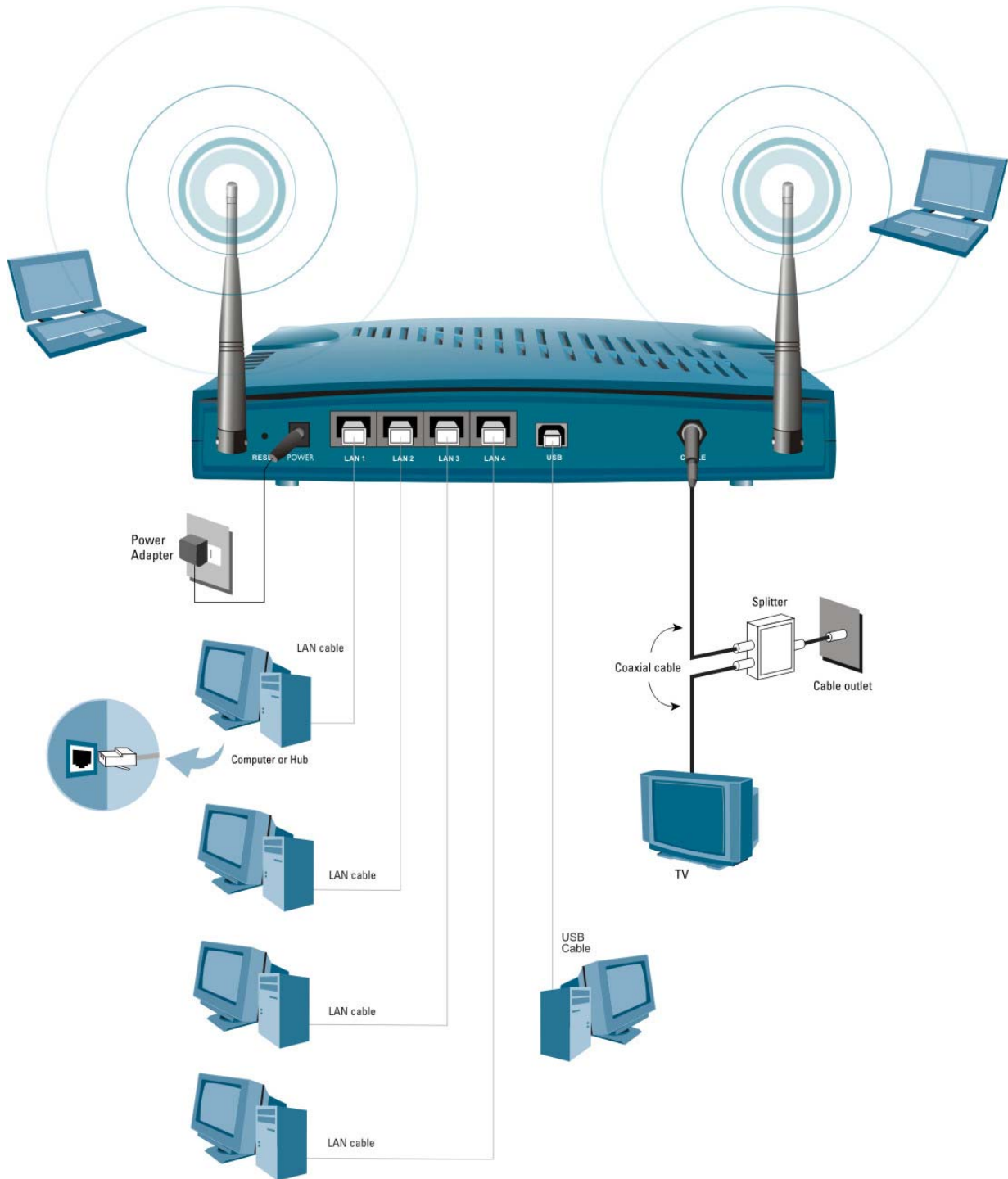


# P964 APR 964

## Cable Router with 11g AP

### *Quick Installation Guide* VER. 1.0



## Rear Panel Connections

PORT	CONNECTION	
CABLE	Connect the F-type connector to the CATV outlet using a coaxial cable.	
POWER	Connect the external power adaptor to the P964 APR and plug it into an appropriate power outlet.	
	<b>TO a COMPUTER</b>	<b>TO a HUB</b>
LAN1~LAN4	Straight-through/Crossover Ethernet cable	Straight-through/Crossover Ethernet cable
WLAN	IEEE 802.11g/b	-
USB	USB cable	-

