

TECHNICAL INFORMATION

COVERING

BROADCAST RECEIVER TYPE 5151 R.G.

COLLIER & BEALE Ltd. WELLINGTON.

5155RG
same cabinet

TYPE SET—A.C. Superheterodyne. Table Radiogram.

TUBES (Five)—*ECH42 Converter, 6BA6 I.F. Amp., 6AV6 Det.-A.F., 6AQ5 Power Output, 6X4 Rectifier.

POWER SUPPLY—230 v. A.C. Rating 27 watts.

TUNING RANGE—Broadcast 535-1530 Kc/s.

ALIGNMENT INSTRUCTIONS

To set pointer, fully mesh variable condenser and set pointer at last reference mark at left end of dial. Set volume control at maximum and keep output from signal generator no higher than necessary to obtain output readings. Use insulated alignment tool for adjusting.

Dummy Antenna	Signal Generator Coupling	Sig. Gen. Frequency	Band Switch Position	Radio Dial Setting	Output Meter	Adjust	Remarks
0.1 μ fd.	High Side to pin No. 6 (grid) of ECH42.	455 Kc.	BC	High freq. end	Across voice coil	A1, A2, A3, A4,	Adjust for maximum output
R.M.A. Standard	High side to ant. terminal	1400 Kc.	"	1400 Kc.	"	C22	" "
"	"	1400 Kc.	"	1400 Kc.	"	C23	" "
"	"	600 Kc.	"	Rock Gang	"	C16	" "

CAPACITORS

Ref. No.	Cap.	Volts
C1-2	50 + 50 μ fd.	250
C3	8 "	"
C4	25 "	25
C5-6	0.25 "	150
C7-8	0.05 "	300
C9	0.02 "	400
C10-13	0.01 "	"
C14	0.005 "	"
C15	0.004 "	Mica
C16	600 μ fd.	Padder
C17	500 "	Mica
C18	250 "	"
C19	100 "	"
C20-21	50 "	"
C22-23	3-30 "	Trimmer
C24-25	5 "	Ceramic

MISCELLANEOUS

Ref. No.	Res., Pri.	Res., Sec.	
PE100	13 ohm	13 ohm	IF
784	20 "	2.7 "	BC
189	0.82 "	2.7 "	"
	Volts	Volts	Volts
TR5571-2	230	175/175	6.3
	Type	Transformer	
SP1	5 x 7 PM	5000 ohm	
S1	SPST attached to R4		
S2	DPDT Gram switch		
CV	Polar C90-02/1 (swing 351 μ f.)		
P.L.	6.5, 0.3 amp. M.E.S. tub. lamp		

* Some sets use ECH21.

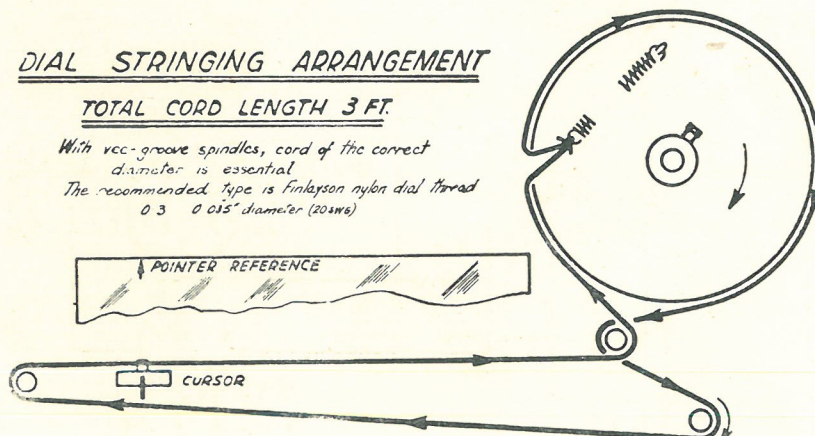
RESISTORS

Ref. No.	Res.	Watts
R1	10 meg.	$\frac{1}{2}$
R2	2 "	"
R3	500K "	Pot
R4	500K "	"
R5	500K "	$\frac{1}{2}$
R6-7	100K "	"
R8-10	50K "	"
R11	20K "	"
R12	15K "	"
R13	3K "	1
R14-15	3K "	$\frac{1}{2}$
R16	500 "	$\frac{1}{2}$
R17	300 "	1
R18-19	150 "	$\frac{1}{2}$
R20	50 "	$\frac{1}{2}$
R21	2.6 "	1

DIAL STRINGING ARRANGEMENT

TOTAL CORD LENGTH 3 FT.

