

RLX-FHES
Wireless
Ethernet Switch
with Serial

Quick Start Guide



April 15, 2005

Table of Contents

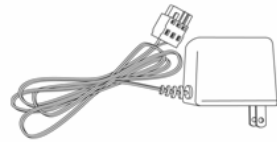
BEFORE YOU BEGIN	1
INSTALL THE CONFIGURATION SOFTWARE ON YOUR PC.....	2
CONNECT YOUR PC TO A RLX-FHES.....	3
SET UP IP ADDRESSES	4
CONFIGURE A RLX-FHES USING THE ETHERNET PORT	5
TEST COMMUNICATIONS	8
IF YOU ENCOUNTER PROBLEMS.....	9
ENCRYPTION KEYS	10
ADVANCED CONFIGURATION SCREEN	11
CHECKING YOUR IP ADDRESS	12
WHAT'S NEXT?	14

Before You Begin

Your RLX-FHES Wireless Ethernet Switch is shipped with the following:



RLX-FHES
Wireless Ethernet
Switch



AC Power
Adapter



5-foot Ethernet
Straight-Thru
Cable (Gray)



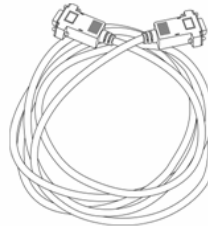
Omni-directional
antenna (2 dBi)



5-foot Ethernet
Crossover
Cable (Red)



Radiolinx CD



DB9 M/F 6-foot
Configuration
Cable

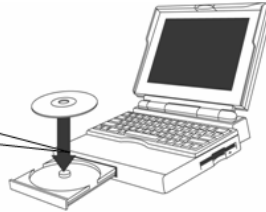
In addition, you will need:

- A PC or Laptop computer equipped with an Ethernet port
- IP addresses for each RLX device you plan to install. You can obtain this information from your system administrator.

Note: This Startup Guide is designed for use with two (2) RLX-FH radios. One radio will be set up as a Master (base) while the other radio will be set up as a Remote.

Install the Configuration Software on Your PC

1. Insert the RadioLinX Solutions CD into your CD-ROM drive and close the drive.



2. When this screen appears, select "Open folder to view files using Windows Explorer."



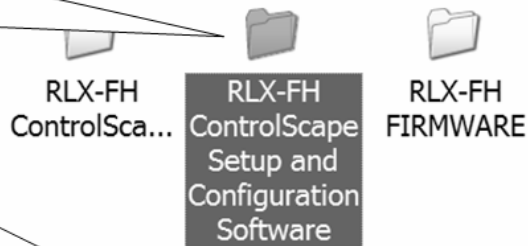
3. Click OK

4. Double-click on the RLX-FH folder.



Note: Use the default installation directories.

5. Double-click on the RLX-FH ControlScape Setup and Configuration Software folder.



6. Double-click on the Setup icon to start the installation process. When complete, the program adds the RadioLinX ControlScape icon to your desktop for use in the next step.

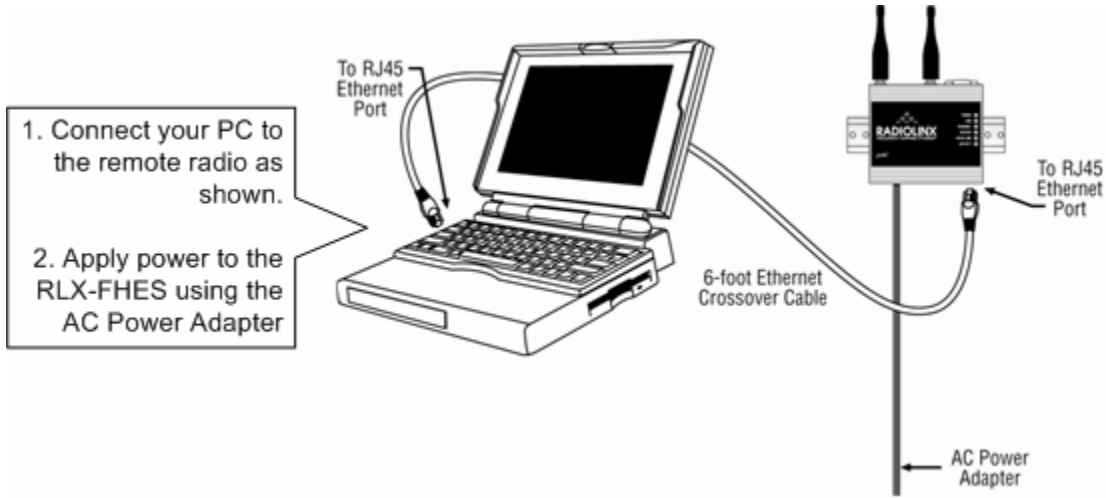


Note: This example uses Microsoft XP operating system. Your screens may vary depending on the operating system installed on your PC.

