ZS-S50CP

SERVICE MANUAL

AEP Model
E Model

Ver. 1.1 2007.08

Model Name Using Similar Optical Pick-up Block	NEW
Optical Pick-up Block Type	KSM-213CCP

SPECIFICATIONS

CD player section

System
  Compact disc digital audio system
Laser diode properties
  Emission duration: Continuous
  Laser output: Less than 44.6 µW
  (This output is the value measured at a distance of about 200 mm from the objective lens surface on the optical pick-up block with 7 mm aperture.)
Number of channels
  2
Frequency response
  20 - 20 000 Hz +1/–1 dB
Wow and flutter
  Below measurable limit

Radio section

Frequency range
  FM: 87.5 - 108 MHz
  AM:
  except Mexican model:
    531 - 1 611 kHz (9 kHz step)
    530 - 1 610 kHz (10 kHz step)
  Mexican model:
    530 - 1 710 kHz
IF
  FM: 10.7 MHz
  AM: 450 kHz
Antennas
  FM: Telescopic antenna
  AM: Built-in ferrite bar antenna

General

Speaker
  Full range: 10 cm dia., 6 Ω, cone type (2)
Input
  AUDIO IN jack (stereo minijack): Minimum input level 245 mV
Outputs
  Headphones jack (stereo minijack)
  For 16 - 64 Ω impedance headphones
Power output
  4.5 W + 4.5 W (at 6 Ω, 10% harmonic distortion)
Power requirements
  For player:
  Mexican model: 120 V AC, 60 Hz
  Singapore model: 230 - 240 V AC, 50 Hz
  Other models: 230 V AC, 50 Hz
  9 V DC, 6 R20 (size D) batteries
  For remote control:
  3 V DC, 2 R6 (size AA) batteries
Power consumption
  AC 16 W
Battery life
  For player:

FM Radio reception
Sony R20P: approx. 30 h
Sony alkaline LR20: approx. 60 h

CD playback
Sony R20P: approx. 8 h
Sony alkaline LR20: approx. 20 h

  It is recommended that you use alkaline batteries.
Dimensions
  Approx. 480 × 156 × 250 mm (w/h/d)
  (incl. projecting parts)
Mass
  Approx. 4.3 kg (incl. batteries)
Supplied accessories
  AC power cord (1)
  Remote control (1)

Design and specifications are subject to change without notice.

PERSONAL AUDIO SYSTEM

9-887-662-02
2007H05-1

Sony Corporation
Personal Audio Division
Published by Sony Techno Create Corporation

SONY

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.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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.

TABLE OF CONTENTS

SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

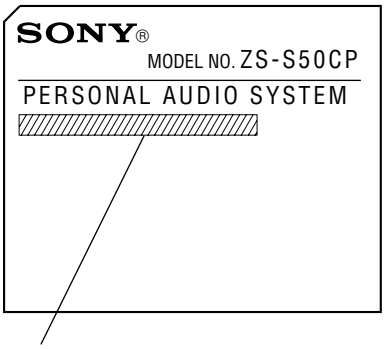
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION

– Model Number Label –



Mexican model: AC: 120 V 60 Hz 16 W
Singapore model: AC: 230 - 240 V ∼ 50 Hz 16 W
Other models: AC: 230 V ∼ 50 Hz 16 W

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

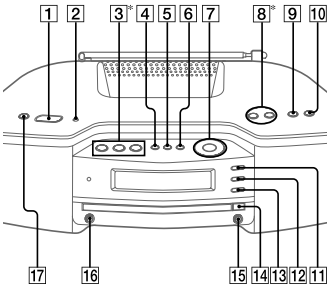
Unleaded solder has the following characteristics.

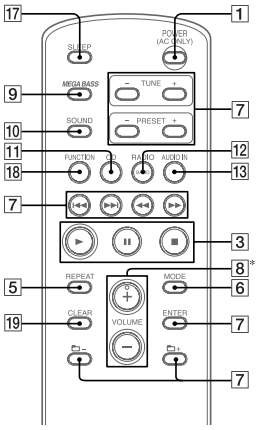
- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SECTION 2
GENERAL

This section is extracted from instruction manual.

Basic Operations





* VOLUME + 8 and ► 3 on the unit have a tactile dot.

Before using the unit

To turn on/off the power
Press POWER 1.

To adjust the volume
Press VOLUME +, – 8.

To listen through headphones
Connect the headphones to the ∩ (headphones) jack 16.

To select the sound characteristic
Press SOUND 10 repeatedly to select the audio emphasis you want.

Choose	To get
	Powerful, clean sounds, emphasizing low and high range audio
	Light, bright sounds emphasizing high and middle range audio
	Percussive sounds, emphasizing bass audio
	The presence of vocals, stressing middle range audio
	The whole dynamic range for music such as classical music

To reinforce the bass sound
Press MEGA BASS 9 to display "MEGA BASS" in the display.
To return to normal sound, press MEGA BASS 9 to disappear from the display.

Playing a CD/MP3 disc

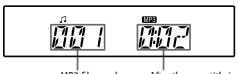
1 Press CD 11 on the unit.
"CD" appears in the display.

2 Press ⏏ 14 on the unit, and place a disc with the label side up on the CD tray.
To close the CD tray, press ⏏ 14 on the unit.

3 Press ► 3 on the unit.
The unit plays all the tracks/MP3 files once.
When you place MP3 discs, "MP3" appears in the display after the unit reads the file information.

Audio CD

MP3 disc



* If the playing time is more than 100 minutes, it appears "--:--" in the display.

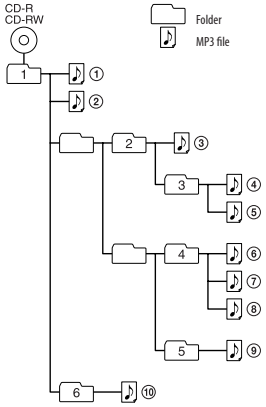
To	Press
Pause playback	❚❚ 3. To resume play, press it again.
Stop playback	■ 3.
Go to the next track/MP3 file	▶▶•▶▶I (▶▶I on the remote) 7.
Go back to the previous track/MP3 file	◀◀•I◀◀ (I◀◀ on the remote) 7.
Select a folder on an MP3 disc	🗀/PRESET + (🗀+ on the remote) 7 to go forward and 🗀/PRESET – (🗀– on the remote) 7 to go backward.
Locate a point while listening to the sound	▶▶•▶▶I (forward) or ◀◀•I◀◀ (backward) 7 while playing and hold it until you find the point. (On the remote, use ▶▶ or ◀◀ 7)
Locate a point while observing the display	▶▶•▶▶I (forward) or ◀◀•I◀◀ (backward) 7 in pause and hold it until you find the point. (On the remote, use ▶▶ or ◀◀ 7)
Remove the CD	⏏ 14.

On the remote
To select CD function, press FUNCTION 18 repeatedly to select "CD" in the display.

Tips
- Playback starts from the track/MP3 file you last stopped playing (Resume play). During stop, the track/MP3 file number to be played is displayed.
- To cancel the resume play (to start play from the beginning of the first track/MP3 file), press ■ 3 while the CD is stopped. When you open the CD tray or turn off the unit, the resume play is also canceled.

Notes
- When pressing 7 (▶▶•▶▶I, ◀◀•I◀◀, ↑, ↓) on the unit, press the marking at the part near the outer edge.
- You cannot locate a specific track if "SHUF" or "PGM" is lit in the display. Press ■ 3, and then press MODE 6 repeatedly until "SHUF" and "PGM" disappears from the display.

Example of folder structure and playing order
The playing order of the folders and files is as follows:



Notes on MP3 discs
- When the disc is inserted, the unit reads all the files on that disc. During this time, "READING" is displayed. If there are many folders or non-MP3 files on the disc, it may take a long time for play to begin or for the next MP3 file to start play.
  We recommend that you do not save unnecessary folders or files other than MP3 ones in the disc to be used for MP3 listening.
- A folder that does not include an MP3 file is skipped.
- Maximum number of files: 255
  Maximum number of folders: 150 (including the root folder)
  Maximum number of folders and files in total: 300
  Maximum directory levels: 8
- Folder names and file names can be displayed with up to 32 characters including quotation marks.
- The characters A - Z, 0 - 9, and _ can be displayed on this unit. Other characters are displayed as "_".
- This unit conforms to Version 1.0, 1.1, 2.2, 2.3 and 2.4 of the ID3 tag format. When the file has the ID3 tag information, "song title", "artist name" and "album name" can be displayed. If the file does not have the ID3 tag information, "NO TITLE" appears instead of song title, "NO ARTIST" appears instead of artist name and "NO ALBUM" appears instead of album name. The ID3 tag information can be displayed with up to 30 characters.
- The characters may not be displayed correctly according to the character code.
- When naming, be sure to add the file extension "mp3" to the file name.
- If you put the extension "mp3" to a file other than an MP3 file, the unit cannot recognize the file properly and will generate random noise that could damage your speakers.
- The file name does not correspond to the ID3 tag.

Listening to the radio

To listen to FM or AM

1 Press RADIO BAND•AUTO PRESET 12 on the unit (RADIO•BAND 12 on the remote) repeatedly to select FM or AM.

2 Hold down TUNE + or – 7 until the frequency digits begin to change in the display.
The unit automatically scans the radio frequencies and stops when it finds a clear station.
If you cannot tune in a station, press TUNE + or – 7 repeatedly to change the frequency step by step.
When an FM stereo broadcast is received, "ST" appears.

Tip
If the FM broadcast is noisy, press MODE 6 until "MONO" appears in the display and the radio will play in monaural.

Changing the AM tuning interval (except Mexican model)
If you need to change the AM tuning interval, do the following:

1 Press RADIO BAND•AUTO PRESET 12 on the unit until "AM" is displayed.

2 Press ENTER 7 on the unit for 2 seconds.

3 Press RADIO BAND•AUTO PRESET 12 on the unit for 2 seconds.
"9K STEP" or "10K STEP" flashes.

4 Press TUNE + or – on the unit to select "9K STEP" for 9 kHz interval or "10K STEP" for 10 kHz interval.

5 Press ENTER 7 on the unit.

After changing the tuning interval, you need to reset your preset AM radio stations.

Other Operations

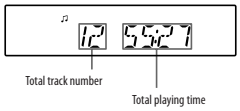
Using the display

You can check information about the CD using the display.

Checking the information of an audio CD

To check the total track number and playing time of the CD

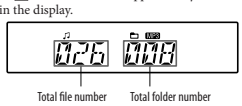
Press ■ 3 to stop the CD playback.



Checking the information of an MP3 disc

To check the total folder number and total file number on the CD

Press ■ 3 while the CD is stopped, and you can check them in the display.



To check file information

Press DISPLAY 4 on the unit while playing an MP3 disc. The display changes as follows:

The current file number and playing time
↓
The song title (♫)
↓
The artist name (👤)
↓
The album name (🗀)

Playing tracks/MP3 files repeatedly

(Repeat Play)

You can play tracks/MP3 files repeatedly in normal, Shuffle or Program play modes.

1 Press CD 11.
"CD" appears in the display.

2 Proceed as follows.

To repeat	Do this
A single track/MP3 file	1 Press REPEAT 5 until "↻ 1" appears. 2 Press I◀◀•◀◀ or ▶▶•▶▶I (I◀◀ or ▶▶I on the remote) 7 to select the track/MP3 file that you want to repeat. 3 Press ► 3.
All tracks/ MP3 files on the CD	1 Press REPEAT 5 until "↻" appears. 2 Press ► 3.
A selected folder (MP3 disc only)	1 Press MODE 6 until "🗀" appears, and then press REPEAT 5 until "↻" appears. 2 Select the folder by pressing 🗀/PRESET + or – (🗀 + or – on the remote) 7. 3 Press ► 3.
Tracks/MP3 files in random order	1 Select Shuffle Play (see "Playing tracks/MP3 files in random order"). 2 Press REPEAT 5 until "SHUF" and "↻" appear. 3 Press ► 3.
Files in a selected folder in random order (MP3 disc only)	1 Start Folder Shufle Play (see "Playing tracks/ MP3 files in random order"). 2 Press REPEAT 5 on the unit until "↻", "SHUF" and "🗀" appear. 3 Press ► 3.
Programed tracks/MP3 files	1 Program tracks/MP3 files (see "Creating your own program"). 2 Press REPEAT 5 until "↻" and "PGM" appear. 3 Press ► 3.

On the remote

To select the CD function, press FUNCTION 18 repeatedly until "CD" appears in the display.

To cancel Repeat Play

Press REPEAT 5 until "↻" disappears from the display.

Playing tracks/MP3 files in random order (Shuffle Play)

You can play tracks/MP3 files in random order. When playing an MP3 disc, you can also play MP3 files in a selected folder in random order (Folder Shuffle Play).

1 Press CD 11.
"CD" appears in the display.

2 Press MODE 6 until "SHUF" appears in the display.
When you select Folder Shuffle Play (MP3 disc only), press MODE 6 on the unit until "🗀" and "SHUF" appear in the display. Then press 🗀/PRESET + or – 7 on the unit to select a folder you want.

3 Press ► 3 on the unit to start Shuffle Play.

On the remote

To select the CD function, press FUNCTION 18 repeatedly until "CD" appears in the display.

To cancel Shuffle Play

Stop playing first. Then press MODE 6 repeatedly until "SHUF" disappears from the display.

Tips

- During Shuffle Play, you cannot select the previous track/MP3 file by pressing ◀◀•I◀◀ (I◀◀ on the remote) 7.
- The resume function does not work during Shuffle Play.

Creating your own program

(Program Play)

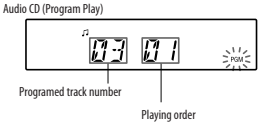
You can arrange the playing order of up to 20 tracks on a CD.

1 Press CD 11.
"CD" appears in the display.

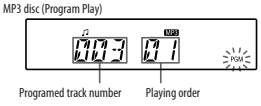
2 Press MODE 6 repeatedly until "PGM" flashes in the display.

3 Press ◀◀•I◀◀ or ▶▶•▶▶I (I◀◀ or ▶▶I on the remote) 7 then press ENTER 7 for the track/MP3 files you want to program in the order you want. For MP3 files, press 🗀/PRESET + or – 7 first and then press ENTER 7.

Audio CD (Program Play)



MP3 disc (Program Play)



4 Press ► 3 to start Program Play.

On the remote

To select the CD function, press CD 11.

To cancel Program Play

Stop playing first. Then press MODE 6 repeatedly until "PGM" disappears from the display.

To delete the last track of the program

Press CLEAR 19 on the remote while the player is stopped.

To check the order of tracks before play

Press ENTER 7.
Every time you press the button, the track number appears in the programed order.

To change the current program

Press ■ 3 once if the CD is stopped and twice if the CD is playing. The current program will be erased. Then create a new program following the programing procedure.

Tips

- If you try to program 21 tracks/MP3 files or more, "FULL" will appear in the display.
- You can play the same program again, since the program is saved until you open the CD tray or turn off the power of the unit.
- The resume function does not work during Program Play.

Presetting radio stations

You can store radio stations into the unit's memory. You can preset up to 30 radio stations, 20 for FM and 10 for AM in any order.

1 Press RADIO BAND•AUTO PRESET 12 on the unit to select the band.

2 Hold down RADIO BAND•AUTO PRESET 12 on the unit for 2 seconds until "AUTO" flashes in the display.

3 Press ENTER 7 while "AUTO" flashes in the display.
The stations are stored in memory from the lower frequencies to the higher ones.

If a station cannot be preset automatically

You need to preset a station with a weak signal manually.

1 Press RADIO BAND•AUTO PRESET 12 on the unit to select the band.

2 Tune in a station you want.

3 Hold down ENTER 7 on the unit for 2 seconds until the preset number flashes in the display.

4 Press 🗀/PRESET + or – 7 on the unit until the preset number you want for the station flashes in the display.

5 Press ENTER 7 on the unit.
The new station replaces the old one.

On the remote

1 Press RADIO•BAND 12 repeatedly until the band you want appears in the display.

2 Tune in a station you want.

3 Hold down ENTER 7 for 2 seconds until the preset number flashes in the display.

4 Press PRESET + or – 7 until the preset number you want for the station flashes in the display.

5 Press ENTER 7.
The new station replaces the old one.

Tip

The preset radio stations remain in memory even if you unplug the AC power cord or remove the batteries.

Playing preset radio stations

1 Press RADIO BAND•AUTO PRESET 12 on the unit (RADIO•BAND 12 on the remote) to select the band.

2 Press 🗀/PRESET + or – 7 on the unit (PRESET + or – 7 on the remote) to tune in the stored station.

Falling asleep to music

1 Play the music source you want.

2 Press SLEEP 17 on the unit to display "SLEEP".

3 Press SLEEP 17 on the unit to select the minutes until the unit goes off automatically.
Each time you press the button, the indication changes as follows:
"AUTO*" → "60MIN" → "30MIN" → "20MIN" → "10MIN" → "OFF".
* When you select "AUTO", the CD stops playing in 90 minutes at most and the unit goes off automatically. When you are listening to the radio, the radio goes off in 90 minutes.
If 4 seconds have passed after you pressed SLEEP 17, the minutes in the display are entered.
When the preset time has passed, the unit goes off automatically.

To cancel the sleep function

Press POWER 1 to turn off the power.

Tip

The display's backlight goes off while sleeping time is active.

Connecting optional component

You can enjoy the sound from a PC, TV, VCR, portable digital music player, etc. through the speakers of this unit. Be sure to turn off the power of each component before making any connections.
For details, refer to the instruction manual of the component to be connected.

1 Connect the AUDIO IN jack 15 on the unit to the line output jack of the portable digital music player or other components using an audio connecting cable* (not supplied).
* For a PC: use a cable which fills the connector of your PC.
For a TV or VCR: use a cable with a stereo-mini plug on one end and two phono plugs on the other end.
For a portable digital music player: use a cable with a stereo-mini plug on both ends.

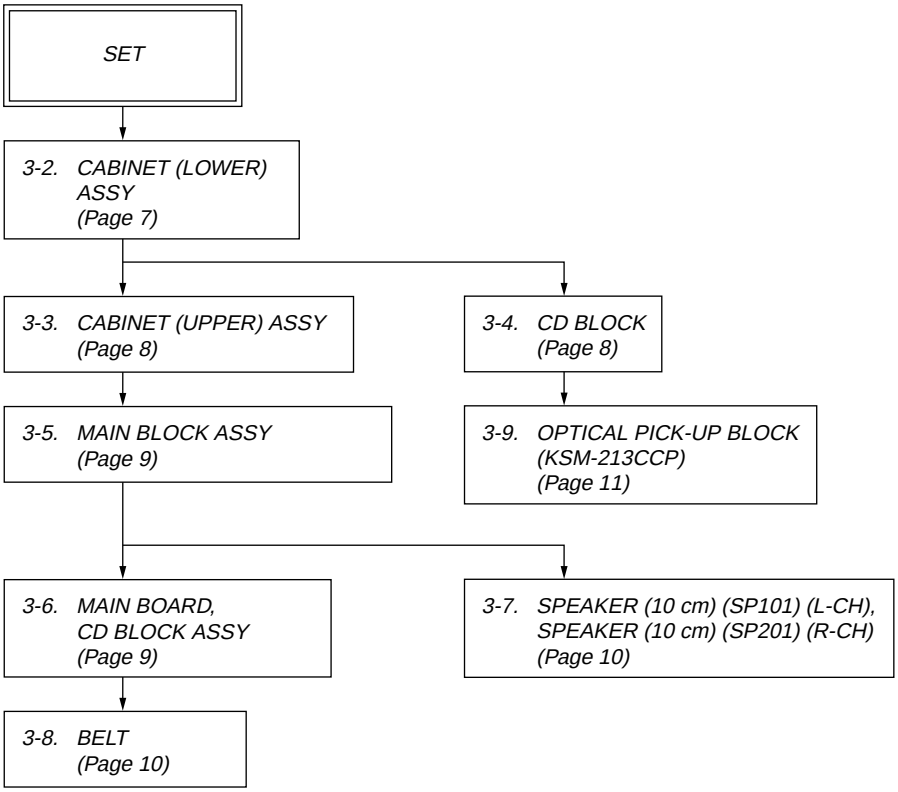
2 Turn the unit and the connected component on.

3 Press AUDIO IN 13 and start playing sound on the connected component.
The sound from the connected component is output from the speakers.

SECTION 3
DISASSEMBLY

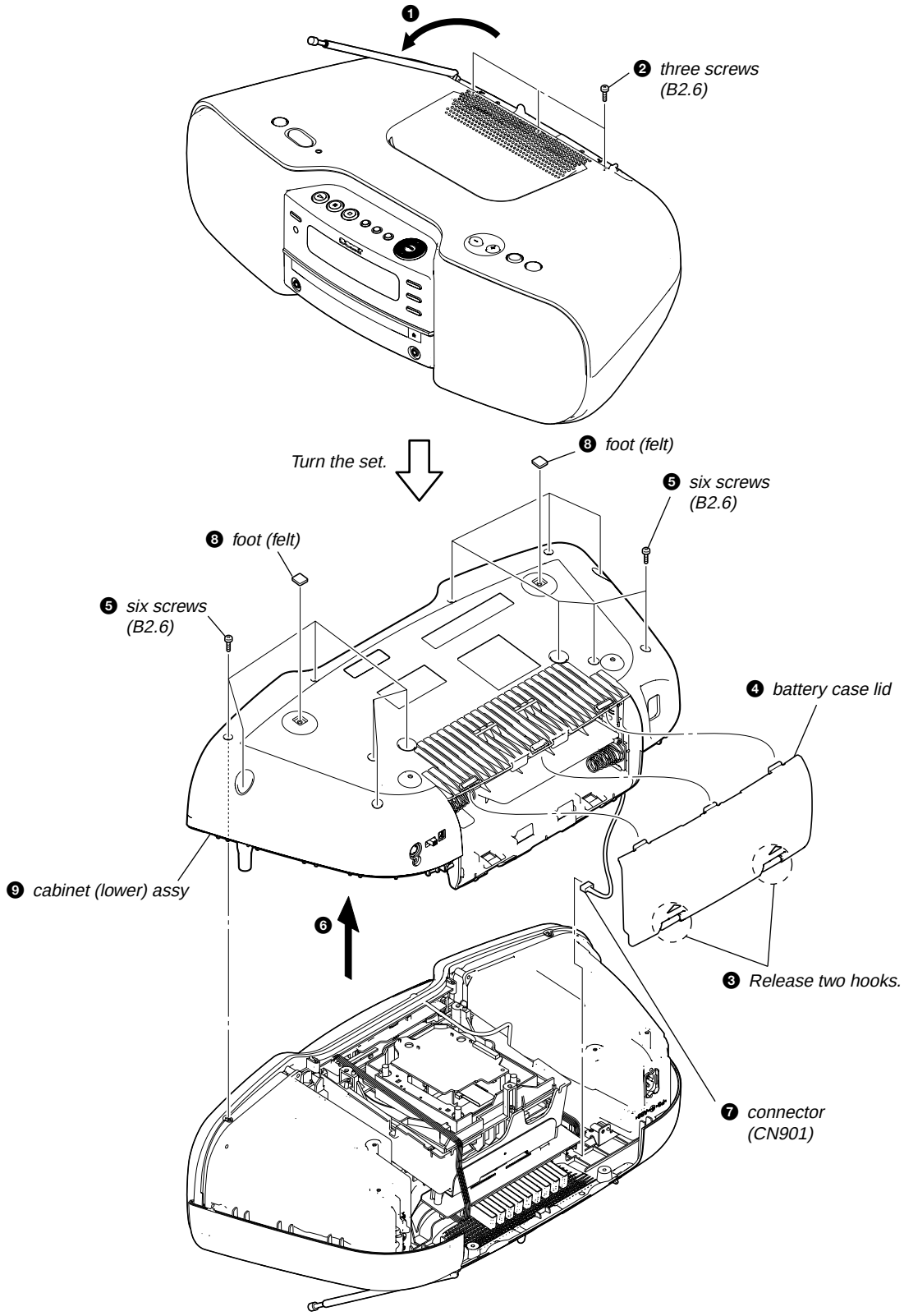
- This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

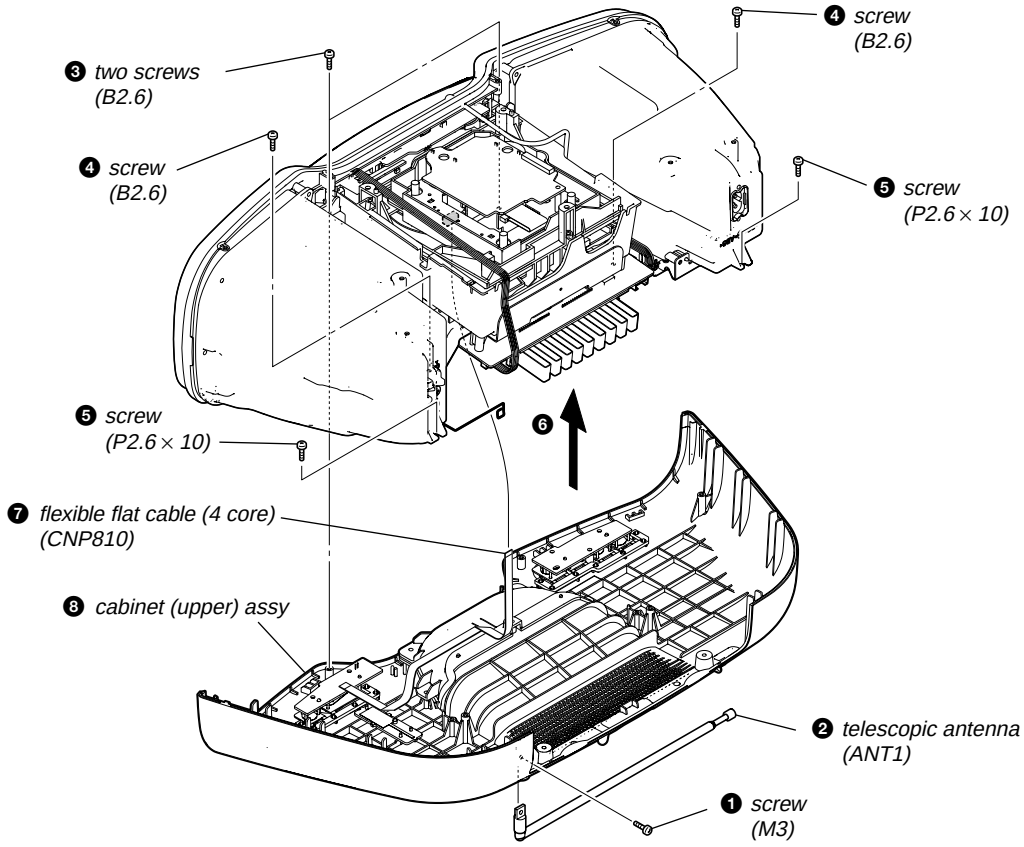


Note: Follow the disassembly procedure in the numerical order given.

