

Service Manual

COMPACT
disc
DIGITAL AUDIO

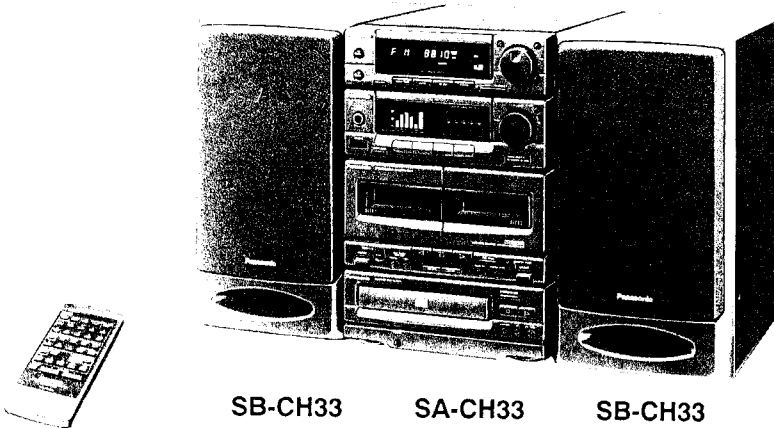
*
DOLBY B NR

ORIGINAL S
8/9/92

CD Stereo System
SA-CH33

Colour

(K) ... Black Type



Area

Suffix for Model No.	Area	Colour
(E)	Continental Europe	(K)
(EB)	Great Britain	
(EG)	F.R. Germany/Italy	
(GN)	Oceania	

System Name	Unit
SC-CH33(GN)	SA-CH33(GN) Music center SB-CH33(G) Speaker
SC-CH33(E/EB/EG)	SA-CH33(E/EB/EG) Music center SB-CH33(E) Speaker (PAES)

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

TAPE DECK : MECHANISM SERIES (AR300)
TRAVERSE DECK : MECHANISM SERIES (SODD110Z)

SPECIFICATIONS

AMPLIFIER SECTION

1 kHz continuous power output both channels driven 2 X 30 W (THD 1%, 6 Ω)
Total harmonic distortion half power at 1 kHz 0.07% (6Ω)
Frequency response
AUX 30 Hz — 30 kHz (−3 dB)
Input sensitivity
AUX 250 mV
Input impedance
AUX 24 kΩ
Graphic equalizer ±10 dB
(100 Hz, 330 Hz, 1 kHz, 3.3 kHz, 10 kHz)

FM TUNER SECTION

Frequency range 87.50 — 108.00 MHz
Sensitivity 23.3 dBf (4.0 μV, IHF '58)
Total harmonic distortion
MONO 0.3%
STEREO 0.5%
S/N Ratio
MONO 65dB (70 dB, IHF)
Frequency response 30 Hz ~ 15 kHz (+0.5, −2 dB)
Image rejection at 98 MHz 40 dB
Stereo separation
1 kHz 35 dB
Antenna terminal(s) 75 Ω (unbalanced)

LW/MW TUNER SECTION

Frequency range
MW 522 — 1611 kHz
LW 144 — 288 kHz
Sensitivity (for 500 mW)
MW (at 999 kHz) 250 μV/m
LW (at 252 kHz) 350 μV/m

CASSETTE DECK SECTION

Track system 4 — track, 2 — channel
Heads
Playback Solid Permalloy
Record/Playback Solid Permalloy
Erasure Double gap ferrite head
Motor DC servo motor
Recording system AC bias, 100 kHz
Erase system AC erase, 100 kHz
Tape speed 4.8 cm/sec
Frequency response
NORMAL 40 Hz—14 kHz (+3, −6 dB)
CrO₂ 40 Hz—14 kHz (+3, −6 dB)
S/N (CrO₂ type tape)
Dolby NR off 52 dB (A-WTD)
Dolby NR on 61 dB (CCIR)
Wow and Flutter 0.1% (WRMS)
Fast forward and rewind time Approx. 110 seconds with C-60 cassette tape

MODEL PARTS TABLE

Panasonic

CD PLAYER

Sampling frequency	44.1 kHz
Decoding	16-bit linear
Beam Source/wave length	Semiconductor laser/780nm
Number of channels	2 - channel, Stereo
Frequency response	20 Hz-20 kHz (+1, -2 dB)
S/N Ratio	90 dB filter (JIS. A)
Wow and Flutter	Below measurable limit
Digital filter	4 times over sampling
D/A converter	Multi stage noise shaping

GENERAL

Power consumption	123 W
Power supply	AC 50 Hz, 230 — 240 V
Dimension (W x H x D)	215 x 319 x 338 mm
Weight	7.7 kg

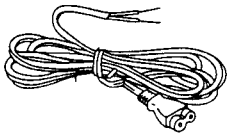
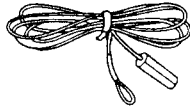
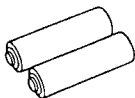
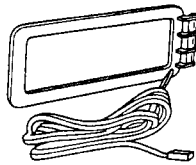
Notes :

- Specifications are subject to change without notice.
Weight and dimensions shown are approximate.
- Total harmonic distortion is measured by the digital spectrum analyzer.

CONTENTS

	Page		Page
ACCESSORIES.....	2	SCHEMATIC DIAGRAM.....	44 ~ 60
PRECAUTION OF LASER DIODE.....	3	PRINTED CIRCUIT BOARD.....	61 ~ 66
HANDLE PRECAUTIONS FOR TRAVERSE DECK.....	4	WIRING CONNECTION DIAGRAM.....	67 ~ 68
PROTECTION CIRCUITRY.....	4	DIGITAL SERVO SYSTEM.....	69 ~ 70
BEFORE REPAIR AND ADJUSTMENT.....	4	TROUBLESHOOTING GUIDE.....	71 ~ 72
FRONT PANEL CONTROLS AND FUNCTIONS.....	5 ~ 9	CABINET PARTS LOCATION.....	73 ~ 74
DISASSEMBLY INSTRUCTIONS.....	10 ~ 20	REPLACEMENT PARTS LIST.....	75 ~ 80
MEASUREMENTS AND ADJUSTMENTS.....	21 ~ 25	RESISTORS & CAPACITORS.....	81 ~ 88
TERMINAL FUNCTION OF IC'S.....	26 ~ 31	MECHANISM PARTS LOCATION (DECK 1).....	88 ~ 90
INTERNAL CONNECTION OF FL.....	32 ~ 35	(DECK 2).....	91 ~ 93
BLOCK DIAGRAM.....	36 ~ 42	TRAVERSE DECK PART.....	94 ~ 95
TERMINAL GUIDE OF IC's TRANSISTORS AND DIODES.....	43	PACKING.....	96 ~ 97

ACCESSORIES

AC power supply cord.....1 pc. 	FM indoor antenna1 pc. 
Remote control transmitter RAK-SC307WM.....1 pc. 	Remote control batteries UM-4, AAA, R03.....2 pcs. 
LW/MW loop antenna SLA9Z5T.....1 pc. 	Antenna holder.....1 pc. 
Attaching plug1 pc. (For United Kingdom only) 	Mounting screws.....2 pcs. 

MODEL PARTS LIST

■ PRECAUTION OF LASER DIODE

CAUTION : This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.

Wave length : 780 nm

Maximum output radiation power from pick up : 100 mW/VDE

Laser radiation from the pick up lens is safety level, but be sure the followings:

1. Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pick up lens for a long time.

ACHTUNG: Dieses produkt enthält eine laserdioden. Im eingeschalteten zustand wird unsichtbare laserstrahlung von der lasereinheit abgestrahlt.

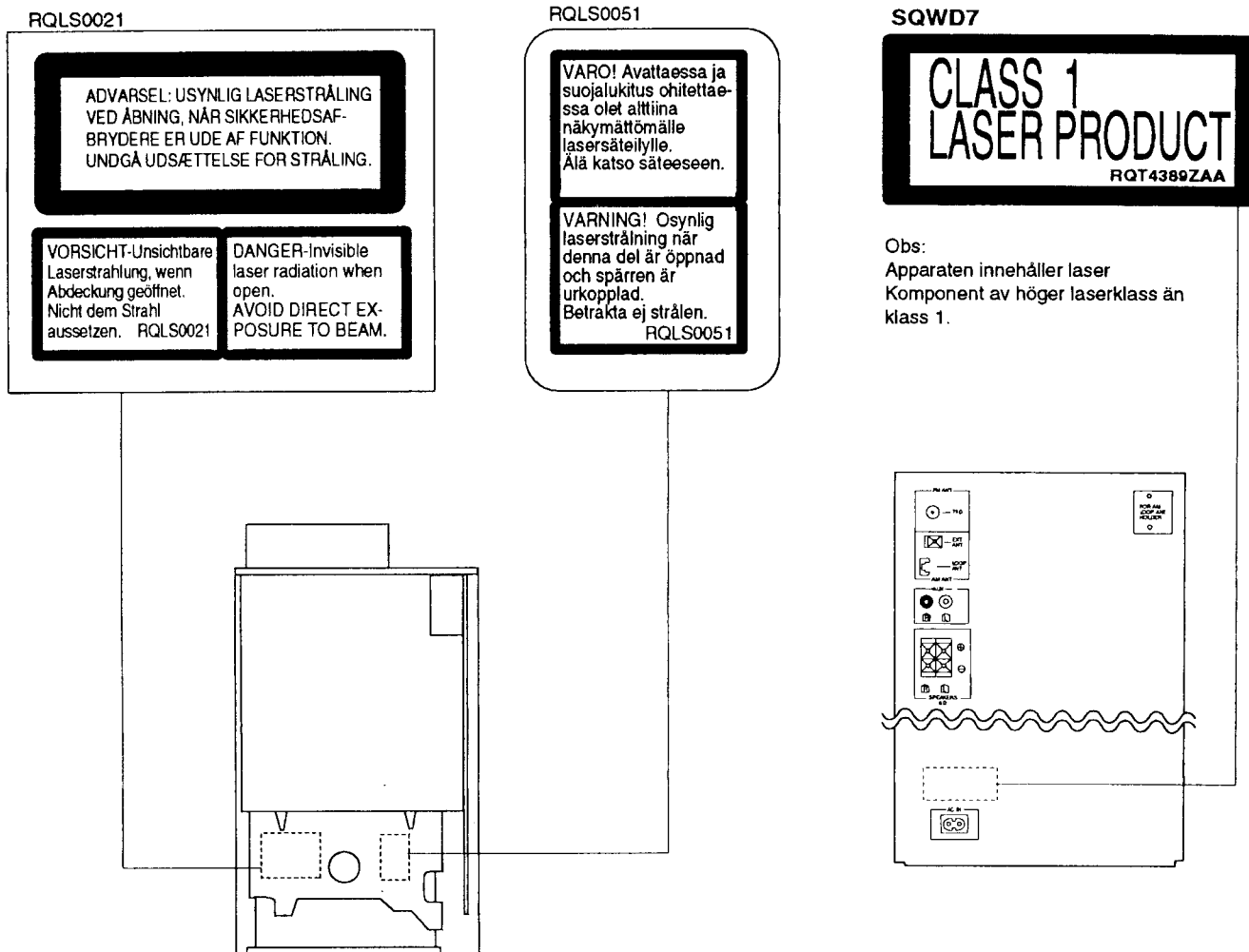
Wellenlänge : 780nm

Maximale strahlungsleistung der lasereinheit : 100µW/VDE

Die strahlung an der lasereinheit ist ungefährlich, wenn folgende punkte beachtet werden:

1. Die lasereinheit nicht zerlegen, da die strahlung an der freigelegten laserdioden gefährlich ist.
2. Den werksseitig justierten einstellregler der lasereinheit nicht verstellen.
3. Nicht mit optischen instrumenten in die fokussierlinse blicken.
4. Nicht über längere zeit in die fokussierlinse blicken.

ADVASEL: I dette a apparat anvendes laser.



■ HANDLE PRECAUTIONS FOR TRAVERSE DECK

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.

