

TECHNICAL INFORMATION

COVERING

BROADCAST RECEIVER TYPE 617P.

Sept 1947

COLLIER & BEALE Ltd., WELLINGTON

TYPE SET—A.C. Superhetrodyne—self contained loop antenna.

TUBES—(six) 6SG7 R.F. Amp., 6SA7 converter, 6U7G I.F. Amp., 6Q7GT Det.-A.F., 6V6GT Power Output, 6X5GT Rectifier.

POWER SUPPLY—230 v. A.C. Rating, 40 watts.

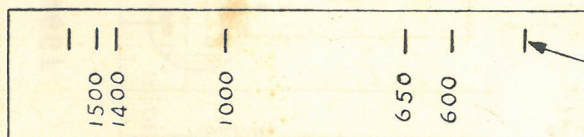
TUNING RANGE—Broadcast, 540-1600 k.c.

ALIGNMENT INSTRUCTIONS

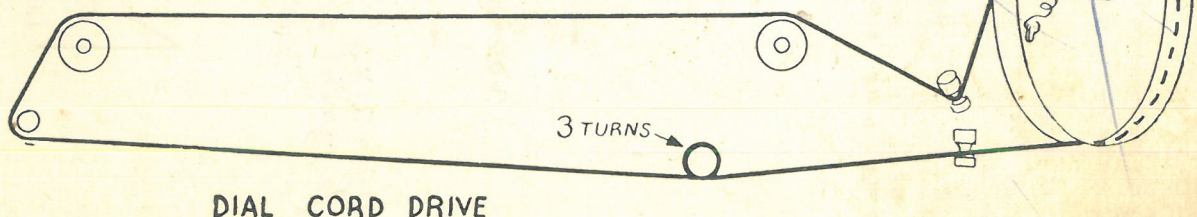
To set pointer, fully mesh variable condenser and set pointer at last reference mark at right end of dial. Set volume control as maximum and keep output from signal generator no higher than necessary to obtain output reading. Use insulated alignment tool for adjusting.

Dummy Antenna	Signal Generator Coupling	Sig. Gen. Frequency	Band Switch Position	Radio Dial Setting	Output Meter	Adjust	Remarks
.1 mfd.	High side to pin No. 8 (grid) of 6SA7. Low side to B —	455 Kc.		High freq. end	Across voice coil	A1, A2, A3, A4.	Adjust for maximum output
R.M.A. Standard	High side to ant. term, low side B—	1400 Kc.		Tune for max. output	"	C20	" "
"	"	600 Kc.		"	"	C14	Rock variable and adjust for max. output.. Recheck C20 at 1400 Kc. If C20 is changed recheck C14.

