

3. Enter the **bridge** IP Address and IP Netmask for the Model 195Ep. You will notice that for the 195Ep in AP Bridge mode only a single IP address is entered. Both the ethernet IP and wireless IP addresses will be the same in the bridge mode. Reference Figure 22.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with buttons for 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Setup' button is highlighted. Below the navigation menu, the page title is 'Setup'. A sub-header reads: 'Enter values for the following fields for manual IP setup of the **bridging** device.' The configuration area shows: 'Mode of operation: AP Bridge', 'DHCP Services: Off', 'Enter IP address for **bridge** device: 172.16.2.5', and 'Enter netmask for **bridge** device: 255.255.0.0'. There are 'Previous' and 'Next' buttons at the bottom of the configuration area. A 'Help' link is visible next to each input field.

Figure 22: Bridge IP Addresses

4. Enter the default route (Gateway) address for the network. For Ethernet devices on the wireless network (IP 172.16.X.X – See Figure 3), the AP Router 195Ep will be the gateway. Enter the **wireless** IP address for the AP Router 195Ep (configured in Example 1) and any DNS server information. If you are not connecting the Model 195Ep to the Internet, leave blank and press the *Next* button. Figure 23.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with buttons for 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Setup' button is highlighted. Below the navigation menu, the page title is 'Setup'. A sub-header reads: 'Enter values for the following fields to set up the default route and DNS settings'. The configuration area shows: 'Mode of operation: AP Bridge', 'Enter default route IP address: 172.16.2.1', 'Use DNS client services? Yes No', 'Enter DNS domain:', 'Enter primary DNS server IP address:', and 'Enter secondary DNS server IP address:'. There are 'Previous' and 'Next' buttons at the bottom of the configuration area. A 'Help' link is visible next to each input field.

Figure 23: Default Route (Gateway) and DNS Configuration

5. Select *Yes* if you will be using security for your wireless network (recommended).

NOTE: The setting of this security level is ONLY for client access to the Model 195Ep. The security of the Bridge communication between the Model 195Ep's is separate and will be configured during the repeater configuration.

Enter the SSID for your network. The SSID is the unique identification for your wireless network and all 195Ep that share a wireless network **MUST** have the same SSID code. This identification code is case sensitive and must **NOT** contain spaces. Reference Figure 24.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with links: Top, Status, Log, Setup, Advanced, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Setup' section is active. Below the navigation, the title 'Setup' is followed by a descriptive text: 'In the following fields, select whether you want wireless security features turned on and enter the service set identifier (SSID) that will be common to all wireless LAN devices.' The main content area shows 'Selected mode of operation: AP Bridge'. Below this, there is a question 'Turn on wireless security features?' with radio buttons for 'Yes' (selected) and 'No'. To the right of this question is a 'Help' link. Below the radio buttons is a text input field for 'Enter the SSID:' containing the text 'ESTeem', with another 'Help' link to its right. At the bottom of the form are 'Previous' and 'Next' buttons.

Figure 24: Security and SSID Configuration

6. Select the encryption level for client access to the wireless network. For further information on the different levels of security, please refer to Appendix E – Security of this User’s Manual. If you would like to hide the SSID from broadcasting from the Access Point select **Yes**. If **Yes** is selected the Model 195Ep will not send out periodic SSID radio. The users of the network will have to know the SSID to enter the network and security is increased, but if you want the SSID to be broadcast to the network for easy identification then select **No**. The 195Ep can also be configured to discard the probe requests from clients. If desired, set Discard Broadcast Probes to **Yes**. In our example, we will be using mobile clients with 128 bit WEP. Reference Figure 25.

The screenshot shows the 'EST195E Web Configuration Manager' interface, similar to Figure 24. The 'Setup' section is active. Below the navigation, the title 'Setup' is followed by a descriptive text: 'Enter/select values for the following fields to set up wireless security features.' The main content area shows 'Select an encryption type:' with radio buttons for 'None', 'WEP 64-bit', 'WEP 128-bit' (selected), 'WPA PSK', and 'WPA Enterprise'. To the right of this question is a 'Help' link. Below the radio buttons is a question 'Hide Beacon SSID and Discard Broadcast Probes?' with radio buttons for 'Yes' and 'No' (selected). To the right of this question is another 'Help' link. At the bottom of the form are 'Previous' and 'Next' buttons.

Figure 25: Encryption Level Selection

7. Enter the WEP key values for your application that will be used by all devices on the wireless network. Reference Figure 26.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Setup' section is active. Below the navigation, there is a title 'EST195E Web Configuration Manager' and the 'ESTEEM Wireless Modems' logo. The main content area is titled 'Setup' and contains the following text: 'Enter 13 hexadecimal bytes, separated by colons, for each of the following 128-bit WEP keys and select which key should be used as the default WEP key. These values are effective for all wireless LAN devices.' Below this text, there are four input fields for WEP keys, each labeled 'Enter WEP Key 1' through '4' and '(13 hex bytes):'. Each field contains the default value '11:22:33:44:55:66:77:88:99:00:aa:bb:cc'. To the right of each field is a 'Help' link. Below the input fields, there is a section for selecting the default WEP key, with radio buttons for 'WEP Key 1', 'WEP Key 2', 'WEP Key 3', and 'WEP Key 4'. A 'Help' link is also present to the right of this section. At the bottom of the configuration area, there are 'Previous' and 'Next' buttons.

