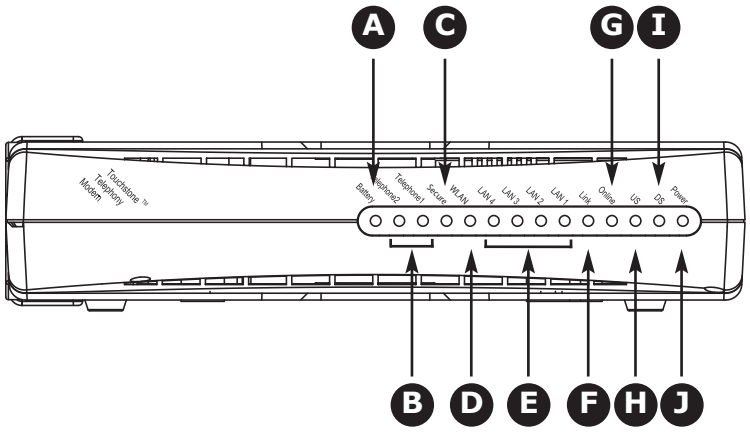
TCC INTERNET

Setup and Configuration

ARRIS TM652 Cable Modem

Connecting the modem
Wireless security
Firewall
SSID/Channel
Troubleshooting

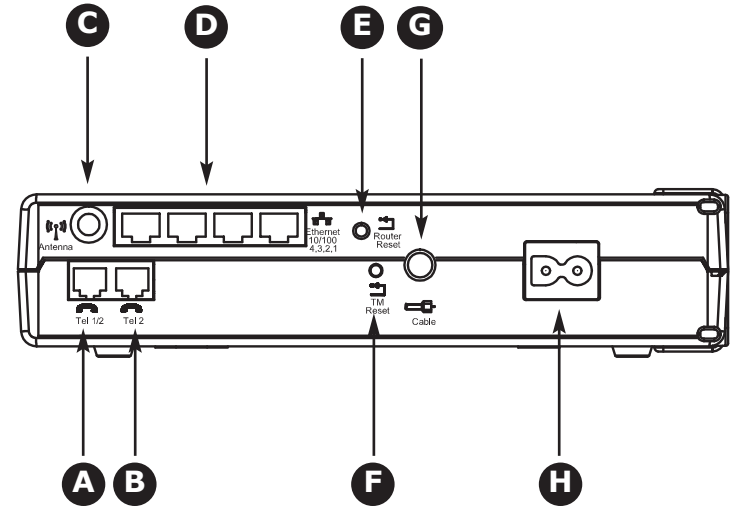
TRI-COUNTY
COMMUNICATIONS COOPERATIVE, INC.



Front Panel

The front of the Telephony Modem has the following indicators:

- **A** **Battery**: (WTM652G only) indicates the battery status.
- **B** **Telephone 1/2**: indicates the status of each telephone line.
- **C** **Secure**: indicates Wireless Protected Setup (WPS) is active.
- **D** **WLAN**: indicates the status of the wireless LAN.
- **E** **LAN 1–4**: indicates the status of each Ethernet port.
- **F** **Link**: indicates Ethernet or wireless connectivity between the Telephony-Modem and computers.
- **G** **Online**: indicates internet data transmission status.
- **H** **US**: indicates upstream connectivity.
- **I** **DS**: indicates downstream connectivity.
- **J** **Power**: indicates whether AC power is available to the unit.



Rear Panel

The rear of the Telephony Modem has the following connectors and controls:

- **A** **Tel 1** (A/B models): connector for the first phone line.
  Tel 1/2 (G models): connector for the first phone line (or both lines of a 2-line phone).
- **B** **Tel 2**: connector for the second phone line.
- **C** **Antenna**: connector for the wireless antenna.
- **D** **Ethernet**: for use with a computer LAN port.
- **E** **Router Reset** button: resets the Ethernet and wireless ports without affecting telephony service.
- **F** **TM Reset** button: resets the Telephony Modem as if you power cycled the unit. Use a pointed non-metallic object to press this button.
- **G** **Cable**: connector for the coaxial cable.
- **H** **Power**: connector for the power cord.

Configuring Your Wireless Connection

The WTM652 ships with a basic factory default configuration that should allow you to immediately access the Internet with a wireless connection. If your computer is equipped with a 802.11b/g wireless LAN card, you may wish to configure the WTM652 wireless settings. At a minimum, ARRIS suggests that you configure security settings.

