

### Touchstone<sup>®</sup> WTM552 Telephony Modem User's Guide

Get ready to experience the Internet's express lane! Whether you're checking out streaming media, downloading new software, checking your email, or talking with friends on the phone, the Touchstone WTM552 Telephony Modem brings it all to you faster and more reliably. All while providing toll quality Voice over IP telephone service and both wired and wireless connectivity. Some models even provide a Lithium-Ion battery backup to provide continued telephone service during power outages.

The Touchstone Telephony Modem provides four Ethernet connections for use as the hub of your home/office Local Area Network (LAN). The Touchstone Telephony Modem also provides 802.11b/g wireless connectivity for enhanced mobility and versatility. In addition, the Touchstone Telephony Modem provides for up to two separate lines of telephone service.

Installation is simple and your cable company will provide assistance to you for any special requirements. The links below provide more detailed instructions.

Safety Requirements

Getting Started

Battery Installation and Replacement (WTM552G/H Models Only)

Installing and Connecting Your Telephony Modem

**Configuring Your Wireless Connection** 

Configuring Your Ethernet Connection

Using the Telephony Modem

**Troubleshooting** 

<u>Glossary</u>

#### **Export Regulations**

This product may not be exported outside the U.S. and Canada without U.S. Department of Commerce, Bureau of Export Administration authorization. Any export or re-export by the purchaser, directly or indirectly, in contravention of U.S. Export Administration Regulation is prohibited.

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### Safety Requirements

ARRIS Telephony Modems comply with the applicable requirements for performance, construction, labeling, and information when used as outlined below:



#### CAUTION Potential equipment damage Potential loss of service

Connecting the Telephony Modem to existing telephone wiring should only be performed by a professional installer. Physical connections to the previous telephone provider must be removed and the wiring must be checked; there must not be any voltages. Cancellation of telephone service is not adequate. Failure to do so may result in loss of service and/or permanent damage to the Telephony Modem.



#### CAUTION

Potential equipment damage

Do not locate the equipment within 6 feet (1.9m) of a flame or ignition source (e.g. heat registers, space heaters, fireplaces, etc.), to avoid damage or injury from battery explosion.

- The Telephony Modem is designed to be connected directly to a telephone.
- Connecting the Telephony Modem to the home's existing telephone wiring should only be performed by a professional installer.
- Do not use product near water (i.e. wet basement, bathtub, sink or near a swimming pool, etc.), to avoid risk of electrocution.
- Avoid using and/or connecting the equipment during an electrical storm, to avoid risk of electrocution.
- Use only power supply and power cord included with the equipment.

- Equipment should be installed near the power outlet and should be easily accessible.
- The shield of the coaxial cable must be connected to earth (grounded) at the entrance to the building in accordance with applicable national electrical installation codes. In the U.S., this is required by NFPA 70 (National Electrical Code) Article 820. In the European Union and in certain other countries, CATV installation equipotential bonding requirements are specified in IEC 60728-11, *Cable networks for television signals, sound signals and interactive services*, Part 11: Safety. This equipment is intended to be installed in accordance with the requirements of IEC 60728-11 for safe operation.

If the equipment is to be installed in an area serviced by an IT power line network, as is found in many areas of Norway, special attention should be given that the installation is in accordance with IEC 60728-11, in particular Annex B and Figure B.4.

- In areas of high surge events or poor grounding situations and areas prone to lightning strikes, additional surge protection may be required (i.e. PF11VNT3 from American Power Conversion) on the AC, RF, Ethernet and Phone lines.
- When the Telephony Modem is connected to a local computer through USB or Ethernet cables, the computer must be properly grounded to the building/residence AC ground network. All plug-in cards within the computer must be properly installed and grounded to the computer frame per the manufacturer's specifications.

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#### **European Compliance**

This product complies with the provisions of the Electromagnetic Compatibility (EMC) Directive (89/336/EEC), the Amending Directive (92/ 31/EEC), the Low Voltage Directive (73/23/EEC), and the CE Marking Directive (93/68/EEC). As such, this product bears the CE marking in accordance with the above applicable Directive(s).

A copy of the Declaration of Conformity may be obtained from: ARRIS International, Inc., 3871 Lakefield Drive, Suite 300, Suwanee, GA 30024.



As indicated by this symbol, disposal of this product or battery is governed by Directive 2002/96/ EC of the European Parliament and of the Council on waste electrical and electronic equipment (WEEE). WEEE could potentially prove harmful to the environment; as such, upon disposal of the Telephony Modem the Directive requires that this product must not be disposed as unsorted municipal waste, but rather collected separately and disposed of in accordance with local WEEE ordinances.

This product complies with directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment.



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#### **Getting Started**

#### About Your New Telephony Modem

The Touchstone WTM552 Telephony Modem is DOCSIS or Euro-DOCSIS compliant with the following features:

- Speed: much faster than dialup or ISDN service
- Convenience: supports Ethernet and 802.11b/g wireless connections; both can be used simultaneously
- Flexibility: provides two independent lines of telephone service as well as high speed data
- Compatibility: supports tiered data services (if offered by your cable company)

All WTM552 models provide:

- Wireless 802.11b/g connectivity
- Four Ethernet ports for connections to non-wireless devices
- Up to two lines of telephone service

Your WTM552 model is one of the following:

- WTM552A: DOCSIS compliant
- WTM552B: Euro-DOCSIS compliant
- WTM552G: DOCSIS compliant with Li-Ion backup battery
- WTM552H: Euro-DOCSIS compliant with Li-Ion backup battery

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			<b>V</b> N fc	Vhat's in the l lake sure you have or assistance if an	<b>Box?</b> the following item ything is missing.	ns before pro	oceeding. Call your ca	ible company
				Telephony M	lodem			
				Antenna				
				Power Cord				
				<ul> <li>Quick Instal</li> </ul>	lation Guide			

- Ethernet Cable
- CD-ROM
- Screws for wall-mounting the unit
- End User License Agreement

#### What's on the CD?

The CD provides the following items:

- Quick Install Guide
- User's Guide

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Coax Cable



**Phone Cable** 

#### **Items You Need**

If you are installing the Telephony Modem yourself, make sure you have the following items on hand before continuing:

- **Telephony modem package**: see <u>What's in the Box?</u> for a list of items in the package.
- **Coaxial cable (coax)**: as shown in the image to the left, this is a thin cable with a connector on each end. It is the same kind of wire used to connect to your television for cable TV. You can buy coax from any electronics retailer and many discount stores; make sure it has connectors on both ends. There are two types of connectors, slip-on and screw-on; the screw-on connectors are best for use with your Telephony Modem. The coax should be long enough to reach from your Telephony Modem to the nearest cable outlet.
- **Phone Cable**: as shown in the image to the left, this is a standard phone cable with standard phone connectors (RJ11 type) on both ends. You can buy phone cables from any electronics retailer and many discount stores.
- **Splitter (optional)**: provides an extra cable connection by splitting a single outlet into two. You may need a splitter if you have a TV already connected to the cable outlet that you want to use. You can buy a splitter from any electronics retailer and most discount stores; you may also need a short piece of coax cable (with connectors); use it to connect the splitter to the cable outlet and then connect the Telephony Modem and TV to the splitter.

**Note:** A splitter effectively cuts the signal in half and sends each half to its two outputs. Using several splitters in a line may deteriorate the quality of your television, telephone, and/or internet connection.

• Information packet: your cable company should furnish you with a packet containing information about your service and how to set it up. Read this information carefully and contact your cable company if you have any questions.

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			C B to Io	Setting Service efore trying to use c establish an Inter owing information	<b>e</b> your new Telepho rnet account and to ready:	ony Modem, elephone se	contact your local ca rvice. When you call,	ble company have the fol-
				<ul> <li>the Telephone</li> <li>(printed on the next page)</li> </ul>	ny Modem serial r a sticker on the bo ge)	number and of the	cable MAC addresse Telephony Modem,	es of the unit as shown on
				the model n	umber of the Telep	ohony Mode	m	
			l1 ti	f the Telephony Mo ne required inform	odem was provide ation.	d by your c	able company, they	already have
			h	n addition, you she	ould ask your cabl	e company <sup>-</sup>	the following questio	ns:
				<ul> <li>Do you have load after 1</li> </ul>	e any special syste am connected?	m requirem	ents or files that I ne	eed to down-
				When can I	start using my Tel	ephony Mod	em?	
				Do I need a	user ID or passwo	ord to acces	s the Internet or my	e-mail?
				Will my pho	ne number(s) chai	nge?		
				What new ca	alling features will	I have and	how do I use them?	

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
		000000000000000000000000000000000000		System Require The Touchstone Tele describes requireme system for details o To use the Telephon your cable company Windows Windows 95, Windov 2000, or Windows 2 available. MacOS System 7.5 to MacO Ethernet or wireless Linux/other Unix Hardware drivers, T Ethernet or wireless About this Man This manual is writte or may not have all model you have pure the label affixed to t	ements ephony Modem operation ints for each operation operation enabling and cor- y Modem, you need with 98, Windows 98 (P. A supported E1 S 9.2 (Open Transpic LAN connection magnetic CP/IP, and DHCP - LAN connection magnetic chased, refer to the capabilities chased, refer to the the Telephony Mod	berates with a figuring ne ed DOCSIS 3 SE (Second thernet or v bort recommendations must be avait must be avait e different V outlined in le image at lem.	n most computers. 1 i; see the documenta etworking. high-speed Internet d Edition), Windows I vireless LAN connect nended) or MacOS X. ilable. abled in the kernel. lable. VTM552 models. You this manual. To dete the left. The model r	The following ation for your service from ME, Windows tion must be A supported A supported ar model may ermine which number is on
	woder i	number						

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**Ethernet Cable** 

#### **Ethernet or Wireless?**

There are two ways to connect your computer (or other equipment) to the Telephony Modem. The following will help you decide which is best for you:

#### Ethernet

Ethernet is a standard method of connecting two or more computers into a Local Area Network (LAN). You can use the Ethernet connection if your computer has built-in Ethernet hardware.

**Note:** To connect more than four computers to the WTM552 through the Ethernet ports, you will need an Ethernet hub (available at computer retailers).

The Telephony Modem package comes with one 6-foot (1.9m) Ethernet cable (the connectors look like wide telephone connectors); you can purchase more cables if necessary at a computer retailer. If you are connecting the Telephony Modem directly to a computer, or to an Ethernet hub with a cross-over switch, ask for Category 5 (CAT5) straight-through cable. If you are connecting the Telephony Modem to an Ethernet hub without a crossover switch, ask for a Category 5 crossover cable.

#### Wireless

The 802.11 wireless LAN standard allows one or more computers to access the WTM552 using a wireless (radio) signal. You can use the wireless connection if your computer has a built-in or aftermarket wireless card.

**Note:** To learn more about which wireless hardware works best with your computer, see your computer dealer.

#### Both

If you have two or more computers, you can use Ethernet for up to four devices and wireless for others. To connect five or more computers to the Ethernet ports, you will need an Ethernet hub (available at computer retailers).

For more information about connecting two or more computers, contact your cable service provider.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			V H ai re Ic	Vhat About Se aving a high-spe mount of responsi easonably secure s wing tips to enha	ecurity? ed, always-on co bility to other Inte system. While no s nce your system's	nnection to rnet users- system is 1 security:	the Internet requir -including the need t 00% secure, you car	res a certain to maintain a n use the fol-
				<ul> <li>Keep your on the system</li> <li>Keep your en tion, avoid</li> </ul>	perating system u update utility at le mail program upda opening email co	pdated with ast weekly. ated with th ntaining att	n the latest security e latest security pate achments, or openi	patches. Run ches. In addi- ng files sent
				<ul><li>through cha</li><li>Install a viru</li><li>Avoid provid</li></ul>	t rooms, wheneve us checker and kee ling web or file-sh	r possible. ep it update naring servi	d. ces over your Teleph	nony Modem.
				Besides cert ning servers violating you	ain vulnerability p on consumer-leve ur terms of service	roblems, m l accounts a e.	ost cable companies and may suspend you	prohibit run- Ir account for
				<ul> <li>Use the cabl</li> <li>Avoid using abuse by ot nals can take into other co ble company</li> </ul>	e company's mail proxy software u her Internet users advantage of ope omputers or sendir may suspend you	servers for nless you a (some are en proxies to ng spam. If ur account t	sending email. re certain that it is shipped open by de hide their identity w you have an open pr o protect the rest of	not open for fault). Crimi- hen breaking oxy, your ca- the network.
				<ul> <li>If you use the Telephony M proxies). Se</li> </ul>	ne wireless LAN, m lodem (for the sar e "Wireless Config	nake sure yo ne reasons uration" for	ou enable wireless se that you should run help.	ecurity on the only secured

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#### 2.2 Ah Battery



#### 4.4 Ah Battery



#### Battery Installation and Replacement (WTM552G/H Models Only)

WTM552G and WTM552H Telephony Modems may optionally include one of two types of Lithium-Ion batteries: a 2.2 <u>Amp-hour</u> (Ah) battery or a 4.4 Ah battery. For safety and regulatory purposes, the battery is shipped outside of the Telephony Modem and must be installed.

