

CDP-XA555ES

SERVICE MANUAL

AEP Model
E Model



Photo: Black

Model Name Using Similar Mechanism	CDP-XA50ES
CD Mechanism Type	CDM32EB-12C (BLACK) CDM32EN-12C (GOLD)
Base Unit Type	BU-12C
Optical Pick-up Type	KSS-273B/J1N

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$) Emission duration: continuous
Laser output	Max 44.6 μW * * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	2 Hz to 20 kHz $\pm 0.3 \text{ dB}$
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0020 %

Outputs

	Jack type	Maximum output level	Load impedance
ANALOG OUT (FIXED)	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
ANALOG OUT (VARIABLE)	Phono jacks	2 V (at 50 kilohms)	Over 50 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	-18 dBm	Wave length: 660 nm
DIGITAL OUT (COAXIAL)	Coaxial output connector	0.5 Vp-p (75 ohms)	75 ohms
PHONES	Stereo phone jack	28 mW	32 ohms

– Continued on next page –

COMPACT DISC PLAYER

SONY®



General

Power requirements	220 V – 230 V AC, 50/60 Hz
Power consumption	23 W
Dimensions (approx.) (w/h/d)	430 × 126 × 375 mm incl. projecting parts
Mass (approx.)	13.2 kg

Supplied accessories

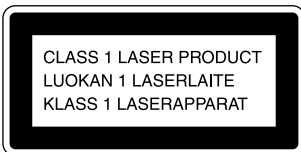
- Audio connecting cord (1)
- Remote commander (remote) (1)
- R6 (size AA) batteries (2)
- Stabilizer (1)

Design and specifications are subject to change without notice.

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. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



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

The following caution label is located inside the unit.



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.

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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.

SECTION 1 SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

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

The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

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

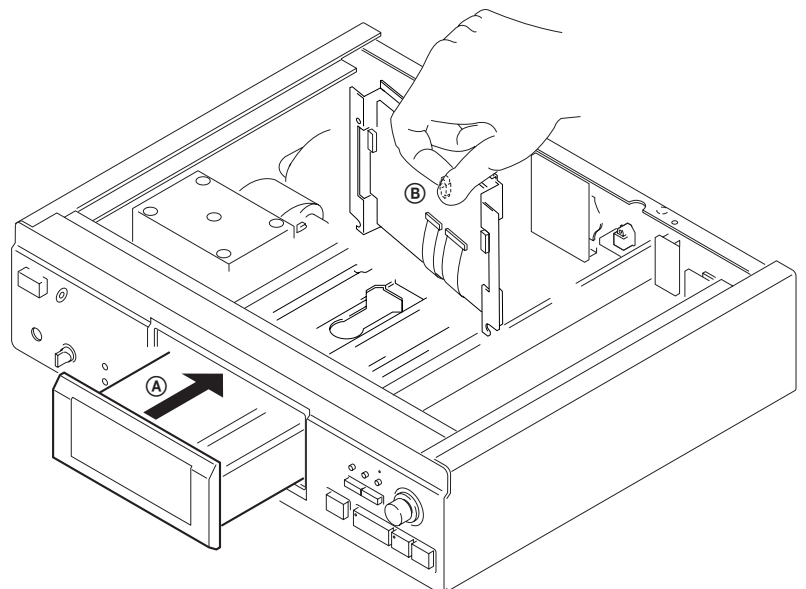
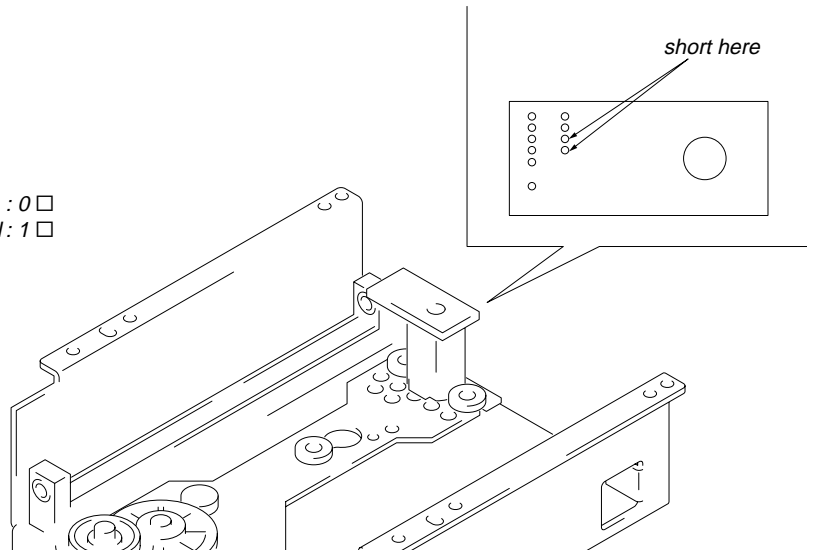
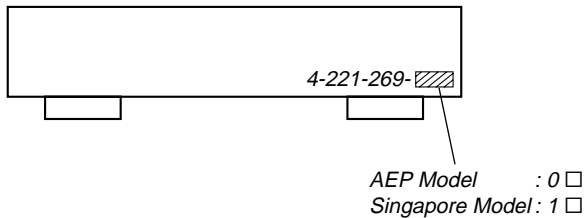
HOW TO PLAY CD WITH THE DISC TRAY OPENED

To play a CD by this method, the screws that secure the SERVO board to the chassis must be removed in advance.

Procedure:

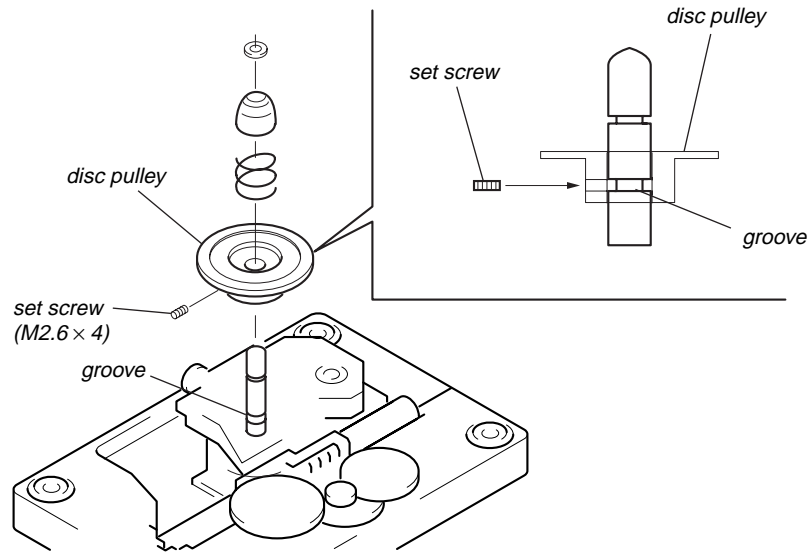
1. Press **Ⓚ** button to turn the power ON.
2. Set a CD on the disc tray.
3. With the disc tray opened, connect pin **①** and pin **②** of CN272 on the LOADING MOTOR board using tweezers, etc.
4. As the disc starts to move toward direction **Ⓐ**, intercept the sensor in **Ⓑ** section with your finger immediately. (See "HOW TO OPERATE THE SET WITHOUT USING STABILIZER" on page 5)
5. You can release your hand when TOC is read.
6. Hence, the operation equivalent to normal operation can be performed.

MODEL IDENTIFICATION - BACK PANEL -



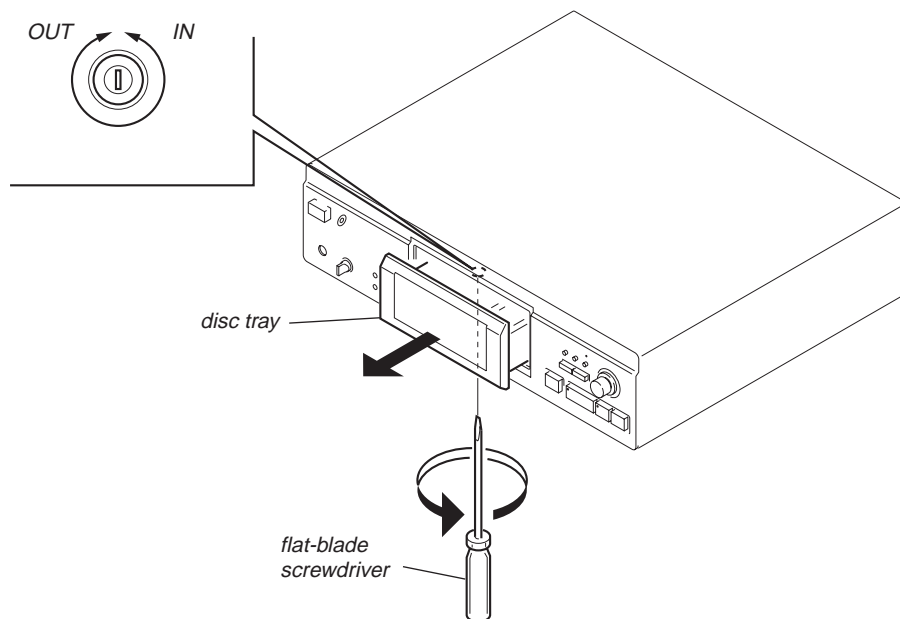
DISC PULLEY INSTALLING POSITION

Note: The shaft on which the disc pulley is installed has a groove to determine the position (height).
Install the disc pulley so that a setscrew can settle in this groove.



HOW TO OPEN DISC TRAY WHEN POWER IS OFF

Insert a flat-blade screwdriver into a hole at the bottom of the set, and rotate the pulley in the arrow direction to open the disc tray.



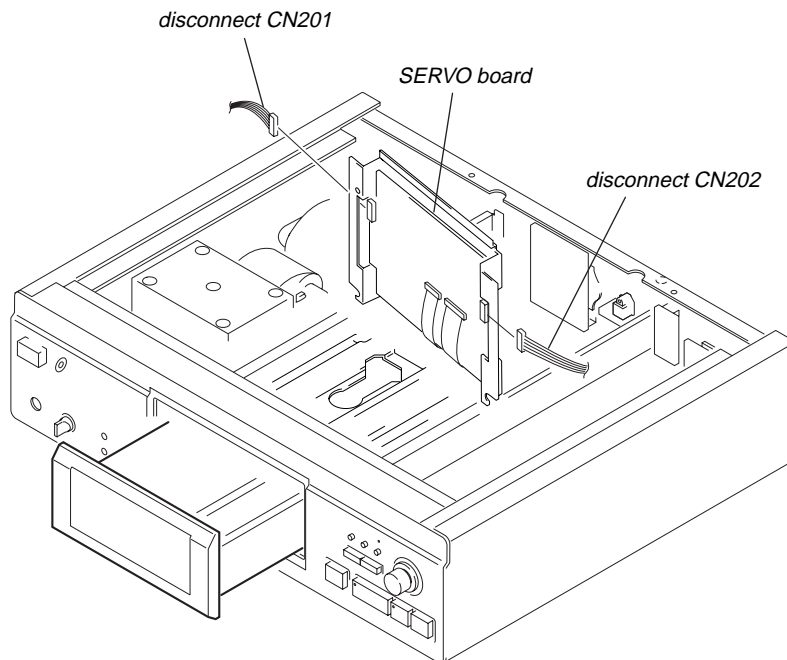
SERVICE POSITION OF SERVO BOARD

In servicing the SERVO board, erect the board as shown below.

In this case, the CN201 and CN202 connectors are disconnected respectively, and accordingly the buttons on the front panel do not function.

Therefore, use the Remote Commander for fundamental operations such as PLAY and STOP.

Also, in performing the service under this condition, the stabilizer is not detected, so refer to “How to Operate the Set without Using Stabilizer”.

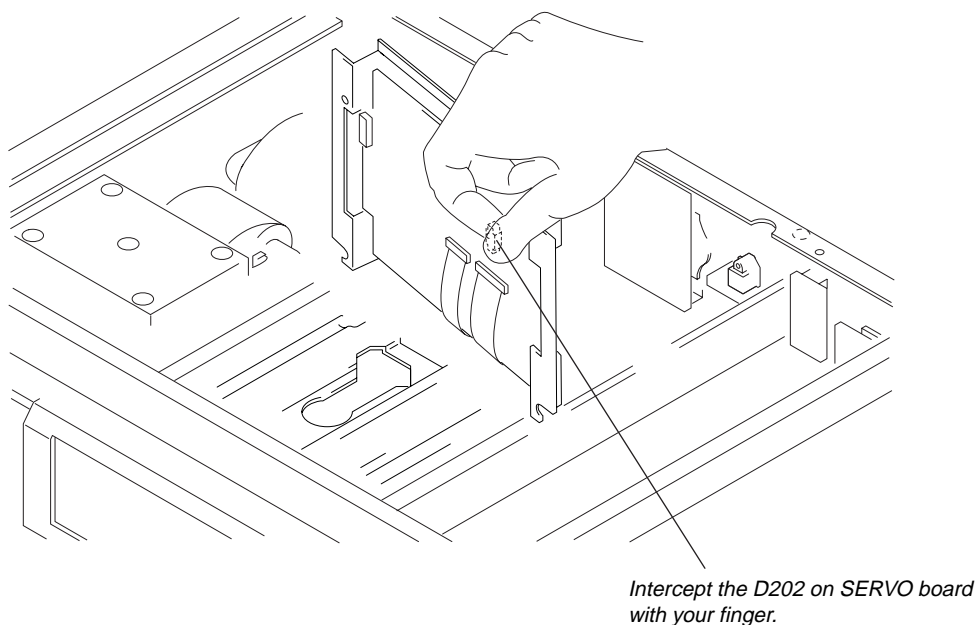


HOW TO OPERATE THE SET WITHOUT USING STABILIZER

As this set detects the stabilizer, if servicing the set in other than normal operating way, disable the stabilizer detecting function by the following method.

The stabilizer is detected before TOC is read, and after that, this function does not operate.

That is, the stabilizer detection is executed after power on or immediately after disc loading, and you can release your finger after the disc was recognized.

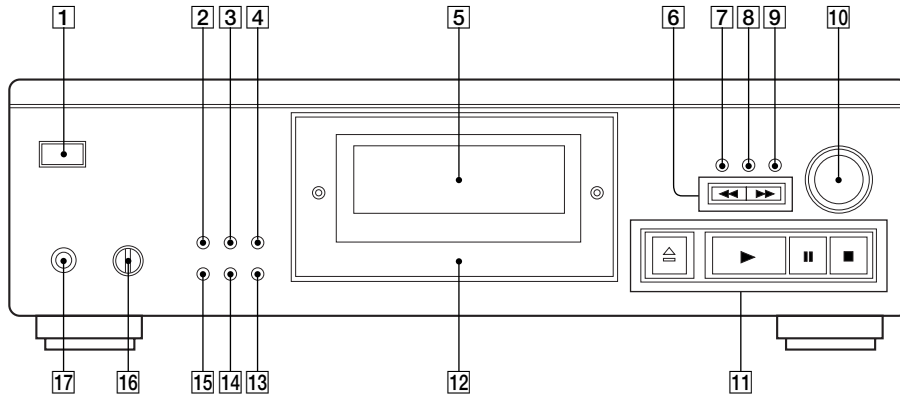


Intercept the D202 on SERVO board with your finger.

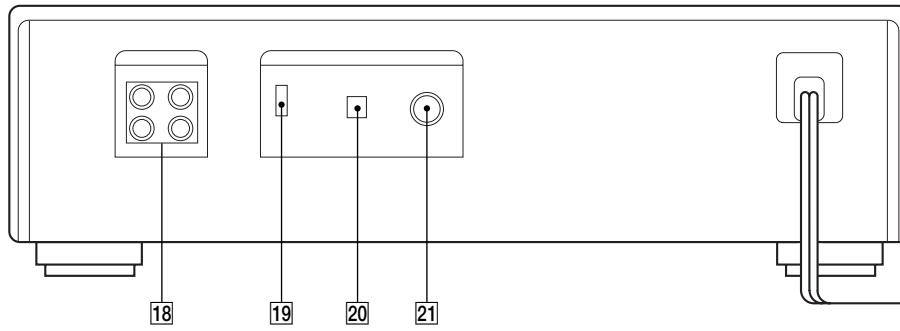
SECTION 2 GENERAL

LOCATION OF CONTROLS

Front view

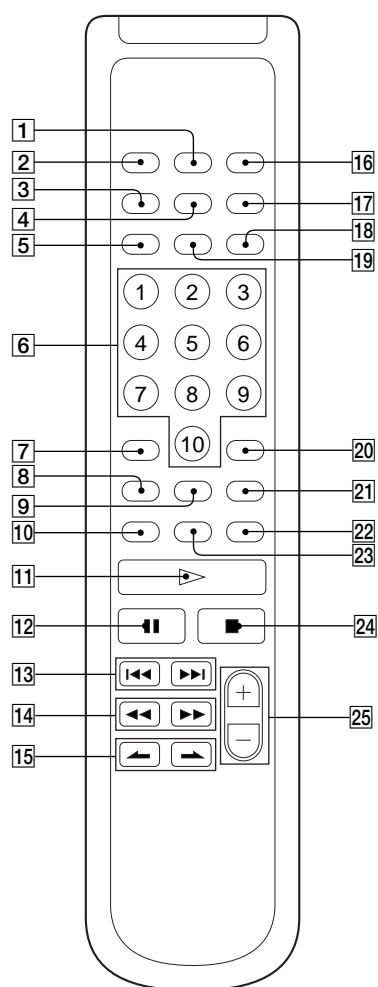


Rear view



- | | |
|---|---|
| <p>1 Ⓞ (power) switch</p> <p>2 PLAY MODE button</p> <p>3 REPEAT button</p> <p>4 TIME button</p> <p>5 Fluorescent indicator tube display</p> <p>6 ◀▶ (forward/backward) button</p> <p>7 CHECK button</p> <p>8 CLEAR button</p> <p>9 FILTER button and indicator</p> <p>10 AMS control</p> <p>11 ■ (stop) button</p> <p>▢ (pause) button and indicator</p> <p>▶ (play) button and indicator</p> <p>⊞ OPEN/CLOSE button</p> | <p>12 Disc table</p> <p>13 ERASE button</p> <p>14 FILE button</p> <p>15 EDIT/TIME FADE button</p> <p>16 LINE OUT/PHONE LEVEL volume</p> <p>17 PHONES jack</p> <p>18 ANALOG OUT (FIXED/VARIABLE) connector</p> <p>19 DIGITAL OUT ON/OFF switch</p> <p>20 DIGITAL OUT (OPTICAL) connector</p> <p>21 DIGITAL OUT (COAXIAL) connector</p> |
|---|---|

Remote commander

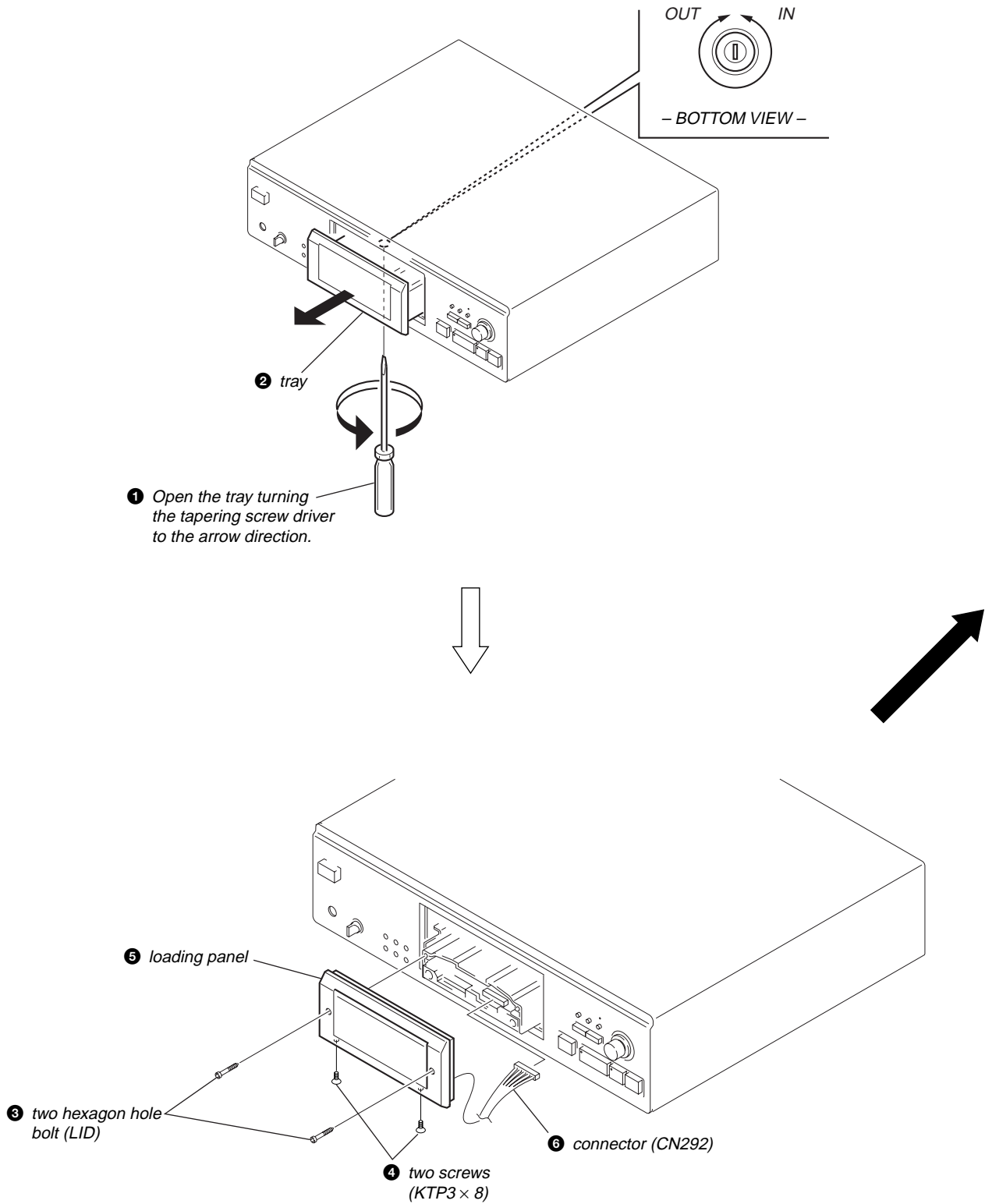


- 1** SHUFFLE button
- 2** CONTINUE button
- 3** C.INDEX button
- 4** A.SPACE button
- 5** TIME button
- 6** Number button
- 7** >10 button
- 8** FILE button
- 9** ERASE button
- 10** REPEAT button
- 11** ▷ (play) button
- 12** || (pause) button
- 13** ◀▶ (AMS) button
- 14** ◀▶ (forward/backward) button
- 15** INDEX ◀/▶ button
- 16** PROGRAM button
- 17** PEAK SEARCH button
- 18** DIGITAL FILTER button
- 19** DISPLAY MODE button
- 20** CLEAR button
- 21** CHECK button
- 22** FADER button
- 23** A ↔ B button
- 24** ■ (stop) button
- 25** LINE OUT LEVEL button

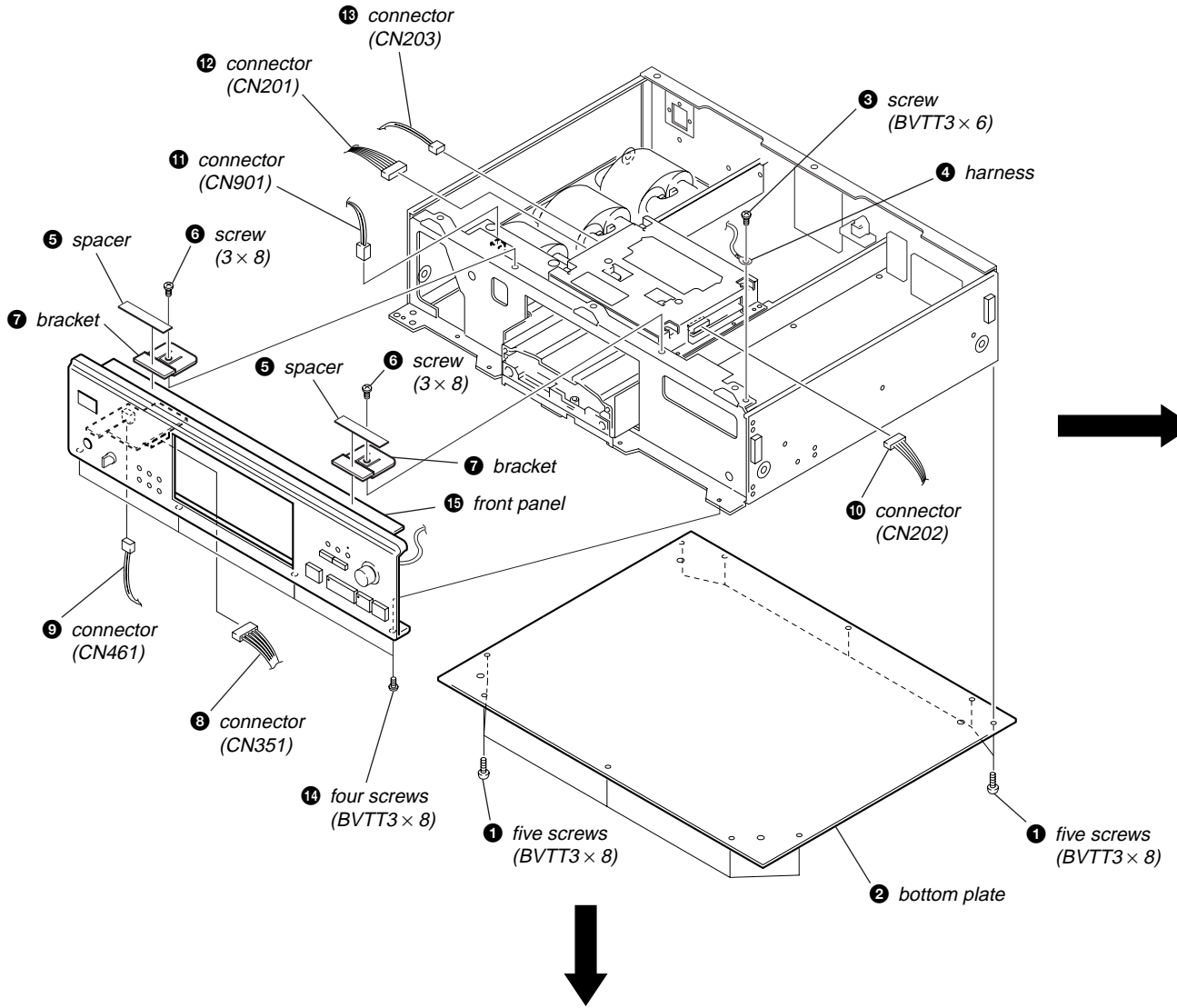
SECTION 3 DISASSEMBLY

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

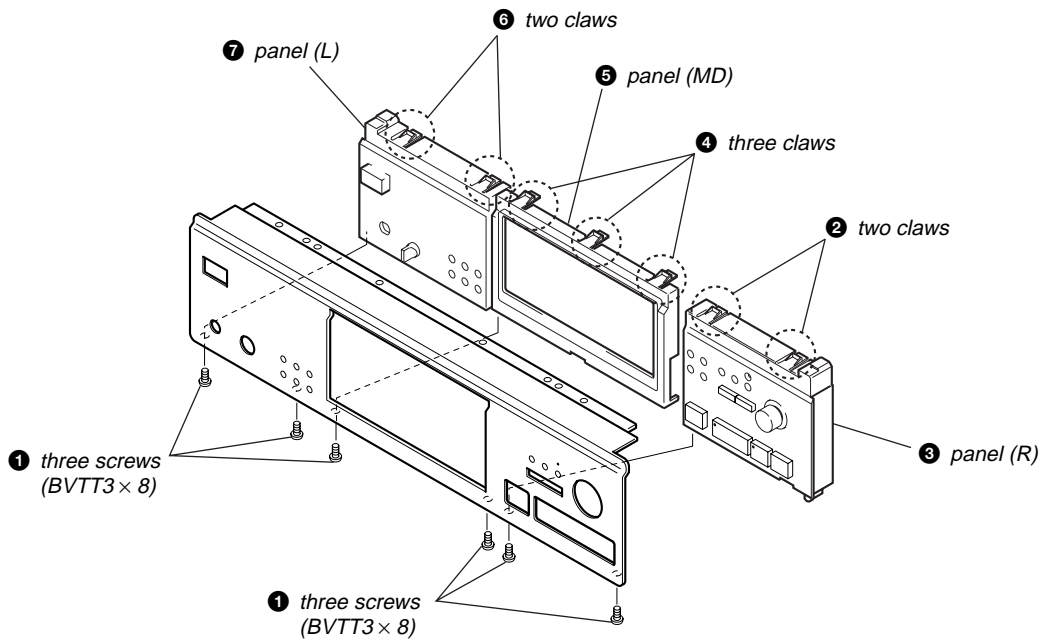
LOADING PANEL



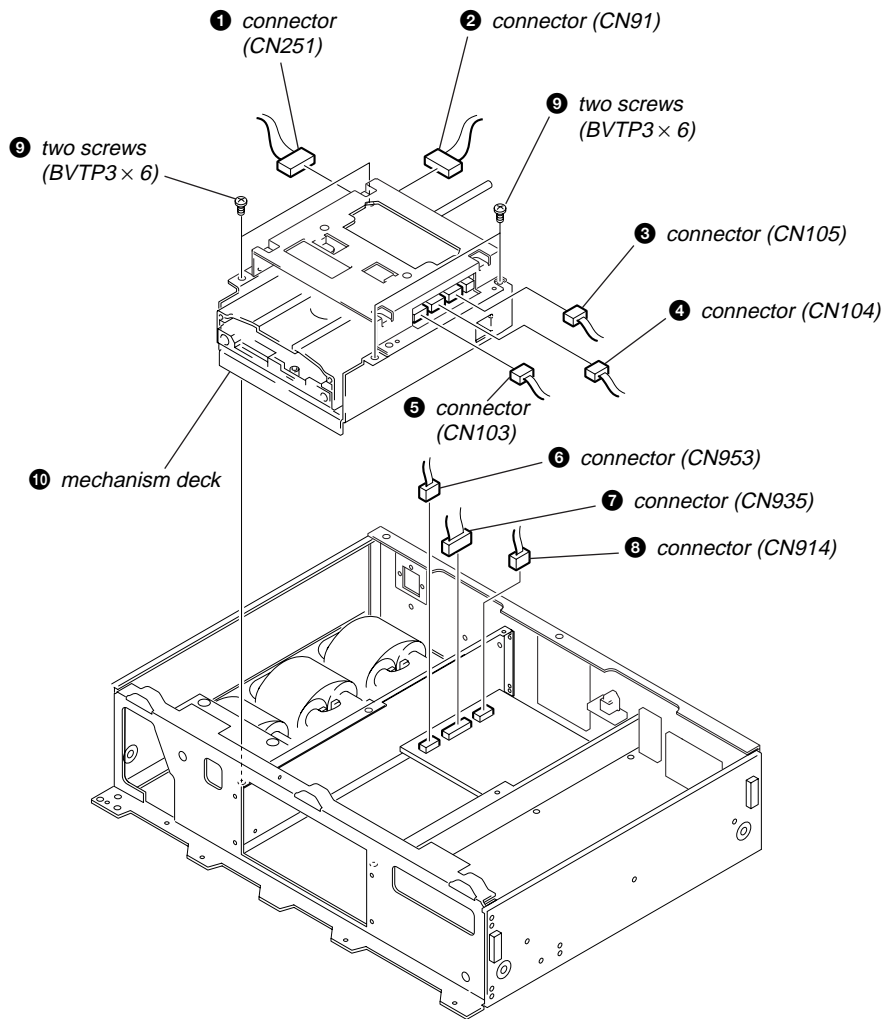
FRONT PANEL



PANEL (L), (M), (R)



MECHANISM DECK (CDM32BN-12C)



SECTION 4 TEST MODE

FLUORESCENT DISPLAY TUBE FULL ON AND KEY CHECK MODE

Procedure:

1. Connect TP(AFJ) and GND on the SERVO board with a lead wire.
2. Press [Ⓜ] button to turn the power ON.
3. The fluorescent display tube will fully turn on.
4. Pressing any button causes the set to enter the Key Check mode. In the Key Check mode, each time a button is pressed, numeric value displayed on the tube is counted up. (However, once the button is pressed, the value is not counted up even if pressing the same button again.) Also, while a button is pressed, its button number is displayed.
5. To exit from the Test mode, press [Ⓜ] button to turn the power OFF.

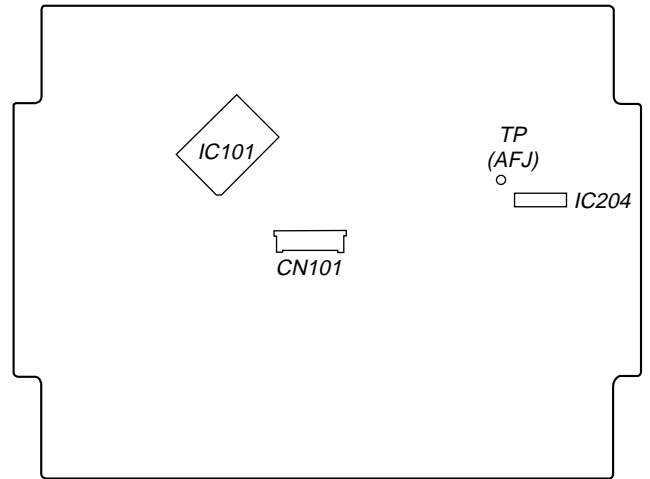
7-segment display



Count-up display

Button number display

– SERVO board (Conductor Side) –




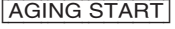

Button Name	Button Number Display (Display while a button is pressed)										
PLAY MODE	Partial on	SIDE-A FADE CUSTOM INDEX C. SEC DELETE									
REPEAT	Partial on	SIDE-B (TIME) (1) MIN C.FILE INDEX									
TIME		000									
EDIT/TIME FADE		12									
FILE		13									
ERASE		00									
CHECK	Partial on	<table border="1" style="display: inline-table; text-align: center;"> <tr><td>1</td><td>3</td><td>5</td></tr> <tr><td>7</td><td>9</td><td></td></tr> <tr><td>11</td><td>13</td><td>15</td></tr> </table>	1	3	5	7	9		11	13	15
1	3	5									
7	9										
11	13	15									
CLEAR	Partial on	<table style="display: inline-table; text-align: center;"> <tr><td>2</td><td>4</td></tr> <tr><td>6</td><td>8 10</td></tr> <tr><td>12</td><td>14 ▶</td></tr> </table>	2	4	6	8 10	12	14 ▶			
2	4										
6	8 10										
12	14 ▶										
FILTER		20									
◀◀	Partial on	PROGRAM 1 B (JUST) INDEX PEAK									
▶▶	Partial on	SHUFFLE REPEAT A-AUTOSPACE EDIT STEP _									
☰ OPEN/CLOSE	Full on										
▶	Partial on and nearby LED on										
	Partial on and nearby LED on										
■		888									
PUSH ENTER		23									

AGING MODE

This set has the Aging mode for operation check of the mechanism deck.

- If a failure occurred
The aging operation stops and a faulty status is displayed on the fluorescent display tube.
- If no failure occurs
The aging operation continues repeatedly.

Note: To enter the Aging mode, the Aging Remote Commander (J-2501-123-A) is required.

1. Press  button to turn the power ON.
2. Set a disc on the tray.
3. Press  button on the Aging Remote Commander.
4. The aging starts, and the fluorescent display tube will display the following.
5. At the completion of aging, press  button.

