

ICF-480L

SERVICE MANUAL

AEP Model
UK Model

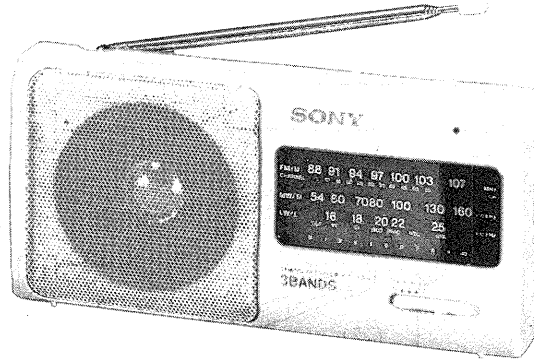


Photo : White

SPECIFICATIONS

Frequency range	FM : 87.6-107.5 MHz MW : 531-1,602 kHz LW : 153-255 kHz
Antennas	FM: Telescopic antenna MW/LW: Built-in ferrite bar antenna
Speaker	Approx. 7.7 cm (3 inches) dia.
Power output	250 mW (at 10% harmonic distortion)
Output	Earphone jack (minijack)
Power requirements	4.5 V DC, three R6 (size AA) batteries DC IN 4.5 V jack accepts: Sony AC-E45M AC power adaptor (not supplied)
Battery life	Approx. 27 hours with Sony batteries SUM-3 (NS) Approx. 55 hours with Sony alkaline batteries AM3
Dimensions	Approx. 190.5 x 96 x 40.5mm (w/h/d) (7 1/2 x 3 7/8 x 1 5/8 inches) incl. projecting parts and controls with the carrying handle pushed in
Weight	Approx. 430 g (15 oz), incl. batteries

Features

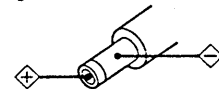
- TUNE indicator lights during radio reception.
- TONE control facilitates fine tone adjustment.
- Two different power sources: batteries and house current.

Design and specifications subject to change without notice.

Notes

- When the AC power adaptor is not used, be sure to unplug it both from the DC IN 4.5 V jack and from a wall outlet.
- Use only the AC power adaptor AC-E45M (not supplied). Do not use any other AC power adaptor.

