ELECTRICAL & RADIO TRADING SERVICE CHART

VIDOR CN396, 396A

RESISTORS

R	Ohms	%	W	R	Ohms	%	W
1	4.7M	20	¼	14	2.2M	20	¼
2	100K	20	¼	15	150	10	¼
3	10K	20	¼	16	1.8K	10	¼
4	1K	20	¼	17	1.5K	2 Vit	4W
5	100K	20	¼	18	700	3 Vit	2W
6	2.2M	20	¼	19	2.7K	10	¼
7	100K	20	¼	20	100	10	¼
8	1M Pot Log Law			21	4.7M	20	¼
9	4.7M	20	¼	22	2K	20	¼
10	1M	20	¼	23	1K	20	¼
11	4.7M	20	¼	24	2.2K	20	¼
12	270	10	¼	25	—	—	—
13	—	—	—				

Differences

PL models—R3 22K, R10 270K, R11 1meg, R13 6.8meg 10% ¼W. To increase gain remove R13. R22-25 not used.
Sep. L models—R22, R23, R25 not used.
Sep. L blue cabinet models—R4 150ohm 10%, R12 120ohms, R16 560ohms, R25 220ohm 10% ¼W. (See modifications to be carried out to all sets), R5, R13, R22, R23 not used.

CAPACITORS

C	mF	%	Voltage	Type	C	mF	%	Voltage	Type
1	3.5-70pF	—	—	Trimmer	17	0.05	20	200	TP
2	150pF	5	350	SM	18	65pF	20	350	SM
3	0.1	25	150	TP	19	0.01	25	350	TP
4	523pF swing		two gang		20	0.001	25	500	TP
5	2	—	200	Elec.	21	200	—	6	Elec.
6, 7	100pF	10	350	SM	22	65pF	2-3	350	SM
8	3.5-70	—	—	Trimmer	23	25	—	50	Elec.
9	532pF	2	350	SM	24	32 + 32 or	—	350	Elec.
10	500pF	1	350	SM	25	40 + 40			
11, 12	0.1	20	350	TP	26	0.005	25	500	TP
13	0.05	20	200	TP	27	0.01	20	150	TP
14, 15	100pF	10	350	SM	28	3.5-70pF	—	—	Trimmer
16	0.001	25	500	TP					

Differences

PL models—C1, C8 3.5-50pF, C2 130pF, C9 635pF, C10 540pF ½% or 515pF, C26 0.02 20%, C28 not used.
SL models—C2 200pF, C28 3.5-50pF, Sep. L models—C20 not used.
Sep. L models in blue cabinets—C12, C15 and C20 not used.

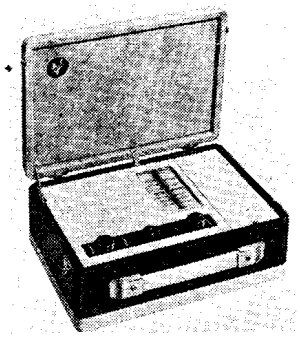
THIS chart covers four models of this very popular receiver. For the chart, the models are classified as (1) PL—having parallel loop aerials, (2) SL—series loops, (3) Sep. L—separate loops, and (4) Sep. L/B—separate loop models in two-tone blue cabinet.

The PL was earliest and provides the circuit shown. The SL was next, and has different loop connection, W/C switch, three trimmers and loading coil L6.

