

ICF-C103

SERVICE MANUAL

*US Model
Canadian Model
AEP Model
E Model
Australian Model*



SPECIFICATIONS

Frequency range	Model for North and South America FM: 87.5 – 108 MHz AM: 530 – 1,710 kHz Model for other countries FM: 87.5 – 108 MHz AM: 531 – 1,602 kHz Intermediate frequency FM: 10.7 MHz AM: 450 kHz	Antennas	FM: FM wire antenna AM: Built-in ferrite bar antenna
Scan step	Model for North and South America FM: 0.1 MHz (fixed) AM: 10 kHz (fixed) Model for other countries FM: 0.05* MHz (fixed) AM: 9 kHz (fixed) * 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 5/8 inches) dia.
		Power output	120 mW (at 10% harmonic distortion)
		Power requirements	North and South American model: 120 V AC, 60 Hz UK model: 240 V AC, 50 Hz Other models: 220 – 230 V AC, 50 Hz
		Dimensions	Approx. 115 x 110 x 105 mm (w/h/d) (4 5/8 x 4 3/8 x 4 1/4 inches) incl. projecting parts and controls
		Weight	Approx. 590 g (1 lb 5 oz)
		Accessory supplied	FM antenna coupler (1, Models for Netherlands, Belgium, Switzerland and Austria only)
		Design and specifications are subject to change without notice.	
		Note	This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

**FM/AM PLL SYNTHESIZED
CLOCK RADIO**

SONY®



SAFETY CHECK-OUT

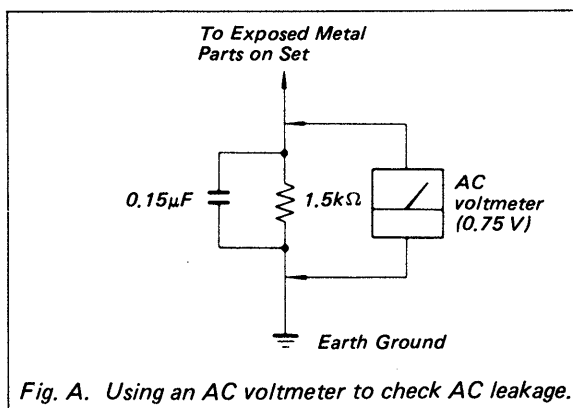
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)





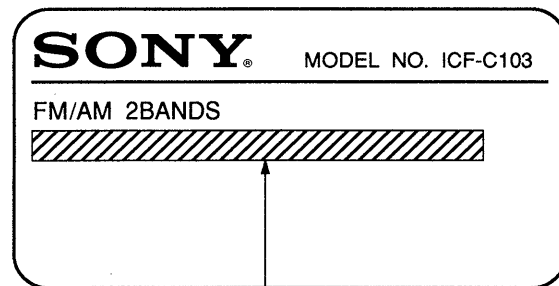
SAFETY-RELATED COMPONENT WARNING!!
 COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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MODEL IDENTIFICATION

— Model Number Portion —



US, Canadian model : AC : 120V ~ 60Hz 3W
 AEP, Italian, E model : AC : 220—230V ~ 50Hz 3W
 Australian model : AC : 240V ~ 50Hz 3W

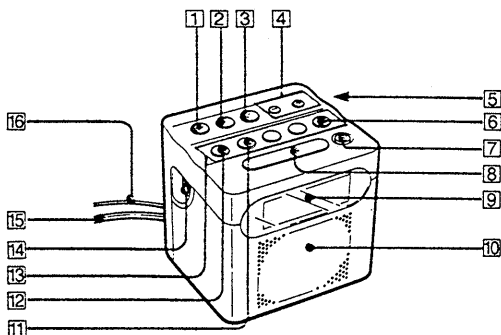
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

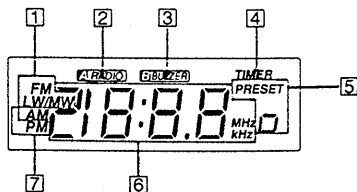
This section is extracted from instruction manual.

Location of Controls



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

Display window



Display window

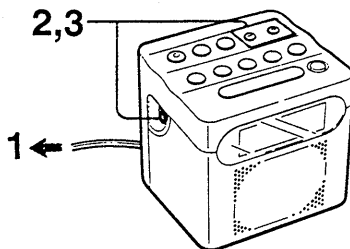
- 1 Band indication
- 2 **A RADIO** alarm indication
- 3 **B BUZZER** alarm indication
- 4 TIMER indication
- 5 PRESET number indication
- 6 Time/frequency indication
- 7 AM/PM indication (North and South American and UK model only)

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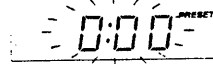
7

Setting the Time

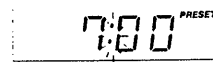
After connecting the AC power cord, be sure to set the time.



1 Connect the AC power cord to a wall outlet.
Time indication appears and flashes in the display window.



2 While keeping the ENTER/CLOCK button pressed, press the TIME SET/TUNE + or - button to set the time.
The + button advances the hour and minute digits and the - button reverses them. Keep pressing the + or - button to advance or reverse the digit rapidly.



3 Release the ENTER/CLOCK button.
The clock starts operating.

12-hour system (North and South American and UK model)	24-hour system (Other models)
AM 12:00 = midnight PM 12:00 = noon	0:00 = midnight 12:00 = noon

(The illustrations of the time indication in this manual are for models with 24-hour system.)

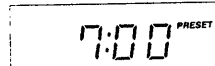
Zero second adjustment

At step 3, release the ENTER/CLOCK button with the time signal.

Note on the Time indication

When the radio is on, ":" of the time indication is lit, and when the radio is off, the ":" is flashing.

Radio is on.



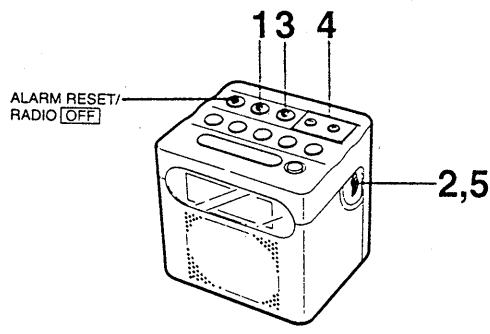
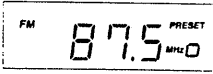

Radio is off.