Code No.	Status	Display in normal operation	Display in case of failure
0	Load IN	A-0	Err-0
1	Access to TOC	A-1	Err-1
2	Access to last track	A-2	Err-2
3	Play of last track (3sec)	Counter display	Err-3
4	Access to first track	A-4	Err-4
5	Play of first track (3sec)	Counter display	Err-5
6	Load OUT	A-6	Err-6

SECTION 5 ELECTRICAL ADJUSTMENTS

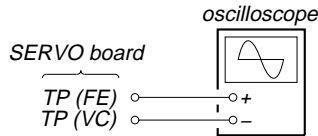
Notes:

1. CD block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (Part No.: 3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check

Note: Operate with remote commander.

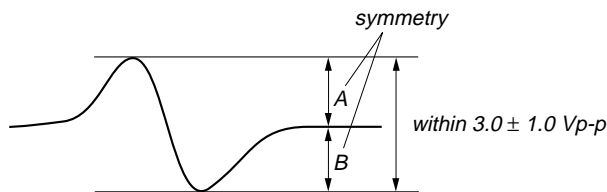
Connection:



Procedure:

1. Connect the oscilloscope to TP (FE) and TP (VC) on SERVO board.
2. Connect the TP (ADJ) and GND with lead wire.
3. Turned power switch (⓪ button) on.
4. Put disc (YEDS-18) in and press the [▶] button. Press the [11] button on remote commander. (actuate the focus search)
5. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3.0 ± 1.0 Vp-p.

S-curve waveform



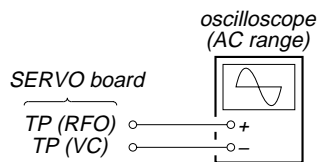
6. After check, remove the lead wire connected in step 2.

Note:

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

RF Level Check

Connection:

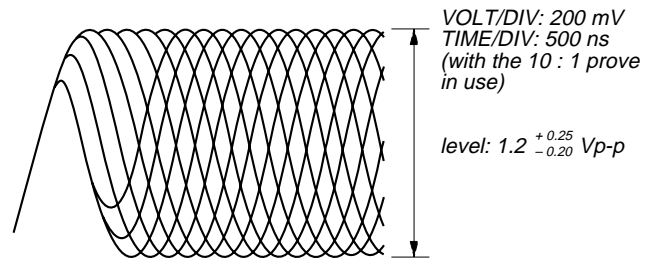


Procedure:

1. Connect the oscilloscope to TP (RFO) and TP (VC) on SERVO board.
2. Turned power switch (⓪ button) on.
3. Put disc (YEDS-18) in and press the [▶] button.
4. Confirm that the oscilloscope waveform is clear and check RF signal level is correct or not.

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

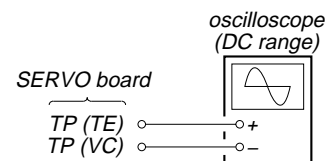
RF signal waveform



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

E-F Balance (Traverse) Check (Operate with remote commander)

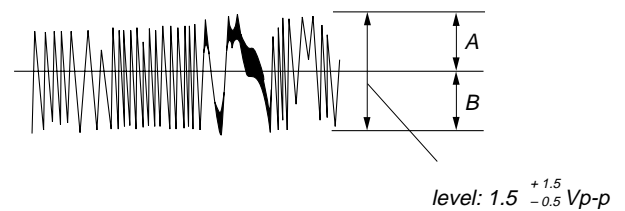
Connection:



Procedure:

1. Connect the TP (ADJ) to ground with lead wire.
2. Connect the oscilloscope to TP (TE) and TP (VC) on SERVO board.
3. Turned power switch (⓪ button) on.
4. Put disc (YEDS-18) in and press the [▶] button.
5. Press the [3] button on remote commander. (Tracking servo on)
6. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 Vdc, and check this level.

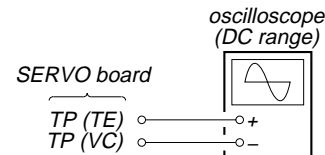
Traverse waveform



7. After check, remove the lead wire connected in step 1.

E-F Balance (Traverse) Check (No remote commander)

Connection:

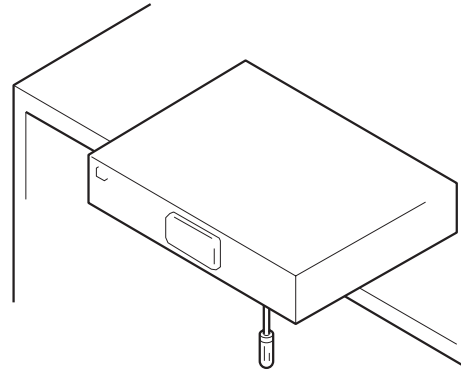
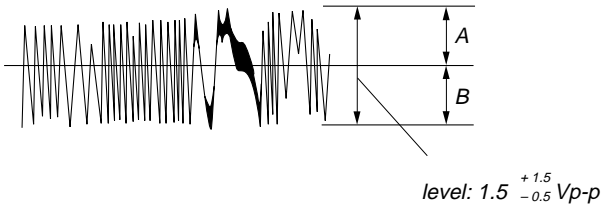


Procedure:

1. Connect the TP (TE: IC101 pin ⑳) to TP (VC) with lead wire.
2. Connect the oscilloscope to TP (TE) and TP (VC) on SERVO board.
3. Turned power switch (⓪ button) on.
4. Put disc (YEDS-18) in and press the [▶] button.

5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 Vdc, and check this level.

Traverse waveform

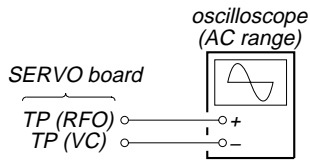


6. After check, remove the lead wire connected in step 1.

Skew Adjustment

Note: Do not perform the skew adjustment when not using attached stabilizer to a set.

Connection:



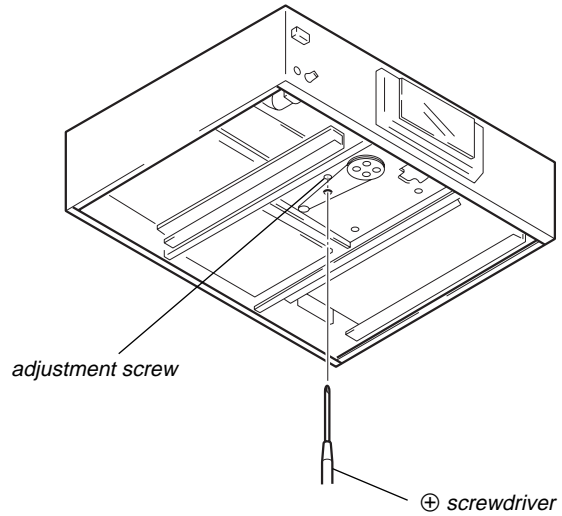
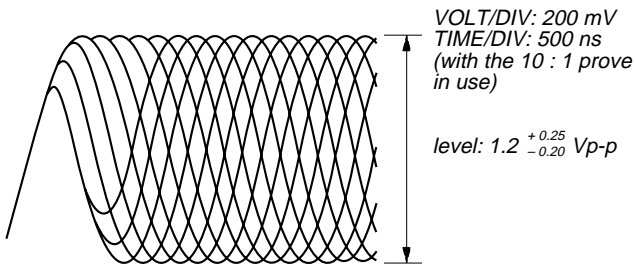
Procedure:

1. Remove the bottom plate, put one third of the unit out from the desk.
2. Connect the oscilloscope to TP (RFO) and TP (VC) on SERVO board.
3. Turned power switch (ⓐ button) on.
4. Put disc (YEDS-18) in and press the ▶ button.
5. Adjust to be clear the waveform of the oscilloscope turning the adjustment screw with a ⊕ screwdriver.

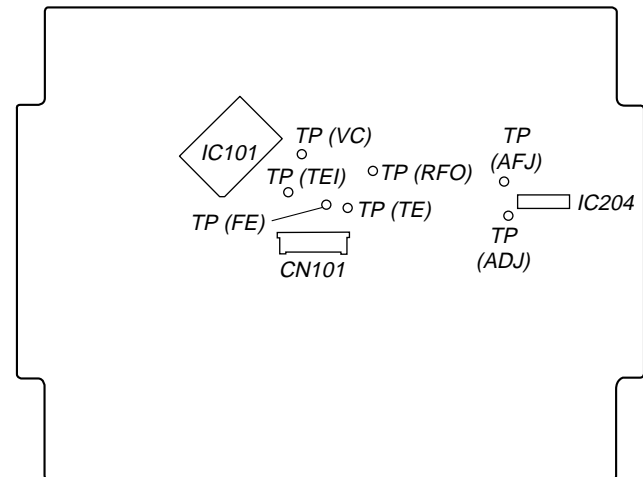
Note: Clear RF signal waveform means that the shape “φ” can be clearly distinguished at the center of the waveform.

6. After the adjustment, lock the adjustment screw.

RF signal waveform

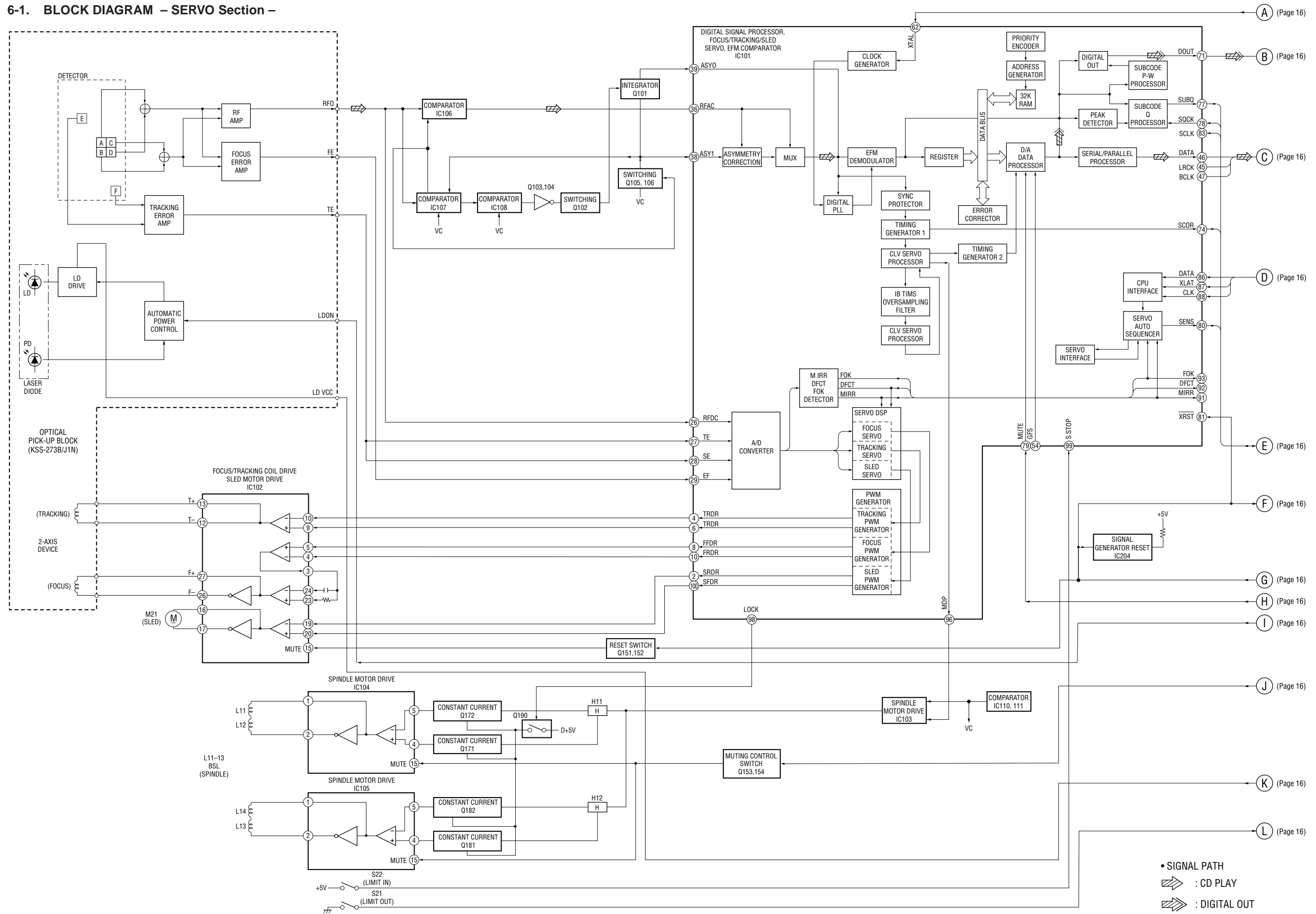


– SERVO BOARD (Conductor Side) –

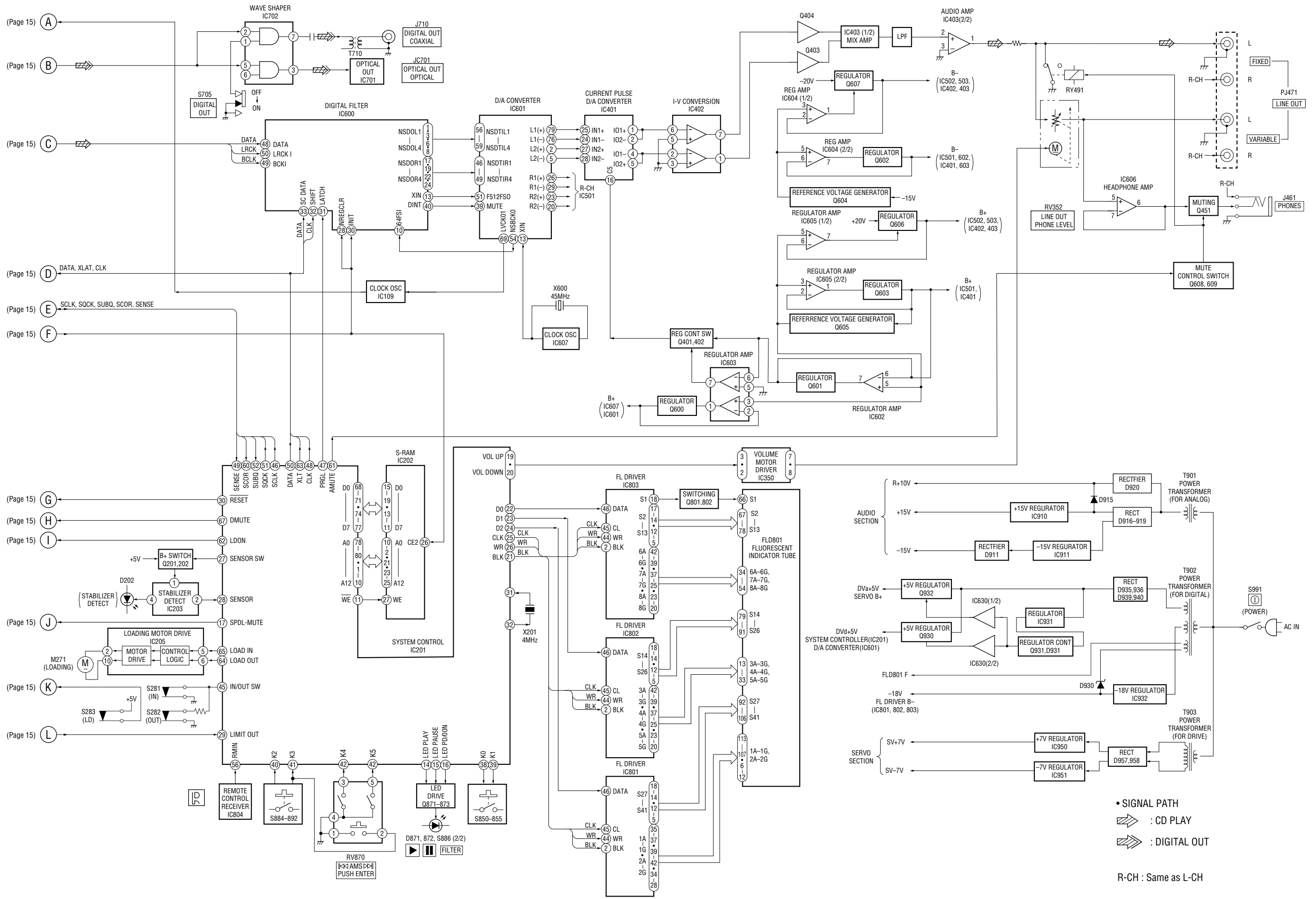


SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM - SERVO Section -



6-2. BLOCK DIAGRAM - MAIN Section -



6-3. NOTES FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

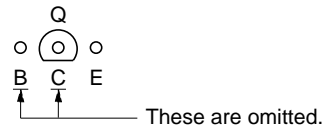
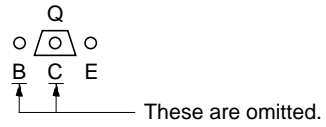
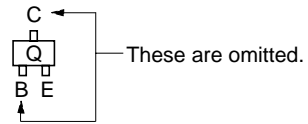
Note on Printed Wiring Board:

- — : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- ▨ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:

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

- Indication of transistor.



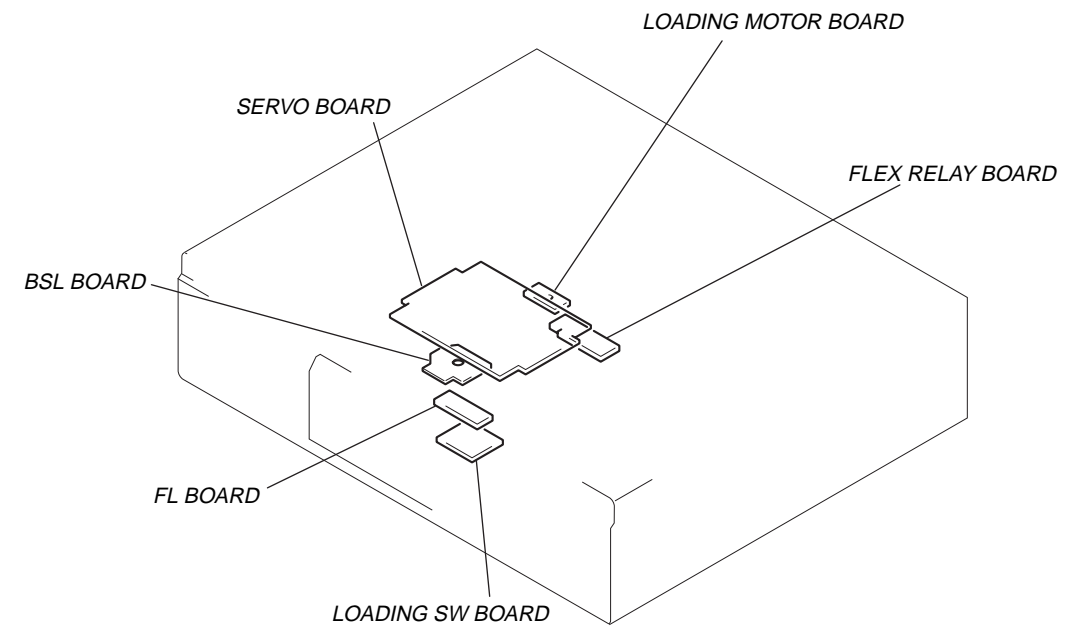
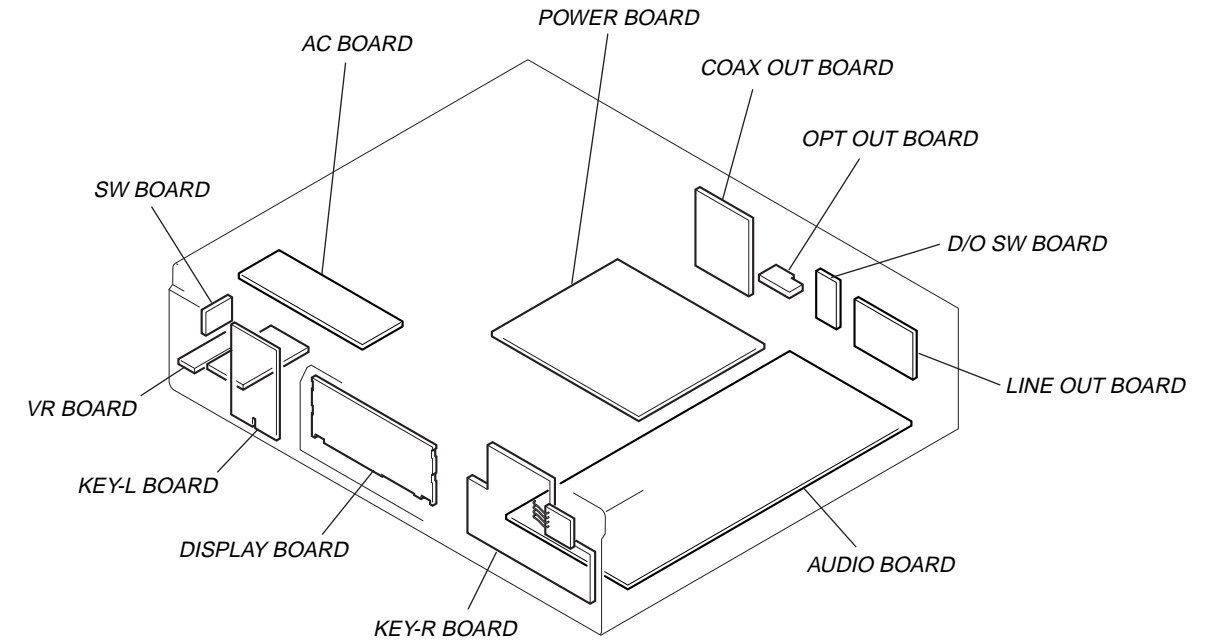
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$ 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.
- % : indicates tolerance.
- Δ : internal component.
- $\text{---}\text{---}\text{---}$: fusible resistor.
- $\text{---}\text{---}\text{---}$: 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.
- $\text{---}\text{---}\text{---}$: adjustment for repair.
- Voltages and waveforms are dc with respect to ground in CD play mode. no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\text{---}\text{---}\text{---}$: CD PLAY
- $\text{---}\text{---}\text{---}$: digital out

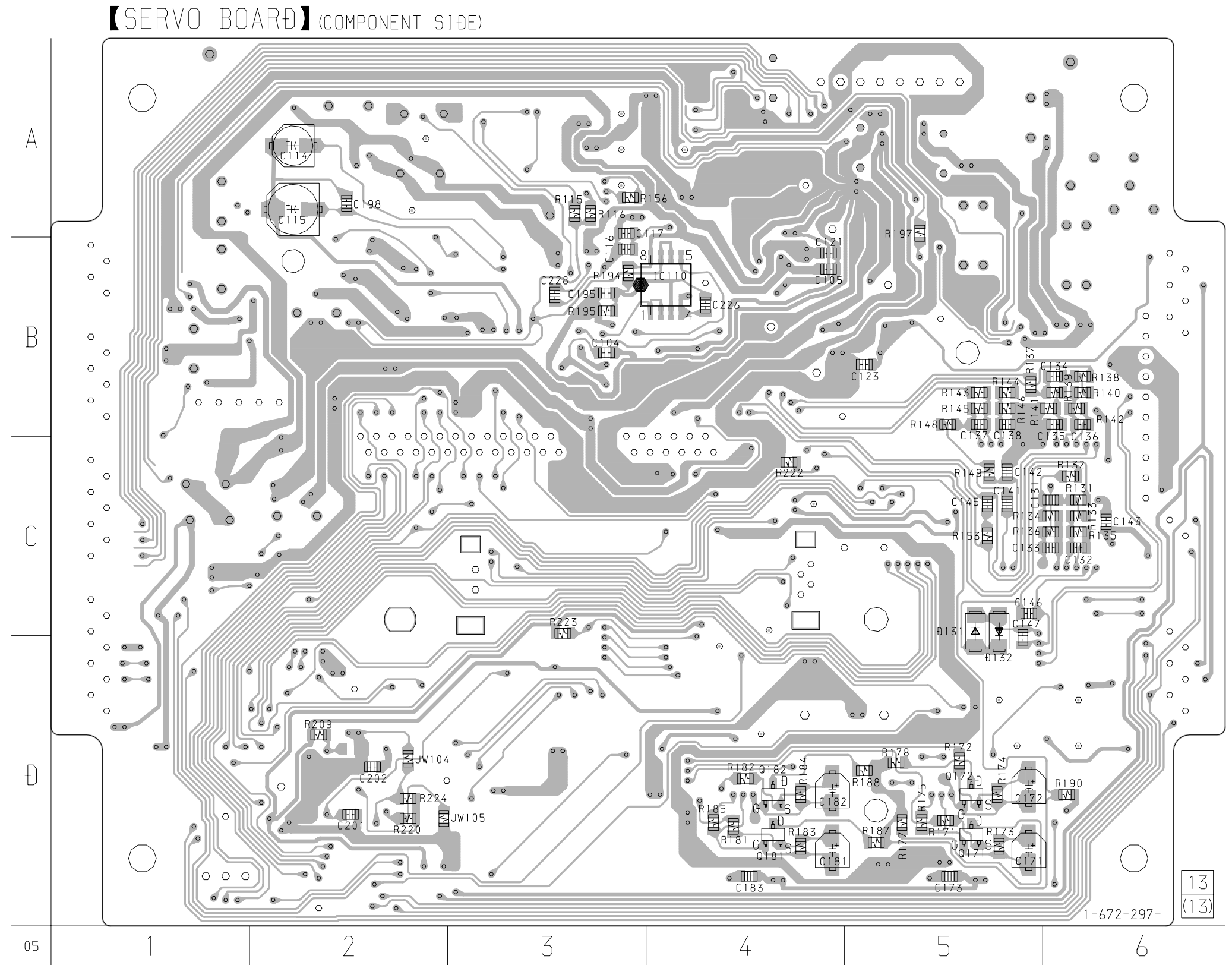
• Circuit Boards Location



6-4. PRINTED WIRING BOARD – SERVO Board (Component Side) – • See page 17 for Circuit Boards Location.

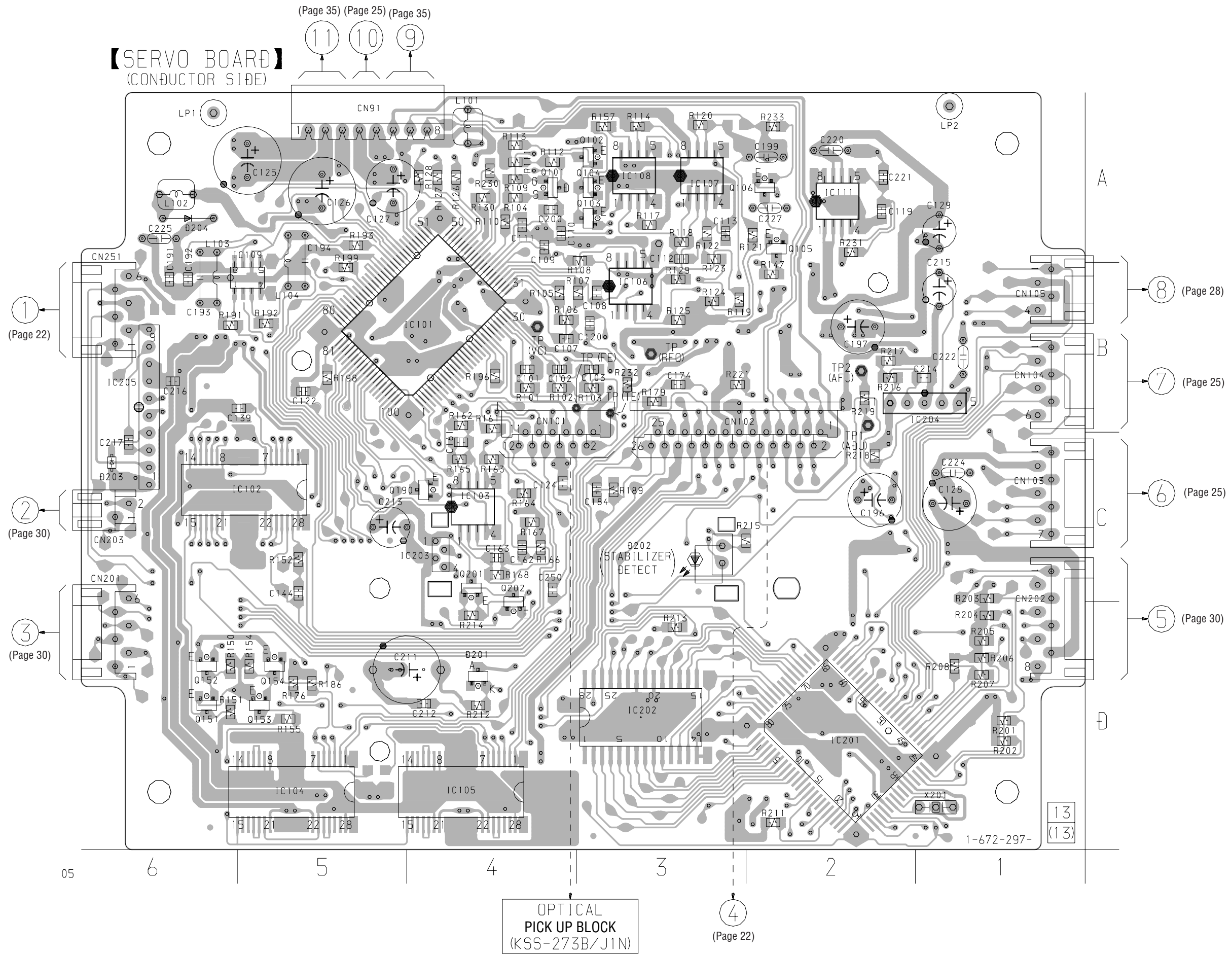
• Semiconductor Location

Ref. No.	Location
D131	C-5
D132	C-5
IC110	B-4
Q171	D-5
Q172	D-5
Q181	D-4
Q182	D-4



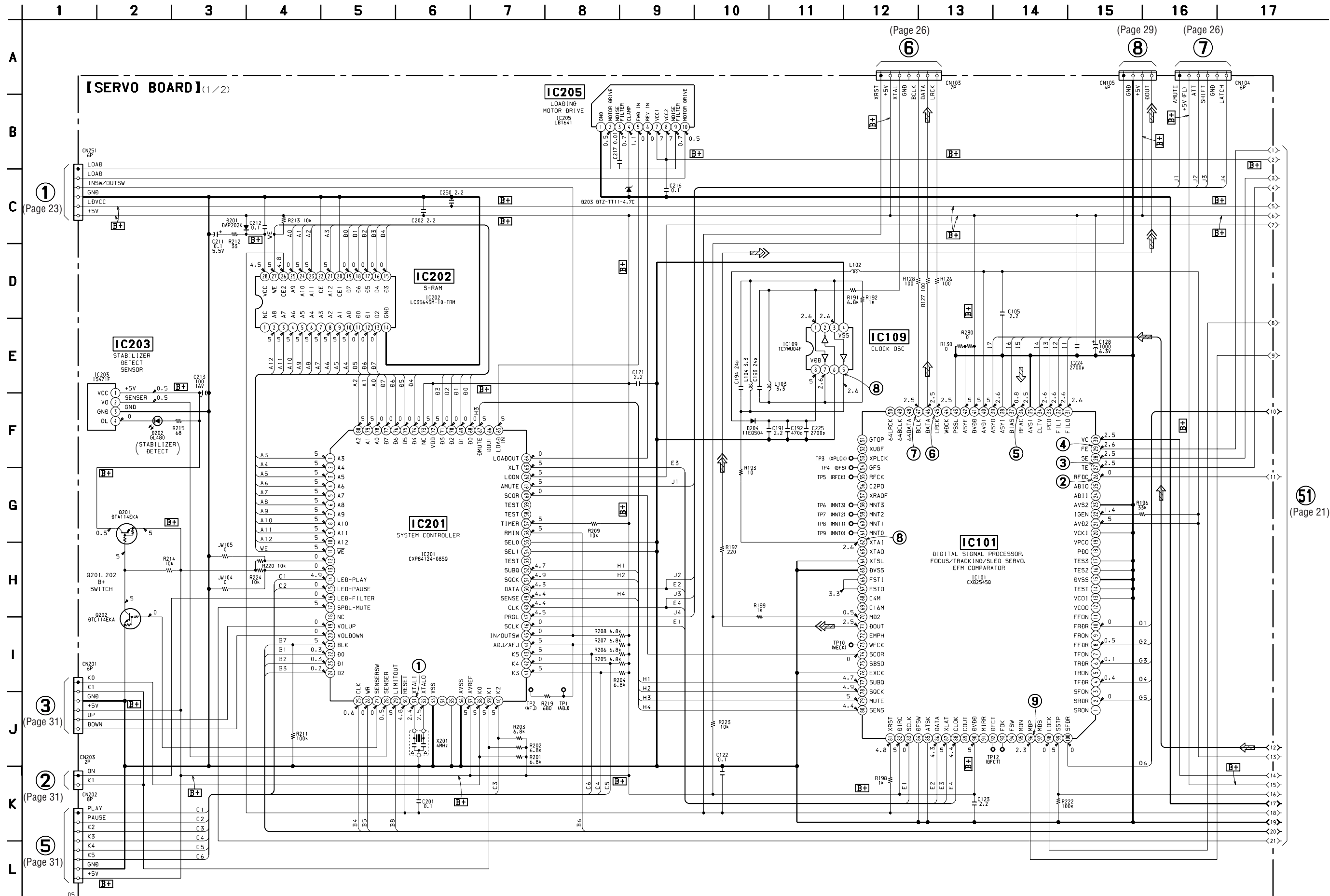
6-5. PRINTED WIRING BOARD – SERVO Board (Conductor Side) – • See page 17 for Circuit Boards Location.

