

TECHNICAL INFORMATION

COVERING

DUAL WAVE RECEIVER TYPE 529P.

COLLIER & BEALE Ltd. WELLINGTON.

TYPE SET.—A.C. Superhetrodyne. Moulded Bakelite Cabinet.

TUBES (Five).—7S7 Converter, 7B7 I.F. Amp. 7C6 Det.-A.F., 7C5 Power Output, 7Y4 Rectifier.

POWER SUPPLY.—230 v. A.C. Rating 25 watts.

TUNING RANGE.—Broadcast, 535-1450 Kc/s.; Short Wave, 6.5-19 Mc/s.

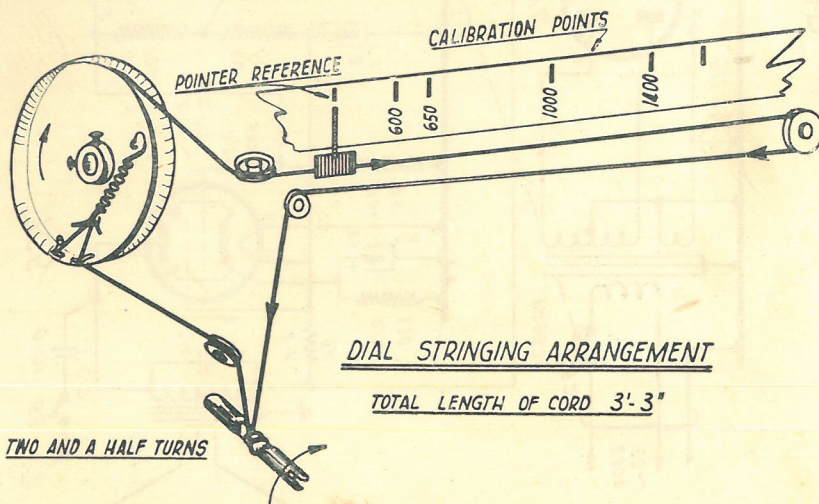
ALIGNMENT INSTRUCTIONS

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 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
0.1 μ f.	High side to pin No. 6 (grid) of 7S7	455 Kc.	B.C.	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.	"	C24	" "
"	"	1400 Kc.	"	1400 Kc.	"	C23	" "
"	"	600 Kc.	"	Rock Gang	"	C16	" "
"	"	18 Mc.	S.W.	18 Mc.	"	C22	" "
"	"	18 Mc.	"	18 Mc.	"	C21	" "
"	"	1400 Kc.	B.C.	1400 Kc.	"	C23	" "

CAPACITORS			MISCELLANEOUS				RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.		Ref. No.	Res.	Watts
C1	50 μ f	250	519P-1	7 ohm	7 ohm	IF	R1	10 meg.	$\frac{1}{2}$
C2	50 "	250	519P-2	7 "	7 "	"	R2	3 "	"
C3	8 "	250	784-1	20 "	2.7 "	BC	R3	2 "	"
C4	25 "	25	189-2	0.82 "	2.7 "	"	R4	500K ohm	Pot.
C5	0.25 "	400	786	0.4 "	0.03 "	SW	R5	500K "	$\frac{1}{2}$
C6	0.1 "	400	186-2A	0.45 "	0.03 "	"	R6	100K "	"
C7-8	0.05 "	400					R7	50K "	"
C9	0.02 "	400					R8	50K "	"
C10-12	0.01 "	400	TR5571	Volts 230	Volts 155/155	Volts 6.3	R9	50K "	"
C13	0.004125 "	Mica					R10	5K "	"
C14	0.004 "	Mica	SP1	5" P.M.	5000 ohm Transformer.		R11	3K "	$\frac{1}{2}$
C15	0.002 "	Mica	S1	3 P.S.T.	Special Slide Switch		R12	500 "	$\frac{1}{2}$
C16	600 μ f.	Padder	S2	S.P.S.T.	Attached to R4		R13	330 "	$\frac{1}{2}$
C17-20	100 "	Mica	S3	S.P.S.T.	Slide Switch.		R14	100 "	$\frac{1}{2}$
C21-24	3-30 "	Trimmer					R15	100 "	"
CV	351 "	Polar C90-swing 02/1							

Scale drawing does not show the S.W. calibration points. Marks on the receiver are given for 6.5, 7, 10, 12 & 18 Mc/s.

