

XR-16

XTENDED RANGE SIXTEEN CHANNEL SUPERVISED STATIONARY RECEIVER

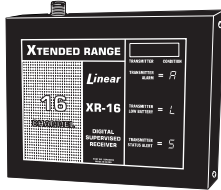
For Use With
Linear's XR Series
Xtended Range
Transmitters

Installation Instructions

Linear®

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USA & Canada (800) 421-1587 & (800) 392-0123
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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 receivers and transmitters are designed for use in various wireless remote control applications. When the Model XR-16 receiver detects a signal from its companion transmitters, it will verify the digital code, activate the correct output channel, and trigger the remote device connected to the receiver.

The XR-16 receiver has full supervision capabilities. If the "status" option for a channel is selected, the receiver expects hourly status signals from that channel's transmitter. 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, each output staying activated as long as each transmitter input is activated. Alternately, an "auto-restore" option can be selected in the transmitter, causing a momentary receiver output each time any transmitter input is activated. If the transmitter sends a low battery signal, the receiver's low battery output will activate.

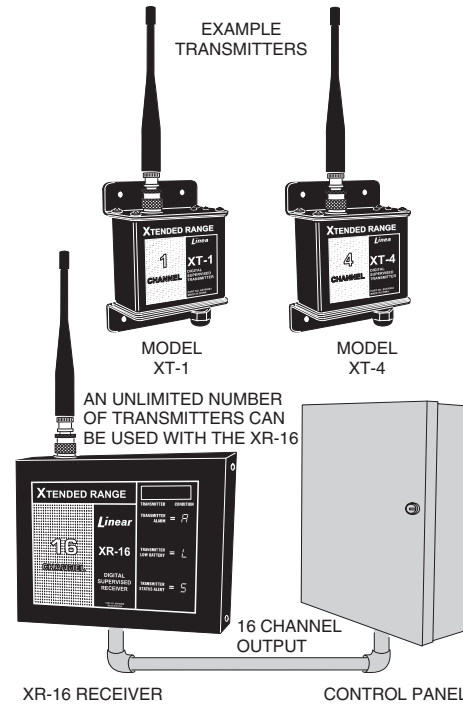
Power for the XR-16 receiver can come from an external 12 VDC power supply (Linear Model T-1224DC) or from a 12-volt battery. A diode protects the unit from reverse power polarity. The XR-16 draws about 50 mA standby, and about 350 mA when all outputs are active. The alarm, low battery and status outputs are solid state and are capable of switching up to 100 mA @ 24 VDC to ground (programmable as N/O or N/C). The receiver's relay can activate with all signals, or just alarm signals. It provides isolated N/O and N/C relay contacts capable of switching a maximum of 1 Amp @ 24 VDC.

Two antennas (sold separately) are available for the XR-16. The Model ANT-1A is an 8-inch "rubber duck" antenna for short range applications (less than 1 mile). The ANT-1 requires a Model CON-180A connector to mate the antenna to the receiver. The Model ANT-2 is a 3-foot whip antenna for use in long range or difficult installations where more range from the XR-16 is required. A common 9-foot 1/4 wave CB whip antenna can also be used with the XR-16 for maximum range.

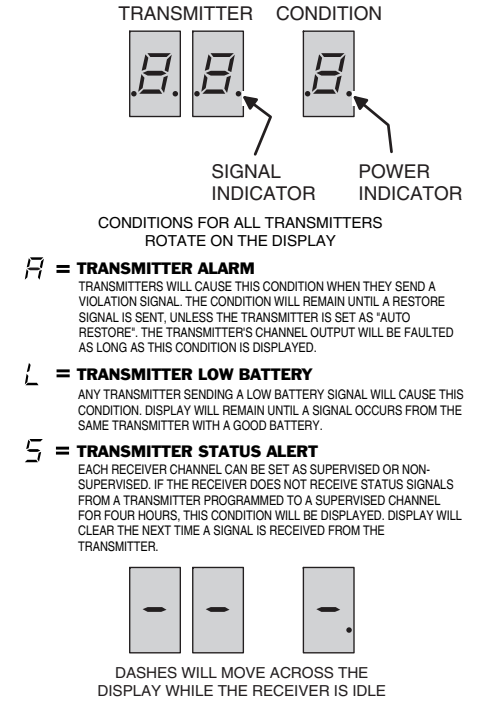
Two 8-position switches set the unit's system code. This code must be matched in the XR-16's transmitters. There are 65,536 different system codes possible. The two 8-position option switches select the status supervision option for each of the 16 channels.

