

# OVERVIEW

Most configuration of the ESTeem Model 195Eg is completed using the internal Web interface (discussed in detail in Chapter 4), but to access the modem through a web browser requires first setting the TCP/IP address. The TCP/IP address (IP address) is set at the factory for a static Class B (172.16.xxx.xxx - Mask 255.255.0.0) and listed on the ESTeem documentation. If this IP address does not match your network configuration, you will need to use either the ESTeem 195E Discovery program or the RS-232 interface to set the IP address in the 195Eg.

### QUICK START GUIDE

A printed copy of the Model 195Eg Quick Start Guide was provided in the documentation package that arrived with your new ESTeem 195Eg. This guide is an abbreviated step-by-step procedure on configuration of the 195Eg for most Ethernet bridging and Access Point applications. A copy of the Quick Start Guide is provided in Appendix G of this User's Manual for convenience.

## **MODEL 195Eg HARDWARE LAYOUT**

Unpack the ESTeem Model 195Eg shipping boxes and locate the items contained below for initial configuration. Take a few minutes to inventory your equipment before you proceed. Report any missing or damaged items to Customer Support (509-735-9092) as soon as possible.

Each node in your ESTeem Model 195Eg's network may have different hardware components based upon the final installation location (i.e Outdoor, Indoor, Point-to-point or Muti-Point). Antenna types, cable lengths, power supplies may be different, but the following items will be required for basic setup:



*Note:* Your accessory model numbers may vary from the above, but you will need to locate each of above items to continue configuration.





### Notes:

- There is no Power On/Off switch on the Model 195Eg.
- Attach the programming Cable to the RS-232 Programming Port and the Patch Cable between the Power Supply and Ethernet port.
- One word of caution, always attach an antenna to Port A (Figure 2) on the Model 195Eg before power up.



Antenna Connectors (TNC Female-RP)

Figure 2: 195Eg Antenna Overview

### MODEL 195Eg HARDWARE CONFIGURATION



The following steps should be completed before any modifications are made to the IP address in the ESTeem Model 195Eg:

- 1. Connect the antenna to the antenna connector on the ESTeem Model 195Eg (Figure 3). For a single antenna use Antenna Port A and connect both if using dual antennas.
- 2. Assemble the 195Eg hardware as shown in Figure 4.





Figure 3: Antenna Configuration Diagram







3. Complete the following System Configuration Table. The Model 195Eg will link to other Model 195Eg's on the network via the WLAN Media Access Control (MAC) address found on the bottom of the case. This MAC address is six hexadecimal digits separated by colons and is configured at the factory. Every MAC address in the world is unique and can not be changed. Complete the following chart to aid in your when defining modes of operation and repeater routes.

Modem_ID(Name)	Serial Number	IP Address	Ethernet MAC	WLAN MAC
/Operating Mode				
Example Modem 1 AP_Bridge	E-14001	172.16.8.101	00:04:3f:00:01:01	00:04:3f:00:01:02



# CHAPTER 3 STARTING OUT

# **ESTEEM DISCOVERY UTILITY**

The ESTeem Discovery Utility will allow you to configure the IP address on the Model 195Eg to match your network. Install the Discovery Utility on your computer by inserting the Resource Disk in your CD drive.

Note: The ESTeem Resource Disk is stand-alone copy of the ESTeem Web site (Figure 5). Navigation of the Resource Disk is as simple as using your web browser. All technical documentation, User's Manuals and the ESTeem Utility Program is available on the disk.

1. Place the ESTeem Utility CD in your CD-ROM drive. The CD will auto load the ESTeem main page



# Note: If the page does not auto load, open your web browser and set your address line to D:\index.html (Where D: is the drive letter for your CD-ROM drive).

2. From the Main Page select ESTeem Utilities and click on ESTeem Discovery Utility (Figure 6).



### Figure 6: Discovery Utility Download

Note: This program is saved in a compressed file format. Microsoft Windows XP® will open the file directly, but other operating systems will require a common compression program such as WinZip available for download at <a href="http://www.winzip.com">http://www.winzip.com</a>

3. Double click on the 195EdiscoverySetup.exe file listed in the window to install the program.



4. Connect the Model 195Eg to your computer either direct to the Ethernet card or through a HUB/Switch using a CAT-5e Ethernet cable. The Ethernet port on the 195Eg supports Auto-Negotiation so either a patch cable or crossover cable will work. Open the ESTeem Discovery Program and press the <u>Discover Modems</u> button. The Model 195Eg will be displayed in the program by the Ethernet MAC address and Current IP Address (Figure 7).

