

# Installation Instructions

## GARAGE DOOR RADIO CONTROLS

### MODEL 1099 RECEIVERS



#### WARNING:

- Disconnect power before any installation or repair.
- Wear safety glasses.

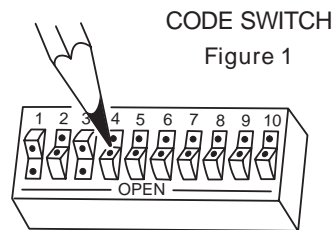
Your Multi-Code Radio Controls are designed specifically for the remote control of industrial door or gate openers and to give years of dependable service without adjustment.

Before you continue to read these instructions, note that there are 3 versions of the model 1099 receiver. The model 1099-20 uses a 115-24 volt transformer. The model 1099-40 comes with 4 wire connections for use with 12VDC systems. The model 1099-30 comes with 4 wire connections for use with 24VAC systems. In addition, if you should choose to cut the transformer away from the 1099-20, this modified product **MUST ALSO BE WIRED TO 24VAC ONLY**.

#### SELECTING A CODE

The code is determined by the positions of the 10 small switches numbered 1 through 10 located on the receiver board. To gain access to the switch, remove the top section of the case. Any combination of ON (CLOSED) or OFF (OPEN) positions can be selected by using a small screwdriver or ball point pen (see figure 1). We strongly urge that you avoid the following code schemes: ALL ON, ALL OFF, 2, 4, 6, 8, 10, on or 1, 3, 5, 7, 9, on. These codes are frequently used by other manufacturers, and create the possibility of false operation, and may be less secure than other code schemes.

Be certain to check that the code is functional before completing the installation.



#### INSTALLATION

The receiver comes equipped with a BNC receptacle and an antenna with a BNC plug. The antenna can be plugged directly into the receptacle, or it can be moved away from a metal structure, or to an outside location for better

receiver performance by using a coaxial kit available from your dealer.

Begin your installation of the 1099 by correctly wiring the receiver to the devices you will be using. **WE URGE YOU TO BECOME FAMILIAR WITH THE INSTRUCTIONS THAT THE MANUFACTURER OF YOUR EQUIPMENT HAS PROVIDED. SINCE, IN MANY CASES, THESE INSTRUCTIONS WILL DETERMINE THE WAY IN WHICH THE 1099 RECEIVER WILL BE INSTALLED.**

The receiver should be mounted near the opener power head and can be installed in any position by using screws and the two slots in the cover flanges. Select a location and position that permits access to the terminals and space for the antenna as clear of metal structures as possible and preferably in a vertical position.

**IF YOU HAVE THE MODEL 1099-20:** Plug the transformer into a convenient 115 volt outlet. Connect the remaining gray wires as specified by the manufacturer of your operator. If such instructions do not exist, wire the two gray wires in parallel with the pushbutton terminals. If the operator has a three wire terminal, the proper terminals will usually be marked "1" and "2" or "24V" and "RELAY" (see figure 2).

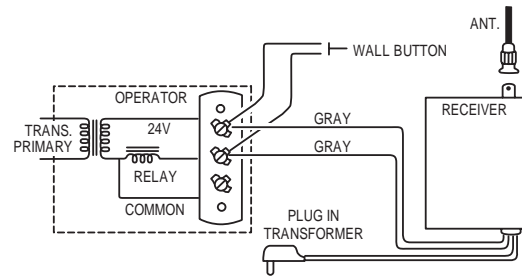


Figure 2 (1099-20)

**IF YOU HAVE THE MODEL 1099-30:** Wire the red and black wires to a 24VAC power supply. Connect the remaining gray wires as specified by the manufacturer of your operator. If such instructions do not exist, wire the two gray wires in parallel with the pushbutton terminals. If the operator has a three wire terminal, the proper terminals will usually be marked "1" and "2" or "24V" and "RELAY" (see figure 3).

