

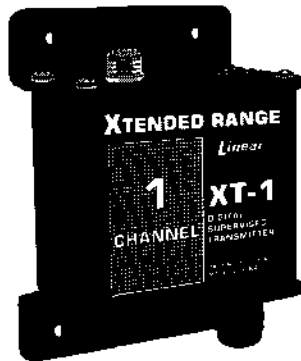
# XT-1

## XTENDED RANGE SINGLE CHANNEL SUPERVISED STATIONARY TRANSMITTER

For Use With Linear's XR Series Xtended Range Receivers

### Installation Instructions

**WARNING: THIS PRODUCT SHOULD NOT BE USED IN LIFE SAFETY APPLICATIONS.**  
FCC Rules allow unlicensed high-power transmissions at or near the operating frequency of this product which may interfere with, or even disable, normal operation of this radio



# Linear

### 1. PRODUCT DESCRIPTION

Linear's Xtended Range FM transmitters and receivers are designed for use in various wireless remote control applications. When triggered with an external switch, the Model XT-1 transmitter will send a 10 watt, 27.255 MHz, digital encoded, FSK modulated, signal to its companion receiver. The receiver will verify the digital code, activate its output, and trigger the remote device.

The XT-1 transmitter has full supervision capabilities. If the "status" option is selected, the XT-1 sends hourly status signals to its receiver. If these signals cease, the receiver will indicate trouble by activating its status output after four hours. Contact supervision allows the receiver's output to follow the transmitter's input, staying activated as long as the transmitter input is activated. Alternately, an "auto-restore" option can be selected, causing a momentary receiver output each time the transmitter is activated. Either a N/O or N/C input (jumper selectable) can trigger the transmitter.

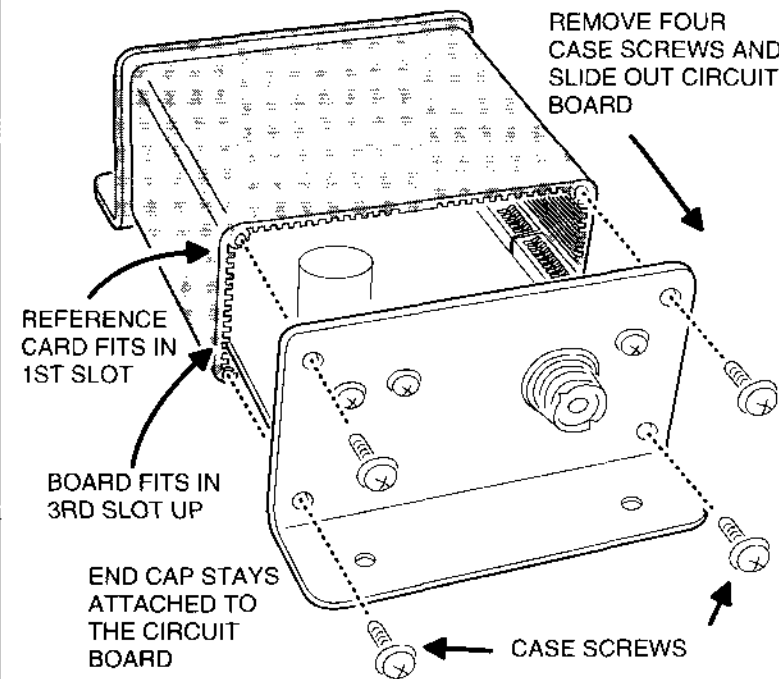
Power for the XT-1 transmitter can come from an external regulated 12 VDC, 2-Amp power supply (Linear Model T-1224DC) or from a 12-volt battery. A 3-amp fuse protects the unit from reverse power polarity. The XT-1 draws about 15  $\mu$ A standby, and about two amps during transmissions. If the power supply voltage drops below 10.5 volts, a low battery message will be included with any signal transmitted, causing the receiver's low battery output to activate.

Two antennas (sold separately) are available for the XT-1. The Model ANT-1 is an 8-inch "rubber duck" antenna for short range applications (less than 1 mile). The ANT-1 requires a Model CON-90 (right angle) or Model CON-180 (straight) connector to mate the antenna to the transmitter. The Model ANT-2 is a 3-foot whip antenna for use in long range or difficult installations where more range from the XT-1 is required. A common 9-foot 1/4 wave CB whip antenna can also be used with the XT-1 for maximum range.

