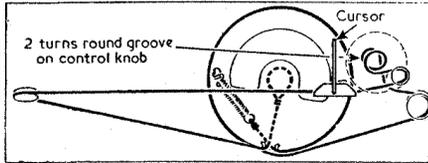


FERGUSON - 341BU



The tuning drive system, seen from front.

CAPACITORS		Values	Locations
C1	Aerial isolator ...	15pF	—
C2	Earth isolator ...	0.01μF	C2
C3	L.W. aerial trim. ...	80pF	A2
C4	V1 C.G. ...	100pF	G3
C5	Osc. neutralizing ...	1.5pF	A1
C6	1st I.F. trans. tuning ...	47pF	A2
C7	ing ...	62pF	A2
C8	Filament by-passes	0.25μF	F4
C9		0.25μF	E4
C10	V1 osc. C.G. ...	100pF	G3
C11	L.W. aerial trim. ...	100pF	A2
C12	Osc. tracker ...	520pF	A1
C13	H.T. decoupling ...	0.1μF	G4
C14	2nd I.F. trans. tuning ...	100pF	B2
C15		180pF	B2
C16	I.F. by-passes	100pF	B2
C17		100pF	B2
C18	A.G.C. decoupling	0.05μF	F3
C19	A.F. coupling ...	0.002μF	D4
C20	V3 S.G. decoupling	0.05μF	E4
C21	A.F. coupling ...	0.002μF	E4
C22	I.F. by-pass	220pF	E4
C23	Tone corrector ...	0.005μF	D4
C24*	Filament by-pass ...	30μF	E4
C25*		40μF	D3
C26*	H.T. smoothing ...	30μF	D3
C27*		20μF	D3
C28	Mains R.F. by-pass	0.05μF	F3
C29†	Aerial tuning	\$530pF	B2
C30†	M.W. osc. trim. ...	35pF	B1
C31†	L.W. osc. tracker ...	750pF	A1
C32†	Oscillator tuning ...	\$580pF	B1
C33†	L.W. osc. trim. ...	40pF	A2
C34†	M.W. osc. tracker ...	40pF	A1

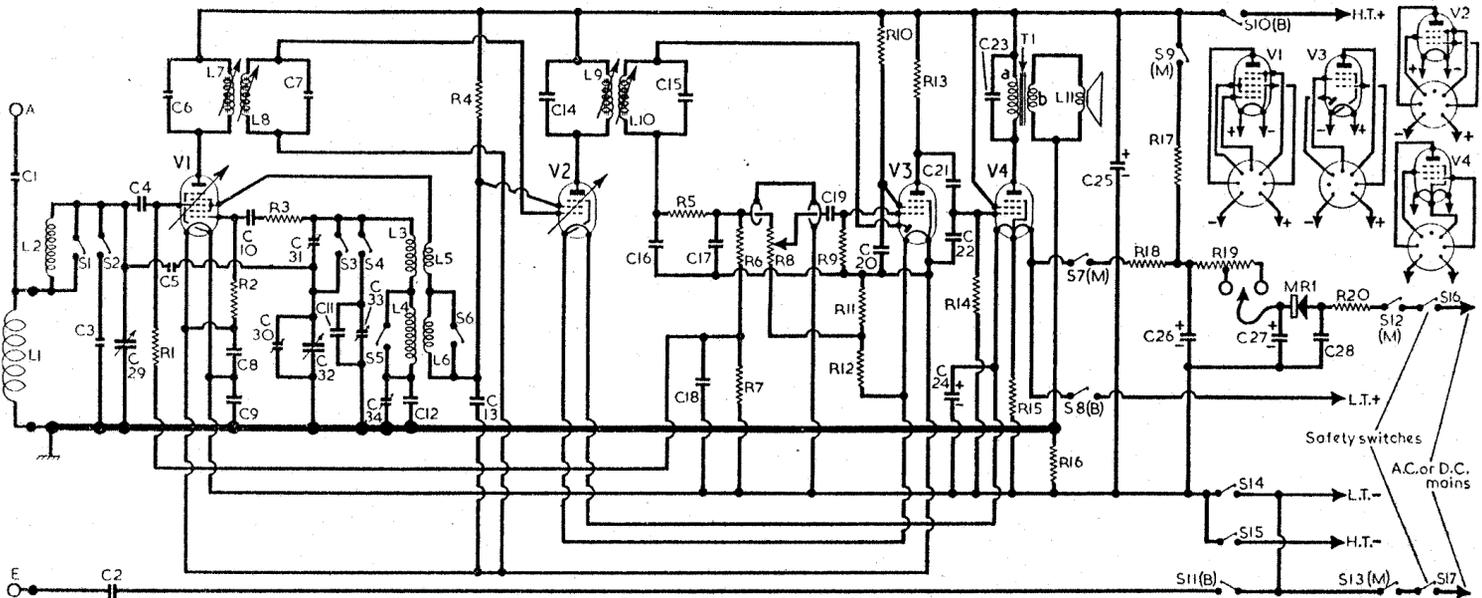
* Electrolytic. † Variable. ‡ Pre-set.
§ "Swing" value, min. to max.

