HCD-EH10

SERVICE MANUAL

Ver. 1.4 2006.03

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

- HCD-EH10 is the amplifier, CD player, tape deck and tuner section in CMT-EH10.

CD Section	Model Name Using Similar Mechanism	NEW
	Base Unit Name	BU-K8BD83S-WOD
	Optical Pick-up Name	KSM-213CDP
TAPE Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	H-21SB

SPECIFICATIONS

Main unit
AUDIO POWER SPECIFICATIONS
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(The United States model only)

With 4 ohm loads, both channels driven, from 100 – 20,000 Hz; rated 4 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section
North-American model:
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
European model:
DIN power output (rated): 4 + 4 W (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
Music power output (reference): 7 + 7 W
The following are measured at AC 240 V, 50/60 Hz (Australian model), AC 220 V, 60 Hz (Korean model), AC 120 V, 50/60 Hz (Taiwanese model), AC 120 or 240 V, 50/60 Hz (other models)
DIN power output (rated): 4 + 4 W (4 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 5 + 5 W (4 ohms at 1 kHz, 10% THD)
Inputs
AUDIO IN (stereo mini jack): Sensitivity 800 mV, impedance 47 kilohms
Outputs
PHONES (stereo mini jack): Accepts headphones with an impedance of 8 ohms or more
SPEAKER: Accepts impedance of 4 ohms

CD player section
System: Compact disc and digital audio system
Laser Diode Properties
Emission duration: continuous
Laser Output*: Less than 44.6µ W
* This output is the value measurement at a distance of 200mm from the objective lens surface on the Optical Pick-up Block with 7mm aperture.
Frequency response: 20 Hz – 20 kHz
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB

Tape deck section
Recording system: 4-track 2-channel, stereo

Tuner section
FM stereo, FM/AM superheterodyne tuner
Antenna:
FM lead antenna
AM loop antenna
FM tuner section:
Tuning range
North American model: 87.5 – 108.0 MHz (100 kHz step)
Other models: 87.5 – 108.0 MHz (50 kHz step)
Intermediate frequency: 10.7 MHz
AM tuner section:
Tuning range
North American models: 530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
European model: 531 – 1,602 kHz (with 9 kHz tuning interval)
Other models: 530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,602 kHz (with 9 kHz tuning interval)
Intermediate frequency: 450 kHz

General
Power requirements
North American model: AC 120 V, 60 Hz
European model: AC 230 V, 50/60 Hz
Australian model: AC 230 – 240 V, 50/60 Hz
Korean model: AC 220 V, 60 Hz
Taiwanese model: AC 120 V, 50/60 Hz
Other models: AC 110 – 120 or 220 – 240 V, 50/60 Hz
Adjustable with voltage selector
Power consumption:
North American model: 23 W
European model: 22 W
1.0 W (in Power off)
Other models: 22 W
Dimensions (w/h/d) (excl. speakers): Approx. 158 × 241.5 × 233 mm
Mass (excl. speakers):
Approx. 2.1 kg
Supplied accessories: Remote Commander (1)/FM/AM antenna (1)

Design and specifications are subject to change without notice.

COMPACT DISC DECK RECEIVER

9-879-855-05
2006C05-1

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.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

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

The following caution label is located inside the unit.

This appliance is classified as a CLASS 1 LASER product.

This label is located on the rear exterior.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

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

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

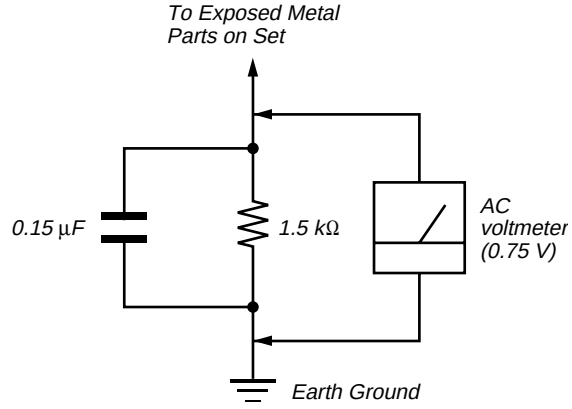


Fig. A. Using an AC voltmeter to check AC leakage.

TABLE OF CONTENTS

Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

SECTION 1
SERVICING NOTES

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)

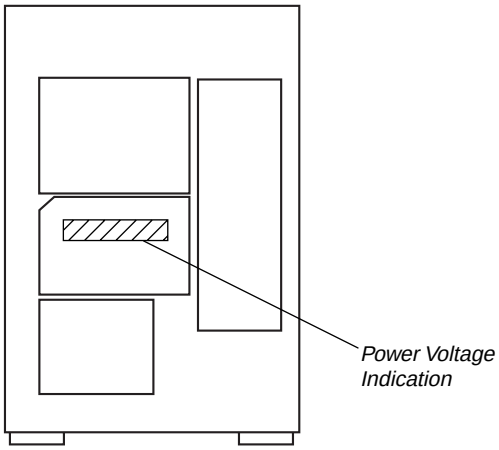
: LEAD FREE MARK

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.

• MODEL IDENTIFICATION

– Rear Cabinet –



MODEL	POWER VOLTAGE INDICATION
US, Canadian models	AC 120 V, 60 Hz
AEP, UK, East European, Russian models	AC 230 V, 50/60 Hz
Singapore model	AC 110 – 120 or 220 – 240 V, 50/60 Hz
Australian model	AC 230 – 240 V, 50/60 Hz
Korean model	AC 220 V, 60 Hz
Taiwan model	AC 120 V, 50/60 Hz

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.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper lid is closed while turning ON the SW750. (push switch type)
The following checking method for the laser diode is operable.

- **Method**
  Emission of the laser diode is visually checked.
  1. Open the upper lid.
  2. Push the SW750 as shown in Fig.1.

Note: Do not push the detection lever strongly, or it may be bent or damaged.

  3. Press the CD ▶II button.
  4. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up.
     In this operation, the object lens will move up and down 2 times along with inward motion for the focus search.

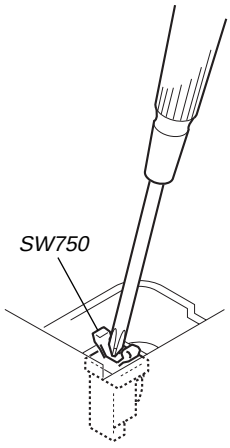
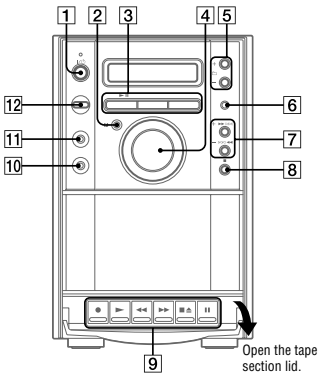


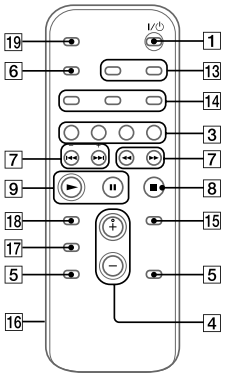
Fig.1 Method to push the SW750

SECTION 2
GENERAL

This section is extracted from instruction manual.

Basic Operations

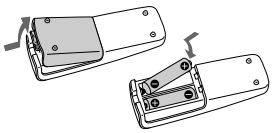




Before using the system

To use the remote

Slide and remove the battery compartment lid 16, and insert the two R6 (size AA) batteries (not supplied), ⊖ side first, matching the polarities shown below.



Notes on using the remote

- With normal use, the batteries should last for about six months.
- Do not mix an old battery with a new one or mix different types of batteries.
- If you do not use the remote for a long period of time, remove the batteries to avoid damage from battery leakage and corrosion.

To set the clock

1 Turn on the system.
Press I/⏻ (power) 1.

2 Select the clock set mode.
Press CLOCK/TIMER SET 13 on the remote. If the current mode appears on the display, press ⏮/⏭ 7 on the remote repeatedly to select "CLOCK," and then press ENTER 15 on the remote.

3 Set the time.
Press ⏮/⏭ 7 on the remote repeatedly to set the hour, and then press ENTER 15 on the remote. Use the same procedure to set the minutes.
The clock settings are lost when you disconnect the power cord or if a power failure occurs.

Selecting a music source

Press the following buttons (or press FUNCTION 3 repeatedly).

To select	Press
CD	CD 3 on the remote.
Tuner	TUNER/BAND 3.
Tape	TAPE 3 on the remote.
Component* (connected using an audio cord)	FUNCTION 3 repeatedly until "AUDIO IN" appears.

* If the component has the AVLS (Automatic Volume Limiter System) or BASS BOOST function, turn off the function to avoid distorted sound from the speakers.

Adjusting the sound

To adjust the volume

Press VOLUME +/– on the remote (or turn the VOLUME control on the unit) 4.

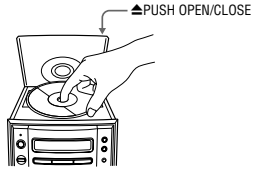
To add a sound effect

To	Press
Generate a more dynamic sound (Dynamic Sound Generator X-tra)	DSGX 12 on the unit.
Set the sound effect	EQ 17 on the remote.

Playing a CD/MP3 disc

1 Select the CD function.
Press CD on the remote (or FUNCTION repeatedly) 3.

2 Place a disc.
Press ⏏PUSH OPEN/CLOSE on the unit, and place a disc with the label side up on the CD compartment.
To close the CD compartment, press ⏏PUSH OPEN/CLOSE on the unit.



3 Start playback.
Press ► (play) 9 (or CD/⏯ (play/pause) 3 on the unit).

To	Press
Pause playback	❚❚ (pause) 9 on the remote (or CD/⏯ 3 on the unit). To resume play, press it again.
Stop playback	■ (stop) 8.
Select a folder on an MP3 disc	🗀 +/– 5.
Select a track or file	⏮/⏭ (go back/go forward) on the remote (⏮◁ ▷⏭ on the unit) 7.
Find a point in a track or file	Hold down ◀◀/►► (rewind/fast forward) 7 during playback, and release it at the desired point.
Select Repeat Play	REPEAT 14 on the remote repeatedly until "REP" appears.

To change the play mode

Press PLAY MODE 14 on the remote repeatedly while the player is stopped. You can select normal play ("🗀" for all MP3 files in the folder on the disc), shuffle play ("SHUF" or "🗀 SHUF*"), or program play ("PGM").

* When playing a CD-DA disc, 🗀 (SHUF) Play performs the same operation as SHUF Play.

Notes on Repeat Play

- All tracks or files on a disc are played repeatedly up to five times.
- "REP1" indicates that a single track or file is repeated until you stop it.

Notes on playing MP3 discs

- Do not save other types of tracks or files or unnecessary folders on a disc that has MP3 files.
- Folders that have no MP3 files are skipped.
- MP3 files are played back in the order that they are recorded onto the disc.
- The system can only play MP3 files that have a file extension of ".MP3".
- If there are files on the disc that have the ".MP3" file extension, but that are not MP3 files, the unit may produce noise or may malfunction.
- The maximum number of:
  - folders is 150 (including the root folder).
  - MP3 files is 255.
  - MP3 files and folders that can be contained on a single disc is 256.
  - folder levels (the tree structure of files) is eight.
- Compatibility with all MP3 encoding/writing software, recording device, and recording media cannot be guaranteed. Incompatible MP3 discs may produce noise or interrupted audio or may not play at all.

Notes on playing multisession discs

- If the disc begins with a CD-DA (or MP3) session, it is recognized as a CD-DA (or MP3) disc, and playback continues until another session is encountered.
- A disc with a mixed CD format is recognized as a CD-DA (audio) disc.

Listening to the radio

1 Select "FM" or "AM."
Press TUNER/BAND 3 repeatedly.

2 Select the tuning mode.
Press TUNING MODE 14 on the remote repeatedly until "AUTO" appears.

3 Tune in the desired station.
Press +/– on the remote (or TUNING + or – on the unit) 7. Scanning stops automatically when a station is tuned in. When you tune in a station that provides RDS services, the station name appears on the display.

Tip
To stop automatic scanning, press ■ (stop) 8.

To tune in a station with a weak signal

Press TUNING MODE 14 on the remote repeatedly until "MANUAL" appears, and then press +/– on the remote repeatedly (or TUNING + or – on the unit) 7 to tune in the desired station.

To reduce static noise on a weak FM stereo station

Press FM MODE 14 on the remote repeatedly until "MONO" appears to turn off stereo reception.

Playing a tape

Use buttons on the unit for the operation.

1 Select a tape function.
Press FUNCTION repeatedly (or TAPE on the remote) 3.

2 Insert a tape.
Press ■⏏ (stop/eject) 9 on the unit, and insert the tape into the cassette holder. Make sure there is no slack in the tape to avoid damaging the tape or the tape deck.

3 Start playback.
Press ► (play) 9 on the unit.

To	Press
Pause playback	❚❚ (pause) 9 on the unit. To resume play, press it again.
Stop playback	■⏏ (stop/eject) 9 on the unit.
Rewind or fast forward*	◀◀/►► 9 on the unit.

* Be sure to press ■⏏ (stop/eject) 9 on the unit after the tape has been wound or rewound to the end.

Note
Do not turn off the system during playback or recording.

Changing the display

To change	Press
Information on the display[1]	DISPLAY 6 repeatedly when the system is on.
Display mode (Clock)	DISPLAY 6 when the system is off[2]. The clock is displayed for eight seconds.

[1] For example, you can view CD/MP3 disc information, such as the track or file number or folder name during normal play, or the total play time while the player is stopped.
[2] The STANDBY indicator lights up when the system is turned off.

Notes on the display information

- The following are not displayed correctly;
  - total playing time for a disc with MP3 files.
  - elapsed playing time and remaining time of an MP3 file encoded using a VBR (variable bit rate) when the file is played or is shifted with fast forward or fast reverse.
  - folder and file names that do not follow either the ISO9660 Level 1 or 2 standard.
- The following are displayed;
  - ID3 tag information for MP3 files when ID3 version 1 and version 2 tags are used.
  - up to 15 characters of ID3 tag information using uppercase letters (A to Z), numbers (0 to 9), and symbols ('< > * + , – / @ [\ ] _).

Using optional audio components

To connect an optional headphones

Connect headphones to the PHONES jack 10 on the unit.

To connect an optional component

Connect additional audio source components to the AUDIO IN jack 11 on the unit using an audio cord (not supplied). Turn down the volume on the system, and then select the AUDIO IN function.

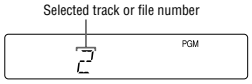
Other Operations

Creating your own CD program (Program Play)

Use buttons on the remote to create your own program.

1. Press CD [3] to select the CD function.
2. Press PLAY MODE [14] repeatedly until "PGM" appears while the player is stopped.
3. Press I◄◄ /►►I (or ⏮ ⏭ on the unit) [7] repeatedly until the desired track number appears.

   When programing MP3 files, press 🗀 +/– [5] repeatedly to select the desired folder, and then select the desired file.



4. Press ENTER [15] to add the track or file to the program.
5. Repeat steps 3 through 4 to program additional tracks or files, up to a total of 15 tracks or files.
6. To play your program of tracks or files, press ► [9] (or CD/►II [3] on the unit).

   The program remains available until you open the CD compartment. To play it again, select the CD function, and press ► [9] (or CD/►II [3] on the unit).

To cancel Program Play, press PLAY MODE [14] repeatedly until "PGM" disappears while the player is stopped.

To delete the last track or file of the program, press CLEAR [18] on the remote while the player is stopped.

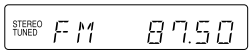
To view program information, such as total track number of the program, press DISPLAY [6] repeatedly.

Presetting radio stations

You can preset your favorite radio stations and tune them in instantly by selecting the corresponding preset number.
Use buttons on the remote to preset stations.

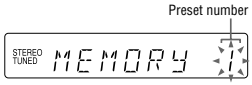
1. Press TUNER/BAND [3] repeatedly to select "FM" or "AM."
2. Press TUNING MODE [14] repeatedly until "AUTO" appears (or "MANUAL" appears, for a station with a weak signal).
3. Press +/– (or TUNING + or – on the unit) [7] to tune in the desired station.

   Scanning stops automatically when a station is tuned in, and then "TUNED" and "STEREO" (for stereo programs) appear.



   If "TUNED" does not appear and the scanning does not stop, press TUNING MODE [14] until "MANUAL" appears and press +/– (or TUNING + or – on the unit) [7] repeatedly to tune in the desired station.

4. Press TUNER MEMORY [14] on the remote.



5. Press +/– (or TUNING + or – on the unit) [7] repeatedly to select your desired preset number.

   If another station is already assigned to the selected preset number, the station is replaced by the new stations.

6. Press ENTER [15].
7. Repeat steps 1 through 6 to store other stations.

   You can preset up to 20 FM and 10 AM stations. The preset stations are retained for about half a day even if you disconnect the power cord or if a power failure occurs.

8. To call up a preset radio station, press TUNING MODE [14] repeatedly until "PRESET" appears, and then press +/– (or TUNING + or – on the unit) repeatedly [7] to select the desired preset number.

To change the AM tuning interval from the factory preset to 9 kHz (or 10 kHz, for some areas; this function is not available on the European model), tune in any AM station, and then turn off the system. Press DISPLAY to display the clock and while hold down TUNING + [7] on the unit, press I/⏻ [1] on the unit. All the AM preset stations are erased. To reset the interval to the factory preset, repeat the procedure.

Recording onto a tape

Use a TYPE I (normal) tape only.

You can record just the portions you like from a sound source, including connected audio components.

Use buttons on the unit to control tape recording.

1. Insert a recordable tape into the cassette holder with the side you want to record facing forward.
2. Prepare the recording source.

   Select the desired source to record.

   Place the disc you want to record.

   When recording a folder from an MP3 disc, press PLAY MODE [14] on the remote repeatedly to select "🗀," and then press 🗀 +/– [7] repeatedly to select the desired folder.

   To record only your favorite CD tracks or MP3 files in your desired order, perform steps 2 to 5 of "Creating your own CD program."

3. Start recording.

   Press ● (record) [9], and then start playing the desired recording source.

   The CD starts playing automatically.

   If there is noise while recording from the tuner, reposition the appropriate antenna to reduce the noise.

   While recording, you cannot listen to other sources.

To stop recording, press ■⏏ [9].

Tip
We recommend that you press II [9] first, and then press ■⏏ [9] to avoid noise being recorded when you stop recording.

Using the Timers

The system offers two timer functions. If you use both timers, the Sleep Timer has priority.

Sleep Timer:
You can fall asleep to music. This function works even if the clock is not set.
Press SLEEP [19] on the remote repeatedly. If you select "AUTO," the system automatically turns off after the current disc or tape stops or in 100 minutes.
If the tape deck is still playing or recording at the set time, the system turns off after the tape deck stops.

Play Timer:
You can wake up to CD or tuner at a preset time.

Use buttons on the remote to control the Play Timer. Make sure you have set the clock.

1. Prepare the sound source.

   Prepare the sound source, and then press VOLUME +/– (or turn the VOLUME control on the unit) [4] to adjust the volume.

   To start from a specific CD track or MP3 file, create your own CD program.

2. Press CLOCK/TIMER SET [13].
3. Press I◄◄ /►►I [7] repeatedly to select "PLAY," and then press ENTER [15].

   "ON TIME" appears, and the hour indication flashes.

4. Set the time to start playing.

   Press I◄◄ /►►I [7] repeatedly to set the hour, and then press ENTER [15].

   The minute indication flashes. Use the procedure above to set the minute.

5. Use the same procedure as in step 4 to set the time to stop playing.
6. Select the sound source.

   Press I◄◄ /►►I [7] repeatedly until the desired sound source appears, and then press ENTER [15]. The display shows the timer settings.

7. Press I/⏻ [1] to turn off the system.

   If the system is on at the preset time, the Play Timer will not play.

To activate or check the timer again, press CLOCK/TIMER SELECT [13], press I◄◄ /►►I [7] repeatedly until "PLAY" appears, and then press ENTER [15].

To cancel a timer, repeat the same procedure as above until "OFF" appears, and then press ENTER [15].

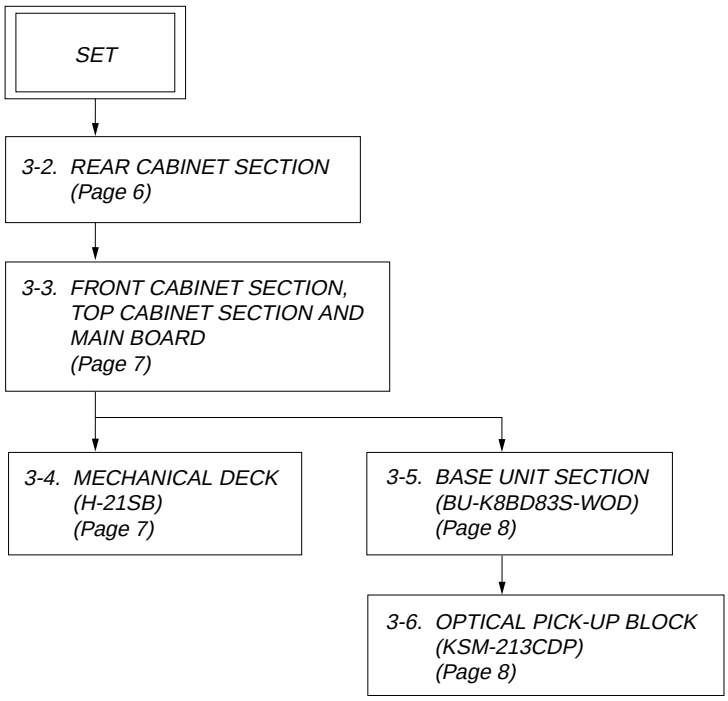
To change the setting, start over from step1.

Tip
The Play Timer setting remains as long as the setting is not canceled manually.

SECTION 3
DISASSEMBLY

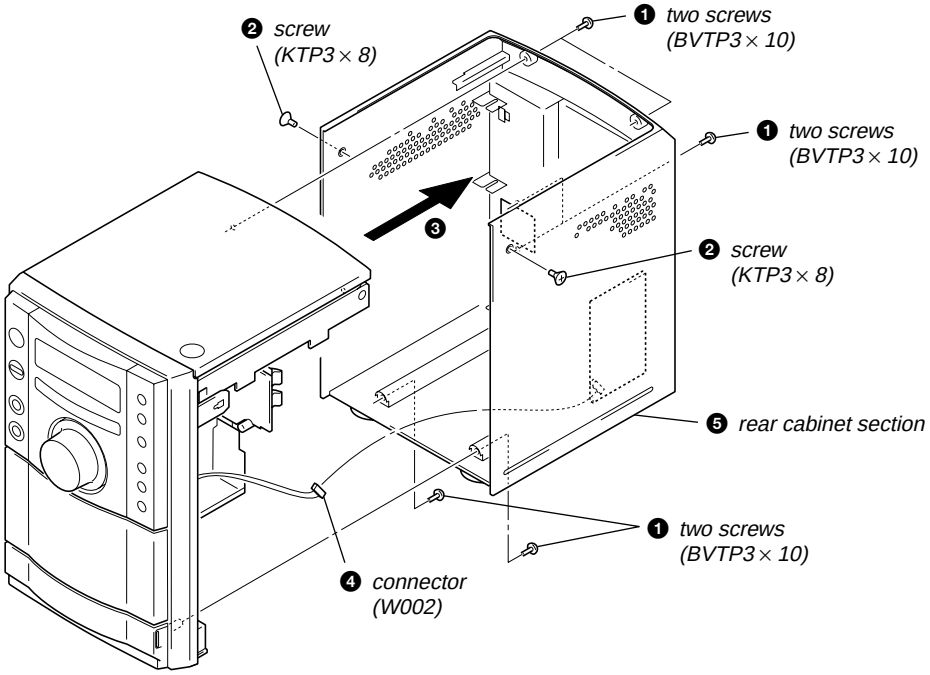
- This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

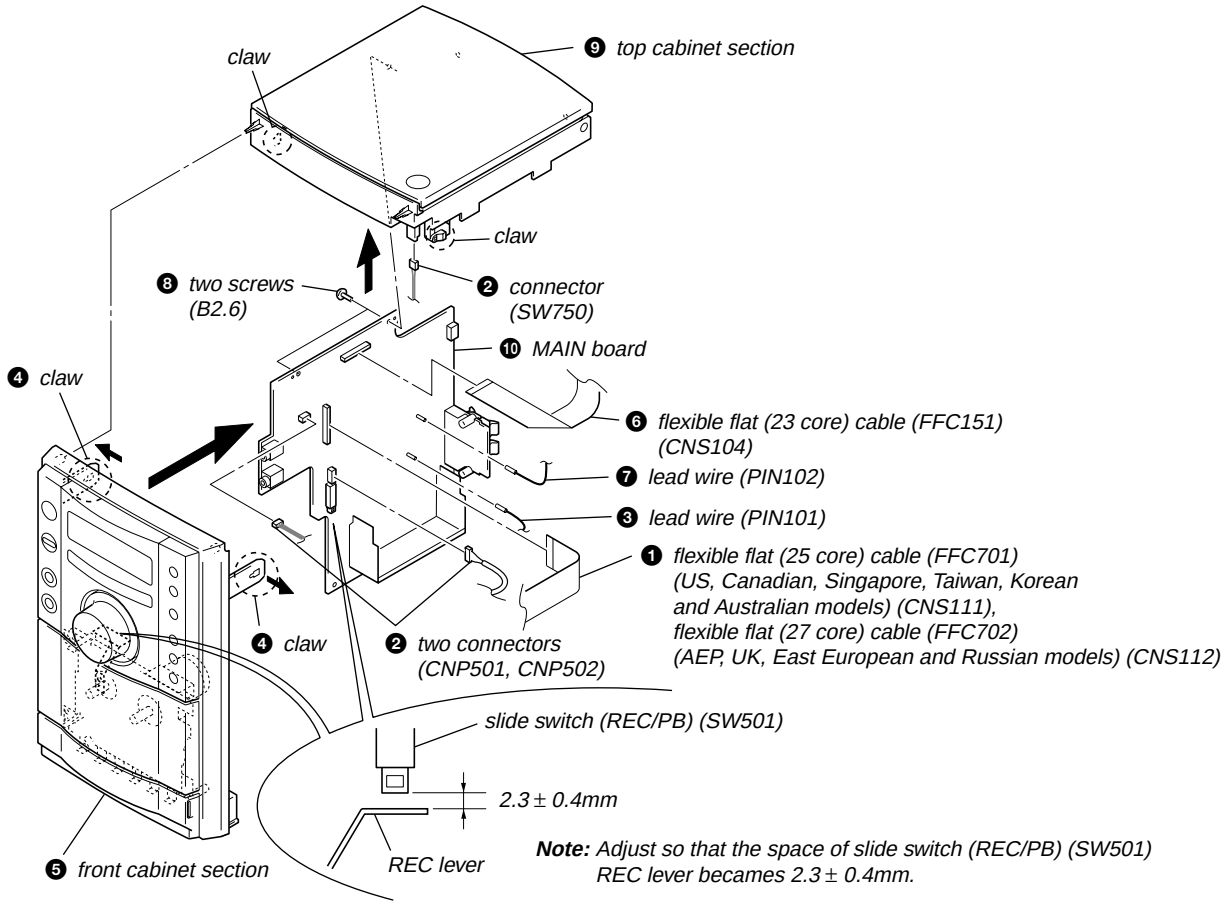


Note: Follow the disassembly procedure in the numerical order given.

