
4. In the "Network Connections" window, double-click **Local Area Connection**. A number may be displayed after the Local Area Connection. If more than one Local Area Connection is listed, locate the one that corresponds to the network card installed in your computer by finding the name of the network card in the "Device Name" column.
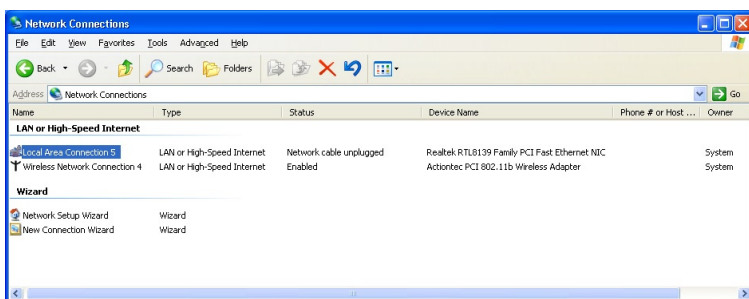
5. The "Local Area Connection Properties" window appears. Select **General**.

6. In the "This connection uses the following items" list box, double-click **Internet Protocol (TCP/IP)**.
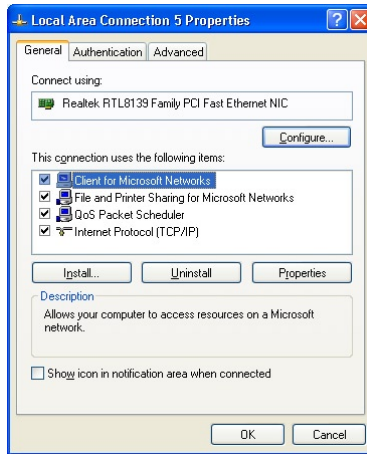
7. The "Internet Protocol (TCP/IP) Properties" window appears.
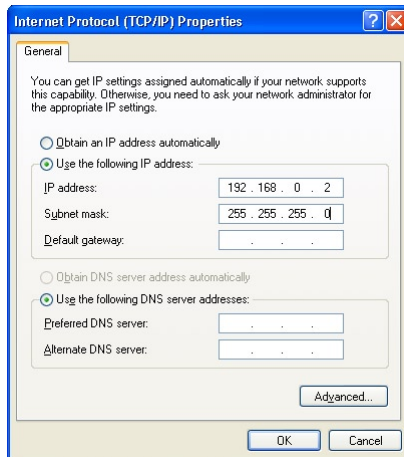
8. In the **General** tab, make sure the circle next to "Use the following IP Address" is selected. When active, a black dot appears in the circle. If the circle already contains a black dot, leave it alone.

9. Enter the following address in the "IP Address" text box:
   `192.168.0.2`
   Enter the periods in the address by pressing the space bar on the keyboard.

10. Enter the following address in the "Subnet mask" text box:
   `255.255.255.0`
   Enter the periods in the address by pressing the space bar on the keyboard.

11. Click **OK**. The Internet Protocol (TCP/IP) Properties window disappears.

12 In the Local Area Connection Properties window, click **Close**. The Local Area Connection Properties window disappears.

13. Click **Close** in the Local Area Connection Status window. The window disappears.

14. Close the Network and Dial-up Connections window by clicking on the "**x**" button at the upper right corner of the window.

The computer is now set up with a static IP address.

Setting Up File and Printer Sharing

6

This chapter describes how to share files, hard drives, and printers over the MegaPlug network.

File Sharing

To share files, directories, or hard drives on the MegaPlug network, select the operating system running on the computer, then follow the instructions.

