

TCC INTERNET

Setup and Configuration



ARRIS TM652 Cable Modem

Connecting the modem
Wireless security
Firewall
SSID/Channel
Troubleshooting



Front Panel

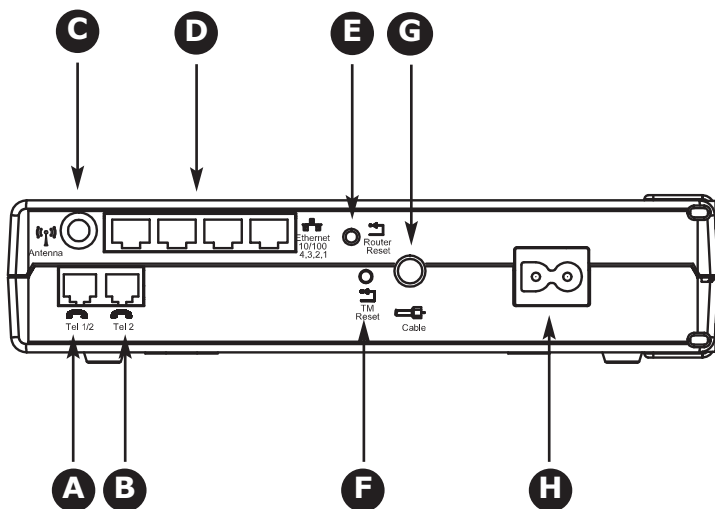
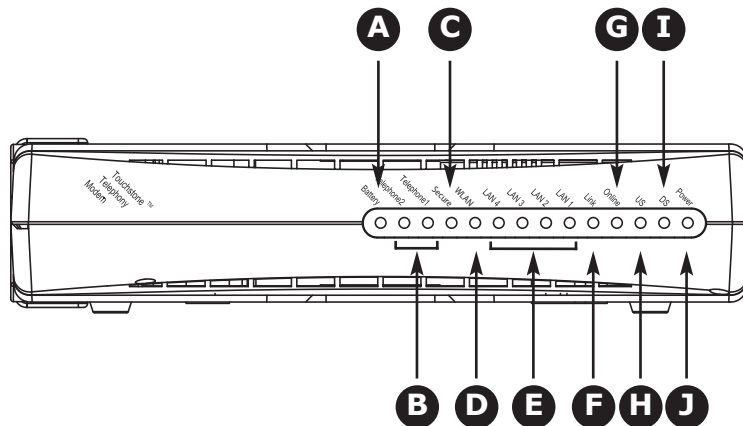
The front of the Telephony Modem has the following indicators:

- 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

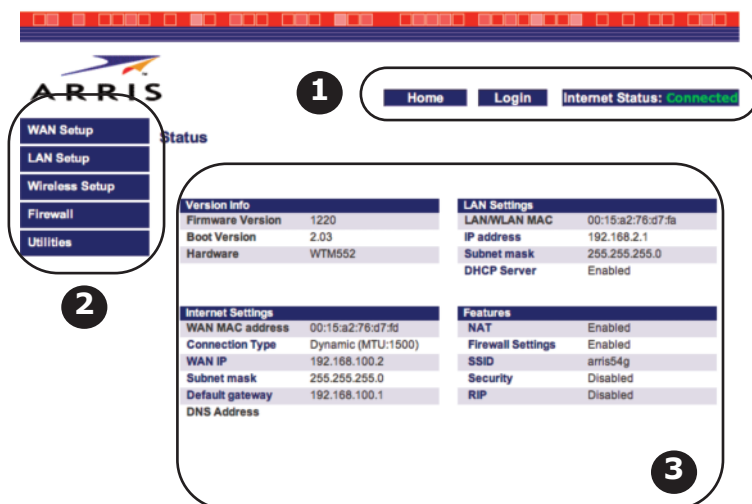
Make sure you have the following before attempting to configure your Ethernet connection:

