

TC-TX101

SERVICE MANUAL

AEP Model
UK Model
E Model
Tourist Model



- This set is the optional stereo cassette deck that can be used only with section HCD-101 (AEP, UK model) / CMT-101 (E, Tourist model).

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| | |
|------------------------------------|----------|
| Model Name Using Similar Mechanism | TC-TX313 |
| Tape Transport Mechanism Type | — |

SPECIFICATIONS

| | |
|-----------------------------------|---|
| Recording system | 4-track 2-channel stereo |
| Frequency response (DOLBY NR OFF) | 50 - 14,000 Hz (± 3 dB), using Sony TYPE I cassettes 50 - 15,000 Hz (± 3 dB), using Sony TYPE II cassettes |
| Dimensions | Approx. 142 × 125 × 235 mm (w / h / d) incl. projecting parts and controls |
| Mass | Approx. 2 kg |

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK



SONY[®]

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SAFETY-RELATED COMPONENT WARNING!!

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

Notes on Chip Component Replacement

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

SECTION 1 SERVICE NOTE

1-1. SUPPLYING POWER DURING SERVICING

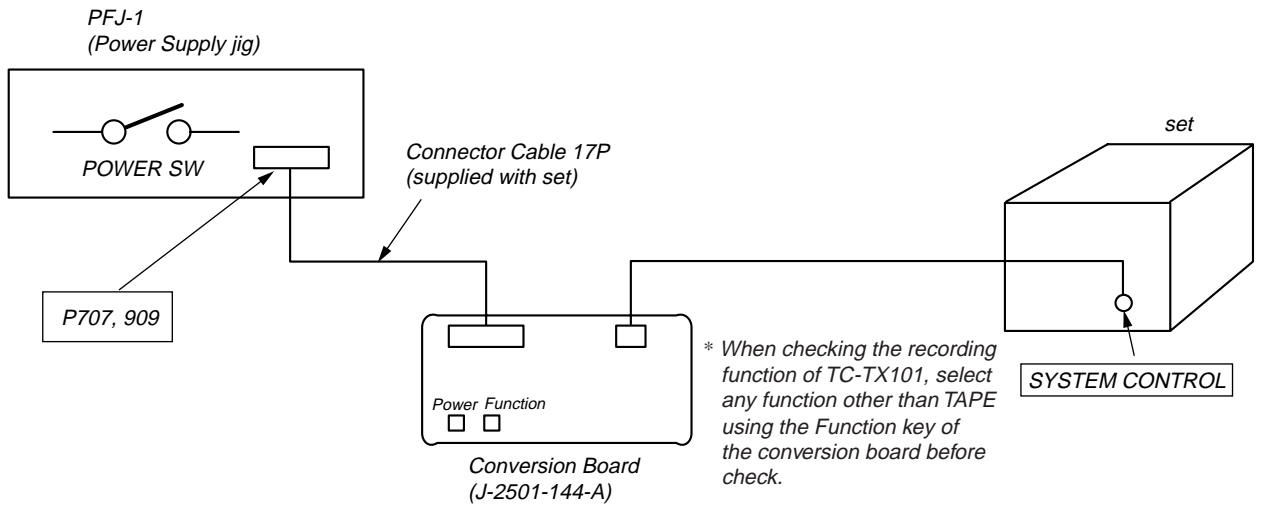
This equipment cannot operate without using a separate power supply. Connect this set to the HCD-101.

To apply power set the SYSTEM POWER switch of HCD-101.

When other units are not available use the PFJ-1 power supply jig.

When using the PFJ-1, press the POWER switch of the conversion board to turn on the power.

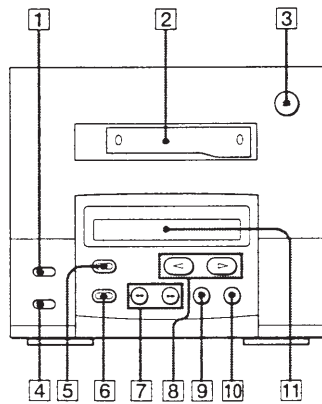
• Connection Diagram



SECTION 2 GENERAL

This section extracted from
instruction manual.

Parts and Controls



- 1 DOLBY NR OFF/ON switch
- 2 Cassette slot
- 3 ▲EJECT button
- 4 DIRECTION ⇐/⇒ switch
- 5 REC button
- 6 CD SYNC button
- 7 AMS/▶▶ (fast forward) button
- ▶▶ (fast backward) button
- 8 ▶▶ (upper side play) button
- ▶▶ (lower side play) button
- 9 || (pause) button
- 10 ■ (stop) button
- 11 Display window

SECTION 3 TEST MODE

3-1. CHECKING THE ITEMS OF TEST MODE

The set allows you to check the items of the test mode although this may not be directly related with the adjustment.

1] Setting/Releasing the Test Mode:

- 1) Setting
With power OFF, short between test pin ① and pin ② of TP1 on the MAIN board. (See page 16.)
Then, turn power ON to enter the test mode.
- 2) Releasing
Open between pin ① and pin ② of TP1.

2] Items of Test Mode

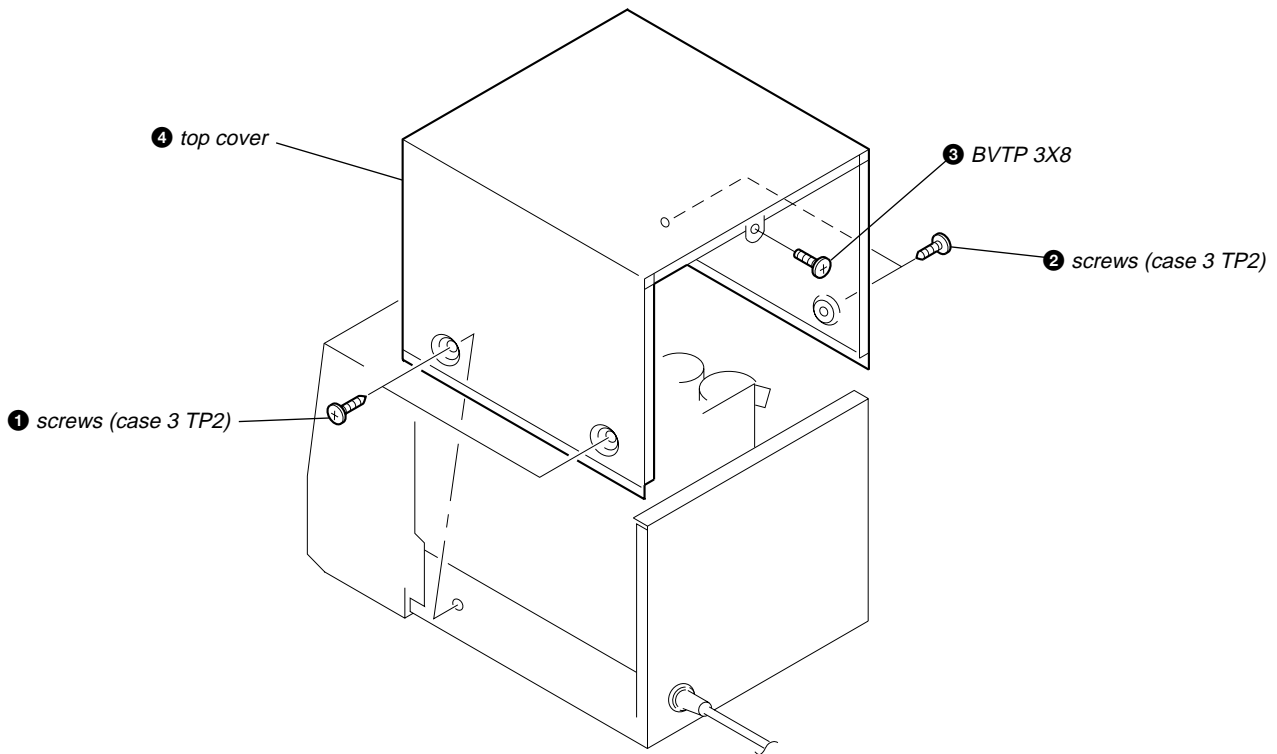
- 1) Memory Stop
 - 1-1) In side A record mode, press the REW (◀◀) button.
The tape is rewind to the start point of recording and stopped.
 - 1-2) In side B record mode, press the FF (▶▶) button.
The tape is rewind to the start point of recording and stopped.
- 2) Memory Play
 - 2-1) In side A record mode, press the FWD Auto Play (▶+◀◀) buttons simultaneously. The tape is rewind to the start point of recording and FWD played.
 - 2-2) In side B record mode, press the REV Auto Play (◀+▶▶) buttons simultaneously. The tape is rewind to the start point of recording and REV played.

- 3) All LED Flickering
When no tape is inserted, all LED indicators are flickering.
- 4) Aging Operation
When tape with record erase preventing claw is inserted for both sides A and B, enter the aging operation start command by pressing [■] and [CD SYNC] simultaneously. The system will change the direction to one side and perform the following operations:
 - ① Rewind in REW mode until side A of tape is stopped.
 - ② Playback tape in FWD mode for 1 minute.
 - ③ Pause mode.
 - ④ Record tape for 3 minutes.
 - ⑤ Forward tape in FF mode to the end of side A of tape.
 - ⑥ Shut off and switch to side B.
 - ⑦ Playback tape in REV mode for 1 minute.
 - ⑧ Pause mode.
 - ⑨ Record tape for 3 minutes.
 - ⑩ Forward tape in FF mode to the end of side B of tape.
 - ⑪ Shut off and switch to side A.
 - ⑫ Repeat the procedure from ② to ⑪.
 - ⑬ Pressing the STOP (■) button will release the set from these operations.

