HCD-GTR33/GTR55/GTR77

SERVICE MANUAL

E Model

Ver. 1.0 2010.03

Photo: HCD-GTR77 (E4 Model)

- HCD-GTR33 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR33.
- HCD-GTR55 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR55.
- HCD-GTR77 is the amplifier, USB, CD player, tuner and tape deck (only E4 model) section in MHC-GTR77.

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CD Section	Model Name Using Similar Mechanism	HCD-GTZ4/GTZ4i/GTZ5
	CD Mechanism Type	CDM88BL-DVBU101
	Optical Pick-up Name	KHM-313CAB/C2NP
Tape Section (Only for E4 model)	Model Name Using Similar Mechanism	HCD-GT111/GT222/GT444/GT555
	Tape mechanism Type	CS-21SC-900TP

SPECIFICATIONS

Amplifier section

MHC-GTR77

The following are measured at
Mexican model:
AC 127 V, 60 Hz
Other models:
AC 120 V, 220 V, 240 V, 50/60 Hz
Front/Satellite Speaker
Power Output (rated):
120 W + 120 W (at 6 Ω, 1 kHz, 1% THD)
Front Speaker
RMS output power (reference):
225 W + 225 W (per channel at 8 Ω, 1 kHz)
Satellite Speaker
RMS output power (reference):
100 W + 100 W (per channel at 24 Ω, 1 kHz)
Subwoofer
RMS output power (reference):
130 W + 130 W (12 Ω, 100 Hz)

MHC-GTR55

The following are measured at
Mexican model:
AC 127 V, 60 Hz
Other models:
AC 120 V, 220 V, 240 V, 50/60 Hz
Front Speaker
Power Output (rated):
110 W + 110 W (at 6 Ω, 1 kHz, 1% THD)
RMS output power (reference):
240 W + 240 W (per channel at 6 Ω, 1 kHz)
Subwoofer
RMS output power (reference):
240 W (6 Ω, 100 Hz)

MHC-GTR33

The following are measured at
Mexican model:
AC 127 V, 60 Hz
Other models:
AC 120 V, 220 V, 240 V, 50/60 Hz
Front Speaker
Power Output (rated):
75 W + 75 W (at 6 Ω, 1 kHz, 1% THD)
RMS output power (reference):
165 W + 165 W (per channel at 6 Ω, 1 kHz)
Subwoofer
RMS output power (reference):
160 W (6 Ω, 100 Hz)

Inputs

PC (AUDIO IN) L/R
Voltage 700 mV, impedance 47 kilohms
MIC
Sensitivity 1 mV, impedance 10 kilohms
(USB) port: Type A

Outputs

PHONES
Accepts headphones of 8 Ω or more

USB section

Supported bit rate
MP3 (MPEG 1 Audio Layer-3):
32 kbps – 320 kbps, VBR
WMA: 48 kbps – 192 kbps
AAC: 48 kbps – 320 kbps
Sampling frequencies
MP3 (MPEG 1 Audio Layer-3):
32 kHz/44.1 kHz/48 kHz
WMA: 44.1 kHz
AAC: 44.1 kHz
Transfer speed
Full-Speed
Supported USB device
Mass Storage Class
Maximum current
500 mA

Disc player section

System
Compact disc and digital audio system
Laser Diode Properties
Emission Duration: Continuous
Laser Output*: Less than 44.6 µW
* This output is the value measurement at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response
20 Hz – 20 kHz
Signal-to-noise ratio
More than 90 dB
Dynamic range
More than 88 dB

Tape deck section (For African model only)

Recording system
4-track 2 channel, stereo

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
North American models:
87.5 MHz – 108.0 MHz (100 kHz step)
Other models:
87.5 MHz – 108.0 MHz (50 kHz step)
Antenna
FM lead antenna
Antenna terminals
75 ohms unbalanced
Intermediate frequency
10.7 MHz

AM tuner section

Tuning range
Pan American and Oceanian models:
530 kHz – 1,710 kHz (with 10 kHz tuning interval)
531 kHz – 1,710 kHz (with 9 kHz tuning interval)
Other models:
530 kHz – 1,610 kHz (with 10 kHz tuning interval)
531 kHz – 1,602 kHz (with 9 kHz tuning interval)
Antenna
AM loop antenna, external antenna terminal
Intermediate frequency
450 kHz

General

Power requirements
Oceanian model: AC 230 V – 240 V, 50/60 Hz
Mexican model: AC 127 V, 60 Hz
Argentina model: AC 220 V, 50/60 Hz
Other models: AC 120 V, 220 V or 230 V – 240 V, 50/60 Hz, Adjustable with voltage selector
Power consumption
MHC-GTR77: 260 W
MHC-GTR55: 250 W
MHC-GTR33: 280 W
Dimensions (w/h/d) (excl. speakers) (Approx.)
231 mm × 361 mm × 429.5 mm
Mass (excl. speakers) (Approx.)
African and Pan Asian models:
HCD-GTR77/HCD-GTR55: 10.7 kg
HCD-GTR33: 10.5 kg
Other models:
HCD-GTR77/HCD-GTR55: 10.2 kg
HCD-GTR33: 10.0 kg

Design and specifications are subject to change without notice.

- Abbreviation
  E4 : African model

COMPACT DISC DECK RECEIVER

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2010C08-1
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Sony Corporation
Audio & Video Business Group
Published by Sony EMCS (Malaysia) PG Tec

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 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.

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)

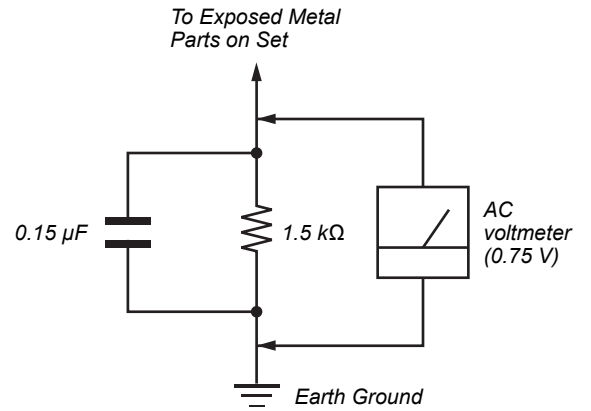

Fig. A. Using an AC voltmeter to check AC leakage.

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

This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

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.

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SECTION 1
SERVICING NOTES

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

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

NOTES ON LASER DIODE EMISSION CHECK

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

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 viscous (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.

NOTE OF REPLACING THE IC102 ON THE DMB19 BOARD

IC102 on the DMB19 board cannot exchange with single. When this part is damaged, exchange the entire mounted board.

RELEASING THE DISC TRAY LOCK

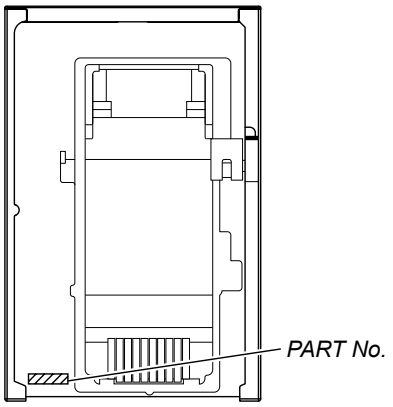
The disc tray lock function for the antitheft of an demonstration disc in the store is equipped.

Releasing Procedure:

1. Press [I/⏻ STANDBY] button to turn the power on.
2. Press the [CD] button to select CD function.
3. While pressing the [■] button, press the [⏏ OPEN/CLOSE] button for more 5 seconds).
4. The message "UNLOCKED" is displayed and the disc tray is unlocked.

Note: When "LOCKED" is displayed, the slot lock is not released by turning power on/off with the [I/⏻ STANDBY] button.

MODEL IDENTIFICATION – Back Panel –

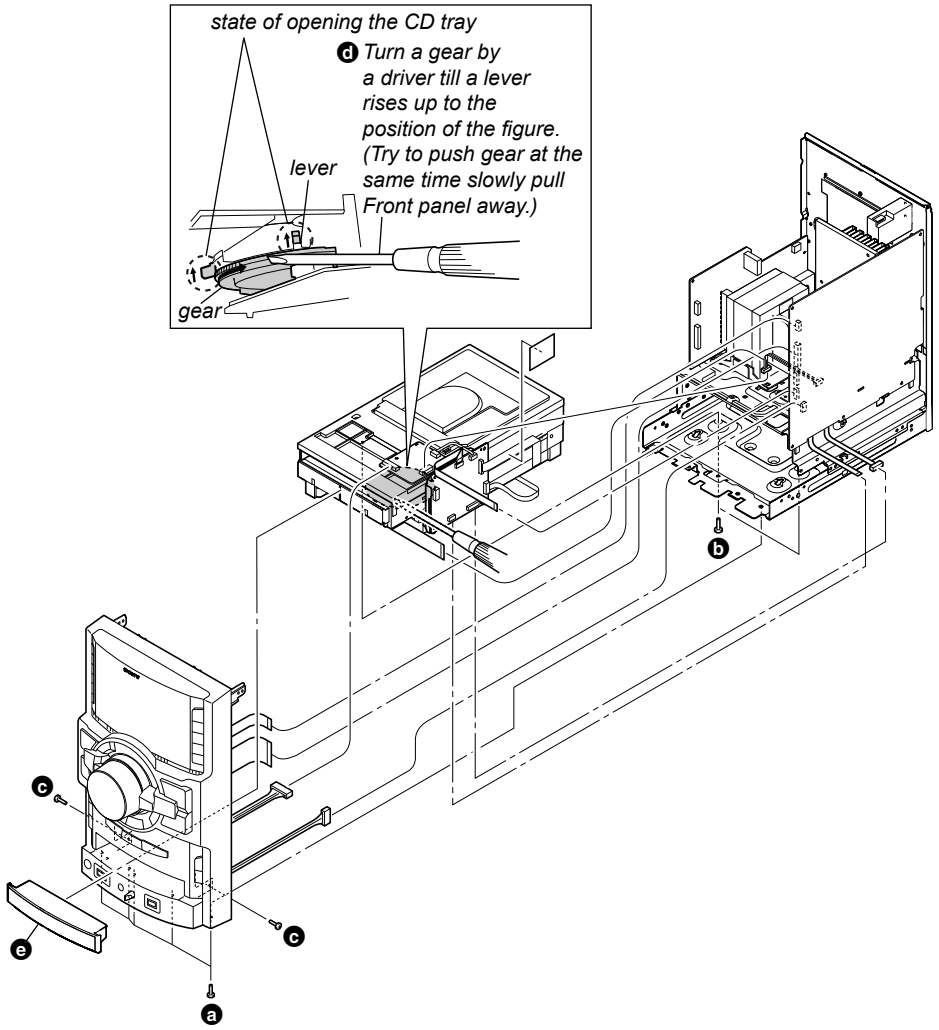


Model	Part No.
HCD-GTR33: E2, E51	4-164-386-0□
HCD-GTR33: AR	4-164-386-1□
HCD-GTR33: MX	4-164-386-2□
HCD-GTR33: E4	4-164-386-4□
HCD-GTR55: E2, E51	4-170-620-0□
HCD-GTR55: AR	4-170-620-1□
HCD-GTR55: MX	4-170-620-2□
HCD-GTR55: E4	4-170-620-4□
HCD-GTR77: E2, E51	4-170-621-0□
HCD-GTR77: AR	4-170-621-1□
HCD-GTR77: MX	4-170-621-2□
HCD-GTR77: E4	4-170-621-4□

- Abbreviation
  AR : Argentina model
  E2 : 120V AC area in E model
  E4 : African model
  E51 : Chilean and Peruvian models
  MX : Mexican model

HOW TO OPEN THE TRAY WHEN POWER SWITCH TURN OFF

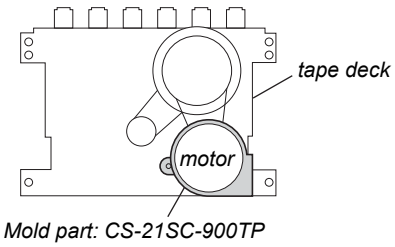
Step: 1) Work after removing the case (side-R and side-L) referring to "2.2. CASE(SIDE-L/R)" on disassembly (page 5).
2) Work after removing the top case referring to "2-3. TOP CASE" on disassembly (page 6).



HOW TO DISTINGUISH TAPE MECHANISM DECK

Two kinds of tape mechanism decks installed by this set exist.

Please do the repair exchange after confirming which tape mechanism deck set of the repair according to how to distinguish the figure below.

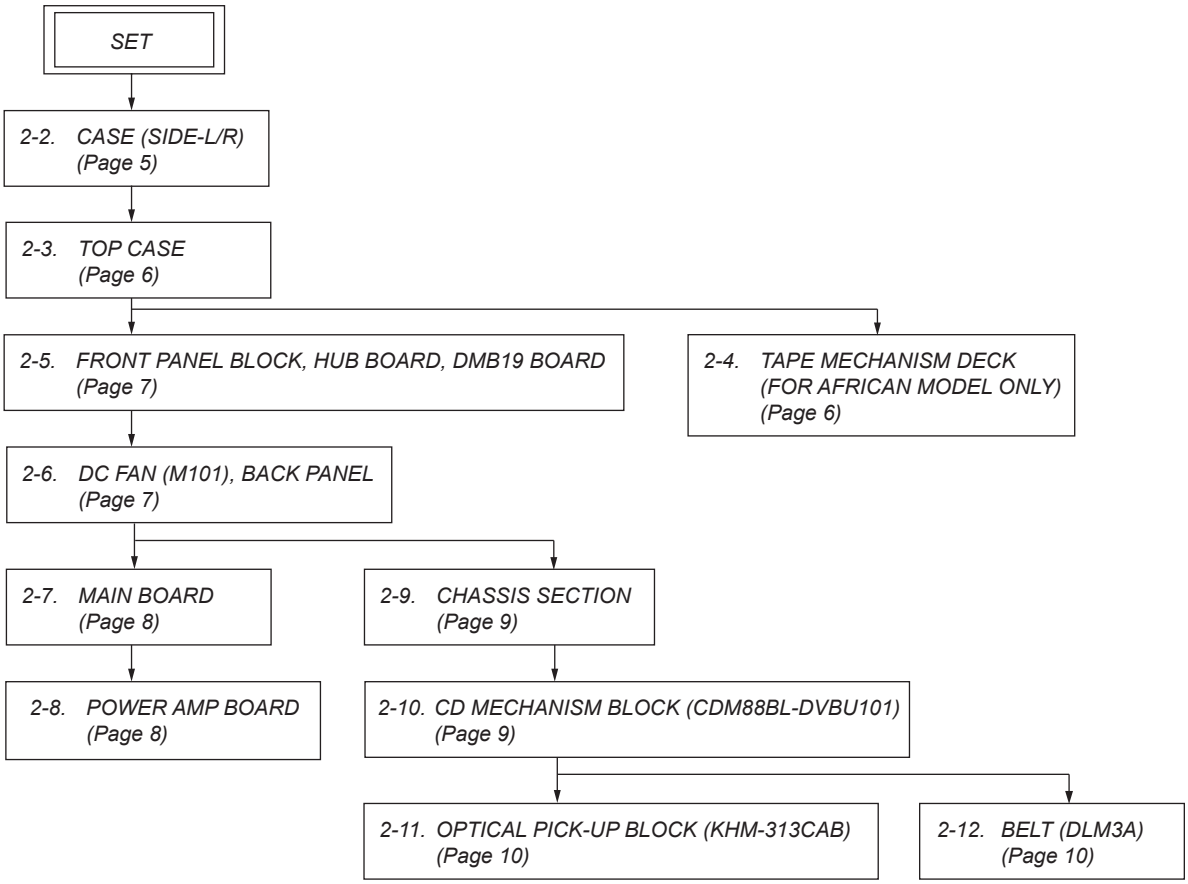


Tape Deck Name	Tape Deck Part No.	Belt Part No.
CS-21SC-900TP	1-797-575-11	2-688-621-01 BELT (R/F)
		2-688-622-01 BELT (MAIN)

SECTION 2
DISASSEMBLY

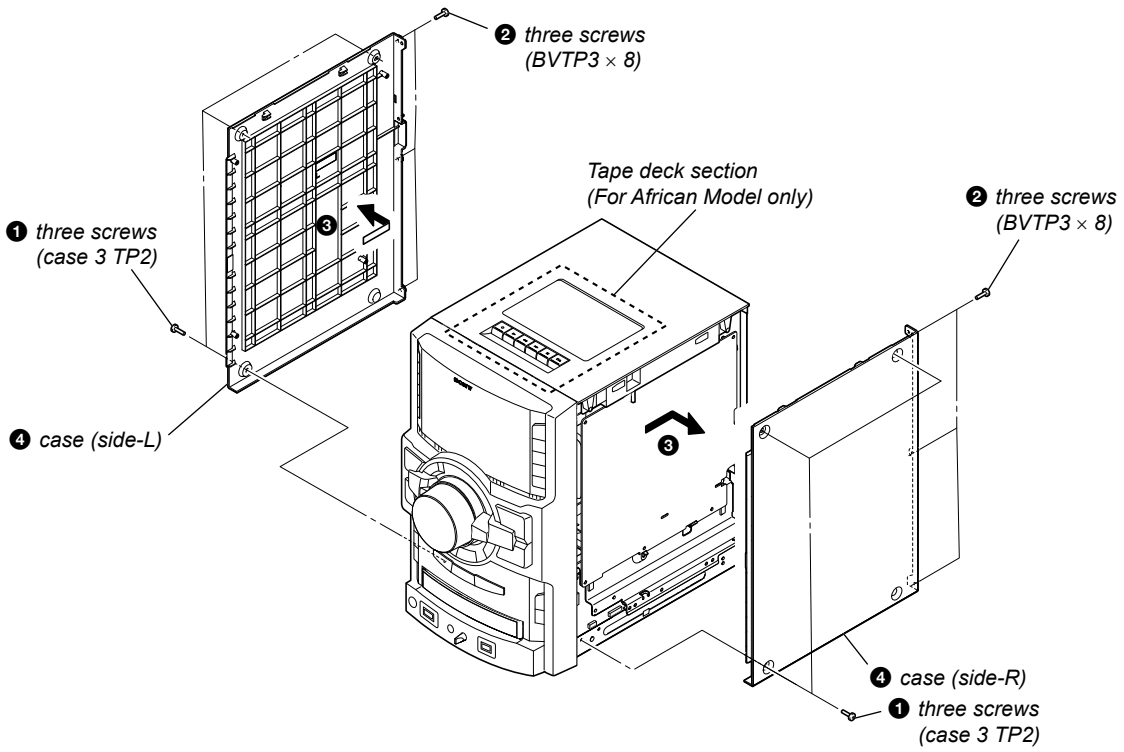
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

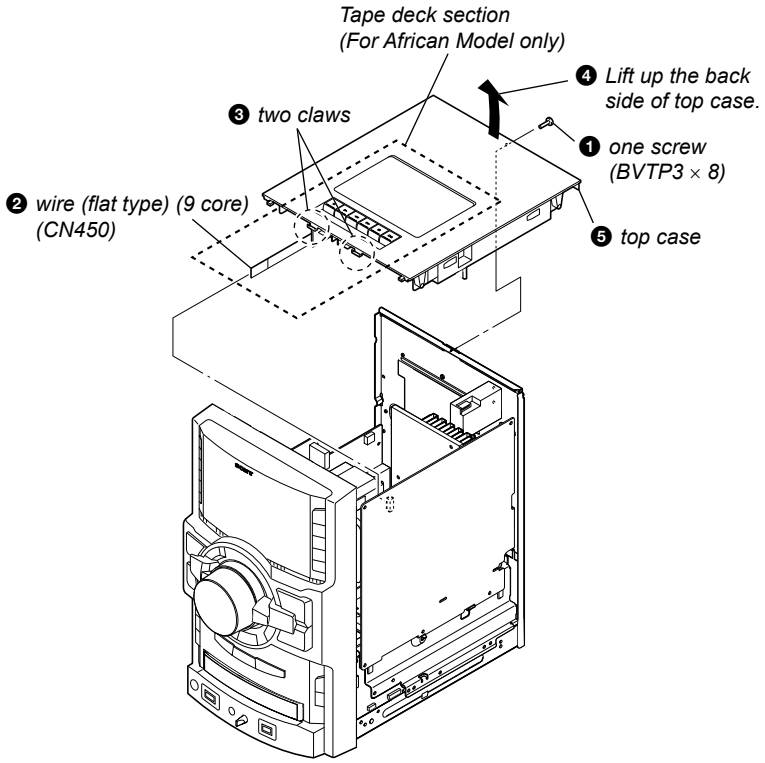


Note: Follow the disassembly procedure in the numerical order given.

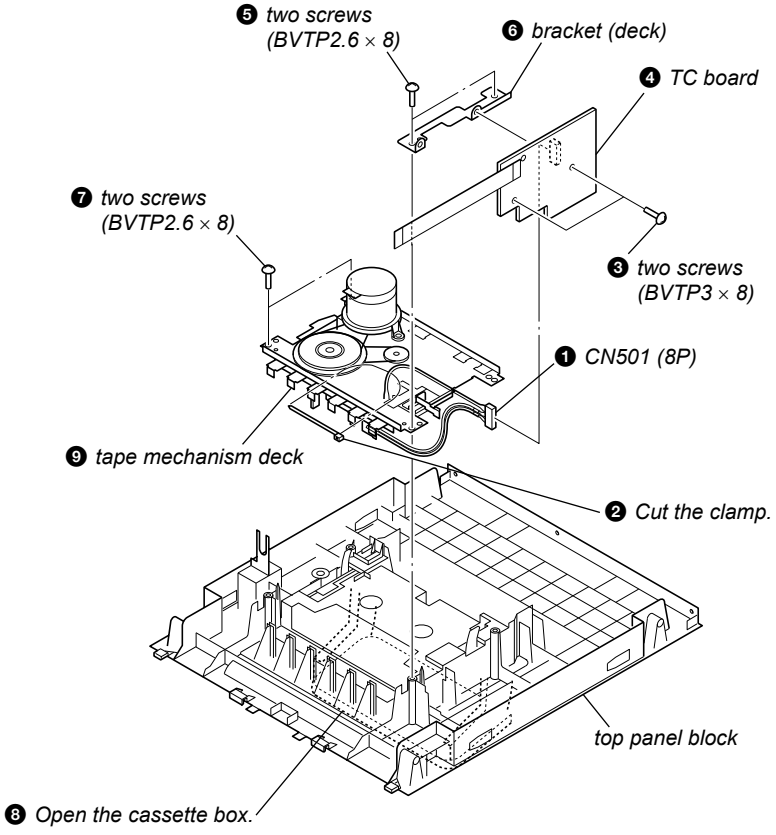
2-2. CASE (SIDE-L/R)



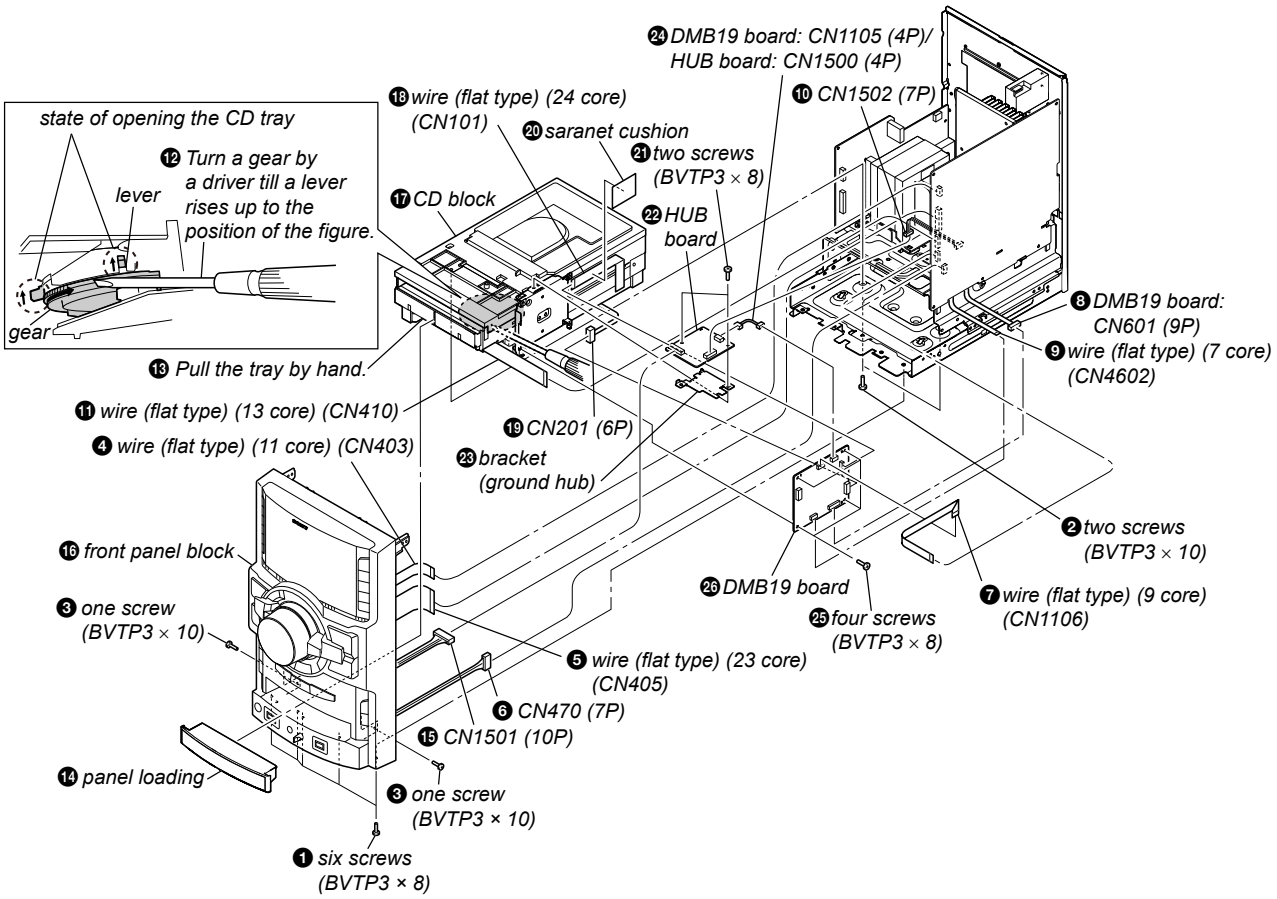
2-3. TOP CASE



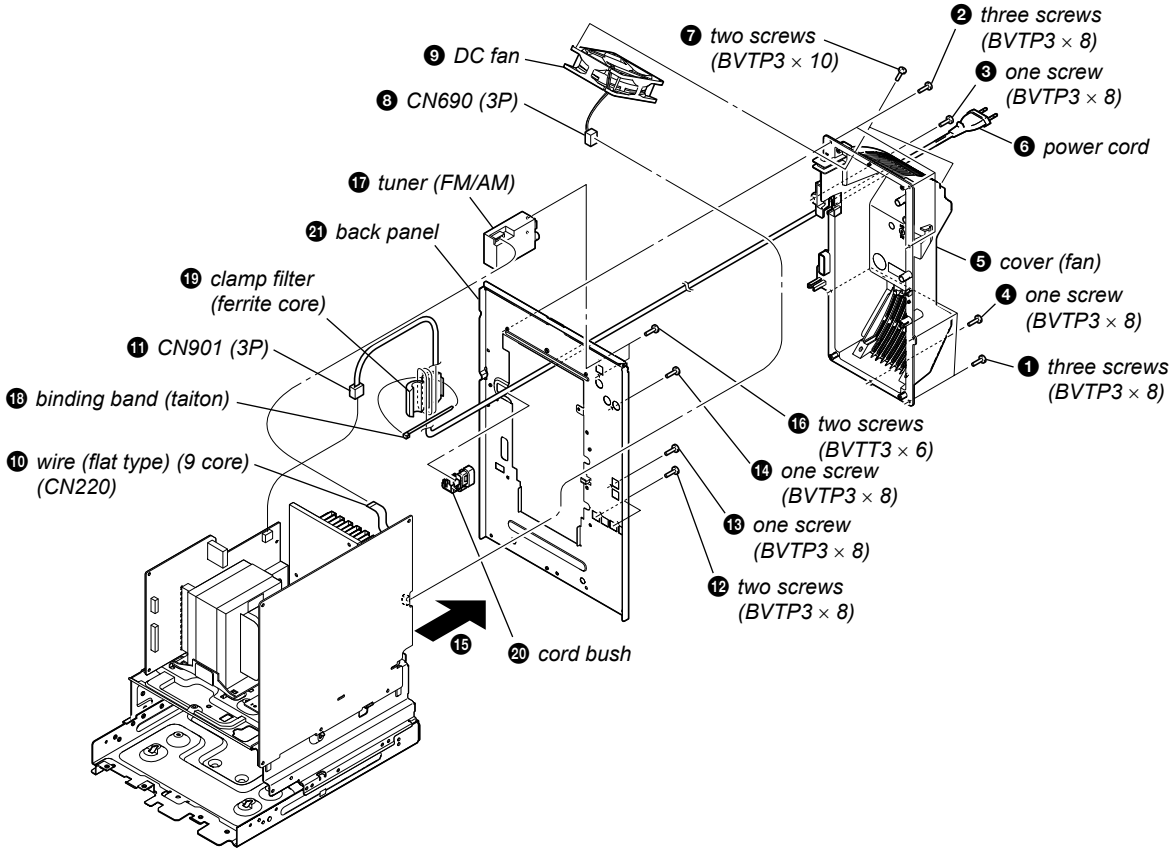
2-4. TAPE MECHANISM DECK (For African model only)



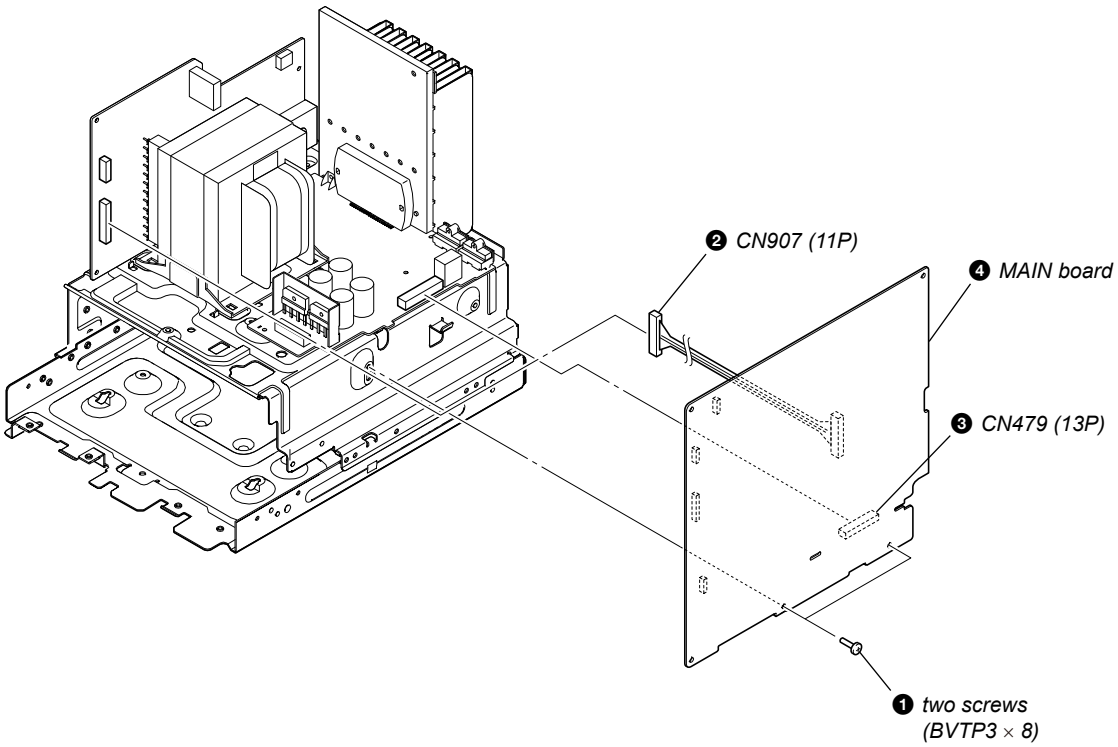
2-5. FRONT PANEL BLOCK, HUB BOARD, DMB19 BOARD



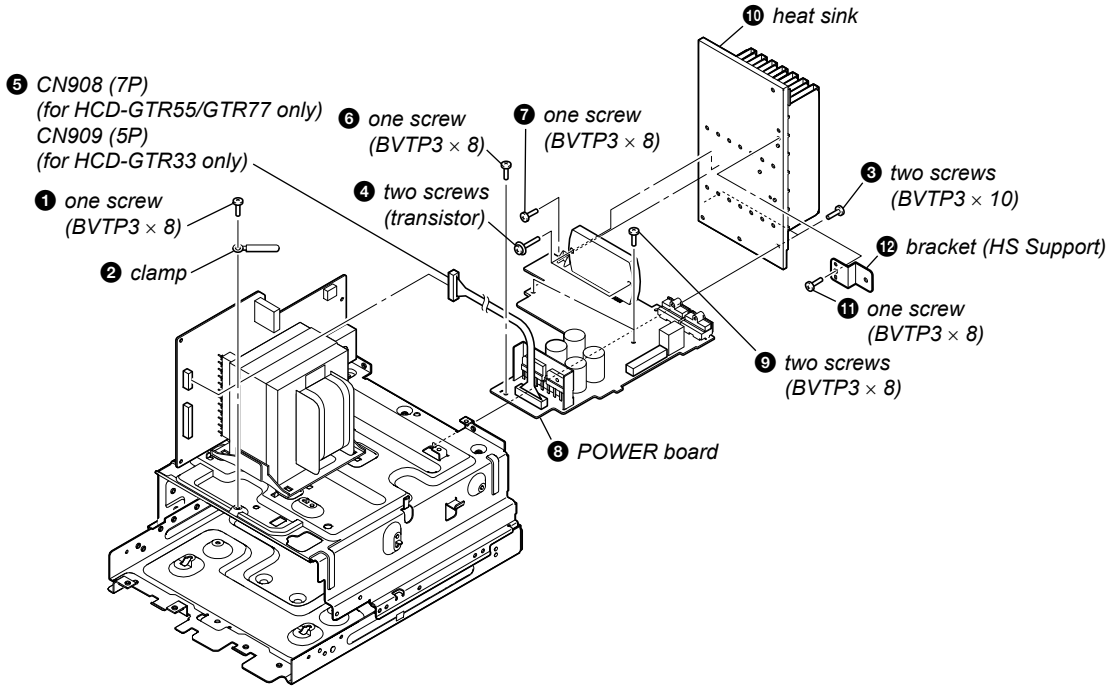
2-6. DC FAN (M101), BACK PANEL



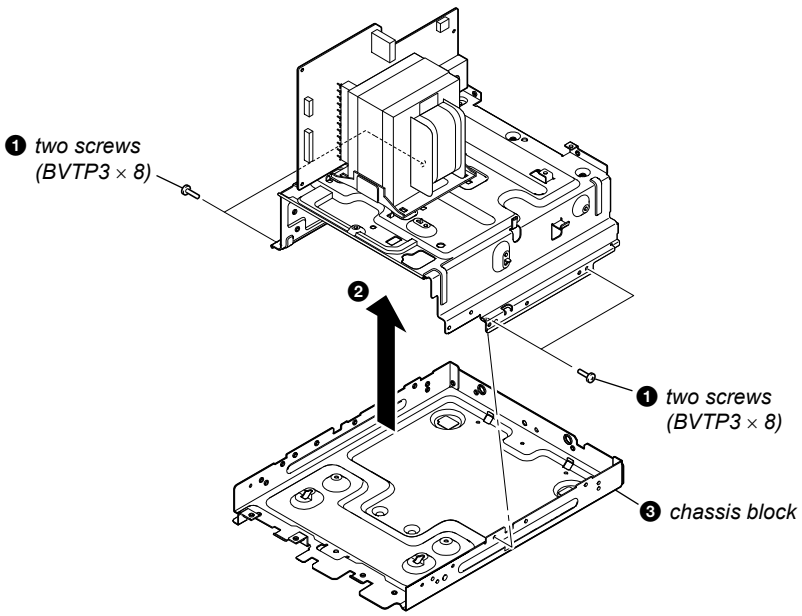
2-7. MAIN BOARD



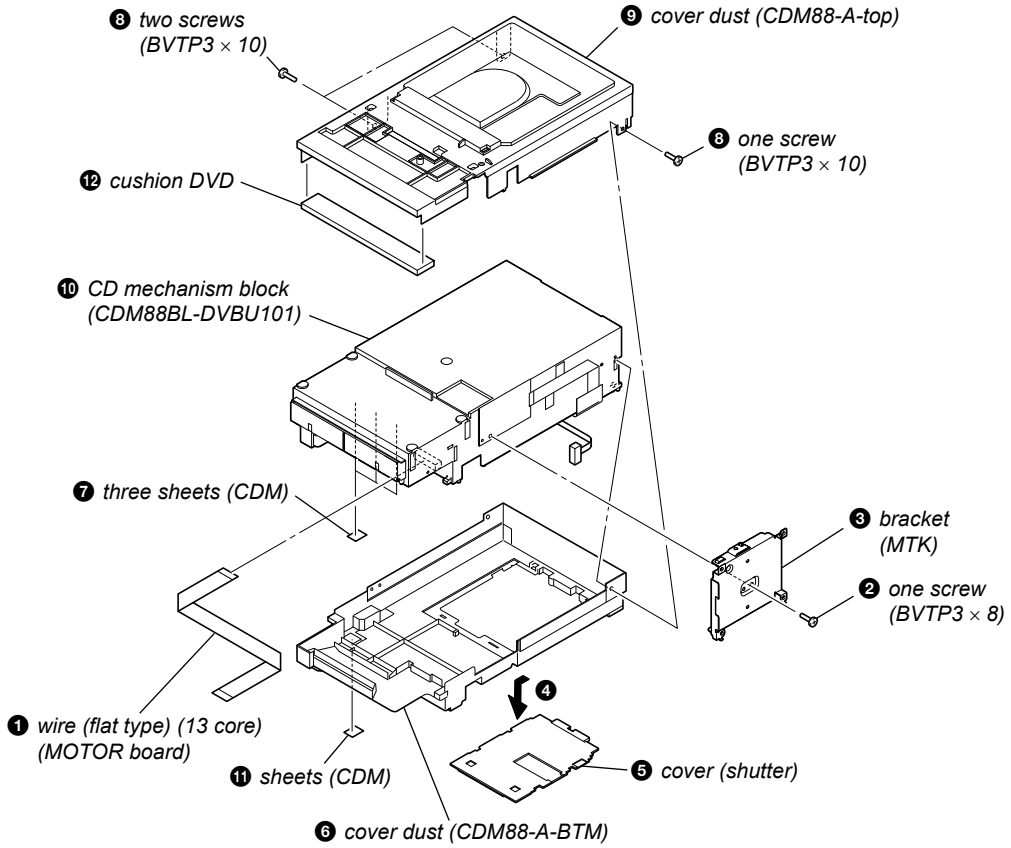
2-8. POWER BOARD



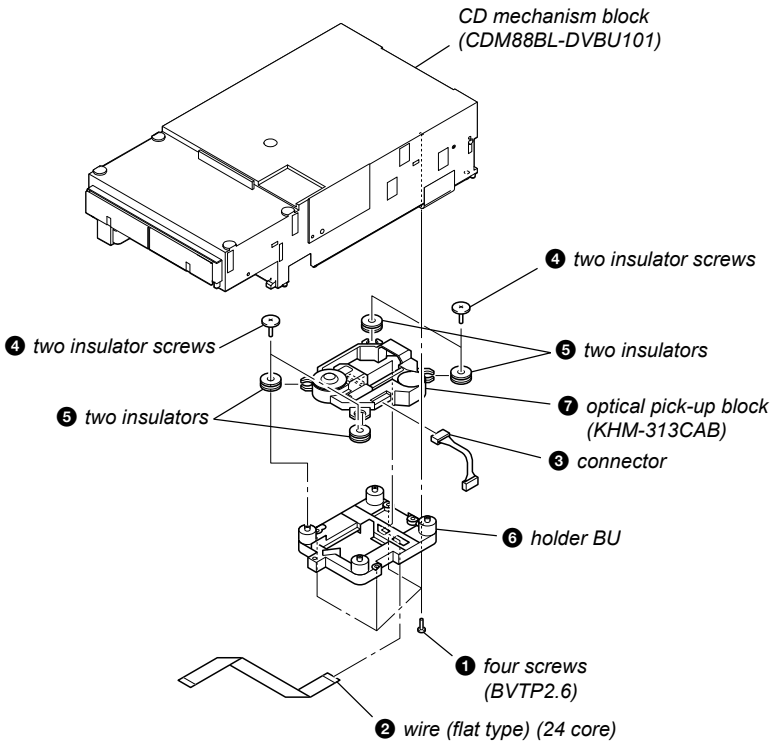
2-9. CHASSIS SECTION



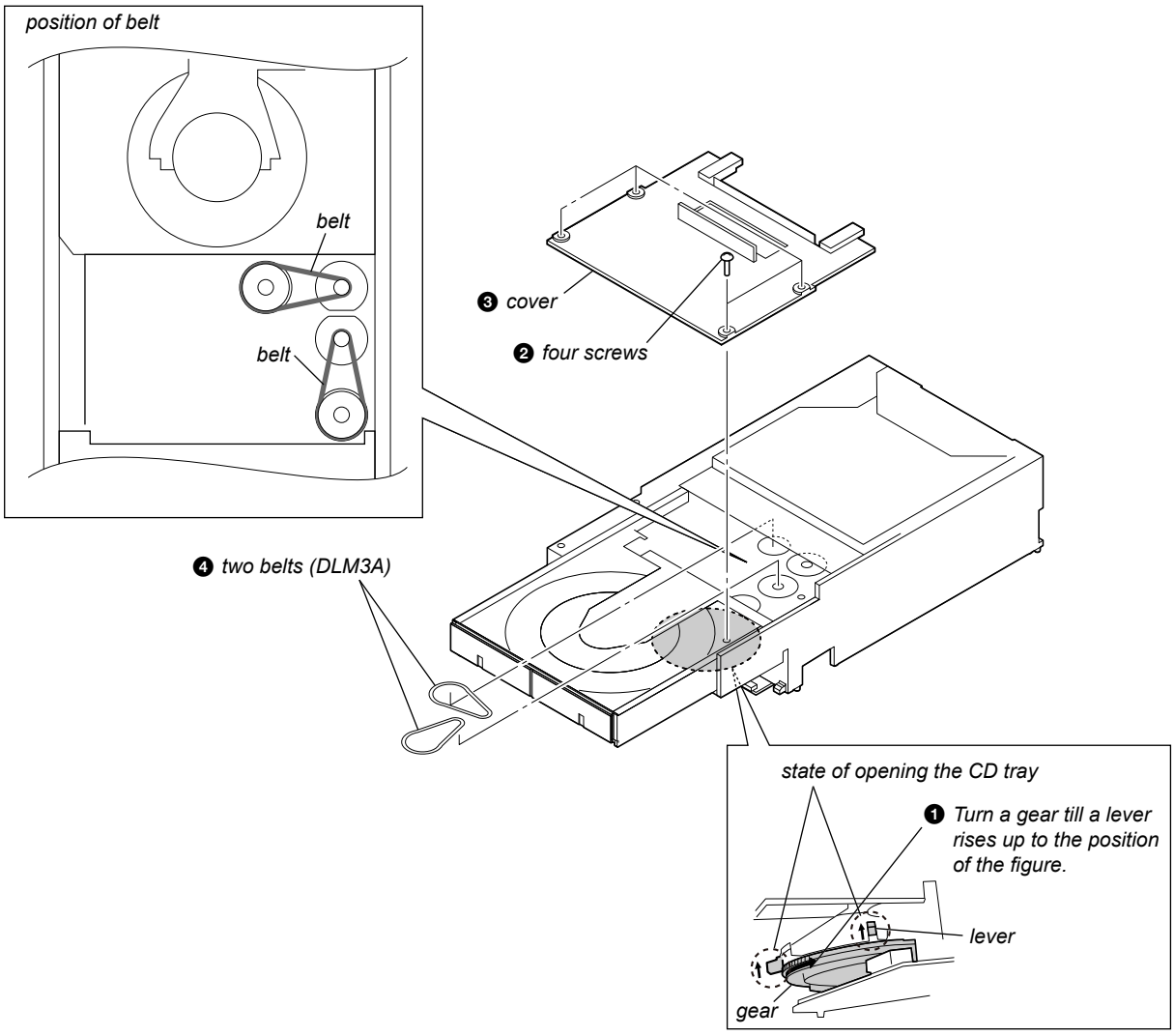
2-10. CD MECHANISM BLOCK (CDM88BL-DVBU101)



2-11. OPTICAL PICK-UP BLOCK (KHM-313CAB)



2-12. BELT (DLM3A)



SECTION 3
TEST MODE

PANEL TEST MODE

This mode is used to check the fluorescent indicator tube, LEDs, keys, [MASTER VOLUME] jog, [OPERATION DIAL] jog, model, destination and software version.

