T-Mobile TM-G5240 Wireless Router User Manual

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Introduction

TM-G5240 Wireless Router

Congratulations on your purchase of the T-Mobile TM-G5240 wireless router (also referred to as TM-G5240).

The TM-G5240 supports high-speed wireless networking at home, at work, and in public places. The TM-G5240 wireless router uses the new 802.11g standard. The IEEE 802.11g standard is an extension of the 802.11b standard. It increases the data rate up to 54 Mbps within the 2.4GHz band, utilizing OFDM technology.

In addition to offering fast data transfer speeds, the TM-G5240 has the newest, strongest, and most advanced security features available today (WPA and 802.1x):

- **WPA**: Wi-Fi Protected Access authorizes and identifies users based on a secret key that changes automatically at a regular interval. WPA uses TKIP (Temporal Key Integrity Protocol) to change the temporal key every 10,000 packets (a packet is a kind of message transmitted over a network.) This insures much greater security than the standard WEP security. By contrast, the older WEP encryption required the keys to be changed manually.

- **Authentication**: Authentication is a first line of defense against intrusion. In the authentication process, the server verifies the identity of the client attempting to connect to the network. Unfamiliar clients would be denied access.

What is unique about the TM-G5240

The TM-G5240 is unique in that it has been optimized to work with a compatible T-Mobile phone so that you can use your phone for calling via your Wi-Fi network or the T-Mobile GSM network.

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TM-G5240 Features

- Fully compatible with the 802.11g standard to provide a wireless data rate of up to 54Mbps.*
- Backwards compatible with the 802.11b standard to provide a wireless data rate of up to 11Mbps.
- WPA (Wi Fi Protected Access) authorizes and identifies users based on a secret key that changes automatically at a regular interval, for example:
  - o **TKIP** (Temporal Key Integrity Protocol), in conjunction with a RADIUS server, changes the temporal key every 10,000 packets, ensuring greater security.
  - o **Pre Shared Key** mode means that the home user, without a RADIUS server, can connect securely via a pre-shared key, vastly improving the safety of communications on the network.
- 802.1x Authentication in conjunction with the RADIUS server verifies the identity of would be clients.
- Utilizes OFDM technology (Orthogonal Frequency Division Multiplexing).
- User-friendly configuration and diagnostic utilities.
- Operates in the 2.4GHz frequency range.
- Connects multiple computers to a Broadband (Cable or DSL) modem to share the Internet connection.
- Advanced firewall features:
  - o Supports NAT with VPN pass-through, providing added security
  - o MAC Filtering
  - o IP Filtering
  - o URL Filtering
  - o Domain Blocking
  - o Scheduling
- DHCP server enables all networked computers to automatically receive IP addresses.
- Web-based interface for Managing and Configuring.
- Access Control to manage users on the network.
- Supports special applications that require multiple connections.
- Equipped with 4 10/100 Ethernet ports, 1 WAN port, Auto MDI/MDIX.

*Maximum wireless signal rate based on IEEE Standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead lower actual data throughput rate.

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Technical specifications

Standards
- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 802.3u

VPN Pass Through
- PPTP
- L2TP
- IPSec

Device Management
- Web-Based- Internet Explorer v6 or later; Netscape Navigator v6 or later; or other Java-enabled browsers
- DHCP Server and Client

Advanced Firewall Features
- NAT with VPN Passthrough (Network Address Translation)
- MAC Filtering
- IP Filtering
- URL Filtering
- Domain Blocking
- Scheduling

Wireless Operating Range
- Indoor – Up to 300 feet
- Outdoor – Up to 2000 feet

Operating Temperature
- 32°F to 104°F (-0°C to 40°C)

Safety and Emissions
- FCC

Wireless Frequency Range
- 2.412 GHz to 2.462 GHz

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Status Lights
- Power
- Internet
- Wireless
- Ports 1-4 (LAN 10/100)
- Encryption

Physical Dimensions
- L = 5.6 inches (142mm)
- W = 4.3 inches (109mm)
- H = 1.2 inches (31mm)

Wireless Transmit Power
- 19 dBm +1/-1.5 dBm

Security
- Wi-Fi Protected Access (WPA)
  (WEP with TKIP, MIC, IV Expansion, Shared Key Authentication)
- WPA2

Multimedia
- WMM
- WMM power save

External Antenna Type
- Single detachable reverse SMA

Modulation Technology
- Orthogonal Frequency Division Multiplexing (OFDM)

Power Input
- Ext. Power Supply DC 5V, 2A

Weight
- 7.8 oz. (0.22kg)

Warranty
- 1 year

Wireless Data Rates* with Automatic Fallback
- 54 Mbps

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- 48 Mbps
- 36 Mbps
- 24 Mbps
- 18 Mbps
- 12 Mbps
- 11 Mbps
- 9 Mbps
- 6 Mbps
- 5.5 Mbps
- 2 Mbps
- 1 Mbps

Receiver Sensitivity

- Better than -92dBm @ 6, 9Mbps
- Better than -92dBm @ 12Mbps
- Better than -88dBm @ 18Mbps
- Better than -84dBm @ 24Mbps
- Better than -81dBm @ 36Mbps
- Better than -74dBm @ 48Mbps & 54Mbps

*Maximum wireless signal rate based on IEEE Standard 802.11g specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead lower actual data throughput rate.

Package contents

Contact your reseller if you are missing any items:

- T-Mobile TM-G5240 wireless router
- Power adapter - DC 5V, 2A
  NOTE: Using a power supply with a different voltage rating than the one included with the TM-G5240 will cause damage and void the warranty for this product.
- Blue Ethernet cable
- Antenna (attach on the back of the router)
- Installation CD (includes Installation Wizard, user manual)
- Quick Installation Guide
- Frequently Asked Questions (FAQ's)

Panel components

Back panel

Internet Port
Plug the network cable used to connect to the Internet into the TM-G5240.

Reset Button
Press and hold for 10 seconds to restore to original factory settings.

Antenna
Screw in the included antenna here.

Ports (1-4)
Plug the blue network cable that comes with this router into one of the ports (1-4).

Power
Plug the power adaptor to power on the TM-G5240.

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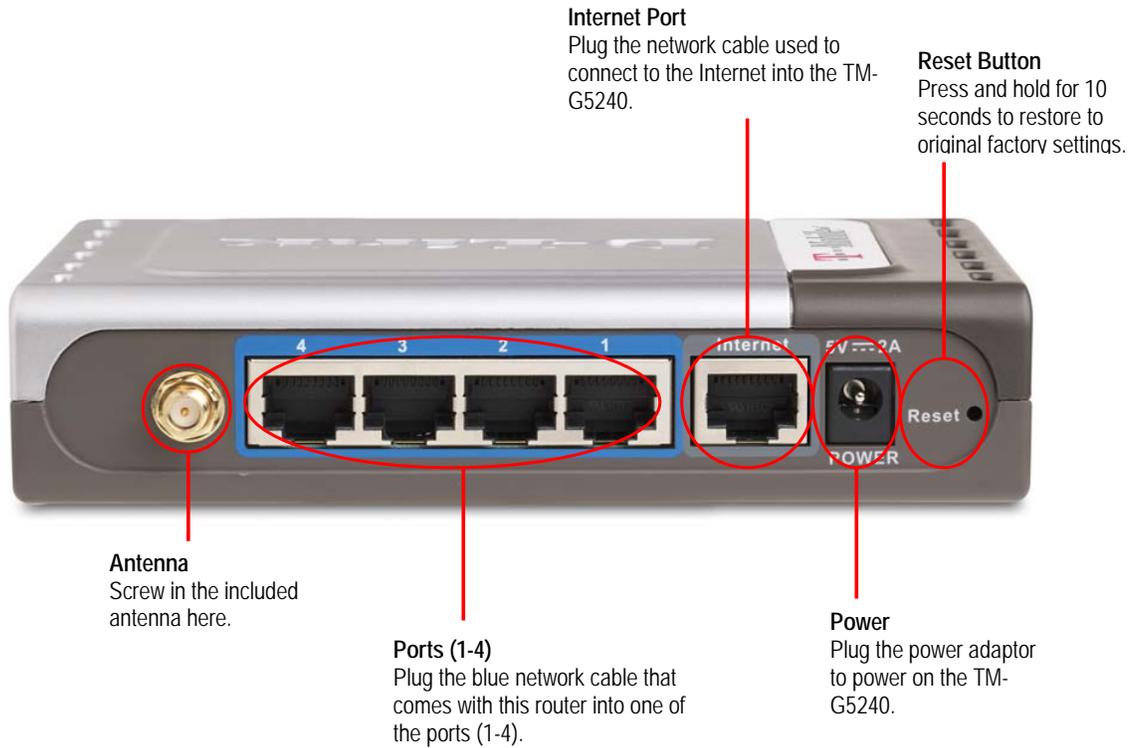
Front panel

Get Security Key or Secure Button
In the phone go to Get Security Key to share the router's security key/passphrase with a T-Mobile phone.
- Off - no encryption
- Blinking amber – in securing process
- Solid green – encryption enabled
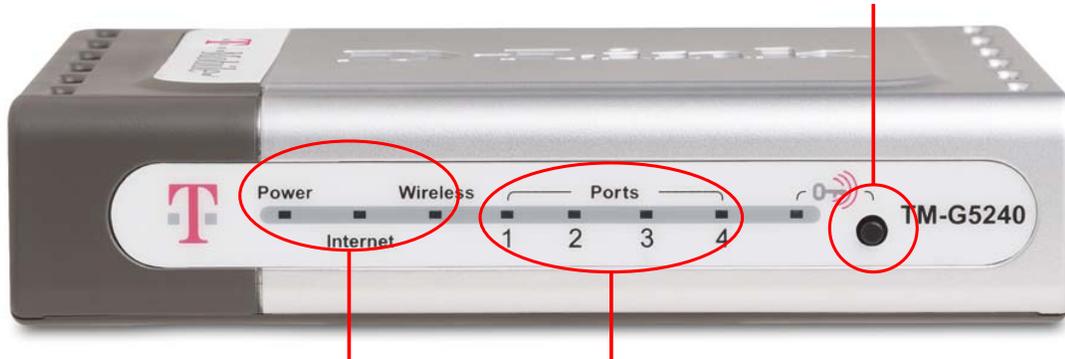
Power Light
Solid green if the power adaptor is plugged into an electrical outlet and is receiving adequate power.

Internet Light
Blinking green if the modem is plugged into the Internet port and connection is good.

Wireless Light
Blinking green when there is connection and data activity

Port Lights (1-4)
Light is on for the port that is connected to the computer (via blue cable).

- Solid green – No activity but has good connection
- Blinking green – Data activity

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Getting Started

What you need before installing the TM-G5240

Before you install and use the TM-G5240, you must have:

- Broadband Internet access
  (a cable or DSL-subscriber line into your home or office)
  <u>NOTE:</u> Consult with your Cable or DSL provider for proper installation of the modem.

- Computer with Windows, Macintosh*, or Linux-based operating system with an installed Ethernet adapter.

  *The CD wizard is not compatible with Mac/Apple computers (See page 10).

- Internet Explorer Version 6.0 or Netscape Navigator Version 6.0 or above

Other installation considerations

The TM-G5240 lets you access your network, using a wireless connection, from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

- Each wall or ceiling can reduce your TM-G5240's range from 3-90 feet (1-30 meters). Position the TM-G5240 so that the number of walls or ceilings is minimized.

- Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.

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- Building materials can impede the wireless signal - a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.

- Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate extreme radio frequency noise (example, microwave).

Configuring TM-G5240

Configure the TM-G5240

The configuration of the TM-G5240 involves the following:

1. The Installation Wizard walks you through the steps to physically connect the hardware components (computer, TM-G5240, modem, cables).

   Note: The CD wizard is not compatible with Mac/Apple computers. Please use the step-by-step image instructions (steps 1 – 9) provided on pages 12 through 15 in this User Manual, or the steps outlined in the QIG.

2. After connecting the hardware, the Wizard walks you through the configuration steps for the TM-G5240.

   Note: The CD wizard is not compatible with Mac/Apple computers. For Mac/Apple users, once the cabling instructions are completed:

   a. Open an Internet browser, i.e. Safari, Fire fox, etc.
   b. Type in 192.168.0.1 in the address bar.
   c. When asked for password, type in "admin" in the password field and leave the user name field empty.
   d. Click "Setup Wizard" to continue with the configuration process.

3. After configuring the TM-G5240, you will see Congratulations. At this point either go to your phone to connect to your network or you can choose Security Settings on the bottom left of the install screen to enable encryption.

Physical connection of hardware components

To start the Installation Wizard, insert the CD into your computer that is connected to your modem and click the **Installation Wizard** button. Follow the instructions on screen.

Note: If the CD does not auto-start, try inserting the CD again, or you can go to your computer's file browser to view the files on the CD.

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1. Power off your modem, by unplugging the power cord. When done, click the **Next** button on the Wizard.

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2. Unplug the network cable from your computer and plug the network cable into the TM-G5240's Internet port. When done, click the **Next** button on the Wizard.

3. Plug in the power adapter to your modem. The lights on your modem should start flashing. When done, click the **Next** button on the Wizard.

4. Connect one end of the blue cable that came with the TM-G5240 to any of the Ports (1-4) on the back of the TM-G5240. Connect the other end of the blue cable to the computer's network port. When done, click the **Next** button on the Wizard.

5. Plug the power adapter into the back of the TM-G5240 and plug the other end into an electrical outlet or power strip. When done, click the **Next** button on the Wizard.
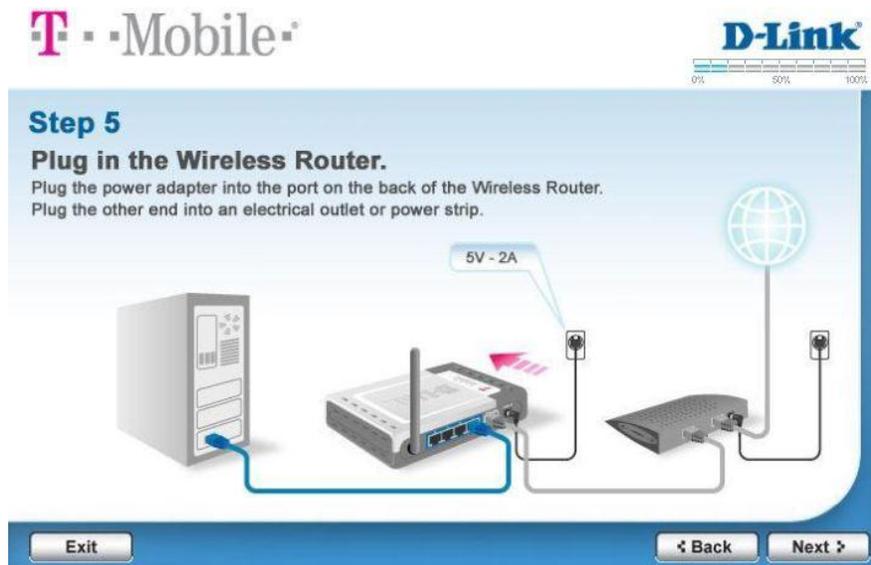
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6. Observe the status lights on the front of the router. The lights for Power, Internet, Wireless, and one of the numbered ports (1-4) should be lit. If not lit, make sure that all cables are securely connected and if necessary select back to check your cabling. When done, click the **Next** button on the Wizard.

Your cables should look similar to the image shown below after you have finished connecting all hardware components. Remember to attach the Antenna.

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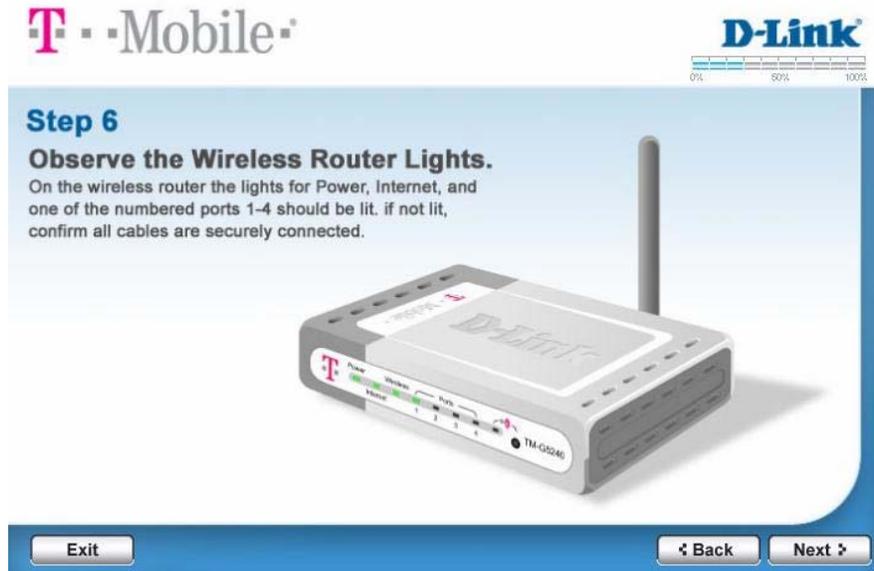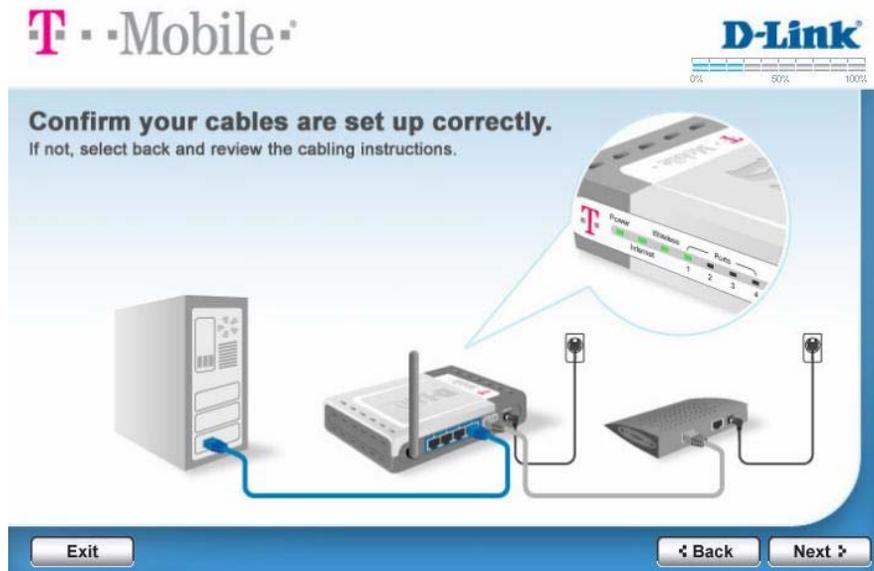
If you want to replace the existing router with the TM-G5240, click the **Yes** button on the Wizard.

1. Power off your modem, by unplugging the power cord. When done, click the **Next** button on the Wizard.

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2. Unplug the network cable connected to your computer from your old router and plug it into any of the Ports (1-4) on the TM-G5240. When done, click the **Next** button on the Wizard.

3. Unplug the cable connected to your modem from your old router and plug it into the TM-G5240's Internet port. When done, click the **Next** button on the Wizard.

