ICF-C733/C733L

SERVICE MANUAL

AEP Model
ICF-C733/C733L
UK Model
ICF-C733L

Photo : ICF-C733L

SPECIFICATIONS

Time display:
UK: 12-hour system
Other countries: 24-hour system
Frequency range:

Band	Frequency range	Channel step
FM	87.5 – 108 MHz	0.05 MHz*
AM (MW)	531 – 1,602 kHz	9 kHz
LW (ICF-C733L only)	153 – 281 kHz	2 kHz ⇄ 7 kHz

* 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 (MW): 450 kHz
Speaker:
Approx. 6.6 cm (2 5/8 inches) dia.
Power output:
120 mW (at 10 % harmonic distortion)
Power requirements:
UK: 240 V AC, 50 Hz
Other countries: 220 - 230 V AC, 50 Hz

Dimensions:
Approx. 233 × 77 × 140 mm (w/h/d)
(9 1/4 × 3 1/8 × 5 5/8 inches) incl. projecting parts and controls
Mass:
Approx. 680 g (1 lb 8 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.

Notes on chip component replacement

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

SAFETY-RELATED COMPONENT WARNING !!

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

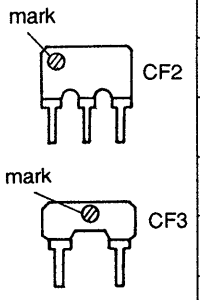
ICF-C733 : FM/AM PLL SYNTHESIZED CLOCK RADIO
ICF-C733L : FM/MW/LW 3BAND PLL SYNTHESIZED CLOCK RADIO

SONY®

TABLE OF CONTENTS

HOW TO CHANGED THE CERAMIC FILTERS

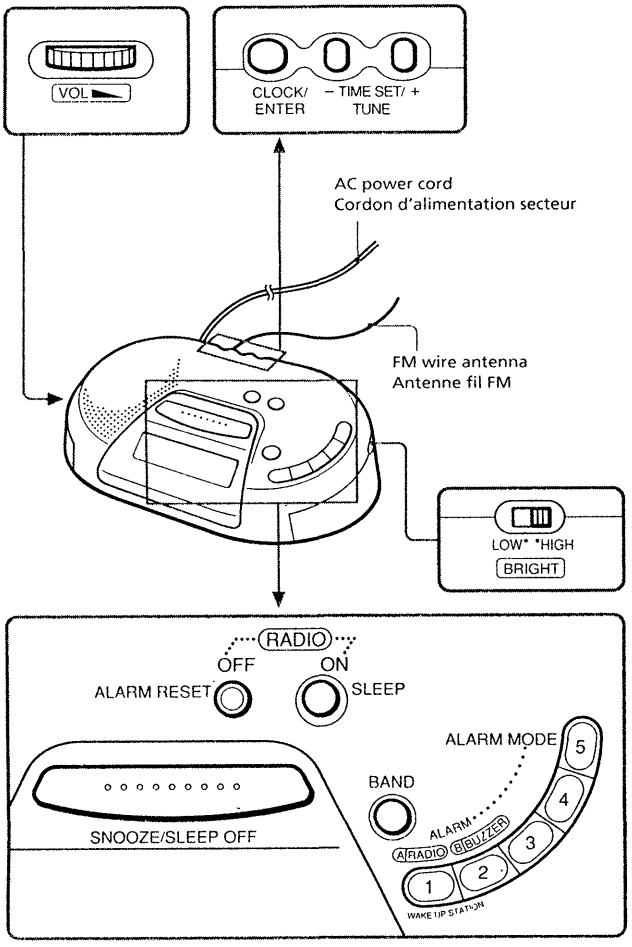
This model is used two ceramic filters of CF2 and CF3. You must used same type of color marked ceramic filters in order to meet same specifications. Therefore, the ceramic filter must changed two pieces together since it's supply two pieces in one package as a spare parts.



mark	center frequency
red	10.70MHz
blue	10.67MHz
orenge	10.73MHz
black	10.64MHz
white	10.76MHz

SECTION 1
GENERAL

This section is extracted from instruction manual.



Setting the Clock

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

1. 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.
2. Adjust **VOL** (Volume).
3. Press **BAND** to select the band.
   Every push changes the band as follows. (The last frequency selected in each band appears.)

   LW → AM (MW) → FM
   ↑_____↓

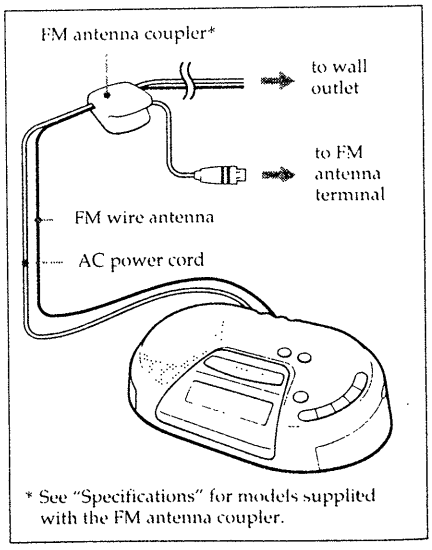
   FM/AM = ICF-C733 only
   FM/MW/LW = ICF-C733L only

4. Tune in a station by pressing the + or – button of **TIME SET/TUNE**.
   The FM channel step is set to 0.05 MHz or (The FM frequency indication changes every 0.1 MHz.).
   The AM (MW) channel step is set to 9 kHz.
   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: Extend the FM wire antenna fully to improve FM reception.
  AM (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.



* See "Specifications" for models supplied with the FM antenna coupler.

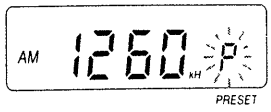
Preset Tuning

Presetting the Station

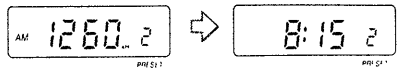
You can preset up to 5 stations in FM/AM(MW)/LW with numbered buttons 1 to 5.

