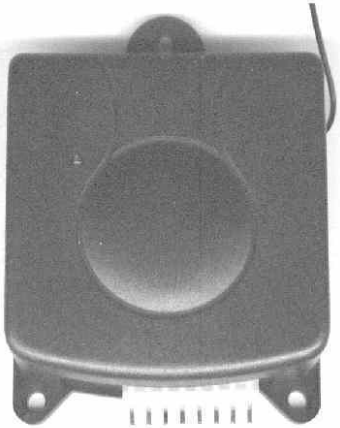
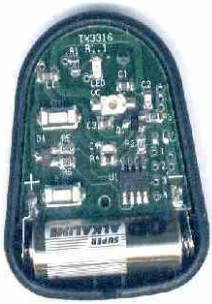
RF Remote Control Subsystem

Features:

- Various applications such as garage remote control / trunk release.
- 4 major models:
  - CS-03M4: 4-button transmitter, without relay
  - CS-04: 2-button transmitter, with 2 relays
  - CS-04R / CS-04R2: 2-button rolling code transmitter, with 2 relays

■ CS-04	◘ CS-04R2	◘ 12V DC	255 USERS
■ CS-04R	■ CS-03M4	■ 24V AC	





CS-04R2 Two-Channel RF Remote Control Subsystem (W / Relays, 255 Users)

1. Introduction

This is a 255-user RF remote control subsystem with 2-button transmitter and 2 relays built inside the system with rolling code. It's the active low type. Major application is for the garage opener remote control. You can add up to 255 transmitters per system. Bundled with the optional TX-Man, you can easily manage up to 255 transmitters. With the help of TX-Man, you can delete any transmitter learned earlier.

There are 2 major models for different power requirements:

- CS-04R2-DC: For application of 12V DC.
- CS-04R2-AC: For application of 24V AC.

Basically, the following 2-button rolling code transmitters can be used:
TX-3312R, TX-3313R, TX-3315(S)

For user's convenience, the 2-channel operation can also be operated using the first 2-button of our 4-button rolling code transmitters such as TX-4312R(S) or TX-4311R.

Each model can be independently programmed to set the relay output mode as follows:

■ Pulse type:
The activated relay will be closed for 2 seconds for each activation. This is the most widely used application such as garage opener.

■ Sustaining type:
The activated relay will be closed for as long as the transmitter button is held down. You can connect it to a buzzer so that the buzzer will sound for as long as the transmitter's button is down.

■ Latch type:

The activated relay will be closed until you push the button again. You can use it to control a 110V or 220V AC lamp or appliance by connecting through a suitable external strong AC-relay first. Push the transmitter's button to turn the lamp or the appliance on. Repress the button will turn it off.

For each relay, once its output mode is programmed, then the other transmitters can control the relay only in the specified way, unless its mode is reprogrammed.
Each transmitter learned can program the relay output mode. Thus the Main Unit should be kept in a secret place so that only the supervisor can access it.

2. Contents Of Products

Upon unpacking you will find the following items:

1. Main Unit
2. Transmitter X 2 (depending on order)
   (TX-3312R, TX-3313R, TX-3315(S))
3. Wire Harness
4. Receiving Antenna
5. Fuse (2A or smaller)

3. Code Operations

Code operations include:

1) All transmitters code erasing
2) Transmitter labeling
3) First transmitter learning
4) Other transmitters learning
5) Relay output mode adjustment

3.1 Code Learning for CS-04R2

New transmitters can be added, but should be processed with code learning first. Up to 255 2-button rolling code transmitters TX-3312R / TX-3313R / TX-3315(S) can be learned into system's non-volatile memory.

The standard product comes with two transmitters (labeled) whose codes have been learned and all relays output have been set in the pulse mode. If you want to change the modes in your own way, then proceed as follows:

1) Erasing all the transmitters by firmly pressing the learning switch for more than 8.4 seconds. The LED is lit on while the switch is being pressed and will return to flashing at the end of the 8.4 seconds to indicate that all the transmitters have been erased.

