

# ICF-C203L

## SERVICE MANUAL

*AEP Model  
UK Model*



### SPECIFICATIONS

Frequency range	FM: 87.5—108 MHz MW: 531—1,602 kHz LW: 153—281 kHz Intermediate frequency FM: 10.7 MHz AM: 450 kHz	Antennas	FM: FM wire antenna MW/LW: Built-in ferrite bar antenna
Scan step	FM: 0.05* MHz (fixed) MW: 9 kHz (fixed) LW: 2 kHz $\rightleftharpoons$ 7 kHz *The frequency display is raised or lowered by steps of 0.1 MHz. (Example: Frequency 88.05 MHz is displayed as "88.0 MHz".)	Speaker	Approx. 6.6 cm (2 <sup>5</sup> / <sub>8</sub> inches) dia.
		Power output	120 mW (at 10% harmonic distortion)
		Power requirements	UK model: 240 V AC, 50 Hz AEP model: 220—230 V AC, 50 Hz
		Dimensions	Approx. 201×59×146 mm (w/h/d) (8×2 <sup>3</sup> / <sub>8</sub> ×5 <sup>3</sup> / <sub>4</sub> inches) incl. projecting parts and controls
		Weight	Approx. 600 g (1 lb 5 oz)
		Accessory supplied	FM antenna coupler (1, Models for Netherlands, Belgium, Switzerland, Austria and Scandinavia only)

Design and specifications are subject to change without notice.

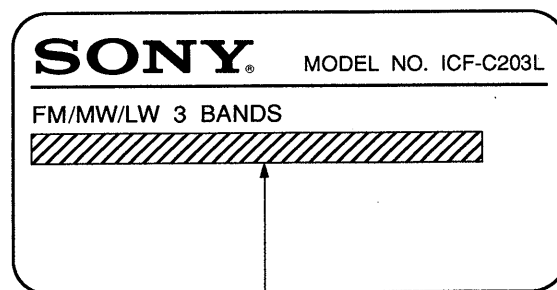
#### Note

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

FM/MW/LW/ PLL SYNTHESIZED  
KLOCK RADIO  
**SONY**®

**MODEL IDENTIFICATION**



— Specification Label —



AE9, 5AE9 model : AC : 220—230V~50Hz 3W  
UK model : AC : 240V~50Hz 3W

AE9 : French model  
5AE9 : Swiss, Belgian model

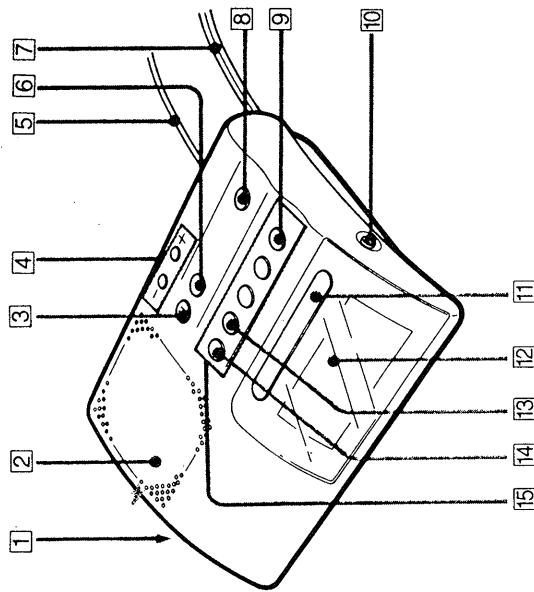
**SAFETY-RELATED COMPONENT WARNING!!**

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.

Location of Controls

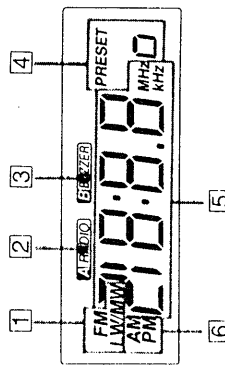


- 1 VOL (volume) control (left side)
- 2 Speaker
- 3 ALARM RESET/RADIO OFF button
- 4 TIME SET/TUNE (tuning) + and - buttons
- 5 FM wire antenna
- 6 SLEEP/RADIO ON button
- 7 AC power cord
- 8 BAND button
- 9 ALARM MODE button
- 10 ENTER/CLOCK button
- 11 REPEAT ALARM/SLEEP OFF bar
- 12 Display window
- 13 BUZZER ALARM button
- 14 RADIO ALARM (WAKE UP STATION) button
- 15 Preset number 1 - 5 buttons

Display window

- 1 Band indication
- 2 A RADIO alarm indication
- 3 BUZZER alarm indication
- 4 PRESET number indication
- 5 Time/frequency indication
- 6 AM/PM indication (North and South American and UK model only)

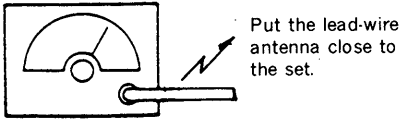
Display window



## SECTION 2 ELECTRICAL ADJUSTMENTS

### MW/LW Section

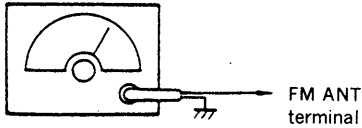
AM RF signal generator



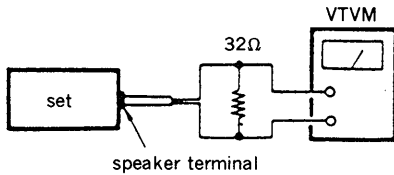
30 % amplitude modulation by 400Hz signal  
Output level: as low as possible