Figure 26: WEP Key Entry

8. Enter the values for the Access Control List (ACL). This is a configurable MAC filter that can be set to allow or deny specific wireless MAC address to the network. This feature is further explained in Appendix E – Security. In our example we will not use the ACL. Reference Figure 27.
9. Select the frequency channel of operation. All Access Points in the same Repeater Peer network need to be on the same radio

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Advanced' section is active. Below the navigation, there is a title 'EST195E Web Configuration Manager' and the 'ESTEEM Wireless Modems' logo. The main content area is titled 'Setup' and contains the following text: 'Enter the appropriate values in the fields below for configuring MAC Address Authentication. If **allow_all** is selected, the MACs in the access control list are ignored.' Below this text, there is a section for selecting the MAC address authentication mode, with radio buttons for 'allow_all', 'allow only those client MACs in the list below', and 'deny only those client MACs in the list below'. A 'Help' link is present to the right of this section. Below the radio buttons, there is an 'Enter MAC address:' field with an 'Add MAC to Access Control List' button. Below this, there is an 'Access Control List:' field with a 'Remove MAC' button and a 'Remove ALL MACs' button. Below the buttons, there is a note: 'To remove a MAC address from the access control list, select the MAC to remove and click the **Remove MAC** button. To remove all MAC addresses from the list, click the **Remove ALL MACs**.' At the bottom of the configuration area, there are 'Previous' and 'Next' buttons.

Figure 27: ACL Configuration

frequency channel. See Appendix D – Radio Configuration for help in selecting the frequency channel. Reference Figure 28.

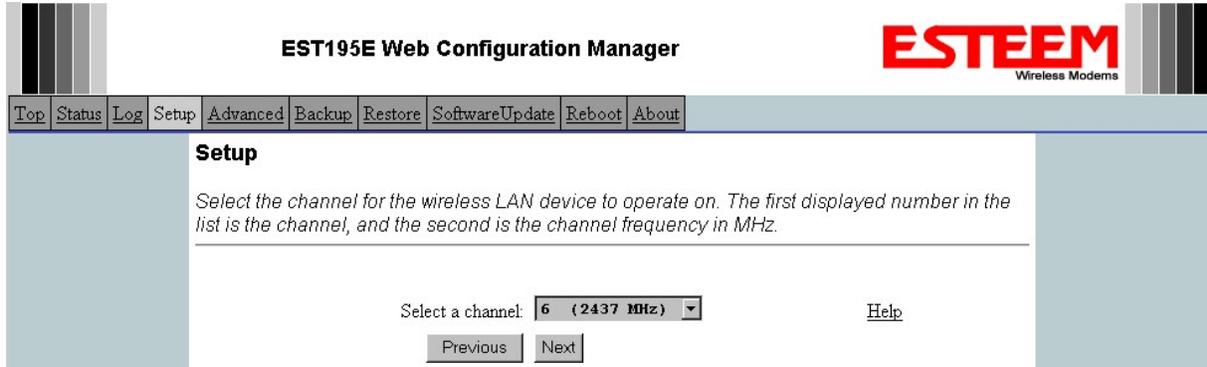


Figure 28: Channel Configuration

10. The Repeater Peer Table identifies which Model 195Ep’s will bridge wireless Ethernet communication. Only other Access Point Repeaters need to be listed not the Model 195Ep’s in client modes. Looking at the system layout in Figure 1 and what we discussed in Example 1, both the Plant Network’s 195Ep and the Remote Building’s 195Ep will be listed by their wireless (WLAN) MAC (Figure 29). There is only a single radio connection path to the other two 195Ep’s in the network. The path cost only effects redundant links in the network (not applicable to the repeater) and will be left at default. Enter the WLAN MAC addresses for the other two Access Points and press the *Next* button to continue.
11. Select Commit Changes to write the programming to Flash memory and reboot the Model 195Ep. When the reboot process has completed (approximately 30 seconds) the modem will be ready to place in operation.

