ICF-903L

SERVICE MANUAL

AEP Model
UK Model

Ver 1.0 2000. 04

(Photo: BLACK)

SPECIFICATIONS

Frequency range:

Band	
FM	87.5 - 108.0 MHz
SW	5.95 - 18 MHz
MW	530 - 1605 kHz
LW	153 - 255 kHz

Speaker:
Approx. 10.2 cm (4 1/8 inches) dia. 8 Ω
Power output:
430 mW (at 10 % harmonic distortion)
Output:
⦾ jack (ø 3.5 mm minijack)
Power requirements:
With the supplied AC power cord:
220 - 230 V AC, 50 Hz
With four R6 (size AA) batteries: 6V DC
Dimensions:
Approx. 265 × 137 × 69 mm (w/h/d)
(10 1/2 × 5 1/2 × 2 3/4 inches) incl. projecting parts and control with carrying handle pushed in.
Mass:
Approx. 1081 g (2 lb 6 oz) incl. batteries
Supplied accessory:
AC power cord (1)

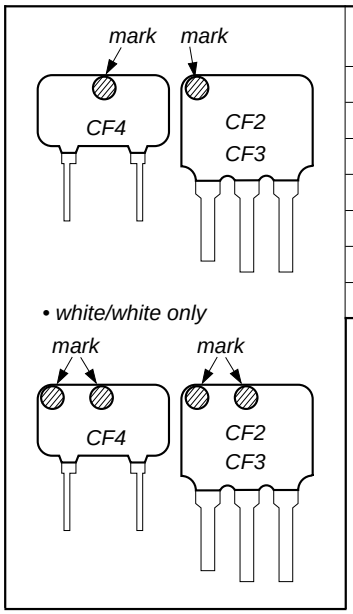
Design and specifications are subject to change without notice.

FM/SW/MW/LW 4 BAND RADIO

SONY®

HOW TO CHANGE THE CERAMIC FILTERS

This model is used two ceramic filters of CF2, CF3 and CF4.
You must use same type of color marked ceramic filters in order to meet same specifications.
Therefore, the ceramic filter must change two pieces together since it's supply two pieces in one package as a spare parts.



mark	Center Frequency
red	10.70 MHz
blue	10.67 MHz
orange	10.73 MHz
black	10.64 MHz
white	10.76 MHz
white/white	10.75 MHz
yellow	10.79 MHz

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

1. GENERAL
Choosing Power Sources 3
Operating the Radio Manual Tuning 3

2. DISASSEMBLY
2-1. Cabinet (Rear) 4
2-2. Power Board 4
2-3. Main Board, Key Board 5
2-4. Setting the Pointer 5

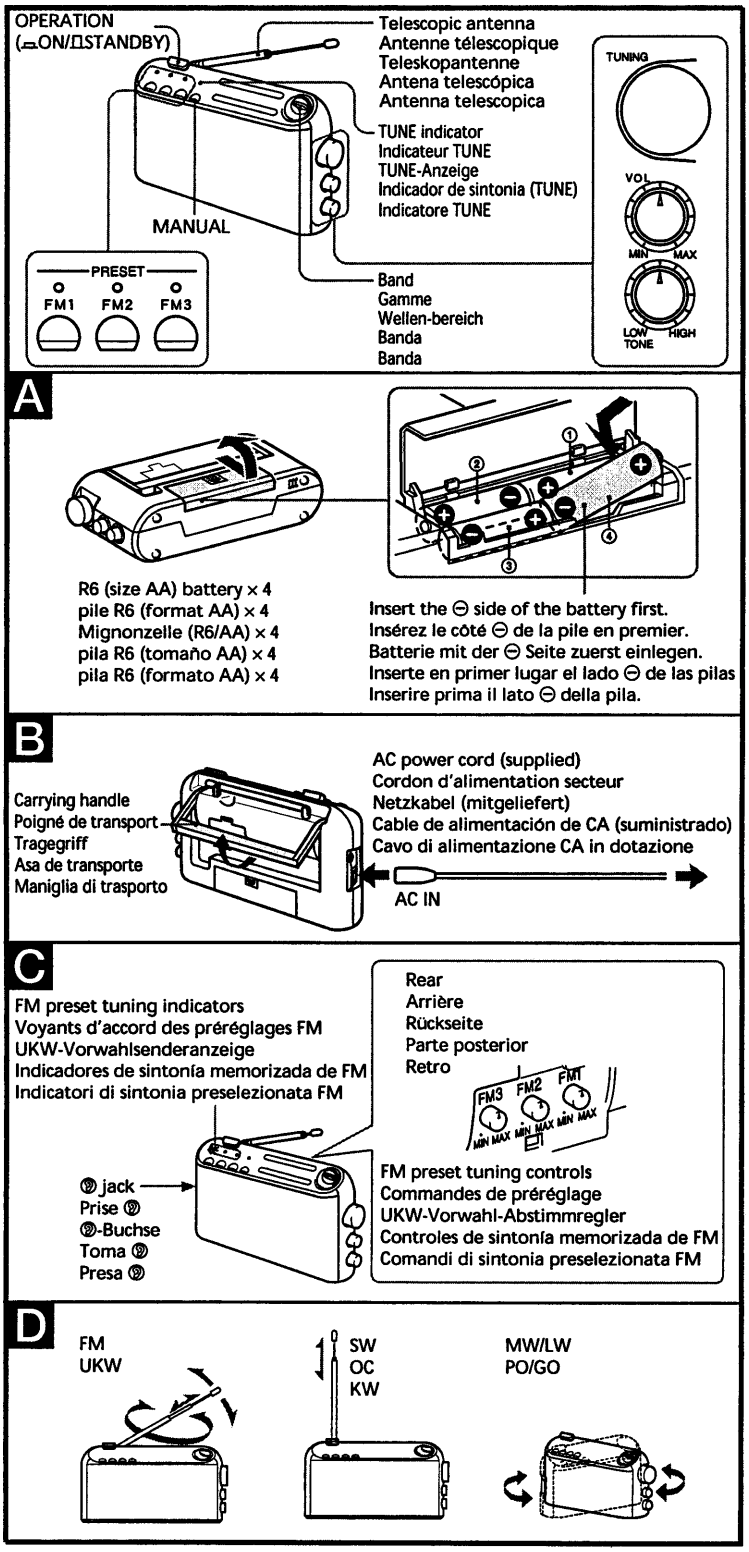
3. ELECTRICAL ADJUSTMENTS
3-1. MW section 6
3-2. LW section 6
3-3. SW section 7
3-4. FM section 7

4. DIAGRAMS
4-1. Block Diagram 9
4-2. Printed Wiring Boards (1/2) 11
4-3. Printed Wiring Board (2/2) 13
4-4. Schematic Diagrams 15

5. EXPLODED VIEWS
5-1. Cabinet (Front) Section 17
5-2. Cabinet (Rear) Section 18

6. ELECTRICAL PARTS LIST 19

This section is extracted from instruction manual.



Choosing Power Sources

Batteries (See Fig. A)

1 Open the lid of the battery compartment.
2 Insert four R6 (size AA) batteries (not supplied) with correct polarity.
3 Close the lid.

Battery Life (approximate hours)

	Sony alkaline LR6 (size AA)	Sony R6 (size AA)
FM reception	75	25
SW/MW/LW reception	100	35

Replacing batteries

Replace all the batteries with new ones when the batteries become exhausted. The time to replace them is:
- When the sound becomes weak or distorted, or
- When FM PRESET indicator (FM1, FM2, or FM3) or TUNE indicator fades away, and the sound of the radio begins to be interrupted.

Notes on batteries

- Insert the batteries with correct polarity.
- Do not charge the dry batteries.
- Do not use different types of batteries at the same time.
- When you replace the batteries, replace all with new ones.
- When the unit is not being used for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.
- If a battery leakage occurs, wipe the battery compartment with a soft cloth before inserting new ones.

House Current (See Fig. B)

1 Connect the AC power cord supplied to the AC IN jack of the radio.
2 Plug into a wall outlet.

Operating the Radio

Manual tuning

1 Press OPERATION (⏏) to turn on the radio.
2 Press MANUAL.
3 Select a desired band, and tune in a station using TUNING.
TUNE (tuning) indicator lights up when a station is tuned in.
4 Adjust the volume using VOL.
5 Adjust the tone to your preference using TONE.
To obtain clear treble, turn to "HIGH".
To reinforce bass, set to "LOW".