💋 195E Discovery	2.1.1.28					
Discover Modems	Found 1 modems					
MAC Address	IP Address	SSID	Mode	Modem ID	Version	Model
00:04:3F:00:0B:54	172.16.8.149	ESTeem	AP Bridge		302.8.102	195Eg
Ready						

Figure 7: Discovery Program Main Page

Note: The SSID and Mode of Operation will be adjusted later in the configuration.

5. Double-click on the 195Eg you want to program and the *Configure IP Address* window will be displayed (Figure 8). Enter an IP address and Subnet Mask for the 195Eg that matches your network subnet and press the <u>OK</u> button to save this to the ESTeem. You will receive notification that the Configuration was Successful and the 195Eg will reboot. Proceed to ESTeem Setup in Chapter 4.

Discover Modems		Configure IP Add	iress 🔣			
MAC Address 00:04:3F:00:0B:54	IP Address 172.16.8.149	E IP Address: Subnet Mask: Default Gateway:	172. 16 , 8 ,149 255.255. 0 , 0 172. 16 , 1 , 6	Modem ID	Version 302.8.102	Model 195Eg

Figure 8: Change IP Address Window



### **USING THE RS-232 INTERFACE**

Any terminal emulation program that can run with VT100 emulation can be used for this configuration of the ESTeem. Most Windows users will probably use either Hyper Terminal or the Terminal Emulation in the ESTeem Utility program. Configure your RS-232C port for a Baud Rate to 38,400, Data Bits to 8, Parity to None, Stop Bits to 1 and Handshaking to None and set the Emulation type to VT100. Once your ESTeem has an IP address, you can attach the ESTeem to your network and use the Web Server for further programming.

### Installing Esteem Utility Program

The ESTeem Utility program version 2.7.0 and above can configure the Terminal Emulation to VT100 for easy navigation of the configuration menu. The ESTeem Utility Program is located on the ESTeem Resource Disk (AA109) which is stand-alone copy of the ESTeem Web site (Figure 5). Navigation of the Resource Disk is as simple as using your web browser. All technical documentation, User's Manuals and the ESTeem Utility Program is available on the disk. To install the ESTeem Utility Program use the following instructions:

- 1. Place the ESTeem Utility CD in your CD-ROM drive. The CD will auto load the ESTeem main page (Figure 9).
- 2. If the page does not auto load, open your web browser and set your address line to D:\index.html (Where D: is the drive letter for your CD-ROM drive).
- 3. From navigation menu on the left side of the page, select ESTeem Utilities (Figure 1).



### Figure 9: ESTeem Utility Main Menu

- 4. Select the Windows version of the ESTeem Utility and click Download Windows Utility for Model 192 Series. When asked to Open or Save the file, press Open to view the contents of the Zip file.
- 5. Double Click on the Setup.exe file to start the Utility Installation or extract the files to a directory for later installation.
- 6. Once the installation is complete, Press the Start button on your Window desktop and select Programs. Select ESTeem Utility from the list of program folders then click ESTeem Utility from the list of files and the program will start (Figure 2).

When prompted, configure your RS-232C port for a Baud Rate to 38,400, Data Bits to 8, Parity to None, Stop Bits to 1 and leave the Flow Control boxes unchecked. You will now be ready to continue with the configuration of the Model 195Eg.

### Programming Using the RS-232 Port

- 1. When configuring the Model 195Eg for the first time you must use the ESTeem RS-232C Configuration Menu to setup the basic operating parameters such as assigning the IP Address, IP Net Mask, Gateway IP Address, Domain Name, and DNS IP Address.
- 2. Connect the serial cable (EST P/N: AA0621.1) between the RS-232 connector (RJ-45) on the Model 195Eg to the serial port on the computer.
- 3. Any terminal emulation program can be used for the configuration of the Model 195Eg. Most users will use the Terminal Emulation section of the ESTeem Utility Program. Configure your RS-232C port for a Baud Rate to 38,400, Data Bits to 8, Parity to None, Stop Bits to 1, use No Handshaking (Flow Control) and set the Terminal to VT100 emulation.
- 4. Plug the Model AA175 power supply into a wall socket and connect an Ethernet patch cable from the Model 195Eg Ethernet port to the J1 (Data&PWR) port on the power supply (Figure 5). The Power over Ethernet (POE) LED on the front of the ESTeem should be illuminated.



