

ICF-C703L

SERVICE MANUAL

*AEP Model
UK Model*



Photo : AEP model

SPECIFICATIONS

Time display :

AEP Model : 24-hour system

UK model : 12-hour system

Frequency range :

Band	Frequency range	Channel step
FM	87.5—108MHz	0.05*MHz (fixed)
MW	531—1,602kHz	9kHz (fixed)
LW	153—281kHz	2kHz ⇄ 7kHz

*The frequency display is raised or lowered by a step of 0.1 MHz. (Example: Frequency 88.05 MHz is displayed as "88.0 MHz".)

Intermediate frequency:

FM: 10.7 MHz, AM: 450 kHz

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

Power output: 150 mW (at 10 % harmonic distortion)

Power requirements:

AEP model: 220—230V AC, 50Hz

UK model : 240V AC, 50Hz

Dimensions: Approx. 128 × 92.8 × 137 mm (w/h/d)
(5 1/8 × 3 3/4 × 5 1/2 inches) incl. projecting parts and controls

Mass: Approx. 495 g (1 lb 2 oz)

Accessory supplied: FM antenna coupler
(1, AEP model only)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Features

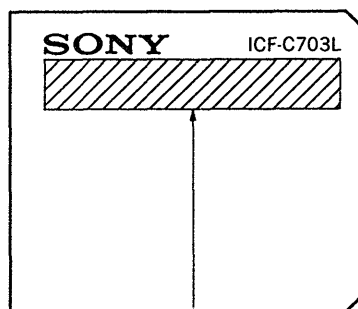
- Dual alarm PLL (phase locked loop) synthesized clock radio
- Display with adjustable brightness
- 5 random memory presets
- Self power back-up:
Even if the power supply is interrupted, the time setting and the memory will be backed up for 1 hour without battery.

FM/MW/LW PLL SYNTHESIZED CLOCK RADIO
SONY®

MODEL IDENTIFICATION

—Model Number label—



Model number label on POWER unit:



AEP model: AC: 220—230V
~50Hz 3W

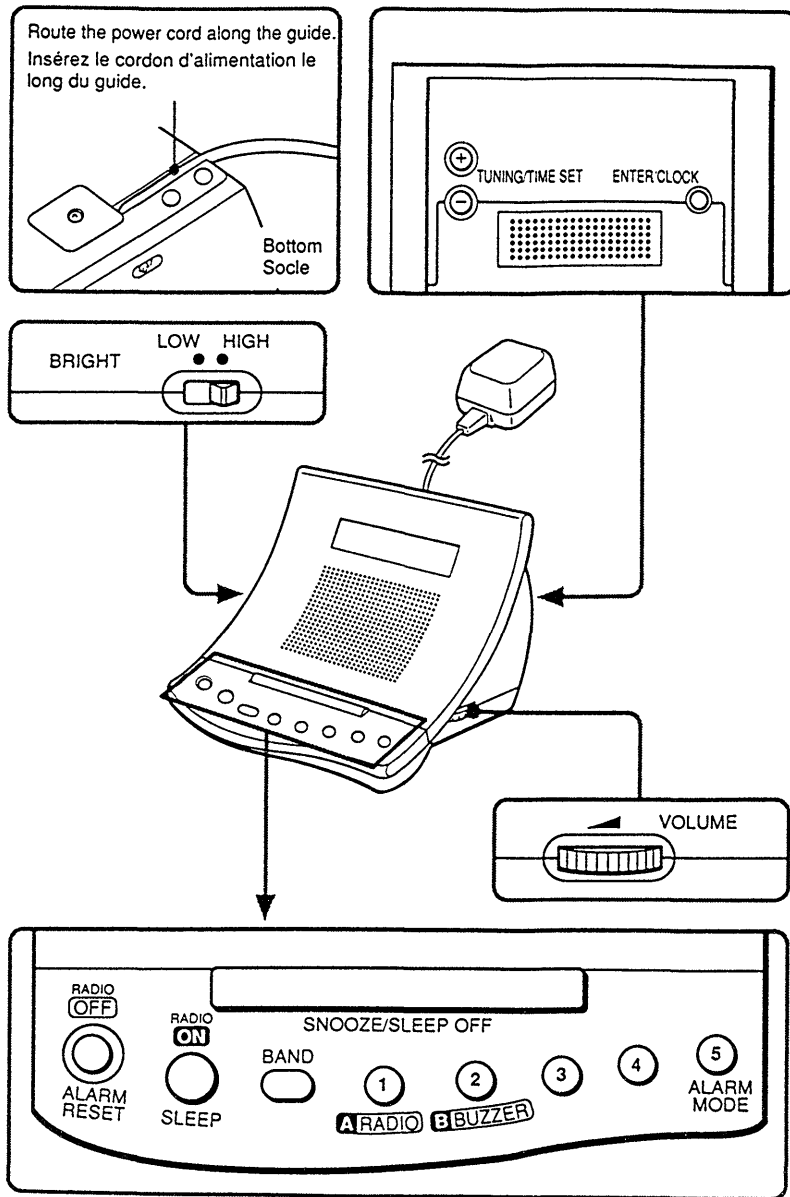
UK model : AC: 240V~50Hz 3W

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.

SECTION 1 GENERAL

This section is extracted from instruction manual.

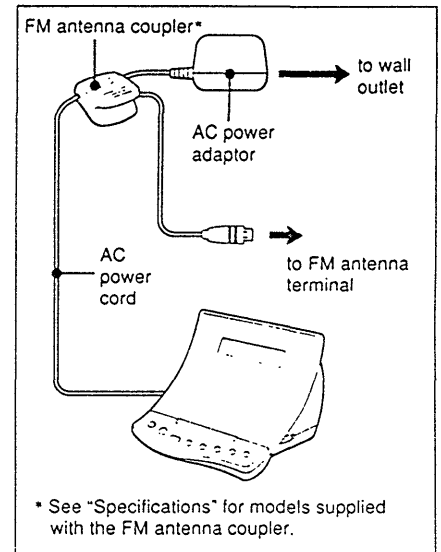


- Tune in a station by pressing the + or - button of **TUNING/TIME SET**.
The FM channel step is set to 0.05 MHz (The FM frequency indication changes every 0.1 MHz.).
The MW channel step is set to 10 kHz for models for North and South America and 9 kHz for models for other countries.
The LW channel step alternates between 2 kHz and 7 kHz.
A beep sounds at the band edge.

