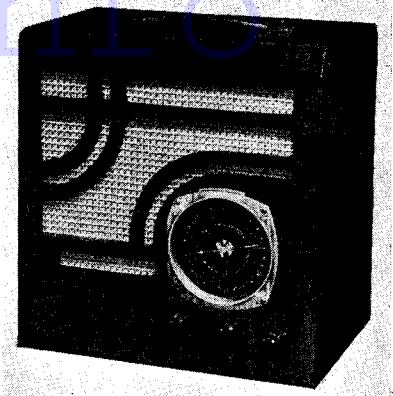


# BENSON AWP MIDGET PORTABLE



The model AWP by Benson Radio Ltd., is a midget frame-aerial trans-portable suitable for A.C. or D.C. operation. It was originally known as the Cameo.

**CIRCUIT.**—The grid coils of V1, a triode hexode frequency changer, are frame windings L1, L2 and L3 supplying the input. A series grid resistance R1 is included to ensure stable oscillation, whilst the anode, oscillator anode and screen electrodes are also decoupled with the same object. The oscillator section of the receiver follows standard practice. It will be observed that coupling to an external aerial is provided to ensure adequate pick-up for short-wave reception in screened localities.

V1 is coupled to V2, an H.F. pentode operating as the I.F. amplifier, by means of a transformer tuned to 470 kc.

A further I.F. transformer effects the coupling between V2 and the strapped diodes of V3, a double diode triode. The diode load (R11) potentials feed the grid of the triode section of V3 via a coupling condenser and manual volume control and also provide the A.V.C. bias controlling V1.

V3 is resistance capacity coupled to V4, an output pentode, between anode and

cathode of which is connected a tone-control circuit consisting of a variable resistance and fixed condenser.

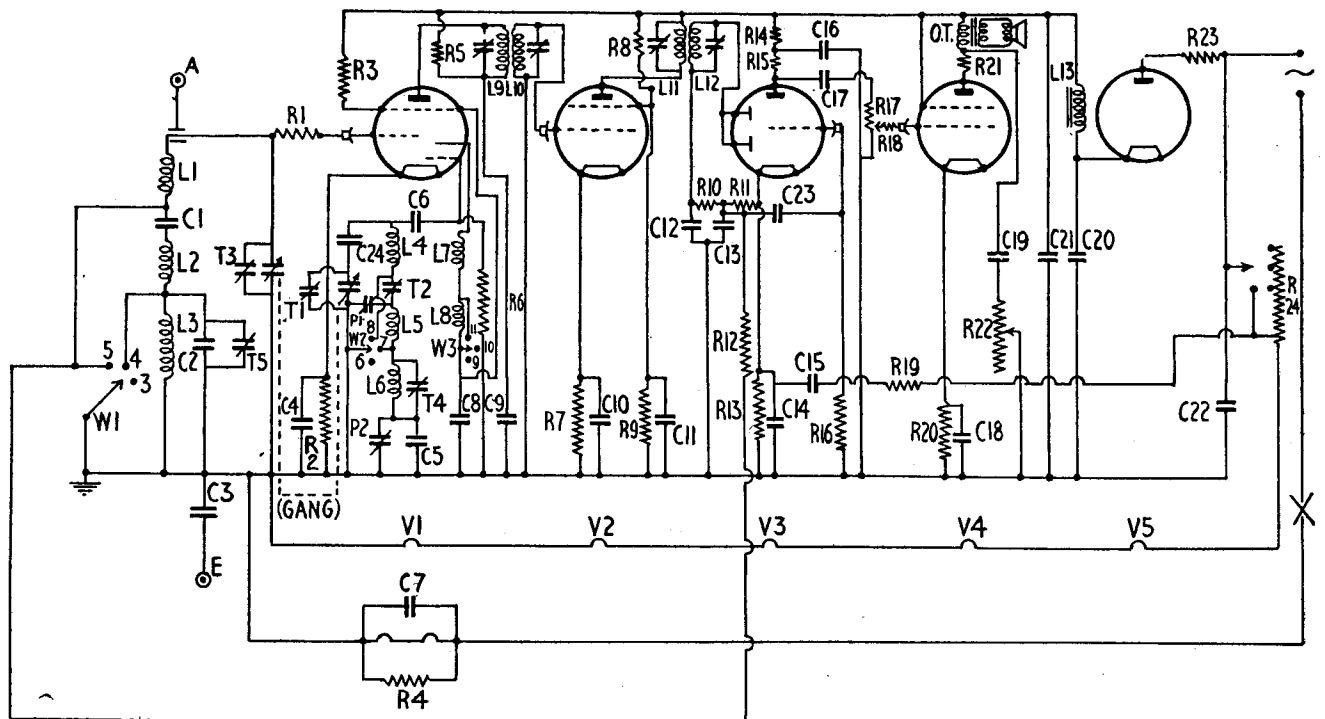
Mains equipment consists of a mains-adjustment resistance that also operates as a barretter, a half-wave rectifying valve V5, electrolytic smoothing condensers and a separate smoothing choke.

**Chassis Removal.**—Take off the back and the three grub-screw fixed control knobs. Then remove the two wood screws securing the metal brackets on the sides of the chassis deck to the sides of the cabinet.

Loosen the wood screw holding the bracket on the top of the wavelength scale and slide the bracket away from the scale. Unsolder the red and black flex leads from the speaker transformer and the bare

CONDENSERS		
C.	Purpose.	Mfd's.
1	A.V.C. isolator	.1
2	L.W. aerial fixed trimmer	.00004
3	Chassis isolating	.1
4	V1 cathode bias shunt	.1
5	L.W. osc. fixed padder	.00025
6	Osc. grid	.00004
7	Dial lamp shunt	25
8	V1 screen and osc. anode decoupling.	.1
9	V1 anode decoupling	.1
10	V2 cathode bias shunt	.1
11	V2 screen decoupling	.1
12	H.F. by-pass	.0001
13	H.F. by-pass	.0003
14	V3 cathode bias shunt	.02
15	Mains suppressor	.0001
16	V3 anode decoupling	2
17	L.F. coupling	.01
18	V4 cathode bias shunt	50
19	Tone control	.05
20	H.T. smoothing	24
21	H.T. smoothing	8
22	Mains shunt	.1
23	L.F. coupling	.01
24	S.W. osc. fixed trimmer	.002

RESISTANCES		
R.	Purpose.	Ohms.
1	V1 series grid	50
2	V1 cathode bias	200
3	V1 screen and osc. anode decoupling.	15,000
4	Dial lamps shunt	140
5	V1 anode decoupling	1,000
6	Osc. grid leak	25,000
7	V3 cathode bias	140
8	V2 screen potr. (part)	20,000
9	V2 screen potr. (part)	20,000
10	H.F. stopper	50,000
11	V3 diodes load	500,000
12	V1 A.V.C. decoupling	1 meg.
13	V3 cathode bias	2,000
14	V3 anode decoupling	10,000
15	V3 anode load	100,000
16	V3 grid leak	500,000
17	Volume control	500,000
18	V4 grid stopper	50,000
19	Mains suppressor resistance	1 meg.
20	V4 cathode bias	160
21	V4 anode stabiliser	50
22	Tone control	25,000
23	Rectifier safety resistance	50
24	Mains adjustment resistance	670



Short-wave reception is provided by the model AWP and there are external aerial and earth sockets in addition to the frame aerial. The circuit, as a whole, is entirely orthodox.

For more information remember

www.savoy-hill.co.uk

