Addendum Sheet

FOR

"His Master's Voice"

Model 21

Five-Valve Broadcast Battery Receiver

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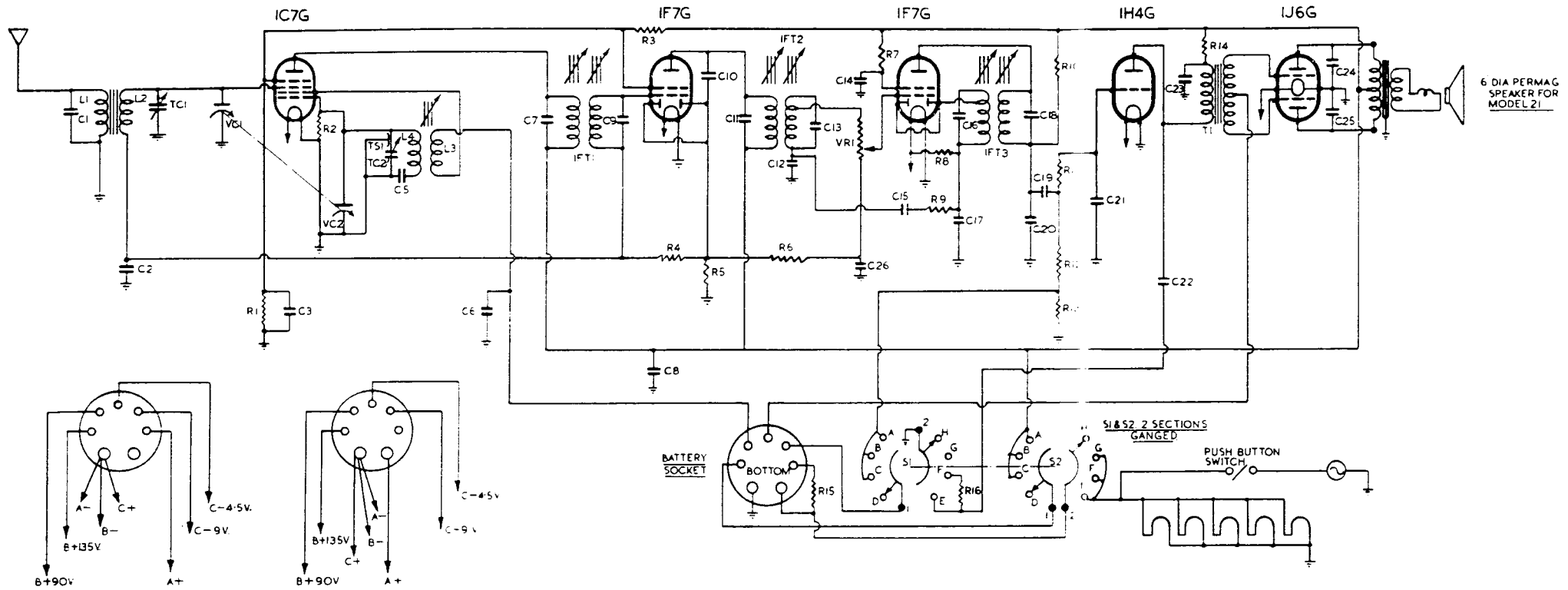
Use in conjunction with

SERVICE MANUAL

FOR

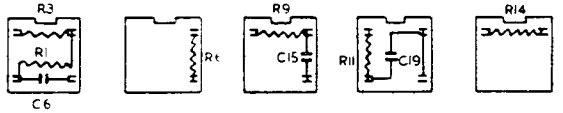
Models 22 and 330

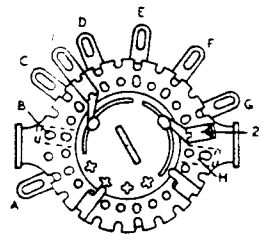


REF	PART NO.	DESCRIPTION
R1	W1X	30 000 OHMS 1/4 WATT
R2	H1X	50 000 OHMS 1/4 WATT
R3	W1X	30 000 OHMS 1/4 WATT
R4	P1XX	1 MEGOHM 1/4 WATT
R5	A A1X	2 MEGOHM 1/4 WATT
R6	A A1X	2 MEGOHM 1/4 WATT
R7	O1X	0·5 MEGOHM 1/4 WATT
R8	P1XX	1 MEGOHM 1/4 WATT
R9	J1X	100 000 OHMS 1/4 WATT
R10	J1X	100 000 OHMS 1/4 WATT
R11	J1X	100 000 OHMS 1/4 WATT
R12	P1XX	1 MEGOHM 1/4 WATT
R13	F1X	10 000 OHMS 1/4 WATT
R14	X1X	5000 OHMS 1/4 WATT
R15	AP0111S	RESISTOR (0·5 1 OHMS)
R16	X1X	5000 OHMS 1/4 WATT

