

- **A WPS** button: begins associating the Telephony Gateway with a wireless device.
- **B Reset** button: resets the Telephony Gateway as if you power cycled the unit. Use a pointed non-metallic object to press this button.
- C USB: USB host connector future support for external USB devices
- **D Telephone 1/2**: connector for the first phone line (or both lines of a 2-line phone).
- **E Telephone 2**: connector for the second phone line.
- F Ethernet (1 4): connectors for use with a computer LAN port.
- **G Cable**: connector for the coaxial cable.
- **H Power**: connector for the power cord.



Safety	Getting Started	Battery Installation	Installation	Ethernet n Configuration	Usage	Troubleshooting	Glossary
			Sele	cting an Instal	lation Lo	cation	
			There a Telepho	are a number of factors ony Gateway:	s to consider v	when choosing a locati	on to install your
			•	Is an AC outlet availab switched and should be sion cords are not requ	ole nearby? Fo e close enoug uired.	or best results, the out h to the Telephony Gat	let should not be way that exten-
			•	Is a cable jack availab ters between the jack a (reduces) the signal av splitters can slow down phone service.	le? For best p and cable drop ailable to the n the Interne	performance, keep the to a minimum. Each s Telephony Gateway. A t connection and even	number of split- plitter attenuates large number of affect your tele-
			•	Can you easily run can the phones?	bles between	the Telephony Gatew	ay's location and
			•	If you are connecting obles between the Telep	devices to the hony Gatewa	e Ethernet ports, can y iy's location and those	ou easily run ca- devices?
			•	If you want to mount provide a solid surface ing the Telephony Gate at least one of the scre phony Gateway from p	the Telephon for secure att eway on dryw ws are fasten fulling out of t	y Gateway on a wall, o achment? For best resuvall, position the Telepled to a stud. This may the wall in the future.	does the location ults when mount- hony Gateway so prevent the Tele-
			•	If you want to install the space on either side to overheating.	he Telephony keep the ver	Gateway on a desktop nts clear? Blocking the	, is there enough vents may cause
			•	How close are your wir nection range is typica can affect connection r	reless devices ally 100-200 range, as desc	? The Telephony Gatev feet (30m-65m). A n cribed below.	vay wireless con- umber of factors

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### **Factors Affecting Wireless Range**

A number of factors can affect the usable range for wireless connections.

Increases range:	<ul> <li>Raising the unit above the devices (for example, in- stalling the Telephony Gateway in the upper floor of a multi-story dwelling)</li> </ul>
	Adding wireless hubs in a bridge (WDS) network
Decreases range:	<ul> <li>Lowering the unit below the devices (for example, in- stalling the Telephony Gateway in a basement)</li> </ul>
	<ul> <li>Metal or concrete walls between the Telephony Gate- way and other devices</li> </ul>
	<ul> <li>Large metal appliances, aquariums, or metal cabinets between the Telephony Gateway and other devices</li> </ul>
	<ul> <li>Interference and RF noise (2.4 GHz wireless phones, microwave ovens, or other wireless networks)</li> </ul>

**Note:** Note that decreasing the range of your wireless network may be beneficial, as long as the decreased range is sufficient for your needs. By limiting your network's range, you reduce interference with other networks and make it harder for unwanted users to find and connect to your network.

**Note:** Setting the trasmit power level to High increases the range. Setting it to Medium or Low decreases the range proportionately.

Safety	Started	Installation	Installation	Configuration	Usage	Troubleshooting	Glossary
	* Backson' Staphene Annovember		Mount	ing the Telep	ohony Ga	teway	
r r r r r r r r r r r r r r			You can e For wall-n cators fac	ither mount the Tele nount applications, v ing upward (vertica	ephony Gatev you can mour l) or to the si	vay on a wall or place i ht the Telephony Gatew de (horizontal).	t on a desktop. vay with the indi-
Benefit and an and a second and			Tools an	d Materials			
E	Step 1	Step	2 For wall-r rials befor	nounted installation re proceeding:	s, make sure	you have the following	tools and mate-
			• for 1/4	- mounting on dryw 4" (6mm) bit (not ir	all: Two 1/4" ncluded)	(6mm) drywall anchor	s and a drill with
			• for sci	r mounting on plywo rews (not included)	ood or studs:	two #6 x 1.5" (38.1	mm) self tapping
			• SCI US	rewdriver (flat-blade e)	e or Phillips,	depending on what kii	nd of screws you
				II was a such that was a last a d	(here the start)		

Cattin

Step 3

Datt

- wall-mount template (included)
- transparent tape: for temporarily securing the mounting template to the wall • (not included)

#### Location

Step 4

Always position the Telephony Gateway:

Ethorno

- within reach of an AC outlet. The power cord must reach the outlet without stretching and without adding extension cords.
- near a cable outlet (to avoid long cable runs).