Windows XP

After installing and configuring the 4-Port Hub, Windows XP automatically enables file sharing. The only item that needs to be altered is workgroup settings. All the computers on the network must have the same workgroup name, but different computer names. To check or change this:

1. Right-click the **My Computer** icon and click **Properties**. The "System Properties" window appears.

2. Select the **Computer Name** tab.
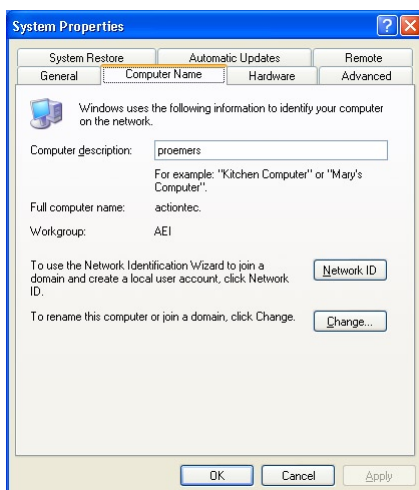
3. Click **Change**.

4. When the "Computer Name Changes" window appears, enter a new computer name in the "Computer name" text box.
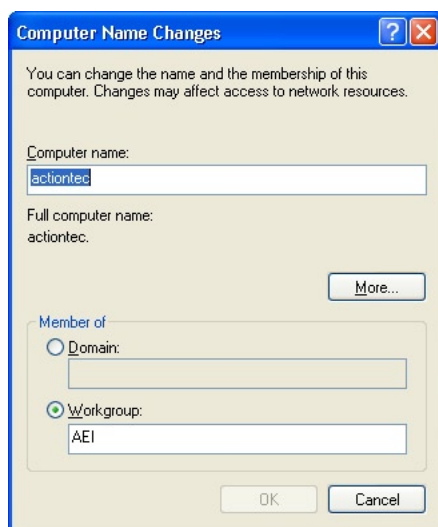
5. Enter a workgroup name in the "Workgroup" text book.

6. Click **OK**.

7. Restart the computer.

Windows 2000

After installing and configuring the 4-Port Hub, Windows 2000 automatically enables file sharing. The only item that needs to be altered is workgroup settings. All the computers on the network must have the same workgroup name, but different computer names. To check or change this:

1. Right-click the **My Computer** icon on your desktop, then select **Properties**.

2. When the "System Properties" window appears, select **Network Identification**.
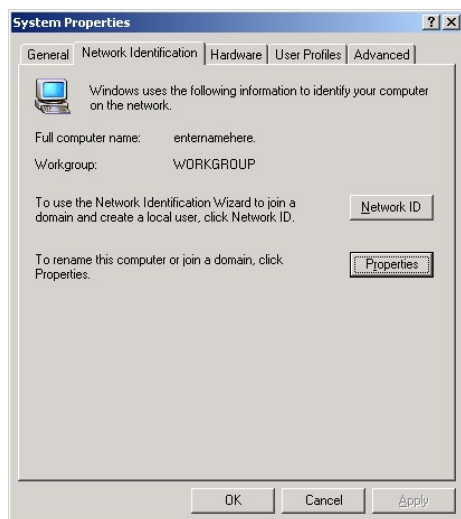
3. If the **Workgroup** name is already the same as all the other computers on the network, click **OK.** If it is not the same, click **Properties**.

4. The "Identification Changes" window appears. In the "Computer Name" text box, type a name different than the other computers on the network.
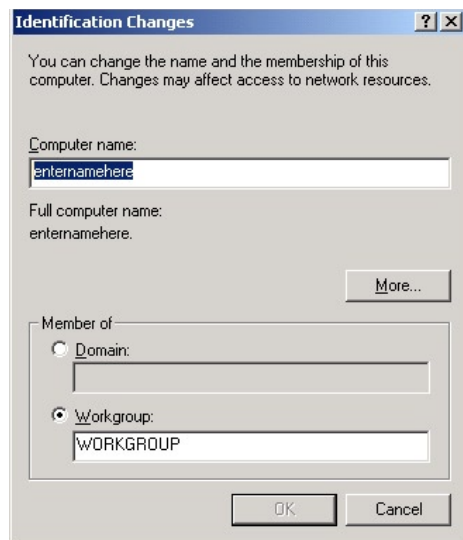
5. In the "Workgroup" text box, enter the network workgroup name. This is the same on each computer on the network.