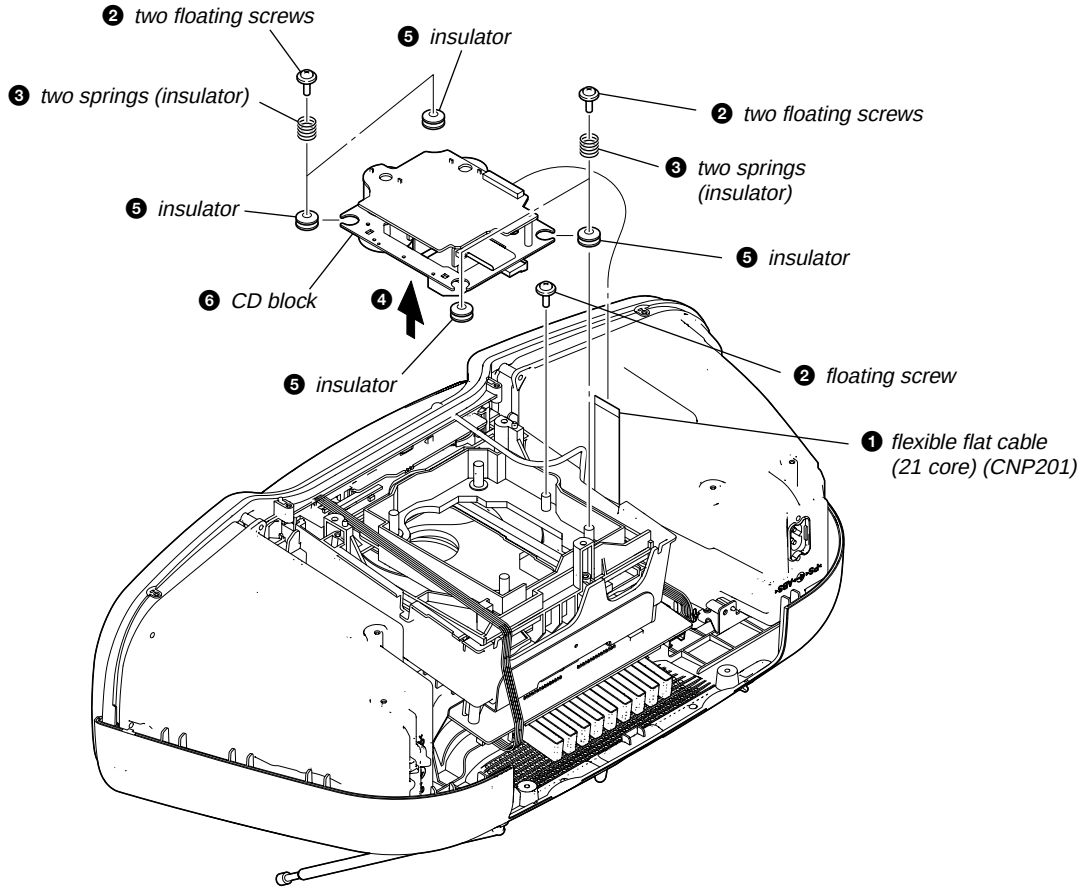
3-2. CABINET (LOWER) ASSY



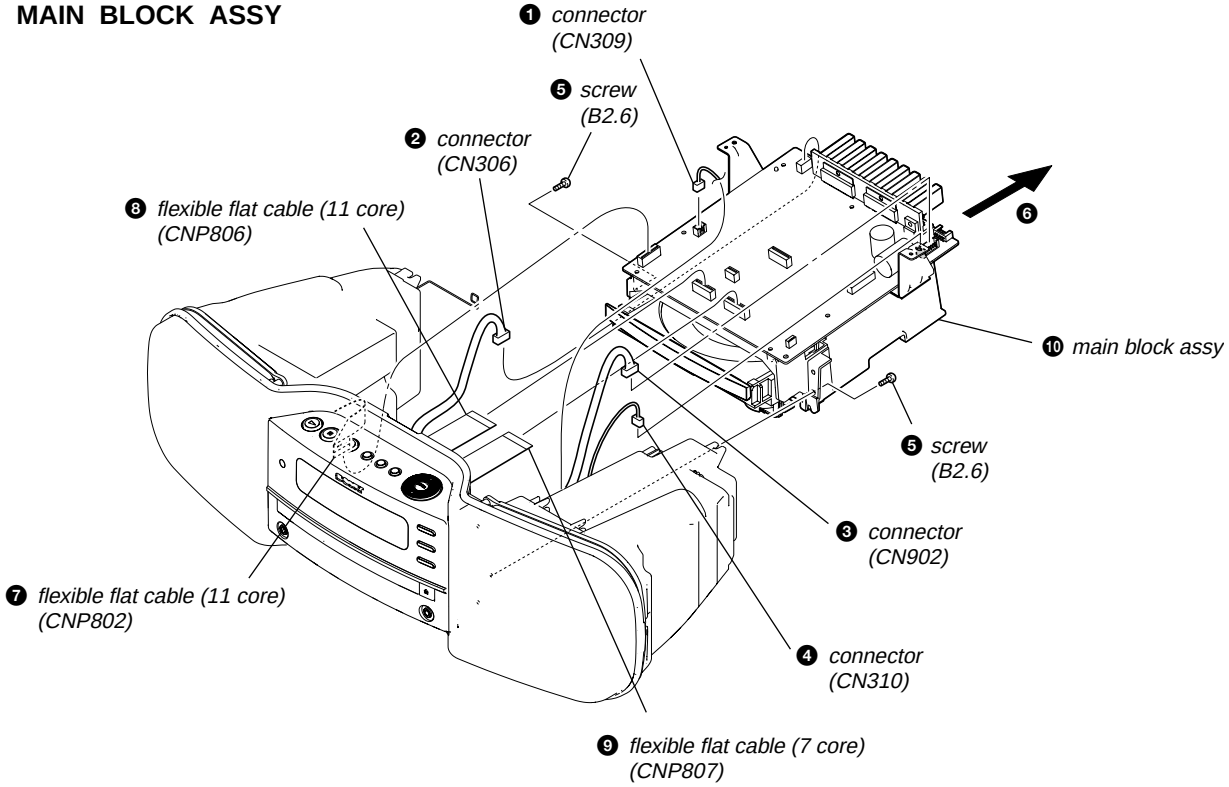
3-3. CABINET (UPPER) ASSY



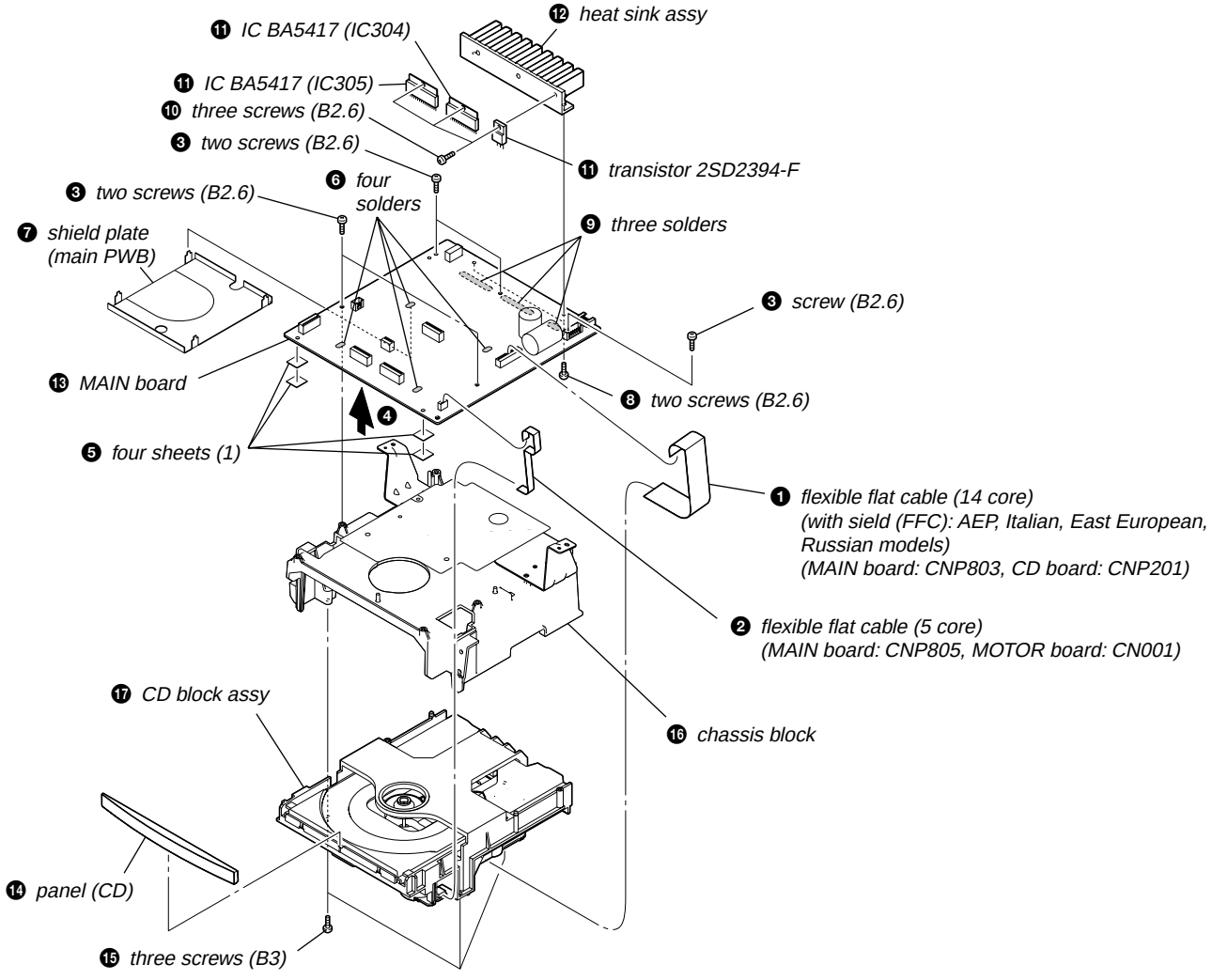
3-4. CD BLOCK



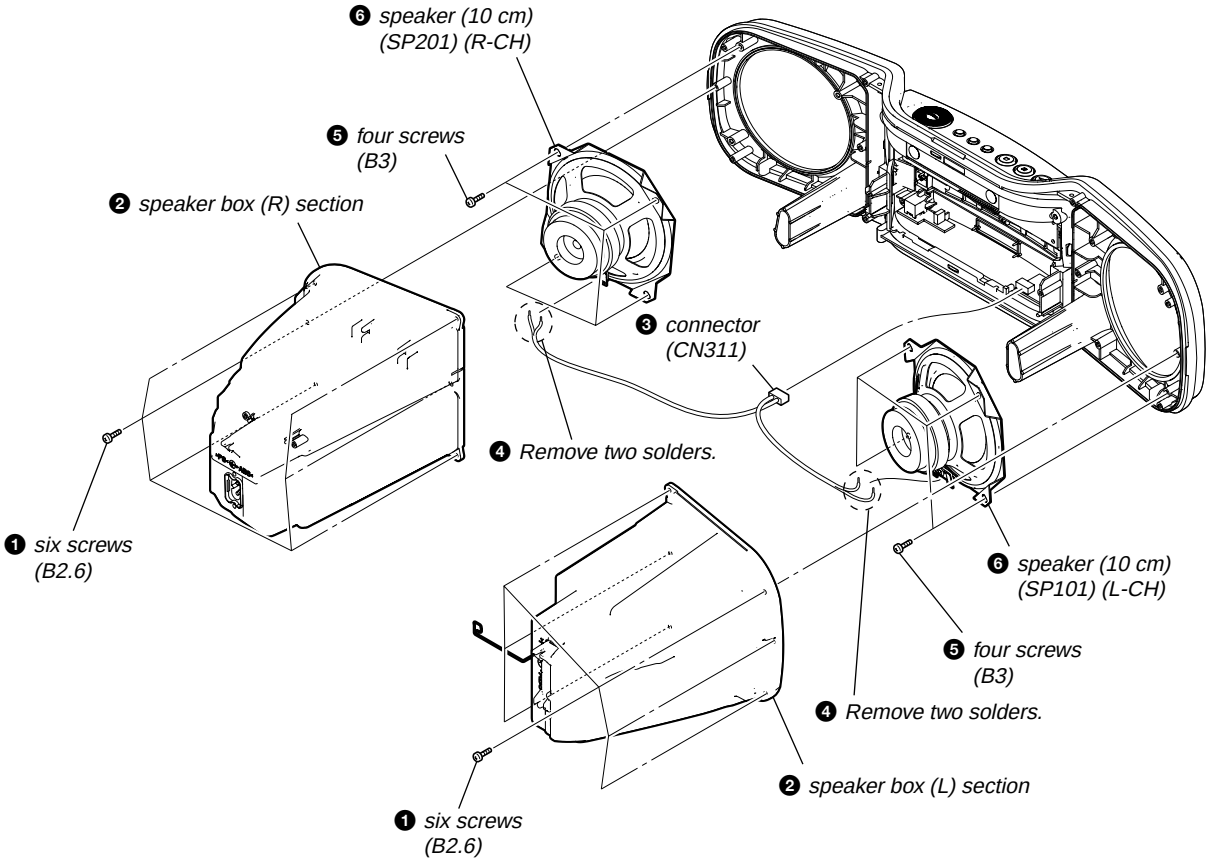
3-5. MAIN BLOCK ASSY



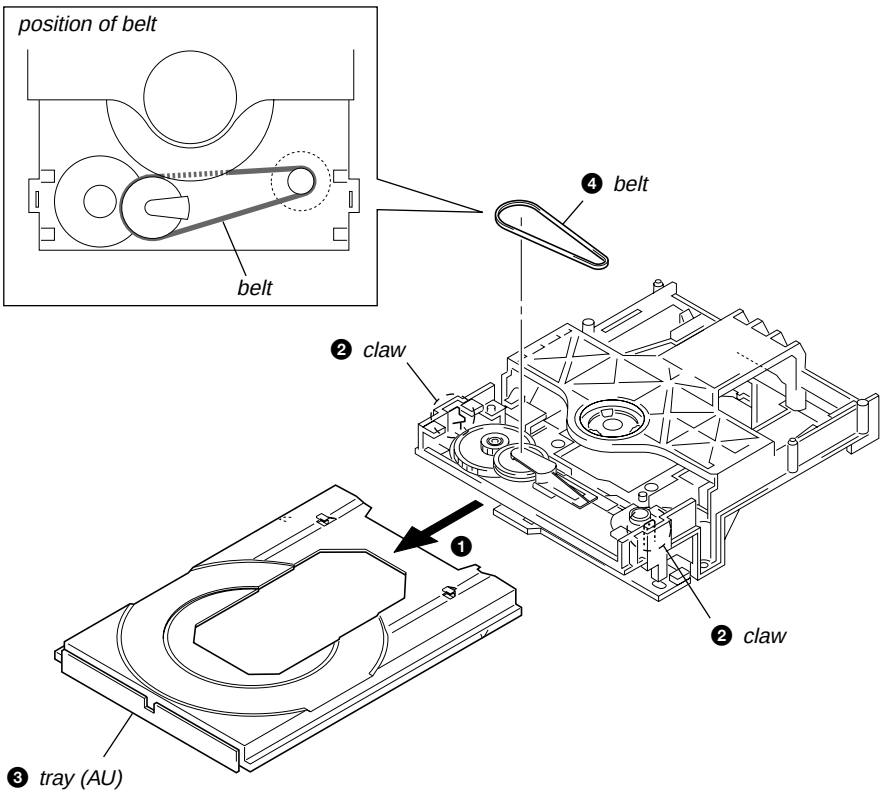
3-6. MAIN BOARD, CD BLOCK ASSY



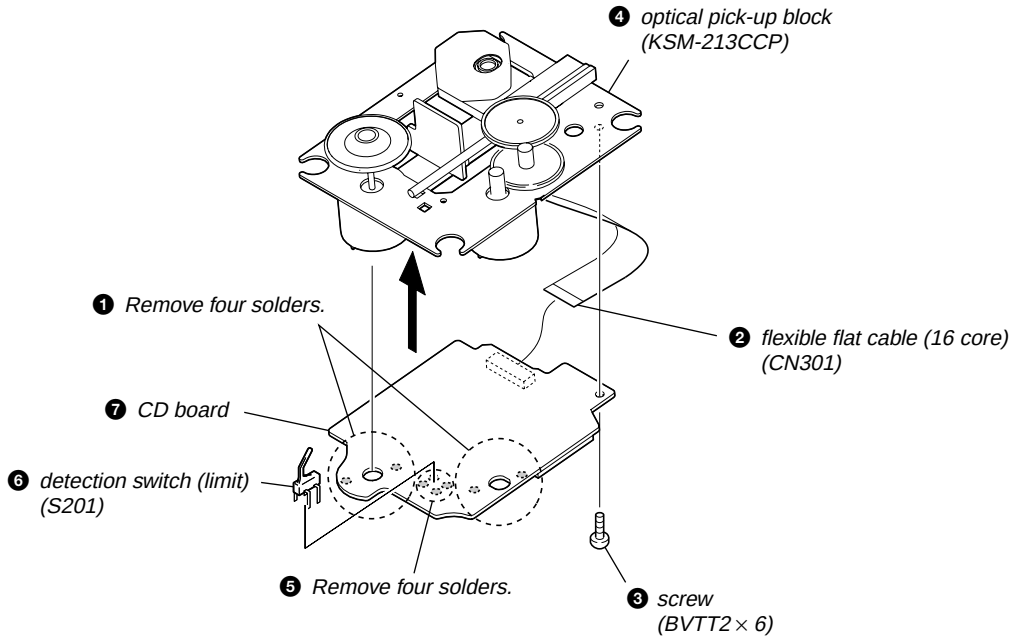
3-7. SPEAKER (10 cm) (SP101) (L-CH), SPEAKER (10 cm) (SP201) (R-CH)



3-8. BELT



3-9. OPTICAL PICK-UP BLOCK (KSM-213CCP)



SECTION 4
TEST MODE

COLD RESET

Procedure:

1. In the power on status, press three buttons of [ENTER], [■], [POWER] simultaneously.
2. The set is reset and display "RESET", then becomes standby status.

PANEL TEST MODE

Procedure:

1. In the standby mode or power on status, press three buttons of [ENTER], [SLEEP], [DISPLAY] simultaneously.
2. When enter this mode, it turns on all segments of the liquid crystal display.
3. In this mode, it displays as follows.
   [BAND] button : Date/Version display
   [AUDIO IN] button: Destination display
4. To exit from this mode, press three buttons of [ENTER], [SLEEP], [DISPLAY] simultaneously.

CHANGE OF THE AM TUNING INTERVAL (except Mexican model)

Procedure:

1. Press the [POWER] button to turn the power on.
2. Press the [BAND] button to select "AM".
3. Press the [ENTER] button for 2 seconds, and then press the [BAND] button for 2 seconds, "9K STEP" or "10K STEP" is displayed on the liquid crystal display.
4. The AM tuning interval is selected by pressing the [TUNE +]/[TUNE —] button, and it is fixed by pressing the [ENTER] button.

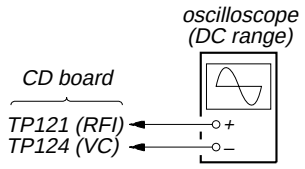
SECTION 5
ELECTRICAL ADJUSTMENTS

CD SECTION

Note:

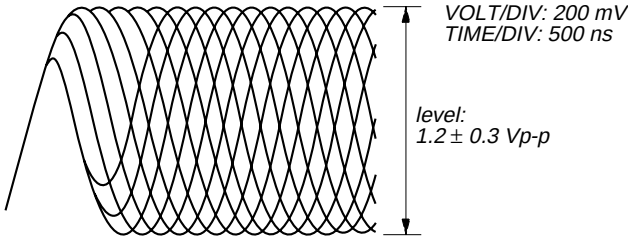
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Check the focus bias check when optical pick-up block is replaced.

FOCUS BIAS CHECK



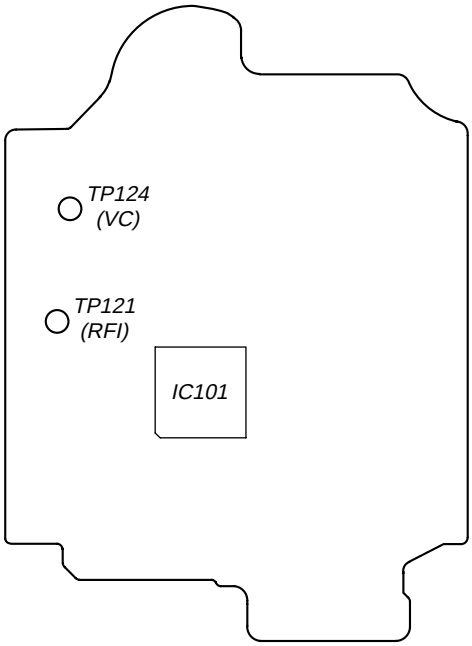
Procedure :

1. Connect oscilloscope to TP121 (RFI) and TP124 (VC) on the CD board.
2. Press the [POWER] button to turn the power ON and press the [CD] button to set the "CD" function.
3. Set disc (YEDS-18) on the tray and press the [►] button to playback.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.



Checking Location:

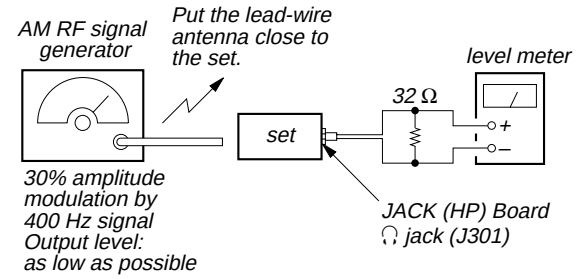
– CD Board (Conductor Side) –



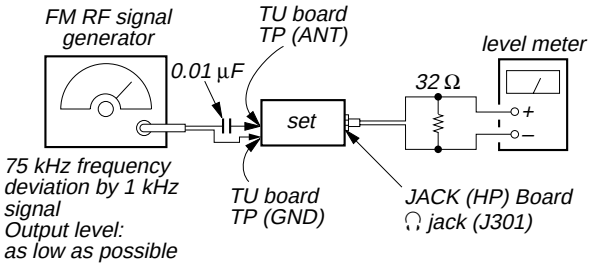
TUNER SECTION

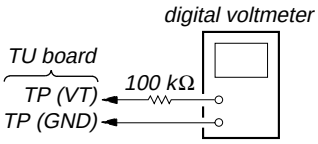
0 dB=1 µV

[AM]
Setting:
Function: RADIO
Band: AM



[FM]
Setting:
Function: RADIO
Band: FM





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

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

( ): except Mexican model

AM FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L4	530 kHz (531 kHz)	1.0 ± 0.3 V
Confirmation	1,710 kHz (1,611 kHz)	5.2 ± 0.8 V (4.8 ± 0.6 V)

( ): except Mexican model

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L3	620 kHz (621 kHz)
CT3	1,400 kHz (1,404 kHz)

FM IF ADJUSTMENT	
Adjust for a minimum reading on level meter	
T2	10.7 MHz

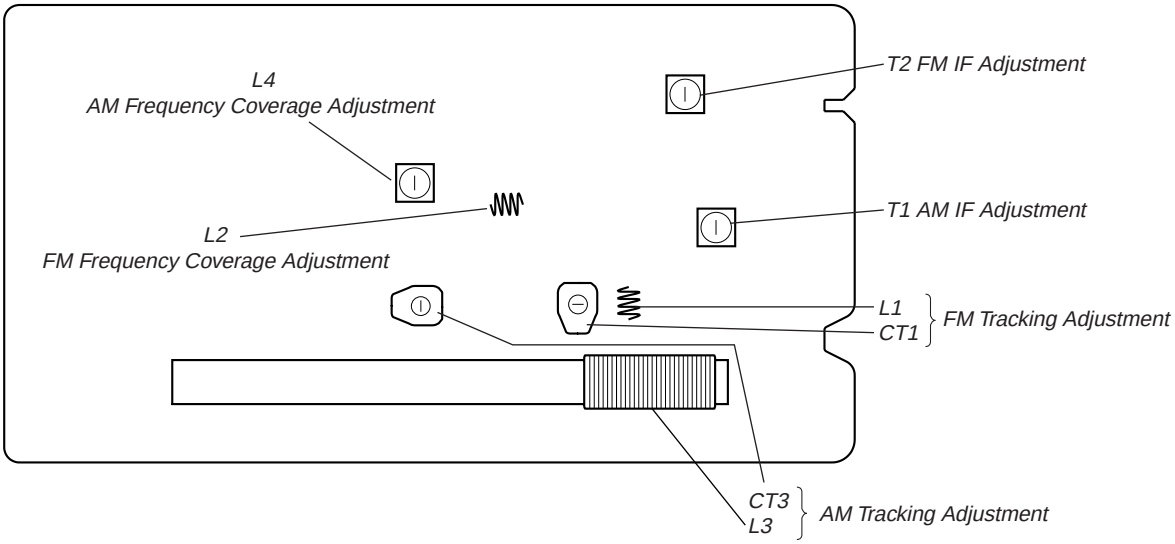
FM FREQUENCY COVERAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L2	108 MHz	3.0 ± 0.3 V
Confirmation	87.5 MHz	1.3 ± 0.4 V

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L1	87.5 MHz
CT1	108 MHz

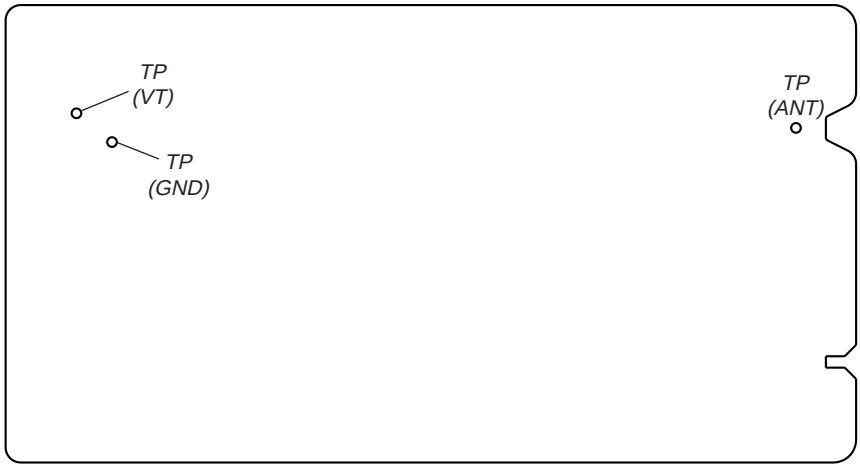
Adjustment and Connecting Locations: TU board (see page 14)

Adjustment and Connecting Location:

– TU Board (Component Side) –

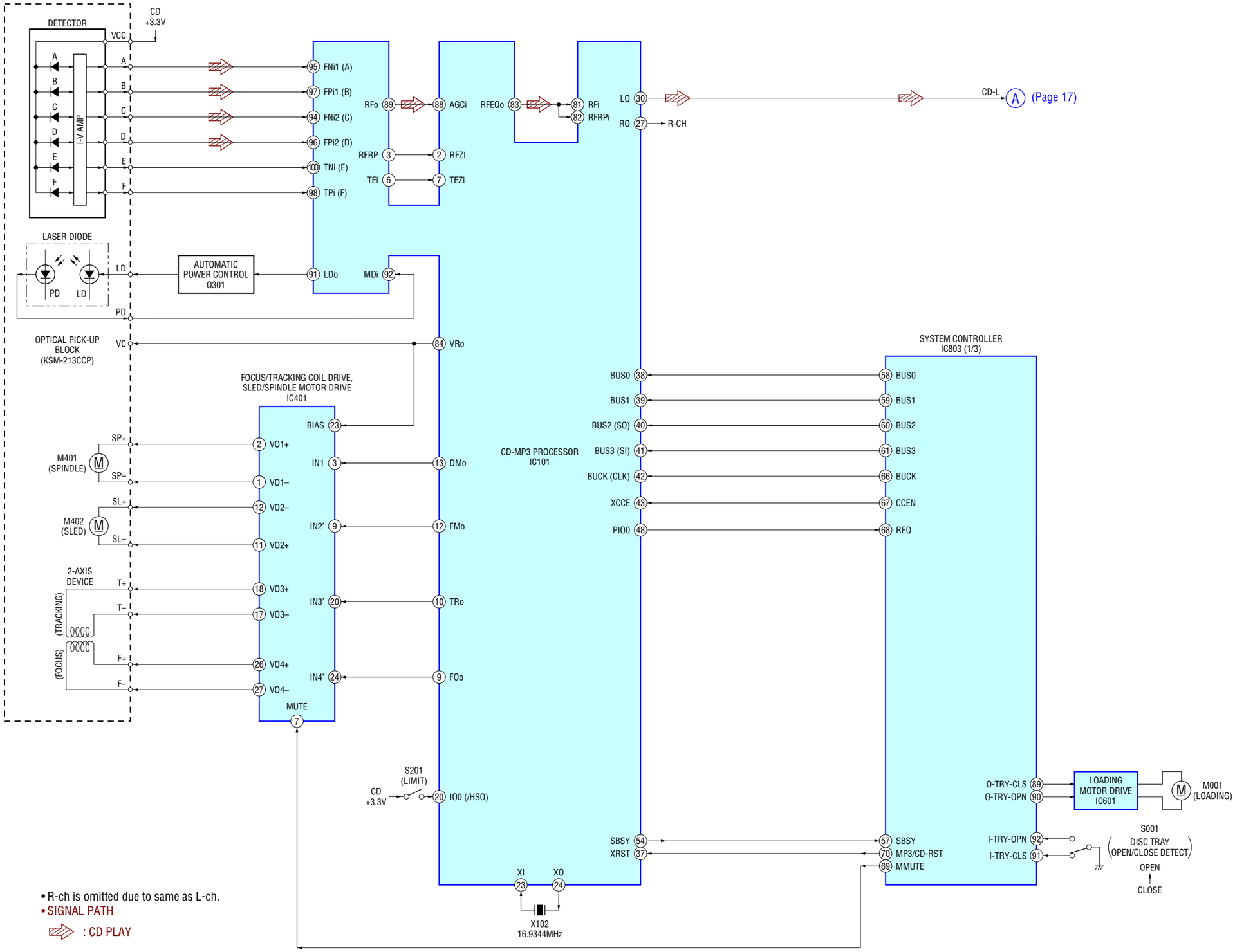


– TU Board (Conductor Side) –



SECTION 6
DIAGRAMS

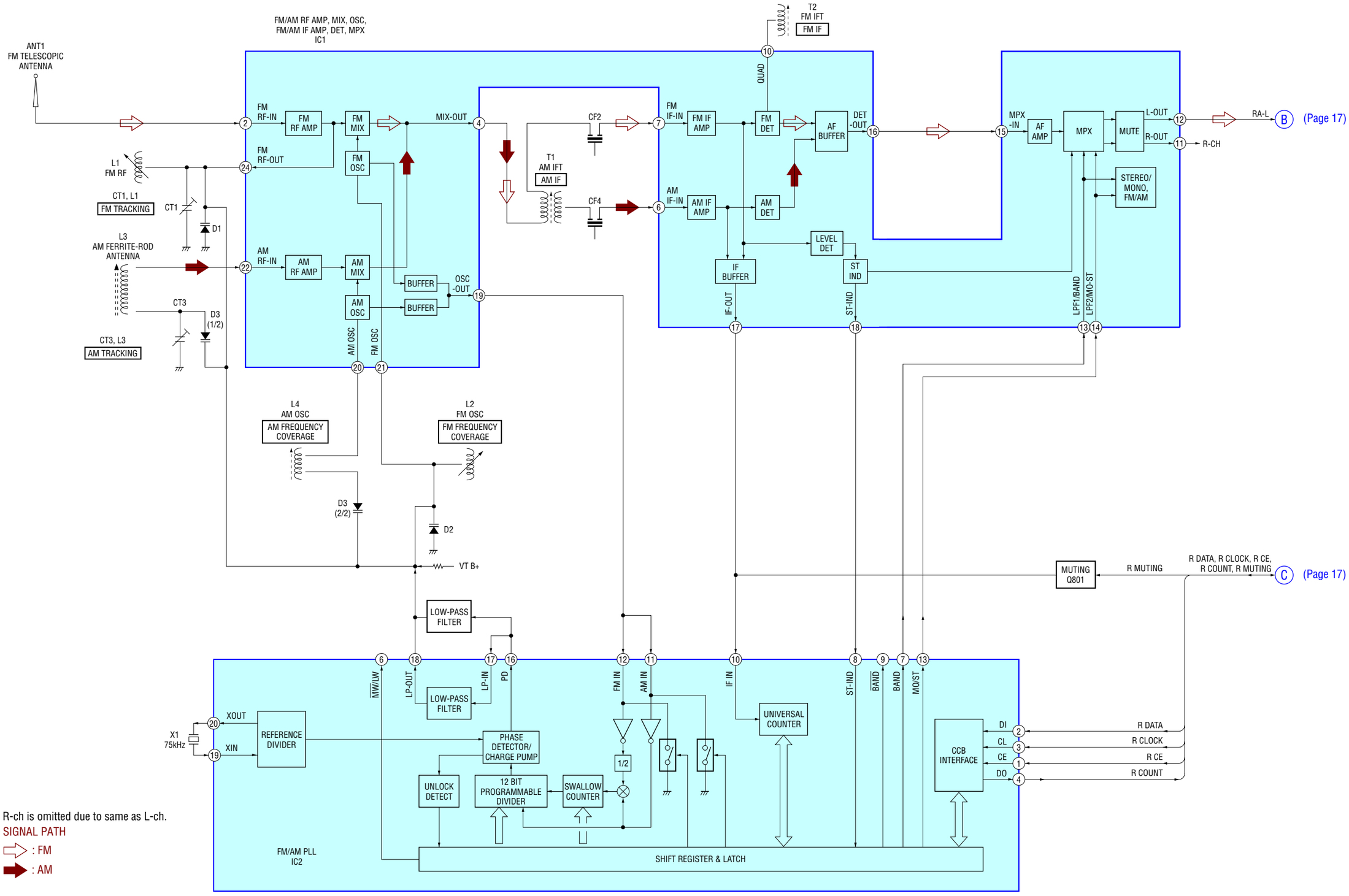
6-1. BLOCK DIAGRAM – CD SERVO Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH

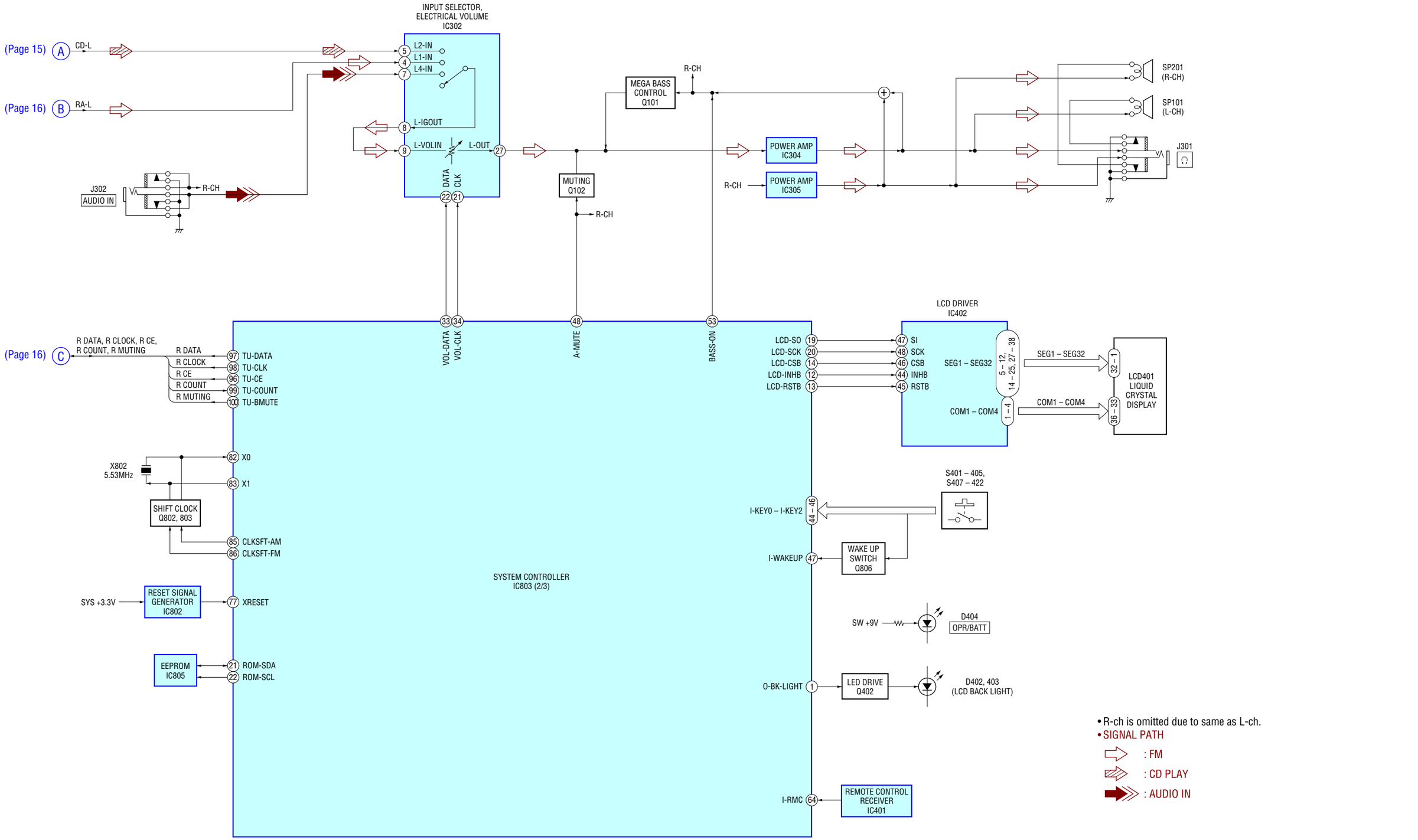
: CD PLAY

6-2. BLOCK DIAGRAM – TUNER Section –



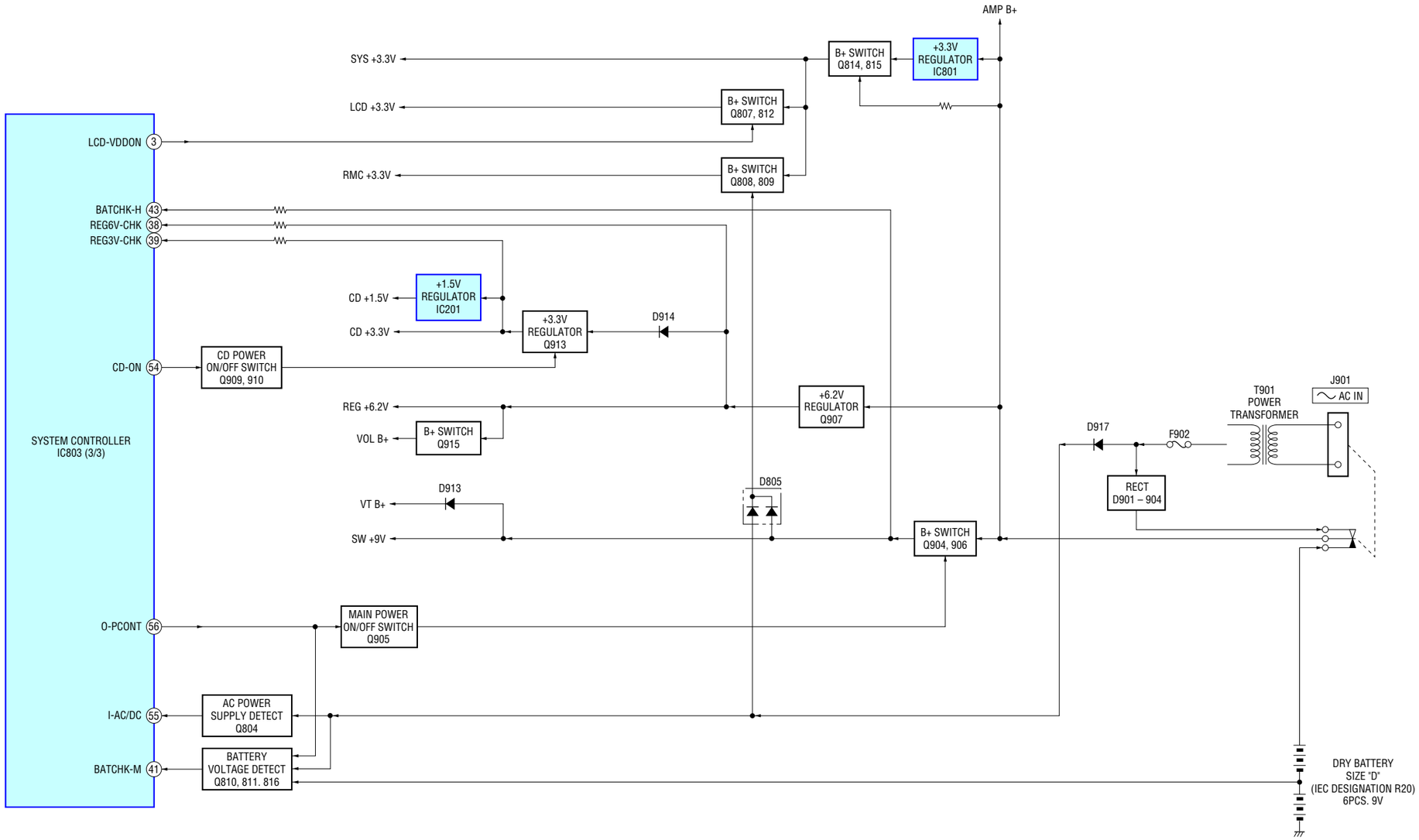
- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : FM
  - : AM

6-3. BLOCK DIAGRAM – MAIN Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : FM
  - : CD PLAY
  - : AUDIO IN

6-4. BLOCK DIAGRAM – POWER SUPPLY Section –



• Note for Printed Wiring Boards and Schematic Diagrams

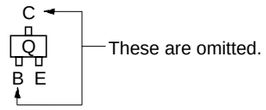
Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ⊡← : indicates side identified with part number.
- △ : internal component.
- ▭ : Pattern from the side which enables seeing.

(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.

- Indication of transistor



Note on Schematic Diagram:

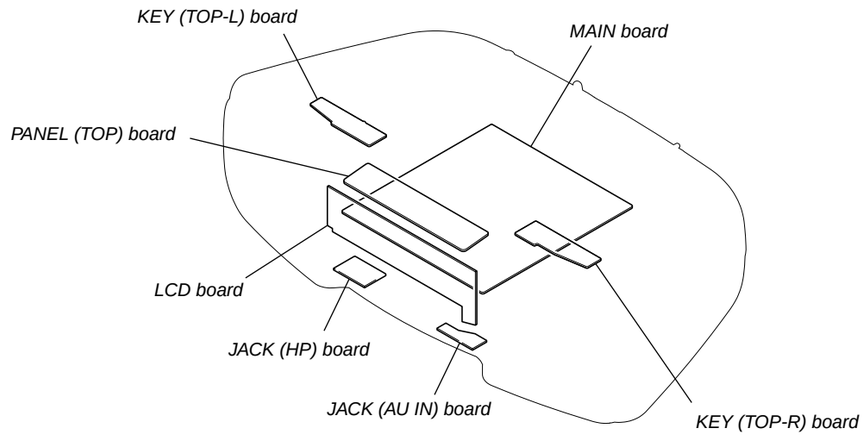
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

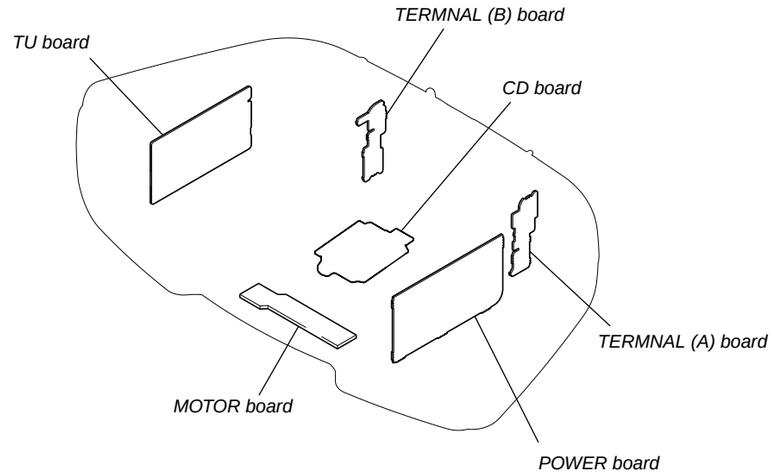
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 4.5 V and fed with regurated dc power supply from pin ① and ④ of KH905 on the TERMINAL (A) board, and power voltage is dc 9 V and fed with regurated dc power supply from pin ③ and ④ of KH905 on the TERMINAL (A) board.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  – CD Board –
  no mark :CD PLAY
  – TU Board –
  no mark : FM
  ( ) : AM
  – Other Boards –
  no mark : FM
  ( ) : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveform are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveform.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : CD PLAY
  ➡ : AUDIO IN
- Abbreviation

EE	: East European model
IT	: Italian model
MX	: Mexican model
RU	: Russian model
SP	: Singapore model
TH	: Thai model

• Circuit Boards Location



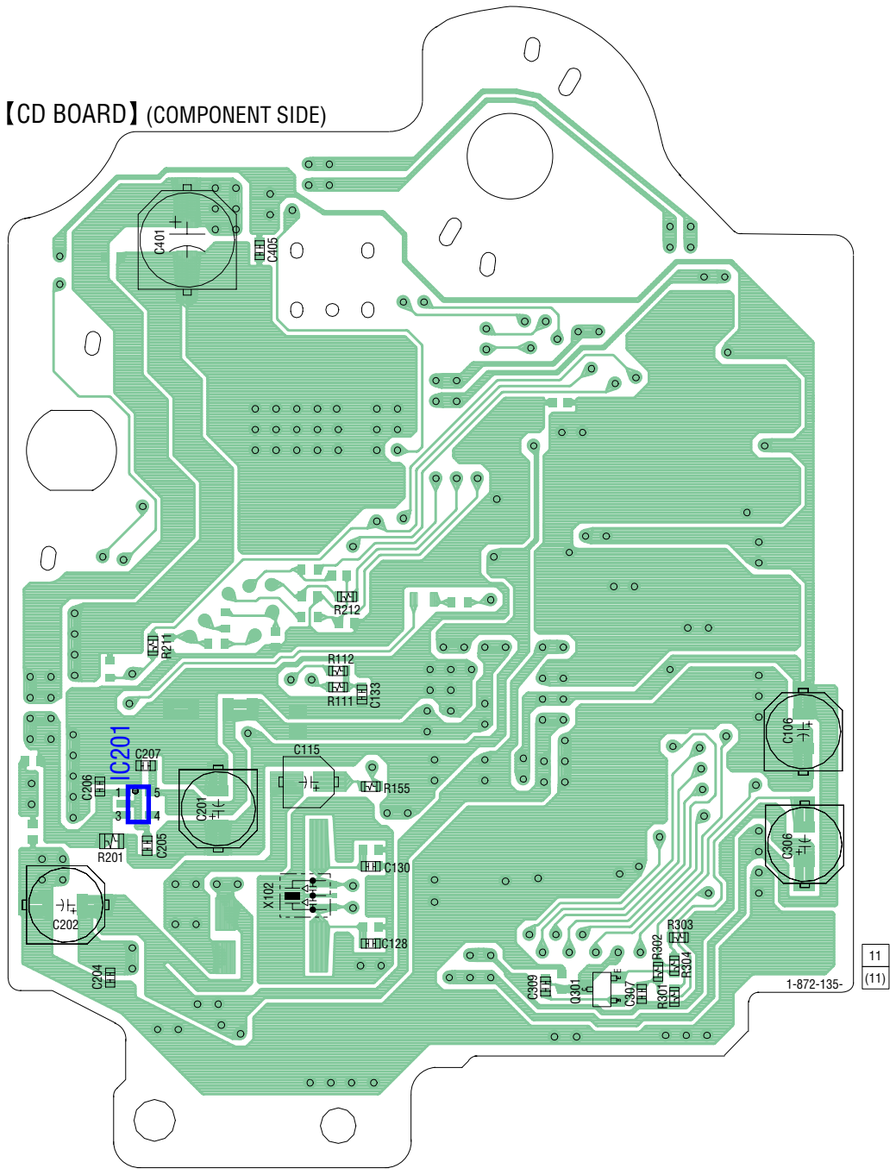


6-5. PRINTED WIRING BOARDS – CD Section –

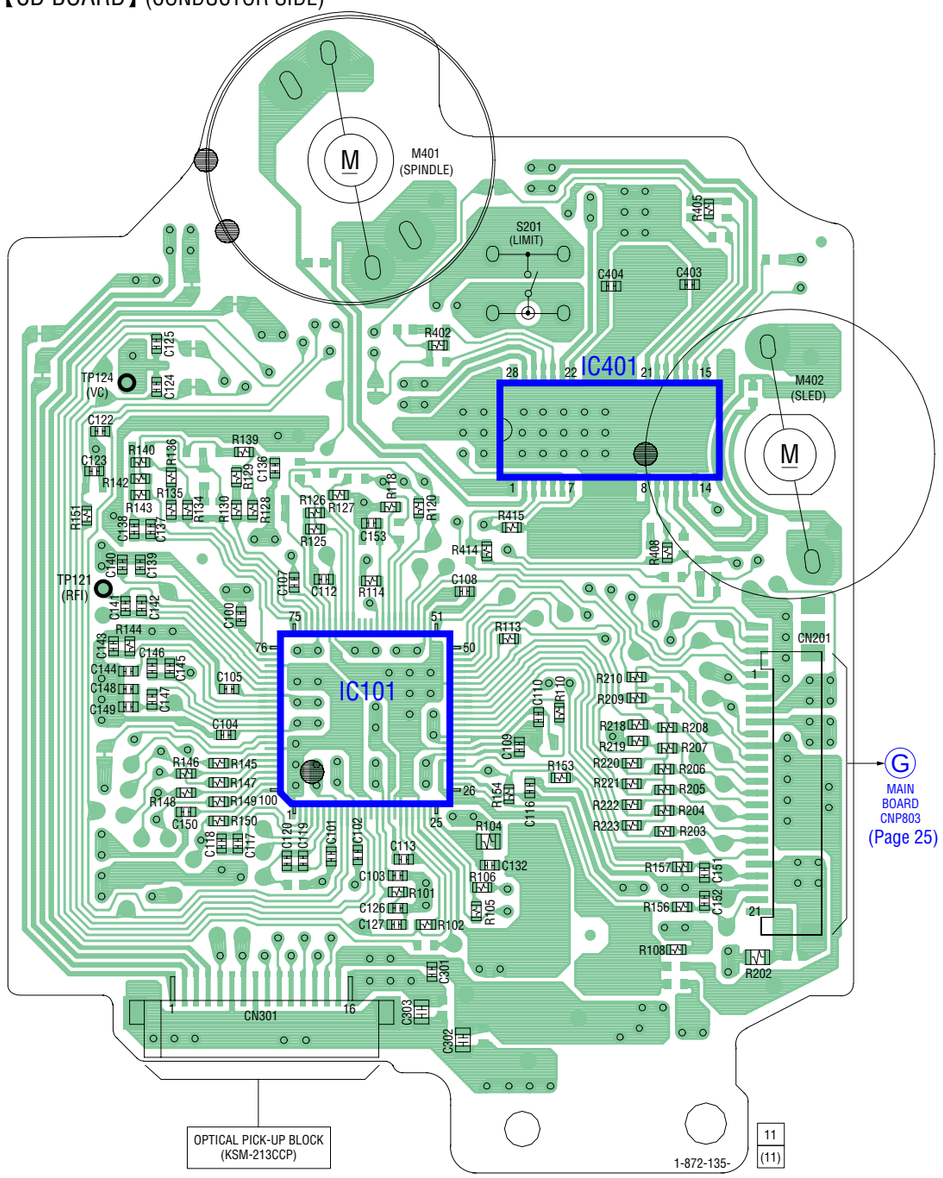
• See Page 19 for Circuit Boards Location.

: Uses unleaded solder.

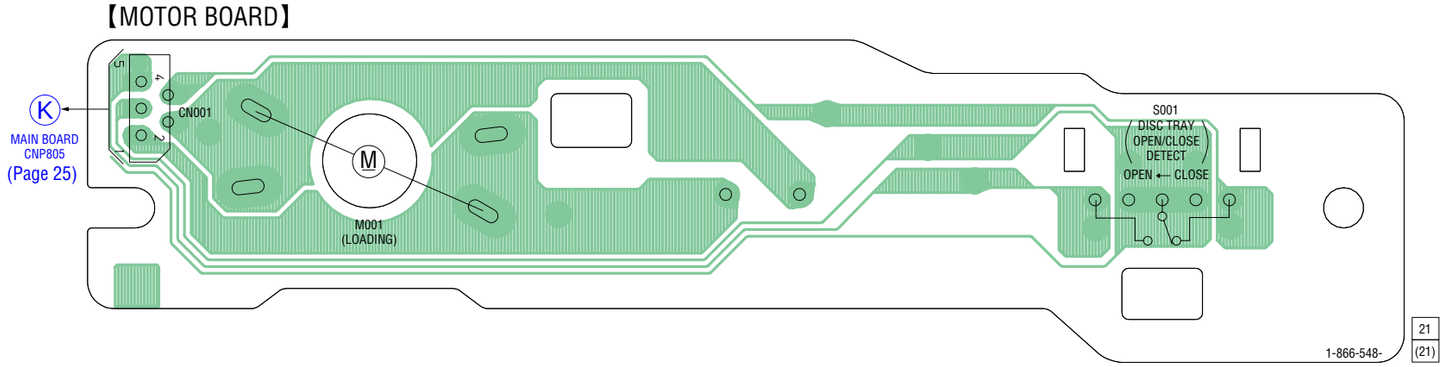
【CD BOARD】(COMPONENT SIDE)



【CD BOARD】(CONDUCTOR SIDE)

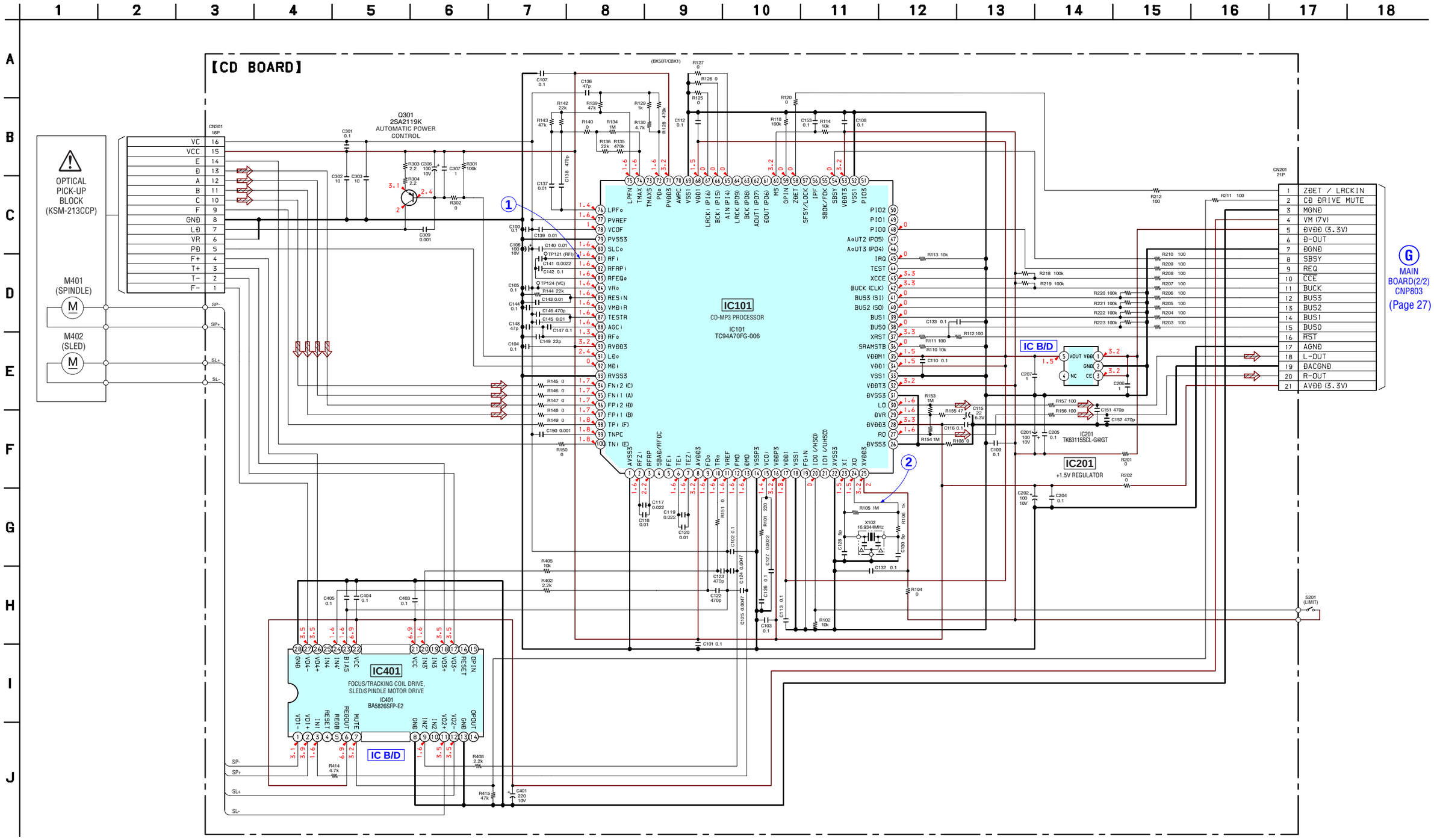


【MOTOR BOARD】



6-6. SCHEMATIC DIAGRAM – CD Board –

• See Page 31 for Waveforms. • See Page 34 for IC Block Diagrams. • See Page 37 for IC Pin Function Description.

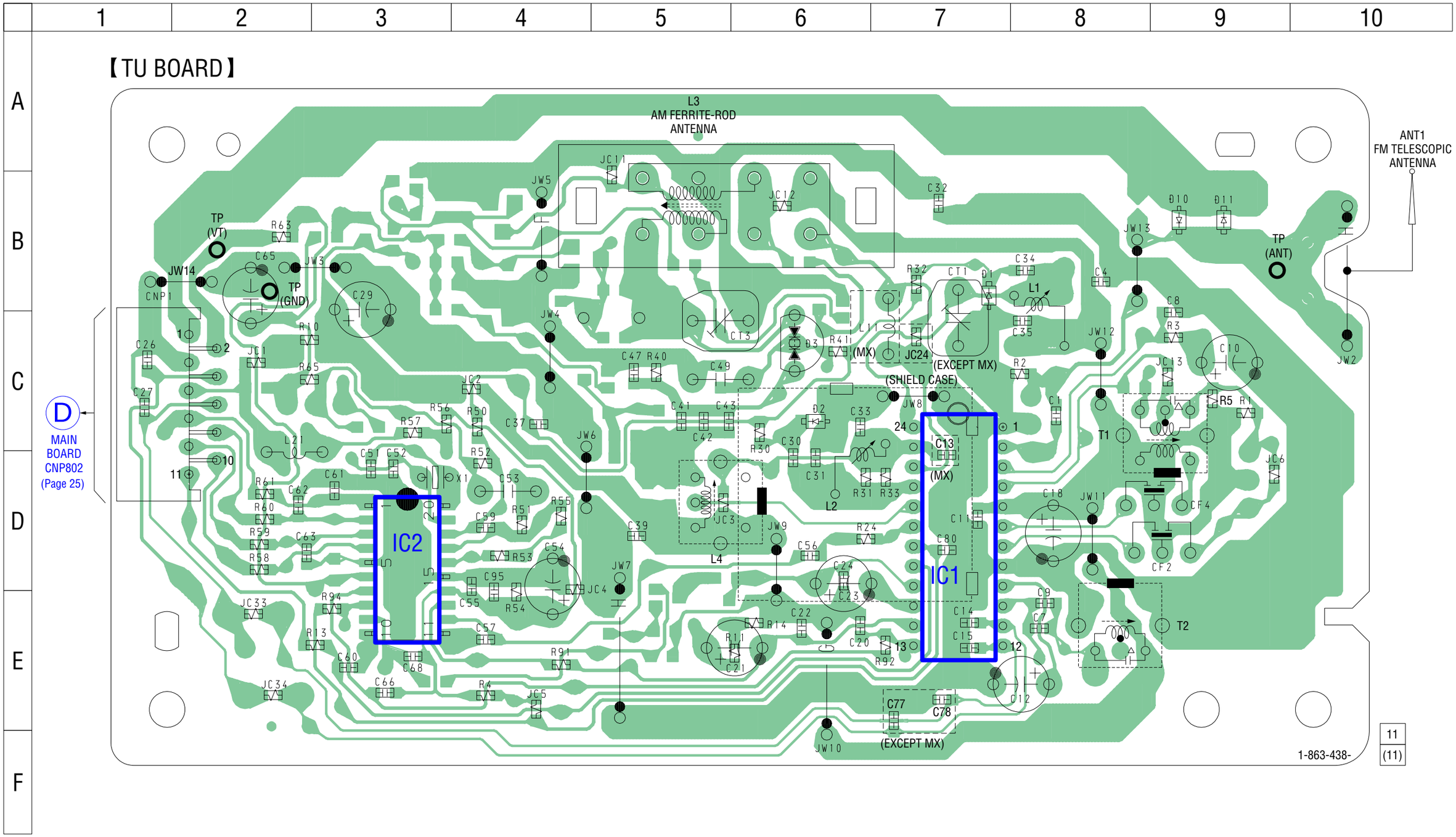


6-7. PRINTED WIRING BOARD – TU Board –

• See Page 19 for Circuit Boards Location.