- To turn off the radio, press OPERATION (⏻).

Note

When the FM preset indicator is being lit, you cannot use the manual tuning. If you tune in a station manually, press MANUAL again.

FM preset tuning (See Fig. C)

You can preset up to 3 FM stations (one station for each PRESET FM1, FM2, FM3 buttons).

1 Press PRESET FM1.
2 Turn VOL a little to get sound.
3 Tune in a desired FM station using the FM1 preset tuning control.
Turn the control to "MAX" for higher frequencies, and to "MIN" for lower frequencies.
When the station is tuned in, the TUNE indicator will light up.
The stations is now preset.
Preset on the FM2 and FM3 buttons in the same way.
4 Adjust the volume using VOL.

To change the preset station

Preset a new station on a desired button.

To Tune in a Preset Station

The desired FM station will be received simply by pressing the FM1, FM2, FM3 button.

- To turn off the radio, press OPERATION (⏻). When you turn on the radio again, the station previously turned in will be recieved.
- To tune in preset station after replacing batteries or disconnecting the power cord, press PRESET FM1, FM2 or FM3 again.
- To listen with an earphone connect the earphone to the ⏻ (earphone) jack.
The spearker is deactivated when an earphone is connected.
- **To improve Receiving condition (See Fig. D)**
FM: Extend the telescopic antenna and adjust its length, direction and angle for the best reception.
SW: Extend the telescopic antenna vertically.
MW/LW: Rotate the unit horizontally for optimum reception. A ferrite bar antenna is built into the unit.

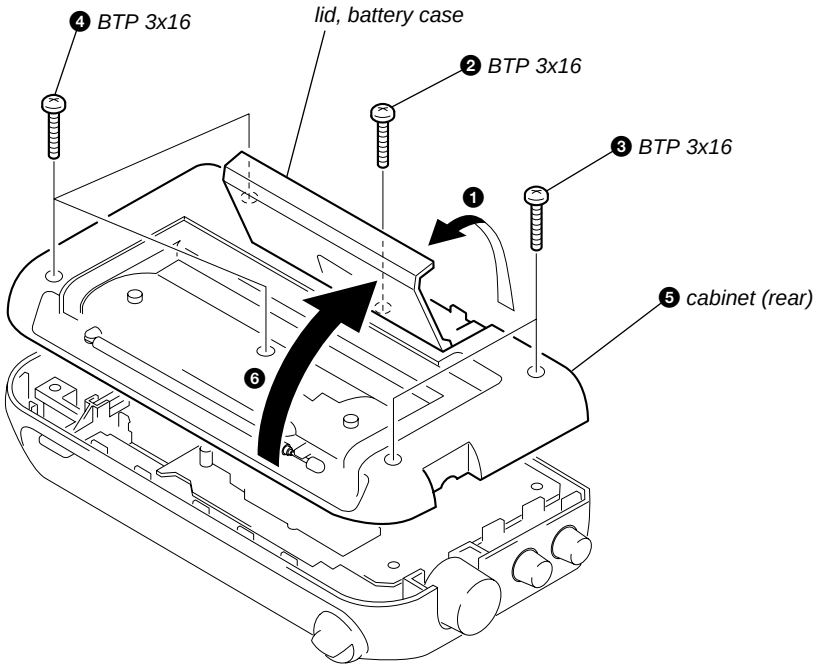
SECTION 2
DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

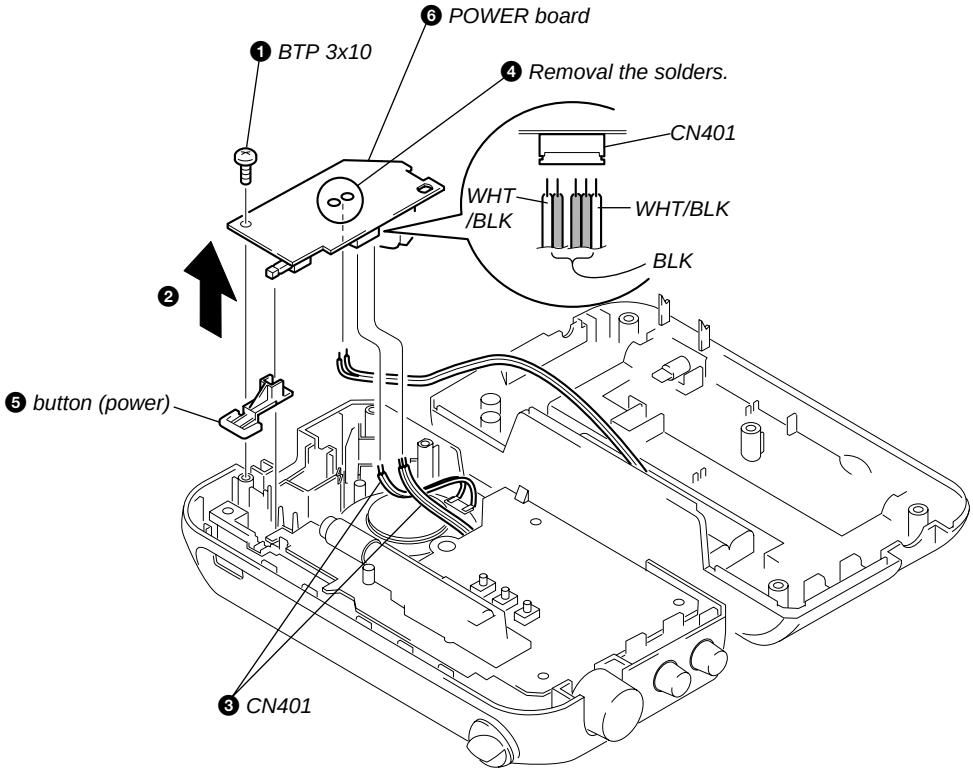
Set ➡ Cabinet (Rear) ➡ Power Board ➡ Main Board, Key Board ➡ Setting the Pointer

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

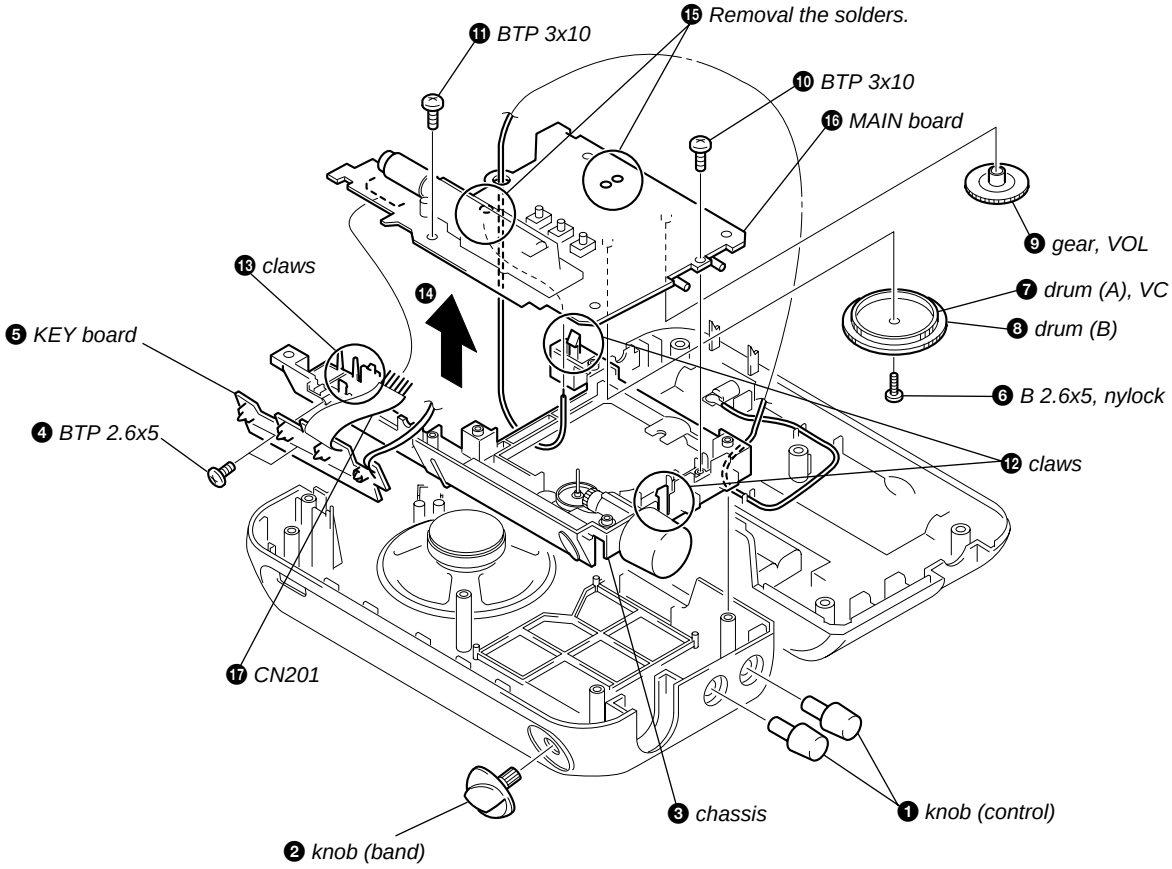
2-1. CABINET (REAR)