Polarity of the plug



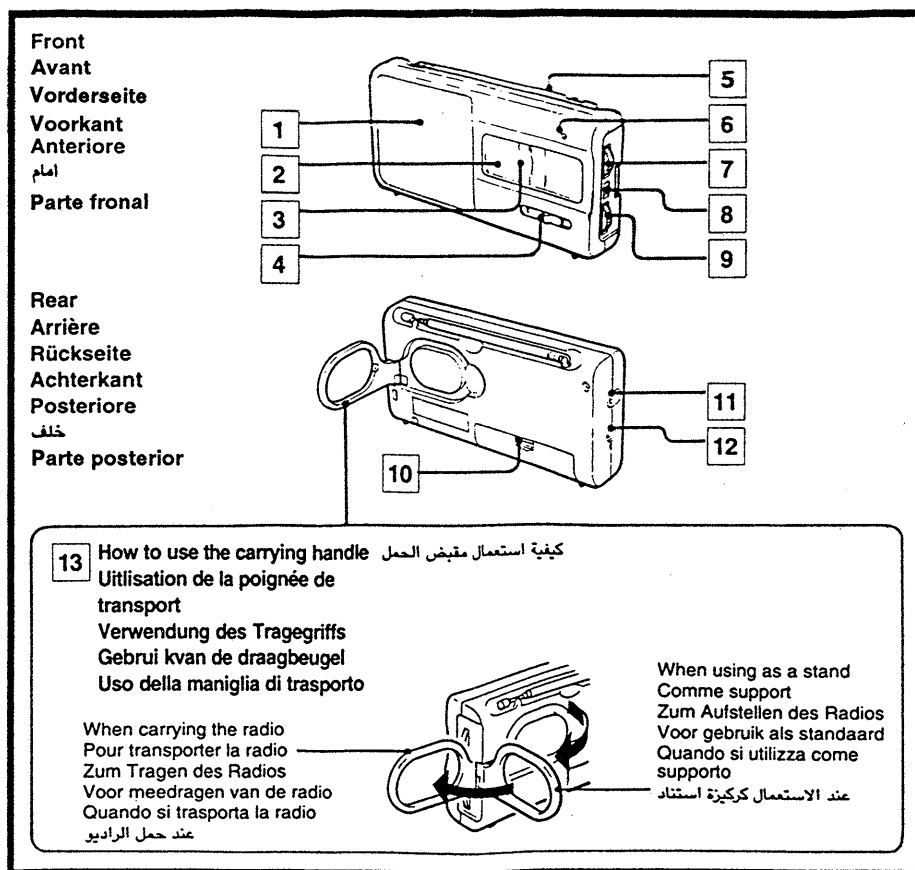
AC power adaptor AC-E45M


FM/MW/LW 3BAND RECEIVER
SONY®

SECTION 1 GENERAL

This section is extracted from instruction manual.