: Uses unleaded solder.

【TU BOARD】

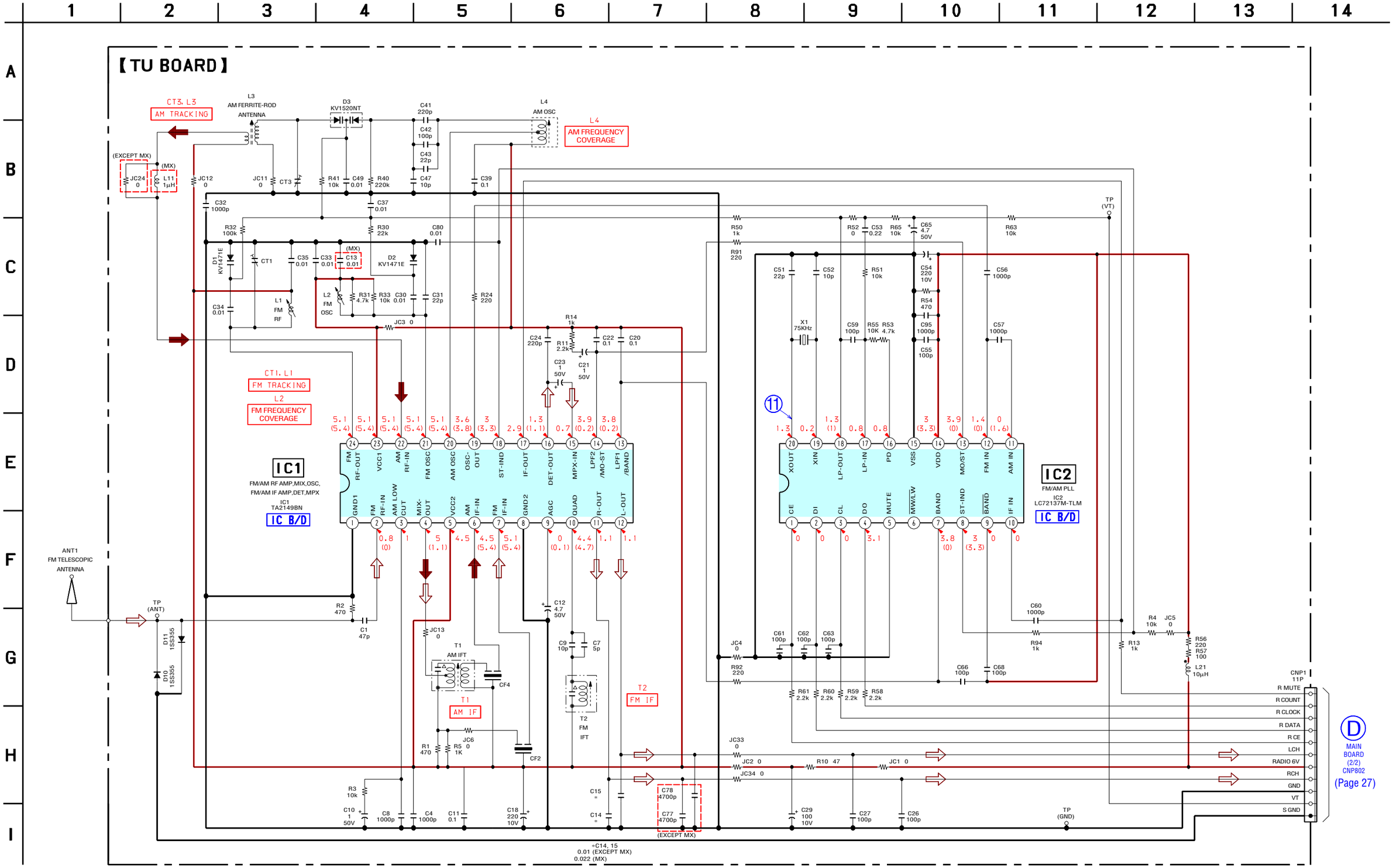


- **Semiconductor Location**

Ref. No.	Location
D1	B-7
D2	C-6
D3	C-6
D10	B-9
D11	B-9
IC1	D-7
IC2	D-3

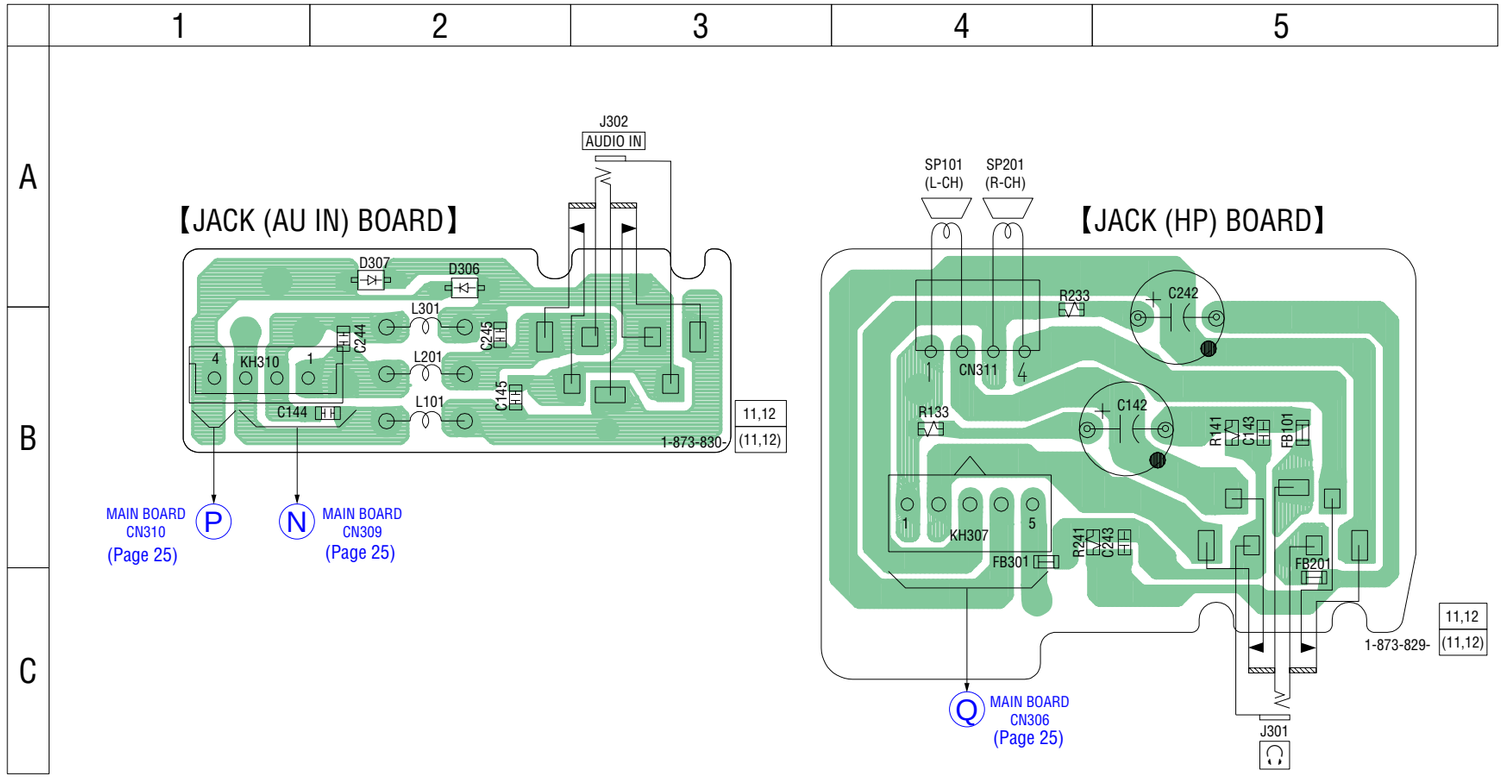
6-8. SCHEMATIC DIAGRAM – TU Board –

• See Page 31 for Waveforms. • See Page 34 for IC Block Diagrams.



6-9. PRINTED WIRING BOARDS – JACK Section –

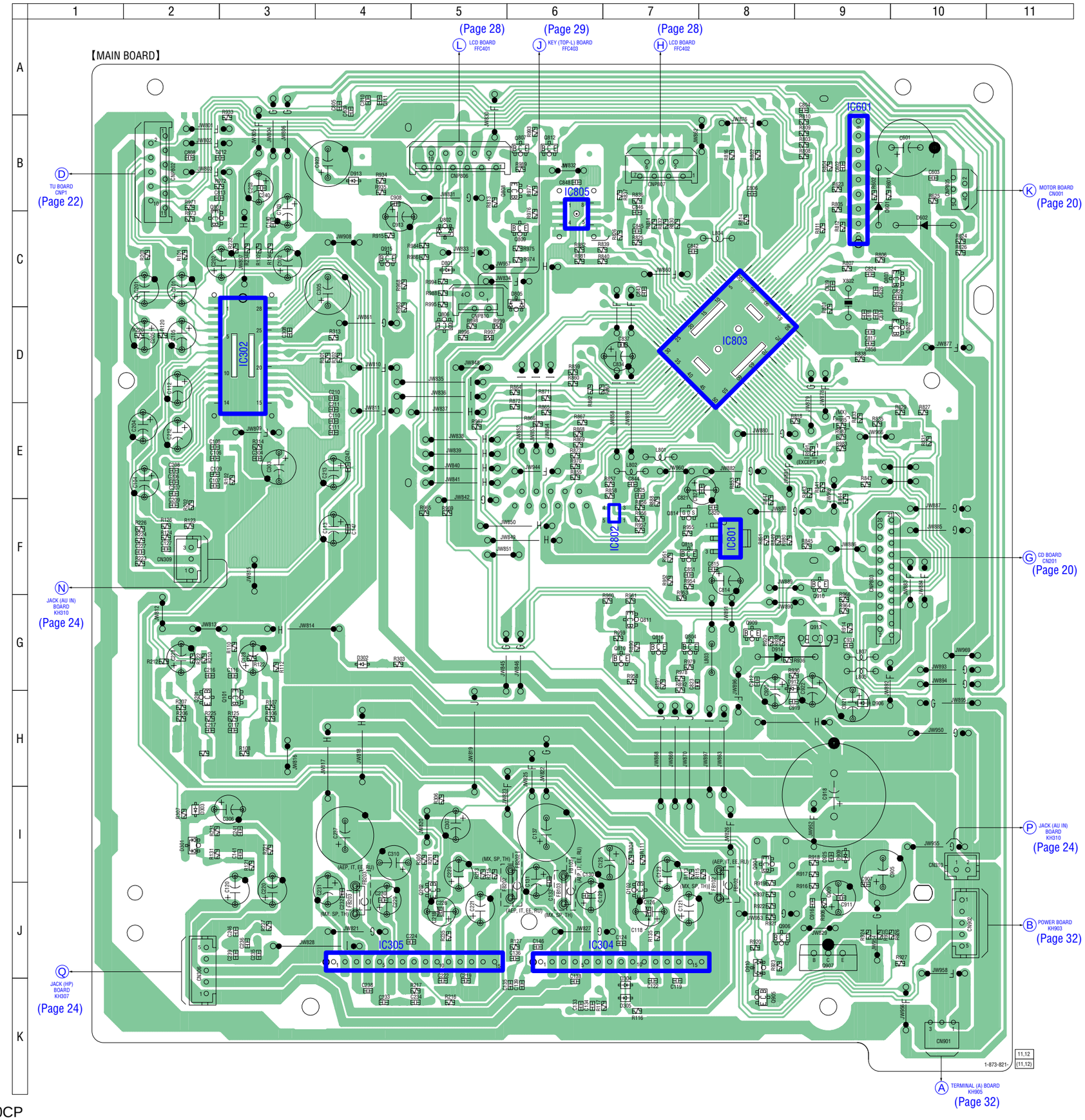
• See Page 19 for Circuit Boards Location. : Uses unleaded solder.



6-10. PRINTED WIRING BOARD – MAIN Board –

• See Page 19 for Circuit Boards Location.

: Uses unleaded solder.

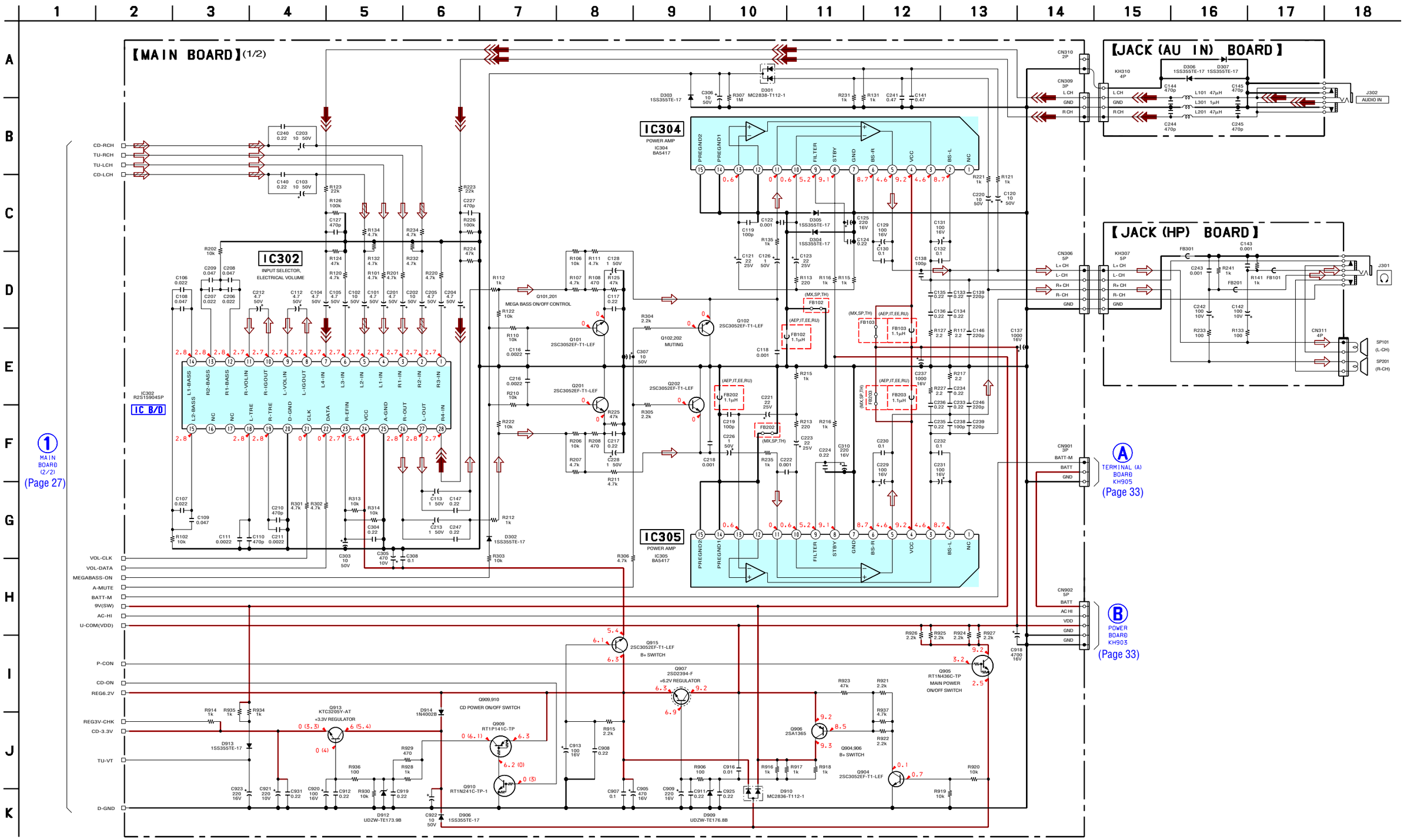


- **Semiconductor Location**

Ref. No.	Location
D301	I-2
D302	G-4
D303	I-2
D304	K-7
D305	K-7
D601	B-9
D602	C-10
D801	C-5
D802	C-5
D805	C-6
D906	H-9
D909	I-9
D910	J-8
D912	G-8
D913	B-4
D914	G-8
IC302	D-3
IC304	J-7
IC305	J-5
IC601	B-9
IC801	F-8
IC802	F-7
IC803	D-8
IC805	C-6
Q101	H-3
Q102	J-7
Q201	H-2
Q202	J-5
Q801	C-2
Q802	D-10
Q803	C-10
Q804	G-7
Q806	D-5
Q807	B-6
Q808	B-6
Q809	C-6
Q810	G-7
Q811	G-7
Q812	B-6
Q814	F-7
Q815	F-7
Q816	G-7
Q904	I-8
Q905	K-8
Q906	J-8
Q907	J-9
Q909	G-8
Q910	F-9
Q913	G-9
Q915	C-4

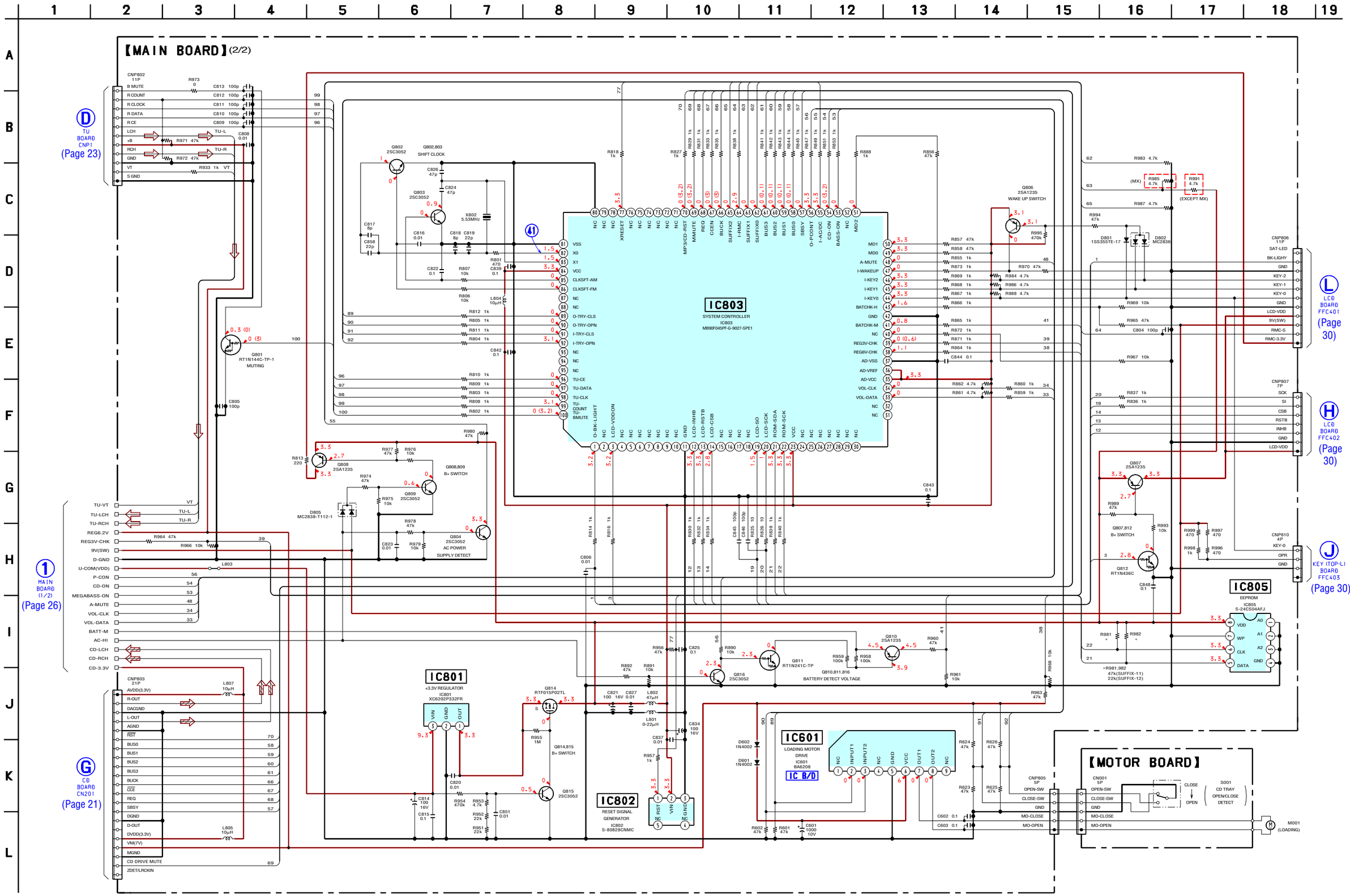
6-11. SCHEMATIC DIAGRAM – MAIN Section (1/2) –

• See Page 34 for IC Block Diagrams.



6-12. SCHEMATIC DIAGRAM – MAIN Section (2/2) –

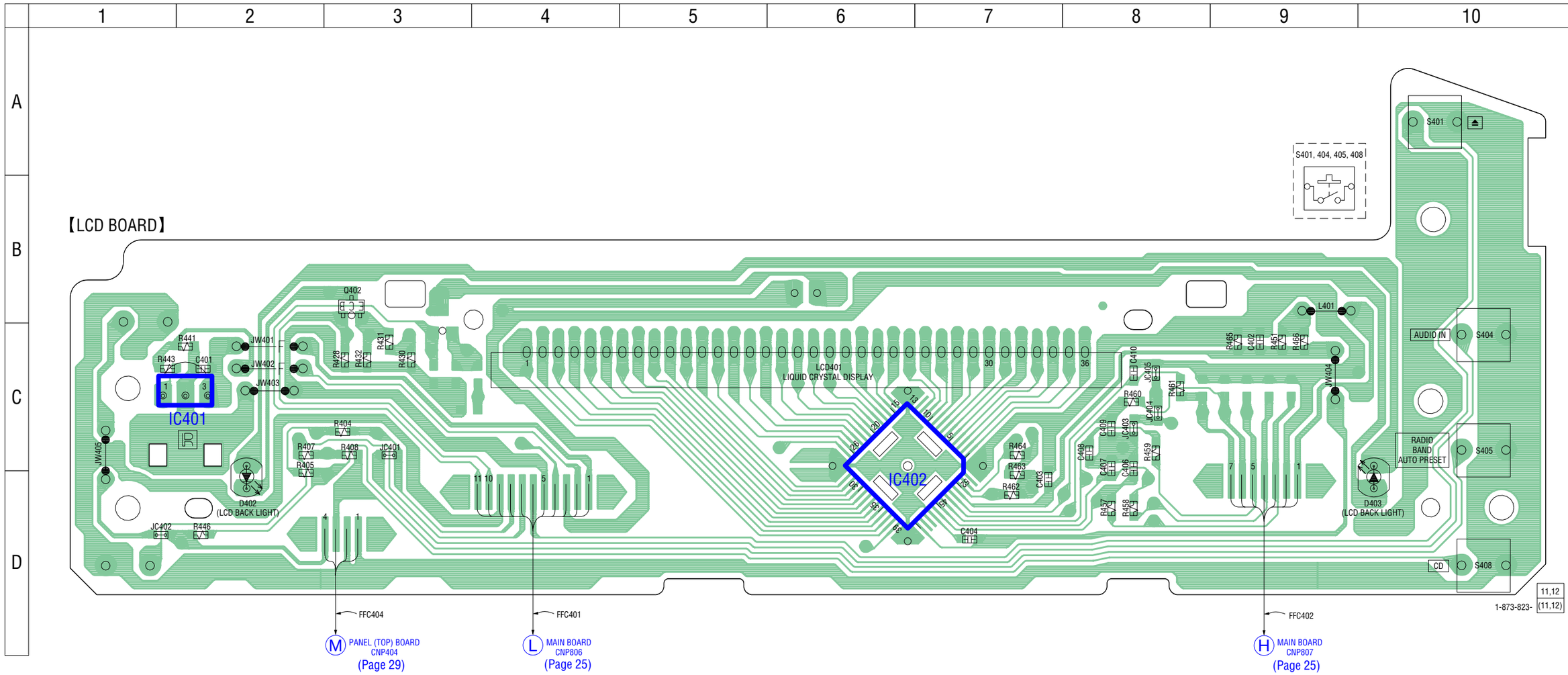
• See Page 31 for Waveforms. • See Page 34 for IC Block Diagrams. • See Page 37 for IC Pin Function Description.



6-13. PRINTED WIRING BOARD – LCD Board –

• See Page 19 for Circuit Boards Location.

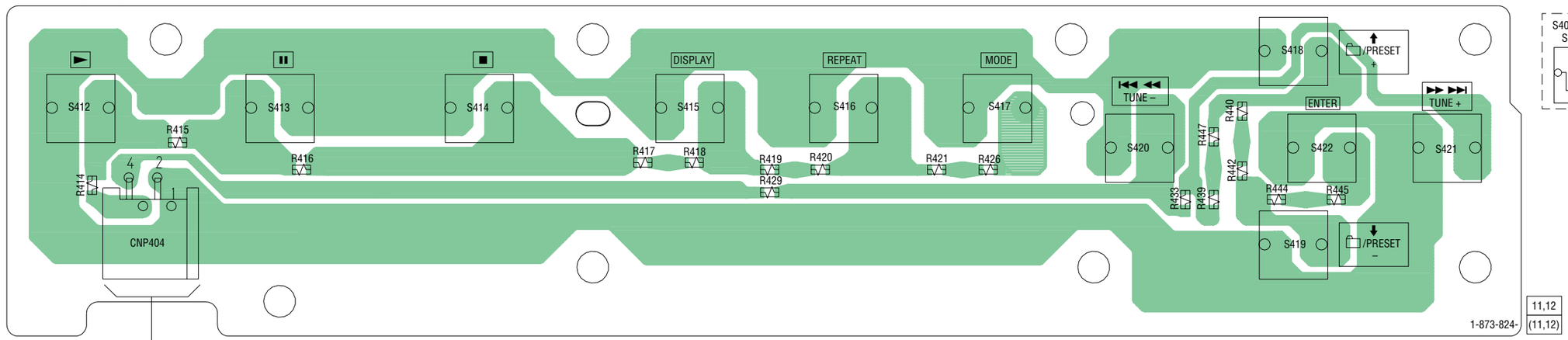
: Uses unleaded solder.



6-14. PRINTED WIRING BOARDS – KEY Section –

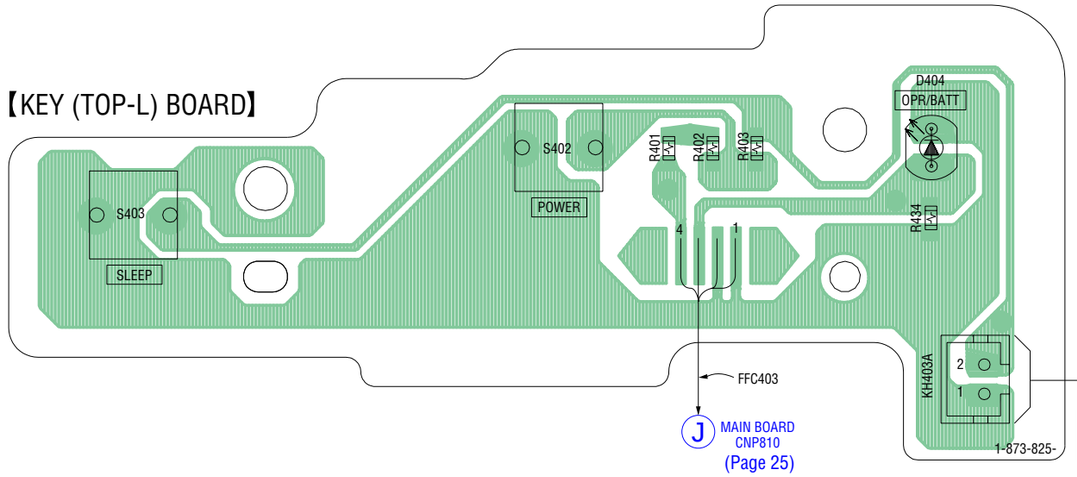
• See Page 19 for Circuit Boards Location. : Uses unleaded solder.

