

ICF-C610L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Radio section

Frequency range :

FM : 87.6—107.5MHz
MW : 531—1,602kHz
LW : 153—255kHz

Tape player section and general

Track system: 2-track, 1-channel, monaural
Frequency response: 50 Hz – 10,000 Hz with normal (TYPE I) tapes

Speaker: Approx. 7.7 cm (3 inches) dia.

Power output:

Radio section: 360 mW (at 10 % harmonic distortion)
Player section: 300 mW (at 10 % harmonic distortion)

Power requirements : UK model :

240V AC, 50Hz
AEP model :
220—230V AC, 50Hz

For the power backup function: 9 V DC, one 6F22 battery

Battery life: Approx. 32 hours, using Sony battery S-006P(U)

Dimensions: Approx. 254 × 128 × 101 mm (w/h/d) (10 × 5 × 4 inches) incl. projecting parts and controls

Mass: Approx. 1.3 kg (2 lb 14 oz) not incl. battery

Design and specifications subject to change without notice.

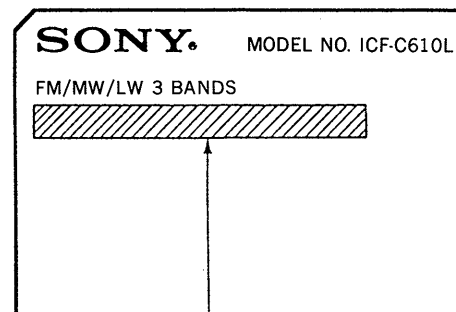
Features

- Wake up to your favorite music tape
- Dual alarm
- Date display
- Forward/reverse time setting

Model Name Using Similar Mechanism	ICF-C600L
Tape Transport Mechanism Type	MF-C600

MODEL IDENTIFICATION

—Model Number Label—



AEP model : AC : 220—230V~50Hz 5W
UK model : AC : 240V~50Hz 5W

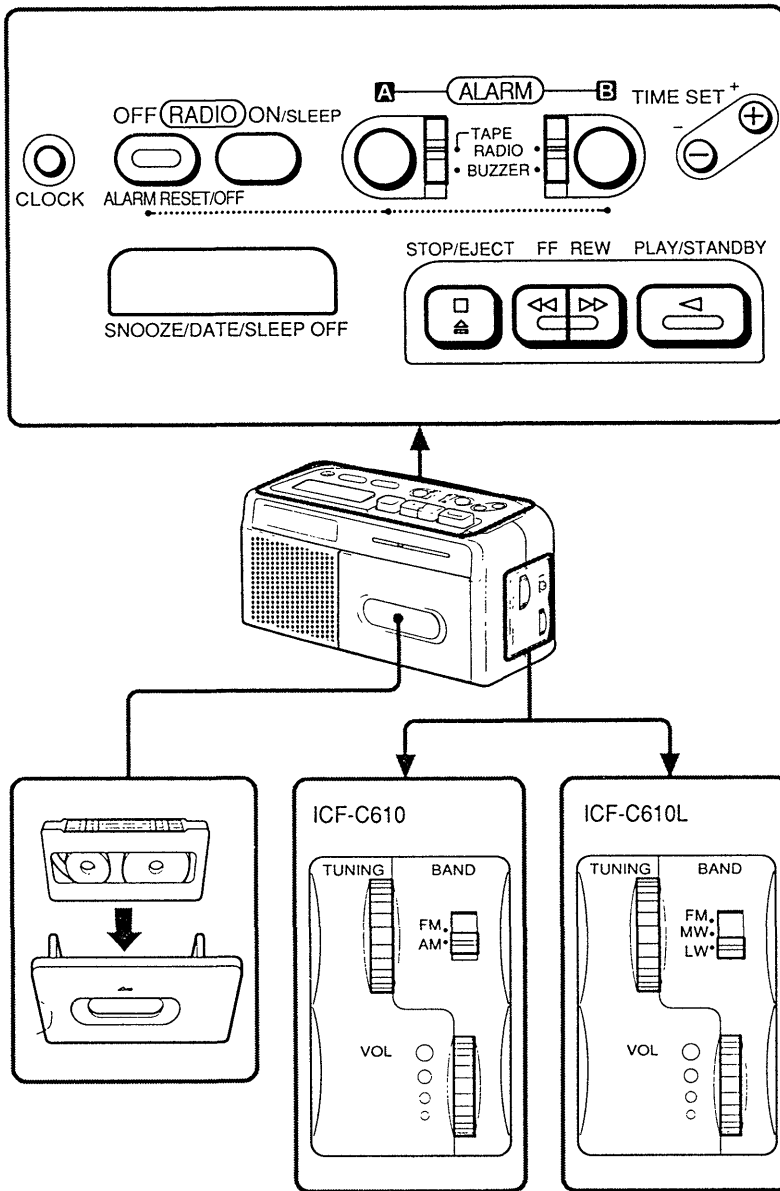
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ OR DOTTED LINE WITH MARK Δ 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.

FM/MW/LW CASSETTE PLAYER CLOCK RADIO
SONY[®]

SECTION 1 GENERAL

This section is extracted from instruction manual.



Setting the Date

1. While holding down **SNOOZE/DATE/SLEEP OFF**, press either + or – under **TIME SET** till the correct date appears in the display. Then release **SNOOZE/DATE/SLEEP OFF**.

- To display the date, press **SNOOZE/DATE/SLEEP OFF**. The display returns to the current time when you release **SNOOZE/DATE/SLEEP OFF**.

Operating the Radio

1. Press **RADIO ON/SLEEP** to turn on the radio and adjust **VOL** (volume).
2. Select **BAND** (**FM** or **AM** for ICF-C610, **FM**, **MW** or **LW** for ICF-C610L), and tune in to a station using the **TUNING** dial.

- To turn off the radio, press **RADIO OFF/ALARM RESET/OFF**.
- To improve radio reception
FM: Extend the FM wire antenna to improve FM reception.
AM (MW)/LW: Rotate the unit horizontally for optimum reception. A ferrite bar antenna is built into the unit.

Playing Back a Tape

1. Press **RADIO OFF/ALARM RESET/OFF** to turn off the radio.
2. Press **STOP/EJECT** (⏏) to open the cassette holder and insert a recorded tape.
3. Depress **PLAY/STANDBY** (▶).
4. Adjust **VOL** (volume).

- To stop playback, press **STOP/EJECT** (⏏).
- To rewind the tape, press **REW** (◀▶).
- To advance the tape rapidly, press **FF** (◀◀).