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

1. Tune in to AM 1260 kHz (See "Manual Tuning").
2. Press **CLOCK/ENTER**.
   "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 **VOL** (Volume).

1. Turn off the radio.
2. While holding down **A RADIO** or **B BUZZER**, press either **+** or **–** of **TIME SET/TUNE** 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 **VOL** (volume).
- 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 Sleep Timer")

Note

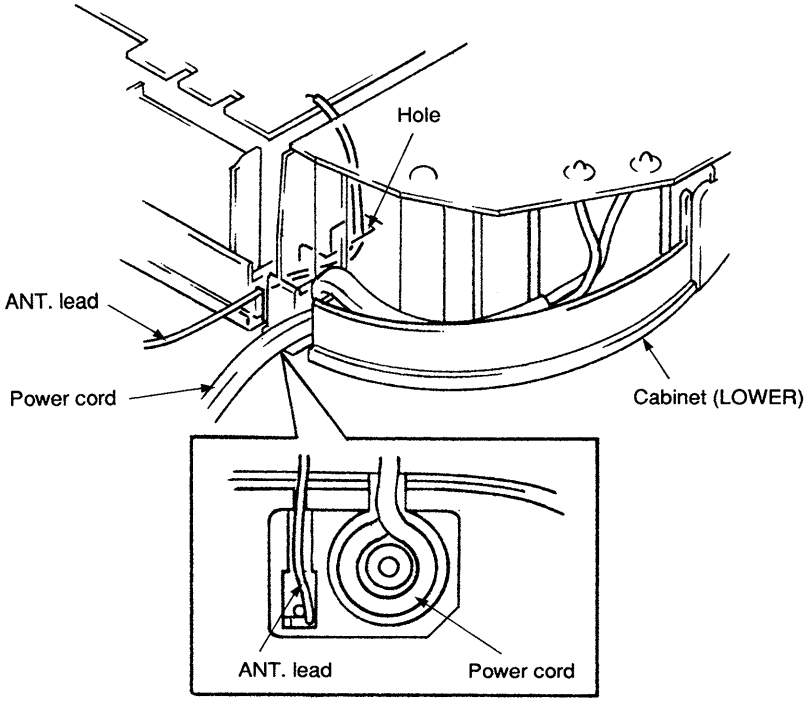
When the alarm time arrives while the sleep timer is working, the sleep timer is canceled and the alarm sounds.

SECTION 2
SERVICING NOTE

• SET THE POWER CORD AND ANT. LEAD

❶ Pull around and arrange the Power cord along the edge of the Cabinet (LOWER) as shown in the figure.

❷ Thread and arrange the ANT. lead through a hole of the Cabinet (LOWER) as shown in the figure.



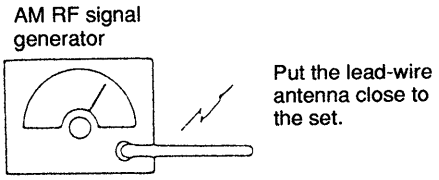
SECTION 3
ELECTRICAL ADJUSTMENTS

ICF-C733L

• MW/LW Section

Setting :

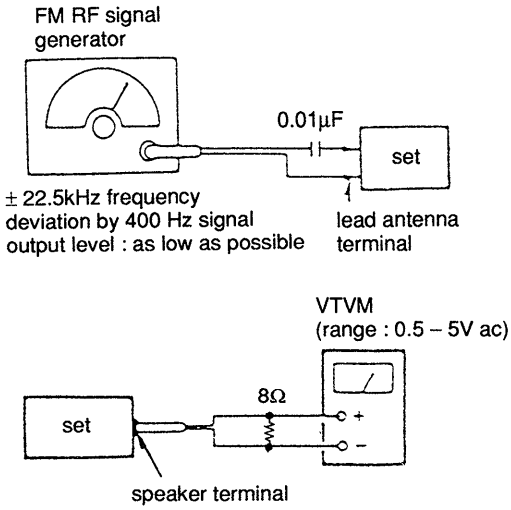
BAND switch : MW or LW



• FM Section

Setting :

BAND switch : FM



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

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

AM (MW) VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
L6	531kHz	2.85 ± 0.1V
confirmation	1,602kHz	less than 11V

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

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

AM (LM) VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
CT4	153kHz	2.2 ± 0.1V
confirmation	281kHz	less than 10V

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

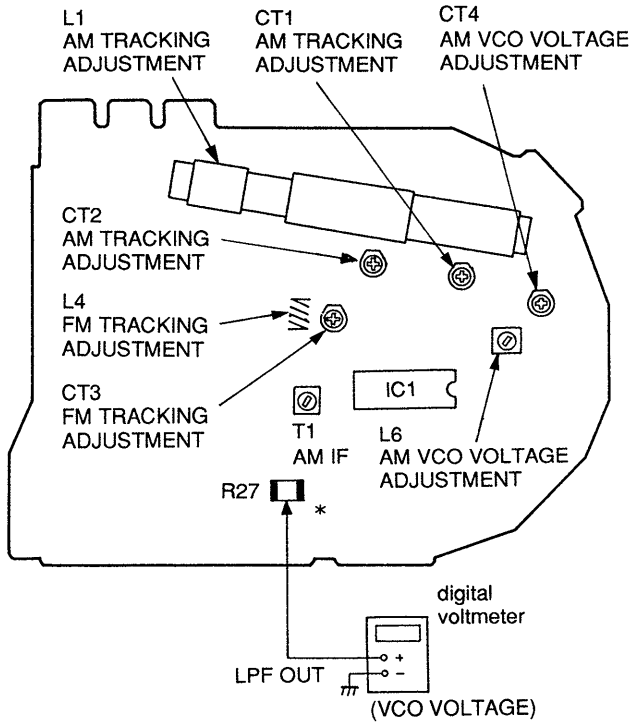
AM (LM) TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-2	CT2
162kHz	243kHz

FM VCO VOLTAGE CHECK		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
confirmation	87.5MHz	more than 2V
confirmation	108MHz	check 10.5 ± 1.0V

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

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT3
87.5MHz	108MHz

Adjustment Location : MAIN board (Component Side)



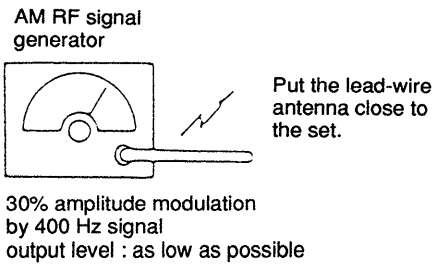
* mark is mounted on conductor side.

