

HMV 1107

Four-valve, plus rectifier, three-waveband superhet table model. Wavechanging is effected by three push-buttons, but tuning is manual. Provision is made for connecting a pickup and extra loudspeaker. For operation from 195-255v mains, 50-100 cycles. Marketed 1940 by the Gamophone Co., Ltd, Hayes, Middlesex.

THE Model 1107 incorporates the basic chassis and circuit of the Models 1106 and 1504 reviewed elsewhere. As will be seen from the circuit diagram there are no press-button tuning circuits, but wave-changing is effected by a triple push-button switch assembly. The other circuit arrangements are so similar to the

Model 1106 that a repetition of the circuit description is not necessary.

GANGING

IF Circuits.—Inject signal to V2 top cap (via a 0.1 mfd condenser), leaving grid connexion in position, and chassis.

Connect 35,000 ohm resistance and 0.05 mfd condenser in series across L14 (or between "hot" side of coil and chassis, whichever is more convenient).

Tune oscillator exactly to 465kc (645.2m). Adjust L15 for maximum output.

Damp L15 as above and trim L14 for maximum output.

Connect oscillator leads to top cap V1 (via 0.1 mfd condenser) and chassis.

Damp L12 as above. Trim L13 for maximum output.

Damp L13 and trim L12 for maximum output.

SW Band.—Before commencing ganging operations on the HF circuits check the position of the wave-scale and pointer.

Turn gang condenser to minimum.

See that the pointer registers accurately on the 192m mark. If adjustment is necessary, pointer can be slid up or down the drive wire.

Connect oscillator to A and E sockets via a SW dummy aerial. Switch receiver to SW, volume to maximum, and tone control fully clockwise.

Inject signal of 50m (6mc), set tuning pointer to 50m and adjust loops in L8 and L2 for maximum output. Repeat several times if necessary until no further increase in output can be obtained.

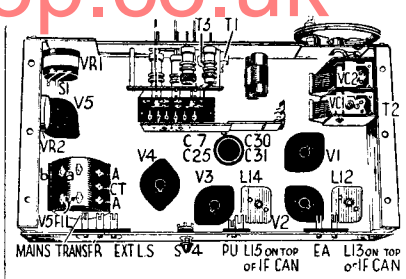
Check that receiver will tune in 16.8m (17.86mc).

MW Band.—Set gang to minimum, and tune oscillator to exactly 192m. (1,562kc). Adjust T1 for maximum output.

Set oscillator and receiver (by scale) to 210m (1,429kc), and adjust T2 for maximum output.

Set oscillator and receiver (by scale) to 510m (588.2kc), and adjust the cores of L10 and L4 for maximum.

Repeat above operations several times if necessary.



The under-chassis layout for model 1107.

LW Band.—Set oscillator and receiver to 720m (416.7kc) and adjust T3 for maximum output.

Set oscillator and receiver to 1,850m (162.2kc), and adjust L11 for maximum output.

Set oscillator and receiver to 1,400m (214.3kc), and adjust L6 for maximum output.

Repeat adjustment of T3.

After ganging do not alter position of pointer in relation to the gang condenser.

VALVE READINGS

V	Type	Electrode	Volts	Mas
1	X61M	Anode	260	3.3
		Osc anode	95	5
		Screen	85	3.7
2	KTW61M	Cathode	2.7	—
		Anode	260	8
		Screen	85	2.5
3	DH63M	Cathode	3.5	—
		Anode	105	.5
		Screen	1.1	—
4	KT6I	Anode	245	42
		Screen	260	8
		Cathode	5	—
5	U50	Cathode	350	80
		Anode	—	—

Circuit description is similar to that for model 1106 on page iv.