Identify the battery type using the photos to the left and use the proper installation procedure:

- 2.2 Ah Battery Installation and Replacement
- 4.4 Ah Battery Installation and Replacement

**Note:** The 4.4 Ah battery is longer and has a strap between the guides.

To order new or replacement batteries, visit <u>http://www.yourbroadbandstore.com/</u>. Product IDs are:

- 2.2 Ah battery: 718003
- 4.4 Ah battery: 718005

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# Latch End

#### 2.2 Ah Battery Installation and Replacement

This model of the Telephony Modem has the ability to provide battery backup in the event of a local power loss. The battery backup is not intended to take the place of AC power. The 2.2Ah Lithium-Ion battery pack can be inserted into the Telephony Modem. Use this procedure to install and to replace the backup battery.

#### Action

1 Insert a finger into the latch opening, press down and pull back on the latch holding the battery door (on the bottom of the Telephony Modem). Pull the door toward you. Set the door aside in a safe place.



**2** Hold the battery pack so that the guides on the battery align with the slots on the Telephony Modem and slide the battery into the bay. The diagram on the left shows the proper orientation. The battery will not insert completely into the Telephony Modem if not oriented correctly.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
Receiver		Battery Opening	linge Tabs	3 Push the bat agram show you are tak battery ope pulling it st Note: The Te power.	tery pack into the s a Telephony Mod ing the battery o ning area and us raight back. elephony Modem	bay until it s dem with a <b>but of the u</b> se leverage will not beg	seats into place. The 2.2Ah battery pack nit, position your f to dislodge the ba gin operating until y	following di- installed. If inger in the attery while ou apply AC



4 Replace the door. To do so, place the hinge tabs of the battery door into the receiver slots inside the Telephony Modem battery compartment on the opposite end of the battery opening slot. Rotate the door toward the unit until the latch snaps back into place.

**Note:** The Lithium-Ion battery pack contains precious material, so there may be some benefit in recycling. Please dispose of the battery responsibly and in accordance with local ordinances.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>4</b> T U	<b>1.4 Ah Battery</b> The 4.4 Ah Lithium Jse this procedure	Installation a Ion battery pack to install and to re	ind Repla can be inse place the ba	<b>cement</b> rted into the Teleph ickup battery.	ony Modem.
			Latch End	Action 1 Insert a finge holding the k door toward	er into the latch op battery door (on th you. Set the door	pening, press ne bottom of aside in a s	s down and pull back The Telephony Mode afe place.	on the latch em). Pull the
		Battery Guide Batt	tery Strap	<ul> <li>Hold the batton the Telephone</li> <li>the left show</li> <li>Note: The batoriented correlated correlated correlated correlated pointed correlated pointed pointe</li></ul>	tery pack so that t nony Modem and s is the proper orier ttery will not inser rectly. The battery o the slots in the b ressure on both e	the guides o lide the batt tation. t completely should slide attery bay w nds of the b	n the battery align v ery into the bay. The r into the Telephony I e into the bay withou ith the guides on the attery.	vith the slots e diagram on Modem if not ut significant e battery and
Receive Slots -	Hinge Tabs			WRONG		VRONG	RIGH	IT





4 Replace the door. To do so, place the tabs of the battery door into the slot on the Telephony Modem battery compartment. Rotate the door toward the unit until the latch snaps back into place.

**Note:** The Lithium-Ion battery pack contains precious material, so there may be some benefit in recycling. Please dispose of the battery responsibly and in accordance with local ordinances.

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#### Installing and Connecting Your Telephony Modem

Before you start, make sure that:

- You have contacted your cable company and verified that they provide data and telephone service using standard DOCSIS technology.
- You have all the <u>Items You Need</u>.
- Cable, phone, and power outlets are available near the computer. If a cable outlet is not conveniently located, your cable company can install a new one.



#### Risk of equipment damage

Only qualified installation technicians should connect the Telephony Modem to house wiring. Incumbent telephone service must be *physically* disconnected at the outside interface box before making any connections.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
WTM552	A/B		<b>Fro</b> The	nt Panel Wi front of the Tele	<b>FM552A/B</b> ephony Modem has	s the follow	ing indicators:	
				A Telephone	1/2: indicates the	status of e	ach telephone line	
				<b>B DMZ</b> : indication firewall)	tes the status of t	he DMZ cor	nnection (a computer	outside the
			(	C WLAN: indic	ates the status of	the wireles	s LAN	
Atogen Peter Court				<b>D LAN 1–4</b> : in	dicates the status	of each Eth	nernet port	
3				E Link: indica Modem and o	tes Ethernet or w computers	ireless con	nectivity between th	e Telephony
				• Online: indi	cates internet data	a transmissi	on status	
	(		(	G US: indicates	s upstream connec	ctivity		
	ų		I	H DS: indicate	s downstream con	nectivity		
				Power: indic	cates whether AC	oower is ava	ailable to the unit	

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Safety	Getting Started	Battery Installation	Installation	\ Cor	Wireless nfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary	
			<b>F</b>	<b>ront</b> he fro	Panel W	<b>FM552G/H</b> ephony Modem ha	s the follow	ing indicators:		
	.G/ П			A Battery: indicates status of the battery in the Telephony Modem						
				В	Telephone	1/2: indicates the	e status of e	ach telephone line		
				С	<b>DMZ</b> : indica firewall <b>)</b>	tes the status of t	he DMZ cor	nnection (a compute	r outside the	
44,244				D	WLAN: india	cates the status of	the wireles	s LAN		
				Е	LAN 1-4: ir	dicates the status	of each Eth	ernet port		
				F	Link: indica Modem and	tes Ethernet or w computer	vireless con	nectivity between th	ie Telephony	
				G	Online: indi	cates internet data	a transmissi	on status		
			•	н	US: indicate	s upstream conne	ctivity			
				I	DS: indicate	s downstream con	nectivity			
				J	Power: indi	cates whether AC	power is ava	ailable to the unit		

Sofoty	Getting	Battery	Installation		Vireless	Ethernet		Troublochooting	Classary
Safety	Starteo	Installation	Installation	Cor	figuration	Configuration	Usage	Troubleshooting	Glossary
WTM552	Λ/R		F	<b>Rear</b> The rea	Panel Ir of the Tele	phony Modem has	the followi	ng connectors and co	ontrols:
G	D	•		Α	<b>Tel 1</b> (A/B/H <b>Tel 1/2</b> (G 2-line phone	1 models): connec models): connect )	tor for the f or for the fi	irst phone line rst phone line (or bo	oth lines of a
				в	Tel 2: conne	ector for the secor	d phone line	e	
			]]	С	Antenna: c	onnector for the w	ireless ante	nna	
(rp1)				D	Ethernet co	nnectors: for use	e with a con	nputer LAN port	
				Ε	Router Res	<b>et</b> button: resets t y service.	he Ethernet	and wireless ports w	ithout affect-
				F	<b>TM Reset</b> b unit. Use a p	utton: resets the pointed <b>non-meta</b>	Felephony N <b>Ilic</b> object t	lodem as if you powe o press this button.	er cycled the
	9 <b>(</b>	G	Ű	G	Cable: conn	ector for the <u>coax</u>	<u>cable</u>		
				н	Power: con	nector for the pow	er cord		
WTM55	2G/H								
C	D	B							
	,	¥							
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Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>S</b> TH Te	electing an Ir nere are a numbe elephony Modem:	nstallation Loo r of factors to cons	cation sider when a	choosing a location t	o install your
				<ul> <li>Is an AC out switched an sion cords a</li> </ul>	let available nearl d should be close re not required.	by? For best enough to t	t results, the outlet s he Telephony Moden	should not be n that exten-
				<ul> <li>Is a cable jac between the duces) the s ters can slow service.</li> </ul>	ck available? For be jack and cable dro ignal available to the v down the Interne	est performa op to a minir he Telephon et connectio	ance, keep the numb num. Each splitter at y Modem. A large nu n and even affect yo	er of splitters tenuates (re- mber of split- our telephone
				<ul> <li>Can you eas phones?</li> </ul>	ily run cables betv	veen the Tel	ephony Modem's loca	ation and the
				<ul> <li>If you are consistent of the second se</li></ul>	onnecting devices n the Telephony M	to the Ethe odem's loca	rnet ports, can you e ition and those devic	easily run ca- es?
				<ul> <li>If you want to vide a solid the Telephor one of the solid Modem from</li> </ul>	to mount the Telep surface for secure ny Modem on dryw crews are fastene n pulling out of the	hony Moder attachment all, position d to a stud. wall in the	n on a wall, does the ? For best results wh the Telephony Mode This may prevent tl future.	location pro- nen mounting em so at least he Telephony
				<ul> <li>If you want space on eit overheating</li> </ul>	to install the Teler her side to keep th	ohony Mode ne vents cle	em on a desktop, is t ar? Blocking the ven	there enough ts may cause
				How close a nection rang can affect co	re your wireless d ge is typically 100 pnnection range, a	levices? The -200 feet ( s described	e Telephony Modem v 30m–65m). A numb below.	wireless con- per of factors

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Coi	Ethernet nfiguration	Usage	Troubleshooting	Glossary
			<b>F</b> A	actors Affecting number of factors	<b>Wire</b> s can	eless Range affect the us	able range f	or wireless connection	ons.
			Ir	ncreases range:	•	Raising the stalling the multi-story tional anter	antenna abo Telephony dwelling or 1na)	ove the devices (for e Modem in the uppe using an aftermarket	example, in- r floor of a t omnidirec-
					•	Using an a range in on directions)	aftermarket le direction	directional antenna while decreasing rar	(increases ige in other
					•	Adding wire	eless hubs ir	a bridge (WDS) net	work
			D	ecreases range:	•	Lowering th installing th	ne antenna l ne Telephony	pelow the devices (for Modem in a baseme	or example, ent)
					•	Removing t	he antenna		
					•	Metal or con and other d	ncrete walls levices	between the Teleph	ony Modem
					•	Large meta between the	I appliances e Telephony	s, aquariums, or me Modem and other de	tal cabinets evices
					•	Interference microwave	e and RF n ovens, or ot	oise (2.4 GHz wirele her wireless network	ess phones, (s)
			N a ra e	ote that decreasin s the decreased r ange, you reduce in d users to find and	g the ange nterfe d coni	range of you is sufficient erence with o nect to your	Ir wireless n for your n ther networl network.	etwork may be bene eeds. By limiting yo ks and make it harde	ficial, as long our network's r for unwant-

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>M</b> o You wa fac	ounting the u can either mou III-mount applica sing upward (vert	<b>Felephony Mo</b> nt the Telephony I tions, you can mo tical) or to the side	<b>dem</b> Modem on a unt the Tele e (horizonta	wall or place it on a phony Modem with t I).	desktop. For he indicators
			<b>To</b> Foi ria	ols and Materia r wall-mounted in Is before proceed	<b>ils</b> nstallations, make ling:	sure you h	ave the following too	ls and mate-
				<ul> <li>for mounting 1/4" (6mm)</li> </ul>	g on drywall: Two bit (not included)	1/4" (6mm	) drywall anchors an	d a drill with
			<ul> <li>for mounting on plywood or studs: two #6 x 1.5" (38.1 mm) self tapple screws (included)</li> </ul>					
				<ul> <li>screwdriver use)</li> </ul>	(flat-blade or Phi	llips, depen	ding on what kind o	f screws you
				<ul> <li>wall-mount</li> <li>Guide)</li> </ul>	template (includec	l with the Te	lephony Modem Quic	k Installation
				<ul> <li>transparent wall)</li> </ul>	tape (for tempor	arily securir	ng the mounting ten	nplate to the

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
Instructions								









#### Wall-mounting instructions

- **1** Position the mounting template on the surface where you intend to mount the Telephony Modem and secure in place with transparent tape.
- **2** Drill holes through the template in the specified locations for the mounting screws. After drilling holes, remove the template from the surface.
- **3** If using drywall anchors, set them into the wall. Then, drive the screws into the wall leaving a gap of about 1/8" (3 mm) between the screw head and the wall. If not using anchors, just drive the screws.
- **4** Orient the Telephony Modem with the indicator lights facing up or right, as desired. Slip both mounting slots (in the back of the Telephony Modem) over the screws, then slide the case down until the narrow end of the keyhole slot contacts the screw shaft.
- **5** Proceed to <u>Connecting the Telephony Modem</u>.

