SRF-M73

SERVICE MANUAL

US Model
Panama Model

Ver 1.0 1999. 03

SPECIFICATIONS

Time display:
12-hour system

Frequency range

Frequency	Channel step
FM : 87.5 – 108 MHz	0.1 MHz
AM: 530 – 1,710 kHz	10 kHz

Output
Ω jack (stereo minijack), load impedance 16 ohms

Power output
20 mW + 20 mW (at 10 % harmonic distortion)

Power requirements
3 V DC, two R03 (size AAA) batteries

Dimensions
Approx. 140.5 x 41 x 60.5 mm (w/h/d)
(4 1/8 x 1 5/8 x 2 1/2 inches) incl. projecting parts and controls

Mass
Approx. 103 g (3.63 oz.) not incl. battery

Accessories Supplied
Stereo headphones (1)
Belt holder (1)
Hand strap (1)

Design and specifications are subject to change without notice.

FM STEREO/AM PLL SYNTHESIZED RADIO

MICROFILM

SONY®

TABLE OF CONTENTS

SECTION 1
SERVICING NOTES

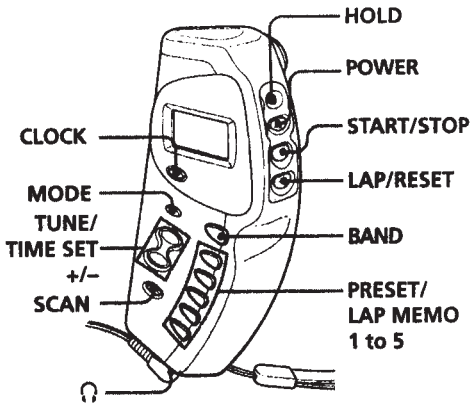
Forced Reset

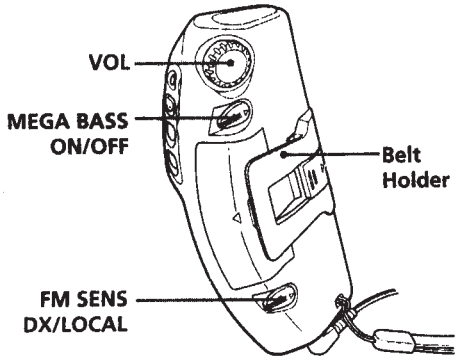
The system microprocessor can be reset in the following procedure.
Use these procedure when the unit cannot be worked normally due to the overrunning of the microprocessor, etc.

Procedure:

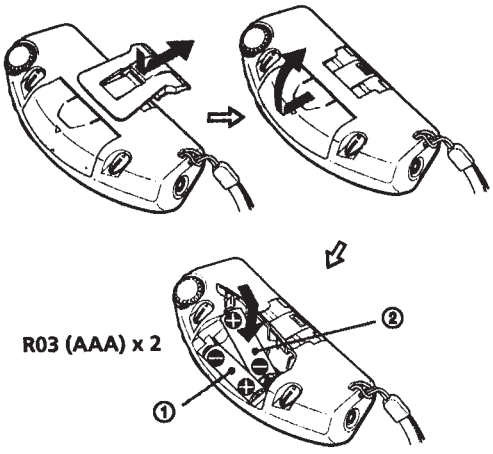
1. Set to radio OFF.
2. While pressing the [SCAN] button, press two buttons of [START/STOP] and [BAND] simultaneously for 5 seconds.
3. The unit is reset, and display blinking "AM 12:00".

This section is extracted from instruction manual.





A



Changing AM Channel Step

The channel step of this unit is factory-set to 10 kHz. When needed, change the channel step before listening to the radio.

Area	Channel step
North and South American countries	10kHz
Other countries	9kHz

1 Press **POWER** to turn off the power.
2 While holding down **SCAN**, keep pressing **BAND** for more than 5 seconds.
The channel step appears in the display for a few seconds. To go back to the original channel step, repeat step 2.

Note
- When the AM channel step is changed, the clock time and the lap time will be kept but the preset stations will be erased.

Features

- FM stereo/AM PLL (Phase Locked Loop) Synthesized radio
- Up to 15 stations (10 for FM, 5 for AM) can be preset for one-touch tuning.
- Auto Station Scan tuning for speedy locating of stations
- Built-in digital clock and stopwatch
- Splash-resistant for all-weather use
- Countdown timer
- Hand strap and belt holder supplied
- MEGA BASS for dynamic bass sound

Installing the Batteries

(See Fig. A)

1 Remove the belt holder.
2 Slide and open the lid at the rear of the unit.
3 Insert two R03 (size AAA) batteries (not supplied) with correct polarity.
Insert the batteries from the negative ⊖ terminal to prevent a short-circuit, and in the order from ① to ② as shown in the illustration.

Battery life

Using R03 (Sony AAA) batteries

FM : Approx.	12 hours
AM: Approx.	17 hours

When to replace the batteries

When the batteries become weak, the battery "⌧" indication will flash in the display. Replace the batteries with new ones. The unit will switch to the clock mode from any other mode.

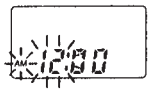
Note
- The battery "⌧" indication in the display does not show the remaining power of the battery.

Notes on battery
- Insert the batteries with correct polarity.
- Do not mix new and used batteries.
- The batteries can not be charged.
- Remove the batteries when the unit is not to be used for a long time.
- Should any battery leakage occur, wipe the battery case well and install new batteries.

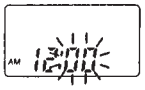
Setting the Clock

The display will flash "12:00" when the batteries are first inserted.

1 Hold down **CLOCK** for more than 2 seconds.
The hour flashes in the display.



2 Press **TUNE/TIME SET +** or **–** until the correct hour appears in the display.
Each press changes the digit(s) by one.
When you keep the button pressed, the digit(s) change rapidly.
3 Press **CLOCK**.
The minute starts to flash.

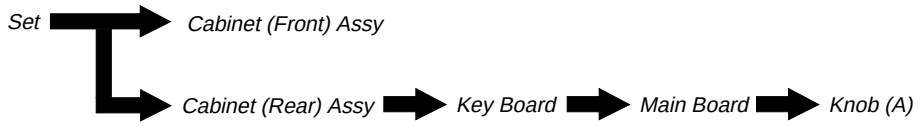


Repeat steps 2 and 3 to set the minute. After setting the minute, press **CLOCK** again. The clock starts from 0 seconds.

- 12-hour system: "AM 12:00" = midnight
"PM 12:00" = noon

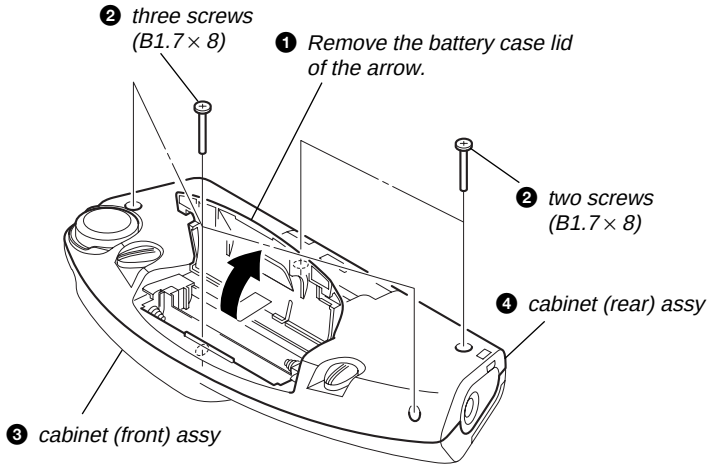
SECTION 3
DISASSEMBLY

・This set can be disassembled in the order shown below.