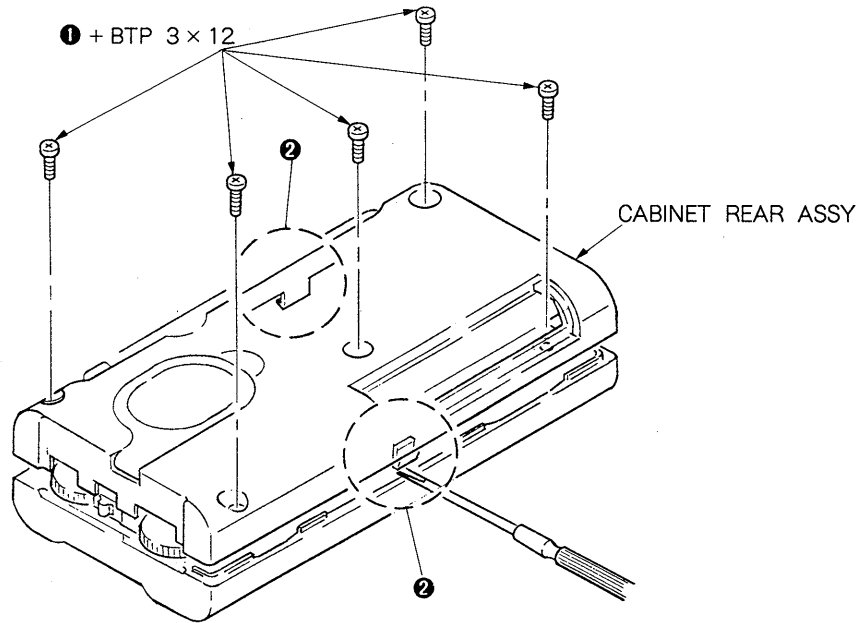
LOCATION AND FUNCTION CONTROLS



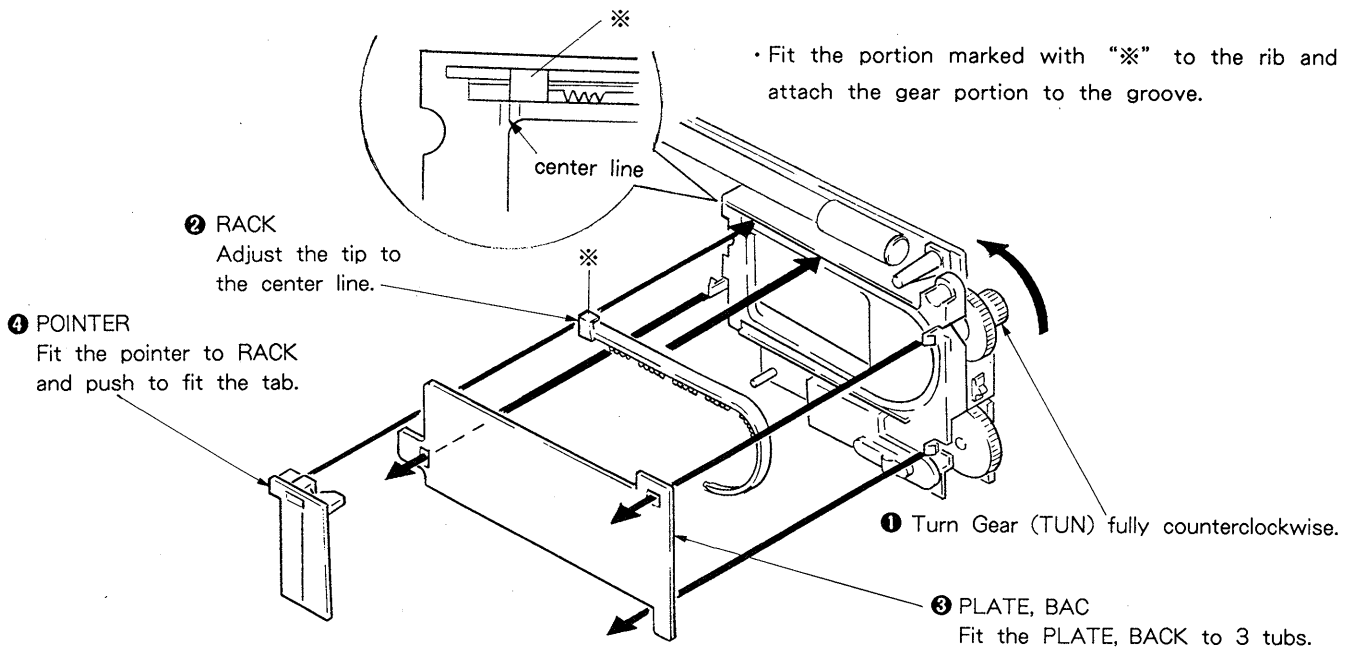
- 1** Speaker
- 2** Dial scale
- 3** Dial pointer
- 4** BAND selector
(FM/MW/LW)
- 5** Telescopic antenna
- 6** TUNE (tuning) indicator
- 7** TUNE (tuning) control
- 8** TONE control
To obtain clear treble, set to "H" (high).
To reinforce bass, set to "L" (low).
- 9** POWER/VOL (volume) control
Turn left to increase the volume.
- 10** Battery compartment
- 11**  (earphone) jack
The sound through the speaker cannot be heard when an earphone is connected to the jack.
- 12** DC IN 4.5 V jack
- 13** Carrying handle

SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.



INSTALLING THE DIAL POINTER

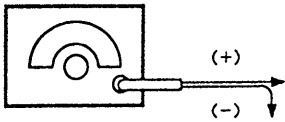


SECTION 3 ELECTRICAL ADJUSTMENTS

RADIO SECTION

FM Section

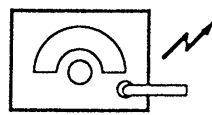
FM rf signal generator



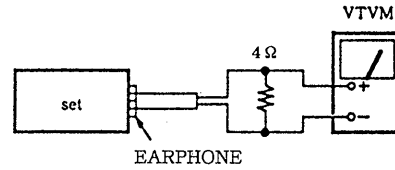
400Hz, 30% FM modulation
frequency deviation $\pm 22.5\text{kHz}$
output level: at low as possible

AM Section

AM rf signal generator



400Hz, 30% AM modulation
Output level: as low as possible



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L5	87.35MHz
CT4	108.05MHz

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T1	455kHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	87.35MHz
CT3	108.05MHz

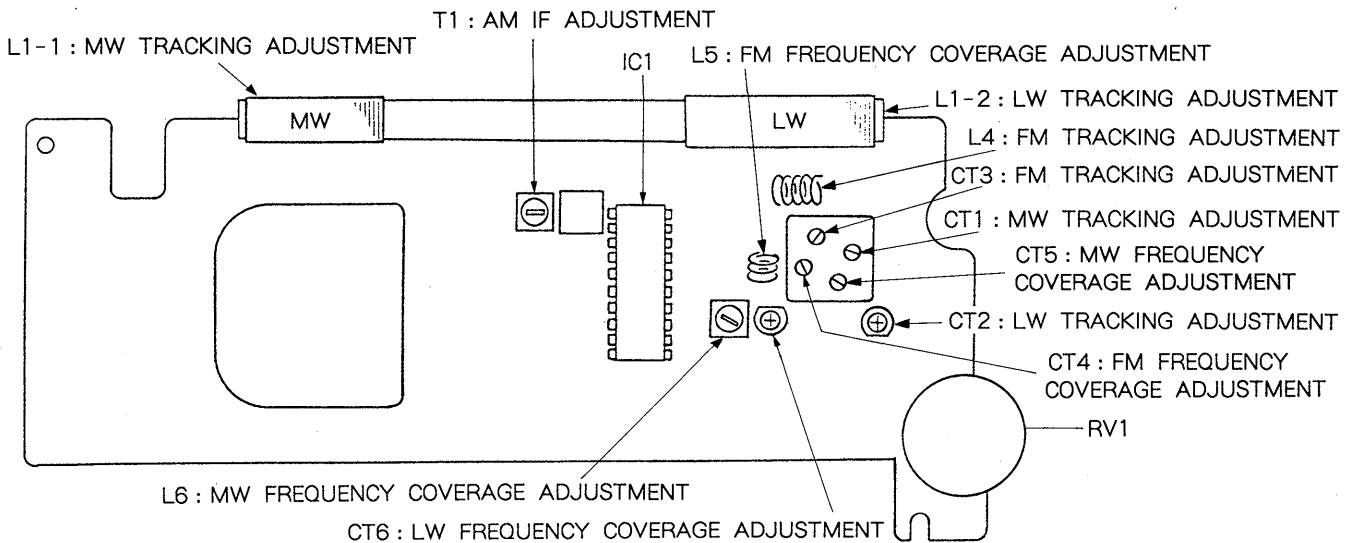
MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L6	520kHz
CT5	1,650kHz