#### **Desktop mounting instructions**

- **1** Position the Telephony Modem so that:
  - air flows freely around it
  - the back faces the nearest wall
  - it will not fall to the floor if bumped or moved
- 2 Proceed to <u>Connecting the Telephony Modem</u>.

	Getting	Battery		Wireless	Ethernet			
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#### WTM552A/B/C



WTM552G/H



#### **Connecting the Telephony Modem**

WARNING: Connecting the Telephony Modem to the home's existing telephone wiring should only be performed by a professional installer. Physical connections to the previous telephone provider must be removed and the wiring must be checked; there must not be any voltages. Cancellation of telephone service is not adequate. Failure to do so may result in loss of service and/or permanent damage to the Telephony Modem.

- 1 Thread the antenna onto the Antenna connector on the back of the Telephony Modem (C). Tighten only by hand. Turn the antenna so that it points straight up, if possible.
- 2 Connect one end of the coax cable to the cable outlet or splitter, and the other end to the Telephony Modem's Cable connector (G). Tighten the connections by hand, then tighten an additional 1/8 turn with a wrench.

**Note:** For best performance, use high-quality coax cable and minimize or eliminate splitters between the cable jack and the Telephony Modem.

**3** Insert the plug from the power cord into the Power connector on the back of the Telephony Modem (**H**) and insert the power cord into a convenient AC outlet.

The Power light on the front of the Telephony Modem lights up, then flashes once (refer to the LED table on page 44). See <u>Troubleshooting</u> if the Power light does not turn on.

4 Connect one end of the Ethernet cable to any Ethernet port on the back of the Telephony Modem, (**D**) and the other end to the Ethernet port on a computer, hub, or broadband router.

**Note:** If you are connecting to a computer, use the Ethernet cable included in the Telephony Modem package.

**5** Connect one end of the telephone cable to the telephone port on the back of the Telephony Modem (**A** or **B**). Connect the other end to the telephone.

	Getting	Battery		Wireless	Ethernet			
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Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- <u>Setting the MAC Address</u>
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- Configuring the Firewall
  - Configuring Virtual Servers
  - Configuring Client IP Filters
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

#### **Configuring Your Wireless Connection**

The WTM552 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 WTM552 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

	Getting	Battery		Wireless	Ethernet			
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Jump directly to one of the following topics:

- Configuration Basics
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- <u>Setting the MAC Address</u>
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- <u>Configuring the Firewall</u>
  - Configuring Virtual Servers
  - <u>Configuring Client IP Filters</u>
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

**Configuration Basics** 

The WTM552 uses a web-based interface to configure wireless settings. The following screen shows the various components of the interface.

Status			
		I AN Sattings	
Firmware Version	0117	LAN/WLAN MAC	00:15:96:c8:bd:cc
Boot Version	2.00	IP address	192.168.2.1
Hardware	WTM552	Subnet mask	255.255.255.0
Serial No.	ARRISc8bdcc	DHCP Server	Enabled
Internet Settings		Features	
WAN MAC address	00:15:96:c8:bd:cf	NAT	Enabled
Connection Type	Dynamic	Firewall Settings	Enabled
Subnet mask	255.255.255.0	SSID	arris54g
Wan IP	192,168,100.2	Security	Disabled
Default gateway			0
DNS Address		-	(3)

- **1 Access bar**: Shows the WTM552 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 WTM552 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.

	Getting	Battery		Wireless	Ethernet			
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Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- Accessing the Configuration Interface
- <u>Configuring System Settings</u>
- Setting Up Your WAN Connection
- <u>Setting the MAC Address</u>
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- <u>Configuring the Firewall</u>
  - Configuring Virtual Servers
  - <u>Configuring Client IP Filters</u>
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

#### Accessing the Configuration Interface

Follow these steps to access the configuration interface. You should have already set up the WTM552 as described in <u>Installing and Connecting Your Telephony Mo-dem</u>.

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

	C	-		
VAN Setup	5	Hor	ne Login	Internet Status: Conn
AN Setup	Status			
Vireless Setup	· · · · · · · · · · · · · · · · · · ·			
	Version Info		LAN Settings	
Irewall	Firmware Version	0117	LAN/WLAN MAC	00:15:96:c8:bd:cc
tilities	Boot Version	2.00	IP address	192.168.2.1
anaoo	Hardware	WTM552	Subnet mask	255.255.255.0
	Serial No.	ARRISc8bdcc	DHCP Server	Enabled
	Internet Settings		Features	
	WAN MAC address	00:15:96:c8:bd:cf	NAT	Enabled
		Destants	Eirounii Sottinge	Enabled
	Connection Type	Dynamic	Firewait Setungs	LIIdbildd
	Connection Type Subnet mask	255.255.255.0	SSID	arris54g

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

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

	Home Login Internet Status: Conne
WAN Setup Login	
LAN Setup	
Wireless Setup	Log in with a password before making any necessary change. If you have not come up with a password, then leave this field blank and click
Firewall	"Submit,"
Utilities	Password
Restart Router	Default = leave blank
Restore Factory	
Default	Submit Clear
Save/Backup Settings	
Restore Previous	
Settings	
Sustam Sattings	

**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 <u>Configuring System Settings</u>.

	Getting	Battery		Wireless	Ethernet			
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#### **Configuring System Settings**

Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- Configuring System Settings
- Setting Up Your WAN Connection
- <u>Setting the MAC Address</u>
- <u>Setting Up DNS</u>
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- Configuring the Firewall
  - Configuring Virtual Servers
  - <u>Configuring Client IP Filters</u>
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

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:

<b>K K I</b> :	5	Home Logout Internet Status: Cor
etup	Proton Patting	
thin (	System Settings	
nop	Administrator Password:	
is Setup	The Router ships with NO paseword incl enter it here. ?	luded. If you wish to kell a password for better protection, you can
	Enter Current Password	
	Enter New Password	
Router	Confirm New Password	
e Factory	Loop Timesait	The of the second second
and in Ferning	Login rameour.	10 (1-Ma mannaar)
Province	Time and Time Zone:	January 01, 2000 12:26:17 AM
S .	Please select your Time Zone. If you are	in an area where "doylight saving" is observed, check the box
Settings	below. ?	
	These Parts	
	Time Zone	(CMT-08:00) Pacific Time(US, Canada); Tijuana
	Daylight Savings	GCAT-08:00/ Pacific TamelUS, Canada), Tijuana
	Time zone Davight Savings Remote Management: ADVANCED FRATURE! When enabled accessed then termst and allow you b you enable miss function, Marke Suffe Y 	CRAT-08.00 Pacific Timetti, Canada, Tiyana S Automatodily Adjust Daylight Saving Remote Management will allow web based isliny to be make charges by your flowar's setting from anywhere, Before Your HAVE SET THE ADMINISTRATOR PASSWORD. ? age the router.
	Time Zone Daylight Savings Remote Management: ADVANCED F& TURE! When enabled accused than trained a date you b you enable that function, MAXE SURE? Doug that P address can remotely man. Only that P address can remotely manage the noster	CMT-06.00 Flock Timits, Canada, Tyuana II Automatically Adjust Daylight Earling Tenato Management Hall Earling Automatically Adjust Daylight Earling Tenato Management Hall Earling Tenato Management Hall Earling Tenato Management Hall Earling Tenato Management Hall Hall Hall Hall Tenato Management Hall
	Time Zone Dargigt Bavings Remote Management: ADVANCED FEATURET When enabled accessed from terming and allow you to you enable this function. MAXES SURE? Any IP address can remotely man- Day this IP address can remotely man- manage the router	CMT-66 00 Pixet: Timits, Canadi, Tijana 1 Automotolij Adjust Davljet Savnig Tennoti Management sili allow work basis sility to br make charges to pix Automotoma tengo to manyene tjetov CO HAVE SET THE ADMINISTRATOR PASSWORD. 7 age the router.
	Time 2019 Daylight startings Daylight startings Renote Management: AdVAACCD TEATURE! When examine the starting of the starting of the starting of the the starting of the starting day this & high starting of the starting day the & high starting of the starting day the & high starting of the starting day the Starting of the starting day can be starting of the starting of the starting day and the starting of the starting of the starting day and starting of the starting of the starting of the starting day and the starting of the starting of the starting of the starting day and the starting of the starti	COM-06 00 Profits Trinitis Canada, Trjana      Common Control Con
	Tim Zoro Daylight Skrings Daylight Skrings AdvAncet P FATURE: Motors insolid AdvAncet P FATURE: Motors insolid Day this # advass can remotely man Day this # advass can remotely man Day this # advass can remotely manage the notation. MARE Starts Daylight # advass can remotely manage the notation. Mark Starts Daylight # advass can remotely manage the notation. NAT Enable Databol	Control con Profile Transfer, Canada, Trauna      Canada Transfer Canada, Trauna      Canada C
	Time 2019 Dysfylle takvings Dysfylle takvings Activated of TextURELWane enabled activated for the trade of take you you and a the take takes Only the P address can enable you amangs the number Distribute P address can be address Distribute P address NAT Enable / Disable	CONTINUE CONTINUES CARABIL TYPESE     Advect Trunking Canada, Typese     Advector Trunking Canada, Typese     Advector Management Hall Service     Advector Trunking     Advector Trunking     Advector Trunking     Enable     Chable
	Tim Zoro Dysight Skrings Dysight Skrings Remote Management: AdvAnced PrEATURE of Motor enclosed autors and the second system of the second system Dysight Skrings and second system Dysight Preads and second system Dysight Preads and Skrings and Skrings NAT Exable Dystability Dyst Destability UPAP Exables: UPAP Exables:	Control con Profile Trinettis, Conselli, Tyuesa      Advertisedely Adjust Daviget Gaving     Rende Management all allow we based daily to be     conserved to be provided that the formation of the operation of the operatio

- **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.
  - Time Zone: Select the proper time zone for your location. The Telephony Modem uses an Internet time server to set its internal clock.
- **3** Scroll down to the bottom of the page and click the **Save** button. If you are prompted to log in again, type your new password and click the **Submit** button.
- 4 Proceed to <u>Setting Up Your WAN Connection</u>.

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Safety Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### Setting Up Your WAN Connection

Follow these steps to set up your WAN connection.

