HCD-HP7

SERVICE MANUAL

Ver 1.0 2003.06

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

HCD-HP7 is the Amplifier, CD player, Tape Deck and Tuner section in CMT-HP7.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM69CH-K6BD71C
	Base Unit Name	BU-K6BD71C
	Optical Pick-up Name	KSS-213D
TAPE Section	Model Name Using Similar Mechanism	HCD-EP515
	Tape Transport Mechanism Type	CMAL1Z234A

SPECIFICATIONS

Main unit

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:

With 6 ohm loads, both channels driven, from 120 – 10,000 Hz: rated 60 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

Amplifier section

North American model:

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

Total harmonic distortion: less than 0.7% (6 ohms at 1 kHz, 30 W)

European and Russian models:

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)

Music power output (reference): 120 + 120 watts (6 ohms at 1 kHz, 10% THD)

Other models:

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

Outputs

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

OPTICAL CD DIGITAL OUT (Supported sampling frequency: 44.1 kHz)

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

Tape deck section

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

MICRO HI-FI COMPONENT SYSTEM

9-877-349-01
2003F16-1

Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range
Russian model: 65.0 – 74.0 MHz (There is no stereo effect) 87.5 – 108.0 MHz
Other models: 87.5 – 108.0 MHz
Antenna: FM lead antenna
Antenna terminals: 75 ohms unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range
Pan-American model: 530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,710 kHz (with the tuning interval set at 9 kHz)
European, Russian, Middle Eastern models: 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

General

Power requirements
North American model: 120 V AC, 60 Hz
European and Russian models: 230 V AC, 50/60 Hz
Australian model: 230 – 240 V AC, 50/60 Hz
Mexican model: 120 V AC, 60 Hz
Other models: 120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector

Power consumption
European and Russian models: 100 watts 0.35 watts (at the Power Saving Mode)
Other models: 100 watts

Dimensions (w/h/d): Approx. 199 252 400 mm

Mass: Approx. 7.0 kg

Supplied accessories: Remote Commander (1) Batteries (2) AM loop antenna (1) FM lead antenna (1) Speaker pads (8)

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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

SAFETY CHECK-OUT

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

LEAKAGE TEST

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

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

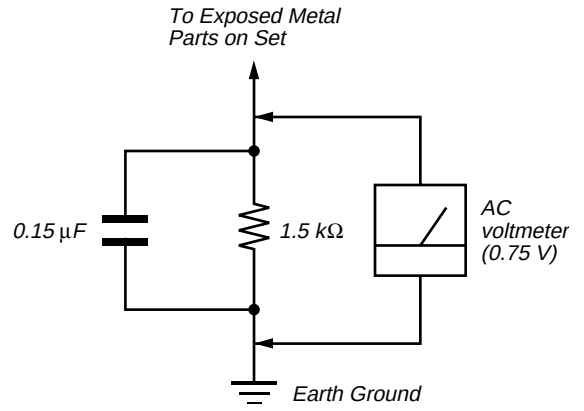


Fig. A. Using an AC voltmeter to check AC leakage.

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

This appliance is classified as a CLASS 1 LASER product.
This 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

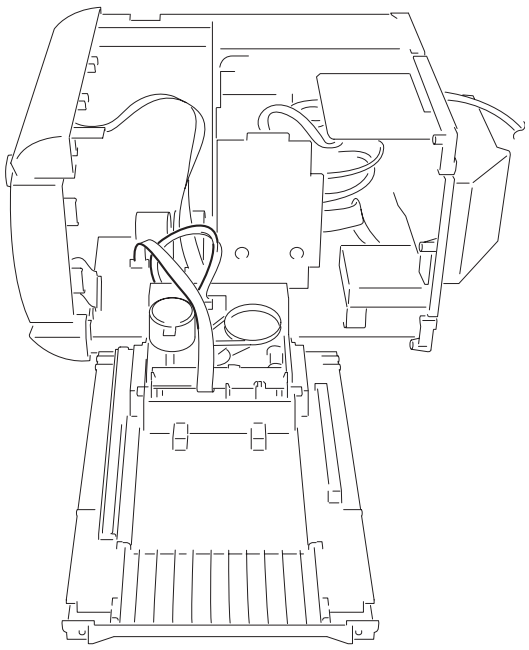
Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

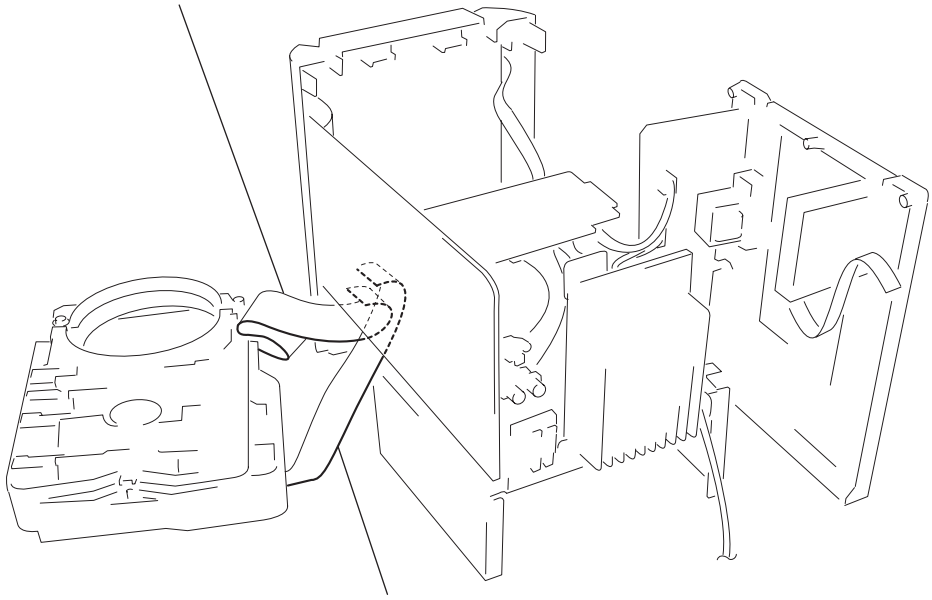
- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C .
  Caution: The printed 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

Connect jig (extension cable J-2501-248-A)
to the MAIN board (CN302) and CONNECTOR board (CN701).



Connect jig (extension cable J-2501-011-B)
to the MAIN board (CN301) and BD board (CN710).

SECTION 2
GENERAL

This section is extracted from instruction manual.

List of button locations and reference pages

Main unit

ALPHABETICAL ORDER

A – G

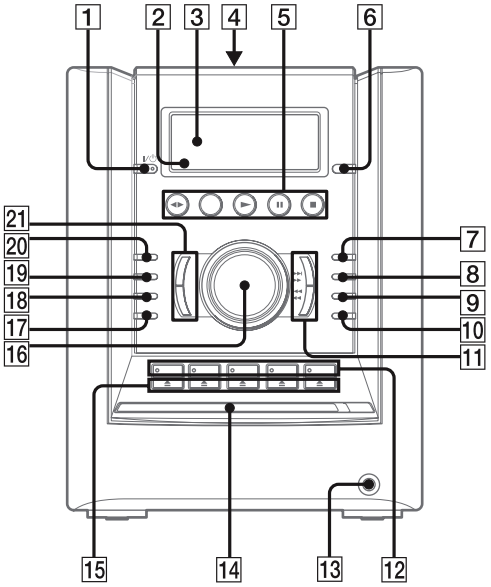
CD SYNC 9 (17)
DIMMER 19 (23)
DISC 1 – 5 12 (9, 10, 11, 29)
Disc slot 14
DISPLAY 6 (15, 22, 23, 29)
Display window 3
FUNCTION 20 (9, 11, 16, 17, 25)
GROOVE 17 (18)

P – Z

PHONES jack 13
PLAY MODE 7 (9, 11, 16, 17, 21)
PRESET EQ 18 (18)
PRESET/ALBUM +/– 21 (10, 11, 13, 14)
REC PAUSE/START 10 (17)
Remote sensor 2
REPEAT 8 (11)
Tape deck 4
TUNER/BAND 5 (13, 14, 17)
TUNING +/– 11 (13, 14)
VOLUME 16 (20)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (7, 8, 14, 20, 21, 29)
◀◀/▶▶ (rewind/fast forward) 11 (10, 16)
I◀◀/▶▶I (go back/go forward) 11 (8, 10, 11, 16, 20, 21)
■ (stop) 5 (10, 16, 17, 21, 29)
❚❚ (pause) 5 (10, 16)
CD ► (play) 5 (10, 12)
TAPE ◀► (play) 5 (16, 17, 21)
DISC 1 ⏏ – DISC 5 ⏏ (eject) 15 (9, 10)



Remote control

ALPHABETICAL ORDER

A – G

ALBUM +/– 14 (10, 11)
CD 19 (9, 11, 17)
CLEAR 5 (12)
CLOCK/TIMER SELECT 2 (21, 22)
CLOCK/TIMER SET 3 (8, 20, 21)
DISPLAY 6 (15, 22, 23, 29)
D. SKIP 7 (10, 11)
ENTER 16 (8, 11, 13, 20, 21)
GAME (MD)*1 10 (17, 25)
GROOVE 13 (18)

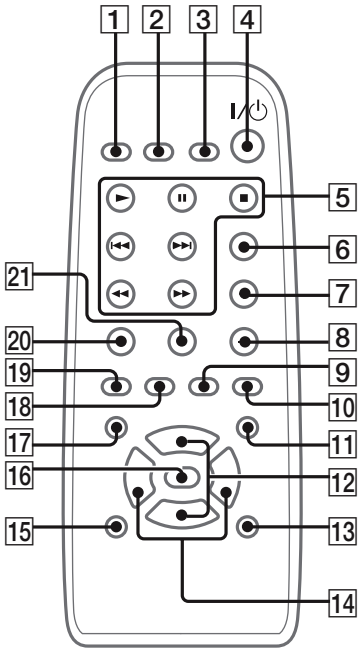
I – Z

ILLUMINATION*2 15
PLAY MODE 20 (9, 11, 16, 17, 21)
PRESET EQ 17 (18)
PRESET +/– 5 (13, 14)
REPEAT/FM MODE 21 (11, 14)
SLEEP 1 (20)
SURROUND 11 (19)
TAPE A/B*3 9 (16, 17)
TUNER BAND 18 (13, 14, 17)
TUNER MEMORY 8 (13)
TUNING +/– 5 (13, 14)
VOL +/– 12 (20)

BUTTON DESCRIPTIONS

I/⏻ (power) 4 (7, 8, 20, 21, 29)
◀◀/▶▶ (rewind/fast forward) 5 (10, 16)
I◀◀/▶▶I (go back/go forward) 5 (8, 10, 11, 16, 20, 21)
■ (stop) 5 (10, 16, 17, 21, 29)
❚❚ (pause) 5 (10, 16)
► (play) 5 (10, 12, 16)

*1 This button is used to switch to MD function.
*2 This button cannot be used in this system.
*3 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 I◀◀/▶▶I repeatedly to set the hour.
4 Press ENTER.
5 Press I◀◀/▶▶I repeatedly to set the minute.
6 Press ENTER.
The clock starts working.

To adjust the clock

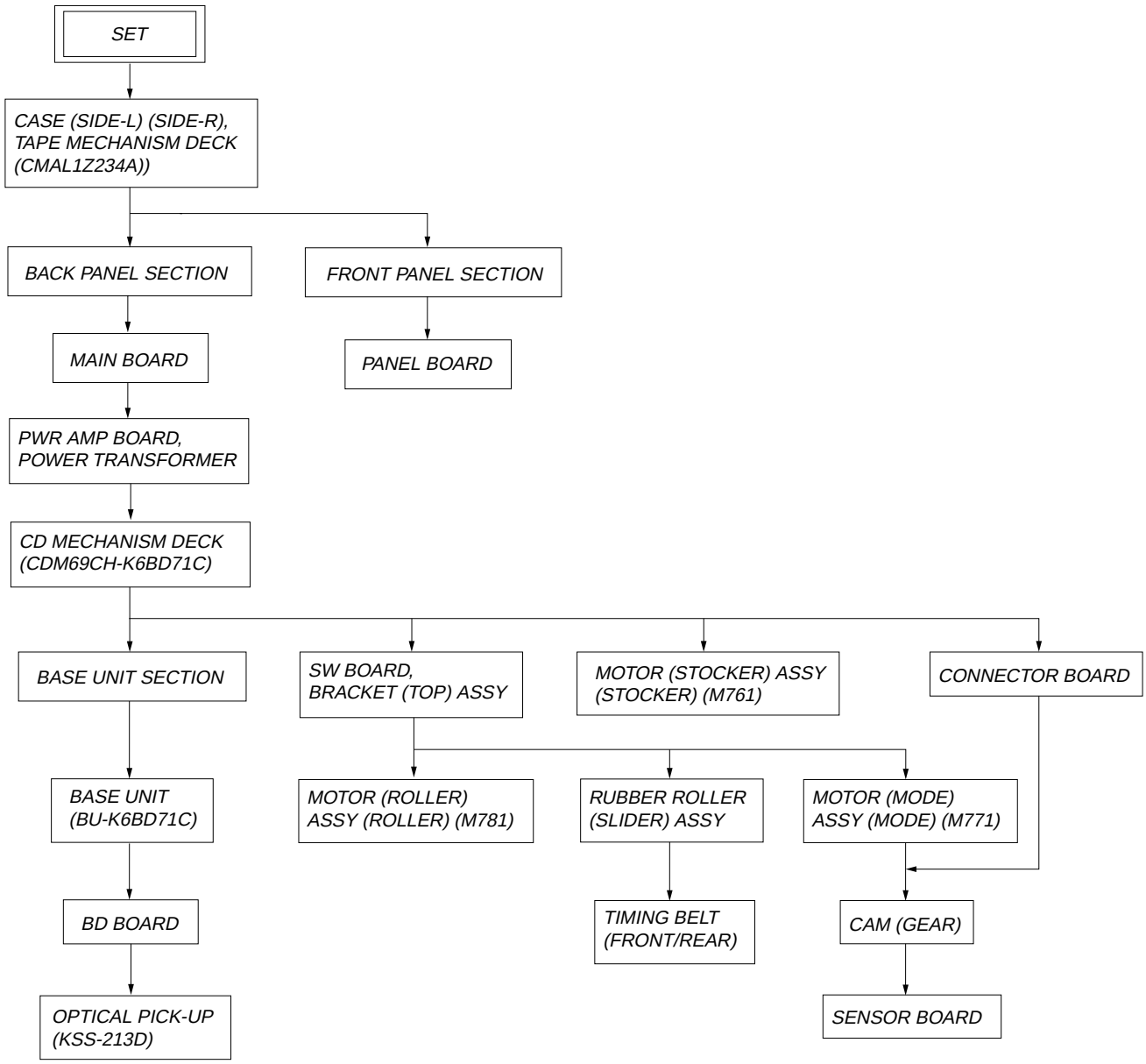
1 Press CLOCK/TIMER SET.
2 Press I◀◀/▶▶I to select “CLOCK SET”, then press ENTER.
3 Do the same procedures as step 3 to 6 above.

Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

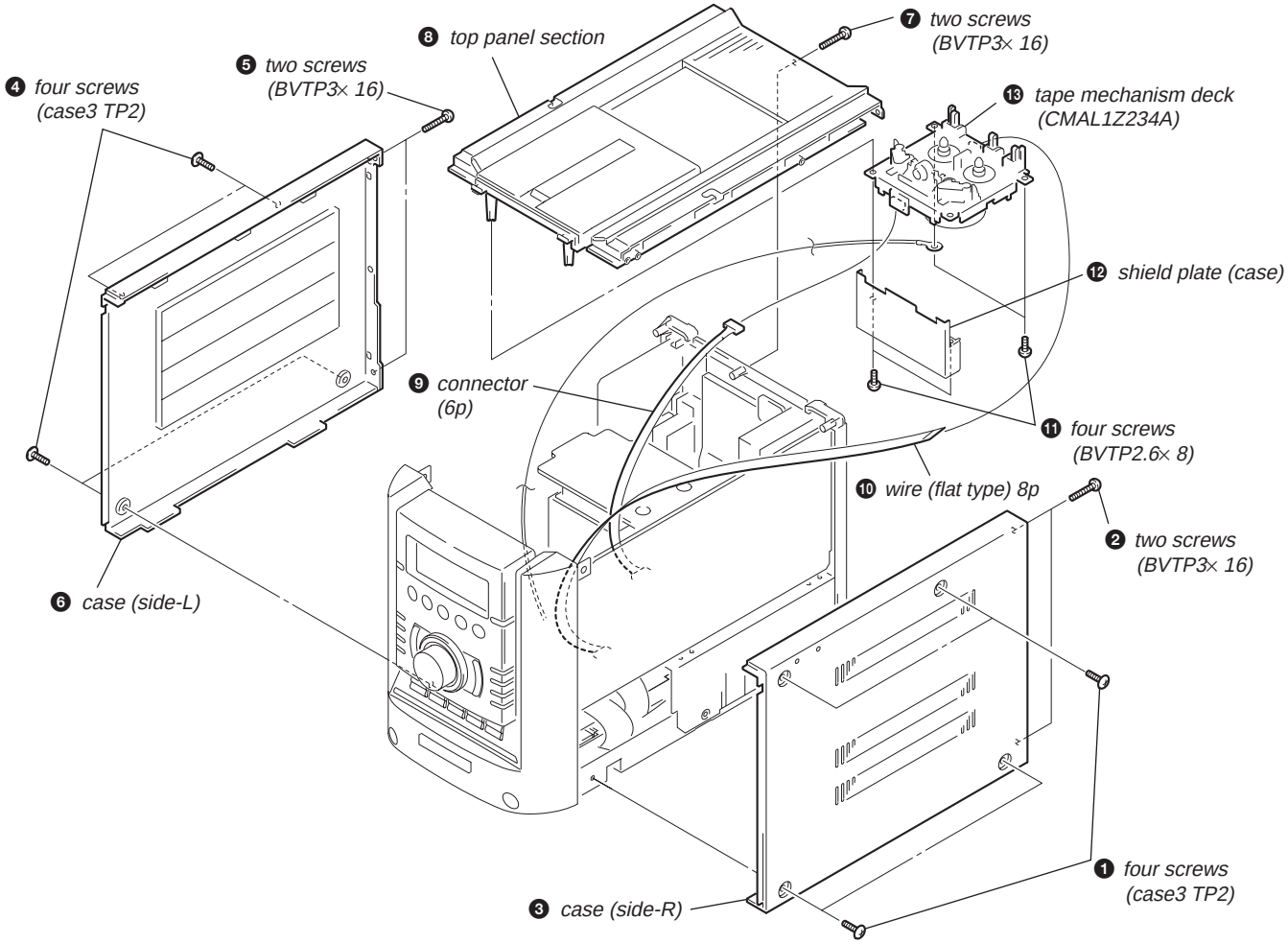
SECTION 3
DISASSEMBLY

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

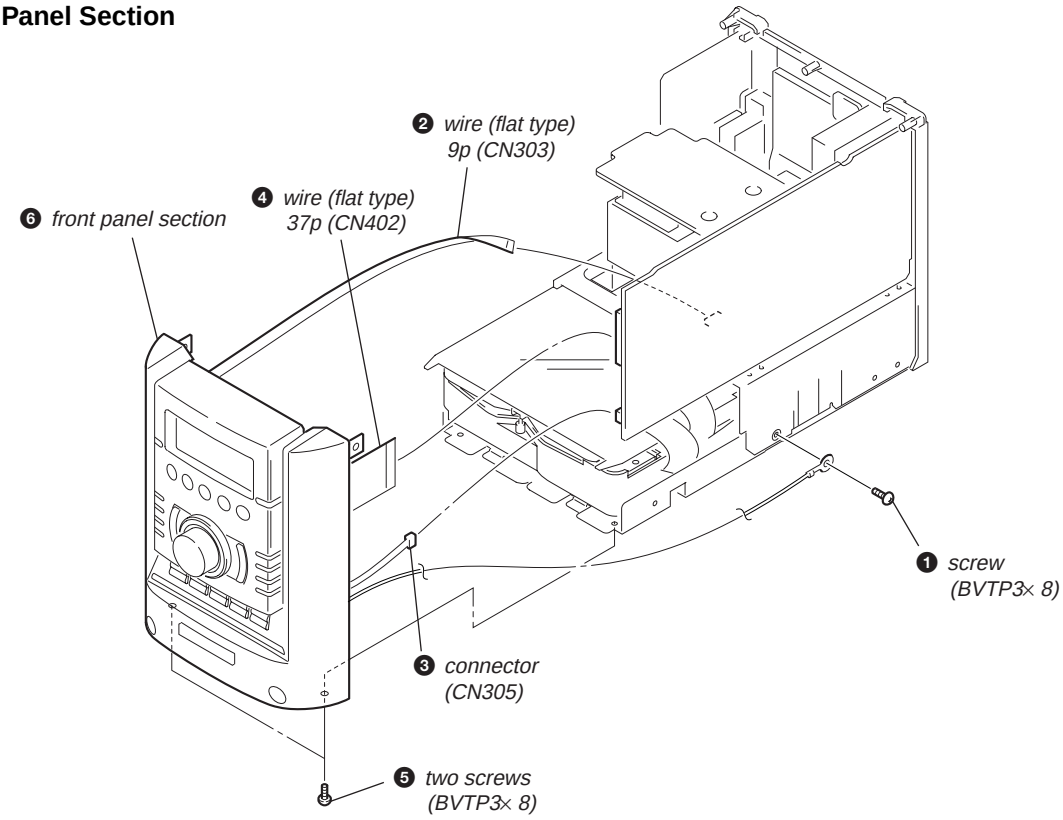


Note: Follow the disassembly procedure in the numerical order given.

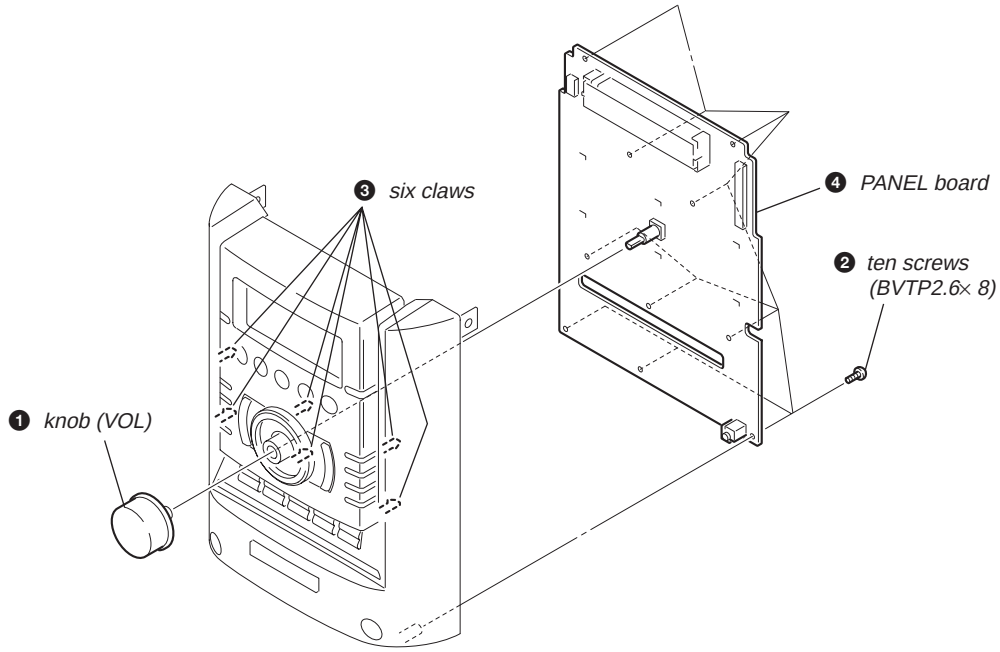
3-1. Case (Side-L)(Side-R), Tape Mechanism Deck (CMAL1Z234A)