Procedure:

1. Press [■] button, [METER MODE] button and [DISC SKIP/EX-CHANGE] button simultaneously.
2. All LEDs and segments in fluorescent indicator tube are lighted up.
3. When you want to enter to the software version display mode, press [DISC 1] button. The model information appears on the fluorescent indicator tube.
   • "GVX 1S" is shown for MHC-GTR33.
   • "GVX 3S" is shown for MHC-GTR55.
   • "GVX 4S" is shown for MHC-GTR77.
   Press [DISC 1] button again to view the destination information.
4. During the destination information display, press [DISC 1] button. Each time [DISC 1] button is pressed, the fluorescent indicator tube shows the version of each category software in the following sequence: SC, MTK (DMB Board firmware version), GC, SYS, CD, CDMA, CDMB, ST, TC TA, TM , MTR (METER) and return back to model information display.
5. When [DISC 3] button is pressed while the version numbers are being displayed except model and destination, the date of the software creation appears. When [DISC 3] button is pressed again, the display returns to the software version display. When [DISC 1] button is pressed while the date of the software creation is being displayed, the date of the software creation is displayed in the same order of software version display.
6. Press [DISC 2] button, the key check mode is activated.
7. In the key check mode, the fluorescent indicator tube displays "K 0 V0".
   Each time a button is pressed, "K" value increases. However, once a button has been pressed, it is no longer taken into account.
   "V" value increases in the manner of 0,1, 2, 3 ... if [MASTER VOLUME] knob is turned clockwise, or it decreases in the manner of 0, 9, 8,7 ... if [MASTER VOLUME] knob is turned counterclockwise.
8. When [DISC SKIP/EX-CHANGE] button is pressed after all LEDs and segments in fluorescent indicator tube light up, alternate segments in fluorescent indicator tube and LEDs would light up. If you press [DISC SKIP/EX-CHANGE] button again, another half of alternate segments in fluorescent indicator tube and LEDs would light up. Pressing [DISC SKIP/EX-CHANGE] button again would cause all segments in fluorescent indicator tube and LEDs light up.
9. To release from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

COMMON TEST MODE

This mode is used to check operations of the Amplifier section.

Procedure:

To enter Common Test Mode

1. Press [■] button, [METER MODE] button and [OPEN/CLOSE] button simultaneously.
2. The CD ring indicators flash on the fluorescent indicator tube. The function is changed to AUDIO and the volume is changed to VOLUME MIN.

Check of Amplifier

1. Press [EQ BAND/SURROUND] button repeatedly until a message "GEQ MAX" appears on the fluorescent indicator tube. GEQ increases to its maximum.
2. Press [EQ BAND/SURROUND] button repeatedly until a message "GEQ MIN" appears on the fluorescent indicator tube. GEQ decreases to its minimum.
3. Press [EQ BAND/SURROUND] button repeatedly until a message "GEQ FLAT" appears on the fluorescent indicator tube. GEQ is set to flat.
4. When the [MASTER VOLUME] knob is turned clockwise even slightly, the sound volume increases to its maximum and a message "VOLUME MAX" appears on the fluorescent indicator tube.
5. When the [MASTER VOLUME] knob is turned counterclockwise even slightly, the sound volume decreases to its minimum and a message "VOLUME MIN" appears on the fluorescent indicator tube.

To release from Common Test mode

1. To release from this mode, press [I/⏻ STANDBY] button.
2. The cold reset is enforced at the same time.

COLD RESET

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

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [■] button, [ENTER] button, and [I/⏻ STANDBY] button simultaneously.
3. "COLD RESET" appears on the fluorescent indicator tube. After that, the fluorescent indicator tube becomes blank for a while, and the system is reset.

VACS ON/OFF

This mode is used to switch ON and OFF the VACS (Variable Attenuation Control System).

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [■] button, [RETURN], and [DISPLAY] button simultaneously. The message "VACS OFF" or "VACS ON" appears on the fluorescent indicator tube.

TUNER STEP CHANGE

The step interval of AM channels can be toggled between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [TUNER/BAND] button repeatedly to select the "AM".
3. Press [I/⏻ STANDBY] button to turn off the system.
4. Press [ENTER] button and [I/⏻ STANDBY] button simultaneously. The system turns on automatically. The message "AM 9K STEP" or "AM 10K STEP" appears on the fluorescent indicator tube and thus the channel step is changed.

CD SHIP MODE (WITH MEMORY CLEAR)

This mode moves the optical pick-up to the position durable to vibration and clears all data including preset data stored in the EEPROM to initial conditions during the next AC-In. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Select CD function.
3. Press [■] button, [OPEN/CLOSE] button and [I/⏻ STANDBY] button simultaneously. The system turns off automatically.
4. After the "STANDBY" blinking display finishes, a message "MECHA LOCK" is displayed on the fluorescent indicator tube and the CD ship mode is set.

CD SHIP MODE (WITHOUT MEMORY CLEAR)

This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Select CD function.
3. Press [DISC SKIP/EX-CHANGE] button and [I/⏻ STANDBY] button simultaneously. The system turns off automatically.
4. After the "STANDBY" blinking display finishes, a message "MECHA LOCK" is displayed on the fluorescent indicator tube and the CD ship mode is set.

CD TRAY LOCK MODE

This mode let you lock the disc tray. When this mode is activated, the disc tray will not open when [OPEN/CLOSE] button or [DISC SKIP/EX-CHANGE] button is pressed. The message "LOCKED" will be displayed on the fluorescent indicator tube. This mode only applied when there is disc(s) on the tray.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Select CD function.
3. Press [■] button and [OPEN/CLOSE] button simultaneously and hold down until "LOCKED" or "UNLOCKED" displayed on the fluorescent indicator tube (around 5 seconds).

FACTORY PRESET

This mode is use to load all the factory use preset frequencies into FM 1-FM 20 and AM 1-AM 10. Originally, frequency of FM 1-FM 20 and AM 1-AM10 are set to the minimum frequency.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [EQ BAND/SURROUND] button, [■] button, and [DISC 1] button simultaneously and the message "FACTORY" appears on the fluorescent indicator tube. The function is changed to TUNER automatically.

VACS DISPLAY

This mode is used to check the VACS level.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [ERASE] button, [■] button and [ENTER] button simultaneously.
3. The fluorescent indicator tube displays "V0 AP0".
   "V" represents Conventional VACS (Triggered by signal level)
   "AP" represents AP VACS (Abuse Protection Variable Attenuation Control System)
   • To release from VACS display mode
   To release from this mode, do the step (2) again.

METER SWITCH TOUCH COUNT DISPLAY

This mode is used to display the total count of meter pointer touch initial switch and max switch.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [■] button, [ENTER] button and [DISPLAY] button simultaneously.
3. The fluorescent indicator tube displays "IxxxxxMyyyyy".
   "I" represents the Initial Switch touch.
   "xxxxx" represents the total count of Initial Switch touch.
   (Maximum Value of "xxxxx" = 65535)
   "M" represents the Max Switch touch.
   "yyyyy" represents the total count of Max Switch touch.
   (Maximum Value of "yyyyy" = 65535)
   • To release from Meter Switch Touch Count Display Mode.
   To release from this mode, do the step (2) again.
   The fluorescent indicator tube displays "MODE OUT".

METER TEST MODE

This mode is used to check the meter device.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Press [■] button, [ENTER] button and [METER MODE] button simultaneously.
3. Meter Backlight LEDs, Meter Pointer LEDs, Power Illuminator LEDs and fluorescent indicator tube are lighted up.
4. When you want to perform count total step from Initial Switch to Max Switch operation mode, press [▶▶ / ▶▶I / TUNING +] button. The meter pointer will move from Initial Switch to Max Switch and finally move back to the middle position. The total step count information appears on the fluorescent indicator tube. "xxx STP yy" is shown.
   "xxx" represents the total step.
   (Value of "xxx" should between 430 steps to 470 steps)
   "yy" represents the status of total step count.
   (If total step between 430 steps to 470 steps, "yy" is OK,
   Else "yy" is NG)
5. When you want to perform count total step from Max Switch to Initial Switch operation mode, press [◀◀ / I◀◀ / TUNING –] button. The meter pointer will move from Max Switch to Initial Switch and finally move back to the middle position. The total step count information appears on the fluorescent indicator tube. "xxx STP yy" is shown.
   "xxx" represents the total step.
   (Value of "xxx" should between 430 steps to 470 steps)
   "yy" represents the status of total step count.
   (If total step between 430 steps to 470 steps, "yy" is OK,
   else "yy" is NG)
   • To release from Meter Test Mode.
   To release from this mode, do the step (2) again.
   The fluorescent indicator tube displays "TST MODE OUT".

CDM AGING MODE

This mode is used to display the total count of all disc playing.

Procedure:

1. Press [I/⏻ STANDBY] button to turn on the system.
2. Select CD function and All DISC play mode
3. Put discs on all trays and close the tray.
4. Press [GROOVE] button, [■] button and [RETURN] button simultaneously.
5. The fluorescent indicator tube displays Aging Display "AG xxxx/yyyy".
   "xxxx" represents the error counter
   (Maximum Value of "xxxx" = 9999)
   "yyyyy" represents the cycle counter
   (Maximum Value of "yyyy" = 9999)
6. Press [◀◀ / I◀◀ / TUNING –] or [▶▶ / ▶▶I / TUNING +] to search for Aging History Error Display
   The fluorescent indicator tube displays "Mx E1E2E3E4".
   x: error history number
   E1: Loading sequence JCP high
   E2: Loading sequence JCP low
   E3: Loading operation JCP
   E4: Cam position operation JCP
7. Press [RETURN] to Aging Display
   • To release from CDM Aging Mode.
   To release from this mode, press [I/⏻ STANDBY] button or perform COLD RESET operation.

SECTION 4
MECHANICAL ADJUSTMENTS

(For African model only)
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, apply 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 to 80 g • cm) (0.28 – 1.12 oz • inch)
FWD Back Tension	CQ-102C	0.15 – 0.6 mN • m (1.5 to 6 g • cm) (0.021 – 0.083 oz • inch)
FF	CQ-201AS	5 – 17.7 mN • m (50 to 177 g • cm) (0.7 – 2.48 oz • inch)
REV	CQ-201B	5 – 17.7 mN • m (50 to 177 g • cm) (0.7 – 2.48 oz • inch)

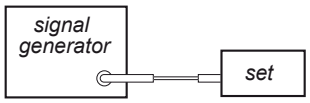
- **Tape Tension Measurement**

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

SECTION 5
ELECTRICAL CHECK

TUNER SECTION

FM TUNE LEVEL CHECK



Procedure:
1. Turn on the set.
2. Input the following signal from signal generator to FM antenna input directly.

Carrier frequency : A = 87.5 MHz, B = 98 MHz, C = 108 MHz
Deviation : 75 kHz
Modulation : 1 kHz
ANT input : 35 dBu (EMF)

Note: Use 75 ohm coaxial cable to connect signal generator and the set.
You cannot use video cable for checking.
Use signal generator whose output impedance is 75 ohm.

3. Set to FM tuner function and tune A, B and C signals.
4. Confirm "TUNED" is lit on the display for A, B and C signals.

When the selected station signal is received in good condition, "TUNED" is displayed.

DECK SECTION

0dB = 0.775V

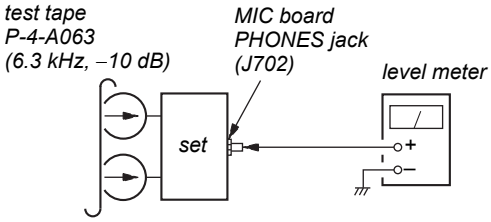
(For African model only)
1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.

TEST TAPE

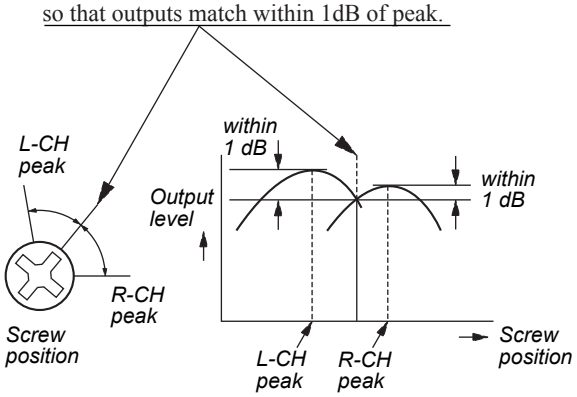
Tape	Signal	Used for
P-4-A063	6.3 kHz, -10 dB	Azimuth Adjustment

RECORD/PLAYBACK HEAD AZIMUTH ADJUSTMENT

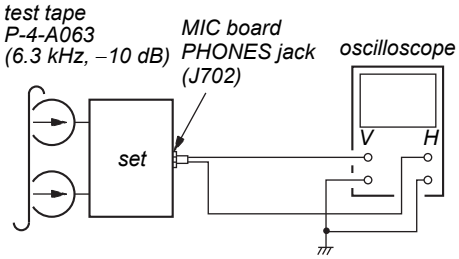
Procedure:
1. Mode: Playback

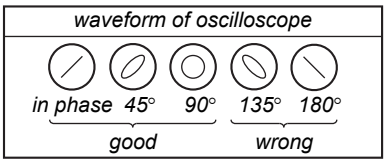


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



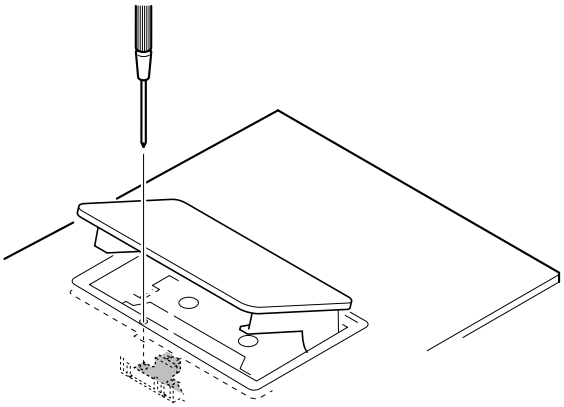
3. Mode: Playback





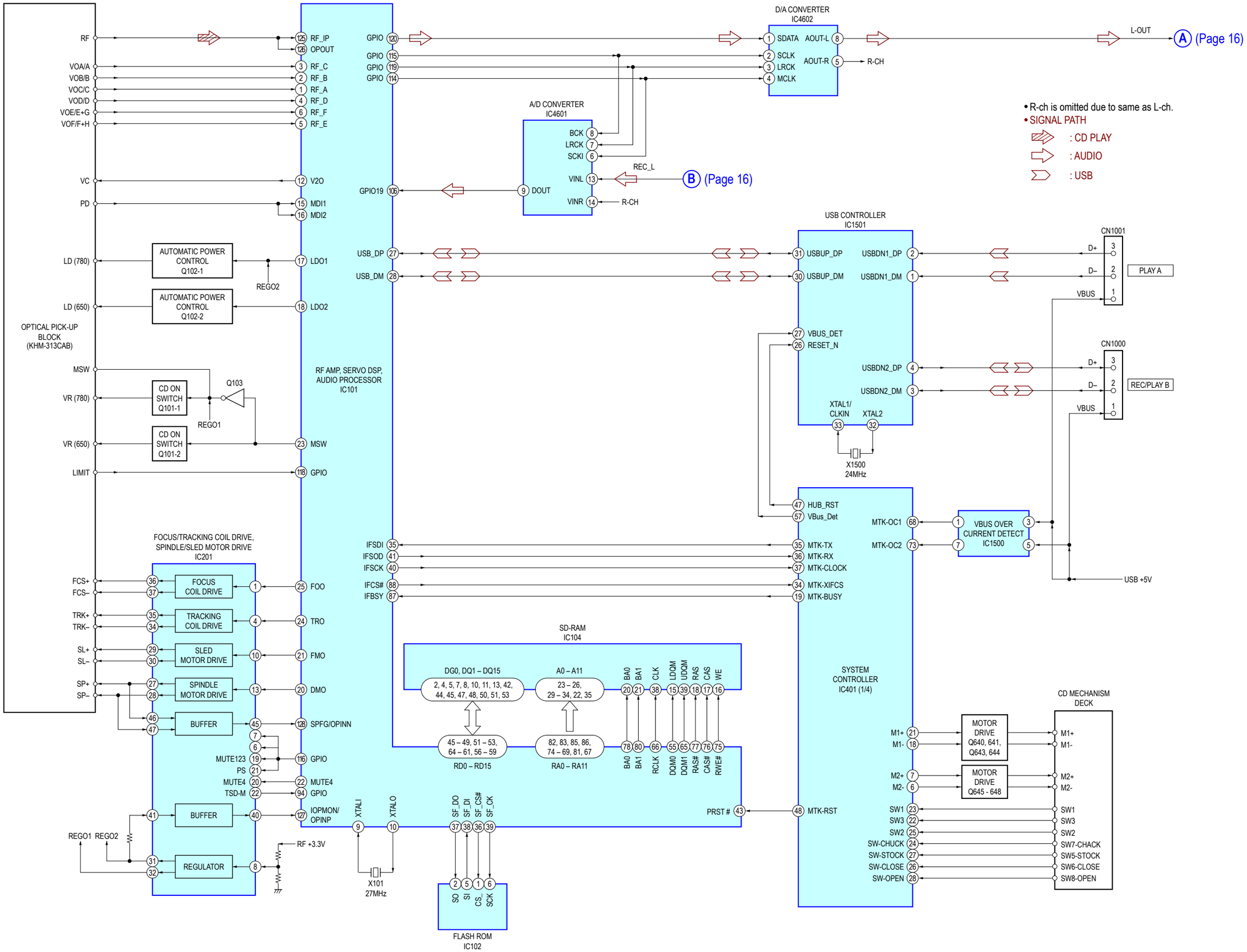
4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Record/Playback/Erase Head

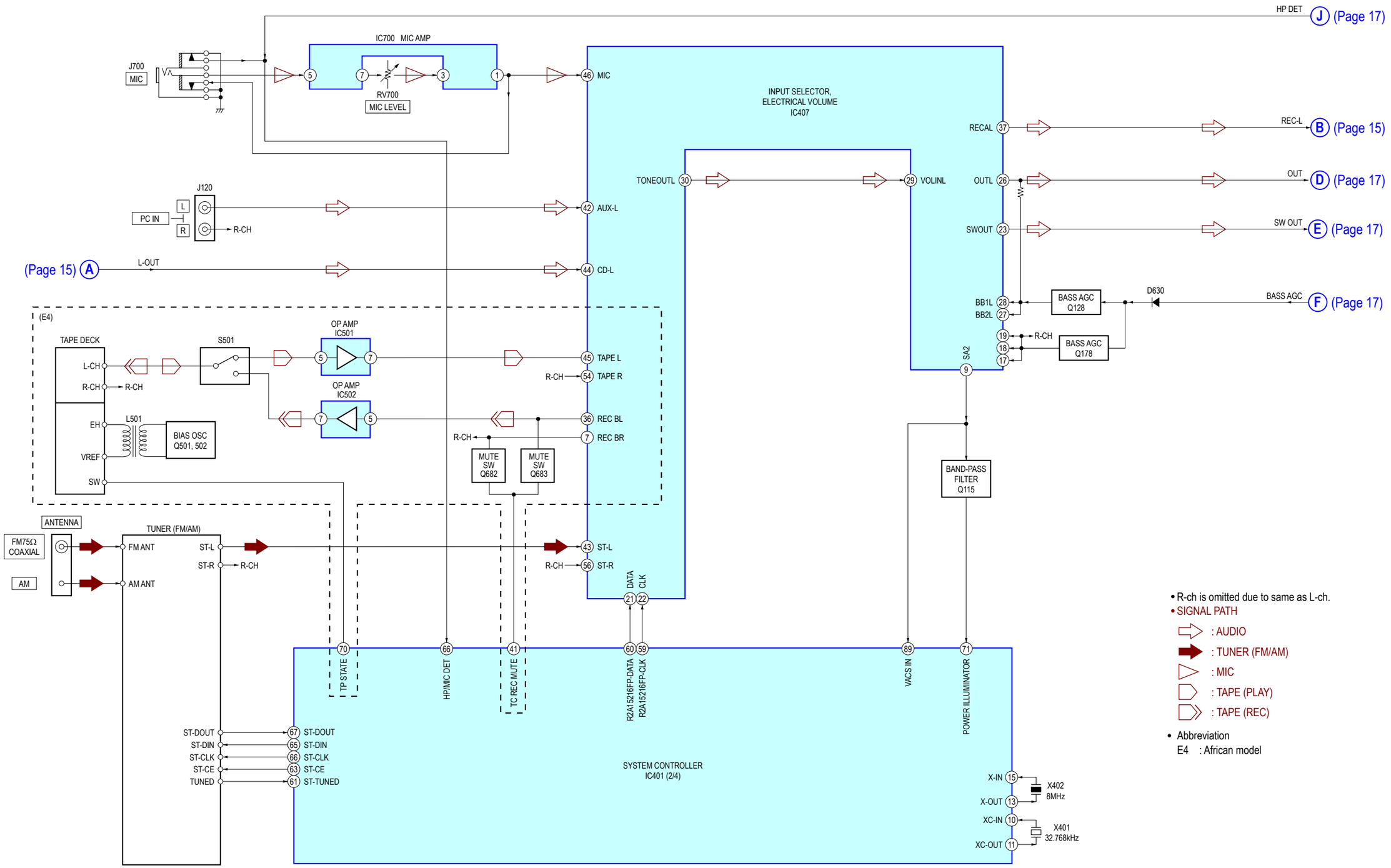


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM - RF SERVO, USB Section -

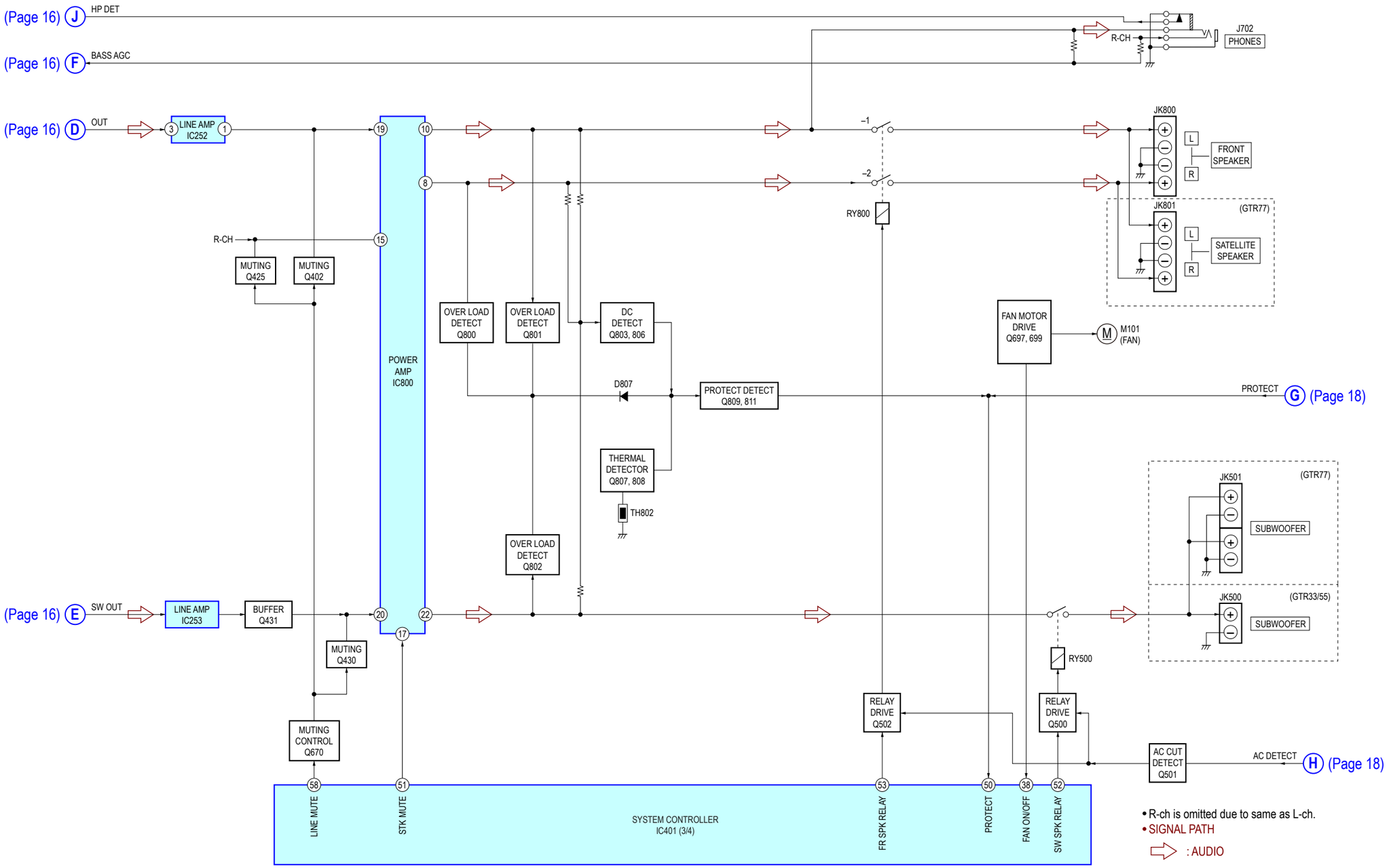


6-2. BLOCK DIAGRAM - MAIN Section -

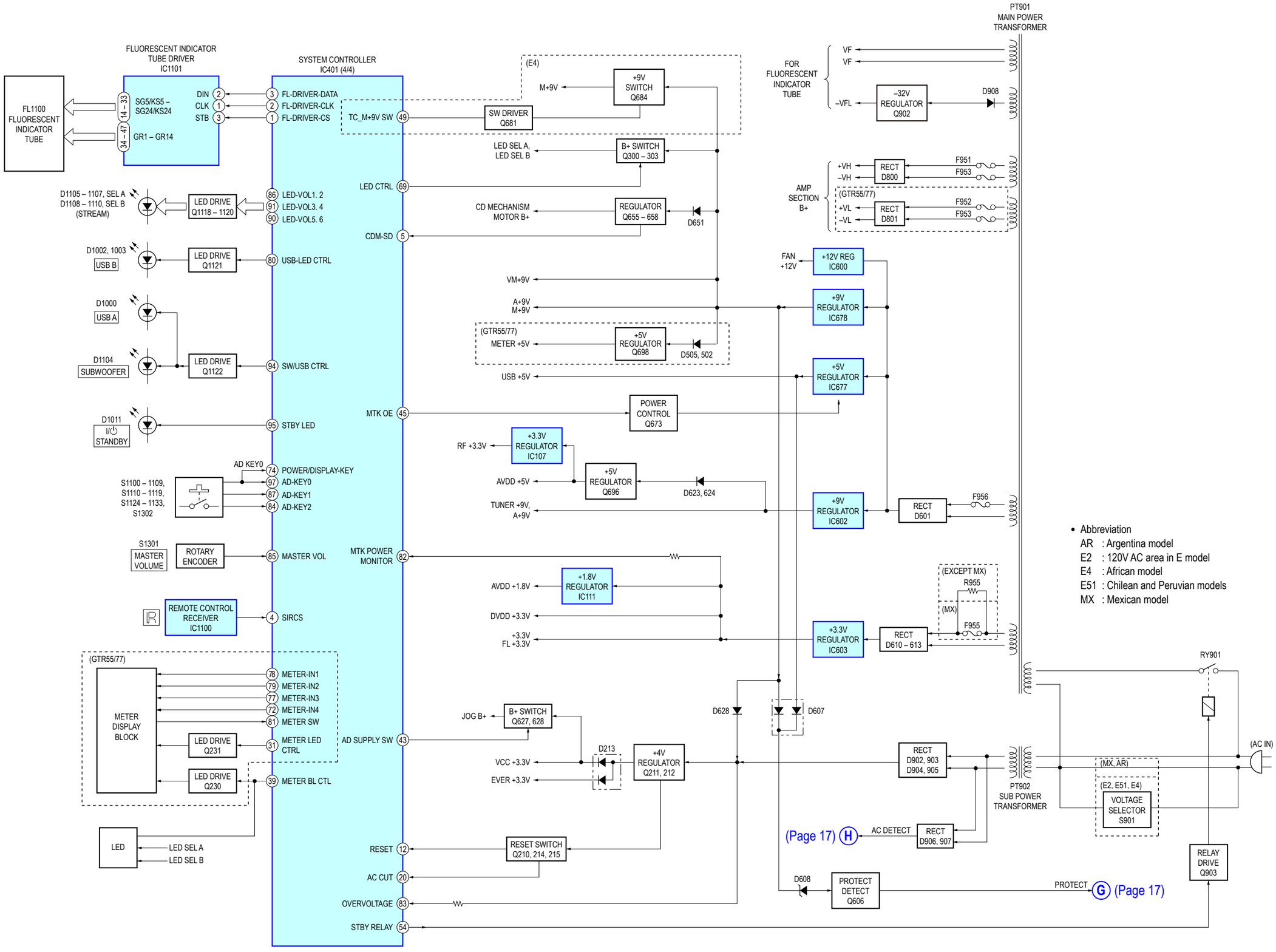


- R-ch is omitted due to same as L-ch.
- SIGNAL PATH
  - : AUDIO
  - : TUNER (FM/AM)
  - : MIC
  - : TAPE (PLAY)
  - : TAPE (REC)
- Abbreviation
  E4 : African model

6-3. BLOCK DIAGRAM - AMP Section -



6-4. BLOCK DIAGRAM - PANEL, POWER SUPPLY Section -



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For Printed Wiring Boards.

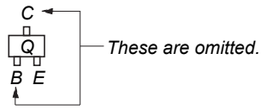
Note:

- ○——: 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.

Caution:	
Pattern face side: (SIDE B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE A)	Parts on the parts face side seen from the parts face are indicated.

- DMB19 board is multi-layer printed board.
  However, the patterns of intermediate layers have not been included in diagrams.
- Indication of transistor.



These are omitted.

These are omitted.

- Abbreviation
  AR : Argentina model
  E2 : 120V AC area in E model
  E4 : African model
  E51 : Chilean and Peruvian models
  MX : Mexican model

For Schematic Diagrams.

Note:

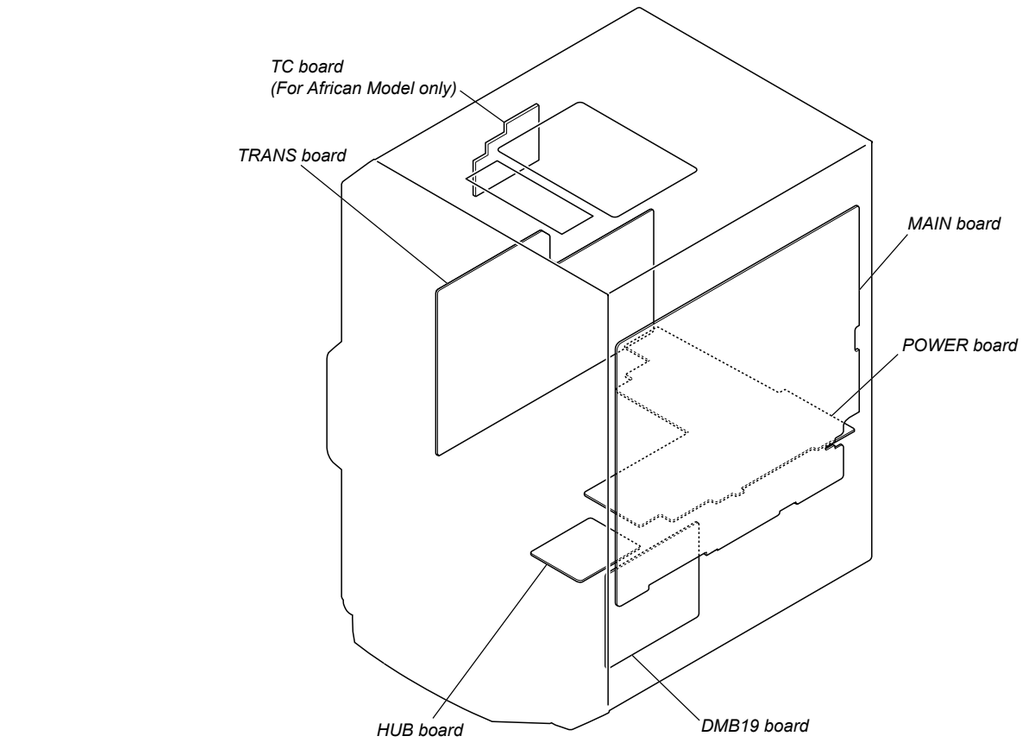
- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : Internal component.
- : Nonflammable resistor.
- : Fusible resistor.
- : Panel designation.

