



"BOURNEMOUTH"
MODEL 496 B.C.

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

BROADCAST RECEIVER MODEL 496 B.C. SERVICE DATA SHEET

TYPE SET.—A.C. Superhetrodyne.

TUBES (six).—EF41 R.F. Amp., ECH41 Converter, EF41 I.F. Amp., EBC41 Det.-A.F., EL41 Power Output, 6X4 Rectifier.

POWER SUPPLY.—230 v. A.C. Rating, 50 watts.

TUNING RANGE.—Broadcast, 535-1500 K.C.

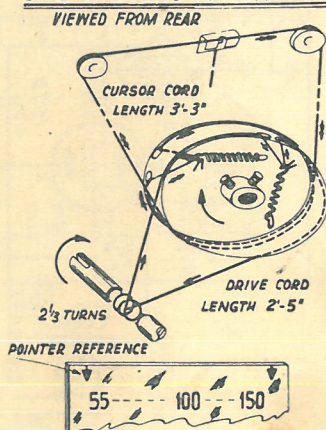
ALIGNMENT INSTRUCTIONS

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 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 fd.	High side to pin No. 6 (grid) of ECH41.	455 Kc.	—	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.	"	C26	"
"	"	1400 Kc.	—	1400 Kc.	"	C25 & C24	"
"	"	600 Kc.	—	Rock Variable	"	C18	"

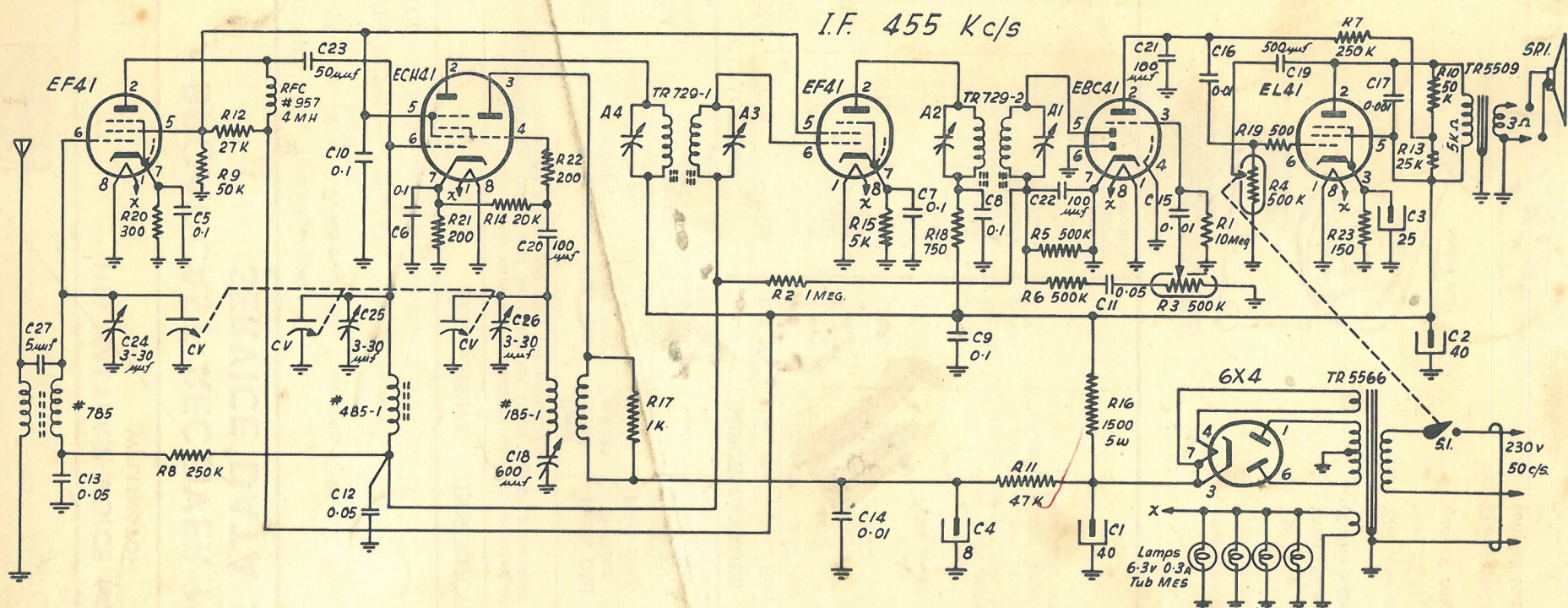
CAPACITORS			MISCELLANEOUS			RESISTORS		
Ref. No.	Cap.	Volts	Ref. No.	Res., Pri.	Res., Sec.	Ref. No.	Res.	Watts
C1-2	40 + 40 μ fd	450	785	17.5 ohm	2.57 ohm	R1	10 meg.	$\frac{1}{2}$
C3	25 "	35	485-1	—	2.4 "	R2	1 "	"
C4	8 "	450	185-1	2.1 "	2.5 "	R3-4	500K ohm	Pot.
C5-10	0.1 "	400	729-1	6.75 "	6.75 "	R5-6	500K "	$\frac{1}{2}$
C11	0.05 "	400	729-2	6.75 "	6.75 "	R7-8	250K "	"
C12	0.05 "	400	CH957	52 "	"	R9	50K "	1
C13	0.05 "	400		Volts	Volts	R10	50K "	$\frac{1}{2}$
C14	0.01 "	400	TR5566	230	350 a side	R11	47K "	2
C15	0.01 "	400				R12	27K "	"
C16	0.01 "	400				R13	25K "	$\frac{1}{2}$
C17	0.001 "	Mica	SP1		Type	R14	20K "	"
C18	600 μ fd.	Padder	TR5509		6 $\frac{1}{2}$ in. P.M. speaker.	R15	5K "	"
C19	500 "	Mica	SW1		Output trans. 7,000 ohm—3 ohm.	R16	1.5K "	5
C20	100 "	"	CV		S.P.S.T. switch attached to R4.	R17	1K "	$\frac{1}{2}$
C21	100 "	"			Plessey Gang Type 9393/L22	R18	750 "	"
C22	100 "	"			(437mmfd. max.)	R19	500 "	"
C23	50 "	"				R20	300 "	"
C24-26	3-30 "	Trimmer				R21-22	200 "	"
C27	5 "	Ceramic				R23	150 "	"