### FM Section

FM RF signal generator



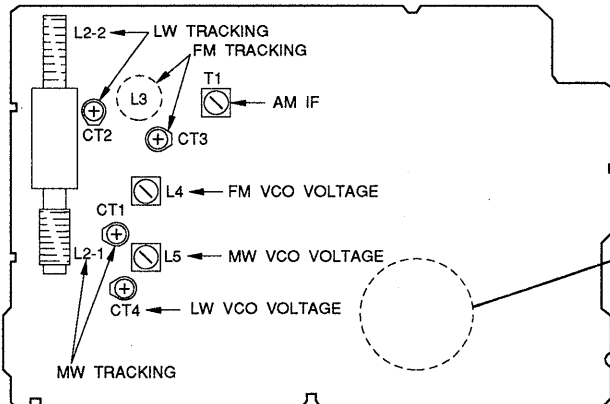
± 22.5kHz frequency deviation by 400Hz signal  
Output level: as low as possible



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

**Adjustment Location :**

**[MAIN BOARD] -COMPONENT SIDE-**



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

Note : Receive 531kHz.

MW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
(confirmation)	531kHz	More than 1.5V (Standard 1.7V)
L5	1,602kHz	Less than 8.5V

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

MW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT1	L2-1
1,404kHz	621kHz

LW VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
CT4	279kHz (Receive 281kHz)	7.0V
(confirmation)	153kHz	More than 1.0V (Standard 1.1V)

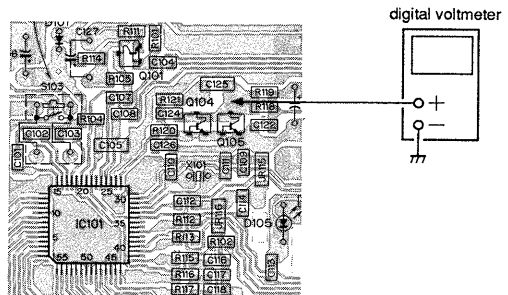
Note : Not use the AM signal generator in this adjustment.

LW TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT2	L2-2
279kHz	153kHz

FM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
L4	108MHz	10 ± 1.0V
(confirmation)	87.5MHz	More than 1.8V (Standard 2.2V)

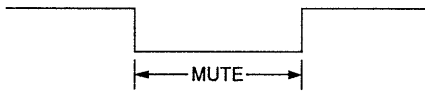
Note : Not use the FM signal generator in this adjustment.

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CT3	L3 (confirmation)
108MHz	87.5MHz



## SECTION 3 PIN DESCRIPTION

### IC101 $\mu$ PD1724GB-590-1P7

Pin No.	Pin Name	Signal Name	I/O	Description
1-10	LCD10-LCD1	LCD10-LCD1	O	LCD drive
11	NC		—	
12-14	COM3-COM1	COM3-COM1	O	LCD common
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.
21	NC		—	
22	VDD		—	3V power supply input terminal
23	VCOH		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	PLL error output pin
28	EO2			
29	CE	CE	I	Detects power supply line status. Power supply line OFF : Low Power supply line ON : High
30	XO		O	Crystal oscillator connection pin
31	XI		I	
32	VSS4		—	Pin for regulator circuit capacitor connection to attain stable drive voltage of the oscillator
33	PA3	AC/DC	I	AC/DC select input AC : High DC : Low
34	PA2	ALARM OUT	O	Unused pin
35	PA1	TV OUT	O	Unused pin
36	PA0	BATT/BAND 1	I/O	BATTERY CHECK input, BAND output FM : Low MW/LW : High
37	PB3	LIGHT	O	Unused pin
38	PB2	POWER	O	Unused pin
39	PB1	INITIALIZE	O	KEY IN control output
40	PB0	BAND 2	O	BAND output FM/MW : Low LW : High
41-44	PC3-PC0	KEY SOURCE	O	Conducts Key Scan
45-48	K3-K0	KEY RETURN	I	Key Return input
49, 50	NC		—	
51-56	LCD16-LCD11	LCD16-LCD11	O	LCD drive



