

An interior view of the 70 Mc/s converter. Note the use of ceramic feedthrough insulators for supporting the air-spaced coils.

All 0.01  $\mu$ F capacitors are high *K* ceramic types. The 1000 pF feedthrough ceramic capacitors can either be the solder-in or nut secured types. All other fixed capacitors are ceramic, suitable types being marketed by Radiospares Ltd. All resistors are  $\frac{1}{2}$  watt type except the 8.2 K ohms h.t. feed for V1, which as a  $\frac{1}{2}$  watt rating. A number of KLG

feedthrough insulators are used but for support and feed-through purpose resulting in a neat and rigid assembly.

All wiring associated with the circuitry should be kept as short as possible. Decoupling and earth returns associated with each valve are made by solder tags which are held under the securing nuts for the valveholder concerned. In the case of the Nuvistor tags 8 and 10 are wired to the frame of the holder. The earth lead from the Bulgin power socket is connected to a solder tag under one of the securing bolts of screen "E."

**The 70 Mc/s Nuvistor Converter**

The circuit is shown in Fig. 5.21 and mechanical details in Fig. 5.19. Component details are given in Table 5.1.

To align the converter, disconnect the h.t. supply from V1, remove the caps from L7 and L8 and first adjust L8 for maximum indication on the r.f. checking meter—Fig. 5.22. Then adjust L7 in a similar manner. The tuning range of each coil is such that only the required harmonic should be selected but it is wise to check the actual frequencies with an absorption wavemeter or g.d.o. When this has been done the caps should be replaced on L7 and L8, and the two cores re-adjusted for maximum r.f. output from the coupling link L4. The output should be connected to the communicator's receiver, tuned to 2.4 Mc/s. L5 will be approximately

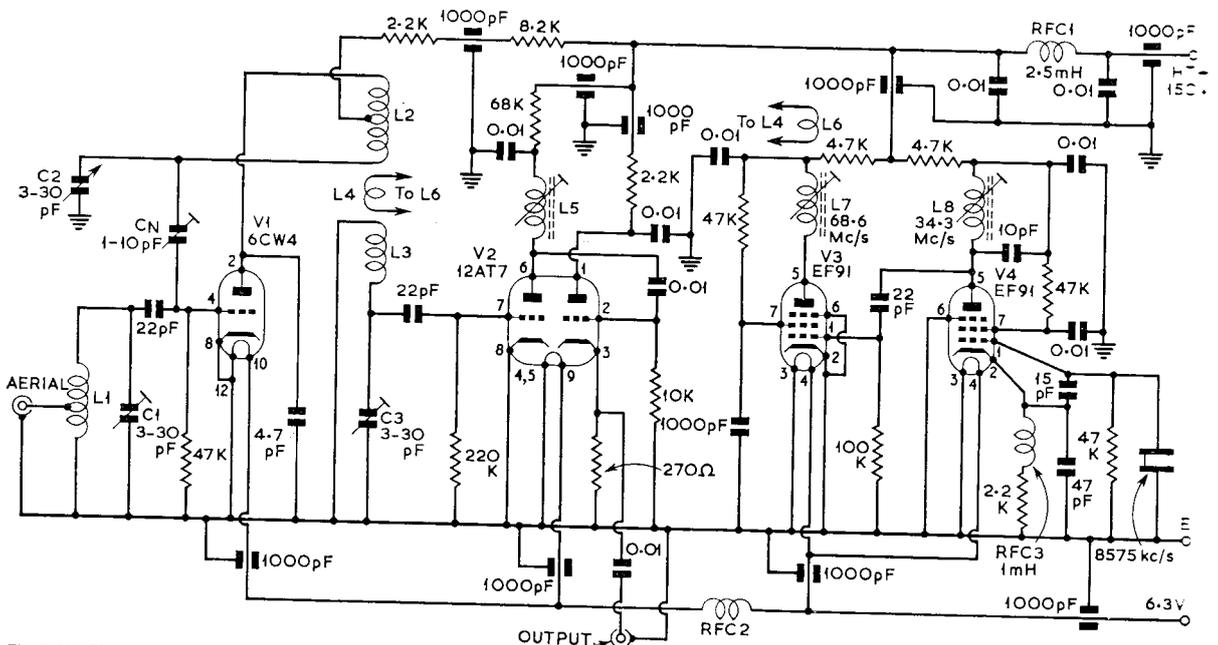


Fig. 5.21. Circuit diagram of the 70 Mc/s Nuvistor converter. A 22 pF ceramic capacitor should be connected from pin 6 (anode) of V2 to earth.