ICF-C273

SERVICE MANUAL

Australian Model

Ver 1.0 2004.03

SPECIFICATIONS

Time display
12 hour

Frequency range

Band		Channel step
FM	87.5-108 MHz	0.05 MHz
AM	531-1 602 kHz	9 kHz

Speaker
Approx. 6.6 cm (2 5/8 in.) dia. 8 Ω

Power output
200 mW (at 10% harmonic distortion)

Power requirements
230 V AC, 50 Hz

Dimensions
Approx. 173 x 57.2 x 133.5 mm (w/h/d)
(6 7/8 x 2 3/8 x 5 3/8 in.) incl. projecting parts and controls

Mass Approx. 630 g (1 lb 6.2 oz)

Design and specifications are subject to change without notice.

FM/AM PLL SYNTHESIZED CLOCK RADIO

9-877-642-01
2004C02-1
© 2004.03

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

SONY®

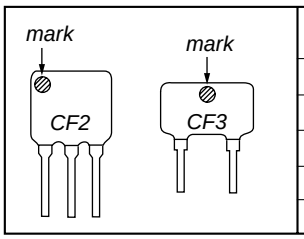
TABLE OF CONTENTS

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.

• HOW TO CHANGE THE CERAMIC FILTER

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

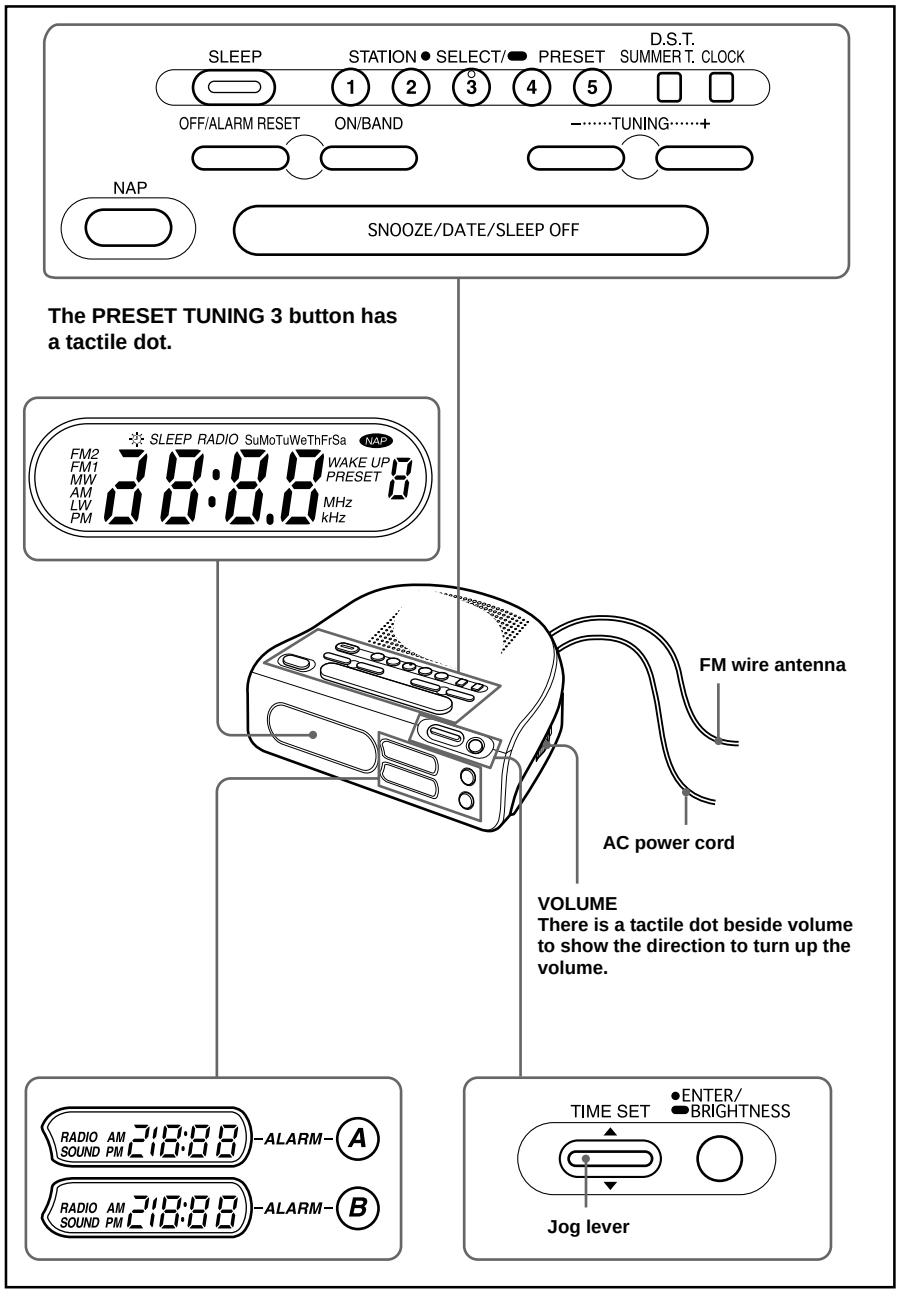


Mark	Center frequency
no mark	10.70MHz
blue	10.67MHz
orange	10.73MHz
black	10.64MHz
white	10.76MHz

SECTION 1
GENERAL

This section is extracted from instruction manual.

LOCATION AND FUNCTION OF CONTROLS



Setting the Clock and Date

1 Plug in the clock radio.
The display will flash “AM12:00” or “0:00”.
2 Press **CLOCK** for a few seconds.
You will hear a beep and the year will start to flash in the display.
3 Press Jog lever ▲ (up) or ▼ (down) until the correct year appears in the display.
4 Press **ENTER/BRIGHTNESS**.
5 Repeat steps **3** and **4** to set the month, day, hour, and minute.
After setting the minute, press **ENTER/ BRIGHTNESS** to start the counting of the seconds, and you will hear two short beeps.

- To set the current time rapidly, hold down Jog lever ▲ (up) or ▼ (down).
- The clock system varies depending on the model you own.
  12-hour system: “AM 12:00” = midnight
  24-hour system: “0:00” = midnight
- In step **5**, when you press **ENTER/BRIGHTNESS** after the minute setting to activate the clock, the seconds start counting from zero.
- When the alarm setting mode is entered, the clock cannot be set.

To display the year and date

Press **SNOOZE/DATE/SLEEP OFF** once for the date, and within 2 seconds press it again for the year.
The display shows the date or year for a few seconds and then changes back to the current time.

To change the display to the daylight saving time (summer time) indication

Press **D.S.T./SUMMER T.**
“☼ ” is displayed and the time indication changes to summer time.
To deactivate the summer time function, press **D.S.T./SUMMER T.** again.

To set the brightness of the backlight

If you cannot see the display clearly, press and hold **ENTER/ BRIGHTNESS** to set the desired brightness (high, middle or low).

Changing AM (MW) Channel Step

The AM (MW) channel step differs depending on area. The channel step of this unit is factory-set to 9 kHz or 10 kHz to change the setting as shown below to be able to listen to the radio.

Channel step

9 kHz

1 Plug in the clock radio.
Press **OFF/ALARM RESET** to turn off the power.
2 While holding down **OFF/ALARM RESET**, keep pressing **ON/BAND** for more than 5 seconds.
The AM (MW) channel step will be changed.
If you proceed to step **2** again, the channel step changes again.

Notes

- When the AM (MW) channel step is changed, the preset stations for AM (MW) will be initialized.
- When the AM (MW) channel step is changed, the FM channel step also will be changed.

Operating the Radio —Manual Tuning

1 Press **ON/BAND** to turn on the radio.
The display shows the band and frequency for a few seconds and then changes back to the current time.
2 Press **ON/BAND** repeatedly to select the desired band.
Each press changes the band as follows:

→ AM → FM1 → FM2 →

When using FM1 or FM2 preset mode, you may listen to the radio on either mode. (See “Presetting Your Favourite Station”.)

3 Use **TUNING +** or **–** to tune into the desired station.
The FM channel step is set to 0.05 MHz* and the AM (MW) channel step is set to 9 kHz.

* The FM frequency display is raised or lowered by a step of 0.1 MHz. For example, frequency 88.00 and 88.05 MHz is displayed as “88.0 MHz.”

Two short beeps sound when the minimum frequency of each band is received during tuning.
4 Adjust volume using **VOLUME**.

- To turn off the radio, press **OFF/ALARM RESET**.
- To listen with an earphone, connect the earphone to the ⓟ (earphone) jack. The speaker is deactivated when an earphone is connected.
- To check the station being received, press **TUNING +** or **–** or **ON/ BAND** lightly. The display shows the band and frequency for a few seconds and then changes back to the current time.

Improving the Reception

FM: Extend the FM wire antenna fully to increase reception sensitivity.
AM (MW): Rotate the unit horizontally for optimum reception. A ferrite bar is built in to the unit.

Do not operate the unit over a steel desk or metal surface, as this may lead to interference of reception.

Presetting Your Favourite Station —Preset Tuning

You can preset up to 10 stations in FM (5 stations in FM1, 5 stations in FM2), and 5 stations in AM.

Presetting a Station

1 Follow steps **1** to **4** in “Operating the Radio” and manually tune into the station you wish to preset.
2 Hold down the desired **STATION•SELECT/PRESET** button until you hear two short beeps.
Example: To preset AM 1 260 kHz onto preset **2** button.

The display shows the frequency for a few seconds and then changes back to the current time.
To preset another station, repeat these steps.
To change the preset station, tune into the desired station and hold down the **PRESET TUNING 1** to **5** button. The new station will replace the previous station on the preset button.

Tuning into a preset station

1 Press **ON/BAND** to turn on the radio.
2 Press **STATION•SELECT/PRESET** where the desired station is stored.
3 Adjust volume using **VOLUME**.
After a few seconds, the display will return to the current time but the preset button number will remain.

Setting the Alarm

You can choose from two types of alarm, Radio or Buzzer.
The alarm will come on at the same time everyday.
The factory setting alarm time for the radio and buzzer is 12:00am or 0:00.

Notes

- Set the current time before setting the alarm.
- Radio reception is interrupted while the alarm time is being set.

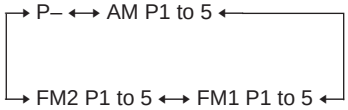
To set the Alarm Time

1 Press and hold **ALARM A** or **ALARM B** for a few seconds.
After one beep, the hour flashes in the alarm display.
2 Press Jog lever ▲ (up) or ▼ (down) to select the hour.
To set the hour rapidly, hold down Jog lever ▲ (up) or ▼ (down).
3 Press **ENTER/BRIGHTNESS**.
After one beep, the minutes flash on the alarm display.

