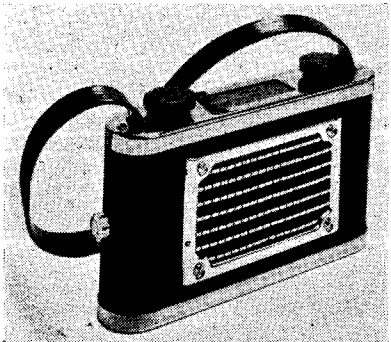


# ROMAC 136L, 136S



The Olympic, model 136, personal receiver is an all-dry battery operated two waveband four-valve portable superhet. Type L covers MW and LW; type S covers SW and MW. In ripple black and chromium case. Made by Romac Radio Corporation Ltd., The Hyde, Hendon, London, NW9.

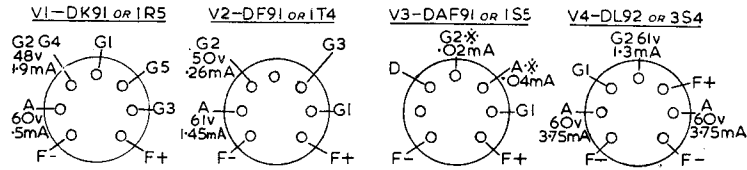
**CIRCUIT** consists of a heptode frequency changer V1, followed by an RF pentode IF amplifier V2, which in turn is transformer coupled to a diode-pentode signal rectifier and AF amplifier V3. A pentode output valve V4 feeds into a 2.5 in. PM loudspeaker. HT is provided by a 67.5V miniature battery and LT from a 1.5V standard unit cell.

**Aerial.** Loop aerial L1, formed by five turns of plastic covered wire, is inside the shoulder carrying strap. On MW band L1 is connected by S1 in series with a loading coil L2 and both are switched by S2 to tuning capacitor VC1 and to g3 of heptode frequency-changer V1. T1 is MW aerial trimmer. On LW band L1 is connected by S1 across coupling coil L3 and S2 switches grid tuned coil L4 to tuning capacitor VC1 and to

