

# ICF-380L

## SERVICE MANUAL

*AEP Model*



### SPECIFICATIONS

Frequency range

	Frequency range	
	FM	LW
AEP model	87.6 – 107.5MHz	153 – 255kHz
East European model	65 – 108MHz	153 – 255kHz

Intermediate frequency FM: 10.7 MHz

Antennas

FM: Telescopic antenna

LW: Built-in ferrite bar antenna

Speaker

Approx. 5.7 cm (2 1/4 inches) dia.

Power output

150 mW (at 10% harmonic distortion)

Output

Earphone jack (minijack)

Power requirements

3 V DC, two R6 (size AA) batteries

Battery life

Approx. 30 hours of listening (for four hours a day at

a normal volume), using Sony batteries SUM-3 (NS)

Approx. 62 hours, using Sony alkaline batteries

AM3

Dimensions

Approx. 154.5 x 79 x 34.5 mm (w/h/d)

(6 1/8 x 3 1/8 x 1 3/8 inches)

incl. projecting parts and controls with the carrying

handle pushed in

Weight

Approx. 260 g (9.2 oz), incl. batteries


Design and specifications subject to change without notice.

FM / LW RECEIVER  
**SONY**®

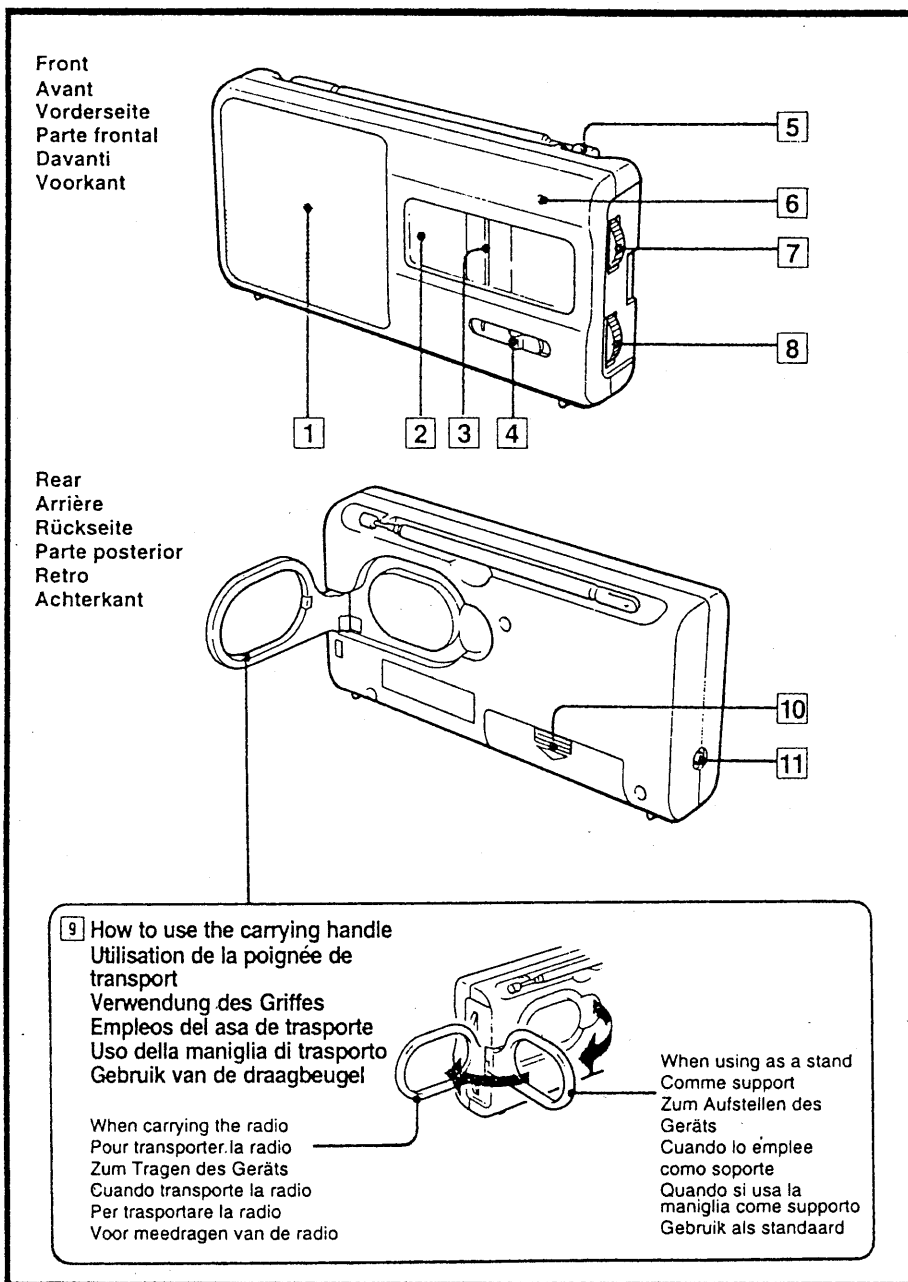
SECTION 1  
GENERAL

This section is extracted from instruction manual.

# A Location of Controls

- 1 Speaker
- 2 Dial scale
