

HCD-VA550

SERVICE MANUAL

Australian Model



Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol $\square\square$ are trademarks of Dolby Laboratories Licensing Corporation.

CD Section	Model Name Using Similar Mechanism	NEW
	CD Mechanism Type	CDM33C-5BD19FK
	Base Unit Name	BU-5BD19FK
Tape deck Section	Model Name Using Similar Mechanism	NEW
	Tape Transport Mechanism Type	TCM-2600HLD

SPECIFICATIONS

Tuner
System FM stereo
FM/AM superheterodyne tuner

FM tuner section
Tuning range 87.5 - 108.0 MHz
Antenna 75 ohms unbalanced
Intermediate frequency 10.7 MHz

AM tuner section
Tuning range MW: 531 - 1,602 kHz
LW: 153 - 279 kHz
Antenna AM loop antenna
External antenna terminals
Intermediate frequency 450 kHz

Cassette deck section
Recording system 4-track 2-channel stereo

Frequency response
DOLBY NR OFF
With Sony Type II cassette
40 Hz to 14 kHz (± 3 dB)
With Sony Type I cassette
40 Hz to 13 kHz (± 3 dB)

Wow and flutter
0.1% (W.RMS)
 $\pm 0.2\%$ (W.Peak)

Compact disc player
Laser Semiconductor laser
($\lambda=780$ nm)
Emission duration: continuous
Laser output power
Less than $44.6 \mu\text{W}^*$

* 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.

— Continued on page 2 —

COMPACT DISC DECK RECEIVER
SONY[®]

TABLE OF CONTENTS

General

Audio input	Jack type	Sensitivity	Impedance
MD	Phono	440 mV	50 kilohms
AUX	Phono	250 mV	50 kilohms

Audio output	Jack type	Voltage	Impedance
MD	Phono	250 mV	1 kilohm
FIXED	Phono	440 mV	1 kilohm
VARIABLE	Phono	620 mV	1 kilohm

Power requirements

220–230 V AC 50/60Hz

Power consumption

25 W

AC outlet unswitched, 100W max

Mass Approx. 8.3 kg (3 lb. 13 oz.)

Dimensions

Approx. 430 x 130 x 385 mm
(17 x 5 1/4 x 15 1/4 inches)
(w/h/d, including projections)

Supplied accessories

Remote commander RM-U55 (1)

FM wire antenna (1)

AM loop antenna (1)

Audio connecting cord (1)

Control S cord (1)

Batteries Sony SUM-3 (NS) (2)

Design and specifications are subject to change without notice.

Specifications	1
1. SERVICING NOTES	3
2. GENERAL	
Index to Parts and Controls	4
3. DISASSEMBLY	
3-1. Front Panel Section Removal	7
3-2. CD Mechanism Section Removal	7
3-3. Cassette MD Section and Control Board Removal	8
4. ADJUSTMENTS	
4-1. Mechanical Adjustments	9
4-2. Electrical Adjustments	9
5. EXPLANATION OF IC TERMINALS	15
6. DIAGRAMS	
6-1. Block Diagram – CD Section –	19
6-2. Block Diagram – Main Section –	21
6-3. Circuit Board Location	25
6-4. Printed Wiring Boards – Main Section –	26
6-5. Schematic Diagram – Main Section –	29
6-6. Printed Wiring Boards – Control Section –	33
6-7. Schematic Diagram – Control Section –	37
6-8. Printed Wiring Boards – CD Section –	44
6-9. Schematic Diagram – CD Section –	47
6-10. IC Block Diagrams	51
7. EXPLODED VIEWS	
7-1. Front Panel Section	54
7-2. Chassis Section	55
7-3. Mechanism Deck Section-1 (TCM-2600HLD)	56
7-4. Mechanism Deck Section-2 (TCM-2600HLD)	57
7-5. CD Mechanism Section-1 (CDM33C-5BD19FK)	58
7-6. CD Mechanism Section-2 (CDM33C-5BD19FK)	59
7-7. CD Mechanism Section-3 (BU-5BD19FK)	60
8. ELECTRICAL PARTS LIST	61

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



CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

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

CAUTION	: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSÅFBRYDEDE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTHINK LASERSÄTEILYLLE.
VARNING	: LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URÖPPPLAD.
ADVARSEL	: USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

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

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

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 breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown 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.

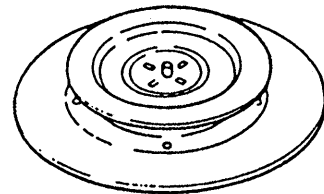
NOTES ON LASER DIODE EMISSION CHECK

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 more than 30cm away from the objective lens.

CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig : X-4918-255-1



SECTION 2 GENERAL

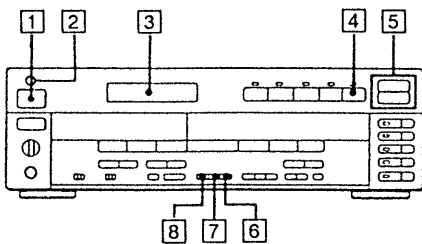
This section is extracted from instruction manual.

Index to Parts and Controls

Refer to the pages indicated in parentheses for details or how to use the controls. Controls with an asterisk have indicators on them.

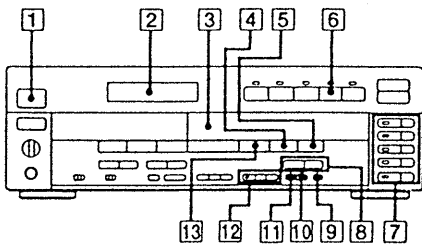
Front Panel

Tuner section



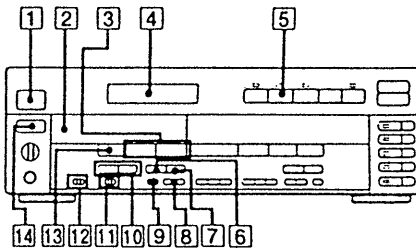
- 1 POWER button
- 2 STANDBY indicator
- 3 Display window
- 4 TUNER/BAND button
- 5 TUNING +/- button
- 6 MEMORY button
- 7 STEREO/MONO button
- 8 TUNING MODE button

Multi-compact disc player section



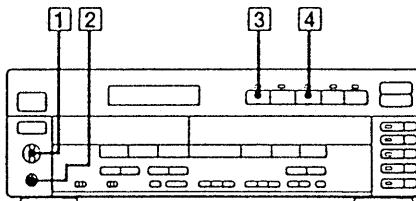
- 1 POWER button
- 2 Display window
- 3 Disc tray(s)
- 4 || (pause) button
- 5 ■ (stop) button
- 6 CD button (12)
- 7 △ OPEN/CLOSE and disc select buttons
- 8 <<<<<< / >>>>>> buttons
- 9 TIME button
- 10 CHECK button
- 11 EDIT button
- 12 PLAY MODE buttons
CONTINUE
SHUFFLE
PROGRAM
- 13 ▷ (play) button

Cassette deck



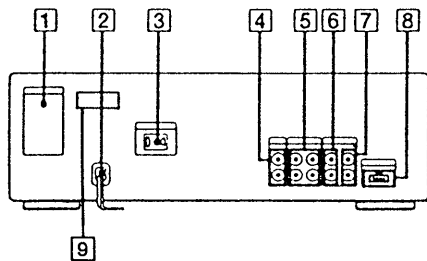
- 1 POWER button
- 2 Cassette tray
- 3 ◀ / ▶ (play) buttons
- 4 Display window
- 5 TAPE button
- 6 || PAUSE button
- 7 ● REC button
- 8 CD SYNCHRO button
- 9 COUNTER RESET button
- 10 ◀◀ (fast leftward)
▶▶ (fast rightward) buttons
- 11 DIRECTION mode selector
- 12 DOLBY NR selector
- 13 ■ (stop) button
- 14 △ OPEN/CLOSE button

Other



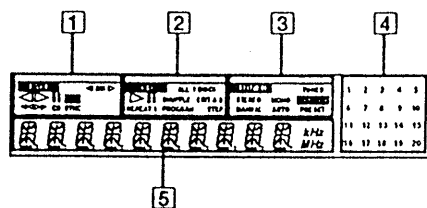
- 1 LINE OUT/
PHONES LEVEL
- 2 PHONES
- 3 MD
- 4 AUX

Rear Panel



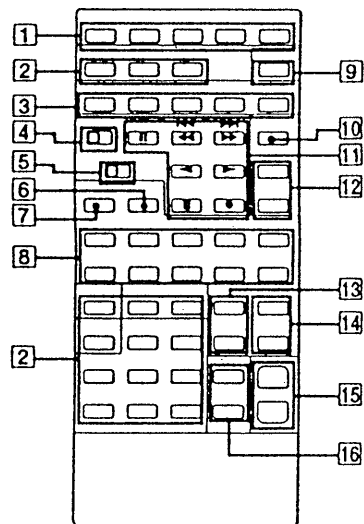
- 1 Antenna terminals
- 2 AC power cord (mains lead)
- 3 AC OUTLET (US, Panama model)
- 4 AUX IN jacks
- 5 MD jacks
- 6 LINE OUT (FIXED) jacks
- 7 LINE OUT (VARIABLE) jacks
- 8 CONTROL S OUT jack
- 9 AC OUTLET

Display Window



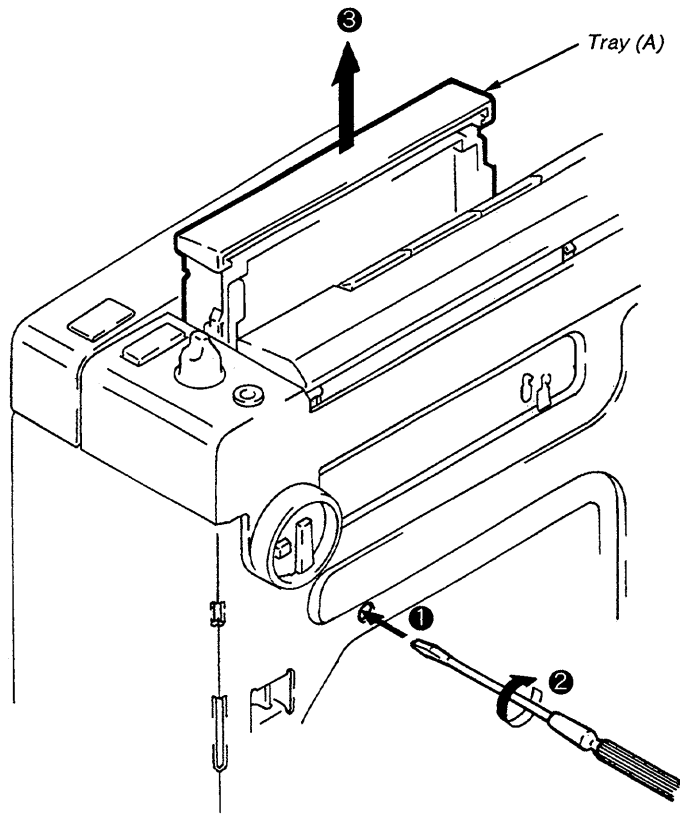
- 1 Tape indicators
- 2 CD indicators
- 3 Tuner indicators
- 4 CD music calendar
Tuner preset calendar
- 5 Frequency/Multi-display

Remote (RM-U55)



- 1 VCR, LDP (laserdisc player), TV, HCD, and VA (SA-VA15 speaker system) POWER buttons
- 2 VA (SA-VA15 speaker system) control buttons
- 3 FUNCTION buttons (for HCD)
- 4 AUDIO/VIDEO selector
- 5 Component selector
- 6 TV/VCR button (for TV)
- 7 ENTER button (for TV)
- 8 Numeric buttons (for TV)
T.TONE and DELAY buttons
(for SA-VA15 speaker system)
- 9 SYSTEM OFF button
- 10 BAND and ANT TV/VCR button
- 11 Operation button (for TAPE, CD, MD, VCR and LDP)
 - ▶ (play)
 - ◀ (play) and CD REPEAT
 - ◀◀ (fast leftward)
 - ▶▶ (fast rightward)
 - ◀◀ (CD track skip backwards)
 - ▶▶ (CD track skip forwards)
 - || (pause)
 - (stop)
 - (record) and DISC SKIP
- 12 CH PRESET button
- 13 TV CH (channel) button
- 14 TV VOL (volume) button
- 15 VA VOL (SA-VA15 volume) button
- 16 HCD VOL (volume) button

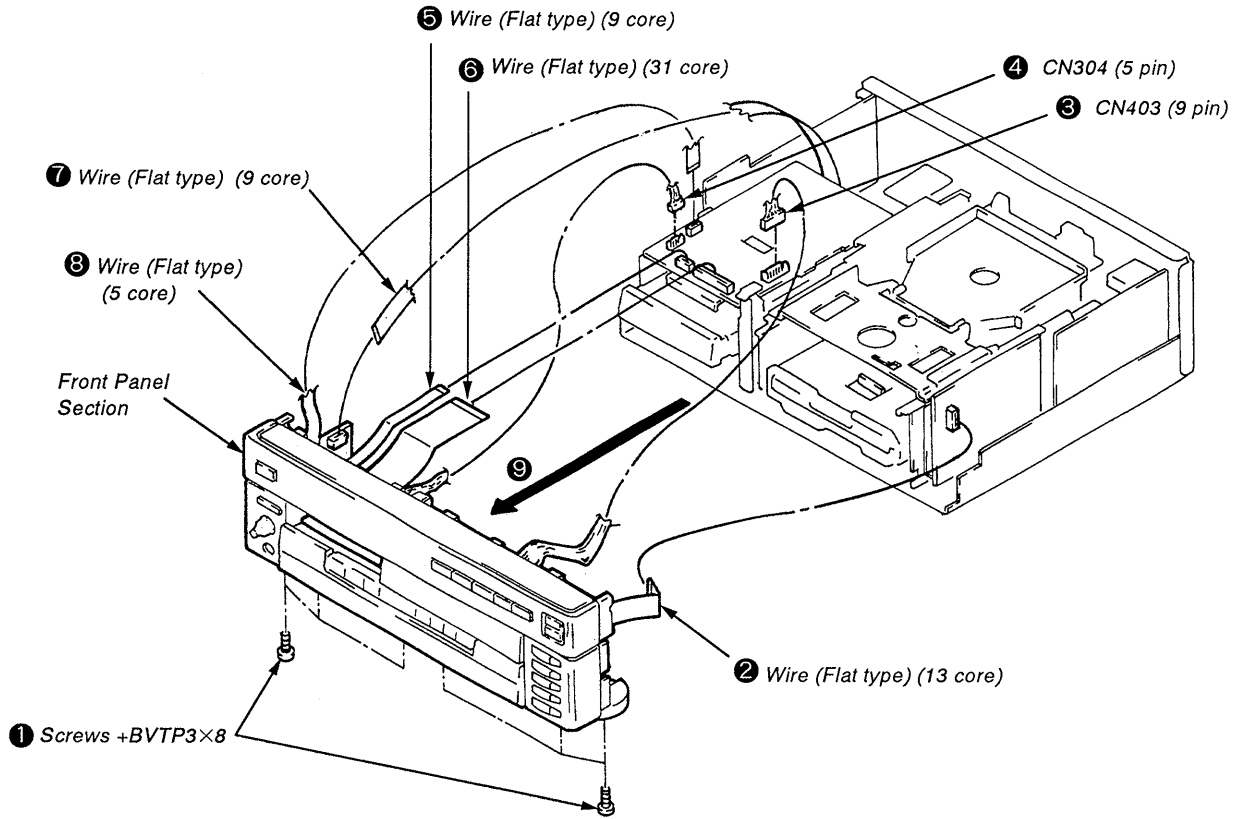
Tray (A) getting out procedure on the power supply is OFF



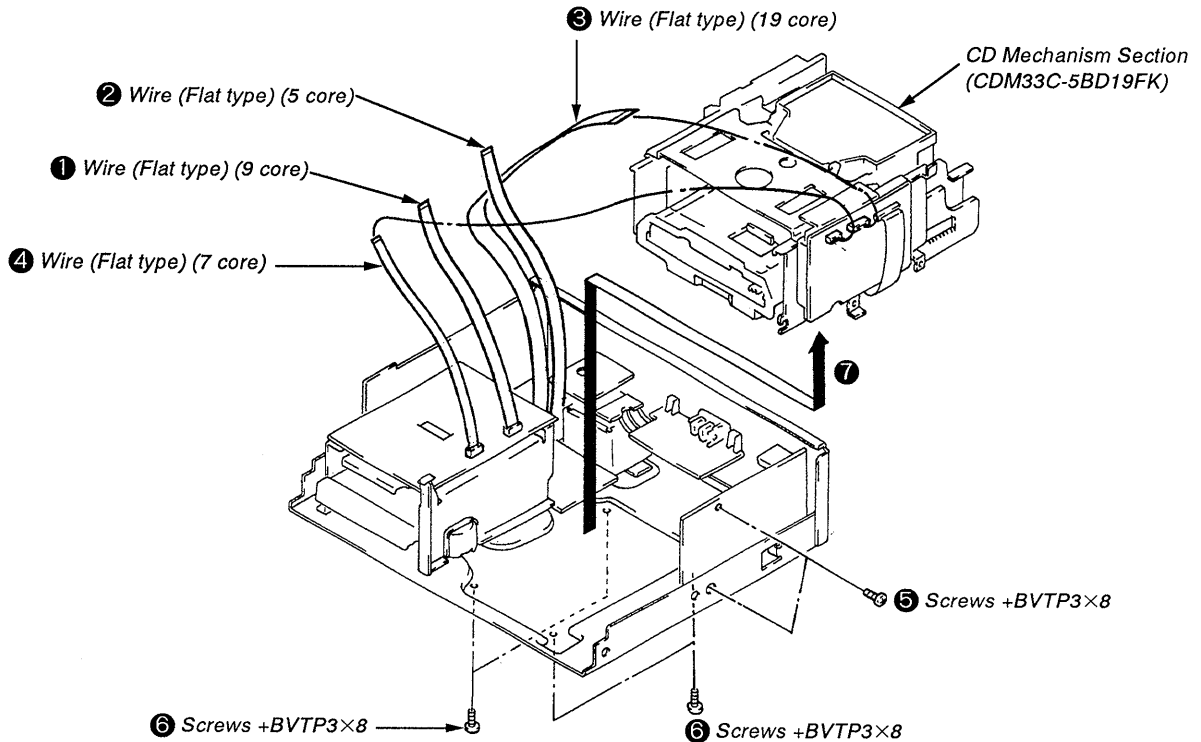
SECTION 3 DISASSEMBLY

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

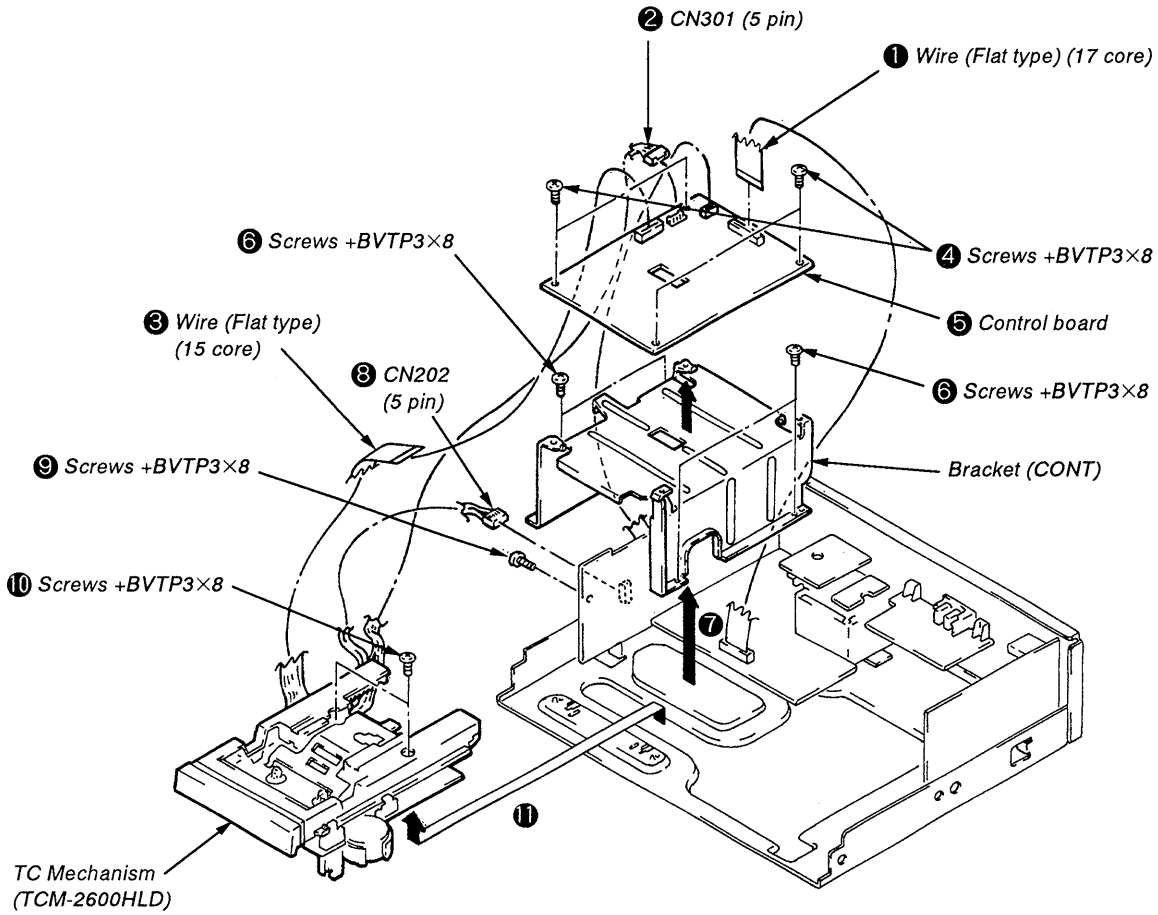
3-1. FRONT PANEL SECTION REMOVAL



3-2. CD MECHANISM SECTION REMOVAL



3-3. CASSETTE MD SECTION AND CONTROL BOARD REMOVAL



SECTION 4 ADJUSTMENTS

4-1. MECHANICAL ADJUSTMENTS

PRECAUTION

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

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

• Torque Measurement

Mode	Torque Meter	Meter Reading
Forward	CQ-102C	30 to 65g•cm (0.42 – 0.9 oz•inch)
Forward Back Tension	CQ-102C	1 to 6g•cm (0.0134 – 0.083 oz•inch)
Reverse	CQ-102RC	30 to 65g•cm (0.41 – 0.9 oz•inch)
Reverse Back Tension	CQ-102RC	1 to 6g•cm (0.0134 – 0.083 oz•inch)
FF, REW	CQ-201B	70 to 120g•cm (0.972 – 1.66 oz•inch)

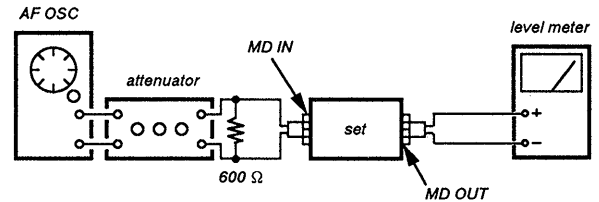
• Tape Tension Measurement

Mode	Tension Meter	Meter Reading
Forward	CQ-403A	more than 1kg (35.2 oz)
Reverse	CQ-403R	more than 1kg (35.2 oz)

4-2. ELECTRICAL ADJUSTMENTS

DECK SECTION

1. The adjustment should be performed in the publication.
(Be sure to make playback adjustment at first.)
 2. The adjustment and measurement should be performed for both L-CH and R-CH.
 - Switch position
DOLBY NR switch : OFF
FUNCTION button : TAPE
- Record Mode –



Test Mode

1. Insert a short-circuit plug into CN305 (2P) and turn ON the power switch.
2. To release the test mode, remove the short plug and turn off the power switch.
3. Remove the short plug after completion of adjustment.

• Test Tape

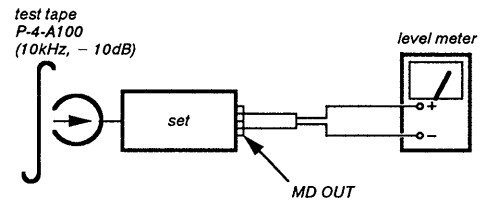
Tape	Contents	Use
P-4-A100	10kHz, - 10dB	Head Azimuth Adjustment
P-4-L300	315Hz, 0dB	Level Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

0 dB=0.775V

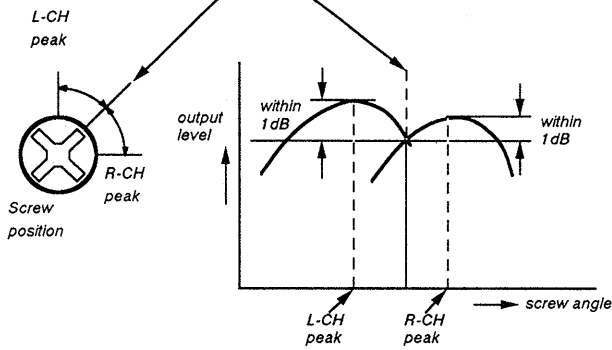
Record/Playback Head Azimuth Adjustment

Procedure :

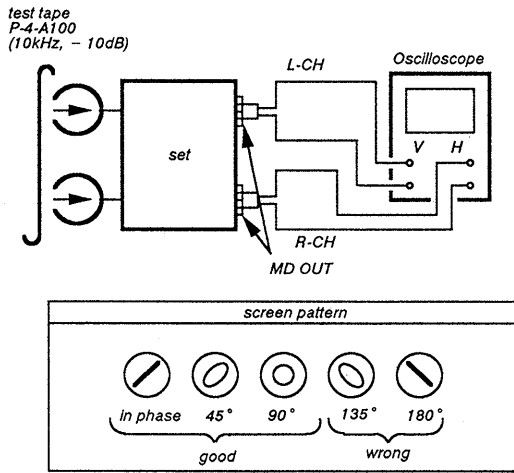
1. Forward Playback mode



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1dB.



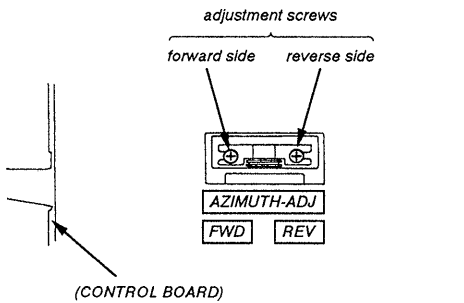
- Playback Mode



- Change the reverse playback mode and repeat the steps 1 to 3.
- After the adjustment, lock the adjustment screw with suitable locking compound.

Adjustment Location :

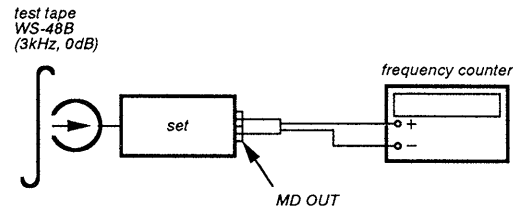
— record/playback head



Tape Speed Adjustment

Procedure :

Mode : Playback



- Set to forward playback mode.
- Adjust RV301 so that frequency counter reading becomes $3,000 \pm 10\text{Hz}$.

Frequency difference between the beginning and the end of the tape should be within $\pm 3\%$.

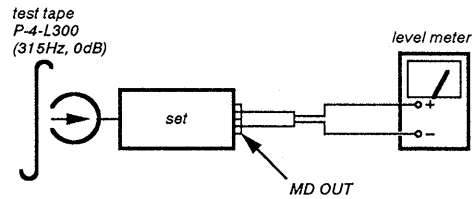
Adjustment Location : CONTROL board.

(see page 11)

Playback Level Adjustment

Procedure :

Mode : Playback



Adjust RV202 (L-CH) and RV201 (R-CH) so the level meter reading becomes the adjustment limits below.

Adjustment Level :

MD OUT level : $-7.5\text{dB} \pm 0.5\text{dB}$ (0.31 to 0.34V)

Level Difference between Channels : within 0.5dB

Confirm the MD OUT level does not change in playback mode while changing the mode from playback to stop several times.