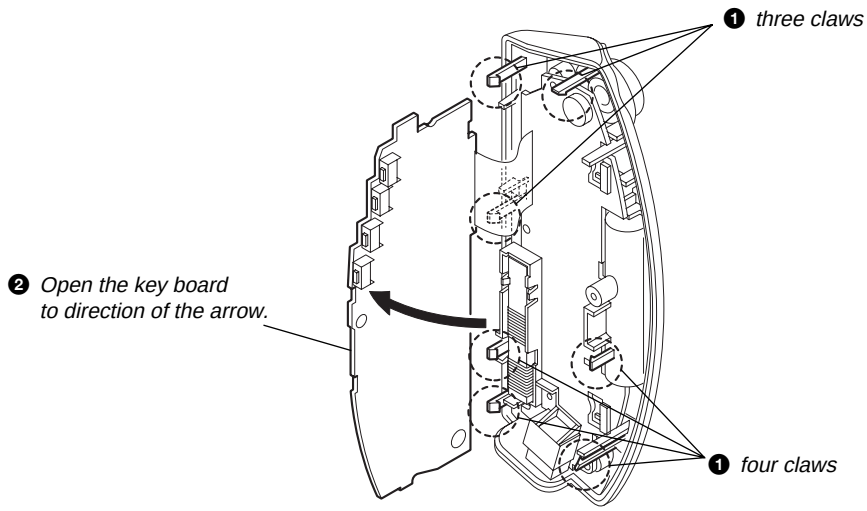


Note: Follow the disassembly procedure in the numerical order given.

CABINET (FRONT)/(REAR) ASSY

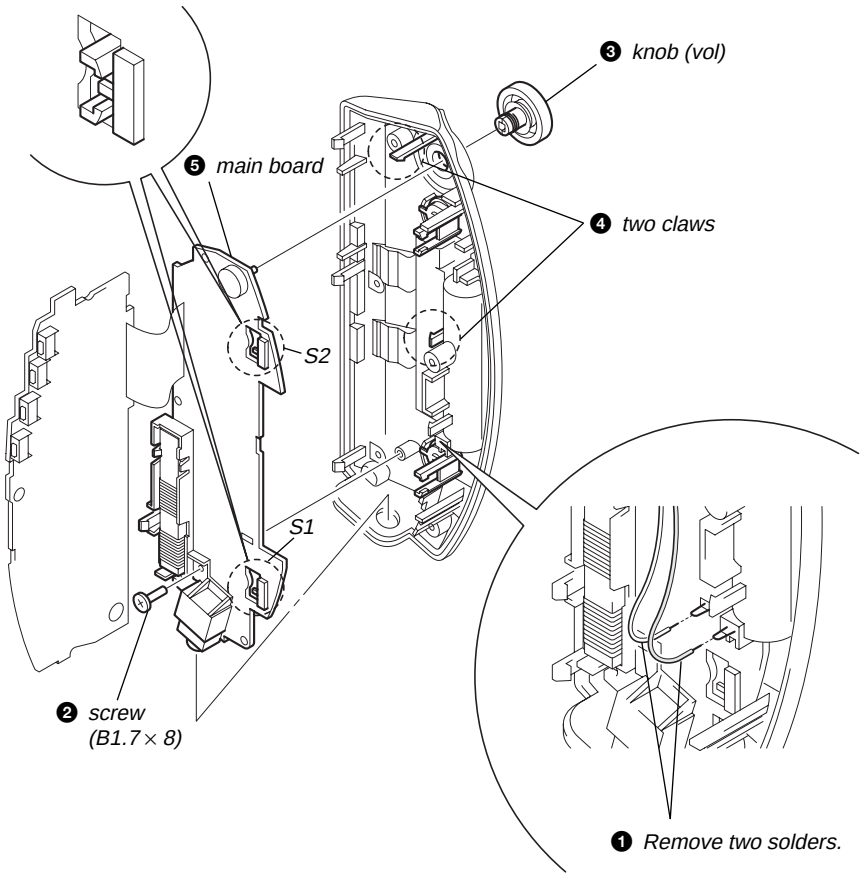


KEY BOARD

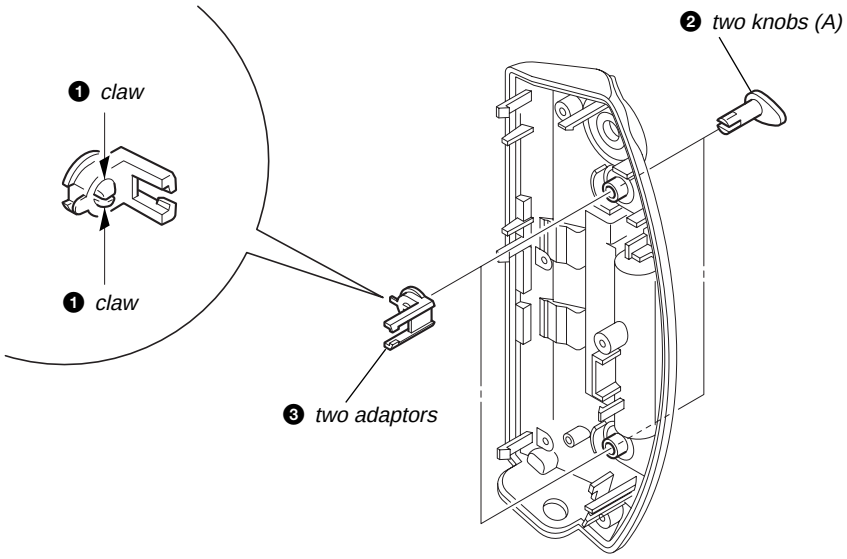


MAIN BOARD

Note: *Check that two switch (S1, S2) is latched with two adaptors when carrying out installation.*



KNOB (A)



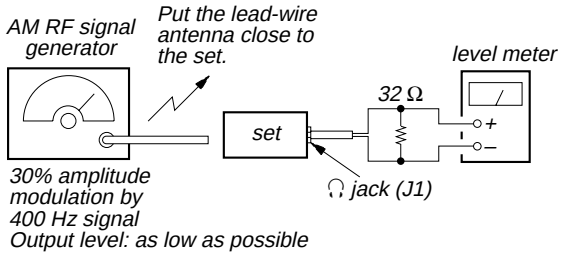
SECTION 4
ELECTRICAL ADJUSTMENTS

0 dB = 1 µV

[AM]

Setting:

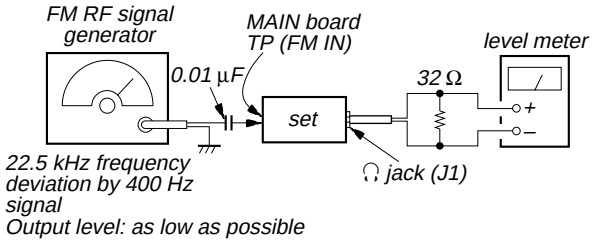
Band switch: AM



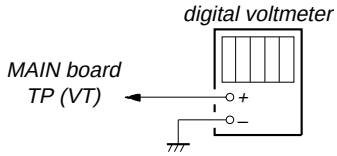
[FM]

