# DX-COKIT

## DX BY Linear®

### WIRELESS CARBON MONOXIDE ALARM WITH A TWO-CHANNEL DIGITAL RECEIVER

Installation Instructions

**Linear®**
Building On Innovation.

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## PRODUCT DESCRIPTION

The DX-COKIT is a DXS-80 carbon monoxide (CO) alarm with a wireless transmitter that communicates with the matching DXR-702 two channel receiver. The CO alarm monitors its operating condition and the transmitter will send battery status to the receiver. If the battery is low, the receiver's channel two relay will latch until reset. In the event of an alarm, the transmitter will activate channel one of the DXR-702, and the receiver's relay will close for four seconds. **IMPORTANT: When the DXR-702 is connected to a security panel it is very important that the central station monitoring the location is advised of which zone(s) will report a carbon monoxide alarm.**

In a typical installation, the receiver is connected to an alarm control panel. The receiver should be mounted with the supplied mounting bracket indoors or inside a weather resistant *non-metallic* housing.

Refer to the instructions for the DXS-80 CO alarm included with this product for information about locating and mounting the DXS-80. Please read the DXS-80 instructions thoroughly for important information about the effects of carbon monoxide poisoning.

The digital DX code format features over a million possible codes. The DX transmitters are precoded at the factory to unique codes, so no field coding is required. *For versatility, any transmitter can be programmed into any receiver channel.* Receivers must be programmed to the transmitter's code before system testing and operation. Up to 32 transmitters maximum can be programmed into the receiver. The transmitters can be split in any number between the two receiver channels.

The DXS-80 CO alarm is factory programmed into channel one of the receiver that it boxed with in the DX-COKIT.
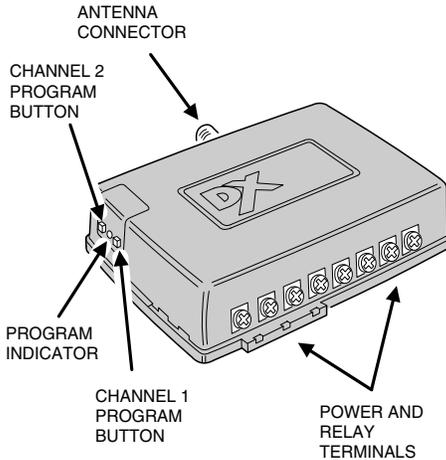
Receiver channel two is a special channel. If channel two memory is empty, with no transmitters programmed into it, it will report low battery signals from any channel one transmitters capable of sending them. When a low battery transmission is received, the channel two relay will latch. The relay will remain engaged until the channel two program button is pressed. The low transmitter batteries should be replaced before resetting the relay.

The receiver can be powered from a 11-17 VDC or 12-16 VAC power source. The relays' normally open and normally closed contacts can switch up to 1 amp at 24 volts AC/DC.
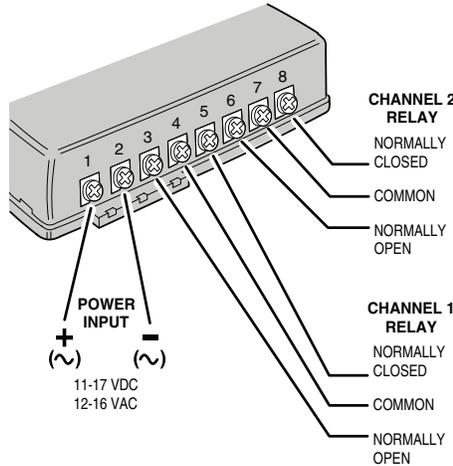
A nine-inch wire whip antenna screws into the receiver's antenna connector. Optionally, a remote antenna (Linear EXA-1000) can be connected to the receiver for greater radio range. The red program indicator lights during RF reception. The installer can verify that signals are being sent from transmitters and diagnose interference problems by viewing the indicator. The indicator also lights during memory programming/erasing and flashes to count the number of transmitters in memory.