5. If your computer is configured properly, you will see the ESTeem Model 195Eg booting sequence on your Terminal Emulation program. Once the ESTeem boot sequence is complete (approximately 30 seconds) you will receive this message:

### "Please press Enter to active this console."

If you don't see this message press the Reset button on the front panel of the Model 195Eg and/or check the programming of your RS-232 port.

- 6. Press the Enter key and you will be at the Configuration Menu 195Eg login prompt. See Figure 10.
- 7. To enter the Model 195Eg Main Menu you will need to log into the system with a login name and password.
- 8. If this is not the first time configuration of the Model 195Eg, see your network systems administrator for the password.

💻 COM1	1:38400,N,8,1				
File Edi	t Esteem Setup	Terminal Setup	Help		
Bus yBo	x on wdp802	11 login:			*
				-	

Figure 10: RS-232 Port Log-in Screen

- 9. At the 195Eg login prompt type *admin* for the login name and press the *Enter key* (<Enter>). *The login name is defined at the factory and is not changeable by the user. Note that all characters are lower case.*
- 10. If this is the first time the Model 195Eg has been programmed or the Password was not changed from the factory default values, the factory default password is also *admin*. Enter *admin* for the password and press the Enter key (<Enter>).

Note: All characters are lower case.



11. The ESTeem Configuration Welcome Screen (Figure 11) will now be displayed. Press the Enter key to continue on the Top menu items.

₽ COM1:38400,N,8,1	
File Edit Esteem Setup Terminal Setup Help	
EST195E Web Configuration Manager () EST195E Web (font=title_text) (font=title_text) Configuration Manager	p1 of 2) 👗
Top <mark>Status</mark> Log Setup Advanced Backup Restore Software Update 1	Reboot
TopWelcome	<b>†</b>
Thi Welcome to links!	t
LAN Press ESC for menu. Select Help->Manual in menu for user's manual.	SS
<u>[ 0K ]</u>	
Current Mode of Operation: AP Bridge SSID: T::195DBS Wireless MAC Address: 00:04:3F:00:09:0A Wireless Repeater enabled: true Ethernet MAC Address: 00:04:3F:00:09:08 Bridge MAC Address: 00:04:3F:00:09:08 ittp://127.0.0.1/cgi-bin/avsweb.cgi?status.frm	-
	1

Figure 11: RS-232 Welcome Screen

- Note: The configuration menu functions the same as the Web Configuration Manager, but requires moving the arrows to change fields. To move left and right on the Menu Items use the Up and Down arrow keys and press Enter to select the highlighted item.
- 12. Press the Down Arrow key until the SETUP menu item is highlighted and press Enter. Again press the Down Arrow key until the Mode of Operation is highlighted and press Enter again to bring up the mode selection menu (Figure 12).

≝,COM1:38400,N,8,1 File Edit Esteem Setup Terminal Setup Help	
I (font=title_text> <font=title_text></font=title_text>	EST195E Web Configuration Manager EST195E Web EST195E Web Configuration Manager
Top Status Log Setup Advanced Backup Re Setup	estore Software Update Reboot
This is the main <b>Setup</b> Page. Select a mode of unit from the following list.	f operation for the wireless LAN
Select Mode of Operation: [ AP Bridge AP Masquer AP Router EtherStatj Station Ra Station Ra Ethernet ( AirScope(1)	Help rade ion asquerade outer Only
elect field, name avs_mode	+

Figure 12: Setup Ethernet Only Screen



- 13. Select Ethernet Only and press the Enter key. In the initial configuration it is best not to use the ESTeem as a DHCP client. Select OFF on the DHCP client services on the next screen and continue the process selecting Next and Posting the information. Program the basic operating parameters such as assigning the Model 195Eg an IP Address, IP Net Mask, Gateway IP Address, Domain Name, or DNS IP Address.
- *Note: Next to all items in the configuration menu are Help screens that define all the settings and provide assistance on configuring the Model 195Eg.*
- 14. After the basic parameters have been entered into the Model 195Eg you will need to commit the changes to the Model 195Eg (Figure 13). The changes will be saved to flash memory. You can use programming features in the ESTeem Web Configuration Manager to configure the unit for your application. Proceed to Chapter 4.