DIAL STRINGING ARRANGEMENT



Conventional design has been followed in this receiver except in:—

- The use of non frequency-selective feedback from the output tube plate into the load resistor of the demodulator/amplifier.
- The tone control utilises a feedback loop around the EL41, thereby controlling the high-frequency amplification of the stage.
- The radio-frequency tube EF41 is impedance coupled to the mixer ECH41.



SCHEMATIC DIAGRAM MODEL 496 B.C.

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	EF41	6.3 AC	265	2.2	2.2	92	0	2.2	—
Conv.	ECH41	6.3 AC	265	105	—2	92	0	2	—
I.F.	EF41	—	265	5.4	5.4	92	0	5.4	6.3 AC
Det-AF.	EBC41	—	70	0	—	0	—	—	6.3 AC
Output	EL41	—	245	7	0	265	0	7	6.3 AC
Rect.	6X4	330 AC	—	325	325	—	330 AC	325	—

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 common negative (chassis).

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
R.F.	EF41	—	250K	300 ohm	300 ohm	50K	1.7 meg	300 ohm	—
Conv.	ECH41	—	250K	24K	24K	50K	1.5 meg	200 ohm	—
I.F.	EF41	—	250K	5K	5K	50K	1.5 meg	5K	—
Det-AF.	EBC41	—	250K	10 meg	—	0.5 meg	—	—	—
Output	EL41	—	250K	150 ohm	0.5 meg	250K	0.5 meg	150 ohm	—
Rect.	6X4	230 ohm	—	250K	250K	—	230 ohm	250K	—

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.