

ACE - U50

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 6K8G	195	1.0	50	2.0
V2 6K7G	60	2.4	50	0.75
V3 6Q7G	195	3.1	195	4.2
V4 14F6G	50	0.45		
V5 25Y5G	188	26.0		

* Cathode to chassis, 198V, D.C.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial I.F. filter coil ...	35.0
L2	Aerial S.W. coupling coil ...	1.8
L3	Aerial M.W. coupling coil ...	10.0
L4	Aerial L.W. coupling coil ...	35.0
L5	Aerial S.W. tuning coil ...	0.05
L6	Aerial M.W. tuning coil ...	3.0
L7	Aerial L.W. tuning coil ...	23.0
L8	Osc. S.W. tuning coil ...	0.05
L9	Osc. M.W. tuning coil ...	3.0
L10	Osc. L.W. tuning coil ...	7.0
L11	Osc. S.W. reaction coil ...	0.3
L12	1st I.F. trans. { Pri. ...	3.5
L13	Sec. ...	3.5
L14	2nd I.F. trans. { Pri. ...	5.0
L15	Sec. ...	5.0
L16	Speaker speech coil ...	2.4
L17	H.T. smoothing choke ...	100.0
T1	Output trans. { Pri. ...	220.0
	Sec. ...	0.25
S1-S14	Waveband switches ...	—
S15	Mains switch, ganged R17	—

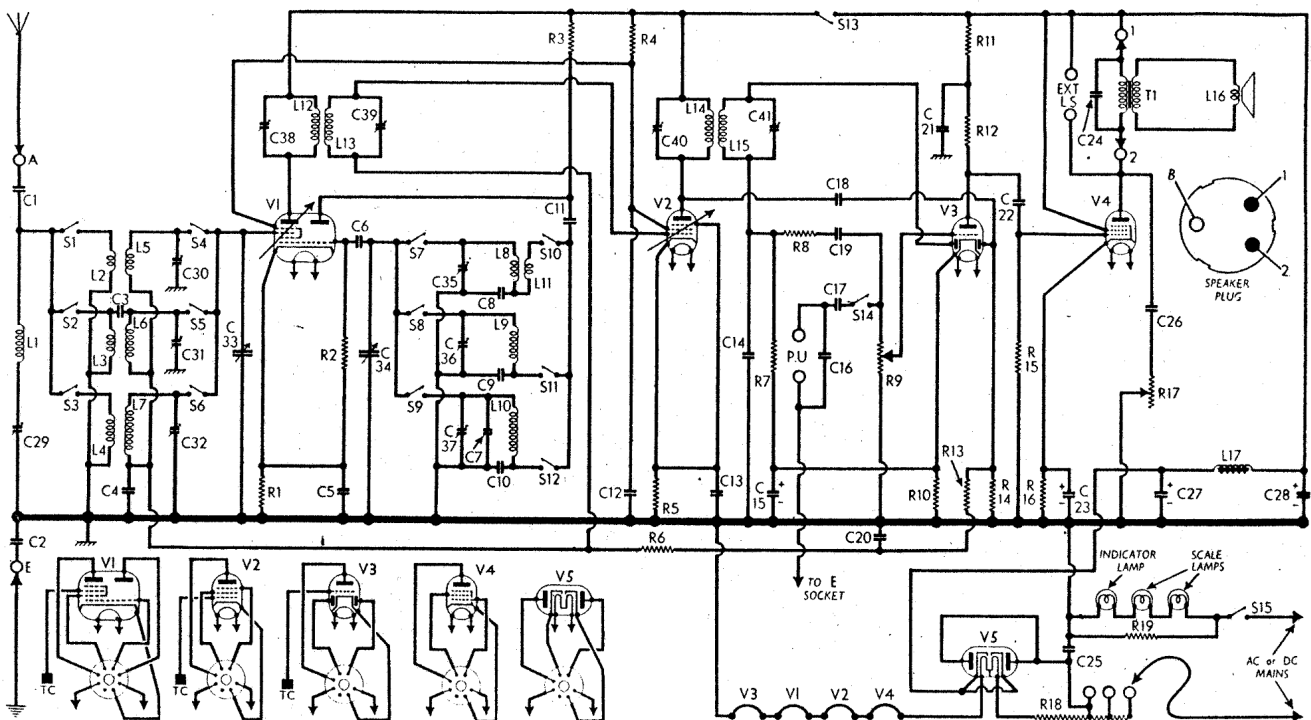
RESISTORS		Values (ohms)
R1	V1 fixed G.B. resistor ...	300
R2	V1 osc. C.G. resistor ...	50,000
R3	V1 osc. anode H.T. feed ...	50,000
R4	V1, V2 S.G.'s H.T. feed ...	50,000
R5	V2 fixed G.B. resistor ...	300
R6	A.V.C. line decoupling ...	300,000
R7	V3 signal diode load ...	820,000
R8	I.F. stopper ...	220,000
R9	Manual volume control ...	500,000
R10	V3 G.B. resistor ...	3,000
R11	V3 triode H.T. decoupling ...	50,000
R12	V3 triode anode load ...	220,000
R13	A.V.C. line decoupling ...	820,000
R14	V3 A.V.C. diode load ...	820,000
R15	V4 C.G. resistor ...	220,000
R16	V4 G.B. resistor ...	330
R17	Variable tone control ...	50,000
R18	Heater ballast resistor ...	530*
R19	Scale lamp shunt ...	140