- 3 Dial pointer
- 4 BAND selector
- 5 Telescopic antenna
- 6 TUNE (tuning) indicator
- 7 TUNE (tuning) control
- 8 POWER/VOL (volume) control  
Turn left to increase the volume.
- 9 Carrying handle
- 10 Battery compartment
- 11  (earphone) jack  
The sound through the speaker cannot be heard when an earphone is connected to the jack.

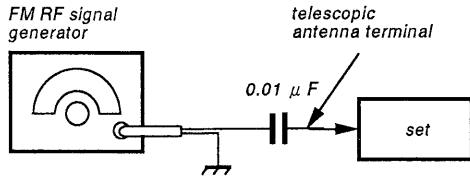
## A



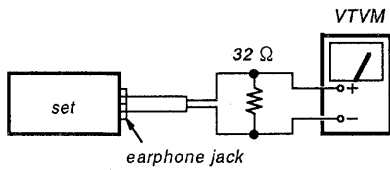
## SECTION 2 ADJUSTMENTS

### FM SECTION

BAND SWITCH : FM



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



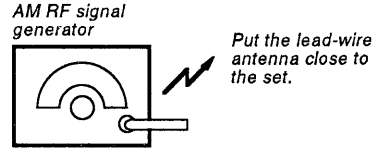
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	87.35 (64)MHz
CT1-3	108.05 (109.5)MHz

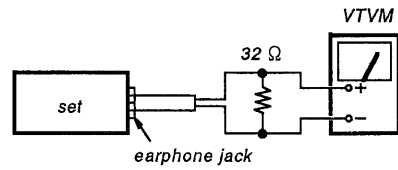
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	87.35 (68)MHz
CT1-2	108.05 (102)MHz

### LW SECTION

BAND SWITCH : LW



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.

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L5	145kHz
CT1	265kHz

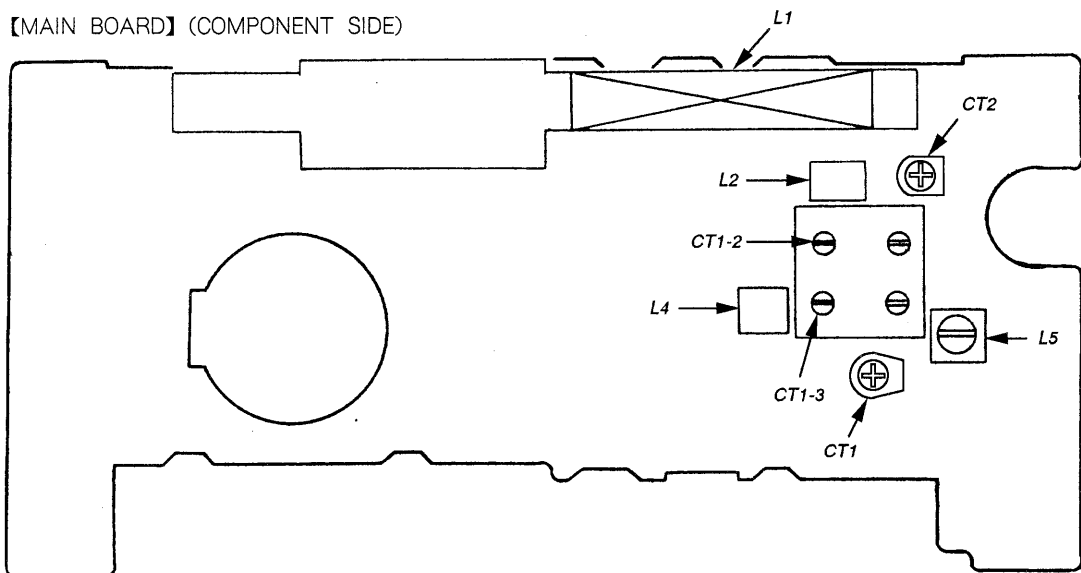
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	160kHz
CT2	240kHz

NOTE: no mark : AEP model.

