

Touchstone[®] TM502 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 TM502 Telephony Modem brings it all to you faster and more reliably. All while providing toll quality Voice over IP telephone service. Some models even provide a Lithium-Ion battery backup to provide continued telephone service during power outages.

The Touchstone Telephony Modem provides an Ethernet connection for use with either a single computer or home/office Local Area Network (LAN). Some Telephony Modems also provide a USB connection. You can connect two separate computers at the same time using both of these connections. 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 (TM502G/H Models Only)

Installing and Connecting Your Telephony Modem

Installing USB Drivers on Your PC

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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Release 5 Standard 3.0 August 2006

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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

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.

- 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.
- Do not locate the equipment within 6 feet (1.9 m) of a flame or ignition source, to avoid damage or injury from battery explosion (i.e. heat registers, space heaters, fireplaces, etc.).
- 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 coax drop cable's shield must be grounded at the building/residence either close to the point of entrance or at the point of attachment. It should be grounded as close as practical to the building/residence AC ground to minimize grounding connector length and thereby limit the po-

tential voltage differences between the cable TV coax cable and other grounding systems. Refer to the individual country's National Electric Code for further details.

- 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.



End User License Agreement and Limited Warranty

This Standard License Agreement and Limited Warranty ("Agreement") applies to all ARRIS manufactured or otherwise ARRIS provided products ("Products") and the corresponding current and subsequently provided versions of software or firmware, if any, whether embedded in the Products or used in conjunction with the Products, ("Software"). The Product, without the Software, is referred to in this Agreement as the ("Hardware"). The Software and Hardware are AR-RIS Products and may be referred to in this Agreement as the ("System").

If you ("You" or "Purchaser") and ARRIS International, Inc. ("ARRIS") have entered into a separate written agreement, then, inconsistent terms between this Agreement and the separate agreement shall be governed by such separate agreement.

If You do not agree to be bound by this Agreement, please return the Products to the Party from whom You acquired the Products. Use of the Products shall constitute acceptance of the terms hereof.

1. LICENSE TERMS

Subject to the terms herein, ARRIS grants You a royalty-free, non-exclusive, non-transferable, non-sublicensable license to use the Software with the Products, in binary object code form only. You may use third party software products or modules supplied by ARRIS solely with the System, unless the licensing terms of the third party software specify otherwise. You may not disclose the results of Software performance benchmarks to any third party without ARRIS' prior written consent. All rights not specifically granted to You herein are retained by ARRIS.

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You and/or any third party agree not to (i) make any copies of the Software, (ii) modify, decompile, disassemble, separate, reverse engineer or otherwise attempt to derive any source code from the Software; (iii) transfer the Software to any third party without ARRIS' written con-



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sent; (iv) export the Software or any of its underlying technology in contravention of U.S. and foreign export laws and regulations, or (v) if Products are included, use the Software other than in connection with the System.

3. USE

The right to use the Software, or any individual feature thereof, may be restricted by a measure of usage. An expansion beyond a commercially reasonable usage level may require payment of an additional fee to ARRIS.

4. SOFTWARE DEVELOPED AT PRIVATE EXPENSE

The Software provided under this Agreement is commercial computer software developed exclusively at private expense, and in all respects are proprietary data belonging solely to ARRIS and/or it licensors.

5. LIMITATIONS ON LIABILITY

NEITHER ARRIS NOR ITS LICENSORS SHALL BE LIABLE FOR INDI-RECT, INCIDENTAL, PUNITIVE, CONSEQUENTIAL, EXEMPLARY, OR SPECIAL DAMAGES UNDER ANY THEORY OF LIABILITY, WHETHER AL-LEGED AS A BREACH OF CONTRACT, TORT (INCLUDING NEGLI-GENCE), STRICT LIABILITY OR OTHERWISE AND REGARDLESS OF WHETHER YOU, ANY OTHER SOFTWARE USER, OR ANY THIRD PARTY SUFFERED SUCH DAMAGES, EVEN IF ARRIS AND/OR ITS LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL ARRIS' TOTAL LIABILITY TO YOU OR ANY THIRD PARTY ARISING OUT OF OR PURSUANT TO THIS AGREEMENT EXCEED THE AMOUNT PAID BY PURCHASER TO ARRIS FOR THE SOFTWARE AND/ OR SYSTEM.

6. TERM & TERMINATION

This Agreement takes effect upon Your acceptance of the terms hereof or Your first use of the Software and will remain in force until terminated in accordance hereunder. ARRIS may terminate this Agreement upon fifteen (15) days prior written notice upon Your material breach of this Agreement if such breach is not cured within such fifteen (15) day period. Notwithstanding the foregoing, this Agreement shall terminate immediately upon Your breach of any of the provisions of Section 2 above.

7. OWNERSHIP

Title, ownership rights, and all intellectual property rights in and to the Software and/or System and any accompanying materials or documentation, and any copy of the foregoing, shall remain the sole and exclusive property of ARRIS and/or its licensors. You agree to abide by copyright laws and all other applicable laws, and acknowledge that the Software contains valuable confidential information and trade secrets of ARRIS and/or its licensors.

8. YOUR INDEMNIFICATION TO ARRIS

You agree to defend, indemnify and hold ARRIS harmless from and against any costs, losses, liabilities and expenses (including attorney's fees) arising out of or relating to third party claims arising out of or related to Your use of the Software and/or System in contravention to the terms of this Agreement, including without limitation, any and all claims, actions, suits, or proceedings alleging fraud, breach of security, non-compliance with laws, breach of contract or negligence.

9. PATENT INDEMNIFICATION

9.1 ARRIS will indemnify, defend and hold You harmless against damages, liabilities and costs, excluding consequential and exemplary damages finally awarded against You and will, at ARRIS' expense, defend any claim, suit or proceeding ("Claim") brought against You insofar as such Claim is based on an allegation that the Products as provided to You directly infringe a United States patent or copyright. ARRIS will pay those costs and damages, including settlement costs awarded or agreed-upon, as applicable, as the result of the Claim, provided (i) You promptly notify ARRIS of the Claim (ii) You give ARRIS all applicable evidence in Your possession, custody or control, (iii) You give ARRIS reasonable assistance in and sole control of the defense and all negotiations for its settlement or compromise, and (iv) You have paid all fees due to ARRIS under this Agreement and continue to pay all such fees as such become due.



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9.2 In the event of an infringement allegation for which ARRIS is obligated to indemnify You, ARRIS may at its discretion: (i) obtain a license that allows You to continue to use the accused Products, (ii) replace or modify the accused Products with changes that reasonably meet the ARRIS specification, so as to be non-infringing, or (iii) if (i) and (ii) are not commercially reasonable, repurchase ARRIS' provided Products at its depreciated value based on a three-year amortization rate. If ARRIS provides any one of the options set forth in clauses (i) through (iii) above, ARRIS' indemnity obligation under this Agreement shall be entirely fulfilled. ARRIS liability for patent infringement indemnification in this section shall not exceed the amount You paid for the Products finally found to infringe a valid US patent.

10. LIMITED WARRANTY

IF YOU ACQUIRED THE PRODUCTS FROM ANYONE OTHER THAN ARRIS YOU DO NOT RECEIVE ANY OF THE WARRANTIES DIRECTLY FROM AR-RIS. YOUR EXCLUSIVE WARRANTY, IF ANY, COMES FROM THE PARTY FROM WHOM YOU ACQUIRED THE PRODUCTS: IN WHICH CASE THE REMAINDER OF THIS DOCUMENT, EXCEPT FOR THE ARRIS TOUCH-STONE PRODUCTS SAFETY INFORMATION, DOES NOT APPLY TO YOU.

11. SOFTWARE WARRANTY

ARRIS warrants to the original purchaser that for ninety (90) days from the ship date of the original ARRIS branded Software (the "Software Warranty Period"), the Software will perform in substantial conformance with the technical specifications for such Software set forth in the Documentation. Your sole and exclusive remedy, and ARRIS" sole and exclusive liability under this Section 11 (Software Warranty) shall be, at ARRIS" option: (i) to use commercially reasonable efforts to correct any reproducible errors that You identify in writing during the Software Warranty Period which renders the Software non-conforming, (ii) to replace the Software with functionally equivalent software or (iii) to accept Your return of the Software, if applicable. ARRIS does not warrant that the Software will work in combination with any hardware or application software products provided by third parties not supplied or approved by ARRIS, that the operation of the Software will be uninterrupted or error free, or that all defects in the Software can be corrected. ARRIS shall not have any obligation or liability with respect to this Section 11 for any errors or any defects in the Software upon expiration of the Software Warranty Period.