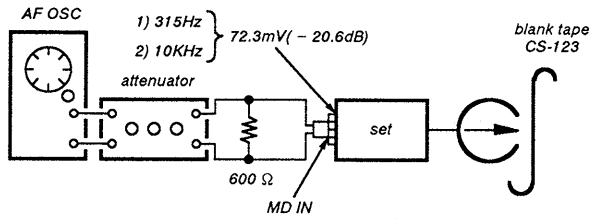
Adjustment Location : TC Main board.

(see page 11)

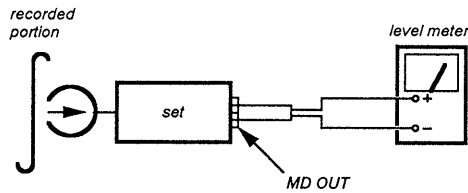
Record Bias Adjustment

Procedure :

1. Record mode



2. Playback mode



3. Confirm playback the signal recorded in step 1 become adjustment level as follows.
4. If these levels do not adjustment level, adjustment the RV206 (L-CH) and RV205 (R-CH) to repeat step 1 and 4.

Adjustment level : Playback output of 315Hz to playback output of 10kHz : - 0.5dB to 0.5dB.

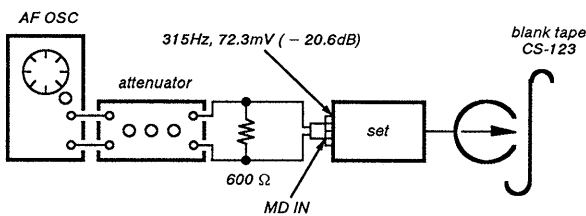
Adjustment Location : TC Main board.

Record Level Adjustment

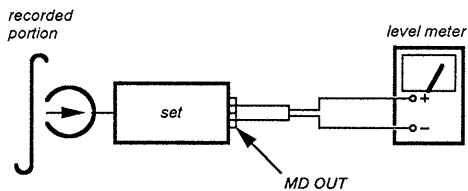
FUNCTION button : MD

Procedure :

1. Record mode



2. Playback mode



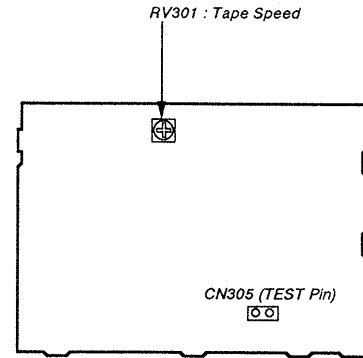
3. Confirm playback the signal recorded in step become adjustment level as follows.
4. If these levels do not adjustment level, adjustment the RV204(L-CH) and RV203 (R-CH) to repeat step 1 and 4.

Adjustment Level :

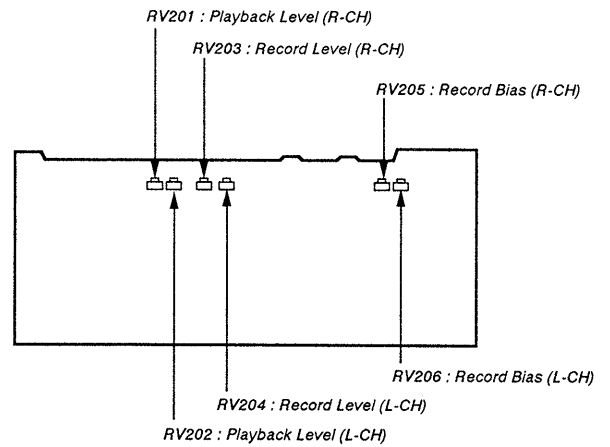
MD OUT level : - 27dB ± 0.5dB (32.7 to 34.6mV)

Adjustment Location : TC Main board

[CONTROL BOARD] - Component side -



[TC MAIN BOARD] - Component side -



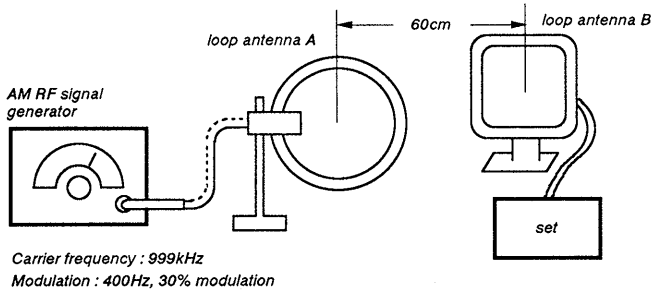
TUNER SECTION

Note. 1 : The adjustment should be performed in the publication.
(AM→FM)

Note. 2 : As a front-end (FE1) is difficult to repair if faulty, replace it with new one.

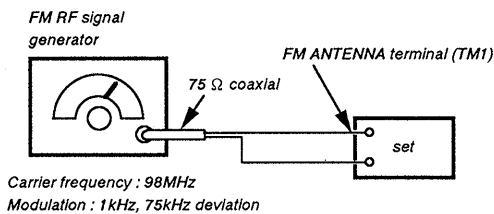
AM Section Adjustment

Setting :



FM Section Adjustment

Setting :



AM Tuned Indication Lighting Level Adjustment

Band : MW

Procedure :

1. Set loop antenna A so that the loop antenna B input level becomes $398.1 \mu V$ ($52dB \mu$)
2. Tune the set to 999kHz.
3. Adjust RV1 so that the **TUNED** light up.
4. Confirm that the **TUNED** light off with AM RF Signal generator output level set at $316.2 \mu V$ ($50dB \mu$).
5. Confirm the FM tuned indication lighting level and adjust if necessary.

Adjustment Location : ST Main board

FM Tuned Indication Lighting Level Adjustment

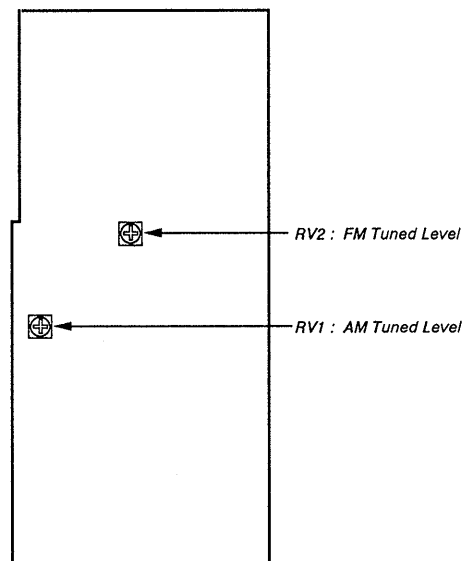
Band : FM

Procedure :

1. Supply a $17.8 \mu V$ ($25dB \mu$) 98MHz signal to the ANTENNA terminal (TM1).
2. Tune the set to 98MHz.
3. Adjust RV2 so that the **TUNED** light up.
4. Confirm that the **TUNED** light off with FM RF signal generator output level set at $14.1 \mu V$ ($23dB \mu$).

Adjustment Location : ST Main board

[ST MAIN BOARD] – Component side –



CD SECTION

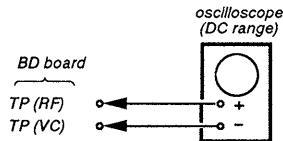
Note :

1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10M Ω 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.

Focus Bias Adjustment

This adjustment is to be done when the optical block is replaced.

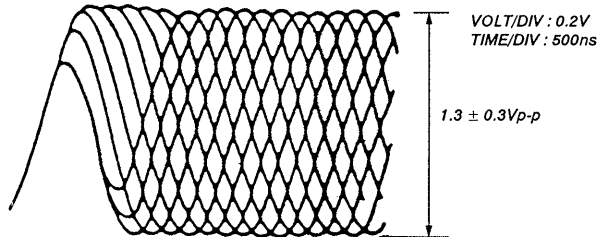
Adjustment procedure :



1. Connect oscilloscope to test point TP (VC) and TP (RF) on BD board.
2. Turned power switch ON. (Stop mode)
3. Put disc (YEDS-18) in and press the \triangleright button.
4. Adjust RV101 so that the oscilloscope waveform is as shown in the figure below (eye pattern).

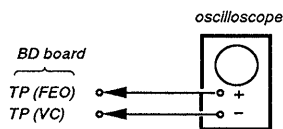
A good eye pattern means that the diamond shape (\diamond) in the center of the waveform can be clearly distinguished.

● RF signal reference waveform (eye pattern)



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

S-Curve Check

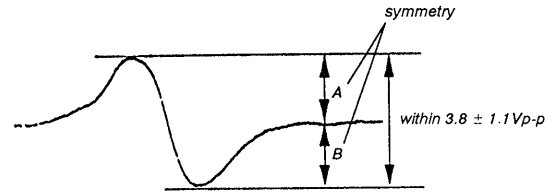


Procedure :

1. Connect oscilloscope to test point TP (FEO) and BD board.
2. Connect between test point TP (FOK) and GND by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)

5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within $3.8 \pm 1.1Vp-p$.

S-curve waveform

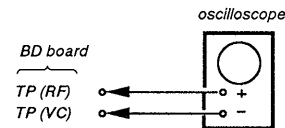


6. After check, remove the lead wire connected in step 2.

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



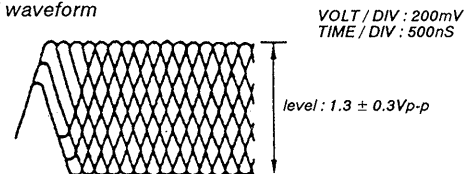
Procedure :

1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

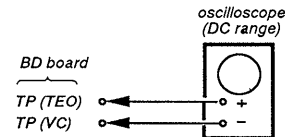
Note :

Clear RF signal waveform means that the shape " \diamond " can be clearly distinguished at the center of the waveform.

RF signal waveform



E-F Balance Check



Procedure :

1. Ground CD main board IC701 pin ④ with the lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.

Traverse waveform



- Specified value : ● $\frac{A - B}{2(A+B)} \times 100 = \text{less than } \pm 7\%$
 ● $A+B = 300 \pm 100\text{mVp-p}$

6. Remove the lead wire connected in step 1.

Focus/Tracking Gain (RV102/RV103)

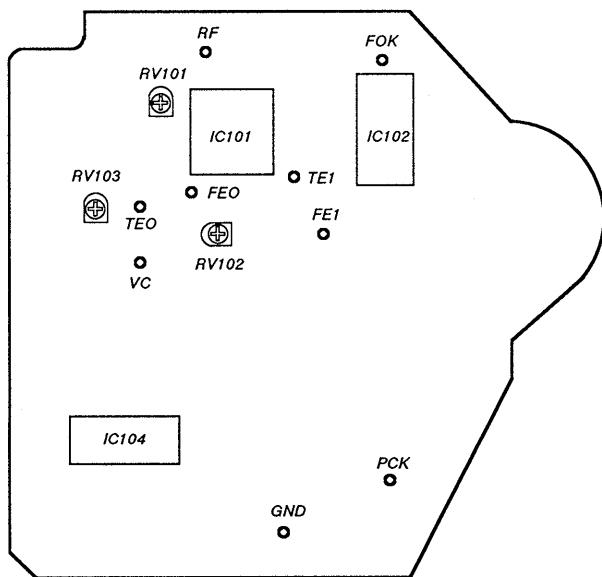
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Adjustment Location :

[BD BOARD] – Component side –



SECTION 5 EXPLANATION OF IC TERMINALS

IC401 (SYSTEM CONTROL) μ PD78042AGF-042-3B9 (CONTROL BOARD)

Pin No.	Pin name	I/O	Description
1 - 7	G7 - G1	O	FL Drive.
8	VDD	-	Power supply (+5V).
9	CD-DATA3	I	CD display data input.
10	CD-DATA2	I	CD display data input.
11	CD-DATA1	I	CD display data input.
12	CD-DATA0	I	CD display data input.
13	MUTE	O	Line mute output.
14	TC-CLK	O	TC control clock output.
15	NC	-	Not used (OPEN).
16	TC-DATA	I	TC control data input.
17	RESET	I	System reset input.
18	VOL-DOWN	O	Volume down control data output.
19	VOL-UP	O	Volume up control data output.
20	AVSS	-	Power supply (GND).
21	TC-POWER	O	TC power control data output.
22	V1/V2	-	Not used (GND).
23	MONITOR	-	Not used (GND).
24	POWER	I	Power Ray input.
25	DEST	I	Model identification check input.
26	KEY-3	I	Key input.
27	KEY-2	I	Key input.
28	KEY-1	I	Key input.
29	AVDD	-	Power supply (+5V).
30	AVREF	-	Analog voltage reference.
31	STOP	I	Stop DET terminal.
32	XT2	-	Not used (OPEN).
33	VSS	-	Power supply (GND).
34	X1	I	System clock (5MHz).
35	X2	O	System clock (5MHz).
36	ST-CE	O	Tuner IC control CE output.
37	ST-DOUT	O	Tuner IC control data output.
38	ST-CLK	O	Tuner IC control clock output.
39	ST-DIN	I	Tuner IC control data input.
40	SIRCS	I	SIRCS signal input.
41	TUNED	I	TUNED signal input.
42	STEREO	I	STEREO signal input.
43	ST-MUTE	O	Tuner mute output.
44	AUB-OUT	O	AU BUS signal output.
45	TC-SYNC	I	TC SYNC input.
46	CD-CLK	I	CD clock input.

Pin No.	Pin name	I/O	Description
47	AUB-IN	I	AU BUS signal input.
48	IC	–	Not used (GND).
49	FUNC-C	O	Function control data output.
50	FUNC-B	–	Function control data output.
51	FUNC-A	I	Function control data output.
52	VDD	–	Power supply (+5V).
53	LED-5	O	FL Drive.
54	LED-4	O	FL Drive.
55	LED-3	O	FL Drive.
56	LED-2	O	FL Drive.
57	LED-1	O	FL Drive.
58 – 70	P15 – P3	O	FL Drive.
71	VLOAD	I	FL Drive. – 28V Power supply.
72	P2	O	FL Drive.
73	P1	O	FL Drive.
74 – 80	G14 – G8	O	FL Drive.

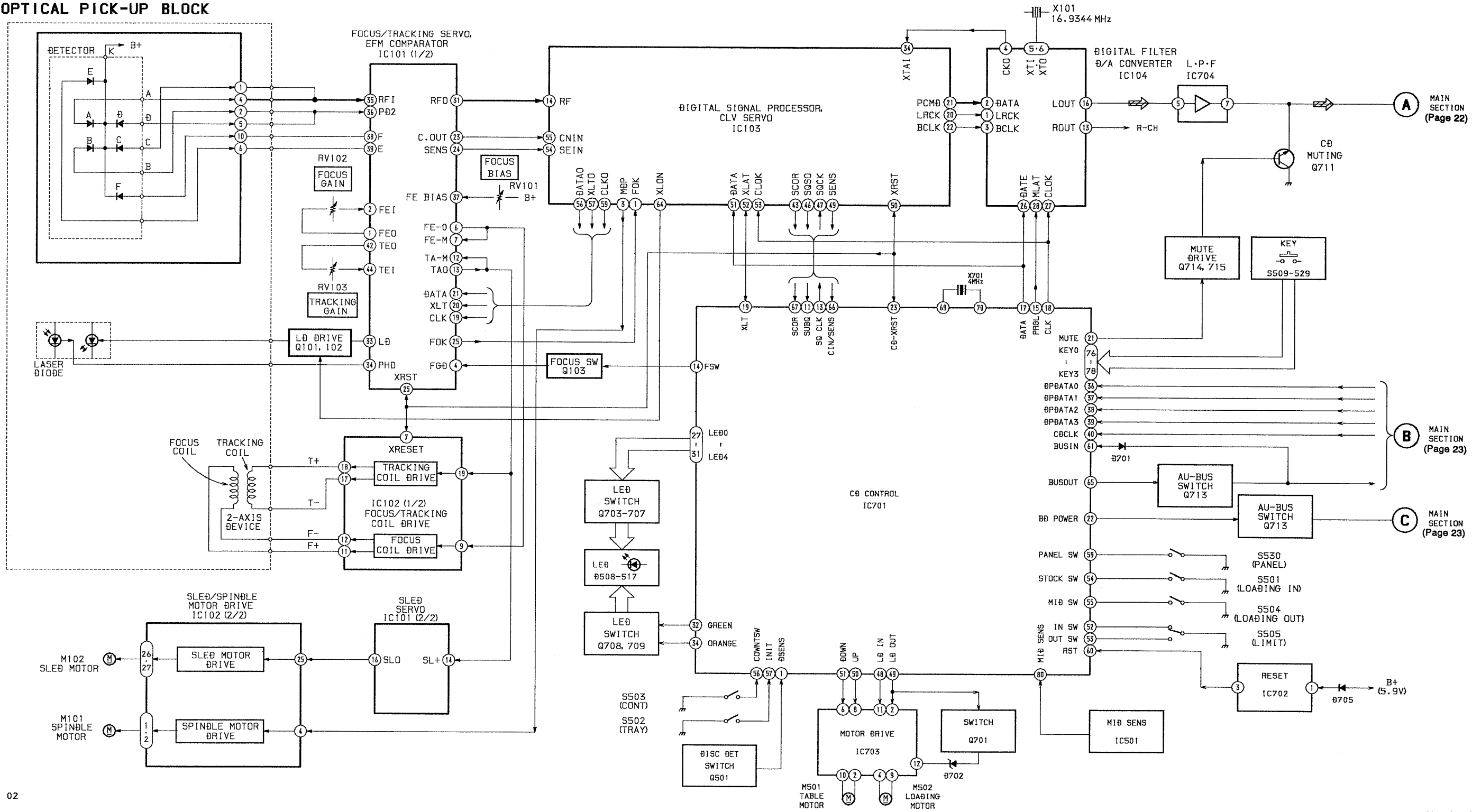
IC701 (CD SYSTEM CONTROL) μ PD78054GC-088-3B9 (CD MAIN BOARD)

Pin No.	Pin name	I/O	Description
1	DSENSOR	I	Disc sensor input. Disc is preset when input voltage is over AV Ref/2.
2	PWMSEL1	I	This input voltage determines PWM1 duty to move the tray horizontally.
3	PWMSEL2	I	This input voltage determines PWM2 duty to move the tray horizontally.
4	AVSS	–	Power supply (GND).
5	NC	–	Not used (High level).
6	NC	–	Not used (High level).
7	AVREF	I	Analog voltage reference (+5V).
8	NC	–	Not used (GND).
9	NC	–	Not used (OPEN).
10	NC	–	Not used (OPEN).
11	SUBQ	I	Q data serial input from CXD2507.
12	NC	–	Not used (GND).
13	SQCLK	O	Clock output to CXD2507 (for reading subcode Q data).
14	FSW	O	Focus switch output.
15	PRGL	O	Serial data latch pulse to digital filter.
16	NC	–	Not used (GND).
17	DATA	O	Serial data output to CXD2507.
18	CLK	O	Serial clock output to CXD2507.
19	KLT	O	Serial data latch pulse output to CXD2507.
20	XRST	–	Not used (OPEN).
21	AMUTE	O	Muting ON/OFF output.
22	BD POWER	O	Servo system power supply control.
23	BDRST	O	BD reset output.
24	(DRVCS)	–	Not used (OPEN).
25	(DRVRST)	–	Not used (OPEN).
26	LED EZ	–	Not used (OPEN).
27	LED4	O	LED (DISC5) data output.
28	LED3	O	LED (DISC4) data output.
29	LED2	O	LED (DISC3) data output.
30	LED1	O	LED (DISC2) data output.
31	LED0	O	LED (DISC1) data output.
32	GREEN	O	LED Scan output (GREEN).
33	VSS	–	Power supply (GND).
34	ORANGE	O	LED Scan output (ORANGE).
35	NC	–	Not used (OPEN).
36 – 39	DPDAT0 – 3	O	Display data output terminal.
40	DPCLK	O	Display clock output terminal.

Pin No.	Pin name	I/O	Description
41	NC	I	Normally 5V. Connection to GND enables BD operation without mechanism.
42	AFADJ	I	TEST mode input. "L" at power on to enable the test.
43	ADJ	I	TEST mode input. At "L", GFS check is disabled.
44	TEST	I	Test mode selector. "L" : Test mode.
45	PMOD0	I	Normally 5V. Connection to GND disables reverse braking during tray horizontal control.
46	PMOD1	I	Normally GND. Connection to 5V selects different specification for TOC reading.
47	DSENSOR	-	Not used (GND).
48	LDIN	O	Load in output.
49	LDOUT	O	Load out output.
50	UP	O	Disc table up control.
51	DOWN	O	Disc table down control.
52	IN SW	I	CDM IN SW DET terminal
53	OUT SW	I	CDM OUT SW DET terminal
54	STOCK SW	I	CDM STOCK DET terminal
55	MID SW	I	MID SW DET terminal
56	COUNT SW	I	Counter SW DET terminal
57	INIT SW	I	INIT SW DET terminal
58	MID SENS	-	Not used (GND).
59	PANEL SW	I	"H" : CD tray cover panel OPEN. "L" : CD tray cover panel CLOSE.
60	RST	I	Reset.
61	BUSIN	I	AU BUS signal input.
62 - 64	NC	-	Not used (GND).
65	BUSOUT	O	AU BUS signal output.
66	SENS	I	SENS Signal input from CXD2507, CXA1372.
67	SCOR	I	Subcode Sync SO/SI detection.
68	VDD	-	Power supply (+5V).
69	X2	O	System clock (4MHz).
70	X1	I	System clock (4MHz).
71	VSS	-	GND.
72	NC	-	Not used (OPEN).
73	NC	-	Not used (GND).
74	AVDD	-	Power supply (+5V).
75	AVREF	I	Analog voltage reference (+5V).
76 - 79	KEY0 - 3	I	Key input terminal.
80	MIDSNS	I	MID sensor input terminal.

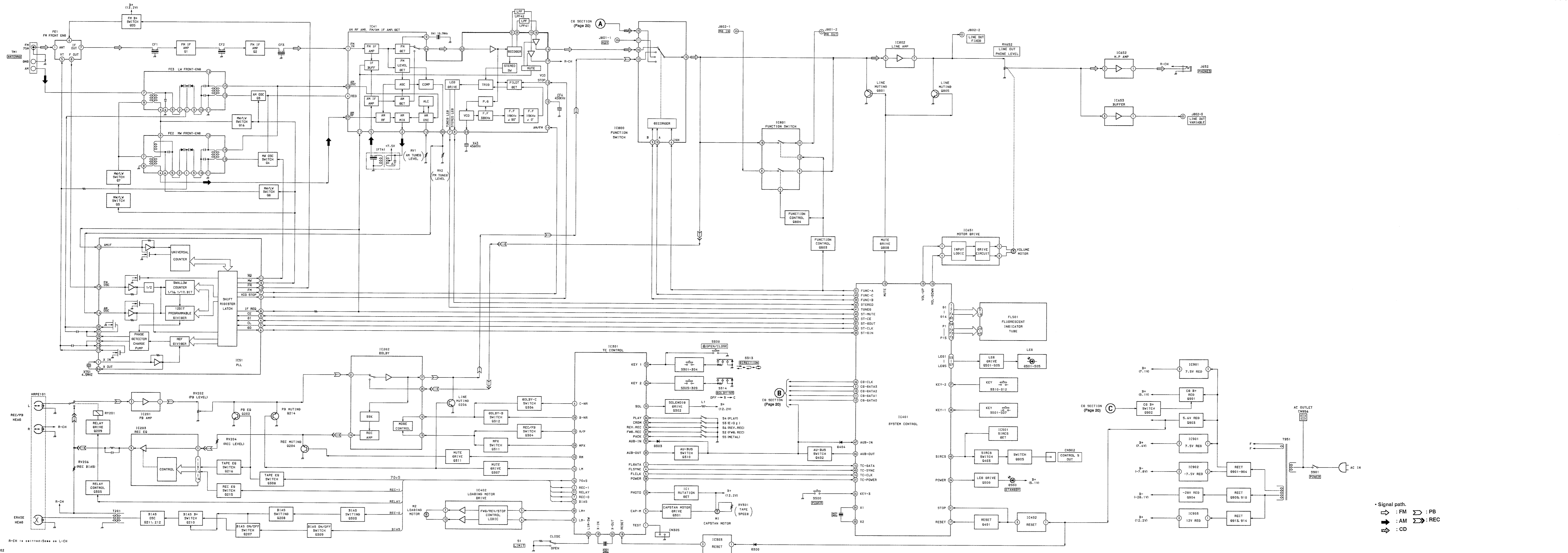
SECTION 6
DIAGRAMS

6-1. BLOCK DIAGRAM - CD SECTION -
OPTICAL PICK-UP BLOCK

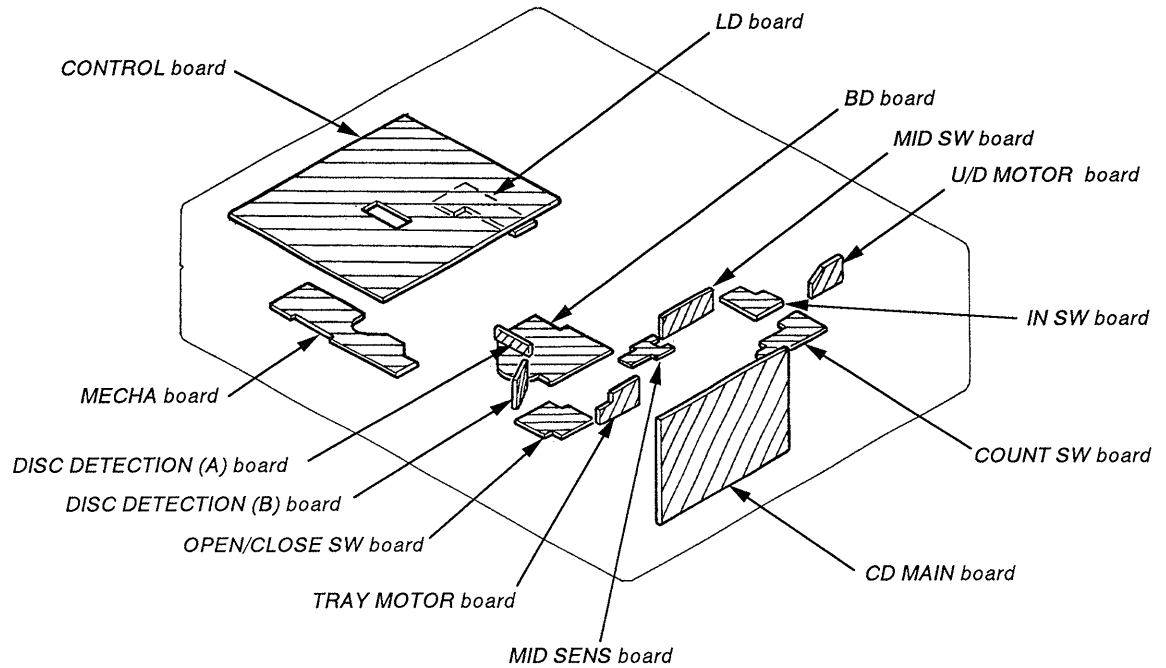
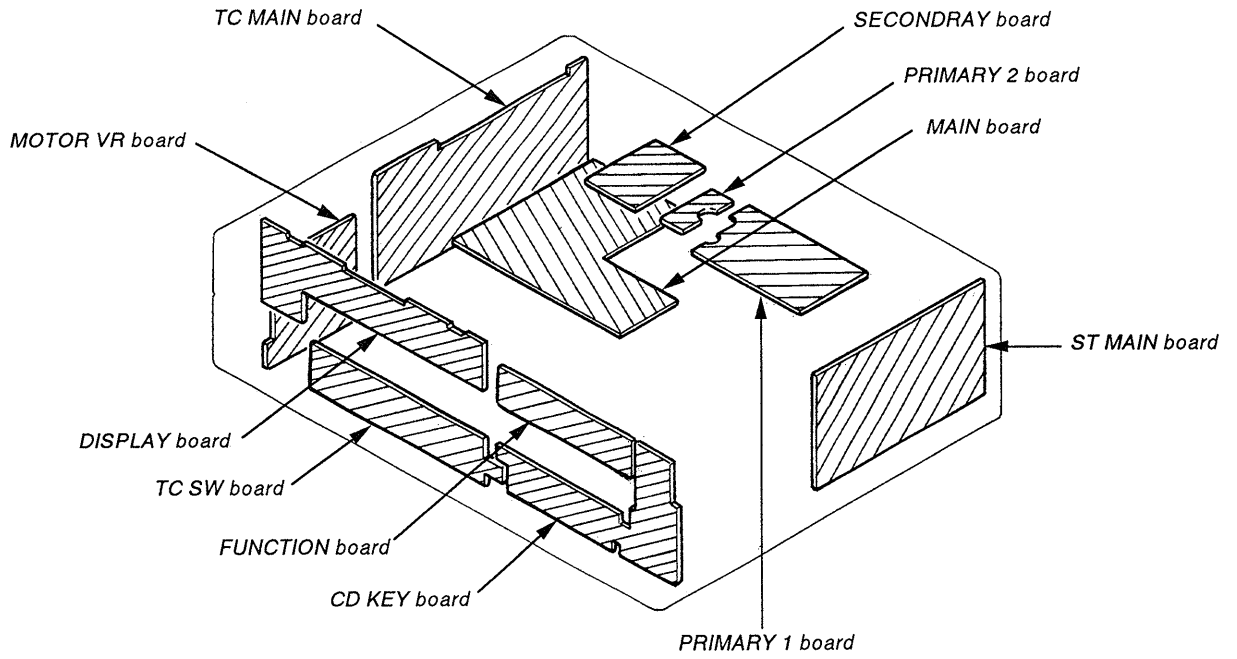


