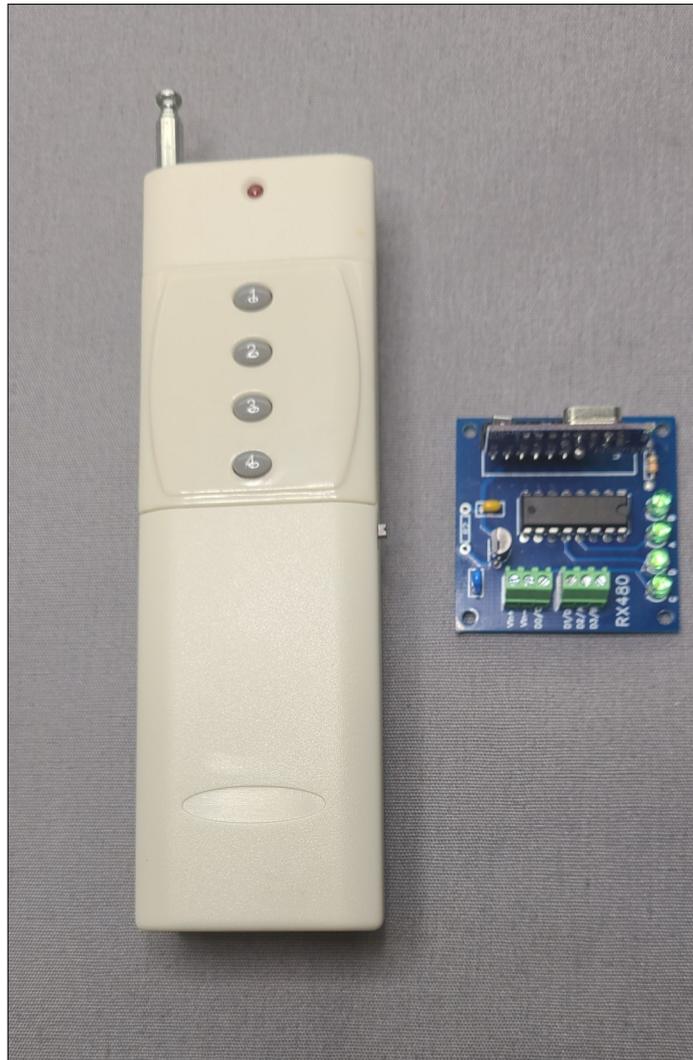


4 Ch RC

Low Cost 433MHz R/C

Operation and Installation Manual



Overview

4 Channel R/C

is a small handheld 433MHz transmitter (TX, Remote) and four channel receiver (RX). It can be used to trigger or control electronic devices.

The 433MHz radio system has no frequencies or channels to worry about. *Your* transmitter controls *your* receiver (or receivers) and no one else's. Radio range is excellent and the transmitter easily fits in a shirt or pants pocket.

The four button transmitter controls the four functions on the receiver, which can be programmed for momentary low output, or latched high/low outputs. Any device which triggers via a switch connection to common can be triggered with this board, as long as they share the same power supply.

Each receiver "learns" a transmitter and will only respond to that transmitter and no others. Press the Learn button on the **RX480 module**. Press any button on the transmitter. If linked, the LED on the RX module will turn on while a transmitter button is pressed. A green LED on the RX480 board will turn on, when a button is pressed. There are no channels or frequency selections to worry about. One transmitter can control multiple RX480 boards.

The 4-button handheld transmitter is powered by a 9 volt battery. There is an on/off switch, but the current draw when ON and no buttons are pressed is virtually zero. So accidentally leaving it ON shouldn't drain the battery. It is always ready to use, and only transmits while a button is pressed.

RX480 operates over a wide range of input voltage (7-25V).

Warning: The input is NOT protected for reverse polarity, which will damage the board.

Transmitter buttons 1 - 4 control outputs D3/B, D2/A, D1/D, and D0/C respectively.

Setup and Testing

The on-board green LEDs can be used to check out your wiring and most of the board functions.

Transmitter / Receiver Setup

There are no channels or frequencies to worry about. Your receiver will only respond to your transmitter, and no others. The transmitter uses a 9V battery.

Each receiver must "Learn" the transmitter it is expected to respond to. This only needs to be done once, or whenever reassigning a receiver to a new transmitter. Press the Learn button on the RX module and wait for RX module LED to turn on. Press any button on the transmitter and observe the RX LED blink 3 times.

The transmitter is powered by one 9V battery. Pressing any button on the TX should cause the TX LED to turn ON. If it doesn't check the battery.

Control Outputs - Open collector, switch to common, Max load = 250 ma

TX button 1 controls terminal D3/B. LED B ON, indicates output is low (0V).