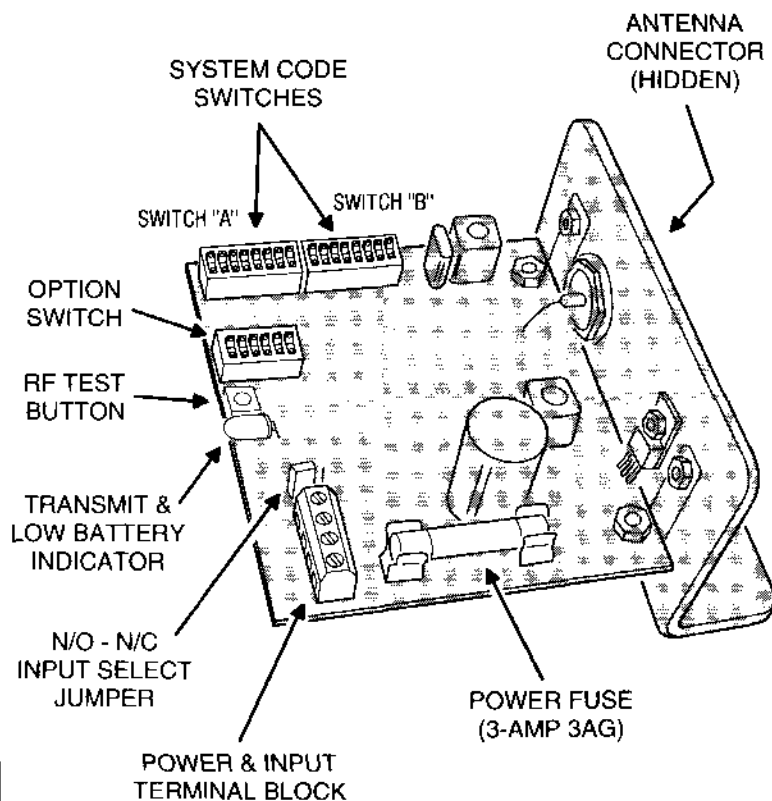
Two 8-position switches set the unit's system code. This code must be matched in the XT-1's receiver. There are 65,536 different system codes possible. The 6-position option switch selects the transmitter's channel, receiver's bank (for XR-16 receiver only), and options for status and auto-restore transmissions.

The transmitter is housed in a rugged weather-resistant metal enclosure with a sturdy SO-239 antenna connector and a water-tight wiring strain relief bushing. During transmissions, the red operation indicator (visible through a window on the case) lights. If the XT-1's input voltage is low, the indicator will blink during transmissions.

### 2. OPEN TRANSMITTER



### 3. COMPONENT LOCATIONS



### 4. INSTALLATION TIPS

**USE ANT-1 ANTENNA FOR SHORT RANGE APPLICATIONS (LESS THAN 1 MILE)**

8-INCH ANT-1 ANTENNA, RIGHT ANGLE CONNECTOR (CON-90), STRAIGHT-THRU CONNECTOR (CON-180)