02

• Signal path.
⇒ : CD



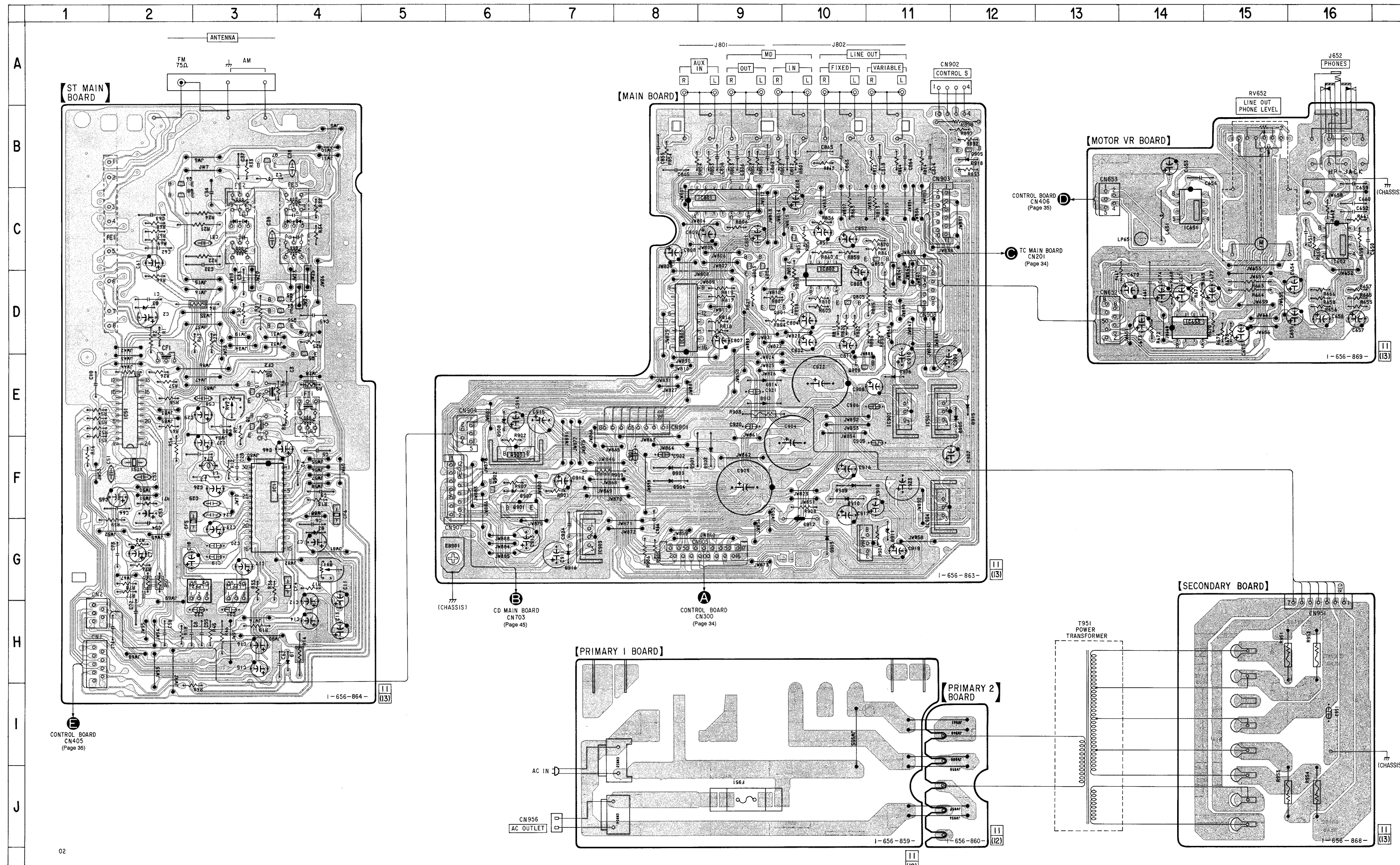
6-3. CIRCUIT BOARD LOCATION



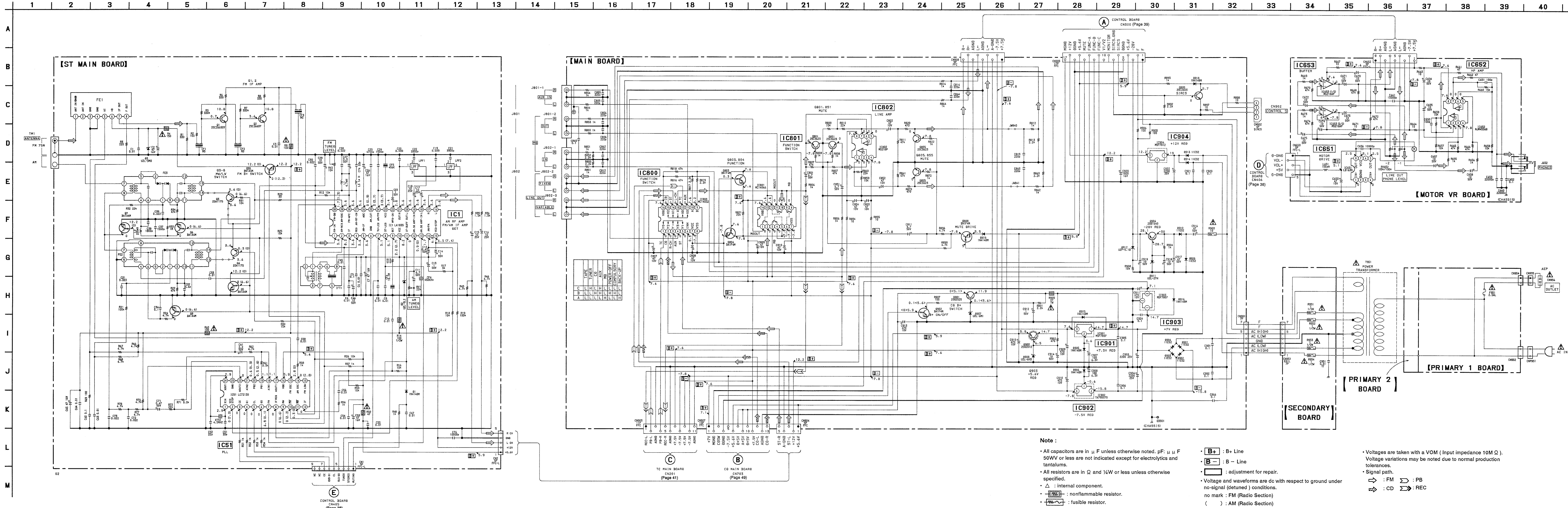
6-4. PRINTED WIRING BOARDS - MAIN SECTION -

• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D1	H - 4	IC903	G - 7
D2	G - 4	IC904	F - 11
D3	D - 2		
D901	F - 8	Q1	E - 3
D902	F - 9	Q2	E - 3
		Q3	D - 4
D903	F - 8	Q4	D - 4
D904	F - 8	Q5	E - 4
D905	E - 12		
D906	E - 11	Q6	B - 2
D907	F - 6	Q7	B - 3
		Q8	C - 2
D908	E - 6	Q55	D - 4
D909	F - 10	Q801	D - 9
D910	F - 10		
D911	G - 11	Q803	C - 9
D912	G - 10	Q804	C - 9
		Q805	D - 10
D913	E - 9	Q808	E - 10
D914	E - 9	Q851	C - 10
D915	E - 12		
D916	G - 7	Q855	C - 11
D918	B - 12	Q901	F - 6
		Q902	F - 6
D919	G - 10	Q903	F - 6
		Q904	G - 10
		Q905	B - 12
IC1	F - 3		
IC51	E - 2		
IC651	C - 14		
IC652	C - 16		
IC653	D - 14		
IC800	D - 8		
IC801	C - 9		
IC802	D - 10		
IC901	E - 11		
IC902	E - 11		



Note:
 ○ — : parts extracted from the component side.
 ••••• : Pattern on the side which is seen.



Note :

- All capacitors are in μ F unless otherwise noted. pF: μ pF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- \square : internal component.
- \square : nonflammable resistor.
- \square : fusible resistor.

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
- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (Radio Section)
- () : AM (Radio Section)
- () : PLAY (CD Section)

- Voltagess are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- \rightarrow : FM \rightarrow : PB
- \rightarrow : CD \rightarrow : REC

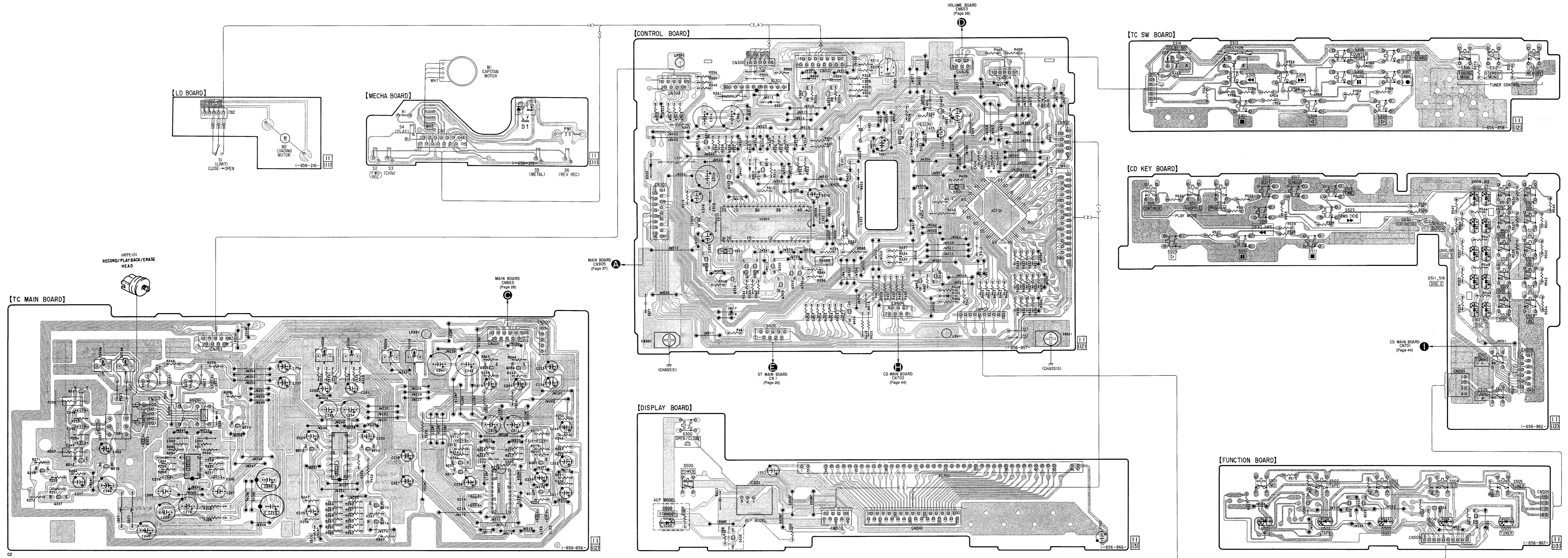
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

A
B
C
D
E
F
G
H
I
J

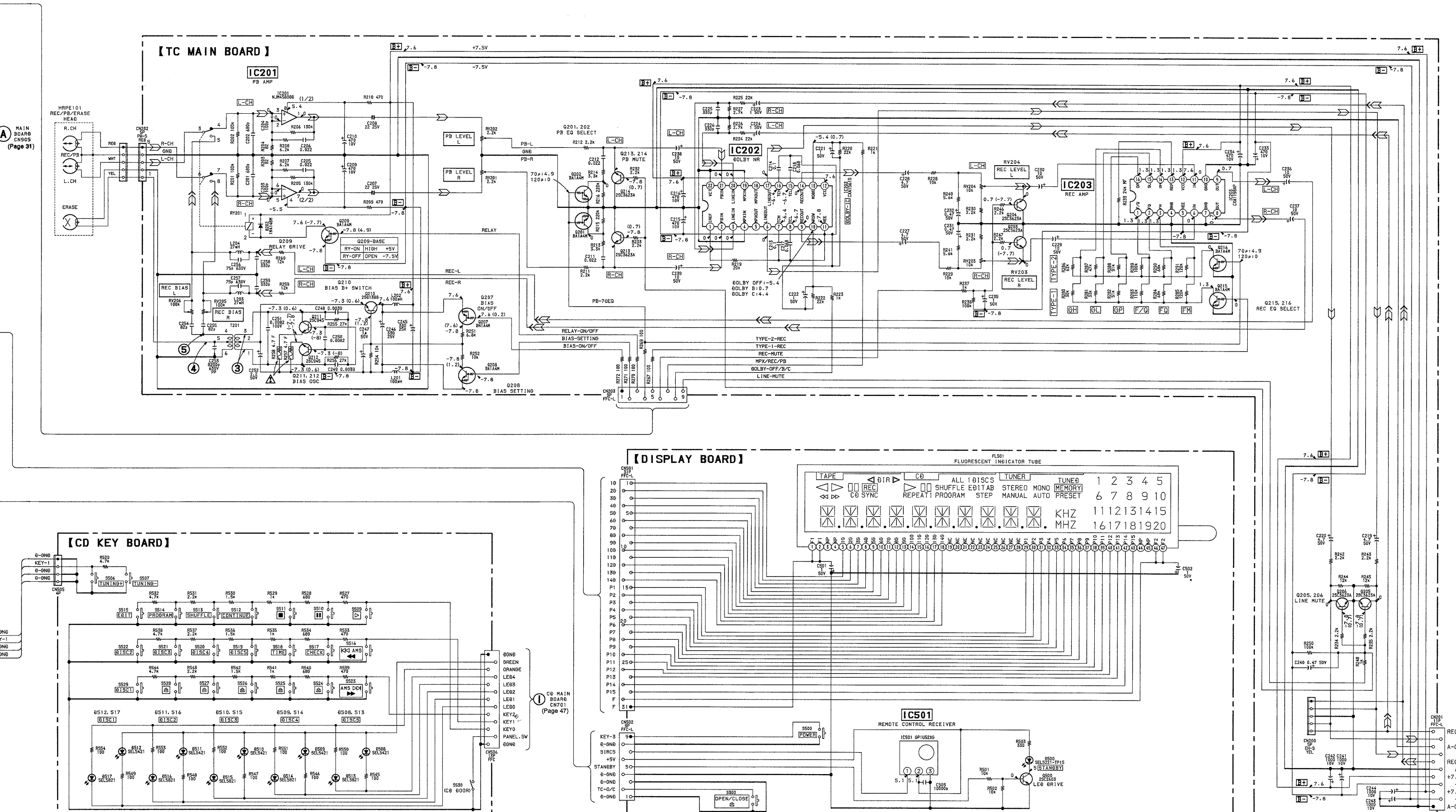
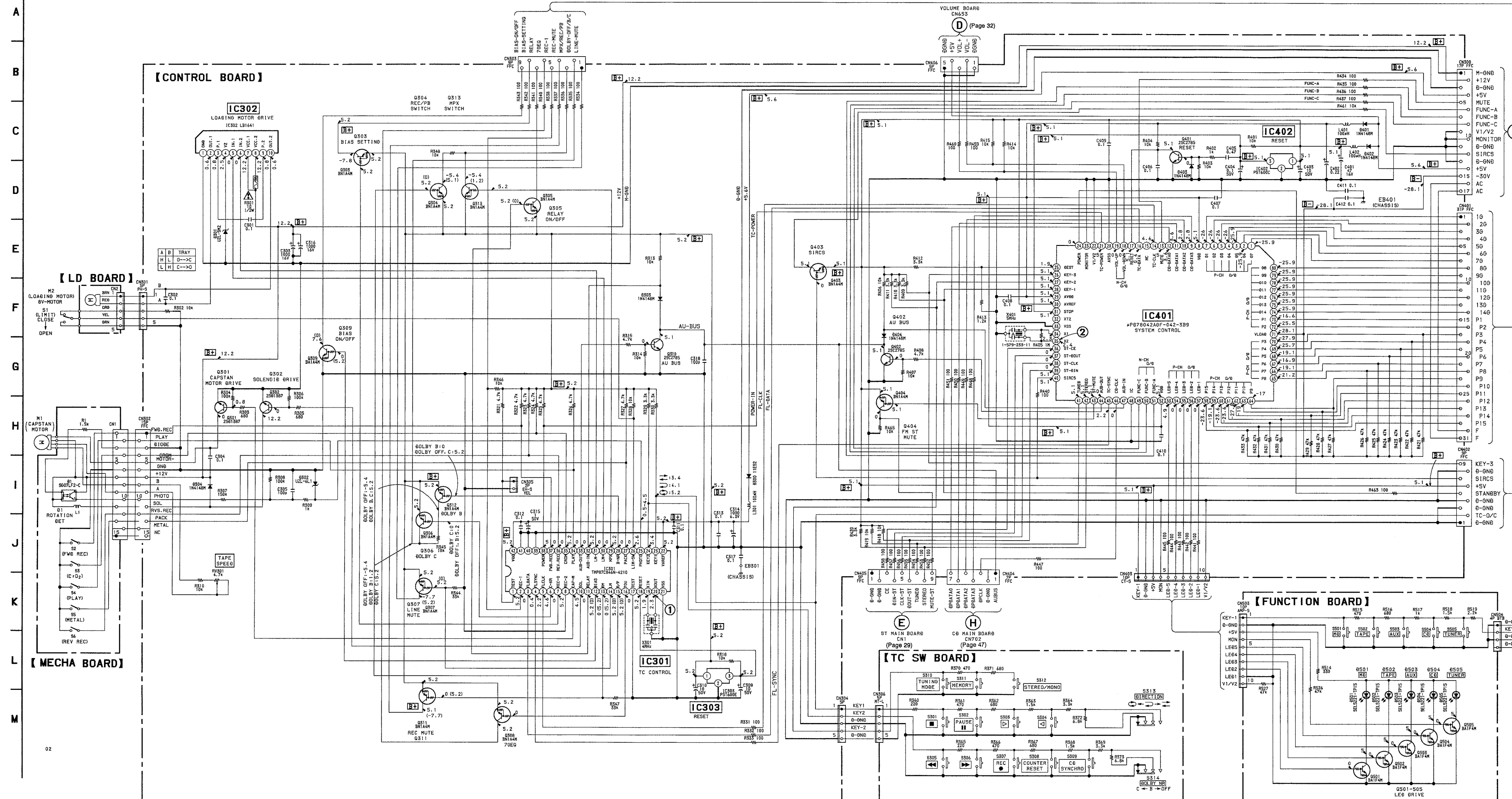
● SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D1	C-10	Q206	G-10
D202	H-5	Q207	I-2
D300	D-12	Q208	I-2
D301	C-14	Q209	H-5
D302	B-15	Q210	I-3
D303	D-13	Q211	H-2
D304	B-14	Q212	I-2
D401	D-15	Q213	I-10
D402	D-15	Q214	I-9
D403	C-16	Q215	J-7
D404	F-17	Q216	J-7
D500	J-12	Q301	B-15
D501	J-22	Q302	B-14
D502	J-23	Q303	F-14
D503	J-24	Q304	F-13
D504	J-25	Q305	E-14
D505	J-26	Q306	F-14
D508	D-26	Q307	E-14
D509	E-26	Q308	E-13
D510	E-26	Q309	F-14
D511	F-26	Q310	D-14
D512	F-26	Q311	E-13
D513	D-26	Q312	C-13
D514	E-26	Q313	D-13
D515	E-26	Q401	C-16
D516	F-26	Q402	F-16
D517	F-26	Q403	F-17
		Q404	F-15
		Q500	J-13
		Q501	J-23
IC201	I-4	Q502	J-24
IC202	I-9	Q503	J-24
IC203	I-7	Q504	J-25
IC301	E-14	Q505	J-26
IC302	B-14		
IC303	E-13		
IC401	D-18		
IC402	C-17		
IC501	I-14		
Q201	I-10		
Q202	I-9		
Q203	I-6		
Q204	I-7		
Q205	G-9		

Note:
 ○ : parts extracted from the component side.
 ◐ : Pattern on the side which is seen.



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49





Note – Control Section –

• All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$
50WV or less are not indicated except for electrolytics and tantalums.

• All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.

• Δ : internal component.


•  : nonflammable resistor.

•  : fusible resistor.

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

• **B+** : B+ Line

• **B-** : B- Line

•  : adjustment for repair.

• Voltage and waveforms are dc with respect to ground under no-signal conditions.

no mark : PLAY (Tape Section)

() : REC (Tape Section)


• Voltages are taken with a VOM (Input impedance $10M \Omega$). 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.

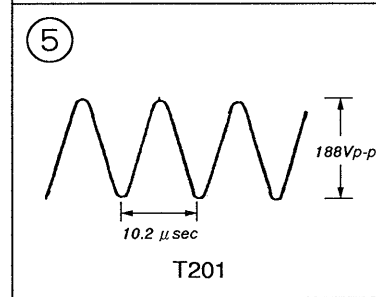
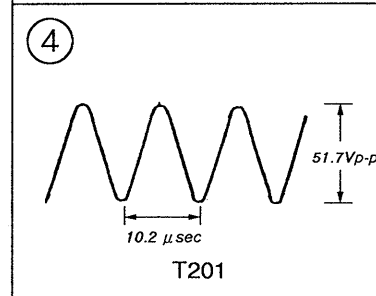
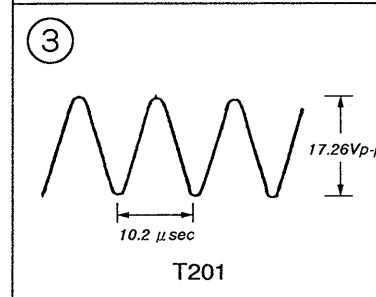
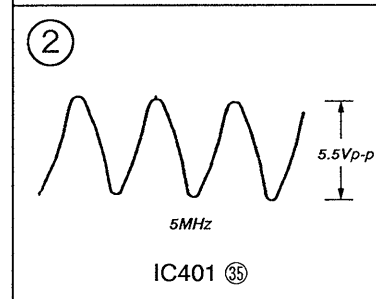
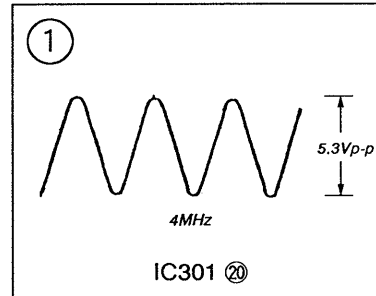
• Circled numbers refer to waveforms.

• Signal path.