Setting:

Band switch: FM



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



Adjustment Location: Main Board (See page 7)

AM IF ADJUSTMENT	
Adjust for a maximum reading on level meter	
T1	450 kHz

AM VCO VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	530 kHz (531 kHz)	3 ± 0.1V
Confirmation	1710 kHz (1602 kHz)	9 ± 1V (8.5 ± 1V)

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1	580 kHz (621 kHz)
CT1	1,490 kHz (1,395 kHz)

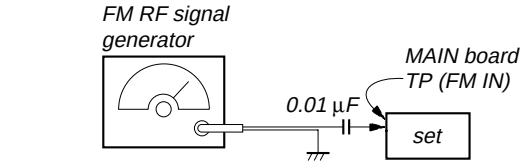
FM VCO VOLTAGE CONFIRMATION	
Frequency Display	Reading on Digital Voltmeter
87.5 MHz	3 ± 0.3V
108 MHz	Less than 11 ± 1V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L2	87.5 MHz
CT2	108 MHz

( ): Panama model

FM Free-Run Adjustment

Setting:

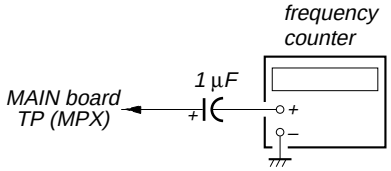


Carrier frequency : 98 MHz
Modulation : no modultion
Output level : 0.1 V (100 dB)

Procedure:

1. Connect the frequency counter to TP (MPX) as shown the figure below.
2. Tune the set to 98 MHz.
3. Adjust RT1 for 76 kHz reading on the frequency counter.

Specification: 75.8 kHz to 76.2 kHz

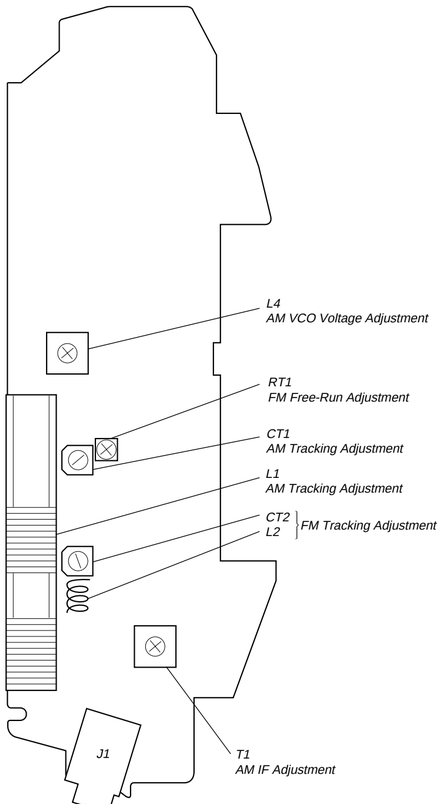


Adjustment Location: MAIN board (See page 7)

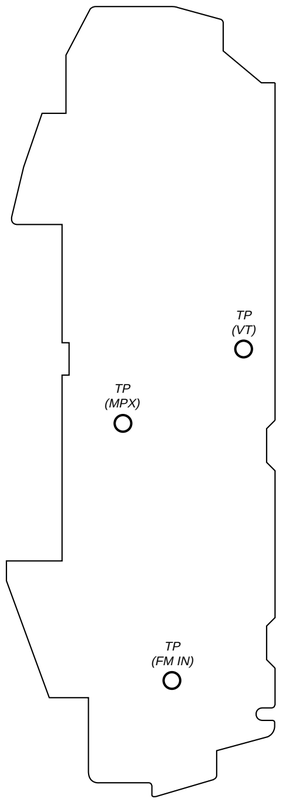
SECTION 5
DIAGRAMS

Adjustment Location:

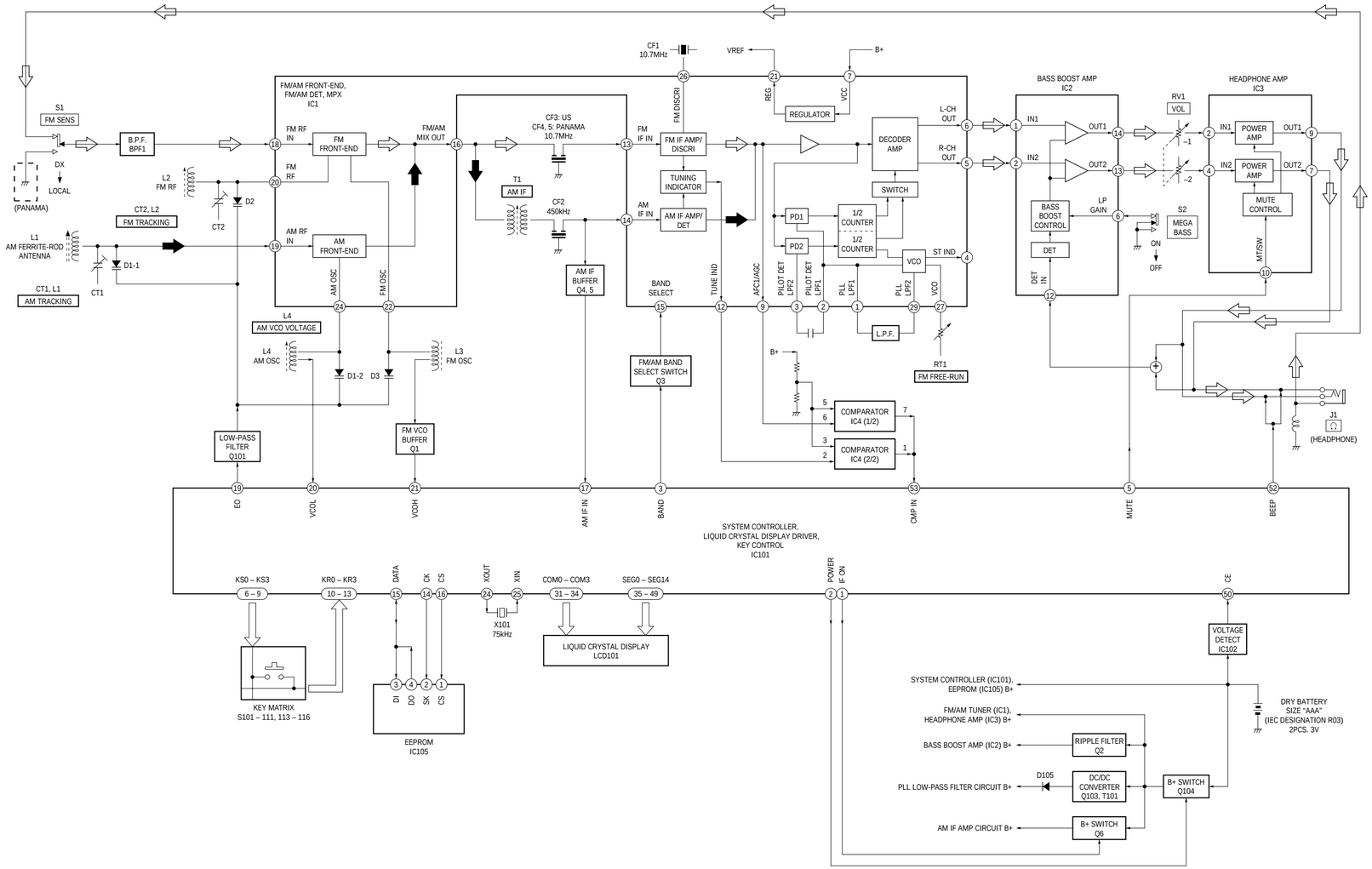
– MAIN BOARD (Component Side) –



– MAIN BOARD (Conductor Side) –



5-1. BLOCK DIAGRAM



• SIGNAL PATH
⇨ : FM
➡ : AM

05

5-2. PRINTED WIRING BOARDS

- **Semiconductor Location**

Ref. No.	Location
D1	F-17
D2	I-17
D3	G-17
D105	B-8
D106	B-7
IC1	G-16
IC2	E-16
IC3	C-16
IC4	E-12
IC101	D-7
IC102	C-4
IC105	E-2
Q1	H-12
Q2	D-12
Q3	H-13
Q4	H-12
Q5	H-12
Q6	D-17
Q101	D-3
Q103	B-6
Q104	B-4

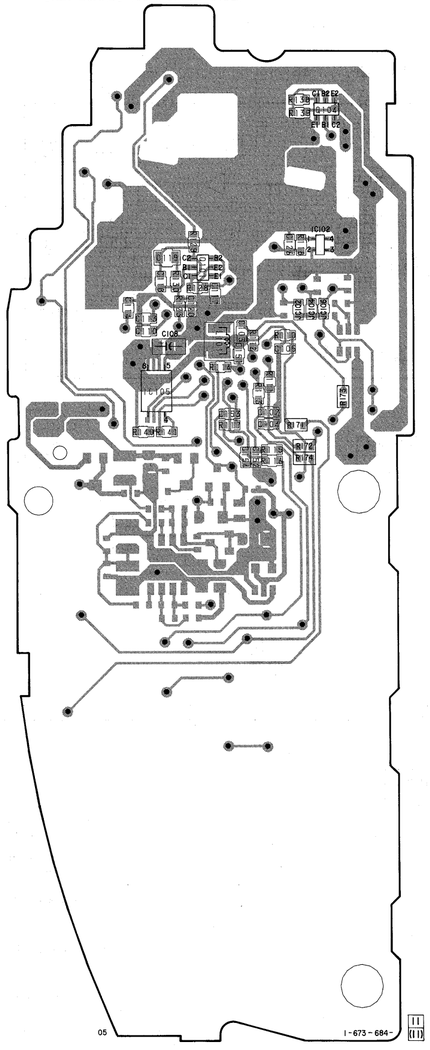
Note on Printed Wiring Boards:

- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡ : indicates side identified with part number.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.
- ▨▨▨ : Carbon pattern.

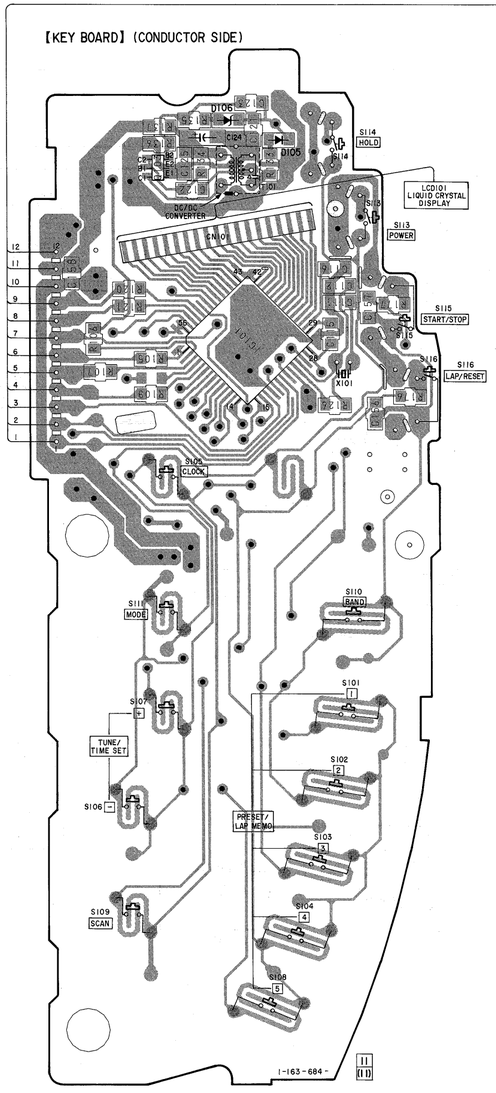
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Conductor Side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side) Parts on the parts face side seen from the parts face are indicated.

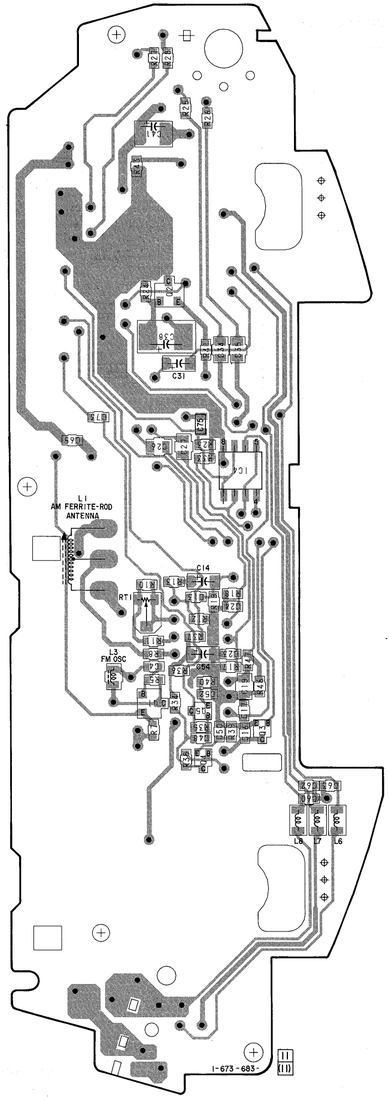
【KEY BOARD】(COMPONENT SIDE)