So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

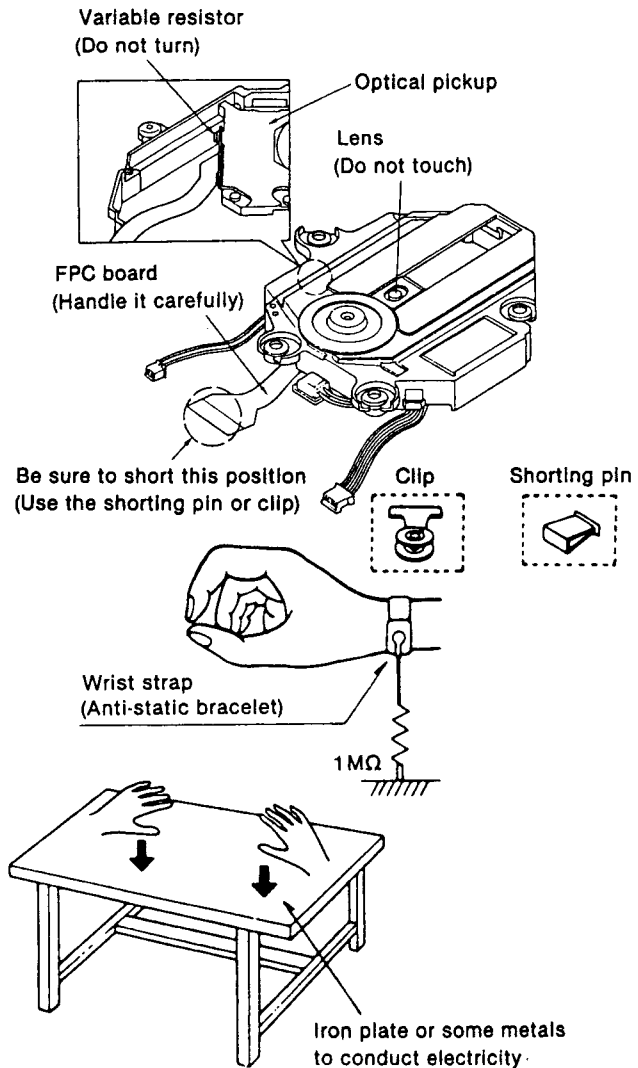
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the flexible board (FPC board).
When removing or connecting the short pin, finish the job in as short time as possible.
3. Take care not to apply excessive stress to the flexible board (FPC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.

• Grounding for electrostatic breakdown prevention

1. Human body grounding
Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding.
Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution :

The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).



■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

if this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

■ BEFORE REPAIR AND ADJUSTMENT

Disconnect AC power, Discharge both Power Supply Capacitors C541 and C542 through a 10Ω, 5W resistor to ground.

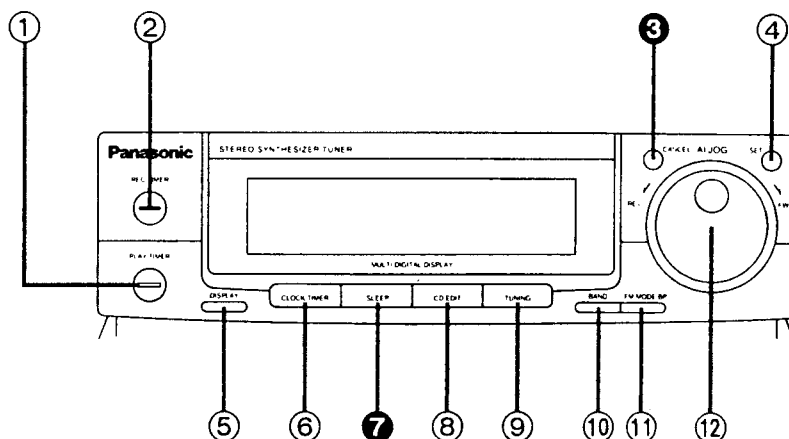
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at 230V, 50 Hz in NO SIGNAL mode should be less than 350mA.

FRONT PANEL CONTROLS AND FUNCTIONS

The functions indicated by the numbers with black background (for example ③) can also be activated from the remote control transmitter.

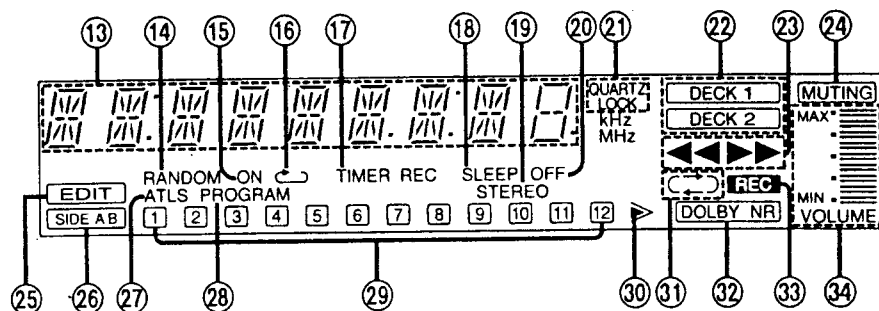


Tuner

■ Tuner control

- ① **Timer play button (PLAY TIMER)**
Use for timer play (when you want play to begin automatically at a preset time).
- ② **Timer recording button (REC TIMER)**
Use for timer recording (when you want to begin recording automatically at a preset time).
- ③ **Cancel button (CANCEL)**
Press to cancel the contents chosen with the jog dial.
- ④ **Set button (SET)**
Press to set various functions.
- ⑤ **Display select button (DISPLAY)**
Press to select the display (mode display, clock, tape counter, etc.).
- ⑥ **Clock/timer button (CLOCK/TIMER)**
Use to select the desired timer mode or to adjust the clock.
- ⑦ **Sleep timer button (SLEEP)**
Press when you want the system to turn itself off.
- ⑧ **Compact disc edit-recording mode select button (CD EDIT)**
Press to select the desired edit-recording mode.
- ⑨ **Tuning mode select button (TUNING)**
Press to select the preset, manual or auto tuning mode.
- ⑩ **Band select button (BAND)**
Press to select the LW, MW or FM radio band.
- ⑪ **FM mode/beat proof button (FM MODE/BP)**
Press to select the FM listening mode (stereo or monaural) during FM broadcasts or to reduce the unwanted beat signals (whistle) during recording of a LW/MW broadcast.
- ⑫ **Jog dial (AI JOG)**
Use to select the contents of the mode, i.e., select tracks in CD player mode or stations in the tuner mode, as well as many other functions.

Multi digital display



⑬ Alphanumeric display

Shows the selected source, present time, tape counter and the contents of the timer setting, received frequencies, CD edit-recording mode, volume level, etc.

⑭ Random play indicator (RANDOM)

Lights during the random play mode of the compact disc.

⑮ Timer on-time indicator (ON)

Shows the timer on-time (the time the system is set to go on).

⑯ Repeat play indicator ()

Lights during the repeat play mode of the compact disc.

⑰ Timer recording indicator (TIMER REC)

Lights when you press the timer recording button.

⑱ Sleep timer indicator (SLEEP)

Lights when you press the sleep timer button.

⑲ FM stereo indicator (STEREO)

Lights when you receive an FM stereo broadcast. It will not light if you are using the FM mode/beat proof button to select monaural mode.

⑳ Timer off-time indicator (OFF)

Shows the timer off-time (the time the system is set to shut off).

㉑ Quartz lock indicator (QUARTZ LOCK)

Lights when you precisely tune in a broadcast station.

㉒ Deck 1/deck 2 indicator (DECK 1, DECK 2)

Lights to show which deck is operational (deck 1 or deck 2).

㉓ Tape direction indicators (,)

Shows the direction of tape travel.

㉔ Muting indicator (MUTING)

Lights when you activate the muting mode.

㉕ Compact disc edit-recording indicator (EDIT)

Lights when you use the edit-recording from a compact disc.

㉖ Tape side indicator (SIDE A, B)

Shows which side of the cassette tape (A or B) will be recorded on when you use the edit-recording of a compact disc.

㉗ Automatic tape level setting indicator (ATLS)

Lights when you use ATLS recording.

㉘ Program indicator (PROGRAM)

Lights during the program play mode of the compact disc.

㉙ Matrix display (1–12)

Shows the number of tracks and preset channels.

㉚ Over indicator ()

Lights if there are 13 or more tracks on the disc.

㉛ Reverse mode indicators (, ,)

Shows which of the reverse modes you selected with the reverse mode button.

㉜ Dolby noise reduction indicator (DOLBY NR)

Lights when you activate the Dolby noise reduction system.

㉝ Recording indicator (REC)

Lights when the system is in the recording (recording standby) mode.

㉞ Volume level indicator

Shows the volume level.

Amplifier

■ Amplifier controls

㉟ Power "STANDBY /ON" switch (POWER STANDBY /ON)

This switch switches ON and OFF the secondary circuit power only. The unit is in the "standby" condition when this switch is set to the STANDBY  position. Regardless of the switch setting, the primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

㊱ Spectrum analysis display

Shows the spectrum analysis level for each frequency range.

㊲ Full range level display

Shows the full range level.

㊳ Super bass indicator

Lights when you activate the super bass mode.

㊴ Equalizer controls (GRAPHIC EQUALIZER LEVEL)

Use to adjust the equalization level.

These controls are for compensation of tonal quality. By sliding the controls at each of the indicated frequencies in the "+" direction, the tonal quality is increased, and by sliding them in the "-" direction, the tonal quality is decreased.

㊵ Volume level control (VOLUME)

Turn to adjust the volume level.

When turning the control, the alphanumeric display shows the volume level.

Note that --- dB is the lowest volume setting and 0 dB is the highest.

㊶ Volume preset button (VOL PRESET)

Use to preset volume for timer play.

㊷ Remote control signal sensor (SENSOR)

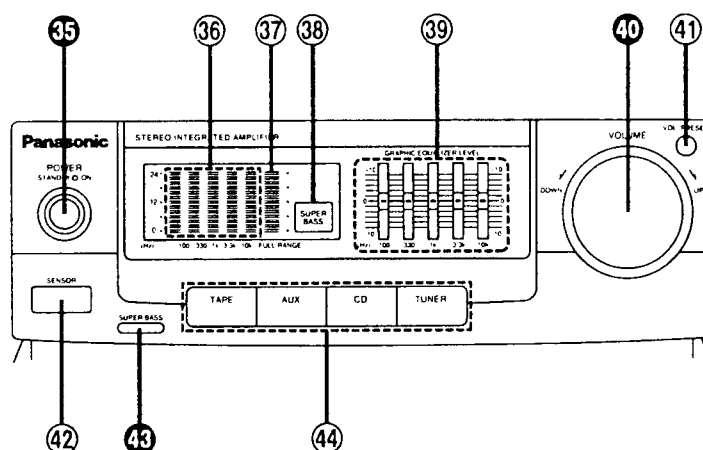
Receives the signals from the remote control.

㊸ Super bass button (SUPER BASS)

Press to boost the dynamic low-frequency ranges.

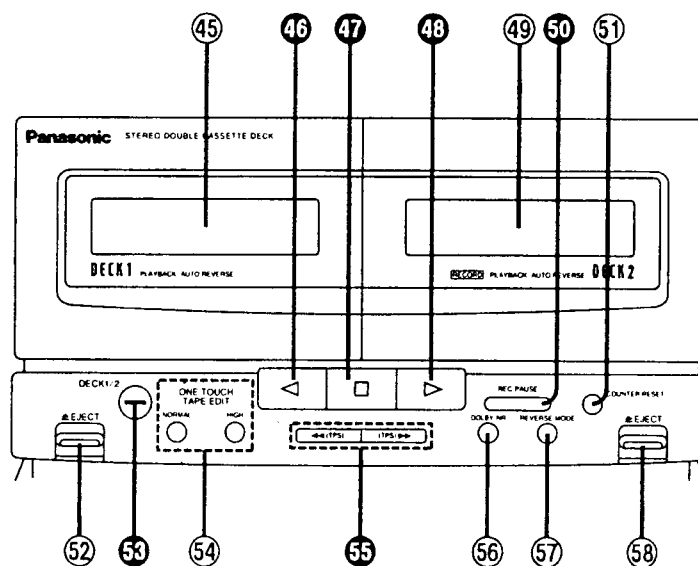
㊹ Input select buttons (TAPE, AUX, CD, TUNER)

Press to select the sound source.