2-2. POWER BOARD



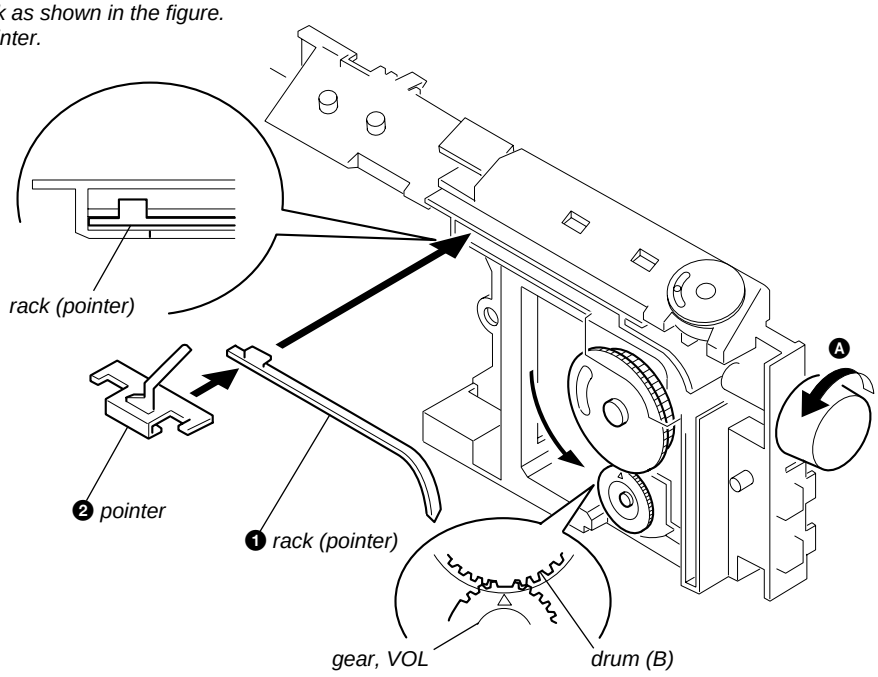
2-3. MAIN BOARD, KEY BOARD



2-4. SETTING THE POINTER

• *Setting the Pointer*

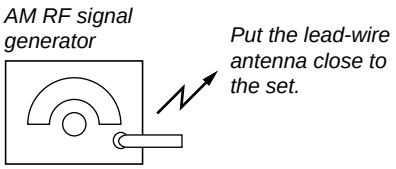
1. Turn the Knob (Tuning) in the direction of Ⓐ *until it is stopped.*
2. Place the rack as shown in the figure.
3. Mount the pointer.



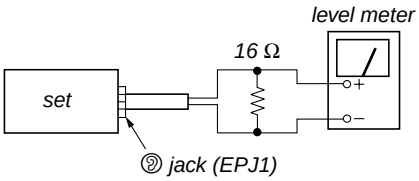
SECTION 3
ELECTRICAL ADJUSTMENTS

3-1. MW SECTION

BAND switch : MW



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.

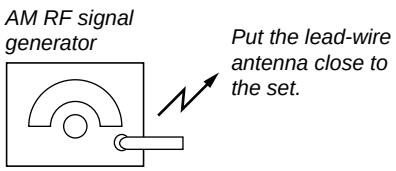
MW IF ADJUSTMENT
Adjust for a maximum reading on level meter
T1
455 kHz

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter	
L5	520 kHz
CT4	1,650 kHz

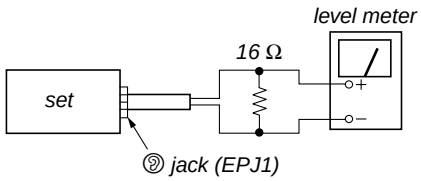
MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L2-1	600 kHz
CT1	1,400 kHz

3-2. LW SECTION

BAND switch : LW



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



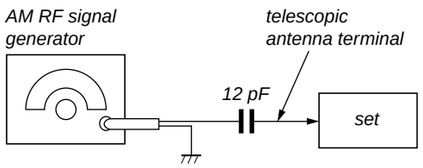
• Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter	
CT6	145 kHz
<confirmation>	265 kHz

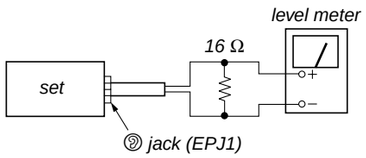
LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L2-2	160 kHz
CT2	240 kHz

3-3. SW SECTION

BAND switch : SW



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



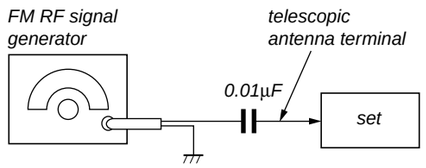
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

SW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter	
L6	5.8 MHz
CT5	18.5 MHz

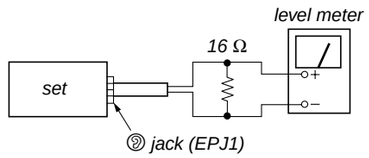
SW TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L3	5.8 MHz
CT3	18.5 MHz

3-4. FM SECTION

BAND switch : FM



400Hz, 30% FM modulation
frequency deviation ±22.5kHz
Output level: as low as possible

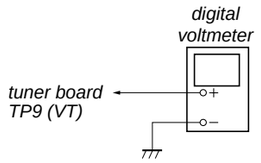


- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on level meter	
L8	86.5 MHz
CT8	109.5 MHz

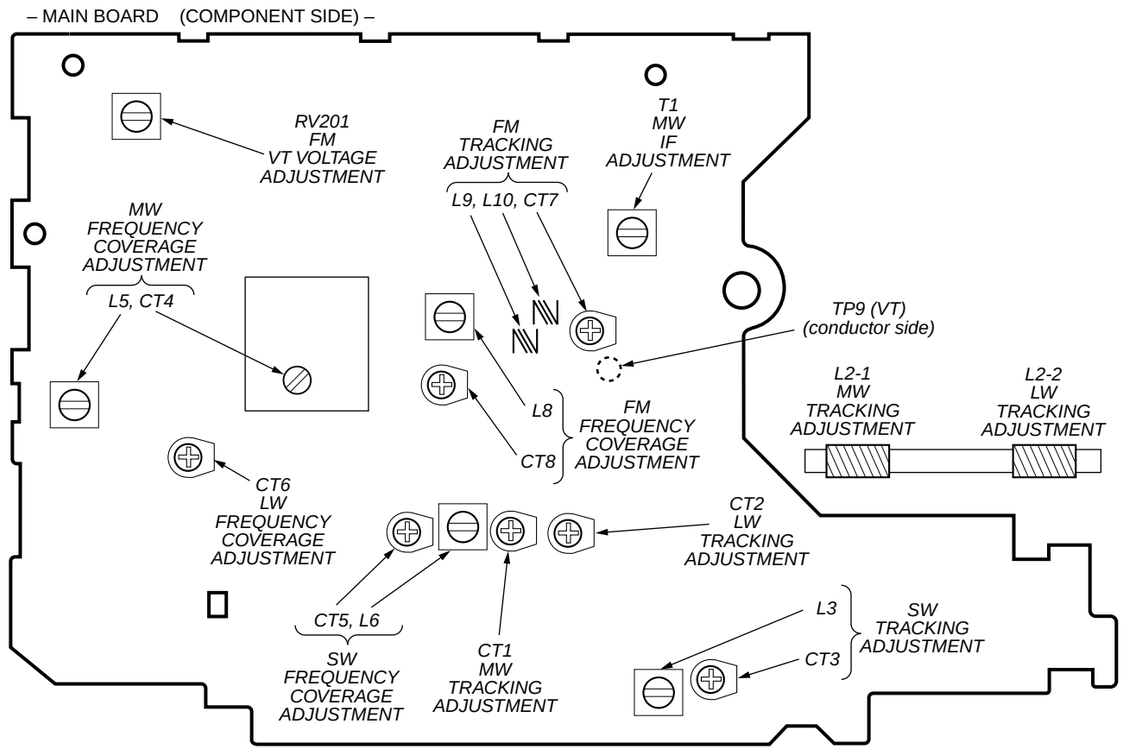
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L9, L10	86.5 MHz
CT7	109.5 MHz

