

HCD-GZR88D/GZR99D

SERVICE MANUAL

E Model

Ver. 1.0 2009.06



Photo: HCD-GZR99D: E2 model

- HCD-GZR88D/GZR99D are the tuner, deck, DVD and amplifier section in MHC-GZR88D/GZR99D.

DVD Section	Model Name Using Similar Mechanism	HCD-GZR77D
	DVD Mechanism Type	CDM74HF-DVBU101
	Optical Pick-up Name	KHM-313CAB
Tape Deck Section	Model Name Using Similar Machanism	HCD-GZR77D
	Tape Transport Mechanism Type	CWP42FR605

SPECIFICATIONS

Amplifier Section

The following measured at AC 127 V, 60 Hz (Mexican model)
The following measured at AC 120, 220, 240 V, 50/60 Hz (Other models)

MHC-GZR99D

Power output (rated): 135 W + 135 W
(at 6 Ω , 1 kHz, 1% THD, at LINK MODE)
RMS output power (reference)
Front speaker: 175 W + 175 W
(per channel at 8 Ω , 1 kHz, 10% THD)
Satellite speaker: 70 W + 70 W
(per channel at 24 Ω , 1 kHz, 10% THD)
Subwoofer: 210 W (at 6 Ω , 100 Hz, 10% THD)

MHC-GZR88D

Power output (rated): 125 W + 125 W
(at 6 Ω , 1 kHz, 1% THD, at LINK MODE)
RMS output power (reference)
Front speaker: 175 W + 175 W
(per channel at 8 Ω , 1 kHz, 10% THD)
Satellite speaker: 70 W + 70 W
(per channel at 24 Ω , 1 kHz, 10% THD)

– Continued on next page –

HCD-GZR99D: E2, E51, AR, MX Model
DVD DECK RECEIVER
HCD-GZR88D/GZR99D: E3, E4, E15, PH, SP Model
DVD RECEIVER

HCD-GZR88D/GZR99D

Inputs

VIDEO/SAT VIDEO IN (phono jack):
1 Vp-p, 75 ohms
VIDEO/SAT AUDIO IN L/R (phono jacks):
voltage 250/450 mV, impedance 47 kilohms
MIC 1/MIC 2 (phone jacks):
sensitivity 1 mV, impedance 10 kilohms

Outputs

VIDEO OUT (phono jack):
max. output level 1 Vp-p, unbalanced,
Sync negative, load impedance 75 ohms
COMPONENT VIDEO OUT:
Y: 1 Vp-p, 75 ohms
PB/CB: 0.7 Vp-p, 75 ohms
Pr/Cr: 0.7 Vp-p, 75 ohms
DVD DIGITAL OUT (Square optical connector jack, rear panel):
Wavelength 650 nm
PHONES (stereo mini jack):
accepts headphones of 8 ohms or more
SUBWOOFER OUT (MHC-GZR88D only):
Voltage 1 V, impedance 1 kilohm
FRONT SPEAKER: Use only the supplied speaker SS-GZR99D.
SATELLITE SPEAKER: Use only the supplied speaker SS-RSX99D.
SUBWOOFER (MHC-GZR99D only):
Use only the supplied subwoofer
SS-WGV99D.
↔ (USB) port: Type A (1)
Maximum current: 500 mA

Disc player section

System: Compact disc and digital audio and video system
Laser Diode Properties
Emission duration:
Continuous Laser Output*:
Less than 44.6μW
*This output is the value measurement
at a distance of 200mm from the objective
lens surface on the Optical Pick-up Block
with 7mm aperture.
Frequency response
DVD (PCM 48 kHz): 2 Hz – 22 kHz (±1 dB)
CD: 2 Hz – 20 kHz (±0.5 dB)
Video color system format
Latin American model: NTSC
Other models: NTSC and PAL

Tape deck section (except for Latin American models)

Recording system: 4-track 2-channel, stereo

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz (50 kHz step)
Antenna: FM lead antenna
Antenna terminals: 75 Ω unbalanced
Intermediate frequency:
10.7 MHz

AM tuner section

Tuning range:
Latin American model:
530 – 1,710 kHz (with 10 kHz tuning interval)
531 – 1,710 kHz (with 9 kHz tuning interval)
Other models:
531 – 1,602 kHz (with 9 kHz tuning interval)
530 – 1,610 kHz (with 10 kHz tuning interval)
Antenna: AM loop antenna
Antenna terminals: External antenna terminal
Intermediate frequency:
450 kHz

General

Power requirements
Argentine and Thai models:
AC 220 V, 50/60 Hz
Mexican model: AC 127 V, 60 Hz,
Other models: AC 120, 220, 230 – 240 V, 50/60 Hz,
adjustable with voltage selector
Power consumption
MHC-GZR99D: 215 W
MHC-GZR88D: 170 W
Dimensions (w/h/d) (excl. speakers):
Approx. 280 × 326 × 440 mm
Mass (excl. speakers)
MHC-GZR99D: Approx. 13.2 kg (Latin American models),
approx. 13.7 kg (other models)
MHC-GZR88D: Approx. 13.2 kg

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONET WARNING!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle 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.

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.

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.

CAUTION

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

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.

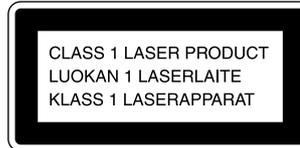
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

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.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

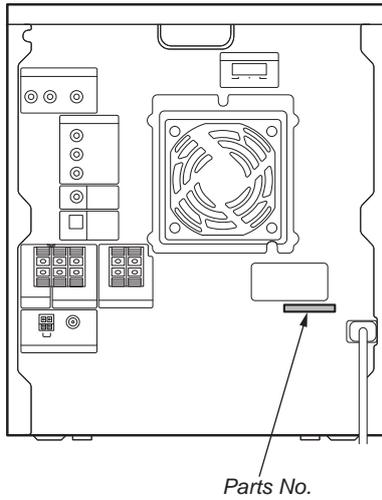


This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

HCD-GZR88D/GZR99D

MODEL IDENTIFICATION

– Back Panel –



Model	Parts No.
GZR88D: E3, E15	4-133-526-0□
GZR88D: E4	4-133-526-1□
GZR88D: E12	4-133-526-2□
GZR88D: SP	4-133-526-3□
GZR88D: TH	4-133-526-4□
GZR88D: PH	4-133-526-5□
GZR99D: E3, E15	4-133-527-0□
GZR99D: E4	4-133-527-1□
GZR99D: SP	4-133-527-2□
GZR99D: PH	4-133-527-3□
GZR99D: E2, E51, MX	4-133-527-4□
GZR99D: AR	4-133-527-6□

• Abbreviation

- E3 : 240V AC area in E model
- E15 : Iran model
- E4 : 110 – 120V/220 – 240V AC area in E model
- E12 : 220 – 240V AC area in E model
- SP : Singapore model
- TH : Thai model
- PH : Philippines model
- E2 : 120V AC area in E model
- E51 : Chilean and Peruvian model
- MX : Mexican model
- AR : Argentina model

TABLE OF CONTENTS

1. SERVICING NOTES	6	6-8. Printed Wiring Board –DMB19 Board (1/2)–	39
2. DISASSEMBLY		6-9. Printed Wiring Board –DMB19 Board (2/2)–	40
2-1. Case (Side-L), Case (Side-R).....	9	6-10. Schematic Diagram –DMB19 Board (1/4)–	41
2-2. Top Panel Section	9	6-11. Schematic Diagram –DMB19 Board (2/4)–	42
2-3. Loading Panel	10	6-12. Schematic Diagram –DMB19 Board (3/4)–	43
2-4. Chassis	10	6-13. Schematic Diagram –DMB19 Board (4/4)–	44
2-5. Front Panel Section.....	11	6-14. Printed Wiring Board –Main Section–.....	45
2-6. Back Panel Section	11	6-15. Schematic Diagram –Main Section (1/3)–.....	46
2-7. MAIN Board.....	12	6-16. Schematic Diagram –Main Section (2/3)–.....	47
2-8. POWER AMP Board	12	6-17. Schematic Diagram –Main Section (3/3)–.....	48
2-9. DVD Mechanism Deck, Tuner (TM901).....	13	6-18. Printed Wiring Board –Mic Section–.....	49
2-10. MIC Board, USB-LED Board	13	6-19. Schematic Diagram –Mic Section–	50
2-11. Panel (FL) Section	14	6-20. Printed Wiring Board –TC Amp Section (Except HCD-GZR99D: E2, E51, AR, MX Model) –....	51
2-12. Liquid Crystal Display Panel (LCD101)	14	6-21. Schematic Diagram –TC Amp Section (Except HCD-GZR99D: E2, E51, AR, MX Model) –....	52
2-13. FRONT Board, VOLUME Board.....	15	6-22. Printed Wiring Board –Video Section–.....	53
2-14. TC-AMP Board (Except HCD-GZR99D: E2, E51, AR, MX Model).....	15	6-23. Schematic Diagram –Video Section–	54
2-15. Tape Mechanism Deck (Except HCD-GZR99D: E2, E51, AR, MX Model).....	16	6-24. Printed Wiring Boards –Front Section–.....	55
2-16. Lid (TC-L), Lid (TC-R) (Except HCD-GZR99D: E2, E51, AR, MX Model).....	16	6-25. Schematic Diagram –Front Section–	56
2-17. DRIVER Board, SW Board.....	17	6-26. Printed Wiring Board –Left Section–	57
2-18. SENSOR Board	17	6-27. Schematic Diagram –Left Section–	58
2-19. MOTOR (TB) Board.....	18	6-28. Printed Wiring Board –Right Section–	59
2-20. MOTOR (LD) Board	18	6-29. Schematic Diagram –Right Section–	60
2-21. Chassis	19	6-30. Printed Wiring Board –LCD Control Section (1/2) –	61
2-22. DMB19 Board.....	19	6-31. Printed Wiring Board –LCD Control Section (2/2) –	62
2-23. Base Unit.....	20	6-32. Schematic Diagram –LCD Control Section–.....	63
2-24. Optical Pick-up	20	6-33. Printed Wiring Boards –Power Amp/HP Section–	64
		6-34. Schematic Diagram –Power Amp/HP Section–.....	65
		6-35. Printed Wiring Boards –Trans Section–.....	66
		6-36. Schematic Diagram –Trans Section–.....	67
3. TEST MODE	21	7. EXPLODED VIEWS	
4. MECHANICAL ADJUSTMENTS	26	7-1. Overall Section	81
5. ELECTRICAL ADJUSTMENTS	27	7-2. Front Panel Section-1.....	82
6. DIAGRAMS		7-3. Front Panel Section-2.....	83
6-1. Block Diagram –RF/Servo Section–.....	31	7-4. Top Panel Section (Except HCD-GZR99D: E2, E51, AR, MX Model).....	84
6-2. Block Diagram –Video Section–	32	7-5. Chassis Section-1	85
6-3. Block Diagram –Main Section–	33	7-6. Chassis Section-2.....	86
6-4. Block Diagram –Audio Section–.....	34	7-7. DVD Mechanism Deck Section-1	87
6-5. Block Diagram –Display/Power Section–	35	7-8. DVD Mechanism Deck Section-2	88
6-6. Printed Wiring Boards –Driver Section–	37	8. ELECTRICAL PARTS LIST	89
6-7. Schematic Diagram –Driver Section–	38		

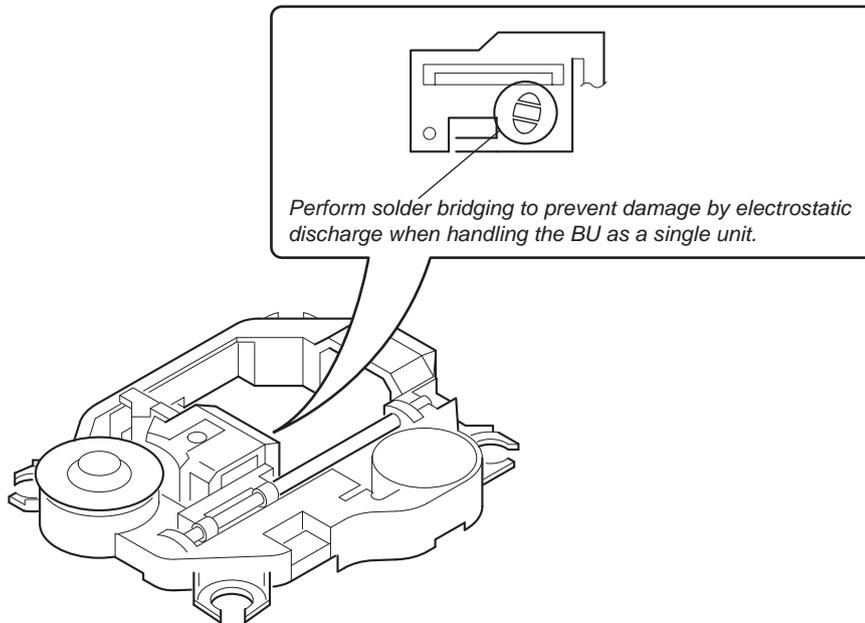
SECTION 1 SERVICING NOTES

Notes on Disconnecting Between the OP Section (DVBU101) and the DMB19 Board

Note: When disconnecting between the OP section (DVBU101) and the DMB19 board, be sure to make a solder bridge for electrostatic prevention as illustrated in the figure (before disconnection).

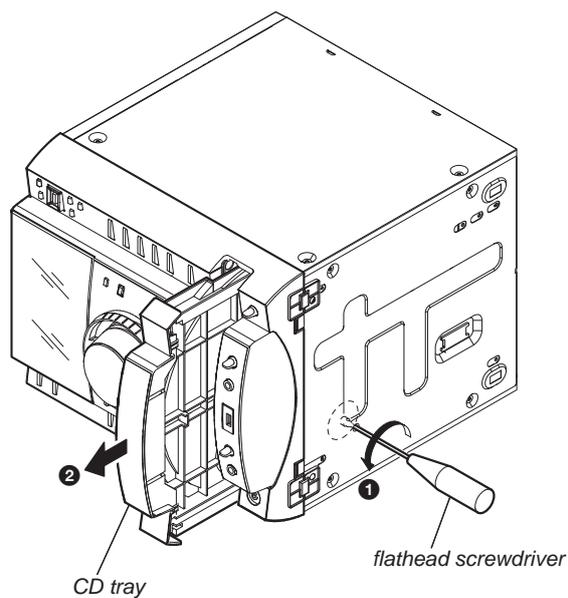
On the contrary, when installing the OP section, never remove the solder bridge until the OP section and the DMB19 board are connected.

Be sure to remove the solder bridge after the OP section and the DMB19 board have been connected.



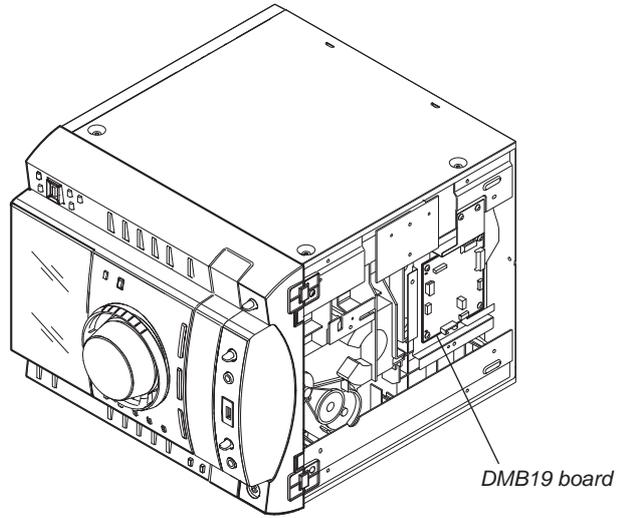
Manual Opening and Closing the CD Tray

As illustrated, insert a flathead screwdriver and give a turn to the left to put the CD tray out.



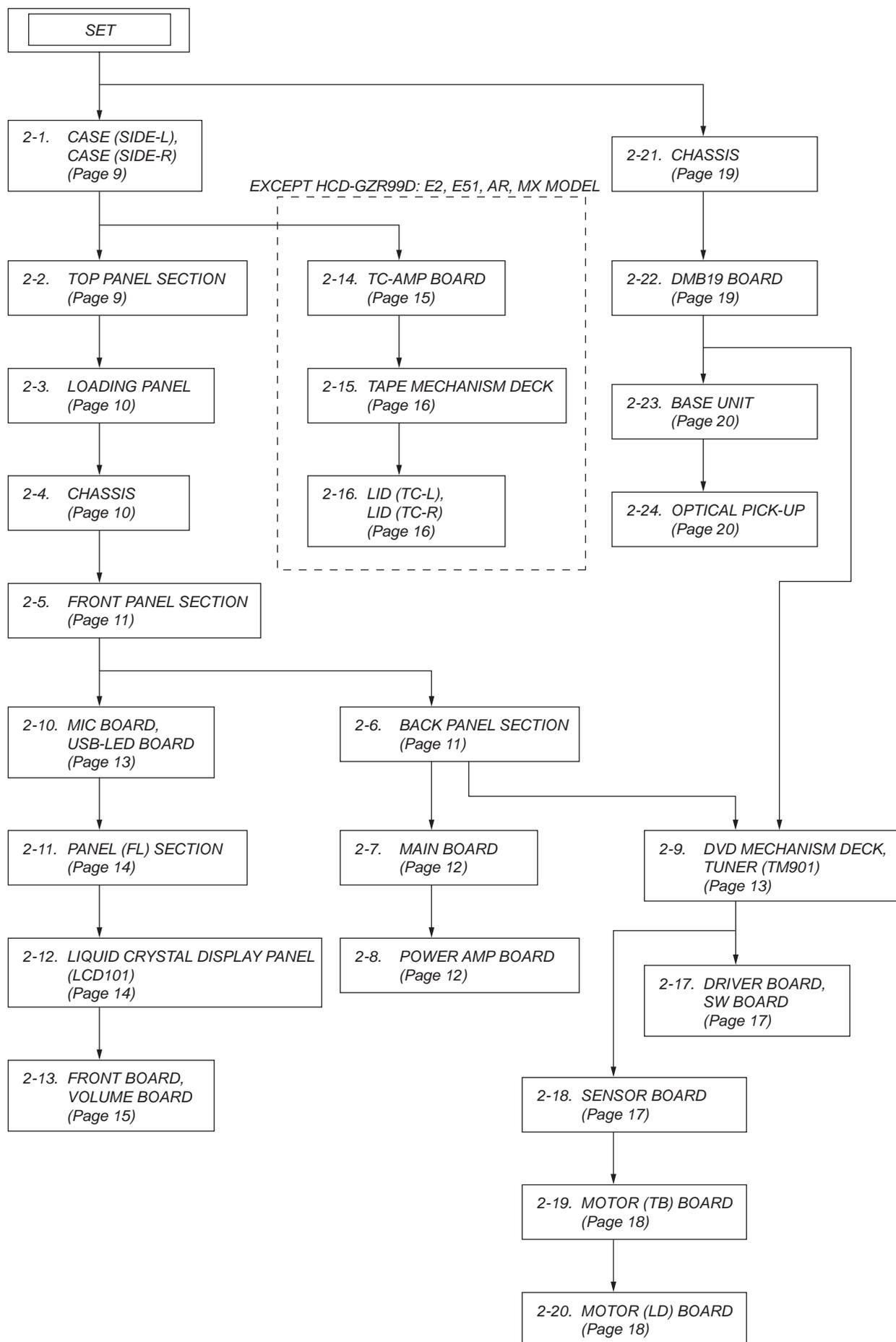
As illustrated, insert a flathead screwdriver and give a turn to the left to put the tray out.

Service Position for the BU



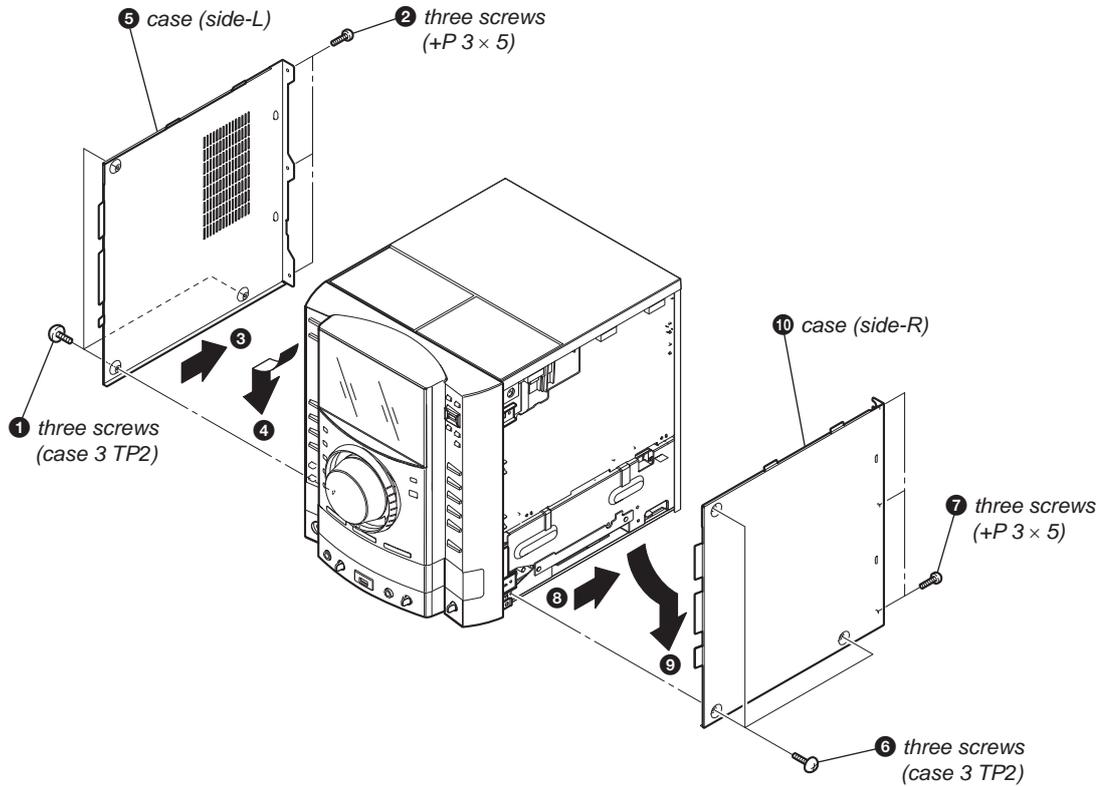
SECTION 2 DISASSEMBLY

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

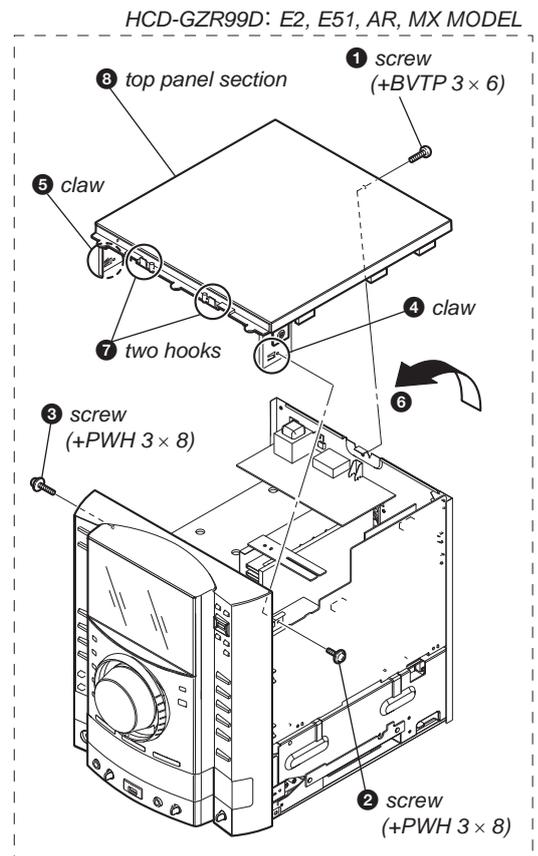
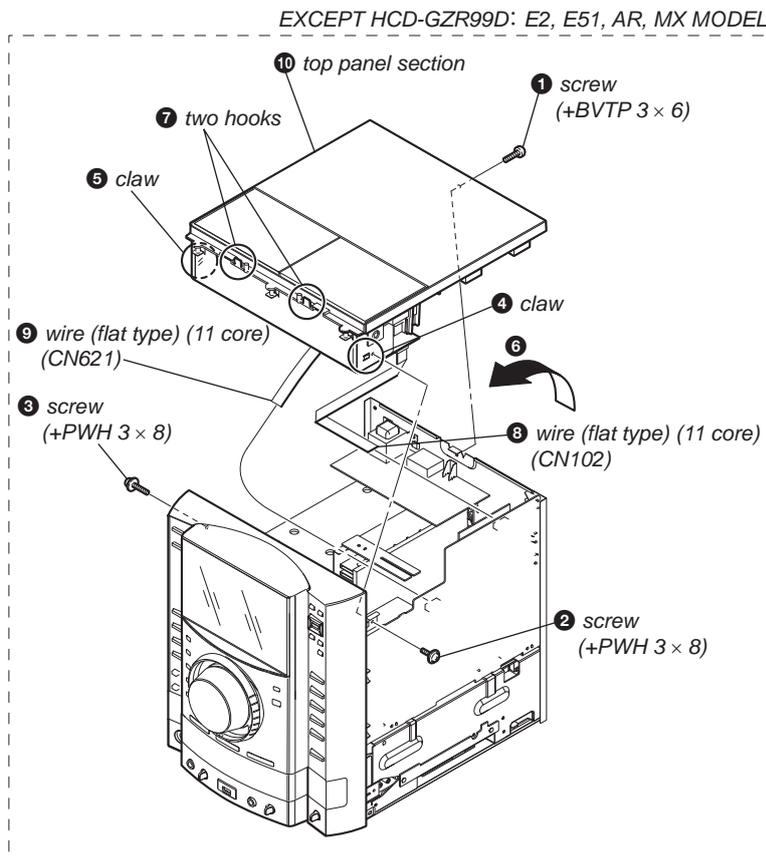


Note: Follow the disassembly procedure in the numerical order given.

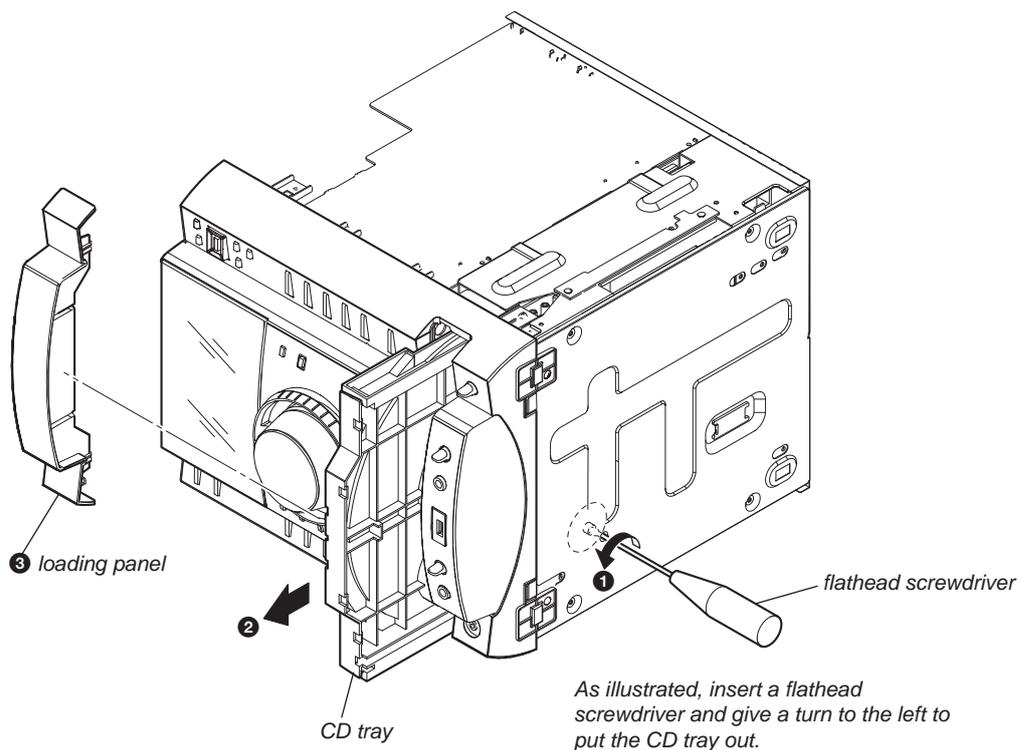
2-1. CASE (SIDE-L), CASE (SIDE-R)



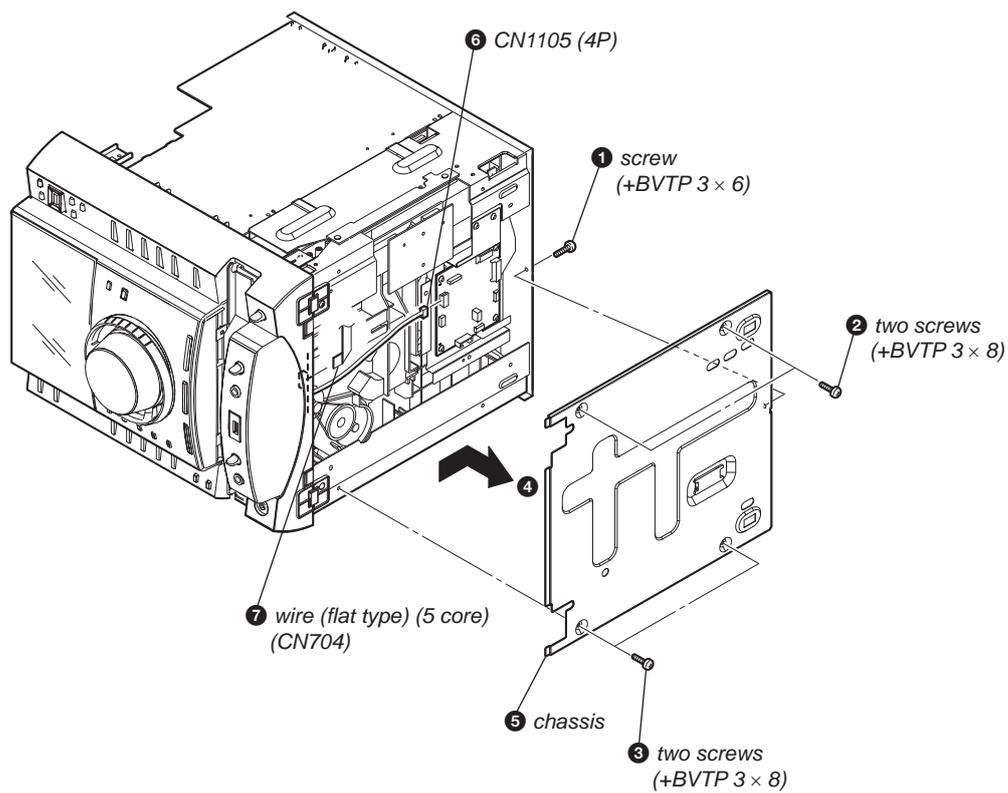
2-2. TOP PANEL SECTION



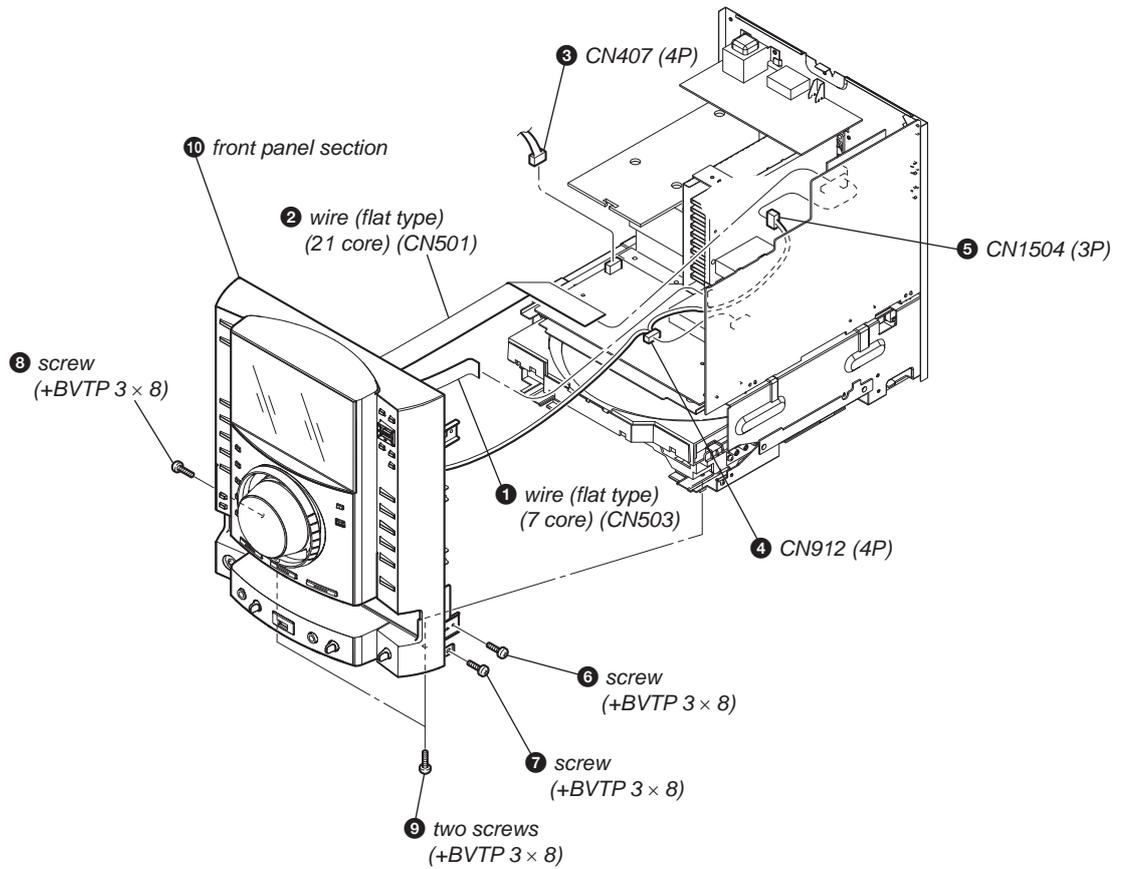
2-3. LOADING PANEL



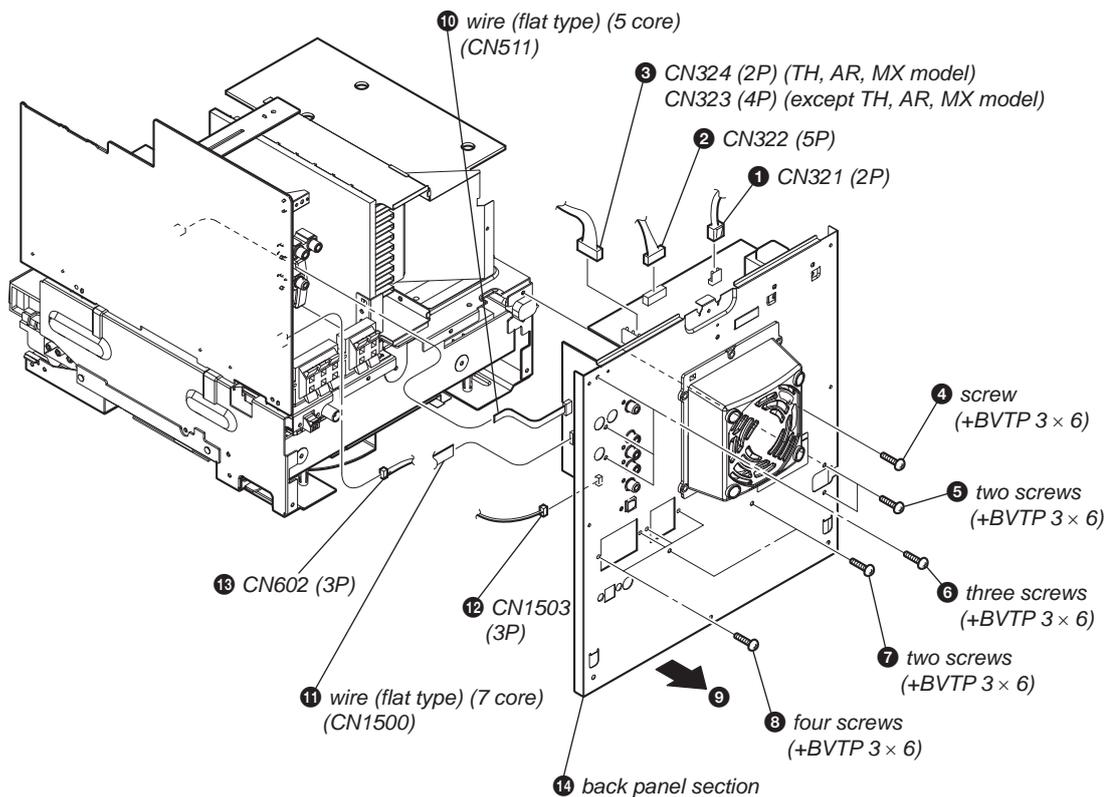
2-4. CHASSIS



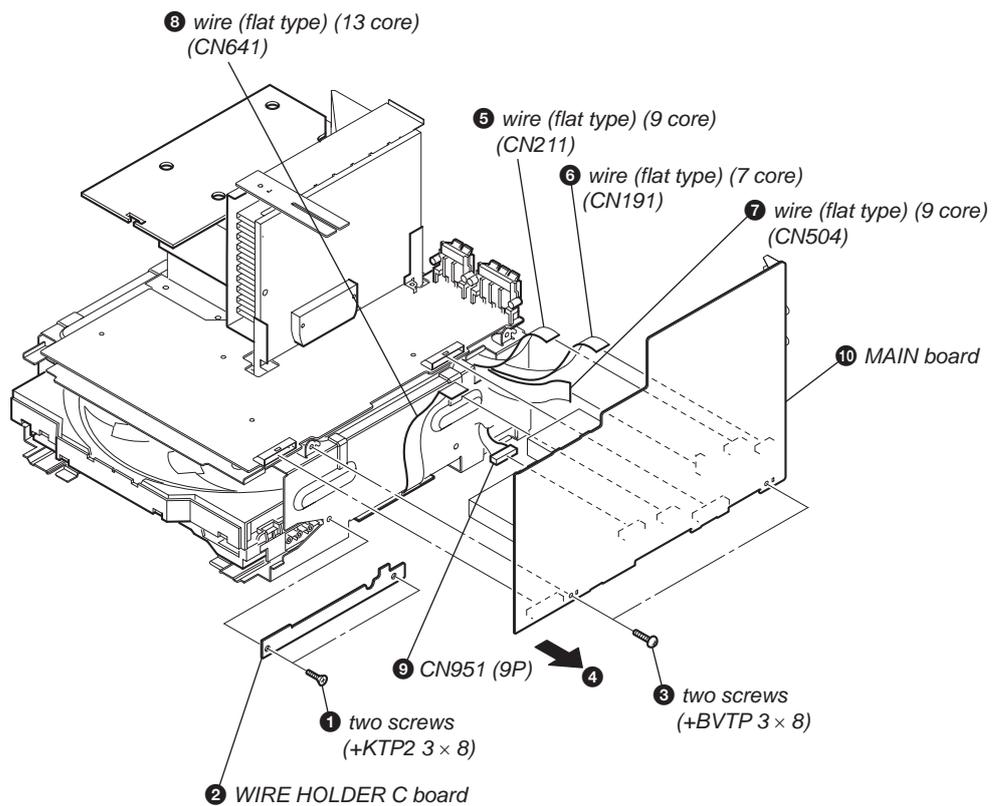
2-5. FRONT PANEL SECTION



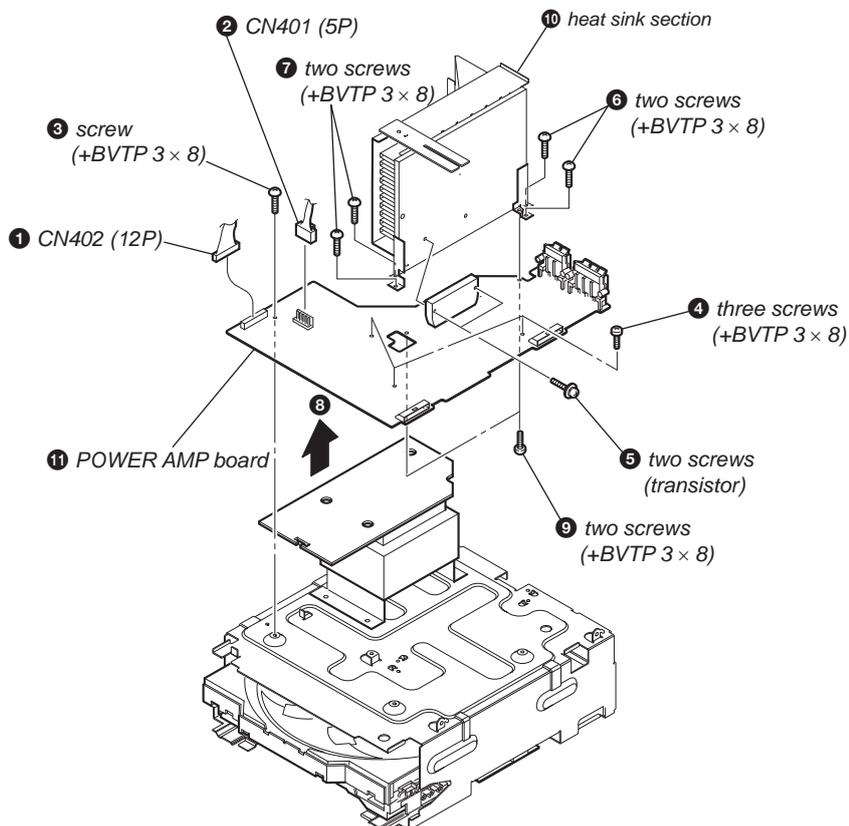
2-6. BACK PANEL SECTION



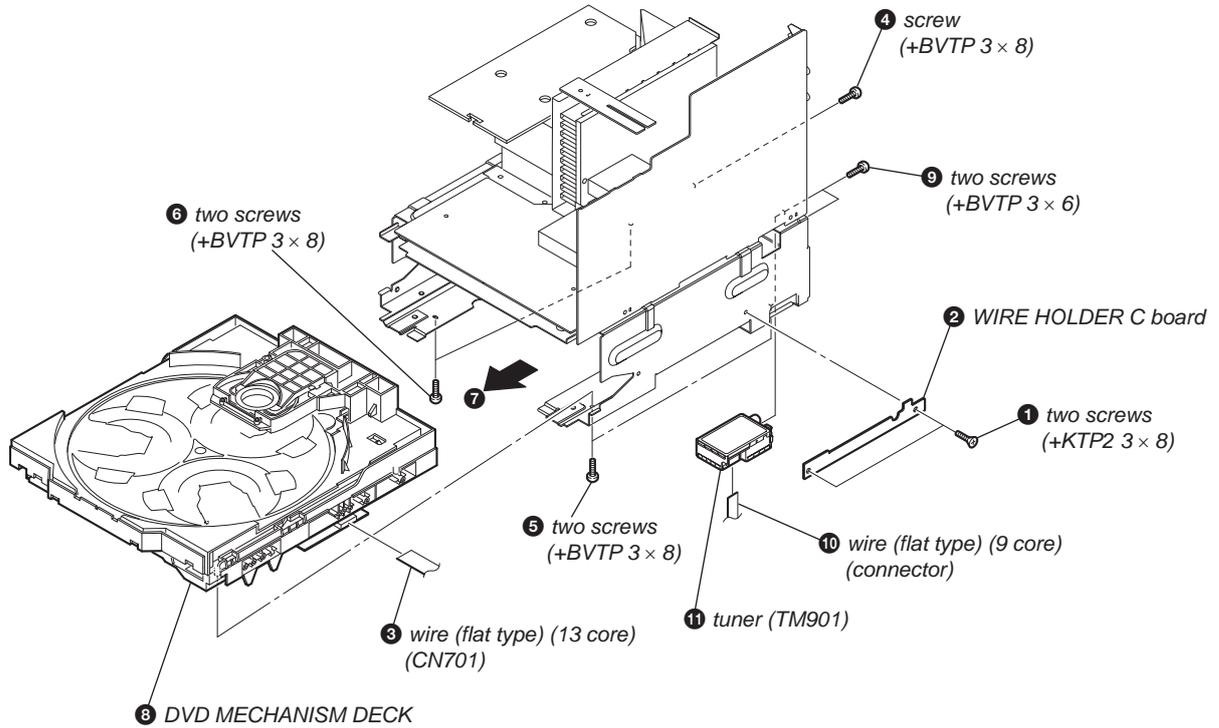
2-7. MAIN BOARD



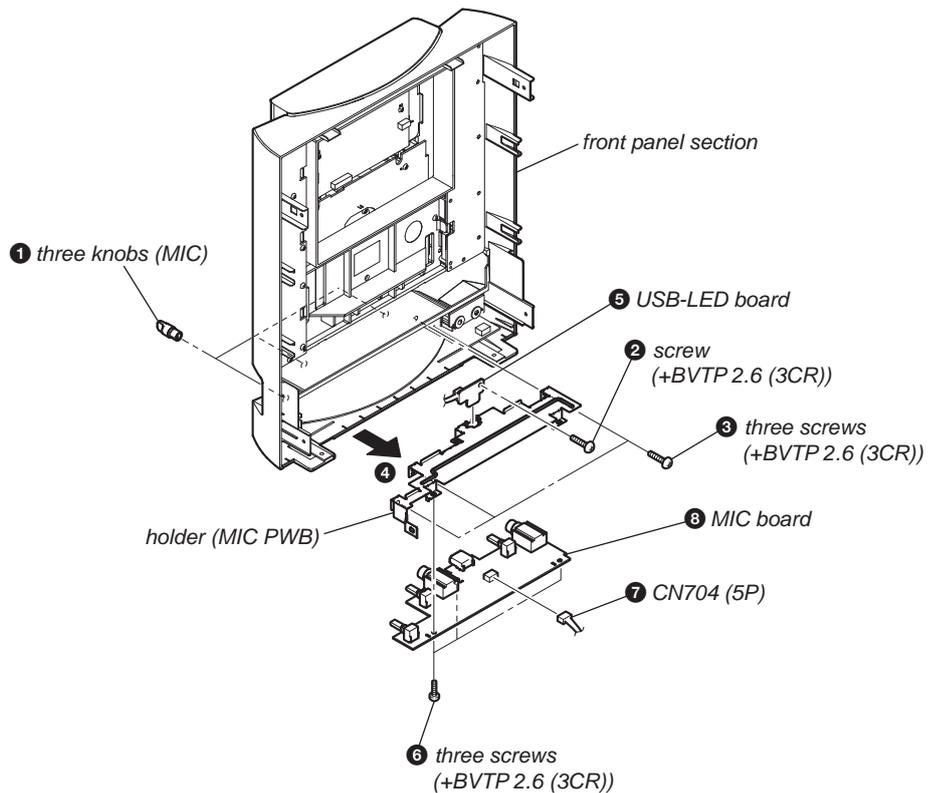
2-8. POWER AMP BOARD



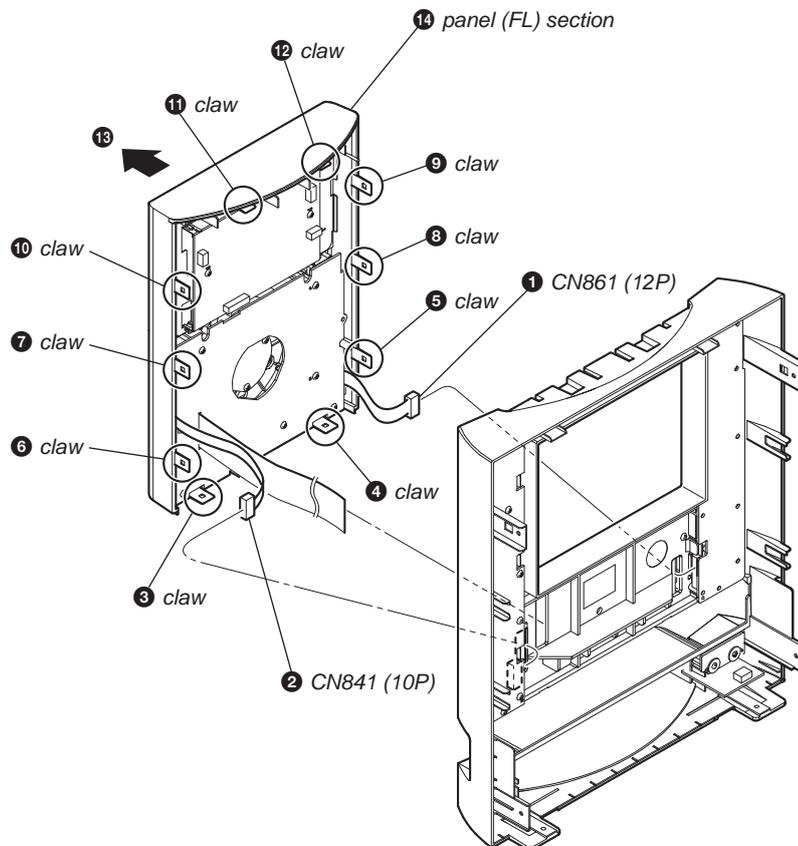
2-9. DVD MECHANISM DECK, TUNER (TM901)