【PANEL (TOP) BOARD】



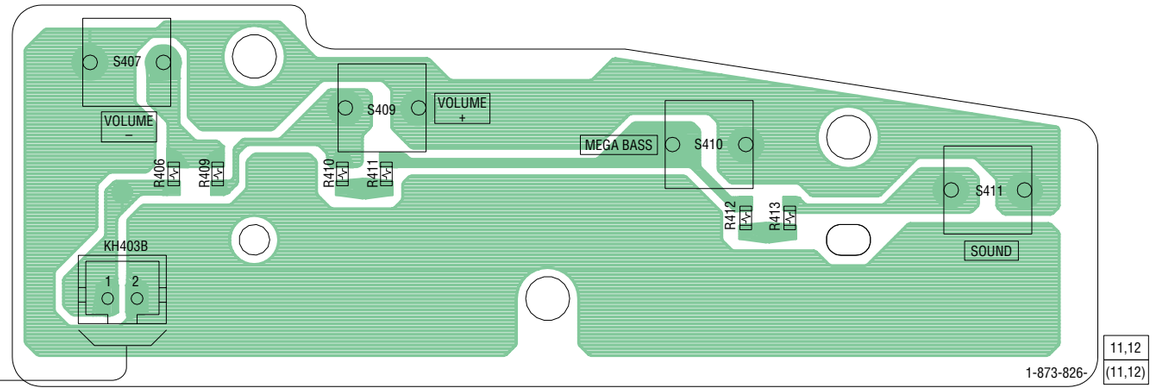
M LCD BOARD FFC404 (Page 28)

【KEY (TOP-L) BOARD】



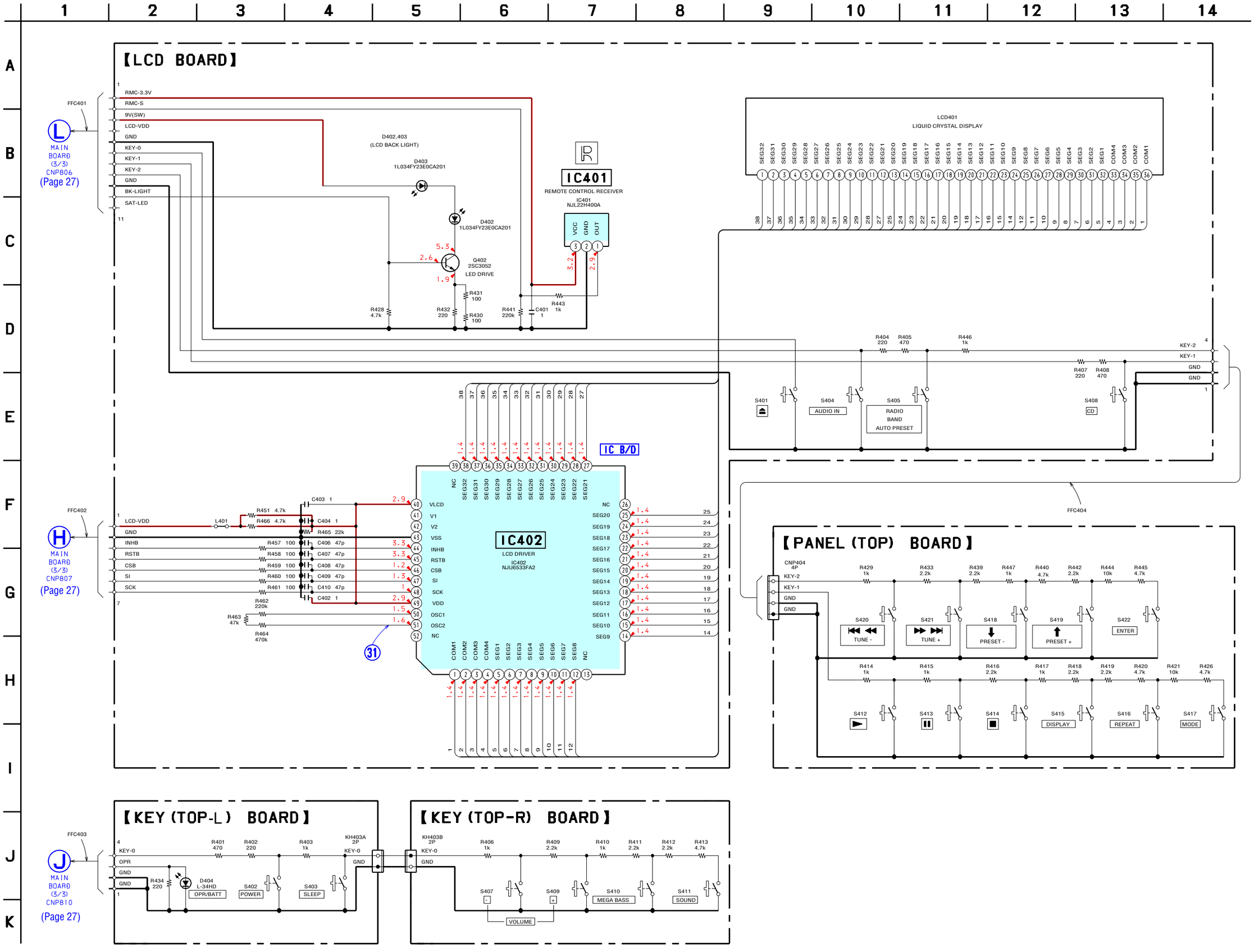
J MAIN BOARD CNP810 (Page 25)

【KEY (TOP-R) BOARD】



6-15. SCHEMATIC DIAGRAM – PANEL Section –

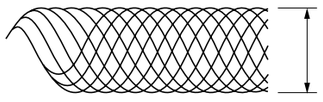
• See Page 31 for Waveforms. • See Page 34 for IC Block Diagrams.



• **Waveforms**

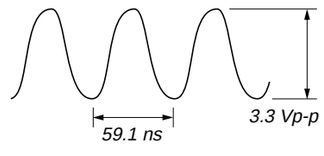
– CD Board –

① IC101 ㉛ (RFi)
(CD play mode)



200 mV/DIV, 500 ns/DIV

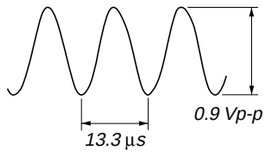
② IC101 ㉔ (XO)
(CD play mode)



1 V/DIV, 20 ns/DIV

– TU Board –

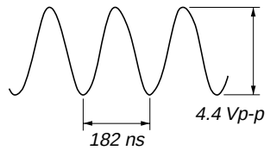
⑪ IC2 ⑳ (XOUT)



500 mV/DIV, 5 µs/DIV

– MAIN Board –

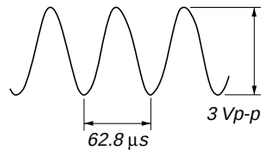
㊶ IC803 ㉜ (X0)



2 V/DIV, 100 ns/DIV

– LCD Board –

㉛ IC402 ㊶ (OSC2)



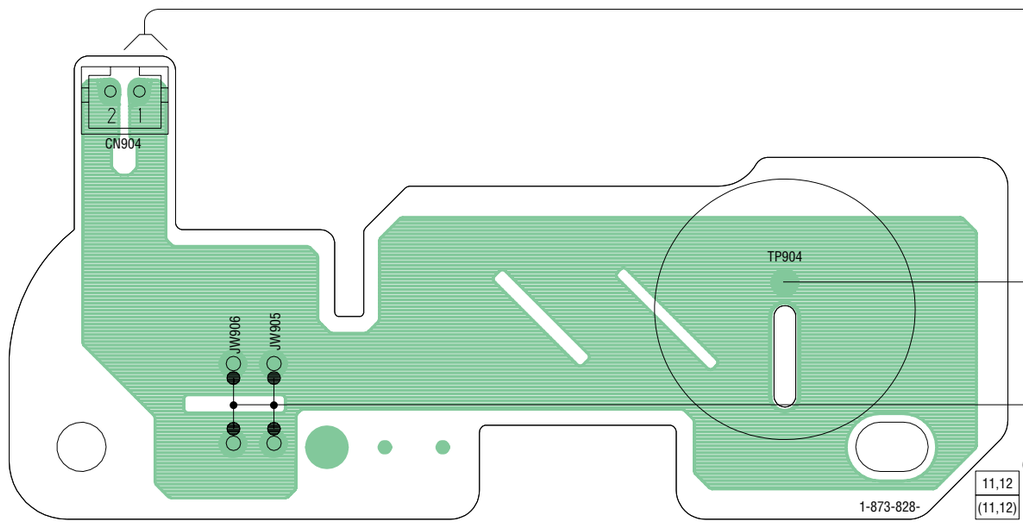
1 V/DIV, 20 µs/DIV

6-16. PRINTED WIRING BOARDS – POWER SUPPLY Section –

• See Page 19 for Circuit Boards Location.

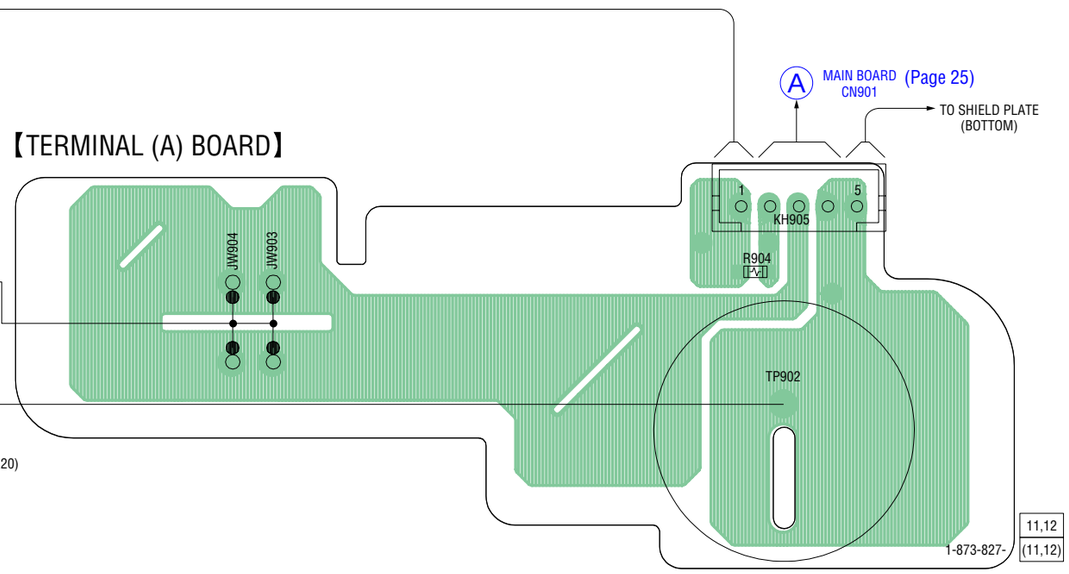
: Uses unleaded solder.

【TERMINAL (B) BOARD】

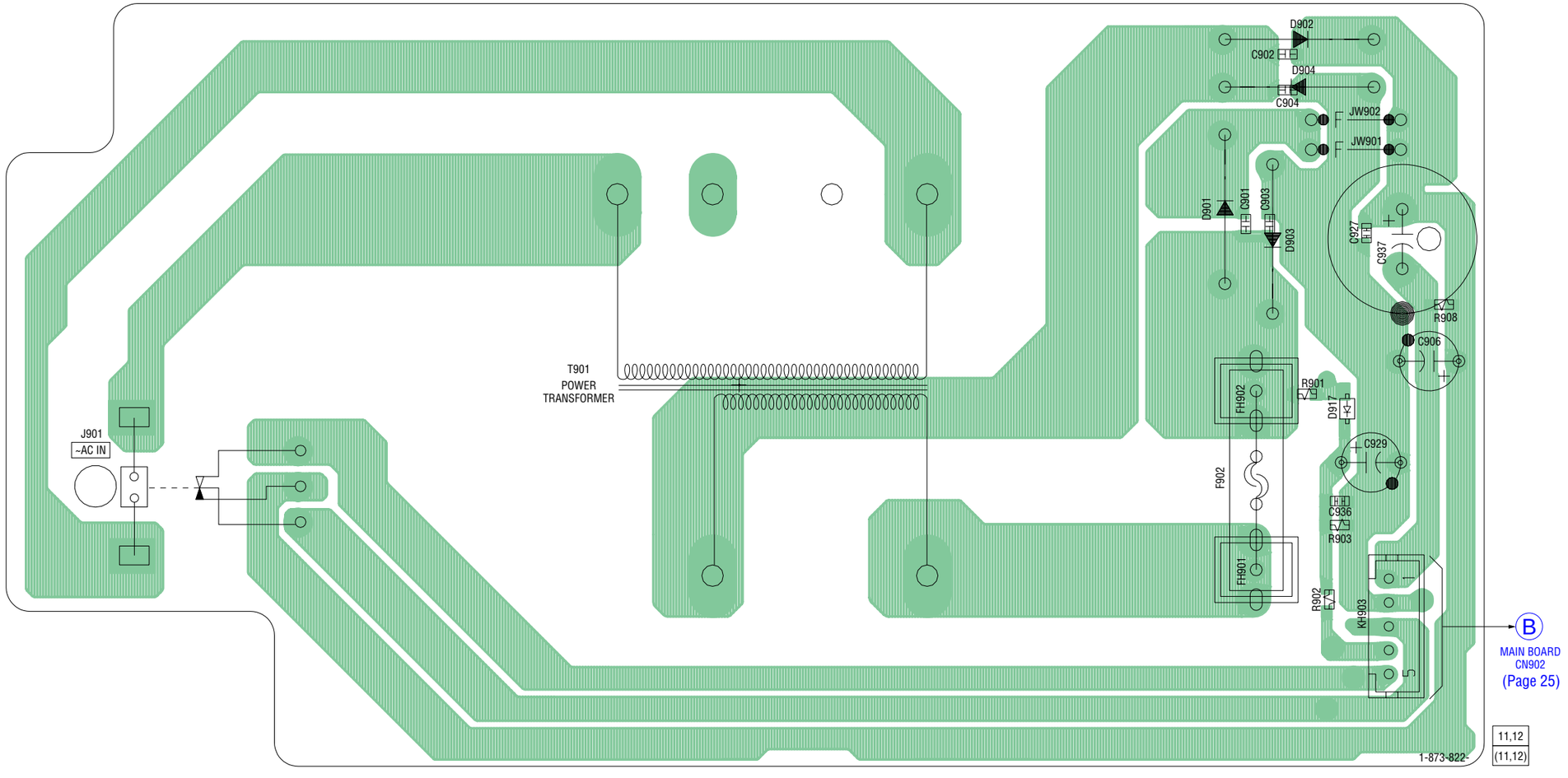


DRY BATTERY
SAZE "D"
(IEC DESIGNATION R20)
6PCS. 9V

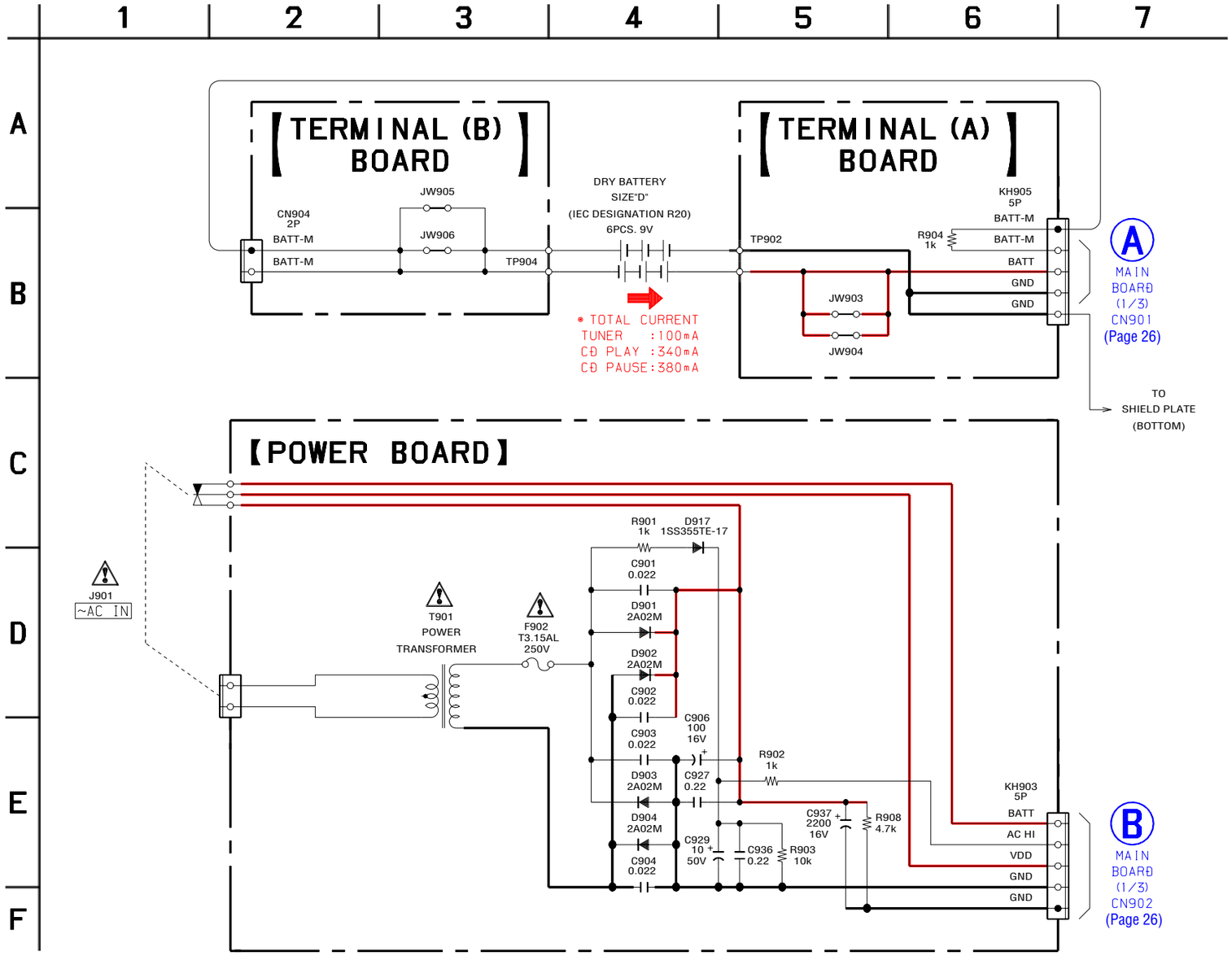
【TERMINAL (A) BOARD】



【POWER BOARD】



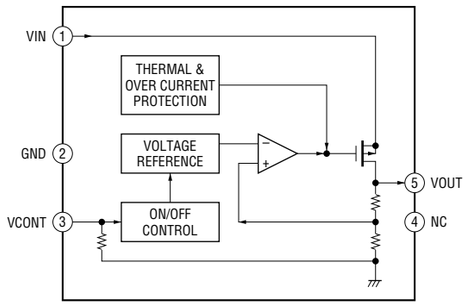
6-17. SCHEMATIC DIAGRAM – POWER SUPPLY Section –



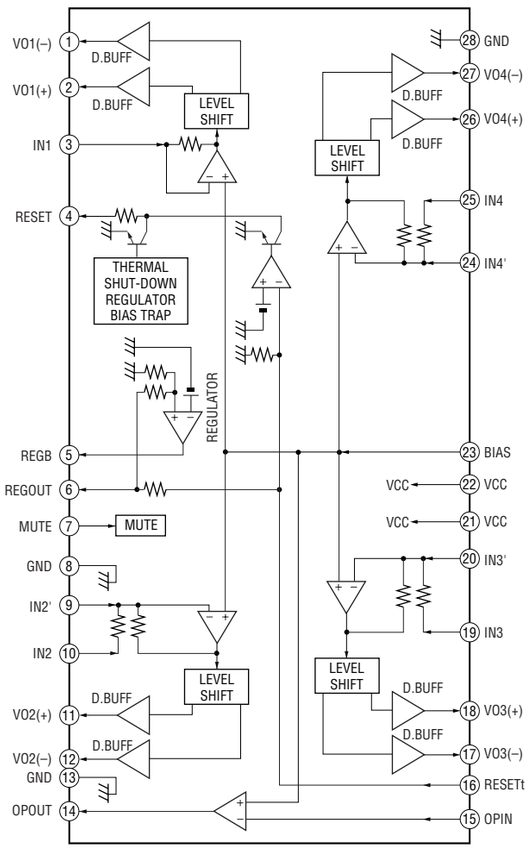
- **IC Block Diagrams**

– CD Board –

IC201 TK63115SCL-G@GT

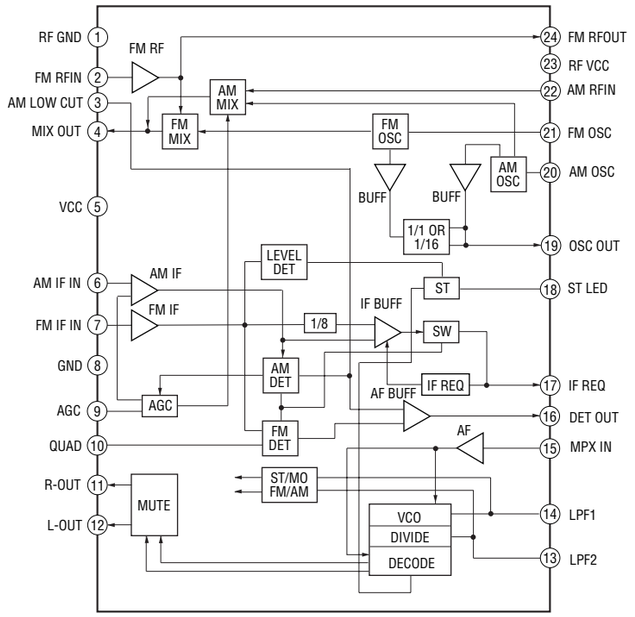


IC401 BA5826SFP-E2

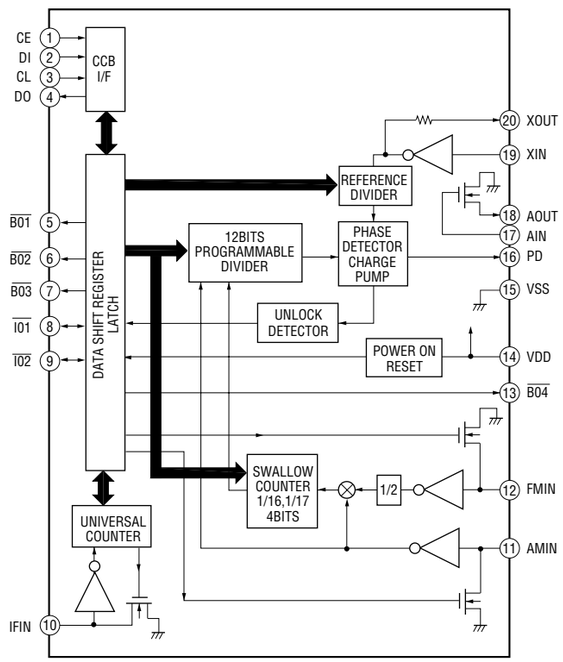


– TU Board –

IC1 TA2149BN

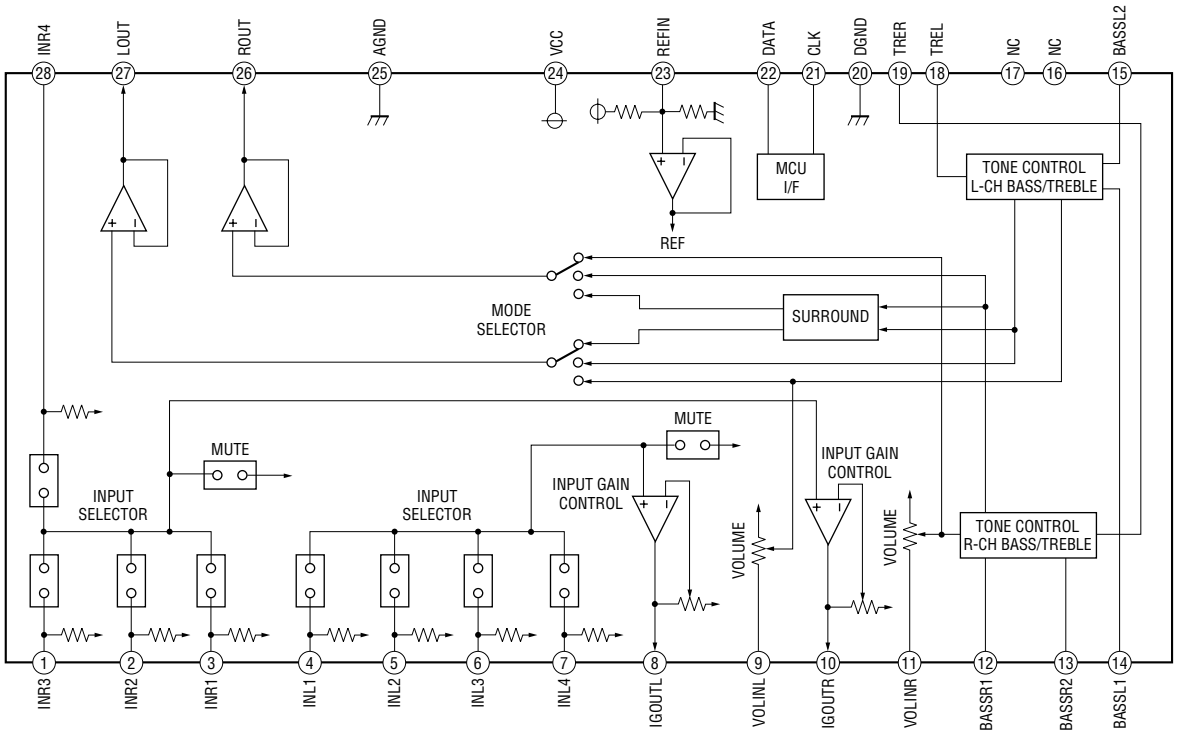


IC2 LC72137M-TLM-E

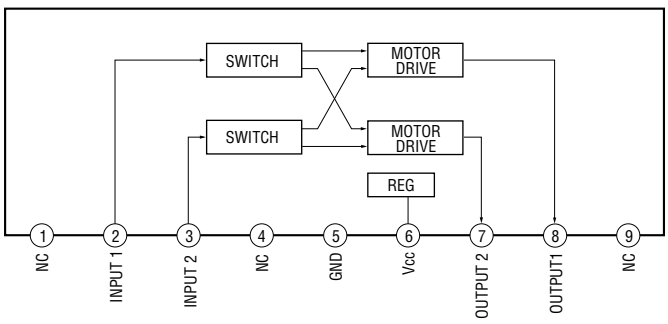


– MAIN Board –

IC302 R2S15904SP

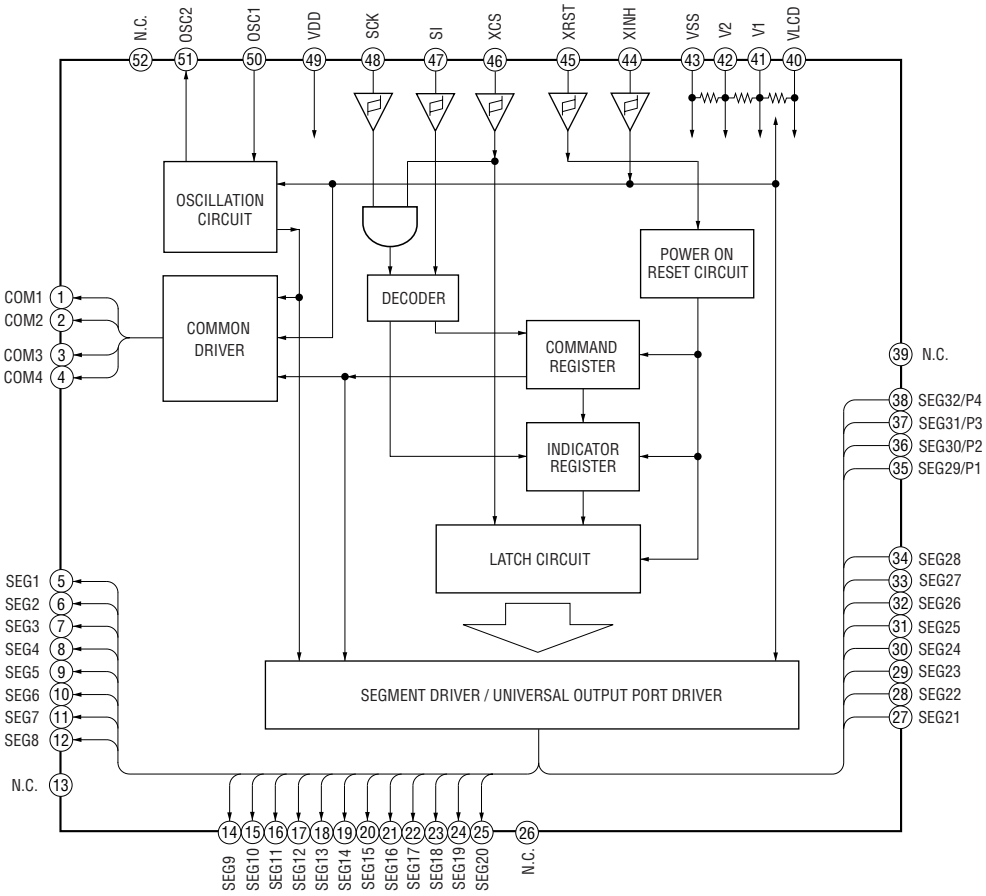


IC601 NJM2374AE



– LCD Board –

IC402 NJU6533FA2



- **IC Pin Function Description**

CD BOARD IC101 TC94A70FG-006 (CD-MP3 PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	AVSS3	-	Ground terminal
2	RFZi	I	RF ripple zero crossing signal input terminal
3	RFRP	O	RF ripple signal output terminal
4	SBAD/RFDC	O	Sub beam addition signal or RF peak detection signal output terminal Not used
5	FEi	O	Focus error signal output terminal Not used
6	TEi	O	Tracking error signal output terminal
7	TEZi	I	Tracking error zero crossing signal input terminal
8	AVDD3	-	Power supply terminal (+3.3 V)
9	FOo	O	Focus coil drive signal output terminal
10	TRo	O	Tracking coil drive signal output terminal
11	VREF	I	Reference voltage (+1.65V) input terminal
12	FMo	O	Sled motor drive signal output terminal
13	DMo	O	Spindle motor drive signal output terminal
14	VSSP3	-	Ground terminal
15	VCOi	I	VCO control voltage input terminal
16	VDDP3	-	Power supply terminal (+3.3 V)
17	VDD1	-	Power supply terminal (+1.5 V)
18	VSS	-	Ground terminal
19	FGiN	I	FG signal input terminal Not used
20	IO0 (/HSO)	I	Disc inner position detection signal input terminal
21	IO1 (/UHSO)	O	Not used
22	XVSS3	-	Ground terminal
23	XI	I	System clock input terminal (16.9344 MHz)
24	XO	O	System clock output terminal (16.9344 MHz)
25	XVDD3	-	Power supply terminal (+3.3 V)
26	DVSS3	-	Ground terminal
27	RO	O	Audio data (R-ch) output to the input selector
28	DVDD3	-	Power supply terminal (+3.3 V)
29	DVR	O	Reference voltage (+1.65V) output terminal
30	LO	O	Audio data (L-ch) output to the input selector
31	DVSS3	-	Ground terminal
32	VDDT3	-	Power supply terminal (+3.3 V)
33	VSS1	-	Ground terminal
34	VDD1	-	Power supply terminal (+1.5 V)
35	VDDM1	-	Power supply terminal (+1.5 V)
36	SRAMSTB	I	S-RAM standby mode control signal input terminal Fixed at "L" in this set
37	XRST	I	Reset signal input from the system controller "L": reset
38, 39	BUS0, BUS1	I	Serial data input from the system controller
40	BUS2 (SO)	I	Serial data input from the system controller
41	BUS3 (SI)	I	Serial data input from the system controller
42	BUCK (CLK)	I	Serial data transfer clock signal input from the system controller
43	XCCE	I	Chip enable signal input from the system controller
44	TEST	I	Setting terminal for test mode Normally fixed at "L"
45	IRQ	I	Interrupt request signal input terminal Not used
46	AoUT3 (PO4)	O	Request signal output terminal Not used
47	AoUT2 (PO5)	O	Audio data output terminal Not used