Notes

- In fast-forward or rewind mode, the motor stops at the tape end. The locked button will automatically release.
- While playing back a tape, do not set the tape alarm. If you set the tape alarm during playback, the tape being played back enters the pause mode.

Installing the Battery

To keep good time, your Dream Machine needs one 6F22 battery (not supplied), in addition to house current. The battery keeps the clock operating in the event of a power interruption. Before setting the time on your Dream Machine, open the lid at the bottom of the unit, install the battery with correct polarity and then close the lid.

- After a power interruption, the displayed time may not be always correct (it may gain or lose about 10 minutes per hour).

Knowing When to Replace the Battery

To check battery power, unplug the power cord from the wall outlet and plug it in again after a few minutes. If the displayed time is incorrect, replace the battery with a new one.

Setting the Clock and the Date

Setting the Clock

1. Plug in the unit.
The display will flash "AM 12:00" or "0:00".
2. While holding down **CLOCK**, press either + or – under **TIME SET** till the correct time appears in the display. When you release **CLOCK**, the clock begins to operate.

- The clock system varies depending on the model you own.
 12-hour system: "AM 12:00" = midnight
 24-hour system: "0:00" = midnight
- To set the current time rapidly, keep pressing **CLOCK** and the + or – button together to advance or return to a time that is within a few minutes of the current time. Then press the + or – button to set the time to the current time.

Setting the Alarm

You can set the tape, radio or buzzer alarm to **ALARM A**, and radio or buzzer alarm to **ALARM B**.

- To set the tape alarm, first play back the desired tape as described in "Playing Back a Tape", adjust the volume and rewind the tape.
- To set the radio alarm, first tune in a station and adjust the volume.

1. Set the alarm time for tape, radio or buzzer.

While holding down **ALARM A** or **B**, press either **+** or **-** under **TIME SET** till the desired time appears in the display. When you release **ALARM A** or **B**, the **ALARM A** or **B** indicator stops flashing and lights up, and the current time appears in the display.

2. Set the appropriate **ALARM** selector to the desired alarm position.

For tape alarm, leave **PLAY/STANDBY** (**▶**) pressed.

The tape, radio or buzzer will automatically sound at the preset time, and automatically turn itself off after 59 minutes, unless it is turned off manually.

- To turn off the alarm manually, press **RADIO OFF/ALARM RESET/OFF**. The alarm will come on at the preset time on the next day.
- To stop the tape, press **STOP/EJECT** (**■**).
- To cancel the alarm before the alarm time, while holding down **ALARM A** or **B**, press **RADIO OFF/ALARM RESET/OFF**.
- To check the preset time, press **ALARM A** or **B**.

Notes

- The buzzer sound level is fixed, and independent of the **VOL** (volume) control.
- You can set **ALARM A** and **ALARM B** at the same time. At the preset time, either the tape, radio or buzzer will sound depending on the set function to **ALARM A**, and either the radio or buzzer will sound depending on the set function to **ALARM B**.
- If you set **ALARM A** and **ALARM B** to the same desired time, only **ALARM A** will work.
- Even if you are listening to the radio, you can set the tape, radio or buzzer alarm.
- While you are listening to the tape, you can set only the buzzer alarm.

To Does for a Few More Minutes

1. Press **SNOOZE/DATE/SLEEP OFF**.

The radio, tape or buzzer will shut off but will automatically come on again after about 6 minutes. You can repeat this process as many as you like.

- You can reset the alarm time while activating the snooze function.

To Use Both Sleep Timer and Alarm Function

You can fall asleep to the radio sound and you will be awakened by the tape/radio/buzzer alarm at the preset time.

1. Set the alarm. (See "Setting the Alarm")
2. Set the sleep timer. (See "Setting the Sleep Timer")

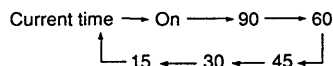
Setting the Sleep Timer

Enjoy falling asleep to the radio using the built-in sleep timer that shuts off the radio automatically at a preset time.

1. Press **RADIO ON/SLEEP**.

The radio turns on. It will go off after the preset time has passed. You can set the sleep timer of 90, 60, 45, 30 or 15 minutes.

Every push changes the display as follows.



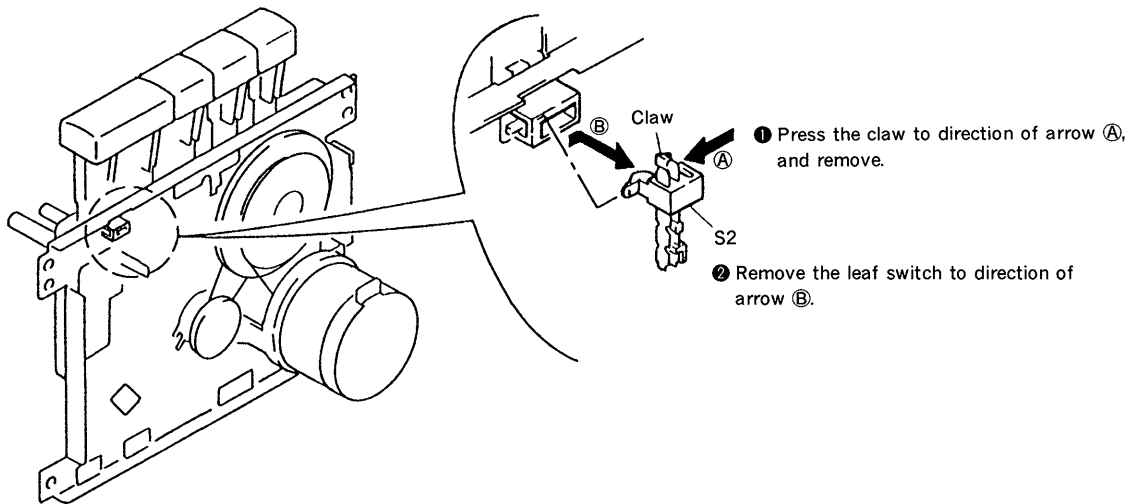
The radio will play for the time you set, then shut off.

- To turn off the radio before the preset time, press **SNOOZE/DATE/SLEEP OFF**.
- To fall asleep to the tape sound, turn the radio off and play back a recorded tape. When it reaches its end, **PLAY/STANDBY** will release automatically. The tape playback time depends on the length of the tape.