• Semiconductor Location

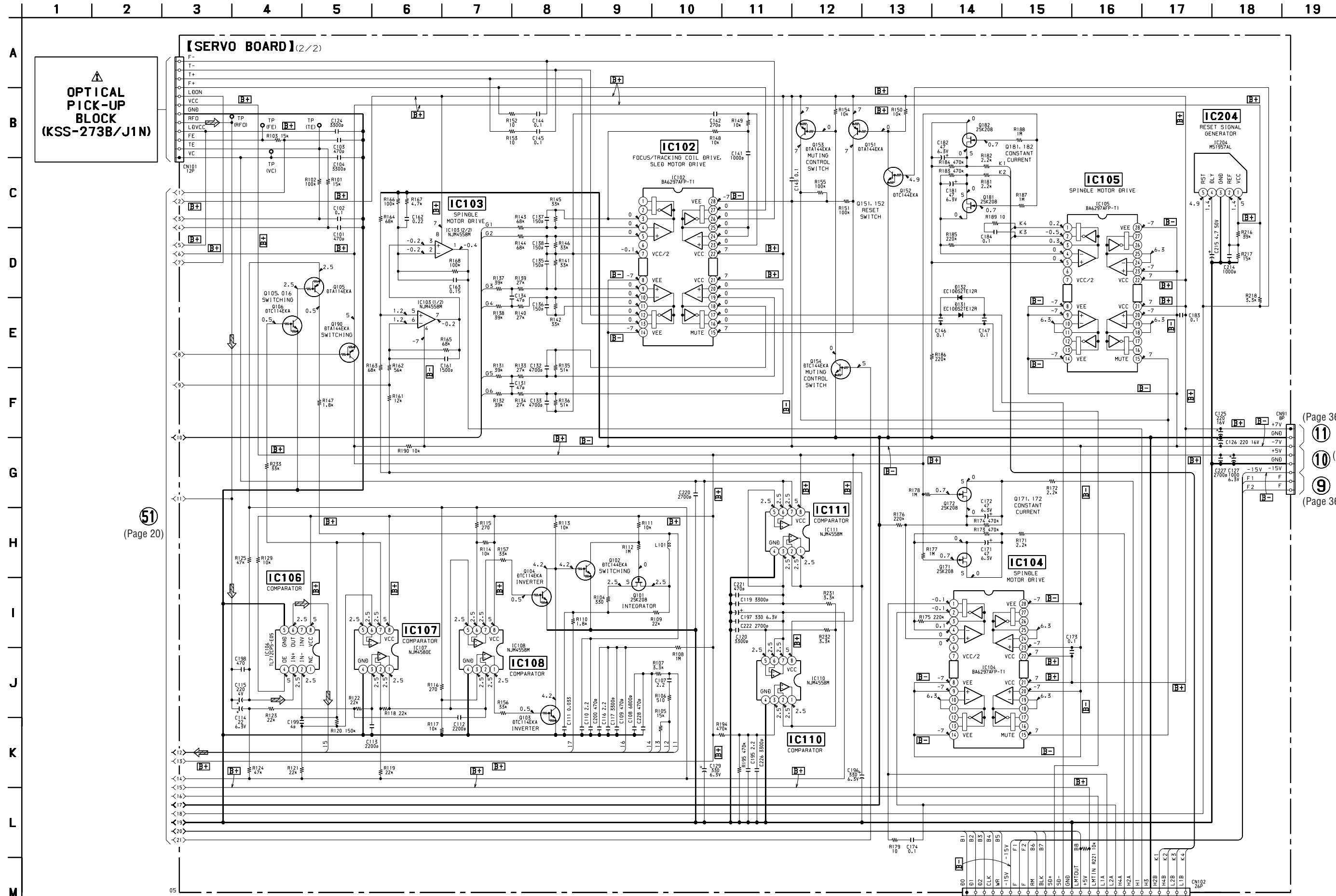


Ref. No.	Location
D201	D-4
D202	C-3
D203	C-6
D204	A-6
IC101	B-5
IC102	C-5
IC103	C-4
IC104	D-5
IC105	D-4
IC106	B-3
IC107	A-3
IC108	A-3
IC109	B-5
IC111	A-2
IC201	D-2
IC202	D-3
IC203	C-4
IC204	B-2
IC205	B-6
Q101	A-4
Q102	A-3
Q103	A-3
Q104	A-3
Q105	A-2
Q106	A-2
Q151	D-6
Q152	D-6
Q153	D-5
Q154	D-5
Q190	C-5
Q201	C-4
Q202	C-4

6-6. SCHEMATIC DIAGRAM – SERVO Board (1/2) – • See page 37 for Waveforms. • See page 38 for IC Block Diagrams.



6-7. SCHEMATIC DIAGRAM – SERVO Board (2/2) – • See page 37 for Waveforms. • See page 39 for IC Block Diagrams.



OPTICAL PICK-UP BLOCK (KSS-273B/J1N)

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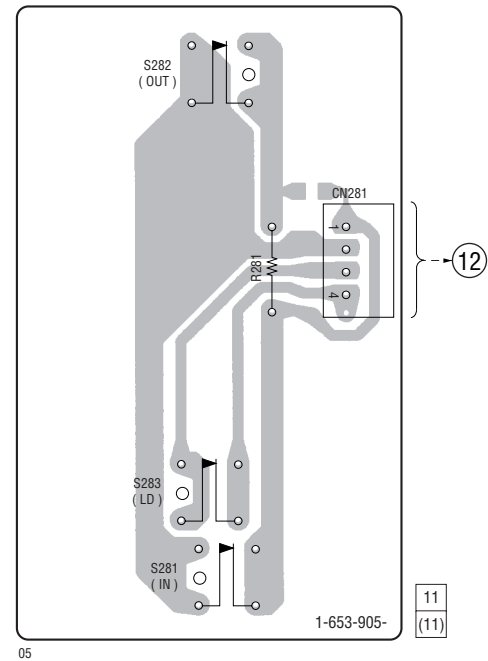
11 (Page 36)
10 (Page 26)
9 (Page 36)

4 (Page 23)

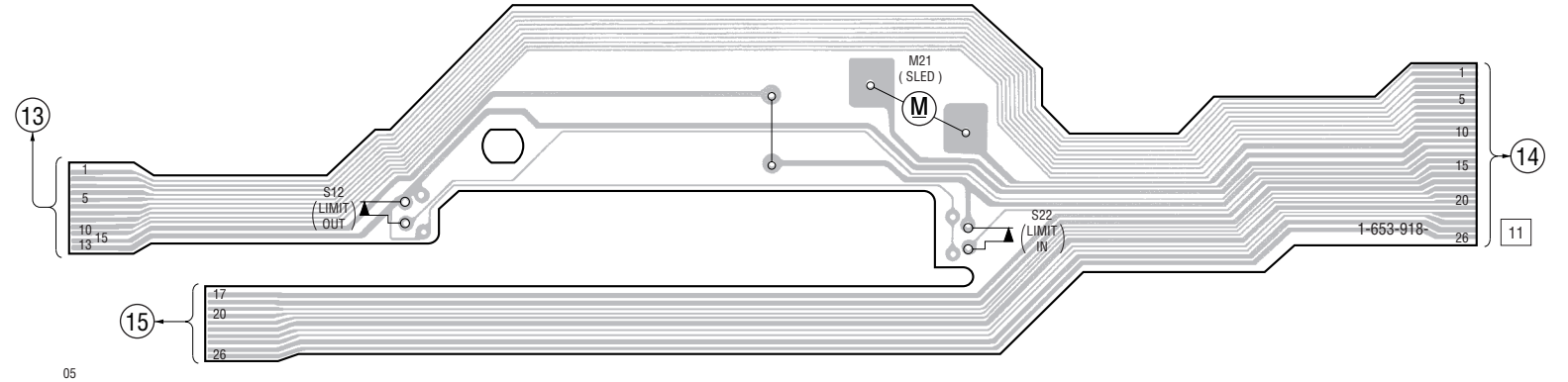
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

6-8. PRINTED WIRING BOARDS – BSL/FL RELAY/FLEX RELAY/LOADING MOTOR/LOADING SW Boards – • See page 17 for Circuit Boards Location.

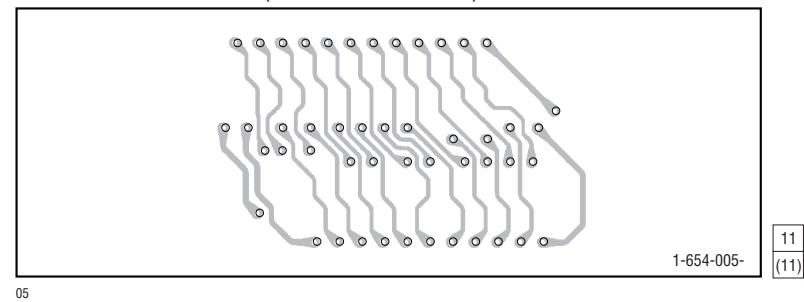
【LOADING SW BOARD】



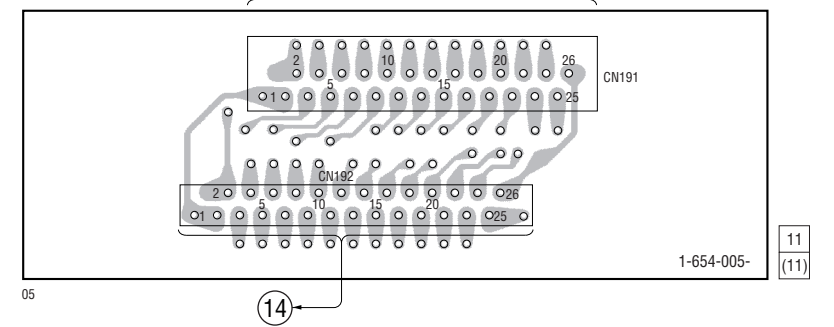
【FLEXIBLE BOARD】



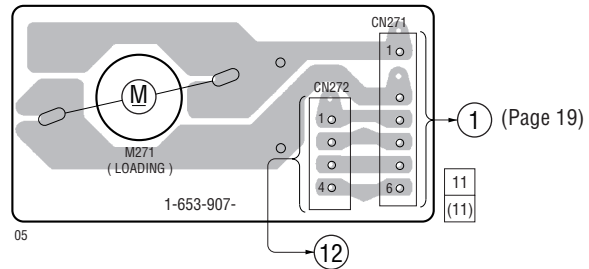
【FLEX RELAY BOARD】 (COMPONENT SIDE)



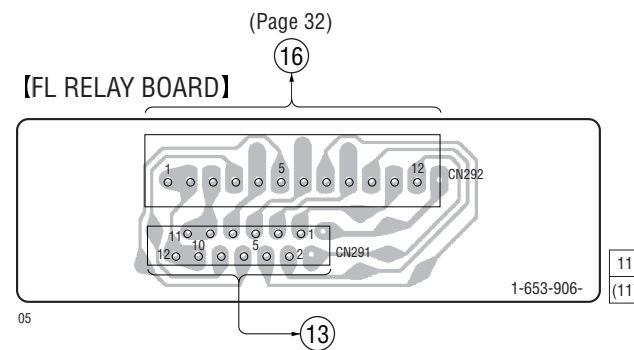
【FLEX RELAY BOARD】 (CONDUCTOR SIDE)



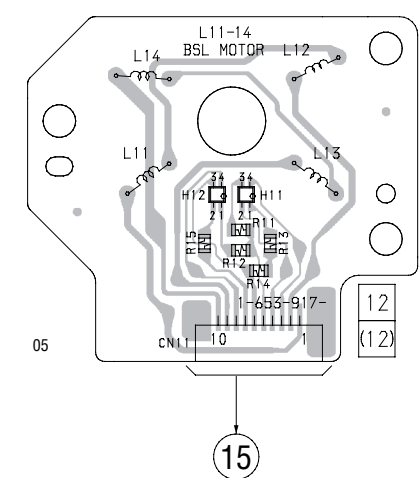
【LOADING MOTOR BOARD】



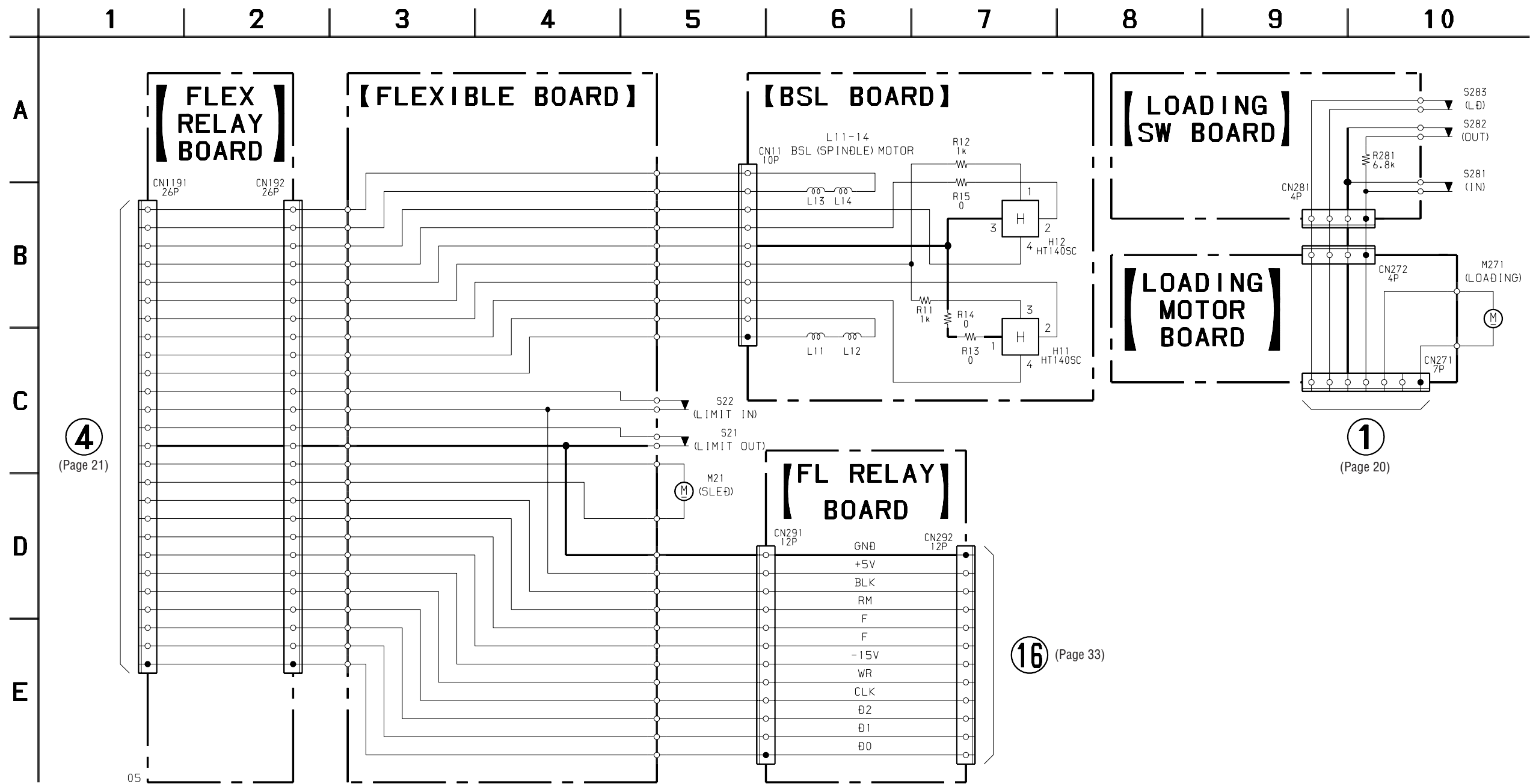
【FL RELAY BOARD】



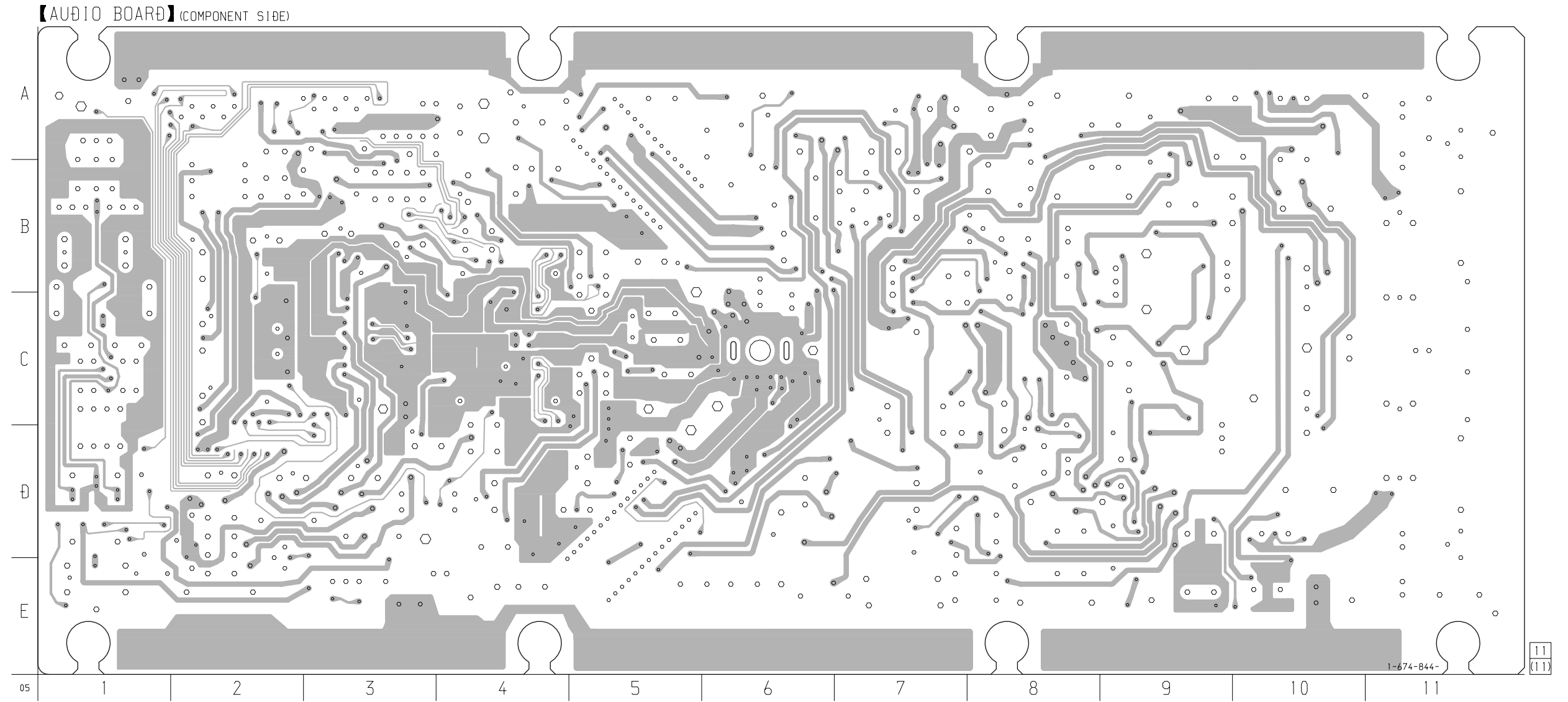
【BSL BOARD】



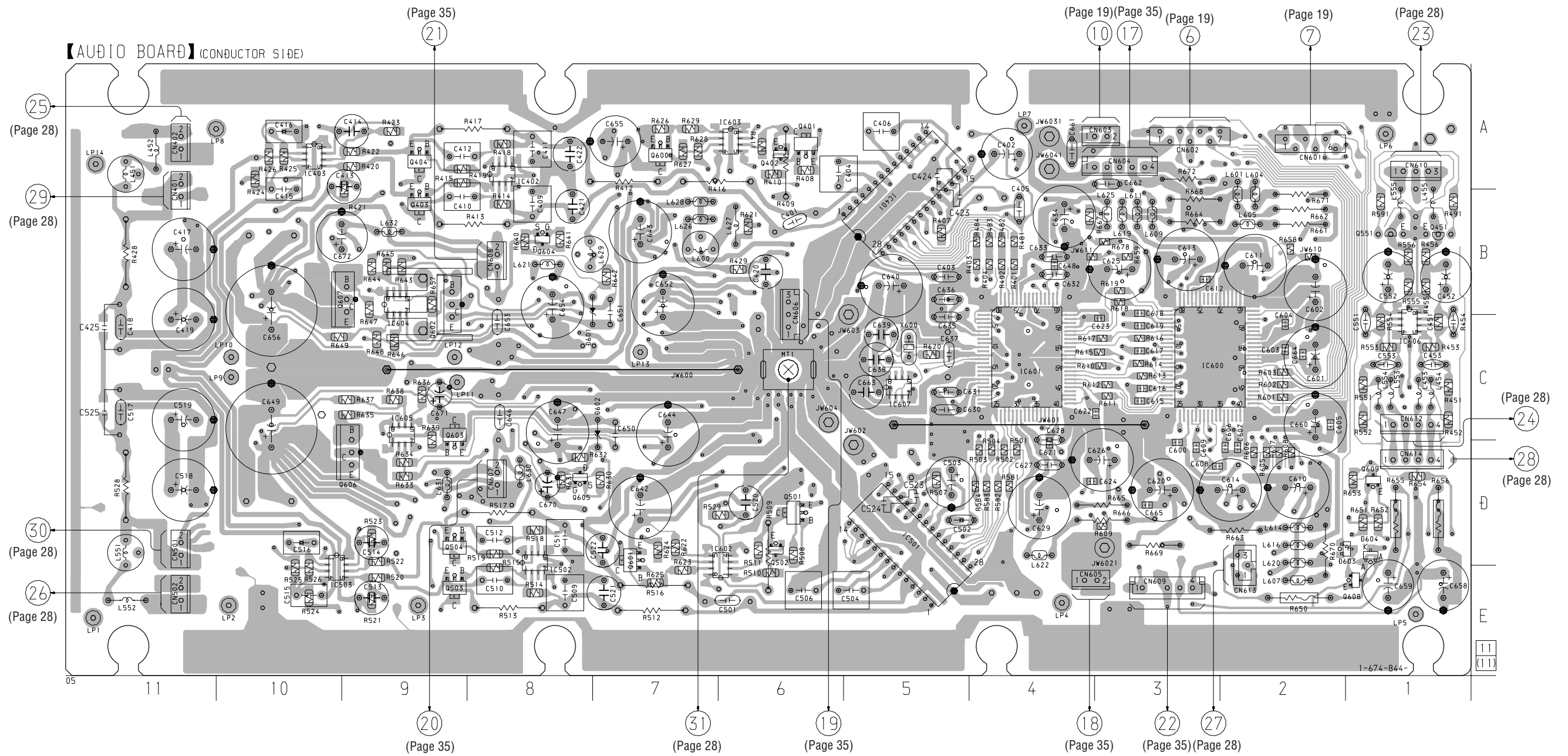
6-9. SCHEMATIC DIAGRAM – BSL/FL RELAY/FLEX RELAY/LOADING MOTOR/LOADING SW Boards –



6-10. PRINTED WIRING BOARD – AUDIO Board (Component Side) – • See page 17 for Circuit Boards Location.



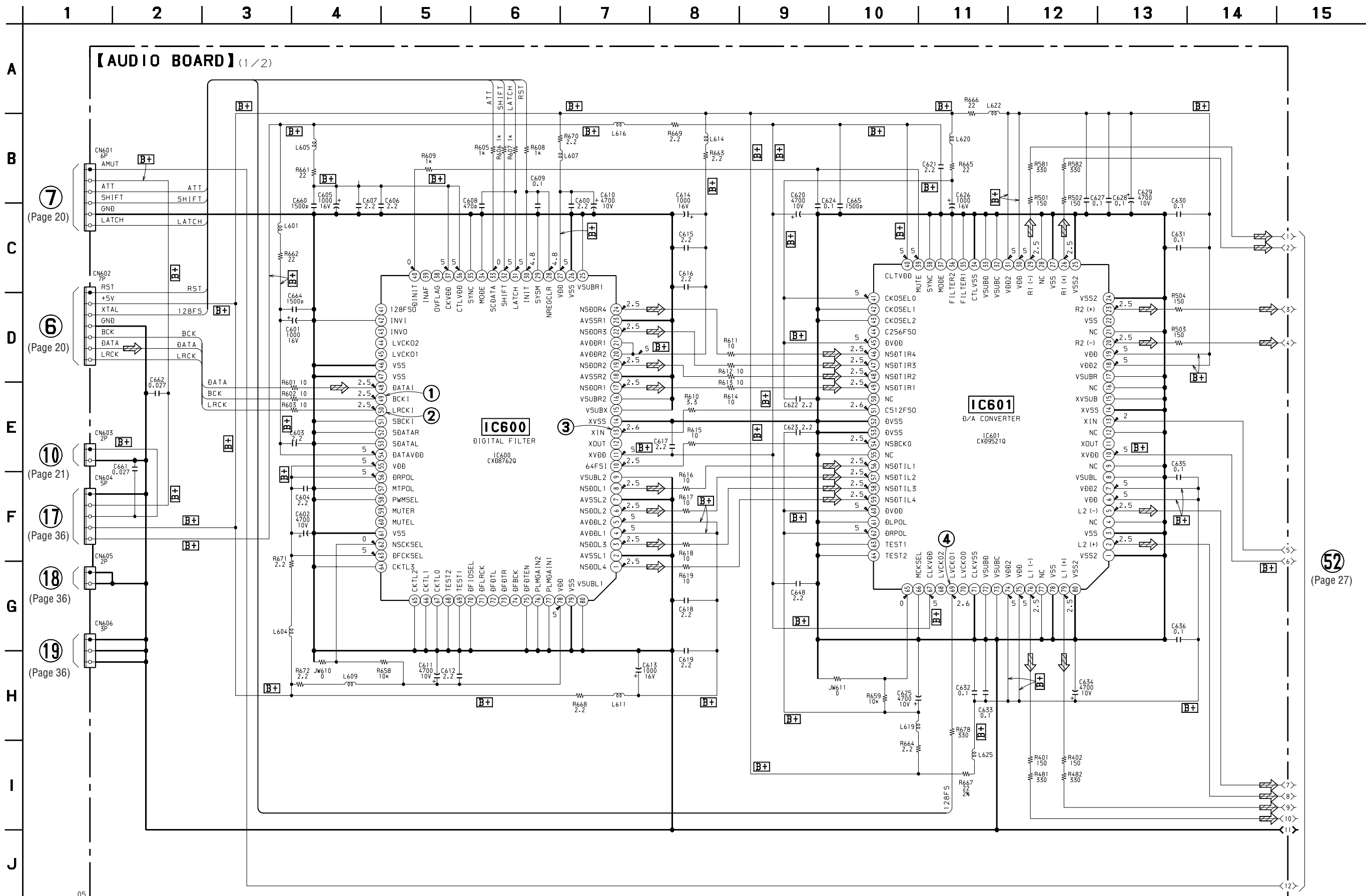
6-11. PRINTED WIRING BOARD – AUDIO Board (Conductor Side) – • See page 17 for Circuit Boards Location.



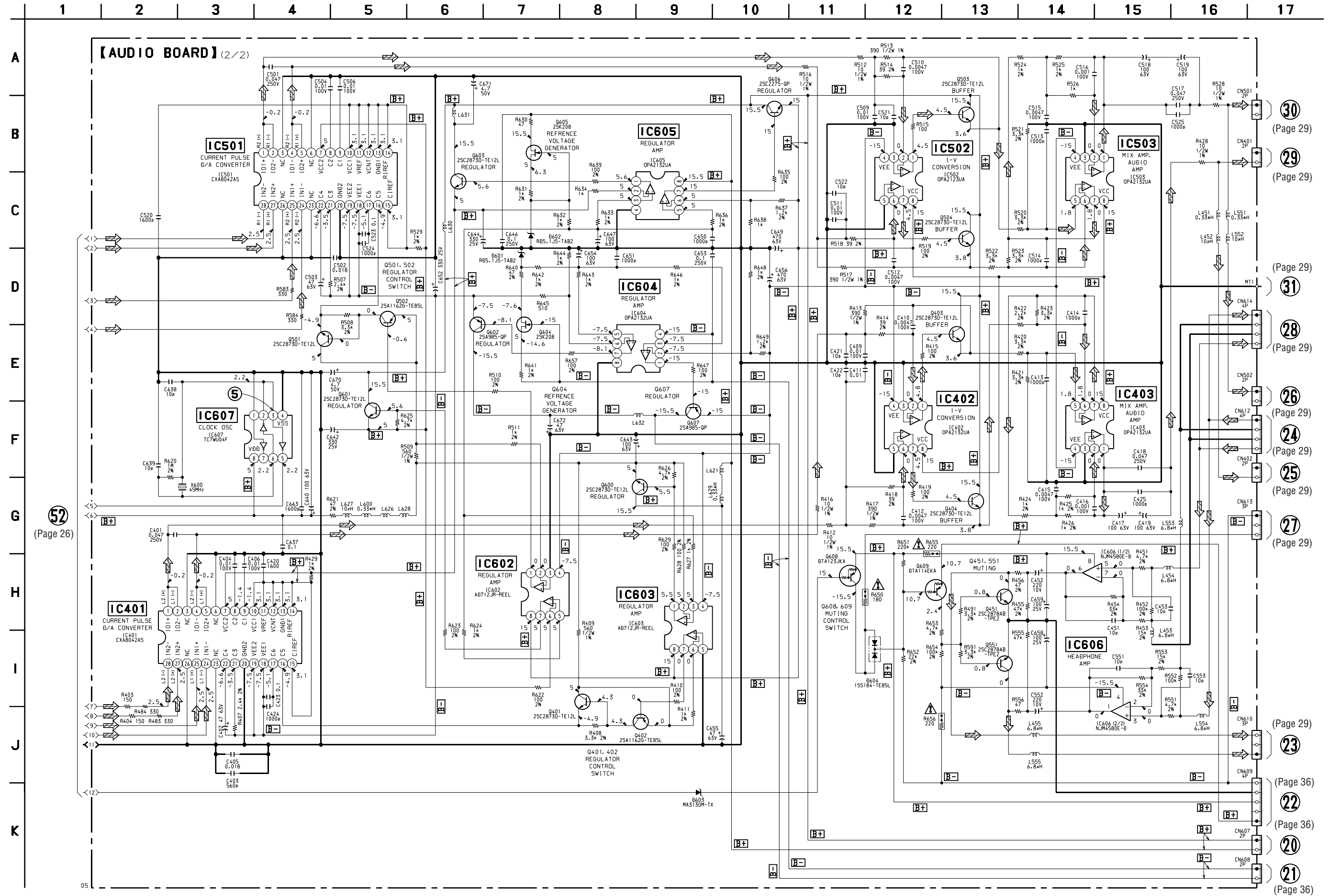
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D601	B-8	IC503	E-10	Q401	A-6	Q600	A-7
D602	C-7	IC600	C-3	Q402	A-6	Q601	D-7
D603	D-1	IC601	C-4	Q403	B-9	Q602	B-9
D604	D-1	IC602	E-6	Q404	A-9	Q603	C-9
IC401	B-5	IC603	A-6	Q451	B-1	Q604	B-8
IC402	A-8	IC604	B-9	Q501	D-6	Q605	D-8
IC403	A-10	IC605	C-9	Q502	D-6	Q606	D-9
IC501	D-5	IC606	C-1	Q503	E-9	Q607	B-9
IC502	D-8	IC607	C-5	Q504	D-9	Q608	E-1
				Q551	B-1	Q609	D-1

6-12. SCHEMATIC DIAGRAM – AUDIO Board (1/2) – • See page 37 for Waveforms. • See page 40 for IC Block Diagrams.



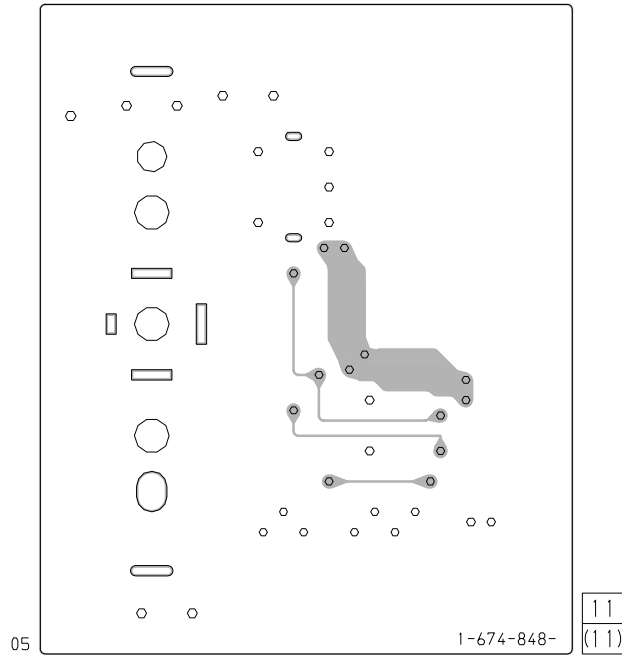
6-13. SCHEMATIC DIAGRAM – AUDIO Board (2/2) – • See page 37 for Waveforms. • See page 40 for IC Block Diagrams.



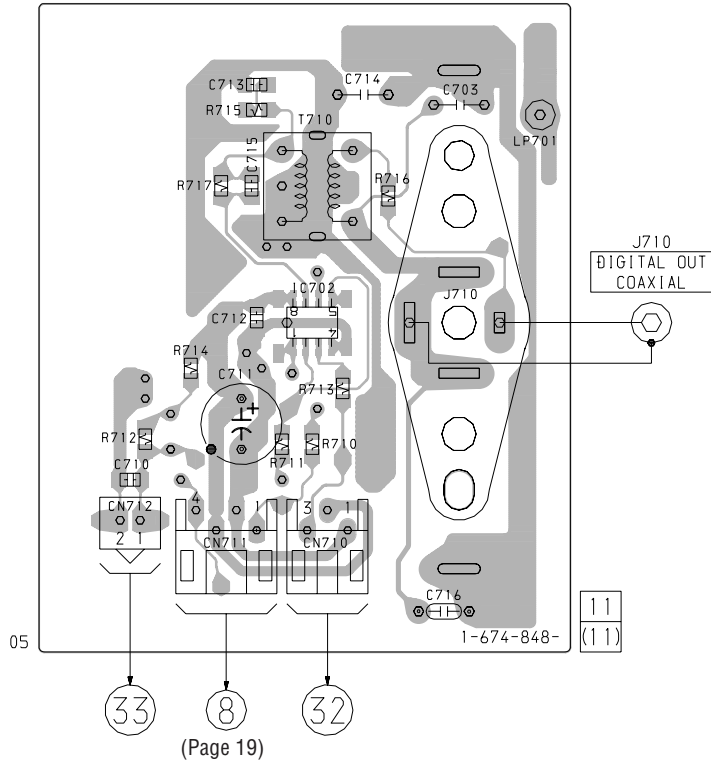
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

6-14. PRINTED WIRING BOARDS – COAX OUT/D/O SW/LINE/OPT OUT/VR Boards – • See page 17 for Circuit Boards Location.