**1** Click the **WAN Setup** link in the navigation menu, then click **Connection** Type.

The Connection Type screen appears:



- **2** Choose the correct connection type in the Connection Type screen. Most cable companies require the Dynamic connection type. If your cable company requires a different connection type, you should have an information sheet that shows the proper connection type to select and other information needed to set up the connection.
- **3** Click the **Next** button at the bottom of the screen (you may have to scroll down in the browser to see the Next button). The Telephony Modem displays a screen showing further settings for your connection type. Follow the appropriate link for your connection type:



**Configuring Client IP Filters** 

**Configuring Wireless Security** 

Jump directly to one of the following topics:

**Configuring System Settings** 

Accessing the Configuration Interface

Setting Up Your WAN Connection

**Configuration Basics** 

<u>Dynamic</u>

Static

**PPPoE** 

**PPTP** 

Setting Up DNS

— L2TP

**Telstra BigPond** 

Setting the MAC Address

•

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- Configuring MAC Address Filtering
- Configuring the DMZ

Configuring the Firewall

- **Configuring DDNS**
- Configuring Wireless Bridging

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				– <u>Dynamic</u>				
				– <u>Static</u>				
				- <u>PPPoE</u>				
				<u>— РРТР</u>				
				<ul> <li><u>Telstra Bi</u></li> </ul>	<u>gPond</u>			
				— <u>L2TP</u>				

#### Dynamic



- **a.** Fill in the **Host Name** field, using any name you want.
- **b.** If you need to clone your computer's MAC address, click the Change WAN MAC Address link and proceed to XXX.
- c. Click the Save button.
- d. Proceed to Configuring the LAN Channel and Name.

~		1		1 to a start
ARRI	S	Home	Logout	Internet Status: Connecter
WAN Setup	Static IP			
Connection Type	Franker for the second sector in the sector		and these settings are	
DNS	Enter the information below to set a	Static IP environment a	and then click Sa	ive. r
MAC Address	IP Address	192 . 168	. 100 . 2	
LAN Setup	Subnet Mask	255 . 255	. 255 . 0	
Wireless Setup	Contract Contraction of		_	
Firewall	ISP Gateway Address			
Utilities	Click here to enter your DN	S settings		
				(Save) (Cancel)

#### Static

- **a.** Fill in the IP Address, Subnet Mask, and ISP Gateway address fields with the information provided by your cable company.
- **b.** If you need to enter DNS settings, click the link and proceed to <u>Setting</u> <u>Up DNS</u>.
- c. Click the Save button.
- d. Proceed to Configuring the LAN Channel and Name.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Р	PPoE				
				a. Fill in the	e fields with the inf	formation p	rovided by your cable	e company.
27		1		b. Click the	Save button to re	eturn to the	Status screen.	
ARRIS		Home Logout Inter	net Status: Connected	c. Proceed	to <u>Configuring the</u>	LAN Chann	<u>el and Name</u> .	
WAN Setup	PPPoE ?				•••			
Connection Type DNS	User Name							
MAC Address	Password							
LAN Setup	Retype Password	i						
Firewall	Service Name (Optional)	1						
Utilities	MTU (576-1492)	1432						
	Do not make changes to the de transmission unit other than 14	efault MTU setting unless your ISP specifically re 54.	equires a different					
	Disconnect after 5	minutes of no activity.						
			(Save) (Cancel)					



#### PPTP

- **a.** Fill in the fields with the information provided by your cable company.
- **b.** If you need to enter DNS settings, click the link and proceed to <u>Setting</u> <u>Up DNS</u>.
- c. Click the Save button to return to the Status screen.
- d. Proceed to Configuring the LAN Channel and Name.

ARRIS       Home       Logout       Internet Status: Connected       C.       Proceed to       Configuring the LAN Channel and Name.	Safety	Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
Connection Type       Hyour Internet service is provided by Teistra BigPond in Australia, you will need to enter the following information. They should be provided by Teistra BigPond.         MAC Address       Select Your State         LAN Setup       User Name         Wireless Setup       Password         Firewall       User Set Login Server Manuality         Utilities       Login Server	WAN Setup Connection Type DNS MAC Address LAN Setup Wireless Setup Firewall Utilities	S Telstra BigPond Hyour Internet service is provided by Telstr Information. They should be provided by Tel Select Your State User Name Password Retype Password User Set Login Server Manually Login Server	Home Logout Inter	emet Status: Connector	elstra BigPond a. Fill in the b. Click the c. Proceed	e fields with the inf • <b>Save</b> button to re to <u>Configuring the</u>	Formation presented by the LAN Chann	rovided by your cable Status screen. nel and Name.	e company.



#### L2TP

- **a.** Fill in the fields with the information provided by your cable company.
- **b.** If you need to enter DNS settings, click the link and proceed to <u>Setting</u> <u>Up DNS</u>.
- c. Click the Save button to return to the Status screen.
- d. Proceed to Configuring the LAN Channel and Name.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- Setting the MAC Address
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- <u>Configuring the Firewall</u>
  - Configuring Virtual Servers
  - <u>Configuring Client IP Filters</u>
  - <u>Configuring MAC Address Filtering</u>
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

#### Setting the MAC Address

Most cable companies authenticate customers by the MAC address of your computer. In some cases, you may need to change the MAC address of the Telephony Modem's WAN port. Follow these steps only if your cable company requires this change.

1 Click the **WAN Setup** link in the navigation menu, then click **MAC Address**. *The MAC address window appears:* 

ARRI	S Hor	ne Logout	Internet Status: Connects
WAN Setup	MAC Address		
Connection Type DNS	Some ISPs require that you register a MAC addres address onto the Router so that you don't have to o	s. This feature "clones" y call your ISP to change th	your PC network adapter's MAC ne registered MAC address to the
MAC Address	Router's MAC address. Cloning your MAC address	s will not cause any prob	lems with your network.
LAN Setup	Wan Mac Address	00 - 15 -	96 - c8 - bd - cf
Wireless Setup	Clone Computer's MAC Address	Clone	
Firewall			
Utilities	7.		

2 If the MAC address required is that of the computer you are using to set up the Telephony Modem, click the **Clone** button.

The Telephony Modem updates the WAN MAC Address field with the MAC address of your computer.

- **3** If you need to enter a MAC address manually, enter the hex digits (0-9, a-f) in the **WAN MAC Address** field. If you need help determining the MAC address, see <u>Finding the MAC Address of a computer</u>.
- 4 Click the Save button to continue.
- **5** To configure DNS settings, proceed to <u>Setting Up DNS</u>. Otherwise, proceed to <u>Configuring the LAN Channel and Name</u>.

								<u>r i j</u>
Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
Jump dire • <u>Co</u> • Acc	ctly to one of the nfiguration Basics cessing the Config	following topics:	<b>S</b> Fo	etting Up DN blow these steps 1 Click the Wa The DNS sci	<b>S</b> to set up DNS. <b>AN Setup</b> link in t reen appears:	he navigatic	on menu, then click [	DNS.
<ul> <li>Co</li> <li>Se</li> <li>Se</li> <li>Se</li> <li>Co</li> <li>Co</li> </ul>	nfiguring System tting Up Your WAN tting the MAC Add tting Up DNS nfiguring the LAN nfiguring Wireless	Settings <u>V Connection</u> <u>Iress</u> <u>Channel and Name</u> <u>Security</u>		A R R I S WAN Setup Connection Type DNS MAC Address LAN Setup Wireless Setup	VNS Vour ISP provided you with specific IP address Automatic from ISP DNS Address Secondary DNS Address	Iome Logout	Internet Status: Connected	
• <u>Co</u>    • <u>Co</u>	nfiguring the Firev Configuring Virtu Configuring Clien Configuring MAC Configuring the E nfiguring DDNS	<u>wall</u> i <u>al Servers</u> <u>ht IP Filters</u> Address Filtering DMZ		2 If your cable servers, ent Address fie	DNS = Domain Name Server to Resource Links) like www.ARRIS.com to e company has pro er the IP addresse Ids.	eated on the Internet that transi IP addresses. ? vided you w es in the <b>DN</b>	ith the IP addresses to Saddress and Seco	for their DNS ondary DNS
• Co	nfiguring Wireless	Bridaina		3 If you have	not received DNS	server info	rmation, check Auto	matic from

ISP.

Configuring Wireless Bridging ٠

4 Click the Save button to return to the Status screen.

5 Proceed to Configuring the LAN Channel and Name.
	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### Configuring the LAN Channel and Name

Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- <u>Setting the MAC Address</u>
- <u>Setting Up DNS</u>
- Configuring the LAN Channel and Name
- <u>Configuring Wireless Security</u>
- <u>Configuring the Firewall</u>
  - Configuring Virtual Servers
  - <u>Configuring Client IP Filters</u>
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

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:

WAN Setup	hannel and SSID		
LAN Setup			
Wireless Setup	Change the basic wireless n	etwork settings such as Channe	and SSID on this screen.
Channel and SSID	Wireless Channel	11 :	
Security	SSID	arris54g	
Wireless Bridging	Wireless Mode	g and b	
Use as Access Point	Broadcast SSID	2	
MAC Address Control	Protected Mode	on : ?	
Firewall			
Utilities	QoS Configuration		
	802.11e QoS		

- **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.
  - <u>SSID</u>: 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.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### **Configuring Wireless Security**

- Jump directly to one of the following topics:
  - <u>Configuration Basics</u>
  - <u>Accessing the Configuration Interface</u>
  - <u>Configuring System Settings</u>
  - <u>Setting Up Your WAN Connection</u>
  - <u>Setting the MAC Address</u>
  - <u>Setting Up DNS</u>
  - <u>Configuring the LAN Channel and Name</u>
  - Configuring Wireless Security
  - <u>Configuring the Firewall</u>
    - Configuring Virtual Servers
    - Configuring Client IP Filters
    - Configuring MAC Address Filtering
    - Configuring the DMZ
  - <u>Configuring DDNS</u>
  - <u>Configuring Wireless Bridging</u>

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

ARRI		Ho	ome Logou	Internet Status: Connec
WAN Setup	Security			
LAN Setup				
Wireless Setup	Security Mode	Disabled	*	
AT THE REAL PROPERTY OF	Change the Wireless F	Router's wireless security	settings on this screer	n. Security should be enabled to
Channel and SSID	ensure maximum prote	ection WPA (Wireless Pr	ntented Anness) provid	es dynamic key changes and
Channel and SSID Security	ensure maximum prote constitutes the best see	ection. WPA (Wireless Pr curity solution. In wireles	otected Access) provid s environment, where i	les dynamic key changes and not all devices support WPA, WEP
Channel and SSID Security Wireless Bridging	ensure maximum prote constitutes the best see (Wired Equivalent Prive	ection. WPA (Wireless Pro curity solution. In wireles racy) should be used.	otected Access) provid s environment, where i	les dynamic key changes and not all devices support WPA, WEP
Channel and SSID Security Wireless Bridging Use as Access Point	ensure maximum prote constitutes the best see (Wired Equivalent Prive	ection. WPA (Wireless Pn curity solution. In wireles acy) should be used.	otected Access) provid s environment, where i	les dynamic key changes and not all devices support WPA, WEP
Channel and SSID Security Wireless Bridging Use as Access Point MAC Address Control	ensure maximum prote constitutes the best see (Wired Equivalent Prive	ection. WPA (Wireless Pro curity solution. In wireles racy) should be used.	otected Access) provid s environment, where i	les dynamic key changes and not all devices support WPA, WEP

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

Depending on the security mode chosen, the WTM552 displays one of the following screens to allow you to configure a key.



Safety	Getting Started	Battery Installation	Installation	Cor	Wireless nfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				3	Enter a passw Generate bu	vord or pass phras Itton to the right o	e in the tex f the text be	t box. For WEP secu ox to create the hex	rity, click the key.
					Note: Do not er wireless ed	make changes to quipment.	the other ite	ems unless required	by your oth-
				4	Click the Sav	e button.			
			Yo qu yo yo	u ha lires lu sh lur co	ve completed additional con ould now be onfiguration, p <u>Configuring t</u> <u>Configuring D</u>	the basic configu figuration, which v able to access the proceed as follows <u>he Firewall</u> <u>DDNS</u> <u>Vireless Bridging</u>	ration steps vould be des Internet. I	. Unless your cable scribed in the informa f you want to furthe	operator re- ation packet, er customize

If you have any problems, proceed to <u>Troubleshooting</u>.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- <u>Setting the MAC Address</u>
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- Configuring the Firewall
  - Configuring Virtual Servers
  - Configuring Client IP Filters
  - <u>Configuring MAC Address Filtering</u>
  - Configuring the DMZ
- <u>Configuring DDNS</u>
- <u>Configuring Wireless Bridging</u>

#### **Configuring the Firewall**

The WTM552 provides a <u>firewall</u> 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.
- DMZ: if you need to access a service that cannot pass through the firewall, the DMZ allows a single computer on the home network to appear as if it were connected directly to the Internet. A computer in the DMZ is completely exposed to the Internet as if there were no router or firewall, so it is best to activate the DMZ only when necessary.
- 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.

