

MCX-8

8-Output Expander for the MCR-308 Receiver



Installation Instructions

1. INTRODUCTION

1.1 General Description

The MCX-8 is an 8-output expander unit especially designed to increase the number of outputs of the MCR-308 PowerCode wireless receiver.

Up to three MCX-8 expanders, with 8 outputs each, can be connected to the MCR-308 (see Figure 1). The expanders communicate with the receiver via a 4-wire power/data bus.

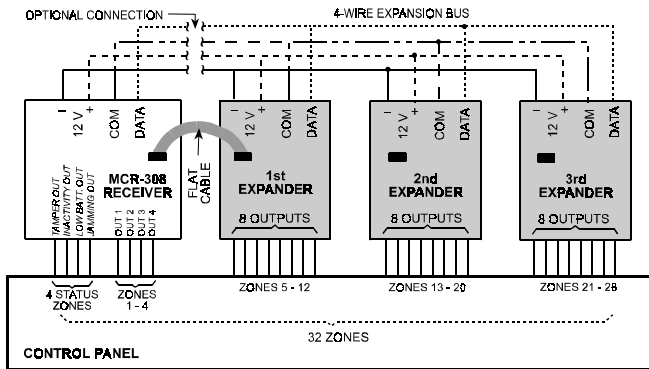


Figure 1. Full System Configuration - MCR-308 with 3 Expanders

Each expander is identified by a factory programmed 8-bit ID number. This ID must be registered in a specific memory location of the MCR-308 to which the expander is connected (see Publication DE3191-).

The communication link between the MCX-8 and MCR-308 receiver is continuously monitored (every 5 seconds) by the MCR-308 receiver. In case of communication failure, the inactivity output of the receiver will be activated.

1.2 Construction and Packaging

The MCX-8 printed circuit board is enclosed in a plastic cabinet that facilitates installation on a flat surface and protects the unit against tampering. The cabinet can be separated into two parts: the cover and the base (see Figure 2). Disassembly instructions are given in Para. 3.1.

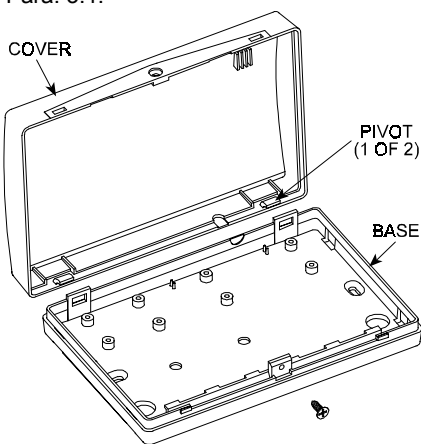


Figure 2. Plastic Cabinet

The base can accommodate a single MCX-8 module (Figure 3) or two side-by-side MCX-8's (Figure 4) or an MCR-308 receiver unit alongside the MCX-8 (Figure 5). Various mounting and wiring knockouts are provided (see Fig. 3).

Tamper protection is accomplished with an on-board tamper switch, actuated upon removal of the front cover (Figure 6). If two

units are installed in the same cabinet, only one tamper switch is used (the one of the unit to the right).

Important! You must bridge the two **TAMP** terminals of the left-mounted MCX-8, but be sure to do it only after having conducted a "teaching" session (as instructed in the MCR-308 manual, Publication DE3191-).