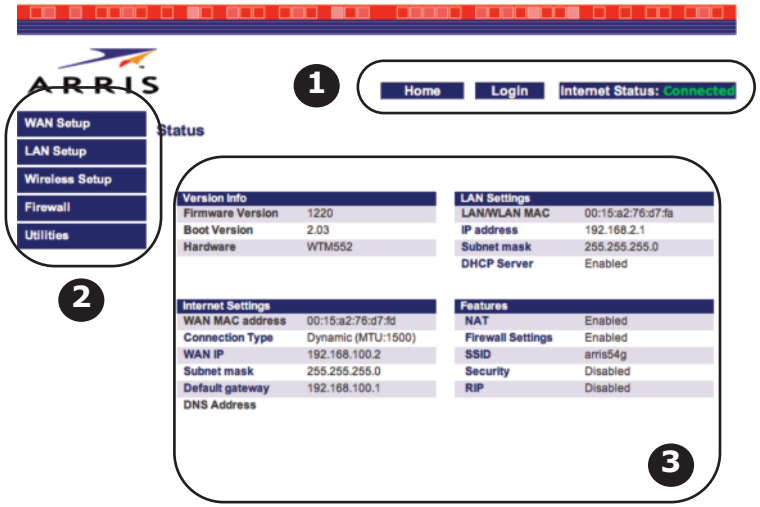
Requirements

Make sure you have the following before attempting to configure your Ethernet connection:

- Computer with:
  - — Ethernet interface or wireless interface
  - — Ethernet cable, if using Ethernet interface (supplied)
- Web browser

Configuration Basics

The WTM652 uses a web-based interface to configure wireless settings. The following screen shows the various components of the interface.



1 Access bar: Shows the WTM652 connection status and provides the following links:

- **Home** — returns to the Status page (shown above) from any screen.
- **Help** — displays help for the current screen.
- **Login/Logout** — allows access to screens other than the Status screen.

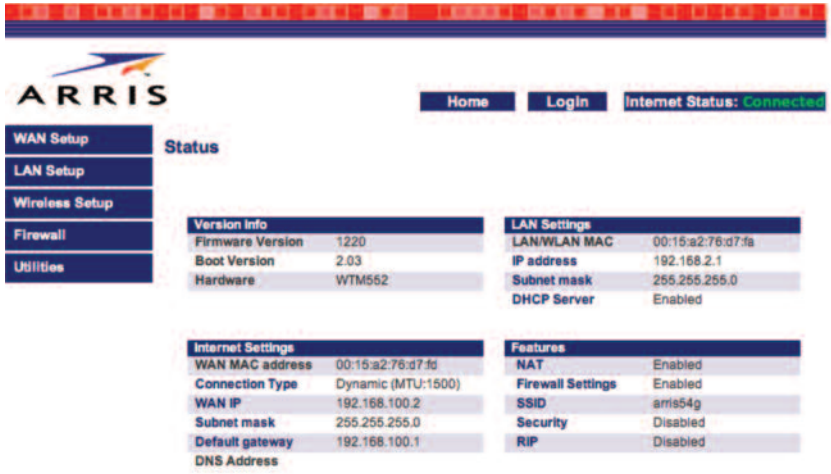
2 Navigation menu: Select any of the items in this list to display an associated submenu. Selecting submenu items displays the associated screen. If you are not logged in, the WTM652 displays the login screen before allowing you to proceed.

3 Display area: Enter or view configuration information in this area. A **?** link may be available to explain the purpose of the screen or individual items on the screen.

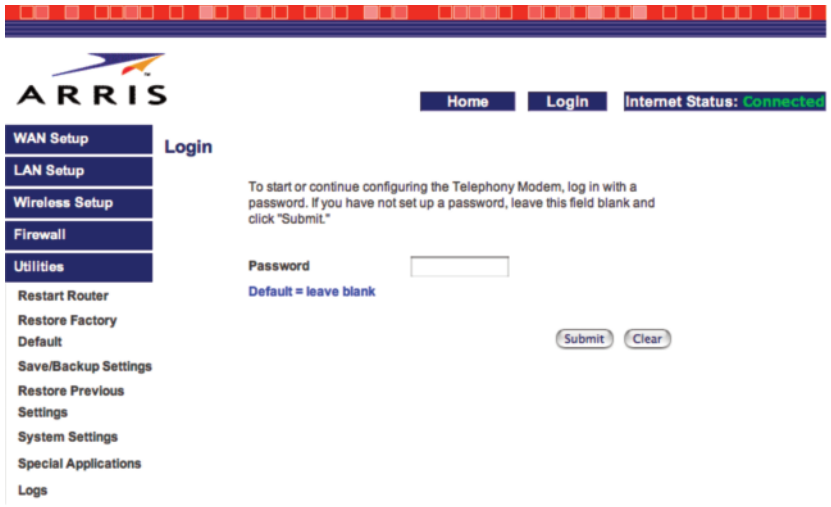
Accessing the Configuration Interface

Follow these steps to access the configuration interface. You should have already set up the WTM652 as described in Installing and Connecting Your Telephony Modem.