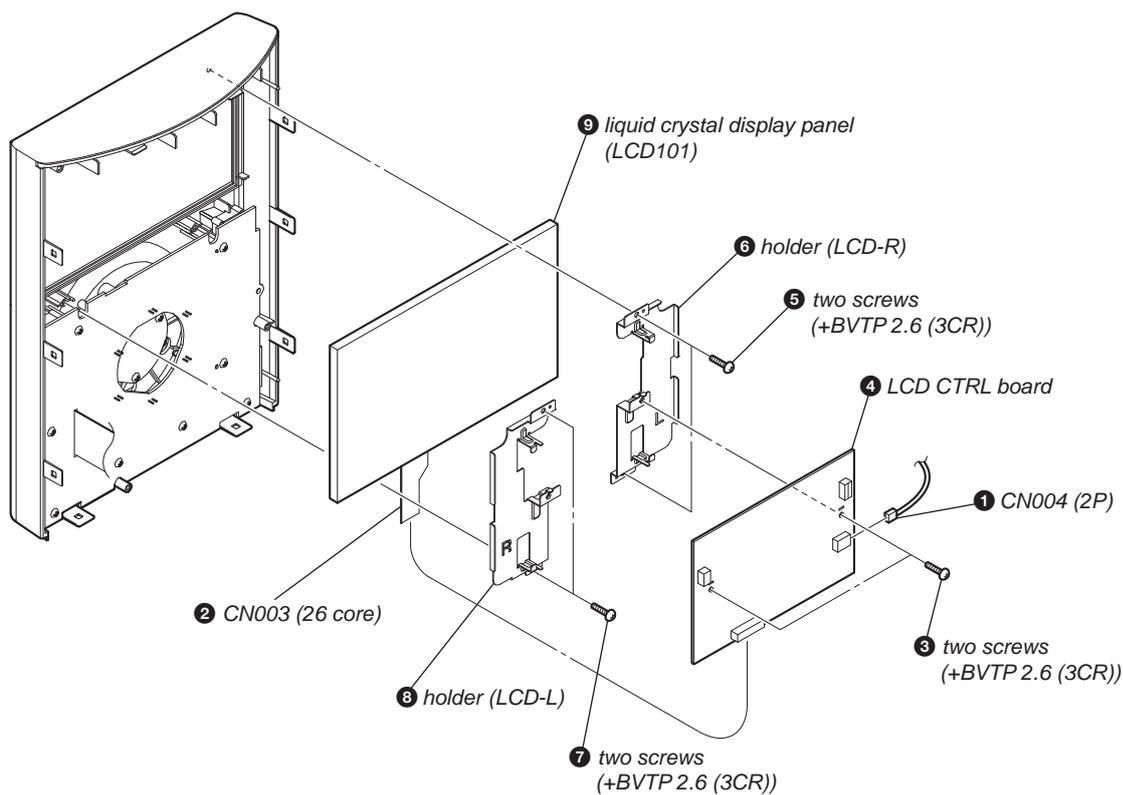
2-10. MIC BOARD, USB-LED BOARD



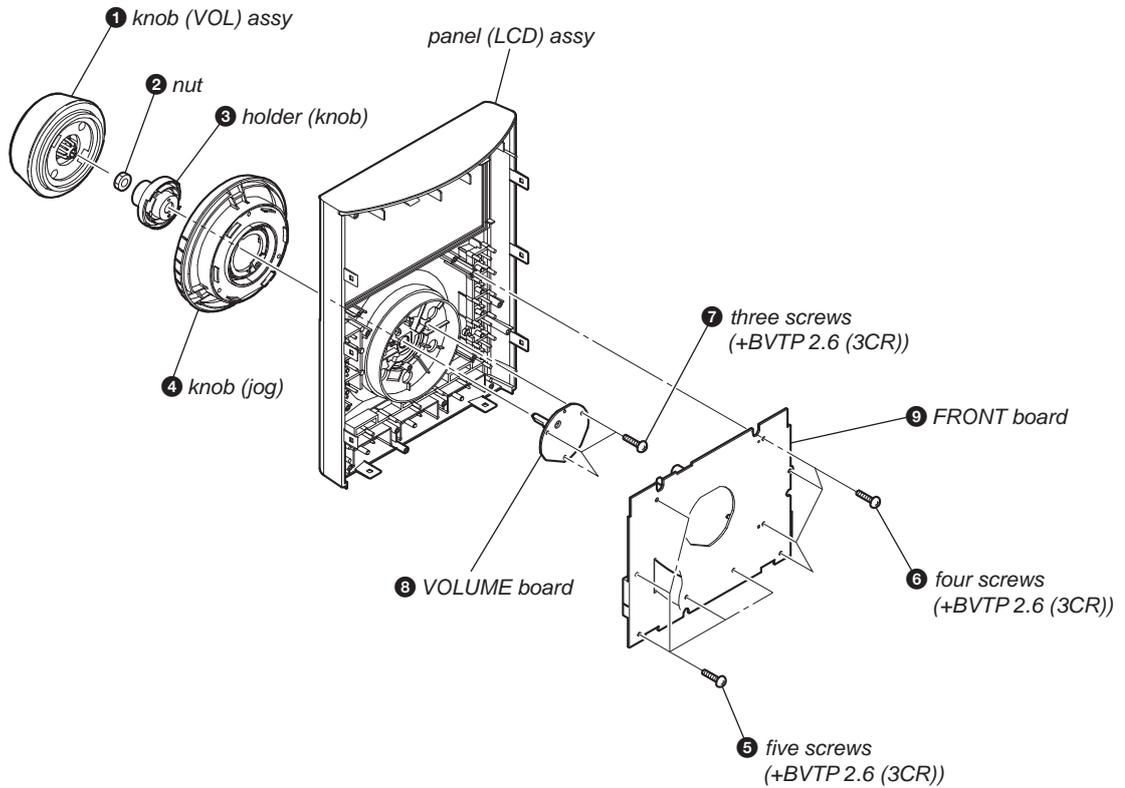
2-11. PANEL (FL) SECTION



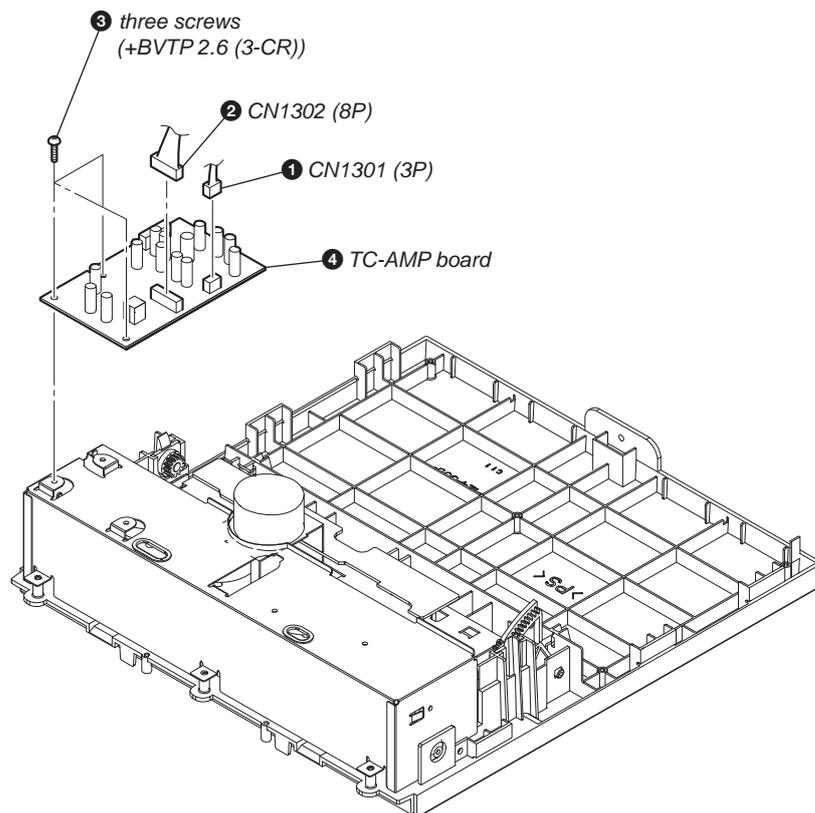
2-12. LIQUID CRYSTAL DISPLAY PANEL (LCD101)



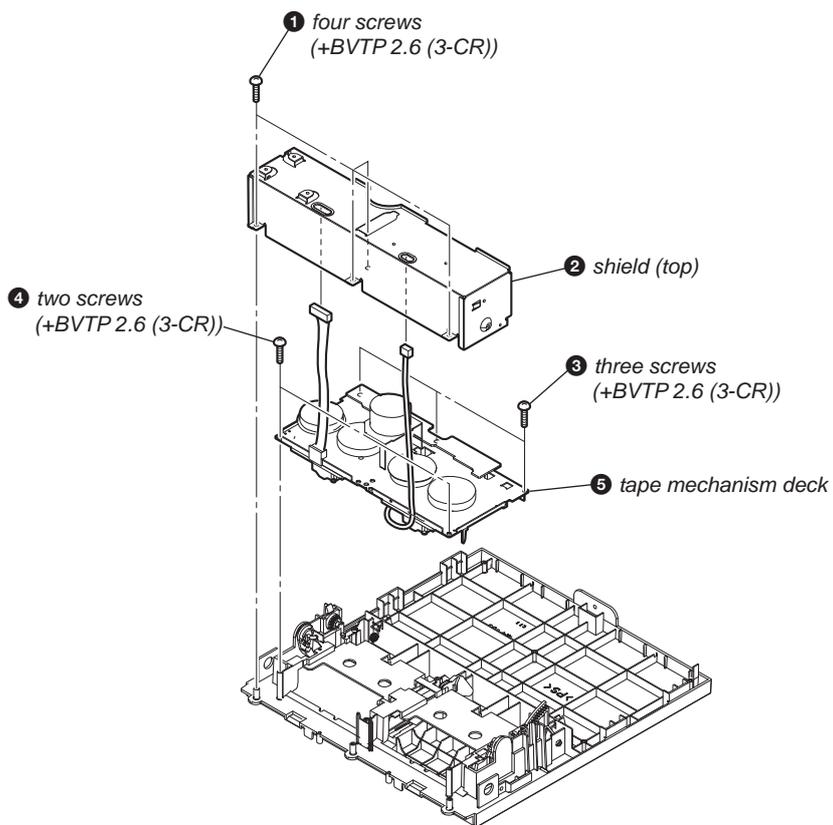
2-13. FRONT BOARD, VOLUME BOARD



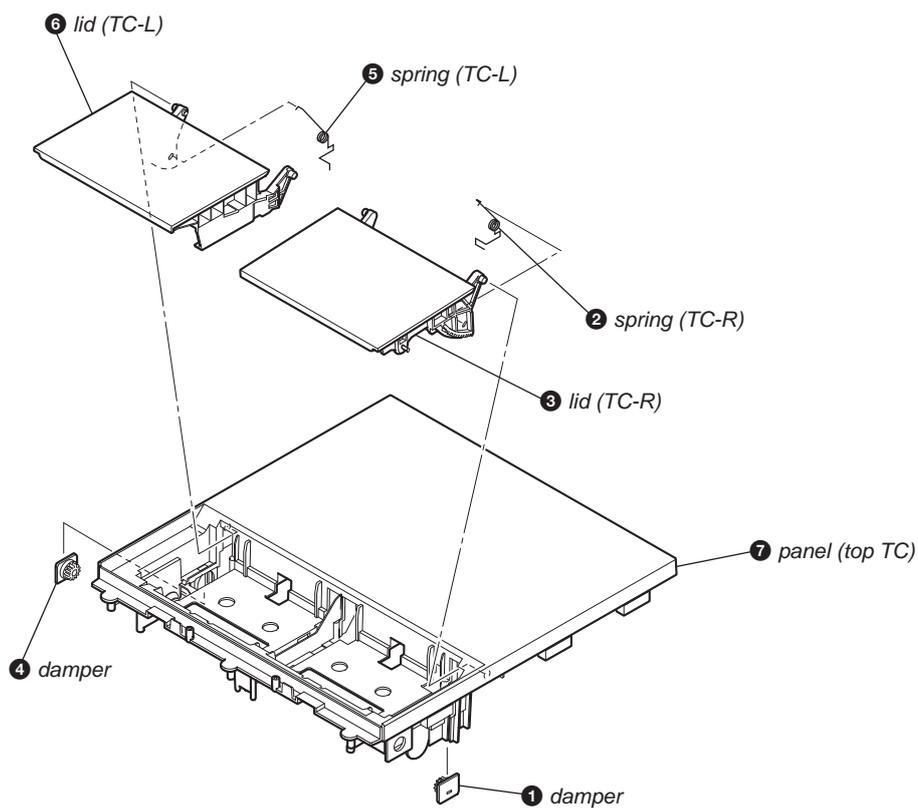
2-14. TC-AMP BOARD (EXCEPT HCD-GZR99D: E2, E51, AR, MX, MODEL)



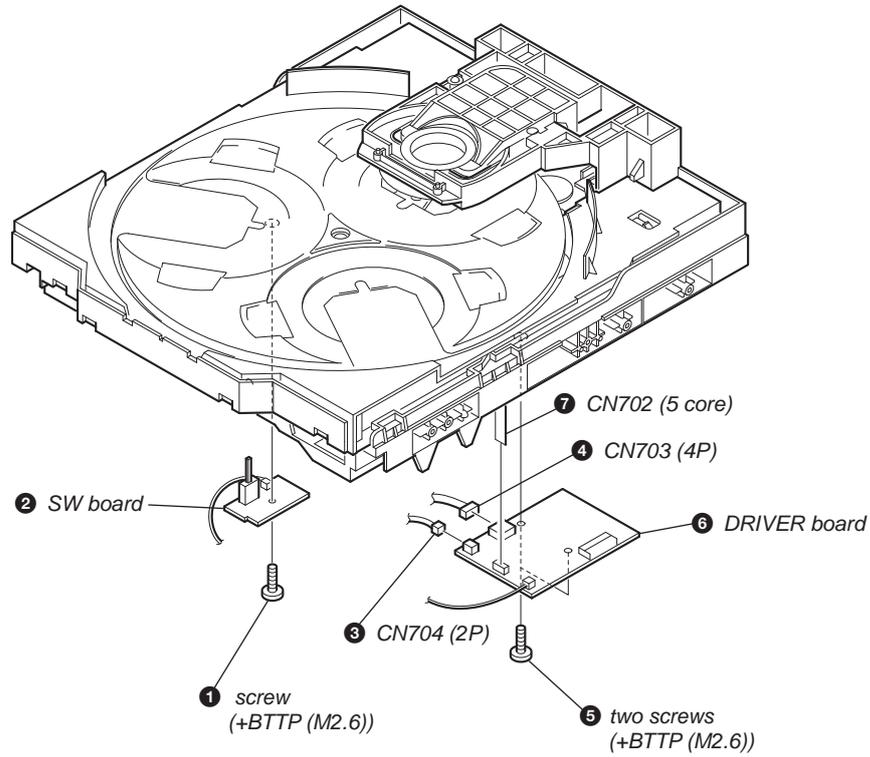
2-15. TAPE MECHANISM DECK (EXCEPT HCD-GZR99D: E2, E51, AR, MX, MODEL)



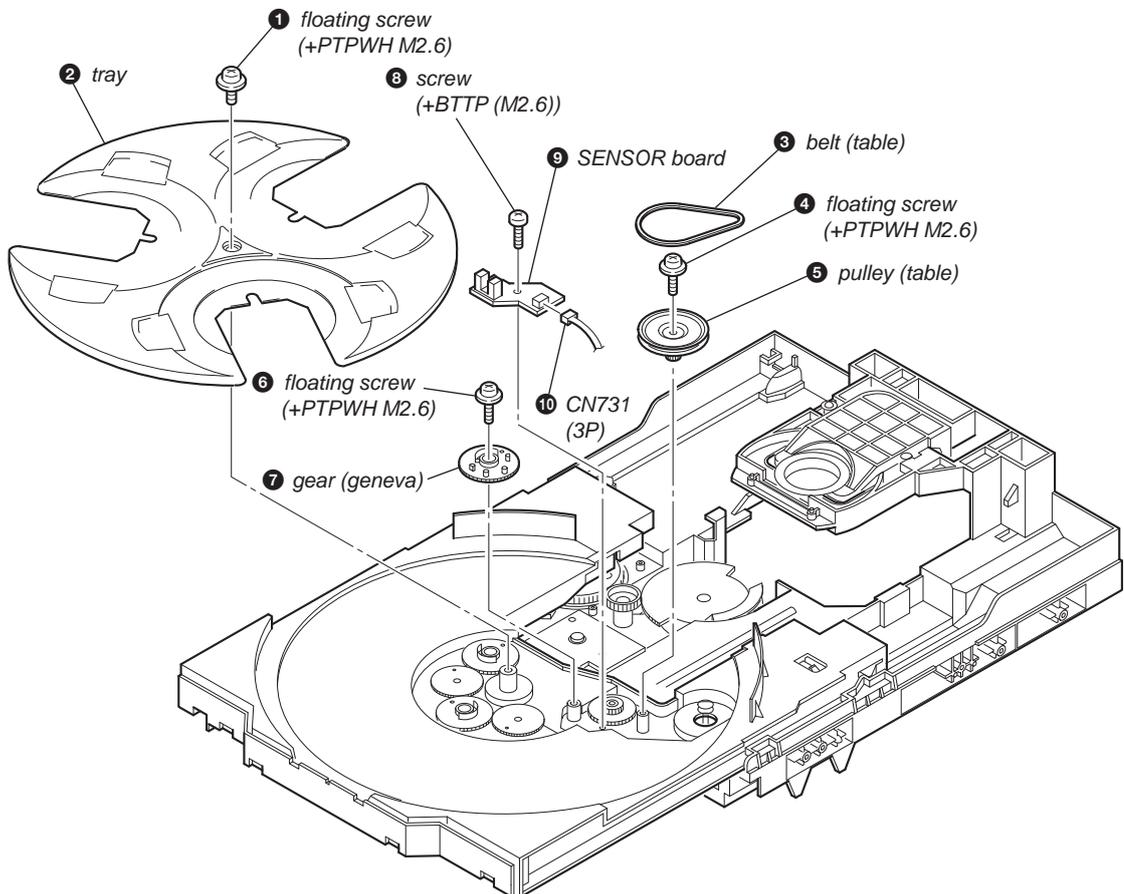
2-16. LID (TC-L), LID (TC-R) (EXCEPT HCD-GZR99D: E2, E51, AR, MX, MODEL)



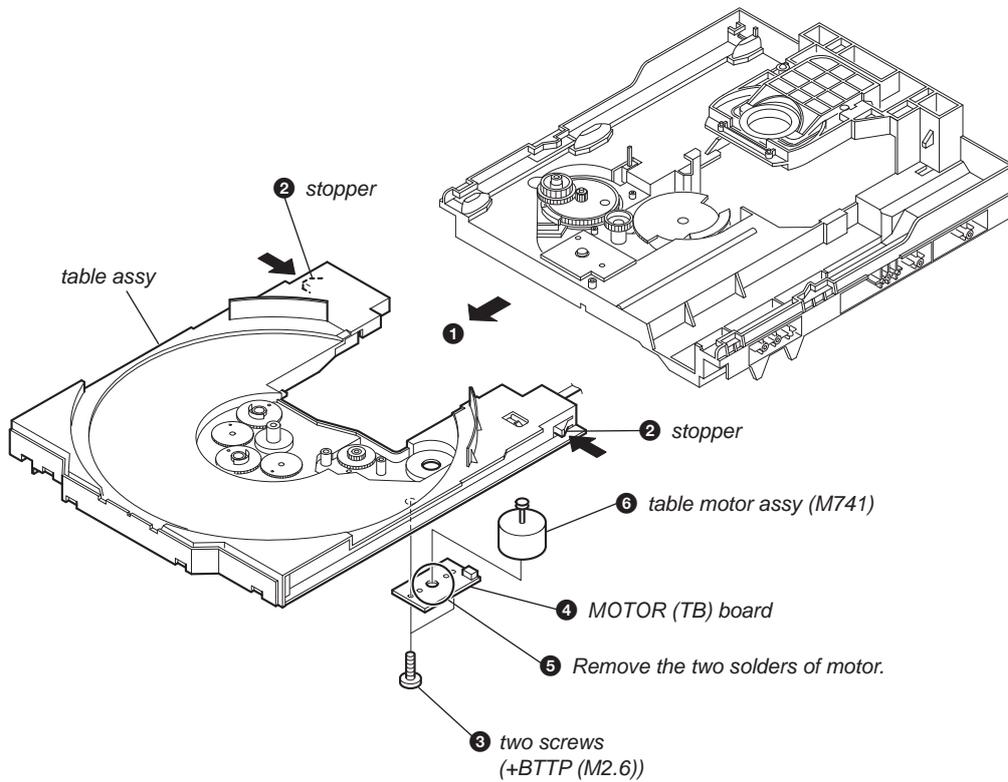
2-17. DRIVER BOARD, SW BOARD



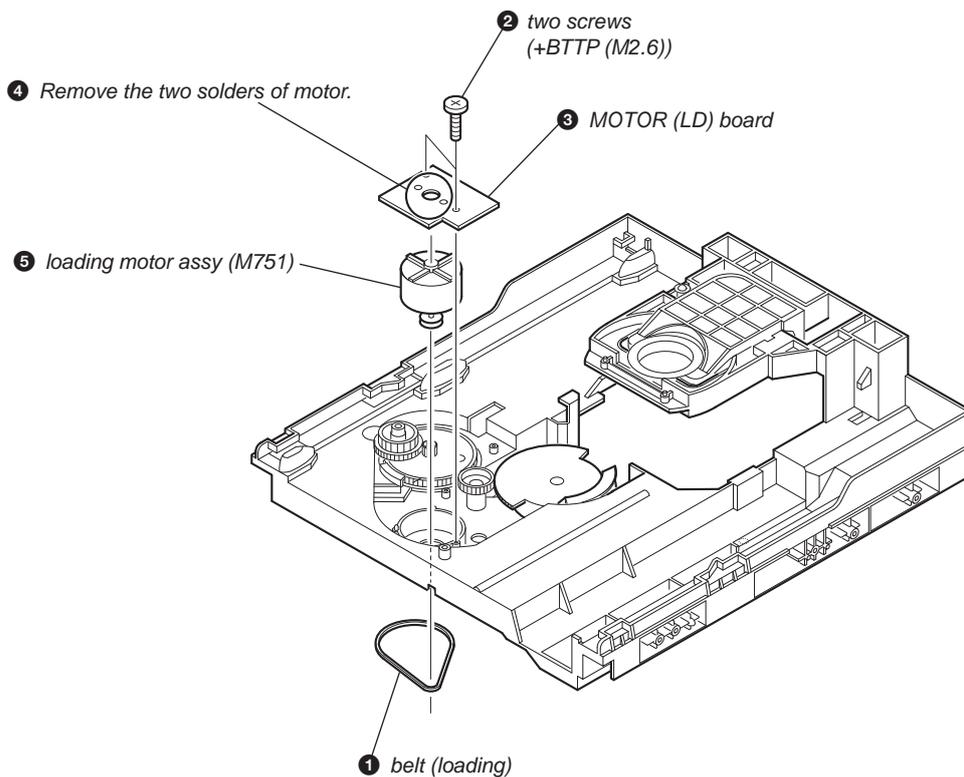
2-18. SENSOR BOARD



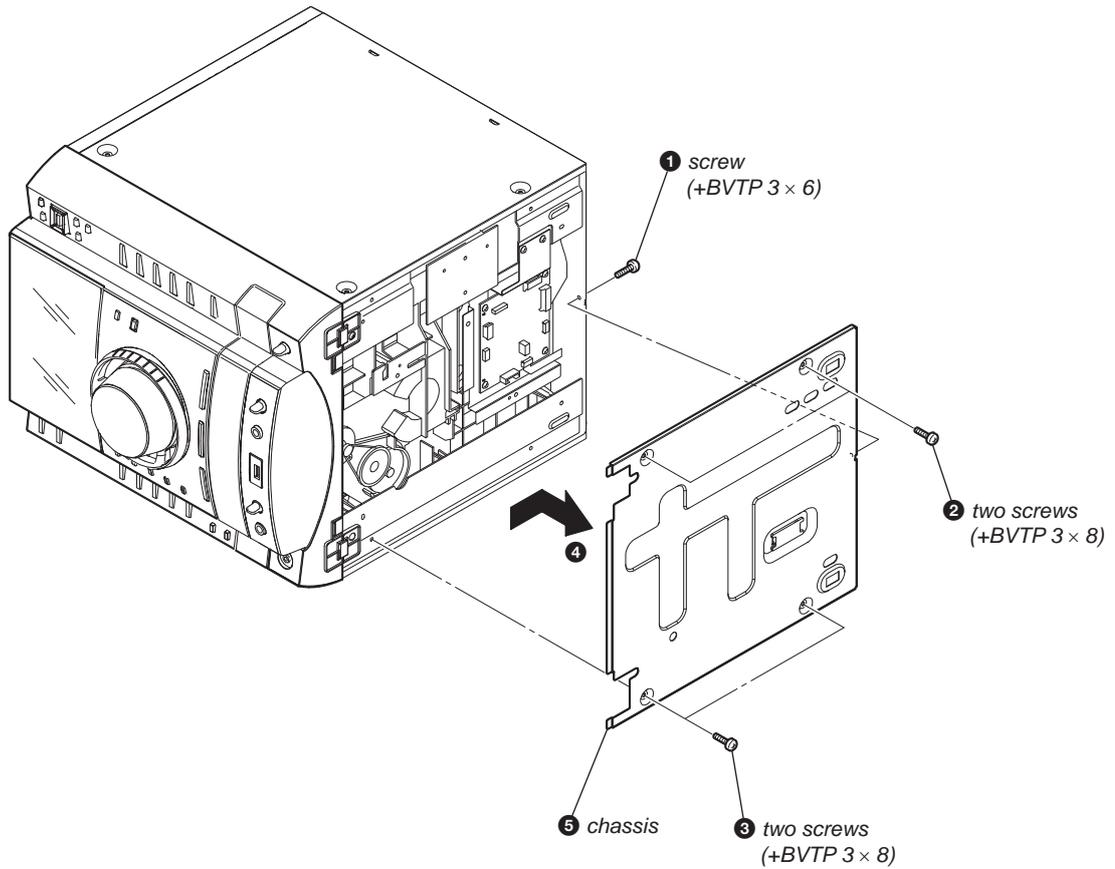
2-19. MOTOR (TB) BOARD



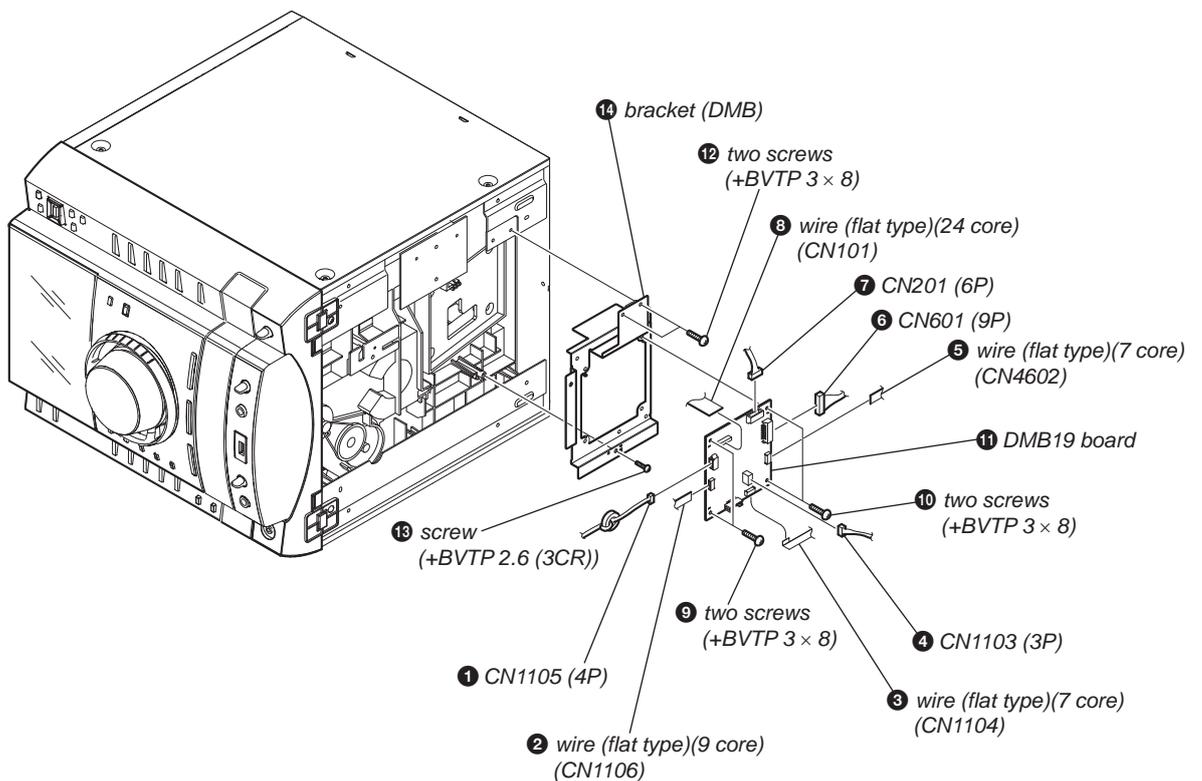
2-20. MOTOR (LD) BOARD



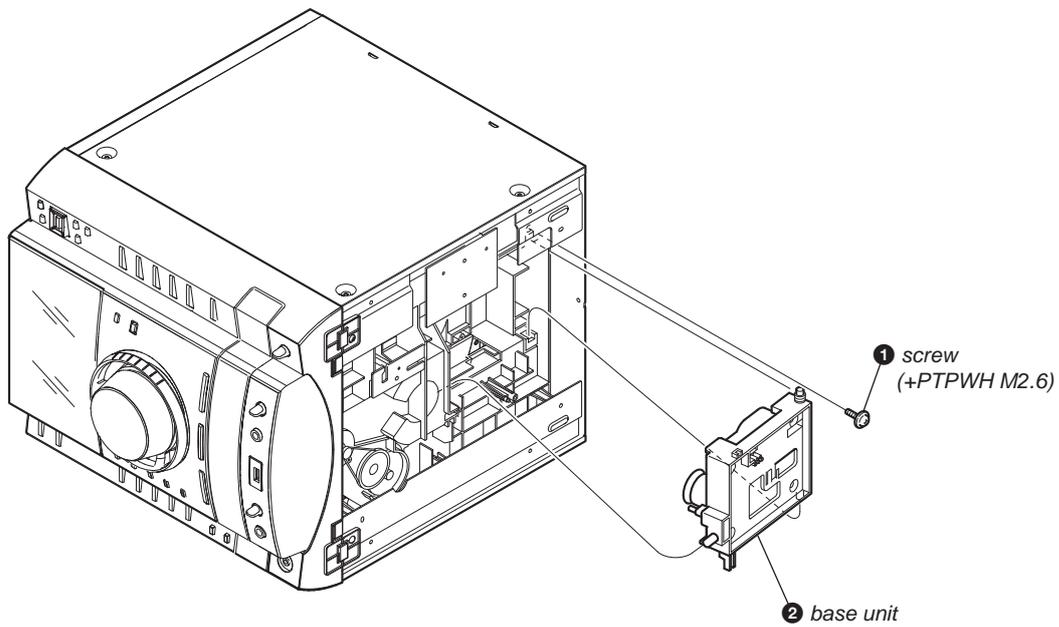
2-21. CHASSIS



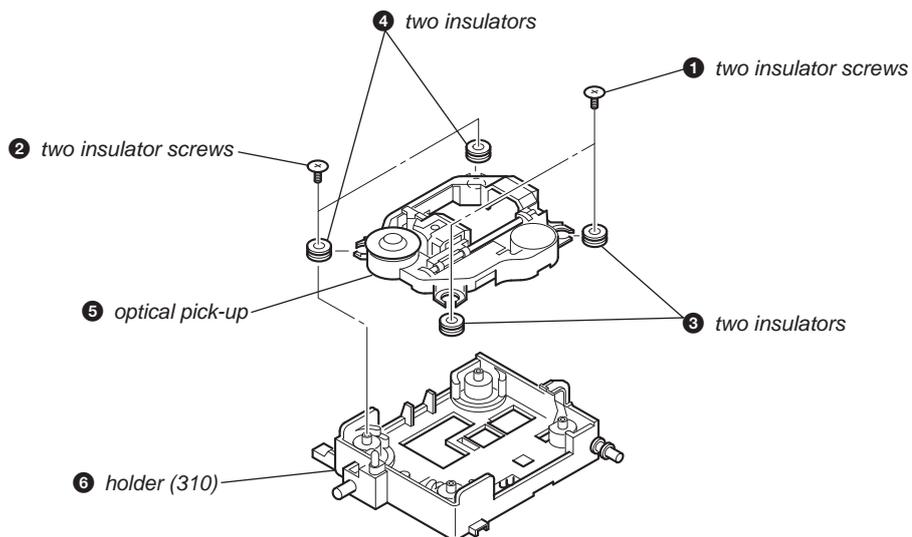
2-22. DMB19 BOARD



2-23. BASE UNIT



2-24. OPTICAL PICK-UP



SECTION 3 TEST MODE

[COLD RESET]

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

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [■] button, [DISC 3] button and [I/⏻] button simultaneously.
3. The message "COLD RESET" appears on the liquid crystal display panel. Then, the liquid crystal display panel becomes blank for a while, and the system is reset.

[COMMON TEST MODE]

- This mode is used to check operations of the respective section of Equalizer level, volume and VACS ON/OFF.

Procedure:

• To enter Common Test Mode

1. Press the [I/⏻] button to turn on the system.
2. Press the [■] button, [PRESET EQ] button and [DISC 1] button simultaneously.
3. The message "VACS0" appears on the liquid crystal display panel.

• Check of Equalizer Level

1. Press the [EQ BAND/MEMORY] button repeatedly until a message "ALL EQ MIN" appears on the liquid crystal display panel. GEQ decreases to its minimum.
2. Press the [EQ BAND/MEMORY] button repeatedly until a message "ALL EQ MAX" appears on the liquid crystal display panel. GEQ increases to its maximum.
3. Press the [EQ BAND/MEMORY] button repeatedly until a message "ALL EQ FLAT" appears on the liquid crystal display panel. GEQ is set to flat.

• Check of Volume

1. Press the [DISPLAY] button repeatedly, the sound volume increases to its maximum and message "VOLUME16" → "VOLUME MAX" appears on the liquid crystal display panel.
2. Press the [OPTIONS] button repeatedly, the sound volume decreases to its minimum and message "VOLUME16" → "VOLUME MIN" appears on the liquid crystal display panel.

• Check of VACS (Variable Attenuation Control System) ON/OFF Select

1. Press the [REC TO USB] button repeatedly until a message "VACS OFF" or "VACS ON" appears on the liquid crystal display panel.

• To release from Common Test Mode

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

[AMP TEST MODE]

- This mode is used to display the real time VACS level and check operations of the respective sections of Equalizer band and DBFB ON/OFF.

Procedure:

• To enter AMP Test Mode

1. Press the [I/⏻] button to turn on the system.
2. Press the [■] button, [GROOVE] button and [DISC 1] button simultaneously.
3. The message "AMP TEST IN" appears of the liquid crystal display panel.

• Check of VACS Display/AMP Adjustment Select

1. Press the [REC TO USB] button repeatedly until a message "V0 0 0" appears on the liquid crystal display panel. "0" represents VACS level which is triggered by signal level.
2. Press the [REC TO USB] button repeatedly until a message "D +6 +2 +4" appears on the liquid crystal display panel. "+6" represents Equalizer Low level, "+2" represents Equalizer Mid level and "+4" represents Equalizer High level.

• Check of Equalizer Band Select

1. Press the [EQ BAND/MEMORY] button repeatedly until a message "LOW +6 dB" appears on the liquid crystal display panel. EQ Band is set to Low level.
2. Press the [EQ BAND/MEMORY] button repeatedly until a message "MID +2 dB" appears on the liquid crystal display panel. EQ Band is set to Middle level.
3. Press the [EQ BAND/MEMORY] button repeatedly until a message "HIGH +4 dB" appears on the liquid crystal display panel. EQ Band is set to High level.

• Change of Equalizer Band

1. Press the [EQ BAND/MEMORY] button repeatedly until a message "LOW +6 dB" appears on the liquid crystal display panel.
2. When the [OPERATION DIAL] ring is turned clockwise or counterclockwise even slightly, "LOW +6 dB" change to "LOW -8 dB" ↔ "LOW +8 dB" appears on the liquid crystal display panel.
3. Press the [EQ BAND/MEMORY] button repeatedly until a message "MID +2 dB" appears on the liquid crystal display panel.
4. When the [OPERATION DIAL] ring is turned clockwise or counterclockwise even slightly, "MID +2 dB" change to "MID -8 dB" ↔ "MID +8 dB" appears on the liquid crystal display panel.
5. Press the [EQ BAND/MEMORY] button repeatedly until a message "HIGH +4 dB" appears on the liquid crystal display panel.
6. When the [OPERATION DIAL] ring is turned clockwise or counterclockwise even slightly, "HIGH +4 dB" change to "HIGH -8 dB" ↔ "HIGH +8 dB" appears on the liquid crystal display panel.

• Check of DBFB ON/OFF Select

1. Press the [OPTIONS] button repeatedly until a message "DBFB OFF" or "DBFB ON" appears on the liquid crystal display panel.

• To release from AMP Test Mode

1. To release from this mode, press the [I/⏻] button.

[TCM OFFLINE MODE]

(EXCEPT HCD-GZR99D: E2, E51, AR, MX, MODEL)

- This mode prevents the system from tuning off automatically when TCM is not connected. Therefore, measurements can be done even when TCM is not connected during production.

Procedure:

1. Press the [I/⏻] button to turn off the system and enter the clock display or demonstration mode.
2. Press the [REC TO TAPE] button, [DISC 3] button and [I/⏻] button simultaneously. The system will turn on automatically.
3. The message “TCM OFFLINE” appears on the liquid crystal display panel.

• To release from TCM OFFLINE Mode

1. To release from this mode, press the [I/⏻] button.

[PANEL TEST MODE]

- This mode is used to check the liquid crystal display panel, LEDs, button, MASTER VOLUME dial, OPERATION DIAL ring, system software version, DVD lib version, model name and destination.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [■] button, [DISC 3] button and [DISPLAY] button simultaneously.
3. Power illuminator LEDs and segment in liquid crystal display panel are lighted up.
4. When you want to enter to the system software version display model, press the [DISC 1] button. The system software version appears on the liquid crystal display panel. Press the [DISC 1] button again, the DVD lib version appears on the liquid crystal display panel.
5. Press the [DISC 2] button the mode name and destination on the liquid crystal display panel.
6. Press the [DISC 3] button the key encode test mode is activated.
7. In the key encode test mode, the liquid crystal display panel displays “KEY 0 0 0 0 0”.
Each time a button pressed, change the each numbers.

• To release from Panel Test Mode

1. To release from this mode, press the [■] button, [DISC 3] button and [DISPLAY] button simultaneously.

[DVD 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 the [I/⏻] button to turn on the system.
2. Press the [DVD] button, to set the “DVD NO DISC” mode.
3. Press the [▶] button
(HCD-GZR99D: E2, E51, AR, MX model)
or [◀▶] button
(Except HCD-GZR99D: E2, E51, AR, MX model)
and [I/⏻] button simultaneously.
The system will turn off automatically.
4. After the “STANDBY” blinking display finishes, a message “LOCK” appears on the liquid crystal display panel and the DVD ship mode is set.

• To release from DVD Ship Mode

1. To release from this mode, press the [I/⏻] button.

[DVD 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 RAM to initial conditions after the power supply is turned off. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button, to set the “DVD NO DISC” mode.
3. Press the [TUNING -] button, [DISC 3] button and [I/⏻] button simultaneously.
4. After the “STANDBY” blinking display finishes, a message “COLD RESET” appears on the liquid crystal display panel and the DVD ship mode is set.

• To release from DVD Ship Mode

1. To release from this mode, press the [I/⏻] button.

[DISC THEFT PREVENTION MODE]

- This mode let you lock the disc tray. When this mode is activated, the disc tray will not open.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button.
3. Press the [■] button and [OPEN/CLOSE ▲] button simultaneously and hold down until “LOCKED” or “UNLOCKED” appears on the liquid crystal display panel (around 5 seconds).

• To release from Disc Theft Prevention Mode

1. This mode will not be deselected only by turning the power off. To exit from the mode, perform the above item 4 again.

[DVD COLOR SYSTEM MODE]

- This mode let you change the color system of the video output from PAL to NTSC or vice-versa.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button.
3. Press the [I/⏻] button to turn off the system.
4. Press the [DISPLAY] button to switch the mode the clock display or demonstration mode.
5. Press the [■] button and [I/⏻] button simultaneously.
The system will turn on automatically.
6. The message “COLOR PAL” or “COLOR NTSC” appears on the liquid crystal display panel.

• To release from DVD Color System Mode

1. Once the color system has been selected, the mode is fixed there after. If you wish to change the mode again, perform the above item 4 again.

[DVD FIRMWARE VERSION MODE]

- This mode is used to display the DVD firmware version.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button.
3. Press the [I/⏻] button to turn off the system and enter the clock display or demonstration mode.
4. Press the [■] button and [I/⏻] button simultaneously.
5. The version of DVD firmware appears on the on-screen display on TV.

• To release from DVD Firmware Version Mode

1. To release from this mode, press the [I/⏻] button.

[MTK REBOOT AVOIDANCE MODE]

- This mode is used to display the MTK Reboot Avoidance.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button.
3. Press the [DVD] button, [DISPLAY] button and [TUNING +] button simultaneously.

• To release from MTK Reboot Avoidance Mode

1. To release from this mode, press the [I/⏻] button.

[AM TUNER STEP CHAGE]

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

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [TUNER/BAND] button repeatedly to select the “AM”.
3. Press the [I/⏻] button to turn off the system.
4. Press the [TUNING +] button and [I/⏻] button simultaneously.
The system will turn on automatically.
5. The message “AM 9k STEP” or “AM 10k STEP” appears on the liquid crystal display panel and thus the channel step change.

[VIDEO/SAT FUNCTION CHANGE]

- This mode let you change from VIDEO to SAT and vice-versa.

Procedure:

1. Press the [I/⏻] button to turn on the system.
2. Press the [VIDEO/SAT] button.
3. Press the [VIDEO/SAT] button and [■] button simultaneously.
The function will change to SAT. Press the same button again to change from SAT to VIDEO.

[DVD SERVICE MODE]

- This mode let you make diagnosis and adjustment easily by using the remote commander and the TV. The instructions, diagnostic results, etc. are given on the on-screen display.

• TEST DISC LIST

Be sure to use the DVD disc that matches the signal standards of your region.

- CD

YEDS-18 (Part No.: 3-702-101-01)
PATD-012 (Part No.: 4-225-203-01)

- DVD SL (Single Layer)

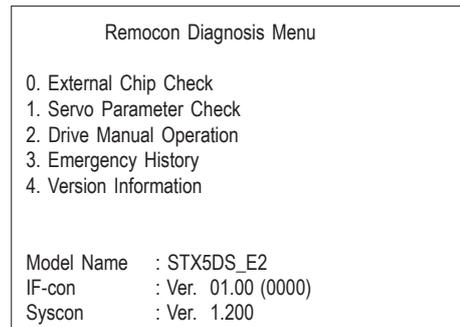
NTSC : HLX-503 (Part No.: J-6090-069-A)
 HLX-504 (Part No.: J-6090-088-A)
PAL : HLX-506 (Part No.: J-6090-077-A)

- DVD DL (Dual Layer)

NTSC : HLX-501 (Part No.: J-6090-071-A)
 HLX-505 (Part No.: J-6090-089-A)
PAL : HLX-507 (Part No.: J-6090-078-A)

• Procedure to enter to DVD Service Mode:

1. Press the [I/⏻] button to turn on the system.
2. Press the [DVD] button.
3. Press the [■] button and [OPEN/CLOSE ▲] button simultaneously and then turn the [MASTER VOLUME] dial clockwise.
4. The message “SERVICE IN” appears on the liquid crystal display panel and the Top Menu of Remocon Diagnosis Menu appears on the on-screen display on the TV. The model name, main unit’s micom version information (IF-con) and DVD firmware version information (Syscon) are displayed at the bottom of the on-screen display.

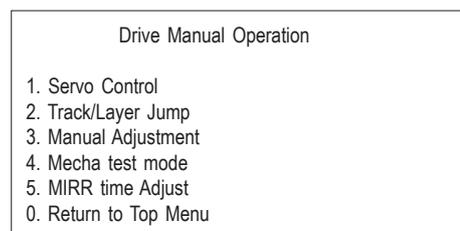


5. To execute each function, press its number by using numeric button on the remote commander.
6. To release from this mode, press the [I/⏻] button to turn off the system.

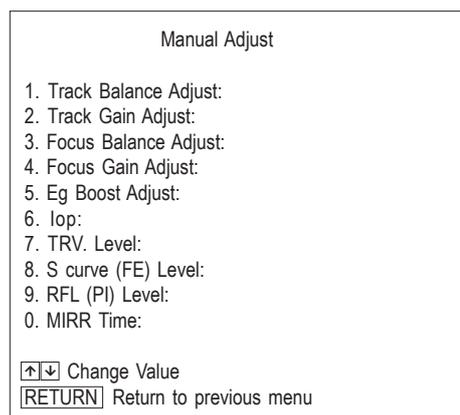
• Execute IOP Measurement

In order to execute IOP measurement, the following standard procedures must be followed.

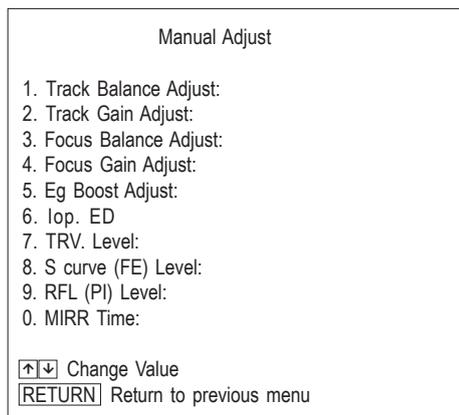
1. From the Top Menu of Remocon Diagnosis Menu, select “2. Drive Manual Operation” by pressing the [2] button on the remote commander. The following screen appears on the on-screen display.



2. Select “3. Manual Adjustment” by pressing the [3] button on the remote commander. The following screen appears on the on-screen display.



- Select "6. Iop:" by pressing the [6] button on the remote commander.
- Wait until a hexadecimal number appears in the on-screen display as below:

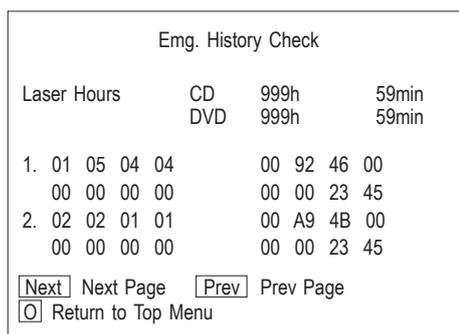


- Convert data from hexadecimal to decimal by using conversion table.
- Please find the label on the rear of the BU (Base Unit). The default IOP value is written in the label.
- Subtract between these two values.
- If the remainder is smaller than 93 (decimal), then it is OK. However if the value is higher than 93, then the BU is defective and need to be change.
- Press the [RETURN] button on the remote commander to return to previous menu.
- Press the [0] button on the remote commander to return to the Top Menu of Remocon Diagnosis Menu.
- Press the [I/⏻] button to turn off the system.

• Check Emergency History

To check the emergency history, please follow the following procedure.

- From the Top Menu of Remocon Diagnosis Menu, select "3. Emergency History" by pressing the [3] button on the remote commander. The following screen appears on the on-screen display.



- You can check the total time when the laser is turned on during playback of DVD and CD from the above menu. The maximum time, which can be displayed are 999h 59min.
- You can check the error code of latest 10 emergency history from the above menu. To view the previous or next page of emergency history, press the [◀◀] button or [▶▶] button on the remote commander. The error code consists of

• Error Code

Example of Error code			
1.	01	05 04 04	00 92 46 00
		00 00 00 00	00 00 23 45

The meaning of error code is as below:

- 01: Communication error (No reply from syscon)
- 02: Syscon hung up
- 03: Power OFF request when syscon hung up
- 19: Thermal shutdown
- 24: MoveSledHome error
- 25: Mechanical move error (5 Changer)
- 26: Mechanical move stack error
- 30: DC motor adjustment error
- 31: DPD offset adjustment error
- 32: TE balance adjustment error
- 33: TE sensor adjustment error
- 34: TE loop gain adjustment error
- 35: FE loop gain adjustment error
- 36: Bad jitter after adjustment
- 40: Focus NG
- 42: Focus layer jump NG
- 52: Open kick spindle error
- 51: Spindle stop error
- 60: Focus on error
- 61: Seek fail error
- 62: Read Q data/ID error
- 70: Lead in data read fail
- 71: TOC read time out (CD)
- 80: Can't buffering
- 81: Unknown media type

• Parameter of error code

This is the detail of error code.

Example of Error code			
1.	01	05 04 04	00 92 46 00
		00 00 00 00	00 00 23 45

• Time of error code

This is the laser time when an error occurred.

Example of Error code			
1.	01	05 04 04	00 92 46 00
		00 00 00 00	00 00 23 45

To clear the Laser Hours

Press the [DISPLAY] button and then press the [CLEAR] button. The data for both CD and DVD data are reset.

Emg. History Check			
Laser Hours	CD DVD	0h 0h	0min 0min
1.	01 05 04 04	00 92 46 00	00 00 23 45
2.	02 02 01 01	00 A9 4B 00	00 00 23 45

[Next] Next Page [Prev] Prev Page
[0] Return to Top Menu

To clear the Emergency History

Press the [DVD TOP MENU] button and then press the [CLEAR] button.

The error code for all emergency history would be reset.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
1.	00 00 00 00	00 00 00 00	
	00 00 00 00	00 00 00 00	
2.	00 00 00 00	00 00 00 00	
	00 00 00 00	00 00 00 00	
<input type="button" value="Next"/> Next Page <input type="button" value="Prev"/> Prev Page <input type="button" value="0"/> Return to Top Menu			

To clear the Initialize Setup Data

Press the [DVD/TUNER MENU] button and then press the [CLEAR] button on the remote commander.

Version information
Firm (Main) : Ver. xxxxx
Firm (Sub) : xxxxx
RISC : xxxxx
8032 : xxxxx
Audio DSP : xxxxx
Servo DSP : xxxxx
<input type="button" value="0"/> Return to Top Menu

To return to the Top Menu of Remocon Diagnosis Menu

Press the [0] button on the remote commander.

- **Check Version Information**

To check the version information, please follow the following procedure.

1. From the Top Menu of Remocon Diagnosis Menu, select "4. Version Information" by pressing the [4] button on the remote commander. The following screen appears on the on-screen display.

Emg. History Check			
Laser Hours	CD	999h	59min
	DVD	999h	59min
Initialize setup data...			
<input type="button" value="Next"/> Next Page <input type="button" value="Prev"/> Prev Page <input type="button" value="0"/> Return to Top Menu			

To return to the Top Menu of Remocon Diagnosis Menu, press the [0] button on the remote commander.

**SECTION 4
MECHANICAL ADJUSTMENTS**

Except HCD-GZR99D: E2, E51, AR, MX Model:

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:

record/playback heads	pinch rollers
erase head	rubber belts
capstan	idlers
2. Demagnetize the record/playback head with a head demagnetizer.
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-102C	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.96 N • m to 14.02 N • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	9.80 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	9.80 N • m 100 g or more (3.53 oz or more)

SECTION 5 ELECTRICAL ADJUSTMENTS

DVD SECTION

When the optical pick-up assy is replaced, perform the "Execute IOP Measurement".

Execute IOP Measurement (See page 23)

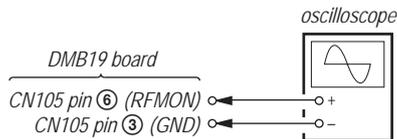
[TEST DISC LIST]

Be sure to use the DVD disc that matches the signal standards of your region.

- CD
 - YEDS-18 (Part No.: 3-702-101-01)
 - PATD-012 (Part No.: 4-225-203-01)
- DVD SL (Single Layer)
 - NTSC : HLX-503 (Part No.: J-6090-069-A)
 - HLX-504 (Part No.: J-6090-088-A)
 - PAL : HLX-506 (Part No.: J-6090-077-A)
- DVD DL (Dual Layer)
 - NTSC : HLX-501 (Part No.: J-6090-071-A)
 - HLX-505 (Part No.: J-6090-089-A)
 - PAL : HLX-507 (Part No.: J-6090-078-A)

[RFMON Level Check]

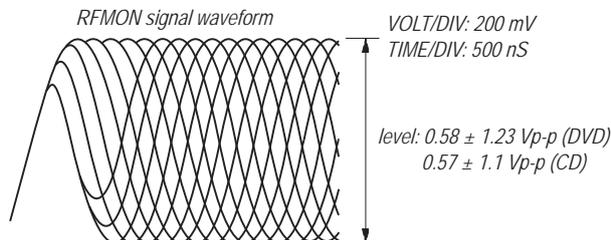
Connection:



Procedure:

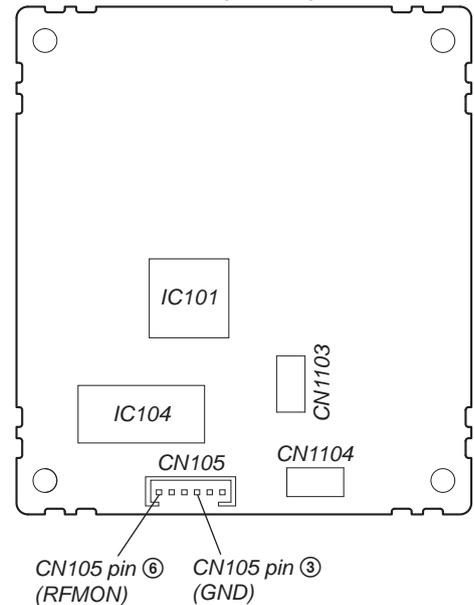
1. Connect an oscilloscope to CN105 pin ⑥ (RFMON) and CN105 pin ③ (GND) on the DMB19 board.
2. Turn the power on.
3. Set the test disc (refer to the TEST DISC LIST) on the tray and press the [▶] button (HCD-GZR99D: E2, E51, AR, MX model) or [◀▶] button (Except HCD-GZR99D: E2, E51, AR, MX model) to playback.
4. Confirm that oscilloscope waveform is clear and check RFMON signal level is correct or not.

Note: A clear RFMON signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.



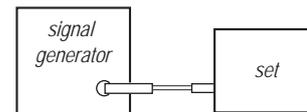
Checking Location: DMB19 board (Side A)

- DMB19 BOARD (SIDE A) -



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 dBμ (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.

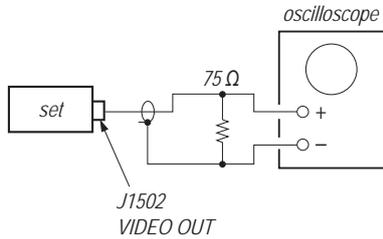
When the selected station signal is received in good condition, "TUNED" is displayed.

VIDEO SECTION

Video Level Check (VIDEO BOARD)

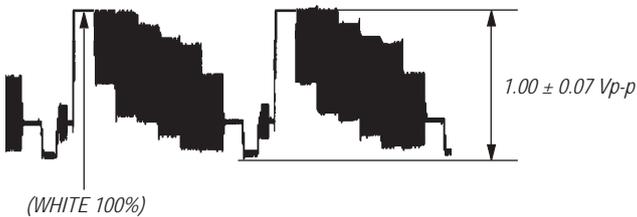
Purpose

This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.



Procedure:

1. Connect oscilloscope to VIDEO OUT jack.
2. Load a DVD reference disc playback.
3. Check the video signal level is $1.00 \pm 0.07 V_{p-p}$.



