



"SUSSEX"

MODEL 5411AW/C/RG

HIS MASTERS VOICE (N.Z.) LTD.
WELLINGTON

ALL WAVE RECEIVER MODEL 5411AW/C/RG SERVICE DATA SHEET

TYPE SET—A.C. Superhetrodyne. Five-position Tone Control.

TUBES (Eleven)—6BA6 R.F. Amp., ECH 42 Converter, 6BA6 I.F. Amp., 6AV6 Det.-A.F., 6BA6 A.F. Equalizer, 6BA6 Phase Inv., 6V6GT Power Output, 6V6GT Power Output, GZ32 Rectifier, 6U5G Tuning Indicator, 6AU6 Pre-amp.

POWER SUPPLY—230 v. A.C. Rating, 90 watts.

TUNING RANGE—Broadcast, 535-1630 K.C., Medium Wave, 3.2-8.2 Mc., Shortwave, 7.5-22.3 Mc.

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 (grid) ECH42	455 Kc.	B.C.	High freq. end	Across voice coil	A1, A2, A3, A4, C40	Adjust for maximum output
R.M.A. Standard	High side to ant. Terminal	1400 Kc.	"	1400 Kc.	"	C41 & 42	" "
"	"	1400 Kc.	"	1400 Kc.	"	C32	" "
"	"	600 Kc.	"	Rock Variable	"	C43	" "
"	"	7.5 Mc.	M.W.	7.5 Mc.	"	C44 & 45	" "
"	"	7.5 Mc.	"	7.5 Mc.	"	C46	" "
"	"	20 Mc.	S.W.	20 Mc.	"	C47 & 48	" "
"	"	20 Mc.	"	20 Mc.	"	"	" "

CAPACITORS			MISCELLANEOUS				RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.		Ref. No.	Res.	Watts
C1-2	40 μ fd.	450	785	17.5 ohm	2.57 ohm	Broadcast	R 1	10 meg.	$\frac{1}{2}$
C3	25 "	25	485-A	69 "	2.4 "	"	R 2	5 "	"
C4	10 "	450	185-1	2.1 "	2.5 "	"	R 3	5 "	"
C5	10 "	"	716	0.23 "	0.028 "	Short Wave	R 4	2 "	"
C6	10 "	"	416	0.44 "	0.028 "	"	R 5	1 "	"
C7	10 "	500-600	116	0.47 "	0.025 "	"	R 6	1 "	"
C8	0.25 "	"	415	0.63 "	0.14 "	Med. Wave	R 7	1 "	"
C9	0.1 "	"	715	1 "	0.14 "	"	R 8	750 K ohm	"
C10	0.1 "	"	115	0.58 "	0.14 "	"	R 9	500 K	"
C11	0.1 "	"	PE-52	6.5 "	6.5 "	I.F.T.	R 10	500 K	"
C12	0.1 "	"		volts	volts	volts	R 11	500 K	Pot
C13	0.1 "	"	TR5572-1	230	290 a side	5 - 6.3 - 6.3	R 12	300 K	$\frac{1}{2}$
C14-22	0.1 "	"	TR5508-4	O.P. Trans 10 K ohm—8.4, 2.7 ohm			R 13	250 K	$\frac{1}{2}$
C23	0.05 "	"	PL.	6.3v., 0.25a, M.E.S. Dial Lamp.			R 14-21	250 K	$\frac{1}{2}$
C24	0.03 "	"	SW1A-H	3 pos. 3-pole band switch.			R22-23A	75 K	"
C25	0.01 "	"	SW2A-B-C	2 pos. 3-pole radio-gram switch.			R 24-29	50 K	"
C26	0.0057 "	Mica	SW3A-B	5 pos. 2-pole tone switch.			R 30	25 K	"
C27	0.005 "	"	SW4	S.P.S.T. Switch attached to R11.			R 31	25 K	$\frac{1}{2}$
C28	0.0035 "	"	Speaker	Rola Type 12U.			R 32	25 K	$\frac{1}{2}$
C29	0.002 "	"	Plessey Gang Type 9393/L22 (437 μ fd.				R 33	20 K	$\frac{1}{2}$
C30	0.001 "	"	swing).				R 34	15 K	$\frac{1}{2}$
C31	0.001 "	"					R 35	15 K	$\frac{1}{2}$
C32	600 μ fd	Padder					R 36	15 K	2
C33	500 "	Mica					R 37	10 K	$\frac{1}{2}$
C34	500 "	"					R 38	5 K	"
C35	300 "	"					R 39	3 K	"
C36	100 "	"					R 40	2 K	"
C37	100 "	"					R 41	2 K	"
C38	100 "	"					R 42	1 K	"
C39	50 "	"					R 43	1 K	"
C40-48	3-30 "	Trimmer					R 44	1 K	$\frac{1}{2}$
C49	25 "	Ceramic					R 45	500 "	$\frac{1}{2}$
C50	25 "	"					R 46	500 "	"
C51	25 "	"					R 47	500 "	"
C52	25 "	"					R 48	300 "	"
C53	15 "	"					R 49	250 "	$\frac{1}{2}$
C54	5 "	"					R 50	250 "	5
C55	5 "	"					R 51	150 "	$\frac{1}{2}$
C56	5 "	"					R 52	150 "	"
							R 53	75 "	"
							R 54	50 "	"
							R 55	25 "	"
							R 56	2.3 "	1
							R 57	2.3 "	"

Signal Section.

