

# SERVICE MANUAL

## AWA B105

### AM/FM DIGITAL CLOCK RADIO

<b>Circuit</b>	<b>SPECIFICATIONS</b> 10 transistors, 5 diodes, superheterodyne
<b>Frequency</b>	AM 540KHz – 1600KHz FM 88MHz – 108MHz
<b>Sensitivity</b>	AM 300 micro v/M 50 mW Output FM 10 micro v/M 500 mW Output
<b>I.F.</b>	AM 455KHz FM 10.7MHz
<b>Output Power</b>	300 mW (max) 200 mW 10% THD.
<b>Speaker Power</b>	3" 8 ohms 240 V AC 50Hz

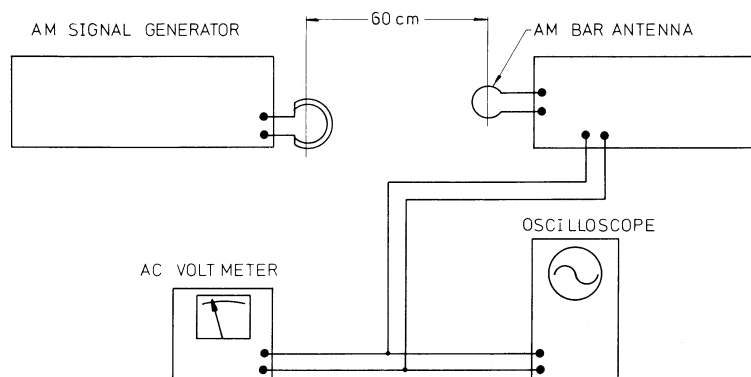


### ALIGNMENT INSTRUCTION

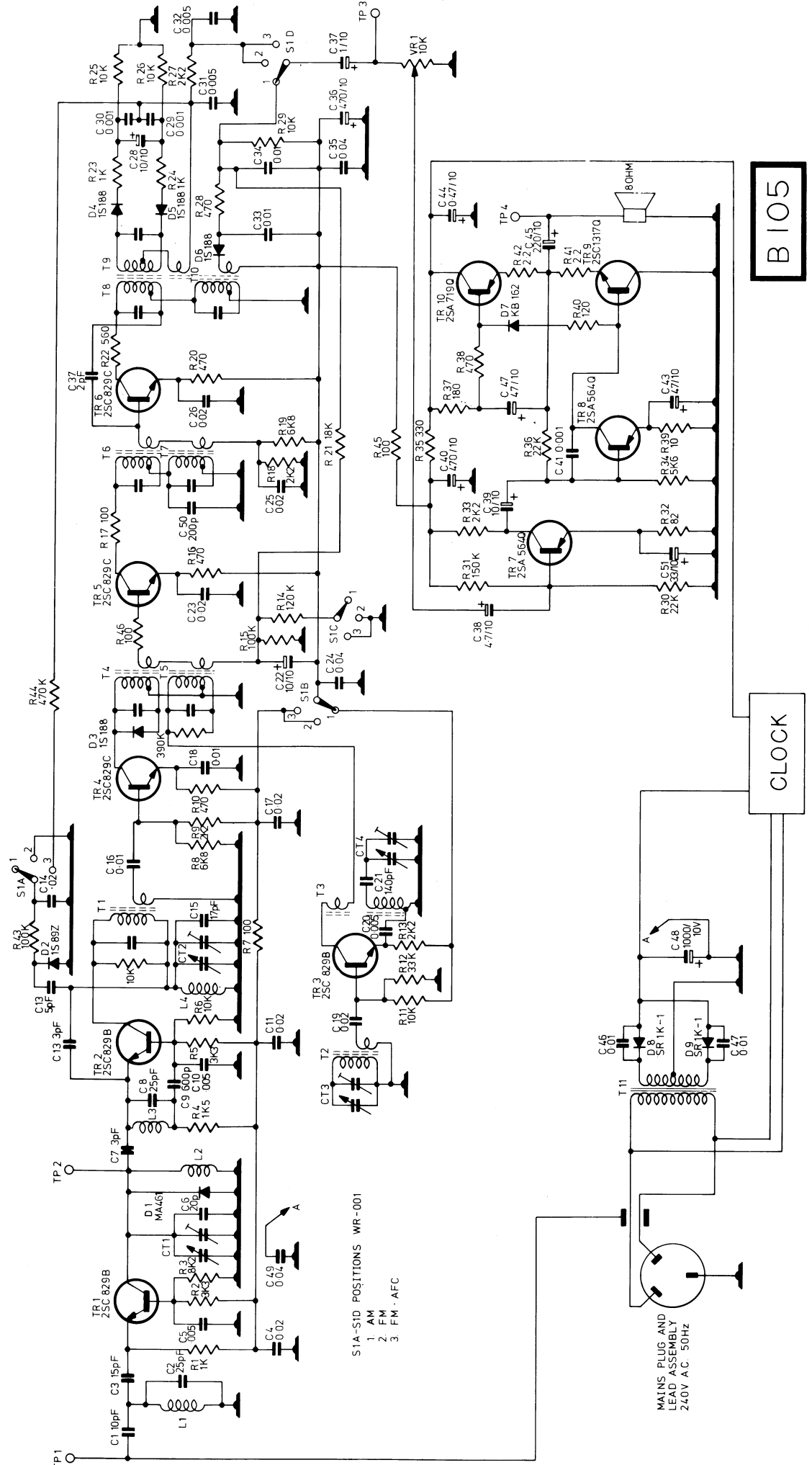
#### AM Alignment

NOTES: Set Band Switch to AM position.  
Set Volume control to Maximum position.  
Set Signal Generator for 1000 KHz (30% modulation)

STEP	SIG. GEN. COUPLING	SIG. GEN. FREQ.	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	Make a loop of several turns of wire and radiate signal into receiver	455 KHz (30% Mod)	Tuning gang fully open.	Connect output meter across speaker voice coil	T-5 T-7 T-10	Adjust for maximum output.
2.	As above.	1650 KHz	1650 KHz	As above.	CT-4	As above.
3.	As above.	525 KHz	525 KHz	As above.	T-3	Adjust for maximum output. Repeat steps 2 and 3.
4.	As above.	1400 KHz.	1400 KHz.	As above.	CT-3	Adjust for maximum output.
5.	As above.	600 KHz.	600 KHz.	As above.	T-2	Adjust for max. output by sliding along ferrite rod. Repeat steps 4 and 5.



**B105**



ST1A-SID POSITIONS WR-001  
 1. AM  
 2. FM  
 3. FM-AFC