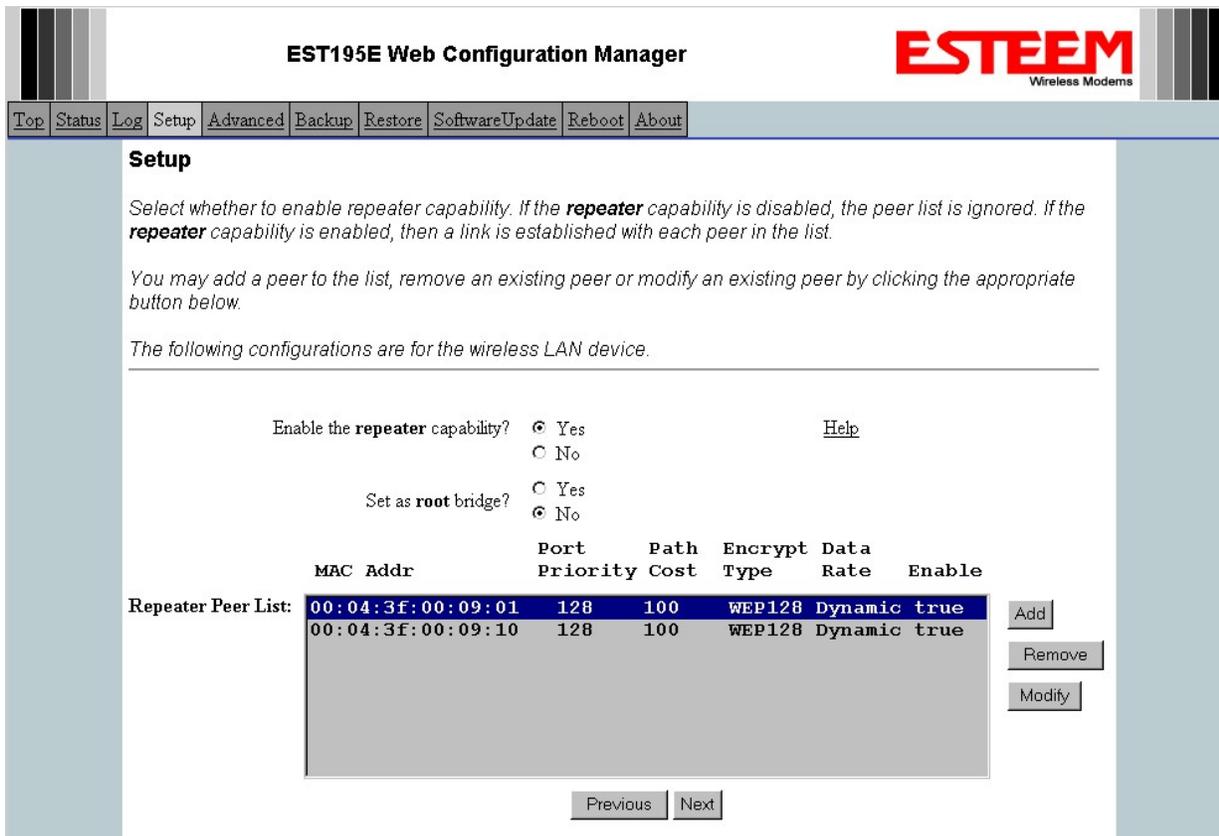


Figure 29: Repeater Configuration

Example 3 – Remote Building (Access Point Bridge with Repeater Enabled)

1. Review Example #1 diagram (Figure 1) and locate the 195Ep marked as Example 3. This ESTeem is connected to a Remote Building network that will be bridged to the Plant network through the Access Point Router (Example #1) via the repeater. This modem should be configured for Access Point Bridge mode and the configuration for this 195Ep will be identical to Example 2 except that the IP addressing and the Repeater Peer table. You would follow all steps 1-11 in Example 2 to configure this 195Ep also but Figures 31 & 32 will show the changes.

EST195E Web Configuration Manager

ESTEEM Wireless Modems

Top Status Log Setup **Advanced** Backup Restore SoftwareUpdate Reboot About

Setup

Enter values for the following fields for manual IP setup of the **bridging** device.

Mode of operation: AP Bridge
 DHCP Services: Off

Enter IP address for **bridge** device: [Help](#)

Enter netmask for **bridge** device: [Help](#)

Figure 31: Example 3 Bridge IP Address

EST195E Web Configuration Manager

ESTEEM Wireless Modems

Top Status Log Setup **Advanced** Backup Restore SoftwareUpdate Reboot About

Setup

Select whether to enable repeater capability. If the **repeater** capability is disabled, the peer list is ignored. If the **repeater** capability is enabled, then a link is established with each peer in the list.

You may add a peer to the list, remove an existing peer or modify an existing peer by clicking the appropriate button below.

The following configurations are for the wireless LAN device.

Enable the **repeater** capability? Yes No [Help](#)

Set as **root** bridge? Yes No

MAC Addr	Port Priority	Path Cost	Encrypt Type	Data Rate	Enable
00:04:3f:00:09:01	128	201	WEP128	Dynamic	true
00:04:3f:00:09:05	128	100	WEP128	Dynamic	true

Repeater Peer List:

Figure 32: Example 3 Repeater Routing Table

Example 4 – Mobile Vehicle with Single Ethernet Device (EtherStation Mode)

Review the Example Diagram #1 (Figure 1) and locate the 195Ep marked as Example 4. This ESTeem is connected to a single Ethernet device in a mobile application and will be configured for EtherStation mode. In this mode the 195Ep will gain access to the wireless Ethernet canopy created by the three Access Points (Examples 1-3), but will be emulating the MAC address for the connected Ethernet device and will no longer have an IP address in the network. To reprogram the 195Ep after configuration in EtherStation mode requires the ESTeem Discovery Utility or direct connection to the RS-232 port.

1. Access the ESTeem Web page using your computer's Web Browser as per instructions in Chapter 4. Select Setup from the menu items. From the Select Mode of Operation pull down box, select EtherStation (Figure 33) and push the *Next* button below the pull down box.

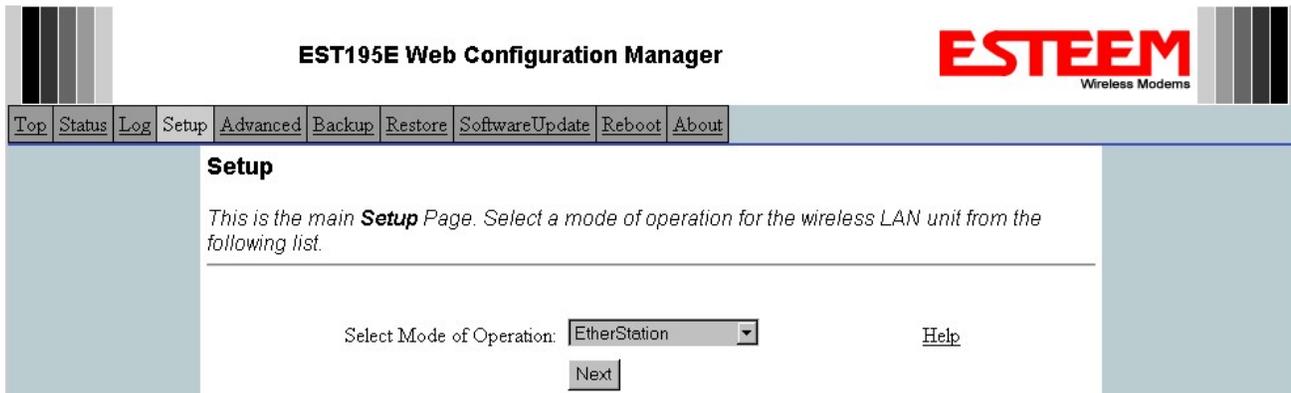


Figure 33: EtherStation Selection

2. Enter the SSID for your network. The SSID is the unique identification for your wireless network and all 195Ep that share a wireless network MUST have the same SSID code. This identification code is case sensitive and must NOT contain spaces. Select the encryption level for the wireless network to match the level of the Access Point canopy. Enter the MAC address of the connected Ethernet device. Reference Figure 34.

