HCD-HP8V

SERVICE MANUAL

E Model

Ver 1.0 2003.07

HCD-HP8V is the Amplifier, CD player, Tape Deck and Tuner section in CMT-HP8V.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM69BH-30BD62
	Base Unit Name	BU-30BD62
	Optical Pick-up Name	A-MAX.3
TAPE Section	Model Name Using Similar Mechanism	HCD-EP515
	Tape Transport Mechanism Type	CMAL1Z234A

SPECIFICATIONS

Main unit

Amplifier section

The following measured at AC 120, 127, 220, 240 V 50/60 Hz

DIN power output (rated): 60 + 60 watts (6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference): 60 + 60 watts (6 ohms at 1 kHz, 10% THD)

Inputs

MD IN (phono jacks): Sensitivity 250 mV, impedance 47 kilohms

MIC (phone jack): Sensitivity 1 mV, impedance 10 kilohms

Outputs

PHONES (stereo minijack): Accepts headphones of 8 ohms or more

MD OUT (phono jack): Impedance 1 kilohm

VIDEO OUT (phono jack): Max. output level 1Vp-p, unbalanced, Sync negative, load impedance 75 ohms

SPEAKER: Accepts impedance of 6 to 16 ohms.

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)
Wavelength	780 – 790 nm
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB
Video color system format	NTSC, PAL

Tape deck section

Recording system	4-track 2-channel, stereo
Frequency response	50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohms unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

Middle Eastern model: 531 – 1,602 kHz (with the tuning interval set at 9 kHz)

Other models: 530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,602 kHz (with the tuning interval set at 9 kHz)

Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

MICRO HI-FI COMPONENT SYSTEM

9-877-476-01
2003G1678-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY

General

Power requirements	
Saudi Arabian model:	120 – 127/220 or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption:	100 watts
Dimensions (w/h/d)	Approx. 199 × 252 × 400 mm
Mass	Approx. 7.5 kg
Supplied accessories:	Remote commander (1) Batteries (2) AM loop antenna (1) FM lead antenna (1) Speaker pads (8) Video cable (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

TABLE OF CONTENTS

SECTION 1
SERVICING NOTES

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

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

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

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

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

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

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

NOTES ON LASER DIODE EMISSION CHECK

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

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveforms is output three times.

UNLEADED SOLDER

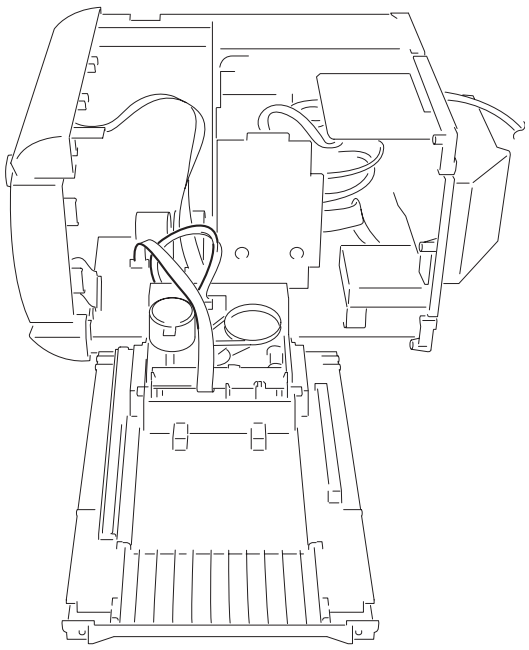
Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

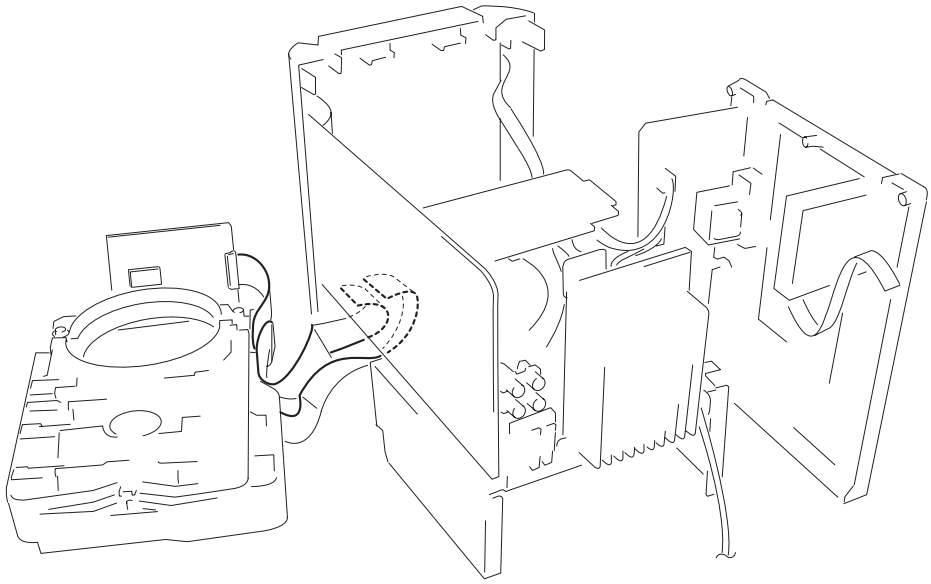
Unleaded solder has the following characteristics.

- 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.

Service Position of the Tape Cassette Mechanism Deck



Service Position of the CD Mechanism Deck



SECTION 2
GENERAL

This section is extracted from instruction manual.

List of button locations and reference pages

How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number

TAPE A/B 5 (18, 19)

Name of button/part — Reference page

Main unit

ALPHABETICAL ORDER

A – M

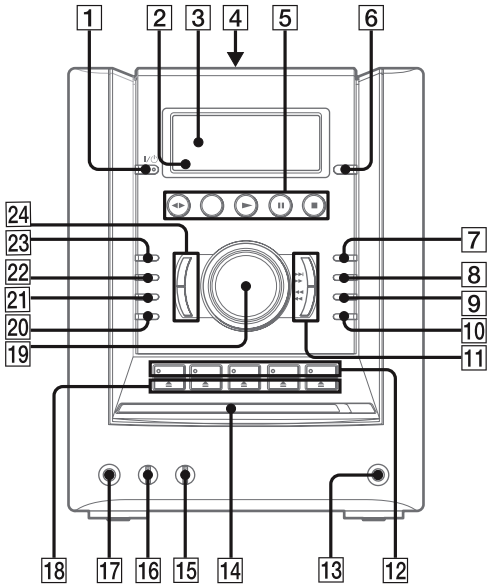
CD SYNC 9 (18)
DIMMER 22 (25)
DISC 1 – 5 12 (10, 13, 32)
Disc slot 14
DISPLAY 6 (24, 25, 32)
Display window 3
ECHO LEVEL 15 (21)
FUNCTION 23 (9, 11, 13, 16, 18, 19, 28)
GROOVE 20 (20)
MIC jack 17
MIC LEVEL 16 (21)

P – Z

PHONES jack 13
PLAY MODE 7 (9, 13, 18, 19, 23)
PRESET EQ 21 (20)
PRESET/ALBUM +/– 24 (10, 13, 15, 16)
REC PAUSE/START 10 (18, 19, 21)
Remote sensor 2
REPEAT 8 (12)
Tape deck 4
TUNER/BAND 5 (15, 16)
TUNING +/– 11 (15, 16)
VOLUME 19 (22)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (7, 8, 16, 22, 23, 32)
◀◀/▶▶ (rewind/fast forward) 11 (10, 18)
⏮/⏭ (go back/go forward) 11 (7, 10, 12, 13, 18)
■ (stop) 5 (10, 11, 16, 18, 19, 21, 23, 32)
❚❚ (pause) 5 (7, 10, 18)
CD ► (play) 5 (10, 11, 13, 14, 37)
TAPE ◄► (play) 5 (18, 19, 23)
DISC 1 ⏏ – DISC 5 ⏏ (eject) 18 (9, 10)



Remote control

ALPHABETICAL ORDER

A – N

ALBUM +/– 26 (10, 13)
CD 32 (9, 11, 13, 16, 18, 19)
CLEAR 9 (13, 14)
CLOCK/TIMER SELECT 2 (23, 24)
CLOCK/TIMER SET 3 (8, 22, 23)
DISPLAY 8 (24, 25, 32)
D. SKIP 11 (10, 13)
EFFECT ON/OFF 23 (20)
ENTER 24 (8, 13, 15, 22, 23)
GAME (MD)[1] 6 (19, 28)
GROOVE 21 (20)
KARAOKE/MPX 17 (21)
KEY CONTROL ♯/♭ 18 (21)
NEXT 28 (11, 14)
Numeric buttons 29 (10, 11, 13, 14)

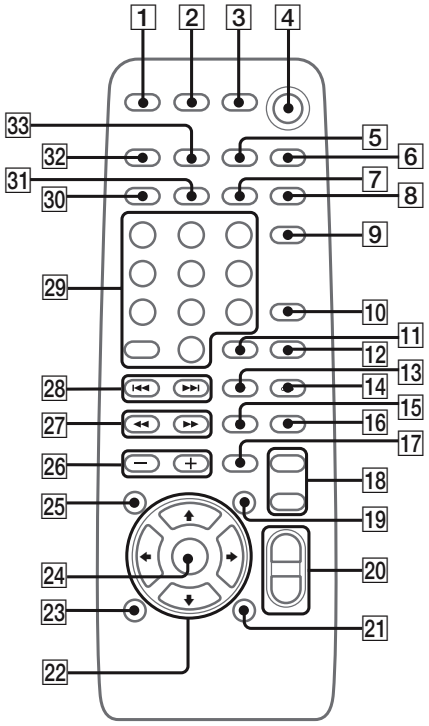
O – Z

ON SCREEN 12 (26)
PLAY MODE 30 (9, 13, 18, 19, 23)
PRESET EQ 25 (20)
PRESET +/– 28 (15, 16)
PREV 28 (11, 14)
REPEAT/FM MODE 31 (12, 17)
SLEEP 1 (22)
SPECIAL MENU 10 (14)
SURROUND 19 (20)
TAPE A/B[2] 5 (18, 19)
TUNER BAND 33 (15, 16, 19)
TUNER MEMORY 7 (15)
TUNING +/– 27 (15, 16)
VOL +/– 20 (22)

BUTTON DESCRIPTIONS

I/⏻ (power) 4 (7, 8, 16, 22, 23, 32)
◀◀/▶▶ (rewind/fast forward) 27 (10, 18)
⏮/⏭ (go back/go forward) 28 (7, 10, 12, 13, 18)
■ (stop) 15 (10, 11, 16, 18, 19, 21, 23, 32)
❚❚ (pause) 16 (7, 10, 18)
► (play) 13 (10, 11, 13, 14, 18, 19, 23, 37)
↑/↓/←/→ (cursor) 22 (8, 22, 23)
RETURN ↩ 14 (11)

[1] This button is used to switch to MD function.
[2] This button is used to switch to TAPE function.



Setting the clock

Use buttons on the remote for the operation.

1 Press I/⏻ to turn on the system.

2 Press CLOCK/TIMER SET.

3 Press ↑/↓ repeatedly to set the hour.

4 Press →.

5 Press ↑/↓ repeatedly to set the minute.

6 Press ENTER.

The clock starts working.

To adjust the clock

1 Press CLOCK/TIMER SET.

2 Press ↑/↓ to select “CLOCK SET”, then press ENTER.

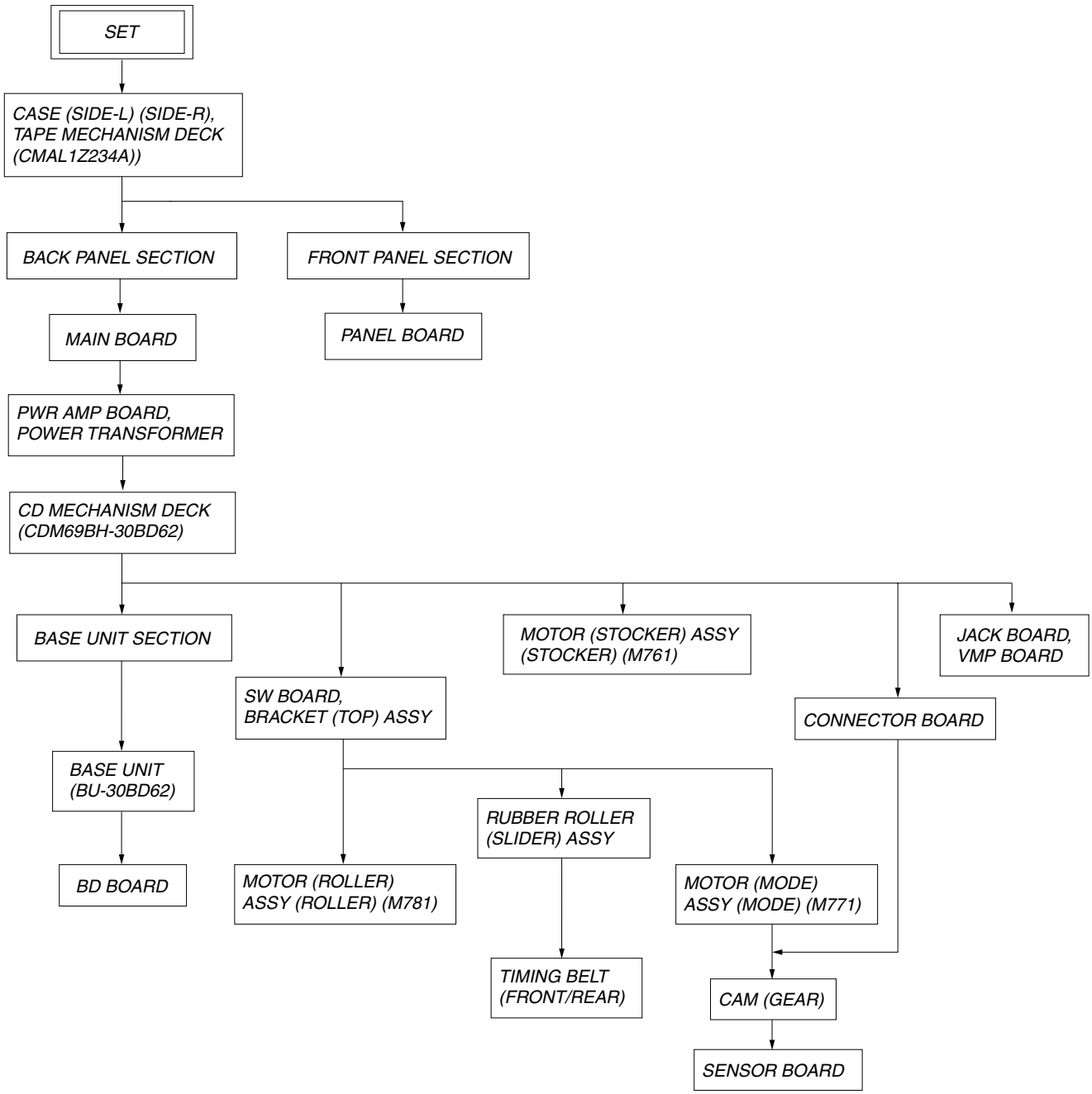
3 Do the same procedures as step 3 to 6 above.

Notes

- The clock settings are canceled when you disconnect the power cord or if a power failure occurs.
- You cannot set the clock in Power Saving Mode.

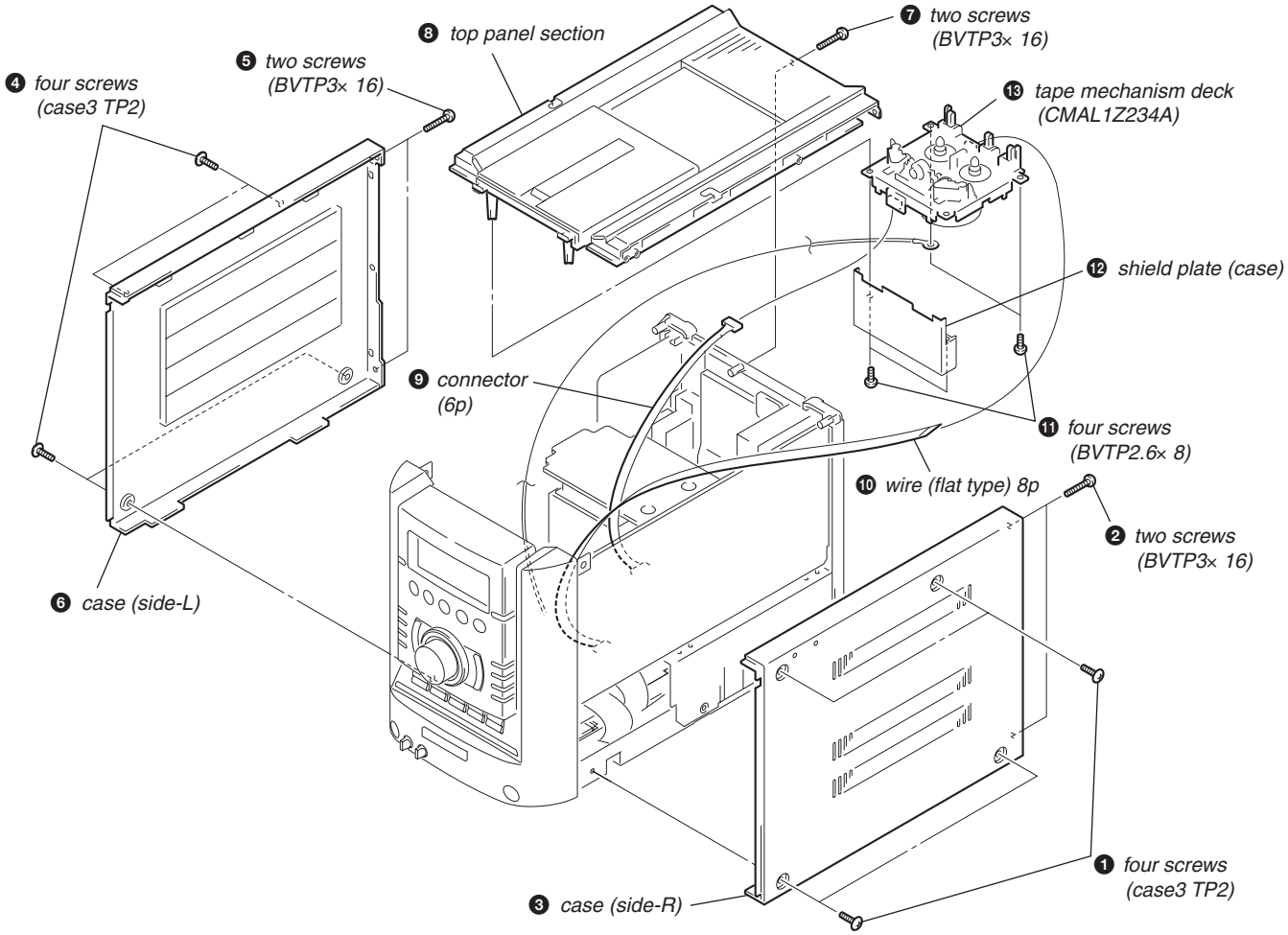
SECTION 3
DISASSEMBLY

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

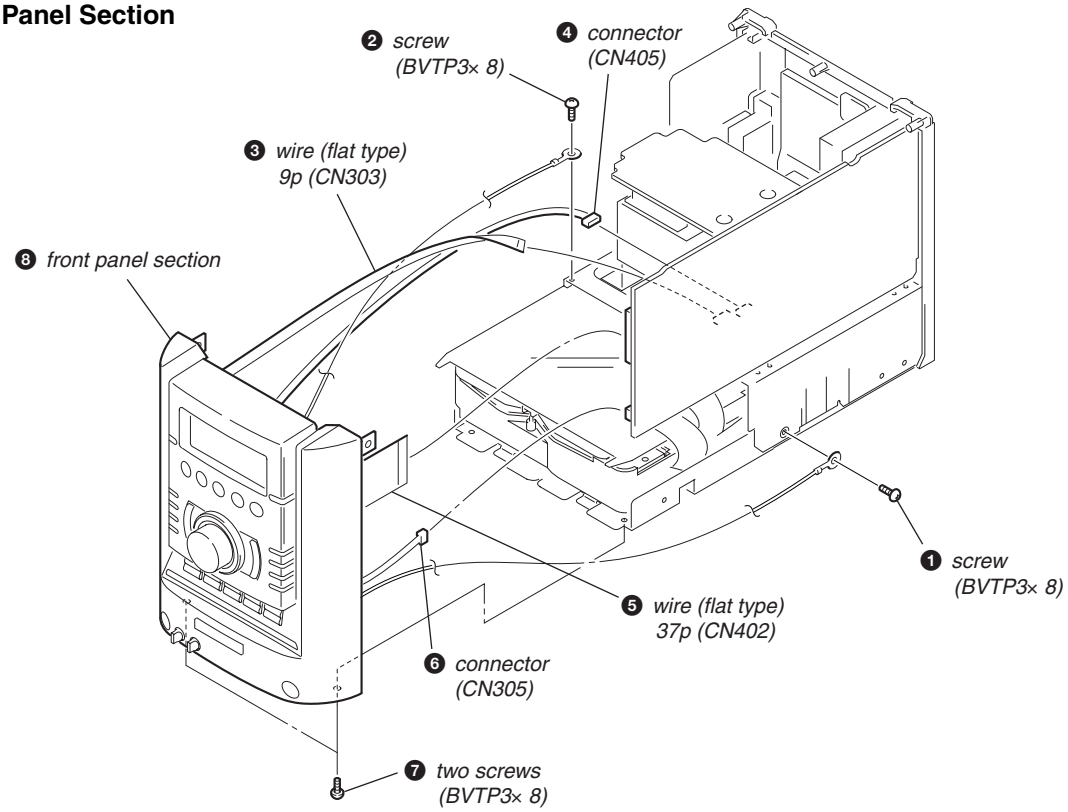


Note: Follow the disassembly procedure in the numerical order given.

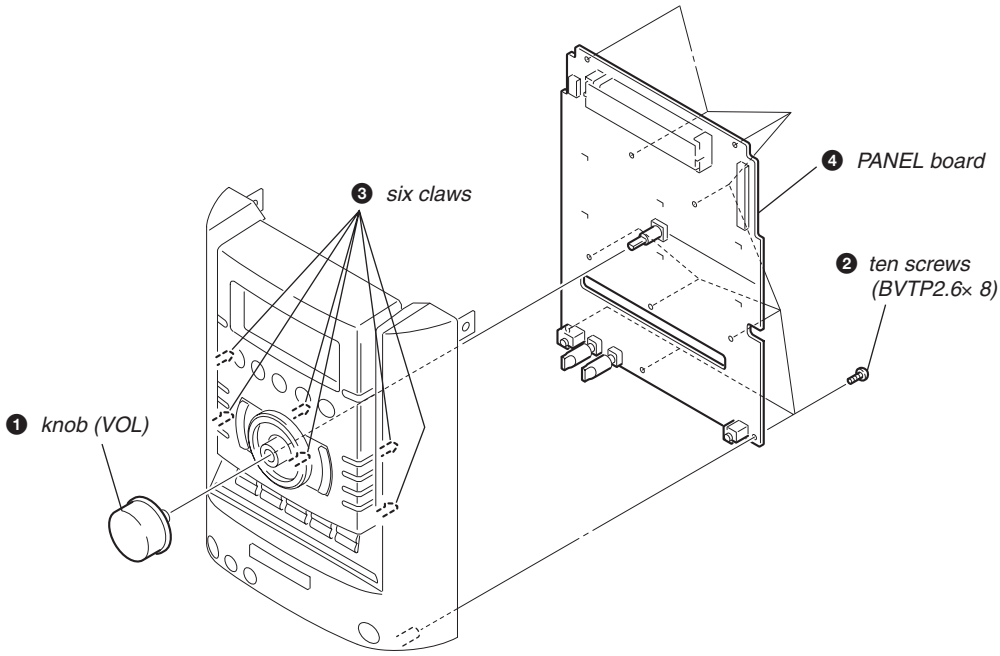
3-1. Case (Side-L)(Side-R), Tape Mechanism Deck (CMAL1Z234A)



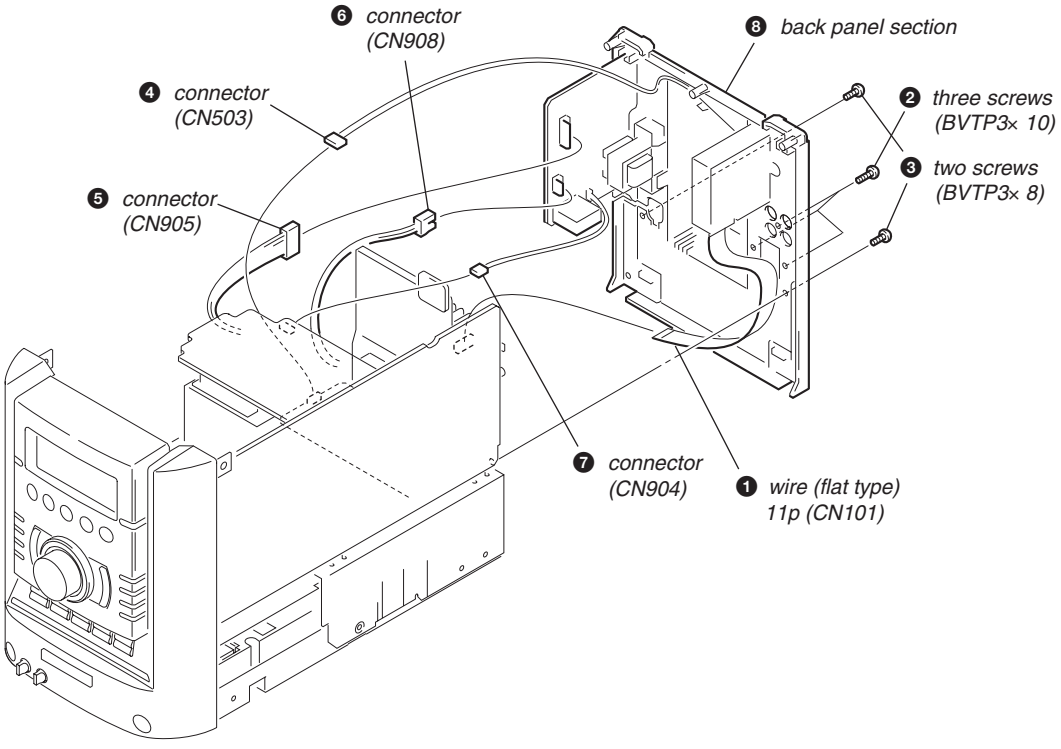
3-2. Front Panel Section



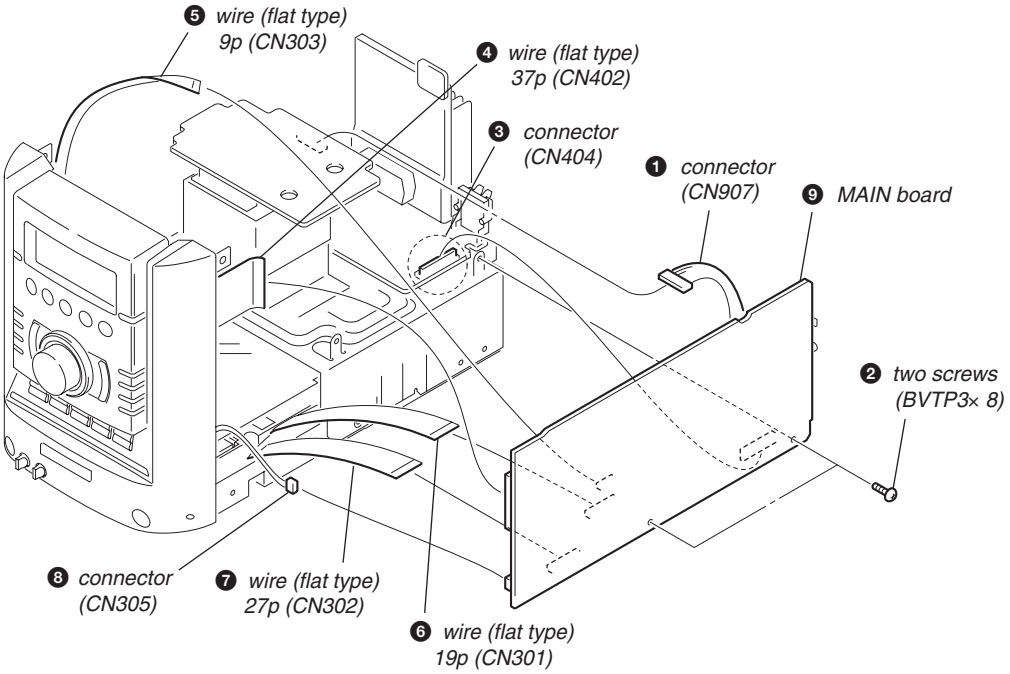
3-3. Panel Board



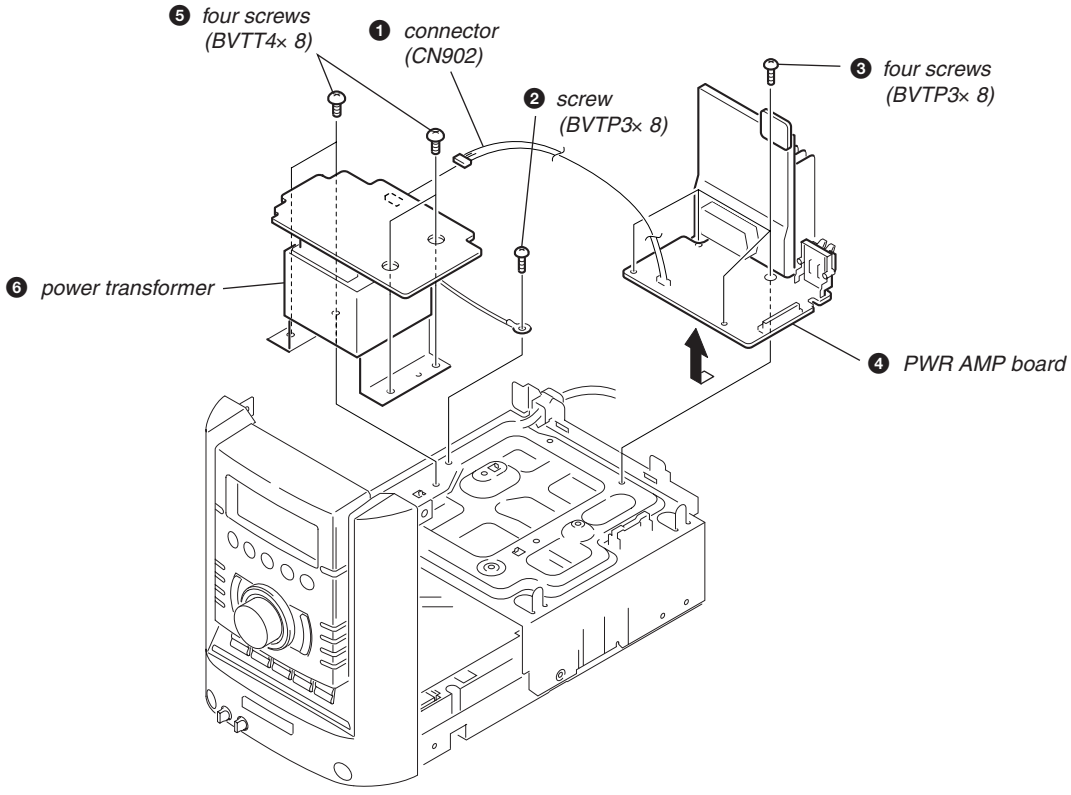
3-4. Back Panel Section



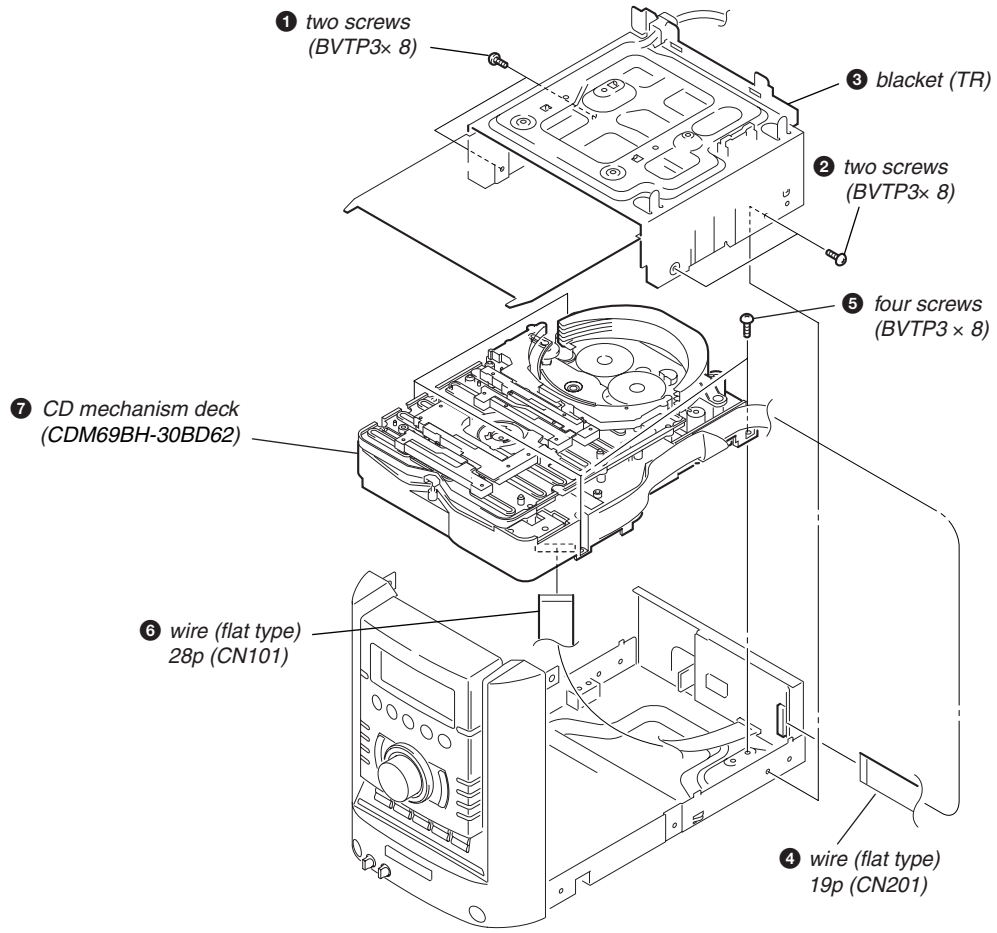
3-5. MAIN Board



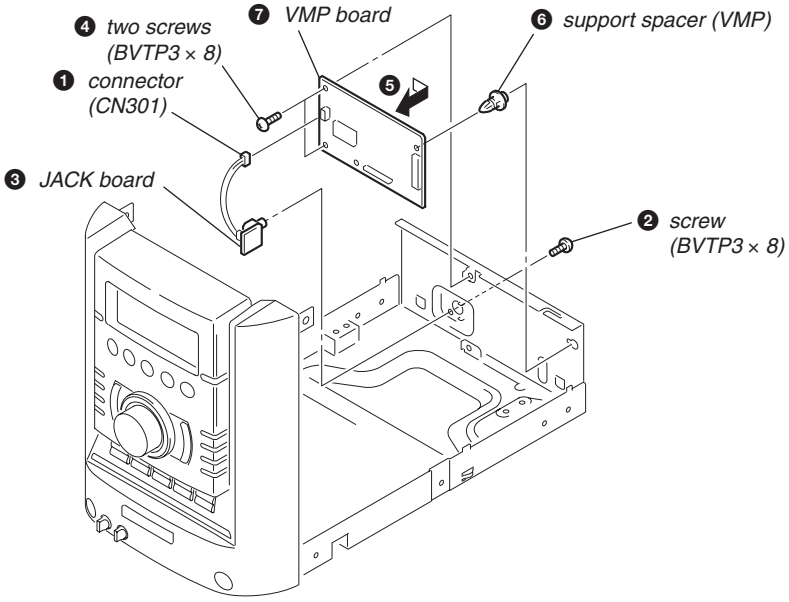
3-6. PWR AMP Board, Power Transformer



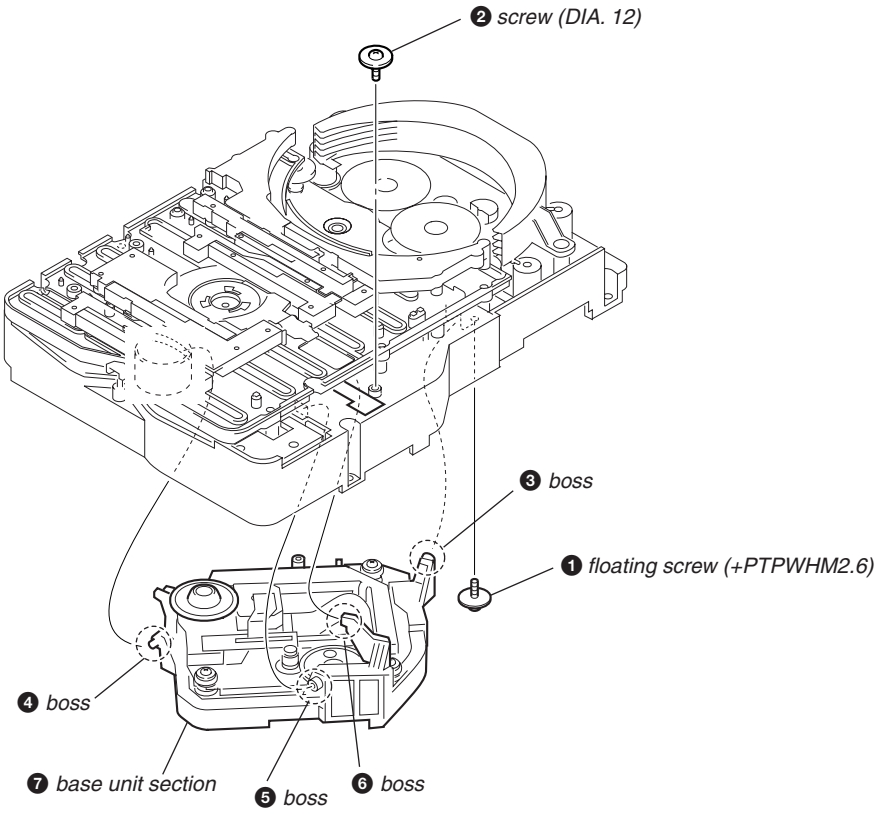
3-7. CD Mechanism Deck (CDM69BH-30BD62)