MAINS PLUG AND LEAD ASSEMBLY  
 240V A.C. 50HZ

CLOCK

## FM RF Alignment

NOTES: Set Band Switch in FM position.  
Using FM Sweep Generator and Oscilloscope.

Step	SWEEP GEN. COUPLING	SWEEP GEN. FREQ.	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	High side to TP-1. Low side to chassis.	109 MHz (109 MHz marker).	109 MHz	Vert. amp. to TP-3 Low side to chassis.	CT-2	Adjust for maximum.
2.	As above.	87 MHz (87 MHz marker).	87 MHz.	As above.	L-4	Adjust for maximum. Repeat steps 1 and 2.
3.	As above.	106 MHz (106 MHz marker).	106 MHz.	As above.	CT-1	Adjust for maximum.
4.	As above.	90 MHz	90 MHz.	As above.	L-2	Adjust for maximum. Repeat steps 3 and 4.
5.	As above.	98 MHz	98 MHz	As above.	L-1	Adjust for maximum.

# PARTS LIST MODEL B105

### REF. NO. DESCRIPTION

HD-2	Transistor 2SC-829B	— TR1/TR2/TR3
HD-3	Transistor 2SC-829C	— TR4/TR5/TR6
HD-4	Transistor 2SA-564Q	— TR7/TR8
HD-5	Transistor 2SA-719Q	— TR10
HD-6	Transistor 2SC-1317Q	— TR9
HD-7	Silicon Diode MA-161	— D1
HD-8	Germanium Diode IS-188FM	— D3/D4/D5
HD-9	Germanium Diode IS-188AM	— D6
HD-10	Variable Capacitor IS-892	—
HD-11	Silicon Rectifier KB-162	— D7
HD-12	Silicone Diode SKIR-1	— D8/D9
HD-13	FM Antenna Coil DS-002	— L1
HD-14	AM.RF Coil DS-001	— L2
HD-15	FM.OSC.Coil DS-009	— L4
HD-16	FM. Trap Coil DS-005	— L3
HD-17	FM.IFT. Coil CA-001	— T1/4/6
HD-18	FM.DET. (P) Coil CM-001	— T8
HD-19	FM.DET. (S) Coil CM-002	— T9