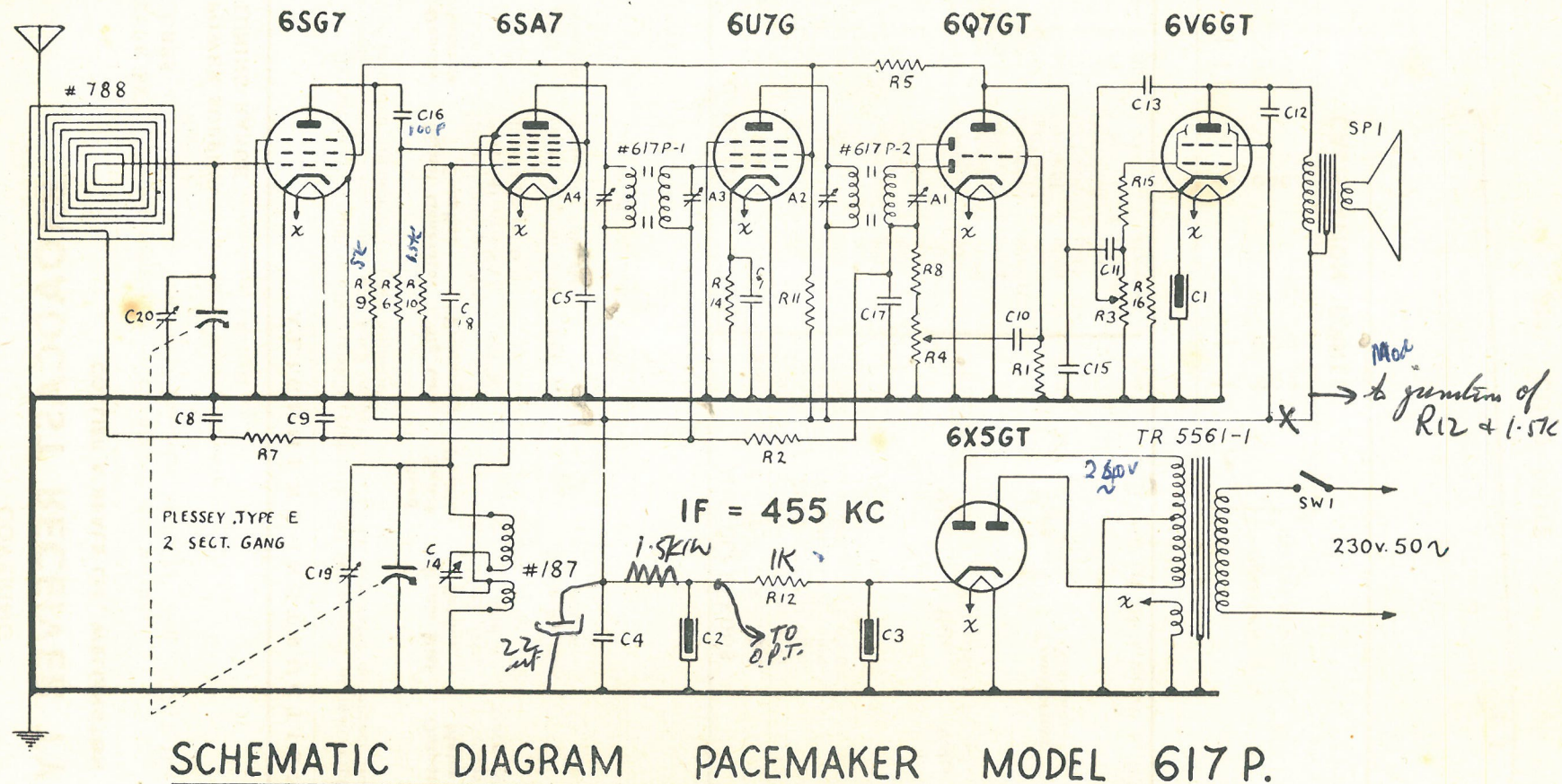
CAPACITORS			MISCELLANEOUS			RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.	Ref. No.	Res.	Watts
C 1	25mfd.	25	788	.04 ohm.	.66 ohm.	R1	10 meg.	$\frac{1}{2}$ watt
C 2	20+20mfd.	450	187	.24 ohm.	2.44 ohm.	R2	1 meg.	$\frac{1}{2}$ watt
C 3	20+20mfd.	450	617p-1	6.75 ohm.	6.75 ohm.	R3	.5 meg.	pot
C 4	.1mfd.	600	617p-2	6.75 ohm.	6.75 ohm.	R4	.5 meg.	pot
C 5	.1mfd.	600				R5	.25 meg.	$\frac{1}{2}$ watt
C 7	.1mfd.	200				R6	15,000 ohm.	$\frac{1}{2}$ watt
C 8	.05mfd.	400				R7	100,000 ohm.	$\frac{1}{2}$ watt
C 9	.05mfd.	400				R8	47,000 ohm.	$\frac{1}{2}$ watt
C 10	.01mfd.	600				R9	5,000 ohm.	$\frac{1}{2}$ watt
C 11	.01mfd.	600				R10	20,000 ohm.	$\frac{1}{2}$ watt
C 12	.004mfd.	mica	TR5561/1	Volts 230	Volts 250 aside	R11	10,000 ohm.	1 watt
C 13	.0005mfd.	mica				R12	1,500 ohm.	5 watt w.w.
C 14	600mmfd.	padder				R14	1,500 ohm.	$\frac{1}{2}$ watt
C 15	.00025mfd.	mica				R15	500 ohm.	$\frac{1}{2}$ watt
C 16	.0001mfd.	mica	SP1	Type 6 $\frac{1}{2}$ P.M.	Transformer 5000 ohm.	R16	300 ohm.	1 watt
C 17	.0001mfd.	mica						
C 18	.00005mfd.	mica						
C 19	3-30	trimmer						
C 20	3-30	trimmer	SW1	S.P.S.T. switch attached to R3				



