

MARCONIPHONE

888

HMV 1105

Four-valve, plus rectifier, three-band superhet, with push-button wave-changing. For 195-255 v., 50-100 cycles.

Circuit.—Transformer coils, with iron cores on M. and L.W., lead through push-button wave switches to V1, the frequency changer. Iron-cored I.F. circuits link up V2, the amplifier, and V3, a double-diode triode connected in the usual manner. After the R.C. coupled output valve is a conventional full-wave rectifier, V5.

Wavebands: 16.5-50, 192-570 720-2,050 metres.

Image rejection is provided by C4. P.U. is provided for by a split socket which shorts V2 anode to earth via C14 to silence radio. Extension speakers should have approximately 5 ohms impedance. Consumption: 61 watts.

CONDENSER DRIVE

Wire S2447, No. 390/04001 is required; 48 in. for table models, 58 in. for consoles and radiograms.
Form a loop, diameter $\frac{1}{8}$ in. at one end and solder. Remove scale and pointer. Fit pointer to new wire, $9\frac{1}{2}$ in. from loop with table model, 12 in. with consoles, etc.
Turn gang to maximum, put loop on pin on drive disc. Pass clockwise round drum once, up over top pulleys, round drum again and fasten to end of spring.

GANGING

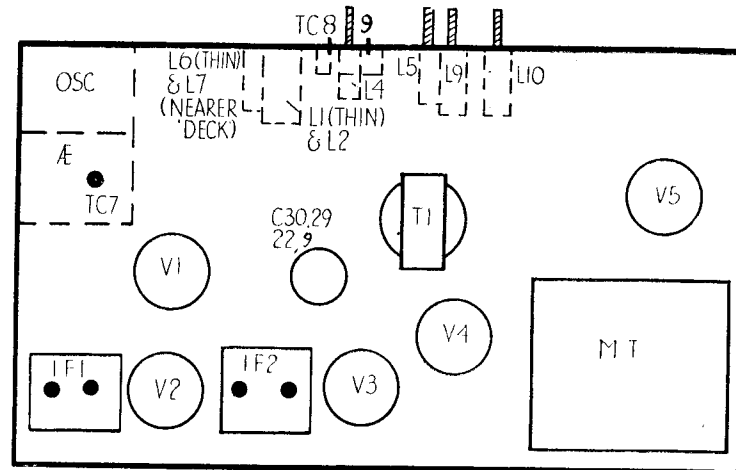
I.F. CIRCUITS.—Adjust at 465 kc.
CALIBRATION.—See that pointer registers with 192 metres with gang at minimum.
S.W. BAND.—Adjust loops in L7 and L2 at 50 metres.
Repeat operations and finally check receiver with time to 16.8 metres.
M.W. BAND.—Adjust TC8 at 192 metres, and TC7 at 220 metres.
Adjust cores of L9 and L4 at 530 metres.
Repeat all operations.
L.W. BAND.—Adjust TC9 at 720 metres, L10 at 1,750 metres, and L5 at 1,400 metres.
Readjust TC9 at 720 metres.

RESISTANCES

R	Ohms.	R	Ohms.
2	.. .23 meg.	12	.. 50,000
3	.. 350	13	.. .15 meg.
4	.. 50,000	14	.. .5 meg.
5	.. 23,000	16	.. 1.5 meg.
6	.. 23,000	17	.. .5 meg.
7	.. 23,000	18	.. 350
8	.. 350	19	.. 50,000
9	.. .1 meg.	22	.. .23 meg.
10	.. .5 meg.	VR1	.. 2 meg.
11	.. 2,300	VR2	.. 50,000

CONDENSERS

C	Mfds.	C	Mfds.
1	.. 35 mmfds.	18	.. 350 mmfds.
4	.. .0005	19	.. .05
6	.. .1	20	.. .05
7	.. .05	21	.. 50
8	.. 75 mmfds.	22	.. 4
9	.. 4	23	.. .0001
10	.. .05	24	.. .05
11	.. 50 mmfds.	25	.. 250 mmfds.
12	.. .005	26	.. .05
13	.. .05	27	.. 25
14	.. .05	29	.. 8
15	.. .0001	30	.. 16
16	.. .0005	31	.. 250 mmfds.
17	.. .05	32	.. .0023



Both trimmer condensers and permeability coils have to be adjusted when aligning this chassis. The set has push buttons for wave switching.

WINDINGS

L	Ohms.	L	Ohms.
1	.. .7	8	.. 1.75
2	.. .1	9	.. 3
3	.. 24	10	.. 7.5
4	.. 2.25	16	.. 6.5
5	.. 1.75	17	.. 2.75
6	.. .8	18	.. 4
7	.. .1	19	.. 4
		20	.. 59

VALVE VOLTAGES

V	Type	Anode	Screen	Cathode
1	X65	260	70	2.5
		90 (osc)		
2	KTW61	260	70	3
3	DH63	110	—	1.3
4	KT63	248	260	15.4
5	U50	355A.C.	—	365

Pilot lamp, 6-8v., .3 amp., No. 22704H.

Broken I.F. Caused Hum

AN A.C./D.C. superhet developed bad hum, and sensitivity was somewhat reduced. Smoothing equipment checked up correctly, as did the by-passing arrangements and most of the other normally suspect points.

Finally the trouble was found to be a break in the grid coil winding of the first I.F. transformer. The break had occurred near the "earth" end, and not the grid end, and so signals were able to get through fairly well.

The break was so near the end that a repair was possible, and with a slight readjustment of the trimmer associated with this coil, the receiver performed as well as ever.—MANDER BARNETT, Southampton.