ICF-C733

• AM Section

Setting :

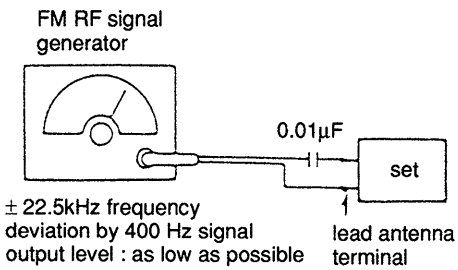
BAND switch : AM

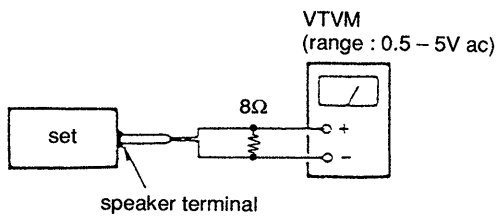


• FM Section

Setting :

BAND switch : FM





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

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

AM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
L6	531kHz	2.85 ± 0.1V
confirmation	1,602kHz	less than 11V

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

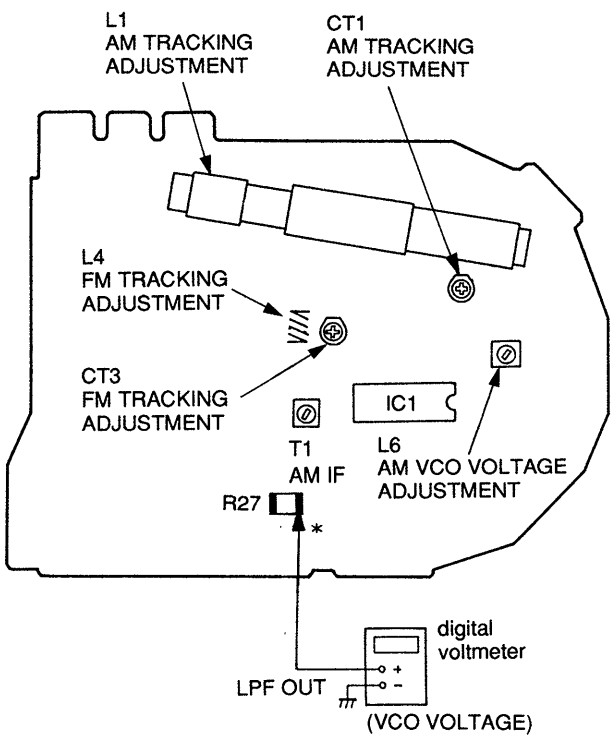
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1-1	CT1
621kHz	1,404kHz

FM VCO VOLTAGE CHECK		
Adjustment Part	Frequency Display	Reading on Digital voltmeter
confirmation	87.5MHz	more than 2V
confirmation	108MHz	check 10.5 ± 1.0V

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

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L4	CT3
87.5MHz	108MHz

Adjustment Location : MAIN board (Component Side)

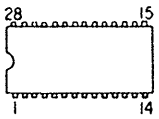


* mark is mounted on conductor side.

SECTION 4
DIAGRAMS

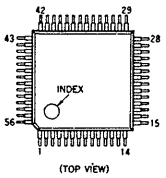
4-1. SEMICONDUCTOR LEAD LAYOUTS

CXA1019S

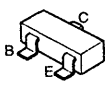


(Top view)