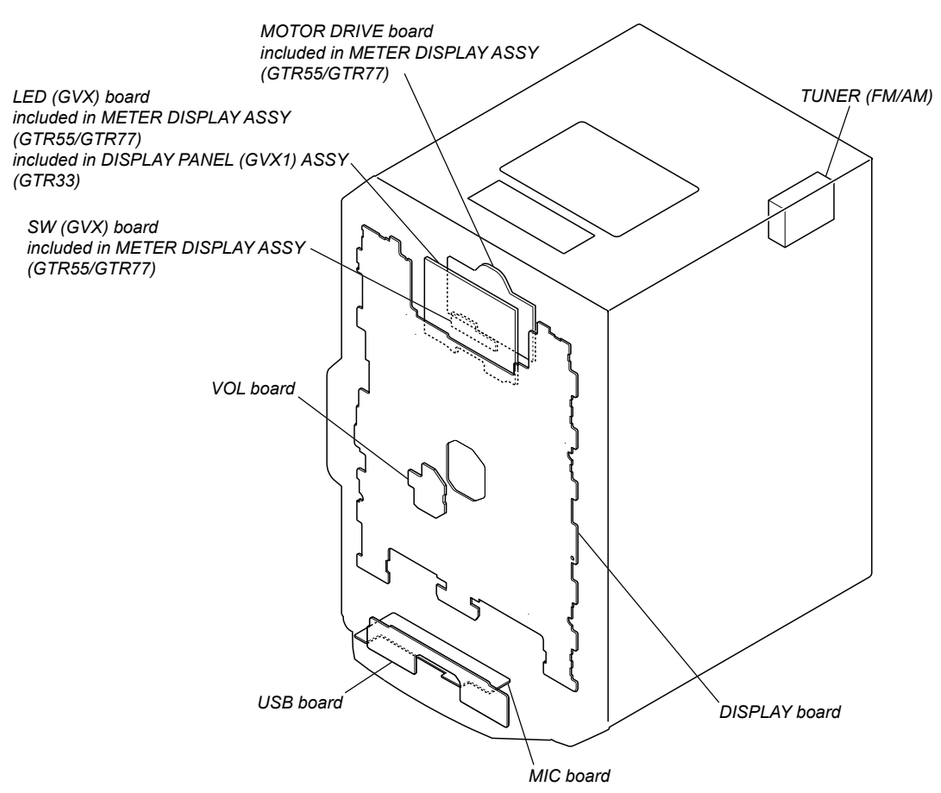
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- ▬▬: B+ Line.
- ▬ ▬ ▬: B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - TC Board -
  no mark : TAPE PLAY
  ( ) : TAPE REC
  - Other Boards -
  no mark : TUNER (FM/AM)
  ( ) : CD PLAY
  << >> : TAPE PLAY
  [ ] : TAPE REC
  < > : USB
  { } : PC
  * : Impossible to measure
- Voltages are taken with 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.
  : AUDIO
  : TUNER (FM/AM)
  : TAPE PLAY
  : TAPE REC
  : MIC
  : CD PLAY
  : DIGITAL
  : USB

- Abbreviation
  AR : Argentina model
  E2 : 120V AC area in E model
  E4 : African model
  E51 : Chilean and Peruvian models
  MX : Mexican model

- **Circuit Boards Location**

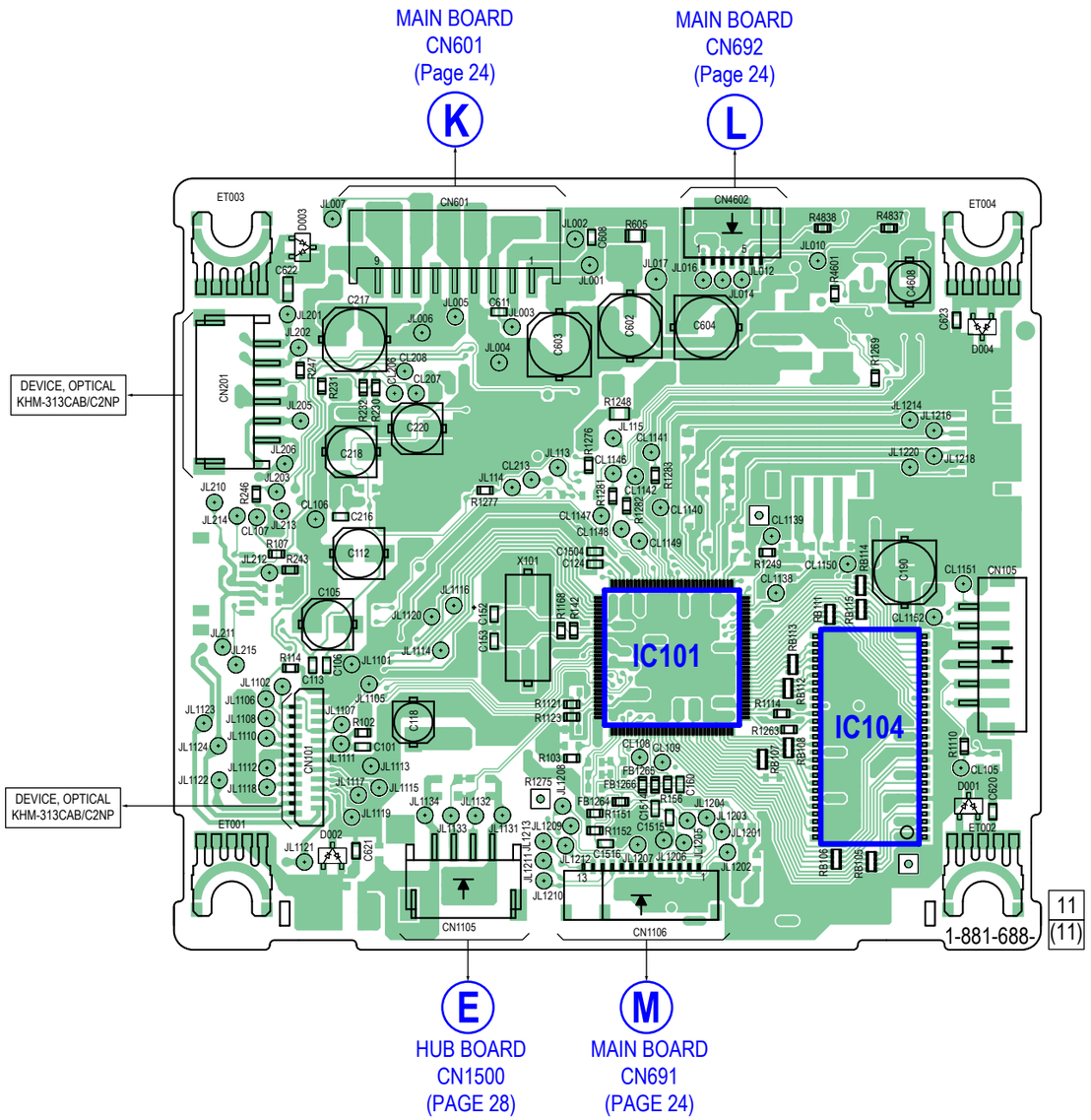




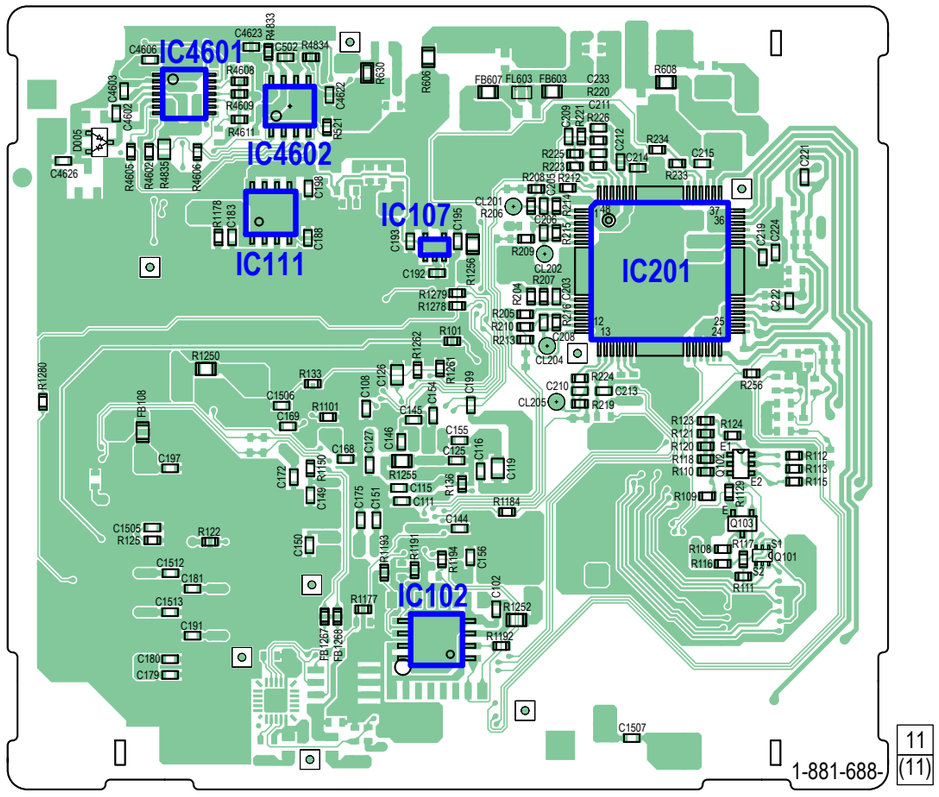
6-5. PRINTED WIRING BOARD - DMB19 Board -

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

【DMB19 BOARD】(COMPONENT SIDE)



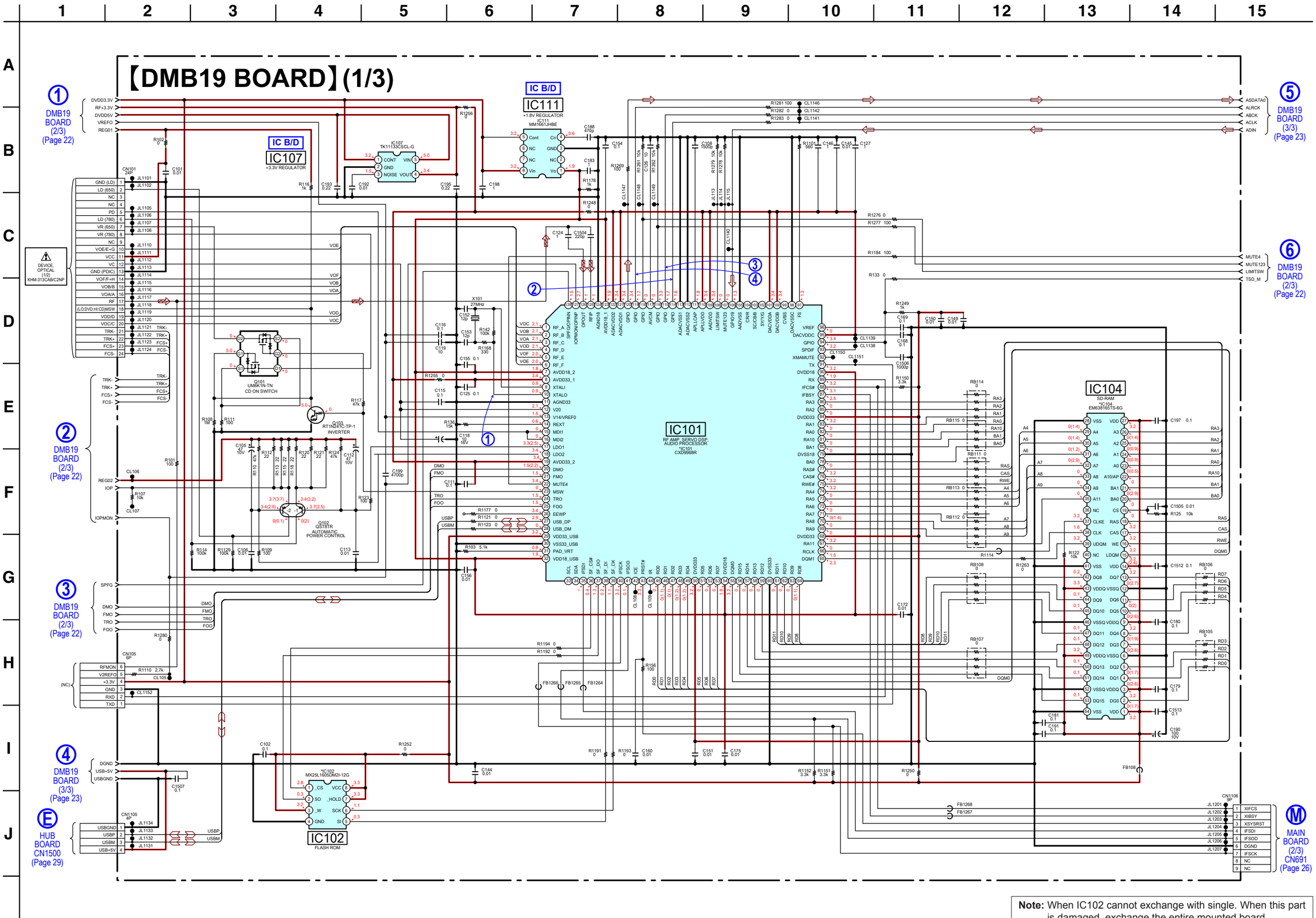
【DMB19 BOARD】(CONDUCTOR SIDE)



Note: When IC102 cannot exchange with single. When this part is damaged, exchange the entire mounted board.

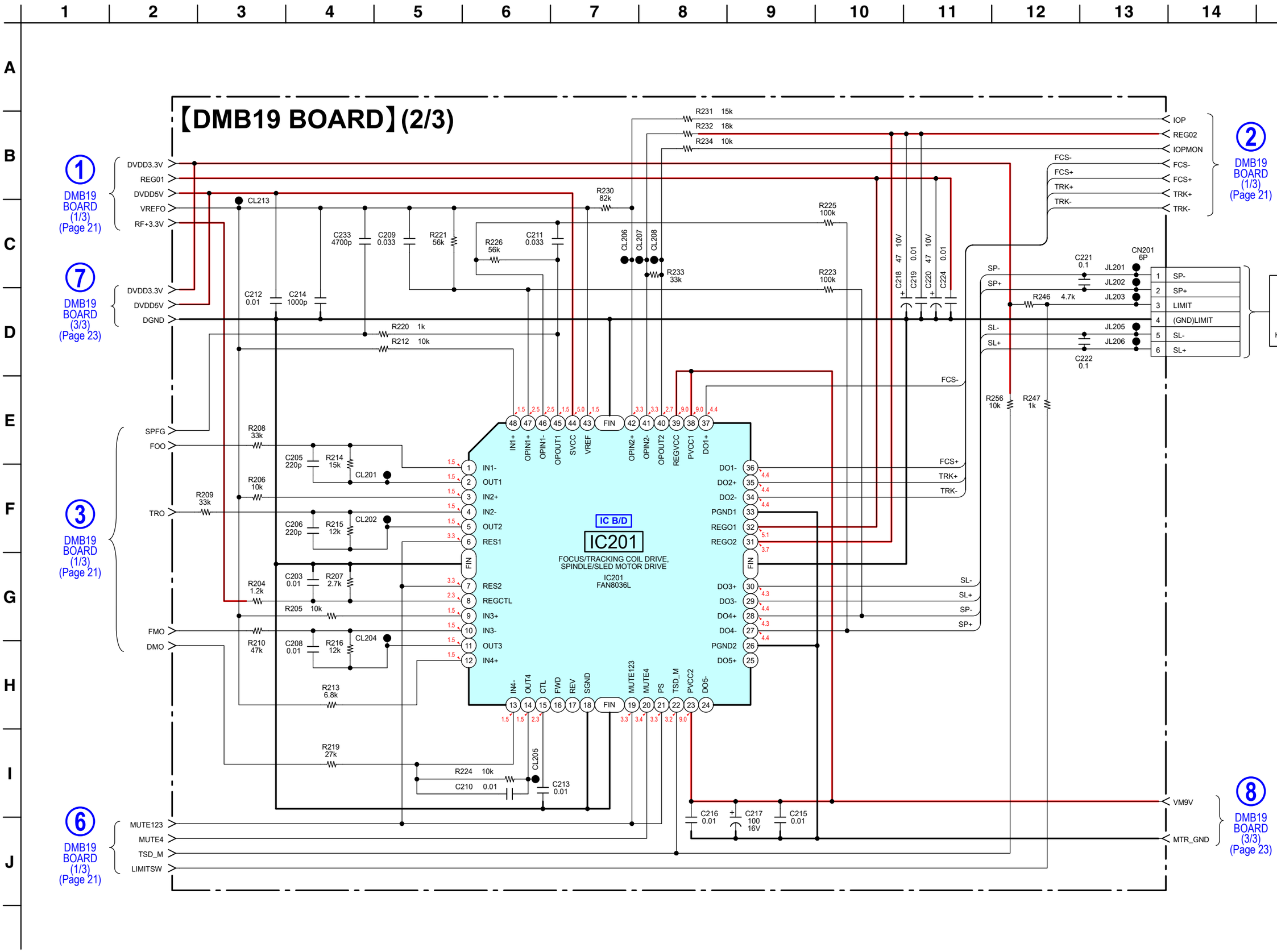
6-6. SCHEMATIC DIAGRAM - DMB19 Board (1/3) -

• See page 39 for Waveforms. • See page 40 for IC Block Diagrams. • See page 44 for IC Pin Function Description.



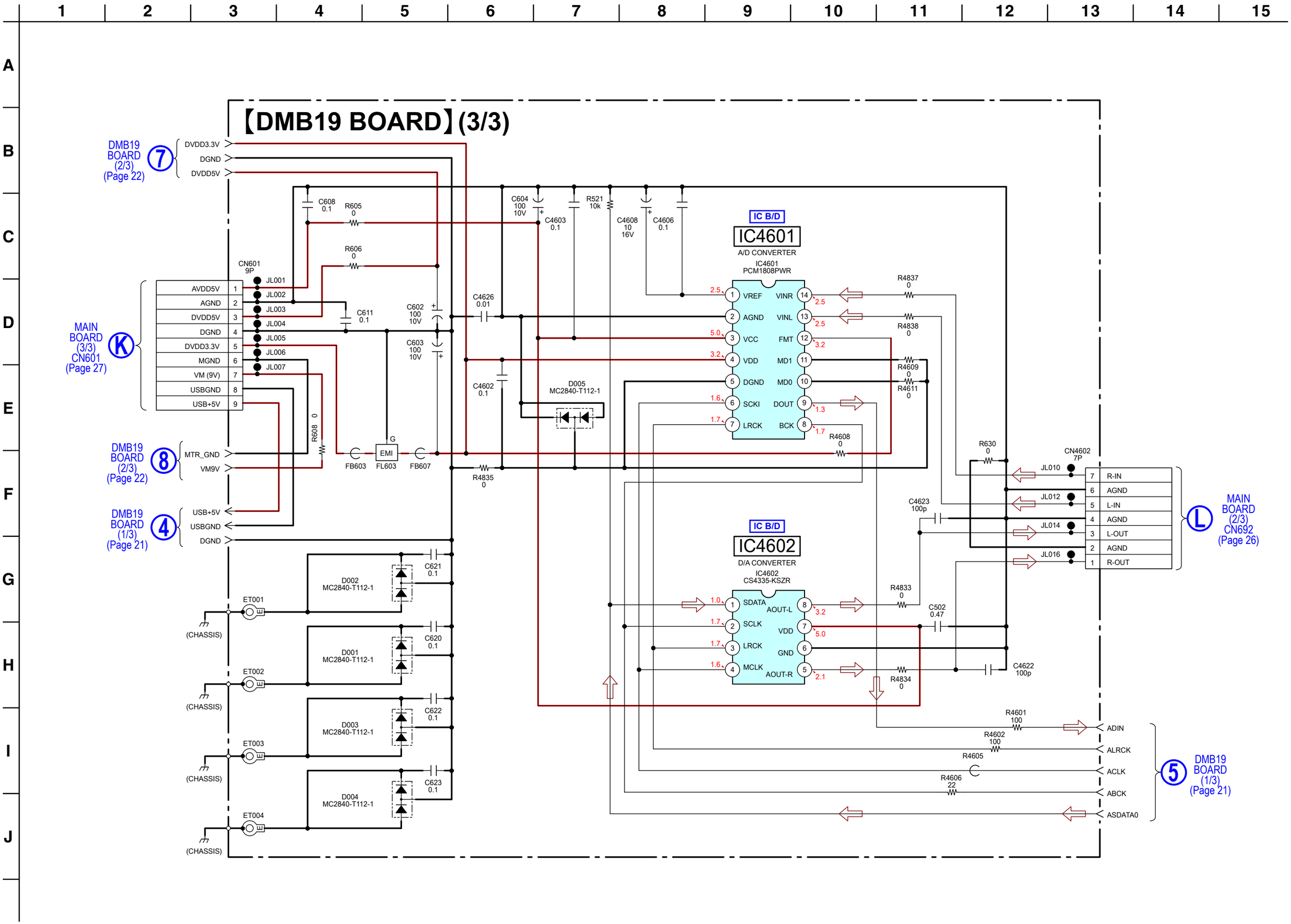
Note: When IC102 cannot exchange with single. When this part is damaged, exchange the entire mounted board.

6-7. SCHEMATIC DIAGRAM - DMB19 Board (2/3) - • See page 40 for IC Block Diagrams.



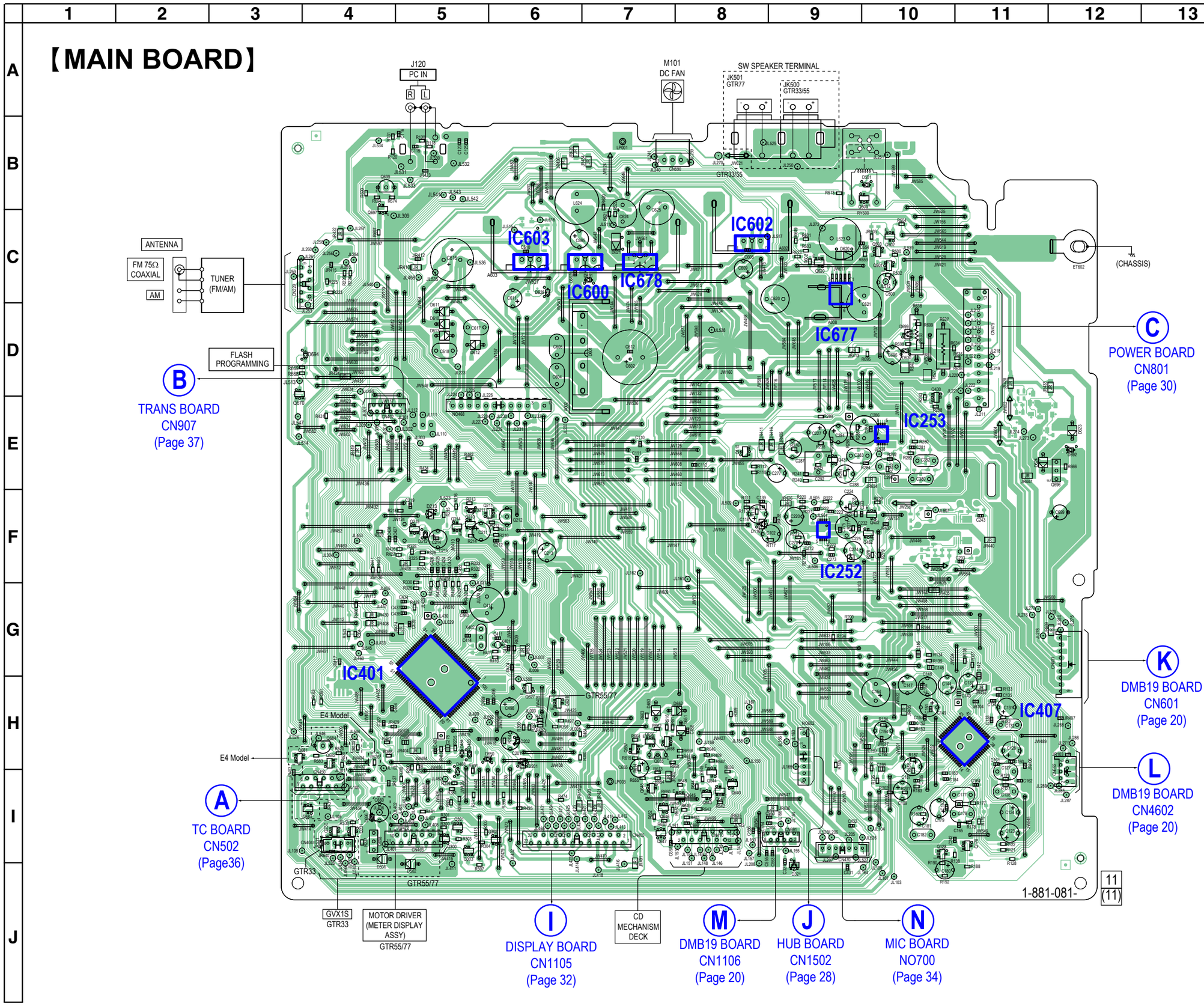
6-8. SCHEMATIC DIAGRAM - DMB19 Board (3/3) -

• See page 40 for IC Block Diagrams.



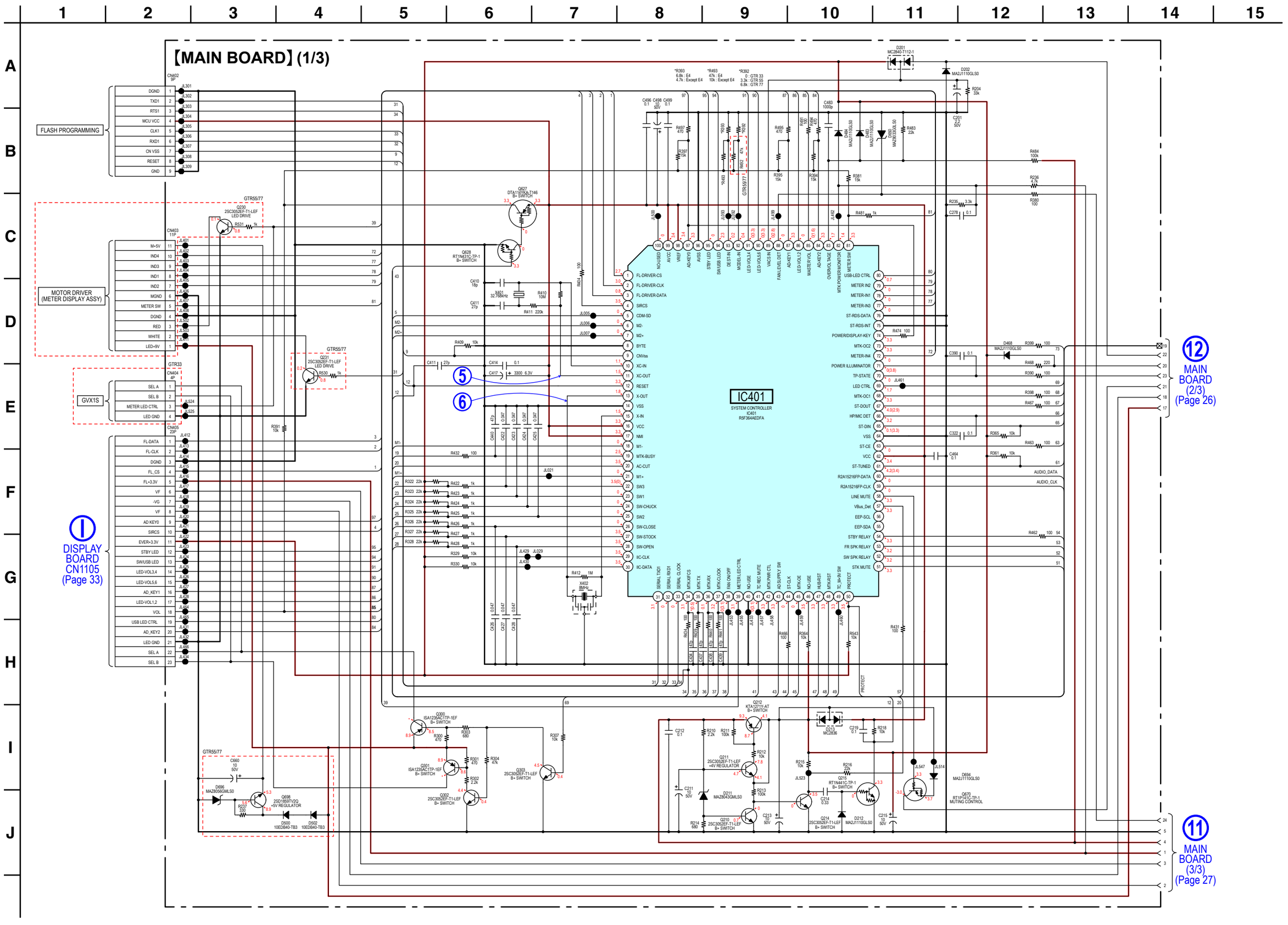
6-9. PRINTED WIRING BOARD - MAIN Board -

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

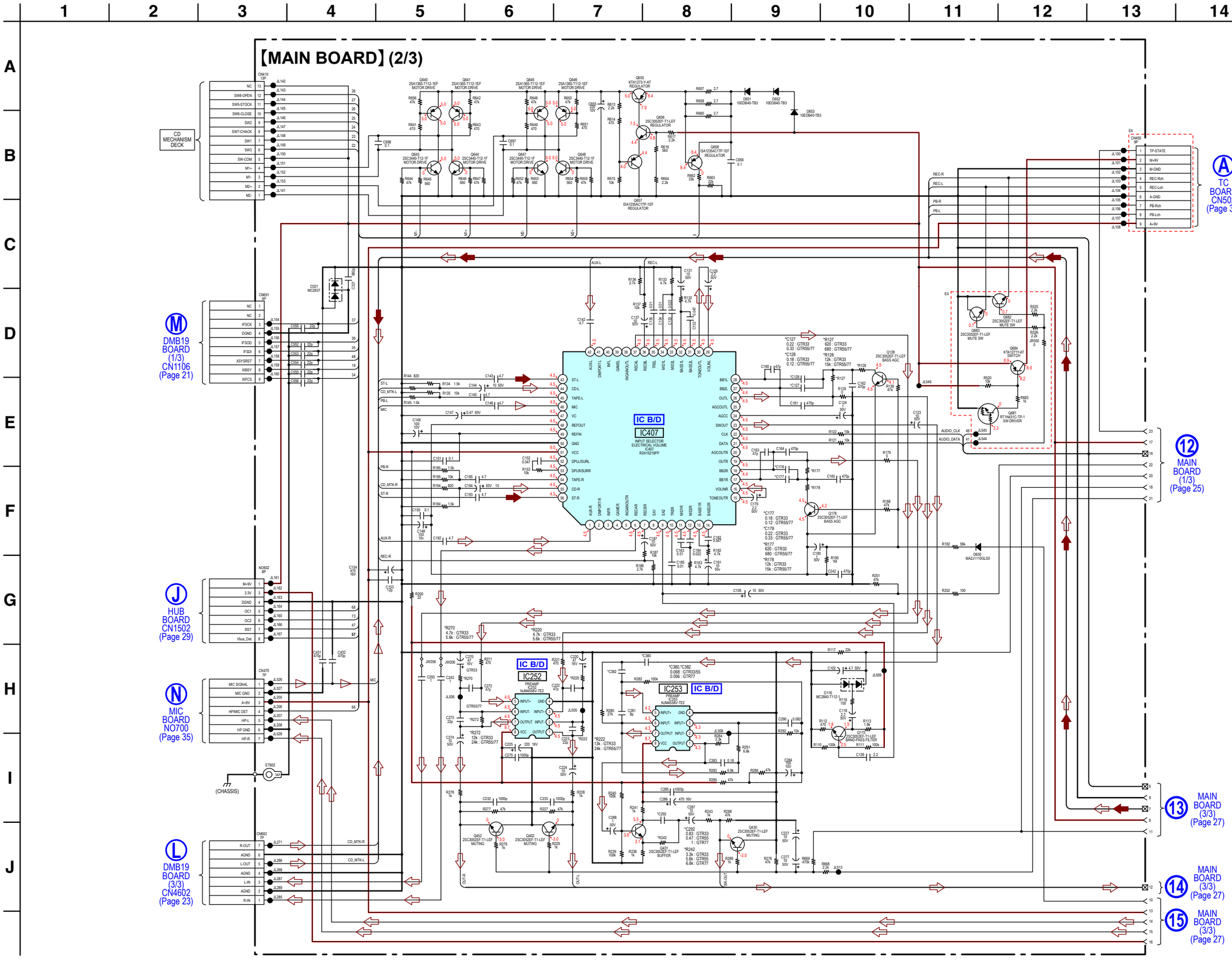


6-10. SCHEMATIC DIAGRAM - MAIN Board (1/3) -

• See page 39 for Waveforms. • See page 40 for IC Pin Function Description.

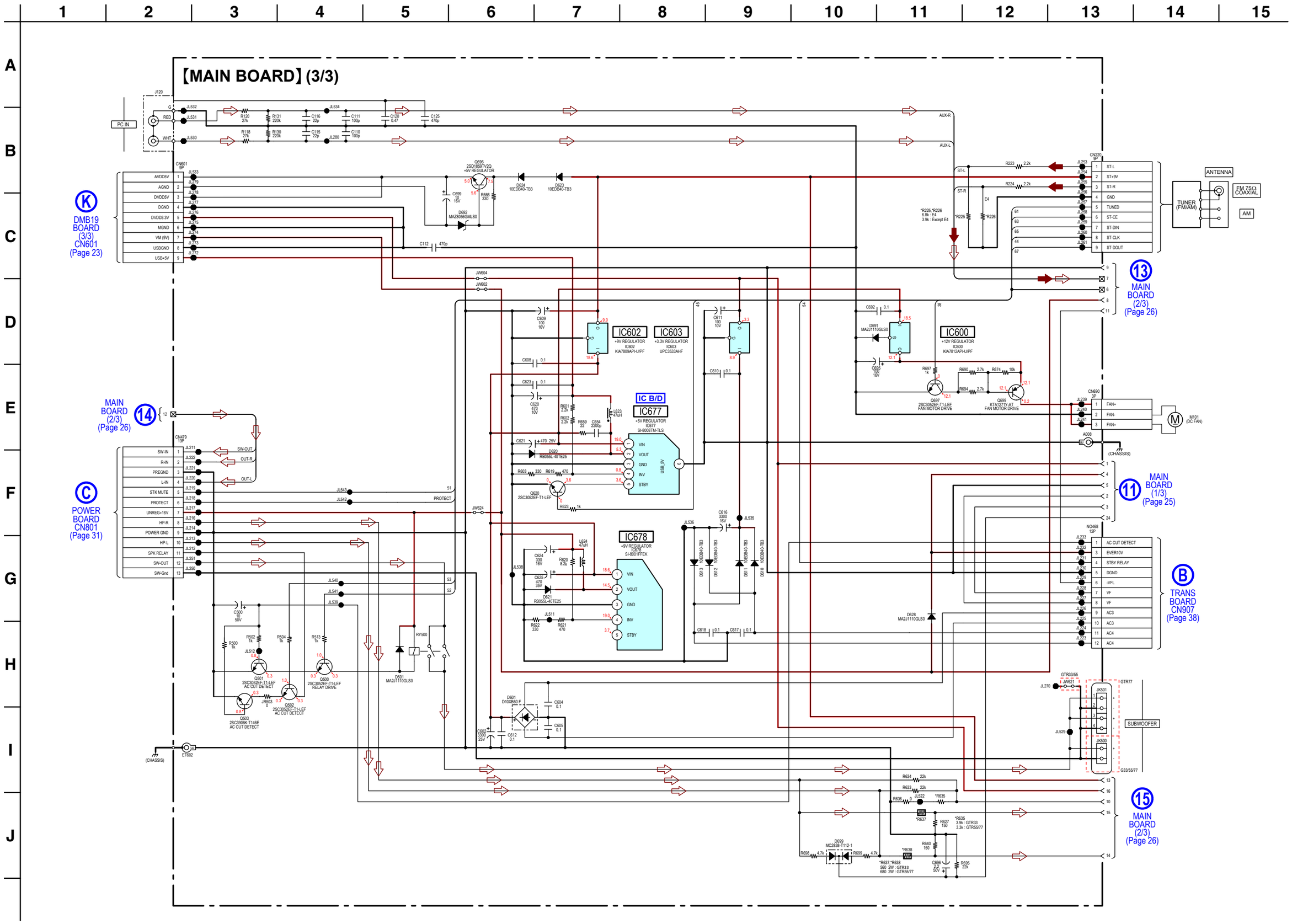

【MAIN BOARD】(1/3)
IC401
SYSTEM CONTROLLER
IC401
R5F364AEDFA
FLASH PROGRAMMING
MOTOR DRIVER
(METER DISPLAY ASSY)
GVX1S
DISPLAY
BOARD
CN1105
(Page 33)
MAIN
BOARD
(2/3)
(Page 26)
MAIN
BOARD
(3/3)
(Page 27)
GTR55/77
GTR33
Q230 2SC3052EF-T1-LEF LED DRIVE
Q231 2SC3052EF-T1-LEF LED DRIVE
Q627 DTA114YKAT146 B+ SWITCH
Q628 RT1N431C-TP-1 B+ SWITCH
Q300 ISA1236ACTP-1EF B+ SWITCH
Q301 ISA1235ACTP-1EF B+ SWITCH
Q302 2SC3052EF-T1-LEF B+ SWITCH
Q303 2SC3052EF-T1-LEF B+ SWITCH
Q212 KTA1271Y-AT B+ SWITCH
Q211 2SC3052EF-T1-LEF +4V REGULATOR
Q210 2SC3052EF-T1-LEF B+ SWITCH
Q215 RT1N441C-TP-1 B+ SWITCH
Q214 2SC3052EF-T1-LEF B+ SWITCH
Q698 2SD1859TV2Q +5V REGULATOR
Q670 RT1P141C-TP-1 MUTING CONTROL
D201 MC2840-T112-1
D202 MA2J1110GLS0
D213 MC2836
D696 MA28056GMLS0
D211 MA28043GMLS0
D600 10EDB40-TB3
D602 10EDB40-TB3
CN402 9P
CN403 11P
CN404 4P
CN405 23P
FL-DRIVER-CS
FL-DRIVER-CLK
FL-DRIVER-DATA
SIRCS
CDM-SD
M2-
M2+
BYTE
CNVss
XC-IN
XC-OUT
RESET
X-OUT
VSS
X-IN
VCC
NMI
M1-
MTK-BUSY
AC-CUT
M1+
SW3
SW1
SW-CHUCK
SW2
SW-CLOSE
SW-STOCK
SW-OPEN
IIC-CLK
IIC-DATA
METER IN2
METER-IN1
METER-IN3
ST-RDS-DATA
ST-RDS-INT
POWER/DISPLAY-KEY
MTK-OC2
METER-IN4
POWER ILLUMINATOR
TP-STATE
LED CTRL
MTK-OC1
ST-DOUT
HP/MIC DET
ST-DIN
VSS
ST-CE
VCC
ST-TUNED
R2A15216FP-DATA
R2A15216FP-CLK
LINE MUTE
VBus_Det
EEP-SCL
EEP-SDA
STBY RELAY
FR SPK RELAY
SW SPK RELAY
STK MUTE
AUDIO_DATA
AUDIO_CLK
X401 32.768kHz
X402 8MHz
R412 1M
R411 220k
R410 10M
R409 10k
R391 10k
R432 100
R397 15k
R395 15k
R394 15k
R381 15k
R481 1k
R484 100k
R236 4.7k
R380 100
R235 3.3k
C278 0.1
R474 100
R543 10k
R431 100
R364 10k
R466 100
R307 10k
R303 680
R300 470
R301 470
R304 47k
R302 2.2k
R210 2.2k
R211 100k
R212 10k
R213 100k
R214 680
R215 10k
R216 22k
R218 10k
R237 330
R399 100
R468 220
R390 100
R398 100
R467 100
R365 10k
R463 100
R361 10k
R462 100
C660 10 50V
C411 27p
C414 0.1
C417 .3300 6.3V
C410 18p
C390 0.1
C322 0.1
C464 0.1
C219 0.1
C211 10 50V
C213 10 50V
C215 10 50V
C440 47p
C422 0.047
C423 0.047
C424 0.047
C425 0.047
C426 0.047
C427 0.047
C428 0.047
C496 0.1
C498 10 50V
C499 0.1
C483 1000p
C201 2.2 50V
R204 33k
R483 22k
R484 100k
R485 100
R486 100
R487 100
R488 100
R489 100
R490 100
R491 100
R492 100
R493 100
R494 100
R495 470
R496 470
R497 470
R498 100
R499 100
R500 100
R501 100
R502 100
R503 100
R504 100
R505 100
R506 100
R507 100
R508 100
R509 100
R510 100
R511 100
R512 100
R513 100
R514 100
R515 100
R516 100
R517 100
R518 100
R519 100
R520 100
R521 100
R522 100
R523 100
R524 100
R525 100
R526 100
R527 100
R528 100
R529 100
R530 1k
R531 1k
R532 1k
R533 1k
R534 1k
R535 1k
R536 1k
R537 1k
R538 1k
R539 1k
R540 1k
R541 1k
R542 1k
R544 1k
R545 1k
R546 1k
R547 1k
R548 1k
R549 1k
R550 1k
R551 1k
R552 1k
R553 1k
R554 1k
R555 1k
R556 1k
R557 1k
R558 1k
R559 1k
R560 1k
R561 1k
R562 1k
R563 1k

6-11. SCHEMATIC DIAGRAM - MAIN Board (2/3) - • See page 40 for IC Block Diagrams.