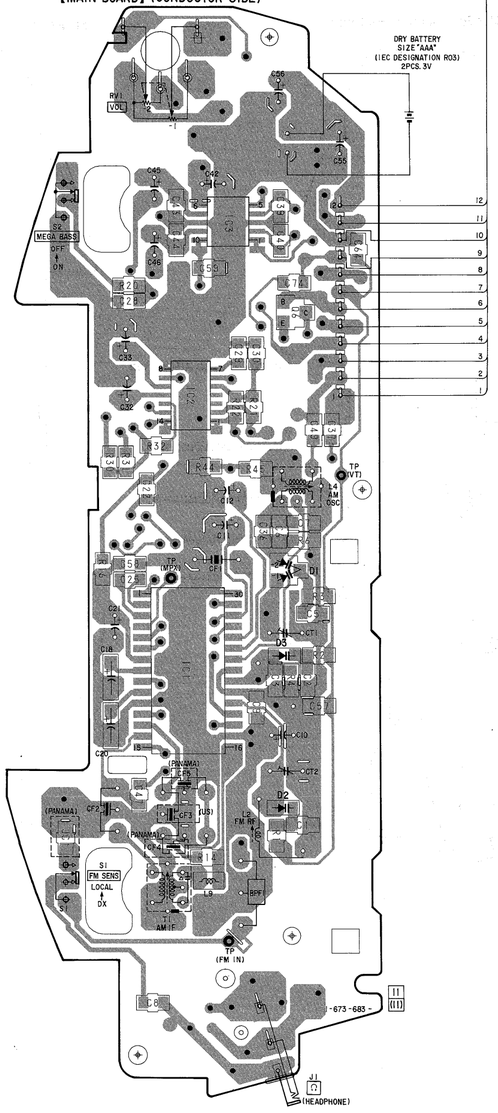
【KEY BOARD】(CONDUCTOR SIDE)



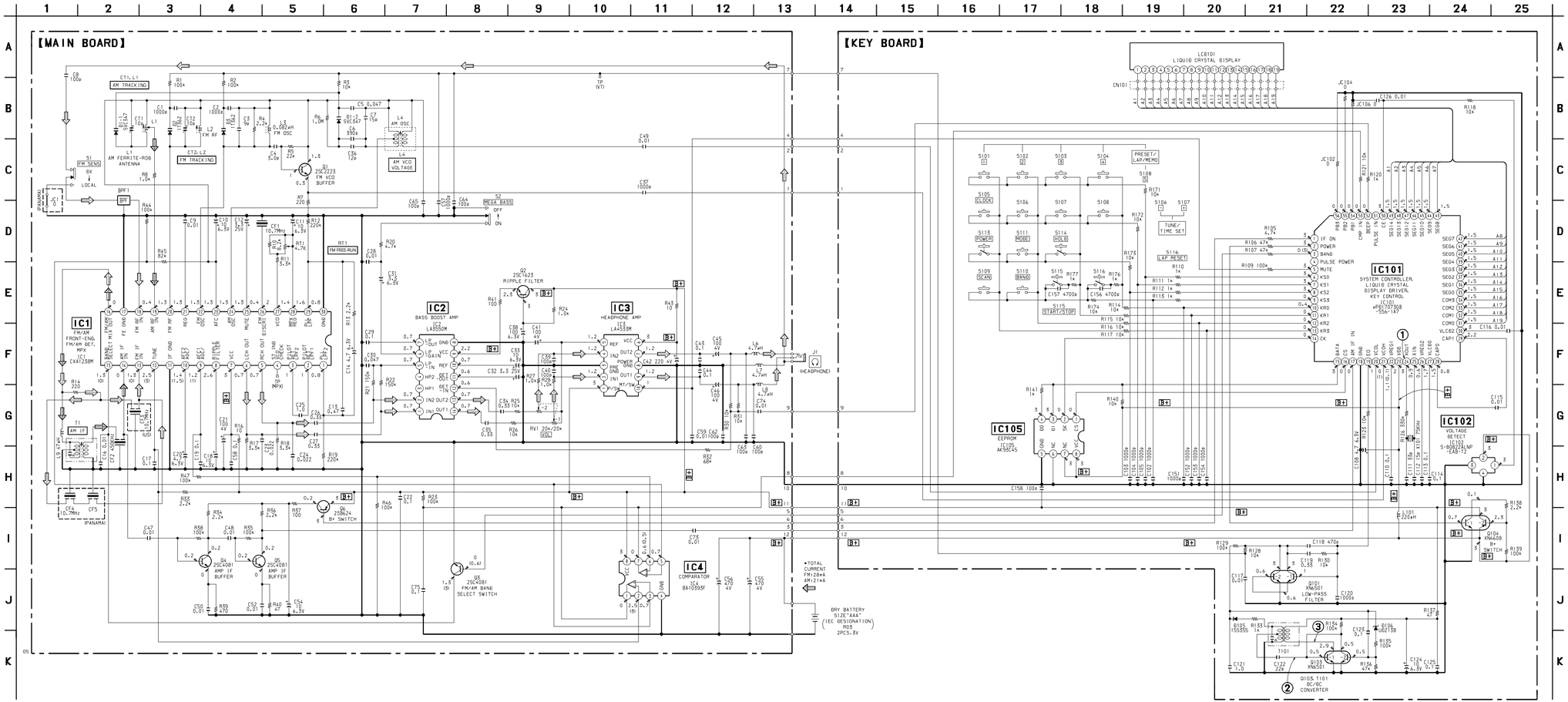
【MAIN BOARD】(COMPONENT SIDE)



【MAIN BOARD】(CONDUCTOR SIDE)

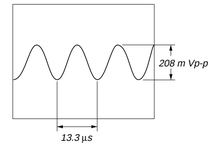


5-3. SCHEMATIC DIAGRAM • See page 17 for IC Block Diagrams.

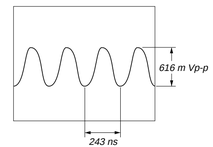


• Waveforms
– KEY Board –

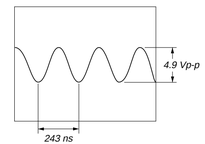
❶ IC101 ㉘ XOUT
200 mV/DIV, 10 μs/DIV



❷ Q103 Base-1, Collector-2 (RADIO ON mode)
200 mV/DIV, 100 ns/DIV



❸ Q103 Collector-1 (RADIO ON mode)
2 V/DIV, 100 ns/DIV



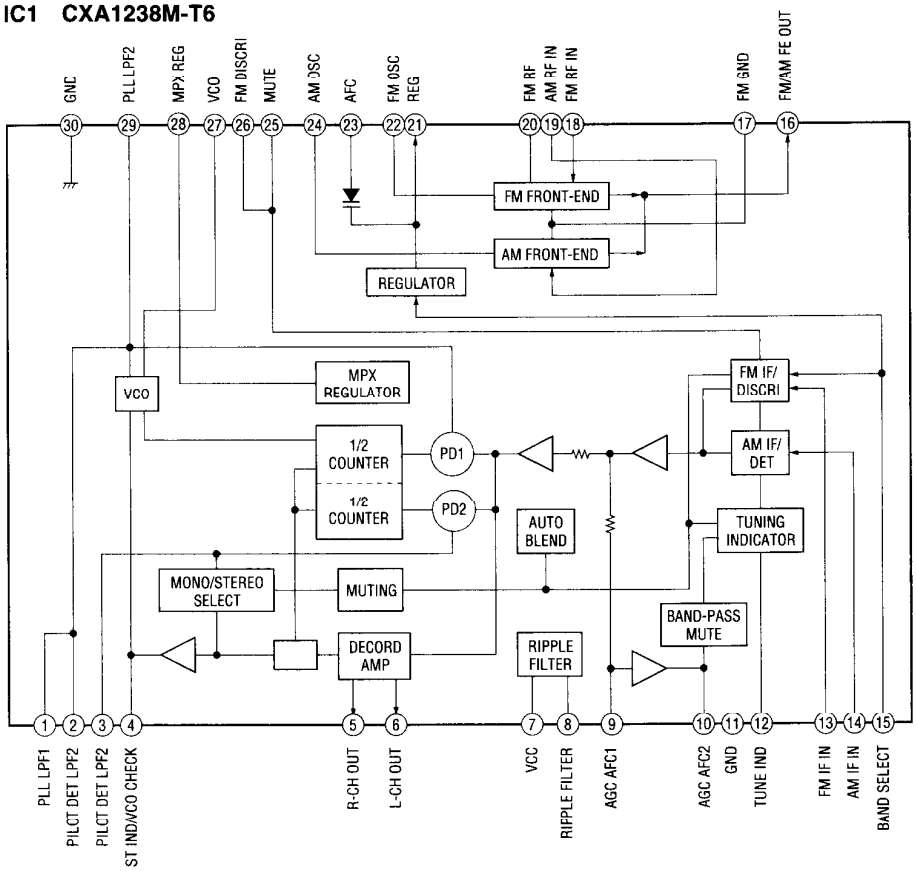
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 3 V and fed with regulated dc power supply from battery terminal.
- Voltages 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 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM

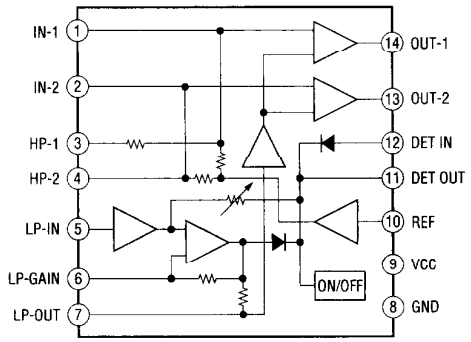
• **IC Block Diagrams**

– MAIN Board –

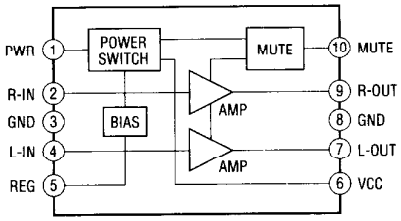
IC1 CXA1238M-T6



IC2 LA3550MTP-1



IC3 LA4533M



5-4. IC PIN FUNCTION DESCRIPTION

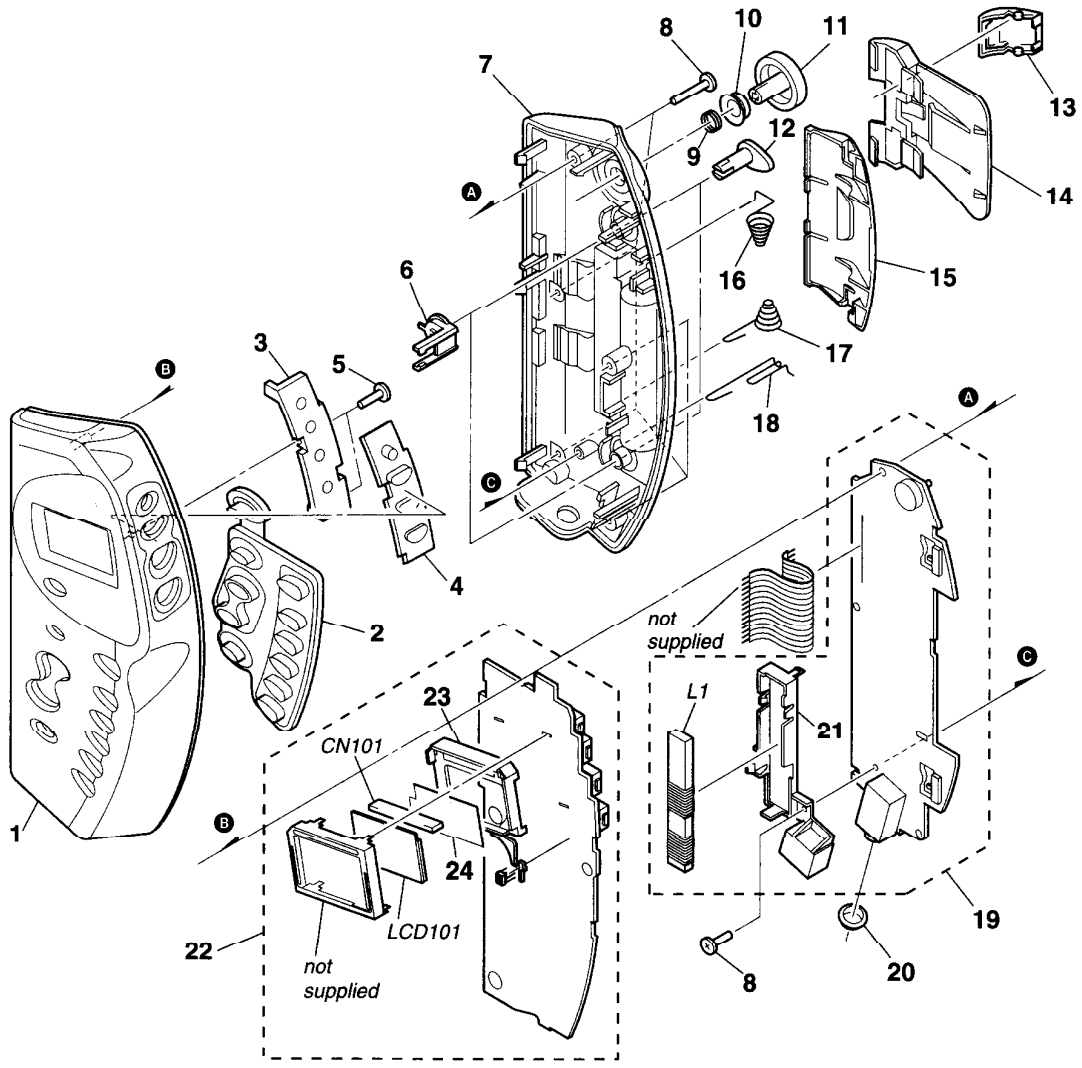
- **KEY BOARD IC101 μPD17073GB-556-1A7**
  (SYSTEM CONTROLLER, LIQUID CRYSTAL DISPLAY DRIVER, KEY CONTROL)