🖳 COM1:38400,N,8,1	
File Edit Esteem Setup Terminal Setup Help	
<font=title_text> <font=title_text></font=title_text></font=title_text>	EST195E Web Configuration Manager EST195E Web Configuration Manager
Top Status Log Setup Advanced Backup Setup	Restore Software Update Reboot
To permanently commit your changes, click below. Once the changes have been permanently save new settings in effect.	on the "Commit Changes" button ed, the system will reboot with the
[ Previous ] [ Commit Changes ] [ Go	To Advanced Setup ] [ Cancel ]
Post form to http://127.0.0.1/cgi-bin/avsweb	.cgi?qs_commit_changes.frm •

Figure 13: Commit Changes Screen



The ESTeem Model 195Eg Web Configuration Manager is an internal web server that will allow setup, monitoring and diagnostics of all operating parameters in the Model 195Eg. The 195Eg can be configured using any current web browser software such as Internet Explorer, Netscape or Mozilla.

### LOGGING ON TO THE ESTeem WEB PAGE

- 1. Using your Web Browser connect to the Model 195Eg Web Page with the IP Address that you have assigned it in Chapter 3.
- 2. You will now see the Log-on Menu on Figure 1. To enter the Model 195Eg Top Menu you will need to log into the system with a User Name and Password.
- 3. For the User Name enter admin and press the Enter key (<Enter>). The User Name is defined at the factory and is not changeable.
- 4. Enter your Password and press the Enter key (<Enter>).

ter Net	work Passwo	ord	<u>?</u> ×
<b>@</b>	Please type y	our user name and password.	
8	Site:	172.16.48.209	
	Realm	cgi-bin	
	User Name	admin	
	Password	*****	
	🗖 Save this	password in your password list	
		OK Ca	ancel

### Figure 1: ESTeem Web Page Log-on Screen

If this is the first time the Model 195Eg has been programmed and Password was not changed from the factory default values, proceed with the steps below to access the Configuration Menu.

- The factory default Password is also admin. Enter admin for the Password and press the Enter key (<Enter>).
- Note: All characters are lower case.
- 5. After Log-in the next screen displayed will be the Model 195Eg Top Menu page (Figure 2). This example screen shows the Top Menu screen.

### Note: Throughout the Configuration Manager are Help Screens that can accessed for further information on each item.

		EST195E Web Configuration Manager	
Тор	Status Log	Setup Advanced Backup Restore SoftwareUpdate Reboot About	
-		Тор	
		This is the <b>Top</b> Page for the Web Configuration Manager. Below are the most recent <b>saved</b> settings of the wireless LAN unit. To reconfigure the wireless LAN unit, select the <b>Setup</b> tab.	_
		Change Admin Password	
		Serial Number: E-14989	
		Software Version: 302.6.104	
		Modem ID:	
		Model: 195Eg	
		Boot Loader: U-Boot 1.0.0.4.3 for the 195Eg	
		Current Mode of Operation: AP Bridge	
		Wireless device 1	
		Wireless1 SSID: ESTeem	
		Wireless1 Channel(Freq): 9 (2452MHz)	
		Wireless1 MAC Address: 00:60:B3:DD:3C:97	
		Wireless 1 Repeater enabled: false	
		Ethernet device 1	
		Ethemet1 MAC Address: 00:04:3F:00:18:74	_
		Bridge device	
		Bridge MAC Address: 00:04:3F:00:18:74	
		Bridge IP Address: 172.16.58.189	
		Bridge 1P Netmask: 255.255.0.0	
		Default Koute: 172.16.1.6	
		DNS Settings: None	
		Figure 2: T	op Menu Screen



# WEB CONFIGURATION MANAGER SECTIONS

The following sections will describe the features in each of the main and sub menu items in the web pages. For step-by-step examples of how to configure the Model 195Eg in different Modes of Operation, please refer to Chapter 5 - Example Configurations.