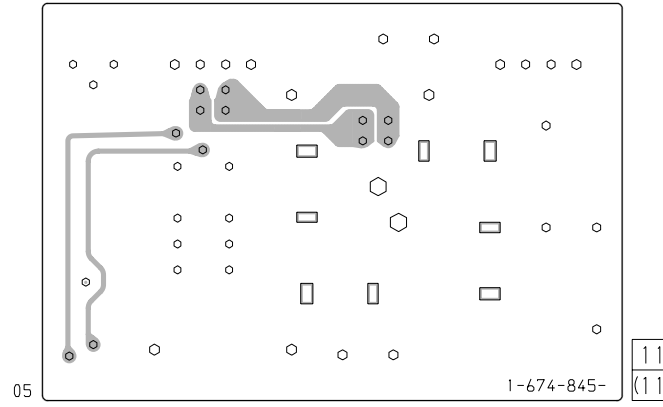
【COAX BOARD】(COMPONENT SIDE)



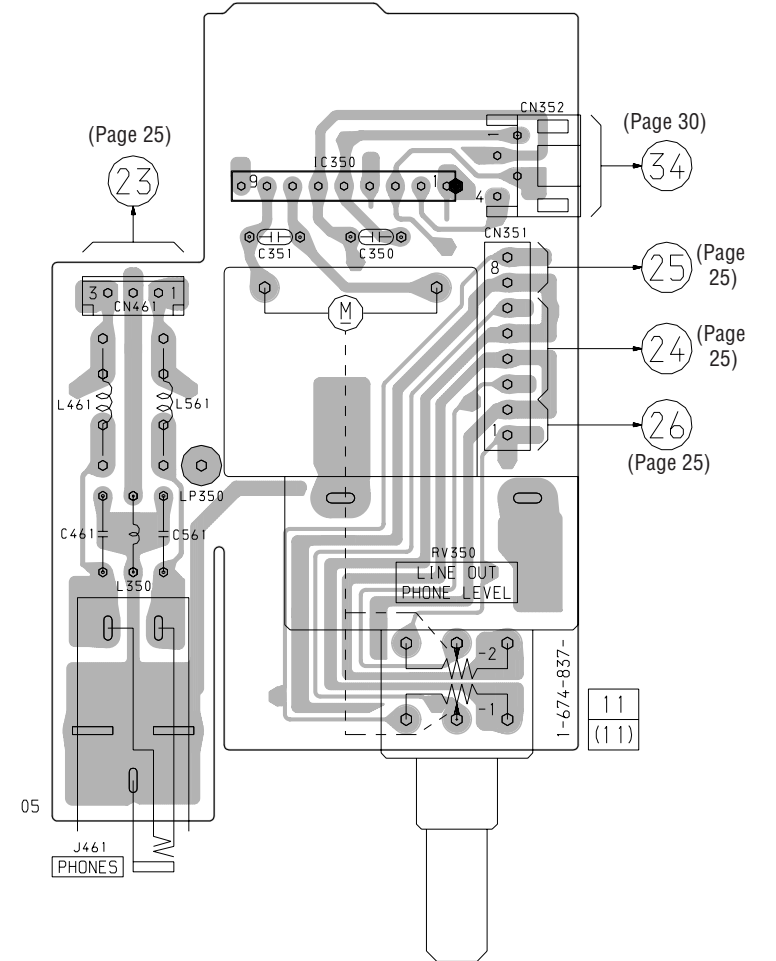
【COAX BOARD】(CONDUCTOR SIDE)



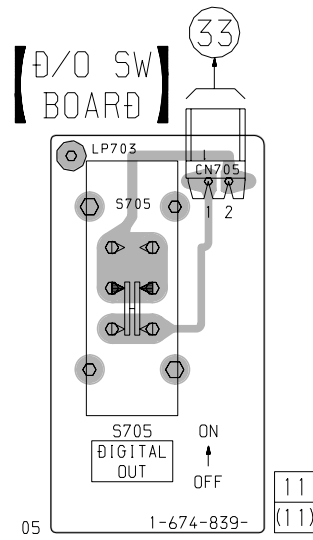
【LINE BOARD】(COMPONENT SIDE)



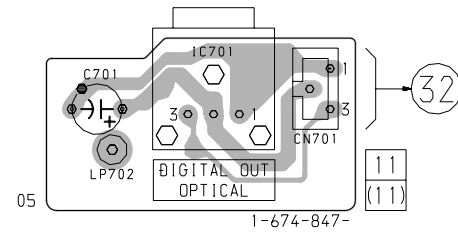
【VR BOARD】



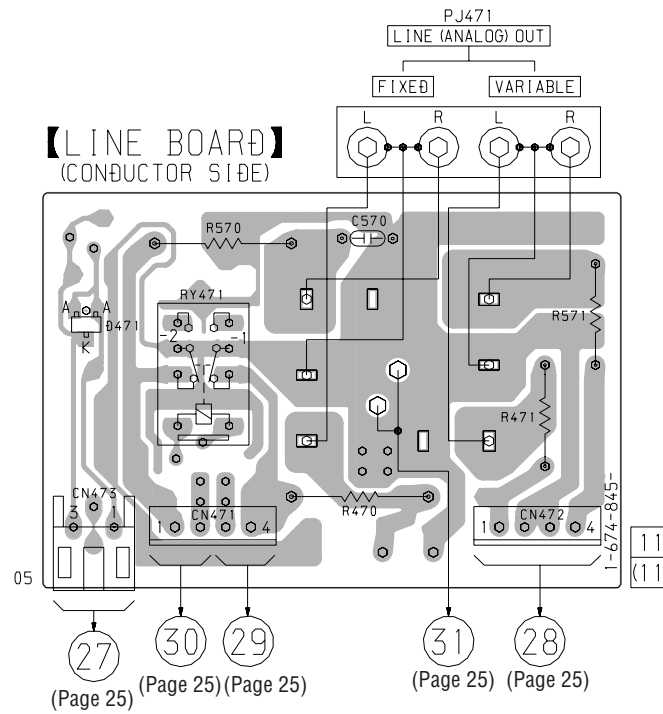
【D/O SW BOARD】



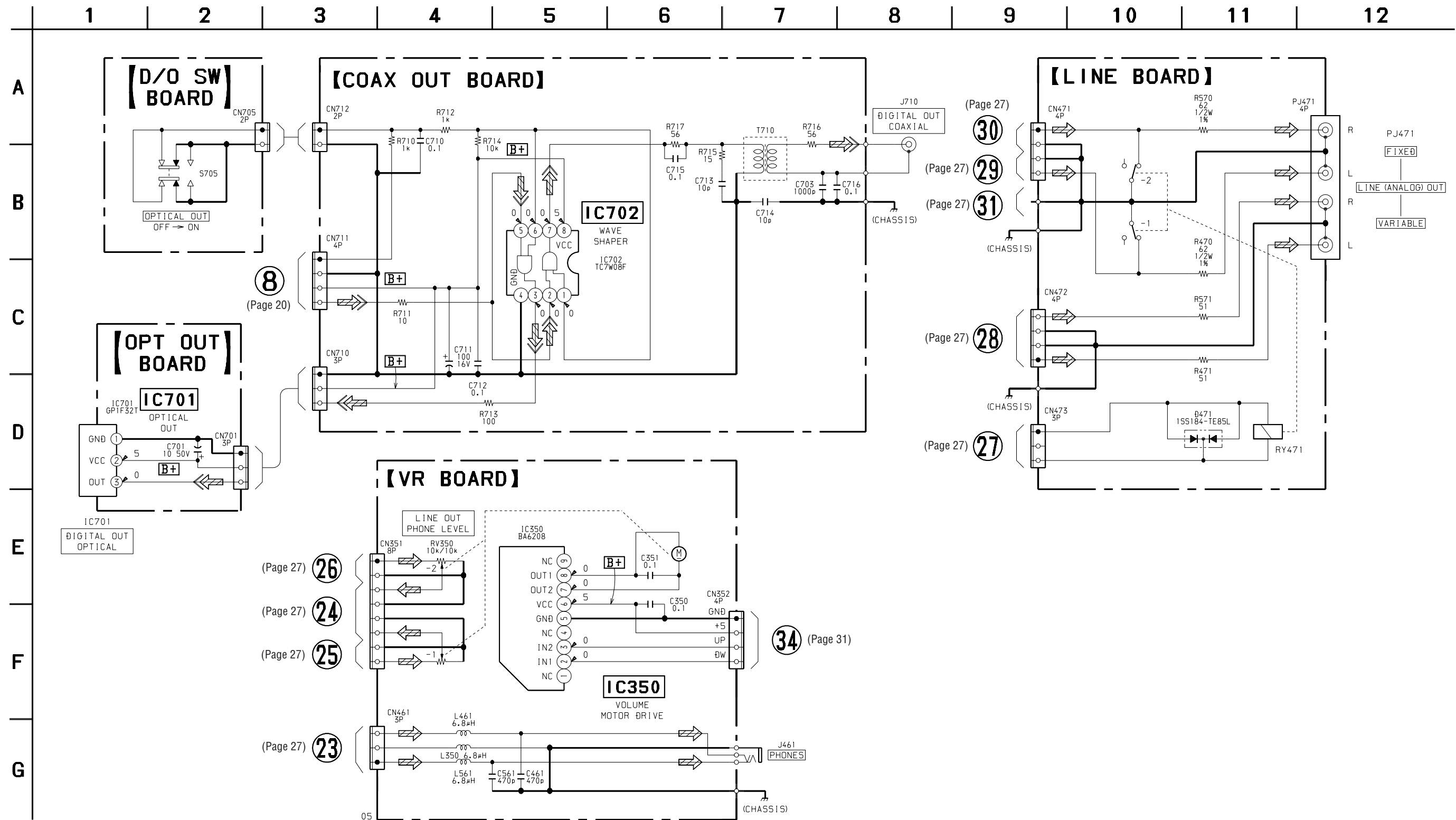
【OPT OUT BOARD】



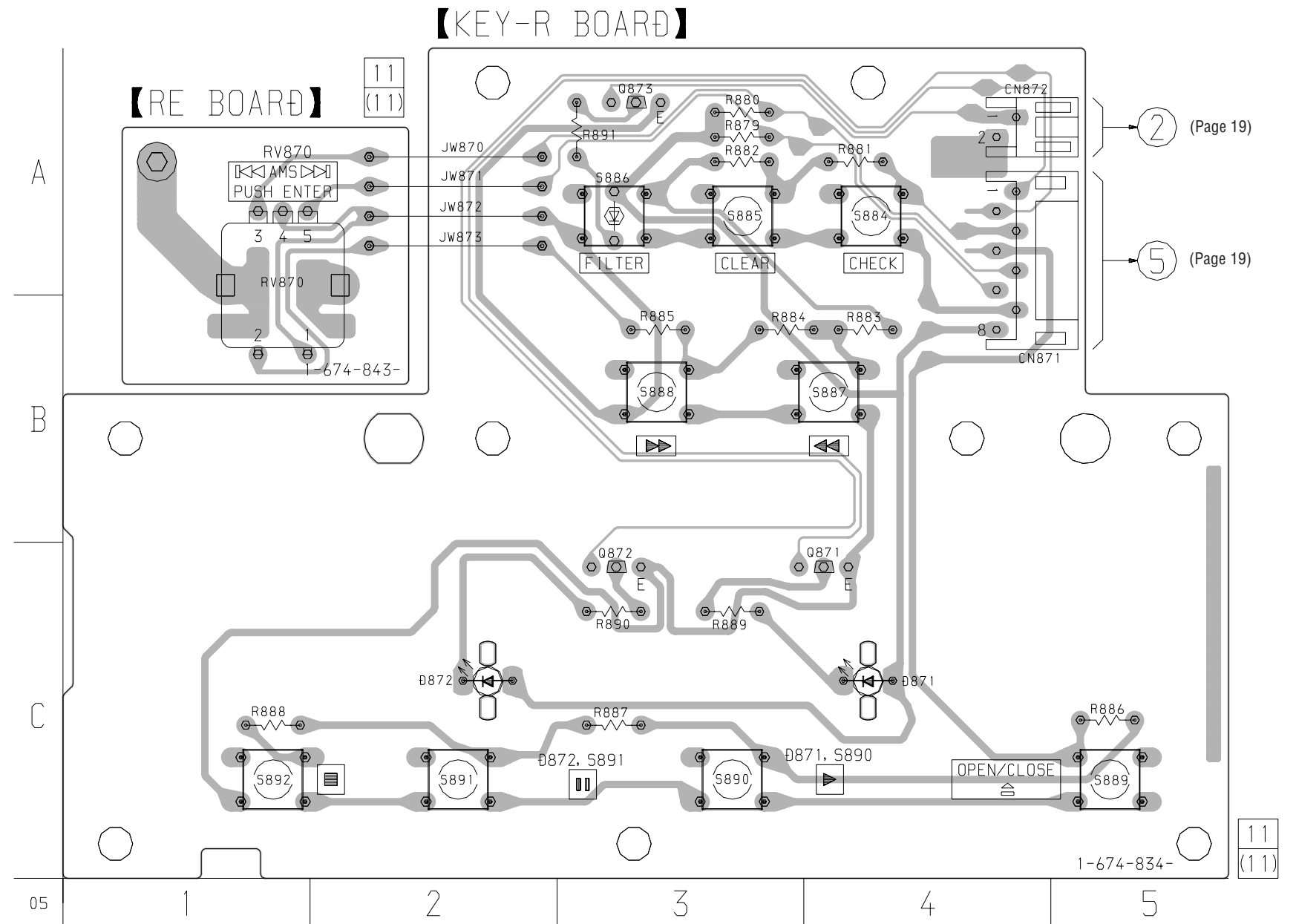
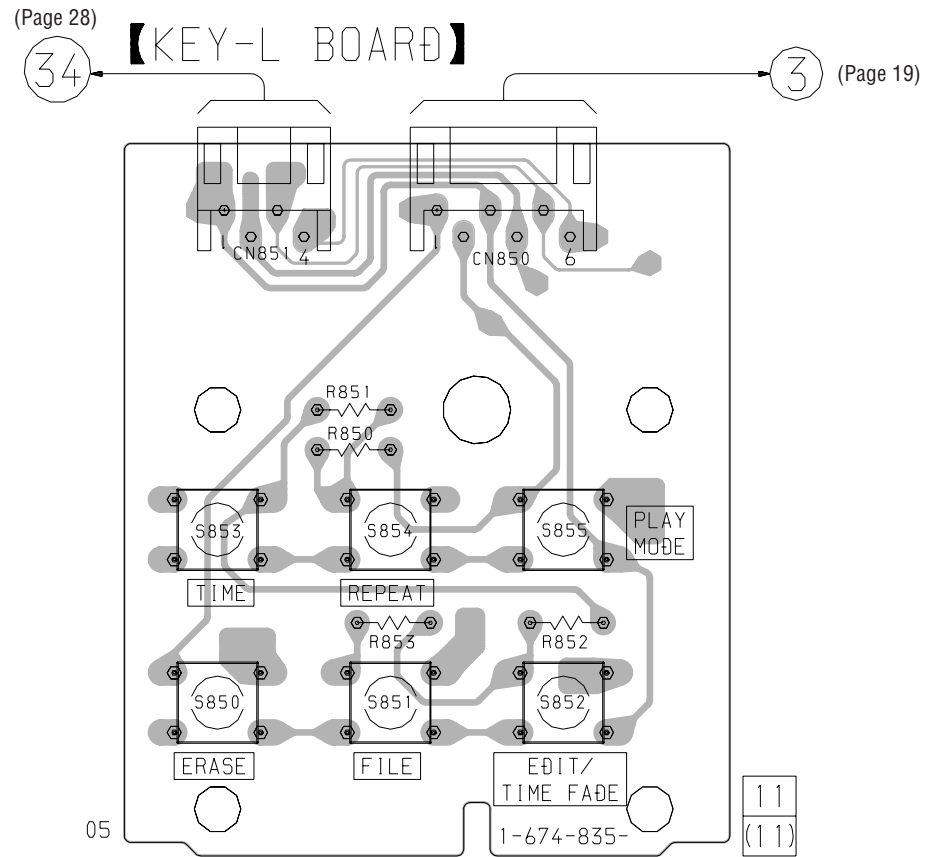
【LINE BOARD】(CONDUCTOR SIDE)



6-15. SCHEMATIC DIAGRAM – COAX OUT/D/O SW/LINE/OPT OUT/VR Boards – • See page 39 for IC Block Diagram.



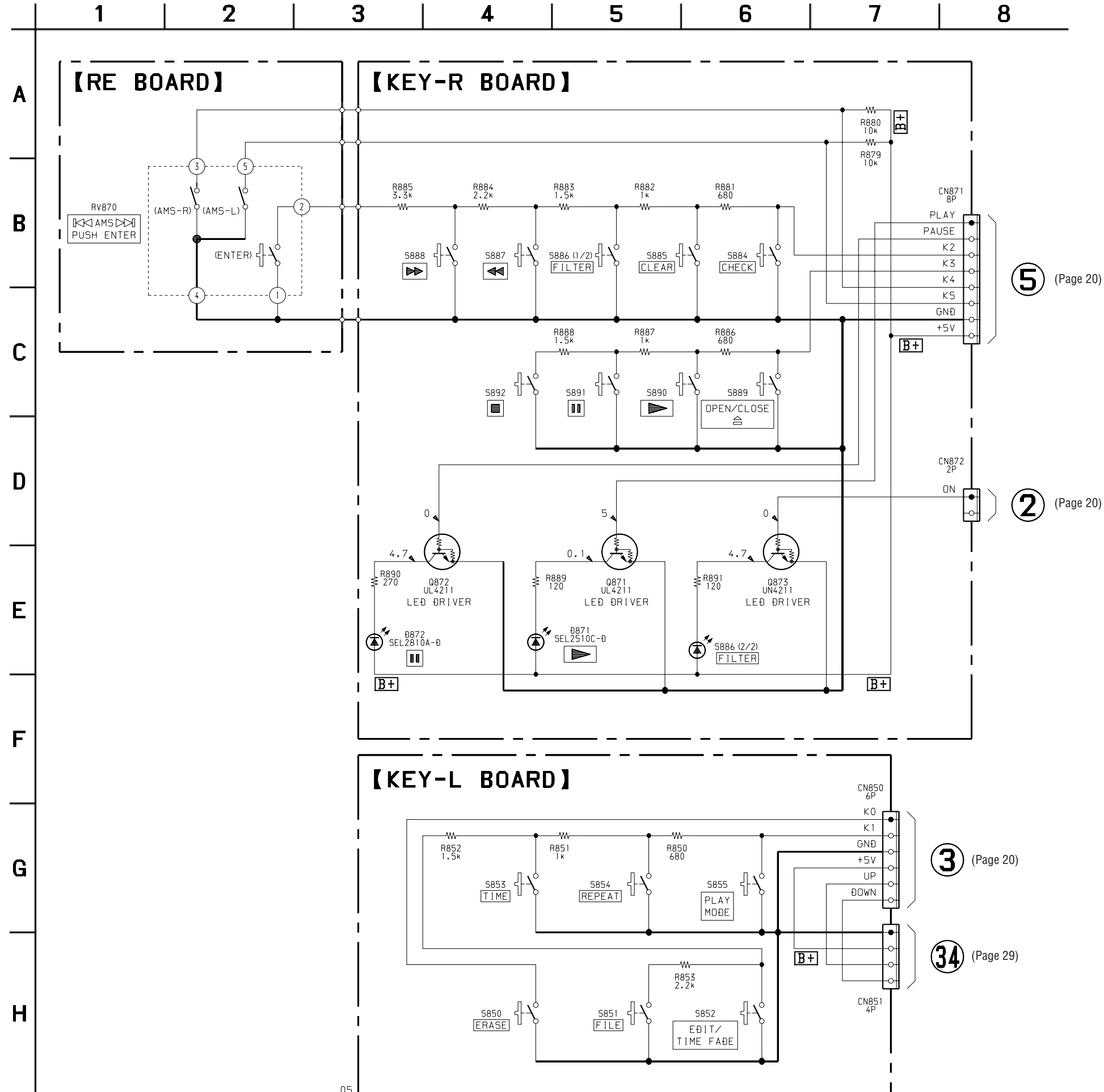
6-16. PRINTED WIRING BOARDS – KEY-L/KEY-R Boards – • See page 17 for Circuit Boards Location.



• Semiconductor Location – KYE-R Board –

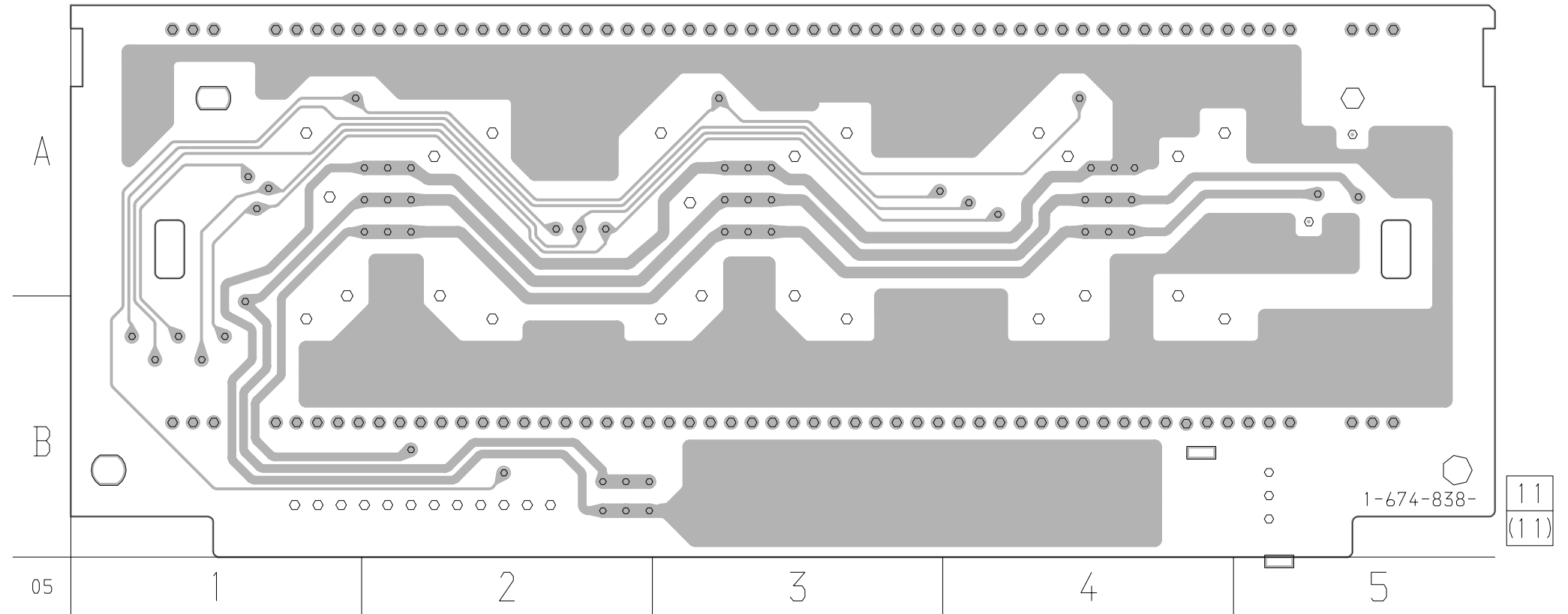
Ref. No.	Location
D871	C-4
D872	C-2
Q871	C-4
Q872	C-3
Q873	A-3

6-17. SCHEMATIC DIAGRAM – KEY-L/KEY-R Boards –

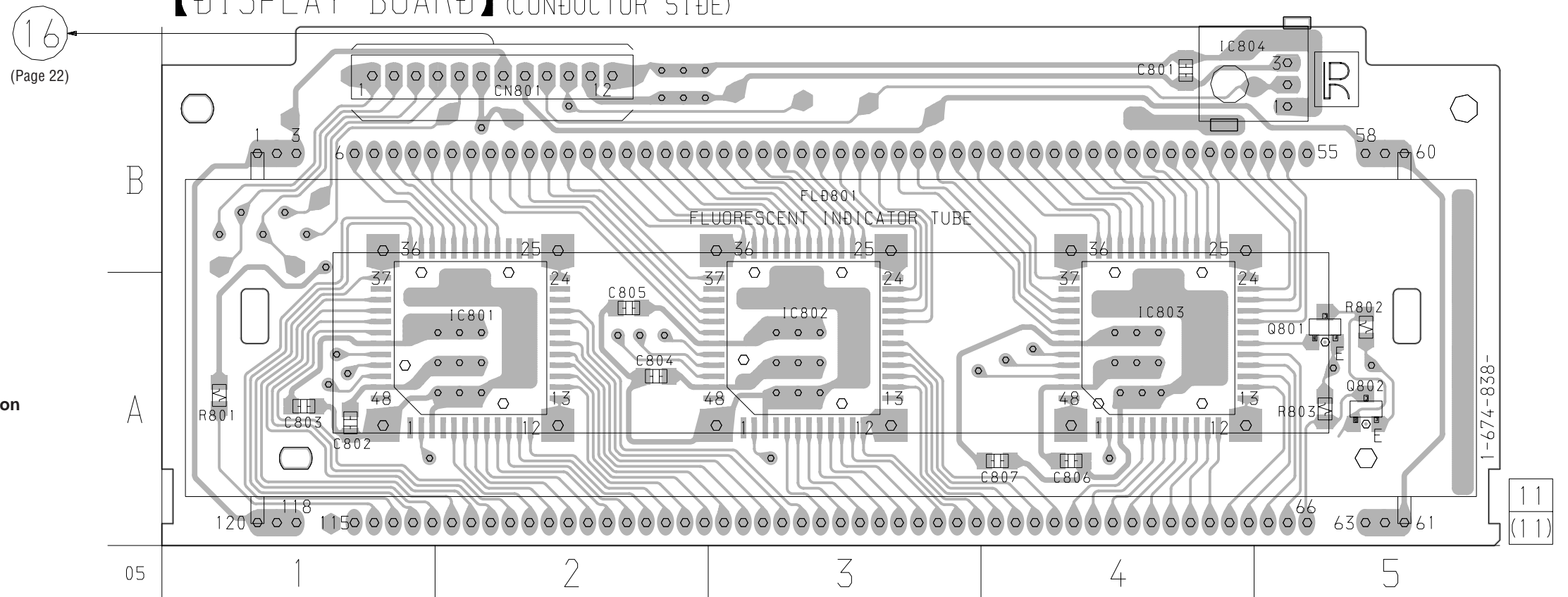


6-18. PRINTED WIRING BOARD – DISPLAY Board – • See page 17 for Circuit Boards Location.

【DISPLAY BOARD】(COMPONENT SIDE)



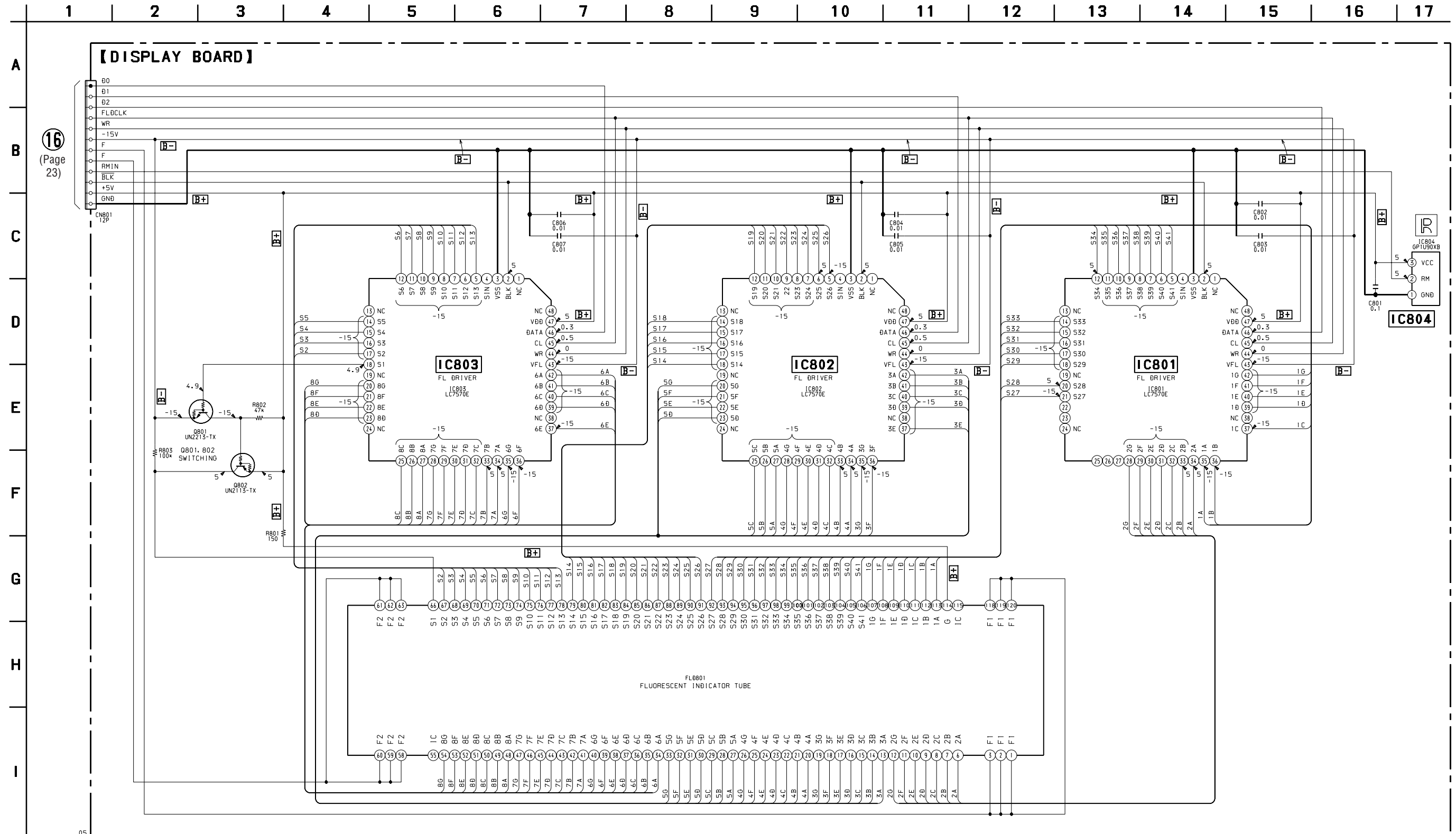
【DISPLAY BOARD】(CONDUCTOR SIDE)



• Semiconductor Location (Conductor Side)

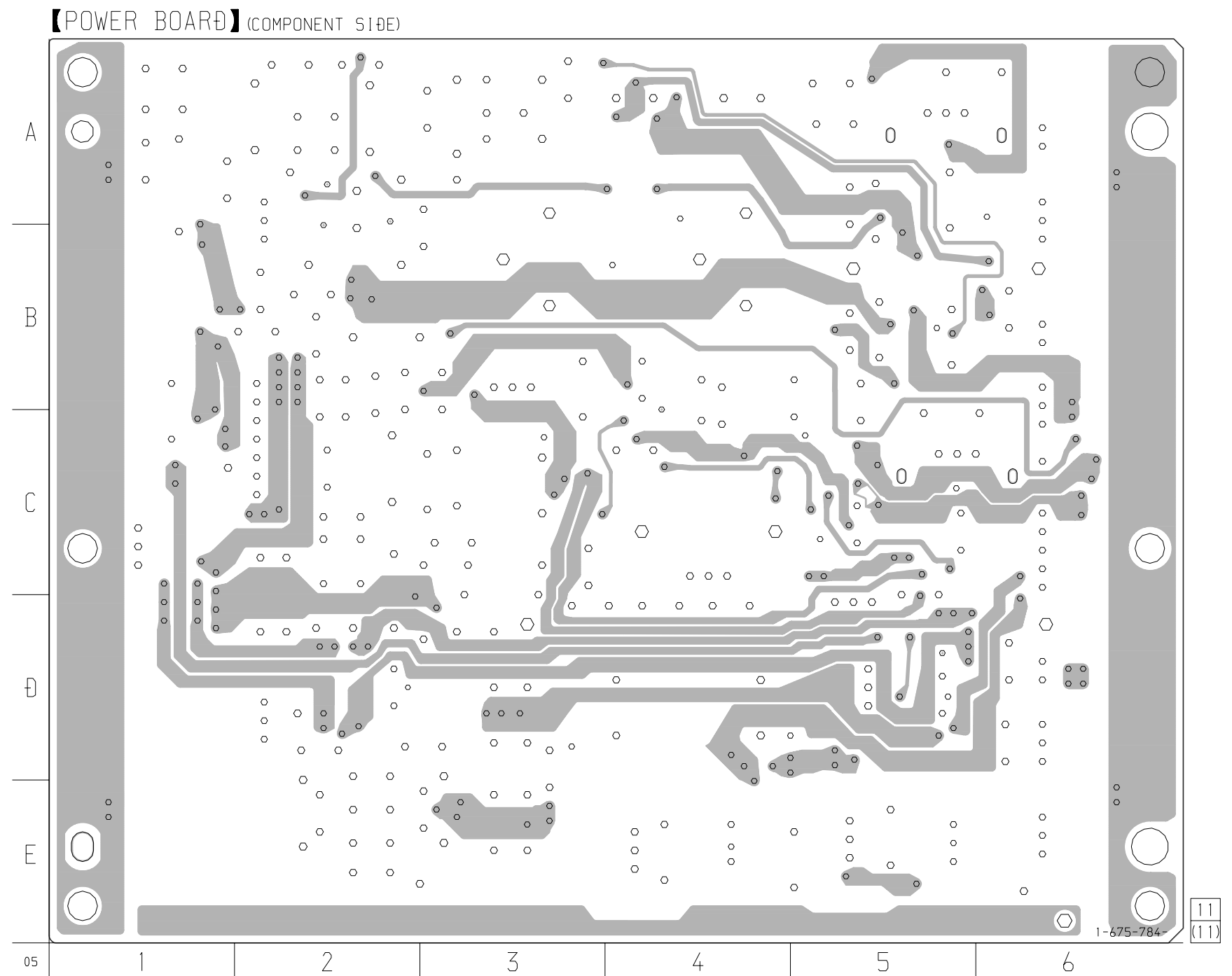
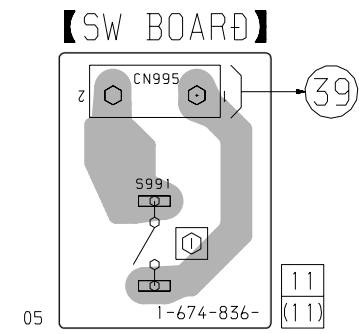
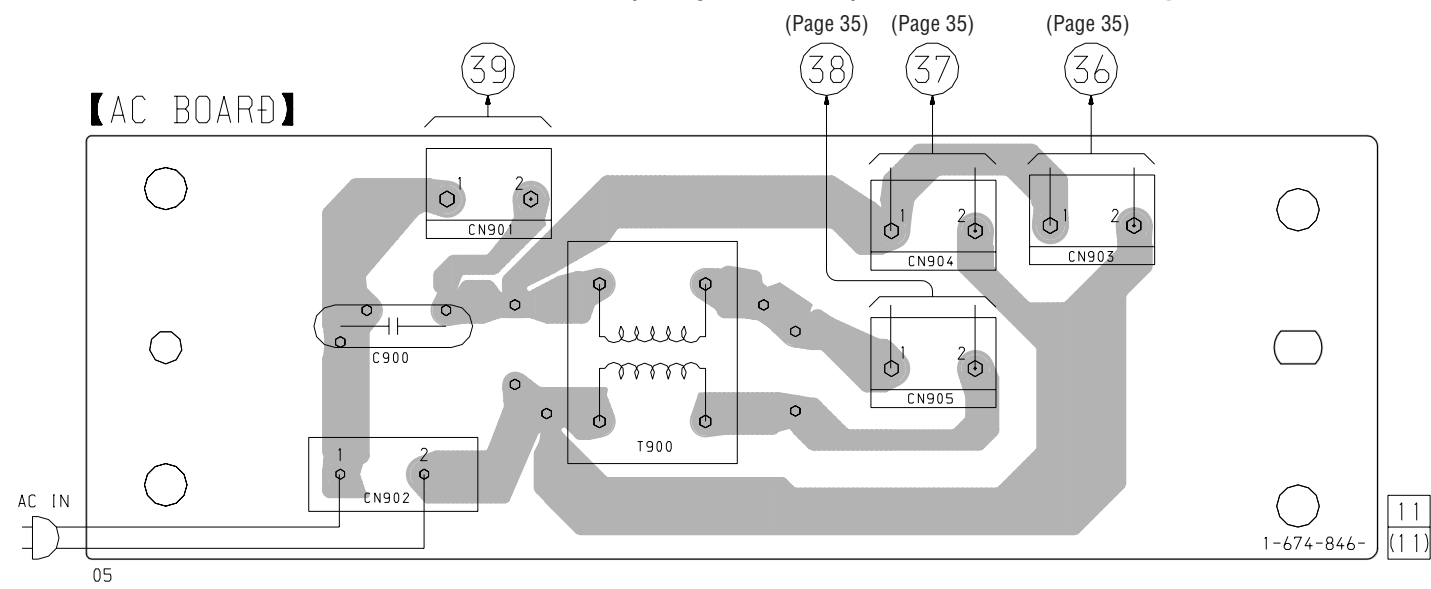
Ref. No.	Location
IC801	A-2
IC802	A-3
IC803	A-4
IC804	B-5
Q801	A-5
Q802	A-5

6-19. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 41 for IC Block Diagram.