Pin No.	Pin Name	I/O	Description
1	IF ON	O	Power on/off control signal output for the AM IF amplifier circuit "L": power on "L" is output when AM scan mode
2	POWER	O	Power on/off control signal output for the radio system power supply "H": power on
3	BAND	O	FM/AM band selection signal output terminal "L": AM, "H": FM
4	PULSE POWER	O	Power on/off control signal output for the pulse meter circuit "H": power on Not used (open)
5	MUTE	O	Muting on/off control signal output to the headphone amplifier (IC3) "L": muting on
6 to 9	KS0 to KS3	O	Key scan signal output for the key matrix
10 to 13	KR0 to KR3	I	Key return signal input for the key matrix
14	CK	O	Serial clock signal output to the EEPROM (IC105)
15	DATA	I/O	Two-way data bus with the EEPROM (IC105)
16	CS	O	Chip select signal output to the EEPROM (IC105)
17	AM IF IN	I	AM intermediate frequency detect signal input terminal
18	GND	—	Ground terminal
19	EO	O	PLL error signal output terminal
20	VCOL	I	AM VCO input terminal
21	VCOH	I	FM VCO input terminal
22	VREG1	—	Power supply terminal (connected to the coupling capacitor)
23	VDD	—	Power supply terminal (+3V)
24	XOUT	O	System clock output terminal (75 kHz)
25	XIN	I	System clock input terminal (75 kHz)
26	VREG2	—	Power supply terminal (connected to the coupling capacitor)
27	VLCD0	—	Terminal for doubler circuit capacitor connection to develop liquid crystal display drive voltage
28	CAP0	—	
29	CAP1	—	
30	VLCD2	—	
31 to 34	COM0 to COM3	O	Common drive signal output to the liquid crystal display (LCD101)
35 to 49	SEG0 to SEG14	O	Segment drive signal output to the liquid crystal display (LCD101)
50	CE	I	Power failure detection signal input from the voltage detect (IC102) Normally: "H"
51	PULSE IN	I	Pulse meter input terminal (detecting a falling edge) Not used (open)
52	BEEP	O	Beep sound drive signal output terminal
53	CMP IN	I	Scan stop detect signal input terminal
54 to 56	PB1 to PB3	I	Initialize signal input for the destination select (fixed at "L" in this set)

SECTION 6
EXPLODED VIEW

NOTE:

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



Ref. No.	Part No.	Description	Remark
1	X-3377-283-1	CABINET (FRONT) ASSY	
2	1-771-677-21	SWITCH, RUBBER KEY	
3	3-033-935-01	HOLDER (BUTTON)	
4	3-033-940-01	BUTTON (POWER)	
5	3-318-203-61	SCREW (B1.7X4), TAPPING	
6	3-033-933-01	ADAPTOR	
7	3-033-928-01	CABINET (REAR)	
8	3-318-203-31	SCREW (B1.7X8), TAPPING	
9	3-378-965-01	SPRING, RING	
10	3-898-411-01	PACKING, KNOB	
11	3-033-934-01	KNOB (VOL)	
12	3-033-932-01	KNOB (A)	
13	3-033-938-01	CLIP (A), BELT	
14	3-033-939-01	CLIP (B), BELT	
15	3-033-931-01	LID, BATTERY CASE	
16	3-033-945-01	TERMINAL (+ -), BATTERY	
17	3-033-944-01	TERMINAL (-), BATTERY	
18	3-033-943-01	TERMINAL (+), BATTERY	
* 19	A-3663-262-A	MAIN BOARD, COMPLETE (US)	
* 19	A-3663-288-A	MAIN BOARD, COMPLETE (Panama)	
20	3-378-515-01	BUSHING	
21	3-033-937-01	HOLDER (BAR ANT)	
* 22	A-3663-259-A	KEY BOARD, COMPLETE	
23	3-033-936-01	HOLDER (LCD)	
24	3-036-200-01	SHEET, SHIELD	
CN101	1-694-532-11	CONDUCTIVE BOARD, CONNECTION	
L1	1-754-057-11	ANTENNA, FERRITE-ROD (AM)	
LCD101	1-803-534-11	DISPLAY PANEL, LIQUID CRYSTAL	

KEY

SECTION 7
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. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

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

Ref. No.	Part No.	Description			Remark
*	A-3663-259-A	KEY BOARD, COMPLETE			
		**********			
	3-033-936-01	HOLDER (LCD)			
	3-036-200-01	SHEET, SHIELD			
		< CAPACITOR >			
C102	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C103	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C104	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C105	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C108	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C111	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C112	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C114	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C115	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C116	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C117	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C118	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C119	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C120	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C121	1-164-346-11	CERAMIC CHIP	1uF		16V
C122	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C123	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C124	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C125	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C126	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C151	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C152	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C153	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C154	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C156	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C157	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C158	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
		< CONDUCTIVE BOARD >			
CN101	1-694-532-11	CONDUCTIVE BOARD, CONNECTION			
		< DIODE >			
D105	8-719-988-61	DIODE 1SS355TE-17			
D106	8-719-977-40	DIODE DTZ-TT11-13			

Ref. No.	Part No.	Description			Remark
		< IC >			
IC101	8-759-581-97	IC uPD17073GB-556-1A7			
IC102	8-759-491-99	IC S-80822ALNP-EAB-T2			
IC105	8-759-457-68	IC AK93C45AV-L			
		< SHORT >			
JC102	1-216-864-11	METAL CHIP	0	5%	1/16W
JC104	1-216-864-11	METAL CHIP	0	5%	1/16W
JC106	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COIL >			
L101	1-410-658-31	INDUCTOR CHIP 220uH			
		< DISPLAY PANEL >			
LCD101	1-803-534-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< TRANSISTOR >			
Q101	8-729-402-19	TRANSISTOR XN6501			
Q103	8-729-402-19	TRANSISTOR XN6501			
Q104	8-729-402-16	TRANSISTOR XN4608			
		< RESISTOR >			
R105	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R106	1-216-089-00	RES, CHIP	47K	5%	1/10W
R107	1-216-089-00	RES, CHIP	47K	5%	1/10W
R109	1-216-097-00	RES, CHIP	100K	5%	1/10W
R110	1-216-821-11	METAL CHIP	1K	5%	1/16W
R111	1-216-821-11	METAL CHIP	1K	5%	1/16W
R112	1-216-821-11	METAL CHIP	1K	5%	1/16W
R113	1-216-821-11	METAL CHIP	1K	5%	1/16W
R114	1-216-833-11	RES, CHIP	10K	5%	1/16W
R115	1-216-833-11	RES, CHIP	10K	5%	1/16W
R116	1-216-833-11	RES, CHIP	10K	5%	1/16W
R117	1-216-833-11	RES, CHIP	10K	5%	1/16W
R118	1-216-833-11	RES, CHIP	10K	5%	1/16W
R120	1-216-049-11	RES, CHIP	1K	5%	1/10W
R121	1-216-073-00	METAL CHIP	10K	5%	1/10W
R123	1-216-833-11	RES, CHIP	10K	5%	1/16W
R126	1-216-109-00	METAL CHIP	330K	5%	1/10W
R128	1-216-833-11	RES, CHIP	10K	5%	1/16W
R129	1-216-845-11	METAL CHIP	100K	5%	1/16W
R130	1-216-833-11	RES, CHIP	10K	5%	1/16W
R133	1-216-049-11	RES, CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R134	1-216-097-00	RES, CHIP	100K	5%	1/10W
R135	1-216-097-00	RES, CHIP	100K	5%	1/10W
R136	1-216-089-00	RES, CHIP	47K	5%	1/10W
R137	1-216-017-00	RES, CHIP	47	5%	1/10W
R138	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R139	1-216-845-11	METAL CHIP	100K	5%	1/16W
R140	1-216-833-11	RES, CHIP	10K	5%	1/16W
R141	1-216-821-11	METAL CHIP	1K	5%	1/16W
R171	1-216-833-11	RES, CHIP	10K	5%	1/16W
R172	1-216-833-11	RES, CHIP	10K	5%	1/16W
R173	1-216-833-11	RES, CHIP	10K	5%	1/16W
R174	1-216-833-11	RES, CHIP	10K	5%	1/16W
R176	1-216-049-11	RES, CHIP	1K	5%	1/10W
R177	1-216-049-11	RES, CHIP	1K	5%	1/10W
		< SWITCH >			
S113	1-572-499-11	SWITCH, TACTIL (POWER)			
S114	1-572-499-11	SWITCH, TACTIL (HOLD)			
S115	1-572-499-11	SWITCH, TACTIL (STRT/STOP)			
S116	1-572-499-11	SWITCH, TACTIL (LAP/RESET)			
		< TRANSFOMER >			
T101	1-449-138-71	TRANSFORMER, DC-DC CONVERTER			
		< VIBRATOR >			
X101	1-767-517-11	VIBRATOR, CRYSTAL (75kHz)			
**********					
*	A-3663-262-A	MAIN BOARD, COMPLETE (US)			
*	A-3663-288-A	MAIN BOARD, COMPLETE (Panama)			
		**********			
	3-033-937-01	HOLDER (BAR ANT)			
		< BAND PASS FILTER >			
BPF1	1-235-171-00	FILTER, BAND PASS			
		< CAPACITOR >			
C1	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C2	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C3	1-163-092-00	CERAMIC CHIP	9PF	0.25PF	50V
C4	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C5	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C6	1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C7	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C8	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C9	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C10	1-126-157-11	ELECT	10uF	20%	16V
C11	1-126-157-11	ELECT	10uF	20%	16V
C12	1-126-162-11	ELECT	3.3uF	20%	50V
C13	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C14	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C16	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C17	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C18	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C19	1-164-346-11	CERAMIC CHIP	1uF		16V
C20	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C21	1-124-584-00	ELECT	100uF	20%	10V