4 Repeat steps **2** and **3** to set the minute.
A beep sounds to confirm the time setting.
"RADIO•SOUND" appears.
You can choose between "RADIO" and "SOUND" modes.
Set the alarm mode as follows:
• RADIO: see "**A** Setting the Radio Alarm"
• SOUND: see "**B** Setting the Sound Alarm"

A Setting the Radio Alarm

For the radio alarm, the station you specified as the wake-up station is played.
1 Perform steps **1** to **4** in "To set the Alarm Time."
2 Press Jog lever ▲ (up) or ▼ (down) to select "RADIO" alarm mode.
"WAKE UP STATION" appears in the display.
3 Press **ENTER/BRIGHTNESS**.
After one beep, the preset number flashes in the display.
4 Press Jog lever ▲ (up) or ▼ (down) to select the desired wake-up station.
Preset number changes in the order as follows:



"P-" is the last received station.
You can directly select the desired wake-up station by pressing **ON/BAND** or the **STATION•SELCET/PRESET** button while the indication "P-" is not displayed.
5 Press **ENTER/BRIGHTNESS**.
Two short beeps will confirm the setting, and the ALARM A or B display will disappear.

B Setting the Sound Alarm

For the sound alarm, the sound you specified as the wake-up sound is played.
1 Perform steps **1** to **4** in "To set the Alarm Time."
2 Press Jog lever v (up) or V (down) to select "SOUND" alarm mode.
"WAKE UP SOUND" appears in the display.
3 Press **ENTER/BRIGHTNESS**.
The displayed wake-up sound number will sound.
4 Press Jog lever v (up) or V (down) to select the desired wake-up sound.
1: Buzzer
2: "Four seasons: Spring" Antonio Lucio Vivaldi
3: "For Eliza" Ludwig van Beethoven
5 Press **ENTER/BRIGHTNESS**.
Two short beeps will confirm the setting, and the ALARM A or B display will disappear.

To Use the Radio and Buzzer Alarm

1 Set both alarm times for ALARM A or B.
(see above).
2 Press **ALARM A** or **ALARM B**.
The ALARM A or B display will be turned on.

If the same alarm time is set for both Alarm A and B, Alarm A takes priority.

To Doze for a Few More Minutes

Press **SNOOZE/DATE/SLEEP OFF**.
The radio or buzzer turns off but will automatically come on again after about 10 minutes. Every time you press **SNOOZE/DATE/SLEEP OFF**, the snooze time changes as follows:
10 ⟶ 20 ⟶ 30 ⟶ 40 ⟶ 10 ⟶
The display shows the snooze time for a few seconds and returns to show the current time. When you press **SNOOZE/DATE/SLEEP OFF** after the current time appeared, the snooze time starts from 10 minutes again.
The maximum length of the snooze time is 60 minutes.

To Stop the Alarm

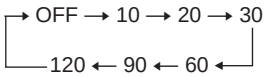
Press **OFF/ALARM RESET** to turn off the alarm.
The alarm will come on again at the same time the next day.

To Deactivate the Alarm

Press **ALARM A** or **ALARM B**.
The ALARM A or B display turns off.

Using the NAP Timer (Count Down Timer)

The NAP timer sounds the buzzer after a preset time duration.
Press **NAP** repeatedly until the desired minutes are displayed.
Every press changes the display as follows:



You will hear two beeps when the display turns from "OFF" to "10".
" NAP " appears and the NAP time is displayed for a few seconds.
NAP timer starts counting down the NAP time.
When selected NAP time has passed, the beep sound comes on, and " NAP " on the display flash.
The buzzer is turned off automatically after about 60 minutes.

To Stop the NAP Timer

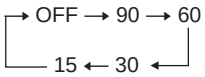
Press **NAP** or **OFF/ALARM RESET** to turn off the buzzer.

To Deactive the NAP Timer

Press **NAP**.
" NAP " goes off in the display.

Setting the Sleep Timer

You can fall asleep to the radio using the built-in sleep timer that turns off the radio automatically after a preset duration.
Press **SLEEP**.
The radio turns on. You can set the sleep timer to durations of 90, 60, 30, or 15 minutes. Every push changes the display as follows:



You will hear two beeps when the display turns from "OFF" to "90".
"SLEEP" will appear in the display when the duration time is set.
The radio will play for the duration you set, then shut off.
• To turn off the radio before the preset time, press **SNOOZE/DATE/SLEEP OFF**.

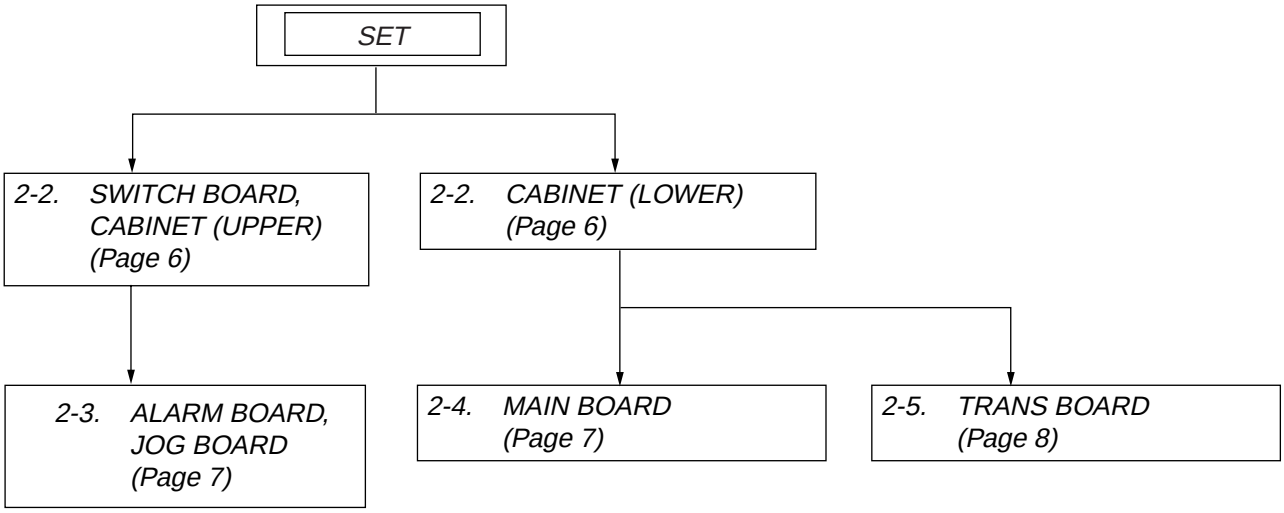
To Use Both Sleep Timer and Alarm

You can fall asleep to the radio and also be awakened by the radio or buzzer alarm at a preset time.
1 Set the alarm. (See "Setting the Alarm".)
2 Set the sleep timer. (See "Setting the Sleep Timer".)

SECTION 2
DISASSEMBLY

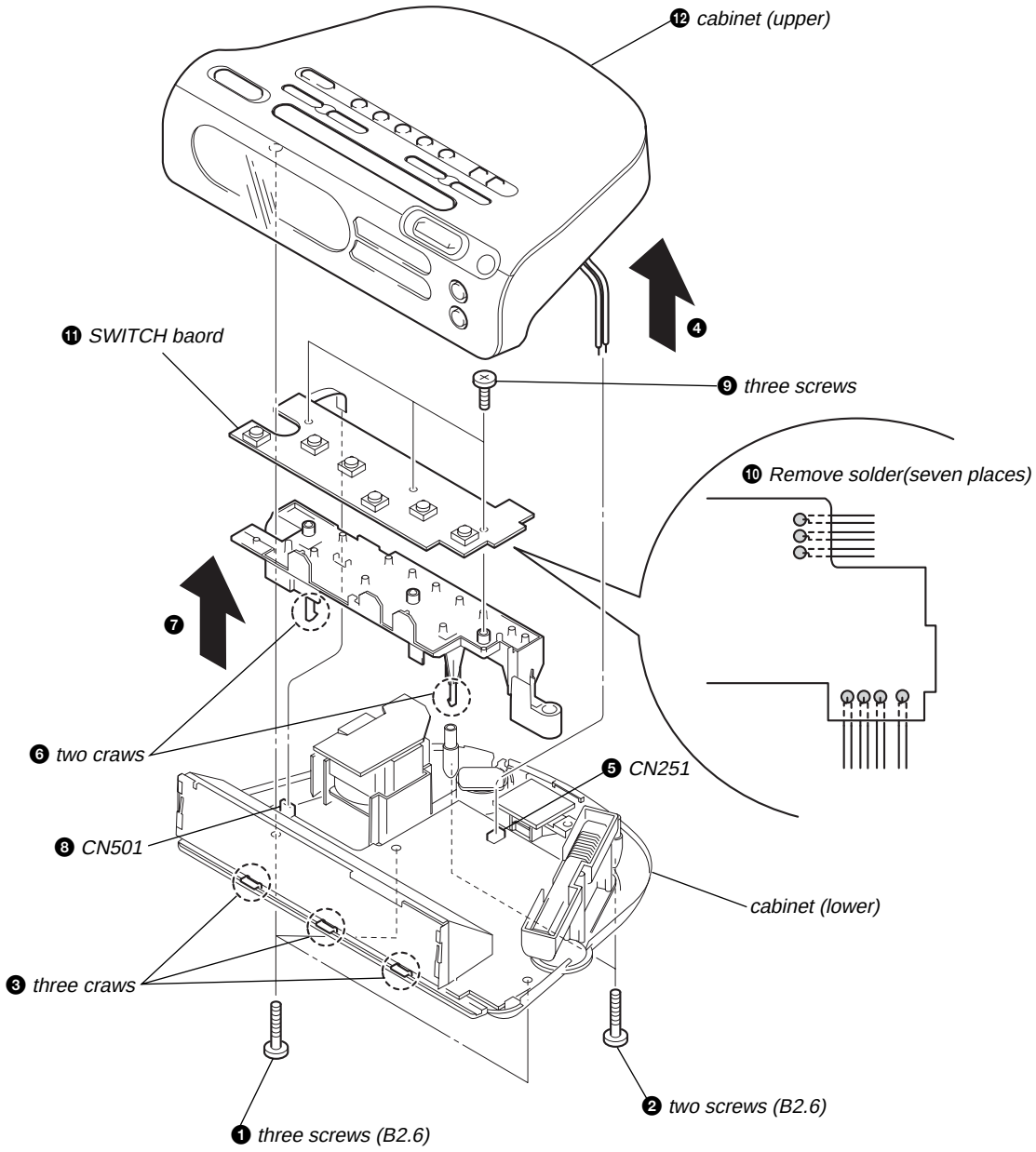
2-1. DISASSEMBLY FLOW

● The equipment can be removed using the following procedure.