( ) : East European model

Adjustment Location : MAIN BOARD

【MAIN BOARD】 (COMPONENT SIDE)

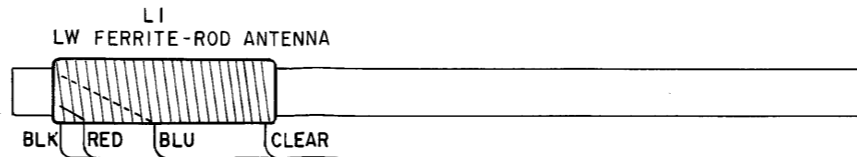


# MEMO

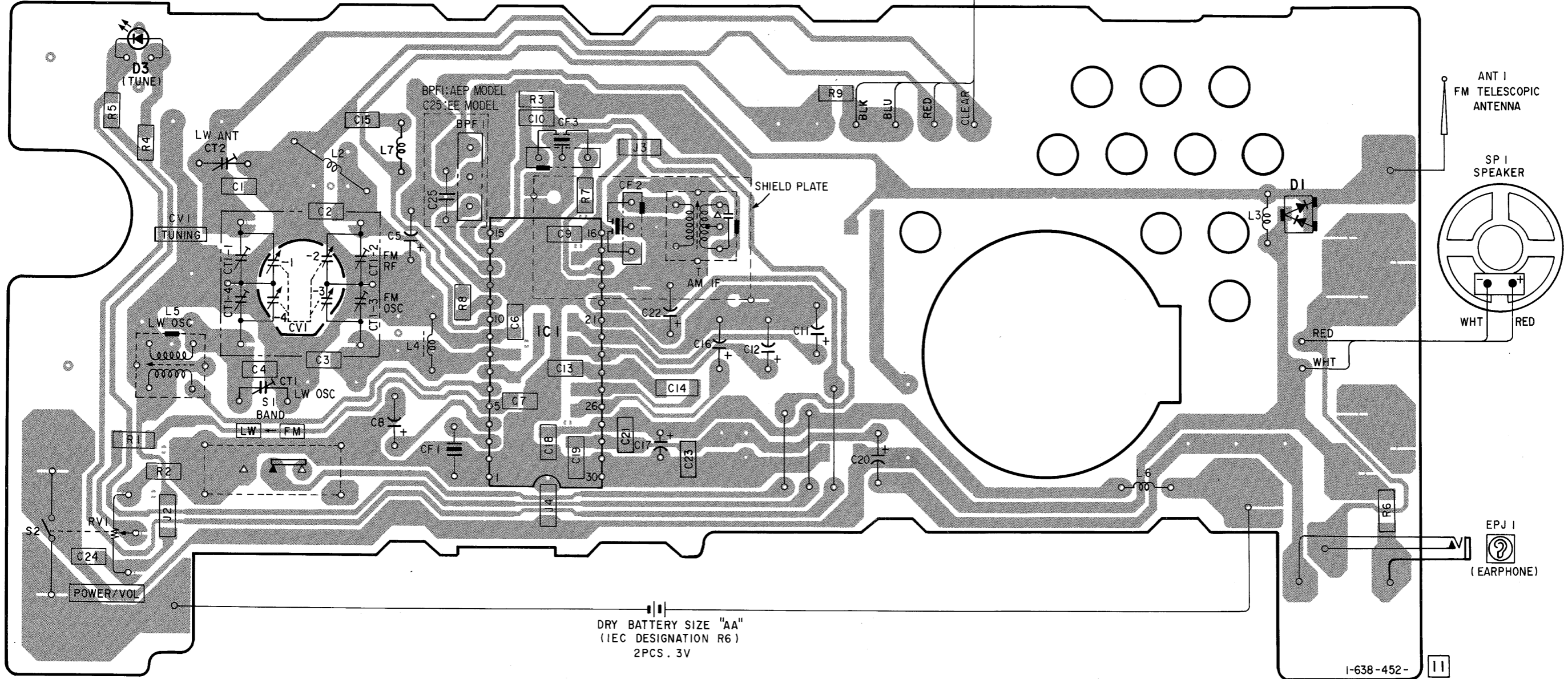
A series of horizontal dotted lines for writing.