The receiver is housed in a metal enclosure with an SO-239 antenna connector. Three displays are visible through a window on the case. The left two displays show the channel number, the right display shows the condition. The display scrolls through all the channel numbers with a condition. The right decimal point lights when the receiver has power. During reception, the center decimal point lights. Two internal test points are provided for signal strength and audio monitoring.

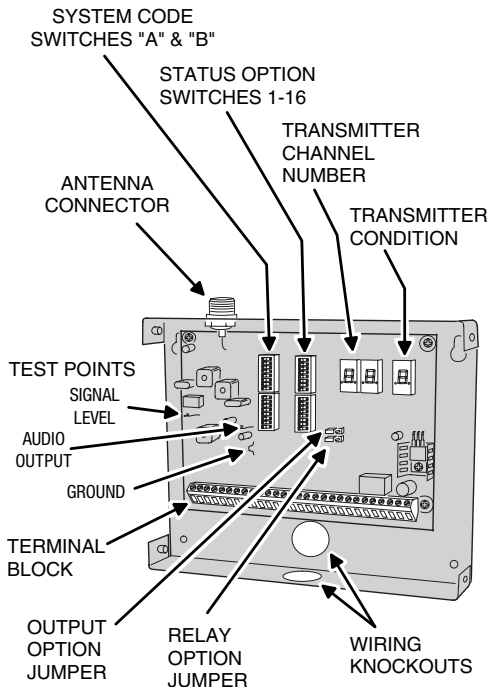
2. SYSTEM OVERVIEW



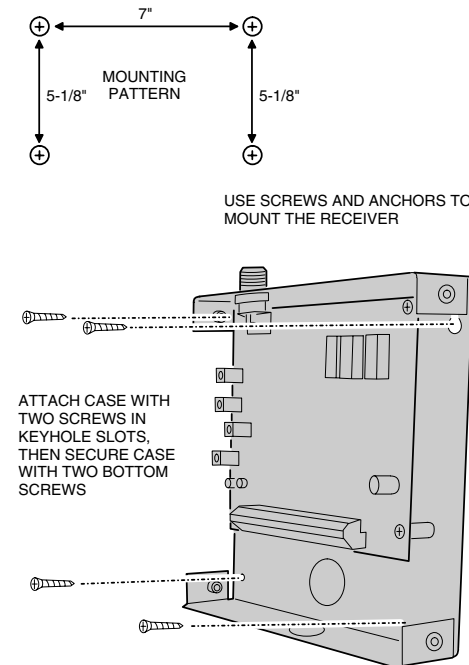
3. DISPLAYED CONDITIONS



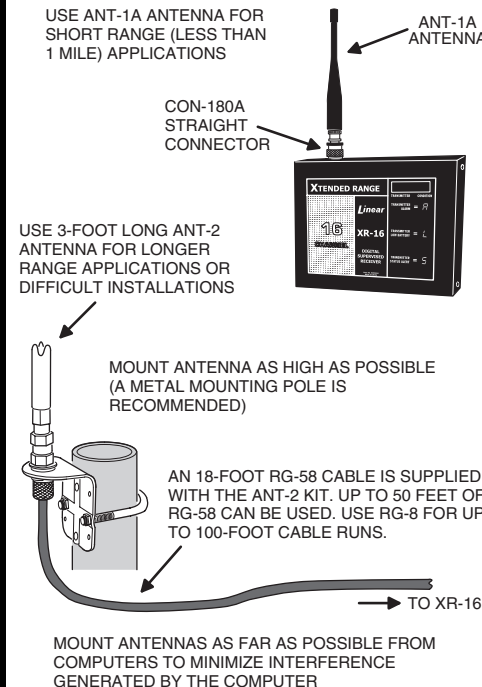
4. COMPONENT LOCATIONS



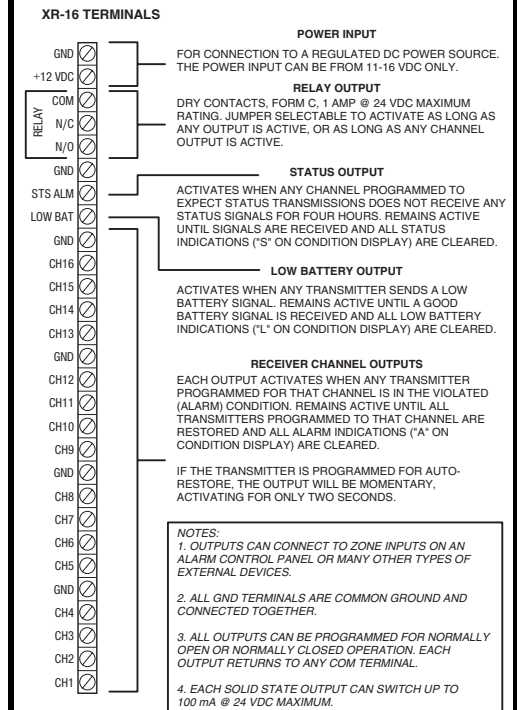
5. MOUNT RECEIVER



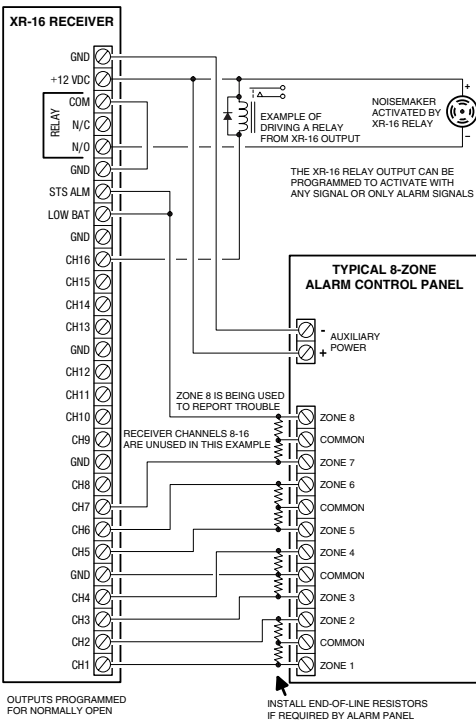