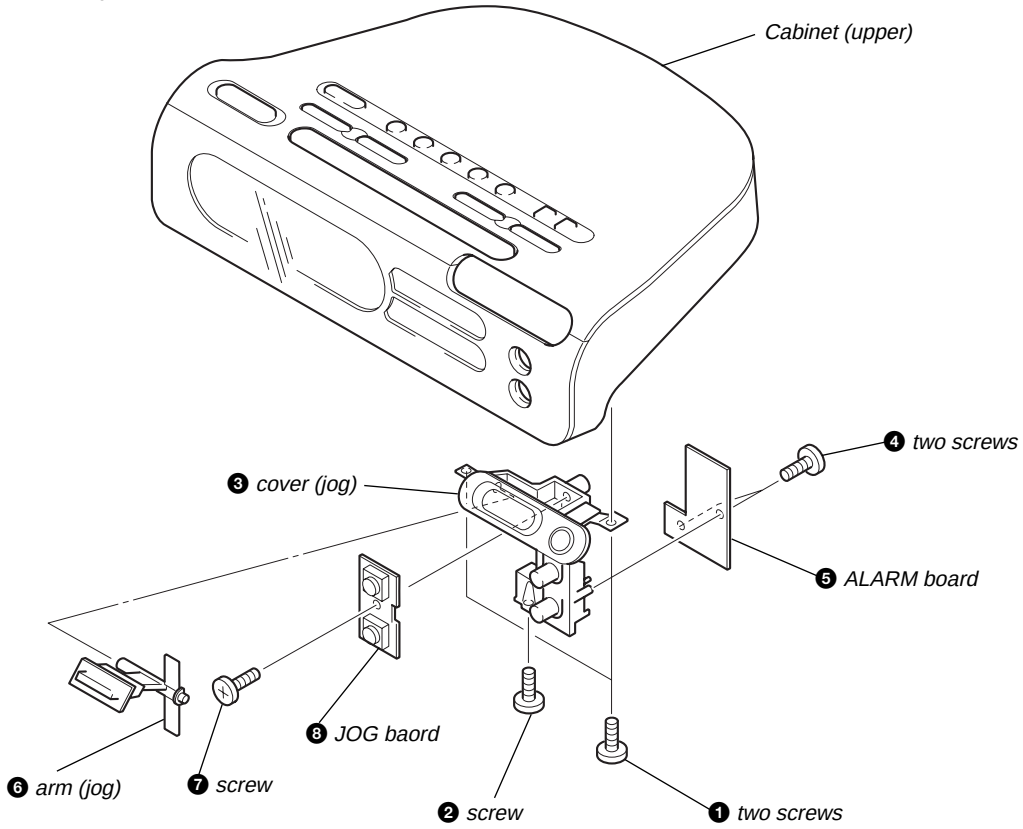


Note : Follow the disassembly procedure in the numerical order given.

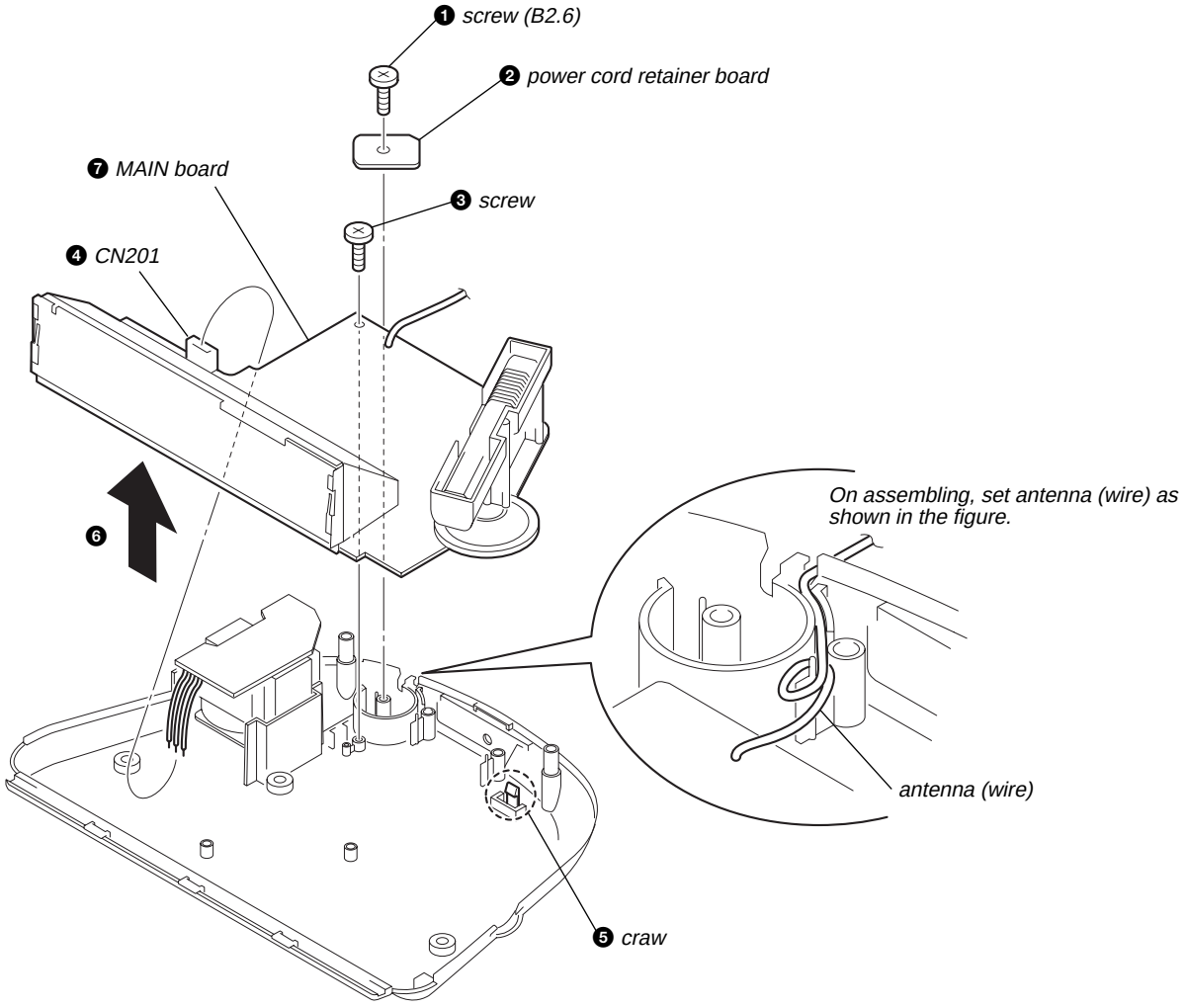
2-2. SWITCH BOARD, CABINET (UPPER)



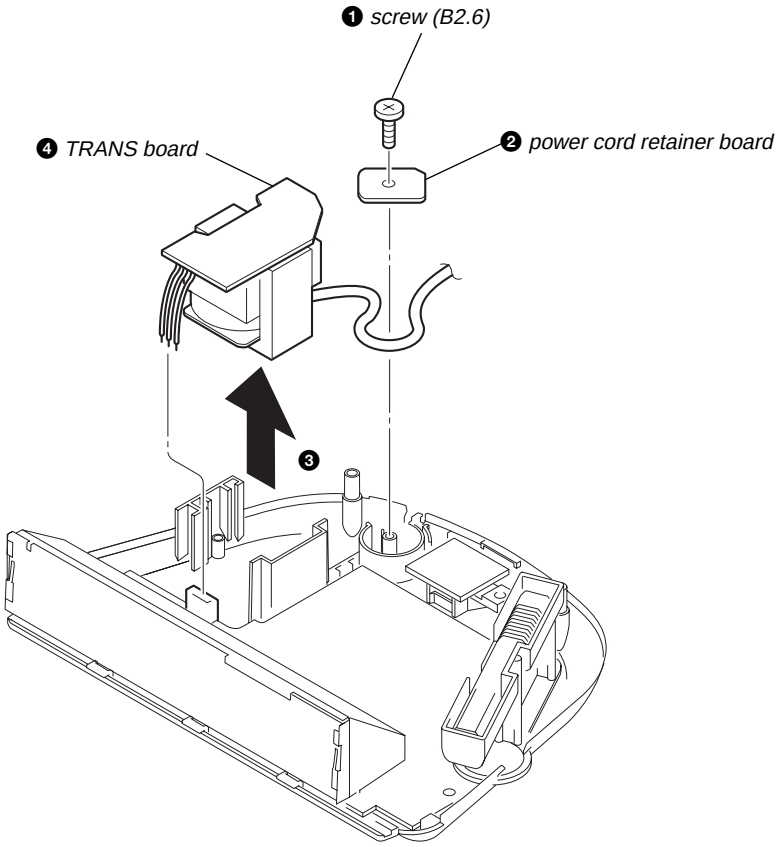
2-3. ALARM BOARD, JOG BOARD



2-4. MIAN BOARD



2-5. TRANS BOARD

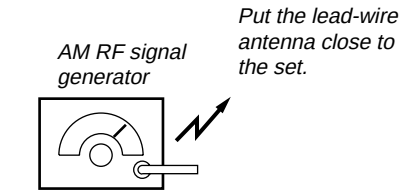


SECTION 3
ELECTRICAL ADJUSTMENTS

3-1.TUNER SECTION

AM Section 0dB=1μV

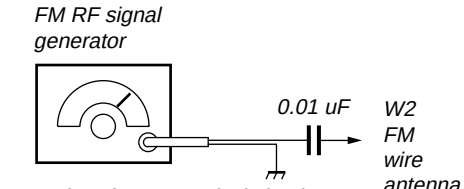
BAND button : AM
Volume : MIN



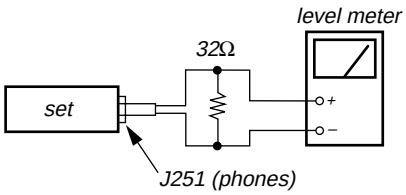
30% amplitude modulation by 400Hz signal.
Output level : as low as possible

FM Section

BAND button : FM
Volume : MIN



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



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

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

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter.
L4	531kHz	Adjustment value: 2.7V Standaed value: 2.5 to 2.9V