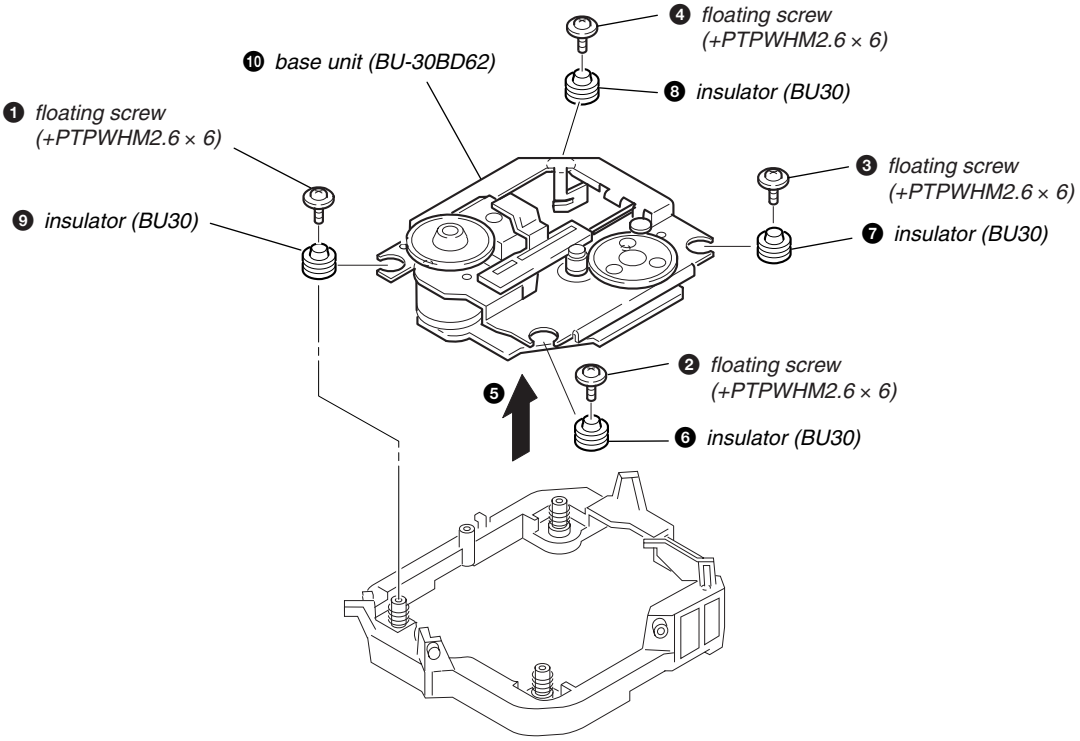
3-8. JACK Board, VMP Board



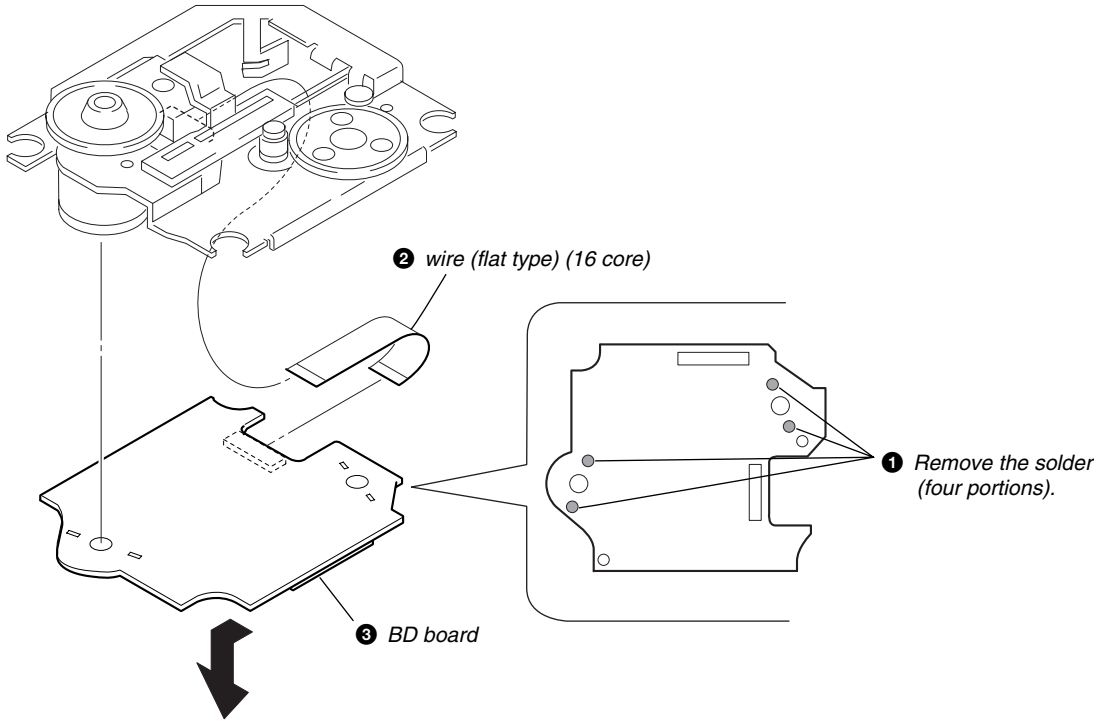
3-9. Base Unit Section



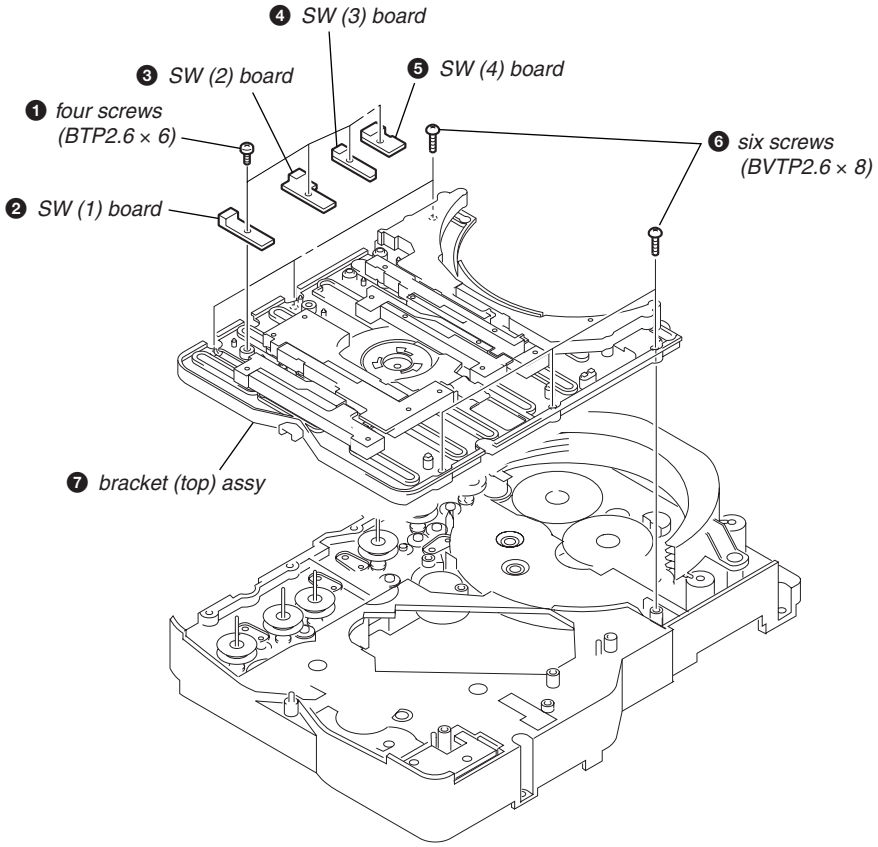
3-10. Base Unit (BU-30BD62)



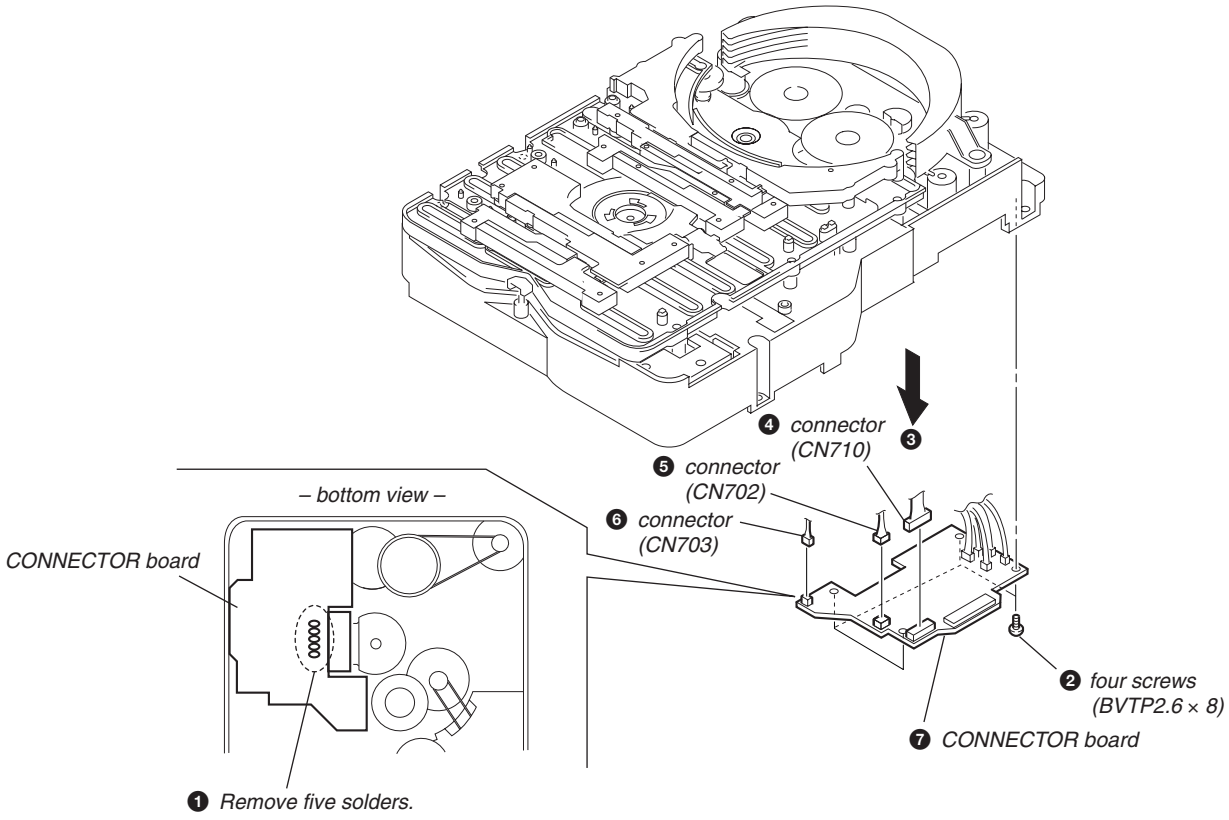
3-11. BD Board


❷ wire (flat type) (16 core)
❶ Remove the solder (four portions).
❸ BD board

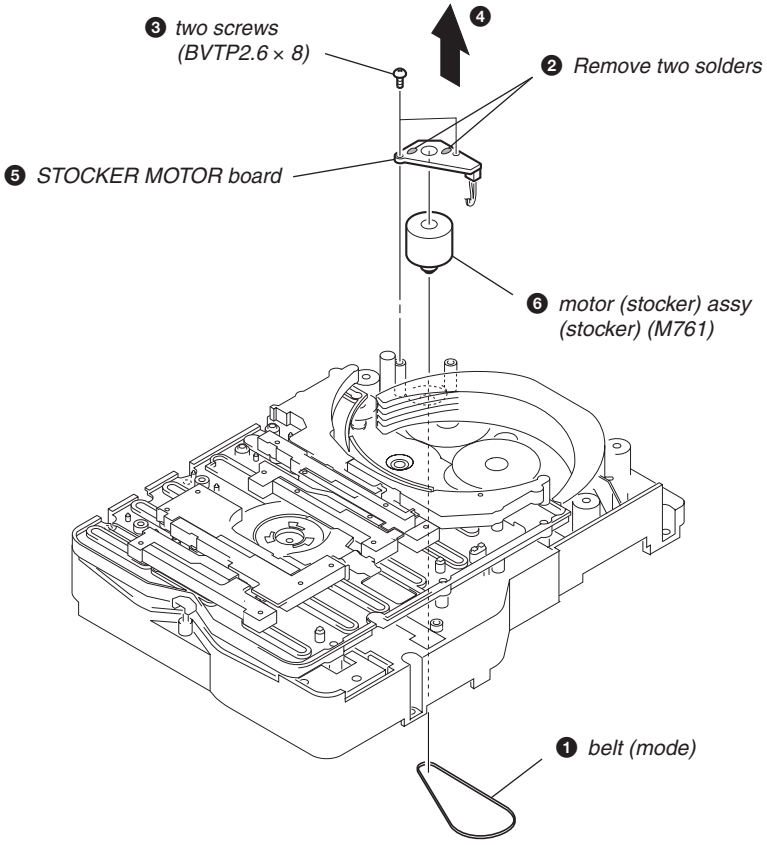
3-12. SW Board, Bracket (Top) Assy



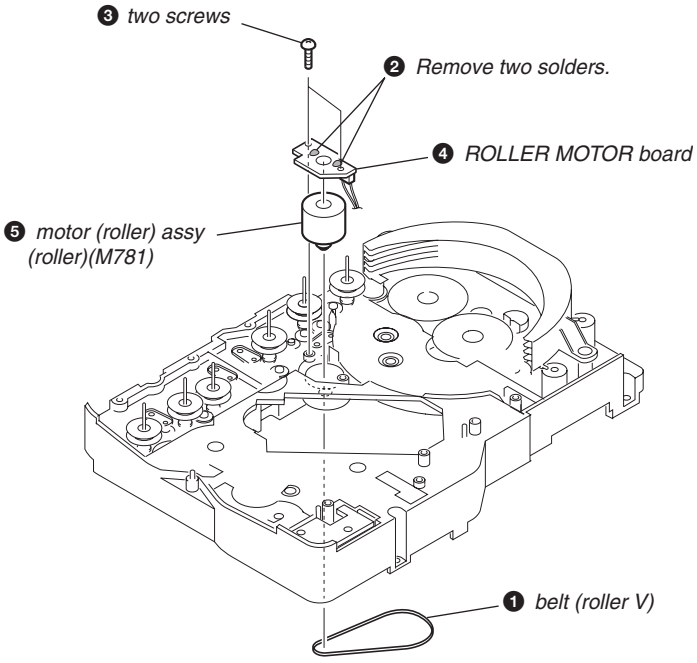
3-13. CONNECTOR Board



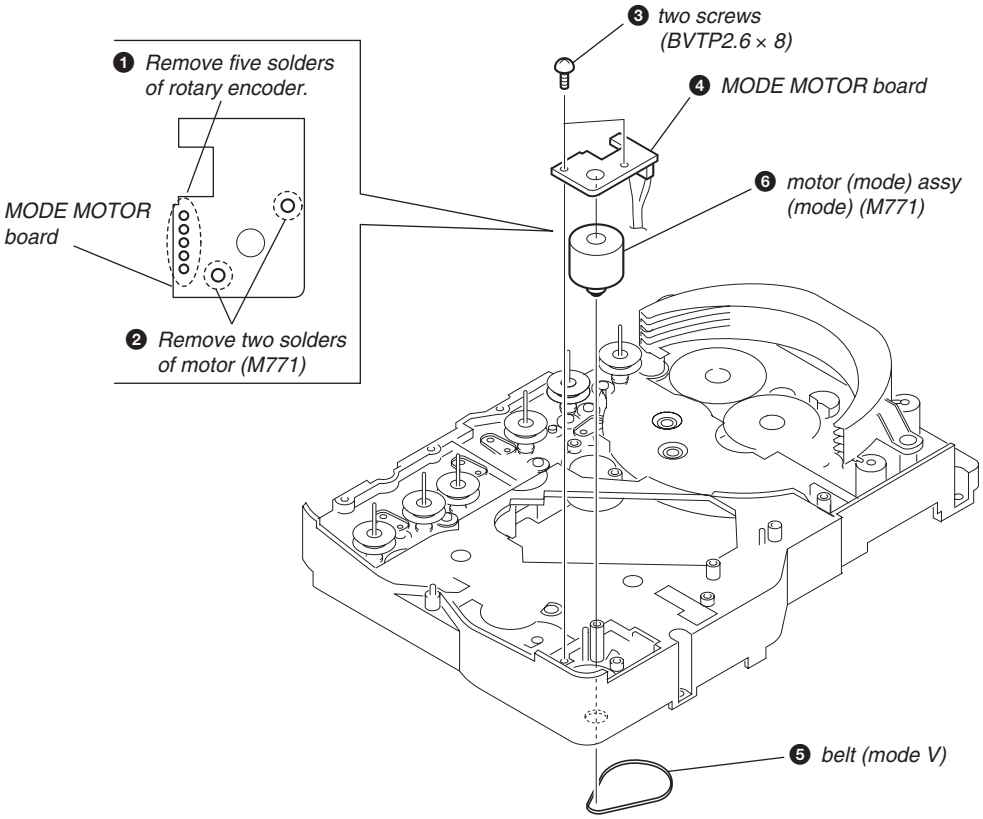
3-14. Motor (Stocker) Assy (Stocker)(M761)



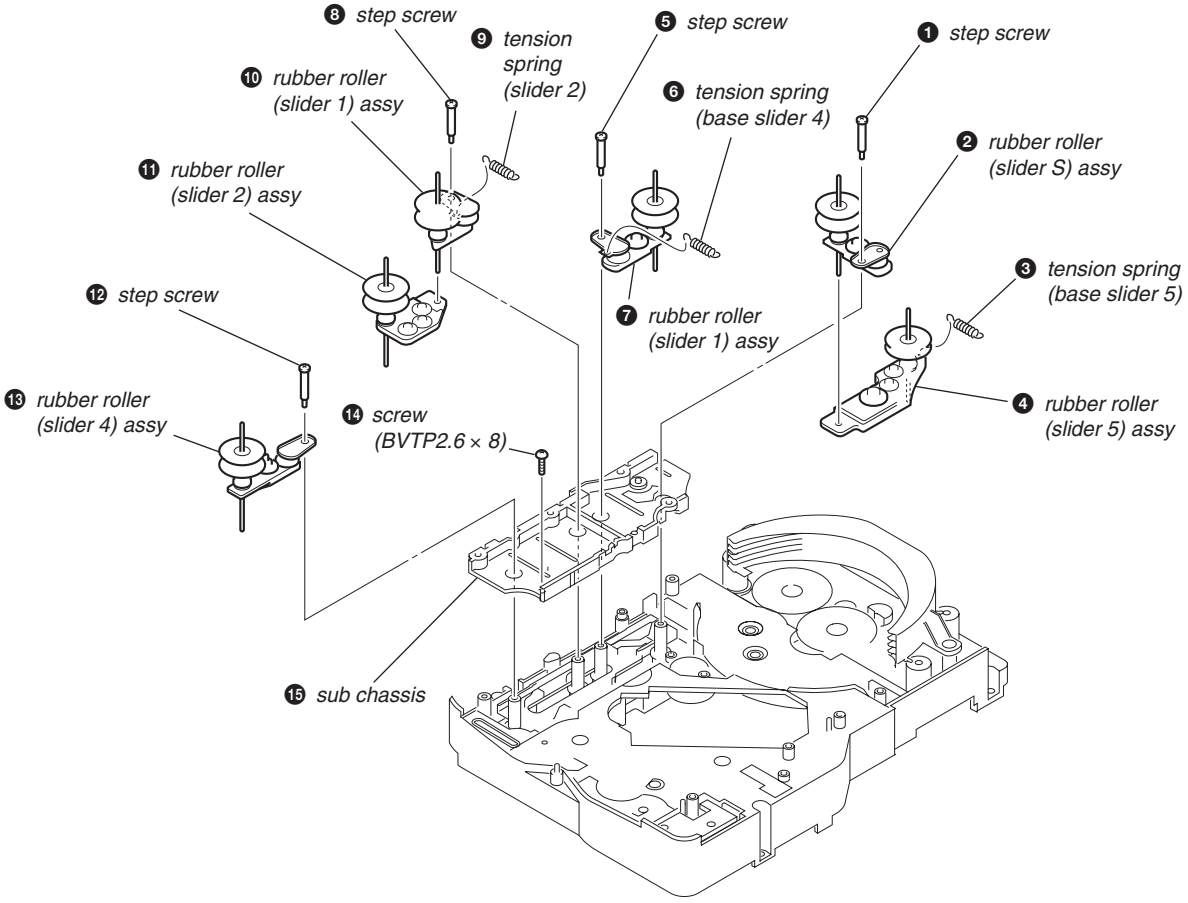
3-15. Motor (Roller) Assy (Roller)(M781)



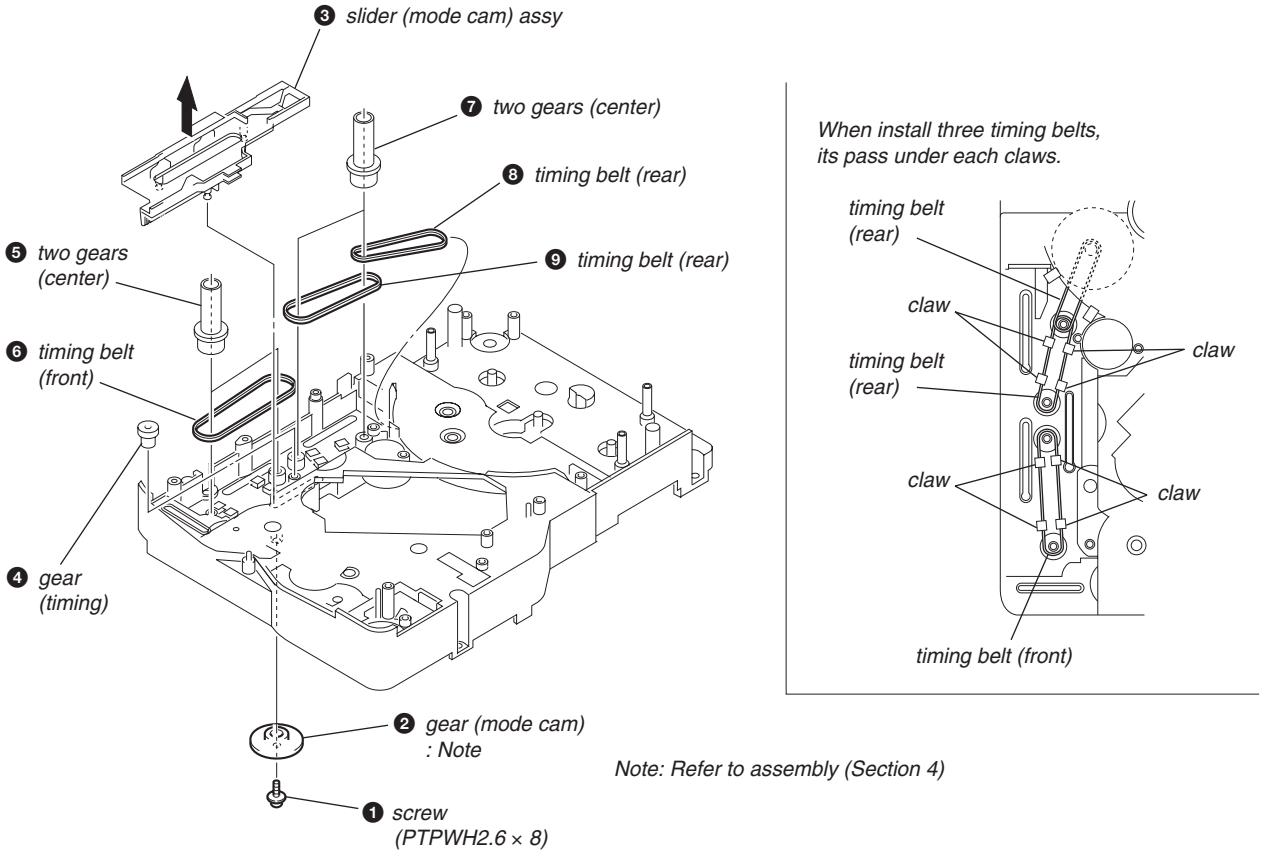
3-16. Motor (Mode) Assy (Mode)(M771)



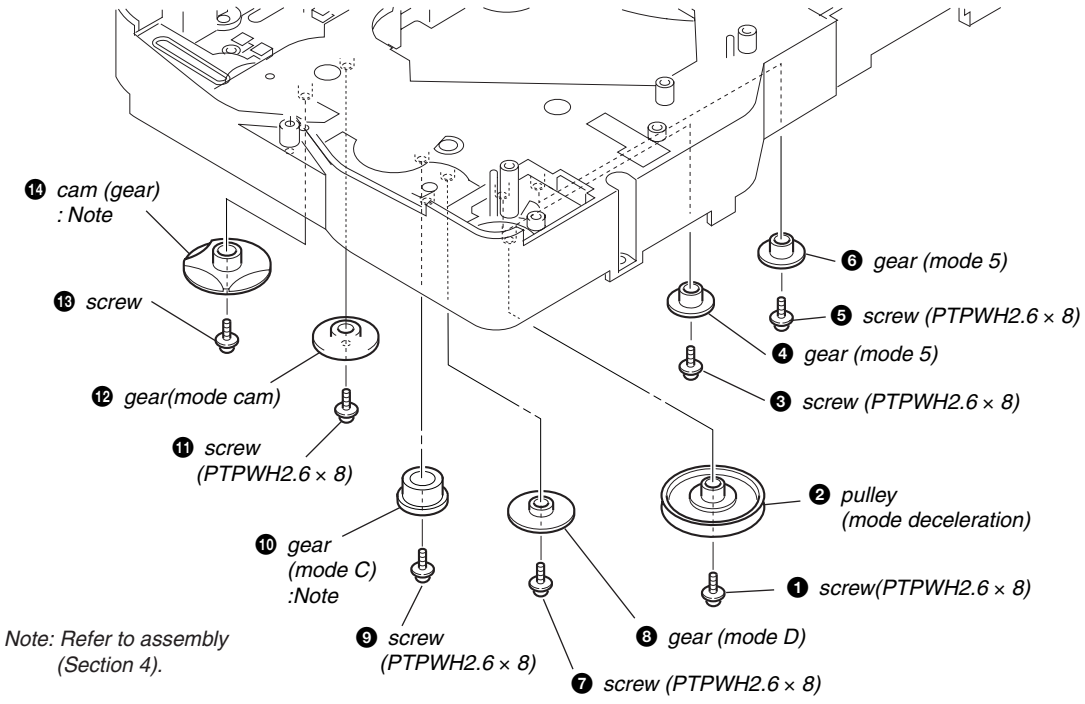
3-17. Rubber Roller (Slider) Assy



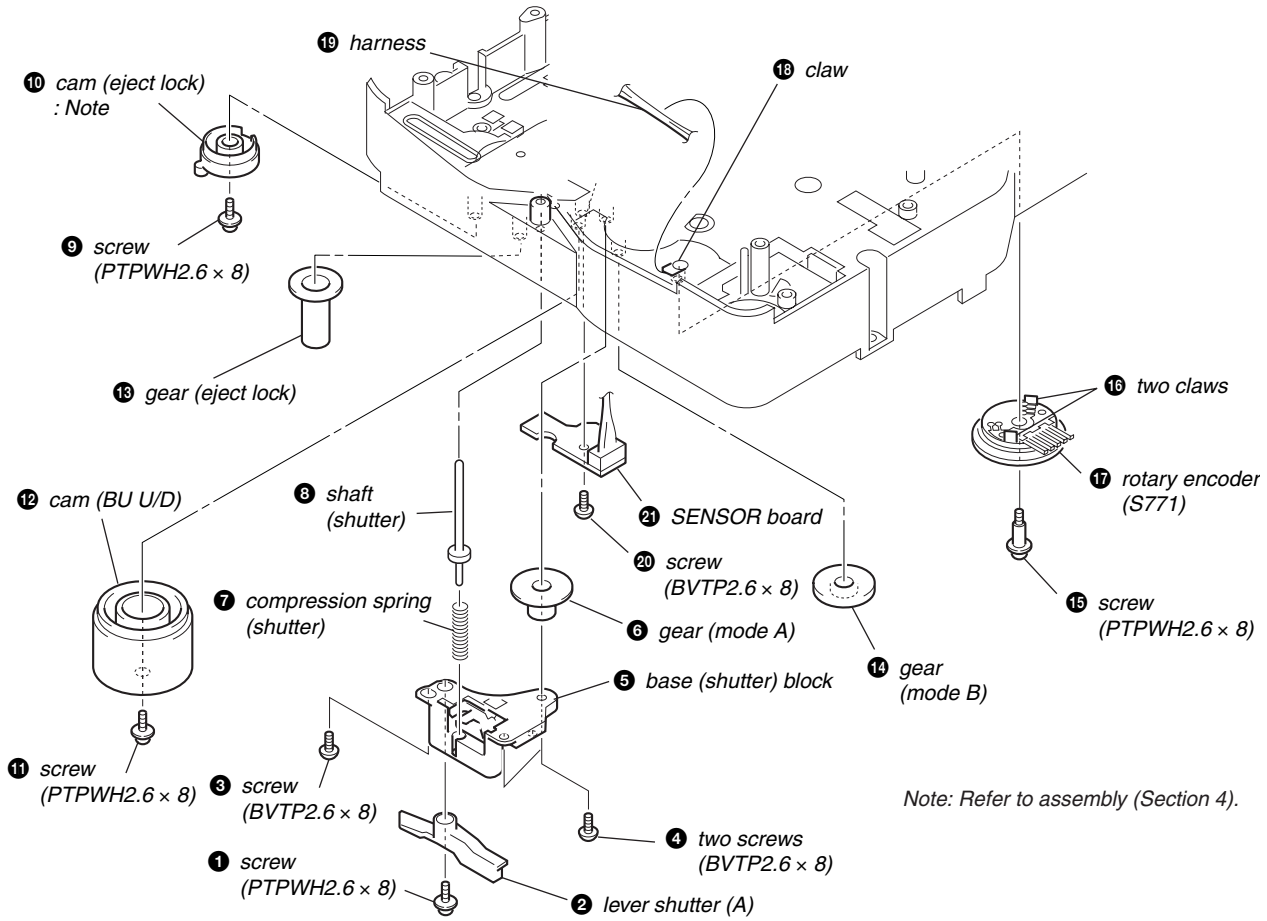
3-18. Timing Belt (Front/Rear)



3-19. Cam (Gear)



3-20. SENSOR Board



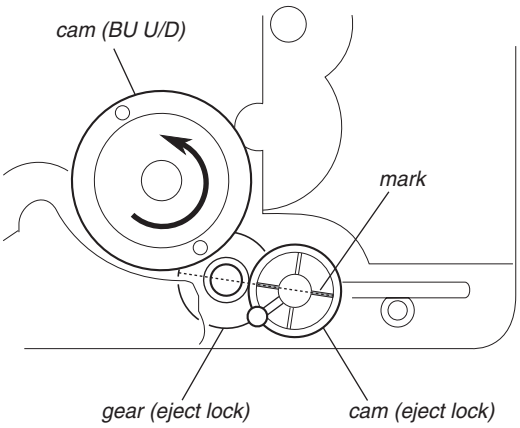
Note: Refer to assembly (Section 4).

SECTION 4
ASSEMBLY

• This set can be assembled in the order shown below.

4-1. How to Install the Cam (Eject Lock)

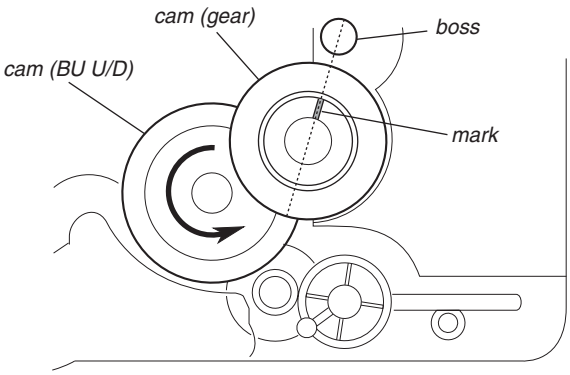
❶ *Rotate the cam (BU U/D) fully in the direction of arrow.*
❷ *Engage the gear (eject lock) and the gear of the cam (eject lock) aligning the mark with the center of the gear (eject lock).*



– bottom view • front –

4-2. How to Install the Cam (Gear)

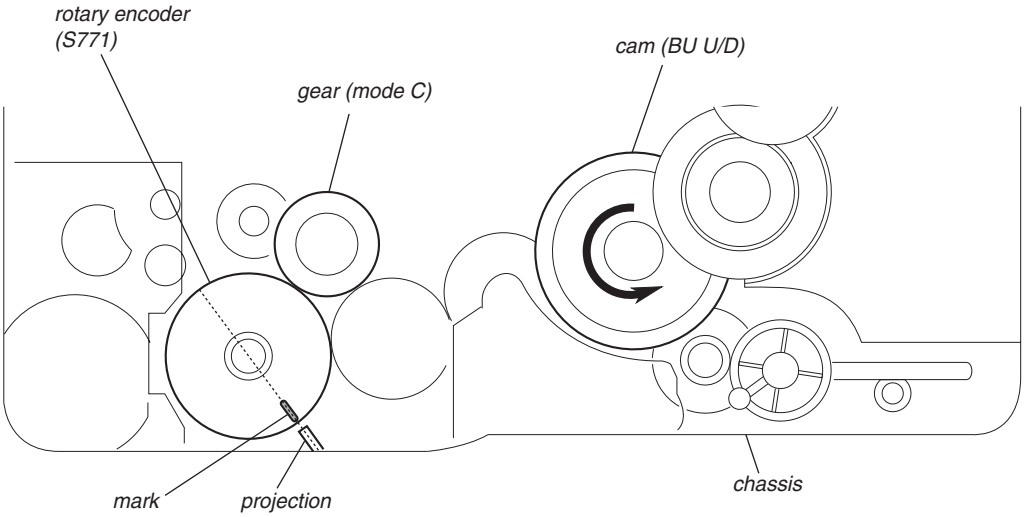
❶ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❷ *Align the mark on the cam (gear) with the boss as shown in the figure and install the cam (gear).*



– bottom view • front –

4-3. How to Install the Gear (Mode C)

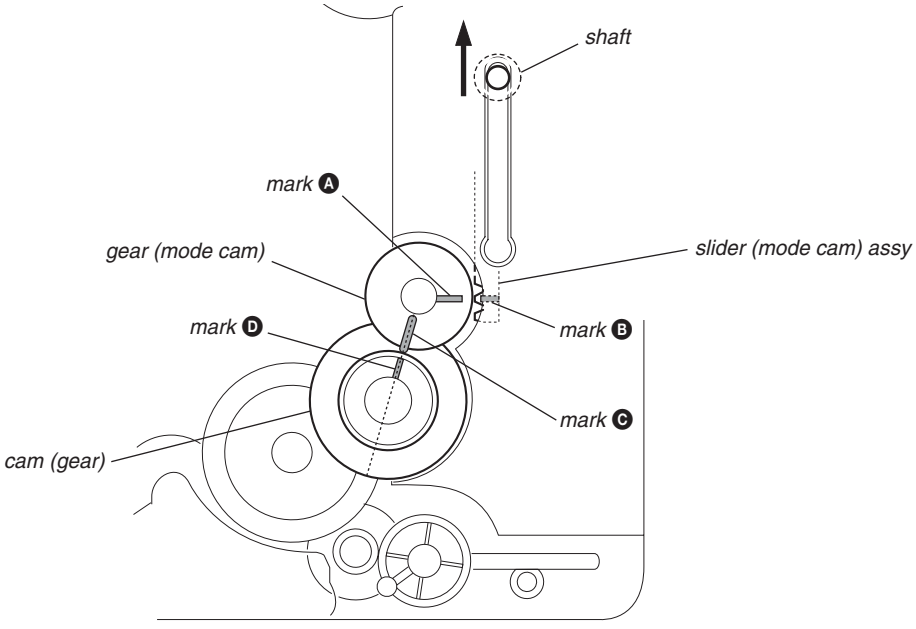
❶ *Align the mark on the rotary encoder (S771) with the projection of the assy.*
❷ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❸ *Install the gear (mode C)*



– bottom view • front –

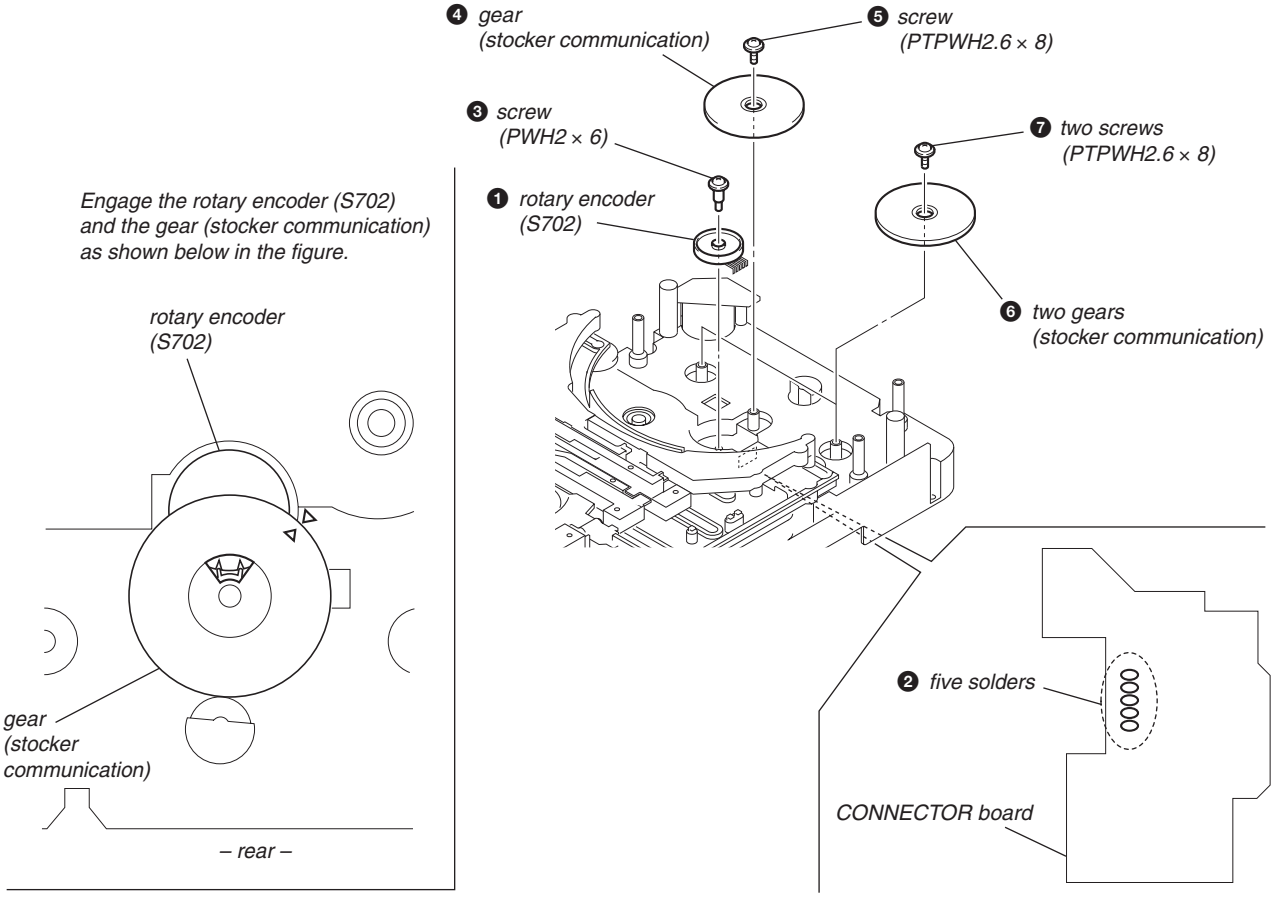
4-4. How to Install the Gear (Mode Cam)

❶ *Slide the shaft in the direction of arrow.*
❷ *Align mark Ⓐ on the gear (mode cam) with mark Ⓑ on the slider (mode cam) assy, then install the gear (mode cam).*
❸ *Check that mark Ⓒ on the gear (mode cam) is in alignment with mark Ⓓ on the cam (gear).*

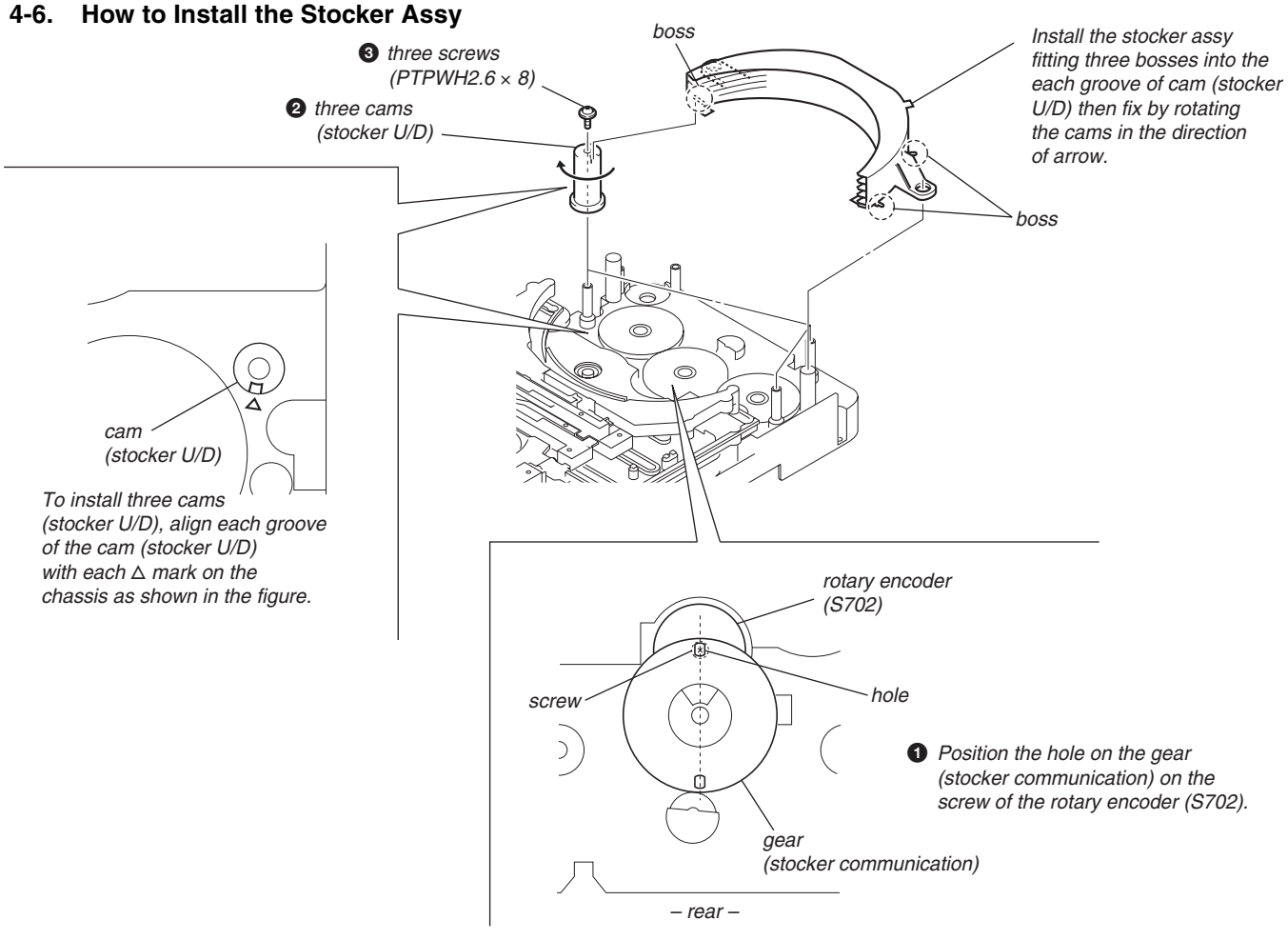


– bottom view • front –

4-5. How to Install the Rotary Encoder (S702), Gear (Stocker Communication)



4-6. How to Install the Stocker Assy



SECTION 5
TEST MODE

[AM Channel Step 9 kHz/10kHz Selection Mode]

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

Procedure:

1. Set the function to AM.
2. Press the I/⏻ button to turn off the main power.
3. While depressing the TUNER/BAND button, press the I/⏻ button to turn on the main power.
4. Either the message "MW 9k STEP" or "MW10k STEP" appears, and thus the channel step is changed over.