- To turn off the radio, press **RADIO OFF/ALARM RESET**.
- To improve radio reception
FM: Since the antenna is encased in the AC power cord, extend the cord to improve FM reception.
MW/LW: Rotate the unit horizontally for optimum reception. A ferrite bar antenna is built into the unit.
- To check the station you are listening to, press **RADIO ON/SLEEP**.
The band and frequency appear for 10 seconds.

For the Customers Supplied with an FM Antenna Coupler

Clamp the AC power cord with the supplied coupler and connect it to a wall FM antenna terminal for optimum FM reception.



Setting the Clock

- Plug in the unit.
The display will flash "AM 12:00" or "0:00".
- While holding down **ENTER/CLOCK**, press either + or - of **TUNING/TIME SET** till the correct time appears in the display. When you release **ENTER/CLOCK**, the clock begins to operate and ":" flashes.

- 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 **ENTER/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.

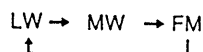
Changing the Brightness of the Display Window

To change the brightness of the display window, slide **BRIGHT** (brightness).

Operating the Radio

Manual Tuning

- Press **RADIO ON/SLEEP** to turn on the radio.
The band, frequency and preset number indications will be displayed in the display window after "On" and preset number appear for about 2 seconds. They change to the current time indication after about 10 seconds.
- Adjust **VOLUME**.
- Press **BAND** to select the band.
Every push changes the band as follows. (The last frequency selected in each band appears.)



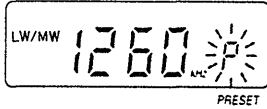
Preset Tuning

Presetting the Station

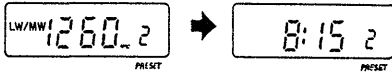
You can preset up to 5 stations in FM/MW / LW with numbered buttons 1 to 5.

Example: To set MW 1260 kHz in preset number 2.

1. Tune in to MW 1260 kHz (See "Manual Tuning").
2. Press ENTER/CLOCK.
"P" flashes for about 10 seconds.



3. Press the "2" button while "P" is flashing.
The beep sounds twice and the station is preset. Though the indication changes to the current time after 10 seconds, the preset number remains.



- To change the preset station, set a new station's frequency in the number whose station you want to change. The previous frequency is canceled.
- Note that the preset 1 station is used for the wake up station of the radio alarm.

Tuning in a Preset Station

1. Press RADIO ON/SLEEP to turn on the radio.
2. Press the preset number button of the station.
The band, frequency and preset number appear in the display window. After 10 seconds, the indication changes to the current time. The preset number remains.

- To turn off the radio, press RADIO OFF/ALARM RESET.
- To check the station you are listening to, press the preset number button. The band and frequency appear for 10 seconds.

Setting the Alarm

You can set the radio and buzzer alarms. The wake up station is that preset in number 1. To set the radio alarm, first preset a desired station for wake up to the preset number 1 (see "Preset Tuning"), and adjust the volume.

1. Turn off the radio.
2. While holding down A RADIO or B BUZZER, press either + or - of TUNING/TIME SET till the desired time appears in the display.
The A RADIO or B BUZZER indicator flashes while these buttons are being held down.



3. Release A RADIO or B BUZZER.
The alarm time is set. The indication becomes the current time.
4. Press ALARM MODE till the alarm you want to set appears in the display.
Each push changes the alarm indication as follows.

No alarm → A RADIO → B BUZZER
↑ A RADIO / B BUZZER ←

When you want to set both A RADIO and B BUZZER alarm, set both A RADIO and B BUZZER alarm time by performing steps 2 and 3 above.
The radio or buzzer will automatically sound at the preset time, and automatically turn itself off after 60 minutes, unless it is turned off manually.

- To shut off the alarm manually, press RADIO OFF/ALARM RESET. The alarm will come on at the preset time the next day.
- To cancel the alarm before the alarm time, press ALARM MODE till the appropriate alarm indication disappears.
- To check the preset time, press A RADIO or B BUZZER.

Notes

- The buzzer sound level is fixed, and independent of the VOLUME dial.
- If you set A RADIO and B BUZZER to the same desired time, only A RADIO will work.

To Doze for a Few More Minutes

1. Press SNOOZE/SLEEP OFF.
The radio or buzzer will shut off but will automatically come on again after about 8 minutes.
You can repeat this process within 1 hour.

- When the snooze alarm function is operating, the alarm indication flashes.

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 repeatedly.
The radio turns on. You can set the sleep timer of 90, 60, 30 or 15 minutes.
Each push changes the display as follows.

Current time → On → 90
↑ ↓
15 ← 30 ← 60

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

- To turn off the radio before the preset time, press SNOOZE/SLEEP OFF.

To Use Both Sleep Timer and Alarm Function

You can fall asleep to the radio sound and be awakened by the 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")

Note

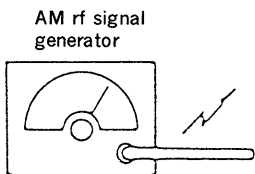
When the alarm time arrives while the sleep timer is working, the sleep timer is canceled and the alarm sounds.

SECTION 2 ELECTRICAL ADJUSTMENTS

● MW/LW Section

Setting :

BAND switch : MW or LW



Put the lead-wire antenna close to the set.

30% amplitude modulation by 400Hz signal
output level : as low as possible

LW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
CT4	153kHz	1.2±0.1V
confirmation	281kHz	check 7.1±1.0V

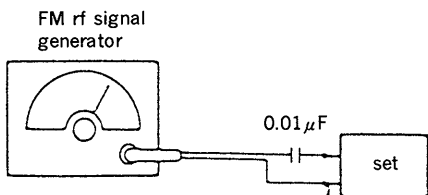
Note : Not use the AM RF signal generator in this adjustment.

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-2	CT2
153kHz	279kHz

● FM Section

Setting :

BAND switch : FM



22.5kHz frequency deviation by 400Hz signal
output level : as low as possible

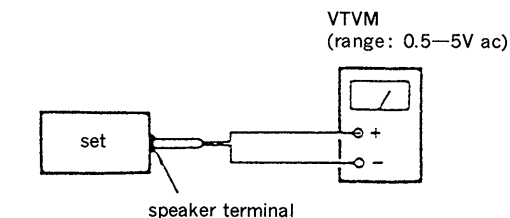
lead antenna terminal

FM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
L3	87.5MHz	2.0±0.1V
confirmation	108MHz	check 9.8±1.0V

Note : Not use the FM RF signal generator in this adjustment.