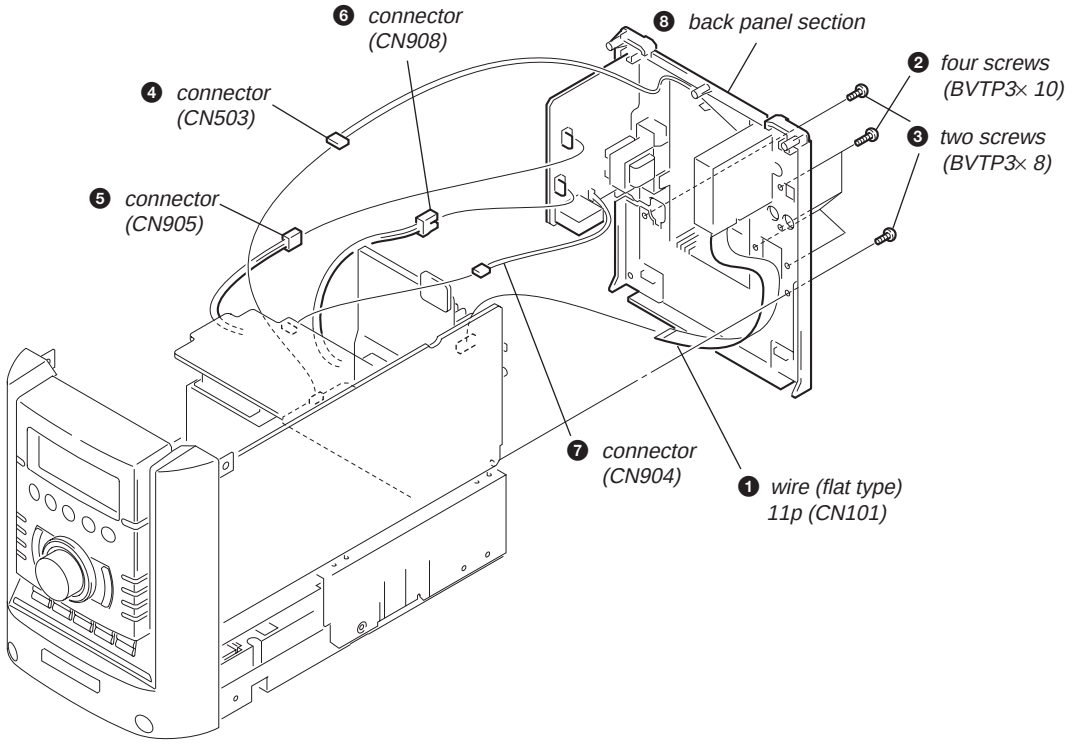
3-2. Front Panel Section



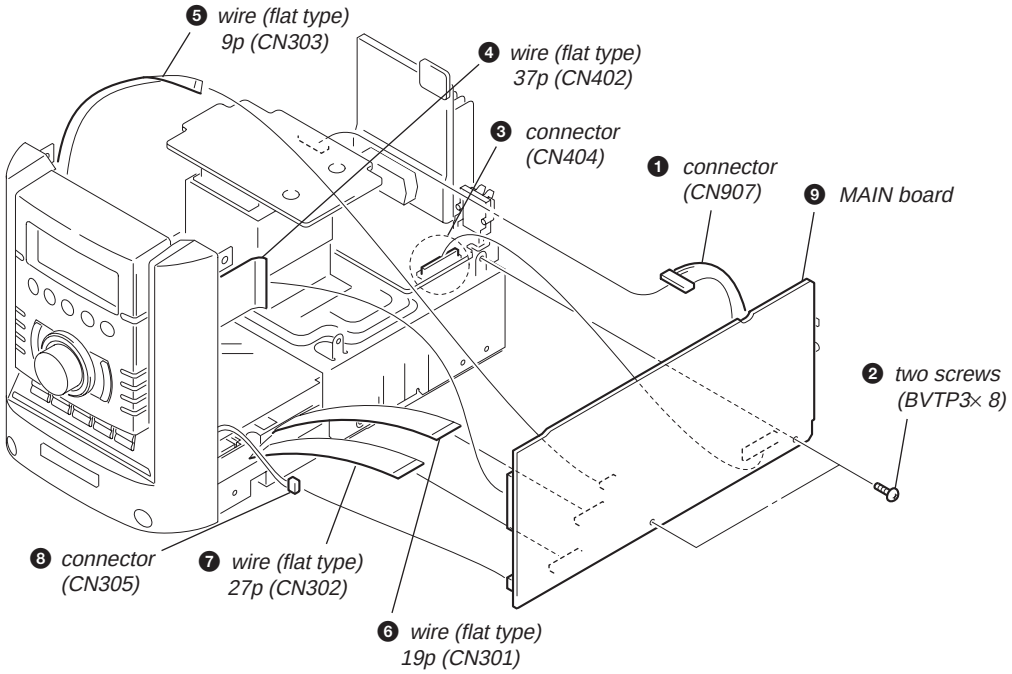
3-3. Panel Board



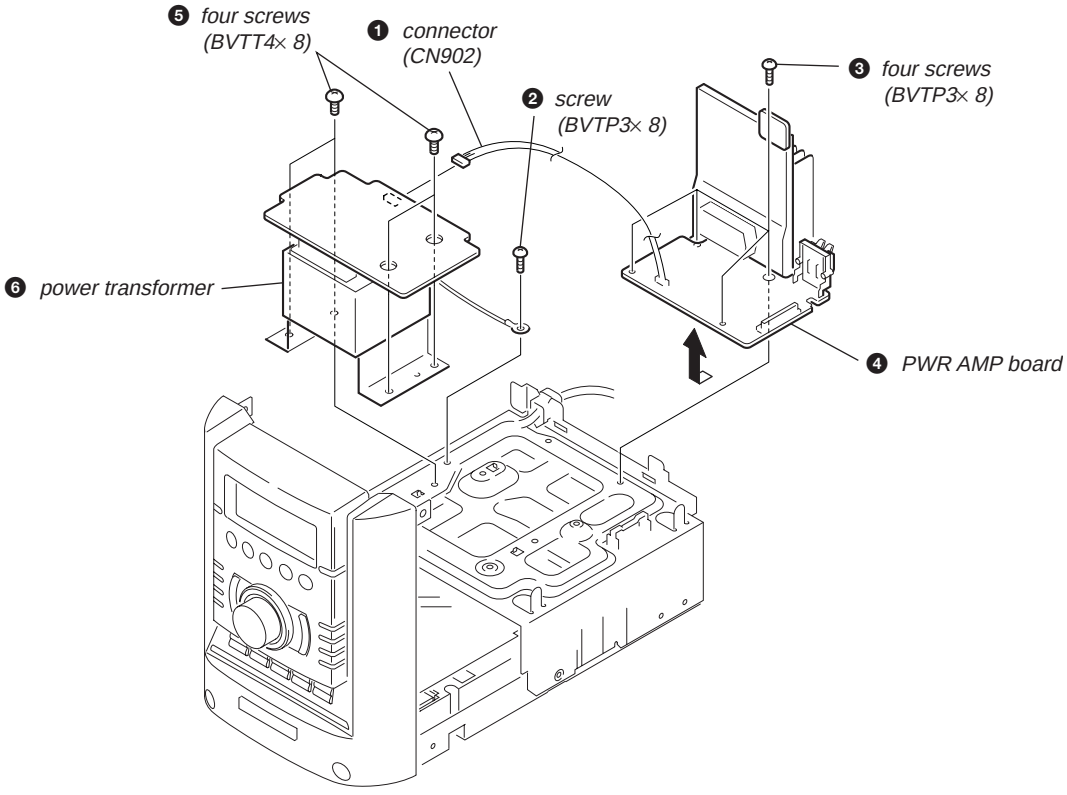
3-4. Back Panel Section



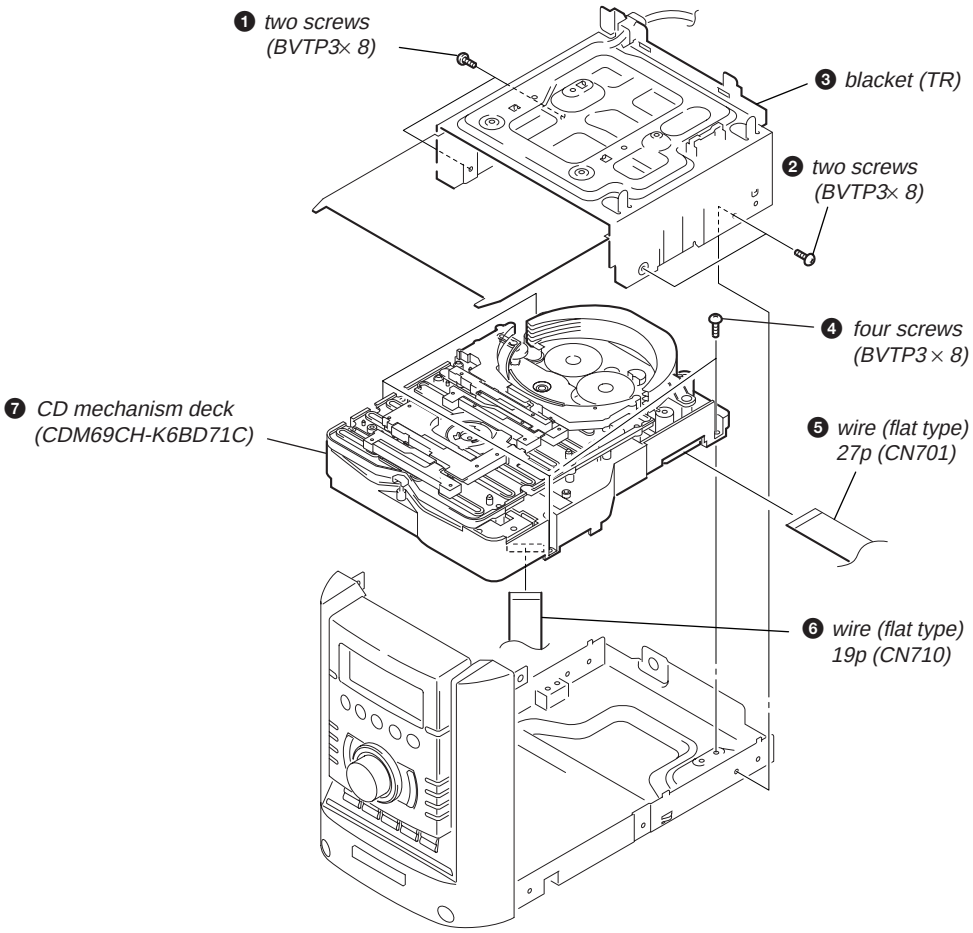
3-5. MAIN Board



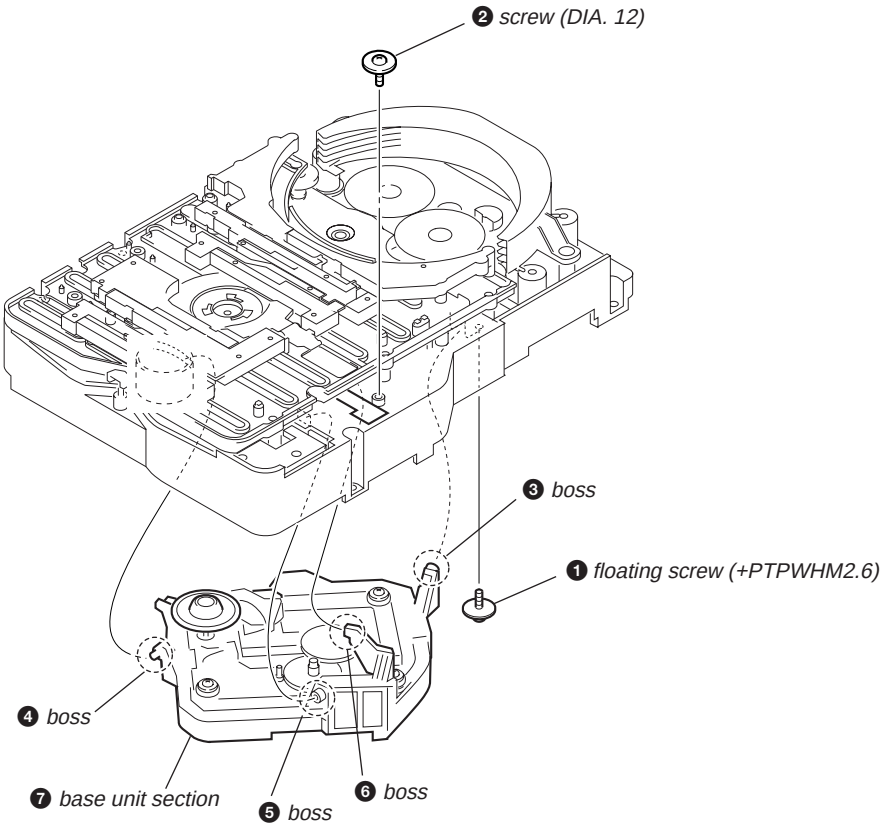
3-6. PWR AMP Board, Power Transformer



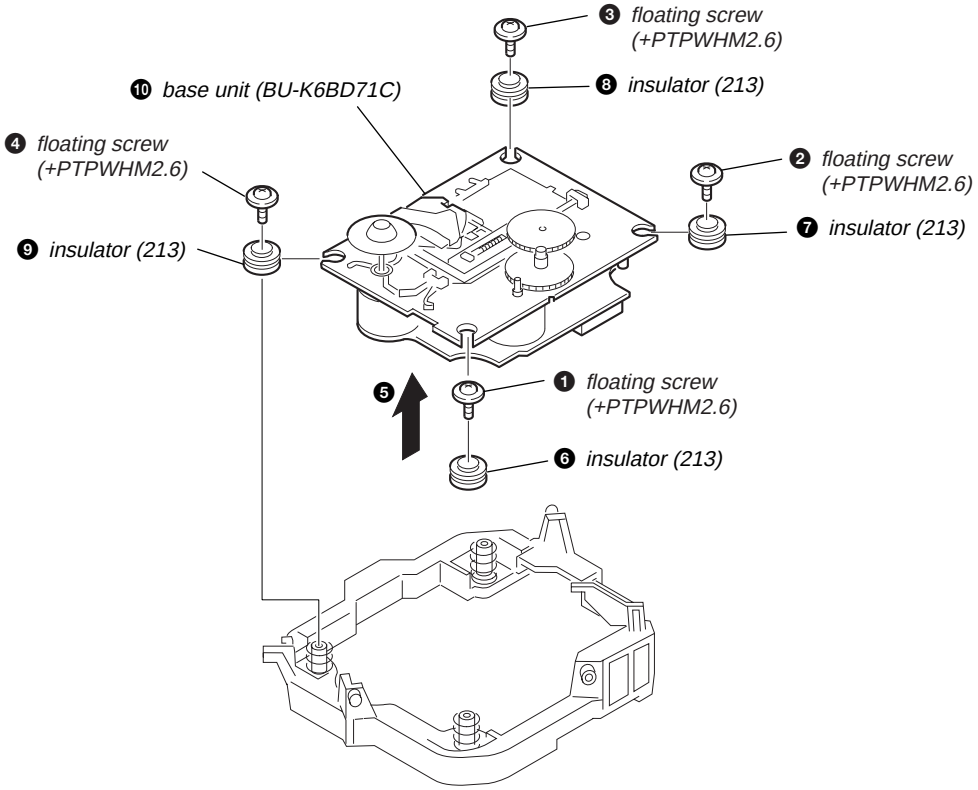
3-7. CD Mechanism Deck (CDM69CH-K6BD71C)



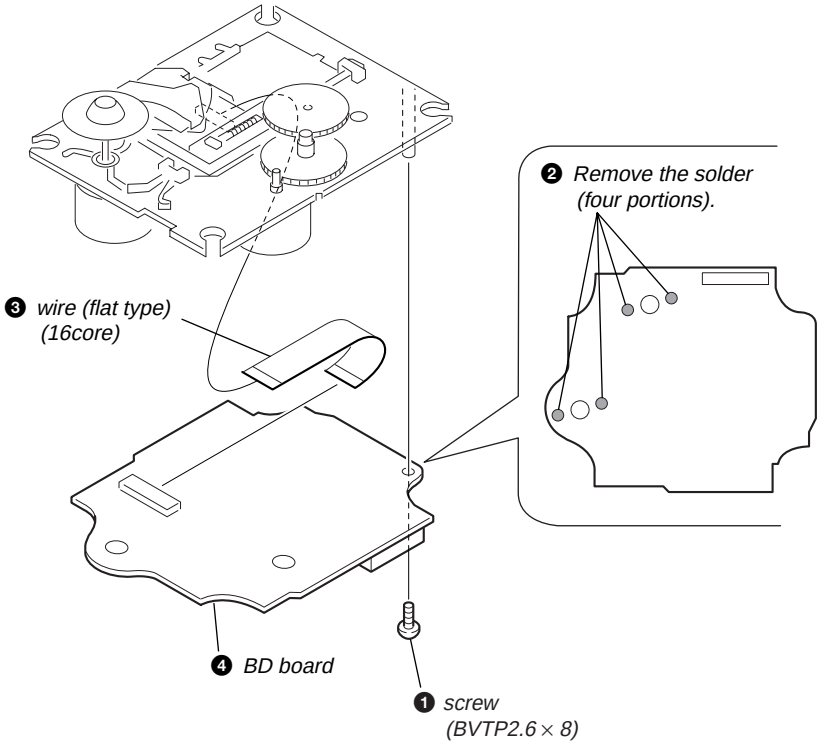
3-8. Base Unit Section



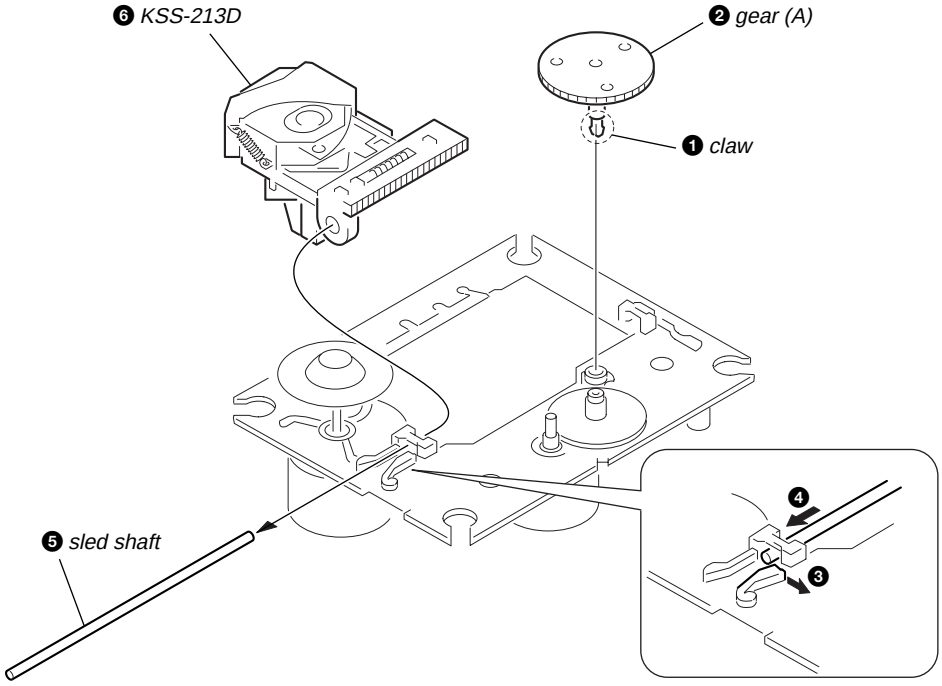
3-9. Base Unit (BU-K6BD71C)



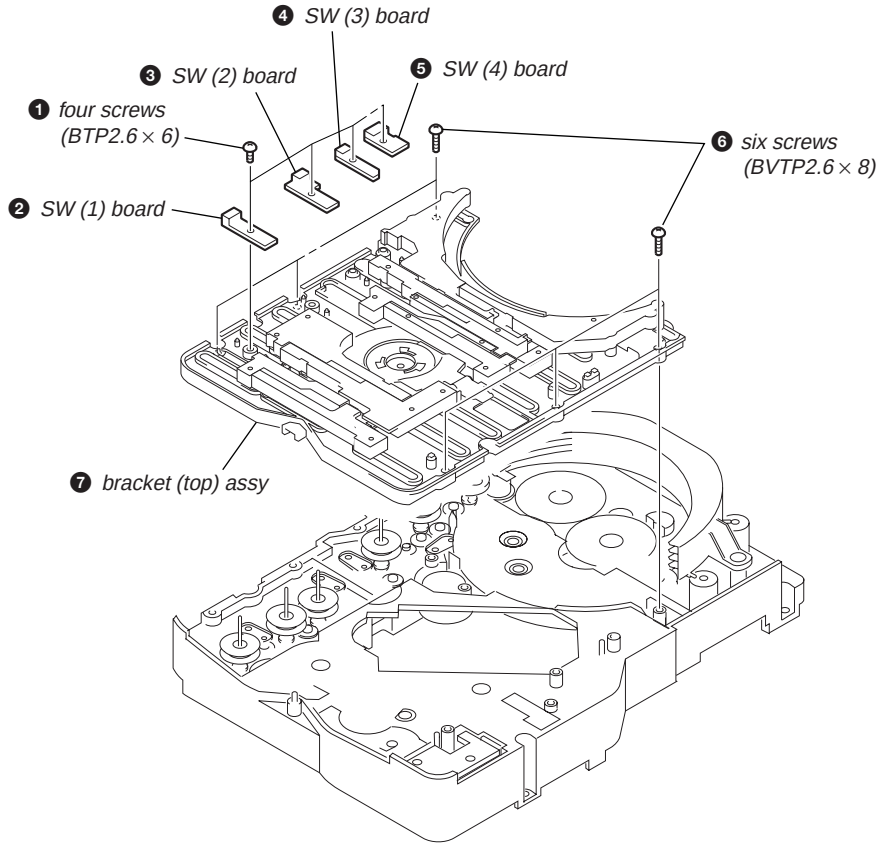
3-10. BD Board



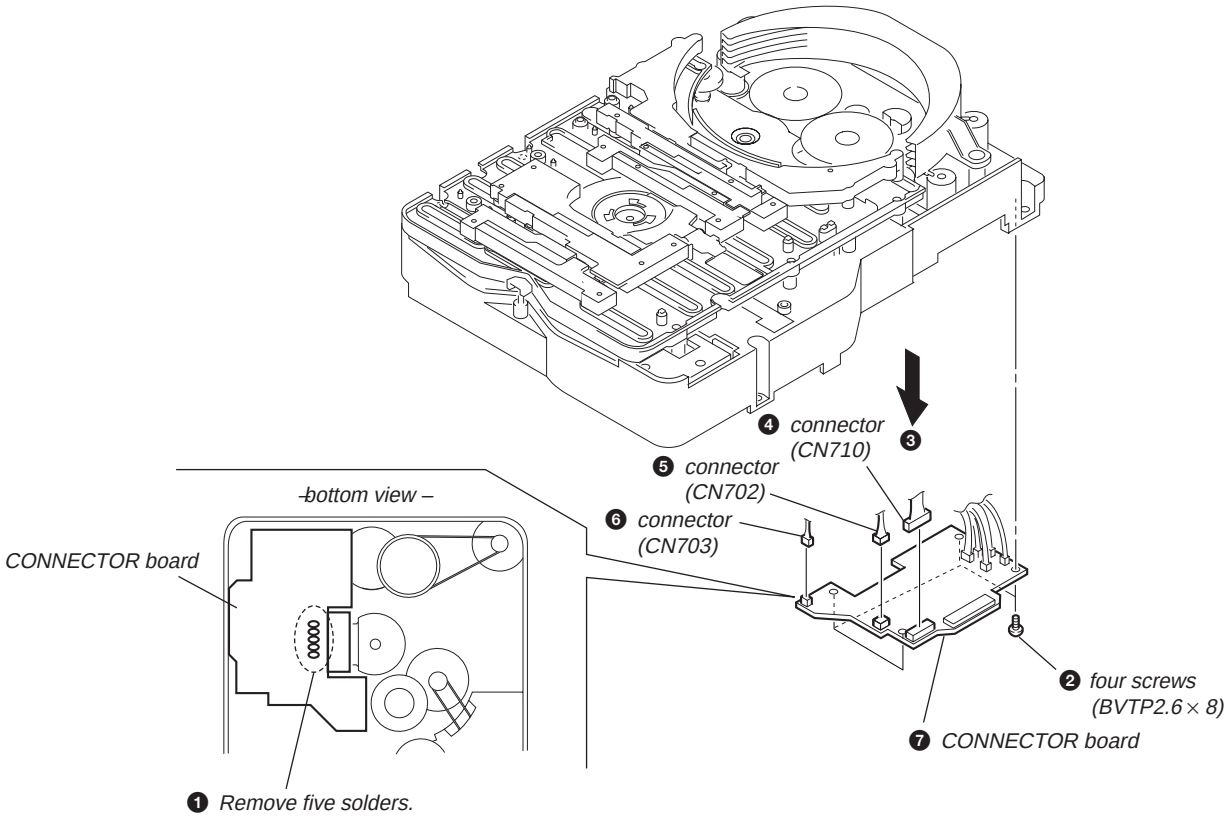
3-11. Optical Pick-up (KSS-213D)



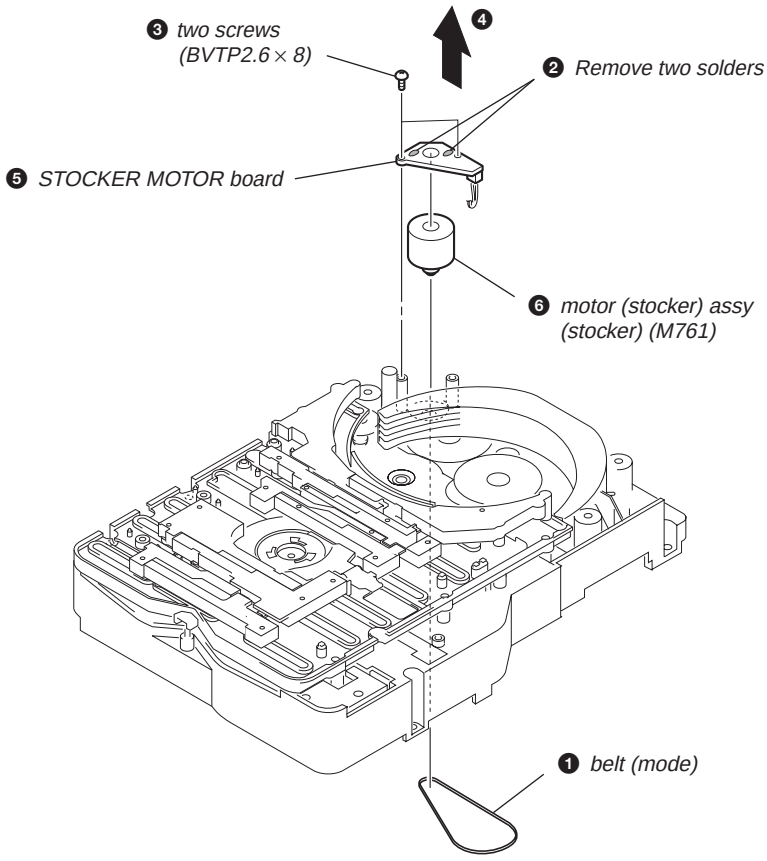
3-12. SW Board, Bracket (Top) Assy



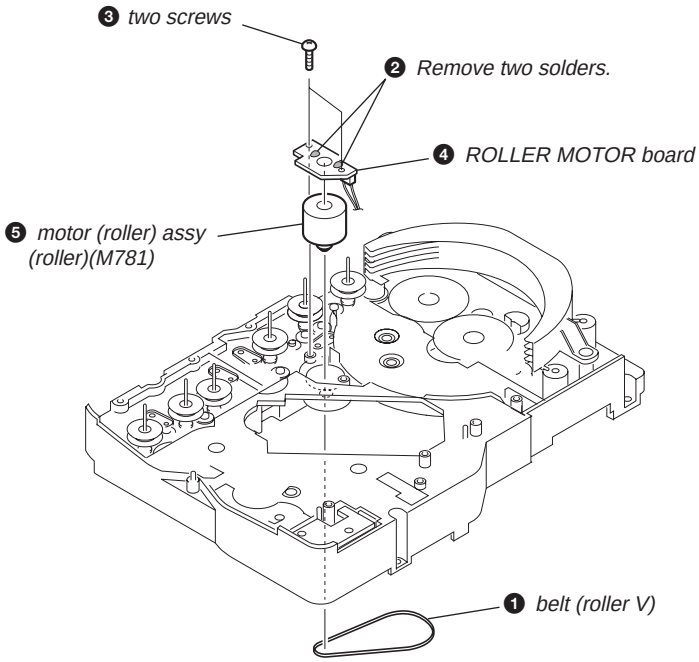
3-13. CONNECTOR Board



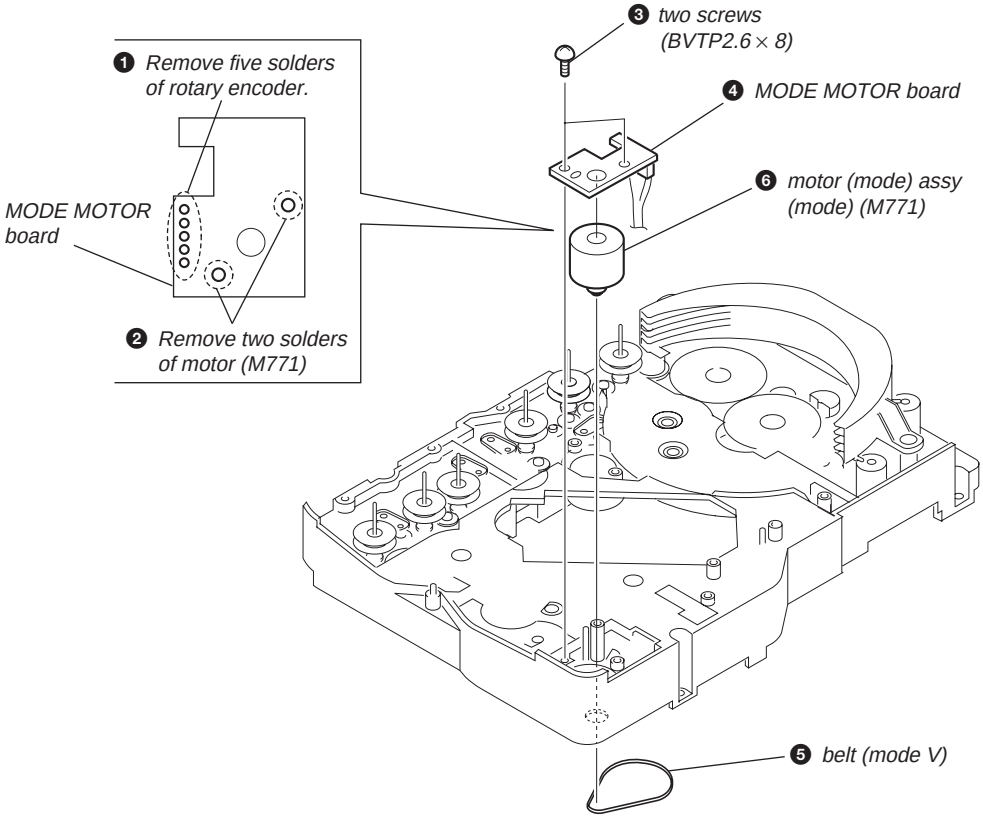
3-14. Motor (Stocker) Assy (Stocker)(M761)