Connect Your PC to a RLX-FHES

You can configure the RLX-FHES using the Ethernet or Serial port on the module. Using the Ethernet port is the most common method and will be illustrated in the Quick Start Guide. For instructions on how to configure the RLX-FHES using the Serial port, please see the ControlScape FH software online Help.


Ethernet Port Connection



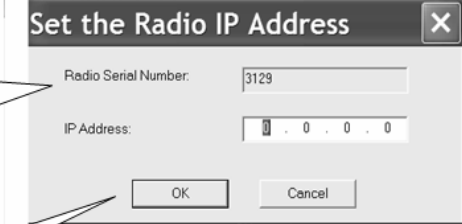
Set Up IP Addresses

All new RadioLinx Radios must have their IP addresses set using the following procedure. The IP address of the PC must be on the same network as the IP address assigned for the RLX-FHES. If you are not sure if your PC address matches, refer to “Checking Your PCs IP Address” at the end of this Quick Start.

1. From your desktop, double-click on this icon to begin the configuration process.

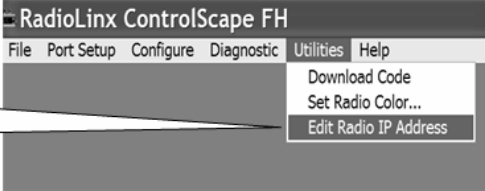


2. The software will detect the RLX-FHES connected to your PC and displays the serial number of the connected RLX-FHES.

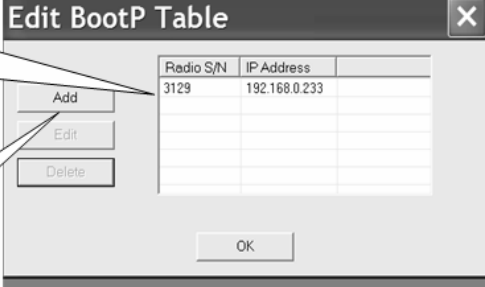


3. Enter the IP Address for this RLX-FHES. Press the OK button.

4. Select Edit Radio IP Address from the Utilities menu.



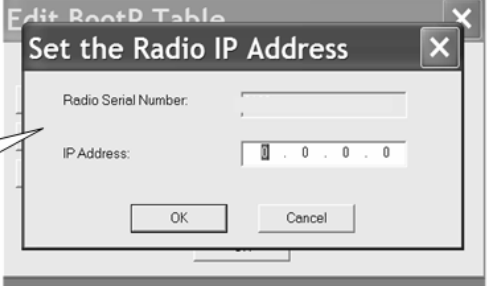
5. The RLX-FHES that you assigned an IP address to appears in the Edit BootP table.



Radio S/N	IP Address
3129	192.168.0.233


6. Click the Add button to add another radio.

Enter the serial numbers and IP addresses for all additional radios.

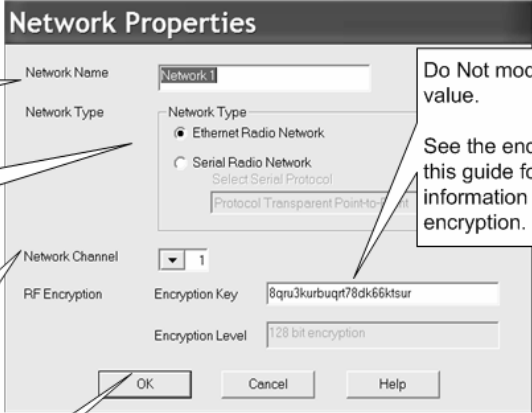


Configure a RLX-FHES Using the Ethernet Port

Note: You can configure the RLX-FHES using the Ethernet port or the serial port. This procedure configures the RLX-FHES using the Ethernet port. For information on using the serial port, please refer to the online Help.



1. From the ControlScape Main Menu, choose Configure/New Network



2. Type in a Network Name

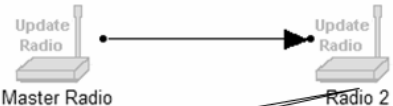
3. Select Ethernet Radio Network

4. If you have previously configured a RLX-FHES network, select a different channel.

5. Click OK. Update radio icons appear on the screen.

Do Not modify this value.