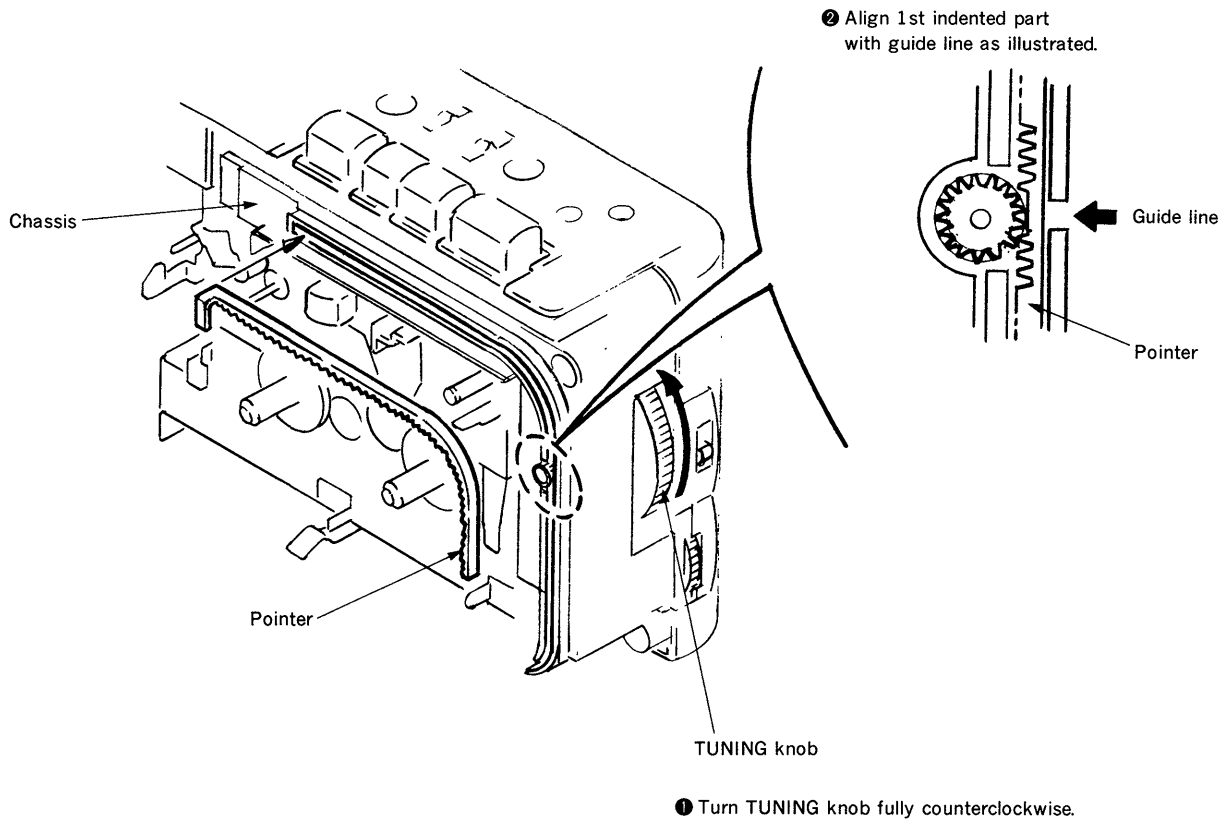
SECTION 2 DISASSEMBLY

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

2-1. REMOVE THE LEAF SWITCH



2-2. DIAL POINTER SETTING



SECTION 3 MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :

playback head	pinch roller
capstan	rubber belts
	idlers
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustment apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	30-60g•cm (0.42-0.83oz•inch)	CQ-102C
Fast Forward and Rewind	55-140g•cm (0.76-1.94oz•inch)	CQ-201B
Back Tension	1-5g•cm (0.014-0.069oz•inch)	CQ-102C

SECTION 4 ELECTRICAL ADJUSTMENTS

4-1. TAPE RECORDER SECTION 0dB=0.775V

• Test Tape

Type	Signal	Used for
P-4-A063	6.3kHz, -10dB	head azimuth adjustment
WS-48A	3kHz, 0dB	tape speed adjustment

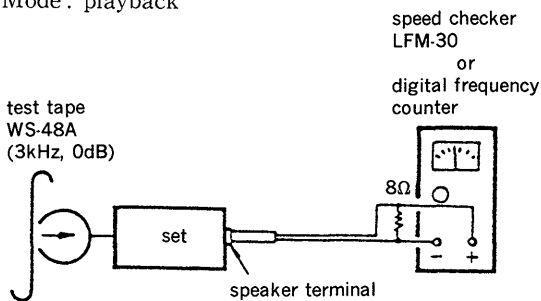
Tape Speed Adjustment

Setting :

VOL control : mechanical mid

Procedure :

1. Mode : playback

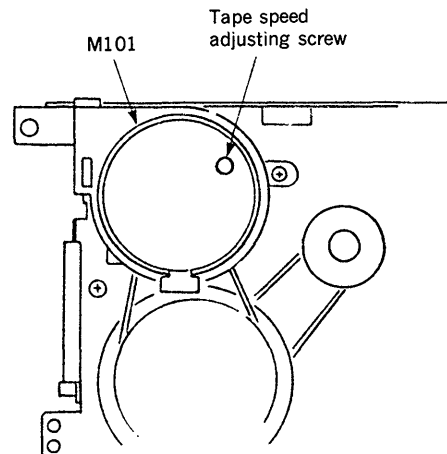


Adjustment Value :

Speed checker	Digital frequency counter
±3%	2,910 to 3,090Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30Hz).

Adjustment Location :



Playback Head Azimuth Adjustment

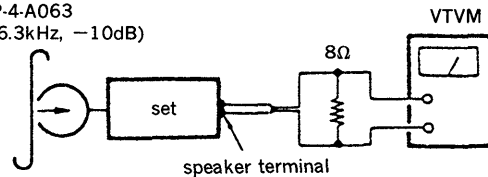
Setting :

VOL control : mechanical mid

Procedure :

1. Mode : playback

test tape
P-4-A063
(6.3kHz, -10dB)

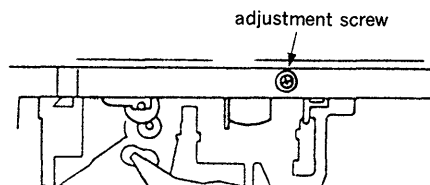


2. Turn the adjustment screw to obtain the maximum reading on VTVM.

Note : Several peaks may appear but take the maximum.