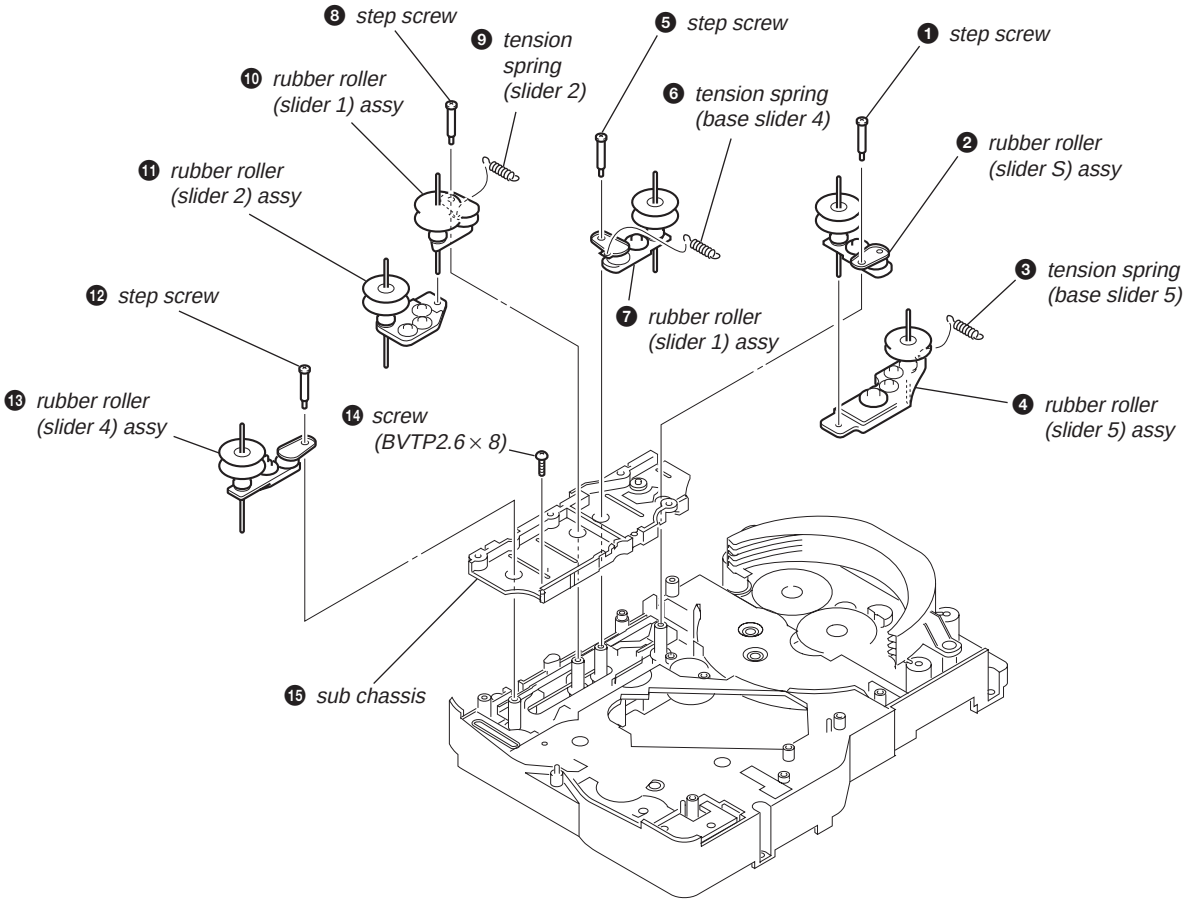
3-15. Motor (Roller) Assy (Roller)(M781)



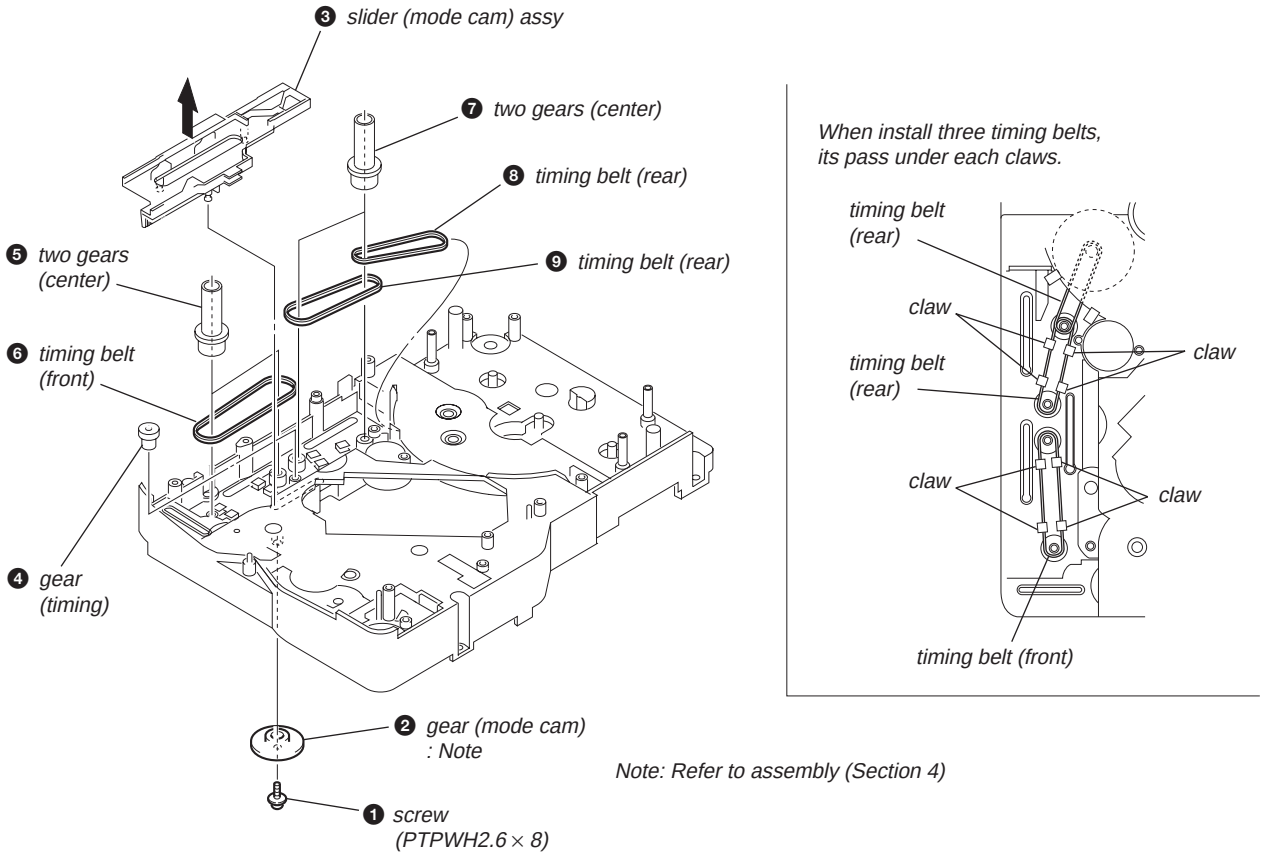
3-16. Motor (Mode) Assy (Mode)(M771)



3-17. Rubber Roller (Slider) Assy

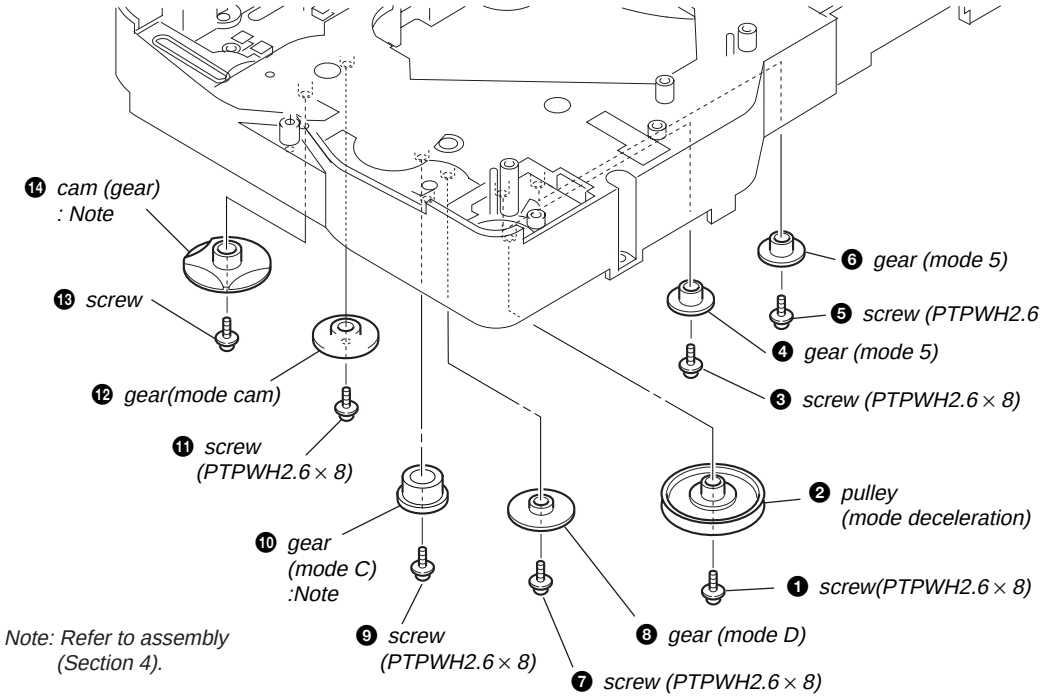


3-18. Timing Belt (Front/Rear)

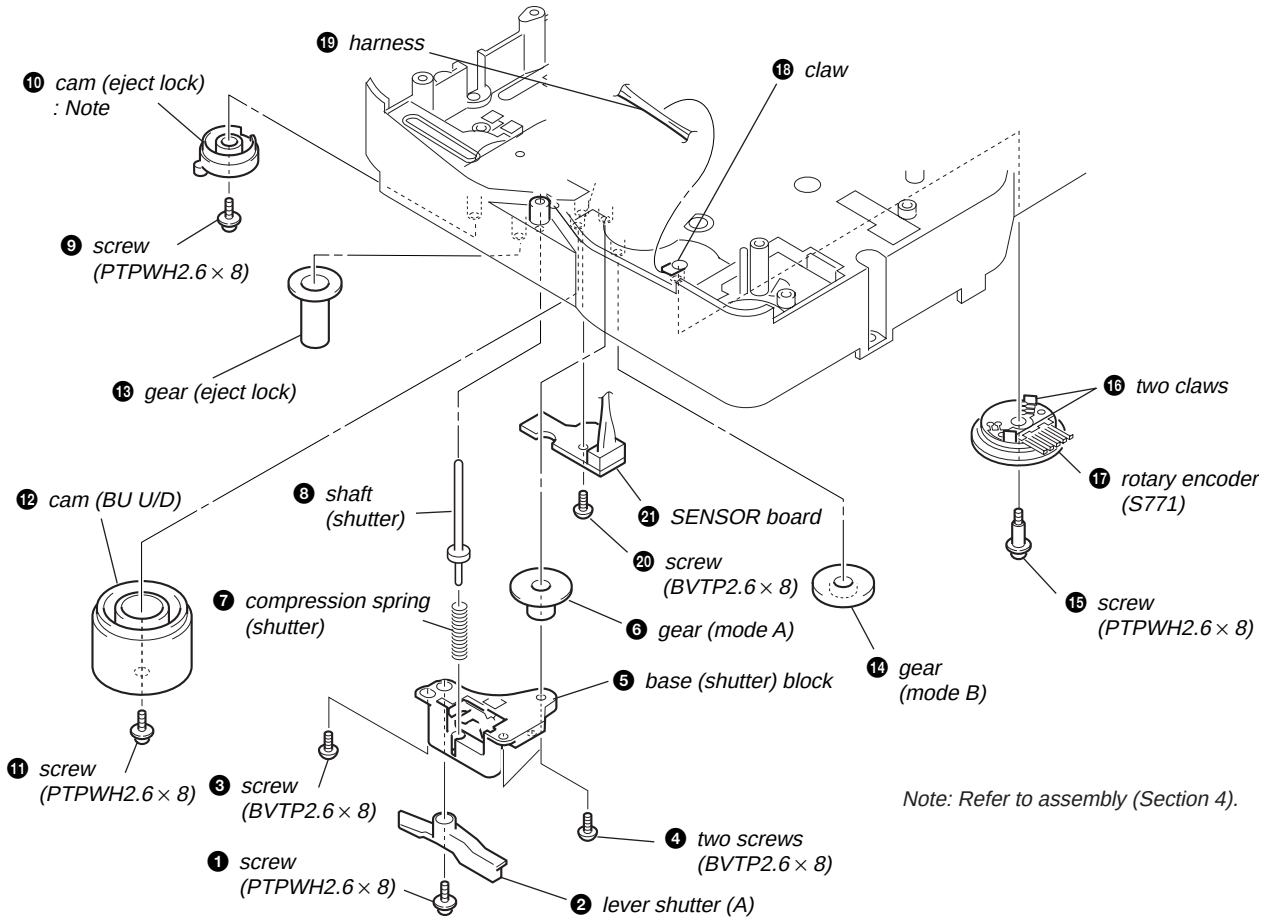


Note: Refer to assembly (Section 4)

3-19. Cam (Gear)



3-20. SENSOR Board

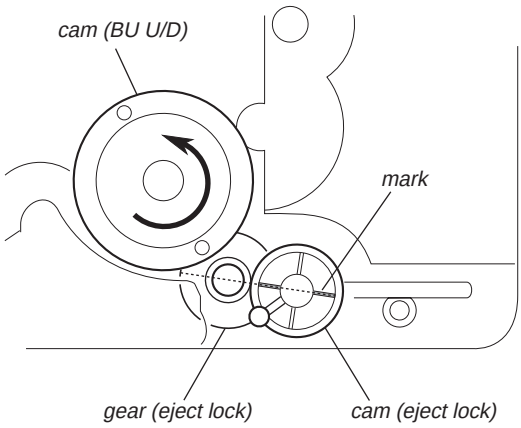


SECTION 4
ASSEMBLY

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

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

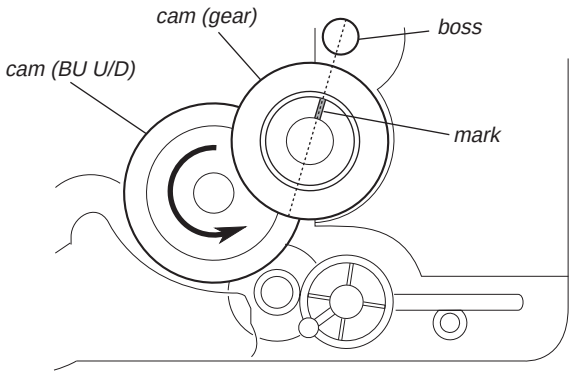
❶ *Rotate the cam (BU U/D) fully in the direction of arrow.*
❷ *Engage the gear (eject lock) and the gear of the cam (eject lock) aligning the mark with the center of the gear (eject lock).*



– bottom view • front –

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

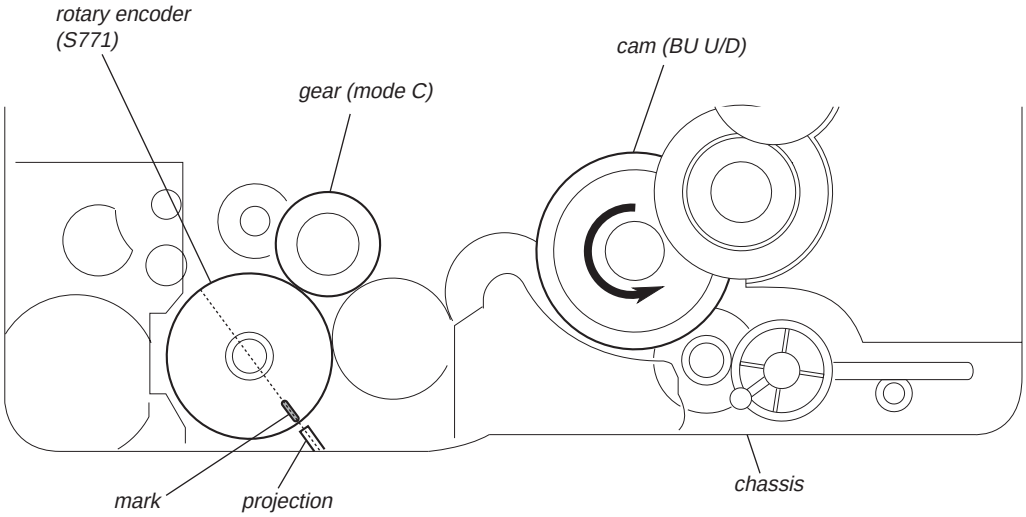
❶ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❷ *Align the mark on the cam (gear) with the boss as shown in the figure and install the cam (gear).*



– bottom view • front –

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

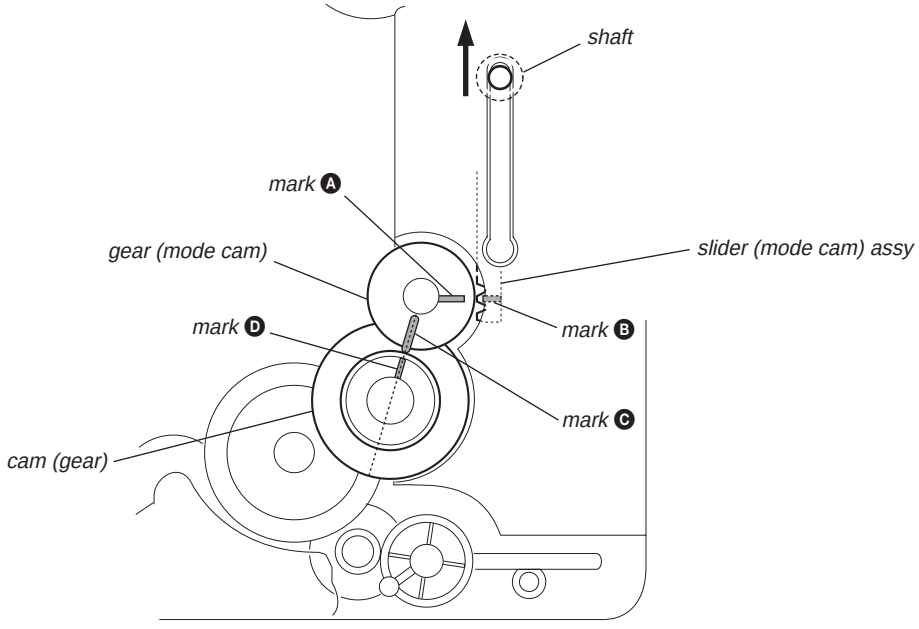
❶ *Align the mark on the rotary encoder (S771) with the projection of the assy.*
❷ *Check that the cam (BU U/D) can not be rotated in the direction of arrow.*
❸ *Install the gear (mode C)*



–bottom view •front –

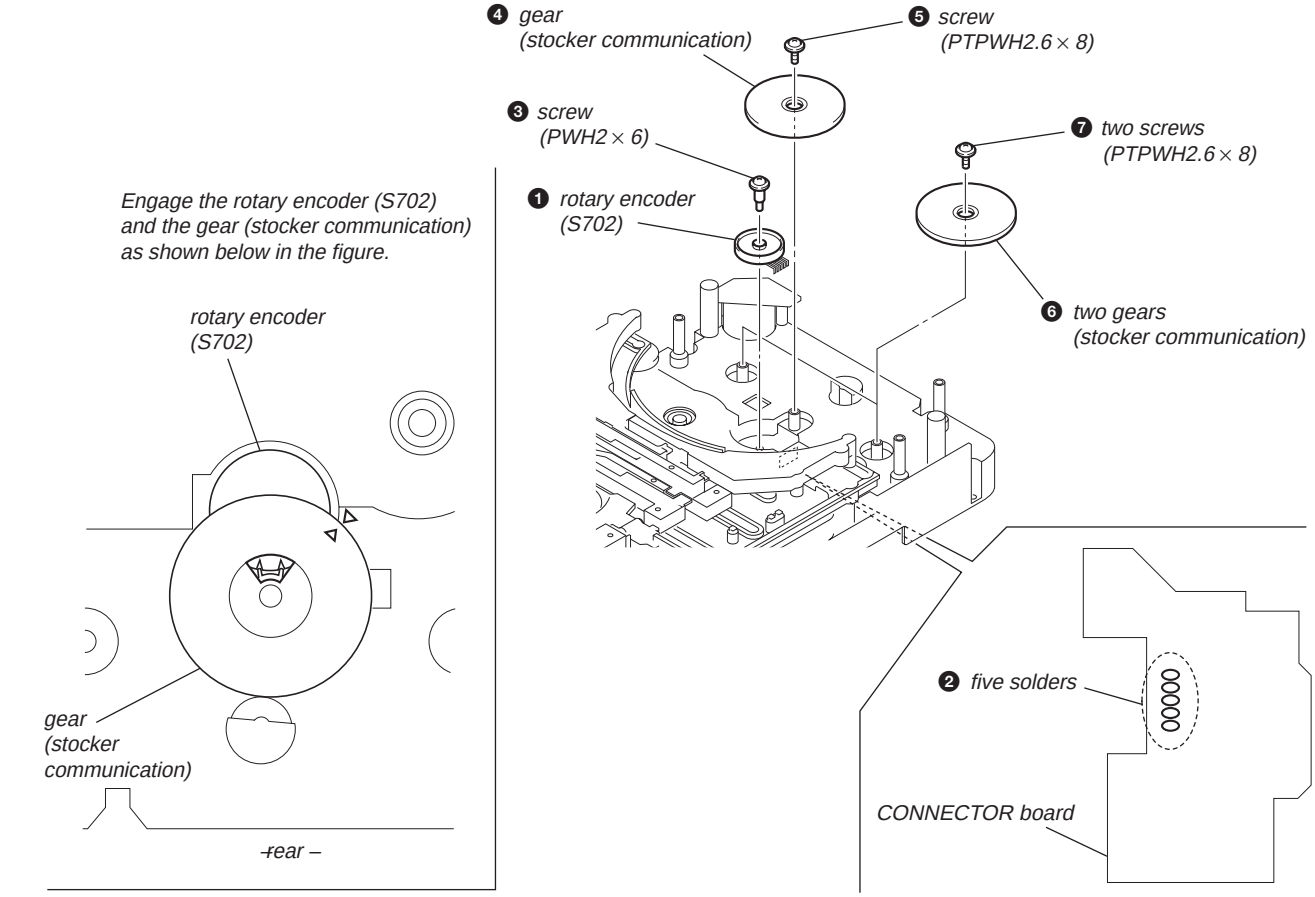
4-4. How to Install the Gear (Mode Cam)

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).*

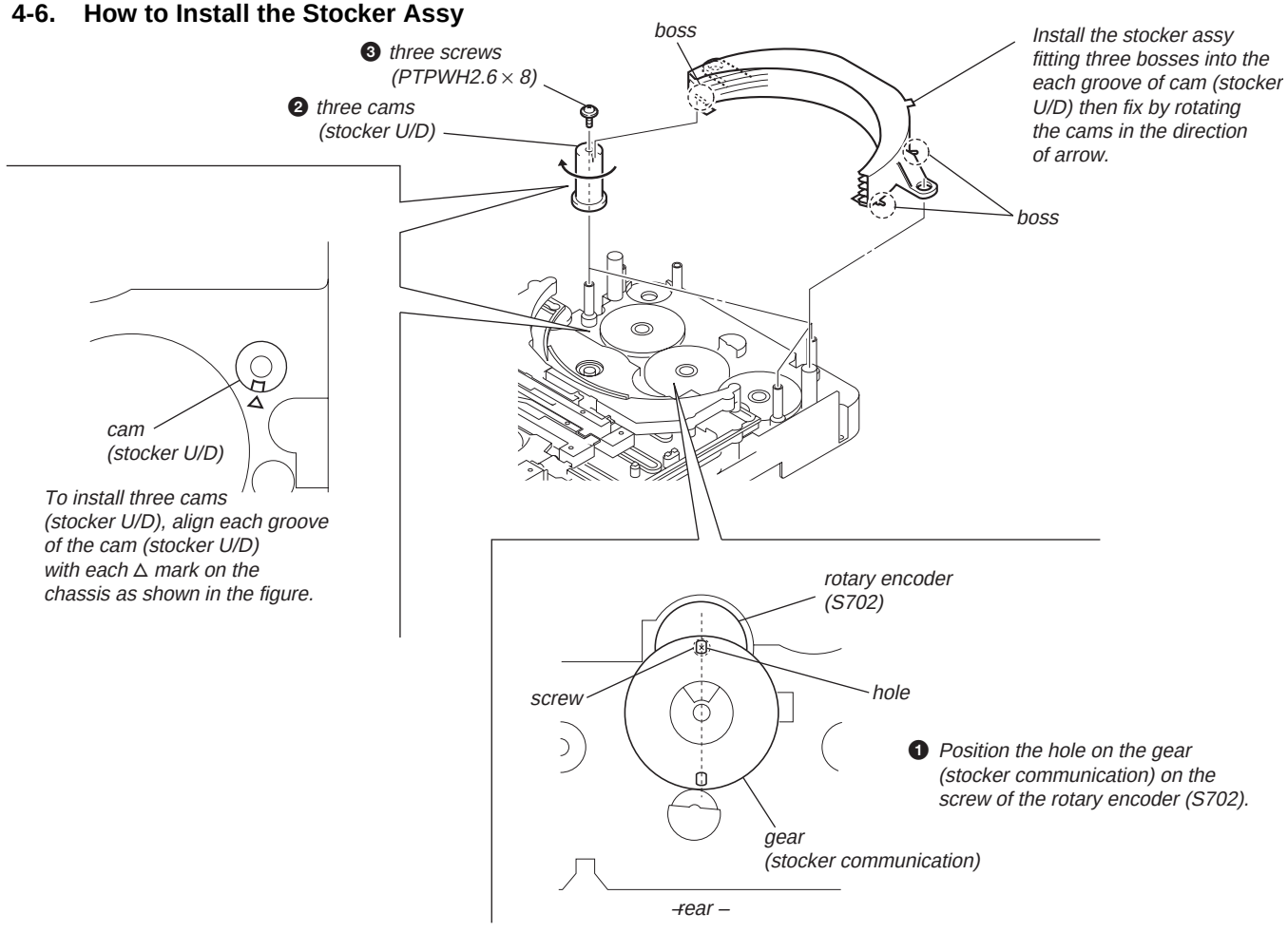


–bottom view •front –

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 : “HP717 U”
4. Press the ■ and PRESET EQ buttons simultaneously.
5. The version is displayed. Example : “V1.09:2003:02.04”
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 fluorecent 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 fluorecent 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 fluorecent 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. 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.

SECTION 6
MECHANICAL ADJUSTMENTS

[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 CD service mode is selected.
5. Press ▶▶I button to move the pickup to outside track, or press I◀◀ button to inside track.
6. 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.

• 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.