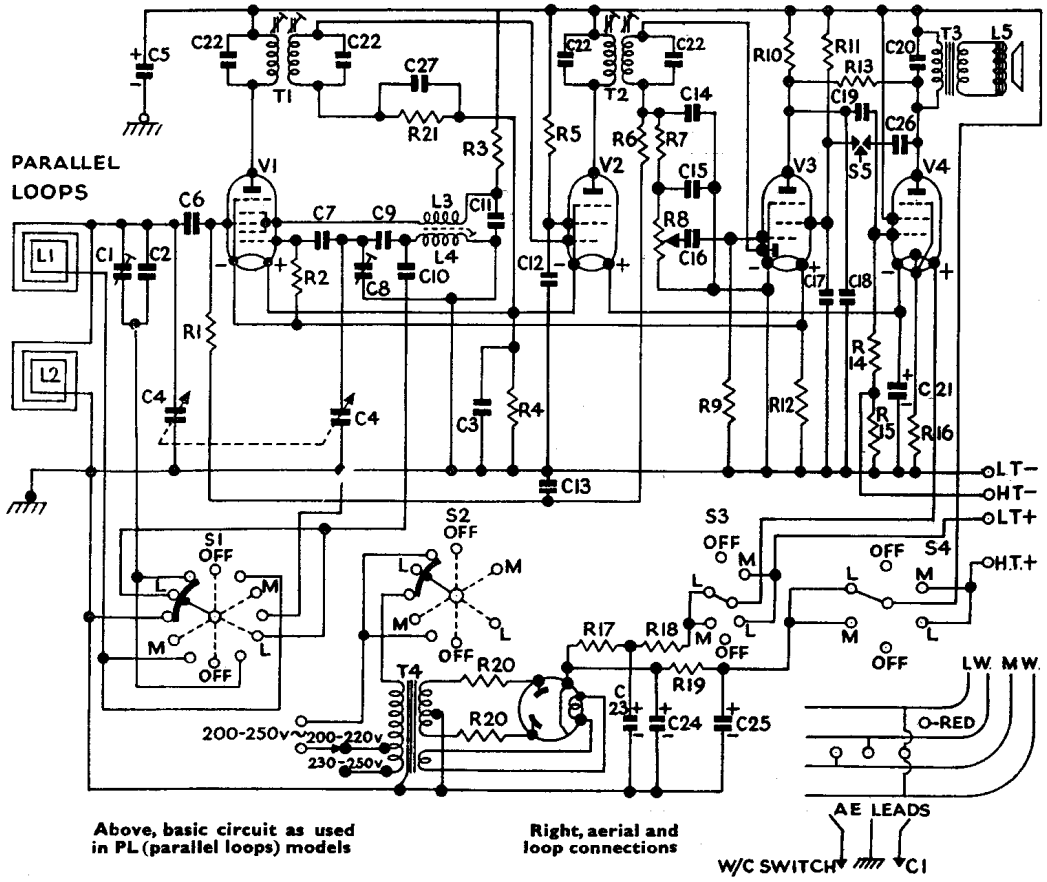
Model Sep. L came next, and has different W/C switch and loop connections, and is also fitted with L6 and three trimmers.

Sep. L/B, latest type, is as Sep. L as regards loop and W/C switch, but has circuit differences. Just recently the same model has

