

DESCRIPTION

The D-21A(/K), D-24A(/K), and D-26A(/K) are digitally coded stationary radio transmitters triggered by normally open (N/O) or normally closed (N/C) sensors. These transmitters can be programmed to activate any of Linear's standard digital receivers that are tuned to the same frequency. Each transmitter can perform many remote switching tasks and are typically used in wireless/hardwire security systems. Each unit is powered by a self-contained 9-volt battery and can be connected to various sensors with the built-in screw terminals.

NOTE: Transmitters with a /K model number suffix are Linear's Canadian models tuned to 318 MHz. These instructions pertain to both the /K and standard 303.875 MHz U.S. models.

D-21A N/O TRANSMITTER

The D-21A is used with various types of security sensors that are *normally open* (magnetic contacts, security floor mats, etc.). **The D-21A transmits a signal when the sensor circuit closes.** The transmitter triggers instantly, and may be re-triggered after a 30-second reset time. A pushbutton is provided for battery/transmission test. Pressing the pushbutton *with the sensor circuit open* (after the 30-second reset) triggers the transmitter and turns on the red LED if the battery is above 7.5 volts.

D-24A N/C TRANSMITTER

The D-24A is used with various types of security sensors that are *normally closed* (magnetic contacts, security window screens, etc.). **The D-24A transmits a signal when the sensor circuit opens.** The transmitter incorporates a

time delay of 1 to 3 seconds, ensuring that the sensor circuit must be continuously open for at least 1 second before the D-24A will transmit. This feature helps prevent activation from short-term, spurious signals, and from signals made from outside electromagnetic sources. The transmitter may be re-triggered after a 30-second reset time. The transmitter has a pushbutton for battery/transmission test.

NOTE: On the D-24A, the loop input terminals must be closed for a minimum of 45 seconds before the pushbutton will activate the transmitter.

D-26A N/O TIME-DELAY TRANSMITTER

The D-26A is used with various types of security sensors that are *normally open*. The special-purpose D-26A transmitter has a built-in exit/entry time delay. **The timer starts when the sensor circuit closes.** It begins a 5 to 10 second countdown. If no action is taken before the time delay is completed, the transmitter will send an alarm signal to its companion receiver. **Pressing the pushbutton before the time delay period has elapsed will prevent signal transmission.** In addition to canceling time-delayed signal transmission, the pushbutton is used to test the battery. Pressing the button turns on the red LED if the battery is in good condition. **The LED does not light upon transmission.**

NOTE: The each transmitter contains a timing circuit that allows a single transmission of a 2-second duration to occur, followed by a 30-second reset time. This means that regardless of the number of times the transmitter is triggered, it will not send a signal more often than once every 30 seconds.

CODE SWITCH LOCATION

The digital coding switch is attached to the circuit board inside the case. To access the switch, unsnap and slide off the back cover as shown in Figure 1, exposing the battery, lead wire screw terminals, and digital coding switch (see Figure 2).

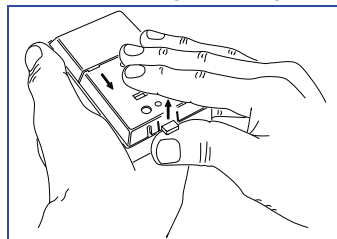


Figure 1.
Removing the
Transmitter
Back Cover

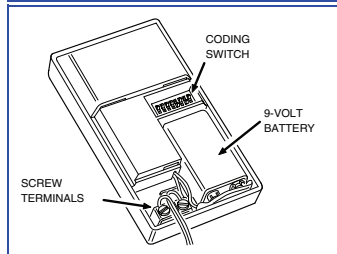


Figure 2.
Transmitter
Components

CODE SETTING

CAUTION! All transmitters and receivers must be re-coded by installer prior to operation. DO NOT USE THE FACTORY SET CODE!

Among the 256 possible codes, four codes are considered invalid, and should not be used. They are: all keys ON, all keys OFF, and keys set alternating ON/OFF or OFF/ON combinations. To set a code, select any valid combination of ON and OFF positions for the switch keys numbered 1 through 8.

Use a pointed object (other than a pencil or pen) to set the keys. The ON position is when the top of the switch is down, facing the numbers. The OFF position is when the top of the switch is up and the bottom is down, away from the numbers. In the example shown in Figure 3, keys 1,4,6 and 8 are ON; keys 2,3,5 and 7 are OFF.