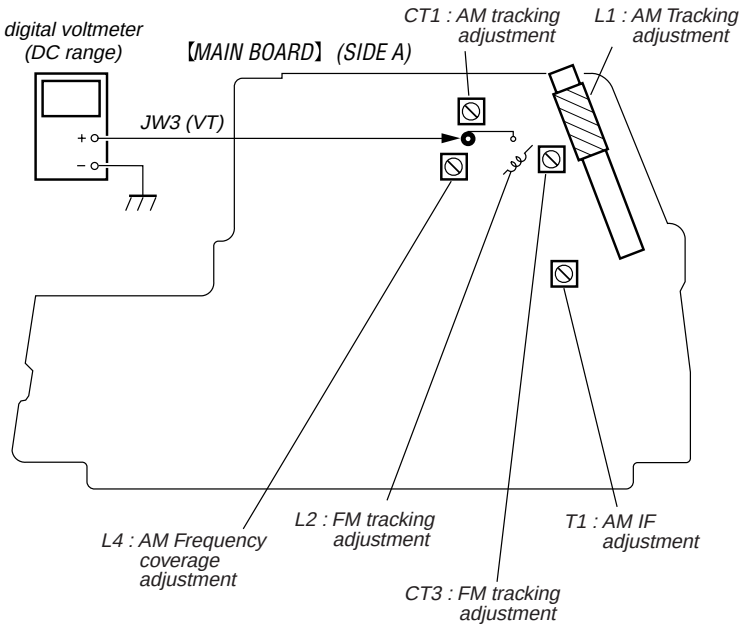
AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
L 1	585kHz
CT1	1,485kHz

FM FREQUENCY COVERAGE CONFIRMATION		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	87.5MHz	3.0 to 4.0V
Confirmation	108MHz	9.5 to 10.5V

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

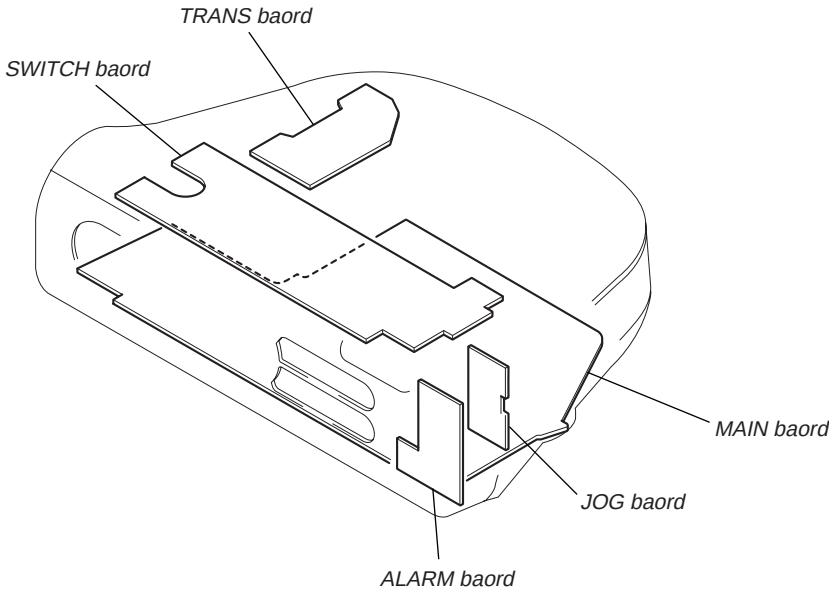
Frequency Coverage Adjustment

Connect Location :



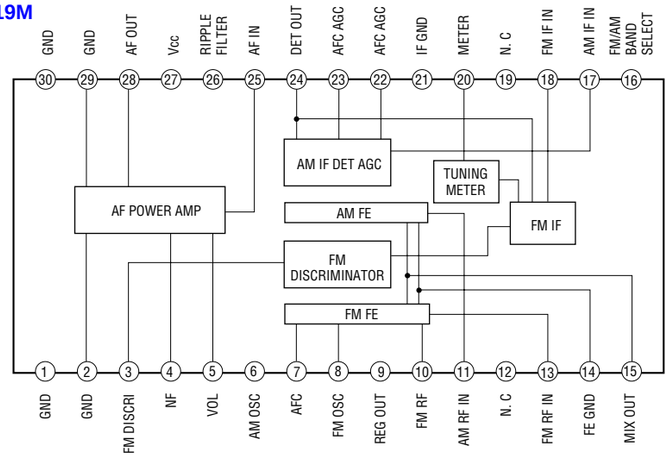
SECTION 4
DIAGRAMS

- **Circuit Boards Location**

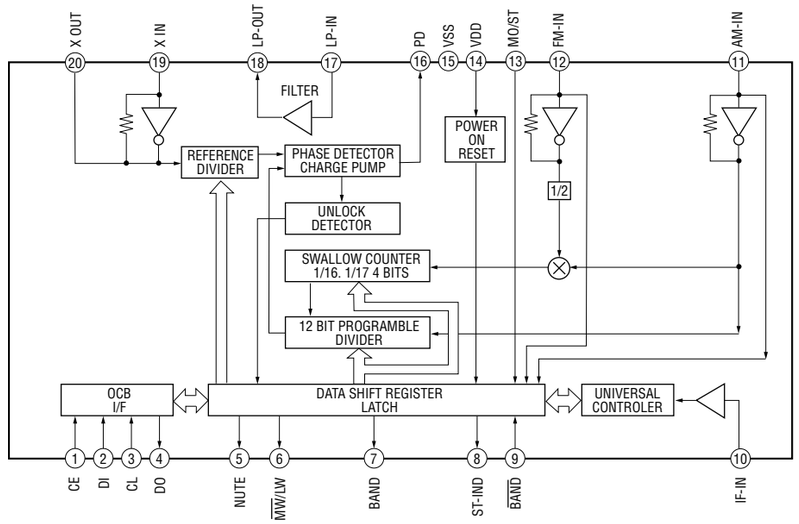


4-1. IC Block Diagrams

IC1 CXA1019M



IC51 LC7213M-TLM-E



Note:

- 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.

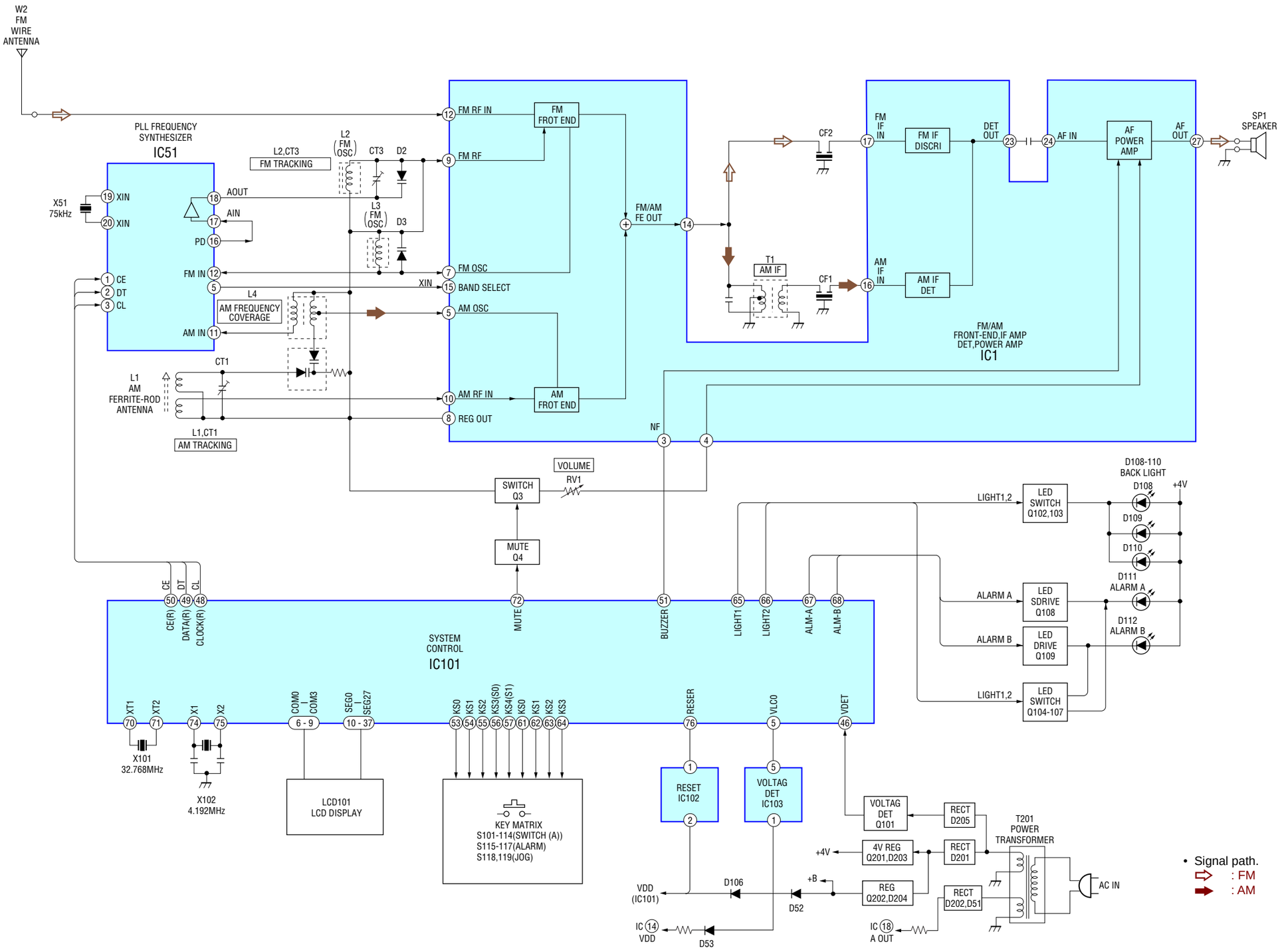
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- Voltages are dc with respect to ground under no-signal 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.
- Signal path.
  ⇨ : FM
  ➡ : AM