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	CT3
87.5MHz	108MHz

Adjustment Location : radio board (component side)



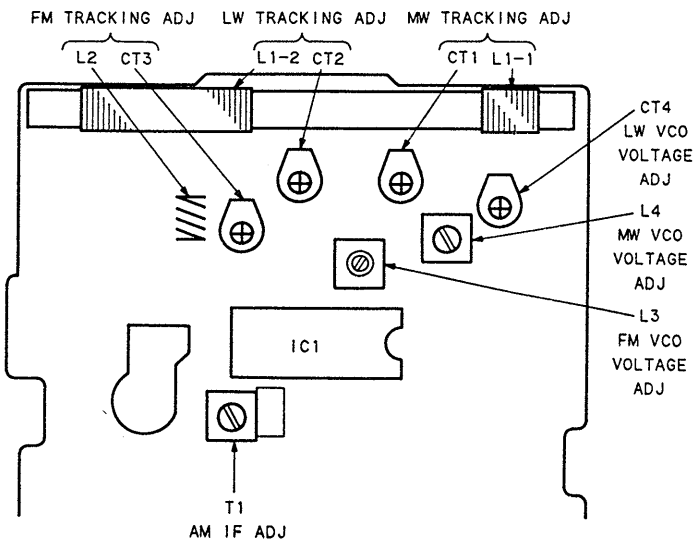
- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT		
Adjust for a maximum reading on VTVM.		
T1		
450kHz		

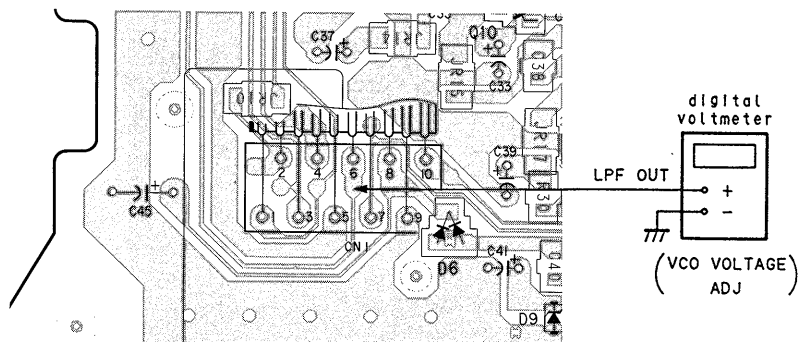
MW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
L4	531kHz	1.7±0.05V
confirmation	1,602kHz	check 8.0±0.6V

Note : Not use the AM RF signal generator in this adjustment.

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-1	CT1
621kHz	1,404kHz

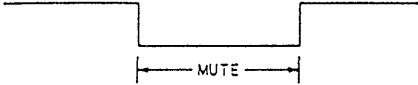


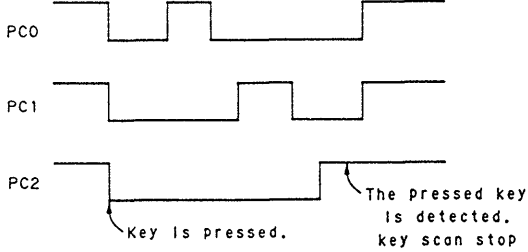
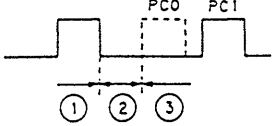
Adjustment Location : radio board (conductor side)