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4. Plug in the power adapter to your modem. The lights on your modem should start flashing. When done, click the **Next** button on the Wizard.

5. Plug the power adapter into the back of the TM-G5240. When done, click the **Next** button on the Wizard.

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6. Observe the status lights on the front of the router. The lights for Power, Internet, Wireless, and one of the numbered ports (1-4) should be lit. If not lit, make sure that all cables are securely connected and if necessary select back to check your cabling. When done, click the **Next** button on the Wizard.
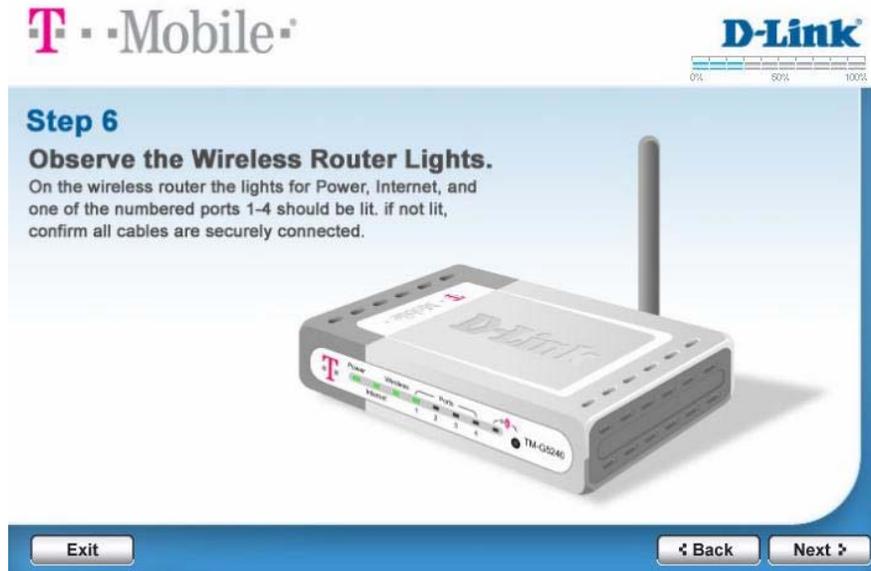
7. Your cables should look similar to the image shown below after you have finished connecting all hardware components. Remember to attach the Antenna.
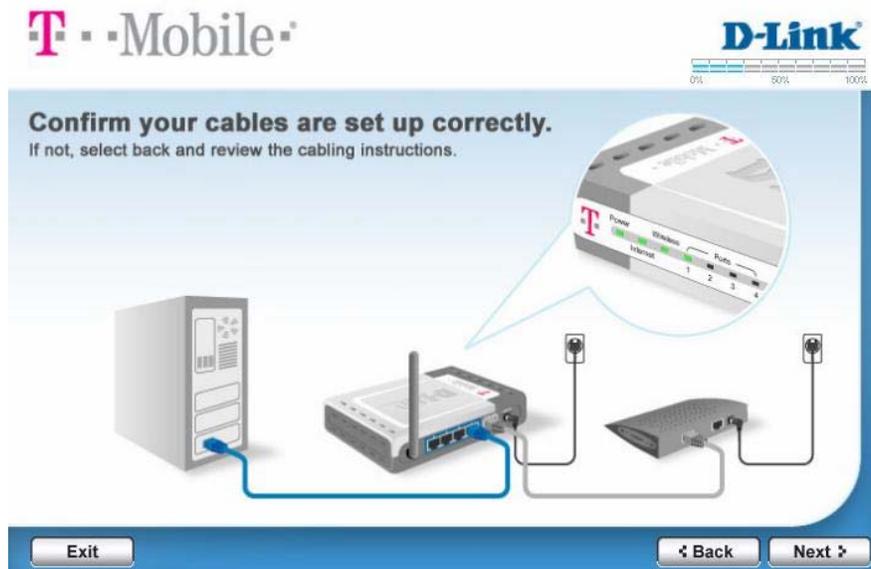
Checks Internet Connection Type

After you have finished connecting the cables, the Installation Wizard will check your Internet connection and display the following screen while detecting the type of internet connection you have..

Note: If you do not get this screen that means something is wrong with the connection between the computer running the CD and your wireless router. See the Troubleshooting section of this User Guide or the FAQ's document.

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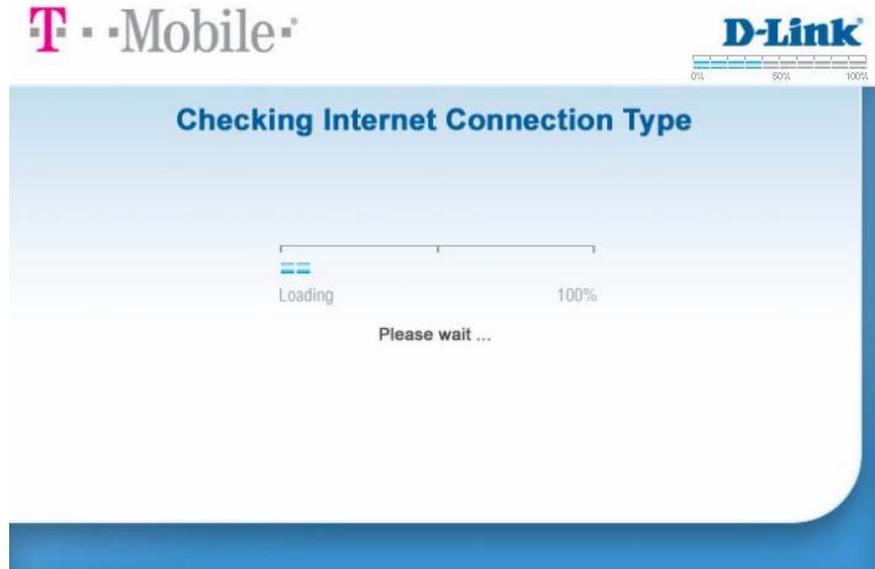
Configuration of TM-G5240

7. After successfully detecting your Internet type you will see one of the following three screens. If you are unsure of the setting, DO NOT change it.

- Most Cable users should have DHCP (Cable)
- Most DSL users will have either PPPOE (DSL) or DHCP (Cable)
- Typically if you have a static IP, you know it.

DHCP (Cable)
If you select **DHCP (Cable)** from the drop-down box, then all you need is to click the **Next** button on the Wizard.

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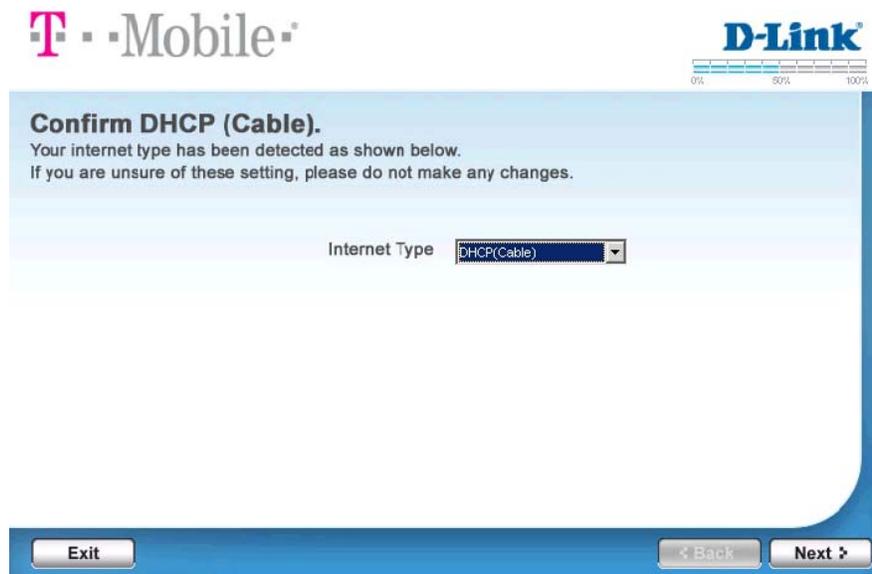
Static IP
If you select **Static IP** from the drop-down box, you must complete the information on this screen. Refer to your Internet Service Provider (ISP) for information on IP address, subnet mask, and so on.

When done, click the **Next** button on the Wizard.

PPPOE (DSL)
If you select **PPPOE (DSL)** from the drop-down box, then type your username and password to log in to the Internet.

When done, click the **Next** button on the Wizard.

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8. Create a unique name to identify your wireless network from other wireless networks around you. This name will also display on your T-Mobile phone's main screen under "T-Mobile" when you are connected to your Wi-Fi network.

When done, click the **Next** button on the Wizard.

9. Select a channel for your network, or auto detect if you'd like the router to pick the best one for you. When done, click the **Next** button on the Wizard.

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10. To protect your router settings from un-authorized access, change the administrative password. You will see a confirmation of settings page where you can print this information for future reference. When done, click the **Next** button on the Wizard. Please note that passwords are limited to 15 characters.

11. To Review your settings and either print or save a copy for your records.

- Click the Save a copy button to save your security settings to your computer. You will see a pop-up with open, save, cancel. Select save.
- Click the **Print Settings** button to print your security settings to an attached printer.

When done, click the **Next** button on the Wizard

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12. You will see saving settings and restarting while the router stores all your settings. You may see the router lights blinking and pop-ups on your computer screen task bar mentioning Internet connectivity. This is all normal.
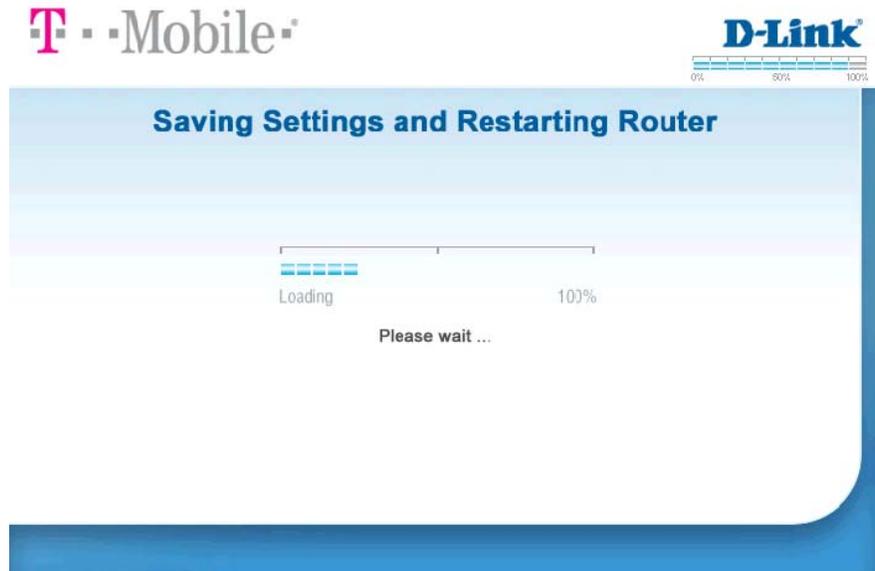
13. When the router is setup you will see this Congratulations screen. You can learn more about your phone and how it works by click on "Learn More about Wi-Fi" Your other two choices are:

- Select Done, and go to your Get Started poster for your T-Mobile phone and follow the steps to connect your wireless network.

    - Or -

- Select "Security Settings" to turn encryption on for your TM-G5240.

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Encryption for your wireless computers

1. With a T-Mobile router and phone you do NOT have to enter the security key or passphrase into your phone manually. Follow these steps to share the encryption settings with your phone:

   - Turn on your T-Mobile phone and go to Menu > Settings > Wi-Fi > Get Security Key

   - Select Next on the phone.

   - Press and release the Get Security Key button on the front of your router located next to the key icon with magenta waves. The light should be flashing amber on the router.

   - Select Done/Next on the phone. It should indicate securing connection and prompt you to create a unique profile name for the network.

Note: For advanced users or those without a T-Mobile phone, you can go to Manual Security and configure your encryptions settings.

2. Success appears on the computer screen and the light next to the Get Security Key icon on the router is now solid green. Select continue.

3. Review your settings and either print or save a copy for your records.

- Click the Save a copy button to save your security settings to your computer. You will see a pop-up with open, save, cancel. Select save.

- Click the **Print Settings** button to print your security settings to an attached printer. When done, click the **Next** button on the Wizard.

4. Congratulations will appear. Select Done.
    Note: At the bottom of the screen, the text should indicate if security is now enabled or disabled. If you want to make advanced configuration changes, proceed to the *Advanced Settings* section in this guide.

Tips for Get Security Key

1. If you have not previously enabled security for your router, the default will be WPA encryption.
2. If you have a security key already in the router, then the router and phone will use your current security settings and share those with the T-Mobile phone.
3. When the router is secured, the light next to the Get Security Key button will be solid green. When encryption is OFF, the light is off.

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Advanced Settings

Configuration menu

The *Configuration* menu allows you to adjust network and TM-G5240 settings. To access the *Configuration* menu:

1. Open a Web browser.
2. Type http://192.168.0.1/. This is the default IP address of the TM-G5240. If you have changed the default, make sure that you type the correct IP address.
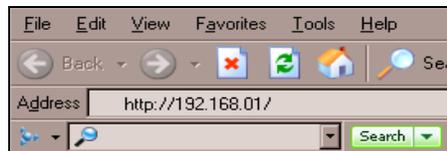
3. Leave the username blank.

4. Type **admin** in the password field. (Please note: Default password is "admin". If you have changed the password while running CD wizard, then use the new password)

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Click **OK**. The *Configuration* menu opens.
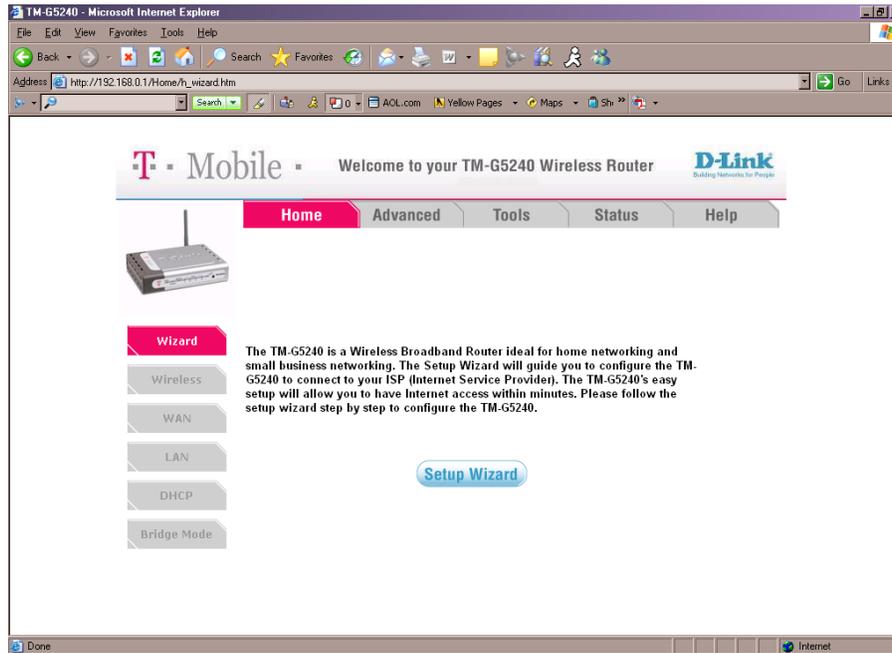
The *Configuration* menu has the following tabs:

- Home
- Advanced
- Tools
- Status
- Help

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Home tab

Home > Wizard

The *Home* tab introduces you to the *Configuration* menu and allows you to access the Installation Wizard.
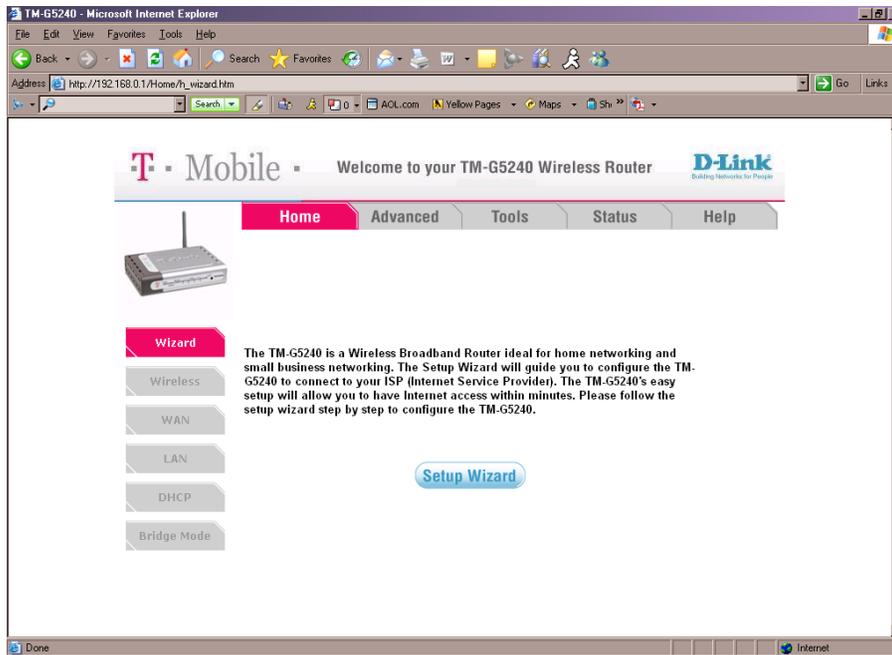
The following buttons appear on most of the Configuration screens after you have made a configuration change:

Click **Apply** to save changes made to the page.

Click **Cancel** to clear changes made to the page.

Click **Help** to bring up helpful information regarding the page.

Click **Restart** to restart the TM-G5240. Restart is necessary for some configuration changes.

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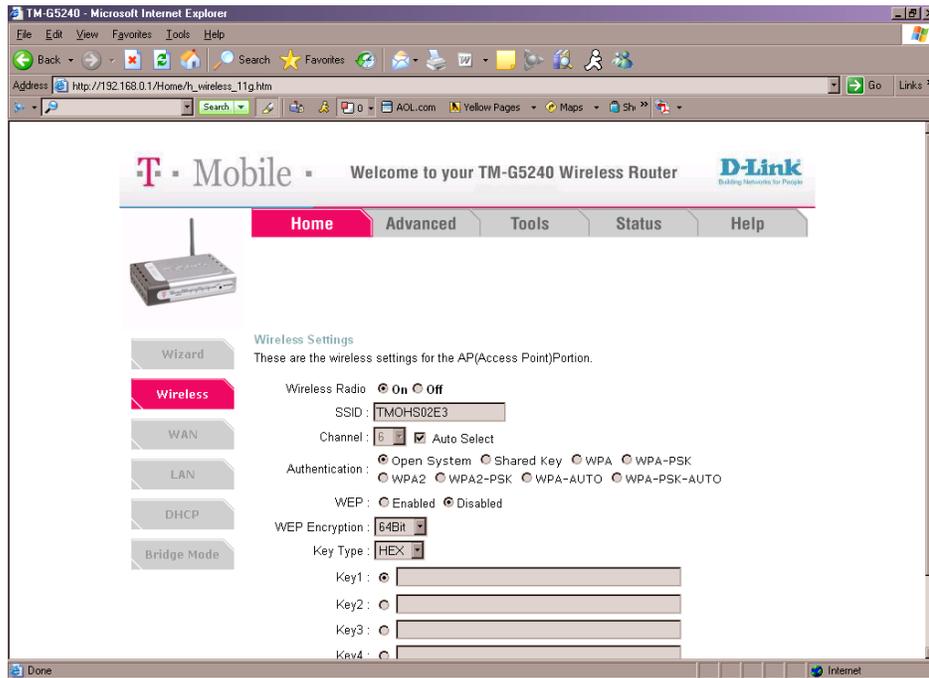
Home > Wireless

At the *Home > Wireless* tab, you can adjust:

- **Wireless Radio -** This option turns off and on the wireless connection feature of the router. If this is not enabled, you cannot connect using a wireless network adapter.