# SECTION 4 DIAGRAMS

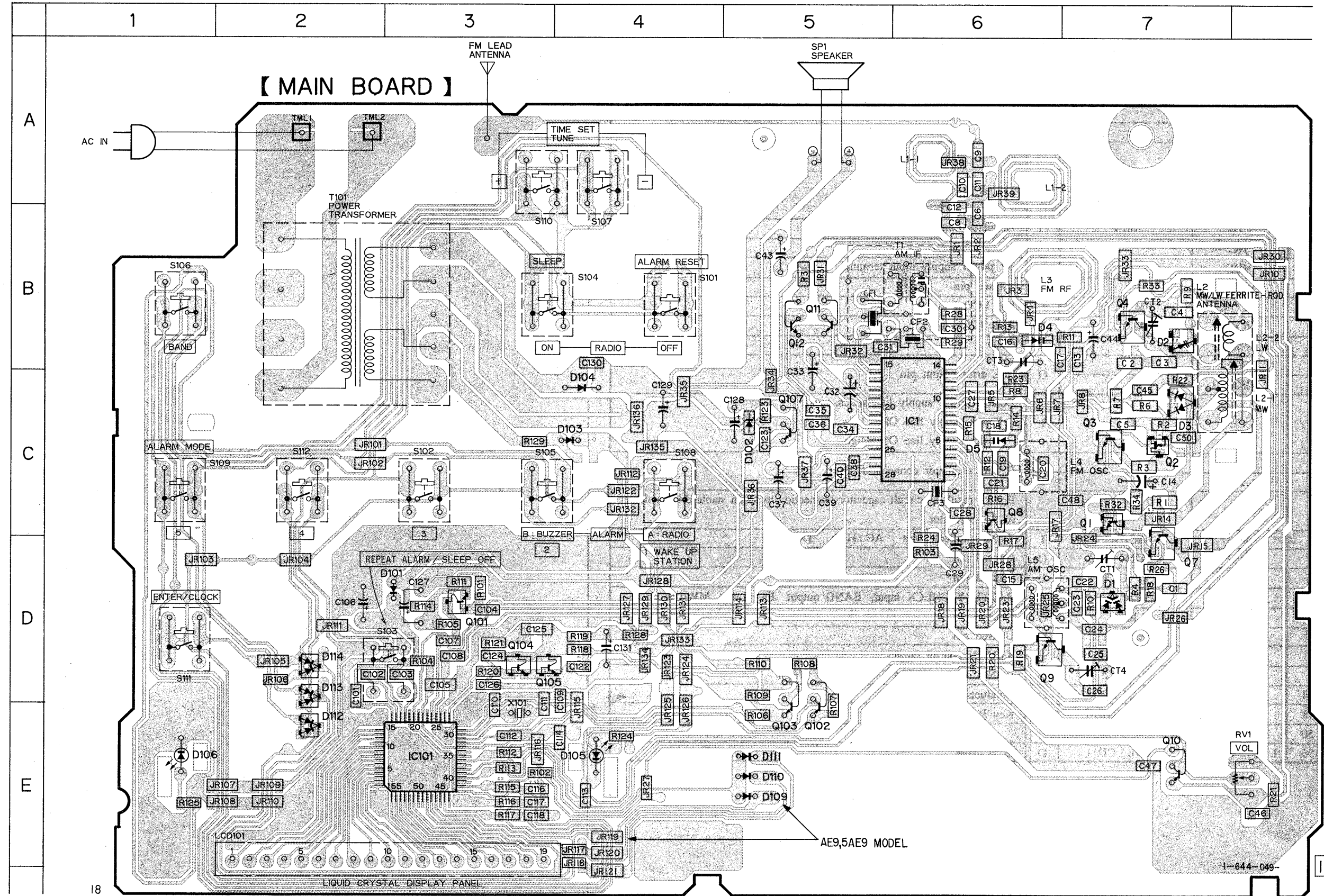
Note:  
 ● — : parts extracted from the component side.

AE9: French model  