SECTION 3  
DIAGRAMS

3-1. PRINTED WIRING BOARD



【 MAIN BOARD 】

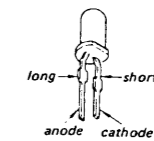


02

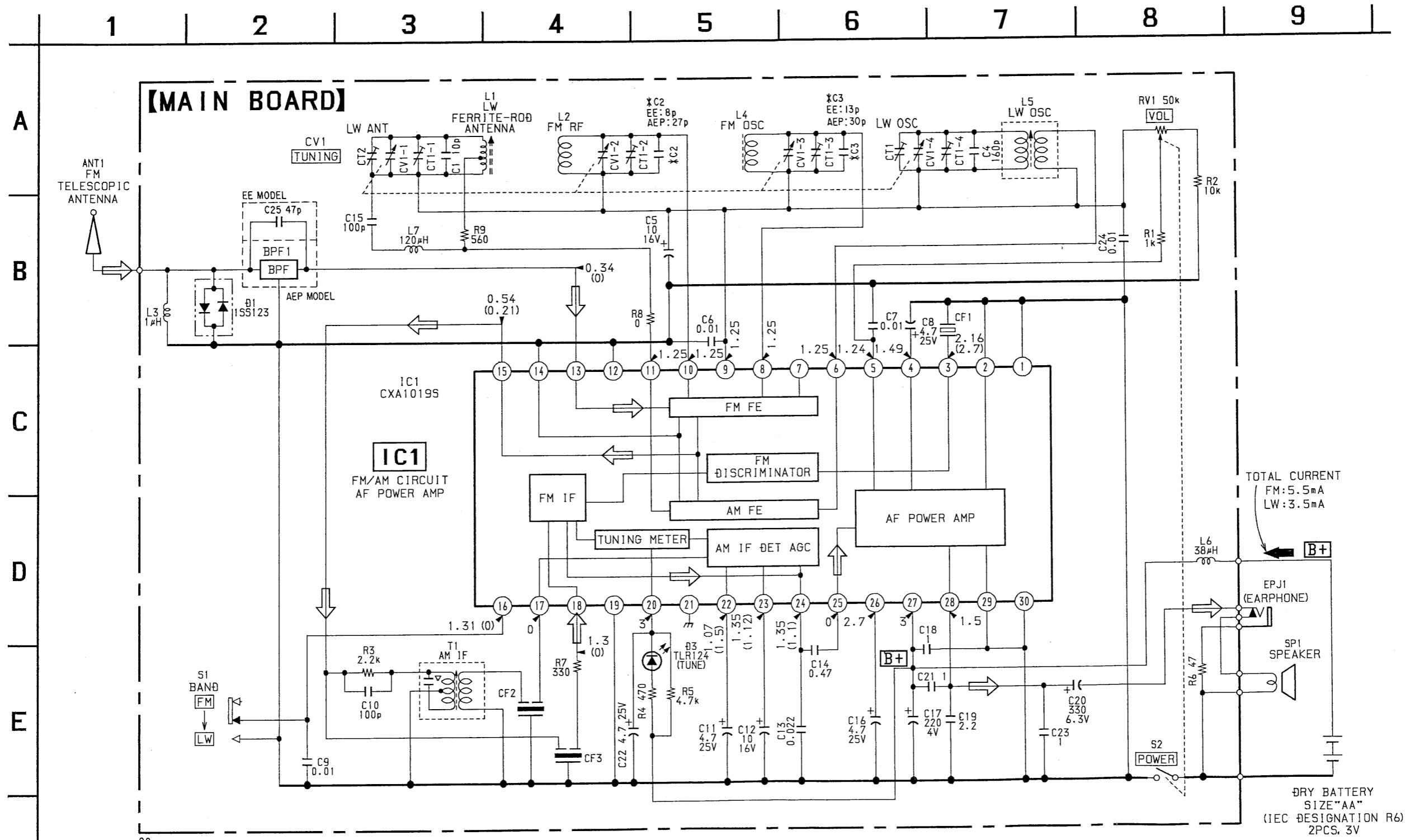
- Note :
- — : parts extracted from the component side.
  - — : indicates side identified with part number.
  - ▨ : Pattern on the side which is seen.
  - EE : East European Model