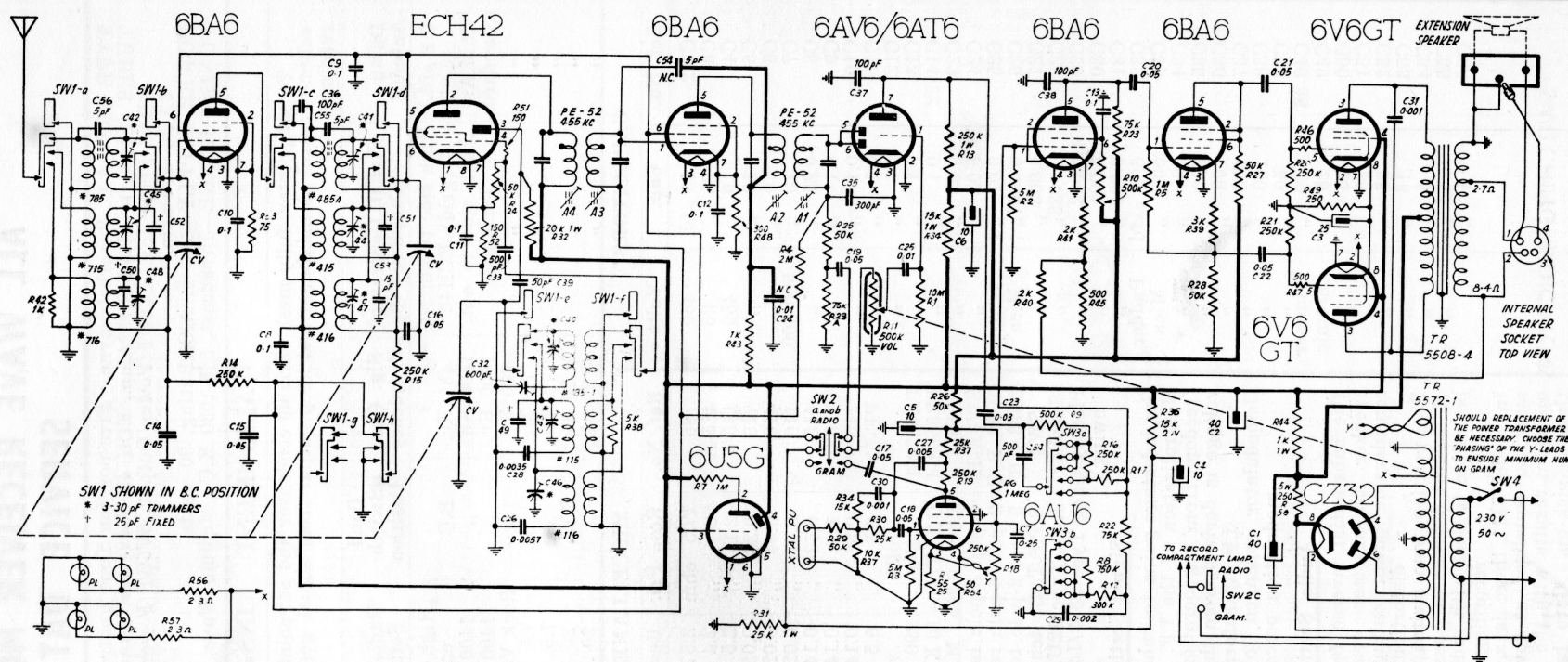
Graded stage-gains to enhance AVC action. Neutralization of the I.F. amplifier ensures freedom from regeneration. The feedback voltage is derived from the HT feed to the I.F. transformer. Demodulator arranged to cope with high modulation percentages.

Audio Section.

The substantial inverse feedback and large speaker transformer combine to handle considerable power output with negligible distortion. Five-position tone switch permits selection of several degrees of bass and treble compensation to deal with radio programmes or recordings.

In Model 5411 there is a gramophone pre-amplifier equalized at low frequencies for optimum results with the Ronette type "P" Crystal pick-up. Care has been taken to minimise hum interference with the high-gain stages.

Pilot lamps are operated at reduced voltage to give extended life.