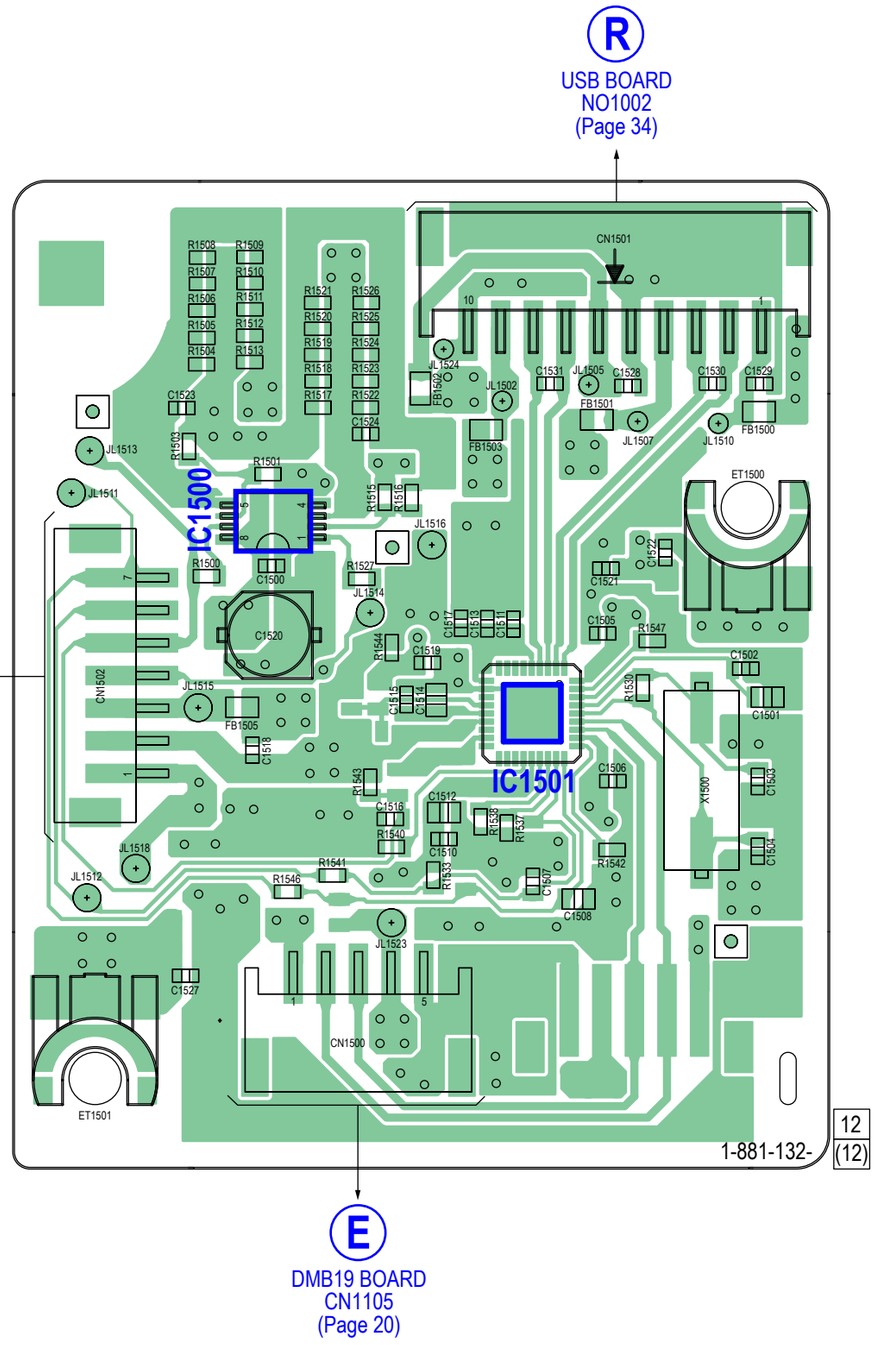
6-12. SCHEMATIC DIAGRAM - MAIN Board (3/3) -

• See page 40 for IC Block Diagrams.

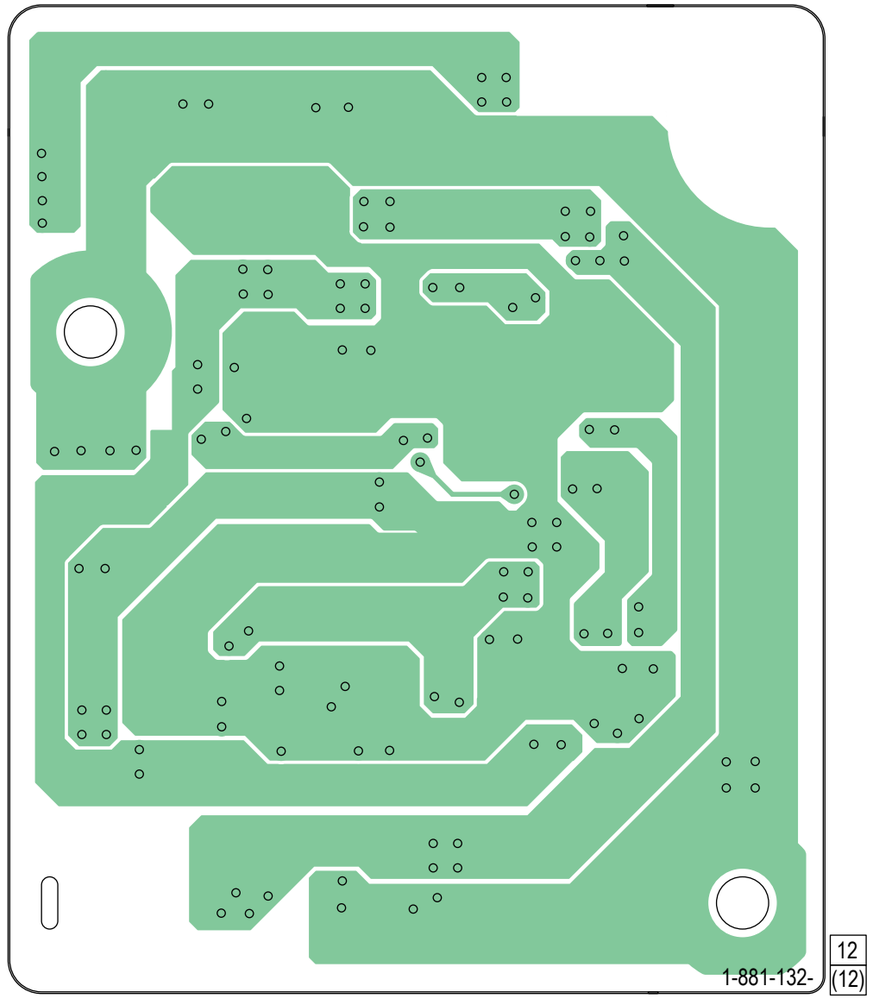


6-13. PRINTED WIRING BOARD - HUB Board - • See page 19 for Circuit Boards Location. • : Uses unleaded solder.

【HUB BOARD】(COMPONENT SIDE)

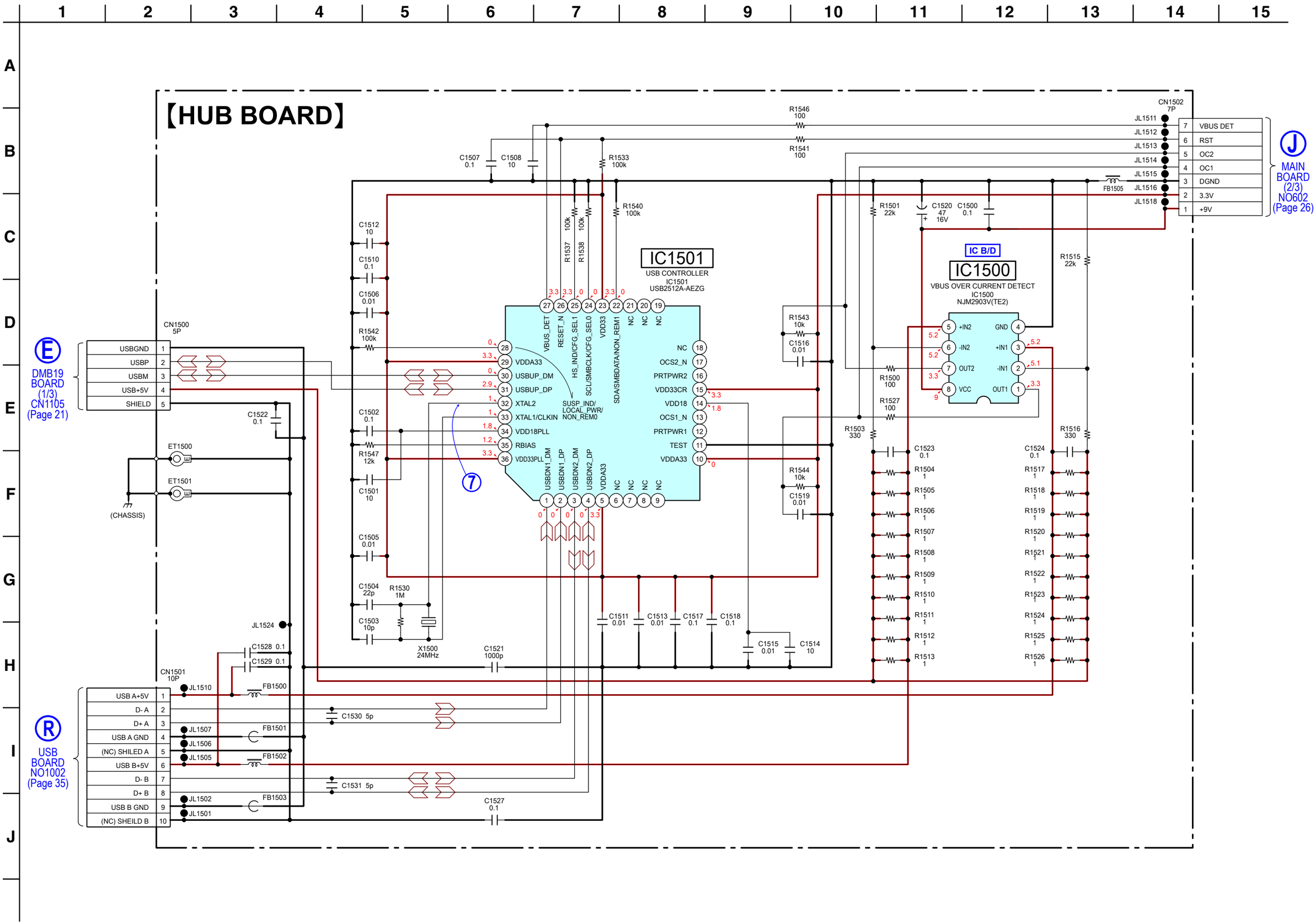


【HUB BOARD】(CONDUCTOR SIDE)



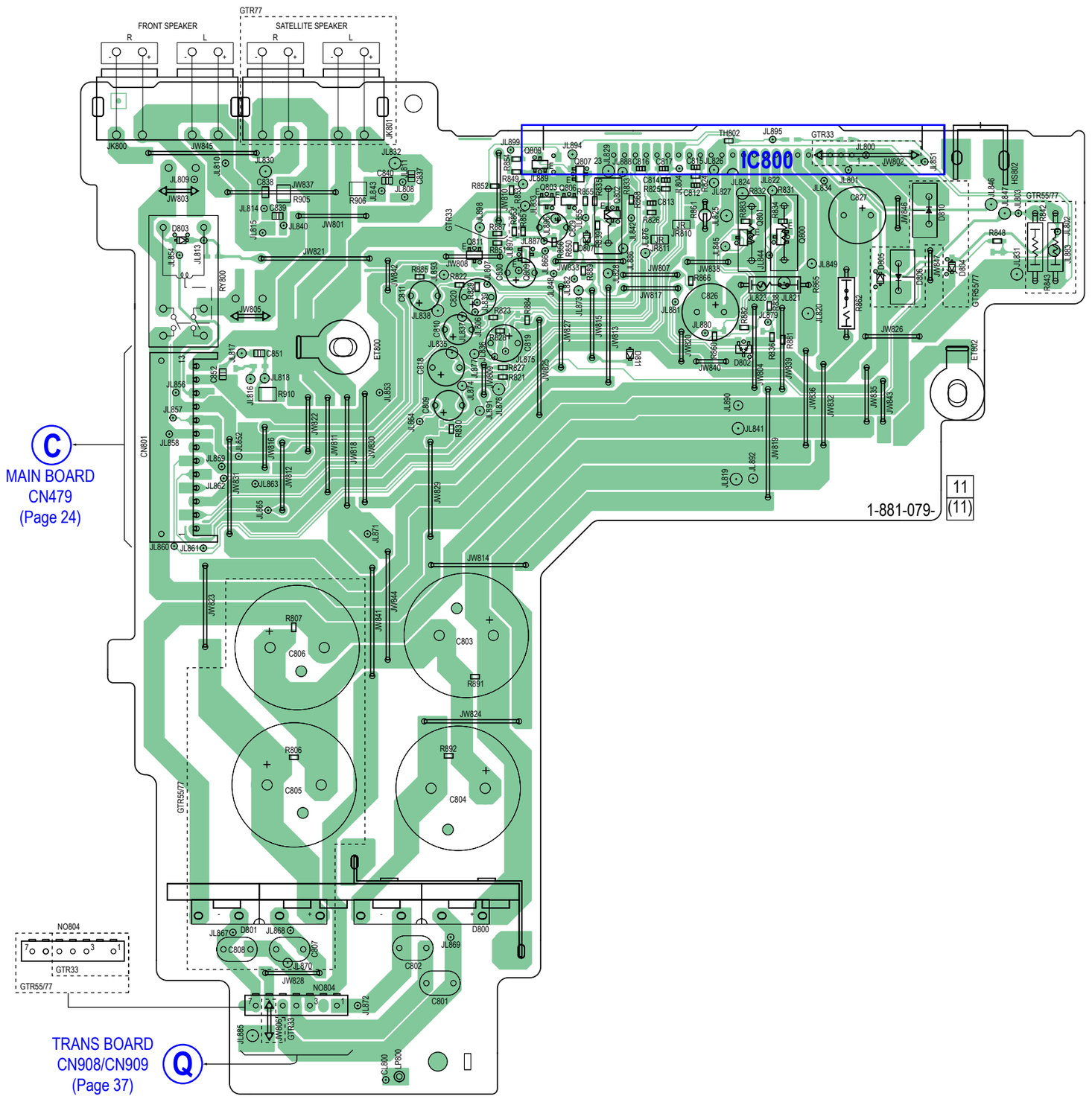
6-14. SCHEMATIC DIAGRAM - HUB Board -

• See page 39 for Waveforms. • See page 40 for IC Pin Function Description.

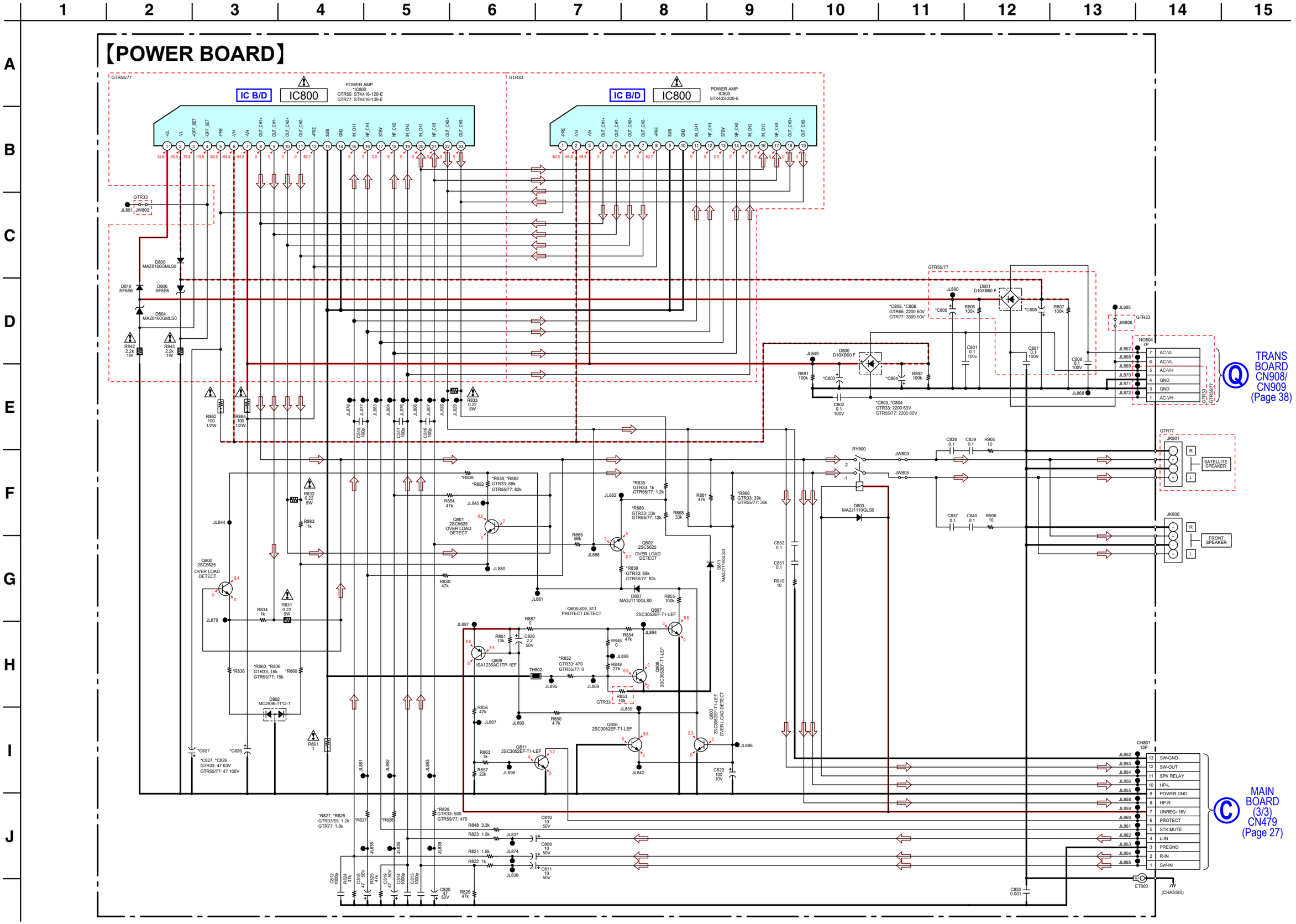


6-15. PRINTED WIRING BOARD - POWER Board - • See page 19 for Circuit Boards Location. • : Uses unleaded solder.

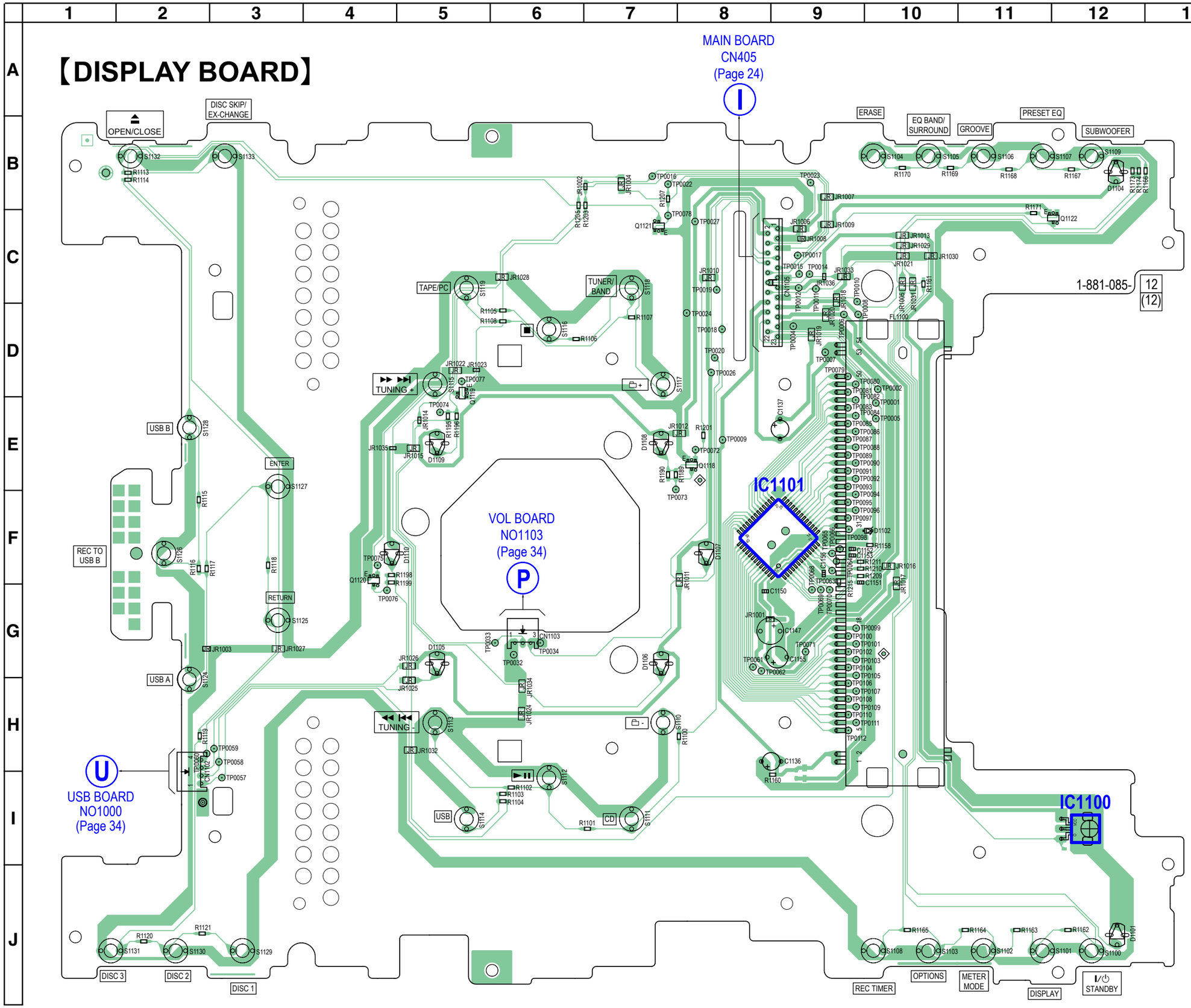
【POWER BOARD】



6-16. SCHEMATIC DIAGRAM - POWER Board -



6-17. PRINTED WIRING BOARD - DISPLAY Board - • See page 19 for Circuit Boards Location. • : Uses unleaded solder.



6-18. SCHEMATIC DIAGRAM - DISPLAY Board - • See page 40 for IC Block Diagrams.

【DISPLAY BOARD】

FL1100
FLUORESCENT INDICATOR TUBE

CN1105 23P
FL-DATA 23 TP0015 FL_DATA
FL-CLK 22 TP0016 FL_CLK
DGND 21 TP0007
FL-CS 20 TP0014 FL_CS
FL+3.3V 19 TP0008
VF 18 TP0006
-VG 17 TP0005
VF 16 TP0004
AD KEY0 15 TP0009 AD_KEY0
SIRCS 14 TP0017 SIRCS
EVER +3.3V 13 TP0023
STBY LED 12 TP0022
SW/USB_LED 11 TP0001 SW_LED
LED2 10 TP0019 LED_VOL3.4
LED3 9 TP0020 LED_VOL5.6
AD KEY1 8 TP0010 AD_KEY1
LED1 7 TP0018 LED_VOL1.2
VOL 6 TP0012 VOL
USB LED CTRL 5 TP0002
AD KEY2 4 TP0011 AD_KEY2
LED GND 3 TP0024
SEL A 2 TP0026
SEL B 1 TP0027

MAIN BOARD (1/3) CN405 (Page 25)

CN1103 3P
DGND 1 TP0032
DET SWITCH 2 TP0033
VOL 3 TP0034 VOL

VOL BOARD NO1103 (Page 35)

CN1102 4P
SW/USB_LED 1 TP0057
LED SEL B 2 TP0058
LED SEL A 3 TP0059
USB LED CTRL 4 TP0060

USB BOARD NO1000 (Page 35)

D1102 MAZ8082GMLS0
R1158 47k
C1137 2.2 50V
R1160 47k
C1136 2.2 50V

D1101 SLI-325URT31WR
STANDBY
R1161 1k

R1162 680 S1100 I / ⏻ STANDBY
R1163 1k S1101 DISPLAY
R1164 1.5k S1102 METER MODE
R1165 1.5k S1103 OPTIONS
R1166 2.2k S1108 REC TIMER
R1167 3.3k *S1109 SUBWOOFER
R1168 4.7k S1107 PRESET EQ
R1169 6.8k S1106 GROOVE
R1170 10k S1105 EQ BAND/ SURROUND
S1104 ERASE

R1113 680 S1132 OPEN/CLOSE
R1114 1k S1133 DISC SKIP/ EX-CHANGE
R1115 1.5k S1128 USB B
R1116 1.5k S1126 REC TO USB B
R1117 2.2k S1124 USB A
R1118 3.3k S1127 ENTER
R1119 4.7k S1125 RETURN
R1120 6.8k S1131 DISC 3
R1121 10k S1130 DISC 2
S1129 DISC 1

IC1100
REMOTE CONTROL RECEIVER
IC1100
PNA4823M03S0
VCC OUT GND

R1100 680 S1110 -
R1101 1k S1111 CD
R1102 1.5k S1112 ▶ ❚❚
R1103 1.5k S1113 ◀◀ |◀◀ TUNING -
R1104 2.2k S1114 USB
R1105 3.3k S1115 ▶▶ ▶▶| TUNING +
R1106 4.7k S1116 ■
R1107 6.8k S1117 +
R1108 10k S1118 TUNER/ BAND
S1119 TAPE/PC

C1147 22 50V

IC B/D
IC1101
FLUORESCENT INDICATOR TUBE DRIVER
IC1101
PT6324-Q

G7 -31.0 40 GR7
G8 -31.0 41 GR8
G9 -31.0 42 GR9
G10 -31.0 43 GR10
G11 -31.0 44 GR11
G12 -31.0 45 GR12
G13 -31.0 46 GR13
G14 -31.0 47 GR14
TP0061 48 GR15
TP0062 49 GR16
-33.2 50 VEE
3.3 51 VDD
52 GND

G6 G5 G4 G3 G2 G1
39 38 37 36 35 34 33 32 31 30 29 28 27
-31.0 -31.0 -31.0 -31.0 -31.0 -24.4 -26.5 -22.3 -26.5 -30.8 -32.9 -24.4
GR6 GR5 GR4 GR3 GR2 GR1 SG24/KS24 SG23/KS23 SG22/KS22 SG21/KS21 SG20/KS20 SG19/KS19 SG18/KS18

S1 S2 S3 S4 S5 S6 S7
S8 S9 S10 S11 S12 S13 S14 S15 S16 S17 S18 S19 S20

SG17/KS17 26 -26.5
SG16/KS16 25 -32.7
SG15/KS15 24 -29.8
SG14/KS14 23 -24.3
SG13/KS13 22 -20.0
SG12/KS12 21 -24.2
SG11/KS11 20 -24.2
SG10/KS10 19 -22.1
SG9/KS9 18 -26.3
SG8/KS8 17 -32.7
SG7/KS7 16 -32.7
SG6/KS6 15 -26.4
SG5/KS5 14 -30.6

CLK 1 2.9
DIN 2 0.8
STB 3 2.6
DOUT 4
K1 5
K2 6 1.8
OSC 7
GND 8
VDD 9 3.3
SG1/KS1 10
SG2/KS2 11
SG3/KS3 12
SG4/KS4 13

TP0068 TP0069 TP0070 TP0063 TP0064 TP0065 TP0066

C1156 0.1
C1150 0.1
C1155 47 10V
R1215 100k

FL_CLK
FL_DATA
FL_CS
R1209 100
R1210 100
R1211 100
C1151 100p
C1152 100p
C1153 100p

D1105-1110
1L0351V22F0MIT01
STREAM

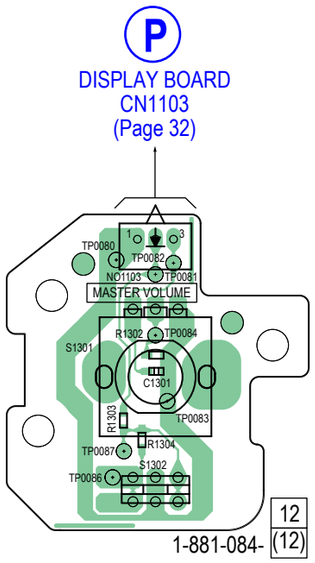
D1104 SLR-325MCT31 SUBWOOFER
D1110 D1109 D1108 D1107 D1106 D1105
R1189 680 R1190 680
R1173 1k R1174 1k
R1195 680 R1196 680 R1198 680 R1199 680

SW_LED R1171 10k 0.1(0.5) <<0.5>>
LED_VOL1.2 R1201 10k
LED_VOL3.4 R1203 10k
LED_VOL5.6 R1205 10k
R1207 10k
TP0073 TP0074 TP0075

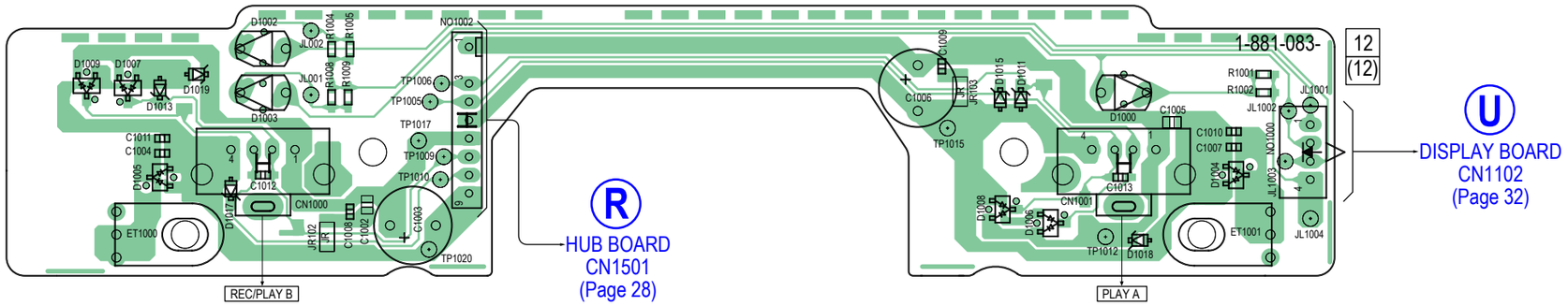
Q1121 2SC3052EF-T1-LEF LED DRIVE
Q1122 2SC3052EF-T1-LEF LED DRIVE
Q1118 2SC3052EF-T1-LEF LED DRIVE
Q1119 2SC3052EF-T1-LEF LED DRIVE
Q1120 2SC3052EF-T1-LEF LED DRIVE

6-19. PRINTED WIRING BOARDS - MIC, USB AND VOL Board - • See page 19 for Circuit Boards Location. • : Uses unleaded solder.

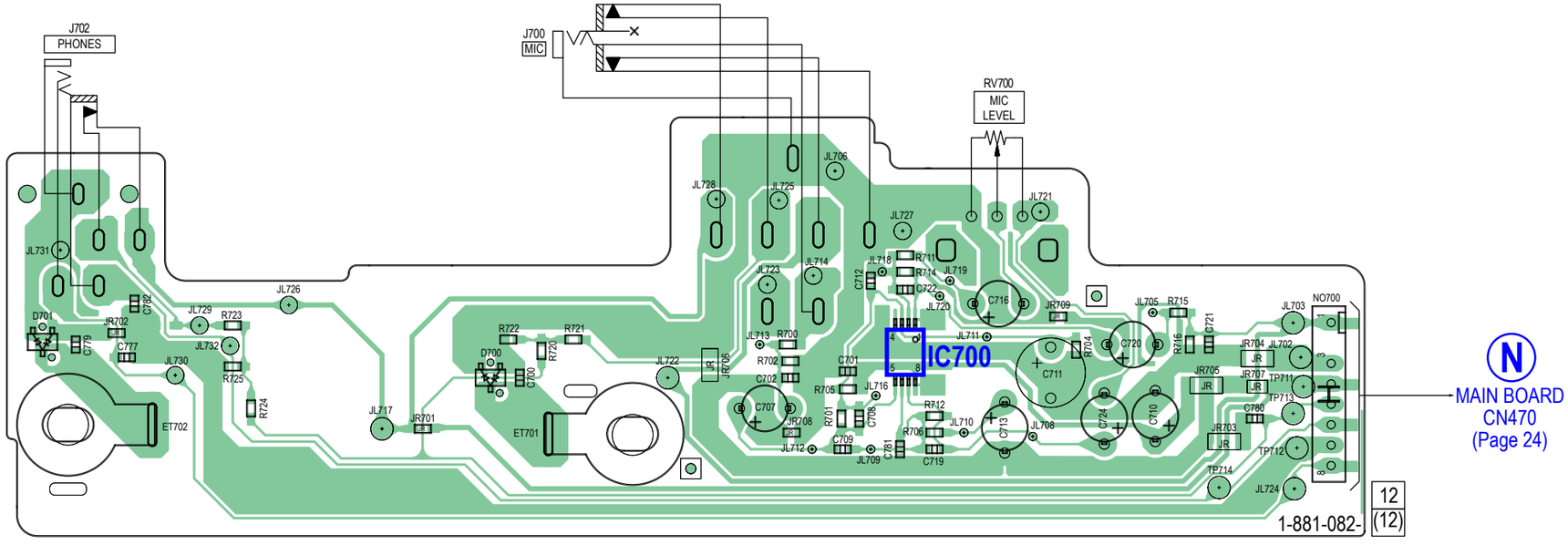
【VOL BOARD】



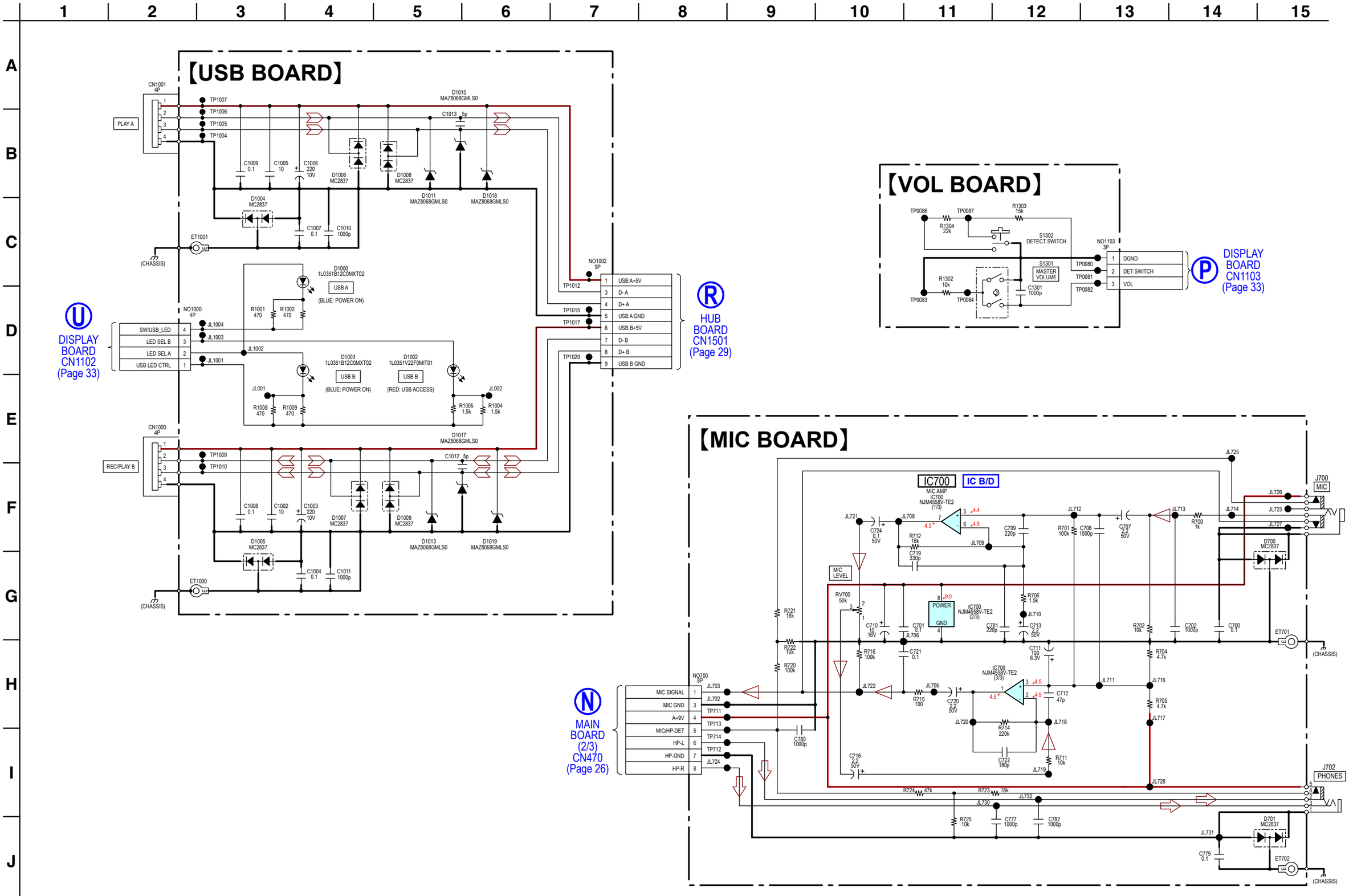
【USB BOARD】



【MIC BOARD】



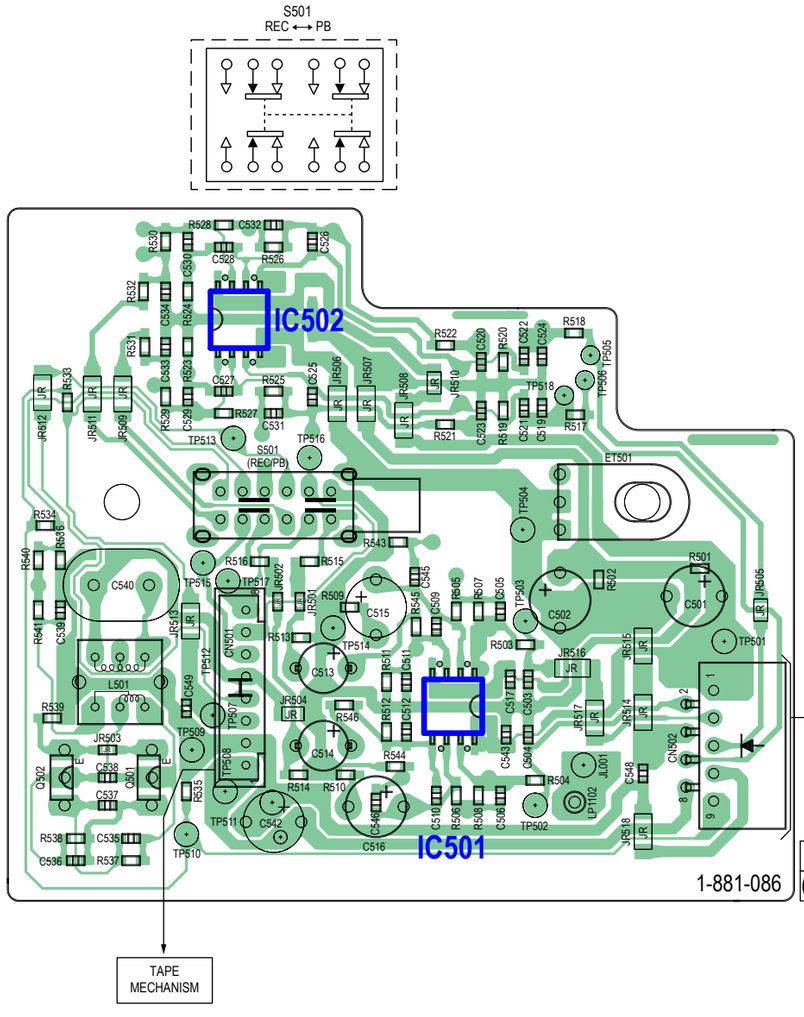
6-20. SCHEMATIC DIAGRAM - MIC, USB AND VOL Board - • See page 40 for IC Block Diagrams.