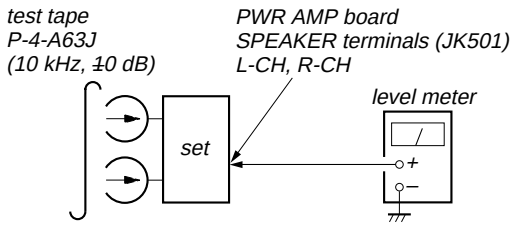
• Test Tape

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

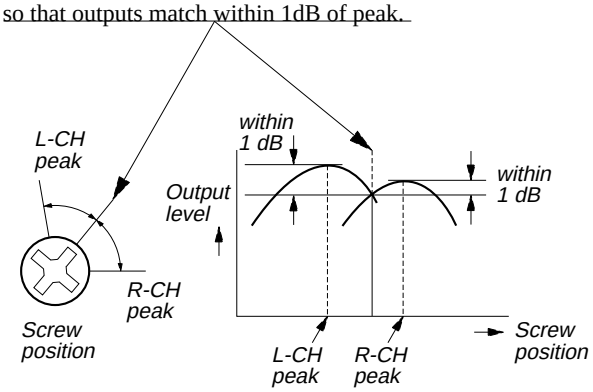
Record/Playback Head Azimuth Adjustment

Procedure:

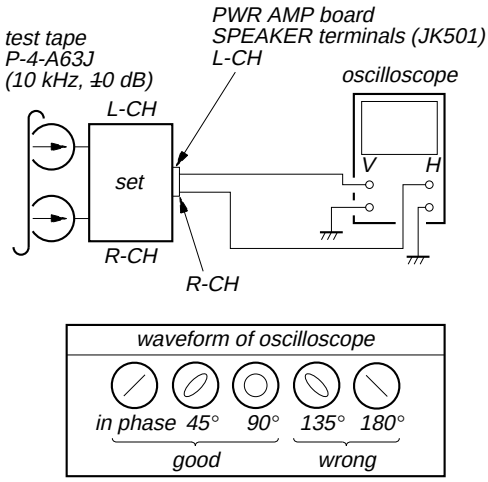
1. Mode: Playback



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.

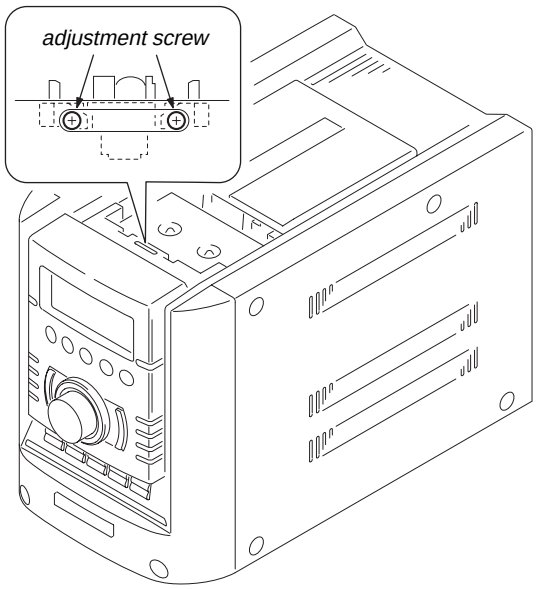


3. Mode: Playback



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

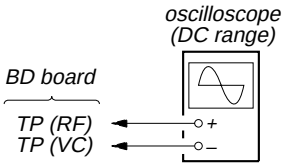


CD SECTION

Note:

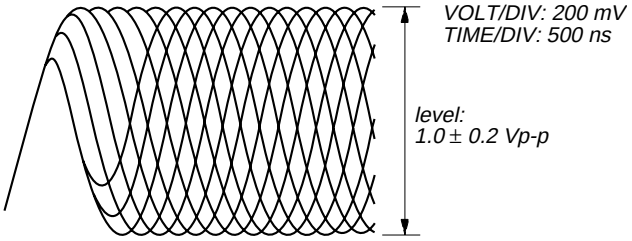
1. CD Block is basically constructed to operate without adjustment.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10 MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value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

Focus Bias Check



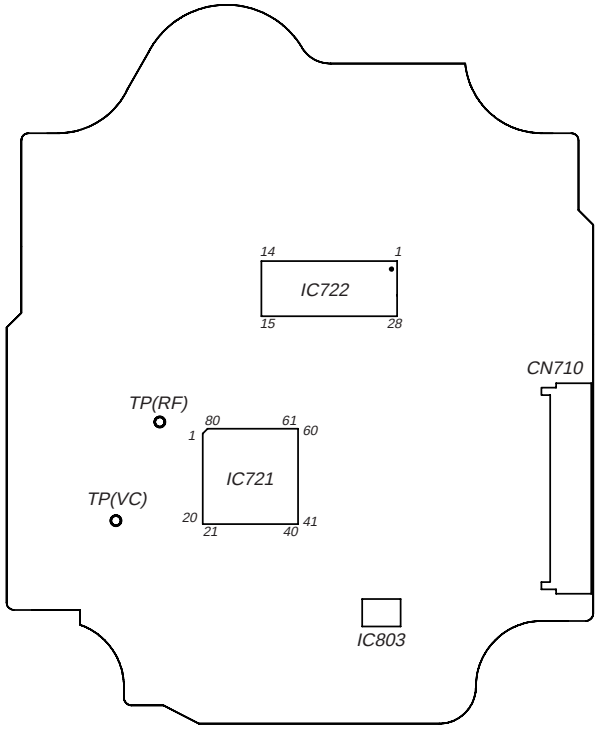
Procedure :

1. Connect oscilloscope to TP (RF) and TP (VC) on the BD board.
2. Press the I/⏻ button to turn the power on.
3. Put disc (YEDS-18) in and press the ► (CD) button to play-back.
4. Confirm that oscilloscope waveform is as shown in the figure below. (eye pattern)
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.



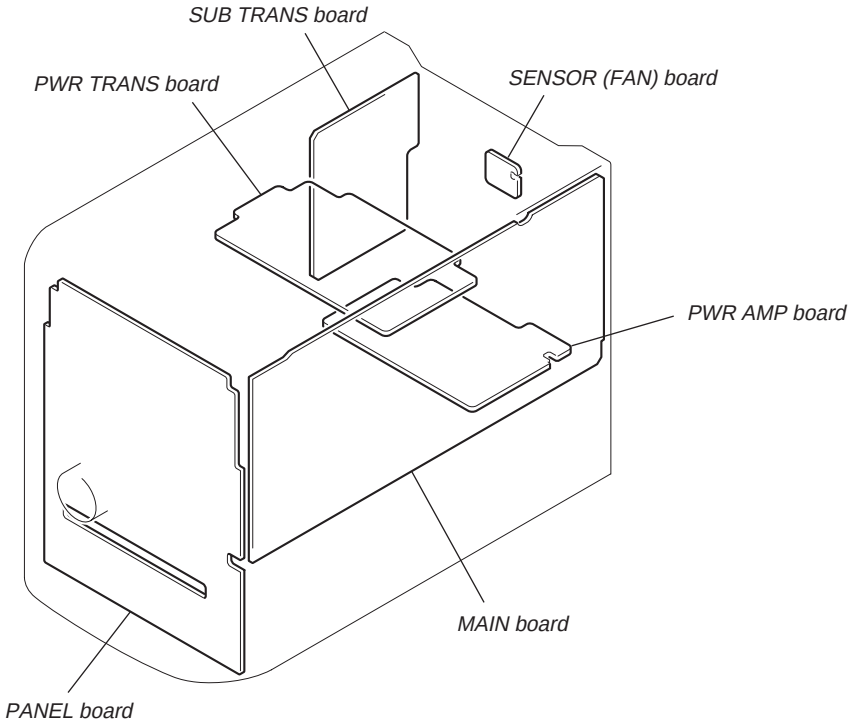
Checking Location:

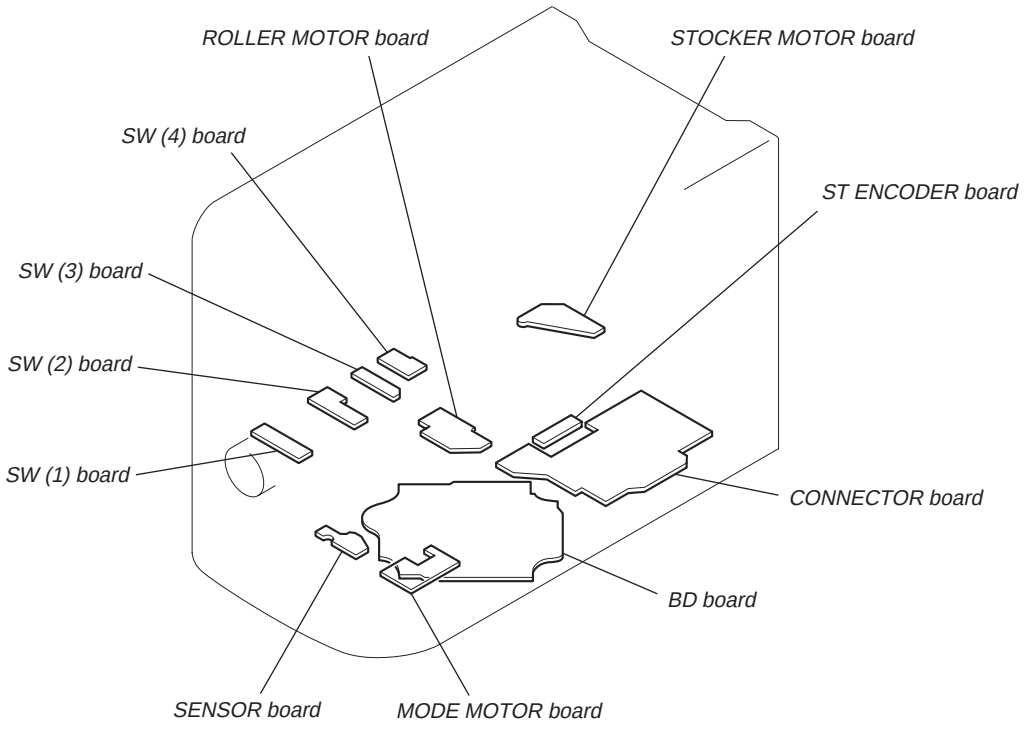
– BD BOARD (Conductor Side) –



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 ¼ W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

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

- : B+ Line.
- : B-Line.
- V oltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  ∗ : Impossible to measure
- V oltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- W aveforms are taken with a oscilloscope.
- W aveforms 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
  : PB (TAPE)
  : REC (TAPE)
  : DIGITAL OUT
- A bbreviation

  AUS : Australian model.
  CND : Canadian model.
  E2 : 120 V AC area in E model.
  E3 : 220-240 V AC area in E model.
  KR : Korean model.
  MX : Mexican model.
  RU : Russian model.
  TH : Thai model.
  TW : Taiwan model.

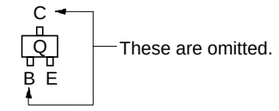
For printed wiring boards.

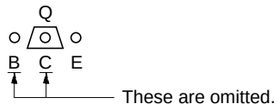
Note:

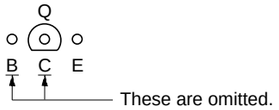
- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.

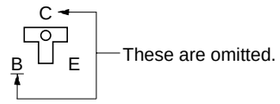
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- **Indication of transistor**





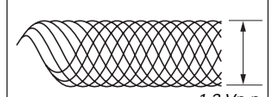




- **Waveforms**

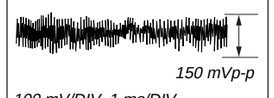
– BD Board –

① IC721 ④ (RF)
(CD Play Mode)

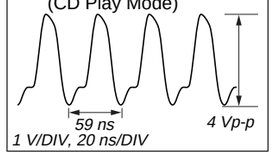


② IC721 ⑬ (FE)
(CD Play Mode)

③ IC721 ⑮ (TE)
(CD Play Mode)

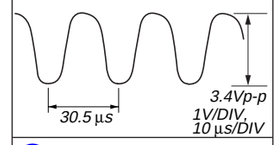


④ IC721 ㊽ (XOUT)
(CD Play Mode)

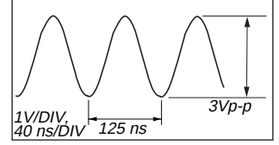


– PANEL Board –

⑤ IC601 ⑬ (XT2)

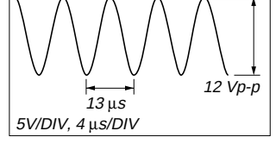


⑥ IC601 ⑯ (CF2)



– MAIN Board –

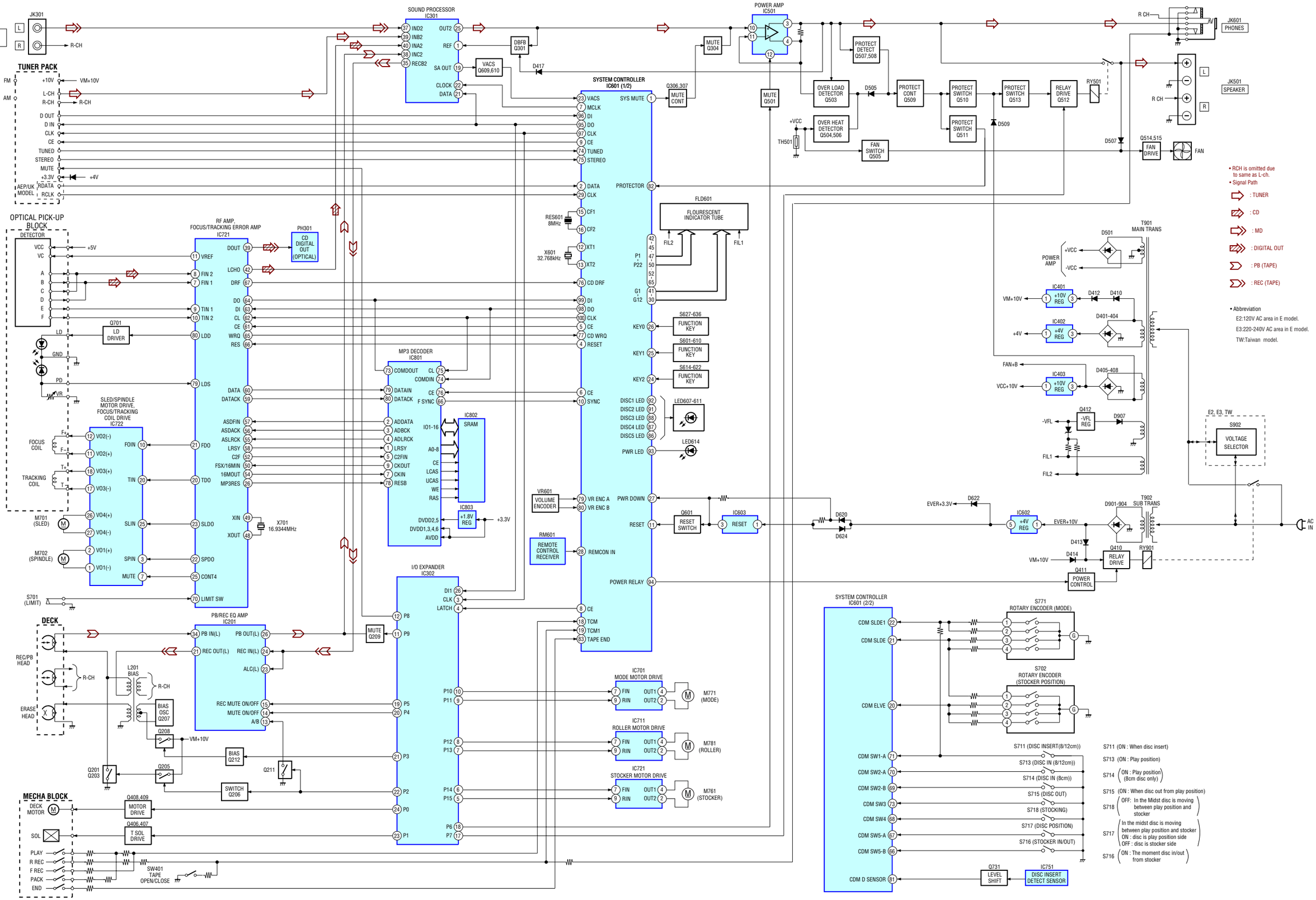
⑦ Q207 collector(REC Mode)



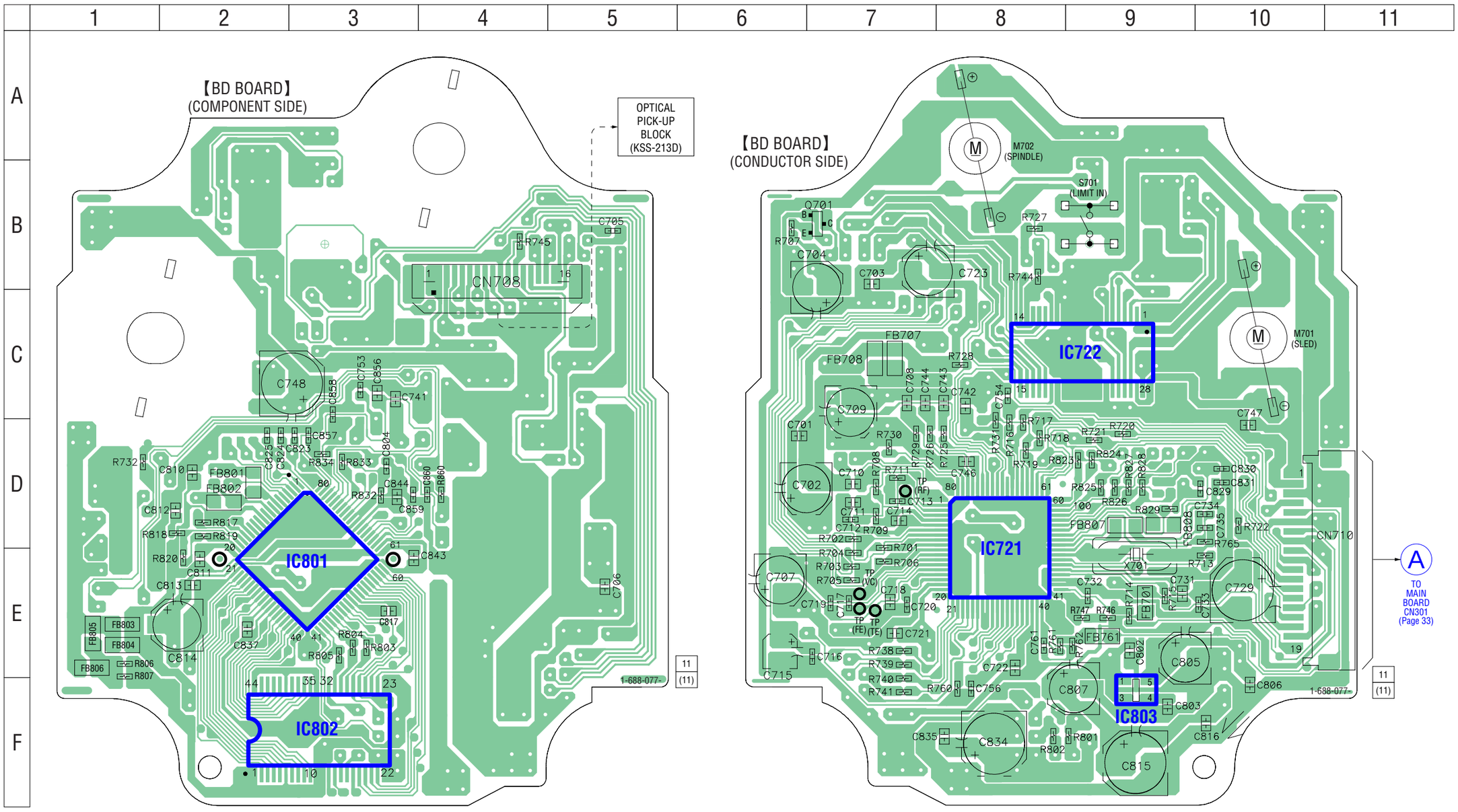
27

HCD-HP7

8-1. Block Diagram



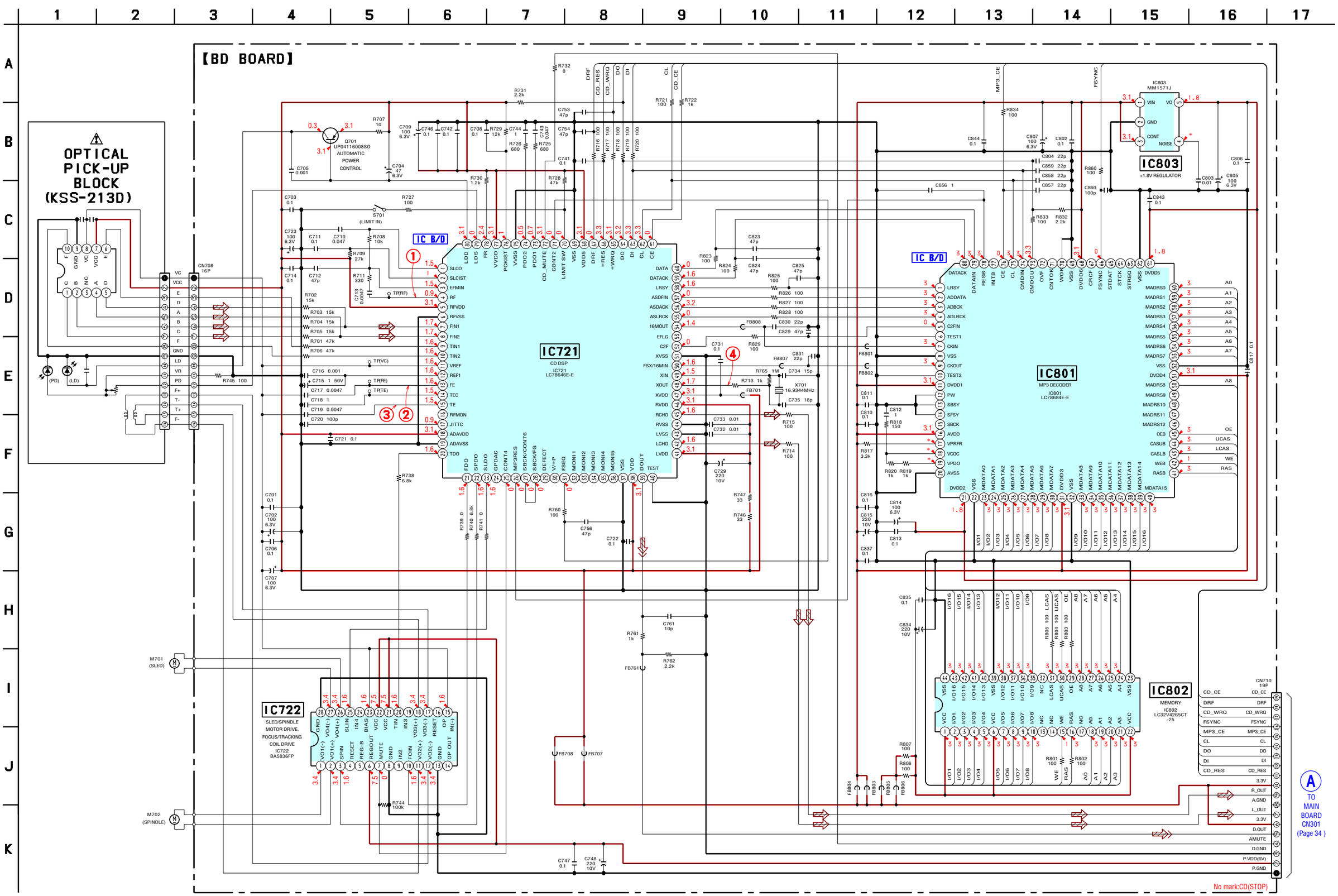
8-2. Printed Wiring Boards — BD Board — •See page 26 for Circuit Boards Location. • : Uses unleaded solder.



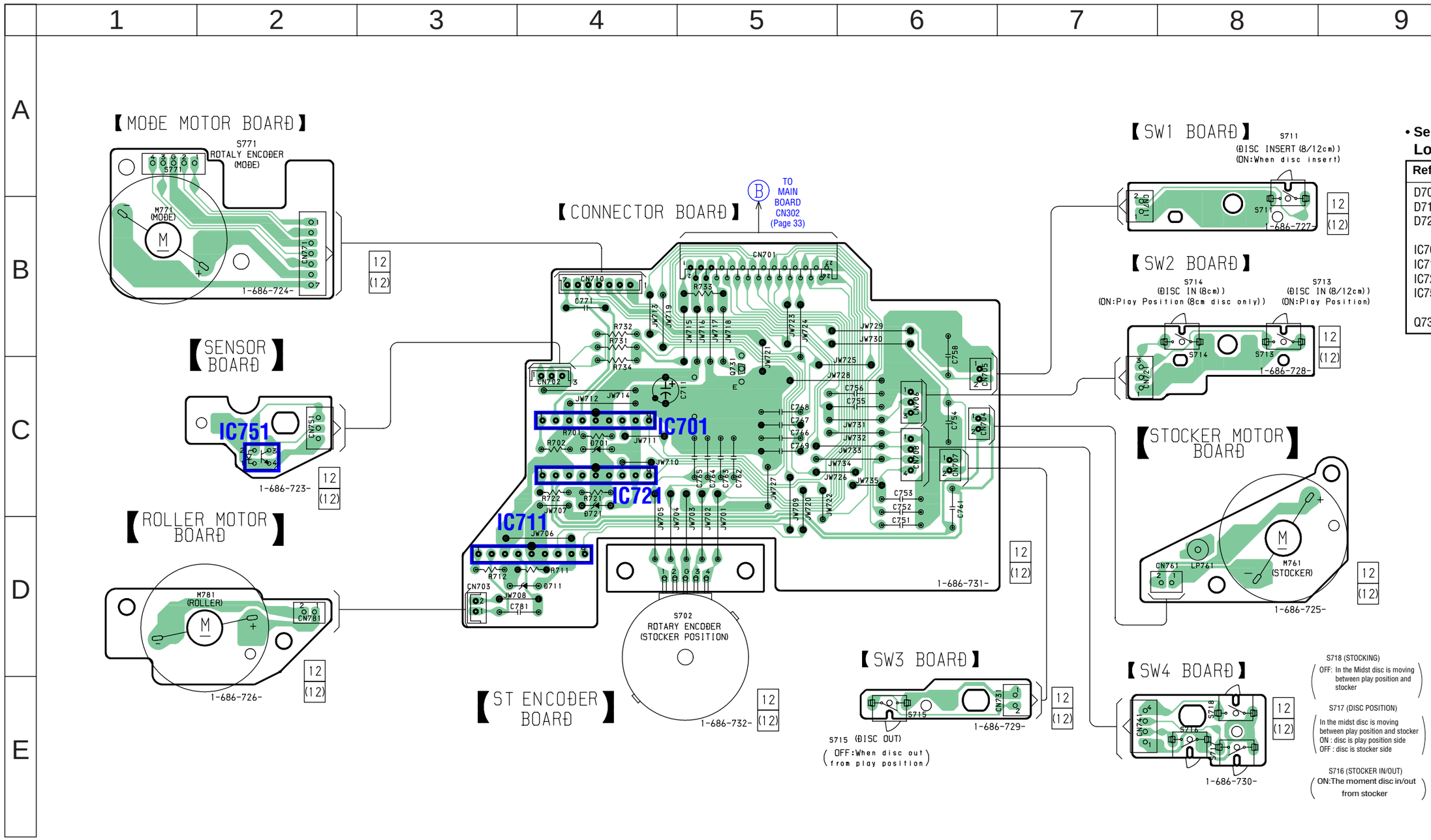
• **Semiconductor Location**

Ref. No.	Location
IC721	D-8
IC722	C-9
IC801	E-3
IC802	F-3
IC803	F-9
Q701	B-7

8-3. Schematic Diagram — BD Board — •See page 39, 40 for IC Block Diagrams. •See page 27 for Waveforms.