[CD Ship Mode]

* 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 the set on.
2. Press the ► (CD) button and the I/⏻ button simultaneously.
3. After the message "STANDBY" blinks, "LOCK" is displayed on the fluorescent indicator tube, and the CD ship mode is set.

[Disc Tray Lock]

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

Setting Procedure:

1. Press the I/⏻ button to turn the set on.
2. Press two buttons of ■ and ⏏ (DISC 1) simultaneously for five seconds.
3. The message "LOCKED" is displayed and the tray is locked.

Releasing Procedure:

1. Press two buttons of ■ and ⏏ (DISC 1) simultaneously for five seconds again.
2. The message "UNLOCKED" is displayed and the tray is unlocked.

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

[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 three buttons DISPLAY, ■ and DISC 1 simultaneously.
2. The fluorescent indicator tube displays the message "COLD RESET" and the set is reset.

[Version and Destination Display Mode]

* The version or destination is displayed.

Procedure:

1. Press the I/⏻ button to turn the set on.
2. To enter the test mode, press the three buttons DISPLAY, ■ and DISC 2 simultaneously.
3. The model and destination is displayed. Example : "HPVCD ASIA3"
4. Press the ■ and PRESET EQ buttons simultaneously.
5. The version is displayed. Example : "V1.03:2003:02.20"
6. To exit from this mode, press the three buttons DISPLAY, ■ and DISC 2 simultaneously, or press the I/⏻ button to turn the set off.

[Panel Test Mode]

* All fluorescent segments, LEDs, keys, volume and headphone detection are tested.

Procedure:

1. Press the I/⏻ button to turn the set on.
2. To enter the test mode, press three buttons DISPLAY, ■ and DISC 3 simultaneously. All segments and LEDs are turned on.
3. Press the ■ and PRESET EQ buttons simultaneously. In this key code display mode, the fluorescent indicator displays "KEY 0 0 0". Each time a button is pressed, the key code is displayed.
4. Press the ■ and PRESET EQ buttons simultaneously. In this key count mode, the fluorescent indicator displays "KEYCNT 0 1". Each time a button is pressed, "KEYCNT 0 X" value increases. However, once a button is pressed, it is no longer taken into account.
5. Press the ■ and PRESET EQ buttons simultaneously. When a headphone jack is not inserted, " H_P RELEASE" is displayed. When a headphone jack is inserted, " H_P IN" is displayed.
6. Press the ■ and PRESET EQ buttons simultaneously. When the VOLUME knob is not rotated, "VOLUME FLAT" is displayed. The message "VOLUME UP" is displayed, when the VOLUME knob is rotated clockwise. The message "VOLUME DOWN" is displayed, when the VOLUME knob is rotated counterclockwise.
7. To exit from this mode, press three buttons DISPLAY, ■ and DISC 3 simultaneously.

[MC Test Mode]

* This mode is used to check the function of the amplifier.

Procedure:

1. Press the I/⏻ button to turn the set on.
2. To enter the test mode, press the three buttons DISPLAY, ■ and DISC 4 simultaneously.
3. The message "VOLUME MIN", "VOLUME 16" or "VOLUME MAX" is displayed , when turning the VOLUME knob clockwise or conterclockwise.
4. Each time the DIMMER button is pressed, the message "GEQ MAX" or "GEQ MIN" is displayed. The function of the equalizer is set to maximum or minimum.
5. The message "GEQ FLAT" is displayed, when pressing the PRESET EQ button. The function of the equalizer is set to flat.
6. Each time the GROOVE button is pressed, the message "VACS OFF" or "VACS ON" is displayed.
7. Automatic recording/playback : Press the REC button when a tape is inserted, recording is started and the input source function is selected to "MD" automatically.
8. When the ⏮ button is pressed, tape is rewound , stops at around the record-starting position and playback is started automatically.
9. To exit from this mode, press the I/⏻ button to turn the set off.

[AMP Test Mode]

Procedure:

1 Press the I/⏻ button to turn the set on.
2. To enter the test mode, press the three buttons ■ , PRESET EQ and DISC 4 simultaneously.
3. The message "AMP TEST IN" is displayed.
4. Press the ■ and PRESET EQ buttons simultaneously. The VACS status and IC parameters are displayed. Example : "D: S: +4. 0. +2"
5. DBFB ON/OFF Function : Press the GROOVE button, "DBFB ON" or "DBFB OFF" is displayed.
6. SURROUND ON/OFF Function : Press the PRESET EQ button, "SURROUND ON" or "SURROUND OFF" is displayed.
7. To exit from this mode, press three buttons ■ , PRESET EQ and DISC 4 simultaneously.

Note: Perform the Cold Reset to initialize the equalizer parameters.

[CD Service Mode]

* This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pickup.

Procedure:

1. Press I/⏻ button to turn the set on.
2. Set the function to CD.
3. Press three buttons DISPLAY, ■ and DISC 5 simultaneously.
4. The MPEG AV TEST mode is selected.
5. When the DIMMER buttons is depressed, the CD service mode is activated.
6. Press ▶▶I button to move the pickup to outside track, or press I◀◀ button to inside track.
7. To exit from this mode, perform as follows:
   1) Move the pickup to the most inside track.
   2) Perform the Cold Reset.

Note: Do not run the sled motor excessively, otherwise the gear can be chipped.

SECTION 6
MECHANICAL ADJUSTMENTS

• TAPE MECHANISM DECK SECTION

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	2.94 – 7.84 mN • m (30 to 79 g • cm) (0.42 – 1.11 oz • inch)
FWD back tension	CQ-102C	0.15 – 0.6 mN • m 2 to 6 g • cm (0.03 – 0.08 oz • inch)
REV	CQ-102RC	2.94 – 7.84 mN • m (30 to 79 g • cm) (0.42 – 1.11 oz • inch)
REV back tension	CQ-102RC	0.15 – 0.6 mN • m 2 to 6 g • cm (0.03 – 0.08 oz • inch)
FF/REV	CQ-201B	6.86 – 17.64 mN • m (70 to 179 g • cm) (0.98 – 2.49 oz • inch)
FWD tension	CQ-403A	9.8 mN • m more (100 • cm or more) (1.4 oz • inch or more)
REV tension	CQ-403R	9.8 mN • m more (100 • cm or more) (1.4 oz • inch or more)

SECTION 7
ELECTRICAL ADJUSTMENTS

DECK SECTION | 0 dB=0.775 V

Note: Confirm each contents of this section first of all. If the results are not satisfied, do the adjustment.

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.

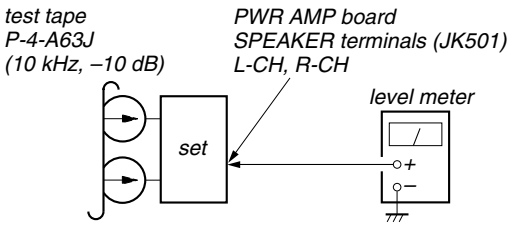
• Test Tape

Tape	Signal	Used for
P-4-A63J	10 kHz, –10 dB	Azimuth Adjustment

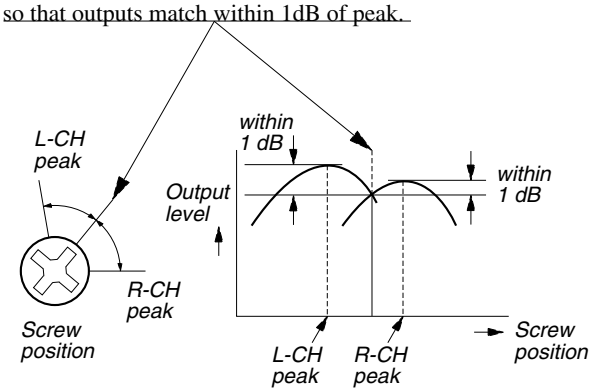
Record/Playback Head Azimuth Adjustment

Procedure:

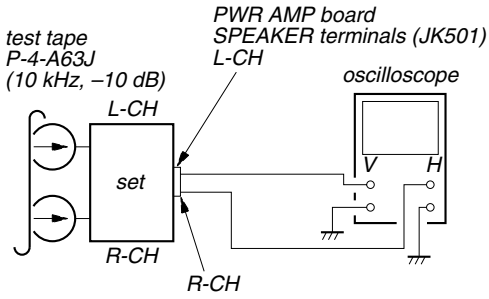
1. Mode: Playback

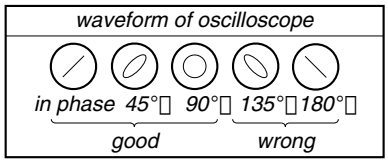


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.



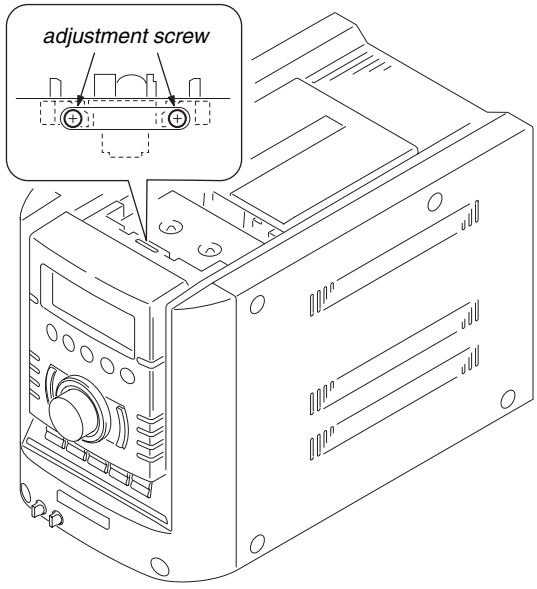
3. Mode: Playback





4. Repeat step 1 to 3 in playback (REV) mode.
5. After the adjustments, apply suitable locking compound to the pats adjusted.

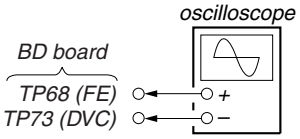
Adjustment Location : Record/Playback/Erase Head



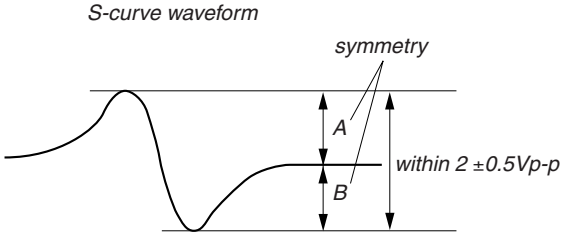
CD SECTION

Note:
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use LUV-P01 (Part No. 4-999-032-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-CURVE CHECK

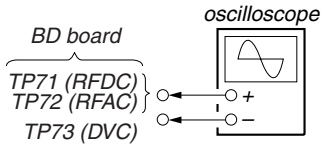


Procedure :
1. Connect an oscilloscope to TP68 (FE) and TP73 (DVC) on the BD board.
2. Turn the power ON.
3. Load a disc (LUV-P01) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
4. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 2 ± 0.5 Vp-p.



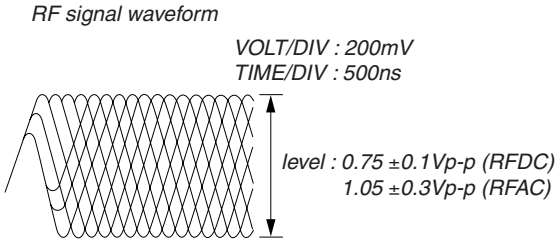
Note:
- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF LEVEL CHECK

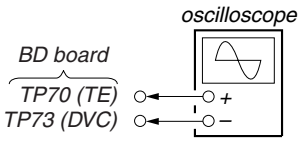


Procedure :
1. Connect an oscilloscope CH1 to TP71 (RFDC), CH2 to TP72 (RFAC) and TP73 (DVC) on the BD board.
2. Turn the power ON.
3. Load a disc (LUV-P01) and playback the number nine track.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

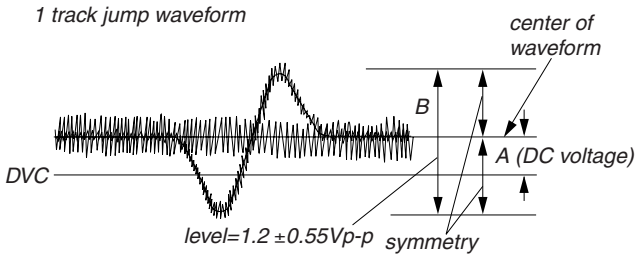
Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



TRAVERSE LEVEL CHECK

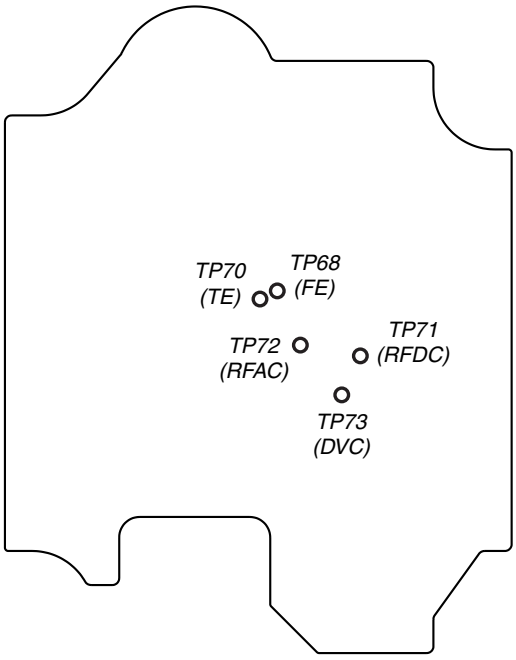


Procedure :
1. Connect an oscilloscope to TP70 (TE) and TP73 (DVC) on the BD board.
2. Turn the power ON.
3. Load a disc (LUV-P01) and playback the number nine track.
4. Press the CD ► button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.



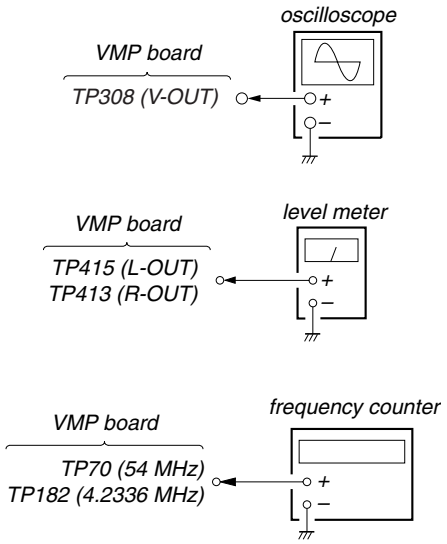
Connecting Location:

– BD BOARD (Conductor Side) –



VIDEO SECTION

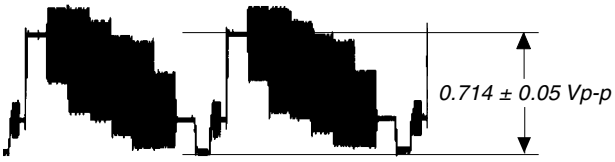
Video Level Check
(Audio Level/Video Clock/Audio Servo Clock Check)



Procedure :

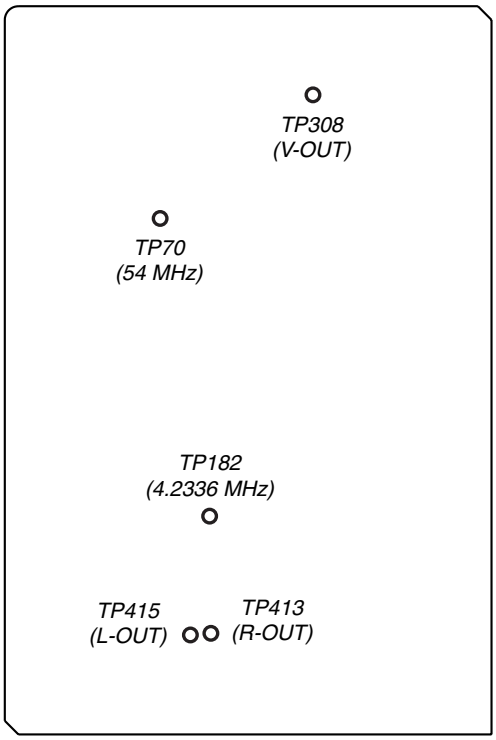
1. Connect an oscilloscope to TP308 (V-OUT) on the VMP board.
2. Connect a level meter to TP415 (L-OUT) and TP413 (R-OUT) on the VMP board.
3. Connect a frequency counter to TP70 (54 MHz) and TP182 (4.2336 MHz) on the VMP board.
4. Turn the power ON.
5. Set a test disc (HLV-402 (Part No. 8-909-870-00))
6. Press three buttons DISPLAY, ■ and DISC5 simultaneously.
7. Press the DIMMER button. The message "MPEG AV TEST" is displayed on the fluorescent indicator. Color bar signal outputs and sine-wave (1 kHz 0dB) appears.
8. Confirm that the signal at TP308 (V-PUT) on the VMP board is 0.714 ± 0.05 Vp-p.

Note: TP308 (V-OUT) on the VMP board must be teminated by 75 Ω.



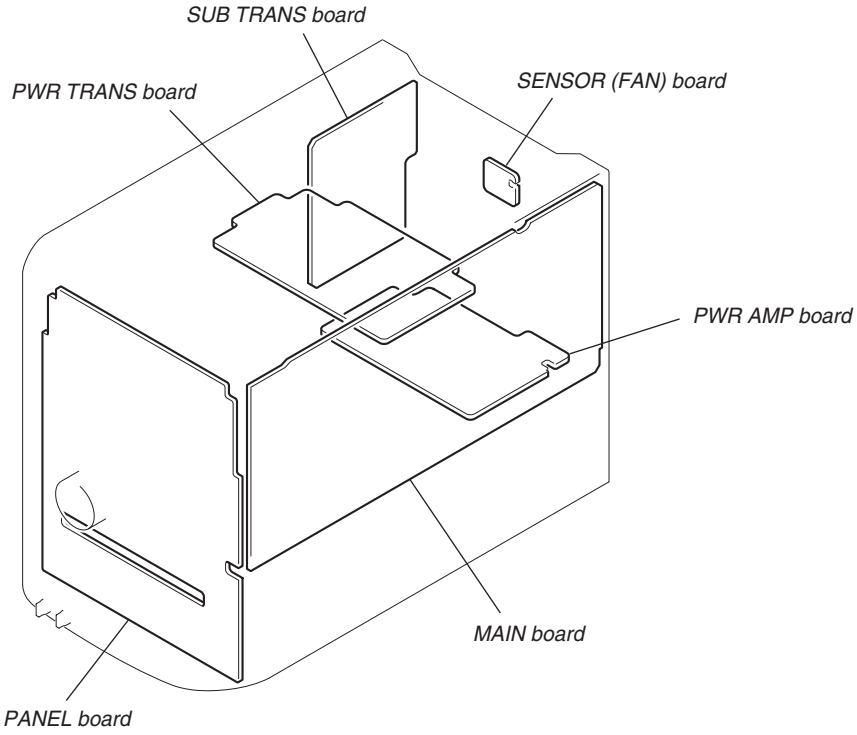
9. Confirm that the value of level meter is 2.5 ± 2.0 dBs.
10. Confirm that the value of frequency counter is 54 MHz ± 400 Hz.
11. Confirm that the value of frequency counter is 4,2336 MHz.
12. To exit from this mode, Press three buttons DISPLAY, ■ and DISC1 simultaneously.

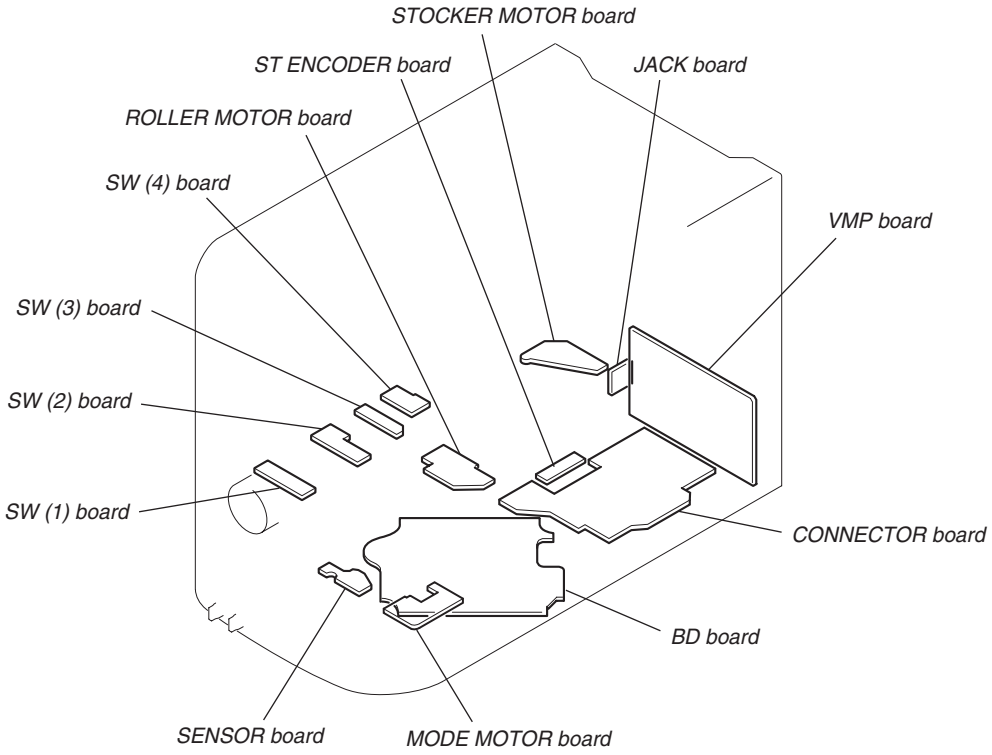
– VMP BOARD (Component Side) –



SECTION 8
DIAGRAMS

- **Circuit Boards Location**





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

For schematic diagrams.

Note:

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

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

- : B+ Line.
- : B– Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  ∗ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : TUNER
  : CD
  : MD
  : VIDEO
  : PB (TAPE)
  : REC (TAPE)
  : DIGITAL OUT
- Abbreviation
  E3 : 220-240 V AC area in E model.
  EA : Saudi Arabia model.
  SP : Singapore model.
  TH : Thai model.

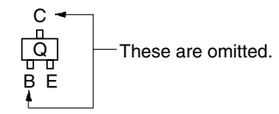
For printed wiring boards.

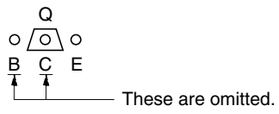
Note:

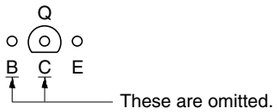
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.

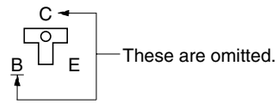
Caution:
Pattern face side: (Conductor Side) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side) Parts on the parts face side seen from the parts face are indicated.

- **Indication of transistor**









- **Waveforms**

– BD Board –

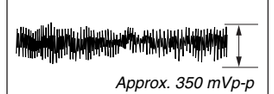
① IC103 ⑮ (RFAC)
(CD Play Mode)

200 mV/DIV, 400 ns/DIV

② IC103 ⑯ (FE)
(CD Play Mode)

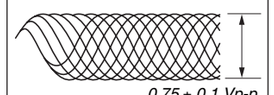
100 mV/DIV, 20 µs/DIV

③ IC103 ⑱ (TE)
(CD Play Mode)



100 mV/DIV, 20 µs/DIV

④ IC103 ㉘ (RFDCO)
(CD Play Mode)

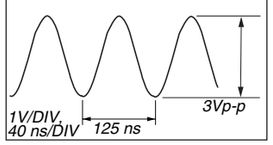


200 mV/DIV, 400 ns/DIV

– PANEL Board –

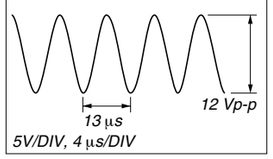
⑤ IC601 ⑬ (XT2)

⑥ IC601 ⑯ (CF2)



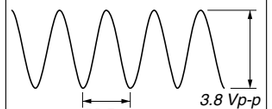
– MAIN Board –

⑦ Q207 collector(REC Mode)

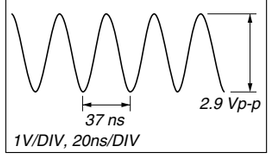


– VMP Board –

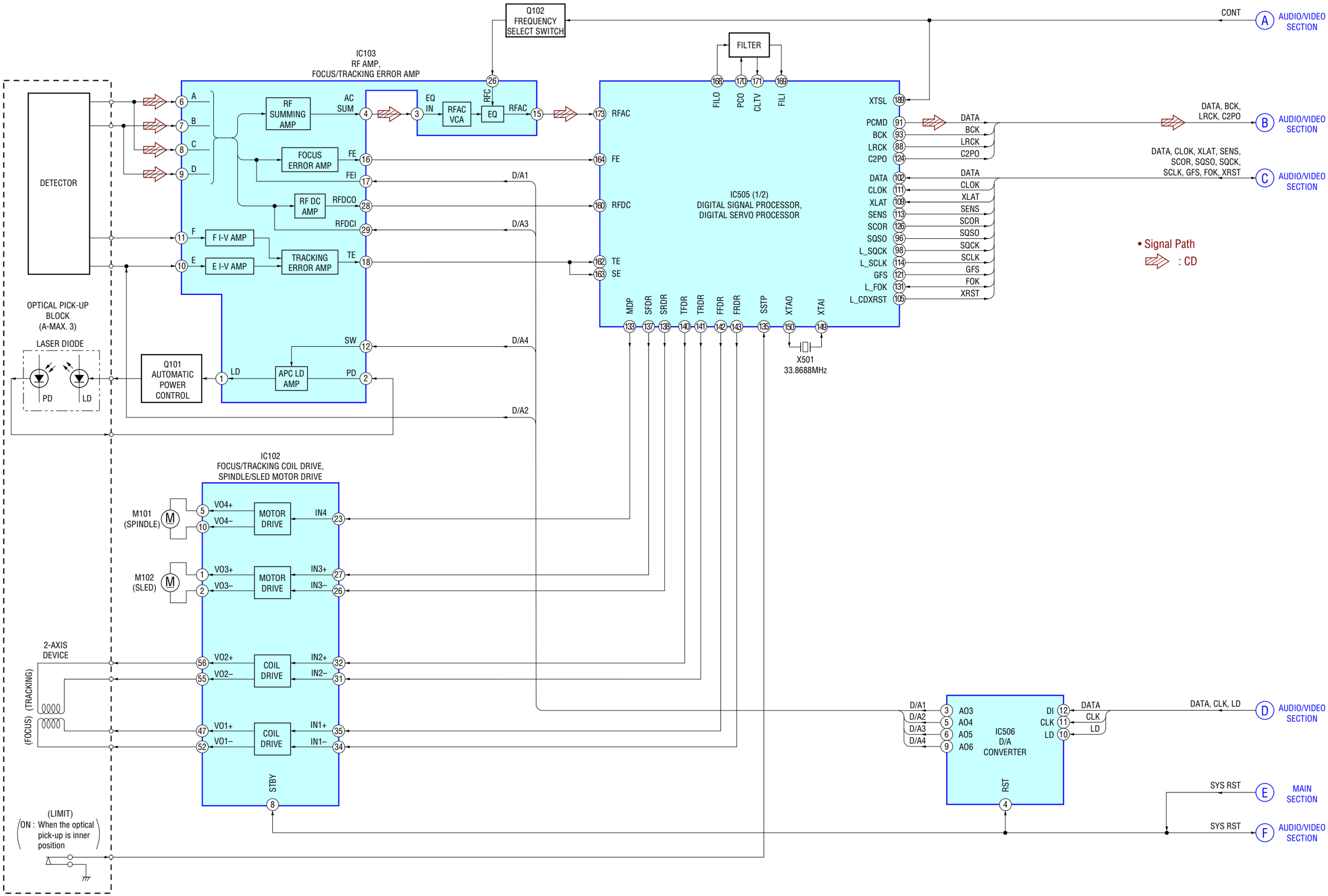
⑧ IC505 ⑭⑨ (XTAO)



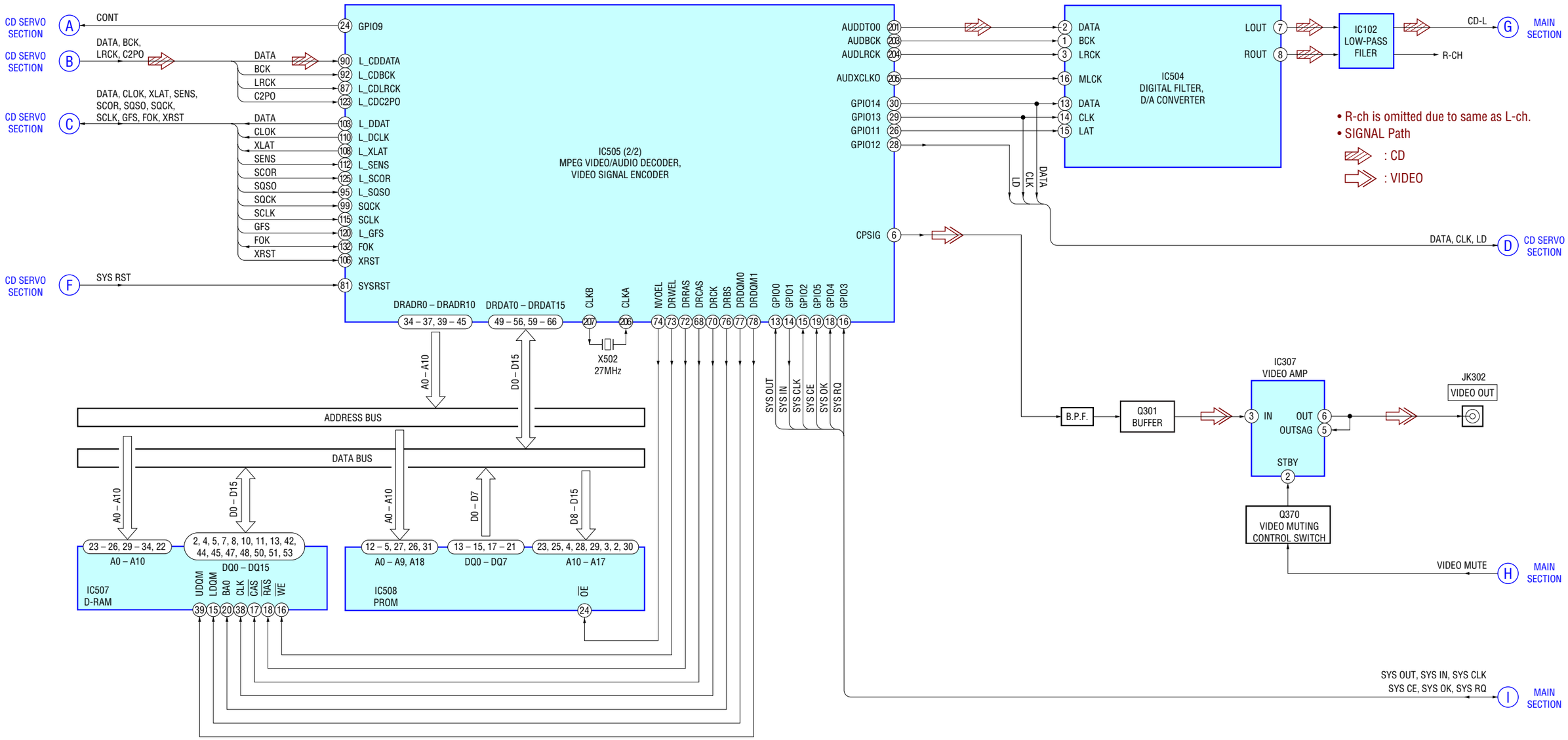
⑨ IC505 ⑳⑦ (CLKB)



8-1. Block Diagram — CD SERVO Section —

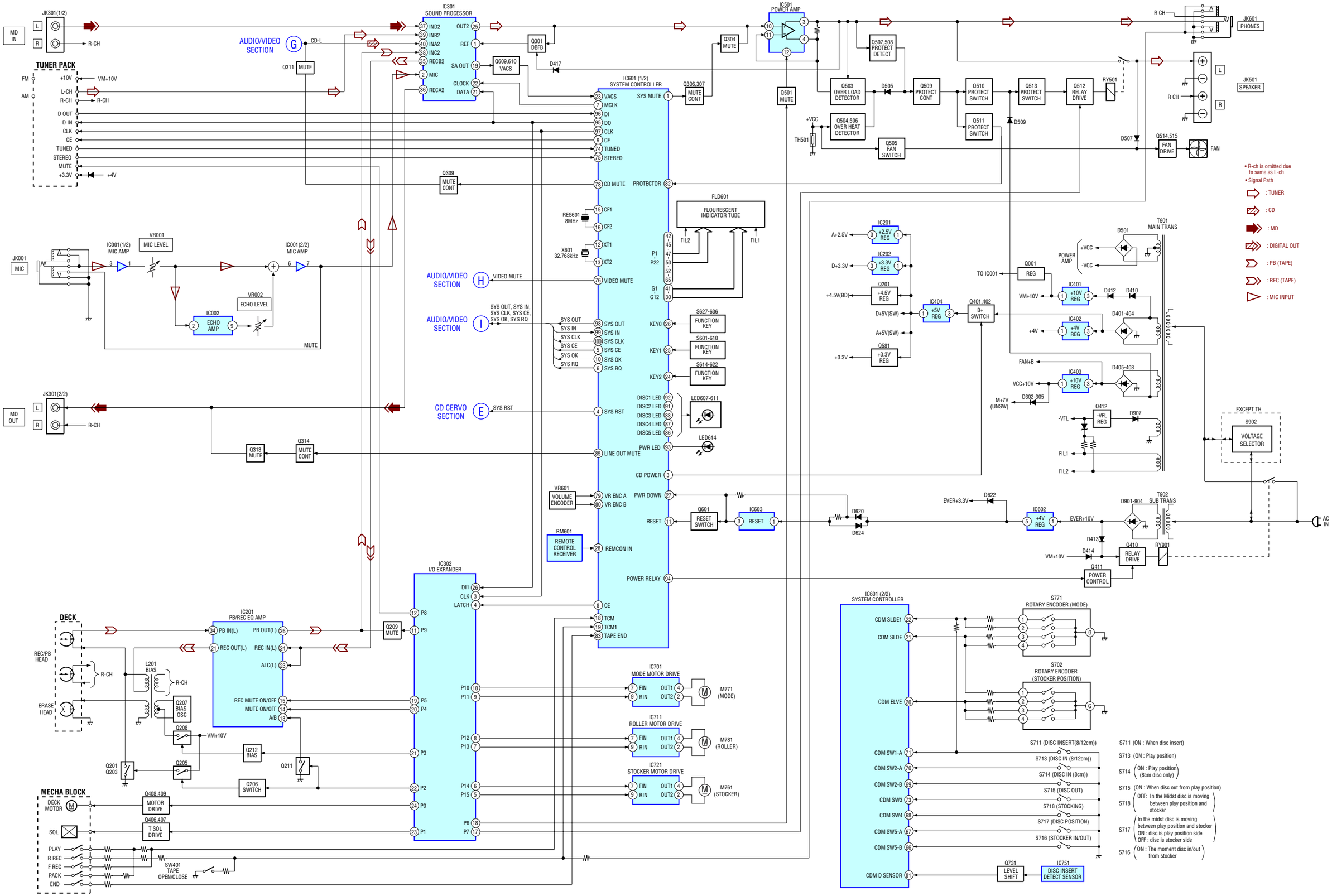


— AUDIO/VIDEO Section —

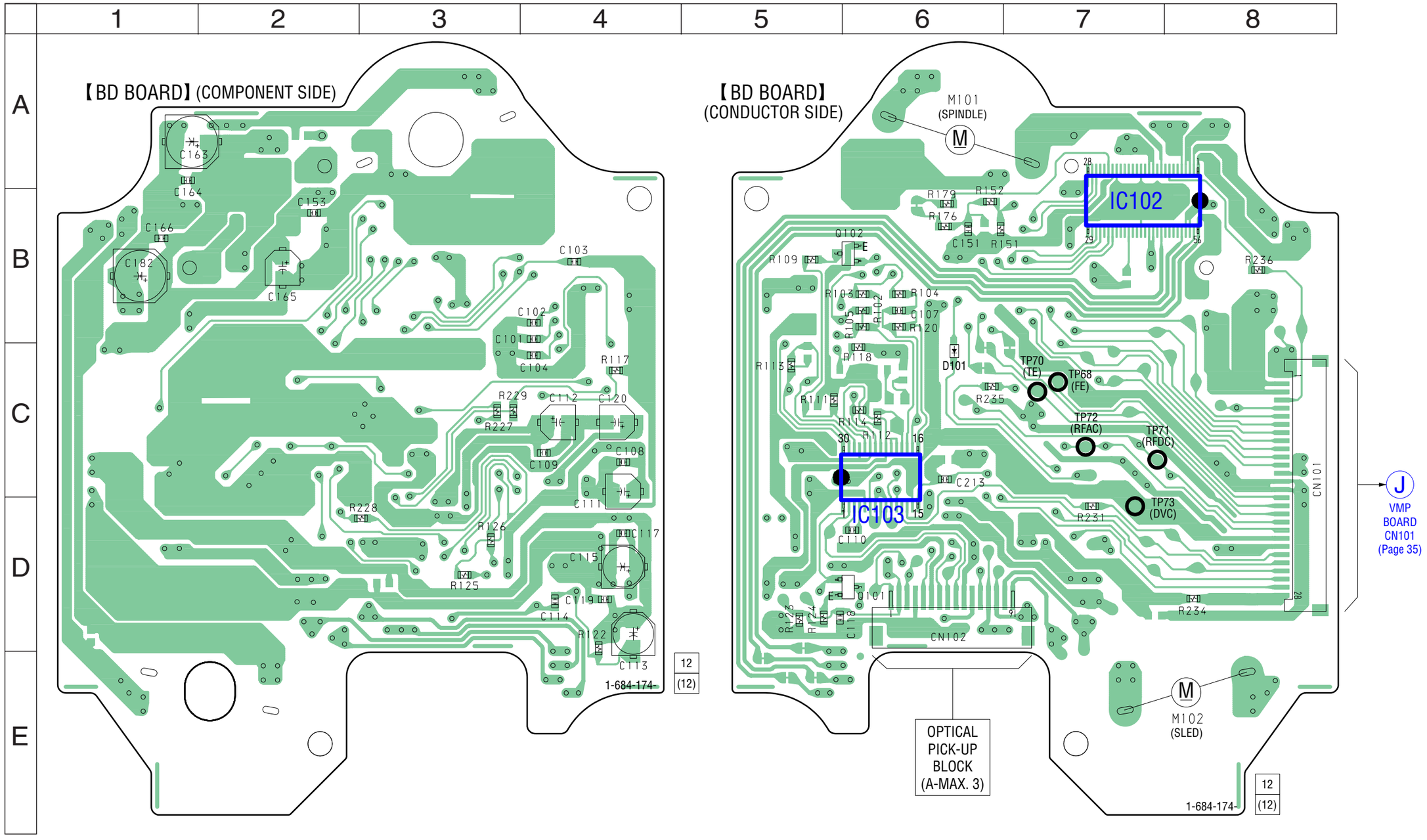


HCD-HP8V

— MAIN Section —



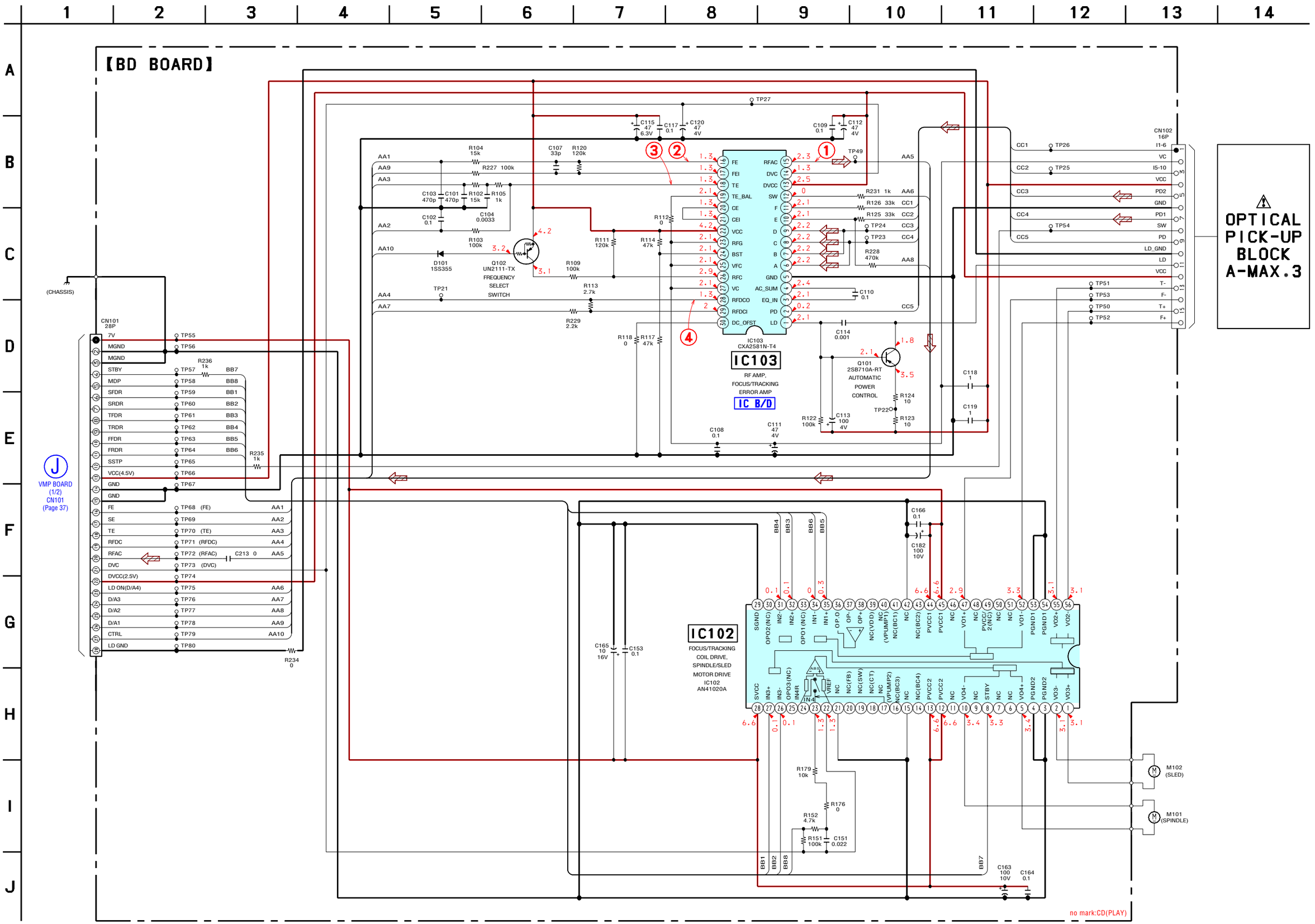
8-2. Printed Wiring Boards — BD Section — • See page 28 for Circuit Boards Location.



