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**NETWORK CONTROL PANEL
KIT**

**INSTALLATION INSTRUCTIONS FOR THE NETWORK CONTROL PANEL KIT (59L21;
LB-95268) USED WITH L CONNECTION® NETWORK**

Shipping and Packing List

Package 1 of 1 contains:

- 1 - Network Control Panel NCP
- 1 - Bag assembly containing:
 - 1 - 2A Fuse (spare)
 - 3 - Phillips head screws
 - 3 - Plastic anchors

Check panel for shipping damage. Receiving party should contact last carrier immediately if shipping damage is found.

These instructions are intended as a general guide and do not supersede local codes in any way. Authorities having jurisdiction should be consulted before installation.

Dimensions

Height:	5-5/16in. (150mm)
Width:	6-5/8 in. (168mm)
Depth:	1-13/16 in. (46mm)

Cable Requirements

Thermostat Wire

Standard thermostat wire (one pair 20 AWG minimum) may be used to wire the NCP to the optional wall plug 24V transformer 18M13, the unit 24 vac supply, or other field-provided 10VA, 18-30VAC output transformer.

Communication Wire - SysBus

Standard or plenum, yellow	Lennox part number
500-ft. roll	27M19
1000-ft. roll	94L63
2500-ft. roll	68M25

Installation

! IMPORTANT

Panel is sensitive to static electricity. Care must be taken in handling. Hold panel by the edges and avoid touching any components.

1. Disconnect all power before installing panel.
2. Remove panel from the baseplate. See figure 1.
3. Locate panel in the conditioned space approximately 5 ft. (1.5m) above the floor.

4. Center the opening in the baseplate over the opening in the wall. Use the baseplate to mark and drill three holes as shown in figure 2.
5. Pull wiring through baseplate and secure baseplate to wall with screws provided.

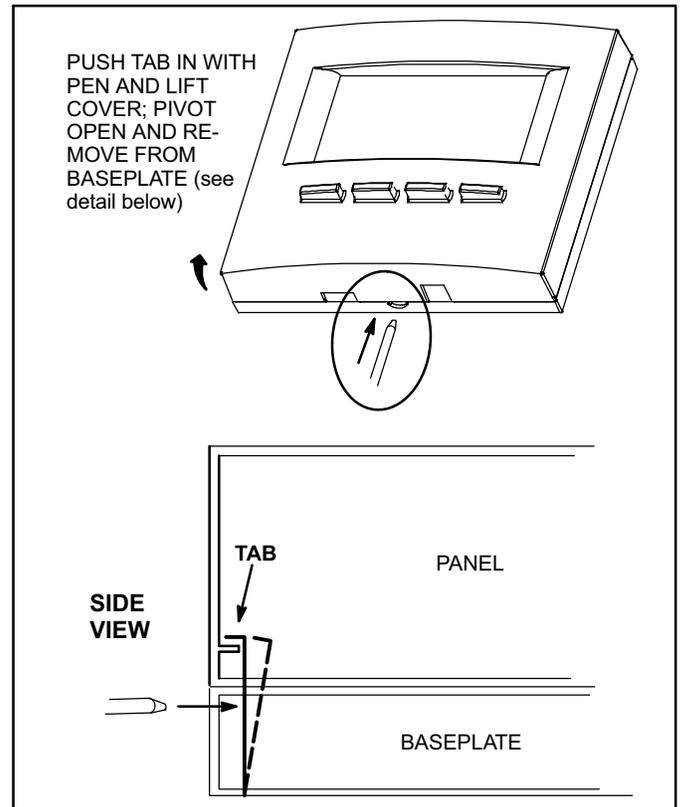


Figure 1. Network Control Panel (NCP)

