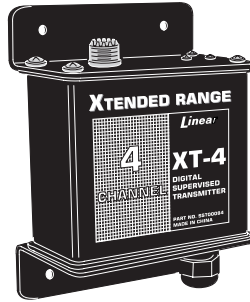


XT-4

XTENDED RANGE FOUR CHANNEL SUPERVISED STATIONARY TRANSMITTER

For Use With Linear's
XR Series Xtended
Range Receivers

Installation Instructions



Linear

(619) 438-7000 • FAX (619) 438-7043
USA & Canada (800) 421-1587 & (800) 392-0123
Toll Free FAX (800) 468-1340

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 device.

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-4 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-4 transmitter has full supervision capabilities. If the "status" option is selected, the XT-4 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 outputs to follow the transmitter's inputs, staying activated as long as each transmitter input is activated. Alternately, an "auto-restore" option can be selected, causing a momentary receiver output each time any transmitter input is activated. Each input can be configured for either N/O or N/C contacts (switch selectable).

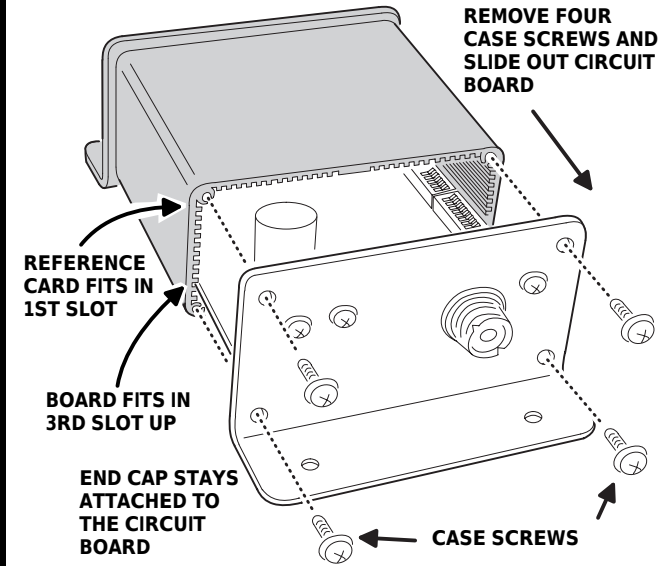
Power for the XT-4 transmitter can come from an external regulated 12 VDC power supply (Linear Model T-1224DC) or from a 12-volt battery. A 3-amp fuse protects the unit from reverse power polarity. The XT-4 draws about 15 μ A standby, and about two amps during transmissions. If the power supply voltage 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-4. 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-4 is required. A common 9-foot 1/4 wave CB whip antenna can also be used with the XT-4 for maximum range.

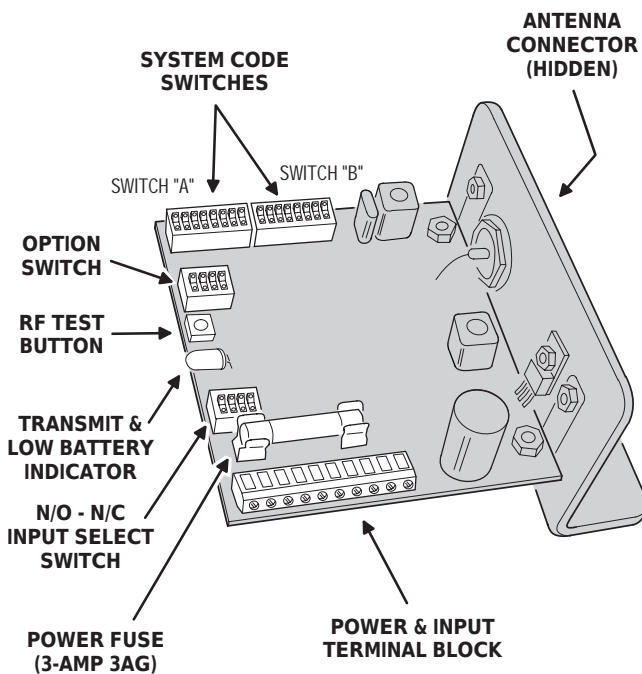
Two 8-position switches set the unit's system code. This code must be matched in the XT-4's receiver. There are 65,536 different system codes possible. The 4-position option switch selects the receiver's bank (for XR-16 receiver only), and options for status and auto-restore transmissions.