• SEMICONDUCTOR LEAD LAYOUT

TLR124



3-2. SCHEMATIC DIAGRAM



02

Note :

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu\mu F$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{4}W$  or less unless otherwise specified.
- $\Delta$  : internal component.
- **B+** : B+ Line
- EE : East European Model
- Total current is measured with power ON.
- Power voltage is dc 3V and fed with regulated dc power supply from battery terminal.
- Voltage are dc with respect to ground under no-signal conditions.
- no mark : FM  
( ) : AM
- Voltages are taken with a VOM (Input impedance 10M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\Rightarrow$  : FM

TOTAL CURRENT  
FM: 5.5mA  
LW: 3.5mA

DRY BATTERY  
SIZE "AA"  
(IEC DESIGNATION R6)  
2PCS, 3V

## SECTION 4 EXPLODED VIEW

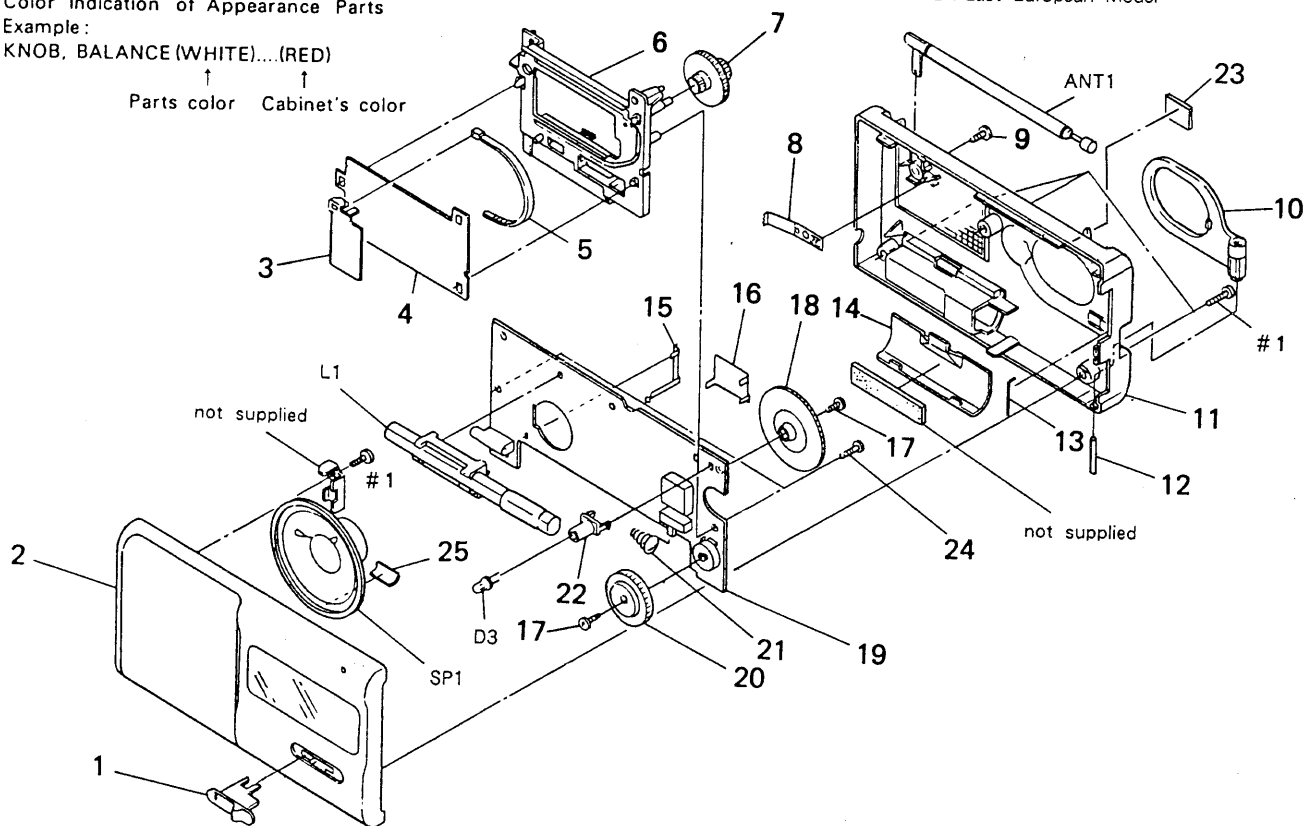
**NOTE:**

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE)...(RED)