• Connecting Digital Voltmeter



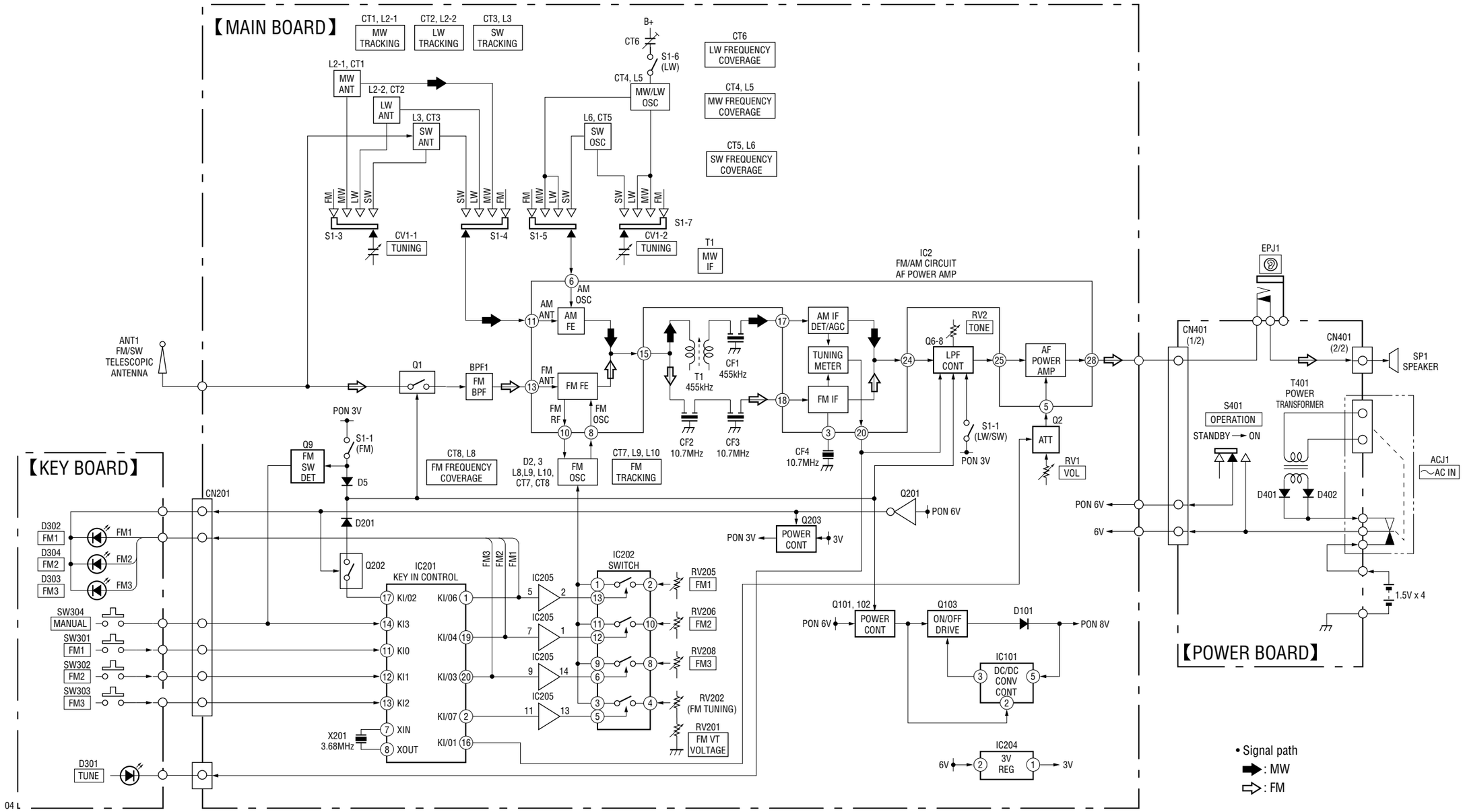
FM VT VOLTAGE ADJUSTMENT	
Frequency Display	86.5 MHz
Reading on Digital voltmeter	1.0 ± 0.1 V
Adjustment Part	RV201

Adjustment Location: MAIN BOARD

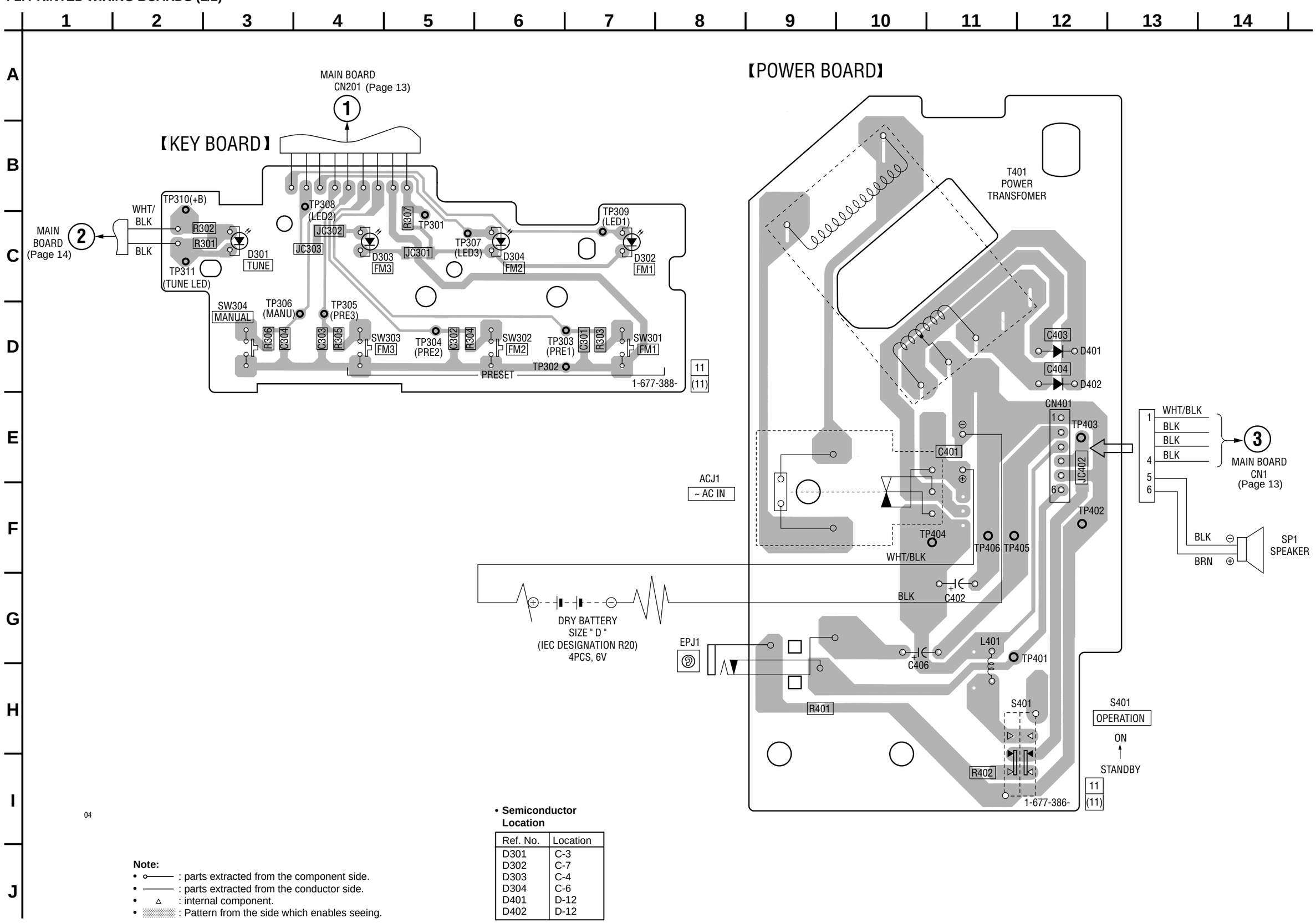


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM



4-2. PRINTED WIRING BOARDS (1/2)