3. After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

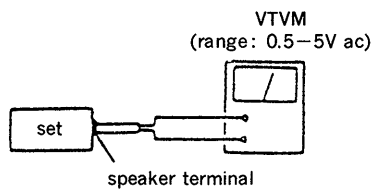
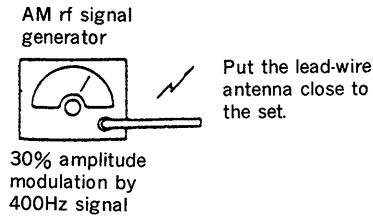


4-2. RADIO SECTION 0dB = 1 μ V

MW/LW

Setting :

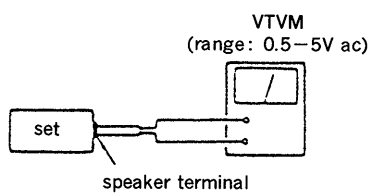
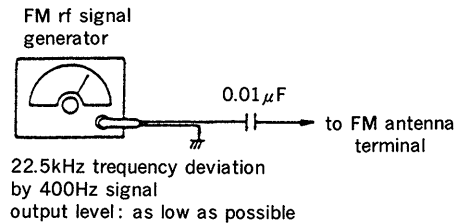
BAND switch : MW/LW



FM

Setting :

BAND switch : FM



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

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

MW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT4
520kHz	1,650kHz

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-1	CT1
680kHz	1,320kHz

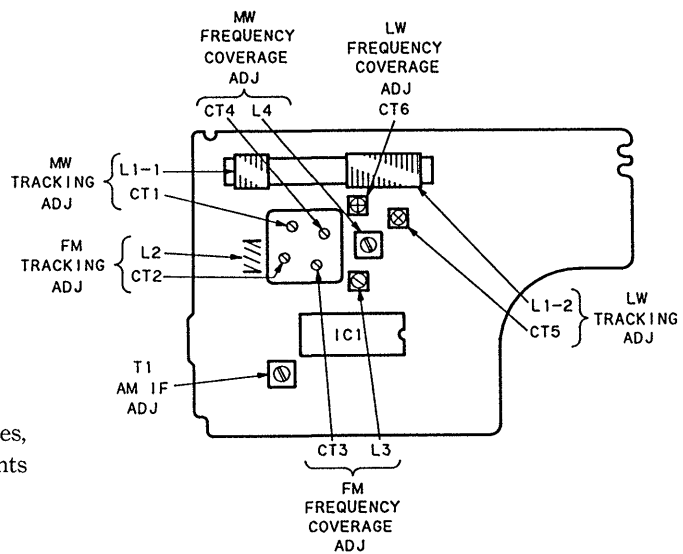
LW FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT6	
145kHz	

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-2	CT5
160kHz	240kHz

FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	CT3
87.35MHz	108.05MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT2
87.35MHz	108.05MHz