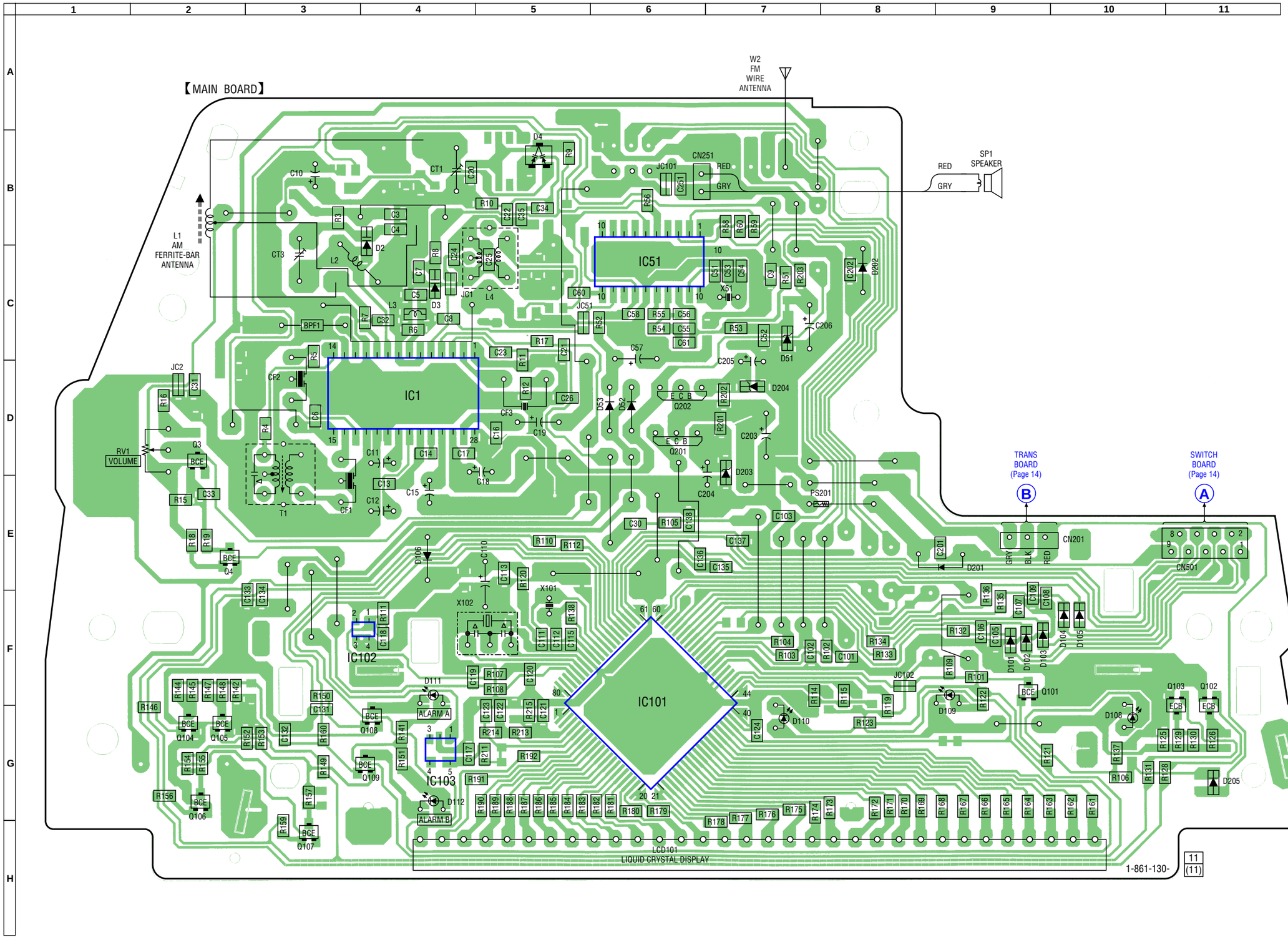
Note:

- ○——— : parts extracted from the component side.
- △ : internal component.
- ▭ : Pattern from the side which enables seeing.

4-2. BLOCK DIAGRAM



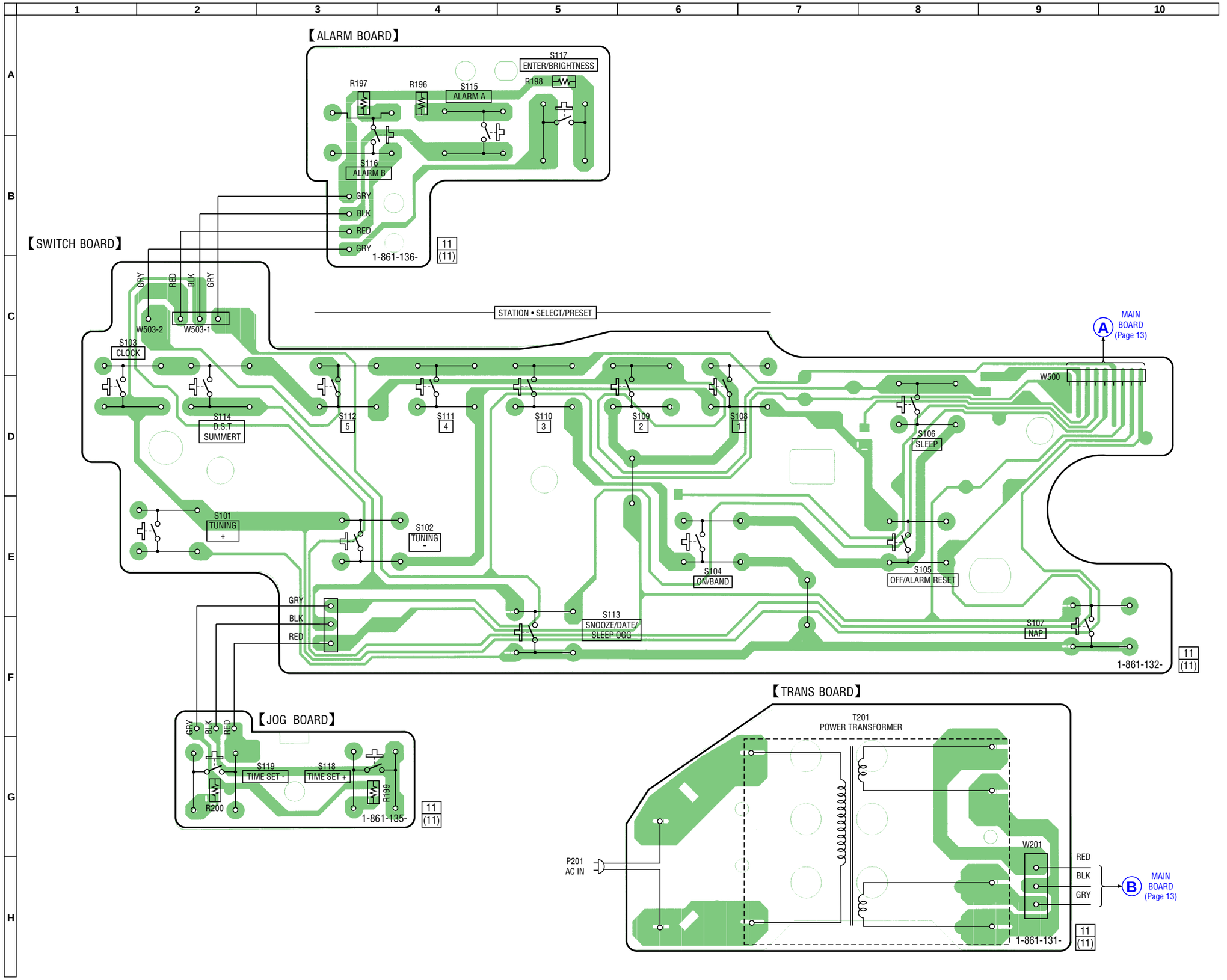
4-3. PRINTED WIRING BOARD – MAIN SECTION (1/2) –



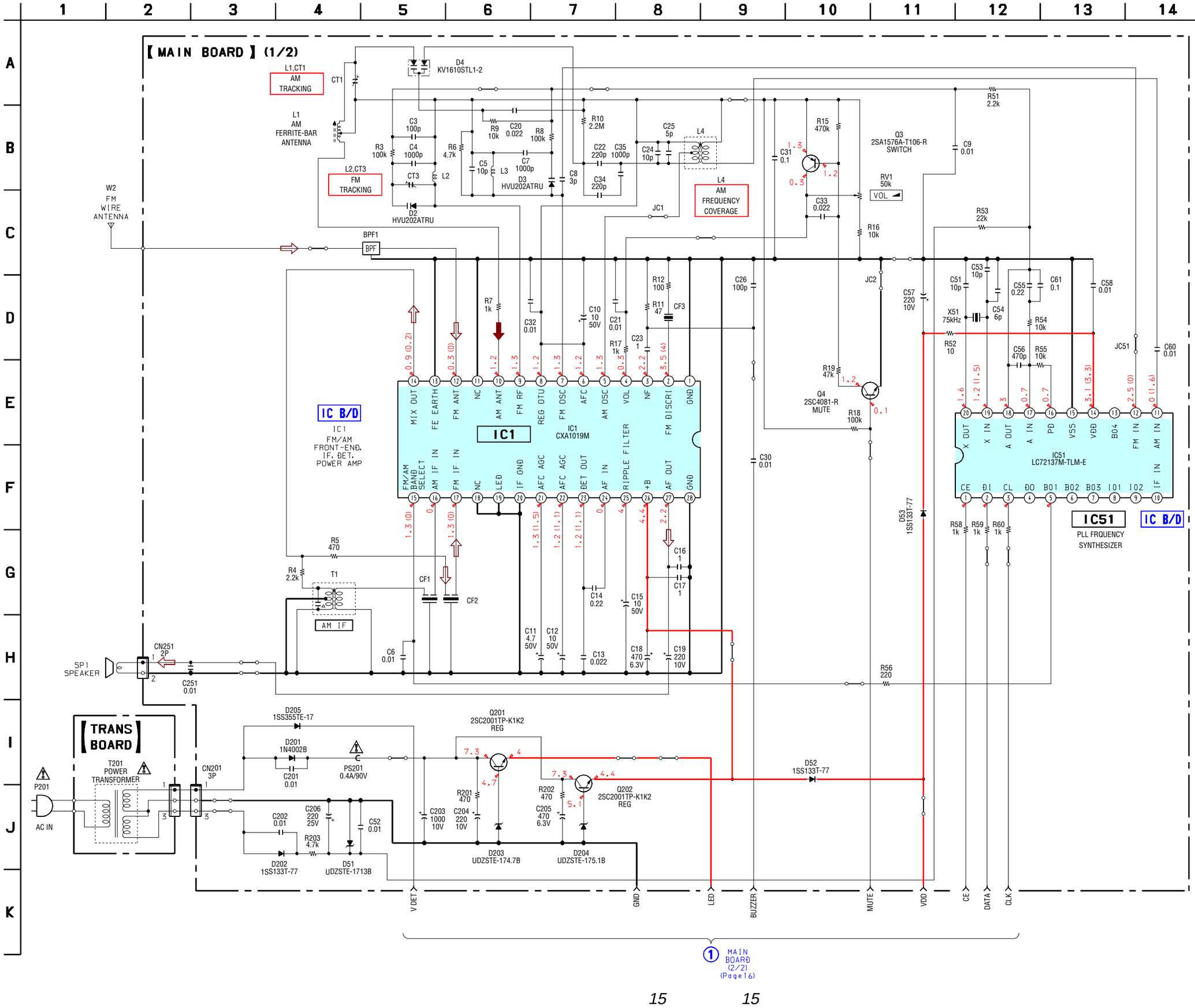
● **Semiconductor Location**

Ref. No.	Location
D2	C-4
D3	C-4
D4	B-5
D51	C-7
D52	D-6
D53	D-6
D101	F-9
D102	F-9
D103	F-9
D104	F-10
D105	F-10
D106	E-4
D108	G-10
D109	F-9
D110	G-7
D111	F-4
D112	G-4
D201	E-9
D202	C-8
D203	D-7
D204	D-7
D205	G-11
IC1	D-4
IC51	C-6
IC101	F-6
IC102	F-4
IC103	G-4
Q3	D-2
Q4	E-2
Q101	F-9
Q102	F-11
Q103	F-11
Q104	G-2
Q105	G-2
Q106	G-2
Q107	H-3
Q108	G-4
Q109	G-4
Q201	D-6
Q202	D-6