Pin No.	Pin Name	I/O	Description
48	PIO0	O	Request signal output to the system controller
49, 50	PIO1, PIO2	O	Not used
51	PIO3	I	Gate signal input terminal Not used
52	VSS1	-	Ground terminal
53	VDDT3	-	Power supply terminal (+3.3 V)
54	SBSY	O	Subcode block sync signal output to the system controller
55	SBOK/FOK	O	Not used
56	IPF	O	Not used
57	SFSY/LOCK	O	Not used
58	ZDET	O	Zero detection signal output terminal Not used
59	GPIN	I	Not used
60	MS	I	Microcomputer interface mode selection signal input terminal Fixed at "H" in this set
61	DOUT (PO6)	O	Digital audio data output terminal Not used
62	AOUT (PO7)	O	Audio data output terminal Not used
63	BCK (PO8)	O	Bit clock signal output terminal Not used
64	LRCK (PO9)	O	L/R sampling clock signal output terminal Not used
65	AIN (PI4)	I	Digital audio data input terminal Not used
66	BCKi (PI5)	I	Bit clock signal input terminal Not used
67	LRCKi (PI6)	I	L/R sampling clock signal input terminal Not used
68	VDD1	-	Power supply terminal (+1.5 V)
69	VSS	-	Ground terminal
70	AWRC	-	Not used
71	PVDD3	-	Power supply terminal (+3.3 V)
72	PDO	O	Phase error margin signal between EFM signal and PLCK signal output terminal
73	TMAXS	O	TMAX detection signal output terminal Not used
74	TMAX	O	TMAX detection signal output terminal
75	LPFN	I	Inverted signal input from the operation amplifier for PLL loop filter
76	LPFo	O	Signal output from the operation amplifier for PLL loop filter
77	PVREF	I	Reference voltage (+1.65V) input terminal
78	VCOF	O	VCO filter output terminal
79	PVSS3	-	Ground terminal
80	SLCo	O	EFM slice level output terminal
81	RFi	I	RF signal input terminal
82	RFRPi	I	RF ripple signal input terminal
83	RFEQo	O	EFM slice level output terminal
84	VRo	O	Reference voltage (+1.65V) output terminal
85	RESiN	O	External resistor connection terminal
86	VMDiR	O	Reference voltage (+1.65V) output terminal for automatic power control circuit
87	TESTR	O	Low-pass filter terminal for RFEQO offset correction
88	AGCi	I	RF signal amplitude adjustment amplification input terminal
89	RFo	O	RF signal generation amplification output terminal
90	RVDD3	-	Power supply terminal (+3.3 V)
91	LDo	O	Laser diode on/off control signal output to the automatic power control circuit "H": laser diode on
92	MDi	I	Light amount monitor input from the laser diode of optical pick-up block
93	RVSS3	-	Ground terminal
94	FNi2 (C)	I	Main beam (C) input from the optical pick-up block
95	FNi1 (A)	I	Main beam (A) input from the optical pick-up block

Pin No.	Pin Name	I/O	Description
96	FPi2 (D)	I	Main beam (D) input from the optical pick-up block
97	FPi1 (B)	I	Main beam (B) input from the optical pick-up block
98	TPi (F)	I	Sub beam (F) input from the optical pick-up block
99	TNPC	O	External capacitor connection terminal
100	TNi (E)	I	Sub beam (E) input from the optical pick-up block

MAIN BOARD IC803 MB90F045PF-G-9027-SPE1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	O-BK-LIGHT	O	LED drive signal output terminal for LCD back light "H": LED on
2	NC	-	Not used
3	LCD-VDDON	O	LCD power supply on/off control signal output terminal "H": LCD power on
4 to 10	NC	-	Not used
11	GND	-	Ground terminal
12	LCD-INHB	O	LCD display control signal output to the LCD driver
13	LCD-RSTB	O	System reset signal output to the LCD driver
14	LCD-CSB	O	Serial data transfer chip select signal output to the LCD driver
15 to 18	NC	-	Not used
19	LCD-SO	O	Serial data output to the LCD driver
20	LCD-SCK	O	Serial data transfer clock signal output to the LCD driver
21	ROM-SDA	I/O	Two-way data bus with the EEPROM
22	ROM-SCL	O	Serial data transfer clock signal output to the EEPROM
23	VCC	-	Power supply terminal (+3.3V)
24 to 32	NC	-	Not used
33	VOL-DATA	O	Serial data output to the electrical volume
34	VOL-CLK	O	Serial data transfer clock signal output to the electrical volume
35	AD-VCC	-	Power supply terminal (+3.3V)
36	AD-VREF	-	Reference voltage (+3.3V) terminal
37	AD-VSS	-	Ground terminal
38	REG6V-CHK	I	Input terminal for +6.2V power supply voltage detection
39	REG3V-CHK	I	Input terminal for CD +3.3V power supply voltage detection
40	NC	-	Not used
41	BATCHK-M	I	Input terminal for battery middle voltage (+4.5V) detection
42	GND	-	Ground terminal
43	BATCHK-H	I	Input terminal for battery high voltage and AC power supply (+9V) detection
44 to 46	I-KEY0 to I-KEY2	I	Front panel key input terminal (A/D input)
47	I-WAKEUP	I	Wake-up signal input terminal
48	A-MUTE	O	Audio muting on/off control signal output terminal "H": muting on
49	MD0	I	Input terminal for mode setting "L": flash writing mode, "H": normal mode
50	MD1	I	Input terminal for mode setting "H": normal and flash writing mode
51	MD2	I	Input terminal for mode setting "L": normal mode, "H": flash writing mode
52	NC	-	Not used
53	BASS-ON	O	Mega bass on/off control signal output terminal "L": Mega bass on
54	CD-ON	O	CD +3.3V power supply on/off control signal output terminal "H": power on
55	I-AC/DC	I	AC/DC power supply detection terminal "L": AC, "H": DC (battery)
56	O-PCONT	O	System power on/off control signal output terminal "H": power on
57	SBSY	I	Subcode block sync signal input from the CD-MP3 processor
58 to 61	BUS0 to BUS3	O	Serial data output to the CD-MP3 processor
62, 63	SUFFIX0, SUFFIX1	I	Input terminal for destination discrimination
64	I-RMC	I	SIRCS signal input from the remote control receiver
65	SUFFIX2	I	Input terminal for destination discrimination
66	BUCK	O	Serial data transfer clock signal output to the CD-MP3 processor

Pin No.	Pin Name	I/O	Description
67	CCEN	O	Chip enable signal output to the CD-MP3 processor
68	REQ	I	Request signal input from the CD-MP3 processor
69	MMUTE	O	Muting signal output to the coil/motor driver
70	MP3/CD-RST	O	System reset signal output to the CD-MP3 processor "L": reset
71 to 76	NC	-	Not used
77	XRESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
78 to 80	NC	-	Not used
81	VSS	-	Ground terminal
82	X0	I	System clock input terminal (5.53 MHz)
83	X1	O	System clock output terminal (5.53 MHz)
84	VCC	-	Power supply terminal (+3.3V)
85	CLKSFT-AM	O	Oscillation frequency selection on/off control signal output terminal for AM
86	CLKSFT-FM	O	Oscillation frequency selection on/off control signal output terminal for FM
87, 88	NC	-	Not used
89	O-TRY-CLS	O	Loading motor control signal output terminal (for loading in)
90	O-TRY-OPN	O	Loading motor control signal output terminal (for loading out)
91	I-TRY-CLS	I	Disc tray close position detection signal input terminal
92	I-TRY-OPN	I	Disc tray open position detection signal input terminal
93 to 95	NC	-	Not used
96	TU-CE	O	Chip enable signal output to the FM/AM PLL "L" active
97	TU-DATA	O	Serial data output to the FM/AM PLL
98	TU-CLK	O	Serial data transfer clock signal output to the FM/AM PLL
99	TU-COUNT	I	Serial count data input from the FM/AM PLL
100	TU-BMUTE	O	Tuner muting on/off control signal output to the FM/AM PLL "H": muting on

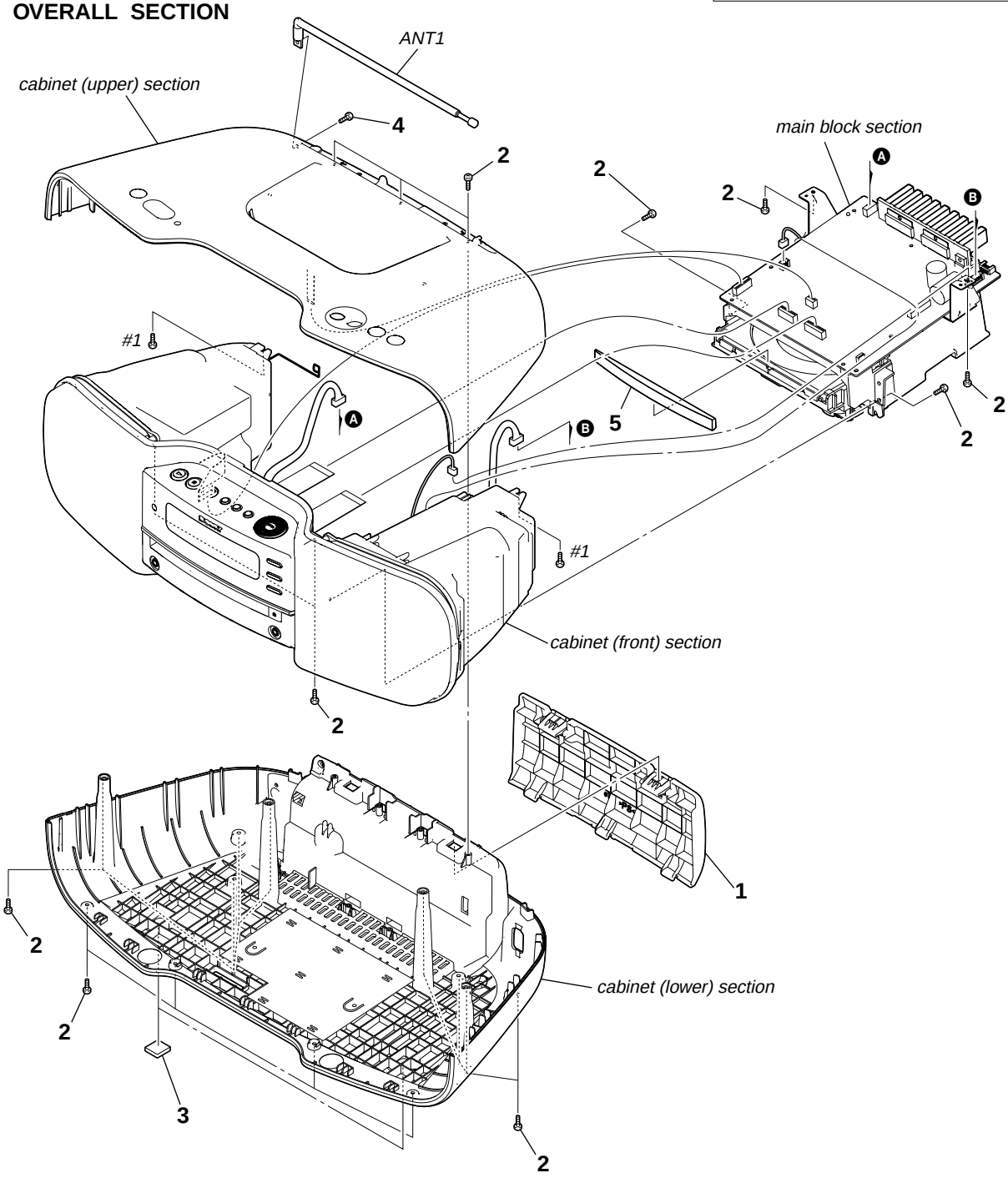
SECTION 7
EXPLODED VIEWS

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 are given in the last of the electrical parts list.
- Abbreviation
  EE : East European model
  IT : Italian model
  MX : Mexican model
  RU : Russian model
  SP : Singapore model
  TH : Thai model

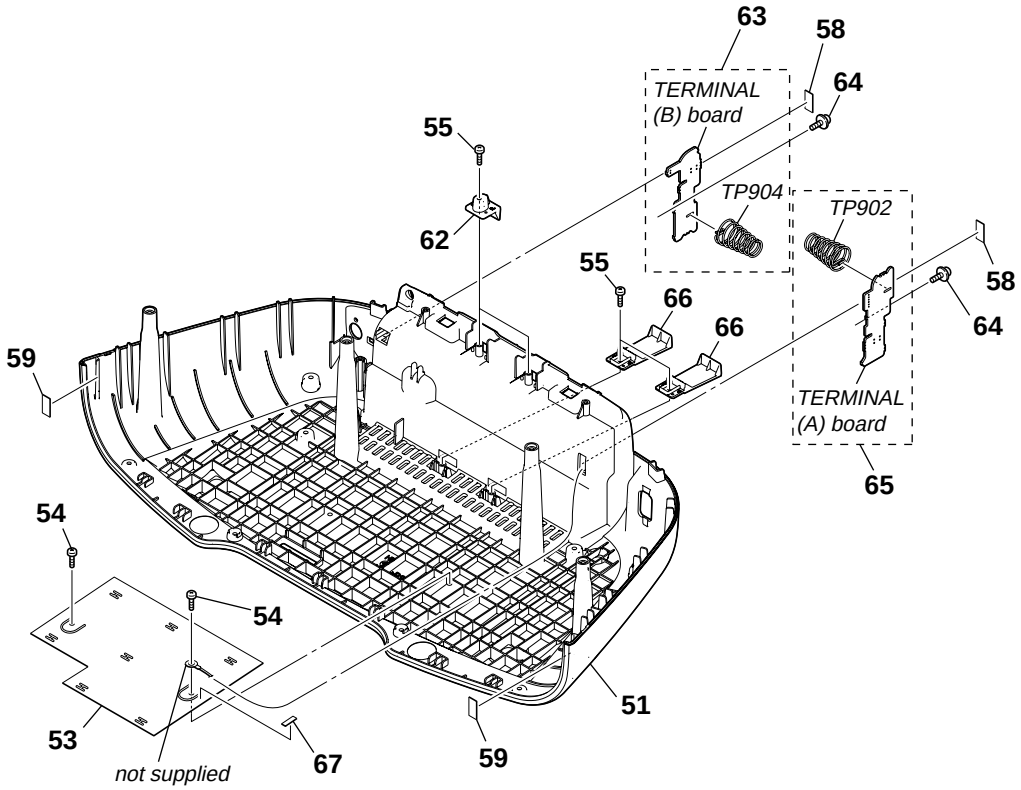
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

7-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark
1	2-889-174-01	LID, BATTERY CASE	
2	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
3	4-233-372-02	FOOT (FELT)	
4	3-252-833-01	SCREW (M3), (+) P	
5	2-889-175-01	PANEL (CD)	
ANT1	1-754-376-11	ANTENNA, TELESCOPIC	
#1	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	

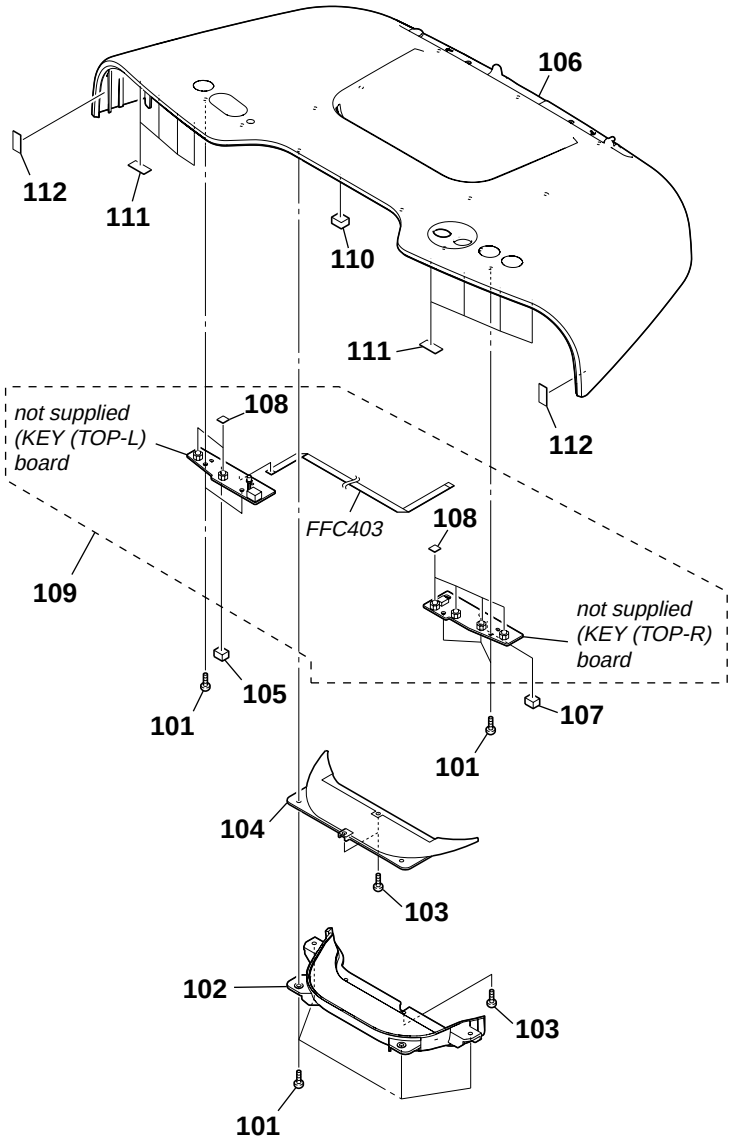
7-2. CABINET (LOWER) SECTION



Ref. No.	Part No.	Description	Remark
51	2-889-171-41	CABINET (LOWER)	
53	3-100-916-01	PLATE (BOTTOM), SHIELD	
54	3-254-151-01	SCREW (B2.6), (+) P TAPPING	
55	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
58	3-255-740-01	CUSHION (BATTERY A)	
59	3-917-753-41	CUSHION (SP)	
62	2-892-711-01	HOLDER (A), BATTERY	

Ref. No.	Part No.	Description	Remark
63	A-1254-618-A	TERMINAL (B) BOARD, COMPLETE	
64	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
65	A-1254-617-A	TERMINAL (A) BOARD, COMPLETE	
66	2-892-712-01	HOLDER (B), BATTERY	
67	3-559-407-01	CUSHION, STOPPER	
TP902	3-240-561-02	TERMINAL (–), BATTERY	
TP904	3-240-561-02	TERMINAL (–), BATTERY	

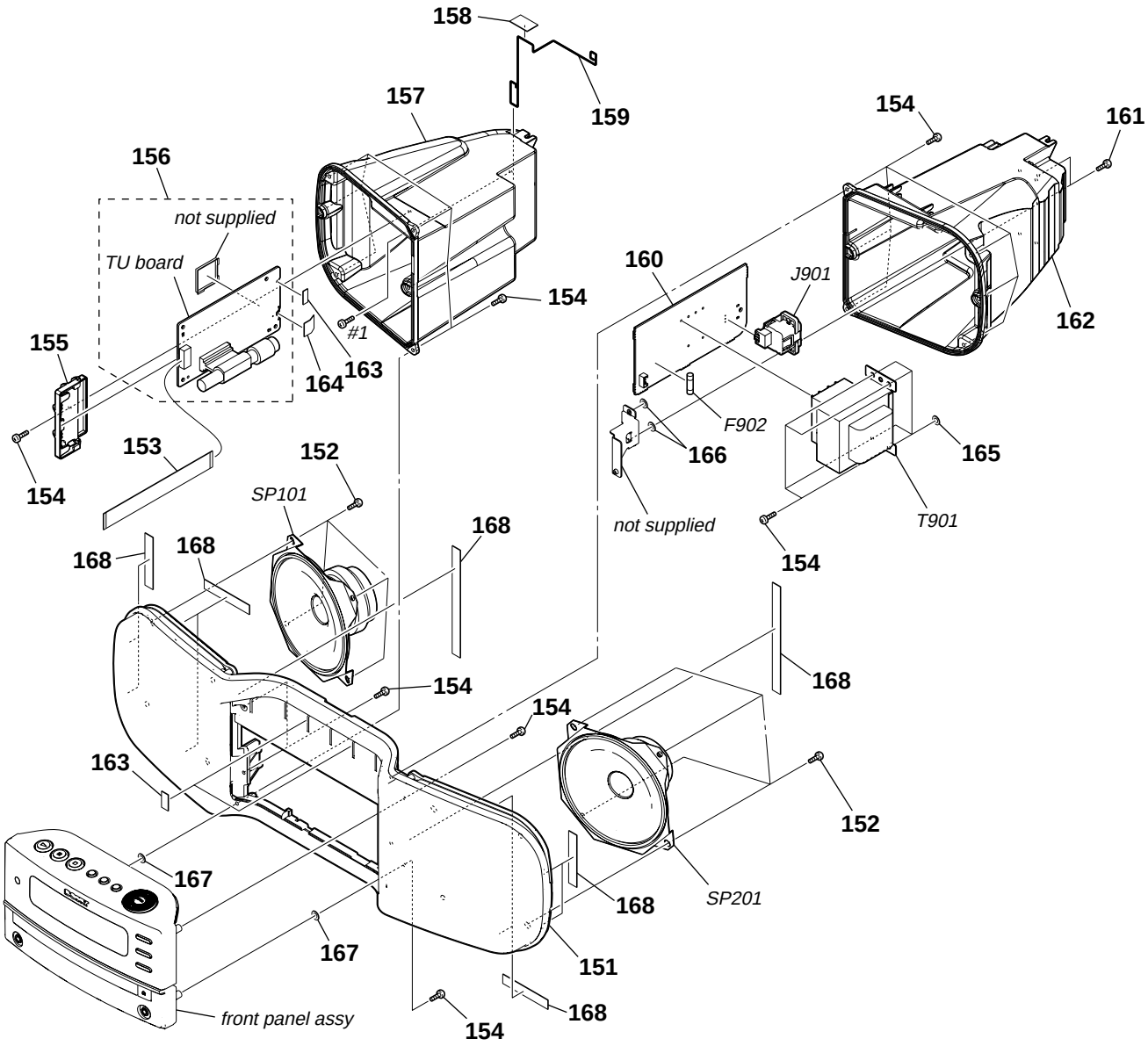
7-3. CABINET (UPPER) SECTION



Ref. No.	Part No.	Description	Remark
101	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
102	2-891-065-01	HANDLE, LOWER	
103	3-253-143-01	SCREW (B2.6), (+) P TAPPING	
104	2-889-173-01	HANDLE, UPPER	
105	3-208-682-01	CUSHION (POW)	
106	X-2177-816-1	CABINET (UPPER) SUB ASSY (AEP, IT, EE, RU)	
106	X-2177-817-1	CABINET (UPPER) SUB ASSY (MX, SP, TH)	

Ref. No.	Part No.	Description	Remark
107	3-208-681-01	CUSHION (VOL)	
108	3-573-007-01	SHEET (1)	
109	A-1254-598-A	KEY (TOP) PC BOARD ASSY	
110	3-211-602-01	CUSHION (UPPER)	
111	3-255-740-01	CUSHION (BATTERY A)	
112	3-917-753-41	CUSHION (SP)	
FFC403	1-831-984-21	CABLE, FLEXIBLE FLAT (4 CORE)	

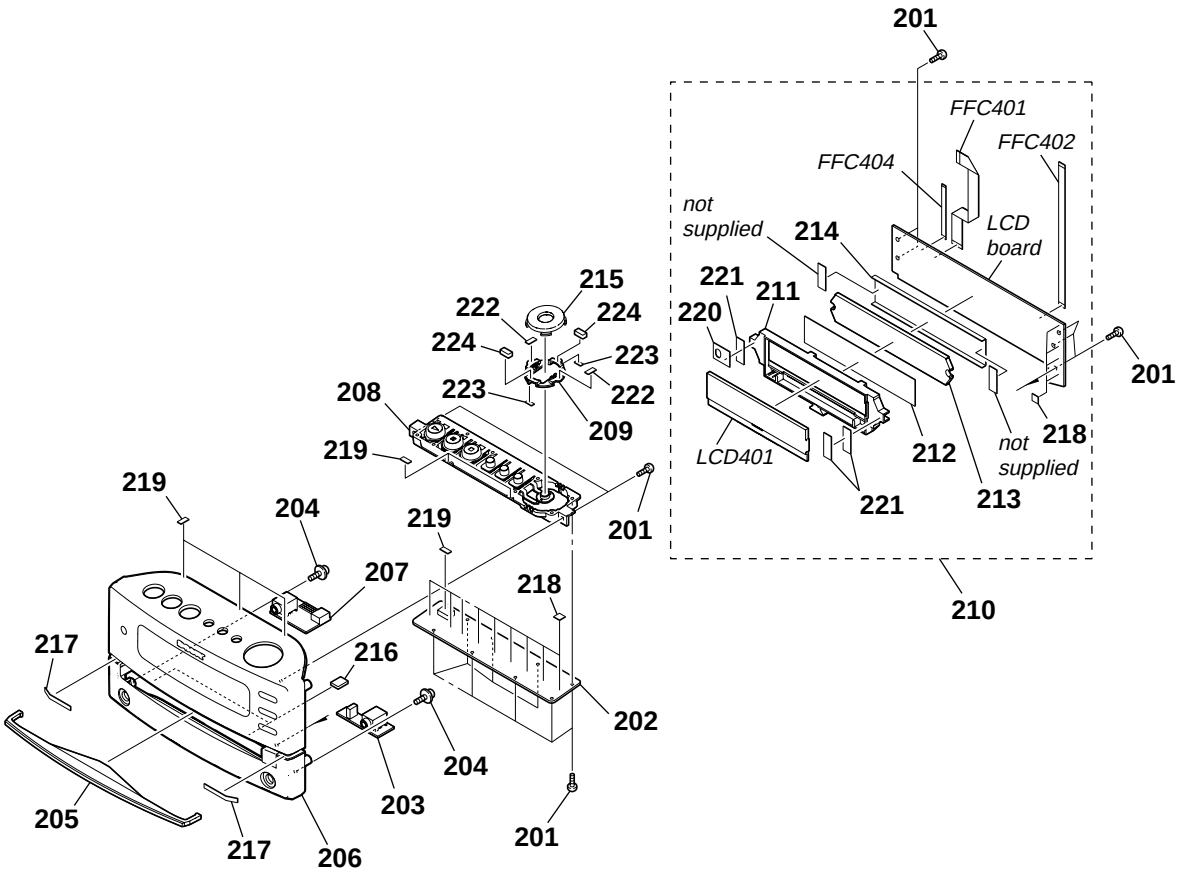
7-4. CABINET (FRONT) SECTION



Ref. No.	Part No.	Description	Remark
151	X-2177-815-1	CABINET (FRONT) SUB ASSY	
152	3-254-143-01	SCREW (B3), (+) BV TAPPING	
153	1-831-711-21	CABLE, FLEXIBLE FLAT (11 CORE)	
154	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
155	3-249-551-01	HOLDER (PWB TU)	
156	A-1071-793-A	TU BOARD, COMPLETE (MX)	
156	A-1177-912-A	TU BOARD, COMPLETE	
		(AEP, IT, EE, RU, SP, TH)	
157	2-889-187-11	BOX (L), SPEAKER	
158	4-017-441-01	CUSHION (B)	
159	2-889-199-01	TERMINAL, ANTENNA	
160	A-1254-620-A	POWER BOARD, COMPLETE	
161	3-254-140-11	SCREW (B2.6), (+) BV TAPPING	
162	2-889-188-11	BOX (R), SPEAKER	
163	3-255-740-01	CUSHION (BATTERY A)	
164	3-917-753-41	CUSHION (SP)	