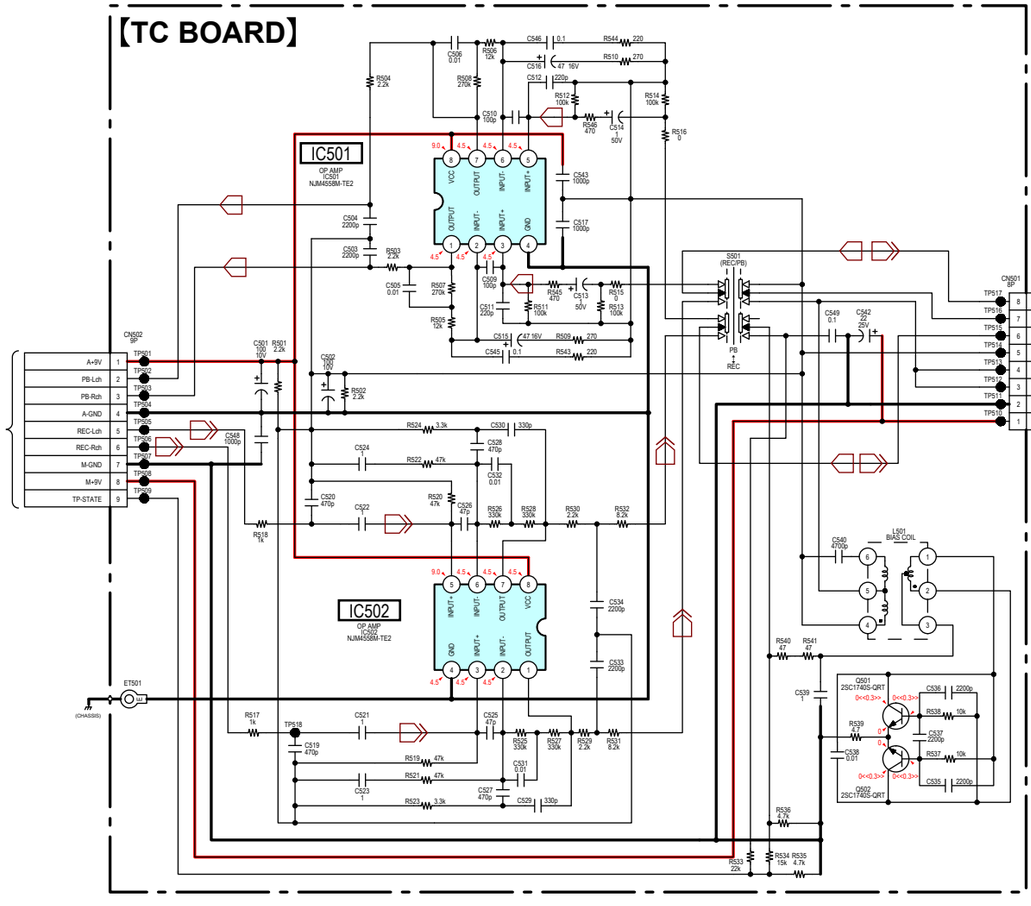
6-21. PRINTED WIRING BOARD - TC Board - (For African model only)

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

【TC BOARD】



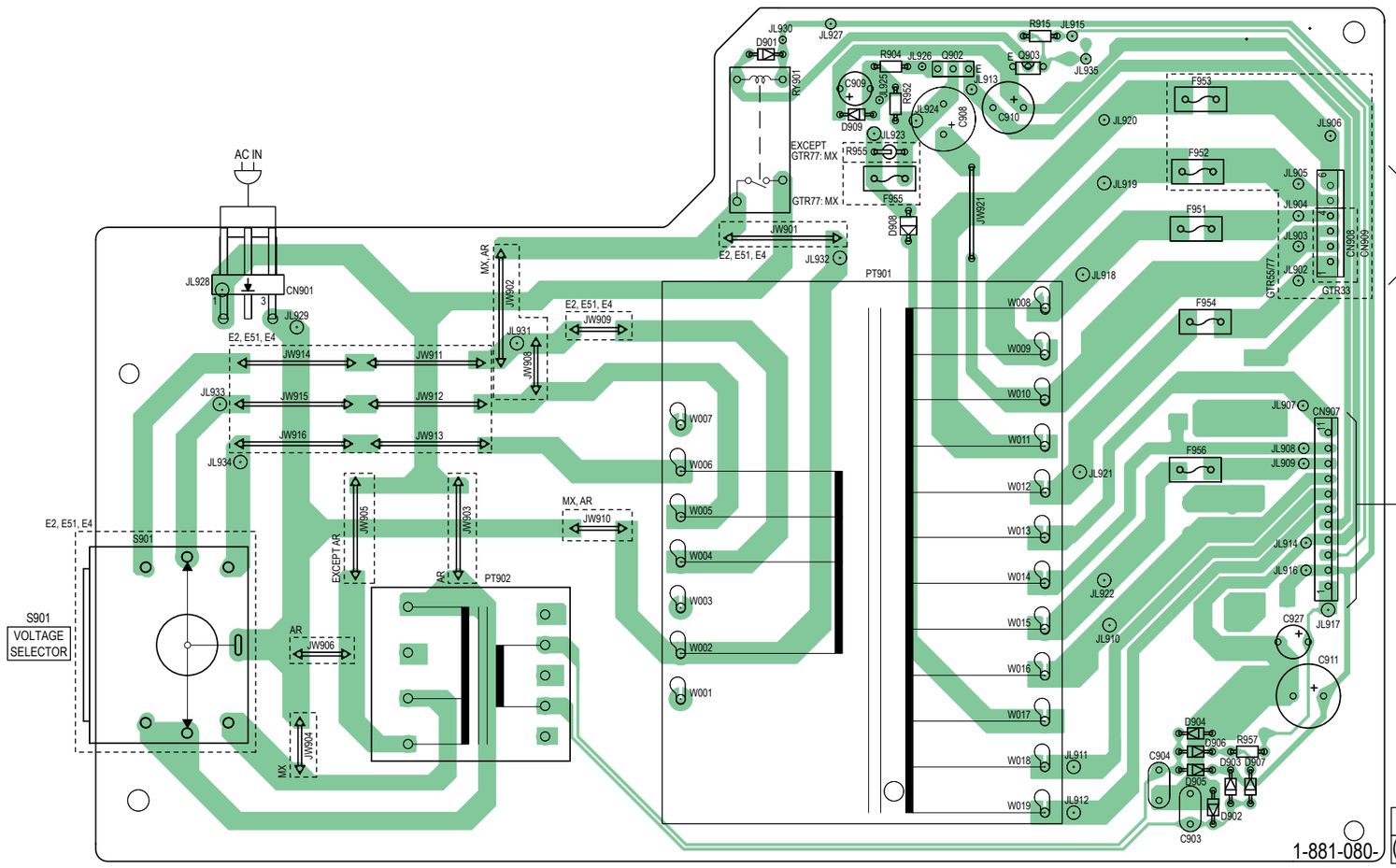
6-22. SCHEMATIC DIAGRAM - TC Board - (For African model only)



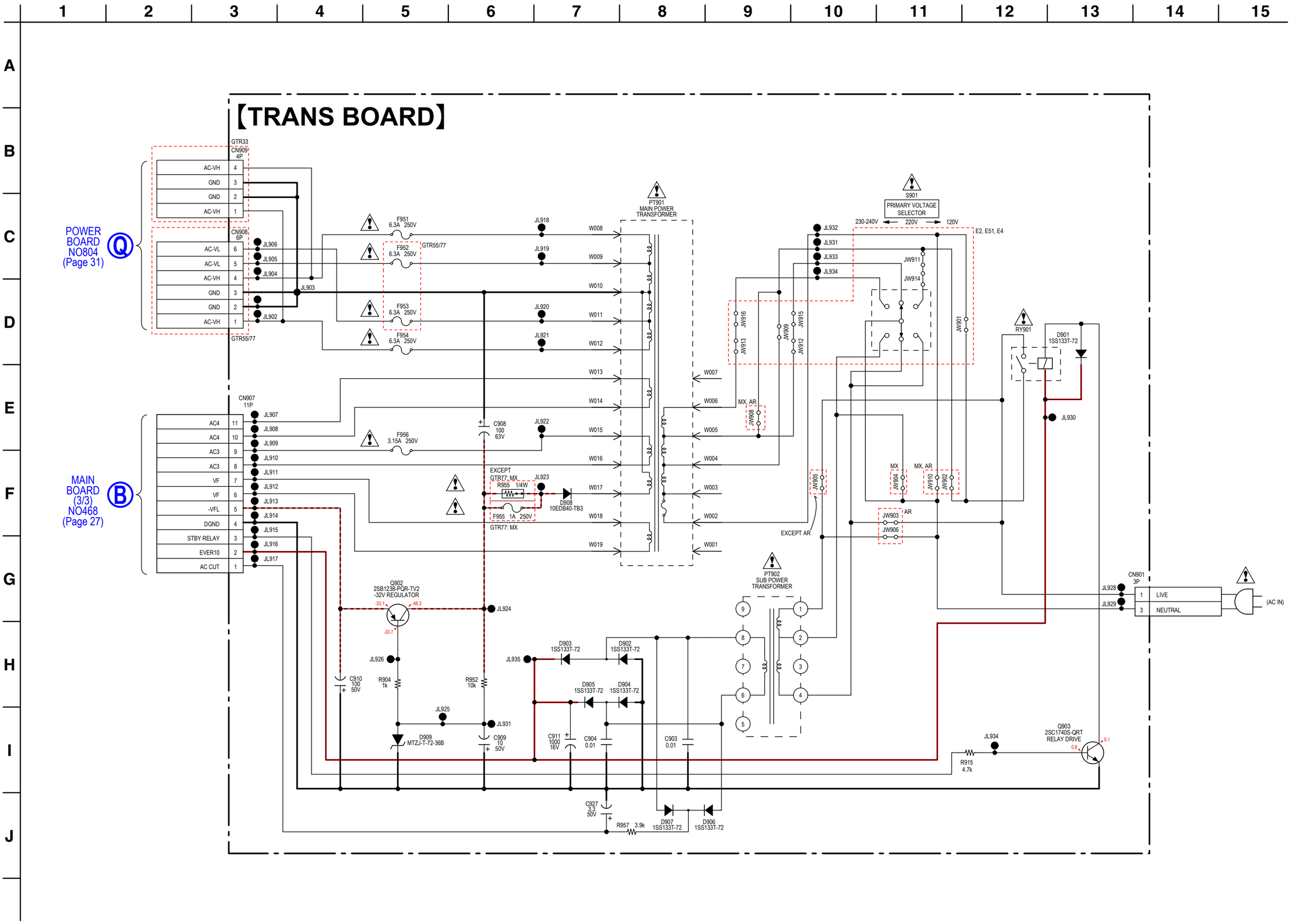
6-23. PRINTED WIRING BOARD - TRANS Board -

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

【TRANS BOARD】



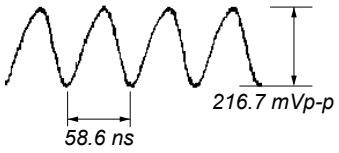
6-24. SCHEMATIC DIAGRAM - TRANS Board -



• **Waveforms**

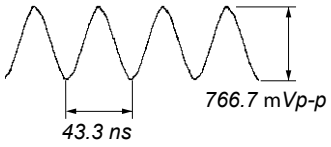
– DMB19 Board –

① **IC101 ⑩ (XTALO)**



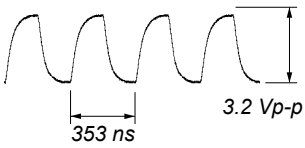
100 mV/DIV, 20 ns/DIV

② **IC101 ⑭ (GPIO)**



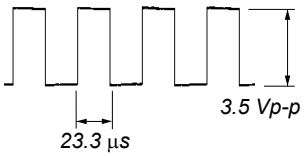
200 mV/DIV, 20 ns/DIV

③ **IC101 ⑮ (GPIO)**



1 V/DIV, 100 ns/DIV

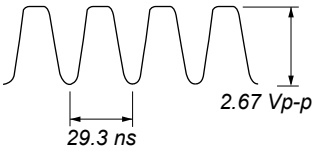
④ **IC101 ⑲ (GPIO)**



1 V/DIV, 10 µs/DIV

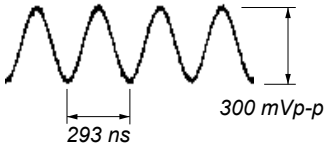
– MAIN Board –

⑤ **IC401 ⑪ (XC-OUT)**



2 V/DIV, 20 µs/DIV

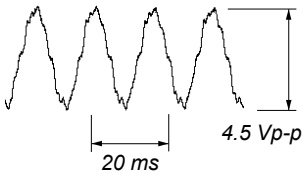
⑥ **IC401 ⑬ (X-OUT)**



200 mV/DIV, 100 ns/DIV

– HUB Board –

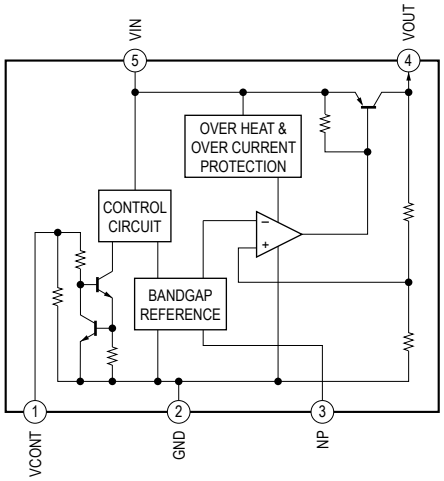
⑦ **IC1501 ㉜ (XTAL2)**



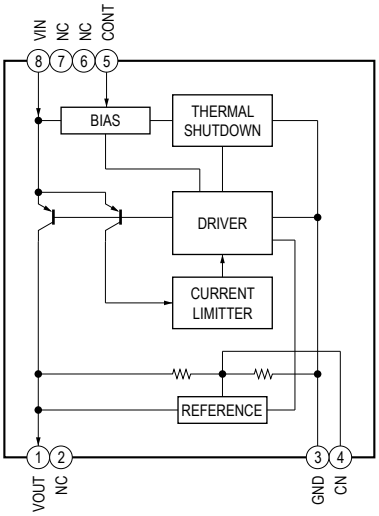
1 V/DIV, 10 ms/DIV

- **IC Block Diagrams**

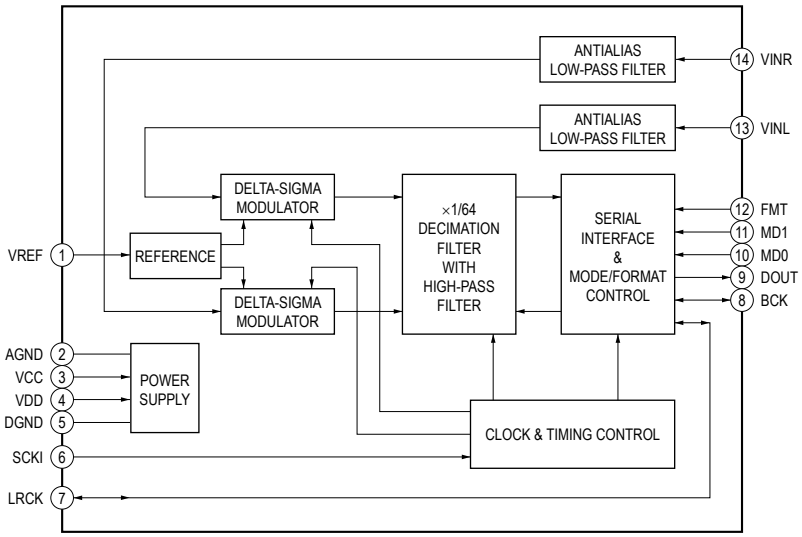
IC107 TK11133CSCL-G (DMB19 Board (1/3))



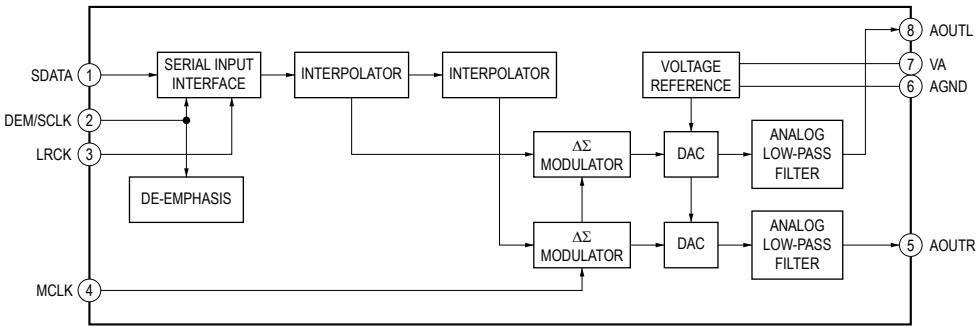
IC111 MM1661JHBE (DMB19 Board (1/3))



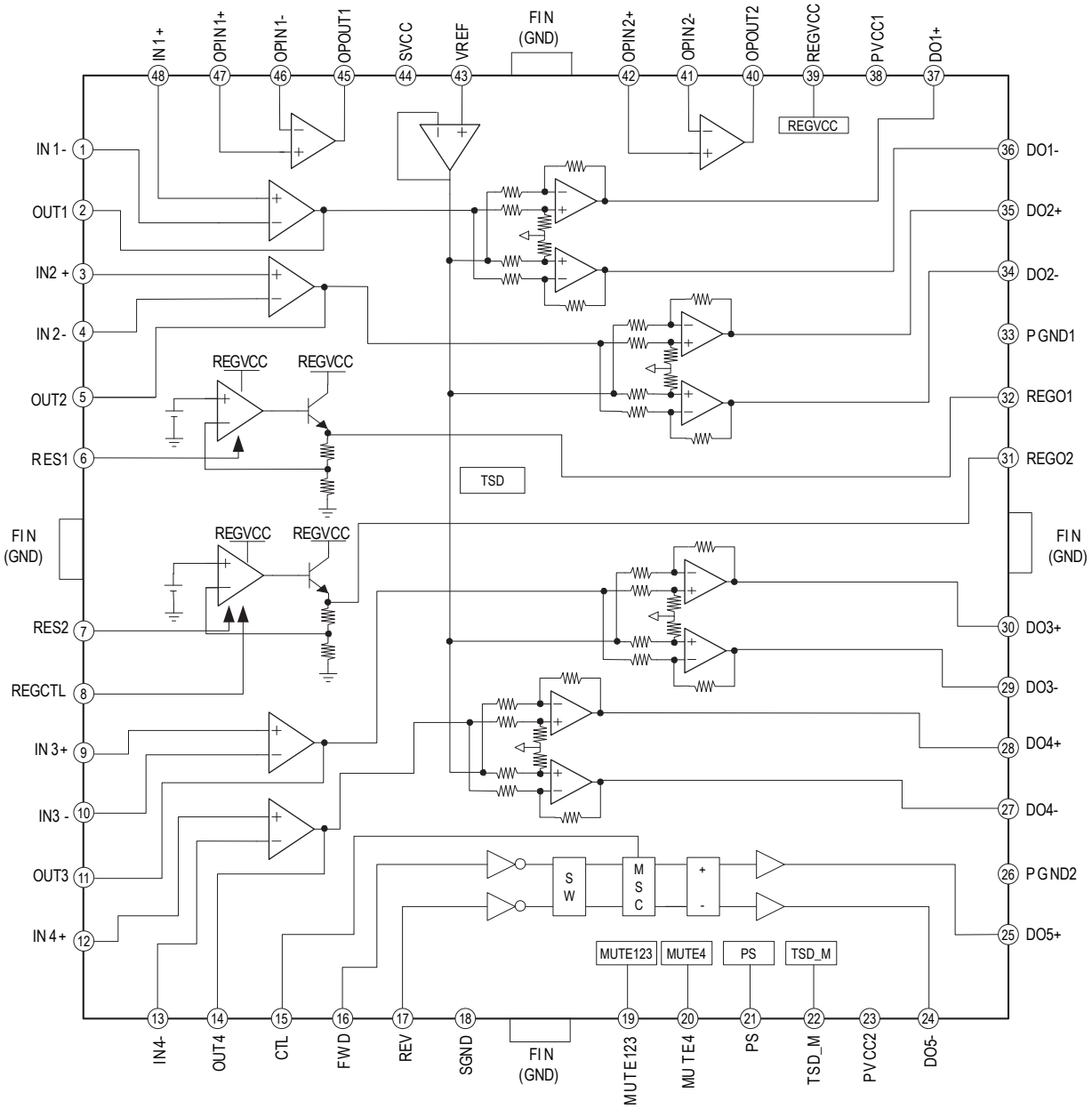
IC4601 PCM1808PWR (DMB19 Board (3/3))



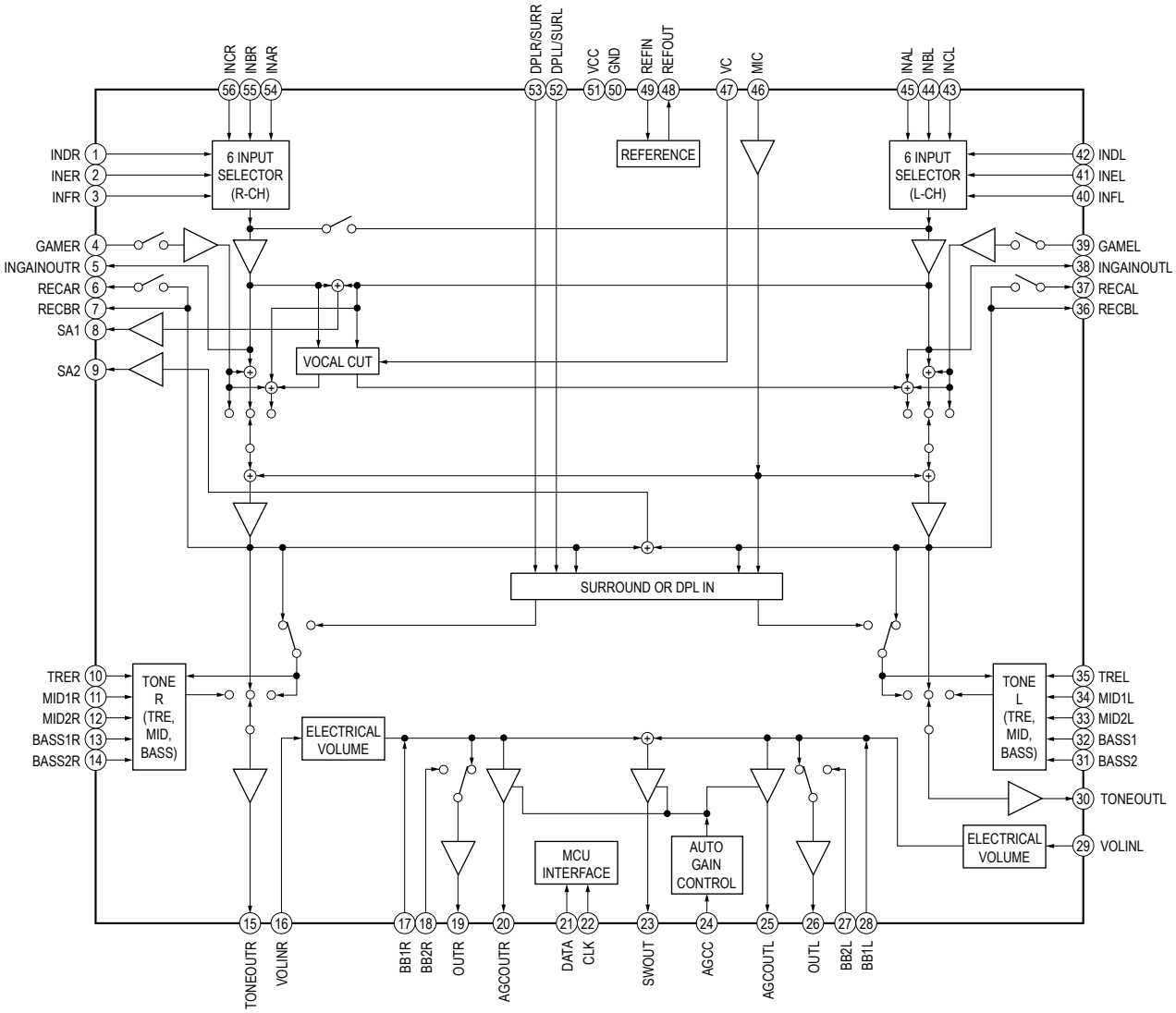
IC4602 CS4335-KSZR (DMB19 Board (3/3))



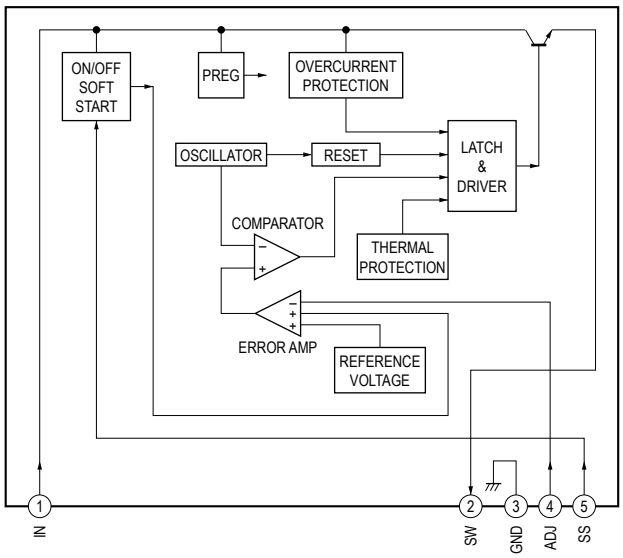
IC201 FAN8036L (DMB19 Board (2/3))



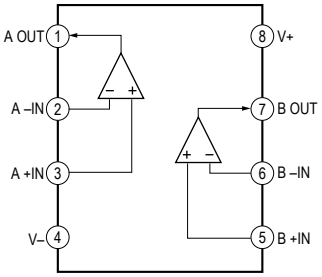
IC407 R2A15216FP (MAIN Board (2/3))



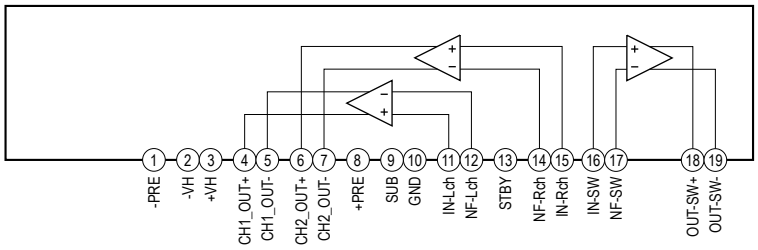
IC677 SI-8008TM-TLS (MAIN Board (3/3))



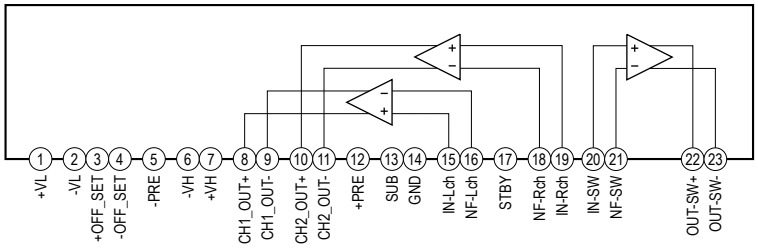
IC252, IC253 NJM4558V-TE2 (MAIN Board (2/3))
IC700 NJM4558V-TE2 (MIC Board)



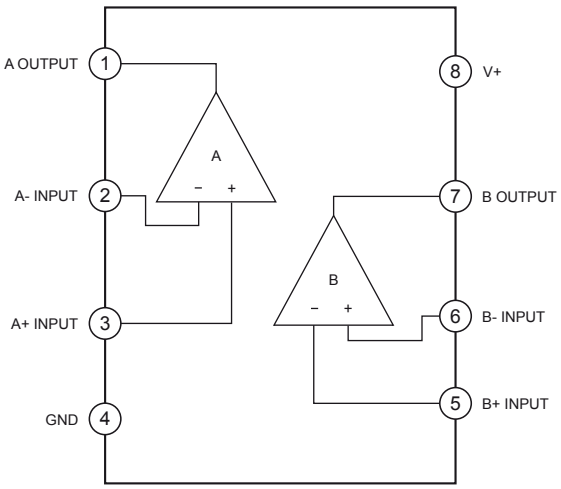
IC800 STK433-320-E (POWER Board) (GTR33)



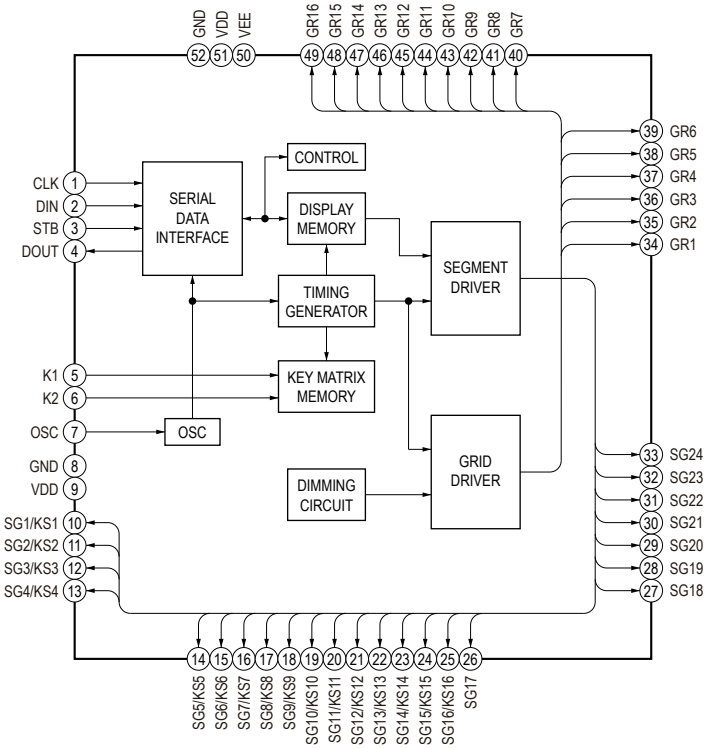
IC800 STK416-130-E (POWER Board) (GTR77)
IC800 STK416-120-E (POWER Board) (GTR55)



IC1500 NJM2903V (TE2) (HUB Board)



IC1101 PT6324-Q (DISPLAY Board)



• **IC Pin Function Description**

DMB19 BOARD (1/3) IC101 CXD9968R (LE) (RF AMP, SERVO DSP, AUDIO PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	RF_A	I	RF main beam (C) input from the optical pick-up block
2	RF_B	I	RF main beam (B) input from the optical pick-up block
3	RF_C	I	RF main beam (A) input from the optical pick-up block
4	RF_D	I	RF main beam (D) input from the optical pick-up block
5	RF_E	I	RF sub beam (F) input from the optical pick-up block
6	RF_F	I	RF sub beam (E) input from the optical pick-up block
7	AVDD18_2	-	Power supply terminal (+1.8V)
8	AVDD33_1	-	Power supply terminal (+3.3V)
9	XTALI	I	System clock input terminal (27 MHz)
10	XTALO	O	System clock output terminal (27 MHz)
11	AGND33	-	Ground terminal
12	V2O	O	Reference voltage (+2V) output to the optical pick-up block
13	V14/VREFO	O	Reference voltage (+1.4V) output terminal
14	REXT	I	Current reference input terminal Fixed at “L” in this set
15, 16	MDI1, MDI2	I	Laser power monitor input from the optical pick-up block
17, 18	LDO1, LDO2	O	Laser diode drive signal output to the optical pick-up block
19	AVDD33_2	-	Power supply terminal (+3.3V)
20	DMO	O	Spindle motor control signal output to the motor driver
21	FMO	O	Sled motor control signal output to the motor driver
22	MUTE4	O	Muting signal output to the coil/motor driver (for spindle motor)
23	MSW	O	CD/DVD selection signal output terminal “L”: CD, “H”: DVD
24	TRO	O	Tracking coil control signal output to the coil driver
25	FOO	O	Focus coil control signal output to the coil driver
26	EEWP	-	Not used
27, 28	USB_DP, USB_DM	I/O	Two-way audio serial data with the USB controller
29	VDD33_USB	-	Power supply terminal (+3.3V)
30	VSS33_USB	-	Ground terminal
31	PAD_VRT	I/O	USB generating reference current terminal
32	VDD18_USB	-	Power supply terminal (+1.8V)
33	SCL	O	Serial clock signal output to the EEPROM (GTZ4i)
34	SDA	I/O	Two-way serial data with the EEPROM (GTZ4i)
35	IFSDI	I	Serial data input from the system controller
36	FS_CS#	O	Chip select signal output to the flash ROM
37	SF_DO	O	Serial data output to the flash ROM
38	SF_DI	I	Serial data input from the flash ROM
39	SF_CK	O	Serial clock signal output to the flash ROM
40	IFSCK	O	Serial data transfer clock signal output to the system controller
41	IFSOD	O	Serial data output to the system controller
42	ICE	I	ICE mode enable setting terminal Not used
43	PRST#	I	Reset signal input from the system controller “L”: reset
44	IR	I	IR control signal input terminal Not used
45 to 49	RD0 to RD4	I/O	Two-way data bus with the SD-RAM
50	DVDD33	-	Power supply terminal (+3.3V)
51 to 53	RD5 to RD7	I/O	Two-way data bus with the SD-RAM
54	DVDD18	-	Power supply terminal (+1.8V)
55	DQM0	O	Data mask signal output to the SD-RAM
56 to 59	RD15 to RD 12	I/O	Two-way data bus with the SD-RAM
60	DVSS33	-	Ground terminal
61 to 64	RD11 to RD8	I/O	Two-way data bus with the SD-RAM
65	DQM1	O	Data mask signal output to the SD-RAM
66	RCLK	O	Clock signal output to the SD-RAM
67	RA11	O	Address signal output to the SD-RAM
68	DVDD33	-	Power supply terminal (+3.3V)
69 to 74	RA9 to RA4	O	Address signal output to the SD-RAM
75	RWE#	O	Write enable signal output to the SD-RAM
76	CAS#	O	Column address strobe signal output to the SD-RAM
77	RAS#	O	Row address strobe signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
78	BA0	O	Bank address signal output to the SD-RAM
79	DVSS18	-	Ground terminal
80	BA1	O	Bank address signal output to the SD-RAM
81 to 83	RA10, RA0, RA1	O	Address signal output to the SD-RAM
84	DVDD33	-	Power supply terminal (+3.3V)
85, 86	RA2, RA3	O	Address signal output to the SD-RAM
87	IFBSY	I	Communication initialization request signal input from the system controller
88	IFCS#	O	Communication initialization request acknowledge signal output to the system controller
89	RX	-	Not used
90	DVDD18	-	Power supply terminal (+1.8V)
91	TX	-	Not used
92	XMAMUTE	-	Not used
93	SPDIF	O	SPDIF signal output terminal Not used
94	GPIO	I	Thermal shut down signal input from the coil/motor driver
95	DACVDDC	-	Power supply terminal (+3.3V)
96	VREF	I	Band gap reference voltage terminal
97	FS	I	Full scale adjustment terminal
98	DACVSSC	-	Ground terminal
99	CVBS	O	Composite video signal output terminal Not used
100, 101	DACVDDB, DACVDDA	-	Power supply terminal (+3.3V)
102	SY/Y/G	O	Component video (Y) signal output terminal Not used
103	SC/CB/B	O	Component video (Pb/Cb) signal output terminal Not used
104	CR/R	O	Component video (Pr/Cr) signal output terminal Not used
105	AADVSS	-	Ground terminal
106	GPIO19	I	Audio data input from the A/D converter (for USB)
107	MUTE123	-	Not used
108	LIMITSW	-	Not used
109, 110	AADVDD, APLLVDD	-	Power supply terminal (+3.3V)
111	APLLCAP	I	External capacitor connecting terminal
112, 113	ADACVSS2, ADACVSS1	-	Ground terminal
114	GPIO	O	Master clock signal output to the A/D converter and D/A converter
115	GPIO	O	Bit clock signal output to the A/D converter and D/A converter
116	GPIO	O	Muting signal output to the coil/motor driver (for focus/tracking coil and sled motor)
117	AVCM	-	Audio D/A converter reference voltage terminal
118	GPIO	I	Limit detection switch input terminal
119	GPIO	O	L/R sampling clock signal output to the A/D converter and D/A converter
120	GPIO	O	Audio data output to the D/A converter
121, 122	ADACVDD1, ADACVDD2	-	Power supply terminal (+3.3V)
123	AVDD18_1	-	Power supply terminal (+1.8V)
124	AGND18	-	Ground terminal
125, 126	RF_IP, OPOUT	I	AC coupled RF signal input from the optical pick-up block
127	IOPMON/OPINP	I	Power monitor terminal
128	SPFG/OPINN	I	Spindle motor hall sensor input from the motor driver

HUB BOARD IC1501 USB2512A-AEZG (USB CONTROLLER)

Pin No.	Pin Name	I/O	Description
1, 2	USBDN1_DM, USBDN1_DP	I	Audio serial data input from the USB A connector
3, 4	USBDN2_DM, USBDN2_DP	I/O	Two-way audio serial data with the USB B connector
5	VDDA33	-	Power supply terminal (+3.3V)
6 to 9	NC	-	Not used
10	VDDA33	-	Power supply terminal (+3.3V)
11	TEST	-	Not used
12	PRTPWR1	O	Not used
13	OCS1_N	I	Over current sense signal input from the USB interface
14	VDD18	-	Power supply terminal (+1.8V)
15	VDD33CR	-	Power supply terminal (+3.3V)
16	PRTPWR2	O	Not used
17	OCS2_N	I	Over current sense signal input terminal
18 to 21	NC	-	Not used
22	SDA/SMBDATA/ NON/REM1	-	Not used
23	VDD33	-	Power supply terminal (+3.3V)
24	SCL/SMBCLK/ CFG_SEL0	-	Not used
25	HS_IND/CFG_SEL1	-	Not used
26	RESET_N	I	Reset signal input from the system controller “L”: reset
27	VBUS_DET	I	VBUS voltage detect signal input from the system controller
28	SUSP_IND/LOCAL_ PWR/NON_PEM0	-	Not used
29	VDDA33	-	Power supply terminal (+3.3V)
30, 31	USBUP_DM, USBUP_DP	I/O	Two-way audio serial data with the audio processor
32	XTAL2	O	System clock (24 MHz) output terminal
33	XTAL1/CLKIN	I	System clock (24 MHz) input terminal
34	VDD18PLL	-	Power supply terminal (+1.8V)
35	RBIAS	-	Not used
36	VDD33PLL	-	Power supply terminal (+3.3V)

MAIN BOARD (1/3) IC401 R5F364AEDFA (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	FL-DRIVER-CS	O	Serial data chip select signal to FL Driver, PT6324
2	FL-DRIVER-CLK	O	Serial data clock signal to FL Driver, PT6324
3	FL-DRIVER-DATA	O	Serial data output signal to FL Driver, PT6324
4	SIRCS	I	Remote control signal input
5	CDM-SD	I	CDM protector detection input signal "H": protector on
6	M2-	O	Disc change and mode change motor control signal output
7	M2+	O	Disc change and mode change motor control signal output
8	BYTE	-	Ground terminal
9	CNVss	-	Ground terminal
10	XC-IN	I	Sub system clock input terminal (32.768kHz)
11	XC-OUT	O	Sub system clock output terminal (32.768kHz)
12	RESET	I	System reset signal input from the reset signal IC "L": reset After the power supply rises, "L" is input for several hundreds msec and then change to "H".
13	X-OUT	O	Main system clock output terminal (8MHz)
14	VSS	-	Ground terminal
15	X-IN	I	Main system clock input terminal (8MHz)
16	VCC	-	Power supply terminal (+3.3V)
17	NMI	I	Non-maskable interrupt input terminal
18	M1-	O	Tray/drawer transportation motor control signal output
19	MTK-BSY	O	BUSY Signal communication between MTK Board
20	AC-CUT	I	AC off detection signal input from the reset signal IC "L": AC Cut detected
21	M1+	O	Tray/drawer transportation motor control signal output
22	SW3	I	Disc change and mode change detection signal input from CDM
23	SW1	I	Disc change and mode change detection signal input from CDM
24	SW-CHUCK	I	Tray chuck position detection signal from CDM
25	SW2	I	Disc change and mode change detection signal input from CDM
26	SW-CLOSE	I	Drawer close position detection signal input from CDM
27	SW-STOCK	I	Tray stock position detection signal from CDM
28	SW-OPEN	I	Drawer open position detection signal input from CDM
29	IIC-CLK	I/O	Serial data transfer clock signal output terminal
30	IIC-DATA	I/O	Serial data output terminal
31	METER BL CTL	O	Meter Backlight LED control signal. "H" LED ON (Only for HCD-GTR55 and HCD-GTR77 model)
32	NO-USE	-	Unused
33	NO-USE	-	Unused
34	MTK-XIFCS	I	Chip Select Signal from MTK DMB Board
35	MTK-SOD	O	Data Out Signal to MTK DMB Board
36	MTK-SIO	I	Data In Signal from MTK DMB Board
37	MTK-CLK	I	Clock Signal from MTK DMB Board
38	FAN CTRL ON/OFF	O	Fan Control Switch "H": fan on
39	METER LED_CTL	O	Dynamic LED drive signal output to the Meter Pointer LED and Meter Backlight LED. "H":LED on (Only for HCD-GTR33 model) Meter pointer LED Control pin. "H":LED on (Only for HCD-GTR55 and HCD-GTR77 model)
40	NO-USE	-	Unused
41	TC REC MUTE	O	TAPE muting control. "H": muting on (Only for African model)
42	MTK PWR CTL	O	Power Control pin for MTK DMB board
43	AD SUPPLY SWITCH	O	AD Power Control pin
44	ST-CLK	O	PLL serial data transfer clock signal output to the tuner unit
45	MTK-OE	O	MTK Output enable control pin
46	NO-USE	-	Unused
47	MTK HUB RST	I	MTK Hub Board reset pin
48	MTK-RESET	I	MTK DMB Board reset pin
49	TC_M+9V SW	O	TCM power supply control signal output "H":power on (Only for African model)
50	PROTECT	I	Speaker protect detection signal input from speaker protect circuit "H":protector on
51	STK MUTE	O	Power amplifier on/off control signal output "H": amplifier on
52	SW SPK RELAY	O	Relay drive signal output for the subwoofer "H":relay on
53	FR SPK RELAY	O	Relay drive signal output for the front speakers "H":relay on