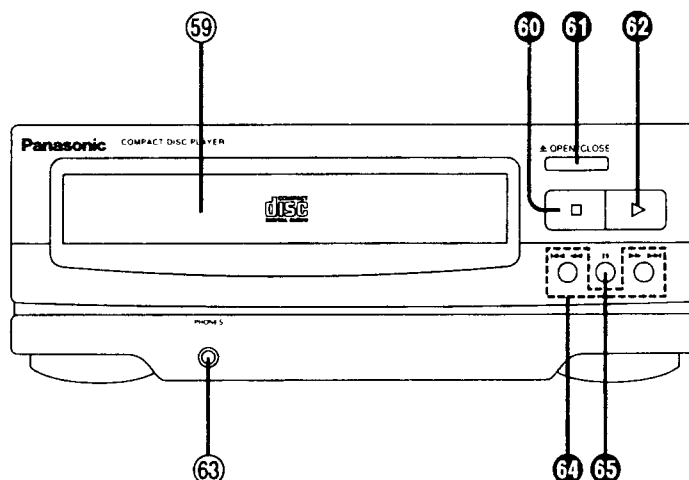
Cassette deck

- 45 Deck 1 cassette holder**
- 46 Reverse-side playback button (<|)**
Press to start the playback or recording (deck 2) in the reverse direction.
- 47 Stop button (□)**
Press to stop the tape.
- 48 Forward-side playback button (|>)**
Press to start the playback or recording (deck 2) in the forward direction.
- 49 Deck 2 cassette holder**
- 50 Record/record standby button (REC PAUSE)**
Press to put deck 2 into the record standby mode.
- 51 Tape counter reset button (COUNTER RESET)**
Press to reset the tape counter indicator to 000.
- 52 Deck 1 cassette eject button (▲ EJECT)**
Press to open the deck 1 cassette holder.
- 53 Deck 1/deck 2 select button (DECK 1/2)**
Press to select the deck to be operated.
- 54 One-touch tape edit buttons (ONE TOUCH TAPE EDIT)**
Press to start the tape-to-tape recording.
- 55 Fast-forward/rewind/tape program sense (TPS) buttons [<< (TPS), (TPS) >>]**
Press to advance or rewind the tape, or to quickly search the beginning of a track while the tape is being played.
- 56 Dolby noise reduction button (DOLBY NR)**
Use to reduce the hissing noise heard from the tape. The system has the Dolby B-type noise reduction system.
- 57 Reverse mode select button (REVERSE MODE)**
Press to select the reverse mode (for playback and recording).
- 58 Deck 2 cassette eject button (▲ EJECT)**
Press to open the deck 2 cassette holder.



Compact disc player

- 59 Disc tray**
- 60 Stop button (□)**
Press to stop the disc play.
- 61 Disc tray open/close button (△ OPEN/CLOSE)**
Press to open and close the disc tray.
- 62 Play button (▷)**
Press to start disc play.
- 63 Headphones jack (PHONES)**
Plug headphones cord into this jack.
- 64 Skip/search buttons (◀◀/◀◀ • ▶▶/▶▶)**
Press to move forward or backward through the tracks on a disc, or to hear disc sound at high speed while searching in the play mode.
- 65 Pause button (||)**
Press to stop the disc play temporarily.



REMOTE CONTROL OPERATION

Common operation controls

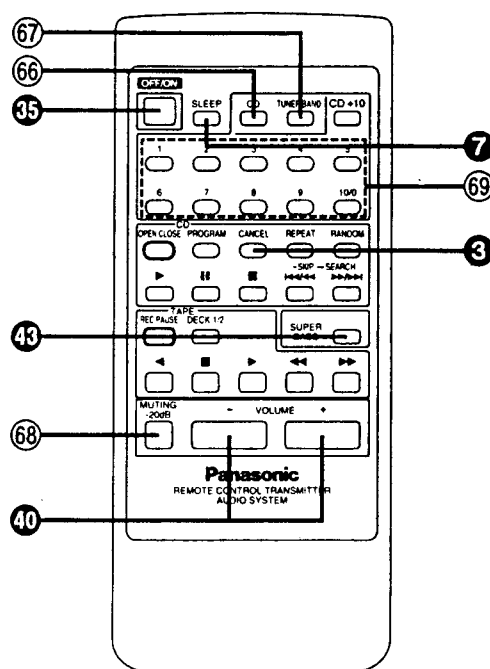
The function description of buttons 65, 40 and 43 is as described under "Amplifier controls" on page 6.

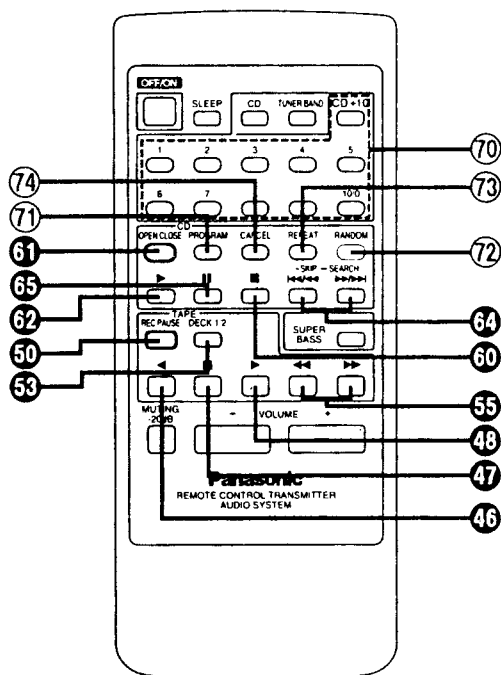
- 66 CD input select button (CD)**
Press to select the CD source.
- 67 Tuner input select button (TUNER/BAND)**
Press to select the tuner source.
- 68 Muting button (MUTING -20 dB)**
Press to temporarily attenuate (mute) the volume level.

Tuner controls

The function description of buttons 3 and 7 is as described under "Tuner control" on page 5.

- 69 Preset-tuning buttons (1-10/0)**
Press to select the preset channel of the tuner.





Compact disc controls

The function description of buttons 60, 61, 62, 64 and 65 is as described under "Compact disc player" on page 8.

⑦① Numeric buttons (1–10/0, +10)

Use to specify the compact disc's track.

⑦② Program button (PROGRAM)

Press to activate the program play mode. You can then enter specific tracks using the numeric buttons.

⑦③ Random button (RANDOM)

Press to play the disc's tracks in random order.

⑦④ Repeat button (REPEAT)

Press to activate the repeat mode.

⑦⑤ Cancel button (CANCEL)

Press to change the program.

Cassette deck controls

■ Cassette deck section

The function description of buttons 46, 47, 48, 50, 53 and 55 is as described under "Cassette deck" on page 7.

DISASSEMBLY INSTRUCTIONS

"ATTENTION SERVICER"

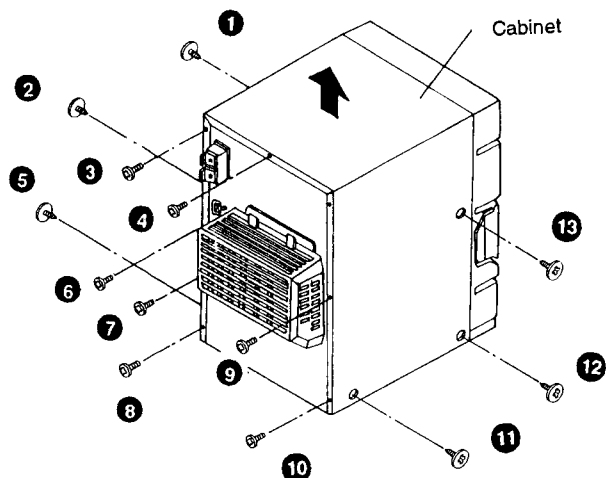
Some chassis components may have sharp edges. Be careful when disassembling and servicing.

Ref. No.
1

Removal of the Cabinet

Procedure
1

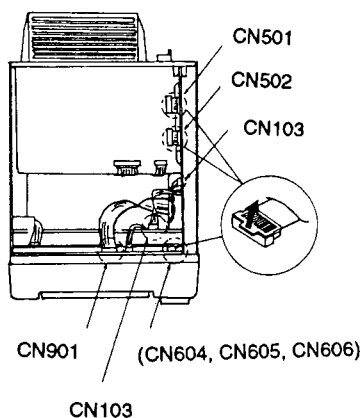
- Remove the 13 screws (1 ~ 13).



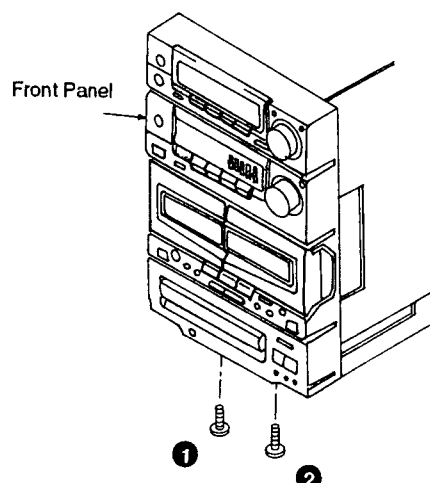
Ref. No.
2

Removal of the Front Cabinet

Procedure
1 ⇒ 2



1. Remove 2 flat cable (CN103, CN901).
2. Remove 3 connectors (CN604, CN605, CN606).

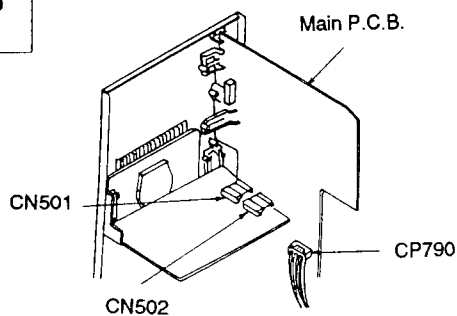


3. Remove 2 screws (1, 2).

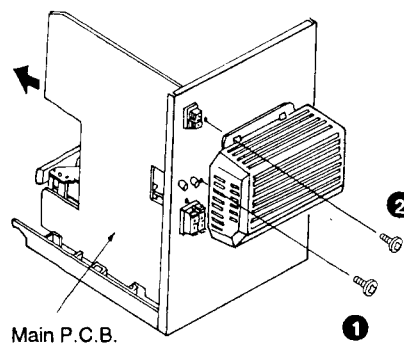
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3

Removal of the Main P.C.B.