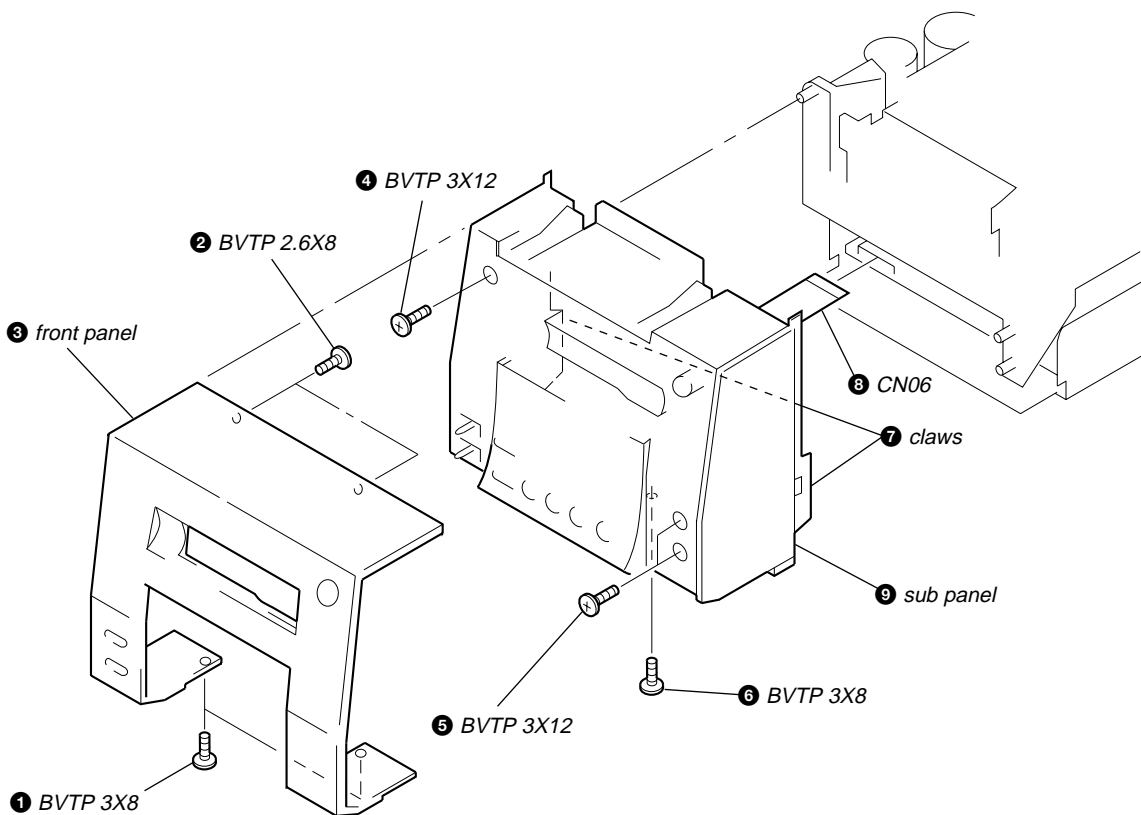
SECTION 4 DISASSEMBLY

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

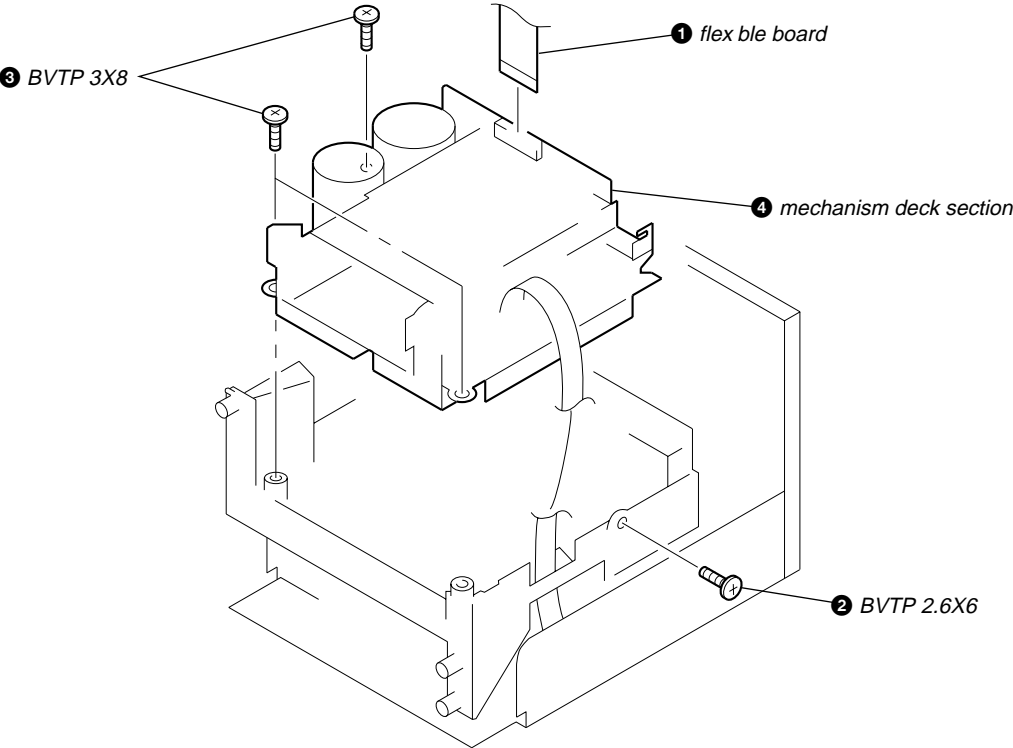
4-1. TOP COVER



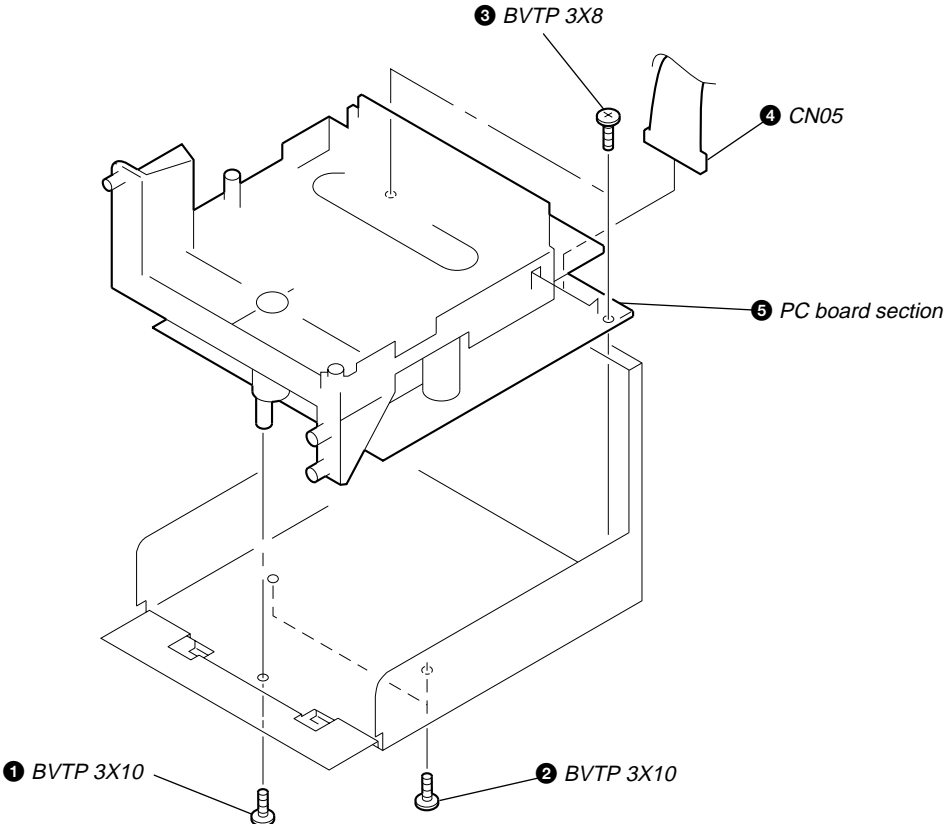
4-2. FRONT PANEL



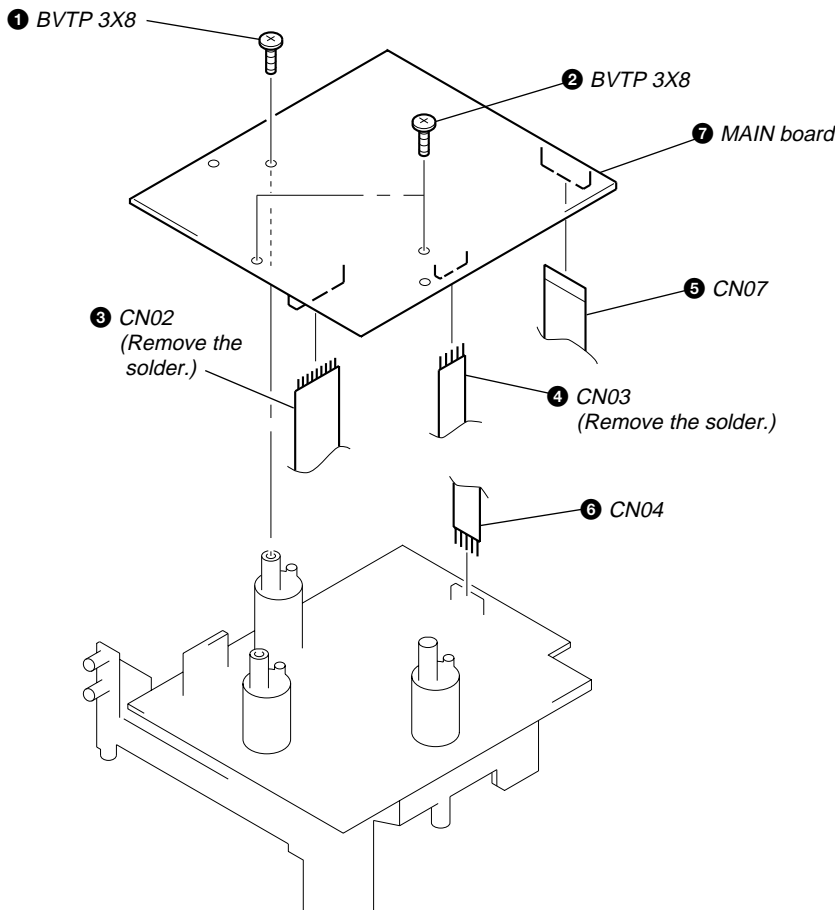
4-3. MECHANISM DECK SECTION



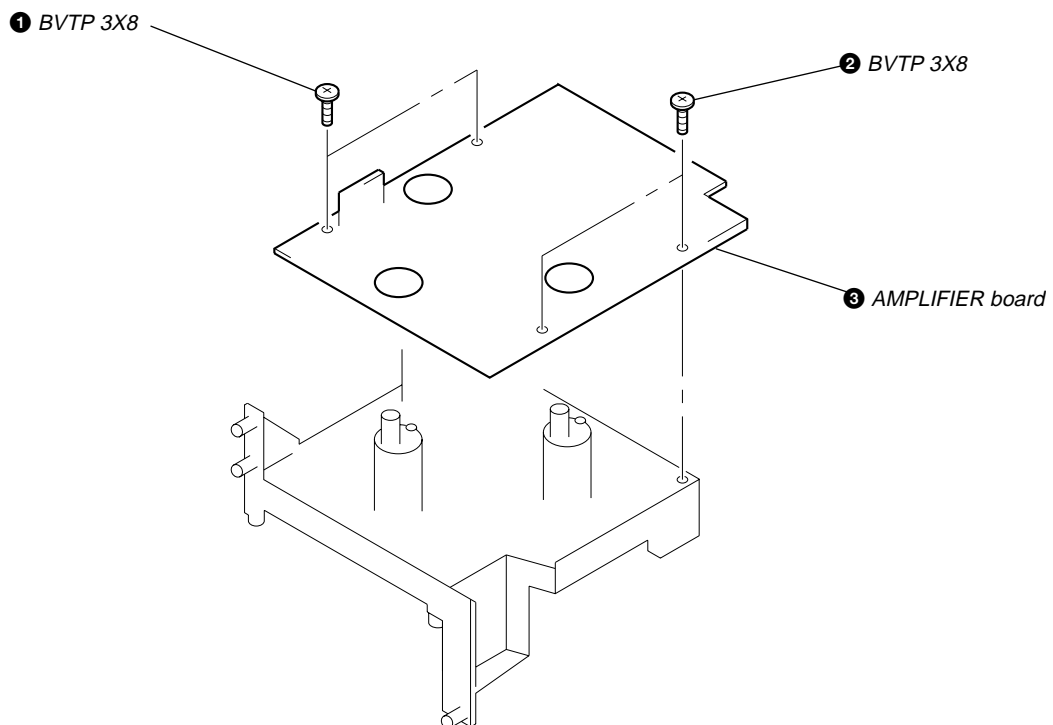
4-4. PC BOARD SECTION



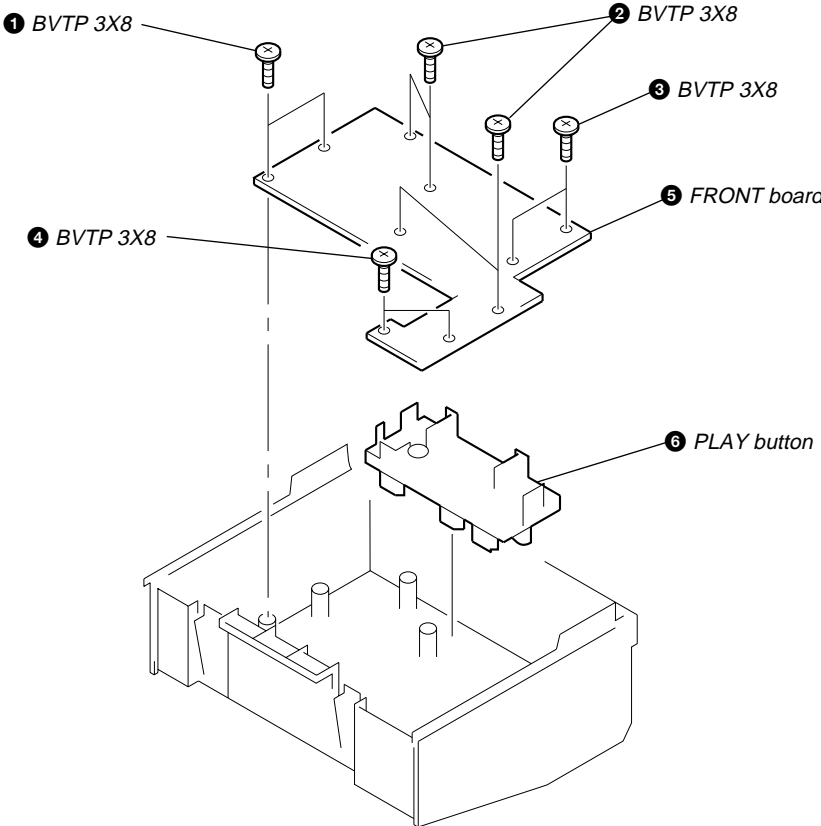
4-5. MAIN BOARD



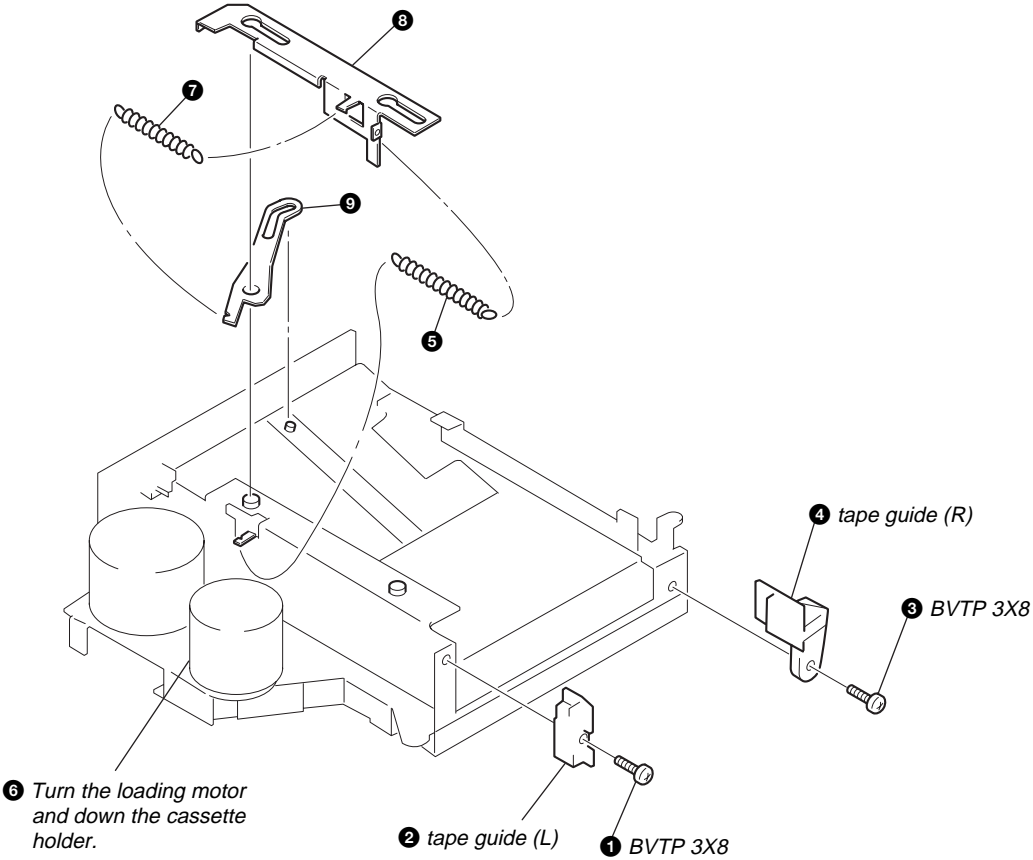
4-6. AMPLIFIER BOARD



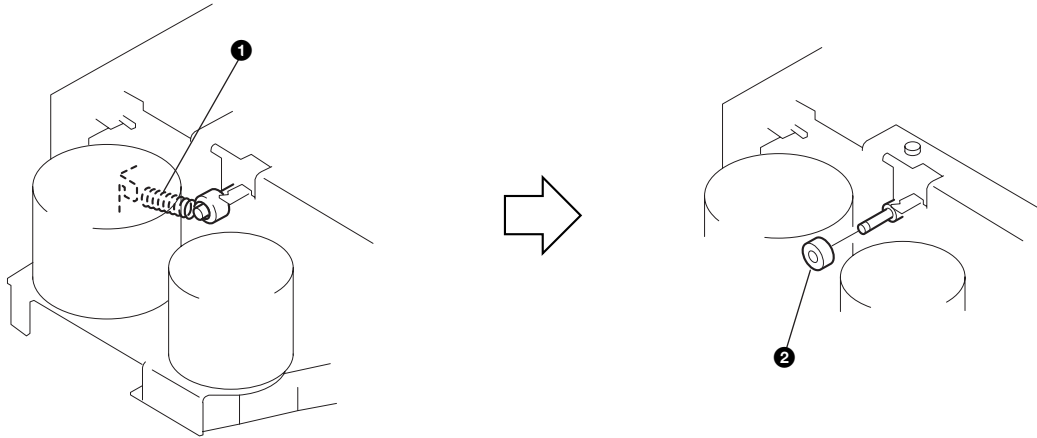
4-7. FRONT BOARD



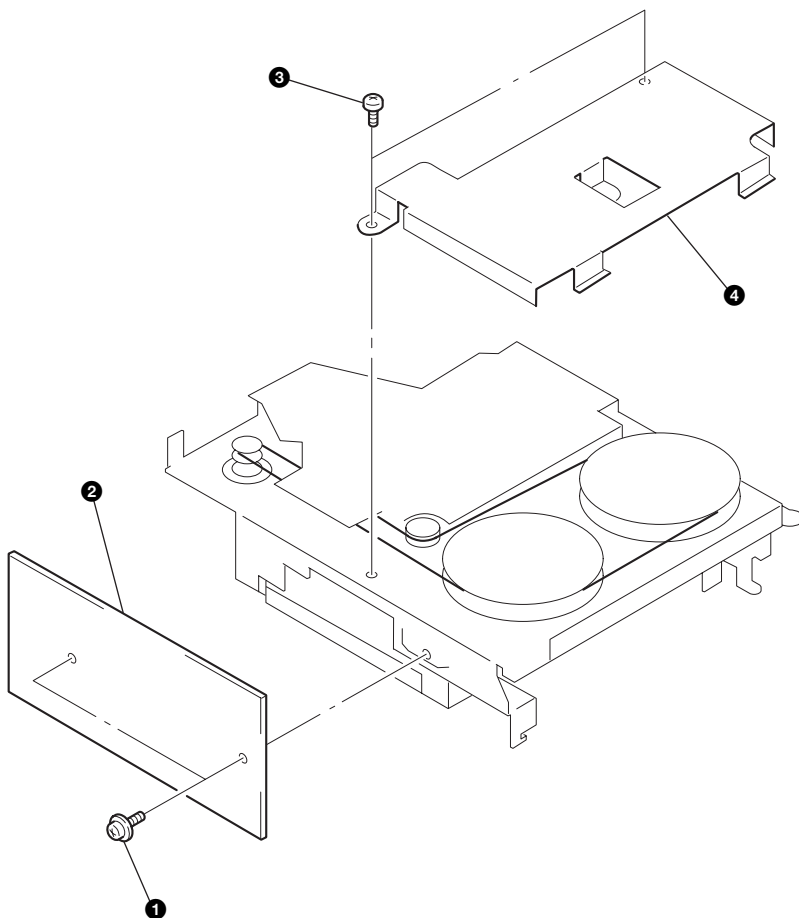
4-8. LEVER



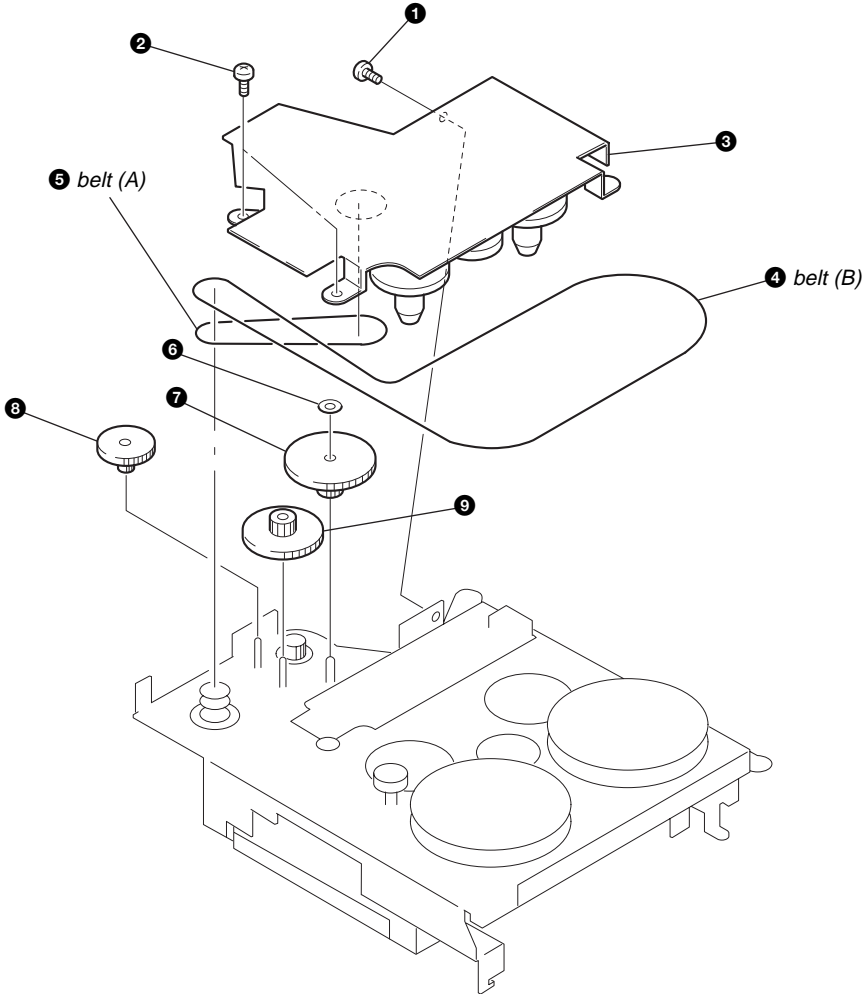
4-9. TENSION SPRING



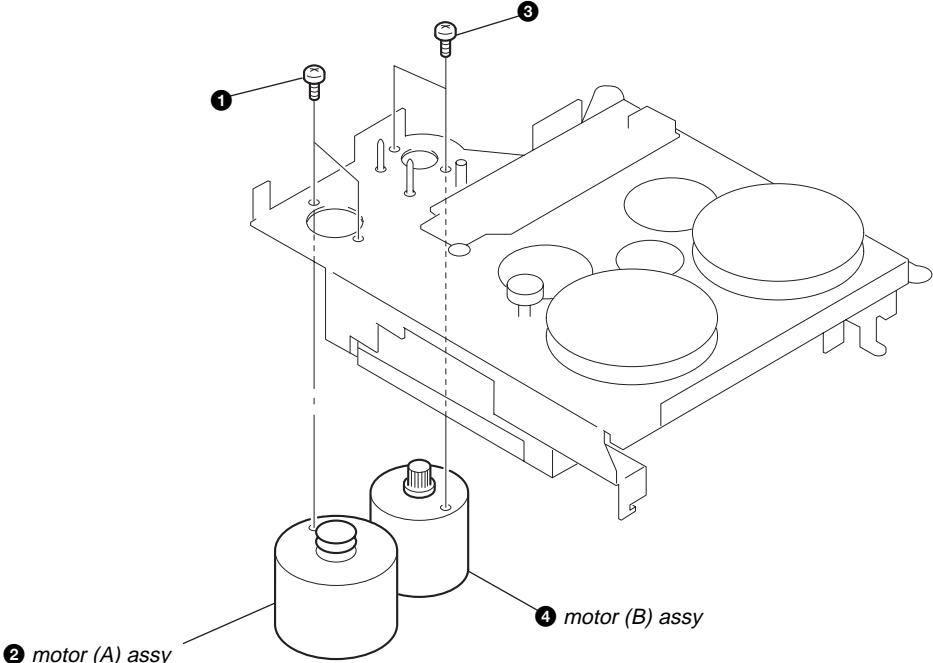
4-10. HOUSING



4-11. CHASSIS

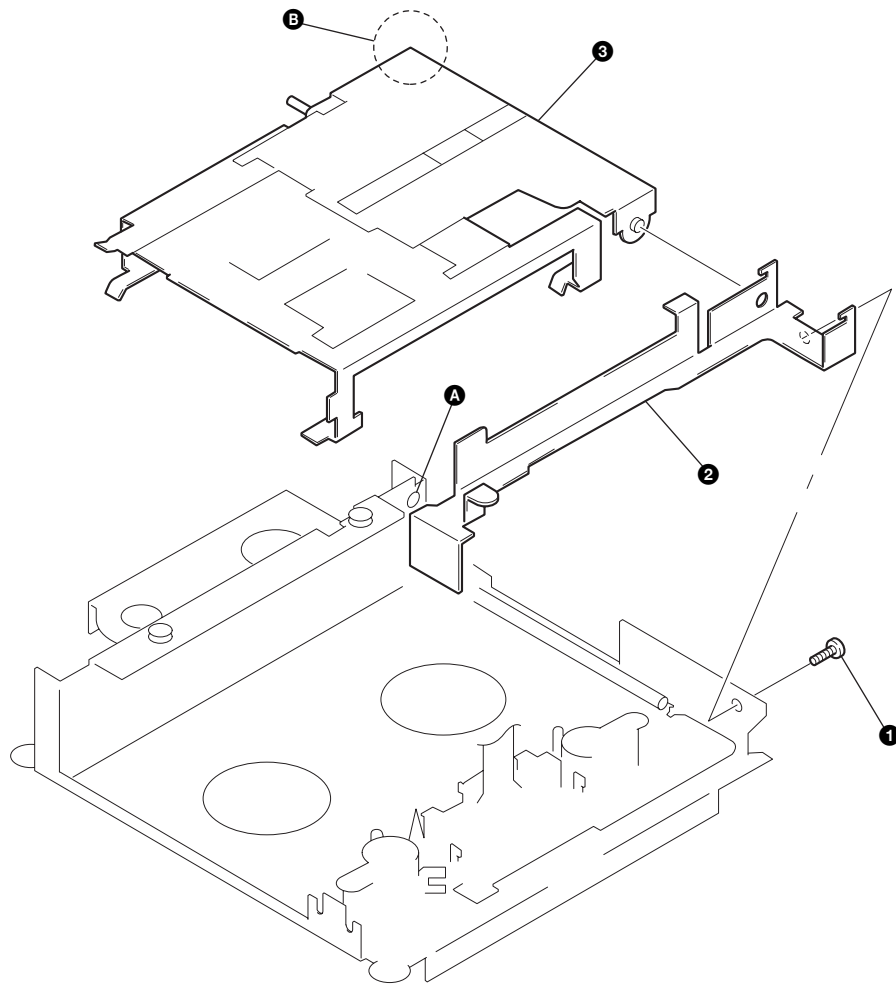


4-12. MOTOR (A) / (B) ASSY

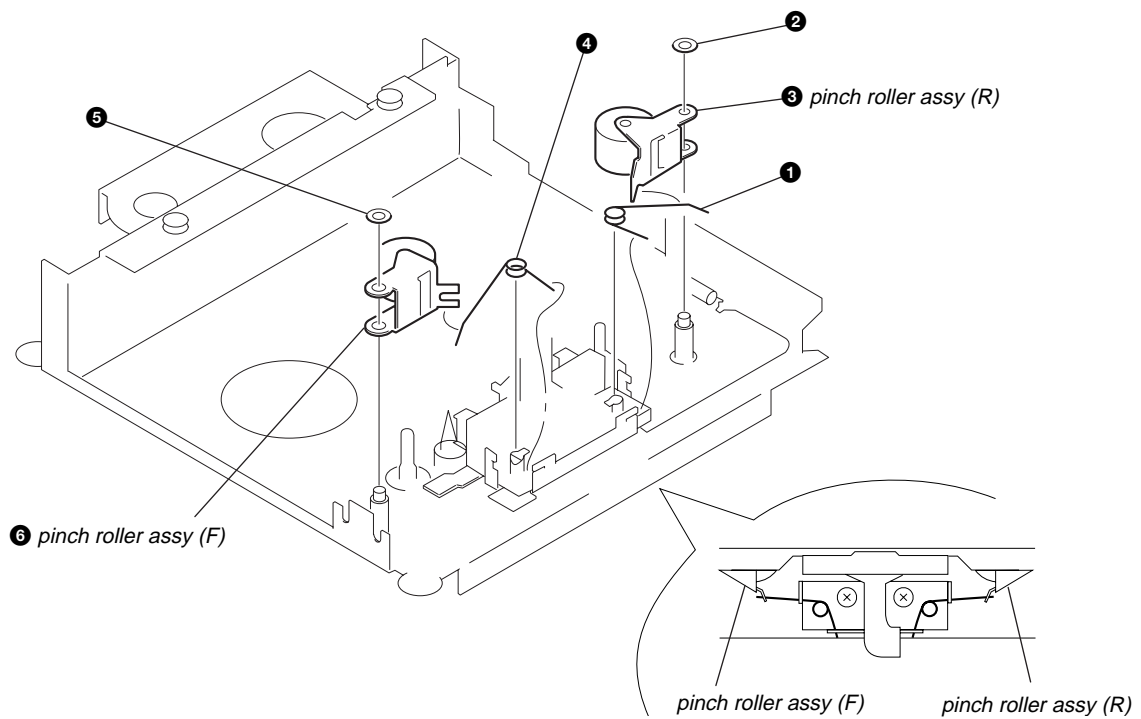


4-13. HEAD PLATE

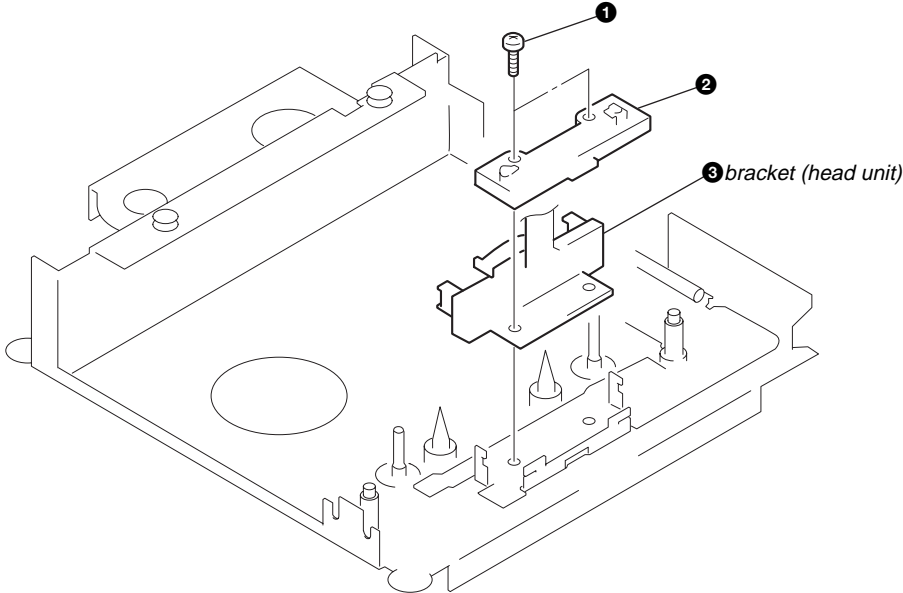
Note : On install, set the portions **A** and **B**.



4-14. PINCH ROLLER ASSY



4-15. BRACKET (HEAD UNIT)



SECTION 5 MECHANICAL ADJUSTMENTS

PRECAUTION

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

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

Torque Check

| Mode | Torque Meter | Meter Reading |
|---------------------|--------------|---|
| FWD | CQ-102C | 35 – 80 g • cm (0.49 – 1.11 oz • inch) |
| FWD Back tension | | 1 – 7 g • cm (0.014 – 0.097 oz • inch) |
| REV | CQ-102RC | 35 – 80 g • cm (0.49 – 1.11 oz • inch) |
| REV Back tension | | 1 – 7 g • cm (0.014 – 0.097 oz • inch) |
| FF, REW | CQ-201B | more than 40 g • cm (more than 0.56 oz • inch) |

SECTION 6 ELECTRICAL ADJUSTMENTS

PRECAUTION

1. The adjustment should be performed in the publication. (Be sure to make playback adjustment at first.)
2. The adjustments and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF
DIRECTION switch : \rightleftarrows

Standard Input Level

| Input terminal | TAPE IN |
|--------------------|-----------------|
| source impedance | 10 k Ω |