12. HARDWARE WARRANTY

12.1 ARRIS warrants to the original Purchaser of the hardware that under normal use and service, for twelve (12) months from the ship date (the "Hardware Warranty Period") of the Hardware, it will be free from defects in material and workmanship. Your sole and exclusive remedy and ARRIS' sole and exclusive liability under this Section 12 shall be, at ARRIS' option: (i) to use commercially reasonable efforts to correct any reproducible Hardware errors that You identify in writing during the Hardware Warranty Period which renders the Hardware non-conforming, (ii) to replace the Hardware or (iii) accept return of the Hardware from Purchaser. ARRIS shall not be responsible for any of Your or third party software, firmware, information or memory data contained in, stored on, or integrated with any Hardware Products returned to ARRIS pursuant to any Warranty provided under this Agreement.

12.2 ARRIS does not warrant (1) physical damage to the surface of the products, including cracks or scratches on the casing; (2) damage caused by misuse, neglect, improper installation or testing, unauthorized attempts to open, repair or modify the products, or any other cause beyond the range of the intended use; (3) damage caused by accident, fire, power changes, other hazards, or acts of God.

12.3 Battery Pack. If Your product has a battery pack, ARRIS warrants that the battery pack will be free from defects in workmanship and materials, under normal use, for twelve (12) months from its ship date. This warranty is void if the ARRIS battery pack is used in any other vendors equipment.

13. WARRANTY CLAIMS

To make a return under the Warranty above, You must contact the AR-RIS Repair Services center within the applicable warranty period, in writing, by sending an email to support@arrisi.com to obtain an ARRIS Return Material Authorization number (RMA). The authorized RMA number You receive from ARRIS must be marked on the outside pack-



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age and sent prepaid and packaged appropriately for safe shipment. ARRIS will use commercially reasonable efforts to ship any repaired or replaced Product to You, at ARRIS' expense, not later than thirty (30) days after ARRIS receives the defective Product. ARRIS warrants the repaired or replaced Hardware or Software for the longer of the remainder of the unexpired applicable Warranty Period or 90 days. Notwithstanding the above, if any return is due to errors or defects for which ARRIS is not responsible or not otherwise covered by the Warranty, You shall be liable for and reimburse ARRIS for shipping and related expenses.

14. DISCLAIMER OF WARRANTY

EXCEPT AS AGREED TO IN A SEPARATE WRITING BETWEEN THE PAR-TIES, THESE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES WITH RESPECT TO THE SOFTWARE AND/OR SYSTEM DELIVERED TO YOU HEREUNDER, WHETHER STATUTORY, BY OPERATION OF LAW, EX-PRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PUR-POSE, NON-INFRINGEMENT, TITLE AND ANY WARRANTIES ARISING OUT OF USAGE OR TRADE. THIS WARRANTY IS APPLICABLE SOLELY TO YOU AND NOT TO ANY SUCCESSOR IN INTEREST OR ANY OTHER THIRD PARTY. NO WAIVER, ALTERATION, OR MODIFICATION OF THIS WARRANTY SHALL BE BINDING AGAINST ARRIS UNLESS IN WRITING AS A SEPARATE AMENDMENT HERETO AND SIGNED BY AN ARRIS AU-THORIZED EXECUTIVE.

15. WARRANTY LIMITATIONS

ARRIS shall be relieved of all obligations and liability under the Warranty provisions set forth herein, if:

a. The Hardware or Software is operated with, or the error or defect is due to, any accessory, equipment, software or part not approved or sold by ARRIS; or

b. The Hardware or Software was not installed, operated and maintained in accordance with ARRIS' instructions and Documentation; or c. The Hardware or Software has been repaired, altered or modified by someone other than ARRIS; or

d. You do not notify ARRIS in writing of the error or defect within the applicable Warranty Period with sufficient information for ARRIS to identify and reproduce such error or defect, or fail to return the defective Hardware or Software according to the terms of this Agreement; or

e. ARRIS demonstrates that the alleged error or defect in the Software or Hardware does not exist or was caused by Your or any third party's misuse, neglect, improper installation or testing, or negligent repair or any other cause beyond the range of the intended use, or by accident, fire, lightening or other hazard or act of God.

16. MISCELLANEOUS

16.1 If any term, condition, or provision in this Agreement is found to be invalid, unlawful or unenforceable to any extent, the remaining terms, conditions and provisions will continue to be valid and enforceable to the fullest extent permitted by law.

16.2 You may not assign or transfer this Agreement nor any rights hereunder, in whole or in part, whether voluntary or by operation of law without ARRIS' prior written consent. Subject to the foregoing, this Agreement will be binding upon and will inure to the benefit of the parties and their respective successors and assigns.

16.3 This Agreement (including any addenda hereto signed by both parties) represents the entire agreement of the parties with respect to the subject matter of this Agreement and supersedes all previous communications, representations, understandings and agreements, either oral or written, between the parties with respect to said subject matter.

16.4 This Agreement may not be amended, except in writing, signed by both parties. No terms, provisions or conditions of any purchase order, acknowledgment or other business form that You may use in connection with the acquisition or licensing of the Software will have any effect on the rights, duties or obligations of the parties under, or oth-

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erwise modify, this Agreement, regardless of any failure of ARRIS to object to such terms, provisions or conditions.

16.5 The laws of the State of Georgia, USA shall govern and construe this Agreement. Any suit brought in connection with this Agreement shall be subject to the exclusive jurisdiction of the State Court of Georgia or the Federal Courts for the Northern District of Georgia and You hereby agree and submit to the personal jurisdiction and venue thereof.

17. SAFETY INFORMATION FOR ARRIS TOUCHSTONE PROD-UCTS

ARRIS telephony modems and cable modems comply with the applicable requirements for performance, construction, labeling, and information when used as outlined in this Section 17:

17.1 Caution: Only a professional installer may connect the telephony modem to the home's existing telephone wiring. 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 sufficient to ensure there is no power to the telephony modem. Failure to do so may result in loss of service and/or permanent damage to the telephony modem.

17.2 Do not use the product near water (e.g., wet basement, bathtub, sink or near a swimming pool), to avoid risk of electrocution.

17.3 Avoid using and/or connecting the equipment during an electrical storm, to avoid risk of electrocution.

17.4 Do not locate the product within 6 feet (2 m) of a flame or ignition source, to avoid damage or injury from battery explosion, or heat damage.

17.5 Use only the power supply and/or power cord included with the Product. Install the Product near and easily accessible to the power outlet. Ground the RF drop cable's shield at the building/residence either close to the point of entrance or at the point of attachment. Grounding as close as practical to the building/residence AC ground is

required to minimize grounding connector length and thereby limit the potential voltage differences between the cable TV coaxial cable and other grounding system. Refer to the individual country's National Electric Code for further details.

17.6 In areas of high AC power surge events or poor AC power grounding situations and areas prone to lightning strikes additional AC power surge protection may be required on the AC, RF, Ethernet, USB and phone lines.

17.7 If connecting the telephony modem or cable modem to a local computer through the Ethernet or USB cable 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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Getting Started

About Your New Telephony Modem

The Touchstone TM502 Telephony Modem is DOCSIS or EuroDOCSIS compliant with the following features:

- Speed: much faster than dialup or ISDN service
- Convenience: supports USB (all but TM502C) and Ethernet; 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)

What's in the Box?

Make sure you have the following items before proceeding. Call your cable company for assistance if anything is missing.