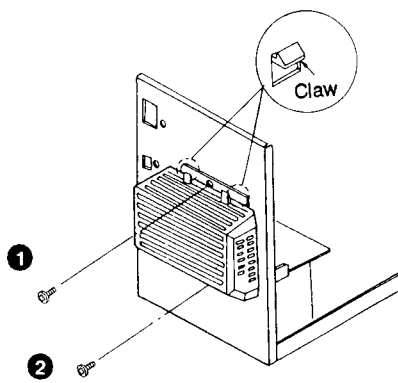
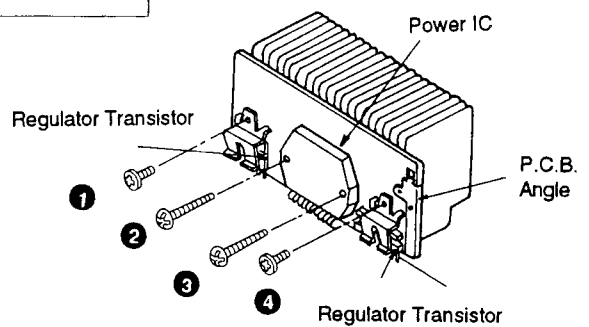
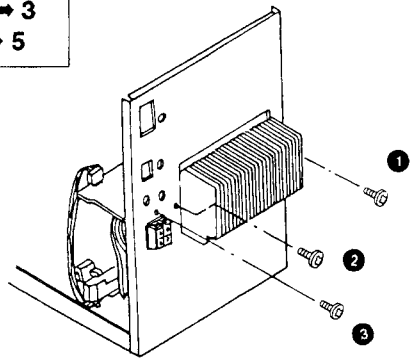
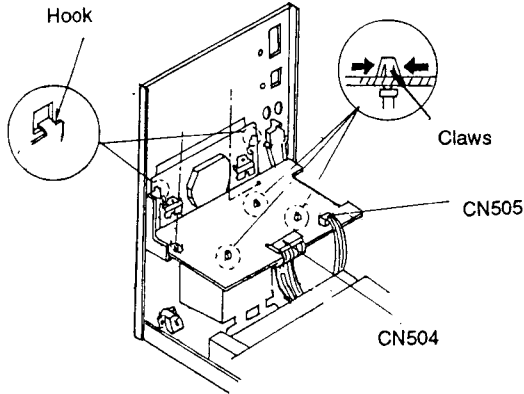
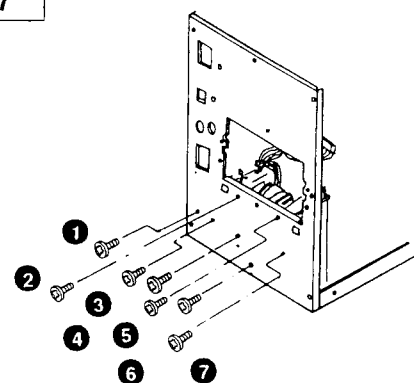
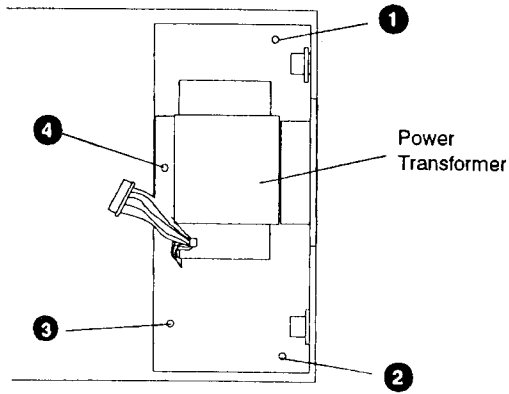
Procedure
1 ⇒ 2 ⇒ 3

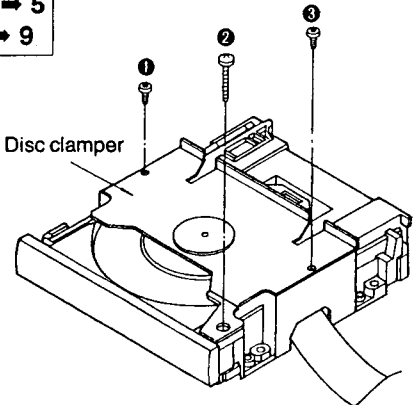
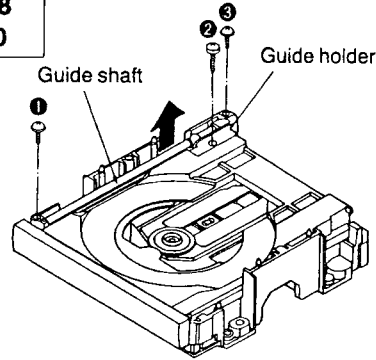
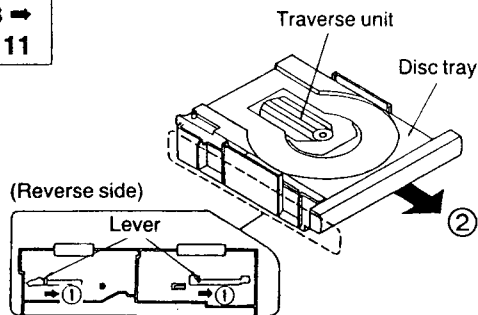
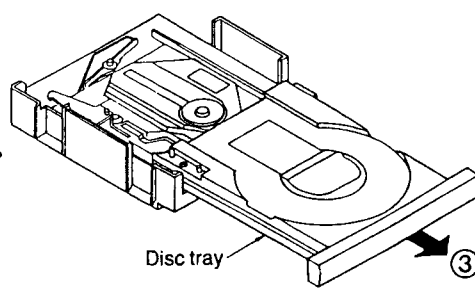
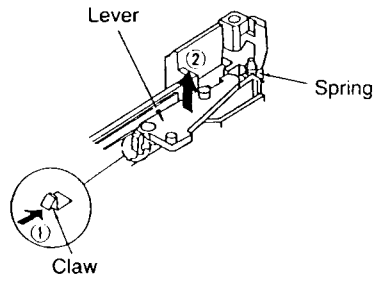
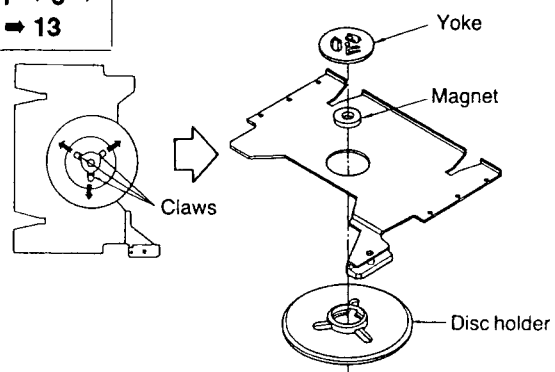


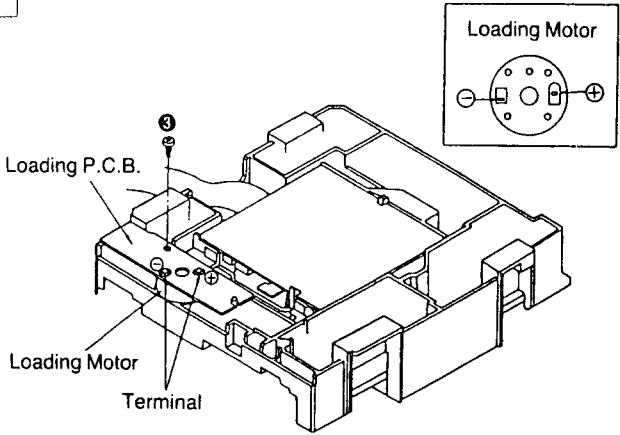
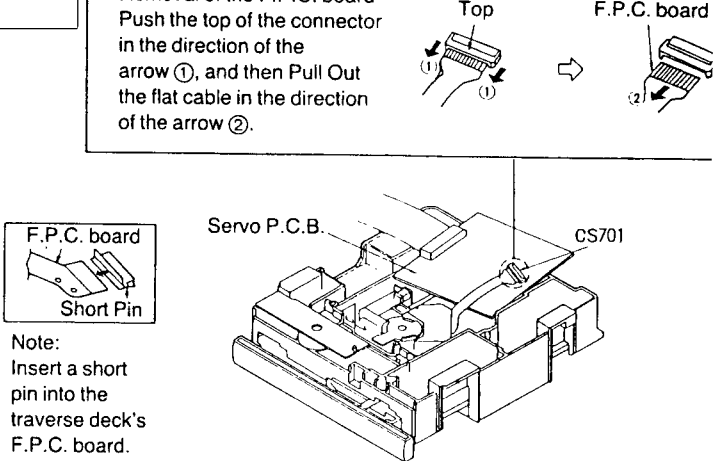
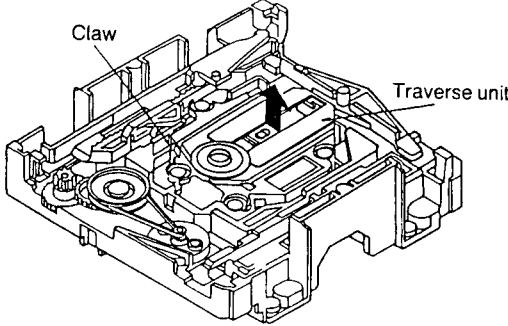
1. Remove 3 connectors (CN501, CN502, CP790).

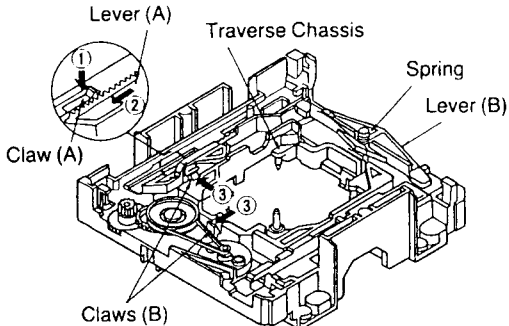
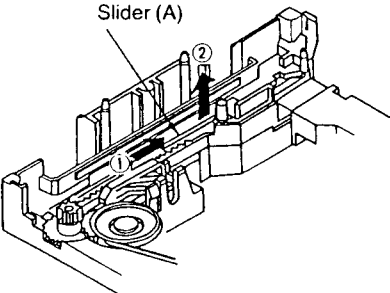
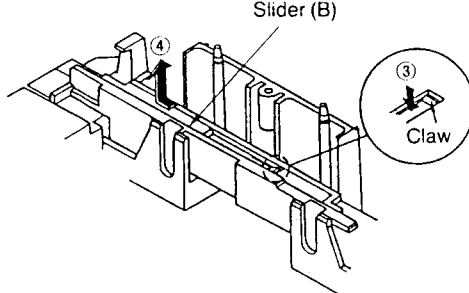
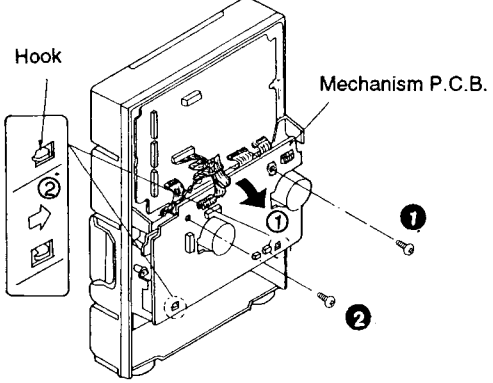