See the end of this guide for information on encryption.



6. Double-click on the Radio 2 icon

7. Type in a Radio Name.

8. Click on the Select Radio button. The Select Radio dialog appears.

9. Choose the remote radio by serial number and IP address by highlighting it.

10. Press the Select button. The IP address now appears in the IP Address field of the Radio Configuration window.

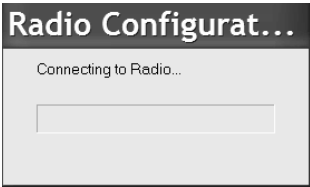
11. Type in the Subnet Mask. The Subnet Mask is set to 255.255.255.0 for Class C and for this example. All devices should have the same Subnet Mask.

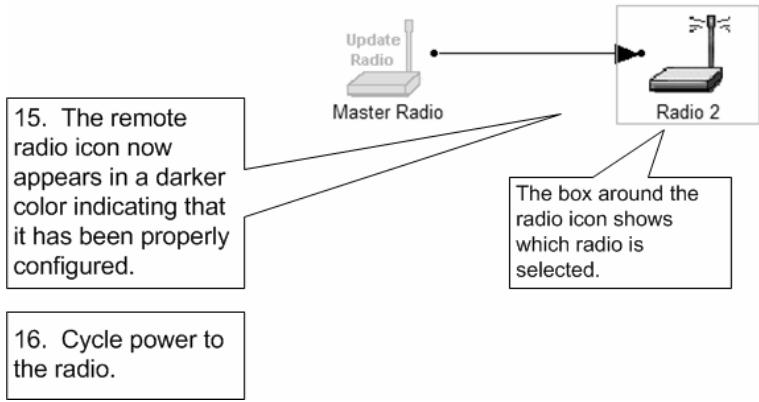
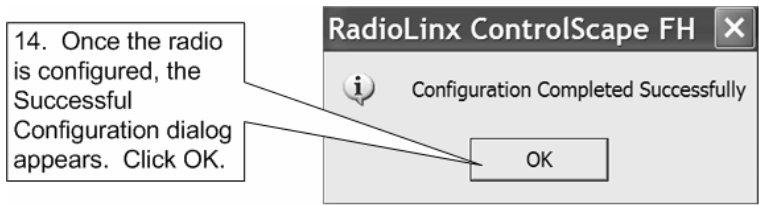
12. Type in the Default Gateway (optional). The Default Gateway defines the default network that the configuration PC operates on.

13. Click the Configure Radio button to start the configuration process on the remote radio.

Radio S/N	IP Address
3171	192.168.0.234
3172	192.168.0.233

Once you click the Configure Radio button, a dialog box appears showing the progress of the configuration download.



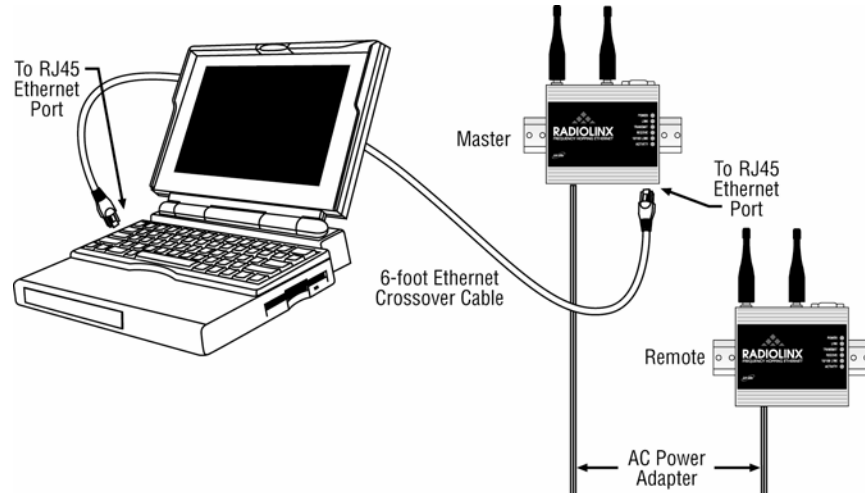


Note: Repeat this process to setup the master radio.

Once both radios are properly setup, the Power and Link LEDs should be lit, and the Transmit and Receive LEDs will be flickering, indicating communication between them.