- Telephony Modem
- Power Cord
- Quick Installation Guide
- USB Cable (all but TM502C)
- 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
- USB Drivers (Windows 98SE/ME/2000/XP)
- Remove USB Driver Utility



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				System Requ The Touchstone T describes require system for details To use the Teleph your cable compa Windows Ethernet connecti	irements Felephony Modem (ments for each open s on enabling and co ony Modem, you no iny.	operates with rating system onfiguring ne eed DOCSIS I /indows 98, V	most computers. T ; see the documenta tworking. high-speed Internet Vindows 98 SE (Seco	The following ation for your service from ond Edition),
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			•	Use the ca Avoid usin abuse by c nals can ta into other ble compar	ble company's mail g proxy software u other Internet users ke advantage of ope computers or sendi ny may suspend yo	servers for s nless you ar (some are s on proxies to ng spam. If y ur account to	ending email. e certain that it is r shipped open by def hide their identity wh ou have an open pro protect the rest of t	not open for ault). Crimi- nen breaking oxy, your ca- the network.
			•	If you conr able securi you should nical suppo	nect your Telephony ty and encryption o run only secured p ort of the wireless e	Modem to a n the wireles roxies). Cons quipment pro	wireless LAN, make s hub (for the same sult the documentation ovider for help.	sure you en- reasons that on and tech-



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary		
2.2	2 Ah Battery		B (`	attery 1 TM5020	Installatio G/H Model	n and s Only	Replacemo ')	ent		
	PN ARCTO0777 01		TM of	502G and TM Lithium-Ion ba	502H Telephony Moo atteries: a 2.2 <u>Amp-</u>	dems may op <u>hour</u> (Ah) ba	otionally include one attery or a 4.4 Ah ba	of two types ttery.		
	6.4V 2.2Ah SN: 22053300045 Assembled in Talwan E187242	m r	For safety and regulatory purposes, batteries are shipped outside of the Telephon Modem and must be installed.							
			Ide pro	entify the batte ocedure:	ery type using the ph	notos to the l	eft and use the prope	er installation		
				• <u>TM502G/I</u>	H 2.2 Ah Battery Ins	stallation and	l Replacement			
4.4	Ah Battery			• <u>TM502G/I</u>	H 4.4 Ah Battery Ins	stallation and	Replacement			
	PN- ARCTOOTT7 OL 8.4V.22An SN- 200500046 Masembled in Talwan E157242			Note: The	4.4 Ah battery is lo	nger and ha	s a strap between th	e guides.		



Safety	Getting Started	Battery Installation	Installatior	1	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Latch End	TM50 This mevent AC por Moden AC 1	D2G/H 2. nodel of the T of a local po wer. The 2.2 n. Use this p tion Insert a fin- holding the door toward	2 Ah Battery I Telephony Modem h wer loss. The batter Ah lithium-ion bat procedure to install ger into the latch o battery door (on t d you. Set the door	nstallation has the ability ery backup is tery pack car and to replac pening, press the bottom of r aside in a sa	h and Replacen to provide battery b not intended to take to be inserted into th the the backup batter down and pull back the Telephony Mod afe place.	hent backup in the the place of the Telephony ries. to on the latch em). Pull the
00000000000000000000000000000000000000		Batt	erv Slot	2	Hold the ba on the Tele the left sho	ttery pack so that phony Modem and ws the proper orie	the guides or slide the batt ntation.	n the battery align v ery into the bay. The	vith the slots e diagram on

Note: Batteries will not insert completely into the Telephony Modem if not oriented correctly. The battery should slide into the bay without significant force. Line up the slots in the battery bay with the guides on the battery.





Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Battery Opening	3	Push the ba agram show you are ta battery op pulling it s Note: The power.	attery pack into the ws a Telephony Moo king the battery o pening area and us straight back. Telephony Modem	bay until it se dem with a 2 out of the un se leverage will not begin	eats into place. The 2.2Ah battery pack i t, position your fi to dislodge the ba n operating until yo	following di- installed. If inger in the ttery while ou apply AC
Receiver			inge Tabs						
				4	Replace the receiver slo posite end of the latch sr Note: Some battery doe cling. Pleas ordinances.	e door. To do so, plac ots inside the Teleph of the battery openi naps back into place e Telephony Modem es contain precious r e dispose of the bat	ce the hinge to ony Modem b ng slot. Rota models use a material, the tery responsi	tabs of the battery o pattery compartmen te the door toward t a Lithium-Ion batter re may be some ber ibly and in accordan	door into the at on the op- the unit until ry pack. The nefit in recy- ce with local



Saf	ety	Getting Started	Battery Installation	Installation		USB Drivers	Etherne Configura	et tion Usage	Troubleshooting	Glossary
					TM5(The 4. this pr	D2G/H 4. 4 Ah lithium ocedure to	4 Ah Bat i-ion battery install and t	tery Installation pack can be inserted i o replace the backup b	and Replace nto the Telephon patteries.	ment y Modem. Use
				Latch End	Ac 1	tion Insert a fin holding the door towar	iger into the battery do d you. Set t	latch opening, press d or (on the bottom of th he door aside in a safe	own and pull bac ne Telephony Mod e place.	k on the latch dem). Pull the
			Battery Guide Bat Pull Bat	tery I Strap ttery Slot	2	Hold the ba on the Tele the left sho Note: Batte oriented co force. Line apply even	attery pack a phony Mode ows the prop eries will no prrectly. The up the slots pressure of	so that the guides on t em and slide the batter per orientation. t insert completely int battery should slide in in the battery bay with n both ends of the batt	the battery align y into the bay. Th o the Telephony nto the bay witho n the guides on th tery.	with the slots ne diagram on Modem if not but significant ne battery and
	100					WRONG	ì	WRONG	RIG	θΗΤ
Recei Slots	iver Hinge Tab			Har						





	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

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.







- A Battery: indicates status of the battery in the Telephony Modem
- B Telephone 2: indicates status of line 2
- **C** Telephone 1: indicates status of line 1
- **D** Link: indicates Ethernet or USB connectivity between the Telephony Modem and computer
- E On-Line: indicates internet data transmission status
- F US: indicates upstream connectivity
- G DS: indicates downstream connectivity
- H Power: indicates whether AC power is available to the unit





AВ

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Touchstone TM502 Telephony Modem User's Guide

Safety	Getting Started	Battery Installation	Installation	USI Drive	B Ethernet ers Configuration	Usage	Troubleshooting	Glossary
ТМ502	2G/H		Т	M502G/H	Rear Panel			
	G D B			A Tel 1 2-lin	/2 (TM502G only): conr e phone)	ector for the	first phone line (or b	oth lines of a
				Tel 1	(TM502H only): connec	ctor for the fir	st phone line	
				B Tel 2	: connector for the seco	ond phone line	2	
				C USB	connector: for use with	a computer l	JSB connection	
				D <u>Ethe</u> tion	met connector: for use	with a compu	ter or home network	LAN connec-
	3	C G		E Rese Use	t button: resets the Tele a pointed non-metallic	ephony Moder object to pre	m as if you power cyc ess this button.	cled the unit.

- **F** Cable: connector for the <u>coax cable</u>
- **G** Power: connector for the power cord



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Mou You c wall-r facing	an either mo mount applica g upward (ve	Telephony Mo unt the Telephony ations, you can mo rtical) or to the siz	odem Modem on a bunt the Telep e (horizontal)	wall or place it on a phony Modem with tl).	desktop. For he indicators
			Tool s For w rials	s and Materi vall-mounted before procee	ials installations, make eding:	e sure you ha	ve the following too	ls and mate-
			•	for mountii 1/4" (6mm	ng on drywall: Two) bit (not included)	0 1/4" (6mm))	drywall anchors an	d a drill with
			•	for mounti screws (inc	ng on plywood or : luded)	studs: two #	6 x 1.5″ (38.1 mm)	self tapping
			•	screwdrive use)	r (flat-blade or Phi	illips, depend	ling on what kind of	f screws you
			•	wall-mount Guide)	template (include	d with the Tel	ephony Modem Quicl	k Installation
			•	transparen wall)	t tape (for tempor	arily securin	g the mounting tem	plate to the
			Loca Alway	tion ys position th	e Telephony Moder	n:		
			•	within reac stretching a	h of an AC outlet. and without adding	The power co g extension co	rd must reach the o ords.	utlet without
			•	near a cabl	e outlet (to avoid l	ong cable rui	ns).	
			Note	: When n lephony may pro ture.	nounting the Teleph Modem so at least event the Telephon	nony Modem t one of the so y Modem fror	on drywall, try to pos crews are fastened to n pulling out of the w	sition the Te- o a stud. This vall in the fu-
				To prev tilation	ent overheating of holes on the sides	the Telephor of the unit.	ny Modem, do not bl	ock the ven-



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Inst	ructions				
			L.	Vall-mount	ing instructions			
1			1	Position the Teleph	ne mounting templa nony Modem and see	te on the su cure in place	rface where you inte with transparent tap	nd to mount e.
	Step 1		Step 2	Drill holes screws. At	through the templa fter drilling holes, re	ite in the spe move the te	ecified locations for t mplate from the surf	he mounting ace.
			3	If using di the wall le the wall. I	rywall anchors, set t eaving a gap of abo f not using anchors,	hem into the ut 1/8" (3 m just drive th	wall. Then, drive the m) between the screen	e screws into ew head and
	sten 3		Step 4	Orient the desired. S the screws contacts t	e Telephony Modem lip both mounting sl s, then slide the case he screw shaft.	with the indi ots (in the ba down until t	cator lights facing up ick of the Telephony I the narrow end of the	o or right, as 1odem) over keyhole slot
	otop o		5	Proceed to	o Connecting the Tel	ephony Mod	em.	