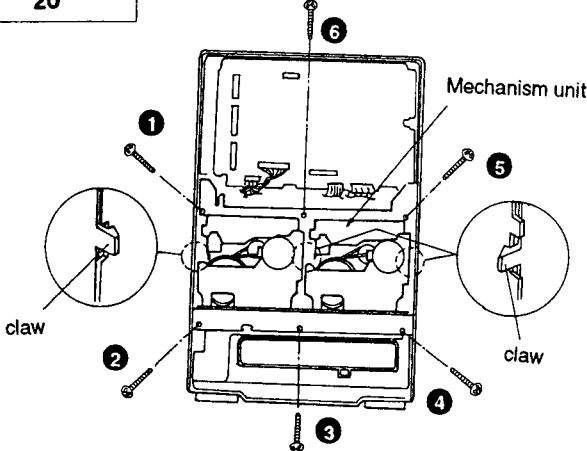
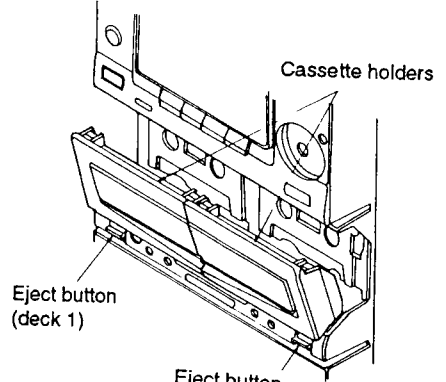
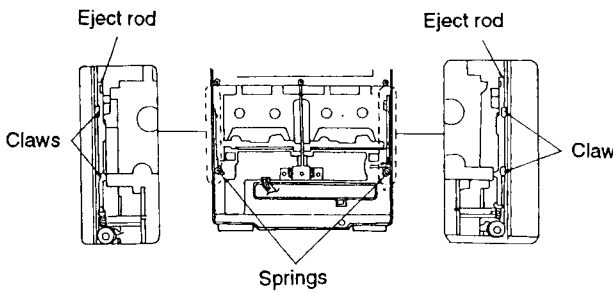
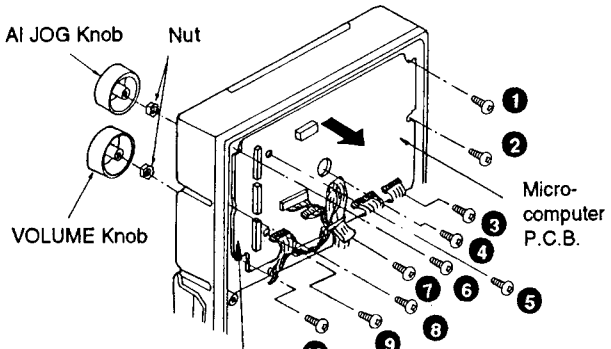
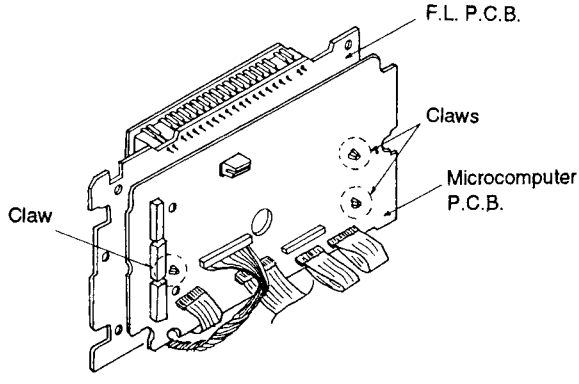
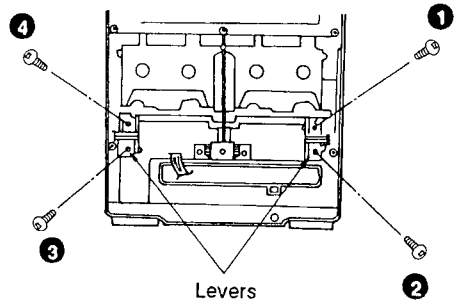
3. Remove 2 screws (1 ~ 2).
4. Remove the main P.C.B. in the direction of arrow.

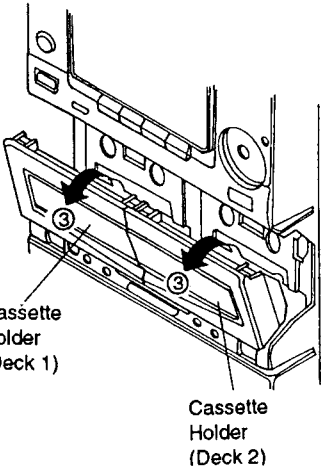
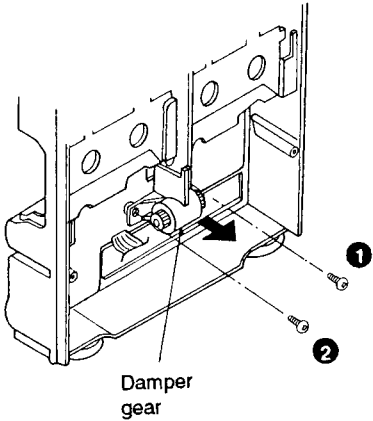
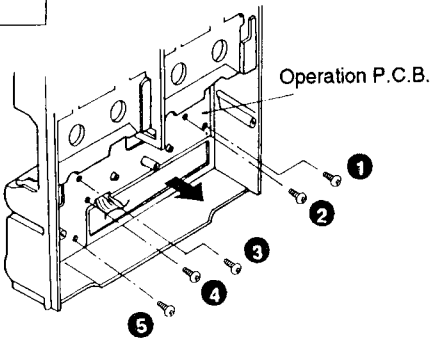
Ref. No. 4	Removal of the Heat Sink Cover	Ref. No. 6	Removal of the Power IC and Regulator Transistor
Procedure 1 ⇒ 4	1. Remove 2 screws (1, 2). 2. Release 2 claws.	Procedure 1 ⇒ 2 ⇒ 3 ⇒ 4 ⇒ 5 ⇒ 6	1. Remove 4 screws (1 ~ 4). 2. Unsolder the Power IC and Regulator Transistor.
			 • When mounting the Power IC and regulator transistors, apply silicone compound (RFKX0002) to the rear side of Power IC and regulator transistors.
Ref. No. 5	Removal of the Power Amp. P.C.B.	Ref. No. 7	Removal of the Rear Panel
Procedure 1 ⇒ 2 ⇒ 3 ⇒ 4 ⇒ 5		Procedure 1 ⇒ 2 ⇒ 3 ⇒ 4 ⇒ 5 ⇒ 7	Remove 7 screws (1 ~ 7).
 1. Remove 3 screws (1 ~ 3).  2. Remove 2 connectors (CN504, CN505). 3. Push 3 claws in the direction of the arrow and then remove the Power Amp. P.C.B.			Ref. No. 8
			Removal of the Power Transformer
		Procedure 1 ⇒ 2 ⇒ 3 ⇒ 4 ⇒ 5 ⇒ 7 ⇒ 8	• Remove 4 screws (1 ~ 4).
			

Ref. No. 9	Removal of Disc Clamper	Ref. No. 10	Removal of the Guide shaft and Guide Shaft Holder
Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9	 Disc clamber •Remove the 3 screws (①~③).	Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 10	 Guide shaft Guide holder 1. Remove the 3 screws (①~③). 2. Remove the guide shaft and guide shaft holder in the direction of the arrow.
Ref. No. 11	Removal of the Disc Tray		
Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 10 ⇒ 11	 Traverse unit Disc tray (Reverse side) Lever 1. Move the lever in the direction of arrow ① until the traverse unit goes down and the disc tray slightly in the direction of the ②.	 Disc tray 2. Remove the disc tray in the direction of the arrow ③.	
Ref. No. 12	Removal of the Lever	Ref. No. 13	Removal of the Magnet and Holder
Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 10 ⇒ 11 ⇒ 12	 Lever Spring Claw 1. Remove the spring. 2. Remove the claw in the direction of the arrow ① and then remove the lever in the direction of the arrow ②.	Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 13	 Yoke Magnet Claws Disc holder •Remove the 3 claws.

Ref. No. 14 Procedure 1 → 2 → 3 → 5 → 7 → 8 → 9 → 10 → 11 → 12 → 14	Removal of the Loading P.C.B. and Loading Motor	 1. Remove the belt. 2. Remove the 2 screws (1~2). 3. Remove the screw (3). 4. Unsolder the 2 terminals of loading motor.
Ref. No. 15 Procedure 1 → 2 → 3 → 5 → 7 → 8 → 15	Removal of the Servo P.C.B.	•Removal of the F.P.C. board Push the top of the connector in the direction of the arrow ①, and then Pull Out the flat cable in the direction of the arrow ②.  Note: Insert a short pin into the traverse deck's F.P.C. board. 4. Remove the 2 connectors (CP702, CP703). 5. Remove the F.P.C. Board (CS701).
Ref. No. 16 Procedure 1 → 2 → 3 → 5 → 7 → 8 → 9 → 10 → 11 → 12 → 14 → 15 → 16	Removal of the Traverse Unit	 1. Release the cables from the code clampers. 2. Remove the 2 pin in the direction of the arrow. 3. Remove the claw and remove the traverse unit in the direction of the arrow.

Ref. No. 17 Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 10 ⇒ 11 ⇒ 12 ⇒ 14 ⇒ 15 ⇒ 16 ⇒ 17	Removal of the Traverse Chassis	
Ref. No. 18 Procedure 1 ⇒ 2 ⇒ 3 ⇒ 5 ⇒ 7 ⇒ 8 ⇒ 9 ⇒ 10 ⇒ 11 ⇒ 12 ⇒ 14 ⇒ 15 ⇒ 16 ⇒ 17 ⇒ 18	Removal of the Slider (A) and Slider (B) 	
Ref. No. 19 Procedure 1 ⇒ 2 ⇒ 19	Removal of the Mechanism Control P.C.B.	

Ref. No. 20	Removal of the Mechanism Unit	Ref. No. 22	Removal of the Eject rod (Deck 1 & Deck 2).
Procedure 1 → 2 → 19 → 20	1. Remove 6 screws (❶ ~ ❺). 2. Remove 2 claws. 	Procedure 1 → 2 → 19 → 22	1. Press the eject buttons (Deck 1 & Deck 2). 
Ref. No. 21	Removal of the FL P.C.B. and Micro-computer P.C.B.	 2. Remove 2 springs (Deck 1 & Deck 2). 3. Remove the 4 claws and then remove the eject rods.	
Procedure 1 → 2 → 19 → 20 → 21	1. Pull out the 2 knobs (volume and AI JOG knobs). 2. Remove the 2 nuts. 3. Remove 10 screws (❶ ~ ❿). 4. Remove the FL P.C.B. and Microcomputer P.C.B. 		
 5. Unhook and remove the wire clasper. 6. Remove 3 claws and then remove the Microcomputer P.C.B.		Ref. No. 23	Removal of the Eject levers (Deck & Deck 2)
		Procedure 1 → 2 → 19 → 20 → 22 → 23	Remove 4 screws (❶ ~ ❹)
			

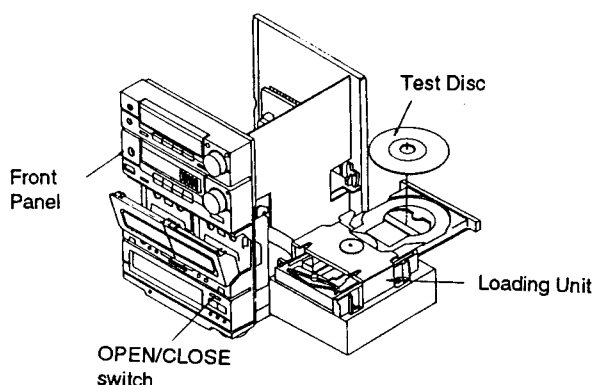
Ref. No. 24 Procedure 1 → 2 → 19 → 20 → 22 → 23 → 24	Removal of the Cassette Holder (Deck 1 & Deck 2) 1. Remove 2 springs in the direction of the arrow ①. 2. Push the ribs in the direction of the arrows ②.	3. Remove the cassette holder in the direction of the arrows ③. 
Ref. No. 25 Procedure 1 → 2 → 19 → 20 → 22 → 23 → 24 → 25	Removal of the Damper Gear 1. Remove 2 screws (①, ②). 2. Pull out the damper gear in the direction of the arrow.	Ref. No 27 How to check the FL P.C.B. and Microcomputer P.C.B. Procedure 1 → 27 1. Remove 2 screws (①, ②). 2. Release 2 claws. 3. Move the Microcomputer P.C.B. in the direction of the arrow. 
Ref. No. 26 Procedure 1 → 2 → 19 → 20 → 22 → 23 → 24 → 25 → 26	Removal of the operation P.C.B. (Cassette Deck/CD) 1. Remove 5 screws (① ~ ⑤). 2. Remove the operation P.C.B. in the direction of the arrow.	Microcomputer P.C.B. FL P.C.B. 4. When checking the soldered surface of the P.C.B. (FL and Microcomputer) and replace the parts, do as shown in the figure above. 

Ref. No.
28

How to check the Servo P.C.B.

Procedure
1 → 2 → 19 →
20 → 28

1. Remove the connector CP790.
2. Remove 4 screws (① ~ ④).



3. Reinstall the front panel to the body and reconnect all the flat cables and connectors.
4. Place the loading unit sideways as shown in figure.
5. Set the test disc.

