COSSOR 469

CIRCUIT ALIGNMENT

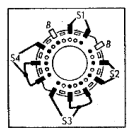
I.F. Stages.—Switch set to M.W., short-circuit **C15** (location reference C1), turn volume control to maximum and connect signal generator leads to control grid (pin 6) of **V1** and chassis. Feed in a 452 kc/s (663.7 m) signal and adjust **C23, C22, C21** and **C20** (F4, A3) in that order, for maximum output. Remove short-circuit from **C15.**

R.F. and Oscillator Stages.—Owing to the interdependence of certain adjustments, it is important that the procedure to be described should be closely followed. With the gang at maximum the pointer should be horizontal. Couple the signal generator output by means of a loop of wire about 12in from, and in the same plane as, the receiver frame aerial.

M.W.—Switch set to M.W., tune to 214 m (calibration line) on scale, feed in a 214 m (1,400 kc/s) signal and adjust **C16** (D2), then **C13** (C2) for maximum output. Tune to 500 m on scale, feed in a 500 m (600 kc/s) signal, and adjust **C19** (C2), whilst rocking the gang, for maximum output. Repeat the 214 m and 500 m adjustments until no improvement results.

L.W.—Switch set to L.W., tune to 1,700 m (calibration line) on scale, feed in a 1,700 m (176.5 kc/s) signal and adjust **C18** (B2) for maximum output. Tune to 1,000 m on scale, feed in a 1,000 m (300 kc/s) signal and adjust **C17** (E2), then **C12** (D2) for maximum output. Repeat the 1,700 m and 1,000 m adjustments until no improvement results.

Below: Diagram of the S1-S4 switch unit as seen from the rear of chassis.



Drive Cord Replacement.—Inset in the front chassis illustration is a sketch of the drive cord as seen from the front above the control panel, after removing the scale, when the gang is at maximum.

VALVE ANALYSIS

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 1R5	80	0·32	45	1·3
V2 1T4	80	0·55	30	0·24
V3 1S5	10	0·08	10	0·02
V4 3S4	78	4·3	80	1·3

	RESISTORS	Values (ohms)	Location
R1	V1 osc. C.G. ...	100,000	J6
R2	Osc. H.T. feed ...	22,000	C3
R3	V2 S.G. H.T. feed...	180,000	J7
R4	A.V.C. potential divider	10,000,000	G8
R5		4,700,000	H7
R6	I.F. stopper ...	47,000	G7
R7	Volume control ...	680,000	F1
R8	V3 pent. C.G. ...	10,000,000	E2
R9	V3 S.G. H.T. feed	3,300,000	G7
R10	V3 pent. anode load	1,000,000	G7
R11	V4 C.G. resistor ...	3,300,000	G6
R12	V4 G.B. resistor ...	1,200	G6

	CAPACITORS	Values (μF)	Location
C1	A.V.C. decoupling ...	0·05	G8
C2	V1 osc. C.G. ...	0·0001	J6
C3	Osc. H.T. decoup. ...	0·1	C3
C4	V2 S.G. decoup. ...	0·1	J8
C5	I.F. by-passes ...	0·00005	G8
C6		0·00005	E1
C7	A.F. coupling ...	0·001	F2
C8	V3 S.G. decoup. ...	0·1	H6
C9	A.F. coupling ...	0·001	G6
C10	Tone corrector ...	0·002	H5
C11*	H.T. reservoir ...	8·0	E3
C12‡	Aerial L.W. trim. ...	0·0001	D2
C13‡	Aerial M.W. trim. ...	0·00005	C2
C14†	Frame aerial tuning	0·000444	C2
C15†	Oscillator tuning ...	0·000444	C1
C16‡	Osc. M.W. trim. ...	0·00005	D2
C17‡	Osc. L.W. trim. ...	0·0001	E2
C18‡	Osc. L.W. track ...	0·0006	B2
C19‡	Osc. M.W. track ...	0·0006	C2
C20‡	1st I.F. transformer tuning	0·0001	A8
C21‡		0·0001	A3
C22‡	2nd I.F. transformer tuning	0·0001	F4
C23‡		0·0001	F4

* Electrolytic. † Variable. ‡ Pre-set.

	OTHER COMPONENTS	Approx. Values (ohms)	Location
L1	Frame aerial windings ...	1·4	A2
L2		20·0	A2
L3	Oscillator circuit tuning coils ...	1·4	B1
L4		5·5	B2
L5	Osc. circuit reaction coils	3·5	B1
L6		7·5	B2
L7	1st I.F. trans. Pri.	25·0	B3
L8	1st I.F. trans. Sec.	25·0	B3
L9	2nd I.F. trans. Pri.	25·0	F4
L10	2nd I.F. trans. Sec.	25·0	F4
L11	Speech coil ...	2·5	—
T1	Output trans. Pri.	650·0	D4
	Output trans. Sec.	0·25	D4
S1-S4	W/band and battery switches ...	—	B2

Intermediate frequency 452 kc/s.