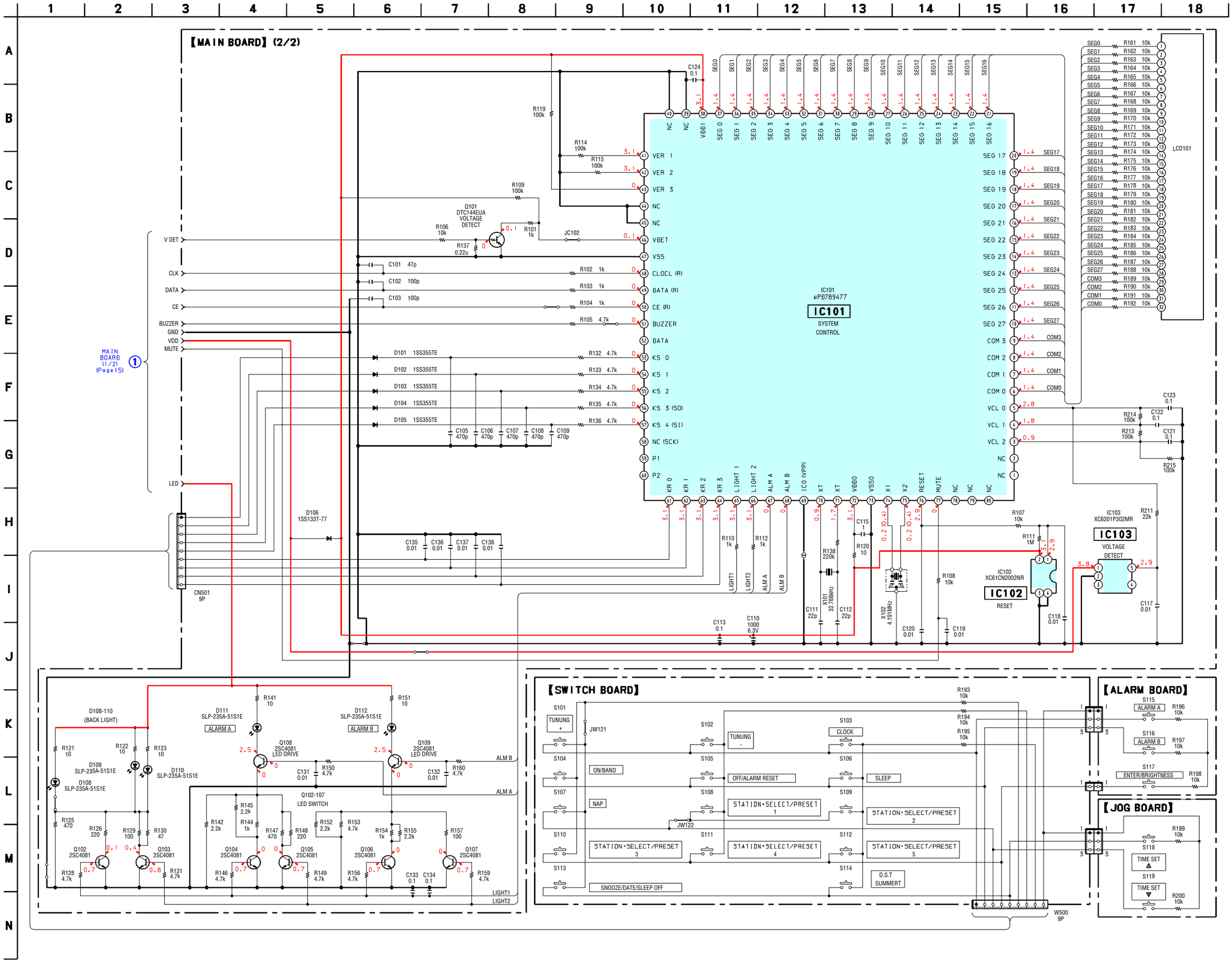
4-4. PRINTED WIRING BOARD – MAIN SECTION (2/2) –



4-5. SCHEMATIC DIAGRAM – MAIN SECTION (1/2)–



4-6. SCHEMATIC DIAGRAM – MAIN SECTION (2/2)–



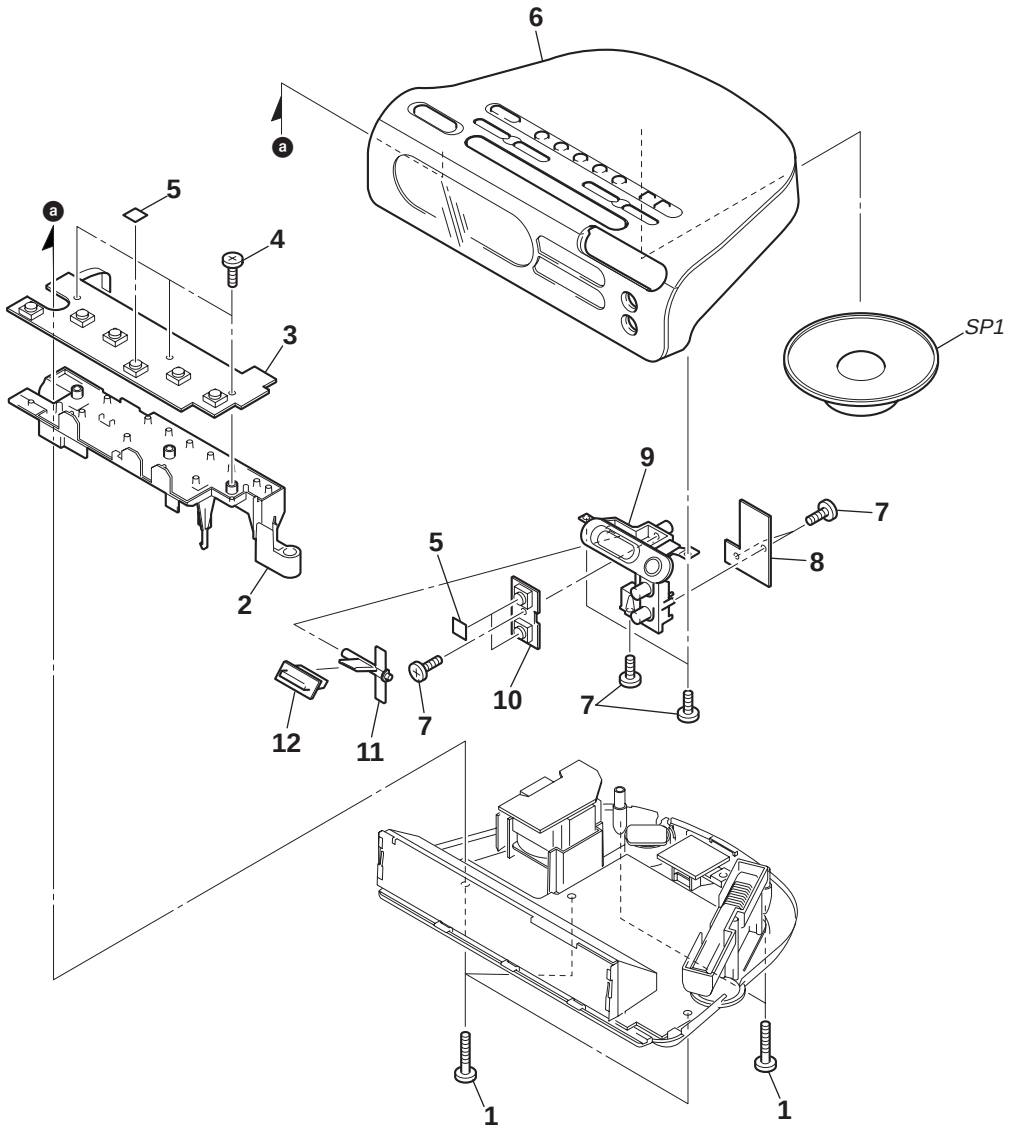
SECTION 5
EXPLODED VIEW

NOTE :

- -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
- 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 this parts list.