**USE ANT-2 ANTENNA FOR MAXIMUM RANGE OR DIFFICULT APPLICATIONS**

3-FOOT ANT-2 ANTENNA, 18-FOOT CABLE, UNIVERSAL MOUNTING BRACKET

**GOOD INSTALLATION**

LINE-OF-SIGHT BETWEEN THE TRANSMITTER AND RECEIVER ANTENNAS WILL PROVIDE THE BEST RANGE

ANTENNAS ARE MOUNTED VERTICALLY, ON HIGH POINTS OF BUILDINGS

**BAD INSTALLATION**

TRANSMITTING THROUGH STRUCTURES, METAL AND GEOGRAPHIC OBSTACLES WILL REDUCE RADIO RANGE

**MOUNT ANTENNA AS HIGH AS POSSIBLE**

AT LEAST 9 FEET ABOVE GROUND IS RECOMMENDED

WHEN MOUNTING ON THE SIDE OF A STRUCTURE, USE A MINIMUM OF A 3-FOOT SPACER TO DISTANCE THE ANTENNA FROM THE STRUCTURE

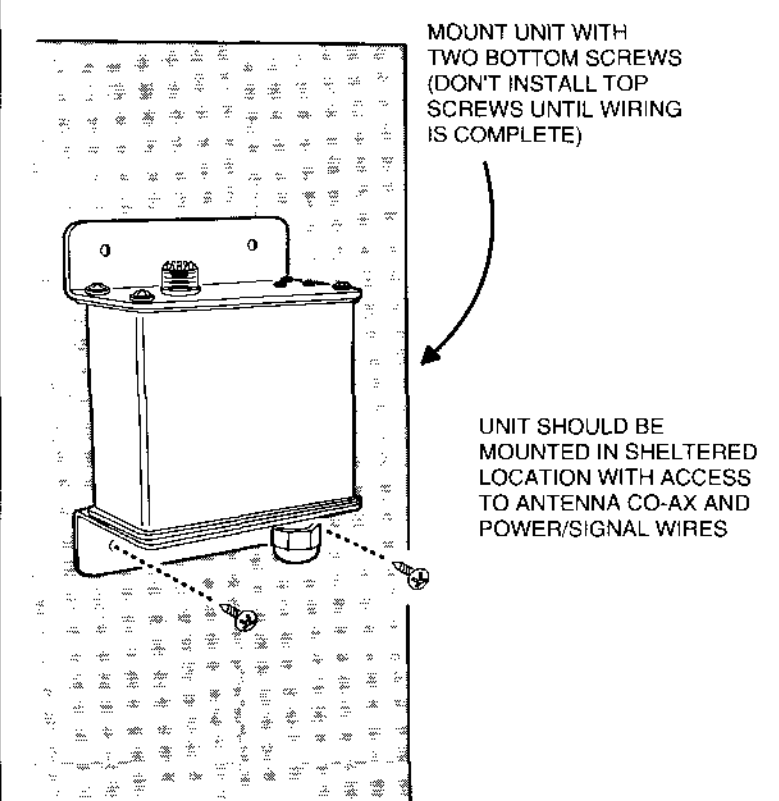
**GOOD ANTENNAS NEED GOOD GROUNDS**

METAL ROOF (OK), FAIR, POOR

IDEALLY, A GROUND PLANE WITH A RADIUS OF NINE FEET MINIMUM IS DESIRED

ANTENNA LOCATION IS OF PRIMARY CONCERN

### 5. MOUNT TRANSMITTER CASE

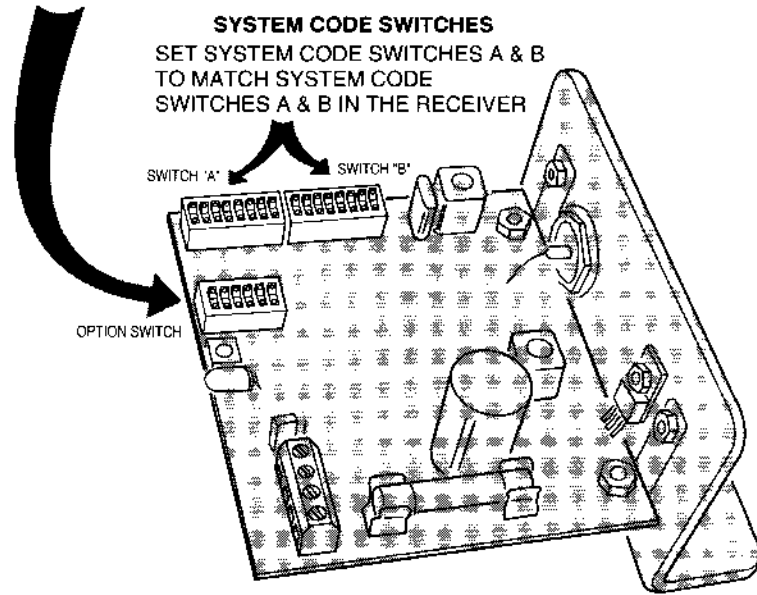


