



"H.M.V. UNIVERSAL
MODEL 535P. *early = Ac/Dc/Batt*
late = Ac/Batt

HIS MASTER'S VOICE (N.Z.) LTD.
WELLINGTON

Circuit shows no provision for no voltage
BROADCAST RECEIVER MODEL 535P.
SERVICE DATA SHEET *note by Cap.*

TYPE SET—230v. A.C.-D.C., —110v. A.C.-D.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—230v. A.C.-D.C., —110v. A.C.-D.C., or self-contained pack battery (9 and 90v), No. 753.
CONSUMPTION—230v. A.C.—20 watts Battery—"A," 50 m.a.; "B," 12.5 m.a.
TUNING RANGE—Broadcast, 535-1540 k.c.

ALIGNMENT INSTRUCTIONS

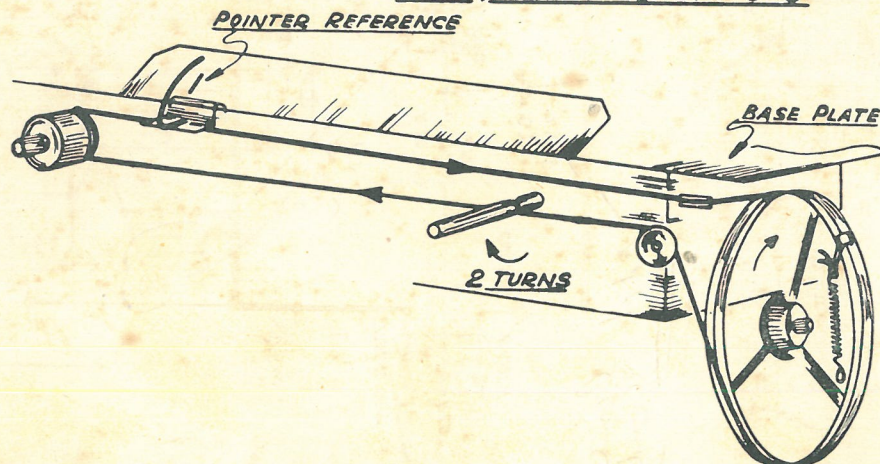
To set pointer, fully mesh condenser and set pointer at last reference mark at left end of dial. Set volume control at maximum and keep output from signal generator no higher than necessary to obtain output readings.