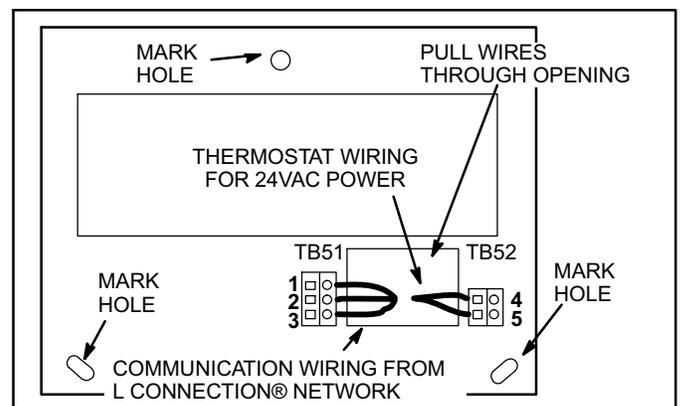


Figure 2. NCP Baseplate



Wiring

NOTE - All wiring must be in accordance with national electric codes and local codes.

1. Route communication wiring between L Connection Controllers and NCP installation location. Route thermostat wire between the NCP and 24V transformer.

NOTE - Any combination of up to 93 total controllers may be used on a network with one NCP. A Zone Link (11W27) or a repeater (11W30) may be required.

2. Make wire connections as shown in figure 3. When more than one L Connection Controller is used in the same network, daisy chain the communication wires to other Controller terminal blocks. See figure 5.

NOTE - Make sure total run of communication wiring does not exceed 4000 feet.

3. Make sure all DIP switches on the back of the NCP circuit board are in the "ON" position before applying power to the NCP.
4. Align hinges with top panel in open position. Pivot the panel closed. See figure 4.