Pin No.	Pin Name	I/O	Description
54	STBY RELAY	O	Main power on/off control signal output "H":power on
55	NO-USE	-	Unused
56	NO-USE	-	Unused
57	MTK-VBUS-DET	O	Hub Power (V-DET) Control Port
58	LINE-MUTE	O	Line muting on/off control signal "L":muting on
59	R2A15216FP-CLK	O	Serial data transfer clock signal output to audio signal processor, R2A15216FP
60	R2A15216FP-DATA	O	Serial data output to audio signal processor, R2A15216FP
61	ST-TUNED	I	Tuned detection input from the tuner unit
62	VCC	-	Power supply terminal (+3.3V)
63	ST-CE	O	PLL chip enable signal output to the tuner unit
64	VSS	-	Ground terminal
65	ST-DIN	O	PLL serial data output to the tuner unit
66	MIC/HP_DET	I	Headphone & microphone connection detection signal input (A/D input)
67	ST-DOUT	I	PLL serial data input from the tuner unit
68	MTK-OC1	I	USB Overcurrent Detection input port 1
69	LED CTRL	O	Dynamic LED drive select signal output
70	TC-STATE	I	Tape playback/recording/stop status detection input signal (A/D input) (Only for African model)
71	ILLUMINATOR-INPUT	I	Power illuminator & METER input signal detection (A/D input)
72	METER-IN4	O	Meter motor control signal output 4 (Only for HCD-GTR55 and HCD-GTR77)
73	MTK-OC2	I	USB Overcurrent Detection input port 2
74	POWER/DISPLAY-KEY	I	POWER & DISPLAY key press detection signal (Interrupt input)
75	NO-USE	-	Unused
76	NO-USE	-	Unused
77	METER-IN3	O	Meter motor control signal output 3 (Only for HCD-GTR55 and HCD-GTR77)
78	METER-IN1	O	Meter motor control signal output 1 (Only for HCD-GTR55 and HCD-GTR77)
79	METER-IN2	O	Meter motor control signal output 2 (Only for HCD-GTR55 and HCD-GTR77)
80	USB-B LED	O	Dynamic LED drive signal output to the USB B Blue and Red LED “H”:LED on
81	METER SW	I	Min and Max switch input signal from METER (A/D input) (Only for HCD-GTR55 and HCD-GTR77)
82	MTK PWR MON	I	MTK DMB Board power monitor input pin (A/D input)
83	OVERVOLTAGE	I	Over-voltage protection detection input terminal "L": over-voltage detected
84	AD-KEY2	I	Key input terminal (A/D input)
85	MASTER VOL	I	Jog dial pulse input from the MASTER VOLUME encoder (A/D input)
86	LED-VOL1,2	O	Dynamic LED drive signal output to the ILLUMINATION 1st indicator and 2nd indicator “H”:LED on
87	AD-KEY1	I	Key input terminal (A/D input)
88	OUTPUT LEVEL DETECT	I	Speaker Output Level Detection
89	VACS-IN	I	VACS level detection signal (A/D input)
90	LED-VOL5,6	O	Dynamic LED drive signal output to the ILLUMINATION 5th indicator and 6h indicator “H”:LED on
91	LED-VOL3,4	O	Dynamic LED drive signal output to the ILLUMINATION 3rd indicator and 4th indicator “H”:LED on
92	MODEL-IN	I	Model setting terminal (A/D input)
93	DEST-IN	I	Destination setting terminal (A/D input)
94	SW LED/USB A LED	O	Dynamic LED drive signal output to the Subwoofer LED and USB A LED indicator “H”:LED on
95	STBY LED	O	LED drive signal output of POWER indicator "H":LED on
96	AVSS	-	Ground terminal (for A/D conversion)
97	AD-KEY0	I	Key input terminal (A/D input)
98	AREF	I	A/D Converter reference voltage input terminal (+3.3V)
99	AVCC	-	Power supply terminal (+3.3V) (for A/D conversion)
100	NO-USE	-	Unused

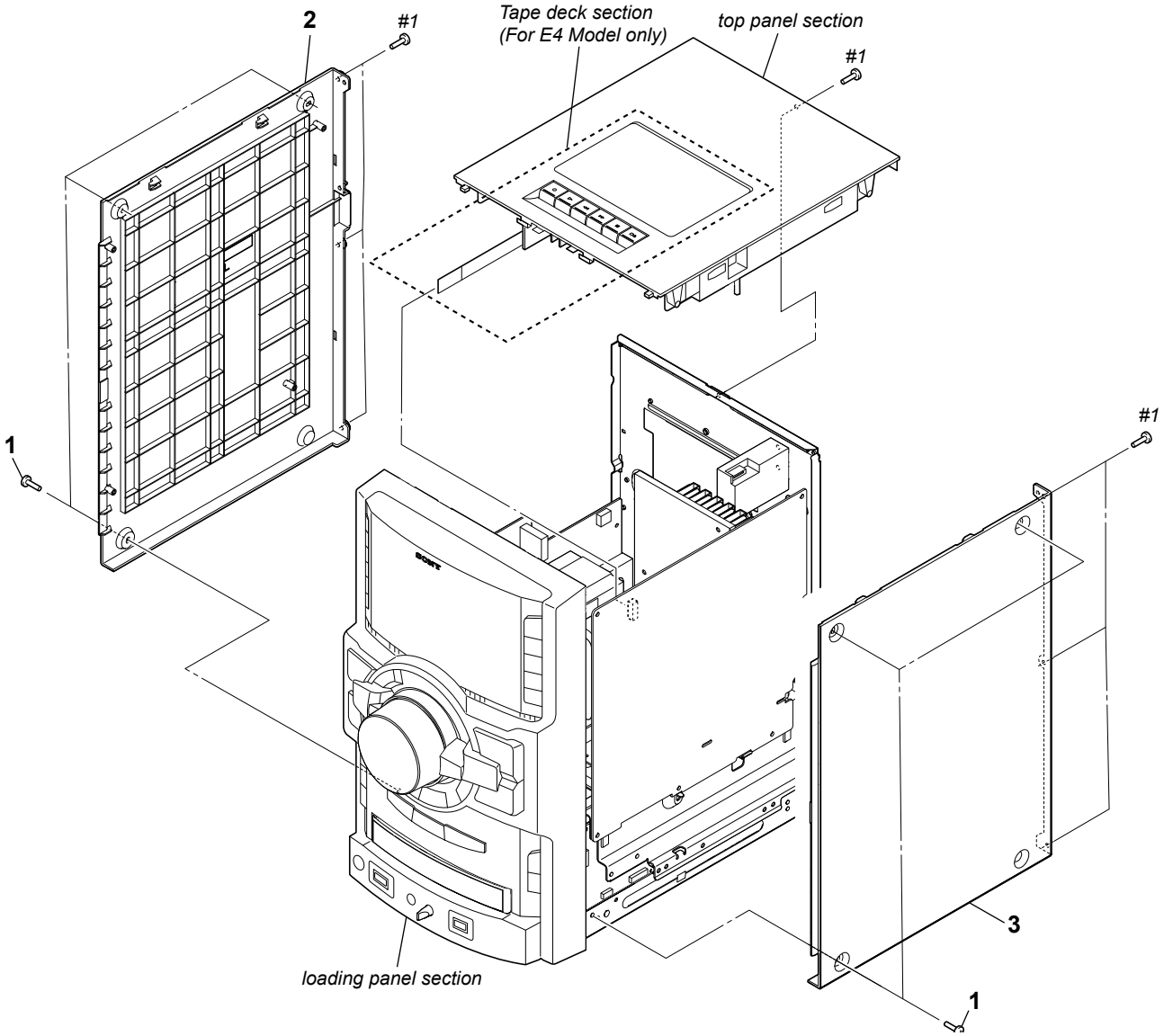
SECTION 7
EXPLODED VIEWS

Note:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AR : Argentina model
  E2 : 120V AC area in E model
  E4 : African model
  E51 : Chilean and Peruvian models
  MX : Mexican model

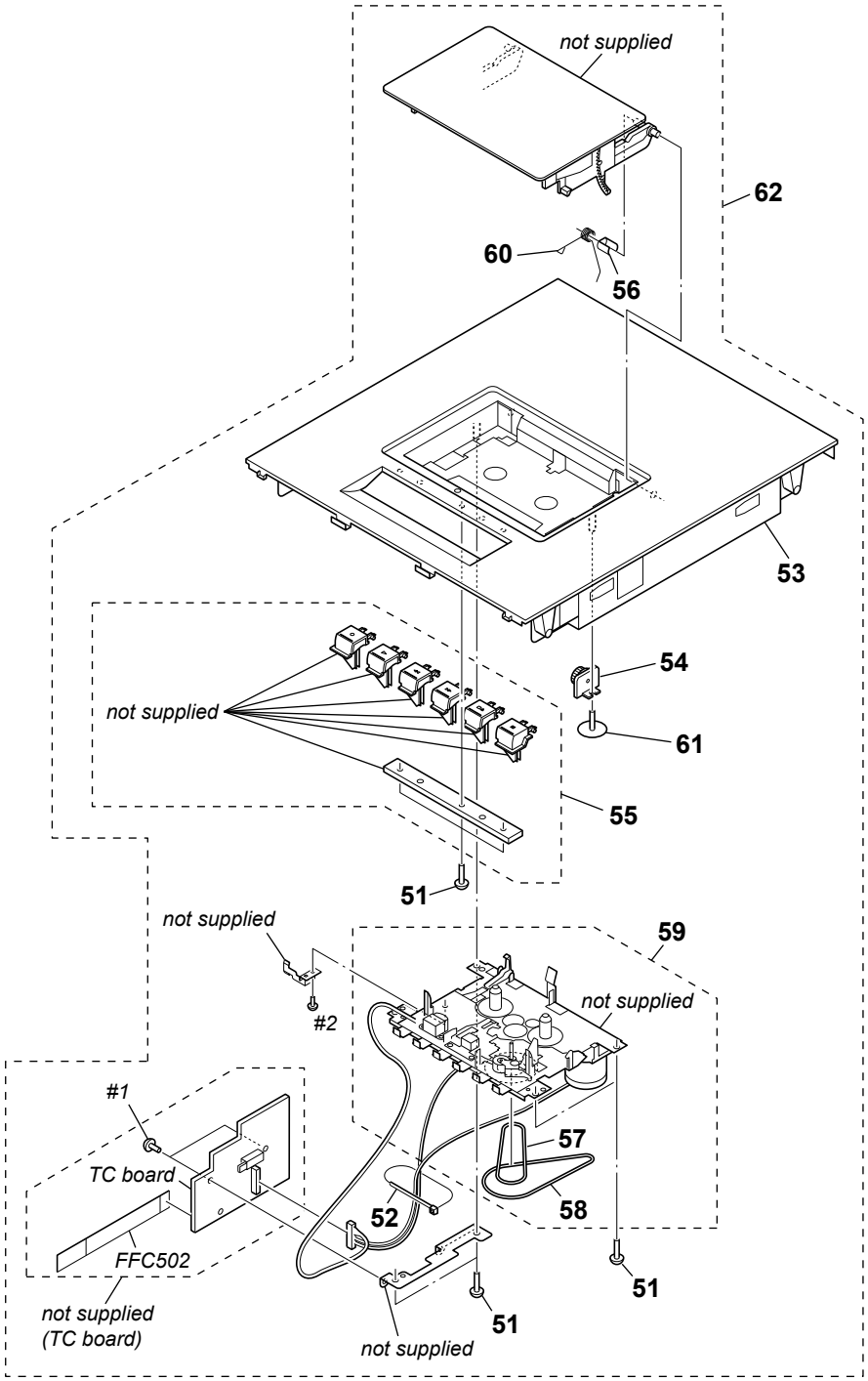
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

7-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
1	3-363-099-32	SCREW (CASE 3 TP2)	
2	3-283-218-22	CASE, (SIDE-L)	
3	3-283-219-22	CASE, (SIDE-R)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

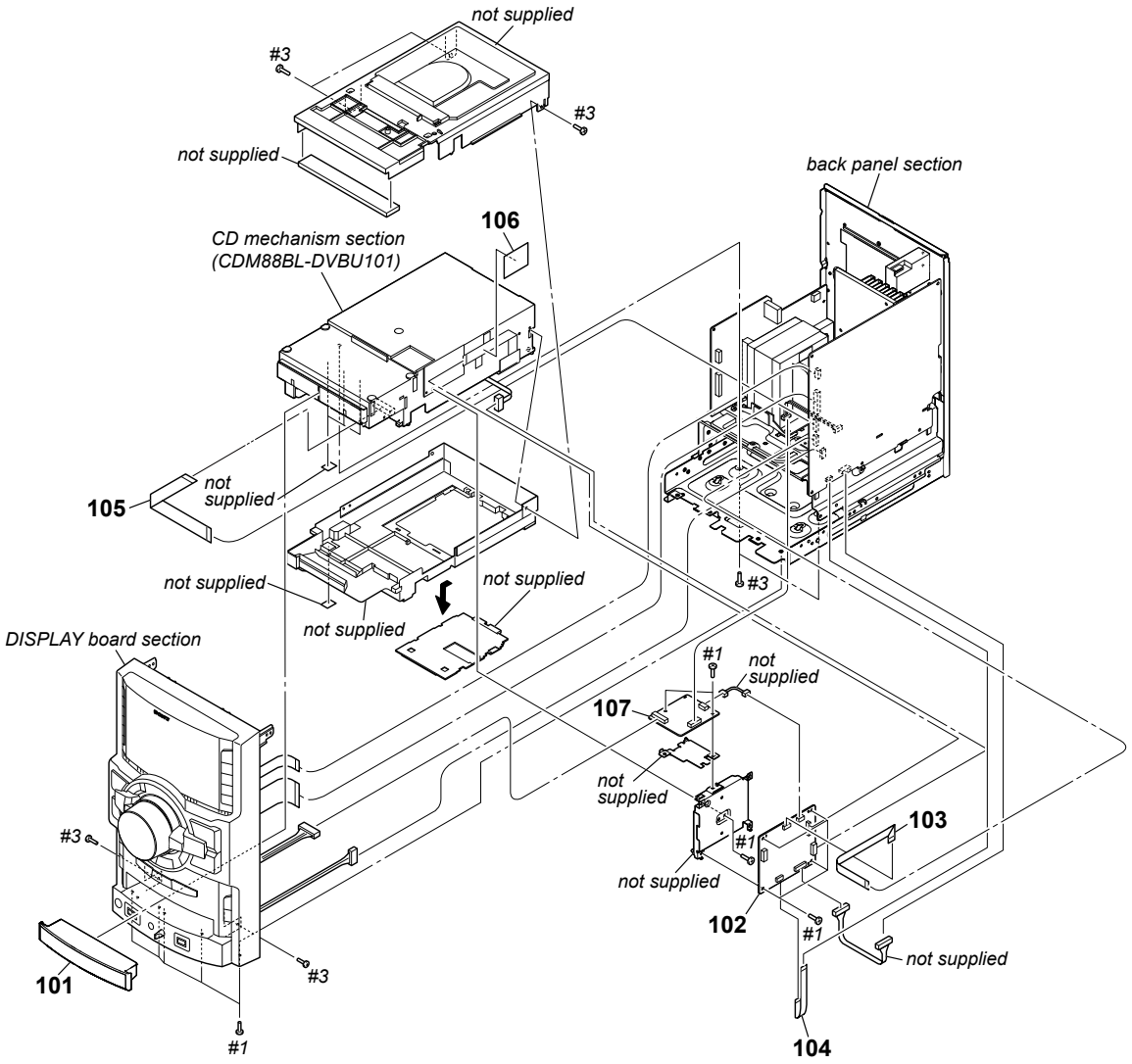
7-2. TOP PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-087-053-01	+BVTP2.6 (3CR) (E4)	
52	3-701-748-00	CLAMP (E4)	
53	4-124-215-01	CASE, TOP (EXCEPT E4)	
54	3-047-468-01	DAMPER (E4)	
55	2-649-132-21	BUTTON (CASS) (●, ▶, ◀◀, ▶▶, ■⏏, ❚❚) (E4)	
56	3-917-753-41	CUSHION (SP) (E4)	
57	2-688-621-01	BELT (R/F) (E4)	
58	2-688-622-01	BELT (MAIN) (E4)	

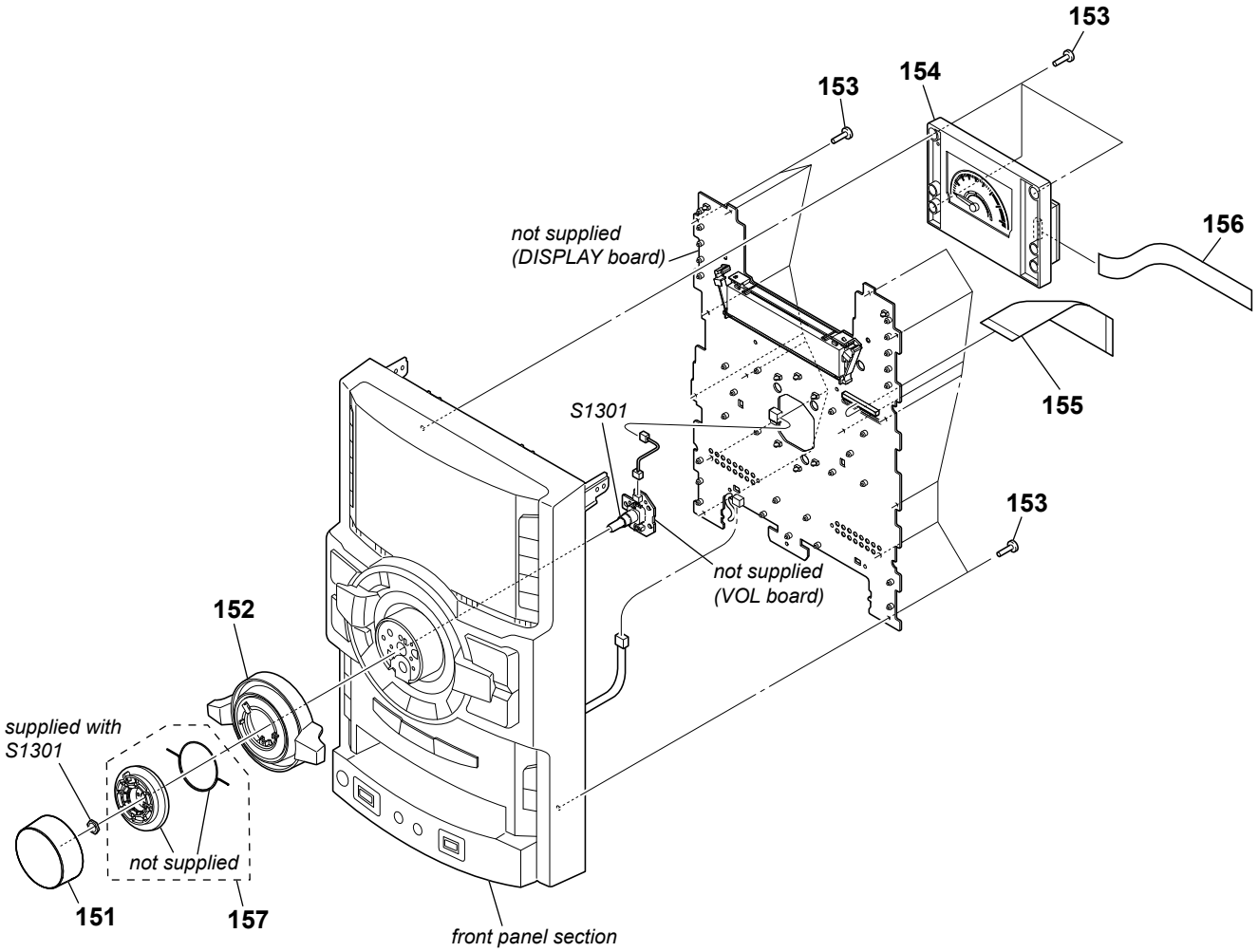
Ref. No.	Part No.	Description	Remark
59	1-797-575-11	DECK, MECHANICAL (E4)	
60	4-170-774-01	SPRING (CASS) (E4)	
61	4-218-252-52	SCREW (+PTPWH M2.6), FLOATING (E4)	
62	X-2546-412-1	TOP CASE ASSY (GVX1S/3S/4S) (E4)	
FFC502	1-828-958-11	WIRE (FLAT TYPE) (9 CORE) (E4)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3 (E4)	
#2	7-685-850-04	SCREW +BVTT 2X3 (S) (E4)	

7-3. LOADING PANEL SECTION, HUB BOARD SECTION, DMB19 BOARD SECTION



Ref. No.	Part No.	Description	Remark
101	4-164-371-11	PANEL, LOADING	
102	A-1745-142-A	DMB19 BOARD, COMPLETE	
103	1-828-311-51	WIRE (FLAT TYPE) (9 CORE)	
104	1-836-973-11	WIRE (FLAT TYPE) (7 CORE)	
105	1-828-975-11	WIRE (FLAT TYPE) (13 CORE)	
106	3-831-441-11	CUSHION, SARANET	
107	A-1750-170-A	HUB BOARD, COMPLETE	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	

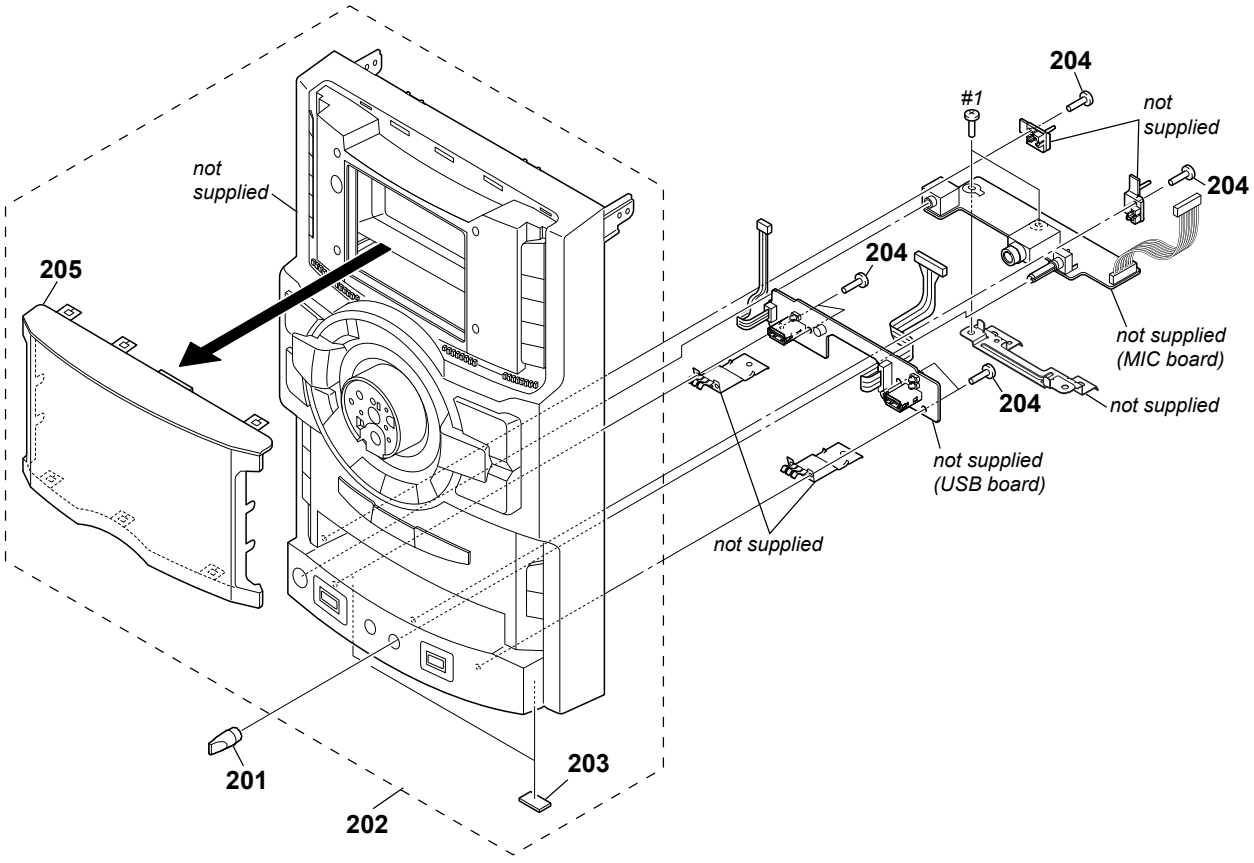
7-4. DISPLAY BOARD SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

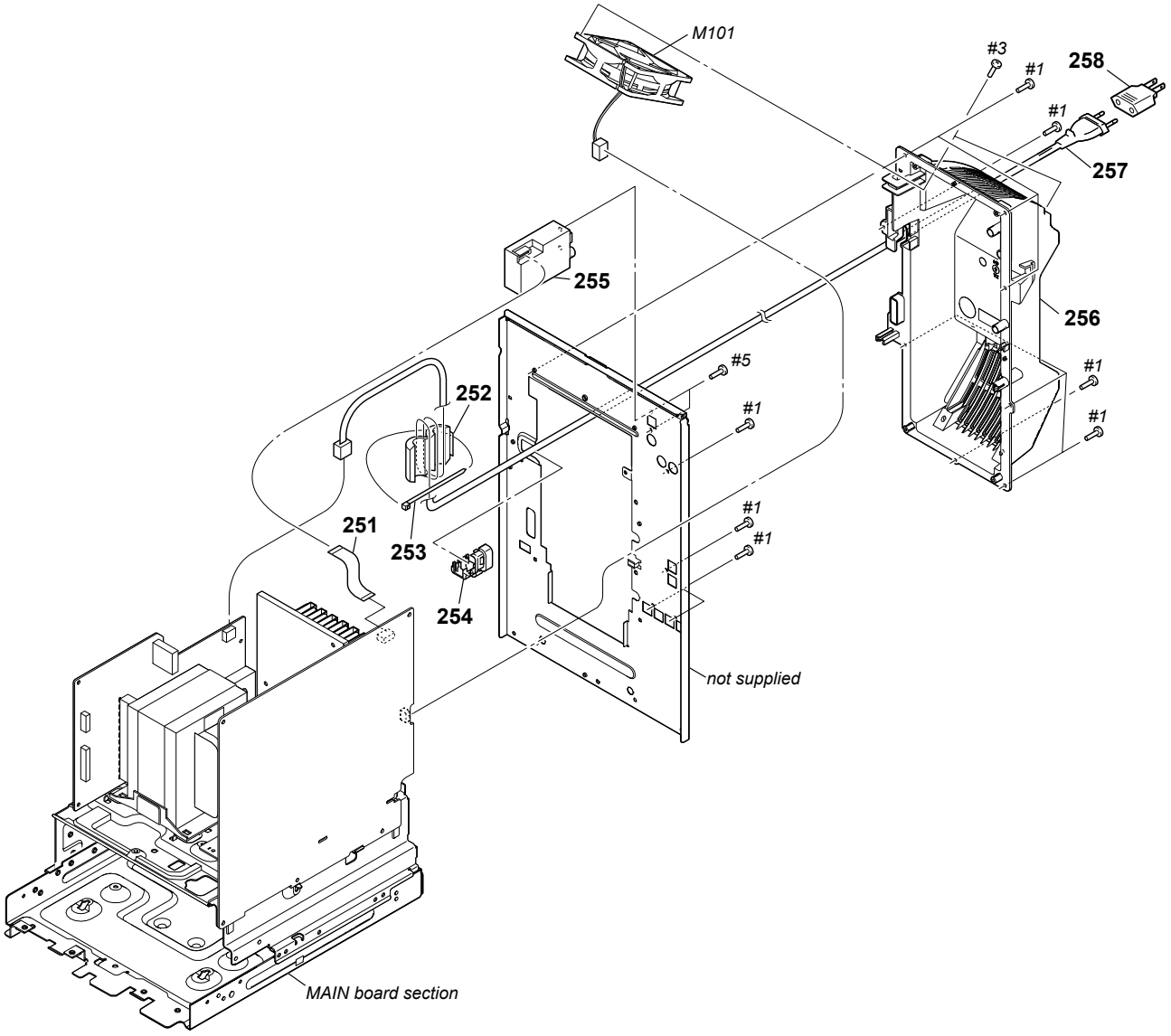
Ref. No.	Part No.	Description	Remark
151	4-164-361-01	KNOB (VOLUME) (GTR33/GTR55)	
151	4-164-361-11	KNOB (VOLUME) (GTR77)	
152	4-164-363-01	KNOB (JOG)	
153	3-087-053-01	+BVTP2.6 (3CR)	
154	A-1754-602-A	METER DISPLAY ASSY (GVX) (GTR55/GTR77)	
154	A-1754-606-A	PANEL (GVX1) ASSY, DISPLAY (GTR33)	
155	1-838-059-11	FLEXIBLE FLAT CABLE (23 CORE)	
156	1-828-964-11	WIRE (FLAT TYPE) (11 CORE) (GTR55/GTR77)	
157	X-2541-975-1	HOLDER (JOG) ASSY	
S1301	1-487-171-11	ROTARY ENCODER	

7-5. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
201	2-895-507-01	KNOB (MIC)	
202	X-2541-955-1	FRONT PANEL ASSY (GVX-COM) (EXCEPT E4)	
202	X-2546-463-1	FRONT PANEL ASSY (GVX-E4) (E4)	
203	4-225-252-01	CUSHION (FOOT)	
204	3-087-053-01	+BVTP2.6 (3CR)	
205	4-164-351-01	WINDOW (FL)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

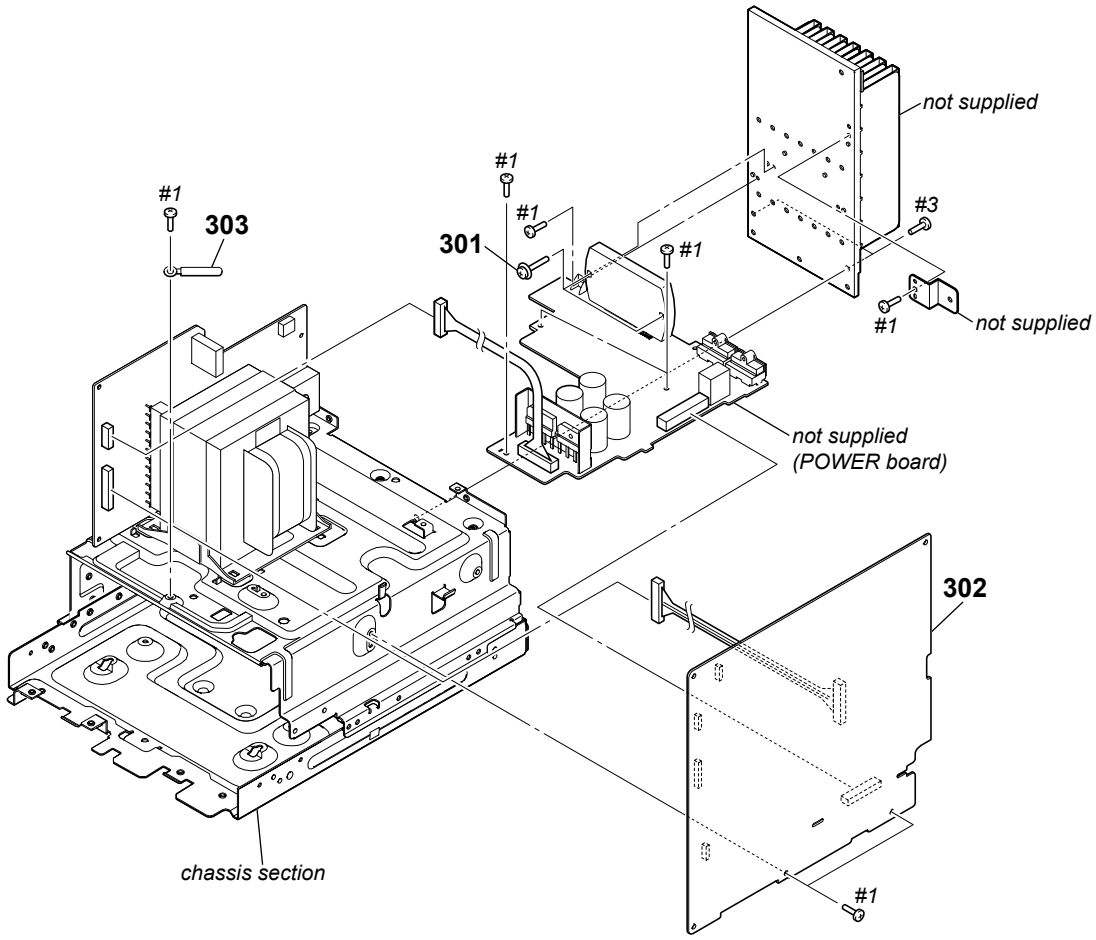
7-6. BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark
251	1-828-952-11	WIRE (FLAT TYPE) (9 CORE)	
252	1-457-369-12	CORE, FERRITE	
253	3-655-653-11	BAND (TAITON), BINDING	
254	4-966-267-12	BUSHING (FBS001), CORD	
255	1-693-778-31	TUNER (FM/AM)	
256	4-124-216-44	COVER (FAN) (E2, E51, E4)	
256	4-124-216-55	COVER (FAN) (MX, AR)	
⚠ 257	1-777-071-83	CORD, POWER (E2, E51, E4)	
⚠ 257	1-837-312-11	CORD, POWER-SUPPLY (AR)	
⚠ 257	1-837-344-11	CORD, POWER-SUPPLY (MX)	

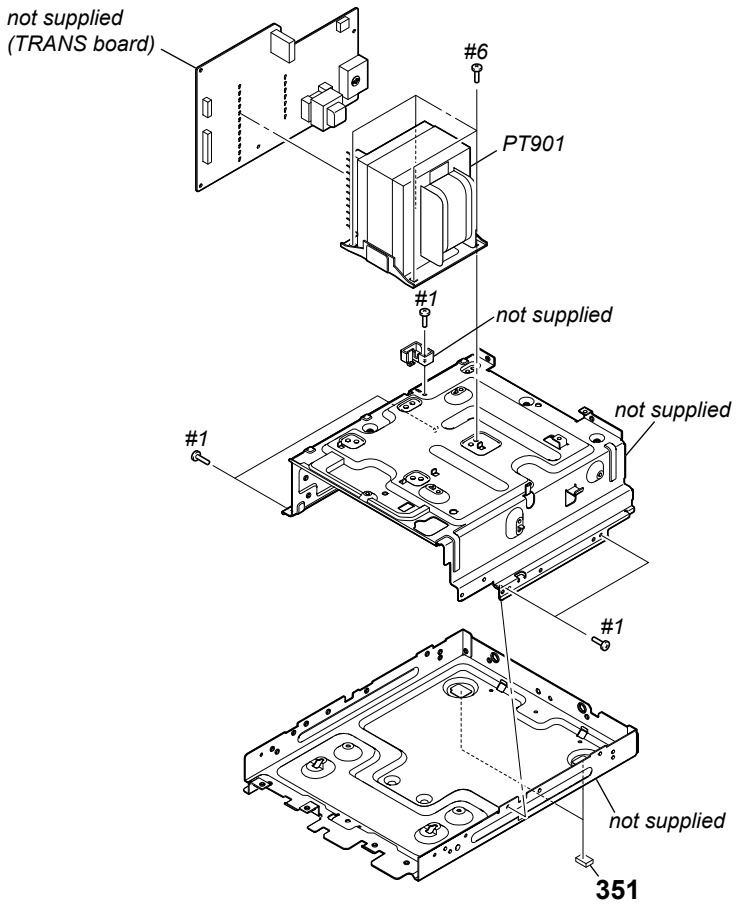
Ref. No.	Part No.	Description	Remark
⚠ 258	1-569-008-21	ADAPTOR, CONVERSION (E2, E51, E4)	
M101	1-787-344-21	FAN, DC	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#5	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-7. MAIN BOARD SECTION



Ref. No.	Part No.	Description	Remark
301	3-905-609-31	SCREW (TRANSISTOR)	
302	A-1750-177-A	MAIN BOARD, COMPLETE (GTR33: AR, E2, E51, MX)	
302	A-1750-180-A	MAIN BOARD, COMPLETE (GTR55: AR, E2, E51, MX)	
302	A-1750-183-A	MAIN BOARD, COMPLETE (GTR77: AR, E2, E51, MX)	
302	A-1754-378-A	MAIN BOARD, COMPLETE (GTR33: E4)	
302	A-1754-384-A	MAIN BOARD, COMPLETE (GTR55: E4)	
302	A-1754-390-A	MAIN BOARD, COMPLETE (GTR77: E4)	
* 303	3-703-150-11	CLAMP	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	

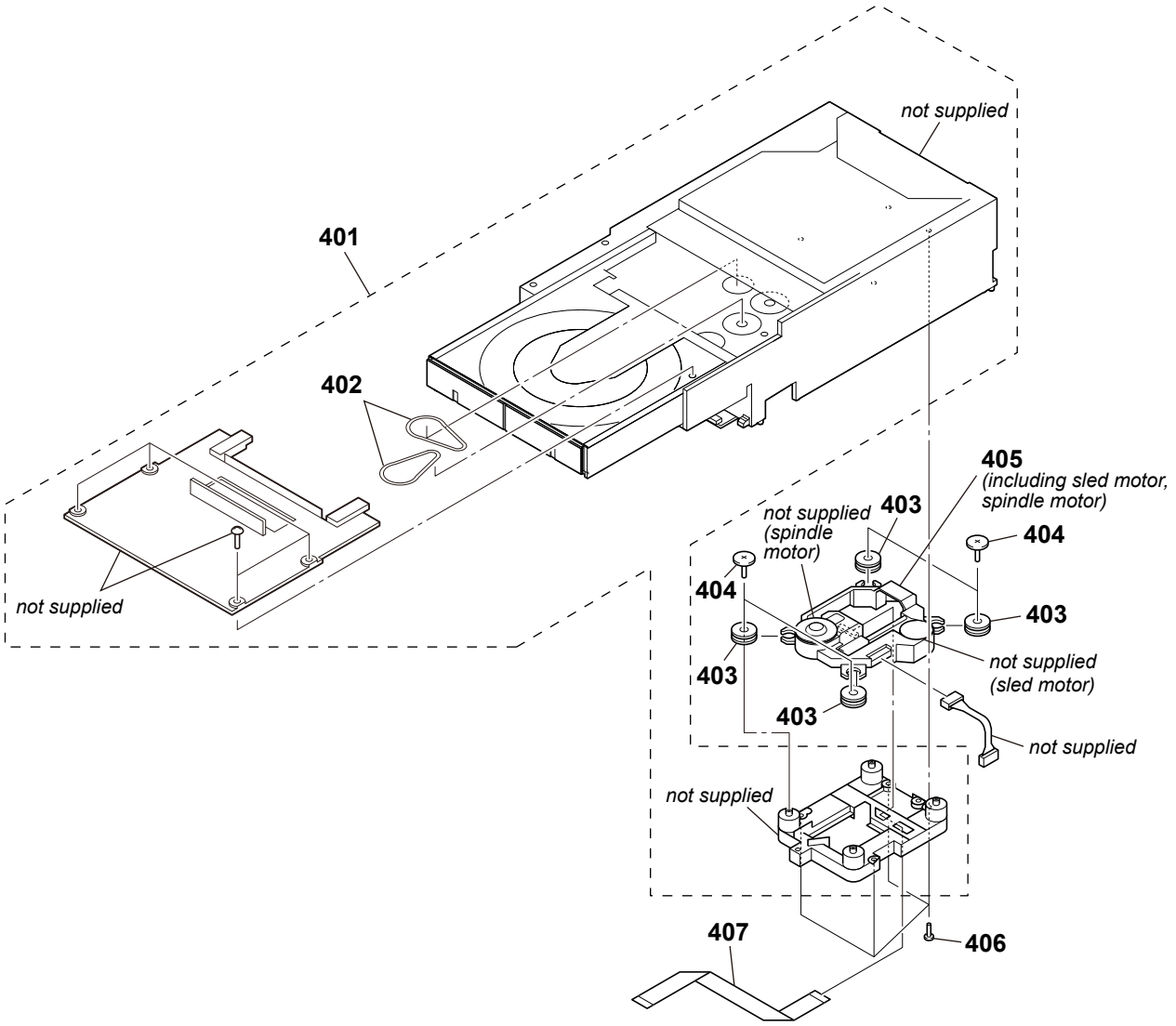
7-8. CHASSIS SECTION



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
351	4-225-252-01	CUSHION (FOOT)	
⚠ PT901	1-445-827-11	POWER TRANSFORMER (MAIN) (GTR33: MX)	
⚠ PT901	1-445-828-11	POWER TRANSFORMER (MAIN) (GTR33:E4)	
⚠ PT901	1-445-829-11	POWER TRANSFORMER (MAIN) (GTR33:E2, E51, AR)	
⚠ PT901	1-445-830-11	POWER TRANSFORMER (MAIN) (GTR77:MX)	
⚠ PT901	1-445-831-11	POWER TRANSFORMER (MAIN) (GTR77:E4)	
⚠ PT901	1-445-832-11	POWER TRANSFORMER (MAIN) (GTR77:E2, E5, AR)	
⚠ PT901	1-445-834-11	POWER TRANSFORMER (MAIN) (GTR55: MX)	
⚠ PT901	1-445-835-11	POWER TRANSFORMER (MAIN) (GTR55: E2, E51, AR)	
⚠ PT901	1-445-836-11	POWER TRANSFORMER (MAIN) (GTR55:E4)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#6	7-685-880-09	SCREW +BVTT 4X6 (S)	