 5AE9: Swiss, Belgian model

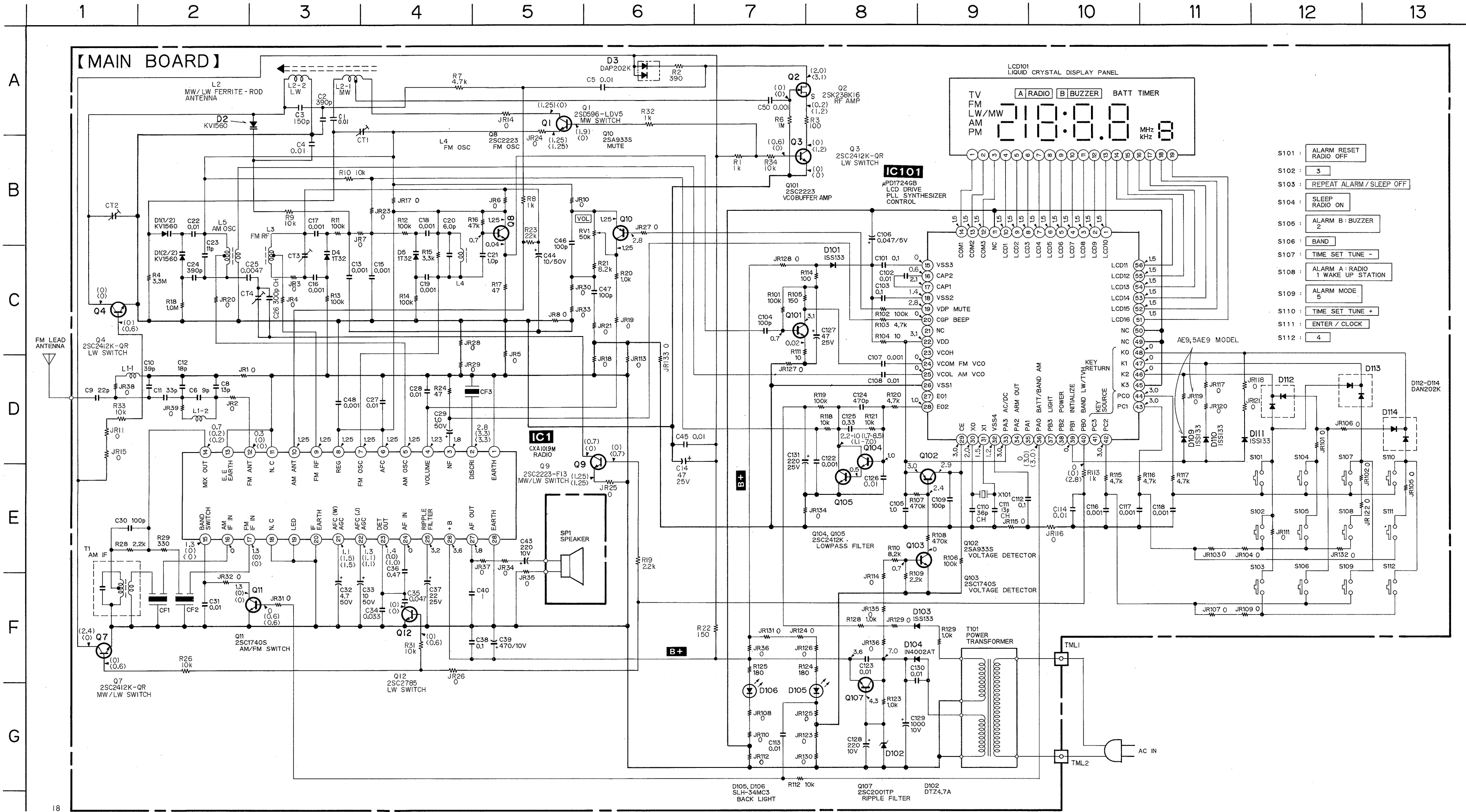
4-1. PRINTED WIRING BOARD • See page 12 for Semiconductor Lead Layouts.