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>.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
т	1502A/B/C		Con	necting t	he Telephony N	1odem		
				WARNIN telephon er. Physi removed voltages to do so the Telep	G: Connecting the e wiring should or cal connections to and the wiring n . Cancellation of to may result in loss phony Modem.	Telephony I Ily be perfor the previou nust be che elephone se of service a	Modem to the hom med by a profession s telephone provio cked; there must rvice is not adequiond/or permanent	e's existing onal install- der must be not be any ate. Failure damage to
t	0 0	 G	G	. Connect of other end nections b	one end of the coax to the Telephony M by hand, then tighte	cable to the odem's Cable n an addition	cable outlet or spli connector (F). Tigh al 1/8 turn with a w	tter, and the iten the con- rench.
ТМ	502G/H			Note: For eliminate	 best performance, splitters between th 	use high-qua e cable jack a	ality coax cable and and the Telephony N	minimize or 1odem.
	⊙ ⊡ ⊥		2	Insert the phony Mo	e plug from the powe dem (G) and insert	er cord into t the power co	he Power connector rd into a convenient	on the Tele- : AC outlet.
				The Powe once (refe light does	r light on the front of er to the LED table o not turn on.	f the Telephor n page 44). S	ny Modem lights up, See <u>Troubleshooting</u>	then flashes if the Power
Ų	▲ <u>– – – – – – – – – – – – – – – – – – –</u>	G G G	3	After conr • <u>Makin</u> • <u>Makin</u>	necting the coax cab g Ethernet Connection g USB Connections (le and power, <u>ons</u> OR (all models ex	, proceed as needec cept TM502C)	1:

Note: Do not connect the same computer to both the Ethernet and USB ports.

Making Ethernet Connections

4 Connect one end of the Ethernet cable to the port on the back of the Telephony Modem labeled "Ethernet 10/100," (**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.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				Making USE	3 Connections			
				5 Connect other end	one end of the USB c I to the USB port on	able to the U the back of	SB port on the comp the Telephony Moden	uter, and the n (C).
				Your com drivers. S	puter should detect t See <u>Installing USB Dr</u>	he Telephon <u>ivers on You</u>	y Modem and begin ii <u>r PC</u> for driver installa	nstalling the ation details.
				Making Tele	ephone Connection	S		
				6 Connect of the Tel	one end of the telep ephony Modem (A o	hone cable t ⁻ B). Connec	o the telephone port t the other end to the	on the back e telephone.
				Note: If arate line "Tel 1/2".	you have a TM502G es on a single RJ-14 o	Telephony M cord, it must	odem and a phone w be plugged into the	vith two sep- port labeled



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			I	nstallin	g USB Driv	vers or	n Your PC	
			W ca	hen you plug t Ily detects the	he Telephony Moder hardware and begir	m into the PC is installing t	C's USB port, Windo he USB drivers.	ws automati-
			Tł Wi	nis procedure d se initiate actu	oes not explain how al service.	ı to provisior	n the Telephony Mod	lem or other-
			N	ote: The TI	M502C does not hav	e a USB port		
			R M	equirement ake sure you ha PC with: — CD-RC — at leas — one of (Wind — ARRIS USB <u>A/B (</u> Modem pa • (Windows • (for instal formation	S ave the following be OM drive st one free USB port f: Windows 98SE, W ows 95 and Window USB Driver CD Cable of appropriate ackage) 98SE systems only lations not using DH	fore attempt Vindows 200 s NT are not length (a ca): Windows 9 CP) IP addre	ing to install the US 00, Windows ME, or : supported) able is included in yc 98 installation CD ss, subnet, gateway	B drivers: Windows XP our Telephony , and DNS in-
			II Se	 Installation Installing Installing Installing Installing Installing Installing 	Instructions r your operating sys USB Drivers on Win USB Drivers on Win USB Drivers on Win USB Drivers on Win	tem to see t dows 98SE dows 2000 dows XP dows ME	he installation instru	uctions.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Inst Follow	alling USE these steps	B Drivers on W to install USB driv	indows 9 ers on Wind	8SE ows 98 Second Editio	on.
			Note	: Always problem CD, Wir	perform these stens. For example, if and ows may install t	ps in the or you plug in t he wrong dr	der shown to minim he USB cable before i iver.	ize possible inserting the
			1	Make sure not, connec <u>dem</u> .	the Telephony Moc ct the AC adapter a	lem is on (tl s described	ne Power light shou in <u>Connecting the Te</u>	ld be on). If <u>lephony Mo-</u>
			2	Insert the OROM ROM drive.	CD that came with	the Telepho	ny Modem package	into the CD-
			3	Plug the ap the other e	propriate end of th nd into the comput	ne USB cable er's USB por	e into the Telephony rt.	Modem and
				The followir a new USB	ng windows appear device:	in order, ind	dicating that the PC h	as detected
				Found New Hardward ARRIS RNI Please Wall	e DIS Adapler			
				Add New Hardware	Wizard This wizard searches for new drive USB Composite Device A device driver is a software progr hardware device work.	ers for: am that makes a		
			4	Click Next.	KBack Nex	Cancel		



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

5 Wait for the system to start the Add New Hardware Wizard and display the following window (there may be a short delay):



6 Select "Search for the best driver" and click the **Next** button. *The wizard displays a list of search options:*

	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
	Eloppy disk drives
	CD-ROM drive
	Microsoft Windows Llodate
**	
	Specify a jocation.
\diamond	-
	DIDMPE:



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary

7 Make sure the **CD-ROM** option is selected (checked), then click the **Next** button.

The wizard searches the specified locations, then displays the location and name of the appropriate driver.



Note: If the wizard can not find the CD drive, and the CD is inserted properly, follow these steps:

- On the Windows desktop, open "My Computer" and note the letter of the Compact Disc (or CD-ROM) drive (on most systems, the CD drive is at D: or E:)
- **b.** Return to the Found New Hardware Wizard, and click the **Back** button. *The wizard displays the previous screen, shown in step 5.*
- **c.** Select "Specify a Location," then choose the drive letter that corresponds to the CD drive from the menu.
- **d.** Click the Next button.

You should now see the screen shown above. If not, contact your cable company for help.



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

8 If you see the following window, insert your Windows 98 CD when prompted and click OK.



Note: After inserting the CD, Windows 98 may revert to searching for networking DLL files on the C: drive, then prompt you for the location of those files. If you see such a prompt, enter **D:\win98** (replace **D:** with the drive letter of your CD-ROM drive, if necessary) to continue the installation.

9 Click the **Next** button.

The wizard installs the drivers, then displays a window indicating that the installation is complete.



- 10 Remove your Windows 98 CD if you had to insert it.
- **11** Restart your computer when prompted.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
Surety	Startou		Inst Follow	alling US	B Drivers on W s to install USB driv	/indows 2	2 000 ows 2000.	choosan y
			1	Make sure not, conne dem.	the Telephony Moder the AC adapter a	dem is on (t as described	he Power light shou in <u>Connecting the Te</u>	ld be on). If <u>lephony Mo-</u>
			2	Insert the ROM drive	CD that came with	the Telepho	ony Modem package	into the CD-
			3	Plug the a the other e	ppropriate end of t and into the compute	he USB cabl ter's USB po	e into the Telephony rt.	Modem and
				The follow USB device	ing window appears e:	s, indicating	that the PC has deter	cted a new
				Found New Hardwa	ire NDIS Adapte:			
			4	Wait for th window (th	e system to start th here may be a shor	ne installation t delay):	n wizard and display	the following
				Found New Hardwa	Are Wizard Welcome to the Hardware Wizard This wizard helps you install hardware device. To continue, click Next.	Found New d I a device driver for a	Dancel	



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				5 Click the	Next button.			