6. Click **OK**.

7. Click **OK** again.

8. Restart the computer.

Windows 98, 98SE, and Me

1. Click **Start**, select **Settings**, then **Control Panel**.

2. In the Control Panel window, double-click the **Network** icon. The Network window appears.

3. In the "Configuration" tab, click **Add**. The "Select Network Component Type" window appears.
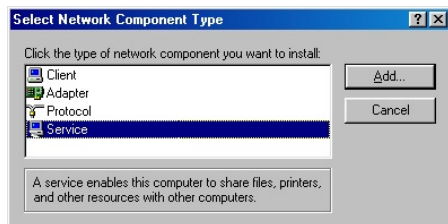
4. Select **Service**, then click **Add**. The "Select Network Service" window appears.
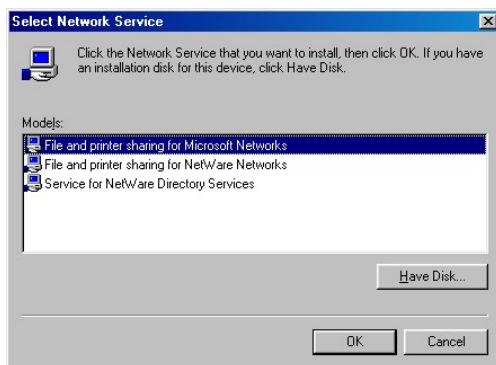
5. Highlight **File and printer sharing for Microsoft Networks**, then click **OK**.

6. The "File and Print Sharing" window appears. Make sure both options have a check mark in their check boxes. If not, click in the box to activate.

7. Click **OK**. The Network window reappears.
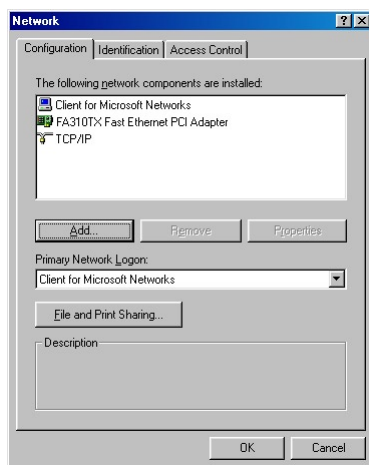
8. In the Network window, select **Identification**. The "Identification" tab appears.
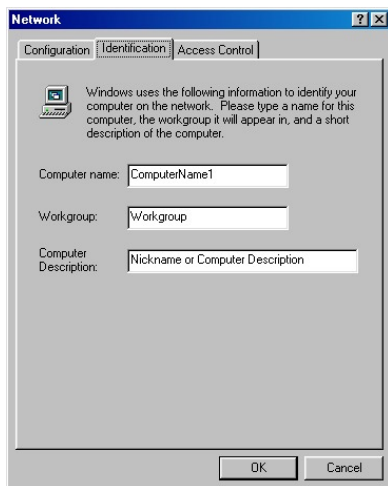
9. In the "Computer Name" text box, type a name different than the other computers on the network.

10. In the "Workgroup" text box, enter the network workgroup name. This is the same on each computer on the network.

11. Enter any description in the "Computer Description" text box. Traditionally, the location name or main user's name is entered.

12. Select **Configuration** to display the Configuration window again.

13. In the "Primary Network Logon" text box, make sure "Client for Microsoft Networks" is entered. If not, click the down arrow and select it from the list.

14. Click **OK**. A "System Settings Change" window appears. Click **Yes**.
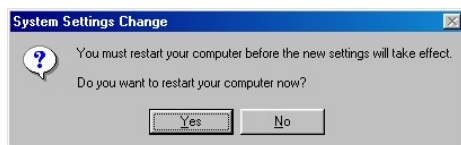
15. After your computer restarts, Windows prompts for a user name and password. Enter a user name and password, then write them on a sheet of paper, as they will be needed to access the network in the future.

16. Find a file or hard drive to share, right-click its icon, and select **Sharing**. The "Properties" window appears.

17. In the Properties window, select **Sharing**. The "Sharing" tab appears.
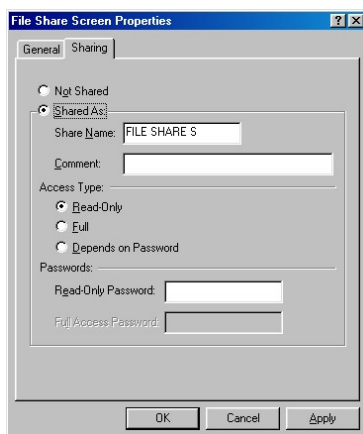
18. Click in the circle next to "Shared As" to share the file or hard drive.