8

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Radio Operation (Manual Tuning)

 <p>13 4</p> <p>ALARM RESET/ RADIO OFF</p> <p>2,5</p>	<p>2 Turn the VOL control a little to get sound.</p> <p>3 Press the BAND button to select the band. Each press of the BAND button changes the band in the following order.</p> <p style="text-align: center;">← LW → AM (MW) → FM →</p> <p>(The display window shows the last frequency chosen in each band.)</p> 
<p>1 Press the SLEEP/RADIO ON button. The band, frequency and the preset number of the station before the radio was turned off appear in the display window. After 10 seconds, the indication becomes the current time.</p> 	<p>4 Tune in the station you want by pressing the TIME SET/TUNE + or - button. The FM tuning interval is set to 0.1 MHz and the AM tuning interval is set to 10 kHz for models for North and South America. The FM tuning interval is set to 0.05 MHz and the AM tuning interval is set to 9 kHz for models for other countries. (The FM frequency indication changes every 0.1 MHz.) The LW tuning interval alternates between 2 kHz and 7 kHz. A beep sounds at the band edge.</p> <p>5 Adjust volume.</p>

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Radio Operation (Manual Tuning)

To turn off the radio

Press the ALARM RESET/RADIO OFF button.

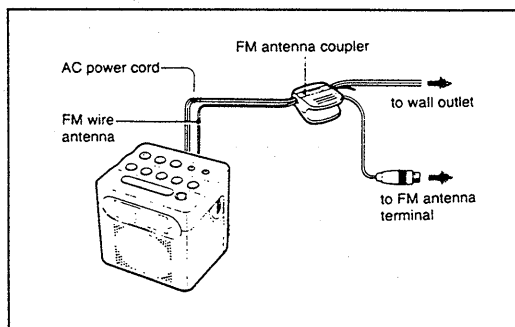
To improve reception

FM: Extend the FM wire antenna fully to increase the FM sensitivity.

AM (MW)/LW: Since the reception is affected by the position of the radio, rotate the unit horizontally for optimum reception.

For the customers supplied with an FM antenna coupler

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



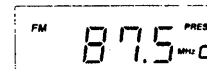
12

To check the station you are listening to

Press the + button lightly. The band and frequency appear for 10 seconds.

Notes

- When you turn on the radio or change the frequency, the display shows the band and frequency for 10 seconds, then it shows the current time.
- When you tune in the frequency which is not included in the preset stations, the PRESET number in the display shows 0 (out).



- If the **A RADIO** alarm time comes while listening to the radio, the station changes to that preset in number 1.

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Radio Operation (Preset Tuning)

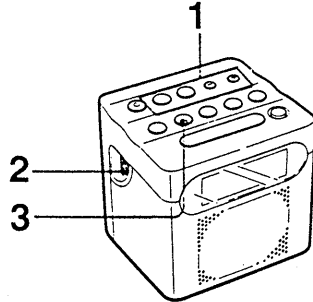
You can preset up to five FM/AM (MW)/LW stations (one station for each number button 1 to 5).

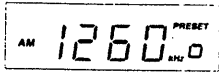
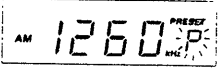
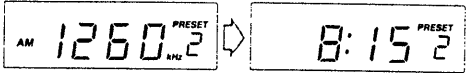
Note

When you use the radio alarm, preset the station you want for the alarm in preset button 1, as the PRESET 1 station is the wake up station.

Presetting the Station

Example: To set AM (MW) 1,260 kHz in preset button 2



- 1 Tune in the AM (MW) 1,260 kHz (see "Radio Operation (Manual Tuning)").

- 2 Press the ENTER/CLOCK button.
 The P indication flashes for 10 seconds.

- 3 While P is flashing, press the 2 button.
 The P indication becomes 2 (the preset number) and the beeps sound.
 The station is preset.
 Though the indication becomes the current time after 10 seconds, the preset number remains.

- 4 Repeat steps 1 to 3 for each stations to be preset.

To change the preset station

Preset a new station in the number of which you want to change the station. The previous station is canceled.

Radio Operation (Preset Tuning)

Tuning in a Preset Station

- 1 Press the RADIO **ON** button 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 becomes the current time.
 The preset number remains.

To turn off the radio

Press the RADIO **OFF** button.

To check the station you are listening to

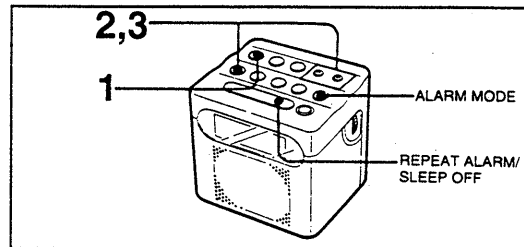
Press the preset number button.
 The band and frequency appear for 10 seconds.

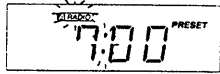
Setting the Alarm

You can set the radio and buzzer alarms. The wake up station is that preset in number 1.

Setting the Alarm Time

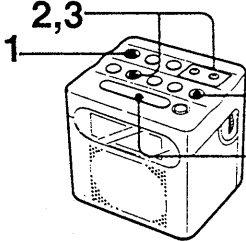
To set the **ALARM RADIO** alarm time at 7:00 AM




- 1 Turn off the radio.
- 2 While keeping the **ALARM RADIO** ALARM button pressed, set the time by pressing the TIME SET/TUNE + or - button.

- 3 Release the **ALARM RADIO** ALARM button.
 The alarm time is set. The indication becomes the current time.

Setting the Alarm

To set the **B BUZZER** alarm time at 8:15 AM



- 1** Turn off the radio.
- 2** While keeping the **B BUZZER** ALARM button pressed, set the time by pressing the TIME SET/TUNE + or - button.


- 3** Release the **B BUZZER** ALARM button. The alarm time is set. The indication becomes the current time.

Notes

- The wake up station is the PRESET 1 station. Preset the station you want for the radio alarm in preset button 1.
- When you set both **A RADIO** and **B BUZZER** alarms continuously, perform from step 2 above.

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Setting the Alarm

To stop the alarm

Press the ALARM RESET/RADIO **OFF** button. The alarm will sound at same time the next day.

To cancel the alarm

Press the ALARM MODE button until neither **A RADIO** nor **B BUZZER** appears in the display window.

Using the Snooze Alarm Function

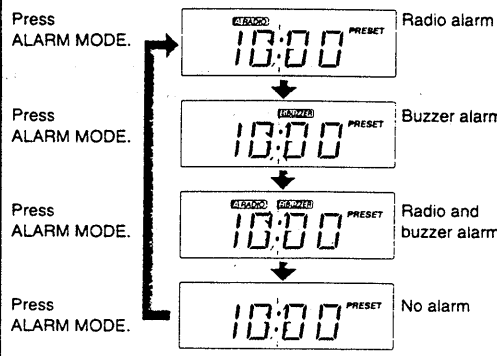
When you awake to the alarm but want to stay in bed for a few more minutes, press the REPEAT ALARM/SLEEP OFF bar. The alarm will be silenced but will come on again after about 8 minutes. If you want to snooze more, press the bar again. You can use the snooze alarm function for about one hour. When the snooze alarm function is operating, the alarm indication flashes.