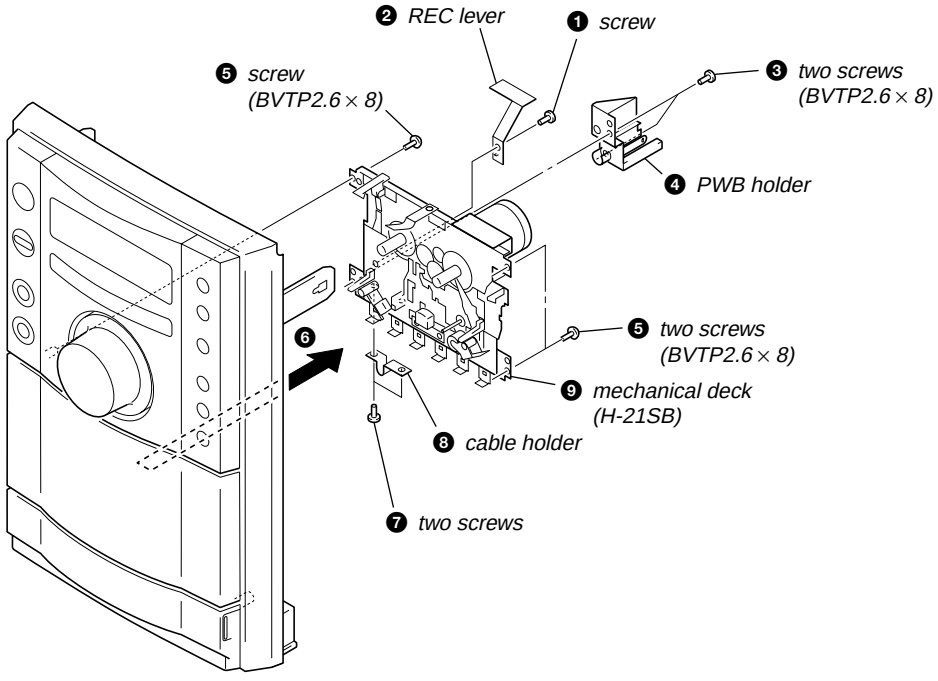
3-2. REAR CABINET SECTION



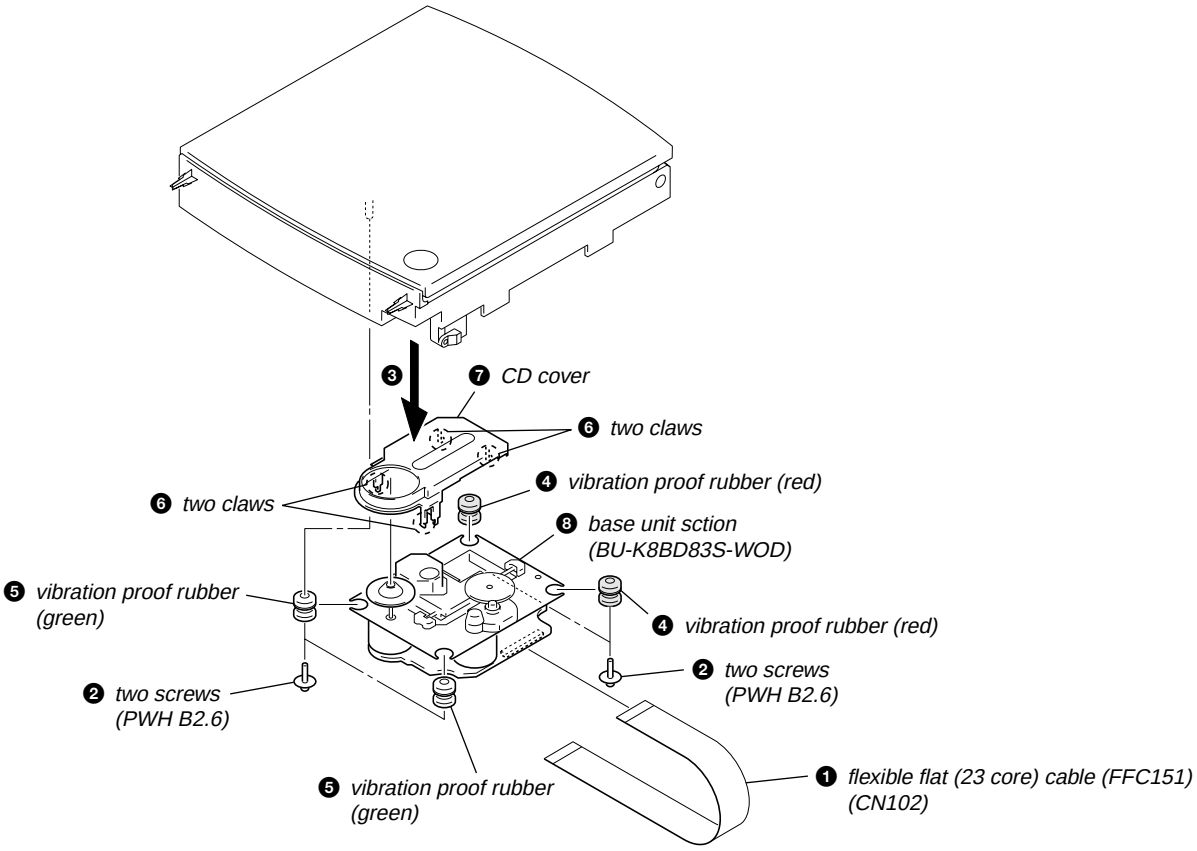
3-3. FRONT CABINET SECTION, TOP CABINET SECTION AND MAIN BOARD



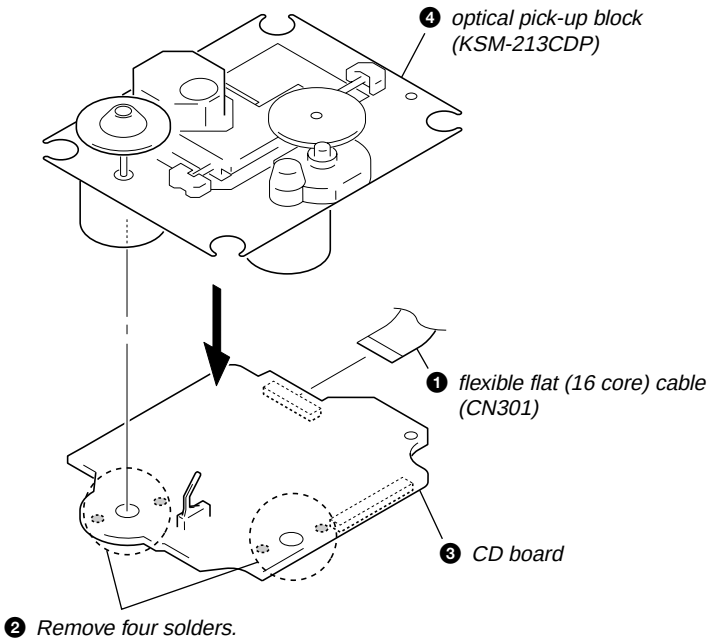
3-4. MECHANICAL DECK (H-21SB)



3-5. BASE UNIT SECTION (BU-K8BD83S-WOD)



3-6. OPTICAL PICK-UP BLOCK (KSM-213CDP)



SECTION 4
TEST MODE

COLD RESET

* The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

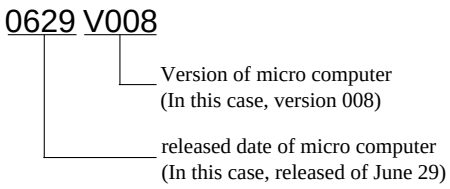
1. Press the I/⏻ button to turn the power on.
2. While pressing the ■ button, press the I/⏻ and DSGX buttons.
3. The message “RESET” is displayed and the set is reset.

PANEL TEST

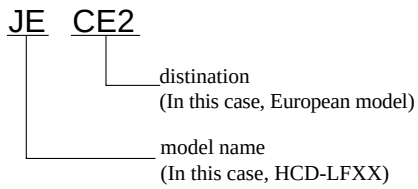
* All segments of liquid crystal display are tested, and the version and released date of the micro computer are displayed.

Procedure:

1. Press the I/⏻ button to turn the power on.
2. While pressing the DSGX button, press the DISPLAY and ■ buttons.
   Then all segments of liquid crystal display are turned on.
3. Press the FUNCTION button, the version and released date of the micro computer are displayed.
   example of display:



4. Press the TUNER/BAND button, the model name and distination are displayed.
   example of display:



5. To exit from this mode, perform the step 2.

TUNER STEP CHANGE-OVER

* Either the 9 kHz step or 10 kHz step can be selected for the AM channel step.

Procedure:

1. Set the FUNCTION to AM, and press the I/⏻ button to turn the power off.
2. Press the DISPLAY button.
3. While pressing the TUNING + button, press the I/⏻ button.
4. The message “9K STEP” or “10K STEP” is displayed on the liquid crystal display, and thus the channel step is changed over.

CD POWER MANEGE

* This mode is for switch the CD power supply on/off. Even if this state pulls out AC plug, it is held.

Procedure:

1. Press the I/⏻ button to turn the power on.
2. Set the FUNCTION to CD.
3. Press the I/⏻ button again to turn the power off (standby).
4. Press the DISPLAY button.
5. While pressing the ■ button, press the I/⏻ button.
6. If turns power on and display “CD POWER”, then display “ON” or “OFF”.

5 REPEAT OFF MODE

* Number of repeat for CD playback is 5 times when the repeat mode is “REPEAT”. This mode is used to enables CD to repeat playback for limitless times.

Procedure:

1. Press the I/⏻ button to turn the power on.
2. Press the FUNCTION button to select “CD”.
3. Press three buttons of DSGX, CD ▶II and DISPLAY simultaneously.
4. When the 5 repeat off mode is activated, “NO LIMIT” is displayed on the liquid crystal display.

SECTION 5
MECHANICAL ADJUSTMENTS

- **Precaution**

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head, erase head, capstan, pinch roller, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head magnetizer close to the erase head.)
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, appiy suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

- **Torque Measurement**

Mode	Torque Meter	Meter Reading
FWD	CQ-102AS	2.0 – 8.0 mN·m (20 – 80 g·cm) (0.28 – 1.12 oz·inch)
FWD Back Tension	CQ-102C	0.15 – 0.6 mN·m (1.5 – 6.0 g·cm) (0.021 – 0.083 oz·inch)
FF	CQ-201AS	5.0 – 17.7 mN·m (50 – 177 g·cm) (0.7 – 2.48 oz·inch)
REW	CQ-201B	5.0 – 17.7 mN·m (50 – 177 g·cm) (0.7 – 2.48 oz·inch)

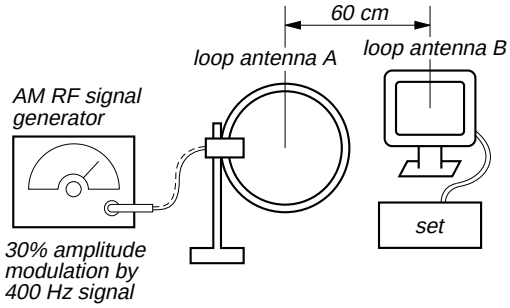
- **Tape Tension Measurement**

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 80 g (more than 2.82 oz)

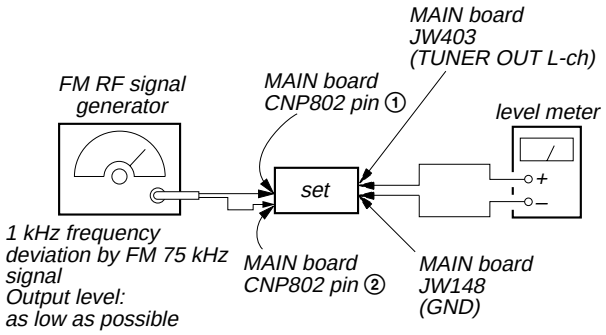
SECTION 6
ELECTRICAL ADJUSTMENTS

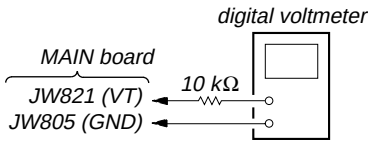
TUNER SECTION | 0 dB=1 µV

[AM (MW/LW)]
Setting:
Function : TUNER
BAND button : AM



[FM]
Setting:
Function : RADIO
RADIO BAND button: 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 VT VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L852	531 kHz	1.5 ± 0.1 V
Confirmation	1602 kHz	7.2 ± 0.5 V

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L851	531 kHz

FM VT VOLTAGE ADJUSTMENT		
Adjustment Part	Frequency Display	Reading on Digital Voltmeter
L805	87.5 MHz	1.75 ± 0.1 V
Confirmation	108 MHz	6.2 ± 0.5 V

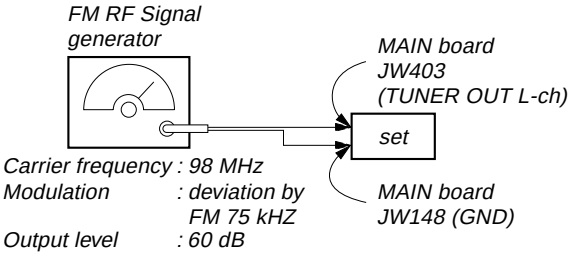
FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter	
L804	98 MHz

FM DETECTOR ADJUSTMENT

Setting:

Function: TUNER

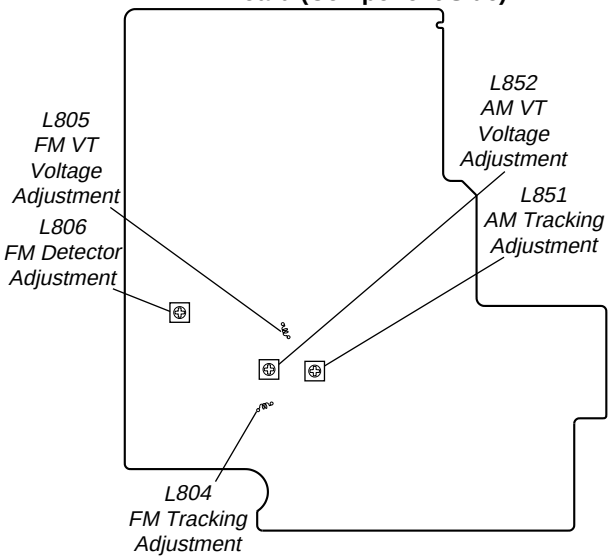
BAND button: FM



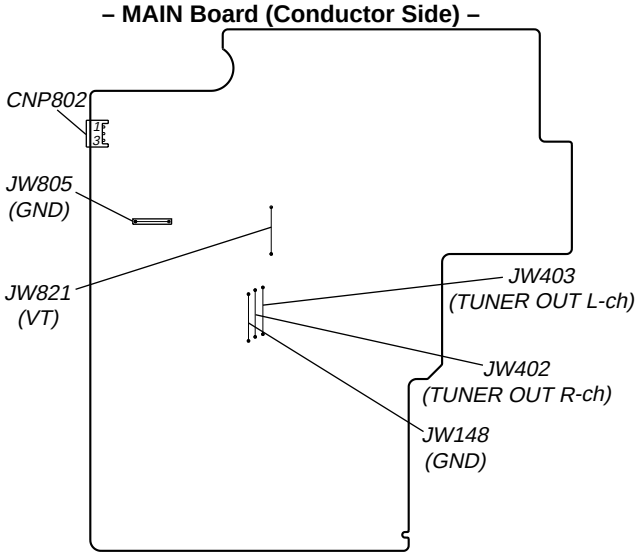
1. Tune the set to 98 MHz.
2. Adjust L806 so that modulation distortion may become the best in the vicinity of the maximum value where the tuner out level becomes -156Bs or more.

Adjustment Location:

– MAIN Board (Component Side) –



– MAIN Board (Conductor Side) –



DECK SECTION | 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.

- **Test Tape**

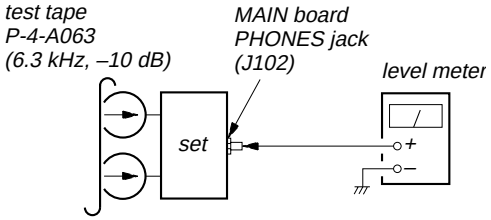
Tape	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	Azimuth Adjustment

RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

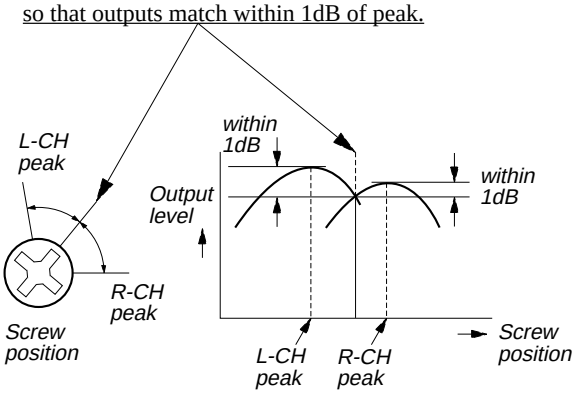
Note: Remove the sheet (azimuth) before this adjustment.
After the end of adjustment, try to paste sheet (azimuth) peeled off to be the same position.
Adjust the tape mechanism deck detaching it from the set when there is no hole for the azimuth adjustment in the set.

Procedure:

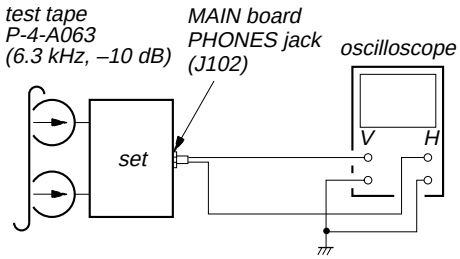
1. Mode: Playback

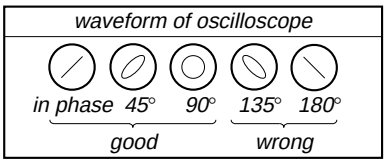


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



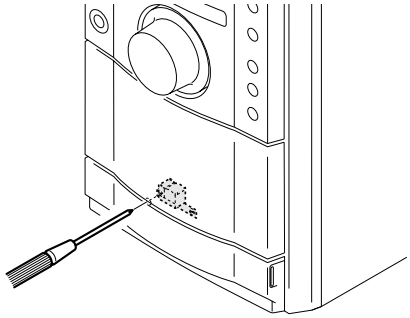
3. Mode: Playback



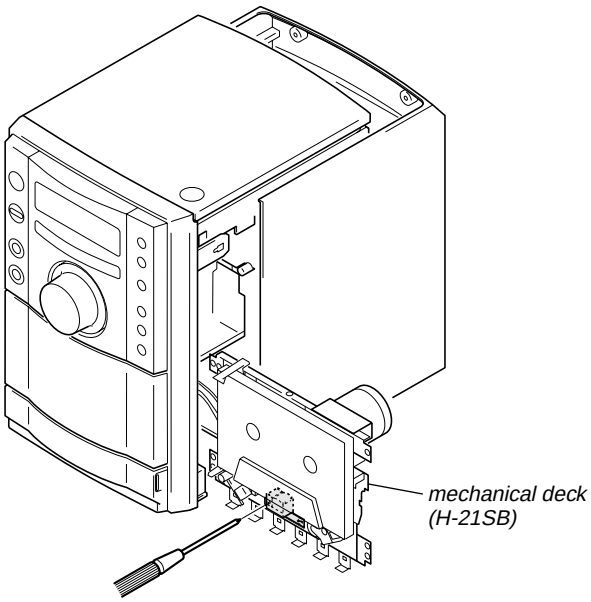


4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Record/Playback/Erase Head
– When there is a hole for the azimuth adjustment –



– When there is no hole for the azimuth adjustment –

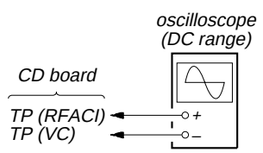


CD SECTION

Note:

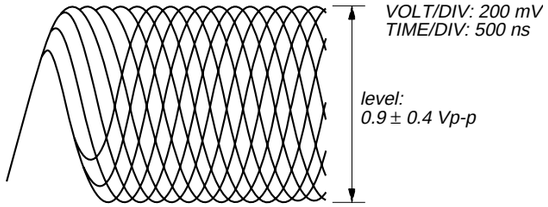
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MW impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value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

FOCUS BIAS CHECK



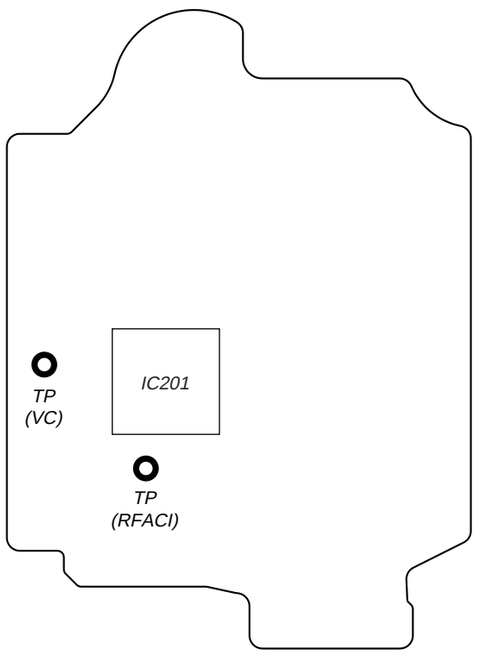
Procedure :

1. Connect oscilloscope to TP (RFACI) and TP (VC) on the CD board.
2. Press the I/⏻ button to turn the power ON.
3. Set disc (YEDS-18) on the tray and press the CD ▶II 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.



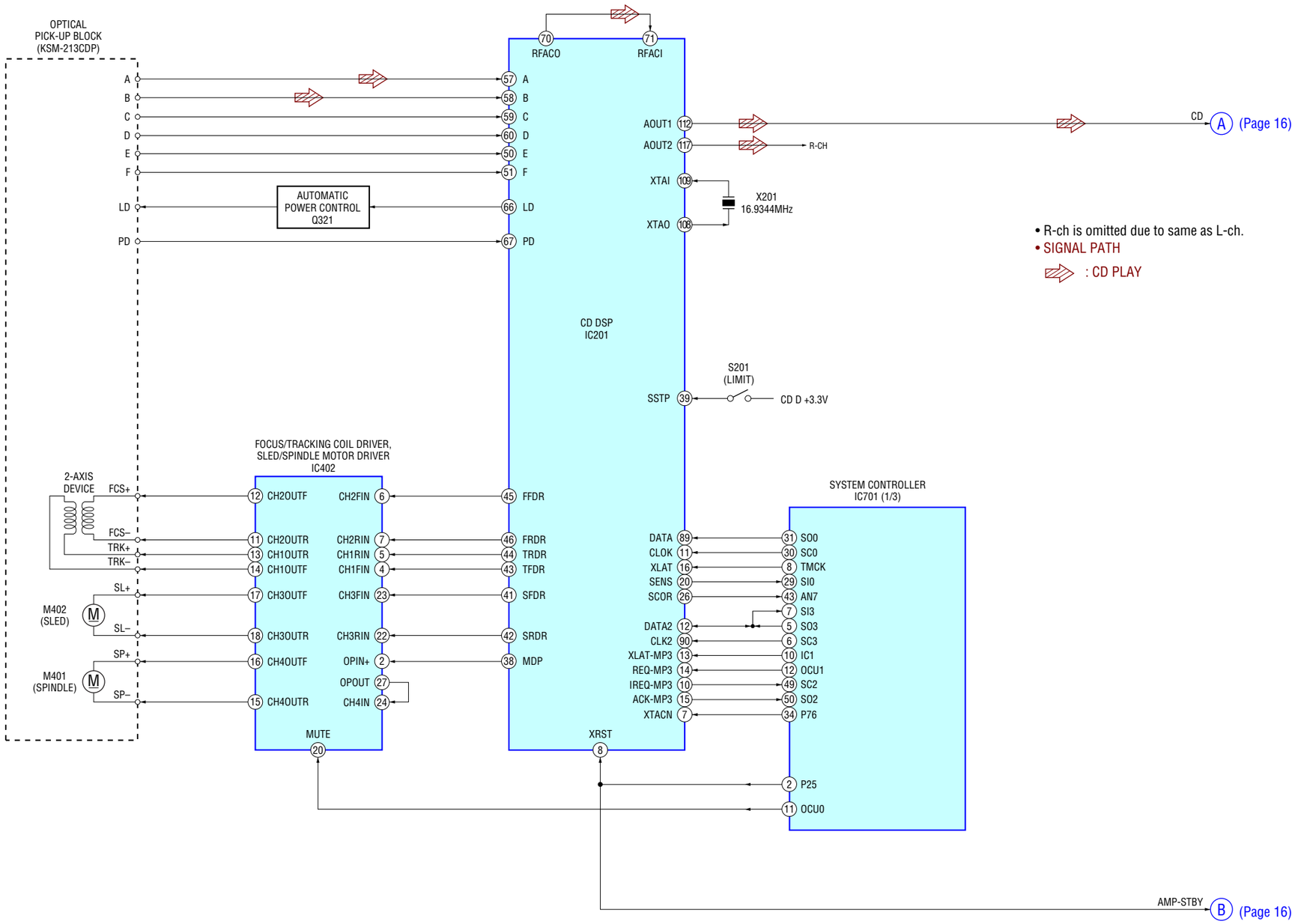
Checking Location:

– CD Board (Conductor Side) –

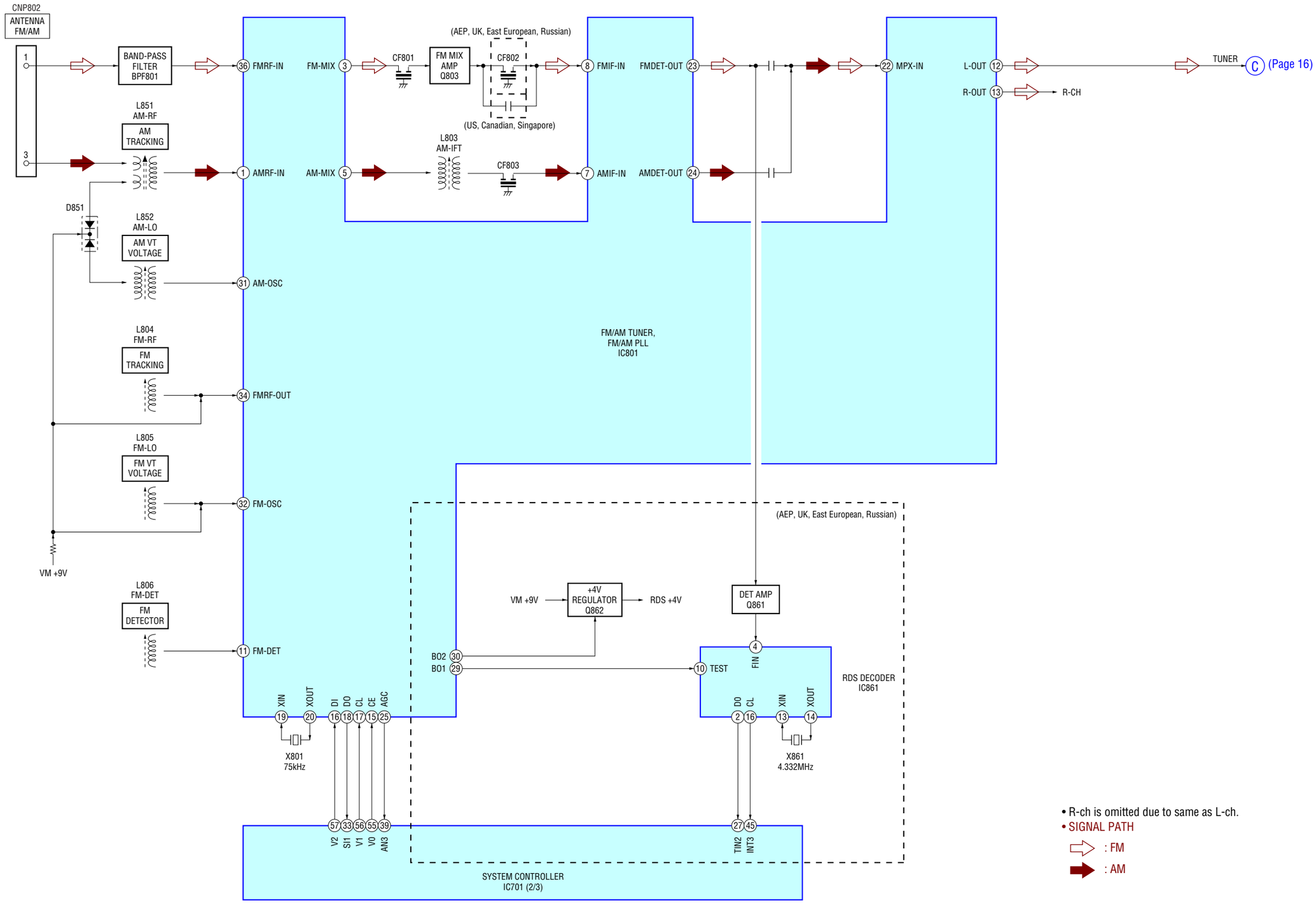


SECTION 7
DIAGRAMS

7-1. BLOCK DIAGRAM – CD SERVO Section –

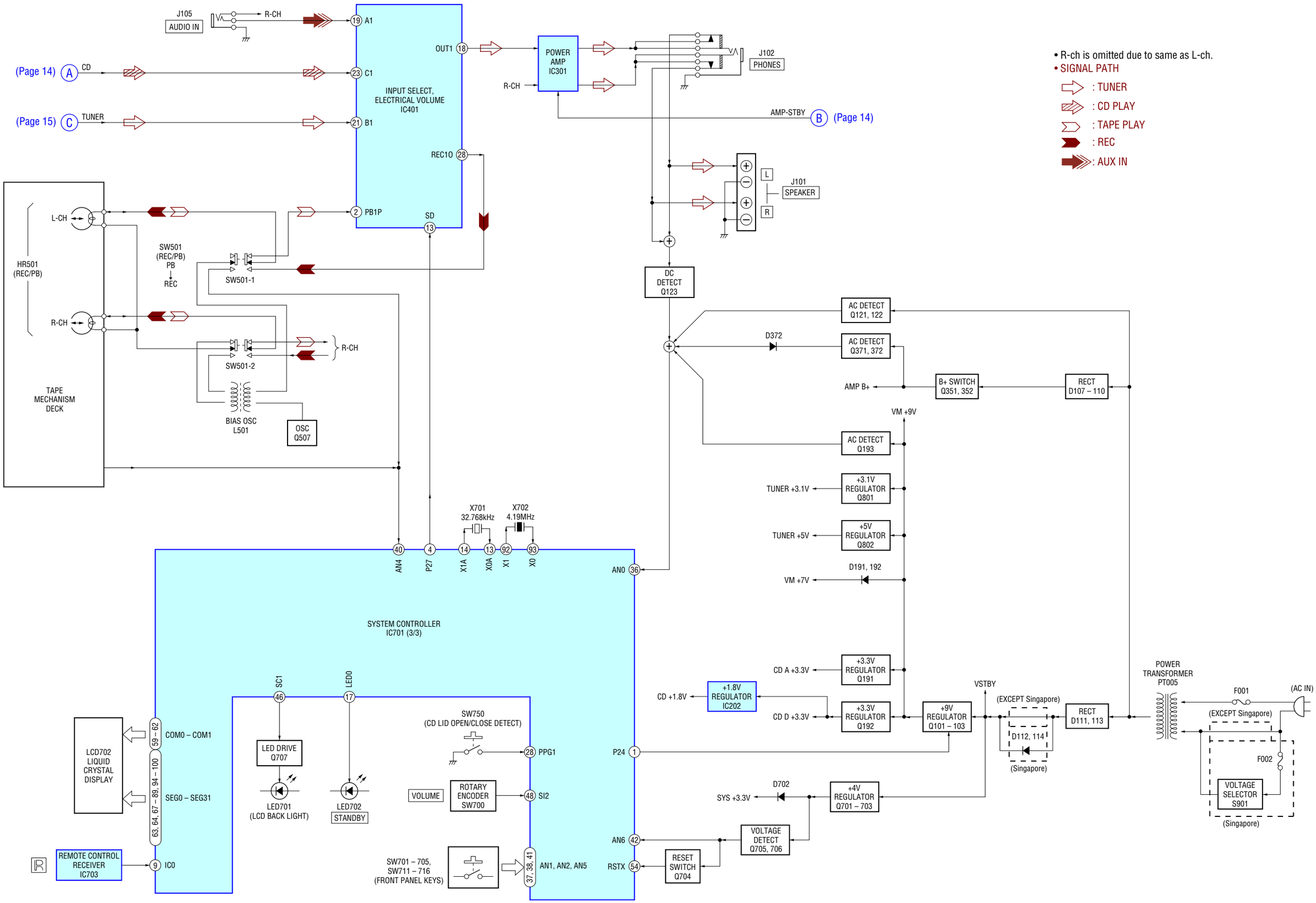


7-2. BLOCK DIAGRAM – TUNER Section –



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

7-3. BLOCK DIAGRAM – MAIN Section –



- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : TUNER
  - : CD PLAY
  - : TAPE PLAY
  - : REC
  - : AUX IN

