



## INSTALLATION INSTRUCTIONS

### Model 2031, 3021, and 3028 2 Channel Receivers



#### WARNING:

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

Congratulations! You have purchased a MULTI-CODE RECEIVER, which we believe to be the finest product of its kind on the market. If you take a moment to read the enclosed instructions, we think that you will find installation of your receiver to be quite an easy matter, and will assure reliable operation.

### INSTALLATION

Your Receiver may be mounted in the operator head, if space permits, or remotely, if this becomes necessary. Note that all wires should be routed through the strain relief fitting or rubber grommet of the cabinet, except for the antenna lead.

Begin your installation 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 RECEIVER WILL BE INSTALLED.**

Note that on the top half of your cabinet you will find a terminal designation schematic. This schematic is reproduced below for your reference (figure 1)

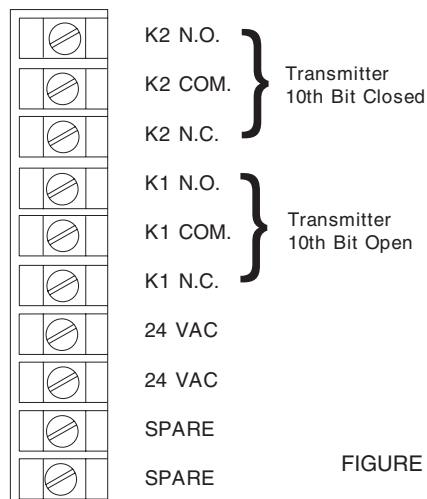


FIGURE 1

Back the screws on the terminal block off slightly and insert your wiring lugs (or wire) under the appropriate set screw.

On the block there are two terminals marked spare. These terminals are not functional, and may be disregarded.

The two positions marked 24 VAC are used to attach your power supply. If you find that your operator supplies only 110 VAC, then contact LINEAR CORPORATION for the 1092-01 power supply, and we will provide an adapter for 110 to 24 Volt use.

The next three positions, above the 24 VAC positions, provide channel 1 selection. Selection of Channel 1 on the transmitter is made by setting the number 10 DIP switch to the open position. You must then choose to wire the first channel to a NORMALLY OPEN or NORMALLY CLOSED circuit. To determine this, consult the manufacturer's instructions, as previously noted. Refer to your transmitter instructions for coding instructions. Now attach the second wire from your device to common.

Above the channel 1 positions you will see the positions which allow channel 2 to be wired. Channel two is wired in the same manner as channel one, with the exception of the transmitter code switch number 10 being placed in the closed or on position.

You will note that the two channels on the receiver may be used in any combination of NORMALLY OPEN or NORMALLY CLOSED devices.

At this point you should mount your receiver to its permanent installation, if you have not already done so. If you have a 3021 receiver be sure to tightly secure the strain relief fitting through which the wires are routed as this provides a degree of water resistance. Should you desire a watertight connection, use a single length of 16 to 22 gauge jacketed cable.

### 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 choose the MULTI-CODE 1066 Coaxial Wiring Kit, which is available from LINEAR CORPORATION. Note that the external antenna coupling uses a TYPE F antenna fitting. If necessary, you may use TYPE F 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.

## CODING

Before you begin to use your MULTI-CODE RECEIVER YOU MUST SET THE CODING SWITCH. In order to set the code, refer to figure 2.

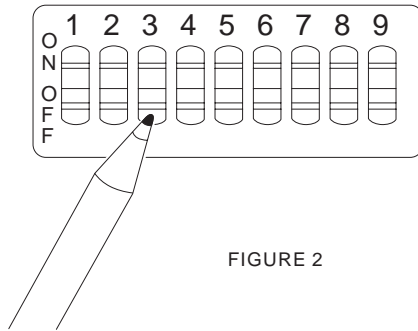


FIGURE 2

To gain access to the switch, remove the top section of the cabinet, if you have not already done so. Using a pencil, or other similar device, move the code switches to set your house code. Positions one through nine on most MULTI-CODE transmitters are used to set the house code. **NOTE: THE MULTI CODE 4120 TWO CHANNEL TRANSMITTER OR 4140 FOUR CHANNEL TRANSMITTER REQUIRES A DIFFERENT CODE SELECTION. REFER TO THE APPROPRIATE INSTRUCTIONS IF THERE IS ANY DOUBT AS TO CORRECT SETTING.**

Setting code switch 10 on your transmitter will determine channel one or channel two. If the number 10 DIP switch is set in the OPEN or OFF position, you have channel one, if the second channel is desired, then set the transmitter DIP switch number 10 to the CLOSED or ON position.

We strongly urge that you avoid the following code schemes: ALL ON, ALL OFF, 2 4 6 8 on 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 arrangements.

**BE SURE TO SET THE FIRST NINE SWITCHES ON YOUR RECEIVER EXACTLY THE SAME AS THE TRANSMITTER.**

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

## ADDITIONAL INSTALLATION INFORMATION

LINEAR CORPORATION has taken every possible precaution to make the 3021 Receiver as reliable as possible. The circuit board is coated with a special water resistant treatment. We think the following notes should be observed:

- Be sure the unit is sealed from moisture, and, if at all possible, keep it away from direct moisture.
- If you are using the 3021 Receiver, make sure the seal around the top of the cabinet and that the strain relief of the 3021 prevents moisture from entering.

- In those installations where vibration may be a factor, be sure to use a fastening compound, such as LOC-TITE™ on the mounting screws to insure reliable mounting.
- 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.

## OPERATION

We urge you to test your installation completely before putting it into operation. Testing this receiver with the rest of the system will save potential problems later on.

Note that two channels will not receive at the same time. Each channel requires a distinct signal from a transmitter in order to become activated.

## WARRANTY

ALL MULTI-CODE garage door related products carry a 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 reinstallation or removal.

LINEAR CORPORATION'S Warranty is in lieu of all other warranties, expressed, or implied.

## Please Note

LINEAR CORPORATION has devoted a great deal of time and research in order to provide the most reliable equipment possible. Certain limitations must be observed:

1. MULTI-CODE radio components must conform with FCC Part 15 requirements. For this reason, the range and power of our radios is within specified limits
2. As with all manufacturers, MULTI-CODE radios must accept all signals that they receive. This may, in rare instances, create difficulty.
3. You should test your entire system occasionally in order to be sure that all components are working in good order.
4. MULTI-CODE dealers can provide you with information regarding the use of our radio controls, and can provide valuable installation and operation information, when requested.
5. 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.