Test Communications

With each radio configured, ensure that you still have your PC connected to the Master RLX-FHES as shown in the following diagram.



Note: This test requires the use of the ping command. You will need to know the pathname where the ping command resides in order to use it. If you do not know that path, contact your system administrator.

Open a DOS window on your PC

Change to the directory where the ping command resides. At the prompt, type:

```
ping xxx.xxx.xxx.xxx
```

where xxx.xxx.xxx.xxx is the IP Address is the address you noted on the first remote radio.

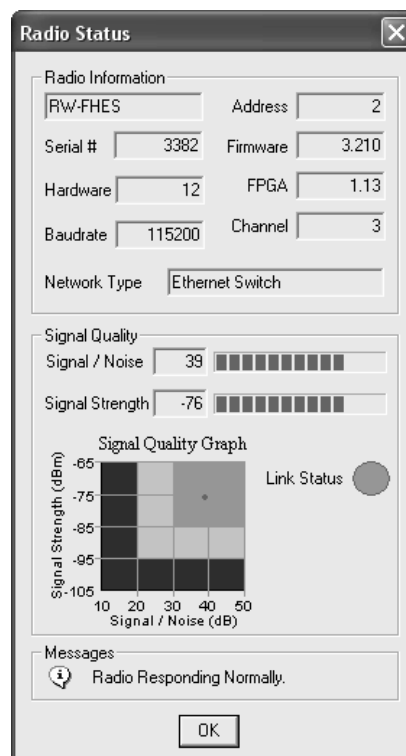
Press Enter

A "Reply from..." response indicates that communication was successful.

A "Request Timed Out..." response indicates that the test was unsuccessful. In this case, repeat the configuration process.

If You Encounter Problems

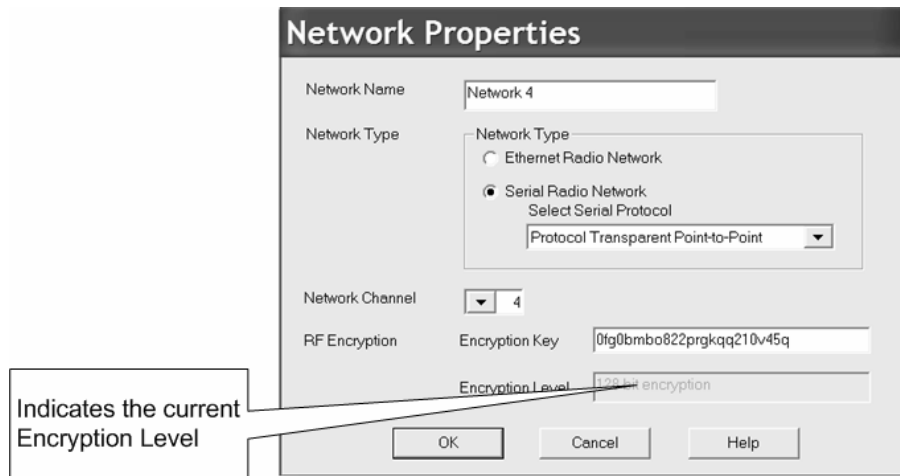
- Make sure you have a link light illuminated on the remote RLX-FHES (the Link Light is always illuminated on a RLX-FHES Master). If not, repeat the procedure.
- Make sure the crossover cable is connected properly from the PC to the Master radio. The 10/100 LINK LED will be illuminated if the correct cable is attached to a functioning Ethernet device
- Make sure the Ethernet card in your PC is functioning properly. Try pinging your PC. If unsuccessful, contact your administrator.
- Make sure both radios are on the same channel and have the same encryption key and subnet.
- In the ControlScape application, save your Network Configuration. In the Diagnostic menu, click on Network, and select your network configuration file from the list. This should bring up a new screen showing the radios on your network. The color of the arrow will indicate the communication between the radios. If the arrow is green or yellow your radios should be communicating properly. If it is red there is something wrong with the communication. By double clicking on one of the radios you can pull up even more information (see image below). You may wish to remove both radios from the network and run through this procedure again.



- If the above actions do not resolve the problem, contact ProSoft Technology Technical Support.

Encryption Keys

A random 128-bit encryption key is generated for you. Enter a different key if desired. The encryption levels are None, 40 bits, or 128 bit encryption. You can view the encryption level on the Encryption Level field. This value will change based on the number of characters in the key.



Advanced Configuration Screen

The advanced settings view allows you to modify the switch's configuration. Under normal circumstances, the default settings will suffice. For changes to the other fields, use the online Help system.