• Note for Printed Wiring Boards and Schematic Diagrams

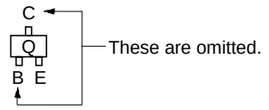
Note on Printed Wiring Board:

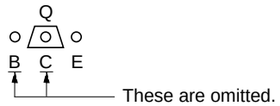
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

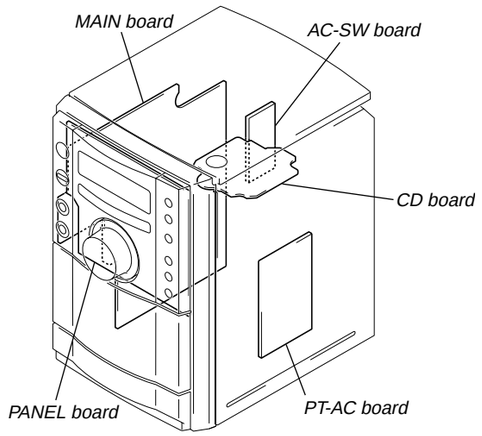
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- Indication of transistor





- Circuit Boards Location



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:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- ▬ ▬ : B– Line.
- ▭ : Adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  – CD Board –
  no mark : CD PLAY
  – Other Section –
  no mark : FM
  [ ] : AM
  ( ) : CD PLAY
  ⟨⟨ ⟩⟩ : TAPE PLAY
  { } : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : FM
  : AM
  : CD PLAY
  : TAPE PLAY
  : REC
  : AUX IN

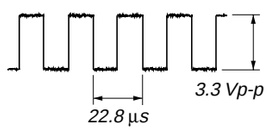
- Abbreviation

AUS	: Australian model
CND	: Canadian model
EE	: East European model
KR	: Korean model
RU	: Russian model
SP	: Singapore model
TW	: Taiwan model

• Waveforms

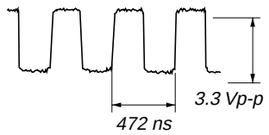
– CD Board –

① IC201 ① (LRCK) (CD PLAY mode)



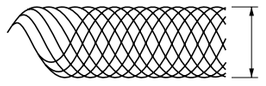
1 V/DIV, 10 µs/DIV

② IC201 ⑤ (BCK) (CD PLAY mode)



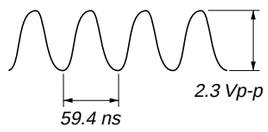
1 V/DIV, 200 ns/DIV

③ IC201 ⑦⓪ (RFACO) (CD PLAY mode)



200 mV/DIV, 500 ns/DIV

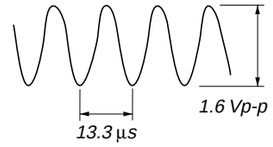
④ IC201 ⑯⑧ (XTAO) (CD PLAY mode)



1 V/DIV, 20 ns/DIV

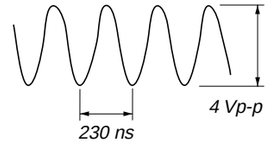
– MAIN Board –

⑪ IC801 ⑳ (XOUT) (tuner mode)



500 mV/DIV, 5 µs/DIV

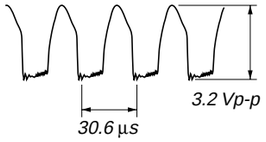
⑫ IC861 ⑭ (XOUT) (FM mode)



1 V/DIV, 100 ns/DIV

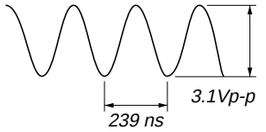
– PANEL Board –

㉑ IC701 ⑭ (X1A)



1 V/DIV, 10 µs/DIV

㉒ IC701 ⑨② (X1)

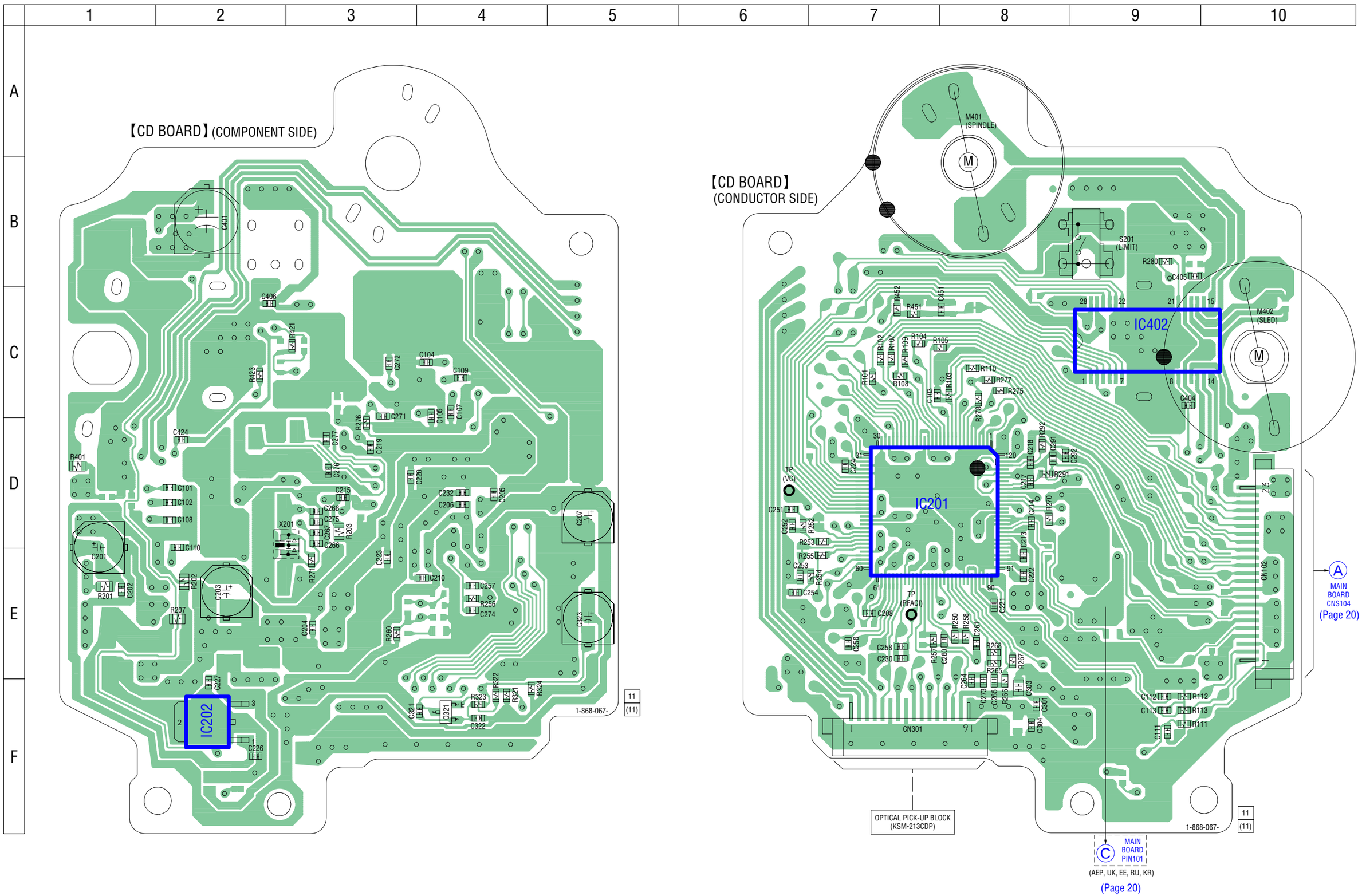


1 V/DIV, 100 ns/DIV

7-4. PRINTED WIRING BOARD – CD Board –

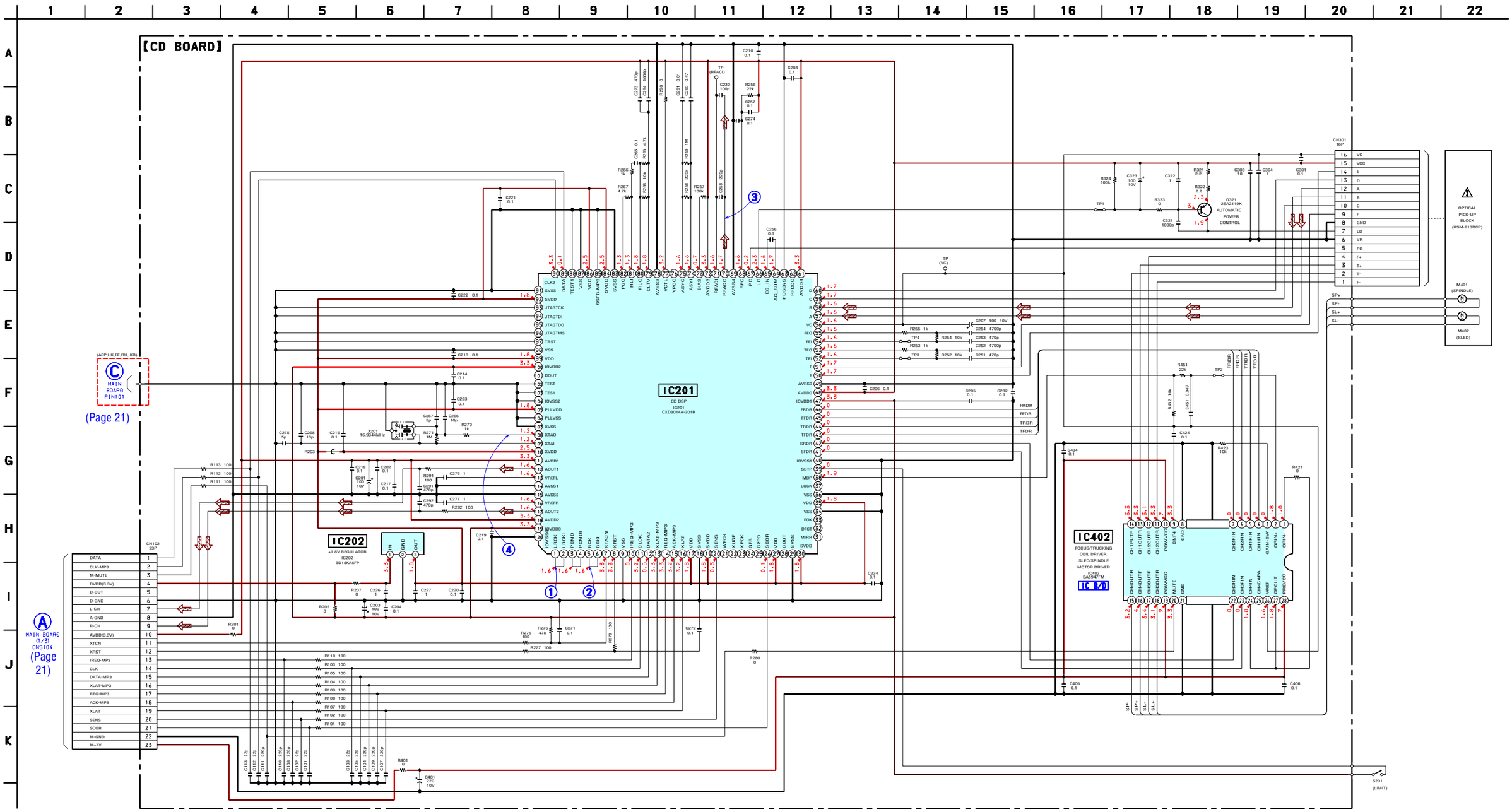
• See page 17 for Circuit Boards Location.

: Uses unleaded solder.



7-5. SCHEMATIC DIAGRAM – CD Board –

• See page 17 for Waveforms. • See page 26 for IC Block Diagrams. • See page 31 for IC Pin Function Description.



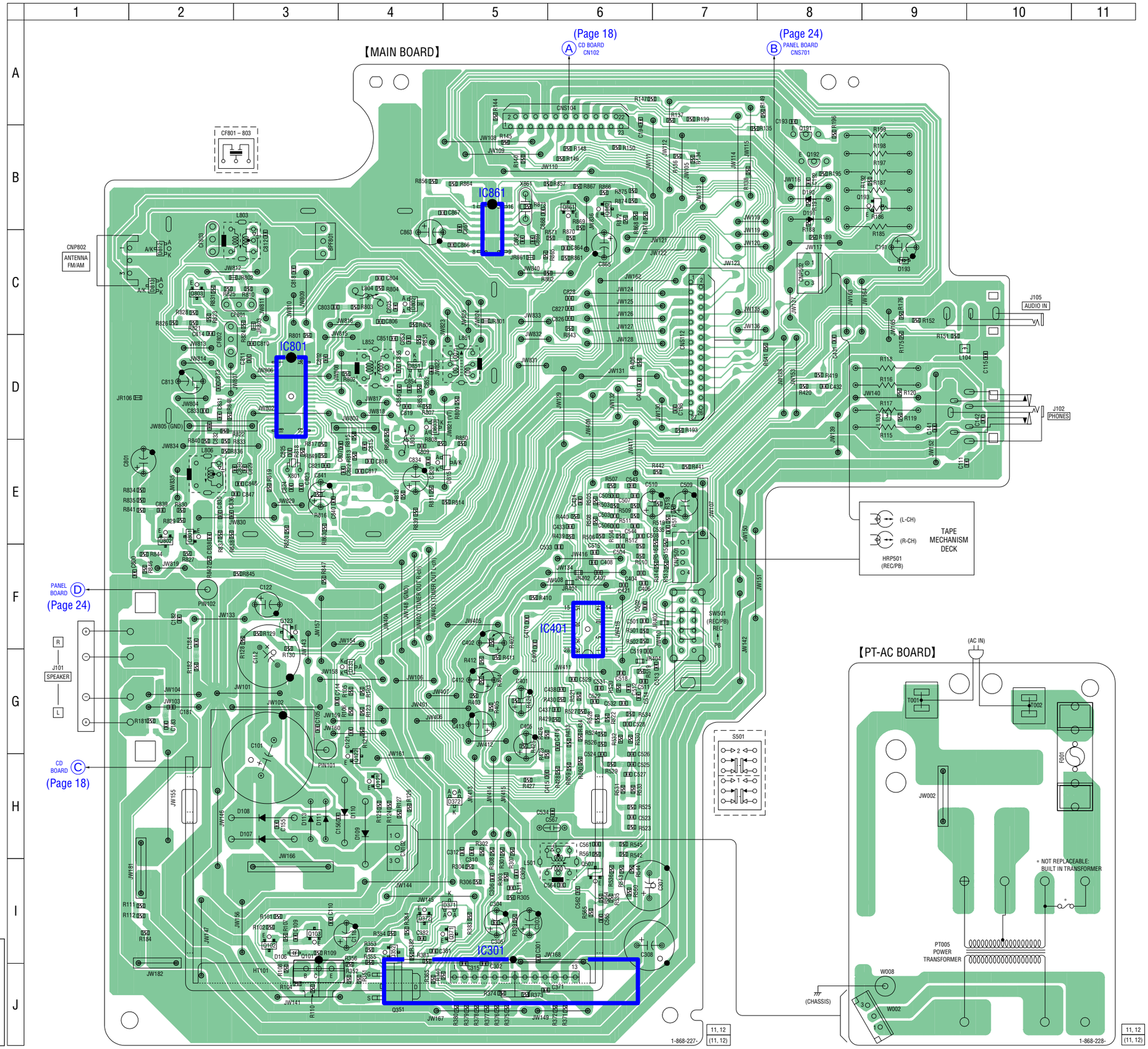
7-6. PRINTED WIRING BOARDS – MAIN Section –

• See page 17 for Circuit Boards Location.

: Uses unleaded solder.

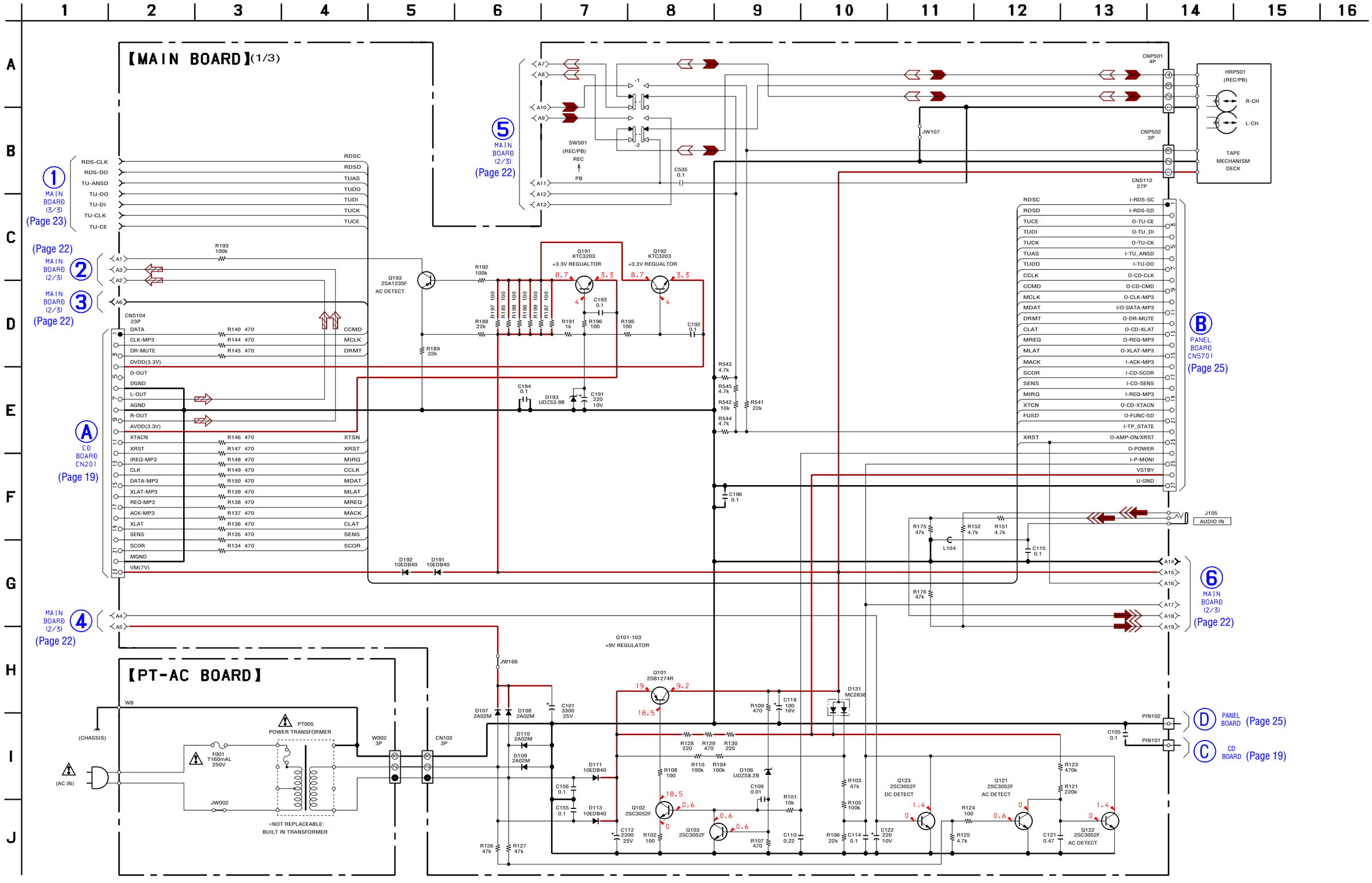
• **Semiconductor Location**

Ref. No.	Location
D106	I-3
D107	H-3
D108	H-3
D109	H-4
D110	H-4
D111	H-3
D113	H-3
D131	G-4
D191	B-8
D192	B-8
D193	C-9
D371	I-5
D372	H-5
D802	C-4
D803	D-4
D812	C-2
D813	C-2
D815	E-5
D851	D-4
IC301	J-5
IC401	F-6
IC801	D-3
IC861	B-5
Q101	J-3
Q102	I-3
Q103	I-3
Q121	H-4
Q122	H-4
Q123	F-3
Q191	B-8
Q192	B-8
Q193	B-9
Q351	J-4
Q352	I-4
Q371	I-5
Q372	I-4
Q507	I-6
Q801	E-2
Q802	E-2
Q803	C-2
Q861	B-6
Q862	B-6



Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

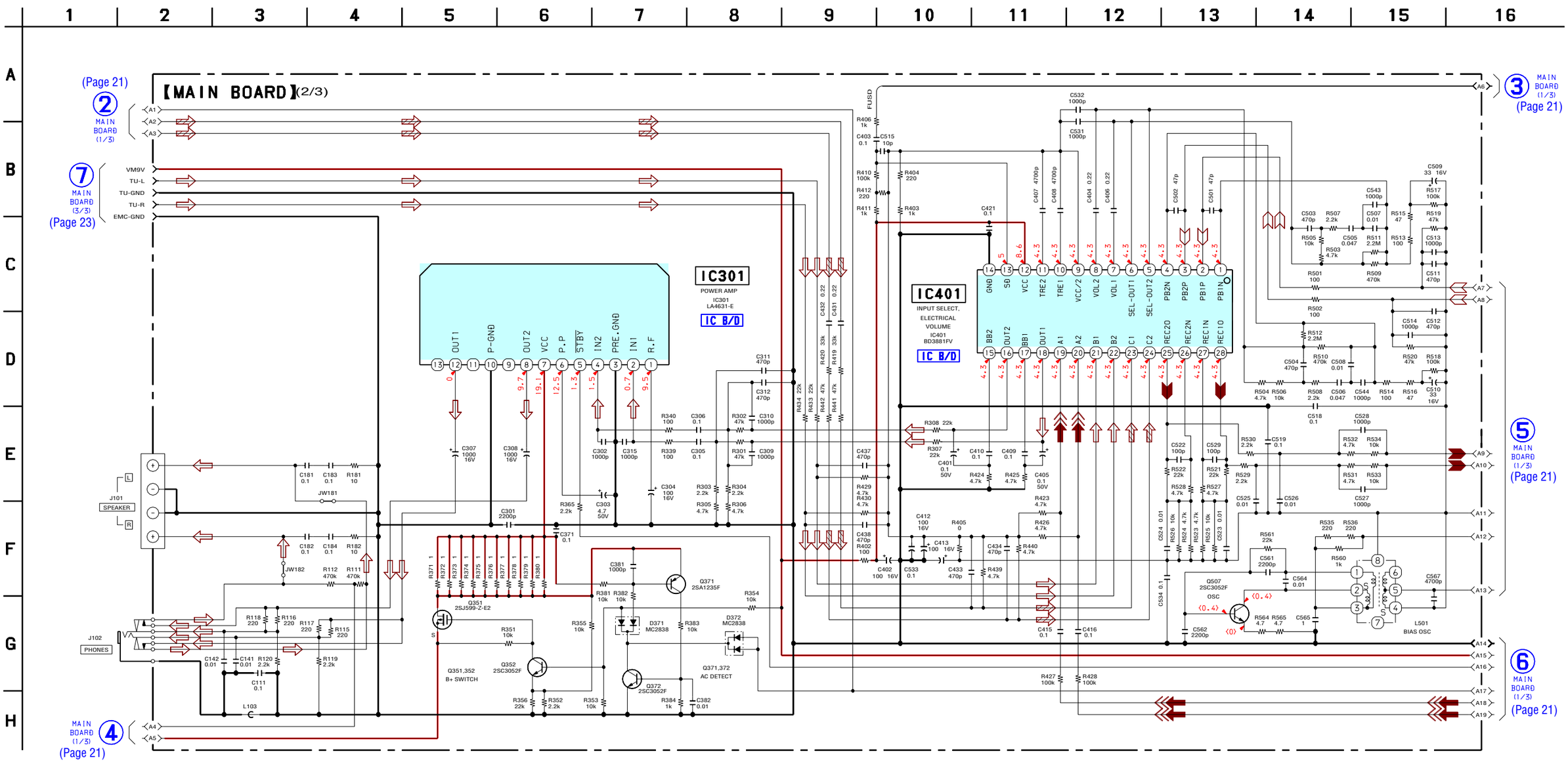
7-7. SCHEMATIC DIAGRAM – MAIN Section (1/3) –



Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

7-8. SCHEMATIC DIAGRAM – MAIN Section (2/3) –

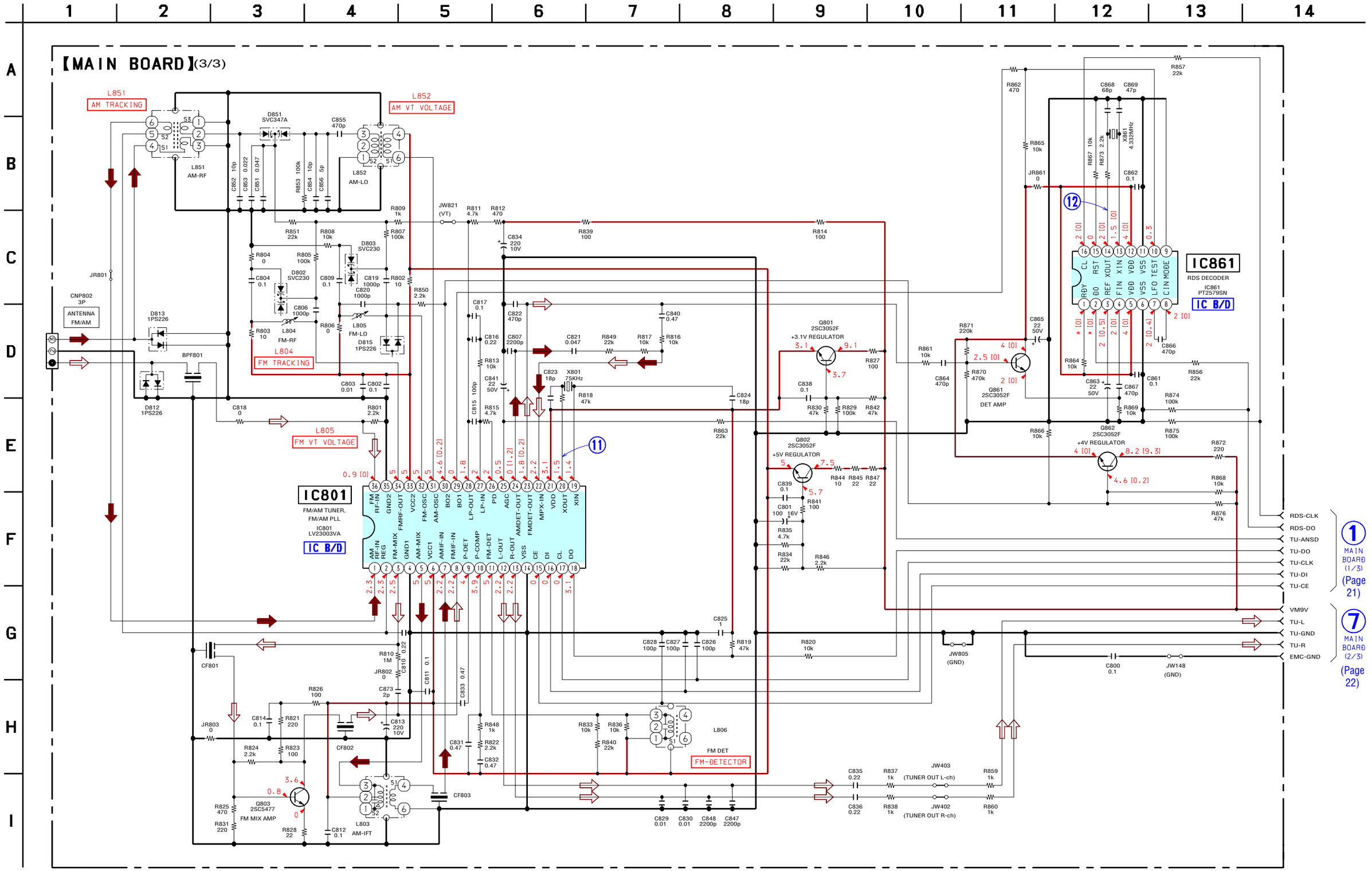
• See page 26 for IC Block Diagrams.



Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

7-9. SCHEMATIC DIAGRAM – MAIN Section (3/3) –

• See page 17 for Waveforms. • See page 26 for IC Block Diagrams.



Refer to SUPPLEMENT-1 for the MAIN section of printed wiring boards and schematic diagrams of US, Canadian, Singapore, Taiwan, Korean and Australian models.
When repairing the set of AEP, UK, East European and Russian, refer to either of original service manual/SUPPLEMENT-1 according to the set.

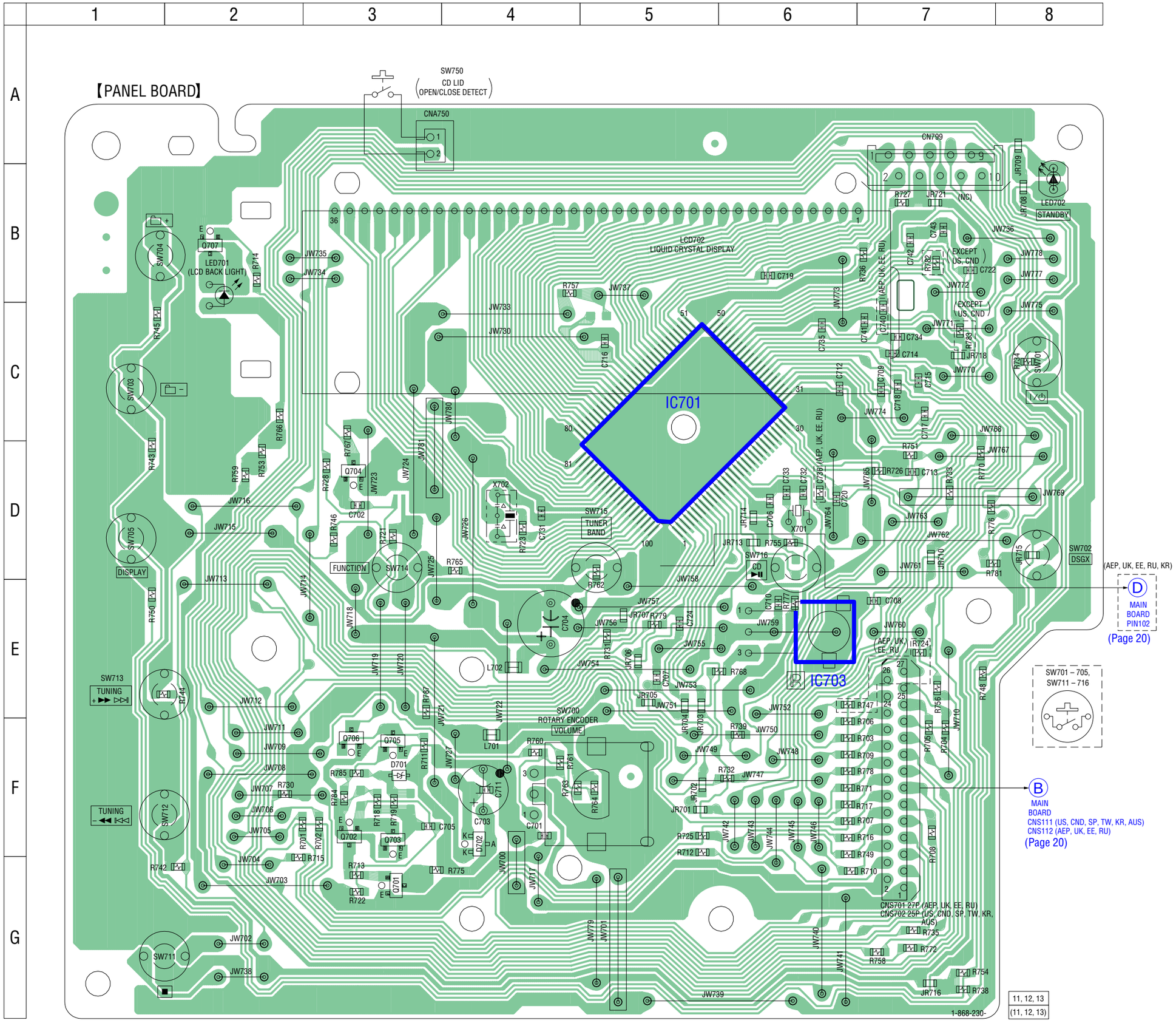
7-10. PRINTED WIRING BOARD – PANEL Board –

• See page 17 for Circuit Boards Location.

: Uses unleaded solder.

• **Semiconductor Location**

Ref. No.	Location
D701	F-3
D702	F-4
IC701	C-5
IC703	E-6
LED701	B-2
LED702	B-8
Q701	G-3
Q702	F-3
Q703	F-3
Q704	D-3
Q705	F-3
Q706	F-3
Q707	B-2



7-11. SCHEMATIC DIAGRAM – PANEL Board –

• See page 17 for Waveforms. • See page 31 for IC Pin Function Description.

【PANEL BOARD】

Q701-703
+4V REGULATOR

Q701 2SA1235F
Q702 2SC3052F
Q703 2SC3052F
Q705 2SC3052F
Q706 2SC3052F
Q705,706
VOLTAGE DETECT
Q704 RT1N441C
RESET SWITCH
Q707 2SC3052F
LED DRIVE

D701 UDZW-TE17-3.6B
D702 MC2836

CNS701 27P(AEP,UK,EE,RU)
CNS702 25P(US,CND,SP,TW,KR,AUS)

I-RDS-SC	R724 1k			I-RDS-SC
I-RDS-SD	R747 1k			I-RDS-SD
O-TU-CE	R704 1k			O-TU-CE
O-TU_DI	R706 1k			O-TU-DI
O-TU-CK	R705 1k			O-TU-CK
I-TU_ANSD	R703 4.7k			I-TU-ANSD
I-TU-DO	R756 1k			I-TU-DO
O-CD-CLK	R709 1k			
O-CD-CMD	R776 1k			
O-CLK-MP3	R778 1k			
I/O-DATA-MP3	R772 1k			
O-DR-MUTE	R771 1k			
O-CD-XLAT	R758 1k			
O-REQ-MP3	R717 1k			
O-XLAT-MP3	R735 1k			
I-ACK-MP3	R707 1k			I-ACK-MP3
I-CD-SCOR	R708 1k			I-CD-SCOR
I-CD-SENS	R716 1k			
I-REQ-MP3	R715 1k			I-REQ-MP3
O-CD-XTACN	R749 1k			O-CD-XTACN
O-FUNC-SD	R701 1k			
I-TP_STATE	R710 4.7k			I-TP_STATE
O-AMP-ON	R702 100			
O-POWER	R725 10k			
I-P-MONI	R712 4.7k			I-P-MONI
VSTBY				
U-GND				

(AEP,UK,EE,RU)

(B) MAIN BOARD (1/3) CNS111 (US,CND,SP,TW,KR,AUS) CNS112 (AEP,UK,EE,RU) (Page 21)

IC701
SYSTEM CONTROLLER
IC701
MB90802-107

X701 32.768Hz
X702 4.19MHz

IC703
RPM7240-H18
REMOTE CONTROL RECEIVER

LED702
SLR-342VRT32
STANDBY

LED701
SELU2B10A-S
(LCD BACK LIGHT)

LCD702
91X43296-B01

SW700
ROTARY ENCODER
VOLUME

SW701 ⏻
SW702 DSGX
SW703
SW704
SW705 DISPLAY
SW711 ■
SW712 TUNING -
SW713 TUNING +
SW714 FUNCTION
SW715 TUNER BAND
SW716 CD ▶II
SW750 CD LID OPEN/CLOSE DETECT

CN799 10P
CNA750 2P

(D) MAIN BOARD PIN102 (AEP,UK,EE,RU,KR) (Page 21)

*R781
10k(US,CND)
100k(EXCEPT US,CND)

*R782
0(AEP,UK,EE,RU)
10k(SP,TW,KR,AUS)

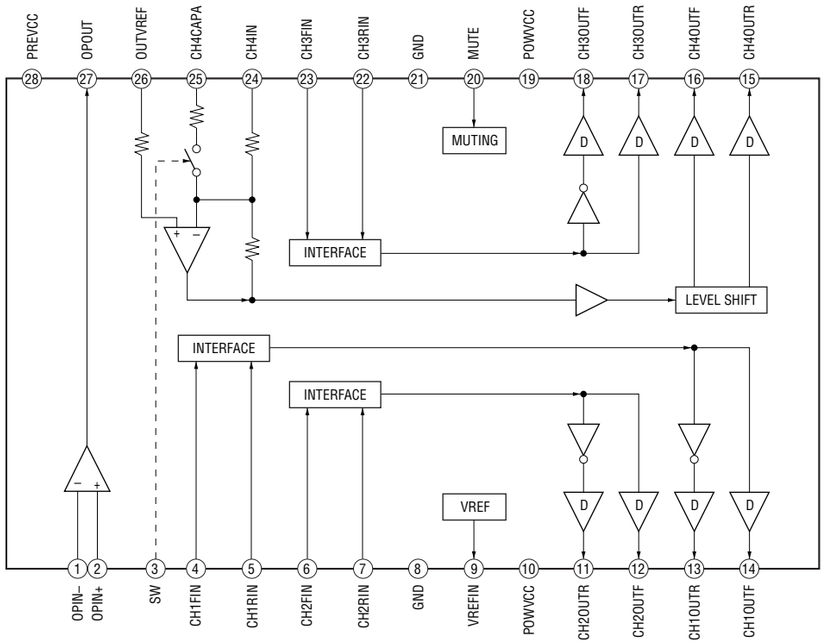
*R783
10k(AEP,UK,EE,RU)
22k(SP,TW,KR,AUS)

(EXCEPT US,CND)

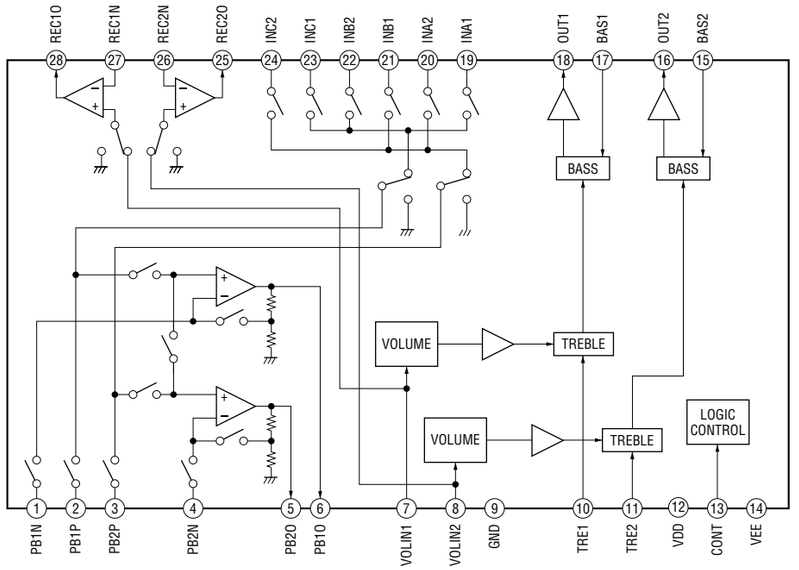
- **IC Block Diagrams**

– CD Board –

IC402 BA5947FM-E2

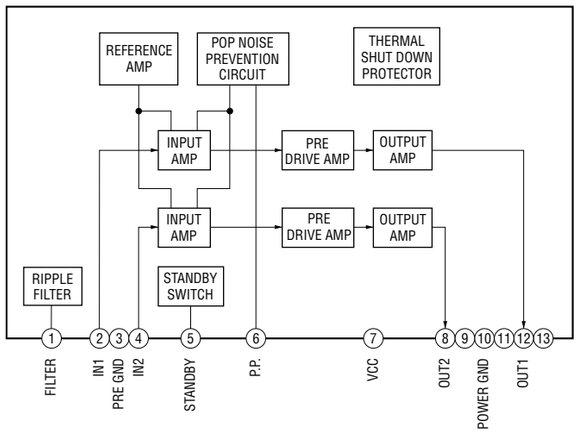


IC401 BD3881FV

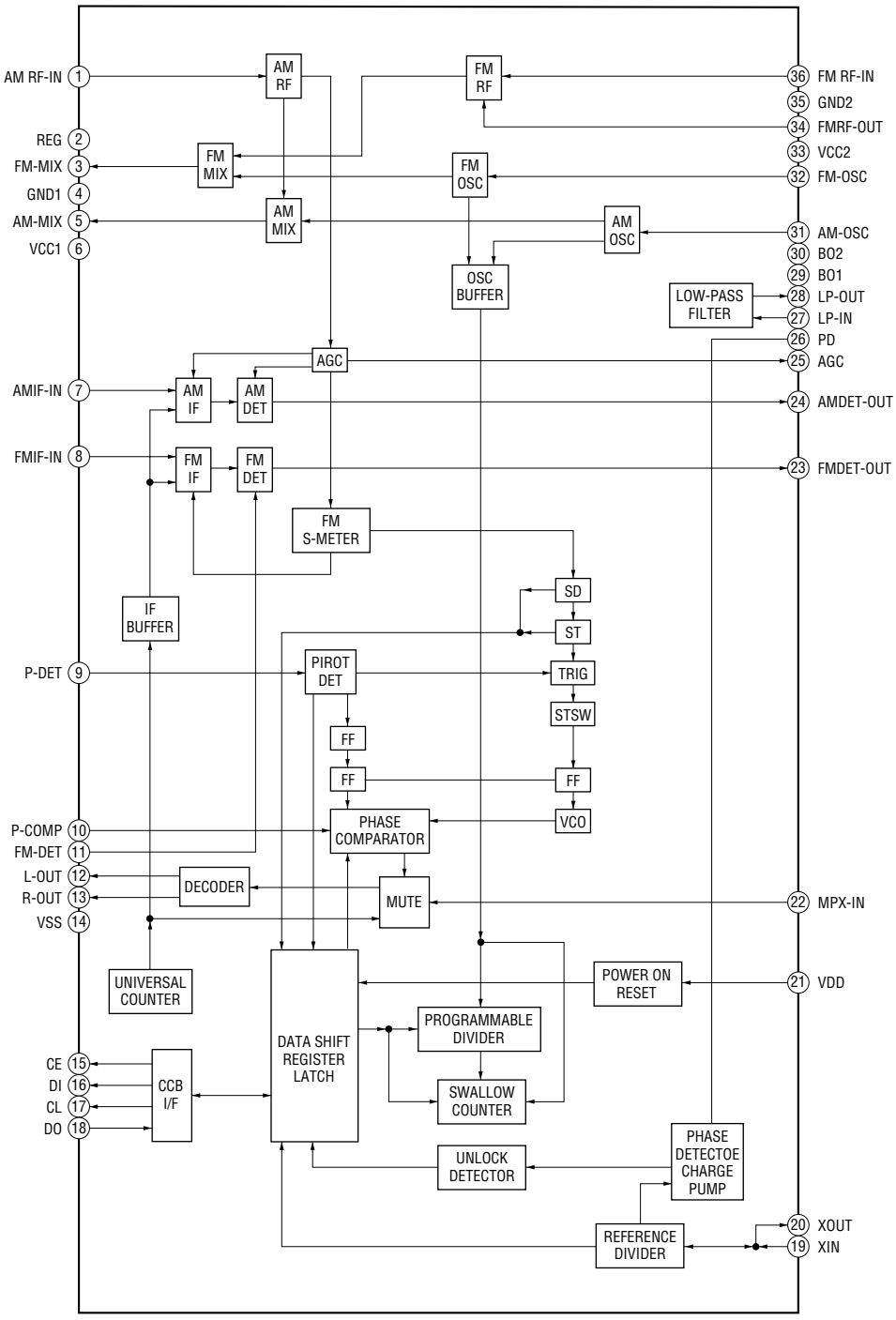


– MAIN Board –

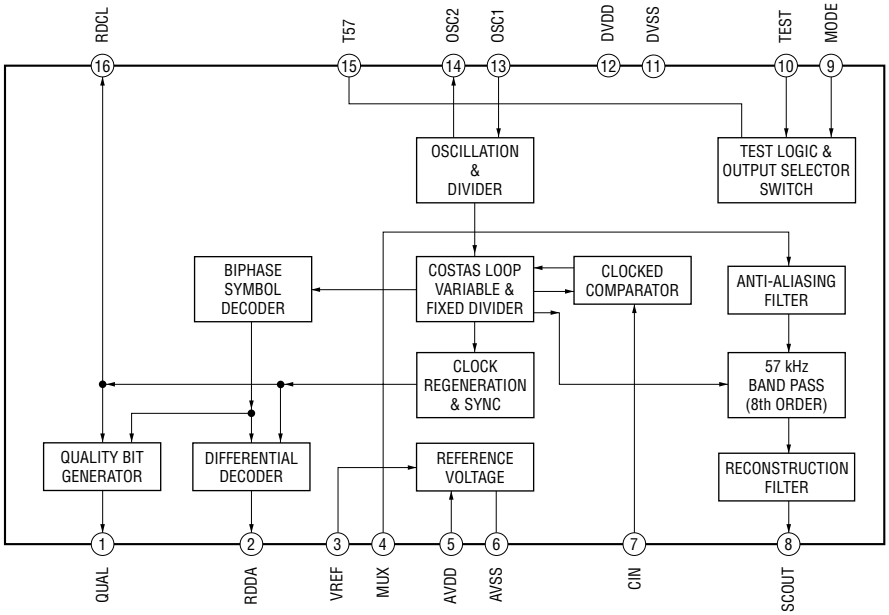
IC301 LA4631-E



IC801 LV23003VA



IC861 PT2579SN



• **IC PIN FUNCTION DESCRIPITION**

CD BOARD IC201 CXD3014A-201R (CD DSP)

Pin No.	Pin Name	I/O	Description
1	LRCK	O	L/R sampling clock signal output terminal
2	LRCKI	I	L/R sampling clock signal input terminal
3	PCMD	O	Serial data output terminal
4	PCMDI	I	Serial data input terminal
5	BCK	O	Bit clock signal output terminal
6	BCKI	I	Bit clock signal input terminal
7	XTACN	I	Oscillation circuit on/off switch control signal input from the system controller "L": oscillation stop, "H": self-oscillation
8	XRST	I	System reset signal input from the system controller "L": reset
9	VSS	-	Ground terminal
10	IREQ-MP3	O	MP3 data request signal output to the system controller
11	CLOK	I	CD serial data transfer clock signal input from the system controller
12	DATA2	I	MP3 serial data input/output with the system controller
13	XLAT-MP3	I	MP3 serial data latch pulse signal input from the system controller
14	REQ-MP3	I	MP3 data request signal input from the system controller
15	ACK-MP3	O	MP3 acknowledge signal output to the system controller
16	XLAT	I	CD serial data latch pulse signal input from the system controller
17	VDD	-	Power supply terminal (+1.8V)
18	SVSS	-	Ground terminal
19	SVDD	-	Power supply terminal (+1.8V)
20	SENS	O	Internal status (SENSE) signal output to the system controller
21	WFCK	-	Not used
22	XUGF	-	Not used
23	XPCK	-	Not used
24	GFS	-	Not used
25	C2PO	-	Not used
26	SCOR	O	Subcode sync (S0+S1) detection signal output to the system controller
27	VDD	-	Power supply terminal (+1.8V)
28	COUT	-	Not used
29	SVSS	-	Ground terminal
30	SVDD	-	Power supply terminal (+1.8V)
31	MIRR	-	Not used
32	DFCT	-	Not used
33	FOK	-	Not used
34	VSS	-	Ground terminal
35	VDD	-	Power supply terminal (+1.8V)
36	VSS	-	Ground terminal
37	MIRR	-	Not used
38	MDP	O	Spindle motor servo control signal output terminal
39	SSTP	I	Disc inner position detection signal input terminal
40	IOVSS1	-	Ground terminal
41	SFDR	O	Sled servo drive signal (+) output to the coil/motor driver
42	SRDR	O	Sled servo drive signal (-) output to the coil/motor driver
43	TFDR	O	Tracking servo drive signal (+) output to the coil/motor driver
44	TRDR	O	Tracking servo drive signal (-) output to the coil/motor driver
45	FFDR	O	Focus servo drive signal (+) output to the coil/motor driver
46	FRDR	O	Focus servo drive signal (-) output to the coil/motor driver
47	IOVDD1	-	Power supply terminal (+3.3V)

Pin No.	Pin Name	I/O	Description
48	AVDD0	-	Power supply terminal (+3.3V)
49	AVSS0	-	Ground terminal
50	E	I	E signal input from the optical pick-up block
51	F	I	F signal input from the optical pick-up block
52	TEI	I	Tracking error signal input terminal
53	TEO	O	Tracking error signal output terminal
54	FEI	I	Focus error signal input terminal
55	FEO	O	Focus error signal output terminal
56	VC	O	Middle point voltage output terminal
57	A	I	A signal input from the optical pick-up block
58	B	I	B signal input from the optical pick-up block
59	C	I	C signal input from the optical pick-up block
60	D	I	D signal input from the optical pick-up block
61	AVDD4	-	Power supply terminal (+3.3V)
62	RFDCO	O	Not used
63	PDSENS	I	Not used
64	AC_SUM	O	RFAC summing amplifier signal output terminal
65	EQ_IN	I	RF equalizer circuit input terminal
66	LD	O	Laser diode on/off control signal output to the automatic power control circuit "L": laser off, "H": laser on
67	PD	I	Light amount monitor input from the optical pick-up block laser diode
68	RFC	I	Equalizer cut off frequency adjustment terminal
69	AVSS4	-	Ground terminal
70	RFACO	O	EFM signal output terminal
71	RFACI	I	EFM signal input terminal
72	AVDD3	-	Power supply terminal (+3.3V)
73	BIAS	I	Asymmetry circuit constant current input terminal
74	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
75	ASYO	O	Playback EFM full-swing output terminal
76	VPCO	O	Charge pump output terminal for broad-band EFM PLL
77	VCTL	I	VCO2 control voltage input terminal for broad-band EFM PLL
78	AVSS3	-	Ground terminal
79	CLTV	I	VCO1 control voltage input terminal for multiplier
80	FILO	O	Filter output terminal for master PLL
81	FILI	I	Filter input terminal for master PLL
82	PCO	O	Charge pump output terminal for master PLL
83	SVSS	-	Ground terminal
84	SVDD	-	Power supply terminal (+1.8V)
85	SSTB-MP3	I	MP3 standby on/off control signal input terminal "L": standby Not used
86	VDD	-	Power supply terminal (+1.8V)
87	VSS	-	Ground terminal
88	TEST1	I	Test terminal Normally: fixed at "L"
89	DATA	I	CD serial data input from the system controller
90	CLK2	I	MP3 serial data transfer clock signal input from the system controller
91	SVSS	-	Ground terminal
92	SVDD	-	Power supply terminal (+2.5V)
93	JTAGTCK	-	Not used
94	JTAGTDI	-	Not used
95	JTAGTDO	-	Not used
96	JTAGTMS	-	Not used

Pin No.	Pin Name	I/O	Description
97	TRST	-	Not used
98	VSS	-	Ground terminal
99	VDD	-	Power supply terminal (+1.8V)
100	IOVDD2	-	Power supply terminal (+3.3V)
101	DOUT	O	Digital audio signal output terminal Not used
102	TEST	I	Test terminal Normally: fixed at "L"
103	TES1	I	Test terminal Normally: fixed at "L"
104	IOVSS2	-	Ground terminal
105	PLLVDD	-	Power supply terminal (+1.8V)
106	PLLVSS	-	Ground terminal
107	XVSS	-	Ground terminal
108	XTAO	O	System clock output terminal (16.9344 MHz)
109	XTAI	I	System clock input terminal (16.9344 MHz)
110	XVDD	-	Power supply terminal (+1.8V)
111	AVDD1	-	Power supply terminal (+3.3V)
112	AOUT1	O	L-ch analog audio signal output terminal
113	VREFL	O	L-ch reference voltage output terminal
114	AVSS1	-	Ground terminal
115	AVSS2	-	Ground terminal
116	VREFR	O	R-ch reference voltage output terminal
117	AOUT2	O	R-ch analog audio signal output terminal
118	AVDD1	-	Power supply terminal (+3.3V)
119	IOVDD0	-	Power supply terminal (+3.3V)
120	IOVSS0	-	Ground terminal

PANEL BOARD IC701 MB90802-107 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	P24	O	Main power on/off control signal output terminal "H": on
2	P25	O	Standby control signal output to the power amplifier and system reset signal output to the CD DSP
3	P26	-	Not used
4	P27	O	Serial data output to the electrical volume
5	SO3	O	MP3 serial data output to the CD DSP
6	SC3	O	MP3 serial data transfer clock signal output to the CD DSP
7	SI3	I	MP3 serial data input terminal
8	TMCK	O	CD serial data latch pulse signa output to the CD DSP
9	IC0	I	Remote control signal input from the remote control receiver
10	IC1	O	MP3 serial data latch pulse signal output to the CD DSP
11	OCU0	O	System reset signal output to the motor/coil driver
12	OCU1	O	MP3 data request signal output to the CD DSP
13	X0A	I	Sub system clock input terminal (32.768 kHz)
14	X1A	O	Sub system clock output terminal (32.768 kHz)
15	VCC	-	Power supply terminal (+3.1V)
16	VSS	-	Ground terminal
17	LED0	O	LED drive signal output terminal for STANDBY indicater
18 to 24	LED1 to LED7	O	Not used
25, 26	TIN0, TIN1	O	Not used
27	TIN2	I	RDS serial data input terminal (AEP, East European, Russian models)
28	PPG1	I	CD lid open/close detection switch input terminal "L": CD lid close
29	SI0	I	Internal status (SENSE) signal input from the CD DSP
30	SC0	O	CD serial data transfer clock signal output to the CD DSP
31	SO0	O	CD serial data output to the CD DSP
32	AVCC	-	Power supply terminal (+3.1V)
33	SI1	I	Serial data input from the FM/AM tuner
34	P76	O	Oscillator control signal output to the CD DSP
35	AVSS	-	Ground terminal
36	AN0	I	Power monitor input terminal
37, 38	AN1, AN2	I	Front panel key input terminal (A/D input)
39	AN3	I	Auto gain control signal input terminal
40	AN4	I	REC switch signal input terminal
41	AN5	I	Front panel key input terminal (A/D input)
42	AN6	-	Not used
43	AN7	I	Subcode sync (S0+S1) detection signal input from the CD DSP
44	VSS	-	Ground terminal
45	INT3	I	RDS serial data transfer clock signal input terminal (AEP, East European, Russian models)
46	SC1	O	LED drive signal output terminal for liquid crystal display back light
47	SO1	I	Model destination setting terminal
48	SI2	I	Dial pulse input of the rotary encoder (for VOLUME control)
49	SC2	I	MP3 data request signal input from the CD DSP
50	SO2	I	MP3 acknowledge signal input from the CD DSP
51 to 53	MD2 to MD0	-	Not used
54	RSTX	I	Reset signal input from the reset switch "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
55	V0	O	Chip enable signal output to the FM/AM tuner