• **Semiconductor Location**

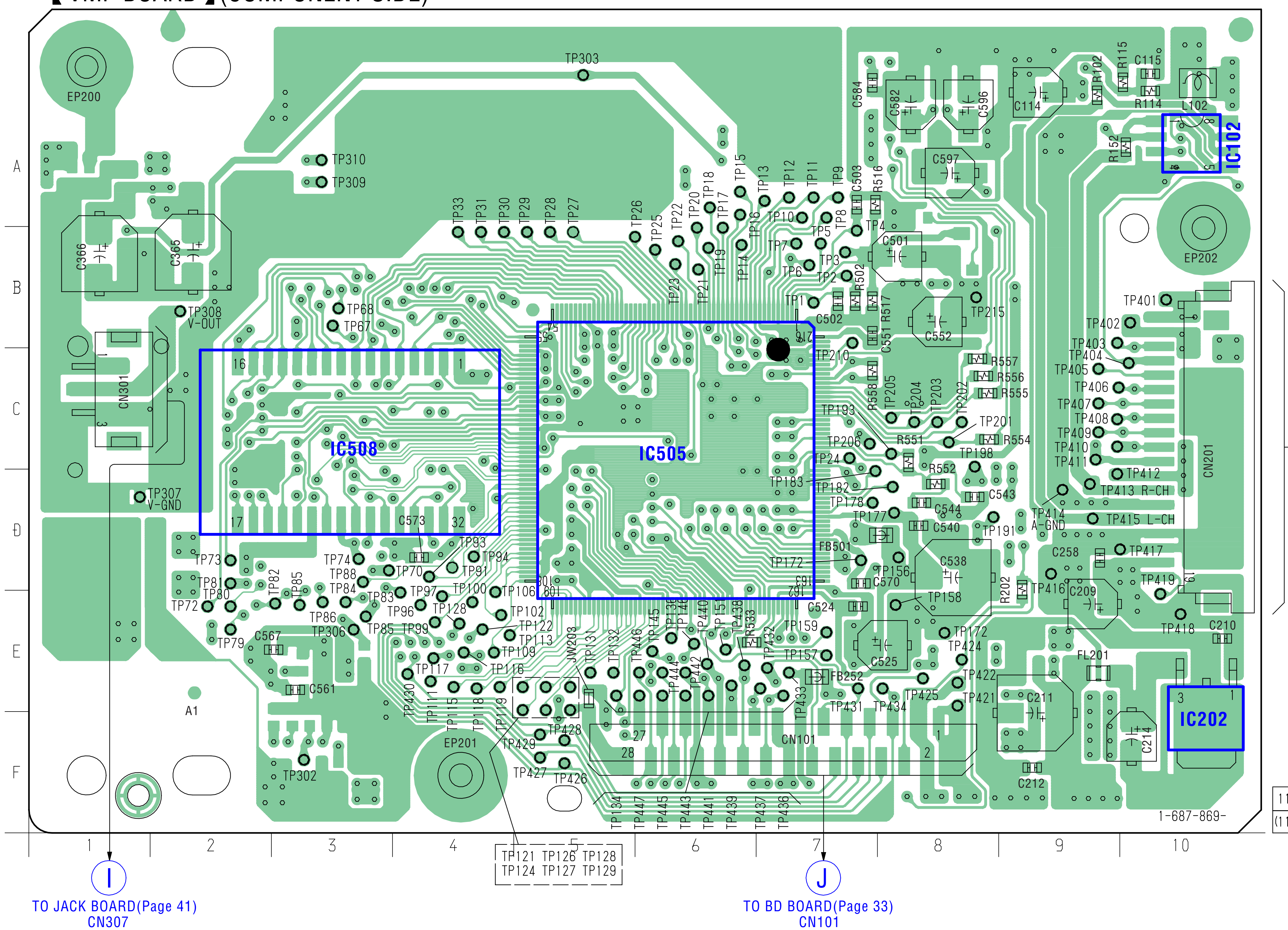
Ref. No.	Location
D101	C-6
IC102	B-7
IC103	D-6
Q101	D-6
Q102	B-6

8-3. Schematic Diagram — BD Section — • See page 47 for IC Block Diagrams. • See page 29 for Waveforms.



8-4. Printed Wiring Boards — VMP Section (1/2) — • See page 28 for Circuit Boards Location.

【 VMP BOARD 】(COMPONENT SIDE)

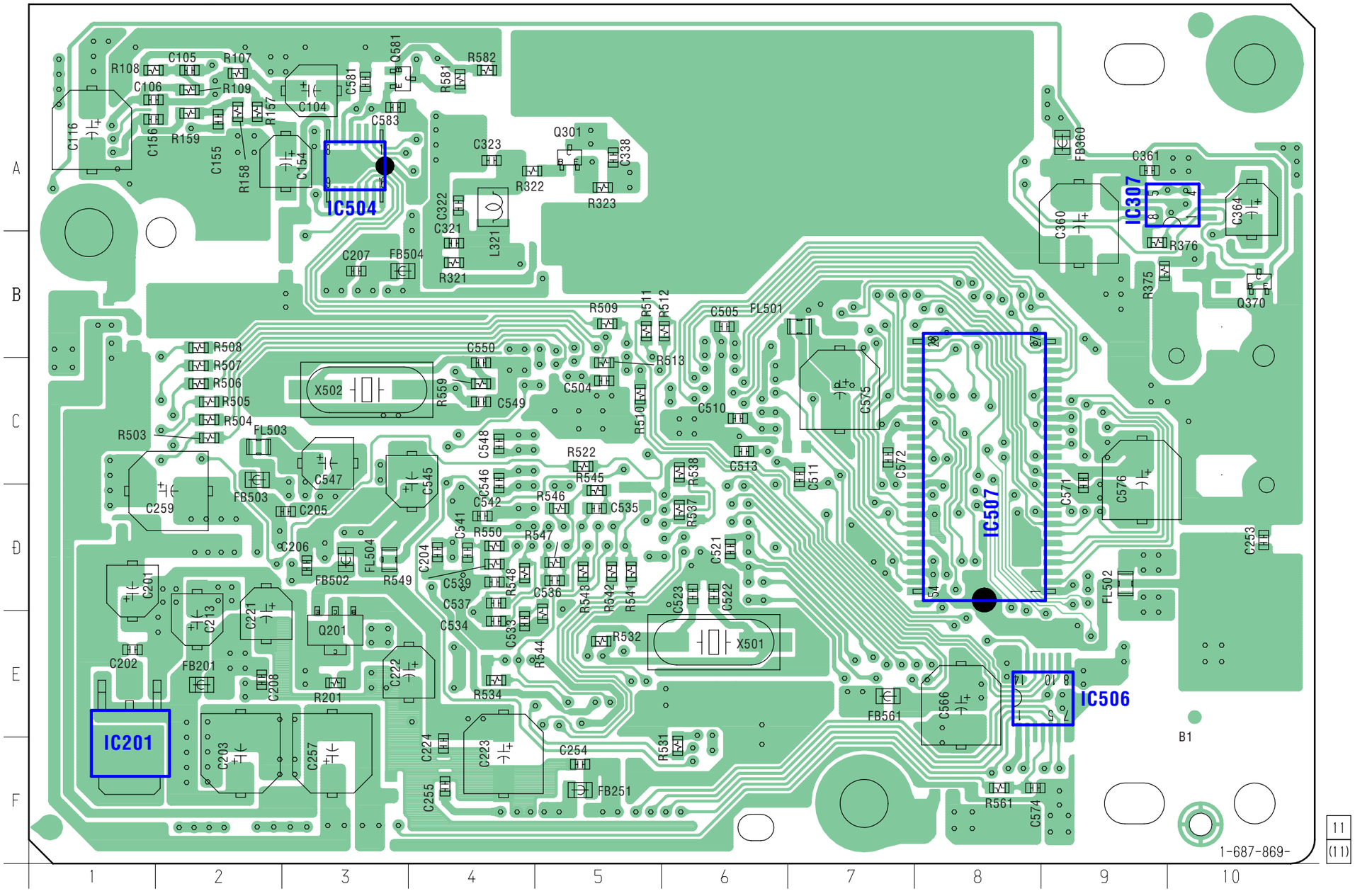


• Semiconductor Location

Ref. No.	Location
IC102	A-10
IC202	E-10
IC505	C-6
IC508	C-3

8-5. Printed Wiring Boards — VMP Section (2/2) — • See page 28 for Circuit Boards Location.

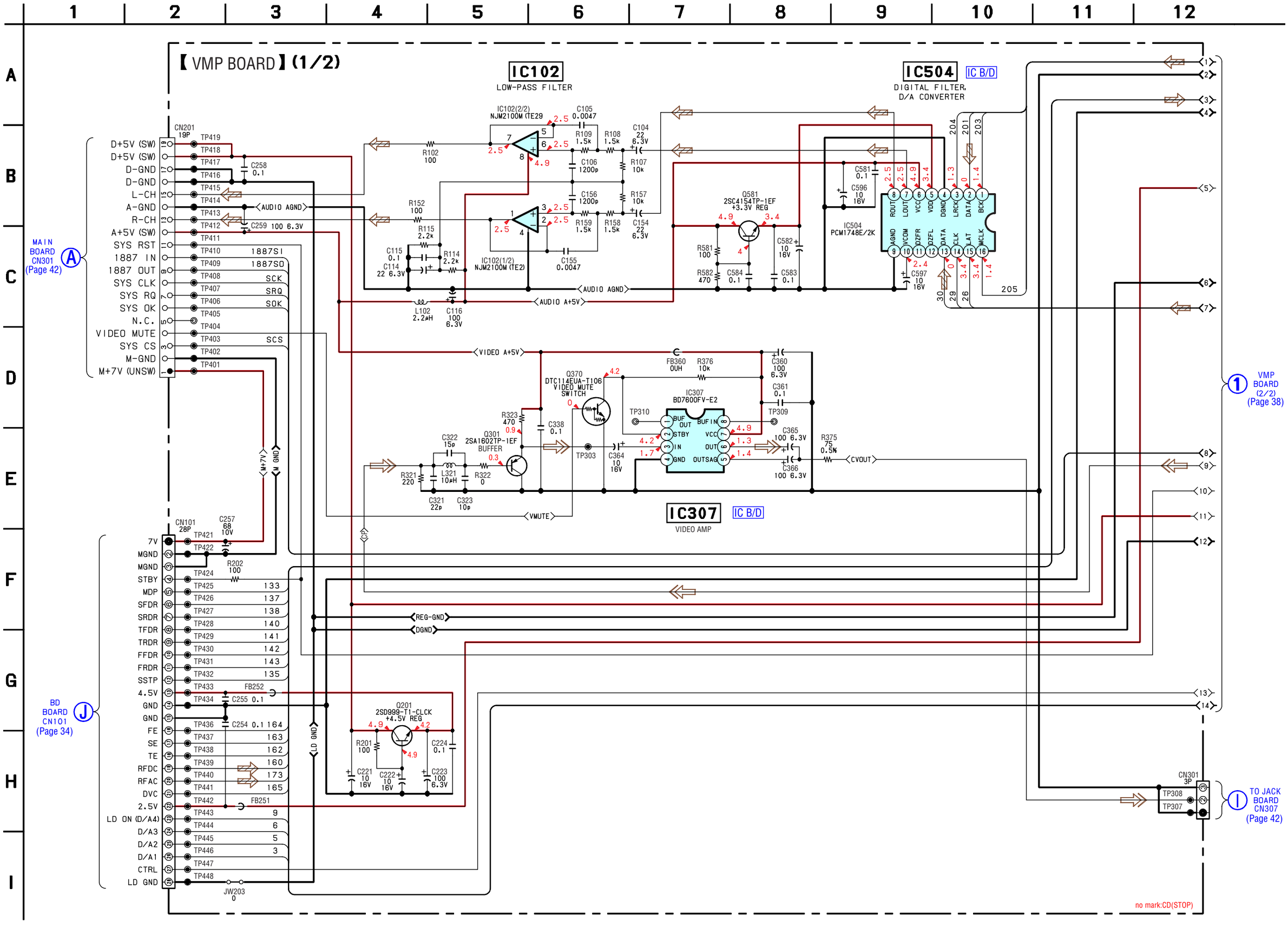
【 VMP BOARD 】(CONDUCTOR SIDE)



- **Semiconductor Location**

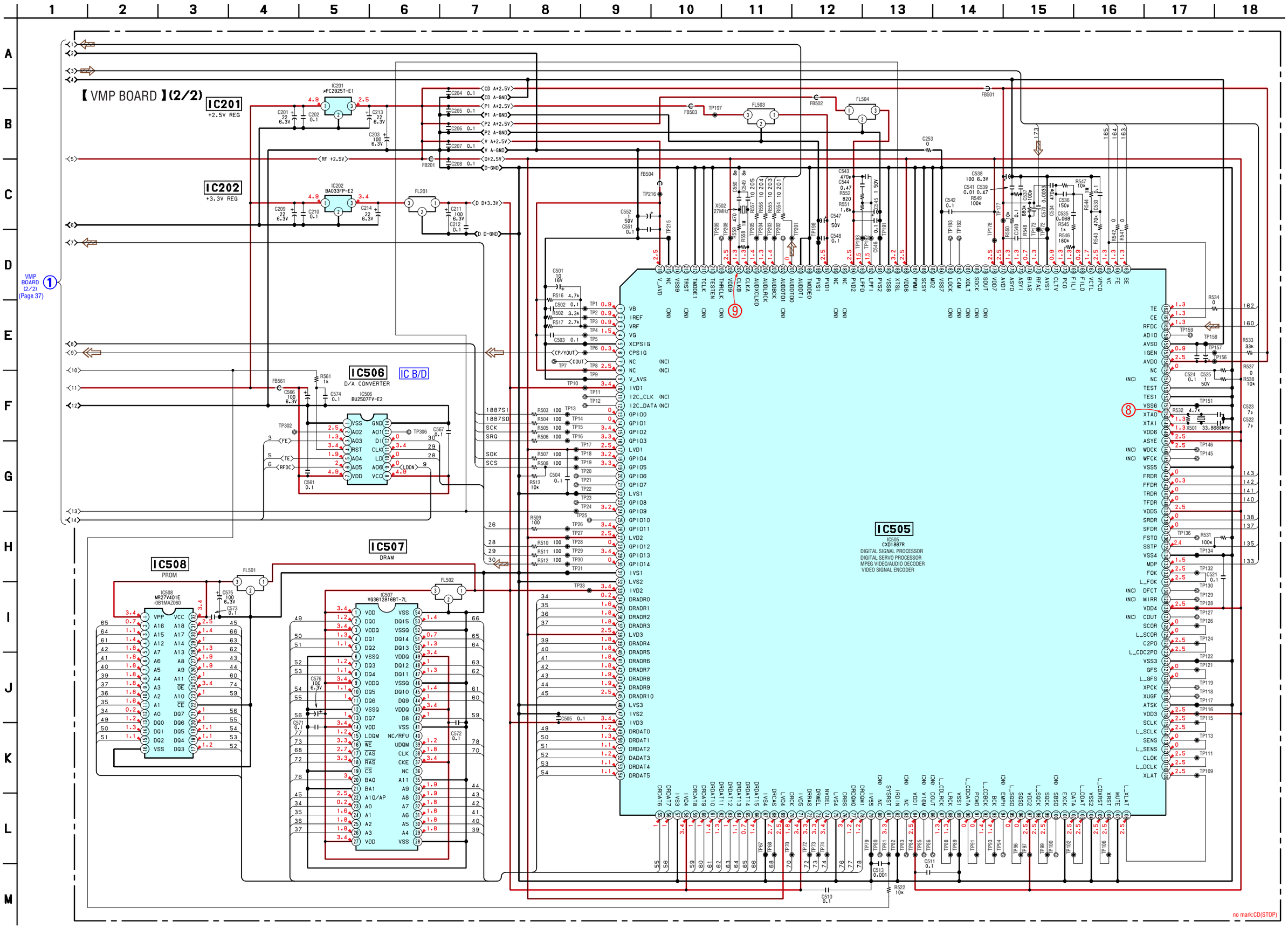
Ref. No.	Location
IC201	F-1
IC307	A-9
IC504	A-3
IC506	E-9
IC507	D-8
Q201	E-3
Q301	A-5
Q370	B-10
Q581	A-3

8-6. Schematic Diagram — VMP Section (1/2) — • See page 48 for IC Block Diagrams.

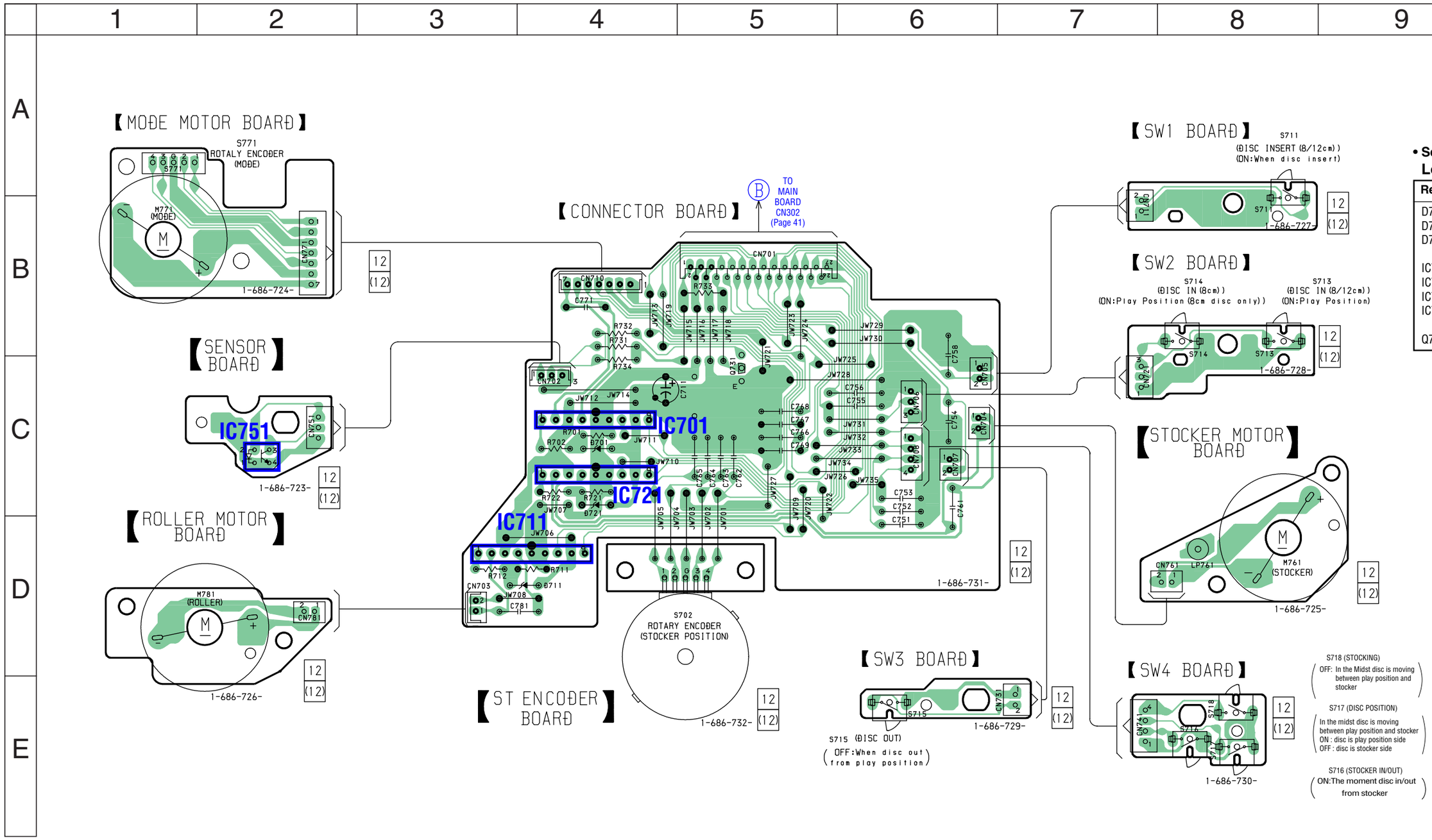


8-7. Schematic Diagram — VMP Section (2/2) —

• See page 48 for IC Block Diagrams. • See page 52 for IC Pin Function. • See page 29 for Waveforms.



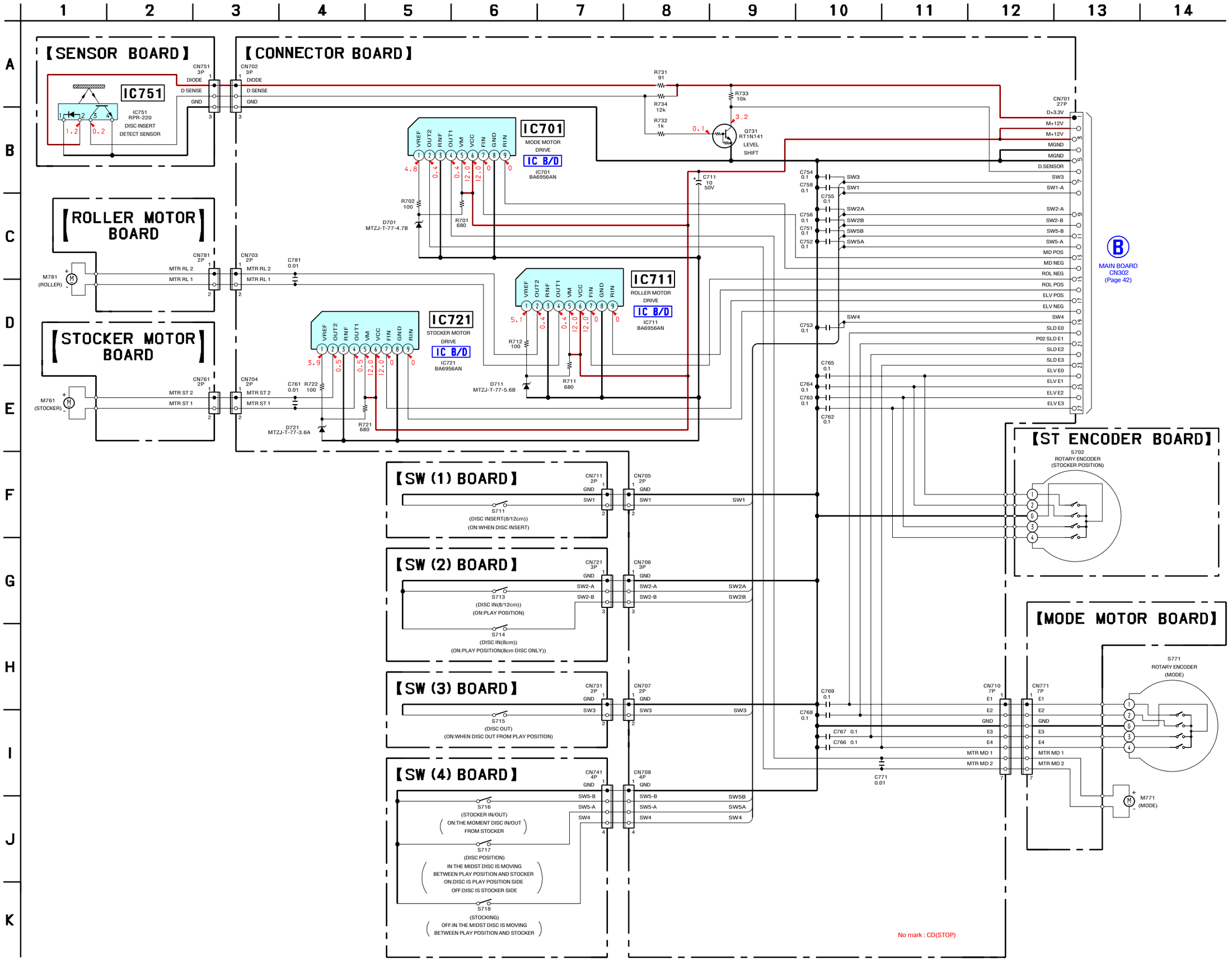
8-8. Printed Wiring Boards — Changer Section — • See page 28 for Circuit Boards Location. • : Uses unleaded solder.



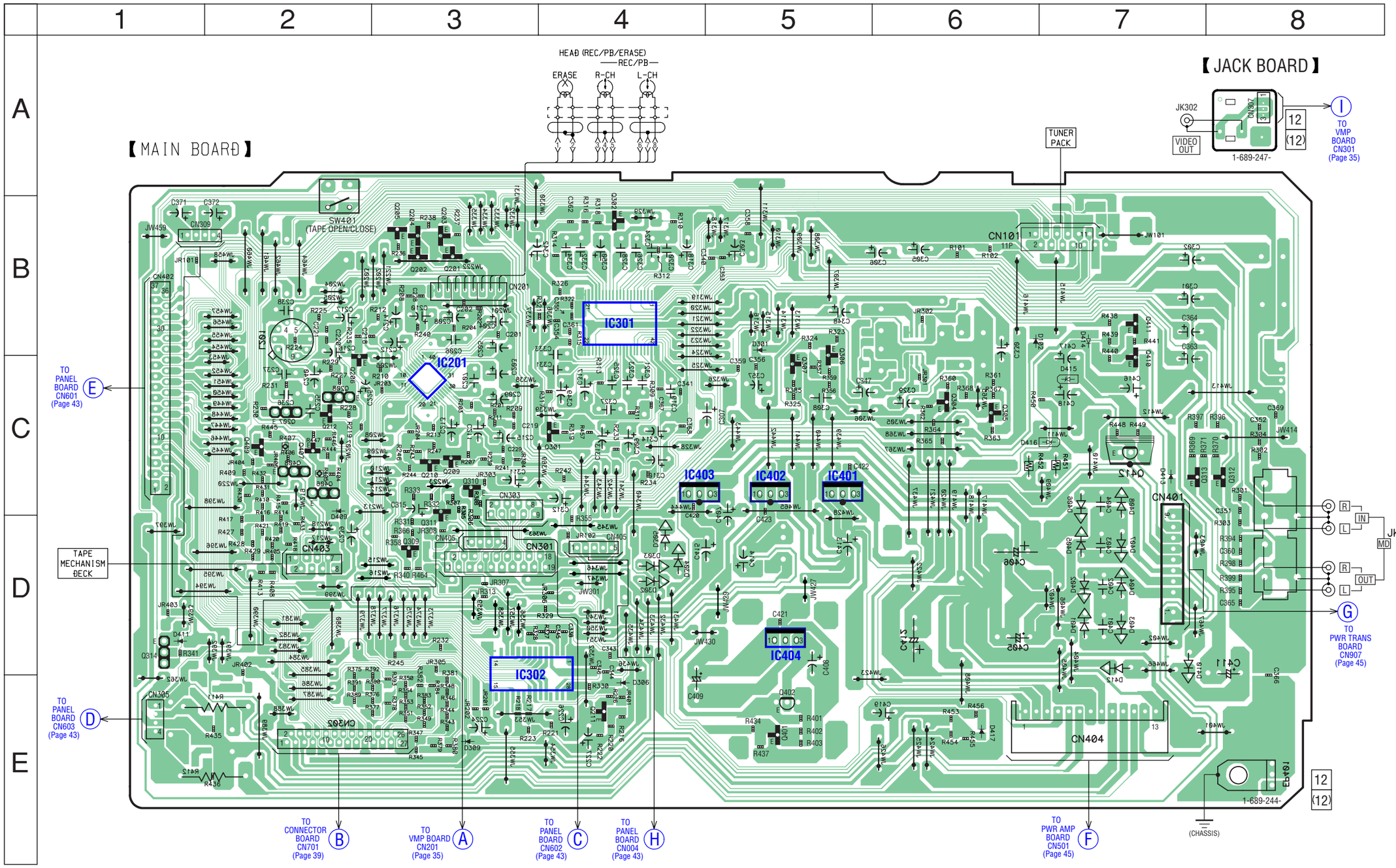
• **Semiconductor Location**

Ref. No.	Location
D701	C-4
D711	C-4
D721	C-4
IC701	C-4
IC711	D-4
IC721	C-4
IC751	C-2
Q731	B-5

8-9. Schematic Diagram — Changer Section — • See page 49 for IC Block Diagrams.



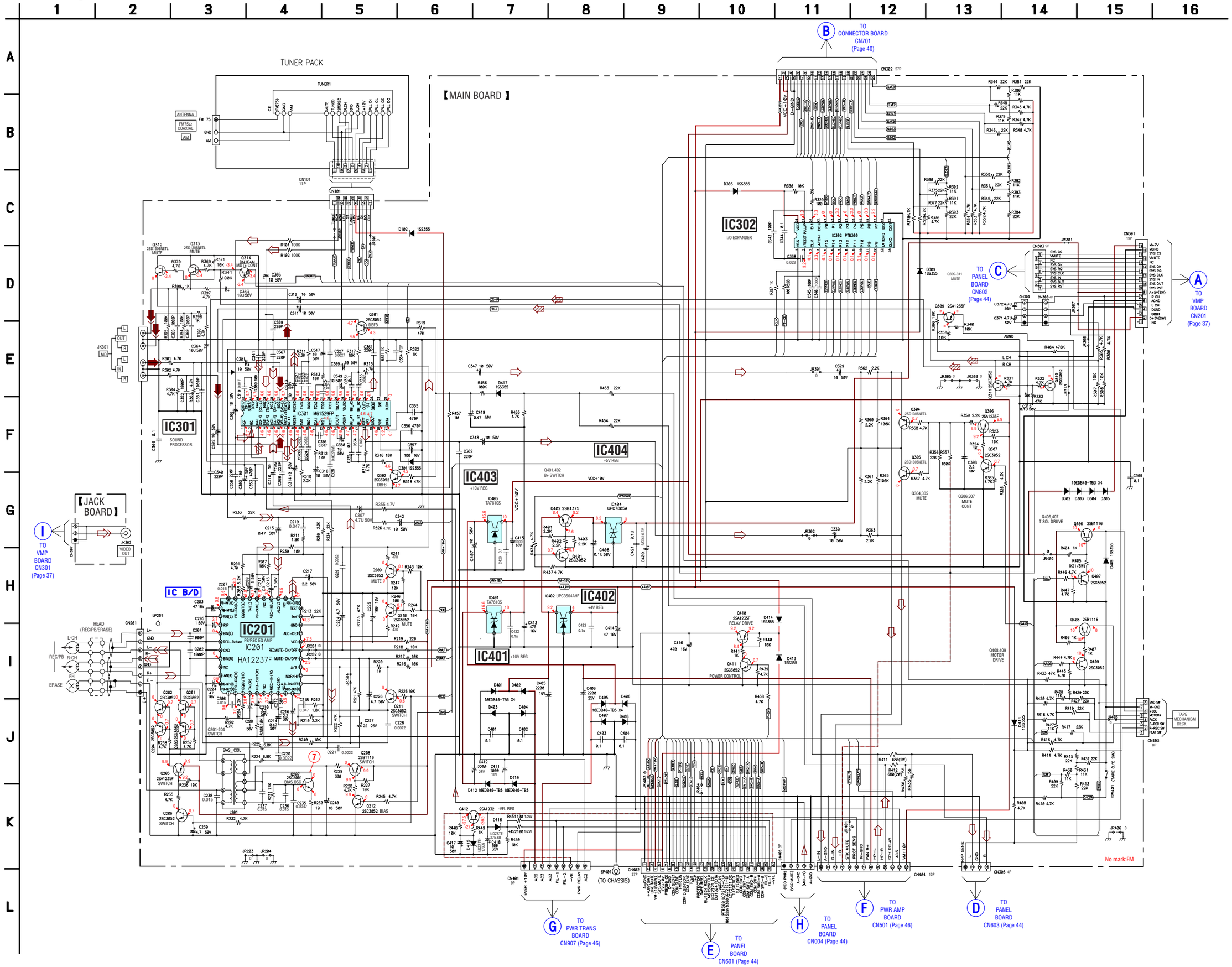
8-10. Printed Wiring Boards — Main Section — • See page 28 for Circuit Boards Location. • : Uses unleaded solder.



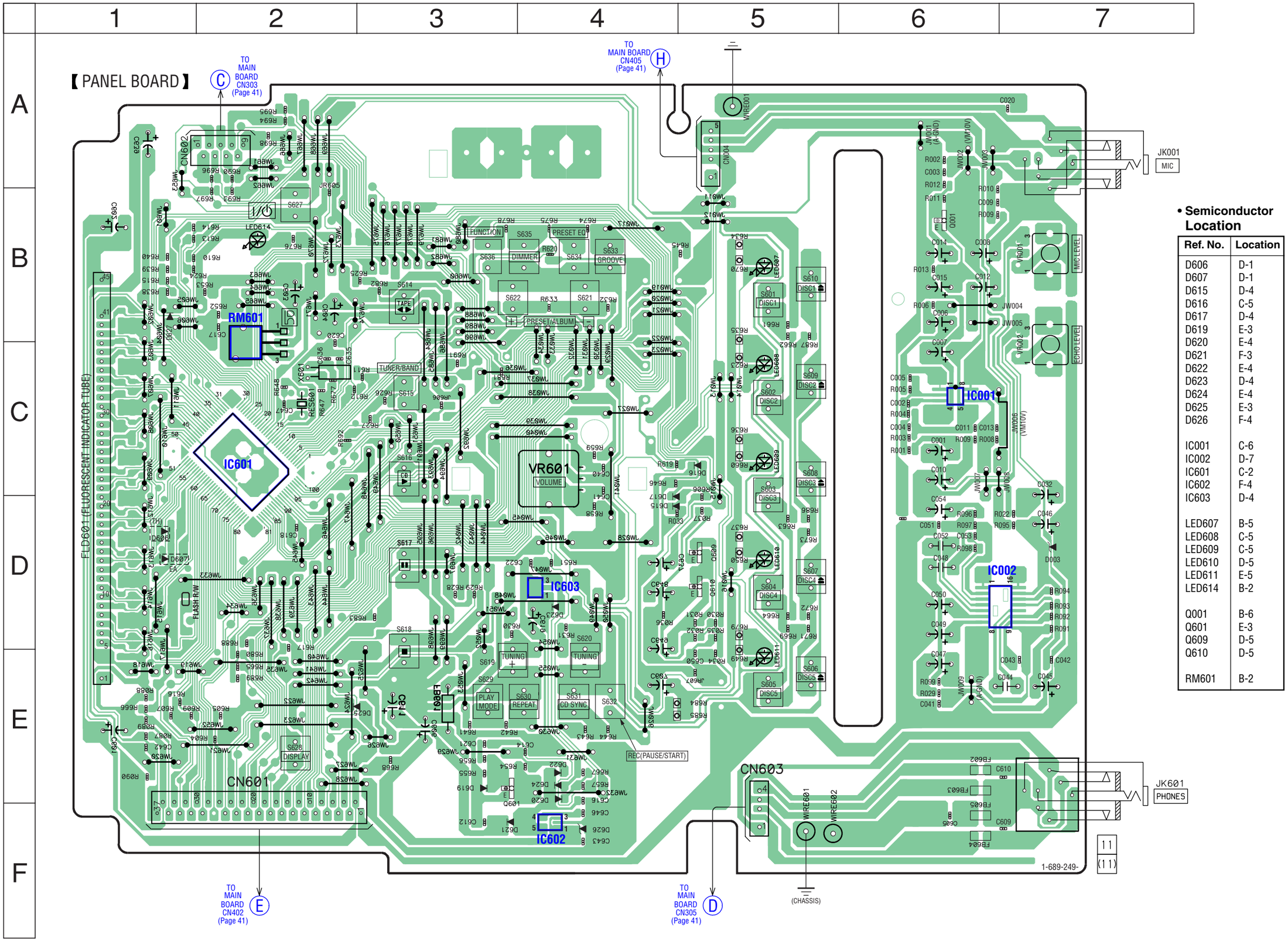
• **Semiconductor Location**

Ref. No.	Location
D101	B-7
D102	B-7
D301	B-5
D302	D-4
D303	D-4
D304	D-4
D305	D-4
D306	E-4
D307	D-5
D309	E-3
D401	D-7
D402	D-7
D403	D-7
D404	D-7
D405	D-7
D406	C-7
D407	D-7
D408	C-7
D409	D-2
D410	D-7
D411	D-1
D412	E-7
D413	C-7
D414	B-7
D415	C-7
D416	C-6
D417	E-6
IC201	C-3
IC301	B-4
IC302	D-3
IC401	C-5
IC402	C-5
IC403	C-4
IC404	D-5
Q201	B-3
Q202	B-3
Q203	B-3
Q204	B-3
Q205	B-3
Q206	C-2
Q207	C-2
Q208	C-2
Q209	C-3
Q210	C-3
Q211	E-4
Q212	C-2
Q301	C-4
Q302	B-4
Q304	C-6
Q305	C-6
Q306	B-5
Q307	C-5
Q309	D-3
Q310	C-3
Q311	C-3
Q312	C-8
Q313	C-8
Q314	D-1
Q401	E-5
Q402	E-5
Q406	C-2
Q407	C-2
Q408	C-2
Q409	C-2
Q410	B-7
Q411	B-7
Q412	C-7

8-11. Schematic Diagram — Main Section — • See page 49 for IC Block Diagrams. • See page 29 for Waveforms.