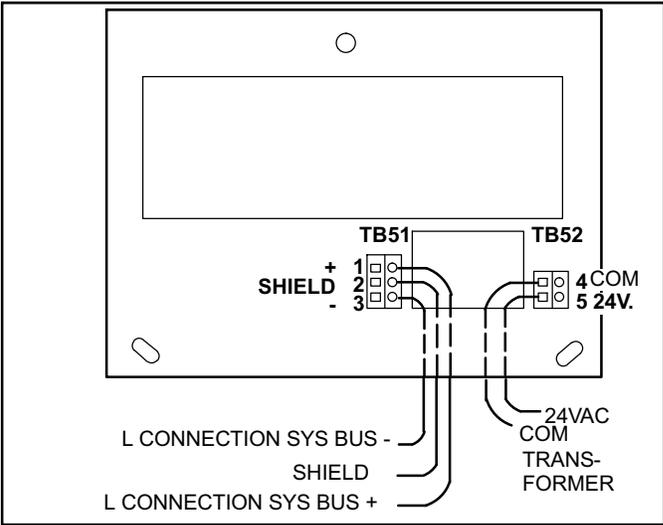


Figure 3. Network Control Panel (NCP) Wiring

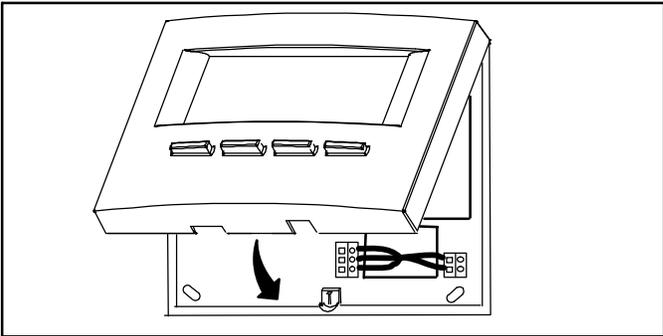


Figure 4. Replacing Baseplate

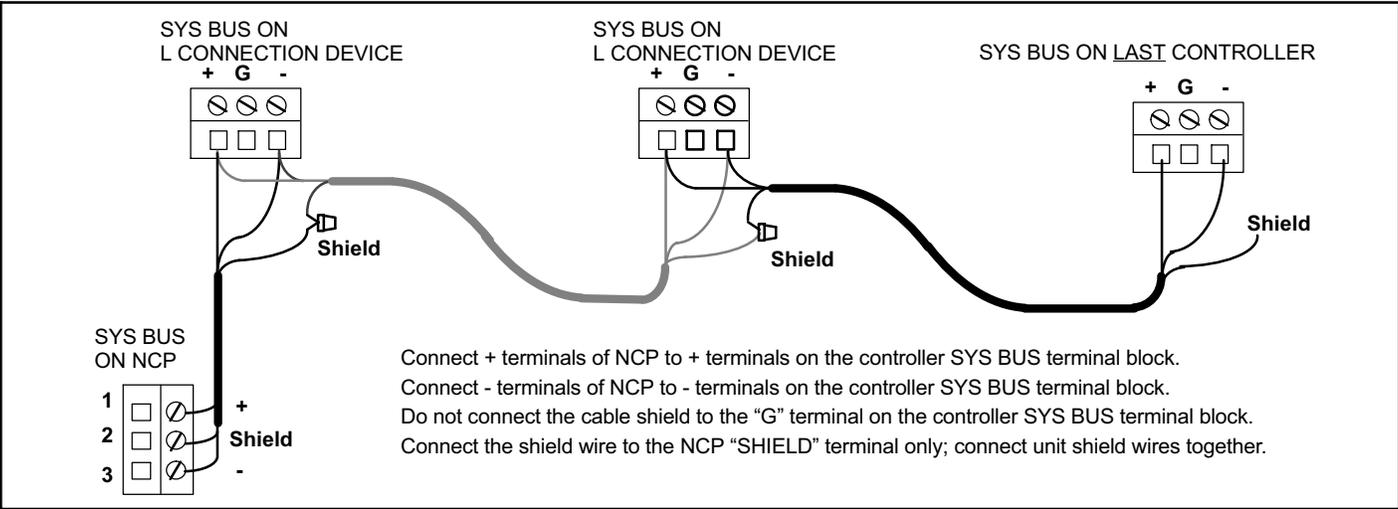


Figure 5. L Connection® Network Daisy-chain Communication Wiring

Network Set-Up

Address DIP Switches

Assign a different address to each L Connection Controller.

Bus Termination on early M1 Unit Controllers

Set bus termination jumper to “OUT” on all M1-5 and earlier Controllers. See figure 6.

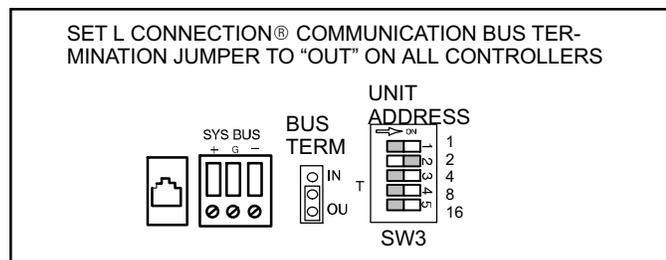


Figure 6. IMC Bus Termination

Unit Controller Configuration

To Control Unit—When the NCP is used to control the space temperature, the unit controller must be set to operate in the zone sensor mode and must have a zone sensor connected.

Change the ECTO parameter 6.01 to “3” to configure the IMC to operate in the zone sensor mode. This configuration uses the unit return air sensor RT16 as a back-up sensor should the zone sensor fail.

In addition, set ECTO 6.17 Blower Control Mode parameter to “1” for continuous blower applications.

To Monitor Unit—When the NCP is used to monitor only, the unit controller can be set to either Local Thermostat or Zone Sensor Mode.

The ECTO parameter 6.01, set to “0”, configures the IMC to operate in the Local Thermostat Mode. “0” is the factory-default setting.

NCP INSTALLATION CHECKLIST

IMC/NTC/BC Controller Set-Up

Minimum Requirements:

Set each controller address DIP switch to a different number (such as 1, 2, 3, 4, 5, 6, etc.).