Pin No.	Pin Name	I/O	Description
56	V1	O	serial data transfer clock signal output to the FM/AM tuner
57	V2	O	Serial data output to the FM/AM tuner
58	V3	-	Terminal for doubler circuit capacitor connection to develop liquid crystal display drive voltage
59 to 62	COM0 to COM3	O	Common drive signal output to the liquid crystal display
63, 64	SEG0, SEG1	O	Segment drive signal output to the liquid crystal display
65	VCC	-	Power supply terminal (+3.1V)
66	GND	-	Ground terminal
67 to 89	SEG2 to SEG24	O	Segment drive signal output to the liquid crystal display
90	VCC	-	Power supply terminal (+3.1V)
91	VSS	-	Ground terminal
92	X1	I	Main system clock output terminal (4.19 MHz)
93	X0	O	Main system clock input terminal (4.19 MHz)
94 to 100	SEG25 to SEG31	O	Segment drive signal output to the liquid crystal display

SECTION 8
EXPLODED VIEWS

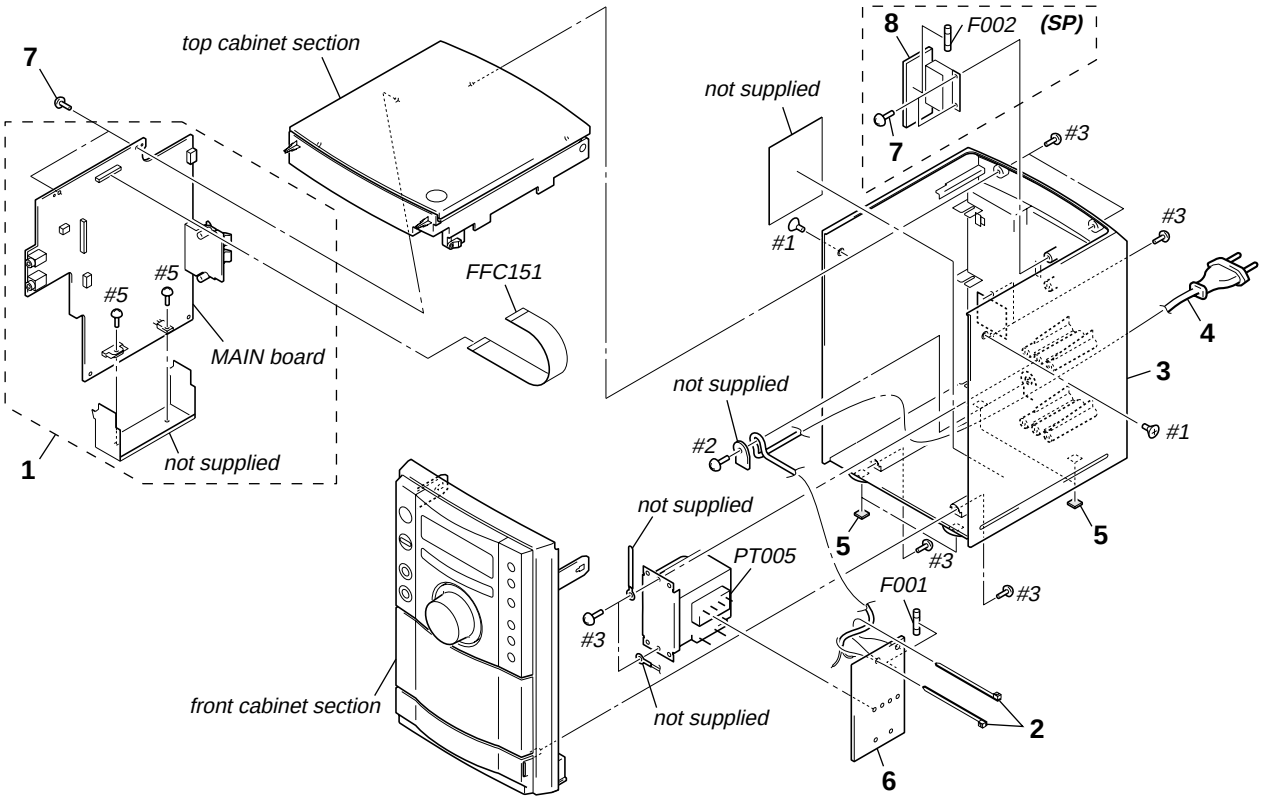
NOTE:

- -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
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model
- 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.

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

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

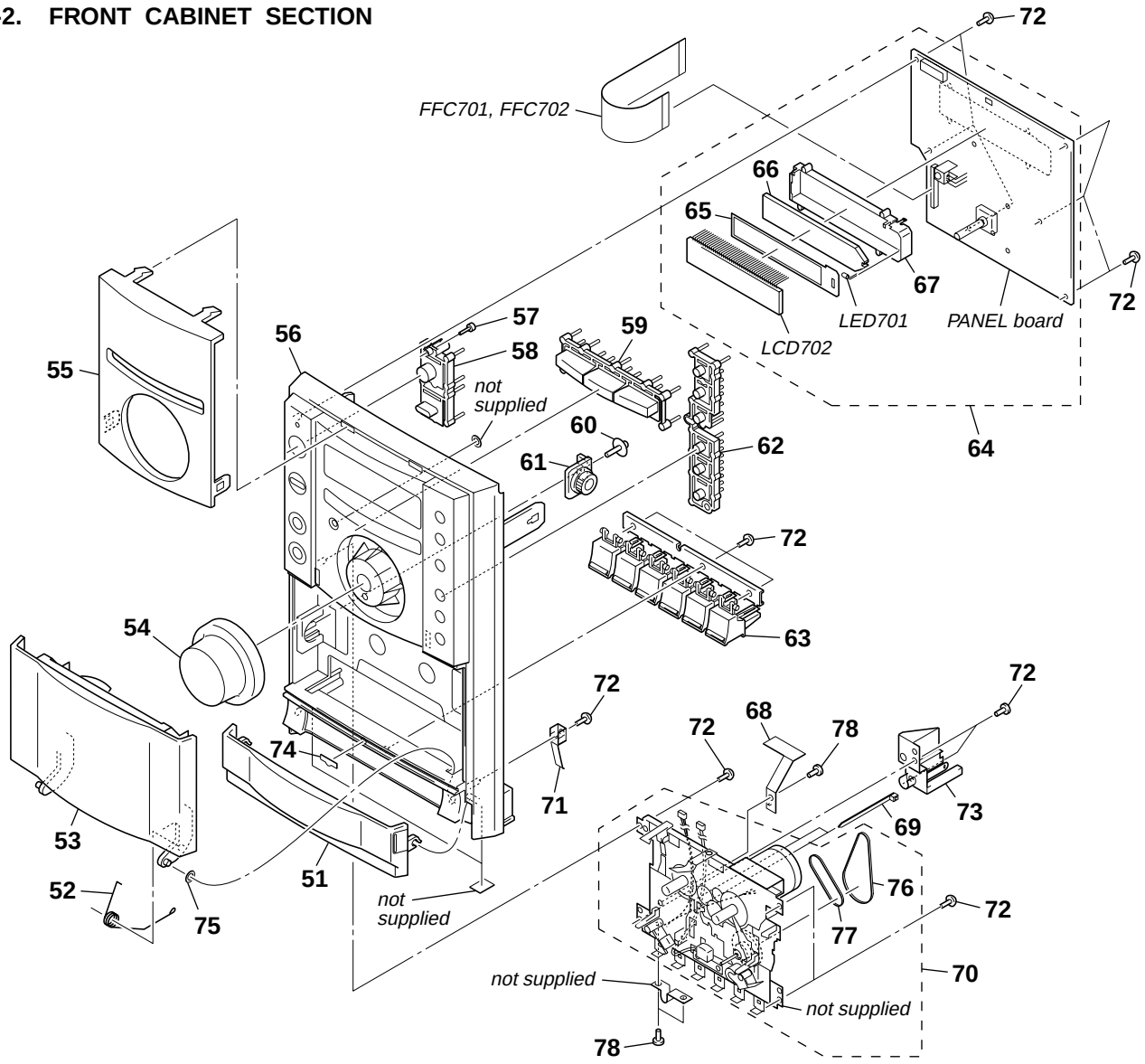
8-1. OVERALL SECTION



Ref. No.	Part No.	Description	Remark
1	A-1138-536-A	MAIN BOARD, COMPLETE (AEP, UK, EE, RU)	
1	A-1158-524-A	MAIN BOARD, COMPLETE (US, CND)	
1	A-1158-531-A	MAIN BOARD, COMPLETE (KR)	
1	A-1158-537-A	MAIN BOARD, COMPLETE (AUS)	
1	A-1158-540-A	MAIN BOARD, COMPLETE (SP)	
1	A-1169-746-A	MAIN BOARD, COMPLETE (TW)	
2	3-701-748-00	CLAMP	
3	2-636-516-01	CABINET, REAR	(AEP, UK, EE, RU, TW, KR, AUS)
3	2-636-516-11	CABINET, REAR (US)	
3	2-636-516-21	CABINET, REAR (CND)	
3	2-636-516-31	CABINET, REAR (SP)	
⚠4	1-769-079-51	CORD, POWER (KR)	
⚠4	1-775-790-81	CORD, POWER (AUS)	
⚠4	1-790-757-51	CORD, POWER (US, CND)	
⚠4	1-827-597-81	CORD, POWER (TW)	
⚠4	1-830-891-11	CORD, POWER (UK)	
⚠4	1-831-370-11	CORD, POWER (AEP, EE, RU, SP)	
5	4-247-752-01	FOOT, RUBBER	
6	A-1138-529-A	PT-AC BOARD, COMPLETE (EXCEPT SP, TW)	

Ref. No.	Part No.	Description	Remark
6	A-1158-541-A	PT-AC BOARD, COMPLETE (SP)	
6	A-1169-744-A	PT-AC BOARD, COMPLETE (TW)	
7	4-951-620-01	SCREW (2.6X8), +BVTP	
8	A-1158-542-A	AC-SW BOARD, COMPLETE (SP)	
⚠F001	1-532-275-33	FUSE (T0.16AL/250V)	(AEP, UK, EE, RU, KR, AUS)
⚠F001	1-532-467-33	FUSE (T0.315AL/250V) (US, CND, SP, TW)	
⚠F002	1-532-275-33	FUSE (T0.16AL/250V) (SP)	
FFC151	1-832-627-21	CABLE, FLEXIBLE FLAT (23 CORE)	
⚠PT005	1-443-829-11	TRANSFORMER, POWER (AEP, UK, EE, RU)	
⚠PT005	1-443-856-11	TRANSFORMER, POWER (US, CND)	
⚠PT005	1-443-857-11	TRANSFORMER, POWER (KR)	
⚠PT005	1-443-858-11	TRANSFORMER, POWER (SP, TW, AUS)	
#1	7-685-246-19	SCREW +KTP 3X8 TYPE2 NON-SLIT	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	(US, CND, AEP, UK, EE, RU)
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	(KR, SP, TW, AUS)

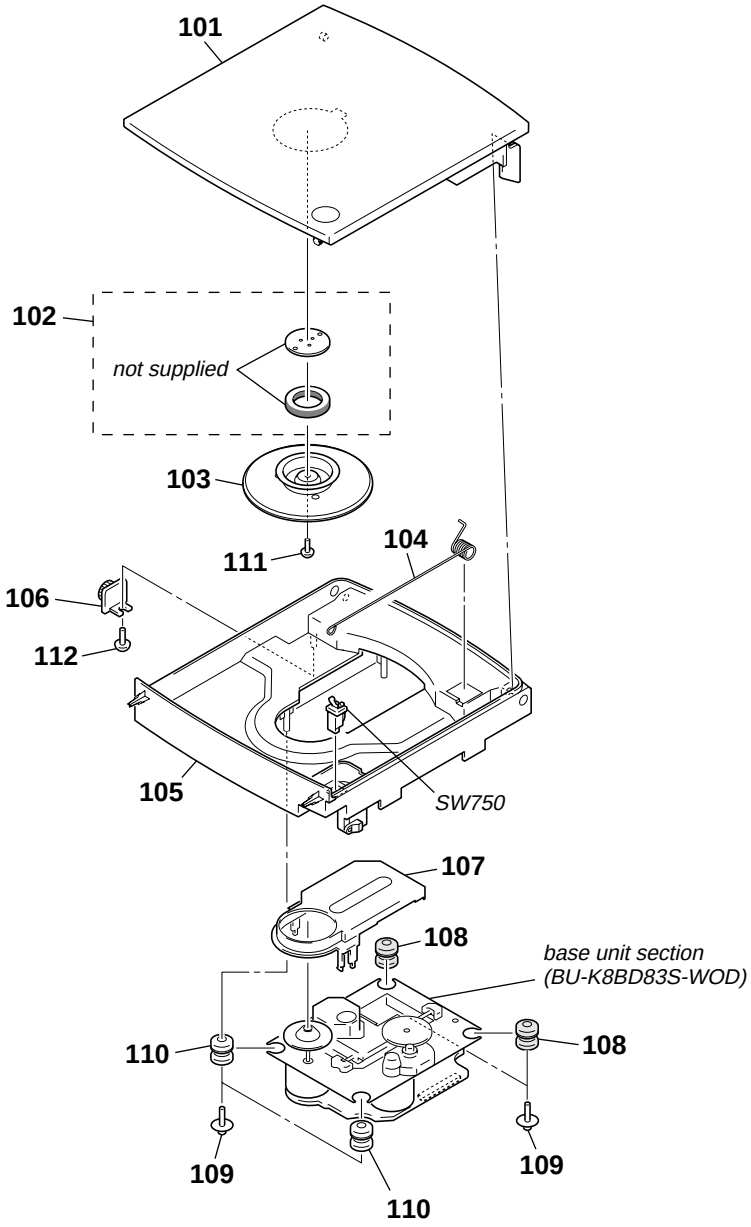
8-2. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark
51	2-636-520-01	COVER (C), BUTTON	
52	2-637-768-01	SPRING (CASSETTE)	
53	2-636-517-01	LID, CASSETTE	
54	2-636-527-01	KNOB (VOL)	
55	2-636-519-01	WINDOW (DISPLAY) (AEP, UK, EE, RU)	
55	2-636-519-11	WINDOW (DISPLAY) (US, CND, SP, TW, KR, AUS)	
56	2-636-514-01	CABINET, FRONT (EXCEPT US)	
56	2-636-514-11	CABINET, FRONT (US)	
57	2-636-533-01	INDICATOR (POWER)	
58	2-636-523-01	BUTTON (POWER)	
59	2-636-521-01	BUTTON (FUNCTION)	
60	3-252-828-01	SCREW (B2.6), (+) PWH TAPPING	
61	3-047-468-51	DAMPER	
62	2-636-525-01	BUTTON (OPERATION)	
63	2-636-522-01	BUTTON (CASSETTE) (●, ►, ◄◄, ►►, ■ ⏏, ❚❚)	
64	A-1138-541-A	PANEL BOARD, COMPLETE (AEP, UK, EE, RU)	
64	A-1158-525-A	PANEL BOARD, COMPLETE (US, CND)	
64	A-1158-532-A	PANEL BOARD, COMPLETE (SP, TW, KR, AUS)	

Ref. No.	Part No.	Description	Remark
65	2-636-545-01	SHEET (LCD)	
66	2-636-532-01	ILLUMINATOR (LCD)	
67	2-636-531-01	HOLDER (LCD)	
68	2-636-546-01	LEVER (REC)	
69	3-701-748-00	CLAMP	
70	1-797-374-11	DECK, MECHANICAL (H-21SB)	
71	2-636-526-01	SPRING BUTTON COVER (C)	
72	4-951-620-01	SCREW (2.6X8), +BVTP	
73	2-636-524-01	HOLDER, PWB	
74	2-663-087-01	SHEET (AZIMUTH)	
75	2-663-694-01	WASHER	
76	2-670-389-01	BELT (1)	
77	2-670-390-01	BELT (2)	
78	3-254-022-01	SCREW	
FFC701	1-832-634-21	CABLE, FLEXIBLE FLAT (25 CORE) (US, CND, SP, TW, KR, AUS)	
FFC702	1-832-644-21	CABLE, FLEXIBLE FLAT (27 CORE) (AEP, UK, EE, RU)	
LCD702	1-805-941-12	DISPLAY PANEL, LIQUID CRYSTAL	
LED701	6-501-139-01	LED SELU2B10A-SLF62 (LCD BACK LIGHT)	

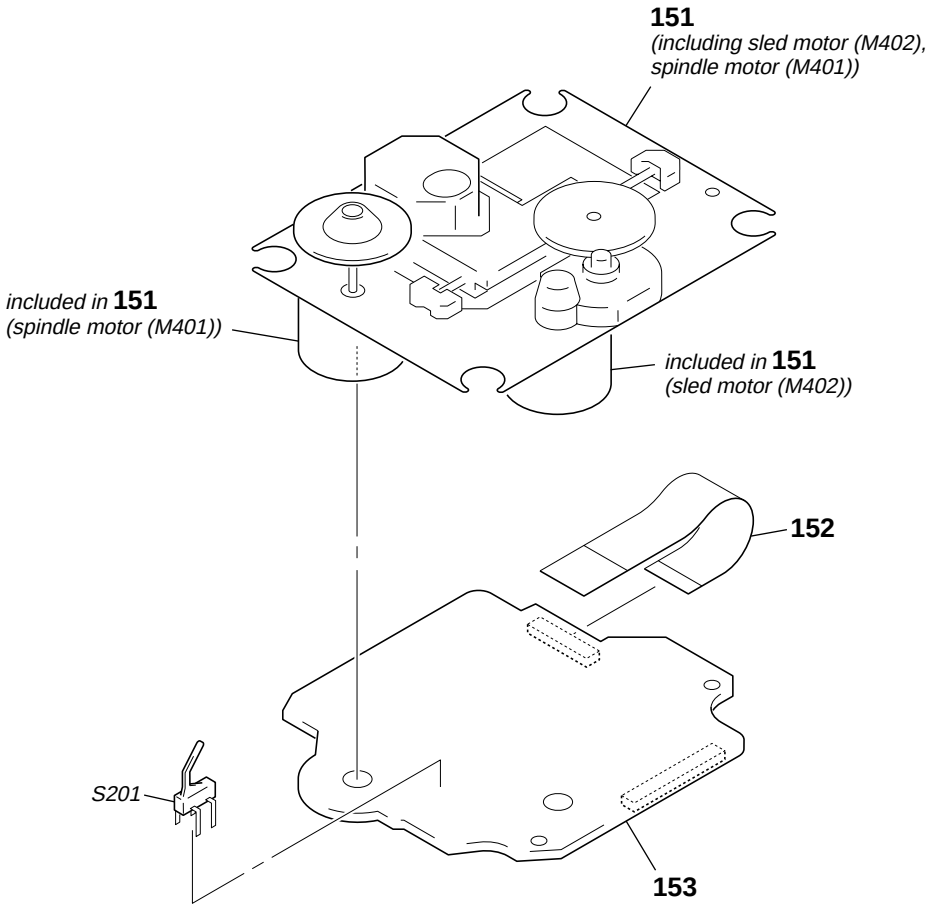
8-3. TOP CABINET SECTION



Ref. No.	Part No.	Description	Remark
101	2-636-518-01	LID, CD	
102	1-452-899-11	MAGNET	
103	3-019-395-01	PLATE, CHUCKING	
104	2-637-769-01	SPRING (CD)	
105	2-636-515-01	CABINET, TOP (EXCEPT US)	
105	2-636-515-11	CABINET, TOP (US)	
106	3-047-468-11	DAMPER	
107	4-247-493-01	COVER, CD	

Ref. No.	Part No.	Description	Remark
108	3-931-379-21	RUBBER, VIBRATION PROOF (RED)	
109	3-252-828-01	SCREW (B2.6), (+) PWH TAPPING	
110	3-931-379-31	RUBBER, VIBRATION PROOF (GREEN)	
111	3-253-143-01	SCREW (B2.6), (+) P TAPPING	
112	4-951-620-01	SCREW (2.6X8), +BVTP	
SW750	1-692-960-11	SWITCH, PUSH (1 KEY)	(CD LID OPEN/CLOSE DETECT)

8-4. BASE UNIT SECTION (BU-K8BD83S-WOD)



Ref. No.	Part No.	Description	Remark
⚠151	8-820-126-01	OPTICAL PICK-UP BLOCK (KSM-213CDP/C2NP) (Including sled motor (M402), spindle motor (M401))	

Ref. No.	Part No.	Description	Remark
152	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
153	A-1134-279-A	CD BOARD, COMPLETE	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	

SECTION 9
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model

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

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

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

Ref. No.	Part No.	Description			Remark
	A-1134-279-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C102	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C103	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C104	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C105	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C107	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C108	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C109	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C110	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C111	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C112	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C113	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	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	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C207	1-128-995-21	ELECT CHIP	100uF	20%	10V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C210	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C213	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C214	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C215	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C217	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C220	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C223	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C226	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C227	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C230	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C232	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C252	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C253	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C256	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C257	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C258	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C260	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C261	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C264	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C266	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C267	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C268	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C272	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C273	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C274	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C275	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C276	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C277	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C291	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C292	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C304	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C321	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C323	1-128-995-21	ELECT CHIP	100uF	20%	10V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C406	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C424	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C451	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
		< CONNECTOR >			
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC201	8-753-246-30	IC CXD3014A-201R			
IC202	6-708-736-01	IC BD18KA5FP-E2			
IC402	6-705-808-01	IC BA5947FM-E2			
		< TRANSISTOR >			
Q321	6-551-120-01	TRANSISTOR	2SA2119K		

Ref. No.	Part No.	Description			Remark
		< RESISTOR/FERRITE BEAD >			
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-809-11	METAL CHIP	100	5%	1/10W
R104	1-216-809-11	METAL CHIP	100	5%	1/10W
R105	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	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	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-00	SHORT CHIP	0		
R202	1-216-295-00	SHORT CHIP	0		
R203	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R207	1-216-295-00	SHORT CHIP	0		
R250	1-216-857-11	METAL CHIP	1M	5%	1/10W
R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
R255	1-216-821-11	METAL CHIP	1K	5%	1/10W
R256	1-216-837-11	METAL CHIP	22K	5%	1/10W
R257	1-216-845-11	METAL CHIP	100K	5%	1/10W
R258	1-216-849-11	METAL CHIP	220K	5%	1/10W
R260	1-216-864-11	SHORT CHIP	0		
R265	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R266	1-216-821-11	METAL CHIP	1K	5%	1/10W
R267	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R268	1-216-833-11	METAL CHIP	10K	5%	1/10W
R270	1-216-821-11	METAL CHIP	1K	5%	1/10W
R271	1-216-857-11	METAL CHIP	1M	5%	1/10W
R275	1-216-809-11	METAL CHIP	100	5%	1/10W
R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R277	1-216-809-11	METAL CHIP	100	5%	1/10W
R278	1-216-809-11	METAL CHIP	100	5%	1/10W
R280	1-216-864-11	SHORT CHIP	0		
R291	1-216-809-11	METAL CHIP	100	5%	1/10W
R292	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R322	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R323	1-216-864-11	SHORT CHIP	0		
R324	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-295-00	SHORT CHIP	0		
R421	1-216-864-11	SHORT CHIP	0		
R423	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-837-11	METAL CHIP	22K	5%	1/10W
R452	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< VIBRATOR >			
X201	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)			
**********					
	A-1138-536-A	MAIN BOARD, COMPLETE			
		**********			
	3-254-142-01	SCREW (B3), (+) BV TAPPING			

Ref. No.	Part No.	Description			Remark
		< BAND PASS FILTER >			
BPF801	1-236-711-41	FILTER, BAND PASS			
		< CAPACITOR >			
C101	1-126-944-11	ELECT	3300uF	20%	25V
C105	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C112	1-126-943-11	ELECT	2200uF	20%	25V
C114	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C115	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C118	1-126-933-11	ELECT	100uF	20%	16V
C121	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C122	1-126-934-11	ELECT	220uF	20%	16V
C141	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C142	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C155	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C156	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C181	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C182	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C183	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C184	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C191	1-126-934-11	ELECT	220uF	20%	16V
C192	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C193	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C194	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C196	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C301	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C302	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-126-963-11	ELECT	4.7uF	20%	50V
C304	1-126-933-11	ELECT	100uF	20%	16V
C305	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C306	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C307	1-126-767-11	ELECT	1000uF	20%	16V
C308	1-126-767-11	ELECT	1000uF	20%	16V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C312	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C315	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C381	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C382	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-126-956-11	ELECT	0.1uF	20%	50V
C402	1-126-933-11	ELECT	100uF	20%	16V
C403	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C404	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C405	1-126-956-11	ELECT	0.1uF	20%	50V
C406	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C407	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C408	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C409	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C410	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C412	1-126-933-11	ELECT	100uF	20%	16V
C413	1-126-933-11	ELECT	100uF	20%	16V

Refer to the SUPPLEMENT-1 for the MAIN board of the except AEP, UK, East European and Russian models.