- **SSID -** Service Set Identifier (SSID) is the name designated for a specific wireless local area network (WLAN). The SSID's factory default setting is default. The SSID can be easily changed to connect to an existing wireless network or to establish a new wireless network.

- **Authentication**

  o **WPA –** Wi-Fi Protected Access authorizes and authenticates users on to the wireless network. WPA uses stronger security than WEP and is based on a key that changes automatically at a regular interval. This mode requires a RADIUS server in the network.
  Radius Server - Enter the IP Address of the RADIUS server.

  Port - Enter the port number that your RADIUS server uses for authentication.

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Shared Secret - Enter the shared secret. The Shared Secret must the same as the Shared Secret on your RADIUS server.

o **WPA-PSK –** Wi-Fi Protected Access – Pre-Shared Key mode means that the wireless client and the router must have the same passphrase in order to establish the wireless connection. A RADIUS server is not required with PSK.

Passphrase - Enter a pass phrase for the router. The client should use the same pass phrase in order to connect to the router.

o **WPA2**

Radius Server - Enter the IP Address of the RADIUS server.

Port - Enter the port number that your RADIUS server uses for authentication. The default setting of 1812 is the port setting for many RADIUS servers.

Shared Secret - Enter the shared secret. The Shared Secret must the same as the Shared Secret on your RADIUS server.

o **WPA2-PSK –** Wi-Fi Protected Access2 – Pre-Shared Key mode means that the wireless client and the router must have the same pass phrase in order to establish the wireless connection. A RADIUS server is not required with PSK.

Passphrase - Enter a pass phrase for the router. The client should use the same pass phrase in order to connect to the router..

o **WPA-Auto**

Radius Server - Enter the IP Address of the RADIUS server.

Port - Enter the port number that your RADIUS server uses for authentication. The default setting of 1812 is the port setting for many RADIUS servers.

Shared Secret - Enter the shared secret. The Shared Secret must the same as the Shared Secret on your RADIUS server.

- **Channel - 6** is the default channel. All devices on the network must share the same channel. *(Note: The wireless adapters will automatically scan and match the wireless setting.)*

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- **WEP -** Wired Equivalent Privacy (WEP) is a wireless security protocol for Wireless Local Area Networks (WLAN). WEP provides security by encrypting the data that is sent over the WLAN. Select Enabled or Disabled. Disabled is the default setting. *(Note: If you enable encryption on the TM-G5240 make sure to also enable encryption on all the wireless clients and match the security settings, or wireless connection will not be established.)*

- **WEP Encryption -** Select the level of encryption desired: 64-bit, or 128-bit.

- **Key Type -** Select HEX or ASCII.

- **Keys 1-4 -** Input up to 4 WEP keys; select the one you wish to use.

Home > WAN
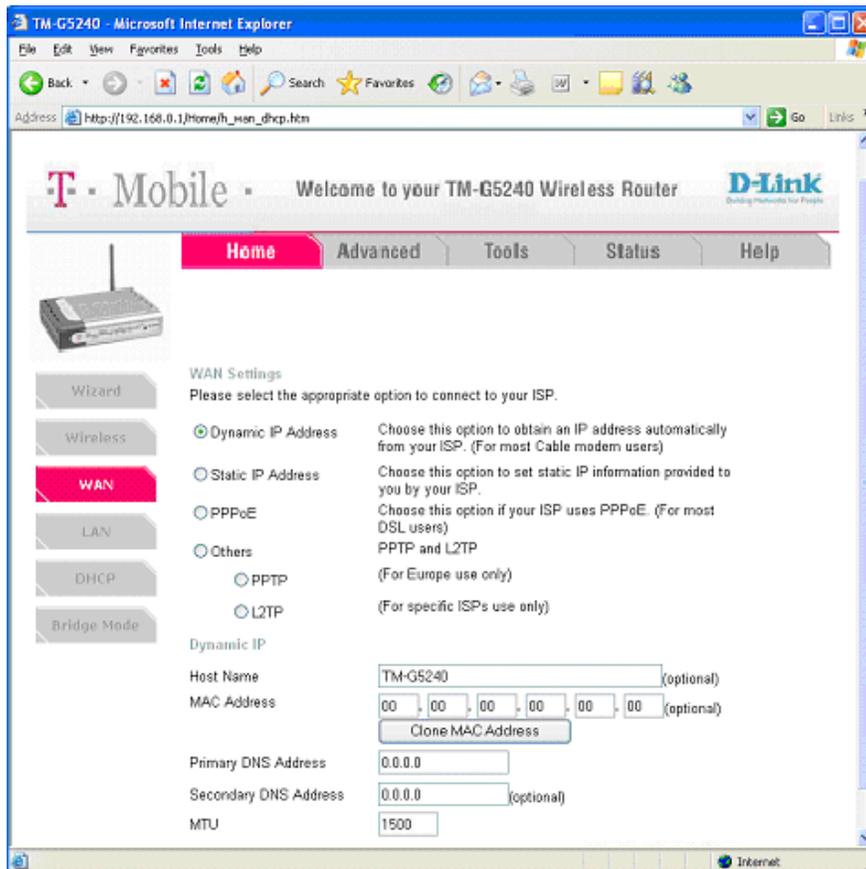
Home > WAN > Dynamic IP Address

At *Home > WAN > Dynamic IP Address*, you can adjust:

- **Dynamic IP Address** - Choose Dynamic IP Address to obtain IP Address information automatically from your ISP. Select this option if your ISP does not give you any IP numbers to use. This option is commonly used for Cable modem services.

- **Host Name** - The Host Name is optional but may be required by some ISPs. The default host name is the device name of the router and may be changed.

- **MAC Address** - The default MAC Address is set to the WAN's physical interface MAC address on the wireless router. It is not recommended that you change the default MAC address unless required by your ISP.

- **Clone MAC Address** - The default MAC address is set to the WAN's physical interface MAC address on the wireless router. You can use the

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"Clone MAC Address" button to copy the MAC address of the Ethernet Card installed by your ISP and replace the WAN MAC address with the MAC address of the router. It is not recommended that you change the default MAC address unless required by your ISP.

- **Primary DNS Address -** Input the primary DNS address provided by your ISP.

- **Secondary DNS Address -** (Optional) Input the secondary DNS address provided by your ISP.

- **MTU -** Maximum Transmission Unit; default is 1500; you may need to change the MTU to conform to your ISP (Internet Service Provider).

Home > WAN > Static IP Address
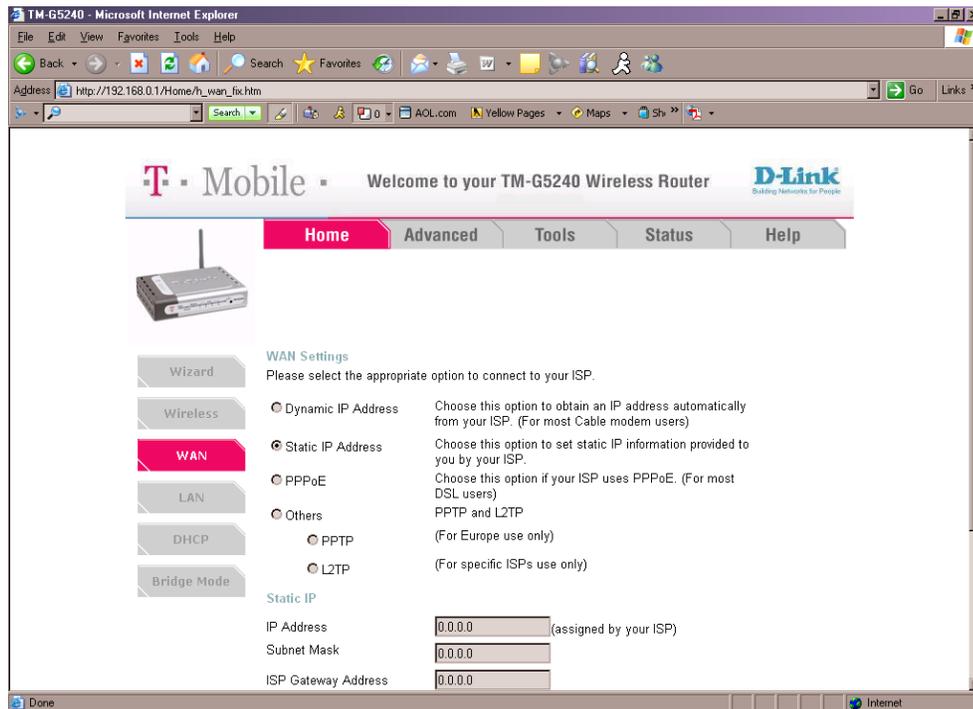
At *Home > WAN > Static IP Address*, you can adjust:

- **Static IP Address** - Choose Static IP Address if all WAN IP information is provided to you by your ISP. You will need to enter in the IP address, subnet mask, gateway address, and DNS address(es) provided to you by your ISP. Each IP address entered in the fields must be in the appropriate IP form, which are four octets separated by a dot (x.x.x.x). The router will not accept the IP address if it is not in this format.

- **IP Address** - Input the public IP Address provided by your ISP.

- **Subnet Mask** - Input your Subnet mask. (All devices in the network must have the same subnet mask.)

- **ISP Gateway Address** - Input the public IP address of the ISP to which you are connecting.

- **Primary DNS Address** - Input the primary DNS (Domain Name Server) IP address provided by your ISP.

- **Secondary DNS Address** -This is optional.

Home > WAN > PPPoE
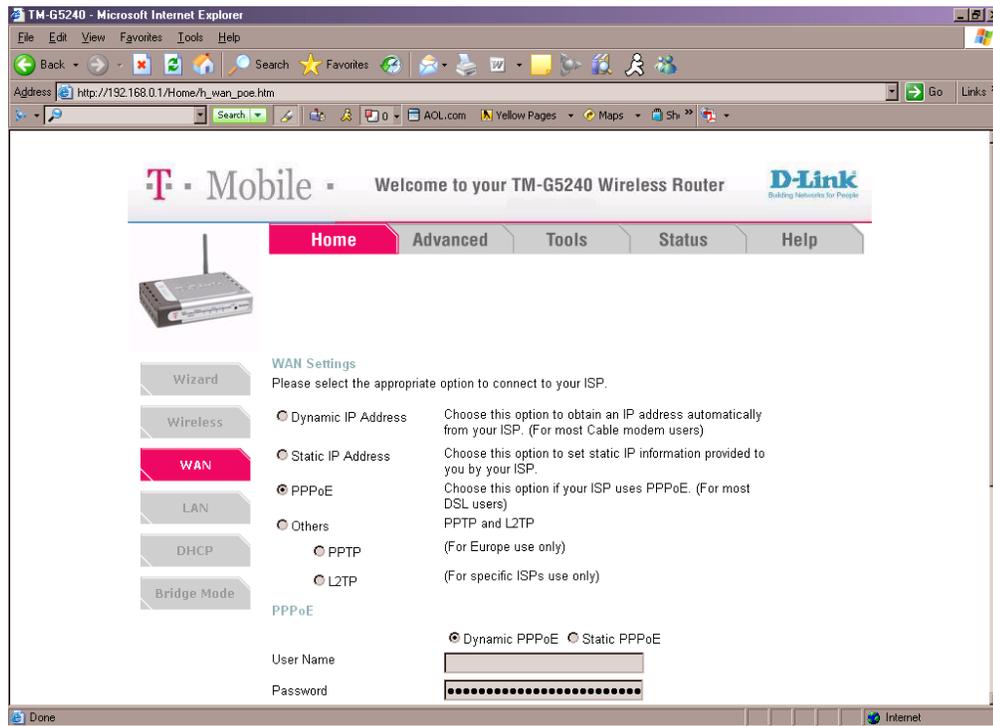
At *Home > WAN > PPPoE*, you can adjust:

- **PPPoE** – Point to Point Protocol over Ethernet. Choose this option if your ISP uses PPPoE connection (Most DSL users will select this option.) Your ISP provider will provide you with a username and pasword. This option is typically used for DSL services.

  Please be sure to remove any existing PPPoE client software installed your computers.

  - o Dynamic PPPoE- Select to receive an IP Address automatically from your ISP.
  - o Static PPPoE- Select to receive an assigned (static) IP Address.

- **User Name** - Your PPPoE username provided by your ISP.

- **Retype Password** - Re-enter the PPPoE password

- **Service Name** - Enter the Service Name provided by your ISP (optional).

- **IP Address** - This option is only available for Static PPPoE. Enter the static IP Address for the PPPoE connection.

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- **Primary DNS Address** - Primary DNS IP address provided by our ISP

- **Secondary DNS Address** - This option is only available for Static PPPoE. Enter the static IP Address for the PPPoE connection.

- **Maximum Idle Time** - Enter a maximum idle time during which Internet connection is maintained during inactivity.

- **MTU -** Maximum Transmission Unit - Default is 1492; you may need to change the MTU to conform to your ISP (Internet Service Provider).

- **Auto-reconnect** - If enabled, the TM-G5240 will automatically connect to your ISP after your system is restarted or if the PPPoE connection is dropped.

- **Connect Mode**
  Always On – Connection is always on
  Manual – User manually starts connection
  Connect on Demand – Connection is established once the browser is activated

Home > LAN

LAN is short for Local Area Network. This is considered your internal network. These are the IP settings of the LAN interface for the TM-G5240. These settings may be referred to as Private settings. You may change the LAN IP address if needed. The LAN IP address is private to your internal network and cannot be seen on the Internet.
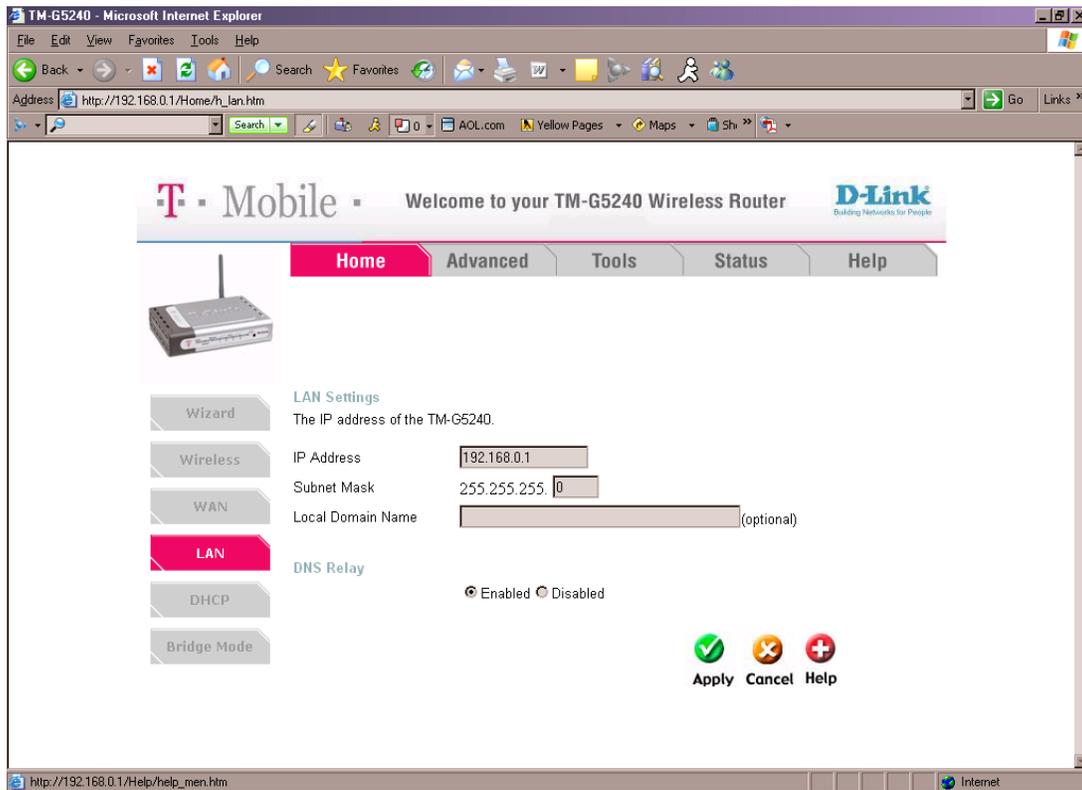
At the *Home > LAN* tab, you can adjust:

- **IP Address** - The IP address of the LAN interface. The default IP address is: **192.168.0.1**.

- **Subnet Mask** - The subnet mask of the LAN interface. The default subnet mask is **255.255.255.0**.

- **Local Domain** - This field is optional. Enter in the local domain name.

- **DNS Relay** - You may choose to enable or disable DNS Relay. If disabled, the DNS address received on the Internet Port will pass through to the LAN clients.

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Home > DHCP

DHCP stands for *Dynamic Host Control Protocol*. The TM-G5240 has a built-in DHCP server. The DHCP Server will automatically assign an IP address to the computers on the LAN/private network. Be sure to set your computers to be DHCP clients by setting their TCP/IP settings to "Obtain an IP Address Automatically." When you turn your computers on, they will automatically load the proper TCP/IP settings provided by the TM-G5240. The DHCP Server will automatically allocate an unused IP address from the IP address pool to the requesting computer. You must specify the starting and ending address of the IP address pool.
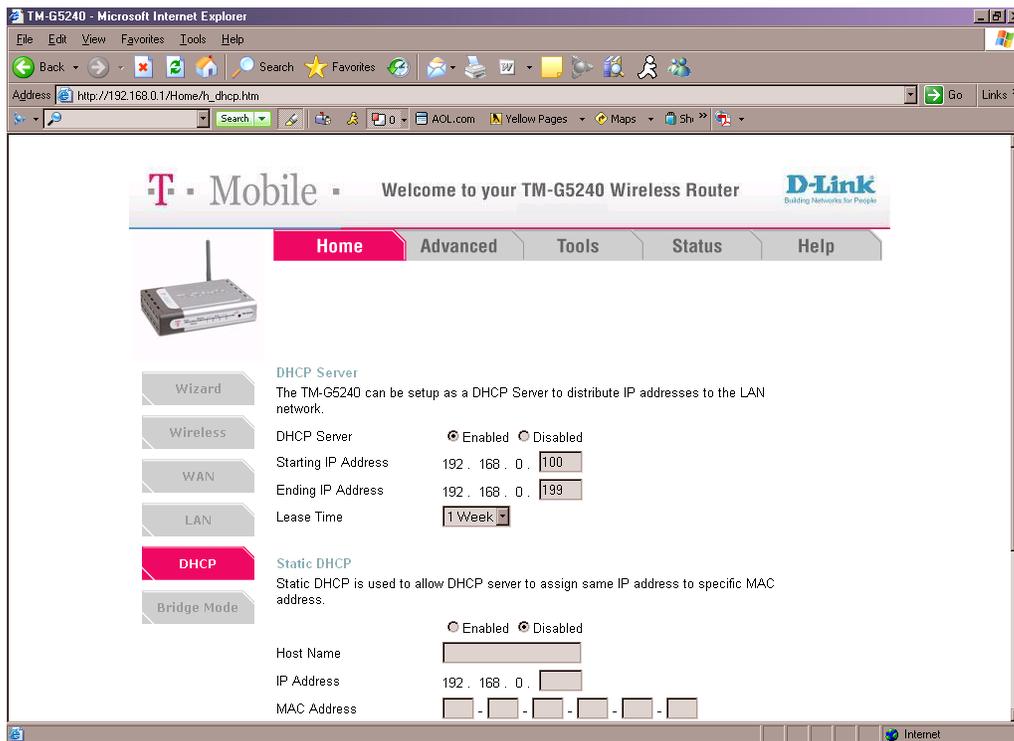
At the *Home > DHCP* tab, you can adjust:

- **DHCP Server** - Select Enabled or Disabled. The default setting is Enabled.