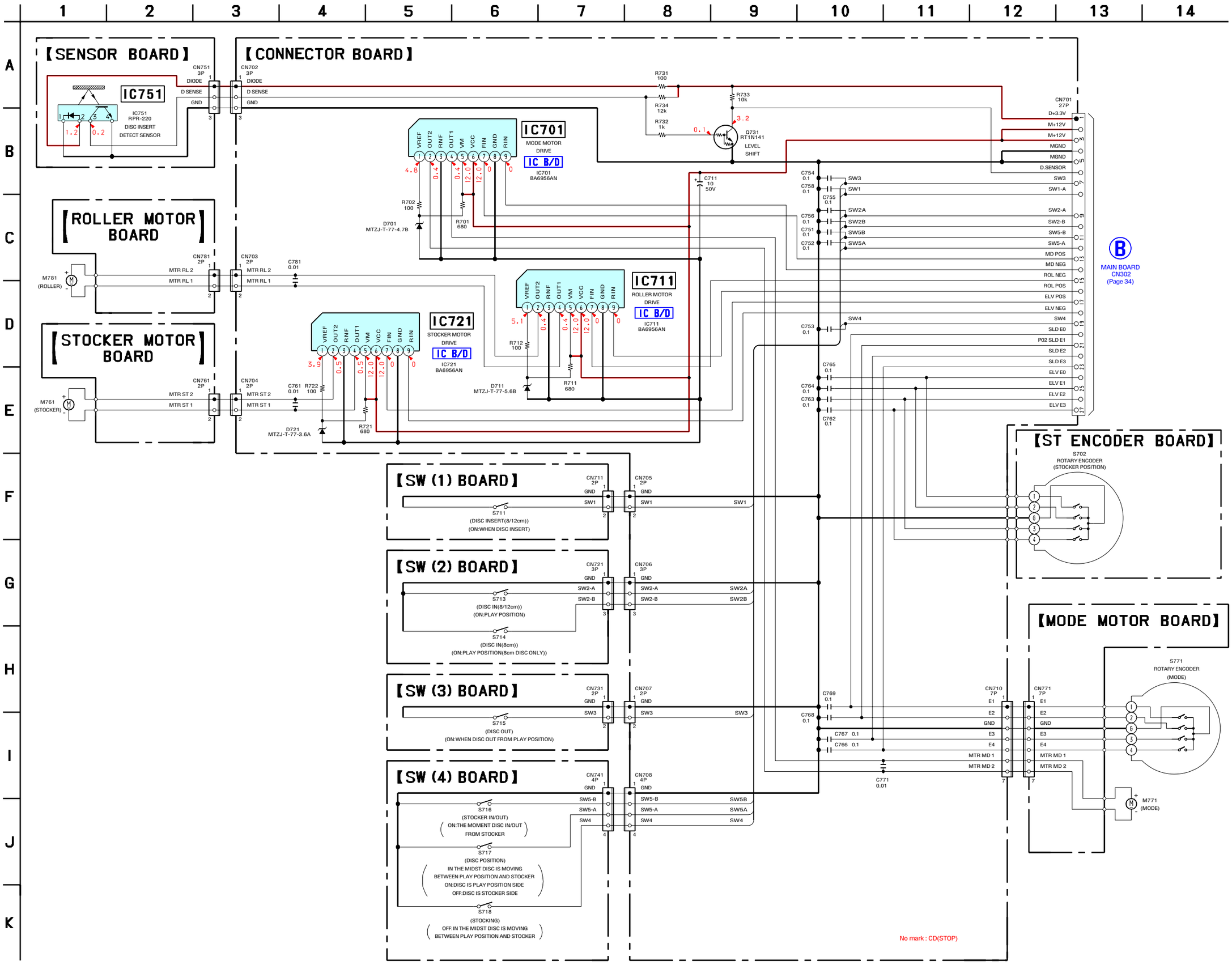
8-4. Printed Wiring Boards — Changer Section — •See page 26 for Circuit Boards Location. • : Uses unleaded solder.



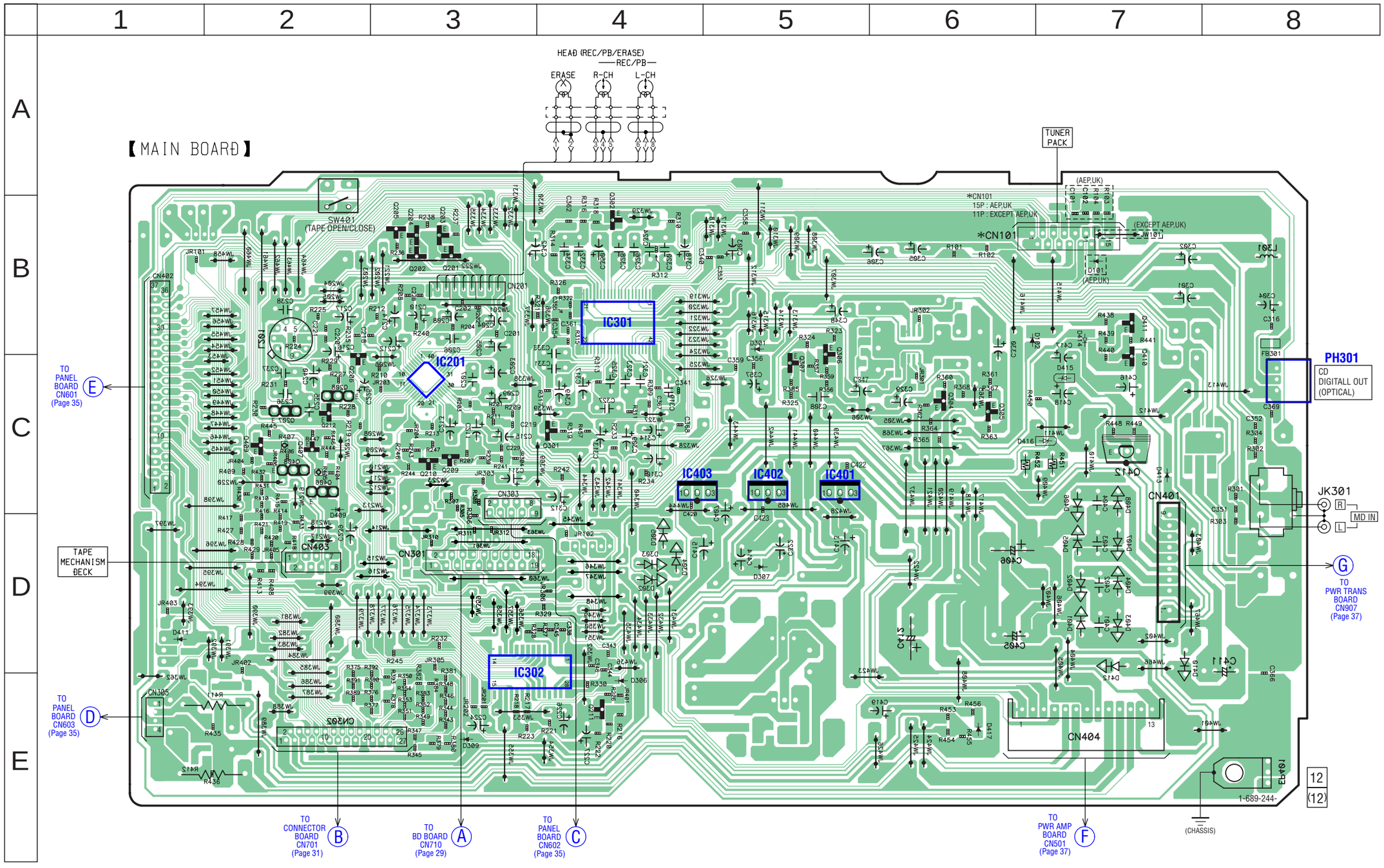
- **Semiconductor Location**

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

8-5. Schematic Diagram — Changer Section — •See page 41 for IC Block Diagrams.



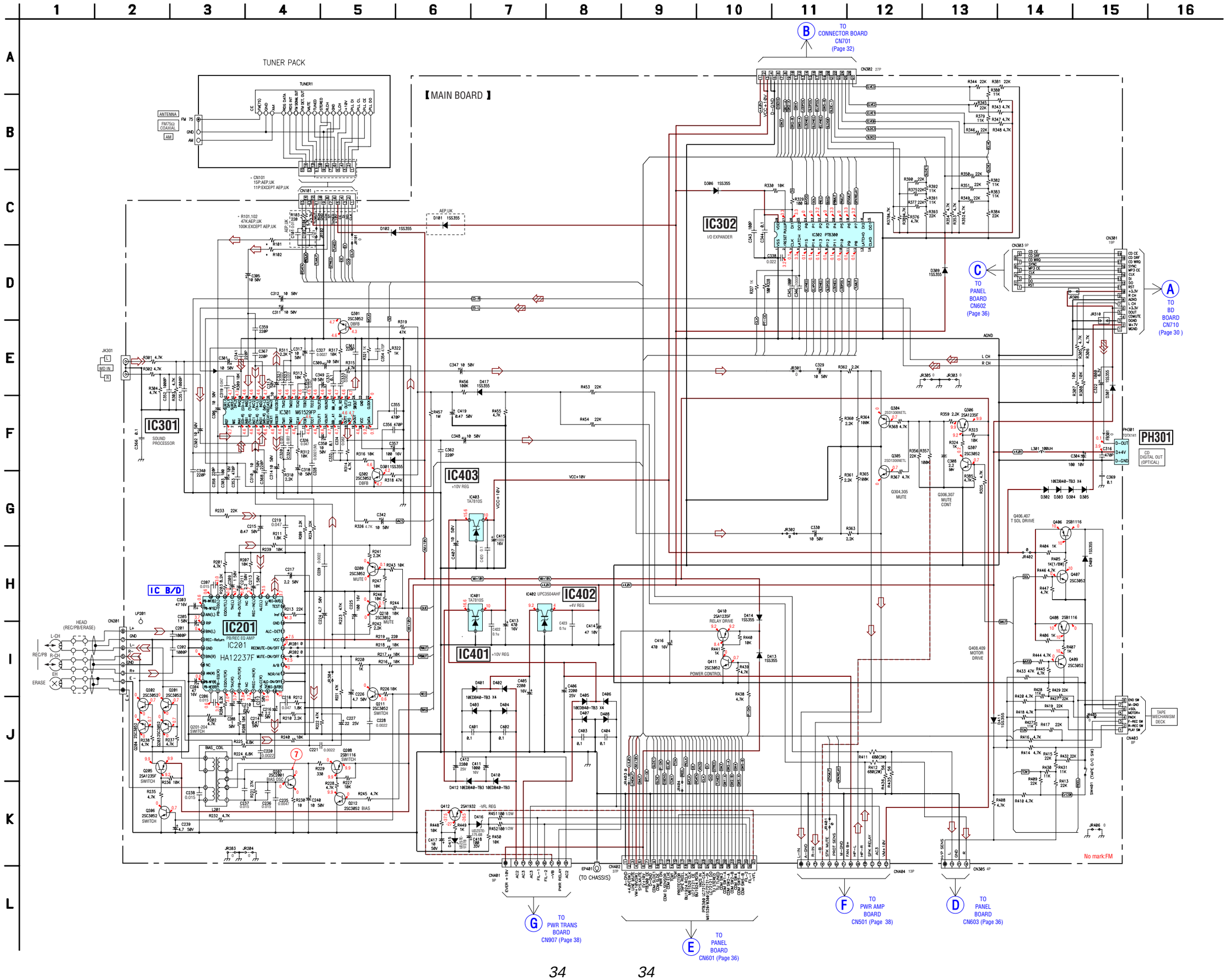
8-6. Printed Wiring Boards — Main Section — •See page 26 for Circuit Boards Location. • : Uses unleaded solder.



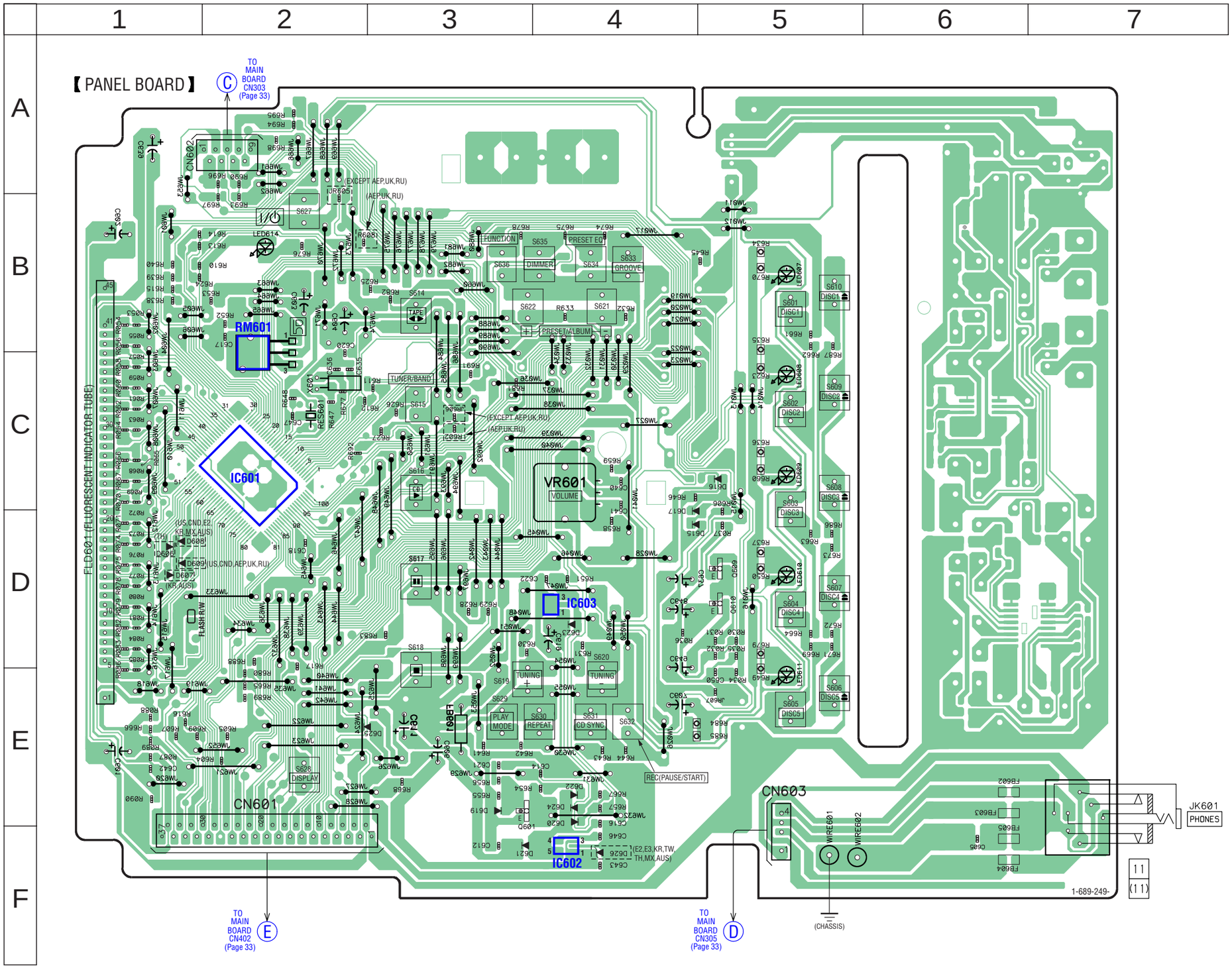
• **Semiconductor Location**

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
PH301	C-8
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
Q406	C-2
Q407	C-2
Q408	C-2
Q409	C-2
Q410	B-7
Q411	B-7
Q412	C-7

8-7. Schematic Diagram — Main Section — •See page 41 for IC Block Diagrams. •See page 27 for Waveforms.



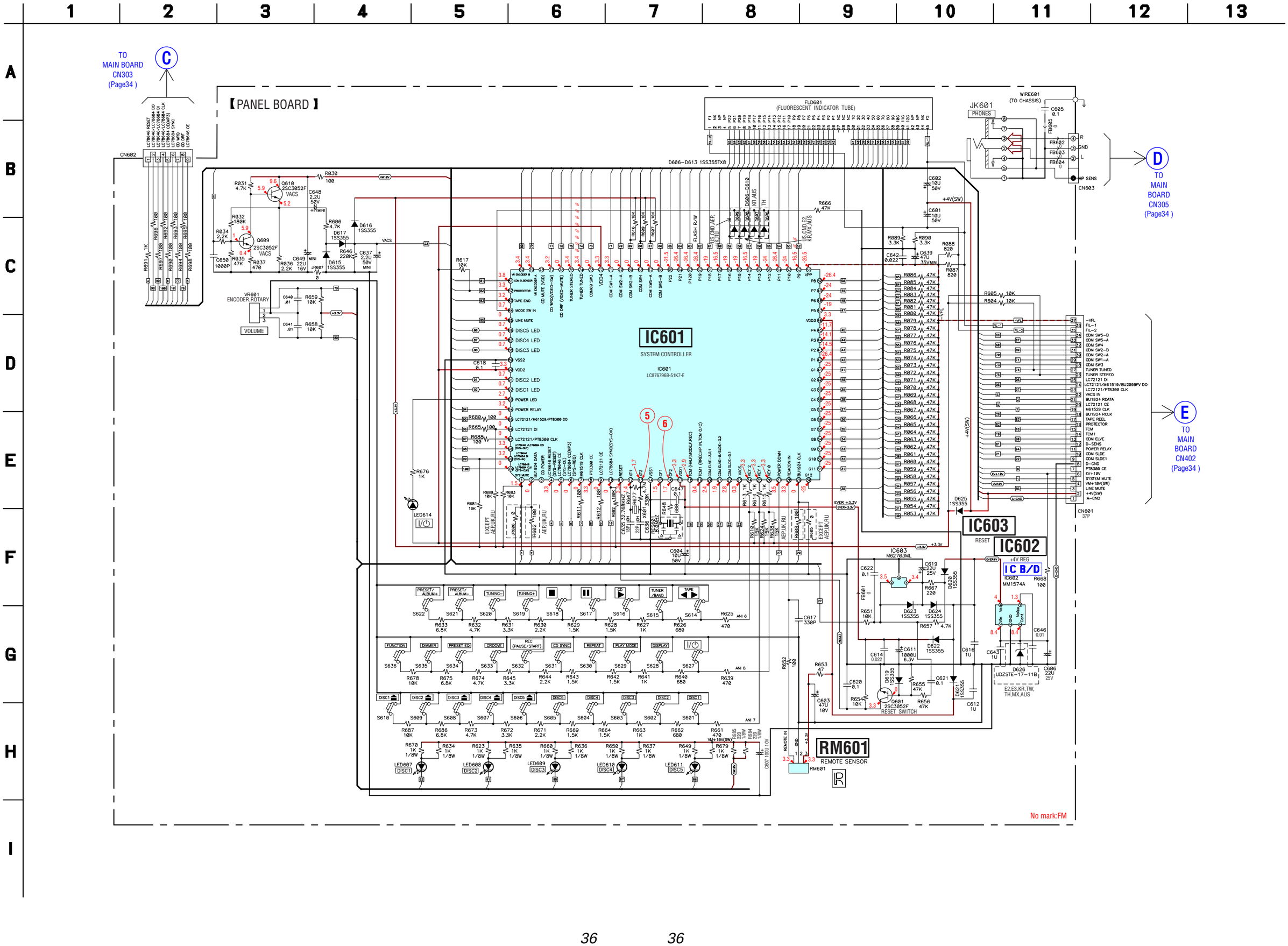
8-8. Printed Wiring Boards — Front Section — •See page 26 for Circuit Boards Location. • **:** Uses unleaded solder.



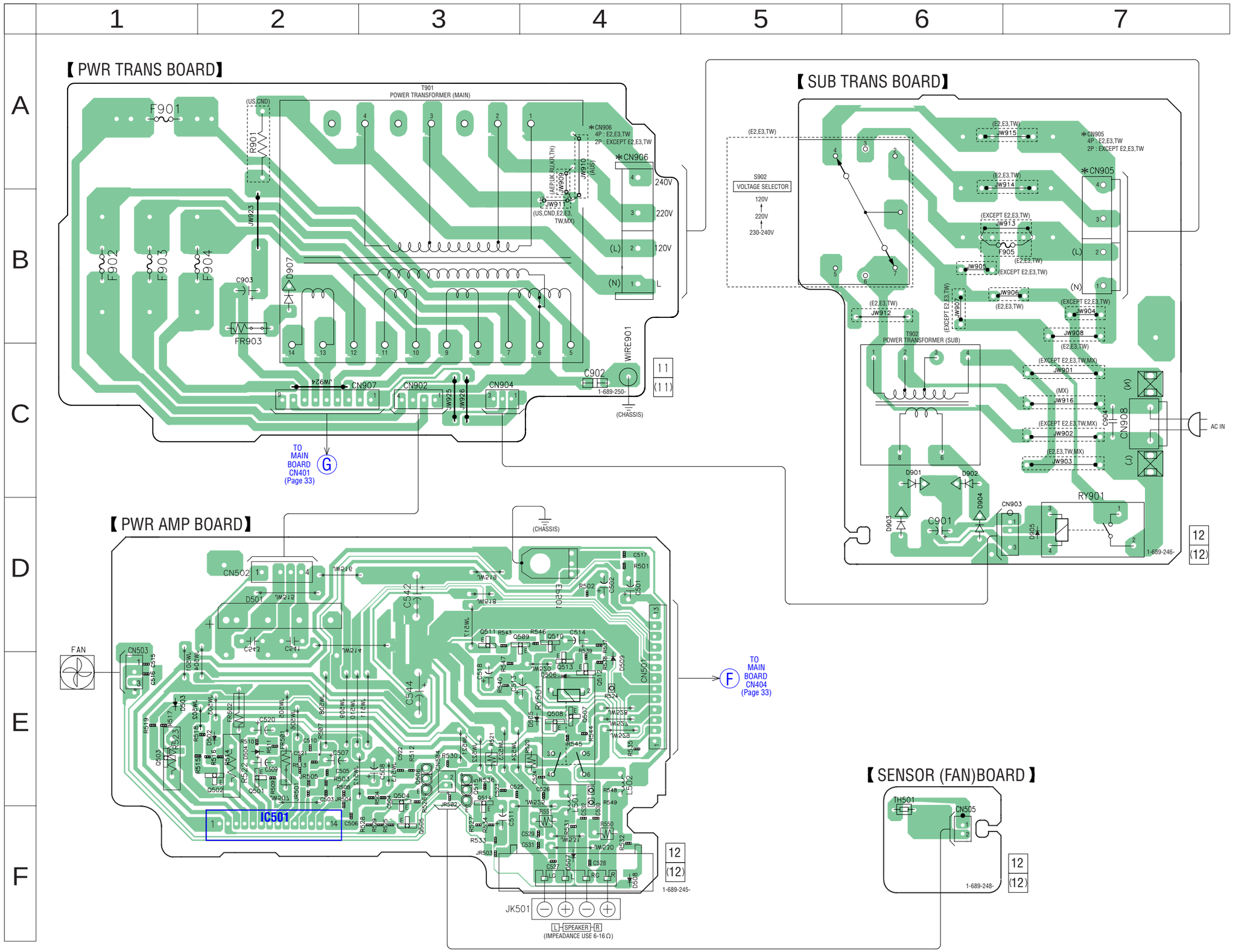
• **Semiconductor Location**

Ref. No.	Location
D606	D-1
D607	D-1
D608	D-1
D609	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
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
Q601	E-3
Q609	D-5
Q610	D-5
RM601	B-2

8-9. Schematic Diagram — Front Section — •See page 40 for IC Block Diagrams. •See page 27 for Waveforms.



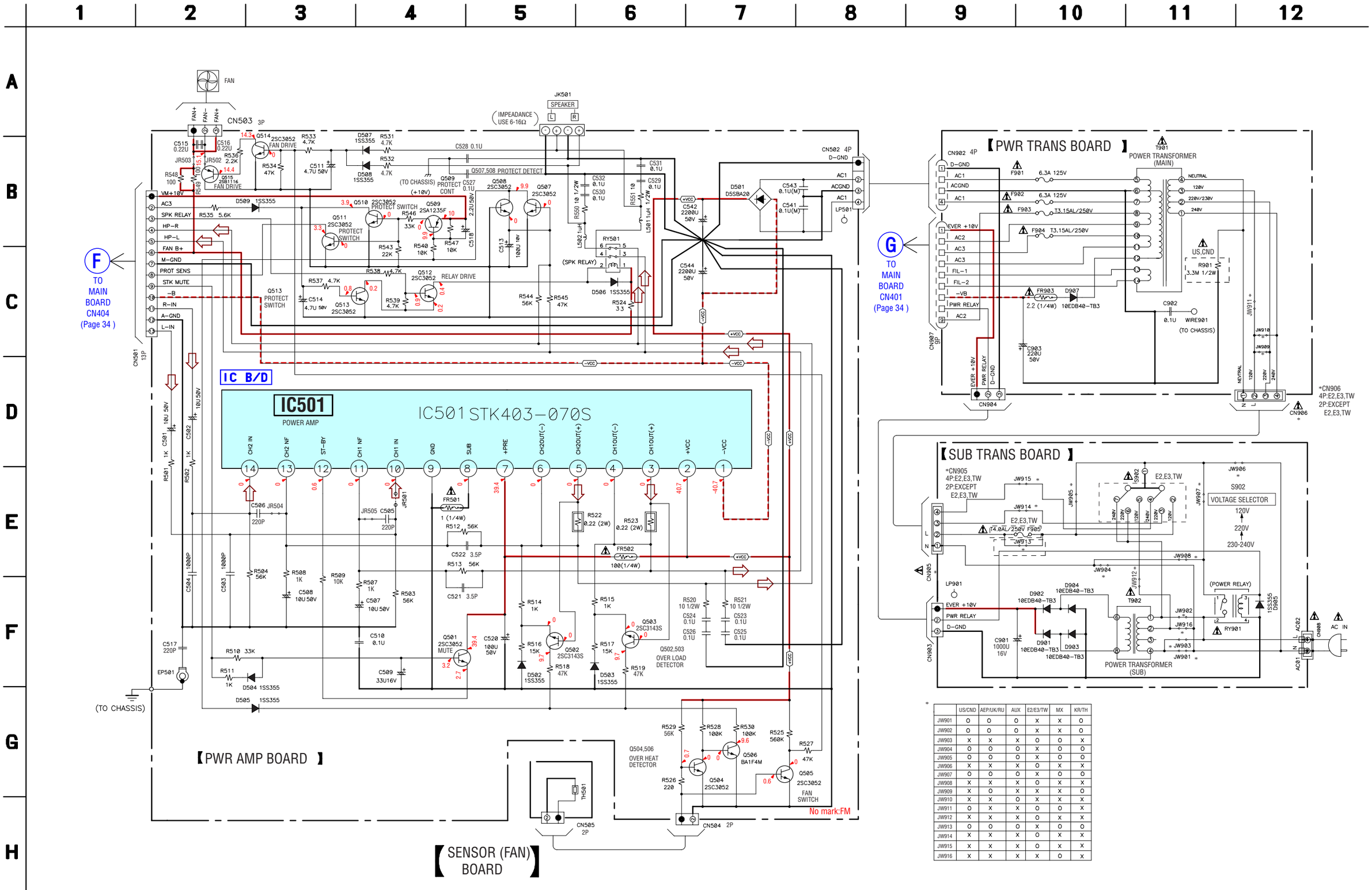
8-10. Printed Wiring Boards — PWR AMP/Power Section — •See page 26 for Circuit Boards Location. • **:** Uses unleaded solder.