#### Instructions

#### Wall-mounting instructions

When mounting the Telephony Gateway on drywall, try to position the Note: Telephony Gateway so at least one of the screws is fastened to a stud. This may prevent the Telephony Gateway from pulling out of the wall in the future. To prevent overheating of the Telephony Gateway, do not block the ventilation holes on the sides of the unit.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
			1	Position the mounting the Telephony Gatewa	template on t y and secure i	the surface where you in place with transpar	i intend to mount ent tape.
			2	Drill holes through the screws. After drilling h	e template in t noles, remove	he specified locations the template from the	for the mounting surface.
			3	If using drywall ancho the wall leaving a gap the wall. If not using a	rs, set them ir o of about 1/8 anchors, just c	nto the wall. Then, driv " (3 mm) between the Irive the screws.	ve the screws into e screw head and
			4	Orient the Telephony Orient the Telephony Orient the Slip both mo over the screws, then hole slot contacts the	Gateway with t unting slots (i slide the case screw shaft.	the indicator lights fac n the back of the Tel- down until the narro	ing up or right, as ephony Gateway) w end of the key-
			5	Proceed to Connecting	the Telephon	<u>y Gateway</u> .	
			Deskto	op mounting instruc	tions		
			1	Position the Telephony	v Gateway so t	hat:	
				air flows freely aro	ound it		
				• the back faces the	nearest wall		
				• it will not fall to th	e floor if bump	ped or moved	
				• the ventilation hole	es on the side	of the unit are not blo	ocked.
			2	Proceed to Connecting	<u>the Telephon</u>	<u>y Gateway</u> .	

#### **Connecting the Telephony Gateway**



#### WARNING Risk of injury or equipment damage

Connecting the Telephony Gateway 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 voltage. Cancellation of telephone service is not adequate. Failure to do so may result in loss of service and/or permanent damage to the Telephony Gateway.

1 Connect one end of the coax cable to the cable outlet or splitter, and the other end to the Telephony Gateway'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 Gateway.

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

The Power light on the front of the Telephony Gateway lights up, then flashes once (refer to the LED tables shown in Using the Telephony Gateway). See <u>Troubleshooting</u> if the Power light does not turn on.

**3** Connect one end of the Ethernet cable to any Ethernet port on the back of the Telephony Gateway, (**F**) 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 Gateway package.

4 Connect one end of the telephone cable to the telephone port on the back of the Telephony Gateway (**D** or **E**). Connect the other end to the telephone.

**Note:** If you have a phone with two separate lines on a single RJ-14 cord, plug it into the connector labeled "Telephone 1/2".



Safety	Getting Started	Battery Installation	Installation	Ethernet n Configuration	Usage	Troubleshooting	Glossary
			Conf	ïguring Your V	Vireless (	Connection	
			The TG immed equipp Teleph	852 ships with a basic iately access the Inter ed with a 802.11b/g/i ony Gateway's wireless	factory defau met with a wi n wireless LA s settings.	It configuration that sh ireless connection. If N card, you may wish	ould allow you to your computer is to configure the
			Note:	At a minimum, AR	RIS suggests	that you configure the	security settings.
			Acces	sing the Configuration	on Interface		
			Follow up the	these steps to access tl TG852 as described in	ne configuration Installing an	on interface. You should d Connecting Your Tele	l have already set phony Gateway.
			1	Use the connection utiless LAN <b>arris_xxxx</b> , Gateway's WLAN MAC	ility for your o where "xxxx" address.	perating system to cor is the last four digits	nnect to the wire- of the Telephony
				Note: This is the Telep address can be found	hony Gatewa on the produce	y's factory default SSIE ct label on the Telepho	D. The WLAN MAC ny Gateway.
			2	In your web browser, wireless router setup.	open the pag	ge http://192.168.2.	1/ to access the
				The Login screen disp	lays.		
				<b>Note</b> : The Telephony you log in for the first	Gateway shi time, leave t	ps with no password o he Password field blank	configured. When <.
			3	Click the <b>Apply</b> button	n to log in.		
				The System Basic Set	up screen dis	plays.	
			4	Use the online help inf	ormation to s	et configuration paramo	eters as required.
			Note:	Most configuration on the System Bas ting a system pass	parameters the structure parameters the setup screek word.	nat you may want to se en, including the securi	t can be accessed ty mode and set-

Safety	Getting Started	Battery Installation	Installation	Ethernet 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 Gateway.

#### Requirements

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

- Computer with:
  - one of: Windows 2000, Windows XP, Windows Vista, Windows 7, or MacOS  $\rm X$
  - 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 2000</u>
- TCP/IP Configuration for Windows XP
- <u>TCP/IP Configuration for Windows Vista</u>
- TCP/IP Configuration for Windows 7
- <u>TCP/IP Configuration for MacOS X</u>