MAIN

Ref. No.	Part No.	Description			Remark
C415	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C416	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C421	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C431	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C432	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C433	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C434	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C437	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C438	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C501	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C502	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C503	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C504	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C505	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C506	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C507	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-126-966-11	ELECT	33uF	20%	50V
C510	1-126-966-11	ELECT	33uF	20%	50V
C511	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C512	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C514	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C515	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C518	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C519	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C522	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C526	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C527	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C528	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C529	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C531	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C532	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C533	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C534	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C535	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C543	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C544	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C562	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C564	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C565	1-115-156-11	CERAMIC CHIP	1uF		10V
C567	1-130-479-00	MYLAR	0.0047uF	5%	50V
C800	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C801	1-126-933-11	ELECT	100uF	20%	16V
C802	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C803	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C804	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C806	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C807	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C809	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C810	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C811	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C812	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C813	1-126-934-11	ELECT	220uF	20%	16V

Ref. No.	Part No.	Description			Remark
C814	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C815	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C816	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C817	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C818	1-216-864-11	SHORT CHIP	0		
C819	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C820	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C821	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C822	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C823	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C824	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C825	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C826	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C827	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C828	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C829	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C831	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C832	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C833	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C834	1-126-934-11	ELECT	220uF	20%	16V
C835	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C836	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C838	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C839	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C840	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C841	1-126-965-11	ELECT	22uF	20%	50V
C847	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C848	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C851	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C852	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C853	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C854	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C855	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C856	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C861	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C862	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C863	1-126-965-11	ELECT	22uF	20%	50V
C864	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C865	1-126-965-11	ELECT	22uF	20%	50V
C866	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C867	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C868	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
C869	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C873	1-162-907-11	CERAMIC CHIP	2PF	0.25PF	50V
		< FILTER >			
CF801	1-795-426-11	FILTER, CERAMIC			
CF802	1-579-554-21	FILTER, CERAMIC			
CF803	1-781-962-21	FILTER, CERAMIC			
		< CONNECTOR >			
CNP501	1-815-445-11	PIN, CONNECTOR (PWB) 4P			
CNP502	1-815-444-11	PIN, CONNECTOR (PWB) 3P			
* CNP802	1-506-680-11	PLUG, CONNECTOR (2.5mm) 3P			
CNS104	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P			
CNS112	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D106	8-719-056-85	DIODE UDZ-TE-17-8.2B	
D107	8-719-046-07	DIODE 2A02M	
D108	8-719-046-07	DIODE 2A02M	
D109	8-719-046-07	DIODE 2A02M	
D110	8-719-046-07	DIODE 2A02M	
D111	6-500-522-01	DIODE 10EDB40-TA1B2	
D113	6-500-522-01	DIODE 10EDB40-TA1B2	
D131	6-500-334-01	DIODE MC2836-T112-1	
D191	6-500-522-01	DIODE 10EDB40-TA1B2	
D192	6-500-522-01	DIODE 10EDB40-TA1B2	
D193	8-719-083-58	DIODE UDZSTE-173.9B	
D371	6-500-335-01	DIODE MC2838-T112-1	
D372	6-500-335-01	DIODE MC2838-T112-1	
D802	6-501-369-01	DIODE SV230-TB-E	
D803	6-501-369-01	DIODE SV230-TB-E	
D812	8-719-062-51	DIODE 1PS226-115	
D813	8-719-062-51	DIODE 1PS226-115	
D815	8-719-062-51	DIODE 1PS226-115	
D851	6-501-142-01	DIODE SVC347A-TL-E	
		< IC >	
IC301	6-706-641-01	IC LA4631-E	
IC401	6-702-895-01	IC BD3881FV	
IC801	6-708-840-01	IC LV23003VA	
IC861	6-708-918-01	IC PT2579SN	
		< JACK >	
J101	1-780-314-11	TERMINAL BOARD (SPEAKERS)	
J102	1-815-629-11	JACK (PHONES)	
J105	1-566-822-51	JACK (AUDIO IN)	
		< JUMPER RESISTOR >	
JR106	1-216-864-11	SHORT CHIP 0	
JR401	1-216-864-11	SHORT CHIP 0	
JR402	1-216-864-11	SHORT CHIP 0	
JR403	1-216-864-11	SHORT CHIP 0	
JR404	1-216-864-11	SHORT CHIP 0	
JR801	1-216-864-11	SHORT CHIP 0	
JR802	1-216-864-11	SHORT CHIP 0	
JR803	1-216-864-11	SHORT CHIP 0	
JR861	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L103	1-469-152-11	FERRITE, EMI (SMD) (2012)	
L104	1-469-152-11	FERRITE, EMI (SMD) (2012)	
L501	1-456-094-11	TRANSFORMER, BIAS OSCILLATION	
L803	1-433-741-11	TRANSFORMER, IF	
L804	1-457-163-11	COIL, AIR-CORE	
L805	1-457-162-11	COIL, AIR-CORE	
L806	1-457-168-11	COIL, DET	
L851	1-457-161-11	COIL, AM ANTENNA	
L852	1-456-596-11	COIL, MW OSC	
		< CONNECTOR >	
* PIN101	1-564-187-00	PIN, CONNECTOR	
* PIN102	1-564-187-00	PIN, CONNECTOR	

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q101	8-729-141-83	TRANSISTOR	2SB1094-LK		
Q102	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q103	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q121	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q122	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q123	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q191	8-729-036-86	TRANSISTOR	KTC3203Y-AT		
Q192	8-729-036-86	TRANSISTOR	KTC3203Y-AT		
Q193	8-729-600-22	TRANSISTOR	2SA1235-F		
Q351	6-550-843-01	FET	2SJ599-Z-E2-AZ		
Q352	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q371	8-729-600-22	TRANSISTOR	2SA1235-F		
Q372	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q507	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q801	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q802	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q803	6-550-304-01	TRANSISTOR	2SC5477-T122-1		
Q861	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q862	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R101	1-216-833-11	METAL CHIP	10K	5%	1/10W
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-841-11	METAL CHIP	47K	5%	1/10W
R104	1-216-845-11	METAL CHIP	100K	5%	1/10W
R105	1-216-845-11	METAL CHIP	100K	5%	1/10W
R106	1-216-837-11	METAL CHIP	22K	5%	1/10W
R107	1-216-817-11	METAL CHIP	470	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-817-11	METAL CHIP	470	5%	1/10W
R110	1-216-845-11	METAL CHIP	100K	5%	1/10W
R111	1-216-853-11	METAL CHIP	470K	5%	1/10W
R112	1-216-853-11	METAL CHIP	470K	5%	1/10W
R115	1-249-409-11	CARBON	220	5%	1/4W
R116	1-249-409-11	CARBON	220	5%	1/4W
R117	1-249-409-11	CARBON	220	5%	1/4W
R118	1-249-409-11	CARBON	220	5%	1/4W
R119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R120	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R121	1-216-849-11	METAL CHIP	220K	5%	1/10W
R123	1-216-853-11	METAL CHIP	470K	5%	1/10W
R124	1-216-809-11	METAL CHIP	100	5%	1/10W
R125	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R126	1-216-841-11	METAL CHIP	47K	5%	1/10W
R127	1-216-841-11	METAL CHIP	47K	5%	1/10W
R128	1-216-813-11	METAL CHIP	220	5%	1/10W
R129	1-216-817-11	METAL CHIP	470	5%	1/10W
R130	1-216-813-11	METAL CHIP	220	5%	1/10W
R134	1-216-817-11	METAL CHIP	470	5%	1/10W
R135	1-216-817-11	METAL CHIP	470	5%	1/10W
R136	1-216-817-11	METAL CHIP	470	5%	1/10W
R137	1-216-817-11	METAL CHIP	470	5%	1/10W
R138	1-216-817-11	METAL CHIP	470	5%	1/10W
R139	1-216-817-11	METAL CHIP	470	5%	1/10W
R140	1-216-817-11	METAL CHIP	470	5%	1/10W
R144	1-216-817-11	METAL CHIP	470	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R145	1-216-817-11	METAL CHIP	470	5%	1/10W
R146	1-216-817-11	METAL CHIP	470	5%	1/10W
R147	1-216-817-11	METAL CHIP	470	5%	1/10W
R148	1-216-817-11	METAL CHIP	470	5%	1/10W
R149	1-216-817-11	METAL CHIP	470	5%	1/10W
R150	1-216-817-11	METAL CHIP	470	5%	1/10W
R151	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R152	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R175	1-216-841-11	METAL CHIP	47K	5%	1/10W
R176	1-216-841-11	METAL CHIP	47K	5%	1/10W
R181	1-216-797-11	METAL CHIP	10	5%	1/10W
R182	1-216-797-11	METAL CHIP	10	5%	1/10W
R185	1-247-807-31	CARBON	100	5%	1/4W
R186	1-247-807-31	CARBON	100	5%	1/4W
R187	1-247-807-31	CARBON	100	5%	1/4W
R188	1-216-837-11	METAL CHIP	22K	5%	1/10W
R189	1-216-837-11	METAL CHIP	22K	5%	1/10W
R191	1-216-821-11	METAL CHIP	1K	5%	1/10W
R192	1-216-845-11	METAL CHIP	100K	5%	1/10W
R193	1-216-845-11	METAL CHIP	100K	5%	1/10W
R195	1-216-809-11	METAL CHIP	100	5%	1/10W
R196	1-216-809-11	METAL CHIP	100	5%	1/10W
R197	1-247-807-31	CARBON	100	5%	1/4W
R198	1-247-807-31	CARBON	100	5%	1/4W
R199	1-247-807-31	CARBON	100	5%	1/4W
R301	1-216-837-11	METAL CHIP	22K	5%	1/10W
R302	1-216-837-11	METAL CHIP	22K	5%	1/10W
R303	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R304	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R307	1-216-837-11	METAL CHIP	22K	5%	1/10W
R308	1-216-837-11	METAL CHIP	22K	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-833-11	METAL CHIP	10K	5%	1/10W
R352	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W
R354	1-216-833-11	METAL CHIP	10K	5%	1/10W
R355	1-216-833-11	METAL CHIP	10K	5%	1/10W
R356	1-216-837-11	METAL CHIP	22K	5%	1/10W
R365	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R371	1-218-446-11	METAL CHIP	1	5%	1/10W
R372	1-218-446-11	METAL CHIP	1	5%	1/10W
R373	1-218-446-11	METAL CHIP	1	5%	1/10W
R374	1-218-446-11	METAL CHIP	1	5%	1/10W
R375	1-218-446-11	METAL CHIP	1	5%	1/10W
R376	1-218-446-11	METAL CHIP	1	5%	1/10W
R377	1-218-446-11	METAL CHIP	1	5%	1/10W
R378	1-218-446-11	METAL CHIP	1	5%	1/10W
R379	1-218-446-11	METAL CHIP	1	5%	1/10W
R380	1-218-446-11	METAL CHIP	1	5%	1/10W
R381	1-216-833-11	METAL CHIP	10K	5%	1/10W
R382	1-216-833-11	METAL CHIP	10K	5%	1/10W
R383	1-216-833-11	METAL CHIP	10K	5%	1/10W
R384	1-216-821-11	METAL CHIP	1K	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-821-11	METAL CHIP	1K	5%	1/10W
R404	1-216-813-11	METAL CHIP	220	5%	1/10W
R405	1-216-864-11	SHORT CHIP	0		
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R410	1-216-845-11	METAL CHIP	100K	5%	1/10W
R411	1-216-821-11	METAL CHIP	1K	5%	1/10W
R412	1-216-813-11	METAL CHIP	220	5%	1/10W
R419	1-216-839-11	METAL CHIP	33K	5%	1/10W
R420	1-216-839-11	METAL CHIP	33K	5%	1/10W
R423	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R424	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R425	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R427	1-216-845-11	METAL CHIP	100K	5%	1/10W
R428	1-216-845-11	METAL CHIP	100K	5%	1/10W
R429	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R430	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R433	1-216-837-11	METAL CHIP	22K	5%	1/10W
R434	1-216-837-11	METAL CHIP	22K	5%	1/10W
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R440	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R441	1-216-841-11	METAL CHIP	47K	5%	1/10W
R442	1-216-841-11	METAL CHIP	47K	5%	1/10W
R501	1-216-809-11	METAL CHIP	100	5%	1/10W
R502	1-216-809-11	METAL CHIP	100	5%	1/10W
R503	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R505	1-216-833-11	METAL CHIP	10K	5%	1/10W
R506	1-216-833-11	METAL CHIP	10K	5%	1/10W
R507	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R508	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R509	1-216-853-11	METAL CHIP	470K	5%	1/10W
R510	1-216-853-11	METAL CHIP	470K	5%	1/10W
R511	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R512	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R513	1-216-809-11	METAL CHIP	100	5%	1/10W
R514	1-216-809-11	METAL CHIP	100	5%	1/10W
R515	1-216-805-11	METAL CHIP	47	5%	1/10W
R516	1-216-805-11	METAL CHIP	47	5%	1/10W
R517	1-216-845-11	METAL CHIP	100K	5%	1/10W
R518	1-216-845-11	METAL CHIP	100K	5%	1/10W
R519	1-216-841-11	METAL CHIP	47K	5%	1/10W
R520	1-216-841-11	METAL CHIP	47K	5%	1/10W
R521	1-216-837-11	METAL CHIP	22K	5%	1/10W
R522	1-216-837-11	METAL CHIP	22K	5%	1/10W
R523	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R524	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R525	1-216-833-11	METAL CHIP	10K	5%	1/10W
R526	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R528	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R531	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R532	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R533	1-216-833-11	METAL CHIP	10K	5%	1/10W
R534	1-216-833-11	METAL CHIP	10K	5%	1/10W
R535	1-216-813-11	METAL CHIP	220	5%	1/10W

Ref. No.	Part No.	Description			Remark
R536	1-216-813-11	METAL CHIP	220	5%	1/10W
R541	1-216-837-11	METAL CHIP	22K	5%	1/10W
R542	1-216-833-11	METAL CHIP	10K	5%	1/10W
R543	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R544	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R545	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R560	1-216-821-11	METAL CHIP	1K	5%	1/10W
R561	1-216-837-11	METAL CHIP	22K	5%	1/10W
R564	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R565	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R801	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R802	1-216-797-11	METAL CHIP	10	5%	1/10W
R803	1-216-797-11	METAL CHIP	10	5%	1/10W
R804	1-216-864-11	SHORT CHIP	0		
R805	1-216-845-11	METAL CHIP	100K	5%	1/10W
R806	1-216-864-11	SHORT CHIP	0		
R807	1-216-845-11	METAL CHIP	100K	5%	1/10W
R808	1-216-833-11	METAL CHIP	10K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W
R810	1-216-857-11	METAL CHIP	1M	5%	1/10W
R811	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R812	1-216-817-11	METAL CHIP	470	5%	1/10W
R813	1-216-833-11	METAL CHIP	10K	5%	1/10W
R814	1-216-809-11	METAL CHIP	100	5%	1/10W
R815	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R816	1-216-833-11	METAL CHIP	10K	5%	1/10W
R817	1-216-833-11	METAL CHIP	10K	5%	1/10W
R818	1-216-841-11	METAL CHIP	47K	5%	1/10W
R819	1-216-841-11	METAL CHIP	47K	5%	1/10W
R820	1-216-833-11	METAL CHIP	10K	5%	1/10W
R821	1-216-813-11	METAL CHIP	220	5%	1/10W
R822	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R823	1-216-809-11	METAL CHIP	100	5%	1/10W
R824	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R825	1-216-817-11	METAL CHIP	470	5%	1/10W
R826	1-216-809-11	METAL CHIP	100	5%	1/10W
R827	1-216-809-11	METAL CHIP	100	5%	1/10W
R828	1-216-801-11	METAL CHIP	22	5%	1/10W
R829	1-216-845-11	METAL CHIP	100K	5%	1/10W
R830	1-216-841-11	METAL CHIP	47K	5%	1/10W
R831	1-216-813-11	METAL CHIP	220	5%	1/10W
R833	1-216-833-11	METAL CHIP	10K	5%	1/10W
R834	1-216-837-11	METAL CHIP	22K	5%	1/10W
R835	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R836	1-216-833-11	METAL CHIP	10K	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	1-216-809-11	METAL CHIP	100	5%	1/10W
R840	1-216-837-11	METAL CHIP	22K	5%	1/10W
R841	1-216-809-11	METAL CHIP	100	5%	1/10W
R842	1-216-841-11	METAL CHIP	47K	5%	1/10W
R843	1-216-853-11	METAL CHIP	470K	5%	1/10W
R844	1-216-797-11	METAL CHIP	10	5%	1/10W
R845	1-216-801-11	METAL CHIP	22	5%	1/10W
R846	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R847	1-216-801-11	METAL CHIP	22	5%	1/10W
R848	1-216-821-11	METAL CHIP	1K	5%	1/10W
R849	1-216-837-11	METAL CHIP	22K	5%	1/10W
R850	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R851	1-216-837-11	METAL CHIP	22K	5%	1/10W
R853	1-216-845-11	METAL CHIP	100K	5%	1/10W
R856	1-216-837-11	METAL CHIP	22K	5%	1/10W
R857	1-216-837-11	METAL CHIP	22K	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	1-216-833-11	METAL CHIP	10K	5%	1/10W
R862	1-216-817-11	METAL CHIP	470	5%	1/10W
R863	1-216-837-11	METAL CHIP	22K	5%	1/10W
R864	1-216-833-11	METAL CHIP	10K	5%	1/10W
R865	1-216-833-11	METAL CHIP	10K	5%	1/10W
R866	1-216-833-11	METAL CHIP	10K	5%	1/10W
R867	1-216-833-11	METAL CHIP	10K	5%	1/10W
R868	1-216-833-11	METAL CHIP	10K	5%	1/10W
R869	1-216-833-11	METAL CHIP	10K	5%	1/10W
R870	1-216-853-11	METAL CHIP	470K	5%	1/10W
R871	1-216-849-11	METAL CHIP	220K	5%	1/10W
R872	1-216-813-11	METAL CHIP	220	5%	1/10W
R873	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R874	1-216-845-11	METAL CHIP	100K	5%	1/10W
R875	1-216-845-11	METAL CHIP	100K	5%	1/10W
R876	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
SW501	1-762-369-11	SWITCH, SLIDE (REC/PB)			
		< VIBRATOR >			
X801	1-795-926-11	VIBRATOR, CRYSTAL (75kHz)			
X861	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)			
**********					
	A-1138-541-A	PANEL BOARD, COMPLETE (AEP, UK, EE, RU)			
	A-1158-525-A	PANEL BOARD, COMPLETE (US, CND)			
	A-1158-532-A	PANEL BOARD, COMPLETE (SP, TW, KR, AUS)			
		**********			
	2-636-531-01	HOLDER, LCD			
	2-636-532-01	ILLUMINATOR, LCD			
	2-636-545-01	SHEET, LCD			
		< CAPACITOR >			
C701	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C703	1-126-382-11	ELECT	100uF	20%	16V
C704	1-119-941-11	ELECT	470uF	20%	6.3V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C708	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C709	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C710	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C711	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C712	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C713	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C714	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C715	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C716	1-164-156-11	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C717	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C718	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C719	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C720	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C722	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C724	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C731	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C732	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C733	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C734	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C735	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C736	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK, EE, RU)
C740	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (AEP, UK, EE, RU)
C741	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C742	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C743	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
		< CONNECTOR >			
CNS701	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			(AEP, UK, EE, RU)
CNS702	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF))			(US, CND, SP, TW, KR, AUS)
		< DIODE >			
D701	6-501-163-01	DIODE UDZW-TE17-3.6B			
D702	6-500-334-01	DIODE MC2836-T112-1			
		< IC >			
IC701	6-806-137-01	IC MB90802-107			
IC703	6-600-446-01	IC RPM7240-H18			
		< RESISTOR >			
JR701	1-216-864-11	SHORT CHIP	0		
JR702	1-216-864-11	SHORT CHIP	0		
JR703	1-216-864-11	SHORT CHIP	0		
JR704	1-216-864-11	SHORT CHIP	0		
JR705	1-216-864-11	SHORT CHIP	0		
JR706	1-216-864-11	SHORT CHIP	0		
JR707	1-216-864-11	SHORT CHIP	0		
JR708	1-216-864-11	SHORT CHIP	0		
JR709	1-216-864-11	SHORT CHIP	0		
JR710	1-216-864-11	SHORT CHIP	0		
JR713	1-216-864-11	SHORT CHIP	0		
JR714	1-216-864-11	SHORT CHIP	0		
JR715	1-216-817-11	METAL CHIP	470	5%	1/10W
JR716	1-216-864-11	SHORT CHIP	0		
JR718	1-216-864-11	SHORT CHIP	0		
JR721	1-216-864-11	SHORT CHIP	0		
L701	1-216-864-11	SHORT CHIP	0		
L702	1-216-864-11	SHORT CHIP	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD702	1-805-941-12	DISPLAY PANEL, LIQUID CRYSTAL			
		< LED >			
LED701	6-501-139-01	LED SELU2B10A-SLF62 (LCD BACK LIGHT)			
LED702	8-719-060-44	LED SLR-342VRT32 (STANDBY)			
		< TRANSISTOR >			
Q701	8-729-600-22	TRANSISTOR	2SA1235-F		
Q702	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q703	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q704	1-801-806-11	TRANSISTOR	DTC144EKA		
Q705	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q706	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q707	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
		< RESISTOR >			
R701	1-216-821-11	METAL CHIP	1K	5%	1/10W
R702	1-216-809-11	METAL CHIP	100	5%	1/10W
R703	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R704	1-216-821-11	METAL CHIP	1K	5%	1/10W
R705	1-216-821-11	METAL CHIP	1K	5%	1/10W
R706	1-216-821-11	METAL CHIP	1K	5%	1/10W
R707	1-216-821-11	METAL CHIP	1K	5%	1/10W
R708	1-216-821-11	METAL CHIP	1K	5%	1/10W
R709	1-216-821-11	METAL CHIP	1K	5%	1/10W
R710	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R711	1-216-837-11	METAL CHIP	22K	5%	1/10W
R712	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R713	1-216-833-11	METAL CHIP	10K	5%	1/10W
R714	1-216-833-11	METAL CHIP	10K	5%	1/10W
R715	1-216-821-11	METAL CHIP	1K	5%	1/10W
R716	1-216-821-11	METAL CHIP	1K	5%	1/10W
R717	1-216-821-11	METAL CHIP	1K	5%	1/10W
R718	1-216-821-11	METAL CHIP	1K	5%	1/10W
R719	1-216-821-11	METAL CHIP	1K	5%	1/10W
R721	1-216-817-11	METAL CHIP	470	5%	1/10W
R722	1-216-849-11	METAL CHIP	220K	5%	1/10W
R723	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R724	1-216-821-11	METAL CHIP	1K	5%	1/10W (AEP, UK, EE, RU)
R725	1-216-833-11	METAL CHIP	10K	5%	1/10W
R726	1-216-845-11	METAL CHIP	100K	5%	1/10W
R727	1-216-864-11	SHORT CHIP	0		
R728	1-216-833-11	METAL CHIP	10K	5%	1/10W
R730	1-216-833-11	METAL CHIP	10K	5%	1/10W
R731	1-216-833-11	METAL CHIP	10K	5%	1/10W
R732	1-216-841-11	METAL CHIP	47K	5%	1/10W
R733	1-216-841-11	METAL CHIP	47K	5%	1/10W
R734	1-216-821-11	METAL CHIP	1K	5%	1/10W
R735	1-216-821-11	METAL CHIP	1K	5%	1/10W
R736	1-216-864-11	SHORT CHIP	0		
R738	1-216-833-11	METAL CHIP	10K	5%	1/10W
R739	1-216-833-11	METAL CHIP	10K	5%	1/10W
R742	1-216-821-11	METAL CHIP	1K	5%	1/10W
R743	1-216-821-11	METAL CHIP	1K	5%	1/10W
R744	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R745	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R746	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R747	1-216-821-11	METAL CHIP	1K	5%	1/10W (AEP, UK, EE, RU)
R748	1-216-841-11	METAL CHIP	47K	5%	1/10W
R749	1-216-821-11	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R750	1-216-821-11	METAL CHIP	1K	5%	1/10W
R751	1-216-845-11	METAL CHIP	100K	5%	1/10W
R753	1-216-809-11	METAL CHIP	100	5%	1/10W
R754	1-216-833-11	METAL CHIP	10K	5%	1/10W
R755	1-216-864-11	SHORT CHIP	0		
R756	1-216-821-11	METAL CHIP	1K	5%	1/10W
R757	1-216-845-11	METAL CHIP	100K	5%	1/10W
R758	1-216-821-11	METAL CHIP	1K	5%	1/10W
R759	1-216-809-11	METAL CHIP	100	5%	1/10W
R760	1-216-845-11	METAL CHIP	100K	5%	1/10W
R761	1-216-841-11	METAL CHIP	47K	5%	1/10W
R762	1-216-833-11	METAL CHIP	10K	5%	1/10W
R763	1-216-837-11	METAL CHIP	22K	5%	1/10W
R764	1-216-837-11	METAL CHIP	22K	5%	1/10W
R765	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R766	1-216-797-11	METAL CHIP	10	5%	1/10W
R767	1-216-849-11	METAL CHIP	220K	5%	1/10W
R768	1-216-833-11	METAL CHIP	10K	5%	1/10W
R770	1-216-841-11	METAL CHIP	47K	5%	1/10W
R771	1-216-821-11	METAL CHIP	1K	5%	1/10W
R772	1-216-821-11	METAL CHIP	1K	5%	1/10W
R775	1-216-805-11	METAL CHIP	47	5%	1/10W
R776	1-216-821-11	METAL CHIP	1K	5%	1/10W
R777	1-216-817-11	METAL CHIP	470	5%	1/10W
R778	1-216-821-11	METAL CHIP	1K	5%	1/10W
R779	1-216-821-11	METAL CHIP	1K	5%	1/10W
R781	1-216-833-11	METAL CHIP	10K	5%	1/10W (US, CND)
R781	1-216-845-11	METAL CHIP	100K	5%	1/10W (EXCEPT US, CND)
R782	1-216-833-11	METAL CHIP	10K	5%	1/10W (SP, TW, KR, AUS)
R782	1-216-864-11	SHORT CHIP	0 (AEP, UK, EE, RU)		
R783	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, UK, EE, RU)
R783	1-216-837-11	METAL CHIP	22K	5%	1/10W (SP, TW, KR, AUS)
R784	1-216-845-11	METAL CHIP	100K	5%	1/10W
R785	1-216-833-11	METAL CHIP	10K	5%	1/10W
R787	1-216-841-11	METAL CHIP	47K	5%	1/10W
		< SWITCH >			
SW700	1-478-642-11	ENCODER, ROTARY (VOLUME)			
SW701	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
SW702	1-762-875-21	SWITCH, KEYBOARD (DSGX)			
SW703	1-762-875-21	SWITCH, KEYBOARD (🗀–)			
SW704	1-762-875-21	SWITCH, KEYBOARD (🗀+)			
SW705	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)			
SW711	1-762-875-21	SWITCH, KEYBOARD (■)			
SW712	1-762-875-21	SWITCH, KEYBOARD (TUNING –, ◀◀ ⏮◁)			
SW713	1-762-875-21	SWITCH, KEYBOARD (TUNING +, ▶▶ ▷⏭)			
SW714	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)			
SW715	1-762-875-21	SWITCH, KEYBOARD (TUNER, BAND)			
SW716	1-762-875-21	SWITCH, KEYBOARD (CD ▶II)			
		< VIBRATOR >			
X701	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
X702	1-795-054-51	VIBRATOR, CERAMIC (4.19MHz)			

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	A-1138-529-A	PT-AC BOARD, COMPLETE	
		**********	
	1-533-233-31	FUSE HOLDER	
		< CONNECTOR >	
W002	1-819-131-11	PIN, CONNECTOR 3P	

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		MISCELLANEOUS	
		**********	
⚠4	1-769-079-51	CORD, POWER (KR)	
⚠4	1-775-790-81	CORD, POWER (AUS)	
⚠4	1-790-757-51	CORD, POWER (US, CND)	
⚠4	1-827-597-81	CORD, POWER (TW)	
⚠4	1-830-891-11	CORD, POWER (UK)	
⚠4	1-831-370-11	CORD, POWER (AEP, EE, RU, SP)	
70	1-797-374-11	DECK, MECHANICAL (H-21SB)	
102	1-452-899-11	MAGNET	
⚠151	8-820-126-01	OPTICAL PICK-UP BLOCK	(KSM-213CDP/C2NP) (Including sled motor (M402), spindle motor (M401))
152	1-832-404-21	CABLE, FLEXIBLE FLAT (16 CORE)	
⚠F001	1-532-275-33	FUSE (T0.16AL/250V)	(AEP, UK, EE, RU, KR, AUS)
⚠F001	1-532-467-33	FUSE (T0.315AL/250V) (US, CND, SP, TW)	
⚠F002	1-532-275-33	FUSE (T0.16AL/250V) (SP)	
FFC151	1-832-627-21	CABLE, FLEXIBLE FLAT (23 CORE)	
FFC701	1-832-634-21	CABLE, FLEXIBLE FLAT (25 CORE)	(US, CND, SP, TW, KR, AUS)
FFC702	1-832-644-21	CABLE, FLEXIBLE FLAT (27 CORE)	(AEP, UK, EE, RU)
⚠PT005	1-443-829-11	TRANSFORMER, POWER (AEP, UK, EE, RU)	
⚠PT005	1-443-856-11	TRANSFORMER, POWER (US, CND)	
⚠PT005	1-443-857-11	TRANSFORMER, POWER (KR)	
⚠PT005	1-443-858-11	TRANSFORMER, POWER (SP, TW, AUS)	
S201	1-771-853-11	SWITCH, DETECTION (LIMIT)	
SW750	1-692-960-11	SWITCH, PUSH (1 KEY)	(CD LID OPEN/CLOSE DETECT)

****

		ACCESSORIES	
		**********	
⚠	1-569-008-22	ADAPTOR, CONVERSION 2P (SP)	
⚠	1-770-019-61	ADAPTOR, CONVERSION PLUG (UK)	

Refer to the SUPPLEMENT-1 for the PT-AC board of the except AEP, UK, East European and Russian models.

MEMO

HCD-EH10

SONY

SERVICE MANUAL

Ver. 1.4 2006.03

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-1

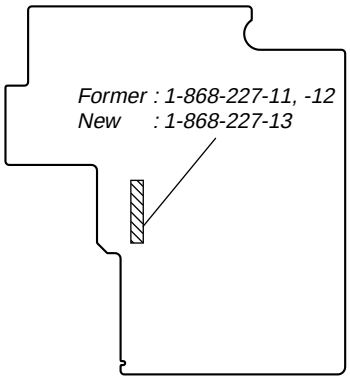
File this supplement with the service manual.

Subject: Change of MAIN and PT-AC boards (Suffix-13)

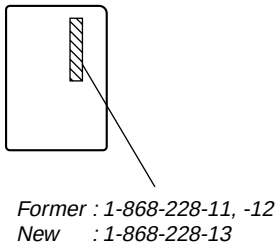
In this set, MAIN and PT-AC boards have been changed in the midway of production.
Printed wiring boards and schematic diagrams of new type, and changed parts list are described in this supplement-1.
Refer to original service manual for other information.