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-4's input voltage is low, the indicator will blink during transmissions.

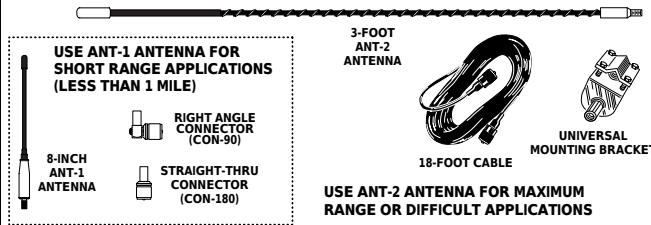
2. OPEN TRANSMITTER



3. COMPONENT LOCATIONS



4. INSTALLATION TIPS

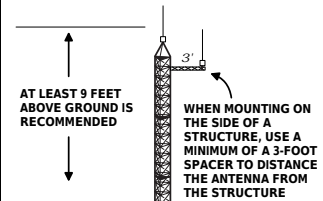


GOOD INSTALLATION

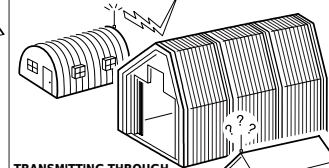


ANTENNAS ARE MOUNTED VERTICALLY, ON HIGH POINTS OF BUILDINGS

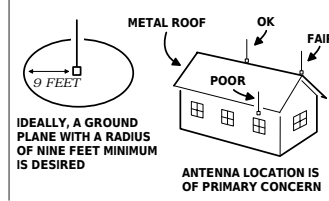
MOUNT ANTENNA AS HIGH AS POSSIBLE



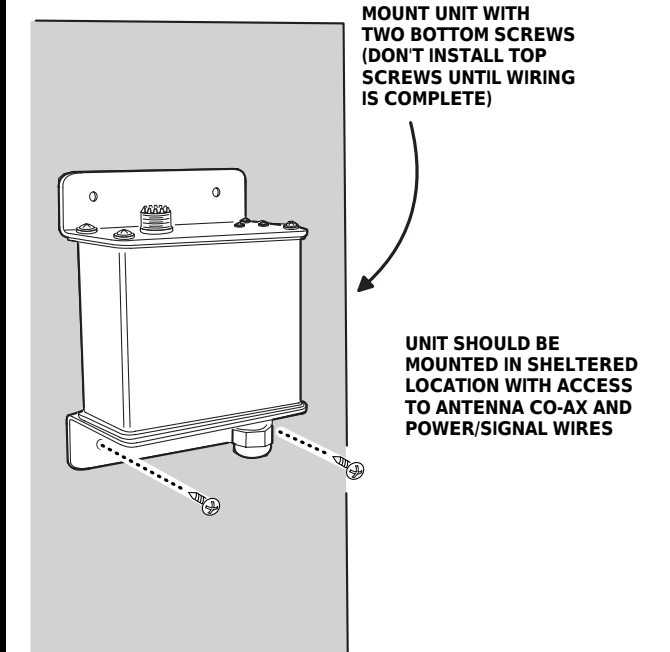
BAD INSTALLATION



GOOD ANTENNAS NEED GOOD GROUNDS



5. MOUNT TRANSMITTER CASE



6. SET TRANSMITTER SWITCHES

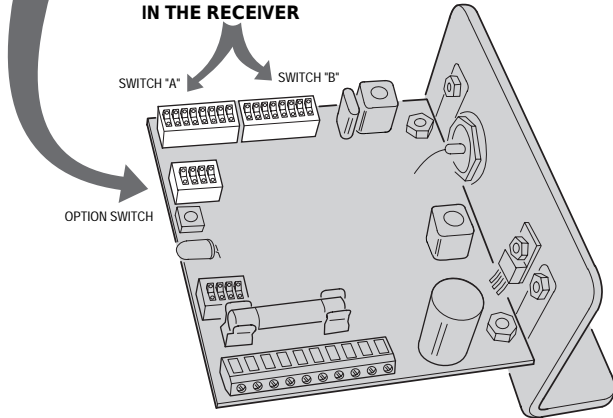
| SET OPTION SWITCH | | |
|-------------------|----------|--------|
| RECEIVER BANK | | |
| SWITCH 1 | SWITCH 2 | BANK # |
| OFF | OFF | 1 |
| ON | OFF | 2 |
| OFF | ON | 3 |