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT6	145kHz
confirmation	260kHz

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-1	620kHz
CT1	1,400kHz

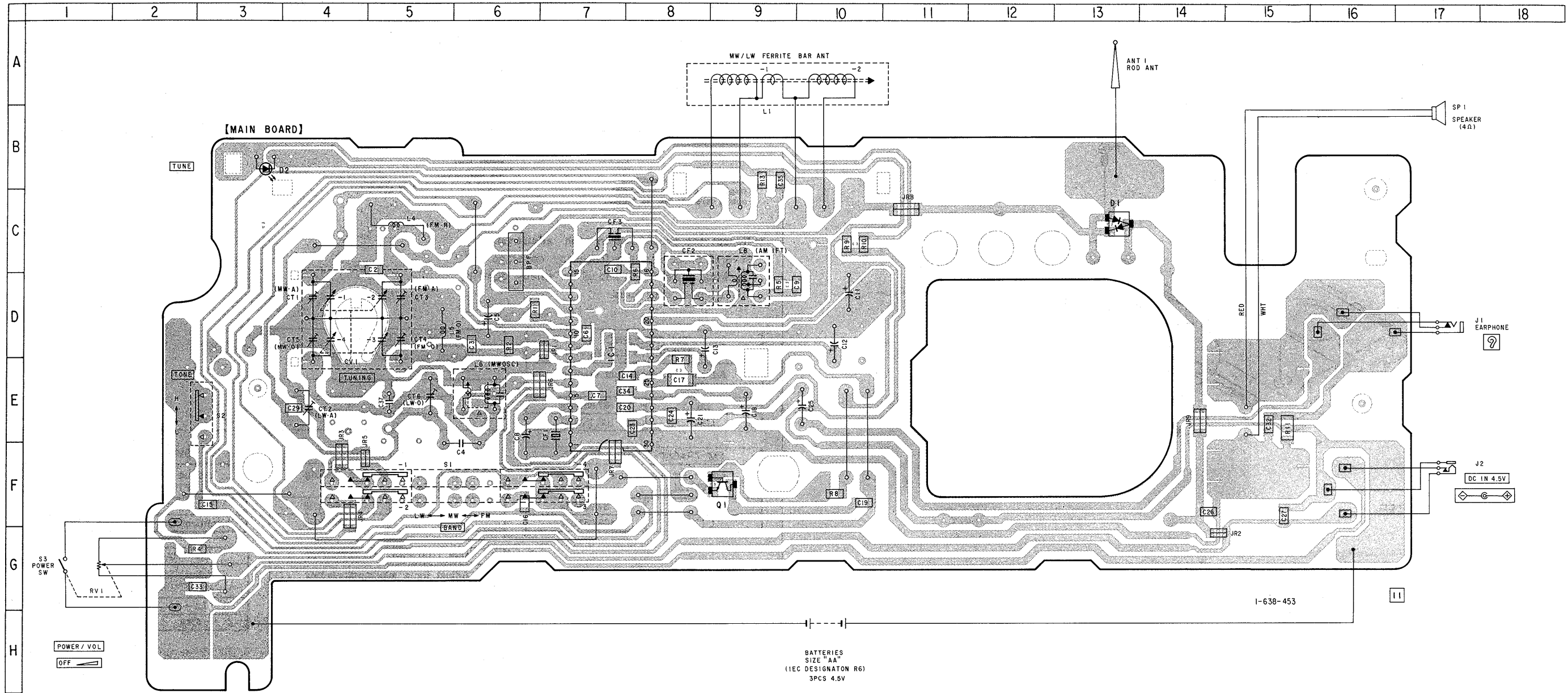
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-2	160kHz
CT2	240kHz

