

The tuning drive cord system, viewed from the front right-hand corner of the chassis.

BUSH - BP10

Valves	Anode		Screen	
	V	mA	V	mA
V1 DK91 ...	85	0.35	40	1.25
V2 DF91 ...	85	1.8	40	0.63
V3 DAF91 ...	10	0.12	6	0.03
V4 DL94 ...	80	5.3	85	1.0

CIRCUIT ALIGNMENT

When aligning the I.F. stages, the chassis should be removed from the carrying case to facilitate the connection of a damping unit. This unit, consisting of a 30 kΩ resistor and a 0.05 μF capacitor in series, should be connected across the I.F. transformer secondary while adjusting the primary, and vice versa.

I.F. Stages.—Switch set to M.W. and tune to about 300 m on scale; turn volume control to maximum and connect signal generator (via a 0.1 μF capacitor in the "live" lead) to control grid (pin 6) of V1. Feed in a 465 kc/s (645.16 m) signal and, using the damping unit referred to above, adjust the cores of L8, L7, L6 and L5 (location references C2, B2) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. action.

R.F. and Oscillator Stages.—In order to adjust the core of L3, the chassis should be removed from the carrying case and placed on the bench. Final adjustments to the aerial trimmers must be made with the chassis in the case, and the back and batteries in position, the trimmers being accessible through a slot in the back cover. With the gang at maximum capacitance, the cursor should coincide with the brown dot at the high wavelength end of the scale. It should be noted that the maximum capacitance setting of the gang is determined by a mechanical stop on the drive drum and not by maximum rotation of the gang. Connect the signal generator leads to a loop, approximately 8 in by 6 in, placed 10 to 20 in from the frame aerial and parallel to it.

M.W.—Switch set to M.W., tune to 500 m on scale, feed in a 500 m (600 kc/s) signal and adjust the core of L3 (F4) for maximum output. Tune to 200 m on scale, feed in a 200 m (1,500 kc/s) signal and adjust C27 (A2) and C22 (A2) for maximum output. Repeat these adjustments.

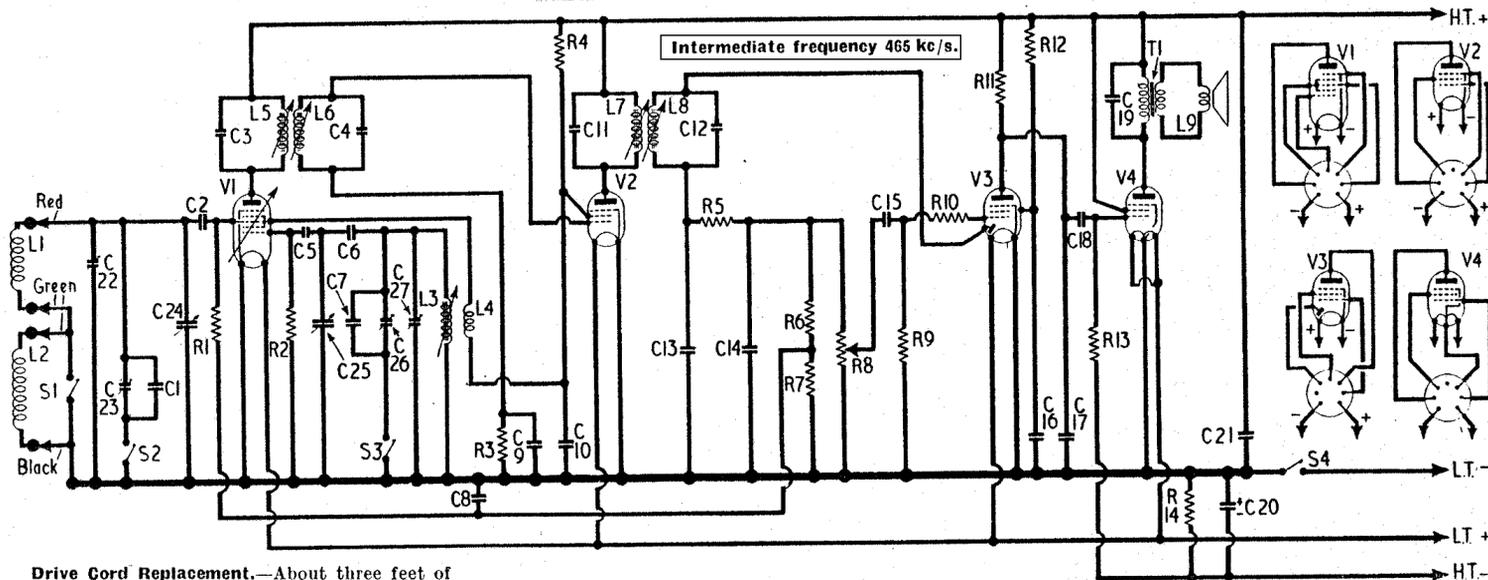
L.W.—Switch set to L.W., tune to 1,400 m on scale, feed in a 1,400 m (214 kc/s) signal and adjust C26 (A2) and C23 (A2) for maximum output. Repeat these adjustments.

