Assembly of the MMR-40 and KD1JV Digital Dial into the aluminum chassis

Check the kit against this parts list.

1 – Chassis top and bottom
1 – KD1JV Digital Dial Kit
2 - small Norcal knobs
1 - 15pF disk capacitor
1 – new C46, 1uF 25v capacitor
1 – new D6, 1N5817
2 – 1/8" stereo audio jacks w/mounting rings
1 – 10k audio taper pot w/switch
1 – speaker
2 – speaker mounting brackets
2 – 4-40 x 3/8" SS flat head screws (speaker)
1 – red acetate plastic window
1 – BNC panel mounted female
1 – 4" bail wire kit (bail wire, 2 blocks, 2ea. 4-40 x 1/4" pan head SS screws)
8 – 4-40 x 1/4", SS pan head screws (4- for main pc board), (4- for dd board)
1 – #4 nylon insulating washer
8 – 4-40 x 1/4" SS flat head screws (for chassis halves)
4 – 1/4" high self adhesive rubber feet
2' – 22awg hook up wire
1 – MMR-40 decal kit

Assembling a new pc board, or retrofitting an existing plastic chassis mounted pc board will require some deviation from the original assembly instructions. These changes are described below. Certain board mounted components will be removed and replaced by supplied chassis mounted equivalents, and the power supply line is tapped and spliced to allow the switch on the volume control potentiometer to work properly.
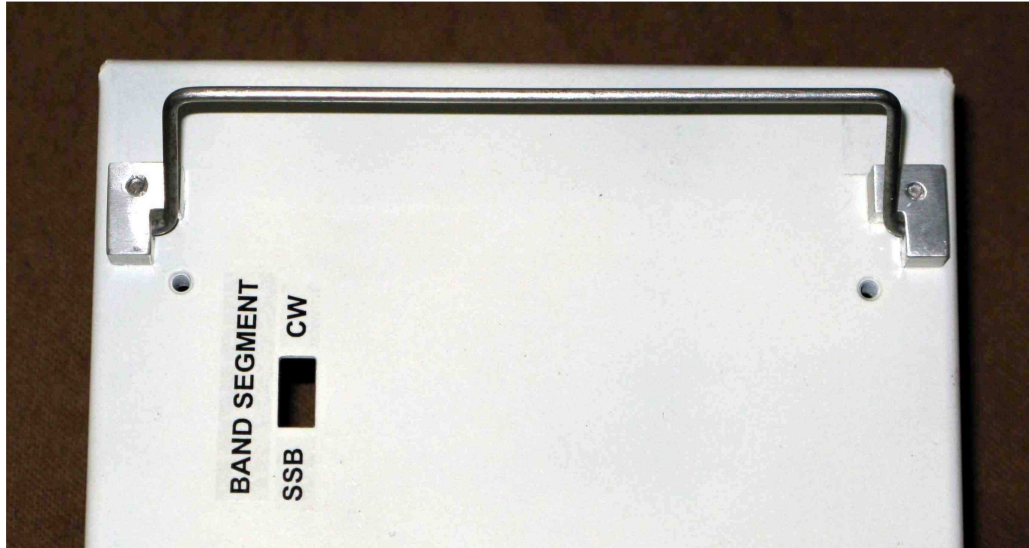
Additionally, the digital dial has one deviation from the original assembly instructions. This involves moving the trim capacitor to the back side of the board so access is allowed when it's installed.

- Apply your decals to the front and rear panel. When placing the decals, be sure to leave clearance for the knobs as shown.
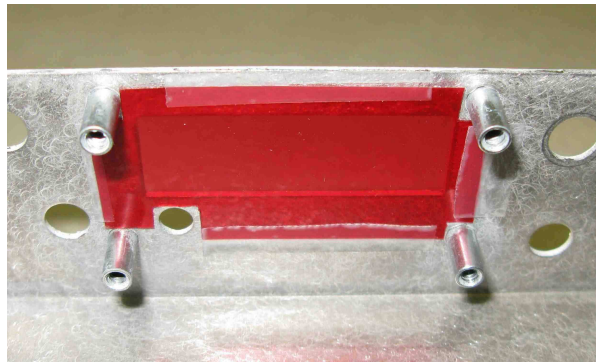