● Semiconductor Location

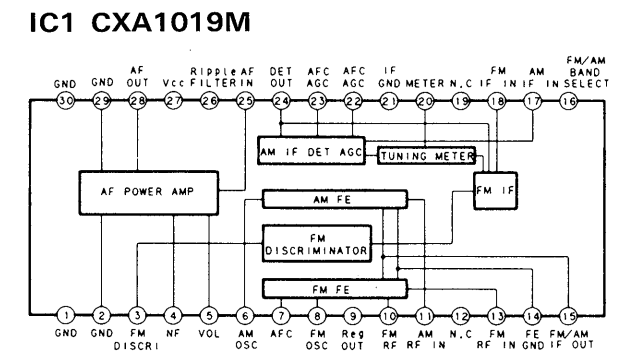
Ref. No.	Location
D1	D-7
D2	B-7
D3	C-7
D4	B-6
D5	C-6
D101	D-3
D102	C-5
D103	C-4
D104	C-4
D105	E-4
D106	E-1
D109	E-5
D110	E-5
D111	D-5
D112	E-2
D113	D-2
D114	D-2
IC1	C-6
IC101	E-3
Q1	C-7
Q2	C-7
Q3	C-7
Q4	B-7
Q7	D-7
Q8	C-6
Q9	D-6
Q10	E-7
Q11	B-5
Q12	B-5
Q101	D-3
Q102	D-5
Q103	D-5
Q104	D-3
Q105	D-3
Q107	C-5



4-2. SCHEMATIC DIAGRAM



● IC Block Diagram



- S101: ALARM RESET RADIO OFF
- S102: 3
- S103: REPEAT ALARM/SLEEP OFF
- S104: SLEEP RADIO ON
- S105: ALARM B: BUZZER 2
- S106: BAND
- S107: TIME SET TUNE -
- S108: ALARM A: RADIO 1 WAKE UP STATION
- S109: ALARM MODE 5
- S110: TIME SET TUNE +
- S111: ENTER / CLOCK
- S112: 4

- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF} = \mu\text{F} / 100$ .
  - All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
  - $\Delta$ : internal component.

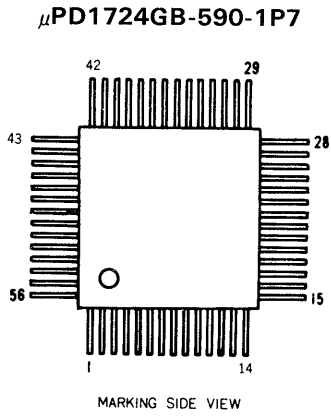
**Note:** The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- ( ): MW
- < >: LW
- 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

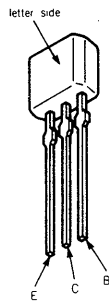
AE9: French model  
5AE9: Swiss, Belgian model



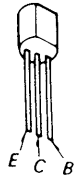
4-2. SEMICONDUCTOR LEAD LAYOUTS



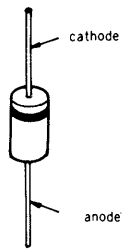
**2SA1175-HFE**  
**2SC2785-HFE**



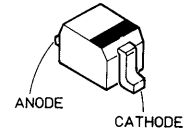
**2SC2001-LK**



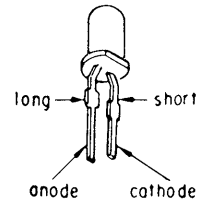
**10E2**



**1T32**  
**DTZ4. 7A**



**GL3EG8**



# SECTION 5 EXPLODED VIEW

**NOTE:**

- -XX, -X mean standardized parts, so they may have some differences from the original one.