DECK SECTION

0 dB = 0.775V

Except HCD-GZR99D: E2, E51, AR, MX Model:

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

• Test Tape

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

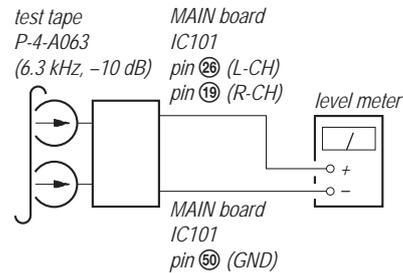
Record/Playback Head Azimuth Adjustment

DECK B

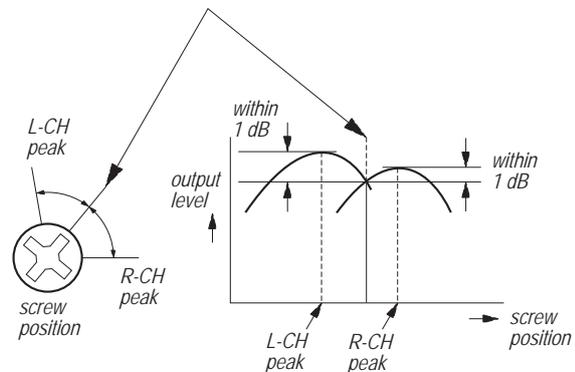
Note: Perform this adjustments for both decks

Procedure:

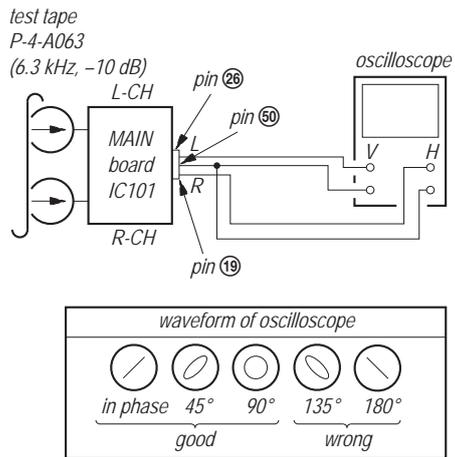
1. Mode: Playback



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.

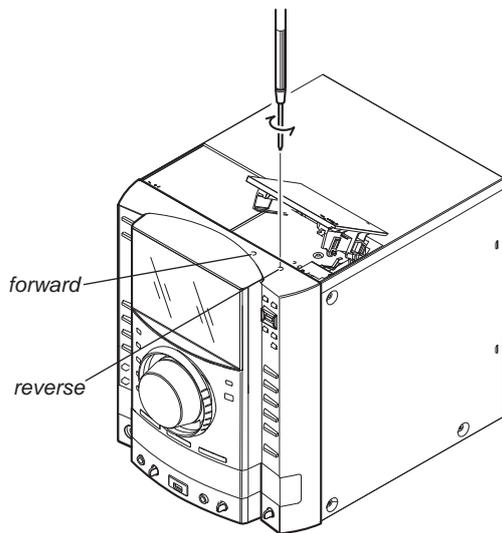


3. Mode: Playback



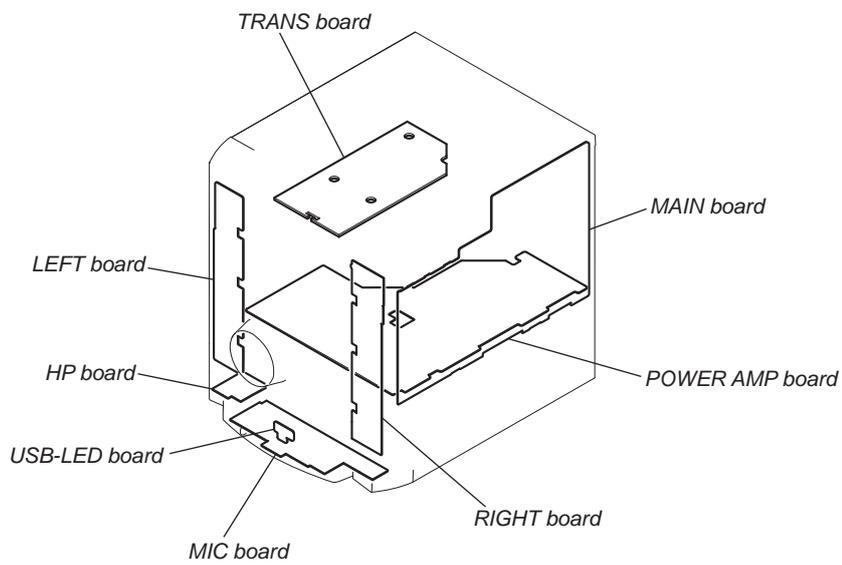
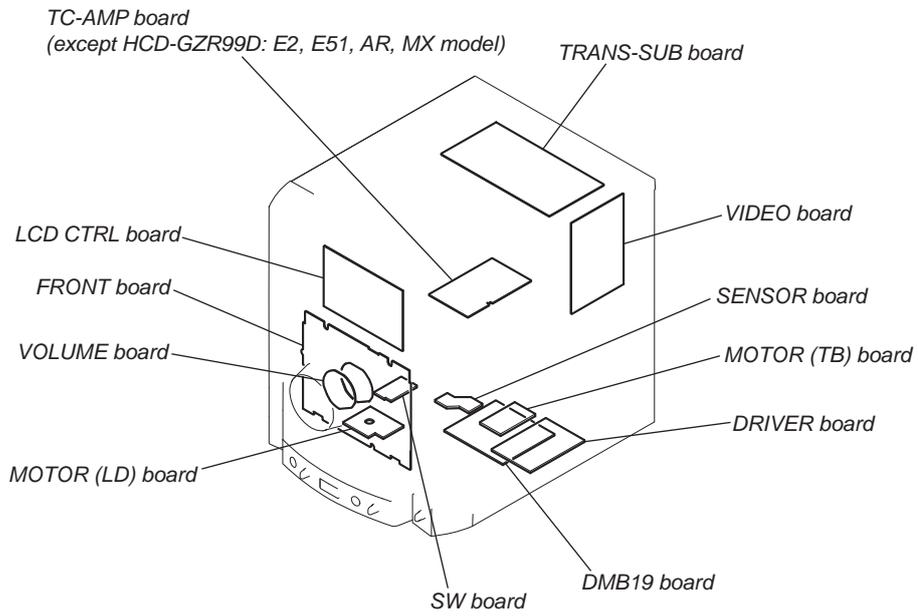
4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Record/Playback/Erase Head (Deck B)

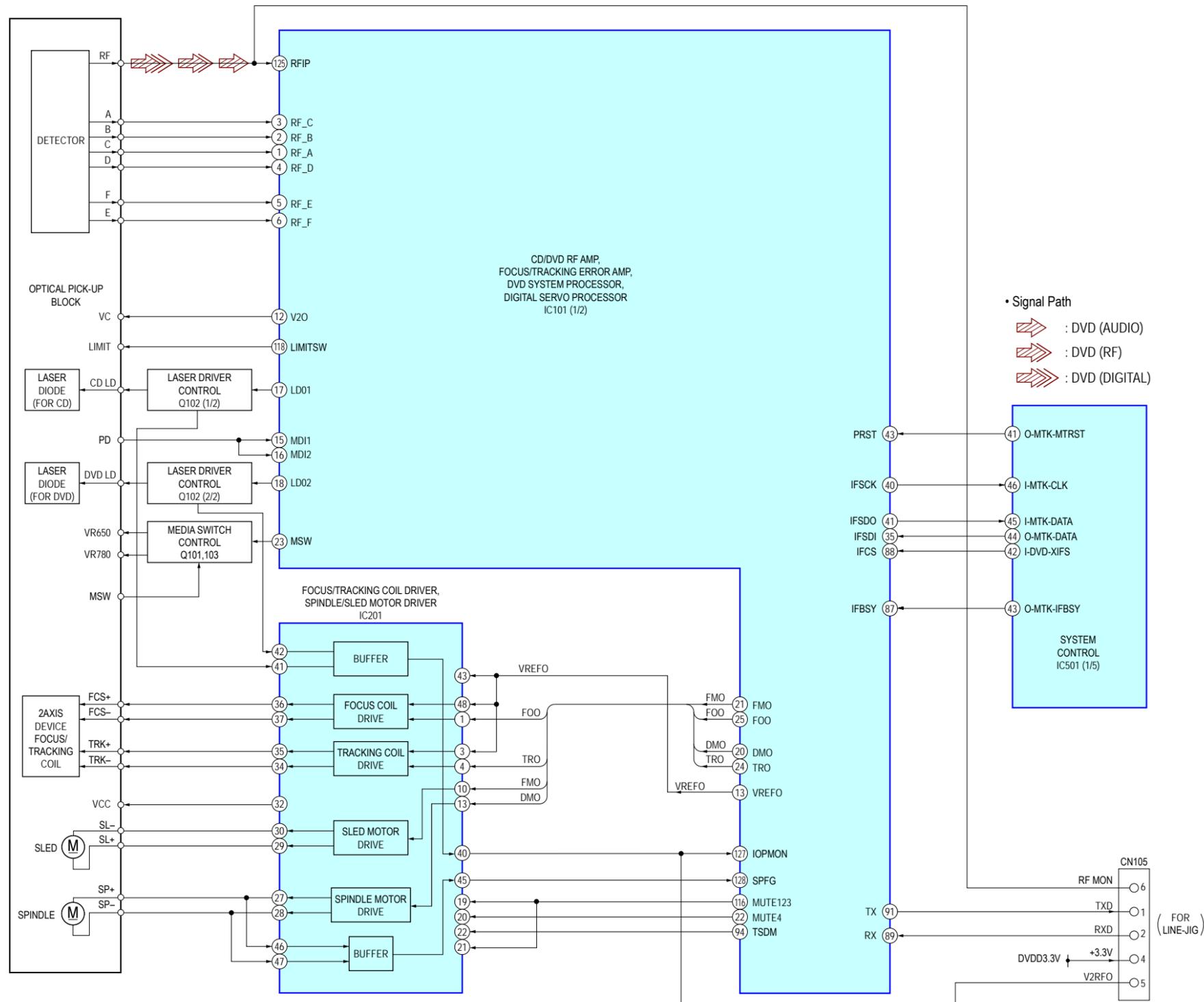


SECTION 6 DIAGRAMS

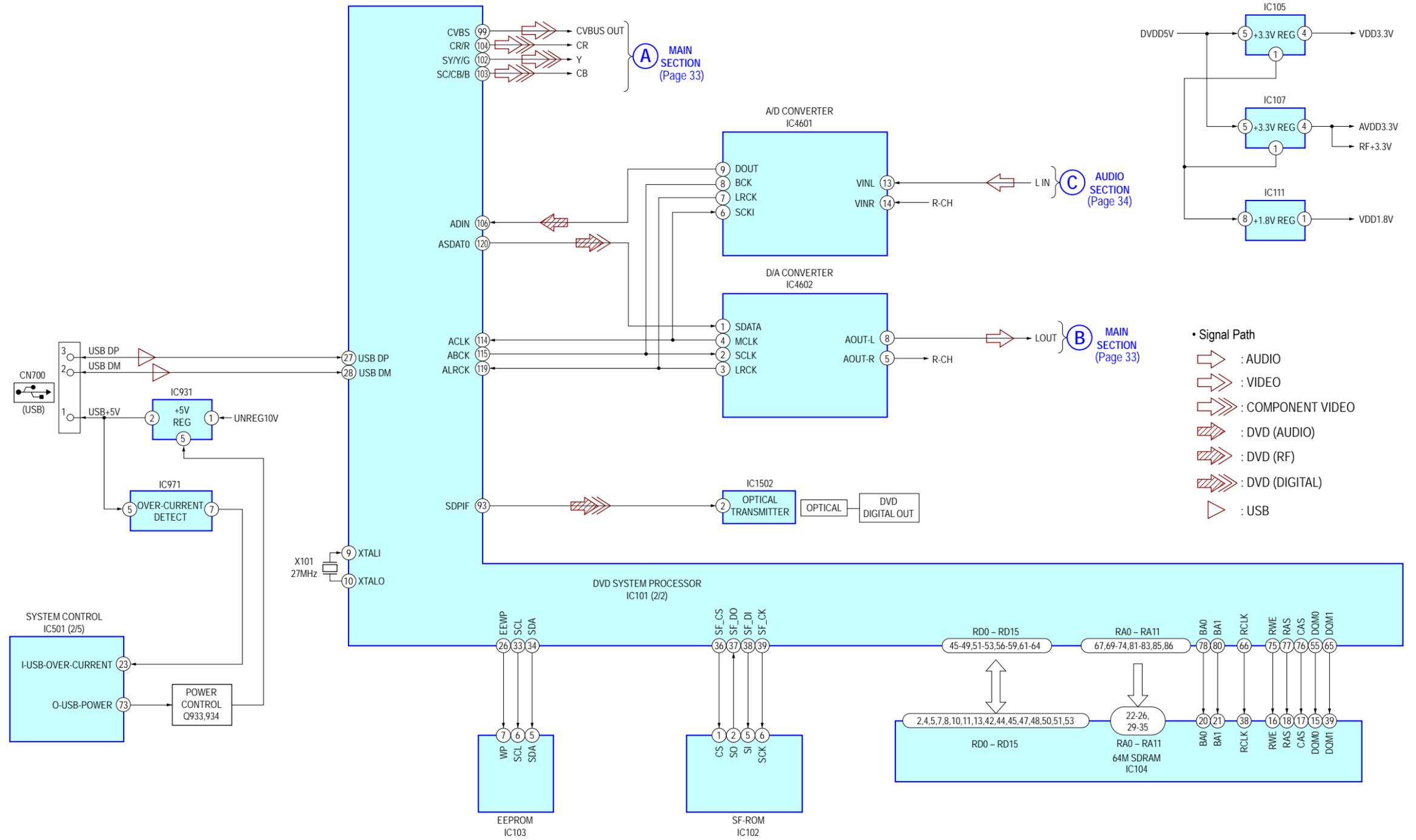
- Circuit Boards Location



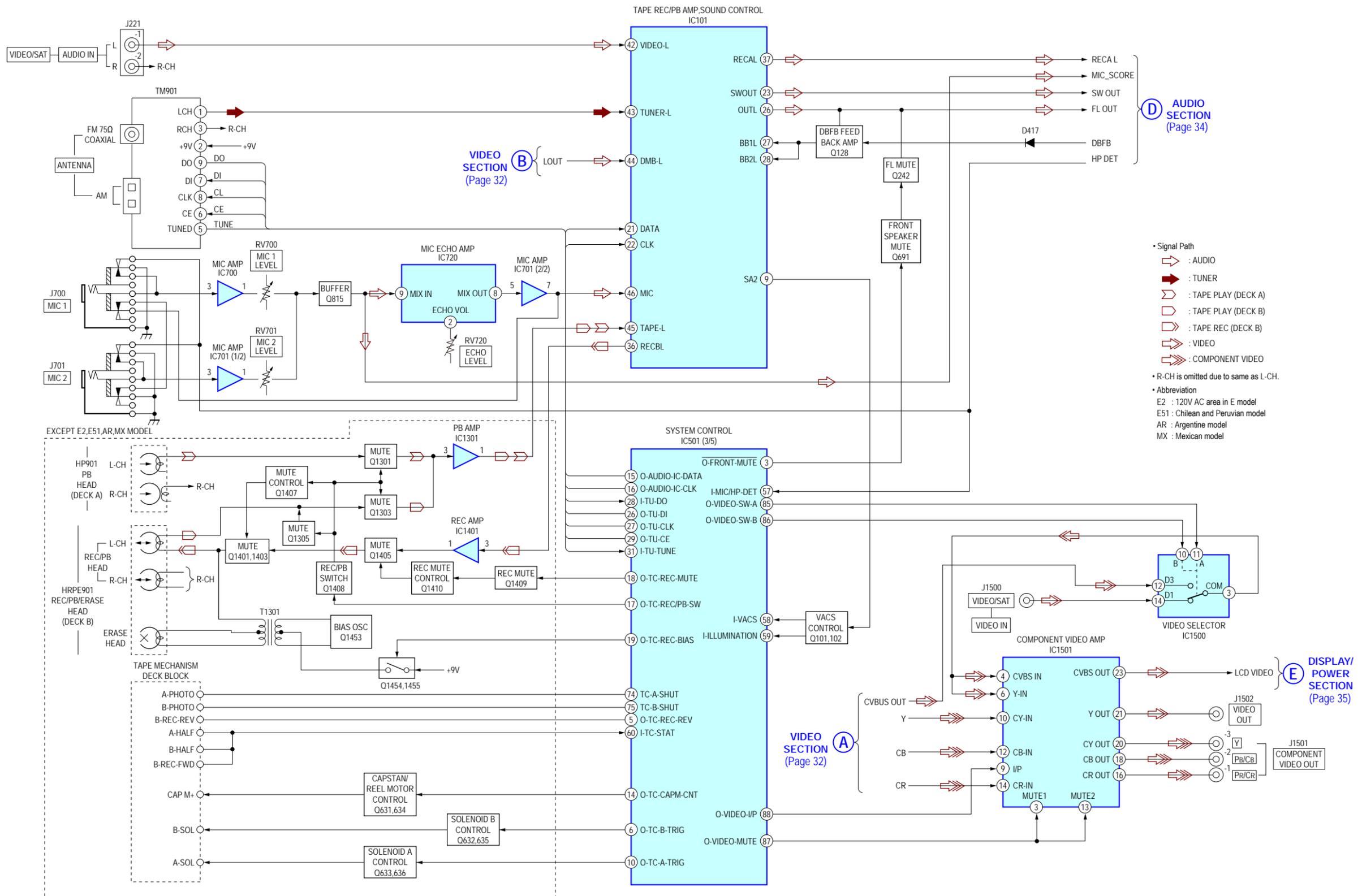
6-1. BLOCK DIAGRAM – RF/SERVO Section –



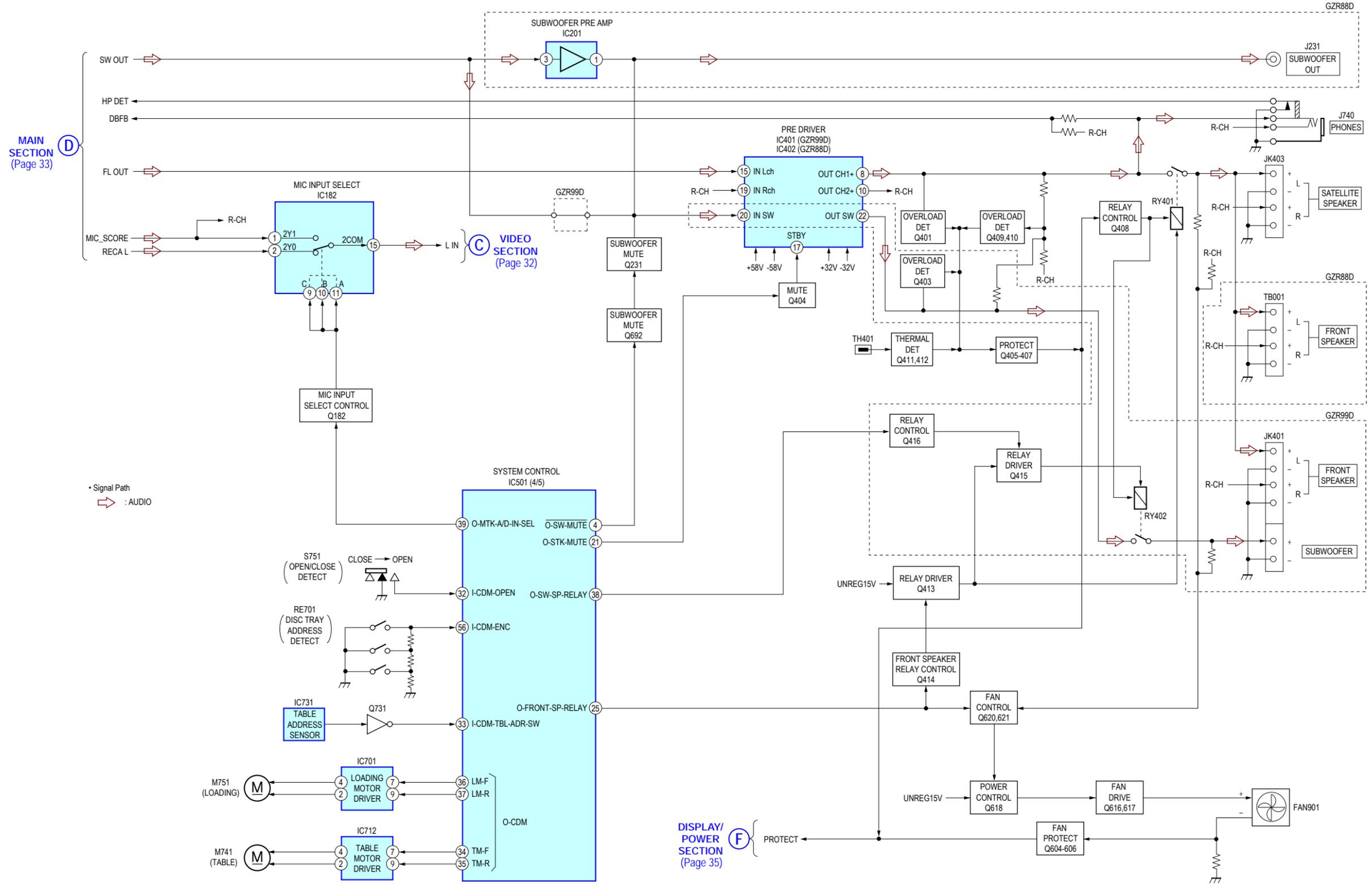
6-2. BLOCK DIAGRAM – VIDEO Section –



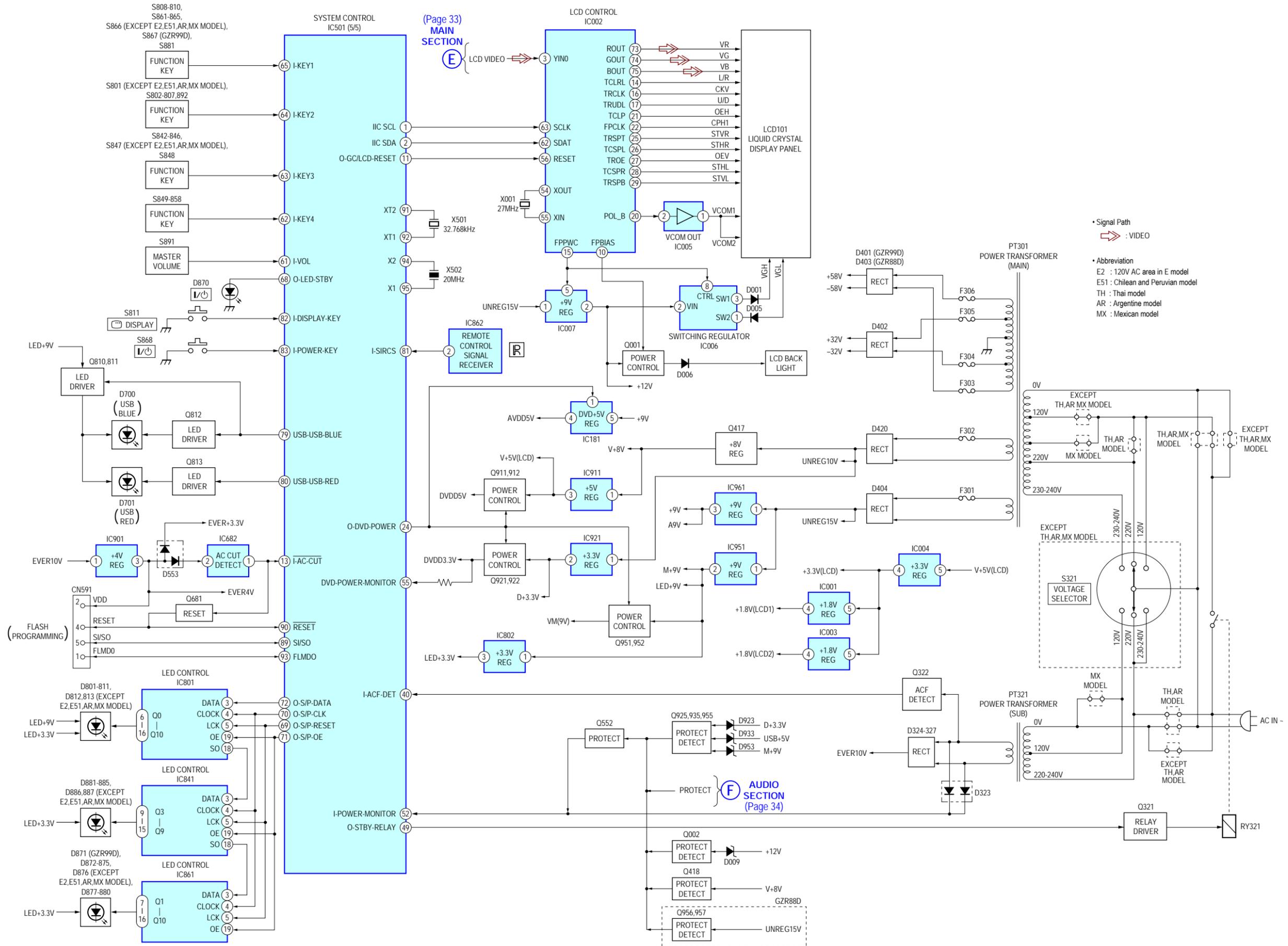
6-3. BLOCK DIAGRAM – MAIN Section –



6-4. BLOCK DIAGRAM – AUDIO Section –



6-5. BLOCK DIAGRAM – DISPLAY/POWER 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.
- : Pattern from the side which enables seeing.
 (The other layers' patterns are not indicated.)

Caution:

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

Abbreviation

- AR : Argentina model
- E2 : 120V AC area in E model
- E3 : 240V AC area in E model
- E4 : 110 – 120V/220 – 240V AC area in E model
- E12 : 220 – 240V AC area in E model
- E15 : Iran model
- E51 : Chilean and Peruvian model
- MX : Mexican model
- PH : Philippines model
- SP : Singapore model
- TH : Thai model

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)

LF : 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.

For Schematic Diagrams.

Note:

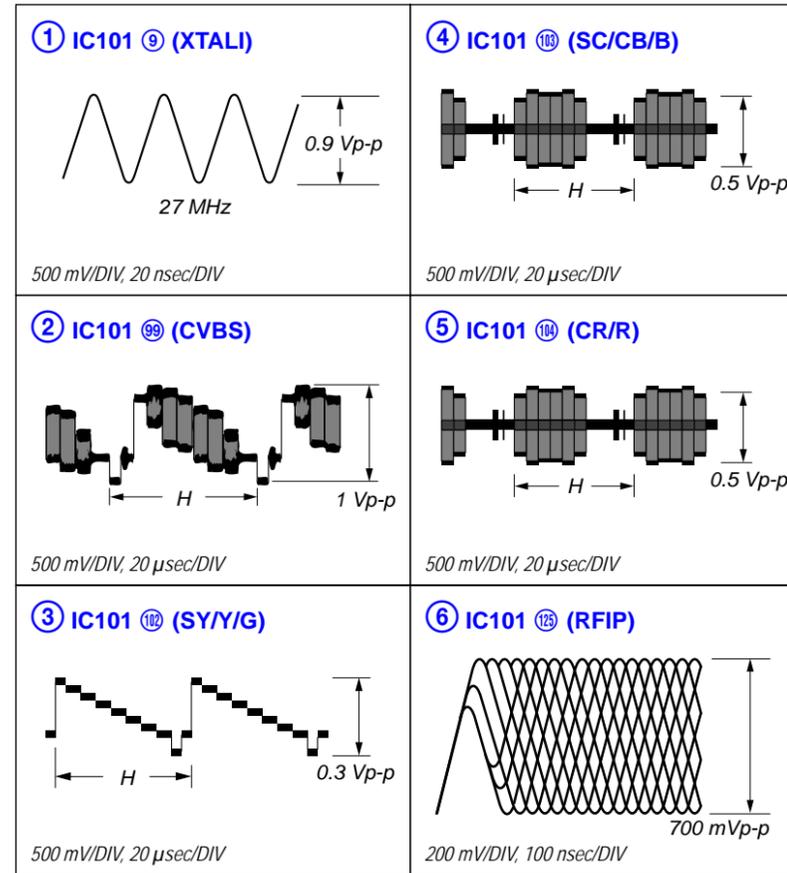
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ⊞: Nonflammable resistor.
- : Panel designation.

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

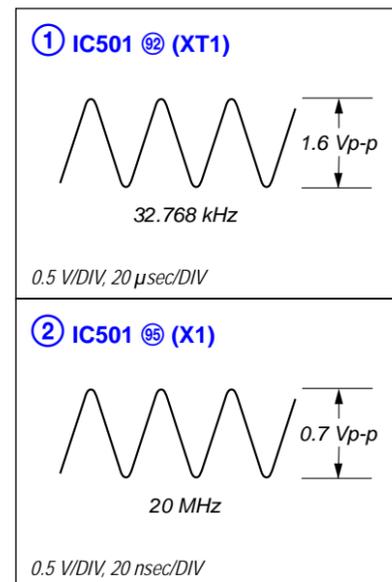
- : B+ Line.
- - -: B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
 no mark: FM
 * : Impossible to measure
- Voltages are taken with VOM (Input impedance 10 M Ω).
 Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
 Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 ⇨ : AUDIO
 ⇨ : TUNER
 ⇨ : VIDEO
 ⇨⇨ : COMPONENT VIDEO
 ⇨⇨ : TAPE PLAY (DECK A)
 ⇨⇨ : TAPE PLAY (DECK B)
 ⇨⇨ : TAPE REC (DECK B)
 ⇨⇨ : DVD (AUDIO)
 ⇨⇨ : DVD (RF)
 ⇨⇨ : DVD (DIGITAL)
 ⇨⇨ : USB
- Abbreviation
 AR : Argentina model
 E2 : 120V AC area in E model
 E3 : 240V AC area in E model
 E4 : 110 – 120V/220 – 240V AC area in E model
 E12 : 220 – 240V AC area in E model
 E15 : Iran model
 E51 : Chilean and Peruvian model
 MX : Mexican model
 PH : Philippines model
 SP : Singapore model
 TH : Thai model

• Waveforms

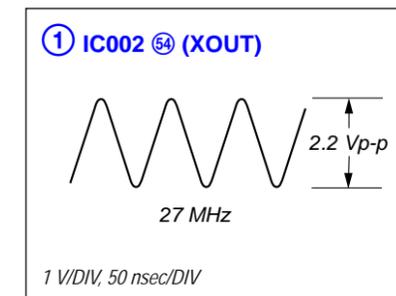
– DMB19 Board –



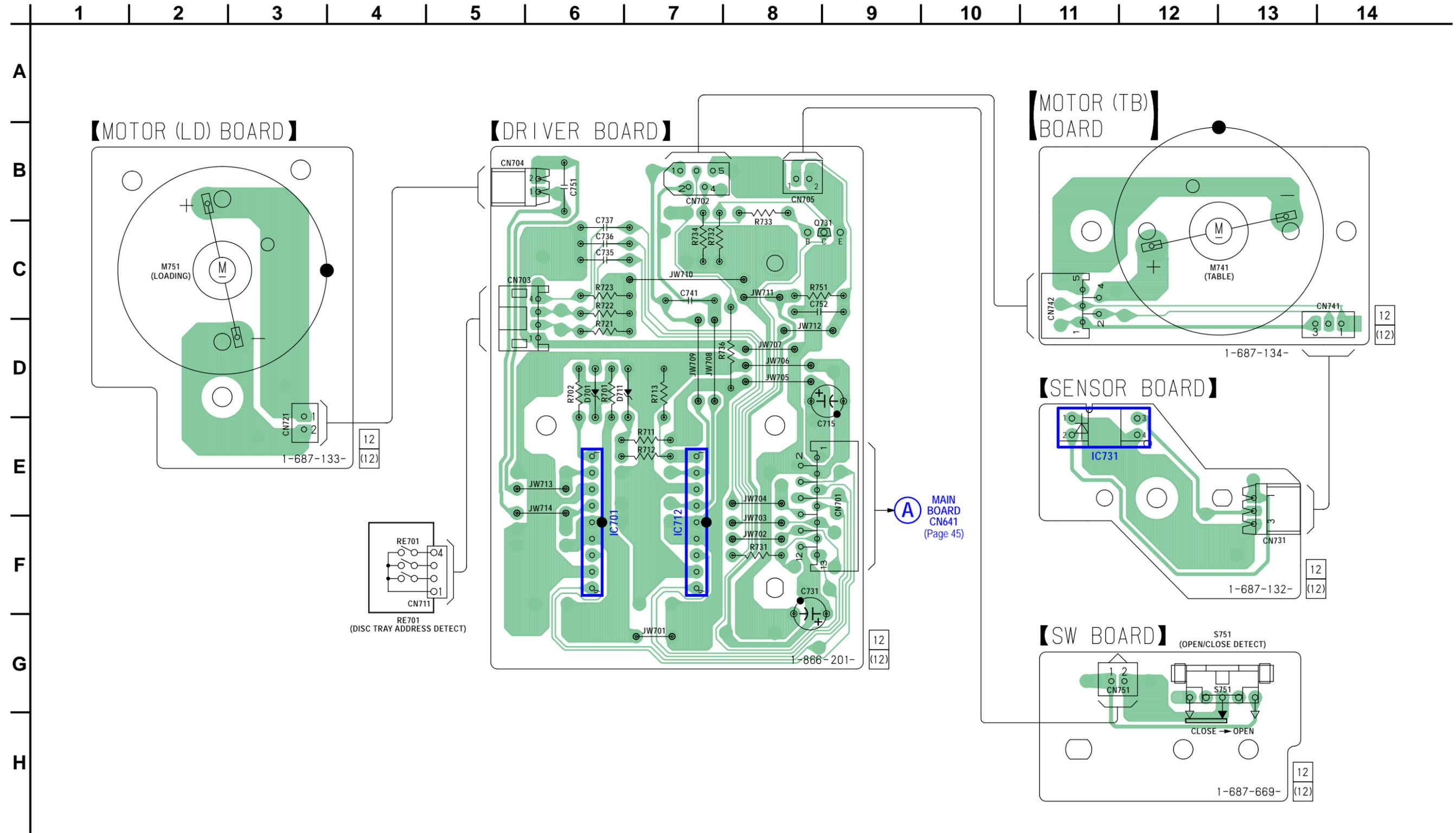
– MAIN Board –

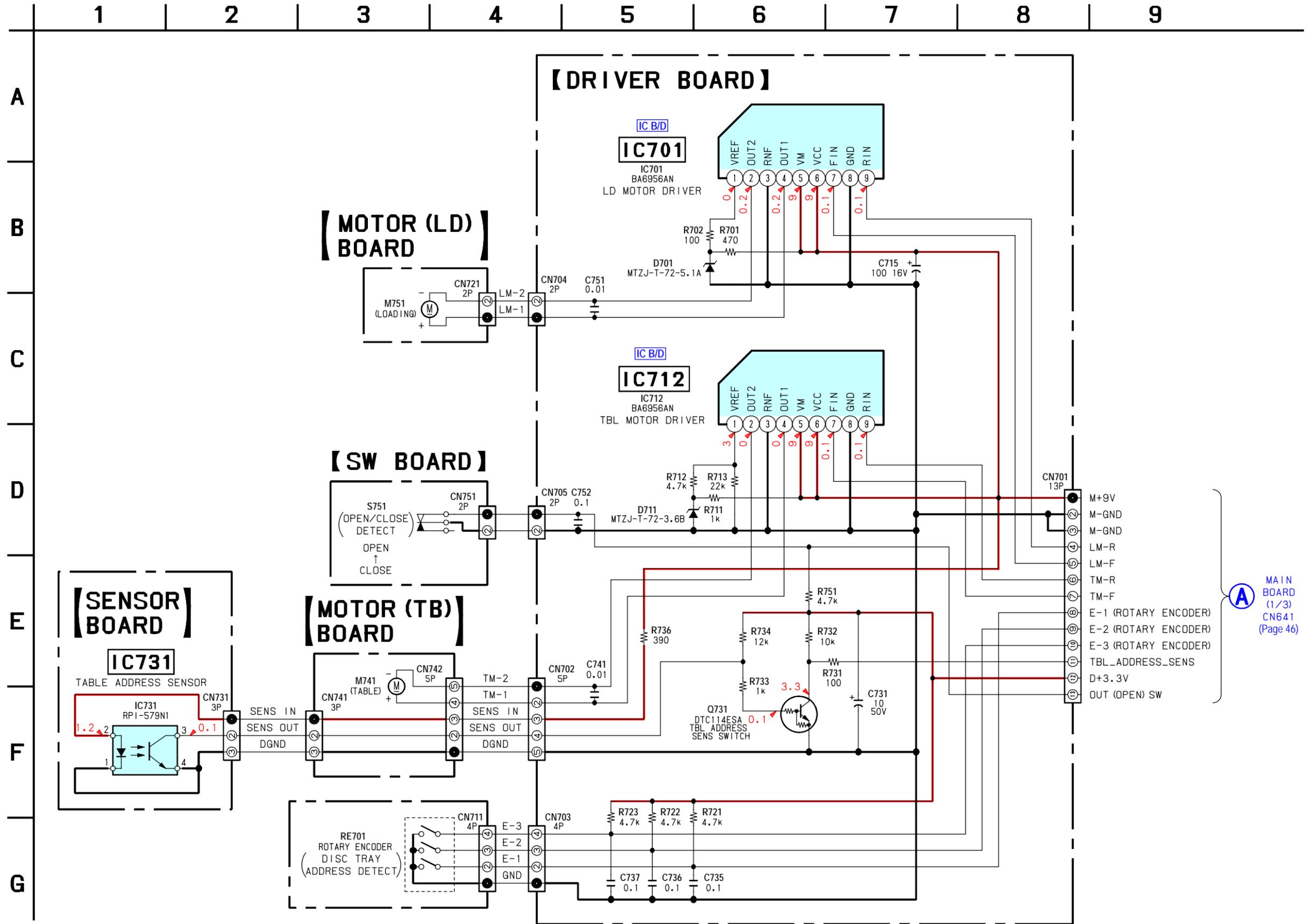


– LCD CTRL Board –



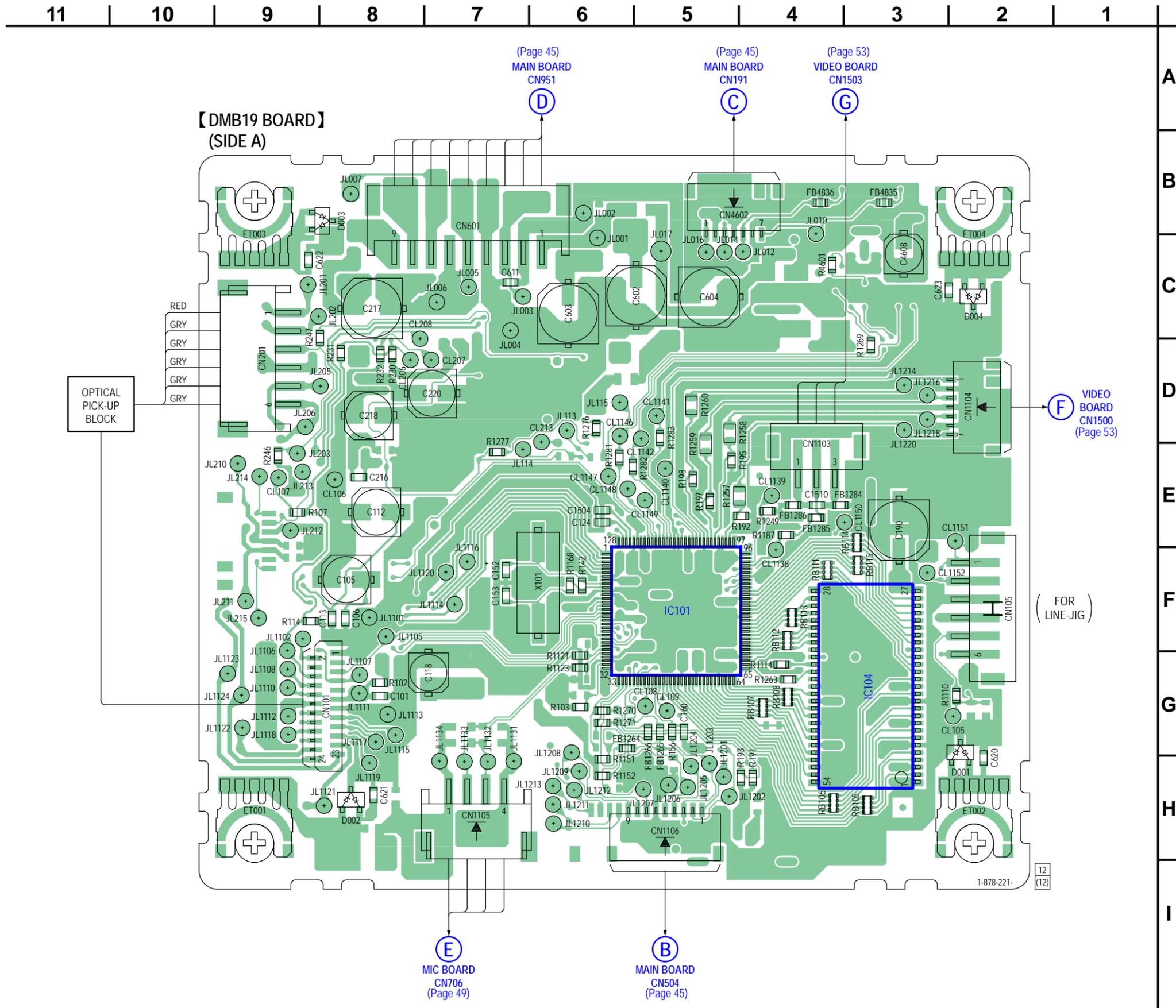
6-6. PRINTED WIRING BOARDS – DRIVER Section – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.

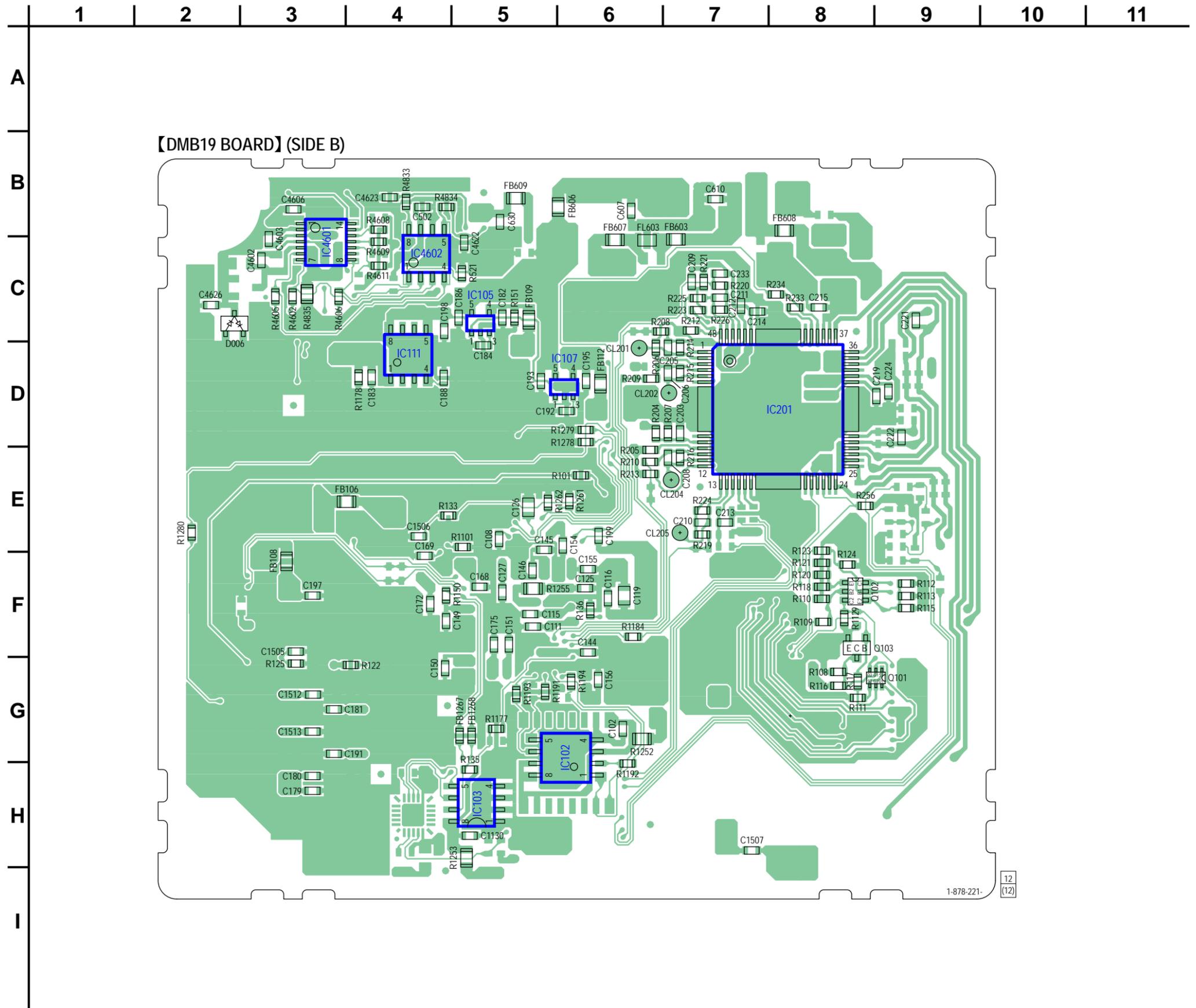




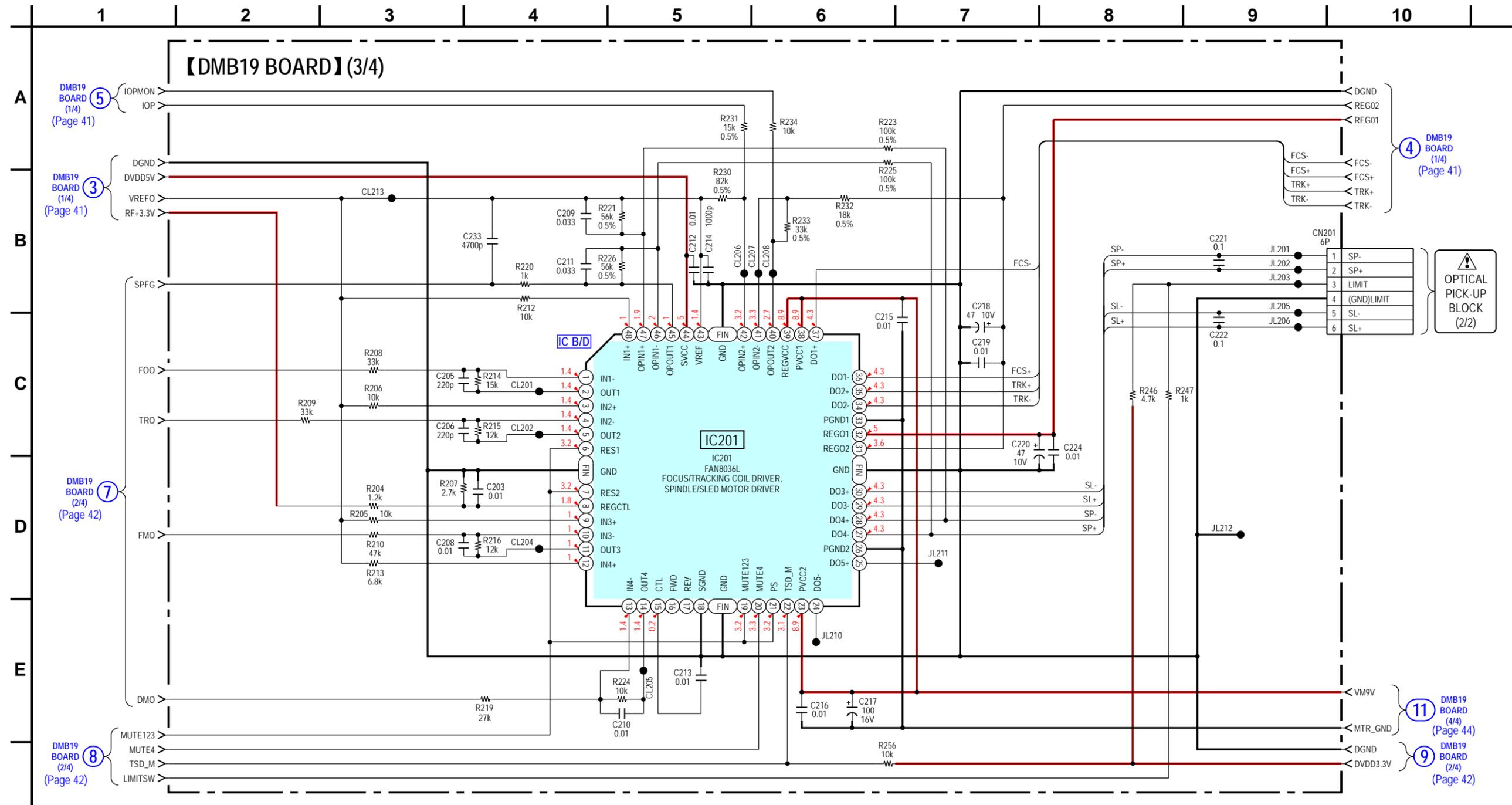
A MAIN BOARD (1/3) CN641 (Page 46)

6-8. PRINTED WIRING BOARD – DMB19 Section (1/2) – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.

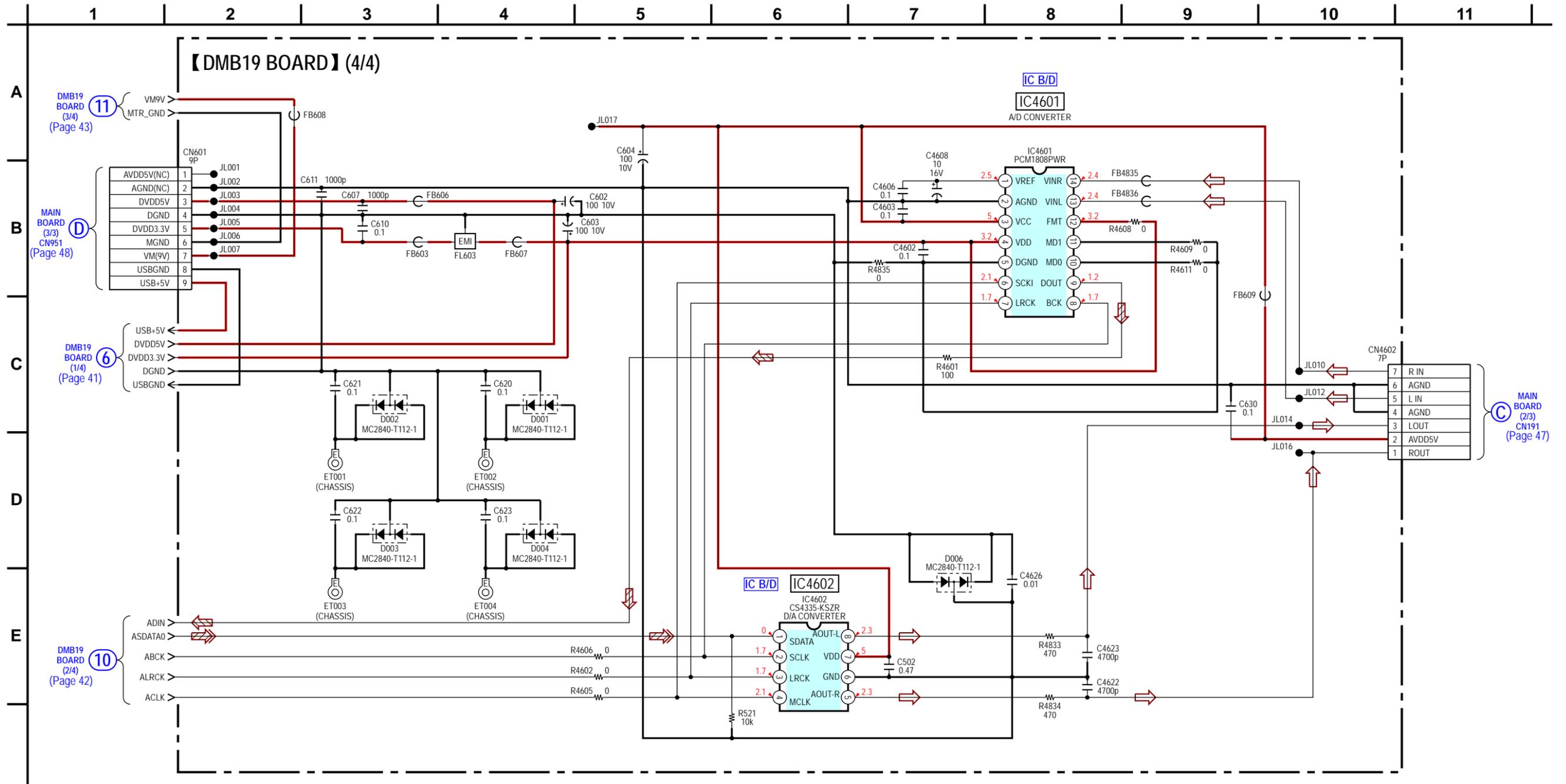




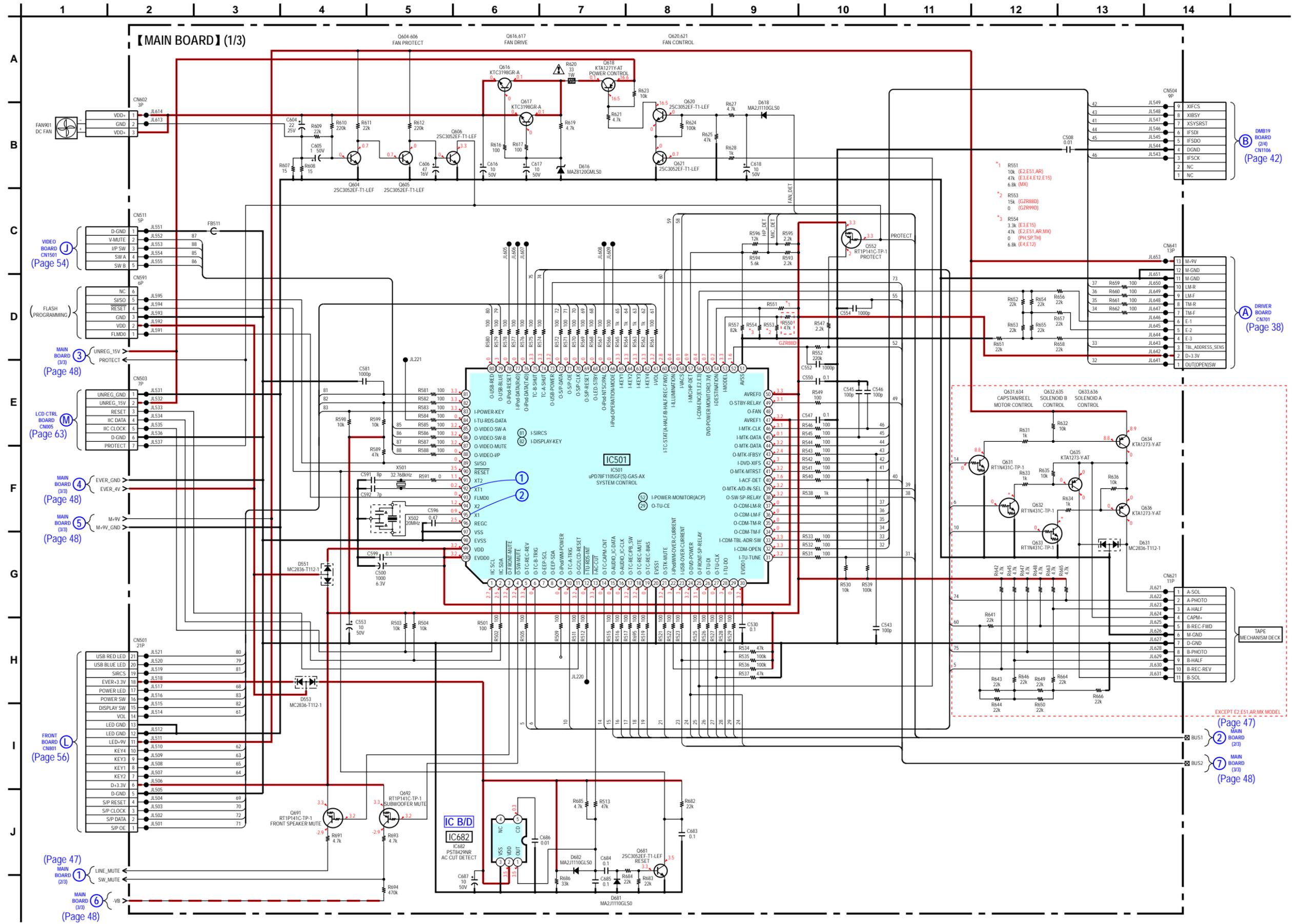
6-12. SCHEMATIC DIAGRAM – DMB19 Section (3/4) – • See page 68 for IC Block Diagrams.



