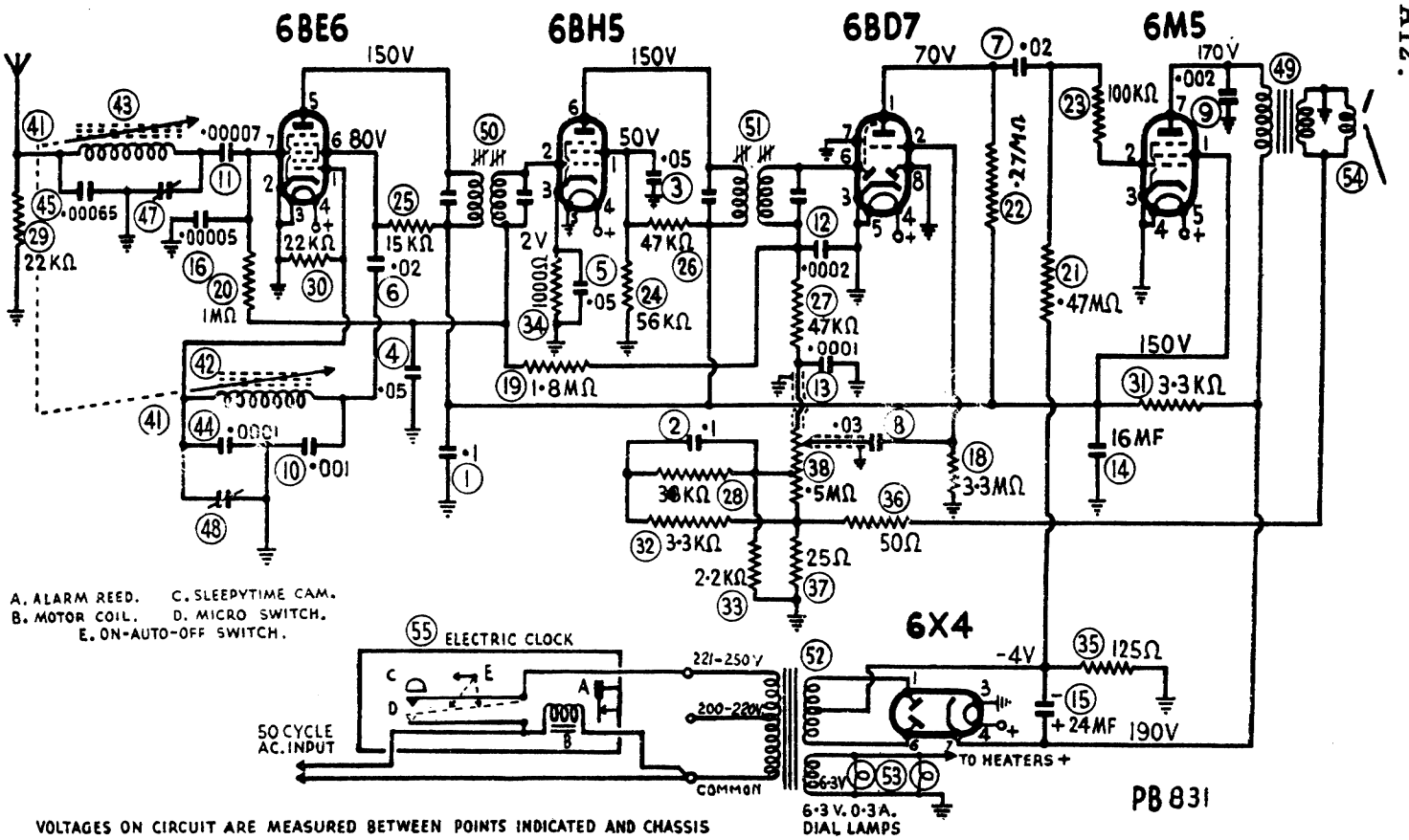
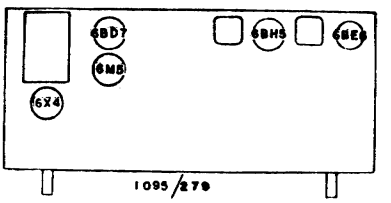