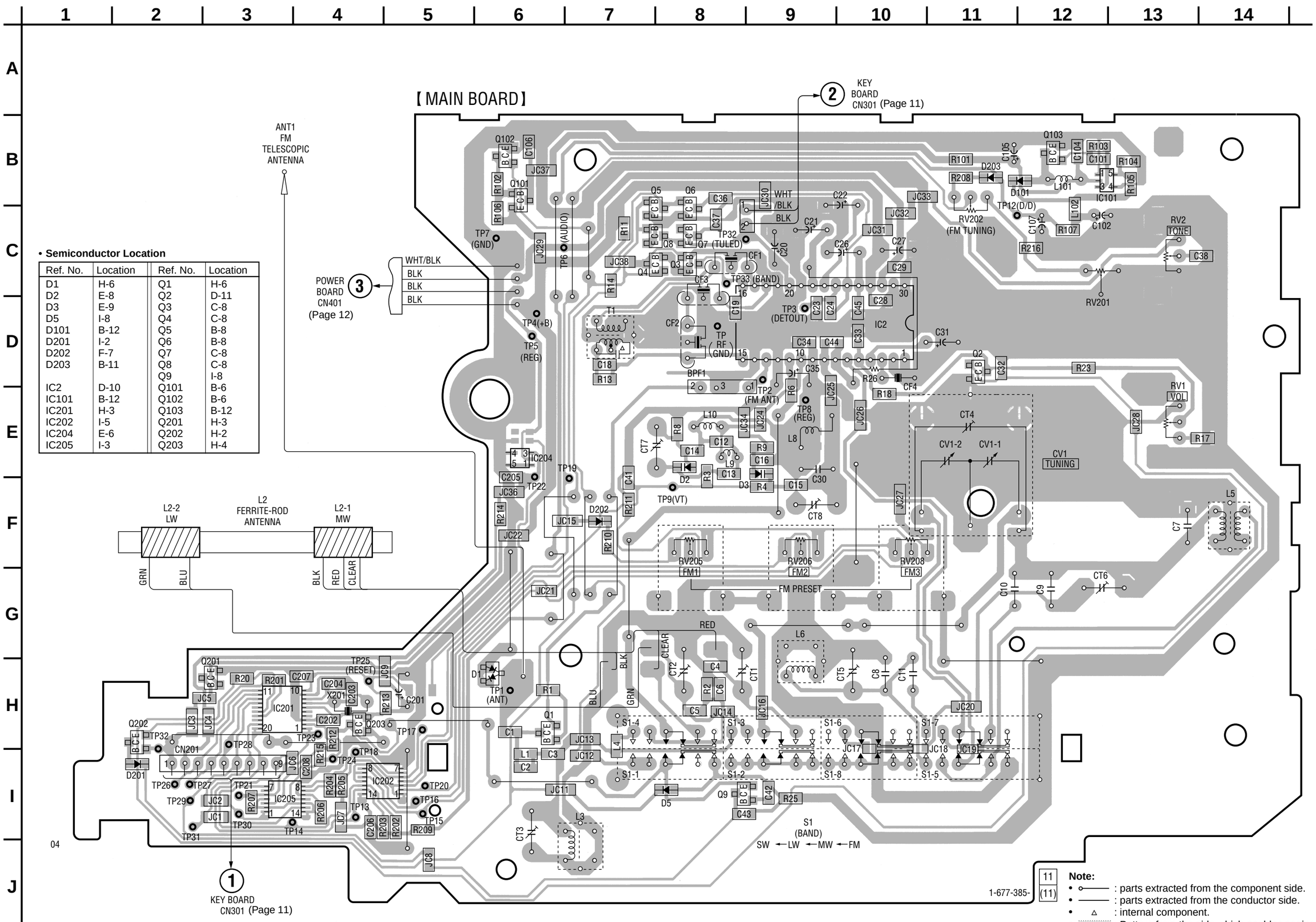
Note:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

- **Semiconductor Location**

Ref. No.	Location
D301	C-3
D302	C-7
D303	C-4
D304	C-6
D401	D-12
D402	D-12

4-3. PRINTED WIRING BOARD (2/2)

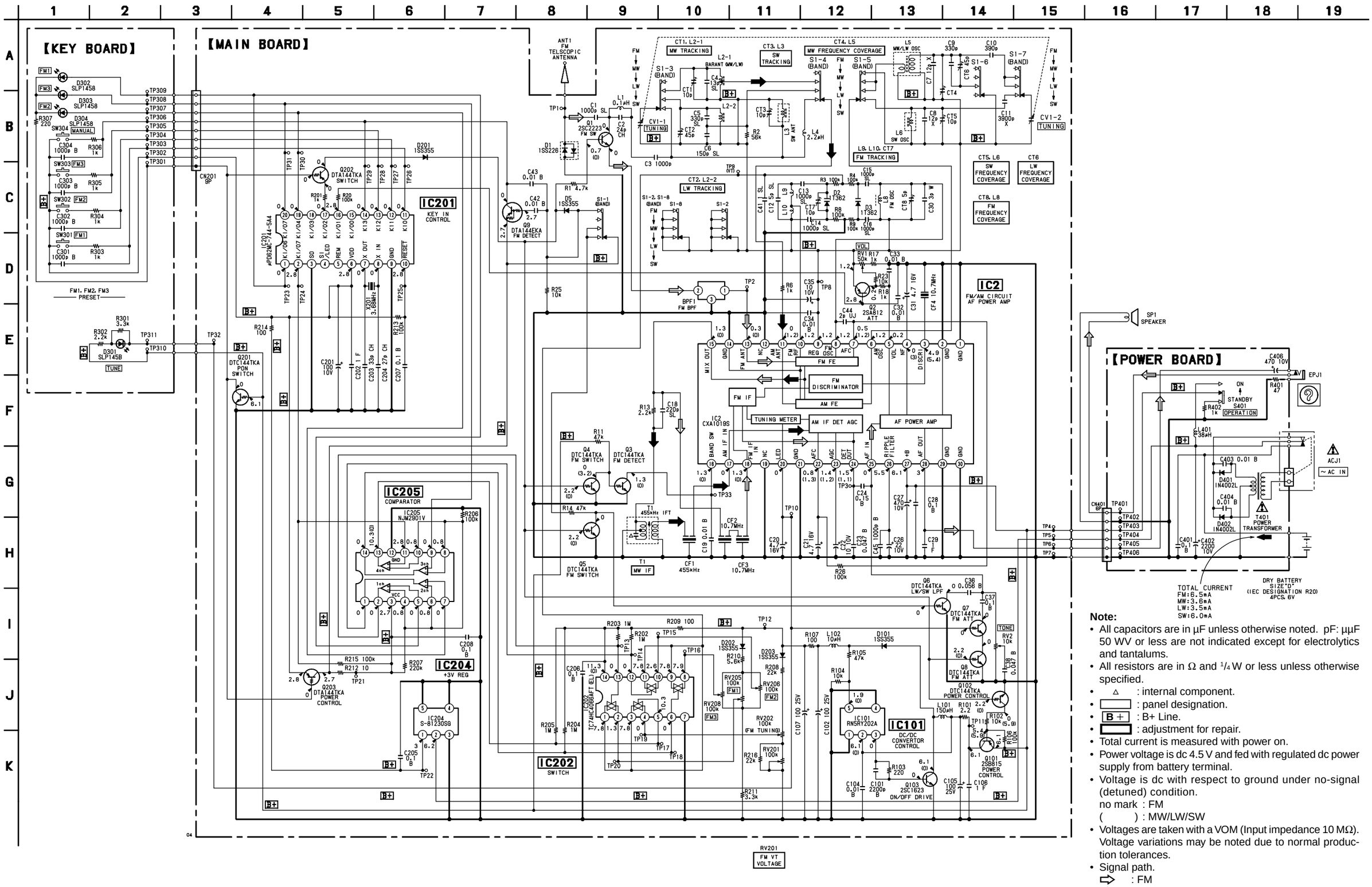


• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	H-6	Q1	H-6
D2	E-8	Q2	D-11
D3	E-9	Q3	C-8
D5	I-8	Q4	C-8
D101	B-12	Q5	B-8
D201	I-2	Q6	B-8
D202	F-7	Q7	C-8
D203	B-11	Q8	C-8
		Q9	I-8
IC2	D-10	Q101	B-6
IC101	B-12	Q102	B-6
IC201	H-3	Q103	B-12
IC202	I-5	Q201	H-3
IC204	E-6	Q202	H-2
IC205	I-3	Q203	H-4

Note:
- ○—— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.