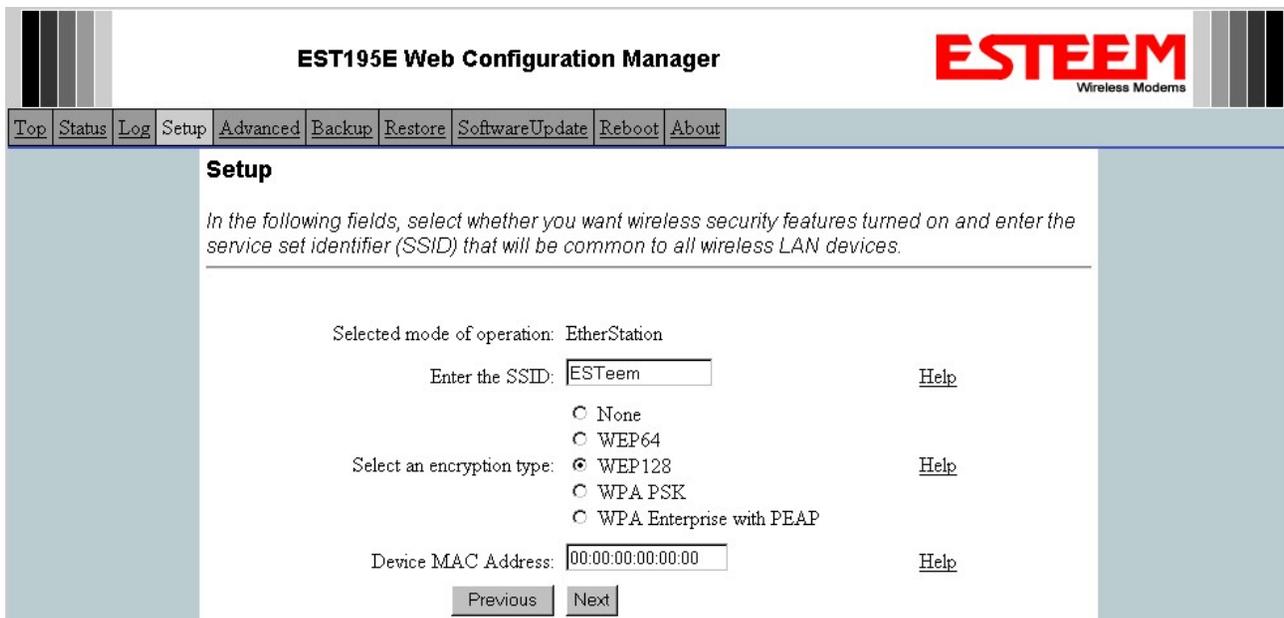


Figure 34: SSID and Device MAC Input

3. Enter the WEP key values for your application that will be used by all devices on the wireless network. Reference Figure 35.

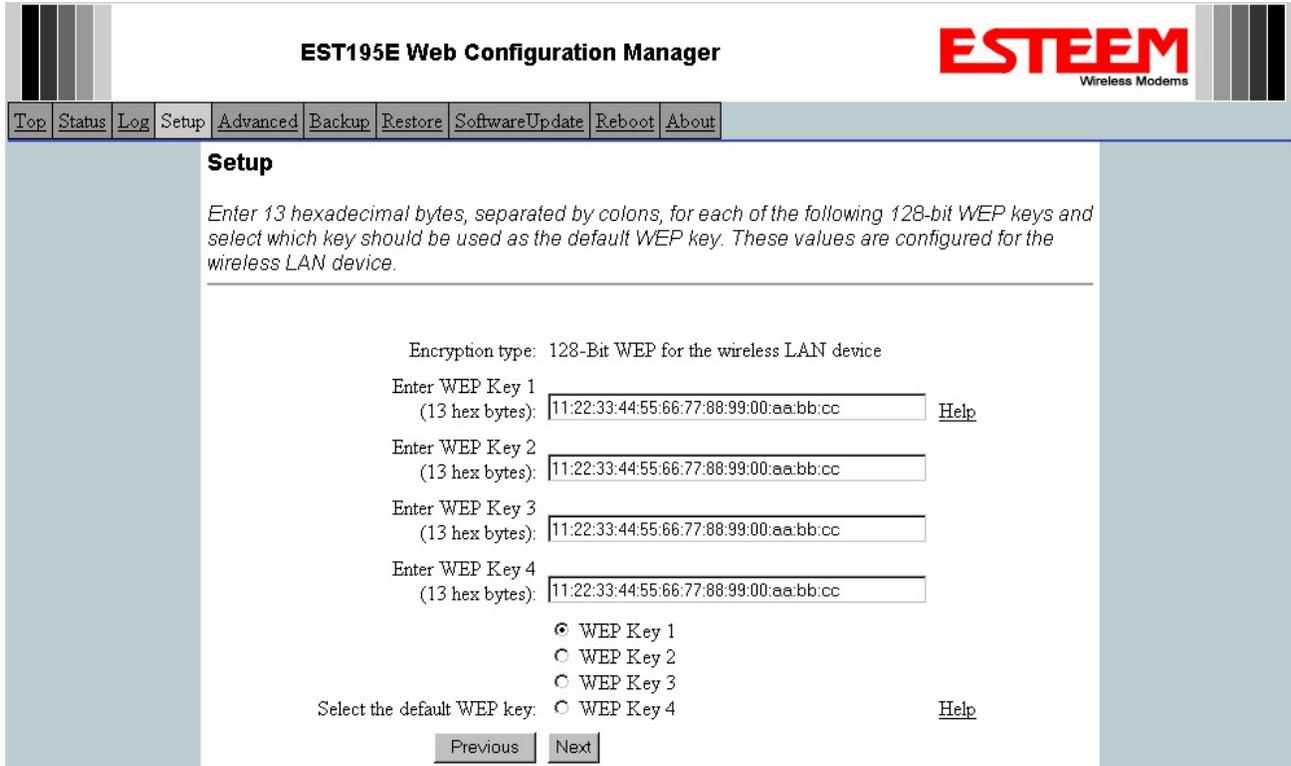


Figure 35: WEP Key Input

4. Select Commit Changes to write the programming to Flash memory and reboot the Model 195Ep. When the reboot process has completed (approximately 30 seconds) the modem will be ready to place in operation. Reference Figure 36.