Safety			Getting Started	In	Batter stallat	y ion	Installation	Co	Wireless onfiguration	Ethernet Configurati	on	Usage	Troubleshooting	Glossary
A R R I S WAN Setup LAN Setup Wireless Setup Firowall Virtual Servers Cilent IP Filters	Virtua (F	I Serve	allows you to direct ext other applications through	Hon arnal (Internet) reque	ne Lo sts for web serv internal networ	gout Interne lice (port 80), FTP ser k. ? Cancel Add	t Status: Connacted	Config Follow 1 2	guring Virtua these steps to Click the Fire <i>The Virtual S</i> Proceed as fo If you want t	I Servers o allow outsic wall link in th ervers windo illows: o	le acce ne navig <i>w appe</i> <b>Then</b>	ss to serv gation me <i>ears.</i>	ers on your internal nu, then click Virtua	network. al Servers.
MAC Address Filtering DMZ	1.	Enable	Clear entry 1 : Description	Inbound port	Туре	Private IP addres	Private port		Add a well-kr	iown service	Choos drop-c buttor	e the des Jown mer 1.	ired service from th au and then click the	e Add Add
WAN Ping Blocking Security Log	2. 3.			+	TCP :	192.168.2.			Add a custom	n service	Fill in	a row as t	follows:	
Utilities	4. 5. 6. 7. 8. 9.				TCP : TCP : TCP : TCP : TCP : TCP : TCP : TCP :	192.168.2. 192.168.2. 192.168.2. 192.168.2. 192.168.2. 192.168.2.					•	Descript Inbound ports of this serv outside o	on: the service nan port: the beginning the range required vice. These are the clients use to access	and ending to support ports that your server.
	10. 11. 12.	0			TCP : TCP : TCP :	192.168.2. 192.168.2. 192.168.2.					•	Type: Cr requires packets,	poose TCP or UDP. If passing both TCI you must create a	and UDP second row.
	13. 14.	0			TCP :	192.168.2.					•	Private I server o	P address: the IP ac n your internal netw	dress of the ork.
	15. 16. 17. 18.				TCP : TCP : TCP : TCP :	192.168.2. 192.168.2. 192.168.2. 192.168.2.					•	Private ports of vice. The from the	port: the beginning the range required private ports may Inbound ports.	and ending by this ser- be different
	19. 20.			+	TCP :	192.168.2. 192.168.2.			Enable or dis service	able a	Check next t	(or clear) o the serv	the box in the <b>Ena</b> vice.	<b>ble</b> column
							Save Cancel		Remove a se	rvice	Choos drop-c	e the row Jown mer	to remove in the <b>C</b> and click the <b>Clea</b>	l <b>ear Entry</b> ar 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.

Safety	Getting Started	Battery Installation	Installation	\ Cor	Wireless nfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary
ARRIS WAN Setup LAN Setup Virtual Servers Client IP Filters MAC Address Filtering DMZ DDNS WAN Ping Blocking Security Log Utilities	S         Client IP Filters         You can configure the Router to restrict at specific days and times.         192.168.2.         192.168.2.         192.168.2.         192.168.2.         192.168.2.	Home     Logout     International       ct access to the webpage, e-mail and/or other net       Trpe     Block Time     Day       0     DTP     Always     SUN       0     DTP     Block     SUN       0     DTP     Block     SUN		Config Follow 1 2	<ul> <li>uring Client</li> <li>these steps t</li> <li>Click the Fire</li> <li>The Client IF</li> <li>Fill in the fie</li> <li>a. IP: the k</li> <li>block onl</li> <li>b. Port: the</li> <li>one port,</li> <li>c. Type: che</li> <li>d. Block Tir</li> <li>specify d</li> <li>e. Day: cho</li> <li>effective.</li> <li>f. Time: ch</li> <li>tive.</li> </ul>	<b>IP Filters</b> o configure client ewall link in the na <i>P Filters window ap</i> lds as follows: beginning and enc y one address, use beginning and er enter the same p bose one of TCP, U ne: choose Alway ays and times to k ose the beginning	IP filters. wigation me opears. ling addres e the same nding port i ort twice. IDP, or BOT s to set up block access and ending g and end ti	enu, then click Client s in a range of IP a address twice. n a range of ports. H. a permanent block day of the week tha me of day that this b	TP Filters. addresses. To To block only , or Block to t this block is block is effec-
					the block				

- 3 Click the **Save** button to save your changes.
- 4 Proceed to Configuring MAC Address Filtering.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			_					



#### Finding the MAC Address of a computer

Locate the operating system of the computer that you want to add to the list and follow the instructions to find its wireless MAC address.

**Windows**: open a Command Prompt window and type **ipconfig /all** (and press Return). Locate the line that begins with "Description" and contains the word "Wireless." The next line, which starts with "Physical Address," contains a string of six hex numbers, separated by dashes. This is the MAC address.

**MacOS X**: open a Terminal window and type **ifconfig** (and press Return). Find the line that begins with "en1" — this is the wireless adapter. The next line that begins with "ether" contains the MAC address of the wireless interface.

**Linux**: open a shell window and type **ifconfig** (and press Return). The wireless interface is eth1 (unless there is no Ethernet adapter, in which case the interface is eth0).

#### **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. See the sidebar for information about finding the MAC address of a computer.

**Note:** Make sure you enter the MAC address correctly. The Telephony Modem may completely block access if you enter an incorrect address.

- 4 Click the **Save** button to save your changes.
- 5 Proceed to <u>Configuring the DMZ</u>.

Glossary

Safety	Getting Started	Battery Installation	Installation	W Con	Vireless figuration	Ethernet Configuration	Usage	Troubleshooting
A R R I S WAN Setup	DMZ	Home Logout Inte	met Status: Connected	<b>Configu</b> Certain properly dem su	uring the D Internet app y with comp pports a "DN	MZ plications, such as uters behind a fire MZ" feature that le	gaming or v ewall. For the ets you place	video conferencing, ese situations, the 1 e a single PC outside
LAN Setup Wireless Setup Firewall	The DMZ feature allows one local may be necessary if the NAT feature video conferencing. Use DMZ host from hacker attacks.	computer to be exposed to the Internet without fi re is causing problems with applications such as on a temporary basis because the computer in	rewall protection. This internet gaming or the DMZ is not protected	Note:	A compu the DMZ has the I	iter placed in the only when necess atest security upd	DMZ is not sary and ma lates installe	protected from atta ke sure the comput ed.
Client IP Filters MAC Address Filtering	IP Address of Virtual DM Static IP 1. 192.168.100.2	IZ Host Private IP Enable 192.166.2.	F	Follow t	hese steps	to place a comput	er in the DN	1Z.
DMZ DDNS WAN Ping Blocking Security Log		(Save) (Cance	Ð	1 (	Click the Fire The DMZ win	ewall link in the na ndow appears.	avigation me	enu, then click DMZ
Utilities				2 8	Enter the IP	address of the co	mputer that	t you want to place

g, may not work e Telephony Moide the firewall.

- ttackers. Enable uter in the DMZ
  - 1Z.
  - e in the DMZ in the **Private IP** field.
  - 3 Check the **Enable** box.
  - 4 Click the **Save** button to save your changes.

The DMZ light on the Telephony Modem front panel lights up to remind you that your computer is operating without firewall protection.

**5** When you are finished using the DMZ, return to this screen, remove the check from the Enable box, and click the Save button.

The DMZ light on the Telephony Modem front panel turns off.

6 Proceed to <u>Configuring DDNS</u>.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

ARRI	5	Home	Logout	Internet Status: Connecto
WAN Setup	DDNS			
LAN Setup				
Wireless Setup	Dynamic DNS (DDNS) so	ervice is useful when combin	ed with the "Virtual	Server" feature. By providing Internet
Firewall	can be accessed from va	rious locations on the Interne	et without disclosing	g your current IP address. To enable
Virtual Servers	DDNS Service	Disable DDNS	Web Site	
Client IP Filters				
Client IP Filters MAC Address Filtering	DDNS Status	Disabled		
Client IP Filters MAC Address Filtering DMZ	DDNS Status User Name	Disabled	1	
Client IP Filters MAC Address Filtering DMZ DDNS	DDNS Status User Name Password/Key	Disabled	]	
Client IP Filters MAC Address Filtering DMZ DDNS WAN Ping Blocking	DDNS Status User Name Password/Key Domain Name	Disabled	] ] 	-

#### **Configuring DDNS**

The public IP addresses assigned to your Telephony Modem can change from time to time. If you are providing services from your private network (using the Virtual Servers feature), you should use Dynamic DNS (DDNS) to associate your current IP address with a domain name. The Telephony Modem directly supports several major DDNS providers.

After setting up a DDNS account, follow these steps to configure the Telephony Modem to contact the DDNS provider.

- **1** Click the Firewall link in the navigation menu, then click DDNS. *The DDNS window appears.*
- 2 Choose your DDNS provider from the **DDNS Service** drop-down menu.
- **3** Enter your DDNS account name, password, and DDNS domain name in the appropriate fields.
- 4 Click the Update DDNS button.

**Note:** Your domain name may not be immediately associated with your current IP address. Updated DNS information takes some time to propagate across the Internet.

5 Proceed to Configuring Wireless Bridging.

Jump directly to one of the following topics:

- <u>Configuration Basics</u>
- <u>Accessing the Configuration Interface</u>
- <u>Configuring System Settings</u>
- <u>Setting Up Your WAN Connection</u>
- Setting the MAC Address
- Setting Up DNS
- <u>Configuring the LAN Channel and Name</u>
- <u>Configuring Wireless Security</u>
- Configuring the Firewall
  - Configuring Virtual Servers
  - Configuring Client IP Filters
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- Configuring DDNS
- <u>Configuring Wireless Bridging</u>

### **A R R I S**

Glossary

Safety	Getting Started	Battery Installation	Installation	Co	Wireless onfiguration	Ethernet Configuration	Usage	Troubleshootii
A R R I S WAN Setup	Wireless Bridge	Home Logout Inter	net Status: Connected	Conf The T mon b by cor	<b>iguring W</b> ielephony Mod pridging stand nnecting seve	ireless Bridging em supports the ard that allows your al wireless router	<b>ng</b> Wireless Dis ou to extend s.	stribution System I the range of a v
LAN Setup	Wireless Bridging or Wireless Distri Points together to extend a network	bution System (WDS) is used to connect Wireless	Routers and Access	Кеер	the following i	n mind when sett	ing up wirel	ess bridging:
Channel and SSID Security Wireless Bridging Use as Access Point MAC Address Control Firewall	1) Wreless channels must mat 2) Security settings (WAP or W 3) If MAC filtering is enabled, u that they can communicate with Cancel Point Point Cancel Fibile Wreless Bridging. Point Fibile Wint is not checked, any J	ch between Router and AP. EP) must match between Router and AP. ser must be sure to add the WLAN MAC address( h each other. (enabling this feature allows other Access Points <b>cess Points to Connect.</b> (Enter Wireless MAC Ad P can connect. Note: when connecting APs, at le	es) of the Router/AP so to connect to this Access dress of AP to connect to, ast one needs to call out	•	One device wireless rou tion for you Points.	(in this case, the ters must be conf r additional devic	Telephony M gured as Ac es for instru	Modem) acts as tl ccess Points. See uctions for using
Utilities	AP1 : : : : AP2 : : : :	Control of the second sec	aarono neoda lo can our	•	While the Te Point, doing access throu	elephony Modem h so disables the ro igh the Telephony	has the abili outer functio Modem.	ty to be configure in and therefore c
	AP4 : : :	CLIENTS to Connect (This feature should only	the used when the AD is	•	Each wireles	s router must sup	port WDS.	
	used exclusively to connect wir	elessly to other APs.)	ue useu when the AP IS	•	The Router a security sett	and each Access P ings.	oint must u	se the same chan

Jump directly to one of the following topics:

- **Configuration Basics** •
- Accessing the Configuration Interface ٠
- **Configuring System Settings** •
- Setting Up Your WAN Connection •
- Setting the MAC Address ٠
- Setting Up DNS ٠
- Configuring the LAN Channel and Name
- **Configuring Wireless Security**
- Configuring the Firewall ٠
  - **Configuring Virtual Servers**
  - **Configuring Client IP Filters**
  - Configuring MAC Address Filtering
  - Configuring the DMZ
- **Configuring DDNS**
- **Configuring Wireless Bridging**

(WDS), a comvireless network

- he router. Other the documentathem as Access
- ed as an Access lisables Internet
- nel number and
- If MAC address filtering is enabled, the router and each Access Point must have the MAC addresses of the other devices in their access lists.