- **Starting IP Address** - The starting IP address for the DHCP server's IP assignment.

- **Ending IP Address** - The ending IP address for the DHCP server's IP assignment.

- **Lease Time** - The length of time for the IP address lease. Enter the Lease time. The default setting is one hour.

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- **Static DHCP -** Used to allow the DHCP server to assign the same IP address to a specified MAC address. Enter the name, IP address, and MAC address into the fields. Select which DHCP client to clone.

- **Host Name –** The name to be used to reference the specific static DHCP client.

- **DHCP Client -** Drop down list of all currently connected DHCP clients.

Home > Bridge Mode

Enable bridge mode will turn off routing and NAT (Network Address Translation) features. TM-G5240 will act similar to a switch instead of router. TM-G5240 will not be able to share one public IP to multiple LAN devices in bridge mode.
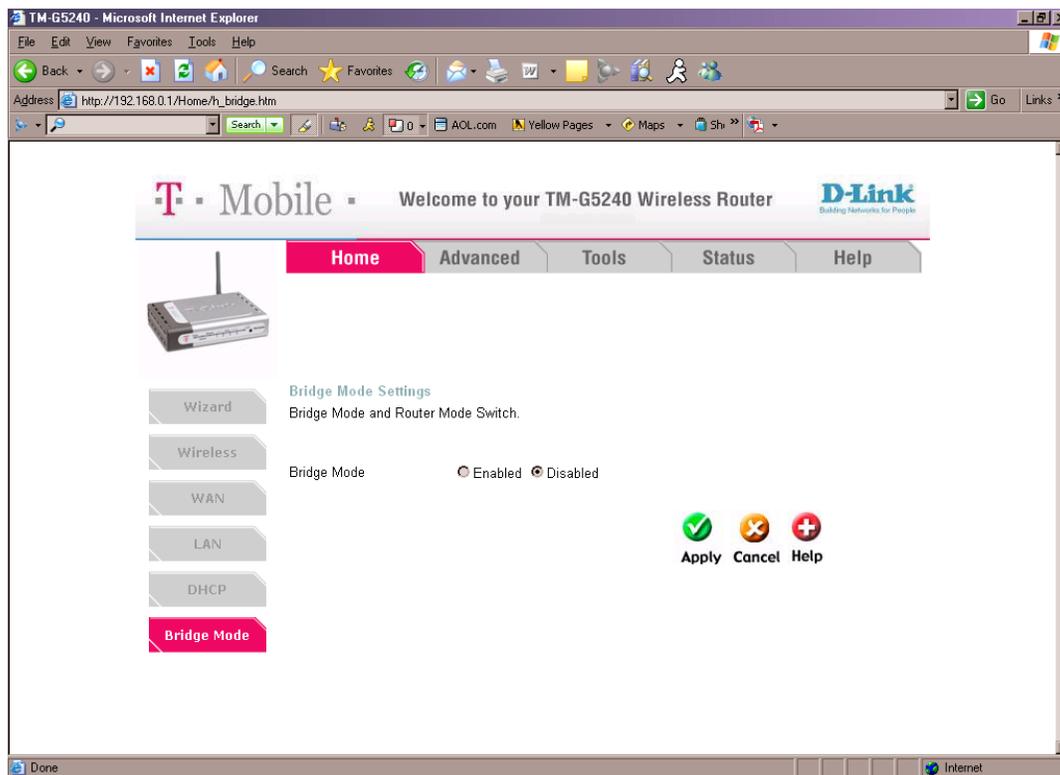
Advanced tab

Advanced > Virtual Server

The TM-G5240 can be configured as a virtual server so that remote users accessing Web or FTP services via the public IP address can be automatically redirected to local servers in the LAN (Local Area Network).

The TM-G5240 firewall feature filters out unrecognized packets to protect your LAN network so all computers networked with the TM-G5240 are invisible to the outside world. If you wish, you can make some of the LAN computers accessible from the Internet by enabling *Virtual Server.* Depending on the requested service, the TM-G5240 redirects the external service request to the appropriate server within the LAN network.

The TM-G5240 is also capable of port-redirection meaning incoming traffic to a particular port may be redirected to a different port on the server computer.

Each virtual service that is created will be listed at the bottom of the screen in the Virtual Servers List. There are pre-defined virtual services already in the table. You may use them by enabling them and assigning the server IP to use that particular virtual service.

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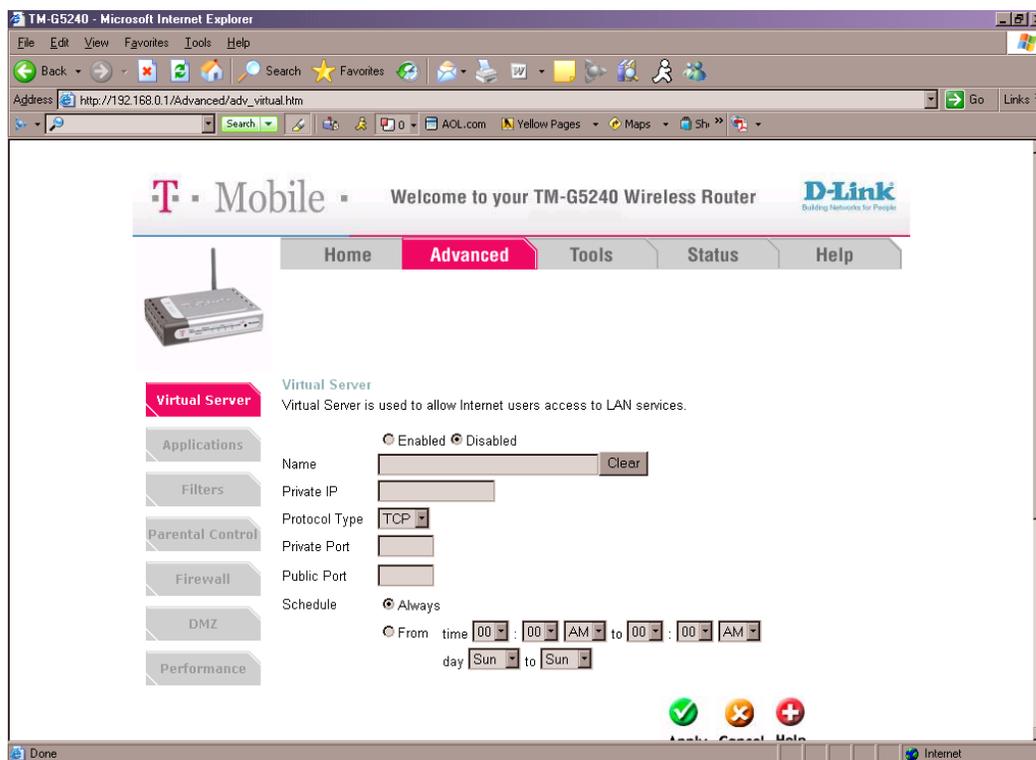
At the *Advanced* > *Virtual Server* tab, you can adjust:

- **Virtual Server** - Select **Enabled** or **Disabled**.

- **Name** - Enter the name referencing the virtual service.

- **Private IP** - The server computer in the LAN (Local Area Network) that will be providing the virtual services.

- **Protocol Type** - The server computer in the LAN (Local Area Network) that will be providing the virtual services.

- **Private Port** - The port number of the service used by the Private IP computer.

- **Public Port** - The port number of the service used by the Private IP computer.

- **Schedule** - The schedule of time when the virtual service will be enabled. The schedule may be set to Always, which will allow the particular service to always be enabled. If it is set to **Time**, select the time frame for the service to be enabled. If the system time is outside of the scheduled time, the service will be disabled.

EXAMPLE 1
If you have a Web server that you wanted Internet users to access at all times, you would need to enable it. Web (HTTP) server is on LAN (Local Area Network) computer 192.168.0.25. HTTP uses port 80, TCP.

Name: Web Server
Private IP: 192.168.0.25
Protocol Type: TCP
Private Port: 80
Public Port: 80
Schedule: always

 Click to edit virtual service

 click to delete virtual service

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EXAMPLE 2

If you have an FTP server that you wanted Internet users to access by WAN port 2100 and only during the weekends, you would need to enable it as such. FTP server is on LAN computer 192.168.0.30. FTP uses port 21, TCP.

Name: FTP Server
Private IP: 192.168.0.30
Protocol Type: TCP
Private Port: 21
Public Port: 2100
Schedule: From: 01:00AM to 01:00AM, Sat to Sun

All Internet users who want to access this FTP Server must connect to it from port 2100. This is an example of port redirection and can be useful in cases where there are many of the same servers on the LAN network.

Advanced > Applications

Some applications require multiple connections, such as Internet gaming, video conferencing, Internet telephony and others. These applications have difficulties working through NAT (Network Address Translation). Special Applications makes some of these applications work with the TM-G5240. If you need to run applications that require multiple connections, specify the port normally associated with an application in the "Trigger Port" field, select the protocol type as TCP or UDP, then enter the public ports associated with the trigger port to open them for inbound traffic.

The TM-G5240 provides some predefined applications in the table on the bottom of the web page. Select the application you want to use and enable it.

NOTE: Only one PC can use each Special Application tunnel.
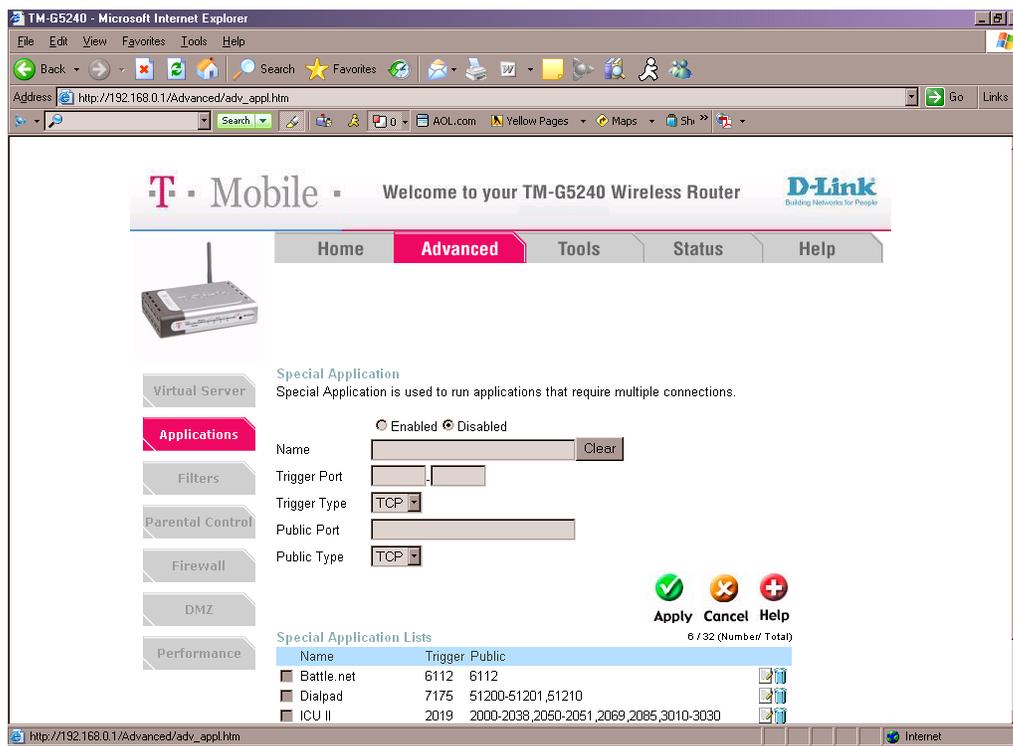
At the *Advanced > Applications* tab, you can adjust:

- **Name** -This is the name referencing the special application.

- **Trigger Port** - This is the port used to trigger the application. It can be either a single port or a range of ports.

- **Trigger Type** - This is the protocol used to trigger the special application.

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- **Public Port** - This is the port number on the WAN side that will be used to access the application. You may define a single port or a range of ports. You can use a comma to add multiple ports or port ranges.

- **Public Type** - This is the protocol used for the special application.

Advanced > Filters
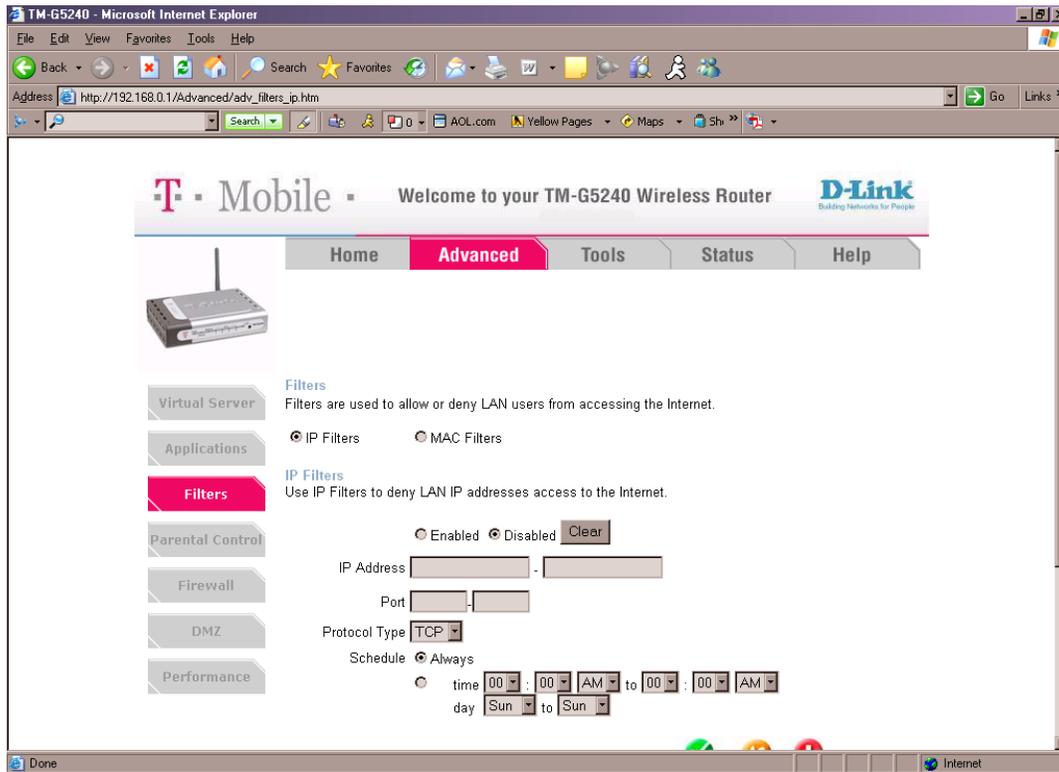
Advanced > Filters > IP Filters

Filters are used to deny or allow LAN (Local Area Network) computers from accessing the Internet. The TM-G5240 can be setup to deny internal computers by their IP or MAC addresses. The TM-G5240 can also block users from accessing restricted web sites.

At *Advanced > Filters > IP Filters*, you can adjust:

- **IP Filters** - Use IP Filters to deny LAN IP addresses from accessing the Internet. You can deny specific port numbers or all ports for the specific IP address.

- **IP** - The IP address of the LAN computer that will be denied access to the Internet.

- **Port** - The single port or port range that will be denied access to the Internet.

- **Protocol Type** - Select the protocol type.

- **Schedule** - This is the schedule of time when the IP Filter will be enabled.

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Advanced > Filters > URL Blocking

URL Blocking is used to deny LAN computers from accessing specific web sites by the URL. A URL is a specially formatted text string that defines a location on the Internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display. To use this feature, enter the text string to be blocked and click **Apply**. The text to be blocked will appear in the list. To delete the text, just highlight it and click **Delete**.

At *Advanced > Filters > URL Blocking*, you can adjust:

- **Filters** - Select the filter you wish to use; in this case, URL Blocking was chosen.

- **URL Blocking** - Select Enabled or Disabled.

- **Keywords** - Block URLs which contain keywords listed below. Enter the keywords in this space.

Advanced > Filters > MAC Filters

Use MAC (Media Access Control) Filters to allow or deny LAN (Local Area Network) computers by their MAC addresses from accessing the Network. You can either manually add a MAC address or select the MAC address from the list of clients that are currently connected to the wireless router.

At *Advanced > Filters > MAC Filters*, you can adjust:

- **Filters** – Select the filter you wish to use (in this case MAC Filters was chosen)

- **MAC Filters** - Choose Disable MAC filters; allow MAC addresses listed below; or deny MAC addresses listed below.

- **Name** – Enter the name here.

- **MAC Address** – Enter the MAC address.

- **DHCP Client** - Select a DHCP client from the pull-down list; click Clone to copy that MAC Address.