1. Use the connection utility for your operating system to connect to the wireless LAN **arris54g** (this is the Telephony Modem's factory default SSID).
2. In your web browser, open the page **http://192.168.2.1/** to display the Status screen:



3 Click the **Login** link in the Access bar to display the Login screen:



Note: The Telephony Modem ships with no password configured. When you log in for the first time, leave the Password field blank.

4 Click the **Submit** button to return to the Status screen.

Note: The Access bar should now show Logout in place of Login.

5 Proceed to Configuring System Settings.

Configuring System Settings

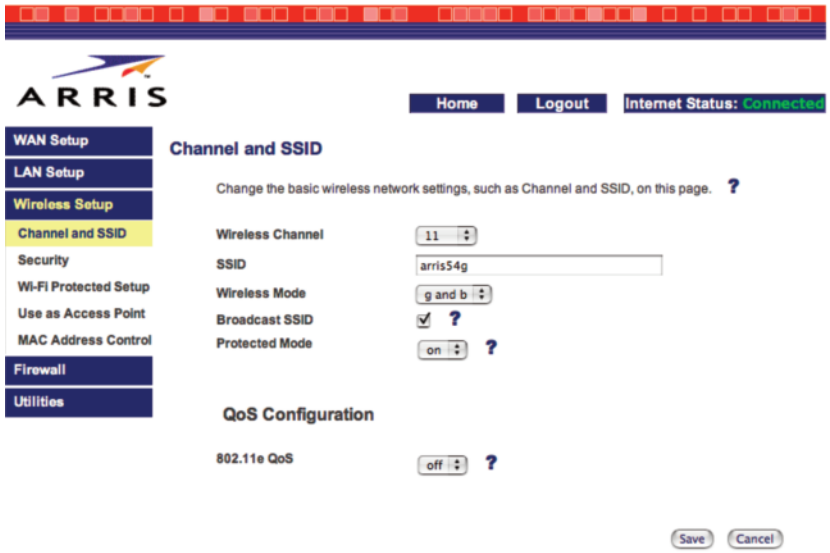
1 Click the Utilities link (at the bottom of the Navigation menu) to open the Utilities menu, then click System Settings to access the System Settings screen:

2 Make changes as follows:

- **Enter Current Password**: If you have already created a password, and you want to change settings on this screen, enter the password here.
- **Enter New Password**: Enter a password that you will remember but is not easy to guess.
- **Confirm new Password**: Enter the same password again.

Configuring the LAN Channel and Name

1 Click the Wireless Setup link to open the Wireless menu, then click the Channel and SSID link to open the Channel and SSID screen:



2 Make the following changes to this screen as desired:

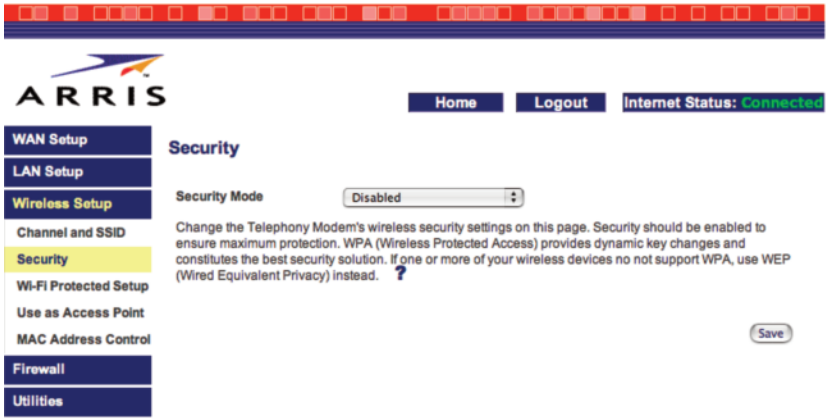
- **Wireless Channel**: Use the default shown in most cases. You may need to change the channel if neighbors have wireless routers, or if you lose your connection while using certain remote telephones.
- SSID: Give your wireless LAN any name you desire. For best security, do not use your name or address. The default SSID is **arris54g**.
- **Broadcast SSID**: Uncheck to prevent passers-by from seeing your wireless LAN name in their connection utility. This provides only a small amount of extra security, since many wireless utilities can learn an SSID by listening to wireless traffic.
- **Protected Mode**: Set to **On** only if needed to overcome interference.