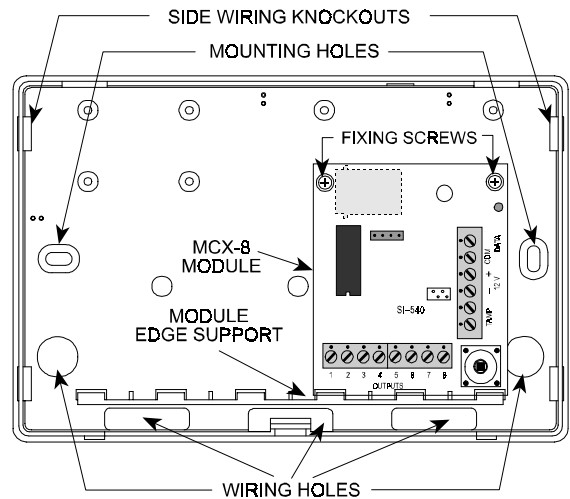


Figure 3. Single MCX-8 Unit within its Cabinet

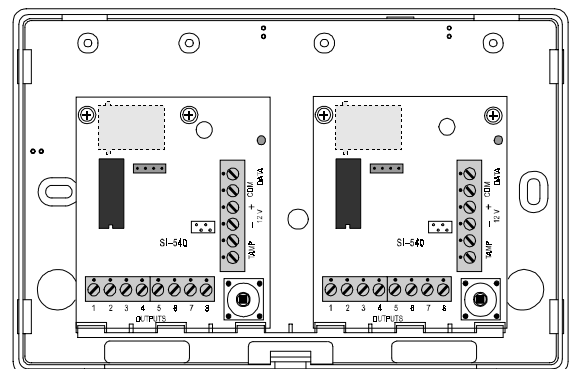


Figure 4. Two MCX-8 units Sharing the Same Cabinet

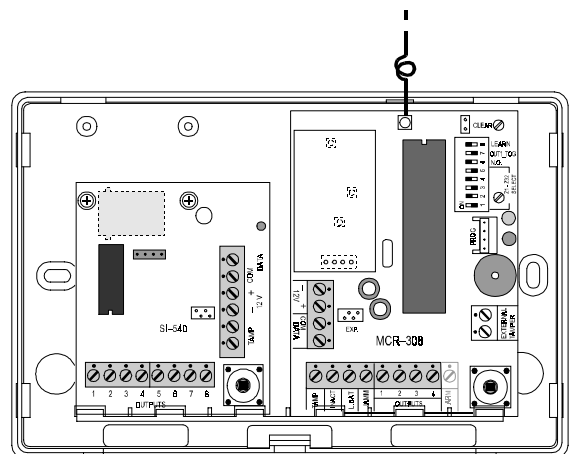


Figure 5. MCR-308 and MCX-8 Sharing the Same Cabinet

2. SPECIFICATIONS

Number of Outputs: 8, open collector type, 100 mA max. each
Unit ID: 8-bit code
Expansion Bus: 4 wires (+12V, 0V, DATA and COMMON)
Bus Length: Up to 1 km (0.62 miles) with single expander and 100 Ω resistance per wire.
Output Polarities: N.O. or N.C., as set by switch on MCR-308

Tamper Switch Ratings: 0.1 A, 30 VDC
Input Voltage: 10 -16 VDC (supplied via the expansion bus).
Current Drain: Approximately 7 mA standby, 13 mA maximum.
Operating Temperature Range: -10°C to 49°C (14°F to 120°F).
Size (H x W x D): 108 x 165 x 38 mm (4-1/4 x 6-1/2 x 1-1/2 in.)
Weight (cabinet with single MCX-8): 191 g (6.75 oz).

3. INSTALLATION

3.1 Mounting

The MCX-8 is supplied in a plastic cabinet, as described in Para. 1.2. Install the plastic cabinet as follows:

- Remove the screw that secures the cover to the base (Fig. 6).
- Insert a small screwdriver blade into the slot near one of the snap-in tabs, as shown. Carefully flex the cover edge out, until the tab disengages the dent. Repeat this with the other tab.
- Remove the cover and use the mounting and wiring holes as required for the particular installation.

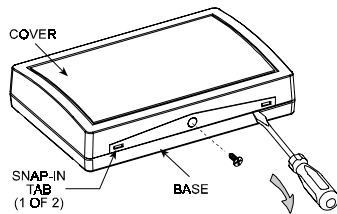


Figure 6. Separating the Cover from the Base

3.2 Expansion Bus Hookup

Since the MCR-308 receiver and the MCX-8 expander usually share the same cabinet, the easiest way to link them is to use the short flat cable assembly supplied with each MCX-8 (Figure 7). To continue the bus to additional expanders, use the 4 bus terminals on each unit (refer to Figure 1). Connect each terminal on the bus terminal block to its counterpart on the other unit.

3.3 Output Circuit Wiring

After connection via the expansion bus to the MCR-308, the MCX-8 will have a common ground with the control panel via the MCR-308. You only have to connect each output terminal of the MCX-8 to one of the control panel's zone inputs. If the control panel zone inputs are defined as E.O.L., you must use appropriate E.O.L. resistors (see Figure 8).

3.4 Using an External Tamper Switch

The built-in tamper switch and the TAMP terminals are connected in parallel. If the external TAMP terminals are used, make sure that

no pressure is applied on the actuating lever of the built-in tamper switch - remove the circular spring if necessary.

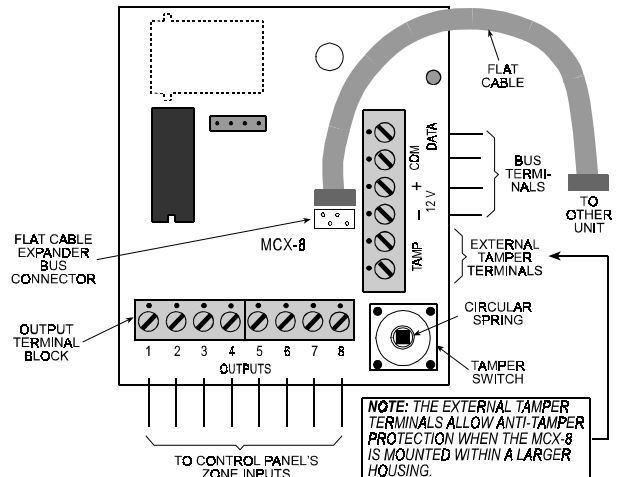


Figure 7. Printed Circuit Board Layout

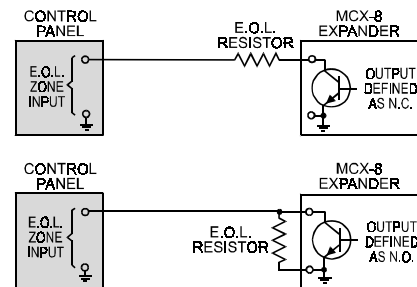


Figure 8. WIRING E.O.L. Zones

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Warning: The user should follow the installation and operation instructions and among other things test the Product and the whole system at least once a week. For various reasons, including, but not limited to, changes in environmental conditions, electric or electronic disruptions and tampering, the Product may not perform as expected. The user is advised to take all necessary precautions for his /her safety and the protection of his/her property.

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VISONIC LTD. (ISRAEL): P.O.B 22020 TEL-AVIV 61220 ISRAEL. PHONE: (972-3) 645-6789, FAX: (972-3) 645-6788
 VISONIC INC. (U.S.A.): 10 NORTHWOOD DRIVE, BLOOMFIELD CT. 06002-1911. PHONE: (860) 243-0833, (800) 223-0020 FAX: (860) 242-8094
 VISONIC LTD. (UK): FRASER ROAD, PRIORY BUSINESS PARK, BEDFORD MK44 3WH. PHONE: (0870) 730-0800 FAX: (0870) 730-0801
 INTERNET: www.visonic.com

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