Assembly of the BitX20A and KD1JV Digital Dial into the aluminum chassis

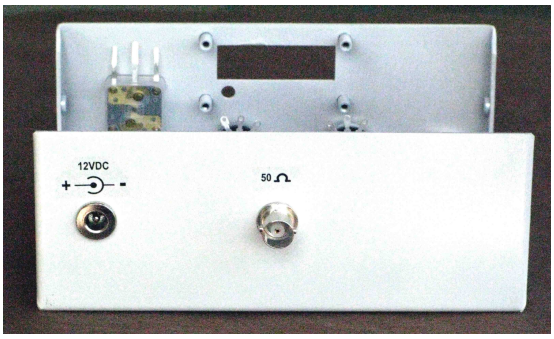
Check the kit against this parts list.

1 – Chassis top and bottom
1 – KD1JV Digital Dial Kit
2 - small Norcal knobs
1 – large Norcal knob
1 - 22pF disk capacitor
1 – 1/8” stereo audio jack w/mounting ring
2 – 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)
8 – 4-40 x 1/4" SS flat head screws (for chassis halves)
4 – 1/4" high self adhesive rubber feet
5’ – 22 awg hook up wire
1 – BitX20A decal kit

These instructions apply to a new pc board, or retrofitting an existing pc board.

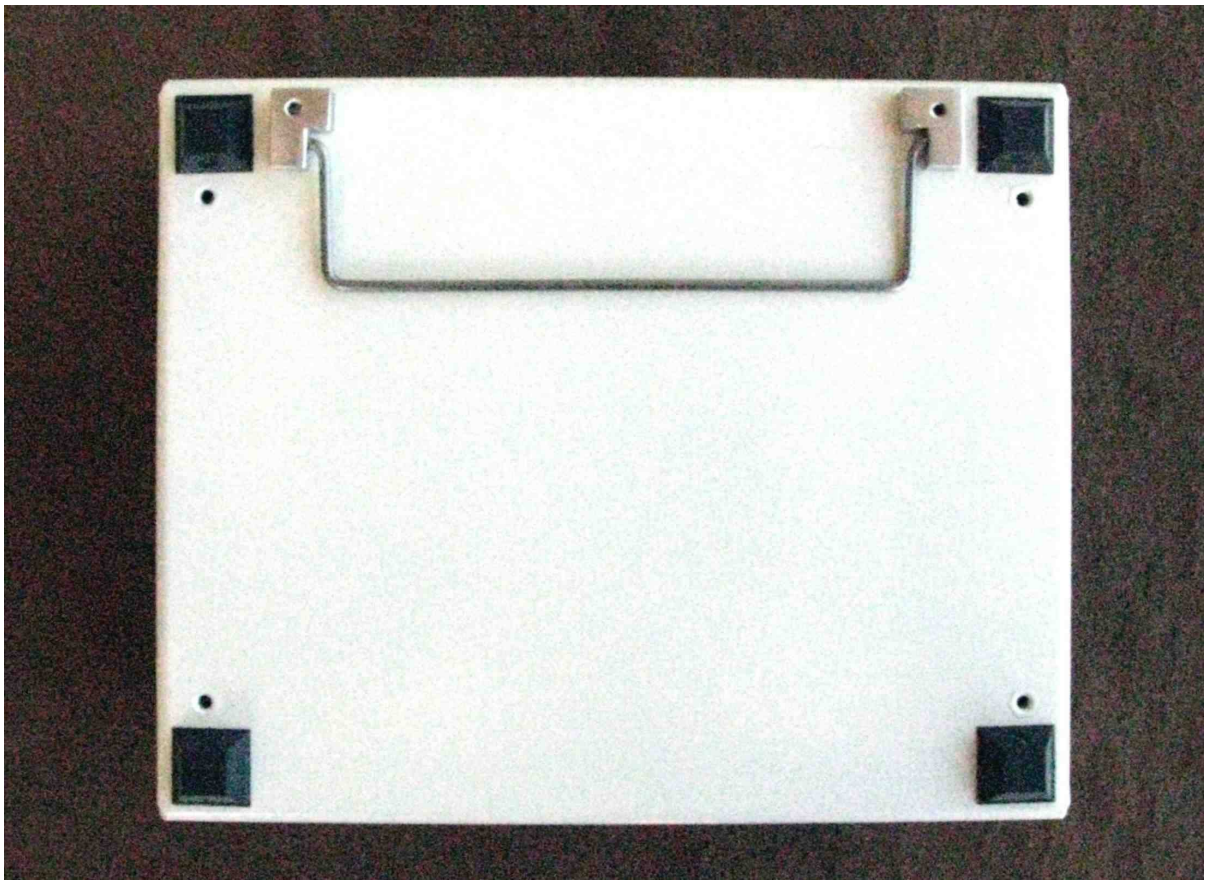
The digital dial has one deviation from the original assembly instructions. This involves moving the trim capacitor to the back side of the board so access is allowed when it’s installed.