3 Click the **Save** button.

4 Proceed to Configuring Wireless Security.

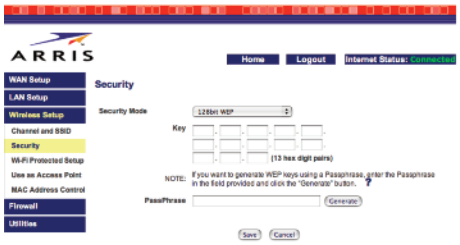
Configuring Wireless Security

1 Click the Security link under the Wireless menu to open the Security screen:



2 In the Security Mode menu, choose WPA or **WPA-Enterprise** unless you have wireless equipment that does not support WPA; in that case, choose **128-bit WEP** (more secure) or **64-bit WEP** (more compatible with older wireless equipment).

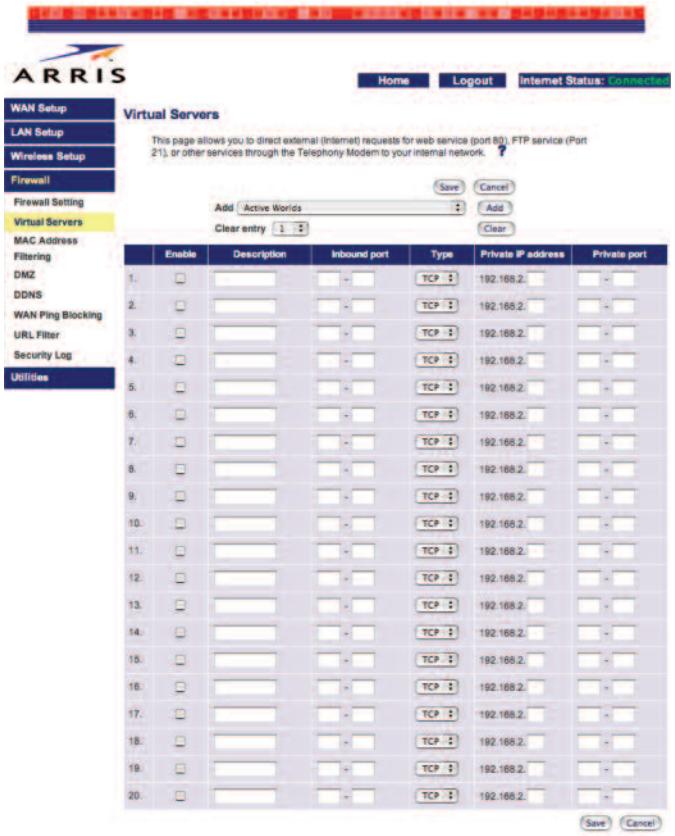
The WTM652 displays a screen to allow you to configure the chosen mode. The following screens show WPA and 128-bit WEP screens.



3 Enter a password or pass phrase in the text box. For WEP security, click the **Generate** button to the right of the text box to create the hex key.

Note: Do not make changes to the other items unless required by your other wireless equipment.

4 Click the **Save** button.



Configuring the Firewall

The WTM652 provides a firewall to protect the computers on your home network from unwanted access. The firewall provides the following features:

- Virtual Server Support: if you have a server on your home network that you want to make available to the general Internet, you can configure a virtual server. The firewall passes requests from the Internet to the designated computer on your home network.
- Client filters: you can use client filters to block computers on your network from accessing the Internet (or certain services) during specific days and times.
- MAC Address filtering: allows access to the wireless network only by computers specifically authorized to connect.
- Ping blocking: ignores ICMP (Ping) requests from the Internet.

Proceed to the next page to begin configuring the firewall.

Configuring Virtual Servers

Follow these steps to allow outside access to servers on your internal network.

1 Click the Firewall link in the navigation menu, then click Virtual Servers.

The Virtual Servers window appears.

2 Proceed as follows:

If you want to…	**Then** …
Add a well-known service	Choose the desired service from the **Add** drop-down menu and then click the **Add** button.
Add a custom service	Fill in a row as follows: • Description: the service name. • Inbound port: the beginning and ending ports of the range required to support this service. These are the ports that outside clients use to access your server.