### REF. NO. DESCRIPTION

HD-20	AM.Antenna Coil BA-013	— T2
HD-21	AM.OSC. Coil DJ-001	— T3
HD-22	AM.IFT. Coil	BW-004 — T5
HD-23	AM.IFT. Coil	BW-005 — T7
HD-24	AM.IFT. Coil	BW-006 — T10
HD-76	Rotary Switch	WR-001 —
HD-77	Speaker	SA-001 — 8ohm
HD-78	Power Transformer	AP-006 — w/AC cord
HD-79	Digital Clock	DT-40B57
HD-81	Tuning Knob Retainer	
HD-86	Antenna Holder	
HD-87	Dial Spring	
HD-93	Front Panel	
HD-95	Tuning Knob	
HD-96	Selector Knob	
HD-97	Volume Knob	
HD-98	Alarm Knob	
HD-99	Timer Knob	
HD-100	Sleep-set Knob	
HD-101	Switching Knob	

**NOTE:** Always quote the model number and the part number when ordering replacement parts.

*The manufacturers reserve the right to vary specifications and/or materials as may be deemed necessary or desirable at any time.*

## FM I.F. Alignment

NOTES: Set Band Switch in FM position.  
Using Sweep Generator and Oscilloscope.

STEP	SIGNAL GEN. COUPLING	SIGNAL GEN. FREQ.	DIAL SETTING	INDICATOR	ADJUST.	REMARKS
1.	High side to TP-2 . Low side to chassis.	10.7 MHz (10.7 MHz marker).	Tuning gang fully open	Vert. amp. to TP-3 Low side to chassis.	T-1 T-4 T-6 T-8	Adjust for maximum gain.
2.	As above.	As above.	As above.	As above.	T-9	Adjust to place marker at centre of 'S' curve as shown in fig A. Slightly readjust T-8 for maximum amplitude and symmetry of response curve. Repeat steps 6 and 7 for more accurate alignment.

FM SIGNAL GENERATOR

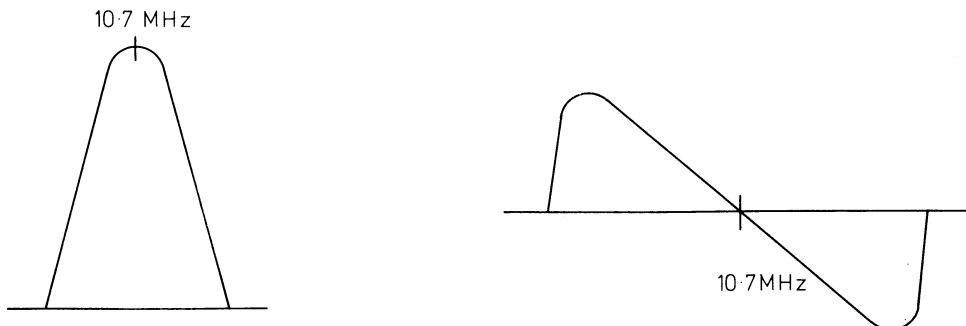
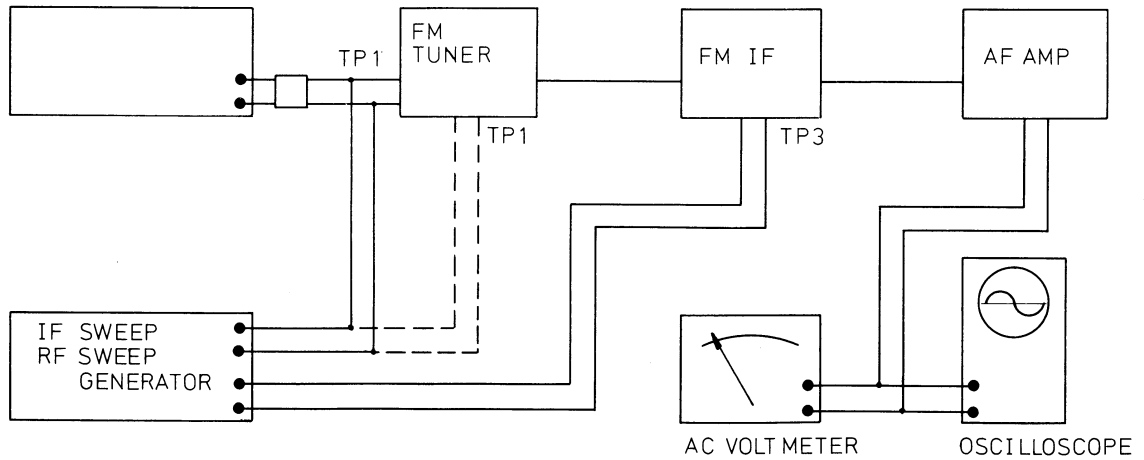


FIG- A