The screenshot shows the 'Radio Configuration - Radio 2' dialog box. It contains several sections: 'Radio Name' (Radio 2), 'Radio Address' (2), 'Last Date Configured' (12:00:00 AM), and 'Last S/N Configured'. Below these are 'Equipment Settings' and 'Serial Port Settings' (Baud Rate: 115,200, Parity: None, Bits: 8). The 'Destination' is set to 'Master Radio'. The 'Data IO Settings' include 'Keep data packet together' and 'Low Latency Mode'. The 'RF Settings' section includes 'Local Radio Settings' (Transmit Power: Max, Retry Limit (ms): 1000, Broadcast Repeats: 0) and 'Radio Network Settings' (Use this radio as a Repeater, Allow radio to Roam, Collision Handling). The 'Repeater Antenna Settings' section has 'Single Antenna' selected. Callout boxes on the left provide instructions: 'Use this field to change the transmit power intensity of the radio; typically set to Max.' (pointing to 'Transmit Power'), 'Mark this box to use this radio as a repeater to achieve line-of-sight between two other radios.' (pointing to 'Use this radio as a Repeater'), and 'Choose the destination of the signal transmitted from the radio being configured.' (pointing to 'Destination').

Use this field to change the transmit power intensity of the radio; typically set to Max.

Mark this box to use this radio as a repeater to achieve line-of-sight between two other radios.

Choose the destination of the signal transmitted from the radio being configured.

Checking Your IP Address

Note: The examples in this section assume you are using Microsoft XP Professional. If you are using another operating system, your screens will be slightly different.

1. Select Start \ Connect To \ Show all Connections

2. Double-click on Local Area Connection.

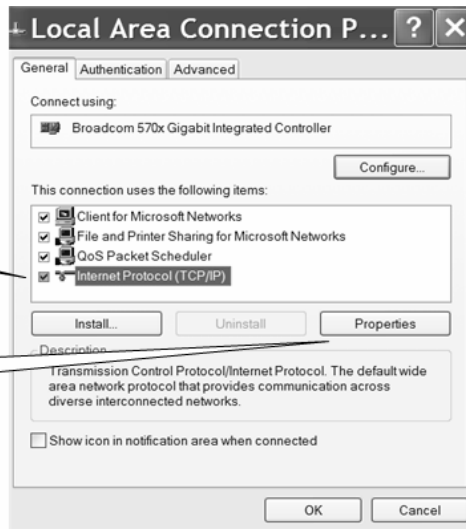
3. Click on Properties.

The first screenshot shows the Start menu with 'Connect To' expanded and 'Show all connections' selected. The second screenshot shows the 'Network Connections' window with 'Local Area Connection' selected. The third screenshot shows the 'Local Area Connection Properties' dialog box with the 'Properties' button highlighted.

Before making the changes indicated in steps 6-9 below, record the existing information somewhere that it can be restored once the radio configuration is complete. If this information is not corrected once the radio configuration is completed, you may be unable to reconnect the computer to the network.

4. Select Internet Protocol (TCP/IP)

5. Click Properties

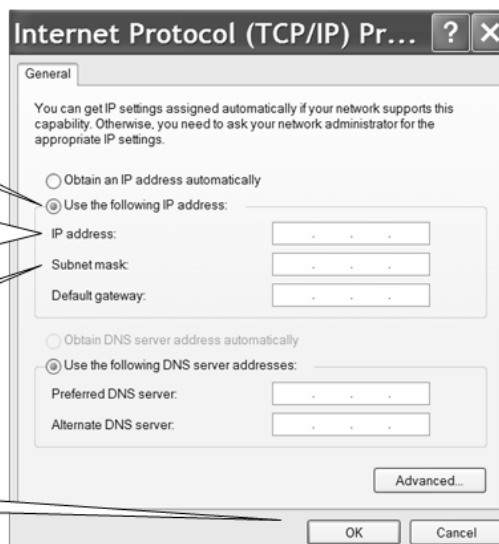


6. Click on "Use the following IP address":

7. Enter an IP Address for your computer that is part of the same subnet that the RLX-FHES Wireless Ethernet Switches will be on.

8. Enter the Subnet Mask

9. Click OK.



What's Next?

Congratulations! Your wireless network is up and running. You now need to connect your wireless Ethernet switches to your network devices. ProSoft Technology provides application connection instructions for numerous applications. Refer to the RadioLinx Application Connection Guide located on the RadioLinx Solutions CD.