Grid Resistor Network Upgrade

This modification decreases the time constant of the grid circuit thus decreasing the response time to changes in the anode circuit. In axial instruments the compacting of L3 also increases current available to the circuit.

This modification should be fitted to ALL Series_2 and VISTA instruments experiencing problems with RF system (soft tube, buzzing at ignition) BEFORE changing RF tubes. In many instances symptoms will disappear, and the RF tube will function correctly again once this modification has been fitted.

The original circuit component R1, a 7k0 resistor is replaced with a 2k2 resistor (R1) and a 4k7 resistor (R4) in series with a filtering capacitor (C19) to ground at their junction. (Refer to the schematic included in this document.)

The modification kit consists of a bracket with R1, R4 and C19 already mounted onto it, and this instruction sheet.

The modified circuit is assembled on an aluminum bracket. This bracket bolts directly onto the RF grid compartment assembly where R1 originally fitted. The bracket also has a cutout section, which is used to set coil L3 to 40 mm.

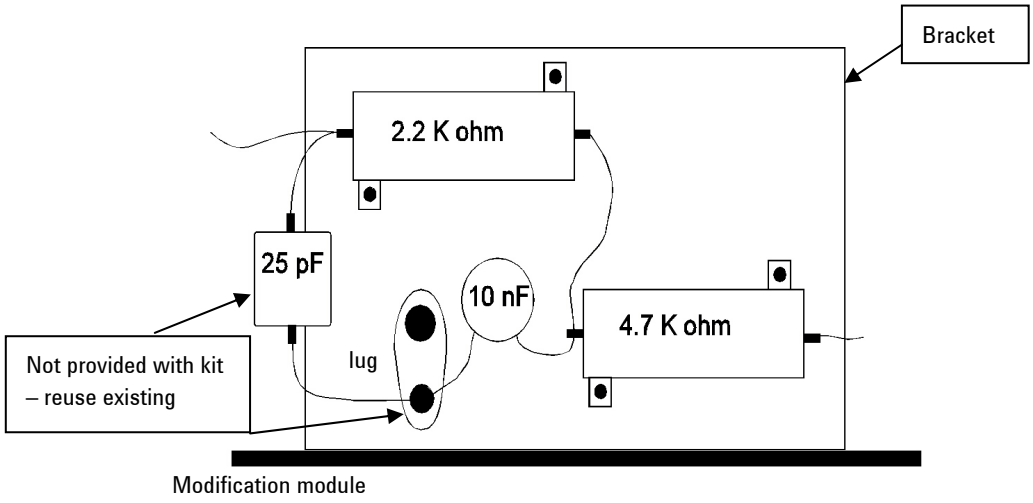

Figure 1. Schematic

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To fit the modification:

1. Remove instrument covers and open the RF oscillator.
2. Compact coil L3 to fit within the cutout (40 mm) section of the modification bracket by gently squeezing the coil. Ensure that even gapping (approx 5 mm) of the coil segments is maintained.
   (axial instruments only)
3. Remove the front cover of the RF filter compartment.
4. Remove L1 and the RF tube as one assembly (remove 3 screws, which fasten L1 to C6, C7 and C8 taking note which screw also fastens the lead from RFC1. Unscrew the PTFE screw from support post and pull RF tube from its socket.) Lift the assembly free of the RF compartment and store safely.
5. Remove the RF grid compartment and RF triode socket from the RF compartment. (2 screws from the end of RF box [in front of filter compartment] + 2 screws inside the RF compartment and unsolder the white wire [junction RFC3 & C11] and the filament wires [junctions C9 & L6, C17 & L8] from inside the filter compartment.) Lift the assembly free of the RF compartment.
6. From the underside of the RF grid/filament connector assembly, remove R1 and discard. Remove C5 and the solder lug and assemble and solder these components onto the modification assembly provided (see picture).
7. Resolder lead from RFC2 onto the unsoldered resistor tag of the modification module.
8. Reposition the RF grid/filament connector assembly into the RF compartment, poking the white wire and filament wires through into the filter compartment.
9. Resolder each of the three wires correctly into position in the filter compartment.