| ON | ON | 4 |

SET SWITCHES 1 & 2 TO SELECT THE RECEIVER BANK THE TRANSMITTER ACTIVATES (USED ONLY FOR 16 CHANNEL RECEIVER, USE BANK 1 FOR ALL OTHERS)

| STATUS REPORTS | |
|----------------|-------------------|
| SWITCH 3 | |
| OFF | NO STATUS REPORTS |
| ON | STATUS REPORTS |

| AUTO RESTORAL | |
|---------------|----------------|
| SWITCH 4 | |
| 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 SWITCH TO MATCH INPUT TYPE FOR EACH CHANNEL

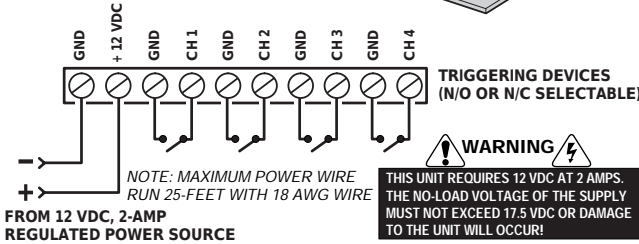
| INPUT SELECT SWITCH | | | |
|---------------------|---------|-------|------|
| SWITCH # | CHANNEL | OFF = | ON = |
| SWT 1 | CH 1 | N/O | N/C |
| SWT 2 | CH 2 | N/O | N/C |
| SWT 3 | CH 3 | N/O | N/C |
| SWT 4 | CH 4 | N/O | N/C |

SET SWITCHES 1 - 4 TO SELECT THE NORMAL (NON-VIOLATED) STATE OF THE INPUT TRIGGER DEVICE
SWITCH OFF = N/O SWITCH ON = N/C