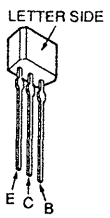
μPD1724GB-648-1P7



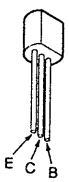
DTA144EK
2SC1623-L5L6
2SC2223-F13



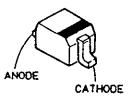
2SA1175-HFE
2SC2785-HFE



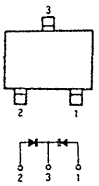
2SC2001TP-K1K2



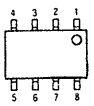
DTZ5.1C
1T362



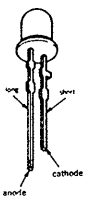
KV1560



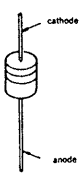
KV1563M, 3



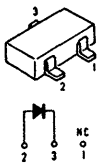
SLH-34MCF07
1T362



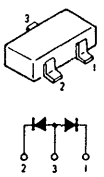
1SS119



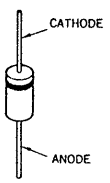
1SS184



1S2836



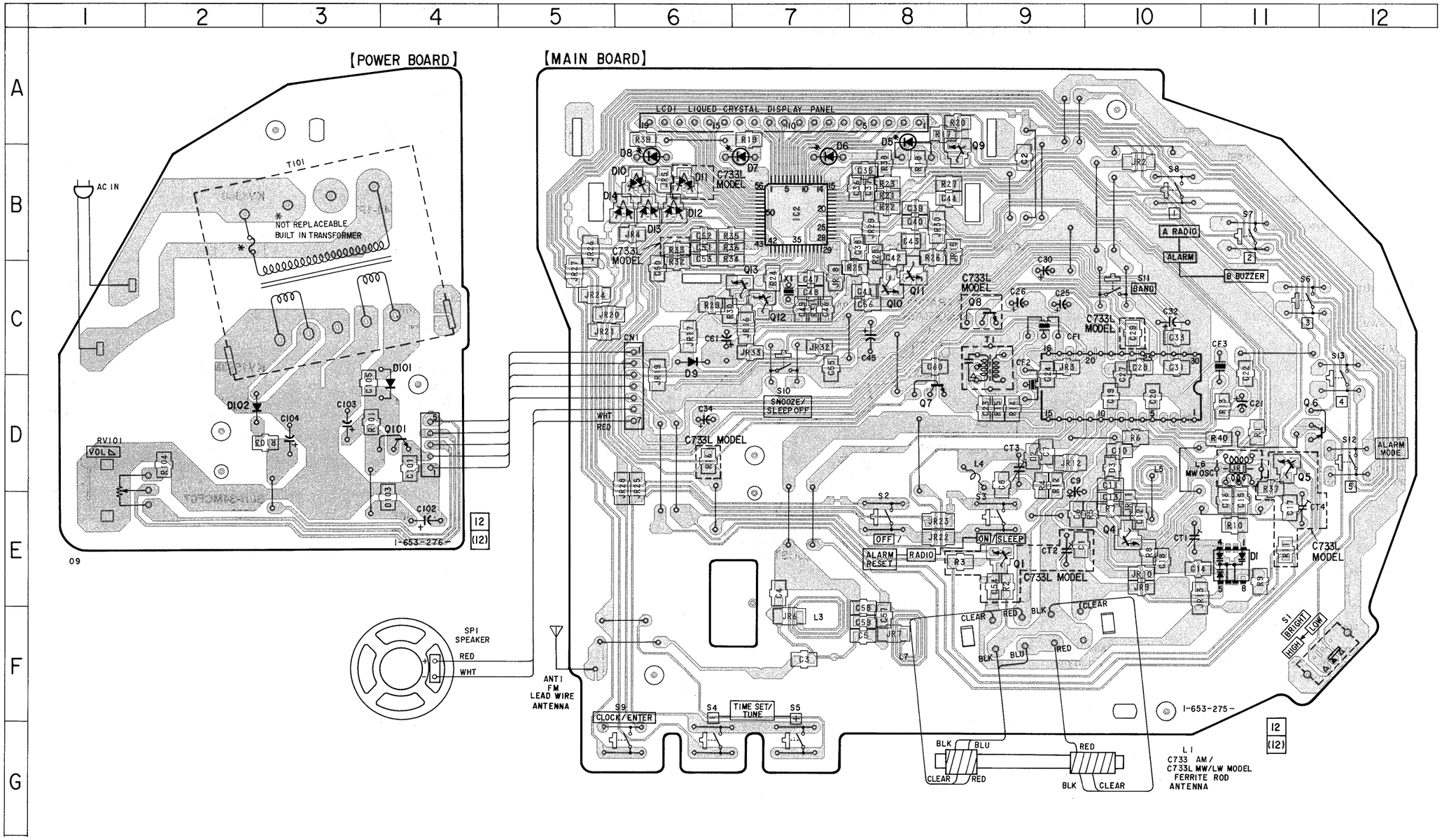
10E2



4-2. PRINTED WIRING BOARD

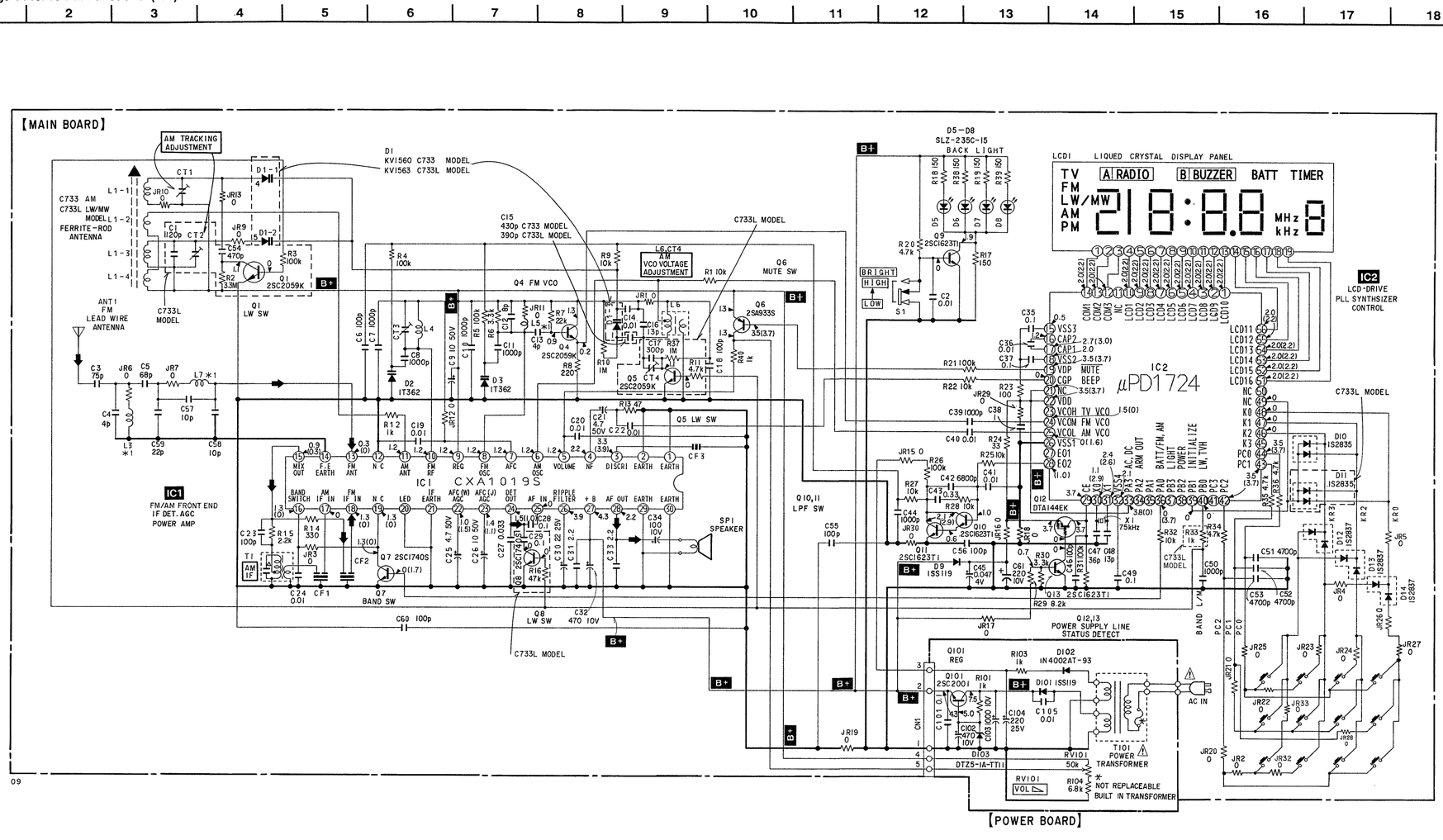
- **Semiconductor Location**

Ref. No.	Location
D1	E-11
D2	D-9
D3	D-10
D5	B-8
D6	B-7
D7	B-7
D8	B-6
D9	C-6
D10	B-6
D11	B-6
D12	B-6
D13	B-6
D14	B-6
D101	D-4
D102	D-2
D103	E-4
IC1	D-9
IC2	B-7
Q1	E-9
Q4	E-10
Q5	D-11
Q6	D-11
Q7	D-8
Q8	C-9
Q9	B-8
Q10	C-8
Q11	C-8
Q12	C-7
Q13	C-7
Q101	D-4

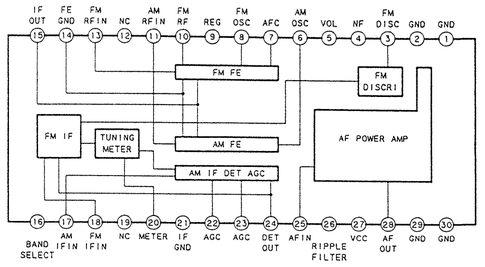


Note:

- ○—— : parts extracted from the component side.
- △ : internal component.
- ▒▒ : Pattern from the side which enable seeing.
- Abbreviation
  IT : Italian model.



• IC Block Diagram IC1 CXA1019S



Note:
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

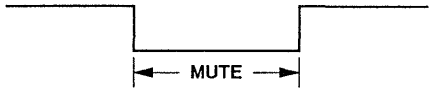
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  ( ) : AM
  * : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ➡ : FM
  *1 : Printed pattern functions as a kind of coil.
- Abbreviation
  IT : Italian model.

S2 RADIO OFF / ALARM RESET
S3 RADIO ON / SLEEP
S4 TIMESET/TUNE −
S5 TIMESET/TUNE +