Safety	Getting Started	Battery Installation	Installation	Ethernet n Configuration	Usage	Troubleshooting	Glossary
			TCP,	/IP Configurat	ion for W	/indows 2000	
			Follow ing sys	these steps to configu tem.	re the Ethern	et interface on a Windo	ows 2000 operat-
			Note:	Dialog boxes show shown in this proc	vn on your co edure.	omputer may differ sli	ghtly from those
			1	From the computer, se <b>nections &gt; Local Ar</b>	lect Start > S ea Connectio	Settings > Network a	nd Dial-up Con-
			2	In the Local Area Conring on it one time, the	ections Prope en click on <b>Pr</b>	rties window, highlight <b>operties</b> .	TCP/IP by click-
				<b>Note</b> : If your compute select the appropriate Area Connection Prop	er has more t Ethernet card erties window	han one Ethernet card, in the <b>Connect using</b> :	you may have to area of the Local
				Local Area Connection 2 Properties         General         Connect using:         Image: Stream Cardbus Ethernet 100 + Modem 51         Components checked are used by this connection         Client for Microsoft Networks         Client for Microsoft Networks         Deterministic Network Enhancer         Thatall         Uninstall         Description         Transmission Control Protocol/Internet Protoco wide area network protocol that provides con across diverse interconnected networks.         Show icon in taskbar when connected	2 X		

ок |

Cancel

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

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

Local Area Connection 2 Properties	<u>? × </u>
General	
Internet Protocol (TCP/IP) Prop	erties ?X
General	
You can get IP settings assigned this capability. Otherwise, you nee the appropriate IP settings.	automatically if your network supports of to ask your network administrator for
Obtain an IP address autom	atically
C Use the following IP address	E
IP address:	
_ Subnet mask:	
Default gateway;	
Obtain DNS server address	automatically
C Use the following DNS serve	er addresses:
Preferred DNS server:	
Alternate DNS server.	
	Advanced
	UK Cancel

- 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.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Trouble	shooting	Glossary
			TCP/I	[P Configura	tion for Wi	ndows	S XP	
			Follow th system.	nese steps to config	jure the Etherne	t interface	e on a Windo	ws XP operating
			TCP/IP	<b>v6 Note:</b> This provise not installed of provider requires Windows XP syst XP for installatio same configurat step.	cedure shows the or enabled by d s TCP/IPv6 you r cem. Refer to Mi n instructions. ( ion example, bu	e configur lefault in nust first icrosoft su Once insta It select 1	ation of TCP/ Windows XP install and e ipport mater lled and ena TCP/IPv6 at	IPv4. TCP/IPv6 If your cable nable it on your ials on Windows bled, follow this the appropriate
			Note:	Dialog boxes sho shown in this pro	own on your cor ocedure.	nputer ma	ay differ slig	htly from those
			<b>1</b> Fi cl	rom the computer, ick <b>Network Conr</b>	select Start > S nections in the (	ettings > Control Pa	• Control Pa nel.	nel and double-
			Ti so	he Network Connec ociated network ad	ction window disp apters.	plays a lisi	t of LAN coni	nections and as-
				Network Connections				
				File Edit View Favorites	Tools Advanced Help	-		
				Ġ Back 🔹 🔘 🕐 🏓 🔒	🔎 Search 🜔 Folders	B & X	. 4 🔟 -	
			2	Address 🔍 Network Connections			-	🛩 🄁 Go
			2	Name	Туре	Status	Device Name	^
				Wireless Network Connection 2 Local Area Connection 4 Local Area Connection 2 Local Area Connection 2 L 1394 Connection 2 Tel(R) 825671 M Ginabit Network C	LAN or High-Speed Internet LAN or High-Speed Internet LAN or High-Speed Internet LAN or High-Speed Internet	Not connected Disabled Connected Connected	Intel(R) WiFi Link 530 Cisco Systems VPN Ac Intel(R) 82567LM Gig 1394 Net Adapter #2	D AGN Japter abit Network Connection

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

**2** Double-click the local area connection to be used for your device's network connection.

The Local Area Connection Status widow displays.

Local Area Co	nnection 2 Status	?
General Support		
Connection		
Status:		Connected
Duration:		00:03:21
Speed:		12.0 Mbps
Activity	Sent — 🕺	Received
Bytes:	12.198	43,986
Properties	<u>D</u> isable	
		Close

- 3 Click Properties.
- **4** Select **TCP/IP** by clicking it one time. Then click **Properties**.

Connect	using:		
	RIS TOUCHST	TONE DEVICE	
			Configure
his c <u>o</u> ni	nection uses the	e following items:	
	Client for Micros	soft Networks	
🗹 📙	File and Printer	Sharing for Micros	oft Networks
And in case of			
	QoS Packet Sc	cheduler	
	QoS Packet Sc Internet Protoc	cheduler ol (TCP/IP)	
	QoS Packet So Internet Protoco	cheduler ol (TCP/IP)	
	QoS Packet Sc Internet Protoco stall	cheduler of (TCP/IP) Unimital	Properties
	QoS Packet So Internet Protoco stall	cheduler ol (TCP/IP)	Properties
Descrip Transr	QoS Packet Sc Internet Protoco stall ition mission Control I	cheduler of (TCP/IP) Unimital Protocol/Internet F	Properties
Descrip Vide a across	QoS Packet So Internet Protoco stall xion mission Control I rea network pro- diverse interco	cheduler ol (TCP/IP) Uncretal Protacol/Internet F otacol that provide uncreted networks	Properties Protocol. The default s communication
In: Descrip Transr wide a across	QoS Packet Sc Internet Protoco stall tion nission Control I rea network pro diverse interco	cheduler of (TCP/IP) Unmital Protocol/Internet F otocol that provide onnected networks	Properties hotocol. The default s communication
Descrip Transr wide a across	QoS Packet So Internet Protoco stall tion nission Control I rea network pro diverse interco icon in notifica	cheduler of (TCP/IP) Unmital Protocol/Internet F otocol that provide onnected networks tion area when cor	Properties hotocol. The default s communication