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Advanced > Filters > Domain Blocking

Domain Blocking is used to allow or deny LAN (Local Area Network) computers from accessing specific domains on the Internet. Domain blocking will deny all requests to a specific domain such as http and ftp. It can also allow computers to access specific sites and deny all other sites.
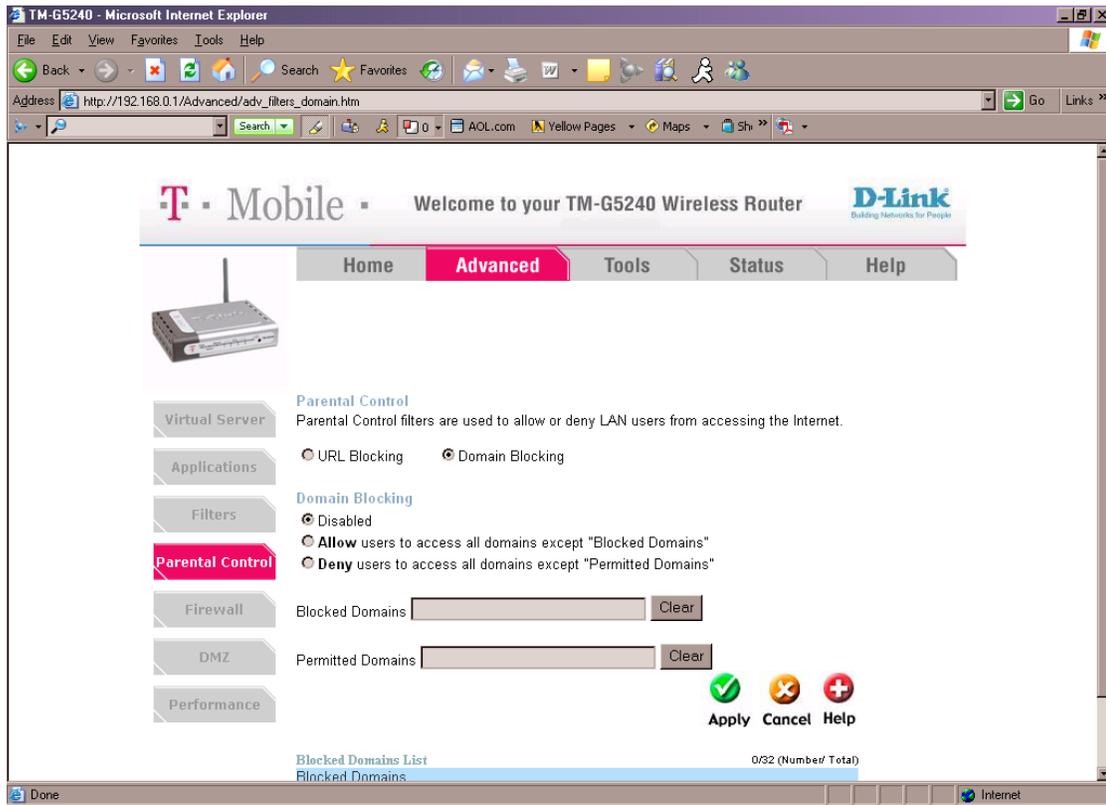
At *Advanced > Filters > Domain Blocking*, you can adjust:

- **Filters – Domain Blocking** – Select the filter you wish to use.
  - o **Disabled** – Select **Disabled** to disable Domain Blocking.
  - o **Allow** – Allows users to access all domains except **Blocked Domains**.
  - o **Deny** – Denies users access to all domains except **Permitted Domains**.

- **Permitted Domains** – Enter the **Permitted Domains** in this field

- **Blocked Domains** – Enter the **Blocked Domains** in this field.

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Advanced > Parental Control

Parental Control filters are used to allow or deny LAN users from accessing the Internet by either blocking URL's or Specific Domains.
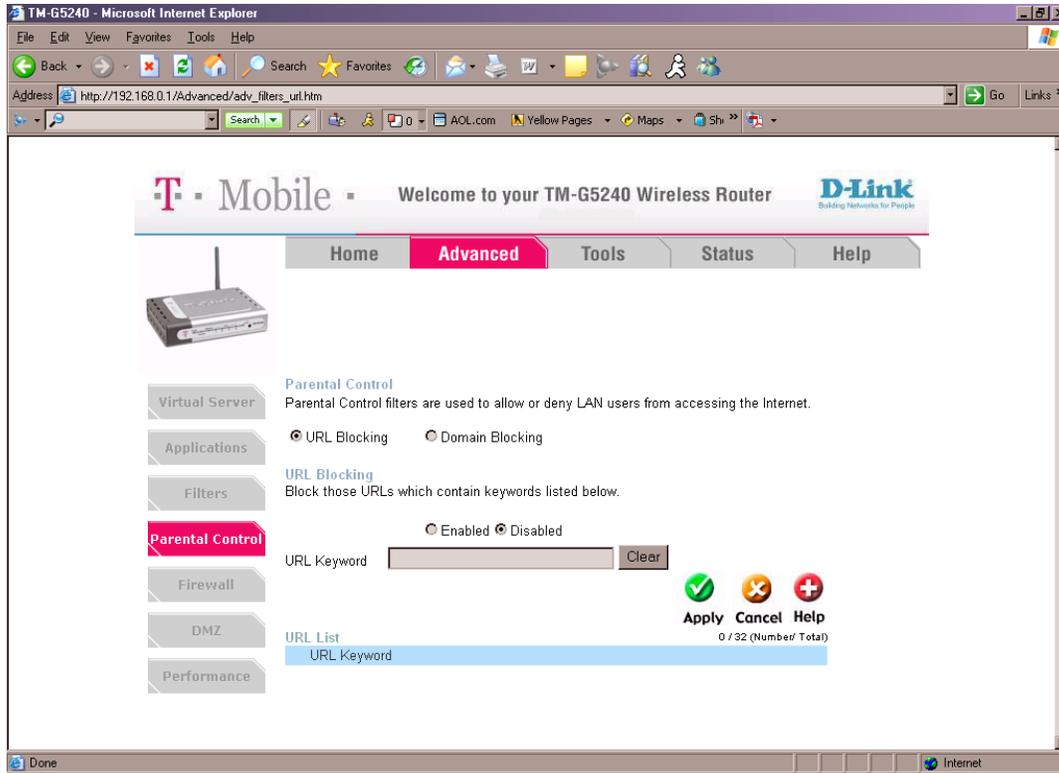
At *Advanced > Parental Control*, you can adjust:

- **URL Blocking -** Use URL blocking to deny LAN computers from accessing specific websites by its URL. A URL is a specifically formatted text string that defines a location on the internet. If any part of the URL contains the blocked word, the site will not be accessible and the web page will not display.

- **Domain Blocking -** Use Domain blocking to allow or deny computers access to specific internet domains whether it is through www, ftp, SNMP, etc. Domain filtering or blocking apply to both wired and wireless clients connected to TM-G5240.

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Advanced > Firewall

Firewall Rules is an advanced feature used to deny or allow traffic from passing through the TM-G5240. It works in the same way as IP Filters with additional settings. You can create more detailed access rules for the TM-G5240. When virtual services are created and enabled, it will also display in Firewall Rules. Firewall Rules contain all network firewall rules pertaining to IP (Internet Protocol).

In the Firewall Rules List at the bottom of the screen, the priorities of the rules are from top (highest priority) to bottom (lowest priority.)

NOTE: The TM-G5240 MAC Address filtering rules have precedence over the Firewall Rules.
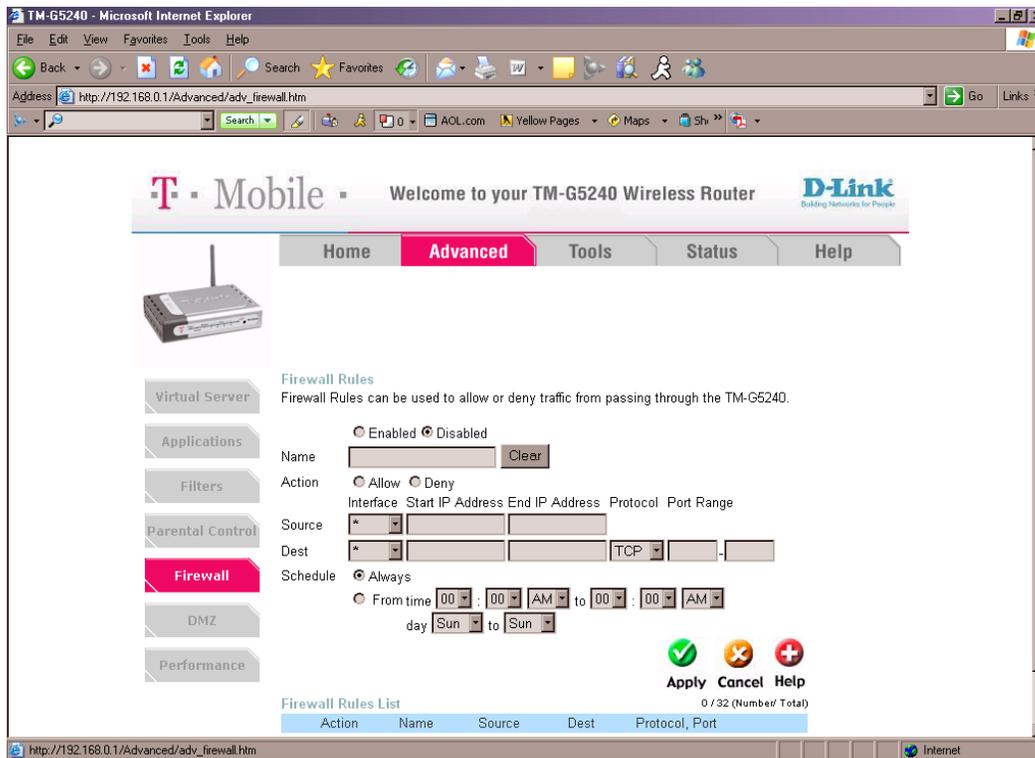
At the *Advanced > Firewall* tab, you can adjust:

- **Firewall Rules** - Enable or disable the Firewall.

- **Name** - Enter the name.

- **Action** - Allow or Deny.

- **Source** - Enter the IP Address range.

- **Destination** - Enter the IP Address range, the Protocol, and the Port Range.

- **Schedule** - Select Always or enter the Time Range.

Advanced > DMZ

If you have a client PC that cannot run Internet applications properly from behind the TM-G5240, then you can set the client up for unrestricted Internet access. It allows a computer to be exposed to the Internet. This feature is useful for gaming purposes. Enter the IP address of the internal computer that will be the DMZ host. Adding a client to the DMZ (Demilitarized Zone) may expose your local network to a variety of security risks, so only use this option as a last resort.
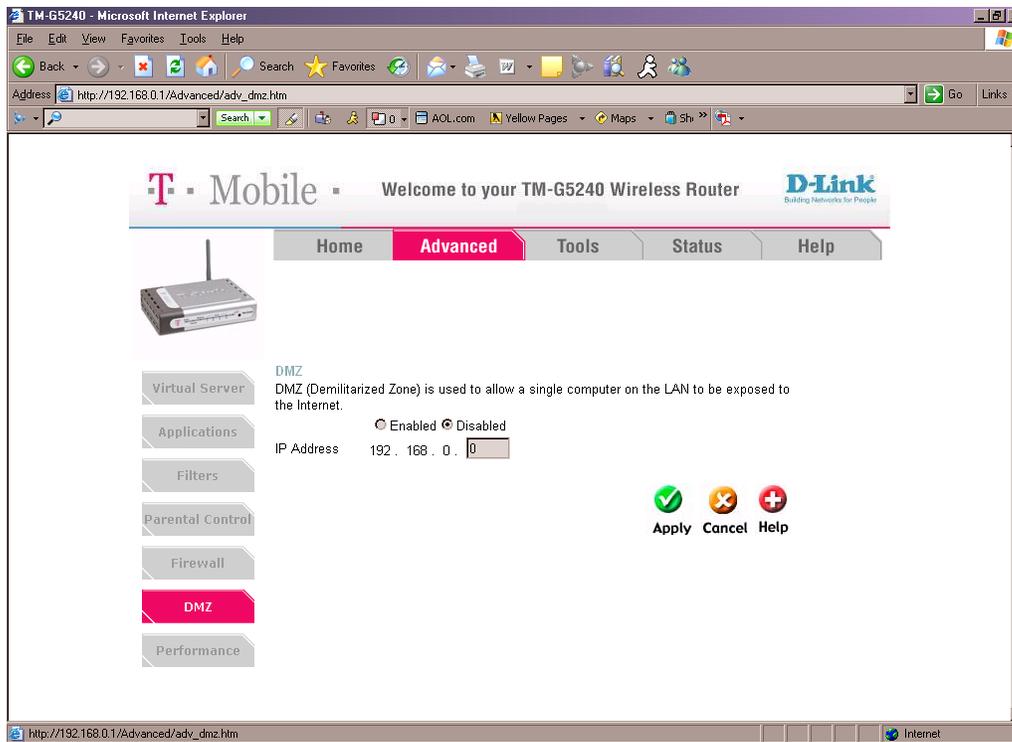
At the *Advanced > DMZ* tab, you can adjust:

- **DMZ** - Enable or Disable the DMZ. The DMZ (Demilitarized Zone) allows a single computer to be exposed to the internet. By default the DMZ is disabled.

- **IP Address** - Enter the IP Address of the computer to be in the DMZ.

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Advanced > Performance

Displayed in this window are the Wireless Performance features for the Access Point
portion of the TM-G5240.
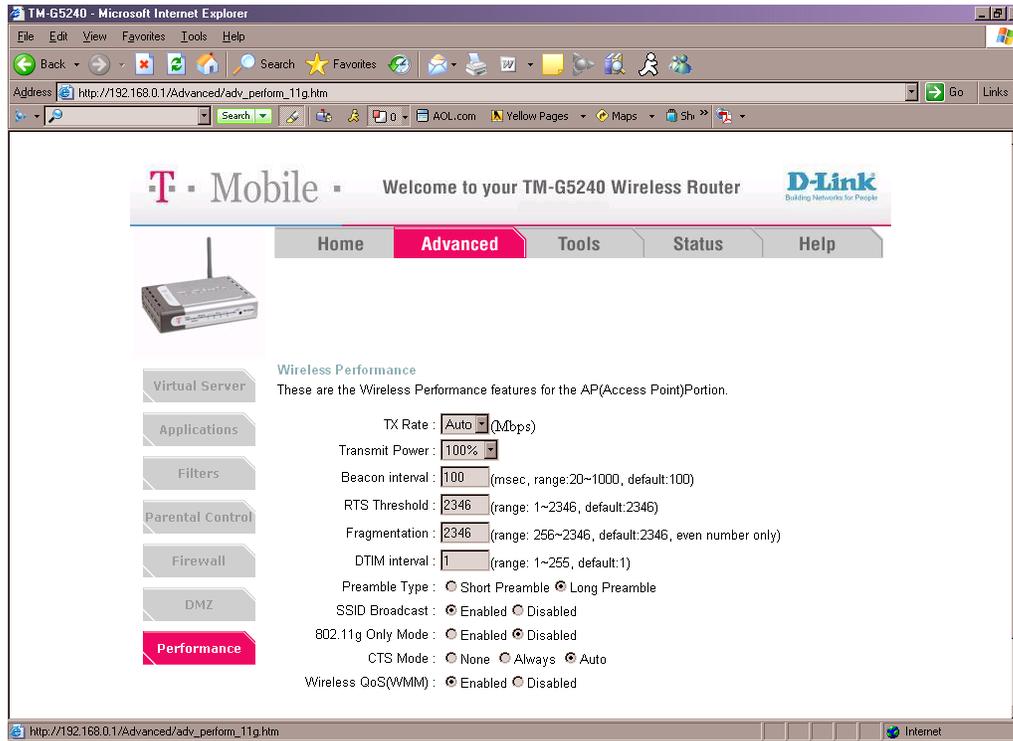
At the Advance > Performance tab, you can adjust:

- **Beacon Interval** - Beacons are packets sent by an Access Point to synchronize a
  wireless network. Specify a value. 100 is the default setting and is recommended.

- **RTS Threshold** - This value should remain at its default setting of 2432. If incon-
  sistent data flow is a problem, only a minor modification should be made.

- **Fragmentation** - The fragmentation threshold, which is specified in bytes, deter-
  mines whether packets will be fragmented. Packets exceeding the 2346 byte
  setting will be fragmented before transmission. 2346 is the default setting.

- **DTIM Interval** - (Delivery Traffic Indication Message) 3 is the default setting. A
  DTIM is a countdown informing clients of the next window for listening to
  broadcast and multicast messages.

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- **Preamble Type** - Select **Short** or **Long Preamble**. The Preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the wireless router and the roaming wireless network adapters. Auto is the default setting. *Note: High network traffic areas should use the shorter preamble type.*

- **Transmit Power (Mbps) -** TM-G5240 has the option to adjust its wireless transmit power. Limiting transmit power can help in situations where you do not want the same signals overlapping one another.

- **SSID Broadcast -** Enabled is the default setting. Choose Enabled to broadcast the SSID across the network. All devices on the network must share the same SSID (Service Set Identifier) to establish communication. Choose Disabled if you do not wish to broadcast the SSID over the network.

- **802.11g Only Mode -** For increased speed in your network, enable this option. 802.11b devices will be excluded.

- **SPI Mode -** Stateful Packet Inspection (also known as dynamic packet filtering) helps to prevent cyber attacks by tracking more state per session. It validates that the traffic passing through the session conforms to the protocol.

- **WAN speed to 10/100 Mbps -** This option allows the user to select 10Mbps, 100Mbps, or 10Mbps/100Mbps Auto for the Internet port. You may need to change the Internet port speed if you are experiencing connection problems with your Cable, or DSL modem.

- **CTS -** Clear To Send is a function used to minimize collisions among wireless devices on a wireless local area network (LAN). CTS will make sure the wireless network is clear before a wireless client attempts to send wireless data. Enabling CTS will add overhead and may lower wireless throughput.

  Auto - CTS will monitor the wireless network and automatically decide whether to implement CTS based on the amount of traffic and collisions that occurs on the wireless network.

  Always - CTS will always be used to make sure the wireless LAN is clear before sending data.

  None - CTS is typically used in a pure 802.11g environment. If CTS is set to **None** in a mixed mode environment populated by 802.11b clients, wireless collisions may occur frequently.

Tools tab

Tools > Admin

At this page, the TM-G5240 administrator can change the system password. There are two accounts that can access the wireless router's Web-Management interface. They are admin and user. Admin has read/write access while user has read-only access. User can only view the settings but cannot make any changes.
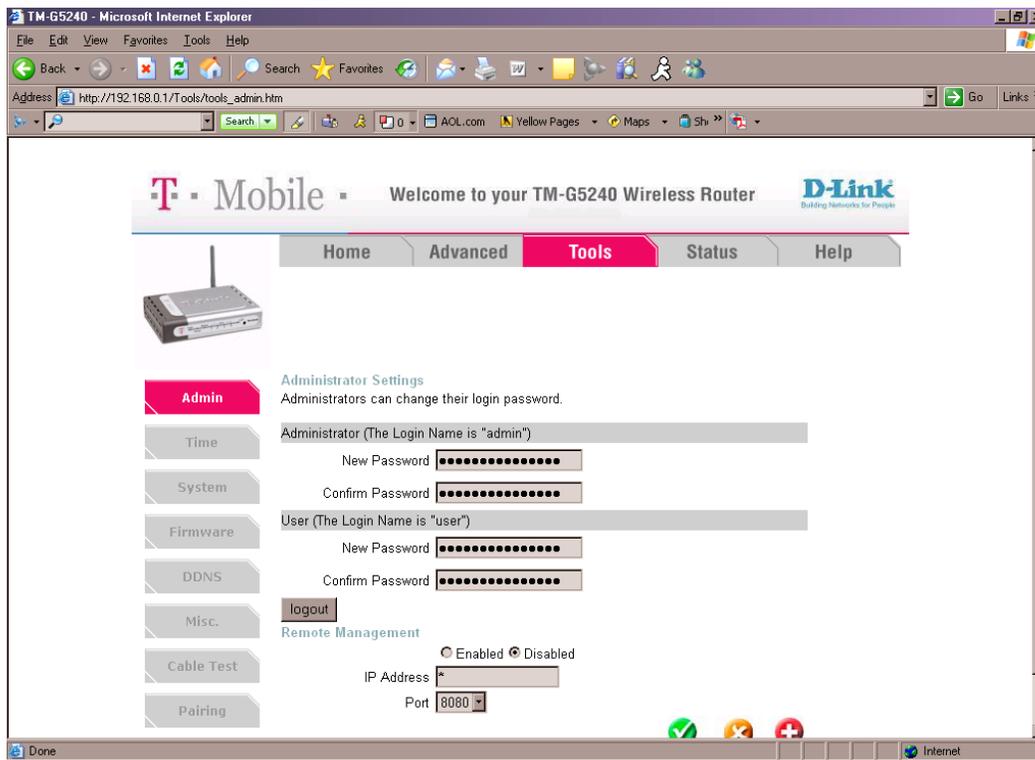
At the *Tools > Admin* tab, you can adjust:

- **Administrator** – **admin** is the Administrator login name.