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Setting the Alarm

Press the ALARM MODE button until the alarm you want appears in the display window.

Each time you press the button, the alarm indication changes as follows.



* If you set the radio alarm and buzzer alarm at the same time, the radio alarm sounds.

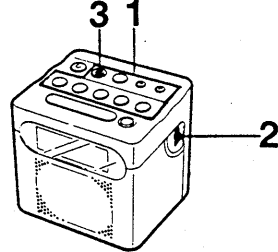
- The selected alarm sounds at the time you set, and automatically turns off after 59 minutes, unless you turn it off.
- When the radio alarm comes on, **A RADIO** indication flashes. If you want to keep on listening to radio and stop flashing, press the RADIO **ON** button.

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Using the Sleep Timer

By setting the sleep timer, you can fall asleep to the radio sound. The radio turns off after the preset time has passed. You can set the sleep timer of 90, 60, 30, or 15 minutes.


Setting the Sleep Timer

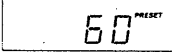


- 1** Turn on the radio and tune in the desired station. See "Radio Operation".
- 2** Adjust volume. (to be continued)

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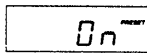
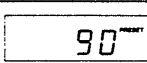
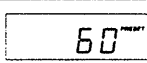
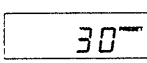
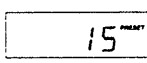
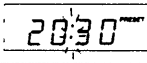
Using the Sleep Timer

3 Press the SLEEP/RADIO  button until the minutes indication you want appears in the display window. Each time you press the button, the operation time becomes shorter.

To turn off the radio after 60 minutes 

The sleep timer is set and the indication becomes the band and frequency, then the current time after 10 seconds each.

Sleep timer operation time

Press SLEEP/RADIO 	Indication	Operation time
once		Radio on
twice		90 minutes
three times		60 minutes
four times		30 minutes
five times		15 minutes
six times		Radio off

To use both sleep timer and alarm function

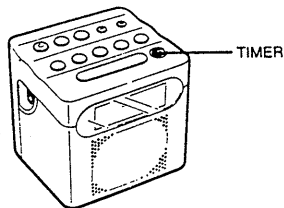
Operate in the following order to fall asleep to the radio sound and be awoken by the radio/buzzer alarm at the preset time.

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

Using the Count Down Timer

Use the count down timer as a reminder. The beep sounds for 1 minute when the preset time has passed. The beep sounds when the radio is either on or off. You can set the timer of 3, 5, 10, 15, 30, or 60 minutes.

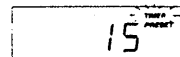
Setting the Timer



Press the TIMER button. While the TIMER indication is flashing, press the TIMER button until the time you want the beep to sound appears. Each time you press the button, the indication changes:

03 → 05 → 10 → 15 → 30 → 60 → OFF (no timer)

To set the 15 minutes timer



The timer is set. When the radio is off, the indication becomes the current time. When the radio is on, the indication becomes the frequency, then becomes the current time after 10 seconds. When the preset time has passed, the TIMER indication flashes and beep sounds. The radio is turned off.

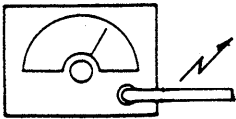
To change the timer setting time

Press the TIMER button until the time you want appears. The indication starts from 03 again.

SECTION 2 ELECTRICAL ADJUSTMENTS

AM Section

AM RF signal generator

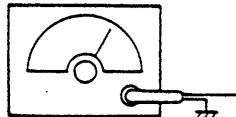


Put the lead-wire antenna close to the set.

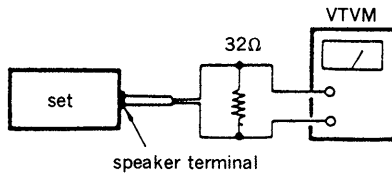
30 % amplitude modulation by 400Hz signal
Output level: as low as possible

FM Section

FM RF signal generator



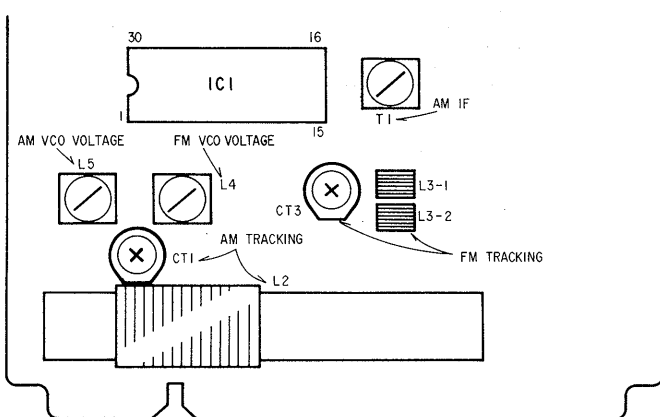
± 22.5kHz frequency deviation by 400Hz signal
Output level: as low as possible



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

Adjustment Location :

[MAIN BOARD] — COMPONENT SIDE —



(): EXCEPT US, CND model

AM IF ADJUSTMENT

Adjust for a maximum reading on VTVM.

T1	450kHz
----	--------

Note : Receive 530kHz (531kHz).

AM VCO VOLTAGE ADJUSTMENT

Adjustment Part	Frequency Display	Reading on Digital voltmeter
L5	530kHz (531kHz)	1.2 V
(confirmation)	1,710kHz (1,602kHz)	Less than 9 V (Less than 8 V)

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

AM TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

CT1	L2
1,490kHz (1,404kHz)	580kHz (621kHz)

FM VCO VOLTAGE ADJUSTMENT

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

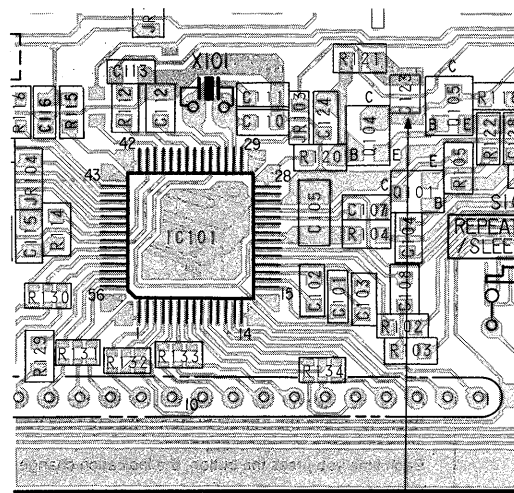
Note : Not use the FM signal generator in this adjustment.