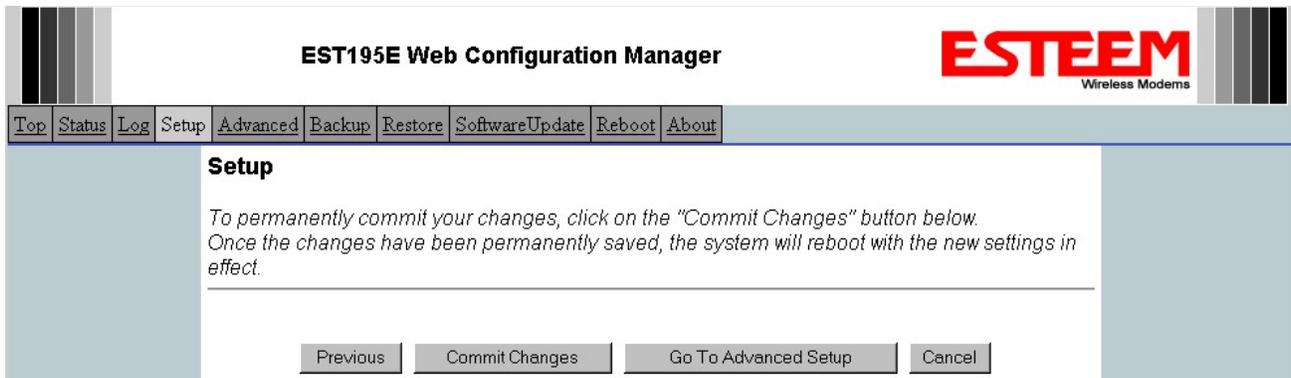


Figure 36: EtherStation Selection

Example 5 – Mobile Vehicle #1 (Station Router)

Review the Example Diagram #2 (Figure 2) and locate the 195Ep marked as Example 5. This ESTeem is connected to multiple Ethernet devices in a mobile application and will be configured Station Router mode. In this mode the 195Ep's will gain access to the wireless Ethernet canopy created by the Access Point and act as the router between the devices connected to the Ethernet port and wireless network. Each of these networks will require a unique subnet to operate. If Ethernet devices on the wired LAN network want to access Ethernet devices on the Station Router 195Ep, a network router is required on the wired LAN to resolve the IP conflict created by having the wired and wireless networks on separate subnets (Figure 37).