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

**5** Click the **General** tab. Then click **Obtain an IP address automatically** and click **OK**.

General	Alternate Configuration	1
You car this cap the app	n get IP settings assigne ability. Otherwise, you n ropriate IP settings.	ed automatically if your network supports weed to ask your network administrator for
00	otain an IP address auto	matically
OU	e the following IP addre	122:
(P at	tdress:	
Subr	et mask:	
Dela	ull galeway:	
• OJ	gtain DNS server addres	s automatically
OU	e the following DNS ser	rver addresses:
Erete	med DNS server	
Alten	nate DNS pervar	1
		Adyanced
		OK Cancel

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

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### **TCP/IP Configuration for Windows Vista**

Follow these steps to configure the Ethernet interface on a Windows Vista operating system

**1** Open the Vista Control Panel.



**2** Double-click **Network and Sharing Center** to display the Network and Sharing Center window.



Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

**3** Click **Manage network connections**. If prompted for a connection, choose **Local Area Connection**.

The Network Connections window displays.



**4** Double-click the **Local Area Connection** to open the Properties window:

**Note:** If Windows requests permission to continue, click **Continue**.

Local Area Conne	ction Properties	X	🚇 Local Area Con	nection Properties	×
letworking Sharing	1		Networking Shari	ing	
Connect using:			Connect using:		
🔮 Realtek RTL	8101E Family PCI-E Fast	Ethernet NIC (NDIS	🔮 Realtek R	TL8101E Family PCI-E Fast	Ethemet NIC (NDIS
This connection use	es the following items:	Configure	This connection u	uses the following items:	Configure
Client for M Symantec Symantec Cos Packet File and Pro Internet Pro	licrosoft Networks Network Security Internet tic Network Enhancer et Scheduler inter Sharing for Microsoft otocol Version 6 (TCP//P tru	kilate Filter Driver E Networks v6) v7)	Clent for Symarte Clean for Symarte Clean File and Clean File and File and Fil	r Microsoft Networks so Network Security Interme listic Network Enhancer sket Scheduler Printer Sharing for Microsoft Protocol Version & (TCP/IP Protocol Version 4 (TCP/IP 111	kdiate Filter Driver
Install	Uninstall	Properties	Install	Uninstall	Properties
Description Transmission Con wide area networ across diverse int	ntrol Protocol/Internet Pro k protocol that provides of terconnected networks.	tocol. The default communication	Description TCP/IP version that provides on networks.	n 6. The latest version of the ommunication across divers	e internet protocol se interconnected

TCP/IPv4 Selected

**TCP/IPv6 Selected** 

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
			<b>5</b> Do TC	ouble-click <b>Internel</b> P/IPv4.	t Protocol	Version 4 (TCP/IP	<b>/4)</b> to configure
			No ne	te: If your cable pro <b>Protocol Version</b>	ovider requir 6 (TCP/IP	res TCP/IP version 6, do v6) to configure TCP/IF	puble-click <b>Inter-</b> Pv6.
			Internet Prote	COL Version 4 (TCP/IP v4) Properties	WINDOW FOR L	The Version You selected	a displays.
			General	ternate Configuration	Ger	neral	
			You can ge this capab for the ap	tt IP settings assigned automatically if your network su lity. Otherwise, you need to ask your network administ propriate IP settings.	pports Yi trator O	ou can get IPv6 settings assigned automatically if your network therwise, you need to ask your network administrator for the	supports this capability. appropriate IPv6 settings.
			Obta	n an IP address automatically		Obtain an IPv6 address automatically	
			🕤 Use t	he following IP address:		Use the following IPv6 address:	
			IP addr	5551		IPv6 address:	
			Subnet	mask:		Subnet prefix length:	
			Default	gabeway:		Default gabeway)	
			Obta	n DNS server address automatically		Obtain DNS server address automatically	
			) Use t	he following DNS server addresses:		Use the following DNS server addresses:	
			Preferre	d DNS server:		Preferred DNS server:	
			Alternal	e DNS server:		Alternate-DNS server:	
				Advan	ced		Advanced
				ок	Cancel		OK Cancel

#### **TCP/IPv4** Properties

#### **TCP/IPv6** Properties

- 6 For either TCP/IPv4 or TCP/IPv6, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, unless instructed otherwise by your cable provider.
- 7 Click **OK** to accept the new settings and close the Properties window.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### **TCP/IP Configuration for Windows 7**

Follow these steps to configure the Ethernet interface on a Windows 7 operating system.

**1** Open the Windows 7 Control Panel.



2 Click Network and Internet.



Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### 3 Click Network and Sharing Center.