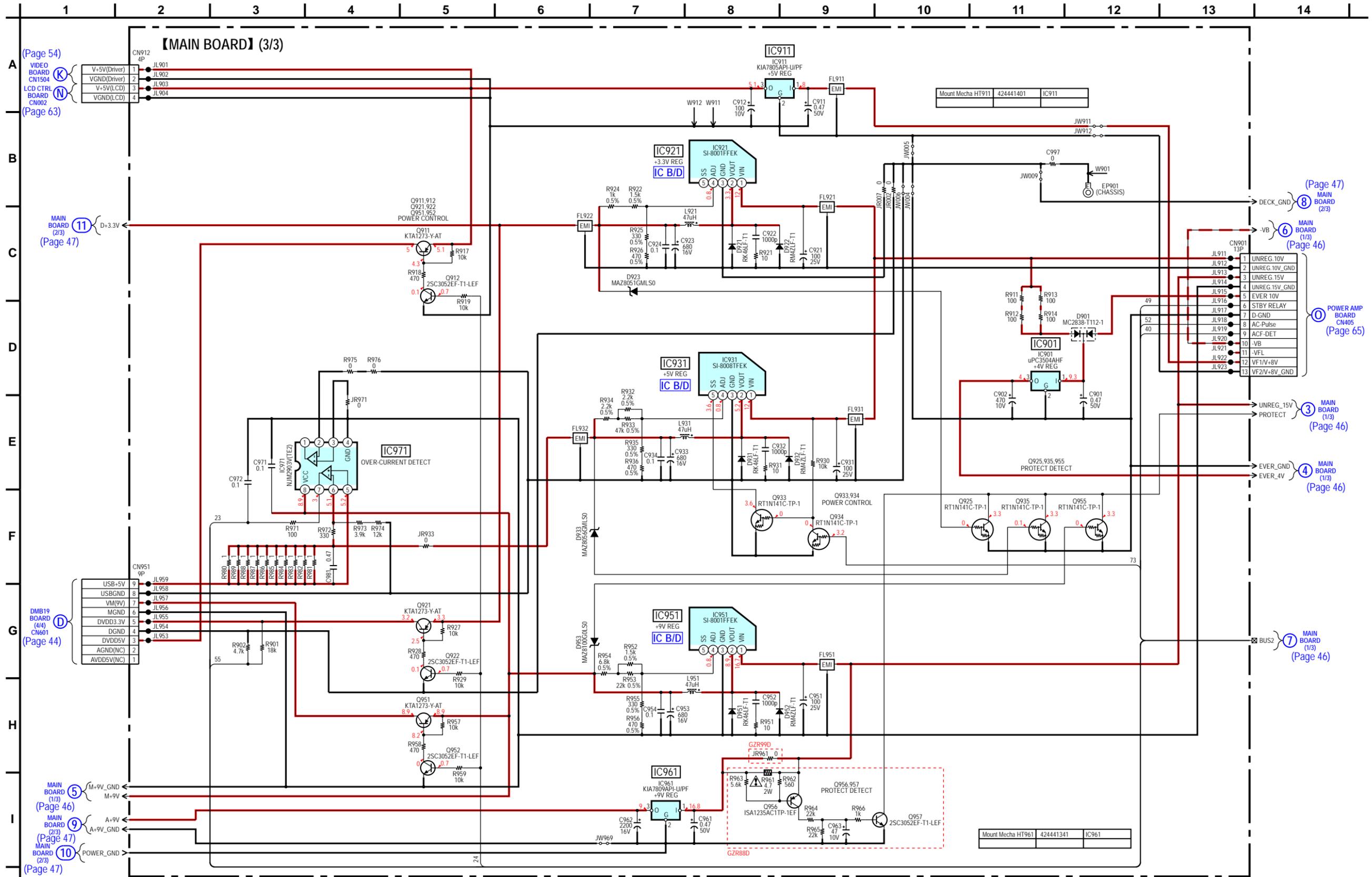
6-13. SCHEMATIC DIAGRAM – DMB19 Section (4/4) – • See page 69 for IC Block Diagrams.



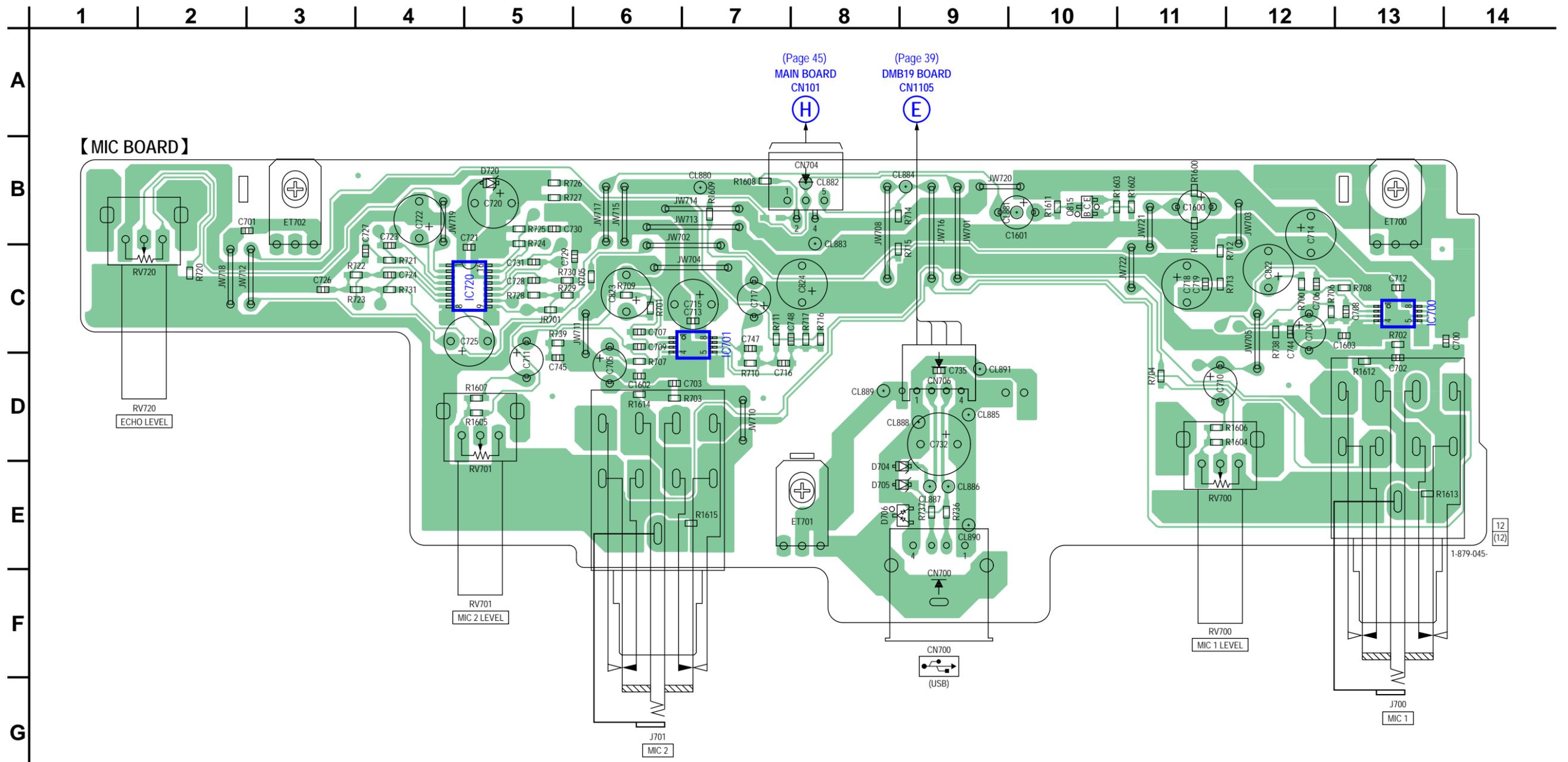
6-15. SCHEMATIC DIAGRAM – MAIN Section (1/3) – • See page 36 for Waveforms. • See page 70 for IC Block Diagrams. • See page 77 for IC Pin Function Descriptions of IC501.



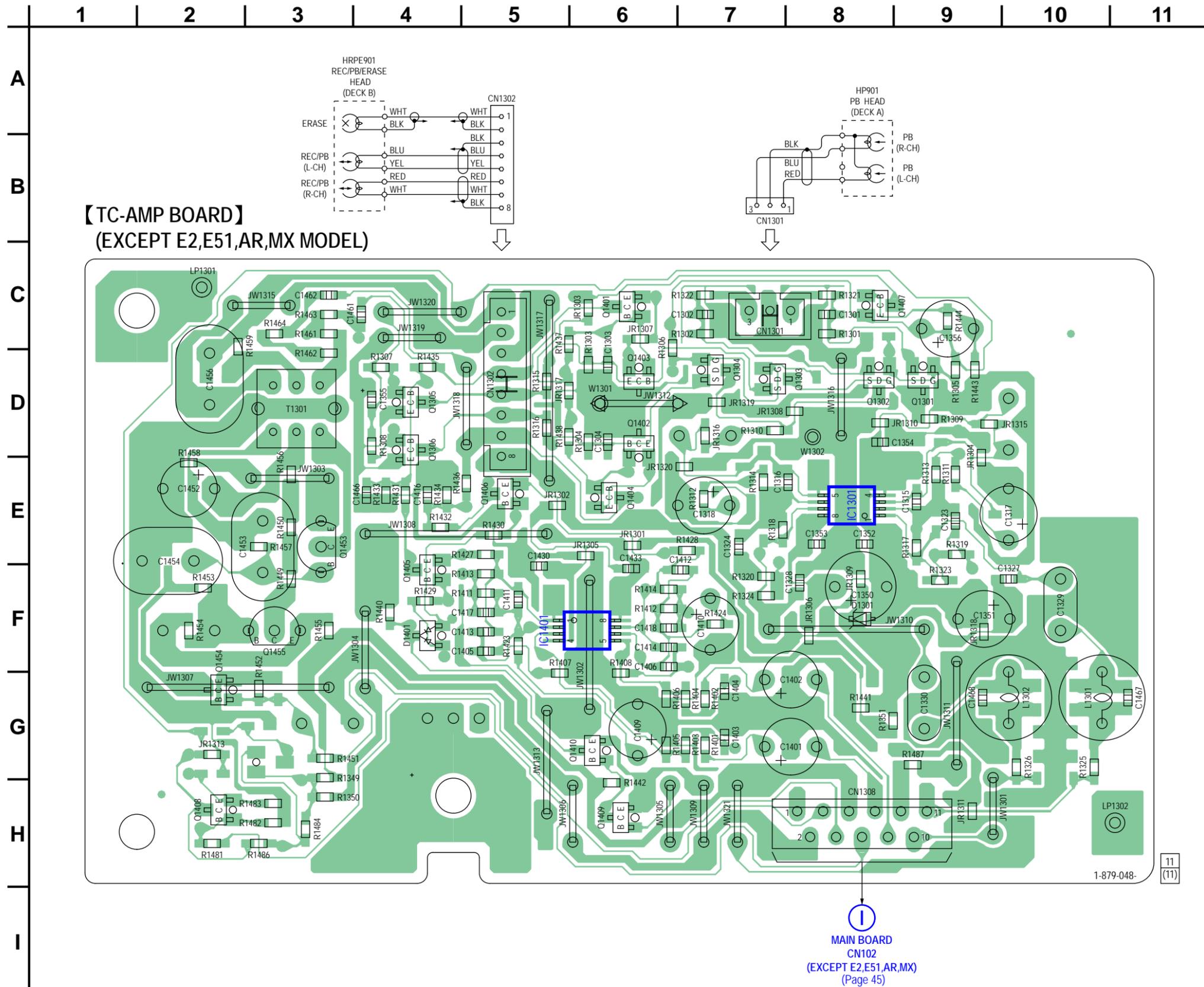
6-17. SCHEMATIC DIAGRAM – MAIN Section (3/3) – • See page 71 for IC Block Diagrams.



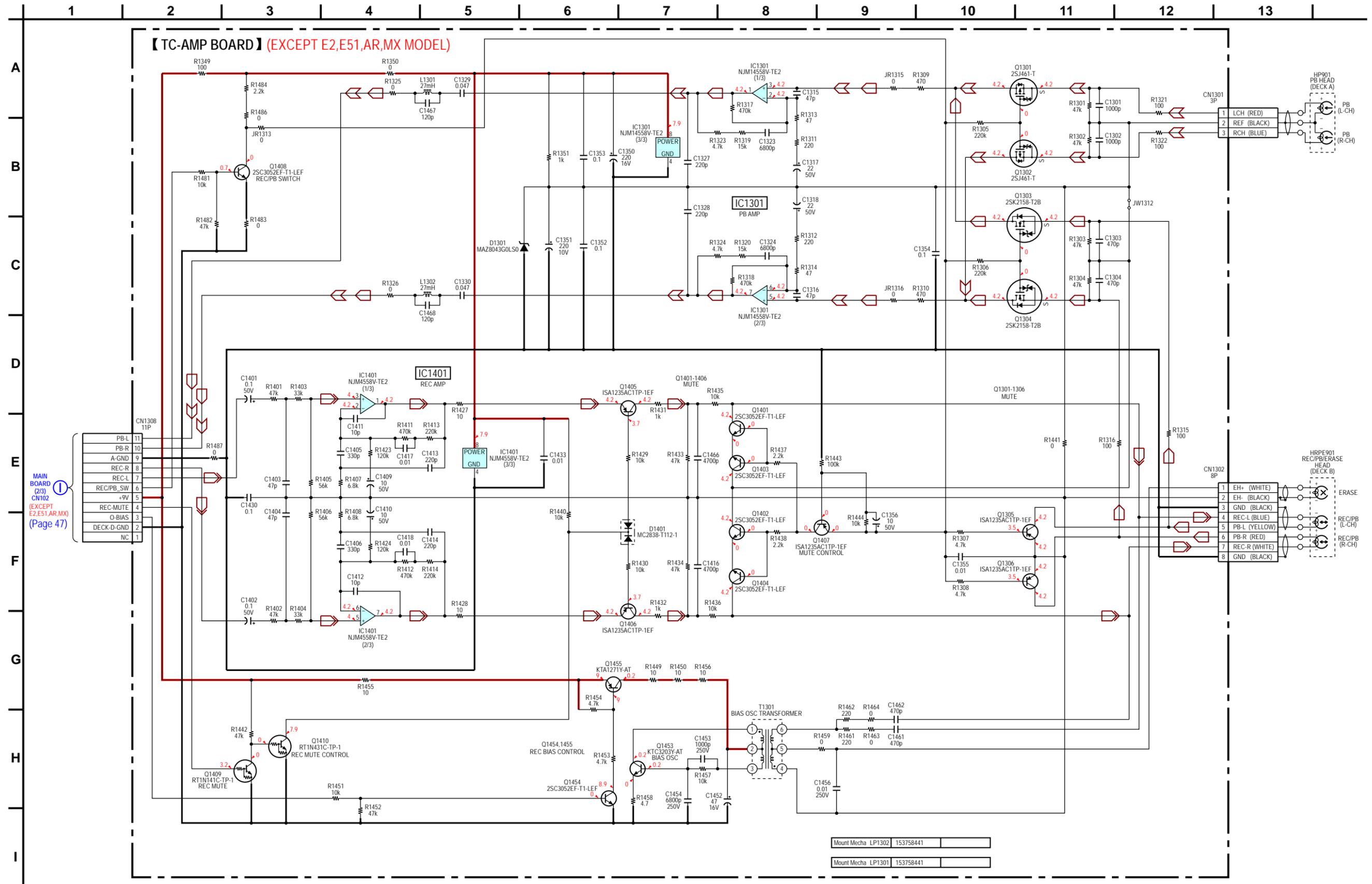
6-18. PRINTED WIRING BOARD – MIC Section – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.



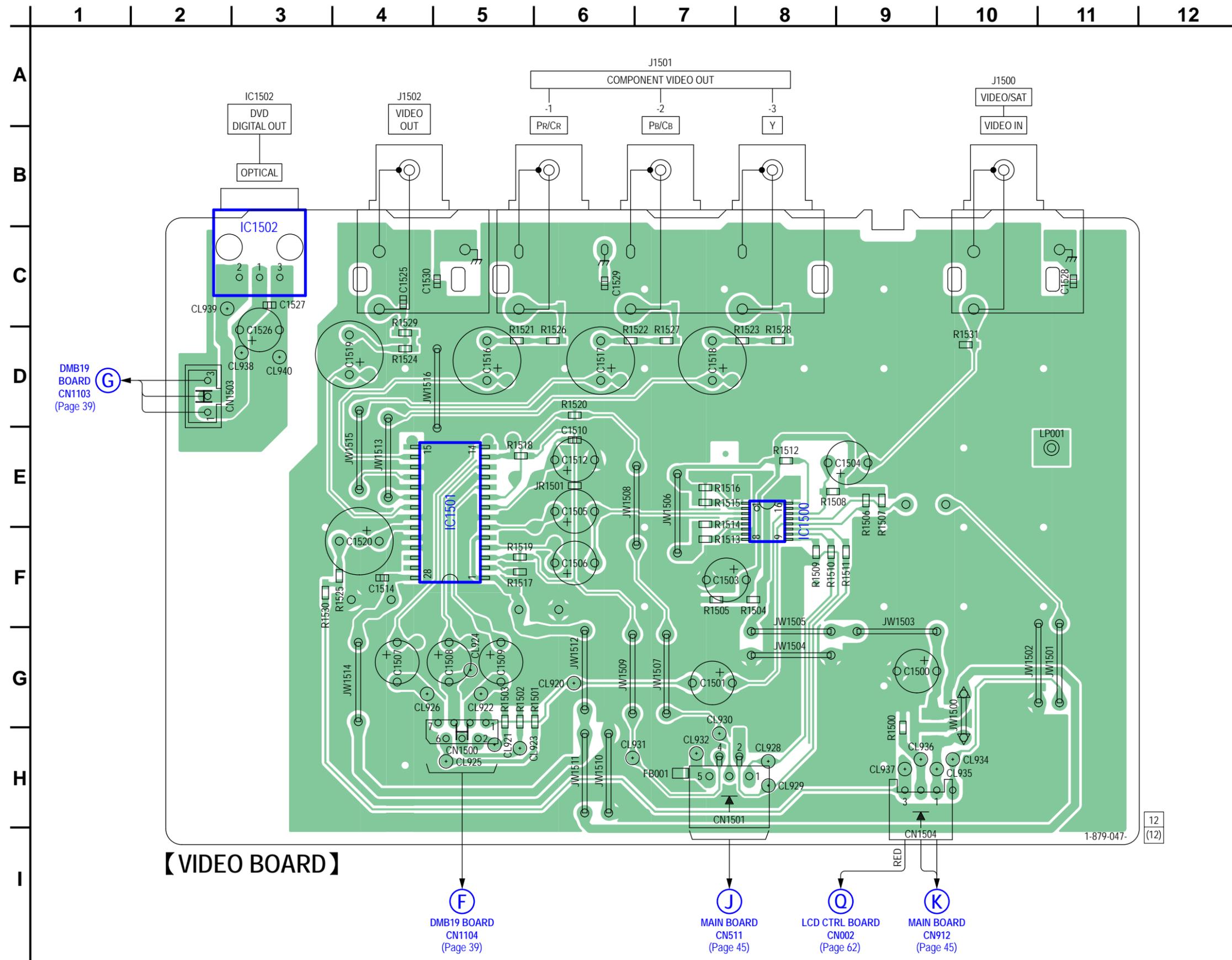
6-20. PRINTED WIRING BOARD – TC AMP Section (Except HCD-GZR99D: E2, E51, AR, MX Model) – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.



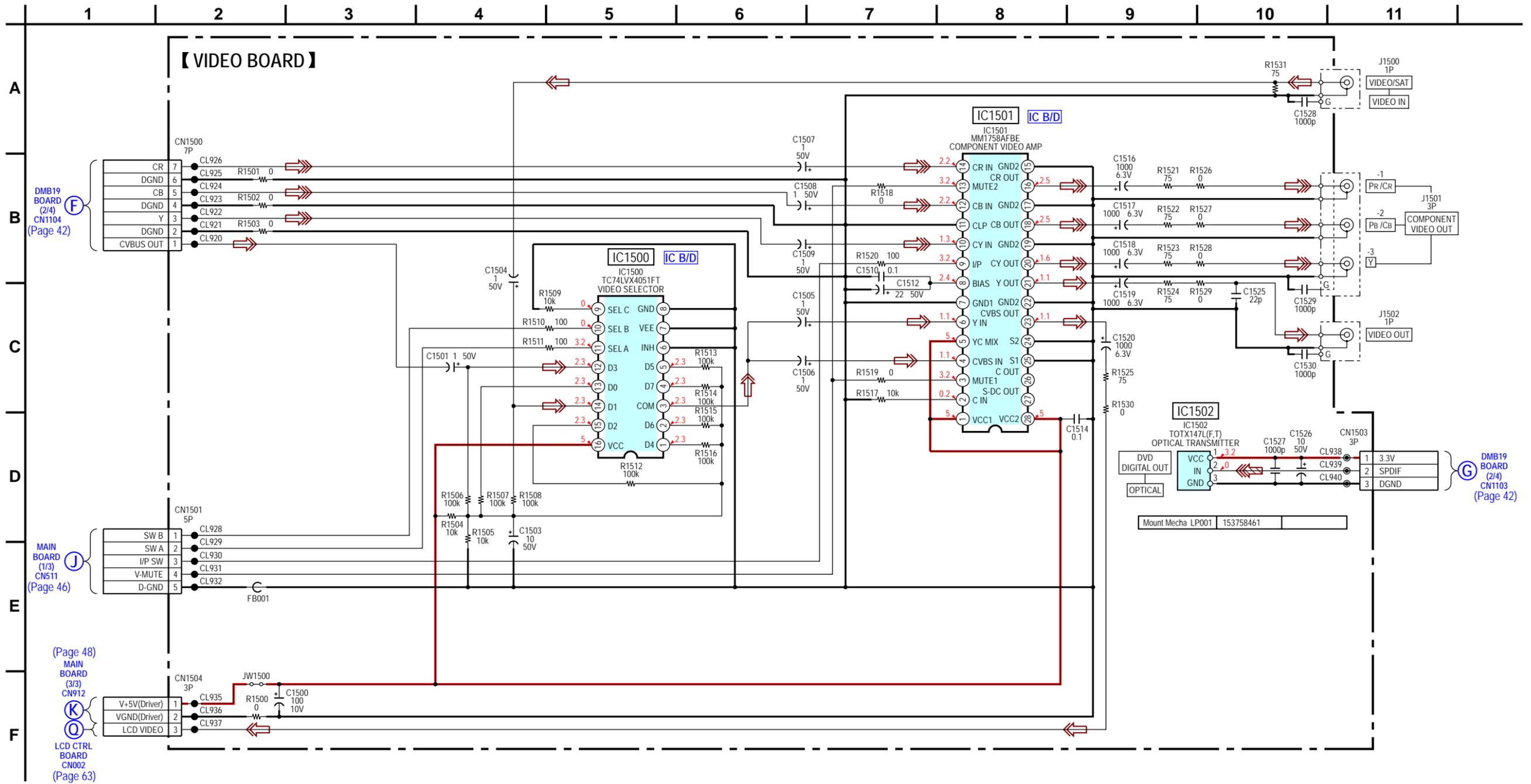
6-21. SCHEMATIC DIAGRAM – TC AMP Section (Except HCD-GZR99D: E2, E51, AR, MX Model) –

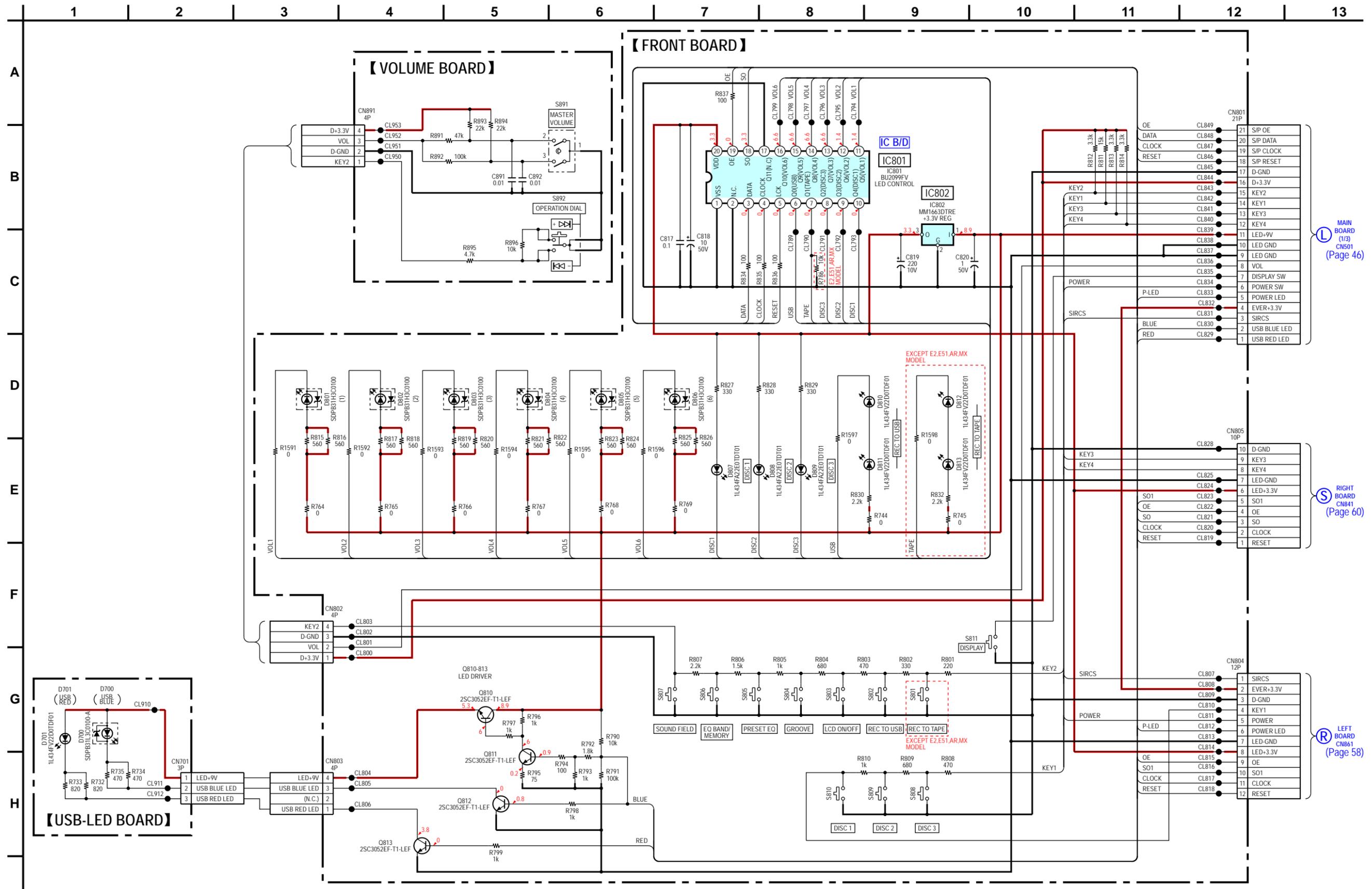


6-22. PRINTED WIRING BOARD – VIDEO Section – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.

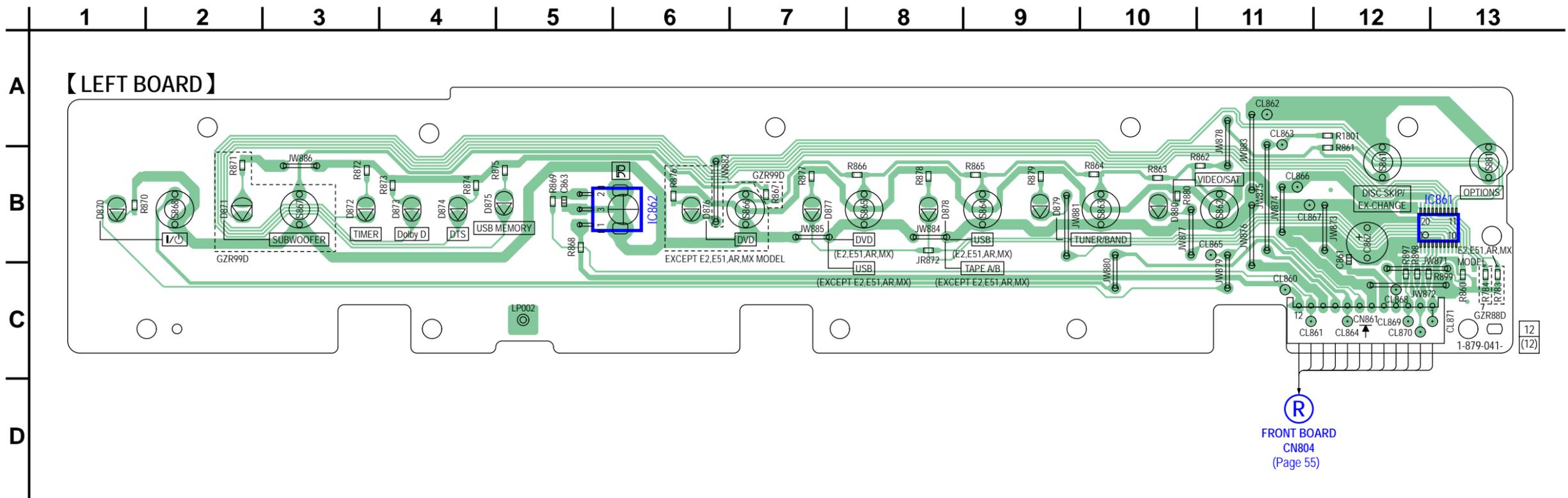


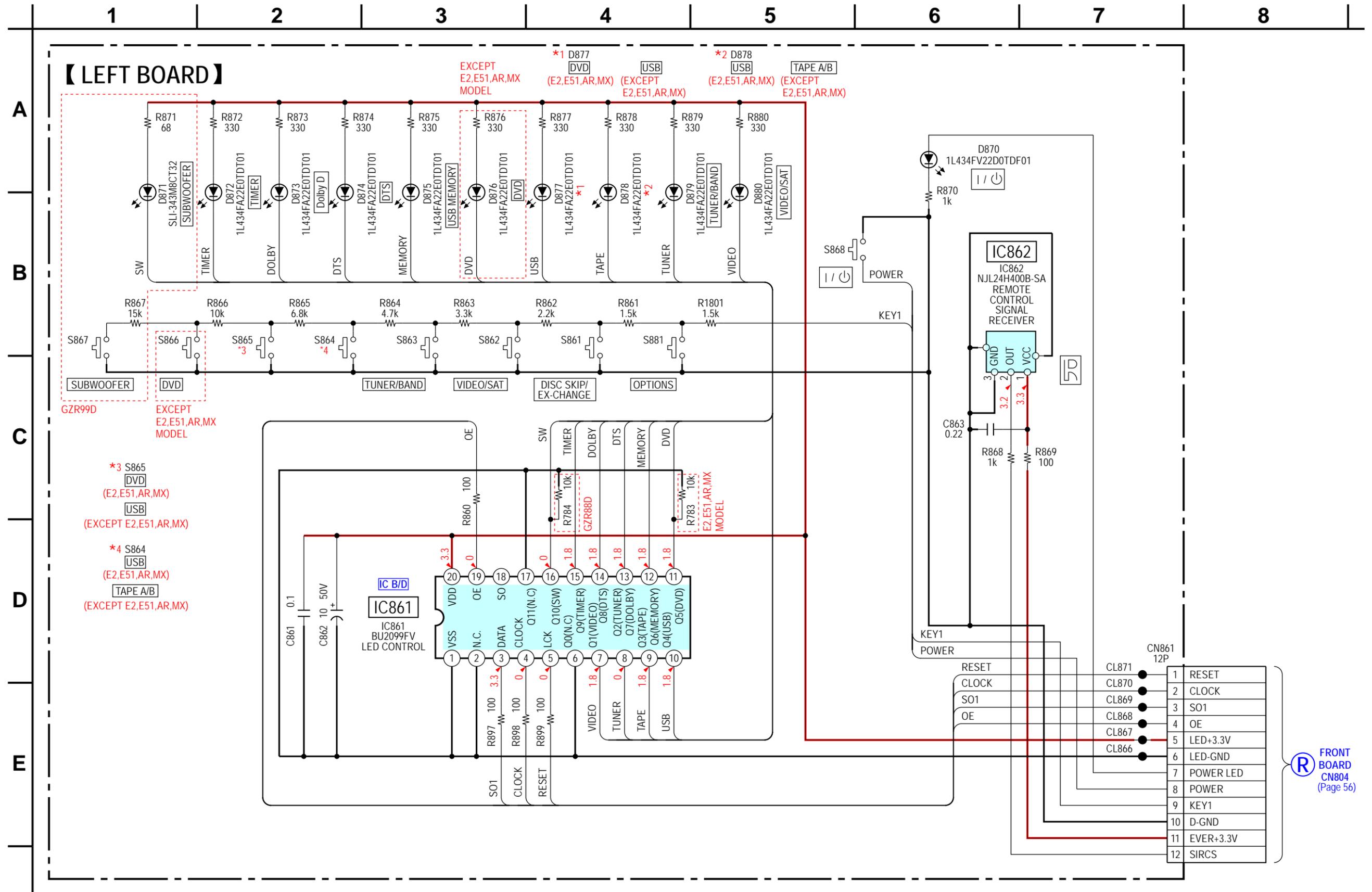
6-23. SCHEMATIC DIAGRAM – VIDEO Section – • See page 72 for IC Block Diagrams.



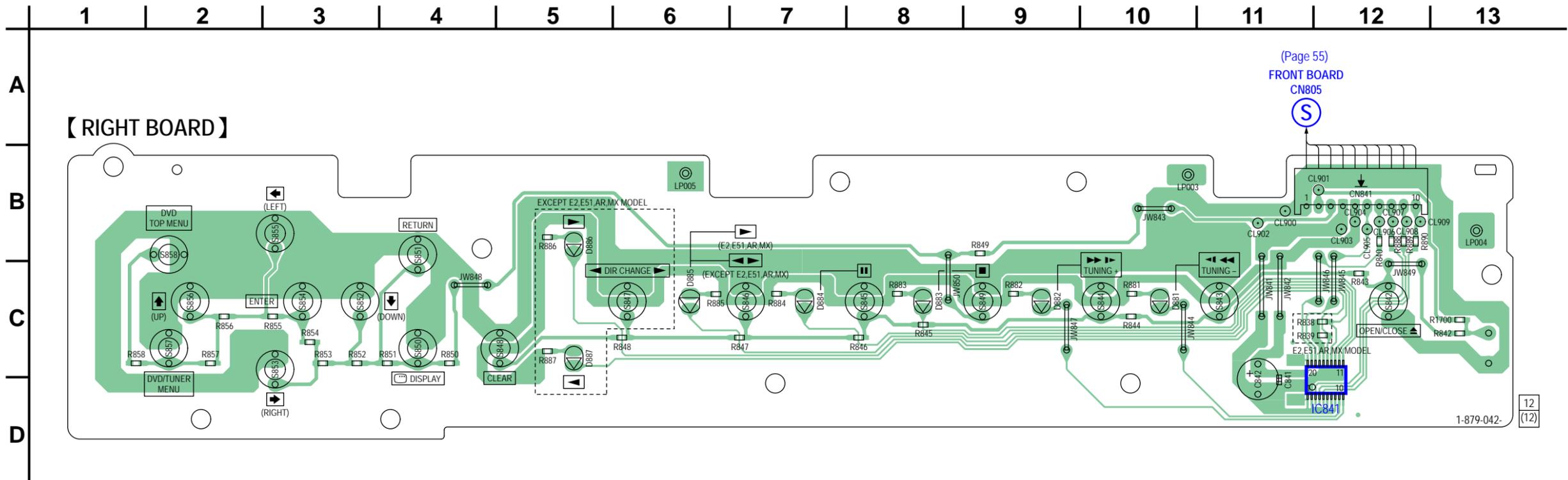


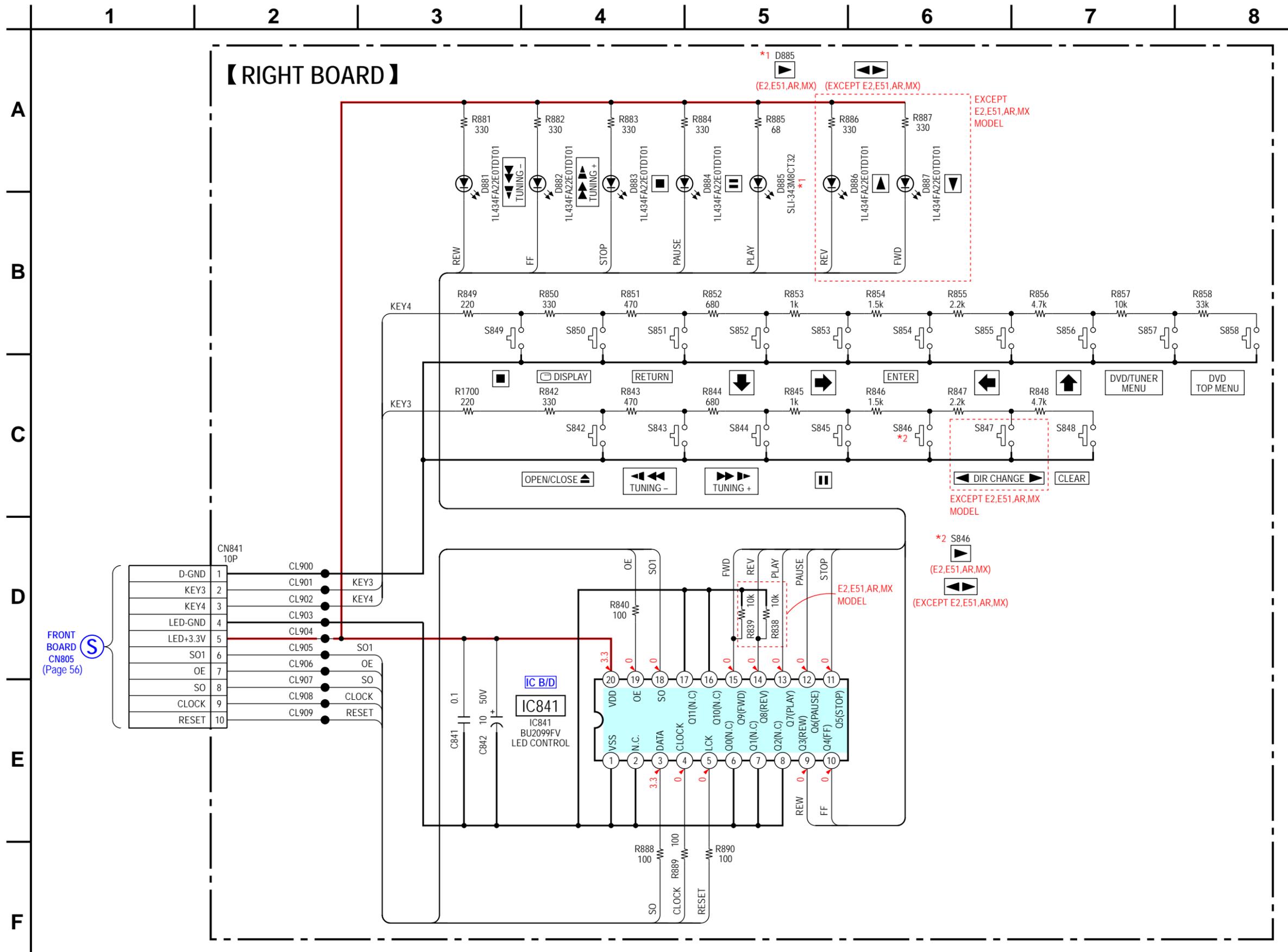
6-26. PRINTED WIRING BOARD – LEFT Section – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.





6-28. PRINTED WIRING BOARD – RIGHT Section – • See page 30 for Circuit Boards Location. •  : Uses unleaded solder.

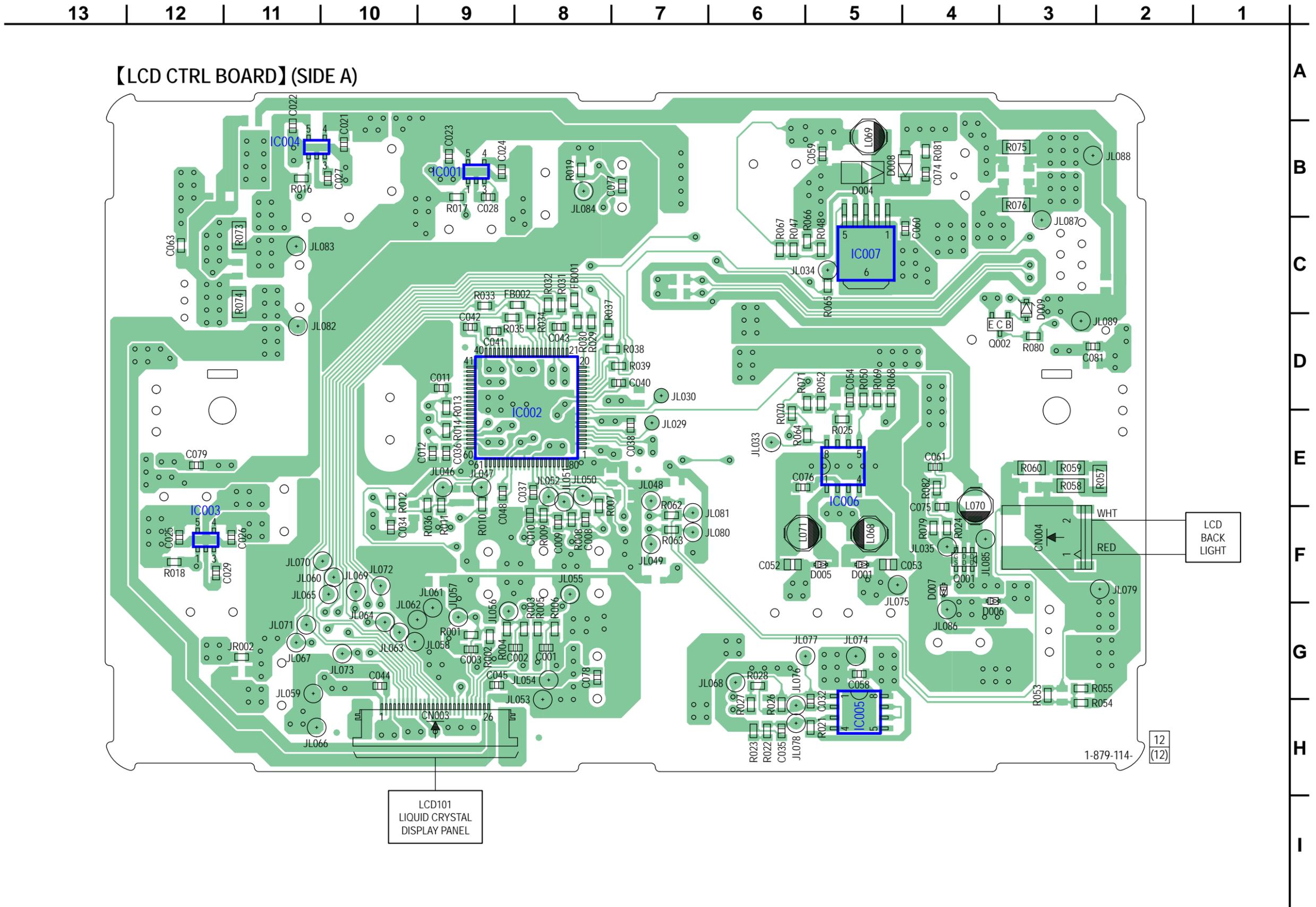


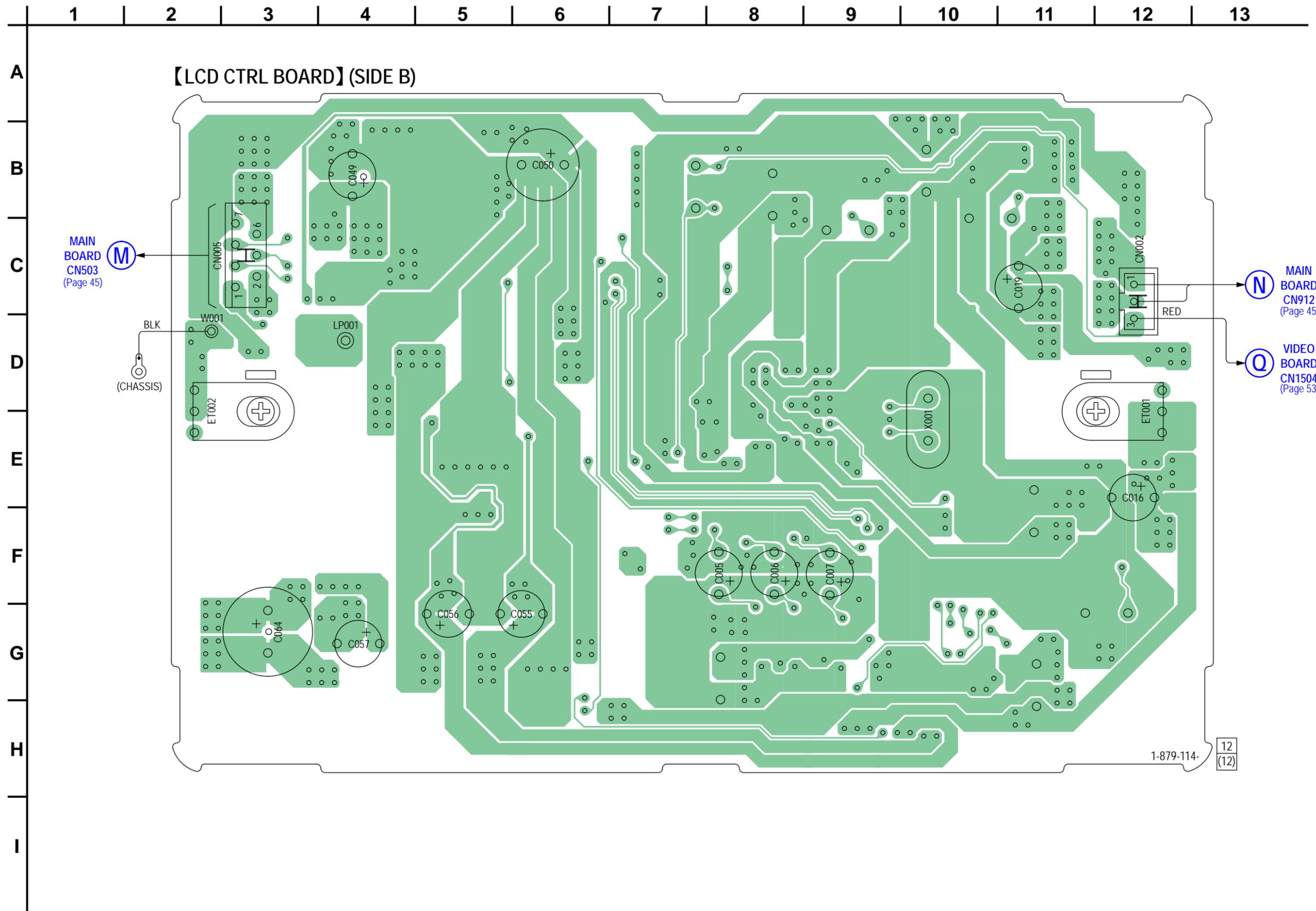


6-30. PRINTED WIRING BOARDS – LCD CONTROL Section (1/2) –

• See page 30 for Circuit Boards Location.

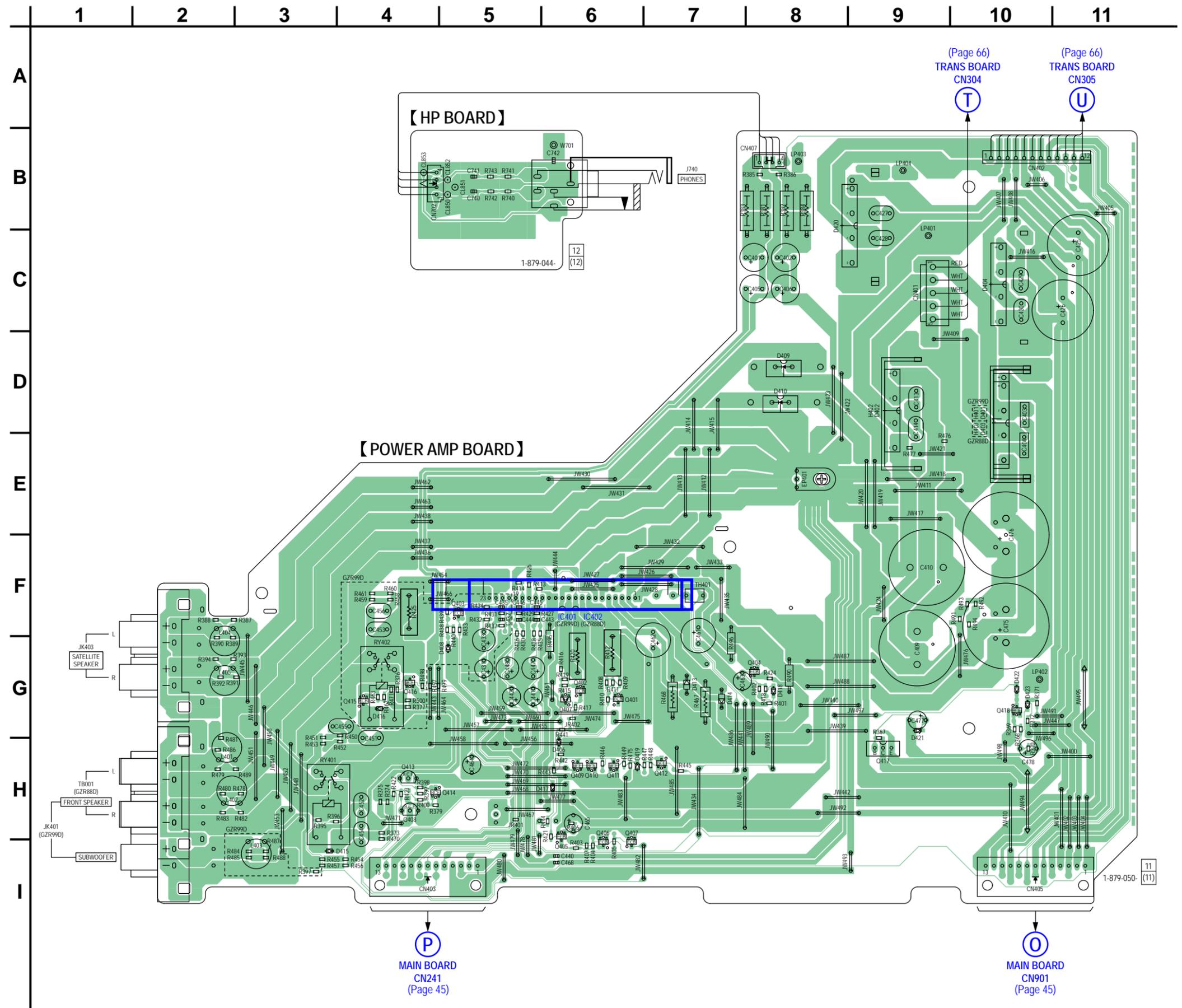
•  : Uses unleaded solder.