Adjustment Location : radio board

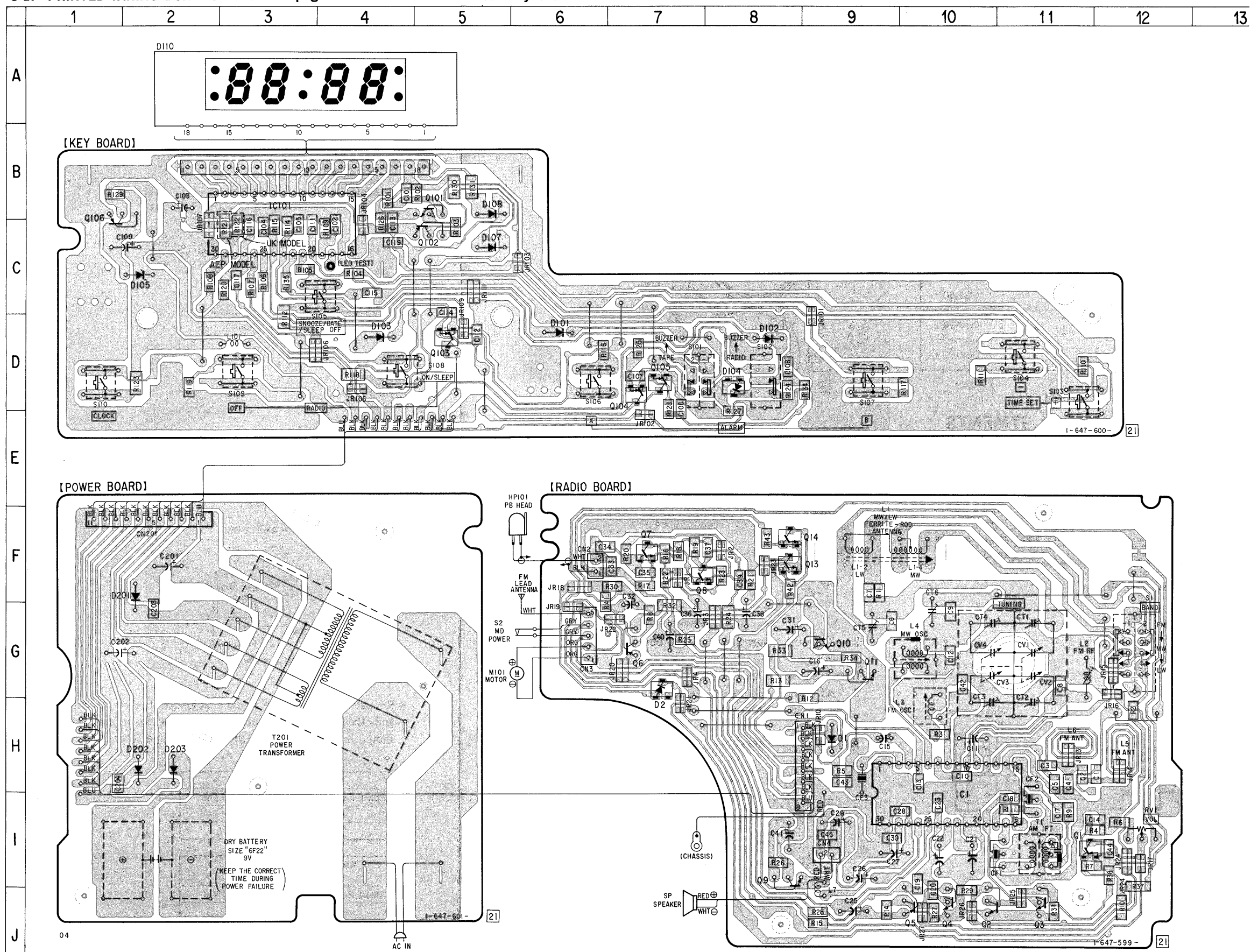


SECTION 5
DIAGRAMS

• Semiconductor Location

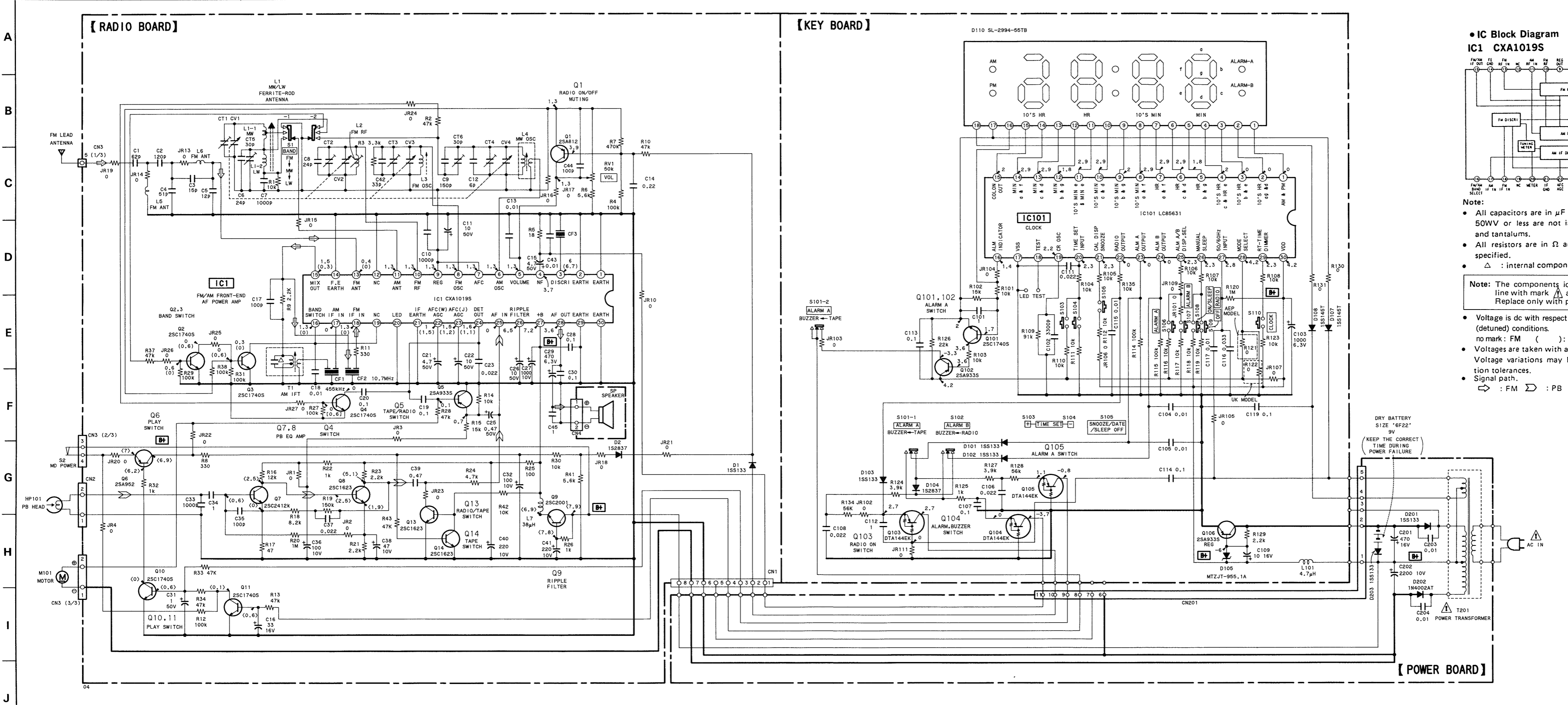
Ref. No.	Location
D1	H-9
D2	G-7
D101	D-6
D102	D-8
D103	D-4
D104	D-8
D105	C-2
D107	C-5
D108	B-5
D201	F-2
D202	H-2
D203	H-2
IC1	H-10
IC101	B-3
Q1	I-11
Q2	J-10
Q3	J-11
Q4	J-10
Q5	J-10
Q6	G-7
Q7	F-7
Q8	F-7
Q9	I-8
Q10	G-9
Q11	G-9
Q13	F-8
Q14	F-8
Q101	B-5
Q102	C-5
Q103	D-5
Q104	D-7
Q105	D-7
Q106	B-1

5-1. PRINTED WIRING BOARDS • Refer to page 12 for Semiconductor Lead Layouts.

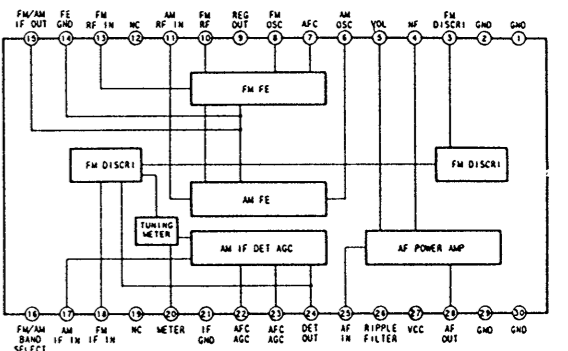


5-2. SCHEMATIC DIAGRAM

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21



IC Block Diagram
IC1 CXA1019S



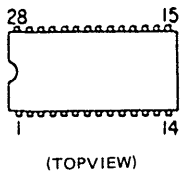
Note:
 • All capacitors are in μF unless otherwise noted. pF : μF
 50WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 • Δ : internal component.

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

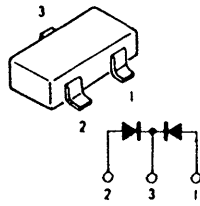
• Voltage is dc with respect to ground under no-signal (detuned) conditions.
 no mark: FM () : MW () : PB
 • Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
 • Signal path.
 \Rightarrow : FM \Rightarrow : PB

5-3. SEMICONDUCTOR LEAD LAYOUTS

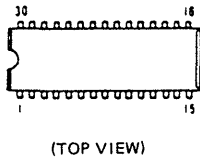
CXA1019S



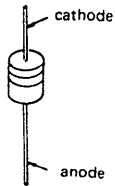
MA152WK



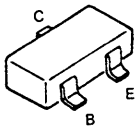
LC85631



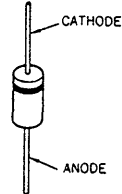
**MTZJ-5.1A
1SS119**



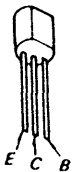
**DTA144EK
2SA1162-G
2SC1623-L5L6
2SC2412KLN-R**



