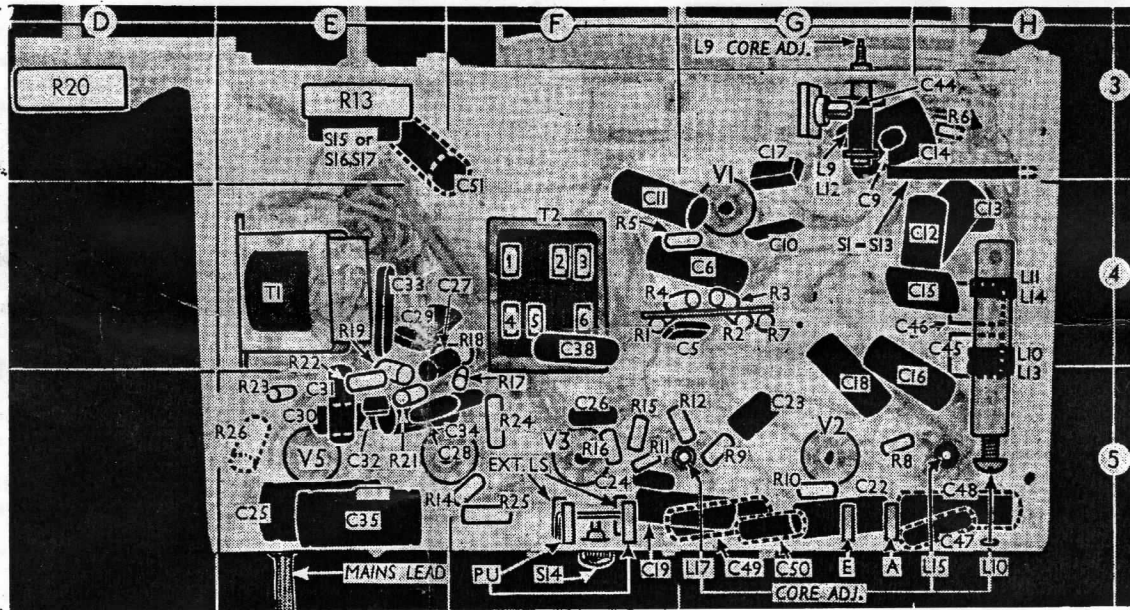


Under-chassis view. The connecting tags of the mains transformer T2 are numbered to agree with the circuit diagram overleaf. A diagram of the wave band switch unit S1-S13 appears in col. 2 opposite. In early models, C44 is omitted and R12 is 47KΩ. Components shown in broken line are found only in A.C./D.C. versions.



sockets. Feed in a 460 kc/s signal and adjust the core of L2 (A2) for minimum output.

**R.F. and Oscillator Stages.**—Transfer signal generator leads to A and E sockets, via a suitable dummy aerial. With the gang at maximum, the pointer should coincide with the calibration marks at the right-hand ends of the S.W. and L.W. scales. If it doesn't, it should be adjusted by sliding the cursor carriage along the drive cord.

With the exception of the S.W. band, alignment can be carried out with the chassis in its cabinet, and it is helpful to do it that way in order to use the scale readings which are mounted on the cabinet. For S.W. alignment, tune to 20 m on scale, remove the chassis from the cabinet, and mark the cursor position on the scale backing plate; then replace the chassis, check the calibration again at maximum gang position, tune to 46.16 m on scale, remove the chassis, and mark the position of the cursor again. The S.W. alignment can then be executed with the chassis out of the cabinet.

**M.W.**—With the receiver switched to M.W., tune to 230.8 m on scale, feed in a 230.8 m (1,300 kc/s) signal, and adjust C45, then C40, (A2) for maximum output. Tune to 375 m on scale, feed in a 375 m (800 kc/s) signal, and adjust the brass core screw of L10 (H5) for maximum output. Check calibration at 600 m (500 kc/s) and repeat the procedure if necessary.

**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 C46, then C41, (A2) for maximum output. Check the calibration at 2,000 m (150 kc/s), and repeat the procedure as necessary.

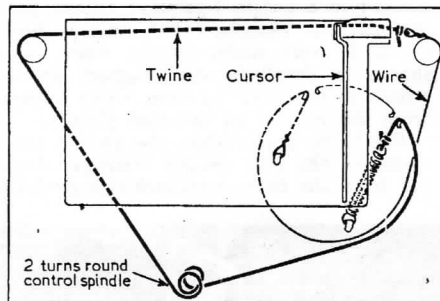
**S.W.**—Switch set to S.W., tune to 46.16 m mark on the scale backing plate, feed in a 46.16 m (6.5 Mc/s) signal, and adjust the cores of L9 and L6 (G3, A2) for maximum output. Tune to the other mark, feed in a 20 m (15 Mc/s) signal, and adjust C44, then C39 (G3, A2) for maxi-

mum output. On some A.C./D.C. models C44 will not be fitted.

**DRIVE CORD REPLACEMENT**

The tuning drive cord consists partly of twine (good quality plaited and waxed flax fishing line) and partly of stranded steel flexible cable, and it is advisable to make it up before trying to fit it. Suitable materials can be obtained from the Service Department, E. K. Cole, Ltd., Somerton Works, Southend-on-Sea.

The wire is prepared by making a loop of about 1/4 in diameter at each end, with



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

an overall length of 14 inches. The ends should be soldered before cutting, and soldered again after the loops are made.

The twine should be tied by non-slip knots to a wire loop at one end and to the tension spring at the other, but before tying on the tension spring the twine should be threaded through the appropriate hole in the drum groove, with the spring inside the drum. The overall length of the twine in our samples when knotted was 26 inches, although the makers quote 28 inches in their manual.

The cord should be fitted as shown in our sketch above, where it is shown as it appears when the gang is at maximum capacitance. It can be fitted without re-

moving the scale backing plate if the twine is run first, with the gang at maximum and the tension spring slipped off its hook. To thread the wire end into the drum and hook it on to its anchor, the gang is swung to minimum; it is then returned to maximum again to hook the spring to its anchor and take up the tension. A short length of sleeving is slipped over the spring before it is hooked up.

Finally, the twine is dropped into the wedge clamp at the back of the cursor carriage, which should be so positioned that the right-hand of the carrier is exactly level with the right-hand end of the guide rail on which it runs, when the gang is at maximum capacitance, as shown in our sketch.

**VALVE ANALYSIS**

Valve voltages and currents given in the tables below are those quoted by the manufacturer, whose receivers were operating from A.C. mains of 225 V. The receivers were tuned to 300 m on the M.W. band, but there was no signal input.

Voltages were measured on a 1,000 ohms-per-volt meter, chassis being the common negative connection.

Valve	Anode		Screen		Cath.
	V	mA	V	mA	
<b>A.C. Model</b>					
V1 UCH42	208	1.7	85	2.4	2.6
	Oscillator				
	98	3.3			
V2 UF41	193	5.2	97	1.6	2.2
V3 UBC41	121	0.4	—	—	2.2
V4 UL41	187	49.5	106	7.0	4.6
V5 UY41	235†	—	—	—	234.0
<b>A.C./D.C. Model</b>					
V1 UCH42	175	1.1	67.5	1.6	1.8
	Oscillator				
	75	3.0			
V2 UF41	165	4.4	80	1.3	1.8
V3 UBC41	102	0.35	—	—	1.6
V4 UL41	162	43.5	105	6.5	5.0
V5 UY41	202†	—	—	—	197.0

†A.C.