### Before You Start

The P964 APR is a broadband cable CPE with dual modem/router operation mode. In order to use your P964 APR, you need to establish an internet access account with your local cable operator.

1. A cable Internet service that supports two-way cable modem access.
2. A coaxial cable line which has been prepared for cable modem service by your ISP or cable operator.
3. The P964 APR's Media Access Control (MAC) address is labeled on the bar code sticker. The MAC address consists of 12 characters preceded by the text "HFC MAC:".

#### **Use the HFC MAC address for registering with your cable operator.**

4. The IP address(es) of the Domain Name System server(s) is supplied by your ISP.
5. The P964 APR is configured as a router with NAT and DHCP enabled and with following factory default.

LAN IP Address	192.168.1.1
Subnet Mask	255.255.255.0
DHCP IP Pool	192.168.1.33 – 192.168.1.64
Web username	webadmin
Web password	1234

**Note: The default might be different from different cable operators. Please consult with your cable Internet service provider for any change.**

## **Preparing Your Network**

1. Your computer must have a 10M or 100M NIC (Network Interface Card), USB interface or IEEE 802.11g/11b compatible client.
2. If using USB connection, you have to install the USB driver. Insert the supporting CD into the CD-ROM drive before you connect the USB port of P964 APR to the USB port on your computer and power on your P964 APR at the first time. System may automatically hint you the installation guide for USB driver and specify the directory where USB driver is stored according to the step-by-step instruction after the CD-ROM drive is ready to read. The USB driver supports Windows 98SE, ME, 2000 and XP.

TCP/IP should already be installed on computers and configure your computer as a DHCP client.

**The following procedures are for dynamic IP addresses.**

### **Setting up Your Windows 95/98/Me Computer**

#### **Installing TCP/IP Components**

1. Click **Start, Settings, Control Panel** and double-click the **Network** icon.
2. The **Network** window **Configuration** tab displays a list of installed components. To install TCP/IP:
  - a. In the **Network** window, click **Add**.
  - b. Select **Protocol** and then click **Add**.
  - c. Select **Microsoft** from the list of manufacturers.
  - d. Select **TCP/IP** from the list of network protocols and then click **OK**.

#### **Configuring TCP/IP**

1. In the **Network** window **Configuration** tab, select your network adapter's **TCP/IP** entry and click **Properties**.
2. Click the **IP Address** tab. Click **Obtain an IP address automatically**.
3. Click the **DNS Configuration** tab. Select **Disable DNS**.
4. Click the **Gateway** tab. Highlight any installed gateways and click **Remove ..**
5. Click **OK** to save and close the **TCP/IP Properties** window.
6. Click **OK** to close the **Network** window.
7. Turn on your P964 APR and restart your computer when prompted. Insert the Windows CD if prompted.

## Verifying TCP/IP Properties

1. Click **Start** and then **Run**. In the **Run** window, type "winipcfg" and then click **OK** to open the **IP Configuration** window.
2. Select your network adapter. You should see your computer's IP address, subnet mask and default gateway.

## Setting up Your Windows NT/2000/XP Computer

### Configuring TCP/IP

1. Click **Start, Settings, Network and Dial-up Connections** and right-click **Local Area Connection** or the connection you want to configure and click **Properties**. For Windows XP, click **start, Control Panel, Network and Internet Connections** and then **Network Connections**. Right-click the network connection you want to configure and then click **Properties**.
2. Select **Internet Protocol (TCP/IP)** (under the **General** tab in Win XP) and click **Properties**.
3. The **Internet Protocol TCP/IP Properties** window opens. Click **Obtain an IP address automatically**.
4. Click **Obtain DNS server automatically**.
5. Click **Advanced, IP Settings** tab and remove any installed gateways, then click **OK**.
6. Click **OK** to save and close the **Internet Protocol (TCP/IP) Properties** window.
7. Click **OK** to close the **Local Area Connection Properties** window.
8. Turn on your P964 APR and restart your computer (if prompted).