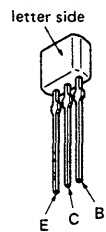
10E2



**2SA952
2SC2001-K1K2**



**2SA1175-HFE
2SC2785-HFE**



SECTION 6 EXPLODED VIEW

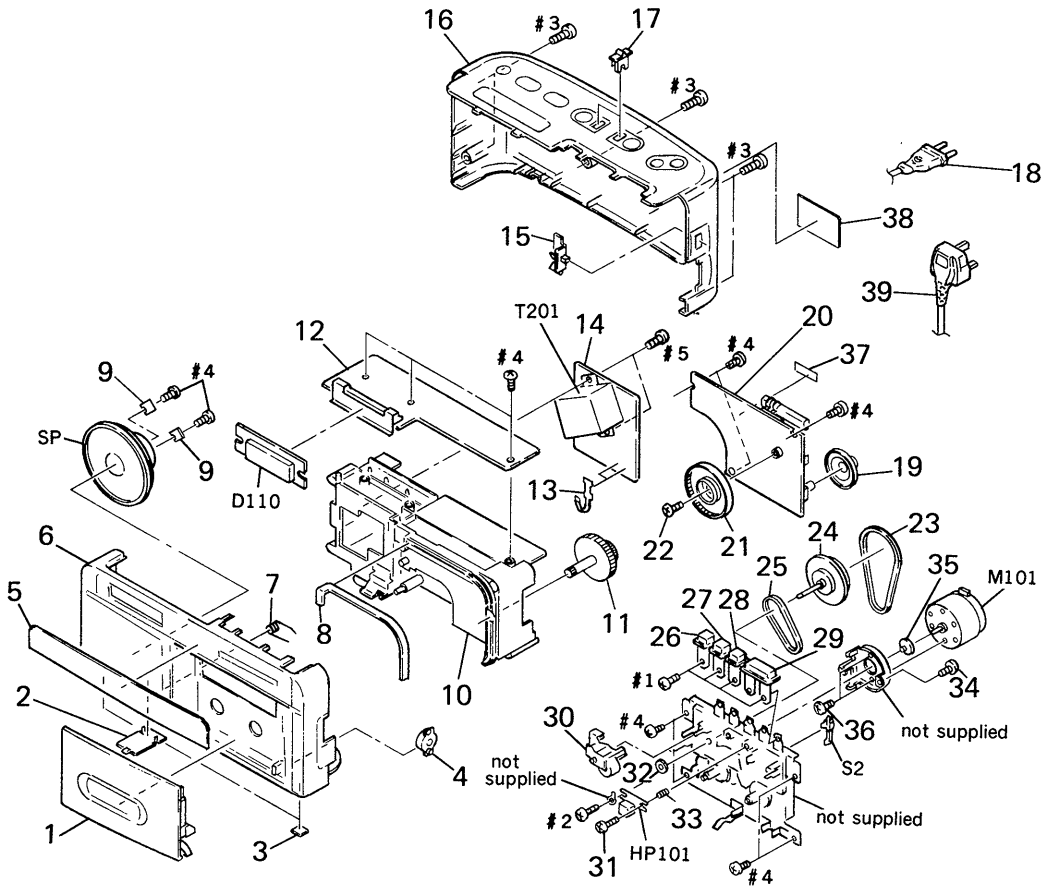
NOTE:

- 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.

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example :
KNOB, BALANCE (WHITE)... (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- Hardware (# mark) list is given in the last of this parts list.

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



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3366-503-1	LID ASSY, CASSETTE		22	3-725-329-11	SCREW, +B M2. 6X6	
2	3-369-135-01	LID, BATTERY CASE		23	3-986-414-01	BELT, MAIN	
3	3-368-852-01	FOOT		24	3-348-356-01	FLYWHEEL ASSY	
4	3-343-248-01	DAMPER (P), SMALL		25	3-596-931-01	BELT, RF	
5	3-385-664-21	PANEL (UK)		26	3-385-675-01	BUTTON (STOP)	
5	3-385-664-41	PANEL (AEP)		27	3-385-674-01	BUTTON (FF)	
6	3-385-661-01	CABINET (FRONT)		28	3-385-673-01	BUTTON (REW)	
7	3-902-031-01	SPRING, TORSION		29	3-385-672-01	BUTTON (PLAY)	
8	3-385-671-01	POINTER		30	3-986-417-01	ARM ASSY, PINCH ROLLER	
9	3-903-217-01	CLAW, SPEAKER		31	3-986-415-01	SCREW (M2X3), + BIND	
* 10	3-385-663-01	CHASSIS		32	3-986-416-01	WASHER, POLY-SLIDER	
11	3-385-667-01	KNOB (T)		33	3-598-845-01	SPRING	
* 12	A-3679-513-A	KEY BOARD, COMPLETE (UK)		34	3-986-412-01	SCREW, MB COLOR	
* 12	A-3679-514-A	KEY BOARD, COMPLETE (AEP)		35	3-986-413-01	PULLEY, MOTOR	
13	3-385-677-01	TERMINAL, BATTERY		36	3-348-362-01	SCREW, M COLOR	
* 14	1-647-601-21	POWER BOARD		37	3-831-441-XX	CUSHION	
15	3-385-668-01	KNOB (B)		* 38	3-385-708-01	LABEL, MODEL NUMBER (UK)	
16	X-3366-861-1	CABINET (REAR) ASSY (UK)		* 38	3-385-709-01	LABEL, MODEL NUMBER (AEP)	
16	X-3367-027-1	CABINET (REAR) ASSY (AEP)		△39	1-751-111-11	CORD, POWER (UK)	
17	3-385-669-01	KNOB (A)		D110	1-810-027-21	DIODE SL-2994-55TB	
△18	1-555-795-00	CORD, POWER (AEP)		HP101	1-543-625-11	HEAD, MAGNETIC (PLAYBACK)	
19	3-382-175-21	KNOB (V)		M101	1-541-662-11	MOTOR, DC	
* 20	A-3661-823-A	RADIO BOARD, COMPLETE (UK)		S2	1-571-745-11	SWITCH, LEAF (MD POWER)	
* 20	A-3661-837-A	RADIO BOARD, COMPLETE (AEP)		SP	1-544-140-21	SPEAKER	
21	3-385-670-01	GEAR, VC		△T201	1-423-701-11	TRANSFORMER, POWER	

SECTION 7 ELECTRICAL PARTS LIST

KEY

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 and -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: μ , for example:
uA ..: μ A. uPA..: μ PA..
uPB..: μ PB. uPC..: μ PC. uPD..: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H