- **Password** – Enter the password and enter again to confirm.

- **User** – **user** is the User login name.

- **Remote management** – Remote management allows the TM-G5240 to be configured from the Internet by a web browser. A username and password is still required to access the Web-Management interface. In general, only a member of your network can browse the built-in web pages to perform Administrator tasks.

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This feature enables you to perform Administrator tasks from the remote (Internet) host.

- **IP Address** – The Internet IP address of the computer that has access to the Wireless router. If you input an asterisk (*) into this field, then any computer will be able to access the Router. Putting an asterisk (*) into this field would present a security risk and is not recommended.

- **Port** – The port number used to access the wireless router.
  Example: http://x.x.x.x:8080 where x.x.x.x is the WAN IP address of the wireless router and 8080 is the port used for the Web-Mangement interface.

Tools > Time
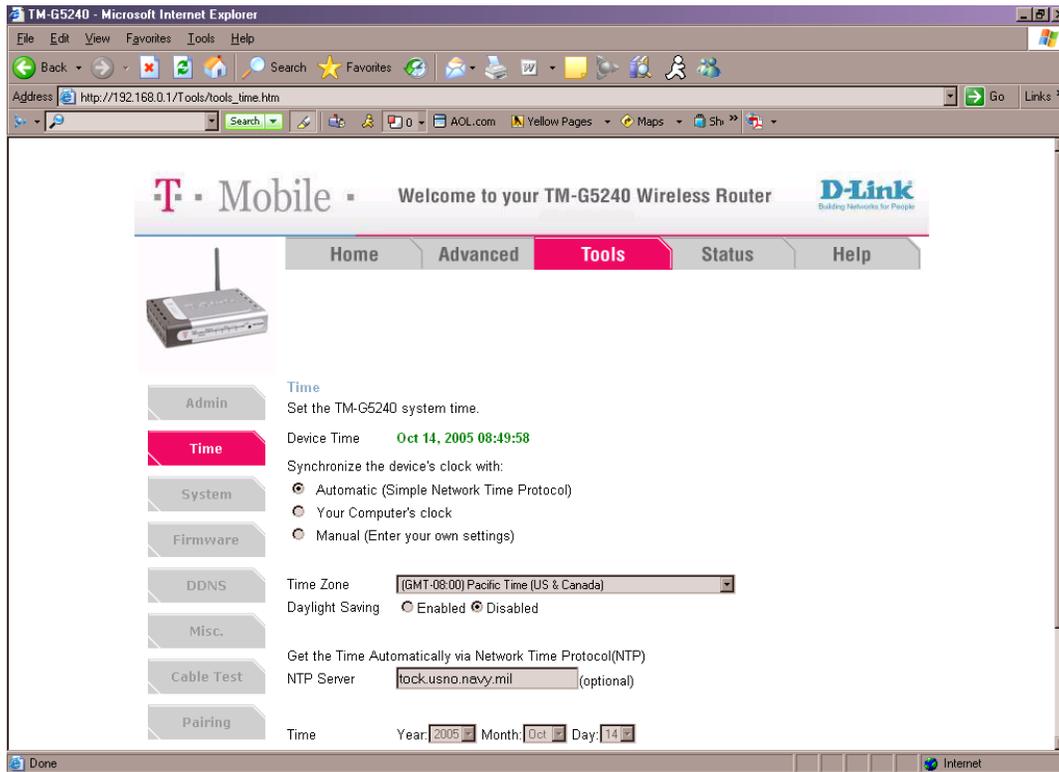
At the *Tools > Time* tab, you can adjust:

- **Time Zone** – Select the time from the pull-down menu.

- **Default NTP Server** – NTP is short for *Network Time Protocol.* NTP synchronizes computer clock times in a network of computers. This field is optional.

- **Set the Time** – To manually input the time, enter the values in these fields for the Year, Month, Day, Hour, Minute, and Second. Click Set Time.

- **Daylight Saving** - To select Daylight Saving time manually, select enabled or disabled, and enter a start date and an end date for daylight saving time.

Tools > System

The current system settings can be saved as a file onto the local hard drive. The saved file or any other saved setting file can be loaded back on the wireless router. To reload a system settings file, click on Browse to browse the local hard drive and locate the system file to be used. You may also reset the wireless router back to factory settings by clicking on Restore.
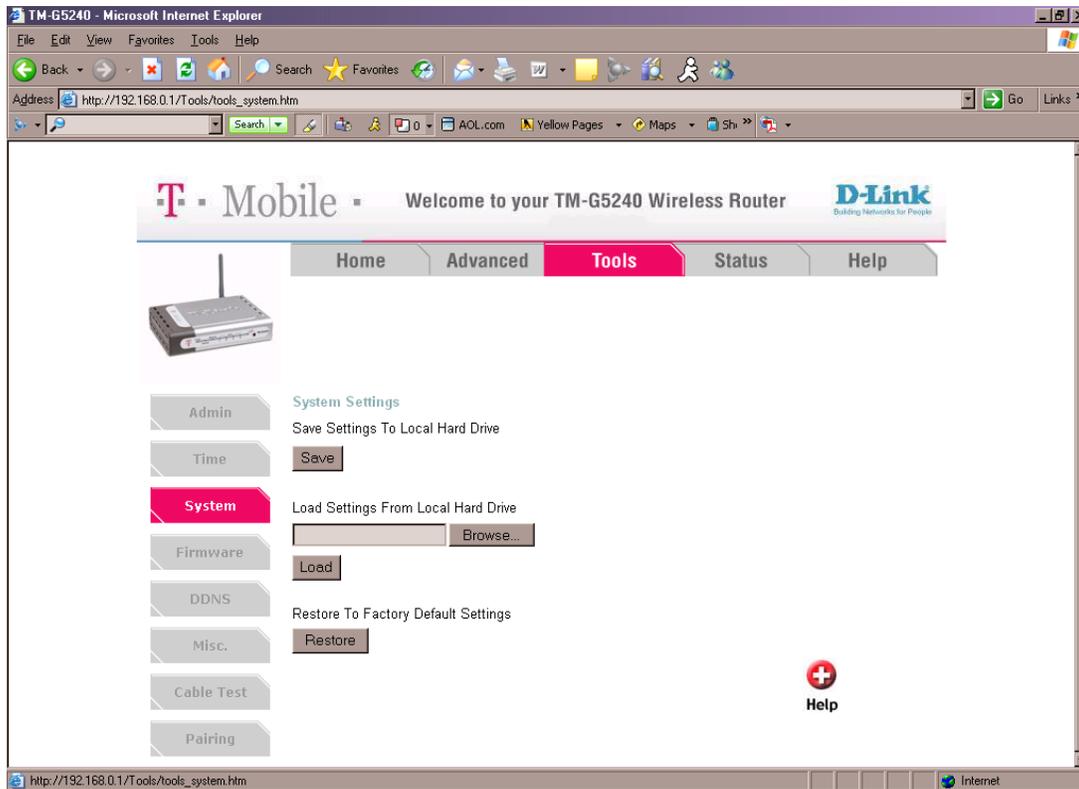
At the *Tools > System* tab, you can adjust:

- **Save Settings to Local Hard Drive** – Click Save to save the current settings to the local Hard Drive.

- **Load Settings from Local Hard Drive** – Click Browse to find the settings, then click **Load**.

- **Restore to Factory Default Settings** - Click Restore to restore the factory default settings.

Tools > Firmware

You can upgrade the firmware of the Router here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on Browse to browse the local hard drive and locate the firmware to be used for the update. Please check the D-Link support site for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from the D-Link support site.
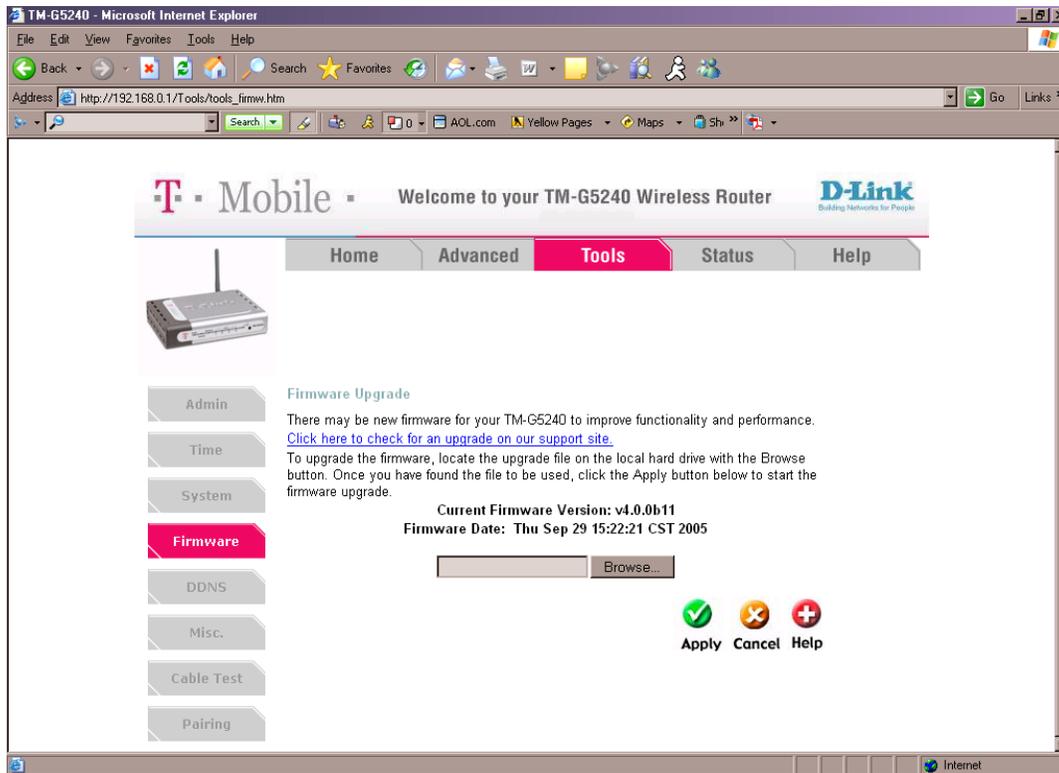
At the *Tools > Firmware* tab, you can adjust:

- **Firmware Upgrade** – Click on the link in this screen to find out if there is an updated firmware; if so, download the new firmware to your hard

- **Browse** – After you have downloaded the new firmware, click Browse in this window to locate the firmware update on your hard drive. Click Apply to complete the firmware upgrade.

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Tools > DDNS

When an IP address is automatically assigned by a DHCP server, DDNS automatically updates the DNS server. Select Disabled to Enable. Users who have a Dynamic DNS account may use this feature.
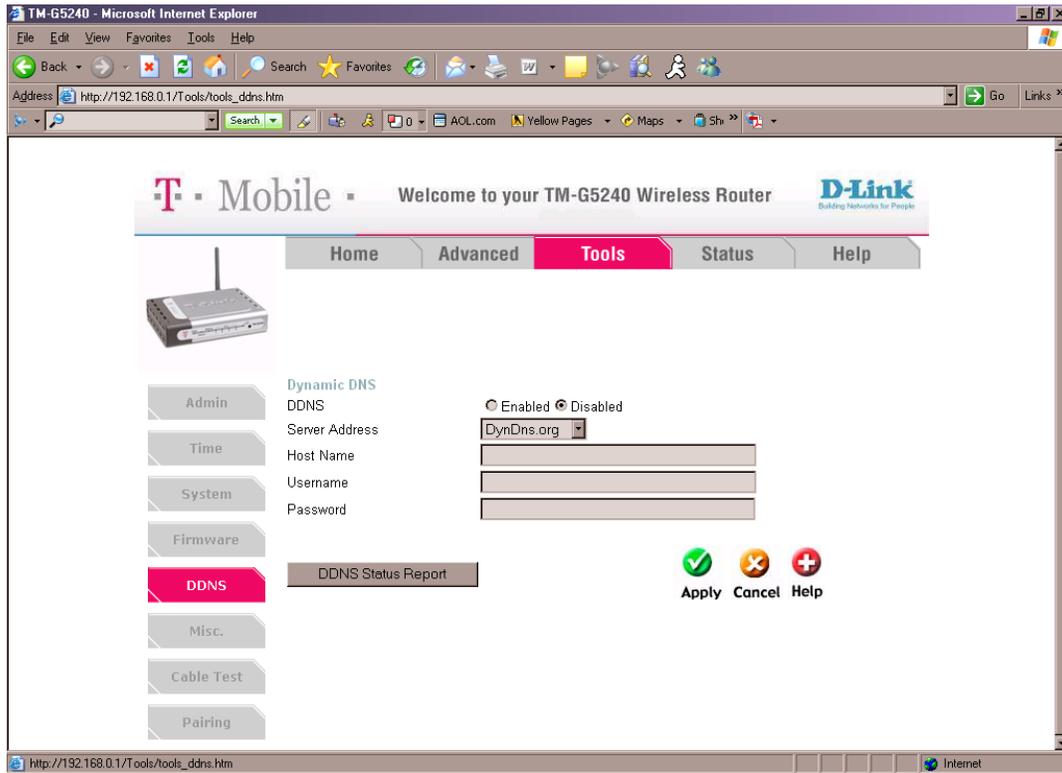
Tools > Misc
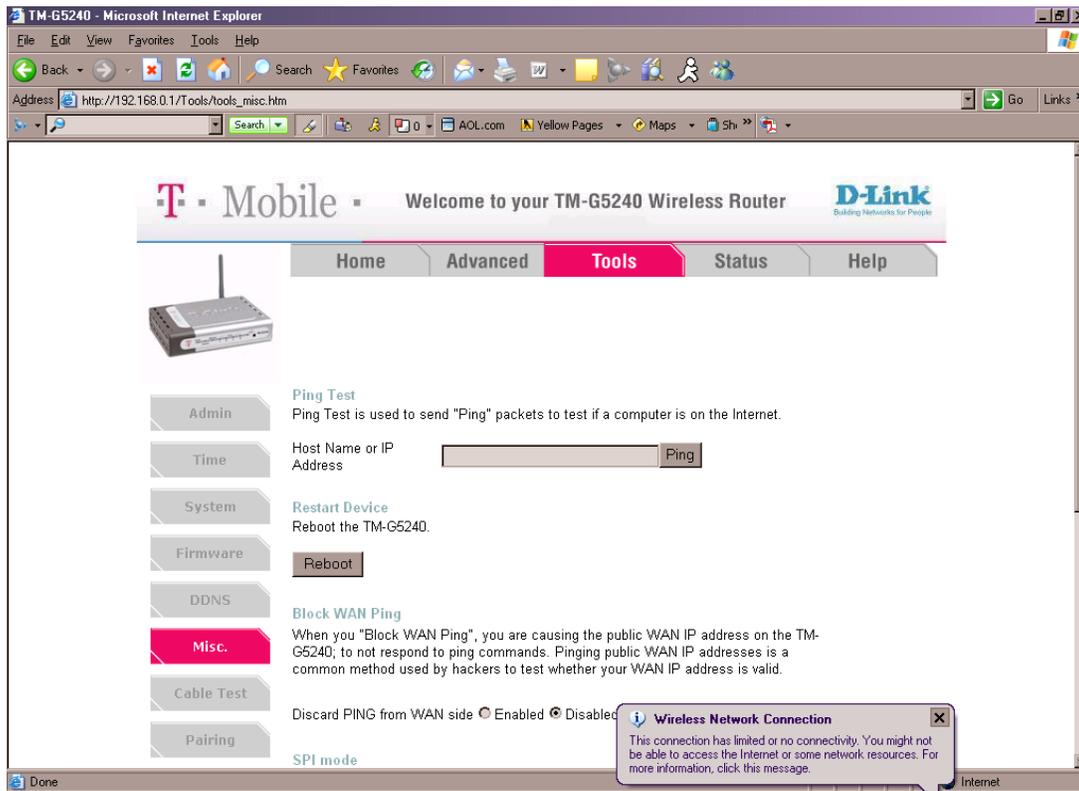
At the *Tools > Misc* tab, you can adjust:

- **Ping Test** – The Ping Test is used to send Ping packets to test if a computer is on the Internet. Enter the IP Address that you wish to Ping, and click **Ping**.

- **Restart Device** – Click Reboot to restart the TM-G5240.

- **Block WAN Ping** – If you choose to block WAN Ping, the WAN IP Address of the TM-G5240 will not respond to pings. Blocking the Ping may provide some extra security from hackers.
  - o **Discard Ping from WAN side** – Click **Enabled** to block the WAN ping.

- **UPNP** – To use the *Universal Plug and Play* feature click on Enabled. UPNP provides compatibility with networking equipment, software and peripherals of the over 400 vendors that cooperate in the Plug and Play

- **Gaming Mode** – Gaming mode allows a form of pass-through for certain Internet Games. If you are using Xbox, Playstation2 or a PC, make sure you are using the latest firmware and Gaming Mode is enabled. To utilize Gaming Mode, click

Enabled. If you are not using a Gaming application, it is recommended that you Disable Gaming Mode.

- **Dynamic DNS** – Dynamic Domain Name System is a method of keeping a domain name linked to a changing IP Address. This is a useful feature since many computers do not use a static IP address.

- **VPN Pass Through** - The TM-G5240 supports VPN (Virtual Private Network) pass-through for both PPTP (Point-to-Point Tunneling Protocol) and IPSec (IP Security). Once VPN pass-through is enabled, there is no need to open up virtual services. Multiple VPN connections can be made through the TM-G5240. This is useful when you have many VPN clients on the LAN network.

  PPTP – Select **Enabled** or **Disabled**
  IPSec – Select **Enabled** or **Disabled**

Tools > Cable Test

Diagnostic cable tester is an advanced feature that integrates a LAN cable tester on every Ethernet Port on the router. Through the graphical user interface (GUI), Cable Tester can be used to remotely diagnose and report cable faults such as opens, shorts, swaps, and impedance mismatch. It enables users to easily troubleshoot their cable connections.