CHECK ALL SOLDER JOINTS AND THAT ALL COMPONENTS ARE SECURELY MOUNTED AND ADEQUATELY SPACED FROM EACH OTHER AND FROM METAL SURFACES OF THE MODULE.

10. Assemble in the reverse order of instructions above.

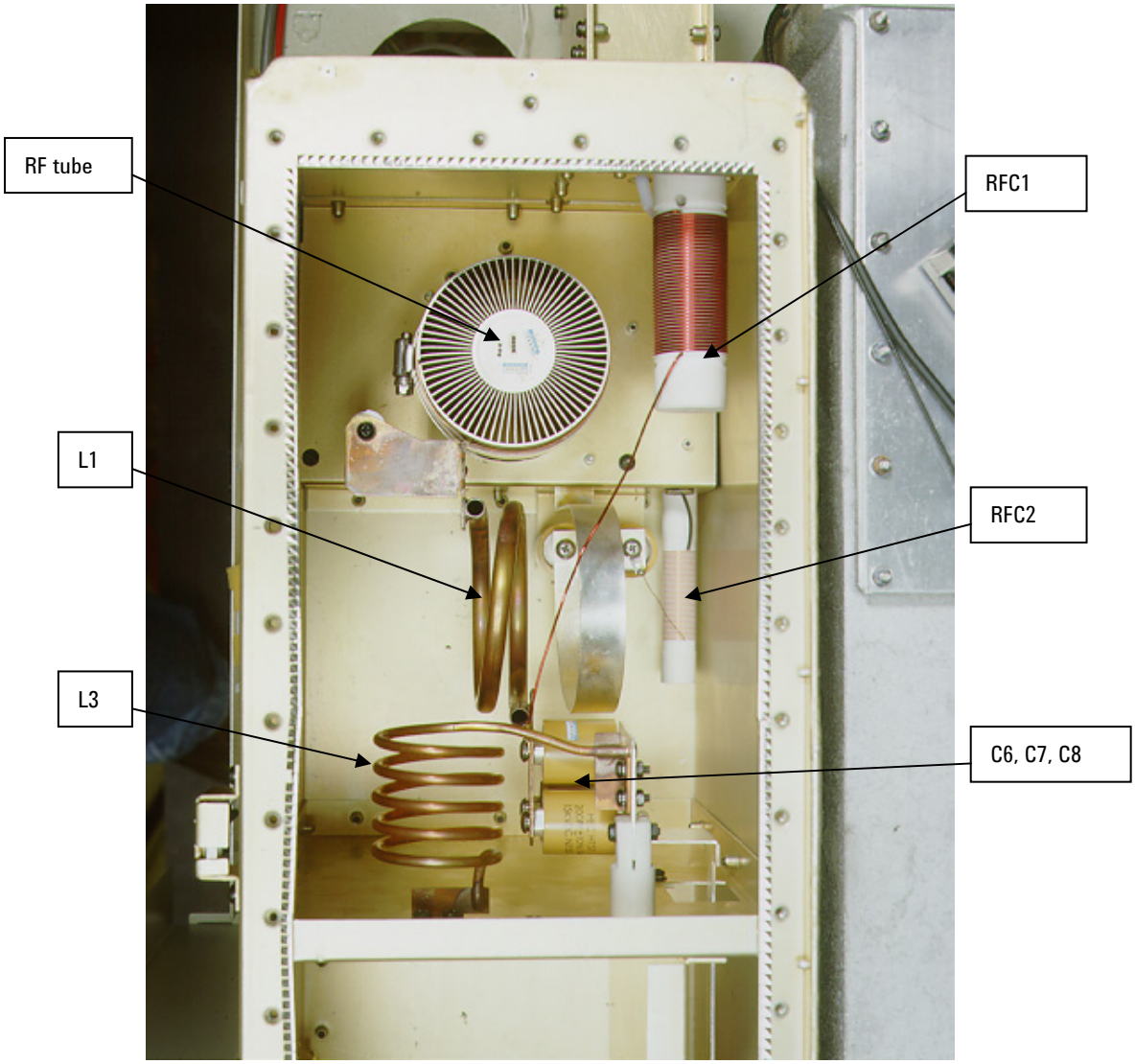

Figure 2. RF oscillator (axial)