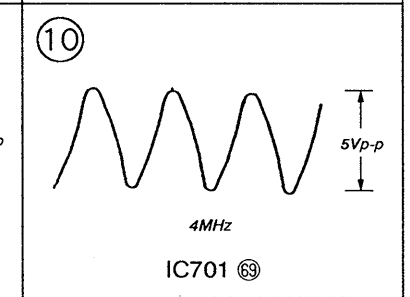
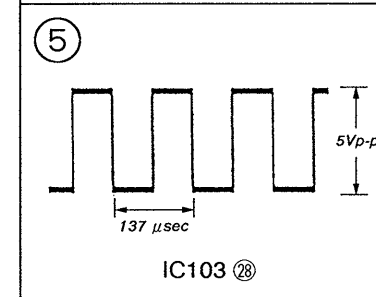
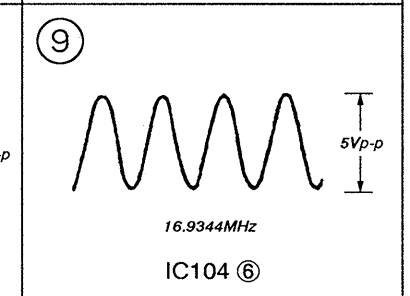
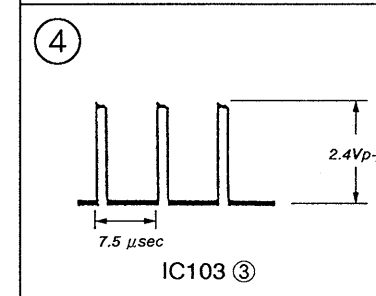
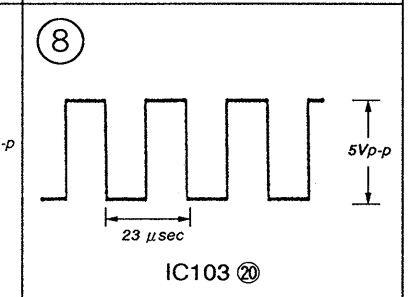
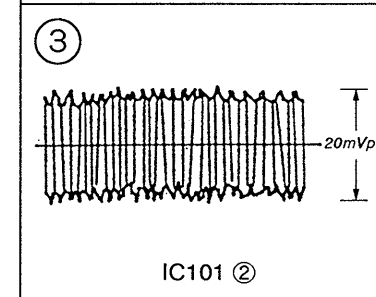
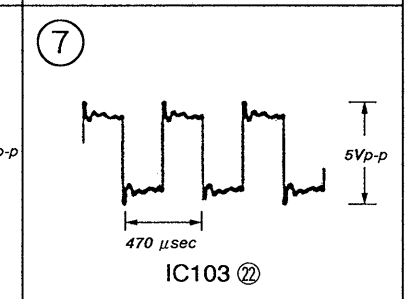
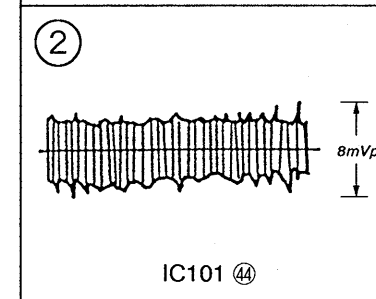
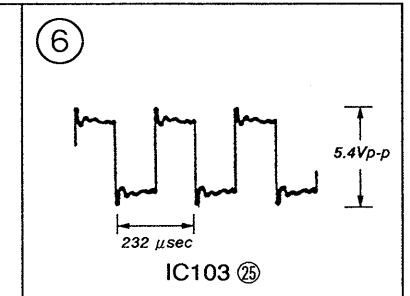
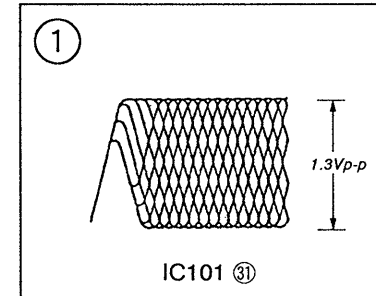
 : PB

 : REC

• WAVEFORMS – CONTROL SECTION –



• WAVEFORMS – CD SECTION –



● SEMICONDUCTOR LOCATION

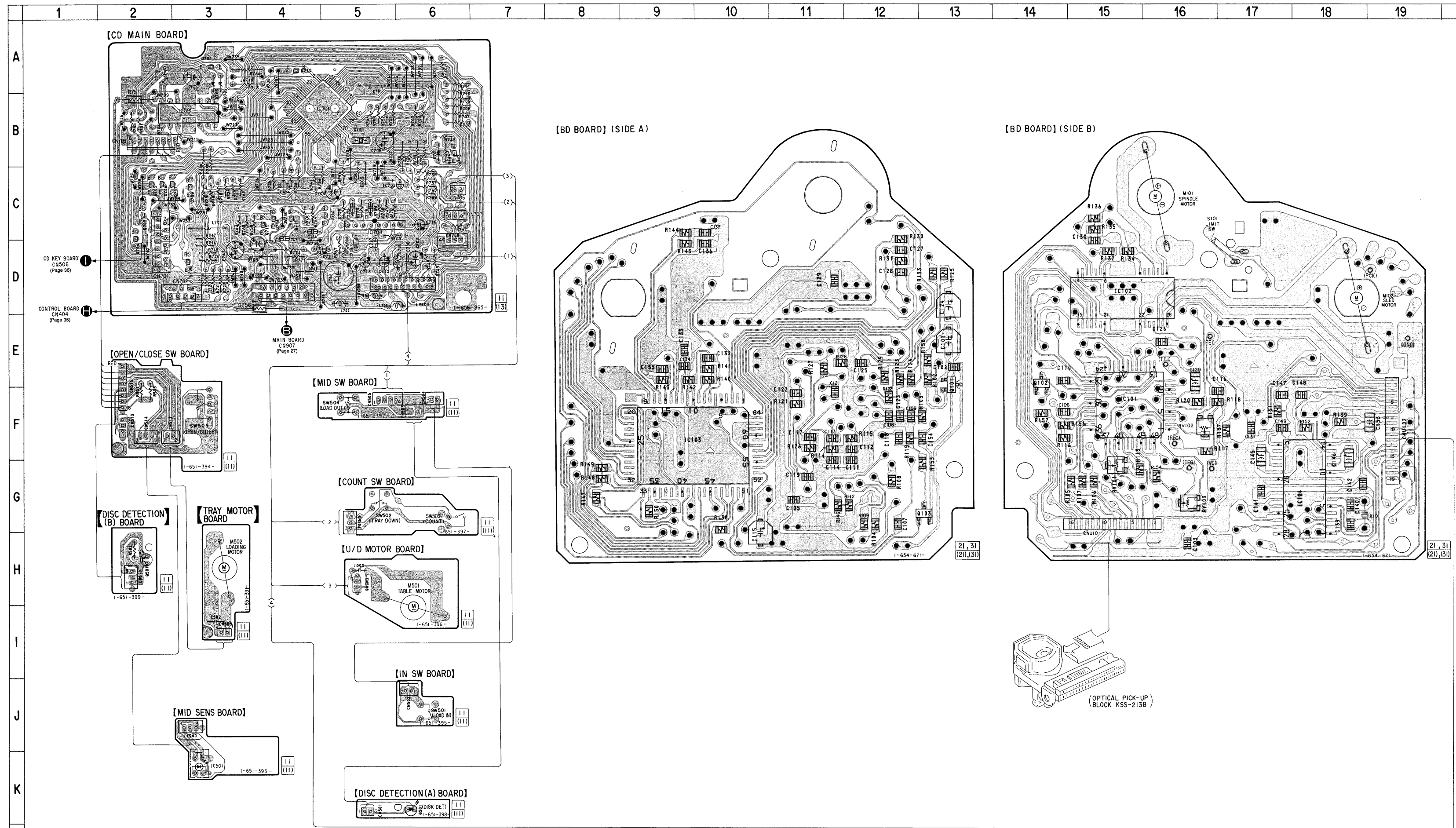
Ref. No.	Location
D501	K - 6
D701	B - 6
D702	A - 3
D703	A - 3
D704	B - 2
D705	D - 4
IC101	F - 15
IC102	D - 15
IC103	F - 9
IC104	G - 18
IC501	K - 3
IC701	B - 4
IC702	C - 6
IC703	B - 3
IC704	C - 5
Q101	E - 13
Q102	E - 14
Q103	G - 13
Q501	H - 2
Q701	A - 3
Q703	C - 2
Q704	D - 2
Q705	C - 2
Q706	C - 2
Q707	C - 3
Q708	D - 3
Q709	C - 3
Q710	A - 4
Q711	C - 4
Q712	C - 5
Q713	B - 6
Q714	C - 5
Q715	C - 5

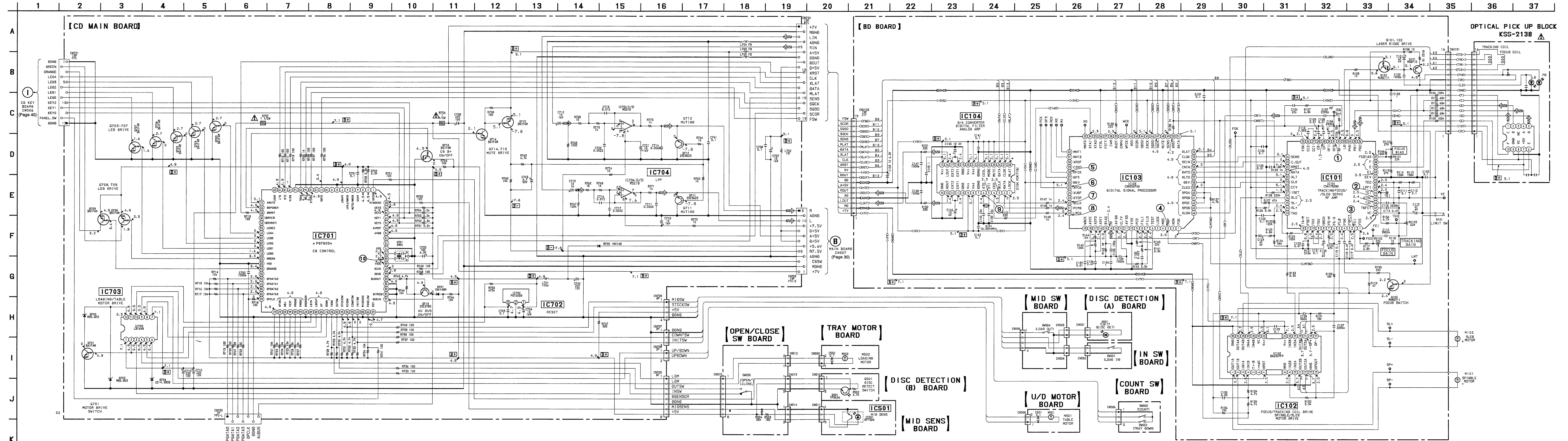
Note:

- : parts extracted from the component side.
- ⊙ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated)

Caution :

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





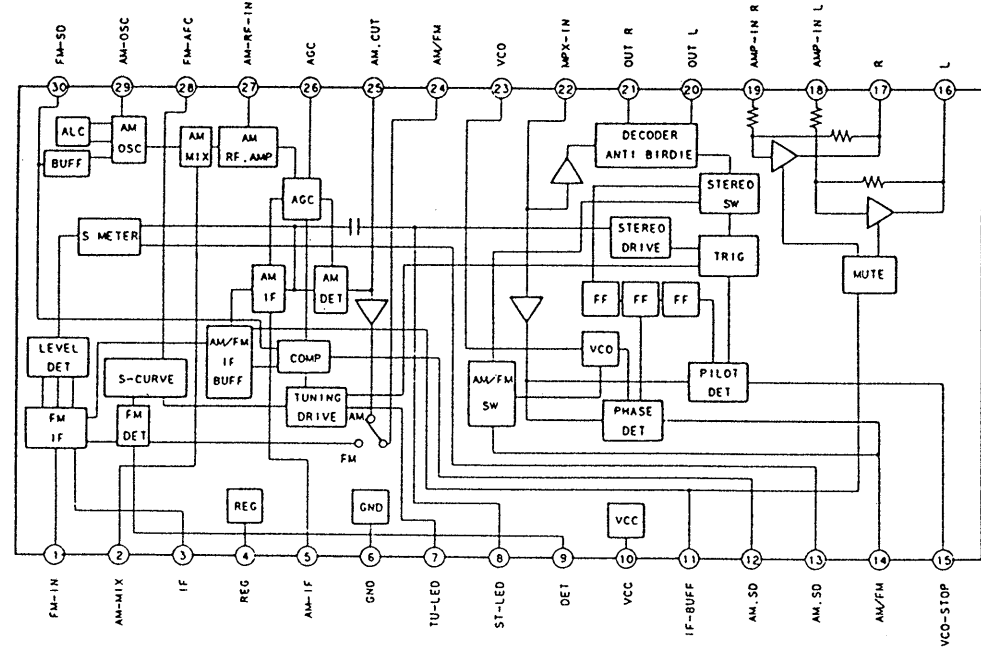
Note :
 • All capacitors are in μF unless otherwise noted. pF: $\mu \mu F$
 50WV or less are not indicated except for electrolytics and tantalums.
 • All resistors are in Ω and $\frac{1}{4}W$ or less unless otherwise specified.
 • Δ : internal component.
 • \square : nonflammable resistor.
Note : The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note :
 • \square : B+ Line
 • \square : adjustment for repair.
 • Voltage and waveforms are dc with respect to ground under no-signal conditions.
 • no mark : PLAY (CD)
 • Voltages are taken with a VOM (Input impedance 10M Ω)
 Voltage variations may be noted due to normal production tolerances.

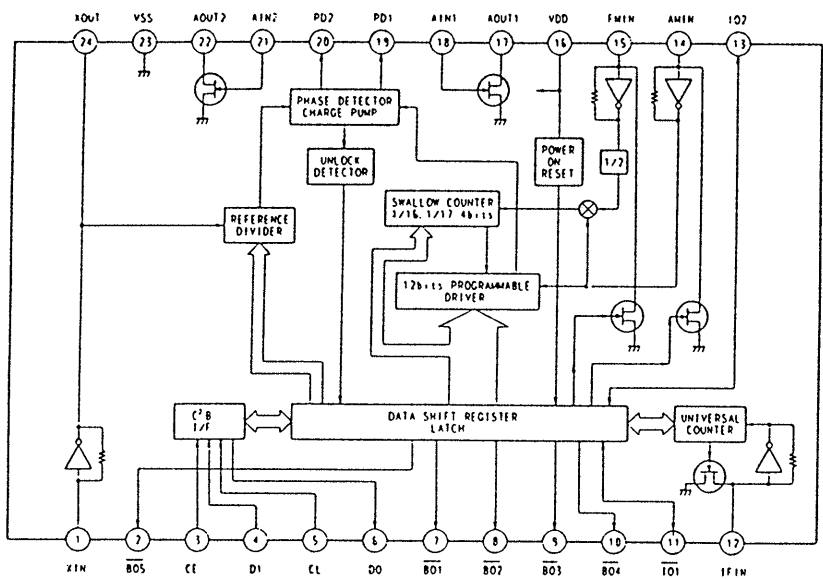
Note :
 • Waveforms are taken with an oscilloscope.
 Voltage variations may be noted due to normal production tolerances.
 • Circled numbers refer to waveforms.
 • Signal path.
 • \Rightarrow : CD

— MAIN SECTION —

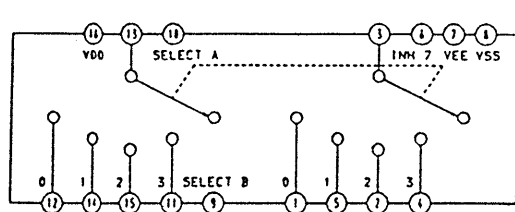
IC1 LA1835



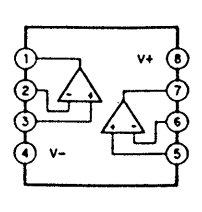
IC51 LC72130



IC800 MC14052BCP

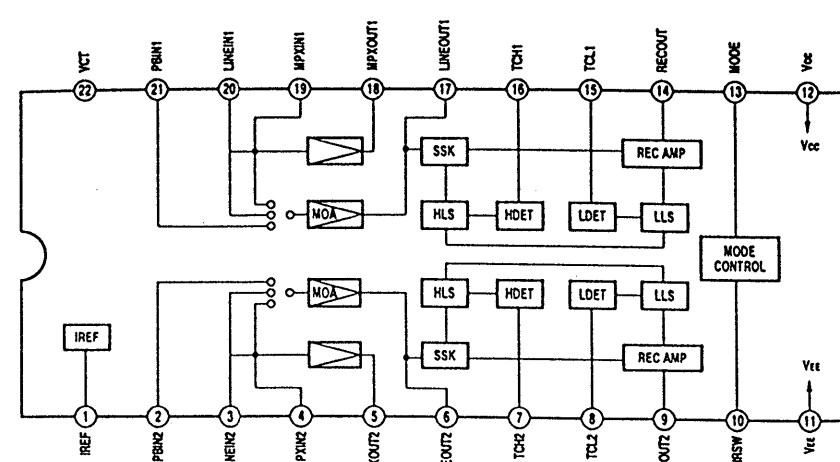


IC802 M5218AP

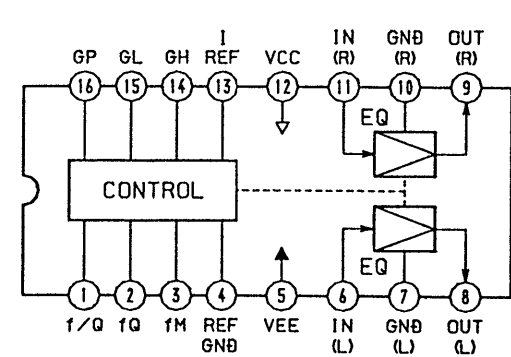


— CONTROL SECTION —

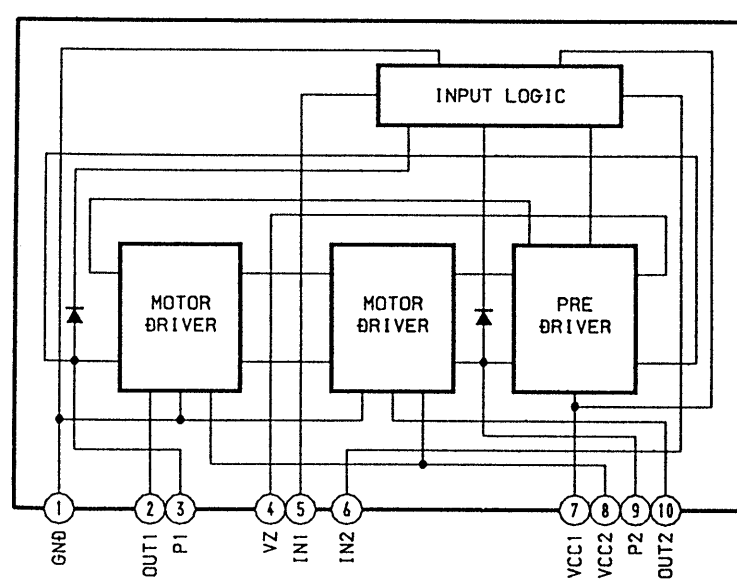
IC202 CXA1561S



IC203 CXA1198AP

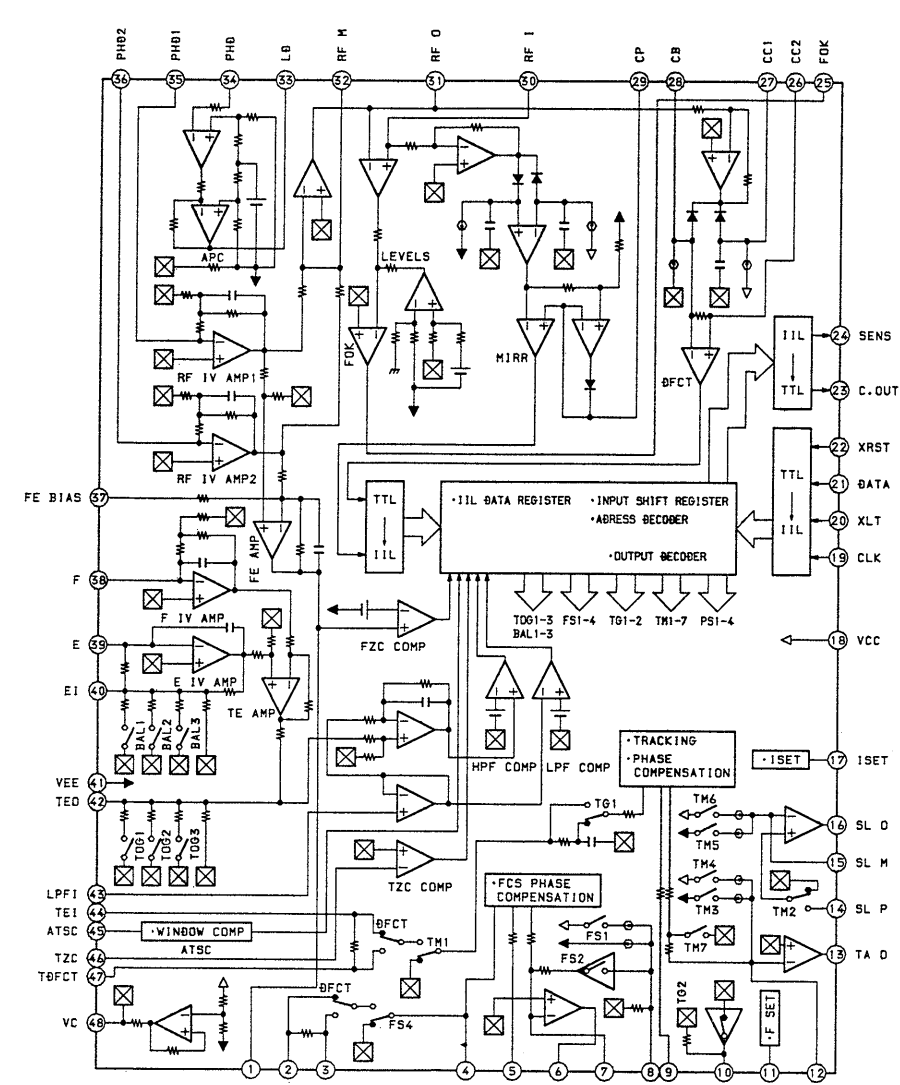


IC302 LB1645N

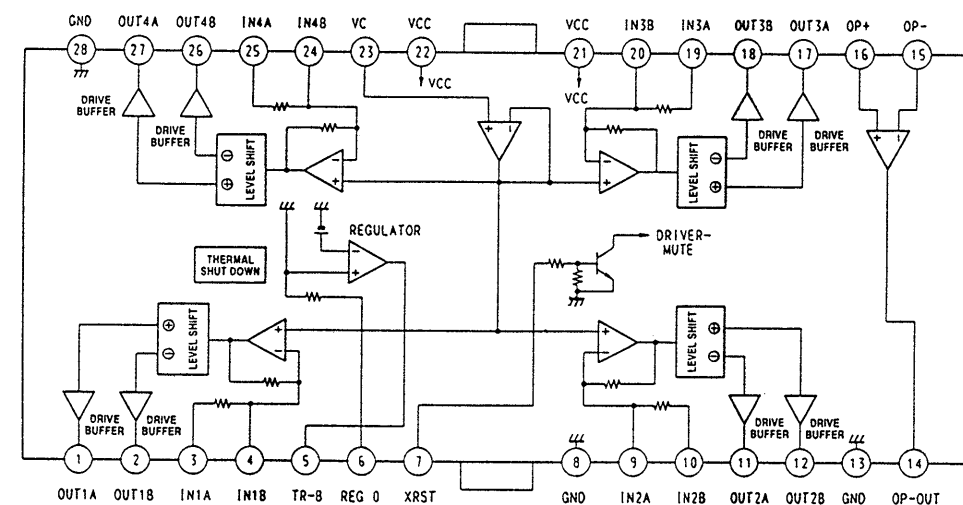


— CD SECTION —

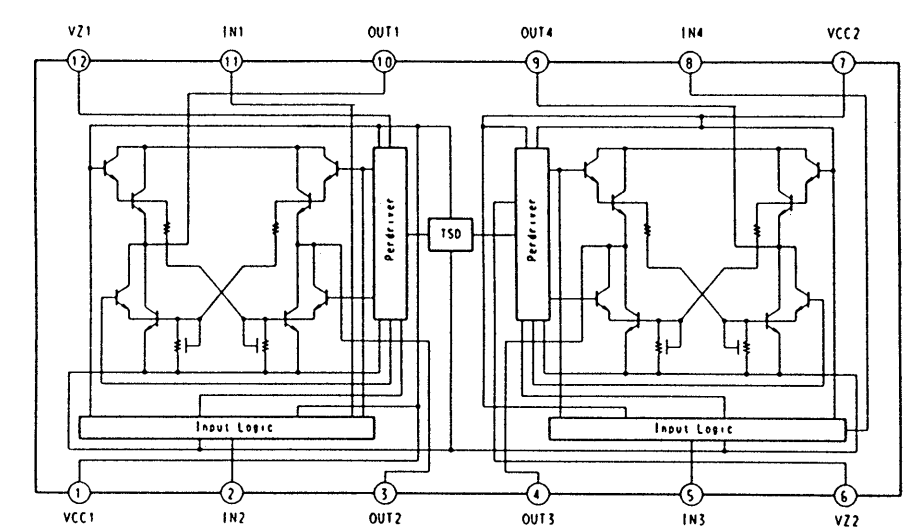
IC101 CXA1782BQ



IC102 BA6397FP



IC703 LB1648



MODE	IN1	IN2	OUT1	OUT2	IN3	IN4	OUT3	OUT4
OPEN	0	0	OPEN	OPEN	0	0	OPEN	OPEN
FORWARD	1	0	H	L	1	0	H	L
RFVERSE	0	1	L	H	0	1	L	H
BRAKE	1	1	L	L	1	1	L	L

SECTION 7 EXPLODED VIEWS

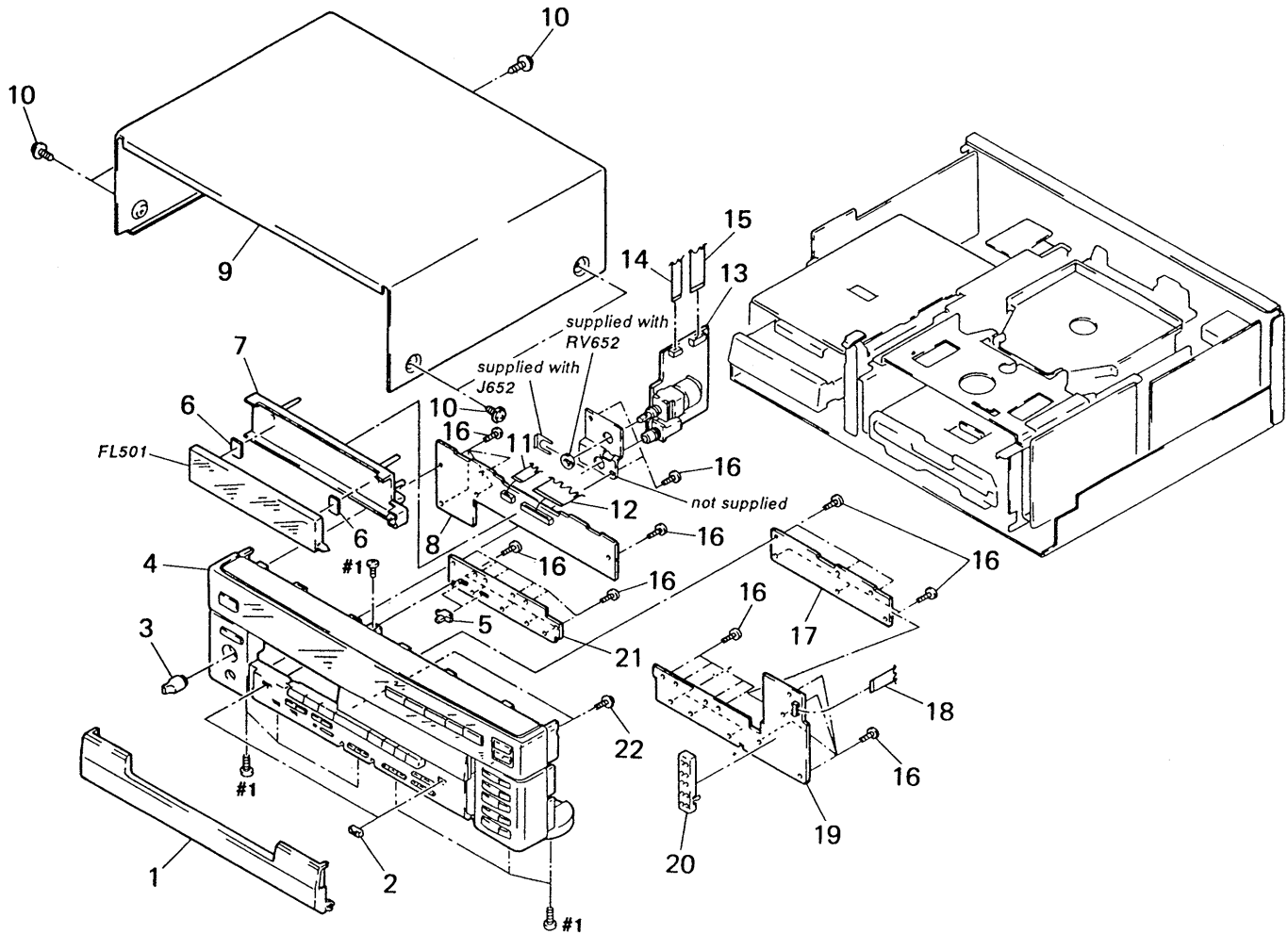
NOTE :

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- 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 this parts list.

