

Installation Instructions: E2 Two- and Four-Channel Repeaters

Overview: Mounting Repeaters

Repeaters are used to extend the maximum length of a segment of Echelon cable, or to act as a bridge between two devices that are farther apart than the cable's maximum node-to-node distance. CPC offers two versions of repeaters for the E2 controller: an external two-way repeater that comes in an enclosure (*P/N 832-1010*), and an internal four-way repeater (*P/N 832-4830*).

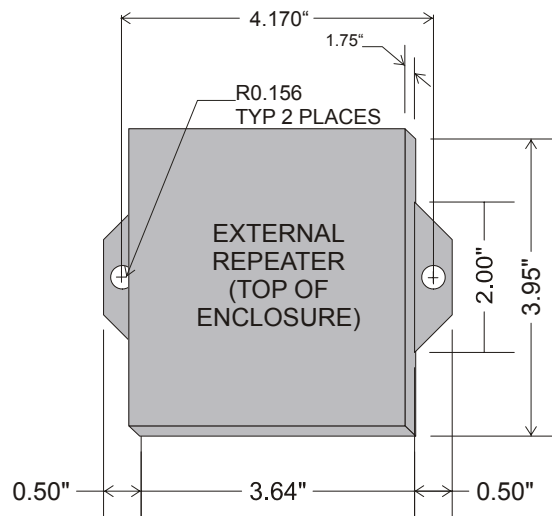
For specific Echelon wiring instructions and more information about installing repeaters and routers, please refer to the *E2 RX/BX/CX Controller Installation and Operation Manual (P/N 026-1610)*, and the *Router and Repeater Installation and Operation Manual (P/N 026-1605)*.

Mounting the Two-Channel Repeater

The external repeater (*P/N 832-1010*) is mounted externally within its own enclosure.

For external repeaters, the mounting bracket at the bottom of the enclosure has two 0.156" bolt holes on either side. Use the bolt holes to mount these repeaters in the field as necessary.

When mounting external repeaters, keep in mind that they require a 24VAC Class 2 power source in order to operate. This will likely require a transformer such as *P/N 640-0041* (110V) or *P/N 640-0042* (220V) to be mounted near the external repeater enclosure. Make sure there will be enough space next to the repeater to mount the transformer.



Mounting and Wiring the Four-Channel Repeater

The four-channel repeater (*P/N 832-4830*) serves the same basic function as the two-channel repeater: boosting signal strength. However, the four-channel repeater is also useful as a means of connecting the E2 to its associated devices using more than one daisy chain.

With a four-channel repeater mounted in the E2, you can run as many as three daisy chain segments out into the field, each of which can be as long as the prescribed Echelon maximum wire length. The fourth channel of the repeater can be used to connect other E2s in a separate daisy-chain, eliminating the need to run cable from the field back to the next E2.

The standoffs and mounting holes are located above the PIB in the back of the enclosure box. Use the mounting screws and standoffs to secure the four-channel repeater in place. Connect the two-pin power connector from JP1 on the repeater to J8 on the PIB.

Positive and negative (+/-) polarity must be observed at both ends of the power cable. Check that the cable is connected to + **Power** on the repeater board and +5V on the PIB.

Repeater Termination

Follow standard Echelon termination practices when wiring to the repeater. Check to make sure that any unused channels are terminated on the repeater. To terminate, move the jumper over the first two pins in the direction of the arrow. Refer to the table below for the termination jumper to use for each channel.

Four-Channel Repeater	
Channel #	To Terminate
A	Move jumper on J2 to direction of arrow
B	Move jumper on J1 to direction of arrow
C	Move jumper on J11 to direction of arrow
D	Move jumper on J8 to direction of arrow