## 6. SET TRANSMITTER SWITCHES

RECEIVER CHANNEL			OPTION SWITCH			STATUS REPORTS	
SWITCH 1	SWITCH 2	CH #	SWITCH 3	SWITCH 4	BANK #	SWITCH 5	
OFF	OFF	1	OFF	OFF	1	OFF	NO STATUS REPORTS
ON	OFF	2	ON	OFF	2	ON	STATUS REPORTS
OFF	ON	3	OFF	ON	3	AUTO RESTORAL	
ON	ON	4	ON	ON	4	SWITCH 6	
SET SWITCHES 1 & 2 TO SELECT THE RECEIVER CHANNEL THE TRANSMITTER ACTIVATES (USE CHANNEL 1 FOR SINGLE CHANNEL RECEIVERS)			SET SWITCHES 3 & 4 TO SELECT THE RECEIVER BANK THE TRANSMITTER ACTIVATES (USED ONLY FOR 16 CHANNEL RECEIVER. USE BANK 1 FOR ALL OTHERS)			OFF	MANUAL RESTORE
						ON	AUTO RESTORE

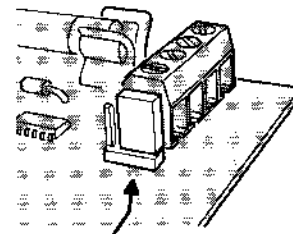
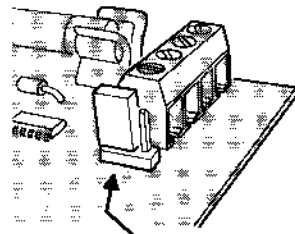
### SYSTEM CODE SWITCHES

SET SYSTEM CODE SWITCHES A & B TO MATCH SYSTEM CODE SWITCHES A & B IN THE RECEIVER



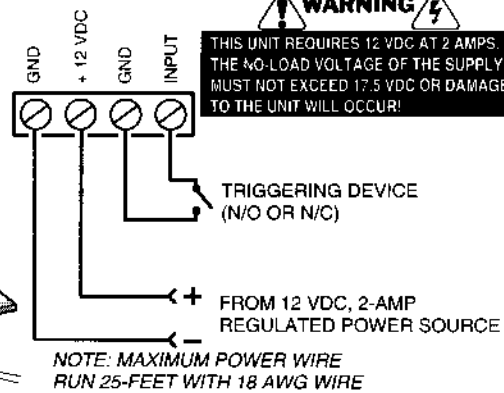
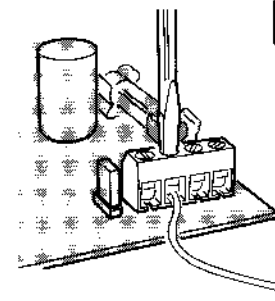
## 7. CONNECT POWER AND TRIGGER INPUTS