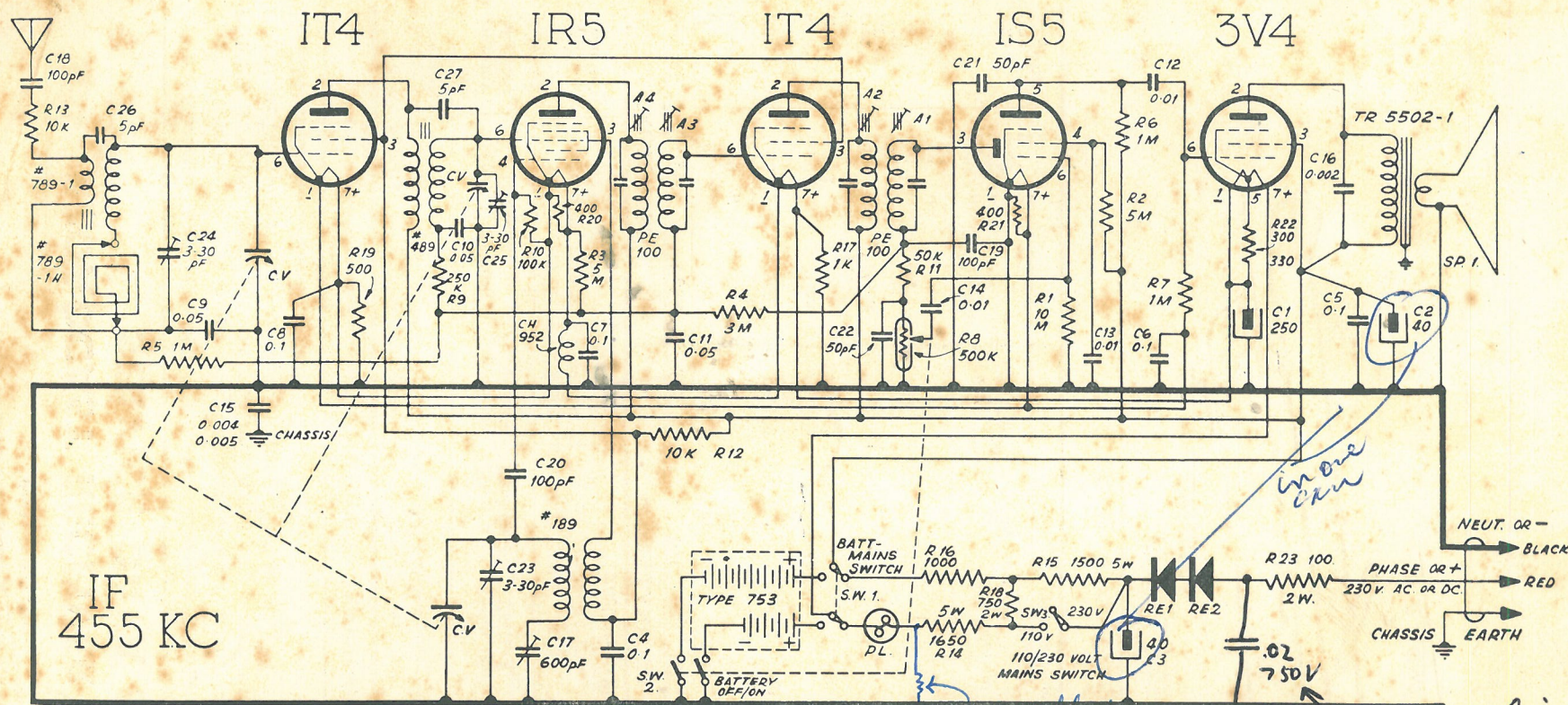
Dummy Antenna	Signal Generator Coupling	Sig. Gen. Frequency	Band Switch Position	Radio Dial Setting	Output Meter	Adjust	Remarks
0.1 μ fd.	High Side to pin No. 6 of 1R5	455 Kc.		High freq. end	Across voice coil	A1, A2, A3, A4, C23	Adjust for maximum output
R.M.A. Standard	High Side to ant. Terminal	1400 Kc.		1400 Kc.	"	C24 & C25	" "
"	"	1400 Kc.		1400 Kc.	"	"	" "
"	"	600 Kc.		Rock Variable	"	C17	" "

CAPACITORS			MISCELLANEOUS				RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.		Ref. No.	Res.	Watts
C1	250 μ fd.	15	789-1	0.720 ohm	1.68 ohm	aerial	R1	10 meg.	$\frac{1}{2}$
C2-3	40 "	450	489	64 ohm	2.7 ohm	r.f.	R2-3	5 meg.	$\frac{1}{2}$
C4-8	0.1 "	150	189	0.82 ohm	2.7 ohm	osc	R4	3 meg.	$\frac{1}{2}$
C9-11	0.05 "	350	PE100	13 ohm	13 ohm		R5-7	1 meg.	$\frac{1}{2}$
C12-14	0.01 "	150	789-1 H	0.5 ohm		loop aerial	R8	500K ohm	Pot
C15	0.004 "	Mica	CH952	1.64 ohm			R9	250K "	$\frac{1}{2}$
C16	0.002 "	"	TR5502-1	10000 ohm	3 ohm	spr tran	R10	100K "	$\frac{1}{2}$
C17	600 μ fd.	Padder		Type			R11	50K "	$\frac{1}{2}$
C18	100 "	Mica		4" x 6" ellipt.			R12-13	10K "	$\frac{1}{2}$
C19	100 "	"	SP1				R14	1650 "	5
C20	100 "	"					R15	1500 "	5
C21	50 "	"					R16-17	1K "	$\frac{1}{2}$
C22	50 "	"	SW1	D.P.D.T.			R18	750 "	2
C23	3-30 "	Trimmer	SW2	D.P.S.T. switch attached to R8			R19	500 "	$\frac{1}{2}$
C24	3-30 "	"	"A" Batt.}	ER type 753 combined			R20	400 "	$\frac{1}{2}$
C25	3-30 "	"	"B" Batt.}	A & B battery			R21	400 "	$\frac{1}{2}$
C26	5 "	Ceramic	PL	6v.-40 ma MES. lamp			R22	330 "	$\frac{1}{2}$
C27	5 "	"	CV	Polar C90-03/1 (swing 351mmf.)			R23	100 "	2

DIAL STRINGING ARRANGEMENT

CORD. TOTAL LENGTH 3'-3"





SCHEMATIC DIAGRAM MODEL 535P.