Ref. No.	Part No.	Description	Remark
165	3-219-355-01	WASHER (L)	
166	3-219-356-01	WASHER (R)	
167	2-178-844-01	WASHER (CD CHASSIS)	
168	3-243-076-01	WOVEN (90), FABRIC NON	
⚠F902	1-533-470-12	FUSE (T3.15AL/250V)	
⚠J901	1-526-838-11	INLET, AC 2P (~AC IN)	
		(AEP, IT, EE, RU, SP, TH)	
⚠J901	1-540-009-12	INLET, AC (~AC IN) (MX)	
SP101	1-826-645-11	SPEAKER (10cm) (L-CH)	
SP201	1-826-645-11	SPEAKER (10cm) (R-CH)	
⚠T901	1-443-859-11	TRANSFORMER, POWER (MX)	
⚠T901	1-443-860-11	TRANSFORMER, POWER	
		(AEP, IT, EE, RU, SP, TH)	
#1	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	

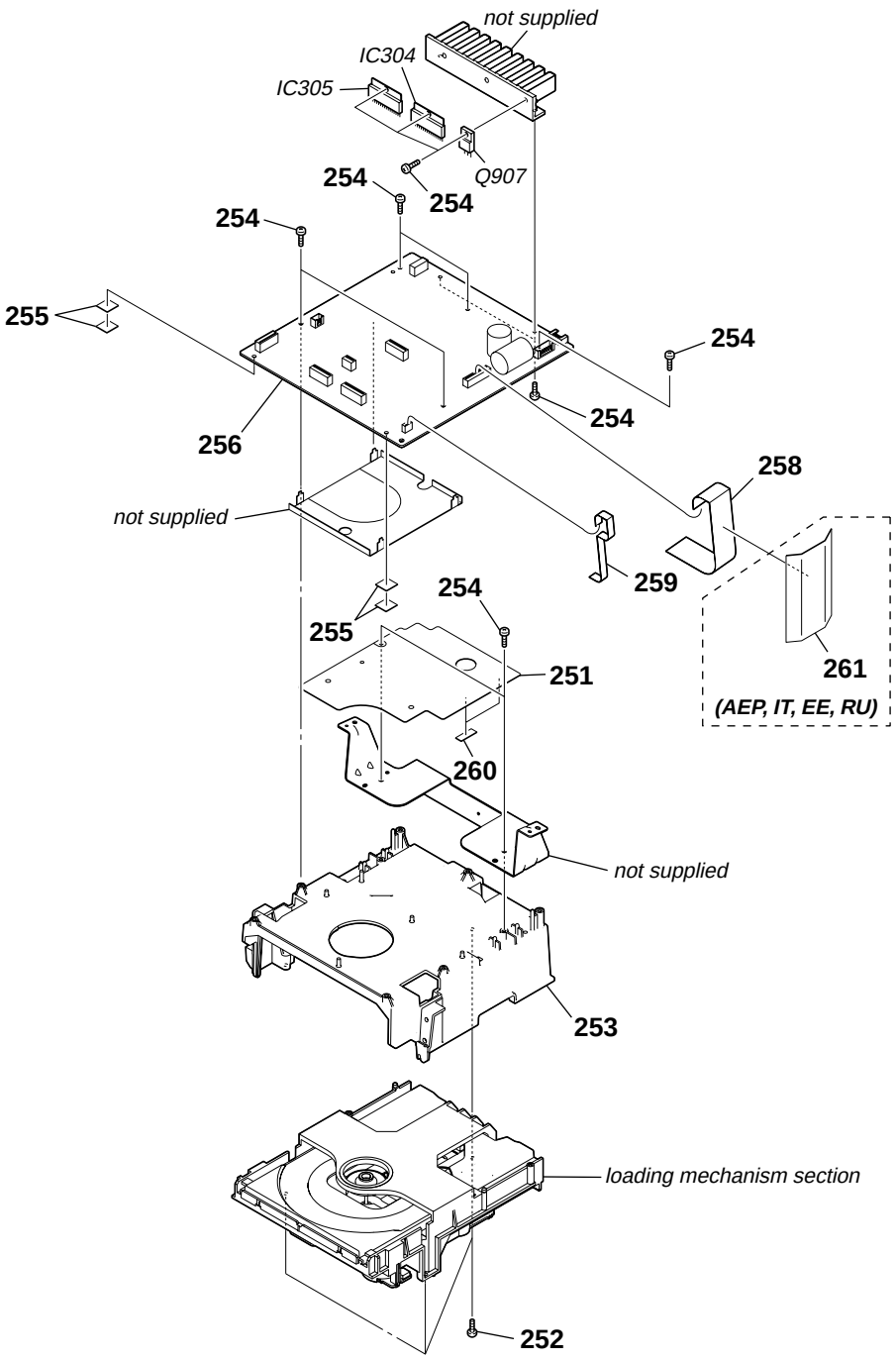
7-5. FRONT PANEL ASSY



Ref. No.	Part No.	Description	Remark
201	3-254-151-01	SCREW (B2.6), (+) P TAPPING	
202	A-1254-612-A	PANEL (TOP) BOARD, COMPLETE	
203	A-1254-613-A	JACK (AU IN) BOARD, COMPLETE	
204	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
205	2-889-193-01	PLATE (PANEL), LIGHT GUIDE	
206	X-2177-814-1	PANEL SUB ASSY, FRONT	
207	A-1254-614-A	JACK (HP) BOARD, COMPLETE	
208	X-2177-026-1	BUTTON (PANEL TOP) ASSY	
		(▷, ▯▯, □, ENTER)	
209	2-890-707-01	BASE (FOLDER) (B)	
210	A-1254-596-A	LCD BOARD, COMPLETE	
211	2-889-191-01	HOLDER LCD	
212	2-889-194-01	SHEET (DIFFUSION)	
213	2-889-192-01	PLATE (LCD), LIGHT GUIDE	
214	2-889-195-01	REFLECTOR	
215	X-2177-027-1	BUTTON (HOLDER) ASSY	
		(⏮ ◁◁, ⇧, ▷▷ ▷▷⏭, ⇩)	

Ref. No.	Part No.	Description	Remark
216	3-213-479-01	SPACER (PANEL)	
217	3-213-738-01	SHEET (PANEL)	
218	3-573-007-01	SHEET (1)	
219	3-255-740-01	CUSHION (BATTERY A)	
220	3-209-206-01	SHEET (SENSOR)	
221	3-917-753-41	CUSHION (SP)	
222	3-215-441-01	CUSHION FOLDER	
223	3-215-441-11	CUSHION FOLDER	
224	3-217-771-01	CUSHION (BTN, P-TOP)	
FFC401	1-832-425-21	CABLE, FLEXIBLE FLAT (11 CORE)	
FFC402	1-831-764-21	CABLE, FLEXIBLE FLAT (7 CORE)	
FFC404	1-831-981-21	CABLE, FLEXIBLE FLAT (4 CORE)	
LCD401	1-802-394-11	LIQUID CRYSTAL DISPLAY	

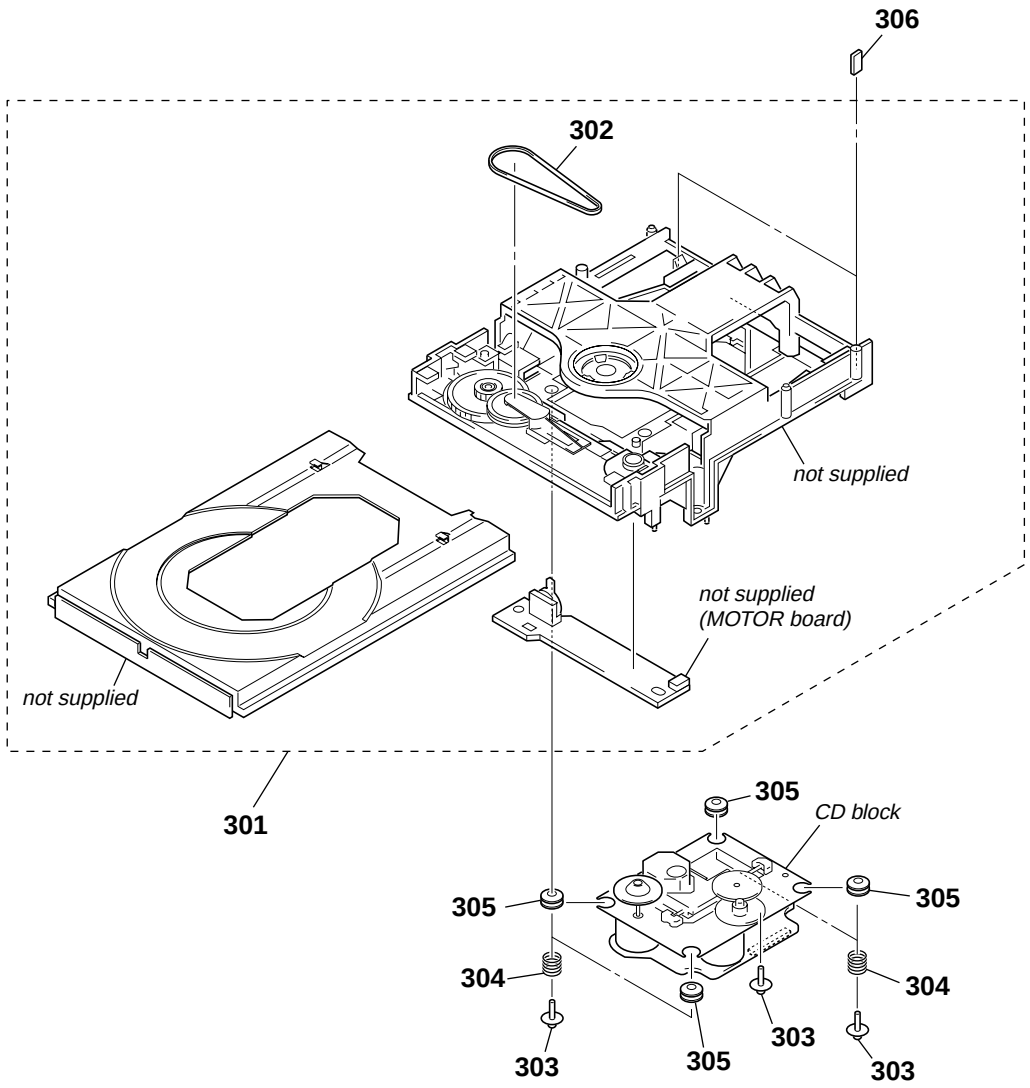
7-6. MAIN BLOCK SECTION



Ref. No.	Part No.	Description	Remark
251	3-216-266-01	PLATE (CD BLOCK 2), SHIELD	
252	3-254-143-01	SCREW (B3), (+) BV TAPPING	
253	2-889-186-01	CHASSIS	
254	3-252-827-01	SCREW (B2.6), (+) BV TAPPING	
255	3-573-007-01	SHEET (1)	
256	A-1254-619-A	MAIN BOARD, COMPLETE (AEP, IT, EE, RU)	
256	A-1254-647-A	MAIN BOARD, COMPLETE (MX)	
256	A-1287-679-A	MAIN BOARD, COMPLETE (SP, TH)	

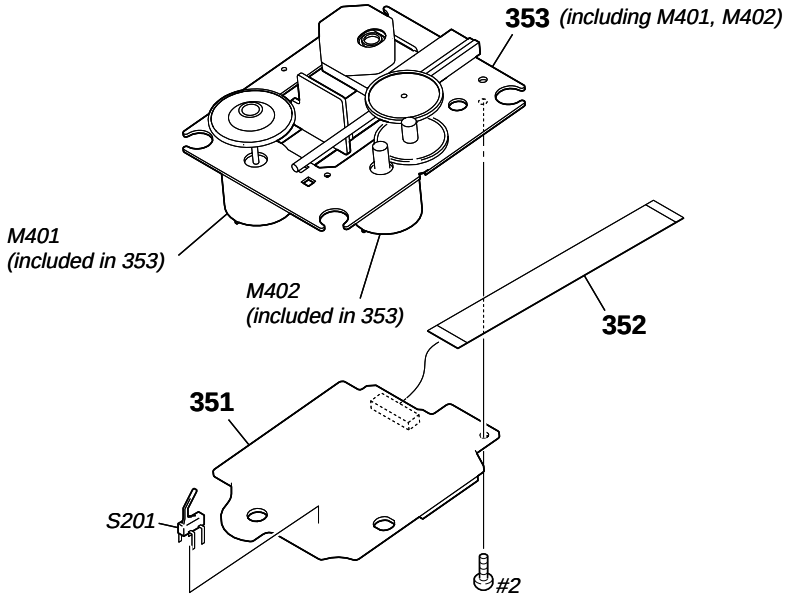
Ref. No.	Part No.	Description	Remark
258	1-832-616-21	CABLE, FLEXIBLE FLAT (21 CORE)	
259	1-832-534-21	CABLE, FLEXIBLE FLAT (5 CORE)	
260	3-917-753-41	CUSHION (SP)	
261	3-208-686-01	SEIELD (FFC) (AEP, IT, EE, RU)	
IC304	8-759-426-51	IC BA5417	
IC305	8-759-426-51	IC BA5417	
Q907	8-729-018-99	TRANSISTOR 2SD2394-F	

7-7. LOADING MECHANISM SECTION



Ref. No.	Part No.	Description	Remark
301	A-1242-967-A	LOADING (BK) ASSY	
302	3-080-478-01	BELT	
303	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
304	4-227-045-41	SPRING (INSULATOR)	
305	4-229-005-41	INSULATOR	
306	3-208-653-01	SPACER (CD MECHANICAL)	

7-8. CD BLOCK



Ref. No.	Part No.	Description	Remark
351	A-1244-423-A	CD BOARD, COMPLETE	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
⚠353	8-820-070-07	OPTICAL PICK-UP BLOCK (KSM-213CCP/C2NP) (including M401, M402)	

Ref. No.	Part No.	Description	Remark
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	
#2	7-685-853-04	SCREW +BVTT 2X6 (S)	

SECTION 8
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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- 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...
- Abbreviation
  EE : East European model
  IT : Italian model
  MX : Mexican model
  RU : Russian model
  SP : Singapore model
  TH : Thai model

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
	A-1244-423-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C100	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C101	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C105	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C106	1-128-995-21	ELECT CHIP	100uF	20%	10V
C107	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C112	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C113	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C115	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C116	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C117	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C118	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C119	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C123	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C124	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C125	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C126	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C127	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C128	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C130	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C132	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C133	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C136	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C137	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C138	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C139	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C140	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C141	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C142	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C143	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C144	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C145	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C146	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C147	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C148	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C149	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C150	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C151	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C152	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-128-995-21	ELECT CHIP	100uF	20%	10V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C207	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C302	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C303	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C306	1-128-995-21	ELECT CHIP	100uF	20%	10V
C307	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C403	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN201	1-784-833-51	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	6-709-624-01	IC TC94A70FG-006			
IC201	6-710-808-01	IC TK63115SCL-G@GT			
IC401	6-710-637-01	IC BA5826SFP-E2			
		< TRANSISTOR >			
Q301	6-551-120-01	TRANSISTOR	2SA2119K		
		< RESISTOR >			
R101	1-216-813-11	METAL CHIP	220	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W
R104	1-216-295-91	SHORT CHIP	0		
R105	1-216-857-11	METAL CHIP	1M	5%	1/10W
R106	1-216-821-11	METAL CHIP	1K	5%	1/10W

CD | JACK (AU IN) | JACK (HP)

Ref. No.	Part No.	Description			Remark
R108	1-216-864-11	SHORT CHIP	0		
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-216-809-11	METAL CHIP	100	5%	1/10W
R113	1-216-833-11	METAL CHIP	10K	5%	1/10W
R114	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-845-11	METAL CHIP	100K	5%	1/10W
R120	1-216-864-11	SHORT CHIP	0		
R125	1-216-864-11	SHORT CHIP	0		
R126	1-216-864-11	SHORT CHIP	0		
R127	1-216-864-11	SHORT CHIP	0		
R128	1-216-853-11	METAL CHIP	470K	5%	1/10W
R129	1-216-821-11	METAL CHIP	1K	5%	1/10W
R130	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-857-11	METAL CHIP	1M	5%	1/10W
R135	1-216-853-11	METAL CHIP	470K	5%	1/10W
R136	1-216-837-11	METAL CHIP	22K	5%	1/10W
R139	1-216-841-11	METAL CHIP	47K	5%	1/10W
R140	1-216-864-11	SHORT CHIP	0		
R142	1-216-837-11	METAL CHIP	22K	5%	1/10W
R143	1-216-841-11	METAL CHIP	47K	5%	1/10W
R144	1-216-837-11	METAL CHIP	22K	5%	1/10W
R145	1-216-864-11	SHORT CHIP	0		
R146	1-216-864-11	SHORT CHIP	0		
R147	1-216-864-11	SHORT CHIP	0		
R148	1-216-864-11	SHORT CHIP	0		
R149	1-216-864-11	SHORT CHIP	0		
R150	1-216-864-11	SHORT CHIP	0		
R151	1-216-864-11	SHORT CHIP	0		
R153	1-216-857-11	METAL CHIP	1M	5%	1/10W
R154	1-216-857-11	METAL CHIP	1M	5%	1/10W
R155	1-216-805-11	METAL CHIP	47	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-91	SHORT CHIP	0		
R202	1-216-295-91	SHORT CHIP	0		
R203	1-216-809-11	METAL CHIP	100	5%	1/10W
R204	1-216-809-11	METAL CHIP	100	5%	1/10W
R205	1-216-809-11	METAL CHIP	100	5%	1/10W
R206	1-216-809-11	METAL CHIP	100	5%	1/10W
R207	1-216-809-11	METAL CHIP	100	5%	1/10W
R208	1-216-809-11	METAL CHIP	100	5%	1/10W
R209	1-216-809-11	METAL CHIP	100	5%	1/10W
R210	1-216-809-11	METAL CHIP	100	5%	1/10W
R211	1-216-809-11	METAL CHIP	100	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R218	1-216-845-11	METAL CHIP	100K	5%	1/10W
R219	1-216-845-11	METAL CHIP	100K	5%	1/10W
R220	1-216-845-11	METAL CHIP	100K	5%	1/10W
R221	1-216-845-11	METAL CHIP	100K	5%	1/10W
R222	1-216-845-11	METAL CHIP	100K	5%	1/10W
R223	1-216-845-11	METAL CHIP	100K	5%	1/10W
R301	1-216-845-11	METAL CHIP	100K	5%	1/10W
R302	1-216-864-11	SHORT CHIP	0		
R303	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R304	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R405	1-216-833-11	METAL CHIP	10K	5%	1/10W
R408	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R414	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R415	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< VIBRATOR >			
X102	1-795-101-21	VIBRATOR, CERAMIC (16.934MHz)			
**********					
	A-1254-613-A	JACK (AU IN) BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C144	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C145	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C244	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C245	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
		< DIODE >			
D306	8-719-988-61	DIODE 1SS355TE-17			
D307	8-719-988-61	DIODE 1SS355TE-17			
		< JACK >			
J302	1-815-629-21	JACK (AUDIO IN)			
		< COIL >			
L101	1-410-517-11	INDUCTOR	47uH		
L201	1-410-517-11	INDUCTOR	47uH		
L301	1-414-142-61	INDUCTOR	1uH		
**********					
	A-1254-614-A	JACK (HP) BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C142	1-124-584-00	ELECT	100uF	20%	10V
C143	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C242	1-124-584-00	ELECT	100uF	20%	10V
C243	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN311	1-815-552-11	PIN, CONNECTOR (PWB) 4P			
		< FERRITE BEAD >			
FB101	1-469-701-21	FERRITE, EMI (SMD) (1608)			
FB201	1-469-701-21	FERRITE, EMI (SMD) (1608)			
FB301	1-469-701-21	FERRITE, EMI (SMD) (1608)			
		< JACK >			
J301	1-815-629-21	JACK (🎧)			
		< RESISTOR >			
R133	1-216-809-11	METAL CHIP	100	5%	1/10W
R141	1-216-821-11	METAL CHIP	1K	5%	1/10W
R233	1-216-809-11	METAL CHIP	100	5%	1/10W
R241	1-216-821-11	METAL CHIP	1K	5%	1/10W
**********					

KEY (TOP-L) **KEY (TOP-R)** **LCD**

Ref. No.	Part No.	Description			Remark
		KEY (TOP-L) BOARD			
		**********			
		< LED >			
D404	8-719-059-97	LED L-34HD (OPR/BATT)			
		< RESISTOR >			
R401	1-216-817-11	METAL CHIP	470	5%	1/10W
R402	1-216-813-11	METAL CHIP	220	5%	1/10W
R403	1-216-821-11	METAL CHIP	1K	5%	1/10W
R434	1-216-813-11	METAL CHIP	220	5%	1/10W
		< SWITCH >			
S402	1-786-050-21	SWITCH, KEY BOARD (POWER)			
S403	1-786-050-21	SWITCH, KEY BOARD (SLEEP)			
**********					
		KEY (TOP-R) BOARD			
		**********			
		< RESISTOR >			
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R409	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R410	1-216-821-11	METAL CHIP	1K	5%	1/10W
R411	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R412	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R413	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
		< SWITCH >			
S407	1-786-050-21	SWITCH, KEY BOARD (VOLUME –)			
S409	1-786-050-21	SWITCH, KEY BOARD (VOLUME +)			
S410	1-786-050-21	SWITCH, KEY BOARD (MEGA BASS)			
S411	1-786-050-21	SWITCH, KEY BOARD (SOUND)			
**********					
	A-1254-596-A	LCD BOARD, COMPLETE			
		**********			
	2-889-191-01	HOLDER LCD			
	2-889-192-01	PLATE (LCD), LIGHT GUIDE			
	2-889-194-01	SHEET (DIFFUSION)			
	2-889-195-01	REFLECTOR			
	3-209-206-01	SHEET (SENSOR)			
	3-831-441-99	SHEET (1)			
	3-917-753-41	CUSHION (SP)			
		< CAPACITOR >			
C401	1-115-156-11	CERAMIC CHIP	1uF		10V
C402	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C403	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C404	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C406	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C407	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C408	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C409	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C410	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
		< LED >			
D402	6-501-831-01	LED 1L034FY23E0CA201 (LCD BACK LIGHT)			

