"BERKELEY" MODEL
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H. W. CLARKE (N.Z.) LTD.

TECHNICAL INFORMATION

COVERING

PACEMAKER BROADCAST RECEIVERS

MANUFACTURED BY COLLIER & BEALE LTD.

TYPE SET — A.C. Superhetrodyne.

TUBES (six) — EBF80 R.F. Amp., ECH81 Converter, EBF80 I.F. Amp. Det., EF86 A.F. Amp., EL84 Power Output, EZ81 Rectifier.

POWER SUPPLY — 230v. A.C. Rating 60 watts.

TUNING RANGE — Broadcast, 525–1605 Kc.

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. 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 µfd.	High Side to pin No.	455 Kc.	BC	High freq. end	Across voice coil	A1, A2, A3, A4,	Adjust for maximum output
R.M.A.	2 (grid) of ECH 81	1400 Kc.	"	1400 Kc.	"	C20	" "
Standard	High Side to ant.	1400 Kc.	"	1400 Kc.	"	C19 & C18	" "
"	Terminal	600 Kc.	"	600 Kc.	"	C13	Rock variable and adjust for max. output. Recheck C20 at 1400 Kc. If C20 is changed recheck C19 and C18.
	"						

CAPACITORS

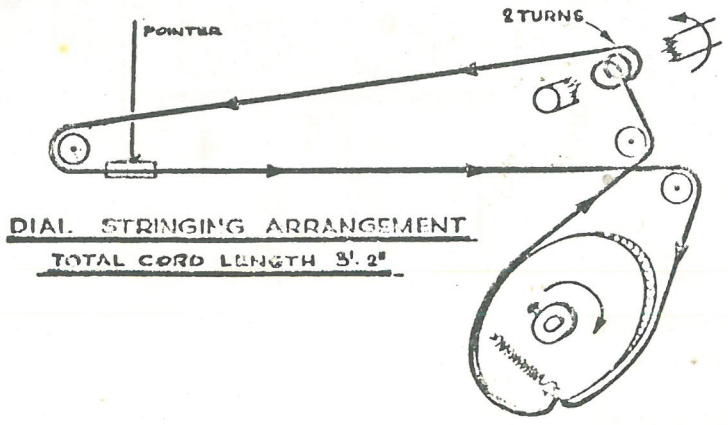
Ref. No.	Cap.	Volts
C1a	40µfd	450
C1b	40 "	"
C1c	20 "	"
C2	25 "	25
C3	0.22 "	400
C4	0.1 "	125
C5–6–7	0.047 "	400
C8	0.02 "	500
C9–10	0.005 "	Ceramic
C11–12	0.001 "	"
C13	600 pF	padder
C14	300 "	mica
C15	500 "	"
C16	500 "	Ceramic
C17	5 "	"
C18–19–20	3–30 "	trimmers

MISCELLANEOUS

Ref. No.	Res., Pri.	Res., Sec.	
731	17.4 ohm	2.8 ohm	BC
431	5.7 ohm	3.1 "	BC
131	2.25 "	1.6 "	BC
PE 1014	14.5 "	13.5 "	IF
PE 1014	14.5 "	13.5 "	IF
	Volts	**Volts**	**Volts**
TR5566	230	350 aside	2 x 6.3
	Type	**Transformer**	
SP1	6–9H	5000 ohm	
SW1	S.P.S.T. switch attached to R3		
CV	Polar C90–03/1 (swing 351 µµfd.)		
SW2	2 Pole, 2 position Rotary Switch		
PL	6.5 v., 0.25 amp. tub. M.E.S. lamp		

RESISTORS

Ref. No.	Res.	Watts
R1	10 Meg	½
R2	2 "	"
R3	500K Ohm	Pot
R4	500K "	"
R5	470K "	½
R6–7	100K "	"
R8–9	100K "	"
R10–11	47K "	"
R12	27K "	1
R13	20K "	1
R14	2.2K "	½
R15	1500 "	5
R16	1K "	½
R17	150 "	1
R18	47K "	½
R19	2.3K "	1