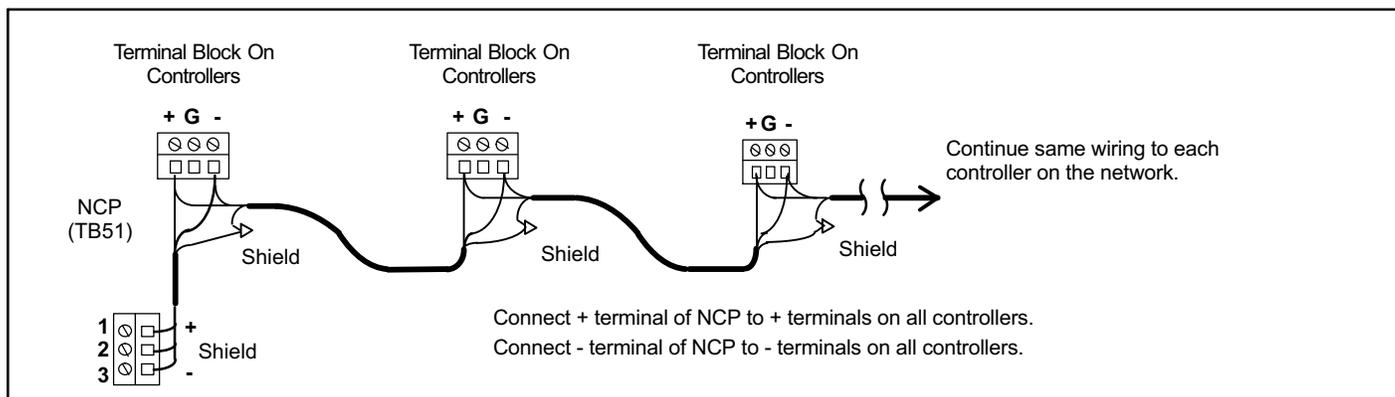
Recommended ECTO Settings:

1. Set the unit controller ECTO 6.01 to option 3: Zone Sensor (A2) with return air back-up (RT16).
2. Set the unit controller ECTO 6.17 to option 1 to operate the blower in the continuous mode during occupied periods.
3. Change the unit controller default back-up setpoints if different settings are desired (M1/M2 ECTO 6.02-6.05

and NTC ECTO A1.01 & A2.01). These are the back-up heating and cooling setpoints the the unit controller use in the event the NCP goes offline.

Network and Power Wiring:

1. Daisy chain all units to the NCP as shown below using the specified shielded communication cable.
2. Use a 24V wall-plug transformer (18M13 or 10VA, 18-30VAC output transformer) to connect 24VAC power to the NCP using 20 AWG minimum thermostat wire.
3. Route all NCP power and communication cables away from other power and communication cables.



NCP Set-Up

Minimum Requirements:

1. Make sure the NCP is communicating with all units. On power-up the NCP will auto poll the network and add all units on the network to the unit list. Press the "Network" or left button to view the Network Status Screen. The left column indicates the unit address. If all units

- are not listed, go to the troubleshooting section below.
2. Set the NCP clock to the current time and date. Go to Network> Main >Panel Set-Up Menu> Set Time/Date.
3. Enter setpoints and schedules as desired and assign to each unit. The NCP defaults to the manual mode with setpoints of 70°F for heating and 74°F for cooling.

Troubleshooting

1. If the NCP doesn't display all units, repoll the network. Go to Network >Main Menu > Network Setup Menu > Poll All Addresses. When polling is complete, go to Change Control Mode to view the unit list.
2. Check NCP Power Wiring
Communication to the L Connection network will be interrupted if 24VAC is reversed or if the common side has been disconnected. The NCP will automatically reset once the wiring problem has been corrected.
3. Check to make sure that SW1 DIP switches on the NCP are set to "on" (right).
4. Check L Connection controllers:
 - A** Each controller address DIP switch must be different and between 1 and 31.
 - B** Each controller must have a "Heartbeat".

- C** Each M1-5 and earlier IMC must have the "BUS TERM" jumper set to the "out" position or removed.
- D** Each controller should be daisy chained as shown in installation manual. Connect + to + and - to -. Connect cable shield to NCP only.
5. If the problem persists, communicate with only one unit by disconnecting the other units on the network to isolate the problem. Initiate a manual Repoll (step 1).
6. If problems persists, reset the NCP back to the factory settings and start over. To do this, go to Network>Main>Service Menu> Restore Factory.
7. If NTC or BC controllers are on the network, make sure the polarity of power to each controller is correct or the NTC/BC will not communicate.