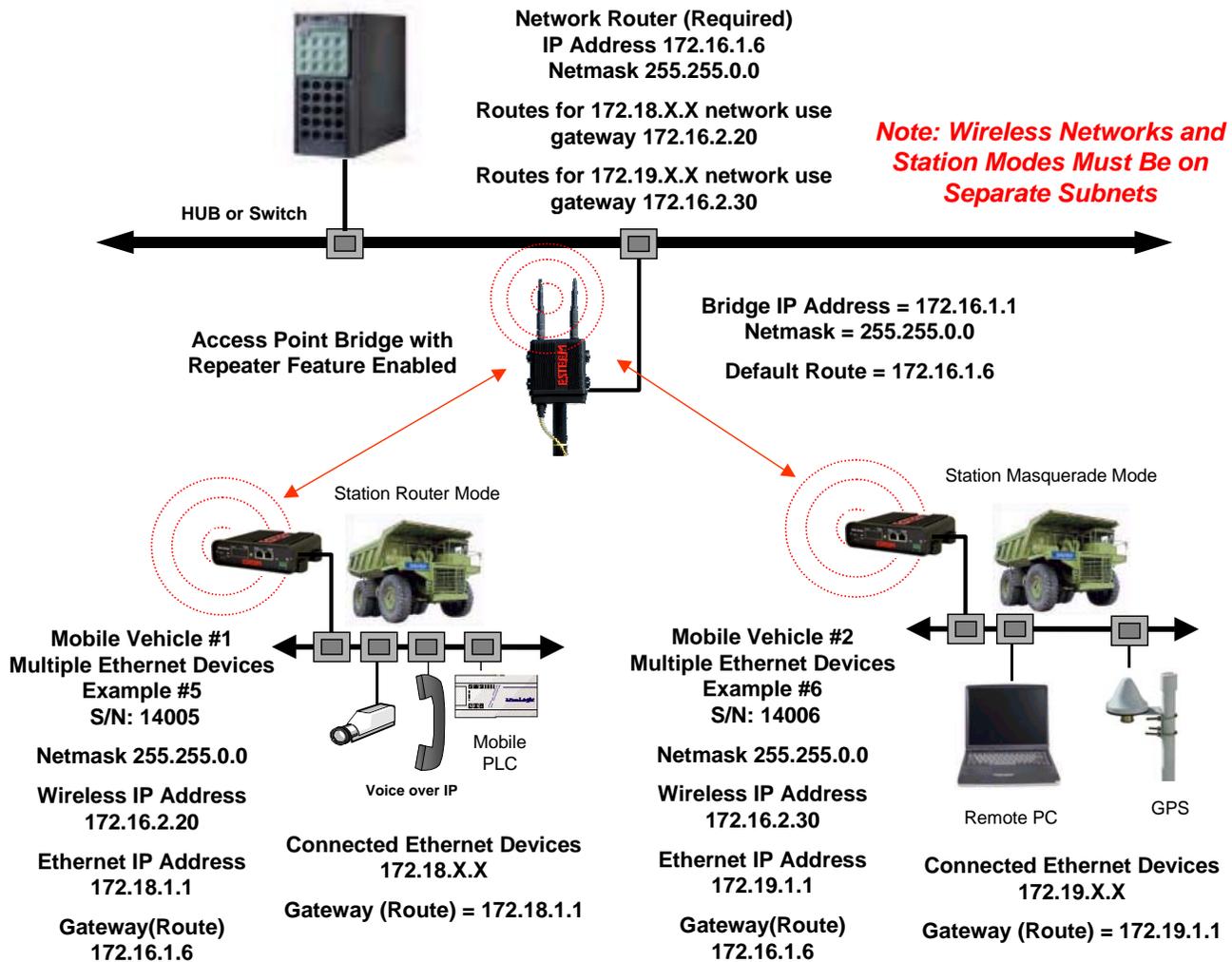


Figure 37: Station Router IP Addressing Diagram

1. Access the ESTeem Web page using your computer's Web Browser as per instructions in Chapter 4. Select Setup from the menu items. From the Select Mode of Operation pull down box , select Station Router (Figure 38) and push the *Next* button below the pull down box.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top right is the 'ESTEEM Wireless Modems' logo. Below the logo is a navigation menu with items: Top, Status, Log, Setup, Advanced, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Setup' menu item is highlighted. The main content area is titled 'Setup' and contains the text: 'This is the main Setup Page. Select a mode of operation for the wireless LAN unit from the following list.' Below this text is a form with a label 'Select Mode of Operation:' followed by a dropdown menu currently showing 'Station Router'. To the right of the dropdown is a 'Help' link. Below the dropdown is a 'Next' button.

Figure 38:Station Router Selection

2. Select *Yes* if you would like to use DHCP services on either the **wireless** or **ethernet** connections. Enter the SSID for your network. The SSID is the unique identification for your wireless network and all 195Ep that share a wireless network **MUST** have the same SSID code. This identification code is case sensitive and must **NOT** contain spaces. Select the encryption level for the wireless network to match the level of the Access Point canopy. Reference Figure 39.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top right is the 'ESTEEM Wireless Modems' logo. Below the logo is a navigation menu with items: Top, Status, Log, Setup, Advanced, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Setup' menu item is highlighted. The main content area is titled 'Setup' and contains the text: 'In the following fields, select whether you wish to use DHCP client services or whether you wish configure a DHCP server. Selecting "Off" will take you through a manual setup of IP addresses as opposed to using DHCP services.' Below this text is another line of text: 'Additionally, select whether you want wireless security features turned on and enter the service set identifier (SSID) for the first wireless LAN device.' Below this text is a form with the following fields: 'Selected mode of operation: Station Router', 'DHCP services on wireless interface:' with radio buttons for Off (selected), Client, and Server, and a 'Help' link; 'DHCP services on bridge interface:' with radio buttons for Off (selected), Client, and Server; 'Enter the SSID:' with a text input field containing 'ESTeem' and a 'Help' link; and 'Select an encryption type:' with radio buttons for None, WEP64, WEP128 (selected), WPA PSK, and WPA Enterprise with PEAP, and a 'Help' link. At the bottom of the form are 'Previous' and 'Next' buttons.

Figure 39:DHCP, SSID and Encryption Settings

3. Enter the WEP key values for your application that will be used by all devices on the wireless network. Reference Figure 40.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with tabs: Top, Status, Log, Setup, **Advanced**, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Advanced' tab is selected. The main content area is titled 'Setup' and contains the following text: 'Enter 13 hexadecimal bytes, separated by colons, for each of the following 128-bit WEP keys and select which key should be used as the default WEP key. These values are configured for the wireless LAN device.'

Below the text, the configuration options are as follows:

- Encryption type: 128-Bit WEP for the wireless LAN device
- Enter WEP Key 1 (13 hex bytes): [Help](#)
- Enter WEP Key 2 (13 hex bytes):
- Enter WEP Key 3 (13 hex bytes):
- Enter WEP Key 4 (13 hex bytes):

Below the keys, there are radio buttons to select the default WEP key:

- WEP Key 1
- WEP Key 2
- WEP Key 3
- WEP Key 4

Below the radio buttons, the text reads: 'Select the default WEP key: [Help](#)'. At the bottom of the form, there are two buttons: 'Previous' and 'Next'.

Figure 40:WEP Key Input

4. Refer to the IP address in Table 1 and enter the **wireless** IP Address and IP Netmask for the Station Router. Reference Figure 41.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with tabs: Top, Status, Log, Setup, **Advanced**, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Advanced' tab is selected. The main content area is titled 'Setup' and contains the following text: 'Enter values for the following fields for manual IP setup.'

Below the text, the configuration options are as follows:

- Mode of operation: Station Router
- DHCP Services: Off
- Enter IP address for the **wireless** LAN interface: [Help](#)
- Enter netmask for the **wireless** LAN interface: [Help](#)

At the bottom of the form, there are two buttons: 'Previous' and 'Next'.

Figure 41:Wireless IP Address

5. Refer to the IP address in Table 1 and enter the **ethernet** IP address and IP netmask. Reference Figure 42.

Note: When configuring the Ethernet devices connected to the Station Router 195Ep, the ethernet IP address will be their Gateway address (Figure 37).

The screenshot shows the 'Setup' page of the ESTEEM Web Configuration Manager. The page title is 'EST195E Web Configuration Manager' and the ESTEEM logo is in the top right. A navigation menu at the top includes 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The main content area is titled 'Setup' and contains the instruction: 'Enter values for the following fields for manual IP setup of the **wired bridging** device.' Below this, the configuration options are: 'Mode of operation: Station Router', 'DHCP Services: Off', 'Enter IP address for **wired bridge** device: 172.18.1.1', and 'Enter netmask for **wired bridge** device: 255.255.0.0'. Each input field has a 'Help' link to its right. At the bottom, there are 'Previous' and 'Next' buttons.