FM TRACKING ADJUSTMENT

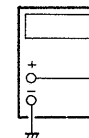
Adjust for a maximum reading on VTVM.

CT3	L3-1, L3-2
108MHz	87.5MHz

[KEY BOARD] — CONDUCTOR SIDE —

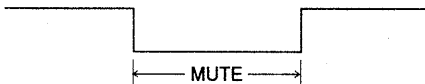


digital voltmeter



SECTION 3 PIN DESCRIPTION

IC101 μ PD1724GB-589-1A7

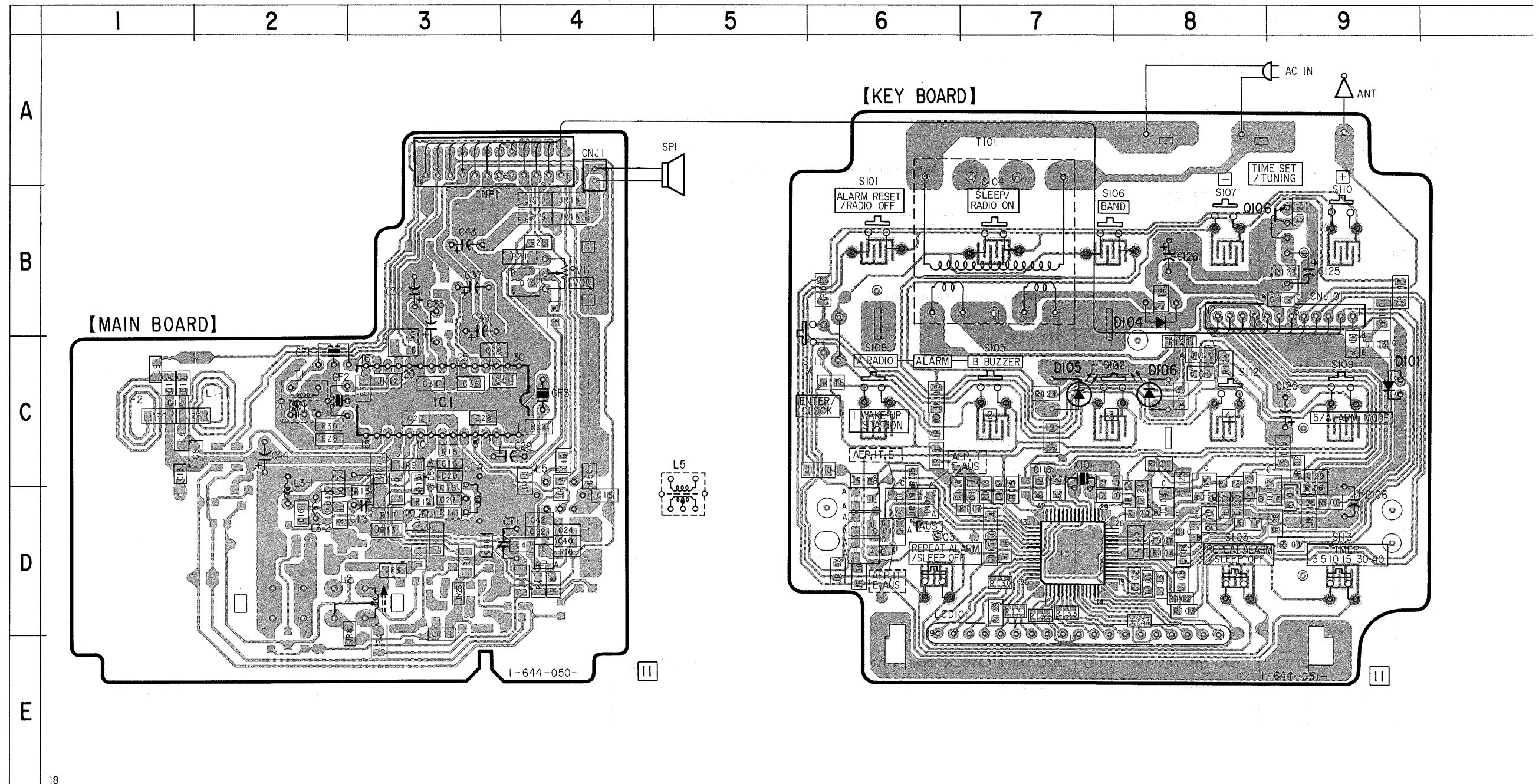
Pin No.	Pin Name	Signal Name	I/O	Description
1-10	LCD10-LCD1	LCD10-LCD1	O	LCD drive
11	NC		—	
12-14	COM3-COM1	COM3-COM1	O	LCD common
15	VSS3		—	Pin for doubler circuit capacitor connection to develop LCD drive voltage
16	CAP2			
17	CAP1			
18	VSS2			
19	VDP	$\overline{\text{MUTE}}$	O	Audio signal mute. 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 AM	I/O	BATTERY CHECK input, BAND FM/AM output FM : Low AM : High
37	PB3	LIGHT	O	Unused pin
38	PB2	POWER	O	Unused pin
39	PB1	INITIALIZE	O	KEY IN control output
40	PB0	BAND LOW/TV H	O	Unused pin
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

4-1. PRINTED WIRING BOARD • See page 16 for semiconductor Lead Layouts.

● Semiconductor Location

Ref. No.	Location
D1	D-4
D4	D-2
D5	C-3
D102	B-9
D103	C-8
D104	B-8
D105	C-7
D106	C-8
D107	D-6
D108	D-6
D109	D-6
D110	D-6
D111	D-6
D112	D-6
IC1	C-3
IC101	D-7
Q8	D-3
Q10	B-4
Q11	C-3
Q101	D-8
Q102	D-9
Q103	C-9
Q104	D-8
Q105	D-8
Q106	B-9