ROUTE WIRES THROUGH CASE STRAIN RELIEF BUSHING BEFORE CONNECTING TO TERMINALS

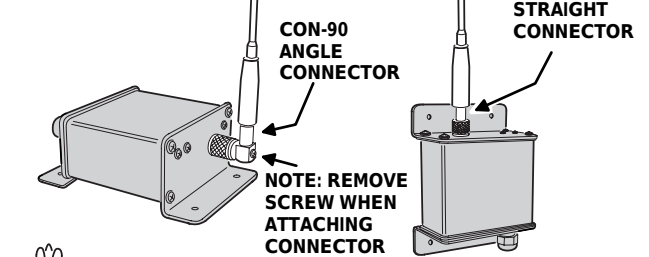
USE 18-24 AWG WIRE TO CONNECT POWER AND TRIGGER INPUTS

CAUTION: BE SURE WIRE STRANDS DO NOT TOUCH NEARBY FUSE

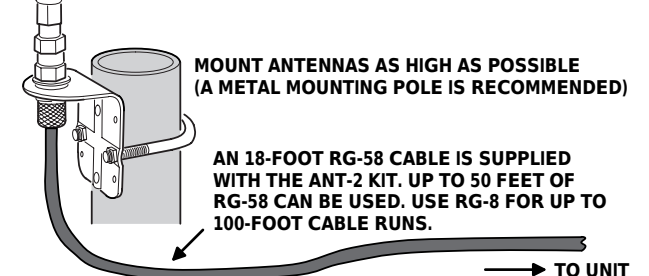


8. MOUNT ANTENNA AND ROUTE CABLE

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



USE 3-FOOT LONG ANT-2 ANTENNA FOR LONGER RANGE APPLICATIONS OR DIFFICULT INSTALLATIONS



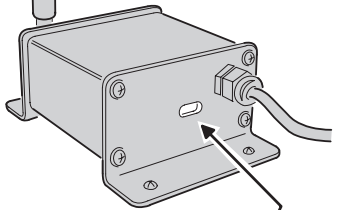
9. TEST SYSTEM

SLIDE BOARD INTO CASE IN THE 3RD SLOT UP

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

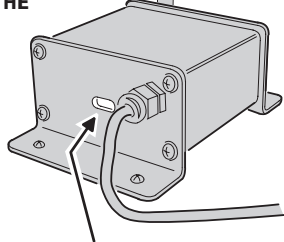
WARNING
NEVER CONNECT THE TRANSMITTER AND RECEIVER ANTENNA CONNECTORS DIRECTLY TO EACH OTHER. MAJOR DAMAGE TO BOTH UNITS WILL OCCUR!

TRANSMITTER APPLY POWER AND TRIGGER THE TRANSMITTER'S INPUT



THE TRANSMIT INDICATOR SHOULD LIGHT WHEN THE TRANSMITTER IS TRIGGERED

RECEIVER



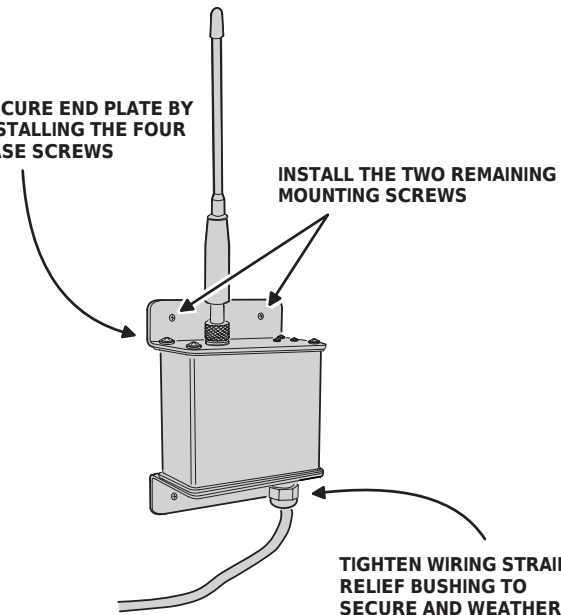
THE RECEIVER'S SIGNAL INDICATOR SHOULD LIGHT AND OUTPUT SHOULD ACTIVATE

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



TEST SYSTEM AGAIN AFTER COMPLETING INSTALLATION

LINEAR LIMITED WARRANTY

This Linear product is warranted against defects in material and workmanship for twelve (12) months. The Warranty Expiration Date is labeled on the product. This warranty extends only to wholesale customers who buy direct from Linear or through Linear's normal distribution channels. Linear does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any. There are no obligations or liabilities on the part of Linear Corporation for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation. All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until Warranty Expiration Date as labeled on the product. This Linear Corporation Warranty is in lieu of all other warranties express or implied.

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

IMPORTANT !!!

Linear radio controls provide a reliable communications link and fill an important need in portable wireless signaling. However, there are some limitations which must be observed.

- * **WARNING:** THIS PRODUCT IS NOT TO 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 device.
- * For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 95 Radio Control devices. As such, they have limited transmitter power and therefore limited range.
- * A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.
- * Changes or modifications to the device may void FCC compliance.
- * Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
- * A general knowledge of radio and its vagaries should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.