With vcc-groove spindles, cord of the correct diameter is essential.
The recommended type is Finlayson nylon dial thread
0.3 0.015" diameter (204W6)

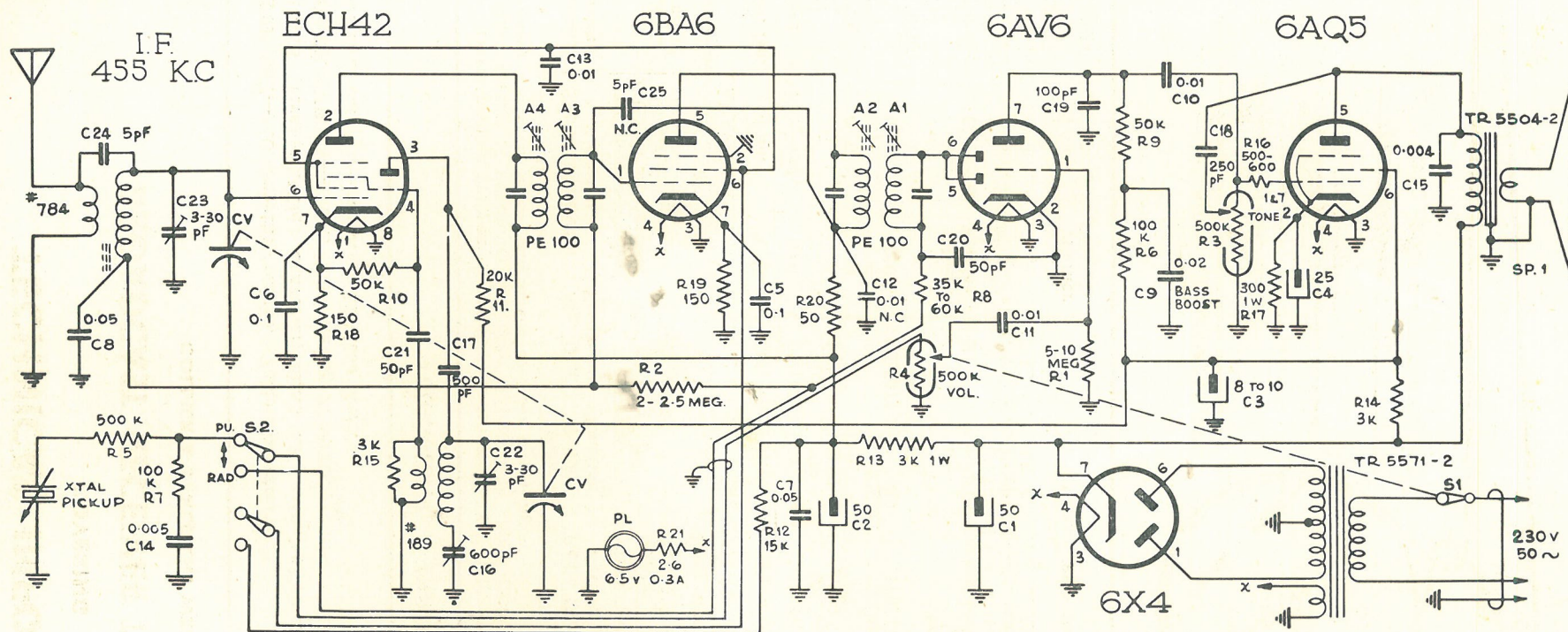


BASS COMPENSATION

Bass compensation has been achieved by the combination of values chosen for the plate feed circuit (R6, R9, C9) of the 6AV6 stage.

The change of reactance of C9, with frequency, modifies the effective plate load impedance presented to the tube.

This results in a greater gain as the frequency is reduced.



SCHEMATIC DIAGRAM MODEL 5151 R.G.

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
Conv.	ECH42	6.1 ac	128	55	—6	70	0	1.0	—
I.F.	6BA6	0	—	—	6.1 ac	126	70	0.8	—
Det-A.F.	6AV6	0	—	—	6.1 "	0	0	88	—
Output	6AQ5	0	7.5	—	6.1 "	150	147	0	—
Rect.	6X4	150 ac	—	—	6.1 "	—	150 ac	162	—

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
Conv.	ECH42	—	503K	525K	50K	515K	2.5 meg	150	—
I.F.	6BA6	2.5 meg.	—	—	—	503K	515K	150	—
Det-A.F.	6AV6	10 meg.	—	—	—	550K	550K	650K	—
Output	6AQ5	500K	300	—	—	500K	503K	500K	—
Rect.	6X4	240	—	—	—	—	240	500K	—

1. D.C. voltage measurements are at 2000 ohms per volt—A.C. voltage measurements at 1,000 ohms per volt.

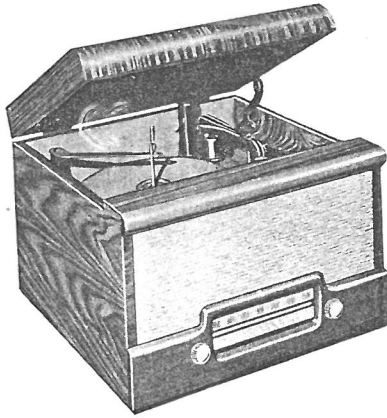
2. Socket connections are shown as bottom views.

3. Measured values are from socket pin to chassis.

4. Nominal tolerances on component values make possible a variation of $\pm 10\%$ in voltage and resistance readings.

5. Volume control at maximum, no signal applied for voltage measurements.

6. Resistance readings in B+ circuits may vary widely according to condition of filter capacitors.



Gulbransen

5-valve Broadcast Radiogram Mantel with
automatic record changer. Model 5151/2
RGM.