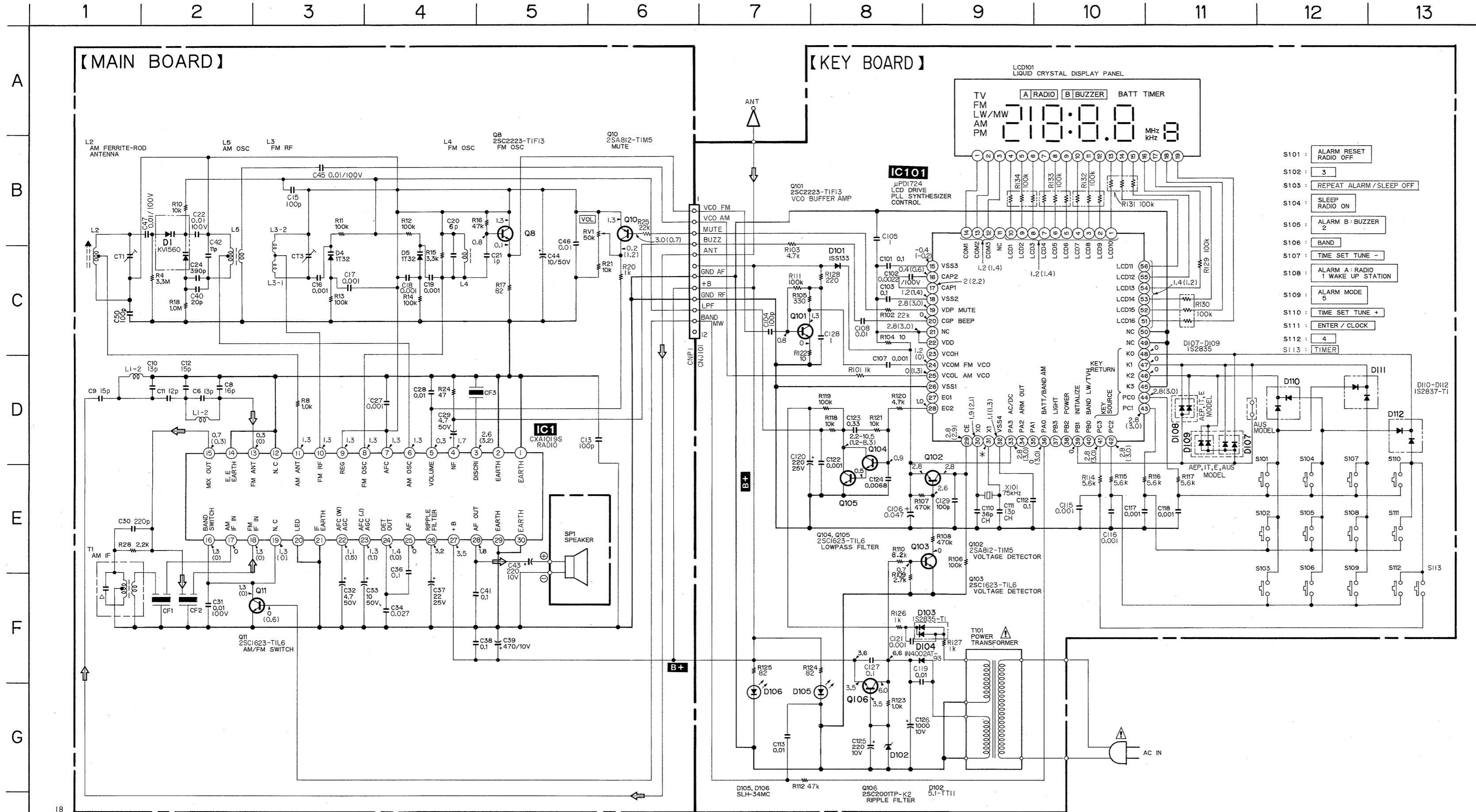


Note:

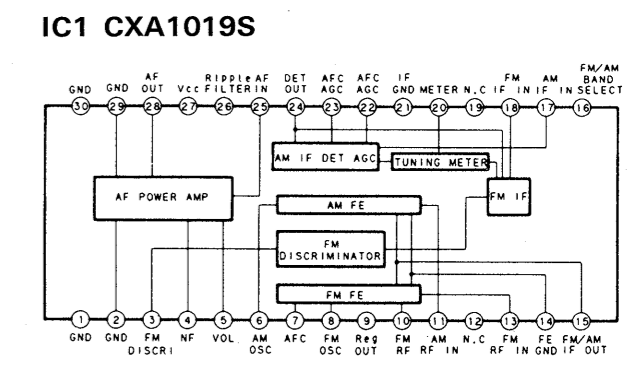
● ○ : parts extracted from the component side.

CND: Canadian
IT: Italian
AUS: Australian

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
- S113: TIMER

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

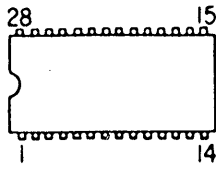
Note:
 The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:
 Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark: FM
 (): AM
- Voltages are taken with a VOM (Input Impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
 \square : FM
 \square : Canadian
 IT: Italian
 AUS: Australian

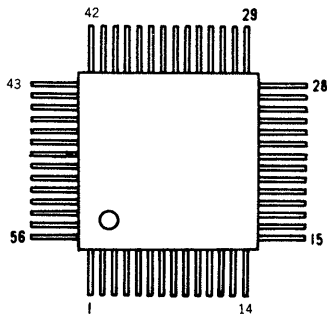
4-3. SEMICONDUCTOR LEAD LAYOUTS

CXA1019S



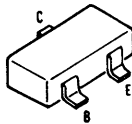
(Top view)

μ PD1724GB-589-1A7

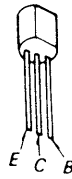


MARKING SIDE VIEW

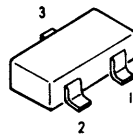
- 2SA1162-G
- 2SC1623-L5L6
- 2SC2223-F13
- 2SC2223-F14