# Top Menu

The Top Menu will be the default web page for the Model 195Eg Web Configuration Manager (Figure 2). This section will display the current configuration summary for the Model 195Eg and allow changing of the default password. This page will also display the Modem ID field that can be used to easily identify the 195Eg you are programming. This Modem ID field can be set to any text combination for example, location name, GPS coordinates or addresses.

### Setting the Modem ID

- 1. The Modem ID field can be adjusted under the *Global Variables* of the Advanced Menu tab. Select Global Variables and press the *Next* button. Figure 3 will be displayed.
- Scroll to the bottom of the Global Variables window and enter the text you would like displayed in the Modem ID field (Figure 4). When complete, press the *Save Settings* button and the *Commit Changes* button on the next screen to save the name to the 195Eg.



**Figure 3: Global Variables Screen** 

		EST195E Web Configuration Man	ager ESTE	
Top	Status Log	Setup Advanced Backup Restore SoftwareUpdate Reboot About		
		Advanced - Global Variables The following is a list of those configuration variables under the variables are independent of any specific network settings or an	Global Variables category. These value of these y specific networking interface.	
		ADMIN_HOSTNAME wdp80211	Enter 1 - 30 characters	
		ADMIN_BASETIME 010100002000	Format: MMDDhhmmYYYY	
		MODEM_ID	Free format string to use for additional identifying information for this system. E.g. "Room 301" or "4th and Main".	



# Status Menu

The Status Menu provides a summary of the current mode of operation, system time, processor usage, internal temperature and status of the communication links to other wireless devices. An example is shown below in Figure 5. Most of the communication troubleshooting is done in this section of the Web Configuration Manager.

	EST195E Web Configuration Manager	EM reless Moderns
<u>Fop</u> Status <u>Log</u> <u>Setu</u>	p Advanced Backup Restore SoftwareUpdate Reboot About	
	Status: Summary	
	This is a summary of the status of the overall system. Most of the source data for this display is also accessible through the <b>"System Details"</b> of the <b>"Log"</b> tab.	
	O manufacture De la constance d	
	Common Status	
	Current System Time: Mon. 12 Jun 2006 09:59:01	
	System Temperature: 134446952 C. 0 F	
	Up Time: 0 days, 00:00:55	
	CPU/Memory Status	
	CPU Usermode(%): 5	
	CPU Kernelmode(%): 4	
	CPU Idle(%): 91	
	CPU Interrupts per Second: 32	
	Pageable Memory Total: 14404	
	Pageable Memory Used 10388	
	Number of Processes: 26	
	Wireless device 1 Status	
	<u>View Peer Table</u>	
	View Global Counter Details	
	55LU (nex): 45:53:54:65:65:6d	
	MAC Address 00.04/3E-00.09.66	
	Wireless Repeater enabled true	
	Associated Stations: 0	
	Rx Bytes: 4444	
	Rx Frames: 60	
	Rx Frame Errors: 0	
	Tx Bytes: 8228	
	Tx Frames: 101	
	Tx Errors: 59	
	IX Drops: 42	
	Ethernet device 1 Status	
	Ethernet MAC Address: 00:04:3F:00:09:64	
	Rx Bytes: 4059	
	Rx Frames: 37	
	Rx Frame Errors: 0	
	Tx Bytes: 24572	
	Tx Frames: 91	
	Tx Errors: 0	
	IX Drops: 0	
	Figure 5: S	tatus Screen

### Peer Status Table

The Peer Status submenu lists the connected wireless devices (either Model 195Egs or 802.11g/b clients), their signal strength, data rate and time of last packet sent. Press the <u>View Peer Table</u> link and Repeater Peer Status Table will be displayed (Figure 6). For a detailed analysis of the information provided in this table, please review Appendix F – Troubleshooting.



<u>Associated Station</u> – This section will list all the associated stations that are attached to the Access Point. These could be other Model 195Eg's in one of the three Client modes or 802.11g/b devices.

<u>Repeater Peers</u> – This section will list all connected 195Eg repeater peers by their Wireless MAC address. For detailed information on repeaters, see Chapter 6 – Repeating Features.

<u>Access Points</u> – This section will list all other 802.11g or 802.11b Access Points that are sharing the operating channel (frequency) of the 195Eg. You can also note that the Repeater Peers listed above are also included in this list.