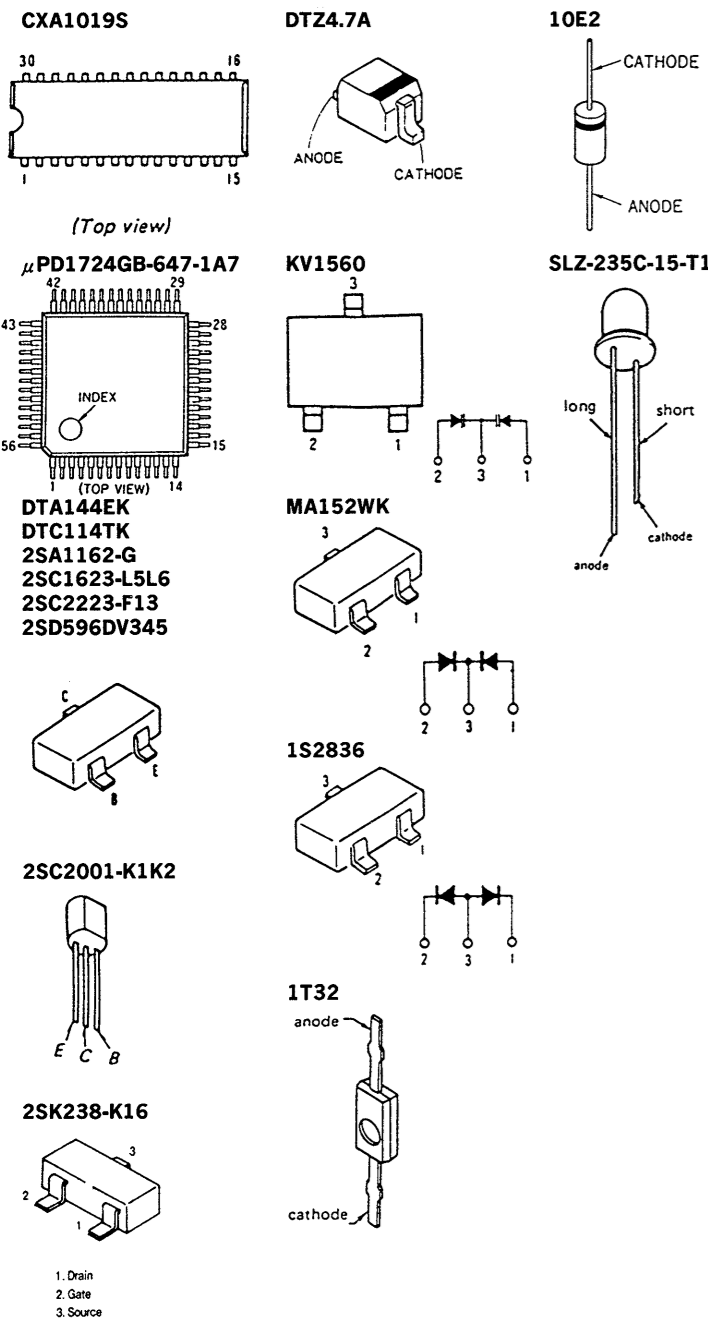
SECTION 3 PIN DESCRIPTION

IC101 μ PD1724GB-647-1A7

Pin No.	Pin Name	Signal Name	I/O	Description
1-10	LCD10-LCD1	LCD10-LCD1	O	LCD drive segment signal
11	NC		—	Connected to GND.
12-14	COM3-COM1	COM3-COM1	O	LCD drive common signal
15	VSS3		—	Pin for doubler circuit capacitor connection to develop LCD drive voltage
16	CAP2			
17	CAP1			
18	VSS2			
19	VDP	$\overline{\text{MUTE}}$	O	Audio signal mute. Active : Low. LOW when MUTE ON. 
20	CGP	BEEP	O	Activates buzzer. (1 kHz)
21	NC		—	Connected to +3V.
22	VDD		—	3V power supply input terminal
23	VCOH	TV VCO	I	Unused pin
24	VCOM	FM VCO	I	FM VCO input
25	VCOL	AM VCO	I	AM VCO input
26	VSS1		—	GND
27	EO1		O	Unused pin
28	EO2		O	PLL error output pin
29	CE	CE	I	Detects power supply line status. Power supply line OFF : Low Power supply line ON : High
30	X0		O	Crystal oscillator connection pin
31	X1		I	
32	VSS4		—	Pin for regulator circuit capacitor connection to attain stable drive voltage of the oscillator
33	PA3	ALARM OUT	—	Connected to +3V.
34	PA2	WEATHER	O	Unused pin
35	PA1	TVL. LW	O	Unused pin
36	PA0	AM	O	BAND output pin. Low : FM, High : MW
37	PB3	CST OUT	—	Unused pin
38	PB2	POWER OUT	O	Unused pin
39	PB1	INT OUT	O	INITIALIZE Output
40	PB0	TVH. WEATHER	O	BAND output pin. Low : FM, High : MW
41	PC3	KEY SOURCE	O	Unused pin

Pin No.	Pin Name	Signal Name	I/O	Description
42-44	PC2-PC0	KEY SOURCE	O	<p>Conducts Key Scan. Timing chart (Ex.) When the PC2 line key is pressed.</p> 
45	K3	KEY RETURN	I	Unused pin
46-48	K2-K0	KEY RETURN	I	<p>Key Return input Key Scan</p> <ol style="list-style-type: none"> ① Set PC0, PC1 and PC2 to "High". ② When no of the 15 keys is pressed, PC0-PC2 will be set to "Low". ③ Each port is set to "High" (Key scan) in the following order PC0 → PC1 → PC2 to determine the pressed key. <p>K0-K3 input condition The figure in the right indicates that the key following PC1 is pressed.</p> <p>* When the initial key is pressed and held down while the next key is pressed, the second key input will not be accepted until the initial key is released (for +, - keys only). Release the initial key and press the next key so that the second key input will be accepted.</p> 
49	NC		—	Connected to INITIALIZE
50	NC		—	Connected to GND.
51-56	LCD16-LCD11	LCD16-LCD11	O	LCD drive segment signal

4-1. SEMICONDUCTOR LEAD LAYOUTS



● Semiconductor Location

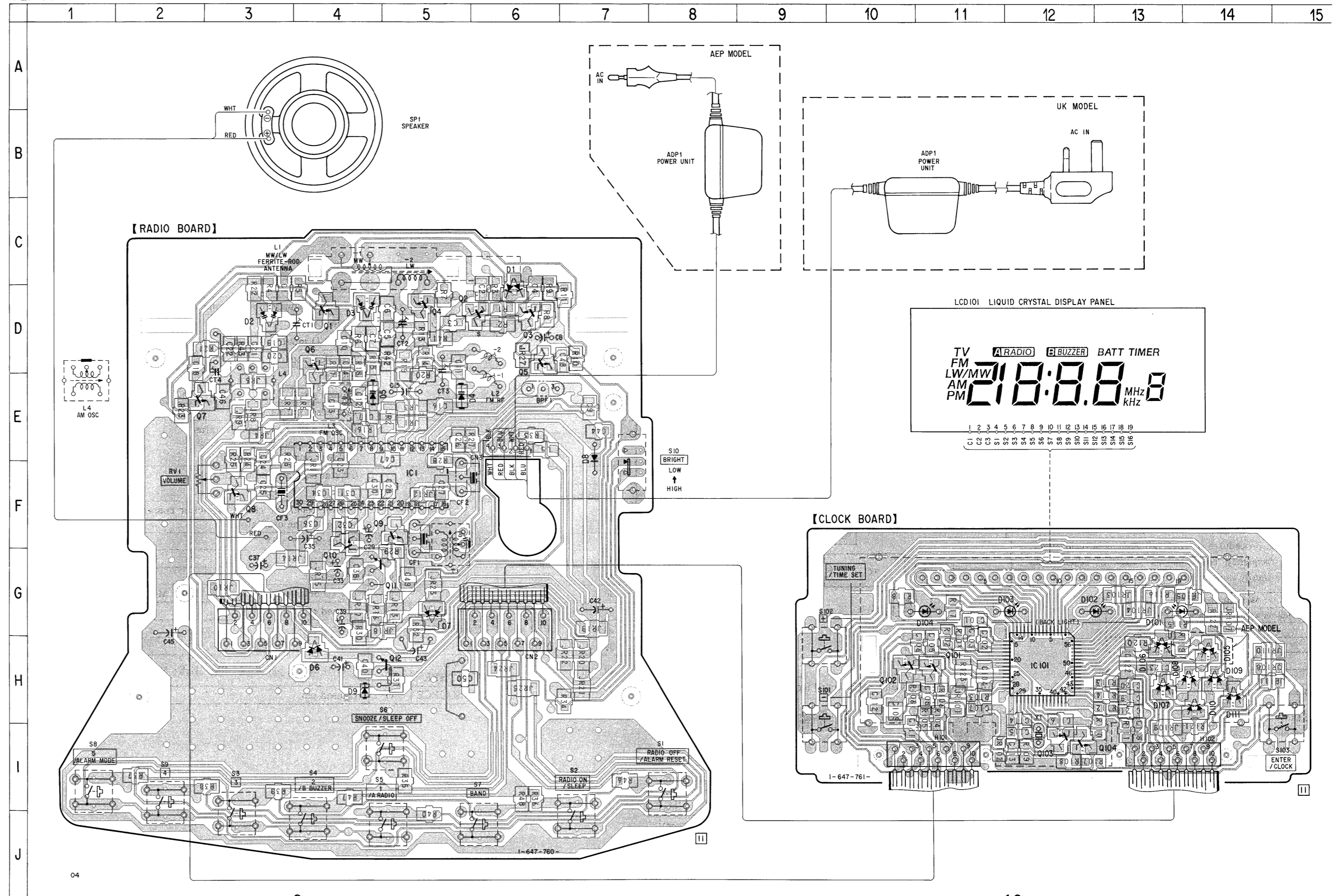
Ref. No.	Location
D1	C-6
D2	D-3
D3	D-4
D4	E-5
D5	E-4
D6	H-4
D7	G-5
D8	E-7
D9	H-4
D101	G-13
D102	G-12
D103	G-12
D104	G-11
(D105)	H-14
D106	H-13
D107	H-13
D108	H-14
D109	H-14
D110	H-14
D111	H-14
IC1	F-5
IC101	H-12
Q1	D-4
Q2	D-6
Q3	D-6
Q4	D-5
Q5	D-6
Q6	D-4
Q7	E-2
Q8	F-3
Q9	F-5
Q10	F-4
Q11	G-4
Q12	H-4
Q101	H-11
Q102	H-10
Q103	I-12
Q104	I-12

