



TECHNICAL DATA SHEET

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2 Parramatta Rd.,
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Modification for chassis type 64 and 64K
to incorporate valve type 6AN7 in place of valve
type 6BE6 Converter.

Circuit changes have been incorporated in chassis type 64 and 64K to employ a triode hexode type 6AN7 converter valve providing slightly better sensitivity and an increased signal to noise ratio. Back bias has been provided for the 6M5 output pentode and a delay voltage for the AVC circuit. A slight alteration in the cathode circuit of the 6M5 output pentode has provided an increased amount of feedback and this together with a rewiring of the tone control circuit has provided a reduced hum level.

The detailed modifications are as follows:-

Remove the 6BE6 converter valve and unwire leads to socket. Remove socket. Remove existing oscillator coil and padding condenser. Remove C8 and R5 from the cathode of the 6BA6 and earth the cathode lug 7 to chassis. Remove the earth on lug 5 of the 6AV6 valve socket and connect to the V2 plate at the IFT2 connection via a 50 pF mica S/M capacitor. Remove the R12 and C20 combination from lug 3 on the 6M5 socket and using the 4" 7/010 PVC lead (yellow) connect the lug 3 of the socket to the V/C tag strip on the top of the chassis. Remove the C.T. lead of the secondary of the mains transformer from earth. Remove the dual 16 mF Electrolytic condensers, 3 tag connector strip and filter resistors. Replace the 3 tag strip with a 5 tag strip. Fit a 2 tag strip adjacent to the 6X4 valve socket and connect the insulated connection to the cathode, lug 7 on the 6X4 valve socket using the 4" PVC 7/010 lead. Connect the positive terminal of a 16 mF Electrolytic condenser to the 2 tag panel and the negative lead to the lug adjacent to the 6X4 socket on the 5 tag strip. This lug is then connected to the adjacent lug via a 68 ohm $\frac{1}{2}$ W resistor and the second lug is connected to the centre earth lug via a 47 ohm $\frac{1}{2}$ W resistor. The two parallel 10K 1 watt resistors are wired between the 2 tag panel and the end of the 5 tag panel adjacent to the volume control. To this terminal is also connected the red B + wiring, a .047 mF 400V paper condenser and the positive lead on the second 16 mF Electrolytic filter condenser; the earth end of the condenser being connected to the earth used originally by the dual electrolytic condenser.

Connect the mains transformer C.T. lead to the stag panel lug adjacent to the 6X4 valve socket.

Connect a 1 megohm $\frac{1}{2}$ W resistor from lug 5 on the 6AV6 valve socket to the junction of the 47 and 68 Ω bias resistors. Remove the AVC 2.2 megohm $\frac{1}{2}$ W resistor from IFT2 terminal and reconnect to lug 5 on the 6AV6 valve socket. Remove the earth lead on the tone control VR2. Remove the grid lead connection and rewire to the other side terminal on the tone control. Connect a 9" green 7/010 wire to the original grid connection on the VR2 and thread through the chassis making connection to the lug on the 5 tag panel now connected to the transformer C.T. and the 68 Ω resistor. Disconnect the .0047 mF tone control condenser from the side lug and reconnect to the chassis earth adjacent to the VR2.

Remove R6 10K Ω 1W resistor and substitute a 20K resistor between lug 6 on V2 socket and IFT2 B + connection. Fit the 9 pin wafer valve socket in the V1 position (pin 1 should be towards the front of the chassis). Fit the new oscillator coil. The lug facing the front of the chassis should be earthed to the chassis. The next lug in clockwise rotation from the bottom of the coil is connected to the oscillator section of the tuning gang via the 400 pF SM padder condenser and also to pin 9 of the 6AN7 valve socket via a 50 pF S/M mica condenser. Pin 9 of the valve socket is also connected to the socket centre and earth via a 22K $\frac{1}{2}$ W resistor. The lug opposite the earth connection on the oscillator coil is connected directly to lug 8 on the 6AN7 valve socket. Connect the remaining oscillator coil lug to the B + terminal of IFT1 via a 10K ohm 1W resistor and also to the chassis via a .047 mF 400V paper condenser.

Connect pin 7 on the valve socket to the plate terminal on IFT1. The filament lead from V2 and the P. lamp is connected to Pin 5 on the valve socket, pins 4 and 3 being earthed to the chassis. Pin 2 of the valve socket is connected to the R.F. section of the tuning gang and pin 1 is connected via the orange lead back to the screen, pin 6 of V2 socket. Fit the 6AN7 valve. Check the chassis for wiring errors and shorts. If correct power can be applied and realignment commenced. The I.F. alignment should be carried out according to the service manual for the type 64, 64K chassis. Having completed I.F. alignment, the R.F. alignment may now be carried out, again according to the service manual.

Note. The voltages should be checked according to the table set out below prior to alignment.

Pin Nos.

	1	2	3	4	5	6	7	8	9
6AN7	85	--	E	E	6.3	--	172	75	--
6BA6	--	E	6.3	E	172	85	E		
6AV6	--	E	E	6.3	--	--	65		
6M5	172	--	E	E	6.3	--	265		
6X4	250	--	6.3	E	--	250	275		

Back bias = 2.2 V and 5.3V across 47 and 68 resistors to earth respectively - Oscillator grid current ranges from 310 mA at 550Kc to 425 mA at 1600 Kc. Total current = 45 mA.

All voltages measured with a 1000 O/P/V meter - Mains at 240 A.C.
No signal input and gang closed.

Queries relating to the above information should be addressed to the
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