| input signal level | 0.49 V (– 4 dB) |

Standard Output Level

| Output terminal | TAPE OUT (L-CH) |
|---------------------|-----------------|
| load impedance | 47 k Ω |
| output signal level | 0.49 V (– 4 dB) |

Test Tape

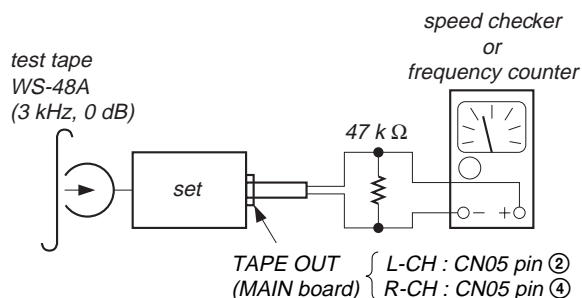
| Type | Signal | Used for |
|----------|----------------|-----------------------|
| P-4-A100 | 10 kHz, –10 dB | Azimuth Adjustment |
| P-4-L300 | 315 Hz, 0 dB | PB Level Adjustment |
| WS-48A | 3 kHz, 0 dB | Tape Speed Adjustment |

0 dB = 0.775 V

Tape Speed Adjustment

Procedure :

1. Connect the speed checker or frequency counter as shown below and set FWD playback mode.
2. Adjust the capstan motor (M1) volume so that the reading on the speed checker or frequency counter falls within the following adjustment value.



Adjustment Value : normal speed

| Speed checker | Frequency counter |
|---------------|-------------------|
| - 3 to + 3 % | 2,910 to 3,090 Hz |

Confirm that the deviation between tape top and tape end is within 3%.

Adjustment Location : Capstan motor (M1) volume (See page 16.)

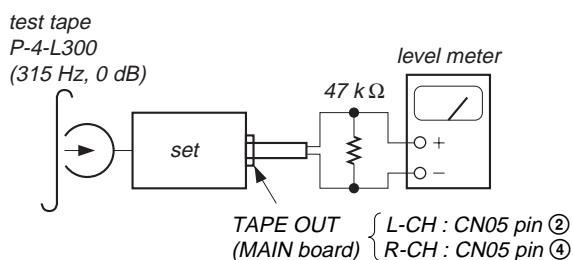
Sample Value of Wow and flutter

W. RMS (JIS) within 0.3%
(test tape : WS-48A)

Playback Level Adjustment

Procedure :

1. Connect the speed checker or frequency counter as shown below and set FWD playback mode.
2. Adjust SFR03 (L-CH) and SFR04 (R-CH) on AMPLIFIER board so that the reading on the level meter falls within the following adjustment value.



Adjustment Value :

| TAPE OUT level | Level difference between channels |
|-----------------------------|-----------------------------------|
| - 4 ± 2 dB (0.39 to 0.62 V) | within 2 dB |

Confirm that the TAPE OUT level does not change even if Playback and Stop operation is repeated several times.

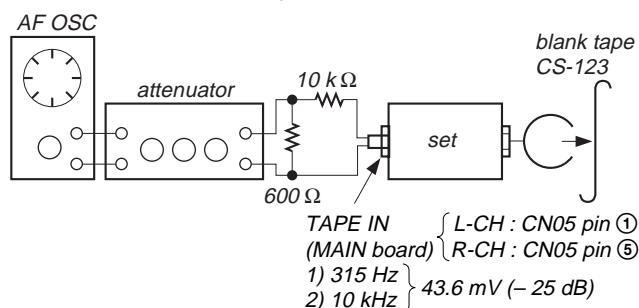
Adjustment Location : AMPLIFIER board (See page 16.)

Record Bias Adjustment

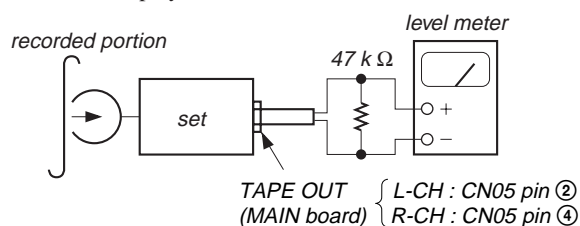
Setting : Set to the TEST mode. (See page 5.)