• **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

8-11. Schematic Diagram — PWR AMP/Power Section — •See page 41 for IC Block Diagrams.



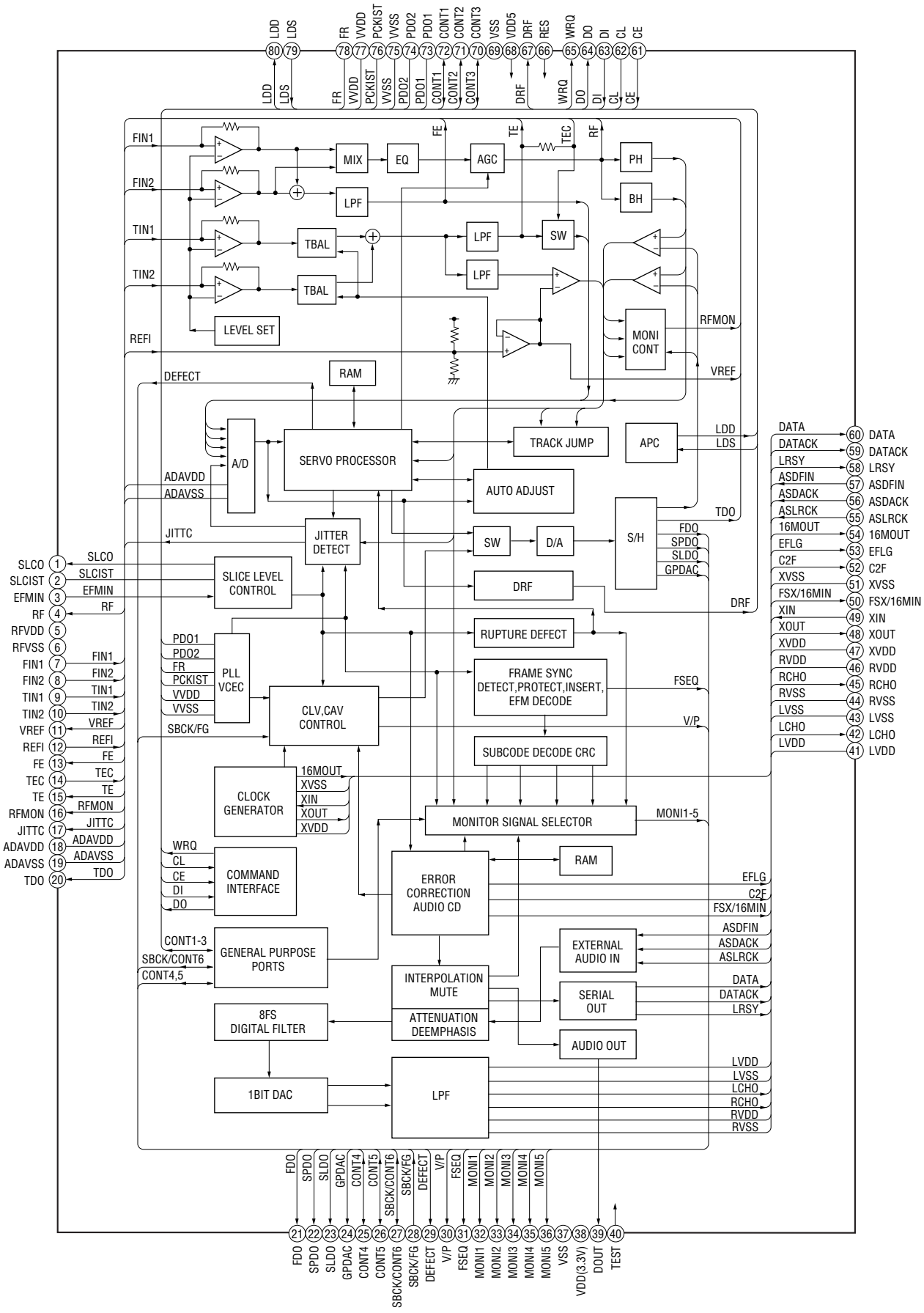
*

	US/CND	AEP/UK/RU	AUX	E2/E3/TW	MX	KR/TH
JW901	O	O	O	X	X	O
JW902	O	O	O	X	X	O
JW903	X	X	X	O	O	X
JW904	O	O	O	X	O	O
JW905	O	O	O	X	O	O
JW906	X	X	X	O	X	X
JW907	O	O	O	X	O	O
JW908	X	X	X	O	X	X
JW909	X	O	X	X	X	O
JW910	X	X	O	X	X	X
JW911	O	X	X	O	O	X
JW912	X	X	X	O	X	X
JW913	O	O	O	X	O	O
JW914	X	X	X	O	X	X
JW915	X	X	X	O	X	X
JW916	X	X	X	X	O	X

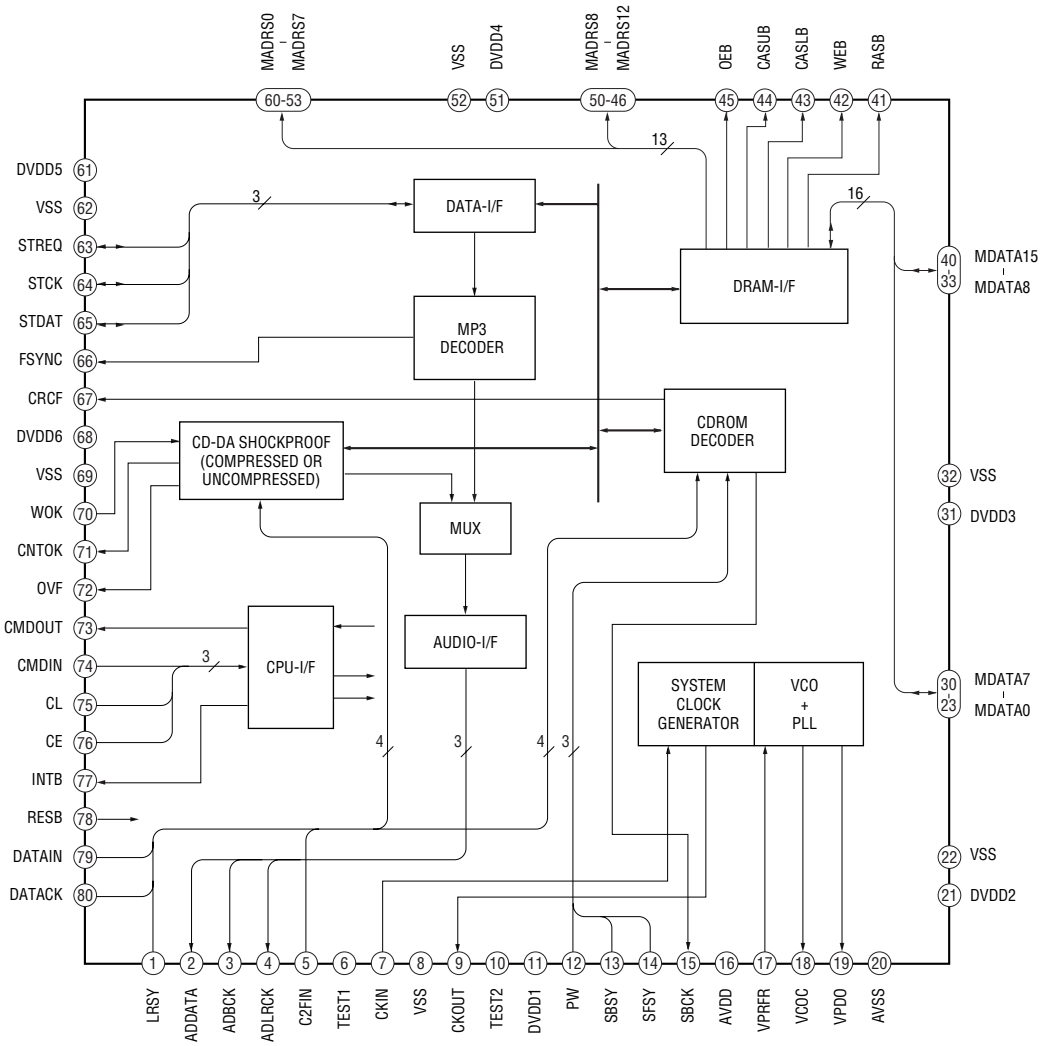
8-12. IC Block Diagrams

— BD Board —

IC721 LC78646E-E

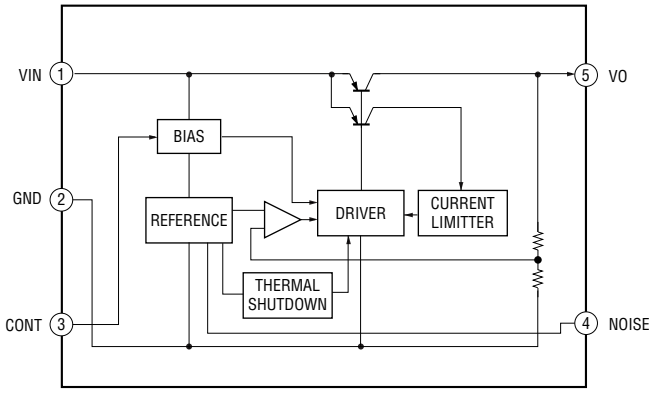


IC801 LC78684E-E



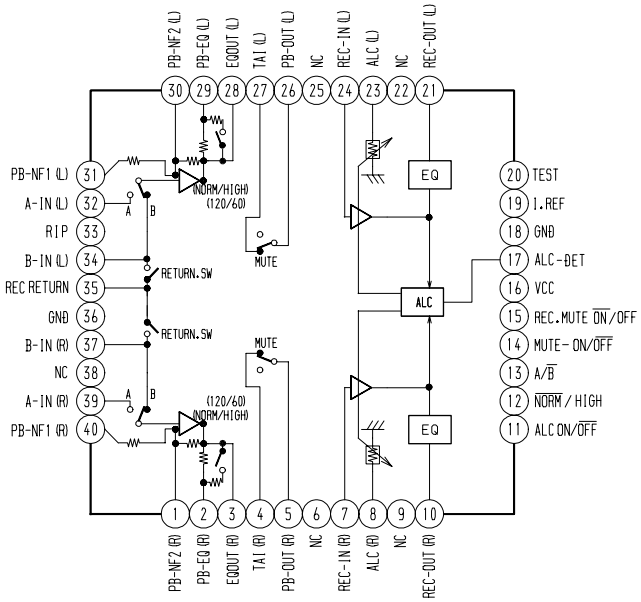
— PANEL Board —

IC602 MM1574A



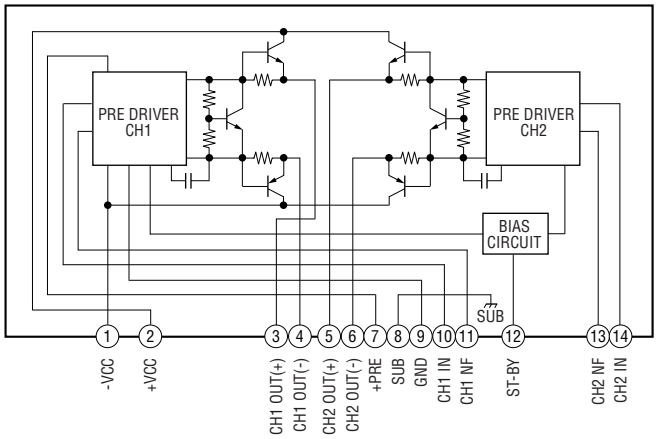
— MAIN Board —

IC201 HA12237F



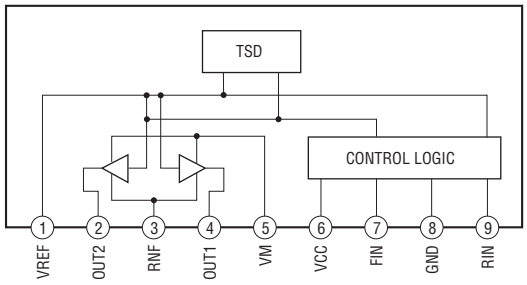
— PWR AMP Board —

IC501 STK403-070S



— CONNECTOR Board —

IC701, 711, 721 BA6956AN



8-13. IC Pin Function Description

• IC601 LC876796B-51K7-E (SYSTEM CONTROLLER)(PANEL B0ARD)

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	Not used (open)
4	LC87646 RESET	O	Reset signal output to the RF amplifier (IC721)
5	LC87646 CE	O	Chip enable signal output to the RF amplifier (IC721)
6	LC87684 CE	O	Chip enable signal output to the MP3 decoder (IC801)
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	LC87684 SYNC	I	MP3 frame sync signal input from the MP3 decoder (IC801)
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	CD DRF	I	DRF signal input from the RF amplifier (IC721)
77	CD WRQ	I	Subcode Q output standby signal input from the RF amplifier (IC721)
78	CD MUTE	O	Not used (open)
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 MUTE	O	Line 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	LC87646/LC78684 DO	O	Serial command data output to the RF amplifier (IC721) and the MP3 decoder (IC801)
99	LC87646/LC78684 DI	I	Serial command data input from the RF amplifier (IC721) and the MP3 decoder (IC801)
100	LC87646/LC78684 CLK	O	Serial command clock output to the RF amplifier (IC721) and the MP3 decoder (IC801)

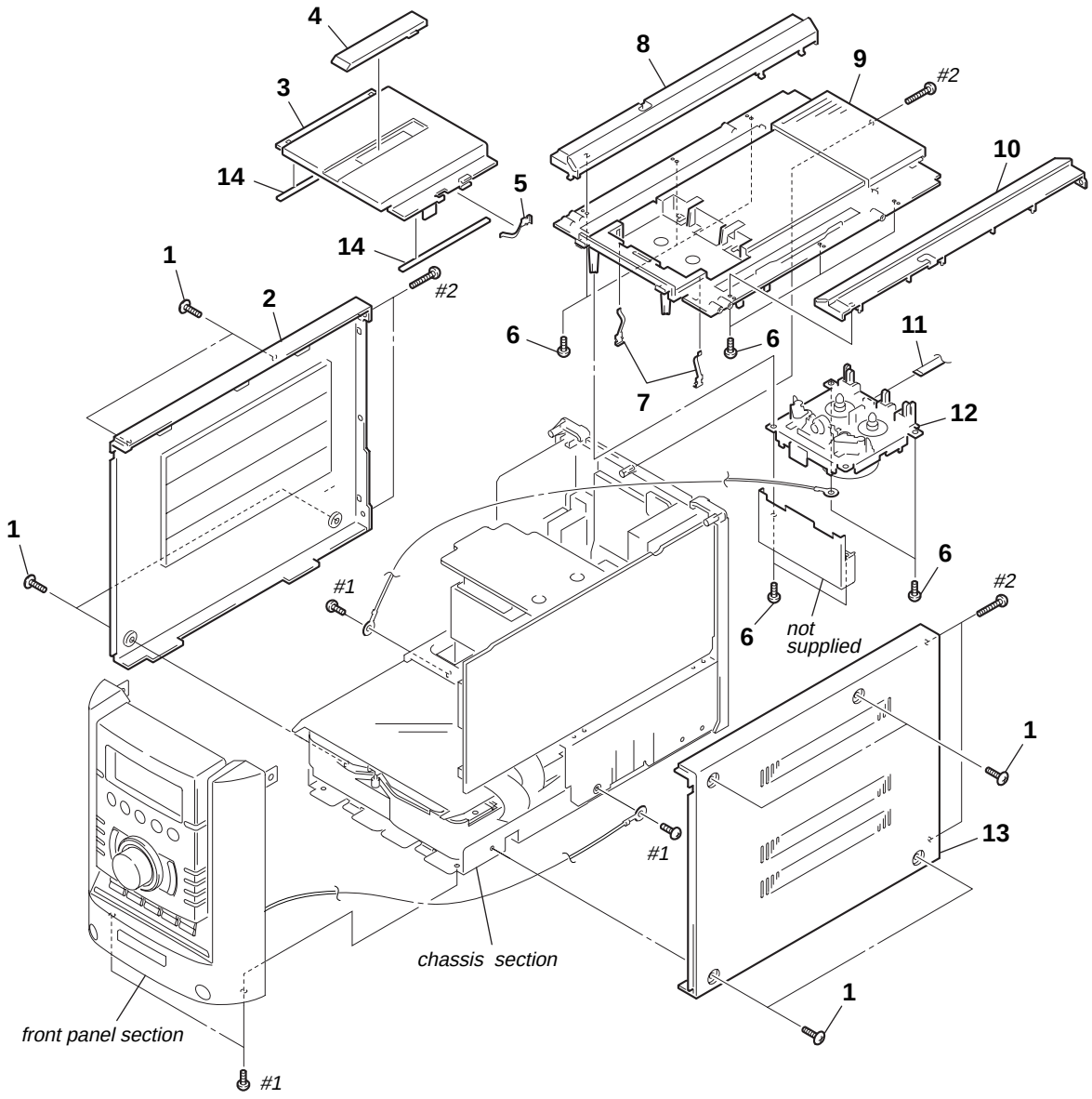
SECTION 9
EXPLODED VIEWS

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
  AUS : Australian model.
  CND: Canadian model.
  E2 : 120 V AC area in E model.
  E3 : 220-240 V AC area in E model.
  KR : Korean model.
  MX : Mexican model.
  RU : Russian model.
  TH : Thai model.
  TW : Taiwan model.

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

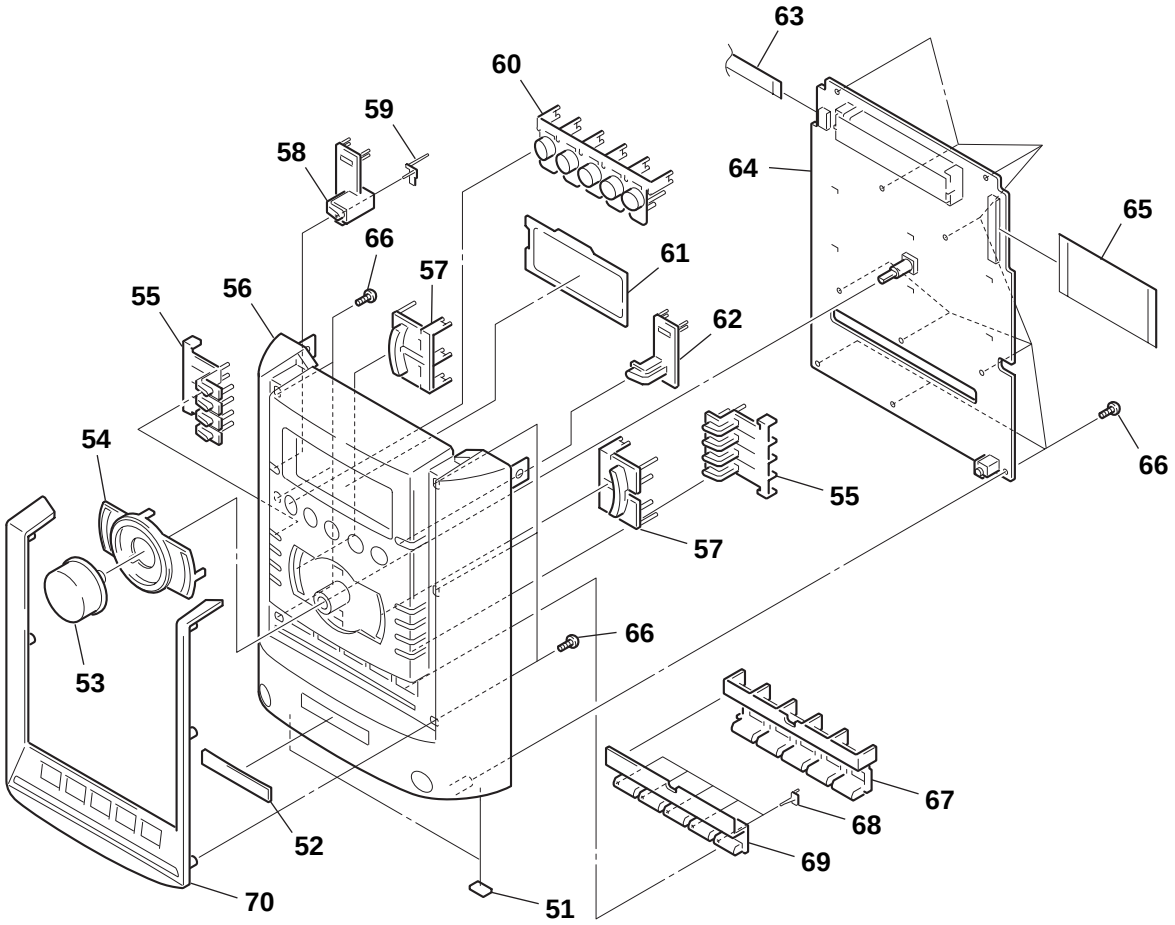
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièe portant le numéro spécifié.

9-1. Case, Top Panel Section



Ref. No.	Part No.	Description	Remark
1	3-363-099-71	SCREW (CASE 3 TP2)(EXCEPT KR)	
1	3-363-099-81	SCREW (CASE 3 TP2)(KR)	
2	4-246-394-01	CASE (SIDE-L)(US)	
2	4-246-394-11	CASE (SIDE-L)(EXCEPT US)	
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	4-246-389-01	PANEL, TOP (US)	
9	4-246-389-11	PANEL, TOP (EXCEPT US)	
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, SINGLE CASSETTE	
13	4-246-393-01	CASE (SIDE-R)(US)	
13	4-246-393-11	CASE (SIDE-R)(EXCEPT US)	
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	

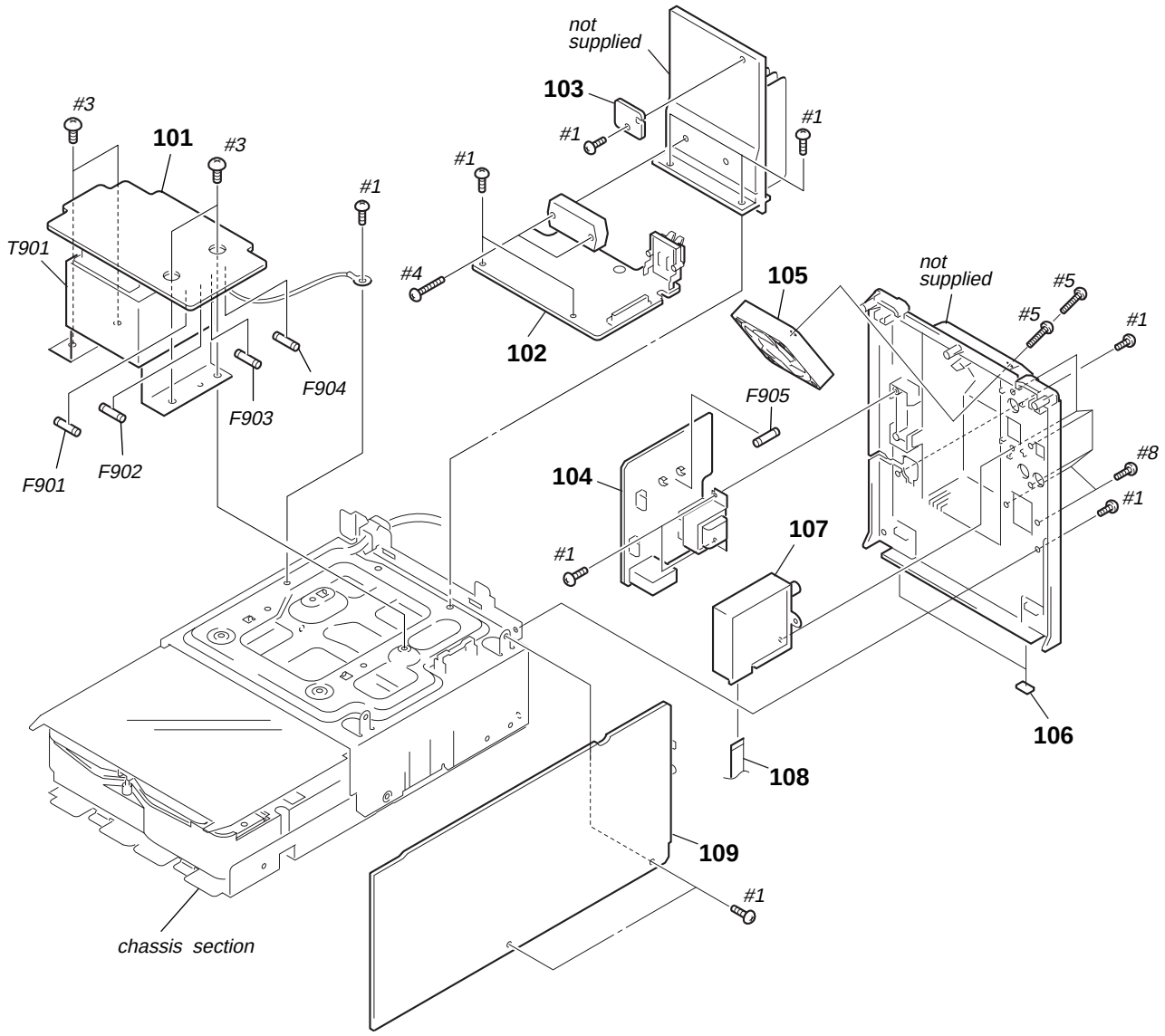
9-2. Front Panel Section



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	4-246-374-01	PANEL, FRONT (US)	
56	4-246-374-11	PANEL, FRONT (AEP,UK)	
56	4-246-374-21	PANEL, FRONT (EXCEPT US,AEP,UK)	
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-4734-337-A	PANEL BOARD, COMPLETE (US,CND)	
64	A-4734-349-A	PANEL BOARD, COMPLETE (AEP,UK,RU)	
64	A-4734-360-A	PANEL BOARD, COMPLETE (E3,TW)	
64	A-4747-533-A	PANEL BOARD, COMPLETE (MX,E2)	
64	A-4747-535-A	PANEL BOARD, COMPLETE (KR,AUS)	
64	A-4747-545-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	

