

INSTALLATION INSTRUCTIONS FOR ETHERNET CONVERTER KIT (76M77)
(Used with the L Connection® Network)

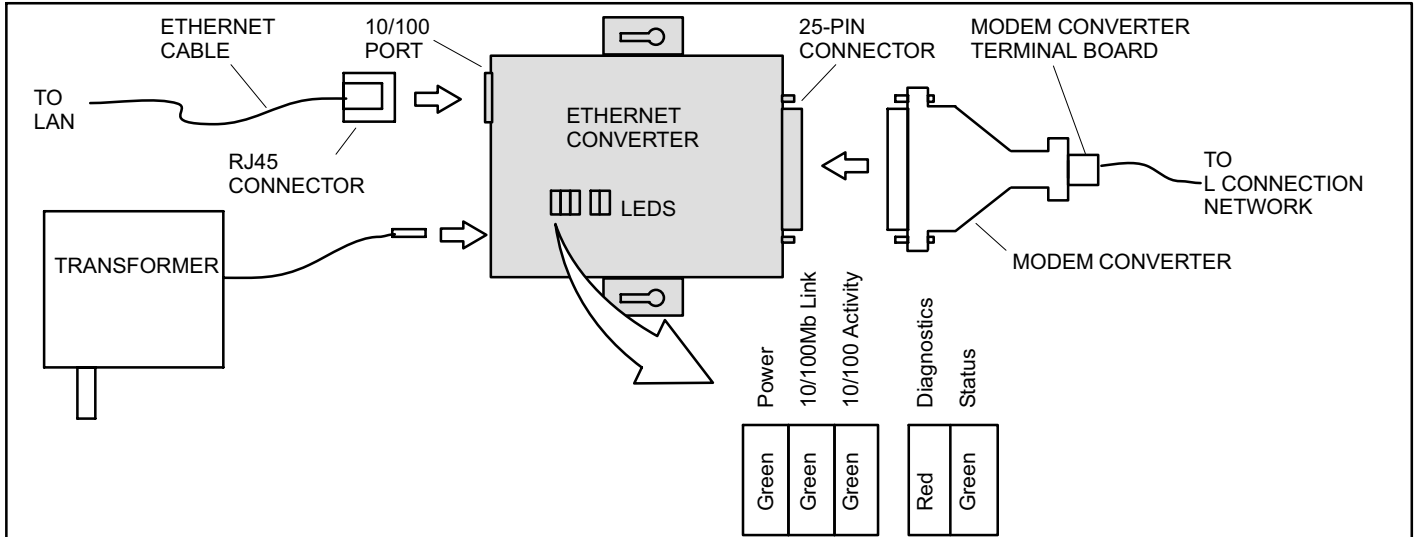


Figure 1. Ethernet Converter Kit

Shipping and Packing List

Package 1 of 1 contains:

- 1- Ethernet converter
- 1- Ethernet cable
- 1- L Connection® modem converter
- 1- Power transformer

! WARNING

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer or service agency.

Application

The Ethernet Converter Kit is required to interface between the L Connection® network and an ethernet local area network (LAN). This allows L Connection® software to access L Connection® products through an ethernet port instead of connecting directly or through a modem. See figure 1.

The L Connection® network provides direct digital communication to a single or network of L Connection® products such as IMC (M1-x), M2 Prodigy®, and NTC rooftop unit controllers, BC building controllers, and an NCP network manager.

Unit controller and network control panel software is ordered separately.

Configure Ethernet Converter

Each ethernet converter must be assigned a unique IP address. On networks which use DHCP, an automatic method for assigning addresses, connect the ethernet cable and transformer to the converter (see figure 2).

The red Diagnostic LED will stop flashing and the green Status LED will be steady ON if the converter has acquired an IP address on the network (see figure 1).

If the red diagnostic LED is flashing and the green LED flashes five times, a DHCP server network is not present. Manually assign an IP address.