SCHEMATIC DIAGRAM MODEL 5411AW/C/RG

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	6BA6	0	0.6	—	6.3 AC	225	85	1.5	—
Conv.	ECH42	6.3 AC	225	67	—	85	0	0.6	—
I.F.	6BA6	0	2.4	6.3 AC	—	220	85	2.4	—
Det.A.F.	6AV6	0	—	—	6.3 AC	0	0	75	—
Eq'izer,	6BA6	0	1.8	—	6.3 AC	125	27	1.8	—
Inv.	6BA6	15	107	—	6.3 AC	107	107	67	—
Output	6V6GT	—	6.3 AC	270	230	0	—	—	14
Output	6V6GT	—	6.3 AC	270	230	0	—	—	14
Rect.	GZ32	—	275	—	250 AC	—	250 AC	—	275
Eye	6U5G	6.3 AC	20	0	225	—	—	—	—
Pre-amp	6AU6	0	—	2 AC	4 AC	112	17.5	—	—

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. Bandswitch in B.C. position.

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	6BA6	2.4 meg	75	—	—	500 K	515 K	75	—
Conv.	ECH42	—	500 K	520 K	50 K	515 K	2.4 meg	300	—
I.F.	6BA6	2.1 meg	300	—	—	500 K	515 K	150	—
Det.A.F.	6AV6	10	—	—	—	100 K	100 K	750 K	—
Eq'izer.	6BA6	5	2.5 K	—	—	575 K	1 meg	2.5 K	—
Inv.	6BA6	1	550 K	—	—	550 K	550 K	53 K	—
Output	6V6GT	—	—	—	500 K	250 K	—	—	250
Output	6V6GT	—	—	—	500 K	250 K	—	—	250
Rect.	GZ32	—	500 K	—	70	—	70	—	—
Eye	6U5G	—	500 K	2.1 meg	1.5 meg	—	—	—	—
Pre-amp	6AU6	5 meg	—	20	—	800 K	250 K	—	—

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.



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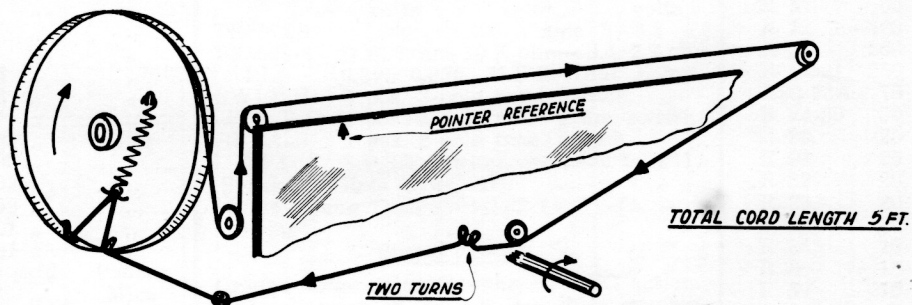
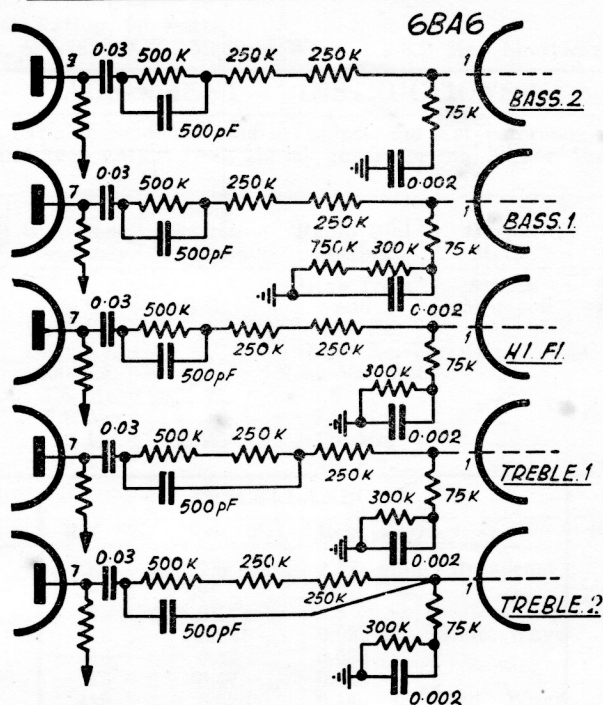
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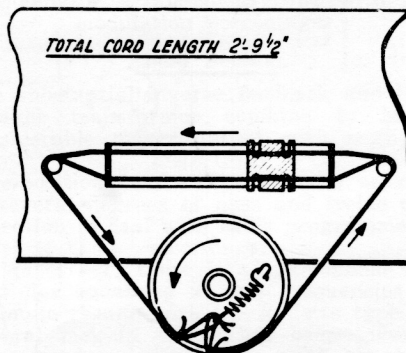
WELLINGTON

ALL WAVE RECEIVER MODEL 5411AW/C/RG SERVICE DATA SHEET

TONE SELECTOR SWITCHING CIRCUIT CONDITION IN EACH SETTING



DIAL STRINGING ARRANGEMENT



SWITCHING INDICATORS

STRINGING DIAGRAMS