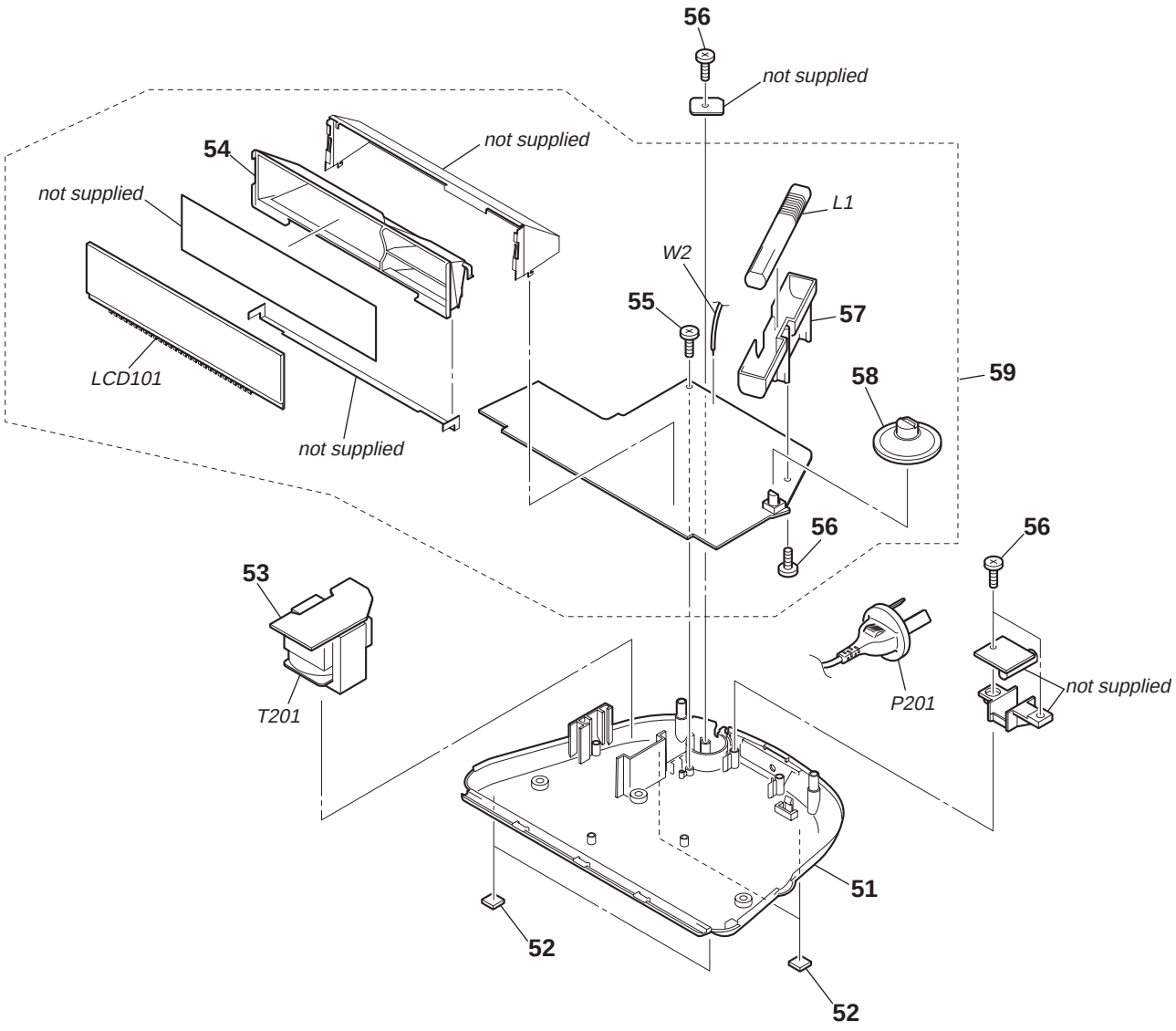
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CABINET (UPPER) SECTION



Ref. No.	Part No.	Description	Remarks
1	3-254-141-01	SCREW (B2.6), (+) BV TAPPING	
2	3-261-891-01	CHASSIS	
* 3	1-861-132-11	SWITCH BOARD	
4	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
5	3-259-210-01	CUSHION (H)	
6	X-2022-166-1	CABINET, UPPER ASSY	
7	3-254-070-01	SCREW	
* 8	1-861-136-11	ALARM BOARD	
9	X-2022-167-1	COVER (JOG) ASSY	
* 10	1-861-135-11	JOG BOARD	
11	3-261-887-01	ARM (JOG)	
12	3-261-888-01	KNOB (JOG)	
SP1	1-529-456-13	SPEAKER (6.6cm)	

5-2. CABINET (LOWER) SECTION



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	Remarks
51	3-261-883-21	CABINET (LOWER)	
52	3-246-344-11	FOOT, RUBBER	
* 53	1-861-131-11	TRANS BOARD	
54	3-261-890-01	HOLDER (LCD)	
55	3-254-070-01	SCREW	
56	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
57	3-261-892-01	HOLDER (ANTENNA)	

Ref. No.	Part No.	Description	Remarks
58	3-382-175-21	KNOB (V)	
59	A-4541-926-A	MAIN BOARD COMPLETE	
L1	1-428-951-21	COIL, FERRITE-ROD ANTENNA (MW)	
LCD101	1-805-524-11	DISPLAY PANEL, LIQUID CRYSTAL	
⚠P201	1-790-431-21	POWER SUPPLY CORD (7.5A/250V)	
⚠T201	1-435-504-11	TRANSFORMER, POWER	
W2	1-754-330-11	ANTENNA (WIRE)	

SECTION 6
ELECTRICAL PARTS LIST

ALARM | JOG | MAIN

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, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE :Metal oxide-film resistor
  F : nonflammable
- Items marked " * "are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ , for example :
  uA.... : μ A.... , uPA.... : μ PA....
  uPB.... : μ PB.... , uPC.... : μ PC....
  uPD.... : μ PD....
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H

The components identified by mark ⚠ 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.

Ref. No.	Part No.	Description			Remark
*	1-861-136-11	ALARM BOARD			
		**********			
		< RESISTOR >			
R196	1-216-833-11	METAL CHIP	10K	5%	1/10W
R197	1-216-833-11	METAL CHIP	10K	5%	1/10W
R198	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S115	1-771-550-11	SWITCH, TACTILE (ALARM A)			
S116	1-771-550-11	SWITCH, TACTILE (ALARM B)			
S117	1-771-550-11	SWITCH, TACTILE (ENTER/BRIGHTNESS)			
**********					
*	1-861-135-11	JOG BOARD			
		*********			
		< RESISTOR >			
R199	1-216-833-11	METAL CHIP	10K	5%	1/10W
R200	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S118	1-554-937-11	SWITCH, TACTILE (TIME SET +)			
S119	1-554-937-11	SWITCH, TACTILE (TIME SET -)			
**********					
	A-4541-926-A	MAIN BOARD, COMPLETE			
		**********			
	3-252-827-01	SCREW (B2.6), (+) BV TAPPING			
	3-261-890-01	HOLDER (LCD)			
	3-261-892-01	HOLDER (ANTENNA)			
	3-382-175-21	KNOB (V)			
		< FILTER >			
BPF1	1-236-022-11	FILTER, BAND PASS			
		< CAPACITOR >			
C3	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C4	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C5	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C6	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C7	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C8	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C9	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C10	1-126-964-11	ELECT	10uF	20%	50V
C11	1-126-963-11	ELECT	4.7uF	20%	50V
C12	1-126-964-11	ELECT	10uF	20%	50V
C13	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C14	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C15	1-126-964-11	ELECT	10uF	20%	50V
C16	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C17	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C18	1-126-935-11	ELECT	470uF	20%	16V
C19	1-126-923-91	ELECT	220uF	20%	10V
C20	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C21	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C22	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C23	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C24	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C25	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C26	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C32	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C33	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C34	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C35	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C51	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C52	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C53	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C54	1-162-911-11	CERAMIC CHIP	6PF	0.5PF	50V
C55	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C56	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C57	1-126-923-91	ELECT	220uF	20%	10V
C58	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C60	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C61	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C101	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C102	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C103	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C105	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C106	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C107	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C108	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C109	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C110	1-126-916-11	ELECT	1000uF	20%	6.3V
C111	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C112	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C113	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C115	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C117	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C119	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C122	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C123	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C124	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C131	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C132	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C133	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C134	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C135	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C136	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C137	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C138	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C203	1-126-926-11	ELECT	1000uF	20%	10V
C204	1-126-934-11	ELECT	220uF	20%	16V
C205	1-126-935-11	ELECT	470uF	20%	16V
C206	1-104-666-11	ELECT	220uF	20%	25V
C251	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< FILTER >			
* CF1	1-577-319-11	FILTER, CERAMIC			
CF2	1-579-632-41	FILTER, CERAMIC			
CF3	1-579-632-41	FILTER, CERAMIC			
		< CONNECTOR >			
CN201	1-568-269-11	SOCKET, CONNECTOR 3P			
* CN251	1-568-268-11	SOCKET, CONNECTOR 2P			
CN501	1-770-640-11	CONNECTOR, FFC/FPC 9P			
		< TRIMMER >			
CT1	1-141-299-11	CAP, CERAMIC TRIMMER	5PF		(AM TRACKING)
CT3	1-141-304-21	CAP, CERAMIC TRIMMER	10PF		(FM TRACKING)
		< DIODE >			
D2	8-719-084-67	DIODE HVU202ATRU			
D3	8-719-084-67	DIODE HVU202ATRU			
D4	6-500-169-01	DIODE KV1610STL1-2			
D51	8-719-083-63	DIODE UDZSTE-1713B			
D52	8-719-991-33	DIODE 1SS133T-77			
D53	8-719-991-33	DIODE 1SS133T-77			
D101	8-719-988-61	DIODE 1SS355TE-17			
D102	8-719-988-61	DIODE 1SS355TE-17			
D103	8-719-988-61	DIODE 1SS355TE-17			
D104	8-719-988-61	DIODE 1SS355TE-17			
D105	8-719-988-61	DIODE 1SS355TE-17			
D106	8-719-991-33	DIODE 1SS133T-77			
D108	6-500-920-01	DIODE SLP-235A-51S1E			
D109	6-500-920-01	DIODE SLP-235A-51S1E			
D110	6-500-920-01	DIODE SLP-235A-51S1E			
D111	6-500-920-01	DIODE SLP-235A-51S1E			
D112	6-500-920-01	DIODE SLP-235A-51S1E			
D201	8-719-063-79	DIODE 1N4002B			
D202	8-719-991-33	DIODE 1SS133T-77			
D203	8-719-083-60	DIODE UDZSTE-174.7B			
D204	8-719-069-54	DIODE UDZSTE-175.1B			
D205	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC1	8-752-050-16	IC CXA1019M			
IC51	8-759-483-40	IC LC72137M-TLM-E			
IC101	6-803-950-01	IC uPD789477GC-A41-8BT			
IC102	6-702-604-01	IC XC61CN2002NR			
IC103	6-703-937-01	IC XC6201P302MR			
		< SHORT >			
JC1	1-216-864-11	SHORT CHIP	0		
JC2	1-216-864-11	SHORT CHIP	0		
JC51	1-216-864-11	SHORT CHIP	0		
JC101	1-216-864-11	SHORT CHIP	0		
JC102	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L1	1-428-951-21	COIL, FERRITE-ROD ANTENNA (MW)			
L2	1-406-922-11	COIL, AIR-CORE			
L3	1-414-690-21	INDUCTOR	82nH		
L4	1-406-485-11	COIL (OSC)			
		< LIQUID CRYSTAL DISPLAY >			
LCD101	1-805-524-11	DISPLAY PANEL, LIQUID CRYSTAL			
		< IC LINK >			
⚠ PS201	1-533-587-21	IC LINK	0.4A	90V	
		< TRANSISTOR >			
Q3	8-729-026-52	TRANSISTOR	2SA1576A-T106-R		
Q4	8-729-905-35	TRANSISTOR	2SC4081-R		
Q101	8-729-029-14	TRANSISTOR	DTC144EUA-T106		
Q102	8-729-905-35	TRANSISTOR	2SC4081-R		
Q103	8-729-905-35	TRANSISTOR	2SC4081-R		
Q104	8-729-905-35	TRANSISTOR	2SC4081-R		
Q105	8-729-905-35	TRANSISTOR	2SC4081-R		
Q106	8-729-905-35	TRANSISTOR	2SC4081-R		
Q107	8-729-905-35	TRANSISTOR	2SC4081-R		
Q108	8-729-905-35	TRANSISTOR	2SC4081-R		
Q109	8-729-905-35	TRANSISTOR	2SC4081-R		
Q201	8-729-011-92	TRANSISTOR	2SC2001TP-K1K2		
Q202	8-729-011-92	TRANSISTOR	2SC2001TP-K1K2		
		< RESISTOR >			
R3	1-216-845-11	METAL CHIP	100K	5%	1/10W
R4	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R5	1-216-817-11	METAL CHIP	470	5%	1/10W
R6	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R7	1-216-821-11	METAL CHIP	1K	5%	1/10W
R8	1-216-845-11	METAL CHIP	100K	5%	1/10W
R9	1-216-833-11	METAL CHIP	10K	5%	1/10W
R10	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R11	1-216-805-11	METAL CHIP	47	5%	1/10W
R12	1-216-809-11	METAL CHIP	100	5%	1/10W
R15	1-216-853-11	METAL CHIP	470K	5%	1/10W
R16	1-216-833-11	METAL CHIP	10K	5%	1/10W
R17	1-216-821-11	METAL CHIP	1K	5%	1/10W
R18	1-216-845-11	METAL CHIP	100K	5%	1/10W