Continued overleaf

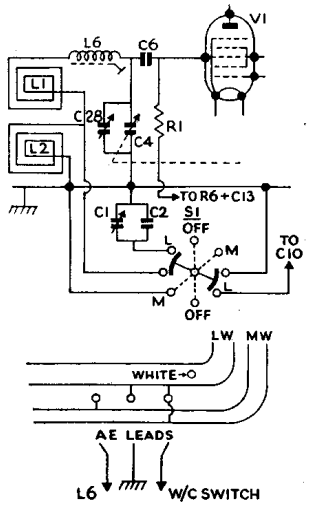


Two waveband superhet AC-battery attache-case portable

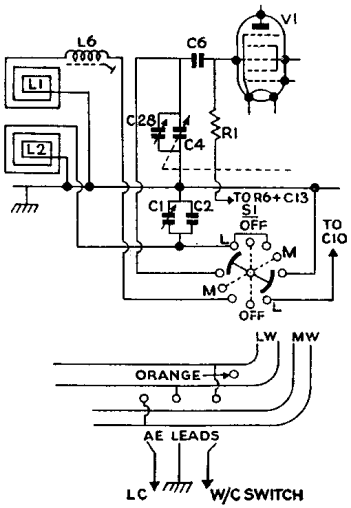


Above, basic circuit as used in PL (parallel loops) models

Right, aerial and loop connections

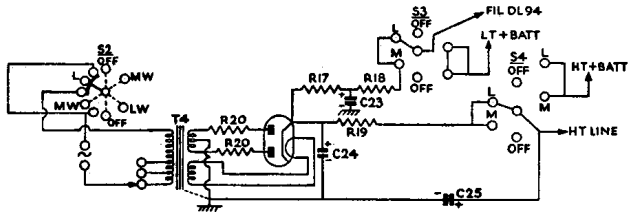


SL MODELS

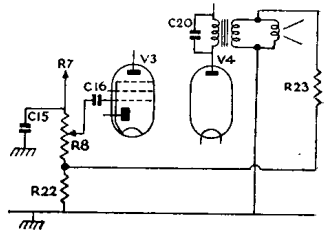


Sep L MODELS

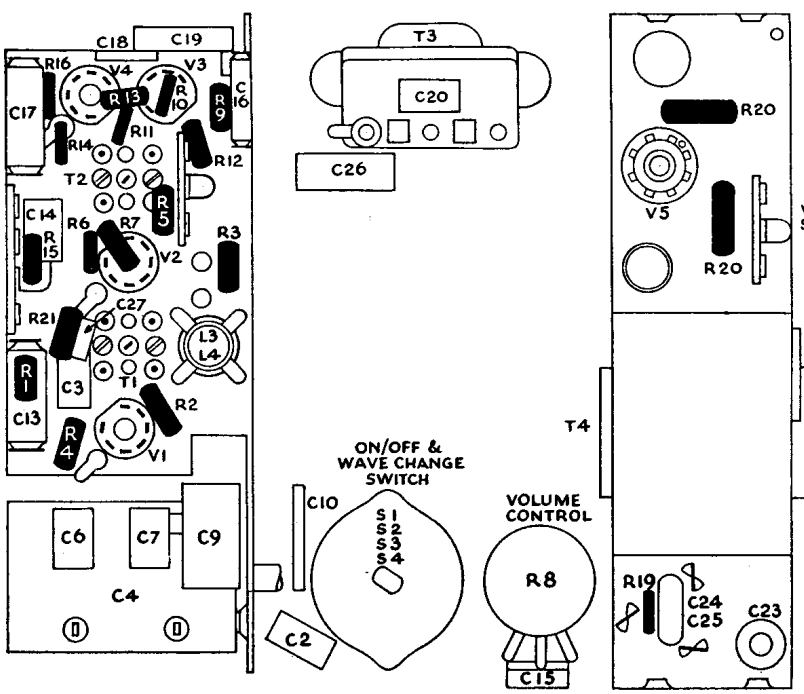
Inductors
L1 MW loop
L2 LW loop
L3, L4 MW osc. coil
L5 Speaker
L6 MW loading coil
T1 1st IFT
T2 2nd IFT
T3 secondary—15K
T4 125-0-125V 55mA 6.3V 0.4A

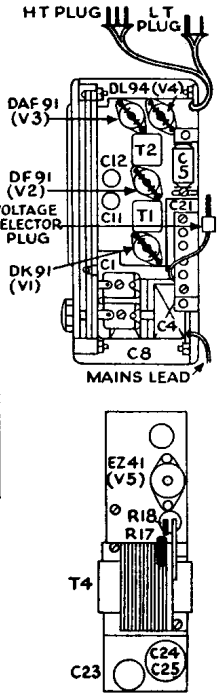


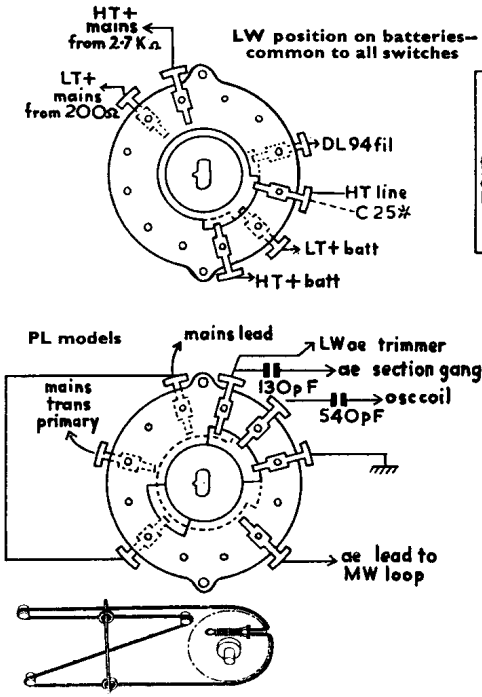
Power pack in Sep L/B models

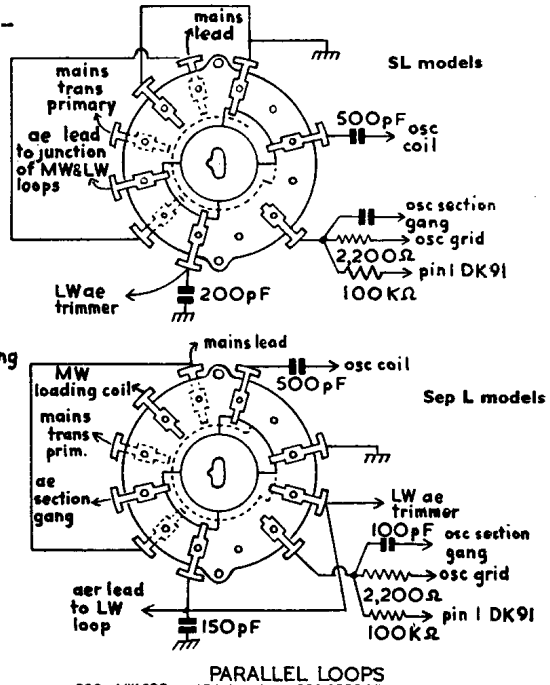


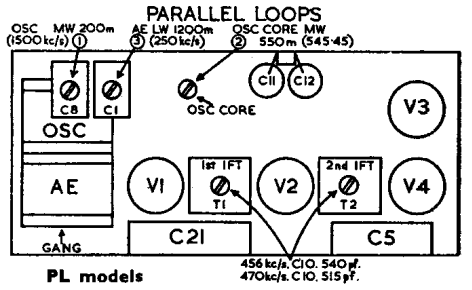
Feedback circuit in SL models

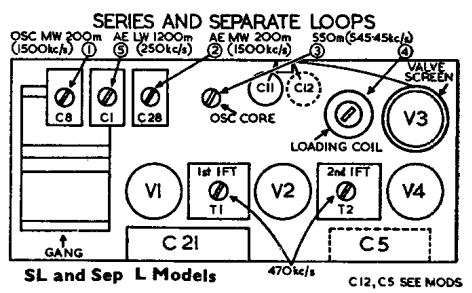












VALVE READINGS 225V AC input. 100V range on Avo 7. * 1000V range.