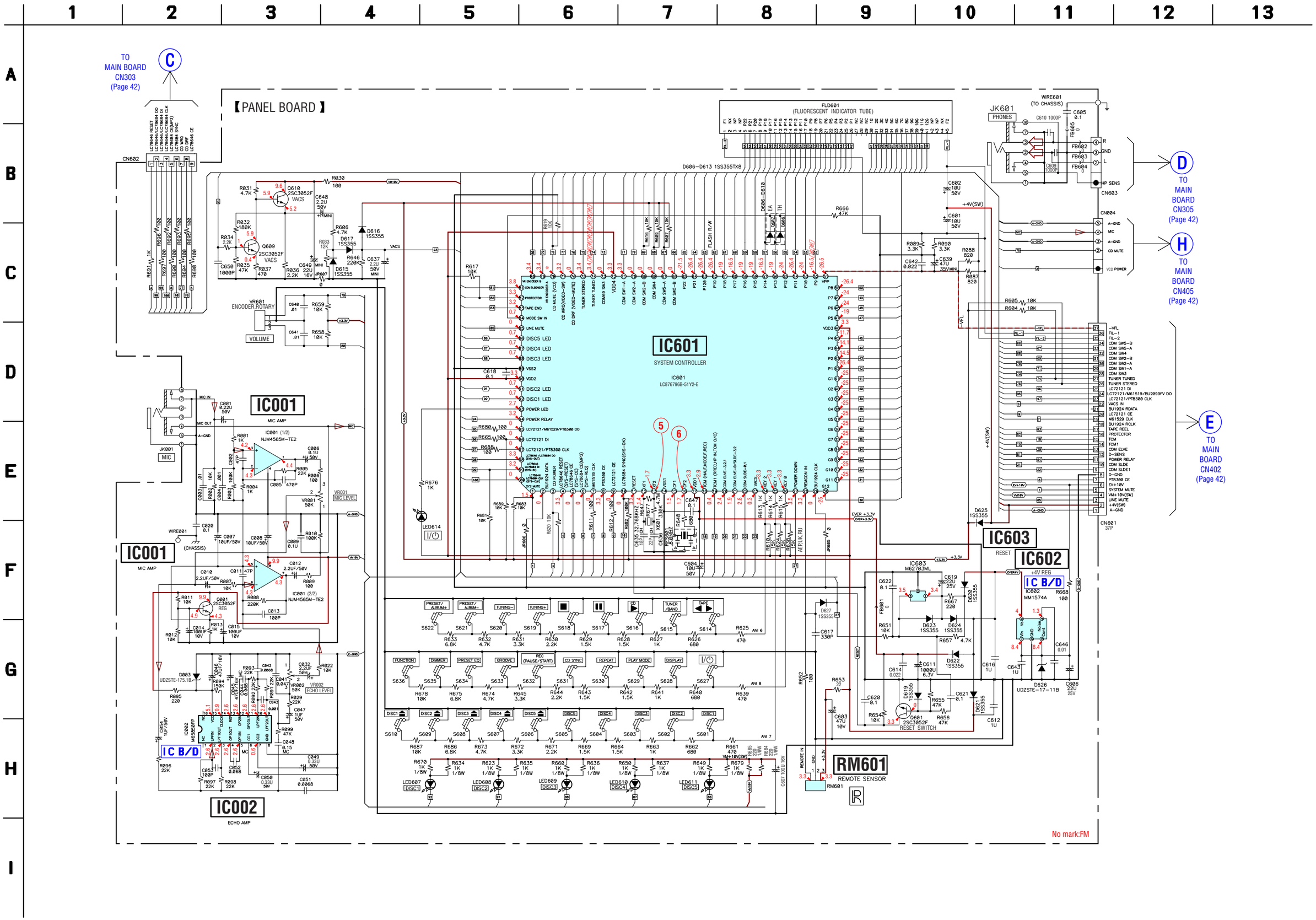
8-12. Printed Wiring Boards — Front Section — • See page 28 for Circuit Boards Location. • **:** Uses unleaded solder.



• **Semiconductor Location**

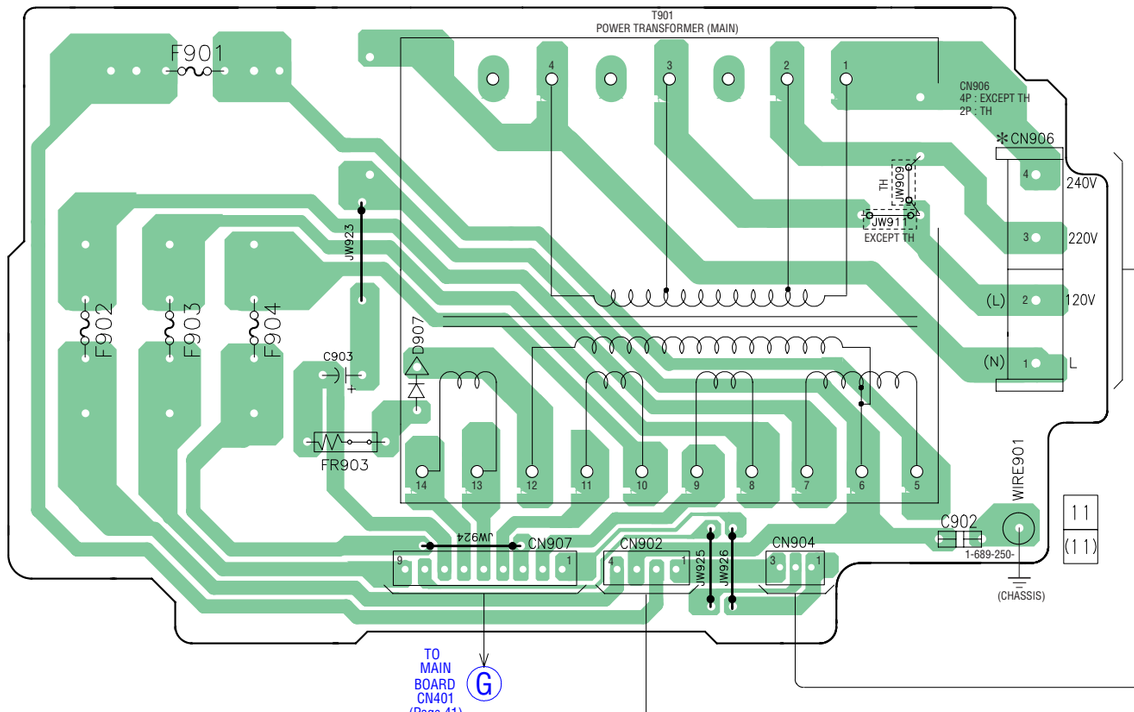
Ref. No.	Location
D606	D-1
D607	D-1
D615	D-4
D616	C-5
D617	D-4
D619	E-3
D620	E-4
D621	F-3
D622	E-4
D623	D-4
D624	E-4
D625	E-3
D626	F-4
IC001	C-6
IC002	D-7
IC601	C-2
IC602	F-4
IC603	D-4
LED607	B-5
LED608	C-5
LED609	C-5
LED610	D-5
LED611	E-5
LED614	B-2
Q001	B-6
Q601	E-3
Q609	D-5
Q610	D-5
RM601	B-2

8-13. Schematic Diagram — Front Section — • See page 47 for IC Block Diagrams. • See page 50 for IC Pin Function. • See page 29 for Waveforms.

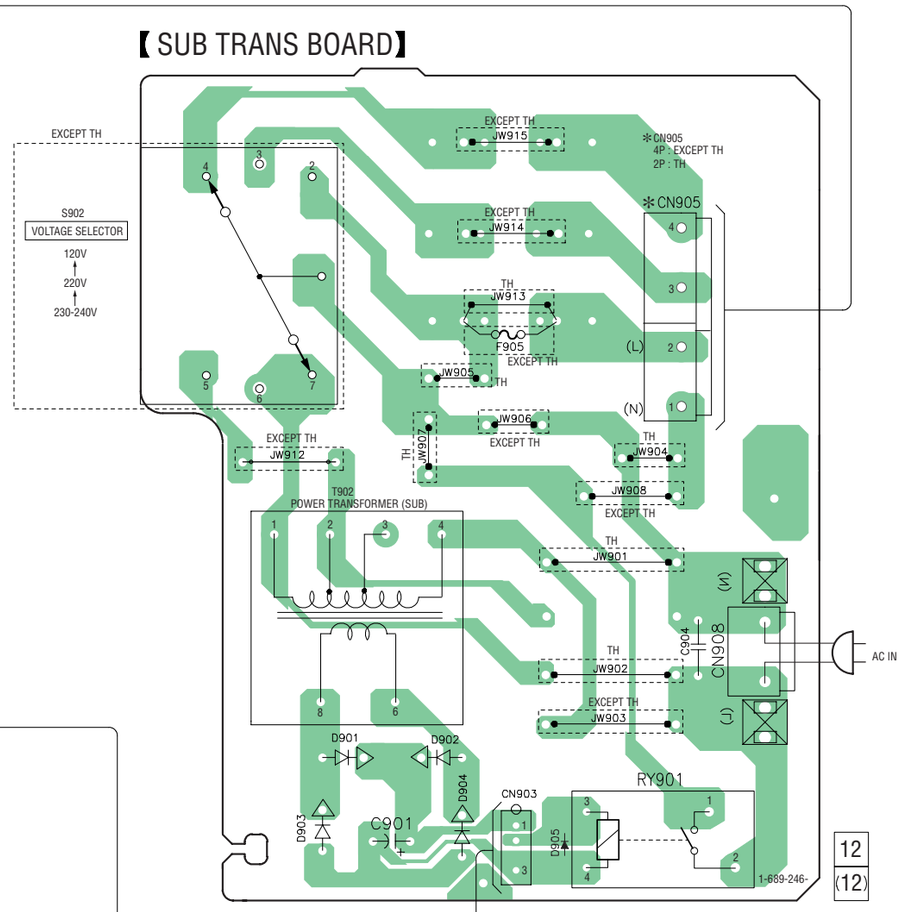


8-14. Printed Wiring Boards — PWR AMP/Power Section — • See page 28 for Circuit Boards Location. • : Uses unleaded solder.

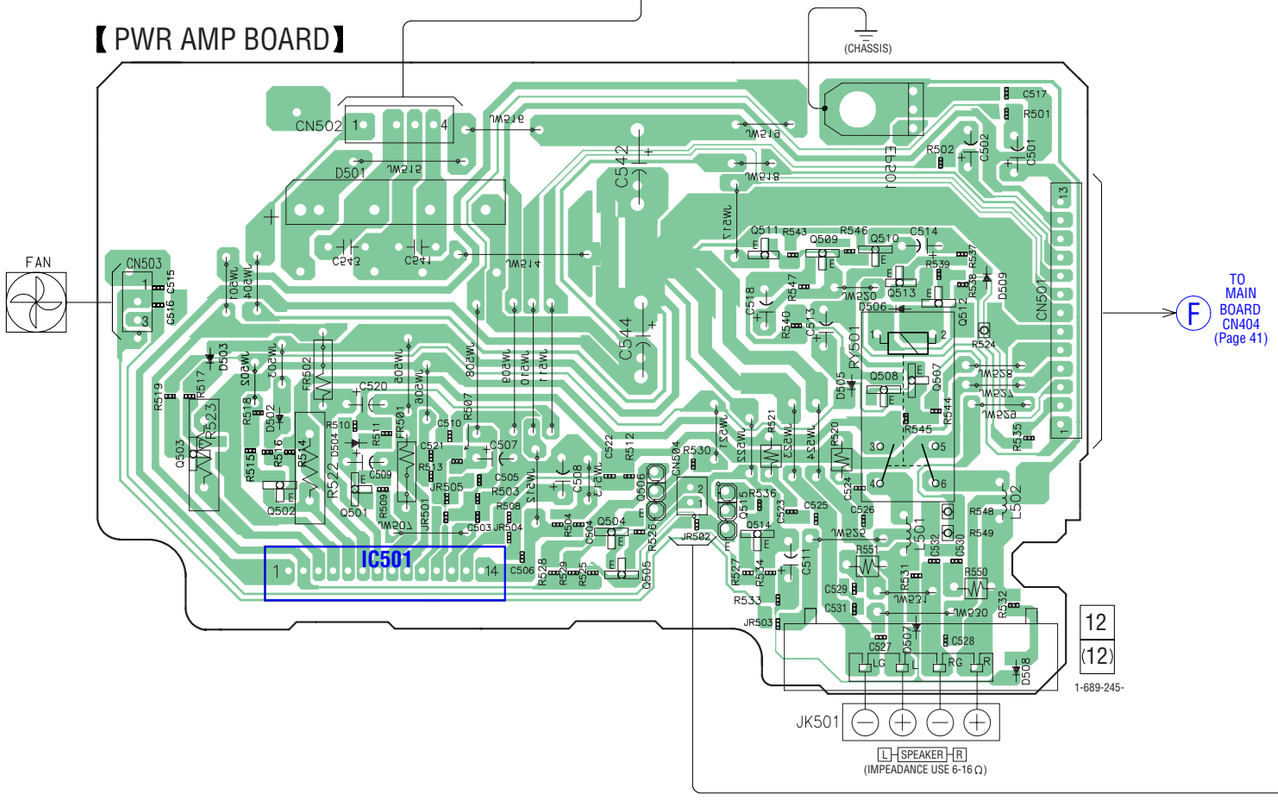
【PWR TRANS BOARD】



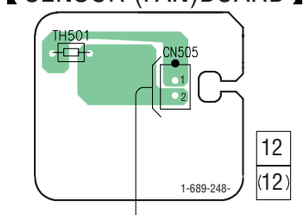
【SUB TRANS BOARD】



【PWR AMP BOARD】



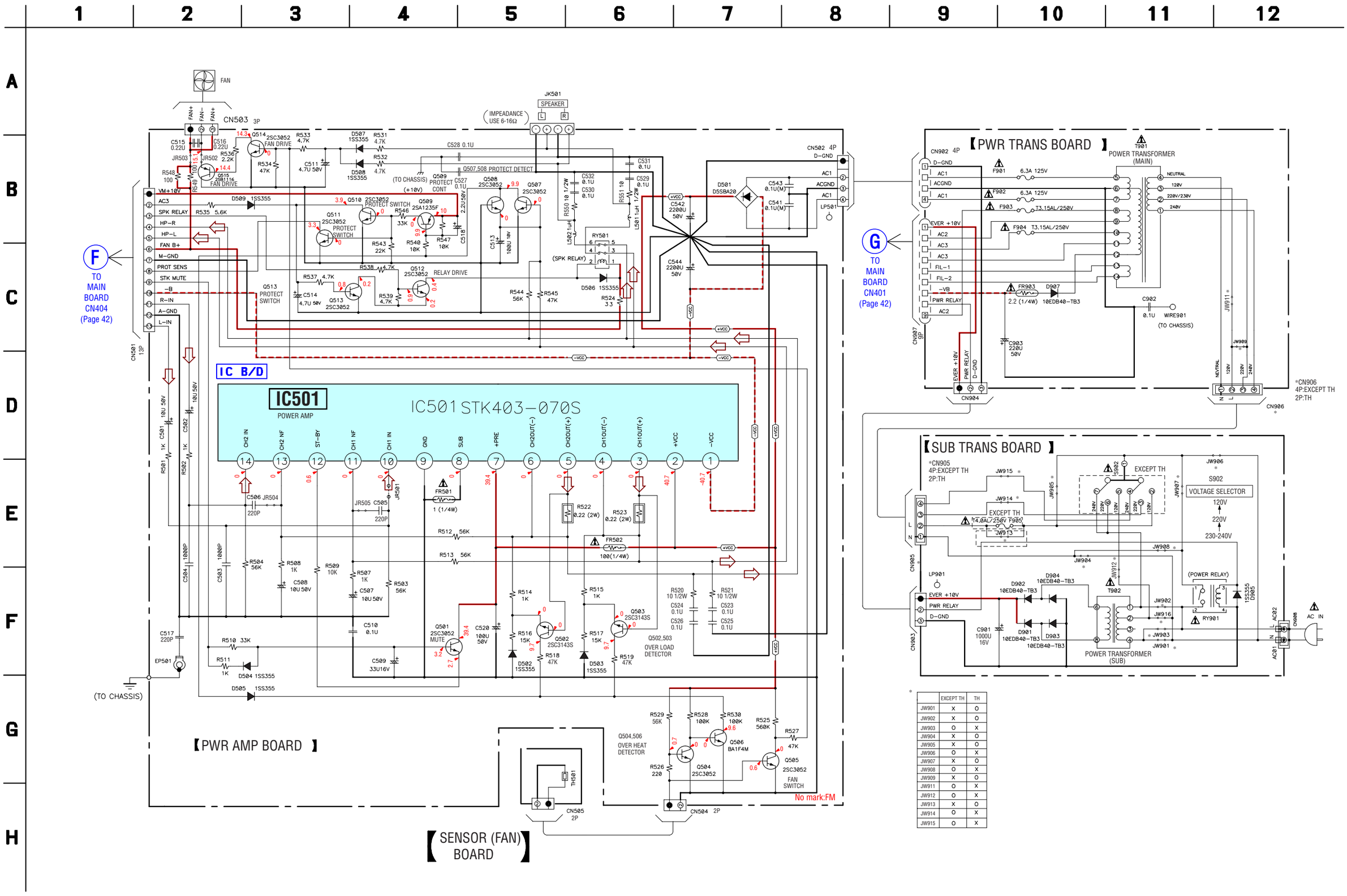
【SENSOR (FAN)BOARD】



• **Semiconductor Location**

Ref. No.	Location
D501	D-2
D502	E-2
D503	E-1
D504	E-2
D505	E-4
D506	E-4
D507	F-4
D508	F-4
D509	E-4
D901	C-6
D902	C-6
D903	D-6
D904	D-6
D905	D-7
D907	B-2
IC501	F-2
Q501	E-2
Q502	E-2
Q503	E-1
Q504	E-3
Q505	F-3
Q506	E-3
Q507	E-4
Q508	E-4
Q509	D-3
Q510	D-4
Q511	D-3
Q512	E-4
Q513	E-4
Q514	E-3
Q515	E-3

8-15. Schematic Diagram — PWR AMP/Power Section — • See page 49 for IC Block Diagrams.

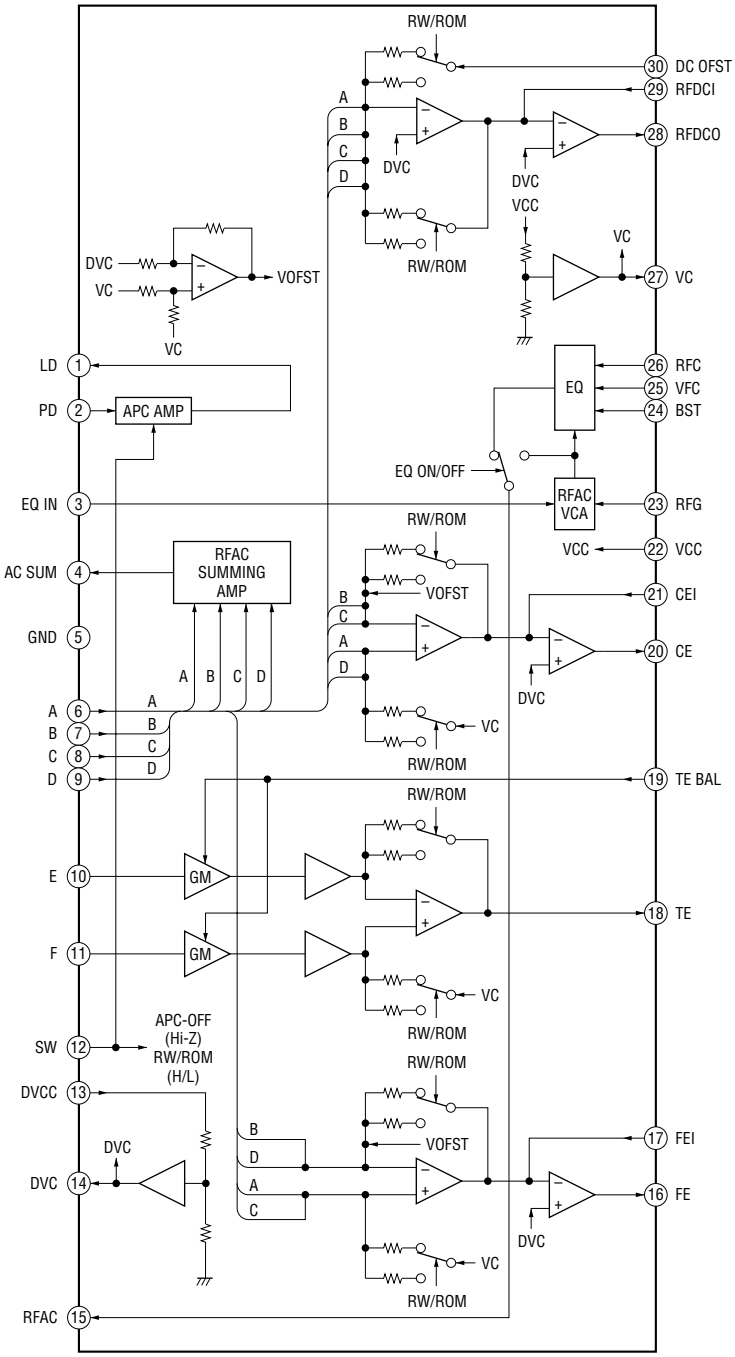


	EXCEPT TH	TH
JW901	X	O
JW902	X	O
JW903	O	X
JW904	X	O
JW905	X	O
JW906	O	X
JW907	X	O
JW908	O	X
JW909	X	O
JW911	O	X
JW912	O	X
JW913	X	O
JW914	O	X
JW915	O	X

8-16. IC Block Diagrams

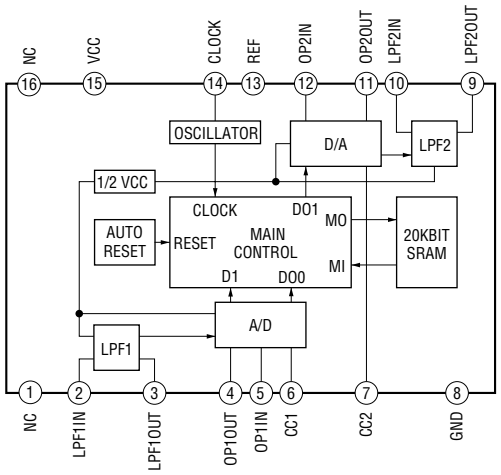
— BD Board —

IC103 CXA2581N-T4

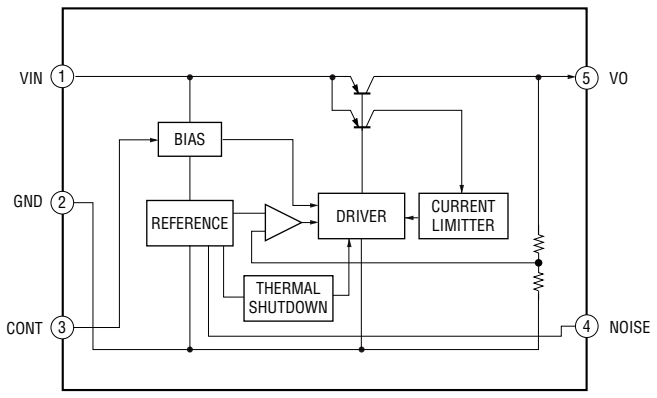


— PANEL Board —

IC002 M65850FP

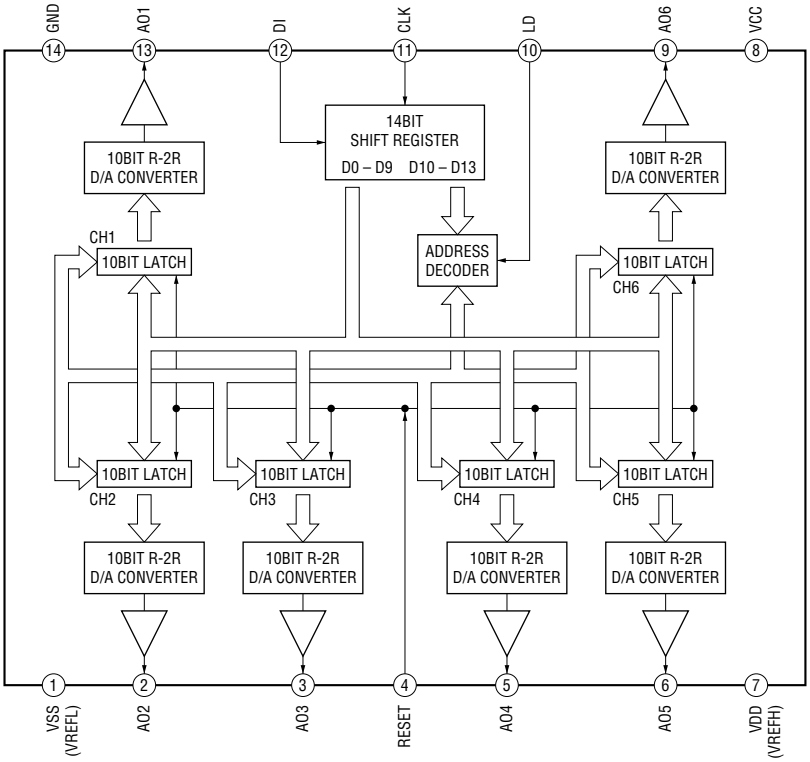


IC602 MM1574A

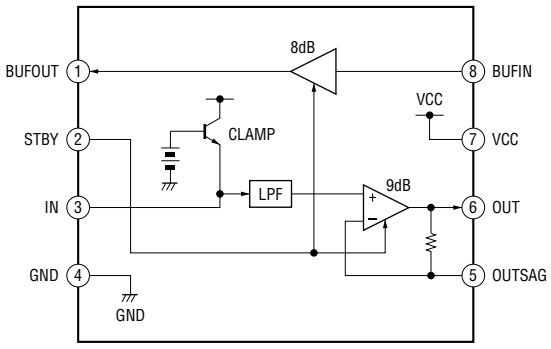


— VMP Board —

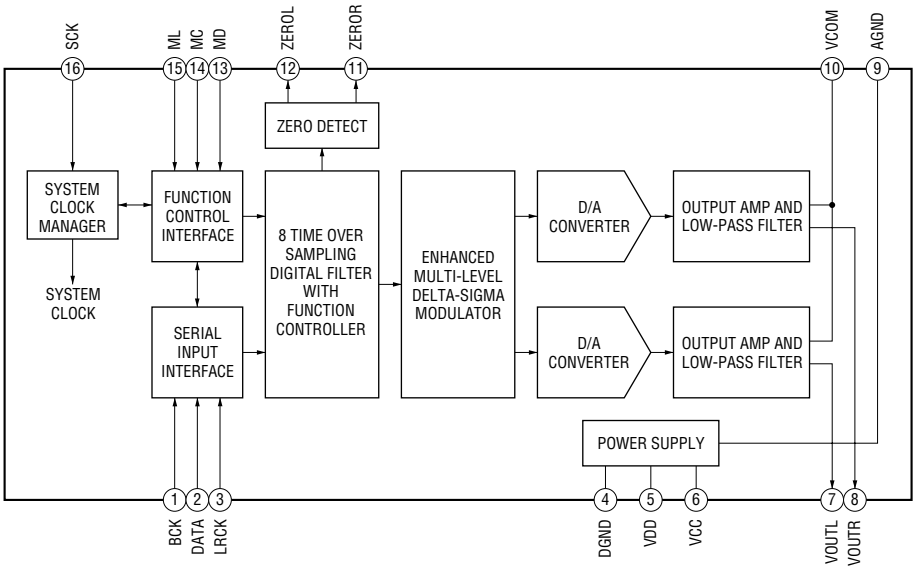
IC506 BU2507FV-E2



IC307 BD7600FV-E2

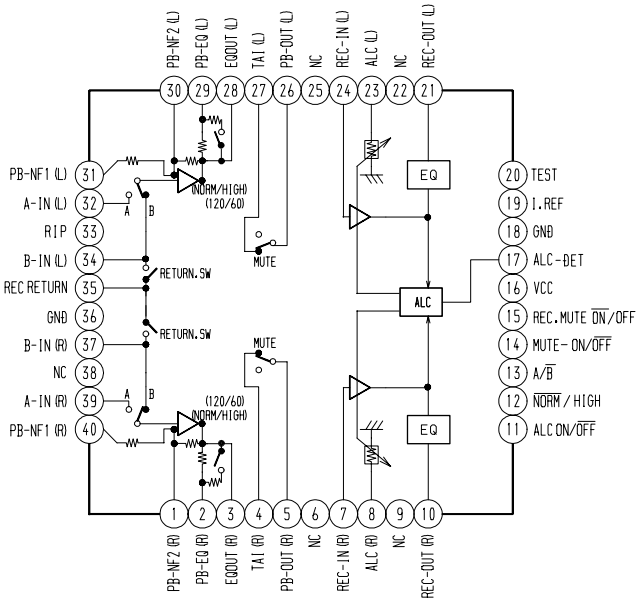


IC504 PCM1748E/2K



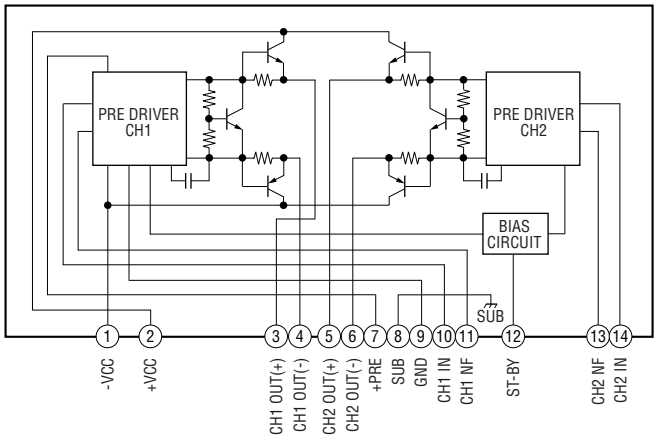
— MAIN Board —

IC201 HA12237F



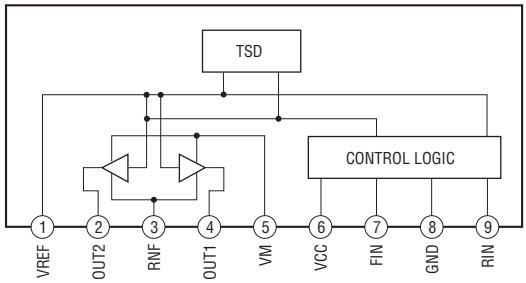
— PWR AMP Board —

IC501 STK403-070S



— CONNECTOR Board —

IC701, 711, 721 BA6956AN



8-17. IC Pin Function Description

• IC601 LC876796B-51Y2-E (SYSTEM CONTROLLER)(PANEL BOARD)

Pin No.	Pin Name	I/O	Description
1	SYS MUTE	O	System muting signal output
2	BU1924 DATA	I	RDS data input from the tuner
3	CD POWER	O	CD power supply on/off control signal output
4	SYS-RESET	O	System reset signal output
5	SYS-CE	O	Chip enable signal output to the IC505
6	SYS-REQ	O	Request signal output to the IC505
7	M61529 CLK	O	Clock output to the sound processor (IC301)
8	PT8300 CE	O	Chip enable signal output to the I/O expander (IC302)
9	LC72121 CE	O	Chip enable signal output to the tuner
10	SYS-OK	O	Acknowledge signal output to the IC505
11	RESET	I	Reset signal input
12	XT1	I	Resonator terminal (32.768kHz)
13	XT2	O	Resonator terminal (32.768kHz)
14	VSS1	—	Ground terminal
15	CF 1	I	Resonator terminal (8MHz)
16	CF 2	O	Resonator terminal (8MHz)
17	VDD1	—	Power supply terminal
18	TCM	I	Switch detection signal input from the tape deck
19	TCM1	I	Switch detection signal input from the tape deck
20	CDM ELVE-3,2,1	I	Sensor signal input from the CD changer
21	CDM ELVE-0/ SLDE-3,2	I	Sensor signal input from the CD changer
22	CDM SLDE-1,0	I	Sensor signal input from the CD changer
23	VACS	I	VACS signal input
24	KEY 2	I	Key signal input from the S614 to 622
25	KEY 1	I	Key signal input from the S601 to 610
26	KEY 0	I	Key signal input from the S627 to 636
27	POWER DOWN	I	Power down detection signal input from the IC603
28	REMCON IN	I	Remote control signal input from the remote sensor (RM601)
29	BU1924 CLK	I	RDS clock input from the tuner
30 to 41	G12 to G1	O	Grid signal output to the fluorescent indicator tube
42 to 45	P1 to P4	O	Segment output to the fluorescent indicator tube
46	VDD3	—	Power supply terminal
47 to 50	P5 to P8	O	Segment output to the fluorescent indicator tube
51	VPP	—	Power supply terminal (negative)
52 to 65	P9 to P22	O	Segment output to the fluorescent indicator tube
66	CDM SW5-B	I	Stocker in/out switch signal input from the CD changer
67	CDM SW5-A	I	Disc position switch signal input from the CD changer
68	CDM SW4	I	Stocking switch signal input from the CD changer
69	CDMSW2-B	I	Disc in (8cm) switch signal input from the CD changer
70	CDM SW2-A	I	Disc in (play) switch signal input from the CD changer
71	CDMSW1-A	I	Disc insert switch signal input from the CD changer
72	VDD4	—	Power supply terminal
73	CDM SW3	I	Disc out switch signal input from the CD changer
74	TUNER TUNED	I	Tuner tuned status signal input from the tuner
75	TUNER STEREO	I	Stereo/mono signal input from the tuner
76	VIDEO-MUTE	O	Video muting signal output to the video amplifier (IC307)
77	VIDEO-SW	O	Not used (open)
78	CD MUTE	O	CD muting signal output
79	VR ENCODER A	I	Volume signal input from the rotary encoder (VR601)

Pin No.	Pin Name	I/O	Description
80	VR ENCODER B	I	Volume signal input from the rotary encoder (VR601)
81	CDM D.SENSOR	I	Disc detection signal input
82	PROTECTOR	I	Protection signal input from the power amplifier circuit
83	TAPE END	I	Tape end detection signal input from the tape deck
84	MODE SW IN	I	Mode setting signal input
85	LINE OUT MUTE	O	Line out muting signal output
86	DISC5 LED	O	Disc LED control signal output
87	DISC4 LED	O	Disc LED control signal output
88	DISC3 LED	O	Disc LED control signal output
89	VSS2	—	Ground terminal
90	VDD2	—	Power supply terminal
91	DISC2 LED	O	Disc LED control signal output
92	DISC1 LED	O	Disc LED control signal output
93	POWER LED	O	Power LED control signal output
94	POWER RELAY	O	Power relay on/off control signal output
95	LC72121/M61529/ PT8300 DO	O	Data output to the tuner, the sound processor (IC301) and the I/O expander (IC302)
96	LC72121 DI	I	Data input from the tuner
97	LC72121/PT8300 CLK	O	Clock output to the tuner and the I/O expander (IC302)
98	SYS-OUT	O	Serial command data output to the IC505
99	SYS-IN	I	Serial command data input from the IC505
100	SYS-CLK	O	Serial command clock output to the IC505

• IC505 CXD1887R (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, MPEG VIDEO/AUDIO DECODER, VIDEO SIGNAL ENCODER)(VMP BOARD)

Pin No.	Pin Name	I/O	Description
1	VB	O	Connected to ground via a capacitor
2	IREF	O	D/A converter reference current output
3	VRF	I	D/A converter reference voltage input
4	VG	O	Connected to the analog power supply (+2.5V) via a capacitor
5	XCPSIG	O	Luminance video composite/component signal invert output terminal Not used
6	CPSIG	O	Luminance video composite/component signal output
7	NC	O	Chrominance video composite signal output Not used
8	V AVD2	—	Analog power supply terminal (+2.5V) (for D/A converter)
9	V AVS2	—	Analog ground terminal (for D/A converter)
10	IVD1	—	Power supply terminal (+3.3V) (for I/O)
11	I2C CLK	I/O	Communication data reading clock signal input or transfer clock signal output terminal Not used
12	I2C DATA	I/O	Communication data bus terminal Not used
13	GPIO0	I	Serial data input from the system controller
14	GPIO1	O	Serial data output to the system controller
15	GPIO2	O	Serial data transfer clock signal output to the system controller
16	GPIO3	I	Request signal input from the system controller
17	LVD1	—	Digital power supply terminal (+2.5V) (for AV decoder block)
18	GPIO4	I	Acknowledge signal input from the system controller
19	GPIO5	O	Chip select signal output to the system controller
20, 21	GPIO6, GPIO7	I/O	Not used
22	LVS1	—	Digital ground terminal (for AV decoder block)
23	GPIO8	I/O	Not used
24	GPIO9	O	Frequency selection signal output
25	GPIO10	I/O	Not used
26	GPIO11	O	Serial data latch pulse signal output to the digital filter
27	LVD2	—	Digital power supply terminal (+2.5V) (for AV decoder block)
28	GPIO12	O	Control signal output to the D/A converter
29	GPIO13	O	Serial data transfer clock signal output to the digital filter and D/A converter
30	GPIO14	O	Serial data output to the digital filter and D/A converter
31	IVS1	—	Ground terminal (for I/O)
32	LVS2	—	Digital ground terminal (for AV decoder block)
33	IVD2	—	Power supply terminal (+3.3V) (for I/O)
34 to 37	DRADR0 to DRADR3	O	Address signal output to the D-RAM and program ROM
38	LVD3	—	Digital power supply terminal (+2.5V) (for AV decoder block)
39 to 45	DRADR4 to DRADR10	O	Address signal output to the D-RAM and program ROM
46	LVS3	—	Digital ground terminal (for AV decoder block)
47	IVS2	—	Ground terminal (for I/O)
48	IVD3	—	Power supply terminal (+3.3V) (for I/O)
49 to 56	DRDAT0 to DRDAT7	I/O	Two-way data bus with the D-RAM Data input from the program ROM
57	IVS3	—	Ground terminal (for I/O)
58	IVD4	—	Power supply terminal (+3.3V) (for I/O)

Pin No.	Pin Name	I/O	Description
59 to 66	DRDAT8 to DRDAT15	I/O	Two-way data bus with the D-RAM Data output to the program ROM
67	IVS4	—	Ground terminal (for I/O)
68	DRCAS	O	Column address strobe signal output to the D-RAM
69	LVD4	—	Digital power supply terminal (+2.5V) (for AV decoder block)
70	DRCK	O	Clock signal output to the D-RAM
71	IVD5	—	Power supply terminal (+3.3V) (for I/O)
72	DRRAS	O	Row address strobe signal output to the D-RAM
73	DRWEL	O	Write enable signal output to the D-RAM
74	NVOEL	O	Chip select signal output to the D-RAM
75	LVS4	—	Digital ground terminal (for AV decoder block)
76	DRBS	O	Bank select signal output to the D-RAM
77, 78	DRDQM0, DRDQM1	O	Mask control signal output to the D-RAM
79	IVS5	—	Ground terminal (for I/O)
80	NC	—	Not used
81	SYSRST	I	Reset signal input from the system controller "L": reset
82	IRDIN	I	IR data input terminal Not used
83	NC	—	Not used
84	VDD1	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
85	V16M	O	Wide-band EFM PLL VCO2 oscillation output terminal Not used
86	DOUT	O	Digital audio signal output terminal Not used
87	L CDLRCK	I	L/R sampling clock signal (44.1 kHz) input
88	LRCK	O	L/R sampling clock signal (44.1 kHz) output
89	VSS1	—	Digital ground terminal
90	L CDDATA	I	Serial data input
91	PCMD	O	Serial data output
92	L CDBCK	I	Bit clock signal (2.8224 MHz) input
93	BCK	O	Bit clock signal (2.8224 MHz) output
94	EMPH	O	"L" is output when playback disc is emphasis off "H" is output when playback disc is emphasis on Not used
95	L SQSO	I	Subcode-Q 80-bit, PCM peak and level data, CD text data input
96	SQSO	O	Subcode-Q 80-bit, PCM peak and level data, CD text data output
97	VDD2	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
98	L SQCK	O	SQSO readout clock signal output
99	SQCK	I	SQSO readout clock signal input
100	SBSO	O	Subcode P to W serial data output terminal Not used
101	EXCK	I	SBSO readout clock signal input terminal Not used
102	DATA	I	Serial data input
103	L DDAT	O	Serial data output
104	VSS2	—	Digital ground terminal
105	L CDXRST	O	Reset signal output "L": reset
106	XRST	I	Reset signal input "L": reset
107	MUTE	I	Muting on/off control signal input terminal "H": muting on Not used
108	L XLAT	O	Serial data latch pulse signal output