- 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:

The screenshot shows the ARRIS configuration interface. At the top, there is a navigation bar with 'Home', 'Login', and 'Internet Status: Connected'. On the left, a sidebar menu includes 'WAN Setup', 'LAN Setup', 'Wireless Setup', 'Firewall', and 'Utilities'. The main content area is titled 'Status' and contains four tables of system information:

Version Info	
Firmware Version	1220
Boot Version	2.03
Hardware	WTM552

LAN Settings	
LAN/WLAN MAC	00:15:a2:76:d7:fa
IP address	192.168.2.1
Subnet mask	255.255.255.0
DHCP Server	Enabled

Internet Settings	
WAN MAC address	00:15:a2:76:d7:fa
Connection Type	Dynamic (MTU:1500)
WAN IP	192.168.100.2
Subnet mask	255.255.255.0
Default gateway	192.168.100.1
DNS Address	

Features	
NAT	Enabled
Firewall Settings	Enabled
SSID	arris54g
Security	Disabled
RIP	Disabled

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

The screenshot displays the ARRIS web interface. At the top, there is a navigation bar with links for Home, Login, and Internet Status (Connected). Below this, the main content area is divided into a left sidebar and a main panel. The sidebar contains a list of menu items: WAN Setup, LAN Setup, Wireless Setup, Firewall, Utilities, Restart Router, Restore Factory Default, Save/Backup Settings, Restore Previous Settings, System Settings, Special Applications, and Logs. The main panel is titled 'Login' and contains the following text: 'To start or continue configuring the Telephony Modem, log in with a password. If you have not set up a password, leave this field blank and click "Submit."'. Below this text is a text input field labeled 'Password' with the instruction 'Default = leave blank'. At the bottom of the main panel are two buttons: 'Submit' and 'Clear'.

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:

The screenshot shows the ARRIS System Settings web interface. At the top, there is a navigation bar with links for Home, Logout, and Internet Status (Connected). Below this is a sidebar menu with options like WAN Setup, LAN Setup, Wireless Setup, Firewall, Utilities, Restart Router, Restore Factory Default, Save/Backup Settings, Restore Previous Settings, System Settings (highlighted), Special Applications, and Logs. The main content area is titled 'System Settings' and contains the following sections:

- Administrator Password:** A text box with a help icon. Below it are three input fields for 'Enter Current Password', 'Enter New Password', and 'Confirm New Password'.
- Login Timeout:** A dropdown menu set to '10' (1-99 minutes).
- Time and Time Zone:** Shows the current date and time as 'January 01, 2000 12:39:40 AM'. Below is a text box for 'Time Zone' set to '(GMT-08:00) Pacific Time(US, Canada); Tijuana' and a checkbox for 'Daylight Savings' which is unchecked.
- NAT Enabling:** A section with a help icon. Below is a text box for 'NAT Enable / Disable' with radio buttons for 'Enable' (selected) and 'Disable'.
- UPNP Enabling:** A section with a help icon. Below is a text box for 'UPNP Enable / Disable' with radio buttons for 'Enable' and 'Disable' (selected).

At the bottom right of the form, there are 'Save' and 'Cancel' buttons.

- 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:

The screenshot shows the ARRIS web interface for configuring wireless settings. The left sidebar contains a menu with the following items: WAN Setup, LAN Setup, Wireless Setup (highlighted), Channel and SSID (highlighted), Security, Wi-Fi Protected Setup, Use as Access Point, MAC Address Control, Firewall, and Utilities. The main content area is titled 'Channel and SSID' and includes the following configuration options:

- Wireless Channel:** A dropdown menu set to '11'.
- SSID:** A text input field containing 'arris54g'.
- Wireless Mode:** A dropdown menu set to 'g and b'.
- Broadcast SSID:** A checked checkbox with a question mark.
- Protected Mode:** A dropdown menu set to 'on' with a question mark.
- QoS Configuration:** A dropdown menu set to 'off' with a question mark.