REF	PART NO.	DESCRIPTION
C1	0243/Q	50 MMFD CONDENSER
C2	0013/M	0·05 MFD 200V
C3	0013/Q	0·1 MFD 200V
C4		
C5	0243/AM	400 MMFD
C6	0013/F	0·1 MFD 300V
C7	0243/AB	100 MMFD
C8	0013/A	0·5 MFD 400V.
C9	0243/AB	100 MMFD
C10	0243/Q	50 MMFD
C11	0243/AW	50 MMFD
C12	0243/O	250 MMFD
C13	0243/AB	100 MMFD
C14	0013/P	0·25 MFD 200V
C15	0013/J	0·01 MFD 400V
C16	0243/AB	100 MMFD
C17	0243/AE	100 MMFD
C18	0243/AB	100 MMFD
C19	0013/J	0·01 MFD 400V
C20	0243/AE	100 MMFD
C21	0243/Q	50 MMFD
C22	0013/H	0·05 MFD 300V
C23	0013/L	0·5 MFD 200V
C24	0013/O	0·002 MFD 600V
C25	0013/O	0·002 MFD 600V
C26	0013/Q	0·1 MFD 200V

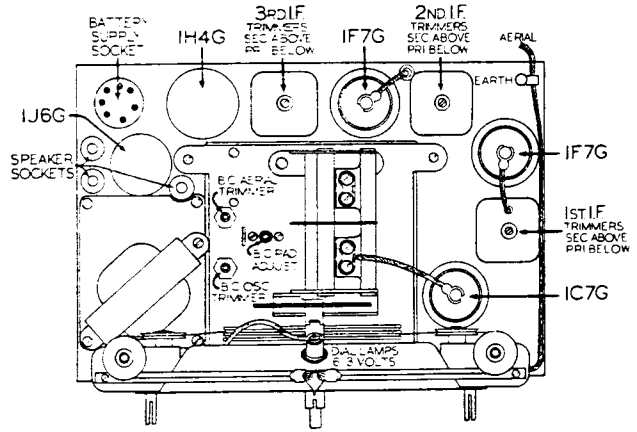
REF	DESCRIPTION	PART NO.
VC1 & VC2	380 MMFD 2 GANG CONDENSER	APC0057/A
TC1 & TC2	AIR TRIMMER	APD0786
TS	FIXED TRIMMER SHUNT 19·0MMF	APD0944
VR1	1 MEGOHM POTENTIOMETER	APD0877
	DIAL LAMP 2 VOLT SCREWCAP	
	6 DIA PERMAG SPEAKER FOR MODEL 21	APC0106
T1	DRIVER TRANSFORMER	APD1116
L1 & L2	BROADCAST AERIAL COIL	APD0896
L3 & L4	BROADCAST OSCILLATOR	APC0085/A
IFT1	1ST IF TRANSFORMER	APD1123
IFT2	2ND IF TRANSFORMER	APD1118
IFT3	3RD IF TRANSFORMER	APD1125