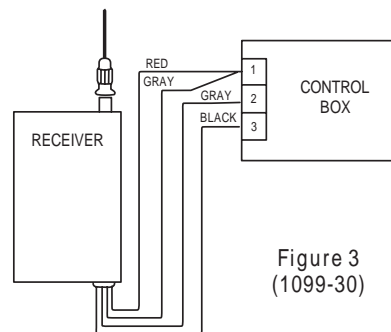


Figure 3 (1099-30)

**IF YOU HAVE THE MODEL 1099-40:** The red wire will go to the positive 12 volt terminal in the operator. The black wire will go to the negative terminal or ground terminal of the operator. Connect the two gray wires as specified by the manufacturer of your operator. If such instructions do not exist, wire the two gray wires in parallel with the pushbutton terminals (see figure 4).

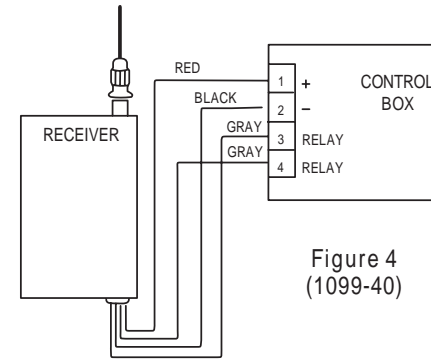


Figure 4 (1099-40)

At this point you should mount your 1099 receiver to its permanent installation, if you have not already done so.

#### ANTENNA INSTALLATION

After you have mounted your receiver, test it with the enclosed antenna for range, noting the coverage that you get from all desired operating locations. If greater range or coverage pattern is necessary, you may need the 1066 Coaxial Wiring Kit, which is available from your dealer. Note that the 1099 external antenna coupling used a TYPE BNC antenna fitting. If necessary, you may use a TYPE BNC to TYPE F adapter, allowing you to use fittings found where television antennas are sold, along with 75 ohm antenna wire. It is not advisable to use lengths greater than 20 feet, as this may affect range or tuning.

#### ADDITIONAL INSTALLATION INFORMATION

Linear Corporation has taken every possible precaution to make the 1099 receiver as reliable as possible. We think the following notes should be observed:

1. Be sure the unit is sealed from moisture, and, if at all possible, keep it away from direct moisture.
2. In those installations where vibration may be a factor, be sure to use a fastening compound, such as LOCTITE (TM) on the mounting screws to insure reliable mounting.
3. If this, or any other equipment is being used in a safety-related device, be sure to test the entire system at the time of installation, and at frequent intervals, to determine that it is working properly.

#### OPERATIONAL CHECK

To check operation, move back a reasonable distance (about 50 feet) and press the transmitter button. Operation should be reliable at this distance but environment and location of both the transmitter and receiver will affect the range. If the transmitter is stowed well out of sight, it may

be necessary to remove it from its mounting and hold near the windshield. Try different locations and positions. If operation is still unsatisfactory, check the following:

1. The antenna must be connected to the receiver for normal use.
2. If the opener fails to operate, check to see that 115 VAC power is present. Check circuit breakers or for a system power failure.
3. If the opener operates by pressing the wall button, but not when the transmitter button is pressed, the radio controls are probably at fault. **Check to make sure both transmitter and receiver code switches are set to the exact same code since a difference of just one switch will prevent operation.** Check transmitter battery, location of the transmitter and receiver installation.
4. Try mounting the antenna at a more favorable remote location by utilizing the coaxial kit.

If, after performing the above operational check, it is necessary to return the radio controls, return both the transmitter and receiver to your dealer for repair or replacement or they may be returned, postage prepaid, directly to Linear Corporation.

#### WARRANTY

ALL MULTI-CODE garage door related products carry an eighteen (18) month warranty against defects in workmanship or material. This warranty begins at the date of manufacture, for eighteen months. Linear Corporation warrants our product **only** to our authorized dealers and distributors, and not to the end customer. If you have any questions about our warranty, please ask your dealer to determine the nature and scope of his warranty. Linear Corporation does not assume, and is not responsible for, any real or consequential damages from claims against the performance of our product, nor is it liable for any costs related to loss of life, property, or revenue. Further, Linear Corporation is in no way responsible for installation of our product, and will assume no costs to re-installation or removal. Linear Corporation's Warranty is in lieu of all other warranties, expressed, or implied.

**CAUTION:** Any changes or modification in intentional or unintentional radiators which are not expressly approved by LINEAR CORPORATION could void the user's authority to operate this equipment. This applies to intentional and unintentional radiators certified per Part 15 of the F.C.C. rules and regulations.

#### LINEAR CORPORATION

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