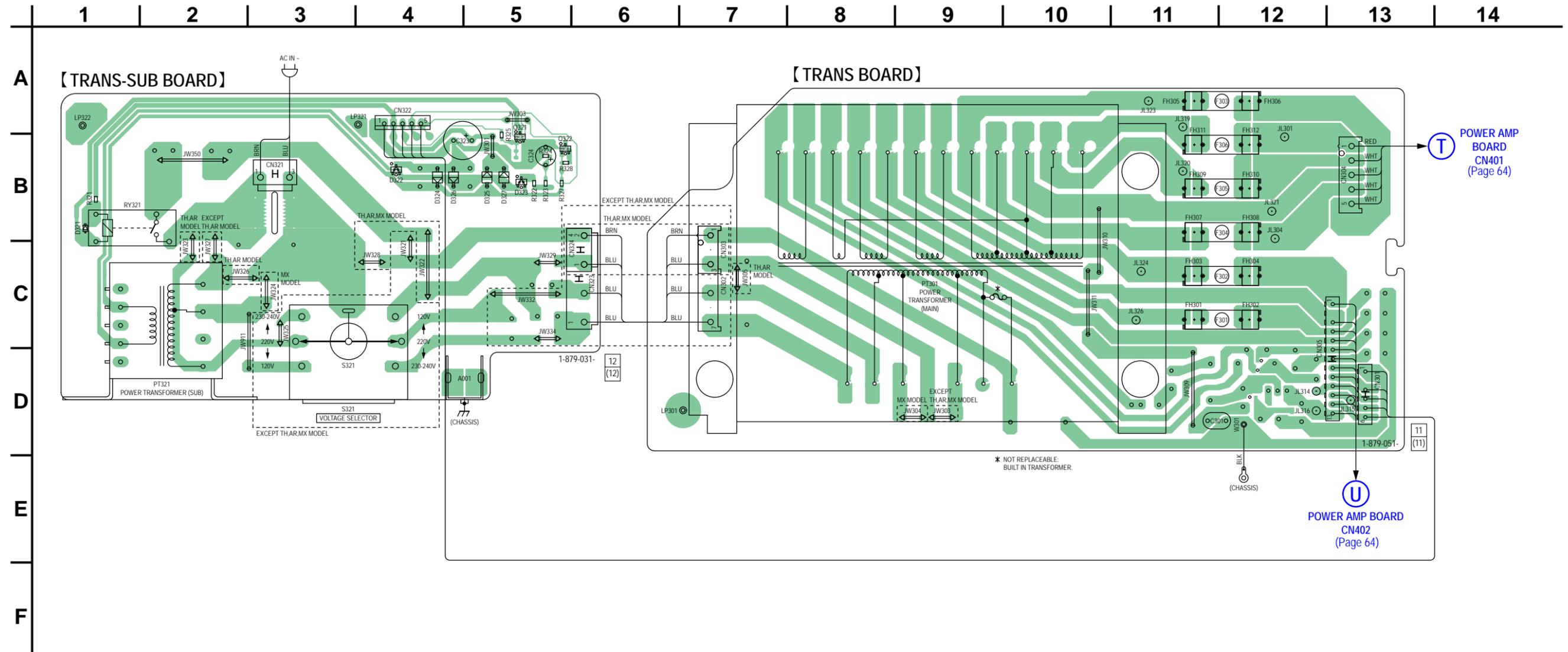




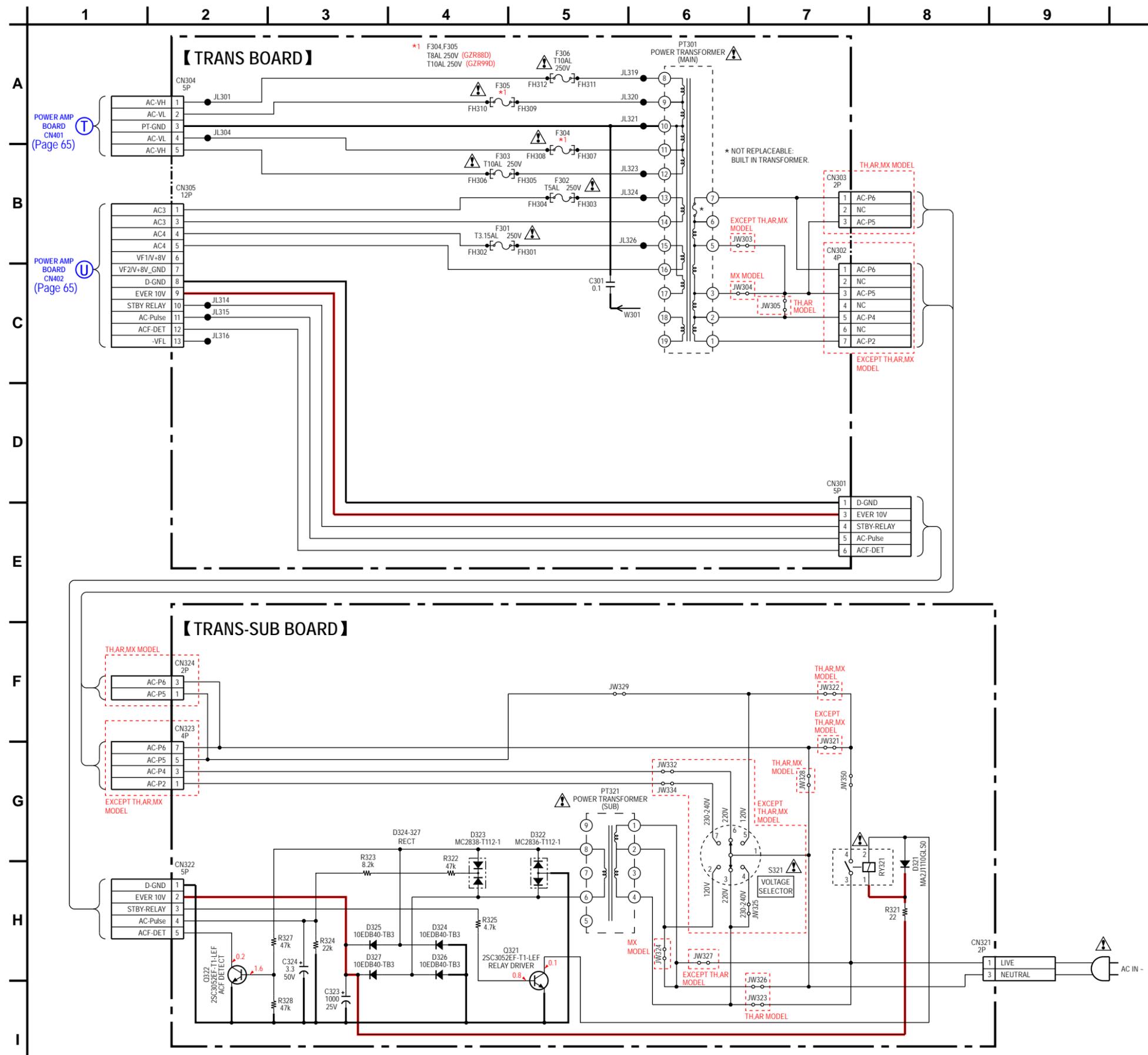
6-33. PRINTED WIRING BOARDS – POWER AMP/HP Section – • See page 30 for Circuit Boards Location.

•  : Uses unleaded solder.



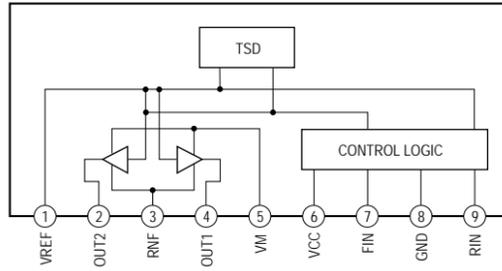


6-36. SCHEMATIC DIAGRAM – TRANS Section –

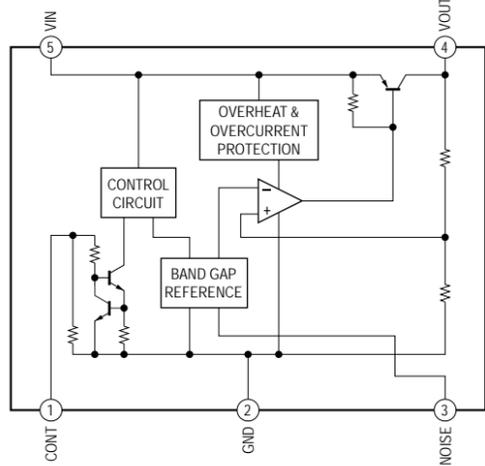


• IC Block Diagrams

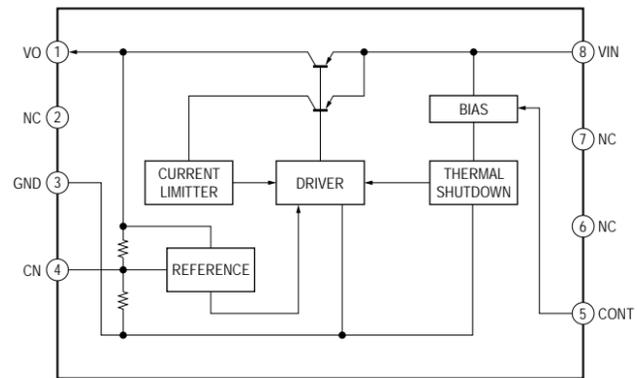
IC701 BA6956AN (DRIVER Board)
IC712 BA6956AN (DRIVER Board)



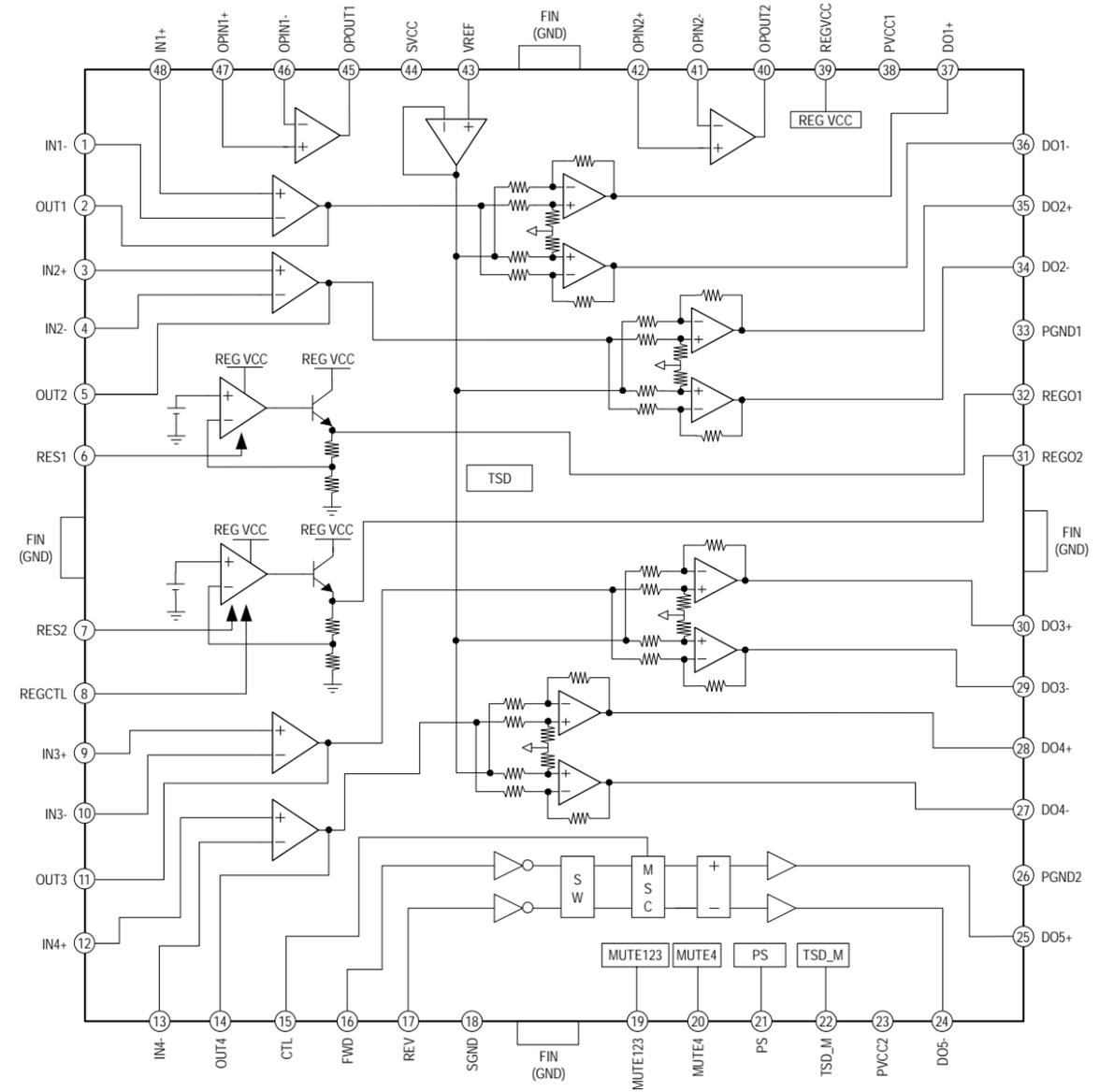
IC105 TK1113CSCL-G (DMB19 Board (1/4))
IC107 TK1113CSCL-G (DMB19 Board (1/4))
IC001 TK1118CSCL-G (LCD CTRL Board)
IC003 TK1118CSCL-G (LCD CTRL Board)
IC004 TK1113CSCL-G (LCD CTRL Board)



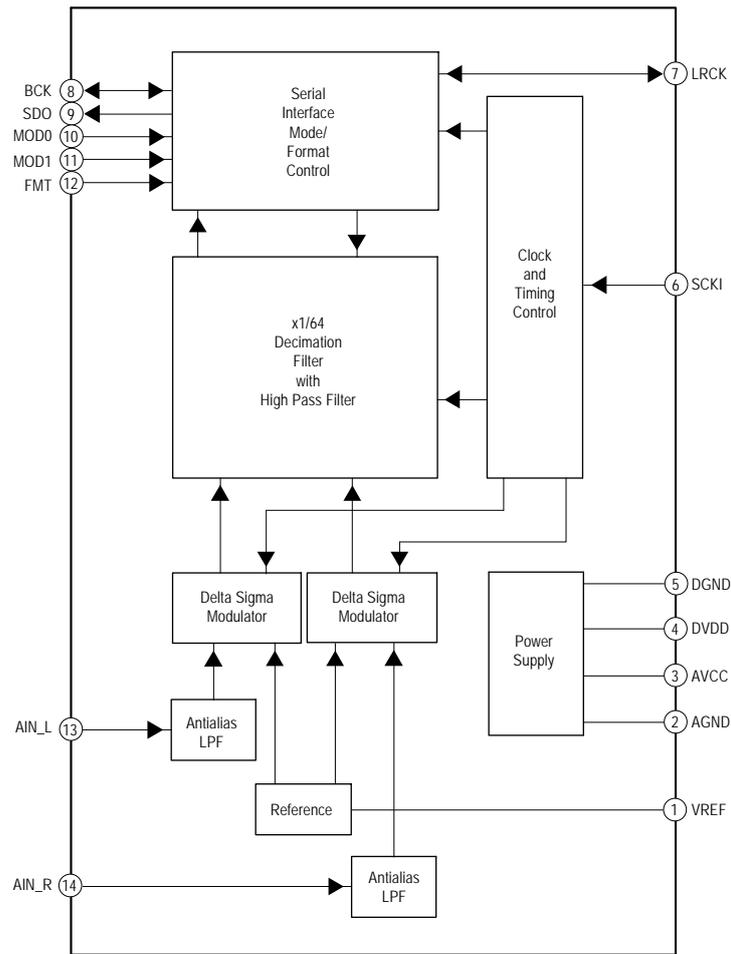
IC111 MM1661JHBE (DMB19 Board (1/4))



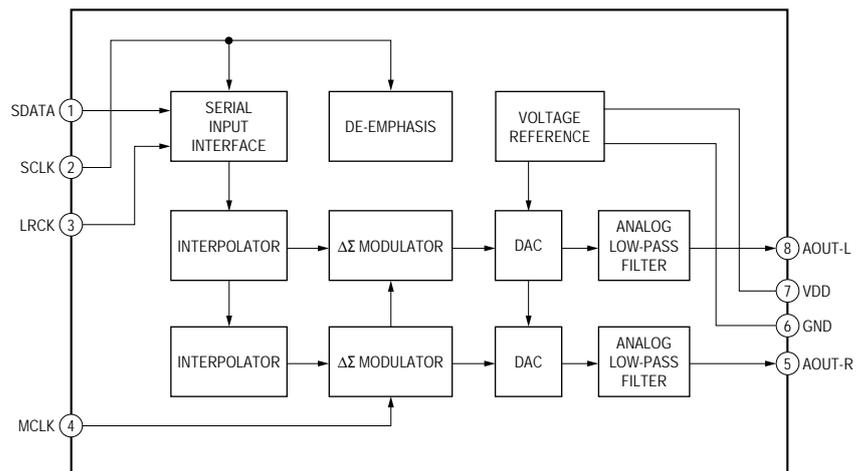
IC201 FAN8036L (DMB19 Board (3/4))



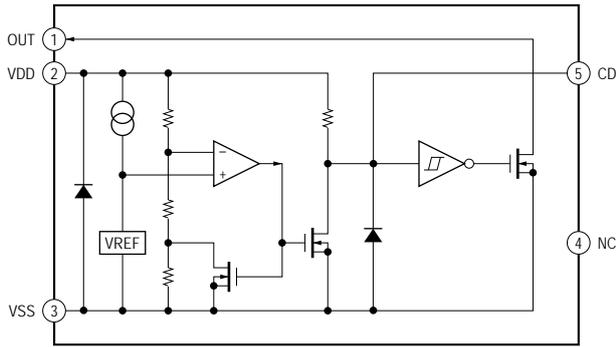
IC4601 PCM1808PWR (DMB19 Board (4/4))



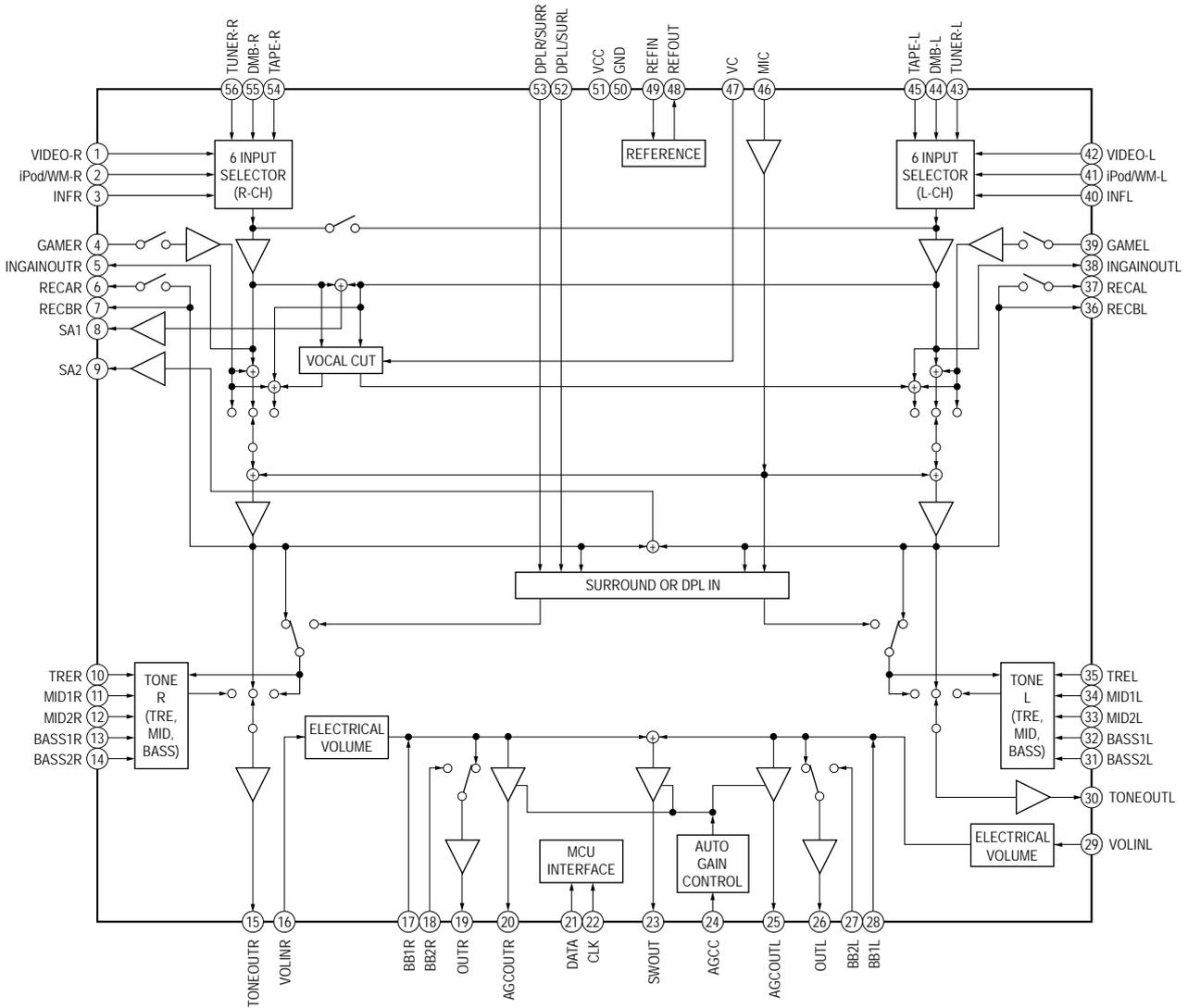
IC4602 CS4335-KSZR (DMB19 Board (4/4))



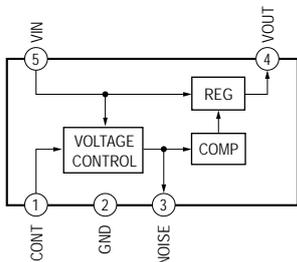
IC682 PST8429NR (MAIN Board (1/3))



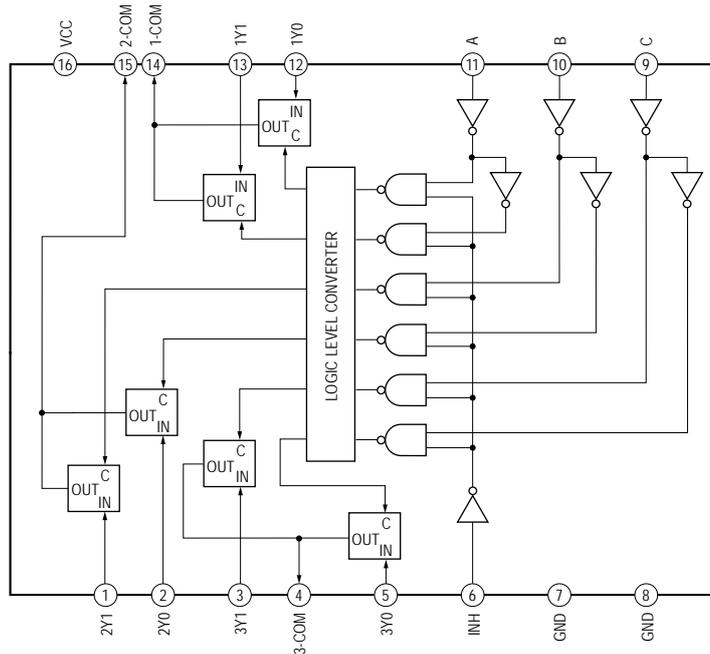
IC101 R2A15216FP (MAIN Board (2/3))



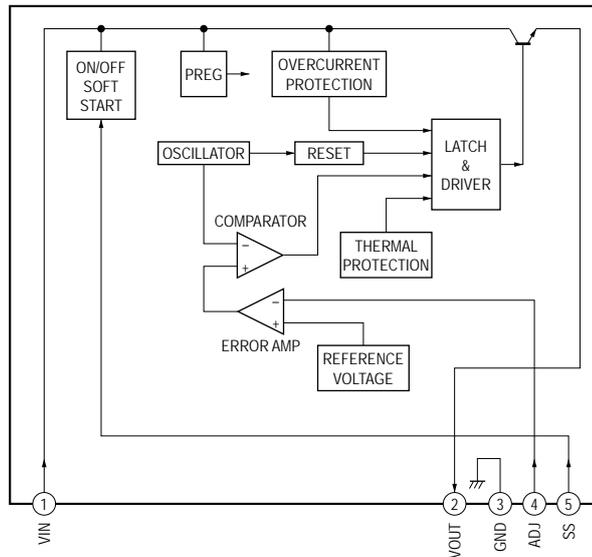
IC181 TK11150CSCL-G (MAIN Board (2/3))



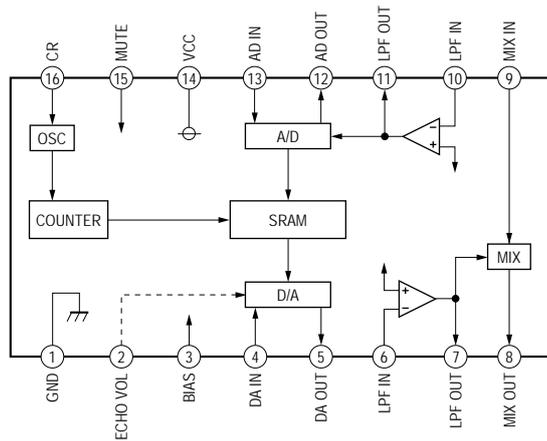
IC182 SN74LV4053APWR (MAIN Board (2/3))



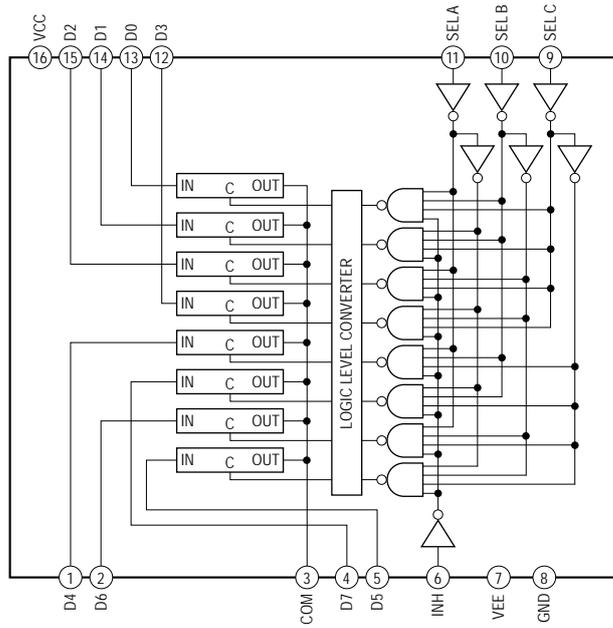
- IC921 SI-8001FFEK (MAIN Board (3/3))**
- IC931 SI-8008TFEK (MAIN Board (3/3))**
- IC951 SI-8001FFEK (MAIN Board (3/3))**



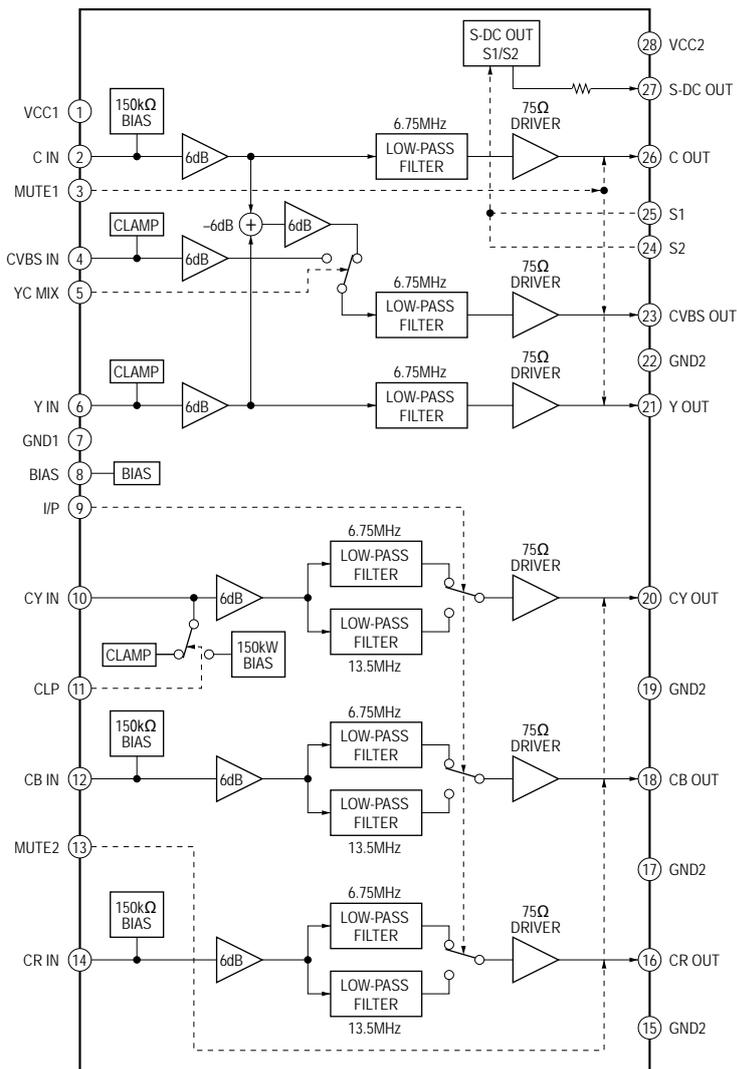
IC720 BU9253FS-E2 (MIC Board)



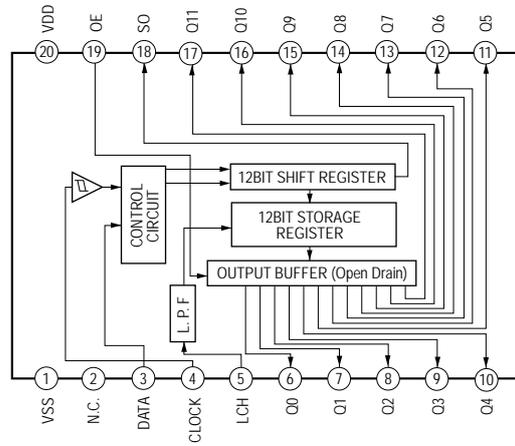
IC1500 TC74LVX4051FT (VIDEO Board)



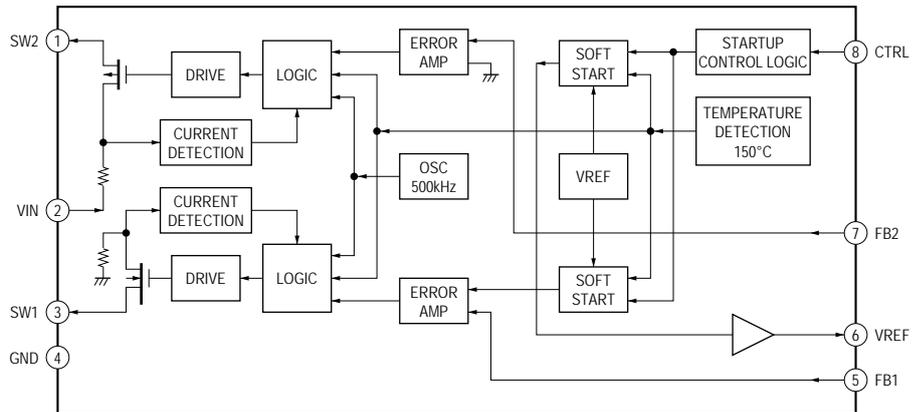
IC1501 MM1758AFBE (VIDEO Board)



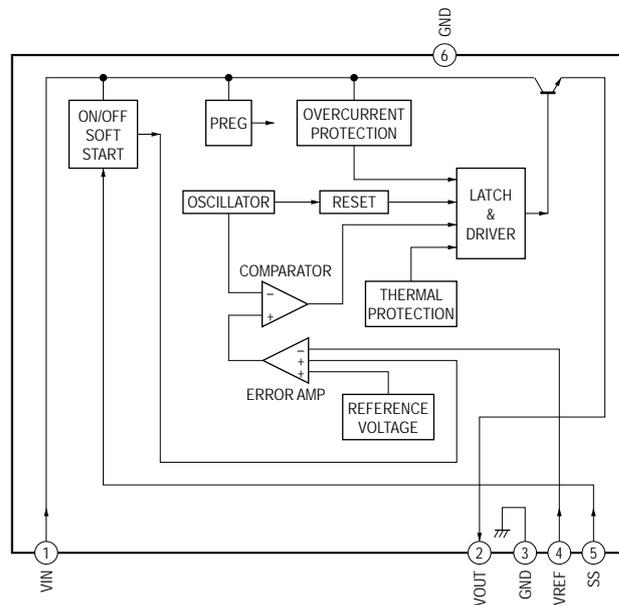
IC801 BU2099FV (FRONT Board)
IC861 BU2099FV (LEFT Board)
IC841 BU2099FV (RIGHT Board)



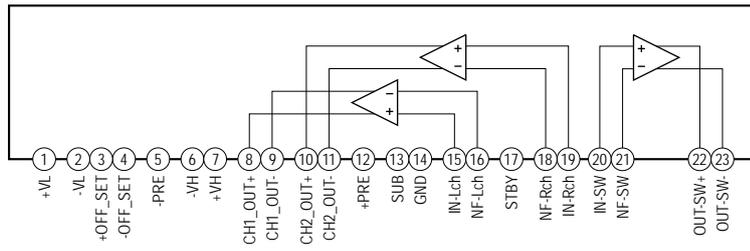
IC006 MM3203BFBE (LCD CTRL Board)



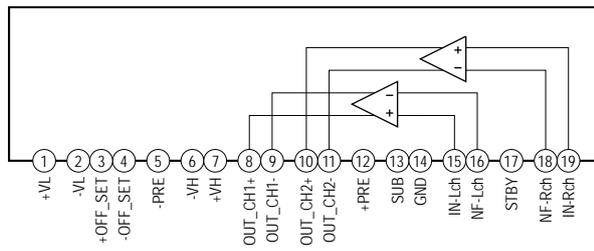
IC007 SI-8008TM-TLS (LCD CTRL Board)



IC401 STK416-130-E (POWER AMP Board) (HCD-GZR99D)



IC402 STK415-130-E (POWER AMP Board) (HCD-GZR88D)



• IC Pin Function Descriptions

DMB19 BOARD (2/4) IC101 CXD9971R (CD/DVD RF AMP, FOCUS/TRACKING ERROR AMP, DVD SYSTEM PROCESSOR, DIGITAL SERVO PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	RF_A	I	RF main beam (C) signal input from the optical pick-up block
2	RF_B	I	RF main beam (B) signal input from the optical pick-up block
3	RF_C	I	RF main beam (A) signal input from the optical pick-up block
4	RF_D	I	RF main beam (D) signal input from the optical pick-up block
5	RF_E	I	RF sub beam (F) signal input from the optical pick-up block
6	RF_F	I	RF sub beam (E) signal input from the optical pick-up block
7	AVDD18_2	—	Power supply pin (+1.8 V)
8	AVDD33_1	—	Power supply pin (+3.3 V)
9	XTALI	I	System clock signal input (27 MHz)
10	XTALO	O	System clock signal output (27 MHz)
11	AGND33	—	Ground
12	V20	O	Reference voltage (+2 V) output for the optical pick-up block
13	V14/VREFO	O	Reference voltage (+1.4 V) output
14	REXT	I	Current reference signal input
15, 16	MDI1, MDI2	I	Laser power monitor signal input from the optical pick-up block
17, 18	LDO1, LDO2	O	Laser diode drive signal output for the optical pick-up block
19	AVDD33_2	—	Power supply pin (+3.3 V)
20	DMO	O	Spindle motor control signal output for the motor driver
21	FMO	O	Sled motor control signal output for the motor driver
22	MUTE4	O	Mute signal output for the coil/motor driver (for spindle motor)
23	MSW	O	CD/DVD select signal output (L: CD, H: DVD)
24	TRO	O	Tracking coil control signal output for the coil driver
25	FOO	O	Focus coil control signal output for the coil driver
26	EEWP	O	Write enable signal output for the EEPROM
27, 28	USB_DP, USB_DM	I/O	Two-way audio serial data input/output with the USB controller
29	VDD33_USB	—	Power supply pin (+3.3 V)
30	VSS33_USB	—	Ground
31	PAD_VRT	I/O	USB generating reference current signal input/output
32	VDD18_USB	—	Power supply pin (+1.8 V)
33	SCL	O	Serial clock signal output for the EEPROM
34	SDA	I/O	Two-way serial data input/output with the EEPROM
35	IFSDI	I	Serial data input from the system control
36	SF_CS#	O	Chip select signal output for the SF-ROM
37	SF_DO	O	Serial data output for the SF-ROM
38	SF_DI	I	Serial data input from the SF-ROM
39	SF_CK	O	Serial clock signal output for the SF-ROM
40	IFSCK	O	Serial data transfer clock signal output for the system control
41	IFSDO	O	Serial data output for the system control
42	ICE	I	ICE mode enable setting pin (Not used in this set)
43	PRST#	I	Reset signal input from the system control (L: reset)
44	IR	I	IR control signal input (Not used in this set)
45 to 49	RD0 to RD4	I/O	Two-way data bus input/output with the 64M SDRAM
50	DVDD33	—	Power supply pin (+3.3 V)
51 to 53	RD5 to RD7	I/O	Two-way data bus input/output with the 64M SDRAM
54	DVDD18	—	Power supply pin (+1.8 V)
55	DQM0	O	Data mask signal output for the 64M SDRAM
56 to 59	RD15 to RD12	I/O	Two-way data bus input/output with the 64M SDRAM
60	DVSS33	—	Ground
61 to 64	RD11 to RD8	I/O	Two-way data bus input/output with the 64M SDRAM
65	DQM1	O	Data mask signal output for the 64M SDRAM
66	RCLK	O	Clock signal output for the 64M SDRAM
67	RA11	O	Address signal output for the 64M SDRAM
68	DVDD33	—	Power supply pin (+3.3 V)

HCD-GZR88D/GZR99D

Pin No.	Pin Name	I/O	Description
69 to 74	RA9 to RA4	O	Address signal output for the 64M SDRAM
75	RWE#	O	Write enable signal output for the 64M SDRAM
76	CAS#	O	Column address strobe signal output for the 64M SDRAM
77	RAS#	O	Row address strobe signal output for the 64M SDRAM
78	BA0	O	Bank address signal output for the 64M SDRAM
79	DVSS18	—	Ground
80	BA1	O	Bank address signal output for the 64M SDRAM
81 to 83	RA10, RA0, RA1	O	Address signal output for the 64M SDRAM
84	DVDD33	—	Power supply pin (+3.3 V)
85, 86	RA2, RA3	O	Address signal output for the 64M SDRAM
87	IFBSY	I	Communication initialization request signal input from the system control
88	IFCS#	O	Communication initialization request acknowledge signal output for the system control
89	RX	—	Not used in this set
90	DVDD18	—	Power supply pin (+1.8 V)
91	TX	—	Not used in this set
92	XMAMUTE	—	Not used in this set
93	SPDIF	O	SPDIF signal output
94	TSDM	I	Thermal shut down signal input from the coil/motor driver
95	DACVDDC	—	Power supply pin (+3.3 V)
96	VREF	I	Band gap reference voltage input
97	FS	I	Full scale adjustment signal input
98	DACVSSC	—	Ground
99	CVBS	O	Composite video signal output
100	DACVddb	—	Power supply pin (+3.3 V)
101	DACVDDA	—	Power supply pin (+3.3 V)
102	SY/Y/G	O	Component video (Y) signal output
103	SC/CB/B	O	Component video (Pb/Cb) signal output
104	CR/R	O	Component video (Pr/Cr) signal output
105	AADVSS	—	Ground
106	ADIN	I	Audio data input from the A/D converter (for USB)
107	MUTE123	O	Not used in this set
108	LIMITSW	I	Not used in this set
109	AADVDD	—	Power supply pin (+3.3 V)
110	APLLVDD	—	Power supply pin (+3.3 V)
111	APLLCAP	I	External capacitor connecting pin
112	ADACVSS2	—	Ground
113	ADACVSS1	—	Ground
114	ACLK	O	Master clock signal output for the A/D converter and D/A converter
115	ABCK	O	Bit clock signal output for the A/D converter and D/A converter
116	MUTE123	O	Mute signal output for the coil/motor driver (for focus/tracking coil and sled motor)
117	AVCM	I	Audio D/A converter reference voltage input
118	LIMITSW	I	Limit detection switch signal input
119	ALRCK	O	L/R sampling clock signal output for the A/D converter and D/A converter
120	ASDATA0	O	Audio data output for the D/A converter
121	ADACVDD1	—	Power supply pin (+3.3 V)
122	ADACVDD2	—	Power supply pin (+3.3 V)
123	AVDD18_1	—	Power supply pin (+1.8 V)
124	AGND18	—	Ground
125	RFIP	I	AC coupled RF signal input from the optical pick-up block
126	OPOUT	O	AC coupled RF signal output for the optical pick-up block
127	IOPMON	I	Power monitor pin
128	SPFG	I	Spindle motor hall sensor input from the motor driver

MAIN BOARD (1/3) IC501 μ PD78F1105GF(S)-GAS-AX (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Description
1	IIC SCL	O	IIC clock (GC micon) signal output
2	IIC SDA	O	IIC data (GC micon) signal output
3	$\overline{\text{O-FRONT-MUTE}}$	O	Front speaker output mute (L: mute ON)
4	$\overline{\text{O-SW-MUTE}}$	O	Subwoofer output mute (L: mute ON)
5	O-TC-REC-REV	I	Tape deck signal input
6	O-TC-B-TRIG	O	Tape deck B trigger plunger control signal output
7	O-EEP-SCL	O	EEPROM communication (Clock) signal output (Not used in this set)
8	O-EEP-SDA	I/O	EEPROM communication (Data) signal input/output (Not used in this set)
9	O-iPod/WM-SW	O	iPod adaptor power supply control signal output (H: power supply) (Not used in this set)
10	O-TC-A-TRIG	O	Tape deck A trigger plunger control signal output
11	O-GC/LCD-RESET	O	LCD reset signal output
12	$\overline{\text{I-TU-RDS-INT}}$	I	Tuner RDS initial setting signal input (Not used in this set)
13	$\overline{\text{I-AC-CUT}}$	I	AC cut decision signal input (L: AC cut)
14	O-TC-CAPM-CNT	O	Capstan motor control signal output
15	O-AUDIO_IC-DATA	O	R2A15216FP (IC101) communication (Data) signal output
16	O-AUDIO_IC-CLK	O	R2A15216FP (IC101) communication (Clock) signal output
17	O-TC-REC/PB_SW	O	Tape deck control signal output
18	O-TC-REC-MUTE	O	Tape deck B recording mute signal output
19	O-TC-REC-BIAS	O	Recording bias control signal output
20	EVSS1	—	Ground
21	O-STK-MUTE	O	Front speaker output mute signal output (L: mute)
22	I-iPod/WM- OVER-CURRENT	I	iPod over-current detect signal input (Not used in this set)
23	I-USB-OVER- CURRENT	I	USB over-current detect signal input
24	O-DVD-POWER	O	DMB19 board power supply control signal output
25	O-FRONT-SP-RELAY	O	Front speaker relay control signal output (L: relay ON)
26	O-TU-DI	O	Tuner IC communication (Data: MCU \rightarrow TUNER) signal output
27	O-TU-CLK	O	Tuner IC communication (Clock) signal output
28	I-TU-DO	I	Tuner IC communication (Data: MCU \leftarrow TUNER) signal input
29	O-TU-CE	O	Tuner IC communication (Chip enable) signal output
30	EVDD1	—	Power supply pin (+3.3 V)
31	I-TU-TUNE	I	Tuner tuned data input
32	I-CDM-OPEN	I	Disc tray open signal input (L: open)
33	I-CDM-TBL-ADR-SW	I	Disc tray position signal input
34	O-CDM-TM-F	O	Disc table motor control signal output
35	O-CDM-TM-R	O	Disc table motor control signal output
36	O-CDM-LM-F	O	Disc tray motor control signal output
37	O-CDM-LM-R	O	Disc tray motor control signal output
38	O-SW-SP-RELAY	O	Subwoofer relay control signal output (L: relay ON) (Not used in this set)
39	O-MTK-A/D-IN-SEL	O	DMB19 board input audio signal control signal output (L: mic, H: audio)
40	I-ACF-DET	I	AC power supply frequency detect signal input
41	O-MTK-MTRST	O	MTK IC reset signal output (L: reset)
42	I-DVD-XIFS	I	DMB19 board communication signal input
43	O-MTK-IFBSY	O	DMB19 board communication (Interface busy) signal output
44	O-MTK-DATA	O	DMB19 board communication (Data: MCU \rightarrow DMB19 board) signal output
45	I-MTK-DATA	I	DMB19 board communication (Data: MCU \leftarrow DMB19 board) signal input
46	I-MTK-CLK	I	DMB19 board communication (Clock) signal input
47	AVREF1	—	Analog reference voltage (+3.3 V)
48	O-FAN	O	Fan motor control signal output (Not used in this set)
49	O-STBY-RELAY	O	Main power relay signal output (H: relay ON)
50	AVREF0	—	Analog reference voltage (+3.3 V)
51	AVSS	—	Analog ground
52	I-POWER- MONITOR(ACP)	I	Main power monitor signal input

HCD-GZR88D/GZR99D

Pin No.	Pin Name	I/O	Description
53	I-MODEL	I	Model identification signal input
54	I-DESTINATION	I	Destination identification signal input
55	DVD-POWER-MONITOR(3.3V)	I	MTK board power monitor signal input
56	I-CDM-ENC(E1,E2,E3)	I	Disc tray signal input
57	I-MIC/HP-DET	I	Mic in/headphone signal input
58	I-VACS	I	Tape deck VACS signal input
59	I-ILLUMINATION	I	Audio level signal input for illumination
60	I-TC-STAT(A-HALF/B-HALF/REC-FWD)	I	Tape deck signal input
61	I-VOL	I	Volume signal input
62	I-KEY4	I	Key 4 signal input
63	I-KEY3	I	Key 3 signal input
64	I-KEY2	I	Key 2 signal input
65	I-KEY1	I	Key 1 signal input
66	I-iPod-OPERATION-MODE	I	iPod micon communication (Operation mode) signal input (Not used in this set)
67	O-iPod-NTSC/PAL	O	iPod micon communication (Color system) signal output (Not used in this set)
68	O-LED-STBY	O	STANDBY LED control signal output (H: light ON)
69	O-S/P-RESET	O	LED control IC reset signal output
70	O-S/P-CLK	O	LED control IC communication (Clock) signal output
71	O-S/P-OE	O	LED control IC communication (Output enable) signal output
72	O-S/P-DATA	O	LED control IC communication (Data: MCU → Control IC) signal output
73	O-USB-POWER	O	USB power supply control signal output
74	TC-A-SHUT	I	Deck A shut off signal input
75	TC-B-SHUT	I	Deck B shut off signal input
76	O-iPod-DATA(TxD)	O	iPod micon communication (Data: MCU → iPod micon) signal output (Not used in this set)
77	I-iPod-DATA(RxD)	I	iPod micon communication (Data: MCU ← iPod micon) signal input (Not used in this set)
78	O-iPod-RESET	O	iPod micon reset signal output (Not used in this set)
79	USB-LED-BLUE	O	USB illuminator LED (Blue) control signal output
80	USB-LED-RED	O	USB illuminator LED (Red) control signal output
81	I-SIRCS	I	Remote control signal receiver sircs signal input
82	I-DISPLAY-KEY	I	Display key interrupt signal input
83	I-POWER-KEY	I	Power key interrupt signal input
84	I-TU-RDS-DATA	I	Tuner RDS data signal input (Not used in this set)
85, 86	O-VIDEO-SW-A, O-VIDEO-SW-B	O	Video output selector (SW-A, SW-B) signal output (L, L: iPod), (L, H: mute), (H, L: VIDEO/SAT), (H, H: DMB19 board)
87	O-VIDEO-MUTE	O	Video mute signal output
88	O-VIDEO-I/P	O	COMPONENT VIDEO OUT select signal output (L: progressive, H: interlace)
89	SI/SO	I/O	Data input/output for flash programmer
90	RESET	I	System reset signal input
91	XT2	I	Sub system clock signal input (32.768 kHz)
92	XT1	O	Sub system clock signal output (32.768 kHz)
93	FLMD0	I	FL mode setting signal input
94	X2	I	Main system clock signal input (20 MHz)
95	X1	O	Main system clock signal output (20 MHz)
96	REGC	—	Regulator ripple capacitor connecting
97	VSS	—	Ground
98	EVSS	—	Ground
99	VDD	—	Power supply pin (+3.3 V)
100	EVDD0	—	Power supply pin (+3.3 V)

LCD CTRL BOARD IC002 TW8827-TA3-GR (LCD CONTROL)

Pin No.	Pin Name	I/O	Description
1	AVD1	—	Power supply pin (+1.8 V)
2	YIN1	I	Analog composite signal input 1 (Connect to AVS)
3	YIN0	I	Analog composite signal input 0
4	YGND	—	Ground
5	YOUT	O	Y signal output (Not used in this set)
6	AVS1	—	Ground
7	CIN	I	Analog component C signal input (Connect to AVS)
8	AVD2	—	Power supply pin (+1.8 V)
9	AVS2	—	Ground
10	FPBIAS	O	Flat panel back light bias power on/off control signal output
11	FPPWM1	O	Flat panel power monitor signal output (Not used in this set)
12	VDD18_1	—	Power supply pin (+1.8 V)
13	VSS18_1	—	Ground
14	TCLRL	O	TCON left/right select signal output (L: right, H: left)
15	FPPWC	O	Flat panel power on/off control signal output
16	TRCLK	O	TCON row driver shift clock signal output
17	TRUDL/GPO1	O	TCON up/down select signal output (L: down, H: up)/general purpose signal output
18	TCINV/GPO2	O	TCON column driver inversion signal output/general purpose signal output (Not used in this set)
19	POL_A/GPO3	O	TCON column driver polarity A signal output/general purpose signal output (Not used in this set)
20	POL_B/GPO4	O	TCON column driver polarity B signal output/general purpose signal output
21	TCLP	O	TCON column driver load pulse signal output
22	FPCLK	O	Flat panel clock signal output
23	VDD33_1	—	Power supply pin (+3.3 V)
24	VSS33_1	—	Ground
25	TRSPT/FPVS	O	TCON row driver starting pulse (top start) signal output/flat panel vertical sync signal output
26	TCSP/FPHS	O	TCON column driver starting pulse (left to right scan) signal output/flat panel horizontal sync signal output
27	TROE/FPDE	O	TCON row driver output enable signal output/flat panel data valid signal output
28	TCSPR/GPO5	O	TCON column driver starting pulse (right to left scan) signal output/general purpose signal output
29	TRSPB/GPO6	O	TCON row driver starting pulse (bottom start) signal output/general purpose signal output
30 to 33	DTV0 to DTV3	I	DTV signal input 0 to 3 (Not used in this set)
34	VDD18_2	—	Power supply pin (+1.8 V)
35	VSS18_2	—	Ground
36 to 39	DTV4 to DTV7	I/O	DTV signal input 4 to 7 (Not used in this set)
40	VDD33_2	—	Power supply pin (+3.3 V)
41	VSS33_2	—	Ground
42 to 49	DTV8/P2.0 to DTV15/P2.7	I/O	DTV signal input 8 to 15/MCU port signal input 2.0 to 2.7 (Not used in this set)
50	DTVCLK	I/O	DTV interface clock signal input (Not used in this set)
51	DTVVS	I/O	DTV interface vertical sync signal input (Not used in this set)
52	DTVHS	I/O	DTV interface horizontal sync signal input (Not used in this set)
53	DTVDE/P3.2/INT	I/O	DTV interface data valid signal input/MCU port signal input 3.2 (MCU int0)
54	XOUT	O	System clock signal output (27 MHz)
55	XIN	I	System clock signal input (27 MHz)
56	RESET	I	Reset signal input
57	TEST1	I	Production test pin (Connect to VSS33)
58	VDD33_3	—	Power supply pin (+3.3 V)
59	VSS33_3	—	Ground
60	PWR_DN	I	Power down signal input (Connect to VSS33)
61	MCU_EN	I	MCU enable signal input (Fixed at L in this set)
62	SDAT/P1.1	I/O	2-wire IIC interface data input/output/MCU port signal input/output 1.1

HCD-GZR88D/GZR99D

Pin No.	Pin Name	I/O	Description
63	SCLK/P1.0	I/O	2-wire IIC interface clock signal input/output/MCU port signal input/output 1.1
64	RXD/P3.0	I/O	MCU RXD signal input/MCU port signal input 3.0 (Not used in this set)
65	TXD/P3.1	I/O	MCU TXD signal output/MCU port signal output 3.1 (Not used in this set)
66	VDD18_3	—	Power supply pin (+1.8 V)
67	VSS18_3	—	Ground
68	SPI_CSN	O	SPI CS (low enable) signal output (Not used in this set)
69	SPI_SDO	O	SPI data out signal output (Not used in this set)
70	SPI_SDI	I	SPI data in signal input (Connect to VSS18)
71	SPI_CLK	O	SPI clock out signal output (Not used in this set)
72	AVD3	—	Power supply pin (+3.3 V)
73	ROUT	O	DAC analog red data output
74	GOUT	O	DAC analog green data output
75	BOUT	O	DAC analog blue data output
76, 77	SENSE0, SENSE1	I	Analog sensing 0, 1 signal input
78, 79	ADCIN1, ADCIN0	I	Low speed ADC input 1, 0
80	AVS3	—	Ground

SECTION 7 EXPLODED VIEWS

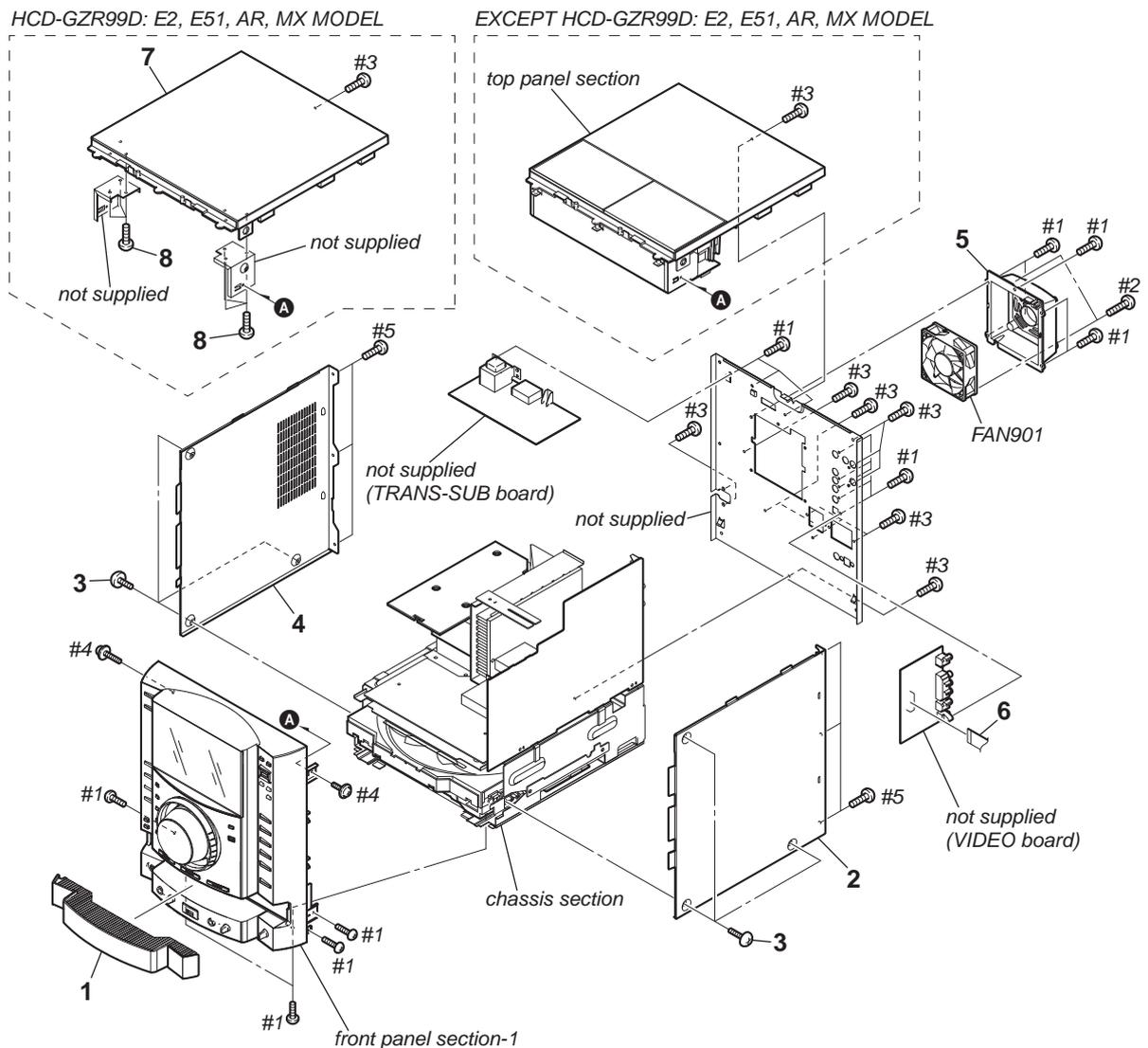
Note:

- -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.
- Accessories are given in the last of the electrical parts list.

