**XR-1 XStended Range SINGLE CHANNEL SUPERVISED STATIONARY RECEIVER**

**For Use With Linear’s XR Series XStended Range Transmitters**

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**1. PRODUCT DESCRIPTION**

Linear’s XStended Range (XR) receivers and transmitters are designed for use in various wireless remote control applications. When the Model XR-1 receiver detects a signal from its companion transmitter, it will verify the digital code, activate its output, and trigger the remote device connected to the receiver.

The XR-1 receiver has full supervision capabilities. If the “status” option is selected, the receiver expects hourly status signals from its transmitter. 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 in the transmitter, causing a momentary receiver output each time the transmitter input is activated.

If the transmitter sends a low battery signal, the receiver’s low battery output will activate. Power for the XR-1 receiver can come from an external regulated 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-1 draws about 30 mA standby, and about 70 mA when the output is active. The receiver output provides isolated N/O and N/C relay contacts capable of switching a maximum of 1 Amp @ 32 VDC. The low battery and status outputs are solid state and are capable of switching up to 50 mA @ 20 VDC to ground.

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**3. COMPONENT LOCATIONS**

**3.1. Antenna Location**

The antenna should be mounted as high as possible. The recommended antenna height is at least 9 feet above ground. For best range, mount the XT/XR unit to a metal plate with a minimum size of 12" x 12". The ANT-1A antenna should extend above the mounting plate and be free of obstructions. If the ANT-1A antenna cannot be mounted in the open, consider using an extension coaxial cable with PL-259 connectors to move the antenna’s location.

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**4. INSTALLATION TIPS**

**4.1. Antenna Tip**

Antennas are mounted on high points of the building to provide the best range. The transmitter and receiver antennas will provide the best range when mounted vertically on high points of buildings.

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**5. MOUNT RECEIVER CASE**

If using the ANT-1A antenna, for best range mount the XT/XR unit to a metal plate with a minimum size of 12" x 12". The ANT-1A antenna should be mounted at the mounting plate and be free of obstructions. If the ANT-1A antenna cannot be mounted in the open, consider using an extension coaxial cable with PL-259 connectors to move the antenna’s location. Antennas, PL-259 extension cables and other adapters are available at Radio Shack® or other electronics stores.
6. SET RECEIVER SWITCHES

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<th>Option Switch</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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7. CONNECT POWER AND OUTPUTS

- Use 18-24 AWG wire to connect power and outputs.
- Use 12 VDC, 1/2 amp, from 12 VDC, 1/2 amp to regulated power source.
- Low battery & status outputs will switch up to 50 mA at 20 VDC to ground when active.
- <30 mA standby, <70 mA with relay energized.
- The no-load voltage of the supply must not exceed 17.5 VDC or damage to the unit will occur!

8. MOUNT ANTENNA AND ROUTE CABLE

- Use 3-foot long ANT-2 antenna for longer range applications or difficult installations.
- Use RG-8 for up to 100-foot cable runs.
- 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.
  - 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.
  - Generally, 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.