(): AEP model only

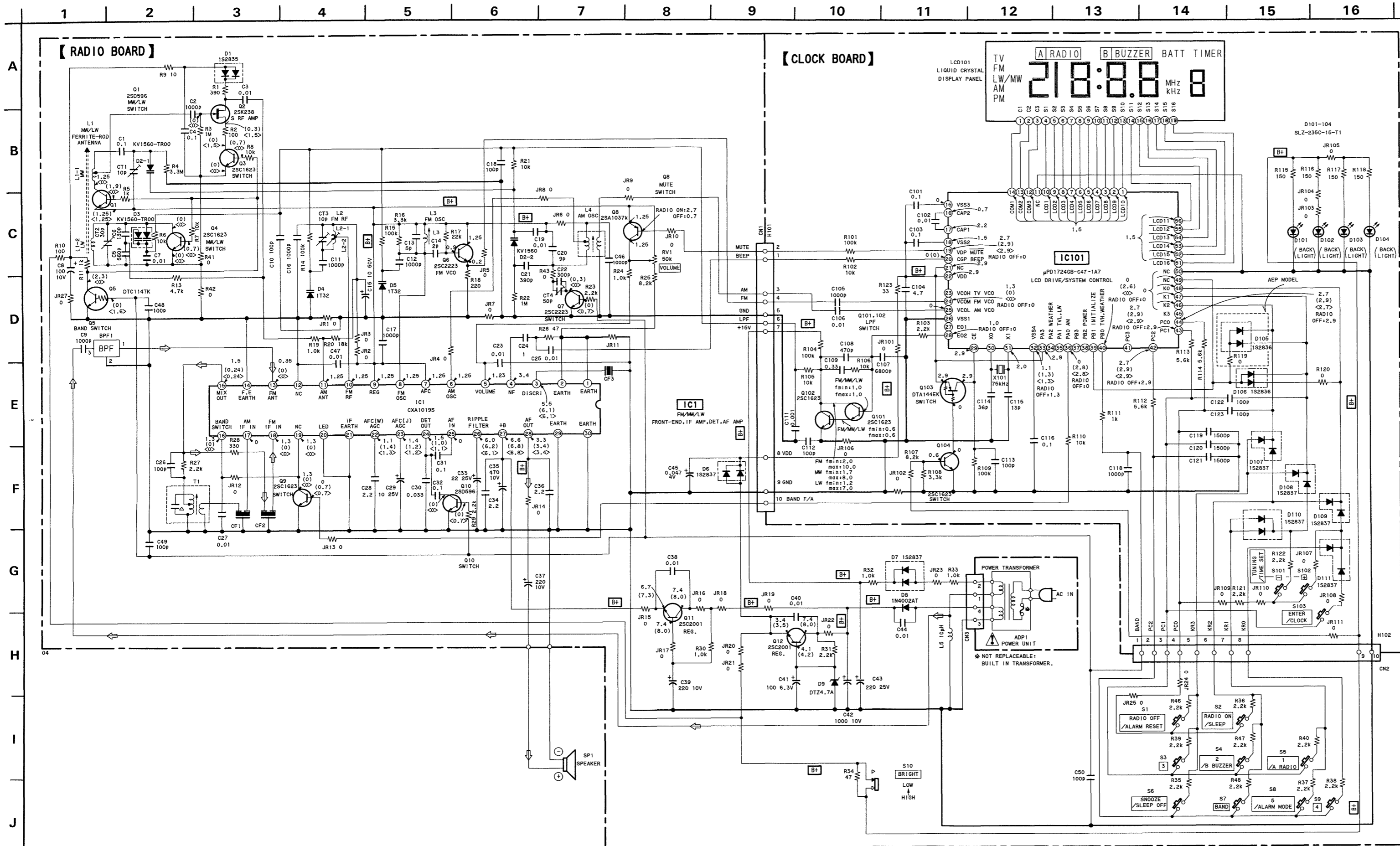
Note:

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

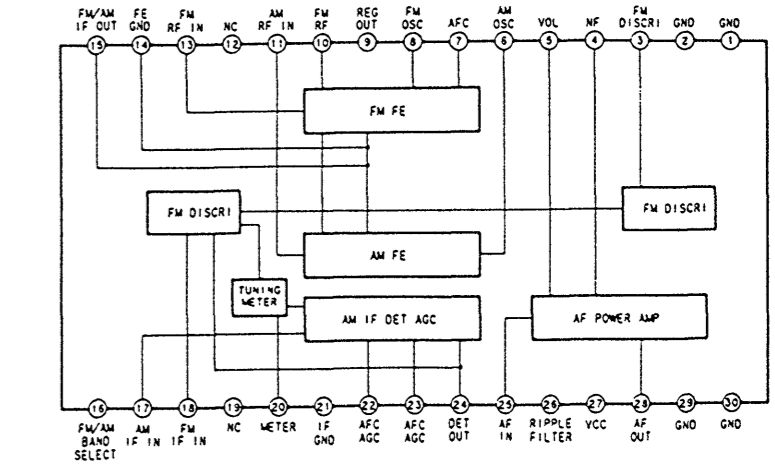
4-2. PRINTED WIRING BOARDS



4-3. SCHEMATIC DIAGRAM



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
(): LW
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.