19. Select an **Access Type**:

Read Only - Allows other users on the network to view and read the file or hard drive selected. They will not be able to modify it in any way. You can further restrict their privileges by entering a password in the appropriate text box.

Full - Allows other users on the network to read, modify, move, and delete any information in the shared file or hard drive. You can further restrict their privileges by entering a user name and password.

Depends on Password - Allows you to set both Read Only and Full access on the shared file or drive. The level of access will depend on the passwords entered in the appropriate field.

20. When finished, click **Apply**, then **OK**.

Printer Sharing

To share a printer connected to the computer, follow these instructions.

☞ *Note*: These instructions are basically identical for Windows XP, 2000, Me, and 98 SE, with some minor differences.

1. Click **Start**, **Settings**, **Control Panel**.

2. In the "Control Panel" window, double-click on the "Printers" icon.
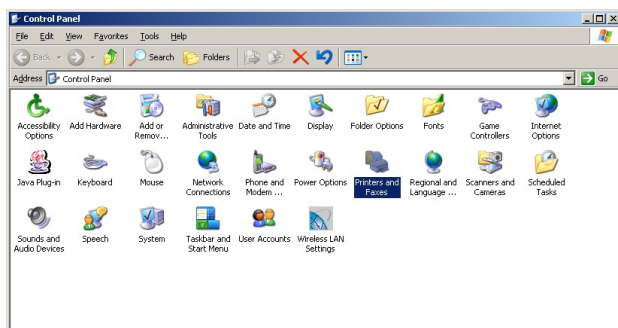
3. In the "Printers" window, right-click on the icon of the printer to be shared and select **Sharing**.
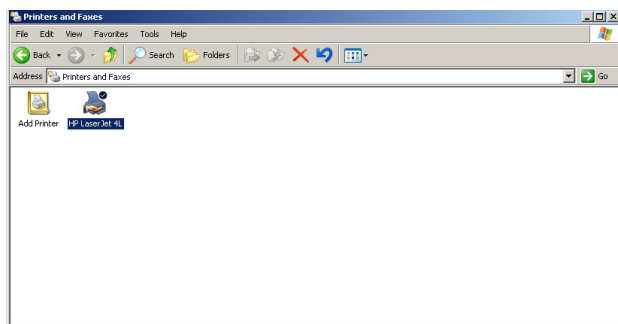
4. A "Properties" window appears, with the "Sharing" tab displayed.
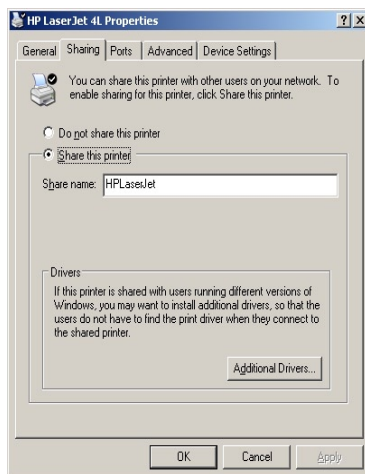
5. Select **Shared As or Share this Printer**. This automatically inserts a default name for the printer share name. You can set a password for the printer at this time if you want to restrict who on the network can use the printer. You can also set the default printer settings by modifying information on the other tabs of this window.

6. Click **OK**, and close all windows.

Specifications

A

General

Model Number

HPE400T (MegaPlug 85 Mbps 4-Port Hub)

Standards

HomePlug Turbo Powerline 1.0.1
IEEE 802.3
10BaseT

Security

56-bit DES data encryption

Frequency Band

4.3 MHz - 20.9 MHz

Modulation

OFDM symbol modulation

Carrier Modulation

DQPSK, DBPSK, ROBO carr

Access Methods

CSMA/CA

Other Protocols

Automatic Channel Adaptation, Forward Error Correction

LED Indicators

Power, HP, 1, 2, 3, 4

Environmental

Power

External, 110 - 240v 0.2a, 50 - 60 Hz

Certifications

FCC part 15, CE

Operating Temperature

0º C to 40º C (32ºF to 104ºF)

Storage Temperature

-20ºC to 70ºC (-4ºF to 158ºF)

Operating Humidity

10% to 85% non-condensing

Storage Humidity

5% to 90% non-condensing

☞ *Note*: Specifications are subject to change without notice.