Adjustment Location : (COMPONENT SIDE)



SECTION 4
DIAGRAMS

4-1. PRINTED WIRING BOARD



• Semiconductor Location

Ref. No.	Location
D1	C-13
D2	B-3
Q1	F-8
IC1	D-7

Note on Mounting Diagram :

- : Parts extracted from the component side.
- : indicates side identified with part number.

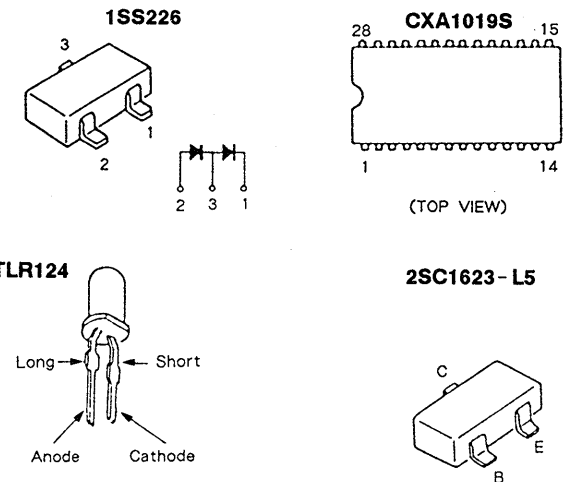
Note on Schematic Diagram :

- All capacitors are in μF unless otherwise noted. pF: μpF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{2} W$ or less unless otherwise specified.
- Δ : internal component.