- **Apply your decals to the front and rear panel. When placing the decals, be sure to leave clearance for the knobs as shown. It is best to pre-mount all the through chassis components, with knobs, so you can properly space the decals.**

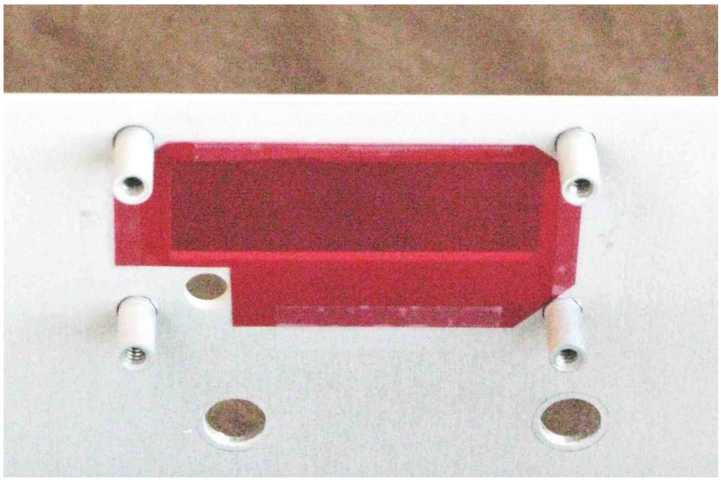


- **The decals are applied the same as the old model airplane decals. Cut around each group of text you wish to apply, leave a border. It doesn’t have to be perfect as the background film is transparent. Place the decal in lukewarm water for 10 seconds. Handle carefully to avoid tearing. Gently slide 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.**

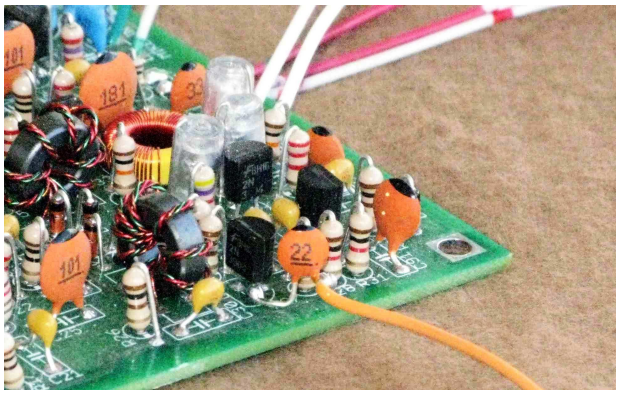
- **Mount the bail to the outside of the chassis bottom, using 2ea. 4-40 x 3/16” pan head screws.**



- **Tape the red acetate film to the inside of the front chassis, some trimming will be required to clear the mounting Pem’s.**