CAPACITORS		Values	Locations
C1	L.W. fixed trim ...	130pF	F4
C2	V1 C.G. ...	100pF	F4
C3	1st I.F. transformer tuning ...	60pF	B2
C4		60pF	B2
C5	V1 osc. C.G. ...	80pF	F4
C6	Osc. tracker ...	605pF	A1
C7	L.W. fixed trim ...	515pF	B1
C8	A.G.C. decoup. ...	0.05μF	F4
C9	V2 C.G. decoup. ...	0.05μF	E4
C10	V2 S.G. decoup. ...	0.05μF	F3
C11	2nd I.F. transformer tuning ...	60pF	C2
C12		60pF	C2
C13	I.F. by-passes ...	100pF	D4
C14		100pF	D3
C15	A.F. coupling ...	500pF	D3
C16	V3 S.G. decoup. ...	0.05μF	D3
C17	I.F. by-pass ...	100pF	D4
C18	A.F. coupling ...	0.005μF	D4
C19	Tone corrector ...	0.005μF	D4
C20*	V4 G.B. by-pass ...	50μF	C2
C21	H.T. decoupling ...	500pF	B2
C22†	M.W. aerial trim ...	40pF	A2
C23†	L.W. aerial trim ...	40pF	A2
C24†	Aerial tuning ...	523pF	A2
C25†	Osc. tuning ...	523pF	A2
C26†	L.W. osc. trimmer ...	40pF	A2
C27†	M.W. osc. trimmer ...	40pF	A2

RESISTORS		Values	Locations
R1	V1 C.G. ...	2.2MΩ	F4
R2	V1 osc. C.G. ...	100kΩ	F4
R3	V1 C.G. decoup. ...	4.7MΩ	E3
R4	H.T. feed ...	22kΩ	F3
R5	I.F. stopper ...	47kΩ	E4
R6		2.2MΩ	F3
R7	A.G.C. feed ...	2.2MΩ	F4
R8		500kΩ	D3
R9	V3 C.G. ...	4.7MΩ	D3
R10	V3 grid stopper ...	100kΩ	D4
R11	V3 pent. load ...	470kΩ	D4
R12	V3 S.G. decoup. ...	2.2MΩ	E3
R13	V4 C.G. ...	1MΩ	D4
R14	V4 G.B. ...	510Ω	C2

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	M.W. frame aerial ...	2.0	—
L2	L.W. frame aerial ...	10.0	—
L3	Oscillator coils ...	2.0	B2
L4		2.5	B2
L5	1st I.F. trans. {Pri. ...	12.5	B2
L6		12.5	B2
L7	2nd I.F. trans. {Pri. ...	12.5	C2
L8		12.5	C2
L9	Speech coil ...	2.9	—
T1	Output trans. {Pri. ...	750.0	—
	{Sec. ...	0.6	—
S1-S3	Waveband switches ...	—	A1
S4	L.T. switch ...	—	C1

* Electrolytic. † Variable. ‡ Pre-set.
|| "Swing" value, min. to max.



Drive Cord Replacement.—About three feet of nylon braided glass yarn is required for the drive cord, and it is run as shown in the sketch (col. 2), where the drive is viewed from the right-hand front corner of the chassis, with the gang at maximum capacitance.

The work is facilitated if the scale panel is removed. It is held by a retaining bar at its lower edge (two 6BA screws with washers).