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	1T4	1.3	90	60	—	—	0	2.7	
Conv.	1R5	2.7	90	60	1.9	—	0.3	3.9	
I.F.	1T4	4.2	90	60	—	—	0.2	5.4	
Det-A.F.	1S5	—	—	—	12	45	0	1.3	
Output	3V4	5.4	87	90	—	6.8	0.3	8.1	

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	1T4	*	3.5K	11K	—	—	4 meg.	*	
Conv.	1R5	*	3.5K	11K	100K	—	2.5 meg.	*	
I.F.	1T4	*	3.5K	11K	—	—	2 meg.	*	
Det-A.F.	1S5	0	—	500K	5 meg.	1 meg.	10 meg.	*	
Output	3V4	*	3K	3.5K	—	—	1 meg.	*	

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

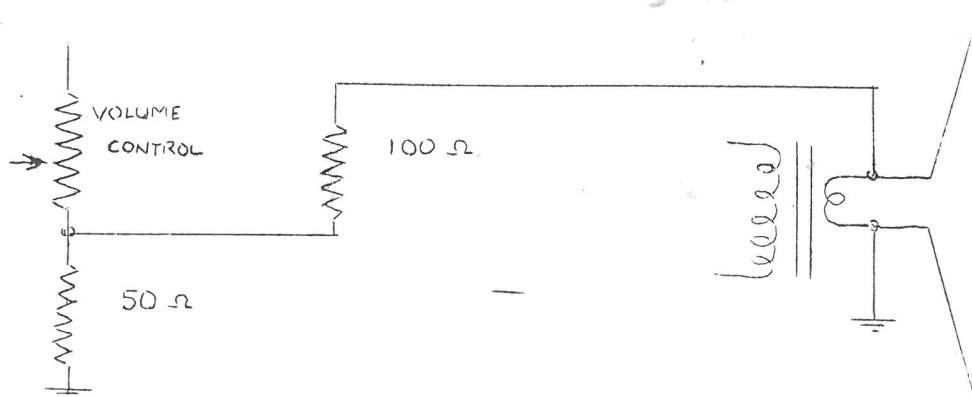
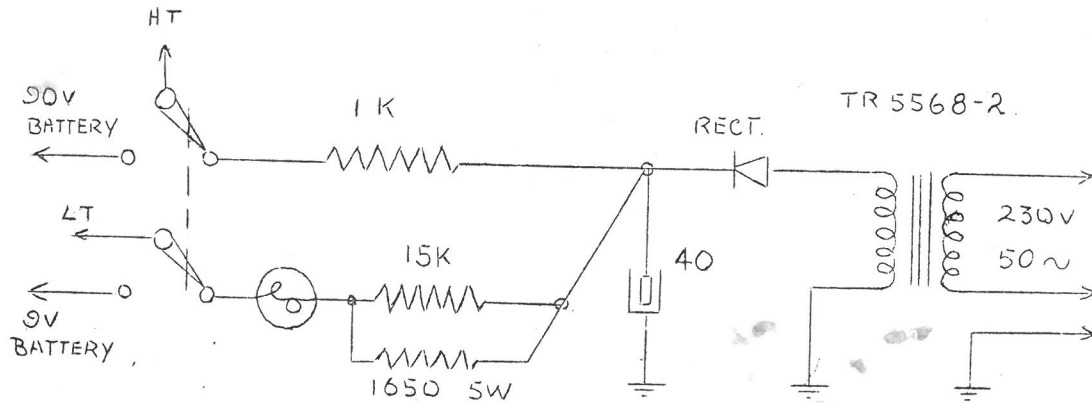
5. Volume control at maximum, no signal applied for voltage measurements.
6. Resistance readings in B+ circuits may vary widely according to condition of filter capacitors.
7. Voltage and resistance readings taken in A.C. position.
* Do not use ohmmeter to measure filament resistance.

H.M.V. "UNIVERSAL" MODEL 535P (AC ONLY)

CIRCUIT MODIFICATIONS

set at lowest position

The "Universal" is now fitted with a 230 volt power transformer, the floating negative line is now directly connected to the chassis proper. The playthrough with volume control ~~off~~ has been eliminated by the application of negative feedback to the bottom of the volume control. These first modifications render this receiver incapable of operation on D.C. mains.



535P
(MODS)