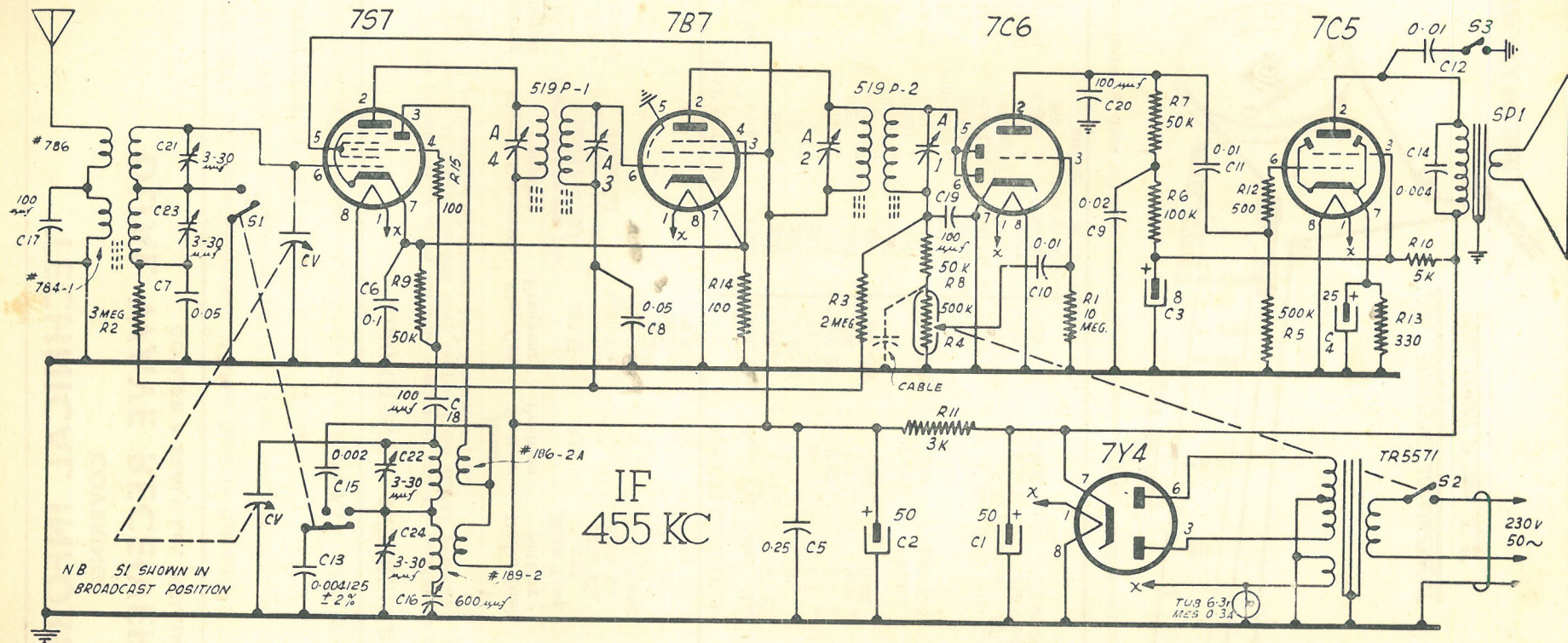


ALIGNMENT

Simplification of the wave-switching has been achieved in this receiver by special series arrangements of broadcast and shortwave coils.

Attention is directed to the need of re-peaking the B.C. antenna trimmer after finishing the normal S.W. alignment, as the resonant circuits of the two bands are partly interdependent.

Should it prove necessary to alter the S.W. oscillator trimmer, this change will affect the B.C. oscillator frequency, necessitating realignment.



SCHEMATIC DIAGRAM MODEL 529P.

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
Conv.	7S7	6.3 a.c.	100	100	—5	100	0	2	—
I.F.	7B7	6.3 a.c.	100	100	3	—	0	2	—
Det-AF.	7C6	6.3 a.c.	75	0	—	0	0	—	—
Output	7C5	6.3 a.c.	145	145	—	0	0	7.9	—
Rect.	7Y4	6.3 a.c.	145	155 a.c.	—	—	155 a.c.	150	—

1. D.C. voltage measurements are at 2,000 ohms per volt—A.C. voltage measured at 1,000 ohms per volt.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to chassis. Band switch in B.C. position.

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
Conv.	7S7	—	0.5 meg	0.5 meg	50K ohm	0.5 meg	5.5 meg	100 ohm	—
I.F.	7B7	—	0.5 meg	0.5 meg	100 ohm	—	2.5 meg	100 ohm	—
Det-AF.	7C6	—	0.5 meg	10 meg	—	0.5 meg	0.5 meg	—	—
Output	7C5	—	0.5 meg	0.5 meg	—	0.5 meg	0.5 meg	330 ohm	—
Rect.	7Y4	—	0.5 meg	240 ohm	—	—	240 ohm	0.5 meg	—

4. Nominal tolerance 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 the condition of filter capacitors.

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April 1951