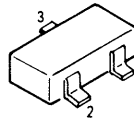
2SC2001-LK



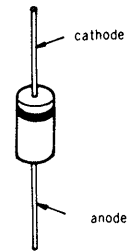
KV1560
MA152WK



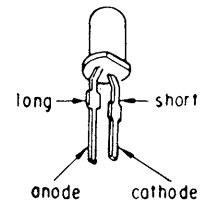
1S2836



10E2



GL3EG8



SECTION 5 EXPLODED VIEWS

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

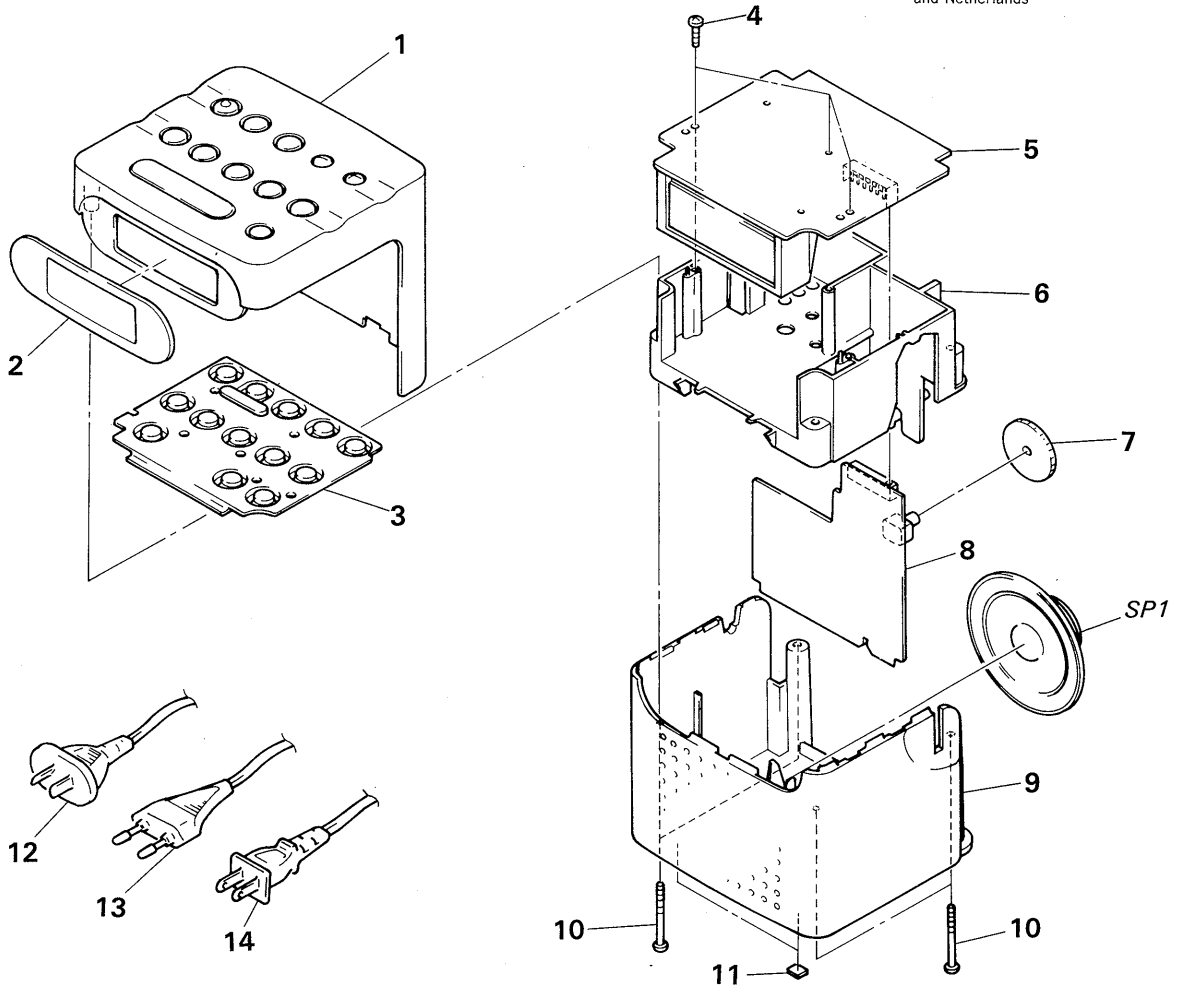
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- hardware (#mark) list is given in the last of this parts list.

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

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

AEZ : AEP
5AEZ : North European and Austria
and Netherlands

IT : Italian
AUS : Australian



Ref. No.	Part No.	Description	Remark
1	A-3635-732-A	CABINET (UPPER) ASSY	
2	3-377-637-01	PANEL	
3	1-692-143-11	SWITCH, RUBBER KEY	
4	7-685-648-79	SCREW +P 3X12 TYPE2 NON-SLIT	
* 5	A-3661-556-A	KEY BOARD, COMPLETE (US, Canadian)	
* 5	A-3661-592-A	KEY BOARD, COMPLETE (AUS)	
* 5	A-3661-594-A	KEY BOARD, COMPLETE (AEP, IT, E)	
* 6	3-377-644-01	CHASSIS	
7	3-368-840-21	KNOB (VOL)	
* 8	A-3661-553-A	MAIN BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
9	3-377-643-01	CABINET (LOWER) (US, Canadian)	
9	3-377-643-11	CABINET (LOWER) (AEP, IT, E)	
9	3-377-643-21	CABINET (LOWER) (AUS)	
10	7-685-154-19	SCREW +P 3X35 TYPE2 NON-SLIT	
11	3-368-852-01	FOOT	
	12	1-559-912-11	CORD, POWER (AUS)
	13	1-555-795-00	CORD, POWER (AEP, IT, E)
	14	1-696-008-31	CORD, POWER (US, Canadian)
SP1	1-503-082-00	SPEAKER	

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

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

KEY

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: 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

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

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

Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CND: Canadian
AEZ: AEP

IT: Italian
AUS: Australian

5AEZ: North European and Austria and Netherlands

Ref. No.	Part No.	Description	Remark
*	A-3661-556-A	KEY BOARD, COMPLETE (US, CND)	
*	A-3661-594-A	KEY BOARD, COMPLETE (AEP, IT, E)	
*	A-3661-592-A	KEY BOARD, COMPLETE (AUS)	

*	3-377-639-01	HOLDER (LCD)	
	3-380-732-01	HOLDER (CRYSTAL)	
< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C102	1-164-161-11	CERAMIC CHIP 0.0022uF	10% 100V
C103	1-163-038-00	CERAMIC CHIP 0.1uF	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
C107	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V
C108	1-164-232-11	CERAMIC CHIP 0.01uF	10% 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	10% 50V
C115	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C116	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C117	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C118	1-163-009-11	CERAMIC CHIP 0.001uF	10% 50V
C119	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C120	1-128-483-11	ELECT 220uF	20% 25V
C121	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C122	1-163-141-00	CERAMIC CHIP 0.001uF	5% 50V
C123	1-164-006-11	CERAMIC CHIP 0.33uF	10% 16V
C124	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V
C125	1-126-176-11	ELECT 220uF	20% 10V
C126	1-124-473-11	ELECT 1000uF	20% 10V
C127	1-163-038-00	CERAMIC CHIP 0.1uF	25V

Ref. No.	Part No.	Description	Remark
C128	1-164-346-11	CERAMIC CHIP 1uF	16V
C129	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
< JACK >			
* CNJ101	1-695-232-11	PIN, CONNECTOR (PC BOARD)	12P
< DIODE >			
D101	8-719-028-22	DIODE 1SS133-T95	
D102	8-719-978-16	DIODE DTZ4.7A	
D103	8-719-104-34	DIODE 1S2836	
D104	8-719-200-02	DIODE 10E2	
D105	8-719-936-66	LED GL3EG8	
D106	8-719-936-66	LED GL3EG8	
D107	8-719-104-34	DIODE 1S2836 (AEP, IT, E, AUS)	
D108	8-719-104-34	DIODE 1S2836 (AEP, IT, E,)	
D109	8-719-104-34	DIODE 1S2836 (AEP, IT, E, AUS)	
D110	8-719-400-18	DIODE MA152WK	
D111	8-719-400-18	DIODE MA152WK	
D112	8-719-400-18	DIODE MA152WK	
< IC >			
IC101	8-759-073-89	IC uPD1724GB-589-1A7	
< JUMPER RESISTOR >			
JR102	1-216-295-00	METAL CHIP 0	5% 1/10W
JR103	1-216-295-00	METAL CHIP 0	5% 1/10W
JR104	1-216-296-00	METAL CHIP 0	5% 1/8W
JR105	1-216-295-00	METAL CHIP 0	5% 1/10W
JR106	1-216-295-00	METAL CHIP 0	5% 1/10W
JR107	1-216-295-00	METAL CHIP 0	5% 1/10W
JR108	1-216-295-00	METAL CHIP 0	5% 1/10W
JR109	1-216-295-00	METAL CHIP 0	5% 1/10W
JR110	1-216-296-00	METAL CHIP 0	5% 1/8W
JR111	1-216-295-00	METAL CHIP 0	5% 1/10W