4-4. SCHEMATIC DIAGRAMS



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- ▬ : adjustment for repair.
- Total current is measured with power on.
- Power voltage is dc 4.5 V and fed with regulated dc power supply from battery terminal.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : MW/LW/SW
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : MW

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

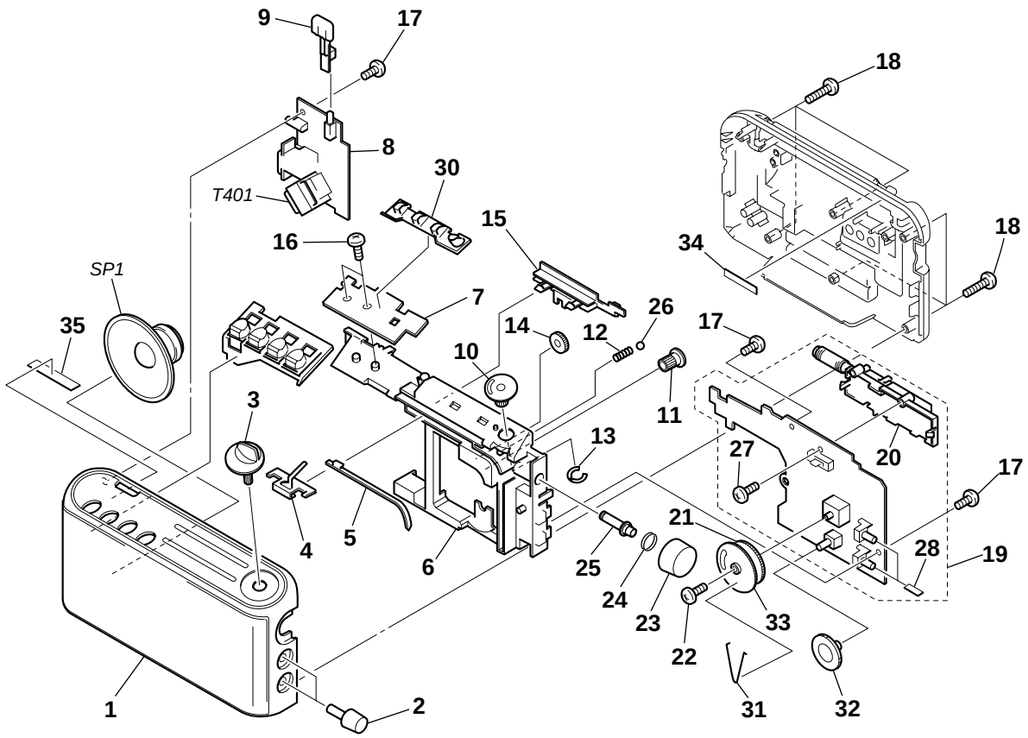
SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ Parts Color ↑ Cabinet's Color
- Accessories and packing materials are given in the last of this parts list.

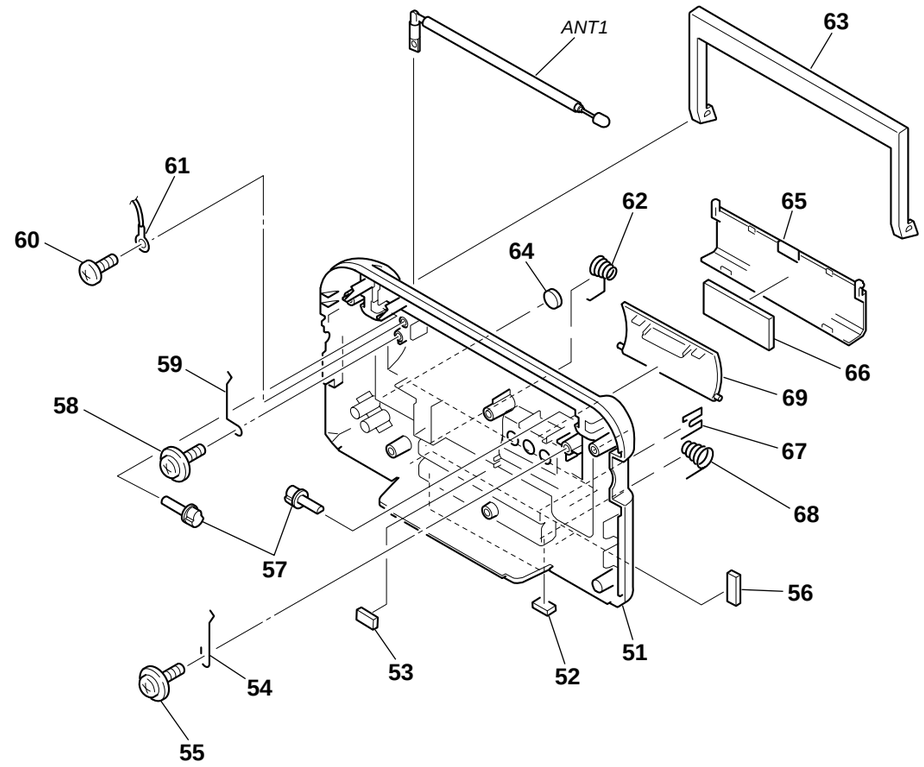
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CABINET (FRONT) SECTION



Ref. No.	Part No.	Description	Remark
1	X-3379-339-1	CABINET (FRONT) SUB ASSY (BLACK)...(BLACK)	
1	X-3379-346-1	CABINET (FRONT) SUB ASSY (WHITE)...(WHITE) (AEP)	
2	3-043-337-01	KNOB (CONTROL) (BLACK)...(BLACK)	
2	3-043-337-11	KNOB (CONTROL) (WHITE)...(WHITE) (AEP)	
3	3-043-343-01	KNOB (BAND) (BLACK)...(BLACK)	
3	3-043-343-11	KNOB (BAND) (WHITE)...(WHITE) (AEP)	
4	3-043-347-01	POINTER	
5	3-043-348-01	RACK (POINTER)	
6	3-043-330-01	CHASSIS	
* 7	A-3683-174-A	KEY BOARD, COMPLETE	
* 8	1-677-386-11	POWER BOARD	
9	3-043-339-01	BUTTON (POWER) (BLACK)...(BLACK)	
9	3-043-339-11	BUTTON (POWER) (WHITE)...(WHITE) (AEP)	
10	3-043-344-01	GEAR (BAND)	
11	3-043-349-01	GEAR (A), MIDWAY	
12	3-043-721-01	SPRING (BAND)	
13	3-048-207-01	RING (BAND)	
14	3-043-350-01	GEAR (B), MIDWAY	
15	3-043-345-01	SLIDER (BAND)	
16	7-685-532-14	SCREW +BTP 2.6X5 TYPE2 N-S	
17	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S	
18	7-685-550-14	SCREW +BTP 3X16 TYPE2 N-S	
* 19	A-3683-173-A	MAIN BOARD, COMPLETE	
20	3-043-346-01	HOLDER, FERRITE-ROD ANTENNA	
21	3-043-342-01	DRUM (A), VC	
22	3-364-941-11	SCREW (+B) (2.6X5), NYLOCK	
23	3-043-338-01	KNOB (TUNING) (BLACK)...(BLACK)	
23	3-043-338-11	KNOB (TUNING) (WHITE)...(WHITE) (AEP)	
24	3-045-680-01	SPRING (TUNING)	
25	3-043-336-01	SHAFT (TUNING)	
26	7-671-112-11	BALL, STEEL	
27	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S	
28	3-049-870-01	WOVEN (VOL), FABRIC NON	
29	3-043-352-01	BUTTON (PRESET) (BLACK)...(BLACK)	
29	3-043-352-11	BUTTON (PRESET) (WHITE)...(WHITE) (AEP)	
30	3-043-354-01	HOLDER (LED)	
31	3-363-366-11	SPRING, DRUM	
32	3-043-341-01	GEAR, VOL	
* 33	3-363-397-01	DRUM (B)	
34	3-831-441-99	CUSHION	
35	4-884-058-01	CUSHION	
SP1	1-529-676-11	SPEAKER (10.2cm)	
⚠T401	1-435-513-11	TRANSFORMER, POWER	