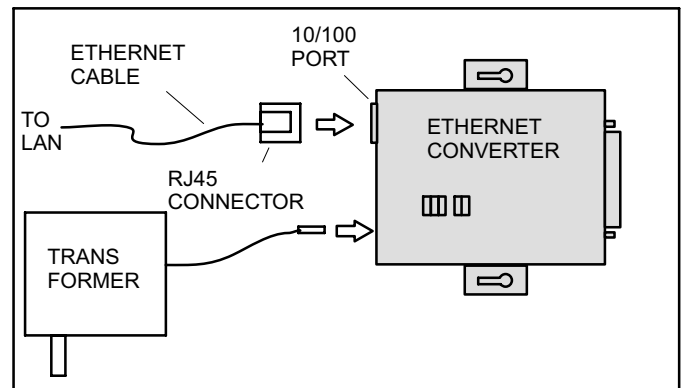


Figure 2. Check for IP Address on DHCP Networks

1. Connect the ethernet cable and transformer as shown in figure 2. Use a 25 to 9-pin serial cable to connect the converter to a PC serial com port. See figure 3.



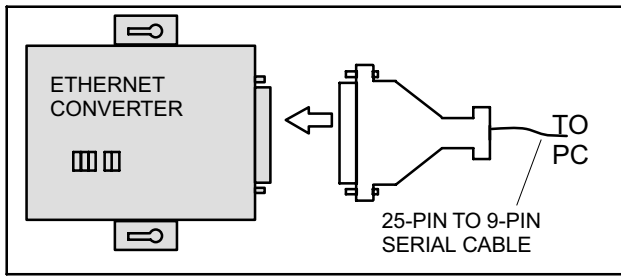
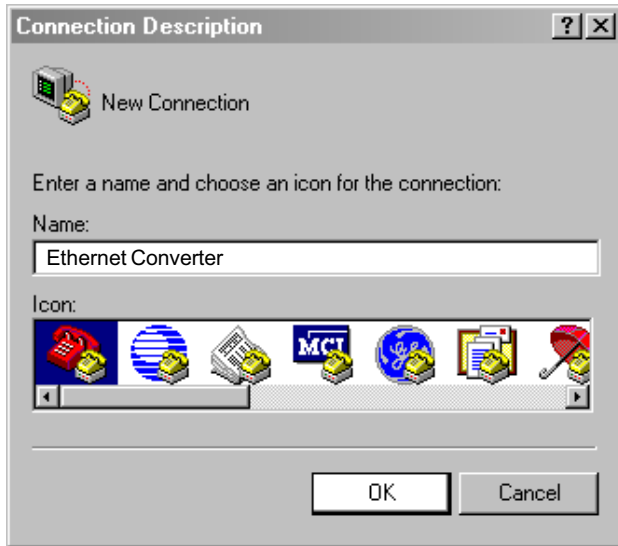


Figure 3. Assign IP Address

- Run HyperTerminal by selecting **Start > Programs > Accessories > Communications > HyperTerminal**. When the following window asks for a connection name, enter **Ethernet Converter** and click the **OK** button.