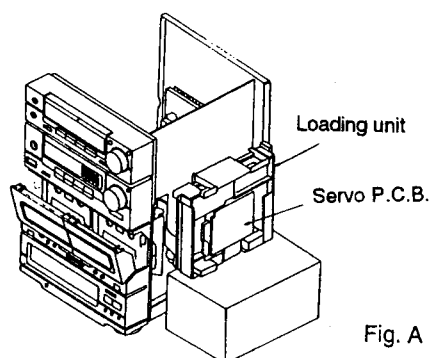
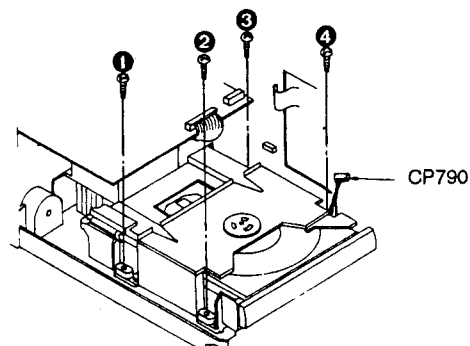


Fig. A

6. When checking the soldered side of the Servo P.C.B., do as shown in fig. A.

Ref. No.
29

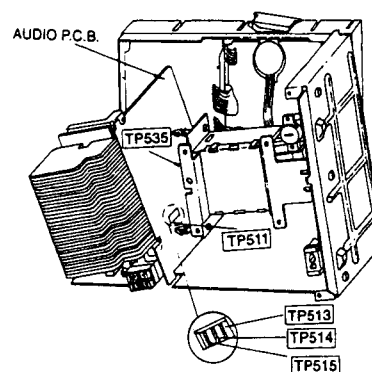
How to check the Audio P.C.B.

Procedure
1 → 29

1. Place the Audio P.C.B. as shown in figure with all the flat cables and connectors connected.
2. When checking the soldered surface of the Audio P.C.B., do as shown in figure.

Note : Audio PCB can be checked by disconnect from main P.C.B.

3. Connect jumper wire between TP511 and TP535.
4. Apply a AF signal to TP515 (Lch) or TP513 (Rch) and TP514 (GND) by using a AF OSC.

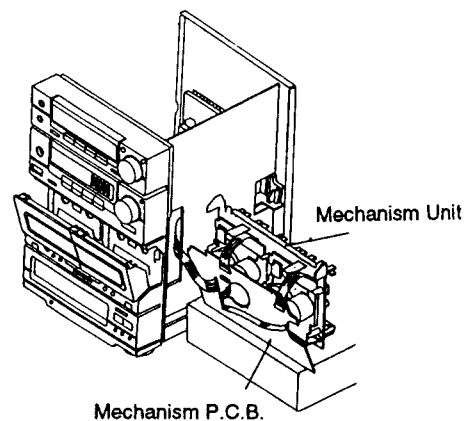
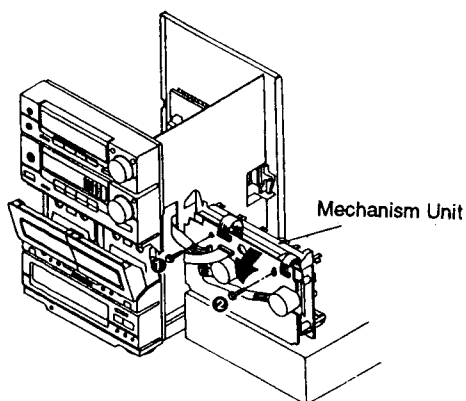


Ref. No.
30

How to check the Mechanism P.C.B.

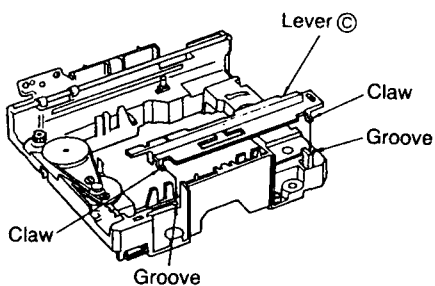
Procedure
1 → 29

1. Set up the mechanism unit as shown in figure.
2. Remove 2 screws (① ~ ②).
3. Remove the Mechanism P.C.B. in the direction of arrow.

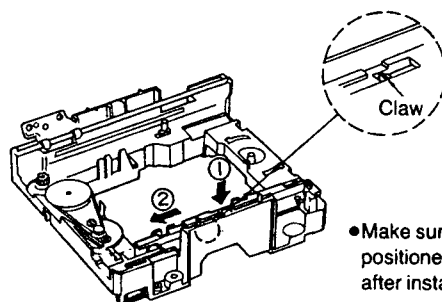


4. When checking the soldered surface of the mechanism P.C.B., do as shown in the figure.

CD UNIT ASSEMBLY

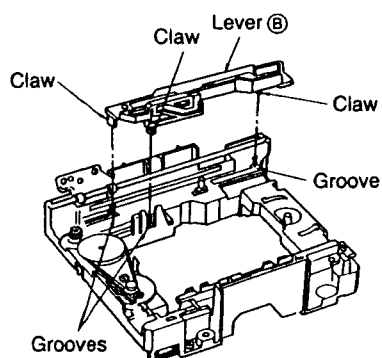


1. Install Lever ① on the chassis by fitting the claws of Lever ① in the two grooves of the chassis.

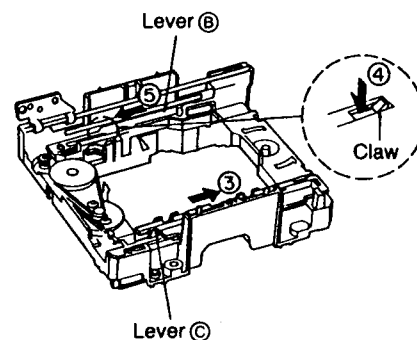


• Make sure that the claw is positioned as shown above after installing Lever ①.

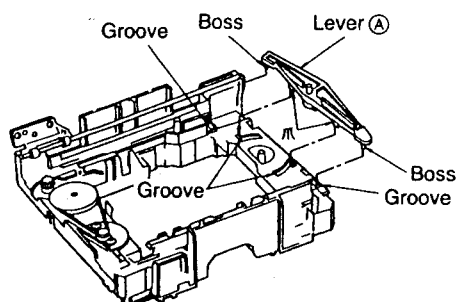
2. Slide Lever ① in the direction of arrow ② while keeping it held down lightly in the direction of arrow ①.



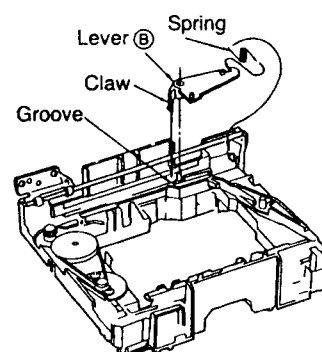
3. Install Lever ② on the chassis by fitting the claws of Lever ② in the three grooves of the chassis as shown above.



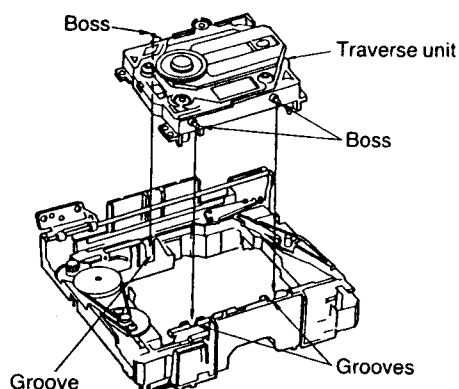
4. Slide Lever ① fully in the direction of arrow ③.
5. Keep holding down the claw in the direction of arrow ④ and slide Lever ② in the direction of arrow ⑤ to stop. (Slide but very little.)



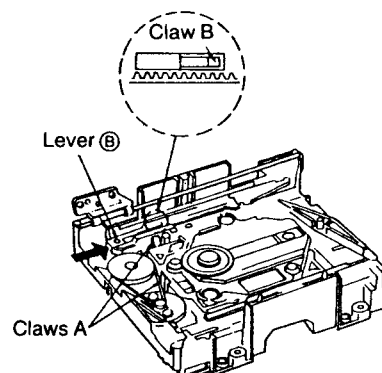
6. Install Lever A on the chassis by fitting the two claws of Lever A in the two grooves of the chassis and the two bosses in the two grooves as shown above.



7. Install Lever B on the chassis by fitting the claw of Lever B in the groove of the chassis.
8. Install the spring on Lever B and the chassis.

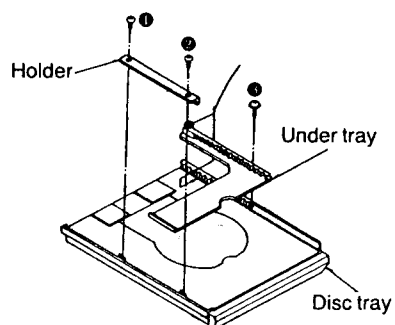


9. Install the traverse unit on the chassis by fitting the three bosses of the traverse unit in the three grooves of the chassis.



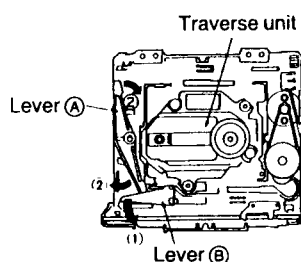
10. Make sure that the traverse unit is engaged with the two claws A.
11. Slide Lever B in the direction of the arrow. Be sure to check if claw B is set as shown above. (Slide Lever B but very little.)

■ INSTALLING DISC TRAY UNIT

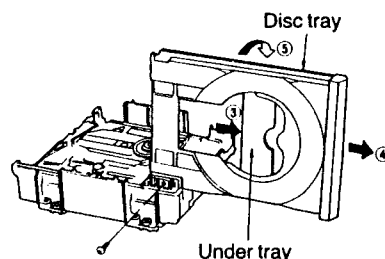


1. Install the under tray on the disc tray.
2. Install the holder on the disc tray with the two screws ① and ②.
3. Screw the under tray on the disc tray ③.
Make sure that the under tray moves smoothly after installing the disc tray unit.

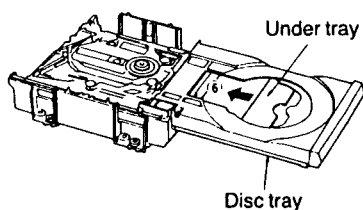
■ INSTALLING DISC TRAY



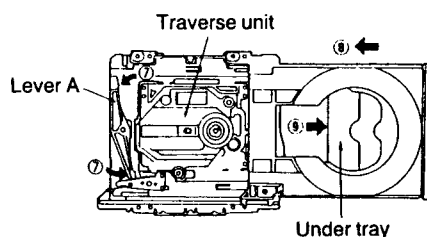
1. Move Lever (B) in the direction of arrow ① and Lever (A) in the direction of arrow ②. (The traverse unit rises.)



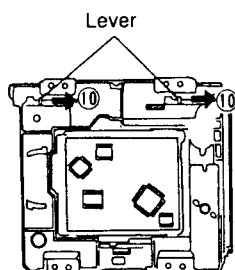
2. Screw the disc tray on the slider as shown above.
3. Slide the under tray fully in the direction of arrow ③.
4. Slide the disc tray fully in the direction of arrow ④.
5. Lay the disc tray down in the direction of arrow ⑤.



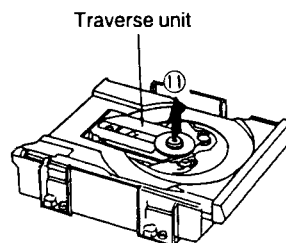
6. Slide the under tray in the direction of arrow ⑥.
7. Hold the disc tray and slide the under tray fully in the direction of arrow ⑥. (Slide but very little and the loading gear is engaged with disc tray gear.)



8. Move Lever A in the direction of arrow ⑦. (The traverse unit is lowered.)
9. Slide the disc tray in the direction of arrow ⑧. (Make sure that the under tray is moved in the direction of arrow ⑨.)



10. Slide the lever in the direction of arrow ⑩ and check if the traverse unit rises in the direction of arrow ⑪.



MEASUREMENTS AND ADJUSTMENTS

Warning : This product uses a laser diode. Refer to caution statements on page 3.

Caution : It is very dangerous to look or touch the laser beam. (laser radiation is invisible)
With the unit turned "on", laser radiation is emitted from the pickup lens.
Avoid exposure to the laser beam, especially when performing adjustments.