Glossary

B

Access Point

A device that allows wireless clients to connect to one another. An access point can also act as a bridge between wireless clients and a "wired" network, such as an Ethernet network. Wireless clients can be moved anywhere within the coverage area of the access point and remain connected to the network. If connected to an Ethernet network, the access point monitors Ethernet traffic and forwards appropriate Ethernet messages to the wireless network, while also monitoring wireless traffic and forwarding wireless client messages to the Ethernet network.

ATM (Asynchronous Transfer Mode)

A networking technology based on transferring data in fixed-size packets

Client

A desktop or mobile computer connected to a network.

DHCP (Dynamic Host Configuration Protocol)

A protocol designed to automatically assign an IP address to every computer on your network.

DNS (Domain Name System) Server Address

Allows Internet host computers to have a domain name and one or more IP addresses. A DNS server keeps a database of host computers and their respective domain names and IP addresses so that when a user enters a domain name into a Web browser, the user is sent to the proper IP address. The DNS server address used by computers on the home network corresponds to the location of the DNS server the ISP has assigned.

DSL (Digital Subscriber Line) Modem

A modem that uses existing phone lines to transmit data at high speeds.

Encryption

A method to allow wireless data transmissions a level of security.

ESSID (Extended Service Set Identifier)

A unique identifier for a wireless network. Also known as "SSID."

Ethernet Network

A standard wired networking configuration using cables and hubs.

Firewall

A method preventing users outside the network from accessing and/or damaging files or computers on the network.

Gateway

A central device that manages the data traffic of your network, as well as data traffic to and from the Internet.

IP (Internet Protocol) Address

A series of four numbers separated by periods identifying a unique Internet computer host.

ISP Gateway Address

An IP address for the Internet router. This address is only required when using a cable or DSL modem.

ISP (Internet Service Provider)

A business that allows individuals or businesses to connect to the Internet.

LAN (Local Area Network)

A group of computers and devices connected together in a relatively small area (such as a house or an office). A home network is considered a LAN.

MAC (Media Access Control) Address

The hardware address of a device connected to a network.

NAT (Network Address Translation)

A method allowing all of the computers on a home network to use one IP address, enabling access to the Internet from any computer on the home network without having to purchase more IP addresses from the ISP.

PC Card

An adapter that inserts in the PCMCIA slot of a computer, enabling the communication with a device.

**PPPoE (Point-To-Point Protocol over Ethernet)/
PPPoA (Point-To-Point Protocol over ATM)**

Methods of secure data transmission.

Router

A central device that manages the data traffic of your network.

Subnet Mask

A set of four numbers configured like an IP address used to create IP address numbers used only within a particular network.

SSID

See "ESSID."

TCP/IP (Transmission Control Protocol/Internet Protocol)

The standard protocol for data transmission over the Internet.

WAN (Wide Area Network)

A network that connects computers located in separate areas, (i.e., different buildings, cities, countries). The Internet is a WAN.

WECA (Wireless Ethernet Compatibility Alliance)

An industry group that certifies cross-vender interoperability and compatibility of IEEE 802.11b wireless networking products and promotes the standard for enterprise, small business, and home environments.

WLAN (Wireless Local Area Network)

A group of computers and other devices connected wirelessly in a small area.

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Notices

Regulatory Compliance Notices

Class B Equipment

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by implementing one or more of the following measures:

- Reorient or relocate the receiving antenna;

- Increase the separation between the equipment and receiver;

- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected;

- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Actiontec Electronics, Inc., may void the user's authority to operate the equipment.

Declaration of conformity for products marked with the FCC logo – United States only.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference

2. This device must accept any interference received, including interference that may cause unwanted operation

> ☞ *Note*: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

For questions regarding your product or the FCC declaration, contact:

Actiontec Electronics, Inc.
760 North Mary Ave.
Sunnyvale, CA 94086
United States
Tel: (408) 752-7700
Fax: (408) 541-9005

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