- Abbreviation
- E2 : 120V AC area in E model
- E51 : Chilean and Peruvian model
- AR : Argentina model
- MX : Mexican model
- E3 : 240V AC area in E model
- E4 : 110 – 120V/220 – 240V AC area in E model
- E15 : Iran model
- PH : Philippines model
- SP : Singapore model
- E12 : 220 – 240V AC area in E model
- TH : Thai model

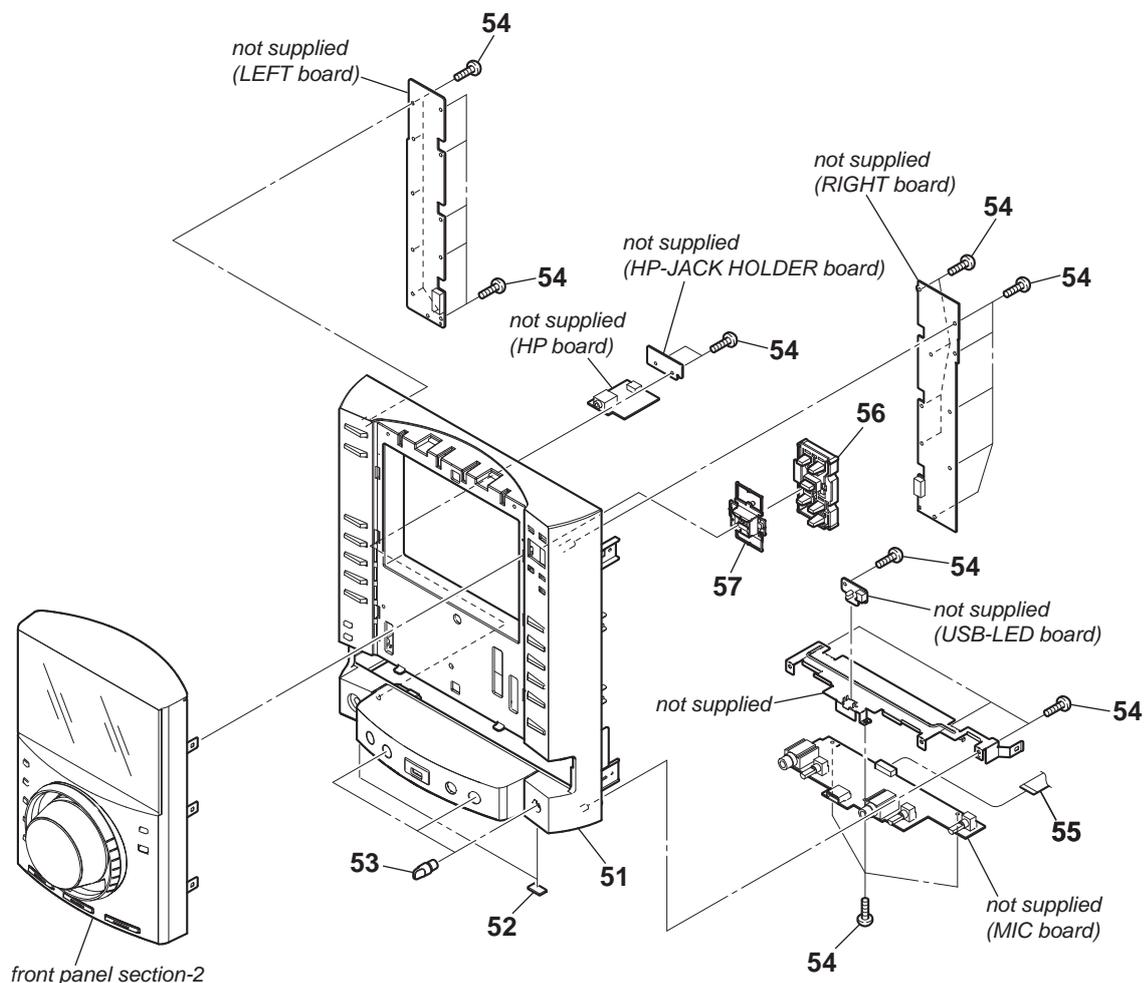
The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

7-1. OVERALL SECTION



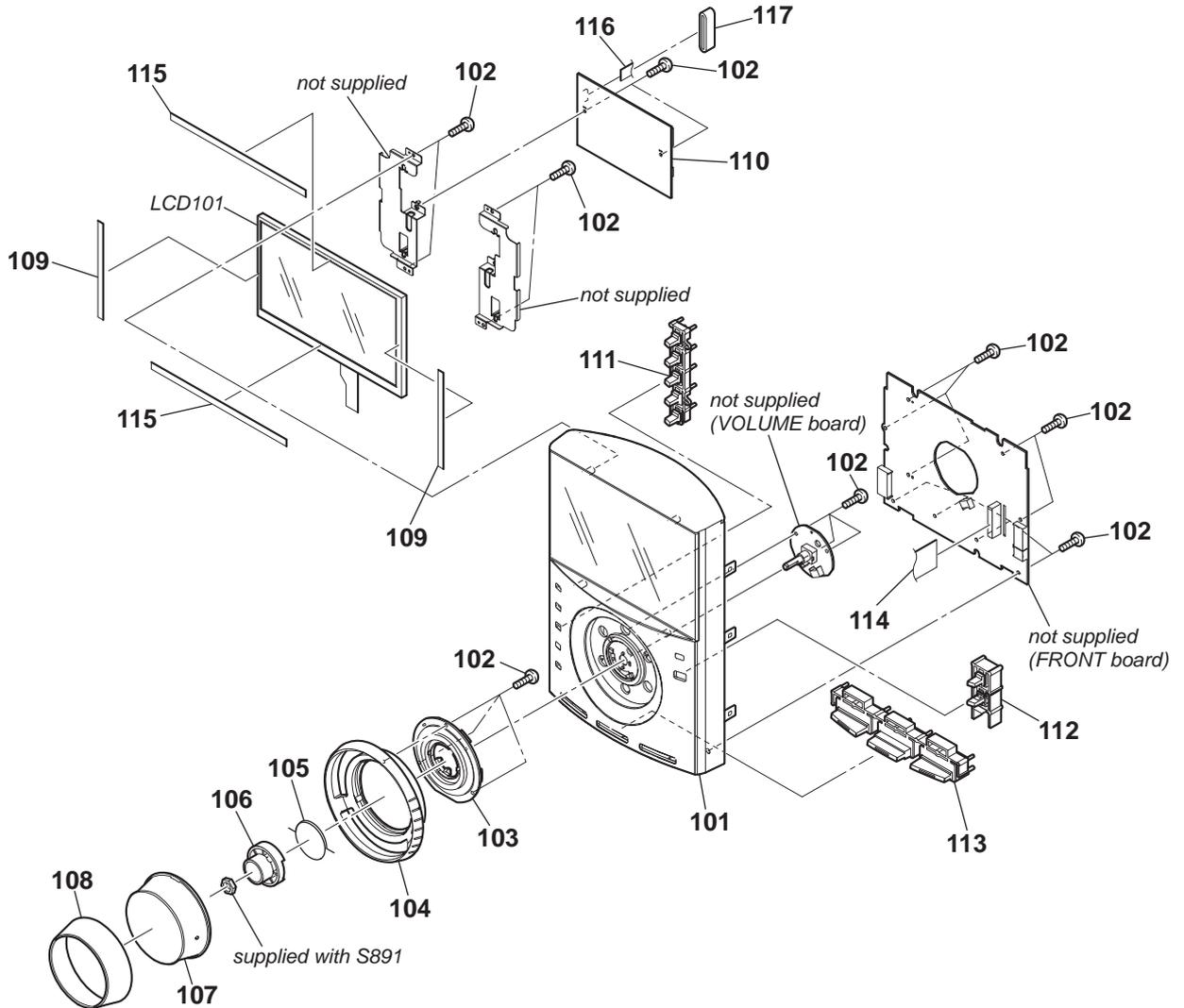
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-124-002-22	PANEL, LOADING (GZR88D)		8	3-087-053-01	+BVTP2.6 (3CR) (GZR99D:E2,E51,AR,MX)	
1	4-124-002-32	PANEL, LOADING (GZR99D)		FAN901	1-787-400-31	FAN (DC) (GZR88D)	
2	4-124-014-01	CASE (SIDE R)		FAN901	1-787-631-11	FAN (DC) (GZR99D)	
3	3-363-099-02	SCREW (CASE 3 TP2)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
4	4-124-013-01	CASE (SIDE L) (GZR99D)		#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
4	4-124-013-11	CASE (SIDE L) (GZR88D)		#3	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
5	3-285-881-01	COVER (FAN)		#4	7-685-903-21	TAPPING +PWH 3X8 TYPE2 N-S	
6	1-828-935-11	WIRE (FLAT TYPE) (5 CORE)		#5	7-685-144-11	SCREW +P 3X5 TYPE2 N-S	
7	4-124-009-21	PANEL (TOP) (GZR99D:E2,E51,AR,MX)					

7-2. FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-2349-503-1	PANEL (MAIN) ASSY (GZR99D:E3,E4,E15,PH,SP)		54	3-087-053-01	+BVTP2.6 (3CR)	
51	X-2349-504-1	PANEL (MAIN) ASSY (GZR99D:E2,E51,AR,MX)		55	1-837-124-11	WIRE (FLAT TYPE) (5 CORE)	
51	X-2349-505-1	PANEL (MAIN) ASSY (GZR88D)		56	4-123-994-01	BUTTON (ENTER)	
52	4-225-252-01	CUSHION (FOOT)		57	4-123-993-01	BUTTON (CURSOR)	
53	2-638-220-21	KNOB (MIC)					

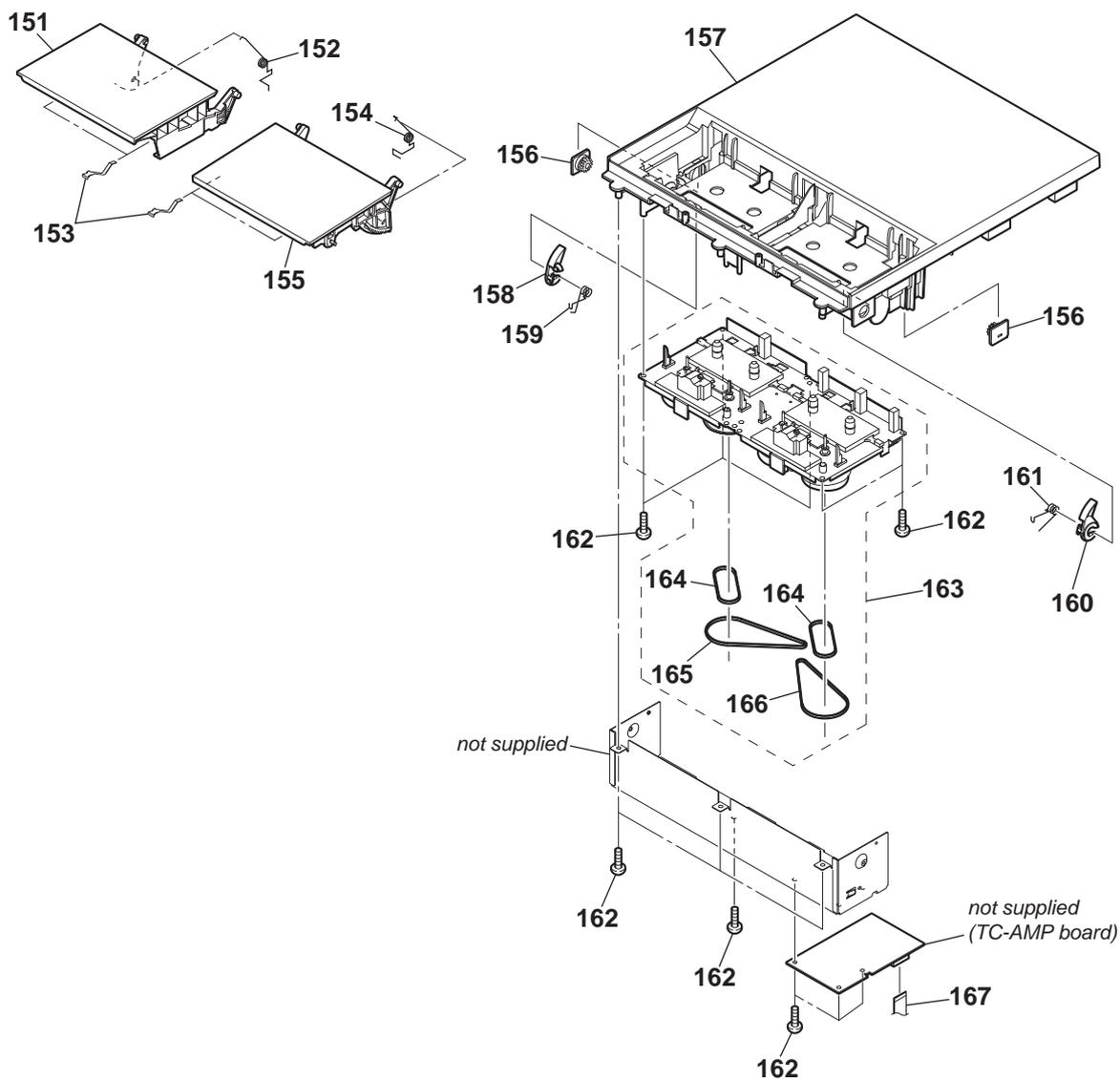
7-3. FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	X-2349-510-1	PANEL (LCD) ASSY (EXCEPT GZR99D:E2,E51,AR,MX)		110	A-1671-636-A	LCD CTRL BOARD, COMPLETE	
101	X-2349-511-1	PANEL (LCD) ASSY (GZR99D:E2,E51,AR,MX)		111	4-123-982-01	BUTTON (DISP)	
102	3-087-053-01	+BVTP2.6 (3CR)		112	4-123-983-01	BUTTON (REC)	
103	4-123-988-01	PLATE (JOG)				(EXCEPT GZR99D:E2,E51,AR,MX)	
104	4-123-989-11	KNOB (JOG)		112	4-123-983-11	BUTTON (REC) (GZR99D:E2,E51,AR,MX)	
105	4-145-107-01	SPRING KNOB		113	X-2349-513-1	BUTTON (DISC) ASSY	
106	4-128-320-01	HOLDER (KNOB)		114	1-831-964-21	WIRE (FLAT TYPE) (21 CORE)	
107	X-2349-514-1	KNOB (VOL) ASSY		115	4-124-001-11	CUSHION (LCD)	
108	4-124-004-01	RUBBER (VOL)		116	1-828-946-51	WIRE (FLAT TYPE) (7 CORE)	
109	4-124-001-01	CUSHION (LCD)		117	1-457-413-11	CORE, FERRITE	
				LCD101	1-802-937-11	DISPLAY PANEL, LIQUID CRYSTAL	

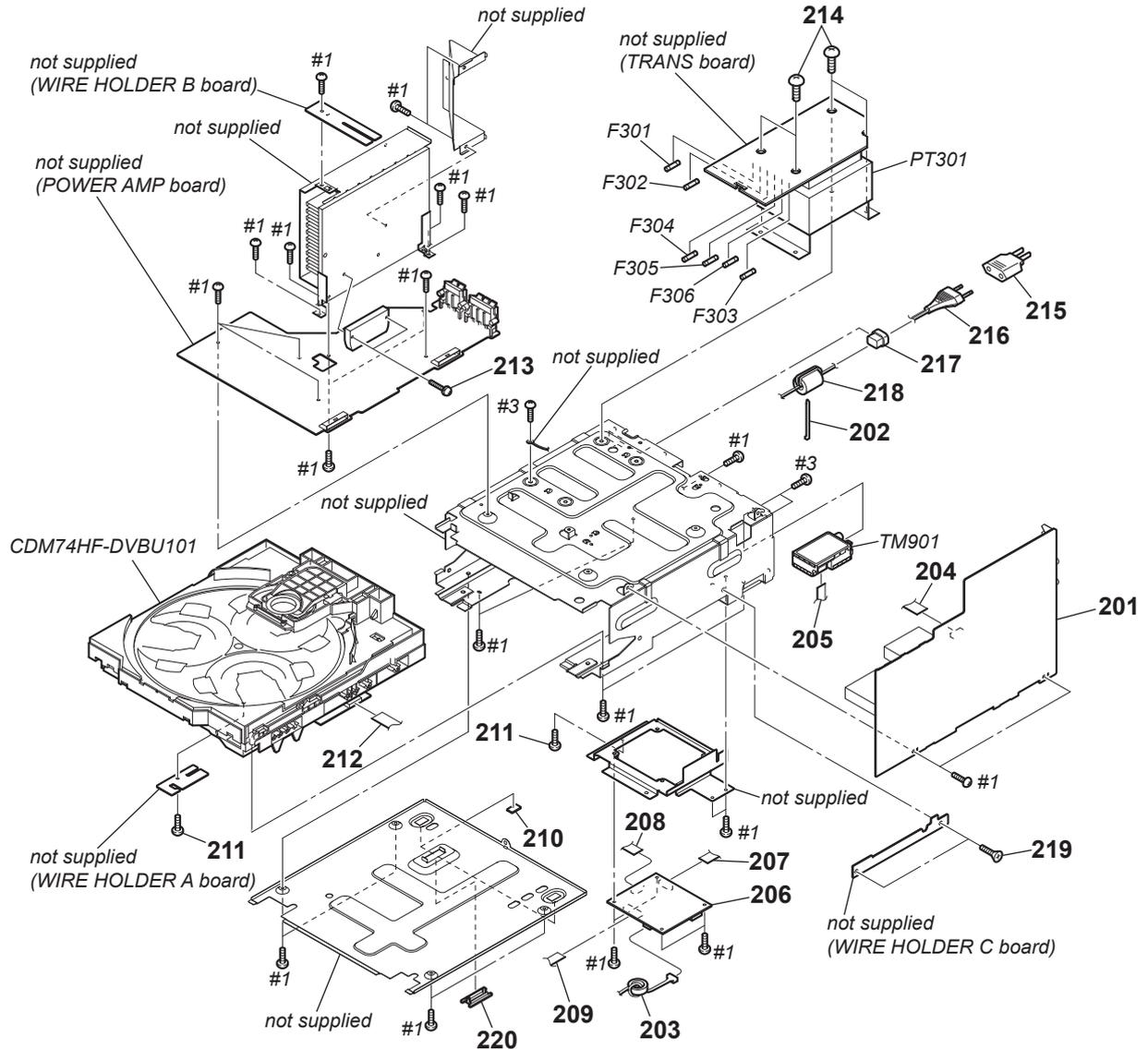
HCD-GZR88D/GZR99D

7-4. TOP PANEL SECTION (EXCEPT HCD-GZR99D: E2, E51, AR, MX MODEL)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	4-124-010-01	LID (TC-L)		160	4-231-825-01	CAM (B), HEART	
152	4-124-021-01	SPRING (TC-L)		161	4-231-841-01	SPRING (HEART CAM-B)	
153	2-669-613-01	DETENT SPRING		162	3-087-053-01	+BVTP2.6 (3CR)	
154	4-124-022-01	SPRING (TC-R)		163	1-840-233-11	DECK, MECHANICAL (CWP42FR605)	
155	4-124-011-01	LID (TC-R)		164	3-274-426-01	BELT (FR)	
156	4-224-104-41	DAMPER		165	4-148-152-01	BELT (AF)	
157	4-124-008-01	PANEL (TOP TC)		166	4-148-154-01	BELT (BR)	
158	4-231-824-01	CAM (A), HEART		167	1-833-868-11	WIRE (FLAT TYPE) (11 CORE)	
159	4-231-836-01	SPRING (HEART CAM-A)					

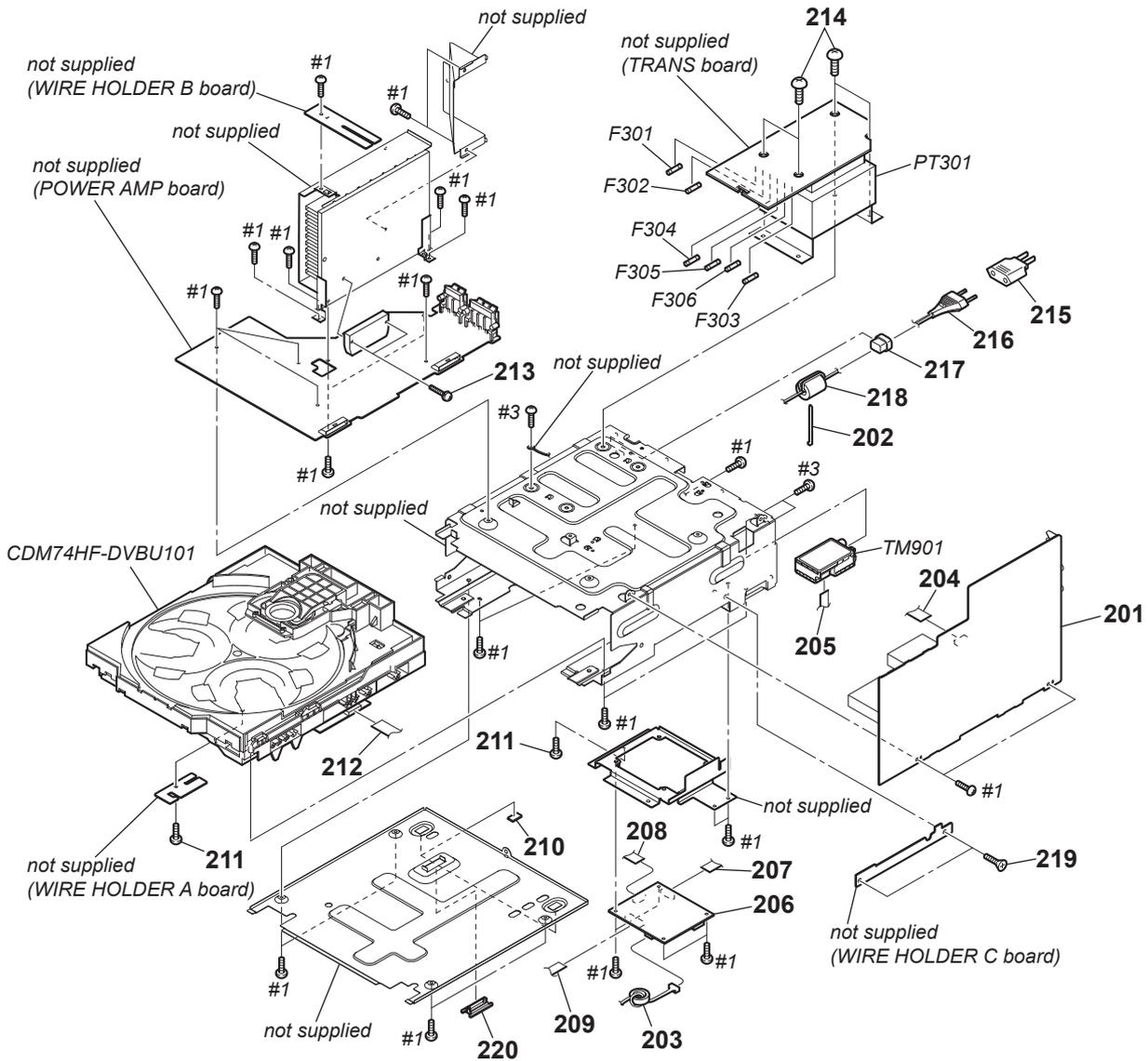
7-5. CHASSIS SECTION-1



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	A-1675-105-A	MAIN BOARD, COMPLETE (GZR88D:E3,E15)		206	A-1719-747-A	DMB19 BOARD, COMPLETE (for SERVICE)	(GZR88D:E4,E12)
201	A-1675-106-A	MAIN BOARD, COMPLETE (GZR88D:E4,E12)		206	A-1719-748-A	DMB19 BOARD, COMPLETE (for SERVICE)	(GZR88D:PH,SP,TH)
201	A-1675-107-A	MAIN BOARD, COMPLETE (GZR88D:PH,SP,TH)		206	A-1736-114-A	DMB19 BOARD, COMPLETE (for SERVICE)	(GZR99D:MX)
201	A-1675-108-A	MAIN BOARD, COMPLETE (GZR99D:E3,E15)		207	1-830-459-51	WIRE (FLAT TYPE) (7 CORE)	
201	A-1675-109-A	MAIN BOARD, COMPLETE (GZR99D:E4)		208	1-837-127-11	WIRE (FLAT TYPE) (7 CORE)	
201	A-1675-110-A	MAIN BOARD, COMPLETE (GZR99D:PH,SP)		209	1-837-125-11	WIRE (FLAT TYPE) (9 CORE)	
201	A-1675-111-A	MAIN BOARD, COMPLETE (GZR99D:E2)		210	4-225-252-01	CUSHION (FOOT)	
201	A-1675-112-A	MAIN BOARD, COMPLETE (GZR99D:E51,AR)		211	3-087-053-01	+BVTP2.6 (3CR)	
201	A-1730-608-A	MAIN BOARD, COMPLETE (GZR99D:MX)		212	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)	
202	3-655-653-11	BAND (TAITON), BINDING		213	3-905-609-31	SCREW (TRANSISTOR)	
203	1-543-929-11	CORE, FERRITE		214	4-900-386-01	SCREW	
204	1-828-965-51	WIRE (FLAT TYPE) (11 CORE) (EXCEPT GZR99D:E2,E51,AR,MX)		△ 215	1-569-008-33	ADAPTOR, CONVERSION 2P (E2,E3,E4,E15,E51,PH,SP)	
205	1-828-956-51	WIRE (FLAT TYPE) (9 CORE)		△ 216	1-829-387-11	CORD, POWER (AR)	
206	A-1719-741-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E3,E15)		△ 216	1-834-288-11	CORD, POWER (TH)	
206	A-1719-743-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E4)		△ 216	1-834-966-41	POWER-SUPPLY CORD (EXCEPT TH,AR,MX)	
206	A-1719-744-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:PH,SP)		△ 216	1-835-080-21	CORD, POWER (MX)	
206	A-1719-745-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E2,E51,AR)		217	3-703-244-00	BUSHING (2104), CORD (EXCEPT TH, MX)	
206	A-1719-746-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR88D:E3,E15)		* 217	3-703-571-12	BUSHING (S) (4516), CORD (MX)	
				217	4-916-783-01	BUSHING, CORD (TH)	

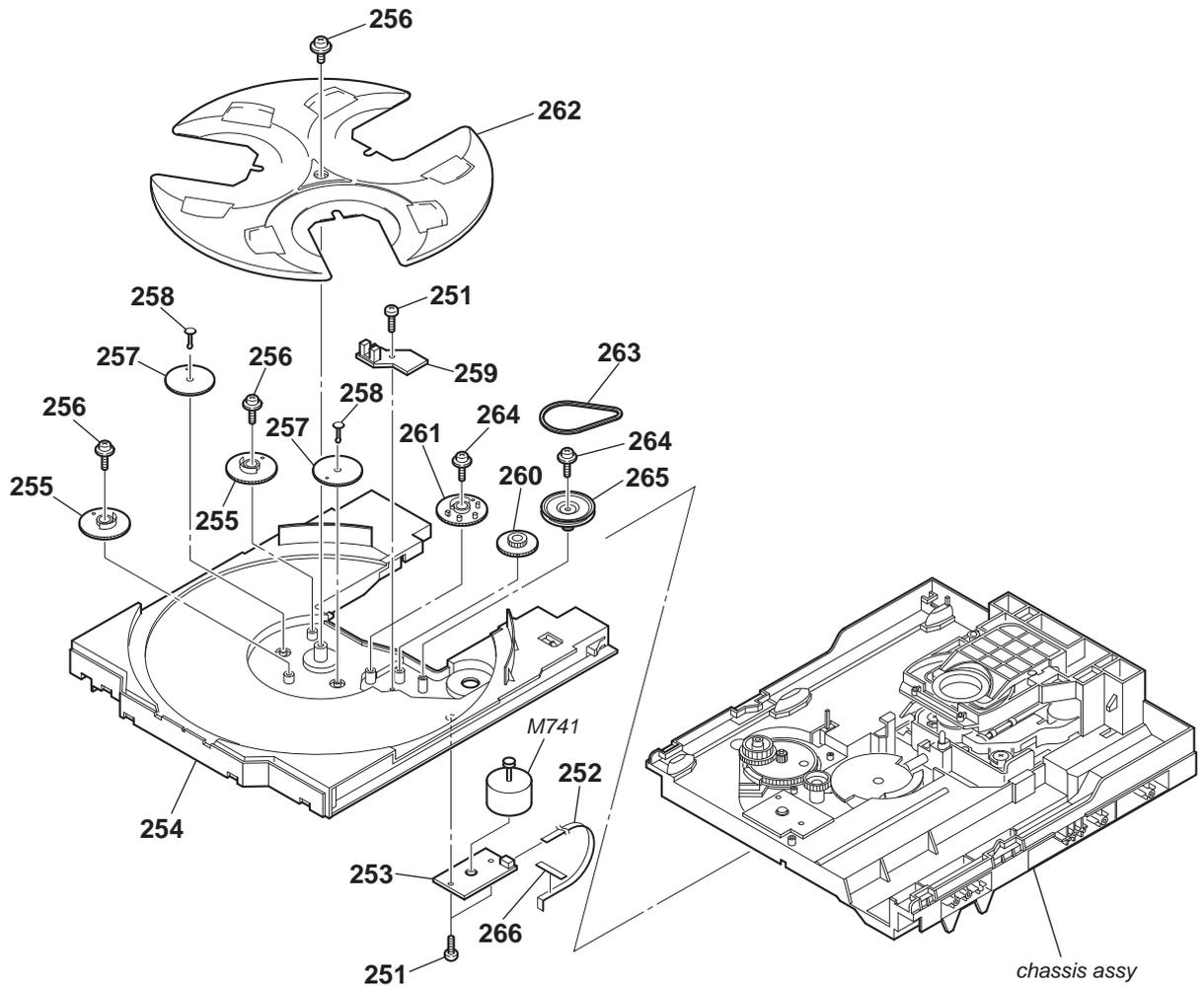
- Continued on next page -

7-6. CHASSIS SECTION-2



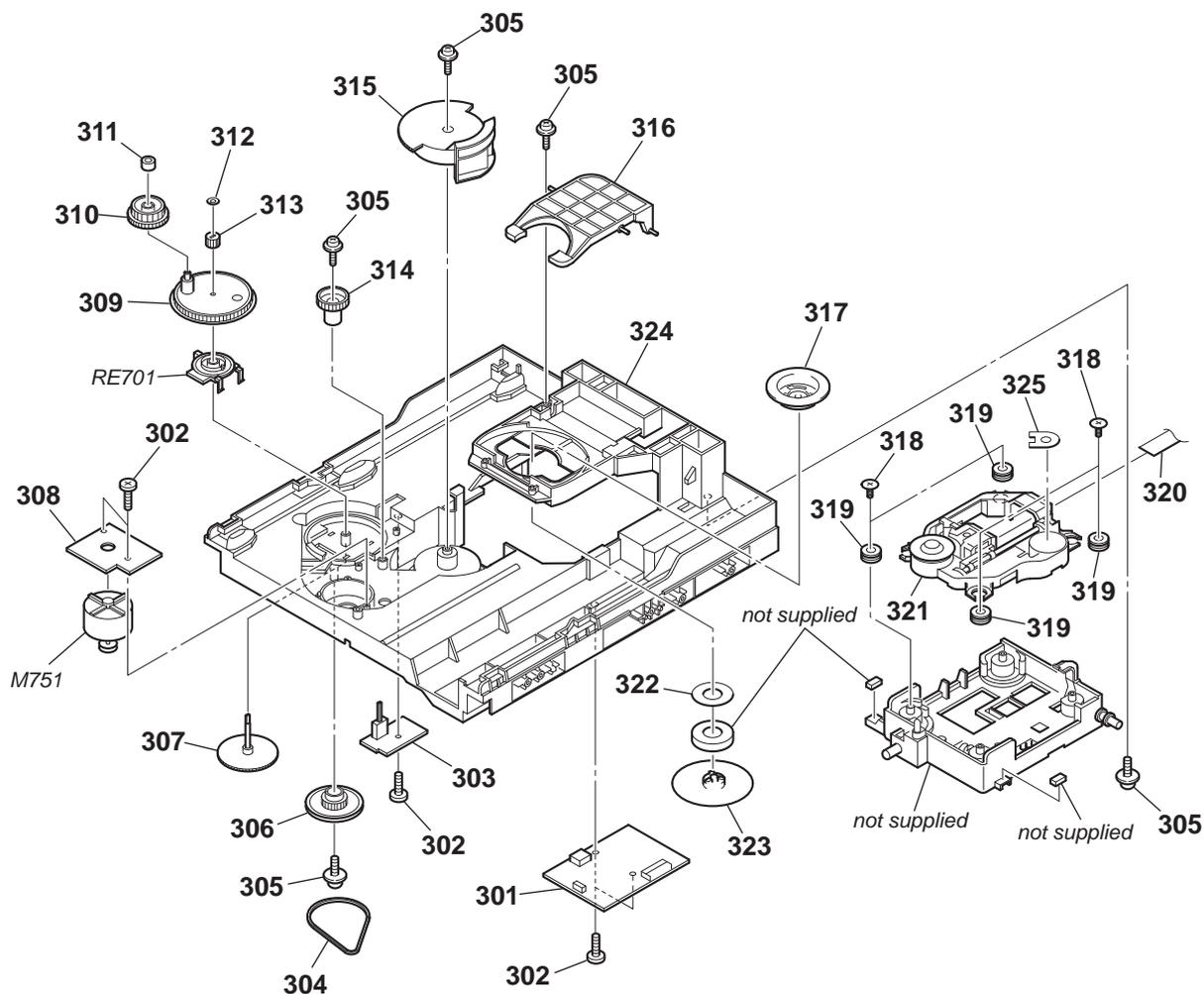
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	218	1-457-369-12	CORE, FERRITE	△ F305	1-533-949-33	FUSE, CYLINDRICAL (TIME LAG) (T8AL/250V)	(GZR88D)
	219	2-580-644-11	SCREW, +KTP2 3X8	△ F305	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	(GZR99D)
	220	4-152-150-01	CAP (DMB)	△ F306	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	
△	F301	1-532-465-33	FUSE (T3.15AL/250V)	△ PT301	1-445-681-11	TRANSFORMER, POWER (MAIN)	(GZR99D)
△	F302	1-532-505-33	FUSE (T5AL/250V)	△ PT301	1-445-684-11	TRANSFORMER, POWER (MAIN)	(GZR88D)
△	F303	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	TM901	1-693-778-11	TUNER (FM/AM) (ANTENNA)	
△	F304	1-533-949-33	FUSE, CYLINDRICAL (TIME LAG) (T8AL/250V)	#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
△	F304	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	#3	7-685-645-79	SCREW +BVTP 3X6 TYPE2 IT-3	
			(GZR88D)				
			(GZR99D)				

7-7. DVD MECHANISM DECK SECTION-1
(CDM74HF-DVBU101)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
251	4-218-253-62	SCREW (M2.6), +BTTP		260	4-243-820-01	GEAR (TABLE)	
252	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)		261	4-243-819-01	GEAR (GENEVA)	
253	1-687-134-12	MOTOR (TB) BOARD		262	4-243-816-21	TRAY	
254	4-243-815-11	TABLE (LOADING)		263	4-243-823-11	BELT (TABLE)	
255	4-245-571-02	GEAR (STOPPER)		264	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
256	4-218-252-61	SCREW (+PTPWH M2.6), FLOATING		265	4-243-821-01	PULLEY (TABLE)	
257	4-245-570-01	GEAR (JOINT)		266	3-231-598-01	SHEET (BA)	
258	4-245-572-01	BUSHING (GEAR)		M741	A-1108-965-A	MOTOR ASSY, TABLE (TABLE)	
259	1-687-132-12	SENSOR BOARD					

7-8. DVD MECHANISM DECK SECTION-2 (CDM74HF-DVBU101)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	A-1103-756-B	DRIVER BOARD, COMPLETE		315	4-243-818-01	GEAR (U/D)	
302	4-218-253-52	SCREW (M2.6), +BTTP		316	2-541-918-01	LEVER (LIFTER (H))	
303	1-687-669-12	SW BOARD		317	2-345-983-01	PULLEY B (310), CHUCKING	
304	4-244-034-11	BELT (LOADING)		318	3-087-599-01	SCREW, INSULATOR	
305	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		319	2-634-618-01	INSULATOR	
306	4-225-844-01	GEAR (LOADING A)		320	1-828-251-51	WIRE (FLAT TYPE) (24 CORE)	
307	4-224-613-11	GEAR (SHAFT)		△ 321	8-820-322-04	OPTICAL PICK-UP (KHM-313CAB/C2RP)	
308	1-687-133-12	MOTOR (LD) BOARD		322	4-251-923-01	YOKE (310)	
309	4-244-108-01	GEAR, SWING		323	2-345-982-01	PULLEY A (310), CHUCKING	
310	4-224-609-01	GEAR (LOADING C)		324	4-243-817-22	CHASSIS	
311	4-224-608-01	COLLAR, SWING		325	3-113-851-01	SHEET	
312	3-016-533-11	WASHER (FR), STOPPER		M751	A-1108-966-A	MOTOR ASSY, LOADING (LOADING)	
313	4-224-611-01	GEAR (LOADING B)		RE701	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS DETECT)	
314	4-224-606-01	GEAR (RV)					

SECTION 8
ELECTRICAL PARTS LIST

DMB19

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- SEMICONDUCTORS
In each case, u: μ , for example:
uA. . . : μ A. . . , uPA. . . , μ PA. . . ,
uPB. . . : μ PB. . . , uPC. . . , μ PC. . . ,
uPD. . . : μ PD. . .
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

- Abbreviation
E3 : 240V AC area in E model
E15 : Iran model
E4 : 110 – 120V/220 – 240V AC area in E model
PH : Philippines model
SP : Singapore model
E2 : 120V AC area in E model
E51 : Chilean and Peruvian model
AR : Argentina model
E12 : 220 – 240V AC area in E model
TH : Thai model
MX : Mexican model

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-1719-741-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E3,E15)		C168	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
	A-1719-743-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E4)		C169	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
	A-1719-744-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:PH,SP)		C172	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
	A-1719-745-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:E2,E51,AR)		C175	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
	A-1719-746-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR88D:E3,E15)		C179	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
	A-1719-747-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR88D:E4,E12)		C180	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
	A-1719-748-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR88D:PH,SP,TH)		C181	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
	A-1736-114-A	DMB19 BOARD, COMPLETE (for SERVICE) (GZR99D:MX)		C182	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
		*****		C183	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
		< CAPACITOR >		C184	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C101	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C186	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
C102	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C188	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C105	1-128-994-21	ELECT CHIP 47uF 20% 10V		C190	1-128-995-21	ELECT CHIP 100uF 20% 10V	
C106	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C191	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C108	1-162-965-11	CERAMIC CHIP 0.0015uF 10% 50V		C192	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C111	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C193	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
C112	1-128-994-21	ELECT CHIP 47uF 20% 10V		C195	1-127-715-11	CERAMIC CHIP 0.22uF 10% 16V	
C113	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C197	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V	
C115	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C198	1-165-908-11	CERAMIC CHIP 1uF 10% 10V	
C116	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C199	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V	
C118	1-124-779-00	ELECT CHIP 10uF 20% 16V		C203	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C119	1-137-710-11	CERAMIC CHIP 10uF 20% 6.3V		C205	1-164-230-11	CERAMIC CHIP 220PF 5% 50V	
C124	1-165-908-11	CERAMIC CHIP 1uF 10% 10V		C206	1-164-230-11	CERAMIC CHIP 220PF 5% 50V	
C125	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C208	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C126	1-137-710-11	CERAMIC CHIP 10uF 20% 6.3V		C209	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V	
C127	1-165-908-11	CERAMIC CHIP 1uF 10% 10V		C210	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C144	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C211	1-164-677-11	CERAMIC CHIP 0.033uF 10% 16V	
C145	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C212	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C146	1-165-908-11	CERAMIC CHIP 1uF 10% 10V		C213	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C149	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C214	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C150	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C215	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C151	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C216	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C152	1-162-916-11	CERAMIC CHIP 12PF 5% 50V		C217	1-117-681-11	ELECT CHIP 100uF 20% 16V	
C153	1-162-916-11	CERAMIC CHIP 12PF 5% 50V		C218	1-128-994-21	ELECT CHIP 47uF 20% 10V	
C154	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C219	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C155	1-107-826-11	CERAMIC CHIP 0.1uF 10% 16V		C220	1-128-994-21	ELECT CHIP 47uF 20% 10V	
C156	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		C221	1-164-360-11	CERAMIC CHIP 0.1uF 16V	
C160	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V		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	
				C607	1-115-416-11	CERAMIC CHIP 0.001uF 5% 25V	

HCD-GZR88D/GZR99D

DMB19

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C610	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	FB1268	1-469-118-21	FERRITE, EMI (SMD) (1608)	
C611	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V	FB1284	1-414-445-11	FERRITE, EMI (SMD) (1608)	
C620	1-164-360-11	CERAMIC CHIP 0.1uF	16V	FB1285	1-414-445-11	FERRITE, EMI (SMD) (1608)	
C621	1-164-360-11	CERAMIC CHIP 0.1uF	16V	FB1286	1-414-445-11	FERRITE, EMI (SMD) (1608)	
C622	1-164-360-11	CERAMIC CHIP 0.1uF	16V	FB4835	1-469-118-21	FERRITE, EMI (SMD) (1608)	
C623	1-164-360-11	CERAMIC CHIP 0.1uF	16V	FB4836	1-469-118-21	FERRITE, EMI (SMD) (1608)	
C630	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V			< FILTER >	
C1130	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V				
C1504	1-162-960-11	CERAMIC CHIP 220PF 10%	50V	FL603	1-234-494-21	FILTER, EMI REMOVAL (SMD)	
C1505	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V			< IC >	
C1506	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V	IC101	6-713-723-01	IC CXD9971R	
C1507	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC102	6-712-212-01	IC MX25L3205DM2I-12G	
C1510	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC103	6-709-450-01	IC S-24CS16A0I-J8T1G	
C1512	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC104	6-711-090-01	IC K4S641632K-UC60T	
C1513	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	IC105	6-702-302-01	IC TK11133CSCL-G	
C4602	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC107	6-702-302-01	IC TK11133CSCL-G	
C4603	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC111	6-706-838-01	IC MM1661JHBE	
C4606	1-164-360-11	CERAMIC CHIP 0.1uF	16V	IC201	6-704-524-01	IC FAN8036L	
C4608	1-124-779-00	ELECT CHIP 10uF 20%	16V	IC4601	6-710-554-01	IC PCM1808PWR	
C4622	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V	IC4602	6-704-819-01	IC CS4335-KSZR	
C4623	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V			< TRANSISTOR >	
C4626	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	Q101	6-550-008-01	FET UM6K1N-TN	
		< CONNECTOR >		Q102	6-550-653-01	TRANSISTOR QST8TR	
CN101	1-815-763-32	CONNECTOR, FFC/FPC 24P		Q103	8-729-027-52	TRANSISTOR DTC124EKA-T146	
CN105	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P				< RESISTOR >	
CN201	1-770-161-21	PIN, CONNECTOR (PC BOARD) 6P		R101	1-216-809-11	METAL CHIP 100 5%	1/10W
CN601	1-778-795-21	PIN, CONNECTOR (PC BOARD) 9P		R102	1-216-864-11	SHORT CHIP 0	
CN1103	1-794-509-11	PIN, CONNECTOR (PC BOARD) 3P		R103	1-218-864-11	METAL CHIP 5.1K 0.5%	1/10W
CN1104	1-784-859-51	CONNECTOR, FFC (LIF(NON-ZIF)) 7P		R107	1-216-833-11	METAL CHIP 10K 5%	1/10W
* CN1105	1-750-005-11	PIN, CONNECTOR (PC BOARD) 4P		R108	1-216-857-11	METAL CHIP 1M 5%	1/10W
CN1106	1-784-861-51	CONNECTOR, FFC (LIF(NON-ZIF)) 9P		R109	1-216-809-11	METAL CHIP 100 5%	1/10W
CN4602	1-784-859-51	CONNECTOR, FFC (LIF(NON-ZIF)) 7P		R110	1-216-841-11	METAL CHIP 47K 5%	1/10W
		< DIODE >		R111	1-216-809-11	METAL CHIP 100 5%	1/10W
D001	6-500-848-01	DIODE MC2840-T112-1		R112	1-211-977-11	METAL CHIP 22 0.5%	1/10W
D002	6-500-848-01	DIODE MC2840-T112-1		R113	1-211-977-11	METAL CHIP 22 0.5%	1/10W
D003	6-500-848-01	DIODE MC2840-T112-1		R114	1-216-845-11	METAL CHIP 100K 5%	1/10W
D004	6-500-848-01	DIODE MC2840-T112-1		R115	1-211-977-11	METAL CHIP 22 0.5%	1/10W
D006	6-500-848-01	DIODE MC2840-T112-1		R116	1-216-821-11	METAL CHIP 1K 5%	1/10W
		< EARTH TERMINAL >		R117	1-216-841-11	METAL CHIP 47K 5%	1/10W
ET001	1-780-482-11	TERMINAL, EARTH		R118	1-216-801-11	METAL CHIP 22 5%	1/10W
ET002	1-780-482-11	TERMINAL, EARTH		R120	1-216-801-11	METAL CHIP 22 5%	1/10W
ET003	1-780-482-11	TERMINAL, EARTH		R121	1-216-801-11	METAL CHIP 22 5%	1/10W
ET004	1-780-482-11	TERMINAL, EARTH		R122	1-216-833-11	METAL CHIP 10K 5%	1/10W
		< FERRITE BEAD >		R123	1-216-809-11	METAL CHIP 100 5%	1/10W
FB106	1-469-324-21	FERRITE, EMI (SMD) (2012)		R124	1-216-841-11	METAL CHIP 47K 5%	1/10W
FB108	1-469-324-21	FERRITE, EMI (SMD) (2012)		R125	1-216-833-11	METAL CHIP 10K 5%	1/10W
FB109	1-469-324-21	FERRITE, EMI (SMD) (2012)		R133	1-216-864-11	SHORT CHIP 0	
FB112	1-469-670-21	FERRITE, EMI (SMD) (2012)		R135	1-216-833-11	METAL CHIP 10K 5%	1/10W
FB603	1-469-324-21	FERRITE, EMI (SMD) (2012)		R136	1-216-835-11	METAL CHIP 15K 5%	1/10W
FB606	1-469-324-21	FERRITE, EMI (SMD) (2012)		R142	1-216-845-11	METAL CHIP 100K 5%	1/10W
FB607	1-469-324-21	FERRITE, EMI (SMD) (2012)		R151	1-216-833-11	METAL CHIP 10K 5%	1/10W
FB608	1-469-324-21	FERRITE, EMI (SMD) (2012)		R156	1-216-809-11	METAL CHIP 100 5%	1/10W
FB609	1-469-324-21	FERRITE, EMI (SMD) (2012)		R191	1-216-821-11	METAL CHIP 1K 5%	1/10W
FB1264	1-469-118-21	FERRITE, EMI (SMD) (1608)		R192	1-218-827-11	METAL CHIP 150 0.5%	1/10W
FB1265	1-469-118-21	FERRITE, EMI (SMD) (1608)		R193	1-216-821-11	METAL CHIP 1K 5%	1/10W
FB1266	1-469-118-21	FERRITE, EMI (SMD) (1608)		R195	1-218-827-11	METAL CHIP 150 0.5%	1/10W
FB1267	1-469-118-21	FERRITE, EMI (SMD) (1608)		R197	1-218-827-11	METAL CHIP 150 0.5%	1/10W