5-2. CABINET (REAR) SECTION



Ref. No.	Part No.	Description	Remark
51	3-043-329-01	CABINET (REAR) (BLACK)...(BLACK)	
51	3-043-329-11	CABINET (REAR) (WHITE)...(WHITE) (AEP)	
52	3-049-207-01	CUSHION (BATTERY) (B)	
53	3-049-448-01	CUSHION (BATTERY) (D)	
54	3-043-717-01	SPRING (HANDLE)	
55	7-685-903-31	SCREW +PTPWH 3X10 (TYPE2)	
56	3-049-447-01	CUSHION (BATTERY) (C)	
57	3-043-335-01	SHAFT (HANDLE)	
58	7-685-903-21	SCREW +PTPWH 3X8 (TYPE2)	
59	3-049-592-01	SPRING (HANDLE) (B)	
60	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S	
61	7-623-508-01	LUG, 3	
62	3-043-718-01	TERMINAL (+.–), BATTERY	
63	3-043-334-01	HANDLE (BLACK)...(BLACK)	
63	3-043-334-11	HANDLE (WHITE)...(WHITE) (AEP)	
64	3-049-208-01	CUSHION (HANDLE)	
65	3-043-331-01	LID, BATTERY CASE (BLACK)...(BLACK)	
65	3-043-331-11	LID, BATTERY CASE (WHITE)...(WHITE) (AEP)	
66	9-911-815-02	CUSHION	
67	3-043-719-01	TERMINAL (+), BATTERY	
68	3-043-720-01	TERMINAL (–), BATTERY	
69	3-043-353-01	COVER, PRESET (BLACK)...(BLACK)	
69	3-043-353-11	COVER, PRESET (WHITE)...(WHITE) (AEP)	
ANT1	1-501-222-71	ANTENNA, TELESCOPIC (FM/SW)	

SECTION 6
ELECTRICAL PARTS LIST

KEY **MAIN**

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.
- 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 : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	A-3683-174-A	KEY BOARD, COMPLETE			
		**********			
	3-043-354-01	HOLDER (LED)			
		< CAPACITOR >			
C301	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C304	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< DIODE >			
D301	8-719-080-08	LED SLP145B-51 (TUNE)			
D302	8-719-080-08	LED SLP145B-51 (PRESET FM1)			
D303	8-719-080-08	LED SLP145B-51 (PRESET FM3)			
D304	8-719-080-08	LED SLP145B-51 (PRESET FM2)			
		< JUMPER RESISTOR >			
JC301	1-216-296-00	SHORT	0		
JC302	1-216-296-00	SHORT	0		
JC303	1-216-295-00	SHORT	0		
		< RESISTOR >			
R301	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R302	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R303	1-216-049-11	RES-CHIP	1K	5%	1/10W
R304	1-216-049-11	RES-CHIP	1K	5%	1/10W
R305	1-216-049-11	RES-CHIP	1K	5%	1/10W
R306	1-216-049-11	RES-CHIP	1K	5%	1/10W
R307	1-216-033-00	METAL CHIP	220	5%	1/10W
		< SWITCH >			
SW301	1-692-444-11	SWITCH, KEY BOARD (PRESET FM1)			
SW302	1-692-444-11	SWITCH, KEY BOARD (PRESET FM2)			
SW303	1-692-444-11	SWITCH, KEY BOARD (PRESET FM3)			
SW304	1-692-444-11	SWITCH, KEY BOARD (MANUAL)			

****

Ref. No.	Part No.	Description			Remark
*	A-3683-173-A	MAIN BOARD, COMPLETE			
		**********			
	3-043-346-01	HOLDER, FERRITE-ROD ANTENNA			
	3-049-870-01	WOVEN (VOL), FABRIC NON			
	7-685-534-14	SCREW +BTP 2.6X8 TYPE2 N-S			
		< BPF >			
BPF1	1-236-022-11	FILTER, BAND PASS			
		< CAPACITOR >			
C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C2	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C3	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C4	1-163-096-00	CERAMIC CHIP	13PF	5%	50V
C5	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C6	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C7	1-102-949-00	CERAMIC	12PF	5%	50V
C8	1-102-949-00	CERAMIC	12PF	5%	50V
C9	1-136-355-11	FILM	330PF	5%	100V
C10	1-104-732-11	FILM	390PF	5%	100V
C11	1-136-682-11	FILM	0.0039uF	5%	100V
C12	1-163-088-00	CERAMIC CHIP	5PF		50V
C13	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C14	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C15	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C16	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C18	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C19	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C20	1-124-259-11	ELECT	4.7uF	20%	16V
C21	1-124-259-11	ELECT	4.7uF	20%	16V
C22	1-124-261-00	ELECT	10uF	20%	50V
C23	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C24	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C26	1-124-234-00	ELECT	22uF	20%	16V
C27	1-126-925-11	ELECT	470uF	20%	10V
C28	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C29	1-164-346-11	CERAMIC CHIP	1uF		16V
C30	1-164-039-11	CERAMIC	3PF	5%	50V
C31	1-124-259-11	ELECT	4.7uF	20%	16V
C32	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C33	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C34	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C35	1-124-261-00	ELECT	10uF	20%	50V
C36	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C41	1-164-346-11	CERAMIC CHIP	1uF		16V
C42	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C43	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C44	1-163-085-00	CERAMIC CHIP	2PF		50V
C45	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C101	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C102	1-128-111-11	ELECT	100uF	20%	25V
C104	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C105	1-128-111-11	ELECT	100uF	20%	25V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-128-111-11	ELECT	100uF	20%	25V
C201	1-124-584-00	ELECT	100uF	20%	10V
C202	1-164-346-11	CERAMIC CHIP	1uF		16V
C203	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C204	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C205	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C206	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C207	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C208	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< FILTER >			
CF1	1-567-177-00	FILTER, CERAMIC			
CF2	1-577-600-81	FILTER, CERAMIC			
CF3	1-577-600-81	FILTER, CERAMIC			
CF4	1-577-600-81	FILTER, CERAMIC			
		< CONNECTOR >			
CN201	1-580-188-11	SOCKET, CONNECTOR 9P			
		< TRIMMER >			
CT1	1-141-354-21	CAP, TRIMMER	10PF		
CT2	1-141-320-11	CAP, TRIMMER	45PF		
CT3	1-141-354-21	CAP, TRIMMER	10PF		
CT5	1-141-354-21	CAP, TRIMMER	10PF		
CT6	1-141-320-11	CAP, TRIMMER	45PF		
CT7	1-141-304-21	CAP, TRIMMER	10PF		
CT8	1-141-299-11	CAP, CERAMIC TRIMMER	5PF		
		< VARIABLE CAPACITOR >			
CV1	1-151-679-11	CAP, VAR (TUNING)			
CT4	1-151-679-11	CAP, VAR (TUNING)			
		< DIODE >			
D1	8-719-800-76	DIODE	1SS226		
D2	8-713-100-11	DIODE	1T362		
D3	8-713-100-11	DIODE	1T362		
D5	8-719-988-61	DIODE	1SS355TE-17		
D101	8-719-988-61	DIODE	1SS355TE-17		
D201	8-719-988-61	DIODE	1SS355TE-17		
D202	8-719-988-61	DIODE	1SS355TE-17		
D203	8-719-988-61	DIODE	1SS355TE-17		