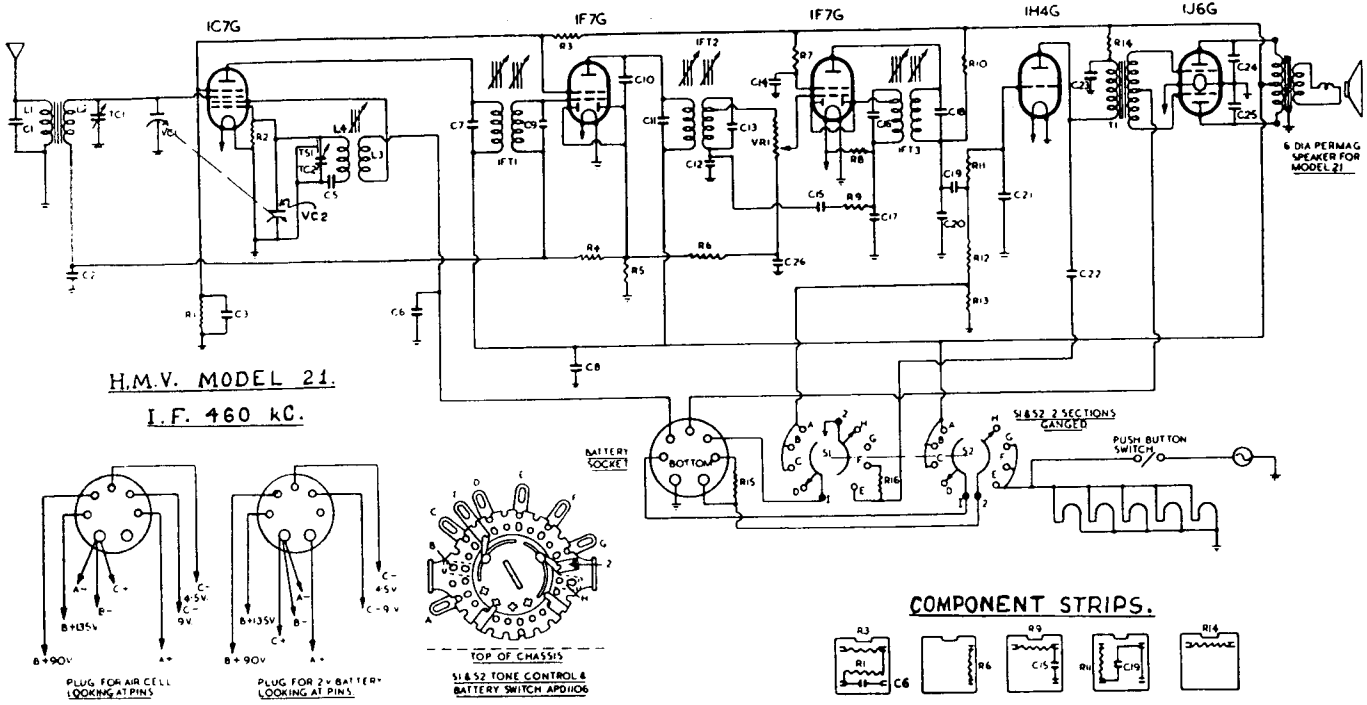


ADDENDUM SHEET
for Model 21

The drawings on this sheet show the circuit diagram and trimmer locations for the H.M.V. Model 21 Broadcast Mantel Receiver. The chassis employed is essentially similar to that used in Models 22 and 330, except for the omission of the wave-change switch, short-wave coils, and associated components, and the same Service instructions apply, with the exception of those dealing with short-wave alignment.



"H.M.V." Battery Operated Broadcast Mantel Model 21



General data on the two circuits shown above will be found on the facing page.

H.M.V. MODEL 21

Mantel, uses 6 inch, P.M. Speaker

Circuit appears on facing page.

COMPONENT VALUES.

RESISTORS.

R1, R3—30,000 ohms, ½ W.; **R2**—50,000 ohms, ½ W.; **R4, R8, R12**—1 megohm, ½ W.; **R5, R6**—2 megohms, ½ W.; **R7**—500,000 ohms, ½ W.; **R9, R10, R11**—100,000 ohms, ½ W.; **R13**—10,000 ohms, ½ W.; **R14, R16**—5,000 ohms, ½ W.; **R15** (APD1115)—0.51 ohms; **VR1**—1 megohm, volume control.

CONDENSERS.

VC1, VC2 (APC0057/A)—380 mmfd. 2-gang variable; **TC1, TC2** (APD0786)—air trimmer; **TS1** (APD0944)—19 mmfd, trimmer shunt; **C1, C10, C21**—50 mmfd.; **C2**—0.05 mfd., 200 v.; **C3, C26**—0.1 mfd., 200 v.; **C5** (0243/AM)—400 mmfd., padder; **C6**—0.1 mfd., 300 v.; **C7, C9, C13, C16, C18** (0243/AB)—100 mmfd., fixed I.F.T. trimmers; **C8**—0.5 mfd., 400 v.; **C11** (0243/AW)—50 mmfd., fixed I.F.T. trimmer; **C12**—250 mmfd.; **C14**—0.25 mfd., 200 v.; **C15, C19**—0.01 mfd., 400 v.; **C17, C20**—100 mmfd.; **C22**—0.05 mfd., 300 v.; **C23**—0.5 mfd., 200 v.; **C24, C25**—0.002 mfd., 600 v.

COILS, ETC.

L1, L2 (APD0896)—B.C. air. coil; **L3, L4** (APC0085/A)—B.C. osc. coil; **IFT1** (APD1123)—1st I.F. trans., 460 kC.; **IFT2** (APD1118)—2nd I.F. trans., 460 kC.; **IFT3** (APD1125)—3rd I.F. trans., 460 kC.; **T1** (APD1116)—Interstage coupling transformer.

OPERATING VOLTAGES

All voltages are measured to chassis with a "1,000 ohms per volt" meter, and readings should be within 10% of the specified values if all batteries are in a fully charged and new condition.

1C7G, Frequency Converter: Plate, 135 v.; screen, 45 v.; grid, zero; osc. anode grid, 90 v.

1F7G, 460 kC. 1st I.F. Amplifier and A.V.C. Rectifier: Plate 135 v.; screen, 45 v.; grid, zero.

1F7G, 460 kC. 2nd I.F. Amplifier, Detector and A.F. Voltage Amplifier: Plate, 65 v.; screen, 25 v.; grid, zero.

Note. Grid bias for the 1C7G and the two 1F7G's is obtained by means of the A.V.C. voltage supplied by the diode section of the 1C7G, 1st I.F. amplifier.

1J6G, Double-Triode Output: Each plate, 135 v.; grid, —4.5 v.

1H4G, Driver: Plate, 125 v.; grid, —9 v.

ALIGNMENT NOTES

As the I.F. channel is of the "flat-top" type, difficulty will be experienced when alignment in the normal manner is attempted. To facilitate "peaking" the I.F. amplifier stages when alignment is necessary, the 1st I.F. transformer should be temporarily "loaded" with a 100,000 ohms resistor shunted across the primary (i.e., between the "B+" and "plate" lugs), and a 50,000 ohms resistor between the grid of the 1st I.F. valve (1F7G) and chassis. In order to avoid introducing unwanted capacity into the I.F. circuits it is essential that these resistor leads be kept as short as possible and as far removed from all wiring and other components as is practicable.