4 Click Local Area Connection to open the Status window.



Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

5 Click **Properties** to open the Properties window.



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Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
			6 Se co	lect <b>Internet Proto</b> nfigure TCP/IPv4.	ocol Version	4 (TCP/IPv4) and cli	ck <b>Properties</b> to
			Noto	ote: If your cable pro	vider require <b>/IPv6)</b> and	s TCP/IP version 6, sele click <b>Properties</b> to cor	ct <b>Internet Pro</b> nfigure TCP/IPv6
			Th	e TCP/IP properties	window for t	he version you selected	l displays.
			Internet Prot	ocol Version 4 (TCP/IPv4) Properties	8 X	net Protocol Version 6 (TCP/IPv6) Properties	? .
			General	Iternate Configuration	Gen	eral	
			You can g this capat for the ap	et IP settings assigned automatically if your network lifty. Otherwise, you need to ask your network admir propriate IP settings.	supports Yo istrator Ot	u can get IPv6 settings assigned automatically if your network herwise, you need to ask your network administrator for the a	supports this capability. appropriate IPv6 settings.
			() Obta	in an IP address automatically		Obtain an IPv6 address automatically	
			🔘 Use	the following IP address:		Use the following IPv6 address:	
			IP add	ess)		IPv6 address:	
			Subnet	mask:		Subnet prefix length:	
			Defaul	gateway:		Default gateway:	
			() Obta	in DNS server address automatically		Obtain DNS server address automatically	
			💮 Use	the following DNS server addresses:		Use the following DNS server addresses:	
			Prefer	ed DNS server)		Preferred DNS server:	
			Alberna	itë DNS server:		Alternate DNS server:	
			[] Vali	date settings upon exit. Adv	anced	Validate settings upon exit	Advanced
			1	OK K	Cancel		OK Cancel

**TCP/IPv4** Properties

#### **TCP/IPv6** Properties

- 7 For either TCP/IPv4 or TCP/IPv6, select **Obtain an IP address automatically** and **Obtain DNS server address automatically**, unless instructed otherwise by your cable provider.
- 8 Click **OK** to accept the new settings and close the Properties window. Then click **Close** to back out of the remaining setup screens.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### **TCP/IP Configuration for MacOS X**

Follow these steps to configure the Ethernet interface on a MacOS X operating system.

**1** Open System Preferences, either by choosing System Preferences from the Apple menu or by clicking the System Preferences icon in the dock.



Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

#### 2 Click the Network icon.



Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

**3** Choose **Automatic** from the Location drop-down menu, and **Built-in Eth-erne**t from the Show menu.

	Location:	Automatic			
	Show:	Built-in Eth	ernet		
	CP/IP PP	PoE Apple	Talk Proxies	Ethernet	
Configure IP	v4: Using	DHCP			
IP Addre	ss:			Renew DH	CP Lease
Subnet Ma	sk:		DHCP Client	ID:	
Rout	ert			(If required	0
DNS Serve	ers:				(Optiona
Search Domai	ns:				(Optiona
IPv6 Addre	55:				
	Config	gure IPv6)			1

**4** Choose the TCP/IP tab, if necessary.

If you are using **TCP/IPv4**, go to **step 5**. If your cable provider requires **TCP/IPv6**, go to **step 8**.

- **5** Choose **Using DHCP** from the Configure IPv4 menu.
- 6 If necessary, click the **Renew DHCP Lease** button.
- 7 Close the System Properties application.

TCP/IPv4 configuration is completed.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary

**8** If you are using TCP/IPv6, click **Configure IPv6** near the bottom of the previous window.

	Net	work		-
Configure IPv6: IPv6 Address: Router:	Automatically	•		
IP Address: Subnet Mask:		Canc DHCP Client ID	Renew DHC	P Lease
DNS Servers:				(Optional
rch Domains:				(Optional
	Configure IPv6: IPv6 Address: Router: IP Address: Subnet Mask: Router: DNS Servers: rch Domains:	Configure IPv6: Automatically IPv6 Address: Router: IP Address: Subnet Mask: Router: DNS Servers: rch Domains:	Configure IPv6: Automatically : IPv6 Address: Router: IP Address: Subnet Mask: DHCP Client ID Router: DNS Servers: rch Domains:	Configure IPv6: Automatically IPv6 Address: Router: IP Address: Subnet Mask: DHCP Client ID: Router: INS Servers: IP Address: IP Address: Renew DHCP IP Address: IP Address:

- **9** Choose **Automatically** from the Configure IPv6 drop-down menu and click **OK**.
- **10** Close the System Properties application.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Using	g the Tele	phony	Gateway	

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

- <u>Setting up Your Computer to Use the Telephony Gateway</u>
- Indicator Lights for the TG852
- Using the Reset Button

# Setting up Your Computer to Use the Telephony Gateway

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



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#### Patterns: Normal Operation (WAN and Battery)

The following table shows light patterns during normal operation.