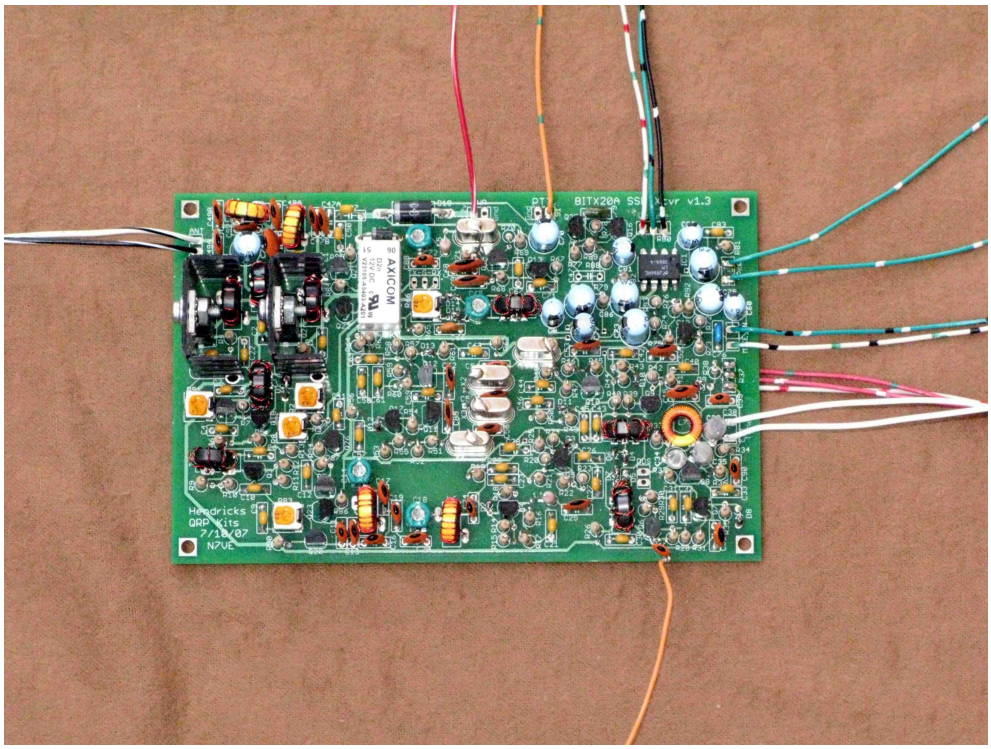
- **Locate Q6. Solder the 22pF disk to the leg of the collector (the leg nearest the edge of the board. This is input to the digital display.**



Prepare your pc board as follows:

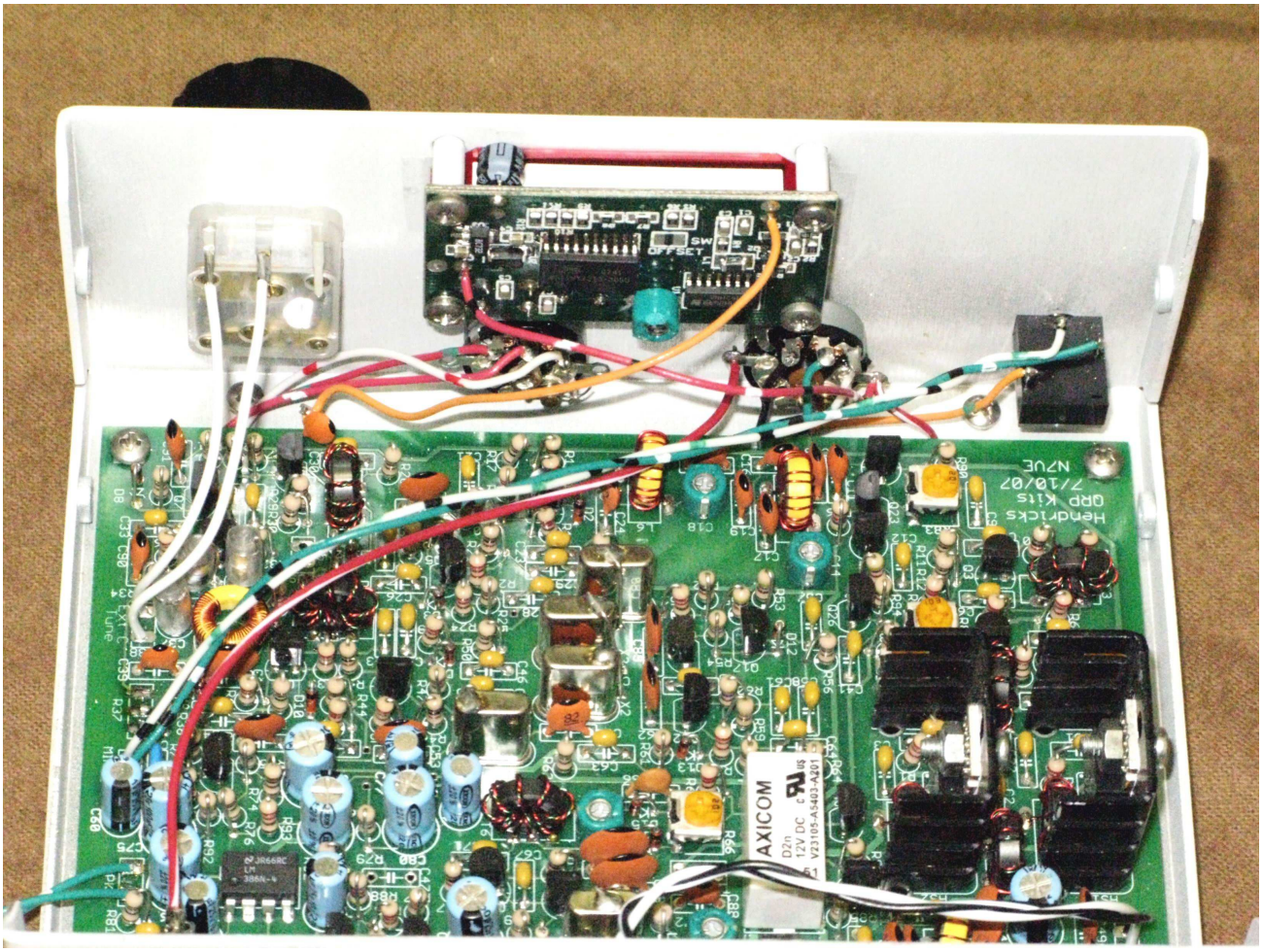
Solder 22 awg wires to the board at these locations.