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R198	1-218-827-11	METAL CHIP	150 0.5% 1/10W	R1271	1-216-864-11	SHORT CHIP	0
R204	1-216-822-11	METAL CHIP	1.2K 5% 1/10W	R1276	1-216-864-11	SHORT CHIP	0
R205	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1277	1-216-809-11	METAL CHIP	100 5% 1/10W
R206	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1278	1-216-833-11	METAL CHIP	10K 5% 1/10W
R207	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	R1279	1-216-833-11	METAL CHIP	10K 5% 1/10W
R208	1-216-839-11	METAL CHIP	33K 5% 1/10W	R1280	1-216-864-11	SHORT CHIP	0
R209	1-216-839-11	METAL CHIP	33K 5% 1/10W	R1281	1-216-809-11	METAL CHIP	100 5% 1/10W
R210	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1282	1-216-801-11	METAL CHIP	22 5% 1/10W
R212	1-216-833-11	METAL CHIP	10K 5% 1/10W	R1283	1-216-809-11	METAL CHIP	100 5% 1/10W
R213	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R4601	1-216-809-11	METAL CHIP	100 5% 1/10W
R214	1-216-835-11	METAL CHIP	15K 5% 1/10W	R4602	1-216-864-11	SHORT CHIP	0
R215	1-216-834-11	METAL CHIP	12K 5% 1/10W	R4605	1-216-864-11	SHORT CHIP	0
R216	1-216-834-11	METAL CHIP	12K 5% 1/10W	R4606	1-216-864-11	SHORT CHIP	0
R219	1-216-838-11	METAL CHIP	27K 5% 1/10W	R4608	1-216-864-11	SHORT CHIP	0
R220	1-216-821-11	METAL CHIP	1K 5% 1/10W	R4609	1-216-864-11	SHORT CHIP	0
R221	1-218-889-11	METAL CHIP	56K 0.5% 1/10W	R4611	1-216-864-11	SHORT CHIP	0
R223	1-218-895-11	METAL CHIP	100K 0.5% 1/10W	R4833	1-216-817-11	METAL CHIP	470 5% 1/10W
R224	1-216-833-11	METAL CHIP	10K 5% 1/10W	R4834	1-216-817-11	METAL CHIP	470 5% 1/10W
R225	1-218-895-11	METAL CHIP	100K 0.5% 1/10W	R4835	1-216-295-11	SHORT CHIP	0
R226	1-218-889-11	METAL CHIP	56K 0.5% 1/10W			< NETWORK RESISTOR >	
R230	1-218-893-11	METAL CHIP	82K 0.5% 1/10W	RB105	1-242-963-21	RES, NETWORK 33X4 (1005)	
R231	1-218-875-11	METAL CHIP	15K 0.5% 1/10W	RB106	1-242-963-21	RES, NETWORK 33X4 (1005)	
R232	1-218-877-11	METAL CHIP	18K 0.5% 1/10W	RB107	1-242-963-21	RES, NETWORK 33X4 (1005)	
R233	1-218-883-11	METAL CHIP	33K 0.5% 1/10W	RB108	1-242-963-21	RES, NETWORK 33X4 (1005)	
R234	1-216-833-11	METAL CHIP	10K 5% 1/10W	RB111	1-242-963-21	RES, NETWORK 33X4 (1005)	
R246	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	RB112	1-242-963-21	RES, NETWORK 33X4 (1005)	
R247	1-216-821-11	METAL CHIP	1K 5% 1/10W	RB113	1-242-963-21	RES, NETWORK 33X4 (1005)	
R256	1-216-833-11	METAL CHIP	10K 5% 1/10W	RB114	1-242-963-21	RES, NETWORK 33X4 (1005)	
R521	1-216-833-11	METAL CHIP	10K 5% 1/10W	RB115	1-242-963-21	RES, NETWORK 33X4 (1005)	
R1101	1-218-841-11	METAL CHIP	560 0.5% 1/10W			< VIBRATOR >	
R1110	1-216-826-11	METAL CHIP	2.7K 5% 1/10W	X101	1-814-103-21	VIBRATOR, CRYSTAL (27MHz)	
R1114	1-216-801-11	METAL CHIP	22 5% 1/10W			*****	
R1121	1-216-864-11	SHORT CHIP	0			A-1103-756-B DRIVER BOARD, COMPLETE	
R1123	1-216-864-11	SHORT CHIP	0			*****	
R1129	1-216-845-11	METAL CHIP	100K 5% 1/10W			< CAPACITOR >	
R1150	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	C715	1-126-933-11	ELECT	100uF 20% 16V
R1151	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	C731	1-126-964-11	ELECT	10uF 20% 50V
R1152	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	C735	1-164-159-11	CERAMIC	0.1uF 50V
R1168	1-218-835-11	METAL CHIP	330 0.5% 1/10W	C736	1-164-159-11	CERAMIC	0.1uF 50V
R1177	1-216-864-11	SHORT CHIP	0	C737	1-164-159-11	CERAMIC	0.1uF 50V
R1178	1-216-821-11	METAL CHIP	1K 5% 1/10W	C741	1-114-708-41	CERAMIC	0.01uF 10% 50V
R1184	1-216-809-11	METAL CHIP	100 5% 1/10W	C751	1-114-708-41	CERAMIC	0.01uF 10% 50V
R1187	1-216-813-11	METAL CHIP	220 5% 1/10W	C752	1-164-159-11	CERAMIC	0.1uF 50V
R1191	1-216-864-11	SHORT CHIP	0			< CONNECTOR >	
R1192	1-216-864-11	SHORT CHIP	0	CN701	1-784-735-11	CONNECTOR, FFC 13P	
R1193	1-216-864-11	SHORT CHIP	0	CN702	1-784-766-11	CONNECTOR, FFC 5P	
R1194	1-216-864-11	SHORT CHIP	0	CN703	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
R1249	1-216-821-11	METAL CHIP	1K 5% 1/10W	CN704	1-785-328-11	PIN, CONNECTOR (LIGHT ANGLE) 2P	
R1252	1-216-295-11	SHORT CHIP	0			< DIODE >	
R1253	1-216-295-11	SHORT CHIP	0	D701	8-719-947-16	DIODE MTZJ-T-72-5.1A	
R1255	1-216-295-11	SHORT CHIP	0	D711	8-719-983-66	DIODE MTZJ-T-72-3.6B	
R1257	1-216-295-11	SHORT CHIP	0			< IC >	
R1258	1-216-295-11	SHORT CHIP	0	IC701	8-759-598-69	IC BA6956AN	
R1259	1-216-295-11	SHORT CHIP	0	IC712	8-759-598-69	IC BA6956AN	
R1260	1-216-295-11	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				
R1270	1-216-864-11	SHORT CHIP	0				

HCD-GZR88D/GZR99D

DRIVER FRONT

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q731	8-729-029-66	TRANSISTOR DTC114ESA	
		< RESISTOR >	
R701	1-249-413-11	CARBON 470 5% 1/4W	
R702	1-247-807-31	CARBON 100 5% 1/4W	
R711	1-247-831-11	CARBON 1K 5% 1/4W	
R712	1-247-847-11	CARBON 4.7K 5% 1/4W	
R713	1-247-863-11	CARBON 22K 5% 1/4W	
R721	1-247-847-11	CARBON 4.7K 5% 1/4W	
R722	1-247-847-11	CARBON 4.7K 5% 1/4W	
R723	1-247-847-11	CARBON 4.7K 5% 1/4W	
R731	1-247-807-31	CARBON 100 5% 1/4W	
R732	1-249-429-11	CARBON 10K 5% 1/4W	
R733	1-247-831-11	CARBON 1K 5% 1/4W	
R734	1-249-430-11	CARBON 12K 5% 1/4W	
R736	1-249-412-11	CARBON 390 5% 1/4W	
R751	1-247-847-11	CARBON 4.7K 5% 1/4W	

		FRONT BOARD	

		< CAPACITOR >	
C817	1-164-156-11	CERAMIC CHIP 0.1uF 25V	
C818	1-124-261-00	ELECT 10uF 20% 50V	
C819	1-126-176-11	ELECT 220uF 20% 10V	
C820	1-126-160-11	ELECT 1uF 20% 50V	
		< CONNECTOR >	
CN801	1-568-838-11	CONNECTOR, FFC 21P	
CN803	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P	
* CN804	1-564-728-11	PIN, CONNECTOR (SMALL TYPE) 12P	
* CN805	1-564-726-11	PIN, CONNECTOR (SMALL TYPE) 10P	
		< DIODE >	
* D801	6-501-884-01	LED SDPB31H3C0100 (1)	
* D802	6-501-884-01	LED SDPB31H3C0100 (2)	
* D803	6-501-884-01	LED SDPB31H3C0100 (3)	
* D804	6-501-884-01	LED SDPB31H3C0100 (4)	
* D805	6-501-884-01	LED SDPB31H3C0100 (5)	
* D806	6-501-884-01	LED SDPB31H3C0100 (6)	
D807	6-502-401-11	LED 1L434FA22E0TDT01 (DISC 1)	
D808	6-502-401-11	LED 1L434FA22E0TDT01 (DISC 2)	
D809	6-502-401-11	LED 1L434FA22E0TDT01 (DISC 3)	
D810	6-501-691-01	LED 1L434FV22D0TDF01 (REC TO USB)	
D811	6-501-691-01	LED 1L434FV22D0TDF01 (REC TO USB)	
D812	6-501-691-01	LED 1L434FV22D0TDF01 (REC TO TAPE) (EXCEPT E2,E51,AR,MX)	
D813	6-501-691-01	LED 1L434FV22D0TDF01 (REC TO TAPE) (EXCEPT E2,E51,AR,MX)	
		< IC >	
IC801	6-704-046-01	IC BU2099FV	
IC802	6-708-742-01	IC MM1663DTRE	
		< JUMPER RESISTOR >	
JR781	1-216-296-11	SHORT CHIP 0	
JR782	1-216-296-11	SHORT CHIP 0	
JR783	1-216-296-11	SHORT CHIP 0	
JR784	1-216-296-11	SHORT CHIP 0	

Ref. No.	Part No.	Description	Remark
JR785	1-216-296-11	SHORT CHIP 0	
JR786	1-216-296-11	SHORT CHIP 0	
JR787	1-216-296-11	SHORT CHIP 0	
JR788	1-216-296-11	SHORT CHIP 0	
JR789	1-216-864-11	SHORT CHIP 0	
JR790	1-216-296-11	SHORT CHIP 0	
JR791	1-216-296-11	SHORT CHIP 0	
		< TRANSISTOR >	
Q810	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q811	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q812	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
Q813	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
		< RESISTOR >	
R744	1-216-864-11	SHORT CHIP 0	
R745	1-216-864-11	SHORT CHIP 0 (EXCEPT E2,E51,AR,MX)	
R764	1-216-864-11	SHORT CHIP 0	
R765	1-216-864-11	SHORT CHIP 0	
R766	1-216-864-11	SHORT CHIP 0	
R767	1-216-864-11	SHORT CHIP 0	
R768	1-216-864-11	SHORT CHIP 0	
R769	1-216-864-11	SHORT CHIP 0	
R786	1-216-833-11	METAL CHIP 10K 5% 1/10W (E2,E51,AR,MX)	
R790	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R791	1-216-845-11	METAL CHIP 100K 5% 1/10W	
R792	1-216-824-11	METAL CHIP 1.8K 5% 1/10W	
R793	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R794	1-216-809-11	METAL CHIP 100 5% 1/10W	
R795	1-218-285-11	METAL CHIP 75 5% 1/10W	
R796	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R797	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R798	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R799	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R801	1-216-813-11	METAL CHIP 220 5% 1/10W	
R802	1-216-815-11	METAL CHIP 330 5% 1/10W	
R803	1-216-817-11	METAL CHIP 470 5% 1/10W	
R804	1-216-819-11	METAL CHIP 680 5% 1/10W	
R805	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R806	1-216-823-11	METAL CHIP 1.5K 5% 1/10W	
R807	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
R808	1-216-817-11	METAL CHIP 470 5% 1/10W	
R809	1-216-819-11	METAL CHIP 680 5% 1/10W	
R810	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R811	1-216-835-11	METAL CHIP 15K 5% 1/10W	
R812	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R813	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R814	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R815	1-216-818-11	METAL CHIP 560 5% 1/10W	
R816	1-216-818-11	METAL CHIP 560 5% 1/10W	
R817	1-216-818-11	METAL CHIP 560 5% 1/10W	
R818	1-216-818-11	METAL CHIP 560 5% 1/10W	
R819	1-216-818-11	METAL CHIP 560 5% 1/10W	
R820	1-216-818-11	METAL CHIP 560 5% 1/10W	
R821	1-216-818-11	METAL CHIP 560 5% 1/10W	
R822	1-216-818-11	METAL CHIP 560 5% 1/10W	
R823	1-216-818-11	METAL CHIP 560 5% 1/10W	
R824	1-216-818-11	METAL CHIP 560 5% 1/10W	
R825	1-216-818-11	METAL CHIP 560 5% 1/10W	
R826	1-216-818-11	METAL CHIP 560 5% 1/10W	

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R827	1-216-815-11	METAL CHIP	330	5%	1/10W	C007	1-104-658-11	ELECT	100uF	20%	10V
R828	1-216-815-11	METAL CHIP	330	5%	1/10W	C008	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
R829	1-216-815-11	METAL CHIP	330	5%	1/10W	C009	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
R830	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C010	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
R832	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C011	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
(EXCEPT E2,E51,AR,MX)						C012	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
R834	1-216-809-11	METAL CHIP	100	5%	1/10W	C016	1-104-658-11	ELECT	100uF	20%	10V
R835	1-216-809-11	METAL CHIP	100	5%	1/10W	C019	1-104-658-11	ELECT	100uF	20%	10V
R836	1-216-809-11	METAL CHIP	100	5%	1/10W	C021	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R837	1-216-809-11	METAL CHIP	100	5%	1/10W	C022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1591	1-216-864-11	SHORT CHIP	0			C023	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1592	1-216-864-11	SHORT CHIP	0			C024	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1593	1-216-864-11	SHORT CHIP	0			C025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1594	1-216-864-11	SHORT CHIP	0			C026	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1595	1-216-864-11	SHORT CHIP	0			C027	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1596	1-216-864-11	SHORT CHIP	0			C028	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1597	1-216-864-11	SHORT CHIP	0			C029	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
R1598	1-216-864-11	SHORT CHIP	0		(EXCEPT E2,E51,AR,MX)	C032	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
< SWITCH >						C034	1-107-726-11	CERAMIC CHIP	0.01uF	10%	16V
S801	1-771-410-21	SWITCH, TACTILE (REC TO TAPE)				C035	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
(EXCEPT E2,E51,AR,MX)						C036	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S802	1-771-410-21	SWITCH, TACTILE (REC TO USB)				C037	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S803	1-771-410-21	SWITCH, TACTILE (LCD ON/OFF)				C038	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S804	1-771-410-21	SWITCH, TACTILE (GROOVE)				C040	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S805	1-771-410-21	SWITCH, TACTILE (PRESET EQ)				C041	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S806	1-771-410-21	SWITCH, TACTILE (EQ BAND/MEMORY)				C042	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S807	1-771-410-21	SWITCH, TACTILE (SOUND FIELD)				C043	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S808	1-771-410-21	SWITCH, TACTILE (DISC 3)				C044	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
S809	1-771-410-21	SWITCH, TACTILE (DISC 2)				C045	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
S810	1-771-410-21	SWITCH, TACTILE (DISC 1)				C048	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
S811	1-771-410-21	SWITCH, TACTILE (DISPLAY)				C049	1-126-947-11	ELECT	47uF	20%	35V
*****						C050	1-135-372-31	ELECT	470uF	20%	10V
HP BOARD						C052	1-100-591-11	CERAMIC CHIP	1uF	10%	25V
*****						C053	1-100-591-11	CERAMIC CHIP	1uF	10%	25V
< CAPACITOR >						C054	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C740	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C055	1-126-964-11	ELECT	10uF	20%	50V
C741	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C056	1-126-964-11	ELECT	10uF	20%	50V
C742	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C057	1-126-956-11	ELECT	0.1uF	20%	50V
< JACK >						C058	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
J740	1-794-702-11	JACK, HEADPHONE (PHONES)				C059	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
< RESISTOR >						C060	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
R740	1-216-805-11	METAL CHIP	47	5%	1/10W	C061	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
R741	1-216-805-11	METAL CHIP	47	5%	1/10W	C063	1-216-864-11	SHORT CHIP	0		
R742	1-216-805-11	METAL CHIP	47	5%	1/10W	C064	1-126-951-11	ELECT	470uF	20%	35V
R743	1-216-805-11	METAL CHIP	47	5%	1/10W	C074	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
*****						C075	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
A-1671-636-A	LCD CTRL BOARD, COMPLETE					C076	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
*****						C077	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
< CAPACITOR >						C078	1-112-815-11	CERAMIC CHIP	10uF	20%	6.3V
C001	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	C079	1-107-726-11	CERAMIC CHIP	0.01uF	10%	16V
C002	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	C081	1-107-726-11	CERAMIC CHIP	0.01uF	10%	16V
C003	1-162-960-11	CERAMIC CHIP	220PF	10%	50V	< CONNECTOR >					
C005	1-104-658-11	ELECT	100uF	20%	10V	CN002	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
C006	1-104-658-11	ELECT	100uF	20%	10V	CN003	1-573-366-61	CONNECTOR, FFC/FPC (ZIF) 26P			
< DIODE >						CN004	1-815-494-21	PIN, CONNECTOR 2P			
D001	6-500-619-01	DIODE	RB520S-40TE61			CN005	1-568-826-11	CONNECTOR, FFC 7P			

HCD-GZR88D/GZR99D

LCD CTRL

LEFT

Ref. No.	Part No.	Description	Remark
D004	6-502-161-01	DIODE RB055L-40TE25	
D005	6-500-619-01	DIODE RB520S-40TE61	
D006	6-500-619-01	DIODE RB520S-40TE61	
D007	6-500-619-01	DIODE RB520S-40TE61	
D008	6-501-119-01	DIODE RR264M-400	
D009	6-501-758-01	DIODE MAZ8100G0LS0	
		< FERRITE BEAD >	
FB001	1-414-760-21	INDUCTOR, FERRITE BEAD	
FB002	1-500-329-21	INDUCTOR, FERRITE BEAD	
		< IC >	
IC001	6-702-300-01	IC TK11118CSCL-G	
IC002	6-714-035-01	IC TW8827-TA3-GR	
IC003	6-702-300-01	IC TK11118CSCL-G	
IC004	6-702-302-01	IC TK11133CSCL-G	
IC005	8-759-100-96	IC uPC4558G2	
IC006	6-711-169-01	IC MM3203BFBE	
IC007	6-712-617-01	IC SI-8008TM-TLS	
		< JUMPER RESISTOR >	
JR002	1-216-864-11	SHORT CHIP 0	
		< COIL >	
L068	1-456-498-11	COIL, CHOKE 47uH	
L069	1-456-498-11	COIL, CHOKE 47uH	
L070	1-456-498-11	COIL, CHOKE 47uH	
L071	1-456-498-11	COIL, CHOKE 47uH	
		< TRANSISTOR >	
Q001	6-550-355-01	FET RTQ045N03TR	
Q002	8-729-027-43	TRANSISTOR DTC114EKA-T146	
		< RESISTOR >	
R001	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R002	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R003	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R004	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R005	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R006	1-216-829-11	METAL CHIP 4.7K 5%	1/10W
R007	1-216-809-11	METAL CHIP 100 5%	1/10W
R008	1-216-809-11	METAL CHIP 100 5%	1/10W
R009	1-216-809-11	METAL CHIP 100 5%	1/10W
R010	1-216-809-11	METAL CHIP 100 5%	1/10W
R011	1-216-809-11	METAL CHIP 100 5%	1/10W
R012	1-216-849-11	METAL CHIP 220K 5%	1/10W
R013	1-216-821-11	METAL CHIP 1K 5%	1/10W
R014	1-216-857-11	METAL CHIP 1M 5%	1/10W
R016	1-216-864-11	SHORT CHIP 0	
R017	1-216-864-11	SHORT CHIP 0	
R018	1-216-864-11	SHORT CHIP 0	
R019	1-218-285-11	METAL CHIP 75 5%	1/10W
R021	1-216-845-11	METAL CHIP 100K 5%	1/10W
R022	1-216-837-11	METAL CHIP 22K 5%	1/10W
R023	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R024	1-216-809-11	METAL CHIP 100 5%	1/10W
R025	1-216-841-11	METAL CHIP 47K 5%	1/10W
R026	1-216-839-11	METAL CHIP 33K 5%	1/10W
R027	1-216-833-11	METAL CHIP 10K 5%	1/10W

Ref. No.	Part No.	Description	Remark
R028	1-216-833-11	METAL CHIP 10K 5%	1/10W
R029	1-216-809-11	METAL CHIP 100 5%	1/10W
R030	1-216-809-11	METAL CHIP 100 5%	1/10W
R031	1-216-809-11	METAL CHIP 100 5%	1/10W
R032	1-216-809-11	METAL CHIP 100 5%	1/10W
R033	1-216-821-11	METAL CHIP 1K 5%	1/10W
R034	1-216-809-11	METAL CHIP 100 5%	1/10W
R035	1-216-821-11	METAL CHIP 1K 5%	1/10W
R036	1-216-833-11	METAL CHIP 10K 5%	1/10W
R037	1-216-821-11	METAL CHIP 1K 5%	1/10W
R038	1-216-821-11	METAL CHIP 1K 5%	1/10W
R039	1-216-821-11	METAL CHIP 1K 5%	1/10W
R047	1-216-833-11	METAL CHIP 10K 5%	1/10W
R048	1-216-817-11	METAL CHIP 470 5%	1/10W
R050	1-216-841-11	METAL CHIP 47K 5%	1/10W
R052	1-216-835-11	METAL CHIP 15K 5%	1/10W
R053	1-216-833-11	METAL CHIP 10K 5%	1/10W
R054	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R055	1-216-813-11	METAL CHIP 220 5%	1/10W
R057	1-217-806-11	METAL CHIP 1 5%	1/8W
R058	1-217-806-11	METAL CHIP 1 5%	1/8W
R059	1-217-806-11	METAL CHIP 1 5%	1/8W
R060	1-217-806-11	METAL CHIP 1 5%	1/8W
R062	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R063	1-216-825-11	METAL CHIP 2.2K 5%	1/10W
R064	1-216-833-11	METAL CHIP 10K 5%	1/10W
R065	1-216-833-11	METAL CHIP 10K 5%	1/10W
R066	1-216-815-11	METAL CHIP 330 5%	1/10W
R067	1-216-841-11	METAL CHIP 47K 5%	1/10W
R068	1-216-851-11	METAL CHIP 330K 5%	1/10W
R069	1-216-833-11	METAL CHIP 10K 5%	1/10W
R070	1-216-849-11	METAL CHIP 220K 5%	1/10W
R071	1-216-849-11	METAL CHIP 220K 5%	1/10W
R073	1-216-296-11	SHORT CHIP 0	
R074	1-216-296-11	SHORT CHIP 0	
R075	1-216-296-11	SHORT CHIP 0	
R076	1-216-296-11	SHORT CHIP 0	
R079	1-216-833-11	METAL CHIP 10K 5%	1/10W
R080	1-216-809-11	METAL CHIP 100 5%	1/10W
R081	1-216-797-11	METAL CHIP 10 5%	1/10W
R082	1-216-797-11	METAL CHIP 10 5%	1/10W
		< VIBRATOR >	
* X001	1-814-031-11	VIBRATOR, CRYSTAL (27MHz)	

		LEFT BOARD	

		< CAPACITOR >	
C861	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C862	1-124-261-00	ELECT 10uF	20% 50V
C863	1-115-467-11	CERAMIC CHIP 0.22uF	10% 10V
		< CONNECTOR >	
* CN861	1-564-728-11	PIN, CONNECTOR (SMALL TYPE) 12P	
		< DIODE >	
D870	6-501-691-01	LED 1L434FV22D0TDF01 (I/C)	
D871	6-502-347-01	LED SLI-343M8CT32 (SUBWOOFER) (GZR99D)	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D872	6-502-401-11	LED 1L434FA22E0TDT01 (TIMER)		S863	1-771-410-21	SWITCH, TACTILE (TUNER/BAND)	
D873	6-502-401-11	LED 1L434FA22E0TDT01 (Dolby D)		S864	1-771-410-21	SWITCH, TACTILE (USB) (E2,E51,AR,MX)	
D874	6-502-401-11	LED 1L434FA22E0TDT01 (DTS)		S864	1-771-410-21	SWITCH, TACTILE (TAPE A/B)	
D875	6-502-401-11	LED 1L434FA22E0TDT01 (USB MEMORY)				(EXCEPT E2,E51,AR,MX)	
D876	6-502-401-11	LED 1L434FA22E0TDT01 (DVD)	(EXCEPT E2,E51,AR,MX)	S865	1-771-410-21	SWITCH, TACTILE (DVD) (E2,E51,AR,MX)	
				S865	1-771-410-21	SWITCH, TACTILE (USB)	(EXCEPT E2,E51,AR,MX)
D877	6-502-401-11	LED 1L434FA22E0TDT01 (DVD) (E2,E51,AR,MX)					
D877	6-502-401-11	LED 1L434FA22E0TDT01 (USB)	(EXCEPT E2,E51,AR,MX)	S866	1-771-410-21	SWITCH, TACTILE (DVD)	(EXCEPT E2,E51,AR,MX)
D878	6-502-401-11	LED 1L434FA22E0TDT01 (USB) (E2,E51,AR,MX)		S867	1-771-410-21	SWITCH, TACTILE (SUBWOOFER) (GZR99D)	
D878	6-502-401-11	LED 1L434FA22E0TDT01 (TAPE A/B)	(EXCEPT E2,E51,AR,MX)	S868	1-771-410-21	SWITCH, TACTILE (⏮/⏭)	
D879	6-502-401-11	LED 1L434FA22E0TDT01 (TUNER/BAND)		S881	1-771-410-21	SWITCH, TACTILE (OPTIONS)	
D880	6-502-401-11	LED 1L434FA22E0TDT01 (VIDEO/SAT)		*****			
		< IC >		A-1675-105-A	MAIN BOARD, COMPLETE (GZR88D:E3,E15)		
IC861	6-704-046-01	IC BU2099FV		A-1675-106-A	MAIN BOARD, COMPLETE (GZR88D:E4,E12)		
IC862	6-711-556-01	IC NJL24H400B-SA (IR)		A-1675-107-A	MAIN BOARD, COMPLETE (GZR88D:PH,SP,TH)		
		< JUMPER RESISTOR >		A-1675-108-A	MAIN BOARD, COMPLETE (GZR99D:E3,E15)		
JR872	1-216-864-11	SHORT CHIP 0		A-1675-109-A	MAIN BOARD, COMPLETE (GZR99D:E4)		
		< RESISTOR >		A-1675-110-A	MAIN BOARD, COMPLETE (GZR99D:PH,SP)		
R783	1-216-833-11	METAL CHIP 10K 5% 1/10W	(E2,E51,AR,MX)	A-1675-111-A	MAIN BOARD, COMPLETE (GZR99D:E2)		
R784	1-216-833-11	METAL CHIP 10K 5% 1/10W	(GZR88D)	A-1675-112-A	MAIN BOARD, COMPLETE (GZR99D:E51,AR)		
R860	1-216-809-11	METAL CHIP 100 5% 1/10W		A-1730-608-A	MAIN BOARD, COMPLETE (GZR99D:MX)		
R861	1-216-823-11	METAL CHIP 1.5K 5% 1/10W		*****			
R862	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		
R863	1-216-827-11	METAL CHIP 3.3K 5% 1/10W		< CAPACITOR >			
R864	1-216-829-11	METAL CHIP 4.7K 5% 1/10W		C101	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
R865	1-218-867-11	METAL CHIP 6.8K 0.5% 1/10W		C102	1-126-964-11	ELECT 10uF	20% 50V
R866	1-216-833-11	METAL CHIP 10K 5% 1/10W		C103	1-126-964-11	ELECT 10uF	20% 50V
R867	1-216-835-11	METAL CHIP 15K 5% 1/10W	(GZR99D)	C104	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
R868	1-216-821-11	METAL CHIP 1K 5% 1/10W		C105	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
R869	1-216-809-11	METAL CHIP 100 5% 1/10W		C106	1-126-934-11	ELECT 220uF	20% 16V
R870	1-216-821-11	METAL CHIP 1K 5% 1/10W		C107	1-126-959-11	ELECT 0.47uF	20% 50V
R871	1-216-807-11	METAL CHIP 68 5% 1/10W	(GZR99D)	C108	1-126-964-11	ELECT 10uF	20% 50V
R872	1-216-815-11	METAL CHIP 330 5% 1/10W		C111	1-126-964-11	ELECT 10uF	20% 50V
R873	1-216-815-11	METAL CHIP 330 5% 1/10W		C112	1-126-964-11	ELECT 10uF	20% 50V
R874	1-216-815-11	METAL CHIP 330 5% 1/10W		C115	1-126-964-11	ELECT 10uF	20% 50V
R875	1-216-815-11	METAL CHIP 330 5% 1/10W		C116	1-126-964-11	ELECT 10uF	20% 50V
R876	1-216-815-11	METAL CHIP 330 5% 1/10W	(EXCEPT E2,E51,AR,MX)	C119	1-126-964-11	ELECT 10uF	20% 50V
R877	1-216-815-11	METAL CHIP 330 5% 1/10W		C120	1-126-964-11	ELECT 10uF	20% 50V
R878	1-216-815-11	METAL CHIP 330 5% 1/10W		C121	1-126-964-11	ELECT 10uF	20% 50V
R879	1-216-815-11	METAL CHIP 330 5% 1/10W		C122	1-126-964-11	ELECT 10uF	20% 50V
R880	1-216-815-11	METAL CHIP 330 5% 1/10W		C127	1-126-964-11	ELECT 10uF	20% 50V
R897	1-216-809-11	METAL CHIP 100 5% 1/10W		C128	1-126-964-11	ELECT 10uF	20% 50V
R898	1-216-809-11	METAL CHIP 100 5% 1/10W		C129	1-126-964-11	ELECT 10uF	20% 50V
R899	1-216-809-11	METAL CHIP 100 5% 1/10W		C130	1-126-964-11	ELECT 10uF	20% 50V
R1801	1-216-823-11	METAL CHIP 1.5K 5% 1/10W		C131	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
		< SWITCH >		C132	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V
S861	1-771-410-21	SWITCH, TACTILE (DISC SKIP/EX-CHANGE)		C133	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
S862	1-771-410-21	SWITCH, TACTILE (VIDEO/SAT)		C134	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V
				C135	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
				C136	1-164-227-11	CERAMIC CHIP 0.022uF	10% 25V
				C137	1-126-964-11	ELECT 10uF	20% 50V
				C138	1-126-964-11	ELECT 10uF	20% 50V
				C139	1-110-563-11	CERAMIC CHIP 0.068uF	10% 16V
				C140	1-110-563-11	CERAMIC CHIP 0.068uF	10% 16V
				C141	1-126-961-11	ELECT 2.2uF	20% 50V
				C142	1-126-961-11	ELECT 2.2uF	20% 50V
				C143	1-136-167-00	FILM 0.15uF	5% 50V
				C144	1-136-167-00	FILM 0.15uF	5% 50V
				C145	1-136-170-00	FILM 0.27uF	5% 50V

HCD-GZR88D/GZR99D

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C146	1-136-170-00	FILM	0.27uF 5% 50V	C550	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C147	1-126-960-11	ELECT	1uF 20% 50V	C552	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C148	1-164-230-11	CERAMIC CHIP	220PF 5% 50V	C553	1-126-964-11	ELECT	10uF 20% 50V
C149	1-164-230-11	CERAMIC CHIP	220PF 5% 50V	C554	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C150	1-114-146-11	CERAMIC CHIP	0.047uF 10% 25V	C581	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C151	1-126-964-11	ELECT	10uF 20% 50V	C591	1-162-913-11	CERAMIC CHIP	8PF 0.5PF 50V
C152	1-126-964-11	ELECT	10uF 20% 50V	C592	1-162-912-11	CERAMIC CHIP	7PF 0.5PF 50V
C153	1-126-964-11	ELECT	10uF 20% 50V	C596	1-125-891-11	CERAMIC CHIP	0.47uF 10% 10V
C154	1-126-964-11	ELECT	10uF 20% 50V	C599	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C155	1-126-964-11	ELECT	10uF 20% 50V	C604	1-104-662-11	ELECT	22uF 20% 25V
C156	1-126-964-11	ELECT	10uF 20% 50V	C605	1-126-960-11	ELECT	1uF 20% 50V
C158	1-126-959-11	ELECT	0.47uF 20% 50V	C606	1-126-947-11	ELECT	47uF 20% 35V
C160	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	C616	1-126-964-11	ELECT	10uF 20% 50V
C161	1-104-662-11	ELECT	22uF 20% 25V	C617	1-126-964-11	ELECT	10uF 20% 50V
C162	1-126-961-11	ELECT	2.2uF 20% 50V	C618	1-126-964-11	ELECT	10uF 20% 50V
C163	1-124-465-00	ELECT	0.47uF 20% 50V	C683	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C164	1-126-961-11	ELECT	2.2uF 20% 50V	C684	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C165	1-126-957-11	ELECT	0.22uF 20% 50V	C685	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C167	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C686	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
C168	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C687	1-126-964-11	ELECT	10uF 20% 50V
C170	1-137-190-11	FILM	0.22uF 5% 50V	C901	1-126-959-11	ELECT	0.47uF 20% 50V
C171	1-126-964-11	ELECT	10uF 20% 50V	C902	1-126-925-11	ELECT	470uF 20% 10V
C172	1-126-964-11	ELECT	10uF 20% 50V	C911	1-126-959-11	ELECT	0.47uF 20% 50V
C175	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V (EXCEPT E2,E51,AR,MX)	C912	1-104-658-11	ELECT	100uF 20% 10V
C176	1-162-969-11	CERAMIC CHIP	0.0068uF 10% 25V (EXCEPT E2,E51,AR,MX)	C921	1-104-665-11	ELECT	100uF 20% 25V
C181	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V	C922	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C182	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	C923	1-165-730-31	ELECT	680uF 20% 16V
C183	1-104-658-11	ELECT	100uF 20% 10V	C924	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C184	1-126-964-11	ELECT	10uF 20% 50V	C931	1-104-665-11	ELECT	100uF 20% 25V
C185	1-104-658-11	ELECT	100uF 20% 10V	C932	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C186	1-126-964-11	ELECT	10uF 20% 50V	C933	1-165-730-31	ELECT	680uF 20% 16V
C187	1-126-964-11	ELECT	10uF 20% 50V	C934	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C188	1-126-964-11	ELECT	10uF 20% 50V	C951	1-104-665-11	ELECT	100uF 20% 25V
C189	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C952	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C201	1-104-658-11	ELECT	100uF 20% 10V (GZR88D)	C953	1-165-730-31	ELECT	680uF 20% 16V
C202	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V (GZR88D)	C954	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C203	1-126-964-11	ELECT	10uF 20% 50V	C961	1-126-959-11	ELECT	0.47uF 20% 50V
C204	1-162-919-11	CERAMIC CHIP	22PF 5% 50V (GZR88D)	C962	1-126-768-11	ELECT	2200uF 20% 16V
C205	1-162-923-11	CERAMIC CHIP	47PF 5% 50V (GZR88D)	C963	1-126-947-11	ELECT	47uF 20% 35V (GZR88D)
C206	1-126-947-11	ELECT	47uF 20% 35V (GZR88D)	C971	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C211	1-104-665-11	ELECT	100uF 20% 25V	C972	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C212	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C981	1-125-891-11	CERAMIC CHIP	0.47uF 10% 10V
C221	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	C997	1-216-864-11	SHORT CHIP	0
C222	1-162-960-11	CERAMIC CHIP	220PF 10% 50V	< CONNECTOR >			
C223	1-164-156-11	CERAMIC CHIP	0.1uF 25V	CN101	1-784-766-11	CONNECTOR, FFC 5P	
C231	1-107-698-11	ELECT	10uF 20% 25V	CN102	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT E2,E51,AR,MX)	
C233	1-164-156-11	CERAMIC CHIP	0.1uF 25V (GZR88D)	CN191	1-779-275-11	CONNECTOR, FFC (LIF(NON-ZIF)) 7P	
C500	1-126-916-11	ELECT	1000uF 20% 6.3V	CN211	1-784-770-11	CONNECTOR, FFC 9P	
C508	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	CN241	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
C530	1-164-156-11	CERAMIC CHIP	0.1uF 25V	CN501	1-568-838-11	CONNECTOR, FFC 21P	
C543	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	CN503	1-568-826-11	CONNECTOR, FFC 7P	
C545	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	CN504	1-779-277-11	CONNECTOR, FFC (LIF(NON-ZIF)) 9P	
C546	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	CN511	1-784-766-11	CONNECTOR, FFC 5P	
C547	1-164-156-11	CERAMIC CHIP	0.1uF 25V	CN591	1-822-599-11	CONNECTOR, FFC/FPC (LIF) 6P	
				CN602	1-564-506-11	PLUG, CONNECTOR 3P	
				CN621	1-568-830-11	CONNECTOR, FFC 11P (EXCEPT E2,E51,AR,MX)	
				CN641	1-784-774-11	CONNECTOR, FFC 13P	
				CN901	1-778-981-21	CONNECTOR, BOARD TO BOARD 13P	
				CN912	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* CN951	1-564-711-11	PIN, CONNECTOR (SMALL TYPE) 9P		JR012	1-216-295-11	SHORT CHIP	0
		< DIODE >		JR013	1-216-295-11	SHORT CHIP	0
D101	6-500-848-01	DIODE MC2840-T112-1		JR014	1-216-295-11	SHORT CHIP	0
D102	6-501-817-01	DIODE MA2J1110GLS0		JR015	1-216-295-11	SHORT CHIP	0
D103	6-500-848-01	DIODE MC2840-T112-1		JR016	1-216-295-11	SHORT CHIP	0
D104	6-500-335-01	DIODE MC2838-T112-1		JR100	1-216-864-11	SHORT CHIP	0
D551	6-500-334-01	DIODE MC2836-T112-1		JR101	1-216-296-11	SHORT CHIP	0
				JR102	1-216-296-11	SHORT CHIP	0
D553	6-500-334-01	DIODE MC2836-T112-1		JR106	1-216-296-11	SHORT CHIP	0
D616	6-501-768-01	DIODE MAZ8120GMLS0		JR107	1-216-296-11	SHORT CHIP	0
D618	6-501-817-01	DIODE MA2J1110GLS0		JR108	1-216-296-11	SHORT CHIP	0
D631	6-500-334-01	DIODE MC2836-T112-1 (EXCEPT E2,E51,AR,MX)		JR109	1-216-296-11	SHORT CHIP	0
D681	6-501-817-01	DIODE MA2J1110GLS0		JR112	1-216-296-11	SHORT CHIP	0
				JR113	1-216-296-11	SHORT CHIP	0
D682	6-501-817-01	DIODE MA2J1110GLS0		JR114	1-216-296-11	SHORT CHIP	0
D901	6-500-335-01	DIODE MC2838-T112-1		JR115	1-216-864-11	SHORT CHIP	0
D921	6-502-489-01	DIODE RK46LF-T1		JR116	1-216-296-11	SHORT CHIP	0
D922	6-502-777-01	DIODE RM4ZLF-T1		JR117	1-216-864-11	SHORT CHIP	0
D923	6-501-730-01	DIODE MAZ8051GMLS0		JR169	1-216-295-11	SHORT CHIP	0
				JR191	1-216-295-11	SHORT CHIP	0
D931	6-502-489-01	DIODE RK46LF-T1		JR192	1-216-295-11	SHORT CHIP	0
D932	6-502-777-01	DIODE RM4ZLF-T1		JR500	1-216-864-11	SHORT CHIP	0
D933	6-501-734-01	DIODE MAZ8056GMLS0		JR501	1-216-864-11	SHORT CHIP	0
D951	6-502-489-01	DIODE RK46LF-T1		JR502	1-216-296-11	SHORT CHIP	0
D952	6-502-777-01	DIODE RM4ZLF-T1		JR503	1-216-864-11	SHORT CHIP	0
D953	6-501-758-01	DIODE MAZ8100GOLS0		JR504	1-216-864-11	SHORT CHIP	0
		< FERRITE BEAD >		JR505	1-216-296-11	SHORT CHIP	0
FB511	1-469-324-21	FERRITE, EMI (SMD) (2012)		JR506	1-216-296-11	SHORT CHIP	0
		< ENCAPSULATED COMPONENT >		JR507	1-216-296-11	SHORT CHIP	0
FL911	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR508	1-216-296-11	SHORT CHIP	0
FL921	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR509	1-216-296-11	SHORT CHIP	0
FL922	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR510	1-216-864-11	SHORT CHIP	0
FL931	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR511	1-216-864-11	SHORT CHIP	0
FL932	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR512	1-216-864-11	SHORT CHIP	0
				JR513	1-216-864-11	SHORT CHIP	0
FL951	1-236-071-11	ENCAPSULATED COMPONENT (EMI FILTER)		JR933	1-216-295-11	SHORT CHIP	0
		< IC >		JR961	1-216-295-11	SHORT CHIP	0 (GZR99D)
IC101	6-712-027-01	IC R2A15216FP		JR971	1-216-864-11	SHORT CHIP	0
IC181	6-705-337-01	IC TK11150CSCL-G				< COIL >	
IC182	8-759-596-34	IC SN74LV4053APWR		L921	1-400-424-11	COIL, CHOKE	47uH
IC201	8-759-278-58	IC NJM4558V-TE2 (GZR88D)		L931	1-400-424-11	COIL, CHOKE	47uH
IC501	A-1732-012-A	IC uPD78F1105GF(S)-GAS-AX (for SERVICE)		L951	1-400-424-11	COIL, CHOKE	47uH
						< TRANSISTOR >	
IC682	6-712-723-01	IC PST8429NR		Q101	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
IC901	6-701-760-01	IC uPC3504AHF		Q102	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
IC911	6-713-031-01	IC KIA7805API-U/PF		Q128	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
IC921	6-713-826-01	IC SI-8001FFEK		Q178	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
IC931	6-713-883-01	IC SI-8008TFEK		Q182	8-729-027-43	TRANSISTOR	DTC114EKA-T146
				Q231	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
IC951	6-713-826-01	IC SI-8001FFEK		Q241	6-550-889-01	TRANSISTOR	2SC5938-T112-1B
IC961	6-713-032-01	IC KIA7809API-U/PF		Q242	6-550-889-01	TRANSISTOR	2SC5938-T112-1B
IC971	8-759-338-95	IC NJM2903V(Te2)		Q552	8-729-027-23	TRANSISTOR	DTA114EKA-T146
		< JACK >		Q604	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
J221	1-815-045-11	JACK, PIN 2P (VIDEO/SAT AUDIO IN)		Q605	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
J231	1-774-785-11	JACK, PIN 1P (SUBWOOFER OUT) (GZR88D)		Q606	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF
		< JUMPER RESISTOR >		Q616	8-729-036-89	TRANSISTOR	KTC3198GR-AT
JR002	1-216-295-11	SHORT CHIP	0	Q617	8-729-036-89	TRANSISTOR	KTC3198GR-AT
JR007	1-216-295-11	SHORT CHIP	0	Q618	8-729-037-13	TRANSISTOR	KTA1271Y

HCD-GZR88D/GZR99D

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q620	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R136	1-216-818-11	METAL CHIP	560 5% 1/10W
Q621	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R137	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
Q631	6-551-276-01	TRANSISTOR	RT1N431C-TP-1 (EXCEPT E2,E51,AR,MX)	R138	1-216-826-11	METAL CHIP	2.7K 5% 1/10W
Q632	6-551-276-01	TRANSISTOR	RT1N431C-TP-1 (EXCEPT E2,E51,AR,MX)	R139	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q633	6-551-276-01	TRANSISTOR	RT1N431C-TP-1 (EXCEPT E2,E51,AR,MX)	R140	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q634	8-729-040-76	TRANSISTOR	KTA1273-Y-AT (EXCEPT E2,E51,AR,MX)	R141	1-216-813-11	METAL CHIP	220 5% 1/10W
Q635	8-729-040-76	TRANSISTOR	KTA1273-Y-AT (EXCEPT E2,E51,AR,MX)	R142	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q636	8-729-040-76	TRANSISTOR	KTA1273-Y-AT (EXCEPT E2,E51,AR,MX)	R143	1-216-813-11	METAL CHIP	220 5% 1/10W
Q681	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R144	1-216-864-11	SHORT CHIP	0
Q691	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R150	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
Q692	8-729-027-23	TRANSISTOR	DTA114EKA-T146	R152	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q911	8-729-040-76	TRANSISTOR	KTA1273-Y-AT	R155	1-216-821-11	METAL CHIP	1K 5% 1/10W (EXCEPT E2,E51,AR,MX)
Q912	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R156	1-216-821-11	METAL CHIP	1K 5% 1/10W (EXCEPT E2,E51,AR,MX)
Q921	8-729-040-76	TRANSISTOR	KTA1273-Y-AT	R182	1-216-864-11	SHORT CHIP	0
Q922	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R184	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q925	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R185	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q933	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R186	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q934	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R187	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q935	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R188	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q951	8-729-040-76	TRANSISTOR	KTA1273-Y-AT	R189	1-216-864-11	SHORT CHIP	0
Q952	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R191	1-216-864-11	SHORT CHIP	0
Q955	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R193	1-216-845-11	METAL CHIP	100K 5% 1/10W
Q956	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF (GZR88D)	R201	1-216-809-11	METAL CHIP	100 5% 1/10W (GZR88D)
Q957	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF (GZR88D)	R202	1-216-833-11	METAL CHIP	10K 5% 1/10W (GZR88D)
< RESISTOR >				R203	1-216-830-11	METAL CHIP	5.6K 5% 1/10W (GZR88D)
R101	1-216-809-11	METAL CHIP	100 5% 1/10W	R204	1-216-864-11	SHORT CHIP	0 (GZR99D)
R102	1-216-809-11	METAL CHIP	100 5% 1/10W	R205	1-216-817-11	METAL CHIP	470 5% 1/10W (GZR88D)
R103	1-216-809-11	METAL CHIP	100 5% 1/10W	R211	1-216-864-11	SHORT CHIP	0
R104	1-216-809-11	METAL CHIP	100 5% 1/10W	R212	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (E2)
R105	1-216-809-11	METAL CHIP	100 5% 1/10W	R213	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (E2)
R106	1-216-809-11	METAL CHIP	100 5% 1/10W	R214	1-216-821-11	METAL CHIP	1K 5% 1/10W
R107	1-216-809-11	METAL CHIP	100 5% 1/10W	R215	1-216-821-11	METAL CHIP	1K 5% 1/10W
R108	1-216-809-11	METAL CHIP	100 5% 1/10W	R221	1-216-845-11	METAL CHIP	100K 5% 1/10W
R109	1-216-809-11	METAL CHIP	100 5% 1/10W	R222	1-216-845-11	METAL CHIP	100K 5% 1/10W
R110	1-216-809-11	METAL CHIP	100 5% 1/10W	R223	1-216-821-11	METAL CHIP	1K 5% 1/10W
R111	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R224	1-216-821-11	METAL CHIP	1K 5% 1/10W
R112	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R231	1-216-841-11	METAL CHIP	47K 5% 1/10W
R113	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R232	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R114	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R233	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R115	1-216-833-11	METAL CHIP	10K 5% 1/10W	R235	1-216-841-11	METAL CHIP	47K 5% 1/10W
R116	1-216-833-11	METAL CHIP	10K 5% 1/10W	R236	1-216-864-11	SHORT CHIP	0
R117	1-216-819-11	METAL CHIP	680 5% 1/10W	R238	1-216-864-11	SHORT CHIP	0 (GZR88D)
R118	1-216-819-11	METAL CHIP	680 5% 1/10W	R239	1-216-845-11	METAL CHIP	100K 5% 1/10W (GZR88D)
R119	1-216-821-11	METAL CHIP	1K 5% 1/10W	R240	1-216-864-11	SHORT CHIP	0 (GZR88D)
R120	1-216-821-11	METAL CHIP	1K 5% 1/10W	R241	1-216-813-11	METAL CHIP	220 5% 1/10W
R121	1-216-833-11	METAL CHIP	10K 5% 1/10W	R242	1-216-813-11	METAL CHIP	220 5% 1/10W
R122	1-216-833-11	METAL CHIP	10K 5% 1/10W	R244	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R123	1-216-809-11	METAL CHIP	100 5% 1/10W	R245	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R124	1-216-857-11	METAL CHIP	1M 5% 1/10W	R246	1-216-841-11	METAL CHIP	47K 5% 1/10W
R130	1-216-809-11	METAL CHIP	100 5% 1/10W	R247	1-216-841-11	METAL CHIP	47K 5% 1/10W
R131	1-216-833-11	METAL CHIP	10K 5% 1/10W	R501	1-216-809-11	METAL CHIP	100 5% 1/10W
R132	1-216-845-11	METAL CHIP	100K 5% 1/10W	R502	1-216-809-11	METAL CHIP	100 5% 1/10W
R133	1-216-841-11	METAL CHIP	47K 5% 1/10W	R503	1-216-833-11	METAL CHIP	10K 5% 1/10W
R134	1-216-829-11	METAL CHIP	4.7K 5% 1/10W				
R135	1-216-824-11	METAL CHIP	1.8K 5% 1/10W				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R504	1-216-833-11	METAL CHIP	10K 5% 1/10W	R566	1-216-809-11	METAL CHIP	100 5% 1/10W
R505	1-216-809-11	METAL CHIP	100 5% 1/10W	R567	1-216-809-11	METAL CHIP	100 5% 1/10W
R509	1-216-809-11	METAL CHIP	100 5% 1/10W	R568	1-216-809-11	METAL CHIP	100 5% 1/10W
R511	1-216-809-11	METAL CHIP	100 5% 1/10W	R569	1-216-809-11	METAL CHIP	100 5% 1/10W
R512	1-216-809-11	METAL CHIP	100 5% 1/10W	R570	1-216-809-11	METAL CHIP	100 5% 1/10W
R513	1-216-841-11	METAL CHIP	47K 5% 1/10W	R571	1-216-809-11	METAL CHIP	100 5% 1/10W
R515	1-216-809-11	METAL CHIP	100 5% 1/10W	R572	1-216-809-11	METAL CHIP	100 5% 1/10W
R516	1-216-809-11	METAL CHIP	100 5% 1/10W	R574	1-216-809-11	METAL CHIP	100 5% 1/10W
R517	1-216-809-11	METAL CHIP	100 5% 1/10W	R575	1-216-809-11	METAL CHIP	100 5% 1/10W
R519	1-216-809-11	METAL CHIP	100 5% 1/10W	R576	1-216-809-11	METAL CHIP	100 5% 1/10W
R521	1-216-809-11	METAL CHIP	100 5% 1/10W	R577	1-216-809-11	METAL CHIP	100 5% 1/10W
R522	1-216-809-11	METAL CHIP	100 5% 1/10W	R578	1-216-809-11	METAL CHIP	100 5% 1/10W
R523	1-216-809-11	METAL CHIP	100 5% 1/10W	R579	1-216-809-11	METAL CHIP	100 5% 1/10W
R525	1-216-809-11	METAL CHIP	100 5% 1/10W	R580	1-216-809-11	METAL CHIP	100 5% 1/10W
R526	1-216-809-11	METAL CHIP	100 5% 1/10W	R581	1-216-809-11	METAL CHIP	100 5% 1/10W
R527	1-216-809-11	METAL CHIP	100 5% 1/10W	R582	1-216-809-11	METAL CHIP	100 5% 1/10W
R528	1-216-809-11	METAL CHIP	100 5% 1/10W	R583	1-216-809-11	METAL CHIP	100 5% 1/10W
R529	1-216-809-11	METAL CHIP	100 5% 1/10W	R584	1-216-809-11	METAL CHIP	100 5% 1/10W
R530	1-216-833-11	METAL CHIP	10K 5% 1/10W	R585	1-216-809-11	METAL CHIP	100 5% 1/10W
R531	1-216-809-11	METAL CHIP	100 5% 1/10W	R586	1-216-809-11	METAL CHIP	100 5% 1/10W
R532	1-216-809-11	METAL CHIP	100 5% 1/10W	R587	1-216-809-11	METAL CHIP	100 5% 1/10W
R533	1-216-809-11	METAL CHIP	100 5% 1/10W	R588	1-216-809-11	METAL CHIP	100 5% 1/10W
R534	1-216-841-11	METAL CHIP	47K 5% 1/10W	R589	1-216-841-11	METAL CHIP	47K 5% 1/10W
R535	1-216-845-11	METAL CHIP	100K 5% 1/10W	R591	1-216-864-11	SHORT CHIP	0
R536	1-216-845-11	METAL CHIP	100K 5% 1/10W	R593	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R537	1-216-841-11	METAL CHIP	47K 5% 1/10W	R594	1-216-830-11	METAL CHIP	5.6K 5% 1/10W
R538	1-216-821-11	METAL CHIP	1K 5% 1/10W	R595	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
R539	1-216-845-11	METAL CHIP	100K 5% 1/10W	R596	1-216-834-11	METAL CHIP	12K 5% 1/10W
R540	1-216-809-11	METAL CHIP	100 5% 1/10W	R598	1-216-833-11	METAL CHIP	10K 5% 1/10W
R541	1-216-809-11	METAL CHIP	100 5% 1/10W	R599	1-216-833-11	METAL CHIP	10K 5% 1/10W
R542	1-216-809-11	METAL CHIP	100 5% 1/10W	R607	1-216-799-11	METAL CHIP	15 5% 1/10W
R543	1-216-809-11	METAL CHIP	100 5% 1/10W	R608	1-216-799-11	METAL CHIP	15 5% 1/10W
R544	1-216-809-11	METAL CHIP	100 5% 1/10W	R609	1-216-837-11	METAL CHIP	22K 5% 1/10W
R545	1-216-809-11	METAL CHIP	100 5% 1/10W	R610	1-216-849-11	METAL CHIP	220K 5% 1/10W
R546	1-216-809-11	METAL CHIP	100 5% 1/10W	R611	1-216-837-11	METAL CHIP	22K 5% 1/10W
R547	1-216-825-11	METAL CHIP	2.2K 5% 1/10W	R612	1-216-849-11	METAL CHIP	220K 5% 1/10W
R549	1-216-809-11	METAL CHIP	100 5% 1/10W	R616	1-216-809-11	METAL CHIP	100 5% 1/10W
R550	1-216-841-11	METAL CHIP	47K 5% 1/10W	R617	1-216-809-11	METAL CHIP	100 5% 1/10W
R551	1-216-833-11	METAL CHIP	10K 5% 1/10W	R619	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R551	1-216-841-11	METAL CHIP	47K 5% 1/10W	△ R620	1-243-681-71	METAL OXIDE	33 5% 1W F
R551	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R621	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R552	1-216-849-11	METAL CHIP	220K 5% 1/10W	R623	1-216-833-11	METAL CHIP	10K 5% 1/10W
R553	1-216-835-11	METAL CHIP	15K 5% 1/10W	R624	1-216-845-11	METAL CHIP	100K 5% 1/10W
R553	1-216-864-11	SHORT CHIP	0 (GZR99D)	R625	1-216-841-11	METAL CHIP	47K 5% 1/10W
R554	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	R627	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R554	1-216-841-11	METAL CHIP	47K 5% 1/10W	R628	1-216-821-11	METAL CHIP	1K 5% 1/10W
R554	1-216-864-11	SHORT CHIP	0 (PH,SP,TH)	R631	1-216-821-11	METAL CHIP	1K 5% 1/10W
R554	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W	R632	1-216-833-11	METAL CHIP	10K 5% 1/10W
R557	1-216-844-11	METAL CHIP	82K 5% 1/10W	R633	1-216-821-11	METAL CHIP	1K 5% 1/10W
R561	1-216-809-11	METAL CHIP	100 5% 1/10W	R634	1-216-821-11	METAL CHIP	1K 5% 1/10W
R562	1-216-821-11	METAL CHIP	1K 5% 1/10W	R635	1-216-833-11	METAL CHIP	10K 5% 1/10W
R563	1-216-821-11	METAL CHIP	1K 5% 1/10W	R636	1-216-833-11	METAL CHIP	10K 5% 1/10W
R564	1-216-821-11	METAL CHIP	1K 5% 1/10W	R641	1-216-837-11	METAL CHIP	22K 5% 1/10W
R565	1-216-821-11	METAL CHIP	1K 5% 1/10W	R642	1-216-829-11	METAL CHIP	4.7K 5% 1/10W