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Tools > Pairing

Pairing is the process of securing the TM-G5240 with your T-Mobile phone. It is a process where the security settings of the TM-G5240 get transmitted to the phone.
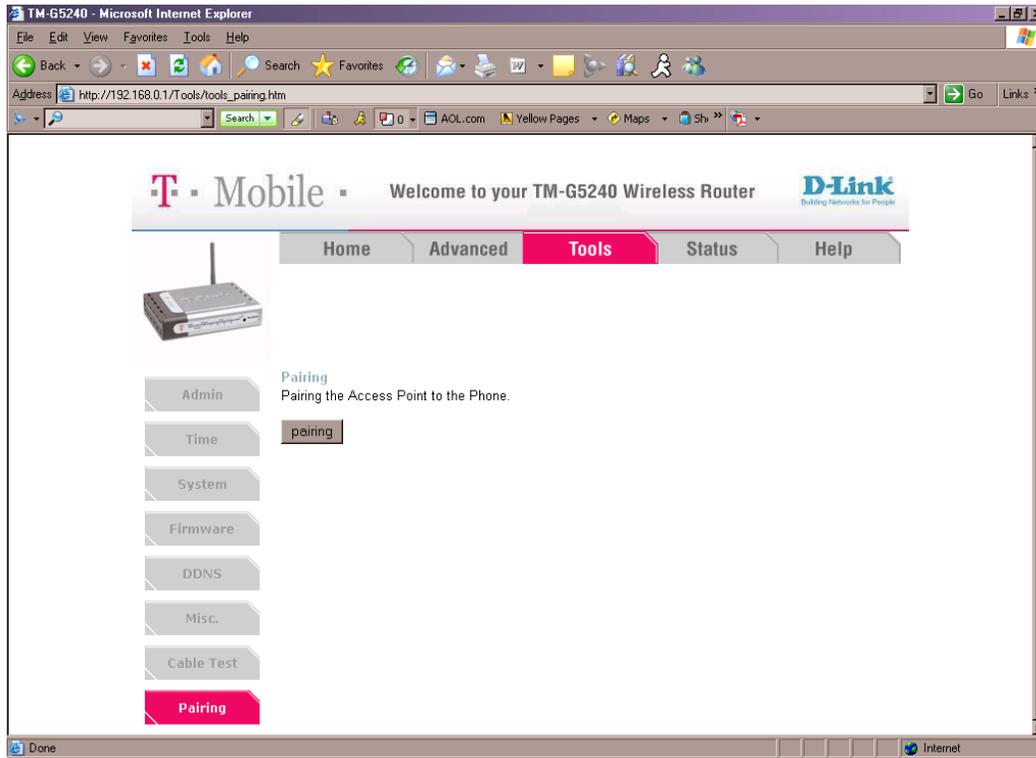
Status tab

Status > Device Info

This page displays the current information for the TM-G5240. It will display the LAN, WAN, and MAC address information.If your WAN connection is set up for a Dynamic IP address then a Release button and a Renew button will be displayed. Use *Release* to disconnect from your ISP and use *Renew* to connect to your ISP. If your WAN connection is set up for PPPoE, a Connect button and a Disconnect button will be displayed. Use *Disconnect* to drop the PPPoE connection and use *Connect* to establish the PPPoE connection.This window will show the TM-G5240's working status:
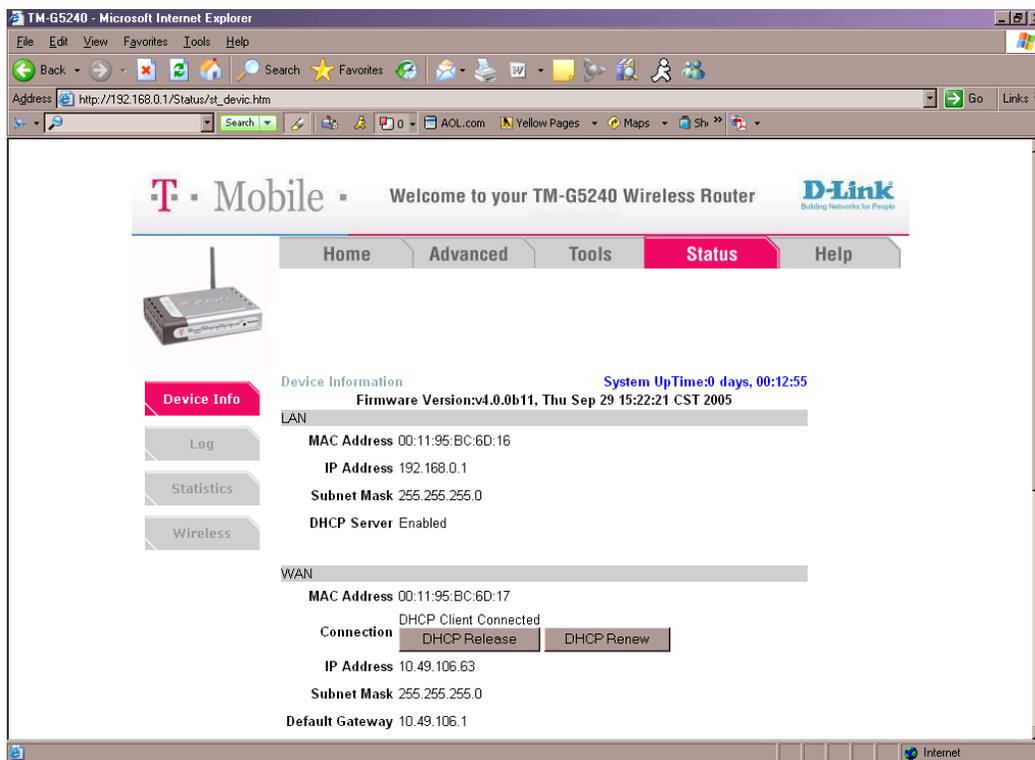
At the *Status > Device Info* tab, you can adjust:

- **IP Address** - LAN/Private IP Address of the TM-G5240 Subnet Mask: LAN/Private Subnet Mask of the TM-G5240

- **WAN** –
  IP Address: WAN/Public IP Address
  Subnet Mask: WAN/Public Subnet Mask
  Gateway: WAN/Public Gateway IP Address

Domain Name Server: WAN/Public DNS IP AddressWAN Status: WAN Connection Status

- **Wireless** –
  MAC Address: Displays the MAC address
  SSID: Displays the current SSID
  Channel: Displays the current channel
  WEP: Indicates whether WEP is enabled or disabled

Status > Log

The wireless router keeps a running log of events and activities occurring on the Router. If the device is rebooted, the logs are automatically cleared. You may save the log files under Log Settings.
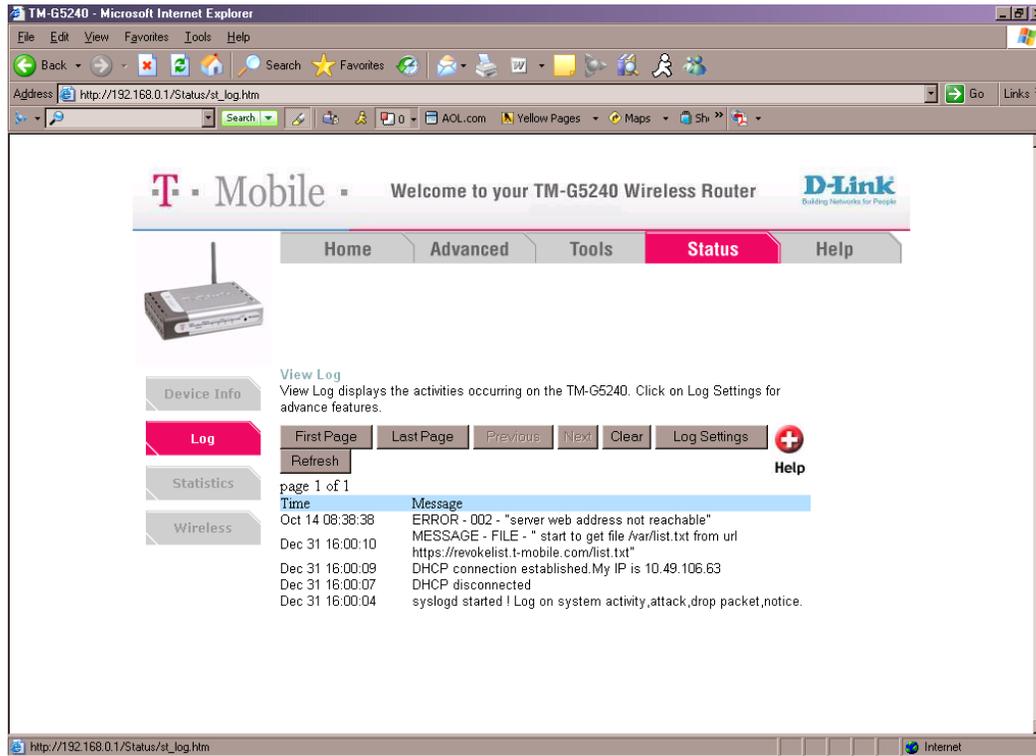
At the *Status > Log* tab, you can select **View Log** to view first page, last page, previous, next, clear, and log settings.

Status > Log > Log Settings

Not only does the wireless router display the logs of activities and events, it can setup to send these logs to another location.

At *Status > Log > Log Settings*, you can adjust:

- **SMTP Server/IP Address** – The address of the SMTP server that will be used to send the logs.

- **Email Address** – The email address to which the logs will be sent.

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Status > Statistics

The screen above displays theTraffic Statistics. Here you can view the amount of packets that pass through the TM-G5240 on both the WAN and the LAN ports. The traffic counter will reset if the device is rebooted.

Status > Wireless

The wireless client table displays a list of current connected wireless clients. This table also displays the connection time and MAC address of the connected wireless client. Click **Help** at any time for more information.
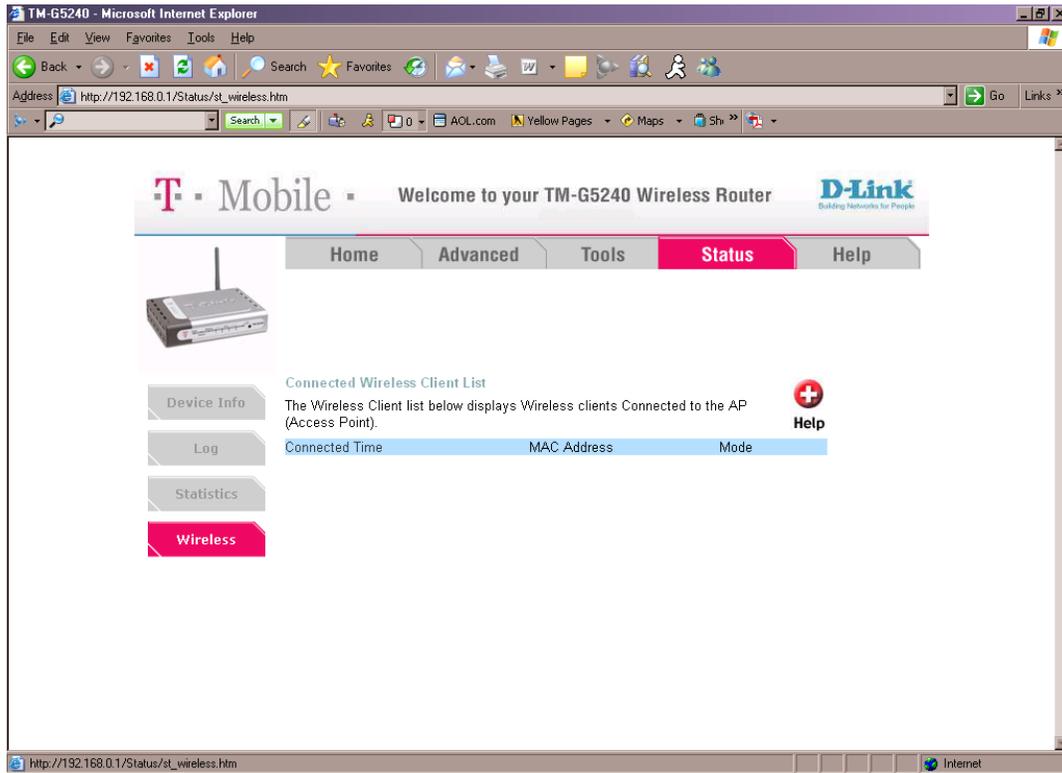
Help tab

On the Help tab, you can click on the links to quickly access information.
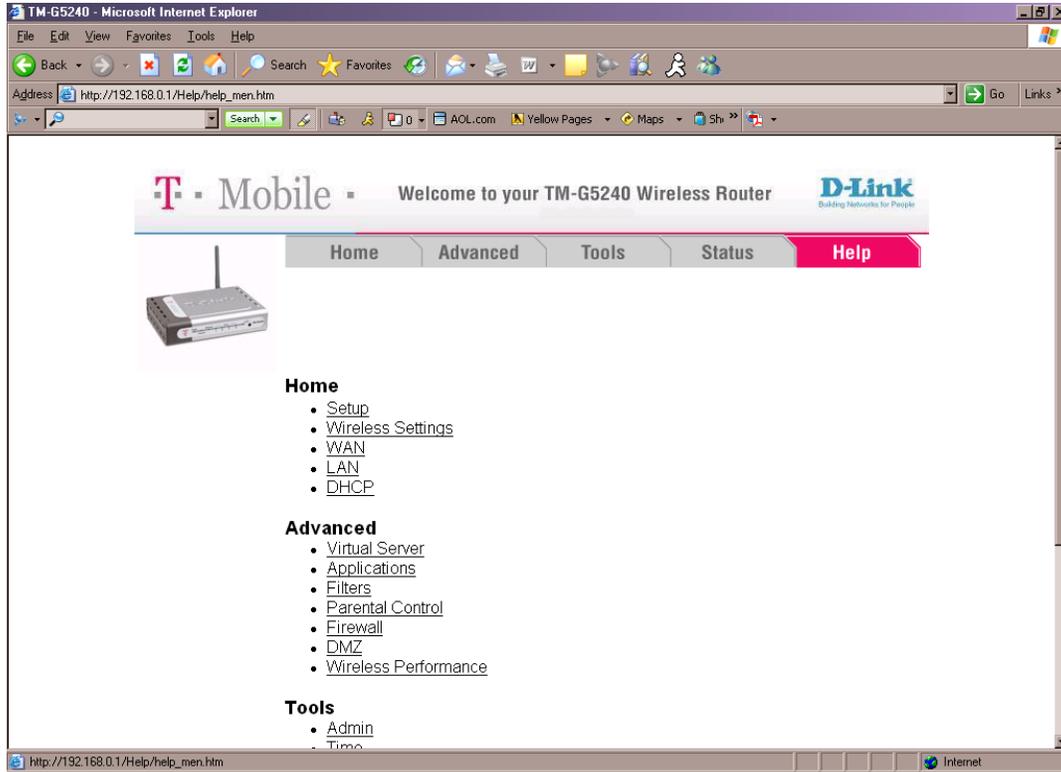
Troubleshooting

Introduction

This section provides solutions to problems that can occur during the installation and operation of the TM-G5240.

Note: It is recommended that you use an Ethernet connection to configure the TM-G5240 wireless router.

I can't connect to the Internet

Check the lights for the TM-G5240.
- **Power light** – solid green
- **Internet light** – blinking green
- **Port light (any port 1-4)** – blinking green for data activity or solid green for no activity but has good connection

Confirm that all cables are connected correctly and securely.
- The modem is connected to your high speed internet connection.
- The modem is connected to the Internet port of the TM-G5240.
- The computer is connected to one of the numbered ports (1-4) on the TM-G5240.
- The TM-G5240's power adapter is connected to an electrical outlet.

Power off all devices (unplug if needed) and power on each device in the following order:
- Cable or DSL modem
- TM-G5240
- Computer

If you have a static IP address, make sure your computer's Internet settings are set to **DHCP** for the initial setup. See *How do I assign static IP address* section in this manual.

When running the CD Install Wizard I can't get past the cabling steps

This means the computer you are running the CD with can not communicate with the wireless router. Try the following:

1. Check that your cables are correct based on the images in the CD Wizard and then see the text in the troubleshooting issue *I can't connect to the internet*.
2. Re-run the CD, ensure all lights are on for the router before moving past step 9.

I'm prompted for a username and password when opening my Web browser

It is most likely that your DSL (PPPoE) software installed on your computer is requesting this information. Since the TM-G5240 will now authenticate and connect you to your DSL service, you must disable or uninstall any PPPoE software from your computer. PPPoE software will not work behind your TM-G5240. Please contact your Internet Service Provider for assistance.

I want to use a broadband modem with a USB connection

The TM-G5240 only works with a modem with an Ethernet connection. Most modems will offer both USB and Ethernet. Disconnect the USB connection before starting the installation procedure. If your modem has only a USB connection, contact your Internet Service Provider for assistance.

The CD will not run when I insert it into the CD-ROM drive

The autorun function of your CD drive may be disabled. To manually launch the Setup Wizard:

1. On your computer, click **Start > Run**.
2. At the Run box, type **d:/Installation_Wizard.exe** (d is the drive letter for your CD-ROM drive).
3. Click **OK** to start the Setup Wizard.

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I can't wirelessly connect to the TM-G5240

- Verify your wireless settings on your computer. Make sure the SSID and security settings are the same as the TM-G5240.

- Change the channel on the TM-G5240 to reduce interference. For best results, use channels 1, 6, or 11.

- Keep the TM-G5240 at least three feet away from electrical devices that generate radio frequency noise (example, cordless phones, microwaves, computer monitors, electric motors, UPS units).

Place the TM-G5240 in the most central location of the house. Do not place the TM-G5240 in a closet, cabinet, or in the garage. See *Other Installation Considerations* section in this manual for further information on the best placement of your TM-G5240.

My wireless connection keeps dropping

- Try a different antenna orientation for the TM-G5240. Try to keep the antenna at least six inches away from the wall or other objects.

- If you are using 2.4GHz cordless phones, X-10 equipment or other home security systems, ceiling fans, and lights, your wireless connection will degrade dramatically or drop altogether. Try changing the channel on your TM-G5240 and on all the devices in your network to avoid interference.

- Keep your product away (at least 3-6 feet) from electrical devices that generate RF noise, like microwaves, monitors, electric motors, and so on.

Telephone cable or coaxial cable will not work with TM-G5240

The TM-G5240 does not function as a modem. Dial-up Internet access will not work with the TM-G5240. You must have a broadband modem supported by your Internet provider. If you have broadband Internet and a Windows PC, run the CD included with the TM-G5240.

I want to modify TM-G5240 settings

To modify settings, you must log on to the TM-G5240:

1. Open your Web browser and type the IP address of the TM-G5240 in the address bar. The default IP address is **192.168.0.1**. You are prompted for your password.

2. Type your password. Default password is **admin**.

Reset to factory default setting

After you have tried other methods for troubleshooting your network, you may choose to reset the TM-G5240 to the factory default settings. Perform the following to hard-reset the TM-G5240 to factory default settings:

1. Ensure the router has power and the status lights are on.
2. Locate the **Reset** button on the back of the TM-G5240.
3. Use a paper clip, press and hold in the **Reset** button.
4. Hold for about 10 seconds, until the status lights flash off, then release.
5. When the status lights are all back on the router is fully reset.

   After the TM-G5240 resets (may take a few minutes), it will be reset to the factory default settings.