CONDENSERS

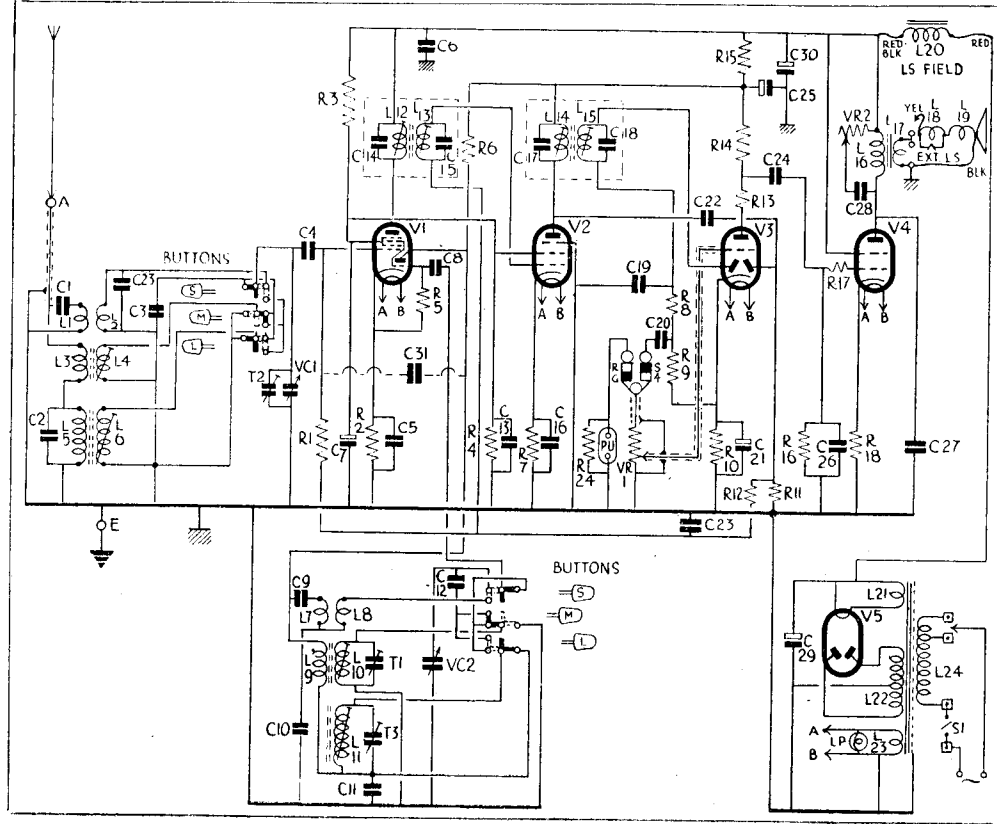
C	Mfds
1	50 mmfds
2	.0005
3	5 mmfds
4	.0001
5	.05
6	.05
7	.05
8	75 mmfds
9	50 mmfds
10	.005
11	.00025
12	.0005
13	.05
14	.0002
15	.0002
16	.05
17	.0002
18	.0002
19	.0001
20	.05
21	.50
22	.0001
23	.05
24	.05
25	.4
26	.00023*
27	.0023
28	.05
29	.15
30	.8
31	2.3 mmfds
32	2.3 mmfds

RESISTANCES

R	Ohms	R	Ohms
1	500,000	11	750,000
2	230	12	750,000
3	15,000	13	75,000
4	15,000	14	100,000
5	50,000	15	10,000
6	23,000	16	350,000
7	350	17	23,000
8	350,000	18	100
9	350,000	VR1	2 meg
10	2,300	VR2	50,000

WINDINGS

L	Ohms	L	Ohms
1	.7	14	5
2	Very low	15	5
3	.24	16	370
4	2.25	17	.5
5	.59	18	—
6	17.5	19	4
7	.8	20	950
8	Very low	21	Very low
9	1.75	22	315+315
10	3	23	Very low
11	7.5	24	30 (total)
12	5		



HMV 1106, 1504

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of the wave-scale and pointer. Turn gang to minimum and see that the pointer registers accurately on the 192m mark.

If adjustment is necessary, pointer can be slid up or down the drive wire.

SW Band.—Connect oscillator to A and E sockets via a SW dummy aerial device. Set receiver to SW, volume fully up and tone fully clockwise.

Inject signal of 50m (6mc), set tuning pointer to 50m, and adjust loops in L8 and L2 for maximum output. Repeat several times if necessary until no further increase in output can be obtained.

Check that receiver will tune in 16.8m (17.86mc).

MW Band.—Set gang to minimum, and tune oscillator to exactly 192m (1,562.5kc). Adjust T8 for maximum output.

Set oscillator and receiver (by scale) to 210m (1,429kc) and adjust T7 for maximum output.

Set oscillator and receiver (by scale) to 510m (588kc) and adjust the cores of L10 and L4 for maximum. Unless either of these coils has been changed very little adjustment should be necessary.

Repeat above operations if necessary.

LW Band.—Set oscillator and receiver to 1,000m (300kc) and adjust T9 and T4 for maximum output.

Set oscillator and receiver to 1,850m (162.2kc) and adjust L11 and L6 for maximum output.

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MW Band.—Switch receiver to MW, set condenser gang to minimum and inject a signal of 192m. Adjust T5 for maximum.

Tune receiver to 220m and inject a signal of that wavelength. Adjust T6 for maximum output.

Inject a signal of 530m and adjust the receiver pointer to this wavelength. Adjust the cores of L10 and L4 for maximum output.

LW Band.—Switch receiver to LW and tune receiver to 1,000m. Inject a signal of this wavelength and adjust T7 and T8 for maximum output.

Tune receiver to 1,750m, inject a signal of this wavelength, and adjust the cores of L11 and L6 to maximum output.

Press-button circuits

Remove the escutcheon, press button and adjust the top trimmer until the programme is heard. Adjust the lower trimmer for maximum.