Mode	Power	DS	US	Online	Battery
AC Power Good	On	Yellow <sup>1</sup> = Connected to the Internet (high speed) Green <sup>1</sup> = Connected to the In- ternet (ultra-high speed) Flash = Not connected to the	Yellow <sup>1</sup> = Connected to the Internet (high speed) Green <sup>1</sup> = Connected to the In- ternet (ultra-high speed) Flash = Not connected to the	<b>On</b> = Internet available Off = Internet not available	On = Battery good or low Off = Battery missing Flash = Battery bad
No AC Power Battery Installed	Flash	Off	Off	Off	Off = Battery power Flash = Battery bad
No AC Power No Battery	Off	Off	Off	Off	Off
Firmware Upgrade	On	Flash	Flash	On	(normal operation)

**Note 1**: Your cable company may configure the Telephony Gateway to always display the **DS** and **US** indicators in green regardless of the connection speed.

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#### **Patterns: Startup Sequence**

The following tables show the Telephony Gateway 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.

#### **Telephony Start Up Sequence**

Power,	Telep	hone	Pattom	Description			
Online	1	2	battery	Description			
Off	Off	Off	Off	No power to Modem			
Flash	Flash	Flash	Flash	Power-on Self Test			
See "Cable Modem Start Up Sequence"							
On	Flash	Off	Off	Retrieving telephone net- work information			
On	Off	Flash	Off	Retrieving telephone line information			
On	Flash	Flash	Off	Activating telephone service			
Normal Operation							

**Note:** The **DS** and **US** indicators flash yellow during startup, and turn green if the Telephony Gateway establishes an ultra-high speed connection.

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#### **Cable Modem Start Up Sequence**

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

#### **Using the Reset Button**

Use the **Reset** button, on the back of the Telephony Gateway, to reset the modem and perform initialization as if you power cycled the unit. You may need to reset the Telephony Gateway if you are having problems connecting to the Internet. Using this button will be rare.

Use a pointed **non-metallic** object to press this button. The photo to the left shows the location of the **Reset** button. The **Reset** button is recessed to prevent accidental resets.

The diagram on the left shows the location of the reset button.

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

To reset the router to factory defaults, press and hold the **Reset** button on the back of the Telephony Gateway for more than fifteen seconds. This restores the wireless setup configuration and router configuration parameters to the factory defaults. You may need to do this if a misconfiguration has locked out all access.





Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary			
			Bootin	g from Batte	ery					
			The TG852 supports a "Boot from Battery" feature that allows the Telephony Gate way to begin service without AC power.							
			To start th	ne TG852 from its b	attery, follow	these steps:				
			<b>1</b> If a	a battery is already	installed in th	ne Telephony Gateway,	remove it.			

- **2** Re-insert the battery into the Telephony Gateway (see <u>Battery Installation</u> <u>and Removal</u> for details).
- **3** Press the **Reset** button; the Power light should turn on immediately.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary			
			Trou	bleshootin	g					
			The Tele	phony Gateway is	plugged in,	but the Power light	is off.			
			Ch en	eck all power conne ds?	ections. Is the	e power cord plugged	in firmly at both			
			If sw	you plugged the po itched on.	wer cord into	a power strip, make	sure the strip is			
			Avoid using an outlet controlled by a wall switch, if possible.							
			Finally, check the fuse or circuit breaker panel.							
			I'm not g	jetting on the Inte	ernet (all co	nnections).				
			It po Alv to	may take over 30 r wer up your Telepho vays leave your Tele the cable system.	ninutes to es ny Gateway, e phony Gatewa	tablish a connection t especially when many p ay plugged into AC pow	he first time you people are online. ver and connected			
			Ch	eck the front panel	lights:					
				• The <b>Power</b> and	d <b>Online</b> light	s should be on.				
				• If the <b>Power</b> li company for as	ght blinks for sistance.	more than 30 minute	s, call your cable			
			Ch sh bro on mo let	eck your cable conr ould not be pinched eak or short in the ca e or more splitters b ove the splitters and	nections. Con , kinked, or b able (you may between the T I connect the	nectors should be tight pent sharply—any of th have to replace the ca elephony Gateway and Telephony Gateway di	t. The <u>coax cable</u> hese can cause a able). If you have d CATV outlet, re- rectly to the out-			
			Pro	oceed to the Etherne	et or wireless	solutions (next page)	if necessary.			