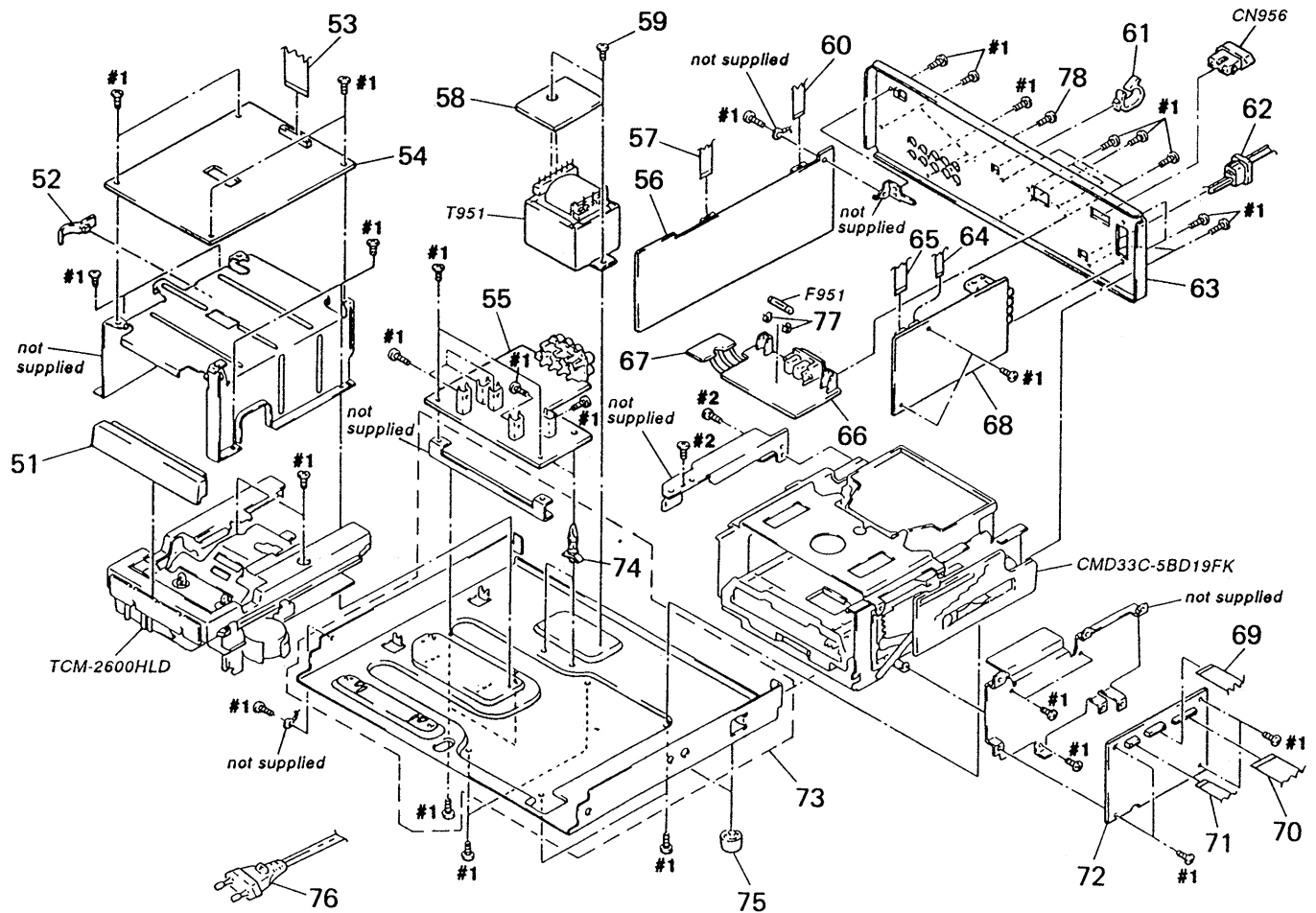
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

7-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4946-091-1	LID (MAIN) ASSY		* 13	1-656-869-11	MOTOR VR BOARD	
2	1-452-419-21	MAGNET		14	1-769-845-11	WIRE (FLAT TYPE) (5 CORE)	
3	4-908-097-21	KNOB		15	1-769-838-11	WIRE (FLAT TYPE) (9 CORE)	
4	X-4946-090-1	PANEL ASSY, FRONT		16	4-951-620-01	SCREW (2.6X8), +BVTP	
5	4-974-445-01	KNOB (TC)		* 17	1-656-867-11	FUNCTION BOARD	
* 6	4-921-941-01	CUSHION (FL)		18	1-769-969-11	WIRE (FLAT TYPE) (13 CORE)	
* 7	4-974-459-01	HOLDER (FL)		* 19	A-4378-137-A	CD KEY BOARD, COMPLETE	
* 8	1-656-866-11	DISPLAY BOARD		* 20	4-974-460-01	HOLDER (LED)	
* 9	4-974-429-11	CASE		* 21	1-656-858-11	TC SW BOARD	
10	3-363-099-01	SCREW (CASE 3 TP2)		22	4-933-134-01	SCREW (+PTPWH M2.6X6)	
11	1-769-910-11	WIRE (FLAT TYPE) (9 CORE)		FL501	1-517-423-11	INDICATOR TUBE, FLUORESCENT	
12	1-773-318-11	WIRE (FLAT TYPE) (31 CORE)					

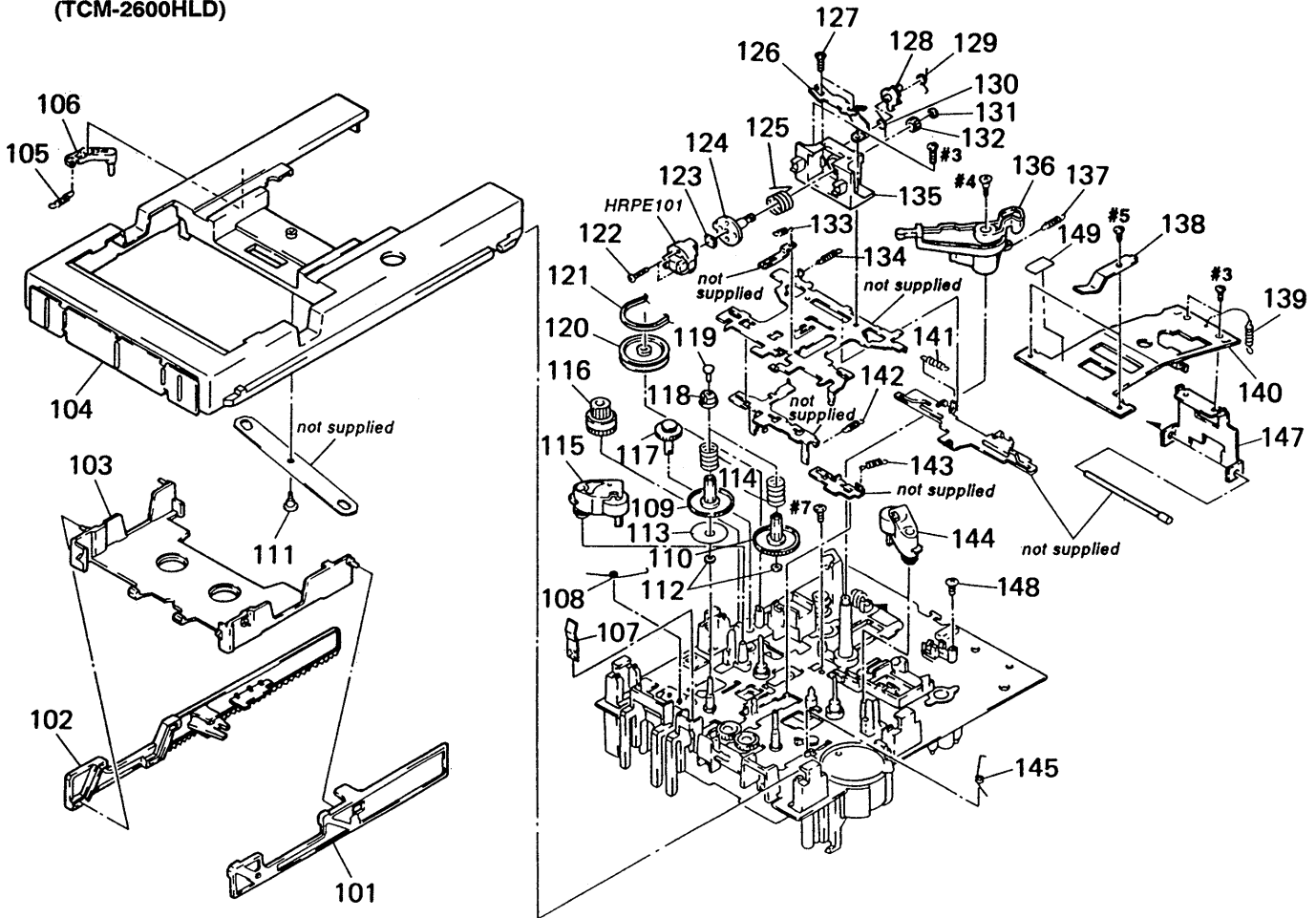
7-2. CHASSIS SECTION



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
51	4-974-449-01	PANEL, LOADING		* 67	1-656-860-11	PRIMARY 2 BOARD	
* 52	3-646-076-00	CLIP (7R), CABLE		* 68	A-4378-140-A	ST MAIN BOARD, COMPLETE	
53	1-773-042-11	WIRE (FLAT TYPE) (17 CORE)		69	1-769-839-11	WIRE (FLAT TYPE) (19 CORE)	
* 54	A-4378-133-A	CONTROL BOARD, COMPLETE		70	1-776-426-11	WIRE (FLAT TYPE) (13 CORE)	
* 55	A-4378-416-A	MAIN BOARD, COMPLETE		71	1-590-486-11	WIRE (FLAT TYPE) (7 CORE)	
* 56	A-4378-131-A	TC MAIN BOARD, COMPLETE		* 72	A-4378-141-A	CD MAIN BOARD, COMPLETE	
57	1-769-906-11	WIRE (FLAT TYPE) (9 CORE)		* 73	A-4361-800-A	CHASSIS ASSY	
* 58	1-656-868-11	SECONDARY BOARD		* 74	3-346-265-31	HOLDER, PC BOARD	
59	4-381-962-11	SCREW +BVTT 4X8 (S)		75	X-4941-228-1	FOOT ASSY	
60	1-769-945-11	WIRE (FLAT TYPE) (11 CORE)		Δ 76	1-575-651-21	CORD, POWER	
* 61	4-949-235-01	HOOK		77	1-533-293-11	FUSE HOLDER	
* 62	3-703-244-00	BUSHING (2104), CORD		78	4-909-982-11	SCREW, TAPPING	
* 63	4-974-461-21	PANEL, BACK		Δ CN956	1-526-794-11	OUTLET, AC (AC OUTLET)	
64	1-769-865-11	WIRE (FLAT TYPE) (5 CORE)		Δ F951	1-532-464-51	FUSE, TIMELUG (T2.5AL/250V)	
65	1-575-783-21	WIRE (FLAT TYPE) (9 CORE)		Δ T951	1-427-971-11	TRANSFORMER, POWER	
* 66	1-656-859-11	PRIMARY 1 BOARD					

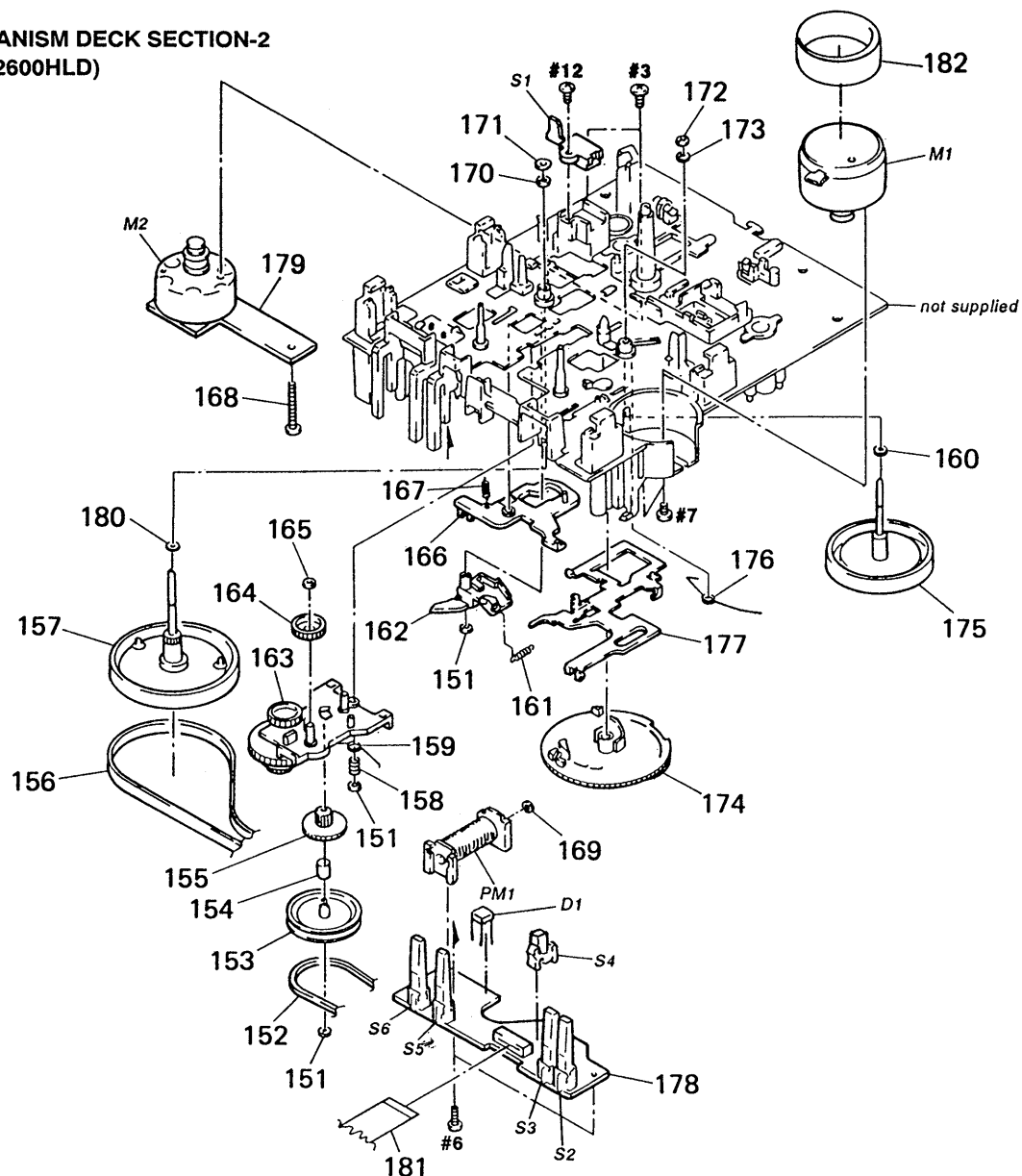
7-3. MECHANISM DECK SECTION-1
(TCM-2600HLD)



Ref. No.	Part No.	Description
101	3-924-861-01	SLIDER (B)
102	3-924-860-01	SLIDER (A)
103	3-924-859-01	TRAY (B)
104	3-924-858-01	TRAY (A)
105	3-924-875-01	SPRING, STOPPER
106	3-924-862-01	STOPPER
107	3-924-833-01	SPRING, PACK
108	3-924-835-01	SPRING (R), BRAKE
109	3-924-811-01	GEAR, REEL
110	X-3370-426-1	GEAR ASSY, REEL
111	3-926-556-01	SCREW (RV)
112	3-924-845-01	WASHER, TEFLON
113	3-924-815-01	SHELL, REFLECT
114	3-924-812-01	SPRING, B.T.
115	A-2004-510-A	ARM (R) ASSY, PINCH
116	3-924-865-01	GEAR (B)
117	3-924-864-01	GEAR (A)
118	3-917-586-01	CAP (A), REEL
119	3-917-587-01	BUSHING (B), REEL
120	3-924-866-01	GEAR, PULLEY
121	3-924-873-01	BELT (LD)
122	3-917-533-01	SCREW (HEAD RVS)
123	3-917-532-01	CLAMP, HEAD WIRE
124	3-924-806-01	PLATE (ASSY), HEAD
125	3-924-855-01	SPRING (B), GROUND

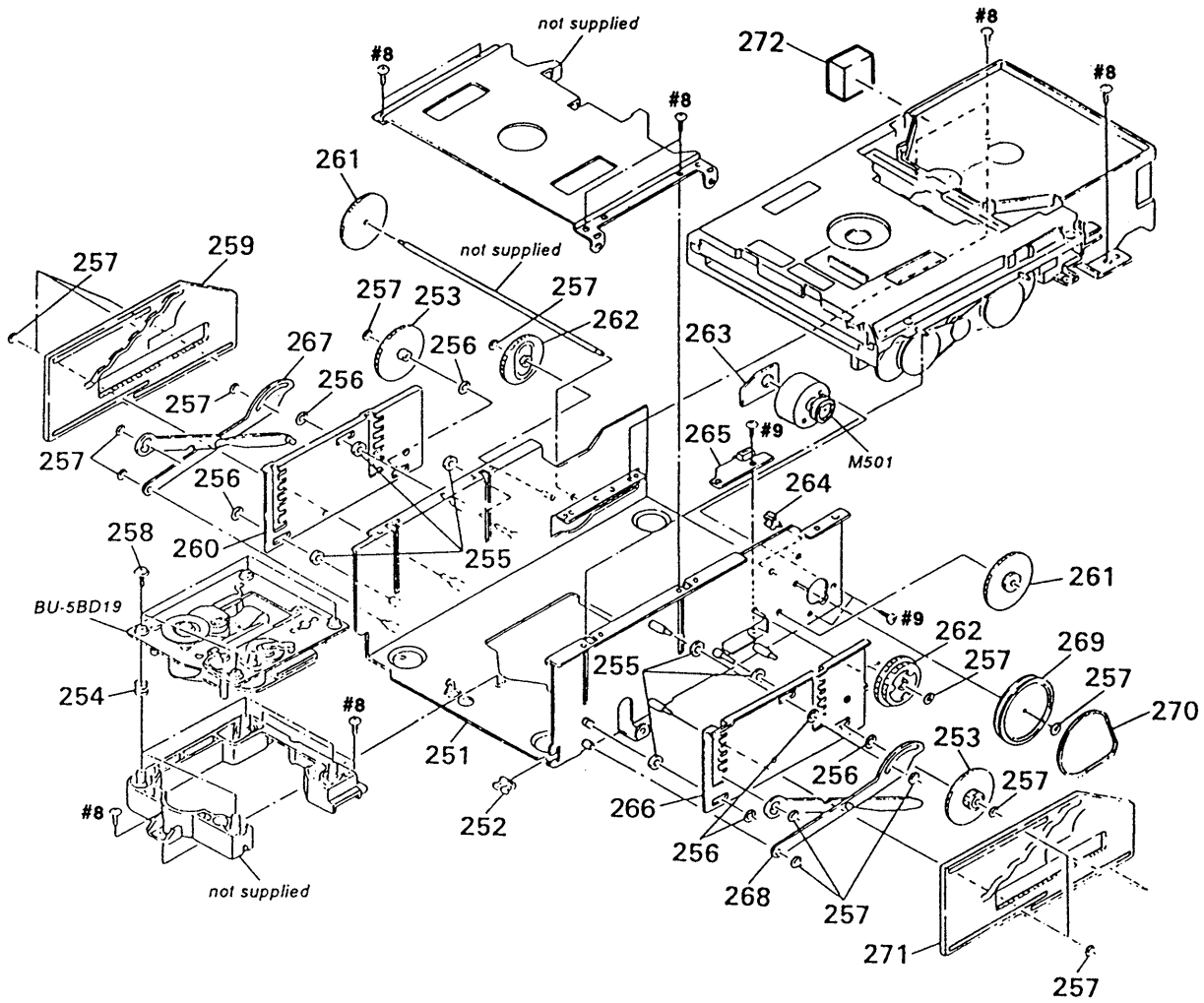
Ref. No.	Part No.	Description	Remark
126	3-924-804-01	SPRING (B), AZIMUTH	
127	3-924-848-01	SCREW, AZIMUTH	
128	3-924-803-01	GEAR, RETURN	
129	3-924-831-01	SPRING, RETURN	
130	3-924-832-01	SPRING, FWD	
131	3-924-846-01	WASHER, POLY-SLIDER	
132	3-924-802-01	GEAR, ROTATION	
133	3-924-828-01	SPRING, SHIFT	
134	3-924-853-01	SPRING, HEAD CHASSIS	
* 135	3-924-801-01	BASE, HEAD	
136	3-924-863-01	GUIDE, CLAMP	
137	3-924-876-01	SPRING, CLAMP GUIDE	
138	3-924-878-01	SPRING, CASSETTE	
139	3-924-874-01	SPRING, CLAMP	
* 140	3-924-869-01	CLAMP (A)	
141	3-924-834-01	SPRING, HEAD RETURN PLATE	
142	3-924-827-01	SPRING, SELECT LEVER	
143	3-924-826-01	SPRING, C/R LEVER	
144	A-2004-511-A	ARM (L) ASSY, PINCH	
145	3-924-836-01	SPRING (L), BRAKE	
* 147	3-924-877-01	CLAMP (B)	
148	3-924-871-01	SCREW (2.6X4)	
149	3-359-469-01	SPACER	
	HRPE1011-500-156-11	HEAD (RECORD/PLAY BACK/ERASE)	

7-4. MECHANISM DECK SECTION-2
(TCM-2600HLD)



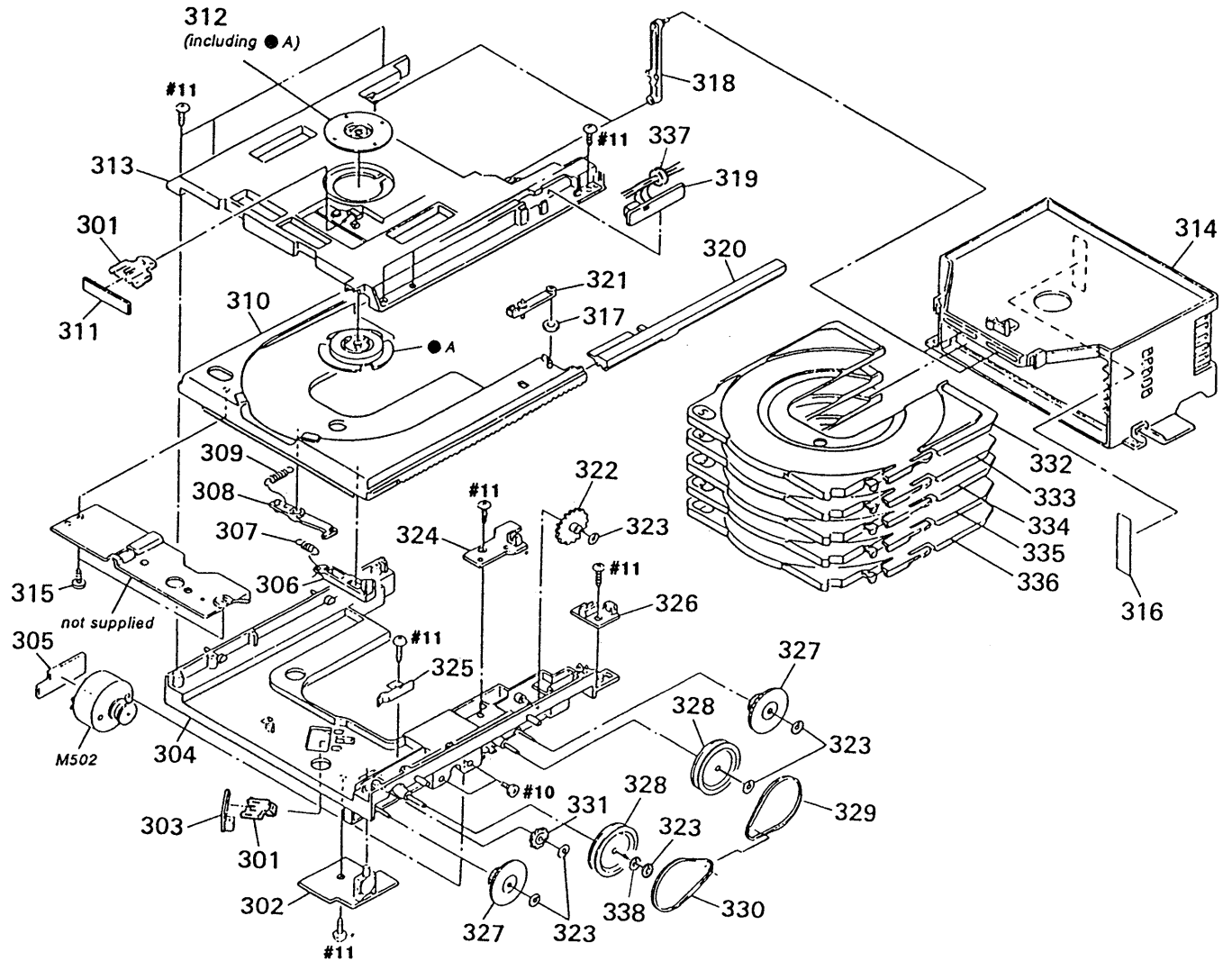
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-321-813-01	WASHER, COTTER POLYETHYLENE		172	3-917-562-01	WASHER, NYLON	
152	3-924-818-01	BELT (H), CLUTCH		173	3-917-559-01	WASHER, POLY-SLIDER	
153	3-924-796-01	PULLEY, IDLER		174	3-924-778-01	GEAR, CAM	
* 154	3-924-850-01	TUBE		175	X-3370-424-1	FLYWHEEL (L) ASSY	
155	3-924-795-01	GEAR, IDLER		176	3-924-819-01	SPRING, SHIFT LEVER	
156	3-924-817-01	BELT (H), DRIVE		177	3-924-776-01	LEVER, SHIFT	
157	X-3370-423-1	FLYWHEEL (R) ASSY		* 178	1-659-215-11	MECHA BOARD	
158	3-924-821-01	SPRING, CLUTCH		* 179	1-659-216-11	LD BOARD	
159	3-924-820-01	SPRING (B), CLUTCH ARM		180	3-701-438-11	WASHER, 2.5	
160	3-701-437-11	WASHER		181	1-773-032-11	WIRE (FLAT TYPE) (15 CORE)	
161	3-924-825-01	SPRING, HEAD CHANGE ARM		* 182	3-926-557-01	PLATE (H), SHIELD	
162	3-924-789-01	ARM, HEAD CHANGE		D1	8-749-011-90	PHOTO INTERRUPTER SG-107LF2-C	
163	A-2004-509-A	ARM ASSY, CLUTCH		M1	X-3370-425-1	MOTOR (H) ASSY	
164	3-924-788-01	GEAR, REW		M2	X-3370-427-1	MOTOR (LD) ASSY	
165	3-917-559-01	WASHER, POLY-SLIDER		PM1	1-454-765-11	SOLENOID, PLUNGER	
166	3-924-777-01	ARM, TRIGGER		S1	1-571-300-21	SWITCH, ROTARY (LIMIT)	
167	3-924-824-01	SPRING, TRIGGER ARM		S2	1-762-569-11	SWITCH, LEAF (FWD REC)	
168	3-894-137-01	SCREW (2.6X25), TAPPING		S3	1-762-569-11	SWITCH, LEAF (CrO2)	
169	3-924-840-01	WASHER, POLY-SLIDER		S4	1-762-570-11	SWITCH, LEAF (PLAY)	
170	3-917-558-01	WASHER, POLY-SLIDER		S5	1-762-569-11	SWITCH, LEAF (METAL)	
171	3-917-561-01	WASHER, NYLON		S6	1-762-569-11	SWITCH, LEAF (REV REC)	

7-5. CD MECHANISM SECTION-1
(CDM33C-5BD19FK)



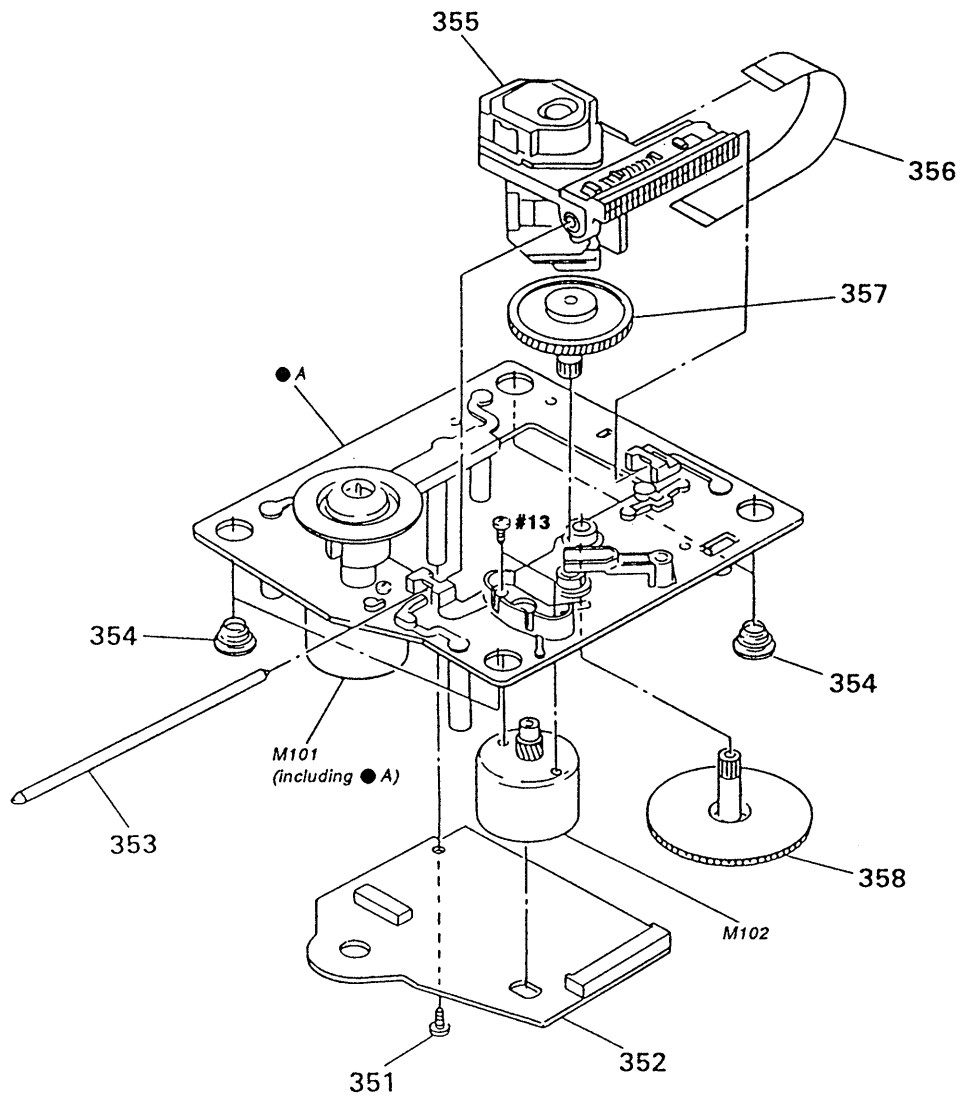
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 251	X-4945-930-1	CHASSIS (B) ASSY, SUB		* 263	1-651-396-11	U/D MOTOR BOARD	
252	3-383-699-01	CLAMP (EDGE)		264	4-962-113-01	CLAMP	
253	4-972-079-02	GEAR (U/D)		* 265	1-651-397-11	COUNT SW BOARD	
254	4-948-503-01	SPRING (BU), COMPRESSION		* 266	X-4945-716-2	SLIDER ASSY	
255	4-965-882-01	SPACER		* 267	X-4945-719-2	LEVER (L) ASSY	
256	4-967-102-01	WASHER, STOPPER		* 268	X-4945-718-2	LEVER (R) ASSY	
257	4-957-798-01	WASHER, STOPPER		269	4-964-487-02	PULLEY (U/D)	
258	4-933-134-01	SCREW (+PTPWH M2.6X6)		270	4-964-477-01	BELT (U/D)	
259	4-972-078-11	CAM (L), GROOVE		271	4-972-077-01	CAM (R), GROOVE	
* 260	X-4945-717-2	SLIDER ASSY		272	4-973-608-01	CUSHION, RUBBER	
261	4-964-466-03	GEAR (JOINT)		M501	A-4660-857-A	MOTOR (U/D) ASSY	
262	4-972-076-02	GEAR (CAM B)					