### Verifying TCP/IP Properties

1. Click **Start, Programs, Accessories** and then **Command Prompt**.
2. In the **Command Prompt** window, type "ipconfig" and then press **ENTER**. The window displays information about your IP address, subnet mask and default gateway.

# Setting up Your Macintosh Computer

## Configuring TCP/IP Properties

1. Click the **Apple** menu, **Control Panel** and double-click **TCP/IP** to open the **TCP/IP Control Panel**.
2. Select **Ethernet** from the **Connect via** list.
3. Select **Using DHCP Server** from the **Configure** list.
4. Close the **TCP/IP Control Panel**.
5. Click **Save** if prompted, to save changes to your configuration.
6. Turn on your P964 APR and restart your computer (if prompted).

## Verifying TCP/IP Properties

Check your TCP/IP properties in the **TCP/IP Control Panel**.

## Initialize Your P964 APR

When you plug the power adapter into a wall outlet, the P964 APR is powered on and executes an automatic installation procedure as described below:

1. Scans and locks on to the service provider's downstream frequency.
2. Obtains timing, signal, power level, authentication, addressing and other operational parameters from the CATV CMTS/headend.
3. Downloads its configuration file and is then operational.

During the initialization stage:

1. The POWER LED should be "ON". The SYS LED lights up after the system self-test is completed. It stays "ON" when the initialization procedure is completed.

**The SYS LED is always YELLOW while system is ready or rebooting. The SYS LED will become Orange when the system is loading its configuration. Don't power off or reset your P964 APR during the SYS LED is becoming Orange. You can only do so after the SYS LED returns GREEN. Otherwise, your P964 APR will not work properly anymore.**

2. The CABLE LED will be flashing on a 2 seconds on/off cyclic duration while scanning the downstream channel and then on a 1 second on/off cyclic duration when it has locked on to a downstream channel and is communicating with the headend CMTS. Once the cable connection is completed, it will remain "ON". It may need 40 seconds from step 1 to step 2.
3. The DATA LED flashes when the cable downstream or cable upstream is receiving or transmitting data. It is OFF when the cable connection is idle.
4. Depending on which port is connected successfully, the LAN (1~4) LED , WLAN, or the USB LED will be "ON" and flashing while sending/receiving data to/from your computer/laptop.

## Troubleshooting

Before performing troubleshooting, make sure both the P964 APR's power (PWR) LED and the system status (SYS) LED are on.

<b>PROBLEM</b>	<b>CORRECTIVE ACTION</b>
The PWR LED is off.	Make sure that the P964 APR's power adaptor is connected to the P964 APR and plugged in to an appropriate power source. Check that the power source is turned on.  If the error persists, you may have a hardware problem. In this case, you should contact your cable operator.
The SYS LED is off.	Turn the P964 APR's power off and then on again.
LAN (1~4) LED, WLAN LED and USB LED are OFF.	Check the LAN/WLAN/USB LEDs on the front panel. One of these LEDs should be on. If they are all off, check the Ethernet cables between your P964 APR and hub/station, or your 802.11g/11b clients, or the USB cable on your station.
Can not access the Internet.	Make sure that the coaxial cable is connected to the P964 APR and the Internet.  Check with your service provider to see if your account has been activated.  Check if your computer's network configuration is correct. For a dynamic IP address assignment, you have to activate your computer's DHCP client. Meanwhile, you may need to assign a DNS server address. Refer to cable operator's configuration information.

Launch "192.168.1.1:8080" in your web browser. Enter "webadmin" as user name and "1234" as password to log on for more information.