

CIRCUIT ALIGNMENT

All the following adjustments can be made accessible by hinging open the escutcheon.

I.F. Stages.—The I.F. coil cores are sealed with wax and should be carefully freed before alignment with a heated screw-driver blade. Switch receiver to L.W., tune to 1,800 m on scale and short-circuit the oscillator section of the gang **C20**. Connect signal generator output, via a 100 pF capacitor in "live" lead, to control grid (of **V1**) and chassis. Feed in a 475 kc/s (631.6 m) signal and adjust the cores of **L8** (location reference **C1**), **L7** (**E3**), **L6** (**B1**) and **L5** (**E3**) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. action. Repeat these adjustments until no further improvement results. Re-seal cores with soft wax, taking care not to disturb their adjustment, and remove short-circuit from **C20**.

Valve	Anode		Screen	
	V	mA	V	mA
V1 DK91 ...	82	1.7	47	2.5
V2 DF91 ...	82	1.6	47	0.45
V3 DAF91 ...	18	0.07	19	0.016
V4 DL94 ...	80	3.0	82	0.55

VIDOR - CN414

R.F. and Oscillator Stages.—Disconnect signal generator leads and lay them near the frame aerials. If insufficient signal is injected in this way, the "live" signal generator lead should be connected via a 200 pF capacitor to the junction of **C2** and **C19** and the other lead to the nearest chassis tag. Check that with the gang at maximum capacitance, the cursor should coincide with the 550 m mark on the M.W. section of the tuning scale.

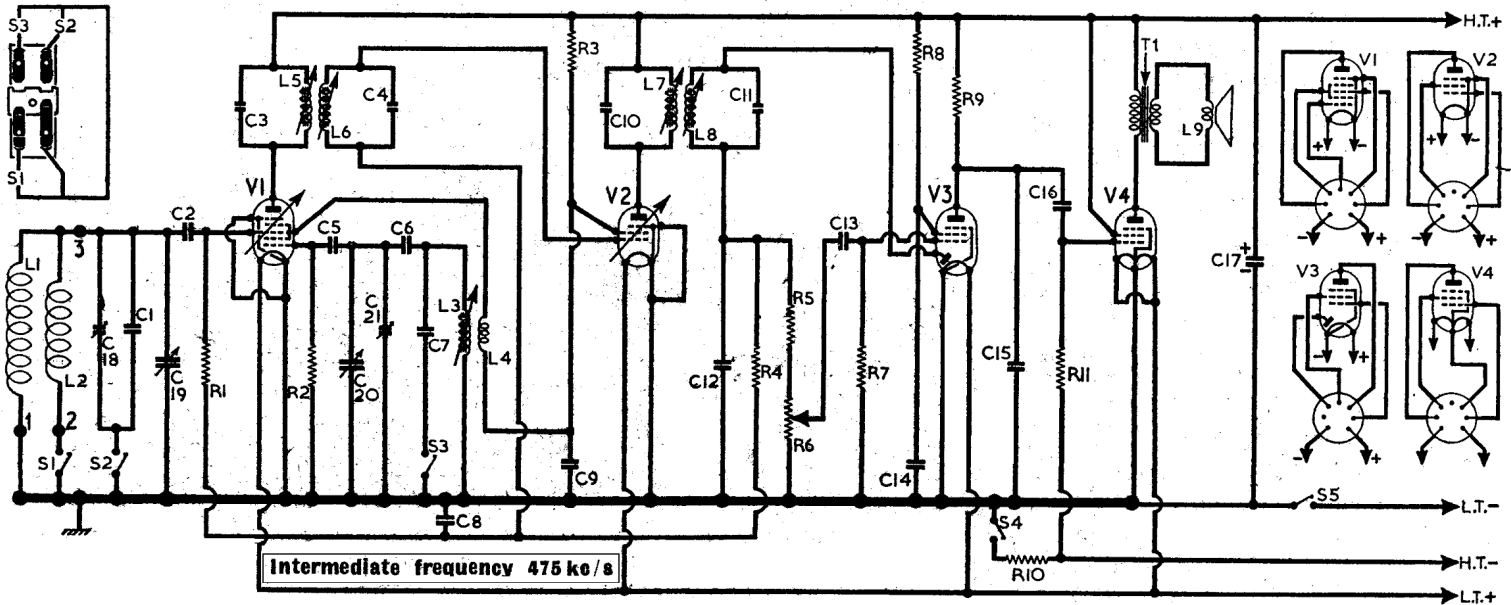
M.W.—Switch receiver to M.W., tune to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust **C21** (**A1**) for maximum output. Tune receiver to 500 m, feed in