Figure 42:Wired Ethernet IP Address

6. All IP requests for the Ethernet devices connected to the 195Ep Station Router (Example #5) will need to be resolved by the Network Router (Figure 37). Enter the default route (Gateway) IP address for the Network Router in the 195Ep. Enter any DNS server information and press the *Next* button. Figure 43.

The screenshot shows the 'Setup' page of the ESTEEM Web Configuration Manager. The page title is 'EST195E Web Configuration Manager' and the ESTEEM logo is in the top right. A navigation menu at the top includes 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The main content area is titled 'Setup' and contains the instruction: 'Enter values for the following fields to set up the default route and DNS settings'. Below this, the configuration options are: 'Mode of operation: Station Router', 'Enter default route IP address: 172.16.1.6', 'Use DNS client services? Yes No', 'Enter DNS domain:', 'Enter primary DNS server IP address:', and 'Enter secondary DNS server IP address:'. Each input field has a 'Help' link to its right. At the bottom, there are 'Previous' and 'Next' buttons.

Figure 43:Default Route (Gateway) Address and DNS Input

7. Select *Commit Changes* to write the programming to Flash memory and reboot the Model 195Ep. When the reboot process has completed (approximately 30 seconds) the modem will be ready to place in operation.

Example 6 – Mobile Vehicle #2 (Station Masquerade)

Review the Example Diagram #2 (Figure 2) and locate the 195Ep marked as Example 6. This ESTeem is connected to multiple Ethernet devices in a mobile application and will be configured Station Masquerade mode. In this mode the 195Ep's will gain access to the wireless Ethernet canopy created by the Access Point and act as a firewall between the devices connected to the Ethernet port and wireless network. Each of these networks will require a unique subnet to operate. In this configuration the Ethernet devices connected to the Station Masquerade 195Ep can access the wired LAN network, but not the other way around. This mode could be used if the Remote PC connected to the Station Masquerade needed to access the Internet (connected to the wired LAN), but did not want to be seen by other Ethernet devices on the network.

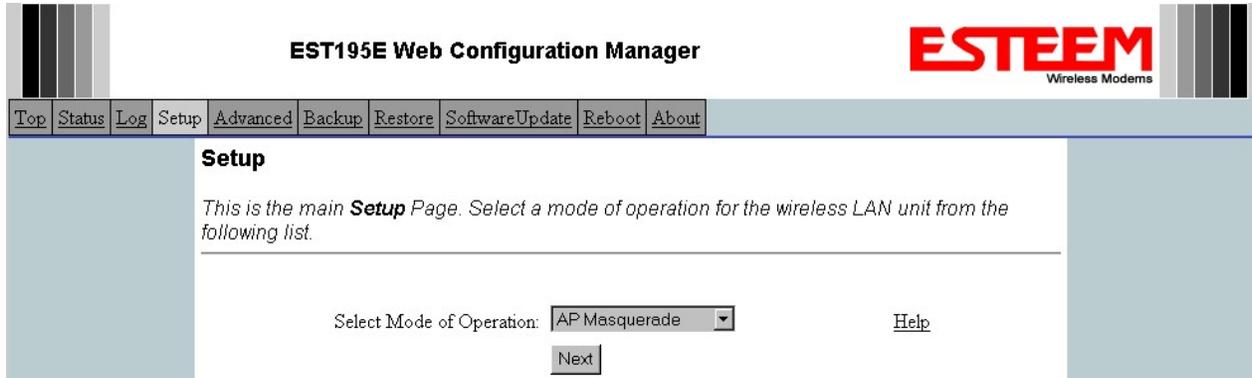


Figure 44: Station Masquerade Selection

1. Access the ESTeem Web page using your computer's Web Browser as per instructions in Chapter 4. Select Setup from the menu items. From the Select Mode of Operation pull down box, select Station Masquerade (Figure 44) and push the *Next* button below the pull down box.