   Note about LED:
   LED will be normally at flashing state starting from applying the power. LED being lit on or switched off means that the system has been set in special mode for modifying system's parameters. During the system setup mode, different number of LED flashing can mean different meanings according to definition.

2) Push and release the learning switch and the LED will change from flashing to steady ON for 15 seconds to indicate that the learning mode is now active. Now you can proceed with code learning of the first transmitter (labeled #1) as follows:

3) Decide the type of relay output mode you want and press the buttons proper described as follows.
   For pulse type: Button #1
   For sustaining type: Button #2
   For latch type: Button #1 and #2 simultaneously.
   System's response for button #1 will be 1 LED flash, for button #2 will be 2 LED flashes and for latch type will be 3 LED flashes. Besides, the relay corresponding to the button pressed will be activated and a clicking sound will be heard.

   The first transmitter learned decides the output mode temporarily for all relays. After learning the first transmitter code and relay type, the LED will return immediately to normally flashing state

even the 15 seconds period doesn't expire.

4) For the 2nd~255th transmitters to be learned:
   First, put a numbered label on each of those 255 transmitters.

   Press momentarily the learning switch and you will see that the learning LED becomes ON for 15 seconds. During this 15-second period, you can learn one single transmitter into the system starting from transmitter #2 by pressing its first button. System will respond with one LED flash for each successful code learned and the corresponding relay will be activated and a clicking sound will be heard.
   In each 15-second of learning period, you can learn only one transmitter.
   Note that code learning here doesn't dictate the relay output mode.

5) To learn up to 255 transmitters, repeat steps 4 but with the 3rd, 4th...transmitter. Note that you can learn up to maximum 255 transmitters into the system, then the system's memory will be closed and no more transmitter can be learned except using the TX-Man tool.

3.2 Relay Output Mode Adjustment

In learning the first transmitter, the relay output mode has been determined for all the relays. You can change the output mode for each relay once each round in way as follows:

1) Press learning switch once to enter the learning mode, the LED becomes ON for 15 seconds. During this period, press again the learning switch, then the system responds with LED going OFF for 15 seconds. During this period, the relay output mode can be changed.

2) Using any transmitter learned before, press the proper button for selecting the relay you want to change the output

mode as follows:
1st relay: Button #1 2nd relay: Button #2
System will respond with the same number of LED flashes corresponding to the number order of the relay. After the flashing, the LED goes OFF again for another 15 seconds for further selecting as follows.

3) Using the same transmitter as in step 2, press the proper button for selecting the output mode you want:
For pulse type: Button #1
For sustaining type: Button #2
For latch type: Button #1 and #2 simultaneously.
System's response for button #1 will be 1 LED flash, for button #2 will be 2 LED flashes and for latch type will be 3 LED flashes.
After the system's response, then the relay output mode has been modified OK and the LED will return immediately to the normal flashing state.

4) Following the same steps as in 3), you can change the relay output mode for the others. Note that in each round you can change only one relay's mode.

4. Remote Control Operations

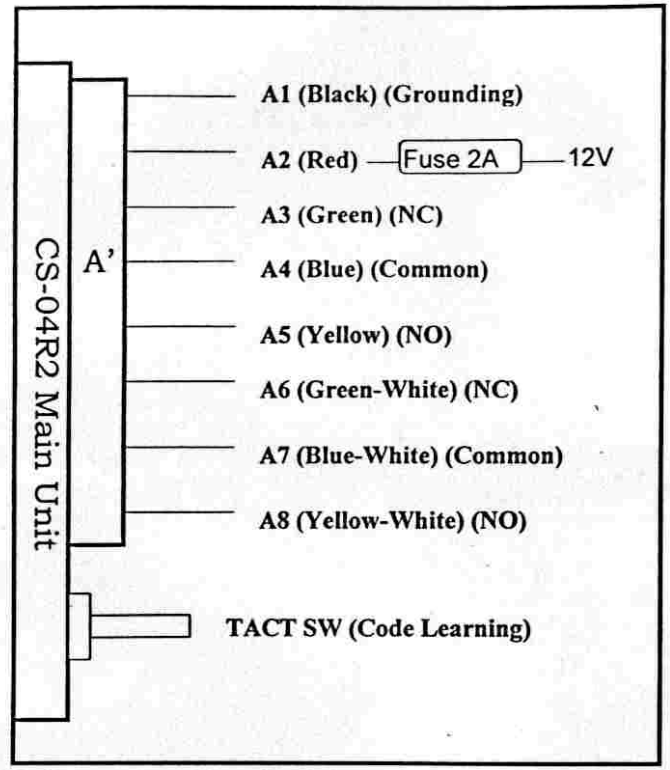
After connecting all the other wires, then connect the power wires. You will see the LED flashing slowly which indicates that the system runs normally.
Then proceed with Sections § 3 for the code learning and relay output programming. Then the system is ready to be operated.