Pin No.	Pin Name	I/O	Description
109	XLAT	I	Serial data latch pulse signal input
110	L DCLK	O	Serial data transfer clock signal output
111	CLOK	I	Serial data transfer clock signal input
112	L SENS	I	SENS signal input
113	SENS	O	SENS signal output
114	L SLCK	O	SENS serial data readout clock signal output
115	SCLK	I	SENS serial data readout clock signal input
116	VDD3	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
117	ATSK	I/O	Input/output terminal for anti-shock Not used
118	XUGF	O	XUGF signal output terminal Not used
119	XPCK	O	XPCK signal output terminal Not used
120	L GFS	I	Guard frame sync signal input
121	GFS	O	Guard frame sync signal output
122	VSS3	—	Digital ground terminal
123	L CDC2PO	I	C2 pointer signal input
124	C2PO	O	C2 pointer signal output
125	L SCOR	I	Subcode sync (S0+S1) detection signal input
126	SCOR	O	Subcode sync (S0+S1) detection signal output
127	COUT	O	Numbers of track counted signal output terminal Not used
128	VDD4	—	Digital ground terminal (for CD-DSP block)
129	MIRR	I/O	Mirror signal input/output terminal Not used
130	DFCT	I/O	Defect signal input/output terminal Not used
131	L FOK	I/O	Focus OK signal input/output
132	FOK	I/O	Focus OK signal input/output
133	MDP	O	Spindle motor servo drive signal output
134	VSS4	—	Digital ground terminal
135	SSTP	I	Detection signal input from limit in switch The optical pick-up is inner position when “H”
136	FSTO	O	2/3 frequency-division output of the XTAI (pin ⑭⑨) Not used
137	SFDR	O	Sled motor servo drive signal (+) output
138	SRDR	O	Sled motor servo drive signal (–) output
139	VDD5	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
140	TFDR	O	Tracking coil servo drive signal (+) output
141	TRDR	O	Tracking coil servo drive signal (–) output
142	FFDR	O	Focus coil servo drive signal (+) output
143	FRDR	O	Focus coil servo drive signal (–) output
144	VSS5	—	Digital ground terminal
145	WFCK	O	Write frame clock signal output terminal Not used
146	WDCK	O	Word clock signal output terminal Not used
147	ASYE	I	Asymmetry circuit on/off control signal input terminal “L”: off, “H”: on
148	VDD6	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
149	XTAI	I	Main system clock input terminal (33.8688 MHz)
150	XTAO	O	Main system clock output terminal (33.8688 MHz)
151	VSS6	—	Digital ground terminal
152	TES1	I	Input terminal for the test Normally: fixed at “L”
153	TEST	I	Input terminal for the test Normally: fixed at “L”

Pin No.	Pin Name	I/O	Description
154, 155	NC	—	Not used
156	AVD0	—	Analog power supply terminal (+2.5V)
157	IGEN	I	Operational amplifier constant current input
158	AVS0	—	Analog ground terminal
159	ADIO	O	Output terminal for the test Not used
160	RFDC	I	RF signal input from the RF amplifier
161	CE	I	Center servo analog signal input
162	TE	I	Tracking error signal input from the RF amplifier
163	SE	I	Sled error signal input from the RF amplifier
164	FE	I	Focus error signal input from the RF amplifier
165	VC	I	Center voltage (+1.65V) input terminal
166	VPCO	O	Wide-band EFM PLL charge pump output
167	VCTL	I	Wide-band EFM PLL VCO2 control voltage input
168	FILO	O	Master PLL filter output
169	FILI	I	Master PLL filter input
170	PCO	O	Master PLL charge pump output
171	CLTV	I	Multiplier VCO1 control voltage input
172	AVS1	—	Analog ground terminal
173	RFAC	I	EFM signal input from the RF amplifier
174	BIAS	I	Asymmetry circuit constant current input
175	ASYI	I	Asymmetry comparator voltage input
176	ASYO	O	EFM full-swing output
177	AVD1	—	Analog power supply terminal (+2.5V)
178	VDD7	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
179	SOUT	O	Serial data output terminal Not used
180	SOCK	O	Serial data readout clock signal output terminal Not used
181	XOLT	O	Serial data latch pulse signal output terminal Not used
182	C4M	O	4.2336 MHz clock signal output terminal Not used
183	LOCK	O	GFS is sampled by 460 Hz "H" output when GFS is "H" Not used
184	VSS7	—	Digital ground terminal
185	MD2	I	Digital out on/off control signal input terminal "L": digital out off, "H": digital out on Not used
186	SCSY	I	Guard subcode sync (S0+S1) resynchronization input terminal Not used
187	PWMI	I	Spindle motor external control signal input terminal Not used
188	VDD8	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
189	XTSL	I	Input terminal for the system clock frequency setting "L": 16.9344 MHz, "H": 33.8688MHz
190	VSS8	—	Digital ground terminal
191	PVS2	—	Analog ground terminal (for PLL2)
192	LPFI	I	Connected terminal of PLL2 filter
193	LPFO	O	Connected terminal of PLL2 filter
194	PVD2	—	Analog power supply terminal (+2.5V) (for PLL2)
195, 196	NC	—	Not used
197	PVD1	—	Analog power supply terminal (+2.5V) (for PLL1)
198	PVS1	—	Analog ground terminal (for PLL1)

Pin No.	Pin Name	I/O	Description
199	TMODE0	I	Selection signal input terminal for the test Not used
200	AUDDTI	I	Serial audio data input terminal Not used
201	AUDDTO0	O	Serial audio data output to the digital filter
202	AUDDTO1	O	Serial audio data output terminal Not used
203	AUDBCK	O	Serial audio bit clock signal (2.8224 MHz) output to the digital filter
204	AUDLRCK	O	Serial audio L/R sampling clock signal (44.1 kHz) output to the digital filter
205	AUDXCLKO	O	Serial audio clock signal output to the digital filter
206	CLKA	I	Sub system clock input terminal (27 MHz)
207	CLKB	O	Sub system clock output terminal (27 MHz)
208	VDD9	—	Digital power supply terminal (+2.5V) (for CD-DSP block)
209	THRCLK	I	Clock signal input terminal for the test Not used
210	TESTEN	I	Setting terminal for the test Normally: fixed at “L”
211	TCLK	I	Clock signal input terminal for the test Not used
212	TMODE1	I	Selection signal input terminal for the test Not used
213	TRST	I	Reset signal input terminal for the test Not used
214	VSS9	—	Digital ground terminal
215	V AVS1	—	Analog ground terminal (for D/A converter)
216	V AVD1	—	Analog power supply terminal (+2.5V) (for D/A converter)

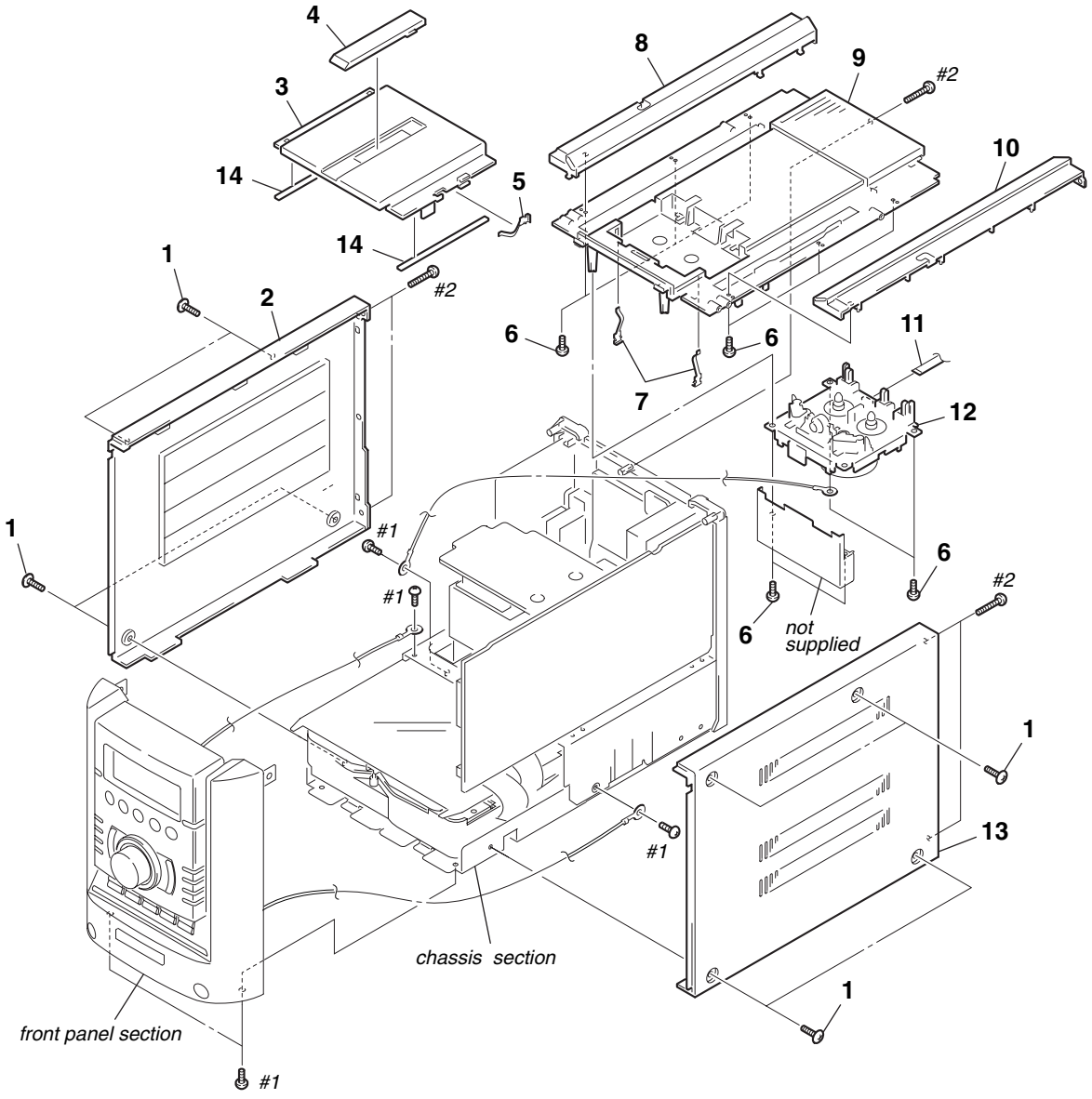
SECTION 9
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some differences 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.
- Abbreviation
  E3 : 220-240 V AC area in E model.
  EA : Saudi Arabia model.
  SP : Singapore model.
  TH : Thai model.

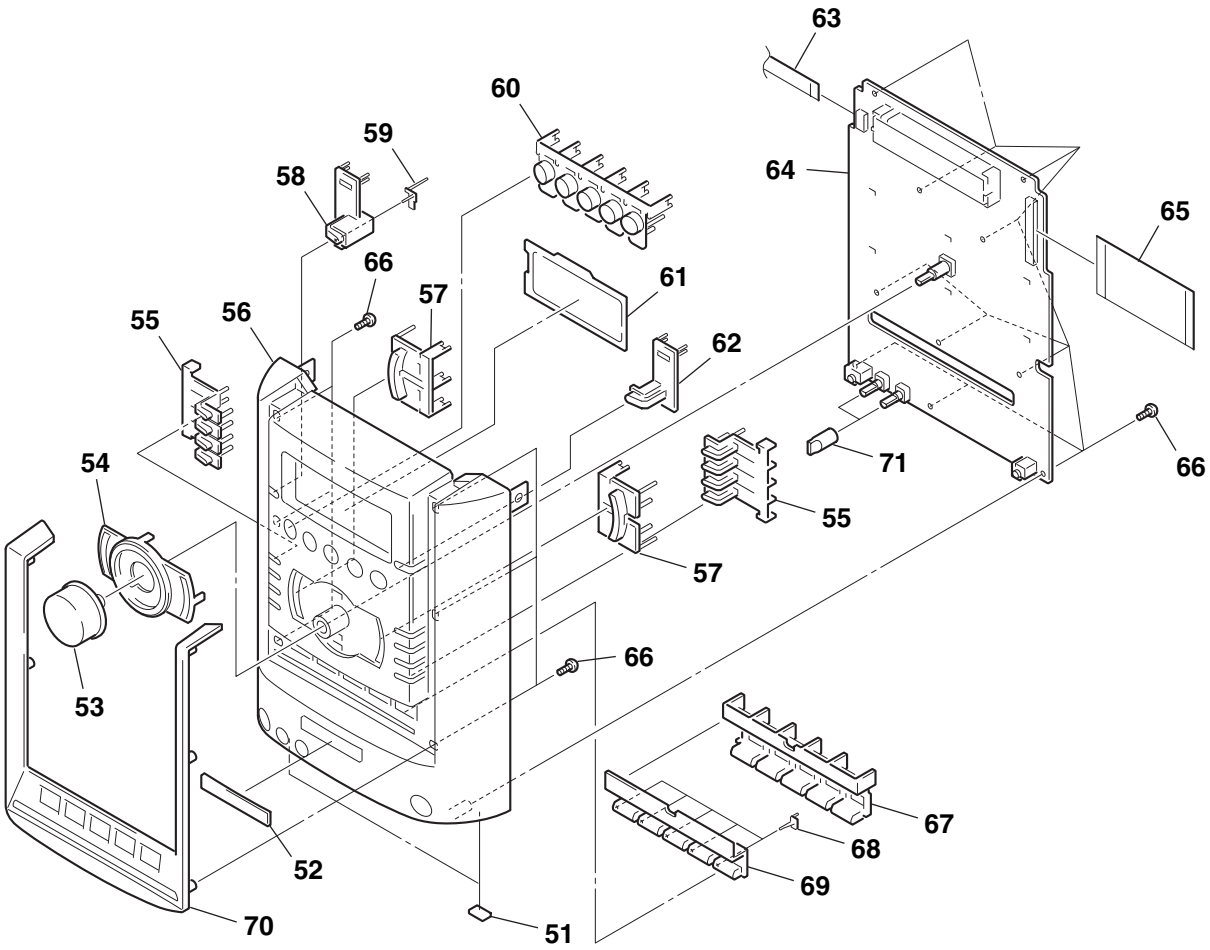
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-1. Case, Top Panel Section



Ref. No.	Part No.	Description	Remark
1	3-363-099-71	SCREW (CASE 3 TP2)	
2	4-246-394-11	CASE (SIDE-L)	
3	4-246-395-01	LID (TC)	
4	4-246-396-01	WINDOW (TC)	
5	4-232-195-01	SPRING (LID)	
6	4-951-620-01	SCREW (2.6X8), +BVTP	
7	4-231-776-01	SPRING, CASSETTE DETENT	
8	4-246-390-01	PANEL (L), SUB TOP	
9	4-246-389-11	PANEL, TOP	
10	4-246-391-01	PANEL (R), SUB TOP	
11	1-827-392-11	WIRE (FLAT TYPE)(8 CORE)	
12	1-796-351-41	MECHANISM, SIGNAL CASSETTE	
13	4-246-393-11	CASE (SIDE-R)	
14	4-246-403-01	SPACER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	

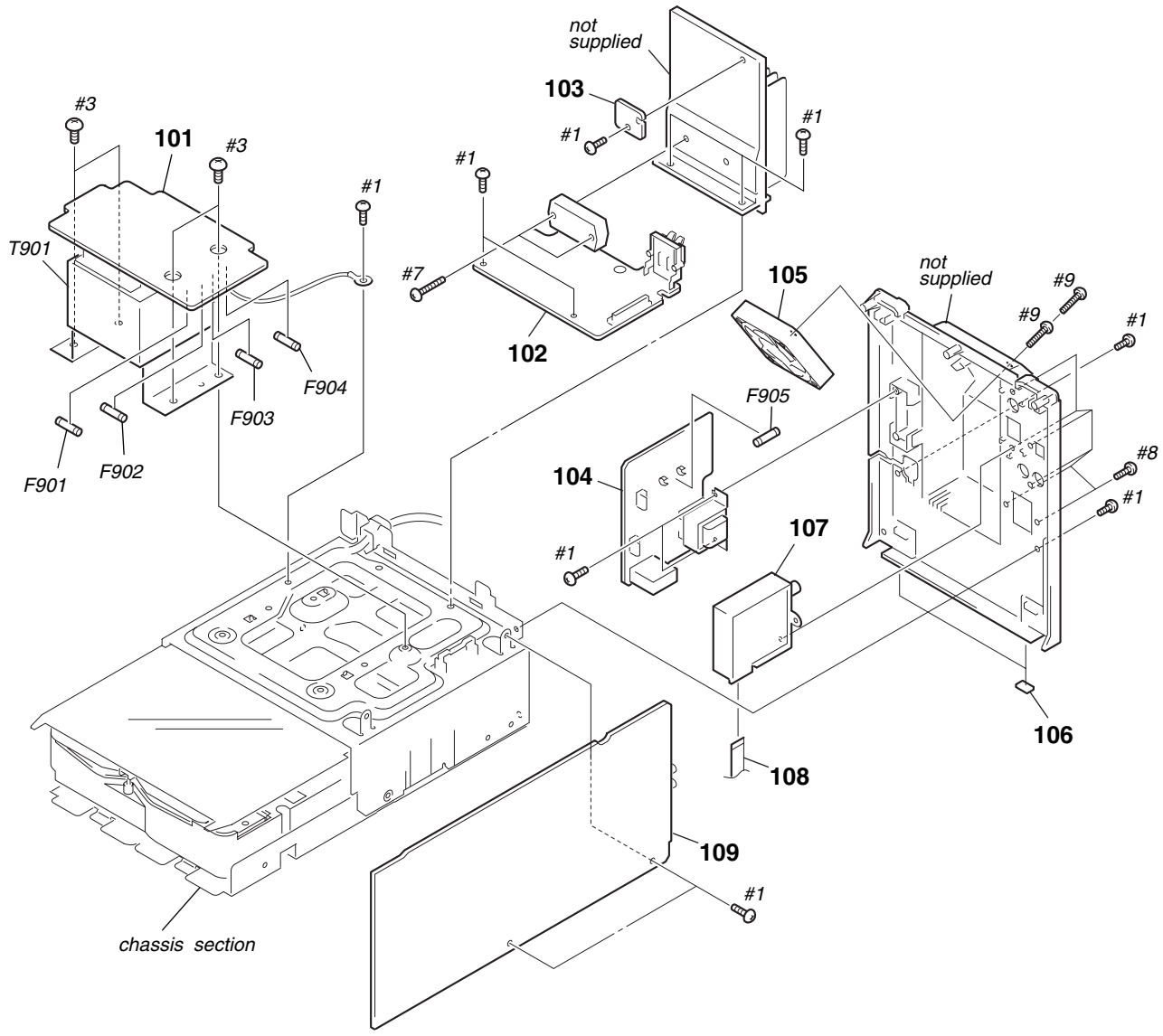
9-2. Front Panel Section



Ref. No.	Part No.	Description	Remark
51	4-225-252-01	CUSHION (FOOT)	
52	4-246-397-01	EMBLEM (5CD)	
53	4-246-384-01	KNOB (VOL)	
54	4-246-385-01	RING (VOL)	
55	4-246-382-01	BUTTON (FUNCTION)	
56	4-246-374-31	PANEL, FRONT	
57	4-246-383-01	BUTTON (PRESET)	
58	4-246-379-01	BUTTON (POWER)	
59	4-246-378-01	INDICATOR (POWER)	
60	4-246-381-01	BUTTON (PLAY)	
61	4-246-376-01	WINDOW (DISPLAY)	
62	4-246-380-01	BUTTON (DISPLAY)	

Ref. No.	Part No.	Description	Remark
63	1-769-920-11	WIRE (FLAT TYPE)(9 CORE)	
64	A-4747-557-A	PANEL BOARD, COMPLETE (E3,SP)	
64	A-4747-565-A	PANEL BOARD, COMPLETE (EA)	
64	A-4747-569-A	PANEL BOARD, COMPLETE (TH)	
65	1-827-395-11	WIRE (FLAT TYPE)(37 CORE)	
66	4-951-620-01	SCREW (2.6X8), +BVTP	
67	4-246-388-01	BUTTON (EJECT)	
68	4-246-387-01	INDICATOR (DISC)	
69	4-246-386-01	BUTTON (DISC)	
70	4-246-375-01	PANEL, SUB	
71	4-246-408-01	KNOB (MIC)	

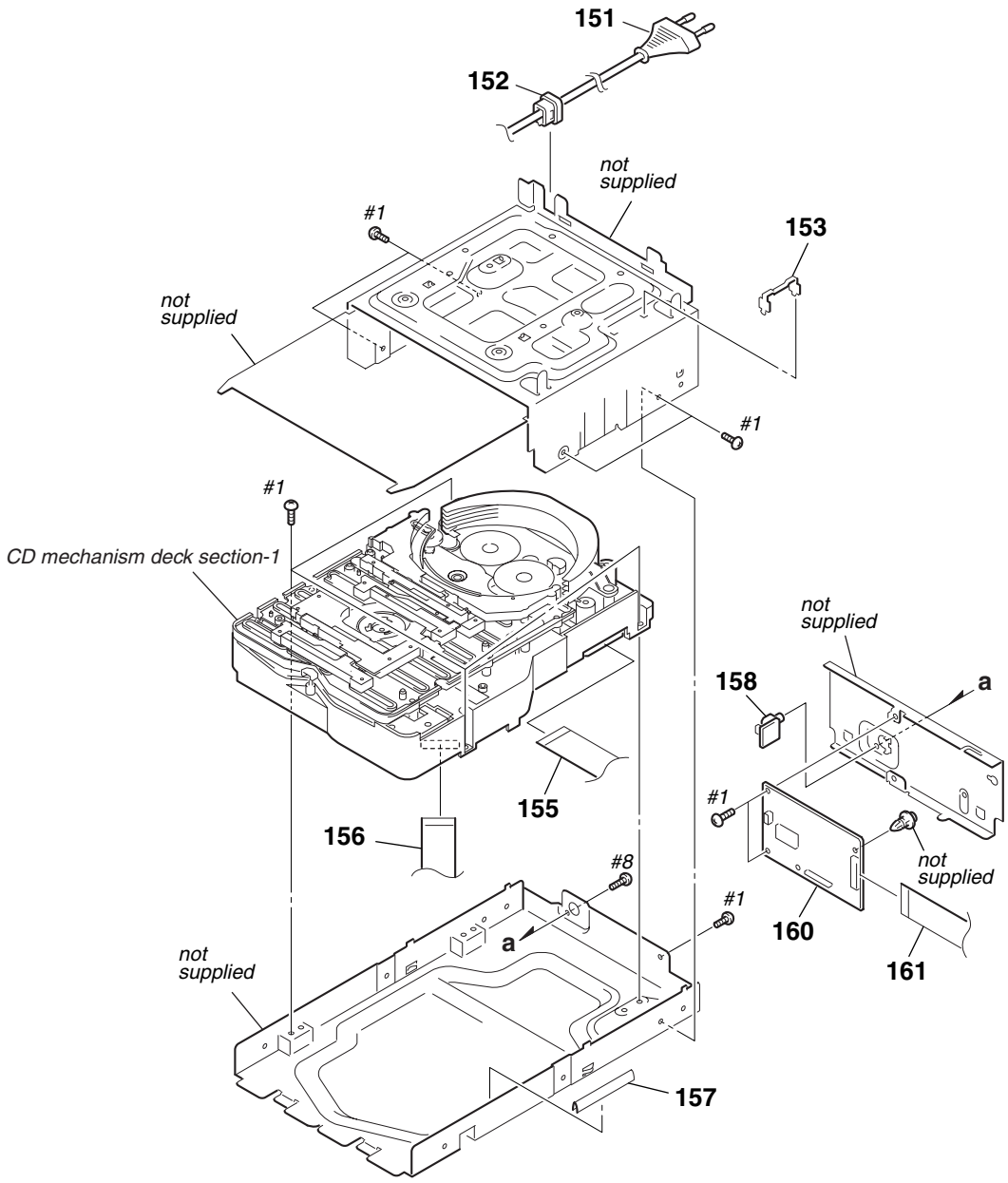
9-3. Chassis Section-1



Ref. No.	Part No.	Description	Remark
101	1-689-250-11	PWR TRANS BOARD	
102	A-4734-342-A	PWR AMP BOARD, COMPLETE (EXCEPT TH)	
102	A-4747-550-A	PWR AMP BOARD, COMPLETE (TH)	
103	1-689-248-12	SENSOR (FAN) BOARD	
104	1-689-246-12	SUB TRANS BOARD	
105	1-787-025-11	DC FAN	
106	4-225-252-01	CUSHION (FOOT)	
107	1-693-628-11	TUNER (FM/AM)	
108	1-769-946-11	WIRE (FLAT TYPE)(11 CORE)	
109	A-4747-562-A	MAIN BOARD, COMPLETE (EXCEPT TH)	
109	A-4747-574-A	MAIN BOARD, COMPLETE (TH)	
⚠F901	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F902	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F903	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F904	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F905	1-533-471-11	FUSE, GLASS TUBE (DIA. 5)(EXCEPT TH)	
⚠T901	1-439-834-11	TRANSFORMER, POWER (EXCEPT EA)	
⚠T901	1-439-835-11	TRANSFORMER, POWER (EA)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-881-09	SCREW +BVTT 4X8 (S)	
#7	7-682-552-09	SCREW +B 3X16	
#8	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#9	7-684-023-04	N 3, TYPE 2	

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

9-4. Chassis Section-2

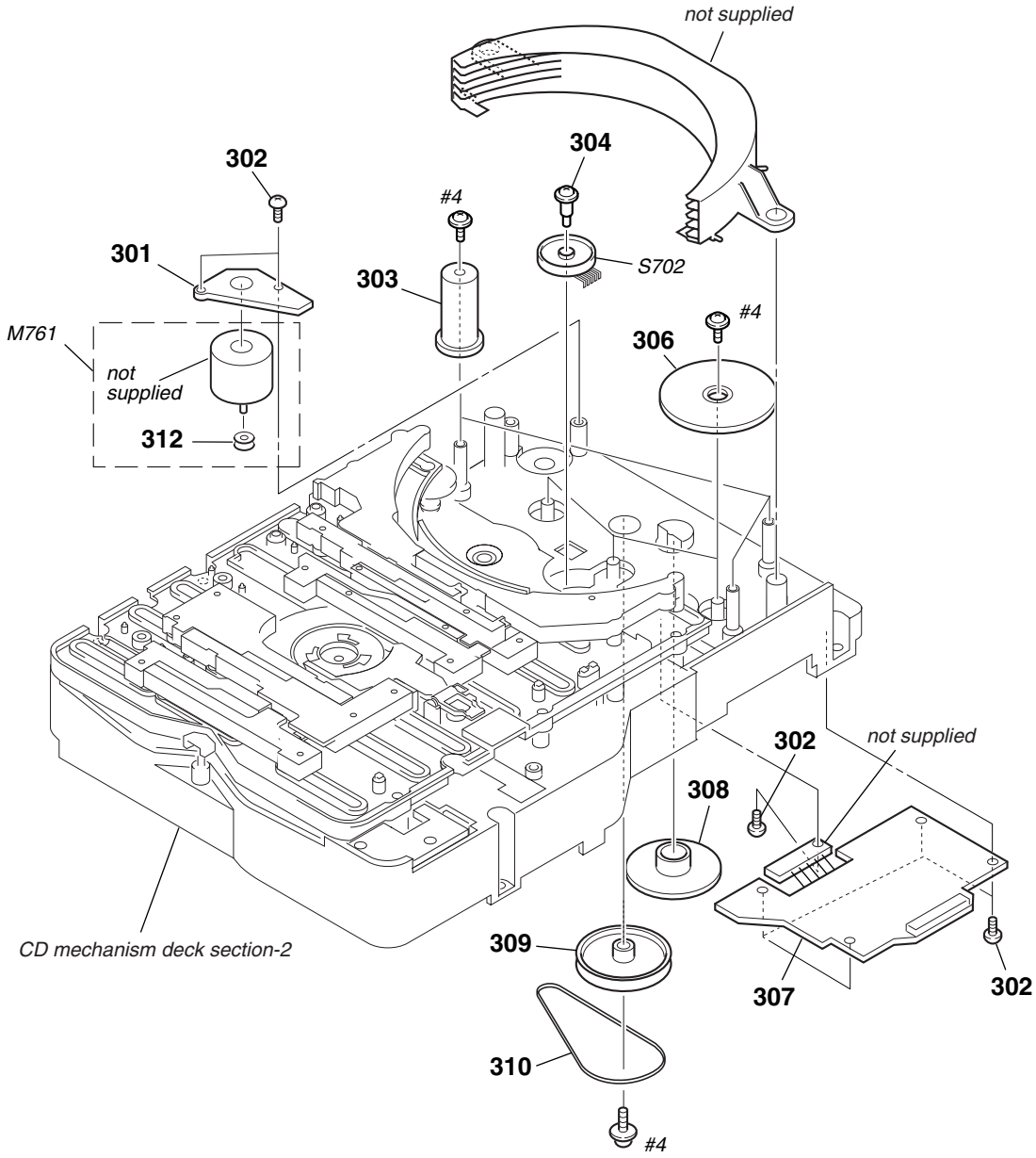


Ref. No.	Part No.	Description	Remark
⚠151	1-824-818-11	CORD, POWER (WITH CONNECTOR)(TH)	
⚠151	1-783-532-11	CORD, POWER (EA,SP)	
⚠151	1-791-901-12	CORD, POWER (E3)	
152	3-703-571-11	BUSHING (S)(4516), CORD (E3)	
* 152	3-703-244-00	BUSHING (2104), CORD (EXCEPT E3)	
153	4-988-533-01	HOLDER, PWB	
155	1-827-390-11	WIRE (FLAT TYPE)(27 CORE)	
156	1-827-391-11	WIRE (FLAT TYPE)(28 CORE)	

Ref. No.	Part No.	Description	Remark
157	3-378-109-12	CUSHION, SARANET	
158	1-689-247-12	JACK BOARD	
160	A-4747-564-A	VMP BOARD, COMPLETE (EXCEPT TH)	
160	A-4747-576-A	VMP BOARD, COMPLETE (TH)	
161	1-827-394-11	WIRE (FLAT TYPE)(19 CORE)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#8	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	

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

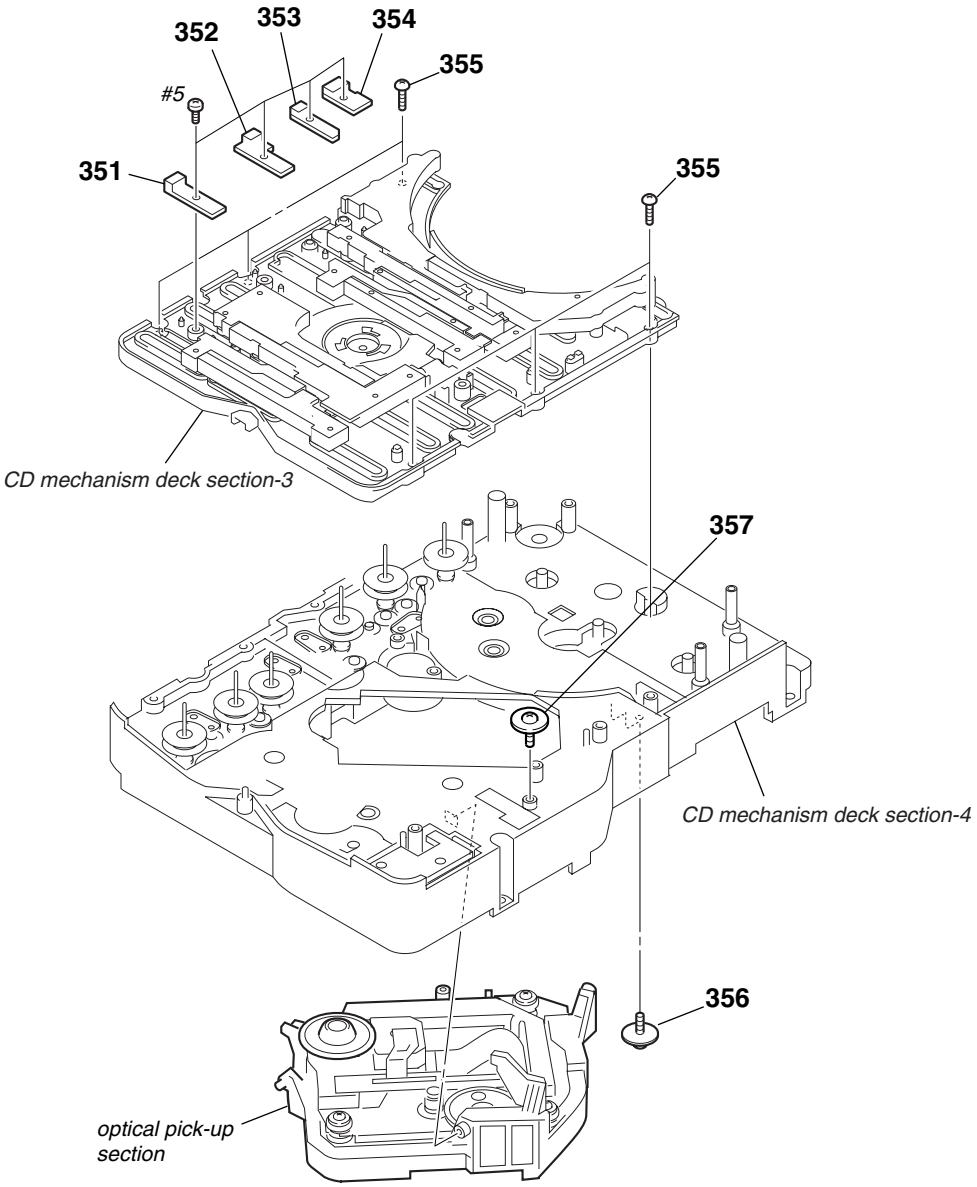
9-5. CD Mechanism Section-1 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
301	1-686-725-12	STOCKER MOTOR BOARD	
302	4-951-620-01	SCREW (2.6X8), +BVTP	
303	4-239-690-01	CAM (STOCKER U/D)	
306	4-239-687-01	GEAR (STOCKER COMMUNICATION)	
307	A-4731-113-A	CONNECTOR BOARD, COMPLETE	
308	4-239-689-01	GEAR (STOCKER DECELERATION)	

Ref. No.	Part No.	Description	Remark
309	4-239-698-01	PULLEY (STOCKER)	
310	4-211-237-01	BELT (MODE)	
312	4-986-156-01	PULLEY, MOTOR	
M761	A-4735-953-A	MOTOR ASSY (STOCKER)	
S702	1-477-299-11	ENCODER, ROTARY (STOCKER POSITION)	
#4	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	

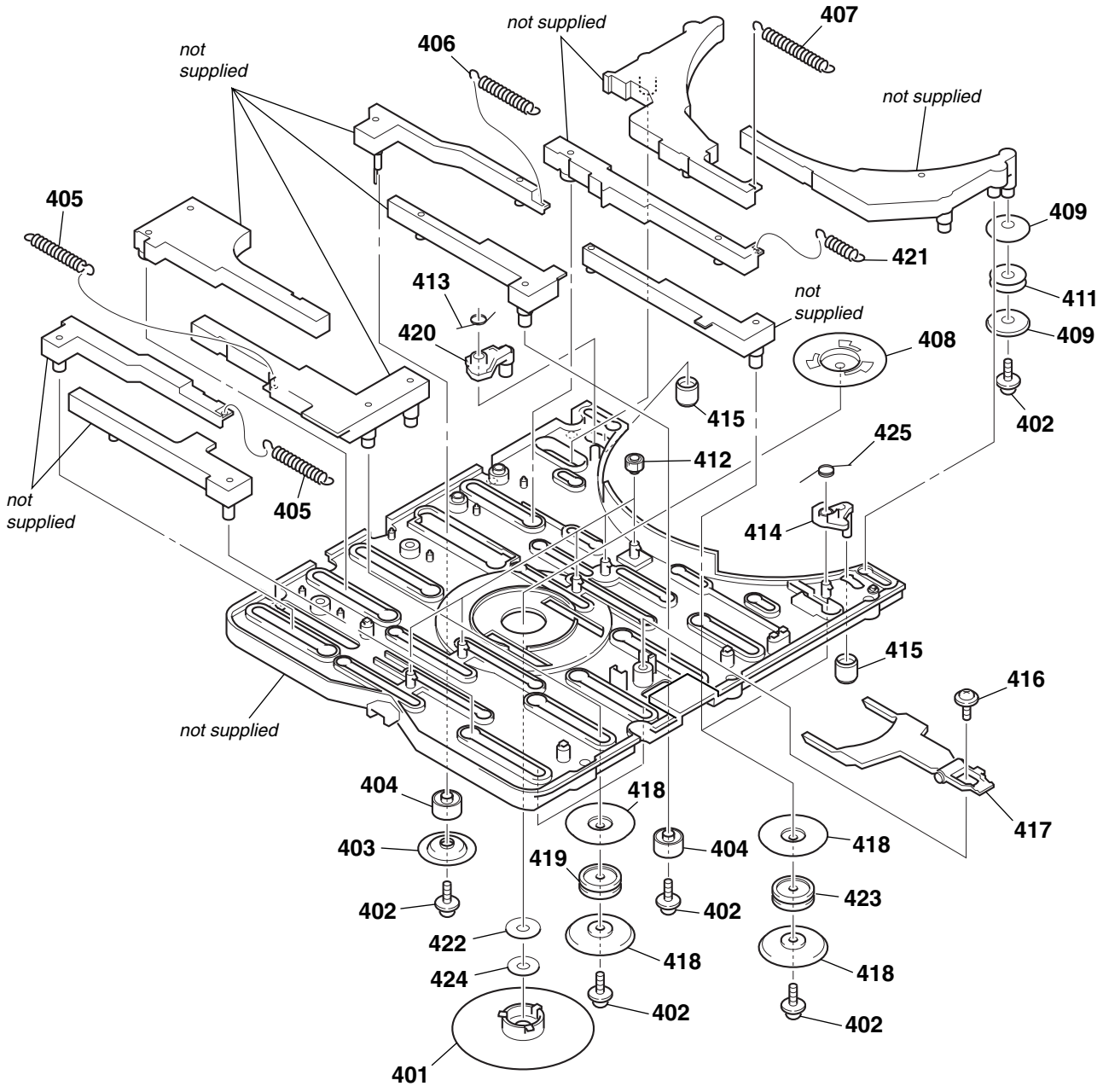
9-6. CD Mechanism Section-2 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
351	1-686-727-12	SW (1) BOARD	
352	1-686-728-12	SW (2) BOARD	
353	1-686-729-12	SW (3) BOARD	
354	1-686-730-12	SW (4) BOARD	

Ref. No.	Part No.	Description	Remark
355	4-951-620-01	SCREW (2.6X8), +BVTP	
356	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
357	4-227-899-01	SCREW (DIA. 12), FROATING	
#5	7-685-533-14	SCREW +BTP 2.6X6 TYPE2 N-S	

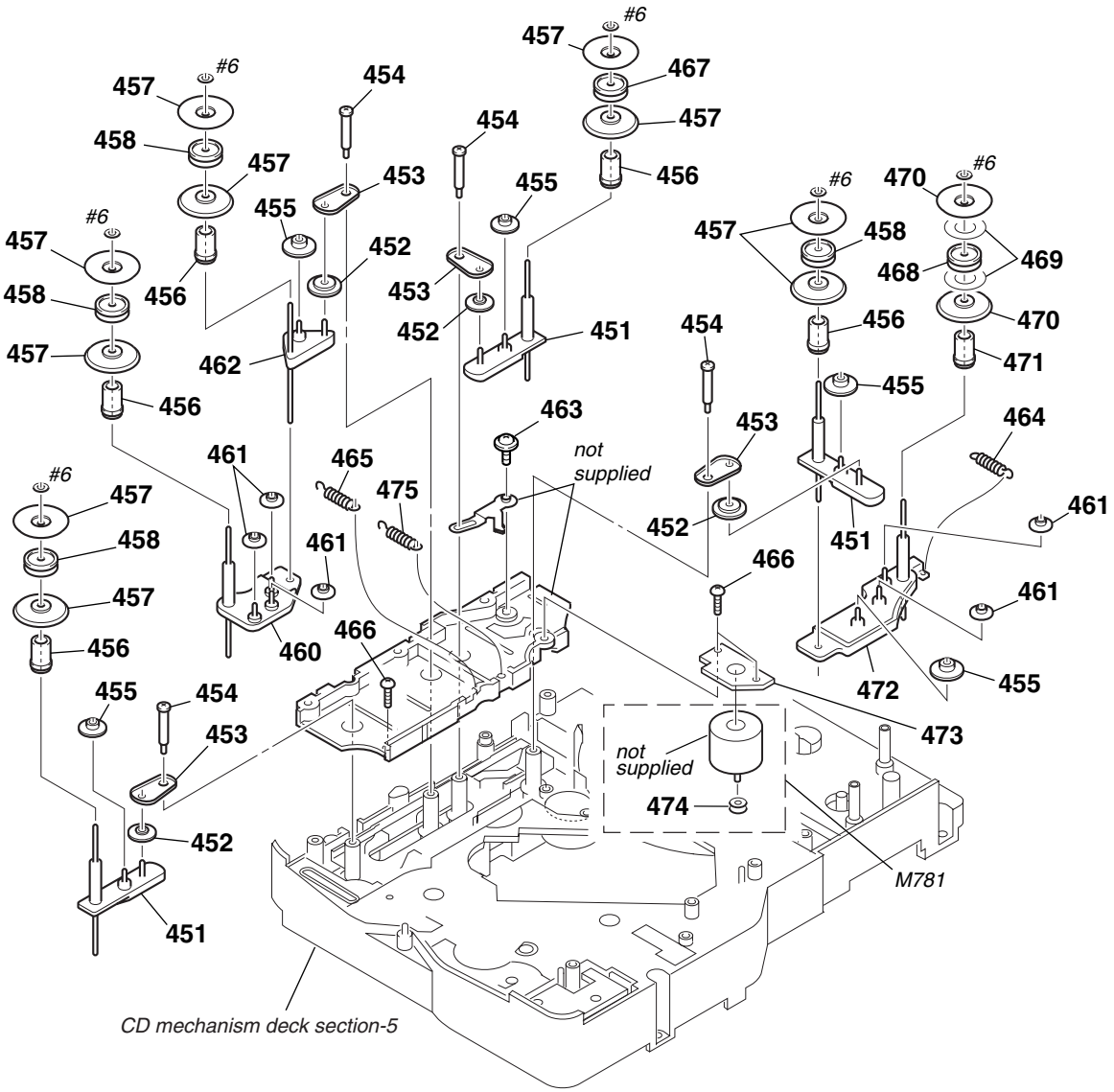
9-7. CD Mechanism Section-3 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
401	X-4955-447-1	PULLEY (A)(BU30) ASSY,CHUCKING	
402	4-992-069-01	SCREW (+PTPWH)(M2)(DIA. 7)	
403	4-239-648-01	PARASOL (ROLLER)	
404	4-239-646-01	ROLLER (ROLLER)	
405	4-239-641-01	SPRING (1.2), TENSION	
406	4-239-642-01	SPRING (3), TENSION COIL	
407	4-239-679-01	SPRING (5), TENSION COIL	
408	4-243-714-01	PULLEY (B)(BU30), CHUCKING	
409	4-239-649-01	PARASOL (STOCKER)	
411	4-244-035-01	ROLLER (STOCKER), RUBBER	
412	4-239-640-02	PINION (SLIDER)	
413	4-243-291-01	SPRING (HELPER2), TENSION	