7-9. CD MECHANISM SECTION (CDM88BL-DVBU101)



Note: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Ref. No.	Part No.	Description	Remark
401	1-840-387-31	MECHANICAL, CD	
402	2-632-062-11	BELT (DLM3A)	
403	2-634-618-21	INSULATOR	
404	3-087-599-01	INSULATOR SCREW	
⚠ 405	8-820-322-04	DEVICE, OPTICAL KHM-313CAB/C2NP (Including sled motor, spindle motor)	

Ref. No.	Part No.	Description	Remark
406	3-087-053-01	+BVTP2.6 (3CR)	
407	1-828-773-51	WIRE (FLAT TYPE) (24 CORE)	

DISPLAY

SECTION 8
ELECTRICAL PARTS LIST

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . , uPA. . , µPA. . ,
  uPB. . : µPB. . , uPC. . , µPC. . ,
  uPD. . : µPD. .
- Abbreviation
  AR : Argentine model
  E2 : 120V AC area in E model
  E4 : African model
  E51 : Chilean and Peruvian models
  MX : Mexican model

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

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

Ref. No.	Part No.	Description			Remark
		DISPLAY BOARD			
		**********			
		< CAPACITOR >			
C1136	1-124-257-00	ELECT	2.2uF	20%	50V
C1137	1-124-257-00	ELECT	2.2uF	20%	50V
C1147	1-128-131-11	ELECT	22uF	20%	50V
C1150	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1151	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1152	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1153	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1155	1-126-947-11	ELECT	47uF	20%	35V
C1156	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN1102	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN1103	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN1105	1-784-784-11	CONNECTOR, FFC 23P			
		< DIODE >			
D1101	6-502-469-01	DI SLI-325URT31WR			
D1102	6-501-752-01	DIODE MAZ8082GMLS0			
D1104	8-719-060-27	DIODE SLR-325MCT31			
D1105	6-503-224-01	DI 1L0351V22F0MIT01			
D1106	6-503-224-01	DI 1L0351V22F0MIT01			
D1107	6-503-224-01	DI 1L0351V22F0MIT01			
D1108	6-503-224-01	DI 1L0351V22F0MIT01			
D1109	6-503-224-01	DI 1L0351V22F0MIT01			
D1110	6-503-224-01	DI 1L0351V22F0MIT01			
		< FLUORESCENT INDICATOR TUBE >			
FL1100	1-483-077-11	VACUUM FLUORESCENT DISPLAYS			
		< IC >			
IC1100	6-600-768-01	IC PNA4823M03S0			
IC1101	6-713-680-01	IC PT6324-Q			
		< JUMPER RESISTOR >			
JR1001	1-216-295-91	SHORT CHIP	0		
JR1002	1-216-864-11	SHORT CHIP	0		
JR1003	1-216-295-91	SHORT CHIP	0		
JR1004	1-216-296-11	SHORT CHIP	0		
JR1005	1-216-296-11	SHORT CHIP	0		
JR1006	1-216-296-11	SHORT CHIP	0		
JR1007	1-216-296-11	SHORT CHIP	0		
JR1008	1-216-295-91	SHORT CHIP	0		
JR1009	1-216-296-11	SHORT CHIP	0		
JR1010	1-216-296-11	SHORT CHIP	0		
JR1011	1-216-296-11	SHORT CHIP	0		
JR1012	1-216-296-11	SHORT CHIP	0		
JR1013	1-216-296-11	SHORT CHIP	0		
JR1014	1-216-864-11	SHORT CHIP	0		
JR1015	1-216-296-11	SHORT CHIP	0		
JR1016	1-216-296-11	SHORT CHIP	0		
JR1017	1-216-296-11	SHORT CHIP	0		
JR1018	1-216-296-11	SHORT CHIP	0		
JR1019	1-216-296-11	SHORT CHIP	0		
JR1020	1-216-296-11	SHORT CHIP	0		
JR1021	1-216-296-11	SHORT CHIP	0		
JR1022	1-216-296-11	SHORT CHIP	0		
JR1023	1-216-864-11	SHORT CHIP	0		
JR1024	1-216-296-11	SHORT CHIP	0		
JR1025	1-216-296-11	SHORT CHIP	0		
JR1026	1-216-296-11	SHORT CHIP	0		
JR1027	1-216-296-11	SHORT CHIP	0		
JR1028	1-216-296-11	SHORT CHIP	0		
JR1029	1-216-296-11	SHORT CHIP	0		
JR1030	1-216-296-11	SHORT CHIP	0		
JR1031	1-216-296-11	SHORT CHIP	0		
JR1032	1-216-296-11	SHORT CHIP	0		
JR1033	1-216-296-11	SHORT CHIP	0		
JR1034	1-216-296-11	SHORT CHIP	0		
JR1035	1-216-864-11	SHORT CHIP	0		
JR1036	1-216-864-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q1118	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q1119	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q1120	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q1121	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q1122	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
		< RESISTOR >			
R1100	1-216-819-11	METAL CHIP	680	5%	1/10W
R1101	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1102	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1103	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1104	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1105	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1106	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R1107	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R1108	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1113	1-216-819-11	METAL CHIP	680	5%	1/10W
R1114	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1115	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1116	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1117	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1118	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1119	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1120	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R1121	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1158	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1160	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1161	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1162	1-216-819-11	METAL CHIP	680	5%	1/10W
R1163	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1164	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1165	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R1166	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1167	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1168	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1169	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R1170	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1171	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1173	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1174	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1189	1-216-819-11	METAL CHIP	680	5%	1/10W
R1190	1-216-819-11	METAL CHIP	680	5%	1/10W
R1195	1-216-819-11	METAL CHIP	680	5%	1/10W
R1196	1-216-819-11	METAL CHIP	680	5%	1/10W
R1198	1-216-819-11	METAL CHIP	680	5%	1/10W
R1199	1-216-819-11	METAL CHIP	680	5%	1/10W
R1201	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1203	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1207	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1209	1-216-809-11	METAL CHIP	100	5%	1/10W
R1210	1-216-809-11	METAL CHIP	100	5%	1/10W
R1211	1-216-809-11	METAL CHIP	100	5%	1/10W
R1215	1-216-845-11	METAL CHIP	100K	5%	1/10W

< SWITCH >

S1100	1-771-410-21	SWITCH, TACTILE (I/⏻ STANDBY)
S1101	1-771-410-21	SWITCH, TACTILE (DISPLAY)
S1102	1-771-410-21	SWITCH, TACTILE (METER MODE)
S1103	1-771-410-21	SWITCH, TACTILE (OPTIONS)
S1104	1-771-410-21	SWITCH, TACTILE (ERASE)
S1105	1-771-410-21	SWITCH, TACTILE (EQ BAND/SURROUND)
S1106	1-771-410-21	SWITCH, TACTILE (GROOVE)
S1107	1-771-410-21	SWITCH, TACTILE (PRESET EQ)
S1108	1-771-410-21	SWITCH, TACTILE (REC TIMER)
S1109	1-771-410-21	SWITCH, TACTILE (SUBWOOFER)
S1110	1-771-410-21	SWITCH, TACTILE (🗀-)
S1111	1-771-410-21	SWITCH, TACTILE (CD)
S1112	1-771-410-21	SWITCH, TACTILE (▶II)
S1113	1-771-410-21	SWITCH, TACTILE (◀◀ I◀◀ TUNING -)
S1114	1-771-410-21	SWITCH, TACTILE (USB)
S1115	1-771-410-21	SWITCH, TACTILE (▶▶ ▶▶I TUNING +)
S1116	1-771-410-21	SWITCH, TACTILE (■)
S1117	1-771-410-21	SWITCH, TACTILE (🗀+)
S1118	1-771-410-21	SWITCH, TACTILE (TUNER/BAND)
S1119	1-771-410-21	SWITCH, TACTILE (TAPE /PC)
S1124	1-771-410-21	SWITCH, TACTILE (USB A)
S1125	1-771-410-21	SWITCH, TACTILE (RETURN)
S1126	1-771-410-21	SWITCH, TACTILE (REC TO USB B)
S1127	1-771-410-21	SWITCH, TACTILE (ENTER)
S1128	1-771-410-21	SWITCH, TACTILE (USB B)
S1129	1-771-410-21	SWITCH, TACTILE (DISC 1)
S1130	1-771-410-21	SWITCH, TACTILE (DISC 2)
S1131	1-771-410-21	SWITCH, TACTILE (DISC 3)
S1132	1-771-410-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)
S1133	1-771-410-21	SWITCH, TACTILE (DISC SKIP/EX-CHANGE)

****

	A-1745-142-A	DMB19 BOARD, COMPLETE
		**********

< CAPACITOR >

C101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C105	1-128-994-21	ELECT CHIP	47uF	20%	10V
C106	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C108	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C111	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C112	1-128-994-21	ELECT CHIP	47uF	20%	10V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C115	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C116	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C118	1-124-779-00	ELECT CHIP	10uF	20%	16V
C119	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C124	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C125	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C126	1-137-710-91	CERAMIC CHIP	10uF	20%	6.3V
C127	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C144	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C145	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C146	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C149	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C150	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C151	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C152	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C153	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C154	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C155	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C156	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C160	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C168	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C169	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C172	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C175	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C179	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C180	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C181	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C183	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C188	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C190	1-128-995-21	ELECT CHIP	100uF	20%	10V
C191	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C192	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C193	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C195	1-127-715-11	CERAMIC CHIP	0.22uF	10%	16V
C197	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

DMB19

Ref. No.	Part No.	Description			Remark
C198	1-165-908-11	CERAMIC CHIP	1uF	10%	10V
C199	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C205	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C206	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C209	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C211	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C212	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C213	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C214	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C215	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C216	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C217	1-117-681-11	ELECT CHIP	100uF	20%	16V
C218	1-128-994-21	ELECT CHIP	47uF	20%	10V
C219	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C220	1-128-994-21	ELECT CHIP	47uF	20%	10V
C221	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C233	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C502	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C602	1-128-995-21	ELECT CHIP	100uF	20%	10V
C603	1-128-995-21	ELECT CHIP	100uF	20%	10V
C604	1-128-995-21	ELECT CHIP	100uF	20%	10V
C608	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C611	1-100-566-91	CERAMIC CHIP	0.1uF	10%	25V
C620	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C621	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C622	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C623	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1504	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1507	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1513	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1514	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1515	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1516	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C4602	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C4603	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C4606	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C4608	1-124-779-00	ELECT CHIP	10uF	20%	16V
C4622	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C4623	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C4626	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN101	1-815-763-32	CONNECTOR, FFC/FPC 24P			
CN105	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P			
CN201	1-770-161-21	PIN, CONNECTOR (PC BOARD) 6P			
CN601	1-778-795-21	PIN, CONNECTOR (PC BOARD) 9P			
* CN1105	1-750-005-11	PIN, CONNECTOR (PC BOARD) 4P			
CN1106	1-784-861-51	CONNECTOR, FFC (LIF (NON-ZIF)) 9P			
CN4602	1-784-859-51	CONNECTOR, FFC (LIF (NON-ZIF)) 7P			

Ref. No.	Part No.	Description			Remark
		< DIODE >			
D001	6-500-848-01	DIODE MC2840-T112-1			
D002	6-500-848-01	DIODE MC2840-T112-1			
D003	6-500-848-01	DIODE MC2840-T112-1			
D004	6-500-848-01	DIODE MC2840-T112-1			
D005	6-500-848-01	DIODE MC2840-T112-1			
		< EARTH TERMINAL >			
ET001	1-780-482-11	EARTH TERMINAL			
ET002	1-780-482-11	EARTH TERMINAL			
ET003	1-780-482-11	EARTH TERMINAL			
ET004	1-780-482-11	EARTH TERMINAL			
		< FERRITE BEAD >			
FB108	1-469-324-21	FERRITE, EMI (SMD) (2012)			
FB603	1-469-324-21	FERRITE, EMI (SMD) (2012)			
FB607	1-469-324-21	FERRITE, EMI (SMD) (2012)			
FB1264	1-469-118-21	FERRITE, EMI (SMD) (1608)			
FB1265	1-469-118-21	FERRITE, EMI (SMD) (1608)			
FB1266	1-469-118-21	FERRITE, EMI (SMD) (1608)			
FB1267	1-469-118-21	FERRITE, EMI (SMD) (1608)			
FB1268	1-469-118-21	FERRITE, EMI (SMD) (1608)			
		< FLUORESCENT INDICATOR TUBE >			
FL603	1-234-494-21	FILTER, EMI REMOVAL (SMD)			
		< IC >			
IC101	6-714-821-01	IC CXD9968R (LE)			
IC102	(Not supplied)	IC MX25L1605DM2I-12G			
IC104	6-714-642-01	IC EM638165 TSA-6G			
IC107	6-702-302-01	IC TK11133CSCL-G			
IC111	6-706-838-01	IC MM1661JHBE			
IC201	6-704-524-01	IC FAN8036L			
IC4601	6-710-554-01	IC PCM1808PWR			
IC4602	6-704-819-01	IC CS4335-KSZR			
		< TRANSISTOR >			
Q101	6-550-008-01	TRANSISTOR	UM6K1N-TN		
Q102	6-550-653-01	TRANSISTOR	QST8TR		
Q103	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
		< RESISTOR >			
R101	1-216-809-11	METAL CHIP	100	5%	1/10W
R102	1-216-864-11	SHORT CHIP	0		
R103	1-218-864-11	METAL CHIP	5.1K	0.5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-857-11	METAL CHIP	1M	5%	1/10W
R109	1-216-809-11	METAL CHIP	100	5%	1/10W
R110	1-216-841-11	METAL CHIP	47K	5%	1/10W
R111	1-216-809-11	METAL CHIP	100	5%	1/10W
R112	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R113	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R114	1-216-845-11	METAL CHIP	100K	5%	1/10W
R115	1-211-977-11	METAL CHIP	22	0.5%	1/10W
R116	1-216-821-11	METAL CHIP	1K	5%	1/10W
R117	1-216-841-11	METAL CHIP	47K	5%	1/10W
R118	1-216-801-11	METAL CHIP	22	5%	1/10W

Note: When IC102 cannot exchange with single. When this part is damaged, exchange the entire mounted board.

Ref. No.	Part No.	Description			Remark
R120	1-216-801-11	METAL CHIP	22	5%	1/10W
R121	1-216-801-11	METAL CHIP	22	5%	1/10W
R122	1-216-833-11	METAL CHIP	10K	5%	1/10W
R123	1-216-809-11	METAL CHIP	100	5%	1/10W
R124	1-216-841-11	METAL CHIP	47K	5%	1/10W
R125	1-216-833-11	METAL CHIP	10K	5%	1/10W
R133	1-216-864-11	SHORT CHIP	0		
R136	1-216-835-11	METAL CHIP	15K	5%	1/10W
R142	1-216-845-11	METAL CHIP	100K	5%	1/10W
R156	1-216-809-11	METAL CHIP	100	5%	1/10W
R204	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R205	1-216-833-11	METAL CHIP	10K	5%	1/10W
R206	1-216-833-11	METAL CHIP	10K	5%	1/10W
R207	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R208	1-216-839-11	METAL CHIP	33K	5%	1/10W
R209	1-216-839-11	METAL CHIP	33K	5%	1/10W
R210	1-216-841-11	METAL CHIP	47K	5%	1/10W
R212	1-216-833-11	METAL CHIP	10K	5%	1/10W
R213	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R214	1-216-835-11	METAL CHIP	15K	5%	1/10W
R215	1-216-834-11	METAL CHIP	12K	5%	1/10W
R216	1-216-834-11	METAL CHIP	12K	5%	1/10W
R219	1-216-838-11	METAL CHIP	27K	5%	1/10W
R220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R221	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R223	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R224	1-216-833-11	METAL CHIP	10K	5%	1/10W
R225	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R226	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R230	1-218-893-11	METAL CHIP	82K	0.5%	1/10W
R231	1-218-875-11	METAL CHIP	15K	0.5%	1/10W
R232	1-218-877-11	METAL CHIP	18K	0.5%	1/10W
R233	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R234	1-216-833-11	METAL CHIP	10K	5%	1/10W
R246	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R247	1-216-821-11	METAL CHIP	1K	5%	1/10W
R256	1-216-833-11	METAL CHIP	10K	5%	1/10W
R521	1-216-833-11	METAL CHIP	10K	5%	1/10W
R605	1-216-295-91	SHORT CHIP	0		
R606	1-216-295-91	SHORT CHIP	0		
R608	1-216-295-91	SHORT CHIP	0		
R630	1-216-295-91	SHORT CHIP	0		
R1101	1-218-841-11	METAL CHIP	560	0.5%	1/10W
R1110	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R1114	1-500-903-21	EMI FERRITE (SMD)			
R1121	1-216-864-11	SHORT CHIP	0		
R1123	1-216-864-11	SHORT CHIP	0		
R1129	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1150	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1151	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1152	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1168	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R1177	1-216-864-11	SHORT CHIP	0		
R1178	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1184	1-216-809-11	METAL CHIP	100	5%	1/10W
R1191	1-216-864-11	SHORT CHIP	0		
R1192	1-216-864-11	SHORT CHIP	0		
R1193	1-216-864-11	SHORT CHIP	0		
R1194	1-216-864-11	SHORT CHIP	0		
R1248	1-216-295-91	SHORT CHIP	0		

Ref. No.	Part No.	Description			Remark
R1249	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1250	1-216-295-91	SHORT CHIP	0		
R1252	1-216-295-91	SHORT CHIP	0		
R1255	1-216-295-91	SHORT CHIP	0		
R1256	1-216-295-91	SHORT CHIP	0		
R1261	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1262	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1263	1-216-864-11	SHORT CHIP	0		
R1269	1-216-809-11	METAL CHIP	100	5%	1/10W
R1276	1-216-864-11	SHORT CHIP	0		
R1277	1-216-809-11	METAL CHIP	100	5%	1/10W
R1278	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1279	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1280	1-216-864-11	SHORT CHIP	0		
R1281	1-216-864-11	SHORT CHIP	0		
R1282	1-216-864-11	SHORT CHIP	0		
R1283	1-216-864-11	SHORT CHIP	0		
R4601	1-216-809-11	METAL CHIP	100	5%	1/10W
R4602	1-216-809-11	METAL CHIP	100	5%	1/10W
R4605	1-469-112-11	FERRITE, EMI (SMD) (1608)			
R4606	1-216-801-11	METAL CHIP	22	5%	1/10W
R4608	1-216-864-11	SHORT CHIP	0		
R4609	1-216-864-11	SHORT CHIP	0		
R4611	1-216-864-11	SHORT CHIP	0		
R4833	1-216-864-11	SHORT CHIP	0		
R4834	1-216-864-11	SHORT CHIP	0		
R4835	1-216-295-91	SHORT CHIP	0		
R4837	1-216-864-11	SHORT CHIP	0		
R4838	1-216-864-11	SHORT CHIP	0		
		< COMPOSITION CIRCUIT BLOCK >			
RB105	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB106	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB107	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB108	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB111	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB112	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB113	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB114	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
RB115	1-234-400-21	CONDUCTOR, NETWORK (1005X4)			
		< VIBRATOR >			
X101	1-814-103-21	VIBRATOR, CRYSTAL (27MHz)			
**********					
	A-1750-170-A	HUB BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1500	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1501	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C1502	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1503	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1504	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1507	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1508	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C1510	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1512	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V

HUB **MAIN**

Ref. No.	Part No.	Description			Remark
C1513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1514	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C1515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1517	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1518	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1520	1-137-765-21	ELECT CHIP	47uF	20%	16V
C1521	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1522	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1523	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1524	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1527	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1528	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1529	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C1530	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C1531	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
		< CONNECTOR >			
CN1500	1-774-731-21	PIN, CONNECTOR (PC BOARD) 5P			
CN1501	1-774-729-21	PIN, CONNECTOR (PC BOARD) 10P			
CN1502	1-785-728-21	PIN (PC BOARD), CONNECTOR 7P			
		< EARTH TERMINAL >			
* ET1500	1-780-408-11	TERMINAL, LUG			
* ET1501	1-780-408-11	TERMINAL, LUG			
		< FERRITE BEAD >			
* FB1500	1-400-973-21	INDUCTOR (EMI FERRITE)			
FB1501	1-216-295-91	SHORT CHIP	0		
* FB1502	1-400-973-21	INDUCTOR (EMI FERRITE)			
FB1503	1-216-295-91	SHORT CHIP	0		
* FB1505	1-400-973-21	INDUCTOR (EMI FERRITE)			
		< IC >			
IC1500	8-759-338-95	IC NJM2903V (TE2)			
IC1501	6-714-034-01	IC USB2512A-AEZG			
		< RESISTOR >			
R1500	1-216-809-11	METAL CHIP	100	5%	1/10W
R1501	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1503	1-216-815-11	METAL CHIP	330	5%	1/10W
R1504	1-218-446-11	METAL CHIP	1	5%	1/10W
R1505	1-218-446-11	METAL CHIP	1	5%	1/10W
R1506	1-218-446-11	METAL CHIP	1	5%	1/10W
R1507	1-218-446-11	METAL CHIP	1	5%	1/10W
R1508	1-218-446-11	METAL CHIP	1	5%	1/10W
R1509	1-218-446-11	METAL CHIP	1	5%	1/10W
R1510	1-218-446-11	METAL CHIP	1	5%	1/10W
R1511	1-218-446-11	METAL CHIP	1	5%	1/10W
R1512	1-218-446-11	METAL CHIP	1	5%	1/10W
R1513	1-218-446-11	METAL CHIP	1	5%	1/10W
R1515	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1516	1-216-815-11	METAL CHIP	330	5%	1/10W
R1517	1-218-446-11	METAL CHIP	1	5%	1/10W
R1518	1-218-446-11	METAL CHIP	1	5%	1/10W
R1519	1-218-446-11	METAL CHIP	1	5%	1/10W
R1520	1-218-446-11	METAL CHIP	1	5%	1/10W
R1521	1-218-446-11	METAL CHIP	1	5%	1/10W

Ref. No.	Part No.	Description			Remark
R1522	1-218-446-11	METAL CHIP	1	5%	1/10W
R1523	1-218-446-11	METAL CHIP	1	5%	1/10W
R1524	1-218-446-11	METAL CHIP	1	5%	1/10W
R1525	1-218-446-11	METAL CHIP	1	5%	1/10W
R1526	1-218-446-11	METAL CHIP	1	5%	1/10W
R1527	1-216-809-11	METAL CHIP	100	5%	1/10W
R1530	1-216-857-11	METAL CHIP	1M	5%	1/10W
R1533	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1537	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1538	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1540	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1541	1-216-809-11	METAL CHIP	100	5%	1/10W
R1542	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1543	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1544	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1546	1-216-809-11	METAL CHIP	100	5%	1/10W
R1547	1-216-834-11	METAL CHIP	12K	5%	1/10W
		< VIBRATOR >			
X1500	1-760-613-21	VIBRATOR, CRYSTAL (24MHz)			
**********					
	A-1750-177-A	MAIN BOARD, COMPLETE (GTR33: E2, E51, MX, AR)			
	A-1750-180-A	MAIN BOARD, COMPLETE (GTR55: E2, E51, MX, AR)			
	A-1750-183-A	MAIN BOARD, COMPLETE (GTR77: E2, E51, MX, AR)			
	A-1754-378-A	MAIN BOARD, COMPLETE (GTR33: E4)			
	A-1754-384-A	MAIN BOARD, COMPLETE (GTR55: E4)			
	A-1754-390-A	MAIN BOARD, COMPLETE (GTR77: E4)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
C102	1-126-963-11	ELECT	4.7uF	20%	50V
C109	1-126-964-11	ELECT	10uF	20%	50V
C110	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C111	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C112	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C115	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C116	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C118	1-126-961-11	ELECT	2.2uF	20%	50V
C120	1-100-385-91	CERAMIC CHIP	0.47uF		25V
C123	1-126-964-11	ELECT	10uF	20%	50V
C124	1-126-960-11	ELECT	1uF	20%	50V
C125	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C127	1-137-190-91	FILM	0.22uF	5%	50V (GTR33)
C127	1-136-171-00	FILM	0.33uF	5%	50V (GTR55/GTR77)
C128	1-136-498-81	FILM	0.12uF	5%	50V (GTR55/GTR77)
C128	1-137-189-11	FILM	0.18uF	5%	50V (GTR33)
C129	1-126-961-11	ELECT	2.2uF	20%	50V
C131	1-126-964-11	ELECT	10uF	20%	50V
C132	1-136-161-00	FILM	0.047uF	5%	50V
C133	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C134	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C135	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C137	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C139	1-135-834-91	CERAMIC CHIP	2.2E+06PF		6.3V
C142	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C143	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C144	1-126-964-11	ELECT	10uF	20%	50V
C145	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C146	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C147	1-126-959-11	ELECT	0.47uF	20%	50V
C148	1-104-658-91	ELECT	100uF	20%	10V
C149	1-104-658-91	ELECT	100uF	20%	10V
C150	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C151	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C152	1-100-756-91	CERAMIC CHIP	0.047uF	10%	50V
C153	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C154	1-126-935-11	ELECT	470uF	20%	16V
C160	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C161	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C162	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C163	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C164	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C165	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C177	1-136-498-81	FILM	0.12uF	5%	50V (GTR55/GTR77)
C177	1-137-189-11	FILM	0.18uF	5%	50V (GTR33)
C178	1-137-190-91	FILM	0.22uF	5%	50V (GTR33)
C178	1-136-171-00	FILM	0.33uF	5%	50V (GTR55/GTR77)
C179	1-126-961-11	ELECT	2.2uF	20%	50V
C180	1-126-960-11	ELECT	1uF	20%	50V
C181	1-126-964-11	ELECT	10uF	20%	50V
C182	1-136-161-00	FILM	0.047uF	5%	50V
C183	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C184	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C185	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C187	1-126-964-11	ELECT	10uF	20%	50V
C192	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C193	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C194	1-126-964-11	ELECT	10uF	20%	50V
C195	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C201	1-126-961-11	ELECT	2.2uF	20%	50V
C211	1-126-964-11	ELECT	10uF	20%	50V
C212	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C213	1-126-964-11	ELECT	10uF	20%	50V
C214	1-128-934-11	CERAMIC CHIP	0.33uF	20%	10V
C215	1-126-964-11	ELECT	10uF	20%	50V
C219	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C220	1-126-947-11	ELECT	47uF	20%	35V
C222	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C223	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C224	1-126-964-11	ELECT	10uF	20%	50V
C225	1-126-934-11	ELECT	220uF	20%	16V
C227	1-126-964-11	ELECT	10uF	20%	50V
C232	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C233	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C242	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C243	1-100-717-91	CERAMIC CHIP	1uF		16V
C270	1-126-947-11	ELECT	47uF	20%	35V
C272	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C273	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C274	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C275	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C277	1-126-964-11	ELECT	10uF	20%	50V
C278	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C281	1-162-913-11	CERAMIC CHIP	8PF	0.5PF	50V
C284	1-104-658-91	ELECT	100uF	20%	10V
C285	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C286	1-126-935-11	ELECT	470uF	20%	16V
C287	1-126-964-11	ELECT	10uF	20%	50V
C288	1-126-960-11	ELECT	1uF	20%	50V
C290	1-136-164-00	FILM	0.082uF	5%	50V
C292	1-137-194-81	FILM	0.47uF	5%	50V (GTR55)
C292	1-136-176-00	FILM	0.82uF	5%	50V (GTR33)
C292	1-137-198-81	FILM	1uF	5%	50V (GTR77)
C293	1-100-717-91	CERAMIC CHIP	1uF		16V
C321	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C322	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C380	1-136-162-00	FILM	0.056uF	5%	50V (GTR77)
C380	1-136-495-11	FILM	0.068uF	5%	50V (GTR33/GTR55)
C382	1-136-162-00	FILM	0.056uF	5%	50V (GTR33)
C382	1-136-495-11	FILM	0.068uF	5%	50V (GTR55/GTR77)
C383	1-137-189-11	FILM	0.18uF	5%	50V
C390	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C410	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C411	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C414	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C417	1-126-917-11	ELECT	3300uF	20%	6.3V
C422	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C423	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C424	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C425	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C426	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C427	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C428	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C431	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C432	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C434	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C437	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C438	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C439	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C440	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C464	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C483	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C496	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C498	1-126-964-11	ELECT	10uF	20%	50V
C499	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C500	1-126-964-11	ELECT	10uF	20%	50V
C550	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C552	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C553	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C554	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C555	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C556	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C602	1-126-944-11	ELECT	3300uF	20%	25V
C604	1-136-497-81	FILM	0.1uF	5%	50V
C605	1-136-497-81	FILM	0.1uF	5%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C608	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C609	1-126-933-11	ELECT	100uF	20%	16V
C610	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C611	1-104-658-91	ELECT	100uF	20%	10V
C612	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C616	1-126-936-11	ELECT	3300uF	20%	16V
C617	1-136-497-81	FILM	0.1uF	5%	50V
C618	1-136-497-81	FILM	0.1uF	5%	50V
C620	1-135-372-31	ELECT	470uF	20%	10V
C621	1-128-953-31	ELECT	470uF	20%	25V
C624	1-165-728-31	ELECT	330uF	20%	16V
C625	1-126-951-11	ELECT	470uF	20%	35V
C654	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C655	1-126-923-91	ELECT	220uF	20%	10V
C656	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C660	1-126-964-11	ELECT	10uF	20%	50V (GTR55/GTR77)
C692	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C695	1-126-933-11	ELECT	100uF	20%	16V
C696	1-126-961-11	ELECT	2.2uF	20%	50V
C697	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C698	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C699	1-126-157-11	ELECT	10uF	20%	16V
		< CONNECTOR >			
CN220	1-784-770-11	CONNECTOR, FFC 9P			
CN402	1-779-277-11	CONNECTOR, FFC (LIF (NON-ZIF)) 9P			
CN403	1-568-830-11	CONNECTOR, FFC 11P			(GTR55/GTR77)
CN404	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			(GTR33)
CN405	1-784-784-11	CONNECTOR, FFC 23P			
CN410	1-784-774-11	CONNECTOR, FFC 13P			
CN450	1-784-770-11	CONNECTOR, FFC 9P (E4)			
CN470	1-564-709-11	PIN, CONNECTOR (SMALL TYPE) 7P			
* CN479	1-573-094-11	SOCKET, CONNECTOR 13P			
* CN601	1-564-725-11	PIN, CONNECTOR (SMALL TYPE) 9P			
* CN690	1-564-518-11	PLUG, CONNECTOR 3P			
CN691	1-779-277-11	CONNECTOR, FFC (LIF (NON-ZIF)) 9P			
CN692	1-779-544-21	CONNECTOR, FFC (LIF (NON-ZIF)) 7P			
		< DIODE >			
D116	6-500-848-01	DIODE MC2840-T112-1			
D201	6-500-848-01	DIODE MC2840-T112-1			
D202	6-501-817-01	DIODE MA2J1110GLS0			
D211	6-501-722-01	DIODE MAZ8043GMLS0			
D212	6-501-817-01	DIODE MA2J1110GLS0			
D213	6-500-334-01	DIODE MC2836-T112-1			
D321	6-501-579-01	DIODE MC2837			
D468	6-501-817-01	DIODE MA2J1110GLS0			
D483	6-501-817-01	DIODE MA2J1110GLS0			
D484	6-501-817-01	DIODE MA2J1110GLS0			
D500	6-500-522-21	DIODE 10EDB40-TB3 (GTR55/GTR77)			
D501	6-501-817-01	DIODE MA2J1110GLS0			
D502	6-500-522-21	DIODE 10EDB40-TB3 (GTR55/GTR77)			
D601	6-502-994-01	DI D10XB60 F			
D610	6-500-522-21	DIODE 10EDB40-TB3			
D611	6-500-522-21	DIODE 10EDB40-TB3			
D612	6-500-522-21	DIODE 10EDB40-TB3			
D613	6-500-522-21	DIODE 10EDB40-TB3			
D620	6-502-272-01	DI RB055L-40TE25			

Ref. No.	Part No.	Description	Remark
D621	6-502-272-01	DI RB055L-40TE25	
D623	6-500-522-21	DIODE 10EDB40-TB3	
D624	6-500-522-21	DIODE 10EDB40-TB3	
D628	6-501-817-01	DIODE MA2J1110GLS0	
D630	6-501-817-01	DIODE MA2J1110GLS0	
D650	6-501-713-01	DIODE MAZ8033G0LS0	
D651	6-500-522-21	DIODE 10EDB40-TB3	
D652	6-500-522-21	DIODE 10EDB40-TB3	
D653	6-500-522-21	DIODE 10EDB40-TB3	
D691	6-501-817-01	DIODE MA2J1110GLS0	
D692	6-501-734-01	DIODE MAZ8056GMLS0	
D694	6-501-817-01	DIODE MA2J1110GLS0	
D696	6-501-734-01	DIODE MAZ8056GMLS0	(GTR55/GTR77)
D699	6-500-335-01	DIODE MC2838-T112-1	
		< IC >	
IC252	8-759-278-58	IC NJM4558V-TE2	
IC253	8-759-278-58	IC NJM4558V-TE2	
IC401	A-1778-942-A	IC R5F364AEDFA (for SERVICE)	
IC407	6-712-027-01	IC R2A15216FP	
IC600	6-713-034-01	IC KIA7812API-U/PF	
IC602	6-713-032-01	IC KIA7809API-U/PF	
IC603	6-701-761-01	IC uPC3533AHF	
IC677	6-712-617-01	IC SI-8008TM-TLS	
IC678	6-713-826-01	IC SI-8001FFEK	
		< JACK >	
J120	1-822-758-11	JACK, PIN 2P (PC IN)	
		< JACK >	
JK500	1-780-812-11	TERMINAL BOARD (SPEAKER) (SUBWOOFER)	(GTR33/GTR55)
JK501	1-820-067-21	TERMINAL BOARD (SPEAKER) (SUBWOOFER)	(GTR77)
		< JUMPER RESISTOR >	
JR103	1-216-864-11	SHORT CHIP 0	
JR104	1-216-864-11	SHORT CHIP 0	
JR401	1-216-296-11	SHORT CHIP 0	
JR402	1-216-296-11	SHORT CHIP 0	
JR403	1-216-864-11	SHORT CHIP 0	
JR404	1-216-296-11	SHORT CHIP 0	
JR405	1-216-296-11	SHORT CHIP 0	
JR406	1-216-864-11	SHORT CHIP 0	
JR407	1-216-864-11	SHORT CHIP 0	
JR408	1-216-296-11	SHORT CHIP 0	
JR409	1-216-864-11	SHORT CHIP 0	
JR410	1-216-296-11	SHORT CHIP 0	
JR411	1-216-296-11	SHORT CHIP 0	
JR412	1-216-864-11	SHORT CHIP 0	
JR413	1-216-296-11	SHORT CHIP 0	
JR414	1-216-296-11	SHORT CHIP 0	
JR415	1-216-864-11	SHORT CHIP 0	
JR416	1-216-296-11	SHORT CHIP 0	
JR417	1-216-864-11	SHORT CHIP 0	
JR418	1-216-296-11	SHORT CHIP 0	
JR419	1-216-296-11	SHORT CHIP 0	
JR420	1-216-296-11	SHORT CHIP 0	
JR421	1-216-296-11	SHORT CHIP 0	

Ref. No.	Part No.	Description		Remark
JR422	1-216-296-11	SHORT CHIP	0	
JR423	1-216-864-11	SHORT CHIP	0	
JR424	1-216-296-11	SHORT CHIP	0	
JR425	1-216-296-11	SHORT CHIP	0	
JR426	1-216-296-11	SHORT CHIP	0	
JR427	1-216-864-11	SHORT CHIP	0	
JR428	1-216-296-11	SHORT CHIP	0	
JR429	1-216-864-11	SHORT CHIP	0	
JR430	1-216-296-11	SHORT CHIP	0	
JR431	1-216-864-11	SHORT CHIP	0	
JR432	1-216-296-11	SHORT CHIP	0	
JR433	1-216-296-11	SHORT CHIP	0	
JR434	1-216-296-11	SHORT CHIP	0	
JR435	1-216-296-11	SHORT CHIP	0	
JR436	1-216-296-11	SHORT CHIP	0	
JR437	1-216-864-11	SHORT CHIP	0	
JR438	1-216-864-11	SHORT CHIP	0	
JR439	1-216-296-11	SHORT CHIP	0	
JR440	1-216-296-11	SHORT CHIP	0	
JR447	1-216-296-11	SHORT CHIP	0	
JR449	1-216-296-11	SHORT CHIP	0	
JR500	1-216-864-11	SHORT CHIP	0 (E4)	
JR503	1-216-864-11	SHORT CHIP	0	
JR634	1-216-296-11	SHORT CHIP	0	
JR635	1-216-296-11	SHORT CHIP	0	
JR636	1-216-296-11	SHORT CHIP	0	
JR637	1-216-864-11	SHORT CHIP	0	
JR638	1-216-296-11	SHORT CHIP	0	
JR639	1-216-296-11	SHORT CHIP	0	
JR640	1-216-864-11	SHORT CHIP	0	
		< COIL >		
L623	1-400-424-21	INDUCTOR	47uH	
L624	1-457-822-11	INDUCTOR	47uH	
		< TRANSISTOR >		
Q115	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q128	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q178	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q210	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q211	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q212	8-729-037-13	TRANSISTOR	KTA1271Y	
Q214	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q215	8-729-038-28	TRANSISTOR	RT1N441C-TP-1	
Q230	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	(GTR55/GTR77)
Q231	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	(GTR55/GTR77)
Q300	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	
Q301	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	
Q302	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q303	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q402	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q430	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q431	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q452	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q500	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q501	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q502	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q503	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	