Procedure :

1. Connection for recording :



2. Connection for playback :



3. In the connection of item 2, playback the signal recorded in the connection of item 1, confirm that the reading on the level meter falls within the following adjustment value.
4. If these levels do not adjustment value, adjust SFR01 (L-CH) and SFR02 (R-CH) on AMPLIFIER board to repeat items 1 and 2.

Adjustment Value : Difference of playback output of 10 kHz to playback output of 315 Hz : 0 ± 0.5 dB

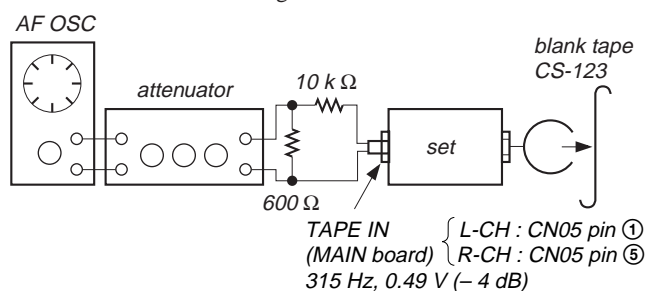
Adjustment Location : AMPLIFIER board (See page 16.)

Record Level Adjustment

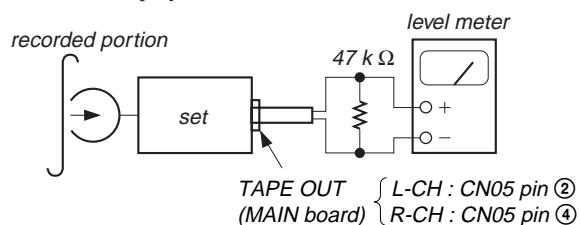
Setting : Set to the TEST mode. (See page 5.)

Procedure :

1. Connection for recording :



2. Connection for playback :

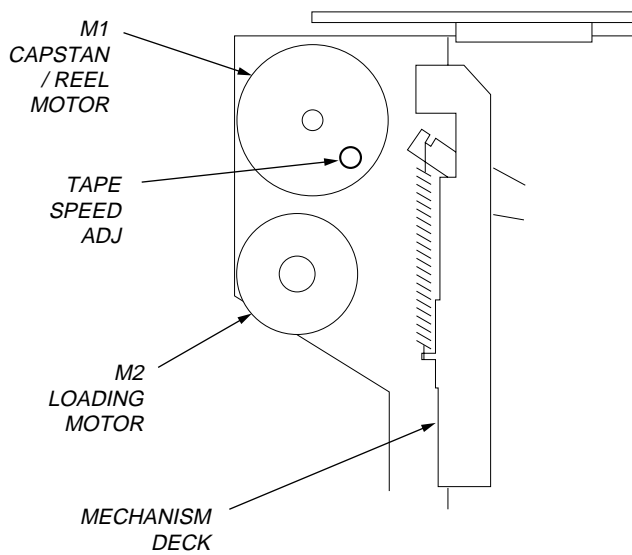
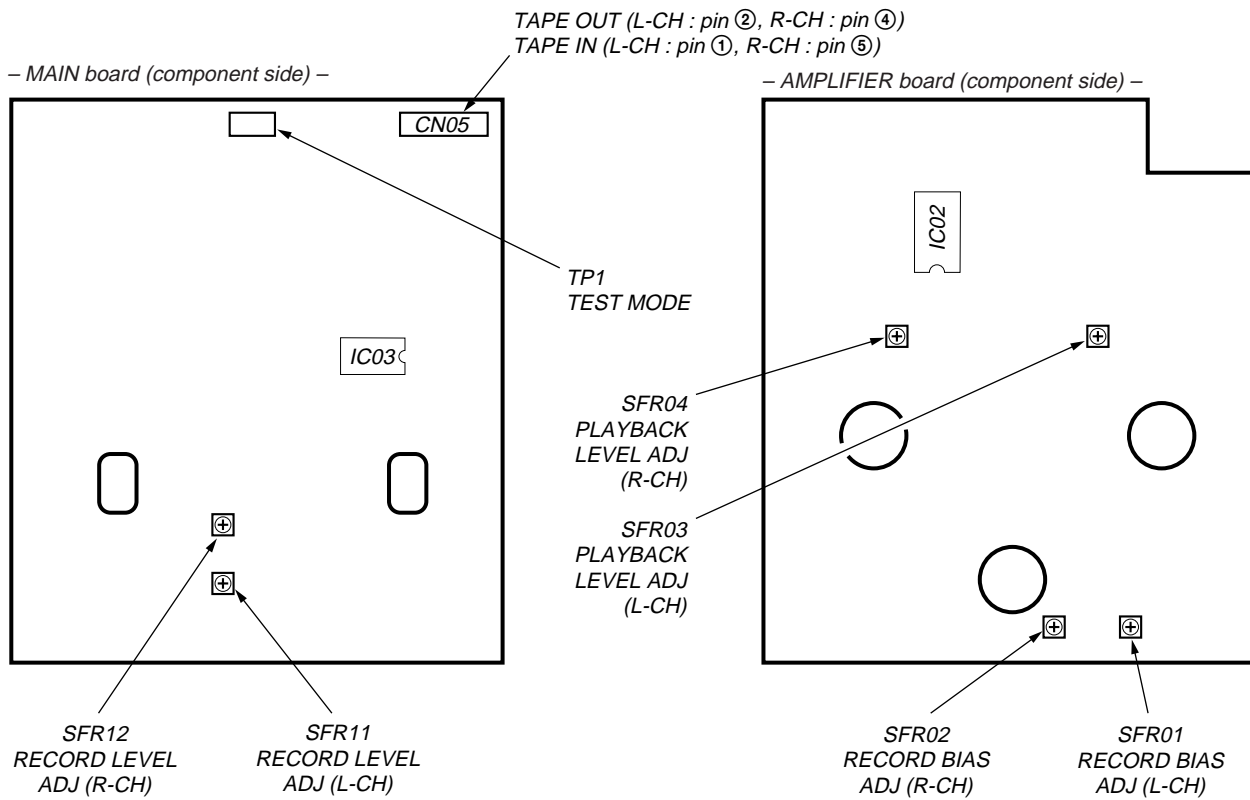


3. In the connection of item 2, playback the signal recorded in the connection of item 1, confirm that the reading on the level meter falls within the following adjustment value.
4. If these levels do not adjustment value, adjust SFR11 (L-CH) and SFR12 (R-CH) on MAIN board to repeat items 1 and 2.

Adjustment Value : Playback output level of 315 Hz :
- 4 ± 2 dB (0.39 to 0.62 V)

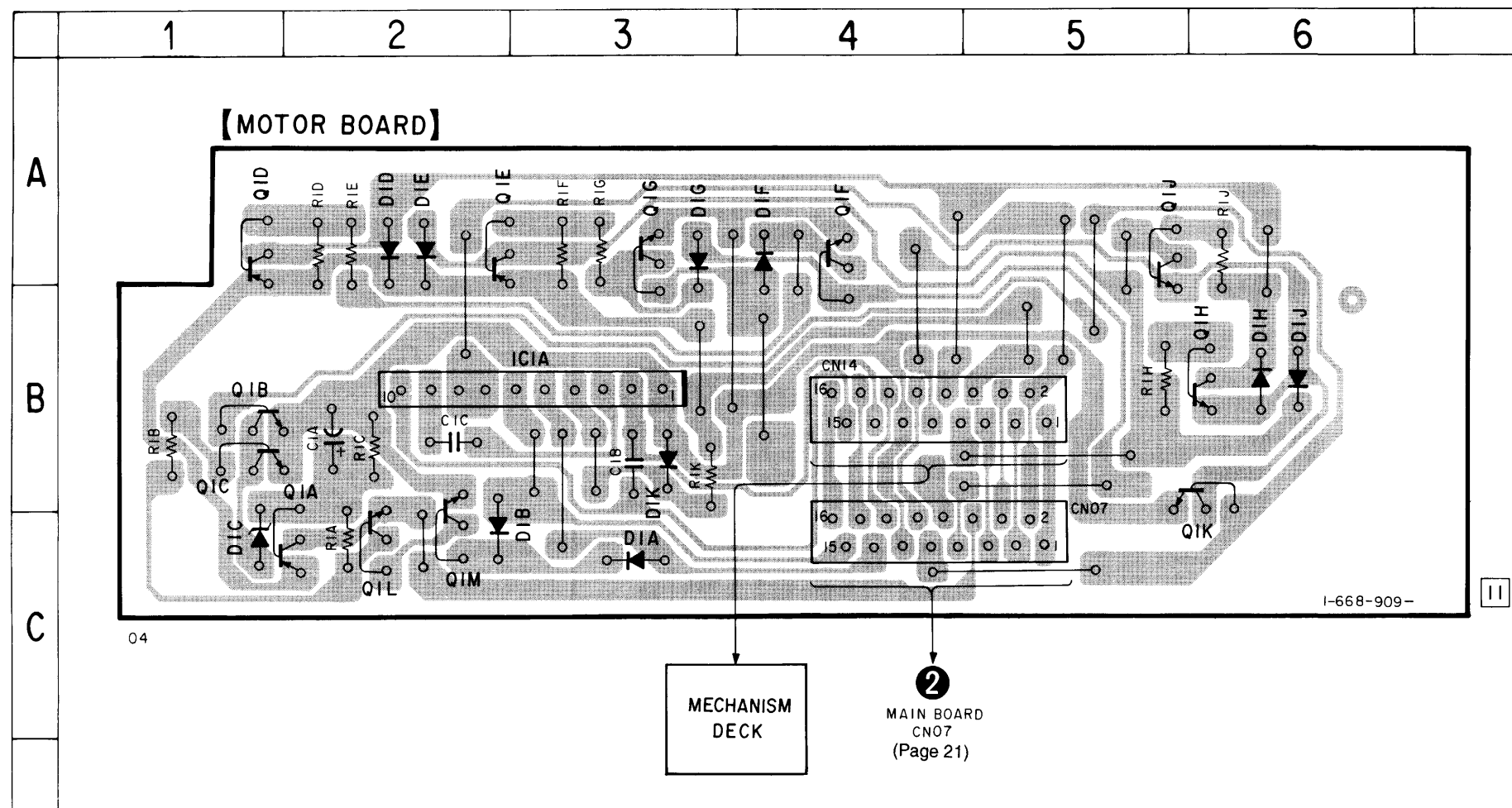
Adjustment Location : MAIN board (See page 16.)

Adjustment Location :



SECTION 7
DIAGRAMS

7-1. PRINTED WIRING BOARD — MOTOR SECTION —



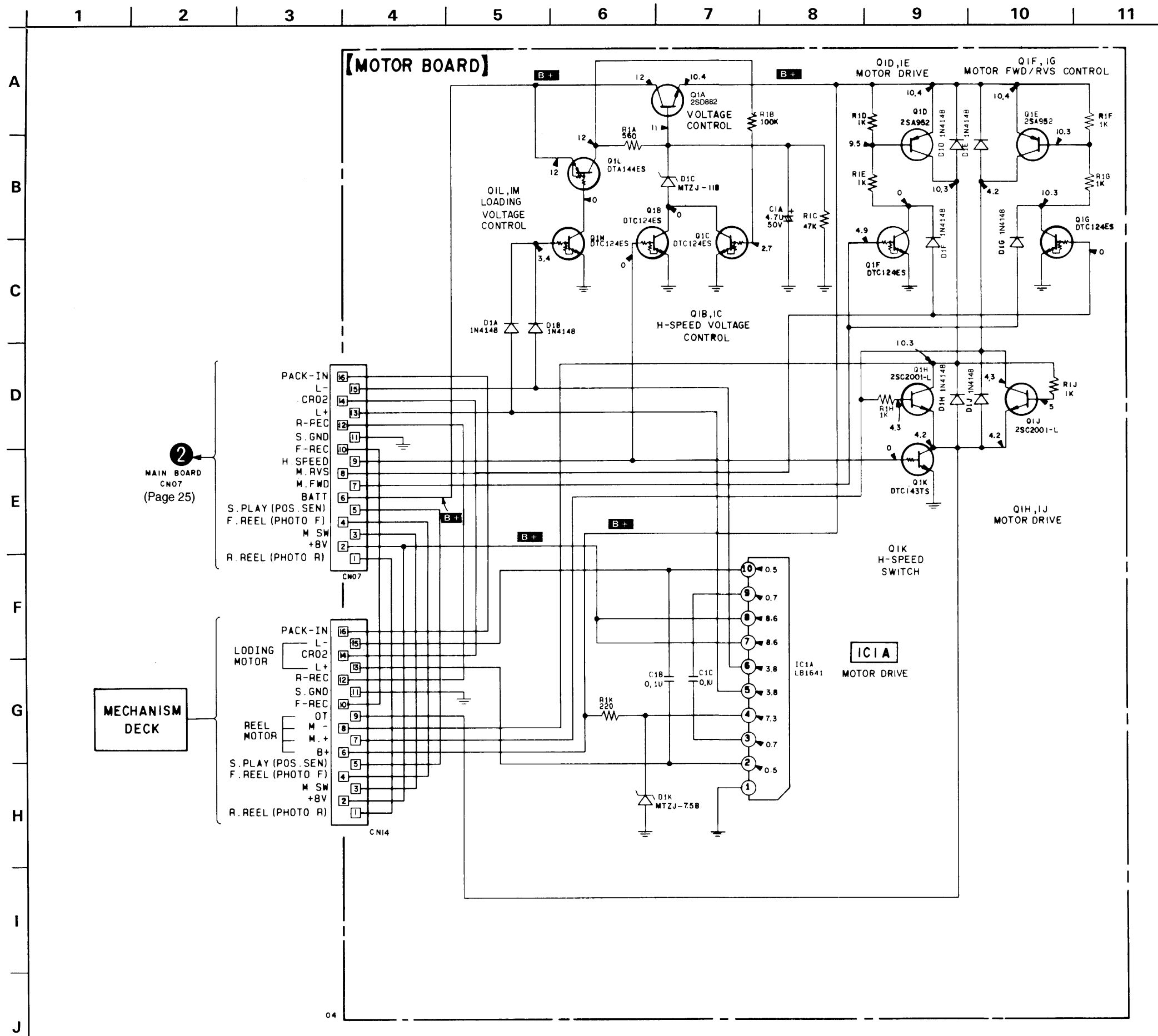
• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D1A | C-3 |
| D1B | C-2 |
| D1C | C-1 |
| D1D | A-2 |
| D1E | A-2 |
| D1F | A-4 |
| D1G | A-3 |
| D1H | B-6 |
| D1J | B-6 |
| D1K | B-3 |
| IC1A | B-3 |
| Q1A | C-1 |
| Q1B | B-1 |
| Q1C | B-1 |
| Q1D | A-1 |
| Q1E | A-2 |
| Q1F | A-4 |
| Q1G | A-3 |
| Q1H | B-5 |
| Q1J | A-5 |
| Q1K | B-5 |
| Q1L | C-2 |
| Q1M | C-2 |

Note on Printed Wiring Boards:

- : parts extracted from the component side.
- ▨ : Pattern from the side which enables seeing.

7-2. SCHEMATIC DIAGRAM — MOTOR SECTION — • Refer to page 26 for IC Block Diagrams.



