

TECHNICAL INFORMATION

COVERING

BROADCAST RECEIVER TYPE 5153 A.B.

COLLIER & BEALE Ltd. WELLINGTON.

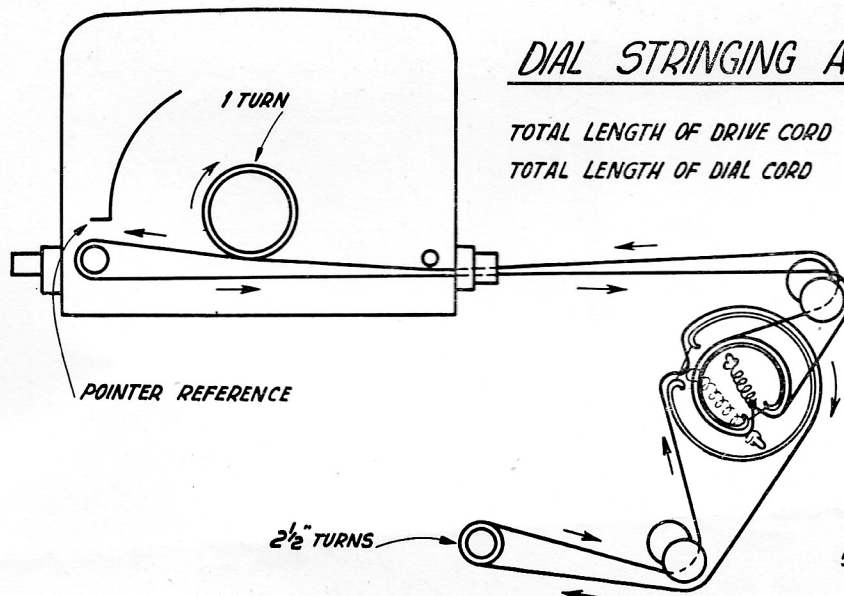
TYPE SET—A.C.-Battery Superhetrodyne Portable—self-contained Loop Antenna.
TUBES (Five)—1T4 R.F. Amp., 1R5 Converter, 1T4 I.F. Amp., 1S5 Det.-A.F., 3V4 Power Output.
POWER SUPPLY—230 v. A.C., or self-contained Single Dry Battery 9 and 90 v.
CONSUMPTION—A.C.—15 watts, Battery—"A," 50 m.a.; "B," 12.5 m.a.
TUNING RANGE—Broadcast, 535-1600 k.c.

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.

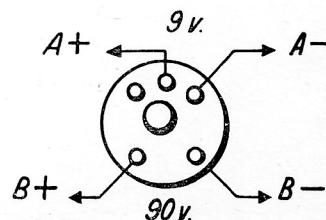
Dummy Antenna	Signal Generator Coupling	Sig. Gen. Frequency	Band Switch Position	Radio Dial Setting	Output Meter	Adjust	Remarks
0.1 μ fd.	High side to pin No. 6 of 1R5	455 Kc.		High freq. end	Across voice coil	A1, A2, A3, A4, C20	Adjust for maximum output
R.M.A. Standard	High side to ant. Terminal	1400 Kc.		1400 Kc.	"	C21 & C22	" "
"	"	1400 Kc.		1400 Kc.	"	C15	" "
"	"	600 Kc.		Rock Gang	"		" "

CAPACITORS			MISCELLANEOUS				RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.		Ref. No.	Res.	Watts
C1	250 μ fd.	15	722	0.94 ohm	—	Loop	R1	10 meg.	$\frac{1}{2}$
C2-3	50+50 "	150	722-1	0.83 "	1.2 ohm.	Aerial Coil	R2	5 "	"
C4	0.1 "	350	485	69 "	2.4 "	Interstage	R3	5 "	"
C5	0.1 "	350	118	0.83 "	2.54 "	Osc.	R4	3 "	"
C6	0.1 "	350	PE100	13 "	13 "	I.F.	R5	1 "	"
C7	0.1 "	350		Volts	Volts	Volts	R6-7	1 "	"
C8	0.1 "	350	TR5568-1	230	110	6.3	R8	500K ohm	Pot
C9	0.05 "	350		Type	Transformer		R9	250K "	$\frac{1}{2}$
C10	0.05 "	350	SP1	5in. P.M.	10,000 ohm		R10	100K "	"
C11	0.01 "	350	Rect.	R.E. 3613-3			R11	50K "	"
C12	0.01 "	350	SW1	D.P.D.T. toggle			R12	15K "	"
C13	0.01 "	350	SW2	3 P.S.T. switch attached to dial			R13	10K "	"
C14	0.002 "	Mica	"B" Batt.	Combined A & B. Battery			R14	2K "	5
C15	600 μ fd.	Padder	"A" Batt.	E.R. Type 753			R15	1K "	$\frac{1}{2}$
C16-18	100 "	Mica	CV	Polar C90-03/1 (swing 446uufd.)			R16	1K "	"
C19	50 "	Mica					R17	500 ohm	"
C20-22	3-30 "	Trimmer					R18-19	400 "	"
C23-24	5 "	Ceramic					R20	330 "	"