Follow these steps to set up wireless bridging. The steps assume you have already configured the devices as described above.

**1** In the Telephony Modem, click the Wireless Setup link in the navigation menu, then click Wireless Bridging.

The Wireless Bridging window appears.

- 2 Check the Enable Wireless Bridging box.
- **3** (recommended) If you want to specify which Access Points are allowed to connect to your network, check the Enable ONLY Specific Access Points to Connect box and enter the MAC address of each Access Point in the AP1 through AP4 fields. You can enter up to four Access Points.

Note: Most wireless devices have their MAC addresses printed on a label attached to the back or bottom of the unit. Make sure you enter the wireless (WLAN) MAC address: the Ethernet and WAN connections have different MAC addresses.

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

	Getting	Battery		Wireless	Ethernet			
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#### **Configuring Your Ethernet Connection**

If your computer is equipped with a LAN card providing an Ethernet connection, you may have to configure your computer's TCP/IP settings. The steps that follow will guide you through setting your computer's TCP/IP settings to work with the Telephony Modem.

#### Requirements

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

- Computer with:
  - one of: Windows 98SE, Windows 2000, Windows ME, or Windows XP (Windows 95 and Windows NT are not supported)
  - Ethernet interface
- Ethernet cable (supplied)
- IP address, subnet, gateway, and DNS information for installations not using DHCP

#### How to use this chapter

The following list shows the procedures for modifying the TCP/IP settings on the computer. The procedure is slightly different depending on the operating system that you are using. Please ensure you are using the correct steps for the operating system on your computer. Follow the links below for instructions to configure your ethernet connection on your operating system.

- <u>TCP/IP Configuration for Windows 98SE</u>
- <u>TCP/IP Configuration for Windows 2000</u>
- <u>TCP/IP Configuration for Windows ME</u>
- <u>TCP/IP Configuration for Windows XP</u>

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
Safety	Started	Installation	Installation T F( S) N	Configuration CP/IP Config ollow these steps ystem. Tote: Dialog b shown in T From the co 2 Double click	Configuration uration for W to configure the T oxes shown on y this procedure. mputer, select Sta on the Network Control Panel Control Panel Network Control Panel Find Fast Control Panel Find Fast Control Panel Find Fast Control Panel Find Fast Control Panel Control Panel	Usage Tindows 9 TCP/IP settin our compute art > Settin icon in the C Copy Pate Undo Add Remove Add Remove Pate Contoers Some Contoe	BSE gs on a Windows 98 er may differ slightly gs > Control Panel Control Panel.	Glossary SE operating / from those
					Microsoft Home Options Technical Support So Mouse	Multimedia	DDBC Data Passwords Sources (32bit)	

3 Click the Configuration tab in the Network window to display the list of Network Adapters.

S Printers

2

Telephony

Sounds

Regional Settings

Users

Configures network hardware and 🛄 My Computer

2

Symantec LiveUpdate

\*

Y

Power Manageme

> System

1 object(s) selected

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

4 Highlight TCP/IP by clicking on it one time, then click on Properties.



5 Click the IP Address tab, click Obtain an IP address automatically, then click OK.

CP/IP Properties	۲.		,	?
Bindings	Adv	anced	N	etBIOS
DNS Configuration	Gateway	WINS Confi	guration	IP Address
An IP address can If your network doa your network admi the space below.	be automai es not autor nistrator for	ically assigne natically assig an address, a	d to this c n IP addro nd then ty	computer. esses, ask ype it in
Obtain an IP	address au	omatically		
Specify an IF	address:			
		•		
S <u>u</u> bnet Mas	k:			

Safety	Getting Started	Battery Installation	Installation	C	Wireless onfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				6	Click <b>OK</b> to a tion window.	accept the new se	ettings, and	<b>OK</b> again to close th	e Configura-
				7	You may hav a new IP ado	e to restart your o dress from the net	computer in o work.	order for your compu	iter to obtain

-end-

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>TCI</b> Follo syst	P/IP Configution of the steps o	uration for W to configure the T	indows 2 CP/IP settin	<b>000</b> gs on a Windows 20	00 operating
			Not	e: Dialog bo shown in	oxes shown on yo this procedure.	our compute	er may differ slightly	y from those
				1 From the cor nections >	nputer, select Sta Local Area Conn	rt > Setting ection.	gs > Network and D	)ial-up Con-
			:	2 In the Local A ing on it one	Area Connections I time, then click c	Properties w	indow, highlight <b>TCP</b> e <b>s</b> .	/IP by click-
				<b>Note:</b> If you select the ap cal Area Con	r computer has m propriate Etherne nection Properties	ore than one t card in the s window.	e Ethernet card, you e <b>Connect using:</b> ar	may have to ea of the Lo-
					Local Area Connection 2.P General Connect using: Components checked are Components checked area Components checked area	roperties emet 100 + Modem 55 (Ell used by this connection: Networks ork Enhancer aring for Microsoft Network (CP/IP) Uninstall I blocol/Internet Protocol. T icol that provides commun ected networks.	Properties he default ication	

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

3 Click Obtain an IP address automatically and Obtain DNS server address automatically, then click OK.

Local A	rea Connection 2 Properties	<u>?</u> ×	
Gener	al		
C In	ternet Protocol (TCP/IP) Pro	perties	? ×
	General		
c ſ	You can get IP settings assigner this capability. Otherwise, you ne the appropriate IP settings.	d automatically if your network suppo sed to ask your network administrator	nts r for
	Obtain an IP address auto	matically	
	C Use the following IP addre	\$\$:	_
	IP address		
4	Subnet mask:		
-	Default gateway:		
	Obtain DNS server addres	s automatically	
Г	C Use the following DNS ser	ver addresses:	
	Preferred DNS server:		
	Alternate DNS server.		
٦		Advance	ed
		ОКСС	ancel

- **4** Click **OK** to accept the new settings, and **OK** again to close the Configuration window.
- **5** You may have to restart your computer in order for your computer to obtain a new IP address from the network.

-end-

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethern Configura	et ation l	Jsage	Troub	leshooting	Glossary
			<b>TC</b> Fol ten	P/IP Config low these steps t n.	<b>juration f</b> to configure	or Wind the TCP/IF	ows N setting	<b>/IE</b> is on a Wil	ndows ME oj	perating sys-
			No	te: Dialog b shown ir	ooxes showr n this proced	n on your dure.	comput	er may d	iffer slightly	from those
				1 From the co	mputer, sel	ect Start >	> Settir	ngs > Co	ntrol Panel	l.
				2 Double click	on the <b>Net</b>	work icon	in the (	Control Pa	nel.	
				Cor Netw Con Icchr	ntrol Panel Edit View Favorites Ioo Edit View Favorites Ioo Sec	is Help Folders I I I I I I I I I I I I I I I I I I I	Add/Remove Programs Add/Remove Programs Folder Options Mail Nail Nail Nail Nail Nail Nail Nail N	Automatic Updates Fonts Fonts Fonts Modems Printers System System Faktor at Men	Carries and Carries and Carrie	
				Configu	ures network hardware and softwa	ite.		📃 My	Computer //	

**3** Click the **Configuration** tab in the Network window to display the list of Network Adapters.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

4 Highlight TCP/IP by clicking on it one time, then click on Properties.

letwork	? >
Configuration   Identification   Access Control	
· · · · ·	
The following network components are installe	ed:
ARRIS TOUCHSTONE DEVICE	
🕮 Dial-Up Adapter	
TCP/IP -> 3Com 3C918 Integrated Fast E	thernet Controlle
TCP/IP -> ARRIS TOUCHSTONE DEVIC	E
TCP/IP -> Dial-Up Adapter	<b>•</b>
	Þ
Add Remove	Properties
Primary Network Logon:	
Client for Microsoft Networks	•
File and Print Sharing	
Description	
TCP/IP is the protocol you use to connect t	o the Internet and
wide-area networks.	
10	< Cancel

5 Click the **IP Address** tab, then click **OK**.

TCP/IP Properties		<u>?</u> ×						
Bindings	Advanced	NetBIOS						
DNS Configuration	Gateway WINS Confi	guration IP Address						
An IP address can If your network doa your network admin the space below.	be automatically assigne es not automatically assig nistrator for an address, a	d to this computer. n IP addresses, ask nd then type it in						
Obtain an IP Specify an IP	address automatically 'address:							
[P Address:								
S <u>u</u> bnet Masl	k:							
Detect connection to network media								
	0	Cancel						

Safety	Getting Started	Battery Installation	Installation	C	Wireless onfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				6	Click <b>OK</b> to a tion window.	accept the new se	ettings, and	<b>OK</b> again to close th	e Configura-
				7	You may hav a new IP ado	e to restart your o dress from the net	computer in o work.	order for your compu	iter to obtain

-end-

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>TCI</b> Follo tem	P/IP Configue w these steps to	uration for Wi o configure the TC	i <b>ndows X</b> P/IP setting:	ד <b>ף</b> s on a Windows XP op	perating sys-
			Not	e: Dialog bu shown in	oxes shown on yc this procedure.	our compute	er may differ slightly	<sup>,</sup> from those
				1 From the cou click on the I	mputer, select Sta Network Connec	n <b>rt &gt; Settin</b> tions icon i	ngs > Control Pane n the Control Panel.	I and double
			:	2 Click the Co Network Ada	nfiguration tab i pters.	n the Netw	ork window to displa	ay the list of
					Local Area Connection 2 State General Support Connection Status: Duration: Speed.	rs ? X Connected 00.03.21 12.0 Mbps		

Activity

Bytes:

Properties Disable

Sent —

12,198

- Received

43,986

Close

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

3 Highlight TCP/IP by clicking on it one time, then click on Properties.



4 Click the **IP Address** tab, click **Obtain an IP address automatically**, then click **OK**.

t IP settings assig ty. Otherwise, you ate IP settings.	ned automatio i need to ask	ally if your n	etwork sup	
			< administra	ports itor for
i an IP address au	tomatically			
e following IP ad	dress:			
rask				
aleway	Ē			
DNS server add	ess automatic	ally		
e following DNS	server address	es:		
DNS server				
DNS server			-	
			Advar	nced
	an in address at the following IP add sc mask interway DNS server addition following DNS at DNS server DNS server	Lan In-address automatical and the following IP address: test following IP address: taske taske DNS server address automatical following DNS server address IBNS server	an In-address automatically lee following IP address: sake adaway DNS server address automatically le following DNS server addresses: IBNS server DNS server	In In address automatically te following IP address: set adaway DNS server address automatically following DNS server addresses: IBNS server DNS server

Safety	Getting Started	Battery Installation	Installation	Со	Wireless onfiguration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				5	Click <b>OK</b> to a tion window.	accept the new se	ttings, and (	<b>OK</b> again to close th	e Configura-
				6	You may hav a new IP add	e to restart your c Iress from the net	omputer in a work.	order for your compu	iter to obtain

-end-

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### Using the Telephony Modem

This chapter describes the controls and features available on the Touchstone Telephony Modem, and covers basic troubleshooting procedures.