The components identified by mark Δ or dotted line with mark Δ 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	Ref. No.	Part No.	Description	Remark
*	A-3679-513-A	KEY BOARD, COMPLETE (UK)				< JUMPER RESISTOR >	
*	A-3679-514-A	KEY BOARD, COMPLETE (AEP)					

	1-751-224-11	CORD, CONNECTION			JR101-105		
		< CAPACITOR >			1-216-295-00	METAL CHIP 0 5% 1/10W	
C101	1-164-346-11	CERAMIC CHIP 1uF	16V	JR106	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C102	1-164-182-11	CERAMIC CHIP 0.0033uF	10% 50V	JR107	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C103	1-126-916-11	ELECT 1000uF	20% 6.3V	JR109	1-216-295-00	METAL CHIP 0 5% 1/10W	
C104	1-163-031-11	CERAMIC CHIP 0.01uF	50V	JR111	1-216-296-91	METAL GLAZE 0 5% 1/8W	
C105	1-163-031-11	CERAMIC CHIP 0.01uF	50V			< COIL >	
C106	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	L101	1-414-181-11	INDUCTOR 4.7uH	
C107	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V			< TRANSISTOR >	
C108	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	Q101	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C109	1-126-157-11	ELECT 10uF	20% 16V	Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C111	1-163-033-00	CERAMIC CHIP 0.022uF	50V	Q103-105			
C112	1-164-346-11	CERAMIC CHIP 1uF	16V	8-729-901-06	TRANSISTOR DTA144EK		
C113	1-163-038-00	CERAMIC CHIP 0.1uF	25V	Q106	8-729-119-76	TRANSISTOR 2SA1175-HFE	
C114	1-163-038-00	CERAMIC CHIP 0.1uF	25V			< RESISTOR >	
C115	1-163-031-11	CERAMIC CHIP 0.01uF	50V	R101	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C116	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V	R102	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C117	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R103-108			
C119	1-163-038-00	CERAMIC CHIP 0.1uF	25V	1-216-073-00	METAL CHIP 10K 5% 1/10W		
		< DIODE >		R109	1-216-096-00	METAL GLAZE 91K 5% 1/10W	
D101-103				R110	1-216-073-00	METAL CHIP 10K 5% 1/10W	
	8-719-911-19	DIODE 1SS119		R111	1-216-073-00	METAL CHIP 10K 5% 1/10W	
D104	8-719-400-18	DIODE MA152WK		R112	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
D105	8-719-921-42	DIODE MTZJ-5.1A		R114	1-216-097-00	METAL CHIP 100K 5% 1/10W	
D107	8-719-911-19	DIODE 1SS119		R115	1-216-097-00	METAL CHIP 100K 5% 1/10W	
D108	8-719-911-19	DIODE 1SS119		R116	1-216-073-00	METAL CHIP 10K 5% 1/10W	
D110	1-810-027-21	DIODE SL-2994-55TB		R117	1-216-073-00	METAL CHIP 10K 5% 1/10W	
		< IC >		R118	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
IC101	8-759-095-52	IC LC85631		R119	1-216-073-00	METAL CHIP 10K 5% 1/10W	
				R120	1-216-121-00	METAL CHIP 1M 5% 1/10W	
				R121	1-216-296-91	METAL GLAZE 0 5% 1/8W (AEP)	
				R122	1-216-295-00	METAL CHIP 0 5% 1/10W (UK)	
				R123	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
				R124	1-216-063-00	METAL CHIP 3.9K 5% 1/10W	
				R125	1-216-049-00	METAL CHIP 1K 5% 1/10W	
				R126	1-216-081-00	METAL CHIP 22K 5% 1/10W	

KEY

POWER

RADIO

Ref. No.	Part No.	Description	Remark		
R127	1-216-063-00	METAL CHIP	3.9K	5%	1/10W
R128	1-216-091-00	METAL CHIP	56K	5%	1/10W
R129	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R130	1-216-296-91	METAL GLAZE	0	5%	1/8W
R131	1-216-296-91	METAL GLAZE	0	5%	1/8W
R134	1-216-091-00	METAL CHIP	56K	5%	1/10W
R135	1-216-073-00	METAL CHIP	10K	5%	1/10W
< SWITCH >					
S101	1-571-478-11	SWITCH, SLIDE (TAPE/BUZZER)			
S102	1-571-478-11	SWITCH, SLIDE (RADIO/BUZZER)			
S103	1-554-937-11	SWITCH, KEY BOARD (TIME SET +)			
S104	1-554-937-11	SWITCH, KEY BOARD (TIME SET -)			
S105	1-554-937-11	SWITCH, KEY BOARD (SNOOZE/DATE/SLEEP OFF)			
S106	1-554-937-11	SWITCH, KEY BOARD (ALARM A)			
S107	1-554-937-11	SWITCH, KEY BOARD (ALARM B)			
S108	1-554-937-11	SWITCH, KEY BOARD (RADIO ON/SLEEP)			
S109	1-554-937-11	SWITCH, KEY BOARD (RADIO OFF)			
S110	1-554-937-11	SWITCH, KEY BOARD (CLOCK)			

*	1-647-601-21	POWER BOARD	*****		
*	1-535-771-11	TERMINAL			
	1-751-223-11	CORD, CONNECTION			
	3-385-677-01	TERMINAL, BATTERY			
< CAPACITOR >					
C201	1-126-103-11	ELECT	470uF	20%	16V
C202	1-126-927-11	ELECT	2200uF	20%	10V
C203	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C204	1-163-031-11	CERAMIC CHIP	0.01uF		50V
< CONNECTOR >					
* CN201	1-750-661-11	SOCKET, CONNECTOR 11P			
< DIODE >					
D201	8-719-911-19	DIODE 1SS119			
D202	8-719-200-02	DIODE 10E2			
D203	8-719-911-19	DIODE 1SS119			
< TRANSFORMER >					
△T201	1-423-701-11	TRANSFORMER, POWER			