KEY **MAIN**

Ref. No.	Part No.	Description	Remark		
JR112	1-216-296-00	METAL CHIP	0	5%	1/8W
JR113	1-216-296-00	METAL CHIP	0	5%	1/8W
JR114	1-216-296-00	METAL CHIP	0	5%	1/8W
JR115	1-216-295-00	METAL CHIP	0	5%	1/10W
JR117	1-216-296-00	METAL CHIP	0	5%	1/8W
JR118	1-216-296-00	METAL CHIP	0	5%	1/8W
JR119	1-216-295-00	METAL CHIP	0	5%	1/10W (AUS)
< LCD >					
LCD101	1-809-707-11	DISPLAY PANEL, LIQUID CRYSTAL			
< TRANSISTOR >					
Q101	8-729-102-07	TRANSISTOR	2SC2223-F13		
Q102	8-729-216-22	TRANSISTOR	2SA1162		
Q103	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q104	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q105	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q106	8-729-142-46	TRANSISTOR	2SC2001-LK		
< RESISTOR >					
R101	1-216-049-00	METAL CHIP	1K	5%	1/10W
R102	1-216-081-00	METAL CHIP	22K	5%	1/10W
R103	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R104	1-216-001-00	METAL CHIP	10	5%	1/10W
R105	1-216-037-00	METAL CHIP	330	5%	1/10W
R106	1-216-097-00	METAL CHIP	100K	5%	1/10W
R107	1-216-113-00	METAL CHIP	470K	5%	1/10W
R108	1-216-113-00	METAL CHIP	470K	5%	1/10W
R109	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R110	1-216-220-00	METAL CHIP	8.2K	5%	1/8W
R111	1-216-097-00	METAL CHIP	100K	5%	1/10W
R112	1-216-089-00	METAL CHIP	47K	5%	1/10W
R114	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R115	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R116	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R117	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R118	1-216-073-00	METAL CHIP	10K	5%	1/10W
R119	1-216-246-00	METAL GLAZE	100K	5%	1/8W
R120	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R122	1-216-001-00	METAL CHIP	10	5%	1/10W
R123	1-216-049-00	METAL CHIP	1K	5%	1/10W
R124	1-216-023-00	METAL CHIP	82	5%	1/10W
R125	1-216-023-00	METAL CHIP	82	5%	1/10W
R126	1-216-049-00	METAL CHIP	1K	5%	1/10W
R127	1-216-198-00	METAL CHIP	1K	5%	1/8W
R128	1-216-033-00	METAL CHIP	220	5%	1/10W
R129	1-216-097-00	METAL CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description	Remark		
R130	1-236-502-11	NETWORK CHIP	100K	5%	
R131	1-236-502-11	NETWORK CHIP	100K	5%	
R132	1-236-502-11	NETWORK CHIP	100K	5%	
R133	1-236-502-11	NETWORK CHIP	100K	5%	
R134	1-236-502-11	NETWORK CHIP	100K	5%	
< SWITCH >					
SW101	1-692-143-11	RUBBER SWITCH (ALARM RESET/RADIO OFF)			
SW102	1-692-143-11	RUBBER SWITCH (P3)			
SW103	1-692-143-11	RUBBER SWITCH (REPEAT ALARM/SLEEP OFF)			
SW104	1-692-143-11	RUBBER SWITCH (SLEEP/RADIO ON)			
SW105	1-692-143-11	RUBBER SWITCH (ALARM B BUZZER/P2)			
SW106	1-692-143-11	RUBBER SWITCH (BANDO)			
SW107	1-692-143-11	RUBBER SWITCH (-)			
SW108	1-692-143-11	RUBBER SWITCH (ALARM A RADIO/ P1 WAKE UP STATION)			
SW109	1-692-143-11	RUBBER SWITCH (ALARM MODE/P5)			
SW110	1-692-143-11	RUBBER SWITCH (+)			
SW111	1-554-088-00	SWITCH, KEY BOARD (ENTER/CLOCK)			
SW112	1-692-143-11	RUBBER SWITCH (P4)			
SW113	1-692-143-11	RUBBER SWITCH (TIMER)			
< TRANSFORMER >					
△T101	1-450-922-11	TRANSFORMER, POWER (US, CND)			
△T101	1-450-923-11	TRANSFORMER, POWER (EXEPT US, CND)			
< VIBRATOR >					
X101	1-567-769-11	VIBRATOR, CRYSTAL			

*	A-3661-553-A	MAIN BOARD, COMPLETE			

< CAPACITOR >					
C6	1-163-096-00	CERAMIC CHIP	13PF	5%	50V
C8	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C9	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C10	1-163-096-00	CERAMIC CHIP	13PF	5%	50V
C11	1-163-095-00	CERAMIC CHIP	12PF	5%	50V
C12	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C13	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C15	1-163-117-00	CERAMIC CHIP	100PF	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	0.25PF	50V
C21	1-163-083-00	CERAMIC CHIP	1PF	0.25PF	50V
C22	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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MAIN