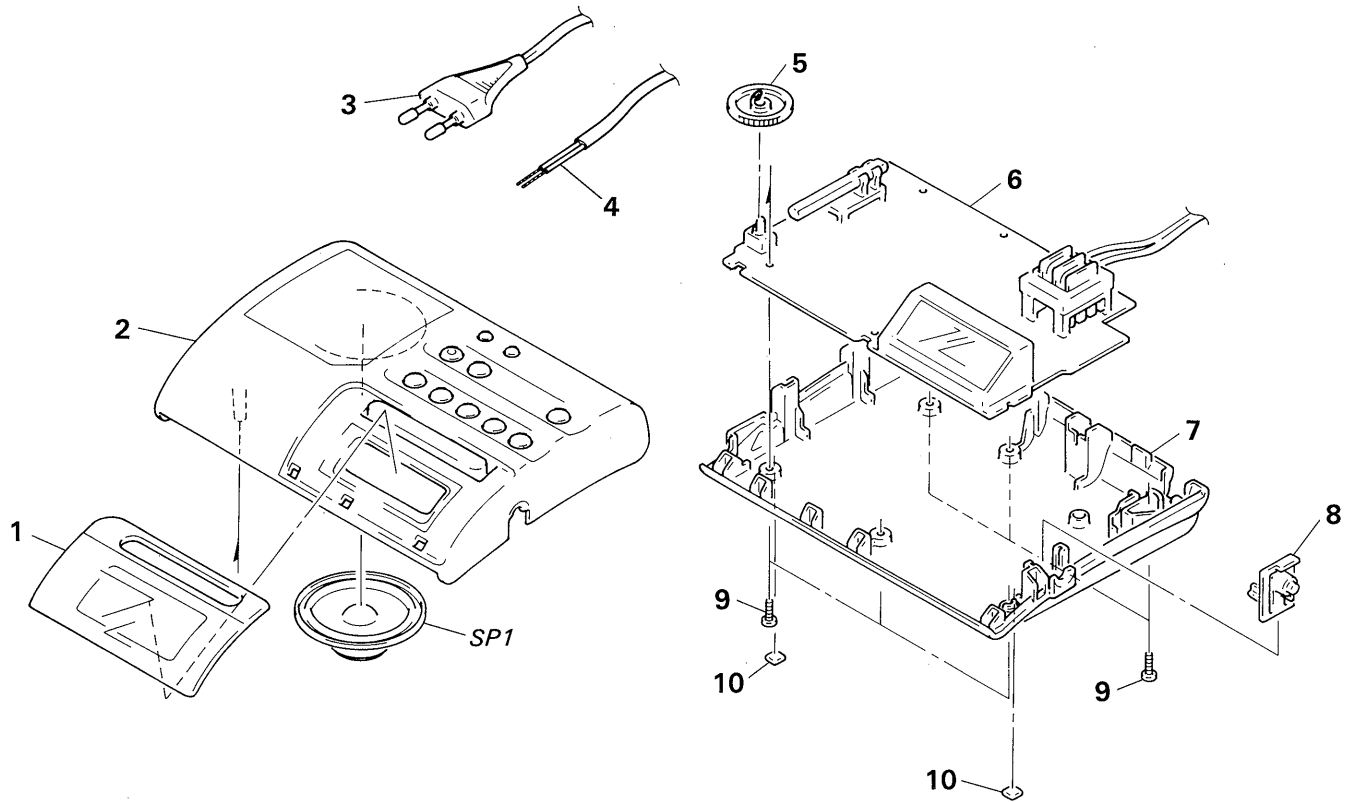
- Color Indication of Appearance Parts  
Example:

↑                    ↑  
 KNOB, BALANCE(WHITE)...(RED)  
 Parts color      Cabinet's color

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

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

AE9 : French model  
 5AE9 : Swiss, Belgian model



Ref. No.	Part No.	Description	Remark
1	3-377-646-01	PLATE, TRANSPARENT	
2	X-3365-485-1	CABINET (U) ASSY (GRAY)	
2	X-3365-485-2	CABINET (U) ASSY (WHITE)	
	1-551-958-21	CORD, POWER (WHITE) (AE9, 5AE9)	
	1-555-795-00	CORD, POWER (GRAY) (AE9, 5AE9)	
	1-555-001-21	CORD, POWER (WHITE) (UK)	
	1-556-035-00	CORD, POWER (BLACK) (UK)	
5	3-368-840-01	KNOB (VOL) (GRAY)	
5	3-368-840-11	KNOB (VOL) (WHITE)	

Ref. No.	Part No.	Description	Remark
* 6	A-3679-399-A	MAIN BOARD, COMPLETE (UK)	
* 6	A-3679-400-A	MAIN BOARD, COMPLETE (AE9, 5AE9)	
7	3-377-653-41	CABINET (LOWER) (GRAY)	
7	3-377-653-51	CABINET (LOWER) (WHITE)	
8	3-377-647-01	BUTTON (MODE) (GRAY)	
8	3-377-647-11	BUTTON (MODE) (WHITE)	
9	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT	
10	3-368-852-01	FOOT	
SP1	1-503-082-00	SPEAKER	

**MAIN**

**SECTION 6  
ELECTRICAL PARTS LIST**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX 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:  $\mu$ , for example:  
uA...:  $\mu$ A... uPA...:  $\mu$ PA..  
uPB...:  $\mu$ PB... uPC...:  $\mu$ PC... uPD...:  $\mu$ PD..
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

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

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

AE9: French model  
5AE9: Swiss, Belgian model

Ref. No.	Part No.	Description	Remark
*	A-3679-399-A	MAIN BOARD, COMPLETE (UK)	
*	A-3679-400-A	MAIN BOARD, COMPLETE (AE9, 5AE9)	
*****			
	3-377-648-01	HOLDER (LED)	
*	3-377-650-01	FRAME, REFLECTION	
*	3-382-614-01	PLATE, SHIELD	
< CAPACITOR >			
C1	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C2	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C3	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
C4	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C5	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C6	1-163-092-00	CERAMIC CHIP 9PF 0.25PF	50V
C8	1-163-096-00	CERAMIC CHIP 13PF 5%	50V
C9	1-163-101-00	CERAMIC CHIP 22PF 5%	50V
C10	1-163-107-00	CERAMIC CHIP 39PF 5%	50V
C11	1-163-105-00	CERAMIC CHIP 33PF 5%	50V
C12	1-163-099-00	CERAMIC CHIP 18PF 5%	50V
C13	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C14	1-124-477-11	ELECT 47uF 20%	25V
C15	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C16	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C17	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C18	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C19	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C20	1-163-089-00	CERAMIC CHIP 6PF	50V
C21	1-163-083-00	CERAMIC CHIP 1PF	50V
C22	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C23	1-163-094-00	CERAMIC CHIP 11PF 5%	50V
C24	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C25	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V
C26	1-163-128-00	CERAMIC CHIP 300PF 5%	50V
C27	1-163-059-00	CERAMIC CHIP 0.01uF 10%	50V
C28	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C29	1-124-903-11	ELECT 1uF 20%	50V
C30	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C31	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C32	1-124-927-11	ELECT 4.7uF 20%	100V