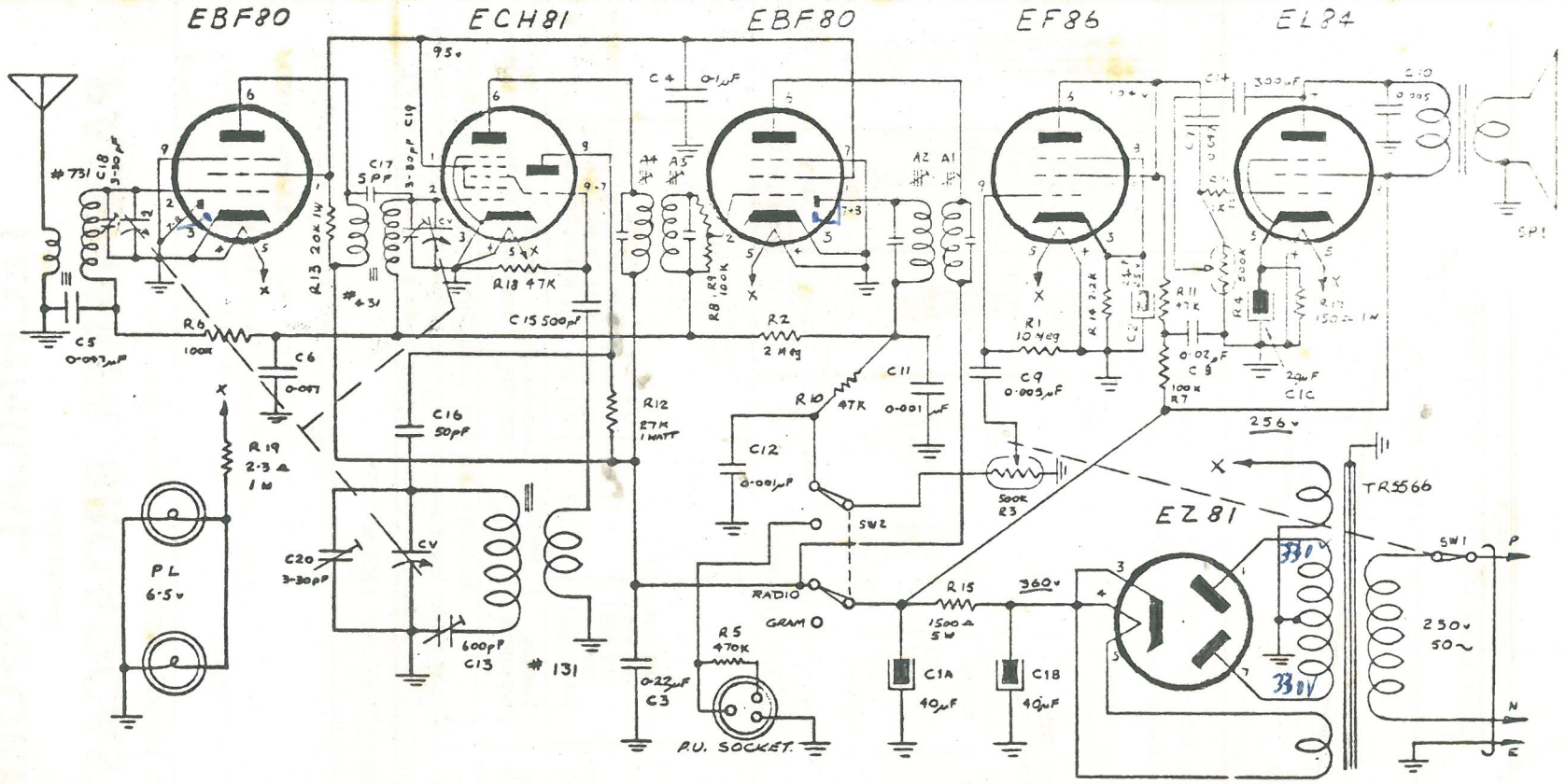
DIAL STRINGING ARRANGEMENT

TOTAL CORD LENGTH 3'. 2"

seems to have been the last valve model

1000/1/63

Nov.



SCHEMATIC DIAGRAM MODEL "BERKELEY"

VOLTAGE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
R.F.	EBF80	95	—	—	—	6.3 AC	260	—	—	—
Conv.	ECH81	95	—	—	—	,,	260	—	150	—
I.F. Det.	EBF80	95	—	—	—	,,	260	—	—	—
A.F. Amp.	EF86	104	—	2.2	—	,,	104	—	2.2	—
Output	EL84	—	—	−7	—	,,	—	235	—	256
Rect.	EZ81	330 AC	—	360 ⟷ 360		360	—	330 AC	—	

RESISTANCE READINGS

Use	Tube	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
R.F.	EBF80	490 K	2.65 M	—	—	—	470 K	—	—	—
Conv.	ECH81	490 K	2.55 M	—	—	—	470 K	47 K	497 K	47 K
I.F. Det.	EBF80	490 K	2.65 M	—	—	—	470 K	550 K	550 K	—
A.F. Amp.	EF86	0.65 M	—	2.2 K	—	—	0.65 M	—	2.2 K	10 M
Output	EL84	—	500 K	150	—	—		470 K	—	470 K
Rect.	EZ81	480	—	470 K	470 K	470 K	—	480	—	—

1. D.C. voltage measurements are at 20,000 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 tolerance on component values make possible a variation of ± 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 conditions of filter capacitors.

BERKELEY

Jan 1963

Poor design — HT voltage too high, especially on RF + IF tubes which have no minimum bias