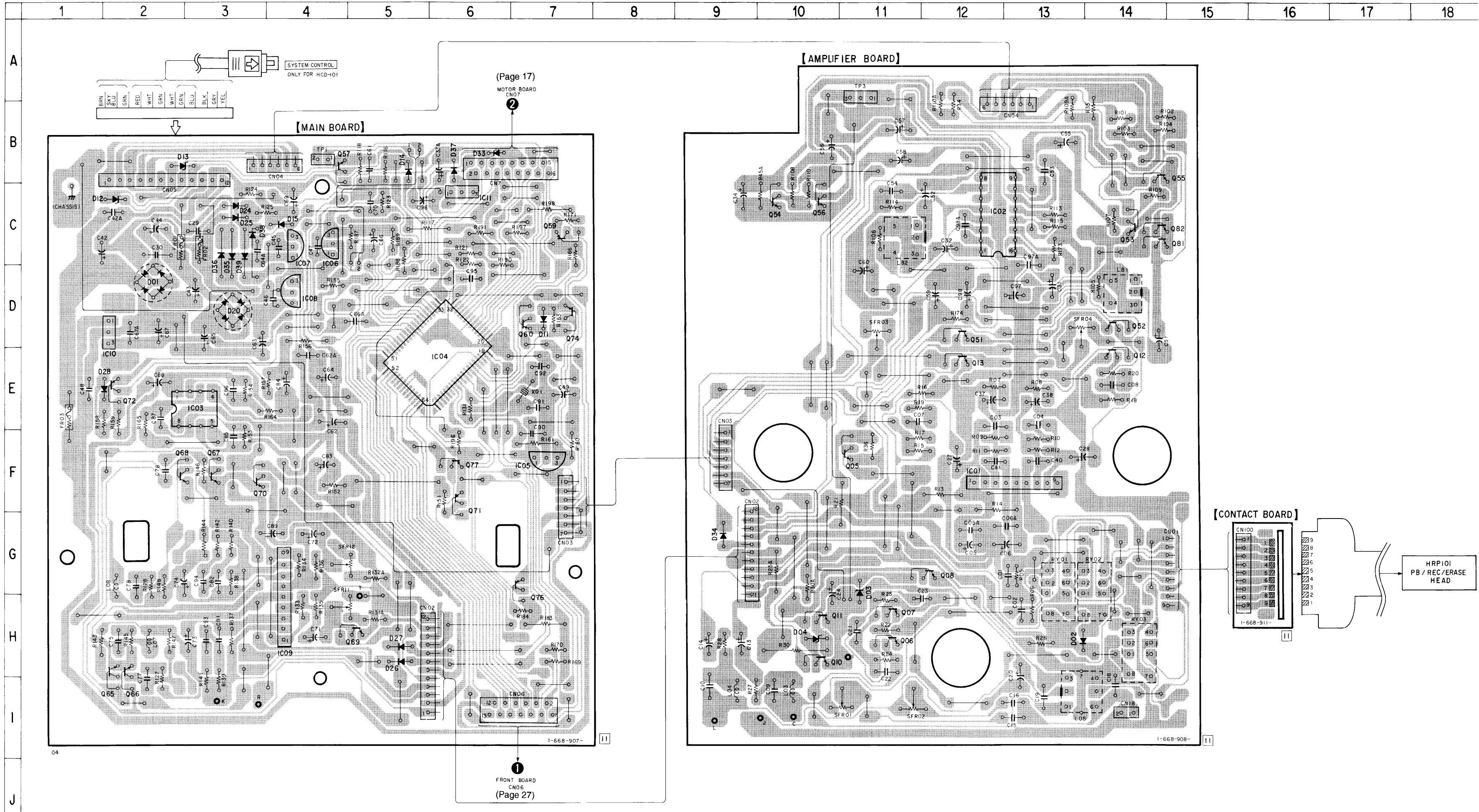
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μpF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- B+** : B+ Line.
- Voltage is dc with respect to ground under no-signal conditions. no mark : PB (FWD)
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.

7-3. PRINTED WIRING BOARDS — MAIN SECTION —

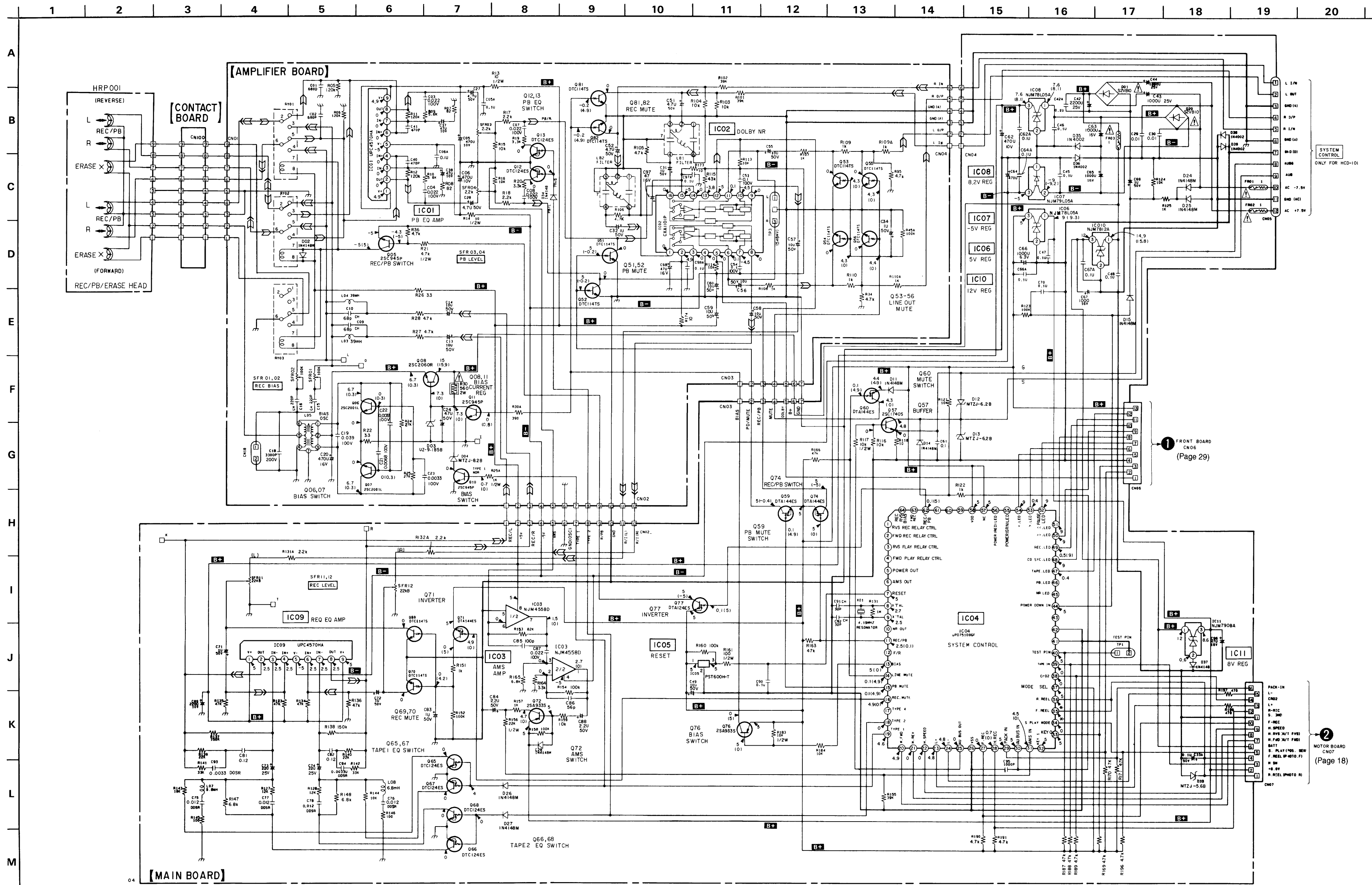
• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D01 | D-2 |
| D02 | H-13 |
| D03 | G-11 |
| D04 | H-10 |
| D11 | D-7 |
| D12 | C-2 |
| D13 | B-2 |
| D14 | B-5 |
| D15 | C-4 |
| D20 | D-3 |
| D24 | C-3 |
| D25 | C-3 |
| D26 | H-5 |
| D27 | H-5 |
| D28 | E-1 |
| D33 | B-6 |
| D34 | G-9 |
| D35 | C-3 |
| D36 | C-3 |
| D37 | B-6 |
| D38 | C-3 |
| D39 | C-3 |
| IC01 | F-12 |
| IC02 | C-12 |
| IC03 | E-3 |
| IC04 | E-6 |
| IC05 | F-7 |
| IC06 | C-4 |
| IC07 | C-4 |
| IC08 | D-4 |
| IC09 | H-4 |
| IC10 | D-2 |
| IC11 | C-6 |
| Q05 | F-11 |
| Q06 | H-11 |
| Q07 | H-11 |
| Q08 | G-12 |
| Q10 | H-10 |
| Q11 | H-10 |
| Q12 | E-14 |
| Q13 | E-12 |
| Q51 | D-12 |
| Q52 | D-14 |
| Q53 | C-14 |
| Q54 | C-10 |
| Q55 | B-14 |
| Q56 | C-10 |
| Q57 | B-4 |
| Q59 | C-7 |
| Q60 | D-7 |
| Q65 | I-2 |
| Q66 | I-2 |
| Q67 | F-3 |
| Q68 | F-2 |
| Q69 | H-4 |
| Q70 | F-3 |
| Q71 | F-6 |
| Q72 | E-2 |
| Q74 | D-7 |
| Q76 | G-7 |
| Q77 | F-6 |
| Q81 | C-14 |
| Q82 | C-14 |



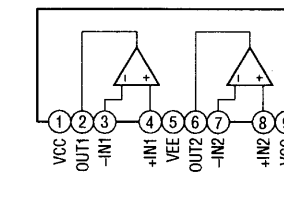
Note:
 • : parts extracted from the component side.
 [] : indicates side identified with part number.
 [] : Pattern from the side which enables seeing.

7-4. SCHEMATIC DIAGRAM — MAIN SECTION —

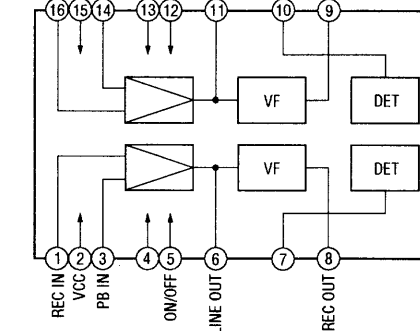


• IC Block Diagrams

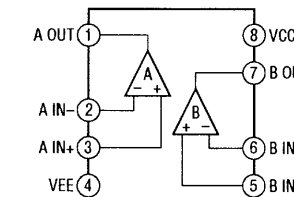
IC01, 09 µPC4570H



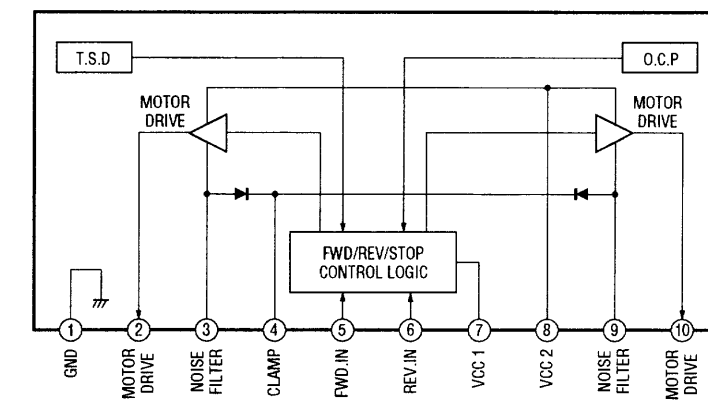
IC02 CXA1101P



IC03 NJM4558L



IC1A LB1641



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

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

- B+ : B+ Line.
- B- : B- Line.
- □ : adjustment for repair.
- Voltage is dc with respect to ground under no-signal conditions.
- no mark : PB (FWD)
- () : REC (FWD)
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- □ : PB
- □ : REC

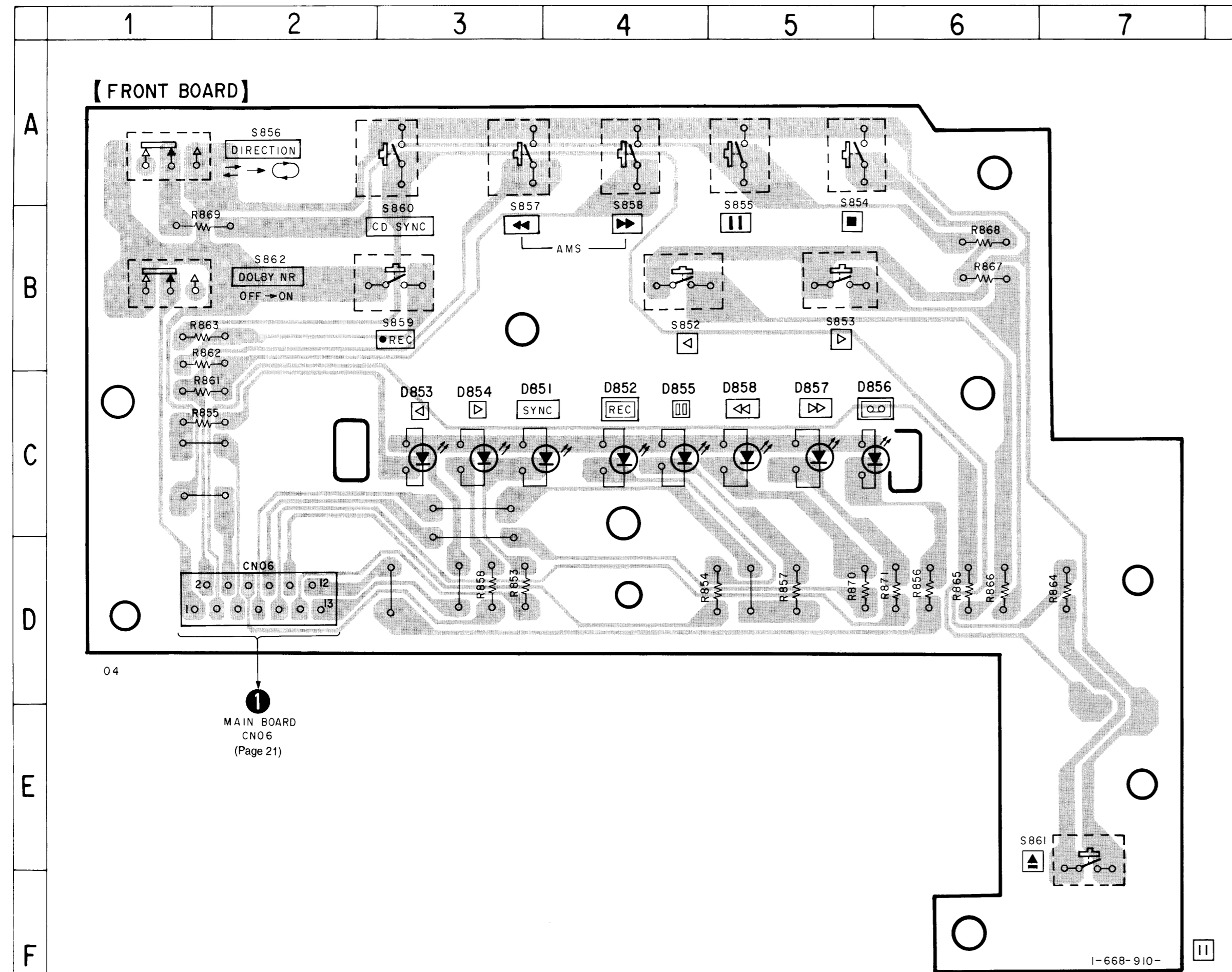
FRONT BOARD
CN06
(Page 29)