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial ...	1-3	—
L2	L.W. loading coil ...	13.8	G3
L3	Oscillator tuning coils ...	2.5	A2
L4		2.5	A2
L5	Oscillator reaction coils ...	1.9	A2
L6		6.8	A2
L7	1st I.F. trans. { Pri. ...	14.4	A2
L8		11.1	A2
L9	2nd I.F. trans. { Sec. ...	8.0	B2
L10		6.0	B2
L11	Speech coil ...	2-3	—
T1	O.P. trans. { a ...	706.0	—
S1-S6	Waveband switches	—	A1
S7(M)	Mains/battery switches ...	—	C1
S13(M)		—	C1
S14	Flap operated sw. ...	—	—
S15		—	—
S16	Safety switches ...	—	F4
S17		—	F4

RESISTORS		Values	Locations
R1	V1 C.G. ...	1MΩ	G3
R2	V1 osc. C.G. ...	100kΩ	G3
R3	Osc. stabilizer ...	3.3kΩ	G3
R4	H.T. decoupling	15kΩ	G4
R5	I.F. stopper	100kΩ	B2
R6	A.G.C. pot. divider	2.2MΩ	F4
R7		3.3MΩ	F3
R8	Volume control ...	1MΩ	C1
R9	V3 C.G. ...	6.8MΩ	E4
R10	V3 S.G. feed ...	4.7MΩ	E4
R11	V3 diode delay bias ...	470Ω	E4
R12		270Ω	E4
R13	V3 pentode load ...	470kΩ	E4
R14	V4 C.G. ...	2.2MΩ	D4
R15	Filament shunt ...	680Ω	D4
R16	Chassis isolator ...	150kΩ	G3
R17	H.T. smoothing ...	470Ω	C1
R18	L.T. ballast ...	2kΩ	C2
R19	Voltage adjustment	*1,840Ω	C2
R20	Surge limiter ...	230Ω	C2

* Tapped at 1,450Ω + 390Ω from R18.

Intermediate frequency 470 kc/s.



CIRCUIT ALIGNMENT

I.F. Stages.—Remove chassis from carrying case as described under "Dismantling," but do not disconnect leads. Connect output of signal generator, via an 0.1μF capacitor in each lead, to control grid (pin 4) of V1 and H.T. negative (metal case of C25, C26, C27). Strap safety switch S16, S17 (location reference F4) in the "on" position with adhesive tape. Turn gang and volume control to maximum. Feed in a 470 kc/s (638.3 m) signal and adjust the cores of L10 (B2), L9 (E4), L8 (A2) and L7 (G4) for maximum output. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—Disconnect signal generator leads and lay them near the frame aerial winding. As the tuning scale remains fixed to the carrying case when the chassis is withdrawn, reference must be made during alignment to the six indentations on the scale backing plate. The two at the right-hand end indicate the highest wavelength end of the tuning scale, and the cursor should coincide with these marks when the gang is at maximum. The remaining four indentations indicate the trimming and tracking positions as follows, reading from left to right: 1, M.W. trim; 2, L.W. trim; 3, L.W. track; 4, M.W. track.

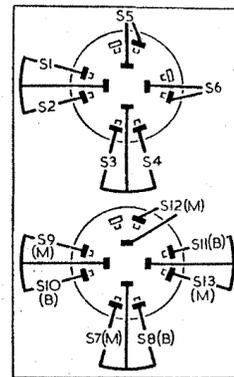
M.W.—Switch receiver to M.W., tune to trimming point, feed in a 1,500 kc/s (200 m) signal and adjust C30 (B1) for maximum output. Tune receiver to tracking point, feed in a 550 kc/s (545.4 m) signal and adjust C34 (A1) for maximum output. Repeat these adjustments.

L.W.—Switch receiver to L.W., tune to trimming point, feed in a 290 kc/s (1,035 m) signal and adjust C33 (A2) for maximum output. Tune to tracking point, feed in a 150 kc/s (2,000 m) signal and adjust C31 (A1) for maximum output. Repeat these adjustments.

Drive Cord Replacement.—About 3ft 6in of high-grade flax fishing line, plaited and waxed, is required for a new drive cord, which should be run as shown in the accompanying sketch, where the system is drawn as seen from the front with the gang at maximum capacitance.

There are two types of gang drum: the early type, which was fitted to our sample chassis and is as shown in our sketch; and the later type, which was adopted to overcome a tendency for the cord to run off the groove.

In the early type, the drum groove flange turns inwards, on the same side of the drum as the centre boss; in the later type, the flange turns outwards, so the cord enters it on the front of the drum, instead of the rear. In the later type, anchor tags are provided for both ends of the cord. The entry slot in the flange is at about 3 o'clock, not at 6 o'clock as in our drawing.



Left: Waveband and mains/battery switch units.