Button #1: For controlling relay #1 (Channel #1)
#2: For controlling relay #2 (Channel #2)

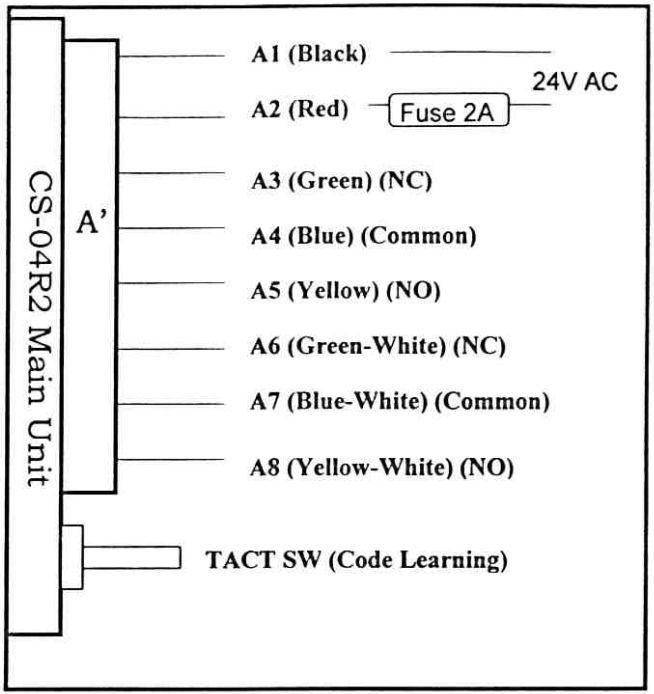
5. Relay Specification & Relay Wiring

There are totally 2 relays built into the system.
For all relays:
Coil voltage: 12V DC. (Low down to 9V)
Contact capacity: DC 24V, 10A.

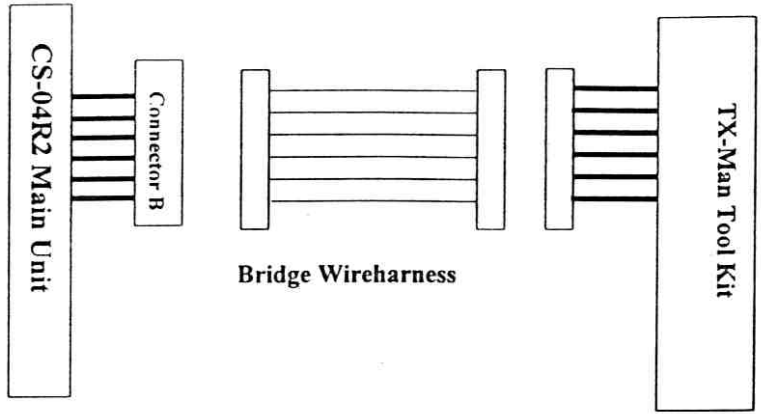
6. Master Wiring (For CS-04R2-DC)



7. Master Wiring (For CS-04R2-AC)



8. How To Connect With TX-Man



Most of the time, CS-04R2(255-user version) comes with the optional transmitter manager TX-Man. With this option added, then connector B will be provided so that CS-04R2 can be connected to TX-Man via the bridge wireharness.

Regarding operations of TX-Man, please refer to its operating manual.

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