At the bottom right of the configuration area, there are 'Save' and 'Cancel' buttons.

- 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](#).

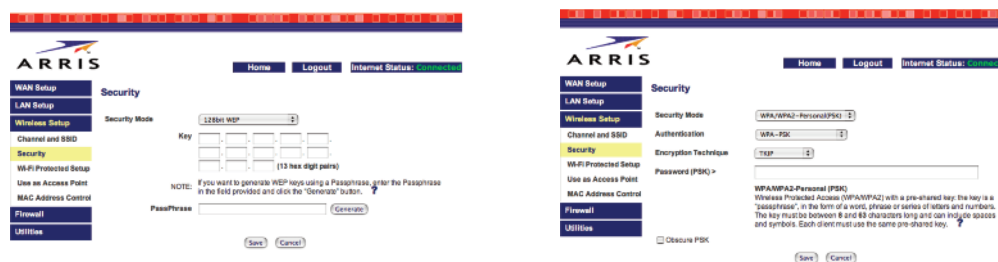
Configuring Wireless Security

- 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:

<u>If you want to...</u>	<u>Then ...</u>
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.

The screenshot shows the 'Virtual Servers' configuration page in the ARRIS web interface. The page title is 'Virtual Servers' and it includes a brief description: 'This page allows you to direct external (Internet) requests for web service (port 80), FTP service (Port 21), or other services through the Telephony Modem to your internal network.' Below the description, there are 'Add' and 'Clear' buttons. The 'Add' button is currently set to 'Active Worlds'. Below this, there is a table with 20 rows and 6 columns: 'Enable', 'Description', 'Inbound port', 'Type', 'Private IP address', and 'Private port'. The table is currently empty. At the bottom of the table, there are 'Save' and 'Cancel' buttons.

Enable	Description	Inbound port	Type	Private IP address	Private port
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	
<input type="checkbox"/>			TCP	192.168.2.	

- 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.

ARRIS Home Logout Internet Status: connected

WAN Setup
LAN Setup
Wireless Setup
Firewall
Firewall Setting
Virtual Servers
MAC Address
Filtering
DMZ
DDNS
WAN Ping Blocking
URL Filter
Security Log
Utilities

Firewall Setting

ADVANCED FEATURE! Allows you to turn the Firewall(SPI and Client IP Filter) feature on or off.

Firewall Enable/Disable Enable Disable

Client IP Filters
You can configure the Router to restrict access to the webpage, e-mail and/or other network services at specific days and times when firewall enable. ?

IP	Port	Type	Block Time	Day	Time	Enable
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>
192.168.2. -	-	<input type="radio"/> TCP <input type="radio"/> UDP <input checked="" type="radio"/> BOTH	<input checked="" type="radio"/> Always <input type="radio"/> Block	SUN	12:00 A.M.	<input type="checkbox"/>

Save Cancel

- 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.

The screenshot shows the ARRIS web interface for MAC Address Filtering. The navigation menu on the left includes: WAN Setup, LAN Setup, Wireless Setup, Firewall (selected), Firewall Setting, Virtual Servers, MAC Address Filtering (highlighted), DMZ, DDNS, WAN Ping Blocking, URL Filter, Security Log, and Utilities. The main content area is titled 'MAC Address Filtering' and contains the following text: 'Use this page to set up a list of clients allowed to access the network. Enter the MAC address of each client on your network to allow network access. Click the "Add" button to create space for another MAC address. ?'. Below this text is a section for 'Enable MAC Address Filtering' with a checkbox. Underneath is a table titled 'MAC Address Filtering List' with the following structure:

Block	Host	MAC Address	
<input type="checkbox"/>		<input type="text"/>	<< Add

At the bottom right of the table area are 'Save' and 'Cancel' buttons.

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
Our local TCC office numbers are 715-695-2691 or 715-985-3004