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	L.W. frame aerial...	1.5	—
L2	M.W. frame aerial	13.0	—
L3	Osc. tuning coil ...	1.8	F2
L4	Osc. reaction coil ...	1.0	F2
L5	1st I.F. trans. {	20.0	B1
L6		20.0	B1
L7	2nd I.F. trans. {	20.0	C1
L8		20.0	C1
L9	Speech coil	2.6	—
T1	O.P. trans. {	540.0	—
	O.P. trans. {	—	—
S1-S3	Waveband switches	—	G2
S4, S5	Battery switches	—	—

CAPACITORS		Values	Locations
C1	L.W. aerial trim. ...	150pF	G2
C2	V1 C.G. ...	100pF	G3
C3	1st I.F. trans. ...	65pF	B1
C4	tuning	65pF	B1
C5	V1 osc. C.G. ...	100pF	G2
C6	Osc. tracker	635pF	F2
C7	L.W. osc. trim. ...	515pF	F2
C8	A.G.C. decoupling	0.05μF	F3
C9	H.T. decoupling	0.1μF	B1
C10	2nd I.F. trans. tun. {	65pF	C1
C11		65pF	C1
C12	I.F. by-pass	100pF	E3
C13	A.F. coupling	0.001μF	E2
C14	V3 S.G. decoupling	0.05μF	D3
C15	I.F. by-pass	200pF	D3
C16	A.F. coupling	0.01μF	D3
C17*	H.T. reservoir	2μF	B1
C18†	L.W. aerial trim. ...	70pF	A1
C19†	Aerial tuning	5523pF	A1
C20†	Oscillator tuning	5523pF	A1
C21†	M.W. osc. trim. ...	70pF	A1

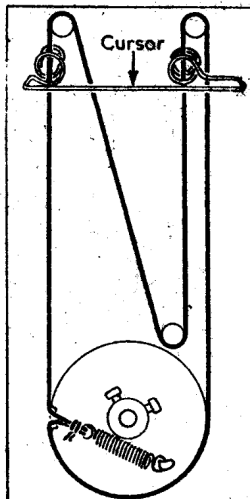
* Electrolytic.
† Variable.
‡ Pre-set.
§ Swing valve, minimum to maximum.

RESISTORS		Values	Locations
R1	V1 C.G. ...	470kΩ	F3
R2	V1 osc. C.G. ...	100kΩ	F3
R3	H.T. decoupling	12kΩ	E2
R4	A.G.C. decoupling	2.2MΩ	E3
R5	I.F. stopper	100kΩ	E3
R6	Volume control	1MΩ	—
R7	V3 C.G. ...	4.7MΩ	D2
R8	V3 S.G. feed	4.7MΩ	D2
R9	V3 anode load	1MΩ	D2
R10	V4 G.B. ...	820Ω	E3
R11	V4 C.G. ...	2.2MΩ	D3



a 500 m (600 kc/s) signal and adjust the core of **L3** (**B1**) for maximum output, rocking the gang for optimum results. Repeat these adjustments until no further improvements result.

L.W.—Switch receiver to L.W., tune to 1,200 m, feed in a 1,200 m (250 kc/s) signal and adjust **C18** (**A1**) for maximum output. As there are no L.W. oscillator adjustments, the value of the tracking capacitor **C6** should be checked if the L.W. calibration is not correct over the band. Its value should not be outside its rated tolerance, which is $\pm 2\%$. If it is necessary to replace **C6**, the complete R.F. and oscillator alignment should be repeated.



Sketch showing the tuning drive system, as seen from the front with the gang at maximum.

Cursor Drive Cord Replacement.—About 30 inches of high-grade fishing line, plaited and waxed, is required for a new drive cord. It is run as shown in the sketch in col. 3, where it is drawn as seen from the front when the gang is at maximum capacitance.

To fit the cord it is necessary to remove the chassis from its mounting, although it may not be necessary to unsolder all the leads. The work is facilitated by the removal of the metal tuning scale panel, which is held by three 8BA round-head screws, with lock-washers. The cursor can be fitted afterwards.