1. NEW/FORMER DESCRIPTION

– MAIN Board (Component Side) –



– PT-AC Board (Component Side) –



2. DIAGRAMS

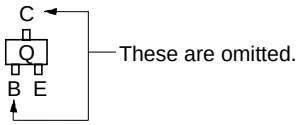
- **Note for Printed Wiring Boards and Schematic Diagrams**

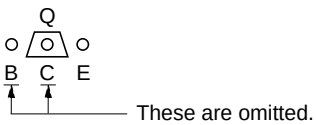
Note on Printed Wiring Board:

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

(The other layers' patterns are not 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.

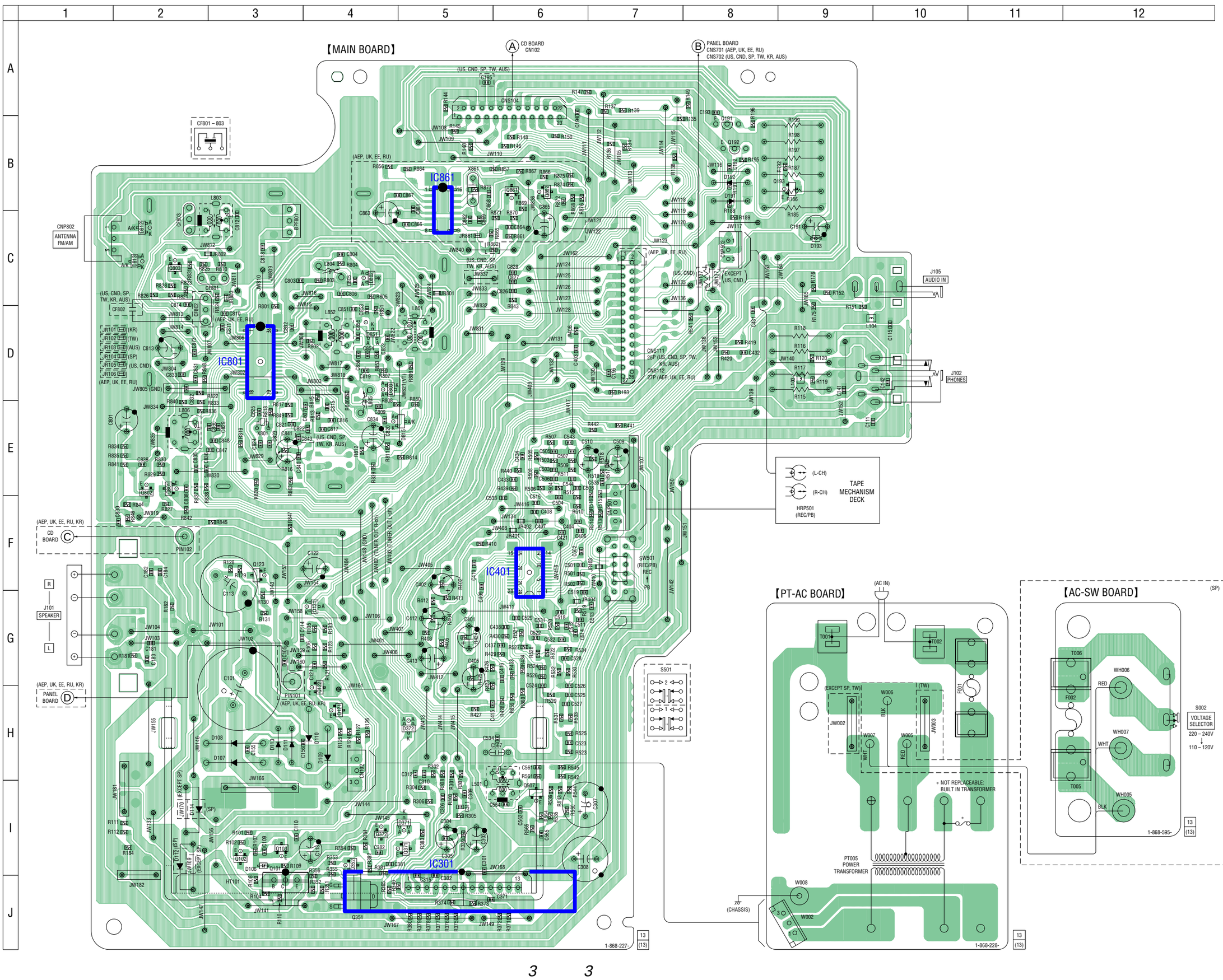
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▬ : B+ Line.
- ▭ : Adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : FM
  [ ] : AM
  { } : REC
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇨ : CD PLAY
  ⇨ : TAPE PLAY
  ➡ : REC
  ➡ : AUX IN
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  EE : East European model
  KR : Korean model
  RU : Russian model
  SP : Singapore model
  TW : Taiwan model

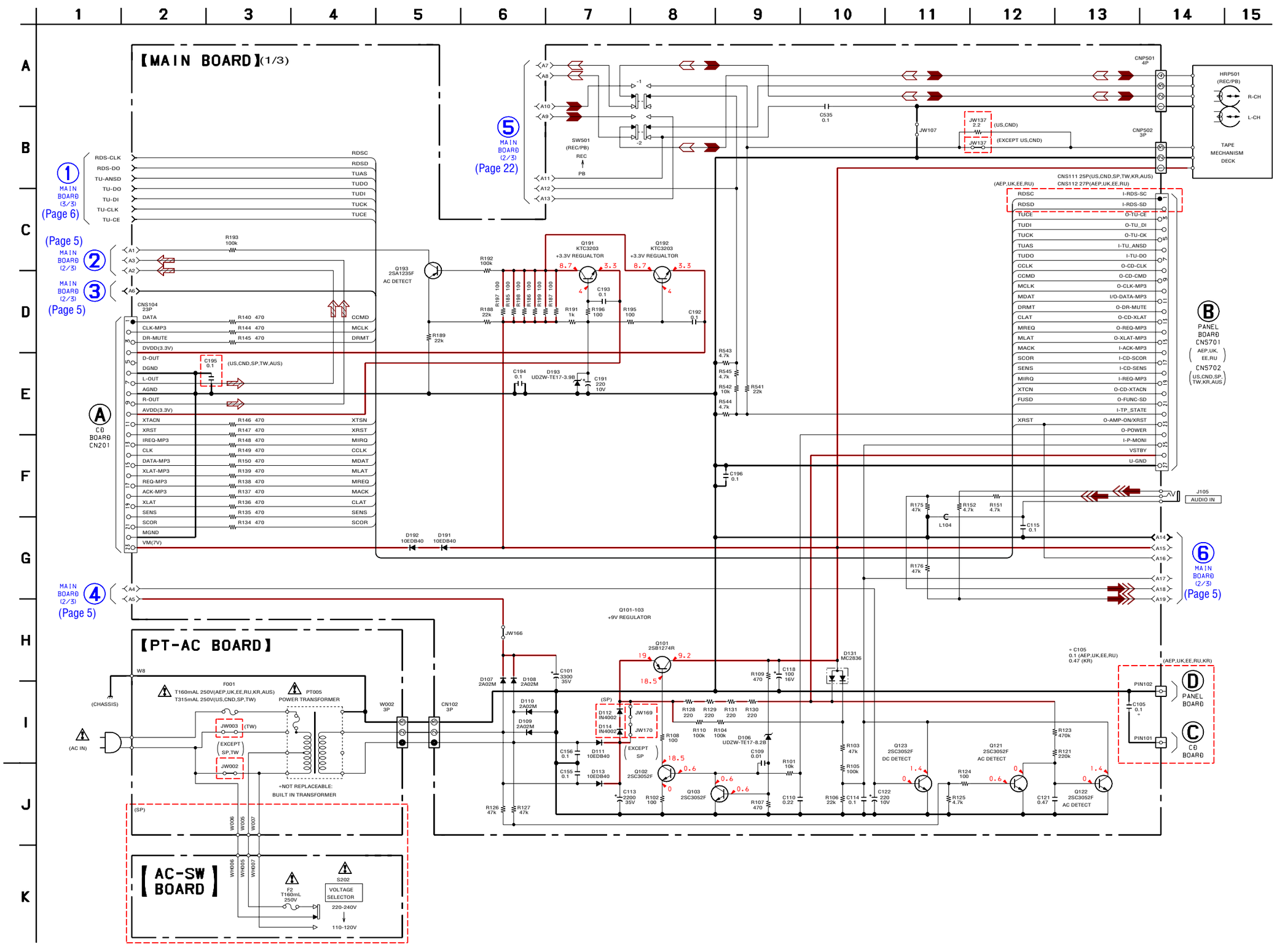
2-1. PRINTED WIRING BOARDS – MAIN Section – : Uses unleaded solder.

- **Semiconductor Location**

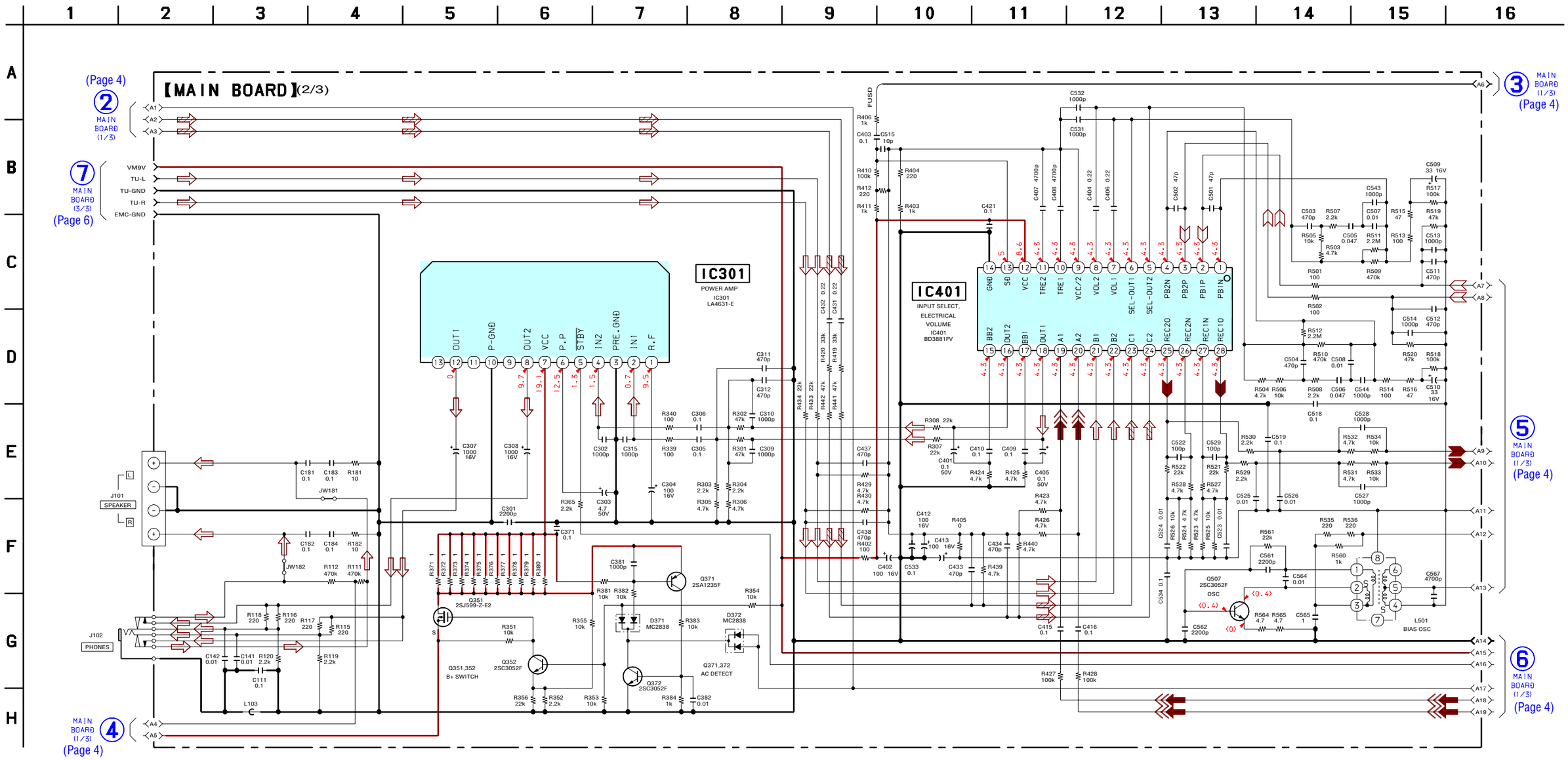
Ref. No.	Location
D106	I-3
D107	H-3
D108	H-3
D109	H-4
D110	H-4
D111	H-3
D113	H-3
D131	G-4
D191	B-8
D192	B-8
D193	C-9
D371	I-5
D372	H-5
D802	C-4
D803	D-4
D812	C-2
D813	C-2
D815	E-5
D851	D-4
IC301	J-5
IC401	F-6
IC801	D-3
IC861	B-5
Q101	J-3
Q102	I-3
Q103	I-3
Q121	H-4
Q122	H-4
Q123	F-3
Q191	B-8
Q192	B-8
Q193	B-9
Q351	J-4
Q352	I-4
Q371	I-5
Q372	I-4
Q507	I-6
Q801	E-2
Q802	E-2
Q803	C-2
Q861	B-6
Q862	B-6



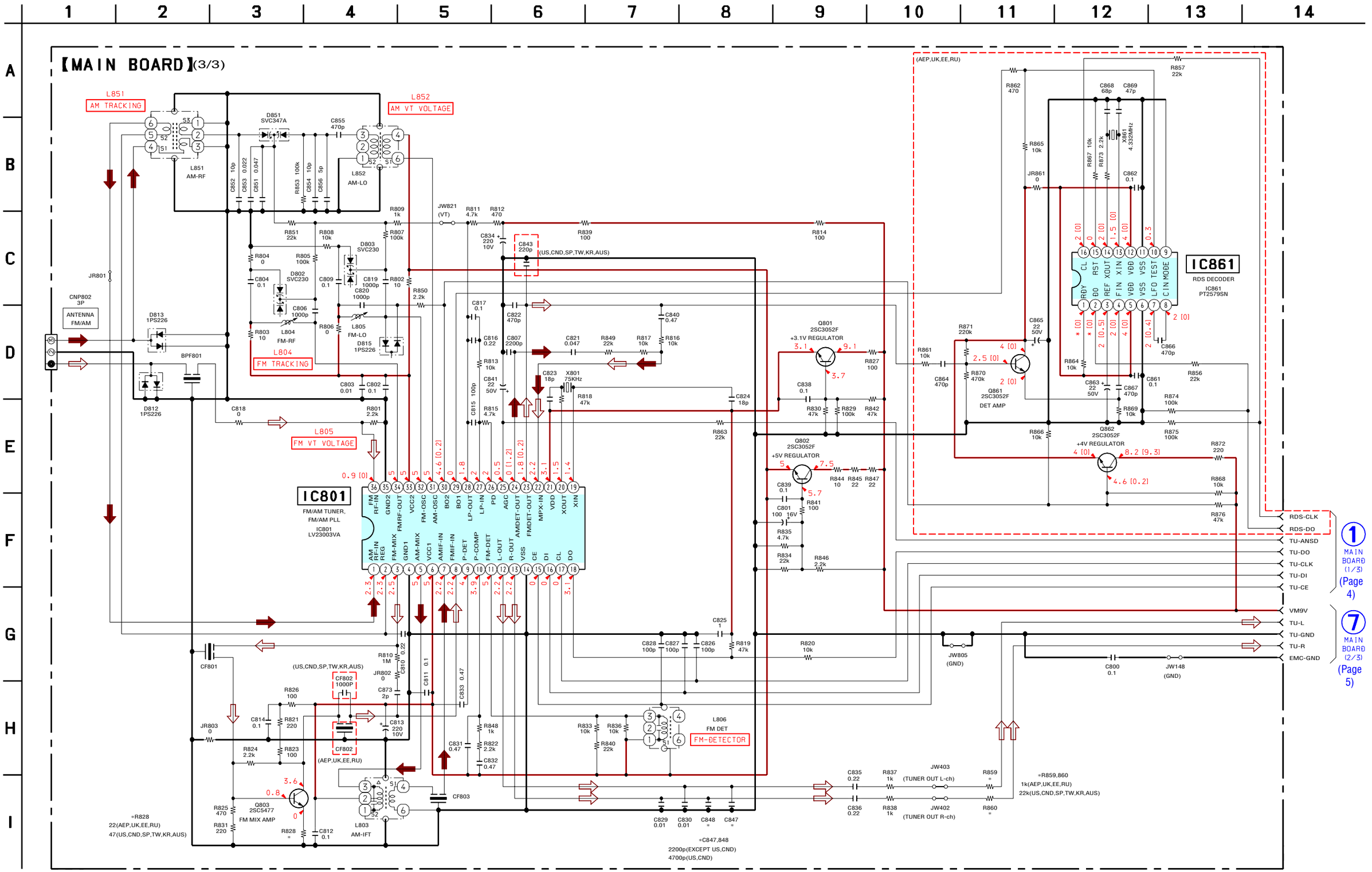
2-2. SCHEMATIC DIAGRAM – MAIN Section (1/3) –



2-3. SCHEMATIC DIAGRAM – MAIN Section (2/3) –



2-4. SCHEMATIC DIAGRAM – MAIN Section (3/3) –



3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Abbreviation
  AUS : Australian model EE : East European model RU : Russian model TW : Taiwan model
  CND : Canadian model KR : Korean model SP : Singapore model
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

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

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

Ref. No.	Part No.	Description			Remark
	A-1158-542-A	AC-SW BOARD, COMPLETE (SP)			
		**********			
	1-533-233-31	FUSE HOLDER			
		< SWITCH >			
⚠S002	1-786-920-11	SWITCH, VOLTAGE SELECTION			
					(VOLTAGE SELECTOR)
**********					
	A-1138-536-A	MAIN BOARD, COMPLETE (AEP, UK, EE, RU)			
	A-1158-524-A	MAIN BOARD, COMPLETE (US, CND)			
	A-1158-531-A	MAIN BOARD, COMPLETE (KR)			
	A-1158-537-A	MAIN BOARD, COMPLETE (AUS)			
	A-1158-540-A	MAIN BOARD, COMPLETE (SP)			
	A-1169-746-A	MAIN BOARD, COMPLETE (TW)			
		**********			
	7-685-646-79	SCREW +BVTT 3X8 TYPE2 N-S			
					(US, CND, AEP, UK, EE)
	7-685-647-79	SCREW +BVTT 3X10 TYPE2 N-S			
					(SP, TW, KR, AUS)
		< BAND PASS FILTER >			
BPF801	1-236-711-41	FILTER, BAND PASS			
		< CAPACITOR >			
C101	1-128-549-11	ELECT	3300uF	20%	35V
C105	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
					(AEP, UK, EE, RU)
C105	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
					(KR)
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C113	1-126-953-11	ELECT	2200uF	20%	35V
C114	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C115	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C118	1-126-933-11	ELECT	100uF	20%	16V
C121	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C122	1-126-934-11	ELECT	220uF	20%	16V
C141	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C142	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C155	1-165-621-11	CERAMIC CHIP	0.1uF		50V
C156	1-165-621-11	CERAMIC CHIP	0.1uF		50V
C181	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C182	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C183	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C184	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C191	1-126-934-11	ELECT	220uF	20%	16V
C192	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C193	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C194	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C195	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
					(US, CND, SP, TW, AUS)
C196	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C301	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C302	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C303	1-126-963-11	ELECT	4.7uF	20%	50V
C304	1-126-933-11	ELECT	100uF	20%	16V
C305	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C306	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C307	1-126-767-11	ELECT	1000uF	20%	16V
C308	1-126-767-11	ELECT	1000uF	20%	16V
C309	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C310	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C312	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C315	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C371	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C381	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C382	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-126-956-11	ELECT	0.1uF	20%	50V
C402	1-126-933-11	ELECT	100uF	20%	16V
C403	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C404	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C405	1-126-956-11	ELECT	0.1uF	20%	50V
C406	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C407	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C408	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C409	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C410	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C412	1-126-933-11	ELECT	100uF	20%	16V
C413	1-126-933-11	ELECT	100uF	20%	16V
C415	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C416	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C421	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C431	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C432	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C433	1-162-962-11	CERAMIC CHIP	470PF	10%	50V

Ref. No.	Part No.	Description			Remark
C434	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C437	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C438	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C501	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C502	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C503	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C504	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C505	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C506	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C507	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-126-966-11	ELECT	33uF	20%	50V
C510	1-126-966-11	ELECT	33uF	20%	50V
C511	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C512	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C514	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C515	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C518	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C519	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C522	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C526	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C527	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C528	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C529	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C531	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C532	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C533	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C534	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C535	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C543	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C544	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C561	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C562	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C564	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C565	1-115-156-11	CERAMIC CHIP	1uF		10V
C567	1-130-479-00	MYLAR	0.0047uF	5%	50V
C800	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C801	1-126-933-11	ELECT	100uF	20%	16V
C802	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C803	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C804	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C806	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C807	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C809	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C810	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C811	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C812	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C813	1-126-934-11	ELECT	220uF	20%	16V
C814	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C815	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C816	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C817	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C818	1-216-864-11	SHORT CHIP	0		
C819	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C820	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C821	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C822	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C823	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C824	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C825	1-125-837-11	CERAMIC CHIP	1uF	10%	6.3V
C826	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C827	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C828	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C829	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C830	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C831	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C832	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C833	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C834	1-126-934-11	ELECT	220uF	20%	16V
C835	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C836	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C838	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C839	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V-
C840	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C841	1-126-965-11	ELECT	22uF	20%	50V
C843	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
					(US, CND, SP, TW, KR, AUS)
C847	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
					(EXCEPT US, CND)
C847	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(US, CND)
C848	1-162-966-11	CERAMIC CHIP	0.0022uF	10%50V	
					(EXCEPT US, CND)
C848	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
					(US, CND)
C851	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C852	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C853	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C854	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C855	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C856	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C861	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
					(AEP, UK, EE, RU)
C862	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
					(AEP, UK, EE, RU)
C863	1-126-965-11	ELECT	22uF	20%	50V
					(AEP, UK, EE, RU)
C864	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
					(AEP, UK, EE, RU)
C865	1-126-965-11	ELECT	22uF	20%	50V
					(AEP, UK, EE, RU)
C866	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
					(AEP, UK, EE, RU)
C867	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
					(AEP, UK, EE, RU)
C868	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
					(AEP, UK, EE, RU)
C869	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
					(AEP, UK, EE, RU)
C873	1-162-907-11	CERAMIC CHIP	2PF	0.25PF	50V