Ref. No.	Part No.	Description	Remark
C33	1-124-907-11	ELECT 10uF 20%	50V
C34	1-163-989-11	CERAMIC CHIP 0.033uF 10%	25V
C35	1-163-809-11	CERAMIC CHIP 0.047uF 10%	25V
C36	1-164-005-11	CERAMIC CHIP 0.47uF	25V
C37	1-126-233-11	ELECT 22uF 20%	50V
C38	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C39	1-124-472-11	ELECT 470uF 20%	10V
C40	1-164-346-11	CERAMIC CHIP 1uF	16V
C43	1-126-176-11	ELECT 220uF 20%	10V
C44	1-124-907-11	ELECT 10uF 20%	50V
C45	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C46	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C47	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C48	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C50	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C101	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C102	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C103	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C104	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C105	1-162-638-11	CERAMIC CHIP 1uF	16V
C106	1-125-701-11	CAP. DOUBLE LAYEYER 0.047F	5V
C107	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C108	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C109	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C110	1-163-106-00	CERAMIC CHIP 36PF 5%	50V
C111	1-163-096-00	CERAMIC CHIP 13PF 5%	50V
C112	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C113	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C114	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C116	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C117	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C118	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C122	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C123	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C124	1-163-133-00	CERAMIC CHIP 470PF 5%	50V
C125	1-164-006-11	CERAMIC CHIP 0.33uF 10%	16V
C126	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C127	1-124-477-11	ELECT 47uF 20%	25V
C128	1-126-176-11	ELECT 220uF 20%	10V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C129	1-126-926-11	ELECT	1000uF 20% 10V	JR14	1-216-296-00	METAL CHIP	0 5% 1/8W
C130	1-164-232-11	CERAMIC CHIP	0.01uF 50V	JR15	1-216-296-00	METAL CHIP	0 5% 1/8W
C131	1-128-483-11	ELECT	220uF 20% 25V	JR17	1-216-296-00	METAL CHIP	0 5% 1/8W
< FILTER >				JR18	1-216-296-00	METAL CHIP	0 5% 1/8W
CF1	1-578-677-21	FILTER, CRYSTAL		JR19	1-216-296-00	METAL CHIP	0 5% 1/8W
CF2	1-579-632-11	FILTER, CERAMIC		JR20	1-216-296-00	METAL CHIP	0 5% 1/8W
CF3	1-579-632-11	FILTER, CERAMIC		JR21	1-216-296-00	METAL CHIP	0 5% 1/8W
< TRIMMER >				JR23	1-216-296-00	METAL CHIP	0 5% 1/8W
CT1	1-141-304-21	CAP, TRIMMER	10PF	JR24	1-216-295-00	METAL CHIP	0 5% 1/10W
CT2	1-141-443-11	TRIMMER, CERAMIC		JR25	1-216-295-00	METAL CHIP	0 5% 1/10W
CT3	1-141-304-21	CAP, TRIMMER	10PF	JR26	1-216-295-00	METAL CHIP	0 5% 1/10W
CT4	1-141-444-91	TRIMMER, CERAMIC		JR27	1-216-295-00	METAL CHIP	0 5% 1/10W
< DIODE >				JR28	1-216-296-00	METAL CHIP	0 5% 1/8W
D1	8-719-951-05	DIODE	KV1560	JR29	1-216-296-00	METAL CHIP	0 5% 1/8W
D2	8-719-951-05	DIODE	KV1560	JR30	1-216-296-00	METAL CHIP	0 5% 1/8W
D3	8-719-104-34	DIODE	1S2836	JR31	1-216-295-00	METAL CHIP	0 5% 1/10W
D4	8-719-949-46	DIODE	1T32	JR32	1-216-296-00	METAL CHIP	0 5% 1/8W
D5	8-719-949-46	DIODE	1T32	JR33	1-216-296-00	METAL CHIP	0 5% 1/8W
D101	8-719-028-22	DIODE	1SS133-T95	JR34	1-216-295-00	METAL CHIP	0 5% 1/10W
D102	8-719-976-94	DIODE	DTZ4.7A	JR35	1-216-296-00	METAL CHIP	0 5% 1/8W
D103	8-719-028-22	DIODE	1SS133-T95	JR36	1-216-296-00	METAL CHIP	0 5% 1/8W
D104	8-719-200-02	DIODE	10E2	JR37	1-216-296-00	METAL CHIP	0 5% 1/8W
D105	8-719-938-67	LED	GL-3EG8 (BACK LIGHT)	JR38	1-216-295-00	METAL CHIP	0 5% 1/10W
D106	8-719-938-67	LED	GL-3EG8 (BACK LIGHT)	JR39	1-216-296-00	METAL CHIP	0 5% 1/8W
D109	8-719-028-22	DIODE	1SS133-T95 (AE9, 5AE9)	JR101	1-216-296-00	METAL CHIP	0 5% 1/8W
D110	8-719-028-22	DIODE	1SS133-T95	JR102	1-216-296-00	METAL CHIP	0 5% 1/8W
D111	8-719-028-22	DIODE	1SS133-T95	JR103	1-216-296-00	METAL CHIP	0 5% 1/8W
D112	8-719-400-18	DIODE	MA152WK	JR104	1-216-296-00	METAL CHIP	0 5% 1/8W
D113	8-719-400-18	DIODE	MA152WK	JR105	1-216-296-00	METAL CHIP	0 5% 1/8W
D114	8-719-400-18	DIODE	MA152WK	JR106	1-216-295-00	METAL CHIP	0 5% 1/10W
< IC >				JR107	1-216-296-00	METAL CHIP	0 5% 1/8W
IC1	8-759-605-77	IC	CXA1019M	JR108	1-216-296-00	METAL CHIP	0 5% 1/8W
IC101	8-759-073-88	IC	UPD1724GB-590-1P7	JR109	1-216-296-00	METAL CHIP	0 5% 1/8W
< JUMPER RESISTOR >				JR110	1-216-296-00	METAL CHIP	0 5% 1/8W
JR1	1-216-296-00	METAL CHIP	0 5% 1/8W	JR111	1-216-296-00	METAL CHIP	0 5% 1/8W
JR2	1-216-296-00	METAL CHIP	0 5% 1/8W	JR112	1-216-295-00	METAL CHIP	0 5% 1/10W
JR3	1-216-296-00	METAL CHIP	0 5% 1/8W	JR113	1-216-296-00	METAL CHIP	0 5% 1/8W
JR4	1-216-295-00	METAL CHIP	0 5% 1/10W	JR114	1-216-296-00	METAL CHIP	0 5% 1/8W
JR5	1-216-296-00	METAL CHIP	0 5% 1/8W	JR115	1-216-296-00	METAL CHIP	0 5% 1/8W
JR6	1-216-296-00	METAL CHIP	0 5% 1/8W	JR116	1-216-296-00	METAL CHIP	0 5% 1/8W
JR7	1-216-296-00	METAL CHIP	0 5% 1/8W	JR117	1-216-295-00	METAL CHIP	0 5% 1/10W
JR8	1-216-295-00	METAL CHIP	0 5% 1/10W	JR118	1-216-296-00	METAL CHIP	0 5% 1/8W
JR10	1-216-296-00	METAL CHIP	0 5% 1/8W	JR119	1-216-296-00	METAL CHIP	0 5% 1/8W (AE9, 5AE9)
JR11	1-216-295-00	METAL CHIP	0 5% 1/10W	JR120	1-216-296-00	METAL CHIP	0 5% 1/8W
				JR121	1-216-296-00	METAL CHIP	0 5% 1/8W
				JR122	1-216-296-00	METAL CHIP	0 5% 1/8W
				JR123	1-216-295-00	METAL CHIP	0 5% 1/10W
				JR124	1-216-296-00	METAL CHIP	0 5% 1/8W
				JR125	1-216-296-00	METAL CHIP	0 5% 1/8W