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

MAIN **SWITCH**

Ref. No.	Part No.	Description			Remark
R19	1-216-841-11	METAL CHIP	47K	5%	1/10W
R51	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R52	1-216-797-11	METAL CHIP	10	5%	1/10W
R53	1-216-837-11	METAL CHIP	22K	5%	1/10W
R54	1-216-833-11	METAL CHIP	10K	5%	1/10W
R55	1-216-833-11	METAL CHIP	10K	5%	1/10W
R56	1-216-813-11	METAL CHIP	220	5%	1/10W
R58	1-216-821-11	METAL CHIP	1K	5%	1/10W
R59	1-216-821-11	METAL CHIP	1K	5%	1/10W
R60	1-216-821-11	METAL CHIP	1K	5%	1/10W
R101	1-216-821-11	METAL CHIP	1K	5%	1/10W
R102	1-216-821-11	METAL CHIP	1K	5%	1/10W
R103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R104	1-216-821-11	METAL CHIP	1K	5%	1/10W
R105	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-833-11	METAL CHIP	10K	5%	1/10W
R109	1-216-845-11	METAL CHIP	100K	5%	1/10W
R110	1-216-821-11	METAL CHIP	1K	5%	1/10W
R111	1-216-857-11	METAL CHIP	1M	5%	1/10W
R112	1-216-821-11	METAL CHIP	1K	5%	1/10W
R114	1-216-845-11	METAL CHIP	100K	5%	1/10W
R115	1-216-845-11	METAL CHIP	100K	5%	1/10W
R119	1-216-845-11	METAL CHIP	100K	5%	1/10W
R120	1-216-797-11	METAL CHIP	10	5%	1/10W
R121	1-216-797-11	METAL CHIP	10	5%	1/10W
R122	1-216-797-11	METAL CHIP	10	5%	1/10W
R123	1-216-797-11	METAL CHIP	10	5%	1/10W
R125	1-216-817-11	METAL CHIP	470	5%	1/10W
R126	1-216-813-11	METAL CHIP	220	5%	1/10W
R128	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R129	1-216-809-11	METAL CHIP	100	5%	1/10W
R130	1-216-805-11	METAL CHIP	47	5%	1/10W
R131	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R136	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R137	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
R138	1-216-849-11	METAL CHIP	220K	5%	1/10W
R141	1-216-797-11	METAL CHIP	10	5%	1/10W
R142	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R144	1-216-821-11	METAL CHIP	1K	5%	1/10W
R145	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R146	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R147	1-216-817-11	METAL CHIP	470	5%	1/10W
R148	1-216-813-11	METAL CHIP	220	5%	1/10W
R149	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R150	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R151	1-216-797-11	METAL CHIP	10	5%	1/10W
R152	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R153	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R154	1-216-821-11	METAL CHIP	1K	5%	1/10W
R155	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R156	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W
R159	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R160	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R161	1-216-833-11	METAL CHIP	10K	5%	1/10W
R162	1-216-833-11	METAL CHIP	10K	5%	1/10W
R163	1-216-833-11	METAL CHIP	10K	5%	1/10W
R164	1-216-833-11	METAL CHIP	10K	5%	1/10W
R165	1-216-833-11	METAL CHIP	10K	5%	1/10W
R166	1-216-833-11	METAL CHIP	10K	5%	1/10W
R167	1-216-833-11	METAL CHIP	10K	5%	1/10W
R168	1-216-833-11	METAL CHIP	10K	5%	1/10W
R169	1-216-833-11	METAL CHIP	10K	5%	1/10W
R170	1-216-833-11	METAL CHIP	10K	5%	1/10W
R171	1-216-833-11	METAL CHIP	10K	5%	1/10W
R172	1-216-833-11	METAL CHIP	10K	5%	1/10W
R173	1-216-833-11	METAL CHIP	10K	5%	1/10W
R174	1-216-833-11	METAL CHIP	10K	5%	1/10W
R175	1-216-833-11	METAL CHIP	10K	5%	1/10W
R176	1-216-833-11	METAL CHIP	10K	5%	1/10W
R177	1-216-833-11	METAL CHIP	10K	5%	1/10W
R178	1-216-833-11	METAL CHIP	10K	5%	1/10W
R179	1-216-833-11	METAL CHIP	10K	5%	1/10W
R180	1-216-833-11	METAL CHIP	10K	5%	1/10W
R181	1-216-833-11	METAL CHIP	10K	5%	1/10W
R182	1-216-833-11	METAL CHIP	10K	5%	1/10W
R183	1-216-833-11	METAL CHIP	10K	5%	1/10W
R184	1-216-833-11	METAL CHIP	10K	5%	1/10W
R185	1-216-833-11	METAL CHIP	10K	5%	1/10W
R186	1-216-833-11	METAL CHIP	10K	5%	1/10W
R187	1-216-833-11	METAL CHIP	10K	5%	1/10W
R188	1-216-833-11	METAL CHIP	10K	5%	1/10W
R189	1-216-833-11	METAL CHIP	10K	5%	1/10W
R190	1-216-833-11	METAL CHIP	10K	5%	1/10W
R191	1-216-833-11	METAL CHIP	10K	5%	1/10W
R192	1-216-833-11	METAL CHIP	10K	5%	1/10W
R201	1-216-817-11	METAL CHIP	470	5%	1/10W
R202	1-216-817-11	METAL CHIP	470	5%	1/10W
R203	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R211	1-216-837-11	METAL CHIP	22K	5%	1/10W
R213	1-216-845-11	METAL CHIP	100K	5%	1/10W
R214	1-216-845-11	METAL CHIP	100K	5%	1/10W
R215	1-216-845-11	METAL CHIP	100K	5%	1/10W

< VARIABLE RESISTOR >

RV1	1-227-482-11	RES, VAR, CARBON	50K (VOL◢)

< TRANSFORMER >

T1	1-404-790-11	TRANSFORMER, IF (AM IF)	

< ANTENNA WIRE >

W2	1-754-330-11	ANTENNA (WIRE)	

< VIBRATOR >

X51	1-767-388-11	VIBRATOR, CRYSTAL (75kHz)	
X101	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)	
X102	1-795-054-21	VIBRATOR, CERAMIC (4.192MHz)	

****

*	1-861-132-11	SWITCH BOARD	

****

< RESISTOR >

R193	1-216-833-11	METAL CHIP	10K	5%	1/10W
R194	1-216-833-11	METAL CHIP	10K	5%	1/10W
R195	1-216-833-11	METAL CHIP	10K	5%	1/10W

SWITCH **TRANS**

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S101	1-771-550-11	SWITCH, TACTILE (TUNNG +)	
S102	1-771-550-11	SWITCH, TACTILE (TUNING -)	
S103	1-554-937-11	SWITCH, TACTILE (CLOCK)	
S104	1-771-550-11	SWITCH, TACTILE (ON/BAND)	
S105	1-771-550-11	SWITCH, TACTILE (OFF/ALARM RESET)	
S106	1-554-937-11	SWITCH, TACTILE (SLEEP)	
S107	1-771-550-11	SWITCH, TACTILE (NAP)	
S108	1-554-937-11	SWITCH, TACTILE (STATION.SELECT/PRESET 1)	
S109	1-554-937-11	SWITCH, TACTILE (STATION.SELECT/PRESET 2)	
S110	1-554-937-11	SWITCH, TACTILE (STATION.SELECT/PRESET 3)	
S111	1-554-937-11	SWITCH, TACTILE (STATION.SELECT/PRESET 4)	
S112	1-554-937-11	SWITCH, TACTILE (STATION.SELECT/PRESET 5)	
S113	1-771-550-11	SWITCH, TACTILE (SNOOZE/DATE/SLEEP OFF)	
S114	1-554-937-11	SWITCH, TACTILE (D.S.Y. SUMMER T)	
		< FLAT CABLE >	
W500	1-829-132-11	CABLE, FLEXIBLE FLAT (9 CORE)	
**********			
*	1-861-131-11	TRANS BOARD	
		**********	
		< POWER CORD >	
⚠P201	1-790-431-21	POWER SUPPLY CORD 7.5A 250V	
		< TRANSFORMER >	
⚠T201	1-435-504-11	TRANSFORMER, POWER	
		< TERMINAL >	
TML201	1-535-771-31	TERMINAL	
TML202	1-535-771-31	TERMINAL	
**********			
		MISCELLANEOUS	
		**********	
LCD101	1-805-524-11	DISPLAY PANEL, LIQUID CRYSTAL	
L1	1-428-951-21	COIL, FERRITE-ROD ANTENNA (MW)	
⚠P201	1-790-431-21	POWER SUPPLY CORD (7.5A/250V)	
SP1	1-529-456-13	SPEAKER (6.6cm)	
⚠T201	1-435-504-11	TRANSFORMER, POWER	
W2	1-754-330-11	ANTENNA (WIRE)	
**********			
		ACCESSORIES	
		**********	
	3-263-574-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH)	

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

MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2004.03	New