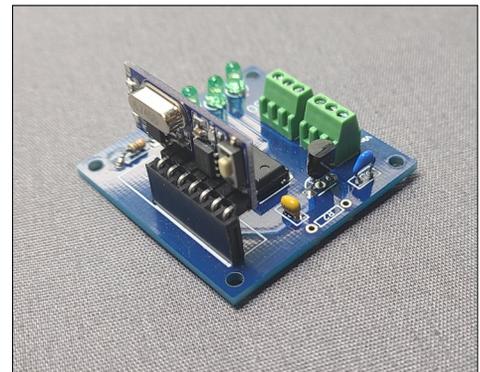
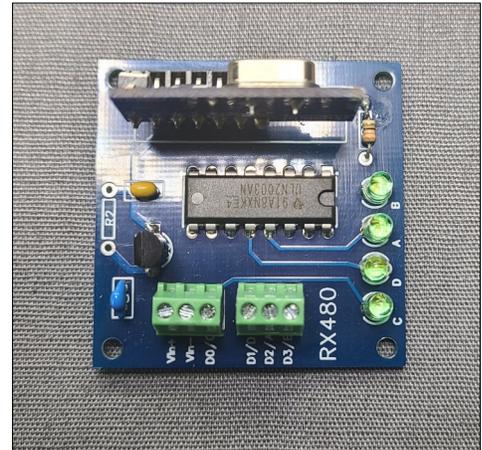
TX button 2 controls terminal D2/A. LED A ON, indicates output is low (0V).

TX button 3 controls terminal D1/D. LED D ON, indicates output is low (0V).

TX button 4 controls terminal D0/C. LED C ON, indicates output is low (0V).

(Numbering and labels are confusing, so pay close attention to connections)

As shipped, the outputs momentarily switch low (battery -) upon activation.



Programming the RX480 Receiver

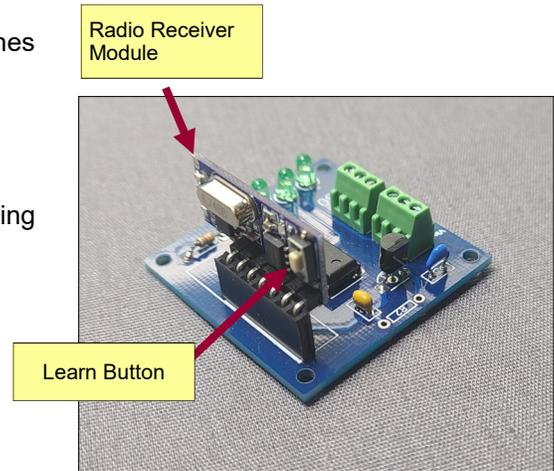
To pair the RX with the TX, hold down the learn button for several seconds, then press any button on the TX twice. The LED on the RX will blink 3 times, indicating success.

To DELETE EXISTING DATA, press the button 8 times, LED flashes 7 times and is ready for programming.

Now, either press the button 1 time for MOMENTARY operation, or press 2 times for LATCHING operation. LED comes on.

Press any TX button. LED flashes 3 times indicating programming complete.

Press TX buttons to test.



4 CH R/C - Hardware Specifications

Revision New

Mechanical

RX480 Receiver Board

Physical Size: PCB – 1.6" X 1.6", Max component height – 0.9".

User Connections: Screw clamp terminal strips accept individual wires, 30 to 20 AWG.
Requires a 1/16" or 5/64" slotted screwdriver

Transmitter

433MHz radio with 7.5" telescoping antenna: 5.3" X 1.65" X 1.0" contoured case.
4 buttons, one 9V battery.

Electrical

RX480 Power Input (Terminals Vin+, Vin-)

7V min to 25V max

NO Reverse polarity protection. Reverse polarity will DAMAGE the board.

Control Outputs - Open collector, switch to common, Max load = 250 ma

TX button 1 controls terminal D3/B. LED B ON, indicates output is low (0V).

TX button 2 controls terminal D2/A. LED A ON, indicates output is low (0V).

TX button 3 controls terminal D1/D. LED D ON, indicates output is low (0V).

TX button 4 controls terminal D0/C. LED C ON, indicates output is low (0V).

(Numbering and labels are confusing, so pay close attention to connections)

Radio Rx and Tx

433MHz, EV1527 format

Range up to 800 ft. line-of-sight. Obstacles will reduce range.

Example: 4 Ch RC triggering sounds on a MyLocoSound and a Sound Clip Module.

**TX buttons 1,2,3 trigger MyLocoSound F1,F2,F3.
TX button 4 triggers Sound Clip Module.**