↑                   ↑  
Parts color   Cabinet's color

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.
- EE : East European Model



Ref. No.	Part No.	Description	Remark
1	3-369-174-01	KNOB (BAND) (BLK)	
1	3-369-174-21	KNOB (BAND) (RED) (AEP)	
2	X-3363-151-1	CABINET (FRONT) ASSY (BLK) (AEP)	
2	X-3363-155-1	CABINET (FRONT) ASSY (RED) (AEP)	
2	X-3367-358-1	CABINET (FRONT) ASSY (BLK) (EE)	
3	3-369-163-01	POINTER	
4	* 3-369-165-01	PLATE, BACK	
5	3-369-170-01	RACK	
6	* 3-369-185-01	CHASSIS	
7	3-369-172-01	KNOB (TUNE) (BLK)	
7	3-369-172-21	KNOB (TUNE) (RED) (AEP)	
8	* 3-369-166-01	PLATE (ANT). CONTACT	
9	3-370-476-01	SCREW (+B) (2X5), NYLOCK	
10	3-369-169-01	HANDLE (BLK)	
10	3-369-169-21	HANDLE (RED) (AEP)	
11	3-369-187-01	CABINET (REAR) (BLK)	
11	3-369-187-21	CABINET (REAR) (RED) (AEP)	

Ref. No.	Part No.	Description	Remark
12	* 3-372-368-01	PIN, PARALLEL	
13	3-372-123-01	SPRING (HANDLE)	
14	3-369-161-01	LID, BATTERY CASE (BLK)	
14	3-369-161-21	LID, BATTERY CASE (RED) (AEP)	
15	3-369-157-01	PLATE, CONTACT BATTERY	
16	* 3-369-167-01	PLATE, SHIELD	
17	3-370-474-21	SCREW (NYLOCK +B 1.7X4)	
18	3-369-171-01	GEAR (TUNING CAPACITOR)	
19	* A-3661-328-A	MAIN BOARD (CHIP), COMPLETE	
20	3-369-173-01	KNOB (VOL) (BLK)	
20	3-369-173-21	KNOB (VOL) (RED) (AEP)	
21	3-369-164-02	SPRING, BATTERY	
22	* 3-369-162-01	HOLDER, LED	
23	3-372-369-01	CUSHION (REAR)	
24	3-371-765-21	SCREW +BTP 2X8	
25	2-532-810-00	CUSHION, 15X5X0.3	
ANT1	1-501-247-21	ANTENNA, TELESCOPIC	
L1	1-402-567-11	ANTENNA, FERRITE-ROD (LW)	
SP1	1-544-517-11	SPEAKER	

**MAIN**

**SECTION 5  
ELECTRICAL PARTS LIST**

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F: nonflammable

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA....:  $\mu$ A...., uPA....:  $\mu$ PA....  
uPB....:  $\mu$ PB...., uPC....:  $\mu$ PC....  
uPD....:  $\mu$ PD....
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

