

Elecraft XV Transverter Builder's Alert

Bypass Capacitor Change

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We recently discovered that the XV50, 144, 222 and 432 transverters may experience erratic behavior under certain conditions. There are two causes: RF energy entering voltage regulator U4, and voltage surges on the 5V bus caused by the relay coils.

Even if you have not experienced any erratic behavior of your transverter, we strongly advise you make these modifications to ensure stable operation under all conditions. They involve adding three leaded parts. You need only remove the top cover.

You will need the following parts available from Elecraft:

Quantity	Description	Elecraft Part Number
2	Capacitor, monolithic, 0.1 μ F (104),50V,20%,0.1" lead spacing	E530020
1	Capacitor, electrolytic, 10 μ F,16V,20%, 0.1" lead spacing	E530142

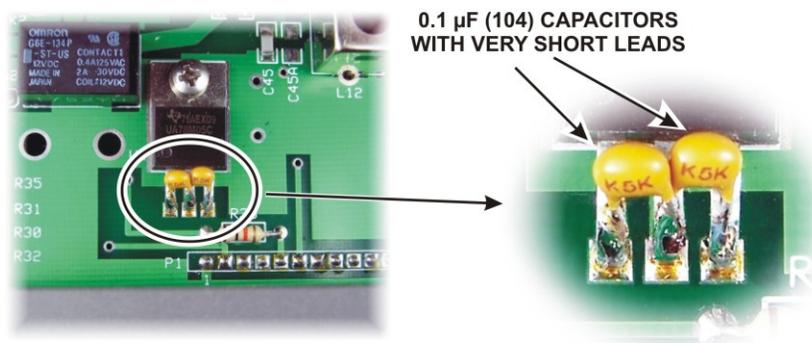
Procedure

Disconnect power from your transverter, remove the top cover four corner screws and remove the cover.

⚠ Observe ESD precautions when inside your transverter. Wear an ESD wrist strap or frequently touch an unpainted metal ground while working.

Locate voltage regulator U4. It is just behind the front panel with a heat sink tab bolted to the pc board.

Install the two 0.1 μ F (104) capacitors between U4's center and outer pins as shown below. Solder the capacitors directly the U4's pins with very short leads. Hint: Bend the capacitor leads and hold them with your pliers while tacking one lead onto U4 with your soldering iron carrying a small drop of solder. Then solder the other lead, clean up the first connection if needed, and trim off the excess leads.



Check the resistance between the center pin and each outside pin using your DMM. It must be greater than 500 ohms to confirm no shorts between U4's pins.

(OVER)

- Solder the 10 μ F (10) electrolytic capacitor to P1 pins 1 (negative) and 2 as shown below using short leads. **Be sure to connect the negative lead to pin 1 as shown!**



- Check the resistance between P1 pins 1 and 2. It must be greater than 500 ohms to confirm no short between the pins.
- Replace the top cover. Ensure the top cover and all case screws are tight. A solid mechanical and electrical connection between all case parts is important for stable operation.

That completes the modification to your transverter.