**The DXS-80 CO alarm that is included in the COKIT is already programmed into the associated DXR-702 receiver. To program more DXS-80 CO alarms into the receiver see programming memory panel.**
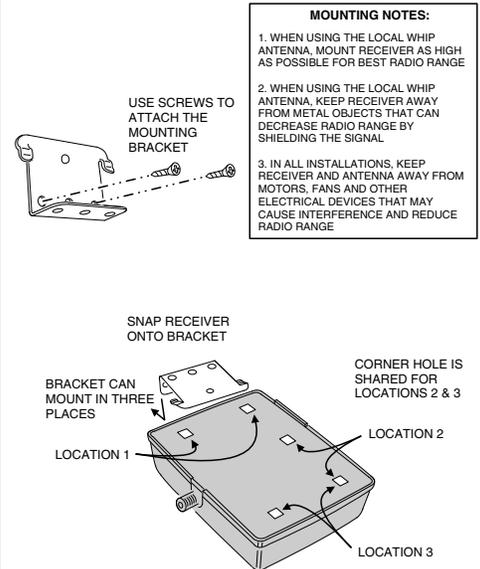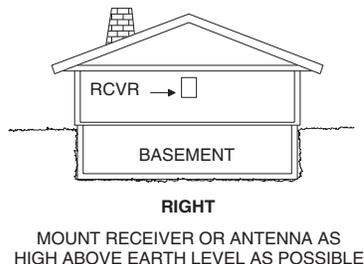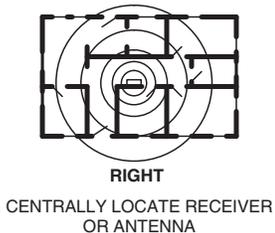
## DXR-702 FEATURES



ANTENNA CONNECTOR

CHANNEL 2 PROGRAM BUTTON

PROGRAM INDICATOR

CHANNEL 1 PROGRAM BUTTON

POWER AND RELAY TERMINALS

## TERMINAL DETAILS



**CHANNEL 2 RELAY**
NORMALLY CLOSED
COMMON
NORMALLY OPEN

**POWER INPUT**
+ (∼)    − (∼)
11-17 VDC
12-16 VAC

**CHANNEL 1 RELAY**
NORMALLY CLOSED
COMMON
NORMALLY OPEN

## MOUNTING RECEIVER

**MOUNTING NOTES:**

1. WHEN USING THE LOCAL WHIP ANTENNA, MOUNT RECEIVER AS HIGH AS POSSIBLE FOR BEST RADIO RANGE

2. WHEN USING THE LOCAL WHIP ANTENNA, KEEP RECEIVER AWAY FROM METAL OBJECTS THAT CAN DECREASE RADIO RANGE BY SHIELDING THE SIGNAL

3. IN ALL INSTALLATIONS, KEEP RECEIVER AND ANTENNA AWAY FROM MOTORS, FANS AND OTHER ELECTRICAL DEVICES THAT MAY CAUSE INTERFERENCE AND REDUCE RADIO RANGE

USE SCREWS TO ATTACH THE MOUNTING BRACKET



SNAP RECEIVER ONTO BRACKET

BRACKET CAN MOUNT IN THREE PLACES

CORNER HOLE IS SHARED FOR LOCATIONS 2 & 3

LOCATION 1

LOCATION 2

LOCATION 3

## INSTALLATION TIPS



**RIGHT**
CENTRALLY LOCATE RECEIVER OR ANTENNA

**WRONG!**
TRANSMITTERS AT THE OTHER END OF HOUSE MIGHT BE TOO FAR AWAY

RCVR →
BASEMENT

**RIGHT**
MOUNT RECEIVER OR ANTENNA AS HIGH ABOVE EARTH LEVEL AS POSSIBLE

RCVR
BASEMENT

**WRONG!**
LOCATING A RECEIVER OR ANTENNA BELOW EARTH LEVEL WILL IMPAIR RANGE
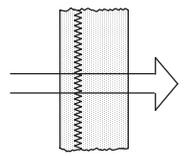
CONSTRUCTION MATERIALS WILL EFFECT RADIO RANGE

90% - 100% OF FULL POWER
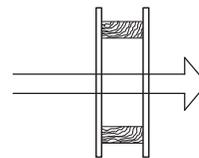
WALLBOARD AND WOOD STUDS

65% - 95% OF FULL POWER
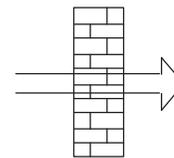
LIGHT CONCRETE OR BRICK