7-6. CD MECHANISM SECTION-2
(CDM33C-5BD19FK)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	4-964-461-02	HOLDER (SENSOR)		321	X-4944-659-1	LEVER (GOOSENECK) ASSY	
* 302	1-651-394-11	OPEN/CLOSE SW BOARD		322	4-964-463-02	GEAR (TRAY R)	
* 303	1-651-399-11	DISC DETECTION (B) BOARD		323	4-957-798-01	WASHER, STOPPER	
304	X-4945-929-1	BASE (TRAY B) ASSY, FITTING		* 324	1-651-393-11	MID SENS BOARD	
* 305	1-651-391-11	TRAY MOTOR BOARD		325	4-967-196-01	SPRING (CLICK), LEAF	
306	4-964-458-01	SLIDER (CLICK)		* 326	1-651-395-11	IN SW BOARD	
307	4-964-481-01	SPRING (A), TENSION		327	4-964-464-02	GEAR (DECELERATION)	
308	4-964-459-01	LEVER (STOPPER)		328	4-964-465-02	PULLEY (TRAY)	
309	4-964-482-01	SPRING (B), TENSION		329	4-964-476-01	BELT (R)	
310	4-964-453-01	TRAY (MAIN)		330	3-319-030-01	BELT (MIDWAY)	
* 311	1-651-398-11	DISC DETECTION (A) BOARD		331	4-964-462-02	GEAR (TRAY F)	
312	1-452-719-11	MAGNET ASSY		332	X-4945-931-1	TRAY (SUB NO.5) ASSY	
313	4-964-492-01	BASE (MAGNET), FITTING		333	X-4945-928-1	TRAY (SUB NO.4) ASSY	
314	4-964-193-11	STOCKER		334	X-4945-927-1	TRAY (SUB NO.3) ASST	
315	4-933-134-01	SCREW (+PTPWH M2.6X6)		335	X-4945-926-1	TRAY (SUB NO.2) ASSY	
* 316	4-967-859-01	CUSHION		336	X-4944-823-1	TRAY (SUB NO.1) ASSY	
317	3-701-439-21	WASHER		337	3-665-653-01	BAND (TAITON), BINDING	
* 318	4-964-460-03	LEVER (STOCK)		338	3-701-439-01	WASHER	
* 319	1-651-392-11	MID SW BOARD		M502	X-4944-463-1	MOTOR ASSY (TRAY)	
320	4-964-455-01	SLIDER (SELECTION)					

7-7. CD MECHANISM SECTION-3
(BU-5BD19FK)



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
351	4-951-620-01	SCREW (2.6X8), +BVTP		356	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
* 352	A-4673-402-A	BD BOARD, COMPLETE		357	4-917-567-01	GEAR (M)	
353	4-917-565-01	SHAFT, SLED		358	4-917-564-01	GEAR (P), FLATNESS	
354	4-951-940-01	INSULATOR (BU)		M101	X-4917-523-4	MOTOR(SPINDLE)ASSY	
Δ 355	8-848-387-01	OPTICAL PICK-UP KSS-213BA/S-N		M102	X-4917-504-1	MOTOR(SLED)ASSY	

SECTION 8 ELECTRICAL PARTS LIST

BD

NOTE:

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

● SEMICONDUCTORS

In each case, u : μ , for example :
 uA..... : μ A..... , uPA..... : μ PA.....
 uPB..... : μ PB..... , uPC..... : μ PC.....
 uPD..... : μ PD.....

● CAPACITORS

uF : μ F

● COILS

uH : μ H

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4673-402-A	BD BOARD, COMPLETE *****		C136	1-164-005-11	CERAMIC CHIP 0.47uF	25V
		< CAPACITOR >		C137	1-164-232-11	CERAMIC CHIP 0.01uF	50V
C101	1-126-607-11	ELECT CHIP 47uF	20% 4V	C139	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C102	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V	C140	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C103	1-164-346-11	CERAMIC CHIP 1uF	16V	C141	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C105	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C142	1-163-038-91	CERAMIC CHIP 0.1uF	25V
C106	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C145	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C107	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	C146	1-135-201-11	TANTALUM CHIP 10uF	20% 4V
C108	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C147	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C109	1-164-232-11	CERAMIC CHIP 0.01uF	50V	C148	1-163-275-11	CERAMIC CHIP 0.001uF	5% 50V
C110	1-163-989-11	CERAMIC CHIP 0.033uF	10% 25V	C149	1-164-346-11	CERAMIC CHIP 1uF	16V
C111	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C153	1-135-259-11	TANTAL. CHIP 10uF	20% 6.3V
C112	1-163-038-91	CERAMIC CHIP 0.1uF	25V	C154	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
C113	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V			< CONNECTOR >	
C114	1-164-005-11	CERAMIC CHIP 0.47uF	25V	CNU101	1-770-014-11	CONNECTOR, FFC/FPC 16P	
C115	1-126-607-11	ELECT CHIP 47uF	20% 4V	CNU102	1-770-013-11	CONNECTOR, FFC/FPC 19P	
C116	1-163-016-00	CERAMIC CHIP 0.0039uF	10% 50V			< IC >	
C117	1-164-005-11	CERAMIC CHIP 0.47uF	25V	IC101	8-752-069-56	IC CXA1782BQ	
C118	1-107-823-11	CERAMIC CHIP 0.47uF	10% 16V	IC102	8-759-291-06	IC BA6397FP	
C119	1-163-038-91	CERAMIC CHIP 0.1uF	25V	IC103	8-752-372-94	IC CXD2507AQ	
C120	1-135-201-11	TANTALUM CHIP 10uF	20% 4V	IC104	8-759-185-29	IC PCM1710U-B	
C121	1-163-038-91	CERAMIC CHIP 0.1uF	25V			< TRANSISTOR >	
C122	1-164-232-11	CERAMIC CHIP 0.01uF	50V	Q101	8-729-010-08	TRANSISTOR MSB710-R	
C123	1-163-038-91	CERAMIC CHIP 0.1uF	25V	Q102	8-729-424-08	TRANSISTOR UN2111	
C124	1-126-607-11	ELECT CHIP 47uF	20% 4V	Q103	8-729-421-22	TRANSISTOR UN2211	
C125	1-164-232-11	CERAMIC CHIP 0.01uF	50V			< RESISTOR >	
C126	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R102	1-216-001-00	METAL CHIP 10	5% 1/10W
C127	1-164-695-11	CERAMIC CHIP 0.0022uF	5% 50V	R103	1-216-049-91	METAL GLAZE 1K	5% 1/10W
C128	1-163-135-00	CERAMIC CHIP 560PF	5% 50V	R104	1-216-097-91	METAL GLAZE 100K	5% 1/10W
C129	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R105	1-216-093-00	METAL CHIP 68K	5% 1/10W
C130	1-164-336-11	CERAMIC CHIP 0.33uF	25V	R106	1-216-093-00	METAL CHIP 68K	5% 1/10W
C131	1-163-038-91	CERAMIC CHIP 0.1uF	25V	R107	1-216-093-00	METAL CHIP 68K	5% 1/10W
C132	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	R108	1-216-093-00	METAL CHIP 68K	5% 1/10W
C133	1-163-145-00	CERAMIC CHIP 0.0015uF	5% 50V				
C134	1-164-346-11	CERAMIC CHIP 1uF	16V				
C135	1-163-251-11	CERAMIC CHIP 100PF	5% 50V				

BD CD KEY

Ref. No.	Part No.	Description	Remark
R109	1-216-097-91	METAL GLAZE	100K 5% 1/10W
R112	1-216-083-00	METAL CHIP	27K 5% 1/10W
R113	1-216-083-00	METAL CHIP	27K 5% 1/10W
R114	1-216-101-00	METAL CHIP	150K 5% 1/10W
R115	1-216-101-00	METAL CHIP	150K 5% 1/10W
R116	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R117	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R118	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R119	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R120	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R121	1-216-114-00	METAL GLAZE	510K 5% 1/10W
R122	1-216-097-91	METAL GLAZE	100K 5% 1/10W
R123	1-216-099-00	METAL CHIP	120K 5% 1/10W
R124	1-216-091-00	METAL CHIP	56K 5% 1/10W
R125	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R126	1-216-063-91	METAL GLAZE	3.9K 5% 1/10W
R127	1-216-089-91	METAL GLAZE	47K 5% 1/10W
R128	1-216-105-91	METAL GLAZE	220K 5% 1/10W
R129	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R130	1-216-079-00	METAL CHIP	18K 5% 1/10W
R131	1-216-079-00	METAL CHIP	18K 5% 1/10W
R132	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R133	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R134	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R135	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R136	1-216-073-00	METAL CHIP	10K 5% 1/10W
R137	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R138	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R139	1-216-033-00	METAL CHIP	220 5% 1/10W
R140	1-216-081-00	METAL CHIP	22K 5% 1/10W
R141	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R142	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
R143	1-216-121-91	METAL GLAZE	1M 5% 1/10W
R144	1-216-073-00	METAL CHIP	10K 5% 1/10W
R145	1-216-097-91	METAL GLAZE	100K 5% 1/10W
R146	1-216-097-91	METAL GLAZE	100K 5% 1/10W
R147	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R148	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R149	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R150	1-216-037-00	METAL CHIP	330 5% 1/10W
R151	1-216-037-00	METAL CHIP	330 5% 1/10W
R152	1-216-037-00	METAL CHIP	330 5% 1/10W
R153	1-216-082-00	METAL GLAZE	24K 5% 1/10W
R154	1-216-065-00	METAL CHIP	4.7K 5% 1/10W
R156	1-216-085-00	METAL CHIP	33K 5% 1/10W
R157	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
R158	1-216-001-00	METAL CHIP	10 5% 1/10W
< VARIABLE RESISTOR >			
RV101	1-241-396-11	RES, ADJ, METAL GLAZE 22K(FOCUS BIAS)	
RV102	1-241-396-11	RES, ADJ, METAL GLAZE 22K(FOCUS GAIN)	
RV103	1-241-396-11	RES, ADJ, METAL GLAZE 22K(TRACKING GAIN)	

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF(LIMIT)	
< VIBRATOR >			
X101	1-579-280-11	VIBRATOR, CRYSTAL(16.9344MHz)	

*	A-4378-137-A	CD KEY BOARD, COMPLETE	*****
*	4-974-460-01	HOLDER (LED)	
< CONNECTOR >			
* CN505	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P	
* CN506	1-568-856-11	SOCKET, CONNECTOR 13P	
< DIODE >			
D508	8-719-046-43	LED SEL5421E-TP15(DISC 5)	
D509	8-719-046-43	LED SEL5421E-TP15(DISC 4)	
D510	8-719-046-43	LED SEL5421E-TP15(DISC 3)	
D511	8-719-046-43	LED SEL5421E-TP15(DISC 2)	
D512	8-719-046-43	LED SEL5421E-TP15(DISC 1)	
D513	8-719-046-39	LED SEL5821A-TH15(DISC 5)	
D514	8-719-046-39	LED SEL5821A-TH15(DISC 4)	
D515	8-719-046-39	LED SEL5821A-TH15(DISC 3)	
D516	8-719-046-39	LED SEL5821A-TH15(DISC 2)	
D517	8-719-046-39	LED SEL5821A-TH15(DISC 1)	
< RESISTOR >			
R520	1-249-425-11	CARBON	4.7K 5% 1/4W
R527	1-249-413-11	CARBON	470 5% 1/4W
R528	1-249-415-11	CARBON	680 5% 1/4W
R529	1-249-417-11	CARBON	1K 5% 1/4W
R530	1-249-419-11	CARBON	1.5K 5% 1/4W
R531	1-249-421-11	CARBON	2.2K 5% 1/4W
R532	1-249-425-11	CARBON	4.7K 5% 1/4W
R533	1-249-413-11	CARBON	470 5% 1/4W
R534	1-249-415-11	CARBON	680 5% 1/4W
R535	1-249-417-11	CARBON	1K 5% 1/4W
R536	1-249-419-11	CARBON	1.5K 5% 1/4W
R537	1-249-421-11	CARBON	2.2K 5% 1/4W
R538	1-249-425-11	CARBON	4.7K 5% 1/4W
R539	1-249-413-11	CARBON	470 5% 1/4W
R540	1-249-415-11	CARBON	680 5% 1/4W
R541	1-249-417-11	CARBON	1K 5% 1/4W
R542	1-249-419-11	CARBON	1.5K 5% 1/4W
R543	1-249-421-11	CARBON	2.2K 5% 1/4W
R544	1-249-425-11	CARBON	4.7K 5% 1/4W
R545	1-247-807-31	CARBON	100 5% 1/4W
R546	1-247-807-31	CARBON	100 5% 1/4W
R547	1-247-807-31	CARBON	100 5% 1/4W
R548	1-247-807-31	CARBON	100 5% 1/4W

Ref. No.	Part No.	Description	Remark
R549	1-247-807-31	CARBON 100 5%	1/4W
R550	1-247-807-31	CARBON 100 5%	1/4W
R551	1-247-807-31	CARBON 100 5%	1/4W
R552	1-247-807-31	CARBON 100 5%	1/4W
R553	1-247-807-31	CARBON 100 5%	1/4W
R554	1-247-807-31	CARBON 100 5%	1/4W
< SWITCH >			
S506	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S507	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S509	1-554-303-21	SWITCH, TACTILE (▷)	
S510	1-554-303-21	SWITCH, TACTILE (■)	
S511	1-554-303-21	SWITCH, TACTILE (■)	
S512	1-554-303-21	SWITCH, TACTILE (CONTUNUE)	
S513	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S514	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S515	1-554-303-21	SWITCH, TACTILE (EDIT)	
S516	1-554-303-21	SWITCH, TACTILE (◀◀◀AMS◀◀◀)	
S517	1-554-303-21	SWITCH, TACTILE (CHECK)	
S518	1-554-303-21	SWITCH, TACTILE (TIME)	
S519	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S520	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S521	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S522	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S523	1-554-303-21	SWITCH, TACTILE (AMS▷▷▷▶▶▶)	
S524	1-554-303-21	SWITCH, TACTILE (△)	
S525	1-554-303-21	SWITCH, TACTILE (△)	
S526	1-554-303-21	SWITCH, TACTILE (△)	
S527	1-554-303-21	SWITCH, TACTILE (△)	
S528	1-554-303-21	SWITCH, TACTILE (△)	
S529	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S530	1-572-126-11	SWITCH, PUSH (1 KEY) (CD DOOR)	

*	A-4378-141-A	CD MAIN BOARD, COMPLETE	*****
< CAPACITOR >			
C701	1-164-159-11	CERAMIC 0.1uF	50V
C702	1-162-294-31	CERAMIC 0.001uF 10%	50V
C703	1-164-159-11	CERAMIC 0.1uF	50V
C704	1-126-157-11	ELECT 10uF 20%	16V
C705	1-126-177-11	ELECT 100uF 20%	10V
C707	1-126-157-11	ELECT 10uF 20%	16V
C708	1-164-159-11	CERAMIC 0.1uF	50V
C709	1-126-941-11	ELECT 470uF 20%	16V
C710	1-126-176-11	ELECT 220uF 20%	10V
C711	1-130-481-00	MYLAR 0.0068uF 5%	50V
C712	1-126-157-11	ELECT 10uF 20%	16V
C713	1-126-157-11	ELECT 10uF 20%	16V
C714	1-130-481-00	MYLAR 0.0068uF 5%	50V
C715	1-126-176-11	ELECT 220uF 20%	10V
C716	1-136-154-00	FILM 0.012uF 5%	50V

Ref. No.	Part No.	Description	Remark
C717	1-137-366-11	FILM 0.0022uF 5%	50V
C718	1-126-157-11	ELECT 10uF 20%	16V
C719	1-136-154-00	FILM 0.012uF 5%	50V
C720	1-137-366-11	FILM 0.0022uF 5%	50V
C721	1-126-157-11	ELECT 10uF 20%	16V
C741	1-164-159-11	CERAMIC 0.1uF	50V
C742	1-126-176-11	ELECT 220uF 20%	10V
C743	1-126-963-11	ELECT 4.7uF 20%	50V
< CONNECTOR >			
* CN701	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN702	1-568-826-11	SOCKET, CONNECTOR 7P	
* CN703	1-568-832-11	SOCKET, CONNECTOR 13P	
CN704	1-770-067-11	CONNECTOR, FFC/FPC 19P	
* CN705	1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P	
* CN706	1-568-951-11	PIN, CONNECTOR 2P	
CN707	1-506-468-11	PIN, CONNECTOR 3P	
* CN708	1-564-706-21	PIN, CONNECTOR (SMALL TYPE) 4P	
< DIODE >			
D701	8-719-987-63	DIODE 1N4148M	
D702	8-719-010-41	DIODE UZ-5.6BSA	
D703	8-719-109-98	DIODE RD6.8ES-B3	
D704	8-719-010-28	DIODE UZ-4.3BSA	
D705	8-719-987-63	DIODE 1N4148M	
< IC >			
IC701	8-759-342-95	IC uPD78054GC-088-3B9	
IC702	8-759-165-81	IC PST600D-T	
IC703	8-759-277-68	IC LB1648	
IC704	8-759-634-50	IC M5218AL	
< COIL >			
L701	1-408-080-00	INDUCTOR 100uH	
L702	1-410-397-21	FERRITE BEAD INDUCTOR	
L703	1-410-397-21	FERRITE BEAD INDUCTOR	
L704	1-410-397-21	FERRITE BEAD INDUCTOR	
L705	1-410-397-21	FERRITE BEAD INDUCTOR	
< TRANSISTOR >			
Q701	8-729-900-36	TRANSISTOR DTC124ES	
Q703	8-729-900-36	TRANSISTOR DTC124ES	
Q704	8-729-900-36	TRANSISTOR DTC124ES	
Q705	8-729-900-36	TRANSISTOR DTC124ES	
Q706	8-729-900-36	TRANSISTOR DTC124ES	
Q707	8-729-900-36	TRANSISTOR DTC124ES	
Q708	8-729-900-63	TRANSISTOR DTA124ES	
Q709	8-729-900-63	TRANSISTOR DTA124ES	
Q710	8-729-900-36	TRANSISTOR DTC124ES	
Q711	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q712	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q713	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q714	8-729-900-36	TRANSISTOR DTC124ES	

CD MAIN

CONTROL

Ref. No.	Part No.	Description	Remark
Q715	8-729-900-63	TRANSISTOR DTA124ES	
< RESISTOR >			
R701	1-247-807-31	CARBON 100	5% 1/4W
R702	1-249-423-11	CARBON 3.3K	5% 1/4W
R703	1-249-423-11	CARBON 3.3K	5% 1/4W
R706	1-247-807-31	CARBON 100	5% 1/4W
R707	1-247-807-31	CARBON 100	5% 1/4W
R708	1-247-807-31	CARBON 100	5% 1/4W
R709	1-249-417-11	CARBON 1K	5% 1/4W
R710	1-247-807-31	CARBON 100	5% 1/4W
R711	1-247-807-31	CARBON 100	5% 1/4W
R712	1-247-807-31	CARBON 100	5% 1/4W
R713	1-247-807-31	CARBON 100	5% 1/4W
R714	1-249-429-11	CARBON 10K	5% 1/4W
R715	1-249-429-11	CARBON 10K	5% 1/4W
R716	1-249-429-11	CARBON 10K	5% 1/4W
R717	1-249-429-11	CARBON 10K	5% 1/4W
R718	1-247-807-31	CARBON 100	5% 1/4W
R719	1-247-807-31	CARBON 100	5% 1/4W
R720	1-247-807-31	CARBON 100	5% 1/4W
R721	1-247-807-31	CARBON 100	5% 1/4W
R722	1-247-807-31	CARBON 100	5% 1/4W
R723	1-249-429-11	CARBON 10K	5% 1/4W
R724	1-249-429-11	CARBON 10K	5% 1/4W
R725	1-249-429-11	CARBON 10K	5% 1/4W
R726	1-249-429-11	CARBON 10K	5% 1/4W
R727	1-249-429-11	CARBON 10K	5% 1/4W
R728	1-249-425-11	CARBON 4.7K	5% 1/4W
R729	1-249-425-11	CARBON 4.7K	5% 1/4W
R730	1-249-425-11	CARBON 4.7K	5% 1/4W
R731	1-249-425-11	CARBON 4.7K	5% 1/4W
R732	1-249-425-11	CARBON 4.7K	5% 1/4W
R733	1-249-425-11	CARBON 4.7K	5% 1/4W
R734	1-249-429-11	CARBON 10K	5% 1/4W
R735	1-247-807-31	CARBON 100	5% 1/4W
R736	1-247-807-31	CARBON 100	5% 1/4W
R737	1-247-807-31	CARBON 100	5% 1/4W
R738	1-247-807-31	CARBON 100	5% 1/4W
R739	1-247-807-31	CARBON 100	5% 1/4W
R740	1-247-807-31	CARBON 100	5% 1/4W
R741	1-247-807-31	CARBON 100	5% 1/4W
R743	1-249-425-11	CARBON 4.7K	5% 1/4W
R744	1-249-429-11	CARBON 10K	5% 1/4W
R746	1-249-429-11	CARBON 10K	5% 1/4W
R747	1-249-412-11	CARBON 390	5% 1/4W
R748	1-247-807-31	CARBON 100	5% 1/4W
R749	1-247-807-31	CARBON 100	5% 1/4W
R750	1-247-895-00	CARBON 470K	5% 1/4W
R751	1-249-423-11	CARBON 3.3K	5% 1/4W
R752	1-249-423-11	CARBON 3.3K	5% 1/4W
R753	1-249-423-11	CARBON 3.3K	5% 1/4W

Ref. No.	Part No.	Description	Remark
R754	1-249-423-11	CARBON 3.3K	5% 1/4W
R755	1-247-807-31	CARBON 100	5% 1/4W
△R756	1-249-474-11	CARBON 1	5% 1/2W F
△R757	1-249-474-11	CARBON 1	5% 1/2W F
R758	1-249-429-11	CARBON 10K	5% 1/4W
R759	1-249-417-11	CARBON 1K	5% 1/4W
R760	1-249-429-11	CARBON 10K	5% 1/4W
R761	1-249-429-11	CARBON 10K	5% 1/4W
R762	1-249-417-11	CARBON 1K	5% 1/4W
R763	1-249-425-11	CARBON 4.7K	5% 1/4W
R764	1-249-417-11	CARBON 1K	5% 1/4W
R765	1-249-417-11	CARBON 1K	5% 1/4W
R766	1-249-429-11	CARBON 10K	5% 1/4W
R767	1-249-441-11	CARBON 100K	5% 1/4W
R768	1-249-441-11	CARBON 100K	5% 1/4W
R769	1-249-417-11	CARBON 1K	5% 1/4W
R770	1-249-393-11	CARBON 10	5% 1/4W
R771	1-249-417-11	CARBON 1K	5% 1/4W
R773	1-249-417-11	CARBON 1K	5% 1/4W
R774	1-249-393-11	CARBON 10	5% 1/4W
R775	1-249-417-11	CARBON 1K	5% 1/4W
< VIBRATOR >			
X701	1-577-358-21	VIBRATOR, CERAMIC (4 MHz)	

*	A-4378-133-A	CONTROL BOARD, COMPLETE	

< CAPACITOR >			
C301	1-164-159-11	CERAMIC 0.1uF	50V
C302	1-164-159-11	CERAMIC 0.1uF	50V
C303	1-126-942-61	ELECT 1000uF	20% 16V
C304	1-164-159-11	CERAMIC 0.1uF	50V
C305	1-162-282-31	CERAMIC 100PF	10% 50V
C309	1-124-907-11	ELECT 10uF	20% 50V
C310	1-124-907-11	ELECT 10uF	20% 50V
C311	1-164-159-11	CERAMIC 0.1uF	50V
C312	1-164-159-11	CERAMIC 0.1uF	50V
C313	1-164-159-11	CERAMIC 0.1uF	50V
C314	1-124-471-00	ELECT 1000uF	20% 6.3V
C315	1-124-903-11	ELECT 1uF	20% 50V
C316	1-126-942-61	ELECT 1000uF	20% 16V
C317	1-164-159-11	CERAMIC 0.1uF	50V
C318	1-162-282-31	CERAMIC 100PF	10% 50V
C401	1-104-664-11	ELECT 47uF	20% 16V
C402	1-104-905-11	CAPACITOR 0.22F	5.5V
C403	1-124-907-11	ELECT 10uF	20% 50V
C404	1-124-463-00	ELECT 0.1uF	20% 50V
C405	1-136-173-00	FILM 0.47uF	5% 50V
C406	1-164-159-11	CERAMIC 0.1uF	50V
C407	1-164-159-11	CERAMIC 0.1uF	50V

