



CAPACITORS

C 1	470 p.f. ceramic
C 2	Simplex trimmer CT3.55
C 3	25 p.f. 20% mica
C 4	.047 u.f. 400v paper
C 5	470 p.f. ceramic
C 6	.047 u.f. 200v paper
C 7	180 p.f. 10% mica
C 8	3 plate trimmer J-BELL
C 9	100 p.f. 20% mica
C10	Air trimmer 3-30 p.f.
C11	80 p.f. 20% mica
C12	100 p.f. 5% mica
C13	100 p.f. 5% mica
C14	.047 u.f. 400v paper
C15	100 p.f. 5% mica
C16	100 p.f. 5% mica
C17	100 p.f. 20% mica
C18	100 p.f. 20% mica
C19	.01 u.f. 600v paper
C20	250 p.f. 20% mica
C21	.01 u.f. 600v paper
C22	.0047 u.f. 600v paper
C23	.01 u.f. 600v paper
C24	25 u.f. 40v electrolytic
C25	16 u.f. 350v electrolytic
C26	16 u.f. 350v electrolytic
C27	.033 u.f. 600v paper
C28	100 p.f. 20% mica
C29	1.0 u.f. 200v paper
C30	.1 u.f. 200v paper
C31	.1 u.f. 200v paper
C32	.001 u.f. 20% mica
C33	.47 u.f. 100v paper
C34	62 p.f. 10% NPO ceramic
C35	22 p.f. N750 ceramic

VIBRATOR

Oak	4006 - 6v Models
Oak	4012 - 12v Models

DIAL LAMP

6v or 12v M.E.S.

FUSE RATING

6v Models - 15 amp.
12v Models - 10 amp.

RESISTORS

R 1	100K	$\frac{1}{2}w$	20%	carbon
R 2	1 meg	$\frac{1}{2}w$	20%	carbon
R 3	100K	$\frac{1}{2}w$	20%	carbon
R 4	22 K	1w	20%	carbon
R 5	22 K	$\frac{1}{2}w$	20%	carbon
R 6	22 K	1w	20%	carbon
R 7	22 K	1w	20%	carbon
R 8	100 ohm	$\frac{1}{2}w$	20%	carbon
R 9	1 meg	$\frac{1}{2}w$	20%	carbon
R10	100K potentiometer			(concentric)
R11	47 K	$\frac{1}{2}w$	20%	carbon
R12	500K potentiometer			(concentric)
R13	10 meg	$\frac{1}{2}w$	20%	carbon
R14	220K	$\frac{1}{2}w$	20%	carbon
R15	47K	$\frac{1}{2}w$	20%	carbon
R16	470K	$\frac{1}{2}w$	20%	carbon
R17	330 ohm	$\frac{1}{2}w$	20%	carbon
R18	1K	1w	20%	carbon
R19	22 ohm	$\frac{1}{2}w$	20%	carbon
R20	22 ohm	$\frac{1}{2}w$	20%	carbon

TRANSFORMERS

T 1	I.F.	455KC	R760
T 2	I.F.	455KC	R760
T 3	Speaker trans.	No.65	
		7000ohm primary	
T 4	Power trans.	No.114 (6v)	
		No.115 (12v)	

INDUCTORS

L 1	Aerial choke	L210
L 2	Aerial Coil) Tuning
L 3	R.F. Coil) Coil
L 4	Osc. Coil) Assembly L290
L 5	Padder Coil	R768
L 6	Choke L.T. iron cored	R750
L 7	Choke H.F. hash	R772

VALVES.

V 1	6BA6	or	12BA6
V 2	6BE6	or	12BE6
V 3	6BA6	or	12BA6
V 4	6AV6	or	12AV6
V 5	6AQ5	or	12AQ5
V 6	6 x 4	or	12 x 4

When push-button tuner No.36394 is used (identified by push-buttons without metal inserts) the following circuit and component parts changes should be noted.