6. CONNECT ANTENNA



7. TERMINAL BLOCK DETAILS



8. TYPICAL WIRING CONNECTIONS



12. SET TRANSMITTER CHANNELS

EVERY FOUR RECEIVER CHANNELS CREATE ONE RECEIVER BANK

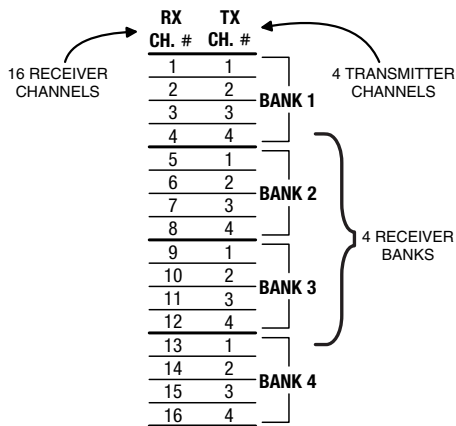
SINGLE-CHANNEL TRANSMITTERS:

SET THE RECEIVER CHANNEL NUMBER (1-4) AND BANK NUMBER (1-4) ON THE OPTION SWITCHES IN THE TRANSMITTER

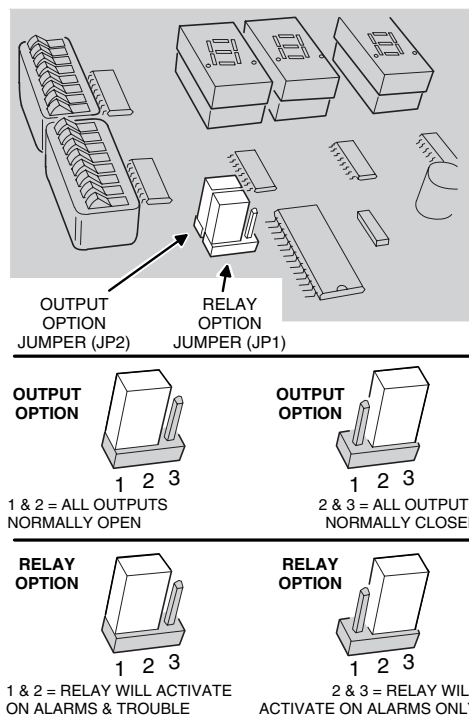
MULTI-CHANNEL TRANSMITTERS:

SET THE RECEIVER BANK NUMBER (1-4) ON THE OPTION SWITCHES IN THE TRANSMITTER

REFER TO THE SPECIFIC TRANSMITTER INSTRUCTIONS FOR ACTUAL SWITCH "ON"/"OFF" SETTINGS FOR EACH MODEL OF TRANSMITTER



9. SET OPTION JUMPERS



13. TEST THE SYSTEM

1. APPLY POWER TO THE RECEIVER AND TRANSMITTER(S). THE RECEIVER'S POWER INDICATOR SHOULD LIGHT AND DASHES SHOULD MOVE ACROSS THE DISPLAY.