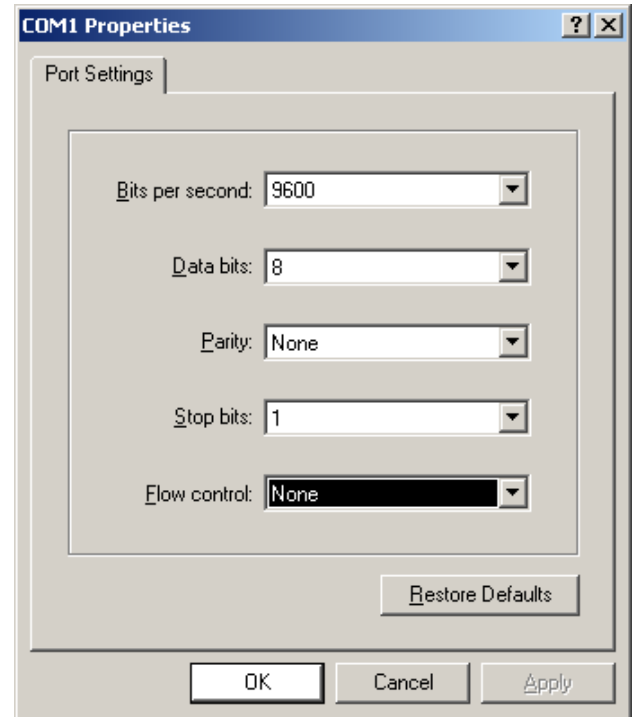


- Assign the appropriate com port from the **Connect using** pulldown menu shown below. Click the **OK** button.

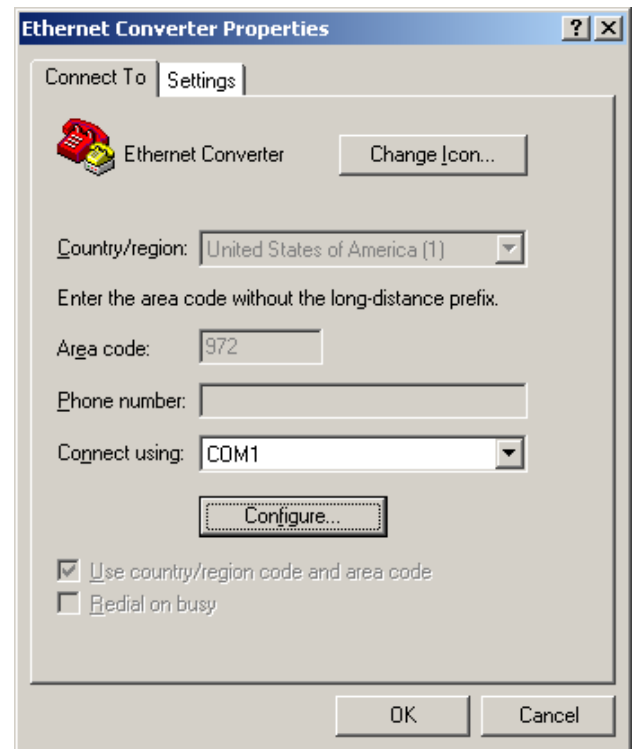


- Enter the port settings as follows:
Bits per second=9600

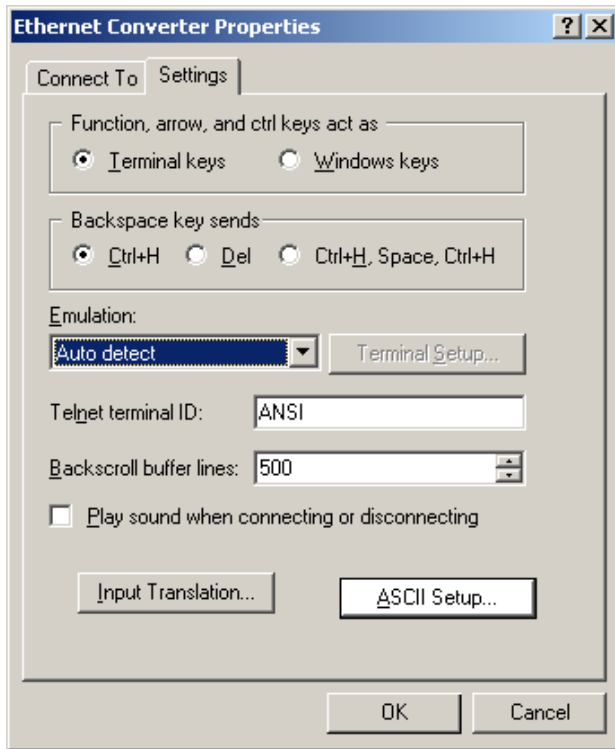
Data bits=8
Parity=None
Stop bits=1
Flow control=None
Click on the **OK** button.



