Spectrotek Services

29 May 2014

Engineering Change Order 1 – SSQ-2F – All Versions

Units affected:

SSQ-2F v1.41, all serial numbers,
SSQ-2F v3.10, all serial numbers,
SSQ-2F v3.21, all serial numbers,
SSQ-2F v3.22, all serial numbers through 433.

Observed problems:

1) Unstable waveform on the leading or trailing edge of the modulation square wave.
2) Erratic duty cycle in the presence of RF interference, such as may be caused when operating the SSQ-2F in close proximity to an operating plasma tube.

Cause of the problem:

Excessive out-of-band high frequency gain in the audio processor stage of the SSQ-2F.

Resolution of the problem:

Install an additional 220 pF disc ceramic capacitor directly across the existing 100K Ohm feedback resistor for the LME49710NA. This additional capacitor will reduce the circuit gain at frequencies above 60 KHz to prevent erratic operation. The capacitor may be installed on either side of the circuit board.

No other changes are required. No recalibration or adjustment of the SSQ-2F is required after performing this ECO.

It is recommended that this ECO be applied to all units within that serial number range.

Customer installation of this ECO will not void or change the warranty.

SSQ-2F boards may be returned to Spectrotek Services at the Customer's expense. The SSQ-2F will have the ECO installed, be fully tested, and then returned to the Customer. There will be no charge to the Customer for installation of the ECO or the return shipment back to the Customer.

Please refer to the picture below for the position of the 100K resistor shown inside the red oval. The new 220 pF capacitor will be soldered directly across this resistor.

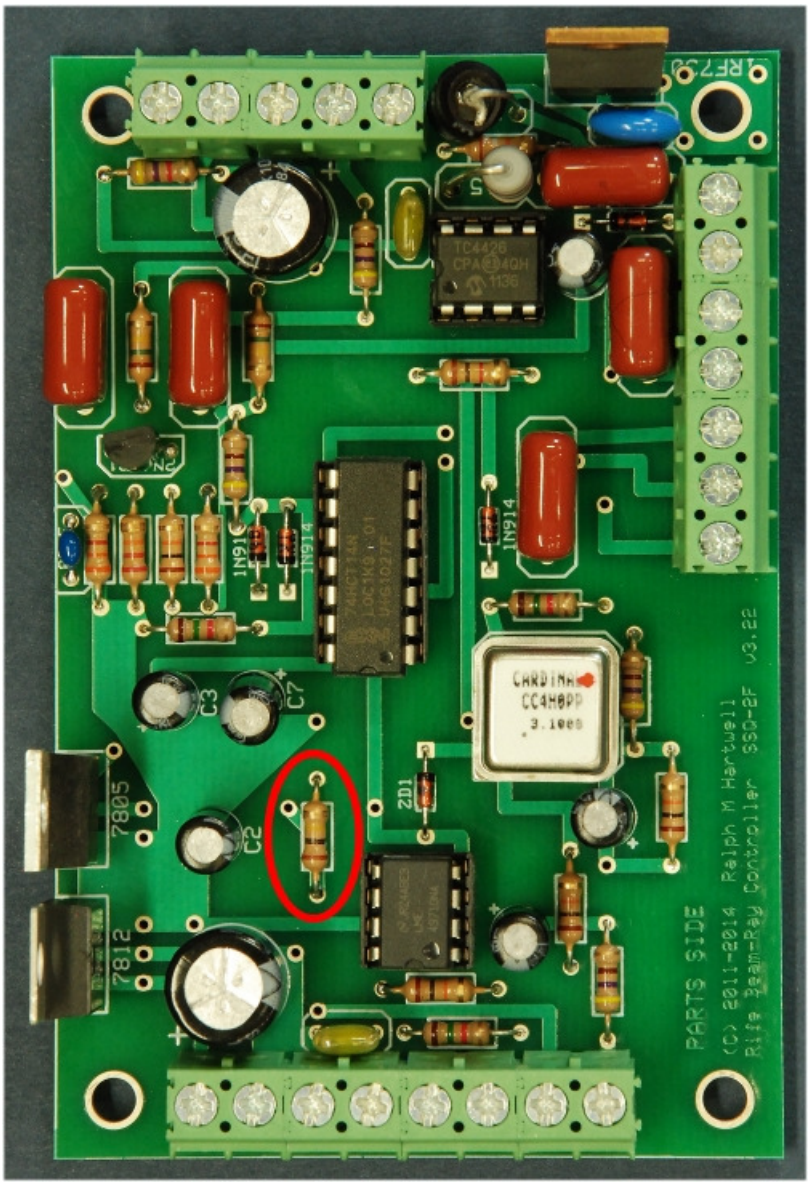

Photo 1

End of SSQ-2F ECO-1