

# 4-Component SMT Trans-Receiver

Revision and Update Notes, W5USJ 19 Dec '09

**Refer to the individual component schematics for more detail.**

## **Transmitter:**

No changes.

## **PK-DC Keyer:**

Added 100k pullup resistor for the audio muting circuit on the receiver board

Added a 3.3uF capacitor to soften the T/R click a little

Added a solder pad for the 5V connection to the receiver board.

## **T/R Switch:**

No changes from original.

Possible future changes might include: Revising the relay contacts so that only 1/2 of them are used for antenna switching. The other set could be used for mechanical receiver muting or some other function.

Note that not using the mute function from the keyer PCB would negate the T/R timing provided.

Use a 12V version of the relay in place of the 4.5V freebee I used. This would allow reducing the parts count by removing the 5V regulator and the 10uF electrolytic. A jumper would be needed to connect the 12V input pad to the 5V regulator output pad. Leave the 0.1uF bypass capacitors.

## **Receiver:**

Added receiver mute circuit using an FET switch. The PCB is updated to include these changes.

Added 6V zener circuit for mixer supply voltage. This was done so the receiver board could be used as a stand-alone component. As used with the 4-component trans-receiver configuration, leave out the zener and 1k bias resistor. Connect 5V from the T/R board to the receiver mixer Vcc supply lead as shown in the connection layout.

The mute circuit requires a 12V jumper. The square pad on the upper right side near the 12V input and the square pad near the mute input connection are used for the jumper. Also note the ground jumper from the bottom edge of the audio amp to the edge of the PCB under the audio output capacitor. These jumpers can be added on the bottom of the PCB. Insulate the 12V jumper.