The wizard prompts you for the location of the drivers.



Note: The dialog indicates that the wizard is looking for the ARRIS RNDIS (Remote Network Device Interface Specification) driver for the Telephony Modem.



Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				6	Select "Se the second The wizard Found New Hardw Locate Drive Where do Search for Search for A The wizard The wizard The wizard The wizard The wizard The wizard The wizard The wizard Search for Search for Search for To start the insert the th Defonal se Spe Tra start the insert the th	earch for a suitable of d option to choose a d displays a list of se ware Wizard r Files you want Windows to search for driver files? driver files for the following hardware device: RRIS RNDIS Adapter search locations: hardware devices for suitable drivers in its driver delt ollowing optional search locations that you a search locations: pay disk or ED before clicking Next.	driver for my specific driv earch option	y device", unless you yer, then click the Ne s.	want to use



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				 Make survivulton. The wizar name of the vizar name of the vizar of the	e the CD-ROM option of searches the spect the appropriate drive ware Wizard Search Results d has finished searching for driver files for your d found a driver for this device. To install the d d ARRIS RINDIS Adapter found a driver for this device. To install the d d Artmusb.int & attruueb.int & the wizard can not file w these steps:	on is selecte	d (checked), then cl	ick the Next <i>location and</i>

- On the Windows desktop, open "My Computer" and note the letter of the Compact Disc (or CD-ROM) drive (on most systems, the CD drive is at D: or E:)
- **b.** Return to the Found New Hardware Wizard, and click the **Back** button.

The wizard displays the previous screen, shown in step 6.

- **c.** Select "Specify a Location," then choose the drive letter that corresponds to the CD drive from the menu.
- **d.** Click the Next button.

You should now see the screen shown above. If not, contact your cable company for help.



Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				8	Click the	Next button.			
					The wizar installatio	d installs the drivers n is complete.	s, then displa	nys a window indicati	ng that the
					Found New Hard	ware Wizard			



9 Click the **Finish** button.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Inst Follov	alling US v these step:	B Drivers on W s to install USB driv	indows X ers on Wind	(P ows XP.	
			1	Make sure not, conne dem.	the Telephony Moo oct the AC adapter a	dem is on (tl as described	ne Power light shou in <u>Connecting the Te</u>	Ild be on). If elephony Mo-
			2	Insert the ROM drive	CD that came with	the Telepho	ny Modem package	into the CD-
			3	Plug the a the other e	ppropriate end of t end into the compu	he USB cabl ter's USB po	e into the Telephony rt.	Modem and
				The follow USB device	ing window appears e:	s, indicating	that the PC has dete	cted a new
				Found New Hardwa	Welcome to the Hardware Wizard This wizard helps you install ARRIS RNDIS Adapter What do you want the wizar If your hardware or floppy disk, in What do you want the wizar Install the software as Install from a list or sp Click Next to continue.	Found New I software for: came with an installation set it now. d to do? atomatically (Recommended ecific location (Advanced)	on CD) Cancel	



Safety	Getting Started	Battery Installation	Installation	USB Drive	Et rs Cont	thernet figuration	Usage	Troubleshooting	Glossary
				4 Click The v windo	the Next bu vizard begin ow indicating w Hardware Wizard	utton. s searching fo g that the ins Completing the F	or and instal tallation is c	ling the drivers, the omplete.	n displays a
						The wizard has finished instal ARRIS TOUCHST(The hardware you installed w your computer.	ling the software for: DNE DEVICE ill not work until you restart		
					All the second second	Click Finish to close the wizar	d.	ancel	

5 Click the **Finish** button.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Inst Follow	alling US	B Drivers on W s to install USB driv	findows M ers on Winde	1E ows Millennium Editio	on.
			1	Make sure not, conne <u>dem</u> .	the Telephony Mod ect the AC adapter a	dem is on (tl as described	he Power light shou in <u>Connecting the Te</u>	uld be on). If elephony Mo-
			2	Insert the ROM drive	CD that came with .	the Telepho	ny Modem package	into the CD-
			3	Plug the a the other e	ppropriate end of t and into the comput	he USB cabl ter's USB poi	e into the Telephony rt.	Modem and
				The follow a new USE	ing window appears } device:	, indicating t	hat the PC is installin	ng drivers for
				New Hardware Fo ARRIS TI Windows is installing	und DUCHSTONE DEVICE) the software for your new hardware.			
			4	When the company i	window disappears f you see an error r	, installation nessage of a	is complete. Contac ny kind.	ct your cable



Safety	Getting Started	Battery Installation	Installation	USB Drivers Co	Ethernet onfiguration	Usage	Troubleshooting	Glossary
			Rem If you ARRIS does r first re stallat 1 2	oving USB I connect the Te driver installat not properly sup emove the comp tion CD. Follow t Insert the ARR Navigate to th	Drivers elephony Modem U tion CD, Windows of port the Telephony posite driver using these steps to use RIS driver installations e CD drive:	SB to your may install Modem. To the Remove the Remove on CD.	r computer before a "composite" USI o correct this proble e utility on the ARR e utility:	inserting the 3 driver that m, you must IS driver in-
				TM502 Rev 1_((D:) Select an item to view its description. Capacity: 23.8 MB Used: 23.8 MB Free: 0 bytes 17 object(s)	D Attmusb	Usb8023m.sys Usb8023w.sys	puter	

3 Start the Remove utility by double-clicking it in the window.

The Remove utility prompts you to click OK to remove the USB driver, or Cancel to quit.



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

4 Click the OK button.

The Remove utility displays the following message:



5 Leave the CD in the drive, reconnect the Telephony Modem, and install the USB driver as appropriate for your operating system.



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

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.

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



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			TCP Follow syster	/IP Confi these step n.	iguration for W os to configure the T	Tindows 9 TCP/IP settin	8SE gs on a Windows 98	SE operating
			Note:	Dialog shown	boxes shown on y in this procedure.	our compute	er may differ slightly	/ from those
			1	From the	computer, select St	art > Settin	gs > Control Panel	l.
			2	Double cli	ck on the Network	icon in the C	Control Panel.	
					Secontrol Panel Elle Edit View Gio Favorites Help Back Farward Address @ Control Panel Control Panel Network Configures network hardware and software, Microsoft Home Technical Support Wouse Powert	ty Add New Add/Remove Hardware Add/Remove Hardware Add/Remove Forts Controllers Java Plugin Keyboard Multimedia Multimedia	Delete Properties Views Delete Properties Views Date/Time Display Date/Time Display MicroModem Braphics Mail and Fax Modems DBC Data Sources (32bh) Sources (32bh)	

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

23

Telephony

june)

System

(B)

Users Configures network hardware and 🛄 My Computer -



1 object(s) selected

	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	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**.