SECTION 5 EXPLODED VIEW

NOTE:

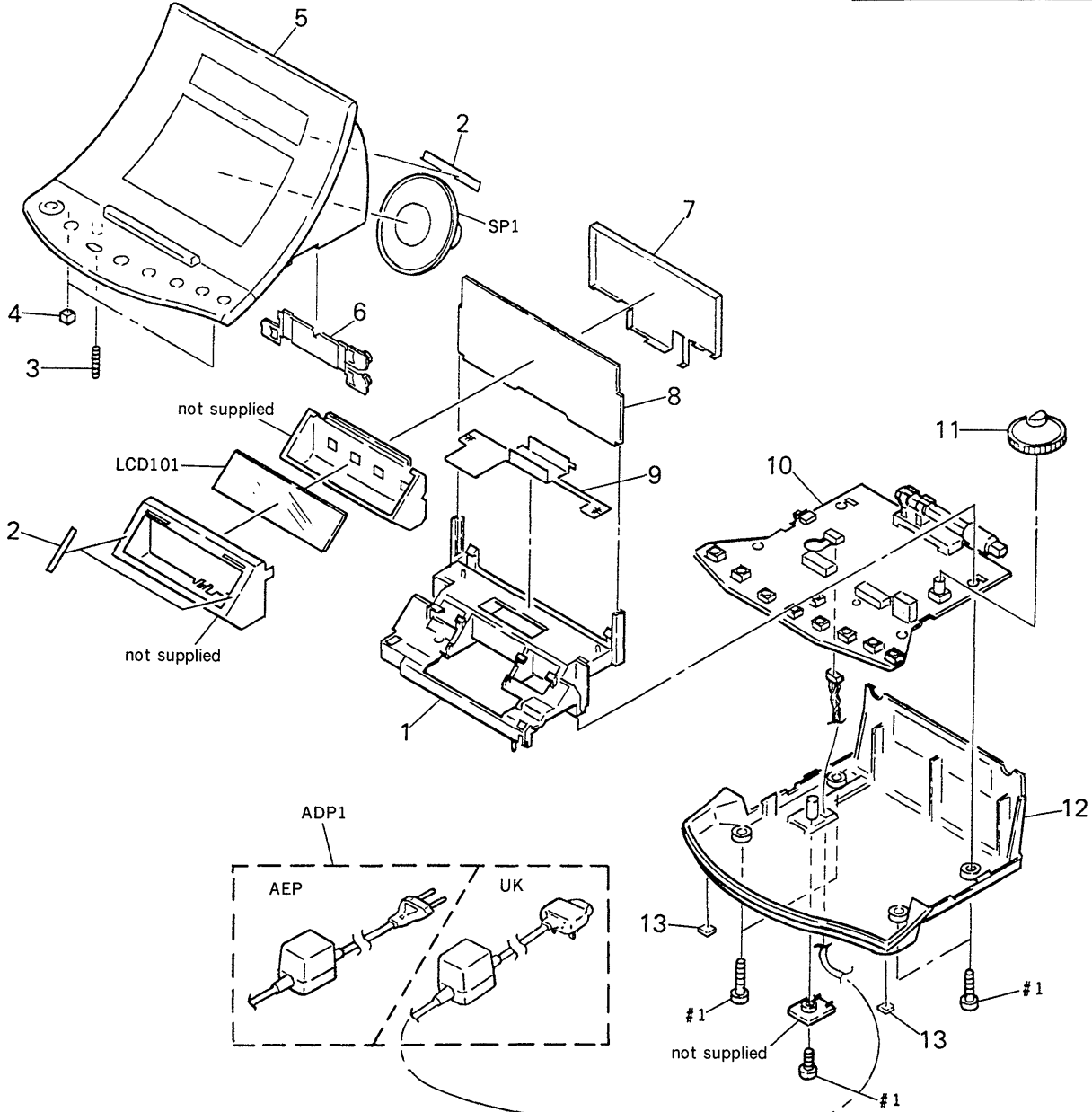
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- -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 Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

5-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 1	3-387-714-01	CHASSIS		* 9	3-388-829-01	PLATE, SHIELD	
2	3-831-441-11	CUSHION, 23X4X0.5		* 10	A-3661-864-A	RADIO BOARD, COMPLETE (UK)	
3	3-905-407-01	SPRING, COMPRESSION		* 10	A-3661-869-A	RADIO BOARD, COMPLETE (AEP)	
4	9-911-838-XX	CUSHION		11	3-904-856-01	KNOB (V)	
5	X-3367-060-1	CABINET (UPPER) ASSY		12	3-387-709-21	CABINET (LOWER)	
6	3-387-711-01	BUTTON, REAR		13	3-368-852-01	FOOT	
* 7	3-387-718-01	CASE (B), SHIELD		Δ ADP1	1-467-056-21	POWER UNIT (AEP)	
* 8	A-3661-862-A	CLOCK BOARD, COMPLETE (UK)		Δ ADP1	1-467-057-11	POWER UNIT (UK)	
* 8	A-3661-867-A	CLOCK BOARD, COMPLETE (AEP)		LCD101	1-810-063-11	DISPLAY PANEL, LIQUID CRYSTAL	
				SP1	1-503-616-11	SPEAKER	

SECTION 6 ELECTRICAL PARTS LIST

CLOCK

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
*	A-3661-862-A	CLOCK BOARD, COMPLETE (UK)	
*	A-3661-867-A	CLOCK BOARD, COMPLETE (AEP)	