Ref. No.	Part No.	Description	Remark
C24	1-163-131-00	CERAMIC CHIP 390PF 5%	50V
C27	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C28	1-163-031-11	CERAMIC CHIP 0.01uF	50V
C29	1-124-927-11	ELECT 4.7uF 20%	100V
C30	1-163-125-00	CERAMIC CHIP 220PF 5%	50V
C31	1-164-232-11	CERAMIC CHIP 0.01uF 10%	100V
C32	1-124-927-11	ELECT 4.7uF 20%	100V
C33	1-124-907-11	ELECT 10uF 20%	50V
C34	1-163-986-00	CERAMIC CHIP 0.027uF 10%	25V
C36	1-164-004-11	CERAMIC CHIP 0.1uF 10%	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	1-163-100-00	CERAMIC CHIP 20PF 5%	50V
C41	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C42	1-163-094-00	CERAMIC CHIP 11PF 5%	50V
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 10%	100V
C46	1-163-059-00	CERAMIC CHIP 0.01uF 10%	50V
C47	1-164-232-11	CERAMIC CHIP 0.01uF 10%	100V
C50	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
< FILTER >			
CF1	1-577-319-11	FILTER, CERAMIC	
CF2	1-579-312-81	FILTER, CERAMIC	
CF3	1-579-312-81	FILTER, CERAMIC	
< JACK >			
CNJ1	1-580-181-11	SOCKET, CONNECTOR 2P	
< CONNECTOR >			
CNP1	1-695-237-11	SOCKET, CONNECTOR(PC BOARD)12P	
< TRIMMER >			
CT1	1-141-304-21	CAP, TRIMMER 10PF	
CT3	1-141-304-21	CAP, TRIMMER 10PF	
< DIODE >			
D1	8-719-951-05	DIODE KV1560	
D4	8-719-949-46	DIODE 1T32	
D5	8-719-949-46	DIODE 1T32	
< IC >			
IC1	8-752-035-29	IC CXA1019S	

Ref. No.	Part No.	Description	Remark
< JUMPER RESISTOR >			
JR1	1-216-296-00	METAL CHIP 0 5%	1/8W
JR2	1-216-296-00	METAL CHIP 0 5%	1/8W
JR4	1-216-296-00	METAL CHIP 0 5%	1/8W
JR5	1-216-296-00	METAL CHIP 0 5%	1/8W
JR6	1-216-295-00	METAL CHIP 0 5%	1/10W
JR7	1-216-296-00	METAL CHIP 0 5%	1/8W
JR8	1-216-295-00	METAL CHIP 0 5%	1/10W
JR9	1-216-296-00	METAL CHIP 0 5%	1/8W
JR10	1-216-295-00	METAL CHIP 0 5%	1/10W
JR11	1-216-295-00	METAL CHIP 0 5%	1/10W
JR12	1-216-295-00	METAL CHIP 0 5%	1/10W
JR13	1-216-296-00	METAL CHIP 0 5%	1/8W
JR14	1-216-295-00	METAL CHIP 0 5%	1/10W
JR15	1-216-296-00	METAL CHIP 0 5%	1/8W
JR16	1-216-296-00	METAL CHIP 0 5%	1/8W
JR17	1-216-296-00	METAL CHIP 0 5%	1/8W
JR18	1-216-296-00	METAL CHIP 0 5%	1/8W
JR20	1-216-296-00	METAL CHIP 0 5%	1/8W
JR21	1-216-295-00	METAL CHIP 0 5%	1/10W
JR22	1-216-295-00	METAL CHIP 0 5%	1/10W
JR23	1-216-295-00	METAL CHIP 0 5%	1/10W
< COIL >			
L2	1-402-616-11	ANTENNA, FERRITE-ROD (MW)	
L3-1	1-402-654-11		
L3-2	1-402-653-11		
L4	1-460-335-11	COIL (WITH CORE)	
L5	1-406-485-11	COIL (OSC)	
< TRANSISTOR >			
Q8	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q10	8-729-216-22	TRANSISTOR 2SA1162-G	
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
R4	1-216-133-00	METAL CHIP 3.3M 5%	1/10W
R8	1-216-198-00	METAL CHIP 1K 5%	1/8W
R10	1-216-073-00	METAL CHIP 10K 5%	1/10W
R11	1-216-097-00	METAL CHIP 100K 5%	1/10W
R12	1-216-097-00	METAL CHIP 100K 5%	1/10W
R13	1-216-097-00	METAL CHIP 100K 5%	1/10W
R14	1-216-097-00	METAL CHIP 100K 5%	1/10W
R15	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
R16	1-216-089-00	METAL CHIP 47K 5%	1/10W
R17	1-216-166-00	METAL CHIP 82 5%	1/8W
R18	1-216-121-00	METAL CHIP 1M 5%	1/10W
R20	1-216-049-00	METAL CHIP 1K 5%	1/10W

Ref. No.	Part No.	Description	Remark		
R21	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R24	1-216-017-00	METAL CHIP	47	5%	1/10W
R25	1-216-081-00	METAL CHIP	22K	5%	1/10W
R28	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

< VARIABLE RESISTOR >

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

< TRANSFORMER >

T1 1-404-790-11 TRANSFORMER, IF

MISCELLANEOUS

3	1-692-143-11	SWITCH, RUBBER KEY
△12	1-559-912-11	CORD, POWER (AUS)
△13	1-555-795-00	CORD, POWER (AEP, IT, E)
△14	1-696-008-31	CORD, POWER (US, Canadian)
SP1	1-503-082-00	SPEAKER

ACCESSORIES & PACKING MATERIALS

	1-501-499-11	COUPLER, ANTENNA (5AEZ)
*	3-378-677-01	INDIVIDUAL CARTON (US)
*	3-378-683-01	INDIVIDUAL CARTON (Canadian)
*	3-378-684-01	INDIVIDUAL CARTON (5AEZ, IT, E, AUS)
*	3-378-684-11	INDIVIDUAL CARTON (AEZ)
	3-755-140-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN) (Canadian, AEP, E, AUS)
	3-755-140-21	MANUAL, INSTRUCTION (ENGLISH) (US)
	3-755-140-41	MANUAL, INSTRUCTION (SPANISH, DUTCH, ITALIAN) (AEP, IT)

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.


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SONY[®] SERVICE MANUAL

*US Model
Canadian Model
AEP Model
E Model
Australian Model*

CORRECTION-1

Correct your service manual as shown below.

 : Indicates corrected portion.

Page	INCORRECT			CORRECT		
	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref.No.</u>	<u>Part No.</u>	<u>Description</u>
19	<u>△T101</u>	1-450-922-11	TRANSFORMER,POWER (US,CND)	<u>△T101</u>	1-450-922-11	TRANSFORMER,POWER (US)
				<u>△T101</u>	<u>1-423-321-11</u>	TRANSFORMER,POWER (CND)

ICF-C103



SONY® SERVICE MANUAL

*US Model
Canadian Model
AEP Model
E Model
Australian Model*

CORRECTION-2

Correct your service manual as shown below.

 : Indicates Corrected portion.

Page	INCORRECT			CORRECT		
	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
	*5	A-3661-592-A	KEY BOARD, COMPLETE (Australian)	*5	 <u>A-3679-401-A</u>	KEY BOARD, COMPLETE (Australian)
	*5	A-3661-594-A	KEY BOARD, COMPLETE (AEP, Italian, E)	*5	 <u>A-3679-402-A</u>	KEY BOARD, COMPLETE (AEP, Italian, E)