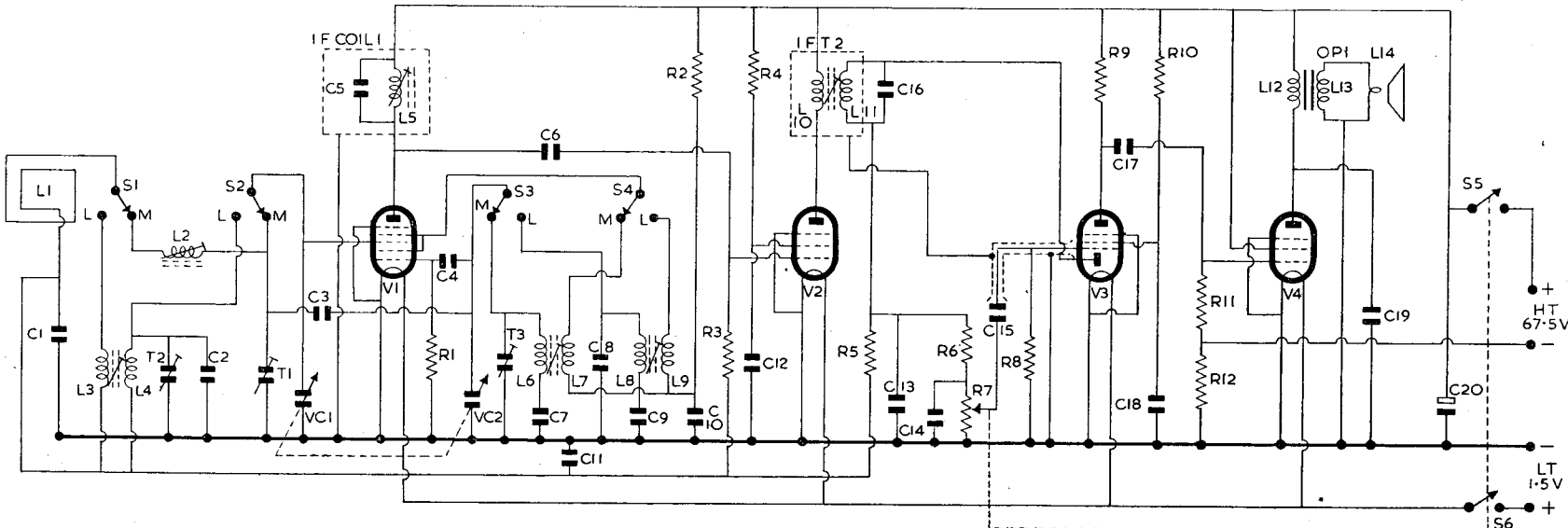
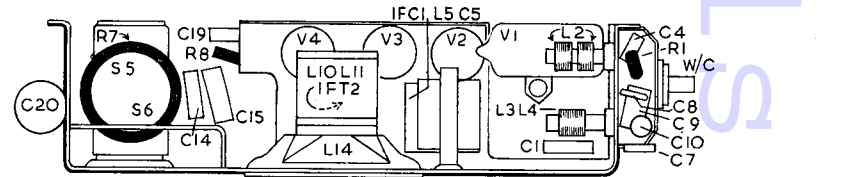
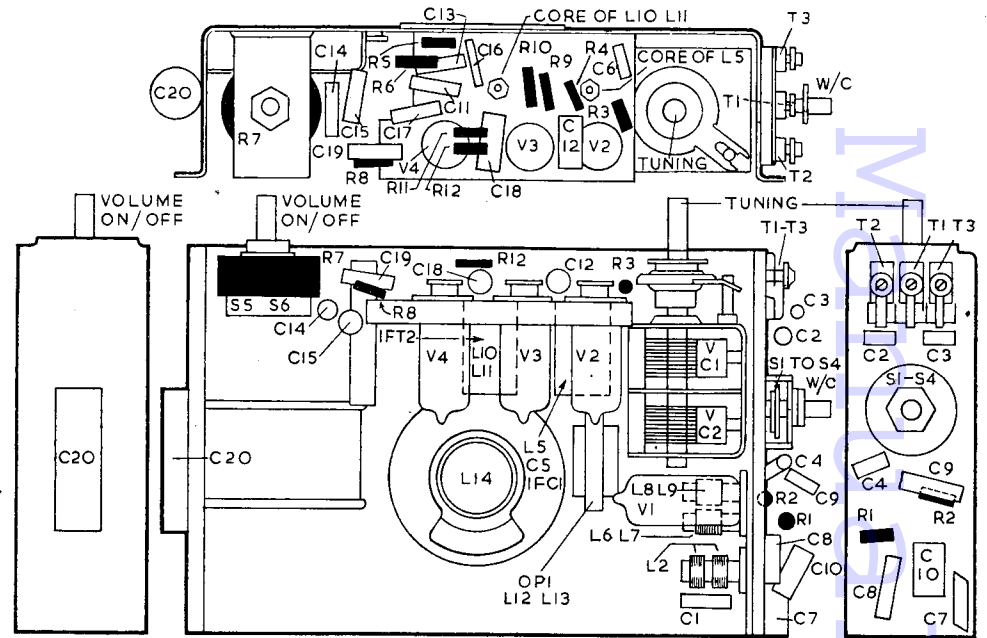
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### CAPACITORS

C	Capacity	Type	C	Capacity	Type
1	.01	Tubular 350V	11	.01	Tubular 350V
2	33 pF	Tubular Ceramic	12	.1	Tubular 150V
3	3 pF	Tubular Ceramic	13	100 pF	Tubular Ceramic
4	33 pF	Tubular Ceramic	14	100 pF	Tubular Ceramic
5	40 pF	Silver Mica	15	1500 pF	Tubular Ceramic
6	33 pF	Tubular Ceramic	16	200 pF	Silver Mica
7	380 pF	Silver Mica	17	1500 pF	Tubular Ceramic
8	70 pF	Silver Mica	18	.1	Tubular 150V
9	132 pF	Silver Mica	19	.01	Tubular 350V
10	.1	Tubular 150V	20	4	Electrolytic 150V



\* DUE TO HIGH ANODE AND SCREEN RESISTORS VOLT READINGS IMPRACTICABLE  
BIAS DEVELOPED ACROSS R12 = 6V



### RESISTORS

Ohms

1	100 K	1W
2	4.7 K	1W
3	1 M	1W
4	10 K	1W
5	1 M	1W
6	100 K	1W
7	1 M	Potentiometer fitted P.PST Switch
8	10 M	1W
9	470 K	1W
10	3.3 M	1W
11	1 M	1W
12	680	1W