2
MOTOR BOARD
CN07
(Page 18)

7-5. PRINTED WIRING BOARDS — FRONT PANEL SECTION —

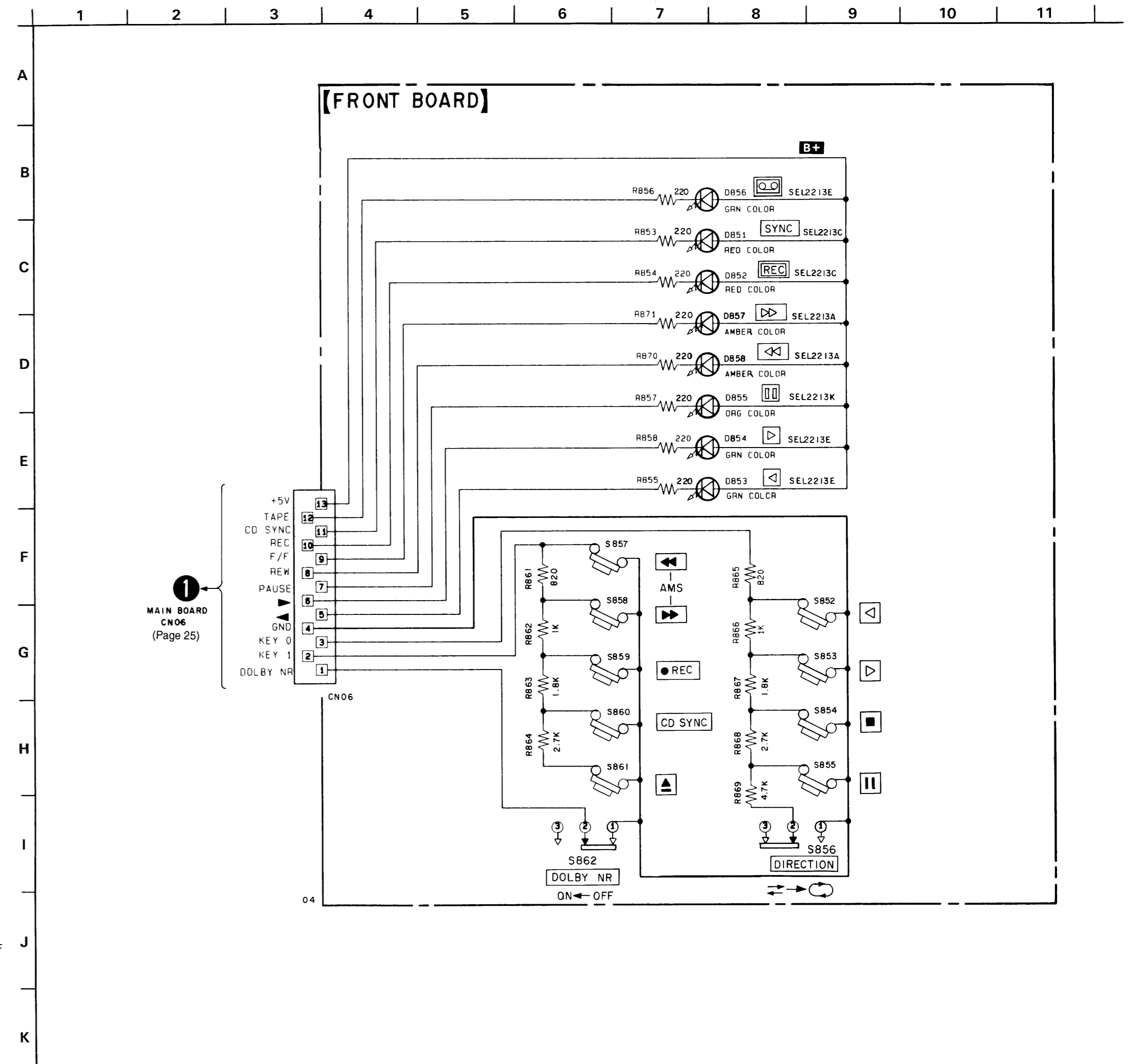
• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D851 | C-3 |
| D852 | C-4 |
| D853 | C-3 |
| D854 | C-3 |
| D855 | C-4 |
| D856 | C-5 |
| D857 | C-5 |
| D858 | C-5 |



Note:
 • : Pattern from the side which enables seeing.

7-6. SCHEMATIC DIAGRAM — FRONT PANEL SECTION —



Note:
 • All capacitors are in μF unless otherwise noted. pF: μpF
 50 WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
 • : panel designation.
 • **B+** : B+ Line.

7-7. IC PIN DESCRIPTION

• IC04 μ PD75108GF-N14-3BE (SYSTEM CONTROL)

| Pin No. | Pin Name | I/O | Pin Description |
|---------|------------------|-----|--|
| 1 | RVS REC RELAY | O | RVS REC relay control output (Not used in this set.) |
| 2 | FWD REC RELAY | O | FWD REC relay control output (Not used in this set.) |
| 3 | RVS PLAY RELAY | O | RVS PLAY relay control output (Not used in this set.) |
| 4 | FWD PLAY RELAY | O | FWD PLAY relay control output (Not used in this set.) |
| 5 | POWER OUT | O | Power output (Not used in this set.) |
| 6 | AMS OUT | O | AMS gain control output (Not used in this set.) |
| 7 | RESET | I | Reset input (L : Reset) |
| 8 | XTAL | — | Oscillator circuit (4.19 MHz) |
| 9 | XTAL | — | Oscillator circuit (4.19 MHz) |
| 10 | NR OUT | O | Noise reduction signal output (Not used in this set.) |
| 11 | REC/PB | O | REC/PB select output (H : REC, L : PB) |
| 12 | F/R | O | RVS/FWD select output (H : RVS, L : FWD) (Not used in this set.) |
| 13 | BIAS | O | Bias oscillation control output (H : ON, L : OFF) |
| 14 | LINE MUTE | O | Line mute control output (H : OFF, L : ON) |
| 15 | PB.MUTE | O | PB mute control output (H : OFF, L : ON) |
| 16 | REC.MUTE | O | REC mute control output (H : OFF, L : ON) |
| 17 | TAPE 4 | O | REC equalizer select output (H : METAL) (Not used in this set.) |
| 18 | TAPE 2 | O | REC equalizer select output (H : CrO ₂) |
| 19 | TAPE 1 | O | REC equalizer select output (H : NORMAL) |
| 20 | M.FWD | O | Reel motor forward direction rotation output |
| 21 | M.REV | O | Reel motor reverse direction rotation output |
| 22 | H.SPEED | O | Tape speed control output |
| 23 | L+ | O | Loading motor forward direction rotation output |
| 24 | L- | O | Loading motor reverse direction rotation output |
| 25 | AU BUS OUT | O | AU BUS signal output |
| 26 | VSS | — | Ground |
| 27 | F.REC | I | Mechanism deck FWD REC PROOF claw detection signal input (H : REC inhibit) |
| 28 | R.REC | I | Mechanism deck RVS REC PROOF claw detection signal input (H : REC inhibit) |
| 29 | PACK IN | I | Loading detection signal input |
| 30 | AU BUS IN | I | AU BUS signal input |
| 31 | AMS IN | I | AMS signal input |
| 32 | KEY 1 | I | Key switch input 1 |
| 33 | KEY 0 | I | Key switch input 0 |
| 34 | S.PLAY MODE | I | Mechanism deck tape position detection signal input |
| 35 | FREEL | I | Mechanism deck FWD reel sensor detection signal input |
| 36 | R.REEL | I | Mechanism deck RVS reel sensor detection signal input |
| 37 | MODE SEL | I | Mode select input (Fixed at "H" in this set.) |
| 38 | CrO ₂ | I | Mechanism deck CrO ₂ switch input |
| 39 | TAPE IN | I | Mechanism deck HALF switch input |
| 40 | TEST PIN | I | Input for test mode. (L : Test mode) |
| 41, 42 | NC | I | Connect to Ground in this set. |
| 43 | NC | O | Not used in this set. |
| 44 | POWER DOWN IN | I | Power detection input |
| 45 | NR.LED | O | NR LED output (Not used in this set.) |
| 46 | PB.LED | O | PLAYBACK LED output (Not used in this set.) |
| 47 | TAPE.LED | O | Tape indicator LED output |
| 48 | CD SYNC.LED | O | CD SYNC LED output |
| 49 | REC.LED | O | REC LED output |
| 50 | >>.LED | O | ▶▶ LED output |
| 51 | <<.LED | O | ◀◀ LED output |
| 52 | PAUSE.LED | O | PAUSE LED output |

| Pin No. | Pin Name | I/O | Pin Description |
|---------|---------------|-----|--|
| 53 | >.LED | O | ▶ LED output |
| 54 | <.LED | O | ◀ LED output |
| 55 | POWER(GRN)LED | O | POWER LED output (Not used in this set.) |
| 56 | POWER(RED)LED | O | POWER LED output (Not used in this set.) |
| 57 | NC | — | Fixed at “H” in this set. |
| 58 | VDD | — | Power supply pin |
| 59 – 61 | NC | — | Not used in this set. |
| 62 | REC/PB | O | REC/PB select output (H : REC, L : PB) |
| 63, 64 | NC | — | Not used in this set. |

SECTION 8 EXPLODED VIEWS

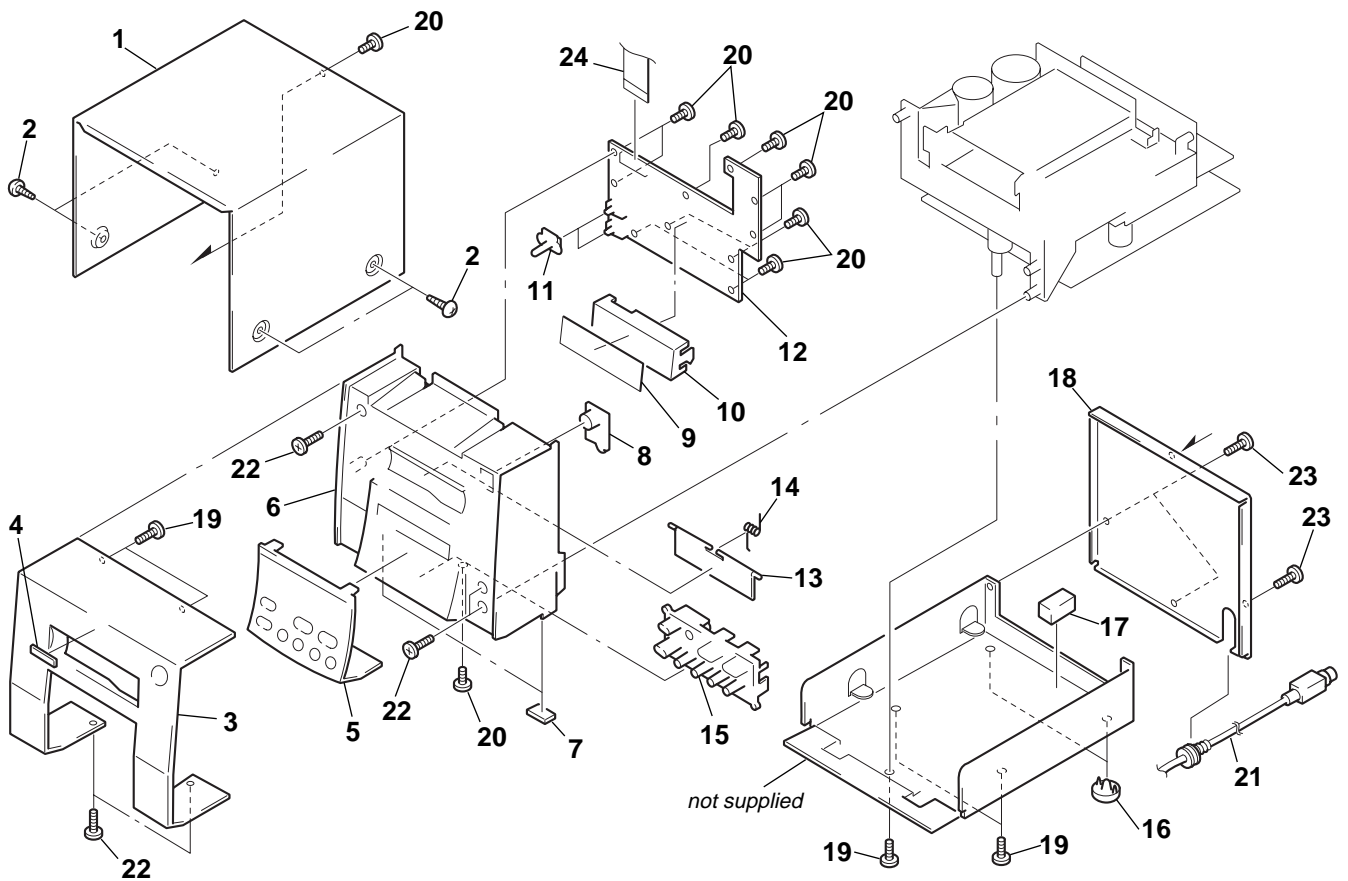
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
 G : German model
 SP : Singapore model
 MY : Malaysia model
 HK : Hong Kong model
 JE : Tourist model

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
 Example :
 KNOB, BALANCE (WHITE) ... (RED)
 ↑ ↑
 Parts Color Cabinet's Color

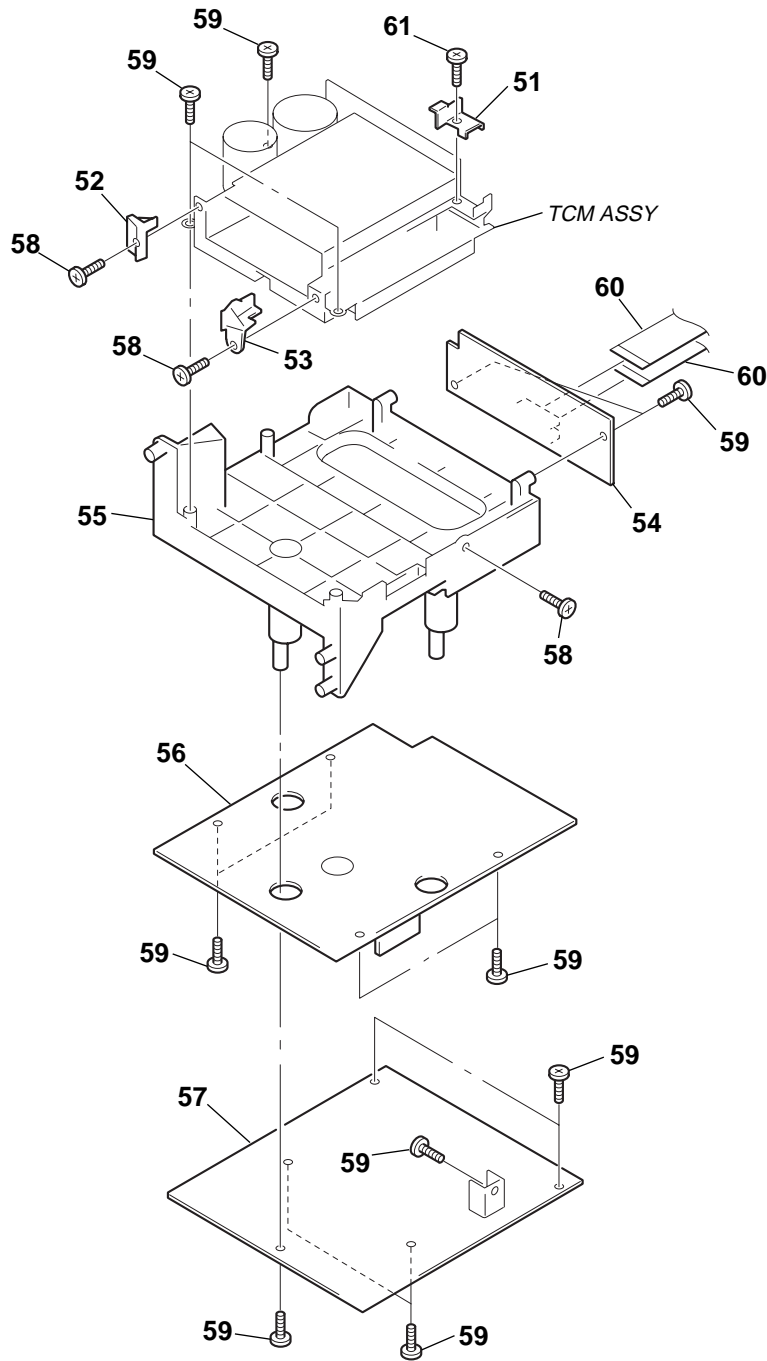
- Accessories and packing materials are given in the last of this parts list.