Ref. No.	Part No.	Description	Remark
414	4-240-039-01	LEVER (DISC STOPPER)	
415	4-239-702-01	ROLLER (DISC STOPPER)	
416	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
417	4-243-713-01	LEVER (LIFTER)	
418	4-239-647-01	PARASOL (MAIN)	
419	4-243-916-01	ROLLER (S), RUBBER	
420	4-241-599-01	LEVER (SUPPORT)	
421	4-239-643-01	SPRING (4), TENSION COIL	
422	4-228-414-01	BRACKET (YOKE)	
423	4-244-032-01	ROLLER, RUBBER	
424	4-231-505-01	SPACER (CH)	
425	4-240-040-01	SPRING, TORSION	

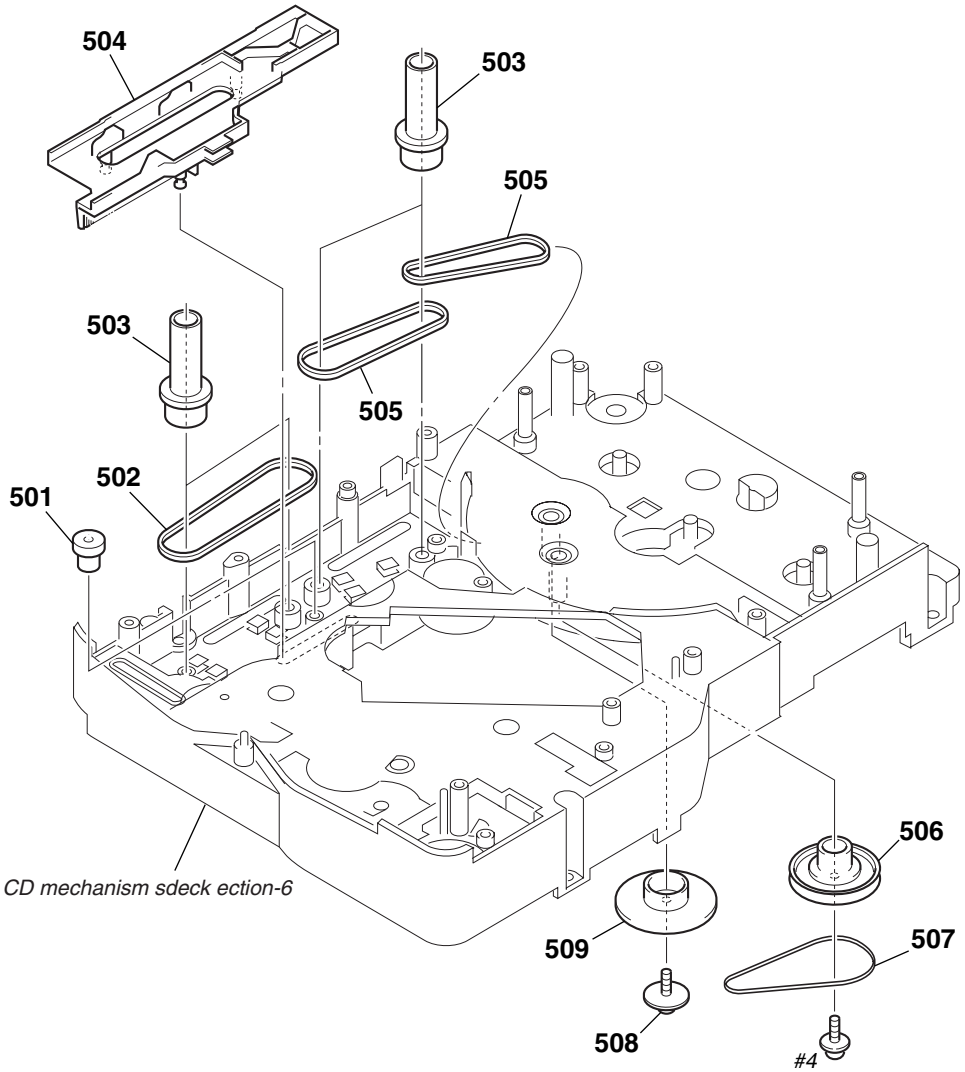
9-8. CD Mechanism Section-4 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
451	X-4954-626-1	LEVER (ROLLER) ASSY	
452	4-239-666-01	GEAR	
453	4-239-668-01	LEVER (CENTER)	
454	4-239-652-01	SCREW (ROLLER), STEP	
455	4-239-669-01	GEAR (ROLLER COMMUNICATION)	
456	4-239-667-01	GEAR (ROLLER CENTER)	
457	4-239-647-01	PARASOL (MAIN)	
458	4-244-032-01	ROLLER, RUBBER	
460	X-4954-622-1	BASE (SLIDER 2) ASSY	
461	4-239-670-01	GEAR (ROLLER 5 COMMUNICATION)	
462	X-4954-624-A	LEVER (SLIDER 4) ASSY	
463	4-992-069-01	SCREW (+PTPWH)(M2)(DIA. 7)	
464	4-240-981-01	SPRING (BASE SLIDER 5),TENSION	
465	4-240-041-01	SPRING (SLIDER 2), TENSION	

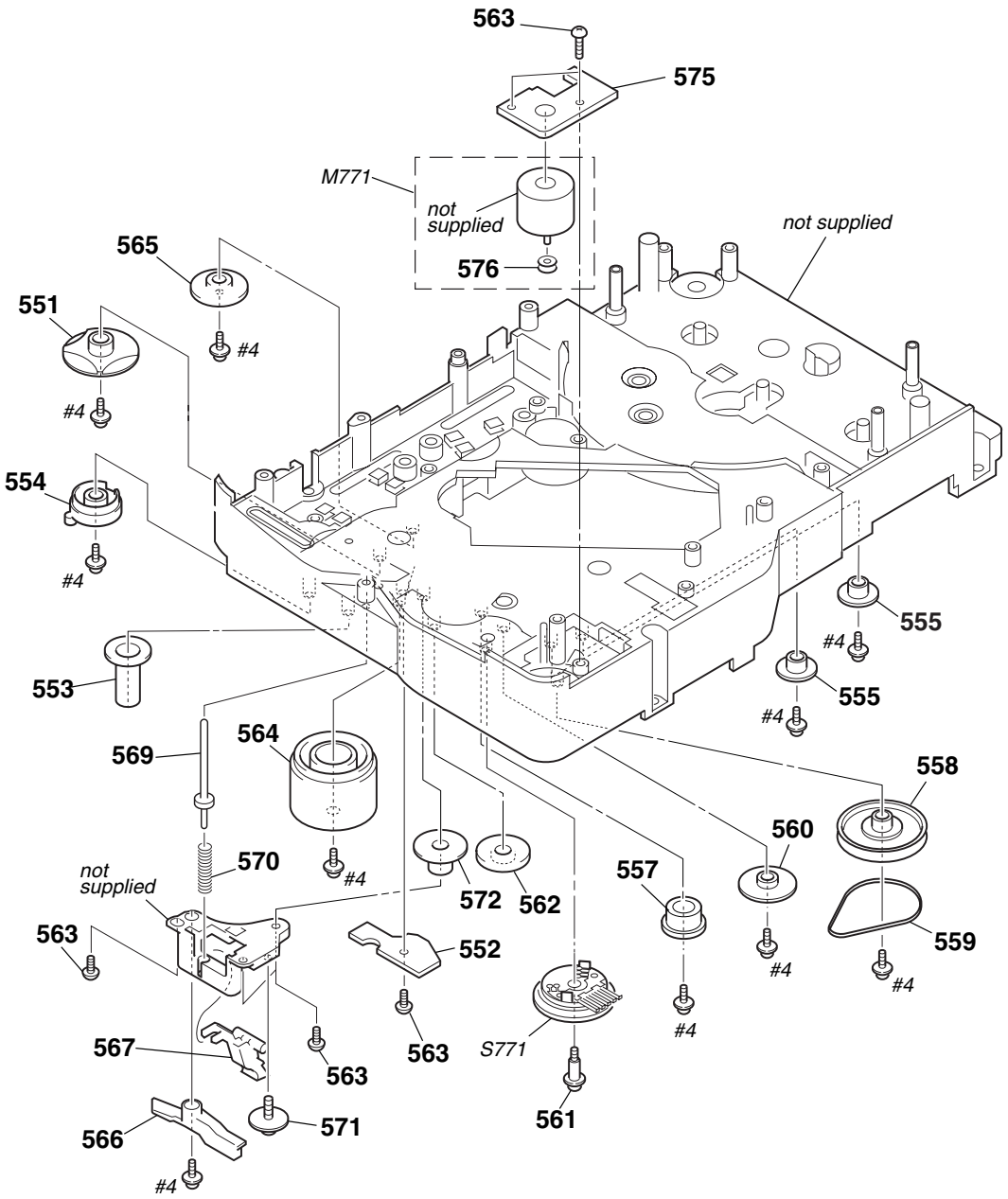
Ref. No.	Part No.	Description	Remark
466	4-951-620-01	SCREW (2.6X8), +BVTP	
467	4-243-916-01	ROLLER (S), RUBBER	
468	4-244-035-01	ROLLER (STOCKER), RUBBER	
469	4-241-209-01	SHEET, ADHESIVE	
470	4-239-649-01	PARASOL (STOCKER)	
471	4-239-671-01	GEAR (ROLLER 5 CENTER)	
472	X-4954-627-1	BASE (SLIDER 5) ASSY	
473	1-686-726-12	ROLLER MOTOR BOARD	
474	4-986-156-01	PULLEY, MOTOR	
475	4-244-162-01	SPRING (SLIDER 4),TENSION	
M781	A-4735-953-A	MOTOR ASSY (ROLLER)	
#6	7-623-921-01	RING, RETAINING, CAPSTAN	
	4-240-040-01	SPRING (DISC STOPPER), TORSION	

9-9. CD Mechanism Section-5 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
501	4-240-020-01	GEAR (TIMING)	
502	4-239-708-02	BELT (FRONT), TIMING	
503	4-239-697-01	GEAR (CENTER)	
504	X-4955-15701	SLIDER (MODE CAM V) ASSY	
505	4-239-706-02	BELT (REAR), TIMING	
506	4-239-699-01	PULLEY	
507	4-247-349-02	BELT (ROLLER V)	
508	4-227-899-01	SCREW (DIA. 12), FROATING	
509	4-239-686-01	GEAR (ROLLER DECELERATION)	
#4	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	

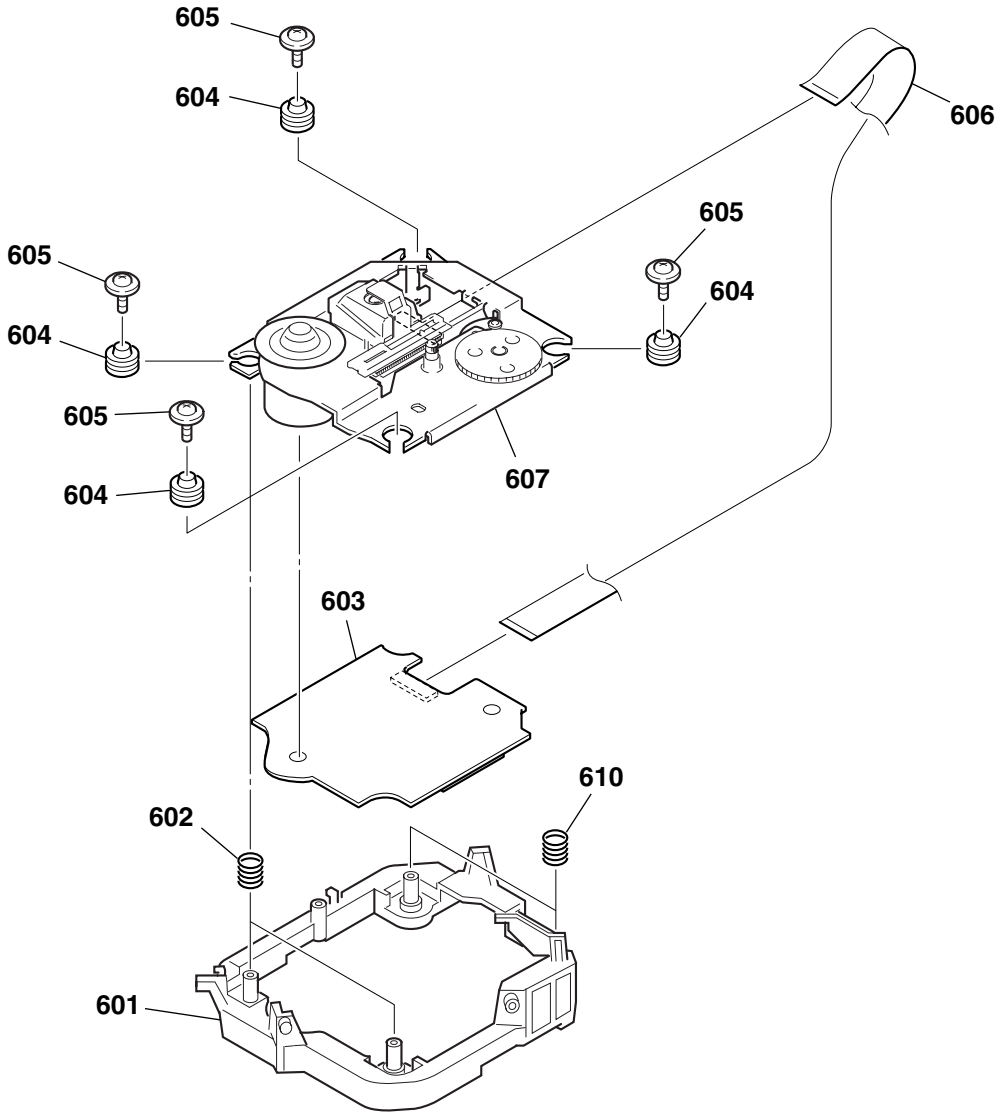
9-10. CD Mechanism Section-6 (CDM69BH-30BD62)



Ref. No.	Part No.	Description	Remark
551	4-239-693-02	CAM (GEAR)	
552	1-686-723-12	SENSOR BOARD	
553	4-239-696-01	GEAR (EJECT LOCK)	
554	4-239-695-02	CAM (EJECT LOCK)	
555	4-240-019-01	GEAR (MODE 5)	
557	4-243-682-01	GEAR (MODE C)	
558	4-239-683-01	PULLEY (MODE DECELERATION)	
559	4-243-702-01	BELT (MODE V)	
560	4-243-683-01	GEAR (MODE D)	
561	4-239-618-01	SCREW (+PWH,2X6), STEP TAPPING	
562	4-243-681-01	GEAR (MODE B)	
563	4-951-620-01	SCREW (2.6X8), +BVTP	
564	4-239-692-02	CAM (BU U/D)	

Ref. No.	Part No.	Description	Remark
565	4-239-694-01	GEAR (MODE CAM)	
566	4-241-731-01	SHUTTER (A), LEVER	
567	4-241-732-01	SHUTTER (B), LEVER	
569	4-241-734-01	SHAFT (SHUTTER)	
570	4-241-735-01	SPRING (SHUTTER), COMPRESSION	
571	4-227-899-01	SCREW (DIA. 12), FROATING	
572	4-243-680-01	GEAR (MODE A)	
575	1-686-724-12	MODE MOTOR BOARD	
576	4-986-156-01	PULLEY, MOTOR	
M771	A-4735-953-A	MOTOR ASSY (MODE)	
S771	1-477-300-11	ENCODER, ROTARY (MODE)	
#4	7-685-902-21	SCREW +PTPWH 2.6X8 (TYPE2)	

9-11. Base Unit Section (BU-30BD62)



Ref. No.	Part No.	Description	Remark
601	4-243-716-01	HOLDER (BU-30)	
602	4-244-556-01	SPRING (FRONT), COMPRESSION	
603	A-4728-371-A	BD BOARD, COMPLETE	
604	4-231-451-01	INSULATOR (BU-30)	
605	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
606	1-782-817-11	WIRE (FLAT TYPE)(16 CORE)	
⚠607	A-4735-189-A	BU-30 (61) ASSY (including M101, M102)	
610	4-227-045-31	SPRING (INSULATOR), COIL	

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

SECTION 10
ELECTRICAL PARTS LIST

BD **CONNECTOR**

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- COILS
  uH: µH
- Accessories are given in the last of this parts list.
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  E3 : 220-240 V AC area in E model.
  EA : Saudi Arabia model.
  SP : Singapore model.
  TH : Thai model.

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

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

Ref. No.	Part No.	Description			Remarks
	A-4728-371-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR/JUMPER RESISTOR >			
C101	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C102	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C103	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C104	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V
C111	1-126-607-11	ELECT CHIP	47uF	20%	4V
C112	1-126-607-11	ELECT CHIP	47uF	20%	4V
C113	1-126-209-11	ELECT CHIP	100uF	20.00%	4V
C114	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C115	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C117	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C118	1-115-156-11	CERAMIC CHIP	1uF		10V
C119	1-115-156-11	CERAMIC CHIP	1uF		10V
C120	1-126-607-11	ELECT CHIP	47uF	20%	4V
C151	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C153	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C163	1-128-995-21	ELECT CHIP	100uF	20%	10V
C164	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C165	1-124-779-00	ELECT CHIP	10uF	20%	16V
C166	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C182	1-128-995-21	ELECT CHIP	100uF	20%	10V
C213	1-216-864-11	METAL CHIP	0	5%	1/10W
		< CONNECTOR >			
CN101	1-784-877-21	CONNECTOR,FFC (LIF (NON-ZIF)) 28P			
CN102	1-794-424-11	CONNECTOR, FCC/FPC 16P			
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC102	8-759-713-70	IC AN41020A			
IC103	8-752-089-74	IC CXA2581N-T4			
		< TRANSISTOR >			
Q101	8-729-049-31	TRANSISTOR	2SB710A-RTX		
Q102	8-729-424-08	TRANSISTOR	UN2111-TX		
		< RESISTOR >			
R102	1-216-835-11	METAL CHIP	15K	5%	1/10W
R103	1-216-845-11	METAL CHIP	100K	5%	1/10W
R104	1-216-835-11	METAL CHIP	15K	5%	1/10W
R105	1-216-821-11	METAL CHIP	1K	5%	1/10W
R109	1-216-845-11	METAL CHIP	100K	5%	1/10W
R111	1-216-846-11	METAL CHIP	120K	5%	1/10W
R112	1-216-864-11	METAL CHIP	0	5%	1/10W
R113	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R114	1-216-841-11	METAL CHIP	47K	5%	1/10W
R117	1-216-841-11	METAL CHIP	47K	5%	1/10W
R118	1-216-864-11	METAL CHIP	0	5%	1/10W
R120	1-216-846-11	METAL CHIP	120K	5%	1/10W
R122	1-216-845-11	METAL CHIP	100K	5%	1/10W
R123	1-216-797-11	METAL CHIP	10	5%	1/10W
R124	1-216-797-11	METAL CHIP	10	5%	1/10W
R125	1-216-839-11	METAL CHIP	33K	5%	1/10W
R126	1-216-839-11	METAL CHIP	33K	5%	1/10W
R151	1-216-845-11	METAL CHIP	100K	5%	1/10W
R152	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R176	1-216-864-11	METAL CHIP	0	5%	1/10W
R179	1-216-833-11	METAL CHIP	10K	5%	1/10W
R227	1-216-845-11	METAL CHIP	100K	5%	1/10W
R228	1-216-853-11	METAL CHIP	470K	5%	1/10W
R229	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R231	1-216-821-11	METAL CHIP	1K	5%	1/10W
R234	1-216-864-11	METAL CHIP	0	5%	1/10W
R235	1-216-821-11	METAL CHIP	1K	5%	1/10W
R236	1-216-821-11	METAL CHIP	1K	5%	1/10W
**********					
	A-4731-113-A	CONNECTOR BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C711	1-126-795-11	ELECT	10uF	20.00%	50V
C751	1-164-159-21	CERAMIC	0.1uF		50V
C752	1-164-159-21	CERAMIC	0.1uF		50V
C753	1-164-159-21	CERAMIC	0.1uF		50V
C754	1-164-159-21	CERAMIC	0.1uF		50V
C755	1-164-159-21	CERAMIC	0.1uF		50V
C756	1-164-159-21	CERAMIC	0.1uF		50V

CONNECTOR **JACK** **MAIN**

Ref. No.	Part No.	Description			Remarks
C758	1-164-159-21	CERAMIC	0.1uF		50V
C761	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C762	1-164-159-21	CERAMIC	0.1uF		50V
C763	1-164-159-21	CERAMIC	0.1uF		50V
C764	1-164-159-21	CERAMIC	0.1uF		50V
C765	1-164-159-21	CERAMIC	0.1uF		50V
C766	1-164-159-21	CERAMIC	0.1uF		50V
C767	1-164-159-21	CERAMIC	0.1uF		50V
C768	1-164-159-21	CERAMIC	0.1uF		50V
C769	1-164-159-21	CERAMIC	0.1uF		50V
C771	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
C781	1-162-306-11	CERAMIC	0.01uF	30.00%	16V
		< CONNECTOR >			
CN701	1-779-564-21	CONNECTOR,FFC (LIF (NON-ZIF)) 27P			
CN702	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE) 3P			
CN703	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			
* CN710	1-506-486-11	PIN, CONNECTOR 7P			
		< DIODE >			
D701	8-719-921-40	DIODE MTZJ-T-77-4.7B			
D711	8-719-109-89	DIODE MTZJ-T-77-5.6B			
D721	8-719-982-03	DIODE MTZJ-T-77-3.6A			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
IC711	8-759-598-69	IC BA6956AN			
IC721	8-759-598-69	IC BA6956AN			
		< TRANSISTOR >			
Q731	8-729-029-66	TRANSISTOR	RT1N141S-TP		
		< RESISTOR >			
R701	1-249-415-11	CARBON	680	5%	1/4W F
R702	1-247-807-31	CARBON	100	5%	1/4W
R711	1-249-415-11	CARBON	680	5%	1/4W F
R712	1-247-807-31	CARBON	100	5%	1/4W
R721	1-249-415-11	CARBON	680	5%	1/4W F
R722	1-247-807-31	CARBON	100	5%	1/4W
R731	1-247-806-11	CARBON	91	5%	1/4W
R732	1-249-417-11	CARBON	1K	5%	1/4W F
R733	1-249-429-11	CARBON	10K	5%	1/4W
R734	1-249-429-11	CARBON	10K	5%	1/4W
**********					
	1-689-247-12	JACK BOARD			
		**********			
		< JACK >			
JK302	1-774-227-31	JACK, PIN 1P (VIDEO OUT)			
**********					
	A-4747-562-A	MAIN BOARD, COMPLETE (EXCEPT TH)			
	A-4747-574-A	MAIN BOARD, COMPLETE (TH)			
		**********			
	4-229-123-01	HEAT SINK, V.OUT			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			

Ref. No.	Part No.	Description			Remarks
		< CAPACITOR >			
C201	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C202	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C203	1-126-947-11	ELECT	47uF	20.00%	16V
C204	1-126-947-11	ELECT	47uF	20.00%	16V
C205	1-126-960-11	ELECT	1uF	20.00%	50V
C206	1-130-485-00	MYLAR	0.015uF	5%	50V
C207	1-130-485-00	MYLAR	0.015uF	5%	50V
C208	1-126-960-11	ELECT	1uF	20.00%	50V
C209	1-126-960-11	ELECT	1uF	20.00%	50V
C210	1-126-961-11	ELECT	2.2uF	20.00%	50V
C211	1-126-961-11	ELECT	2.2uF	20.00%	50V
C212	1-126-960-11	ELECT	1uF	20.00%	50V
C213	1-126-960-11	ELECT	1uF	20.00%	50V
C214	1-126-959-11	ELECT	0.47uF	20.00%	50V
C215	1-126-959-11	ELECT	0.47uF	20.00%	50V
C216	1-126-961-11	ELECT	2.2uF	20.00%	50V
C217	1-126-961-11	ELECT	2.2uF	20.00%	50V
C218	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C219	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C220	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C221	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C224	1-126-963-11	ELECT	4.7uF	20.00%	50V
C225	1-126-933-11	ELECT	100uF	20.00%	16V
C226	1-126-963-11	ELECT	4.7uF	20.00%	50V
C227	1-128-551-11	ELECT	22uF	20.00%	25V
C228	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C229	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C235	1-130-479-00	MYLAR	0.0047uF	5%	50V
C236	1-130-485-00	MYLAR	0.015uF	5%	50V
C237	1-130-485-00	MYLAR	0.015uF	5%	50V
C238	1-130-485-00	MYLAR	0.015uF	5%	50V
C239	1-126-963-11	ELECT	4.7uF	20.00%	50V
C240	1-126-964-11	ELECT	10uF	20.00%	50V
C301	1-126-964-11	ELECT	10uF	20.00%	50V
C302	1-126-964-11	ELECT	10uF	20.00%	50V
C303	1-104-665-11	ELECT	100uF	20.00%	10V
C305	1-126-964-11	ELECT	10uF	20.00%	50V
C306	1-126-964-11	ELECT	10uF	20.00%	50V
C307	1-126-963-11	ELECT	4.7uF	20.00%	50V
C308	1-109-953-11	ELECT	2.2uF	20.00%	50V
C309	1-126-964-11	ELECT	10uF	20.00%	50V
C310	1-126-964-11	ELECT	10uF	20.00%	50V
C311	1-126-964-11	ELECT	10uF	20.00%	50V
C312	1-126-964-11	ELECT	10uF	20.00%	50V
C313	1-126-964-11	ELECT	10uF	20.00%	50V
C314	1-126-964-11	ELECT	10uF	20.00%	50V
C315	1-126-956-91	ELECT	0.1uF	20.00%	50V
C317	1-126-964-11	ELECT	10uF	20.00%	50V
C318	1-126-964-11	ELECT	10uF	20.00%	50V
C319	1-136-161-00	FILM	0.047uF	5.00%	50V
C320	1-136-157-00	FILM	0.022uF	5.00%	50V
C321	1-136-157-00	FILM	0.022uF	5.00%	50V
C323	1-136-157-00	FILM	0.022uF	5.00%	50V
C324	1-136-157-00	FILM	0.022uF	5.00%	50V
C325	1-136-161-00	FILM	0.047uF	5.00%	50V
C326	1-136-161-00	FILM	0.047uF	5.00%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C327	1-130-476-00	MYLAR	0.0027uF	5%	50V
C328	1-130-476-00	MYLAR	0.0027uF	5%	50V
C329	1-126-964-11	ELECT	10uF	20.00%	50V
C330	1-126-964-11	ELECT	10uF	20.00%	50V
C331	1-136-165-00	FILM	0.1uF	5.00%	50V
C332	1-136-165-00	FILM	0.1uF	5.00%	50V
C333	1-136-164-00	FILM	0.082uF	5.00%	50V
C334	1-136-164-00	FILM	0.082uF	5.00%	50V
C338	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C340	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C341	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C342	1-126-964-11	ELECT	10uF	20.00%	50V
C343	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C344	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C345	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C346	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C347	1-126-964-11	ELECT	10uF	20.00%	50V
C348	1-126-964-11	ELECT	10uF	20.00%	50V
C349	1-126-964-11	ELECT	10uF	20.00%	50V
C350	1-126-964-11	ELECT	10uF	20.00%	50V
C351	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C352	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C353	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C354	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C355	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C356	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C357	1-126-933-11	ELECT	100uF	20.00%	16V
C358	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C359	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C360	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C361	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C362	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C363	1-126-964-11	ELECT	10uF	20.00%	50V
C364	1-126-964-11	ELECT	10uF	20.00%	50V
C365	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C366	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C367	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C368	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C369	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C371	1-126-963-11	ELECT	4.7uF	20.00%	50V
C372	1-126-963-11	ELECT	4.7uF	20.00%	50V
C401	1-136-165-00	FILM	0.1uF	5.00%	50V
C402	1-136-165-00	FILM	0.1uF	5.00%	50V
C403	1-136-165-00	FILM	0.1uF	5.00%	50V
C404	1-136-165-00	FILM	0.1uF	5.00%	50V
C405	1-126-768-11	ELECT	2200uF	20.00%	16V
C406	1-126-943-11	ELECT	2200uF	20.00%	25V
C407	1-126-964-11	ELECT	10uF	20.00%	50V
C408	1-126-964-11	ELECT	10uF	20.00%	50V
C409	1-126-919-11	ELECT	6800uF	20.00%	6.3V
C411	1-126-767-11	ELECT	1000uF	20.00%	16V
C412	1-126-943-11	ELECT	2200uF	20.00%	25V
C413	1-126-935-11	ELECT	470uF	20.00%	16V
C414	1-126-947-11	ELECT	47uF	20.00%	10V
C415	1-126-767-11	ELECT	1000uF	20.00%	16V
C416	1-126-935-11	ELECT	470uF	20.00%	16V
C417	1-126-964-11	ELECT	10uF	20.00%	50V
C418	1-126-948-11	ELECT	100uF	20.00%	35V

Ref. No.	Part No.	Description			Remarks
C419	1-126-959-11	ELECT	0.47uF	20.00%	50V
C420	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C421	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C422	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C423	1-164-156-11	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-784-733-11	CONNECTOR, FFC 11P			
CN301	1-784-780-11	CONNECTOR, FFC 19P			
CN302	1-779-564-11	CONNECTOR,FFC (LIF (NON-ZIF)) 27P			
CN303	1-568-828-11	CONNECTOR, FFC 9P			
* CN305	1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CN402	1-784-798-11	CONNECTOR, FFC 37P			
CN403	1-691-040-31	CONNECTOR, FFC 8P			
CN404	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P			
CN405	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
		< DIODE >			
D102	8-719-988-61	DIODE 1SS355TE-17			
D301	8-719-988-61	DIODE 1SS355TE-17			
D302	6-500-522-21	DIODE 10EDB40-TB3			
D303	6-500-522-21	DIODE 10EDB40-TB3			
D304	6-500-522-21	DIODE 10EDB40-TB3			
D305	6-500-522-21	DIODE 10EDB40-TB3			
D306	8-719-988-61	DIODE 1SS355TE-17			
D309	8-719-988-61	DIODE 1SS355TE-17			
D401	6-500-522-21	DIODE 10EDB40-TB3			
D402	6-500-522-21	DIODE 10EDB40-TB3			
D403	6-500-522-21	DIODE 10EDB40-TB3			
D404	6-500-522-21	DIODE 10EDB40-TB3			
D405	6-500-522-21	DIODE 10EDB40-TB3			
D406	6-500-522-21	DIODE 10EDB40-TB3			
D407	6-500-522-21	DIODE 10EDB40-TB3			
D408	6-500-522-21	DIODE 10EDB40-TB3			
D409	8-719-988-61	DIODE 1SS355TE-17			
D410	6-500-522-21	DIODE 10EDB40-TB3			
D411	8-719-988-61	DIODE 1SS355TE-17			
D412	6-500-522-21	DIODE 10EDB40-TB3			
D413	8-719-988-61	DIODE 1SS355TE-17			
D414	8-719-988-61	DIODE 1SS355TE-17			
D415	8-719-083-70	DIODE UDZSTE-1727B			
D416	8-719-069-55	DIODE UDZSTE-175.6B			
D417	8-719-988-61	DIODE 1SS355TE-17			
		< EARTH TERMINAL >			
* EP401	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC201	6-702-130-01	IC HA12237F			
IC301	6-703-650-11	IC M61529FP-D60G			
IC302	8-759-828-32	IC PT8300			
IC401	8-759-231-57	IC TA7810S			
IC402	6-701-760-01	IC uPC3504AHF			
IC403	8-759-231-57	IC TA7810S			
IC404	8-759-039-69	IC uPC7805AHF			

MAIN

Ref. No.	Part No.	Description			Remarks
		< JACK >			
JK301	1-770-613-11	JACK, PIN 4P			
		< JUMPER RESISTOR >			
JR101	1-216-864-11	METAL CHIP	0	5%	1/10W
JR102	1-216-864-11	METAL CHIP	0	5%	1/10W
JR201	1-216-864-11	METAL CHIP	0	5%	1/10W
JR202	1-216-864-11	METAL CHIP	0	5%	1/10W
JR203	1-216-864-11	METAL CHIP	0	5%	1/10W
JR204	1-216-864-11	METAL CHIP	0	5%	1/10W
JR301	1-216-864-11	METAL CHIP	0	5%	1/10W
JR302	1-216-864-11	METAL CHIP	0	5%	1/10W
JR303	1-216-864-11	METAL CHIP	0	5%	1/10W
JR304	1-216-864-11	METAL CHIP	0	5%	1/10W
JR305	1-216-864-11	METAL CHIP	0	5%	1/10W
JR307	1-216-296-11	SHORT CHIP	0		
JR308	1-216-864-11	METAL CHIP	0	5%	1/10W
JR313	1-216-864-11	METAL CHIP	0	5%	1/10W
JR401	1-216-864-11	METAL CHIP	0	5%	1/10W
JR402	1-216-864-11	METAL CHIP	0	5%	1/10W
JR403	1-216-864-11	METAL CHIP	0	5%	1/10W
JR404	1-216-864-11	METAL CHIP	0	5%	1/10W
JR405	1-216-864-11	METAL CHIP	0	5%	1/10W
JR406	1-216-864-11	METAL CHIP	0	5%	1/10W
		< COIL >			
L201	1-424-849-11	COIL, OSCILLATION (BIAS)			
		< TRANSISTOR >			
Q201	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q202	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q203	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q204	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q205	6-550-289-01	TRANSISTOR	2SA1235F		
Q206	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q207	8-729-142-46	TRANSISTOR	2SC2001TP-LK		
Q208	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q209	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q210	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q211	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q212	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q301	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q302	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q304	8-729-052-79	TRANSISTOR	2SD1306NETL		
Q305	8-729-052-79	TRANSISTOR	2SD1306NETL		
Q306	6-550-289-01	TRANSISTOR	2SA1235F		
Q307	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q309	6-550-289-01	TRANSISTOR	2SA1235F		
Q310	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q311	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q312	8-729-052-79	TRANSISTOR	2SD1306NETL		
Q313	8-729-052-79	TRANSISTOR	2SD1306NETL		
Q314	8-729-900-63	TRANSISTOR	BN1F4M-TP		
Q401	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q402	8-729-209-60	TRANSISTOR	2SB1375		
Q406	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q407	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q408	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
Q409	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q410	6-550-289-01	TRANSISTOR	2SA1235F		
Q411	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q412	8-729-048-52	TRANSISTOR	2SA1932 (TP)		
		< RESISTOR >			
R101	1-216-845-11	METAL CHIP	100K	5%	1/10W
R102	1-216-845-11	METAL CHIP	100K	5%	1/10W
R201	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R202	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R203	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R204	1-216-832-11	METAL CHIP	8.2K	5%	1/10W
R207	1-216-833-11	METAL CHIP	10K	5%	1/10W
R208	1-216-833-11	METAL CHIP	10K	5%	1/10W
R209	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R210	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R211	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R212	1-216-824-11	METAL CHIP	1.8K	5%	1/10W
R213	1-216-837-11	METAL CHIP	22K	5%	1/10W
R216	1-216-833-11	METAL CHIP	10K	5%	1/10W
R217	1-216-833-11	METAL CHIP	10K	5%	1/10W
R218	1-216-833-11	METAL CHIP	10K	5%	1/10W
R219	1-216-813-11	METAL CHIP	220	5%	1/10W
R220	1-216-821-11	METAL CHIP	1K	5%	1/10W
R221	1-216-841-11	METAL CHIP	47K	5%	1/10W
R222	1-216-841-11	METAL CHIP	47K	5%	1/10W
R223	1-216-841-11	METAL CHIP	47K	5%	1/10W
R224	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R225	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R226	1-216-833-11	METAL CHIP	10K	5%	1/10W
R227	1-216-833-11	METAL CHIP	10K	5%	1/10W
R228	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R229	1-216-815-11	METAL CHIP	330	5%	1/10W
R230	1-216-797-11	METAL CHIP	10	5%	1/10W
R231	1-216-838-11	METAL CHIP	27K	5%	1/10W
R232	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R233	1-216-837-11	METAL CHIP	22K	5%	1/10W
R234	1-216-837-11	METAL CHIP	22K	5%	1/10W
R235	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R236	1-216-833-11	METAL CHIP	10K	5%	1/10W
R237	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R238	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R239	1-216-833-11	METAL CHIP	10K	5%	1/10W
R240	1-216-833-11	METAL CHIP	10K	5%	1/10W
R241	1-216-817-11	METAL CHIP	470	5%	1/10W
R242	1-216-817-11	METAL CHIP	470	5%	1/10W
R243	1-216-833-11	METAL CHIP	10K	5%	1/10W
R244	1-216-833-11	METAL CHIP	10K	5%	1/10W
R245	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R246	1-216-833-11	METAL CHIP	10K	5%	1/10W
R247	1-216-833-11	METAL CHIP	10K	5%	1/10W
R301	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R302	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R303	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R304	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remarks
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R307	1-216-833-11	METAL CHIP	10K	5%	1/10W
R308	1-216-833-11	METAL CHIP	10K	5%	1/10W
R309	1-216-833-11	METAL CHIP	10K	5%	1/10W
R310	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R311	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R312	1-216-833-11	METAL CHIP	10K	5%	1/10W
R313	1-216-833-11	METAL CHIP	10K	5%	1/10W
R314	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R315	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R316	1-216-833-11	METAL CHIP	10K	5%	1/10W
R317	1-216-833-11	METAL CHIP	10K	5%	1/10W
R318	1-216-841-11	METAL CHIP	47K	5%	1/10W
R319	1-216-841-11	METAL CHIP	47K	5%	1/10W
R321	1-216-821-11	METAL CHIP	1K	5%	1/10W
R322	1-216-821-11	METAL CHIP	1K	5%	1/10W
R323	1-216-833-11	METAL CHIP	10K	5%	1/10W
R324	1-216-821-11	METAL CHIP	1K	5%	1/10W
R325	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R326	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R327	1-216-821-11	METAL CHIP	1K	5%	1/10W
R328	1-216-809-11	METAL CHIP	100	5%	1/10W
R329	1-216-809-11	METAL CHIP	100	5%	1/10W
R330	1-216-833-11	METAL CHIP	10K	5%	1/10W
R331	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R332	1-216-819-11	METAL CHIP	4.7K	5%	1/10W
R333	1-216-841-11	METAL CHIP	47K	5%	1/10W
R340	1-216-833-11	METAL CHIP	10K	5%	1/10W
R341	1-216-845-11	METAL CHIP	100K	5%	1/10W
R343	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R344	1-216-837-11	METAL CHIP	22K	5%	1/10W
R345	1-216-837-11	METAL CHIP	22K	5%	1/10W
R346	1-216-837-11	METAL CHIP	22K	5%	1/10W
R347	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R348	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R349	1-216-837-11	METAL CHIP	22K	5%	1/10W
R350	1-216-837-11	METAL CHIP	22K	5%	1/10W
R351	1-216-837-11	METAL CHIP	22K	5%	1/10W
R352	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R353	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R354	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R355	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R356	1-216-837-11	METAL CHIP	22K	5%	1/10W
R357	1-216-845-11	METAL CHIP	100K	5%	1/10W
R358	1-216-833-11	METAL CHIP	10K	5%	1/10W
R359	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R360	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R361	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R362	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R363	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R364	1-216-845-11	METAL CHIP	100K	5%	1/10W
R365	1-216-845-11	METAL CHIP	100K	5%	1/10W
R366	1-216-833-11	METAL CHIP	10K	5%	1/10W
R367	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R368	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R369	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R370	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R371	1-216-833-11	METAL CHIP	10K	5%	1/10W
R375	1-216-837-11	METAL CHIP	22K	5%	1/10W
R376	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R377	1-216-837-11	METAL CHIP	22K	5%	1/10W
R378	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R379	1-218-717-11	METAL CHIP	11K	5%	1/10W
R380	1-218-717-11	METAL CHIP	11K	5%	1/10W
R381	1-216-837-11	METAL CHIP	22K	5%	1/10W
R382	1-218-717-11	METAL CHIP	11K	5%	1/10W
R383	1-218-717-11	METAL CHIP	11K	5%	1/10W
R384	1-216-837-11	METAL CHIP	22K	5%	1/10W
R385	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R389	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R390	1-216-837-11	METAL CHIP	22K	5%	1/10W
R391	1-218-717-11	METAL CHIP	11K	5%	1/10W
R392	1-218-717-11	METAL CHIP	11K	5%	1/10W
R393	1-216-837-11	METAL CHIP	22K	5%	1/10W
R394	1-216-845-11	METAL CHIP	100K	5%	1/10W
R395	1-216-845-11	METAL CHIP	100K	5%	1/10W
R396	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R397	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R398	1-216-821-11	METAL CHIP	1K	5%	1/10W
R399	1-216-821-11	METAL CHIP	1K	5%	1/10W
R401	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R402	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R403	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R404	1-216-821-11	METAL CHIP	1K	5%	1/10W
R405	1-216-198-91	RES-CHIP	1K	5%	1/8W
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W
R407	1-216-198-91	RES-CHIP	1K	5%	1/8W
R408	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R409	1-216-837-11	METAL CHIP	22K	5%	1/10W
R410	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R411	1-215-891-11	METAL OXIDE	680	5%	2W
R412	1-215-891-11	METAL OXIDE	680	5%	2W
R413	1-216-837-11	METAL CHIP	22K	5%	1/10W
R414	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R415	1-216-837-11	METAL CHIP	22K	5%	1/10W
R416	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R417	1-216-837-11	METAL CHIP	22K	5%	1/10W
R418	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R419	1-216-837-11	METAL CHIP	22K	5%	1/10W
R420	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R421	1-216-837-11	METAL CHIP	22K	5%	1/10W
R427	1-218-717-11	METAL CHIP	11K	5%	1/10W
R428	1-218-717-11	METAL CHIP	11K	5%	1/10W
R429	1-216-837-11	METAL CHIP	22K	5%	1/10W
R430	1-218-717-11	METAL CHIP	11K	5%	1/10W
R431	1-218-717-11	METAL CHIP	11K	5%	1/10W
R432	1-216-837-11	METAL CHIP	22K	5%	1/10W
R433	1-216-841-11	METAL CHIP	47K	5%	1/10W
R434	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R435	1-216-806-11	METAL CHIP	56	5%	1/10W
R436	1-216-806-11	METAL CHIP	56	5%	1/10W
R437	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R438	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R440	1-216-833-11	METAL CHIP	10K	5%	1/10W