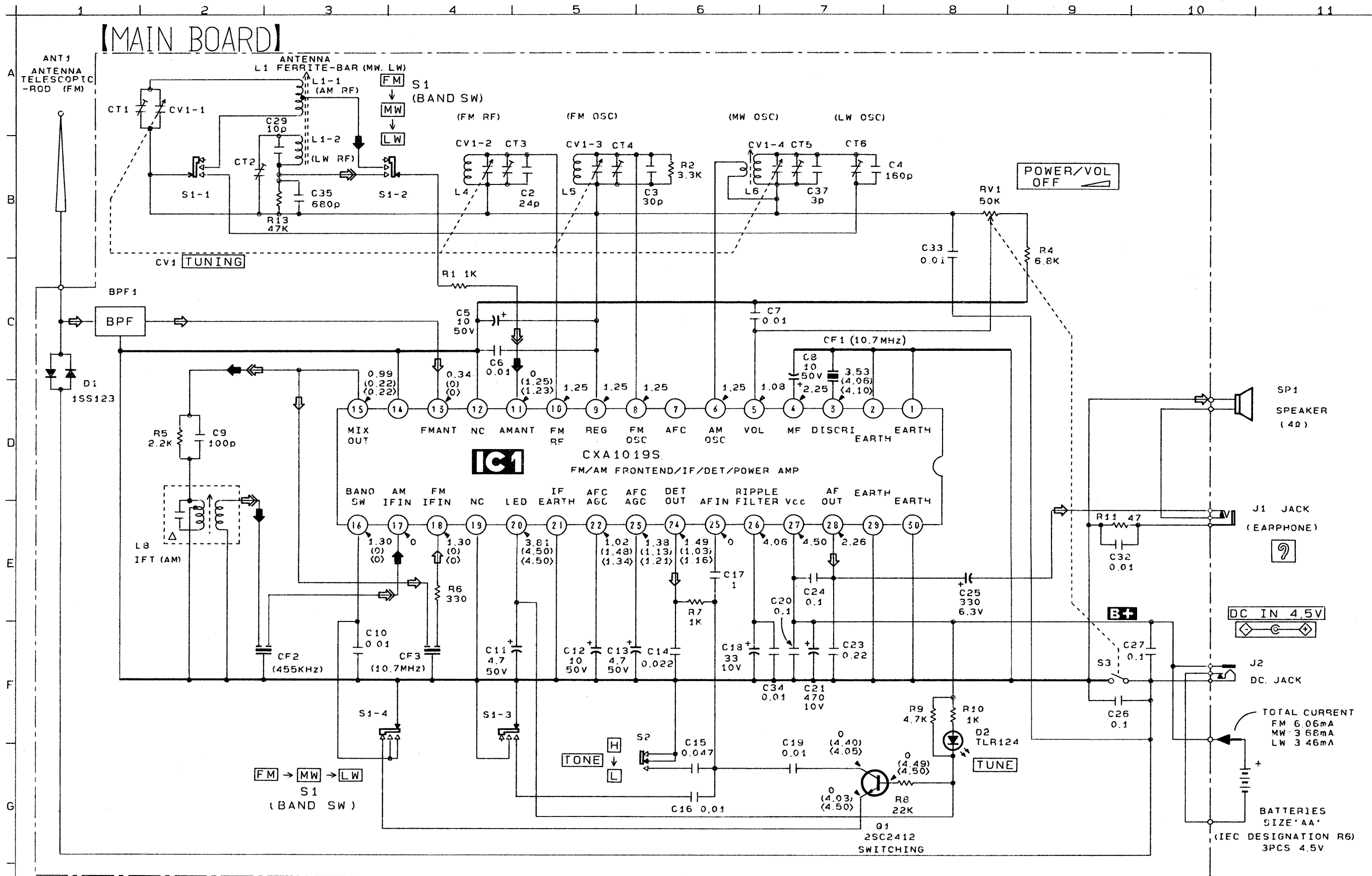
• B+ : B+ Line

- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (input impedance $10 M\Omega$). Voltage variations may be noted due to normal production tolerances.
- no mark : FM
() : MW
< > : LW
- Signal path.
◁ : FM
▶ : MW
⇔ : LW

SEMICONDUCTOR LEAD LAYOUTS



4-2. SCHEMATIC DIAGRAMS



MAIN

Ref. No.	Part No.	Description	Remarks
< JACK >			
J1	1-563-836-21	JACK (EARPHONE)	
J2	1-580-681-21	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 4.5V)	
< JUMPER RESISTOR >			
JR1	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR2	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR3	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR4	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR5	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR6	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR7	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR8	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR9	1-216-296-00	METAL CHIP 0 5% 1/8W	
< COIL >			
L1	1-402-569-11	ANTENNA, FERRITE-BAR (LW/MW)	
L4	* 1-422-320-11	COIL, AIR-CORE, RF (FM)	
L5	* 1-422-294-21	COIL, AIR-CORE, OSC (FM)	
L6	1-406-028-00	COIL, OSC (MW)	
L8	1-404-341-00	TRANSFORMER, 1F (AM)	
< TRANSISTOR >			
Q1	8-729-120-28	TRANSISTOR 2SC1623-L5	
< RESISTOR >			
R1	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R2	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R4	1-216-069-00	METAL CHIP 6.8K 5% 1/10W	
R5	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R6	1-216-037-00	METAL CHIP 330 5% 1/10W	
R7	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R8	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R9	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R10	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R11	1-216-166-00	METAL GLAZE 47 5% 1/8W	
R13	1-216-089-00	METAL CHIP 47K 5% 1/10W	

Ref. No.	Part No.	Description	Remarks
< VARIABLE RESISTOR >			
RV1	1-241-555-11	RES, VAR, CARBON 50K (POWER OFF/VOL, S3:POWER OFF)	
< SWITCH >			
S1	1-571-610-21	SWITCH, SLIDE (BAND, FM-MW-LW)	
S2	1-552-370-00	SWITCH, SLIDE (TONE, H-L)	

MISCELLANEOUS			

ANT1	1-501-362-11	ANTENNA, TELESCOPIC-ROD (FM)	
SP1	1-544-518-11	SPEAKER	

ACCESSORIES & PACKING MATERIALS			

	3-336-617-01	BAG, PROTECTION	
	*3-369-732-01	INDIVIDUAL CARTON	
	*3-370-051-01	CUSHION, CORRUGATED FIBER BOARD	
	3-753-406-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH, ITALIAN, ARABIC)	

HARDWARE LIST			

#1	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#2	7-685-648-79	SCREW +BTP 3X12 TYPE2 N-S	