9-3. Chassis Section-1

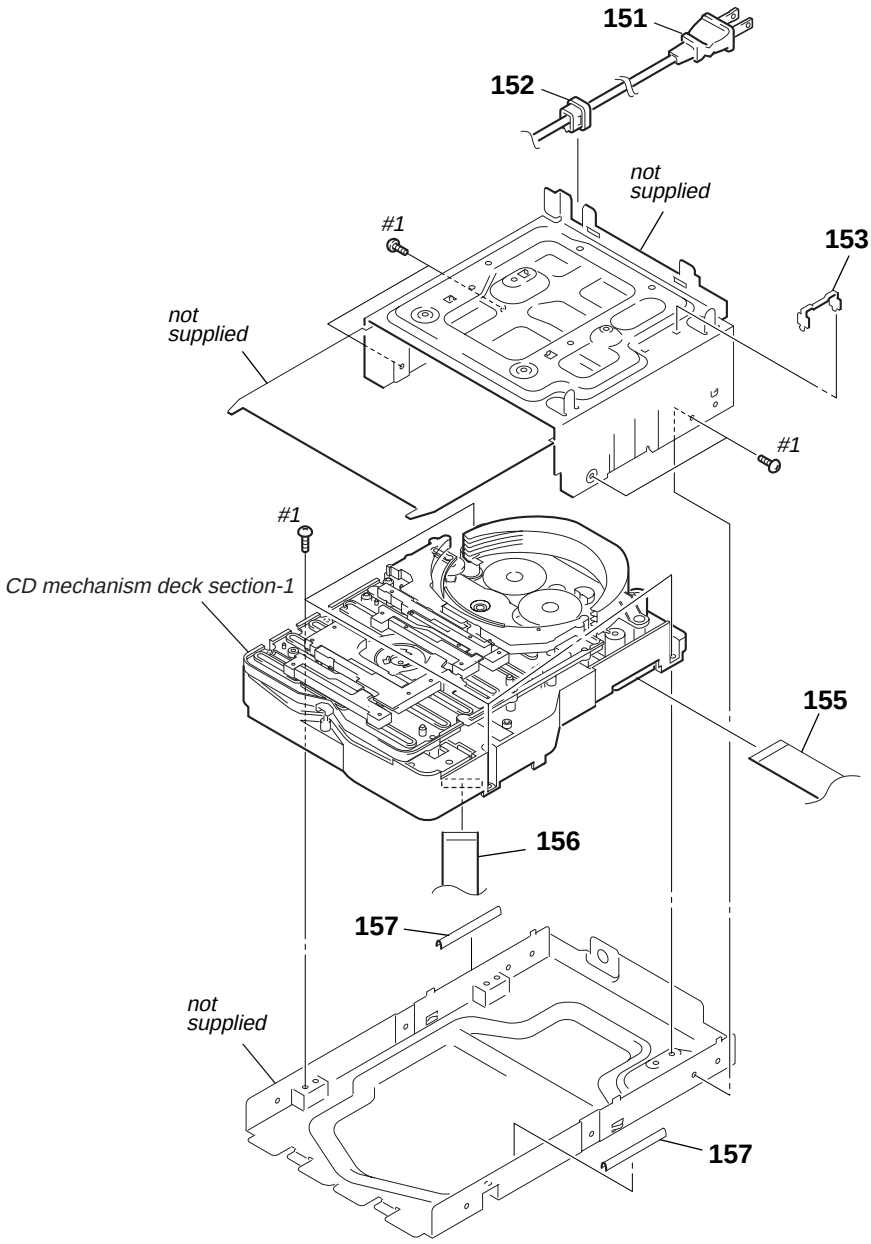


Ref. No.	Part No.	Description	Remark
101	1-689-250-11	PWR TRANS BOARD	
102	A-4734-342-A	PWR AMP BOARD, COMPLETE (EXCEPT TH)	
102	A-4747-550-A	PWR AMP BOARD, COMPLETE (TH)	
103	1-689-248-12	SENSOR (FAN) BOARD	
104	1-689-246-12	SUB TRANS BOARD	
105	1-787-025-11	DC FAN	
106	4-225-252-01	CUSHION (FOOT)	
107	1-693-625-11	TUNER (FM/AM)(US,CND)	
107	1-693-626-11	TUNER (FM/AM)(AEP,UK)	
107	1-693-627-11	TUNER (FM/AM)(RU)	
107	1-693-628-11	TUNER (FM/AM)(E2,E3,TW,TH,MX,AUS)	
107	1-693-629-11	TUNER (FM/AM)(KR)	
108	1-769-946-11	WIRE (FLAT TYPE)(11 CORE)(EXCEPT AEP,UK)	
108	1-773-009-11	WIRE (FLAT TYPE)(15 CORE)(AEP,UK)	
109	A-4734-344-A	MAIN BOARD, COMPLETE (EXCEPT AEP,UK,TH)	
109	A-4734-354-A	MAIN BOARD, COMPLETE (AEP,UK)	
109	A-4747-553-A	MAIN BOARD, COMPLETE (TH)	
⚠F901	1-533-454-11	FUSE, GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F901	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F902	1-533-454-11	FUSE, GLASS TUBE (DIA. 5)(US,CND,MX)	

Ref. No.	Part No.	Description	Remark
⚠F902	1-533-473-11	FUSE, GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F903	1-533-451-11	FUSE, GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F903	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F904	1-533-451-11	FUSE, GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F904	1-533-470-11	FUSE, GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F905	1-533-471-11	FUSE, GLASS TUBE (DIA. 5)(E2,E3,TW)	
⚠T901	1-439-827-11	TRANSFORMER, POWER	(E2,E3,KR,TW,TH,AUS)
⚠T901	1-439-828-11	TRANSFORMER, POWER (US,CND,MX)	
⚠T901	1-439-829-11	TRANSFORMER, POWER (AEP,UK,RU)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-881-09	SCREW +BVTT 4X8 (S)	
#4	7-682-552-09	SCREW +B 3X16	
#5	7-684-023-04	N 3, TYPE 2	
#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.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièe portant le numéro spécifié.

9-4. Chassis Section-2

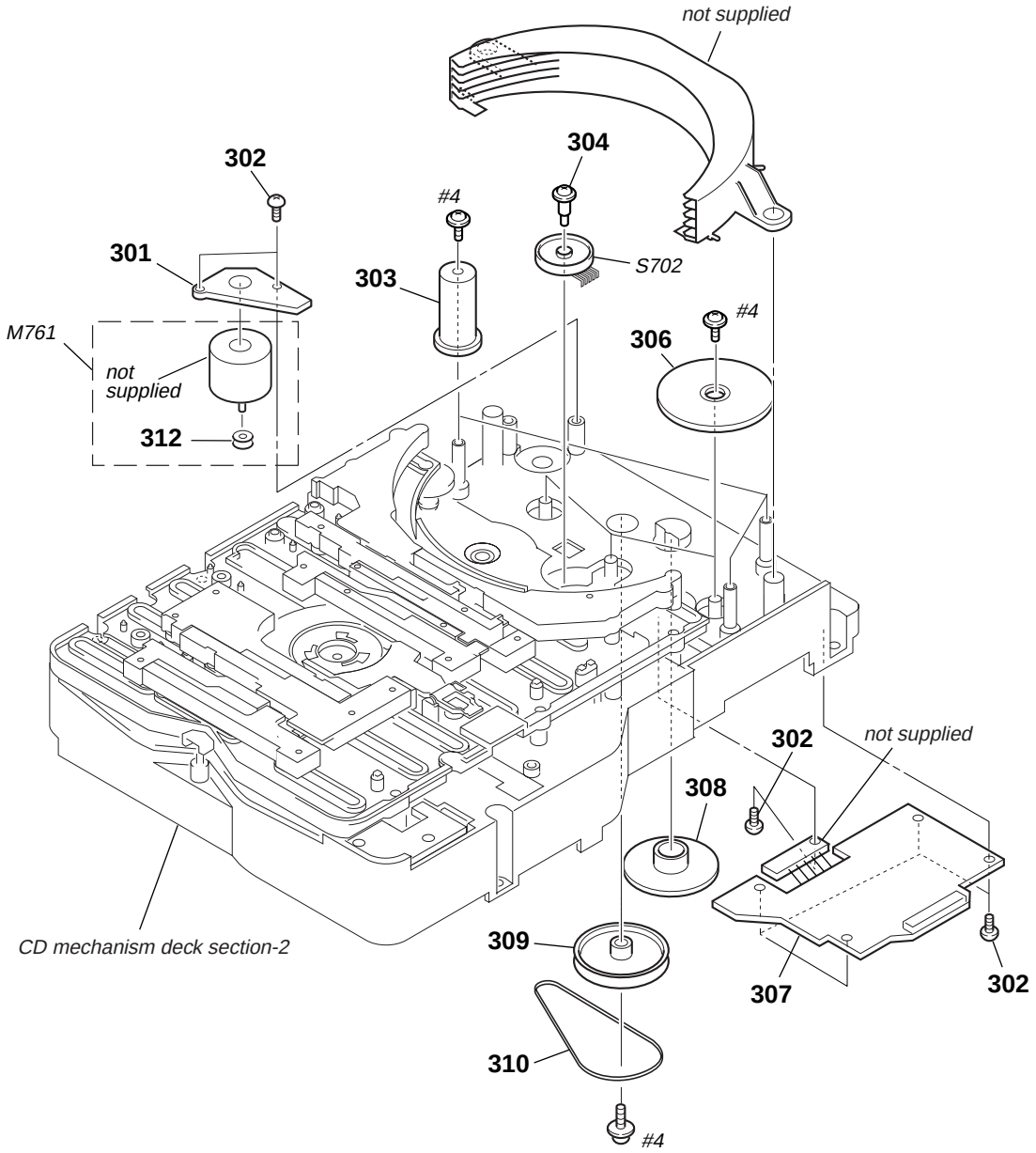


Ref. No.	Part No.	Description	Remark
⚠151	1-690-608-11	CORD, POWER (AUS)	
⚠151	1-769-079-22	CORD, POWER (KR)	
⚠151	1-783-531-11	CORD, POWER (US,CND)	
⚠151	1-783-532-11	CORD, POWER (AEP,UK,RU,TW)	
⚠151	1-791-901-12	CORD, POWER (E2,E3,MX)	
⚠151	1-824-818-11	CORD, POWER (WITH CONNECTOR)	(TH)
152	3-703-571-11	BUSHING (S)(4516), CORD (E2,E3,MX)	

Ref. No.	Part No.	Description	Remark
* 152	3-703-244-00	BUSHING (2104), CORD (EXCEPT E2,E3,MX)	
153	4-988-533-01	HOLDER, PWB	
155	1-827-390-11	WIRE (FLAT TYPE)(27 CORE)	
156	1-827-393-11	WIRE (FLAT TYPE)(19 CORE)	
157	3-378-109-12	CUSHION, SARANET	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

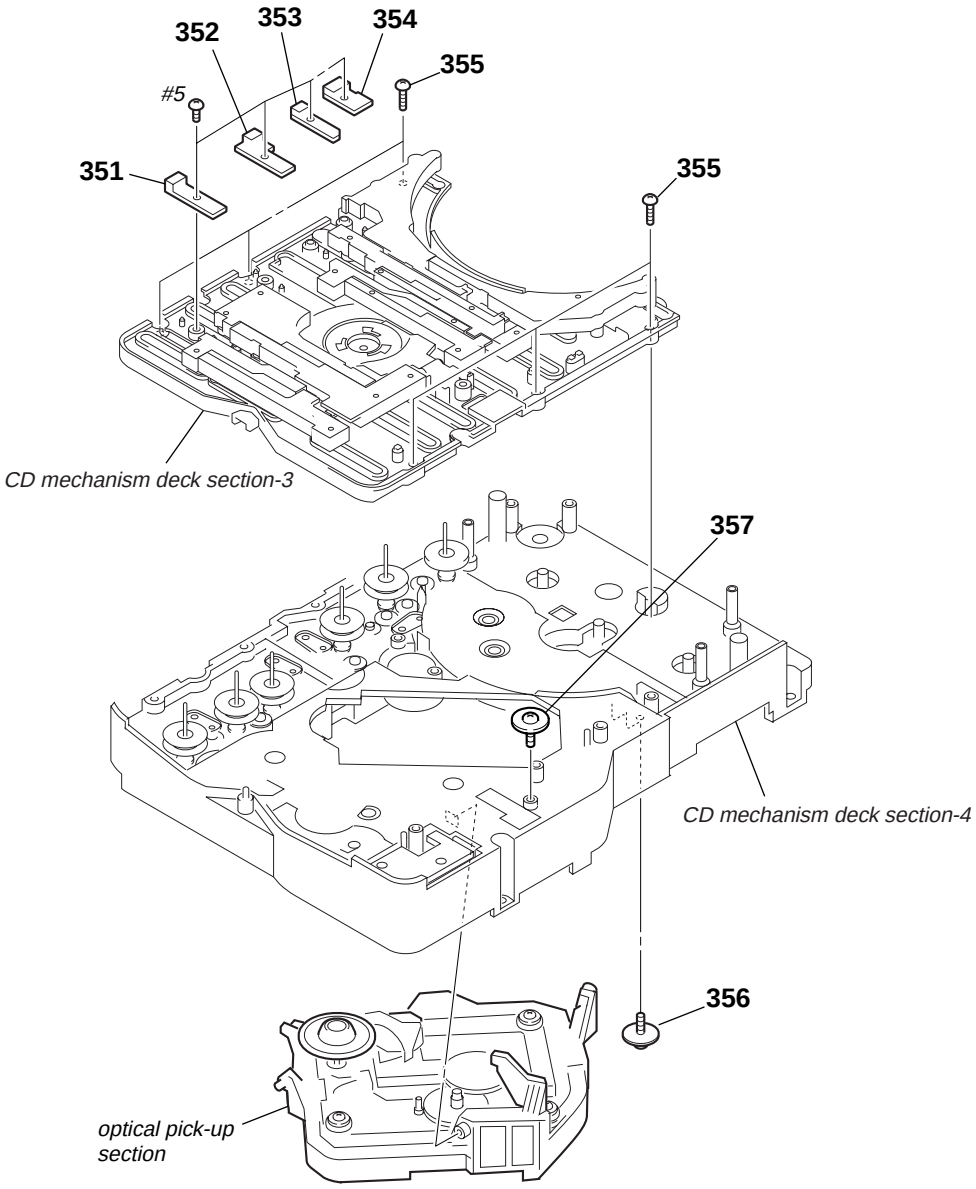
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-5. CD Mechanism Section-1 (CDM69CH-K6BD71C)



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)	
304	4-239-618-01	SCREW (+PWH,2X6), STEP TAPPING	
306	4-239-687-01	GEAR (STOCKER COMMUNICATION)	
307	A-4731-113-A	CONNECTOR BOARD, COMPLETE	
308	4-239-689-01	GEAR (STOCKER DECELERATION)	
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)	

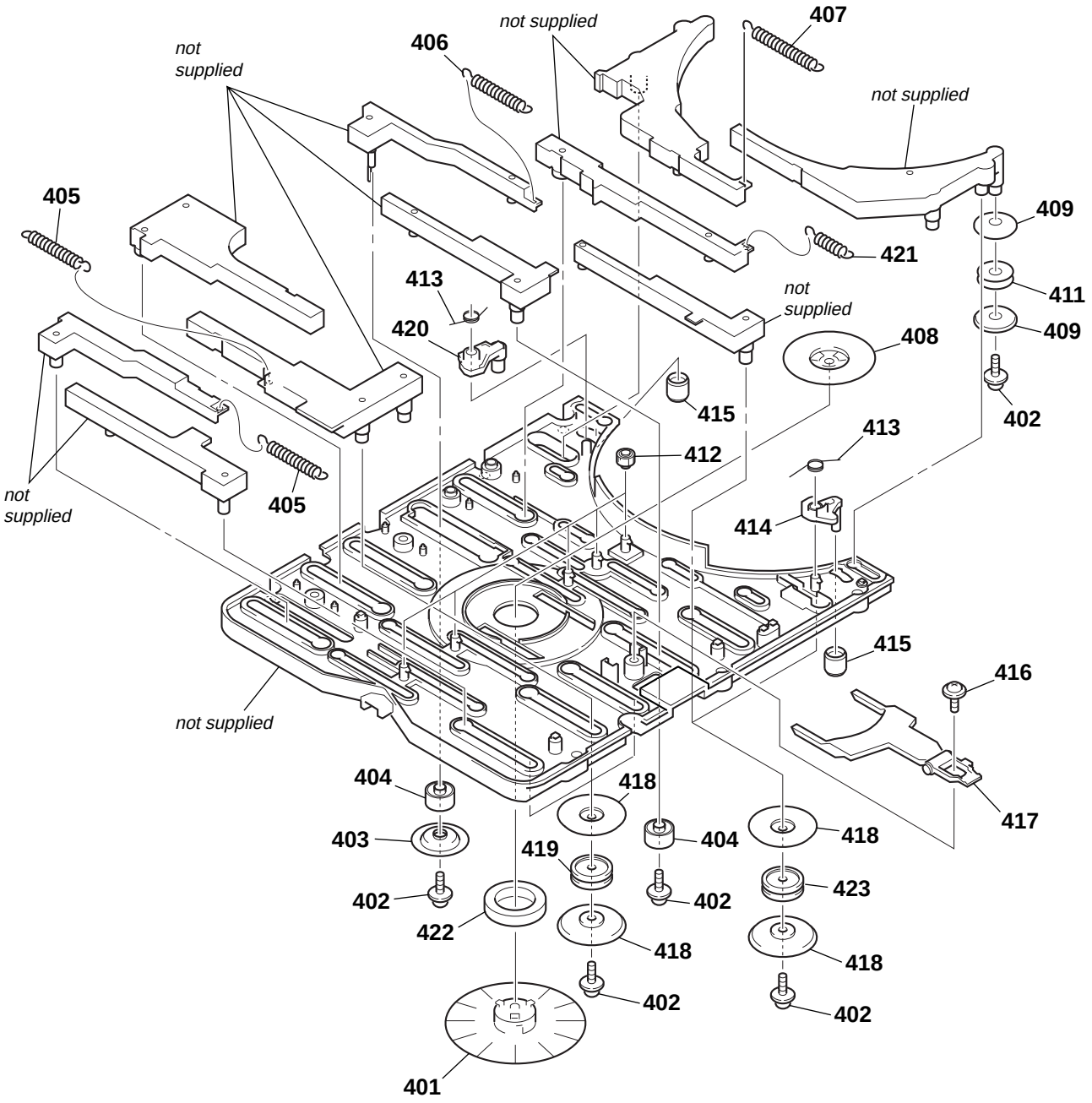
9-6. CD Mechanism Section-2 (CDM69CH-K6BD71C)



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	

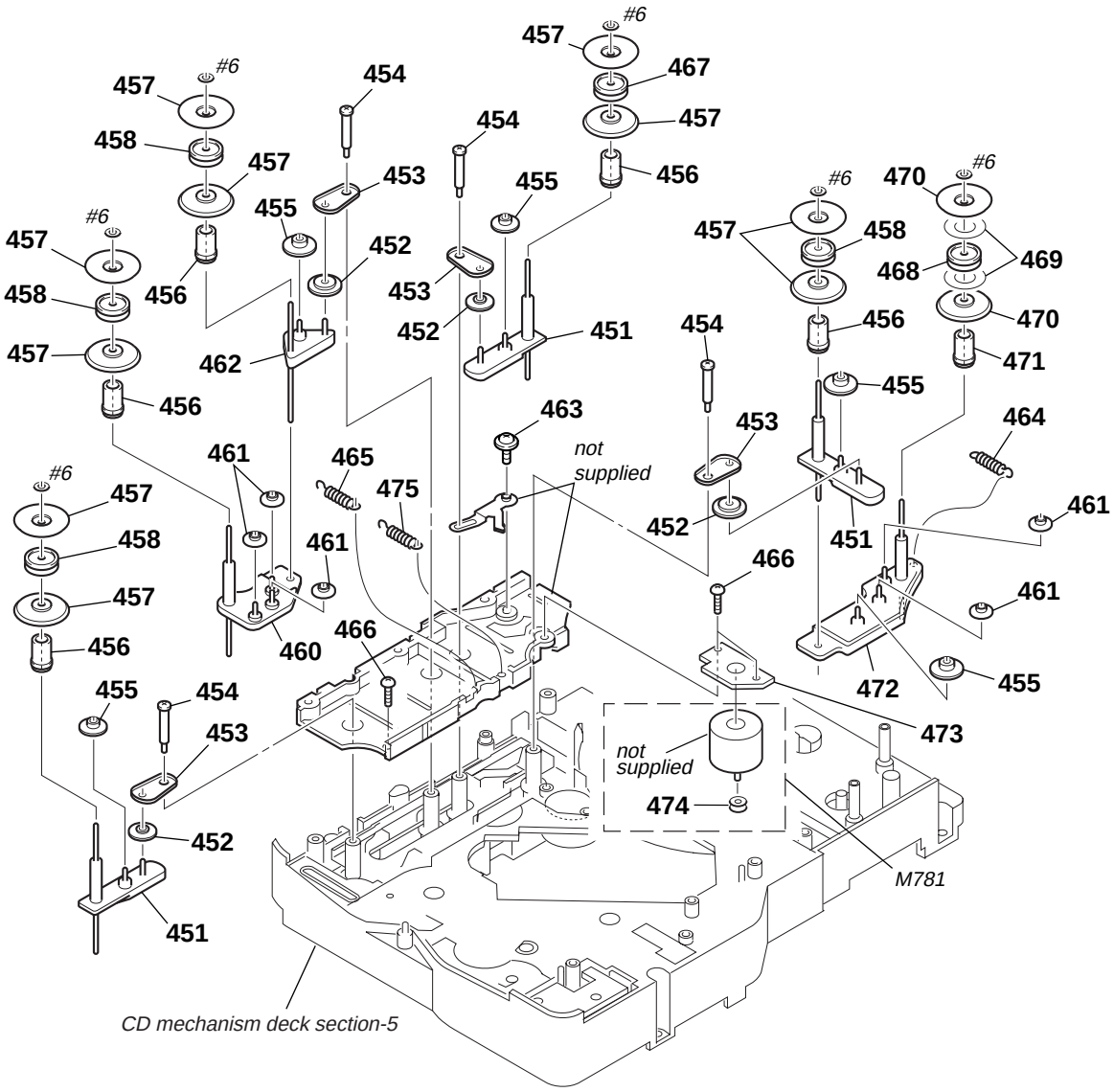
9-7. CD Mechanism Section-3 (CDM69CH-K6BD71C)



Ref. No.	Part No.	Description	Remark
401	X-4955-448-1	PULLEY(A)(KSM213)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	4-243-703-01	YOKE (213)	
409	4-239-649-01	PARASOL (STOCKER)	
411	4-244-035-01	ROLLER (STOCKER), RUBBER	
412	4-239-640-01	PINION (SLIDER)	

Ref. No.	Part No.	Description	Remark
413	4-243-291-01	SPRING, TORSION	
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	1-471-244-11	MAGNET	
423	4-244-032-01	ROLLER, RUBBER	

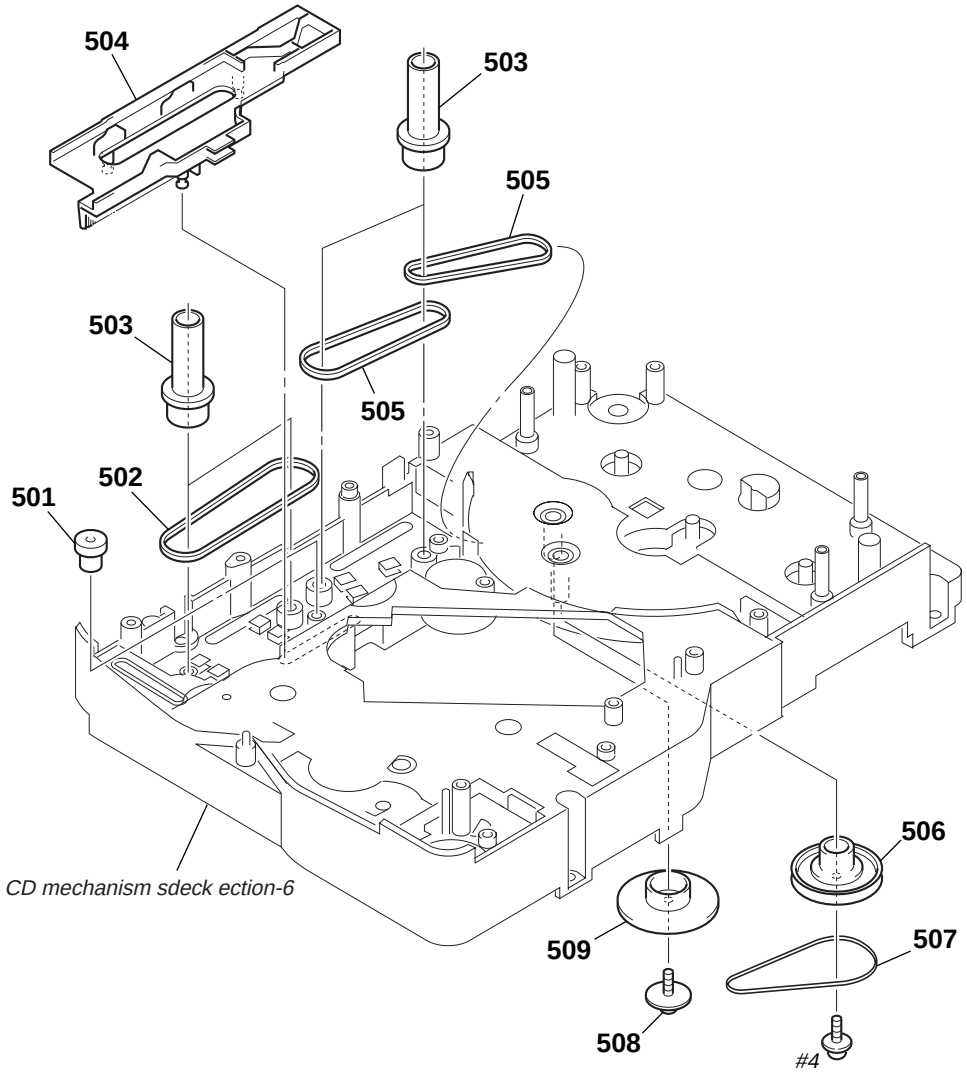
9-8. CD Mechanism Section-4 (CDM69CH-K6BD71C)



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	

Ref. No.	Part No.	Description	Remark
465	4-240-041-01	SPRING (SLIDER 2), TENSION	
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	

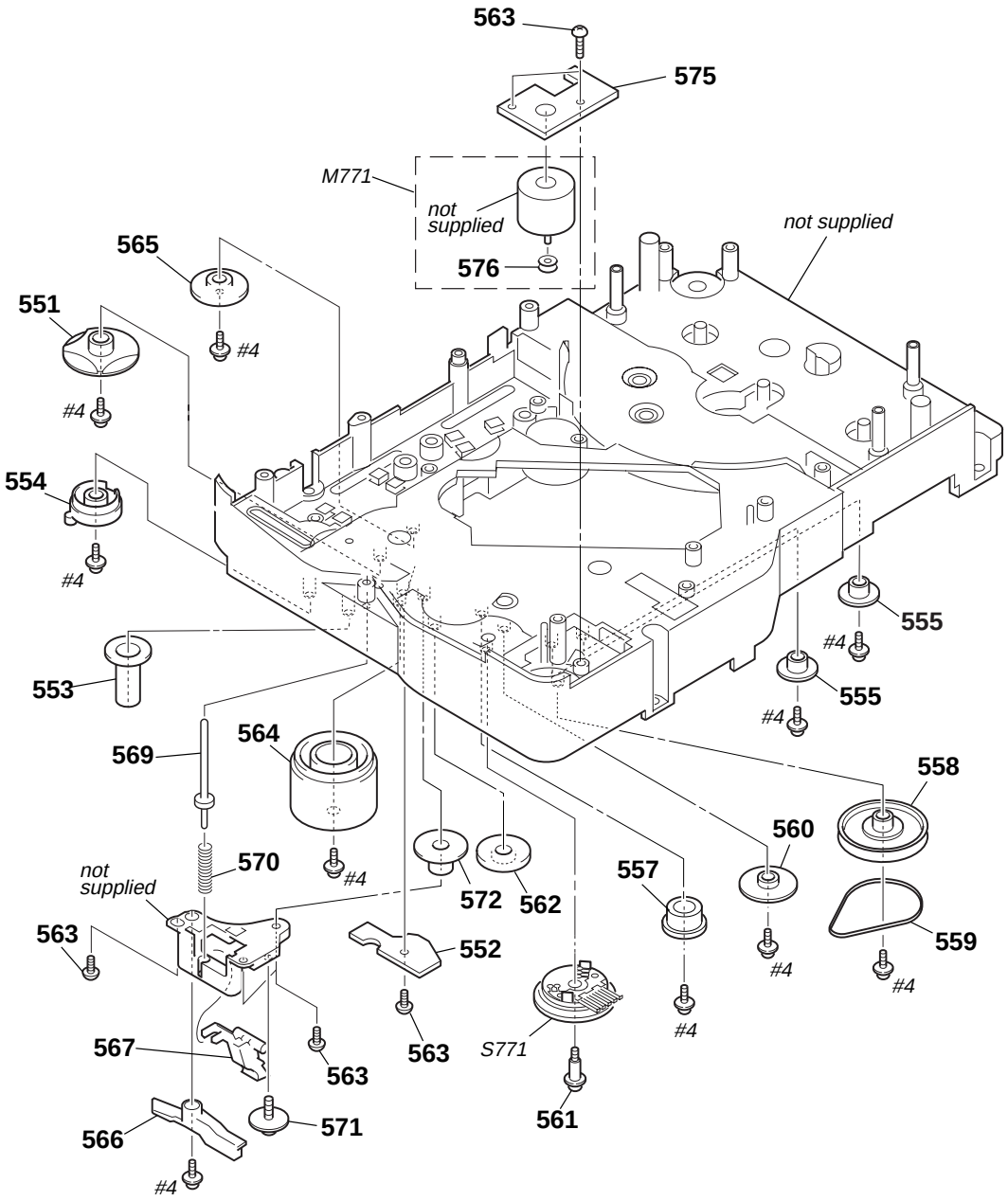
9-9. CD Mechanism Section-5 (CDM69CH-K6BD71C)