Measuring Instruments and Special Tools

★ Test discs

1. Playability test disc (SZZP1054C).
2. Uneven test disc (SZZP1056C).
- ★ Musical program disc (ordinary).
- ★ Extension cable kit (RFKZ0009).

- ★ Dual-beam oscilloscope with bandwidth of 30 MHz or better (with EXT. trigger and 1 : 1 probe).
- ★ Allen wrench (M2.0) (SZZP1101C).
- ★ Lock paint (RZZ0L01)

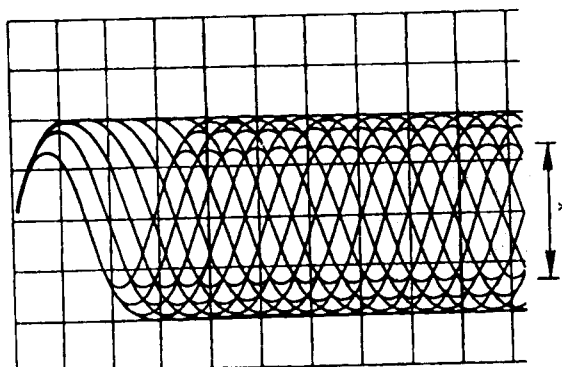
(1) MECHANICAL ADJUSTMENT

- When the traverse deck is replaced, making adjustments is not necessary. (The traverse deck ass'y is already adjusted.)
- Make adjustments to improve playability if the traverse deck has not been replaced.

1. Connect the oscilloscope's CH. 1 probe across **TP702** (RF) (+) and **TP703** (V-Ref.) (-) on the servo P.C.B.

Oscilloscope setting : VOLT200mV.
SWEEP0.5μs.
Input couplingAC.

2. Switch the player power ON, and play track 19 on the test disc (SZZ1056C).
3. Leave the player in play mode, and place the traverse deck as shown in Ref. No. 28 page 17.
4. Alternately adjust the two mechanical adjusting screws with the 2.0mm allen wrench (SZZP1101C) until the RF signal amplitude variation on the oscilloscope is minimized. (Refer to Fig. 2 on page 22)
5. After completing the adjustment, lock the **mechanical adjusting screws** with lock paint (RZZ0L01).



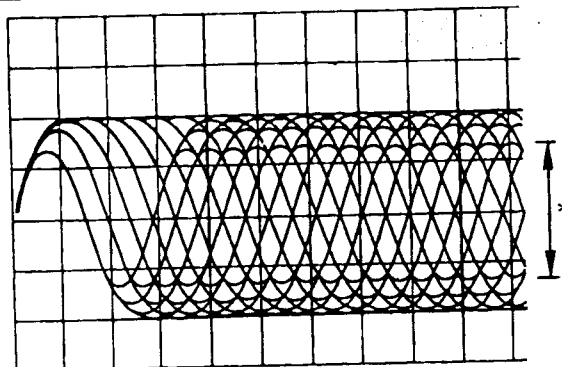
* Most stretched eye pattern

(2) BEST EYE (PD BALANCE) AJUSTMENT

1. Connect the oscilloscope's CH. 1 probe across **TP702** (RF) (+) and **TP703** (V-Ref.) (-) on the servo P.C.B.

Oscilloscope setting: VOLT.....200mV
SWEEP.....0.5μs.
Input coupling AC.

2. Switch the player power ON, and play the 1 KHz (track 1) on the test disc (SZZP1054C).
3. Adjust VR701 until the vertical fluctuation of RF signal is minimized and the eye pattern is moststretched. (Refer to Fig. 1 on page 22)



* Most stretched eye pattern

(3) CHECK OF PLAY OPERATION AFTER ADJUSTMENT

★ **Checking skip Search**

1. Play an ordinary musical program disc.
2. Press the skip button to check for normal skip search operation (in both the forward and reverse directions).

★ **Checking Manual Search**

1. Play an ordinary musical program disc.
2. Press the manual search button to check for smooth manual search operations at either low or high speed (in both the forward and reverse directions).

★ **Checking Playability**

1. Play the 0.7mm black dot and the 0.7mm wedge on the test disc (SZZP1054C) and verify that no sound skip or noise occurs.
2. Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.

• Adjustment points

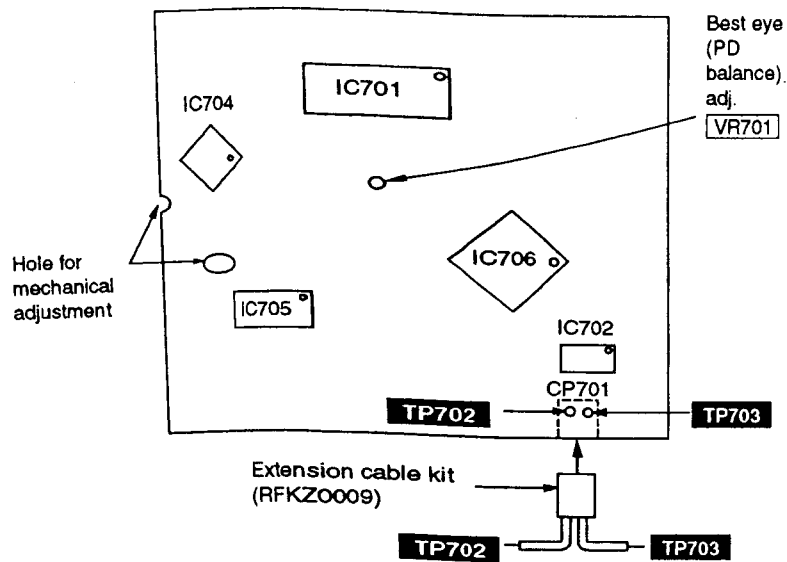


Fig.1

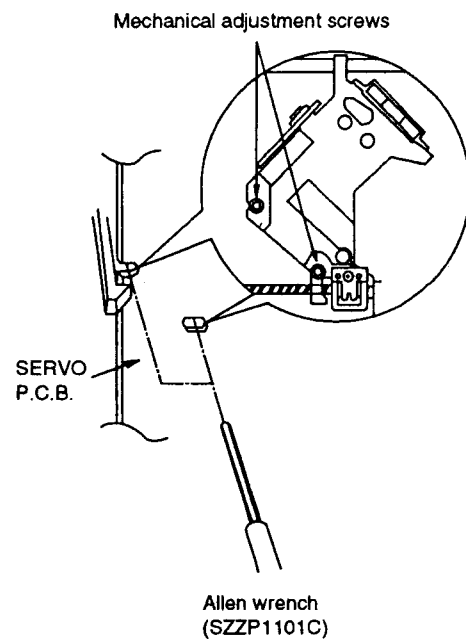


Fig.2

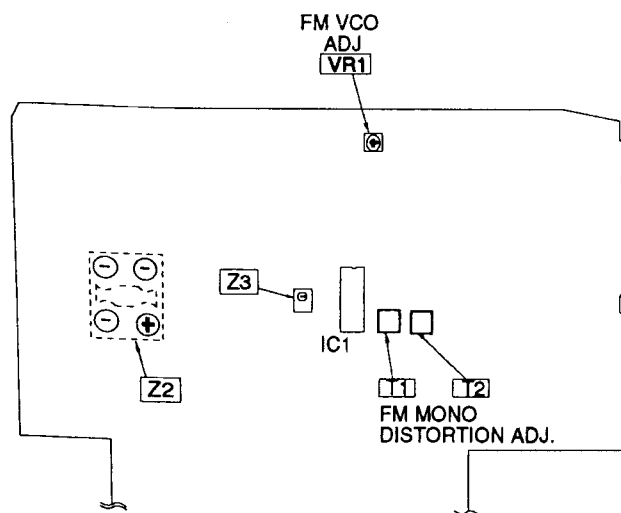


Fig. 3

AM/FM TUNER SECTION

Note: For Z2 (AM IFT) and Z1 (AM ANT and OSC coil), they are supplied as adjusted parts.
So, do not turn the cores of the parts.

Control positions and equipment used

- FM signal generator (AM and FM-SG)
- Oscilloscope
- Distortion analyzer

Measurement condition

- Volume control.....Maximum

- Dummy antenna (75Ω unbalanced)
- AC and DC electronic voltmeter (EVM)
- Digital frequency counter
- Capacitor (50 V 1 μF)
- Resistor (330 kΩ, 1 kΩ, 1 MΩ)
- Equalizer control.....Center
- Balance control.....Center

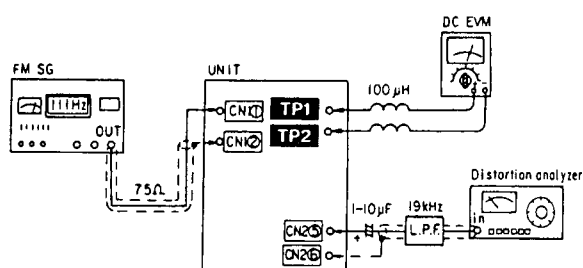
FM IF ADJUSTMENT

1. Test equipment connection is shown in figure.
2. Set the unit to "FM" mode.
3. Set the radio frequency display and signal generator to **100.10 MHz**.
4. Adjust the core of **T1** so that the voltage measured in signal mode is **0mV (0 ±30mV)** in 300 mV range.
5. Adjust **T2** so that the distortion factor of L-ch is minimized.
6. Repeat steps 4 and 5.
7. Make sure that the distortion factors of L-ch and R-ch are nearly the same and minimum.

Note: The adjusting screwdriver used should be made of resin.

FM SIGNAL GENERATOR CONDITION

Modulation.....100%
Modulation frequency.....1kHz
Output level.....66dB

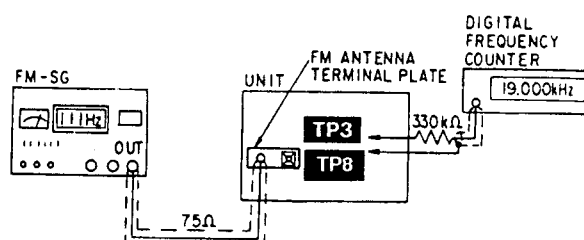


FM STEREO ADJUSTMENT (FREE RUN)

1. Test equipment connection is shown in figure.
2. Place unit into "FM STEREO" position.
3. Place the radio dial and signal generator setting to 98MHz.
4. Adjust **VR1** for **19 kHz ± 50 Hz** on frequency counter reading.
5. Tune a stereo broadcast and confirm the frequency stays at 19 kHz.

AM SIGNAL GENERATOR CONDITION

Modulation.....30%
Modulation frequency.....40%
Output level.....66dB



• CASSETTE DECK SECTION

(Please refer to fig. 4 for the adjustment point.)

MEASUREMENT CONDITION :

- Make sure heads are clean
- Make sure capstan and pressure roller are clean

TEST TAPE:

- Head azimuth adjustment (8 kHz, -20 dB): QZZCFM
- Tape speed adjustment (3 kHz, -10 dB): QZZCWAT
- Normal reference blank tape: QZZCRA
- CrO₂ reference blank tape: QZZCRX

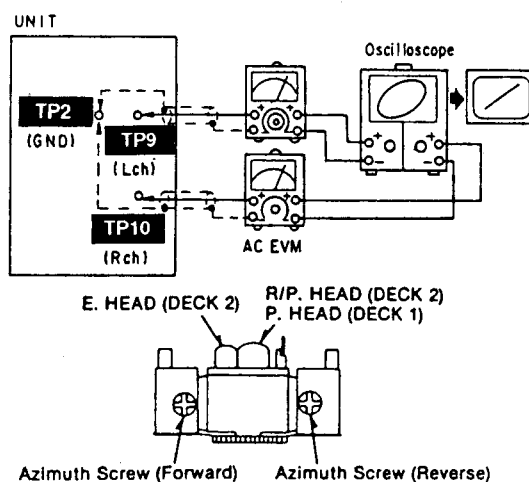
HEAD AZIMUTH ADJUSTMENT (DECK 1, 2)

1. Playback the azimuth adjustment portion (8 kHz, -20 dB) of the test tape (QZZCFM). Vary the azimuth adjusting screw until the outputs of the L-ch and R-ch are maximized and the lisajous waveform, as illustrated, approaches 0 degrees.