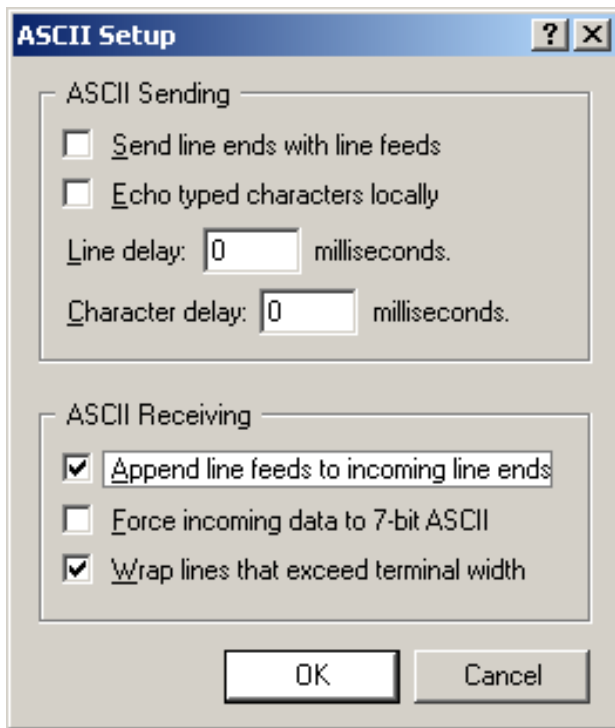
- Select **File > Properties**. Click on the **Settings** tab.



6. Click on the **ASCII Setup** button.



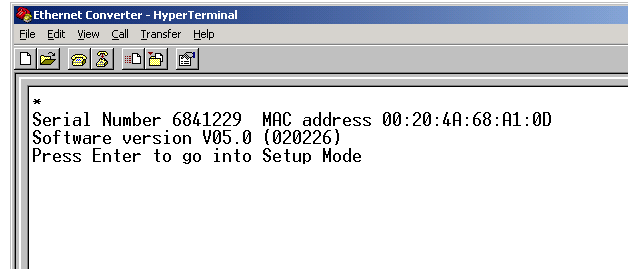
7. Select the box next to **Append line feeds to incoming line ends**.



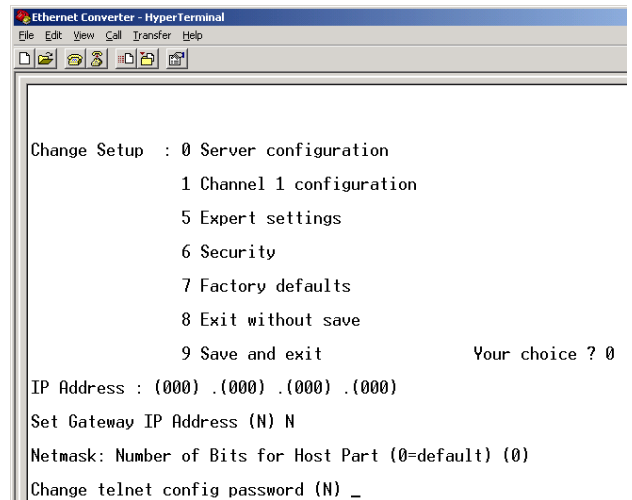
8. Click on **OK** twice to return to the the main HyperTerminal window.

9. Disconnect power to the converter and reconnect power. Press and hold the x key during power-up; make sure the Caps Lock key is off.
10. The following screen will appear if a successful connection was made. Immediately press **Enter**. If the screen does not appear, repeat the previous step.

NOTE - On DHCP networks, when the address has already been acquired, advance to step 14 to assign a port number.



11. In the set-up mode, select **0** and press **Enter** to change server configuration.



12. Enter the following information (refer to the appropriate IT personnel).

IP Address - a value unique to each network in an xxx.xxx.xxx.xxx format where xxx is a decimal number between 0 and 255.