## MAIN

Ref.No.	Part No.	Description	Remark			Ref.No.	Part No.	Description	Remark		
JR126	1-216-296-00	METAL CHIP	0	5%	1/8W	R11	1-216-097-00	METAL CHIP	100K	5%	1/10W
JR127	1-216-296-00	METAL CHIP	0	5%	1/8W	R12	1-216-097-00	METAL CHIP	100K	5%	1/10W
JR128	1-216-296-00	METAL CHIP	0	5%	1/8W	R13	1-216-097-00	METAL CHIP	100K	5%	1/10W
JR129	1-216-296-00	METAL CHIP	0	5%	1/8W	R14	1-216-097-00	METAL CHIP	100K	5%	1/10W
JR130	1-216-296-00	METAL CHIP	0	5%	1/8W	R15	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
JR131	1-216-296-00	METAL CHIP	0	5%	1/8W	R16	1-216-089-00	METAL CHIP	47K	5%	1/10W
JR132	1-216-296-00	METAL CHIP	0	5%	1/8W	R17	1-216-017-00	METAL CHIP	47	5%	1/10W
JR133	1-216-296-00	METAL CHIP	0	5%	1/8W	R18	1-216-121-00	METAL CHIP	1M	5%	1/10W
JR134	1-216-295-00	METAL CHIP	0	5%	1/10W	R19	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
JR135	1-216-296-00	METAL CHIP	0	5%	1/8W	R20	1-216-198-00	METAL CHIP	1K	5%	1/8W
JR136	1-216-296-00	METAL CHIP	0	5%	1/8W	R21	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
< COIL >						R22	1-216-029-00	METAL CHIP	150	5%	1/10W
L2	1-402-615-11	ANTENNA, FERRITE-ROD (MW/LW)				R23	1-216-081-00	METAL CHIP	22K	5%	1/10W
L4	1-460-335-11	COIL (WITH CORE)				R24	1-216-017-00	METAL CHIP	47	5%	1/10W
L5	1-406-485-11	COIL (OSC)				R26	1-216-073-00	METAL CHIP	10K	5%	1/10W
< LIQUID CRYSTAL DISPLAY >						R28	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
LCD101	1-809-711-11	DISPLAY PANEL, LIQUID CRYSTAL				R29	1-216-037-00	METAL CHIP	330	5%	1/10W
< TRANSISTOR >						R31	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q1	8-729-141-75	TRANSISTOR 2SD596DV345				R32	1-216-049-00	METAL CHIP	1K	5%	1/10W
Q2	8-729-123-86	TRANSISTOR 2SK238-K16				R33	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6				R34	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6				R101	1-216-097-00	METAL CHIP	100K	5%	1/10W
Q7	8-729-120-28	TRANSISTOR 2SC1623-L5L6				R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
Q8	8-729-102-07	TRANSISTOR 2SC2223-F13				R103	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
Q9	8-729-102-07	TRANSISTOR 2SC2223-F13				R104	1-216-001-00	METAL CHIP	10	5%	1/10W
Q10	8-729-119-76	TRANSISTOR 2SA1175-HFE				R105	1-216-029-00	METAL CHIP	150	5%	1/10W
Q11	8-729-119-78	TRANSISTOR 2SC2785-HFE				R106	1-216-097-00	METAL CHIP	100K	5%	1/10W
Q12	8-729-119-78	TRANSISTOR 2SC2785-HFE				R107	1-216-113-00	METAL CHIP	470K	5%	1/10W
Q101	8-729-102-07	TRANSISTOR 2SC2223-F13				R108	1-216-113-00	METAL CHIP	470K	5%	1/10W
Q102	8-729-119-76	TRANSISTOR 2SA1175-HFE				R109	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
Q103	8-729-119-78	TRANSISTOR 2SC2785-HFE				R110	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
Q104	8-729-120-28	TRANSISTOR 2SC1623-L5L6				R111	1-216-001-00	METAL CHIP	10	5%	1/10W
Q105	8-729-120-28	TRANSISTOR 2SC1623-L5L6				R112	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q107	8-729-142-46	TRANSISTOR 2SC2001-LK				R113	1-216-049-00	METAL CHIP	1K	5%	1/10W
< RESISTOR >						R114	1-216-025-00	METAL CHIP	100	5%	1/10W
R1	1-216-049-00	METAL CHIP	1K	5%	1/10W	R115	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R2	1-216-039-00	METAL CHIP	390	5%	1/10W	R116	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R3	1-216-025-00	METAL CHIP	100	5%	1/10W	R117	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R4	1-216-133-00	METAL CHIP	3.3M	5%	1/10W	R118	1-216-073-00	METAL CHIP	10K	5%	1/10W
R6	1-216-121-00	METAL CHIP	1M	5%	1/10W	R119	1-216-097-00	METAL CHIP	100K	5%	1/10W
R7	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	R120	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R8	1-216-049-00	METAL CHIP	1K	5%	1/10W	R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R9	1-216-073-00	METAL CHIP	10K	5%	1/10W	R123	1-216-049-00	METAL CHIP	1K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W	R124	1-216-031-00	METAL CHIP	180	5%	1/10W
						R125	1-216-031-00	METAL CHIP	180	5%	1/10W
						R128	1-216-049-00	METAL CHIP	1K	5%	1/10W
						R129	1-216-049-00	METAL CHIP	1K	5%	1/10W

MAIN

Ref.No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV1	1-241-586-11	RES, VAR, CARBON 50K (VOL)	
		< SWITCH >	
S101	1-554-937-11	SWITCH, KEY BOARD (ALARM RESET, RADIO OFF)	
		< SWITCH >	
S102	1-554-937-11	SWITCH, KEY BOARD (3)	
S103	1-554-937-11	SWITCH, KEY BOARD (REPEAT ALARM/SLEEP OFF)	
		< SWITCH >	
S104	1-554-937-11	SWITCH, KEY BOARD (SLEEP, RADIO ON)	
S105	1-554-937-11	SWITCH, KEY BOARD (ALARM B:BUZZER, 2)	
S106	1-554-937-11	SWITCH, KEY BOARD (BAND)	
S107	1-554-937-11	SWITCH, KEY BOARD (TIME SET +, TUNE +)	
S108	1-554-937-11	SWITCH, KEY BOARD (ALARM A:RADIO, 1, WAKE UP STATION)	
		< SWITCH >	
S109	1-554-937-11	SWITCH, KEY BOARD (ALARM MODE, 5)	
S110	1-554-937-11	SWITCH, KEY BOARD (TIME SET -, TUNE -)	
S111	1-554-937-11	SWITCH, KEY BOARD (ENTER/CLOCK)	
S112	1-554-937-11	SWITCH, KEY BOARD (4)	
		< TRANSFORMER >	
T1	1-404-790-11	TRANSFORMER, IF	
△T101	1-450-923-11	TRANSFORMER, POWER	
		< TERMINAL >	
* TML1	1-535-771-11	TERMINAL	
* TML2	1-535-771-11	TERMINAL	
		< VIBRATOR >	
X101	1-567-769-11	VIBRATOR, CRYSTAL	
*****			
MISCELLANEOUS			
*****			
△3	1-551-958-21	CORD, POWER (WHITE) (AE9, 5AE9)	
△3	1-555-795-00	CORD, POWER (GRAY) (AE9, 5AE9)	
△4	1-555-001-21	CORD, POWER (WHITE) (UK)	
△4	1-556-035-00	CORD, POWER (BLACK) (UK)	
SP1	1-503-082-00	SPEAKER	
*****			

Ref.No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		*****	
	1-501-499-11	COUPLER, ANTENNA (5AE9)	
*	3-378-692-01	INDIVIDUAL CARTON	
	3-755-141-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH)	
	3-755-141-41	MANUAL, INSTRUCTION (5AE9) (PORTUGUESE, DUTCH, SWEDISH, ITALIAN)	

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