### INDUCTORS

Ohms

1		.1
2		3
3		1.3
4		35
5		14
6		3.9
7		1.6
8		13
9		5.7
10		9
11		6.5
12		380
13		.5
14		3

## ROMAC 136—Continued

g3 of V1. T2, C2 are LW aerial trimming capacitors. AVC is applied to g3 of V1, through L1 and L2 on MW band and through L4 on LW band. C1 is AVC line isolating capacitor.

Oscillator is coupled in a tuned-grid series-fed HT circuit. L6 (MW), L8 (LW) are the grid coils switched by S3 to tuning capacitor VC2 and through C4 to oscillator grid (g1) of V1. T3 (MW), C8 (LW) are trimmers and C7 (MW), C9 (LW) padders. C3 is a neutralising capacitor between T1 and VC2 Section of the gang condenser and is only in circuit on MW band.

L7 (MW) and L9 (LW) are the feedback coils switched by S4 to oscillator anode (g2g4) of V1. Oscillator HT, obtained from R2 decoupled by C10, is fed through L7, L9 to oscillator anode.

IF amplifier. L5, C5 tune the anode circuit of V1 to 456 Kc/s and C6 feeds the signal to grid of IF amplifier V2. AVC is applied through R3.

Signal rectifier. L11, C16, secondary of IFT2, feed signal to diode of V3. R7, the volume control, is the diode load and R6, C13, C14, an IF filter.

Automatic volume control is obtained from DC component of rectified signal and is fed by R5 to control grids of V1 and V2.

AF amplifier. C15 feeds rectified signal to grid of pentode section of V3. R8, C15 provide bias.

Output stage. C17 feeds signal to grid of output pentode V4. R11 is grid resistor and connected for bias to R12 in the HT negative lead to chassis. L12 is primary of OPI, the output matching transformer; C19 prevents rise in impedance at the higher frequencies; L13, the secondary, feeds a 2.5 in. PM speaker L14.

High tension is provided by a 67.5V battery and is decoupled by C20.

Low tension filaments are connected in parallel and obtain current from a 1.5V standard unit cell. S5, S6 are the HT and LT ON/OFF switch.

Chassis removal. Turn the fasteners in the bottom cover through quarter turn until the slots are parallel to the long side of the set and remove bottom cover and batteries. Pull off control knobs at the top of case and remove wavechange knob at side after loosening grub screw. Unscrew bolts holding top cover, ease off and slide it a few inches up the aerial strap.

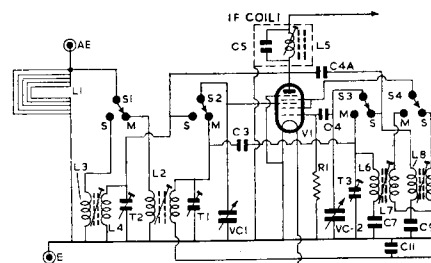
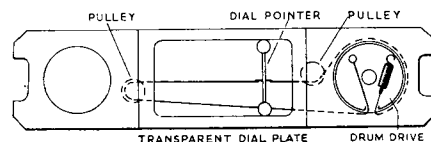
Remove the speaker escutcheon (four bolts) and take off the outer case. By a special cut-out in the chassis back-plate valves V2, V3, V4 are now accessible. V1 can also be taken out after removing the coil protection plate held at the bottom of the chassis by two self-tapping screws.

Unscrew eight self-tapping screws in the back-plate (the side opposite the speaker). This can be completely removed if LT wires are unsoldered.

To expose the underside of valveholders and sub-chassis wiring, remove two screws at each end of the dial plate assembly and also two bolts inside the drive pulley fixing it to the flange on the gang spindle. Lift off pulley and dial plate.