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C408	1-164-159-11	CERAMIC	0.1uF 50V	Q305	8-729-422-57	TRANSISTOR UN4111	
C409	1-164-159-11	CERAMIC	0.1uF 50V	Q306	8-729-422-57	TRANSISTOR UN4111	
C410	1-164-159-11	CERAMIC	0.1uF 50V	Q307	8-729-422-57	TRANSISTOR UN4111	
C411	1-164-159-11	CERAMIC	0.1uF 50V	Q308	8-729-422-57	TRANSISTOR UN4111	
C412	1-164-159-11	CERAMIC	0.1uF 50V	Q309	8-729-900-80	TRANSISTOR DTC114ES	
< CONNECTOR >				Q310	8-729-119-78	TRANSISTOR 2SC403SP-51	
* CN300	1-568-836-11	SOCKET, CONNECTOR 17P		Q311	8-729-422-57	TRANSISTOR UN4111	
* CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P		Q312	8-729-422-57	TRANSISTOR UN4111	
* CN302	1-568-834-11	SOCKET, CONNECTOR 15P		Q313	8-729-422-57	TRANSISTOR UN4111	
* CN303	1-568-828-11	SOCKET, CONNECTOR 9P		Q401	8-729-119-78	TRANSISTOR 2SC403SP-51	
* CN304	1-568-954-11	PIN, CONNECTOR 5P		Q402	8-729-119-78	TRANSISTOR 2SC403SP-51	
* CN305	1-564-505-11	PLUG, CONNECTOR 2P		Q403	8-729-422-57	TRANSISTOR UN4111	
* CN401	1-568-845-11	SOCKET, CONNECTOR 31P		Q404	8-729-422-57	TRANSISTOR UN4111	
* CN402	1-568-828-11	SOCKET, CONNECTOR 9P		< RESISTOR >			
* CN403	1-568-937-11	PIN, CONNECTOR 10P		△R301	1-212-958-00	FUSIBLE	10 5% 1/2W F
* CN404	1-568-826-11	SOCKET, CONNECTOR 7P		R302	1-249-429-11	CARBON	10K 5% 1/4W
* CN405	1-568-828-11	SOCKET, CONNECTOR 9P		R303	1-249-415-11	CARBON	680 5% 1/4W
* CN406	1-568-824-11	SOCKET, CONNECTOR 5P		R304	1-249-441-11	CARBON	100K 5% 1/4W
< DIODE >				R305	1-249-415-11	CARBON	680 5% 1/4W
D300	8-719-024-99	DIODE 11ES2-NTA2B		R306	1-249-441-11	CARBON	100K 5% 1/4W
D301	8-719-933-50	DIODE HZS7C2L		R307	1-247-883-00	CARBON	150K 5% 1/4W
D302	8-719-933-33	DIODE HZS6A1L		R308	1-249-441-11	CARBON	100K 5% 1/4W
D303	8-719-987-63	DIODE 1N4148M		R309	1-249-417-11	CARBON	1K 5% 1/4W
D304	8-719-987-63	DIODE 1N4148M		R310	1-249-429-11	CARBON	10K 5% 1/4W
D401	8-719-987-63	DIODE 1N4148M		R313	1-249-429-11	CARBON	10K 5% 1/4W
D402	8-719-987-63	DIODE 1N4148M		R314	1-249-429-11	CARBON	10K 5% 1/4W
D403	8-719-987-63	DIODE 1N4148M		R315	1-249-425-11	CARBON	4.7K 5% 1/4W
D404	8-719-987-63	DIODE 1N4148M		R318	1-249-429-11	CARBON	10K 5% 1/4W
< TERMINAL EARTH >				R321	1-249-425-11	CARBON	4.7K 5% 1/4W
* EB301	1-537-738-21	TERMINAL, EARTH		R322	1-249-425-11	CARBON	4.7K 5% 1/4W
* EB401	1-537-738-21	TERMINAL, EARTH		R323	1-249-425-11	CARBON	4.7K 5% 1/4W
< IC >				R324	1-249-425-11	CARBON	4.7K 5% 1/4W
IC301	8-759-337-69	IC TMP87C846N-4210		R325	1-249-425-11	CARBON	4.7K 5% 1/4W
IC302	8-759-802-76	IC LB1645N		R326	1-249-425-11	CARBON	4.7K 5% 1/4W
IC303	8-759-165-82	IC PST600E-T		R327	1-249-425-11	CARBON	4.7K 5% 1/4W
IC401	8-759-333-50	IC uPD78042AGF-042-3B9		R328	1-249-429-11	CARBON	10K 5% 1/4W
IC402	8-759-165-80	IC PST600C-T		R329	1-249-423-11	CARBON	3.3K 5% 1/4W
< COIL >				R330	1-249-423-11	CARBON	3.3K 5% 1/4W
L301	1-408-080-00	INDUCTOR	100uH	R331	1-247-807-31	CARBON	100 5% 1/4W
L401	1-408-080-00	INDUCTOR	100uH	R332	1-247-807-31	CARBON	100 5% 1/4W
L402	1-408-080-00	INDUCTOR	100uH	R333	1-247-807-31	CARBON	100 5% 1/4W
< TRANSISTOR >				R334	1-247-807-31	CARBON	100 5% 1/4W
Q301	8-729-801-94	TRANSISTOR 2SD1387-4		R335	1-247-807-31	CARBON	100 5% 1/4W
Q302	8-729-801-94	TRANSISTOR 2SD1387-4		R336	1-247-807-31	CARBON	100 5% 1/4W
Q303	8-729-422-57	TRANSISTOR UN4111		R337	1-247-807-31	CARBON	100 5% 1/4W
Q304	8-729-422-57	TRANSISTOR UN4111		R338	1-247-807-31	CARBON	100 5% 1/4W
				R340	1-247-807-31	CARBON	100 5% 1/4W
				R341	1-247-807-31	CARBON	100 5% 1/4W
				R342	1-247-807-31	CARBON	100 5% 1/4W
				R343	1-247-807-31	CARBON	100 5% 1/4W

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

CONTROL**COUNT SW****DISC DETECTION (A)****DISC DETECTION (B)**

Ref. No.	Part No.	Description	Remark
R344	1-249-435-11	CARBON 33K 5%	1/4W
R345	1-249-429-11	CARBON 10K 5%	1/4W
R346	1-249-429-11	CARBON 10K 5%	1/4W
R347	1-249-435-11	CARBON 33K 5%	1/4W
R348	1-249-429-11	CARBON 10K 5%	1/4W
R401	1-249-429-11	CARBON 10K 5%	1/4W
R402	1-249-417-11	CARBON 1K 5%	1/4W
R403	1-249-429-11	CARBON 10K 5%	1/4W
R404	1-249-429-11	CARBON 10K 5%	1/4W
R405	1-247-903-00	CARBON 1M 5%	1/4W
R406	1-249-429-11	CARBON 10K 5%	1/4W
R407	1-249-429-11	CARBON 10K 5%	1/4W
R408	1-249-425-11	CARBON 4.7K 5%	1/4W
R409	1-249-423-11	CARBON 3.3K 5%	1/4W
R410	1-249-423-11	CARBON 3.3K 5%	1/4W
R411	1-249-423-11	CARBON 3.3K 5%	1/4W
R412	1-249-423-11	CARBON 3.3K 5%	1/4W
R413	1-249-418-11	CARBON 1.2K 5%	1/4W
R414	1-249-429-11	CARBON 10K 5%	1/4W
R415	1-249-429-11	CARBON 10K 5%	1/4W
R418	1-249-429-11	CARBON 10K 5%	1/4W
R419	1-249-429-11	CARBON 10K 5%	1/4W
R420	1-249-423-11	CARBON 3.3K 5%	1/4W
R421	1-249-437-11	CARBON 47K 5%	1/4W
R422	1-249-437-11	CARBON 47K 5%	1/4W
R423	1-249-437-11	CARBON 47K 5%	1/4W
R424	1-249-437-11	CARBON 47K 5%	1/4W
R425	1-249-437-11	CARBON 47K 5%	1/4W
R426	1-249-437-11	CARBON 47K 5%	1/4W
R427	1-249-437-11	CARBON 47K 5%	1/4W
R428	1-249-437-11	CARBON 47K 5%	1/4W
R429	1-249-437-11	CARBON 47K 5%	1/4W
R430	1-249-437-11	CARBON 47K 5%	1/4W
R431	1-249-437-11	CARBON 47K 5%	1/4W
R432	1-249-437-11	CARBON 47K 5%	1/4W
R433	1-249-437-11	CARBON 47K 5%	1/4W
R434	1-247-807-31	CARBON 100 5%	1/4W
R435	1-247-807-31	CARBON 100 5%	1/4W
R436	1-247-807-31	CARBON 100 5%	1/4W
R437	1-247-807-31	CARBON 100 5%	1/4W
R440	1-247-807-31	CARBON 100 5%	1/4W
R441	1-247-807-31	CARBON 100 5%	1/4W
R442	1-247-807-31	CARBON 100 5%	1/4W
R443	1-247-807-31	CARBON 100 5%	1/4W
R444	1-247-807-31	CARBON 100 5%	1/4W
R445	1-247-807-31	CARBON 100 5%	1/4W
R447	1-247-807-31	CARBON 100 5%	1/4W
R448	1-247-807-31	CARBON 100 5%	1/4W
R449	1-247-807-31	CARBON 100 5%	1/4W
R450	1-247-807-31	CARBON 100 5%	1/4W
R451	1-247-807-31	CARBON 100 5%	1/4W
R452	1-247-807-31	CARBON 100 5%	1/4W

Ref. No.	Part No.	Description	Remark
R453	1-247-807-31	CARBON 100 5%	1/4W
R454	1-247-807-31	CARBON 100 5%	1/4W
R455	1-247-807-31	CARBON 100 5%	1/4W
R456	1-247-807-31	CARBON 100 5%	1/4W
R457	1-247-807-31	CARBON 100 5%	1/4W
R458	1-247-807-31	CARBON 100 5%	1/4W
R459	1-247-807-31	CARBON 100 5%	1/4W
R460	1-247-807-31	CARBON 100 5%	1/4W
R461	1-249-429-11	CARBON 10K 5%	1/4W
R463	1-247-807-31	CARBON 100 5%	1/4W
R465	1-249-429-11	CARBON 10K 5%	1/4W
< VARIABLE RESISTOR >			
RV301	1-238-599-11	RES, ADJ, CARBON 4.7K (TAPE SPEED)	
< VIBRATOR >			
X301	1-577-358-21	VIBRATOR, CERAMIC(4 MHz)	
X401	1-579-233-11	VIBRATOR, CERAMIC(5 MHz)	

*	1-651-397-11	COUNT SW BOARD	*****
< SWITCH >			
SW502	1-692-193-11	SWITCH, PUSH (1 KEY)(TRAY DOWN)	
SW503	1-572-126-11	SWITCH, PUSH (1 KEY)(COUNT)	

*	1-651-398-11	DISC DETECTION (A) BOARD	*****
4-964-461-02		HOLDER (SENSOR)	
< DIODE >			
D501	8-719-029-95	DIODE TLN117	

*	1-651-399-11	DISC DETECTION (B) BOARD	*****
< CONNECTOR >			
* CN510	1-568-941-11	PIN, CONNECTOR 3P	
< TRANSISTOR >			
Q501	8-729-018-23	TRANSISTOR TPS626	
< RESISTOR >			
R502	1-249-425-11	CARBON 4.7K 5%	1/4W

DISPLAY
FUNCTION
IN SW
LD
MAIN

Ref. No.	Part No.	Description	Remark
*	1-656-866-11	DISPLAY BOARD *****	
*	4-921-941-01	CUSHION (FL)	
*	4-974-459-01	HOLDER (FL)	
		< CAPACITOR >	
C501	1-126-301-11	ELECT	1uF 20% 50V
C502	1-126-301-11	ELECT	1uF 20% 50V
C503	1-162-306-11	CERAMIC	0.01uF 30% 16V
		< CONNECTOR >	
* CN501	1-568-873-11	SOCKET, CONNECTOR 31P	
* CN502	1-568-852-11	SOCKET, CONNECTOR 9P	
		< DIODE >	
D500	8-719-046-44	LED SEL5221S (STAND BY)	
		< INDICATOR TUBE >	
FL501	1-517-423-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC501	8-749-920-83	IC GP1U52XB	
		< TRANSISTOR >	
Q500	8-729-620-05	TRANSISTOR 2SC2603-EF	
		< RESISTOR >	
R501	1-249-429-11	CARBON	10K 5% 1/4W
R502	1-249-429-11	CARBON	10K 5% 1/4W
R503	1-249-411-11	CARBON	330 5% 1/4W
		< SWITCH >	
S300	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S500	1-554-303-21	SWITCH, TACTILE (POWER)	

*	1-656-867-11	FUNCTION BOARD *****	
		< CONNECTOR >	
* CN504	1-565-295-11	PLUG, CONNECTOR 4P(CONTROL S)	
		< DIODE >	
D501	8-719-046-44	LED SEL5221S (MD)	
D502	8-719-046-44	LED SEL5221S (TAPE)	
D503	8-719-046-44	LED SEL5221S (AUX)	
D504	8-719-046-44	LED SEL5221S (CD)	
D505	8-719-046-44	LED SEL5221S (TUNER)	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q501	8-729-900-36	TRANSISTOR DTC124ES	
Q502	8-729-900-36	TRANSISTOR DTC124ES	
Q503	8-729-900-36	TRANSISTOR DTC124ES	
Q504	8-729-900-36	TRANSISTOR DTC124ES	
Q505	8-729-900-36	TRANSISTOR DTC124ES	
		< RESISTOR >	
R514	1-249-411-11	CARBON	330 5% 1/4W
R515	1-249-413-11	CARBON	470 5% 1/4W
R516	1-249-415-11	CARBON	680 5% 1/4W
R517	1-249-417-11	CARBON	1K 5% 1/4W
R518	1-249-419-11	CARBON	1.5K 5% 1/4W
R519	1-249-421-11	CARBON	2.2K 5% 1/4W
R526	1-249-437-11	CARBON	47K 5% 1/4W
R527	1-249-437-11	CARBON	47K 5% 1/4W
		< SWITCH >	
S501	1-554-303-21	SWITCH, TACTILE (MD)	
S502	1-554-303-21	SWITCH, TACTILE (TAPE)	
S503	1-554-303-21	SWITCH, TACTILE (AUX)	
S504	1-554-303-21	SWITCH, TACTILE (CD)	
S505	1-554-303-21	SWITCH, TACTILE (TUNER)	

*	1-651-395-11	IN SW BOARD *****	
		< CONNECTOR >	
* CN502	1-568-951-11	PIN, CONNECTOR 2P	
		< SWITCH >	
SW501	1-692-193-11	SWITCH, PUSH (1 KEY)(LOAD IN)	

*	1-659-216-11	LD BOARD *****	
		< CONNECTOR >	
CN2	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P	
		< SWITCH >	
S1	1-571-300-21	SWITCH, ROTARY (LIMIT)	

*	A-4378-416-A	MAIN BOARD, COMPLETE *****	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C801	1-126-963-11	ELECT	4.7uF 20% 50V

MAIN

Ref. No.	Part No.	Description	Remark
C802	1-104-664-11	ELECT	47uF 20% 10V
C803	1-104-664-11	ELECT	47uF 20% 10V
C804	1-104-664-11	ELECT	47uF 20% 10V
C805	1-162-286-31	CERAMIC	220PF 10% 50V
C806	1-162-286-31	CERAMIC	220PF 10% 50V
C807	1-104-664-11	ELECT	47uF 20% 10V
C808	1-104-664-11	ELECT	47uF 20% 10V
C809	1-104-664-11	ELECT	47uF 20% 10V
C810	1-104-664-11	ELECT	47uF 20% 10V
C811	1-126-963-11	ELECT	4.7uF 20% 50V
C812	1-162-286-31	CERAMIC	220PF 10% 50V
C813	1-162-286-31	CERAMIC	220PF 10% 50V
C814	1-162-286-31	CERAMIC	220PF 10% 50V
C851	1-126-963-11	ELECT	4.7uF 20% 50V
C852	1-104-664-11	ELECT	47uF 20% 10V
C855	1-162-286-31	CERAMIC	220PF 10% 50V
C856	1-162-286-31	CERAMIC	220PF 10% 50V
C862	1-162-286-31	CERAMIC	220PF 10% 50V
C863	1-162-286-31	CERAMIC	220PF 10% 50V
C864	1-162-286-31	CERAMIC	220PF 10% 50V
C865	1-164-159-11	CERAMIC	0.1uF 50V
C866	1-164-159-11	CERAMIC	0.1uF 50V
C901	1-136-165-00	FILM	0.1uF 5% 50V
C902	1-136-165-00	FILM	0.1uF 5% 50V
C903	1-124-563-11	ELECT	2200uF 20% 25V
C904	1-124-563-11	ELECT	2200uF 20% 25V
C905	1-136-165-00	FILM	0.1uF 5% 50V
C906	1-136-165-00	FILM	0.1uF 5% 50V
C907	1-126-968-11	ELECT	100uF 20% 6.3V
C908	1-126-968-11	ELECT	100uF 20% 6.3V
C909	1-124-472-11	ELECT	470uF 20% 10V
C910	1-124-472-11	ELECT	470uF 20% 10V
C911	1-124-472-11	ELECT	470uF 20% 10V
C912	1-124-903-11	ELECT	1uF 20% 50V
C913	1-124-472-11	ELECT	470uF 20% 10V
C914	1-124-907-11	ELECT	10uF 20% 50V
C915	1-124-472-11	ELECT	470uF 20% 10V
C916	1-124-910-11	ELECT	47uF 20% 50V
C917	1-124-910-11	ELECT	47uF 20% 50V
C918	1-124-907-11	ELECT	10uF 20% 50V
C919	1-124-907-11	ELECT	10uF 20% 50V
C920	1-136-165-00	FILM	0.1uF 5% 50V
C921	1-136-165-00	FILM	0.1uF 5% 50V
C922	1-124-563-11	ELECT	2200uF 20% 25V
C923	1-126-942-61	ELECT	1000uF 20% 16V
C924	1-164-159-11	CERAMIC	0.1uF 50V
< CONNECTOR >			
CN902	1-564-980-11	PIN, CONNECTOR 4P	
* CN903	1-568-830-11	SOCKET, CONNECTOR 11P	
* CN904	1-568-824-11	SOCKET, CONNECTOR 5P	
* CN905	1-568-836-11	SOCKET, CONNECTOR 17P	

Ref. No.	Part No.	Description	Remark
* CN907	1-568-832-11	SOCKET, CONNECTOR 13P	
* CN908	1-568-828-11	SOCKET, CONNECTOR 9P	
< DIODE >			
D901	8-719-024-99	DIODE 11ES2-NTA2B	
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-987-63	DIODE 1N4148M	
D906	8-719-987-63	DIODE 1N4148M	
D907	8-719-933-36	DIODE HZS6B1L	
D908	8-719-933-41	DIODE HZS6C3L	
D909	8-719-024-99	DIODE 11ES2-NTA2B	
D910	8-719-024-99	DIODE 11ES2-NTA2B	
D911	8-719-002-48	DIODE UZL-27H	
D912	8-719-014-56	DIODE UZP-5.1B	
D913	8-719-024-99	DIODE 11ES2-NTA2B	
D914	8-719-024-99	DIODE 11ES2-NTA2B	
D915	8-719-987-63	DIODE 1N4148M	
D916	8-719-987-63	DIODE 1N4148M	
D918	8-719-987-63	DIODE 1N4148M	
D919	8-719-987-63	DIODE 1N4148M	
< TERMINAL EARTH >			
* EB901	1-537-738-21	TERMINAL, EARTH	
< IC >			
IC800	8-759-000-48	IC MC14052BCP	
IC801	8-759-000-49	IC MC14066BCP	
IC802	8-759-634-51	IC M5218AP	
IC901	8-759-604-86	IC M5F7807L	
IC902	8-759-071-47	IC TA79007S	
IC903	8-759-604-86	IC M5F7807L	
IC904	8-759-231-58	IC TA7812S	
< JACK >			
J801	1-695-188-21	JACK, PIN 4P (AUX IN, MD OUT)	
J802	1-580-825-11	JACK, PIN 6P (MD IN, LINE OUT)	
< TRANSISTOR >			
Q801	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q803	8-729-900-63	TRANSISTOR DTA124ES	
Q804	8-729-900-36	TRANSISTOR DTC124ES	
Q805	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q808	8-729-900-63	TRANSISTOR DTA124ES	
Q851	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q855	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q901	8-729-030-18	TRANSISTOR 2SD2525	
Q902	8-729-900-36	TRANSISTOR DTC124ES	
Q903	8-729-209-15	TRANSISTOR 2SD2012	

MAIN

MECHA

MID SENS

MID SW

MOTOR VR

Ref. No.	Part No.	Description	Remark
Q904	8-729-030-19	TRANSISTOR 2SB1640	
Q905	8-729-620-05	TRANSISTOR 2SC2603-EF	
< RESISTOR >			
R801	1-249-417-11	CARBON 1K	5% 1/4W
R802	1-249-421-11	CARBON 2.2K	5% 1/4W
R803	1-249-417-11	CARBON 1K	5% 1/4W
R804	1-249-417-11	CARBON 1K	5% 1/4W
R806	1-249-417-11	CARBON 1K	5% 1/4W
R807	1-249-437-11	CARBON 47K	5% 1/4W
R808	1-249-417-11	CARBON 1K	5% 1/4W
R809	1-249-429-11	CARBON 10K	5% 1/4W
R810	1-249-433-11	CARBON 22K	5% 1/4W
R811	1-249-437-11	CARBON 47K	5% 1/4W
R812	1-249-417-11	CARBON 1K	5% 1/4W
R813	1-249-421-11	CARBON 2.2K	5% 1/4W
R814	1-249-417-11	CARBON 1K	5% 1/4W
R816	1-249-437-11	CARBON 47K	5% 1/4W
R817	1-249-421-11	CARBON 2.2K	5% 1/4W
R818	1-249-437-11	CARBON 47K	5% 1/4W
R819	1-249-421-11	CARBON 2.2K	5% 1/4W
R820	1-249-413-11	CARBON 470	5% 1/4W
R821	1-249-433-11	CARBON 22K	5% 1/4W
R822	1-249-417-11	CARBON 1K	5% 1/4W
R851	1-249-417-11	CARBON 1K	5% 1/4W
R852	1-249-421-11	CARBON 2.2K	5% 1/4W
R853	1-249-417-11	CARBON 1K	5% 1/4W
R854	1-249-417-11	CARBON 1K	5% 1/4W
R856	1-249-417-11	CARBON 1K	5% 1/4W
R857	1-249-437-11	CARBON 47K	5% 1/4W
R858	1-249-417-11	CARBON 1K	5% 1/4W
R859	1-249-429-11	CARBON 10K	5% 1/4W
R860	1-249-433-11	CARBON 22K	5% 1/4W
R861	1-249-437-11	CARBON 47K	5% 1/4W
R862	1-249-417-11	CARBON 1K	5% 1/4W
R863	1-249-421-11	CARBON 2.2K	5% 1/4W
R864	1-249-417-11	CARBON 1K	5% 1/4W
R870	1-249-413-11	CARBON 470	5% 1/4W
R872	1-249-417-11	CARBON 1K	5% 1/4W
R892	1-249-421-11	CARBON 2.2K	5% 1/4W
R893	1-249-417-11	CARBON 1K	5% 1/4W
R894	1-249-393-11	CARBON 10	5% 1/4W
R895	1-249-393-11	CARBON 10	5% 1/4W
R896	1-249-425-11	CARBON 4.7K	5% 1/4W
R897	1-249-393-11	CARBON 10	5% 1/4W
R898	1-249-393-11	CARBON 10	5% 1/4W
R899	1-249-425-11	CARBON 4.7K	5% 1/4W
R901	1-249-421-11	CARBON 2.2K	5% 1/4W
R902	1-249-413-11	CARBON 470	5% 1/4W
△ R903	1-212-857-00	FUSIBLE 10	5% 1/4W F
R904	1-249-417-11	CARBON 1K	5% 1/4W
R905	1-247-807-31	CARBON 100	5% 1/4W

Ref. No.	Part No.	Description	Remark
R906	1-247-807-31	CARBON 100	5% 1/4W
R907	1-247-807-31	CARBON 100	5% 1/4W
R908	1-249-429-11	CARBON 10K	5% 1/4W
△ R909	1-216-423-11	METAL OXIDE 27	5% 1W F

*	1-659-215-11	MECHA BOARD	*****
< CONNECTOR >			
CN1	1-695-376-21	PIN, CONNECTOR (PC BOARD) 15P BOARD	
< DIODE >			
D1	8-749-011-90	PHOTO INTERRUPTER SG-107LF2-C	
< RESISTOR >			
R1	1-247-835-11	CARBON 1.5K	5% 1/4W
< SWITCH >			
S2	1-762-569-11	SWITCH, LEAF (FWD REC)	
S3	1-762-569-11	SWITCH, LEAF (CrO2)	
S4	1-762-570-11	SWITCH, LEAF (PLAY)	
S5	1-762-569-11	SWITCH, LEAF (METAL)	
S6	1-762-569-11	SWITCH, LEAF (REV REC)	

*	1-651-393-11	MID SENS BOARD	*****
< IC >			
IC501	8-729-020-74	IC GP1S24	

*	1-651-392-11	MID SW BOARD	*****
< CONNECTOR >			
CN503	1-506-481-11	PIN, CONNECTOR 2P	
< SWITCH >			
SW504	1-692-193-11	SWITCH, PUSH (1 KEY)(LOAD OUT)	

*	1-656-869-11	MOTOR VR BOARD	*****
< CAPACITOR >			
C650	1-162-282-31	CERAMIC 100PF	10% 50V
C651	1-162-282-31	CERAMIC 100PF	10% 50V
C652	1-164-159-11	CERAMIC 0.1uF	50V
C653	1-104-664-11	ELECT 47uF	20% 10V
C654	1-124-907-11	ELECT 10uF	20% 50V

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

MOTOR VR OPEN/CLOSE SW PRIMARY 1 PRIMARY 2 SECONDARY

Ref. No.	Part No.	Description	Remark
C655	1-124-907-11	ELECT 10uF 20%	50V
C656	1-162-306-11	CERAMIC 0.01uF 30%	16V
C657	1-124-907-11	ELECT 10uF 20%	50V
C658	1-124-907-11	ELECT 10uF 20%	50V
C659	1-161-494-00	CERAMIC 0.022uF	25V
C660	1-161-494-00	CERAMIC 0.022uF	25V
C661	1-162-306-11	CERAMIC 0.01uF 30%	16V
C670	1-124-907-11	ELECT 10uF 20%	50V
C671	1-124-907-11	ELECT 10uF 20%	50V
C672	1-124-907-11	ELECT 10uF 20%	50V
C673	1-124-907-11	ELECT 10uF 20%	50V
C674	1-124-907-11	ELECT 10uF 20%	50V
C675	1-124-907-11	ELECT 10uF 20%	50V
< CONNECTOR >			
* CN652	1-568-852-11	SOCKET, CONNECTOR 9P	
* CN653	1-568-848-11	SOCKET, CONNECTOR 5P	
< IC >			
IC651	8-759-820-62	IC LB1639	
IC652	8-759-981-85	IC RC4556D	
IC653	8-759-634-51	IC M5218AP	
< JACK >			
J652	1-750-162-21	JACK (LARGE TYPE)(PHONE)	
< COIL >			
L651	1-408-080-00	INDUCTOR 100uH	
< RESISTOR >			
R655	1-249-417-11	CARBON 1K 5%	1/4W
R656	1-249-417-11	CARBON 1K 5%	1/4W
R657	1-249-429-11	CARBON 10K 5%	1/4W
R658	1-249-429-11	CARBON 10K 5%	1/4W
R659	1-249-431-11	CARBON 15K 5%	1/4W
R660	1-249-431-11	CARBON 15K 5%	1/4W
R661	1-249-401-11	CARBON 47 5%	1/4W
R662	1-249-401-11	CARBON 47 5%	1/4W
R663	1-249-393-11	CARBON 10 5%	1/4W
R664	1-249-393-11	CARBON 10 5%	1/4W
R665	1-249-437-11	CARBON 47K 5%	1/4W
R666	1-249-437-11	CARBON 47K 5%	1/4W
R667	1-249-393-11	CARBON 10 5%	1/4W
R668	1-249-437-11	CARBON 47K 5%	1/4W
R669	1-249-417-11	CARBON 1K 5%	1/4W
R670	1-249-437-11	CARBON 47K 5%	1/4W
R671	1-249-393-11	CARBON 10 5%	1/4W
R672	1-249-437-11	CARBON 47K 5%	1/4W
R673	1-249-417-11	CARBON 1K 5%	1/4W
R674	1-249-437-11	CARBON 47K 5%	1/4W

Ref. No.	Part No.	Description	Remark
< VARIABLE RESISTOR >			
RV652	1-223-923-11	RES, VAR, CARBON 100KX2 (LINE OUT/PHONE LEVEL)	

* 1-651-394-11	OPEN/CLOSE SW BOARD *****		
< CONNECTOR >			
CN512	1-506-481-11	PIN, CONNECTOR 2P	
* CN514	1-568-941-11	PIN, CONNECTOR 3P	
< RESISTOR >			
R503	1-249-408-11	CARBON 180 5%	1/4W
R504	1-249-435-11	CARBON 33K 5%	1/4W
< SWITCH >			
SW505	1-571-300-21	SWITCH, ROTARY (OPEN/CLOSE)	