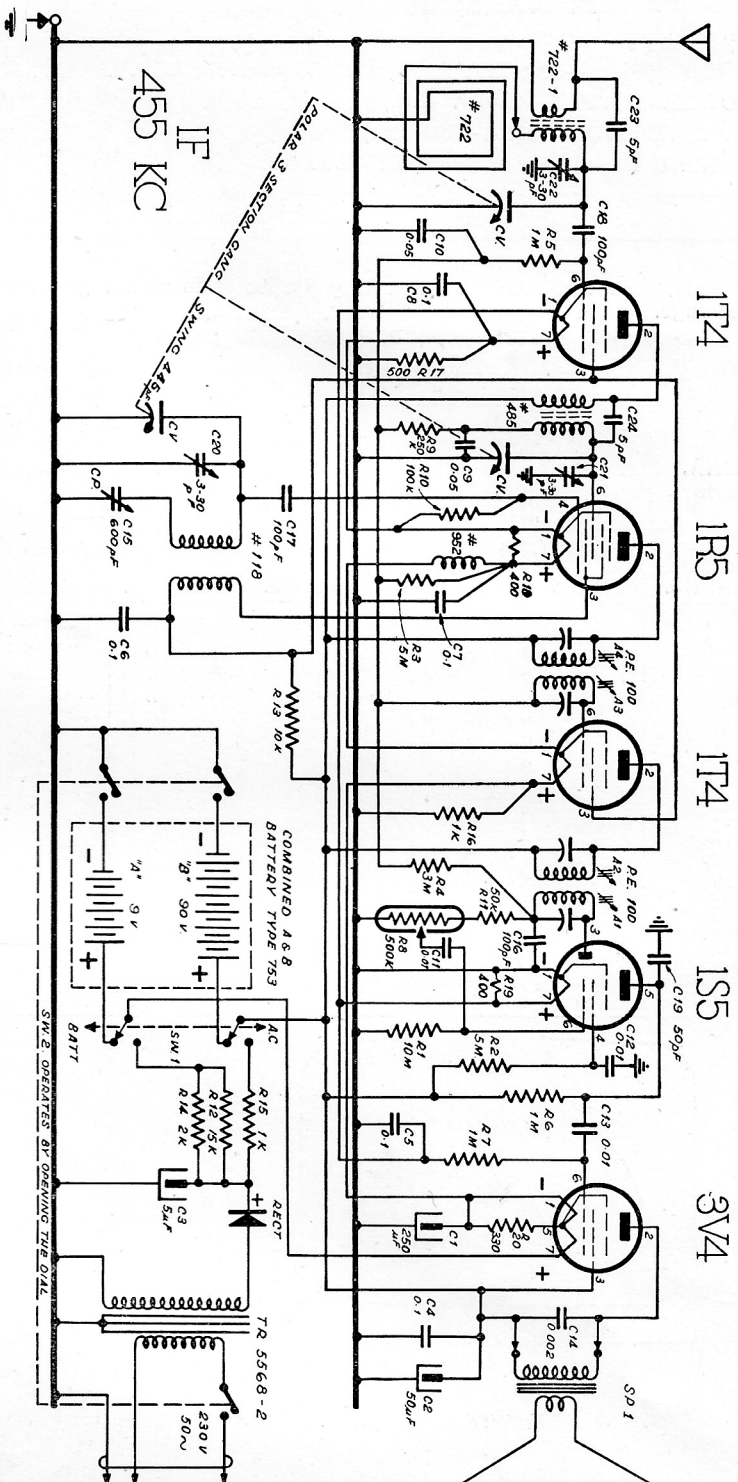
DIAL STRINGING ARRANGEMENT

TOTAL LENGTH OF DRIVE CORD 1'2"
TOTAL LENGTH OF DIAL CORD 2'6"



BATTERY PLUG WIRING CONNECTIONS

NOTE PLUG VIEWED FROM PIN SIDE.



SCHEMATIC DIAGRAM PACEMAKER MODEL 5153 A.B.

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F. Conv.	1T4	1.4	85	45	—	1.4	0	2.7	
I.F. Det.-A.F.	1R5	2.7	85	45	—	2.7	0	4.2	
	1T4	4.2	85	0	12	4.2	0	5.6	
	1S5	0	81	85	10	10	0	1.4	
Output	3V4	5.6			6.8	6.8	0	8.1	

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F. Conv.	1T4	*	3K	13K	—	*	4.5meg.	*	*
I.F. Det.-A.F.	1R5	*	3K	13K	100K	*	3.5meg.	*	*
	1T4	*	3K	13K	—	*	3.5meg.	*	*
	1S5	0	3K	.55meg.	5meg.	1meg.	10meg.	*	*
Output	3V4	*	3K	3K	3K	*	1meg.	*	*

1. D.C. voltage measurements are at 2,000 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.
7. Voltage and resistance readings taken in A.C. position.

* Do not use ohmmeter to measure filament resistance.