		< CAPACITOR >	
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C102	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C103	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C104	1-164-506-11	CERAMIC CHIP 4.7uF	16V
C135	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C106	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C107	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C108	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C109	1-164-006-11	CERAMIC CHIP 0.33uF	10% 16V
C111	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C112	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C113	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C114	1-163-106-00	CERAMIC CHIP 30PF	5% 50V
C115	1-163-096-00	CERAMIC CHIP 13PF	5% 50V
C116	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C118	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C119-121			
	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V
C122	1-163-181-00	CERAMIC CHIP 100PF	5% 50V
C123	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
		< DIODE >	
D101-104			
	8-719-042-10	DIODE SLZ-235C-15-T1	
D105	8-719-104-34	DIODE 1S2836 (AEP)	
D106	8-719-104-34	DIODE 1S2836	
D107-111			
	8-719-400-18	DIODE MA152WK	
		< CABLE HOLDER >	
* H101	1-565-363-11	HOLDER, CABLE (PC BOARD) 10P	
* H102	1-565-363-11	HOLDER, CABLE (PC BOARD) 10P	
		< IC >	
IC101	8-759-184-35	IC UPD1724GB-647-1A7	

Ref. No.	Part No.	Description	Remark
		< JUMPER RESISTOR >	
JR101	1-216-296-00	METAL CHIP 0 5%	1/8W
JR102	1-216-295-91	METAL GLAZE 0 5%	1/10W
JR103	1-216-296-00	METAL CHIP 0 5%	1/8W
JR104	1-216-296-00	METAL CHIP 0 5%	1/8W
JR105	1-216-295-91	METAL GLAZE 0 5%	1/10W
JR106	1-216-295-91	METAL GLAZE 0 5%	1/10W
JR107-110			
	1-216-296-00	METAL CHIP 0 5%	1/8W
JR111	1-216-295-91	METAL GLAZE 0 5%	1/10W
		< LIQUID CRYSTAL DISPLAY >	
LCD101	1-810-063-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< TRANSISTOR >	
Q101	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-901-06	TRANSISTOR DTA144EK	
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R101	1-216-097-00	METAL CHIP 100K 5%	1/10W
R102	1-216-073-00	METAL CHIP 10K 5%	1/10W
R103	1-216-081-00	METAL CHIP 22K 5%	1/10W
R104	1-216-097-00	METAL CHIP 100K 5%	1/10W
R105	1-216-073-00	METAL CHIP 10K 5%	1/10W
R106	1-216-073-00	METAL CHIP 10K 5%	1/10W
R107	1-216-071-00	METAL CHIP 8.2K 5%	1/10W
R108	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R109	1-216-097-00	METAL CHIP 100K 5%	1/10W
R110	1-216-073-00	METAL CHIP 10K 5%	1/10W
R111	1-216-049-00	METAL CHIP 1K 5%	1/10W
R112-114			
	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R115	1-216-029-00	METAL CHIP 150 5%	1/10W
R116	1-216-178-00	METAL GLAZE 150 5%	1/8W
R117	1-216-029-00	METAL CHIP 150 5%	1/10W
R118	1-216-029-00	METAL CHIP 150 5%	1/10W
R119	1-216-295-91	METAL GLAZE 0 5%	1/10W (AEP)
R120	1-216-295-91	METAL GLAZE 0 5%	1/10W

CLOCK

RADIO

Ref. No.	Part No.	Description	Remark		
R121	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R122	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W
R123	1-216-162-00	METAL GLAZE	33	5%	1/8W
< SWITCH >					
S101	1-553-856-00	SWITCH, KEY BOARD (- (TUNING/TIME SET))			
S102	1-553-856-00	SWITCH, KEY BOARD (+ (TUNING/TIME SET))			
S103	1-553-856-00	SWITCH, KEY BOARD (ENTER/CLOCK)			
< VIBRATOR >					
X101	1-567-769-11	VIBRATOR, CRYSTAL (75kHz)			

*	A-3661-864-A	RADIO BOARD, COMPLETE (UK)			
*	A-3661-869-A	RADIO BOARD, COMPLETE (AEP)			

< FILTER >					
BPF1	1-239-061-11	FILTER, BAND PASS			
< CAPACITOR >					
C1	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C2	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C3	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C4	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C5	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C6	1-163-120-00	CERAMIC CHIP	130PF	5%	50V
C7	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C8	1-124-443-00	ELECT	100uF	20%	10V
C9	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C10	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C11	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C12	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C13	1-163-088-00	CERAMIC CHIP	5PF		50V
C14	1-163-085-00	CERAMIC CHIP	2PF		50V
C15	1-124-907-11	ELECT	10uF	20%	50V
C16	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C17	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C18	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C19	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C20	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C21	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C22	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C23	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C24	1-164-346-11	CERAMIC CHIP	1uF		16V
C25	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C26	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C27	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C28	1-164-505-11	CERAMIC CHIP	2.2uF		16V

Ref. No.	Part No.	Description	Remark		
C29	1-124-907-11	ELECT	10uF	20%	50V
C30	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C31	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C33	1-126-233-11	ELECT	22uF	20%	50V
C34	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C35	1-124-472-11	ELECT	470uF	20%	10V
C36	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C37	1-126-176-11	ELECT	220uF	20%	10V
C38	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C39	1-126-176-11	ELECT	220uF	20%	10V
C40	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C41	1-124-584-00	ELECT	100uF	20%	10V
C42	1-126-926-11	ELECT	1000uF	20%	10V
C43	1-128-483-11	ELECT	220uF	20%	25V
C44	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C45	1-125-701-11	DOUBLE LAYER	0.047F	5.5V	
C46	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C47	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C48-50	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
< FILTER >					
CF1	1-578-677-21	FILTER, CRYSTAL			
CF2	1-579-312-81	FILTER, CERAMIC			
CF3	1-579-312-81	FILTER, CERAMIC			
< CONNECTOR >					
* CN1	1-566-904-11	HOUSING, CONNECTOR 10P			
* CN2	1-566-904-11	HOUSING, CONNECTOR 10P			
* CN3	1-566-779-11	PIN, CONNECTOR (PC BOARD) 4P			
< TRIMMER >					
CT1	1-141-304-21	CAP, TRIMMER	10PF		
CT2	1-141-443-11	TRIMMER, CERAMIC			
CT3	1-141-304-21	CAP, TRIMMER	10PF		
CT4	1-141-444-11	TRIMMER, CERAMIC			
< DIODE >					
D1	8-719-104-34	DIODE	1S2836		
D2	8-719-951-05	DIODE	KV1560		
D3	8-719-951-05	DIODE	KV1560		
D4	8-719-949-46	DIODE	1T32		
D5	8-719-949-46	DIODE	1T32		
D6	8-719-400-18	DIODE	MA152WK		
D7	8-719-400-18	DIODE	MA152WK		
D8	8-719-200-02	DIODE	10E2		
D9	8-719-976-94	DIODE	DTZ4.7A		