* 1-656-859-11	PRIMARY 1 BOARD *****		
1-533-293-11	FUSE HOLDER		
< CONNECTOR >			
CN952	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P	
CN954	1-564-321-00	PIN, CONNECTOR 2P	
< FUSE >			
△ F951	1-532-464-51	FUSE, TIMELUG (T2.5AL/250V)	

* 1-656-860-11	PRIMARY 2 BOARD *****		
< CAPACITOR >			
C259	1-162-288-31	CERAMIC 330PF 10%	50V

* 1-656-868-11	SECONDARY BOARD *****		
< CAPACITOR >			
C951	1-136-153-00	FILM 0.01uF 5%	50V
< CONNECTOR >			
* CN951	1-564-522-11	PLUG, CONNECTOR 7P	
< RESISTOR >			
△ R951	1-212-934-00	FUSIBLE 1 5%	1/2W F
△ R952	1-212-934-00	FUSIBLE 1 5%	1/2W F

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SECONDARY

ST MAIN

Ref. No.	Part No.	Description	Remark
△ R953	1-212-934-00	FUSIBLE 1 5% 1/2W F	
△ R954	1-212-934-00	FUSIBLE 1 5% 1/2W F	

*	A-4378-140-A	ST MAIN BOARD, COMPLETE	

< CAPACITOR >			
C1	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C2	1-126-967-11	ELECT 47uF 20% 16V	
C3	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C4	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C5	1-164-159-11	CERAMIC 0.1uF 50V	
C6	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C7	1-126-786-11	ELECT 47uF 20% 16V	
C8	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C9	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C10	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C11	1-126-963-11	ELECT 4.7uF 20% 50V	
C12	1-124-465-00	ELECT 0.47uF 20% 50V	
C13	1-126-301-11	ELECT 1uF 20% 50V	
C14	1-126-301-11	ELECT 1uF 20% 50V	
C15	1-126-096-11	ELECT 10uF 20% 35V	
C16	1-126-096-11	ELECT 10uF 20% 35V	
C17	1-126-096-11	ELECT 10uF 20% 35V	
C18	1-126-096-11	ELECT 10uF 20% 35V	
C19	1-136-160-00	FILM 0.039uF 5% 50V	
C20	1-136-160-00	FILM 0.039uF 5% 50V	
C21	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C22	1-130-478-00	MYLAR 0.0039uF 5% 50V	
C23	1-126-301-11	ELECT 1uF 20% 50V	
C24	1-102-119-00	CERAMIC 1500PF 10% 50V	
C25	1-164-093-11	CERAMIC 0.0047uF 10% 25V	
C26	1-126-786-11	ELECT 47uF 20% 16V	
C27	1-126-962-11	ELECT 3.3uF 20% 50V	
C28	1-161-494-00	CERAMIC 0.022uF 25V	
C29	1-124-907-11	ELECT 10uF 20% 50V	
C30	1-161-494-00	CERAMIC 0.022uF 25V	
C31	1-161-055-00	CERAMIC 0.022uF 10% 50V	
C32	1-162-196-31	CERAMIC 5.6PF 10% 50V	
C33	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C34	1-164-159-11	CERAMIC 0.1uF 50V	
C37	1-162-301-11	CERAMIC 0.0015uF 30% 16V	
C38	1-130-474-00	MYLAR 0.0018uF 5% 50V	
C39	1-161-055-00	CERAMIC 0.022uF 10% 50V	
C45	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C46	1-124-907-11	ELECT 10uF 20% 50V	
C51	1-102-518-11	CERAMIC 33PF 5% 50V	
C52	1-102-959-00	CERAMIC 22PF 5% 50V	
C53	1-126-786-11	ELECT 47uF 20% 16V	
C54	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C55	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C56	1-162-306-11	CERAMIC 0.01uF 30% 16V	

Ref. No.	Part No.	Description	Remark
C58	1-164-096-11	CERAMIC 0.01uF 50V	
C61	1-126-961-11	ELECT 2.2uF 20% 50V	
C62	1-164-159-11	CERAMIC 0.1uF 50V	
C63	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C64	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C65	1-126-786-11	ELECT 47uF 20% 16V	
C67	1-162-306-11	CERAMIC 0.01uF 30% 16V	
C71	1-124-465-00	ELECT 0.47uF 20% 50V	
C72	1-161-494-00	CERAMIC 0.022uF 25V	
C73	1-161-494-00	CERAMIC 0.022uF 25V	
C74	1-162-211-31	CERAMIC 33PF 5% 50V	
C76	1-162-306-11	CERAMIC 0.01uF 30% 16V	
< FILTER >			
CF1	1-567-389-11	FILTER, CERAMIC	
CF2	1-760-393-11	FILTER, CERAMIC	
CF3	1-760-393-11	FILTER, CERAMIC	
CF4	1-527-981-00	FILTER, CERAMIC	
CF5	1-577-075-11	OSCILLATOR, CERAMIC	
CF6	1-760-220-11	FILTER, CERAMIC	
< CONNECTOR >			
* CN1	1-568-852-11	SOCKET, CONNECTOR 9P	
* CN2	1-568-848-11	SOCKET, CONNECTOR 5P	
< DIODE >			
D1	8-719-987-63	DIODE 1N4148M	
D2	8-719-933-54	DIODE HZS9A2L	
D3	8-719-001-18	DIODE UZL-9M3	
< FRONT END >			
FE1	1-693-253-21	FRONT END (4 GANG)	
FE2	1-239-876-11	ENCAPSULATED COMPONENT	
FE3	1-236-463-11	ENCAPSULATED COMPONENT	
< IC >			
IC1	8-759-176-03	IC LA1835	
IC51	8-759-288-54	IC LC72130	
< IFT >			
IFT1	1-409-636-11	TRANSFORMER,IF(CERAMIC FILTER)	
< COIL >			
L1	1-407-500-00	INDUCTOR 4.7mH	
L2	1-410-336-11	INDUCTOR 220uH	
L3	1-414-142-11	INDUCTOR 1uH	
< FILTER >			
LPF1	1-239-597-11	FILTER, LOW PASS	
LPF2	1-239-597-11	FILTER, LOW PASS	

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ST MAIN

TC MAIN

Ref. No.	Part No.	Description	Remark
< TRANSISTOR >			
Q1	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q2	8-729-230-99	TRANSISTOR 2SC2669-OY	
Q3	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q4	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q5	8-729-900-80	TRANSISTOR DTC114ES	
Q6	8-729-900-80	TRANSISTOR DTC114ES	
Q7	8-729-900-80	TRANSISTOR DTC114ES	
Q8	8-729-900-80	TRANSISTOR DTC114ES	
Q55	8-729-422-57	TRANSISTOR UN4111	
< RESISTOR >			
R1	1-249-411-11	CARBON 330	5% 1/4W
R2	1-247-807-31	CARBON 100	5% 1/4W
R3	1-249-409-11	CARBON 220	5% 1/4W
△ R4	1-249-407-11	CARBON 150	5% 1/4W F
R5	1-247-891-00	CARBON 330K	5% 1/4W
R6	1-249-411-11	CARBON 330	5% 1/4W
R7	1-247-891-00	CARBON 330K	5% 1/4W
R8	1-249-411-11	CARBON 330	5% 1/4W
△ R9	1-249-405-11	CARBON 100	5% 1/4W F
R12	1-249-429-11	CARBON 10K	5% 1/4W
R13	1-249-442-11	CARBON 510	5% 1/4W
△ R14	1-247-739-11	CARBON 100	5% 1/2W F
R16	1-249-429-11	CARBON 10K	5% 1/4W
R17	1-247-842-11	CARBON 3K	5% 1/4W
R18	1-249-429-11	CARBON 10K	5% 1/4W
R19	1-249-441-11	CARBON 100K	5% 1/4W
R21	1-249-441-11	CARBON 100K	5% 1/4W
R22	1-249-437-11	CARBON 47K	5% 1/4W
R23	1-249-399-11	CARBON 33	5% 1/4W
R24	1-249-425-11	CARBON 4.7K	5% 1/4W
R25	1-249-429-11	CARBON 10K	5% 1/4W
R26	1-249-429-11	CARBON 10K	5% 1/4W
R30	1-249-429-11	CARBON 10K	5% 1/4W
R31	1-249-429-11	CARBON 10K	5% 1/4W
R32	1-249-433-11	CARBON 22K	5% 1/4W
R33	1-247-903-00	CARBON 1M	5% 1/4W
R34	1-249-437-11	CARBON 47K	5% 1/4W
R35	1-249-419-11	CARBON 1.5K	5% 1/4W
R36	1-249-419-11	CARBON 1.5K	5% 1/4W
R45	1-249-425-11	CARBON 4.7K	5% 1/4W
R46	1-249-425-11	CARBON 4.7K	5% 1/4W
R48	1-249-417-11	CARBON 1K	5% 1/4W
△ R50	1-249-401-11	CARBON 47	5% 1/4W F
R51	1-249-417-11	CARBON 1K	5% 1/4W
R52	1-249-417-11	CARBON 1K	5% 1/4W
R53	1-249-417-11	CARBON 1K	5% 1/4W
R54	1-249-417-11	CARBON 1K	5% 1/4W
R56	1-249-417-11	CARBON 1K	5% 1/4W
R57	1-249-417-11	CARBON 1K	5% 1/4W
R58	1-249-417-11	CARBON 1K	5% 1/4W

Ref. No.	Part No.	Description	Remark
R59	1-249-429-11	CARBON 10K	5% 1/4W
△ R60	1-249-405-11	CARBON 100	5% 1/4W F
R61	1-249-423-11	CARBON 3.3K	5% 1/4W
R62	1-249-425-11	CARBON 4.7K	5% 1/4W
R66	1-249-425-11	CARBON 4.7K	5% 1/4W
R67	1-249-425-11	CARBON 4.7K	5% 1/4W
R68	1-249-425-11	CARBON 4.7K	5% 1/4W
R69	1-247-807-31	CARBON 100	5% 1/4W
R71	1-249-423-11	CARBON 3.3K	5% 1/4W
R72	1-249-433-11	CARBON 22K	5% 1/4W
R76	1-249-425-11	CARBON 4.7K	5% 1/4W
R77	1-249-425-11	CARBON 4.7K	5% 1/4W
R78	1-249-425-11	CARBON 4.7K	5% 1/4W
< VARIABLE RESISTOR >			
RV1	1-238-601-11	RES, ADJ, CARBON 22K (AM TUNED LEVEL)	
RV2	1-238-600-11	RES, ADJ, CARBON 10K (FM TUNED LEVEL)	
< TERMINAL >			
* TM1	1-537-288-11	TERMINAL BOARD, ANTENNA (ANTENNA)	
< CRYSTAL >			
XT51	1-760-549-11	VIBRATOR, CRYSTAL (4.5 MHz)	

* A-4378-131-A	TC MAIN BOARD, COMPLETE		

< CAPACITOR >			
C201	1-162-292-31	CERAMIC 680PF	10% 50V
C202	1-162-292-31	CERAMIC 680PF	10% 50V
C203	1-162-282-31	CERAMIC 100PF	10% 50V
C204	1-162-282-31	CERAMIC 100PF	10% 50V
C205	1-136-157-00	FILM 0.022uF	5% 50V
C206	1-136-157-00	FILM 0.022uF	5% 50V
C207	1-124-282-00	ELECT 22uF	20% 25V
C208	1-124-282-00	ELECT 22uF	20% 25V
C209	1-124-472-11	ELECT 470uF	20% 10V
C210	1-124-472-11	ELECT 470uF	20% 10V
C211	1-136-157-00	FILM 0.022uF	5% 50V
C212	1-136-157-00	FILM 0.022uF	5% 50V
C213	1-136-165-00	FILM 0.1uF	5% 50V
C214	1-136-165-00	FILM 0.1uF	5% 50V
C215	1-124-472-11	ELECT 470uF	20% 10V
C216	1-124-472-11	ELECT 470uF	20% 10V
C217	1-136-163-00	FILM 0.068uF	5% 50V
C218	1-136-163-00	FILM 0.068uF	5% 50V
C219	1-126-963-11	ELECT 4.7uF	20% 50V
C220	1-126-963-11	ELECT 4.7uF	20% 50V
C221	1-124-903-11	ELECT 1uF	20% 50V
C222	1-124-903-11	ELECT 1uF	20% 50V
C223	1-124-903-11	ELECT 1uF	20% 50V

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Ref. No.	Part No.	Description	Remark		
C224	1-124-903-11	ELECT	1uF	20%	50V
C225	1-162-288-31	CERAMIC	330PF	10%	50V
C226	1-162-288-31	CERAMIC	330PF	10%	50V
C227	1-126-963-11	ELECT	4.7uF	20%	50V
C228	1-126-963-11	ELECT	4.7uF	20%	50V
C229	1-124-907-11	ELECT	10uF	20%	50V
C230	1-124-907-11	ELECT	10uF	20%	50V
C231	1-124-902-00	ELECT	0.47uF	20%	50V
C232	1-124-902-00	ELECT	0.47uF	20%	50V
C233	1-124-472-11	ELECT	470uF	20%	10V
C234	1-124-472-11	ELECT	470uF	20%	10V
C235	1-124-903-11	ELECT	1uF	20%	50V
C236	1-124-907-11	ELECT	10uF	20%	50V
C237	1-124-907-11	ELECT	10uF	20%	50V
C238	1-124-907-11	ELECT	10uF	20%	50V
C239	1-124-907-11	ELECT	10uF	20%	50V
C240	1-124-902-00	ELECT	0.47uF	20%	50V
C241	1-126-926-11	ELECT	1000uF	20%	10V
C242	1-126-926-11	ELECT	1000uF	20%	10V
C243	1-126-926-11	ELECT	1000uF	20%	10V
C244	1-126-926-11	ELECT	1000uF	20%	10V
C245	1-124-479-11	ELECT	330uF	20%	25V
C246	1-124-479-11	ELECT	330uF	20%	25V
C247	1-124-903-11	ELECT	1uF	20%	50V
C248	1-137-436-11	FILM	0.0039uF	5%	50V
C249	1-137-436-11	FILM	0.0039uF	5%	50V
C250	1-137-438-11	FILM	0.0082uF	5%	50V
C251	1-130-848-00	FILM	0.0082uF	5%	100V
C252	1-126-961-11	ELECT	2.2uF	20%	50V
C253	1-136-562-11	FILM	0.0082uF	5%	630V
C254	1-162-280-31	CERAMIC	82PF	10%	50V
C255	1-162-280-31	CERAMIC	82PF	10%	50V
C256	1-136-273-91	FILM	75PF	5%	630V
C257	1-136-273-91	FILM	75PF	5%	630V
C258	1-162-288-31	CERAMIC	330PF	10%	50V
< CONNECTOR >					
* CN200	1-564-508-11	PLUG, CONNECTOR 5P			
* CN201	1-568-854-11	SOCKET, CONNECTOR 11P			
CN202	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
* CN203	1-568-852-11	SOCKET, CONNECTOR 9P			
< DIODE >					
D202	8-719-987-63	DIODE 1N4148M			
< IC >					
IC201	8-759-710-59	IC NJM4580D-D			
IC202	8-752-060-46	IC CXA1561S			
IC203	8-752-060-64	IC CXA1198AP			

Ref. No.	Part No.	Description	Remark		
< COIL >					
L201	1-408-080-00	INDUCTOR	100uH		
L202	1-408-080-00	INDUCTOR	100uH		
L203	1-410-780-11	INDUCTOR	27mH		
L204	1-410-780-11	INDUCTOR	27mH		
< TRANSISTOR >					
Q201	8-729-900-80	TRANSISTOR	DTC114ES		
Q202	8-729-900-80	TRANSISTOR	DTC114ES		
Q203	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q204	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q205	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q206	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q207	8-729-422-57	TRANSISTOR	UN4111		
Q208	8-729-900-80	TRANSISTOR	DTC114ES		
Q209	8-729-900-80	TRANSISTOR	DTC114ES		
Q210	8-729-111-29	TRANSISTOR	2SD1616A-K		
Q211	8-729-194-57	TRANSISTOR	2SC945-P		
Q212	8-729-194-57	TRANSISTOR	2SC945-P		
Q213	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q214	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q215	8-729-900-80	TRANSISTOR	DTC114ES		
Q216	8-729-900-80	TRANSISTOR	DTC114ES		
< RESISTOR >					
R201	1-249-441-11	CARBON	100K	5%	1/4W
R202	1-249-441-11	CARBON	100K	5%	1/4W
R203	1-249-404-00	CARBON	82	5%	1/4W
R204	1-249-404-00	CARBON	82	5%	1/4W
R205	1-247-882-11	CARBON	130K	5%	1/4W
R206	1-247-882-11	CARBON	130K	5%	1/4W
R207	1-247-850-11	CARBON	6.2K	5%	1/4W
R208	1-247-850-11	CARBON	6.2K	5%	1/4W
R209	1-249-413-11	CARBON	470	5%	1/4W
R210	1-249-413-11	CARBON	470	5%	1/4W
R211	1-249-421-11	CARBON	2.2K	5%	1/4W
R212	1-249-421-11	CARBON	2.2K	5%	1/4W
R213	1-249-423-11	CARBON	3.3K	5%	1/4W
R214	1-249-423-11	CARBON	3.3K	5%	1/4W
R215	1-247-887-00	CARBON	220K	5%	1/4W
R216	1-247-887-00	CARBON	220K	5%	1/4W
R219	1-215-452-00	METAL	20K	1%	1/4W
R220	1-249-433-11	CARBON	22K	5%	1/4W
R221	1-249-417-11	CARBON	1K	5%	1/4W
R222	1-249-433-11	CARBON	22K	5%	1/4W
R223	1-249-417-11	CARBON	1K	5%	1/4W
R224	1-249-433-11	CARBON	22K	5%	1/4W
R225	1-249-433-11	CARBON	22K	5%	1/4W
R226	1-249-422-11	CARBON	2.7K	5%	1/4W
R227	1-249-422-11	CARBON	2.7K	5%	1/4W
R228	1-249-429-11	CARBON	10K	5%	1/4W

TC MAIN TC SW TRAY MOTOR

Ref. No.	Part No.	Description			Remark
R229	1-249-429-11	CARBON	10K	5%	1/4W
R230	1-249-421-11	CARBON	2.2K	5%	1/4W
R231	1-249-421-11	CARBON	2.2K	5%	1/4W
R232	1-249-421-11	CARBON	2.2K	5%	1/4W
R233	1-249-421-11	CARBON	2.2K	5%	1/4W
R234	1-249-421-11	CARBON	2.2K	5%	1/4W
R235	1-249-421-11	CARBON	2.2K	5%	1/4W
R237	1-249-417-11	CARBON	1K	5%	1/4W
R238	1-249-441-11	CARBON	100K	5%	1/4W
R239	1-215-454-00	METAL	24K	1%	1/4W
R240	1-249-426-11	CARBON	5.6K	5%	1/4W
R241	1-249-426-11	CARBON	5.6K	5%	1/4W
R242	1-249-421-11	CARBON	2.2K	5%	1/4W
R243	1-249-421-11	CARBON	2.2K	5%	1/4W
R244	1-249-430-11	CARBON	12K	5%	1/4W
R245	1-249-430-11	CARBON	12K	5%	1/4W
R246	1-249-421-11	CARBON	2.2K	5%	1/4W
R247	1-249-421-11	CARBON	2.2K	5%	1/4W
R248	1-249-417-11	CARBON	1K	5%	1/4W
R250	1-249-441-11	CARBON	100K	5%	1/4W
R251	1-249-427-11	CARBON	6.8K	5%	1/4W
R252	1-249-429-11	CARBON	10K	5%	1/4W
R254	1-249-429-11	CARBON	10K	5%	1/4W
R255	1-249-434-11	CARBON	27K	5%	1/4W
R256	1-249-434-11	CARBON	27K	5%	1/4W
△R257	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
△R258	1-212-849-00	FUSIBLE	4.7	5%	1/4W F
R259	1-249-430-11	CARBON	12K	5%	1/4W
R260	1-249-430-11	CARBON	12K	5%	1/4W
R267	1-247-807-31	CARBON	100	5%	1/4W
R269	1-247-807-31	CARBON	100	5%	1/4W
R270	1-247-807-31	CARBON	100	5%	1/4W
R271	1-247-807-31	CARBON	100	5%	1/4W
R272	1-247-807-31	CARBON	100	5%	1/4W
R280	1-247-866-11	CARBON	30K	5%	1/4W
R281	1-249-435-11	CARBON	33K	5%	1/4W
R282	1-247-872-11	CARBON	51K	5%	1/4W
R283	1-247-880-11	CARBON	110K	5%	1/4W
R284	1-249-439-11	CARBON	68K	5%	1/4W
R285	1-247-881-00	CARBON	120K	5%	1/4W
R286	1-247-874-11	CARBON	62K	5%	1/4W
R287	1-249-437-11	CARBON	47K	5%	1/4W
R288	1-247-878-00	CARBON	91K	5%	1/4W
R289	1-249-441-11	CARBON	100K	5%	1/4W
R290	1-249-439-11	CARBON	68K	5%	1/4W
R291	1-247-881-00	CARBON	120K	5%	1/4W
< VARIABLE RESISTOR >					
RV201	1-230-495-11	RES, ADJ, CARBON 2.2K (PB LEVEL R)			
RV202	1-230-495-11	RES, ADJ, CARBON 2.2K (PB LEVEL L)			
RV203	1-230-496-11	RES, ADJ, CARBON 10K (REC LEVEL R)			

Ref. No.	Part No.	Description			Remark
RV204	1-230-496-11	RES, ADJ, CARBON 10K (REC LEVEL L)			
RV205	1-230-499-11	RES, ADJ, CARBON 100K (REC BIAS R)			
RV206	1-230-499-11	RES, ADJ, CARBON 100K (REC BIAS L)			
< RELAY >					
RY201	1-515-614-11	RELAY			
< TRANSFORMER >					
T201	1-433-349-11	TRANSFORMER, BIAS OSCILLATION			

*	1-656-858-11	TC SW BOARD			

< RESISTOR >					
R360	1-249-409-11	CARBON	220	5%	1/4W
R361	1-249-413-11	CARBON	470	5%	1/4W
R362	1-249-415-11	CARBON	680	5%	1/4W
R363	1-249-419-11	CARBON	1.5K	5%	1/4W
R364	1-249-423-11	CARBON	3.3K	5%	1/4W
R365	1-249-409-11	CARBON	220	5%	1/4W
R366	1-249-413-11	CARBON	470	5%	1/4W
R367	1-249-415-11	CARBON	680	5%	1/4W
R368	1-249-419-11	CARBON	1.5K	5%	1/4W
R369	1-249-423-11	CARBON	3.3K	5%	1/4W
R370	1-249-413-11	CARBON	470	5%	1/4W
R371	1-249-415-11	CARBON	680	5%	1/4W
R372	1-249-427-11	CARBON	6.8K	5%	1/4W
R373	1-249-427-11	CARBON	6.8K	5%	1/4W
< SWITCH >					
S301	1-554-303-21	SWITCH, TACTILE (■)			
S302	1-554-303-21	SWITCH, TACTILE (PAUSE■■)			
S303	1-554-303-21	SWITCH, TACTILE (▷)			
S304	1-554-303-21	SWITCH, TACTILE (◁)			
S305	1-554-303-21	SWITCH, TACTILE (◀◀)			
S306	1-554-303-21	SWITCH, TACTILE (▶▶)			
S307	1-554-303-21	SWITCH, TACTILE (REC●)			
S308	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)			
S309	1-554-303-21	SWITCH, TACTILE (CD SYNCHRO)			
S310	1-554-303-21	SWITCH, TACTILE (TUNING MODE)			
S311	1-554-303-21	SWITCH, TACTILE (MEMORY)			
S312	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)			
S313	1-762-205-11	SWITCH, SLIDE (DIRECTION)			
S314	1-762-205-11	SWITCH, SLIDE (DOLBY NR)			

*	1-651-391-11	TRAY MOTOR BOARD			

< CAPACITOR >					
C502	1-164-159-11	CERAMIC	0.1uF		50V

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

U/D MOTOR

Ref. No.	Part No.	Description	Remark
*	1-651-396-11	U/D MOTOR BOARD *****	
		< CAPACITOR >	
C501	1-164-159-11	CERAMIC 0.1uF 50V	

		MISCELLANEOUS *****	
2	1-452-419-21	MAGNET	
11	1-769-910-11	WIRE (FLAT TYPE) (9 CORE)	
12	1-773-318-11	WIRE (FLAT TYPE) (31 CORE)	
14	1-769-845-11	WIRE (FLAT TYPE) (5 CORE)	
15	1-769-838-11	WIRE (FLAT TYPE) (9 CORE)	
18	1-769-969-11	WIRE (FLAT TYPE) (13 CORE)	
53	1-773-042-11	WIRE (FLAT TYPE) (17 CORE)	
57	1-769-906-11	WIRE (FLAT TYPE) (9 CORE)	
60	1-769-945-11	WIRE (FLAT TYPE) (11 CORE)	
64	1-769-865-11	WIRE (FLAT TYPE) (5 CORE)	
65	1-575-783-21	WIRE (FLAT TYPE) (9 CORE)	
69	1-769-839-11	WIRE (FLAT TYPE) (19 CORE)	
70	1-776-426-11	WIRE (FLAT TYPE) (13 CORE)	
71	1-590-486-11	WIRE (FLAT TYPE) (7 CORE)	
△76	1-575-651-21	CORD, POWER	
77	1-533-293-11	FUSE HOLDER	
181	1-773-032-11	WIRE (FLAT TYPE) (15 CORE)	
312	1-452-719-11	MAGNET ASSY	
△355	8-848-387-01	OPTICAL PICK-UP KSS-213BA/S-N	
356	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
△CN956	1-526-794-11	OUTLET, AC (AC OUTLET)	
△F951	1-532-464-51	FUSE, TIMELUG (T2.5AL/250V)	
FL501	1-517-423-11	INDICATOR TUBE, FLUORESCENT	
HRPE1011	500-156-11	HEAD (RECORD/PLAY BACK/ERASE)	
M1	X-3370-425-1	MOTOR (H) ASSY	
M2	X-3370-427-1	MOTOR (LD) ASSY	
M101	X-4917-523-4	MOTOR(SPINDLE)ASSY	
M102	X-4917-504-1	MOTOR(SLED)ASSY	
M501	A-4660-857-A	MOTOR (U/D) ASSY	
M502	X-4944-463-1	MOTOR ASSY (TRAY)	
PM1	1-454-765-11	SOLENOID, PLUNGER	
S1	1-571-300-21	SWITCH, ROTARY (LIMIT)	
S2	1-762-569-11	SWITCH, LEAF (FWD REC)	
S3	1-762-569-11	SWITCH, LEAF (CrO2)	
S4	1-762-570-11	SWITCH, LEAF (PLAY)	
S5	1-762-569-11	SWITCH, LEAF (METAL)	
S6	1-762-569-11	SWITCH, LEAF (REV REC)	
△T951	1-427-971-11	TRANSFORMER, POWER	

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
	1-473-205-11	COMMANDER, STANDARD (RM-U55)	
	1-501-369-11	ANTENNA	
	1-501-374-11	ANTENNA, LOOP	
	1-558-787-81	CORD, CONNECTION	
	1-773-980-11	CORD (WITH CONNECTOR)(CIRCS)4P	
	3-707-584-11	COVER, BATTERY (FOR RM-U55)	
	3-800-383-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
*	4-976-231-01	INDIVIDUAL CARTON	
*	4-976-232-02	CUSHION (FRONT)	
*	4-976-233-02	CUSHION (REAR)	

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#2	7-682-548-04	SCREW +BVTT 3X8 (S)
#3	7-621-255-35	SCREW +BVTT 2X5 (S)
#4	7-685-132-19	SCREW +PTPWH 2.6X5 (TYPE2)
#5	7-621-255-10	SCREW +BVTT 2X3 (S)
#6	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT
#7	7-621-775-10	SCREW +B 2.6X4
#8	7-685-871-01	SCREW +BVTT 3X6 (S)
#9	7-621-775-00	SCREW +B 2.6X3
#10	7-621-773-86	SCREW +B 2.6X4
#11	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S
#12	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#13	7-621-255-15	SCREW +P 2X3

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