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(Page 23)

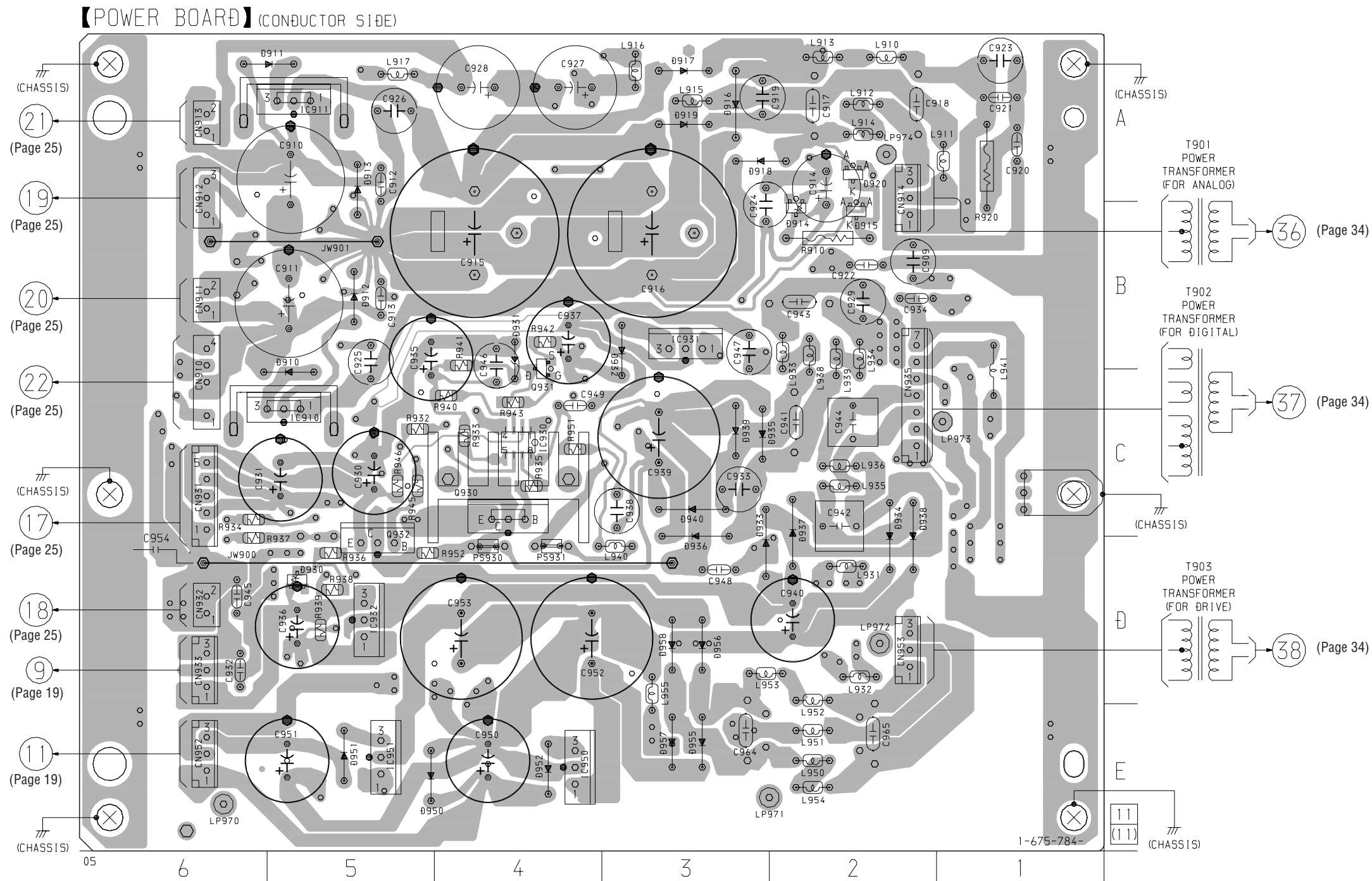
6-20. PRINTED WIRING BOARDS – AC/POWER (Component Side) /SW Boards – • See page 17 for Circuit Boards Location.



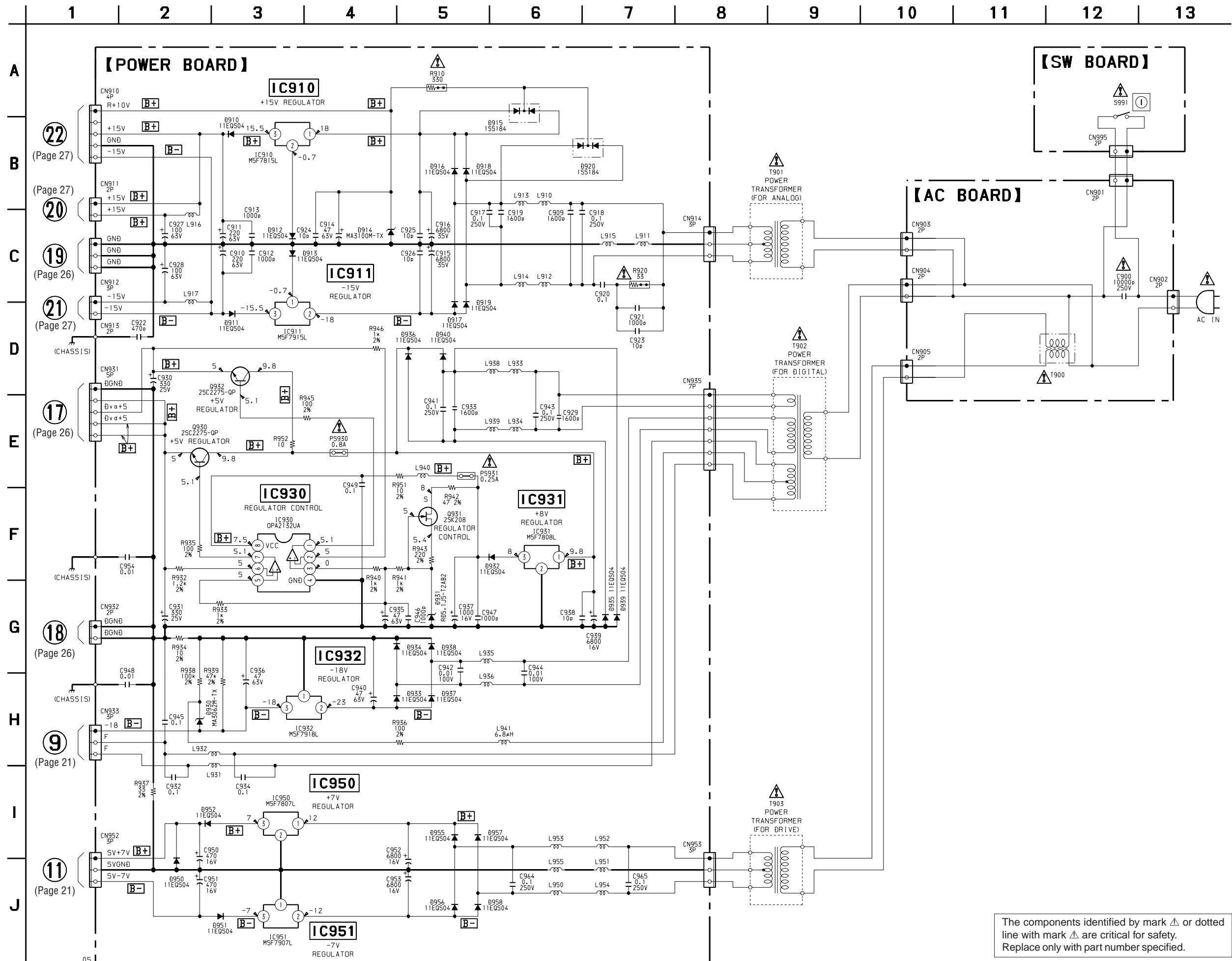
6-21. PRINTED WIRING BOARD – POWER Board (Conductor Side) – • See page 17 for Circuit Boards Location.

• Semiconductor Location (Conductor Side)

Ref. No.	Location
D910	C-5
D911	A-5
D912	B-5
D913	A-5
D914	B-2
D915	B-2
D916	A-3
D917	A-3
D918	A-3
D919	A-3
D920	A-2
D930	D-5
D931	B-4
D932	B-3
D933	D-3
D934	D-2
D935	C-3
D936	D-3
D937	C-2
D938	D-2
D939	C-3
D940	C-3
D950	E-5
D951	E-5
D952	E-4
D955	E-3
D956	D-3
D957	E-3
D958	D-3
IC910	C-5
IC911	A-5
IC930	C-4
IC931	B-3
IC932	D-5
IC950	E-4
IC951	E-5
Q930	C-4
Q931	C-4
Q932	C-5



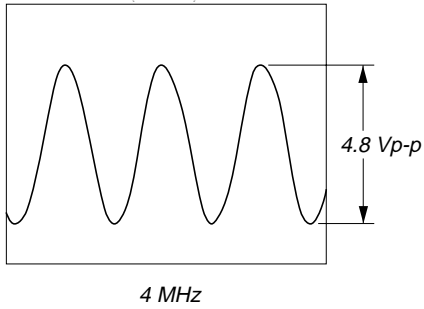
6-22. SCHEMATIC DIAGRAM – AC/POWER/SW Boards –



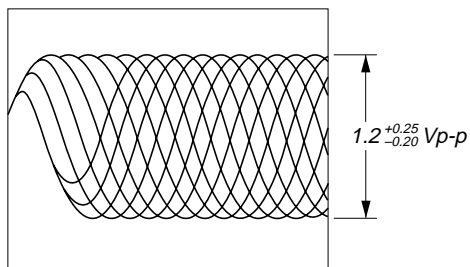
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

• Waveforms
– SERVO Board –

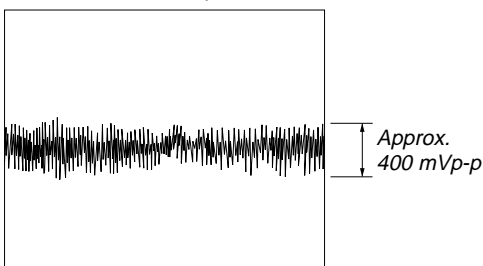
1 IC201 31 (XTALI)



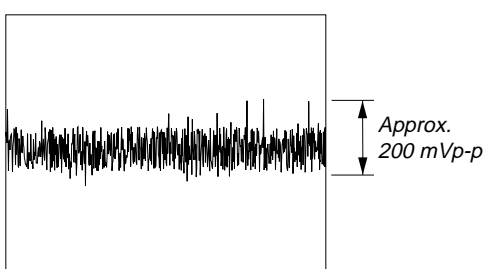
2 IC101 26 (RFDC)
200 mV/DIV, 500 ns/DIV



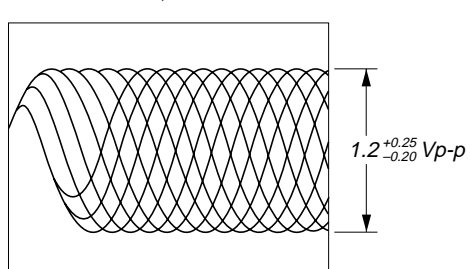
3 IC101 27 (TE)
200 mV/DIV, 100 μs/DIV



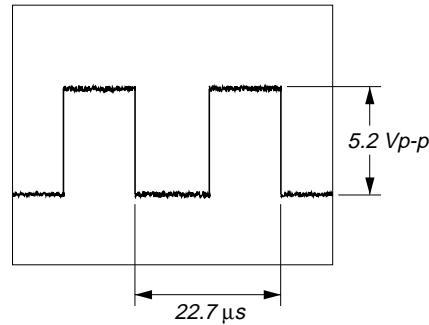
4 IC101 29 (FE)
200 mV/DIV, 50 ns/DIV



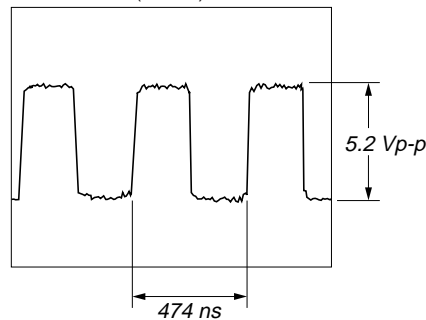
5 IC101 36 (RFAC)
200 mV/DIV, 500 ns/DIV



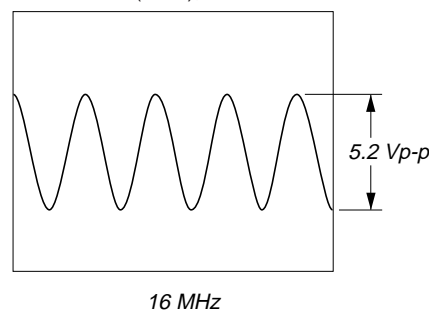
6 IC101 45 (LRCK)



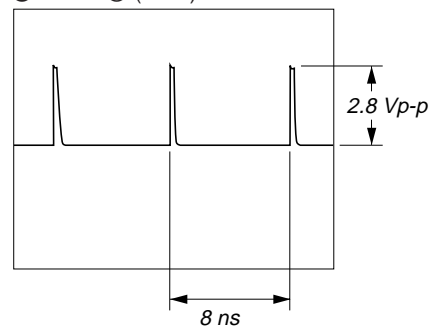
7 IC101 47 (BLCK)



8 IC101 22 (XTAI), IC109 5

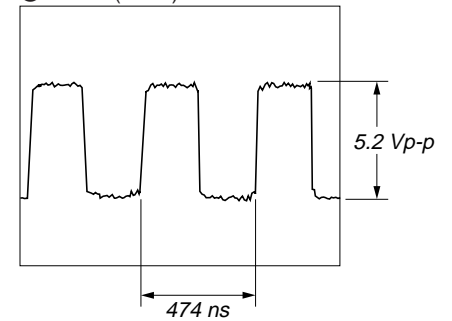


9 IC101 96 (MDP)

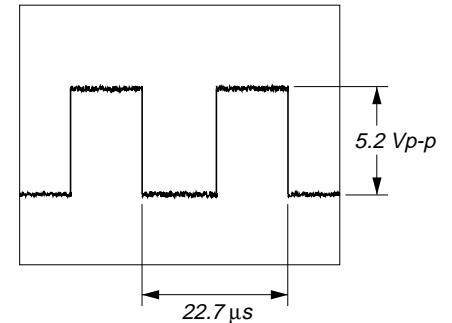


– AUDIO Board –

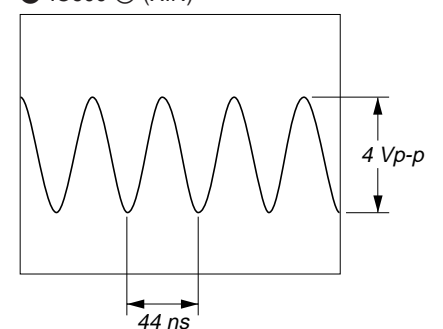
1 IC600 (BCKI)



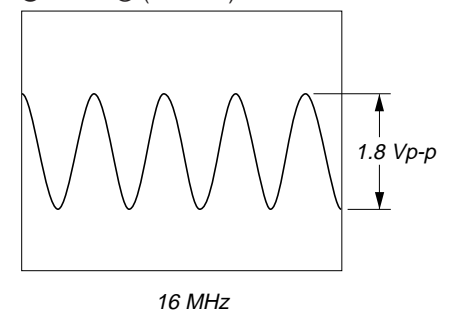
2 IC600 (LRCKI)



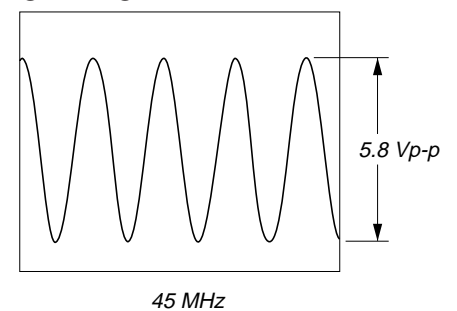
3 IC600 13 (XIN)



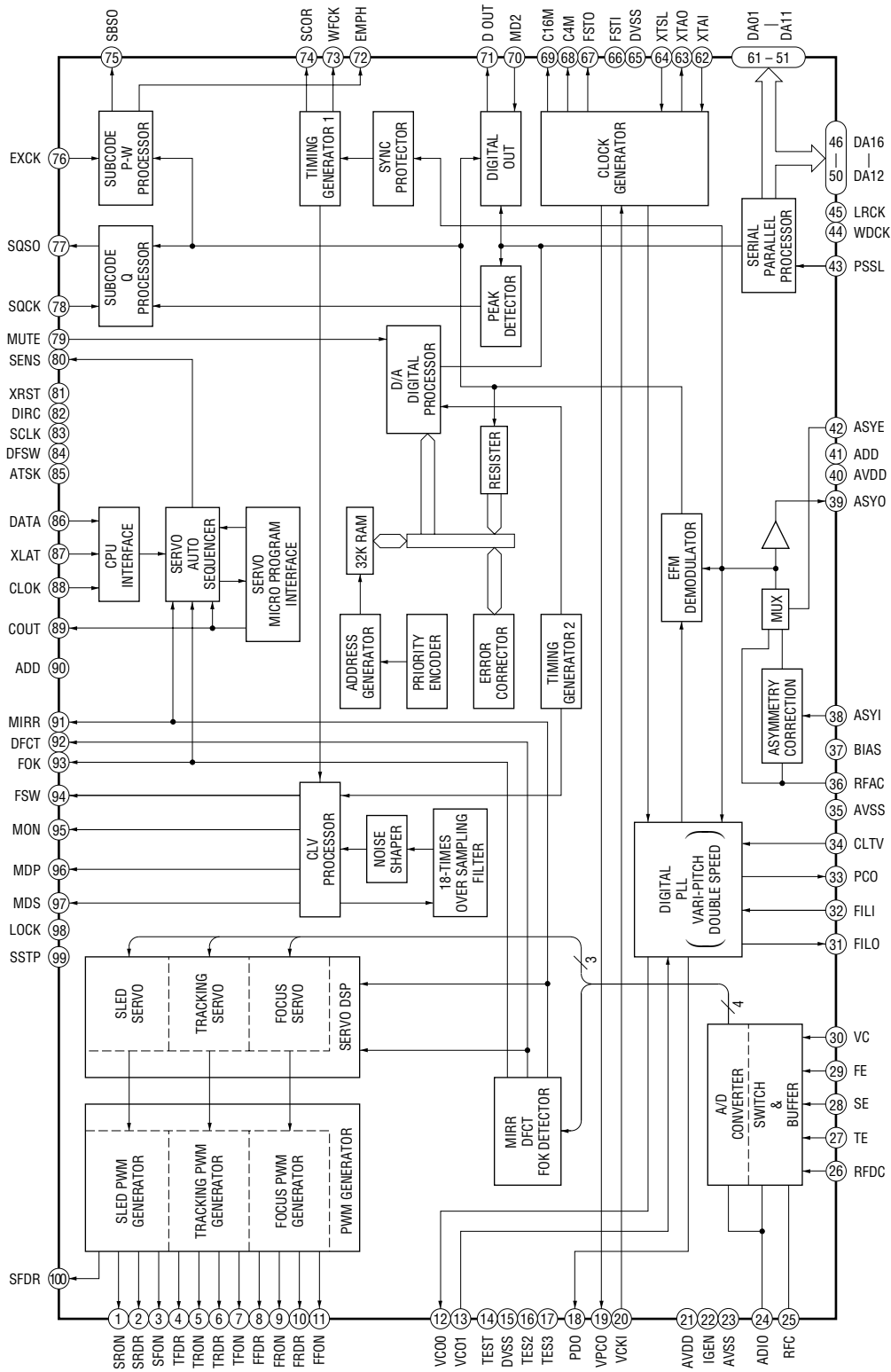
4 IC601 4 (LVCK01)



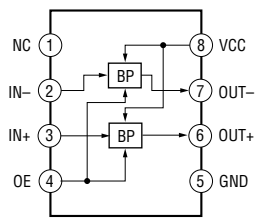
5 IC607 3



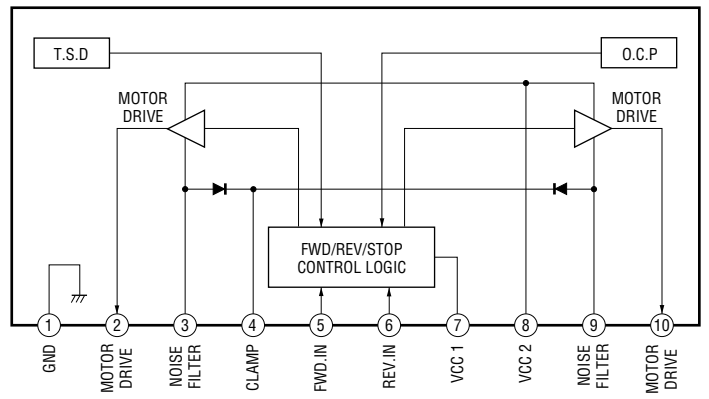
• IC Block Diagrams
 – SERVO Board –
 IC101 CXD2545Q



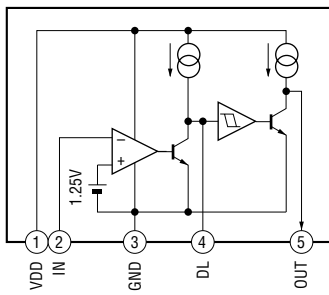
IC106 TL712CPS-E05



IC205 LB1641

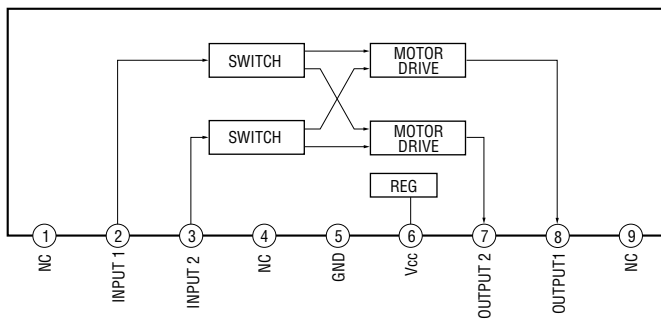


IC204 M51957AL



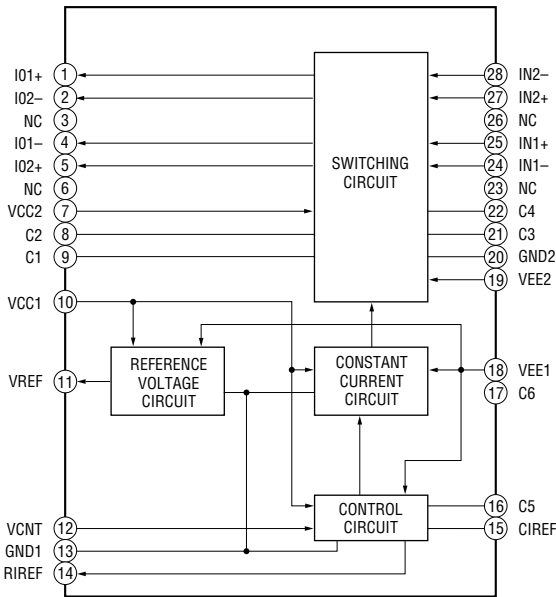
- VR Board -

IC350 BA6208

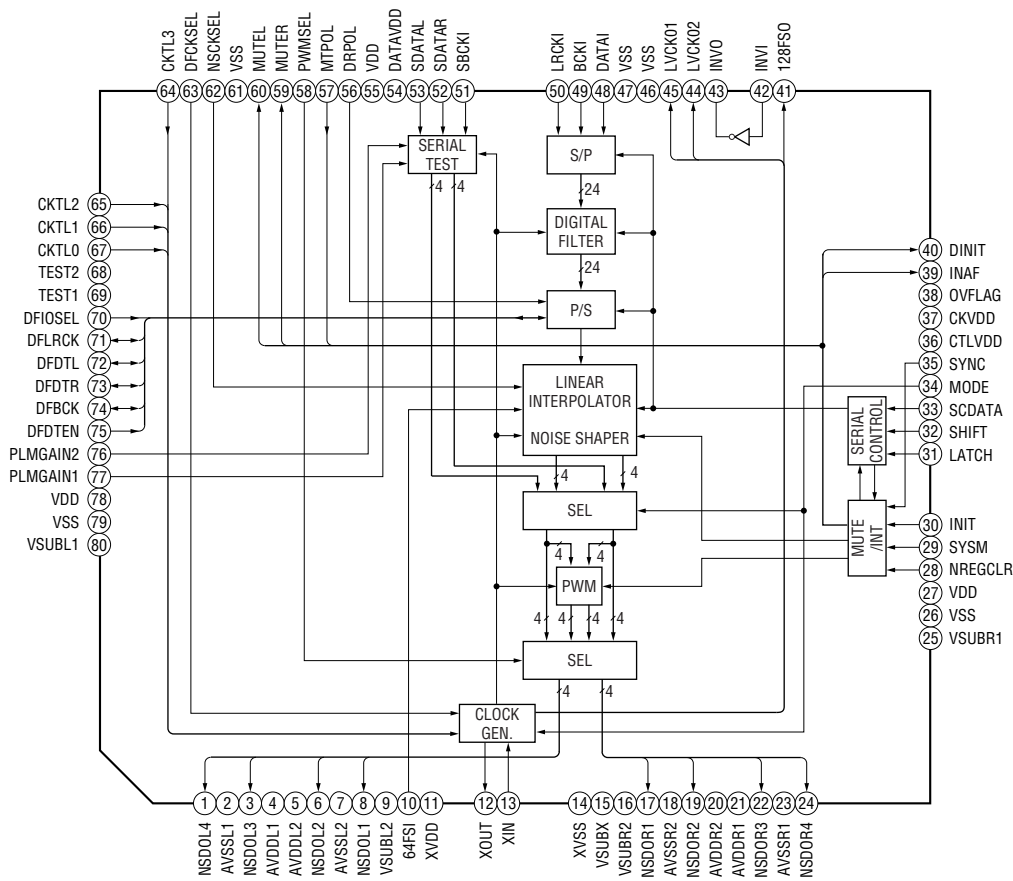


– AUDIO Board –

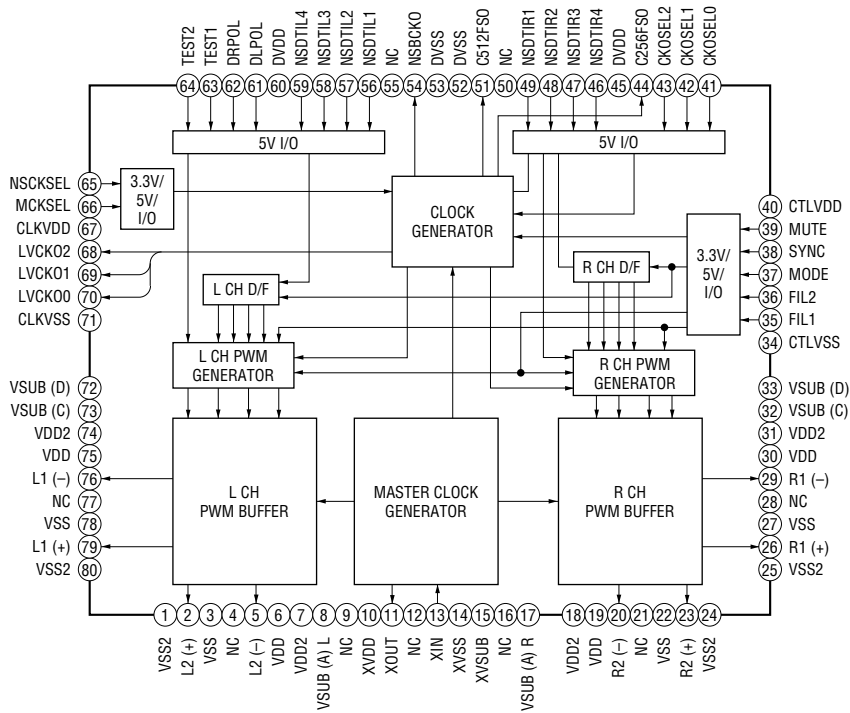
IC401, 501 CXA8042AS



IC600 CXD87629

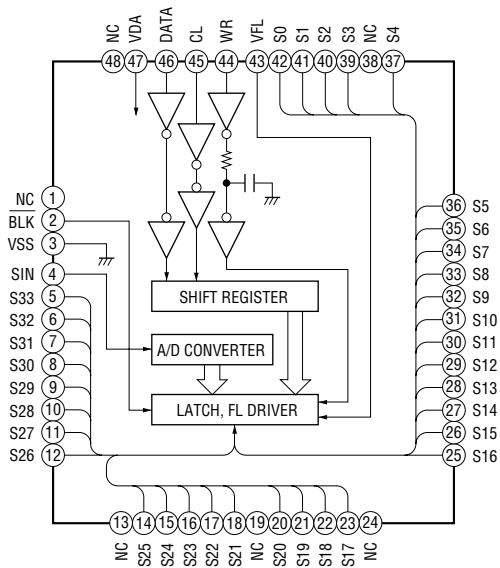


IC601 CXD9521Q



- DISPLAY Board -

IC801, 802, 803 LC7570E



6-23. IC PIN FUNCTION DESCRIPTION

• SERVO BOARD IC101 CXD2545Q (DIGITAL SIGNAL PROCESSOR, FOCUS/TRACKING/SLED SERVO, EFM COMPARATOR)

Pin No.	Pin Name	I/O	Description
1	SRON	O	Sled servo drive PWM signal output terminal Not used (open)
2	SRDR	O	Sled servo drive PWM signal (-) output to the BA6297AFP (IC102)
3	SFON	O	Sled servo drive PWM signal output terminal Not used (open)
4	TFDR	O	Tracking servo drive PWM signal (-) output to the BA6297AFP (IC102)
5	TRON	O	Tracking servo drive PWM signal output terminal Not used (open)
6	TRDR	O	Tracking servo drive PWM signal (+) output to the BA6297AFP (IC102)
7	TFON	O	Tracking servo drive PWM signal output terminal Not used (open)
8	FFDR	O	Focus servo drive PWM signal (+) output to the BA6297AFP (IC102)
9	FRON	O	Focus servo drive PWM signal output terminal Not used (open)
10	FRDR	O	Focus servo drive PWM signal (-) output to the BA6297AFP (IC102)
11	FFON	O	Focus servo drive PWM signal output terminal Not used (open)
12	VCOO	O	Oscillator circuit output terminal for analog PLL of the playback EFM Not used (open)
13	VCOI	I	Oscillator circuit input terminal for analog PLL of the playback EFM Not used (fixed at "L")
14	TEST	I	Input terminal for the test (fixed at "L")
15	DVSS	—	Ground terminal (digital system)
16	TES2	I	Input terminal for the test (fixed at "L")
17	TES3	I	Input terminal for the test (fixed at "L")
18	PDO	O	Charge-pump output terminal for analog PLL of the playback EFM Not used (open)
19	VPCO	O	PLL charge-pump output terminal for the variable pitch Not used (open)
20	VCKI	I	Clock signal input from external VCO for the variable pitch Not used (fixed at "L")
21	AVD2	—	Power supply terminal (+5V) (analog system)
22	IGEN	I	Power supply terminal (+5V) (for operational amplifier)
23	AVS2	—	Ground terminal (analog system)
24	ADII	I	Input terminal for the A/D converter Not used (open)
25	ADIO	O	Output terminal of the operational amplifier Not used (open)
26	RFDC	I	RF signal (DC level) input terminal for the digital servo process
27	TE	I	Tracking error signal input from the RF amplifier in optical pick-up
28	SE	I	Sled error signal input from the RF amplifier in optical pick-up
29	FE	I	Focus error signal input from the RF amplifier in optical pick-up
30	VC	I	Middle point voltage (+2.5V) input from the RF amplifier in optical pick-up
31	FILO	O	Filter output terminal for master clock of the playback master PLL
32	FILI	I	Filter input terminal for master clock of the playback master PLL
33	PCO	O	Phase comparison output terminal for master clock of the playback EFM master PLL
34	CLTV	I	Internal VCO control voltage input of the playback master PLL
35	AVS1	—	Ground terminal (analog system)
36	RFAC	I	RF signal (AC level) input terminal for the EFM demodulator
37	BIAS	I	Constant current input terminal of the playback EFM asymmetry circuit
38	ASYI	I	Playback EFM asymmetry comparator voltage input terminal
39	ASYO	O	Playback EFM full-swing output terminal
40	AVD1	—	Power supply terminal (+5V) (analog system)
41	DVDD	—	Power supply terminal (+5V) (digital system)
42	ASYE	I	Playback EFM asymmetry circuit on/off selection input terminal (fixed at "H")
43	PSSL	I	Audio data output mode selection input terminal (fixed at "L")

Pin No.	Pin Name	I/O	Description
44	WDCK	O	Word clock signal (88.2 kHz) output terminal Not used (open)
45	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the CXD8762Q (IC600)
46	DATA	O	“L”: 48-bit slot serial data output when PSSL “H”: DA16 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Serial data output to the CXD8762Q (IC600)
47	BCLK	O	“L”: 48-bit slot bit clock signal output when PSSL “H”: DA15 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Bit clock signal (2.8224 MHz) output to the CXD8762Q (IC600)
48	64 DATA	O	“L”: 64-bit slot serial data output when PSSL “H”: DA14 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
49	64 BCLK	O	“L”: 64-bit slot bit clock signal output when PSSL “H”: DA13 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
50	64 LRCK	O	“L”: 64-bit slot L/R sampling clock signal output when PSSL “H”: DA12 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
51	GTOP	O	“L”: GTOP signal output when PSSL “H”: DA11 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
52	XUGF	O	“L”: XUGF signal output when PSSL “H”: DA10 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
53	XPLCK	O	“L”: XPLCK signal output when PSSL “H”: DA09 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
54	GFS	O	“L”: GFS (guard frame sync) signal output when PSSL “H”: DA08 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
55	RFCK	O	“L”: RFCK (read frame clock) signal output when PSSL “H”: DA07 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
56	C2PO	O	“L”: C2PO signal output when PSSL “H”: DA06 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
57	XRAOF	O	“L”: XRAOF (RAM over flow) signal output when PSSL “H”: DA05 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
58	MNT3	O	“L”: MNT3 (monitor 3) signal output when PSSL “H”: DA04 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
59	MNT2	O	“L”: MNT2 (monitor 2) signal output when PSSL “H”: DA03 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
60	MNT1	O	“L”: MNT1 (monitor 1) signal output when PSSL “H”: DA02 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
61	MNT0	O	“L”: MNT0 (monitor 0) signal output when PSSL “H”: DA01 output when PSSL (PSSL (pin ④⑨) : fixed at “L”) Not used (open)
62	XTAI	I	System clock input terminal (16 MHz)
63	XTAO	O	System clock output terminal (16 MHz) Not used (open)
64	XTSL	I	System clock selection input terminal (fixed at “L”)
65	DVSS	—	Ground terminal (digital system)
66	FSTI	I	2/3 divider input terminal of pins ⑥② (XATI) and ⑥③ (XTAO)
67	FSTO	O	2/3 divider output terminal of pins ⑥② (XATI) and ⑥③ (XTAO)
68	C4M	O	4.2336 MHz clock signal output terminal Not used (open)
69	C16M	O	16.9344 MHz clock signal output terminal Not used (open)
70	MD2	I	Digital out on/off control signal input from the system controller (IC201)
71	DOUT	O	Digital signal (for coaxial out and optical out) output terminal
72	EMPH	O	Emphasis control signal output terminal Not used (open)
73	WFCK	O	Write frame clock signal output terminal Not used (open)
74	SCOR	O	Sub-code sync (S0+S1) detection signal output to the system controller (IC201)

Pin No.	Pin Name	I/O	Description
75	SBSO	O	Sub-code P-W serial data output terminal Not used (open)
76	EXCK	I	Sub-code P-W serial data reading clock signal input terminal Not used (fixed at "L")
77	SUBQ	O	Sub-code Q data signal output to the system controller (IC201)
78	SQCK	I	Sub-code Q data reading clock signal input from the system controller (IC201)
79	MUTE	I	Mute signal input from the system controller (IC201)
80	SENS	O	Internal status (SENSE) signal output to the system controller (IC201)
81	$\overline{\text{XRST}}$	I	System reset signal input from the reset signal generator (IC204) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
82	DIRC	I	1-track jump mode input terminal Not used (fixed at "H")
83	SCLK	I	Sense serial data reading clock signal input from the system controller (IC201)
84	DFSW	I	Defect on/off select signal input terminal Not used (fixed at "L")
85	ATSK	I	Input terminal for the anti-shock Not used (fixed at "L")
86	DATA	I	Serial data input from the system controller (IC201)
87	XLAT	I	Serial data latch pulse signal input from the system controller (IC201)
88	CLOK	I	Serial data transfer clock signal input from the system controller (IC201)
89	COUT	O	Track number count signal output terminal Not used (open)
90	DVDD	—	Power supply terminal (+5V) (digital system)
91	MIRR	O	Mirror detection signal output terminal Not used (open)
92	DFCT	O	Defect signal output terminal Not used (open)
93	FOK	O	Focus OK signal output terminal Not used (open)
94	FSW	O	Selection signal output terminal of the output filter for spindle motor Not used (open)
95	MON	O	Spindle motor on/off control signal output terminal Not used (open)
96	MDP	O	Spindle servo control signal output terminal
97	MDS	O	Spindle servo control signal output terminal Not used (open)
98	LOCK	O	GFS is sampled by 460 Hz "H" output when GFS is "H" Not used (open)
99	SSTP	I	Detection input from the sled limit-in detect switch (S22) The optical pick-up is inner position when "H"
100	SFDR	O	Sled servo drive PWM signal (+) output to the BA6297AFP (IC102)