S6 3
S7 2 ALARM B BUZZER
S8 1 ALARM A RADIO
S9 CLOCK/ENTER
S10 SNOOZE/SLEEP OFF
S11 BAND
S12 ALARM MODE 5
S13 4

4-4. IC PIN FUNCTIONS

• **IC2 (μPD1724GB-648-1P7)**

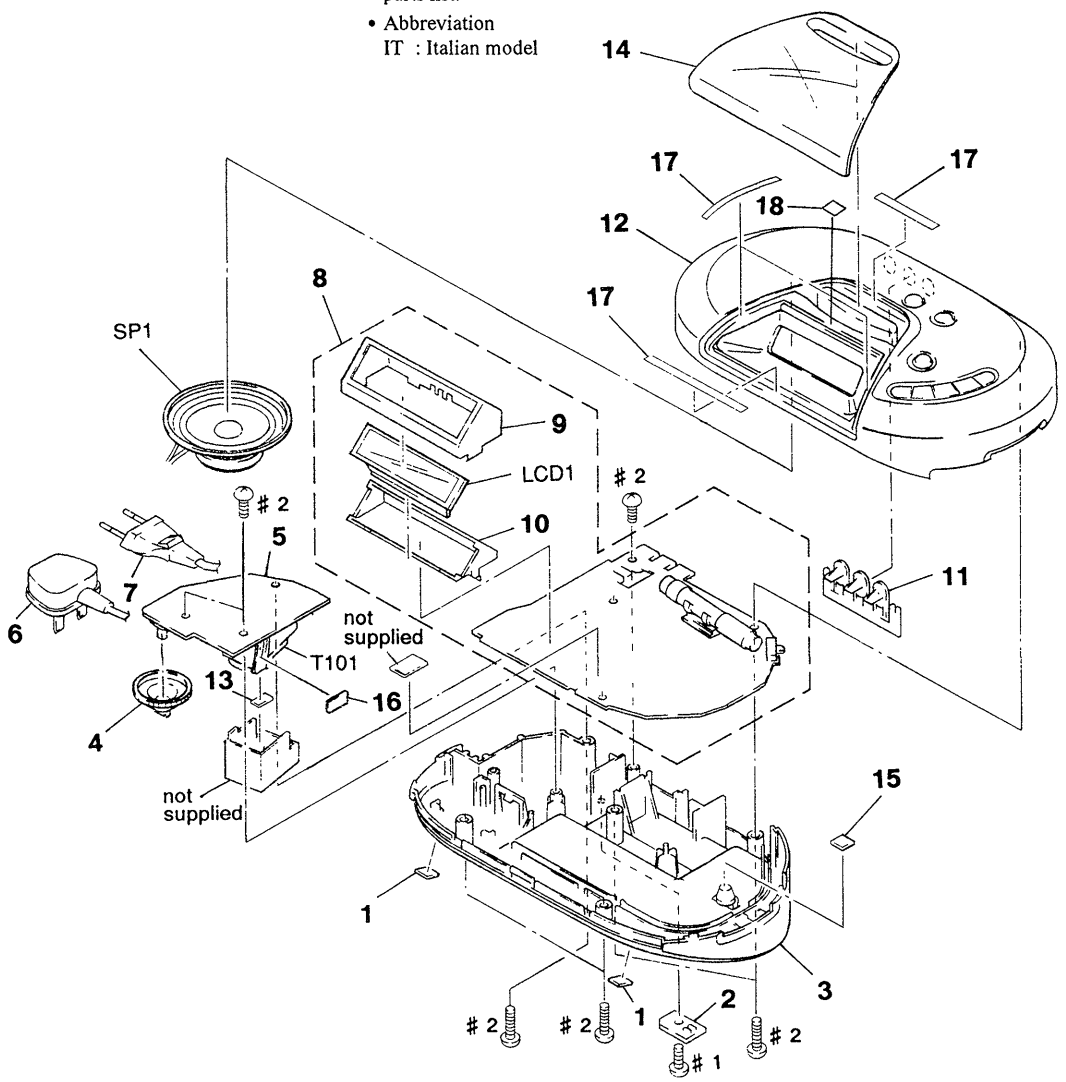
Pin No.	Pin Name	Signal Name	I/O	Description
1 – 10	LCD10 – LCD1	LCD10 – LCD1	O	LCD drive
11	NC	–	–	Not in use.
12 – 14	COM3 – COM1	COM3 – COM1	O	LCD common
15	VSS3	–	–	Pin for doubler circuit capacitor connection to develop LCD drive voltage.
16	CAP2	–		
17	CAP1	–		
18	VSS2	–		
19	VDP	$\overline{\text{MUTE}}$	O	Audio signal mute. Active : Low. LOW when MUTE ON. 
20	CGP	BEEP	O	Activates buzzer.
21	NC	–	–	Terminated to VDD
22	VDD	–	–	3V power supply input terminal.
23	VCOH	TV VCO	I	Not in use.
24	VCOM	FM VCO	I	FM VCO input.
25	VCOL	AM VCO	I	AM VCO input.
26	VSS1	–	–	GND
27	EO1	–	–	Not in use.
28	EO2	–	O	PLL error output.
29	CE	CE	I	Detects power supply line status. Power supply line OFF : Low Power supply line ON : High
30	XO	X OUT	O	Crystal oscillator connection terminal. (75kHz)
31	XI	X IN	I	
32	VSS4	–	–	Pin for regulator circuit capacitor connection to attain stable drive voltage of the oscillator.
33	PA3	AC DC	I	Terminated to VDD
34	PA2	ARM OUT	O	Not in use.
35	PA1	PA1	O	Not in use.
36	PA0	BATT/FM AM	O	BAND output. Low : FM, High : AM
37	PB3	LIGHT	–	Not in use.
38	PB2	POWER	–	Not in use.
39	PB1	INITIALIZE	O	Initialize output.
40	PB0	LW TVH	O	Band output. Low : LW, High : MW
41 – 44	PC3 – PC0	KEY SCAN	O	Conducts Key Scan. (pin ㊶ : Not in use.)
45 – 48	K3 – K0	KEY RET	I	Key Return input. (pin ㊺ : Not in use.)
49	NC	–	–	Terminated to initialize.
50	NC	–	–	Not in use.
51 – 56	LCD16 – LCD11	LCD16 – LCD11	O	LCD drive