1. Aerial choke connected to grid end of aerial coil through 62PF N.P.O 10% ceramic condenser C34 (not shown in circuit).
2. C3 is deleted.
3. C11 changed to 10 PF N2,200 ceramic.
4. C35 (not shown in circuit) value 22 PF N750 ceramic connected across R.F. coil.
5. L5 padder coil changed to Part No.R788.

12 VOLT.

VALVE	FUNCTION	ANODE	SCREEN	CATHODE	BIAS
12BA6	R.F. Amplifier	65	80		- 0.7
12BE6	Converter	190	80		- 0.7
12BA6	I.F. Amplifier	190	80	0.6	- 0.7
12AV6	Audio amp. Det. A.V.C.	* 80			
12AQ5	Power Output	200	190	9.5	
12 x 4	Rectifier			215	

Oscillator grid current 230 - 300 micro-amps. over tuning range.

Total battery current 2.7 amps. for 12 volts input.

Total H.T. current 52 m.a.

* Measured with V.T. voltmeter.

6 VOLT

VALVE	FUNCTION	ANODE	SCREEN	CATHODE	BIAS
6BA6	R.F. Amplifier	50	75		* - 0.7
6BE6	Converter	175	75		* - 0.7
6BA6	I.F. Amplifier	175	75	0.6	* 0.7
6AV6	Audio Amp. Det. A.V.C.	* 80			
6AQ5	Power Output	195	175	8.5	
6 x 4	Rectifier			205	

Oscillator grid current 260 - 340 micro-amps over tuning range.

Total battery current 5.5 amps for 6 volts input.

Total H.T. current 50 m.a.

* Measured with V.T. voltmeter.

N.B.

All measurements taken with zero signal input.

All voltages checked with 1000 O.P.V. meter except readings marked thus *.

Voltages will vary slightly from set to set due to component tolerances.

All alignment procedure should be carried out with Volume Control set at near maximum and the Tone Control in the Treble Position. The signal carrier input should be modulated 30%. All adjustments listed below are made for maximum output indication.

Alignment Order	Sig. Generator Connected	Sig. Generator Connected Through	Sig. Generator Frequency	Dial Setting	Adjustment
1	Converter Valve Grid.	.05 U F Capacitor	455 KC/S	H.F	Both 2nd I.F.T. Cores
2	Converter Grid.	.05 U F Capacitor	455 KC/S	H.F	Both 1st I.F.T. Cores
3	Repeat 1 and 2 until no further output can be obtained.				
4	Connect the active lead from the signal generator to the chassis of the set and plug in the co-ax aerial lead to the aerial socket.				
5	To Tuner Chassis	.05 U F Capacitor	530 KC/S	L.F. and tune until clutch slips	Padder Coil
6	To Tuner Chassis	.05 U F Capacitor	1610 KC/S	* H. F. Limit	Oscillator Trimmer
7	To Tuner Chassis	.05 U F Capacitor	Repeat steps 5 and 6 several times.		
8	To Tuner Chassis	.05 U F Capacitor	1500 KC/S	Tune to Signal	Aerial & R. F. Trimmers
9	Check band limits of 530 KC/S and 1610 KC/S and that sensitivity is well maintained at 1500 KC/S, 1000 KC/S and 600 KC/S.				

* H.F. limit is ascertained by tuning to extreme H.F. end until clutch slips, then depress button at H.F. end just sufficiently to release clutch. The H.F. limit setting will then be correct.

DO NOT upset the adjustment of the three cores in the tuning unit as optimum adjustment has been carried out at the factory. If, however, a tuning coil or iron dust core has to be replaced in service then the following procedure should be followed.

Tune to extreme L.F. end of band i.e. until clutch slips, then tune oscillator coil to 530 KC/S. Do not touch padder coil adjustment. Tune to 1000 KC/S and peak R.F. and aerial coil cores for maximum output. Finally carry out full alignment procedure if necessary.

To set Dial Pointer, adjust the eccentric stud located under the rear end of the pointer arm.