- The decals are applied the same as the old model airplane decals. Cut around each group of text you wish to apply, leave a border. It doesn't have to be perfect as the background film is transparent. Place the decal in lukewarm water for 10 seconds. Handle carefully to avoid tearing. Gently slide the decal into place on location. Use a damp cloth to wipe excess water. Remove any bubbles by wiping gently to the sides. Allow to set 3 hours, or speed drying by placing near a fan. After drying spray Krylon clear to seal and protect the decals, and allow to dry. There are two complete decal sets for this project, if you mess one up.
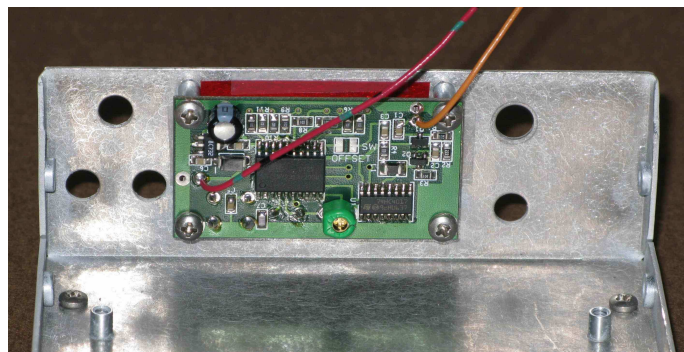
- **Mount the bail to the outside of the chassis bottom, using 2ea. 4-40 x 3/16" pan head screws.**

- **Tape the red acetate film to the inside of the front chassis, some trimming will be required to clear the mounting Pem's.**
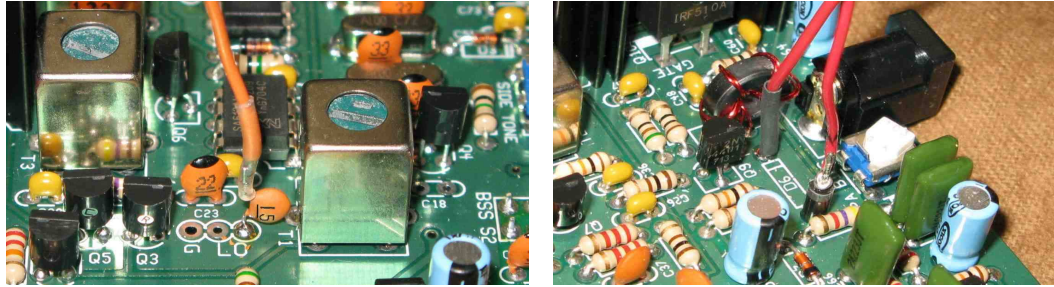
- **Assemble the digital dial or modify your existing one to move the trim capacitor to the side opposite the display. Solder a wire to the signal input and another to the positive power input of the digital dial, on the side opposite the display. There is no need for the ground wire, the chassis mounting will complete that connection. It can now be mounted to the chassis using 4ea. 4-40 x 1/4" pan head screws.**
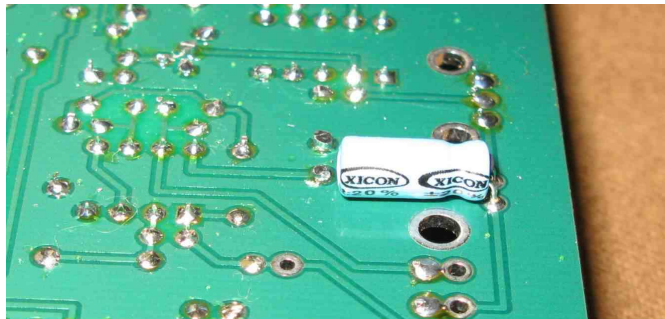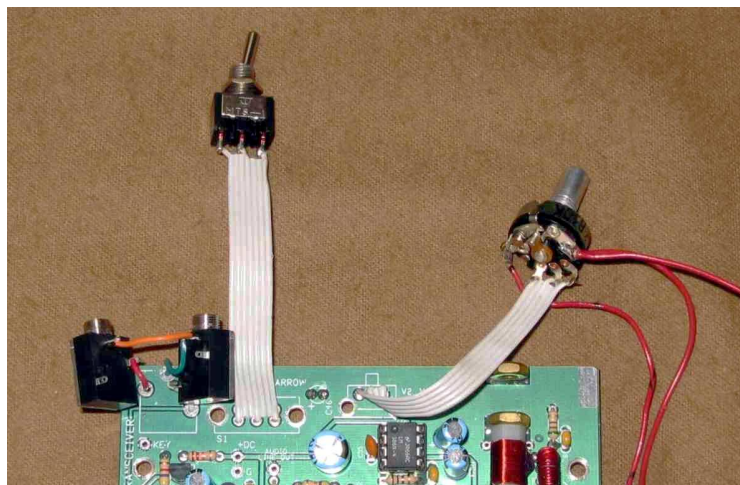
Prepare your pc board as follows:

- Unsolder the speaker wires from the speaker.
- Locate D6. This is a protection diode for an incorrectly connected power supply. Unsolder the cathode end (banded) and stand on end. Solder a 8" long wire to the pad just vacated and another 8" long wire to the band end of the diode up in the air. These two wires will go to the switch contacts on the supplied 10k volume/switch pot. Locate the Local Oscillator pad, marked "LO" and solder 1 leg of the supplied 15pF capacitor to the pad, the other leg straight up for later connection.