TCP/IP Properties		? ×
Bindings	Advanced	NetBIOS
DNS Configuration	Gateway WINS Confi	guration IP Address
An IP address can If your network doe your network admir the space below.	be automatically assigne is not automatically assig istrator for an address, a	d to this computer. n IP addresses, ask nd then type it in
	address automatically	
C Specify an IP	address:	
JP Address:		
S <u>u</u> bnet Masl	« · ·	
	OK	Cancel



Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				6	Click OK t tion windo	to accept the new server.	ettings, and	OK again to close th	e Configura-
				7	You may h a new IP a	have to restart your of address from the ne	computer in o twork.	order for your compu	iter to obtain

-end-



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			TCP, Follow syster	/IP Confi v these step: n.	guration for W s to configure the T	' indows 2 [•] CP/IP settin	gs on a Windows 20	00 operating
			Note:	: Dialog shown	boxes shown on y in this procedure.	our compute	er may differ slightly	from those
			1	From the c nections 3	omputer, select Sta > Local Area Coni	rt > Setting rection.	js > Network and D	ial-up Con-
			2	In the Loca ing on it or	al Area Connections ne time, then click	Properties w	vindow, highlight TCP es .	/IP by click-
				Note: If yo select the cal Area Co	our computer has n appropriate Etherne onnection Propertie	nore than one et card in the s window.	e Ethernet card, you e Connect using: ar	may have to ea of the Lo-
					Local Area Connection 2 General Connect using: Components checked an Components checked an File and Printer S Transmission Control File wide area network pro across diverse intercor	Properties hernet 100 + Modem 56 (Et s used by this connection: it Networks work Enhancer haring for Microsoft Network (TCP/IP) Uninstall Intocol/Internet Protocol. T social that provides commun socied networks. when connected	? × thermet Interf Configure ks Properties he default ication	



OK

Cancel

	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

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

Local #	Area Connection 2 Properties	<u>?×</u>	
Gene	aral		
C II	nternet Protocol (TCP/IP) Prop	perties	? ×
	General		
c [You can get IP settings assigned this capability. Otherwise, you ner the appropriate IP settings.	automatically if your network supports ed to ask your network administrator for	,
	Obtain an IP address autom	natically	
	C Use the following IP addres	s.	
L.	IP address:	4 44 44	
-	Subnet mask:		
ſ	Default gateway:		
	 Obtain DNS server address 	automatically	
Г	C Use the following DNS serv	ver addresses:	
	Preferred DNS server.		
	Alternate DNS server:		
		Advanced.	
		OK Can	cel

- **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-



TCP Follow tem.	/IP Config w these steps	juration for W	/indows M	F	
		to configure the T	CP/IP settings	s on a Windows ME o	perating sys-
Note	: Dialog b shown i	poxes shown on y n this procedure.	our compute	er may differ slightly	from those
1	From the co	omputer, select St	art > Settin	gs > Control Pane	
2	Double click	< on the Network	icon in the C	Control Panel.	
	Eie Fie Agdre Con soft	Initial Support Look Help Sade Image: Control Panel Search Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control Panel Image: Control	Image: Constraint of the second se	Image: Constraint of the constraint	
	Note	tem. Note: Dialog I shown i 1 From the co 2 Double click	 tem. Note: Dialog boxes shown on y shown in this procedure. 1 From the computer, select St 2 Double click on the Network 	 tem. Note: Dialog boxes shown on your compute shown in this procedure. 1 From the computer, select Start > Settine. 2 Double click on the Network icon in the Computer is computer in the Computer in the Computer in the Computer is computer in the Computer in the Computer in the Computer in the Computer is computer in the Comp	 tem. Note: Dialog boxes shown on your computer may differ slightly shown in this procedure. 1 From the computer, select Start > Settings > Control Panel 2 Double click on the Network icon in the Control Panel.

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

	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	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 installed:	
RARRIS TOUCHSTONE DEVICE	
Bial-Up Adapter	
TCP/IP -> 3Com 3C918 Integrated Fast Ethernet Controlle	
TCP/IP -> ARRIS TOUCHSTONE DEVICE	
TCP/IP -> Dial-Up Adapter	
Add Remove Properties	
Primary Network Logon:	
Client for Microsoft Networks	
Eile and Print Sharing	
Description	
TCP/IP is the protocol you use to connect to the Internet and	
wide-area networks.	
OK Court	

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

TCP/IP Properties		? ×						
Bindings	Advanced	NetBIOS						
DNS Configuration	Gateway WINS Confi	guration IP Address						
An IP address can If your network doe your network admir the space below.	be automatically assigne is not automatically assig nistrator for an address, a	d to this computer. n IP addresses, ask nd then type it in						
	address automatically address:							
JP Address:								
Sybnet Masl	k:							
☑ Detect connection to network media								
	0K	Cancel						



Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				6	Click OK t tion windo	to accept the new server.	ettings, and	OK again to close th	e Configura-
				7	You may h a new IP a	have to restart your of address from the ne	computer in o twork.	order for your compu	iter to obtain

-end-



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary		
			TCP Follow tem.	IP Conf these step	iguration for W s to configure the TC	indows X CP/IP setting	P s on a Windows XP op	perating sys-		
			Note: Dialog boxes shown on your computer may differ slightly from the shown in this procedure.							
			1	From the click on th	computer, select St a ne Network Conne	art > Settir ctions icon i	ngs > Control Pane n the Control Panel.	I and double		
			2	Click the Network A	Configuration tab Adapters.	in the Netw	ork window to displa	ay the list of		
					-4- Local Area Connection 2 Sta General Support	tus ?X				



Connection

Status:

Duration:

Speed:

Activity

Bytes:

Properties Disable

Connected

00:03:21

12.0 Mbps

Received

43,986

Close

Sent — 🛃

12,198

	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

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

	Addienac		kuvanceu į		
Connec	et using:				
BB /	ARRIS TOU	JCHSTO	INE DEVICE		
-				ſ	Configure
This or	nnection u	eas tha f	ollowing items		<u>c</u> oninguie
	l courtes	Marriel	a Maturalia		
	Client for	MICrosol Drinter CL	rt Networks	ocoft blot	mates
	Oos Pac	ket Sobr	adular adular	USUR MEL	WUIKS
	Internet F	Protocol	TCP/IP1		
	Antonionica				
	matall		Uninstall		Properties
	Dstait				
Desc	ription				
Desc Trar	ription ismission C	ontrol Pro	otocol/Interne	t Protoco	l. The default
Desc Trar wide acro	ription ismission C area netw ss diverse	ontrol Pro ork proto	otocol/Interne ocol that provi	t Protoco des comm ks.	l. The default nunication
Desc Trar wide acro	ription Ismission C I area netw ss diverse	ontrol Pro ork proto interconr	otocol/Interne ocol that provi nected networ	t Protoco des comm ks.	I. The default nunication
Desc Trar wide acro	ription ismission C area netw ss diverse <u>w</u> icon in r	ontrol Pro ork proto interconr	otocol/Interne ocol that provi nected networ n area when o	t Protoco des comm ks. connecter	l. The default nunication

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

Alternate Conliguration	
ou can get IP settings assigned is capability. Otherwise, you nee e appropriate IP settings.	automatically if your network supports d to ask your network administrator for
⊙ <u>O</u> btain an IP address automa	atically
○ Use the following IP address	1
IP address:	
Sybriet mask:	
Default gateway:	
Obtain DNS server address	automatically
OUse the following DNS serve	er addresses:
Preferred DNS server.	
Alternate DNS server	
	Advanced



Safety	Getting Started	Battery Installation	Installation		USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
				5	Click OK to accept the new settings, and OK again to close the C tion window.				
				6	You may have to restart your computer in order for your a new IP address from the network.				ter to obtain

-end-



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	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 TM502A/B/C Models
- Indicator Lights for the TM502G/H Models
- Using the Reset Button

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.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Etherı Configur	net ation	Usage	Troubleshooti	ng Glossary
Power O Power O US O Other O US O Other O		1 1 1 1 1 1 1 1	Indicato The Touchs Wiring Pro If the Telep dicates a pro (touching), more than call a wiring Patterns: The following	r Lights tone Telep oblems whony Mod roblem wir or there 10 second g technicia Normal C ng table s	s for the T phony Moder em begins fit th the teleph may be under s, disconnect an for assistan Operation hows light pa	TM502A/I m has seven lashing all it ione wiring - esired voltage t the telepho ance.	B/C Mode LEDs to as: s lights for r – the red ar ge on the lin one lines fro	els sist in troubles more than 10 s nd green wires nes. If this pat om the Telepho peration.	hooting. seconds, this in- may be shorted tern persists for ny Modem, then
			Mode	Power	DS	US	Online	Link	Tel. 1/Tel. 2
Telephone 0			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	On = Internet Available Off = Internet not available	On = Computer Connected Off = Computer not connected Flash = Computer Activity	On = On-hook Flash = Off- hook Off = disabled
			No AC Power	Off	Off	Off	Off	Off	Off
			Firmware Upgrade	On	Flash	Flash	On	(normal operation)	(normal operation)