Ref. No.	Part No.	Description			Remark
D403	6-501-831-01	LED 1L034FY23E0CA201 (LCD BACK LIGHT)			
		< FLEXIBLE FLAT CABLE >			
FFC401	1-832-425-21	CABLE, FLEXIBLE FLAT (11 CORE)			
FFC402	1-831-764-21	CABLE, FLEXIBLE FLAT (7 CORE)			
FFC404	1-831-981-21	CABLE, FLEXIBLE FLAT (4 CORE)			
		< IC >			
IC401	6-600-349-11	IC NJL22H400A			
IC402	6-709-360-01	IC NJU6533FA2			
		< JUMPER RESISTOR >			
JC401	1-216-864-11	SHORT CHIP	0		
JC402	1-216-864-11	SHORT CHIP	0		
JC403	1-216-864-11	SHORT CHIP	0		
JC404	1-216-864-11	SHORT CHIP	0		
JC405	1-216-864-11	SHORT CHIP	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD401	1-802-394-11	LIQUID CRYSTAL DISPLAY			
		< TRANSISTOR >			
Q402	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
		< RESISTOR >			
R404	1-216-813-11	METAL CHIP	220	5%	1/10W
R405	1-216-817-11	METAL CHIP	470	5%	1/10W
R407	1-216-813-11	METAL CHIP	220	5%	1/10W
R408	1-216-817-11	METAL CHIP	470	5%	1/10W
R428	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R430	1-216-809-11	METAL CHIP	100	5%	1/10W
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-813-11	METAL CHIP	220	5%	1/10W
R441	1-216-849-11	METAL CHIP	220K	5%	1/10W
R443	1-216-821-11	METAL CHIP	1K	5%	1/10W
R446	1-216-821-11	METAL CHIP	1K	5%	1/10W
R451	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R457	1-216-809-11	METAL CHIP	100	5%	1/10W
R458	1-216-809-11	METAL CHIP	100	5%	1/10W
R459	1-216-809-11	METAL CHIP	100	5%	1/10W
R460	1-216-809-11	METAL CHIP	100	5%	1/10W
R461	1-216-809-11	METAL CHIP	100	5%	1/10W
R462	1-216-849-11	METAL CHIP	220K	5%	1/10W
R463	1-216-841-11	METAL CHIP	47K	5%	1/10W
R464	1-216-853-11	METAL CHIP	470K	5%	1/10W
R465	1-216-837-11	METAL CHIP	22K	5%	1/10W
R466	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
		< SWITCH >			
S401	1-786-050-21	SWITCH, KEY BOARD (⏏)			
S404	1-786-050-21	SWITCH, KEY BOARD (AUDIO IN)			
S405	1-786-050-21	SWITCH, KEY BOARD (RADIO, BAND, AUTO PRESET)			
S408	1-786-050-21	SWITCH, KEY BOARD (CD)			
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Ref. No.	Part No.	Description			Remark
	A-1254-619-A	MAIN BOARD, COMPLETE (AEP, IT, EE, RU)			
	A-1254-647-A	MAIN BOARD, COMPLETE (MX)			
	A-1287-679-A	MAIN BOARD, COMPLETE (SP, TH)			
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		< CAPACITOR >			
C101	1-126-963-11	ELECT	4.7uF	20%	50V
C102	1-126-964-11	ELECT	10uF	20%	50V
C103	1-126-964-11	ELECT	10uF	20%	50V
C104	1-126-963-11	ELECT	4.7uF	20%	50V
C105	1-126-963-11	ELECT	4.7uF	20%	50V
C106	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C107	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C108	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C109	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C110	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C111	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C112	1-126-963-11	ELECT	4.7uF	20%	50V
C113	1-126-960-11	ELECT	1uF	20%	50V
C116	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C117	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C118	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C119	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C120	1-126-964-11	ELECT	10uF	20%	50V
C121	1-104-662-91	ELECT	22uF	20%	25V
C122	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C123	1-104-662-91	ELECT	22uF	20%	25V
C124	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C125	1-126-934-11	ELECT	220uF	20%	16V
C126	1-126-960-11	ELECT	1uF	20%	50V
C127	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C128	1-126-960-11	ELECT	1uF	20%	50V
C129	1-126-933-11	ELECT	100uF	20%	16V
C130	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C131	1-126-933-11	ELECT	100uF	20%	16V
C132	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C133	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C134	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C135	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C136	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C137	1-126-767-11	ELECT	1000uF	20%	16V
C138	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C139	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C140	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C141	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C146	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C147	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C201	1-126-963-11	ELECT	4.7uF	20%	50V
C202	1-126-964-11	ELECT	10uF	20%	50V
C203	1-126-964-11	ELECT	10uF	20%	50V
C204	1-126-963-11	ELECT	4.7uF	20%	50V
C205	1-126-963-11	ELECT	4.7uF	20%	50V
C206	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C207	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C208	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C209	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C210	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C211	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C212	1-126-963-11	ELECT	4.7uF	20%	50V
C213	1-126-960-11	ELECT	1uF	20%	50V
C216	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C217	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C218	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C219	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C220	1-126-964-11	ELECT	10uF	20%	50V
C221	1-104-662-91	ELECT	22uF	20%	25V
C222	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C223	1-104-662-91	ELECT	22uF	20%	25V
C224	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C226	1-126-960-11	ELECT	1uF	20%	50V
C227	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C228	1-126-960-11	ELECT	1uF	20%	50V
C229	1-126-933-11	ELECT	100uF	20%	16V
C230	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C231	1-126-933-11	ELECT	100uF	20%	16V
C232	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C233	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C234	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C235	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C236	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C237	1-126-767-11	ELECT	1000uF	20%	16V
C238	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C239	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C240	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C241	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C246	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C247	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C303	1-126-964-11	ELECT	10uF	20%	50V
C304	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C305	1-126-925-91	ELECT	470uF	20%	10V
C306	1-126-964-11	ELECT	10uF	20%	50V
C307	1-126-964-11	ELECT	10uF	20%	50V
C308	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C310	1-126-934-11	ELECT	220uF	20%	16V
C601	1-126-926-11	ELECT	1000uF	20%	10V
C602	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C603	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C804	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C805	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C806	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C808	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C809	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C810	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C811	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C812	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C813	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C814	1-126-933-11	ELECT	100uF	20%	16V
C815	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C816	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C817	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C818	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C819	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C820	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C821	1-126-933-11	ELECT	100uF	20%	16V
C822	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C823	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C824	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C825	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C826	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C827	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C834	1-126-933-11	ELECT	100uF	20%	16V
C837	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C839	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C842	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C843	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C844	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C845	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C846	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C848	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C851	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C858	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C905	1-126-935-11	ELECT	470uF	20%	16V
C907	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C908	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C909	1-126-934-11	ELECT	220uF	20%	16V
C911	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C912	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C913	1-126-933-11	ELECT	100uF	20%	16V
C916	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C918	1-126-937-11	ELECT	4700uF	20%	16V
C919	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C920	1-126-933-11	ELECT	100uF	20%	16V
C921	1-126-923-91	ELECT	220uF	20%	10V
C922	1-126-964-11	ELECT	10uF	20%	50V
C923	1-126-934-11	ELECT	220uF	20%	16V
C925	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C931	1-165-128-11	CERAMIC CHIP	0.22uF		16V
		< CONNECTOR >			
CN306	1-815-446-11	PIN, CONNECTOR (PWB) 5P			
CN309	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
CN310	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
CN901	1-815-551-11	PIN, CONNECTOR (PWB) 3P			
CN902	1-815-446-11	PIN, CONNECTOR (PWB) 5P			
CNP802	1-568-830-11	CONNECTOR, FFC 11P			
CNP803	1-779-289-11	CONNECTOR, FFC (LIF (NON-ZIF)) 21P			
CNP805	1-779-273-11	CONNECTOR, FFC (LIF (NON-ZIF)) 5P			
CNP806	1-568-830-11	CONNECTOR, FFC 11P			
CNP807	1-568-826-11	CONNECTOR, FFC 7P			
CNP810	1-784-765-11	CONNECTOR, FFC 4P			
		< DIODE >			
D301	6-500-335-01	DIODE	MC2838-T112-1		
D302	8-719-988-61	DIODE	1SS355TE-17		
D303	8-719-988-61	DIODE	1SS355TE-17		
D304	8-719-988-61	DIODE	1SS355TE-17		
D305	8-719-988-61	DIODE	1SS355TE-17		
D601	8-719-063-79	DIODE	1N4002B		
D602	8-719-063-79	DIODE	1N4002B		
D801	8-719-988-61	DIODE	1SS355TE-17		
D802	6-500-334-01	DIODE	MC2836-T112-1		
D805	6-500-335-01	DIODE	MC2838-T112-1		
D906	8-719-988-61	DIODE	1SS355TE-17		
D909	6-501-170-01	DIODE	UDZW-TE17-6.8B		
D910	6-500-334-01	DIODE	MC2836-T112-1		
D912	6-501-164-01	DIODE	UDZW-TE17-3.9B		
D913	8-719-988-61	DIODE	1SS355TE-17		
D914	8-719-063-79	DIODE	1N4002B		
		< FERRITE BEAD >			
FB102	1-410-397-21	FERRITE	1.1uH (AEP, IT, EE, RU)		
FB103	1-410-397-21	FERRITE	1.1uH (AEP, IT, EE, RU)		
FB202	1-410-397-21	FERRITE	1.1uH (AEP, IT, EE, RU)		
FB203	1-410-397-21	FERRITE	1.1uH (AEP, IT, EE, RU)		
		< IC >			
IC302	6-710-289-01	IC	R2S15904SP		
IC601	8-759-962-08	IC	BA6208		
IC801	6-706-338-01	IC	XC6202P332FR		
IC802	6-704-118-01	IC	S-80828CNMC-B8NT2G		
IC803	6-807-526-01	IC	MB90F045PF-G-9027-SPE1		
* IC805	6-708-842-01	IC	S-24CS04AFJ-TB-G		
		< COIL >			
L801	1-414-137-31	INDUCTOR	0.22uH		
L802	1-414-743-21	INDUCTOR	47uH		
L804	1-410-509-11	INDUCTOR	10uH		
L805	1-410-509-11	INDUCTOR	10uH		
L807	1-414-741-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q101	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q102	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q201	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q202	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q801	8-729-027-46	TRANSISTOR	DTC114YKA-T146		
Q802	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q803	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q804	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q806	8-729-600-22	TRANSISTOR	2SA1235-F		
Q807	8-729-600-22	TRANSISTOR	2SA1235-F		
Q808	8-729-600-22	TRANSISTOR	2SA1235-F		
Q809	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q810	8-729-600-22	TRANSISTOR	2SA1235-F		
Q811	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q812	6-551-444-01	TRANSISTOR	RT1N436C-TP-1		
Q814	6-551-067-01	FET	RTF015P02TL		
Q815	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q816	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q904	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q905	6-551-444-01	TRANSISTOR	RT1N436C-TP-1		
Q906	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF		
Q909	8-729-027-23	TRANSISTOR	DTA114EKA-T146		
Q910	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q913	8-729-028-54	TRANSISTOR	KTC3205		
Q915	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
		< RESISTOR >			
R101	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R102	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R106	1-216-833-11	METAL CHIP	10K	5%	1/10W
R107	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R108	1-216-817-11	METAL CHIP	470	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R112	1-216-821-11	METAL CHIP	1K	5%	1/10W
R113	1-216-813-11	METAL CHIP	220	5%	1/10W
R115	1-216-821-11	METAL CHIP	1K	5%	1/10W
R116	1-216-821-11	METAL CHIP	1K	5%	1/10W
R117	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R120	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R121	1-216-821-11	METAL CHIP	1K	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R123	1-216-837-11	METAL CHIP	22K	5%	1/10W
R124	1-216-841-11	METAL CHIP	47K	5%	1/10W
R125	1-216-841-11	METAL CHIP	47K	5%	1/10W
R126	1-216-845-11	METAL CHIP	100K	5%	1/10W
R127	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R131	1-216-821-11	METAL CHIP	1K	5%	1/10W
R132	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-821-11	METAL CHIP	1K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-833-11	METAL CHIP	10K	5%	1/10W
R206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R207	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R208	1-216-817-11	METAL CHIP	470	5%	1/10W
R210	1-216-833-11	METAL CHIP	10K	5%	1/10W
R211	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R212	1-216-821-11	METAL CHIP	1K	5%	1/10W
R213	1-216-813-11	METAL CHIP	220	5%	1/10W
R215	1-216-821-11	METAL CHIP	1K	5%	1/10W
R216	1-216-821-11	METAL CHIP	1K	5%	1/10W
R217	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R220	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R221	1-216-821-11	METAL CHIP	1K	5%	1/10W
R222	1-216-833-11	METAL CHIP	10K	5%	1/10W
R223	1-216-837-11	METAL CHIP	22K	5%	1/10W
R224	1-216-841-11	METAL CHIP	47K	5%	1/10W
R225	1-216-841-11	METAL CHIP	47K	5%	1/10W
R226	1-216-845-11	METAL CHIP	100K	5%	1/10W
R227	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R231	1-216-821-11	METAL CHIP	1K	5%	1/10W
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R234	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R235	1-216-821-11	METAL CHIP	1K	5%	1/10W
R301	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-833-11	METAL CHIP	10K	5%	1/10W
R304	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R305	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R307	1-216-857-11	METAL CHIP	1M	5%	1/10W
R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R314	1-216-833-11	METAL CHIP	10K	5%	1/10W
R601	1-216-841-11	METAL CHIP	47K	5%	1/10W
R602	1-216-841-11	METAL CHIP	47K	5%	1/10W
R623	1-216-841-11	METAL CHIP	47K	5%	1/10W
R624	1-216-841-11	METAL CHIP	47K	5%	1/10W
R625	1-216-841-11	METAL CHIP	47K	5%	1/10W
R626	1-216-841-11	METAL CHIP	47K	5%	1/10W
R801	1-216-817-11	METAL CHIP	470	5%	1/10W
R802	1-216-821-11	METAL CHIP	1K	5%	1/10W
R803	1-216-821-11	METAL CHIP	1K	5%	1/10W
R804	1-216-821-11	METAL CHIP	1K	5%	1/10W
R805	1-216-821-11	METAL CHIP	1K	5%	1/10W
R806	1-216-833-11	METAL CHIP	10K	5%	1/10W
R807	1-216-833-11	METAL CHIP	10K	5%	1/10W
R808	1-216-821-11	METAL CHIP	1K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W
R810	1-216-821-11	METAL CHIP	1K	5%	1/10W
R811	1-216-821-11	METAL CHIP	1K	5%	1/10W
R812	1-216-821-11	METAL CHIP	1K	5%	1/10W
R813	1-216-813-11	METAL CHIP	220	5%	1/10W
R814	1-216-821-11	METAL CHIP	1K	5%	1/10W
R816	1-216-821-11	METAL CHIP	1K	5%	1/10W
R818	1-216-821-11	METAL CHIP	1K	5%	1/10W
R825	1-216-797-11	METAL CHIP	10	5%	1/10W
R826	1-216-797-11	METAL CHIP	10	5%	1/10W
R827	1-216-821-11	METAL CHIP	1K	5%	1/10W
R829	1-216-821-11	METAL CHIP	1K	5%	1/10W
R830	1-216-821-11	METAL CHIP	1K	5%	1/10W
R831	1-216-821-11	METAL CHIP	1K	5%	1/10W
R832	1-216-821-11	METAL CHIP	1K	5%	1/10W
R833	1-216-821-11	METAL CHIP	1K	5%	1/10W
R834	1-216-821-11	METAL CHIP	1K	5%	1/10W
R835	1-216-821-11	METAL CHIP	1K	5%	1/10W
R836	1-216-821-11	METAL CHIP	1K	5%	1/10W
R837	1-216-821-11	METAL CHIP	1K	5%	1/10W
R838	1-216-821-11	METAL CHIP	1K	5%	1/10W
R839	1-216-821-11	METAL CHIP	1K	5%	1/10W
R840	1-216-821-11	METAL CHIP	1K	5%	1/10W
R841	1-216-821-11	METAL CHIP	1K	5%	1/10W
R842	1-216-821-11	METAL CHIP	1K	5%	1/10W
R843	1-216-821-11	METAL CHIP	1K	5%	1/10W
R844	1-216-821-11	METAL CHIP	1K	5%	1/10W
R845	1-216-821-11	METAL CHIP	1K	5%	1/10W
R847	1-216-821-11	METAL CHIP	1K	5%	1/10W
R849	1-216-821-11	METAL CHIP	1K	5%	1/10W
R851	1-216-821-11	METAL CHIP	1K	5%	1/10W
R853	1-216-821-11	METAL CHIP	1K	5%	1/10W
R855	1-216-821-11	METAL CHIP	1K	5%	1/10W
R856	1-216-841-11	METAL CHIP	47K	5%	1/10W
R857	1-216-841-11	METAL CHIP	47K	5%	1/10W
R858	1-216-841-11	METAL CHIP	47K	5%	1/10W
R859	1-216-821-11	METAL CHIP	1K	5%	1/10W
R860	1-216-821-11	METAL CHIP	1K	5%	1/10W
R861	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R862	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R864	1-216-821-11	METAL CHIP	1K	5%	1/10W
R865	1-216-821-11	METAL CHIP	1K	5%	1/10W
R866	1-216-821-11	METAL CHIP	1K	5%	1/10W
R867	1-216-821-11	METAL CHIP	1K	5%	1/10W
R868	1-216-821-11	METAL CHIP	1K	5%	1/10W
R869	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R871	1-216-821-11	METAL CHIP	1K	5%	1/10W
R872	1-216-821-11	METAL CHIP	1K	5%	1/10W
R873	1-216-821-11	METAL CHIP	1K	5%	1/10W
R888	1-216-821-11	METAL CHIP	1K	5%	1/10W
R890	1-216-833-11	METAL CHIP	10K	5%	1/10W
R891	1-216-833-11	METAL CHIP	10K	5%	1/10W
R892	1-216-841-11	METAL CHIP	47K	5%	1/10W
R906	1-216-809-11	METAL CHIP	100	5%	1/10W
R914	1-216-821-11	METAL CHIP	1K	5%	1/10W
R915	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R916	1-216-821-11	METAL CHIP	1K	5%	1/10W
R917	1-216-821-11	METAL CHIP	1K	5%	1/10W
R918	1-216-821-11	METAL CHIP	1K	5%	1/10W
R919	1-216-833-11	METAL CHIP	10K	5%	1/10W
R920	1-216-833-11	METAL CHIP	10K	5%	1/10W
R921	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R922	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R923	1-216-841-11	METAL CHIP	47K	5%	1/10W
R924	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R925	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R926	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R927	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R928	1-216-821-11	METAL CHIP	1K	5%	1/10W
R929	1-216-817-11	METAL CHIP	470	5%	1/10W
R930	1-216-833-11	METAL CHIP	10K	5%	1/10W
R933	1-216-821-11	METAL CHIP	1K	5%	1/10W
R934	1-216-821-11	METAL CHIP	1K	5%	1/10W
R935	1-216-821-11	METAL CHIP	1K	5%	1/10W
R936	1-216-809-11	METAL CHIP	100	5%	1/10W
R937	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R951	1-216-837-11	METAL CHIP	22K	5%	1/10W
R952	1-216-837-11	METAL CHIP	22K	5%	1/10W
R953	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R954	1-216-853-11	METAL CHIP	470K	5%	1/10W
R955	1-216-857-11	METAL CHIP	1M	5%	1/10W
R956	1-216-841-11	METAL CHIP	47K	5%	1/10W
R957	1-216-821-11	METAL CHIP	1K	5%	1/10W
R958	1-216-845-11	METAL CHIP	100K	5%	1/10W
R959	1-216-845-11	METAL CHIP	100K	5%	1/10W
R960	1-216-841-11	METAL CHIP	47K	5%	1/10W
R961	1-216-833-11	METAL CHIP	10K	5%	1/10W
R963	1-216-841-11	METAL CHIP	47K	5%	1/10W
R964	1-216-841-11	METAL CHIP	47K	5%	1/10W
R965	1-216-841-11	METAL CHIP	47K	5%	1/10W
R966	1-216-833-11	METAL CHIP	10K	5%	1/10W
R967	1-216-833-11	METAL CHIP	10K	5%	1/10W
R968	1-216-833-11	METAL CHIP	10K	5%	1/10W
R969	1-216-833-11	METAL CHIP	10K	5%	1/10W
R970	1-216-841-11	METAL CHIP	47K	5%	1/10W
R971	1-216-841-11	METAL CHIP	47K	5%	1/10W
R972	1-216-841-11	METAL CHIP	47K	5%	1/10W
R973	1-216-864-11	SHORT CHIP	0		
R974	1-216-841-11	METAL CHIP	47K	5%	1/10W
R975	1-216-833-11	METAL CHIP	10K	5%	1/10W
R976	1-216-833-11	METAL CHIP	10K	5%	1/10W
R977	1-216-841-11	METAL CHIP	47K	5%	1/10W
R978	1-216-841-11	METAL CHIP	47K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R979	1-216-833-11	METAL CHIP	10K	5%	1/10W
R980	1-216-841-11	METAL CHIP	47K	5%	1/10W
R981	1-216-837-11	METAL CHIP	22K	5%	1/10W (SUFFIX-12)
R981	1-216-841-11	METAL CHIP	47K	5%	1/10W (SUFFIX-11)
R982	1-216-837-11	METAL CHIP	22K	5%	1/10W (SUFFIX-12)
R982	1-216-841-11	METAL CHIP	47K	5%	1/10W (SUFFIX-11)
R983	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R984	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R985	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (MX)
R986	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R987	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R988	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R989	1-216-841-11	METAL CHIP	47K	5%	1/10W
R991	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (EXCEPT MX)
R993	1-216-833-11	METAL CHIP	10K	5%	1/10W
R994	1-216-841-11	METAL CHIP	47K	5%	1/10W
R995	1-216-853-11	METAL CHIP	470K	5%	1/10W
R996	1-216-817-11	METAL CHIP	470	5%	1/10W
R997	1-216-817-11	METAL CHIP	470	5%	1/10W
R998	1-216-821-11	METAL CHIP	1K	5%	1/10W
R999	1-216-817-11	METAL CHIP	470	5%	1/10W
		< VIBRATOR >			
X802	1-813-940-11	PIEZOELECTRIC OSCILLATOR (5.53MHz)			
**********					
		MOTOR BOARD			
		**********			
		< CONNECTOR >			
CN001	1-779-542-21	CONNECTOR, FFC (LIF (NON-ZIF)) 5P			
		< SWITCH >			
S001	1-786-514-21	SWITCH, LEVER (SLIDE) (CD TRAY OPEN/CLOSE DETECT)			
**********					
	A-1254-612-A	PANEL (TOP) BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CNP404	1-784-726-11	CONNECTOR, FFC 4P			
		< RESISTOR >			
R414	1-216-821-11	METAL CHIP	1K	5%	1/10W
R415	1-216-821-11	METAL CHIP	1K	5%	1/10W
R416	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R417	1-216-821-11	METAL CHIP	1K	5%	1/10W
R418	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R419	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R420	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R421	1-216-833-11	METAL CHIP	10K	5%	1/10W
R426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R429	1-216-821-11	METAL CHIP	1K	5%	1/10W
R433	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R439	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R440	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R442	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R444	1-216-833-11	METAL CHIP	10K	5%	1/10W
R445	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R447	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S412	1-786-050-21	SWITCH, KEY BOARD (►)			
S413	1-786-050-21	SWITCH, KEY BOARD (❚❚)			
S414	1-786-050-21	SWITCH, KEY BOARD (■)			
S415	1-786-050-21	SWITCH, KEY BOARD (DISPLAY)			
S416	1-786-050-21	SWITCH, KEY BOARD (REPEAT)			
S417	1-786-050-21	SWITCH, KEY BOARD (MODE)			
S418	1-786-050-21	SWITCH, KEY BOARD (↓, FOLDER/PRESET –)			
S419	1-786-050-21	SWITCH, KEY BOARD (↑, FOLDER/PRESET +)			
S420	1-786-050-21	SWITCH, KEY BOARD (I◄◄ ◄◄, TUNE –)			
S421	1-786-050-21	SWITCH, KEY BOARD (►► ►►I, TUNE +)			
S422	1-786-050-21	SWITCH, KEY BOARD (ENTER)			
**********					
	A-1254-620-A	POWER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C902	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C903	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C904	1-162-995-11	CERAMIC CHIP	0.022uF		50V
C906	1-126-933-11	ELECT	100uF	20%	16V
C927	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C929	1-126-964-11	ELECT	10uF	20%	50V
C936	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C937	1-126-768-11	ELECT	2200uF	20%	16V
		< DIODE >			
D901	8-719-046-07	DIODE 2A02M			
D902	8-719-046-07	DIODE 2A02M			
D903	8-719-046-07	DIODE 2A02M			
D904	8-719-046-07	DIODE 2A02M			
D917	8-719-988-61	DIODE 1SS355TE-17			
		< FUSE HOLDER >			
FH901	1-533-233-31	FUSE HOLDER			
FH902	1-533-233-31	FUSE HOLDER			
		< RESISTOR >			
R901	1-216-821-11	METAL CHIP	1K	5%	1/10W
R902	1-216-821-11	METAL CHIP	1K	5%	1/10W
R903	1-216-833-11	METAL CHIP	10K	5%	1/10W
R908	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
**********					

Ref. No.	Part No.	Description			Remark
	A-1254-617-A	TERMINAL (A) BOARD, COMPLETE			
		**********			
		< RESISTOR >			
R904	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< BATTERY TERMINAL >			
TP902	3-240-561-02	TERMINAL (–), BATTERY			
**********					
	A-1254-618-A	TERMINAL (B) BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
CN904	1-815-443-11	PIN, CONNECTOR (PWB) 2P			
		< BATTERY TERMINAL >			
TP904	3-240-561-02	TERMINAL (–), BATTERY			
**********					
	A-1071-793-A	TU BOARD, COMPLETE (MX)			
	A-1177-912-A	TU BOARD, COMPLETE (EXCEPT MX)			
		**********			
		< CAPACITOR >			
C1	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C4	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C7	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C8	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C9	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C10	1-126-960-11	ELECT	1uF	20%	50V
C11	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C12	1-126-963-11	ELECT	4.7uF	20%	50V
C13	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (MX)
C14	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (EXCEPT MX)
C14	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (MX)
C15	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (EXCEPT MX)
C15	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (MX)
C18	1-126-923-91	ELECT	220uF	20%	10V
C20	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C21	1-126-960-11	ELECT	1uF	20%	50V
C22	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C23	1-126-960-11	ELECT	1uF	20%	50V
C24	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C26	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C27	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C29	1-104-658-91	ELECT	100uF	20%	10V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C32	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C33	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C37	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

TU

Ref. No.	Part No.	Description			Remark
C39	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C41	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C42	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C43	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C47	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C49	1-161-051-00	CERAMIC	0.01uF	10%	25V
C51	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C52	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C53	1-136-169-00	FILM	0.22uF	5%	50V
C54	1-126-923-91	ELECT	220uF	20%	10V
C55	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C56	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C57	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C59	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C60	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C61	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
C65	1-126-963-11	ELECT	4.7uF	20%	50V
C66	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C68	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C77	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (EXCEPT MX)
C78	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (EXCEPT MX)
C80	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C95	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< FILTER >			
CF2	1-760-235-81	FILTER, CERAMIC			
CF4	1-781-962-21	FILTER, CERAMIC			
		< CONNECTOR >			
CNP1	1-568-854-11	CONNECTOR, FFC 11P			
		< TRIMMER >			
CT1	1-141-442-91	CAP, CERAMIC TRIMMER			
CT3	1-141-304-21	CAP, CERAMIC TRIMMER			
		< DIODE >			
D1	8-719-078-48	DIODE KV1471ETR-G			
D2	8-719-078-48	DIODE KV1471ETR-G			
D3	8-719-050-69	DIODE KV1520N			
D10	8-719-988-61	DIODE 1SS355TE-17			
D11	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC1	6-700-512-01	IC TA2149BN			
IC2	8-759-483-40	IC LC72137M-TLM-E			
		< JUMPER RESISTOR >			
JC1	1-216-864-11	SHORT CHIP	0		
JC2	1-216-864-11	SHORT CHIP	0		
JC3	1-216-864-11	SHORT CHIP	0		
JC4	1-216-864-11	SHORT CHIP	0		
JC5	1-216-864-11	SHORT CHIP	0		
JC6	1-216-864-11	SHORT CHIP	0		
JC11	1-216-864-11	SHORT CHIP	0		
JC12	1-216-864-11	SHORT CHIP	0		
JC13	1-216-864-11	SHORT CHIP	0		
JC24	1-216-864-11	SHORT CHIP	0 (EXCEPT MX)		
JC33	1-216-864-11	SHORT CHIP	0		
JC34	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L1	1-409-775-11	COIL, AIR-CORE			
L2	1-416-509-11	COIL, AIR-CORE			
L3	1-754-117-12	ANTENNA, FERRITE-ROD (MW)			
L4	1-411-234-21	COIL, AM OSC			
L11	1-414-142-11	INDUCTOR	1uH (MX)		
L21	1-410-509-11	INDUCTOR	10uH		
		< RESISTOR >			
R1	1-216-817-11	METAL CHIP	470	5%	1/10W
R2	1-216-817-11	METAL CHIP	470	5%	1/10W
R3	1-216-833-11	METAL CHIP	10K	5%	1/10W
R4	1-216-833-11	METAL CHIP	10K	5%	1/10W
R5	1-216-821-11	METAL CHIP	1K	5%	1/10W
R10	1-216-805-11	METAL CHIP	47	5%	1/10W
R11	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R13	1-216-821-11	METAL CHIP	1K	5%	1/10W
R14	1-216-821-11	METAL CHIP	1K	5%	1/10W
R24	1-216-813-11	METAL CHIP	220	5%	1/10W
R30	1-216-837-11	METAL CHIP	22K	5%	1/10W
R31	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R32	1-216-845-11	METAL CHIP	100K	5%	1/10W
R33	1-216-833-11	METAL CHIP	10K	5%	1/10W
R40	1-216-849-11	METAL CHIP	220K	5%	1/10W
R41	1-216-833-11	METAL CHIP	10K	5%	1/10W
R50	1-216-821-11	METAL CHIP	1K	5%	1/10W
R51	1-216-833-11	METAL CHIP	10K	5%	1/10W
R52	1-216-864-11	SHORT CHIP	0		
R53	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R54	1-216-817-11	METAL CHIP	470	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
R57	1-216-809-11	METAL CHIP	100	5%	1/10W
R58	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R59	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R60	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R61	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R63	1-216-833-11	METAL CHIP	10K	5%	1/10W
R65	1-216-833-11	METAL CHIP	10K	5%	1/10W
R91	1-216-813-11	METAL CHIP	220	5%	1/10W
R92	1-216-813-11	METAL CHIP	220	5%	1/10W
R94	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF			
T2	1-419-465-11	COIL (DET)			
		< VIBRATOR >			
X1	1-795-449-11	VIBRATOR, CRYSTAL (75kHz)			

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
153	1-831-711-21	CABLE, FLEXIBLE FLAT (11 CORE)	
258	1-832-616-21	CABLE, FLEXIBLE FLAT (21 CORE)	
259	1-832-534-21	CABLE, FLEXIBLE FLAT (5 CORE)	
301	A-1242-967-A	LOADING (BK) ASSY	
352	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
⚠353	8-820-070-07	OPTICAL PICK-UP BLOCK (KSM-213CCP/C2NP)	(including M401, M402)
ANT1	1-754-376-11	ANTENNA, TELESCOPIC	
⚠F902	1-533-470-12	FUSE (T3.15AL/250V)	
IC304	8-759-426-51	IC BA5417	
IC305	8-759-426-51	IC BA5417	
⚠J901	1-526-838-11	INLET, AC 2P (~AC IN)	(AEP, IT, EE, RU, SP, TH)
⚠J901	1-540-009-11	INLET, AC (~AC IN) (MX)	
Q907	8-729-018-99	TRANSISTOR 2SD2394-F	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	
SP101	1-826-645-11	SPEAKER (10cm) (L-CH)	
SP201	1-826-645-11	SPEAKER (10cm) (R-CH)	
⚠T901	1-443-859-11	TRANSFORMER, POWER (MX)	
⚠T901	1-443-860-11	TRANSFORMER, POWER	(AEP, IT, EE, RU, SP, TH)
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		ACCESSORIES	
		**********	
⚠	1-769-412-22	CORD, POWER (AEP, IT, EE, RU, SP)	
⚠	1-834-027-11	CORD, POWER (MX)	
⚠	1-834-539-11	CORD, POWER (TH)	
	2-055-382-01	LID, BATTERY CASE	(for RMT-CS50/RMT-CS50AD)
	3-099-777-52	MANUAL, INSTRUCTION (ENLISH, SPANISH)	(MX)
	3-099-777-62	MANUAL, INSTRUCTION (ENLISH, SPANISH)	(SP, TH)
	3-099-777-71	MANUAL, INSTRUCTION (UKRAINIAN) (EE, RU)	
	3-099-778-12	MANUAL, INSTRUCTION (ENGLISH) (AEP)	
	3-099-778-22	MANUAL, INSTRUCTION (FRENCH, GERMAN)	(AEP)
	3-099-778-32	MANUAL, INSTRUCTION (SPANISH) (AEP)	
	3-099-778-42	MANUAL, INSTRUCTION	(DUTCH, PORTUGUESE) (AEP)
	3-099-778-52	MANUAL, INSTRUCTION (ITALIAN) (IT)	
	3-099-778-62	MANUAL, INSTRUCTION (FINNISH, SWEDISH)	(EE, RU)
	3-099-778-72	MANUAL, INSTRUCTION (POLISH) (EE, RU)	
	3-099-778-82	MANUAL, INSTRUCTION (CZECH, HUNGARIAN)	(EE, RU)
	3-099-778-93	MANUAL, INSTRUCTION	(RUSSIAN, SLOVAKIAN) (EE, RU)
	A-1251-503-A	RMT-CS50 (Remote control)	(including battery case lid) (MX, SP, TH)
	A-1251-505-A	RMT-CS50AD (Remote control)	(including battery case lid) (AEP, IT, EE, RU)

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2007.04	New
1.1	2007.08	Addition of Thai model Change of JACK (AU IN), JACK (HP), KEY (TOP-L), KEY (TOP-R), LCD, MAIN, PANEL (TOP), POWER, TERMINAL (A) and TERMINAL (B) boards (Suffix-12) Addition of Ref. No. 67, 165, 166, 167, 168 on EXPLODED VIEWS Addition of INSTRUCTION MANUAL (UKRAINIAN) (ECN-ECC28982/ECC37266/SPM-07058)