Ref. No.	Part No.	Description	Remark
		< FILTER/CAPACITOR >	
CF801	1-795-426-11	FILTER, CERAMIC	
CF802	1-128-821-51	SERAMIC 1000PF 5% 50V	(US, CND, SP, TW, KR, AUS)
CF802	1-579-554-21	FILTER, CERAMIC	(AEP, UK, EE, RU)
CF803	1-781-962-21	FILTER, CERAMIC	
		< CONNECTOR >	
CNP501	1-815-445-11	PIN, CONNECTOR (PWB) 4P	
CNP502	1-815-444-11	PIN, CONNECTOR (PWB) 3P	
* CNP802	1-506-680-11	PLUG, CONNECTOR (2.5mm) 3P	
CNS104	1-779-291-11	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
CNS111	1-779-293-11	CONNECTOR, FFC (LIF (NON-ZIF)) 25P	(US, CND, SP, TW, KR, AUS)
CNS112	1-779-295-11	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	(AEP, UK, EE, RU)
		< DIODE >	
D106	6-501-172-01	DIODE UDZW-TE17-8.2B	
D107	8-719-046-07	DIODE 2A02M	
D108	8-719-046-07	DIODE 2A02M	
D109	8-719-046-07	DIODE 2A02M	
D110	8-719-046-07	DIODE 2A02M	
D111	6-500-522-01	DIODE 10EDB40-TA1B2	
D112	8-719-904-02	DIODE 1N4002 (SP)	
D113	6-500-522-01	DIODE 10EDB40-TA1B2	
D114	8-719-904-02	DIODE 1N4002 (SP)	
D131	6-500-334-01	DIODE MC2836-T112-1	
D191	6-500-522-01	DIODE 10EDB40-TA1B2	
D192	6-500-522-01	DIODE 10EDB40-TA1B2	
D193	6-501-164-01	DIODE UDZW-TE17-3.9B	
D371	6-500-335-01	DIODE MC2838-T112-1	
D372	6-500-335-01	DIODE MC2838-T112-1	
D802	6-501-369-01	DIODE SV230-TB-E	
D803	6-501-369-01	DIODE SV230-TB-E	
D812	8-719-062-51	DIODE 1PS226-115	
D813	8-719-062-51	DIODE 1PS226-115	
D815	8-719-062-51	DIODE 1PS226-115	
D851	6-501-142-01	DIODE SVC347A-TL-E	
		< IC >	
IC301	6-706-641-01	IC LA4631-E	
IC401	6-702-895-01	IC BD3881FV	
IC801	6-708-840-01	IC LV23003VA	
IC861	6-708-918-01	IC PT2579SN (AEP, UK, EE, RU)	
		< JACK >	
J101	1-780-314-11	TERMINAL BOARD (SPEAKERS)	
J102	1-815-629-11	JACK (PHONES)	
J105	1-566-822-51	JACK (AUDIO IN)	
		< JUMPER RESISTOR >	
JR101	1-216-864-11	SHORT CHIP 0 (KR)	
JR102	1-216-864-11	SHORT CHIP 0 (TW)	
JR103	1-216-864-11	SHORT CHIP 0 (AUS)	
JR104	1-216-864-11	SHORT CHIP 0 (SP)	
JR105	1-216-864-11	SHORT CHIP 0 (US, CND)	
JR106	1-216-864-11	SHORT CHIP 0 (AEP, UK, EE, RU)	
JR401	1-216-864-11	SHORT CHIP 0	
JR402	1-216-864-11	SHORT CHIP 0	
JR403	1-216-864-11	SHORT CHIP 0	
JR404	1-216-864-11	SHORT CHIP 0	
JR801	1-216-864-11	SHORT CHIP 0	
JR802	1-216-864-11	SHORT CHIP 0	
JR803	1-216-864-11	SHORT CHIP 0	
JR861	1-216-864-11	SHORT CHIP 0 (AEP, UK, EE, RU)	
		< RESISTOR >	
JN137	1-249-385-11	CARBON 2.2 5% 1/4W	(US,CND)
		< COIL >	
L103	1-469-152-11	FERRITE, EMI (SMD) (2012)	
L104	1-469-152-11	FERRITE, EMI (SMD) (2012)	
L501	1-456-094-11	TRANSFORMER, BIAS OSCILLATION	
L803	1-433-741-11	TRANSFORMER, IF	
L804	1-457-163-11	COIL, AIR-CORE	
L805	1-457-162-11	COIL, AIR-CORE	
L806	1-457-168-11	COIL, DET	
L851	1-457-161-11	COIL, AM ANTENNA	
L852	1-456-596-11	COIL, MW OSC	
		< CONNECTOR >	
* PIN101	1-564-187-00	PIN, CONNECTOR (AEP, UK, EE, RU, KR)	
* PIN102	1-564-187-00	PIN, CONNECTOR (AEP, UK, EE, RU, KR)	
		< TRANSISTOR >	
Q101	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q102	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q103	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q121	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q122	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q123	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q191	8-729-036-86	TRANSISTOR KTC3203Y-AT	
Q192	8-729-036-86	TRANSISTOR KTC3203Y-AT	
Q193	8-729-600-22	TRANSISTOR 2SA1235-F	
Q351	6-550-843-01	FET 2SJ599-Z-E2-AZ	
Q352	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q371	8-729-600-22	TRANSISTOR 2SA1235-F	
Q372	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q507	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q801	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q802	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q803	6-550-304-01	TRANSISTOR 2SC5477-T122-1	
Q861	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q862	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		< RESISTOR >	
R101	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R102	1-216-809-11	METAL CHIP 100 5% 1/10W	
R103	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R104	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R105	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R106	1-216-837-11	METAL CHIP 22K 5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R107	1-216-817-11	METAL CHIP	470	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-817-11	METAL CHIP	470	5%	1/10W
R110	1-216-845-11	METAL CHIP	100K	5%	1/10W
R111	1-216-853-11	METAL CHIP	470K	5%	1/10W
R112	1-216-853-11	METAL CHIP	470K	5%	1/10W
R115	1-249-409-11	CARBON	220	5%	1/4W
R116	1-249-409-11	CARBON	220	5%	1/4W
R117	1-249-409-11	CARBON	220	5%	1/4W
R118	1-249-409-11	CARBON	220	5%	1/4W
R119	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R120	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R121	1-216-849-11	METAL CHIP	220K	5%	1/10W
R123	1-216-853-11	METAL CHIP	470K	5%	1/10W
R124	1-216-809-11	METAL CHIP	100	5%	1/10W
R125	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R126	1-216-841-11	METAL CHIP	47K	5%	1/10W
R127	1-216-841-11	METAL CHIP	47K	5%	1/10W
R128	1-216-813-11	METAL CHIP	220	5%	1/10W
R129	1-216-813-11	METAL CHIP	220	5%	1/10W
R130	1-216-813-11	METAL CHIP	220	5%	1/10W
R131	1-216-813-11	METAL CHIP	220	5%	1/10W
R134	1-216-817-11	METAL CHIP	470	5%	1/10W
R135	1-216-817-11	METAL CHIP	470	5%	1/10W
R136	1-216-817-11	METAL CHIP	470	5%	1/10W
R137	1-216-817-11	METAL CHIP	470	5%	1/10W
R138	1-216-817-11	METAL CHIP	470	5%	1/10W
R139	1-216-817-11	METAL CHIP	470	5%	1/10W
R140	1-216-817-11	METAL CHIP	470	5%	1/10W
R144	1-216-817-11	METAL CHIP	470	5%	1/10W
R145	1-216-817-11	METAL CHIP	470	5%	1/10W
R146	1-216-817-11	METAL CHIP	470	5%	1/10W
R147	1-216-817-11	METAL CHIP	470	5%	1/10W
R148	1-216-817-11	METAL CHIP	470	5%	1/10W
R149	1-216-817-11	METAL CHIP	470	5%	1/10W
R150	1-216-817-11	METAL CHIP	470	5%	1/10W
R151	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R152	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R175	1-216-841-11	METAL CHIP	47K	5%	1/10W
R176	1-216-841-11	METAL CHIP	47K	5%	1/10W
R181	1-216-797-11	METAL CHIP	10	5%	1/10W
R182	1-216-797-11	METAL CHIP	10	5%	1/10W
R185	1-247-807-31	CARBON	100	5%	1/4W
R186	1-247-807-31	CARBON	100	5%	1/4W
R187	1-247-807-31	CARBON	100	5%	1/4W
R188	1-216-837-11	METAL CHIP	22K	5%	1/10W
R189	1-216-837-11	METAL CHIP	22K	5%	1/10W
R191	1-216-821-11	METAL CHIP	1K	5%	1/10W
R192	1-216-845-11	METAL CHIP	100K	5%	1/10W
R193	1-216-845-11	METAL CHIP	100K	5%	1/10W
R195	1-216-809-11	METAL CHIP	100	5%	1/10W
R196	1-216-809-11	METAL CHIP	100	5%	1/10W
R197	1-247-807-31	CARBON	100	5%	1/4W
R198	1-247-807-31	CARBON	100	5%	1/4W
R199	1-247-807-31	CARBON	100	5%	1/4W
R301	1-216-837-11	METAL CHIP	22K	5%	1/10W
R302	1-216-837-11	METAL CHIP	22K	5%	1/10W
R303	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R304	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R307	1-216-837-11	METAL CHIP	22K	5%	1/10W
R308	1-216-837-11	METAL CHIP	22K	5%	1/10W
R339	1-216-809-11	METAL CHIP	100	5%	1/10W
R340	1-216-809-11	METAL CHIP	100	5%	1/10W
R351	1-216-833-11	METAL CHIP	10K	5%	1/10W
R352	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R353	1-216-833-11	METAL CHIP	10K	5%	1/10W
R354	1-216-833-11	METAL CHIP	10K	5%	1/10W
R355	1-216-833-11	METAL CHIP	10K	5%	1/10W
R356	1-216-837-11	METAL CHIP	22K	5%	1/10W
R365	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R371	1-218-446-11	METAL CHIP	1	5%	1/10W
R372	1-218-446-11	METAL CHIP	1	5%	1/10W
R373	1-218-446-11	METAL CHIP	1	5%	1/10W
R374	1-218-446-11	METAL CHIP	1	5%	1/10W
R375	1-218-446-11	METAL CHIP	1	5%	1/10W
R376	1-218-446-11	METAL CHIP	1	5%	1/10W
R377	1-218-446-11	METAL CHIP	1	5%	1/10W
R378	1-218-446-11	METAL CHIP	1	5%	1/10W
R379	1-218-446-11	METAL CHIP	1	5%	1/10W
R380	1-218-446-11	METAL CHIP	1	5%	1/10W
R381	1-216-833-11	METAL CHIP	10K	5%	1/10W
R382	1-216-833-11	METAL CHIP	10K	5%	1/10W
R383	1-216-833-11	METAL CHIP	10K	5%	1/10W
R384	1-216-821-11	METAL CHIP	1K	5%	1/10W
R402	1-216-809-11	METAL CHIP	100	5%	1/10W
R403	1-216-821-11	METAL CHIP	1K	5%	1/10W
R404	1-216-813-11	METAL CHIP	220	5%	1/10W
R405	1-216-864-11	SHORT CHIP	0		
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R410	1-216-845-11	METAL CHIP	100K	5%	1/10W
R411	1-216-821-11	METAL CHIP	1K	5%	1/10W
R412	1-216-813-11	METAL CHIP	220	5%	1/10W
R419	1-216-839-11	METAL CHIP	33K	5%	1/10W
R420	1-216-839-11	METAL CHIP	33K	5%	1/10W
R423	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R424	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R425	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R426	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R427	1-216-845-11	METAL CHIP	100K	5%	1/10W
R428	1-216-845-11	METAL CHIP	100K	5%	1/10W
R429	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R430	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R433	1-216-837-11	METAL CHIP	22K	5%	1/10W
R434	1-216-837-11	METAL CHIP	22K	5%	1/10W
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R440	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R441	1-216-841-11	METAL CHIP	47K	5%	1/10W
R442	1-216-841-11	METAL CHIP	47K	5%	1/10W
R501	1-216-809-11	METAL CHIP	100	5%	1/10W
R502	1-216-809-11	METAL CHIP	100	5%	1/10W
R503	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R504	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R505	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R506	1-216-833-11	METAL CHIP	10K	5%	1/10W
R507	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R508	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R509	1-216-853-11	METAL CHIP	470K	5%	1/10W
R510	1-216-853-11	METAL CHIP	470K	5%	1/10W
R511	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R512	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R513	1-216-809-11	METAL CHIP	100	5%	1/10W
R514	1-216-809-11	METAL CHIP	100	5%	1/10W
R515	1-216-805-11	METAL CHIP	47	5%	1/10W
R516	1-216-805-11	METAL CHIP	47	5%	1/10W
R517	1-216-845-11	METAL CHIP	100K	5%	1/10W
R518	1-216-845-11	METAL CHIP	100K	5%	1/10W
R519	1-216-841-11	METAL CHIP	47K	5%	1/10W
R520	1-216-841-11	METAL CHIP	47K	5%	1/10W
R521	1-216-837-11	METAL CHIP	22K	5%	1/10W
R522	1-216-837-11	METAL CHIP	22K	5%	1/10W
R523	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R524	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R525	1-216-833-11	METAL CHIP	10K	5%	1/10W
R526	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R528	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R529	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R530	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R531	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R532	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R533	1-216-833-11	METAL CHIP	10K	5%	1/10W
R534	1-216-833-11	METAL CHIP	10K	5%	1/10W
R535	1-216-813-11	METAL CHIP	220	5%	1/10W
R536	1-216-813-11	METAL CHIP	220	5%	1/10W
R541	1-216-837-11	METAL CHIP	22K	5%	1/10W
R542	1-216-833-11	METAL CHIP	10K	5%	1/10W
R543	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R544	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R545	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R560	1-216-821-11	METAL CHIP	1K	5%	1/10W
R561	1-216-837-11	METAL CHIP	22K	5%	1/10W
R564	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R565	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R801	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R802	1-216-797-11	METAL CHIP	10	5%	1/10W
R803	1-216-797-11	METAL CHIP	10	5%	1/10W
R804	1-216-864-11	SHORT CHIP	0		
R805	1-216-845-11	METAL CHIP	100K	5%	1/10W
R806	1-216-864-11	SHORT CHIP	0		
R807	1-216-845-11	METAL CHIP	100K	5%	1/10W
R808	1-216-833-11	METAL CHIP	10K	5%	1/10W
R809	1-216-821-11	METAL CHIP	1K	5%	1/10W
R810	1-216-857-11	METAL CHIP	1M	5%	1/10W
R811	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R812	1-216-817-11	METAL CHIP	470	5%	1/10W
R813	1-216-833-11	METAL CHIP	10K	5%	1/10W
R814	1-216-809-11	METAL CHIP	100	5%	1/10W
R815	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R816	1-216-833-11	METAL CHIP	10K	5%	1/10W
R817	1-216-833-11	METAL CHIP	10K	5%	1/10W
R818	1-216-841-11	METAL CHIP	47K	5%	1/10W
R819	1-216-841-11	METAL CHIP	47K	5%	1/10W
R820	1-216-833-11	METAL CHIP	10K	5%	1/10W
R821	1-216-813-11	METAL CHIP	220	5%	1/10W
R822	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R823	1-216-809-11	METAL CHIP	100	5%	1/10W
R824	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R825	1-216-817-11	METAL CHIP	470	5%	1/10W
R826	1-216-809-11	METAL CHIP	100	5%	1/10W
R827	1-216-809-11	METAL CHIP	100	5%	1/10W
R828	1-216-801-11	METAL CHIP	22	5%	1/10W (AEP, UK, EE, RU)
R828	1-216-805-11	METAL CHIP	47	5%	1/10W (US, CND, SP, TW, KR, AUS)
R829	1-216-845-11	METAL CHIP	100K	5%	1/10W
R830	1-216-841-11	METAL CHIP	47K	5%	1/10W
R831	1-216-813-11	METAL CHIP	220	5%	1/10W
R833	1-216-833-11	METAL CHIP	10K	5%	1/10W
R834	1-216-837-11	METAL CHIP	22K	5%	1/10W
R835	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R836	1-216-833-11	METAL CHIP	10K	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	1-216-809-11	METAL CHIP	100	5%	1/10W
R840	1-216-837-11	METAL CHIP	22K	5%	1/10W
R841	1-216-809-11	METAL CHIP	100	5%	1/10W
R842	1-216-841-11	METAL CHIP	47K	5%	1/10W
R843	1-216-853-11	METAL CHIP	470K	5%	1/10W
R844	1-216-797-11	METAL CHIP	10	5%	1/10W
R845	1-216-801-11	METAL CHIP	22	5%	1/10W
R846	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R847	1-216-801-11	METAL CHIP	22	5%	1/10W
R848	1-216-821-11	METAL CHIP	1K	5%	1/10W
R849	1-216-837-11	METAL CHIP	22K	5%	1/10W
R850	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R851	1-216-837-11	METAL CHIP	22K	5%	1/10W
R853	1-216-845-11	METAL CHIP	100K	5%	1/10W
R856	1-216-837-11	METAL CHIP	22K	5%	1/10W (AEP, UK, EE, RU)
R857	1-216-837-11	METAL CHIP	22K	5%	1/10W (AEP, UK, EE, RU)
R859	1-216-821-11	METAL CHIP	1K	5%	1/10W (AEP, UK, EE, RU)
R859	1-216-837-11	METAL CHIP	22K	5%	1/10W (US, CND, SP, TW, KR, AUS)
R860	1-216-821-11	METAL CHIP	1K	5%	1/10W (AEP, UK, EE, RU)
R860	1-216-837-11	METAL CHIP	22K	5%	1/10W (US, CND, SP, TW, KR, AUS)
R861	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, UK, EE, RU)
R862	1-216-817-11	METAL CHIP	470	5%	1/10W (AEP, UK, EE, RU)
R863	1-216-837-11	METAL CHIP	22K	5%	1/10W
R864	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, UK, EE, RU)
R865	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, UK, EE, RU)
R866	1-216-833-11	METAL CHIP	10K	5%	1/10W (AEP, UK, EE, RU)

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MAIN **PT-AC**

Ref. No.	Part No.	Description		Remark
R867	1-216-833-11	METAL CHIP	10K	5% 1/10W (AEP, UK, EE, RU)
R868	1-216-833-11	METAL CHIP	10K	5% 1/10W (AEP, UK, EE, RU)
R869	1-216-833-11	METAL CHIP	10K	5% 1/10W (AEP, UK, EE, RU)
R870	1-216-853-11	METAL CHIP	470K	5% 1/10W (AEP, UK, EE, RU)
R871	1-216-849-11	METAL CHIP	220K	5% 1/10W (AEP, UK, EE, RU)
R872	1-216-813-11	METAL CHIP	220	5% 1/10W (AEP, UK, EE, RU)
R873	1-216-825-11	METAL CHIP	2.2K	5% 1/10W (AEP, UK, EE, RU)
R874	1-216-845-11	METAL CHIP	100K	5% 1/10W (AEP, UK, EE, RU)
R875	1-216-845-11	METAL CHIP	100K	5% 1/10W (AEP, UK, EE, RU)
R876	1-216-841-11	METAL CHIP	47K	5% 1/10W (AEP, UK, EE, RU)
		< SWITCH >		
SW501	1-762-369-11	SWITCH, SLIDE (REC/PB)		
		< VIBRATOR >		
X801	1-767-388-21	VIBRATOR, CRYSTAL (75kHz)		(US, CND, SP, TW, KR, AUS)
X801	1-795-926-11	VIBRATOR, CRYSTAL (75kHz)		(AEP, UK, EE, RU)
X861	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz)		(AEP, UK, EE, RU)
**********				
	A-1138-529-A	PT-AC BOARD, COMPLETE (EXCEPT SP, TW)		
	A-1158-541-A	PT-AC BOARD, COMPLETE (SP)		
	A-1169-744-A	PT-AC BOARD, COMPLETE (TW)		
		**********		
	1-533-233-31	FUSE HOLDER		
		< CONNECTOR >		
W002	1-819-131-11	PIN, CONNECTOR 3P		
**********				
		MISCELLANEOUS		
		**********		
⚠PT005	1-443-829-11	TRANSFORMER, POWER (AEP, UK, EE, RU)		
⚠PT005	1-443-856-11	TRANSFORMER, POWER (US, CND)		
⚠PT005	1-443-857-11	TRANSFORMER, POWER (KR)		
⚠PT005	1-443-858-11	TRANSFORMER, POWER (SP, TW, AUS)		

HCD-EH10

SONY

SERVICE MANUAL

Ver. 1.4 2006.03

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-2

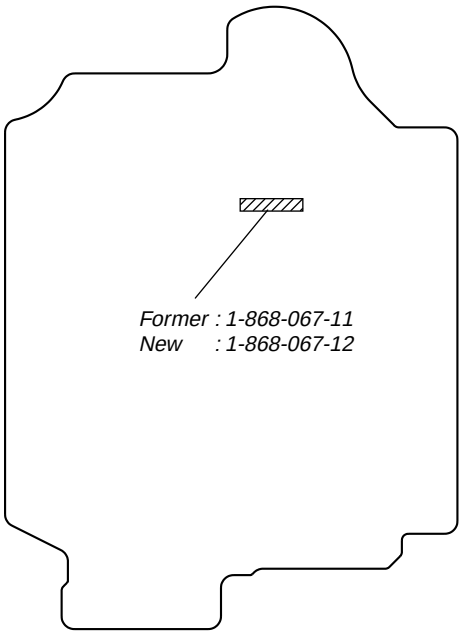
File this supplement with the service manual.

Subject: Change of CD board (Suffix-12)

In this set, CD board has changed in the midway of production.
Printed wiring board and schematic diagram of new type, and changed parts list are described in this supplement-2.
Refer to original service manual for other information.

1. NEW/FORMER DESCRIPTION

– CD Board (Component Side) –



2. DIAGRAMS

- **Note for Printed Wiring Board and Schematic Diagram**

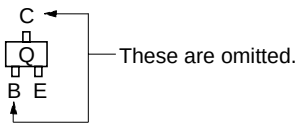
Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▭ : 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:

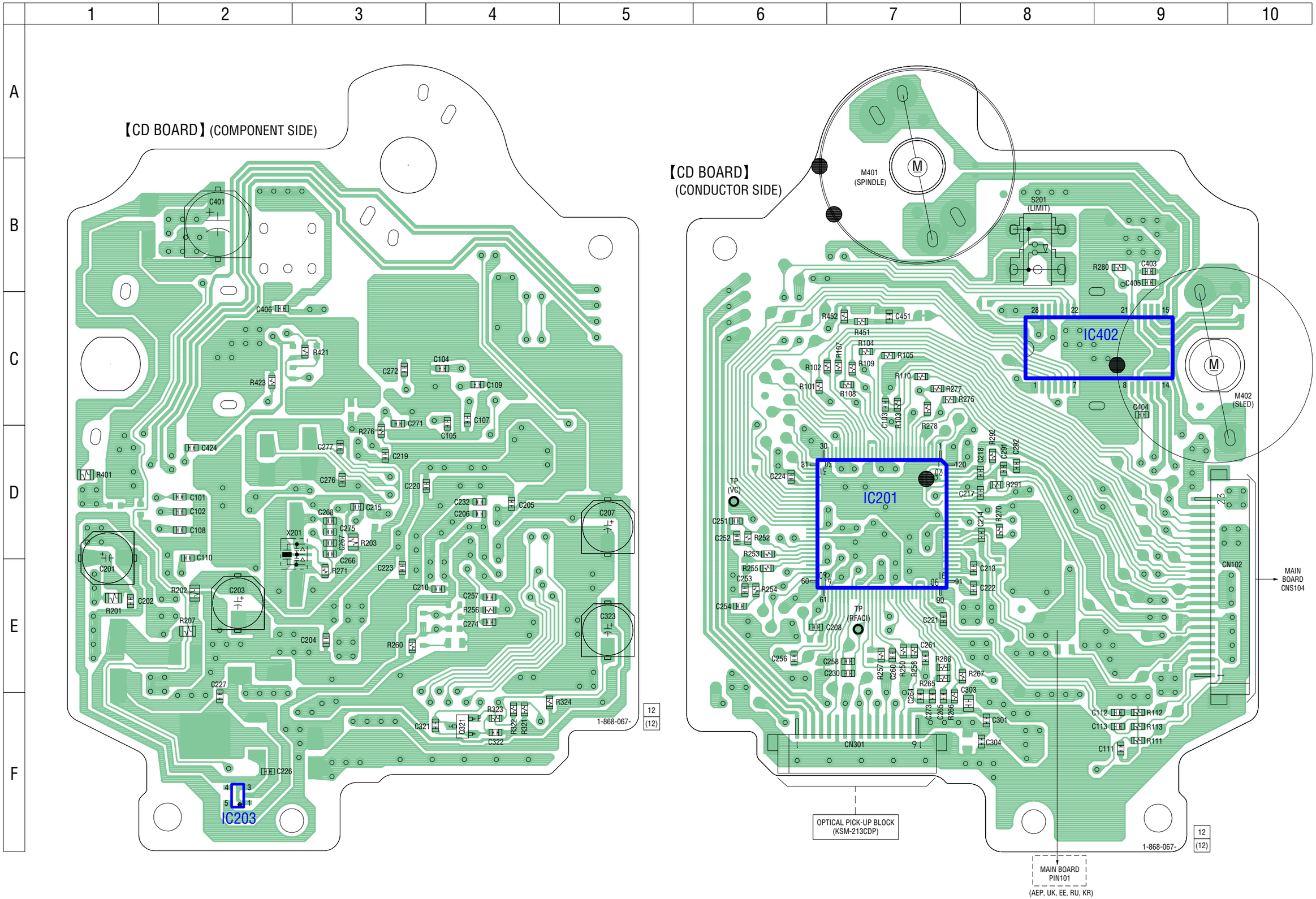
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

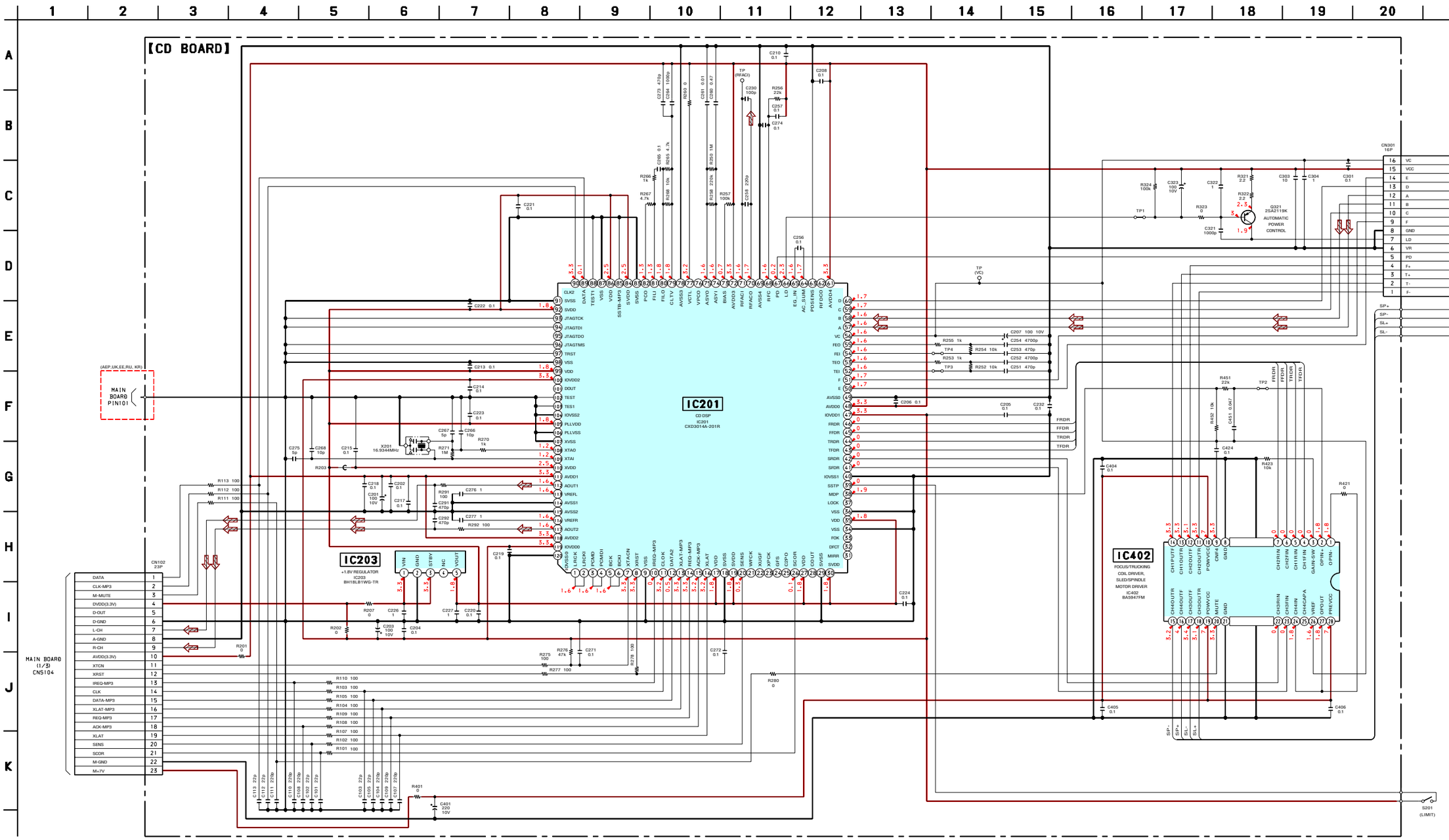
- ▬ : B+ Line.
- Voltages are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD PLAY

- Abbreviation
  EE : East European model
  KR : Korean model
  RU : Russian model

2-1. PRINTED WIRING BOARD – CD Board – : **Uses unleaded solder.**



2-2. SCHEMATIC DIAGRAM – CD Board –



CD

3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA... : µA... uPA... : µPA...
  uPB... : µPB... uPC... : µPC...
  uPD... : µPD...
- CAPACITORS
  uF: µF
- COILS
  uH: µH

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

Ref. No.	Part No.	Description			Remark
	A-1134-279-A	CD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C102	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C103	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C104	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C105	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C107	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C108	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C109	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C110	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C111	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C112	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C113	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C201	1-128-995-21	ELECT CHIP	100uF	20%	10V
C202	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C203	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	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C207	1-128-995-21	ELECT CHIP	100uF	20%	10V
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C210	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C213	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C214	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C215	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C217	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C219	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C220	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C223	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C226	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C227	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C230	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C232	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C252	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C253	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C256	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C257	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C258	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C260	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C261	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C264	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C266	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C267	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C268	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C271	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C272	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C273	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C274	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C275	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C276	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C277	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C291	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C292	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C301	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-137-710-11	CERAMIC CHIP	10uF	20%	6.3V
C304	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C321	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C322	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C323	1-128-995-21	ELECT CHIP	100uF	20%	10V
C401	1-128-394-11	ELECT CHIP	220uF	20%	10V
C404	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C405	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C406	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C424	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C451	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
		< CONNECTOR >			
CN102	1-770-706-21	CONNECTOR, FFC/FPC 23P			
CN301	1-770-425-51	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC201	8-753-246-30	IC CXD3014A-201R			
IC203	6-709-050-01	IC BH18LB1WG-TR			
IC402	6-705-808-01	IC BA5947FM-E2			

CD

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q321	6-551-120-01	TRANSISTOR	2SA2119K		
		< RESISTOR/FERRITE BEAD >			
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R103	1-216-809-11	METAL CHIP	100	5%	1/10W
R104	1-216-809-11	METAL CHIP	100	5%	1/10W
R105	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-809-11	METAL CHIP	100	5%	1/10W
R108	1-216-809-11	METAL CHIP	100	5%	1/10W
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-809-11	METAL CHIP	100	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	1-216-809-11	METAL CHIP	100	5%	1/10W
R201	1-216-295-00	SHORT CHIP	0		
R202	1-216-295-00	SHORT CHIP	0		
R203	1-500-445-21	FERRITE, EMI (SMD) (2012)			
R207	1-216-295-00	SHORT CHIP	0		
R250	1-216-857-11	METAL CHIP	1M	5%	1/10W
R252	1-216-833-11	METAL CHIP	10K	5%	1/10W
R253	1-216-821-11	METAL CHIP	1K	5%	1/10W
R254	1-216-833-11	METAL CHIP	10K	5%	1/10W
R255	1-216-821-11	METAL CHIP	1K	5%	1/10W
R256	1-216-837-11	METAL CHIP	22K	5%	1/10W
R257	1-216-845-11	METAL CHIP	100K	5%	1/10W
R258	1-216-849-11	METAL CHIP	220K	5%	1/10W
R260	1-216-864-11	SHORT CHIP	0		
R265	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R266	1-216-821-11	METAL CHIP	1K	5%	1/10W
R267	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R268	1-216-833-11	METAL CHIP	10K	5%	1/10W
R270	1-216-821-11	METAL CHIP	1K	5%	1/10W
R271	1-216-857-11	METAL CHIP	1M	5%	1/10W
R275	1-216-809-11	METAL CHIP	100	5%	1/10W
R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R277	1-216-809-11	METAL CHIP	100	5%	1/10W
R278	1-216-809-11	METAL CHIP	100	5%	1/10W
R280	1-216-864-11	SHORT CHIP	0		
R291	1-216-809-11	METAL CHIP	100	5%	1/10W
R292	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R322	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R323	1-216-864-11	SHORT CHIP	0		
R324	1-216-845-11	METAL CHIP	100K	5%	1/10W
R401	1-216-295-00	SHORT CHIP	0		
R421	1-216-864-11	SHORT CHIP	0		
R423	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-216-837-11	METAL CHIP	22K	5%	1/10W
R452	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< VIBRATOR >			
X201	1-795-101-21	VIBRATOR, CERAMIC (16.9344MHz)			

MEMO

REVISION HISTORY

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

Ver.	Date	Description of Revision
1.0	2005.09	New
1.1	2005.11	Correction of Torque and Tape Tension Measurements Addition of Ref. No. 76, 77 on EXPLODED VIEWS (ECN-ECB33898/ENG-05012)
1.2	2005.12	Change of MAIN, PT-AC and PANEL boards (suffix-12) Change of PANEL board (suffix-13) Change of MAIN and PT-AC boards (suffix-13) (SUPPLEMENT-1) (ECN-ECB27448/ECB33087)
1.3	2006.01	Addition of US, Canadian and Singapore models
1.4	2006.03	Addition of Taiwan, Korean and Australian models Change of CD board (Suffix-12) (SUPPLEMENT-2) (ECN-ECB42207)