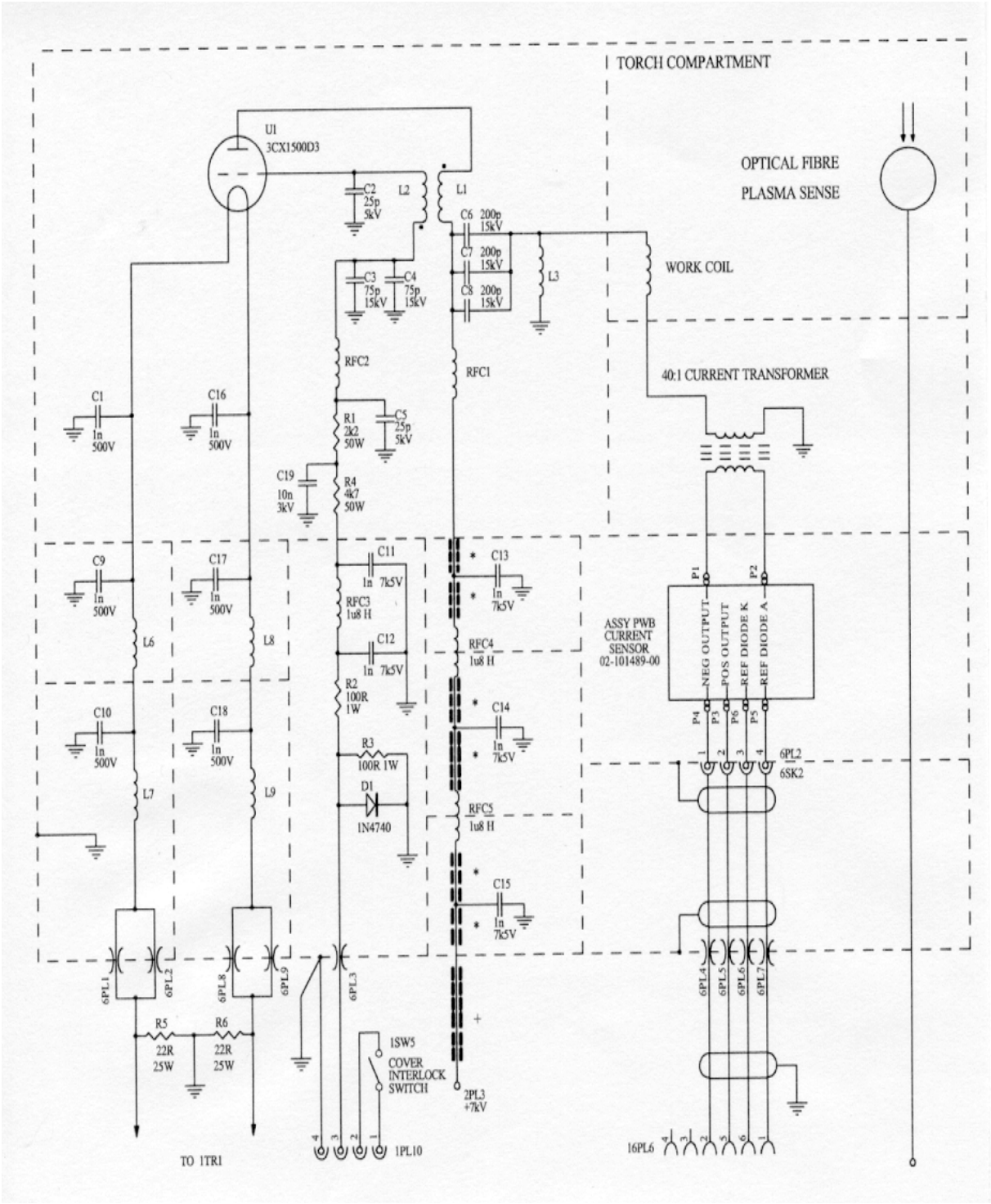

Figure 3. Schematic

This information is subject to change without notice.

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