MAIN **MODE MOTOR** **PANEL**

Ref. No.	Part No.	Description			Remarks
R441	1-216-821-11	METAL CHIP	1K	5%	1/10W
R444	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R445	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R446	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R447	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R448	1-216-833-11	METAL CHIP	10K	5%	1/10W
R449	1-216-821-11	METAL CHIP	1K	5%	1/10W
R450	1-216-833-11	METAL CHIP	10K	5%	1/10W
R451	1-260-087-21	METAL CHIP	100	5%	1/2W
R452	1-260-087-21	METAL CHIP	100	5%	1/2W
R453	1-216-837-11	METAL CHIP	22K	5%	1/10W
R454	1-216-837-11	METAL CHIP	22K	5%	1/10W
R455	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R456	1-216-845-11	METAL CHIP	100K	5%	1/10W
R457	1-216-857-11	METAL CHIP	1M	5%	1/10W
R464	1-216-853-11	METAL CHIP	470K	5%	1/10W
		< SWITCH >			
SW401	1-771-264-11	SWITCH, PUSH (DETECTION)(1 KEY) (TAPE OPEN/CLOSE)			
**********					
	1-686-724-12	MODE MOTOR BOARD			
		**********			
**********					
	A-4747-557-A	PANEL BOARD, COMPLETE (E3,SP)			
	A-4747-565-A	PANEL BOARD, COMPLETE (EA)			
	A-4747-569-A	PANEL BOARD, COMPLETE (TH)			
		**********			
	4-238-614-01	FL HOLDER (R)			
		< CAPACITOR >			
C001	1-126-957-11	ELECT	0.22uF	20.00%	50V
C002	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C003	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C004	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C005	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C006	1-126-956-91	ELECT	0.1uF	20.00%	50V
C007	1-126-964-11	ELECT	10uF	20.00%	50V
C008	1-126-964-11	ELECT	10uF	20.00%	50V
C009	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C010	1-126-961-11	ELECT	2.2uF	20.00%	50V
C011	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C012	1-126-961-11	ELECT	2.2uF	20.00%	50V
C013	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C014	1-104-665-11	ELECT	100uF	20.00%	10V
C015	1-104-665-11	ELECT	100uF	20.00%	10V
C020	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C032	1-126-961-11	ELECT	2.2uF	20.00%	50V
C041	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C042	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C043	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C044	1-130-493-00	MYLAR	0.068uF	5%	50V
C045	1-126-947-11	ELECT	47uF	20.00%	16V
C046	1-126-947-11	ELECT	47uF	20.00%	16V
C047	1-126-960-11	ELECT	1uF	20.00%	50V
C048	1-136-167-00	FILM	0.15uF	5.00%	50V

Ref. No.	Part No.	Description			Remarks
C049	1-126-958-91	ELECT	0.33uF	20%	50V
C050	1-126-958-91	ELECT	0.33uF	20%	50V
C051	1-162-969-11	CERAMIC CHIP	0.0068uF	10%	25V
C052	1-130-493-00	MYLAR	0.068uF	5%	50V
C053	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C054	1-126-960-11	ELECT	1uF	20.00%	50V
C601	1-126-964-11	ELECT	10uF	20.00%	50V
C602	1-126-964-11	ELECT	10uF	20.00%	50V
C603	1-126-947-11	ELECT	47uF	20.00%	10V
C604	1-126-964-11	ELECT	10uF	20.00%	50V
C605	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C606	1-128-551-11	ELECT	22uF	20.00%	25V
C607	1-119-774-11	ELECT	100uF	20.00%	16V
C609	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C610	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C611	1-126-916-11	ELECT	1000uF	20.00%	6.3V
C612	1-115-156-11	CERAMIC CHIP	1uF		10V
C614	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C616	1-115-156-11	CERAMIC CHIP	1uF		10V
C617	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C618	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C619	1-128-551-11	ELECT	22uF	20.00%	25V
C620	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C621	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C622	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C635	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C636	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C637	1-124-257-00	ELECT	2.2uF	20%	50V
C639	1-119-772-91	ELECT	47uF	20.00%	35V
C640	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C641	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C642	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C643	1-115-156-11	CERAMIC CHIP	1uF		10V
C646	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C647	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C648	1-124-257-00	ELECT	2.2uF	20%	50V
C649	1-124-234-00	ELECT	22uF	20%	16V
C650	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN601	1-784-759-11	CONNECTOR, FFC 37P			
CN602	1-784-731-11	CONNECTOR, FFC 9P			
		< DIODE >			
D003	8-719-069-54	DIODE UDZSTE-175.1B			
D606	8-719-988-61	DIODE 1SS355TE-17 (TH)			
D607	8-719-988-61	DIODE 1SS355TE-17 (EA)			
D615	8-719-988-61	DIODE 1SS355TE-17			
D616	8-719-988-61	DIODE 1SS355TE-17			
D617	8-719-988-61	DIODE 1SS355TE-17			
D619	8-719-988-61	DIODE 1SS355TE-17			
D620	8-719-988-61	DIODE 1SS355TE-17			
D621	8-719-988-61	DIODE 1SS355TE-17			
D622	8-719-988-61	DIODE 1SS355TE-17			
D623	8-719-988-61	DIODE 1SS355TE-17			
D624	8-719-988-61	DIODE 1SS355TE-17			
D625	8-719-988-61	DIODE 1SS355TE-17			
D626	8-719-083-61	DIODE UDZSTE-1711B			

PANEL

Ref. No.	Part No.	Description			Remarks
D627	8-719-988-61	DIODE 1SS355TE-17			
		< FERRITE BEAD >			
FB601	1-412-473-21	INDUCTOR	0uH		
FB602	1-550-907-21	FERRITE	0uH		
FB603	1-550-907-21	FERRITE	0uH		
FB604	1-550-907-21	FERRITE	0uH		
FB605	1-550-907-21	FERRITE	0uH		
		< FLUORESCENT INDICATOR >			
FLD601	1-518-923-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC001	8-759-710-97	IC NJM4565M(TE2)			
IC002	8-759-496-40	IC M65850FP			
IC601	6-803-329-01	IC LC876796B-51Y2-E			
IC602	6-704-045-01	IC MM1574A			
IC603	8-759-533-04	IC M62703ML-E1			
		< JACK >			
JK001	1-815-603-11	JACK (MIC)			
JK601	1-691-293-21	JACK (PHONES)			
		< JUMPER RESISTOR >			
JR605	1-216-864-11	METAL CHIP	0	5%	1/10W
JR606	1-216-864-11	METAL CHIP	0	5%	1/10W
JR607	1-216-864-11	METAL CHIP	0	5%	1/10W
		< DIODE >			
LED607	6-500-414-01	DIODE HL-30105Q2AT (DISC1)			
LED608	6-500-414-01	DIODE HL-30105Q2AT (DISC2)			
LED609	6-500-414-01	DIODE HL-30105Q2AT (DISC3)			
LED610	6-500-414-01	DIODE HL-30105Q2AT (DISC4)			
LED611	6-500-414-01	DIODE HL-30105Q2AT (DISC5)			
LED614	6-500-415-01	DIODE HL-30105Q2IT (I/⏻)			
		< TRANSISTOR >			
Q001	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q601	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q609	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q610	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
		< RESISTOR >			
R001	1-216-821-11	METAL CHIP	1K	5%	1/10W
R002	1-216-833-11	METAL CHIP	10K	5%	1/10W
R003	1-216-845-11	METAL CHIP	100K	5%	1/10W
R004	1-216-821-11	METAL CHIP	1K	5%	1/10W
R005	1-216-837-11	METAL CHIP	22K	5%	1/10W
R006	1-216-809-11	METAL CHIP	100	5%	1/10W
R007	1-216-833-11	METAL CHIP	10K	5%	1/10W
R008	1-216-849-11	METAL CHIP	220K	5%	1/10W
R009	1-216-809-11	METAL CHIP	100	5%	1/10W
R010	1-216-845-11	METAL CHIP	100K	5%	1/10W
R011	1-216-833-11	METAL CHIP	10K	5%	1/10W
R012	1-216-833-11	METAL CHIP	10K	5%	1/10W
R013	1-216-821-11	METAL CHIP	1K	5%	1/10W
R022	1-216-833-11	METAL CHIP	10K	5%	1/10W
R029	1-216-837-11	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R030	1-216-809-11	METAL CHIP	100	5%	1/10W
R031	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R032	1-216-848-11	METAL CHIP	180K	5%	1/10W
R033	1-216-834-11	METAL CHIP	12K	5%	1/10W
R034	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R035	1-216-841-11	METAL CHIP	47K	5%	1/10W
R036	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R037	1-216-817-11	METAL CHIP	470	5%	1/10W
R087	1-216-820-11	METAL CHIP	820	5%	1/10W
R088	1-216-820-11	METAL CHIP	820	5%	1/10W
R089	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R090	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R091	1-216-837-11	METAL CHIP	22K	5%	1/10W
R092	1-216-837-11	METAL CHIP	22K	5%	1/10W
R093	1-216-837-11	METAL CHIP	22K	5%	1/10W
R094	1-216-847-11	METAL CHIP	150K	5%	1/10W
R095	1-216-813-11	METAL CHIP	220	5%	1/10W
R096	1-216-837-11	METAL CHIP	22K	5%	1/10W
R097	1-216-837-11	METAL CHIP	22K	5%	1/10W
R098	1-216-837-11	METAL CHIP	22K	5%	1/10W
R099	1-216-841-11	METAL CHIP	47K	5%	1/10W
R604	1-216-833-11	METAL CHIP	10K	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W
R606	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R607	1-216-833-11	METAL CHIP	10K	5%	1/10W
R609	1-216-833-11	METAL CHIP	10K	5%	1/10W
R610	1-216-835-11	METAL CHIP	15K	5%	1/10W
R611	1-216-809-11	METAL CHIP	100	5%	1/10W
R612	1-216-809-11	METAL CHIP	100	5%	1/10W
R613	1-216-821-11	METAL CHIP	1K	5%	1/10W
R614	1-216-821-11	METAL CHIP	1K	5%	1/10W
R615	1-216-821-11	METAL CHIP	1K	5%	1/10W
R616	1-216-833-11	METAL CHIP	10K	5%	1/10W
R617	1-216-833-11	METAL CHIP	10K	5%	1/10W
R619	1-216-833-11	METAL CHIP	10K	5%	1/10W
R620	1-216-833-11	METAL CHIP	10K	5%	1/10W
R623	1-216-198-91	RES-CHIP	1K	5%	1/8W
R624	1-216-835-11	METAL CHIP	15K	5%	1/10W
R625	1-216-817-11	METAL CHIP	470	5%	1/10W
R626	1-216-819-11	METAL CHIP	680	5%	1/10W
R627	1-216-821-11	METAL CHIP	1K	5%	1/10W
R628	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R629	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R630	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R631	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R632	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R633	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R634	1-216-198-91	RES-CHIP	1K	5%	1/8W
R635	1-216-198-91	RES-CHIP	1K	5%	1/8W
R636	1-216-198-91	RES-CHIP	1K	5%	1/8W
R637	1-216-198-91	RES-CHIP	1K	5%	1/8W
R638	1-216-835-11	METAL CHIP	15K	5%	1/10W
R639	1-216-817-11	METAL CHIP	470	5%	1/10W
R640	1-216-819-11	METAL CHIP	680	5%	1/10W
R641	1-216-821-11	METAL CHIP	1K	5%	1/10W
R642	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R643	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R644	1-216-825-11	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R645	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R646	1-216-849-11	METAL CHIP	220K	5%	1/10W
R647	1-220-397-11	RES-CHP	4.7M	5%	1/10W
R648	1-216-819-11	METAL CHIP	680	5%	1/10W
R649	1-216-198-91	RES-CHIP	1K	5%	1/8W
R650	1-216-198-91	RES-CHIP	1K	5%	1/8W
R651	1-216-833-11	METAL CHIP	10K	5%	1/10W
R652	1-216-809-11	METAL CHIP	100	5%	1/10W
R653	1-216-801-11	METAL CHIP	22	5%	1/10W
R654	1-216-833-11	METAL CHIP	10K	5%	1/10W
R655	1-216-841-11	METAL CHIP	47K	5%	1/10W
R656	1-216-841-11	METAL CHIP	47K	5%	1/10W
R657	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R658	1-216-833-11	METAL CHIP	10K	5%	1/10W
R659	1-216-833-11	METAL CHIP	10K	5%	1/10W
R660	1-216-198-91	RES-CHIP	1K	5%	1/8W
R661	1-216-817-11	METAL CHIP	470	5%	1/10W
R662	1-216-819-11	METAL CHIP	680	5%	1/10W
R663	1-216-821-11	METAL CHIP	1K	5%	1/10W
R664	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R665	1-216-809-11	METAL CHIP	100	5%	1/10W
R666	1-216-841-11	METAL CHIP	47K	5%	1/10W
R667	1-216-813-11	METAL CHIP	220	5%	1/10W
R668	1-216-809-11	METAL CHIP	100	5%	1/10W
R669	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R670	1-216-198-91	RES-CHIP	1K	5%	1/8W
R671	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R672	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R673	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R674	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R675	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R676	1-216-821-11	METAL CHIP	1K	5%	1/10W
R677	1-216-851-11	METAL CHIP	330K	5%	1/10W
R678	1-216-833-11	METAL CHIP	10K	5%	1/10W
R679	1-216-198-91	RES-CHIP	1K	5%	1/8W
R680	1-216-809-11	METAL CHIP	100	5%	1/10W
R681	1-216-833-11	METAL CHIP	10K	5%	1/10W
R682	1-216-845-11	METAL CHIP	100K	5%	1/10W
R683	1-216-833-11	METAL CHIP	10K	5%	1/10W
R684	1-216-182-00	RES-CHIP	220	5%	1/8W
R685	1-216-182-00	RES-CHIP	220	5%	1/8W
R686	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R687	1-216-833-11	METAL CHIP	10K	5%	1/10W
R688	1-216-809-11	METAL CHIP	100	5%	1/10W
R689	1-216-833-11	METAL CHIP	10K	5%	1/10W
R690	1-216-809-11	METAL CHIP	100	5%	1/10W
R691	1-216-821-11	METAL CHIP	1K	5%	1/10W
R692	1-216-809-11	METAL CHIP	100	5%	1/10W
R693	1-216-809-11	METAL CHIP	100	5%	1/10W
R694	1-216-809-11	METAL CHIP	100	5%	1/10W
R695	1-216-809-11	METAL CHIP	100	5%	1/10W
R696	1-216-809-11	METAL CHIP	100	5%	1/10W
R697	1-216-809-11	METAL CHIP	100	5%	1/10W
R698	1-216-809-11	METAL CHIP	100	5%	1/10W
		< VIBRATOR >			
RES601	1-579-125-11	VIBRATOR, CERAMIC (8.0MHz)			

Ref. No.	Part No.	Description			Remarks
		< IC >			
RM601	6-600-174-01	IC RPM7240-H4 (R)			
		< SWITCH >			
S601	1-762-196-21	SWITCH, TACT (DISC1)			
S602	1-762-196-21	SWITCH, TACT (DISC2)			
S603	1-762-196-21	SWITCH, TACT (DISC3)			
S604	1-762-196-21	SWITCH, TACT (DISC4)			
S605	1-762-196-21	SWITCH, TACT (DISC5)			
S606	1-762-196-21	SWITCH, TACT (DISC5 ⏏)			
S607	1-762-196-21	SWITCH, TACT (DISC4 ⏏)			
S608	1-762-196-21	SWITCH, TACT (DISC3 ⏏)			
S609	1-762-196-21	SWITCH, TACT (DISC2 ⏏)			
S610	1-762-196-21	SWITCH, TACT (DISC1 ⏏)			
S614	1-762-196-21	SWITCH, TACT (TAPE ◀▶)			
S615	1-762-196-21	SWITCH, TACT (TUNER/BAND)			
S616	1-762-196-21	SWITCH, TACT (CD)			
S617	1-762-196-21	SWITCH, TACT (▶)			
S618	1-762-196-21	SWITCH, TACT (■)			
S619	1-762-196-21	SWITCH, TACT (TUNING+)			
S620	1-762-196-21	SWITCH, TACT (TUNING-)			
S621	1-762-196-21	SWITCH, TACT (PRSET/ALBUM-)			
S622	1-762-196-21	SWITCH, TACT (PRSET/ALBUM+)			
S627	1-762-196-21	SWITCH, TACT (I/⏻)			
S628	1-762-196-21	SWITCH, TACT (DISPLAY)			
S629	1-762-196-21	SWITCH, TACT (PLAY MODE)			
S630	1-762-196-21	SWITCH, TACT (REPEAT)			
S631	1-762-196-21	SWITCH, TACT (CD SYNC)			
S632	1-762-196-21	SWITCH, TACT (REC (PAUSE/START))			
S633	1-762-196-21	SWITCH, TACT (GROOVE)			
S634	1-762-196-21	SWITCH, TACT (PRESET EQ)			
S635	1-762-196-21	SWITCH, TACT (DIMMER)			
S636	1-762-196-21	SWITCH, TACT (FUNCTION)			
		< VARIABLE RESISTOR >			
VR001	1-225-739-11	RES, VAR CARBON 50K (MIC LEVEL)			
VR002	1-225-739-11	RES, VAR CARBON 50K (ECHO LEVEL)			
VR601	1-477-194-11	ENCODER, ROTARY (12 TYPE)(VOLUME)			
		< VIBRATOR >			
X601	1-760-252-12	VIBRATOR, CRYSTAL (32.768kHz)			
**********					
	A-4734-342-A	PWR AMP BOARD, COMPLETE (EXCEPT TH)			
	A-4747-550-A	PWR AMP BOARD, COMPLETE (TH)			
		**********			
		< CAPACITOR >			
C501	1-126-964-11	ELECT	10uF	20.00%	50V
C502	1-126-964-11	ELECT	10uF	20.00%	50V
C503	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C504	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C505	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C506	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C507	1-126-964-11	ELECT	10uF	20.00%	50V
C508	1-126-964-11	ELECT	10uF	20.00%	50V
C509	1-126-966-11	ELECT	33uF	20.00%	16V
C510	1-164-156-11	CERAMIC CHIP	0.1uF		25V

PWR AMP

Ref. No.	Part No.	Description			Remarks
C511	1-126-963-11	ELECT	4.7uF	20.00%	50V
C513	1-104-665-11	ELECT	100uF	20.00%	10V
C514	1-126-963-11	ELECT	4.7uF	20.00%	50V
C515	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C516	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C517	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C518	1-126-961-11	ELECT	2.2uF	20.00%	50V
C520	1-126-968-11	ELECT	100uF	20.00%	50V
C523	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C524	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C525	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C526	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C527	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C528	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C529	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C530	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C531	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C532	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C541	1-136-165-00	FILM	0.1uF	5.00%	50V
C542	1-128-550-11	ELECT	2200uF	20.00%	50V
C543	1-136-165-00	FILM	0.1uF	5.00%	50V
C544	1-128-550-11	ELECT	2200uF	20.00%	50V
		< CONNECTOR >			
CN501	1-778-982-21	CONNECTOR, BOARD TO BOARD 13P			
CN503	1-564-506-11	PLUG, CONNECTOR 3P			
* CN504	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
		< DIODE >			
D501	8-719-510-68	DIODE D5SBA204101			
D502	8-719-988-61	DIODE 1SS355TE-17			
D503	8-719-988-61	DIODE 1SS355TE-17			
D504	8-719-988-61	DIODE 1SS355TE-17			
D505	8-719-988-61	DIODE 1SS355TE-17			
D506	8-719-988-61	DIODE 1SS355TE-17			
D507	8-719-988-61	DIODE 1SS355TE-17			
D508	8-719-988-61	DIODE 1SS355TE-17			
D509	8-719-988-61	DIODE 1SS355TE-17			
		< EARTH TERMINAL >			
* EP501	1-537-738-21	TERMINAL, EARTH			
		< FUSIBLE >			
⚠FR501	1-202-972-61	FUSIBLE	1	5%	1/4W
⚠FR502	1-212-881-11	FUSIBLE	100	5%	1/4W
		< IC >			
IC501	6-600-089-01	IC STK403-070			
		< TERMINAL BOARD >			
JK501	1-694-884-11	TERMINAL BOARD (4P)(SPEAKER)			
		< JUMPER RESISTOR >			
JR501	1-216-864-11	METAL CHIP	0	5%	1/10W
JR502	1-216-864-11	METAL CHIP	0	5%	1/10W
JR503	1-216-864-11	METAL CHIP	0	5%	1/10W
JR504	1-216-864-11	METAL CHIP	0	5%	1/10W

Ref. No.	Part No.	Description			Remarks
JR505	1-216-864-11	METAL CHIP	0	5%	1/10W
		< COIL >			
L501	1-422-009-13	COIL, AIR-CORE			
L502	1-422-009-13	COIL, AIR-CORE			
		< TRANSISTOR >			
Q501	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q502	6-550-646-01	TRANSISTOR	2SC3143K4/K5-TB		
Q503	6-550-646-01	TRANSISTOR	2SC3143K4/K5-TB		
Q504	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q505	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q506	8-729-900-36	TRANSISTOR	BA1F4M-TP		
Q507	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q508	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q509	6-550-289-01	TRANSISTOR	2SA1235F		
Q510	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q511	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q512	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q513	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q514	8-729-120-28	TRANSISTOR	2SC3052F-T1-LF		
Q515	8-729-140-04	TRANSISTOR	2SB1116-TP-LK		
		< RESISTOR >			
R501	1-216-821-11	METAL CHIP	1K	5%	1/10W
R502	1-216-821-11	METAL CHIP	1K	5%	1/10W
R503	1-216-842-11	METAL CHIP	56K	5%	1/10W
R504	1-216-842-11	METAL CHIP	56K	5%	1/10W
R507	1-216-821-11	METAL CHIP	1K	5%	1/10W
R508	1-216-821-11	METAL CHIP	1K	5%	1/10W
R509	1-216-833-11	METAL CHIP	10K	5%	1/10W
R510	1-216-839-11	METAL CHIP	33K	5%	1/10W
R511	1-216-821-11	METAL CHIP	1K	5%	1/10W
R512	1-216-842-11	METAL CHIP	56K	5%	1/10W
R513	1-216-842-11	METAL CHIP	56K	5%	1/10W
R514	1-216-821-11	METAL CHIP	1K	5%	1/10W
R515	1-216-821-11	METAL CHIP	1K	5%	1/10W
R516	1-216-835-11	METAL CHIP	15K	5%	1/10W
R517	1-216-835-11	METAL CHIP	15K	5%	1/10W
R518	1-216-841-11	METAL CHIP	47K	5%	1/10W
R519	1-216-841-11	METAL CHIP	47K	5%	1/10W
R520	1-260-076-21	CARBON	10	5%	1/2W
R521	1-260-076-21	CARBON	10	5%	1/2W
R522	1-217-151-00	METAL	0.22	10%	2W
R523	1-217-151-00	METAL	0.22	10%	2W
R524	1-216-162-00	RES-CHIP	33	5%	1/8W
R525	1-216-854-11	METAL CHIP	560K	5%	1/10W
R526	1-216-813-11	METAL CHIP	220	5%	1/10W
R527	1-216-841-11	METAL CHIP	47K	5%	1/10W
R528	1-216-845-11	METAL CHIP	100K	5%	1/10W
R529	1-216-842-11	METAL CHIP	56K	5%	1/10W
R530	1-216-845-11	METAL CHIP	100K	5%	1/10W
R531	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R532	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R533	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R534	1-216-841-11	METAL CHIP	47K	5%	1/10W

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

Ref. No.	Part No.	Description			Remarks
R535	1-216-830-11	RES-CHIP	5.6K	5%	1/10W
R536	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R537	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R538	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R539	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R540	1-216-833-11	METAL CHIP	10K	5%	1/10W
R543	1-216-837-11	METAL CHIP	22K	5%	1/10W
R544	1-216-842-11	METAL CHIP	56K	5%	1/10W
R545	1-216-841-11	METAL CHIP	47K	5%	1/10W
R546	1-216-839-11	METAL CHIP	33K	5%	1/10W
R547	1-216-833-11	METAL CHIP	10K	5%	1/10W
R548	1-216-174-00	RES-CHIP	100	5%	1/8W
R549	1-216-174-00	RES-CHIP	100	5%	1/8W
R550	1-260-076-21	CARBON	10	5%	1/2W
R551	1-260-076-21	CARBON	10	5%	1/2W
		< RELAY >			
RY501	1-755-373-11	RELAY			
**********					
	1-689-250-11	PWR TRANS BOARD			
		**********			
		< CAPACITOR >			
C902	1-164-159-21	CERAMIC	0.1uF		50V
C903	1-126-969-11	ELECT	220uF	20.00%	50V
		< CONNECTOR >			
* CN902	1-564-519-11	PLUG, CONNECTOR 4P			
* CN904	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
* CN907	1-564-524-11	PLUG, CONNECTOR 9P			
		< DIODE >			
D907	6-500-522-21	DIODE 10EDB40-TB3			
		< FUSIBLE >			
⚠FR903	1-217-639-00	FUSIBLE	2.2	5%	1/4W
**********					
	1-686-726-12	ROLLER MOTOR BOARD			
		**********			
**********					
	1-689-248-12	SENSOR (FAN) BOARD			
		**********			
		< THERMISTOR >			
TH501	1-807-796-11	THERMISTOR			
**********					
	1-686-723-12	SENSOR BOARD			
		**********			
		< IC >			
IC751	8-749-017-45	SENSOR, PHONT RPR-220C1N (DISC INSERT DETECT SENSOR)			
**********					

Ref. No.	Part No.	Description			Remarks
		ST ENCODER BOARD			
		**********			
**********					
	1-686-725-12	STOCKER MOTOR BOARD			
		**********			
**********					
	1-689-246-12	SUB TRANS BOARD			
		**********			
		< CAPACITOR >			
C901	1-126-767-11	ELECT	1000uF	20.00%	16V
		< CONNECTOR >			
CN905	1-564-321-21	PIN, CONNECTOR (3.96mm PITCH) 2P (TH)			
CN905	1-568-106-11	PIN, CONNECTOR (3.96mm PITCH) 4P			(EXCEPT TH)
CN908	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
		< DIODE >			
D901	6-500-522-21	DIODE 10EDB40-TB3			
D902	6-500-522-21	DIODE 10EDB40-TB3			
D903	6-500-522-21	DIODE 10EDB40-TB3			
D904	6-500-522-21	DIODE 10EDB40-TB3			
D905	8-719-988-61	DIODE 1SS355TE-17			
		< RELAY >			
⚠RY901	1-755-276-11	RELAY, POWER			
		< SWITCH >			
⚠S902	1-786-055-21	SELECTOR, VOLTAGE (VOLTAGE SELECTOR)			(EXCEPT TH)
		< TRANSFORMER >			
⚠T902	1-439-832-11	TRANSFORMER, POWER			
**********					
	1-686-727-12	SW (1) BOARD			
		**********			
		< SWITCH >			
S711	1-786-382-11	SWITCH, PUSH (1 KEY)			(DISC INSERT (8/12cm))
**********					
	1-686-728-12	SW (2) BOARD			
		**********			
S713	1-786-382-11	SWITCH, PUSH (1 KEY)(DISC IN (8/12cm))			
S714	1-786-382-11	SWITCH, PUSH (1 KEY)(DISC IN (8cm))			
**********					
	1-686-729-12	SW (3) BOARD			
		**********			
S715	1-786-382-11	SWITCH, PUSH (1 KEY)(DISC OUT)			
**********					

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

SW (4) VMP

Ref. No.	Part No.	Description			Remarks
	1-686-730-12	SW (4) BOARD			
		**********			
S716	1-786-382-11	SWITCH, PUSH (1 KEY)(STOCKER IN/OUT)			
S717	1-786-382-11	SWITCH, PUSH (1 KEY)(DISC POSITION)			
S718	1-786-382-11	SWITCH, PUSH (1 KEY)(STOCKING)			
**********					
	A-4747-564-A	VMP BOARD, COMPLETE (EXCEPT TH)			
	A-4747-576-A	VMP BOARD, COMPLETE (TH)			
		**********			
		< CAPACITOR >			
C104	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C105	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C106	1-164-670-11	CERAMIC CHIP	1200PF	5.00%	16V
C114	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C115	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C116	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C154	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C155	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C156	1-164-670-11	CERAMIC CHIP	1200PF	5.00%	16V
C201	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C202	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C203	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C204	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C205	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C206	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C207	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C208	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C209	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C210	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C211	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C212	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C213	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C214	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C221	1-124-779-00	ELECT CHIP	10uF	20%	16V
C222	1-124-779-00	ELECT CHIP	10uF	20%	16V
C223	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C224	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C253	1-216-864-11	METAL CHIP	0	5%	1/10W
C254	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C255	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C257	1-128-065-11	ELECT CHIP	68uF	20.00%	10V
C258	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C259	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C321	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C322	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C323	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C338	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C360	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C361	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C364	1-124-779-00	ELECT CHIP	10uF	20%	16V
C365	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C366	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C501	1-124-779-00	ELECT CHIP	10uF	20%	16V
C502	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C504	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C505	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C510	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C511	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C513	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C521	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C522	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C523	1-162-912-11	CERAMIC CHIP	7PF	0.5PF	50V
C524	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C525	1-126-193-11	ELECT	1uF	20%	50V
C533	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C534	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C535	1-110-563-11	CERAMIC CHIP	0.068uF	10.00%	16V
C536	1-164-217-11	CERAMIC CHIP	150PF	5.00%	50V
C537	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C538	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C539	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C540	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C541	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C542	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C543	1-164-315-11	CERAMIC CHIP	470PF	5.00%	50V
C544	1-117-863-11	CERAMIC CHIP	0.47uF	10.00%	6.3V
C545	1-126-193-11	ELECT	1uF	20%	50V
C546	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C547	1-126-193-11	ELECT	1uF	20%	50V
C548	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C549	1-162-913-11	CERAMIC CHIP	8PF	0.50PF	50V
C550	1-162-913-11	CERAMIC CHIP	8PF	0.50PF	50V
C551	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C552	1-126-193-11	ELECT	1uF	20%	50V
C561	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C566	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C567	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C570	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C571	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C572	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C573	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C574	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C575	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C576	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C581	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C582	1-124-779-00	ELECT CHIP	10uF	20%	16V
C583	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C584	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C596	1-124-779-00	ELECT CHIP	10uF	20%	16V
C597	1-124-779-00	ELECT CHIP	10uF	20%	16V
		< CONNECTOR >			
CN101	1-784-327-21	CONNECTOR, FFC/FPC 28P			
CN201	1-778-874-11	CONNECTOR,FFC(LIF (NON-ZIF)) 19P			
CN301	1-794-509-11	PIN, CONNECTOR (PC BOARD)(3P)			
		< FERRITE BEAD >			
FB201	1-469-869-21	FERRITE	0uH		
FB251	1-469-869-21	FERRITE	0uH		
FB252	1-469-869-21	FERRITE	0uH		
FB360	1-469-869-21	FERRITE	0uH		
FB501	1-469-869-21	FERRITE	0uH		

Ref. No.	Part No.	Description			Remarks
FB502	1-469-869-21	FERRITE	0uH		
FB503	1-469-869-21	FERRITE	0uH		
FB504	1-469-869-21	FERRITE	0uH		
FB561	1-469-869-21	FERRITE	0uH		
		< FILTER >			
FL201	1-234-177-21	FERRITE	0uH		
FL501	1-234-177-21	FERRITE	0uH		
FL502	1-234-177-21	FERRITE	0uH		
FL503	1-234-177-21	FERRITE	0uH		
FL504	1-234-177-21	FERRITE	0uH		
		< IC >			
IC102	8-759-701-40	IC NJM2100M (TE2)			
IC201	6-700-399-01	IC uPC2925T-E1			
IC202	8-759-460-72	IC BA033FP-E2			
IC307	6-702-001-01	IC BD7600FV-E2			
IC504	8-759-825-13	IC PCM1748E/2K			
IC505	8-752-417-93	IC CXD1887R			
IC506	6-702-000-01	IC BU2507FV-E2			
IC507	6-702-571-01	IC VG3612816BT-7L			
IC508	6-802-823-01	IC MR27V401E-0B1MAZ060			
		< JUMPER RESISTOR >			
JW203	1-216-864-11	METAL CHIP	0	5%	1/10W
		< COIL >			
L102	1-410-373-31	INDUCTOR	2.2uH		
L321	1-410-381-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q201	8-729-140-75	TRANSISTOR	2SD999-T1-CLCK		
Q301	8-729-602-36	TRANSISTOR	2SA1602TP-1EF		
Q370	8-729-028-96	TRANSISTOR	RT1N141M-TP-1		
Q581	8-729-602-21	TRANSISTOR	2SC4154TP-1EF		
		< RESISTOR >			
R102	1-216-809-11	METAL CHIP	100	5%	1/10W
R107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R108	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R109	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R114	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R115	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R152	1-216-809-11	METAL CHIP	100	5%	1/10W
R157	1-216-833-11	METAL CHIP	10K	5%	1/10W
R158	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R159	1-216-823-11	METAL CHIP	1.5K	5%	1/10W
R201	1-216-809-11	METAL CHIP	100	5%	1/10W
R202	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-813-11	METAL CHIP	220	5%	1/10W
R322	1-216-864-11	METAL CHIP	0	5%	1/10W
R323	1-216-817-11	METAL CHIP	470	5%	1/10W
R375	1-211-990-11	METAL CHIP	75	0.5%	1/10W
R376	1-216-833-11	METAL CHIP	10K	5%	1/10W
R502	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R503	1-216-809-11	METAL CHIP	100	5%	1/10W
R504	1-216-809-11	METAL CHIP	100	5%	1/10W
R505	1-216-809-11	METAL CHIP	100	5%	1/10W

Ref. No.	Part No.	Description			Remarks
R506	1-216-809-11	METAL CHIP	100	5%	1/10W
R507	1-216-809-11	METAL CHIP	100	5%	1/10W
R508	1-216-809-11	METAL CHIP	100	5%	1/10W
R509	1-216-809-11	METAL CHIP	100	5%	1/10W
R510	1-216-809-11	METAL CHIP	100	5%	1/10W
R511	1-216-809-11	METAL CHIP	100	5%	1/10W
R512	1-216-809-11	METAL CHIP	100	5%	1/10W
R513	1-216-833-11	METAL CHIP	10K	5%	1/10W
R516	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R517	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R522	1-216-833-11	METAL CHIP	10K	5%	1/10W
R531	1-216-845-11	METAL CHIP	100K	5%	1/10W
R532	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R533	1-216-839-11	METAL CHIP	33K	5%	1/10W
R534	1-216-864-11	METAL CHIP	0	5%	1/10W
R537	1-216-864-11	METAL CHIP	0	5%	1/10W
R538	1-216-833-11	METAL CHIP	10K	5%	1/10W
R541	1-216-864-11	METAL CHIP	0	5%	1/10W
R542	1-216-864-11	METAL CHIP	0	5%	1/10W
R543	1-216-853-11	METAL CHIP	470K	5%	1/10W
R544	1-216-857-11	METAL CHIP	1M	5%	1/10W
R545	1-216-821-11	METAL CHIP	1K	5%	1/10W
R546	1-216-848-11	METAL CHIP	180K	5%	1/10W
R547	1-216-833-11	METAL CHIP	10K	5%	1/10W
R548	1-216-855-11	METAL CHIP	680K	5%	1/10W
R549	1-216-845-11	METAL CHIP	100K	5%	1/10W
R550	1-216-833-11	METAL CHIP	10K	5%	1/10W
R551	1-218-852-11	METAL CHIP	1.6K	5%	1/10W
R552	1-216-820-11	METAL CHIP	820	5%	1/10W
R554	1-216-797-11	METAL CHIP	10	5%	1/10W
R555	1-216-797-11	METAL CHIP	10	5%	1/10W
R556	1-216-797-11	METAL CHIP	10	5%	1/10W
R557	1-216-797-11	METAL CHIP	10	5%	1/10W
R558	1-216-857-11	METAL CHIP	1M	5%	1/10W
R559	1-216-817-11	METAL CHIP	470	5%	1/10W
R561	1-216-821-11	METAL CHIP	1K	5%	1/10W
R581	1-216-809-11	METAL CHIP	100	5%	1/10W
R582	1-216-817-11	METAL CHIP	470	5%	1/10W
		< VIBRATOR >			
X501	1-767-518-11	VIBRATOR, CRYSTAL (33.8688MHz)			
X502	1-767-519-11	VIBRATOR, CRYSTAL (27MHz)			

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MISCELLANEOUS

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11	1-827-392-11	WIRE (FLAT TYPE)(8 CORE)
12	1-796-351-41	MECHANISM, SIGNAL CASSETTE
63	1-769-920-11	WIRE (FLAT TYPE)(9 CORE)
65	1-827-395-11	WIRE (FLAT TYPE)(37 CORE)
105	1-787-025-11	DC FAN
107	1-693-628-11	TUNER (FM/AM)
108	1-769-946-11	WIRE (FLAT TYPE)(11 CORE)
⚠151	1-824-818-11	CORD, POWER (WITH CONNECTOR)(TH)
⚠151	1-783-532-11	CORD, POWER (EA,SP)
⚠151	1-791-901-12	CORD, POWER (E3)

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

Ref. No.	Part No.	Description	Remarks
155	1-827-390-11	WIRE (FLAT TYPE)(27 CORE)	
156	1-827-391-11	WIRE (FLAT TYPE)(28 CORE)	
161	1-827-394-11	WIRE (FLAT TYPE)(19 CORE)	
606	1-782-817-11	WIRE (FLAT TYPE)(16 CORE)	
⚠607	A-4735-189-A	BU-30 (61) ASSY (including M101, M102)	
⚠F901	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F902	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F903	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F904	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	
⚠F905	1-533-471-11	FUSE, GLASS TUBE (DIA. 5)(EXCEPT TH)	
M761	A-4735-953-A	MOTOR ASSY (STOCKER)	
M771	A-4735-953-A	MOTOR ASSY (MODE)	
M781	A-4735-953-A	MOTOR ASSY (ROLLER)	
S702	1-477-299-11	ENCODER, ROTARY (STOCKER POSITION)	
S771	1-477-300-11	ENCODER, ROTARY (MODE)	
⚠T901	1-439-834-11	TRANSFORMER, POWER (EXCEPT EA)	
⚠T901	1-439-835-11	TRANSFORMER, POWER (EA)	

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

MEMO

REVISION HISTORY

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

Ver.	Date	Description of Revision
1.0	2003.07	New