RADIO

Ref. No.	Part No.	Description	Remark		
< IC >					
IC1	8-752-035-29	IC CXA1019S			
< JUMPER RESISTOR >					
JR1-3	1-216-296-00	METAL CHIP	0	5%	1/8W
JR4	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR5	1-216-296-00	METAL CHIP	0	5%	1/8W
JR6	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR7	1-216-296-00	METAL CHIP	0	5%	1/8W
JR8	1-216-296-00	METAL CHIP	0	5%	1/8W
JR9	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR10	1-216-296-00	METAL CHIP	0	5%	1/8W
JR11	1-216-296-00	METAL CHIP	0	5%	1/8W
JR12	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR13-17	1-216-296-00	METAL CHIP	0	5%	1/8W
JR18	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR19-25	1-216-296-00	METAL CHIP	0	5%	1/8W
JR27	1-216-295-91	METAL GLAZE	0	5%	1/10W
< COIL >					
L1	1-402-615-11	ANTENNA, FERRITE-ROD (MW/LW)			
L2-1	1-406-827-11	COIL, AIR-CORE			
L2-2	1-406-826-11	COIL, AIR-CORE			
L3	1-460-335-11	COIL (WITH CORE)			
L4	1-406-485-11	COIL (OSC)			
L5	1-412-006-31	INDUCTOR CHIP 10uH			
< TRANSISTOR >					
Q1	8-729-141-75	TRANSISTOR 2SD596DV345			
Q2	8-729-123-86	TRANSISTOR 2SK238-K16			
Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q5	8-729-902-99	TRANSISTOR DTC114TK			
Q6	8-729-102-07	TRANSISTOR 2SC2223-F13			
Q7	8-729-102-07	TRANSISTOR 2SC2223-F13			
Q8	8-729-216-22	TRANSISTOR 2SA1162-G			
Q9	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
Q10	8-729-141-75	TRANSISTOR 2SD596DV345			
Q11	8-729-011-92	TRANSISTOR 2SC2001-K1K2			
Q12	8-729-011-92	TRANSISTOR 2SC2001-K1K2			
< RESISTOR >					
R1	1-216-039-00	METAL CHIP	390	5%	1/10W
R2	1-216-025-00	METAL CHIP	100	5%	1/10W
R3	1-216-121-00	METAL CHIP	1M	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R4	1-216-133-00	METAL CHIP	3.3M	5%	1/10W
R5	1-216-049-00	METAL CHIP	1K	5%	1/10W
R6-8	1-216-073-00	METAL CHIP	10K	5%	1/10W
R9	1-216-001-00	METAL CHIP	10	5%	1/10W
R10	1-216-025-00	METAL CHIP	100	5%	1/10W
R11	1-216-049-00	METAL CHIP	1K	5%	1/10W
R13	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R14	1-216-097-00	METAL CHIP	100K	5%	1/10W
R15	1-216-097-00	METAL CHIP	100K	5%	1/10W
R16	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R17	1-216-081-00	METAL CHIP	22K	5%	1/10W
R18	1-216-033-00	METAL CHIP	220	5%	1/10W
R19	1-216-198-91	METAL GLAZE	1K	5%	1/8W
R20	1-216-079-00	METAL CHIP	18K	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-121-00	METAL CHIP	1M	5%	1/10W
R23	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R24	1-216-049-00	METAL CHIP	1K	5%	1/10W
R25	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R26	1-216-017-00	METAL CHIP	47	5%	1/10W
R27	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R28	1-216-037-00	METAL CHIP	330	5%	1/10W
R29	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R30	1-216-049-00	METAL CHIP	1K	5%	1/10W
R31	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R32	1-216-049-00	METAL CHIP	1K	5%	1/10W
R33	1-216-049-00	METAL CHIP	1K	5%	1/10W
R34	1-216-017-00	METAL CHIP	47	5%	1/10W
R35-40	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R41-43	1-216-295-91	METAL GLAZE	0	5%	1/10W
R46-48	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
< VARIABLE RESISTOR >					
RV1	1-241-542-11	RES, VAR, CARBON (VOLUME)			
< SWITCH >					
S1	1-571-977-11	SWITCH, TACTIL (RADIO OFF/ALARM RESET)			
S2	1-571-977-11	SWITCH, TACTIL (RADIO ON /SLEEP)			
S3	1-571-977-11	SWITCH, TACTIL (3)			
S4	1-571-977-11	SWITCH, TACTIL (2/B BUZZER)			
S5	1-571-977-11	SWITCH, TACTIL (1/A RADIO)			
S6	1-571-977-11	SWITCH, TACTIL (SNOOZE/SLEEP OFF)			
S7	1-571-977-11	SWITCH, TACTIL (BAND)			
S8	1-571-977-11	SWITCH, TACTIL (5/ALARM MODE)			
S9	1-571-977-11	SWITCH, TACTIL (4)			

RADIO

Ref. No.	Part No.	Description	Remark
S10	1-571-478-11	SWITCH, SLIDE (BRIGHT)	
		< TRANSFORMER >	
T1	1-404-902-21	TRANSFORMER, IF	

		MISCELLANEOUS	

△ADP1	1-467-056-21	POWER UNIT (AEP)	
△ADP1	1-467-057-11	POWER UNIT (UK)	
SP1	1-503-616-11	SPEAKER	

		ACCESSORIES & PACKING MATERIALS	

	1-501-499-11	COUPLER, ANTENNA (AEP)	
	3-756-705-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH)	
	3-756-705-41	MANUAL, INSTRUCTION (ITALIAN, PORTUGUESE, DUTCH, SWEDISH) (AEP)	
*	3-905-272-01	INDIVIDUAL CARTON	

		HARDWARE LIST	

#1	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT	

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