8-1. CHASSIS SECTION



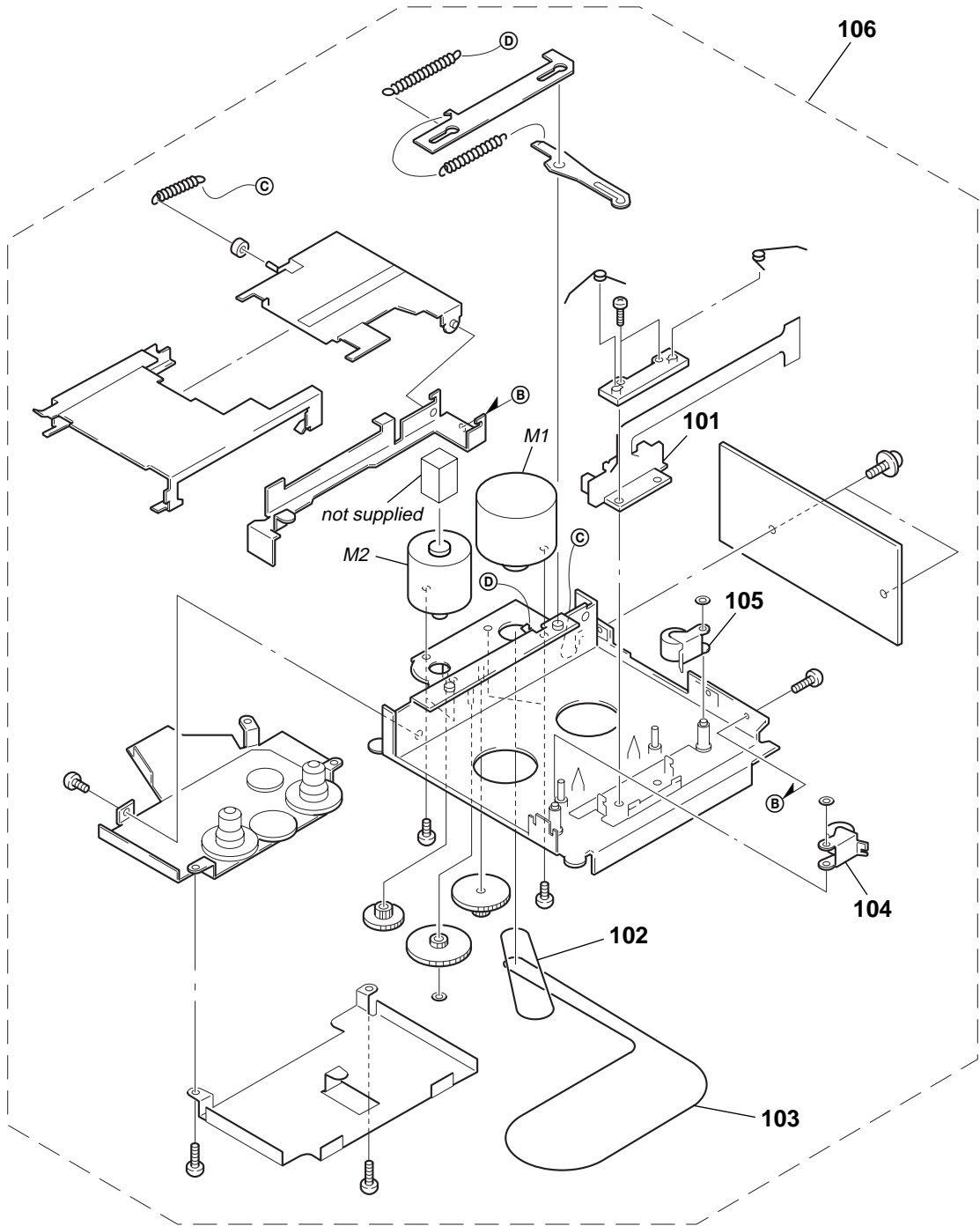
| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-----------------------|--------|----------|--------------|----------------------------|--------|
| * 1 | 3-021-633-01 | TOP COVER | | 14 | 3-020-419-01 | DOOR SPRING | |
| 2 | 3-363-099-51 | SCREW (CASE 3 TP2) | | 15 | 3-021-621-01 | PLAY BUTTON | |
| 3 | 3-021-619-01 | FRONT PANEL | | 16 | 3-020-399-01 | FOOT (REAR) | |
| 4 | 4-942-636-21 | EMBLEM (No.3.5), SONY | | * 17 | 3-021-639-01 | CUSHION | |
| 5 | 3-021-632-01 | FRONT WINDOW | | * 18 | 3-021-643-01 | BACK PLATE (AEP,UK,G) | |
| 6 | 3-021-623-01 | SUB PANEL | | * 18 | 3-022-375-01 | BACK PLATE (SP,MY,HK,JE) | |
| 7 | 3-021-634-01 | FOOT (FRONT) | | 19 | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 N-S | |
| 8 | 3-021-622-01 | EJECT BUTTON | | 20 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| * 9 | 3-021-627-01 | LED PLATE | | 21 | 1-782-804-11 | CORD (WITH CONNECTOR) | |
| * 10 | 3-021-626-01 | LED HOLDER | | 22 | 7-685-648-79 | SCREW +BVTP 3X12 TYPE2 N-S | |
| 11 | 3-021-624-01 | SLIDE KNOB | | 23 | 7-685-645-79 | SCREW +BVTP 3X6 TYPE2 N-S | |
| * 12 | A-2007-755-A | FRONT BOARD, COMPLETE | | 24 | 3-021-640-01 | BRACKET (FLEXIBLE A) | |
| 13 | 3-021-620-01 | DOOR CASSETTE | | | | | |

8-2. PC BOARD SECTION



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|---------------------------|--------|----------|--------------|---------------------------|--------|
| * 51 | 3-021-638-01 | DECK BRACKET | | * 57 | A-2007-752-A | MAIN BOARD, COMPLETE | |
| * 52 | 3-020-436-01 | TAPE GUIDE (L) | | 58 | 4-951-620-01 | SCREW (2.6X8), +BVTP | |
| * 53 | 3-020-437-01 | TAPE GUIDE (R) | | 59 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| * 54 | A-2007-756-A | MOTOR BOARD, COMPLETE | | 60 | 3-021-641-01 | BRACKET (FLEXIBLE B) | |
| 55 | 3-021-644-01 | CASSETTE DECK HOLDER | | 61 | 7-685-103-19 | SCREW +P 2X5 TYPE2 N-S | |
| * 56 | A-2007-753-A | AMPLIFIER BOARD, COMPLETE | | | | | |

8-3.TCM ASSY SECTION



| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|-----------------------|--------|----------|--------------|-------------------------------|--------|
| 101 | 3-020-446-01 | BRACKET (HEAD UNIT) | | 105 | 3-020-450-01 | PINCH ROLLER ASSY (R) | |
| 102 | 3-020-444-01 | BELT (A) | | * 106 | A-2004-641-A | TCM ASSY | |
| 103 | 3-020-445-01 | BELT (B) | | M1 | 3-020-447-01 | MOTOR (A) ASSY (REEL/CAPSTAN) | |
| 104 | 3-020-443-01 | PINCH ROLLER ASSY (F) | | M2 | 3-020-448-01 | MOTOR (B) ASSY (LOADING) | |

AMPLIFIER

SECTION 9 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "***" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u : μ , for example:
uA.. : μ A.. uPA.. : μ PA..
uPB.. : μ PB.. uPC.. : μ PC.. uPD.. : μ PD..
- CAPACITORS
uF : μ F
- COILS
uH : μ H

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

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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|------------------------------------|--------|----------|--------------|-------------------------------|--------|
| * | A-2007-753-A | AMPLIFIER BOARD, COMPLETE ***** | | C59 | 1-124-907-11 | ELECT 10uF 20% | 50V |
| | | < CAPACITOR > | | C60 | 1-124-907-11 | ELECT 10uF 20% | 50V |
| C01 | 1-162-292-31 | CERAMIC 680PF 10% | 50V | C97 | 1-104-664-11 | ELECT 47uF 20% | 16V |
| C02 | 1-162-292-31 | CERAMIC 680PF 10% | 50V | C98 | 1-104-664-11 | ELECT 47uF 20% | 16V |
| C03 | 1-137-395-11 | FILM 0.022uF 5% | 100V | | | < DIODE > | |
| C04 | 1-137-395-11 | FILM 0.022uF 5% | 100V | D02 | 8-719-901-33 | DIODE 1SS133 | |
| C05 | 1-124-472-11 | ELECT 470uF 20% | 10V | D03 | 8-719-010-62 | DIODE UZ-9.1B5B | |
| C05A | 1-161-772-11 | CERAMIC 0.1uF 10% | 25V | D04 | 8-719-921-67 | DIODE MTZJ-8.2B | |
| C06 | 1-124-472-11 | ELECT 470uF 20% | 10V | D34 | 8-719-901-33 | DIODE 1SS133 | |
| C06A | 1-161-772-11 | CERAMIC 0.1uF 10% | 25V | | | < IC > | |
| C07 | 1-137-395-11 | FILM 0.022uF 5% | 100V | IC01 | 8-759-112-93 | IC uPC4570HA-1 | |
| C08 | 1-137-395-11 | FILM 0.022uF 5% | 100V | IC02 | 8-752-057-19 | IC CXA1101P | |
| C09 | 1-164-066-11 | CERAMIC 68PF 5% | 50V | | | < COIL > | |
| C10 | 1-164-066-11 | CERAMIC 68PF 5% | 50V | L03 | 1-416-568-11 | COIL, CHOKE 39mH | |
| C13 | 1-124-907-11 | ELECT 10uF 20% | 50V | L04 | 1-416-568-11 | COIL, CHOKE 39mH | |
| C14 | 1-124-907-11 | ELECT 10uF 20% | 50V | L05 | 1-431-706-11 | TRANSFORMER, BIAS OSCILLATION | |
| C15 | 1-164-077-11 | CERAMIC 220PF 10% | 50V | L81 | 1-234-023-11 | FILTER, MPX | |
| C16 | 1-164-077-11 | CERAMIC 220PF 10% | 50V | L82 | 1-234-023-11 | FILTER, MPX | |
| C18 | 1-104-990-11 | FILM 0.0033uF 5% | 200V | | | < TRANSISTOR > | |
| C19 | 1-137-464-11 | FILM 0.039uF 5% | 100V | Q05 | 8-729-194-57 | TRANSISTOR 2SC945-P | |
| C20 | 1-126-941-11 | ELECT 470uF 20% | 16V | Q06 | 8-729-142-46 | TRANSISTOR 2SC2001-LK | |
| C21 | 1-137-392-11 | FILM 0.0068uF 5% | 100V | Q07 | 8-729-142-46 | TRANSISTOR 2SC2001-LK | |
| C22 | 1-137-390-11 | FILM 0.0033uF 5% | 100V | Q08 | 8-729-140-96 | TRANSISTOR 2SD774-34 | |
| C23 | 1-137-390-11 | FILM 0.0033uF 5% | 100V | Q10 | 8-729-194-57 | TRANSISTOR 2SC945-P | |
| C24 | 1-124-910-11 | ELECT 47uF 20% | 50V | Q11 | 8-729-194-57 | TRANSISTOR 2SC945-P | |
| C27 | 1-126-963-11 | ELECT 4.7uF 20% | 50V | Q12 | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| C28 | 1-126-963-11 | ELECT 4.7uF 20% | 50V | Q13 | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| C31 | 1-124-903-11 | ELECT 1uF 20% | 50V | Q51 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C32 | 1-124-903-11 | ELECT 1uF 20% | 50V | Q52 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C34 | 1-124-903-11 | ELECT 1uF 20% | 50V | Q53 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C37 | 1-104-664-11 | ELECT 47uF 20% | 10V | Q54 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C38 | 1-104-664-11 | ELECT 47uF 20% | 10V | Q55 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C40 | 1-162-290-31 | CERAMIC 470PF 10% | 50V | Q56 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C41 | 1-162-290-31 | CERAMIC 470PF 10% | 50V | Q81 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C51 | 1-126-963-11 | ELECT 4.7uF 20% | 50V | Q82 | 8-729-029-68 | TRANSISTOR DTC114TSA | |
| C52 | 1-126-963-11 | ELECT 4.7uF 20% | 50V | | | < RESISTOR > | |
| C53 | 1-137-399-11 | FILM 0.1uF 5% | 100V | R05 | 1-247-881-00 | CARBON 120K 5% | 1/4W |
| C54 | 1-137-399-11 | FILM 0.1uF 5% | 100V | R06 | 1-247-881-00 | CARBON 120K 5% | 1/4W |
| C55 | 1-124-907-11 | ELECT 10uF 20% | 50V | R07 | 1-249-404-00 | CARBON 82 5% | 1/4W |
| C56 | 1-124-907-11 | ELECT 10uF 20% | 50V | R08 | 1-249-404-00 | CARBON 82 5% | 1/4W |
| C57 | 1-124-907-11 | ELECT 10uF 20% | 50V | | | | |
| C58 | 1-124-907-11 | ELECT 10uF 20% | 50V | | | | |

AMPLIFIER

CONTACT

FRONT

| Ref. No. | Part No. | Description | | | Remark |
|-----------------------|--------------|------------------|------|----|--------|
| R09 | 1-247-849-11 | CARBON | 5.6K | 5% | 1/4W |
| R10 | 1-247-849-11 | CARBON | 5.6K | 5% | 1/4W |
| R11 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R12 | 1-247-881-00 | CARBON | 120K | 5% | 1/4W |
| R13 | 1-260-076-11 | CARBON | 10 | 5% | 1/2W |
| R14 | 1-260-076-11 | CARBON | 10 | 5% | 1/2W |
| R15 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R16 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R17 | 1-247-839-11 | CARBON | 2.2K | 5% | 1/4W |
| R18 | 1-247-839-11 | CARBON | 2.2K | 5% | 1/4W |
| R19 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R20 | 1-247-843-11 | CARBON | 3.3K | 5% | 1/4W |
| R21 | 1-260-107-11 | CARBON | 4.7K | 5% | 1/2W |
| R22 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W |
| R24 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R25 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R25A | 1-260-099-11 | CARBON | 1K | 5% | 1/2W |
| R26 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W |
| R27 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R28 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| △ R30 | 1-216-455-11 | METAL OXIDE | 560 | 5% | 2W F |
| R30A | 1-249-412-11 | CARBON | 390 | 5% | 1/4W |
| R34 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R35 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R36 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R45A | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R101 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R102 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W |
| R103 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R104 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R105 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R106 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R107 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R108 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R109 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R109A | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R110 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R110A | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R113 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R114 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R115 | 1-247-870-11 | CARBON | 43K | 5% | 1/4W |
| R173 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| R174 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W |
| < RELAY > | | | | | |
| RY01 | 1-755-244-11 | RELAY | | | |
| RY02 | 1-755-244-11 | RELAY | | | |
| RY03 | 1-755-244-11 | RELAY | | | |
| < VARIABLE RESISTOR > | | | | | |
| SFR01 | 1-230-724-11 | RES, ADJ, CARBON | 100K | | |
| SFR02 | 1-230-724-11 | RES, ADJ, CARBON | 100K | | |
| SFR03 | 1-238-598-11 | RES, ADJ, CARBON | 2.2K | | |

| Ref. No. | Part No. | Description | | | Remark |
|---------------|--------------|---------------------------|-------------------|----|--------|
| SFR04 | 1-238-598-11 | RES, ADJ, CARBON | 2.2K | | |
| ***** | | | | | |
| * | 1-668-911-11 | CONTACT BOARD | | | ***** |
| < CONNECTOR > | | | | | |
| CN100 | 1-695-547-11 | PIN, CONNECTOR (PC BOARD) | 9P | | |
| ***** | | | | | |
| * | A-2007-755-A | FRONT BOARD, COMPLETE | | | ***** |
| < CONNECTOR > | | | | | |
| * CN06 | 1-568-856-11 | SOCKET, CONNECTOR | 13P | | |
| < DIODE > | | | | | |
| D851 | 8-719-302-24 | LED | SEL2213C-D (SYNC) | | |
| D852 | 8-719-302-24 | LED | SEL2213C-D (REC) | | |
| D853 | 8-719-301-46 | LED | SEL2413E (◁) | | |
| D854 | 8-719-301-46 | LED | SEL2413E (▷) | | |
| D855 | 8-719-302-86 | LED | SEL2913K (IT) | | |
| < RESISTOR > | | | | | |
| R853 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R854 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R855 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R856 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R857 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R858 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R861 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R862 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R863 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R864 | 1-247-841-11 | CARBON | 2.7K | 5% | 1/4W |
| R865 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R866 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R867 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W |
| R868 | 1-247-841-11 | CARBON | 2.7K | 5% | 1/4W |
| R869 | 1-247-847-11 | CARBON | 4.7K | 5% | 1/4W |
| R870 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R871 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| < SWITCH > | | | | | |
| S852 | 1-571-760-11 | SWITCH, KEY BOARD | (◁) | | |
| S853 | 1-571-760-11 | SWITCH, KEY BOARD | (▷) | | |
| S854 | 1-571-760-11 | SWITCH, KEY BOARD | (■) | | |
| S855 | 1-571-760-11 | SWITCH, KEY BOARD | (▣) | | |
| S856 | 1-771-304-11 | SWITCH, SLIDE (DIRECTION) | | | |
| S857 | 1-571-760-11 | SWITCH, KEY BOARD | (◀(AMS)) | | |
| S858 | 1-571-760-11 | SWITCH, KEY BOARD | (▶(AMS)) | | |