Valve	PL Models		SL Models		Sep. L Models		Sep. L/B Models	
	Anode	Screen	Anode	Screen	Anode	Screen	Anode	Screen
DK91 ...	83(79)	32(30)	84(82)	52(50)	85(80)	60(55)	85(75)	50(48)
DF91 ...	83(79)	24(22)	84(82)	26(24)	85(80)	33(30)	85(75)	50(48)
DAF91* ...	8(7)	4(3.5)	8(8)	5(5)	8(8)	5(5)	8(8)	5(5)
DL94 ...	80(76)	83(79)	81.5(79.5)	84(82)	80(75)	85(80)	82.5(72.5)	85(75)

Other Voltages and Currents

	PL	SL	Sep. L	Sep. L/B
EZ41, Anodes AC	125	120	120	110
,, Cathode DC	115	110	108	105
Batts, LT mA	50	50	50	50
,, HT mA	10	10	9.5	11
Mains LT mA	48	48	47	47
,, HT mA	9	9	9	10.5

appeared in a grey two-tone cabinet.

Modification to be carried out on all models. DL94: Fit 560 ohm ½W resistor between pins 1–5, remove R16 1.8K fitted between pin 5 and earth.

DF91: Fit 220 ohm ½W between pins 1–7.

DK91: Fit 150 ohm ½W between pins 1–7, remove R4 1K between pin 7 and earth.

DAF91: Fit 120 ohm ½W between pins 1–7, remove R12 270 ohm between 7 and earth.

Modification — latest models. Sets with Hinchley type mains transformer have low LT (5.8V approximately). To bring voltage up to 6.5 approximately, remove 100 ohm EZ41 anode stoppers.

CIRCUIT DIFFERENCES

Series and Separate Loops. R24 (2.2K) is fitted between oscillator grid pin of the DK91 and the junction of R2 (100K) and C7 (100pF) on the wavechange switch.

L5 is fitted on top of the chassis behind the second 1FT.

C28 is alongside C1.

A valve screen is fitted to the DAF91.

Separate Loops (Blue Two-Tone Cabinets). R5 and C12 are no longer used, and a lead is taken from the junction of R3–C11 on the osc. coil tag to the screen pin of the DF91.

The 2mF is also no longer used, instead one of the 32+32mF is used. This is shown in the power pack diagram for this type of set.

Chassis removal. To remove the complete receiver unit from the case lift battery compartment cover and allow it to rest against cabinet lid. Remove batteries. Remove card cover at side of chassis by lifting retaining clip at top and remove the two large nuts securing chassis to back and front of cabinet.

All valves, except rectifier, are accessible for replacement after removing card cover.

Remove the small metal brackets at inside top and bottom of lid and gently prise away the loop cover. The aerial leads can now be unsoldered.

The chassis can be removed by sliding it to the right until it is clear of the fixing bolts and then lifting upward. Before doing this, make sure that a sufficient length of mains lead is released from the cabinet fastening and that the two small metal clips attached to the two protruding wires on the left-hand inside of the cabinet have been disconnected.

For most servicing purposes, there is no need to disconnect the aerial leads or to remove the loop cover; but when removing the chassis from the cabinet it should be turned front upwards and half left, and rested on its back on the left and back edges of the cabinet.

In this position the inside of the receiver should be facing front and therefore accessible. Do not strain the aerial leads.

The procedure for removal of the 396A receiver unit is the same as above, but, in addition to the two large nuts, the two left-hand domed feet have to be unscrewed.

On replacing, make sure that the two small clips are attached to the two protruding wires on the left-hand inside of the cabinet.

ALIGNMENT

Switch set to LW and tune to 2000m (150kc/s). Set volume control to max. and connect up output meter.

IF Circuits. Short out osc. section of the gang and connect signal generator leads as follows: earth lead to chassis and hot lead to Ae section of the gang. Adjust cores of T1 and T2 for max. gain, keeping the signal as low as possible. The operations are shown on the diagrams.

RF and Osc. Circuits. With the gang at max. the pointer should be set on the 550m. mark.

The signal generator leads should be in close proximity to the loops and aligned in the order above for max. output. Repeat for max. gain.

Note.—Should calibration of LW be out, the LW padder C10 should be checked for value.

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