SECTION 5
EXPLODED VIEWS

NOTE:

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  IT : Italian model

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



Ref. No.	Part No.	Description	Remark
1	3-368-852-01	FOOT	
2	3-903-160-01	STOPPER (CODE) (BLACK)	
2	3-903-160-11	STOPPER (CODE) (WHITE)	
3	3-914-598-01	CABINET (LOWER) (C733) (BLACK)	
3	3-914-598-11	CABINET (LOWER) (C733) (WHITE)	
3	3-914-598-21	CABINET (LOWER) (C733L) (BLACK)	
3	3-914-598-31	CABINET (LOWER) (C733L) (WHITE)	
4	3-382-175-31	KNOB (V)	
* 5	A-3662-027-A	POWER BOARD, COMPLETE	
⚠6	1-696-572-21	CORD, POWER (BLACK) (UK)	
⚠6	1-751-112-11	CORD, POWER (WHITE) (UK)	
⚠7	1-551-958-21	CORD, POWER (WHITE) (AEP, IT)	
⚠7	1-555-795-00	CORD, POWER (BLACK) (AEP, IT)	
* 8	A-3662-024-A	MAIN BOARD, COMPLETE (C733)	
* 8	A-3662-093-A	MAIN BOARD, COMPLETE (C733L)	
* 9	3-914-605-01	CASE, SHIELD	

Ref. No.	Part No.	Description	Remark
* 10	3-914-604-01	FRAME, REFLECTION	
11	3-914-600-01	BUTTON (TIME SET) (BLACK)	
11	3-914-600-11	BUTTON (TIME SET) (WHITE)	
12	X-3368-866-1	CABINET (UPPER) ASSY (BLACK) (C733)	
12	X-3368-867-1	CABINET (UPPER) ASSY (WHITE) (C733)	
12	X-3369-062-1	CABINET (UPPER) ASSY (BLACK) (C733L)	
12	X-3369-063-1	CABINET (UPPER) ASSY (WHITE) (C733L)	
13	9-911-840-XX	CUSHION	
14	3-914-594-01	PLATE, TRANSPARENT	
15	3-831-441-11	CUSHION (B)	
16	3-846-067-01	SPACER C	
17	3-918-369-01	SHEET, ADHESIVE	
18	3-831-441-XX	SHEET (1)	
LCD1	1-809-711-31	DISPLAY PANEL, LIQUID CRYSTAL	
SP1	1-503-082-00	SPEAKER (6.6CM)	
⚠T101	1-405-923-11	TRANSFORMER, POWER	

MAIN

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

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

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

- 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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -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 and accessories and packing materials are given in the last of this parts list.

- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  IT: Italian model

Ref.No.	Part No.	Description			Remark
*	A-3662-024-A	MAIN BOARD, COMPLETE (C733)			
		**********			
*	A-3662-093-A	MAIN BOARD, COMPLETE (C733L)			
		**********			
*	3-914-604-01	FRAME, REFLECTION			
*	3-914-605-01	CASE, SHIELD			
		< CAPACITOR >			
C1	1-163-119-00	CERAMIC CHIP	120PF	5% 50V	(C733L)
C2	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C3	1-163-114-00	CERAMIC CHIP	75PF	5% 50V	
C4	1-163-087-00	CERAMIC CHIP	4PF	50V	
C5	1-163-113-00	CERAMIC CHIP	68PF	5% 50V	
C6	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C7	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C8	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C9	1-124-907-11	ELECT	10uF	20% 50V	
C10	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C11	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C12	1-163-091-00	CERAMIC CHIP	8PF	50V	
C13	1-163-087-00	CERAMIC CHIP	4PF	50V	
C14	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C15	1-163-131-00	CERAMIC CHIP	390PF	5% 50V	(C733L)
C15	1-163-132-00	CERAMIC CHIP	430PF	5% 50V	(C733)
C16	1-163-096-00	CERAMIC CHIP	13PF	5% 50V	
C17	1-163-128-00	CERAMIC CHIP	300PF	5% 50V	(C733L)
C18	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C19	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C20	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C21	1-124-927-11	ELECT	4.7uF	20% 100V	
C22	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C23	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C24	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C25	1-124-927-11	ELECT	4.7uF	20% 100V	
C26	1-124-907-11	ELECT	10uF	20% 50V	
C27	1-163-989-11	CERAMIC CHIP	0.033uF	10% 25V	
C28	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C29	1-163-038-00	CERAMIC CHIP	0.1uF	25V	(C733L)
C30	1-126-233-11	ELECT	22uF	20% 50V	
C31	1-164-505-11	CERAMIC CHIP	2.2uF	16V	
C32	1-124-472-11	ELECT	470uF	20% 10V	

Ref.No.	Part No.	Description			Remark
C33	1-164-505-11	CERAMIC CHIP	2.2uF	16V	
C34	1-124-443-00	ELECT	100uF	20% 10V	
C35	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C36	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C37	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C38	1-164-346-11	CERAMIC CHIP	1uF	16V	
C39	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C40	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C41	1-163-031-11	CERAMIC CHIP	0.01uF	50V	
C42	1-163-019-00	CERAMIC CHIP	0.0068uF	10% 50V	
C43	1-164-006-11	CERAMIC CHIP	0.33uF	10% 16V	
C44	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C45	1-125-701-11	DOUBLE LAYER	0.047F	4V	
C46	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C47	1-163-106-00	CERAMIC CHIP	36PF	5% 50V	
C48	1-163-096-00	CERAMIC CHIP	13PF	5% 50V	
C49	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C50	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C51	1-163-029-11	CERAMIC CHIP	0.0047uF	50V	
C52	1-163-029-11	CERAMIC CHIP	0.0047uF	50V	
C53	1-163-029-11	CERAMIC CHIP	0.0047uF	50V	
C54	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	(C733L)
C55	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C56	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C57	1-163-093-00	CERAMIC CHIP	10PF	5% 50V	
C58	1-163-093-00	CERAMIC CHIP	10PF	5% 50V	
C59	1-163-101-00	CERAMIC CHIP	22PF	5% 50V	
C60	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
C61	1-126-176-11	ELECT	220uF	20% 10V	
		< FILTER >			
CF1	1-577-072-21	FILTER, CERAMIC (C733)			
CF1	1-578-677-21	FILTER, CRYSTAL (C733L)			
CF2	1-567-097-61	FILTER, CERAMIC			
CF3	1-567-097-61	FILTER, CERAMIC			
		< CONNECTOR >			
* CN1	1-568-273-11	SOCKET, CONNECTOR 7P			
		< TRIMMER >			
CT1	1-141-304-21	CAP, TRIMMER	10PF		

Ref.No.	Part No.	Description	Remark
CT2	1-141-443-11	TRIMMER, CERAMIC (C733L)	
CT3	1-141-304-21	CAP, TRIMMER 10PF	
CT4	1-141-444-11	TRIMMER, CERAMIC (C733L)	
		< DIODE >	
D1	8-719-023-XX	DIODE KV1563M-3 (C733L)	
D1	8-719-951-05	DIODE KV1560 (C733)	
D2	8-713-002-79	DIODE 1T362	
D3	8-713-002-79	DIODE 1T362	
D5	8-719-037-81	DIODE SLH-34MCF07	
D6	8-719-037-81	DIODE SLH-34MCF07	
D7	8-719-037-81	DIODE SLH-34MCF07	
D8	8-719-037-81	DIODE SLH-34MCF07	
D9	8-719-911-19	DIODE 1SS119	
D10	8-719-104-34	DIODE 1S2836	
D11	8-719-104-34	DIODE 1S2836 (C733L)	
D12	8-719-801-78	DIODE 1SS184	
D13	8-719-801-78	DIODE 1SS184	
D14	8-719-801-78	DIODE 1SS184	
		< IC >	
IC1	8-752-035-29	IC CXA1019S	
IC2	8-759-184-36	IC uPD1724GB-648-1P7	
		< JUMPER RESISTOR >	
JR1	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR2	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR3	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR4	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR5	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR6	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR7	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR9	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR10	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR11	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR12	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR13	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR15	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR16	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR17	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR18	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR19	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR20	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR21	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR22	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR23	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR24	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR25	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR26	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR27	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR28	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR29	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR30	1-216-296-91	METAL GLAZE 0 5% 1/8W	
JR32	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR33	1-216-295-91	METAL GLAZE 0 5% 1/10W	
		< COIL >	
L1	1-402-616-11	ANTENNA, FERRITE-ROD (MW) (C733)	
L1	1-501-715-11	ANTENNA, FERRITE-ROD (LW/MW) (C733L)	
L4	1-406-545-11	COIL, AIR-CORE	
L6	1-406-485-11	COIL (OSC)	
		< LIQUID CRYSTAL DISPLAY >	
LCD1	1-809-711-31	DISPLAY PANEL, LIQUID CRYSTAL	
		< TRANSISTOR >	
Q1	8-729-102-07	TRANSISTOR 2SC2223-F13 (C733L)	
Q4	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q5	8-729-102-07	TRANSISTOR 2SC2223-F13 (C733L)	
Q6	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q7	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q8	8-729-119-78	TRANSISTOR 2SC2785-HFE (C733L)	
Q9	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q10	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q11	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q12	8-729-901-06	TRANSISTOR DTA144EK	
Q13	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R2	1-216-133-00	METAL CHIP 3.3M 5% 1/10W	(C733L)
R3	1-216-097-00	METAL CHIP 100K 5% 1/10W	(C733L)
R4	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R5	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R6	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R7	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R8	1-216-033-00	METAL CHIP 220 5% 1/10W	
R9	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R10	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R11	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	(C733L)
R12	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R13	1-216-017-00	METAL CHIP 47 5% 1/10W	
R14	1-216-037-00	METAL CHIP 330 5% 1/10W	
R15	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R16	1-216-089-91	METAL GLAZE 47K 5% 1/10W	(C733L)
R17	1-216-029-00	METAL CHIP 150 5% 1/10W	
R18	1-216-029-00	METAL CHIP 150 5% 1/10W	
R19	1-216-029-00	METAL CHIP 150 5% 1/10W	
R20	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