CAPACITORS		Values (μF)
C1	Aerial isolator ...	0.001
C2	Earth isolator ...	0.1
C3	Aerial M.W. "top" coupling ...	Very low
C4	V1 hex. C.G. decoupling ...	0.1
C5	V1 cathode by-pass ...	0.1
C6	V1 osc. C.G. capacitor ...	0.0002
C7	Osc. L.W. fixed trimmer ...	0.00005
C8	Osc. circ. S.W. tracker ...	0.004
C9	Osc. circ. M.W. tracker ...	0.00045
C10	Osc. circ. L.W. tracker ...	0.000205
C11	V1 osc. anode coupling ...	0.0005
C12	V1, V2 S.G.'s decoupling ...	0.1
C13	V2 cathode by-pass ...	0.1
C14	I.F. by-pass ...	0.0001
C15	V3 cathode by-pass ...	25.0
C16	Pick-up tone corrector ...	0.0001
C17	Pick-up isolator ...	0.05
C18	V3 A.V.C. diode coupling ...	0.0001
C19	A.F. coupling to V3 triode ...	0.01
C20	A.V.C. line decoupling ...	0.1
C21	V3 triode H.T. decoupling ...	0.1
C22	A.F. coupling to V4 ...	0.01
C23	V4 cathode by-pass ...	25.0
C24	Fixed tone corrector ...	0.005
C25	Mains R.F. by-pass ...	0.025
C26	Part variable tone control ...	0.05
C27	H.T. smoothing capacitor ...	8.0
C28	tors ...	16.0
C29	Aerial I.F. filter tuning ...	—
C30	Aerial circ. S.W. trimmer ...	—
C31	Aerial circ. M.W. trimmer ...	—
C32	Aerial circ. L.W. trimmer ...	—
C33	Aerial circuit tuning ...	—
C34	Oscillator circuit tuning ...	—
C35	Osc. circ. S.W. trimmer ...	—
C36	Osc. circ. M.W. trimmer ...	—
C37	Osc. circ. L.W. trimmer ...	—
C38	1st I.F. trans. pri. tuning ...	—
C39	1st I.F. trans. sec. tuning ...	—
C40	2nd I.F. trans. pri. tuning ...	—
C41	2nd I.F. trans. sec. tuning ...	—

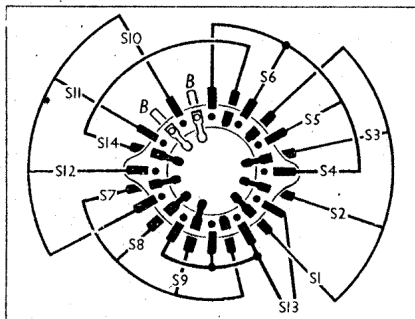
Intermediate frequency 465 kc/s.

* Tapped at 410Ω + 60Ω + 60Ω from V5 heater.

* Electrolytic. † Variable. ‡ Pre-set.



Switch Diagram and Table



CIRCUIT ALIGNMENT

I.F. Stages.—Switch set to S.W. and turn volume control to maximum. Connect signal generator leads to control grid (top cap) of V2 and chassis, feed in a 465 kc/s (645.16 m) signal, and adjust C40 and C41 for maximum output. Transfer signal generator lead to control grid (top cap) of V1, and adjust C38 and C39 for maximum output. Check settings of C40, C41.

I.F. Filter.—Transfer signal generator leads to A and E sockets, via a suitable dummy aerial, and switch set to M.W. Feed in a 465 kc/s signal, and adjust C29 for maximum output.

R.F. and Oscillator Stages.—With the gang at maximum capacitance the pointer should be vertical.

S.W.—Switch set to S.W., tune to 17.6 m on scale, feed in a 17.6 m (17 Mc/s) signal, and adjust C35 for maximum output, selecting the peak involving the least trimmer capacitance. Then adjust C30, and check sensitivity and calibration at 50 m (6 Mc/s).

M.W.—Switch set to M.W., tune to 250 m on scale, feed in a 250 m (1,200 kc/s) signal, and adjust C36, then C31, for maximum output. Check sensitivity and calibration at 500 m (600 kc/s).

L.W.—Switch set to L.W., tune to 1,200 m on scale, feed in a 1,200 m (250 kc/s) signal, and adjust C37, then C32, for maximum output. Check sensitivity and calibration at 1,800 m (166.6 kc/s).

Switch	S.W.	M.W.	L.W.	Gram.
S1	C	—	—	—
S2	—	C	—	—
S3	—	—	C	—
S4	C	—	—	—
S5	—	C	—	—
S6	—	—	C	—
S7	C	—	—	—
S8	—	C	—	—
S9	—	—	C	—
S10	C	—	—	—
S11	—	C	—	—
S12	—	—	C	—
S13	C	—	—	—
S14	—	C	—	—