- Remove C46, and install under the board, laying flat against the board. This will give you more clearance for the digital dial, and connecting wires.

- Remove the board mounted BNC connector, volume control, filter slide switch, and microphone jack. The board mounted power jack is not removed.

- Connect the remote mounted volume control, filter toggle switch, microphone jack, and key jack to the pc board prior to board mounting. They are wired like their board mounted equivalents, with the exception of the microphone and key jacks. They are now separated to two jacks. Connect the two jacks in parallel to the points marked on the PCB.

- **Mount the pc board using 4ea. 4-40 x 1/4" pan head screws. Use the #4 nylon washer under the screw head near R26, as there is a trace that needs insulating from ground if the solder mask fails.**

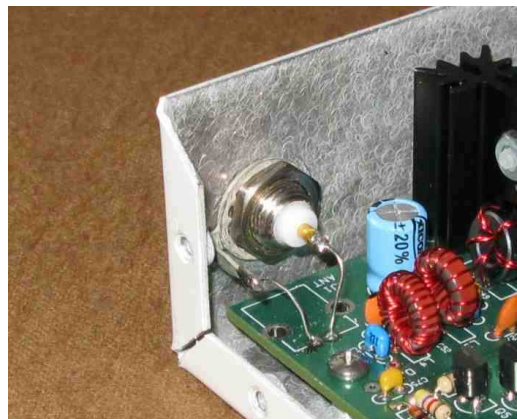- **Mount the volume control, toggle switch, mic. and key jacks.**

- **Connect the two power wires from D6 to the volume control switch connections. Connect the power connection to the digital dial to the switched side of the volume control/switch.**

- **Connect the signal input wire of the digital dial to the flying lead of the 15pF capacitor connected to the Local Oscillator pad.**
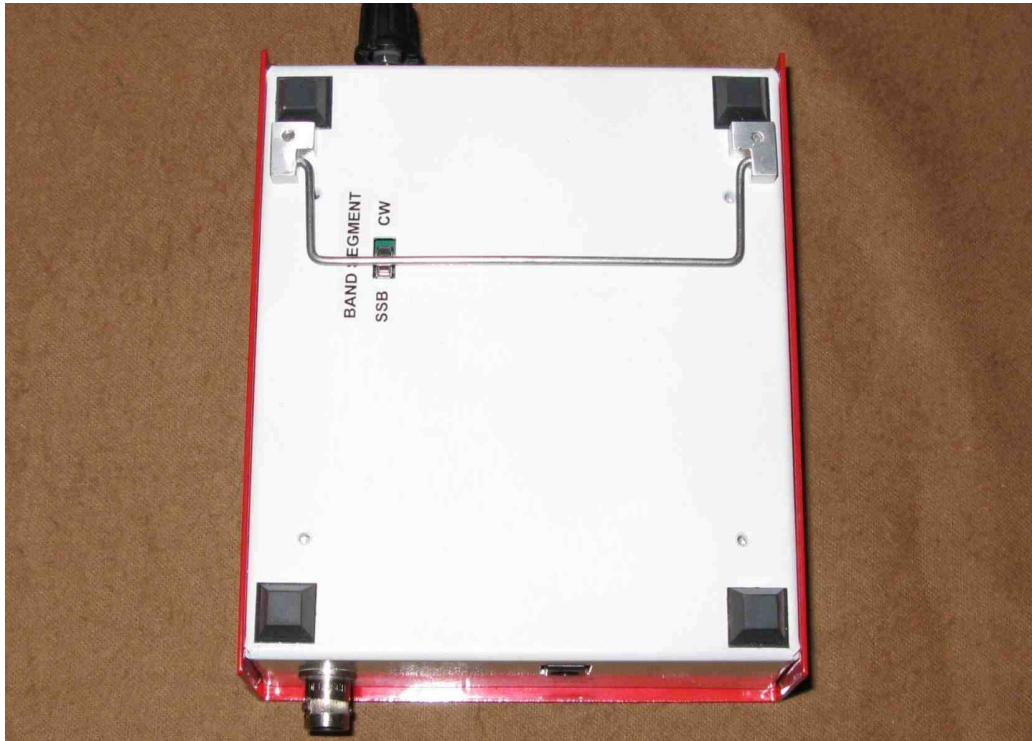

- **Mount the new BNC connector to the rear panel, and wire to the board pads just below the connector.**

- **Mount the speaker to the top cover using 2ea. 4-40 x 5/16" flat head screws and the supplied Pem nut retainers, and connect the speaker wires.**

Assemble the cover to the base, using 8ea. 4-40 x 1/4" flat head screws.
Replace the knobs to the front panel, and attach the four rubber feet to the corners of the chassis.

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