• SERVO BOARD IC201 CXP84124-085Q (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	A3	O	Address signal output to the static RAM (IC202)
2	A4	O	Address signal output to the static RAM (IC202)
3	A5	O	Address signal output to the static RAM (IC202)
4	A6	O	Address signal output to the static RAM (IC202)
5	A7	O	Address signal output to the static RAM (IC202)
6	A8	O	Address signal output to the static RAM (IC202)
7	A9	O	Address signal output to the static RAM (IC202)
8	A10	O	Address signal output to the static RAM (IC202)
9	A11	O	Address signal output to the static RAM (IC202)
10	A12	O	Address signal output to the static RAM (IC202)
11	$\overline{\text{WE}}$	O	Write enable signal output to the static RAM (IC202)
12	NC	O	Not used (fixed at "H")
13	NC	O	Not used (fixed at "H")
14	LED-PLAY	O	▶ LED (D871) drive signal output terminal "H": LED on
15	LED-PAUSE	O	▬ LED (D872) drive signal output terminal "H": LED on
16	LED-FILTER	O	FILTER LED (S886(2/2)) drive signal output terminal "H": LED on
17	SPDL-MUTE	O	Mute signal output to the spindle motor driver (IC104, 105)
18	SHIFT-ON/OFF	O	Reset signal output terminal Not used (open)
19	VOL UP	O	Volume up control signal output to the volume control motor driver (IC350)
20	VOL DOWN	O	Volume down control signal output to the volume control motor driver (IC350)
21	BLANK	O	Blank signal output to the fluorescent indicator tube driver (IC801 to IC803)
22	FL D0	O	Serial data output to the fluorescent indicator tube driver (IC803)
23	FL D1	O	Serial data output to the fluorescent indicator tube driver (IC802)
24	FL D2	O	Serial data output to the fluorescent indicator tube driver (IC801)
25	FL CLK	O	Serial data transfer clock signal output to the fluorescent indicator tube driver (IC801 to IC803)
26	FL WR	O	Read/write select signal output to the fluorescent indicator tube driver (IC801 to IC803)
27	SENSOR SW	O	On/off control signal output to the stabilizer detect sensor (IC203) "H": on
28	SENSOR	I	Detect signal input from the stabilizer detect sensor (IC203) "H": on
29	LIMIT OUT	I	Detection input from the sled limit-out detect switch (S21) The optical pick-up is outer position when "L"
30	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC204) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
31	XTALI	I	Main system clock input terminal (4 MHz)
32	XTALO	O	Main system clock output terminal (4 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal Not used (open)
35	TEX	I	Sub system clock input terminal Not used (fixed at "L")
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V)
38	K0	I	Key input terminal (A/D input) ERASE key (S850) input
39	K1	I	Key input terminal (A/D input) FILE, EDIT/TIME FADE, TIME, REPEAT, P MODE keys (S851 to S855) input
40	K2	I	Key input terminal (A/D input) CHECK, CLEAR, FILTER, ◀, ▶, PUSH ENTER keys (S884 to S888, RV870) input

Pin No.	Pin Name	I/O	Description
41	K3	I	Key input terminal (A/D input) ≡ OPEN/CLOSE, ◀, ▶, ■ keys (S889 to S892) input
42	K4	I	Rotary encoder input terminal (A/D input) AMS ▷▷ key (RV870) input
43	K5	I	Rotary encoder input terminal (A/D input) AMS ◀◀ key (RV870) input
44	ADJ/AFJ	I	Setting terminal for the test mode "L" active
45	IN/OUT SW	I	Detection input from the loading in/out detect switch (S281, S282) (A/D input)
46	SCLK	O	Sense serial data reading clock signal output to the CXD2545Q (IC101)
47	PRGL	O	Serial data latch pulse signal output to the CXD8762Q (IC600)
48	CLK	O	Serial data transfer clock signal output to the CXD2545Q (IC101) and CXD8762Q (IC600)
49	SENSE	I	Internal status (SENSE) signal input from the CXD2545Q (IC101)
50	DATA	O	Serial data output to the CXD2545Q (IC101) and CXD8762Q (IC600)
51	SQCK	O	Sub-code Q data reading clock signal output to the CXD2545Q (IC101)
52	SUBQ	I	Sub-code Q data signal input from the CXD2545Q (IC101)
53	TEST	O	Output terminal for the test Not used (open)
54	SEL1	I	Destination setting terminal (fixed at "L")
55	SEL0	I	Destination setting terminal (fixed at "L")
56	RMIN	I	Remote control signal input from the remote control receiver (IC804)
57	TIMER	I	Timer control input terminal Not used (fixed at "H")
58	TEST	O	Output terminal for the test Not used (open)
59	TEST	O	Output terminal for the test Not used (open)
60	SCOR	I	Sub-code sync (S0+S1) detection signal input from the CXD2545Q (IC101)
61	AMUTE	O	Muting control signal output to the analog mute driver and mute relay driver
62	LDON	O	Laser diode on/off selection signal output to the RF amplifier in optical pick-up
63	XLT	O	Serial data latch pulse signal output to the CXD2545Q (IC101)
64	LOAD OUT	O	Loading motor (M271) drive signal output to the LB1641 (IC205) *1
65	LOAD IN	O	Loading motor (M271) drive signal output to the LB1641 (IC205) *1
66	DOUT	O	Digital out on/off control signal output terminal Not used (open)
67	DMUTE	O	Muting control signal output to the CXD2545Q (IC101) and CXD8762Q (IC600)
68	D0	I/O	Two-way data bus with the static RAM (IC202)
69	D1	I/O	Two-way data bus with the static RAM (IC202)
70	D2	I/O	Two-way data bus with the static RAM (IC202)
71	D3	I/O	Two-way data bus with the static RAM (IC202)
72	VDD	—	Power supply terminal (+5V)
73	NC	I	Not used (fixed at "H")
74	D4	I/O	Two-way data bus with the static RAM (IC202)
75	D5	I/O	Two-way data bus with the static RAM (IC202)
76	D6	I/O	Two-way data bus with the static RAM (IC202)
77	D7	I/O	Two-way data bus with the static RAM (IC202)
78	A0	O	Address signal output to the static RAM (IC202)
79	A1	O	Address signal output to the static RAM (IC202)
80	A2	O	Address signal output to the static RAM (IC202)

*1 Loading motor (M271) control

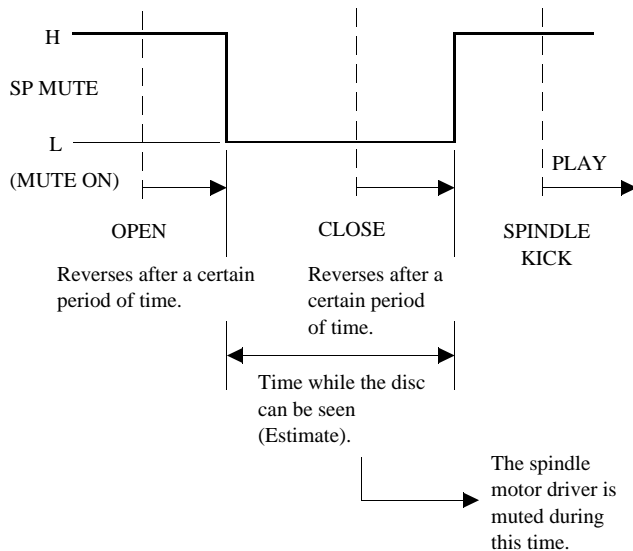
Terminal	Operation	OFF	OUT	IN	BRAKE
LOAD OUT (pin ④)		"L"	"H"	"L"	"H"
LOAD IN (pin ⑤)		"L"	"L"	"H"	"H"

• Main Ports

SPDL-MUTE (pin 17)

From the viewpoint of performance of the set, the disc must not move nor sway when the disc table opens. These problems however occur in the actual case due to the offset voltage generated and the voltage generated because of the positional relation between the BSL coil and Hall element.

The spindle motor driver (IC104, IC105) is therefore muted while the tray is open. Pin 17 provides the timing for this.

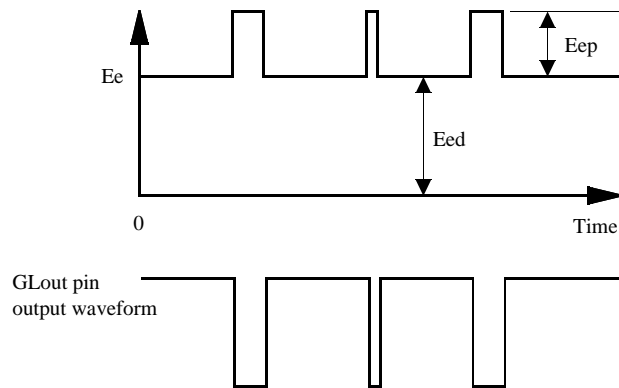


BLANK (pin 21)

This port is required because the display tube in this set static-lights up and a dedicated screwdriver is required. It is basically a RESET pin. But as problems will occur if used also as RESET, timings are specially provided using the micro-processor.

SENDER SW (pin 27)

As IC203 IS471F operate in pulse as shown in the figure, the sound quality may be affected if operated constantly. As the purpose of IC203 is to detect if the presence of the stabilizer, it should be operated only when the tray is drawn in. IC203 operates as it is "H" only at this time. Normally it is "L".



* Eep is the luminance of the signal light tuned with the low level timing of the GLout pin output.
Eed is the luminance of the D.C. light. The light source is the infrared-emitting diode ($\lambda_p=940$ nm).

SENER (pin 28)

The results of the detection of IC261 IS471F is output to this pin. It becomes "L" when there is no stabilizer (when light reaches). The next process of imposing the next focus is not performed. (Effective only when pin 27 is "H".)

Therefore, it must be noted that if PLAY is performed when the servo board at the top of the CDM is not assembled properly, the detection circuit operates and this pin does not operate.

It is does not operate, refer to "1. SERVICING NOTES " on page 3.

SECTION 7 EXPLODED VIEWS

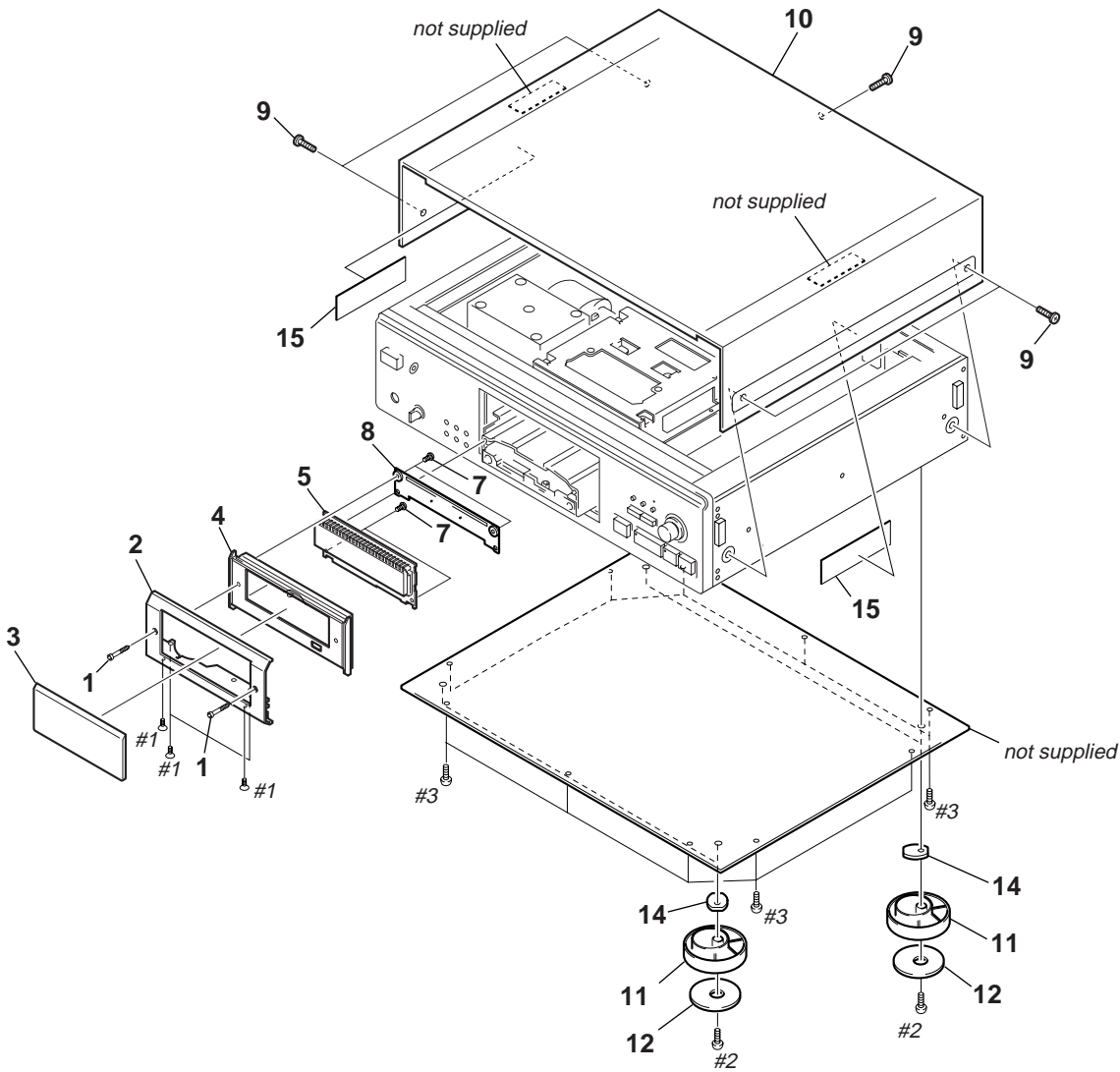
NOTE:

- -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

- 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.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

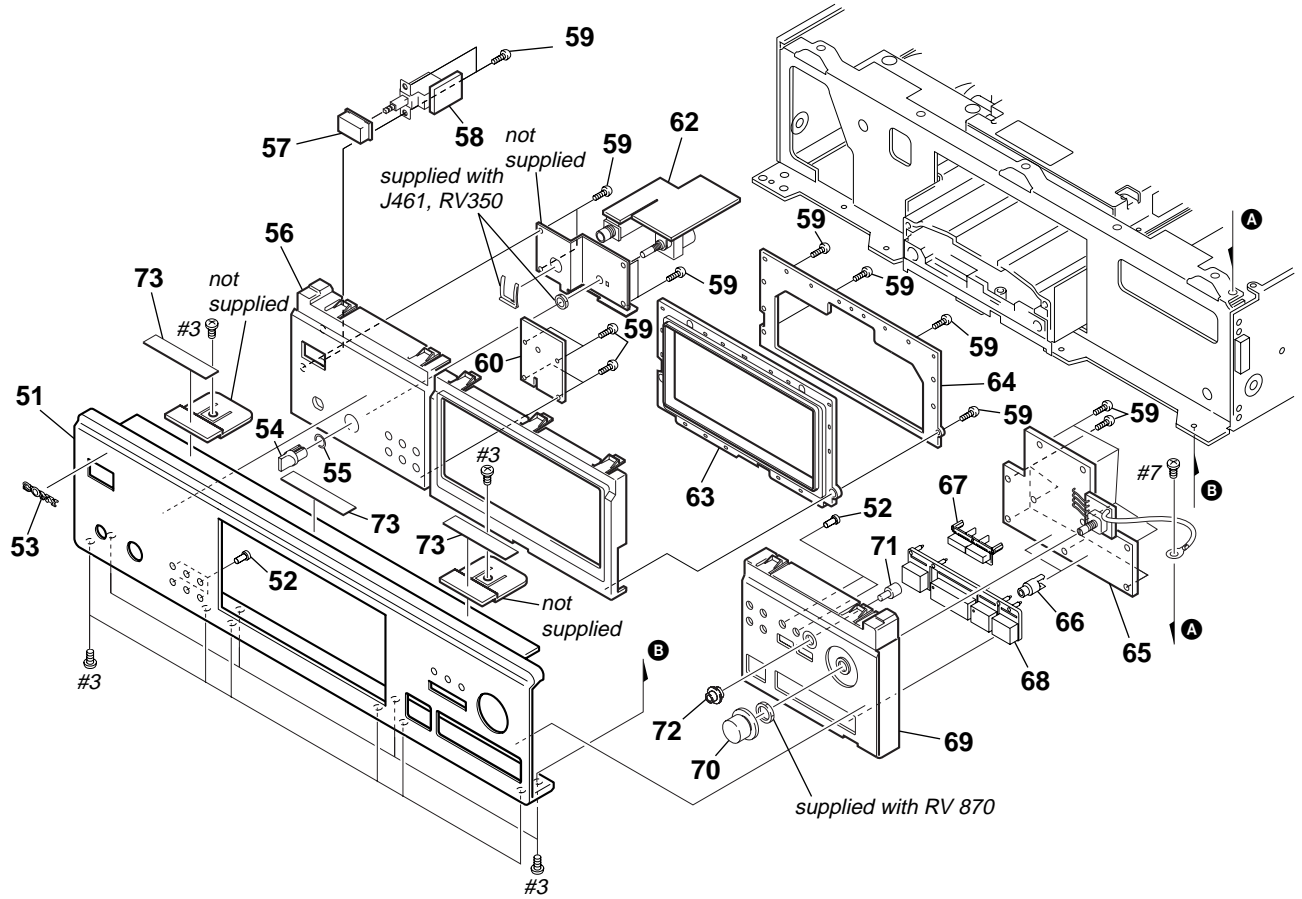
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

(1) CASE, LOADING PANEL SECTION



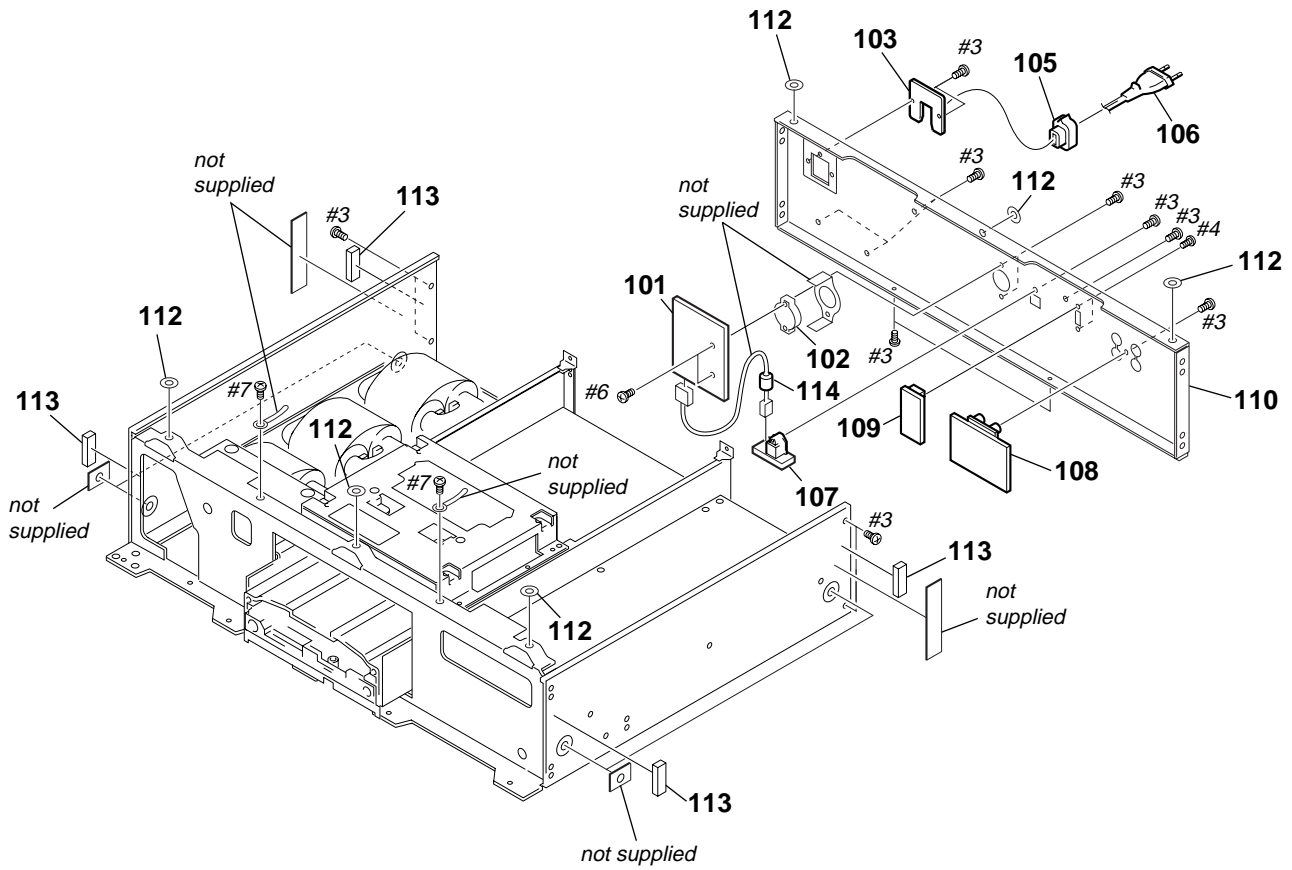
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-970-998-01	BOLT (LID), HEXAGON HOLE (BLACK)		8	4-221-266-01	COVER, LOADING PANEL (GOLD)	
1	4-970-998-11	BOLT (LID), HEXAGON HOLE (GOLD)		8	4-221-266-11	COVER, LOADING PANEL (BLACK)	
2	4-221-264-01	PANEL, LOADING (GOLD)		9	4-210-291-01	SCREW (CASE 3 TP2) (BLACK)	
2	4-221-264-11	PANEL, LOADING (BLACK)		9	4-210-291-11	SCREW (CASE 3 TP2) (GOLD)	
3	4-221-267-01	PLATE, INDICATION (GOLD)		10	4-220-301-01	CASE (GOLD)	
3	4-221-267-11	PLATE, INDICATION (BLACK)		10	4-220-301-11	CASE (BLACK)	
4	4-221-265-01	BASE, LOADING PANEL (GOLD)		11	4-970-487-01	FOOT (F50180S)	
4	4-221-265-11	BASE, LOADING PANEL (BLACK)		12	4-970-124-11	CUSHION (F50180S)	
5	A-4724-835-A	DISPLAY BOARD, COMPLETE		14	4-970-488-01	SPACER (F50180S)	
7	4-951-620-41	SCREW (2.6), +BVTP (BLACK)		* 15	4-615-354-01	SPACER	
7	4-951-620-51	SCREW (2.6), +BVTP (GOLD)					

(2) FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-221-254-01	PANEL, FRONT (GOLD)		63	4-221-260-01	PACKING	
51	4-221-254-11	PANEL, FRONT (BLACK)		64	4-221-261-01	RETAINER (PACKING)	
52	4-220-319-01	BUTTON (MODE) (GOLD)		65	A-4724-829-A	KEY-R BOARD, COMPLETE	
52	4-220-319-11	BUTTON (MODE) (BLACK)		* 66	3-362-478-11	HOLDER (T), LED	
53	4-942-568-41	EMBLEM (NO.5), SONY		67	4-221-258-01	BUTTON (FR) (GOLD)	
54	4-221-262-01	KNOB (VOL) (GOLD)		67	4-221-258-11	BUTTON (FR) (BLACK)	
54	4-221-262-11	KNOB (VOL) (BLACK)		68	X-4951-807-1	BUTTON (PLAY) ASSY (BLACK)	
55	3-354-981-01	SPRING (SUS), RING		68	X-4951-808-1	BUTTON (PLAY) ASSY (GOLD)	
56	4-221-255-01	BASE (LM), PANEL (GOLD)		69	4-221-256-01	BASE (R), PANEL (GOLD)	
56	4-221-255-11	BASE (LM), PANEL (BLACK)		69	4-221-256-11	BASE (R), PANEL (BLACK)	
57	4-923-520-81	KNOB, POWER (GOLD)		70	4-221-263-01	KNOB (AMS) (GOLD)	
57	4-923-520-91	KNOB, POWER (BLACK)		70	4-221-263-11	KNOB (AMS) (BLACK)	
58	1-674-836-11	SW BOARD		71	4-220-317-01	BUTTON (FILTER)	
59	4-951-620-01	SCREW (2.6X8), +BVTP		72	4-220-711-01	INDICATOR (FILTER)	
60	1-674-835-11	KEY-L BOARD		* 73	4-615-354-01	SPACER	
62	1-674-837-11	VR BOARD					

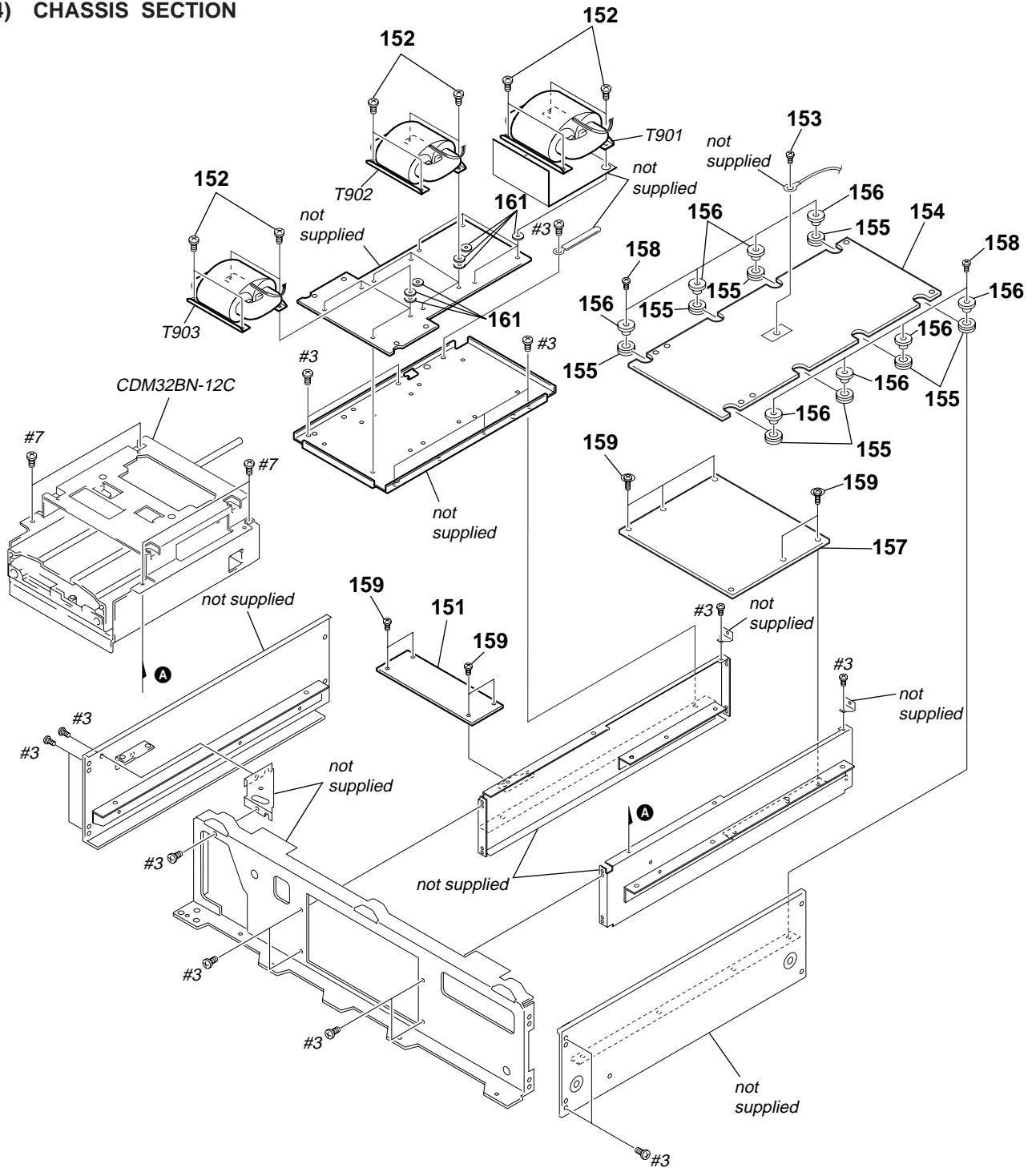
(3) BACK PANEL SECTION



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	1-674-848-11	COAX OUT BOARD		108	1-674-845-11	LINE BOARD	
* 102	4-913-152-01	ESCUTCHEON, D/O		109	1-674-839-11	D/O SW BOARD	
* 103	4-923-873-01	BRACKET, CORD STOPPER		110	4-221-269-01	PANEL, BACK (AEP)	
105	3-703-244-00	BUSHING (2104), CORD		110	4-221-269-11	PANEL, BACK (Singapore)	
\triangle 106	1-558-568-21	CORD, POWER		112	4-971-099-01	WASHER (P)	
107	1-674-847-11	OPT OUT BOARD		113	4-955-901-01	CUSHION (FL)	
				114	1-500-219-11	BEAD, FERRITE (CASE)	

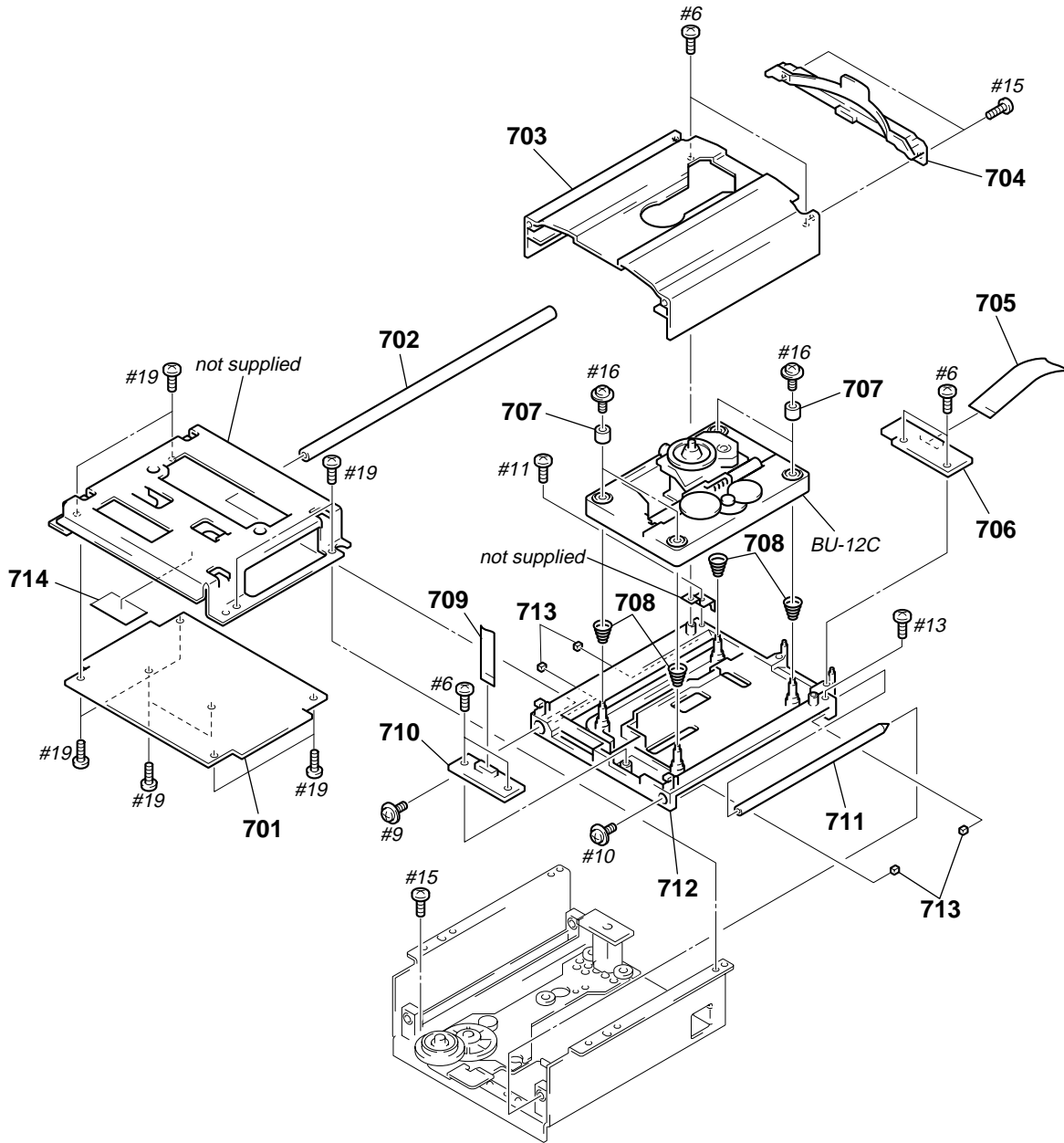
(4) CHASSIS SECTION



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

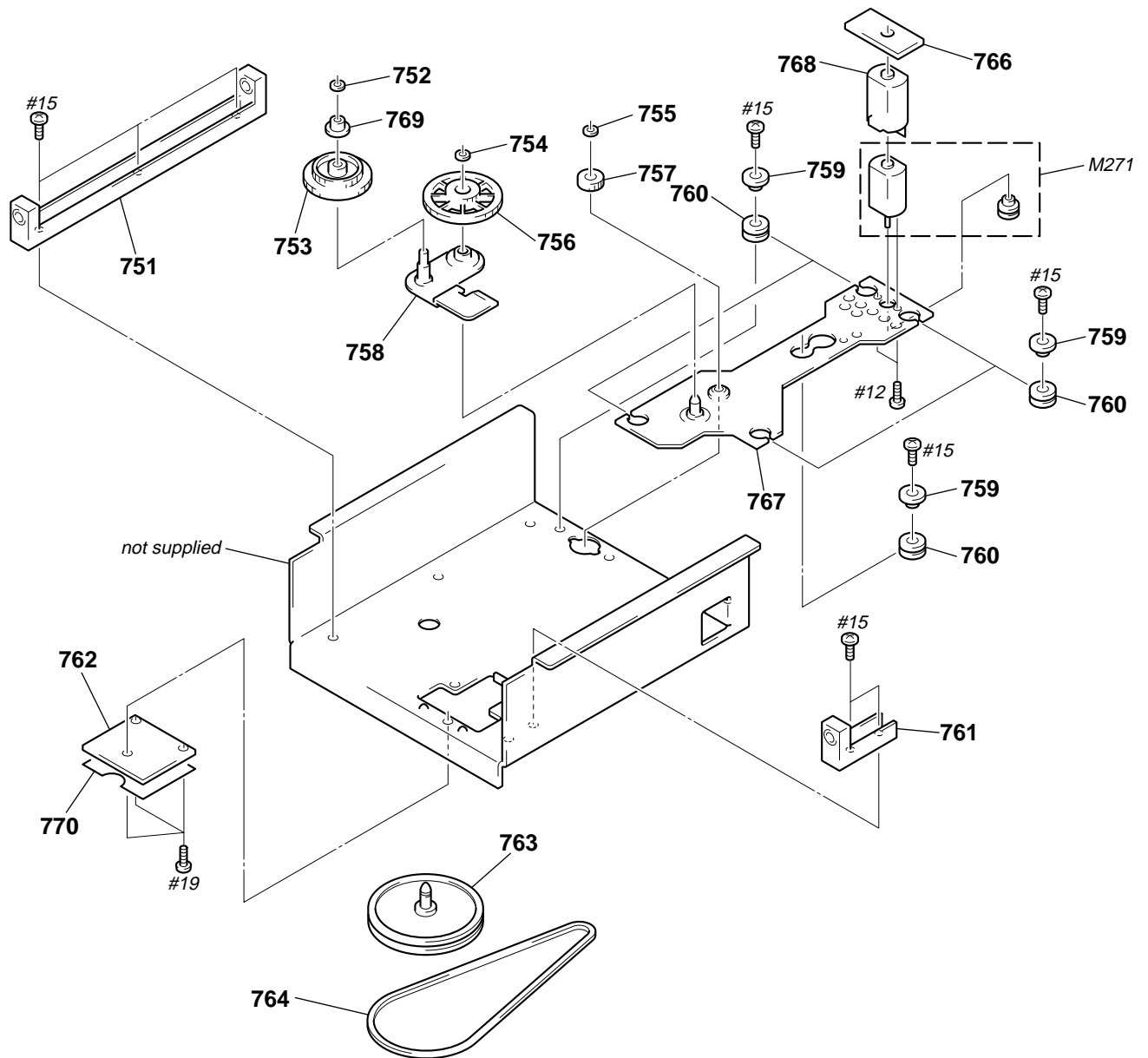
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	1-674-846-11	AC BOARD		158	3-905-609-11	SCREW (TRANSISTOR)	
152	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6		159	4-211-985-01	SCREW (3X8), PC BOARD FITTING	
153	2-259-121-01	SCREW, TR		161	4-971-099-01	WASHER (P)	
154	A-4724-837-A	AUDIO BOARD, COMPLETE		Δ T901	1-435-067-11	TRANSFORMER, POWER	
* 155	4-888-798-11	BUSHING, RUBBER		Δ T902	1-435-068-11	TRANSFORMER, POWER	
156	4-928-032-01	COLLAR (A)		Δ T903	1-435-069-11	TRANSFORMER, POWER	
157	A-4724-840-A	POWER BOARD, COMPLETE					