Ref. No.	Part No.	Description		Remark
		< IC >		
IC2	8-752-037-02	IC	CXA1019S	
IC101	8-759-448-77	IC	RN5RY202A-TL	
IC201	8-759-680-16	IC	uPD62MC-744-5A4	
IC202	8-759-523-03	IC	TC74HC4066AFT(EL)	
IC204	8-759-198-63	IC	S-81230SG-QB-T1	
IC205	8-759-273-87	IC	NJM2901V(TE2)	
		< JUMPER RESISTOR >		
JC1	1-216-296-00	SHORT	0	
JC2	1-216-296-00	SHORT	0	
JC3	1-216-296-00	SHORT	0	
JC4	1-216-296-00	SHORT	0	
JC5	1-216-295-00	SHORT	0	
JC6	1-216-295-00	SHORT	0	
JC7	1-216-296-00	SHORT	0	
JC8	1-216-295-00	SHORT	0	
JC9	1-216-296-00	SHORT	0	
JC11	1-216-296-00	SHORT	0	
JC12	1-216-296-00	SHORT	0	
JC13	1-216-296-00	SHORT	0	
JC14	1-216-295-00	SHORT	0	
JC15	1-216-296-00	SHORT	0	
JC16	1-216-295-00	SHORT	0	
JC17	1-216-296-00	SHORT	0	
JC18	1-216-295-00	SHORT	0	
JC19	1-216-295-00	SHORT	0	
JC20	1-216-296-00	SHORT	0	
JC21	1-216-295-00	SHORT	0	
JC22	1-216-296-00	SHORT	0	
JC24	1-216-295-00	SHORT	0	
JC25	1-216-296-00	SHORT	0	
JC26	1-216-296-00	SHORT	0	
JC27	1-216-295-00	SHORT	0	
JC28	1-216-295-00	SHORT	0	
JC29	1-216-296-00	SHORT	0	
JC30	1-216-296-00	SHORT	0	
JC31	1-216-296-00	SHORT	0	
JC32	1-216-296-00	SHORT	0	
JC33	1-216-296-00	SHORT	0	
JC34	1-216-296-00	SHORT	0	
JC36	1-216-296-00	SHORT	0	
JC37	1-216-296-00	SHORT	0	
JC38	1-216-296-00	SHORT	0	
		< COIL >		
L1	1-410-981-22	INDUCTOR CHIP	0.1uH	
L2	1-754-133-11	ANTENNA, FERRITE-ROD (MW/LW)		
L3	1-402-538-11	COIL, SW (ANT)		
L4	1-410-997-22	INDUCTOR CHIP	2.2uH	
L5	1-406-092-11	COIL, OSC (MW)		
L6	1-406-413-11	COIL, SW (OSC)		

Ref. No.	Part No.	Description			Remark
L8	1-419-767-11	COIL, AIR-CORE			
L9	1-428-290-11	COIL, AIR-CORE			
L10	1-428-229-11	COIL, AIR-CORE			
L101	1-410-335-11	INDUCTOR	150uH		
L102	1-412-006-31	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q2	8-729-216-22	TRANSISTOR	2SA1162-G		
Q3	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q4	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q5	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q6	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q7	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q8	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q9	8-729-027-38	TRANSISTOR	DTA144EKA-T146		
Q101	8-729-800-71	TRANSISTOR	2SB815B7-TB		
Q102	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q103	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q201	8-729-027-60	TRANSISTOR	DTC144TKA-T146		
Q202	8-729-027-39	TRANSISTOR	DTA144TKA-T146		
Q203	8-729-027-39	TRANSISTOR	DTA144TKA-T146		
		< RESISTOR >			
R1	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R2	1-216-091-00	METAL CHIP	56K	5%	1/10W
R3	1-216-097-11	RES-CHIP	100K	5%	1/10W
R4	1-216-097-11	RES-CHIP	100K	5%	1/10W
R6	1-216-049-11	RES-CHIP	1K	5%	1/10W
R8	1-216-097-11	RES-CHIP	100K	5%	1/10W
R9	1-216-097-11	RES-CHIP	100K	5%	1/10W
R11	1-216-089-11	RES-CHIP	47K	5%	1/10W
R13	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R14	1-216-089-11	RES-CHIP	47K	5%	1/10W
R17	1-216-049-11	RES-CHIP	1K	5%	1/10W
R18	1-216-049-11	RES-CHIP	1K	5%	1/10W
R20	1-216-097-11	RES-CHIP	100K	5%	1/10W
R23	1-216-073-00	METAL CHIP	10K	5%	1/10W
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W
R26	1-247-879-11	CARBON	100K	5%	1/4W
R101	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-033-00	METAL CHIP	220	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-089-11	RES-CHIP	47K	5%	1/10W
R106	1-216-097-11	RES-CHIP	100K	5%	1/10W
R107	1-216-025-11	RES-CHIP	100	5%	1/10W
R201	1-216-049-11	RES-CHIP	1K	5%	1/10W
R202	1-216-121-11	RES-CHIP	1M	5%	1/10W
R203	1-216-121-11	RES-CHIP	1M	5%	1/10W
R204	1-216-121-11	RES-CHIP	1M	5%	1/10W
R205	1-216-121-11	RES-CHIP	1M	5%	1/10W
R206	1-216-097-11	RES-CHIP	100K	5%	1/10W
R207	1-216-105-11	RES-CHIP	220K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R208	1-216-081-00	METAL CHIP	22K	5%	1/10W
R209	1-216-025-11	RES-CHIP	100	5%	1/10W
R210	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R211	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R212	1-216-001-00	METAL CHIP	10	5%	1/10W
R213	1-216-097-11	RES-CHIP	100K	5%	1/10W
R214	1-216-025-11	RES-CHIP	100	5%	1/10W
R215	1-216-097-11	RES-CHIP	100K	5%	1/10W
R216	1-216-081-00	METAL CHIP	22K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-225-498-11	RES, VAR, CARBON	50K (VOL)		
RV2	1-225-499-11	RES, VAR, CARBON	10K (TONE)		
RV201	1-241-767-21	RES, ADJ, CARBON	100K		
RV202	1-223-621-11	RES, VAR, CARBON	100K (FM TUNING)		
RV205	1-241-377-11	RES, VAR, CARBON	100K (FM1)		
RV206	1-241-377-11	RES, VAR, CARBON	100K (FM2)		
RV208	1-241-377-11	RES, VAR, CARBON	100K (FM3)		
		< SWITCH >			
S1	1-571-172-11	SWITCH, SLIDE (BAND)			
		< TRANSFORMER >			
T1	1-404-902-11	TRANSFORMER, IF			
		< VIBRATOR >			
X201	1-579-452-11	OSCILLATOR, CERAMIC (3.68MHz)			
**********					
*	1-677-386-11	POWER BOARD			
		**********			
		< AC INLET >			
⚠ACJ1	1-526-838-11	INLET, AC 2P (~ AC IN)			
		< CAPACITOR >			
C401	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C402	1-126-927-11	ELECT	2200uF	20%	10V
C403	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C404	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C406	1-126-925-11	ELECT	470uF	20%	10V
		< CONNECTOR >			
* CN401	1-568-272-11	SOCKET, CONNECTOR 6P			
		< DIODE >			
D401	8-719-031-85	DIODE	1N4002L		
D402	8-719-031-85	DIODE	1N4002L		
		< JACK >			
EPJ1	1-563-836-21	JACK (②)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

POWER

Ref. No.	Part No.	Description			Remark
		< JUMPER RESISTOR >			
JC402	1-216-296-00	SHORT	0		
		< COIL >			
L401	1-410-294-11	INDUCTOR	38uH		
		< RESISTOR >			
R401	1-216-017-11	RES-CHIP	47	5%	1/10W
R402	1-216-049-11	RES-CHIP	1K	5%	1/10W
		< SWITCH >			
S401	1-571-042-11	SWITCH, PUSH (1 KEY) (OPERATION)			
**********					
		MISCELLANEOUS			
		**********			
ANT1	1-501-222-71	ANTENNA, TELESCOPIC (FM/SW)			
SP1	1-529-676-11	SPEAKER (10.2cm)			
⚠T401	1-435-513-11	TRANSFORMER, POWER			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
⚠	1-696-562-11	CORD, POWER (AEP)			
⚠	1-751-115-11	CORD, POWER (UK)			
	3-046-206-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH, GERMAN,SPANISH,ITALIAN,DUTCH, SWEDISH,PORTUGUESE,FINNISH,DANISH)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

2000D0444-1
Printed in Japan ©2000. 4
Published by PE General Engineering Dept.