10% - 70% OF FULL POWER

CONCRETE WITH STEEL REINFORCEMENT OR METAL LATH AND PLASTER

MODEL EXA-1000 ANTENNA

SCREW LOCAL WHIP ANTENNA ONTO RECEIVER
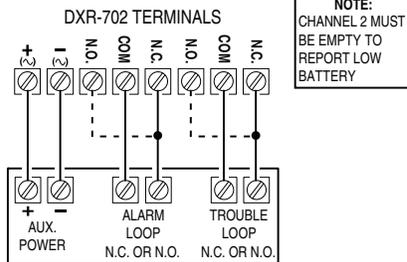
- OR -

USE REMOTE ANTENNA

UP TO 25 FEET OF RG-59 CABLE ALLOWED
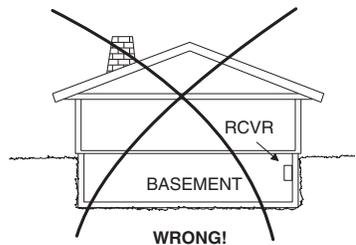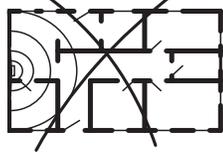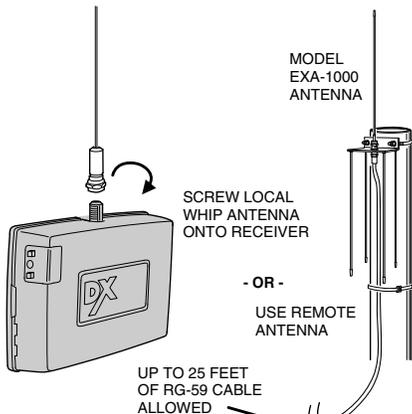
**ANTENNA NOTES:**

1. ANTENNA SHOULD BE MOUNTED AS HIGH AS PRACTICAL.

2. KEEP ANTENNA AWAY FROM ELECTRICAL INTERFERENCE SOURCES.

3. CENTRALLY LOCATE ANTENNA AMONG THE TRANSMITTERS.

DXR-702 TERMINALS

**NOTE:** CHANNEL 2 MUST BE EMPTY TO REPORT LOW BATTERY

+  −  N.O.  COM  N.C.  N.O.  COM  N.C.

+  −  AUX. POWER

ALARM LOOP N.C. OR N.O.

TROUBLE LOOP N.C. OR N.O.

**ALARM PANEL CONNECTION WITH LOW BATTERY REPORTING LATCHING RELAY OPTION**

| FUNCTION | PROGRAM BUTTON | PROGRAM INDICATOR |
|---|---|---|
| NORMAL OPERATION | RELEASES LATCHED RELAY FOR CHANNEL 1 OR 2 | LIGHTS WHEN TRANSMITTER IS RECEIVED, FLASHES WHEN INTERFERENCE IS RECEIVED |
| PROGRAMMING MEMORY | PRESS AND RELEASE FOR CHANNEL 1 OR 2 | LIGHTS FOR 3 SECONDS FOR PROGRAMMING |
| CHECKING MEMORY | PRESS FOR CHANNEL 1 OR 2 UNTIL BLINK AND RELEASE | BLINKS THE NUMBER OF TRANSMITTERS IN CHANNEL MEMORY |
| ERASING MEMORY | FOR CHANNEL 1 OR 2, PRESS AND HOLD THROUGH THE COUNT AND HOLD FOR 5 SECONDS MORE | AFTER BLINKING COUNT. A PAUSE THEN A SINGLE BLINK AS MEMORY IS ERASED (DOUBLE BLINK ON CHANNEL 2) |

**THE DXS-80 CO ALARM THAT IS INCLUDED IN THE COKIT IS ALREADY PROGRAMMED INTO THE ASSOCIATED DXR-702 RECEIVER. TO PROGRAM MORE DXS-80 CO ALARMS INTO THE RECEIVER USE THE FOLLOWING PROCEDURE.**

1. PRESS AND RELEASE PROGRAM BUTTON FOR THE DESIRED CHANNEL. IF LOW BATTERY REPORTING IS DESIRED, BE SURE TO LEAVE CHANNEL TWO EMPTY.

