

6132C Series Wireless Remote Controls



Model Numbers: 6132C2TX & 6132C4TX

Specifications:

- Input: 12 volt battery, type A23
- Circuit voltage: ~5.0 volts DC. Battery output is regulated by a series regulator power supply circuit (transistor & zener diode).
- Radio Frequency: 315 MHz
- User-selectable address codes: 4

Theory of Operation:

The remote is normally off with the RF transmission starting when one of the pushbuttons is depressed momentarily. When the normally open pushbutton is depressed, it connects the ground pin, Vss, of IC1 to circuit ground. When Vss is connected to ground, the encoder outputs a 3 KHz 12-bit transmission to the RF tank circuit transmitting the information on a 315 MHz carrier frequency. The encoder continues to transmit as long as the pushbutton is depressed.

The 12-bit output consists of an 8-bit address and 4 bits of data. The user-selectable address is set with a two-position dipswitch. The receiving unit to be controlled is set to the same address as the remote. A third address bit is used to determine which of two different style receivers is controlled. With version one of the 6132C2TX remote, the address line is shorted to ground and with version two the address line is left open (internally pulled “high”). This is a permanent factory setting and the remotes are marked with the receiver that they control. For the 6132C4TX four-button version, one pair of switches control receiver 1 and the other pair of switches control receiver 2

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allowing independent control of two devices. This is also achieved by shorting or leaving open the third address bit. A single data bit is used by the remote to tell the receiver to turn “ON” or to turn “OFF”. The “ON” pushbuttons leave the data bit open and the “OFF” pushbuttons short the data line to ground. This is the same for both the 6132C2TX and 6132C4TX remote controls.

The 6132C2TX and 6132C4TX utilize the same printed circuit board, power supply circuit, encoder IC, and RF tank circuit. The differences are with the switches and associated circuitry (diodes) used. The 6132C4TX uses four switches and associated diodes and the 6132C2TX uses only two switches and associated diodes.

A red LED is used to let the user know that the remote is transmitting. The LED comes on when a pushbutton (ON or OFF) is depressed and remains on until the pushbutton is released.