PB 831

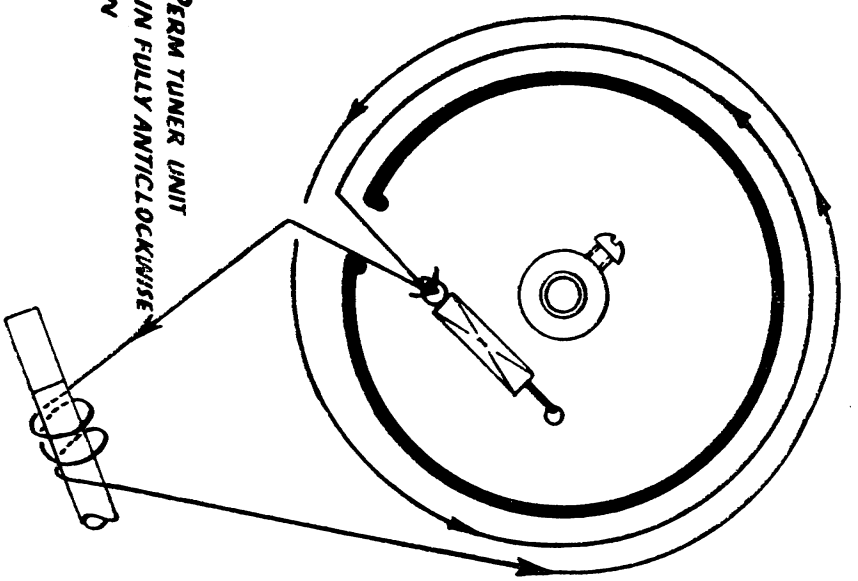
VOLTAGES ON CIRCUIT ARE MEASURED BETWEEN POINTS INDICATED AND CHASSIS WITH A DC. VACUUM TUBE VOLTMETER 230V. 50 CYCLE AC INPUT TO POWER TRANS. 221-250V. PRI. TAP. WHEN MEASURING VOLTAGES IN HIGH IMPED. CIRCUITS — LOWER READINGS THAN THOSE SHOWN WILL BE OBTAINED — IF A V.T.V.M. IS NOT USED DEPENDING ON THE RESISTANCE OF THE METER EG: 1000Ω/VOLT OR 20,000Ω/VOLT

IF. - 455 Kc/s.



PB745

NOTE: PERM TUNER UNIT SPINDLE IN FULLY ANTICLOCKWISE POSITION



DIAL DRIVE CORDING

The length of dial cord required is 3 ft. 6 ins. which includes 9 ins. spare for tying to the tension spring.

	Part No.
Dial cord	34/754
Dial spring	,, ,, 508/30C
Dial drum	,, ,, 18/785
Brass collar	,, ,, 56/678

MANTEL MODEL "ASQ" CLOCK RADIO

MANTEL MODEL "ASQ" CLOCK RADIO

ALIGNMENT PROCEDURE

EQUIPMENT

Signal Generator:
Output Meter :
Mica Capacitor : 0.01MF (for I.F. trans. alignment)
Dummy Antenna : 200 MMF. Mica Capacitor
Alignment Tool : Type M195

ALIGNMENT CONDITIONS

Load Impedance: 7000 ohms, output meter connected across spkr. trans. primary.
3.5 ohms, output meter connected across spkr. trans. secondary.
Output Level : 50 Milliwatts
Vol. Control: Max. vol. fully clockwise
Intermed. Freq.: 455 Kc/s.
Input Voltage : 230 Volts 50 Cycle AC. input to trans. 221-250 volt pri. tap.

Dummy Antenna: The 200MMF. dummy antenna must not be connected to the free end of the 25 ft. antenna during alignment, but must be connected to the antenna junction lug on the chassis. It is not necessary to have the 25 ft. antenna connected to the receiver during alignment, if it is connected it should be rolled up into a small hank.

ALIGNMENT: The I.F. transformer variable iron cores are accessible when the rear section of the cabinet is removed from the front section.