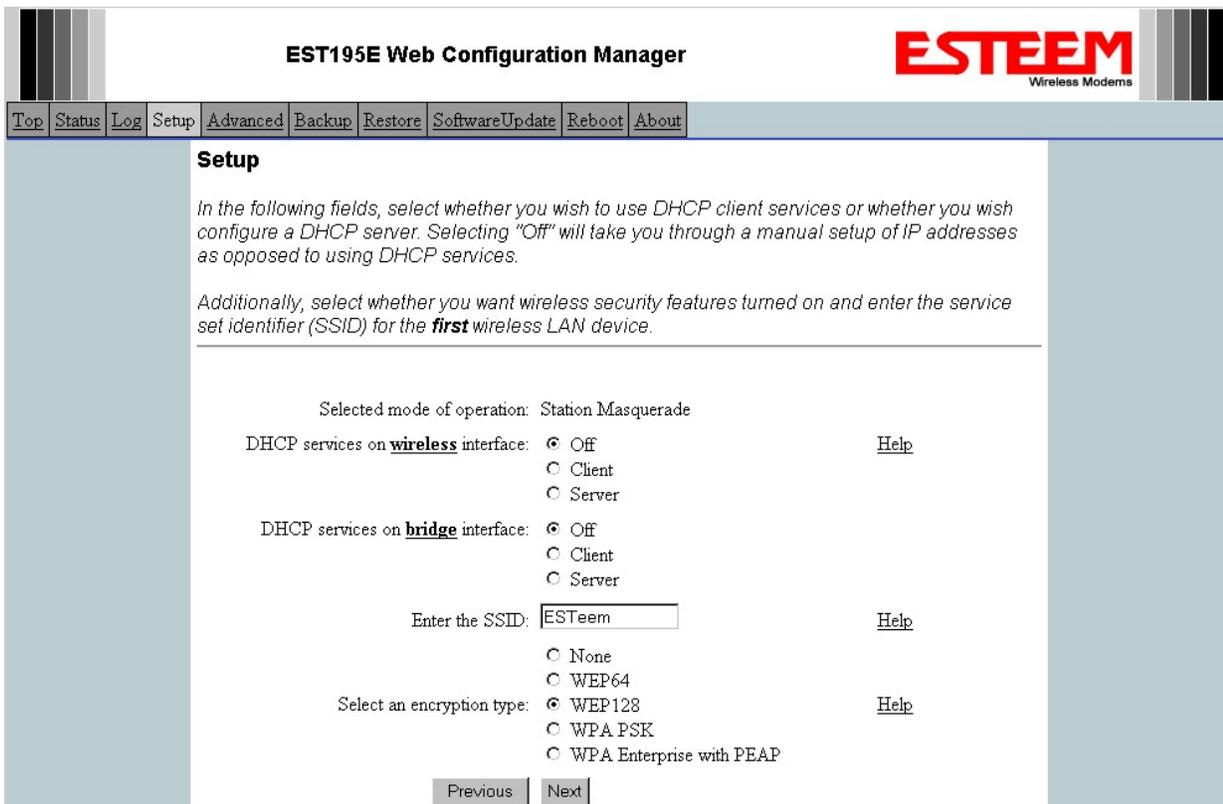


Figure 45: DHCP, SSID and Encryption Settings

2. Select *Yes* if you would like to use DHCP services on either the **wireless** or **ethernet** connections. Enter the SSID for your network. The SSID is the unique identification for your wireless network and all 195Ep that share a wireless network **MUST** have the same SSID code. This identification code is case sensitive and must **NOT** contain spaces. Select the encryption level for the wireless network to match the level of the Access Point canopy. Reference Figure 45.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation bar with links: Top, Status, Log, Setup, Advanced, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Setup' section is active. Below the navigation bar, the title 'Setup' is displayed. A paragraph of instructions reads: 'Enter 13 hexadecimal bytes, separated by colons, for each of the following 128-bit WEP keys and select which key should be used as the default WEP key. These values are configured for the wireless LAN device.' Below this, the 'Encryption type' is set to '128-Bit WEP for the wireless LAN device'. There are four input fields for WEP keys, each labeled 'Enter WEP Key 1' through '4' and containing the value '11:22:33:44:55:66:77:88:99:00:aa:bb:cc'. To the right of each field is a 'Help' link. Below the key fields, there are four radio buttons labeled 'WEP Key 1' through '4', with 'WEP Key 1' selected. Below the radio buttons, there is a label 'Select the default WEP key:' and a 'Help' link. At the bottom of the form are 'Previous' and 'Next' buttons.

Figure 46:WEP Key Entry

3. Enter the WEP key values for your application that will be used by all devices on the wireless network. Reference Figure 46.
4. Refer to the IP address in Table 1 and enter the **wireless** IP Address and IP Netmask for the Station Router. Reference Figure 47.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation bar with links: Top, Status, Log, Setup, Advanced, Backup, Restore, SoftwareUpdate, Reboot, and About. The 'Setup' section is active. Below the navigation bar, the title 'Setup' is displayed. A paragraph of instructions reads: 'Enter values for the following fields for manual IP setup.' Below this, the 'Mode of operation' is set to 'Station Masquerade' and 'DHCP Services' is set to 'Off'. There are two input fields: 'Enter IP address for the wireless LAN interface:' with the value '172.16.2.30' and 'Enter netmask for the wireless LAN interface:' with the value '255.255.0.0'. To the right of each field is a 'Help' link. At the bottom of the form are 'Previous' and 'Next' buttons.

Figure 47:Wireless IP Settings

5. Refer to the IP address in Table 1 and enter the **ethernet** IP address and IP netmask. Reference Figure 48.

Note: When configuring the Ethernet devices connected to the Station Router 195Ep, the ethernet IP address will be their Gateway address (Figure 37).

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with buttons for 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Setup' button is selected. The main content area is titled 'Setup' and contains the following text: 'Enter values for the following fields for manual IP setup of the **wired bridging** device.' Below this, there are several configuration options: 'Mode of operation: Station Masquerade', 'DHCP Services: Off', 'Enter IP address for **wired bridge** device: 172.16.38.189', and 'Enter netmask for **wired bridge** device: 255.255.0.0'. Each input field has a 'Help' link to its right. At the bottom of the form, there are 'Previous' and 'Next' buttons.

Figure 48:Wired Ethernet Interface

6. All IP requests for the Ethernet devices connected to the 195Ep Station Router (Example #5) will need to be resolved by the Network Router (Figure 37). Enter the default route (Gateway) IP address for the Network Router in the 195Ep. Enter any DNS server information and press the *Next* button. Figure 49.

The screenshot shows the 'EST195E Web Configuration Manager' interface. At the top, there is a navigation menu with buttons for 'Top', 'Status', 'Log', 'Setup', 'Advanced', 'Backup', 'Restore', 'SoftwareUpdate', 'Reboot', and 'About'. The 'Setup' button is selected. The main content area is titled 'Setup' and contains the following text: 'Enter values for the following fields to set up the default route and DNS settings'. Below this, there are several configuration options: 'Mode of operation: Station Masquerade', 'Enter default route IP address: 172.16.1.6', 'Use DNS client services? Yes No', 'Enter DNS domain:', 'Enter primary DNS server IP address:', and 'Enter secondary DNS server IP address:'. Each input field has a 'Help' link to its right. At the bottom of the form, there are 'Previous' and 'Next' buttons.

Figure 49:Default Route (Gateway) and DNS Input

7. Select *Commit Changes* to write the programming to Flash memory and reboot the Model 195Ep. When the reboot process has completed (approximately 30 seconds) the modem will be ready to place in operation.