Top Status Log Set.	EST195E W	eb Confi	guration Ma	nager		E		EM ess Modems
	Status: Peer Table This page is a summary address for more details Return to Status Summary F	view of the about that	e peer table for t peer.	WLAN devi	ce wlan0. Cl	ick on a give	n MAC	
	Associated Stations							
	MAC Addr	Signal	LastRx (sec@kbps)	Tx(Pkts)	Tx(KB)	Rx(Pkts)	Rx(KB)	
	00:14:6c:19:0e:59	-48	47@54000	206	5	383	26	
	Repeater Peers MAC Addr	Signal	LastRx M (sec@kbps)	odem ID				

### **Counter Details**

The Counter Details submenu will summarize all transmitted and receive data packets for the Model 195Eg (Figure 5).

Figure 6: Peer Table Screen



# System Log Screen

The Log Screen is a trouble-shooting tool that shows the current log of Model 195Eg system messages. See Figure 7. The System Details button will display a more detailed system diagnostics that may be requested by ESTeem technical support.

EST195E Web Configuration Manager	
Top Status Log Setup Advanced Backup Restore SoftwareUpdate Reboot About	
System Log	
The following display is the system log. To view more detailed system information, click on the System Details button.	
System Details	
System Log:	
Jan 1 00:00:00 (none) syslog.info syslogd started: BusyBox v1.00 (2006.05.22-22:27+0000)	
Jan 1 00:00:01 (none) kern.notice kernel: klogd started: BusyBox v1.00 (2006.05.22-22:27+0000)	
Jan 1 00:00:01 (none) kern.warn kernel: Linux version 2.4.27 (tbrown@brown) (gcc version 3.4.3) #10 Wed May 31 14:35	5:43 PD
Jan 1 00:00:01 (none) kern.warn kernel: Early serial init of port 0	
Jan 1 00:00:01 (none) kern.warn kernel: Early serial init of port 1	
Jan 1 00:00:01 (none) kern.warn kernel: Esteem 195CPU (C) 2004 Electronic Systems Technology.	
Jan 1 00:00:01 (none) kern.warn kernel: On node O totalpages: 4096	
Jan 1 00:00:01 (none) kern.warn kernel: zone(0): 4096 pages.	
Jan 1 00:00:01 (none) kern.warn kernel: zone(1): 0 pages.	
Jan 1 00:00:01 (none) kern.warn kernel: zone(2): 0 pages.	
Jan 1 00:00:01 (none) kern.warn kernel: Kernel command line: root=/dev/mtdblock3 ro console=ttyS0,38400	
Jan 1 00:00:01 (none) kern.warn kernel: Calibrating delay loop 249.03 BogoMIPS	
Jan 1 00:00:01 (none) kern.info kernel: Memory: 14320k available (1392k kernel code, 372k data, 84k init, 0k highmen	m)
Jan 1 00:00:01 (none) kern.info kernel: Dentry cache hash table entries: 2048 (order: 2, 16384 bytes)	
Jan 1 00:00:01 (none) kern.info kernel: Inode cache hash table entries: 1024 (order: 1, 8192 bytes)	
Jan 1 00:00:01 (none) kern.info kernel: Mount cache hash table entries: 512 (order: 0, 4096 bytes)	
Jan 1 ΛΛ:ΛΛ:ΛΛ (none) kern.info kernel: Buffer cache hash table entries: 1Λ24 (order: Λ. 4Λ96 bytes)	1
Figure 7: System Log So	reen

# **Setup Screen**

The Setup screen allows the step-by-step configuration of the Model 195Eg. Please see Chapter 5 for complete description on System Setup menu and examples for system configurations. See Figure 8.

Top Status Log Setu	EST195E Web Configuration Manager	
	<b>Setup</b> This is the main <b>Setup</b> Page. Select a mode of operation for the wireless LAN unit from the following list.	
	Select Mode of Operation: AP Bridge <u>Help</u> Next	





# **Advanced Configuration Screen**

The Advanced screen allows the user to access all configuration parameters. The parameters are grouped based upon their variable. It is recommended that only advanced users of the Model 195Eg enter this section unless instructed by ESTeem technical support. See Figure 9.