• EE : East European Model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* A-3661-328-A	MAIN BOARD (CHIP), COMPLETE *****				< TRIMMER >	
		< B. P. F. >		CT1	1-141-245-00	CAP, TRIMMER 30PF	
				CT2	1-141-245-00	CAP, TRIMMER 30PF	
BPF1	1-236-839-11	FILTER, BAND PASS (AEP)				< VARIABLE CAPACITOR >	
		< CAPACITOR >		CV1	1-151-658-11	CAP, VARIABLE (TUNING) (AEP)	
				CV1	1-151-659-11	CAP, VARIABLE (TUNING) (EE)	
C1	1-163-093-00	CERAMIC CHIP 10PF 5% 50V				< DIODE >	
C2	1-163-091-00	CERAMIC CHIP 8PF 50V (EE)					
C2	1-163-103-00	CERAMIC CHIP 27PF 5% 50V (AEP)					
C3	1-163-104-00	CERAMIC CHIP 30PF 5% 50V (AEP)		D1	8-719-800-76	DIODE 1SS226	
C3	1-163-706-00	CERAMIC CHIP 13PF 5% 50V (EE)		D3	8-719-812-41	DIODE TLR124 (TUNE)	
C4	1-163-122-00	CERAMIC CHIP 160PF 5% 50V				< JACK >	
C5	1-126-157-11	ELECT 10uF 20% 16V		EPJ1	1-563-836-21	JACK (EARPHONE)	
C6	1-164-232-11	CERAMIC CHIP 0.01uF 50V				< IC >	
C7	1-163-031-11	CERAMIC CHIP 0.01uF 50V		IC1	8-752-035-29	IC CXA1019S	
C8	1-126-163-11	ELECT 4.7uF 20% 50V				< JUMPER >	
C9	1-163-031-11	CERAMIC CHIP 0.01uF 50V		J2	1-216-296-00	METAL CHIP 0 5% 1/8W	
C10	1-163-117-00	CERAMIC CHIP 100PF 5% 50V		J3	1-216-296-00	METAL CHIP 0 5% 1/8W	
C11	1-126-163-11	ELECT 4.7uF 20% 50V		J4	1-216-296-00	METAL CHIP 0 5% 1/8W	
C12	1-126-157-11	ELECT 10uF 20% 16V				< COIL >	
C13	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V		L1	1-402-567-11	ANTENNA, FERRITE-ROD (LW)	
C14	1-162-637-11	CERAMIC CHIP 0.47uF 16V		L2	1-406-922-11	COIL, AIR-CORE (EE)	
C15	1-163-117-00	CERAMIC CHIP 100PF 5% 50V		L2	* 1-422-320-11	COIL, AIR-CORE (AEP)	
C16	1-126-163-11	ELECT 4.7uF 20% 50V		L3	1-410-965-41	INDUCTOR 1uH	
C17	1-124-434-11	ELECT 220uF 20% 4V		L4	1-422-294-21	COIL, AIR-CORE (AEP)	
C18	1-162-638-11	CERAMIC CHIP 1uF 16V		L4	1-428-241-11	COIL, AIR-CORE (EE)	
C19	1-164-337-11	CERAMIC CHIP 2.2uF 16V		L5	1-406-028-00	COIL, OSC (LW)	
C20	1-128-057-11	ELECT 330uF 20% 6.3V		L6	1-410-294-11	INDUCTOR, MICRO 38uH	
C21	1-162-638-11	CERAMIC CHIP 1uF 16V		L7	1-412-316-11	INDUCTOR 120uH	
C22	1-126-163-11	ELECT 4.7uF 20% 50V					
C23	1-162-638-11	CERAMIC CHIP 1uF 16V					
C24	1-163-031-11	CERAMIC CHIP 0.01uF 50V					
C25	1-101-881-61	CERAMIC 47PF 10% 50V (EE)					
		< FILTER >					
CF1	1-579-312-91	FILTER, CERAMIC					
CF2	1-578-677-11	FILTER, CRYSTAL					
CF3	1-579-312-91	FILTER, CERAMIC					



Ref. No.	Part No.	Description	Remark
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< RESISTOR >

R1	1-216-198-00	METAL CHIP	1K 5% 1/8W
R2	1-216-073-00	METAL CHIP	10K 5% 1/10W
R3	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R4	1-216-041-00	METAL CHIP	470 5% 1/10W
R5	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R6	1-216-166-00	METAL GLAZE	47 5% 1/8W
R7	1-216-037-00	METAL CHIP	330 5% 1/10W
R8	1-216-295-00	METAL CHIP	0 5% 1/10W
R9	1-216-043-00	METAL CHIP	560 5% 1/10W

< VARIABLE RESISTOR >

RV1 1-241-555-11 RES. VAR. CARBON 50K (POWER/VOL)

< SWITCH >

S1 1-552-370-00 SWITCH, SLIDE (BAND)

< TRANSFORMER >

T1 1-404-355-00 TRANSFORMER, IF

\*\*\*\*\*

MISCELLANEOUS

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ANT1 1-501-247-21 ANTENNA, TELESCOPIC  
 SP1 1-544-517-11 SPEAKER

\*\*\*\*\*

ACCESSORY & PACKING MATERIAL

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- \* 3-370-050-01 CUSHION, CORRUGATED FIBERBOARD
- \* 3-370-376-01 INDIVIDUAL CARTON
- 3-703-264-11 LABEL (B), SERIAL NO
- 3-753-405-11 MANUAL, INSTRUCTION (ENGLISH/GERMAN/  
FRENCH/ITALIAN/DUTCH)
- 3-753-405-61 MANUAL, INSTRUCTION (ENGLISH/POLISH/  
HUNGARIAN/CZECH/RUSSIAN) (EE)

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HARDWARE LIST

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# 1 7-685-135-19 SCREW +P 2.6X10 TYPE2 NON-SLIT

