# TORO.

E-Series OSMAC Digital Wireless Paging System Satellite Controller
Wide Band to Narrow Band Conversion Kit
Installation Instructions

Installing the Narrow Band Decoder Module

1. Place the satellite AC power supply switch in the Off position.

2. Remove the clear plastic cover from the decoder module assembly

3. Release the ribbon cable connector from the decoder module by moving the cable receptacle locking tabs outward.

4. Disconnect the remote antenna cable (if installed).

5. The decoder module is secured by a self-locking nylon standoff in each corner of the PCB. To remove the module, compress the standoff locking tab (indicated in **Figure 1**) using needle nose pliers or a flat blade screwdriver, then carefully lift the module upward just enough to keep the locking tab compressed. When all four standoffs are compressed, remove the module.

6. Position the narrow band decoder module onto the standoffs (in the same orientation as the wide band module), then simultaneously press downward on all four corners of the module to lock into position.

7. Place the (keyed) ribbon cable into the receptacle and push inward to lock into position.

8. For remote antenna connection: Connect the short antenna cable assembly (supplied in the kit) to the receptacle on the decoder module (A) and the antenna or antenna cable BNC receptacle. Using small wire cutters, clip the wire jumper (B) located to the right of the de antenna receptacle. See **Figure 2**.

9. Place the satellite AC power switch in the On position.

10. When testing is complete (as per instructions on page 2), reinstall the decoder module cover.

Figure 1

Figure 2
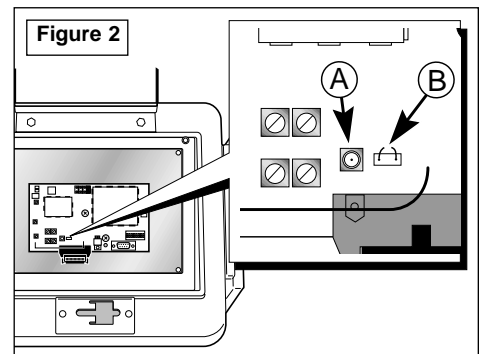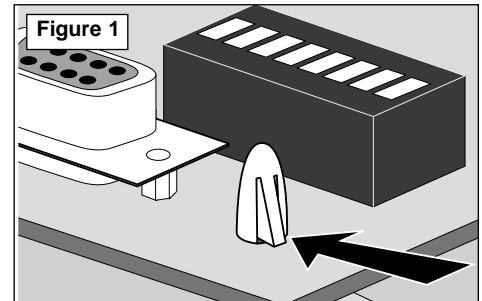
Selecting the Decoder Radio Frequency

The narrow band decoder module stores four user-selectable radio frequencies. The frequencies are programmed at the factory or by the distributor prior to delivery. A set of jumper pins, located at the top center of the decoder module, enable the desired frequency to be selected by placing the jumper on the appropriate pin set. In most cases, the jumper will be configured properly by the distributor prior to delivery. However if a frequency change is desired, place the jumper on the desired pin set number as indicated in **Figure 3**.

Important: The base station transmitter and decoder module **must be set to the same frequency** to enable communication.

Assigning the Satellite Address Number

Each satellite requires a 3-digit address number to enable communication with the central controller and/or a hand-held radio. The address numbers range from 1 (001) through 255 and are issued to the satellite through an array of eight DIP switches, located on the decoder module assembly. See **Figure 4**. In the down position, the switch is Off (open) and represents a value of 0 (zero). In the up position, the switch is On (closed) and represents the following address number:

Sw 1 = 1	**Sw 2 = 2**	**Sw 3 = 4**	**Sw 4 = 8**
Sw 5 = 16	**Sw 6 = 32**	**Sw 7 = 64**	**Sw 8 = 128**

To set the satellite address number, place the switch or combination of switches to the On position which provides the numerical equivalent of the desired address number.

For example: To set satellite address number 50 (050), start with all eight DIP switches in the Off (open) position, then close switch numbers 2, 5 and 6; i.e., **2** (Sw 2) **+ 16** (Sw 5) **+ 32** (Sw 6) **= 50**.

Figure 3

#4 #3 #2 #1

Frequency # Jumper Pin Set

Figure 4

DIP Switch Array
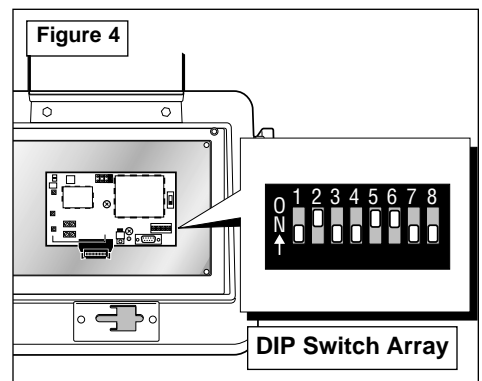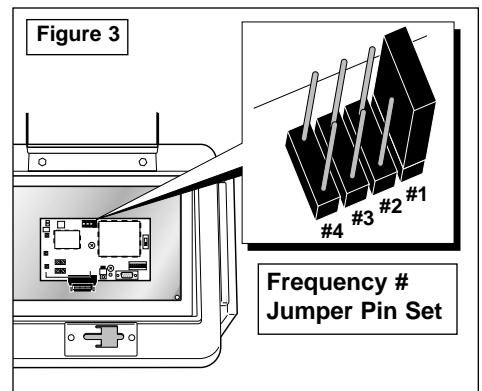
Performing a Control Circuit Self Test

A self-test feature is provided to check the functionality of various key satellite control circuits. Before performing the test, ensure the Field Common, Pump and Station Output control switches are set to the **AUTO** (down) position.

The test is initiated by positioning the **TEST/RESET** switch, located on the decoder module, to the **TEST** position as shown in **Figure 5**. Testing will begin immediately and is indicated by the audible clicks of the control relays and momentary illumination of the LED's on the various PCB assemblies. The test will repeat continuously until the **TEST/RESET** switch is positioned to the center (normal operation) position.

Note: The **RESET** position resets the decoder microprocessor to factory defaults. To take affect, the satellite must be powered up with the switch in the **RESET** position. The switch should be placed in the **NORMAL** position after 15 seconds of operation.

Figure 5

TEST
NORMAL
RESET

Test Switch