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary				
	I'm not getting on the Internet. (Ethernet)										
			If y	ou are using a hub, i	is the hub tu	Irned on?					
			Are rec hul	e you using the right t it connection to a cor b.	type of <u>Ether</u> mputer; use	<u>net</u> cable? Use the supp a cross-over cable for	blied cable for di- connection to a				
			Pre	ess the <b>Reset</b> button	on the back	of the Telephony Gate	way.				
			A n If y	nisconfiguration could ou think this has hap	l lock out all a pened, see <u>F</u>	access to the Telephony Resetting the Router to	<sup>r</sup> Gateway router. <u>Factory Defaults</u> .				
			I'm not g	etting on the Inter	net. (Wirel	ess)					
			Check the indicator lights (see <u>Using the Telephony Gateway</u> ) — the W light should be on.								
			Does your connection utility discover your wireless LAN? If you turned "Broadcast SSID" you need to manually enter the name of your wireless l in the connection utility.								
			Cha	ange your security m able one of the other	node to "WE security mo	P" or "disabled". If you des as soon as you find	u use "disabled," d the problem.				
			A n If y	nisconfiguration could ou think this has hap	l lock out all a pened, see F	access to the Telephony Resetting the Router to	<sup>r</sup> Gateway router. <u>Factory Defaults</u> .				
			My wirele	ess Internet conne	ction stops	working sometimes.					
			Thi "re fer	s is usually caused b mote" telephones and ing product, try using	y interferen d microwave a different	ce — two common sou ovens. If you cannot r channel or setting Prot	rces are 2.4GHz emove the inter- ected Mode.				
			I can get	on the Internet, b	ut everythi	ng is slow.					
			If t ble mir tior	he Web site you are w servicing all the requinutes and try again. Un speed.	visiting is ver Jests. If othe Jsage during	y popular, that site may er sites download quick peak hours may also a	/ be having trou- ly, wait for a few ffect the connec-				
			Oth	ner communications ns, may slow down y	on the LAN, our connecti	or interference with von.	wireless connec-				

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary			
			I don't h	ave dial tone whe	n I pick up ı	my phone, why?				
			In tel coi ide	order for telephone ephone service mus nfigured on your Te entifying the source	e service to b t have been p lephony Gate of the proble	e functional on the Tele ourchased from the ser way. The following ste m.	ephony Gateway, vice provider and ps should help in			
			<b>1</b> Is the Power LED lit?							
				<ul> <li>If not, chec and the out</li> </ul>	k to make su let has powei	re the Telephony Gater r.	way is plugged in			
				• If the LED i	s lit, go to the	e next step.				
				2 Is the Online L	ED lit?					
				<ul> <li>If not, check the coax connection at the Telephony Gatew the wall. Ensure they are connected and tight. If they a you do not have dial tone, contact your service provider.</li> </ul>						
				• If the Onlin	e LED is lit, g	o to the next step.				
				3 Is the Telephor	e (Tele 1 or 1	Fel 2) LED lit?				
				<ul> <li>If not, phor your service</li> </ul>	ne service ha e provider.	s not been set up on t	hat line. Contact			
				<ul> <li>If it is blin house. Find</li> </ul>	king, there is that phone a	s a phone off hook so and hang it up.	omewhere in the			
				• If it is lit, g	o to the next	step.				
				4 Is the phone pl	ugged directl	y into the Telephony G	ateway?			
				<ul> <li>Make sure t Telephony C phone 2" fo</li> </ul>	the phone is p Gateway label r line 2.	olugged into the port o ed "Telephone 1/2" for	n the back of the line 1, and "Tele-			
				• If so, try a ing phone.	different phor	ne. Make sure the new	phone is a work-			
				<ul> <li>If a known try a different store dial to</li> </ul>	good phone is ent phone cab one, call your	s used and you still don ble. If a new phone and service provider.	't have dial tone, l cable do not re-			

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
				<b>5</b> Is the Telephon	y Gateway plu	ugged into a wall outlet	?

• If so, unplug the RJ-11 connector at the back of the Telephony Gateway 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	Ethernet Configuration	Usage	Troubleshooting	Glossary					
			Glos	sary								
			The follow	ving is a list of comm	non cable and	l networking terms.						
			Amp-hou	ır (Ah)								
			A su	measure of battery of poly one Ampere of	capacity. For e current for o	example, a 1.0Ah batte ne hour.	ery can nominally					
			Category	/ 5 (Cat5)								
			A high-quality type of cable, used for Fast Ethernet (100BaseT) connection: When purchasing Ethernet cables, always look for Category 5 cable.									
			Coaxial o	cable (coax)								
			A ca dis	thin wire, used to co ble TV system. You scount stores.	onnect your te can buy coax	elevision and Telephon from any electronics r	y Gateway to the etailer and many					
			CPE									
			Cu Te	istomer Premise Equ lephony Gateway; ty	ipment. This i vpically a com	s the equipment that is nputer or hub.	plugged in to the					
			Cross-ov	ver								
			Ar tog	e Ethernet cable used gether. Also, some E pre ports (which elin	to connect t thernet hubs ninates the ne	wo hubs (or a hub and may have built-in cros eed for a cross-over ca	a cable modem) s-over on one of ble).					
			DHCP									
			Dy ad vic yo	namic Host Configu dress and location of ce connecting to the ur computer's netwo	ration Protoco of services (su network. DHC orking softwa	ol. An IP protocol used uch as DNS and TFTP) CP allows the cable com re for you.	to provide an IF needed by a de- pany to configure					
			DNS									
			Do	main Name Service	e (Server). A	n IP service that asso	ociates a domair					

Domain Name Service (Server). An IP service that associates a domain name (such as www.example.com) with an IP address.