(5) MECHANISM DECK SECTION-1
 (CDM32EB-12C) (BLACK)
 (CDM32EN-12C) (GOLD)



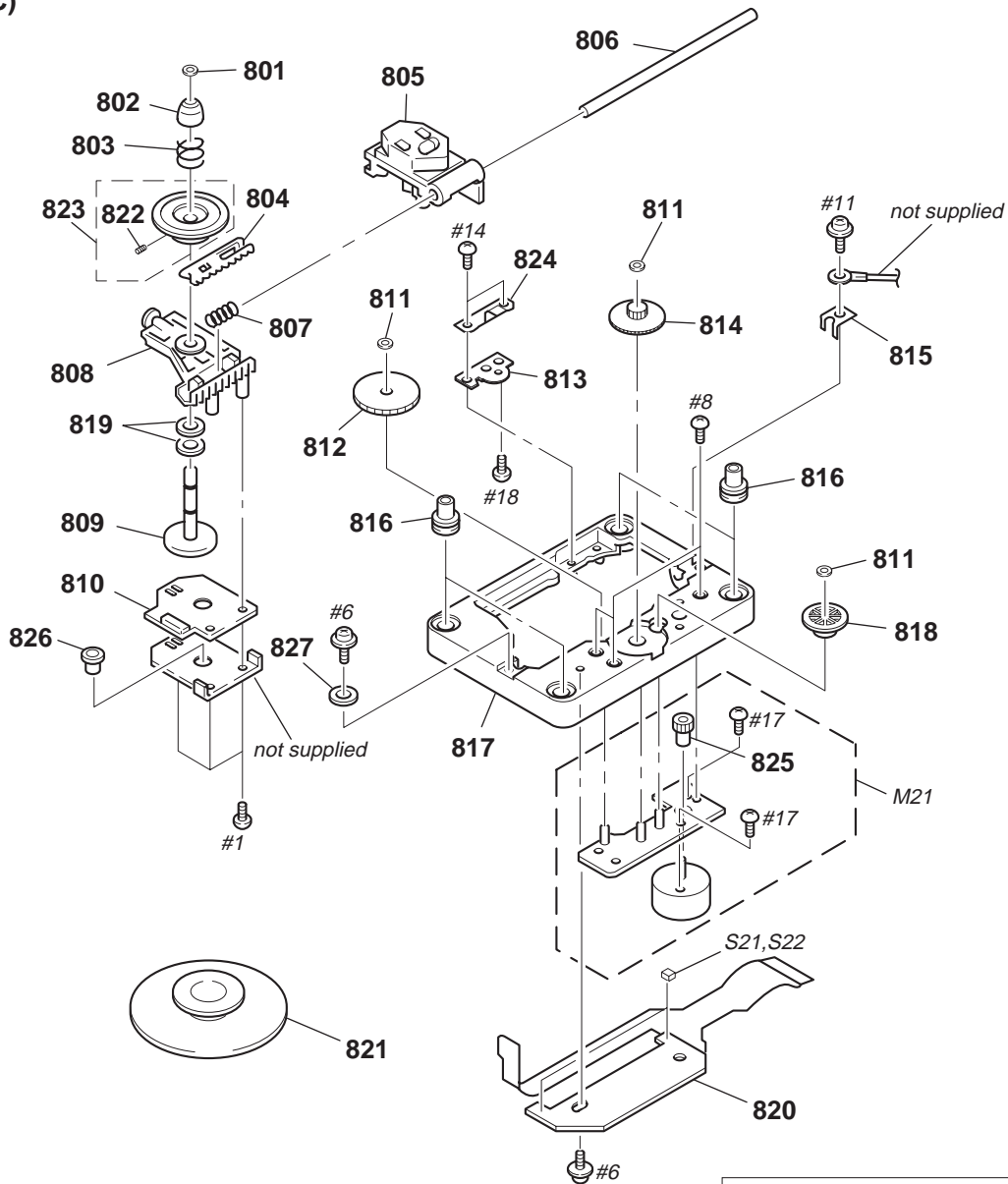
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
701	A-4724-901-A	SERVO BOARD, COMPLETE		707	4-927-634-01	HOLDER (SP)	
* 702	4-968-903-01	SHAFT (MAIN)		708	4-948-375-01	SPRING (F), COIL	
703	4-968-907-11	PANEL (DRAWER)		709	1-769-109-11	WIRE (FLAT TYPE) (12 CORE)	
704	4-971-000-21	COVER (CD) (BLACK)		710	1-653-906-11	FL RELAY BOARD	
704	4-971-000-31	COVER (CD) (GOLD)		* 711	4-968-904-01	SHAFT (SUB)	
705	1-769-110-11	WIRE (FLAT TYPE) (26 CORE)		* 712	4-968-906-01	HOLDER, BU	
* 706	1-654-005-11	FLEX RELAY BOARD		713	4-925-315-31	DAMPER	
				714	4-222-658-01	SHEET, MAGNET	

**(6) MECHANISM DECK SECTION-2
(CDM32EB-12C) (BLACK)
(CDM32EN-12C) (GOLD)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 751	4-968-901-01	BEARING (MAIN)		* 761	4-968-902-01	BEARING (SUB)	
752	3-325-697-31	WASHER		762	1-653-905-11	LOADING SW BOARD	
753	4-968-900-01	GEAR (LAST)		763	X-4945-209-1	PULLEY (FIRST) ASSY	
754	3-363-191-01	WASHER (BA)		764	4-968-905-01	BELT (CDM)	
755	4-973-849-01	WASHER		766	1-653-907-11	LOADING MOTOR BOARD	
756	4-968-899-01	GEAR (MIDDLE)		767	X-4945-205-1	SHAFT ASSY	
757	4-968-898-01	GEAR (FIRST)		768	4-971-894-01	DAMPER (MOTOR)	
758	X-4945-207-1	BRACKET (LAST) ASSY		* 769	4-970-999-01	ROLLER (J RACK)	
* 759	4-928-026-01	COLLAR (B)		* 770	4-972-921-01	COVER (SW)	
* 760	4-888-798-11	BUSHING, RUBBER		M271	X-4945-565-1	MOTOR ASSY	

(7) BASE UNIT
(BU-12C)



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
801	4-968-871-01	WASHER (SPINDLE)		816	4-917-562-21	INSULATOR	
802	4-968-867-01	CAP, CENTERING		* 817	4-968-862-01	BASE, MECHANICAL	
803	4-968-869-01	SPRING (CENTERING), COMPRESSION		818	4-968-864-01	GEAR (B)	
804	4-968-870-01	RACK, SLIDE		819	3-701-444-11	WASHER, 6	
\triangle 805	8-820-014-13	OPTICAL PICK-UP KSS-273B/J1N		820	1-653-918-11	PC BOARD, FLEXIBLE	
* 806	4-968-944-01	SHAFT, SLED		821	A-4411-793-A	STABILIZER ASSY	
807	4-968-880-01	SPRING (SLED), COMPRESSION		822	4-971-266-01	SCREW (M2.6X4)	
808	X-4945-203-1	BASE ASSY, SLIDE		823	A-4660-814-A	PULLEY ASSY, DISK	
809	X-4945-273-1	ROTOR ASSY		824	4-970-924-01	SPRING (SKEW), LEAF	
* 810	A-4699-545-A	BSL BOARD, COMPLETE		825	4-968-863-01	GEAR (A)	
811	3-364-731-01	WASHER, POLY-SLIDER		826	4-943-342-01	BEARING	
812	4-968-866-01	GEAR (D)		827	4-971-099-01	WASHER (P)	
813	4-968-916-01	BRACKET (OP BASE)		M21	X-4945-920-1	MOTOR ASSY, SLED	
814	4-968-865-01	GEAR (C)		S21	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT IN)	
815	4-968-879-01	SPRING (OP), LEAF		S22	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT OUT)	

SECTION 8 ELECTRICAL PARTS LIST

AC	AUDIO
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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	
	1-674-846-11	AC BOARD *****		C422	1-127-764-21	FILM 10PF 10%	50V	
		< CAPACITOR >		C423	1-117-775-31	FILM 0.1uF 10%	250V	
				C424	1-125-859-21	FILM 0.001uF 5%	50V	
				C425	1-125-859-21	FILM 0.001uF 5%	50V	
				C451	1-102-947-00	CERAMIC 10PF 5%	50V	
Δ C900	1-127-802-51	CERAMIC 10000PF 20%	250V	C452	1-119-779-11	ELECT 220uF 20%	10V	
		< CONNECTOR >		C453	1-102-947-00	CERAMIC 10PF 5%	50V	
	CN901	1-564-321-00	PIN, CONNECTOR 2P	C501	1-127-741-41	ELECT 0.047uF 10%	250V	
* CN902	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P		C502	1-130-486-00	FILM 0.018uF 5%	50V	
	CN903	1-770-128-11	PIN, CONNECTOR 2P	C503	1-109-857-11	ELECT 47uF 20%	63V	
	CN904	1-564-321-00	PIN, CONNECTOR 2	C504	1-136-820-11	FILM 0.01uF 5%	100V	
* CN905	1-564-321-21	PIN, CONNECTOR 2P		C506	1-136-820-11	FILM 0.01uF 5%	100V	
		< FILTER >		C507	1-125-853-21	FILM 470PF 5%	50V	
Δ T900	1-421-915-11	COIL, LINE FILTER		C509	1-136-820-11	FILM 0.01uF 5%	100V	
		*****		C510	1-136-818-11	FILM 0.0047uF 5%	100V	
	A-4724-837-A	AUDIO BOARD, COMPLETE *****		C511	1-136-820-11	FILM 0.01uF 5%	100V	
				C512	1-136-818-11	FILM 0.0047uF 5%	100V	
	2-259-121-01	SCREW, TR		C513	1-125-859-21	FILM 0.001uF 5%	50V	
	4-924-264-01	TERMINAL, MOUNT		C514	1-125-859-21	FILM 0.001uF 5%	50V	
		< CAPACITOR >		C515	1-136-818-11	FILM 0.0047uF 5%	100V	
	C401	1-127-741-41	ELECT 0.047uF 10%	250V	C516	1-136-814-11	FILM 0.001uF 5%	100V
	C402	1-109-857-11	ELECT 47uF 20%	63V	C517	1-127-741-41	ELECT 0.047uF 10%	250V
	C403	1-130-468-00	FILM 560PF 5%	50V	C518	1-128-201-11	ELECT 100uF 20%	63V
	C404	1-136-820-11	FILM 0.01uF 5%	100V	C519	1-128-201-11	ELECT 100uF 20%	63V
	C405	1-130-486-00	FILM 0.018uF 5%	50V	C520	1-128-653-21	FILM 1600PF 5%	50V
	C406	1-136-820-11	FILM 0.01uF 5%	100V	C521	1-127-764-21	FILM 10PF 10%	50V
	C407	1-125-853-21	FILM 470PF 5%	50V	C522	1-127-764-21	FILM 10PF 10%	50V
	C409	1-136-820-11	FILM 0.01uF 5%	100V	C523	1-117-775-31	FILM 0.1uF 10%	250V
	C410	1-136-818-11	FILM 0.0047uF 5%	100V	C524	1-125-859-21	FILM 0.001uF 5%	50V
	C411	1-136-820-11	FILM 0.01uF 5%	100V	C525	1-125-859-21	FILM 0.001uF 5%	50V
	C412	1-136-818-11	FILM 0.0047uF 5%	100V	C551	1-102-947-00	CERAMIC 10PF 5%	50V
	C413	1-125-859-21	FILM 0.001uF 5%	50V	C552	1-119-779-11	ELECT 220uF 20%	10V
	C414	1-125-859-21	FILM 0.001uF 5%	50V	C553	1-102-947-00	CERAMIC 10PF 5%	50V
	C415	1-136-818-11	FILM 0.0047uF 5%	100V	C600	1-164-505-11	CERAMIC CHIP 2.2uF	16V
	C416	1-136-814-11	FILM 0.001uF 5%	100V	C601	1-119-793-11	ELECT 1000uF 20%	16V
	C417	1-128-201-11	ELECT 100uF 20%	63V	C602	1-126-929-11	ELECT 4700uF 20%	10V
	C418	1-127-741-41	ELECT 0.047uF 10%	250V	C603	1-164-505-11	CERAMIC CHIP 2.2uF	16V
	C419	1-128-201-11	ELECT 100uF 20%	63V	C604	1-164-505-11	CERAMIC CHIP 2.2uF	16V
	C420	1-128-653-21	FILM 1600PF 5%	50V	C605	1-119-793-11	ELECT 1000uF 20%	16V
	C421	1-127-764-21	FILM 10PF 10%	50V	C606	1-164-505-11	CERAMIC CHIP 2.2uF	16V
				C607	1-164-505-11	CERAMIC CHIP 2.2uF	16V	
				C608	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	
				C609	1-163-038-00	CERAMIC CHIP 0.1uF	25V	
				C610	1-126-929-11	ELECT 4700uF 20%	10V	

AUDIO

Ref. No.	Part No.	Description		Remark	Ref. No.	Part No.	Description	Remark
C611	1-126-929-11	ELECT	4700uF	20%	10V		< CONNECTOR >	
C612	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN401	1-564-505-11	PLUG, CONNECTOR 2P
C613	1-119-793-11	ELECT	1000uF	20%	16V	* CN402	1-564-505-11	PLUG, CONNECTOR 2P
C614	1-119-793-11	ELECT	1000uF	20%	16V	* CN501	1-564-505-11	PLUG, CONNECTOR 2P
C615	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN502	1-564-505-11	PLUG, CONNECTOR 2P
C616	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN601	1-691-462-11	PIN, CONNECTOR (PC BOARD) 6P
C617	1-164-505-11	CERAMIC CHIP	2.2uF		16V	CN602	1-691-463-31	PIN, CONNECTOR (PC BOARD) 7P
C618	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN603	1-564-505-11	PLUG, CONNECTOR 2P
C619	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN604	1-564-508-11	PLUG, CONNECTOR 5P
C620	1-126-929-11	ELECT	4700uF	20%	10V	* CN605	1-564-505-11	PLUG, CONNECTOR 2P
C621	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN606	1-564-506-11	PLUG, CONNECTOR 3P
C622	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN607	1-564-505-11	PLUG, CONNECTOR 2P
C623	1-164-505-11	CERAMIC CHIP	2.2uF		16V	* CN608	1-564-505-11	PLUG, CONNECTOR 2P
C624	1-163-038-00	CERAMIC CHIP	0.1uF		25V	CN609	1-691-766-11	PLUG (MICRO CONNECTOR) 4P
C625	1-126-929-11	ELECT	4700uF	20%	10V	* CN610	1-564-506-11	PLUG, CONNECTOR 3P
C626	1-119-793-11	ELECT	1000uF	20%	16V	* CN612	1-564-507-11	PLUG, CONNECTOR 4P
C627	1-136-850-11	FILM	0.1uF	5%	63V	CN613	1-691-459-21	PIN, CONNECTOR (PC BOARD) 3P
C628	1-136-850-11	FILM	0.1uF	5%	63V	* CN614	1-564-507-11	PLUG, CONNECTOR 4P
C629	1-126-929-11	ELECT	4700uF	20%	10V		< DIODE >	
C630	1-136-850-11	FILM	0.1uF	5%	63V	D601	8-719-114-30	DIODE RD5.1JS-T2AB2
C631	1-136-850-11	FILM	0.1uF	5%	63V	D602	8-719-114-30	DIODE RD5.1JS-T2AB2
C632	1-136-850-11	FILM	0.1uF	5%	63V	D603	8-719-402-47	DIODE MA3130M-TX
C633	1-136-850-11	FILM	0.1uF	5%	63V	D604	8-719-801-78	DIODE 1SS184-TE85L
C634	1-126-929-11	ELECT	4700uF	20%	10V		< IC >	
C635	1-136-850-11	FILM	0.1uF	5%	63V	IC401	8-759-371-51	IC CXA8042AS
C636	1-136-850-11	FILM	0.1uF	5%	63V	IC402	8-759-566-39	IC OPA2132UA/2K5
C637	1-117-775-31	FILM	0.1uF	10%	250V	IC403	8-759-566-39	IC OPA2132UA/2K5
C638	1-127-764-21	FILM	10PF	10%	50V	IC501	8-759-371-51	IC CXA8042AS
C639	1-127-764-21	FILM	10PF	10%	50V	IC502	8-759-566-39	IC OPA2132UA/2K5
C640	1-128-201-11	ELECT	100uF	20%	63V	IC503	8-759-566-39	IC OPA2132UA/2K5
C642	1-117-914-51	ELECT	330uF	20%	25V	IC600	8-759-573-17	IC CXD8762Q
C643	1-128-201-11	ELECT	100uF	20%	63V	IC601	8-759-596-81	IC CXD9521Q
C644	1-117-914-51	ELECT	330uF	20%	25V	IC602	8-759-296-74	IC AD712JR-REEL
C646	1-117-775-31	FILM	0.1uF	10%	250V	IC603	8-759-296-74	IC AD712JR-REEL
C647	1-128-201-11	ELECT	100uF	20%	63V	IC604	8-759-566-39	IC OPA2132UA/2K5
C648	1-164-505-11	CERAMIC CHIP	2.2uF		16V	IC605	8-759-566-39	IC OPA2132UA/2K5
C649	1-128-204-11	ELECT	470uF	20%	63V	IC606	8-759-711-85	IC NJM4580E-D (T1)
C650	1-125-859-21	FILM	0.001uF	5%	50V	IC607	8-759-242-70	IC TC7WU04F-TE12L
C651	1-125-859-21	FILM	0.001uF	5%	50V		< SHORT >	
C652	1-117-914-51	ELECT	330uF	20%	25V	JW610	1-216-295-00	SHORT 0
C653	1-117-775-31	FILM	0.1uF	10%	250V	JW611	1-216-295-00	SHORT 0
C654	1-128-201-11	ELECT	100uF	20%	63V		< COIL >	
C655	1-109-857-11	ELECT	47uF	20%	63V	L451	1-410-757-21	INDUCTOR 0.33mH
C656	1-128-204-11	ELECT	470uF	20%	63V	L452	1-414-520-21	INDUCTOR 10uH
C658	1-115-197-11	ELECT	100uF	20%	25V	L453	1-414-512-21	INDUCTOR 6.8uH
C659	1-115-197-11	ELECT	100uF	20%	25V	L454	1-414-512-21	INDUCTOR 6.8uH
C660	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	L455	1-414-512-21	INDUCTOR 6.8uH
C661	1-130-488-00	MYLAR	0.027uF	5%	50V	L551	1-410-757-21	INDUCTOR 0.33mH
C662	1-130-488-00	MYLAR	0.027uF	5%	50V	L552	1-414-520-21	INDUCTOR 10uH
C663	1-128-653-21	FILM	1600PF	5%	50V	L553	1-414-512-21	INDUCTOR 6.8uH
C664	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	L554	1-414-512-21	INDUCTOR 6.8uH
C665	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V	L555	1-414-512-21	INDUCTOR 6.8uH
C670	1-124-927-11	ELECT	4.7uF	20%	100V	L600	1-410-757-21	INDUCTOR 0.33mH
C671	1-124-927-11	ELECT	4.7uF	20%	100V			
C672	1-109-857-11	ELECT	47uF	20%	63V			

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L601	1-424-090-11	COIL, LINE FILTER		R417	1-259-545-11	CARBON 390	1% 1/2W
L604	1-424-090-11	COIL, LINE FILTER		R418	1-259-978-11	CARBON MELF 39	2% 1/8W
L605	1-424-090-11	COIL, LINE FILTER		R419	1-259-983-11	CARBON MELF 100	2% 1/8W
L607	1-424-090-11	COIL, LINE FILTER		R420	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
L609	1-424-090-11	COIL, LINE FILTER		R421	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
L611	1-424-090-11	COIL, LINE FILTER		R422	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
L614	1-424-090-11	COIL, LINE FILTER		R423	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
L616	1-424-090-11	COIL, LINE FILTER		R424	1-259-995-11	CARBON MELF 1K	2% 1/8W
L619	1-424-090-11	COIL, LINE FILTER		R425	1-259-995-11	CARBON MELF 1K	2% 1/8W
L620	1-424-090-11	COIL, LINE FILTER		R426	1-259-995-11	CARBON MELF 1K	2% 1/8W
L621	1-424-090-11	COIL, LINE FILTER		R428	1-259-507-11	CARBON 10	1% 1/2W
L622	1-424-090-11	COIL, LINE FILTER		R429	1-259-995-11	CARBON MELF 1K	2% 1/8W
L625	1-424-090-11	COIL, LINE FILTER		R451	1-260-004-11	CARBON MELF 4.7K	2% 1/8W
L626	1-424-090-11	COIL, LINE FILTER		R452	1-260-020-11	CARBON MELF 100K	2% 1/8W
L627	1-414-520-21	INDUCTOR 10uH		R453	1-260-010-11	CARBON MELF 15K	2% 1/8W
L628	1-424-090-11	COIL, LINE FILTER		R454	1-260-014-11	CARBON MELF 33K	2% 1/8W
L629	1-410-757-21	INDUCTOR 0.33mH		R455	1-260-016-11	CARBON MELF 47K	2% 1/8W
L630	1-424-090-11	COIL, LINE FILTER		R456	1-259-979-11	CARBON MELF 47	2% 1/8W
L631	1-424-090-11	COIL, LINE FILTER		R481	1-216-037-00	METAL CHIP 330	5% 1/10W
L632	1-424-090-11	COIL, LINE FILTER		R482	1-216-037-00	METAL CHIP 330	5% 1/10W
		< TRANSISTOR >		R483	1-216-037-00	METAL CHIP 330	5% 1/10W
Q401	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R484	1-216-037-00	METAL CHIP 330	5% 1/10W
Q402	8-729-216-22	TRANSISTOR 2SA1162G-TE85L		R491	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
Q403	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R501	1-216-029-00	METAL CHIP 150	5% 1/10W
Q404	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R502	1-216-029-00	METAL CHIP 150	5% 1/10W
Q451	8-729-231-55	TRANSISTOR 2SC2878AB-TPE2		R503	1-216-029-00	METAL CHIP 150	5% 1/10W
Q501	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R504	1-216-029-00	METAL CHIP 150	5% 1/10W
Q502	8-729-216-22	TRANSISTOR 2SA1162G-TE85L		R507	1-259-927-11	CARBON MELF 2.4K	2% 1/8W
Q503	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R508	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
Q504	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R509	1-259-549-11	CARBON 560	1% 1/2W
Q551	8-729-231-55	TRANSISTOR 2SC2878AB-TPE2		R510	1-259-983-11	CARBON MELF 100	2% 1/8W
Q600	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R511	1-259-995-11	CARBON MELF 1K	2% 1/8W
Q601	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R512	1-259-507-11	CARBON 10	1% 1/2W
Q602	8-729-141-10	TRANSISTOR 2SA985-QP		R513	1-259-545-11	CARBON 390	1% 1/2W
Q603	8-729-202-05	TRANSISTOR 2SC28730-TE12L		R514	1-259-978-11	CARBON MELF 39	2% 1/8W
Q604	8-729-232-69	FET 2SK208-GRT5LSONY-1		R515	1-259-983-11	CARBON MELF 100	2% 1/8W
Q605	8-729-232-69	FET 2SK208-GRT5LSONY-1		R516	1-259-507-11	CARBON 10	1% 1/2W
Q606	8-729-107-53	TRANSISTOR 2SC2275-QP		R517	1-259-545-11	CARBON 390	1% 1/2W
Q607	8-729-141-10	TRANSISTOR 2SA985-QP		R518	1-259-978-11	CARBON MELF 39	2% 1/8W
Q608	8-729-027-29	TRANSISTOR DTA123JKA-T146		R519	1-259-983-11	CARBON MELF 100	2% 1/8W
Q609	8-729-027-23	TRANSISTOR DTA114EKA-T146		R520	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
		< RESISTOR >		R521	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
R401	1-216-029-00	METAL CHIP 150 5%	1/10W	R522	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
R402	1-216-029-00	METAL CHIP 150 5%	1/10W	R523	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
R403	1-216-029-00	METAL CHIP 150 5%	1/10W	R524	1-259-995-11	CARBON MELF 1K	2% 1/8W
R404	1-216-029-00	METAL CHIP 150 5%	1/10W	R525	1-259-995-11	CARBON MELF 1K	2% 1/8W
R407	1-259-927-11	CARBON MELF 2.4K 2%	1/8W	R526	1-259-995-11	CARBON MELF 1K	2% 1/8W
R408	1-260-002-11	CARBON MELF 3.3K 2%	1/8W	R528	1-259-507-11	CARBON 10	1% 1/2W
R409	1-259-549-11	CARBON 560 1%	1/2W	R529	1-259-995-11	CARBON MELF 1K	2% 1/8W
R410	1-259-983-11	CARBON MELF 100 2%	1/8W	R551	1-260-004-11	CARBON MELF 4.7K	2% 1/8W
R411	1-259-995-11	CARBON MELF 1K 2%	1/8W	R552	1-260-020-11	CARBON MELF 100K	2% 1/8W
R412	1-259-507-11	CARBON 10 1%	1/2W	R553	1-260-010-11	CARBON MELF 15K	2% 1/8W
R413	1-259-545-11	CARBON 390 1%	1/2W	R554	1-260-014-11	CARBON MELF 33K	2% 1/8W
R414	1-259-978-11	CARBON MELF 39 2%	1/8W	R555	1-260-016-11	CARBON MELF 47K	2% 1/8W
R415	1-259-983-11	CARBON MELF 100 2%	1/8W	R556	1-259-979-11	CARBON MELF 47	2% 1/8W
R416	1-259-507-11	CARBON 10 1%	1/2W	R581	1-216-037-00	METAL CHIP 330	5% 1/10W
				R582	1-216-037-00	METAL CHIP 330	5% 1/10W

AUDIO	BSL	COAX OUT
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Ref. No.	Part No.	Description	Remark
R583	1-216-037-00	METAL CHIP 330	5% 1/10W
R584	1-216-037-00	METAL CHIP 330	5% 1/10W
R591	1-260-002-11	CARBON MELF 3.3K	2% 1/8W
R601	1-216-001-00	METAL CHIP 10	5% 1/10W
R602	1-216-001-00	METAL CHIP 10	5% 1/10W
R603	1-216-001-00	METAL CHIP 10	5% 1/10W
R605	1-216-049-11	RES, CHIP 1K	5% 1/10W
R606	1-216-049-11	RES, CHIP 1K	5% 1/10W
R607	1-216-049-11	RES, CHIP 1K	5% 1/10W
R608	1-216-049-11	RES, CHIP 1K	5% 1/10W
R609	1-216-049-11	RES, CHIP 1K	5% 1/10W
R610	1-216-304-11	METAL CHIP 3.3	5% 1/10W
R611	1-216-001-00	METAL CHIP 10	5% 1/10W
R612	1-216-001-00	METAL CHIP 10	5% 1/10W
R613	1-216-001-00	METAL CHIP 10	5% 1/10W
R614	1-216-001-00	METAL CHIP 10	5% 1/10W
R615	1-216-001-00	METAL CHIP 10	5% 1/10W
R616	1-216-001-00	METAL CHIP 10	5% 1/10W
R617	1-216-001-00	METAL CHIP 10	5% 1/10W
R618	1-216-001-00	METAL CHIP 10	5% 1/10W
R619	1-216-001-00	METAL CHIP 10	5% 1/10W
R620	1-260-032-11	CARBON MELF 1M	2% 1/8W
R621	1-259-979-11	CARBON MELF 47	2% 1/8W
R622	1-259-983-11	CARBON MELF 100	2% 1/8W
R623	1-259-983-11	CARBON MELF 100	2% 1/8W
R624	1-259-995-11	CARBON MELF 1K	2% 1/8W
R625	1-260-004-11	CARBON MELF 4.7K	2% 1/8W
R626	1-260-004-11	CARBON MELF 4.7K	2% 1/8W
R627	1-259-995-11	CARBON MELF 1K	2% 1/8W
R628	1-259-983-11	CARBON MELF 100	2% 1/8W
R629	1-259-983-11	CARBON MELF 100	2% 1/8W
R630	1-259-979-11	CARBON MELF 47	2% 1/8W
R631	1-259-995-11	CARBON MELF 1K	2% 1/8W
R632	1-259-995-11	CARBON MELF 1K	2% 1/8W
R633	1-259-995-11	CARBON MELF 1K	2% 1/8W
R634	1-259-995-11	CARBON MELF 1K	2% 1/8W
R635	1-259-983-11	CARBON MELF 100	2% 1/8W
R636	1-259-995-11	CARBON MELF 1K	2% 1/8W
R637	1-259-996-11	CARBON MELF 1.2K	2% 1/8W
R638	1-259-995-11	CARBON MELF 1K	2% 1/8W
R639	1-259-983-11	CARBON MELF 100	2% 1/8W
R640	1-259-979-11	CARBON MELF 47	2% 1/8W
R641	1-259-995-11	CARBON MELF 1K	2% 1/8W
R642	1-259-995-11	CARBON MELF 1K	2% 1/8W
R643	1-259-995-11	CARBON MELF 1K	2% 1/8W
R644	1-259-995-11	CARBON MELF 1K	2% 1/8W
R645	1-216-191-00	CARBON MELF 510	2% 1/8W
R646	1-259-995-11	CARBON MELF 1K	2% 1/8W
R647	1-259-983-11	CARBON MELF 100	2% 1/8W
R648	1-259-995-11	CARBON MELF 1K	2% 1/8W
R649	1-259-996-11	CARBON MELF 1.2K	2% 1/8W
△R650	1-212-887-00	FUSIBLE 180	5% 1/4W F
R651	1-216-254-00	CARBON MELF 220K	2% 1/8W
R652	1-260-012-11	CARBON MELF 22K	2% 1/8W
R653	1-260-004-11	CARBON MELF 4.7K	2% 1/8W
R654	1-260-020-11	CARBON MELF 100K	2% 1/8W
△R655	1-212-889-00	FUSIBLE 220	5% 1/4W F
△R656	1-212-889-00	FUSIBLE 220	5% 1/4W F

Ref. No.	Part No.	Description	Remark
R657	1-259-983-11	CARBON MELF 100	2% 1/8W
R658	1-216-073-00	METAL CHIP 10K	5% 1/10W
R659	1-216-073-00	METAL CHIP 10K	5% 1/10W
R661	1-247-692-11	CARBON 22	5% 1/4W
R662	1-247-692-11	CARBON 22	5% 1/4W
R663	1-249-451-11	CARBON 2.2	5% 1/4W
R664	1-249-451-11	CARBON 2.2	5% 1/4W
R665	1-247-692-11	CARBON 22	5% 1/4W
R666	1-247-692-11	CARBON 22	5% 1/4W
R667	1-259-975-11	CARBON MELF 22	2% 1/8W
R668	1-249-451-11	CARBON 2.2	5% 1/4W
R669	1-249-451-11	CARBON 2.2	5% 1/4W
R670	1-249-451-11	CARBON 2.2	5% 1/4W
R671	1-249-451-11	CARBON 2.2	5% 1/4W
R672	1-249-451-11	CARBON 2.2	5% 1/4W
R678	1-216-037-00	METAL CHIP 330	5% 1/10W
< VIBRATOR >			
X600	1-577-686-11	VIBRATOR, CRYSTAL (45MHz)	

*	A-4699-545-A	BSL BOARD, COMPLETE	

< CONNECTOR >			
CN11	1-580-864-11	SOCKET, CONNECTOR (SMT) 10P	
< DIODE >			
H11	8-719-984-27	DIODE LT140SAZ	
H12	8-719-984-27	DIODE LT140SAZ	
< RESISTOR >			
R11	1-216-049-11	RES, CHIP 1K	5% 1/10W
R12	1-216-049-11	RES, CHIP 1K	5% 1/10W
R13	1-216-295-00	SHORT 0	
R14	1-216-295-00	SHORT 0	
R15	1-216-295-00	SHORT 0	

	1-674-848-11	COAX OUT BOARD	

< CAPACITOR >			
C703	1-106-343-00	FILM 0.001uF	5% 50V
C710	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C711	1-126-382-11	ELECT 100uF	20% 16V
C712	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C713	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C714	1-102-947-00	CERAMIC 10PF	0.5PF 50V
C715	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C716	1-130-495-00	MYLAR 0.1uF	5% 50V
< CONNECTOR >			
CN710	1-580-771-31	PIN, CONNECTOR (PC BOARD) 3P	
* CN711	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
< IC >			
IC702	8-759-242-76	IC TC7W08F-TE12L	

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

COAX OUT

D/O SW

DISPLAY

FL RELAY

FLEX RELAY

KEY-L

KEY-R

Ref. No.	Part No.	Description	Remark
		< JACK >	
J710	1-507-567-71	JACK, PIN 1P (DIGITAL OUT COAXIAL)	
		< RESISTOR >	
R710	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R711	1-216-001-00	METAL CHIP 10 5% 1/10W	
R712	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R713	1-216-025-00	RES, CHIP 100 5% 1/10W	
R714	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R715	1-216-005-00	METAL CHIP 15 5% 1/10W	
R716	1-216-019-00	METAL CHIP 56 5% 1/10W	
R717	1-216-019-00	METAL CHIP 56 5% 1/10W	
		< COIL >	
T710	1-409-594-11	COIL (WITH CORE)	

	1-674-839-11	D/O SW BOARD	

		< CONNECTOR >	
CN705	1-568-940-21	PIN, CONNECTOR 2P	
		< SWITCH >	
S705	1-571-083-31	SWITCH, SLIDE (DIGITAL OUT)	