2. ACTIVATE AND MAINTAIN A TRANSMITTER INPUT (WITH AUTO-RESTORE OFF). DISPLAY SHOULD SHOW THE CHANNEL # AND AN "A".

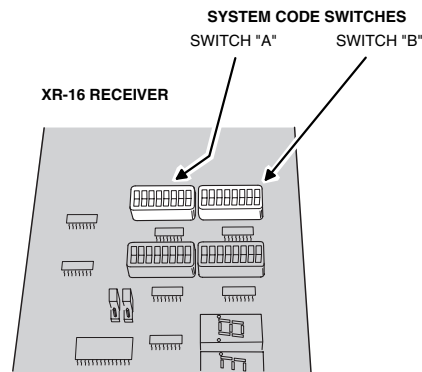
3. VERIFY THAT THE CHANNEL'S OUTPUT ACTIVATES WHILE THE "A" IS ON THE DISPLAY. USE A METER OR CHECK THE CONNECTED DEVICE.

4. RESTORE THE TRANSMITTER'S INPUT. THE CHANNEL # AND THE "A" SHOULD GO AWAY.



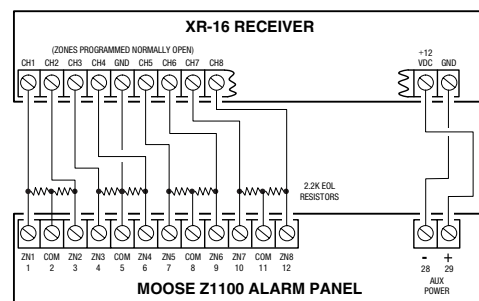
10. SET SYSTEM CODE

SET SYSTEM CODE SWITCHES "A" & "B" IN THE RECEIVER TO MATCH SYSTEM CODE SWITCHES "A" & "B" IN ALL OF THE SYSTEM'S TRANSMITTERS

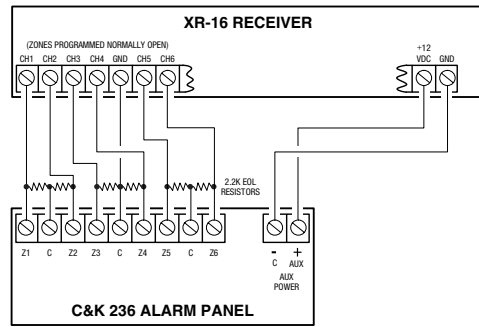


AVOID SETTING SYSTEM CODE SWITCHES ALL "ON", ALL "OFF", OR IN ALTERNATING "ON"/"OFF" PATTERNS

14. EXAMPLE HOOK-UPS

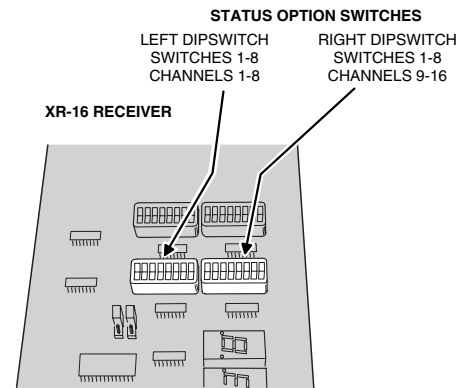


THE XR-16 RECEIVER CAN BE CONNECTED TO COMMON ALARM CONTROL PANELS OR MANY OTHER EXTERNAL DEVICES



11. SET STATUS OPTIONS

SET STATUS OPTION SWITCHES "ON" FOR EACH RECEIVER CHANNEL THAT WILL REQUIRE STATUS REPORTS



ANY CHANNEL WITH ITS STATUS OPTION SWITCH "ON" WILL EXPECT HOURLY STATUS REPORTS FROM TRANSMITTERS PROGRAMMED TO THAT CHANNEL

IF STATUS REPORTS ARE NOT RECEIVED FOR THAT CHANNEL FOR FOUR HOURS, THE STATUS ALARM OUTPUT WILL ACTIVATE (THE RELAY CAN ALSO ACTIVATE IF SELECTED)

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 LLC 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 until Warranty Expiration Date as labeled on the product. This Linear LLC 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.