Ref. No.	Part No.	Description	Remark		
*	A-3661-823-A	RADIO BOARD, COMPLETE (UK)			
*	A-3661-837-A	RADIO BOARD, COMPLETE (AEP)	*****		
*	3-893-382-01	PLATE (SFU), SHIELD			
< CAPACITOR >					
C1	1-163-112-00	CERAMIC CHIP	62PF	5%	50V
C2	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C3	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C4	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C5	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C6	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C7	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C8	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C9	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C11	1-124-907-11	ELECT	10uF	20%	50V
C12	1-163-089-00	CERAMIC CHIP	6PF		50V
C13	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C14	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C15	1-124-927-11	ELECT	4.7uF	20%	100V
C16	1-124-034-51	ELECT	33uF	20%	16V
C17	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C18	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C19	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C20	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C21	1-124-927-11	ELECT	4.7uF	20%	100V
C22	1-124-907-11	ELECT	10uF	20%	50V
C23	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C25	1-124-902-00	ELECT	0.47uF	20%	50V
C26	1-124-907-11	ELECT	10uF	20%	50V
C27	1-124-473-11	ELECT	1000uF	20%	10V
C28	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C29	1-124-472-11	ELECT	470uF	20%	10V
C30	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C31	1-124-903-11	ELECT	1uF	20%	50V
C32	1-124-443-00	ELECT	100uF	20%	10V
C33	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C34	1-164-346-11	CERAMIC CHIP	1uF		16V
C35	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C36	1-124-443-00	ELECT	100uF	20%	10V
C37	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C38	1-124-126-00	ELECT	47uF	20%	10V
C39	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C40	1-126-176-11	ELECT	220uF	20%	10V
C41	1-126-176-11	ELECT	220uF	20%	10V
C42	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C43	1-163-031-11	CERAMIC CHIP	0.01uF		50V

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

Ref. No.	Part No.	Description	Remark
C44	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C45	1-164-346-11	CERAMIC CHIP 1uF	16V
< FILTER >			
CF1	1-578-677-11	FILTER, CRYSTAL	
CF2	1-567-097-61	FILTER, CERAMIC	
CF3	1-567-097-61	FILTER, CERAMIC	
< CONNECTOR >			
* CN1	1-568-283-11	SOCKET, CONNECTOR 8P	
* CN2	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P	
* CN3	1-568-271-11	SOCKET, CONNECTOR 5P	
CN4	1-568-277-11	SOCKET, CONNECTOR 2P	
< VARIABLE CAPACITOR >			
CT1-4 } CV1-4 }	1-151-628-11	CAP, VARIABLE (TUNING)	
< TRIMMER >			
CT5	1-141-443-11	TRIMMER, CERAMIC 30PF	
CT6	1-141-443-11	TRIMMER, CERAMIC 30PF	
< DIODE >			
D1	8-719-911-19	DIODE 1SS119	
D2	8-719-400-18	DIODE MA152WK	
< IC >			
IC1	8-752-035-29	IC CXA1019S	
< 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	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR4	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR10	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR13-15	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR16	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR17	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR18	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR19	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR20	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR21-23	1-216-295-00	METAL CHIP 0 5% 1/10W	
JR24	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR25-27	1-216-295-00	METAL CHIP 0 5% 1/10W	

Ref. No.	Part No.	Description	Remark
< COIL >			
L1	1-402-584-11	ANTENNA, FERRITE-ROD (MW/LW)	
L2	1-406-835-11	COIL, AIR-CORE	
L3	1-406-425-11	COIL	
L4	1-406-028-00	COIL, OSC (MW)	
L7	1-410-294-11	INDUCTOR, MICRO 38uH	
< TRANSISTOR >			
Q1	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2-4	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q5	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q6	8-729-195-23	TRANSISTOR 2SA952	
Q7	8-729-016-80	TRANSISTOR 2SC2412KLN-R	
Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q9	8-729-011-92	TRANSISTOR 2SC2001-K1K2	
Q10	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q13	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q14	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R2	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R3	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R4	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R5	1-216-007-00	METAL CHIP 18 5% 1/10W	
R6	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R7	1-216-113-00	METAL CHIP 470K 5% 1/10W	
R8	1-216-037-00	METAL CHIP 330 5% 1/10W	
R9	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R10	1-216-238-00	METAL GLAZE 47K 5% 1/8W	
R11	1-216-037-00	METAL CHIP 330 5% 1/10W	
R12	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R13	1-216-238-00	METAL GLAZE 47K 5% 1/8W	
R14	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R15	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R16	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R17	1-216-017-00	METAL CHIP 47 5% 1/10W	
R18	1-216-071-00	METAL CHIP 8.2K 5% 1/10W	
R19	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R20	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R21	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R22	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R23	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R24	1-216-214-00	METAL GLAZE 4.7K 5% 1/8W	
R25	1-216-025-00	METAL CHIP 100 5% 1/10W	
R26	1-216-049-00	METAL CHIP 1K 5% 1/10W	

RADIO

Ref. No.	Part No.	Description	Remark
R27	1-216-097-00	METAL CHIP	100K 5% 1/10W
R28	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R29	1-216-097-00	METAL CHIP	100K 5% 1/10W
R30	1-216-073-00	METAL CHIP	10K 5% 1/10W
R31	1-216-097-00	METAL CHIP	100K 5% 1/10W
R32	1-216-198-00	METAL CHIP	1K 5% 1/8W
R33	1-216-238-00	METAL GLAZE	47K 5% 1/8W
R34	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R37	1-216-238-00	METAL GLAZE	47K 5% 1/8W
R38	1-216-097-00	METAL CHIP	100K 5% 1/10W
R41	1-216-067-00	METAL CHIP	5.6K 5% 1/10W
R42	1-216-073-00	METAL CHIP	10K 5% 1/10W
R43	1-216-089-91	METAL GLAZE	47K 5% 1/10W

< VARIABLE RESISTOR >

RV1 1-241-586-11 RES. VAR, CARBON 50K (VOL)

< SWITCH >

S1 1-572-949-11 SWITCH, SLIDE (BAND)

< TRANSFORMER >

T1 1-404-902-21 TRANSFORMER, IF

MISCELLANEOUS

△18 1-555-795-00 CORD, POWER (AEP)

△39 1-751-111-11 CORD, POWER (UK)

HP101 1-543-625-11 HEAD, MAGNETIC (PLAYBACK)

M101 1-541-662-11 MOTOR, DC

S2 1-571-745-11 SWITCH, LEAF (MD POWER)

SP 1-544-140-21 SPEAKER

ACCESSORIES & PACKING MATERIALS

3-756-529-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, DUTCH)

3-756-529-41 MANUAL, INSTRUCTION (SPANISH, ITALIAN, PORTUGUESE) (AEP)

* 3-904-766-01 INDIVIDUAL CARTON

Ref. No.	Part No.	Description	Remark
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HARDWARE LIST

#1	7-621-255-10	SCREW +BVTT 2X3 (S)	
#2	7-621-255-45	SCREW, TOTSU PWH 2X6	
#3	7-685-154-19	SCREW +P 3X35 TYPE2 NON-SLIT	
#4	7-685-646-79	SCREW +P 3X8 TYPE2 NON-SLIT	
#5	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	

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