2. PROGRAM INDICATOR WILL LIGHT FOR 3 SECONDS IF THERE IS ROOM IN THAT CHANNEL'S MEMORY FOR ANOTHER TRANSMITTER (32 TRANSMITTERS MAXIMUM TOTAL ALLOWED BETWEEN BOTH CHANNELS IN THE RECEIVER).

3. WITHIN 3 SECONDS, SEND SIGNAL FROM TRANSMITTER, PROGRAM INDICATOR WILL FLICKER AS SIGNAL IS RECEIVED.

4. REPEAT THE ABOVE THREE STEPS FOR EACH ADDITIONAL TRANSMITTER.
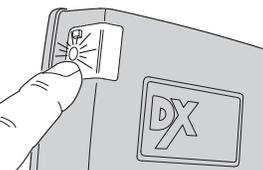
**AFTER PUSHING THE RECEIVER'S PROGRAMMING BUTTON, YOU ONLY HAVE 3 SECONDS TO SEND A SIGNAL BEFORE PROGRAMMING MODE STOPS**
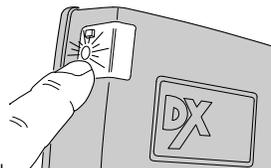
PRESS UNTIL ALARM BEEPS THEN RELEASE TEST BUTTON TO SEND SIGNAL

A TEST SIGNAL WILL BE SENT A FEW SECONDS AFTER THE SWITCH IS RELEASED

1. PRESS PROGRAM BUTTON FOR THE DESIRED CHANNEL AND HOLD FOR ABOUT TWO SECONDS UNTIL INDICATOR LIGHTS THEN RELEASE.

2. COUNT THE NUMBER OF INDICATOR BLINKS, THIS IS THE TOTAL NUMBER OF TRANSMITTERS PROGRAMMED INTO THAT CHANNEL.

PUSH UNTIL INDICATOR LIGHTS

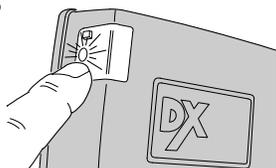**NOTE: DO NOT CONTINUE TO PRESS BUTTON OR MEMORY WILL BE ERASED**
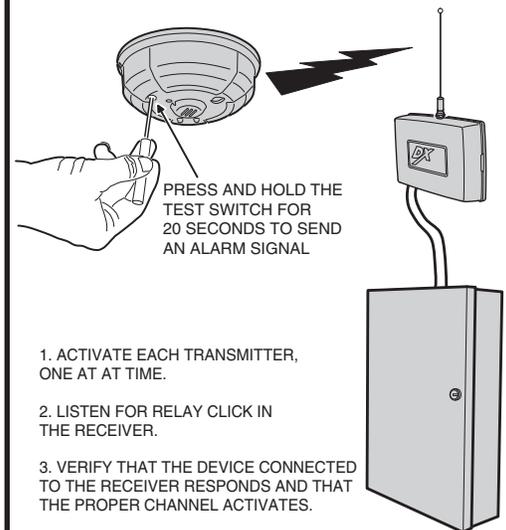
PRESS AND HOLD THE TEST SWITCH FOR 20 SECONDS TO SEND AN ALARM SIGNAL

1. ACTIVATE EACH TRANSMITTER, ONE AT AT TIME.

2. LISTEN FOR RELAY CLICK IN THE RECEIVER.

3. VERIFY THAT THE DEVICE CONNECTED TO THE RECEIVER RESPONDS AND THAT THE PROPER CHANNEL ACTIVATES.

1. PRESS PROGRAM BUTTON FOR THE CHANNEL TO ERASE AND CONTINUE TO HOLD IT THROUGH THE COUNT OF THE TRANSMITTERS.

2. CONTINUE TO HOLD THE BUTTON AFTER THE COUNT UNTIL THE INDICATOR BLINKS ONCE FOR CHANNEL ONE, TWICE FOR CHANNEL TWO (ABOUT FIVE SECONDS AFTER THE COUNT).

3. ALL TRANSMITTERS PROGRAMMED INTO THAT CHANNEL WILL BE ERASED.

PUSH AND HOLD BUTTON FOR FIVE SECONDS AFTER THE TRANSMITTER COUNT

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

- For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 15 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.

- Not for UL Listed CO alarm applications.