Safety	Getting Started	Battery Installation	Installa	ntion	USB Drivers	Ethern Configura	et ation	Usage Tr	oubleshooting	Glossary
Postel 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Indicato The Touchs not all mod Wiring Pro If the Telep lem with th be undesire telephone I Indicator The followin	r Lights tone Telep els have a oblems hony Mode e telephone d voltage ines from Lights: N ng table s	em begins fl ne wiring — on the lines the Telepho ormal Ope	TM502G/ m has eight ht. ashing all its the red and s. If this patt ny Modem, f ration atterns durin	H Model indicator li lights for r green wire ern persist then call a ng normal	s ghts to assist i nore than 10 se as may be short s for more thar wiring technici operation.	n troubleshootin econds, this indic ted (touching), c n 10 seconds, dis an for assistanc	ig. Note that cates a prob- or there may sconnect the e.	
			Mode	Power	DS	US	Online	Link	Tel. 1/Tel. 2	Battery
Telephone 2 Telephone 2 Telephone 2			AC Power Good	On	On = Connected to the Internet Flash = Not connected to the Internet	On = Connected to the Internet Flash = Not connected to the Internet	On = Internet Available Off = Internet not available	On = Computer Connected Off = Computer not connected Flash = Computer Activity	On = On-hook Flash = Off-hook Off = disabled	On = Battery good or low Off = Battery missing or MTA not registered Flash = Battery bad
			No AC Power Battery	Flash	Off	Off	Off	Off	On = On-hook Flash = Off-hook	Off = Battery power Flash =

Installed

No AC Power

No Battery

Firmware Upgrade

Off

On

Off

Flash

Off

Flash

Off

On

Battery bad or low

Off

(normal operation)

Off = disabled

Off

(normal operation)

Off

(normal operation)

	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

Indicator Lights: Startup Sequence

The following table shows the Telephony Modem light patterns during each phase of the startup sequence. There are two phases of startup; the Telephony phase and the cable modem phase. Both are outlined below.

Power, DS, US,	Link	Telep	hone	Batterv*	Description
Online		1	2	-	•
Off	Off	Off	Off	Off	No power to Cable Modem
Flash	Flash	Flash	Flash	Flash	Power-on Self Test
	S	See "Cable	e Modem	Start Up Se	quence" Below
On	On	Flash	Off	Off	Retrieving telephone network information
On	On	Off	Flash	Off	Retrieving telephone line information
On	On	Flash	Flash	Off	Activating telephone service
	* = Batter	y LEDs on	Norn Iy apply	nal Operatior to those mo	า dels with battery backup

Cable Modem Start Up Sequence

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



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
TM502A/	B/C	 		Using the Re Use the Reset by as if you power cy are having proble Use a pointed no r the location of th The Reset buttor	set Button utton, on the back of ycled the unit. You n ems connecting to th n-metallic object to e Reset button. n is recessed to prev	of the Teleph nay need to r ne Internet. I o press this bu vent accident	ony Modem, to reset eset the Telephony N Jsing this button will utton. The photo to tl al resets.	the modem lodem if you be rare. ne left shows
TM502G/H	∙ ⊒+⊡-♥ =====							



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Tr	oubles	hooting			
			Pro	oblems and	d Solutions			
			The	e Telephony Check all ends?	modem is plugged power connections.	d in, but the Is the powe	e Power light is off . er cord plugged in fi	rmly at both
				If you plu switched o	gged the power co on.	rd into a pov	wer strip, make sure	e the strip is
				Avoid usin	g an outlet controll	ed by a wall	switch, if possible.	
				Finally, ch	eck the fuse or circ	uit breaker p	anel.	
			I'm	It may tal power up Always lea to the cab	on the Internet. ke over 30 minutes your Telephony Moo ave your Telephony le system.	to establish lem, especia Modem plugo	a connection the fi lly when many peopl ged into AC power ar	rst time you e are online. nd connected
				Check the	front panel lights:			
				 The The If t corr Check you Check you cable show cause a br you have outlet, rer the outlet. Proceed to	e Power and Onlin e Link light should the Power light blin mpany for assistance or cable connections uld not be pinched reak or short in the one or more splitters nove the splitters a	e lights shou be either on hks for more e. Connectors , kinked, or cable (you m ers between and connect f SB solutions (Id be on. or blinking. than 30 minutes, ca should be finger-tig bent sharply—any o hay have to replace t the Telephony Mode the Telephony Moder	Il your cable ht. The <u>coax</u> of these can the cable). If m and CATV m directly to ary.



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			I'm	not getting If you are	on the Internet. (using a hub, is the	(Ethernet) hub turned	on?	
				Are you u direct con hub or ho	sing the right type nection to a comput me router.	of <u>Ethernet</u> er; use a cro	<u>cable</u> ? Use the supp oss-over cable for co	lied cable for nnection to a
				Press the	Reset button on th	e back of the	e Telephony Modem.	
			I'm	not getting Did you <u>lo</u>	on the Internet.	(USB)		
				If you are	using a powered US	SB <u>hub</u> , is th	e hub turned on?	
				Check the	USB cable connecti	ons. Disconr	nect and reconnect th	ne USB cable.
				Restart th	e computer.			
				Press the	Reset button on th	e back of the	e Telephony Modem.	
			I'm	not getting In some c ARRIS Tel	on the Internet. (ases, Windows may ephony modem driv	(USB, Wind install a "cor er. To correc	ows 98) mposite" USB driver i ct this:	nstead of the
				 Discor Moder 	nect the USB cable	e between t	the computer and th	ie Telephony
				Use the im	ne ARRIS Remove u properly-installed d	tility (see <u>R</u> river.	emoving USB Drivers	<u>s</u>) to remove
				Reboo	t the computer.			
				Reinst	all the drivers as de	scribed in <u>Ir</u>	stalling USB Drivers	on Your PC.
			I ca	an get on the If the Web ble servic minutes a nection sp	e Internet, but even o site you are visiting ing all the requests. and try again. Usage beed.	erything is g is very pop If other site e during pea	slow. ular, that site may be s download quickly, v k hours may also af	having trou- vait for a few fect the con-
				If your Tel directly o down you	ephony Modem is co ⁻ through a firewall, r connection.	onnected to a other comr	a LAN (Local Area Net nunications on the L	work), either AN may slow



Safety	Getting Started	Battery Installation	Installation	USB Driver	Ethernet s Configuration	Usage	Troubleshooting	Glossary
			I hav can <u>c</u>	ve two jet on t Check puter t	computers connected he Internet. your cable company's te to connect directly to th	I to the Tele erms of servic e Telephony N	e: they may allow o Modem.	out only one
			I dor	n't have In ord teleph configu identif	e dial tone when I pick ler for telephone service one service must have b ured on your Telephony ying the source of the p	k up my pho e to be funct peen purchase Modem. The roblem.	ne, why? ional on the Teleph ed from the service e following steps sl	nony Modem, provider and hould help in
			•	Is the	Power LED lit?			
				•	If not, check to make the outlet has power.	sure the Tele	phony Modem is pl	ugged in and
				•	If the LED is lit, go to t	the next step.	1	
			•	Is the	Online LED lit?			
				•	If not, check the coax wall. Ensure they are contact have dial tone, contact	connection a onnected and your service	t the Telephony Mc tight. If they are an provider.	odem and the nd you do not
				•	If the Online LED is lit,	go to the nex	xt step.	
			•	Is the	Telephone (Telephone 1	or Telephone	ອ 2) LED lit?	
				•	If not, phone service h your service provider.	as not been p	provisioned on that	line. Contact
				•	If it is blinking, there i Find that phone and ha	is a phone off ang it up.	f hook somewhere	in the house.
				•	If it is lit, go to the nex	<t step<="" td=""><th></th><th></th></t>		
			•	Is the	Phone plugged directly	into the Telep	ohony Modem?	
				•	Make sure the phone is lephony Modem labeled for line 1, and "Tel 2" f	s plugged into d "Tel 1/2" (TN For line 2.	o the port on the ba M502G) or "Tel 1" (⁻	ack of the Te- TM502A/B/H)
				•	If so, try a different pl phone.	hone. Make s	ure the new phone	is a working
				•	If a known good phone a different phone cable tone, call your service	is used and y . If a new pho provider.	you still don't have one and cable do no	dial tone, try ot restore dial
	. 🔺							

Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary

• Is the Telephony Modem plugged into a wall outlet?