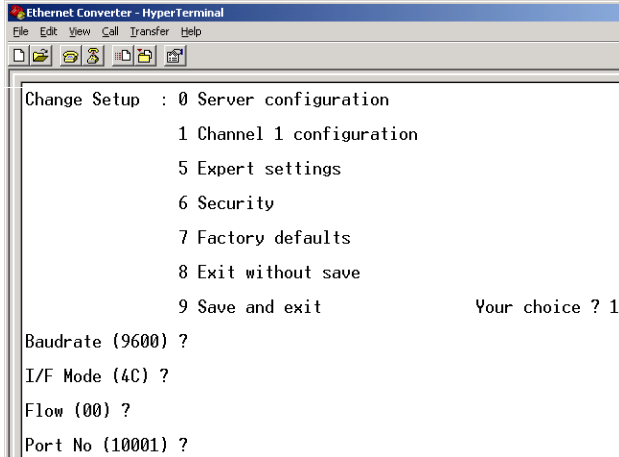
Gateway IP - the address of the router connected to the same LAN segment as the Ethernet converter. The address must be on the local network.

Netmask - defines the number of bits taken from the IP address that are assigned for the host. Examples:

Host Bits	Netmask
8	255.255.255.0
16	255.255.0.0
24	255.0.0.0

13. Enter **N** to pass the prompt for **change telnet config password**.

14. Select **1 Channel 1 configuration**. Press **Enter** until cursor is next to **PORT No (10001)?** and enter the port number.



NOTE - The default port number is 10001 and will operate correctly in most cases. Other port numbers may be used but could conflict with other devices on the LAN. Consult the appropriate IT personnel for suitable ports. Avoid the following well-known port numbers: 0-1023, 9999, 12000-14009, and 30718.

15. Select **Enter** until the **Change Setup** menu is displayed.
16. Select **9** to save the configuration and exit the setup mode. The converter will perform a power reset.

Testing The LAN Connection

Ping the ethernet converter to LAN connection to make sure the ethernet converter is connected correctly. Select **Start>Run**. Enter **ping xxx.xxx.xxx.xxx** (IP address previously assigned). If the ethernet converter is connected, an IP address response will be displayed. If there is no connection, **Request timed out** will be displayed.

Connect to L Connection

1. Disconnect the 25-pin serial port connection from the converter.
2. Connect the modem converter to the ethernet converter. Connect wires from the L Connection daisy chain to the modem converter terminal board (+ wire to + terminal and negative wire to negative terminal). See figure 1. Connect the modem converter to the NCP or to the last controller on the daisy chain. The shorter distance is recommended.

Table 1. Troubleshooting

Error	Reason	Solution
No LEDs are ON.	Ethernet converter is damaged or not connected to power properly, OR power transformer is damaged.	Connect the ethernet converter into another outlet.
The ethernet converter will not power up properly and the LEDs are flashing.	Various.	Refer to the LED Indicator table.
Cannot access the ethernet converter's setup mode.	Keyboard Caps Lock key is ON.	Make sure the Caps Lock is off.
	Other	Press the x key while powering up the ethernet converter.
		Press Enter as soon as setup screen appears.
The ethernet converter is not communicating with the L Connection network.	L Connection network wiring polarity is reversed.	Reverse the polarity and restart.
	The converter is not connected to the L Connection network.	Check connections LEDs on L Connection modem converter terminal block will flash during communication.

Table 2. Converter LED Indication

LED	Action	Indicates
10/100 Mb Link	Steady Green	Valid 10 Mbps network connection.
10/100 Mb Activity	Flashing Green	Network packets transmitting and receiving.
Diagnostic Status	Steady Red Flashing Green	3 Flashes =Network controller error
		4 Flashes =EEPROM checksum error
		5 Flashes =Duplicate IP address on network
Diagnostic Status	Flashing Red Flashing Green	5 Flashes =No DHCP response
Status	Steady Green	Serial port not connected to network.
Status	Flashing Green	Serial port connected to network.