SET INPUT SELECT JUMPER TO MATCH INPUT TYPE



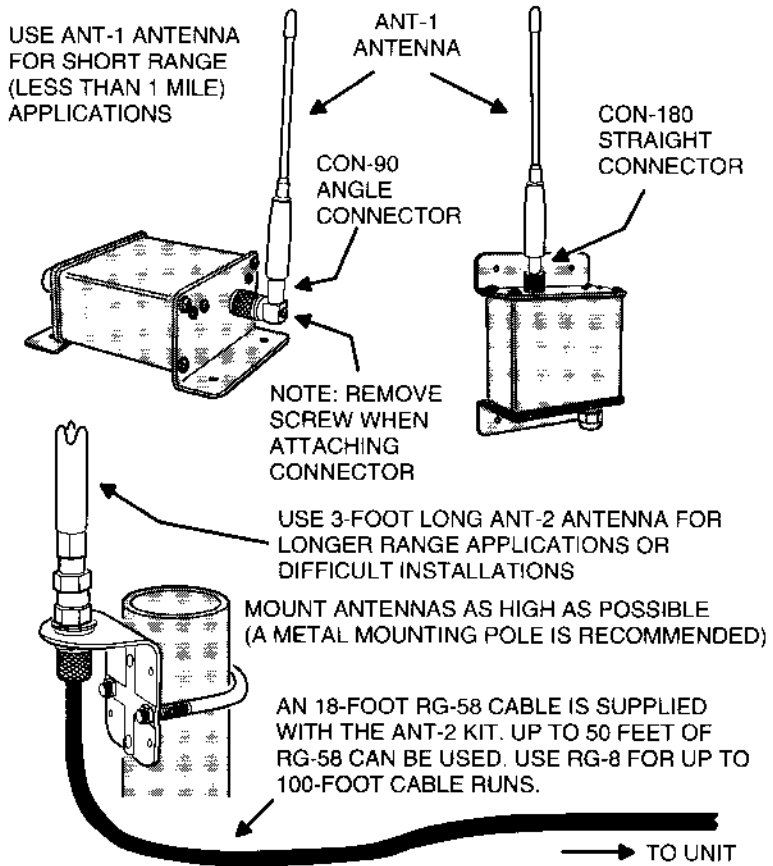
ROUTE WIRES THROUGH CASE STRAIN RELIEF BUSHING BEFORE CONNECTING TO TERMINALS

USE 18-24 AWG WIRE TO CONNECT POWER AND TRIGGER INPUT



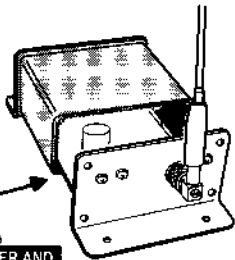
## 8. MOUNT ANTENNA AND ROUTE CABLE

USE ANT-1 ANTENNA FOR SHORT RANGE (LESS THAN 1 MILE) APPLICATIONS



## 9. TEST SYSTEM

SLIDE BOARD INTO CASE IN THE 3RD SLOT UP



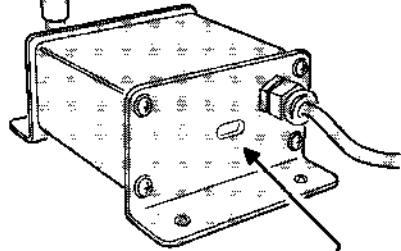
INSTALL AND SETUP THE COMPANION UNIT AS DESCRIBED IN ITS INSTALLATION INSTRUCTIONS

**WARNING**

NEVER CONNECT THE TRANSMITTER AND RECEIVER ANTENNA CONNECTORS DIRECTLY TO EACH OTHER. MAJOR DAMAGE TO BOTH UNITS WILL OCCUR!

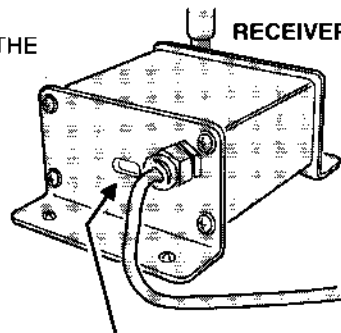
**TRANSMITTER**

APPLY POWER AND TRIGGER THE TRANSMITTER'S INPUT



THE TRANSMIT INDICATOR SHOULD LIGHT WHEN THE TRANSMITTER IS TRIGGERED

**RECEIVER**

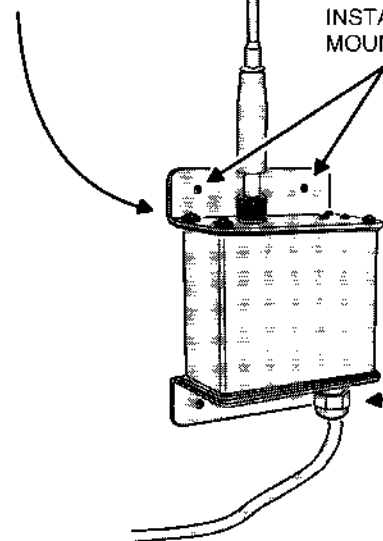


THE RECEIVER'S SIGNAL INDICATOR SHOULD LIGHT AND OUTPUT SHOULD ACTIVATE

IF SYSTEM FAILS TEST, CHECK POWER, SWITCH SETTINGS AND ANTENNA CONNECTIONS

## 10. COMPLETE INSTALLATION

SECURE END PLATE BY INSTALLING THE FOUR CASE SCREWS



INSTALL THE TWO REMAINING MOUNTING SCREWS

TIGHTEN WIRING STRAIN RELIEF BUSHING TO SECURE AND WEATHER PROOF WIRING

TEST SYSTEM AGAIN AFTER COMPLETING INSTALLATION