Ref. No.	Part No.	Description			Remark
C22	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C23	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C24	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C25	1-164-346-11	CERAMIC CHIP	1uF		16V
C26	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C27	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C28	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C31	1-104-912-11	TANTALUM CHIP	3.3uF	20%	6.3V
C32	1-126-162-11	ELECT	3.3uF	20%	50V
C33	1-126-157-11	ELECT	10uF	20%	16V
C34	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C35	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C36	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C37	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C38	1-111-253-11	TANTALUM CHIP	100uF	20%	6.3V
C39	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C40	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C41	1-127-569-91	TANTALUM CHIP	100uF	20%	4V
C42	1-124-434-00	ELECT	220uF	20%	4V
C43	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C44	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C45	1-124-584-00	ELECT	100uF	20%	10V
C46	1-124-584-00	ELECT	100uF	20%	10V
C47	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C48	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C49	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C50	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C52	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C54	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C55	1-126-518-11	ELECT	470uF	20%	4V
C56	1-126-518-11	ELECT	470uF	20%	4V
C57	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C58	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C59	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C60	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C62	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C63	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C64	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C65	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C73	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C74	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C75	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< FILTER >			
CF1	1-760-237-11	FILTER, CERAMIC			
CF2	1-579-638-11	FILTER, CERAMIC			
CF3	1-760-237-11	FILTER, CERAMIC (US)			
CF4	1-760-237-11	FILTER, CERAMIC (Panama)			
CF5	1-760-233-71	FILTER, CERAMIC (Panama)			
		< TRIMMER >			
CT1	1-141-298-11	CAP, TRIMMER 10PF			
CT2	1-141-298-11	CAP, TRIMMER 10PF			
		< DIODE >			
D1	8-719-072-59	DIODE SVC347S-TL			

MAIN

Ref. No.	Part No.	Description	Remark
D2	8-713-100-11	DIODE 1T362	
D3	8-713-100-11	DIODE 1T362	
		< IC >	
IC1	8-752-062-48	IC CXA1238M-T6	
IC2	8-759-380-15	IC LA3550MTP-1	
IC3	8-759-802-75	IC LA4533M	
IC4	8-759-510-73	IC BA10393F-E2	
		< SHORT >	
JC1	1-216-296-00	SHORT 0 (Panama)	
		< JACK >	
J1	1-563-298-11	JACK (SMALL TYPE) (DIA. 3.5) (🎧)	
		< COIL >	
L1	1-754-057-11	ANTENNA, FERRITE-ROD (AM)	
L2	1-416-444-11	COIL, AIR-CORE	
L3	1-414-690-21	INDUCTOR 82nH	
L4	1-406-269-11	COIL (OSC)	
L6	1-412-947-11	INDUCTOR 4.7uH	
L7	1-412-947-11	INDUCTOR 4.7uH	
L8	1-412-947-11	INDUCTOR 4.7uH	
L9	1-412-959-11	INDUCTOR 47uH	
		< TRANSISTOR >	
Q1	8-729-102-07	TRANSISTOR 2SC2223-F13	
Q2	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3	8-729-905-35	TRANSISTOR 2SC4081-R	
Q4	8-729-905-35	TRANSISTOR 2SC4081-R	
Q5	8-729-905-35	TRANSISTOR 2SC4081-R	
Q6	8-729-141-48	TRANSISTOR 2SB624-BV345	
		< RESISTOR >	
R1	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R2	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R3	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R4	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R5	1-216-837-11	METAL CHIP 22K 5% 1/16W	
R6	1-216-121-00	RES, CHIP 1M 5% 1/10W	
R7	1-216-813-11	METAL CHIP 220 5% 1/16W	
R8	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R10	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R11	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R12	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R13	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R14	1-216-033-00	METAL CHIP 220 5% 1/10W	
R16	1-216-001-00	METAL CHIP 10 5% 1/10W	
R17	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R18	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R19	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R20	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
R21	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R22	1-216-101-00	METAL CHIP 150K 5% 1/10W	
R23	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R24	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R25	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R26	1-216-833-11	RES, CHIP 10K 5% 1/16W	
R27	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R28	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R30	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R31	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R32	1-216-093-00	RES, CHIP 68K 5% 1/10W	
R33	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R34	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R35	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R36	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R37	1-216-809-11	METAL CHIP 100 5% 1/16W	
R38	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R39	1-216-817-11	METAL CHIP 470 5% 1/16W	
R40	1-216-805-11	METAL CHIP 47 5% 1/16W	
R41	1-216-809-11	METAL CHIP 100 5% 1/16W	
R43	1-216-797-11	METAL CHIP 10 5% 1/16W	
R44	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R45	1-216-095-00	METAL CHIP 82K 5% 1/10W	
R46	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R47	1-216-845-11	METAL CHIP 100K 5% 1/16W	
		< VARIABLE RESISTOR >	
RT1	1-238-663-11	RES, ADJ, CARBON 4.7K	
RV1	1-237-352-21	RES, BAR, CARBON 20K/20K (VOL)	
		< SWITCH >	
S1	1-570-675-11	SWITCH, SLIDE (FM SENS)	
S2	1-570-675-11	SWITCH, SLIDE (MEGA BASS)	
		< TRANSFORMER >	
T1	1-404-444-31	TRANSFORMER, IF	

****

MISCELLANEOUS
****

2	1-771-677-21	SWITCH, RUBBER KEY

****

ACCESSORIES & PACKING MATERIALS
****

3-035-159-01	STRAP, HAND
3-866-487-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH) (Panama)
3-866-487-21	MANUAL, INSTRUCTION (ENGLISH) (US)
8-953-142-90	HEADPHONE MDR-W14G//K SET

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