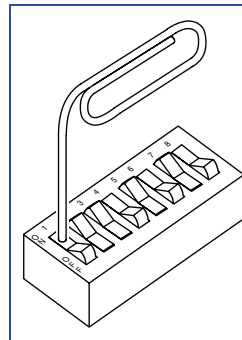


Figure 3. Example
Coding Switch

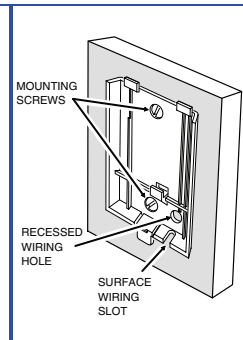


Figure 4. Transmitter
Back Cover Mounting

INSTALLATION

To mount the transmitter, proceed as follows:

STEP 1: Select a location for the transmitter and drive screws through the two countersunk holes of the back cover to mount the cover (see Figure 4).

NOTE: Generally, the higher the transmitter is mounted above ground level (minimum of 3 feet) the better the radio range should be.

STEP 2: For recessed switches with hidden wiring, fish the sensor wires through the wire access hole on the back cover. With surface wiring, route the wire leads through the wire slot on the back cover (see Figure 4).

STEP 3: Attach wires from the sensor switch to the transmitter screw terminals. Wire normally closed switches in *series*, and normally open switches in *parallel* (see Figures 5 & 6).

NOTE: A maximum of wire run of 50 feet with a total of four switches may be used with one transmitter.

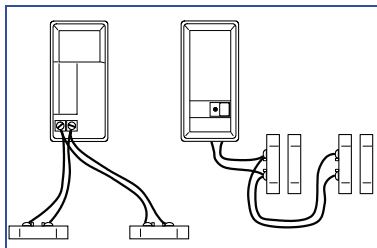


Figure 5.
Normally
Open
Switch
Wiring

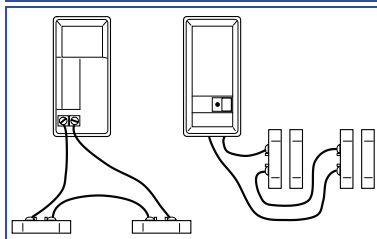


Figure 6.
Normally
Closed
Switch
Wiring

STEP 4: Slide the transmitter onto the back cover until locked into place to complete installation (see Figure 7).

CHECKOUT AND TEST

After installation, the transmitter and receiver should be checked out as a system.

Activate the transmitter by triggering the sensor. Verify that the LED lights when the sensor is triggered (except for D-26A). Receiver activation indicates that the transmitter is

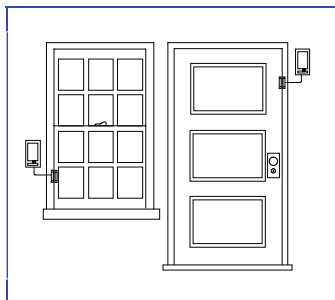


Figure 7.
Typical
Installation
(Door and
Window)

operating properly, and that the transmitter's digital code is correctly matched to the code set in the receiver.

CAUSES FOR NON-OPERATION

If the transmitter fails to activate the receiver, first check the coding switches to see that the switch keys in the transmitter and the receiver are correctly matched. Next, check the battery and replace it if it's weak.

If the code is set correctly, the battery is good, and the LED lights but the receiver doesn't activate, check for hidden metal obstacles or large metal appliances between the transmitter and receiver that may be blocking the radio signal. Re-location of the transmitter or receiver may be necessary

CAUTION: The manufacturer strongly recommends that you test security equipment frequently. From the time of installation, it is absolutely necessary to test the system at least once a week. Although the 9-volt battery should last about a year, it is good practice to change the battery every six months.

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.**

For warranty service on Linear equipment return product, at sender's expense to:

U.S.A. Linear Corporation 2350 Camino Vida Roble, Suite A Carlsbad, CA 92009 Attn: Repairs Department	Canada Linear Canada Inc. 673 Consortium Court London, Ontario, Canada N6E 2S8 Attn: Repairs Department
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IMPORTANT !!!

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.

Receivers may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.

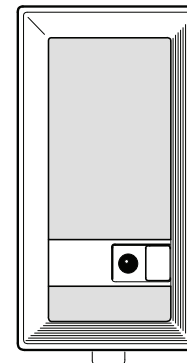
A receiver cannot respond to more than one transmitted signal at a time.

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.

**D-21A, D-21A/K,
D-24A, D-24A/K,
D-26A, D-26A/K**

**Digital Security
Transmitters**



*Code Setting and
Installation Instructions*

Linear
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