• If so, unplug the RJ-11 connector at the back of the Telephony Port and plug in a known working phone. If you now have dial tone, the problem is with the house wiring. Contact your MSO 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	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Tro Follo	ubleshoo ow these step a USB connec	ting USB Proble os if the computer de ction.	ems oes not auto	-detect the Telephon	ny Modem us-
			Befo	ore you start,	make sure that:			
				 You have in <u>Installir</u> 	properly installed and and Connecting N	nd configured <u>(our Telepho</u>	d the Telephony Mod <u>ny Modem</u> .	lem as shown
				 You have <u>Your PC</u>. 	installed the USB of	lrivers as sh	own in <u>Installing US</u>	<u>SB Drivers on</u>
				 The cable you're not 	company has set sure.	up your acc	ount. Call your cabl	e company if
			Inst	tructions				
			:	 Be sure th Windows ported). 	at your computer is ME, or Windows XP	running eith (Windows 9	er Windows 98SE, W 95 and Windows NT	indows 2000, are not sup-
			:	2 Be sure th	ne Telephony Moden	n has power.	The Power light sh	ould be on.
			:	3 Push the I pen tip or	Reset button on the other sharp non-m	e back panel etallic object	of the Telephony Mo	odem, using a
				4 Disconnec	t the USB cable from	m the compu	iter and reconnect it	
			!	5 Restart th	e computer.			
				6 Do the fol a. Discon	lowing to uninstall a nect the USB cable	and the reins to the Telep	tall your USB drivers hony Modem.	s:
				 b. Insert c. Start t tions c 	the Telephony Mode he Remove utility o carefully.	em CD-ROM n your CD-R	Into you computer. OM. Follow the on-so	creen instruc-
				d. Recon	nect the USB cable.			
				e. Re-ins	tall the USB driver a	as shown in <u>I</u>	nstalling USB Driver	<u>s on Your PC</u> .
			:	7 Replace th	ne USB cable.			
			:	B Call your (cable company for h	ielp.		

Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Glo	ssary				
			The fo	ollowing is a	list of common cab	le and netwo	rking terms.	
			А/В (Cable A USB cabl notched sq	e that has a narrow uare connector (B)	v rectangular on the other	connector on one ei end.	nd (A) and a
			Amp	-hour (Ah) A measure supply one	of battery capacity Ampere of current	. For example for one hour	e, a 1.0Ah battery ca	an nominally
			Cate	gory 5 (Cat A high-qua tions. When	5) ality type of cable, n purchasing Etherr	used for Fas net cables, al	st Ethernet (100Bas ways look for Catego	eT) connec- ory 5 cable.
			Coax	ial cable (c A thin wire cable TV sy discount st	oax) ² , used to connect /stem. You can buy ores.	your televisic coax from a	on and Telephony M ny electronics retaile	odem to the er and many
			СРЕ	Customer I the telepho	Premise Equipment	. This is the ly a compute	equipment that is p r, hub, or router.	lugged in to
			Cross	s-over An Etherne together. A more ports	t cable used to con lso, some Ethernet (which eliminates)	nect two hub hubs may ha the need for	is (or a hub and a ca ave built-in cross-ov a cross-over cable).	ıble modem) er on one or
			DHCi	Dynamic H address ar device con figure your	lost Configuration F Id location of serv necting to the netw computer's networ	Protocol. An I ices (such a rork. DHCP al rking software	P protocol used to p s DNS and TFTP) r llows the cable comp e for you.	rovide an IP needed by a pany to con-
			DNS	Domain Na name (sucl	ame Service (Serve a as www.example.	er). An IP se com) with an	ervice that associate I IP address.	es a domain



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Dowr	istream In an HFC Some older	network, the dire cable documentation	ction from t ion may refe	he head-end to the r to this as the forwa	e subscriber. ard path.
			DOCS	Data Over o dards used	Cable System Inter for data communic	face Specific ations equip	ation. The interoper ment on an HFC net	ability stan- work.
			ЕМТА	Embedded with a cable	Multimedia Termin e modem.	al Adapter. A	n MTA device that i	s integrated
			Ether	r net A standard Network (L/	method of connect AN).	ing two or m	ore computers into	a Local Area
			Eurol	DOCSIS The Europe	an version of DOCS	SIS.		
			Event	t An informat	tional message use	d for monito	ring network status.	
			F-con	The type of F-connector connecting	connector used or , slip-on and screv your Telephony Mo	i coax cable. v-on. Use co dem.	There are two comn ax with screw-on co	non types of nnectors for
			Gatev	way The device, other IP sul	usually a router, t onets.	hat connects	devices on a given	IP subnet to
			Head	end The "centra data equipr several "rer	l office" in an HFC i nent. In larger cab note" headends to	network. The le networks, provide distr	headend houses bo a "master" headend ibuted services.	th video and l often feeds
			НТТР	HyperText 1	Fransfer Protocol.			



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Hub	A box with common po add periphe	several Ethernet on bint of contact for a brals without installi	r USB conn Il connected ing a USB ca	ectors. Ethernet hul devices; USB hubs ard in your computer	bs provide a allow you to
			IP ad	dress A number a tify your co	ssigned to your cor mputer to other sys	nputer by yo stems on the	our cable company, ι e Internet.	used to iden-
			ISDN	Integrated vides comm	Services Digital Net nunication speeds a	work. A dig bout twice a	ital telephony standa Is fast as standard d	ard that pro- ialup.
			LAN	Local Area (such as a l	Network. A networ building) to commu	k that allow nicate with o	s computers in a sin one another.	ngle location
			LED	Light Emitti is passed th	ng Diode. A semi-c hrough it.	onductor dic	ode that emits light v	when current
			MAC a	address A number t cable comp access to tl tom of your	hat uniquely identif any uses your Telo he Internet. The M, ⁻ Telephony Modem	ies any devi ephony Mod AC address	ce connected to a ne lem's MAC address is printed on a label	etwork. Your to authorize on the bot-
			Proto	col A set of rul network en	es and formats tha tities at a given lay	t determines er.	s the communicatior	ı behavior of
			Proxy	A device or site) and a burden fror proxy that those pages in faster pa	program that stan client (your brows n the server. For ex keeps copies of po s instead of fetchin ge loading and less	ds in betwe er), providir ample, your opular web g them dire network co	en a server (for exa ng a way to relieve cable company may pages; the proxy ca ctly from the web si ngestion.	mple, a web some of the have a web an send you ite, resulting



Safety	Getting Started	Battery Installation	Installation	USB Drivers	Ethernet Configuration	Usage	Troubleshooting	Glossary
			RF	Abbreviatio cable" and	n for Radio Frequ the connectors as	ency. Some `RF connecto	literature refers to ors."	coax as "RF
			RJ-11	A standard connecting	4-pin modular cor telephones.	inector, com	monly used in North	America for
			RJ-45	A standard RJ-45 conn	6-pin modular con ector looks like a v	nector, comn vide RJ-11 (t	nonly used on Etherr elephone) connector	net cable. An :
			Splitt	er A small boy may need a that you w from any el	k with three cable a splitter if you hav ant to use for you ectronics retailer a	connectors: ve a TV alrea ir Telephony nd most disc	one input and two dy connected to the Modem. You can b count stores.	outputs. You cable outlet uy a splitter
			Switc	hed outlet A power ou intended fo into a switc	tlet that may be to or lamps. Avoid pl hed outlet to avoic	urned on and ugging your I disruptions	d off using a wall sw computer or Teleph	ritch. Usually nony Modem
			TCP/I	IP Transmissic facilitate co	n Control Protoco mmunications acro	ol/Internet P oss one or m	Protocol. The protocorrected netwo	cols used to orks.
			TDMA	Time Division modems for	on Multiple Access r sending upstrean	. A method u n data with n	used by DOCSIS-con ninimal interference.	npliant cable
			Upstr	eam The path fro mentation r	om a subscriber de may refer to this as	evice to the h s the return	neadend. Some older path or reverse path	r cable docu-
			USB	(Universal s sories, suc (such as ca	Serial Bus) An inte h as keyboards, r ble modems) to a	rface used fo nice, printer single compu	or connecting a varie s, and communicat Iter.	ety of acces- ions devices



	Getting	Battery		USB	Ethernet			
Safety	Started	Installation	Installation	Drivers	Configuration	Usage	Troubleshooting	Glossary

WHQL

Windows Hardware Qualification Labs. A division of Microsoft that certifies hardware as being compatible with Windows operating systems.





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Release 5 Standard 3.0 August 2006