Reset button

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How do I find the IP address

Windows 95, 98, and ME

1. On the computer's taskbar, click **Start > Run.** The *Run Dialogue* box opens.
2. At the *Run Dialogue* box, type **winipcfg** in the window as shown then click **OK**. The *IP Configuration* dialog box opens displaying your Ethernet Adapter Information.

3. At the *IP Configuration* dialog box, select your adapter from the drop down menu. NOTE: If you do not see your adapter in the drop down menu, your adapter is not properly installed.
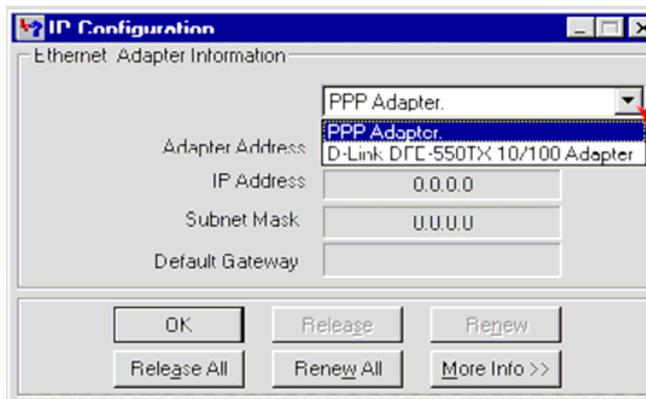
4. After selecting your adapter, it will display your IP Address, subnet mask, and default gateway.
5. Click **OK** to close the *IP Configuration* dialog box.
6. Check your IP address. Your computer must have an IP address in the same range of the device you are attempting to configure.

Windows Vista

1. Click on **Start**.
2. In the *Start Search* dialog box, type **cmd** and press **Enter**. See Step 3 below and continue from there.

Windows 2000 and XP

1. Click on **Start** and select **Run**.
2. Type **cmd** then click **OK.**
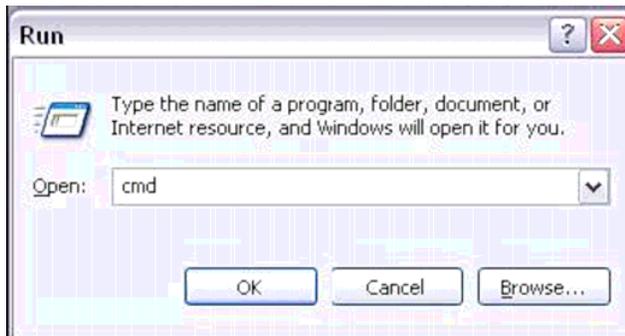
3. From the Command Prompt, enter **ipconfig**. It will return your IP Address, subnet mask, and default gateway.
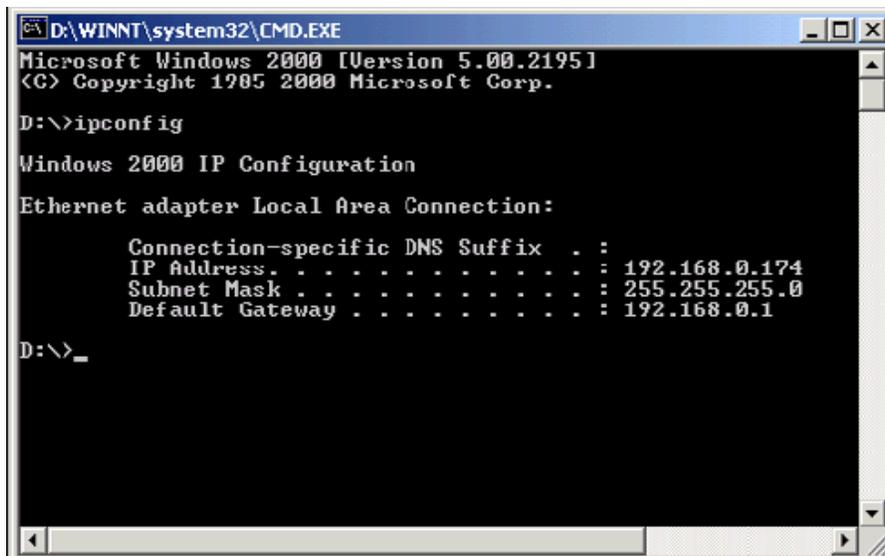
4. Type **exit** to close the command prompt.
5. Check your IP Address. Your computer must have an IP Address in the same range of the device you are attempting to configure.

6. Make sure you take note of your computer´s Default Gateway IP Address. The Default Gateway is the IP Address of the T-Mobile router. By default, it should be 192.168.0.1.

How do I assign a static IP address

Windows Vista

1. Click the **Windows Logo (Start) > Control Panel > Network and Internet > Network and Sharing Center > Manage Network Connections.**
2. See Step 2 for Windows 2000 and continue from there.

Windows XP

1. Click **Start > Control Panel > Network and Internet Connections > Network connections**.
2. See Step 2 for Windows 2000 and continue from there.

Windows 2000

1. Right-click **My Network Places** icon on your computer's desktop and select **Properties**.
2. Right-click **Local Area Connection,** which represents your network card and select **Properties**.
3. Highlight **Internet Protocol (TCP/IP)** and click **Properties.**
4. Click **Use the following IP Address** and enter an IP address that is on the same subnet as the LAN IP address on your router. Example: If the router´s LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X = 2-99. Make sure that the number you choose is not in use on the network.
5. Set the **Default Gateway** to be the same as the LAN IP address of your router (192.168.0.1).
6. Set **the Primary DNS** to be the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or enter a DNS server from your ISP.
7. Click **OK** twice. You may be asked if you want to reboot your computer. Click **Yes**.

Windows 98 and ME

1. From the desktop, right-click the **Network Neighborhood** icon (for Win ME – right-click **My Network Places** icon) and select **Properties**.
2. Highlight **TCP/IP** and click the **Properties** button. If you have more than 1 adapter, then there will be a TCP/IP "Binding" for each adapter. Highlight **TCP/IP** > (your network adapter) and then click **Properties**.

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3. Click **Specify an IP Address**.

4. Enter in an IP address that is on the same subnet as the LAN IP address on your router. Example: If the router´s LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is between 2-99. Make sure that the number you choose is not in use on the network.

5. Click on the **Gateway** tab.

6. Enter the LAN IP address of your router here (192.168.0.1).

7. Click **Add** when finished.

8. Click on the **DNS Configuration** tab. Click **Enable DNS**. Type in a Host (can be any word). Under DNS server search order, enter the LAN IP address of your router (192.168.0.1). Click Add.

9. Click **OK** twice.

   When prompted to reboot your computer, click **Yes**. After you reboot, the computer will now have a static, private IP Address.

10. Access the Web management. Open your web browser and enter the IP address of your T-Mobile device in the address bar. This should open the login page for the web management. Follow instructions to login and complete the configuration.

How can I set up TM-G5240 to work with a cable modem

Dynamic cable connection

Note: Please configure the TM-G5240 with the computer that was last connected directly to the cable modem.   Try running the CD that came with the router first. If that does not work, follow the steps below.

1. Access the TM-G5240's *Configuration* menu by typing the TM-G5240's IP address in your Web browser. The default IP address is **192.168.0.1**.
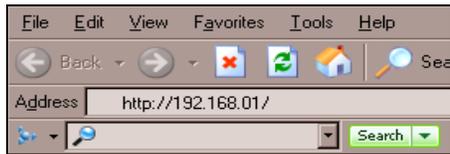
2. Login using your password. The default username is "admin" and the password is blank.

3. At the *Configuration* menu, click the **Home** tab and click the **WAN** button.

4. Make sure **Dynamic IP Address** is selected.

5. Click **Clone Mac Address**.

6. Click on **Apply** and then **Continue** to save the changes.

7. Power cycle the cable modem and TM-G5240:

   Turn the cable modem off first. Turn the router off for two minutes. Turn the cable modem on first. Wait until you get a solid cable light on the cable modem and then turn the TM-G5240 on. Wait 30 seconds.

   Note: If you have a Motorola (Surf Board) modem, leave off for at least 5 minutes.

8. Access the *Configuration* menu again.

9. Click the **Status tab** and click the **Device Info** button. If you do not already have a public IP address under the WAN heading, click **DHCP Renew** and then click **Continue**.

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Static cable connection

1. Access the TM-G5240's *Configuration* menu by typing the TM-G5240's IP address in your Web browser.

2. Login using your password. The default username is "admin" and the password is blank.

3. Click the **Home** tab and click the **WAN** button.

4. Select **Static IP Address** and type your static settings obtained from the ISP in the fields provided. If you do not know your settings, you must contact your ISP.

5. Click **Apply** and then click **Continue** to save the changes.

6. Click the **Status** tab and click the **Device Info** button. Your IP address information will be displayed under the WAN heading.

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How can I set up my router to work with Earthlink DSL or any PPPOE connection

Make sure you disable or uninstall any PPPoE software such as WinPoet or Enternet 300 from your computer or you will not be able to connect to the Internet.

1. Upgrade the firmware if needed. Visit the D-Link tech support web site at http://support.dlink.com for the latest firmware upgrade information.

2. Reset the TM-G5240. Using a paperclip, press the reset button on the back of the TM-G5240 for 10 seconds. Release it and the TM-G5240 will recycle. The lights will blink and then stabilize.

3. After the TM-G5240 stabilizes, access the TM-G5240's *Configuration* menu by typing the TM-G5240's IP address in your Web browser. The default IP address is **192.168.0.1**.
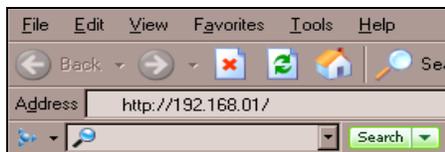
4. Login using your password. The default username is "admin" and the password is blank. If the password dialog box does not open, repeat Step 2. **Note:** Do not run the Wizard.

5. Click the **WAN** button on the Home screen and select **PPPoE**.
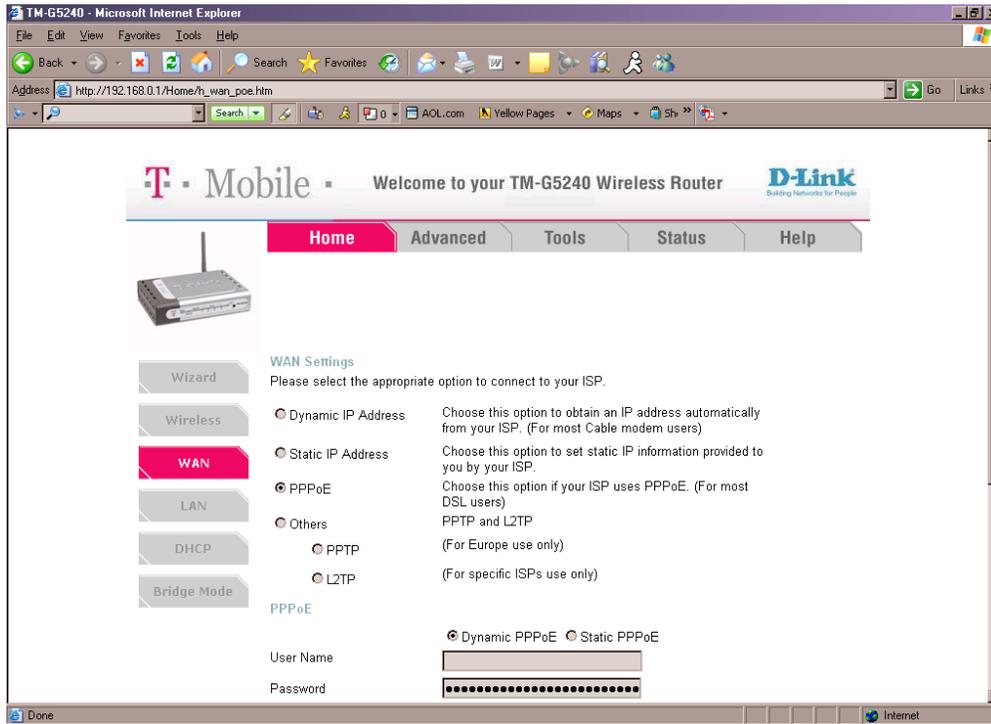
6. Select **Dynamic PPPoE** (unless your ISP supplied you with a static IP address).

7. In the username field, type **ELN/username@earthlink.net** and your password (where username is your own username).
    o For SBC Global users, type username@sbcglobal.net.
    o For Ameritech users, type sername@ameritech.net.
    o For BellSouth users, type username@bellsouth.net.
    o For Mindspring users, type username@mindspring.com.
    o For most other ISPs, type the username.

8. Set the maximum idle time to zero. Set MTU to **1492**, unless specified by your ISP, and set auto-reconnect to **Enabled**.

    Note: If you experience problems accessing certain websites and/or email issues, please set the MTU to a lower number such as 1472, 1452, etc. Contact your ISP for more information and the proper MTU setting for your connection.

9. Click **Apply**. When prompted, click **Continue**. Once the screen refreshes, unplug the power to the TM-G5240.

10. Turn off your DSL modem for 2-3 minutes and then turn it back on. Once the modem has established a link to your ISP, plug the power back into the TM-G5240. Wait about 30 seconds and log back into the router.

11. Click the **Status** tab on the *Configuration* menu where you can view the device information.

12. Under **WAN**, click **Connect**.

13. Click **Continue** when prompted. You should now see that the device info will show an IP address, verifying that the device has connected to a server and has been assigned an IP address.

How do I open ports on the TM-G5240

To allow traffic from the Internet to enter your local network, you will need to open up ports or the TM-G5240 will block the request.

1. Access the TM-G5240's *Configuration* menu by typing the TM-G5240's IP address in your Web browser. The default IP address is **192.168.0.1**.
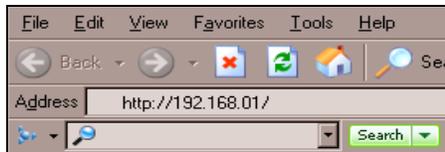
2. Login using your password. The default username is "admin" and the password is blank.

3. At Home page, click the **Advanced** tab then click the **Virtual Server** button.
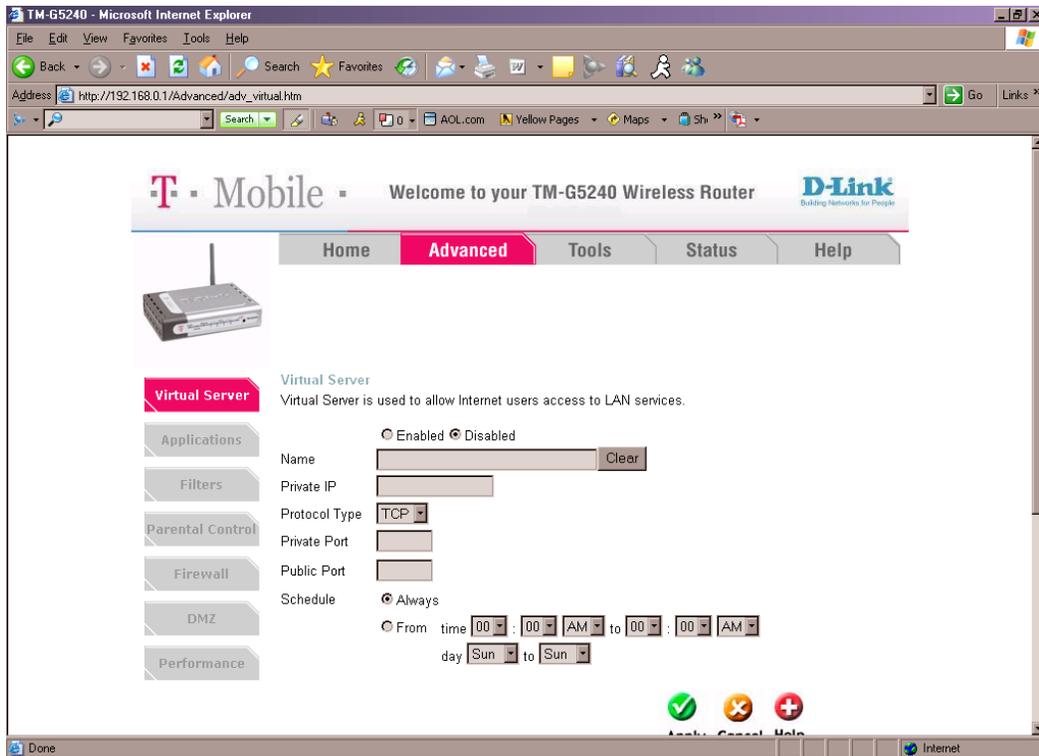
4. Select **Enabled** to activate entry.

5. Type a name for your virtual server entry.

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6. At Private IP, type the IP address of the computer on your local network that you want to allow the incoming service to.

7. Select **TCP**, **UDP**, or **Both** for the protocol type. If you are not sure, select **Both**.

8. Type the port information next to **Private Port** and **Public Port**. The private and public ports are usually the same. The public port is the port seen from the WAN side, and the private port is the port being used by the application on the computer within your local network.

9. Type the **Schedule** information.

10. Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled. If DMZ is enabled, it will disable all Virtual Server entries. Because the TM-G5240 uses NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example, if you have two Web servers on your network, you cannot open port 80 to both computers. You will need to configure one of the Web servers to use port 81. Now you can open port 80 to the first computer and then open port 81 to the other computer. For more information, visit http://support.dlink.com/faq/view.asp?prod_id=1191.

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How do I open a range of ports on the TM-G5240 using firewall rules

1. Access the TM-G5240's *Configuration* menu by typing the TM-G5240's IP address in your Web browser. The default IP address is **192.168.0.1**.
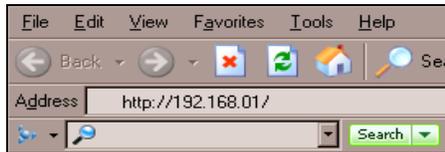
2. Login using your password. The default username is "admin" and the password is blank.

3. At Home page, click the **Advanced** tab then click the **Firewall** button.

4. Click on **Enabled** and type in a name for the new rule.

5. Select **WAN** as the **Source** and type a range of IP addresses out on the Internet that you would like this rule applied to. If you would like this rule to allow all Internet users to be able to access these ports, then put an asterisk in the first box and leave the second box empty.

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6. Select **LAN** as the **Destination** and type the IP address of the computer on your local network that you want to allow the incoming service to. This will not work with a range of IP addresses.

7. Type the port or range of ports that are required to be open for the incoming service.

8. Click **Apply** and then click **Continue**.

Note: Make sure DMZ host is disabled. Because the TM-G5240 uses NAT (Network Address Translation), you can only open a specific port to one computer at a time. For example, if you have two Web servers on your network, you cannot open port 80 to both computers. You will need to configure one of the Web servers to use port 81. Now you can open port 80 to the first computer and then open port 81 to the other computer.

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(USA only)

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor, and
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

Limited Warranty:
D-Link warrants that the hardware portion of the D-Link product described below ("Hardware") will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below ("Warranty Period"), except as otherwise stated herein.

- Hardware (excluding power supplies and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: Ninety (90) days

The customer's sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link's option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an authorized D-Link service agent. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

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CE Mark Warning:
This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Statement:
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 communication. 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 one or more of the following measures**:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.