Operation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	Remove receiver from cabinet as detailed on page 5.			
2.	To signal grid of 6BH5 valve (pin No. 2)	455 Kc/s.	0.01 MF mica capacitor in series with generator	Leave grid wire attached to valve socket. Peak 2nd I.F. trans. pri. and sec. for max. output.
3.	To signal grid of 6BE6 valve (pin No. 7)	455 Kc/s.	0.01 MF mica capacitor in series with generator	Leave grid wire attached to valve socket. Turn perm tuner so that iron cores are fully out of windings on coil formers. Peak 1st IF trans. pri. and sec. for max. output.
4.				Repeat operations No. 2 and 3.
5.	Turn perm. tuner so that the iron cores are fully out of the windings on the coil formers and the unit is hard against the stop. Set the centre of the dial pointer on the end of travel spot on the dial reading near 1700 Kc/s.			
6.	To antenna junction lug on chassis	1000 Kc/s.	200 MMF mica capacitor in series with generator	Turn perm tuner until centre of dial pointer aligns with centre of spot on dial reading at 1000 Kc/s. Peak oscl. coil trimmer condenser then peak antenna trans. trim. cond. for max. output. Repeak oscl. coil trim. cond.
7.	Tuning range after alignment 535 - 1640 Kc/s.			
8.	Check logging at each end of the dial; then refit rear section of the cabinet.			

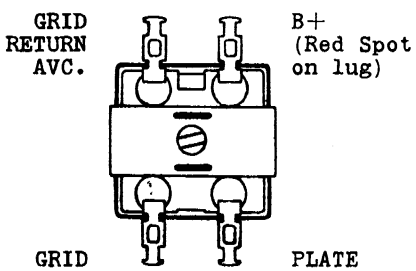
NOTE: Both iron cores are pre-set at the factory to an exact dimension of 2.275" between the extreme end of the former protruding through the rubber grommet, and the end of the iron cores in the former, when the unit is turned fully anti-clockwise and is hard against the stop.
If incorrect logging and mis-alignment are to be avoided, no adjustment of the iron cores must be made to vary this dimension. Both iron cores must have the same colour identification spot on the end of the iron core.

INSTRUCTIONS FOR CHANGING MAINS VOLTAGE INPUT TAP FOR 200-220 VOLT OPERATION

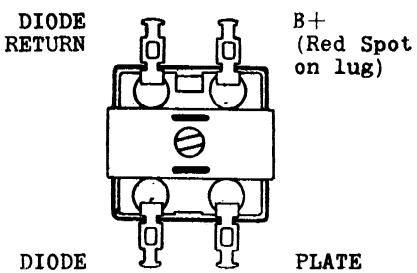
MAINS VOLTAGE: The mains voltage adjustment tap should be adjusted as follows: For any A.C. voltage between 200V. and 220V. on the 200-220V. tap and for any A.C. voltage between 221V. and 250V. on the 221-250V. tap.

A. The receiver chassis does not have to be removed from the cabinet for this adjustment.
B. Switch the receiver off and DISCONNECT THE RECEIVER MAINS LEAD PLUG FROM THE POWER POINT SOCKET.
C. Unscrew and remove the self tapping screw and washer from each of the four corners of the rear section of the cabinet.
D. Prise rear section of cabinet away from front section.
E. The transformer primary mains tap terminal strip is located on the top right hand end of the chassis.
F. The lead from the electric clock which is soldered to the 221-250 volt tap is to be unsoldered and resoldered to the tap terminal marked 200-220 volt.

1st IF. TRANS.



2nd IF. TRANS.



ANTENNA TRANS.

Start of winding - furthest from mounting end - Antenna.
Finish of winding - nearest to mounting end - Grid.

OSCL. COIL

Start of winding - furthest from mounting end - Junction of circuit Nos. 6 and 10.
Finish of winding - nearest to mounting end - Oscl. grid.

POWER TRANS.

(PT938) 50 cycle
Pri. red lead - common
,, green lead - 200-220V.
,, black lead - 221-250V.

HT. Sec.
blue lead - start
yellow lead - centre tap
blue lead - finish

LT. Sec. (two windings in parallel)
start and finish
in winding wire