- Setting up Your Computer to Use the Telephony Modem
- Indicator Lights for the WTM552A/B Models
- Indicator Lights for the WTM552G/H Models
- Using the Reset Buttons

#### Setting up Your Computer to Use the Telephony Modem

Follow the instructions in the information packet supplied by your cable company. Contact your cable company if you need help setting up your computer.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary



#### Indicator Lights for the WTM552A/B Models

The Touchstone Telephony Modem has 13 LEDs to assist in troubleshooting.

#### Wiring Problems

If the Telephony Modem begins flashing all its lights for more than 10 seconds, this indicates a problem with the telephone wiring — the red and green wires may be shorted (touching), or there may be undesired voltage on the lines. If this pattern persists for more than 10 seconds, disconnect the telephone lines from the Telephony Modem, then call a wiring technician for assistance.

#### Patterns: Normal Operation (WAN)

The following table shows light patterns for the cable connection during normal operation.

Mode	Power	DS	US	Online	Link
AC Power	On	On = Connected to the Internet Flash = Not connected to the Internet	On = Connected to the Internet Flash = Not connected to the Internet	<b>On</b> = Internet Available Off = Internet not available	<b>On</b> = Computer Connected Off = Computer not connected Flash = Computer Activity
No AC Power	Off	Off	Off	Off	Off
Firmware Upgrade	On	Flash	Flash	On	(normal operation)

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

**Patterns: Normal Operation (LAN and telephone)** The following table shows light patterns for the Ethernet and wireless LANs, and the telephones, during normal operation.

Mode	LAN1 - LAN4	WLAN	DMZ	Tel. 1/ Tel. 2
	<b>On</b> = Computer Connected	<b>On</b> = Computer Connected	<b>On</b> = DMZ	<b>On</b> = On-hook
AC Power	Off = Computer not connected	Off = Computer not connected	enabled Off = DMZ not	Flash = Off-hook
	Flash = Computer Activity	Flash = Com- puter Activity	enabled	Off = disabled
No AC Power	Off	Off	Off	Off
Firmware Upgrade	(normal operation)	(normal operation)	(normal operation)	(normal operation)

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary



#### Indicator Lights for the WTM552G/H Models

The Touchstone Telephony Modem has fourteen indicator lights to assist in troubleshooting.

#### Wiring Problems

If the Telephony Modem begins flashing all its lights for more than 10 seconds, this indicates a problem with the telephone wiring — the red and green wires may be shorted (touching), or there may be undesired voltage on the lines. If this pattern persists for more than 10 seconds, disconnect the telephone lines from the Telephony Modem, then call a wiring technician for assistance.

#### Patterns: Normal Operation (LAN and Telephone)

The following table shows light patterns for the Ethernet and wireless LANs, and the telephones, during normal operation.

Mode	LAN1 - LAN4	WLAN	DMZ	Tel. 1/Tel. 2
	<b>On</b> = Computer Connected	<b>On</b> = Computer Connected		
	Off = Computer	Off = Computer	<b>On</b> = DMZ enabled	<b>On</b> = On-hook
AC Power	not connected	not connected		Flash = Off-hook
	Flash = Computer Activity	Flash = Computer Activity	Off = DMZ not enabled	Off = disabled
No AC Power	Off	Off	Off	<b>On</b> = On-hook Flash = Off-hook
				Off = disabled
Firmware Upgrade	(normal operation)	(normal operation)	(normal operation)	Off

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

## Indicator Lights: Normal Operation (WAN and Battery) The following table shows light patterns during normal operation.

Mode	Power	DS	US	Online	Link	Battery
		On = Connected to the Internet	<b>On</b> = Connected to the Internet	On =Ononnected to theOn =InternetInternetavailableOf		On = Battery good or low
Good	On	Flash = Not	Flash = Not	Off = Internet not	Computer not connected	Battery missing
		to the Internet	to the Internet	available	Flash = Computer activity	Flash = Battery bad
No AC Power	Flash	Off	Off	Off	Off	Off = Battery power
Installed						Flash = Battery bad
No AC Power No Battery	Off	Off	Off	Off	Off	Off
Firmware Upgrade	On	Flash	Flash	On	(normal operation)	(normal operation)

Getting Started	Battery Installation	Installation	Wirel Configu	ess ration	Ether Configu	net ration	Usage	Troubleshooting	Glossary
		T O th	ndicator he followin f the startu ne cable m	r Lights ig table s ip sequen odem pha	be start the sta	<b>up Se</b> Teleph e are tw are ou	equence ony Modem to phases of tlined below	light patterns during startup; the Telephor 1.	l each phas ny phase an
			Power, DS, US,	Link	Telep	hone	Battery*	Descriptio	on
			Online		1	2			
			Off	Off	Off	Off	Off	No power to Cable	Modem
			Flash	Flash	Flash	Flash	Flash	Power-on Self	Test
				•	See "Cable	e Modem	n Start Up Se	quence" Below	
			On	On	Flash	Off	Off	Retrieving telephon information	e network า
			On	On	Off	Flash	Off	Retrieving telepho information	one line n
			On	On	Flash	Flash	Off	Activating telephon	e service
				<u> </u>		Norr	nal Operatior	1	
			3	* = Batter	y LED only	y applies	to those mo	dels with battery backu	р
		c	able Mode	em Start	Up Seq	uence			
			DC						

DS	US	Online	Link	Description
Flash	Off	Off	Off	Downstream search
On	Flash	Off	Off	Downstream found; upstream search
On	On	Flash	Off	Downstream and Upstream found; retrieving setup information from cable operator

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### **Using the Reset Buttons**

Use the **Router Reset** button to reset the Ethernet and wireless connections without affecting the cable or telephony connections. You may need to reset the router if you are having problems connecting to the Internet, but the phones are working. To reset the Telephony Modem to factory defaults, hold the **Router Reset** button for about 8 seconds.

Use the **TM Reset** button, on the back of the Telephony Modem, to reset the modem as if you power cycled the entire unit. The phones will be out of service until the Telephony Modem finishes reconnecting to the cable system. You may need to reset the Telephony Modem if you are having problems connecting to the Internet or with the phones. This button should be used rarely.

The **TM Reset** button is recessed to prevent accidental resets. Use a pointed **non-metallic** object to press this button.

The diagram to the left shows the location of the Reset buttons.

#### WTM552A/B



	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary

#### Troubleshooting

The information in this chapter may help you to clear up common problems.

#### **Viewing Connection Information**

The web-based configuration interface provides screens that can help to troubleshoot connectivity problems. The default IP address of the Telephony Modem is **192.168.2.1** — if you have changed the IP address, remember to enter the changed address in your browser.

#### Viewing the DHCP Client List

The DHCP client list shows all computers that are currently connected to the Telephony Modem and have received an IP address from the router. This information can help you to troubleshoot connectivity problems or to see whether other people have connected to an unsecured network.

To view the list, choose LAN Setup from the navigation menu and then DHCP Client List.



The list shows the IP address assigned to each computer, the host name (the name given by the computer's owner), and the MAC address of that computer. Click the **Refresh** button to update the listing.

**Note:** The DHCP client list does not show devices that have manually assigned IP addresses.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			V T Se te	<b>iewing the Secu</b> he security log kee ecurity log to troub empts.	rity Log eps a list of system leshoot connectivi	- and firewa ty problems	III-related events. You and to view possible	u can use the intrusion at-
				A Setup AN Setup AN Setup Virtual Servers Client IP Filters MAN Ping Blocking Security Log Hillites AN Setup Client IP Filters Max Ping Blocking Security Log At Jar Set Jar	V log, choose Firev Home Log eventlogging on two categories – System and 0 0 0 0 0 0 0 0 0 0 0 0 0	acted IP 192.168.100.2           rewall. You can view the low           steed IP 192.168.100.2           reted IP 192.168.100.2           steed IP 192.168.2.2           on 192.168.2.2	ne navigation menu a	and then Se-
					(Save) (Clear	Refresh		

Click the **Refresh** button to update the listing. Click the **Save** button to download the current log to your computer (the file is named **log\_web.txt**). Click the **Clear** button to clear both the system and firewall logs.

**Note:** You may have to scroll down to access the buttons.

	Getting	Battery		Wireless	Ethernet			
Safety	Started	Installation	Installation	Configuration	Configuration	Usage	Troubleshooting	Glossary
			B	acking Up an	d Restoring tl	ne Config	uration	
			Yo co ba	u can save a copy mputer. Once you ck up the configu	y of the current Te u have configured uration so that you	lephony Moc the Telepho I can restore	lem router configura ny Modem as desired e it later if needed.	tion to a local d, you should
			Ba Fo	acking Up llow these steps	to back up the cor	nfiguration.		
ARRIS WAN Setup	Save/Backup Settings	Home Logout Inter	met Status: Connected	1 Click the Utitings.	lities link in the n	avigation m	enu, then click Save	/Backup Set-
LAN Setup Wireless Setup	Save your current configuration by u if they are lost or altered. It is recomm firmware update.	ising this feature. Save/Backup will allow you to mended that you backup your current configurat	restore your settings later tion before performing a	The Save/Ba	ackup Settings wir	ndow appeal	ſS.	
Firewall Utilities		Save		2 Click the Sa	<b>ve</b> button.			
Restart Router Restore Factory Default				The Telepho puter.	ny Modem downlo	oads a file ca	alled admcfg.cfg to	your com-
Restore Previous Settings System Settings				3 Copy the ad sired, to hel	l <b>mcfg.cfg</b> file to a p you find it in the	safe locatio future.	on. You can rename t	the file, if de-



#### Restoring

Follow these steps to back up the configuration.

1 Click the Utilities link in the navigation menu, then click Restore Previous-Settings.

The Restore Previous Settings window appears.

2 Click the Choose File button.

Your browser prompts you to find the saved configuration file.

**3** After locating the saved configuration file, click the **Restore** button. The Telephony Modem restarts the router with the restored configuration.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
A R R L S WAN Setup LAN Setup Vireless Setup Firewall Utilities Restart Router Restore Previous Settings System Settings	S Restart Router If the Router begins to work impropr Rebooting the Router will not delete	Home Logout Interne	F T e t t Status: Connected O uter. Resetting or T C Restart Router T	Resetting the T The router can be re- er (without affecting the current configur Restarting the Rou- to restart the router sphony Modem. If your you need to restart to restart the router lick Restart Router the Telephony Mode	<b>Telephony Mod</b> eset in two ways: a g any phone calls in ation to the factor uter r, you can push the your Telephony Mo art it remotely, you remotely, click the ar. When the page of shows a confirm	<b>dem Rou</b> "normal" ren progress), y defaults. e Router Rea dem is mou can use th e <b>Utilities</b> I appears, c nation dialo	ter eset that simply resta and a "factory" rese set button on the bac inted in an inconvenic e Restart Router pag ink in the navigation lick the <b>Restart Rou</b> g; click <b>OK</b> to restar	ck of the Te- ent location, e. menu, then <b>uter</b> button. t the router.



#### **Resetting the Router to Factory Defaults**

To reset the router to factory defaults, you can press and hold the Router Reset button on the back of the Telephony Modem for about eight seconds. You may need to do this if a misconfiguration has locked out all access. If you can access the router and want to restart it remotely, you can use the Restore Factory Defaults page.

To restore factory defaults remotely, click the **Utilities** link in the navigation menu, then click **Restore Factory Defaults**. When the page appears, click the **Restore Defaults** button. The Telephony Modem shows a confirmation dialog; click **OK** to erase the configuration to factory defaults.

The router resets itself after erasing the current configuration.