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	

Ref. No.	Part No.	Description	Remark
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)	

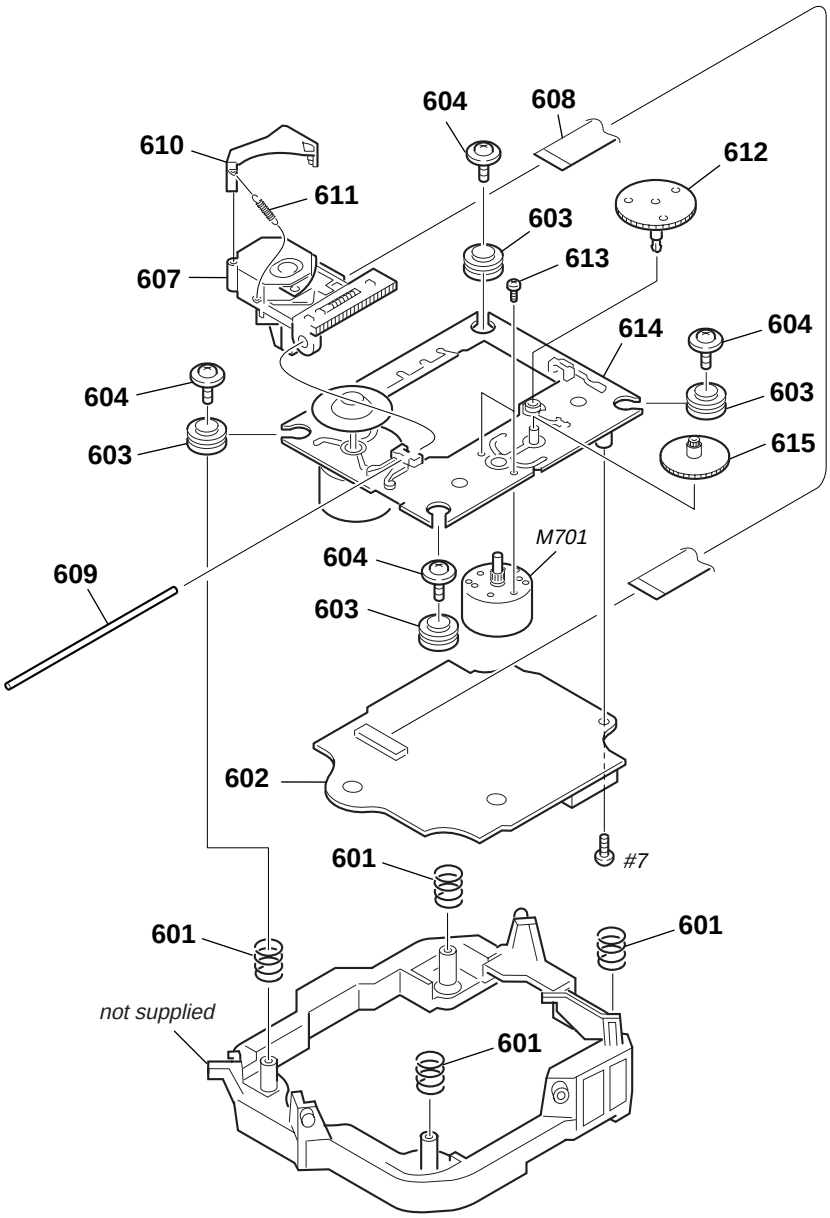
9-10. CD Mechanism Section-6 (CDM69CH-K6BD71C)



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. Optical Pick-up Section (KSS-213D)



Ref. No.	Part No.	Description	Remark
601	4-229-806-01	SPRING (213), COMPRESSION	
602	A-4732-699-A	BD BOARD, COMPLETE	
603	4-227-679-01	INSULATOR (213)	
604	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
⚠607	8-820-020-02	DEVICE,OPTICAL KSS-213D	
608	1-823-859-11	WIRE (FLAT TYPE)(16 CORE)	
609	2-626-908-02	SHAFT, SLED	
610	2-626-697-03	SHUTTER (F), LENS	

Ref. No.	Part No.	Description	Remark
611	2-626-702-02	SPRING, EXTENSION	
612	2-626-907-02	GEAR (A)	
613	3-713-786-51	SCREW +P 2X3	
614	X-2161-802-1	CHASSIS ASSY (DCP), TT	
615	2-627-003-01	GEAR (B)(RP)	
M701	X-2625-769-1	GEAR ASSY (MB)(RP), MOTOR (SLED)	
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	

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

SECTION 10
ELECTRICAL PARTS LIST

BD

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
  AUS : Australian model.
  CND: Canadian model.
  E2 : 120 V AC area in E model.
  E3 : 220-240 V AC area in E model.
  KR : Korean model.
  MX : Mexican model.
  RU : Russian model.
  TH : Thai model.
  TW : Taiwan 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.

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

Ref. No.	Part No.	Description			Remarks
	A-4732-699-A	BD BOARD,COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C703	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C704	1-126-391-11	ELECT CHIP	47uF	20.00%	6.3V
C705	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C707	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C708	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C709	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C710	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C711	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C712	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C713	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C714	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C715	1-126-401-21	ELECT CHIP	1uF	20.00%	50V
C716	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C717	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C718	1-115-156-11	CERAMIC CHIP	1uF		10V
C719	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C720	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C721	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C722	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C723	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C729	1-128-360-11	ELECT CHIP	220uF	20.00%	10V
C731	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C732	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C733	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C734	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C735	1-162-918-11	CERAMIC CHIP	18PF	5.00%	50V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C742	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C743	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V
C744	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C746	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C747	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C748	1-128-360-11	ELECT CHIP	220uF	20.00%	10V
C753	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C754	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C756	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C761	1-162-941-11	CERAMIC CHIP	10PF		50V
C802	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C803	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C804	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C805	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C806	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C807	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C810	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C811	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C812	1-115-156-11	CERAMIC CHIP	1uF		10V
C813	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C814	1-126-392-11	ELECT CHIP	100uF	20.00%	6.3V
C815	1-128-360-11	ELECT CHIP	220uF	20.00%	10V
C816	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C817	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C823	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C824	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C825	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C829	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C830	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C831	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C834	1-128-360-11	ELECT CHIP	220uF	20.00%	10V
C835	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C837	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C843	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C844	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C856	1-115-156-11	CERAMIC CHIP	1uF		10V
C857	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C858	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C859	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C860	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN708	1-817-244-11	CONNECTOR,FFC 16P			
CN710	1-778-874-11	CONNECTOR,FFC (LIF (NON-ZIF)) 19P			
		< FERRITE BEAD >			
FB701	1-550-907-21	FERRITE	0uH		
FB707	1-550-907-21	FERRITE	0uH		
FB708	1-550-907-21	FERRITE	0uH		
FB761	1-550-907-21	FERRITE	0uH		
FB801	1-550-907-21	FERRITE	0uH		
FB802	1-550-907-21	FERRITE	0uH		
FB803	1-550-907-21	FERRITE	0uH		
FB804	1-550-907-21	FERRITE	0uH		

BD CONNECTOR

Ref. No.	Part No.	Description			Remarks
FB805	1-550-907-21	FERRITE	0uH		
FB806	1-550-907-21	FERRITE	0uH		
FB807	1-550-907-21	FERRITE	0uH		
FB808	1-550-907-21	FERRITE	0uH		
		< IC >			
IC721	6-701-796-01	IC LC78646E-E			
IC722	6-704-220-01	IC BA5836FP			
IC801	6-704-008-01	IC LC78684E-E			
IC802	6-704-009-01	IC LC32V4265CT-25-MPB-E			
IC803	6-704-007-01	IC MM1571J			
		< TRANSISTOR >			
Q701	8-729-054-51	TRANSISTOR	UP04116008S0		
		< RESISTOR >			
R701	1-216-841-11	METAL CHIP	47K	5%	1/10W
R702	1-216-835-11	METAL CHIP	15K	5%	1/10W
R703	1-216-835-11	METAL CHIP	15K	5%	1/10W
R704	1-216-835-11	METAL CHIP	15K	5%	1/10W
R705	1-216-835-11	METAL CHIP	15K	5%	1/10W
R706	1-216-841-11	METAL CHIP	47K	5%	1/10W
R707	1-216-797-11	METAL CHIP	10	5%	1/10W
R708	1-216-833-11	METAL CHIP	10K	5%	1/10W
R709	1-216-838-11	METAL CHIP	27K	5%	1/10W
R711	1-216-815-11	METAL CHIP	330	5%	1/10W
R713	1-216-821-11	METAL CHIP	1K	5%	1/10W
R714	1-216-809-11	METAL CHIP	100	5%	1/10W
R715	1-216-809-11	METAL CHIP	100	5%	1/10W
R716	1-216-809-11	METAL CHIP	100	5%	1/10W
R717	1-216-809-11	METAL CHIP	100	5%	1/10W
R718	1-216-809-11	METAL CHIP	100	5%	1/10W
R719	1-216-809-11	METAL CHIP	100	5%	1/10W
R720	1-216-809-11	METAL CHIP	100	5%	1/10W
R721	1-216-809-11	METAL CHIP	100	5%	1/10W
R722	1-216-821-11	METAL CHIP	1K	5%	1/10W
R725	1-216-819-11	METAL CHIP	680	5%	1/10W
R726	1-216-819-11	METAL CHIP	680	5%	1/10W
R727	1-216-809-11	METAL CHIP	100	5%	1/10W
R728	1-216-841-11	METAL CHIP	47K	5%	1/10W
R729	1-216-834-11	METAL CHIP	12K	5%	1/10W
R730	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R731	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R732	1-216-864-11	METAL CHIP	0	5%	1/10W
R738	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R739	1-216-864-11	METAL CHIP	0	5%	1/10W
R740	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R741	1-216-864-11	METAL CHIP	0	5%	1/10W
R744	1-216-845-11	METAL CHIP	100K	5%	1/10W
R745	1-216-809-11	METAL CHIP	100	5%	1/10W
R746	1-216-803-11	METAL CHIP	33	5%	1/10W
R747	1-216-803-11	METAL CHIP	33	5%	1/10W
R760	1-216-809-11	METAL CHIP	100	5%	1/10W
R761	1-216-821-11	METAL CHIP	1K	5%	1/10W
R762	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R765	1-216-857-11	METAL CHIP	1M	5%	1/10W
R801	1-216-809-11	METAL CHIP	100	5%	1/10W
R802	1-216-809-11	METAL CHIP	100	5%	1/10W
R803	1-216-809-11	METAL CHIP	100	5%	1/10W
R804	1-216-809-11	METAL CHIP	100	5%	1/10W
R805	1-216-809-11	METAL CHIP	100	5%	1/10W
R806	1-216-809-11	METAL CHIP	100	5%	1/10W
R807	1-216-809-11	METAL CHIP	100	5%	1/10W
R817	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R818	1-216-811-11	METAL CHIP	150	5%	1/10W
R819	1-216-821-11	METAL CHIP	1K	5%	1/10W
R820	1-216-821-11	METAL CHIP	1K	5%	1/10W
R823	1-216-809-11	METAL CHIP	100	5%	1/10W
R824	1-216-809-11	METAL CHIP	100	5%	1/10W
R825	1-216-809-11	METAL CHIP	100	5%	1/10W
R826	1-216-809-11	METAL CHIP	100	5%	1/10W
R827	1-216-809-11	METAL CHIP	100	5%	1/10W
R828	1-216-809-11	METAL CHIP	100	5%	1/10W
R829	1-216-809-11	METAL CHIP	100	5%	1/10W
R832	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R833	1-216-809-11	METAL CHIP	100	5%	1/10W
R834	1-216-809-11	METAL CHIP	100	5%	1/10W
R860	1-216-809-11	METAL CHIP	100	5%	1/10W
		< SWITCH >			
S701	1-771-853-11	SWITCH,DETECTION (LIMIT IN)			
		< VIBRATOR >			
X701	1-767-408-21	VIBRATOR,CRYSTAL (16.9344MHz)			
**********					
	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
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			

CONNECTOR MAIN

Ref. No.	Part No.	Description			Remarks
		< 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	1-247-807-31	CARBON	100	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	1-249-430-11	CARBON	12K	5%	1/4W
**********					
	A-4734-344-A	MAIN BOARD,COMPLETE (EXCEPT AEP,UK,TH)			
	A-4734-354-A	MAIN BOARD,COMPLETE (AEP,UK)			
	A-4747-553-A	MAIN BOARD,COMPLETE (TH)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3			
		< CAPACITOR >			
C101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (AEP,UK)
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (AEP,UK)
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

Ref. No.	Part No.	Description			Remarks
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
C304	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
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
C316	1-162-962-11	CERAMIC CHIP	470PF	10%	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
C322	1-126-916-11	ELECT	1000uF	20.00%	6.3V
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
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

MAIN

Ref. No.	Part No.	Description			Remarks
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
C361	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C362	1-162-960-11	CERAMIC CHIP	220PF	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
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
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
C419	1-126-959-11	ELECT	0.47uF	20.00%	50V
C420	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 (EXCEPT AEP,UK)			
CN101	1-784-737-11	CONNECTOR,FFC 15P (AEP,UK)			
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			
		< DIODE >			
D101	8-719-988-61	DIODE 1SS355TE-17 (AEP,UK)			
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			
D307	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			
		< FERRITE BEAD >			
FB301	1-550-907-21	FERRITE	0uH		
		< 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			
		< JACK >			
JK301	1-793-987-11	JACK,PIN 2P (MD IN)			
		< 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
JR306	1-216-864-11	METAL CHIP	0	5%	1/10W
JR310	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)			

Ref. No.	Part No.	Description				Remarks
L301	1-410-521-11	INDUCTOR	100uH			
		< IC >				
PH301	8-749-019-25	IC TOTX141 (CD DIGITAL OUT (OPTICAL))				
		< 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			
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	(EXCEPT AEP,UK)
R101	1-216-841-11	METAL CHIP	47K	5%	1/10W	(AEP,UK)
R102	1-216-845-11	METAL CHIP	100K	5%	1/10W	(EXCEPT AEP,UK)
R102	1-216-841-11	METAL CHIP	47K	5%	1/10W	(AEP,UK)
R103	1-216-813-11	METAL CHIP	220	5%	1/10W	(AEP,UK)
R104	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	(AEP,UK)
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	

Ref. No.	Part No.	Description			Remarks
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	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R242	1-216-825-11	METAL CHIP	2.2K	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
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

MAIN | MODE MOTOR | PANEL

Ref. No.	Part No.	Description			Remarks
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
R356	1-216-837-11	METAL CHIP	22K	5%	1/10W
R357	1-216-845-11	METAL CHIP	100K	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
R367	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R368	1-216-829-11	METAL CHIP	4.7K	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
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

Ref. No.	Part No.	Description			Remarks
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
R435	1-216-806-11	METAL CHIP	56	5%	1/10W
R436	1-216-806-11	METAL CHIP	56	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
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	CARBON	100	5%	1/2W
R452	1-260-087-21	CARBON	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
		< SWITCH >			
SW401	1-771-264-11	SWITCH,PUSH (DETECTION)(1 KEY) (TAPE OPEN/CLOSE)			
**********					
	1-686-724-12	MODE MOTOR BOARD			
		**********			
**********					
	A-4734-337-A	PANEL BOARD,COMPLETE (US,CND)			
	A-4734-349-A	PANEL BOARD,COMPLETE (AEP,UK,RU)			
	A-4734-360-A	PANEL BOARD,COMPLETE (E3,TW)			
	A-4747-533-A	PANEL BOARD,COMPLETE (MX,E2)			
	A-4747-535-A	PANEL BOARD,COMPLETE (KR,AUS)			
	A-4747-545-A	PANEL BOARD,COMPLETE (TH)			
		**********			
	4-238-614-01	FL HOLDER (R)			
		< CAPACITOR >			
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	1-124-584-00	ELECT	100uF	20%	10V
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

PANEL

Ref. No.	Part No.	Description			Remarks
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 >			
D606	8-719-988-61	DIODE 1SS355TE-17 (TH)			
D607	8-719-988-61	DIODE 1SS355TE-17 (KR,AUS)			
D608	8-719-988-61	DIODE 1SS355TE-17 (US,CND,E2,KR,MX,AUS)			
D609	8-719-988-61	DIODE 1SS355TE-17 (US,CND,AEP,UK,RU)			
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 (E2,E3,KR,TW,TH,MX,AUS)			
		< 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 TUBE >			
FLD601	1-518-923-11	INDICATOR TUBE,FLUORESCENT			
		< IC >			
IC601	6-803-002-01	IC LC876796B-51K7-E			
IC602	6-704-045-01	IC MM1574A			
IC603	8-759-533-04	IC M62703ML-E1			
		< JACK >			
JK601	1-691-293-21	JACK (PHONES)			

Ref. No.	Part No.	Description			Remarks
		< JUMPER RESISTOR >			
JR605	1-216-864-11	METAL CHIP	0	5%	1/10W (EXCEPT AEP,UK,RU)
JR606	1-216-864-11	METAL CHIP	0	5%	1/10W (EXCEPT AEP,UK,RU)
JR607	1-216-864-11	METAL CHIP	0	5%	1/10W
		< DIODE >			
LED607	6-500-414-01	DIODE HL-30105Q2AT (DISC 1)			
LED608	6-500-414-01	DIODE HL-30105Q2AT (DISC 2)			
LED609	6-500-414-01	DIODE HL-30105Q2AT (DISC 3)			
LED610	6-500-414-01	DIODE HL-30105Q2AT (DISC 4)			
LED611	6-500-414-01	DIODE HL-30105Q2AT (DISC 5)			
LED614	6-500-415-01	DIODE HL-30105Q2IT (I/⏻)			
		< TRANSISTOR >			
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 >			
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
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
R053	1-216-841-11	METAL CHIP	47K	5%	1/10W
R054	1-216-841-11	METAL CHIP	47K	5%	1/10W
R055	1-216-841-11	METAL CHIP	47K	5%	1/10W
R056	1-216-841-11	METAL CHIP	47K	5%	1/10W
R057	1-216-841-11	METAL CHIP	47K	5%	1/10W
R058	1-216-841-11	METAL CHIP	47K	5%	1/10W
R059	1-216-841-11	METAL CHIP	47K	5%	1/10W
R060	1-216-841-11	METAL CHIP	47K	5%	1/10W
R061	1-216-841-11	METAL CHIP	47K	5%	1/10W
R062	1-216-841-11	METAL CHIP	47K	5%	1/10W
R063	1-216-841-11	METAL CHIP	47K	5%	1/10W
R064	1-216-841-11	METAL CHIP	47K	5%	1/10W
R065	1-216-841-11	METAL CHIP	47K	5%	1/10W
R066	1-216-841-11	METAL CHIP	47K	5%	1/10W
R067	1-216-841-11	METAL CHIP	47K	5%	1/10W
R068	1-216-841-11	METAL CHIP	47K	5%	1/10W
R069	1-216-841-11	METAL CHIP	47K	5%	1/10W
R070	1-216-841-11	METAL CHIP	47K	5%	1/10W
R071	1-216-841-11	METAL CHIP	47K	5%	1/10W
R072	1-216-841-11	METAL CHIP	47K	5%	1/10W
R073	1-216-841-11	METAL CHIP	47K	5%	1/10W
R074	1-216-841-11	METAL CHIP	47K	5%	1/10W
R075	1-216-841-11	METAL CHIP	47K	5%	1/10W
R076	1-216-841-11	METAL CHIP	47K	5%	1/10W
R077	1-216-841-11	METAL CHIP	47K	5%	1/10W
R078	1-216-841-11	METAL CHIP	47K	5%	1/10W
R079	1-216-841-11	METAL CHIP	47K	5%	1/10W
R080	1-216-841-11	METAL CHIP	47K	5%	1/10W
R081	1-216-841-11	METAL CHIP	47K	5%	1/10W
R082	1-216-841-11	METAL CHIP	47K	5%	1/10W

PANEL

Ref. No.	Part No.	Description			Remarks
R083	1-216-841-11	METAL CHIP	47K	5%	1/10W
R084	1-216-841-11	METAL CHIP	47K	5%	1/10W
R085	1-216-841-11	METAL CHIP	47K	5%	1/10W
R086	1-216-841-11	METAL CHIP	47K	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
R602	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP,UK,RU)
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
R608	1-216-809-11	METAL CHIP	100	5%	1/10W (AEP,UK,RU)
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
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
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-CHIP	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	1-216-805-11	METAL CHIP	47	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)			
		< IC >			
RM601	6-600-174-01	IC RPM7240-H4 (B)			
		< SWITCH >			
S601	1-762-196-21	SWITCH,TACT (DISC 1)			
S602	1-762-196-21	SWITCH,TACT (DISC 2)			
S603	1-762-196-21	SWITCH,TACT (DISC 3)			
S604	1-762-196-21	SWITCH,TACT (DISC 4)			
S605	1-762-196-21	SWITCH,TACT (DISC 5)			

PANEL **PWR AMP**

Ref. No.	Part No.	Description			Remarks
S606	1-762-196-21	SWITCH,TACT (DISC 5 ⏏)			
S607	1-762-196-21	SWITCH,TACT (DISC 4 ⏏)			
S608	1-762-196-21	SWITCH,TACT (DISC 3 ⏏)			
S609	1-762-196-21	SWITCH,TACT (DISC 2 ⏏)			
S610	1-762-196-21	SWITCH,TACT (DISC 1 ⏏)			
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 (PRESET/ALBUM-)			
S622	1-762-196-21	SWITCH,TACT (PRESET/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 >			
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	
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	
C521	1-165-183-91	CERAMIC CHIP	3.5PF	0.25PF 50V	
C522	1-165-183-91	CERAMIC CHIP	3.5PF	0.25PF 50V	
C523	1-164-156-11	CERAMIC CHIP	0.1uF	25V	

Ref. No.	Part No.	Description			Remarks
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	
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			

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

PWR AMP | PWR TRANS | ROLLER MOTOR | SENSOR | SENSOR (FAN) | ST ENCODER

Ref. No.	Part No.	Description			Remarks
		< 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
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
		< RESISTOR >			
⚠R901	1-219-237-91	SOLID	3.3M	20%	1/2W (US,CND)
**********					
	1-686-726-12	ROLLER MOTOR BOARD			
		**********			
**********					
	1-686-723-12	SENSOR BOARD			
		**********			
		< IC >			
IC751	8-749-017-45	SENSOR,PHONT RPR-220C1N (DISC INSERT DETECT SENSOR)			
**********					
	1-689-248-12	SENSOR (FAN) BOARD			
		**********			
		< THERMISTOR >			
TH501	1-807-796-11	THERMISTOR			
**********					
		ST ENCODER BOARD			
		**********			
**********					

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STOCKER MOTOR **SUB TURANS** **SW (1)** **SW (2)** **SW (3)** **SW (4)**

Ref. No.	Part No.	Description	Remarks
	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	(EXCEPT E2,E3,TW)
⚠CN905	1-568-106-11	PIN,CONNECTOR (3.96mm PITCH) 4P	(E2,E3,TW)
⚠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)	(E2,E3,TW)
		< TRANSFORMER >	
⚠T902	1-439-830-11	TRANSFORMER,POWER (US,CND,MX)	
⚠T902	1-439-832-11	TRANSFORMER,POWER	(E2,E3,KR,TW,TH,AUS)
⚠T902	1-439-831-11	TRANSFORMER,POWER (AEP,UK,RU)	
**********			
	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)	
**********			
	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)	
**********			
		MISCELLANEOUS	
		**********	
11	1-827-392-11	WIRE (FLAT TYPE)(8 CORE)	
12	1-796-351-41	MECHANISM,SINGLE 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	1-693-625-11	TUNER (FM/AM)(US,CND)	
107	1-693-626-11	TUNER (FM/AM)(AEP,UK)	
107	1-693-627-11	TUNER (FM/AM)(RU)	
107	1-693-628-11	TUNER (FM/AM)(E2,E3,TW,TH,MX,AUS)	
107	1-693-629-11	TUNER (FM/AM)(KR)	
108	1-769-946-11	WIRE (FLAT TYPE)(11 CORE)(EXCEPT AEP,UK)	
108	1-773-009-11	WIRE (FLAT TYPE)(15 CORE)(AEP,UK)	
⚠151	1-690-608-11	CORD,POWER (AUS)	
⚠151	1-769-079-22	CORD,POWER (KR)	
⚠151	1-783-531-11	CORD,POWER (US,CND)	
⚠151	1-783-532-11	CORD,POWER (AEP,UK,RU,TW)	
⚠151	1-791-901-12	CORD,POWER (E2,E3,MX)	
⚠151	1-824-818-11	CORD,POWER (WITH CONNECTOR)(TH)	
155	1-827-390-11	WIRE (FLAT TYPE)(27 CORE)	
156	1-827-393-11	WIRE (FLAT TYPE)(19 CORE)	
422	1-471-244-11	MAGNET	
⚠607	8-820-020-02	DEVICE,OPTICAL KSS-213D	
608	1-823-859-11	WIRE (FLAT TYPE)(16 CORE)	
⚠F901	1-533-454-11	FUSE,GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F901	1-533-473-11	FUSE,GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F902	1-533-454-11	FUSE,GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F902	1-533-473-11	FUSE,GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F903	1-533-451-11	FUSE,GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F903	1-533-470-11	FUSE,GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F904	1-533-451-11	FUSE,GLASS TUBE (DIA. 5)(US,CND,MX)	
⚠F904	1-533-470-11	FUSE,GLASS TUBE (DIA. 5)	(EXCEPT US,CND,MX)
⚠F905	1-533-471-11	FUSE,GLASS TUBE (DIA. 5)(E2,E3,TW)	
M701	X-2625-769-1	GEAR ASSY (MB)(RP), MOTOR (SLED)	
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	1-439-827-11	TRANSFORMER,POWER	(E2,E3,KR,TW,TH,AUS)
⚠T901	1-439-828-11	TRANSFORMER,POWER (US,CND,MX)	
⚠T901	1-439-829-11	TRANSFORMER,POWER (AEP,UK,RU)	
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The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièe portant le numéro spécifié.

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	2003.06	New