Ref. No.	Part No.	Description		Remark
Q620	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q627	8-729-027-26	TRANSISTOR	DTA114YKA-T146	
Q628	6-551-276-01	TRANSISTOR	RT1N431C-TP-1	
Q640	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF	
Q641	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF	
Q643	8-729-047-62	TRANSISTOR	2SC3440-T12-1F	
Q644	8-729-047-62	TRANSISTOR	2SC3440-T12-1F	
Q645	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF	
Q646	8-729-024-43	TRANSISTOR	2SA1365-T112-1EF	
Q647	8-729-047-62	TRANSISTOR	2SC3440-T12-1F	
Q648	8-729-047-62	TRANSISTOR	2SC3440-T12-1F	
Q655	8-729-040-76	TRANSISTOR	KTA1273-Y-AT	
Q656	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q657	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	
Q658	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	
Q670	8-729-027-23	TRANSISTOR	DTA114EKA-T146	
Q681	6-551-276-01	TRANSISTOR	RT1N431C-TP-1 (E4)	
Q682	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF (E4)	
Q683	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF (E4)	
Q684	8-729-037-13	TRANSISTOR	KTA1271Y (E4)	
Q696	8-729-032-94	TRANSISTOR	2SD1859TV2Q	
Q697	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	
Q698	8-729-032-94	TRANSISTOR	2SD1859TV2Q	(GTR55/GTR77)
Q699	8-729-037-13	TRANSISTOR	KTA1271Y	
		< RESISTOR >		
R110	1-216-845-11	METAL CHIP	100K 5% 1/10W	
R111	1-216-845-11	METAL CHIP	100K 5% 1/10W	
R112	1-216-817-11	METAL CHIP	470 5% 1/10W	
R113	1-216-824-11	METAL CHIP	1.8K 5% 1/10W	
R116	1-216-809-11	METAL CHIP	100 5% 1/10W	
R117	1-216-837-11	METAL CHIP	22K 5% 1/10W	
R118	1-216-838-11	METAL CHIP	27K 5% 1/10W	
R120	1-216-838-11	METAL CHIP	27K 5% 1/10W	
R121	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R122	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R127	1-216-819-11	METAL CHIP	680 5% 1/10W	(GTR55)
R127	1-220-373-11	METAL CHIP	620 5% 1/10W	(GTR33/GTR77)
R128	1-216-834-11	METAL CHIP	12K 5% 1/10W	(GTR33)
R128	1-216-835-11	METAL CHIP	15K 5% 1/10W	(GTR55/GTR77)
R129	1-216-864-11	SHORT CHIP	0	
R130	1-216-849-11	METAL CHIP	220K 5% 1/10W	
R131	1-216-849-11	METAL CHIP	220K 5% 1/10W	
R132	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
R133	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	
R134	1-216-823-11	METAL CHIP	1.5K 5% 1/10W	
R135	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R136	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	
R137	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R138	1-216-841-11	METAL CHIP	47K 5% 1/10W	
R144	1-216-820-11	METAL CHIP	820 5% 1/10W	
R145	1-216-823-11	METAL CHIP	1.5K 5% 1/10W	
R153	1-216-833-11	METAL CHIP	10K 5% 1/10W	
R177	1-216-819-11	METAL CHIP	680 5% 1/10W	(GTR55)

MAIN

Ref. No.	Part No.	Description			Remark
R177	1-220-373-11	METAL CHIP	620	5%	1/10W (GTR33/GTR77)
R178	1-216-834-11	METAL CHIP	12K	5%	1/10W (GTR33)
R178	1-216-835-11	METAL CHIP	15K	5%	1/10W (GTR55/GTR77)
R179	1-216-864-11	SHORT CHIP	0		
R182	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R183	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R184	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R185	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R186	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R187	1-216-833-11	METAL CHIP	10K	5%	1/10W
R188	1-216-841-11	METAL CHIP	47K	5%	1/10W
R190	1-216-857-11	METAL CHIP	1M	5%	1/10W
R192	1-216-842-11	METAL CHIP	56K	5%	1/10W
R194	1-216-820-11	METAL CHIP	820	5%	1/10W
R195	1-216-833-11	METAL CHIP	10K	5%	1/10W
R200	1-216-801-11	METAL CHIP	22	5%	1/10W
R201	1-216-841-11	METAL CHIP	47K	5%	1/10W
R202	1-216-809-11	METAL CHIP	100	5%	1/10W
R204	1-216-839-11	METAL CHIP	33K	5%	1/10W
R210	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R211	1-216-845-11	METAL CHIP	100K	5%	1/10W
R212	1-216-833-11	METAL CHIP	10K	5%	1/10W
R213	1-216-845-11	METAL CHIP	100K	5%	1/10W
R214	1-216-819-11	METAL CHIP	680	5%	1/10W
R215	1-216-833-11	METAL CHIP	10K	5%	1/10W
R216	1-216-837-11	METAL CHIP	22K	5%	1/10W
R218	1-216-833-11	METAL CHIP	10K	5%	1/10W
R220	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GTR33)
R220	1-216-830-11	METAL CHIP	5.6K	5%	1/10W (GTR55/GTR77)
R221	1-216-817-11	METAL CHIP	470	5%	1/10W
R222	1-216-994-11	METAL CHIP	13K	5%	1/10W (GTR33)
R222	1-218-725-11	METAL CHIP	24K	0.5%	1/10W (GTR55/GTR77)
R223	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R224	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R225	1-216-828-11	METAL CHIP	3.9K	5%	1/10W (EXCEPT E4)
R225	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W (E4)
R226	1-216-828-11	METAL CHIP	3.9K	5%	1/10W (EXCEPT E4)
R226	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W (E4)
R227	1-216-841-11	METAL CHIP	47K	5%	1/10W
R228	1-216-821-11	METAL CHIP	1K	5%	1/10W
R229	1-216-821-11	METAL CHIP	1K	5%	1/10W
R235	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R236	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R237	1-216-815-11	METAL CHIP	330	5%	1/10W (GTR55/GTR77)
R238	1-216-821-11	METAL CHIP	1K	5%	1/10W
R239	1-216-845-11	METAL CHIP	100K	5%	1/10W
R240	1-216-845-11	METAL CHIP	100K	5%	1/10W
R241	1-216-821-11	METAL CHIP	1K	5%	1/10W
R242	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (GTR33)
R242	1-216-830-11	METAL CHIP	5.6K	5%	1/10W (GTR55)
R242	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W (GTR77)
R243	1-216-821-11	METAL CHIP	1K	5%	1/10W
R270	1-216-829-11	METAL CHIP	4.7K	5%	1/10W (GTR33)
R270	1-216-830-11	METAL CHIP	5.6K	5%	1/10W (GTR55/GTR77)
R271	1-216-817-11	METAL CHIP	470	5%	1/10W
R272	1-216-994-11	METAL CHIP	13K	5%	1/10W (GTR33)
R272	1-218-725-11	METAL CHIP	24K	0.5%	1/10W (GTR55/GTR77)
R276	1-216-841-11	METAL CHIP	47K	5%	1/10W
R277	1-216-841-11	METAL CHIP	47K	5%	1/10W
R278	1-216-821-11	METAL CHIP	1K	5%	1/10W
R279	1-216-821-11	METAL CHIP	1K	5%	1/10W
R280	1-216-838-11	METAL CHIP	27K	5%	1/10W
R282	1-216-845-11	METAL CHIP	100K	5%	1/10W
R283	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R284	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R285	1-216-841-11	METAL CHIP	47K	5%	1/10W
R286	1-216-841-11	METAL CHIP	47K	5%	1/10W
R288	1-216-841-11	METAL CHIP	47K	5%	1/10W
R289	1-216-821-11	METAL CHIP	1K	5%	1/10W
R291	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W
R292	1-216-833-11	METAL CHIP	10K	5%	1/10W
R300	1-216-817-11	METAL CHIP	470	5%	1/10W
R301	1-216-817-11	METAL CHIP	470	5%	1/10W
R302	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R303	1-216-819-11	METAL CHIP	680	5%	1/10W
R304	1-216-841-11	METAL CHIP	47K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R322	1-216-837-11	METAL CHIP	22K	5%	1/10W
R323	1-216-837-11	METAL CHIP	22K	5%	1/10W
R324	1-216-837-11	METAL CHIP	22K	5%	1/10W
R325	1-216-837-11	METAL CHIP	22K	5%	1/10W
R326	1-216-837-11	METAL CHIP	22K	5%	1/10W
R327	1-216-837-11	METAL CHIP	22K	5%	1/10W
R328	1-216-837-11	METAL CHIP	22K	5%	1/10W
R329	1-216-833-11	METAL CHIP	10K	5%	1/10W
R330	1-216-833-11	METAL CHIP	10K	5%	1/10W
R361	1-216-833-11	METAL CHIP	10K	5%	1/10W
R364	1-216-833-11	METAL CHIP	10K	5%	1/10W
R365	1-216-833-11	METAL CHIP	10K	5%	1/10W
R380	1-216-809-11	METAL CHIP	100	5%	1/10W
R381	1-216-835-11	METAL CHIP	15K	5%	1/10W
R390	1-216-809-11	METAL CHIP	100	5%	1/10W
R391	1-216-833-11	METAL CHIP	10K	5%	1/10W
R392	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (GTR55)
R392	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W (GTR77)
R392	1-216-864-11	SHORT CHIP	0 (GTR33)		
R393	1-218-867-11	METAL CHIP	6.8K	0.5%	1/10W (E4)
R393	1-216-841-11	METAL CHIP	47K	5%	1/10W (EXCEPT E4)
R394	1-216-835-11	METAL CHIP	15K	5%	1/10W
R395	1-216-835-11	METAL CHIP	15K	5%	1/10W
R397	1-216-835-11	METAL CHIP	15K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R398	1-216-809-11	METAL CHIP	100	5%	1/10W
R399	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-809-11	METAL CHIP	100	5%	1/10W
R409	1-216-833-11	METAL CHIP	10K	5%	1/10W
R410	1-219-570-11	METAL CHIP	10M	5%	1/10W
R411	1-216-849-11	METAL CHIP	220K	5%	1/10W
R422	1-216-821-11	METAL CHIP	1K	5%	1/10W
R423	1-216-821-11	METAL CHIP	1K	5%	1/10W
R424	1-216-821-11	METAL CHIP	1K	5%	1/10W
R425	1-216-821-11	METAL CHIP	1K	5%	1/10W
R426	1-216-821-11	METAL CHIP	1K	5%	1/10W
R427	1-216-821-11	METAL CHIP	1K	5%	1/10W
R428	1-216-821-11	METAL CHIP	1K	5%	1/10W
R431	1-216-809-11	METAL CHIP	100	5%	1/10W
R432	1-216-809-11	METAL CHIP	100	5%	1/10W
R434	1-216-809-11	METAL CHIP	100	5%	1/10W
R439	1-216-809-11	METAL CHIP	100	5%	1/10W
R440	1-216-809-11	METAL CHIP	100	5%	1/10W
R441	1-216-809-11	METAL CHIP	100	5%	1/10W
R462	1-216-809-11	METAL CHIP	100	5%	1/10W
R463	1-216-809-11	METAL CHIP	100	5%	1/10W
R466	1-216-809-11	METAL CHIP	100	5%	1/10W
R467	1-216-809-11	METAL CHIP	100	5%	1/10W
R468	1-216-813-11	METAL CHIP	220	5%	1/10W
R474	1-216-809-11	METAL CHIP	100	5%	1/10W
R481	1-216-821-11	METAL CHIP	1K	5%	1/10W
R483	1-216-837-11	METAL CHIP	22K	5%	1/10W
R484	1-216-845-11	METAL CHIP	100K	5%	1/10W
R491	1-216-809-11	METAL CHIP	100	5%	1/10W
R492	1-216-841-11	METAL CHIP	47K	5%	1/10W (GTR55/GTR77)
R493	1-216-833-11	METAL CHIP	10K	5%	1/10W (EXCEPT E4)
R493	1-216-841-11	METAL CHIP	47K	5%	1/10W (E4)
R494	1-216-817-11	METAL CHIP	470	5%	1/10W
R495	1-216-817-11	METAL CHIP	470	5%	1/10W
R497	1-216-817-11	METAL CHIP	470	5%	1/10W
R500	1-216-821-11	METAL CHIP	1K	5%	1/10W
R502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R504	1-216-821-11	METAL CHIP	1K	5%	1/10W
R513	1-216-821-11	METAL CHIP	1K	5%	1/10W
R520	1-216-833-11	METAL CHIP	10K	5%	1/10W (E4)
R525	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (E4)
R526	1-216-825-11	METAL CHIP	2.2K	5%	1/10W (E4)
R530	1-216-821-11	METAL CHIP	1K	5%	1/10W (GTR55/GTR77)
R531	1-216-821-11	METAL CHIP	1K	5%	1/10W (GTR55/GTR77)
R543	1-216-833-11	METAL CHIP	10K	5%	1/10W
R601	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R602	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R603	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R613	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R614	1-216-817-11	METAL CHIP	470	5%	1/10W
R615	1-216-833-11	METAL CHIP	10K	5%	1/10W
R616	1-216-818-11	METAL CHIP	560	5%	1/10W
R617	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R619	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R620	1-218-869-11	METAL CHIP	8.2K	0.5%	1/10W
R621	1-218-839-11	METAL CHIP	470	0.5%	1/10W
R622	1-218-835-11	METAL CHIP	330	0.5%	1/10W
R623	1-216-821-11	METAL CHIP	1K	5%	1/10W
R627	1-246-024-21	METAL CHIP	150	5%	1/2W
R633	1-216-837-11	METAL CHIP	22K	5%	1/10W
R634	1-216-837-11	METAL CHIP	22K	5%	1/10W
R635	1-216-827-11	METAL CHIP	3.3K	5%	1/10W (GTR55/GTR77)
R635	1-216-828-11	METAL CHIP	3.9K	5%	1/10W (GTR33)
R636	1-216-864-11	SHORT CHIP	0		
R637	1-215-891-11	METAL OXIDE	680	5%	2W (GTR55/GTR77)
R637	1-216-455-11	METAL OXIDE	560	5%	2W (GTR33)
R638	1-215-891-11	METAL OXIDE	680	5%	2W (GTR55/GTR77)
R638	1-216-455-11	METAL OXIDE	560	5%	2W (GTR33)
R640	1-246-024-21	METAL CHIP	150	5%	1/2W
R641	1-216-817-11	METAL CHIP	470	5%	1/10W
R642	1-216-841-11	METAL CHIP	47K	5%	1/10W
R643	1-216-817-11	METAL CHIP	470	5%	1/10W
R644	1-216-841-11	METAL CHIP	47K	5%	1/10W
R645	1-216-818-11	METAL CHIP	560	5%	1/10W
R646	1-216-818-11	METAL CHIP	560	5%	1/10W
R647	1-216-841-11	METAL CHIP	47K	5%	1/10W
R648	1-216-841-11	METAL CHIP	47K	5%	1/10W
R649	1-216-817-11	METAL CHIP	470	5%	1/10W
R650	1-216-841-11	METAL CHIP	47K	5%	1/10W
R651	1-216-817-11	METAL CHIP	470	5%	1/10W
R652	1-216-841-11	METAL CHIP	47K	5%	1/10W
R653	1-216-818-11	METAL CHIP	560	5%	1/10W
R654	1-216-818-11	METAL CHIP	560	5%	1/10W
R655	1-216-841-11	METAL CHIP	47K	5%	1/10W
R656	1-216-841-11	METAL CHIP	47K	5%	1/10W
R657	1-216-790-11	METAL CHIP	2.7	5%	1/10W
R658	1-216-790-11	METAL CHIP	2.7	5%	1/10W
R659	1-216-801-11	METAL CHIP	22	5%	1/10W
R660	1-216-790-11	METAL CHIP	2.7	5%	1/10W
R662	1-216-839-11	METAL CHIP	33K	5%	1/10W
R663	1-216-837-11	METAL CHIP	22K	5%	1/10W
R664	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R666	1-216-815-11	METAL CHIP	330	5%	1/10W
R668	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R669	1-216-853-11	METAL CHIP	470K	5%	1/10W
R674	1-216-833-11	METAL CHIP	10K	5%	1/10W
R683	1-216-821-11	METAL CHIP	1K	5%	1/10W (E4)
R690	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R694	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R695	1-216-837-11	METAL CHIP	22K	5%	1/10W
R697	1-216-821-11	METAL CHIP	1K	5%	1/10W
R698	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R699	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
		< RELAY >			
RY500	1-755-653-11	RELAY			

MAIN **MIC** **POWER**

Ref. No.	Part No.	Description			Remark
		< VIBRATOR >			
X401	1-760-252-12	RELAY (32.768kHz)			
X402	1-781-472-21	VIBRATOR, CERAMIC (8MHz)			
**********					
		MIC BOARD			
		*********			
		< CAPACITOR >			
C700	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C701	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C707	1-124-257-00	ELECT	2.2uF	20%	50V
C708	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C709	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C710	1-126-157-11	ELECT	10uF	20%	16V
C711	1-124-584-00	ELECT	100uF	20%	6.3V
C712	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C713	1-124-257-00	ELECT	2.2uF	20%	50V
C716	1-124-257-00	ELECT	2.2uF	20%	50V
C719	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C720	1-124-257-00	ELECT	2.2uF	20%	50V
C721	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C722	1-164-218-11	CERAMIC CHIP	180PF	5%	50V
C724	1-124-463-00	ELECT	0.1uF	20%	50V
C777	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C779	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C780	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C781	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C782	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< DIODE >			
D700	6-501-579-01	DIODE MC2837			
D701	6-501-579-01	DIODE MC2837			
		< IC >			
IC700	8-759-278-58	IC NJM4558V-TE2			
		< JACK >			
J700	1-822-757-11	JACK (LARGE TYPE) (MIC)			
J702	1-794-702-11	JACK, HEADPHONE (PHONES)			
		< JUMPER RESISTOR >			
JR701	1-216-864-11	SHORT CHIP	0		
JR702	1-216-864-11	SHORT CHIP	0		
JR703	1-216-296-11	SHORT CHIP	0		
JR704	1-216-296-11	SHORT CHIP	0		
JR705	1-216-296-11	SHORT CHIP	0		
JR706	1-216-296-11	SHORT CHIP	0		
JR707	1-216-295-91	SHORT CHIP	0		
JR708	1-216-864-11	SHORT CHIP	0		
JR709	1-216-864-11	SHORT CHIP	0		
		< RESISTOR >			
R700	1-216-821-11	METAL CHIP	1K	5%	1/10W
R701	1-216-845-11	METAL CHIP	100K	5%	1/10W
R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
R704	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R705	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R706	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R711	1-216-833-11	METAL CHIP	10K	5%	1/10W
R712	1-216-836-11	METAL CHIP	18K	5%	1/10W
R714	1-216-849-11	METAL CHIP	220K	5%	1/10W
R715	1-216-809-11	METAL CHIP	100	5%	1/10W
R716	1-216-845-11	METAL CHIP	100K	5%	1/10W
R720	1-216-845-11	METAL CHIP	100K	5%	1/10W
R721	1-216-836-11	METAL CHIP	18K	5%	1/10W
R722	1-216-833-11	METAL CHIP	10K	5%	1/10W
R723	1-216-836-11	METAL CHIP	18K	5%	1/10W
R724	1-216-841-11	METAL CHIP	47K	5%	1/10W
R725	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< VARIABLE RESISTOR >			
RV700	1-227-452-11	RES, VAR, CARBON 50K (MIC LEVEL)			
**********					
		POWER BOARD			
		**********			
	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3 (GTR55/GTR77)			
		< CAPACITOR >			
C801	1-130-777-00	MYLAR	0.1uF	5%	100V
C802	1-130-777-00	MYLAR	0.1uF	5%	100V
C803	1-137-840-11	ELECT (BLOCK)	2200uF	20%	63V (GTR33)
C803	1-137-842-11	ELECT (BLOCK)	2200uF	20%	80V (GTR55/GTR77)
C804	1-137-840-11	ELECT (BLOCK)	2200uF	20%	63V (GTR33)
C804	1-137-842-11	ELECT (BLOCK)	2200uF	20%	80V (GTR55/GTR77)
C805	1-127-811-11	ELECT (BLOCK)	3300uF	20%	50V (GTR77)
C805	1-137-839-11	ELECT (BLOCK)	2200uF	20%	50V (GTR55)
C806	1-127-811-11	ELECT (BLOCK)	3300uF	20%	50V (GTR77)
C806	1-137-839-11	ELECT (BLOCK)	2200uF	20%	50V (GTR55)
C807	1-130-777-00	MYLAR	0.1uF	5%	100V (GTR55/GTR77)
C808	1-130-777-00	MYLAR	0.1uF	5%	100V (GTR55/GTR77)
C809	1-126-964-11	ELECT	10uF	20%	50V
C810	1-126-964-11	ELECT	10uF	20%	50V
C811	1-126-964-11	ELECT	10uF	20%	50V
C812	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C813	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C814	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C815	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C816	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C817	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C818	1-126-967-11	ELECT	47uF	20%	50V
C819	1-126-967-11	ELECT	47uF	20%	50V
C820	1-126-967-11	ELECT	47uF	20%	50V
C826	1-128-552-51	ELECT	47uF	20%	63V (GTR33)
C826	1-128-562-11	ELECT	47uF	20%	100V (GTR55/GTR77)

Ref. No.	Part No.	Description			Remark
C827	1-128-552-51	ELECT	47uF	20%	63V (GTR33)
C827	1-128-562-11	ELECT	47uF	20%	100V (GTR55/GTR77)
C829	1-104-658-91	ELECT	100uF	20%	10V
C830	1-126-961-11	ELECT	2.2uF	20%	50V
C837	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C838	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C839	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C840	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C851	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C852	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
		< CONNECTOR >			
* CN801	1-573-087-11	PIN, CONNECTOR 13P			
		< DIODE >			
D800	6-502-994-01	DI D10XB60 F			
D801	6-502-994-01	DI D10XB60 F (GTR55/GTR77)			
D802	6-500-334-01	DIODE MC2836-T112-1			
D803	6-501-817-01	DIODE MA2J1110GLS0			
D804	6-501-778-01	DIODE MAZ8160GMLS0			(GTR55/GTR77)
D805	6-501-778-01	DIODE MAZ8160GMLS0			(GTR55/GTR77)
D806	6-501-412-01	DIODE SF5S6 (GTR55/GTR77)			
D807	6-501-817-01	DIODE MA2J1110GLS0			
D810	6-501-412-01	DIODE SF5S6 (GTR55/GTR77)			
D811	6-501-817-01	DIODE MA2J1110GLS0			
		< IC >			
⚠ IC800	6-600-674-01	IC STK416-130-E (GTR77)			
⚠ IC800	6-600-675-01	IC STK416-120-E (GTR55)			
⚠ IC800	6-712-281-01	IC STK433-320-E (GTR33)			
		< JACK >			
JK800	1-820-067-21	TERMINAL BOARD (SPEAKER) (FRONT SPEAKER)			
JK801	1-820-067-21	TERMINAL BOARD (SPEAKER) (SATELLITE SPEAKER) (GTR77)			
		< JUMPER RESISTOR >			
JR810	1-216-296-11	SHORT CHIP	0		
JR811	1-216-296-11	SHORT CHIP	0		
		< TRANSISTOR >			
Q800	6-551-268-01	TRANSISTOR	2SC5625		
Q801	6-551-268-01	TRANSISTOR	2SC5625		
Q802	6-551-268-01	TRANSISTOR	2SC5625		
Q803	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q806	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q807	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q808	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
Q809	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF		
Q811	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF		
		< RESISTOR >			
R806	1-216-845-11	METAL CHIP	100K	5%	1/10W (GTR55/GTR77)
R807	1-216-845-11	METAL CHIP	100K	5%	1/10W (GTR55/GTR77)

Ref. No.	Part No.	Description			Remark
R821	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R822	1-216-821-11	METAL CHIP	1K	5%	1/10W
R823	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R824	1-216-841-11	METAL CHIP	47K	5%	1/10W
R825	1-216-841-11	METAL CHIP	47K	5%	1/10W
R826	1-216-841-11	METAL CHIP	47K	5%	1/10W
R827	1-216-822-11	METAL CHIP	1.2K	5%	1/10W (GTR33/GTR55)
R827	1-216-824-11	METAL CHIP	1.8K	5%	1/10W (GTR77)
R828	1-216-822-11	METAL CHIP	1.2K	5%	1/10W (GTR33/GTR55)
R828	1-216-824-11	METAL CHIP	1.8K	5%	1/10W (GTR77)
R829	1-216-817-11	METAL CHIP	470	5%	1/10W (GTR55/GTR77)
R829	1-216-818-11	METAL CHIP	560	5%	1/10W (GTR33)
R830	1-216-841-11	METAL CHIP	47K	5%	1/10W
R831	1-220-893-11	METAL	0.22	10%	5W
R832	1-220-893-11	METAL	0.22	10%	5W
R833	1-220-893-11	METAL	0.22	10%	5W
R834	1-216-821-11	METAL CHIP	1K	5%	1/10W
R835	1-216-821-11	METAL CHIP	1K	5%	1/10W (GTR33)
R835	1-216-822-11	METAL CHIP	1.2K	5%	1/10W (GTR55/GTR77)
R836	1-216-835-11	METAL CHIP	15K	5%	1/10W (GTR55/GTR77)
R836	1-216-836-11	METAL CHIP	18K	5%	1/10W (GTR33)
R838	1-216-843-11	METAL CHIP	68K	5%	1/10W (GTR33)
R838	1-216-844-11	METAL CHIP	82K	5%	1/10W (GTR55/GTR77)
R839	1-216-843-11	METAL CHIP	68K	5%	1/10W (GTR33)
R839	1-216-844-11	METAL CHIP	82K	5%	1/10W (GTR55/GTR77)
R842	1-215-871-11	METAL OXIDE	2.2K	5%	1W (GTR55/GTR77)
R843	1-215-871-11	METAL OXIDE	2.2K	5%	1W (GTR55/GTR77)
R848	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R849	1-216-838-11	METAL CHIP	27K	5%	1/10W
R850	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R851	1-216-833-11	METAL CHIP	10K	5%	1/10W
R852	1-216-817-11	METAL CHIP	470	5%	1/10W (GTR33)
R852	1-216-864-11	SHORT CHIP	0 (GTR55/GTR77)		
R853	1-216-833-11	METAL CHIP	10K	5%	1/10W (GTR33)
R854	1-216-841-11	METAL CHIP	47K	5%	1/10W
R855	1-216-845-11	METAL CHIP	100K	5%	1/10W
R856	1-216-841-11	METAL CHIP	47K	5%	1/10W
R857	1-216-837-11	METAL CHIP	22K	5%	1/10W
R860	1-216-835-11	METAL CHIP	15K	5%	1/10W (GTR55/GTR77)
R860	1-216-836-11	METAL CHIP	18K	5%	1/10W (GTR33)
⚠ R861	1-217-637-55	FUSIBLE	1	5%	1/4W
⚠ R862	1-250-336-11	FUSIBLE	100	5%	1/2W
R863	1-216-821-11	METAL CHIP	1K	5%	1/10W

HCD-GTR33/GTR55/GTR77

POWER **TC**

Ref. No.	Part No.	Description			Remark
⚠ R865	1-250-336-11	FUSIBLE	100	5%	1/2W
R866	1-202-926-11	METAL CHIP	36K	5%	1/10W (GTR55/GTR77)
R866	1-216-840-11	METAL CHIP	39K	5%	1/10W (GTR33)
R868	1-216-839-11	METAL CHIP	33K	5%	1/10W
R881	1-216-841-11	METAL CHIP	47K	5%	1/10W
R882	1-216-843-11	METAL CHIP	68K	5%	1/10W (GTR33)
R882	1-216-844-11	METAL CHIP	82K	5%	1/10W (GTR55/GTR77)
R883	1-216-821-11	METAL CHIP	1K	5%	1/10W
R884	1-216-841-11	METAL CHIP	47K	5%	1/10W
R885	1-216-842-11	METAL CHIP	56K	5%	1/10W
R887	1-216-864-11	SHORT CHIP	0		
R889	1-216-834-11	METAL CHIP	12K	5%	1/10W (GTR55/GTR77)
R889	1-216-839-11	METAL CHIP	33K	5%	1/10W (GTR33)
R891	1-216-845-11	METAL CHIP	100K	5%	1/10W
R892	1-216-845-11	METAL CHIP	100K	5%	1/10W
R905	1-250-312-21	METAL CHIP	10	5%	1/2W
R906	1-250-312-21	METAL CHIP	10	5%	1/2W
R910	1-250-312-21	METAL CHIP	10	5%	1/2W
		< RELAY >			
RY800	1-755-653-11	RELAY			
		< THERMISTOR >			
TH802	1-804-045-11	THERMISTOR			

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TC BOARD (E4)
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< CAPACITOR >

C501	1-104-658-91	ELECT	100uF	20%	10V
C502	1-104-658-91	ELECT	100uF	20%	10V
C503	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C504	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-127-804-91	CERAMIC CHIP	100PF	1%	50V
C510	1-127-804-91	CERAMIC CHIP	100PF	1%	50V
C511	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C512	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C513	1-126-160-11	ELECT	1uF	20%	50V
C514	1-126-160-11	ELECT	1uF	20%	50V
C515	1-126-786-11	ELECT	47uF	20%	16V
C516	1-126-947-11	ELECT	47uF	20%	35V
C517	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C519	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C520	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C521	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C522	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C523	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C524	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C525	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C526	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C527	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C528	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C529	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C530	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C531	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C532	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C533	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C534	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C535	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C536	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C537	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C538	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C539	1-115-156-11	CERAMIC CHIP	1uF		10V
C540	1-130-479-91	MYLAR	0.0047uF	5%	50V
C542	1-126-796-11	ELECT	22uF	20%	50V
C543	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C545	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C546	1-100-597-91	CERAMIC CHIP	0.1uF	10%	25V
C548	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C549	1-164-156-11	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

* CN501	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P	
CN502	1-784-731-11	CONNECTOR, FFC 9P	

< IC >

IC501	8-759-100-96	IC uPC4558G2
IC502	8-759-100-96	IC uPC4558G2

< JUMPER RESISTOR >

JR501	1-216-864-11	SHORT CHIP	0
JR502	1-216-864-11	SHORT CHIP	0
JR503	1-216-864-11	SHORT CHIP	0
JR504	1-216-295-91	SHORT CHIP	0
JR505	1-216-295-91	SHORT CHIP	0
JR506	1-216-296-11	SHORT CHIP	0
JR507	1-216-296-11	SHORT CHIP	0
JR508	1-216-296-11	SHORT CHIP	0
JR509	1-216-296-11	SHORT CHIP	0
JR510	1-216-295-91	SHORT CHIP	0
JR511	1-216-296-11	SHORT CHIP	0
JR512	1-216-296-11	SHORT CHIP	0
JR513	1-216-296-11	SHORT CHIP	0
JR514	1-216-296-11	SHORT CHIP	0
JR515	1-216-296-11	SHORT CHIP	0
JR516	1-216-296-11	SHORT CHIP	0
JR517	1-216-296-11	SHORT CHIP	0
JR518	1-216-296-11	SHORT CHIP	0

< COIL >

L501	1-456-094-11	TRANSFORMER, BIAS OSCILLATION

< TRANSISTOR >

Q501	8-729-119-78	TRANSISTOR	2SC2785-HFE
Q502	8-729-119-78	TRANSISTOR	2SC2785-HFE

< RESISTOR >

R501	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R502	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R503	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R504	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R505	1-216-834-11	METAL CHIP	12K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R506	1-216-834-11	METAL CHIP	12K	5%	1/10W
R507	1-216-850-11	METAL CHIP	270K	5%	1/10W
R508	1-216-850-11	METAL CHIP	270K	5%	1/10W
R509	1-216-814-11	METAL CHIP	270	5%	1/10W
R510	1-216-814-11	METAL CHIP	270	5%	1/10W
R511	1-216-845-11	METAL CHIP	100K	5%	1/10W
R512	1-216-845-11	METAL CHIP	100K	5%	1/10W
R513	1-216-845-11	METAL CHIP	100K	5%	1/10W
R514	1-216-845-11	METAL CHIP	100K	5%	1/10W
R515	1-216-864-11	SHORT CHIP	0		
R516	1-216-864-11	SHORT CHIP	0		
R517	1-216-821-11	METAL CHIP	1K	5%	1/10W
R518	1-216-821-11	METAL CHIP	1K	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	1-216-841-11	METAL CHIP	47K	5%	1/10W
R522	1-216-841-11	METAL CHIP	47K	5%	1/10W
R523	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R524	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R525	1-216-851-11	METAL CHIP	330K	5%	1/10W
R526	1-216-851-11	METAL CHIP	330K	5%	1/10W
R527	1-216-851-11	METAL CHIP	330K	5%	1/10W
R528	1-216-851-11	METAL CHIP	330K	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	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R532	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R533	1-216-837-11	METAL CHIP	22K	5%	1/10W
R534	1-216-835-11	METAL CHIP	15K	5%	1/10W
R535	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R536	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R537	1-216-833-11	METAL CHIP	10K	5%	1/10W
R538	1-216-833-11	METAL CHIP	10K	5%	1/10W
R539	1-216-793-11	METAL CHIP	4.7	5%	1/10W
R540	1-216-805-11	METAL CHIP	47	5%	1/10W
R541	1-216-805-11	METAL CHIP	47	5%	1/10W
R543	1-216-813-11	METAL CHIP	220	5%	1/10W
R544	1-216-813-11	METAL CHIP	220	5%	1/10W
R545	1-216-817-11	METAL CHIP	470	5%	1/10W
R546	1-216-817-11	METAL CHIP	470	5%	1/10W
		< SWITCH >			
S501	1-762-369-11	SWITCH, SLIDE (REC/PB)			

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TRANS BOARD
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< CAPACITOR >

C903	1-136-153-00	FILM	0.01uF	5%	50V
C904	1-136-153-00	FILM	0.01uF	5%	50V
C908	1-128-576-11	ELECT	100uF	20%	63V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-126-968-11	ELECT	100uF	20%	50V
C911	1-126-767-11	ELECT	1000uF	20%	16V
C927	1-126-962-11	ELECT	3.3uF	20%	50V

< CONNECTOR >

CN901	1-691-961-11	PIN, CONNECTOR (PC BOARD) 3P	
* CN907	1-764-334-11	PLUG, CONNECTOR 11P 11P	
* CN908	1-564-509-11	PLUG, CONNECTOR 6P	(GTR55/GTR77)
* CN909	1-564-507-11	PLUG, CONNECTOR 4P (GTR33)	

< DIODE >

D901	8-719-991-33	DIODE	1SS133T-77
D902	8-719-991-33	DIODE	1SS133T-77
D903	8-719-991-33	DIODE	1SS133T-77
D904	8-719-991-33	DIODE	1SS133T-77
D905	8-719-991-33	DIODE	1SS133T-77
D906	8-719-991-33	DIODE	1SS133T-77
D907	8-719-991-33	DIODE	1SS133T-77
D908	6-500-522-21	DIODE	10EDB40-TB3
D909	8-719-983-92	DIODE	MTZJ-T-72-36B

< FUSE >

⚠ F951	1-523-080-11	FUSE 6.3A 250V	
⚠ F952	1-523-080-11	FUSE 6.3A 250V	(GTR55/GTR77)
⚠ F953	1-523-080-11	FUSE 6.3A 250V	(GTR55/GTR77)
⚠ F954	1-523-080-11	FUSE 6.3A 250V	
⚠ F955	1-523-082-11	FUSE 1A 250V	(GTR77: MX)
⚠ F956	1-523-086-11	FUSE 3.15A 250V	

< TRANSFORMER >

⚠ PT902	1-443-927-21	TRANSFORMER, POWER (SUB) (MX)
⚠ PT902	1-445-875-11	POWER TRANSFORMER (SUB) (EXCEPT MX)

< TRANSISTOR >

Q902	8-729-048-66	TRANSISTOR	2SB1238-PQR-TV2
Q903	8-729-119-78	TRANSISTOR	2SC2785-HFE

< RESISTOR >

R904	1-247-831-91	CARBON	1K	5%	1/4W
R915	1-247-847-91	CARBON	4.7K	5%	1/4W
R952	1-249-429-11	CARBON	10K	5%	1/4W
⚠ R955	1-217-637-55	FUSIBLE	1	5%	1/4W (EXCEPT GTR77: MX)
R957	1-249-424-11	CARBON	3.9K	5%	1/4W

< RELAY >

⚠ RY901	1-755-334-11	RELAY, AC POWER

< SWITCH >

⚠ S901	1-786-055-31	SELECTOR, VOLTAGE (E2, E51, E4)

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USB BOARD
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< CAPACITOR >

C1002	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C1003	1-126-176-11	ELECT	220uF	20%	10V
C1004	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1005	1-165-989-11	CERAMIC CHIP	10uF	10%	6.3V
C1006	1-126-176-11	ELECT	220uF	20%	10V
C1007	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1008	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1009	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1010	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1011	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

USB **VOL**

Ref. No.	Part No.	Description			Remark
C1012	1-162-910-11	CERAMIC CHIP	5PF	0.25PF 50V	
C1013	1-162-910-11	CERAMIC CHIP	5PF	0.25PF 50V	
		< CONNECTOR >			
CN1000	1-819-866-11	CONNECTOR, USB (A) (REC/PLAY B)			
CN1001	1-819-866-11	CONNECTOR, USB (A) (PLAY A)			
		< DIODE >			
D1000	6-502-795-01	DI 1L0351B12C0MXT02			
D1002	6-503-224-01	DI 1L0351V22F0MIT01			
D1003	6-502-795-01	DI 1L0351B12C0MXT02			
D1004	6-501-579-01	DIODE MC2837			
D1005	6-501-579-01	DIODE MC2837			
D1006	6-501-579-01	DIODE MC2837			
D1007	6-501-579-01	DIODE MC2837			
D1008	6-501-579-01	DIODE MC2837			
D1009	6-501-579-01	DIODE MC2837			
D1011	6-501-743-01	DIODE MAZ8068GMLS0			
D1013	6-501-743-01	DIODE MAZ8068GMLS0			
D1015	6-501-743-01	DIODE MAZ8068GMLS0			
D1017	6-501-743-01	DIODE MAZ8068GMLS0			
D1018	6-501-743-01	DIODE MAZ8068GMLS0			
D1019	6-501-743-01	DIODE MAZ8068GMLS0			
		< JUMPER RESISTOR >			
JR102	1-216-296-11	SHORT CHIP	0		
JR103	1-216-296-11	SHORT CHIP	0		
		< RESISTOR >			
R1001	1-216-817-11	METAL CHIP	470	5% 1/10W	
R1002	1-216-817-11	METAL CHIP	470	5% 1/10W	
R1004	1-216-823-11	METAL CHIP	1.5K	5% 1/10W	
R1005	1-216-823-11	METAL CHIP	1.5K	5% 1/10W	
R1008	1-216-817-11	METAL CHIP	470	5% 1/10W	
R1009	1-216-817-11	METAL CHIP	470	5% 1/10W	

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VOL BOARD
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< CAPACITOR >

C1301	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	

< RESISTOR >

R1302	1-216-833-11	METAL CHIP	10K	5% 1/10W	
R1303	1-216-835-11	METAL CHIP	15K	5% 1/10W	
R1304	1-216-837-11	METAL CHIP	22K	5% 1/10W	

< SWITCH >

S1301	1-487-171-11	ROTARY ENCODER (MASTER VOLUME)
S1302	1-786-289-31	SWITCH, DETECTION (DETECTION SWITCH)

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
59	1-797-575-11	DECK, MECHANICAL (E4)	
103	1-828-311-51	WIRE (FLAT TYPE) (9 CORE)	
104	1-836-973-11	WIRE (FLAT TYPE) (7 CORE)	
105	1-828-975-11	WIRE (FLAT TYPE) (13 CORE)	
155	1-838-059-11	FLEXIBLE FLAT CABLE (23 CORE)	
156	1-828-964-11	WIRE (FLAT TYPE) (11 CORE) (GTR55/GTR77)	
251	1-828-952-11	WIRE (FLAT TYPE) (9 CORE)	
252	1-457-369-12	CORE, FERRITE	
255	1-693-778-31	TUNER (FM/AM)	
⚠ 257	1-777-071-83	CORD, POWER (E2, E51, E4)	
⚠ 257	1-837-312-11	CORD, POWER-SUPPLY (AR)	
⚠ 257	1-837-344-11	CORD, POWER-SUPPLY (MX)	
⚠ 258	1-569-008-21	ADAPTOR, CONVERSION (E2, E51, E4)	
401	1-840-387-31	MECHANICAL, CD	
⚠ 405	8-820-322-04	DEVICE, OPTICAL KHM-313CAB/C2NP (Including sled motor, spindle motor)	
407	1-828-773-51	WIRE (FLAT TYPE) (24 CORE)	
M101	1-787-344-21	FAN, DC	
⚠ PT901	1-445-827-11	POWER TRANSFORMER (MAIN) (GTR33: MX)	
⚠ PT901	1-445-828-11	POWER TRANSFORMER (MAIN) (GTR33: E4)	
⚠ PT901	1-445-829-11	POWER TRANSFORMER (MAIN) (GTR33: E2, E51, AR)	
⚠ PT901	1-445-830-11	POWER TRANSFORMER (MAIN) (GTR77: MX)	
⚠ PT901	1-445-831-11	POWER TRANSFORMER (MAIN) (GTR77: E4)	
⚠ PT901	1-445-832-11	POWER TRANSFORMER (MAIN) (GTR77: E2, E51, AR)	
⚠ PT901	1-445-834-11	POWER TRANSFORMER (MAIN) (GTR55: MX)	
⚠ PT901	1-445-835-11	POWER TRANSFORMER (MAIN) (GTR55: E2, E51, AR)	
⚠ PT901	1-445-836-11	POWER TRANSFORMER (MAIN) (GTR55: E4)	

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REVISION HISTORY

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

Ver.	Date	Description of Revision
1.0	2010.03	New