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

FRONT

MAIN

| Ref. No. | Part No. | Description | Remark |
|---------------|--------------|-------------------------------|-----------------|
| S859 | 1-571-760-11 | SWITCH, KEY BOARD (● REC) | |
| S860 | 1-571-760-11 | SWITCH, KEY BOARD (CD SYNC) | |
| S861 | 1-571-760-11 | SWITCH, KEY BOARD (▲) | |
| S862 | 1-771-304-11 | SWITCH, SLIDE (DOLBY NR) | |
| ***** | | | |
| * | A-2007-752-A | MAIN BOARD, COMPLETE ***** | |
| < CAPACITOR > | | | |
| C29 | 1-162-306-11 | CERAMIC | 0.01uF 20% 16V |
| C30 | 1-162-306-11 | CERAMIC | 0.01uF 20% 16V |
| C33A | 1-126-956-11 | ELECT | 0.1uF 20% 50V |
| C42 | 1-126-943-11 | ELECT | 2200uF 20% 25V |
| C42A | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C43 | 1-126-942-61 | ELECT | 1000uF 20% 25V |
| C44 | 1-126-942-61 | ELECT | 1000uF 20% 25V |
| C45 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C46 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C47 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C48 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C49 | 1-124-907-11 | ELECT | 10uF 20% 50V |
| C61 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C62 | 1-124-472-11 | ELECT | 470uF 20% 10V |
| C62A | 1-164-159-11 | CERAMIC | 0.1uF 50V |
| C63 | 1-126-942-61 | ELECT | 1000uF 20% 16V |
| C64 | 1-124-472-11 | ELECT | 470uF 20% 10V |
| C64A | 1-164-159-11 | CERAMIC | 0.1uF 50V |
| C65 | 1-126-942-61 | ELECT | 1000uF 20% 16V |
| C66 | 1-124-471-00 | ELECT | 1000uF 20% 6.3V |
| C66A | 1-164-159-11 | CERAMIC | 0.1uF 50V |
| C67 | 1-126-767-11 | ELECT | 1000uF 20% 16V |
| C67A | 1-164-159-11 | CERAMIC | 0.1uF 50V |
| C69 | 1-124-903-11 | ELECT | 1uF 20% 50V |
| C70 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C71 | 1-124-903-11 | ELECT | 1uF 20% 50V |
| C72 | 1-124-903-11 | ELECT | 1uF 20% 50V |
| C73 | 1-126-233-11 | ELECT | 22uF 20% 50V |
| C74 | 1-126-233-11 | ELECT | 22uF 20% 50V |
| C75 | 1-161-052-00 | CERAMIC | 0.012uF 10% 25V |
| C76 | 1-161-052-00 | CERAMIC | 0.012uF 10% 25V |
| C77 | 1-161-052-00 | CERAMIC | 0.012uF 10% 25V |
| C78 | 1-161-052-00 | CERAMIC | 0.012uF 10% 25V |
| C81 | 1-136-166-00 | FILM | 0.12uF 5% 50V |
| C82 | 1-136-166-00 | FILM | 0.12uF 5% 50V |
| C83 | 1-124-903-11 | ELECT | 1uF 20% 50V |
| C84 | 1-126-961-11 | ELECT | 2.2uF 20% 50V |
| C85 | 1-162-282-31 | CERAMIC | 100PF 10% 50V |
| C86 | 1-162-217-31 | CERAMIC | 56PF 5% 50V |
| C87 | 1-137-395-11 | FILM | 0.022uF 5% 100V |
| C88 | 1-126-961-11 | ELECT | 2.2uF 20% 50V |
| C89 | 1-104-666-11 | ELECT | 220uF 20% 10V |
| C90 | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C91 | 1-164-057-11 | CERAMIC | 30PF 5% 50V |

| Ref. No. | Part No. | Description | Remark |
|----------------------|--------------|-----------------------|------------------|
| C92 | 1-164-057-11 | CERAMIC | 30PF 5% 50V |
| C93 | 1-161-045-00 | CERAMIC | 0.0033uF 10% 50V |
| C94 | 1-161-045-00 | CERAMIC | 0.0033uF 10% 50V |
| C95 | 1-162-294-31 | CERAMIC | 0.001uF 10% 50V |
| C96 | 1-104-664-11 | ELECT | 47uF 20% 16V |
| C97A | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| C98A | 1-161-772-11 | CERAMIC | 0.1uF 10% 25V |
| < CONNECTOR > | | | |
| * CN04 | 1-568-272-11 | SOCKET, CONNECTOR 6P | |
| * CN05 | 1-564-515-11 | PLUG, CONNECTOR 12P | |
| * CN06 | 1-568-856-11 | SOCKET, CONNECTOR 13P | |
| * CN07 | 1-568-835-11 | SOCKET, CONNECTOR 16P | |
| < DIODE > | | | |
| △ D01 | 8-719-510-14 | DIODE S2VB60 | |
| D11 | 8-719-901-33 | DIODE 1SS133 | |
| D12 | 8-719-921-54 | DIODE MTZJ-6.2B | |
| D13 | 8-719-921-54 | DIODE MTZJ-6.2B | |
| D14 | 8-719-901-33 | DIODE 1SS133 | |
| D15 | 8-719-901-33 | DIODE 1SS133 | |
| △ D20 | 8-719-510-14 | DIODE S2VB60 | |
| D24 | 8-719-901-33 | DIODE 1SS133 | |
| D25 | 8-719-901-33 | DIODE 1SS133 | |
| D26 | 8-719-901-33 | DIODE 1SS133 | |
| D27 | 8-719-901-33 | DIODE 1SS133 | |
| D28 | 8-719-901-33 | DIODE 1SS133 | |
| D33 | 8-719-109-89 | DIODE RD5.6ESB2 | |
| D35 | 8-719-200-02 | DIODE 10E2 | |
| D36 | 8-719-200-02 | DIODE 10E2 | |
| D37 | 8-719-901-33 | DIODE 1SS133 | |
| D38 | 8-719-200-02 | DIODE 10E2 | |
| D39 | 8-719-200-02 | DIODE 10E2 | |
| < FUSIBLE RESISTOR > | | | |
| △ FR01 | 1-202-972-61 | FUSIBLE | 1 5% 1/4W F |
| △ FR02 | 1-202-972-61 | FUSIBLE | 1 5% 1/4W F |
| △ FR03 | 1-202-972-61 | FUSIBLE | 1 5% 1/4W F |
| < IC > | | | |
| IC03 | 8-759-634-51 | IC M5218AP | |
| IC04 | 8-759-497-87 | IC uPD75108GF-N14-3BE | |
| IC05 | 8-759-165-85 | IC PST600H-T | |
| IC06 | 8-759-708-05 | IC NJM78L05A | |
| IC07 | 8-759-700-65 | IC NJM79L05A | |
| IC08 | 8-759-708-05 | IC NJM78L05A | |
| IC09 | 8-759-112-93 | IC uPC4570HA-1 | |
| IC10 | 8-759-231-58 | IC TA7812S | |
| IC11 | 8-759-982-07 | IC RC7808FA | |
| < COIL > | | | |
| L07 | 1-416-567-11 | COIL, CHOKE | 6.8mH |
| L08 | 1-416-567-11 | COIL, CHOKE | 6.8mH |

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

| Ref. No. | Part No. | Description | Remark | Ref. No. | Part No. | Description | Remark |
|----------|--------------|------------------------|--------|----------|--------------|-----------------------------|--------|
| | | < TRANSISTOR > | | | | | |
| Q57 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | R158 | 1-247-879-11 | CARBON 100K 5% | 1/4W |
| Q59 | 8-729-900-65 | TRANSISTOR DTA144ES | | R159 | 1-247-855-11 | CARBON 10K 5% | 1/4W |
| Q60 | 8-729-900-65 | TRANSISTOR DTA144ES | | R160 | 1-247-879-11 | CARBON 100K 5% | 1/4W |
| Q65 | 8-729-029-86 | TRANSISTOR DTC124ESA | | R161 | 1-260-087-11 | CARBON 100 5% | 1/2W |
| Q66 | 8-729-029-86 | TRANSISTOR DTC124ESA | | R163 | 1-247-871-11 | CARBON 47K 5% | 1/4W |
| Q67 | 8-729-029-86 | TRANSISTOR DTC124ESA | | R164 | 1-247-843-11 | CARBON 3.3K 5% | 1/4W |
| Q68 | 8-729-029-86 | TRANSISTOR DTC124ESA | | R165 | 1-249-427-11 | CARBON 6.8K 5% | 1/4W |
| Q69 | 8-729-029-68 | TRANSISTOR DTC114TSA | | R166 | 1-247-871-11 | CARBON 47K 5% | 1/4W |
| Q70 | 8-729-029-68 | TRANSISTOR DTC114TSA | | R169 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| Q71 | 8-729-900-65 | TRANSISTOR DTA144ES | | R170 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| Q72 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | | R171 | 1-247-871-11 | CARBON 47K 5% | 1/4W |
| Q74 | 8-729-900-65 | TRANSISTOR DTA144ES | | R183 | 1-260-111-11 | CARBON 10K 5% | 1/2W |
| Q76 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | | R184 | 1-247-855-11 | CARBON 10K 5% | 1/4W |
| Q77 | 8-729-900-63 | TRANSISTOR DTA124ES | | R187 | 1-247-871-11 | CARBON 47K 5% | 1/4W |
| | | < RESISTOR > | | R188 | 1-247-871-11 | CARBON 47K 5% | 1/4W |
| R116 | 1-247-855-11 | CARBON 10K 5% | 1/4W | R189 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| R117 | 1-260-111-11 | CARBON 10K 5% | 1/2W | R190 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| R118 | 1-249-393-11 | CARBON 10 5% | 1/4W | R191 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| R121 | 1-247-855-11 | CARBON 10K 5% | 1/4W | R196 | 1-247-847-11 | CARBON 4.7K 5% | 1/4W |
| R122 | 1-249-417-11 | CARBON 1K 5% | 1/4W | R197 | 1-249-413-11 | CARBON 470 5% | 1/4W |
| R123 | 1-247-879-11 | CARBON 100K 5% | 1/4W | R198 | 1-260-095-11 | CARBON 470 5% | 1/2W |
| R124 | 1-247-855-11 | CARBON 10K 5% | 1/4W | | | < VARIABLE RESISTOR > | |
| R125 | 1-249-417-11 | CARBON 1K 5% | 1/4W | SFR11 | 1-241-765-11 | RES, ADJ, CARBON 22K | |
| R127 | 1-249-430-11 | CARBON 12K 5% | 1/4W | SFR12 | 1-241-765-11 | RES, ADJ, CARBON 22K | |
| R128 | 1-249-430-11 | CARBON 12K 5% | 1/4W | | | < VIBRATOR > | |
| R131 | 1-247-903-00 | CARBON 1M 5% | 1/4W | X01 | 1-767-130-11 | VIBRATOR, CERAMIC (4.19MHZ) | |
| R131A | 1-247-839-11 | CARBON 2.2K 5% | 1/4W | | | ***** | |
| R132A | 1-247-839-11 | CARBON 2.2K 5% | 1/4W | | | | |
| R133 | 1-247-871-11 | CARBON 47K 5% | 1/4W | * | A-2007-756-A | MOTOR BOARD, COMPLETE | |
| R134 | 1-247-871-11 | CARBON 47K 5% | 1/4W | | | ***** | |
| R135 | 1-247-871-11 | CARBON 47K 5% | 1/4W | | | < CAPACITOR > | |
| R136 | 1-247-871-11 | CARBON 47K 5% | 1/4W | C1A | 1-126-963-11 | ELECT 4.7uF 20% 50V | |
| R137 | 1-247-883-00 | CARBON 150K 5% | 1/4W | C1B | 1-164-159-11 | CERAMIC 0.1uF 50V | |
| R138 | 1-247-883-00 | CARBON 150K 5% | 1/4W | C1C | 1-164-159-11 | CERAMIC 0.1uF 50V | |
| R139 | 1-247-863-11 | CARBON 22K 5% | 1/4W | | | < CONNECTOR > | |
| R140 | 1-247-863-11 | CARBON 22K 5% | 1/4W | * CN07 | 1-568-835-11 | SOCKET, CONNECTOR 16P | |
| R141 | 1-247-867-11 | CARBON 33K 5% | 1/4W | * CN14 | 1-568-835-11 | SOCKET, CONNECTOR 16P | |
| R142 | 1-247-867-11 | CARBON 33K 5% | 1/4W | | | < DIODE > | |
| R143 | 1-247-855-11 | CARBON 10K 5% | 1/4W | D1A | 8-719-901-33 | DIODE 1SS133 | |
| R144 | 1-247-855-11 | CARBON 10K 5% | 1/4W | D1B | 8-719-901-33 | DIODE 1SS133 | |
| R145 | 1-247-807-11 | CARBON 100 5% | 1/4W | D1C | 8-719-921-80 | DIODE MTZJ-11B | |
| R146 | 1-247-807-11 | CARBON 100 5% | 1/4W | D1D | 8-719-901-33 | DIODE 1SS133 | |
| R147 | 1-249-427-11 | CARBON 6.8K 5% | 1/4W | D1E | 8-719-901-33 | DIODE 1SS133 | |
| R148 | 1-249-427-11 | CARBON 6.8K 5% | 1/4W | D1F | 8-719-901-33 | DIODE 1SS133 | |
| R151 | 1-249-417-11 | CARBON 1K 5% | 1/4W | D1G | 8-719-901-33 | DIODE 1SS133 | |
| R152 | 1-247-879-11 | CARBON 100K 5% | 1/4W | D1H | 8-719-901-33 | DIODE 1SS133 | |
| R153 | 1-249-440-11 | CARBON 82K 5% | 1/4W | D1J | 8-719-901-33 | DIODE 1SS133 | |
| R154 | 1-247-879-11 | CARBON 100K 5% | 1/4W | D1K | 8-719-921-63 | DIODE MTZJ-7.5B | |
| R155 | 1-249-436-11 | CARBON 39K 5% | 1/4W | | | | |
| R156 | 1-260-115-11 | CARBON 22K 5% | 1/2W | | | | |
| R157 | 1-249-417-11 | CARBON 1K 5% | 1/4W | | | | |

MOTOR

| Ref. No. | Part No. | Description | Remark |
|--------------|--------------|--|--------|
| | | < IC > | |
| IC1A | 8-759-822-09 | IC LB1641 | |
| | | < TRANSISTOR > | |
| Q1A | 8-729-188-23 | TRANSISTOR 2SD882-P | |
| Q1B | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| Q1C | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| Q1D | 8-729-195-23 | TRANSISTOR 2SA952 | |
| Q1E | 8-729-195-23 | TRANSISTOR 2SA952 | |
| Q1F | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| Q1G | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| Q1H | 8-729-142-46 | TRANSISTOR 2SC2001-LK | |
| Q1J | 8-729-142-46 | TRANSISTOR 2SC2001-LK | |
| Q1K | 8-729-029-94 | TRANSISTOR DTC143TSA | |
| Q1L | 8-729-422-57 | TRANSISTOR UN4111 | |
| Q1M | 8-729-029-86 | TRANSISTOR DTC124ESA | |
| | | < RESISTOR > | |
| R1A | 1-247-825-11 | CARBON 560 5% 1/4W | |
| R1B | 1-247-879-11 | CARBON 100K 5% 1/4W | |
| R1C | 1-247-871-11 | CARBON 47K 5% 1/4W | |
| R1D | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1E | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1F | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1G | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1H | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1J | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1K | 1-249-409-11 | CARBON 220 5% 1/4W | |
| ***** | | | |
| | | MISCELLANEOUS | |
| | | ***** | |
| 21 | 1-782-804-11 | CORD (WITH CONNECTOR) | |
| 24 | 3-021-640-01 | BRACKET (FLEXIBLE A) | |
| 60 | 3-021-641-01 | BRACKET (FLEXIBLE B) | |
| 101 | 3-020-446-01 | BRACKET (HEAD UNIT) | |
| M1 | 3-020-447-01 | MOTOR (A) ASSY (REEL/CAPSTAN) | |
| M2 | 3-020-448-01 | MOTOR (B) ASSY (LOADING) | |
| ***** | | | |
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ***** | |
| 3-861-243-12 | | MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH,GERMAN,DUTCH,SWEDISH, ITALIAN,PORTUGUESE,CHINESE) | |