- Type: Choose TCP or UDP. If the service requires passing both TCP and UDP packets, you must create a second row.
- Private IP address: the IP address of the server on your internal network.
- Private port: the beginning and ending ports of the range required by this service. The private ports may be different from the Inbound ports.

Enable or disable a service

Check (or clear) the box in the Enable column next to the service.

Remove a service

Choose the row to remove in the Clear Entry drop-down menu and click the **Clear** button.

3 Click the **Save** button at the bottom of the page (you may need to scroll down) to save your changes.

4 Proceed to Configuring Client IP Filters.

Configuring Client IP Filters

Follow these steps to configure client IP filters.

1 Click the Firewall link in the navigation menu, then click Firewall Setting.

The Firewall Setting window appears.

2 Fill in the fields as follows:

- IP: the beginning and ending address in a range of IP addresses. To block only one address, use the same address twice.
- Port: the beginning and ending port in a range of ports. To block only one port, enter the same port twice.
- Type: choose one of TCP, UDP, or BOTH.
- Block Time: choose Always to set up a permanent block, or Block to specify days and times to block access.

- Day: choose the beginning and ending day of the week that this block is effective.
- Time: choose the beginning and end time of day that this block is effective.
- Enable: check this box to activate the block, or clear the check to disable the block.

3 Click the **Save** button to save your changes.

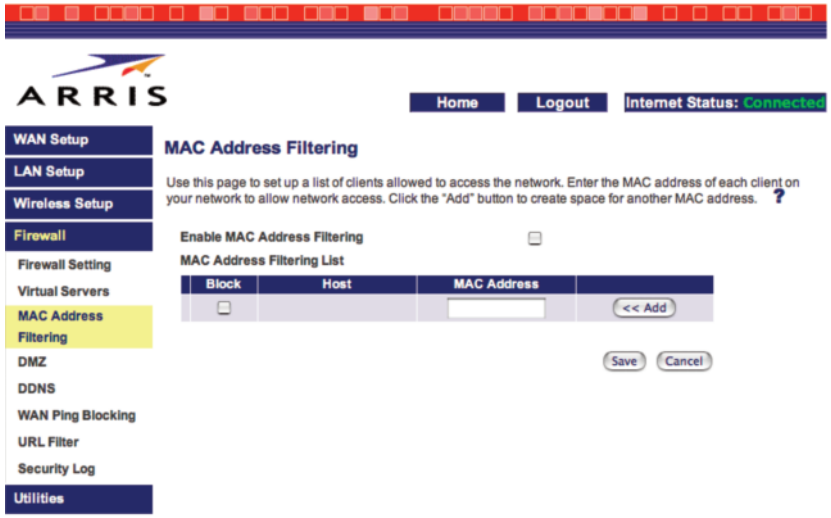
4 Proceed to Configuring MAC Address Filtering.

Configuring MAC Address Filtering

Follow these steps to configure MAC Address filtering.

1 Click the Firewall link in the navigation menu, then click MAC Address Filtering.

The MAC Address Filtering window appears.



2 Click the Add button to add a blank row to the filter list.

3 Enter the MAC address of the computer you want to add to the filter. Do not enter colons or dashes in between the hex digits. For information about find-

Troubleshooting

If you have trouble with your modem/connection, try:

1) Check lights on modem.
Use page 2 for which lights should be on.

2) Check your cords and cables.
Make sure the coax line is connected securely to modem and (if you use ethernet) that your ethernet cord is securely connected between modem and computer.

3) Power cycle your devices
Turn off computer and unplug power to the modem. Wait 30 seconds. Plug modem back in. Wait 60 seconds and turn computer back on. Retry.

4) Disable all anti-virus, security and firewall programs
This is a temporary solution to determine the problem; you want to be protected

5) Call our help desk
The toll-free number is 1-888-655-8642, available 24/7
Our local numbers are 715-695-2691 or 715-985-3004 for weekday support

If your modem/connection appears fine but wireless does not work, try:

1) Move computer closer to modem to see if signal improves

2) Try a computer plugged in directly (via ethernet) to modem

3) Turn off other wireless appliances
Make sure microwaves, cordless phones and other “airwave” appliances are not in use

4) Make sure wireless card on computer is “active/enabled”
Look for switch/button on laptop or see user’s guide for how to determine this

5) Purchase a wireless signal booster or directional antenna
TCC sells long range USB wireless antennas

6) Call our help desk or TCC for other ideas/suggestions
The help desk number is 1-888-655-8642, available 24/7
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