- **3ea. 6” long from R80 (volume control)**
- **2ea. 6” long SPKR**
- **1ea. 6” long from PWR**
- **1ea. 6” long from MIC IN (next to C60)**
- **1ea. 6” long from PTT S1**
- **2ea. 4” long from ANT and the adjacent GND**
- **3ea. 4” long from R37 (fine tune)**
- **1ea. 4” long from the new 22pF cap at Q6 collector**
- **3ea. 2” long from EXT. C Tune**



It should now look like this…

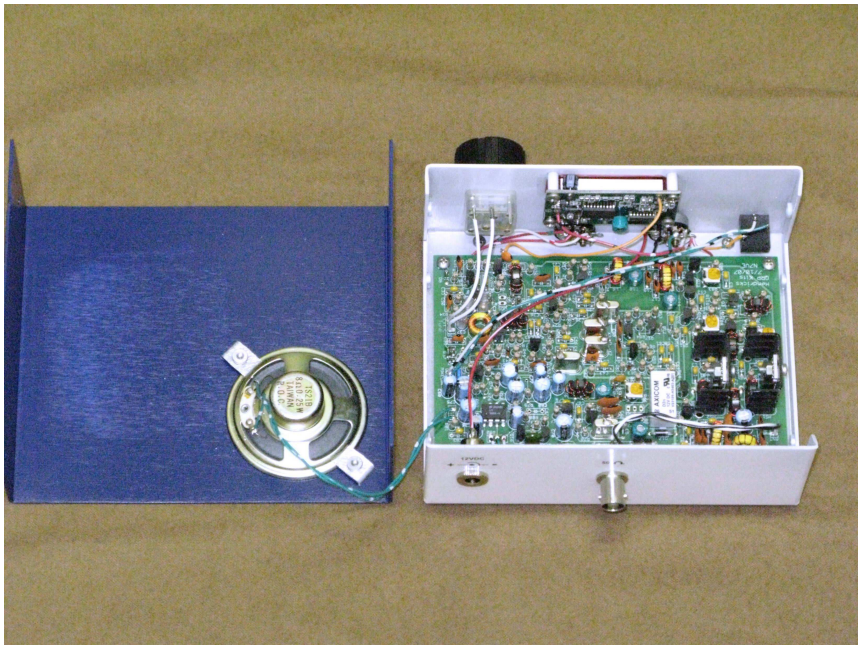
- **Mount the Coarse Tuning cap, Fine Tuning pot, Volume pot, Mic jack, power jack, BNC antenna connector, and the KD1JV digital display using 4ea. 4-40 x .25” long pan head screws. Then finally mount the pc board. The pc board can be mounted last, there is clearance from all the chassis mounted controls.**



- **Connect a wire from the power jack to one side of the power switch.**
- **Connect the pc board power wire to the other side of the power switch, and run a wire from that connection to the power input of the digital display board.**
- **Connect two wires to the Coarse Tuning poly-varicon.**
- **Connect the PTT and Mic wires to the 1/8” panel jack.**
- **Observing the details in the assembly manual, connect the Fine Tuning pot and the Volume pot. Running the pot wires under the pc board keep the topside less cluttered.**

- **Connect the antenna and ground to the BNC.**

- **Connect the wires to the speaker.**



- **Attach the top and bottom using 8ea. 4-40 flat head screws.**