**Note:** If you want to restore the current configuration after restoring factory defaults, see <u>Backing Up and Restoring the Configuration</u> first.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			G	eneral Proble	ms and Solut	ions		
			TI	ne Telephony Mo Check all po ends?	odem is plugged wer connections.	in, but the Is the powe	Power light is off. er cord plugged in fi	rmly at both
				If you plugg switched on.	ed the power cor	d into a pov	ver strip, make sure	e the strip is
				Avoid using	an outlet controlle	d by a wall s	switch, if possible.	
				Finally, chec	< the fuse or circu	it breaker pa	anel.	
			ι,	<b>m not getting or</b> It may take power up yo Always leave to the cable	<b>the Internet (a</b> over 30 minutes ur Telephony Mode your Telephony M system.	II connection to establish em, especial Modem plugg	ons). a connection the fi lly when many peopl ged into AC power ar	rst time you e are online. nd connected
				Check the fr	ont panel lights:			
				• The <b>F</b>	ower and Online	e lights shou	ld be on.	
				• The <b>L</b>	. <b>ink</b> light should b	e either on o	or blinking.	
				If the comp	<b>Power</b> light blinl any for assistance	ks for more	than 30 minutes, ca	III your cable
				Check your o <u>cable</u> should cause a brea you have on outlet, remo the outlet.	cable connections. I not be pinched, Ik or short in the c e or more splitter ve the splitters ar	Connectors kinked, or cable (you m rs between nd connect t	should be finger-tig bent sharply—any o hay have to replace t the Telephony Mode the Telephony Mode	ht. The <u>coax</u> of these can the cable). If m and CATV m directly to

Proceed to the Ethernet or wireless solutions (next page) if necessary.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			۲ <i>۲</i>	<b>m not getting or</b> If you are us	the Internet. (I	Ethernet) hub turned o	on?	
				Are you usin direct connec hub.	g the right type o ction to a compute	f <u>Ethernet (</u> er; use a cro	<u>cable</u> ? Use the suppli sss-over cable for cor	ied cable for nnection to a
				Press the Ro	uter Reset butto	n on the ba	ck of the Telephony N	/lodem.
				A misconfigu If you think t	ration could lock c his has happened,	out all acces see <u>Resetti</u>	s to the Telephony Mo ng the Router to Facto	odem router. ory Defaults.
			Γ'	<b>m not getting or</b> Check the in light should	<b>the Internet. (</b> dicator lights (see be on.	Wireless) e <u>Using the</u>	<u>Telephony Modem)</u> -	– the WLAN
				Does your co "Broadcast S manually en	onnection utility d SID″ (see <u>Configu</u> ter the name of yo	iscover you ring the LAN our wireless	r wireless LAN? If yo <u>I Channel and Name</u> ) LAN in the connectio	ou turned off you need to on utility.
				Change your <u>Security</u> ). If soon as you	security mode to ' you use "disabled find the problem.	WEP" or "di ," enable or	sabled" (see <u>Configur</u> ne of the other securi	ring Wireless ty modes as
				A misconfigu If you think t	ration could lock c his has happened,	out all acces see <u>Resetti</u>	s to the Telephony Mo ng the Router to Facto	odem router. ory Defaults.
			Μ	y wireless Inter This is usual "remote" tele fering produc <u>Configuring</u>	net connection s ly caused by inter ephones and micro ct, try using a diffe the LAN Channel a	tops work ference — t wave ovens erent chann nd Name fo	ing sometimes. two common sources s. If you cannot remo el or setting Protecte or both features).	are 2.4GHz ve the inter- d Mode (see
			I	can get on the I If the Web si ble servicing minutes and nection spee	nternet, but even te you are visiting all the requests. I try again. Usage d.	rything is s is very popu f other sites during peal	<b>slow.</b> ular, that site may be s download quickly, w k hours may also aff	having trou- vait for a few fect the con-

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
				Other comn tions, may s	nunications on the slow down your co	LAN, or ir	nterference with wire	eless connec-
			Id	on't have dial tone when I pick up my phone, why? In order for telephone service to be functional on the Telephony Modem, telephone service must have been purchased from the service provider and configured on your Telephony Modem. The following steps should help in identifying the source of the problem.				
				1 Is the Powe	r LED lit?			
				<ul> <li>If no the c</li> </ul>	t, check to make s outlet has power.	sure the Te	lephony Modem is pl	ugged in and
				• If the	e LED is lit, go to t	he next ste	p.	
				2 Is the Online	e LED lit?			
				<ul> <li>If no wall.</li> <li>have</li> </ul>	t, check the coax Ensure they are co dial tone, contact	connection onnected ar your servic	at the Telephony Mo ad tight. If they are ar a provider.	dem and the nd you do not
				• If the	e Online LED is lit,	go to the n	ext step.	
				3 Is the Telep	hone (Telephone 1	or Telepho	ne 2) LED lit?	
				<ul> <li>If no servi</li> </ul>	t, phone service h ce provider.	as not beer	set up on that line.	Contact your
				• If it i Find	is blinking, there is that phone and ha	s a phone c ng it up.	off hook somewhere i	in the house.
				• Ifiti	s lit, go to the nex	t step.		
				4 Is the phone	e plugged directly	into the Tel	ephony Modem?	
				<ul> <li>Make lepho</li> </ul>	e sure the phone is ony Modem labeled	s plugged in d "Tel 1" for	to the port on the ba line 1, and "Tel 2" fo	ack of the Te- or line 2.
				<ul> <li>If so phon</li> </ul>	, try a different pr e.	ione. Make	sure the new phone	is a working
				<ul> <li>If a k a diff tone.</li> </ul>	known good phone Ferent phone cable , call your service	is used and . If a new p provider.	d you still don't have hone and cable do no	dial tone, try ot restore dial
Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
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**5** Is the Telephony Modem plugged into a wall outlet?

• If so, unplug the RJ-11 connector at the back of the Telephony Modem and plug in a known working phone. If you now have dial tone, the problem is with the house wiring. Contact your cable company or a qualified wiring technician to correct the house wiring. If you still do not have dial tone, contact your service provider.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary			
	Glossary										
		The following is a list of common cable and networking terms.									
			Ar	<b>np-hour (Ah)</b> A measure c supply one A	of battery capacity. Impere of current	. For exampl for one hou	le, a 1.0Ah battery c r.	an nominally			
			Ca	<b>itegory 5 (Cat5</b> ) A high-quali tions. When	<b>)</b> ty type of cable, purchasing Etherr	used for Fa let cables, a	st Ethernet (100Bas Iways look for Categ	seT) connec- Iory 5 cable.			
			Cc	A thin wire, cable TV sys discount stor	ax) used to connect <u>t</u> tem. You can buy res.	your televisi coax from a	on and Telephony M any electronics retail	lodem to the er and many			
			CF	YE Customer Pr the Telephor	emise Equipment y Modem; typicall	. This is the ly a compute	equipment that is p er or hub.	olugged in to			
			Cr	oss-over An Ethernet together. Als more ports (	cable used to con o, some Ethernet which eliminates t	nect two hul hubs may h the need for	bs (or a hub and a ca ave built-in cross-ov a cross-over cable).	able modem) /er on one or			
			DF	ICP							
			5	Dynamic Ho address and device conne figure your c	st Configuration P I location of servi ecting to the netw computer's networ	rotocol. An ices (such a ork. DHCP a king softwar	IP protocol used to p as DNS and TFTP) r illows the cable com re for you.	provide an IP needed by a pany to con-			
			DN	IS							
				Domain Nar name (such	ne Service (Serve as www.example.	er). An IP s com) with a	ervice that associate n IP address.	es a domain			
			Dc	<b>wnstream</b> In an HFC i Some older o	network, the dire- cable documentati	ction from on may refe	the head-end to the	e subscriber. ard path.			

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			DO	CSIS Data Over C dards used f	able System Inter or data communica	face Specifi ations equip	cation. The interoper	rability stan- work.
			EM	TA Embedded M with a cable	Iultimedia Termina modem.	al Adapter.	An MTA device that	is integrated
			Eth	<b>hernet</b> A standard r Network (LA	nethod of connecti N).	ng two or r	nore computers into	a Local Area
			Eur	roDOCSIS The Europea	n version of DOCS	IS.		
			Eve	ent An informati	onal message used	រ for monito	oring network status.	
			F-c	onnector The type of o F-connector, connecting y	connector used on slip-on and screw our Telephony Mod	coax cable '-on. Use co dem.	. There are two comr bax with screw-on co	mon types of onnectors for
			Fire	ewall A hardware vate network	or software device	that preve t. The WTM	nts unauthorized acc 552 provides a built-	cess to a pri- in firewall.
			Gat	<b>teway</b> The device, other IP sub	usually a router, th nets.	nat connects	s devices on a given	IP subnet to
			Hea	adend The "central data equipm several "rem	office" in an HFC r ent. In larger cabl ote" headends to i	ietwork. The e networks, provide dist	e headend houses bo , a "master" headenc ributed services.	th video and d often feeds
			HT	TP HyperText Tr	ansfer Protocol.			

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Н	A box with s	several Ethernet c nt of contact for a	r USB conr Il connected	nectors. Ethernet hu devices; USB hubs	bs provide a allow you to
				add peripher	als without install	ing a USB c	ard in your computer	r.
			IF	• address A number as tify your con	signed to your cor puter to other sys	nputer by y stems on th	our cable company, i e Internet.	used to iden-
			IS	DN				
				Integrated S vides comm	ervices Digital Net unication speeds a	twork. A dig bout twice a	gital telephony stand as fast as standard d	ard that pro- lialup.
			L#	AN Local Area N (such as a b	letwork. A networ uilding) to commu	k that allov nicate with	vs computers in a si one another.	ngle location
			LE	<b>D</b> Light Emittir is passed the	ıg Diode. A semi-c <sup>.</sup> ough it.	onductor di	ode that emits light v	when current
			M.	AC address A number th cable compa access to the of your Telep	at uniquely identif any uses your Tel Internet. The MA Shony Modem.	ies any dev ephony Mo C address is	vice connected to a n dem's MAC address s printed on a label o	etwork. Your to authorize n the bottom
			Pr	<b>otocol</b> A set of rule network enti	s and formats tha ties at a given lay	t determine ər.	s the communication	n behavior of
			Pr	<b>Toxy</b> A device or site) and a burden from proxy that k those pages in faster pag	program that stan client (your brows the server. For ex ceeps copies of po instead of fetchin e loading and less	ds in betwe er), providi ample, you pular web g them dire network co	een a server (for exaing a way to relieve r cable company may pages; the proxy c ectly from the web s ongestion.	ample, a web some of the y have a web an send you ite, resulting

Safety	Getting Start <u>ed</u>	Battery Installation	Installation <u>C</u>	Wireless onfigur <u>ation</u>	Ethernet Configuration	Usage	Troubleshooting	Glos <u>sary</u>
			RF	Abbreviation cable" and the	for Radio Freque ne connectors as "	ency. Some RF connect	literature refers to ors."	coax as "RF
			RJ-1	1 A standard 4 connecting t	-pin modular con elephones.	nector, com	monly used in North	n America for
				-				
			RJ-4	A standard 6 RJ-45 conne	-pin modular conr ctor looks like a w	iector, com ide RJ-11 (	monly used on Ether telephone) connector	net cable. An <sup>r.</sup>
			Split	tor				
			эрш	A small box may need a that you wa from any ele	with three cable of splitter if you have nt to use for you ctronics retailer an	connectors: e a TV alre r Telephony nd most dis	one input and two ady connected to the y Modem. You can b count stores.	outputs. You e cable outlet ouy a splitter
			SSID	Service Set uniquely ider	IDentifier, a strir ntifies a wireless L	ng of text AN.	(up to 32 character	rs long) that
			Swit	ched outlet A power out intended for into a switch	let that may be tu lamps. Avoid plu ed outlet to avoid	rned on ar Igging your disruptions	d off using a wall sw computer or Telepl	vitch. Usually hony Modem
			TOD					
			TCP/	Transmissior facilitate con	Control Protoco	/Internet ss one or m	Protocol. The protoconore connected netwo	cols used to orks.
			TDM	A Time Divisio modems for	n Multiple Access. sending upstream	A method data with	used by DOCSIS-cor minimal interference	mpliant cable
			11	r				
			υρει	The path fro mentation m	m a subscriber de ay refer to this as	vice to the the return	headend. Some older path or reverse path	r cable docu- 1.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			W	EP Wired Equiva a wireless L/	alent Privacy, a coi AN.	mmon stand	lard for encrypting da	ata sent over
			WF	PA Wi-fi Protect LAN. WPA of	ed Access, a stan fers improved sec	dard for enc urity over W	rypting data sent ov /EP.	er a wireless



#### **Touchstone**® WTM552 Telephony Modem User's Guide

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