	A-4724-835-A	DISPLAY BOARD, COMPLETE	

*	4-969-510-01	HOLDER (FL)	
		< CAPACITOR >	
C801	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C802	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C803	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C804	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C805	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C806	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
C807	1-163-031-11	CERAMIC CHIP 0.01uF 50V	
		< FLUORESCENT INDICATOR >	
FLD801	1-517-357-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC801	8-759-324-36	IC LC7570E	
IC802	8-759-324-36	IC LC7570E	
IC803	8-759-324-36	IC LC7570E	
IC804	8-749-923-80	IC GP1U90XB (H)	
		< TRANSISTOR >	
Q801	8-729-421-19	TRANSISTOR UN2213-TX	
Q802	8-729-424-18	TRANSISTOR UN2113-TX	
		< RESISTOR >	
R801	1-216-029-00	METAL CHIP 150 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R802	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R803	1-216-097-00	RES, CHIP 100K 5% 1/10W	

*	1-653-906-11	FL RELAY BOARD	

		< CONNECTOR >	
CN291	1-568-794-11	SOCKET, CONNECTOR 12P	
* CN292	1-568-950-11	PIN, CONNECTOR 12P	

*	1-654-005-11	FLEX RELAY BOARD	

CN191	1-580-473-11	SOCKET, CONNECTOR 26P	
CN192	1-580-460-11	SOCKET, CONNECTOR 26P	

	1-674-835-11	KEY-L BOARD	

CN850	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P	
* CN851	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
		< RESISTOR >	
R850	1-249-415-11	CARBON 680 5% 1/4W	
R851	1-249-417-11	CARBON 1K 5% 1/4W	
R852	1-249-419-11	CARBON 1.5K 5% 1/4W	
R853	1-249-421-11	CARBON 2.2K 5% 1/4W	
		< SWITCH >	
S850	1-554-303-21	SWITCH, TACTILE (ERASE)	
S851	1-554-303-21	SWITCH, TACTILE (FILE)	
S852	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S853	1-554-303-21	SWITCH, TACTILE (TIME)	
S854	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S855	1-554-303-21	SWITCH, TACTILE (PLAY MODE)	

	A-4724-829-A	KEY-R BOARD, COMPLETE	
		(Including RE BOARD)	

		< CONNECTOR >	
CN871	1-580-775-11	PIN, CONNECTOR (PC BOARD) 8P	
CN872	1-580-770-11	PIN, CONNECTOR (PC BOARD) 2P	
		< DIODE >	
D871	8-719-303-02	LED SEL2510C-D-TP3 (▶)	
D872	8-719-301-52	LED SEL2810A-D-TP3 (■)	
		< TRANSISTOR >	
Q871	8-729-900-80	TRANSISTOR UN4211-TA	
Q872	8-729-900-80	TRANSISTOR UN4211-TA	
Q873	8-729-900-80	TRANSISTOR UN4211-TA	
		< RESISTOR >	
R879	1-249-429-11	CARBON 10K 5% 1/4W	
R880	1-249-429-11	CARBON 10K 5% 1/4W	
R881	1-249-415-11	CARBON 680 5% 1/4W	

KEY-R	LINE	LOADING MOTOR	LOADING SW	OPT OUT	POWER
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Ref. No.	Part No.	Description	Remark
R882	1-249-417-11	CARBON 1K 5%	1/4W
R883	1-249-419-11	CARBON 1.5K 5%	1/4W
R884	1-249-421-11	CARBON 2.2K 5%	1/4W
R885	1-247-843-11	CARBON 3.3K 5%	1/4W
R886	1-249-415-11	CARBON 680 5%	1/4W
R887	1-249-417-11	CARBON 1K 5%	1/4W
R888	1-249-419-11	CARBON 1.5K 5%	1/4W
R889	1-249-406-11	CARBON 120 5%	1/4W
R890	1-249-410-11	CARBON 270 5%	1/4W
R891	1-249-406-11	CARBON 120 5%	1/4W
< SWITCH >			
S884	1-554-303-21	SWITCH, TACTILE (CHECK)	
S885	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S886	1-570-101-51	SWITCH, KEY BOARD (FILTER)	
S887	1-554-303-21	SWITCH, TACTILE (◀▶)	
S888	1-554-303-21	SWITCH, TACTILE (▶▶)	
S889	1-554-303-21	SWITCH, TACTILE (≡ OPEN/CLOSE)	
S890	1-554-303-21	SWITCH, TACTILE (▶)	
S891	1-554-303-21	SWITCH, TACTILE (■)	
S892	1-554-303-21	SWITCH, TACTILE (■)	

1-674-845-11	LINE BOARD	*****	
< CONNECTOR >			
CN471	1-764-341-11	PIN, CONNECTOR (PCB) (L TYPE) 4P	
CN472	1-764-341-31	PIN, CONNECTOR (PCB) (L TYPE) 4P	
CN473	1-580-771-31	PIN, CONNECTOR (PC BOARD) 3P	
< DIODE >			
D471	8-719-801-78	DIODE 1SS184-TE85L	
< JACK >			
PJ471	1-568-101-11	JACK, PIN 4P (LINE (ANALOG) OUT)	
< RESISTOR >			
R470	1-259-526-11	CARBON 62 1%	1/2W
R471	1-249-521-11	CARBON 51 5%	1/4W
R570	1-259-526-11	CARBON 62 1%	1/2W
R571	1-249-521-11	CARBON 51 5%	1/4W
< RELAY >			
RY471	1-755-295-11	RELAY	

* 1-653-907-11	LOADING MOTOR BOARD	*****	
< CONNECTOR >			
CN272	1-506-469-11	PIN, CONNECTOR 4P	

* 1-653-905-11	LOADING SW BOARD	*****	
* CN281	1-568-942-11	PIN, CONNECTOR 4P	

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R281	1-249-427-11	CARBON 6.8K 5%	1/4W
< SWITCH >			
S281	1-692-193-11	SWITCH, PUSH (1 KEY) (IN)	
S282	1-692-193-11	SWITCH, PUSH (1 KEY) (OUT)	
S283	1-692-193-11	SWITCH, PUSH (1 KEY) (LD)	

1-674-847-11	OPT OUT BOARD	*****	
< CAPACITOR >			
C701	1-126-048-81	ELECT 10uF 20%	50V
< CONNECTOR >			
CN701	1-691-459-21	PIN, CONNECTOR (PC BOARD) 3P	
< IC >			
IC701	8-749-921-12	IC GP1F32T (DIGITAL OUT OPTICAL)	

A-4724-840-A	POWER BOARD, COMPLETE	*****	
2-259-121-01	SCREW, TR		
* 4-931-401-01	HEAT SINK, V.OUT		
* 4-941-237-01	HEAT SINK		
< CAPACITOR >			
C909	1-128-653-21	FILM 1600PF 5%	50V
C910	1-128-202-11	ELECT 220uF 20%	63V
C911	1-128-202-11	ELECT 220uF 20%	63V
C912	1-125-859-21	FILM 0.001uF 5%	50V
C913	1-125-859-21	FILM 0.001uF 5%	50V
C914	1-109-857-11	ELECT 47uF 20%	63V
C915	1-110-504-11	ELECT (BLOCK) 6800uF 20%	35V
C916	1-110-504-11	ELECT (BLOCK) 6800uF 20%	35V
C917	1-117-775-31	FILM 0.1uF 10%	250V
C918	1-117-775-31	FILM 0.1uF 10%	250V
C919	1-128-653-21	FILM 1600PF 5%	50V
C920	1-130-495-00	MYLAR 0.1uF 5%	50V
C921	1-106-343-00	MYLAR 1000PF 5%	200V
C922	1-130-467-00	MYLAR 470PF 5%	50V
C923	1-127-764-21	FILM 10PF 10%	50V
C924	1-127-764-21	FILM 10PF 10%	50V
C925	1-127-764-21	FILM 10PF 10%	50V
C926	1-127-764-21	FILM 10PF 10%	50V
C927	1-128-201-11	ELECT 100uF 20%	63V
C928	1-128-201-11	ELECT 100uF 20%	63V
C929	1-128-653-21	FILM 1600PF 5%	50V
C930	1-117-914-51	ELECT 330uF 20%	25V
C931	1-117-914-51	ELECT 330uF 20%	25V
C932	1-130-495-00	MYLAR 0.1uF 5%	50V
C933	1-128-653-21	FILM 1600PF 5%	50V
C934	1-130-495-00	MYLAR 0.1uF 5%	50V
C935	1-109-857-11	ELECT 47uF 20%	63V
C936	1-109-857-11	ELECT 47uF 20%	63V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C937	1-119-793-11	ELECT	1000uF 20% 16V	D950	8-719-210-21	DIODE 11EQS04-TA2B	
C938	1-127-764-21	FILM	10PF 10% 50V	D951	8-719-210-21	DIODE 11EQS04-TA2B	
C939	1-126-017-11	ELECT	6800uF 20% 16V	D952	8-719-210-21	DIODE 11EQS04-TA2B	
C940	1-109-857-11	ELECT	47uF 20% 63V	D955	8-719-210-21	DIODE 11EQS04-TA2B	
C941	1-117-775-31	FILM	0.1uF 10% 250V	D956	8-719-210-21	DIODE 11EQS04-TA2B	
C942	1-136-820-11	FILM	0.01uF 5% 100V	D957	8-719-210-21	DIODE 11EQS04-TA2B	
C943	1-117-775-31	FILM	0.1uF 10% 250V	D958	8-719-210-21	DIODE 11EQS04-TA2B	
C944	1-136-820-11	FILM	0.01uF 5% 100V			< IC >	
C945	1-130-495-00	MYLAR	0.1uF 5% 50V	IC910	8-759-231-59	IC M5F7815L	
C946	1-125-859-21	FILM	0.001uF 5% 50V	IC911	8-759-245-87	IC M5F7915L	
C947	1-125-859-21	FILM	0.001uF 5% 50V	IC930	8-759-566-39	IC OPA2132UA/2K5	
C948	1-130-483-00	FILM	0.01uF 5% 50V	IC931	8-759-604-30	IC M5F7808L	
C949	1-130-495-00	MYLAR	0.1uF 5% 50V	IC932	8-759-604-91	IC M5F7918L	
C950	1-125-780-21	ELECT	470uF 20% 16V	IC950	8-759-604-86	IC M5F7807L	
C951	1-125-780-21	ELECT	470uF 20% 16V	IC951	8-759-604-90	IC M5F7907L	
C952	1-126-017-11	ELECT	6800uF 20% 16V			< COIL >	
C953	1-126-017-11	ELECT	6800uF 20% 16V	L910	1-424-090-11	COIL, LINE FILTER	
C954	1-130-483-00	FILM	0.01uF 5% 50V	L911	1-424-090-11	COIL, LINE FILTER	
C964	1-117-775-31	FILM	0.1uF 10% 250V	L912	1-424-090-11	COIL, LINE FILTER	
C965	1-117-775-31	FILM	0.1uF 10% 250V	L913	1-424-090-11	COIL, LINE FILTER	
		< CONNECTOR >		L914	1-424-090-11	COIL, LINE FILTER	
CN910	1-691-766-11	PLUG (MICRO CONNECTOR) 4P		L915	1-424-090-11	COIL, LINE FILTER	
* CN911	1-564-505-11	PLUG, CONNECTOR 2P		L916	1-424-090-11	COIL, LINE FILTER	
* CN912	1-564-506-11	PLUG, CONNECTOR 3P		L917	1-424-090-11	COIL, LINE FILTER	
* CN913	1-564-505-11	PLUG, CONNECTOR 2P		L931	1-424-090-11	COIL, LINE FILTER	
* CN914	1-564-506-11	PLUG, CONNECTOR 3P		L932	1-424-090-11	COIL, LINE FILTER	
* CN931	1-564-508-11	PLUG, CONNECTOR 5P		L933	1-424-090-11	COIL, LINE FILTER	
* CN932	1-564-505-11	PLUG, CONNECTOR 2P		L934	1-424-090-11	COIL, LINE FILTER	
* CN933	1-564-506-11	PLUG, CONNECTOR 3P		L935	1-424-090-11	COIL, LINE FILTER	
* CN935	1-564-510-11	PLUG, CONNECTOR 7P		L936	1-424-090-11	COIL, LINE FILTER	
* CN952	1-564-506-11	PLUG, CONNECTOR 3P		L938	1-424-090-11	COIL, LINE FILTER	
* CN953	1-564-506-11	PLUG, CONNECTOR 3P		L939	1-424-090-11	COIL, LINE FILTER	
		< DIODE >		L940	1-424-090-11	COIL, LINE FILTER	
D910	8-719-210-21	DIODE 11EQS04-TA2B		L941	1-414-512-21	INDUCTOR 6.8uH	
D911	8-719-210-21	DIODE 11EQS04-TA2B		L950	1-424-090-11	COIL, LINE FILTER	
D912	8-719-210-21	DIODE 11EQS04-TA2B		L951	1-424-090-11	COIL, LINE FILTER	
D913	8-719-210-21	DIODE 11EQS04-TA2B		L952	1-424-090-11	COIL, LINE FILTER	
D914	8-719-402-18	DIODE MA3100M-TX		L953	1-424-090-11	COIL, LINE FILTER	
D915	8-719-801-78	DIODE 1SS184-TE85L		L954	1-424-090-11	COIL, LINE FILTER	
D916	8-719-210-21	DIODE 11EQS04-TA2B		L955	1-424-090-11	COIL, LINE FILTER	
D917	8-719-210-21	DIODE 11EQS04-TA2B				< IC LINK >	
D918	8-719-210-21	DIODE 11EQS04-TA2B		△ PS930	1-532-685-00	LINK, IC 0.8A	
D919	8-719-210-21	DIODE 11EQS04-TA2B		△ PS931	1-532-727-11	LINK, IC 0.25A	
D920	8-719-801-78	DIODE 1SS184-TE85L				< TRANSISTOR >	
D930	8-719-401-63	DIODE MA3062M-TX		Q930	8-729-107-53	TRANSISTOR 2SC2275-QP	
D931	8-719-114-30	DIODE RD5.1JS-T2AB2		Q931	8-729-232-69	FET 2SK208-GRT5LSONY-1	
D932	8-719-210-21	DIODE 11EQS04-TA2B		Q932	8-729-107-53	TRANSISTOR 2SC2275-QP	
D933	8-719-210-21	DIODE 11EQS04-TA2B				< RESISTOR >	
D934	8-719-210-21	DIODE 11EQS04-TA2B		△ R910	1-212-893-00	FUSIBLE 330 5% 1/4W F	
D935	8-719-210-21	DIODE 11EQS04-TA2B		△ R920	1-212-869-00	FUSIBLE 33 5% 1/4W F	
D936	8-719-210-21	DIODE 11EQS04-TA2B		R932	1-259-996-11	CARBON MELF 1.2K 2% 1/8W	
D937	8-719-210-21	DIODE 11EQS04-TA2B		R933	1-259-995-11	CARBON MELF 1K 2% 1/8W	
D938	8-719-210-21	DIODE 11EQS04-TA2B		R934	1-259-971-11	CARBON MELF 10 2% 1/8W	
D939	8-719-210-21	DIODE 11EQS04-TA2B					
D940	8-719-210-21	DIODE 11EQS04-TA2B					

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

POWER	RE	SERVO
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Ref. No.	Part No.	Description	Quantity	Remark
R935	1-259-983-11	CARBON MELF	100	2% 1/8W
R936	1-259-983-11	CARBON MELF	100	2% 1/8W
R937	1-259-977-11	CARBON MELF	33	2% 1/8W
R938	1-260-020-11	CARBON MELF	100K	2% 1/8W
R939	1-260-016-11	CARBON MELF	47K	2% 1/8W
R940	1-259-995-11	CARBON MELF	1K	2% 1/8W
R941	1-259-995-11	CARBON MELF	1K	2% 1/8W
R942	1-259-979-11	CARBON MELF	47	2% 1/8W
R943	1-259-987-11	CARBON MELF	220	2% 1/8W
R945	1-259-983-11	CARBON MELF	100	2% 1/8W
R946	1-259-995-11	CARBON MELF	1K	2% 1/8W
R951	1-259-971-11	CARBON MELF	10	2% 1/8W
R952	1-259-971-11	CARBON MELF	10	2% 1/8W

RE BOARD				

(Included in KEY-R BOARD, COMPLETE)				
< VARIABLE RESISTOR >				
RV870	1-475-006-11	ENCODER, ROTARY		
(⏪⏩ AMS ⏪⏩ PUSH ENTER)				

A-4724-901-A SERVO BOARD, COMPLETE				

< CAPACITOR >				
C101	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C102	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V
C103	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C104	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C105	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C107	1-125-838-11	CERAMIC CHIP	2.2uF	10% 6.3V
C108	1-127-937-11	CERAMIC CHIP	6800PF	5% 25V
C109	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C110	1-125-838-11	CERAMIC CHIP	2.2uF	10% 6.3V
C111	1-115-185-11	CERAMIC CHIP	0.033uF	10% 50V
C112	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V
C113	1-164-161-11	CERAMIC CHIP	0.0022uF	10% 100V
C114	1-124-778-00	ELECT CHIP	22uF	20% 6.3V
C115	1-126-246-11	ELECT CHIP	220uF	20% 4V
C116	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C117	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C119	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C120	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C121	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C122	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C123	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C124	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C125	1-128-499-11	ELECT	220uF	20% 16V
C126	1-128-499-11	ELECT	220uF	20% 16V
C127	1-126-916-11	ELECT	1000uF	20% 6.3V
C128	1-126-916-11	ELECT	1000uF	20% 6.3V
C129	1-126-245-11	ELECT	330uF	20% 6.3V
C131	1-163-109-00	CERAMIC CHIP	47PF	5% 50V
C132	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V
C133	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V

Ref. No.	Part No.	Description	Quantity	Remark
C134	1-163-109-00	CERAMIC CHIP	47PF	5% 50V
C135	1-163-121-00	CERAMIC CHIP	150PF	5% 50V
C136	1-163-121-00	CERAMIC CHIP	150PF	5% 50V
C137	1-163-121-00	CERAMIC CHIP	150PF	5% 50V
C138	1-163-121-00	CERAMIC CHIP	150PF	5% 50V
C141	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V
C142	1-163-002-11	CERAMIC CHIP	270PF	10% 50V
C143	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C144	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C145	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C146	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C147	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C161	1-163-011-11	CERAMIC CHIP	0.0015uF	10% 50V
C162	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V
C163	1-164-492-11	CERAMIC CHIP	0.15uF	10% 16V
C171	1-126-205-11	ELECT CHIP	47uF	20% 6.3V
C172	1-126-205-11	ELECT CHIP	47uF	20% 6.3V
C173	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C174	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C181	1-126-205-11	ELECT CHIP	47uF	20% 6.3V
C182	1-126-205-11	ELECT CHIP	47uF	20% 6.3V
C183	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C184	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C191	1-164-505-11	CERAMIC CHIP	0.22uF	16V
C192	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C193	1-162-208-31	CERAMIC	24PF	5% 50V
C194	1-162-208-31	CERAMIC	24PF	5% 50V
C195	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C196	1-126-245-11	ELECT	330uF	20% 6.3V
C197	1-126-245-11	ELECT	330uF	20% 6.3V
C198	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C199	1-125-842-11	FILM	4PF	10% 50V
C200	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C201	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C202	1-164-505-11	CERAMIC CHIP	2.2uF	16V
C211	1-125-622-11	DOUBLE LAYER	0.1F	5.5V
C212	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C213	1-126-382-11	ELECT	100uF	20% 16V
C214	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V
C215	1-126-794-11	ELECT	4.7uF	20% 50V
C216	1-163-038-00	CERAMIC CHIP	0.1uF	25V
C217	1-163-031-11	CERAMIC CHIP	0.01uF	50V
C220	1-106-353-00	MYLAR	0.0027uF	5% 50V
C221	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C222	1-106-353-00	MYLAR	0.0027uF	5% 50V
C224	1-106-353-00	MYLAR	0.0027uF	5% 50V
C225	1-106-353-00	MYLAR	0.0027uF	5% 50V
C226	1-164-699-11	CERAMIC CHIP	0.0033uF	5% 50V
C227	1-106-353-00	MYLAR	0.0027uF	5% 50V
C228	1-163-133-00	CERAMIC CHIP	470PF	5% 50V
C250	1-164-505-11	CERAMIC CHIP	2.2uF	16V
< CONNECTOR >				
* CN91	1-573-278-11	PIN, CONNECTOR 8P		
CN101	1-568-795-11	SOCKET, CONNECTOR 12P		
CN102	1-580-473-11	SOCKET, CONNECTOR 26P		
CN103	1-580-781-11	PIN, CONNECTOR (PC BOARD) 7P		
CN104	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P		

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* CN105	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P		Q201	8-729-027-23	TRANSISTOR	DTA114EKA-T146
CN201	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P		Q202	8-729-900-53	TRANSISTOR	DTC114EKA-T146
CN202	1-580-775-11	PIN, CONNECTOR (PC BOARD) 8P				< RESISTOR >	
CN203	1-580-770-11	PIN, CONNECTOR (PC BOARD) 2P					
CN251	1-580-774-11	PIN, CONNECTOR (PC BOARD) 6P					
		< DIODE >					
D131	8-719-210-33	DIODE EC10DS2TE12R		R101	1-216-077-00	RES, CHIP	15K 5% 1/10W
D132	8-719-210-33	DIODE EC10DS2TE12R		R102	1-216-097-00	RES, CHIP	100K 5% 1/10W
D201	8-719-914-44	DIODE DAP202K-T-146		R103	1-216-077-00	RES, CHIP	15K 5% 1/10W
D202	8-719-938-07	LED GL480 (STABILIZER DETECT)		R104	1-216-037-00	METAL CHIP	330 5% 1/10W
D203	8-719-976-96	DIODE DTZ-TT11-4.7C		R105	1-216-077-00	RES, CHIP	15K 5% 1/10W
		< IC >					
D204	8-719-210-21	DIODE 11EQS04-TA2B		R106	1-216-042-00	METAL CHIP	510 5% 1/10W
				R107	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
IC101	8-752-369-78	IC CXD2545Q		R108	1-216-121-00	RES, CHIP	1M 5% 1/10W
IC102	8-759-071-79	IC BA6297AFP-T1		R109	1-216-081-00	METAL CHIP	22K 5% 1/10W
IC103	8-759-100-96	IC NJM4558M-T1		R110	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
IC104	8-759-071-79	IC BA6297AFP-T1					
IC105	8-759-071-79	IC BA6297AFP-T1		R111	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R112	1-216-121-00	RES, CHIP	1M 5% 1/10W
IC106	8-759-980-44	IC TL712CPS-E05		R113	1-216-073-00	METAL CHIP	10K 5% 1/10W
IC107	8-759-711-85	IC NJM4580E-D (T1)		R114	1-216-073-00	METAL CHIP	10K 5% 1/10W
IC108	8-759-100-96	IC NJM4558M-T1		R115	1-216-035-00	METAL CHIP	270 5% 1/10W
IC109	8-759-242-70	IC TC7WU04F-TE12L					
IC110	8-759-100-96	IC NJM4558M-T1		R116	1-216-035-00	METAL CHIP	270 5% 1/10W
IC111	8-759-100-96	IC NJM4558M-T1		R117	1-216-073-00	METAL CHIP	10K 5% 1/10W
IC201	8-752-909-65	IC CXP84124-085Q		R118	1-216-081-00	METAL CHIP	22K 5% 1/10W
IC202	8-759-336-84	IC LC3564SM-10-TRM		R119	1-216-081-00	METAL CHIP	22K 5% 1/10W
IC203	8-749-010-61	IC IS471F		R120	1-216-101-00	METAL CHIP	150K 5% 1/10W
IC204	8-759-636-16	IC M51957AL					
IC205	8-759-822-09	IC LB1641		R121	1-216-081-00	METAL CHIP	22K 5% 1/10W
		< SHORT >		R122	1-216-081-00	METAL CHIP	22K 5% 1/10W
JW104	1-216-295-00	SHORT 0		R123	1-216-081-00	METAL CHIP	22K 5% 1/10W
JW105	1-216-295-00	SHORT 0		R124	1-216-089-00	RES, CHIP	47K 5% 1/10W
		< COIL >		R125	1-216-089-00	RES, CHIP	47K 5% 1/10W
L101	1-424-122-11	FILTER, NOISE					
L102	1-424-122-11	FILTER, NOISE		R126	1-216-025-00	METAL CHIP	100 5% 1/10W
L103	1-414-510-21	INDUCTOR 3.3uH		R127	1-216-025-00	METAL CHIP	100 5% 1/10W
L104	1-414-510-21	INDUCTOR 3.3uH		R128	1-216-025-00	METAL CHIP	100 5% 1/10W
		< TRANSISTOR >		R129	1-216-073-00	METAL CHIP	10K 5% 1/10W
Q101	8-729-232-69	FET 2SK208-GRT5LSONY-1		R130	1-216-295-00	SHORT	0
Q102	1-801-806-11	TRANSISTOR DTC144EKA-T146					
Q103	8-729-900-53	TRANSISTOR DTC114EKA-T146		R131	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
Q104	8-729-900-53	TRANSISTOR DTC114EKA-T146		R132	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
Q105	8-729-027-23	TRANSISTOR DTA114EKA-T146		R133	1-216-083-00	METAL CHIP	27K 5% 1/10W
				R134	1-216-083-00	METAL CHIP	27K 5% 1/10W
Q106	8-729-900-53	TRANSISTOR DTC114EKA-T146		R135	1-216-090-00	METAL CHIP	51K 5% 1/10W
Q151	8-729-027-38	TRANSISTOR DTA144EKA-T146					
Q152	1-801-806-11	TRANSISTOR DTC144EKA-T146		R136	1-216-090-00	METAL CHIP	51K 5% 1/10W
Q153	8-729-027-38	TRANSISTOR DTA144EKA-T146		R137	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
Q154	1-801-806-11	TRANSISTOR DTC144EKA-T146		R138	1-216-689-11	METAL CHIP	39K 0.5% 1/10W
				R139	1-216-083-00	METAL CHIP	27K 5% 1/10W
Q171	8-729-232-69	FET 2SK208-GRT5LSONY-1		R140	1-216-083-00	METAL CHIP	27K 5% 1/10W
Q172	8-729-232-69	FET 2SK208-GRT5LSONY-1					
Q181	8-729-232-69	FET 2SK208-GRT5LSONY-1		R141	1-216-085-00	METAL CHIP	33K 5% 1/10W
Q182	8-729-232-69	FET 2SK208-GRT5LSONY-1		R142	1-216-085-00	METAL CHIP	33K 5% 1/10W
Q190	8-729-027-38	TRANSISTOR DTA144EKA-T146		R143	1-216-093-11	RES, CHIP	68K 5% 1/10W
				R144	1-216-093-11	RES, CHIP	68K 5% 1/10W
				R145	1-216-085-00	METAL CHIP	33K 5% 1/10W
				R146	1-216-085-00	METAL CHIP	33K 5% 1/10W
				R147	1-216-055-00	METAL CHIP	1.8K 5% 1/10W
				R148	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R149	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R150	1-216-073-00	METAL CHIP	10K 5% 1/10W
				R151	1-216-097-00	RES, CHIP	100K 5% 1/10W
				R152	1-216-001-00	METAL CHIP	10 5% 1/10W
				R153	1-216-001-00	METAL CHIP	10 5% 1/10W
				R154	1-216-073-00	METAL CHIP	10K 5% 1/10W

SERVO	SW	VR
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Ref. No.	Part No.	Description	Remark
R155	1-216-097-00	RES, CHIP 100K	5% 1/10W
R156	1-216-085-00	METAL CHIP 33K	5% 1/10W
R157	1-216-085-00	METAL CHIP 33K	5% 1/10W
R161	1-216-075-00	METAL CHIP 12K	5% 1/10W
R162	1-216-091-00	METAL CHIP 56K	5% 1/10W
R163	1-216-093-11	RES, CHIP 68K	5% 1/10W
R164	1-216-093-11	RES, CHIP 68K	5% 1/10W
R165	1-216-093-11	RES, CHIP 68K	5% 1/10W
R166	1-216-097-00	RES, CHIP 100K	5% 1/10W
R167	1-216-065-00	RES, CHIP 4.7K	5% 1/10W
R168	1-216-097-00	RES, CHIP 100K	5% 1/10W
R171	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R172	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R173	1-216-113-00	METAL CHIP 470K	5% 1/10W
R174	1-216-113-00	METAL CHIP 470K	5% 1/10W
R175	1-216-105-00	RES, CHIP 220K	5% 1/10W
R176	1-216-105-00	RES, CHIP 220K	5% 1/10W
R177	1-216-121-00	RES, CHIP 1M	5% 1/10W
R178	1-216-121-00	RES, CHIP 1M	5% 1/10W
R179	1-216-001-00	METAL CHIP 10	5% 1/10W
R181	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R182	1-216-057-00	METAL CHIP 2.2K	5% 1/10W
R183	1-216-113-00	METAL CHIP 470K	5% 1/10W
R184	1-216-113-00	METAL CHIP 470K	5% 1/10W
R185	1-216-105-00	RES, CHIP 220K	5% 1/10W
R186	1-216-105-00	RES, CHIP 220K	5% 1/10W
R187	1-216-121-00	RES, CHIP 1M	5% 1/10W
R188	1-216-121-00	RES, CHIP 1M	5% 1/10W
R189	1-216-001-00	METAL CHIP 10	5% 1/10W
R190	1-216-073-00	METAL CHIP 10K	5% 1/10W
R191	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R192	1-216-049-11	RES, CHIP 1K	5% 1/10W
R193	1-216-001-00	METAL CHIP 10	5% 1/10W
R194	1-216-113-00	METAL CHIP 470K	5% 1/10W
R195	1-216-113-00	METAL CHIP 470K	5% 1/10W
R196	1-216-085-00	METAL CHIP 33K	5% 1/10W
R197	1-216-033-00	METAL CHIP 220	5% 1/10W
R198	1-216-049-11	RES, CHIP 1K	5% 1/10W
R199	1-216-049-11	RES, CHIP 1K	5% 1/10W
R201	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R202	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R203	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R204	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R205	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R206	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R207	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R208	1-216-069-00	METAL CHIP 6.8K	5% 1/10W
R209	1-216-073-00	METAL CHIP 10K	5% 1/10W
R211	1-216-097-00	RES, CHIP 100K	5% 1/10W
R212	1-216-013-00	METAL CHIP 33	5% 1/10W
R213	1-216-073-00	METAL CHIP 10K	5% 1/10W
R214	1-216-073-00	METAL CHIP 10K	5% 1/10W
R215	1-216-021-00	METAL CHIP 68	5% 1/10W
R216	1-216-689-11	METAL CHIP 39K	0.5% 1/10W
R217	1-216-077-00	RES, CHIP 15K	5% 1/10W
R218	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R219	1-216-045-00	METAL CHIP 680	5% 1/10W

Ref. No.	Part No.	Description	Remark
R220	1-216-073-00	METAL CHIP 10K	5% 1/10W
R221	1-216-073-00	METAL CHIP 10K	5% 1/10W
R222	1-216-097-00	RES, CHIP 100K	5% 1/10W
R223	1-216-073-00	METAL CHIP 10K	5% 1/10W
R224	1-216-073-00	METAL CHIP 10K	5% 1/10W
R230	1-216-295-00	SHORT 0	
R231	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R232	1-216-061-00	METAL CHIP 3.3K	5% 1/10W
R233	1-216-085-00	METAL CHIP 33K	5% 1/10W
< VIBRATOR >			
X201	1-577-082-11	VIBRATOR, CERAMIC (4MHz)	

	1-674-836-11	SW BOARD	

< CONNECTOR >			
* CN995	1-696-874-21	LEAD (WITH CONNECTOR)	
< SWITCH >			
△ S991	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (ⓐ)	

	1-674-837-11	VR BOARD	

*	4-962-201-01	PLATE (HP), GROUND	
< CAPACITOR >			
C350	1-136-165-00	FILM 0.1uF	5% 50V
C351	1-136-165-00	FILM 0.1uF	5% 50V
C461	1-162-290-31	CERAMIC 470PF	10% 50V
C561	1-162-290-31	CERAMIC 470PF	10% 50V
< CONNECTOR >			
CN351	1-764-345-11	PIN, CONNECTOR (PCB) (L TYPE)8P	
* CN352	1-580-772-11	PIN, CONNECTOR (PC BOARD) 4P	
CN461	1-764-326-11	PIN, CONNECTOR (PCB) (V TYPE)3P	
< IC >			
IC350	8-759-962-08	IC BA6208	
< JACK >			
J461	1-750-162-61	JACK (LARGE TYPE) (PHONES) (AEP: BLACK, Singapore)	
J461	1-779-219-11	JACK (LARGE TYPE) (PHONES) (AEP: GOLD)	
< COIL >			
L350	1-414-512-21	INDUCTOR 6.8uH	
L461	1-414-512-21	INDUCTOR 6.8uH	
L561	1-414-512-21	INDUCTOR 6.8uH	
< VARIABLE RESISTOR >			
RV350	1-223-747-11	RES, VAR, CARBON 10K/10K (LINE OUT PHONE LEVEL)	

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
		MISCELLANEOUS *****	
△ 106	1-558-568-21	CORD, POWER	
114	1-500-219-11	BEAD, FERRITE (CASE)	
705	1-769-110-11	WIRE (FLAT TYPE) (26 CORE)	
* 706	1-654-005-11	FLEX RELAY BOARD	
709	1-769-109-11	WIRE (FLAT TYPE) (12 CORE)	
△ 805	8-820-014-13	OPTICAL PICK-UP KSS-273B/J1N	
820	1-653-918-11	PC BOARD, FLEXIBLE	
M21	X-4945-920-1	MOTOR ASSY, SLED	
M271	X-4945-565-1	MOTOR ASSY	
S21	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT OUT)	
S22	1-571-958-11	SWITCH, PUSH (1 KEY) (LIMIT IN)	
△ T901	1-435-067-11	TRANSFORMER, POWER	
△ T902	1-435-068-11	TRANSFORMER, POWER	
△ T903	1-435-069-11	TRANSFORMER, POWER	

HARDWARE LIST

- #1 7-685-246-14 SCREW +KTP 3X8 TYPE2 NON-SLIT (GOLD)
- #1 7-685-246-19 SCREW +KTP 3X8 TYPE2 NON-SLIT (BLACK)
- #2 7-685-886-09 SCREW +BVTT 4X20 (S)
- #3 7-682-548-09 SCREW (3X8)
- #4 7-621-775-10 SCREW +B 2.6X4

- #6 7-685-646-79 SCREW +BVTP 3X8 TYPE2 N-S
- #7 7-685-871-01 SCREW +BVTT 3X6 (S)
- #8 7-685-872-09 SCREW +BVTT 3X8 (S)
- #9 7-682-903-01 SCREW +PWH 3X5
- #10 7-682-902-11 SCREW +PWH 2.6X5

- #11 7-621-775-60 SCREW +B 2.6X12
- #12 7-628-253-00 SCREW +PS 2X4
- #13 7-621-772-30 SCREW +B 2X6
- #14 7-685-534-19 SCREW +BTP 2.6X8 TYPE2 N-S
- #15 7-685-647-79 SCREW +BVTP 3X10 TYPE2 N-S

- #16 7-685-902-21 SCREW +PTPWH 2.6X8 (TYPE2)
- #17 7-627-852-07 SCREW, PRECISION +P 1.7X2.5
- #18 7-627-852-58 SCREW, PRECISION +P 1.7X5 TYPE3
- #19 7-685-645-79 SCREW +BVTP 3X6 TYPE2 N-S

ACCESSORIES & PACKING MATERIALS

- 1-418-691-11 REMOTE COMMANDER (RM-D951)
- 1-791-732-11 CORD, CONNECTION
- 3-867-064-11 MANUAL, INSTRUCTION (ENGLISH, FRENCH,
SPANISH)
- 3-867-064-21 MANUAL, INSTRUCTION (GERMAN, DUTCH,
SWEDISH, ITALIAN, PORTUGUESE) (AEP)
- 3-867-064-31 MANUAL, INSTRUCTION (CHINESE)
(Singapore)

- 4-981-643-01 COVER, BATTERY (for RM-D951)

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