HCD-GZR88D/GZR99D

MAIN **MIC**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R643	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R930	1-216-833-11	METAL CHIP	10K 5% 1/10W
R644	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R931	1-216-797-11	METAL CHIP	10 5% 1/10W
R645	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R932	1-218-855-11	METAL CHIP	2.2K 0.5% 1/10W
R646	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R933	1-218-887-11	METAL CHIP	47K 0.5% 1/10W
R647	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R934	1-218-855-11	METAL CHIP	2.2K 0.5% 1/10W
R648	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R935	1-218-835-11	METAL CHIP	330 0.5% 1/10W
R649	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R936	1-218-839-11	METAL CHIP	470 0.5% 1/10W
R650	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R951	1-216-797-11	METAL CHIP	10 5% 1/10W
R651	1-216-837-11	METAL CHIP	22K 5% 1/10W	R952	1-218-851-11	METAL CHIP	1.5K 0.5% 1/10W
R652	1-216-837-11	METAL CHIP	22K 5% 1/10W	R953	1-218-879-11	METAL CHIP	22K 0.5% 1/10W
R653	1-216-837-11	METAL CHIP	22K 5% 1/10W	R954	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
R654	1-216-837-11	METAL CHIP	22K 5% 1/10W	R955	1-218-835-11	METAL CHIP	330 0.5% 1/10W
R655	1-216-837-11	METAL CHIP	22K 5% 1/10W	R956	1-218-839-11	METAL CHIP	470 0.5% 1/10W
R656	1-216-837-11	METAL CHIP	22K 5% 1/10W	R957	1-216-833-11	METAL CHIP	10K 5% 1/10W
R657	1-216-837-11	METAL CHIP	22K 5% 1/10W	R958	1-216-817-11	METAL CHIP	470 5% 1/10W
R658	1-216-837-11	METAL CHIP	22K 5% 1/10W	R959	1-216-833-11	METAL CHIP	10K 5% 1/10W
R659	1-216-809-11	METAL CHIP	100 5% 1/10W	△ R961	1-216-377-11	METAL OXIDE	4.7 5% 2W F (GZR88D)
R660	1-216-809-11	METAL CHIP	100 5% 1/10W	R962	1-216-818-11	METAL CHIP	560 5% 1/10W (GZR88D)
R661	1-216-809-11	METAL CHIP	100 5% 1/10W	R963	1-216-830-11	METAL CHIP	5.6K 5% 1/10W (GZR88D)
R662	1-216-809-11	METAL CHIP	100 5% 1/10W	R964	1-216-837-11	METAL CHIP	22K 5% 1/10W (GZR88D)
R663	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R965	1-216-837-11	METAL CHIP	22K 5% 1/10W (GZR88D)
R664	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R966	1-216-821-11	METAL CHIP	1K 5% 1/10W (GZR88D)
R665	1-216-829-11	METAL CHIP	4.7K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R971	1-216-809-11	METAL CHIP	100 5% 1/10W
R666	1-216-837-11	METAL CHIP	22K 5% 1/10W (EXCEPT E2,E51,AR,MX)	R972	1-216-815-11	METAL CHIP	330 5% 1/10W
R682	1-216-837-11	METAL CHIP	22K 5% 1/10W	R973	1-216-828-11	METAL CHIP	3.9K 5% 1/10W
R683	1-216-837-11	METAL CHIP	22K 5% 1/10W	R974	1-216-834-11	METAL CHIP	12K 5% 1/10W
R684	1-216-837-11	METAL CHIP	22K 5% 1/10W	R975	1-216-864-11	SHORT CHIP	0
R685	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R976	1-216-864-11	SHORT CHIP	0
R686	1-216-839-11	METAL CHIP	33K 5% 1/10W	R980	1-218-446-11	METAL CHIP	1 5% 1/10W
R691	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R981	1-218-446-11	METAL CHIP	1 5% 1/10W
R693	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R982	1-218-446-11	METAL CHIP	1 5% 1/10W
R694	1-216-853-11	METAL CHIP	470K 5% 1/10W	R983	1-218-446-11	METAL CHIP	1 5% 1/10W
R695	1-216-809-11	METAL CHIP	100 5% 1/10W	R984	1-218-446-11	METAL CHIP	1 5% 1/10W
R901	1-216-836-11	METAL CHIP	18K 5% 1/10W	R985	1-218-446-11	METAL CHIP	1 5% 1/10W
R902	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R986	1-218-446-11	METAL CHIP	1 5% 1/10W
R911	1-216-809-11	METAL CHIP	100 5% 1/10W	R987	1-218-446-11	METAL CHIP	1 5% 1/10W
R912	1-216-809-11	METAL CHIP	100 5% 1/10W	R988	1-218-446-11	METAL CHIP	1 5% 1/10W
R913	1-216-809-11	METAL CHIP	100 5% 1/10W	R989	1-218-446-11	METAL CHIP	1 5% 1/10W
R914	1-216-809-11	METAL CHIP	100 5% 1/10W			< VIBRATOR >	
R917	1-216-833-11	METAL CHIP	10K 5% 1/10W	X501	1-795-950-11	VIBRATOR, CRYSTAL (32.768kHz)	
R918	1-216-817-11	METAL CHIP	470 5% 1/10W	X502	1-795-721-21	VIBRATOR, CERAMIC (20MHz)	
R919	1-216-833-11	METAL CHIP	10K 5% 1/10W	*****			
R921	1-216-797-11	METAL CHIP	10 5% 1/10W			MIC BOARD	
R922	1-218-851-11	METAL CHIP	1.5K 0.5% 1/10W			*****	
R924	1-218-847-11	METAL CHIP	1K 0.5% 1/10W			< CAPACITOR >	
R925	1-218-835-11	METAL CHIP	330 0.5% 1/10W	C700	1-164-156-11	CERAMIC CHIP	0.1uF 25V
R926	1-218-839-11	METAL CHIP	470 0.5% 1/10W	C701	1-164-156-11	CERAMIC CHIP	0.1uF 25V
R927	1-216-833-11	METAL CHIP	10K 5% 1/10W	C702	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R928	1-216-817-11	METAL CHIP	470 5% 1/10W	C703	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R929	1-216-833-11	METAL CHIP	10K 5% 1/10W	C704	1-124-464-11	ELECT	0.22uF 20% 50V
				C705	1-124-464-11	ELECT	0.22uF 20% 50V
				C706	1-162-960-11	CERAMIC CHIP	220PF 10% 50V
				C707	1-162-960-11	CERAMIC CHIP	220PF 10% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C708	1-162-923-11	CERAMIC CHIP 47PF	5% 50V			< JACK >	
C709	1-162-923-11	CERAMIC CHIP 47PF	5% 50V				
C710	1-124-464-11	ELECT 0.22uF	20% 50V	J700	1-774-728-21	JACK (MIC 1)	
C711	1-124-464-11	ELECT 0.22uF	20% 50V	J701	1-774-728-21	JACK (MIC 2)	
C712	1-164-156-11	CERAMIC CHIP 0.1uF	25V			< JUMPER RESISTOR >	
C713	1-164-156-11	CERAMIC CHIP 0.1uF	25V				
C714	1-124-261-00	ELECT 10uF	20% 50V	JR701	1-216-864-11	SHORT CHIP 0	
C715	1-124-261-00	ELECT 10uF	20% 50V			< TRANSISTOR >	
C716	1-162-960-11	CERAMIC CHIP 220PF	10% 50V				
C717	1-124-257-00	ELECT 2.2uF	20% 50V	Q815	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF	
C718	1-124-261-00	ELECT 10uF	20% 50V			< RESISTOR >	
C719	1-164-156-11	CERAMIC CHIP 0.1uF	25V				
C720	1-124-584-00	ELECT 100uF	20% 10V	R700	1-216-821-11	METAL CHIP 1K	5% 1/10W
C721	1-164-156-11	CERAMIC CHIP 0.1uF	25V	R701	1-216-821-11	METAL CHIP 1K	5% 1/10W
C722	1-124-248-00	ELECT 22uF	20% 35V	R702	1-216-833-11	METAL CHIP 10K	5% 1/10W
C723	1-100-436-11	CERAMIC CHIP 0.033uF	10% 25V	R703	1-216-833-11	METAL CHIP 10K	5% 1/10W
C724	1-162-967-11	CERAMIC CHIP 0.0033uF	10% 50V	R704	1-216-845-11	METAL CHIP 100K	5% 1/10W
C725	1-124-261-00	ELECT 10uF	20% 50V	R705	1-216-845-11	METAL CHIP 100K	5% 1/10W
C726	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	R706	1-216-821-11	METAL CHIP 1K	5% 1/10W
C727	1-125-891-11	CERAMIC CHIP 0.47uF	10% 10V	R707	1-216-821-11	METAL CHIP 1K	5% 1/10W
C728	1-162-968-11	CERAMIC CHIP 0.0047uF	10% 50V	R708	1-216-843-11	METAL CHIP 68K	5% 1/10W
C729	1-162-970-11	CERAMIC CHIP 0.01uF	10% 25V	R709	1-216-843-11	METAL CHIP 68K	5% 1/10W
C730	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	R710	1-216-847-11	METAL CHIP 150K	5% 1/10W
C731	1-100-436-11	CERAMIC CHIP 0.033uF	10% 25V	R711	1-216-835-11	METAL CHIP 15K	5% 1/10W
C732	1-126-176-11	ELECT 220uF	20% 10V	R712	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
C735	1-164-156-11	CERAMIC CHIP 0.1uF	25V	R713	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
C744	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	R714	1-216-833-11	METAL CHIP 10K	5% 1/10W
C745	1-162-964-11	CERAMIC CHIP 0.001uF	10% 50V	R715	1-216-830-11	METAL CHIP 5.6K	5% 1/10W
C747	1-162-927-11	CERAMIC CHIP 100PF	5% 50V	R716	1-216-821-11	METAL CHIP 1K	5% 1/10W
C748	1-162-963-11	CERAMIC CHIP 680PF	10% 50V	R717	1-216-845-11	METAL CHIP 100K	5% 1/10W
C822	1-124-261-00	ELECT 10uF	20% 50V	R718	1-216-845-11	METAL CHIP 100K	5% 1/10W
C823	1-124-261-00	ELECT 10uF	20% 50V	R719	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
C824	1-124-261-00	ELECT 10uF	20% 50V	R720	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
C1600	1-124-257-00	ELECT 2.2uF	20% 50V	R721	1-216-833-11	METAL CHIP 10K	5% 1/10W
C1601	1-124-257-00	ELECT 2.2uF	20% 50V	R722	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
C1602	1-115-412-11	CERAMIC CHIP 680PF	5% 25V	R723	1-216-835-11	METAL CHIP 15K	5% 1/10W
C1603	1-115-412-11	CERAMIC CHIP 680PF	5% 25V	R724	1-216-837-11	METAL CHIP 22K	5% 1/10W
		< CONNECTOR >		R725	1-216-840-11	METAL CHIP 39K	5% 1/10W
CN700	1-794-548-21	CONNECTOR, USB (A) 4P (USB)		R726	1-216-815-11	METAL CHIP 330	5% 1/10W
CN704	1-784-727-11	CONNECTOR, FFC 5P		R727	1-216-815-11	METAL CHIP 330	5% 1/10W
CN706	1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P		R728	1-216-832-11	METAL CHIP 8.2K	5% 1/10W
		< DIODE >		R729	1-216-837-11	METAL CHIP 22K	5% 1/10W
D704	6-501-743-01	DIODE MAZ8068GMLS0		R730	1-216-833-11	METAL CHIP 10K	5% 1/10W
D705	6-501-743-01	DIODE MAZ8068GMLS0		R731	1-216-837-11	METAL CHIP 22K	5% 1/10W
D706	6-500-848-01	DIODE MC2840-T112-1		R736	1-216-864-11	SHORT CHIP 0	
D720	6-501-730-01	DIODE MAZ8051GMLS0		R737	1-216-864-11	SHORT CHIP 0	
		< GROUND TERMINAL >		R738	1-216-845-11	METAL CHIP 100K	5% 1/10W
ET700	1-537-771-21	TERMINAL BOARD, GROUND		R739	1-216-845-11	METAL CHIP 100K	5% 1/10W
ET701	1-537-771-21	TERMINAL BOARD, GROUND		R1600	1-216-849-11	METAL CHIP 220K	5% 1/10W
ET702	1-537-771-21	TERMINAL BOARD, GROUND		R1601	1-216-849-11	METAL CHIP 220K	5% 1/10W
		< IC >		R1602	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
IC700	8-759-278-58	IC NJM4558V-TE2		R1603	1-216-811-11	METAL CHIP 150	5% 1/10W
IC701	8-759-278-58	IC NJM4558V-TE2		R1604	1-216-833-11	METAL CHIP 10K	5% 1/10W
IC720	8-759-453-78	IC BU9253FS-E2		R1605	1-216-833-11	METAL CHIP 10K	5% 1/10W
				R1606	1-216-864-11	SHORT CHIP 0	
				R1607	1-216-864-11	SHORT CHIP 0	
				R1608	1-216-864-11	SHORT CHIP 0	
				R1609	1-216-864-11	SHORT CHIP 0	
				R1611	1-216-817-11	METAL CHIP 470	5% 1/10W
				R1612	1-216-864-11	SHORT CHIP 0	
				R1613	1-216-864-11	SHORT CHIP 0	
				R1614	1-216-864-11	SHORT CHIP 0	

HCD-GZR88D/GZR99D

MIC **MOTOR (LD)** **MOTOR (TB)** **POWER AMP**

Ref. No.	Part No.	Description	Remark
R1615	1-216-864-11	SHORT CHIP 0	
		< VARIABLE RESISTOR >	
RV700	1-223-983-11	RES, VAR, CARBON 50K (MIC 1 LEVEL)	
RV701	1-223-983-11	RES, VAR, CARBON 50K (MIC 2 LEVEL)	
RV720	1-223-983-11	RES, VAR, CARBON 50K (ECHO LEVEL)	

	1-687-133-12	MOTOR (LD) BOARD	

	1-687-134-12	MOTOR (TB) BOARD	

		< CONNECTOR >	
CN742	1-784-727-11	CONNECTOR, FFC 5P	

		POWER AMP BOARD	

	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
		< CAPACITOR >	
C401	1-126-968-11	ELECT 100uF 20% 50V	
C402	1-126-968-11	ELECT 100uF 20% 50V	
△ C403	1-137-749-11	MYLAR 0.1uF 100V	
△ C404	1-137-749-11	MYLAR 0.1uF 100V	
C405	1-126-968-11	ELECT 100uF 20% 50V	
C406	1-126-968-11	ELECT 100uF 20% 50V	
C409	1-127-811-11	ELECT(BLOCK) 3300uF 20% 50V	(E2,E51,AR,MX)
C409	1-135-515-21	ELECT 3300uF 20% 50V	(EXCEPT E2,E51,AR,MX)
C410	1-127-811-11	ELECT(BLOCK) 3300uF 20% 50V	(E2,E51,AR,MX)
C410	1-135-515-21	ELECT 3300uF 20% 50V	(EXCEPT E2,E51,AR,MX)
C413	1-136-497-81	FILM 0.1uF 5% 50V	
C414	1-136-497-81	FILM 0.1uF 5% 50V	
C425	1-126-946-11	ELECT 6800uF 20% 25V	
C426	1-126-946-11	ELECT 6800uF 20% 25V	
C427	1-136-165-00	FILM 0.1uF 5% 50V	
C428	1-136-165-00	FILM 0.1uF 5% 50V	
C429	1-136-165-00	FILM 0.1uF 5% 50V	
C430	1-136-165-00	FILM 0.1uF 5% 50V	
C431	1-126-964-11	ELECT 10uF 20% 50V	(GZR99D)
C432	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	(GZR99D)
C433	1-126-967-11	ELECT 47uF 20% 50V	(GZR99D)
C435	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	(GZR99D)
C440	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
C441	1-126-964-11	ELECT 10uF 20% 50V	
C442	1-126-964-11	ELECT 10uF 20% 50V	
C443	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C444	1-164-315-11	CERAMIC CHIP 470PF 5% 50V	
C445	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C446	1-162-927-11	CERAMIC CHIP 100PF 5% 50V	
C447	1-126-967-11	ELECT 47uF 20% 50V	

Ref. No.	Part No.	Description	Remark
C448	1-126-967-11	ELECT 47uF 20% 50V	
C451	1-136-497-81	FILM 0.1uF 5% 50V	
C452	1-136-497-81	FILM 0.1uF 5% 50V	
C453	1-136-497-81	FILM 0.1uF 5% 50V	(GZR99D)
C454	1-136-497-81	FILM 0.1uF 5% 50V	
C455	1-136-497-81	FILM 0.1uF 5% 50V	
C456	1-136-497-81	FILM 0.1uF 5% 50V	(GZR99D)
△ C461	1-128-562-11	ELECT 47uF 20% 100V	
△ C462	1-128-562-11	ELECT 47uF 20% 100V	
C463	1-126-965-11	ELECT 22uF 20% 50V	
C464	1-104-658-11	ELECT 100uF 20% 10V	
C465	1-126-960-11	ELECT 1uF 20% 50V	
C468	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V	
△ C475	1-127-814-11	ELECT(BLOCK) 3300uF 20% 80V	(E2,E51,AR,MX)
△ C475	1-135-517-11	ELECT 3300uF 20% 71V	(EXCEPT E2,E51,AR,MX)
△ C476	1-127-814-11	ELECT(BLOCK) 3300uF 20% 80V	(E2,E51,AR,MX)
△ C476	1-135-517-11	ELECT 3300uF 20% 71V	(EXCEPT E2,E51,AR,MX)
C477	1-126-964-11	ELECT 10uF 20% 50V	
C478	1-126-960-11	ELECT 1uF 20% 50V	
		< CONNECTOR >	
* CN401	1-766-175-11	PIN, CONNECTOR (PC BOARD) 5P	
* CN402	1-564-515-11	PLUG, CONNECTOR 12P	
CN403	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P	
CN405	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P	
CN407	1-815-445-11	PIN, CONNECTOR (PWB) 4P	
		< DIODE >	
D401	6-500-249-01	DIODE D15XB20 (GZR99D)	
D402	6-500-360-01	DIODE D10XB20	
D403	6-500-360-01	DIODE D10XB20 (GZR88D)	
D404	8-719-077-77	DIODE D3SB60F3	
D406	6-501-817-01	DIODE MA2J1110GLS0	
D407	6-500-334-01	DIODE MC2836-T112-1	
D408	6-501-817-01	DIODE MA2J1110GLS0 (GZR99D)	
D409	8-719-080-57	DIODE FSF05A20	
D410	8-719-080-57	DIODE FSF05A20	
D413	8-719-923-92	DIODE MTZJ-T-77-16B	
D414	8-719-923-92	DIODE MTZJ-T-77-16B	
D415	6-501-817-01	DIODE MA2J1110GLS0	
D416	6-501-817-01	DIODE MA2J1110GLS0 (GZR99D)	
D417	6-501-817-01	DIODE MA2J1110GLS0	
D418	6-501-817-01	DIODE MA2J1110GLS0	
D419	6-501-754-01	DIODE MAZ8091G0LS0	
D420	8-719-077-77	DIODE D3SB60F3	
D421	6-501-768-01	DIODE MAZ8120GMLS0	
D422	6-501-817-01	DIODE MA2J1110GLS0	
D423	6-501-817-01	DIODE MA2J1110GLS0	
		< IC >	
IC401	6-600-674-01	IC STK416-130-E (GZR99D)	
IC402	6-600-582-01	IC STK415-130-E (GZR88D)	
		< TERMINAL BOARD >	
JK401	1-780-756-11	TERMINAL BOARD 6P	(FRONT SPEAKER,SUBWOOFER) (GZR99D)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
JK403	1-694-091-11	TERMINAL BOARD 4P (SATELLITE SPEAKER)		R394	1-216-797-11	METAL CHIP 10	5% 1/10W
		< JUMPER RESISTOR >		R395	1-216-841-11	METAL CHIP 47K	5% 1/10W
JR401	1-216-864-11	SHORT CHIP 0		R396	1-216-841-11	METAL CHIP 47K	5% 1/10W
JR402	1-216-864-11	SHORT CHIP 0		R397	1-216-841-11	METAL CHIP 47K	5% 1/10W (GZR99D)
		< COIL >		R398	1-216-833-11	METAL CHIP 10K	5% 1/10W
L401	1-422-009-13	COIL, AIR-CORE		R399	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
L402	1-422-009-13	COIL, AIR-CORE		R400	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
L403	1-422-009-13	COIL, AIR-CORE (GZR99D)		R401	1-216-845-11	METAL CHIP 100K	5% 1/10W
L404	1-422-009-13	COIL, AIR-CORE		R402	1-216-837-11	METAL CHIP 22K	5% 1/10W
L405	1-422-009-13	COIL, AIR-CORE		R403	1-216-841-11	METAL CHIP 47K	5% 1/10W
		< TRANSISTOR >		R404	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q401	6-551-268-01	TRANSISTOR 2SC5625		R405	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q402	6-551-268-01	TRANSISTOR 2SC5625		R406	1-216-833-11	METAL CHIP 10K	5% 1/10W
Q403	6-551-268-01	TRANSISTOR 2SC5625 (GZR99D)		R407	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q404	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R408	1-216-839-11	METAL CHIP 33K	5% 1/10W
Q405	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF		R409	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q406	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R410	1-216-845-11	METAL CHIP 100K	5% 1/10W
Q407	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R411	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q408	8-729-036-89	TRANSISTOR KTC3198GR-AT		△ R412	1-220-893-11	METAL 0.22	10% 5W F
Q409	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R413	1-216-842-11	METAL CHIP 56K	5% 1/10W
Q410	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R414	1-216-842-11	METAL CHIP 56K	5% 1/10W
Q411	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R415	1-216-837-11	METAL CHIP 22K	5% 1/10W
Q412	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R416	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q413	8-729-037-13	TRANSISTOR KTA1271Y		R417	1-216-845-11	METAL CHIP 100K	5% 1/10W
Q414	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R418	1-216-821-11	METAL CHIP 1K	5% 1/10W
Q415	6-551-696-01	TRANSISTOR ISA1235AC1TP-1EF (GZR99D)		R419	1-216-839-11	METAL CHIP 33K	5% 1/10W
Q416	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF (GZR99D)		△ R420	1-220-893-11	METAL 0.22	10% 5W F
Q417	8-729-026-68	TRANSISTOR 2SD2525(TP)		R421	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
Q418	8-729-620-07	TRANSISTOR 2SC3052EF-T1-LEF		R422	1-216-834-11	METAL CHIP 12K	5% 1/10W
		< RESISTOR >		R423	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R367	1-216-817-11	METAL CHIP 470	5% 1/10W	R424	1-216-864-11	SHORT CHIP 0	
R368	1-216-833-11	METAL CHIP 10K	5% 1/10W	△ R425	1-220-893-11	METAL 0.22	10% 5W F (GZR99D)
R369	1-216-833-11	METAL CHIP 10K	5% 1/10W	R426	1-216-827-11	METAL CHIP 3.3K	5% 1/10W
R370	1-216-845-11	METAL CHIP 100K	5% 1/10W	R427	1-216-842-11	METAL CHIP 56K	5% 1/10W
R371	1-216-845-11	METAL CHIP 100K	5% 1/10W	R428	1-216-814-11	METAL CHIP 270	5% 1/10W
R372	1-216-845-11	METAL CHIP 100K	5% 1/10W	R429	1-216-842-11	METAL CHIP 56K	5% 1/10W
R373	1-216-812-11	METAL CHIP 180	5% 1/10W	R430	1-216-814-11	METAL CHIP 270	5% 1/10W
R374	1-216-812-11	METAL CHIP 180	5% 1/10W	R431	1-216-842-11	METAL CHIP 56K	5% 1/10W (GZR99D)
R375	1-216-812-11	METAL CHIP 180	5% 1/10W	R432	1-216-815-11	METAL CHIP 330	5% 1/10W (GZR99D)
R376	1-216-812-11	METAL CHIP 180	5% 1/10W (GZR99D)	R433	1-216-845-11	METAL CHIP 100K	5% 1/10W (GZR99D)
R377	1-216-812-11	METAL CHIP 180	5% 1/10W (GZR99D)	R434	1-216-842-11	METAL CHIP 56K	5% 1/10W (GZR99D)
R379	1-216-841-11	METAL CHIP 47K	5% 1/10W	R435	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
△ R381	1-215-891-11	METAL OXIDE 680	5% 2W F	R436	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
△ R382	1-215-891-11	METAL OXIDE 680	5% 2W F	R437	1-216-825-11	METAL CHIP 2.2K	5% 1/10W (GZR99D)
△ R383	1-215-891-11	METAL OXIDE 680	5% 2W F	R438	1-216-839-11	METAL CHIP 33K	5% 1/10W (GZR99D)
△ R384	1-215-891-11	METAL OXIDE 680	5% 2W F	R439	1-216-821-11	METAL CHIP 1K	5% 1/10W (GZR99D)
R385	1-216-809-11	METAL CHIP 100	5% 1/10W	R440	1-216-837-11	METAL CHIP 22K	5% 1/10W (GZR99D)
R386	1-216-809-11	METAL CHIP 100	5% 1/10W	R441	1-216-837-11	METAL CHIP 22K	5% 1/10W
R387	1-216-797-11	METAL CHIP 10	5% 1/10W	R442	1-216-837-11	METAL CHIP 22K	5% 1/10W
R388	1-216-797-11	METAL CHIP 10	5% 1/10W	R443	1-216-830-11	METAL CHIP 5.6K	5% 1/10W
R389	1-216-797-11	METAL CHIP 10	5% 1/10W	R444	1-216-845-11	METAL CHIP 100K	5% 1/10W
R390	1-216-797-11	METAL CHIP 10	5% 1/10W	R445	1-216-815-11	METAL CHIP 330	5% 1/10W
R391	1-216-797-11	METAL CHIP 10	5% 1/10W				
R392	1-216-797-11	METAL CHIP 10	5% 1/10W				
R393	1-216-797-11	METAL CHIP 10	5% 1/10W				

HCD-GZR88D/GZR99D

POWER AMP RIGHT

Ref. No.	Part No.	Description	Remark
R446	1-216-845-11	METAL CHIP 100K	5% 1/10W
R447	1-216-836-11	METAL CHIP 18K	5% 1/10W
R448	1-216-841-11	METAL CHIP 47K	5% 1/10W
R449	1-216-841-11	METAL CHIP 47K	5% 1/10W
R450	1-216-797-11	METAL CHIP 10	5% 1/10W
R451	1-216-797-11	METAL CHIP 10	5% 1/10W
R452	1-216-797-11	METAL CHIP 10	5% 1/10W
R453	1-216-797-11	METAL CHIP 10	5% 1/10W
R454	1-216-797-11	METAL CHIP 10	5% 1/10W
R455	1-216-797-11	METAL CHIP 10	5% 1/10W
R456	1-216-797-11	METAL CHIP 10	5% 1/10W
R457	1-216-797-11	METAL CHIP 10	5% 1/10W
R458	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R459	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R460	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R461	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R462	1-216-833-11	METAL CHIP 10K	5% 1/10W (GZR99D)
R463	1-216-833-11	METAL CHIP 10K	5% 1/10W (GZR99D)
△ R467	1-215-871-11	METAL OXIDE 2.2K	5% 1W F
△ R468	1-215-871-11	METAL OXIDE 2.2K	5% 1W F
R470	1-216-812-11	METAL CHIP 180	5% 1/10W
R471	1-216-812-11	METAL CHIP 180	5% 1/10W (GZR99D)
R475	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R476	1-216-845-11	METAL CHIP 100K	5% 1/10W
R477	1-216-845-11	METAL CHIP 100K	5% 1/10W
R478	1-216-797-11	METAL CHIP 10	5% 1/10W
R479	1-216-797-11	METAL CHIP 10	5% 1/10W
R480	1-216-797-11	METAL CHIP 10	5% 1/10W
R481	1-216-797-11	METAL CHIP 10	5% 1/10W
R482	1-216-797-11	METAL CHIP 10	5% 1/10W
R483	1-216-797-11	METAL CHIP 10	5% 1/10W
R484	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R485	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R486	1-216-797-11	METAL CHIP 10	5% 1/10W
R487	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
R488	1-216-797-11	METAL CHIP 10	5% 1/10W (GZR99D)
△ R490	1-246-163-61	FUSIBLE 100	5% 1/4W F
R491	1-216-837-11	METAL CHIP 22K	5% 1/10W
R492	1-216-837-11	METAL CHIP 22K	5% 1/10W
R493	1-216-837-11	METAL CHIP 22K	5% 1/10W
R494	1-216-837-11	METAL CHIP 22K	5% 1/10W
△ R495	1-246-155-61	FUSIBLE 1	5% 1/4W F
△ R496	1-246-163-61	FUSIBLE 100	5% 1/4W F
R497	1-216-842-11	METAL CHIP 56K	5% 1/10W
R498	1-216-841-11	METAL CHIP 47K	5% 1/10W (GZR99D)
R499	1-216-841-11	METAL CHIP 47K	5% 1/10W
R500	1-216-812-11	METAL CHIP 180	5% 1/10W (GZR99D)

Ref. No.	Part No.	Description	Remark
		< RELAY >	
RY401	1-755-308-21	RELAY	
RY402	1-755-308-21	RELAY (GZR99D)	
		< TERMINAL BOARD >	
TB001	1-694-785-11	TERMINAL BOARD 4P (FRONT SPEAKER)	(GZR88D)
		< THERMISTOR >	
TH401	1-807-796-11	THERMISTOR	

		RIGHT BOARD	

		< CAPACITOR >	
C841	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C842	1-124-261-00	ELECT 10uF	20% 50V
		< CONNECTOR >	
* CN841	1-564-726-11	PIN, CONNECTOR (SMALL TYPE) 10P	
		< DIODE >	
D881	6-502-401-11	LED 1L434FA22E0TDT01 (◀◀◀ TUNING -)	
D882	6-502-401-11	LED 1L434FA22E0TDT01 (▶▶▶ TUNING +)	
D883	6-502-401-11	LED 1L434FA22E0TDT01 (■)	
D884	6-502-401-11	LED 1L434FA22E0TDT01 (▣)	
D885	6-502-347-01	LED SLI-343M8CT32 (▶) (E2,E51,AR,MX)	
D885	6-502-347-01	LED SLI-343M8CT32 (◀) (EXCEPT E2,E51,AR,MX)	
D886	6-502-401-11	LED 1L434FA22E0TDT01 (▶) (EXCEPT E2,E51,AR,MX)	
D887	6-502-401-11	LED 1L434FA22E0TDT01 (◀) (EXCEPT E2,E51,AR,MX)	
		< IC >	
IC841	6-704-046-01	IC BU2099FV	
		< RESISTOR >	
R838	1-216-833-11	METAL CHIP 10K	5% 1/10W (E2,E51,AR,MX)
R839	1-216-833-11	METAL CHIP 10K	5% 1/10W (E2,E51,AR,MX)
R840	1-216-809-11	METAL CHIP 100	5% 1/10W
R842	1-216-815-11	METAL CHIP 330	5% 1/10W
R843	1-216-817-11	METAL CHIP 470	5% 1/10W
R844	1-216-819-11	METAL CHIP 680	5% 1/10W
R845	1-216-821-11	METAL CHIP 1K	5% 1/10W
R846	1-216-823-11	METAL CHIP 1.5K	5% 1/10W
R847	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R848	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R849	1-216-813-11	METAL CHIP 220	5% 1/10W
R850	1-216-815-11	METAL CHIP 330	5% 1/10W
R851	1-216-817-11	METAL CHIP 470	5% 1/10W
R852	1-216-819-11	METAL CHIP 680	5% 1/10W
R853	1-216-821-11	METAL CHIP 1K	5% 1/10W
R854	1-216-823-11	METAL CHIP 1.5K	5% 1/10W
R855	1-216-825-11	METAL CHIP 2.2K	5% 1/10W
R856	1-216-829-11	METAL CHIP 4.7K	5% 1/10W
R857	1-216-833-11	METAL CHIP 10K	5% 1/10W

RIGHT **SENSOR** **SW** **TC AMP**

Ref. No.	Part No.	Description	Remark		
R858	1-216-839-11	METAL CHIP	33K	5%	1/10W
R881	1-216-815-11	METAL CHIP	330	5%	1/10W
R882	1-216-815-11	METAL CHIP	330	5%	1/10W
R883	1-216-815-11	METAL CHIP	330	5%	1/10W
R884	1-216-815-11	METAL CHIP	330	5%	1/10W
R885	1-216-807-11	METAL CHIP	68	5%	1/10W
R886	1-216-815-11	METAL CHIP	330	5%	1/10W
R887	1-216-815-11	METAL CHIP	330	5%	1/10W (EXCEPT E2,E51,AR,MX)
R888	1-216-809-11	METAL CHIP	100	5%	1/10W
R889	1-216-809-11	METAL CHIP	100	5%	1/10W
R890	1-216-809-11	METAL CHIP	100	5%	1/10W
R1700	1-216-813-11	METAL CHIP	220	5%	1/10W

< SWITCH >

S842	1-771-410-21	SWITCH, TACTILE (OPEN/CLOSE ▲)
S843	1-771-410-21	SWITCH, TACTILE (◀◀ TUNING -)
S844	1-771-410-21	SWITCH, TACTILE (▶▶ TUNING +)
S845	1-771-410-21	SWITCH, TACTILE (▨)
S846	1-771-410-21	SWITCH, TACTILE (▶) (E2,E51,AR,MX)
S846	1-771-410-21	SWITCH, TACTILE (◀▶) (EXCEPT E2,E51,AR,MX)
S847	1-771-410-21	SWITCH, TACTILE (◀DIR CHANGE▶) (EXCEPT E2,E51,AR,MX)
S848	1-771-410-21	SWITCH, TACTILE (CLEAR)
S849	1-771-410-21	SWITCH, TACTILE (■)
S850	1-771-410-21	SWITCH, TACTILE (☐) DISPLAY
S851	1-771-410-21	SWITCH, TACTILE (RETURN)
S852	1-771-410-21	SWITCH, TACTILE (▼)
S853	1-771-410-21	SWITCH, TACTILE (➡)
S854	1-771-410-21	SWITCH, TACTILE (ENTER)
S855	1-771-410-21	SWITCH, TACTILE (↔)
S856	1-771-410-21	SWITCH, TACTILE (▲)
S857	1-771-410-21	SWITCH, TACTILE (DVD/TUNER MENU)
S858	1-771-410-21	SWITCH, TACTILE (DVD TOP MENU)

1-687-132-12 SENSOR BOARD

< CONNECTOR >

CN731	1-785-329-21	PIN, CONNECTOR (LIGHT ANGLE) 3P
-------	--------------	---------------------------------

< IC >

IC731 **6-600-564-01** **IC RPI-579N1**

1-687-669-12 SW BOARD

< SWITCH >

S751	1-786-514-11	SWITCH, LEVER (SLIDE) (OPEN/CLOSE DETECT)
------	--------------	--

TC-AMP BOARD (EXCEPT E2,E51,AR,MX)

< CAPACITOR >

C1301	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1302	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description	Remark		
C1303	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C1304	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C1315	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1316	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1317	1-126-965-11	ELECT	22uF	20%	50V
C1318	1-126-965-11	ELECT	22uF	20%	50V
C1323	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C1324	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C1327	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1328	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1329	1-131-688-31	FILM	0.047uF	5%	50V
C1330	1-131-688-31	FILM	0.047uF	5%	50V
C1350	1-126-934-11	ELECT	220uF	20%	16V
C1351	1-126-923-11	ELECT	220uF	20%	10V
C1352	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

C1353	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C1354	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1355	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1356	1-126-964-11	ELECT	10uF	20%	50V
C1401	1-126-956-11	ELECT	0.1uF	20%	50V
C1402	1-126-956-11	ELECT	0.1uF	20%	50V
C1403	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1404	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1405	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C1406	1-162-959-11	CERAMIC CHIP	330PF	5%	50V

C1409	1-126-964-11	ELECT	10uF	20%	50V
C1410	1-126-964-11	ELECT	10uF	20%	50V
C1411	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1412	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1413	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1414	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C1416	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C1417	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1430	1-164-156-11	CERAMIC CHIP	0.1uF		25V

C1433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1452	1-126-947-11	ELECT	47uF	20%	35V
C1453	1-114-903-11	FILM	0.001uF	5%	250V
C1454	1-114-913-11	FILM	0.0068uF	5%	250V
C1456	1-114-915-11	FILM	0.01uF	5%	250V

C1461	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C1462	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C1466	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C1467	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C1468	1-162-928-11	CERAMIC CHIP	120PF	5%	50V

< CONNECTOR >

CN1301	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P
* CN1302	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P
CN1308	1-568-830-11	CONNECTOR, FFC 11P

< DIODE >

D1301	6-501-720-01	DIODE	MAZ8043G0LS0
D1401	6-500-335-01	DIODE	MC2838-T112-1

< IC >

IC1301 **6-702-945-01** **IC NJM14558V-TE2**
IC1401 **8-759-278-58** **IC NJM4558V-TE2**

HCD-GZR88D/GZR99D

TC AMP

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< JUMPER RESISTOR >							
JR1301	1-216-864-11	SHORT CHIP	0	R1315	1-216-809-11	METAL CHIP	100 5% 1/10W
JR1302	1-216-864-11	SHORT CHIP	0	R1316	1-216-809-11	METAL CHIP	100 5% 1/10W
JR1303	1-216-864-11	SHORT CHIP	0	R1317	1-216-853-11	METAL CHIP	470K 5% 1/10W
JR1304	1-216-864-11	SHORT CHIP	0	R1318	1-216-853-11	METAL CHIP	470K 5% 1/10W
JR1305	1-216-864-11	SHORT CHIP	0	R1319	1-216-835-11	METAL CHIP	15K 5% 1/10W
JR1306	1-216-864-11	SHORT CHIP	0	R1320	1-216-835-11	METAL CHIP	15K 5% 1/10W
JR1307	1-216-864-11	SHORT CHIP	0	R1321	1-216-809-11	METAL CHIP	100 5% 1/10W
JR1308	1-216-864-11	SHORT CHIP	0	R1322	1-216-809-11	METAL CHIP	100 5% 1/10W
JR1309	1-216-864-11	SHORT CHIP	0	R1323	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
JR1310	1-216-864-11	SHORT CHIP	0	R1324	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
JR1311	1-216-864-11	SHORT CHIP	0	R1325	1-216-864-11	SHORT CHIP	0
JR1313	1-216-864-11	SHORT CHIP	0	R1326	1-216-864-11	SHORT CHIP	0
JR1315	1-216-864-11	SHORT CHIP	0	R1349	1-216-809-11	METAL CHIP	100 5% 1/10W
JR1316	1-216-864-11	SHORT CHIP	0	R1350	1-216-864-11	SHORT CHIP	0
JR1317	1-216-864-11	SHORT CHIP	0	R1351	1-216-821-11	METAL CHIP	1K 5% 1/10W
JR1318	1-216-864-11	SHORT CHIP	0	R1401	1-216-841-11	METAL CHIP	47K 5% 1/10W
JR1319	1-216-864-11	SHORT CHIP	0	R1402	1-216-841-11	METAL CHIP	47K 5% 1/10W
JR1320	1-216-864-11	SHORT CHIP	0	R1403	1-216-839-11	METAL CHIP	33K 5% 1/10W
< COIL >				R1404	1-216-839-11	METAL CHIP	33K 5% 1/10W
L1301	1-410-780-11	INDUCTOR	27mH	R1405	1-216-842-11	METAL CHIP	56K 5% 1/10W
L1302	1-410-780-11	INDUCTOR	27mH	R1406	1-216-842-11	METAL CHIP	56K 5% 1/10W
< TRANSISTOR >				R1407	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
Q1301	6-551-597-01	FET	2SJ461-T	R1408	1-218-867-11	METAL CHIP	6.8K 0.5% 1/10W
Q1302	6-551-597-01	FET	2SJ461-T	R1411	1-216-853-11	METAL CHIP	470K 5% 1/10W
Q1303	8-729-045-62	FET	2SK2158-T2B	R1412	1-216-853-11	METAL CHIP	470K 5% 1/10W
Q1304	8-729-045-62	FET	2SK2158-T2B	R1413	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q1305	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	R1414	1-216-849-11	METAL CHIP	220K 5% 1/10W
Q1306	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	R1423	1-216-846-11	METAL CHIP	120K 5% 1/10W
Q1401	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1424	1-216-846-11	METAL CHIP	120K 5% 1/10W
Q1402	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1427	1-216-797-11	METAL CHIP	10 5% 1/10W
Q1403	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1428	1-216-797-11	METAL CHIP	10 5% 1/10W
Q1404	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1429	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q1405	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	R1430	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q1406	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	R1431	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q1407	6-551-696-01	TRANSISTOR	ISA1235AC1TP-1EF	R1432	1-216-821-11	METAL CHIP	1K 5% 1/10W
Q1408	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1433	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q1409	8-729-027-43	TRANSISTOR	DTC114EKA-T146	R1434	1-216-841-11	METAL CHIP	47K 5% 1/10W
Q1410	6-551-276-01	TRANSISTOR	RT1N431C-TP-1	R1435	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q1453	8-729-036-86	TRANSISTOR	KTC3203Y-AT	R1436	1-216-833-11	METAL CHIP	10K 5% 1/10W
Q1454	8-729-620-07	TRANSISTOR	2SC3052EF-T1-LEF	R1437	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
Q1455	8-729-037-13	TRANSISTOR	KTA1271Y	R1438	1-216-825-11	METAL CHIP	2.2K 5% 1/10W
< RESISTOR >				R1440	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1301	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1441	1-216-864-11	SHORT CHIP	0
R1302	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1442	1-216-841-11	METAL CHIP	47K 5% 1/10W
R1303	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1443	1-216-845-11	METAL CHIP	100K 5% 1/10W
R1304	1-216-841-11	METAL CHIP	47K 5% 1/10W	R1444	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1305	1-216-849-11	METAL CHIP	220K 5% 1/10W	R1449	1-216-797-11	METAL CHIP	10 5% 1/10W
R1306	1-216-849-11	METAL CHIP	220K 5% 1/10W	R1450	1-216-797-11	METAL CHIP	10 5% 1/10W
R1307	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R1451	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1308	1-216-829-11	METAL CHIP	4.7K 5% 1/10W	R1452	1-216-841-11	METAL CHIP	47K 5% 1/10W
R1309	1-216-817-11	METAL CHIP	470 5% 1/10W	R1453	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R1310	1-216-817-11	METAL CHIP	470 5% 1/10W	R1454	1-216-829-11	METAL CHIP	4.7K 5% 1/10W
R1311	1-216-813-11	METAL CHIP	220 5% 1/10W	R1455	1-216-797-11	METAL CHIP	10 5% 1/10W
R1312	1-216-813-11	METAL CHIP	220 5% 1/10W	R1456	1-216-797-11	METAL CHIP	10 5% 1/10W
R1313	1-216-805-11	METAL CHIP	47 5% 1/10W	R1457	1-216-833-11	METAL CHIP	10K 5% 1/10W
R1314	1-216-805-11	METAL CHIP	47 5% 1/10W	R1458	1-216-793-11	METAL CHIP	4.7 5% 1/10W
				R1459	1-216-864-11	SHORT CHIP	0
				R1461	1-216-813-11	METAL CHIP	220 5% 1/10W
				R1462	1-216-813-11	METAL CHIP	220 5% 1/10W
				R1463	1-216-864-11	SHORT CHIP	0

HCD-GZR88D/GZR99D

VIDEO **VOLUME**

Ref. No.	Part No.	Description	Remark		
C1529	1-100-831-11	CERAMIC CHIP 0.001uF 2%	50V		
C1530	1-100-831-11	CERAMIC CHIP 0.001uF 2%	50V		
		< CONNECTOR >			
CN1500	1-779-275-11	CONNECTOR, FFC (LIF(NON-ZIF)) 7P			
CN1501	1-784-727-11	CONNECTOR, FFC 5P			
CN1503	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN1504	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< FERRITE BEAD >			
FB001	1-469-324-21	FERRITE, EMI (SMD) (2012)			
		< IC >			
IC1500	6-709-217-01	IC TC74LVX4051FT			
IC1501	6-710-470-01	IC MM1758AFBE			
IC1502	6-600-461-21	IC TOTX147L(F,T) (DVD DIGITAL OUT OPTICAL)			
		< JACK >			
J1500	1-774-227-41	JACK, PIN 1P (VIDEO/SAT VIDEO IN)			
J1501	1-817-449-11	JACK, PIN 3P (COMPONENT VIDEO OUT)			
J1502	1-774-227-41	JACK, PIN 1P (VIDEO OUT)			
		< JUMPER RESISTOR >			
JR1501	1-216-864-11	SHORT CHIP 0			
		< RESISTOR >			
R1500	1-216-864-11	SHORT CHIP 0			
R1501	1-216-864-11	SHORT CHIP 0			
R1502	1-216-864-11	SHORT CHIP 0			
R1503	1-216-864-11	SHORT CHIP 0			
R1504	1-216-833-11	METAL CHIP 10K 5%	1/10W		
R1505	1-216-833-11	METAL CHIP 10K 5%	1/10W		
R1506	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1507	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1508	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1509	1-216-833-11	METAL CHIP 10K 5%	1/10W		
R1510	1-216-809-11	METAL CHIP 100 5%	1/10W		
R1511	1-216-809-11	METAL CHIP 100 5%	1/10W		
R1512	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1513	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1514	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1515	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1516	1-216-845-11	METAL CHIP 100K 5%	1/10W		
R1517	1-216-833-11	METAL CHIP 10K 5%	1/10W		
R1518	1-216-864-11	SHORT CHIP 0			
R1519	1-216-864-11	SHORT CHIP 0			
R1520	1-216-809-11	METAL CHIP 100 5%	1/10W		
R1521	1-218-285-11	METAL CHIP 75 5%	1/10W		
R1522	1-218-285-11	METAL CHIP 75 5%	1/10W		
R1523	1-218-285-11	METAL CHIP 75 5%	1/10W		
R1524	1-218-285-11	METAL CHIP 75 5%	1/10W		
R1525	1-218-285-11	METAL CHIP 75 5%	1/10W		
R1526	1-216-864-11	SHORT CHIP 0			
R1527	1-216-864-11	SHORT CHIP 0			
R1528	1-216-864-11	SHORT CHIP 0			
R1529	1-216-864-11	SHORT CHIP 0			
R1530	1-216-864-11	SHORT CHIP 0			
R1531	1-218-285-11	METAL CHIP 75 5%	1/10W		

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
6	1-828-935-11	WIRE (FLAT TYPE) (5 CORE)	
55	1-837-124-11	WIRE (FLAT TYPE) (5 CORE)	
114	1-831-964-21	WIRE (FLAT TYPE) (21 CORE)	
116	1-828-946-51	WIRE (FLAT TYPE) (7 CORE)	
117	1-457-413-11	CORE, FERRITE	
163	1-840-233-11	DECK, MECHANICAL (CWP42FR605) (EXCEPT GZR99D:E2,E51,AR,MX)	
167	1-833-868-11	WIRE (FLAT TYPE) (11 CORE) (EXCEPT GZR99D:E2,E51,AR,MX)	
203	1-543-929-11	CORE, FERRITE	
204	1-828-965-51	WIRE (FLAT TYPE) (11 CORE) (EXCEPT GZR99D:E2,E51,AR,MX)	
205	1-828-956-51	WIRE (FLAT TYPE) (9 CORE)	
207	1-830-459-51	WIRE (FLAT TYPE) (7 CORE)	
208	1-837-127-11	WIRE (FLAT TYPE) (7 CORE)	
209	1-837-125-11	WIRE (FLAT TYPE) (9 CORE)	
212	1-828-973-11	WIRE (FLAT TYPE) (13 CORE)	
△ 215	1-569-008-33	ADAPTOR, CONVERSION 2P (E2,E3,E4,E15,E51,PH,SP)	
△ 216	1-829-387-11	CORD, POWER (AR)	
△ 216	1-834-288-11	CORD, POWER (TH)	
△ 216	1-834-966-41	POWER-SUPPLY CORD (EXCEPT TH,AR,MX)	
△ 216	1-835-080-21	CORD, POWER (MX)	
218	1-457-369-12	CORE, FERRITE	
252	1-776-182-11	WIRE (FLAT TYPE) (5 CORE)	
320	1-828-251-51	WIRE (FLAT TYPE) (24 CORE)	
△ 321	8-820-322-04	OPTICAL PICK-UP (KHM-313CAB/C2RP)	
△ F301	1-532-465-33	FUSE (T3.15AL/250V)	
△ F302	1-532-505-33	FUSE (T5AL/250V)	
△ F303	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	
△ F304	1-533-949-33	FUSE, CYLINDRICAL (TIME LAG) (T8AL/250V) (GZR88D)	
△ F304	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V) (GZR99D)	
△ F305	1-533-949-33	FUSE, CYLINDRICAL (TIME LAG) (T8AL/250V) (GZR88D)	
△ F305	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V) (GZR99D)	
△ F306	1-576-332-33	FUSE, CYLINDRICAL (TIME LAG) (T10AL/250V)	
FAN901	1-787-400-31	FAN (DC) (GZR88D)	
FAN901	1-787-631-11	FAN (DC) (GZR99D)	
LCD101	1-802-937-11	DISPLAY PANEL, LIQUID CRYSTAL	
M741	A-1108-965-A	MOTOR ASSY, TABLE (TABLE)	
M751	A-1108-966-A	MOTOR ASSY, LOADING (LOADING)	
△ PT301	1-445-681-11	TRANSFORMER, POWER (MAIN) (GZR99D)	
△ PT301	1-445-684-11	TRANSFORMER, POWER (MAIN) (GZR88D)	
RE701	1-477-680-12	ENCODER, ROTARY (DISC TRAY ADDRESS DETECT)	
TM901	1-693-778-11	TUNER (FM/AM) (ANTENNA)	