CALIBRATION POINTS



DIAL CORD DRIVE



VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
RF.	6SG7	OV	OV	OV	OV	OV	75V	6.3AC	128V
Conv.	6SA7	OV	OV	162V	75V	-2.5V	OV	6.3AC	OV
I.F.	6U7G	OV	OV	162V	75V	O	162V	6.3AC	4.3V
Det.-AF.	6Q7GT	OV	OV	35V	OV	O	75V	6.3AC	O
Output	6V6GT	OV	OV	160V	162V	O	OV	6.3AC	7.7V
Rect.	6X5GT	OV	OV	230V AC	OV	230V AC	OV	6.3AC	225V

RESISTANCE READINGS

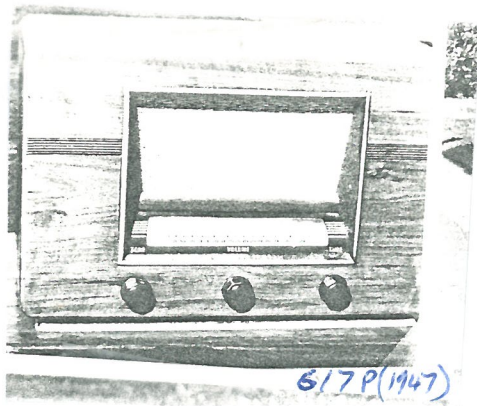
Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
RF.	6SG7	O	O	O	1.6 meg	O	30K	O	23K
Conv.	6SA7	O	O	20K	30K	20K	.25 ohm	O	1.6 meg
I.F.	6U7G	O	O	20K	30K	O	20K	O	1.5K
Det.-AF.	6Q7GT	O	O	300K	1NF	500K	30K	O	O
Output	6V6GT	O	O	20K	20K	500K	500K	O	330 ohm
Rect.	6X5GT	O	O	480 ohm	1NF	480 ohm	1NF	O	20K

1. D.C. Voltage measurements are at 2,000 ohm per volt—A.C. Voltage measured at 1,000 ohm per volt.
2. Socket connections are shown as bottom views.
3. Measured valves are from socket pin to common negative.

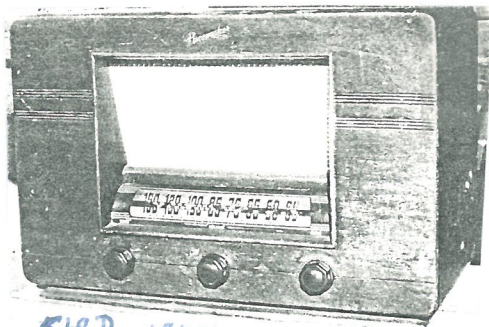
4. Nominal tolerance on component valve make possible a variation of $\pm 10\%$ in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.
6. Resistance readings in B+ circuits may vary widely according to the condition of filter capacitors.

Note: untuned mixer

*mod to decrease hum & increase
low B+ voltage*



517P(1947)



518P 1948 same as 517P