MAIN POWER

Ref.No.	Part No.	Description				Remark
R21	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R22	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R23	1-216-025-00	METAL CHIP	100	5%	1/10W	
R24	1-216-013-00	METAL CHIP	33	5%	1/10W	
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R26	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R27	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R28	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R29	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R30	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R31	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R33	1-216-049-00	METAL CHIP	1K	5%	1/10W	(C733L)
R34	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R35	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R36	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R37	1-216-121-00	METAL CHIP	1M	5%	1/10W	(C733L)
R38	1-216-029-00	METAL CHIP	150	5%	1/10W	
R39	1-216-029-00	METAL CHIP	150	5%	1/10W	
R40	1-216-049-00	METAL CHIP	1K	5%	1/10W	
		< SWITCH >				
S1	1-571-478-11	SWITCH, SLIDE (BRIGHT)				
S2	1-554-937-11	SWITCH, KEY BOARD (RADIO OFF/ALARM RESET)				
S3	1-554-937-11	SWITCH, KEY BOARD (RADIO ON/SLEEP)				
S4	1-554-937-11	SWITCH, KEY BOARD (TIME SET/TUNE -)				
S5	1-554-937-11	SWITCH, KEY BOARD (TIME SET/TUNE +)				
S6	1-554-937-11	SWITCH, KEY BOARD (3)				
S7	1-554-937-11	SWITCH, KEY BOARD (2/ALARM B BUZZER)				
S8	1-554-937-11	SWITCH, KEY BOARD (1/ALARM A RADIO)				
S9	1-554-937-11	SWITCH, KEY BOARD (CLOCK/ENTER)				
S10	1-554-937-11	SWITCH, KEY BOARD (SNOOZE/SLEEP OFF)				
S11	1-554-937-11	SWITCH, KEY BOARD (BAND)				
S12	1-554-937-11	SWITCH, KEY BOARD (5/ALARM MODE)				
S13	1-554-937-11	SWITCH, KEY BOARD (4)				
		< TRANSFORMER >				
T1	1-404-790-11	TRANSFORMER, IF (C733)				
T1	1-404-902-21	TRANSFORMER, IF (C733L)				
		< VIBRATOR >				
X1	1-567-769-11	VIBRATOR, CRYSTAL (75kHz)				
**********						
*	A-3662-027-A	POWER BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C102	1-124-472-11	ELECT	470uF	20%	10V	
C103	1-126-926-11	ELECT	1000uF	20%	10V	
C104	1-124-120-11	ELECT	220uF	20%	25V	
C105	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
		< DIODE >				
D101	8-719-200-02	DIODE 10E2				
D102	8-719-911-19	DIODE 1SS119				
D103	8-719-977-00	DIODE DTZ5.1C				
		< TRANSISTOR >				
Q101	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2				
		< RESISTOR >				
R101	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R103	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R104	1-216-069-00	METAL CHIP	6.8K	5%	1/10W	
		< VARIABLE RESISTOR >				
RV101	1-241-542-11	RES, VAR, CRABON (VOL ◺)				
		< TRANSFORMER >				
⚠T101	1-450-923-11	TRANSFORMER, POWER				
		< TERMINAL >				
* TM101	1-535-771-11	TERMINAL				
* TM102	1-535-771-11	TERMINAL				
**********						
		MISCELLANEOUS				
		**********				
⚠6	1-696-572-21	CORD, POWER (BLACK) (UK)				
⚠6	1-751-112-11	CORD, POWER (WHITE) (UK)				
⚠7	1-551-958-21	CORD, POWER (WHITE) (AEP, IT)				
⚠7	1-555-795-00	CORD, POWER (BLACK) (AEP, IT)				
LCD1	1-809-711-31	DISPLAY PANEL, LIQUID CRYSTAL				
SP1	1-503-082-00	SPEAKER (6.6CM)				
⚠T101	1-405-923-11	TRANSFORMER, POWER				
**********						

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

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		********	
	1-501-499-11	COUPLER, ANTENNA (C733:AEP/C733L:AEP, UK)	
	3-759-077-11	MANUAL, INSTRUCTION (AEP, UK) (ENGLISH, FRENCH, GERMAN, SPANISH)	
	3-759-077-41	MANUAL, INSTRUCTION (AEP, IT, UK) (DUTCH, SWEDISH, ITALIAN, PORTUGUESE)	
*	3-916-625-01	INDIVIDUAL CARTON (C733)	
*	3-917-962-01	INDIVIDUAL CARTON (C733L)	

****

****
HARDWARE LIST
****

#1	7-685-647-79	SCREW +P 3X10 TYPE2 NON-SLIT
#2	7-685-649-79	SCREW +P 3X14 TYPE2 NON-SLIT

9-959-680-11

Sony Corporation
Consumer A&V Products Company
Personal A&V Products Div.

English
94H097560-1
Printed in Germany

Published by Home A&V Products Div.
Quality Engineering Dept.