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary		
			<b>Downstr</b> In olc	<b>eam</b> an HFC network, the ler cable documenta	direction fro tion may refe	m the head-end to the er to this as the forward	subscriber. Some d path.		
			<b>DOCSIS</b> Da da	ta Over Cable Syste rds used for data cor	m Interface mmunication	Specification. The inter s equipment on an HFC	roperability stan- C network.		
			<b>EMTA</b> Em wit	nbedded Multimedia th a cable modem.	Terminal Ada	apter. An MTA device t	hat is integrated		
			Ethernet A standard method of connecting two or more computers into a Local Area Network (LAN).						
			EuroDOC Th	<b>SIS</b> e European version o	of DOCSIS.				
			<b>Event</b> An	informational messa	age used for	monitoring network sta	atus.		
			F-connec	tor					
			Th F-c coi	e type of connector ( connector, slip-on an nnecting your Teleph	used on coax d screw-on. ony Gateway	cable. There are two o Use coax with screw-c	common types of on connectors for		
			Firewall						
			A I vat	nardware or software te network from the	e device that Internet. The	prevents unauthorized e TG852 provides a bui	d access to a pri- ilt-in firewall.		
			Gateway						
			Th	e device, usually a rener IP subnets.	outer, that co	onnects devices on a g	iven IP subnet to		

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary			
			Headen	d						
			T d s	The "central office" in a lata equipment. In largeveral "remote" heade	n HFC networ ger cable netv nds to provid	k. The headend house vorks, a "master" hea e distributed services.	es both video and dend often feeds			
			HTTP							
			F	lyperText Transfer Prot	cocol.					
			Hub							
			A box with several Ethernet connectors. Ethernet hubs provide a common point of contact for all connected devices.							
			IP addr	ess						
			۵ t	number assigned to y ify your computer to o	our computer ther systems	r by your cable compa on the Internet.	ny, used to iden-			
			ISDN							
			I v	ntegrated Services Dig ides communication sp	ital Network. beeds about t	A digital telephony st wice as fast as standa	andard that pro- rd dialup.			
			LAN							
			L (	ocal Area Network. A such as a building) to	network that communicate	allows computers in with one another.	a single location			
			LED							
			L is	ight Emitting Diode. A s passed through it.	semi-conduc	tor diode that emits lig	ght when current			
			MAC ad	dress						
			A c a o	a number that uniquely able company uses you access to the Internet. If your Telephony Gate	v identifies an our Telephony The MAC addr way.	y device connected to Gateway's MAC addr ress is printed on a lab	a network. Your ress to authorize pel on the bottom			
			Protoco	bl						
			β n	a set of rules and form network entities at a gi	ats that deter ven layer.	rmines the communica	ation behavior of			

Safety	Getting Started	Battery Installation	Installation	Ethernet Configuration	Usage	Troubleshooting	Glossary
			Proxy				
			A sit bu pr pa pa	device or program the e) and a client (you orden from the server oxy that keeps copies ges instead of fetching ge loading and less t	nat stands in r browser), r. For exampl s of popular w ng them direc network cong	between a server (for providing a way to reli e, your cable company yeb pages; the proxy ca ctly from the web site, r pestion.	example, a web eve some of the may have a web n send you those resulting in faster
			RF				
			Ab ca	breviation for Radio ble" and the connect	Frequency. Frequency.	Some literature reference sonnectors."	s to coax as "RF
			RJ-11				
			A s ica	standard 2-conducto a for connecting telep	r modular co phones.	nnector, commonly use	d in North Amer-
			RJ-45				
			A ca	standard 8-conductoble. An RJ-45 connection	or modular o ctor looks like	onnector, commonly u e a wide RJ-11 (telepho	ised on Ethernet one) connector.
			Splitter				
			A ma th fro	small box with three ay need a splitter if at you want to use om any electronics re	e cable conne you have a T for your Tele etailer and m	ectors: one input and to V already connected to phony Gateway. You co post discount stores.	two outputs. You the cable outlet an buy a splitter
			SSID				
			Se	rvice Set IDentifier iquely identifies a w	, a string of ireless LAN.	text (up to 32 chara	cters long) that
			Switched	d outlet			
			A int int	power outlet that material condect for lamps. Average of a switched outlet t	ay be turned void plugging to avoid disru	on and off using a wa your computer or Tel ptions.	ll switch. Usually ephony Gateway
			TCP/IP				
			Tra ita	ansmission Control P te communications a	rotocol/Inter across one or	net Protocol. The protocol more connected netwo	cols used to facil- orks.

Safety	Getting Started	Battery Installation	Installation	Wireless Configuration	Ethernet Configuration	Usage	Troubleshooting	Glossary
			тг	ΜΛ				
			ĨĹ	Time Divisi modems fo	on Multiple Acces r sending upstrea	s. A metho m data wit	d used by DOCSIS-c n minimal interferend	compliant cable
			Up	ostream				
				The path fr mentation	om a subscriber of may refer to this	device to th as the retur	e headend. Some old n path or reverse pa	der cable docu- ath.
			W	EP				
				Wired Equiv a wireless l	valent Privacy, a c LAN.	common sta	ndard for encrypting	data sent over
			W	PA				
				Wi-fi Proteo	cted Access, a sta	indard for e	ncrypting data sent	over a wireless

LAN. WPA offers improved security over WEP.

#### Touchstone®

#### **TG852 Telephony Gateway User's Guide**



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