	ESTeem Web Configuration Manager	Modems
Top Status Log Setu	p Advanced Backup Restore SoftwareUpdate Reboot About	
	Advanced	
	Modification of any setting in this section should only be completed if specifically noted in the documentation or requested by ESTeem technical support. Adjustment of any variable in the advanced configuration may result in product inoperability.	
	The <b>Advanced</b> feature provides access to the configuration variables without the <u>Quick Setup</u> navigation using the <u>Setup</u> tab. This feature is intended for experienced users who know the interdependencies between the configuration variables. The variables have been grouped by categories. Select from a category below.	
	To permanently commit all of your changes and reboot the system, click on the <b>"Commit and Reboot"</b> button below.	
	Once the changes have been permanently saved, the system will reboot with the new settings in effect.	
	Global Settings:	
	Global Variables 0	
	Iptables Setup O	
	Set System Time O	
	Wireless LAN Settings:	
	all wireless LAN devices O	
	wlan0 device 🛇	
	Vendor Specified Wireless LAN Settings:	
	wlan0 device 🛇	
	Network Settings:	
	wlan0 device O	
	eth0 device O	
	br0 device O	
	Static IP routes O	
	Bridge Settings:	
	Bridge variables 🔾	
	Commit and Reboot Next	
		-

Figure 9: Advanced Features Screen

## Backup Screen

The Backup Screen saves the current configuration in the Model 195Eg to a file on the computer or network. See Figure 10. Pressing the Backup Button will create a configuration file that can be saved to the computer. This saved file can then be later opened, if necessary, by the Restore menu to quickly replace a Model 195Eg with a spare modem.

EST195E Web Configuration Manager	
Top Status Log Setup Advanced Backup Restore SoftwareUpdate Reboot About	
Backup To backup the most recent commited changes to your local PC, click the Backup button below.	
Backup Figure 10: Backup So	creen



# **Restore Screen**

The Restore screen is used to restore the 195Eg to factory defaults, return to the last saved configuration or to access the configuration files that were backed up to the computer. See Figure 11.

	EST195E Web Configuration Manager
<u>Top Status Log Setu</u>	Advanced       Backup       Restore       SoftwareUpdate       Reboot       About         Restore Settings         The Restore feature allows you to restore this device to the settings from one of the sources below. Click the appropriate button.
	Factory Defaults Last Committed Changes File

### Figure 11: Restore Setting Screen

Factory Default – Returns the Model 195Eg to all factory default values.

<u>Last Committed Changes</u> – This button will remove any changes to the modem that have been done since the last committed changes. The last committed changes will be read from the Flash file and reset in the Model 195Eg.

<u>File</u> – Pressing this button will bring up a selection of where the restore file was saved during the Backup (Figure 12). Select "Upload via web browser" to browse for files saved on a local computer or select "Download from an http or ftp URL" for files saved on a network or over the Internet.

EST195E Web Configuration Manager	EM reless Moderns
Top Status Log Setup Advanced Backup Restore SoftwareUpdate Reboot About	
Restore - From a File	
Select which method this device will use to retrieve the configuration data file:	
Upload via web browser © <u>Help</u> Download from an http or ftp URL C	
Previous Next	
Figure 12: Restore From L	ocal File Screen



### Software Update Screen

The Software Update feature allows the user to update the latest Model 195Eg operating system software from a file supplied by the factory or the Internet to the Model 195Eg's flash memory. To upload from a file on your computer, select *Upload via web browser* and a file selection window will be displayed. To upload directly from the Internet, select *Download from an http or ftp URL* and enter the site address. See Figure 13.

	EST195E Web Configuration Manager
Top Status Log Set	up Advanced Backup Restore SoftwareUpdate Reboot About
	Software Update The Software Update feature allows you to perform a field update of various files, such as a software update image, containing an operating system upgrade and a new root file system, or a new HTTPS certificate.
	Select which file you wish to retrieve: Software update image file HITPS certificate HEIPS
	Next Figure 13: Software Update Screen

# System Reboot Screen

The Reboot screen allows the user to reset the Model 195Eg. See Figure 14.

	EST195E Web Configuration Manager	M dems
Top Status Log Setu	12 Advanced Backup Restore SoftwareUpdate Reboot About	
	System Reboot If you would like to reboot this device, press the <b>Reboot</b> button below. Otherwise, select from one of the above tabs to continue. Rebooting this device will cause the most recently committed configuration changes to take effect.	
	Reboot	
	Figure 14: System Reb	oot Screen