### OLYMPIC 136S

Another version of the 136 receiver has the LW range replaced by a SW range covering 17.5 to 51 metres. The aerial input circuit is somewhat different in that the five wires of the shoulder strap are connected in parallel and are shunted by S1 across L3 (SW) and L2 (MW), the aerial coupling coils. Sockets are provided so that an external



In [the modified circuit of model 136S values are: C4A 3.9 pF tubular ceramic; C9 5000 pF silver mica; L3, L4, L8, L9 very low; L2, resistances of two windings, 0.5 and 3.5 ohms

aerial and earth can be plugged in for SW band reception. No AVC is applied to g3 of V1 on SW range, hence bottom ends of L3, L4 are connected down to chassis.

The MW neutralising capacitor C3 is connected between top ends of L2 and L6. C4A is an additional capacitor for SW neutralising.

The position of all components is almost identical with those of receiver 136L and current and voltage readings are similar.

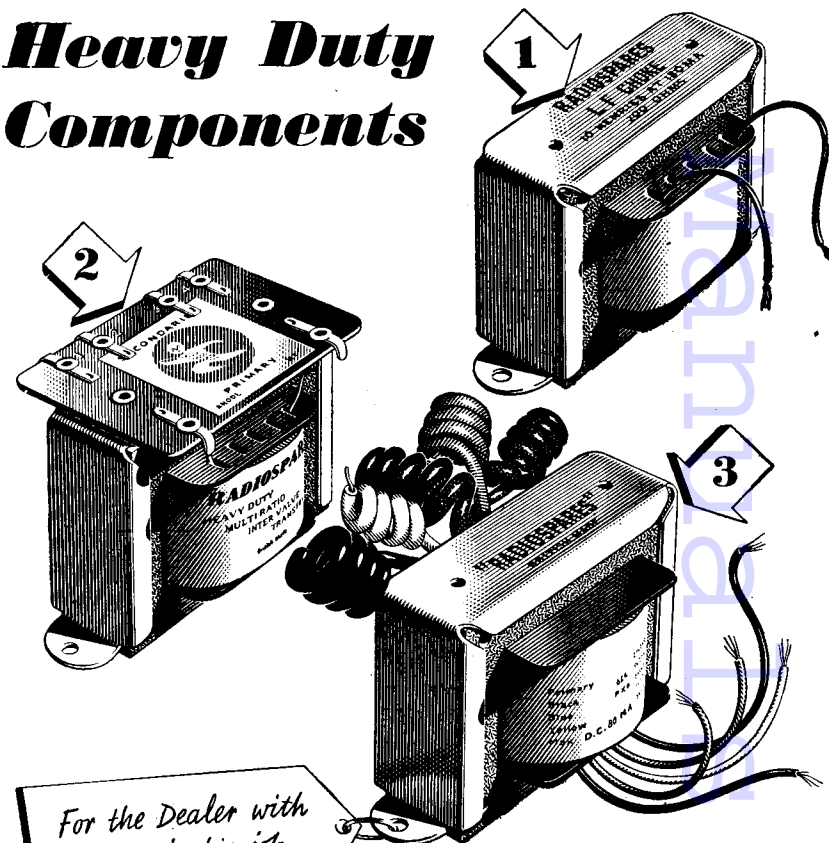
Alignment. IF and MW details as for 136L. SW range as follows:

5.9 Mc/s as in (5) Adjust Core L8, L9.  
6.3 Mc/s " Adjust Core L3, L4.  
16 Mc/s " Adjust T2.

### ALIGNMENT: MODEL 136L

Apply Signal as Below	Tune Receiver to	Trim in Order stated for Max. Output
(1) Adjust pointer, so that the ends of the scales, by loosening the screws inside the drive drum and tightening after adjustment. If insufficient adjustment is obtained then loosen the wheel bush and rotate bush on spindle.		
(2) 456 kc/s to G3 of V1, via .1 pf capacitor	195 metres	Cores of L5, L10, L11
(3) 510 kc/s as above.	588 metres	Core of L6, L7
(4) 1.54 mc/s as above	195 metres	T3. Repeat (3) and (4)
(5) 570 kc/s to loop AE, via link coupling of 2 or 3 turns of wire wrapped around	562 metres (white dot)	Core of L2
(6) 1.4 mc/s as above	214 metres (white dot)	T1. Repeat (5) and (6)
(7) 160 kc/s as above	1875 metres (white dot)	Core of L8, L9 and L3, L4
(8) 240 kc/s as above	1250 metres (white dot)	T2. Repeat (7) and (8).

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