Note:

If L-CH and R-CH are not maximized at the same point, adjust to the point where the levels of each channel are maximized and equal.

2. Perform the same adjustment in the play mode.
3. After the adjustment, apply screwlock to the azimuth adjusting screw.

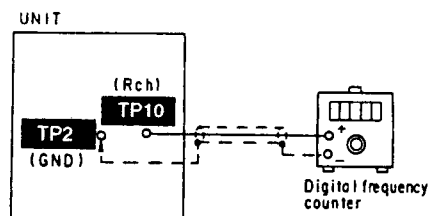


TAPE SPEED ADJUSTMENT (DECK 1, 2)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Playback the middle part of the test tape (QZZCWAT).
4. Adjust VR201 (DECK 1) and VR202 (DECK 2) so that the output is within the standard value.
5. Set the unit to "HIGH" position of editing speed button.
6. Adjust VR203 (DECK 2) so that the output is within the standard value.

Note:

1. The normal speed adjustment must be done before the High speed adjustment.
2. When adjusting the high speed, short circuit between TP1 and TP2.

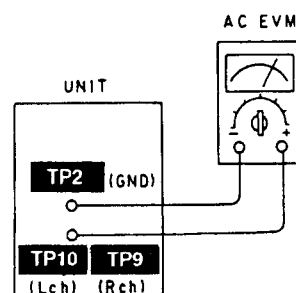


DECK 1 Standard value : 2995~3025 Hz (Normal)
DECK 2 Standard value : 2995~3025 Hz (Normal)

Standard value : 5100~5700 Hz (High)

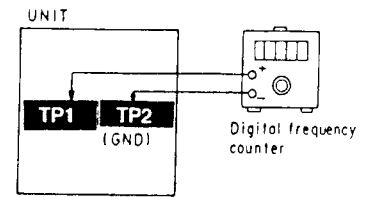
PLAYBACK GAIN ADJUSTMENT (DECK 1, 2)

1. Test equipment connection is shown in figure.
2. Playback test tape (QZZCFM: 315Hz, -10dB).
3. Adjust VR101, VR102 (DECK 1) and VR103, VR104 (DECK 2) to read 390 ± 10 mV on the AC Electronic Voltmeter. (AC EVM)



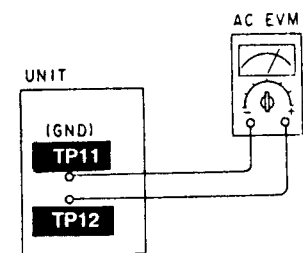
BIAS OSC FREQUENCY ADJUSTMENT (DECK 2)

1. Test equipment connection is shown in figure.
2. Set the unit to "TAPE" position.
3. Place cassette deck into REC mode.
4. Adjust L201 for 99 ± 4 kHz on frequency counter reading.



ERASE CURRENT CHECK (DECK 2)

1. Test equipment connection is shown in figure.
2. Insert the normal tape (QZZCRA).
3. Place cassette deck into REC mode.
4. Make sure that the output is within the standard value.
5. Insert the CrO₂ tape (QZZCRX).
6. Repeat steps 3, 4.



DECK 2 Standard value (Normal): more than mV
DECK 2 Standard value (CrO₂): more than 70 mV

• Cassette Deck Adjustment Point

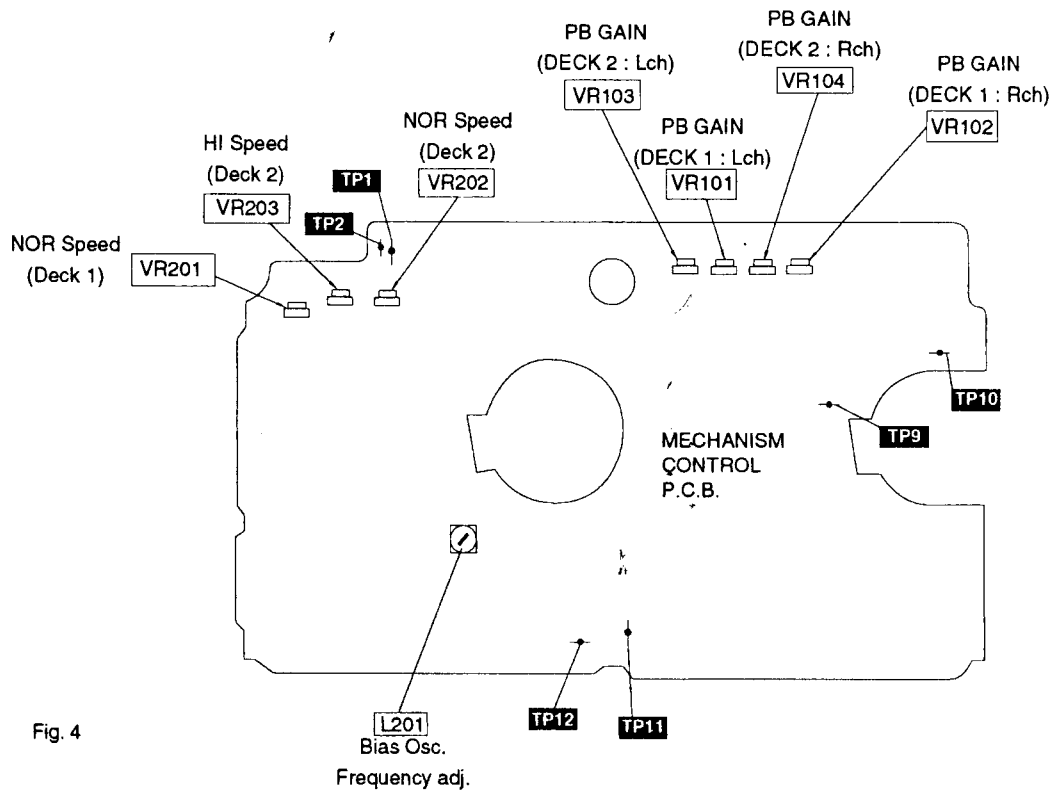


Fig. 4

■ TERMINAL FUNCTIONS OF IC

• IC105 (BU2040F-E2) : I/O Expander

Pin No.	Mark	I/O Division	Function
1	GND	—	GND
2	DATA	I	Data input
3	CLK	I	Clock input
4	TAPE	O	TAPE drive signal control
5	HI SPEED	O	HIGH speed drive signal control
6	DOLBY	I/O	DOLBY drive signal output
7	BP1	O	BEAT PROOF control (bit 1)
8	DMT	O	MUTING control signal output for deck sel.

Pin No.	Mark	I/O Division	Function
9	BP2	O	BEAT PROOF control (bit 2)
10	IH	O	Deck select control terminal
11	REC	O	REC drive signal control
12	2M	O	Motor speed control signal
13	3M	O	Motor speed control signal
14	2PL	O	Solenoid drive control signal
15	1PL	O	Solenoid drive control signal
16	VDD	I	+5V

• IC702 (TC0372DM2R) : Spindle motor drive

Pin No.	Mark	I/O Division	Function
1	GND	—	GND
2	NC	—	—
3	VOUT1	O	Spindle motor control
4	VCC	I	+7.5V
5	VOUT2	O	Spindle motor control
6	NC	—	GND
7	NC	—	GND
8	GND	—	GND

Pin No.	Mark	I/O Division	Function
9	GND	—	GND
10	NC	—	GND
11	-VIN2	I	Spindle motor control
12	+VIN2	I	Spindle motor control
13	+VIN1	I	Spindle motor control
14	-VIN1	I	Spindle motor control
15	NC	—	GND
16	GND	—	GND

• IC703 (AN8377N) : Traverse motor drive

Pin No.	Mark	I/O Division	Function
1	LRCK	I	Clock input
2	BLCK	I	Serial data bit clock input
3	SRDATA	I	Serial data input
4	COT1	—	Ground
5	COT2		
6	TEST		
7	VDD	I	Power supply (+5V input)
8	X2	—	Ground
9	X1		
10	VSS	—	Ground
11	AVDDL	I	Power supply (+5V input)
12	OUT.L	O	AF signal output (Lch)

Pin No.	Mark	I/O Division	Function
13	AVSS.L	—	Ground
14	AVSS.R	—	Ground
15	OUT.R	O	AF signal output (Rch)
16	AVDD.R	I	Power supply input
17	/RST	I	Reset signal input
18	PWM	—	—
19	TP	—	Ground
20	WVEL	I	High speed status signal input
21	DEMPH	I	De-emphasis signal input
22	CSEL	I	+5V input
23	192FS	—	—
24	768FS	O	Clock output (f=16.9344 MHz)

• IC701 (AN8800SCE2): Servo amp

Pin No.	Mark	I/O Division	Function
1	LDG	I	APC loop gain select
2	LDP	I	APC monitor PD polarity select
3	LD	O	Laser power auto control output
4	LPD	I	LD power monitor PD signal
5	GND	—	GND terminal
6	LDON	I	LD APC ON/OFF ('H': ON, 'L': OFF)
7	AMPI	I	RF signal (X30 amp)
8	AMPO	O	
9	RF IN	I	RF AGC signal input
10	RF EQ	—	GND terminal
11	C. AGC	I	AGC detection capacitor input
12	ARF	O	RF signal output
13	C. SBDO	I	Dropout detection capacitor input
14	RF DET	O	RF detection signal ('L': detecting)
15	BDO	O	Dropout detection output
16	Vcc	I	power supply terminal
17	SDO	O	Dropout detection pulse output
18	VAD+	O	Power supply terminal for A/D converter (+)
19	VREF	O	Reference voltage output
20	VAD-	O	Power supply terminal for A/D converter (-)
21	OFTR	O	Off track detection ('H': det.)

Pin No.	Mark	I/O Division	Function
22	PLAY	I	Play signal ('H': ON, 'L': OFF)
23	WVEL	I	Double velocity ('H': double, 'L': single)
24	TES	I	Tracking error shunt ('H': shunt, 'L': output)
25	PTO	O	Potential amp output
26	PTI	I	Potential amp input
27	PBO	O	Potential buffer output
28	POT	I	Potential buffer input
29	CROSS	O	Tracking error zero cross output
30	TE	O	Tracking error signal
31	TE BAL	I	Oscillation det. signal
32	TBAL	I	Tracking balance adj. input
33	VDET	O	Oscillation det. signal ('H': det.)
34	FE	O	Focusing error signal
35	FBL2	I	Focusing balance 2
36	FBL1	I	Focusing balance 1
37	Vcc	I	Power supply terminal
38	GND	—	GND terminal
39	PDBD	I	Photo detector Bch input with delay
40	PDA	I	Photo detector Ach input without delay
41	PDB	I	Photo detector Ach input with delay
42	PDAD	I	Photo detector Bch input without delay

• IC704 (MN6650) : Digital Servo Processor

Pin No.	Mark	I/O Division	Function
1	TES	O	Tracking error signal output
2	PLAY	O	play signal output
3	/RFDET	I	RF detection signal input
4	DO	I	Dropout signal input
5	OFT	I	Off track signal input
6	ARF	I	RF signal input
7	WVEL	O	High speed status signal output
8	PBO	I	Potension buffer signal input
9	TE	I	Tracking error signal input
10	FE	I	Focus error signal input
11	VR2	I	A/D reference voltage input
12	VR1	I	A/D reference voltage input
13	LDON	O	Laser power control signal output
14	VSS	—	Ground
15	AVSS	—	Ground
16	AVDD	I	Power supply (+5 V input)
17	VDD	I	Power supply (+5 V input)
18	TRV	O	Traverse servo control output
19	TVD	O	Traverse drive output
20	FOD	O	Focus drive output
21	TRD	O	Tracking drive output
22	KICK	O	Track kick signal output

• IC705 (MN6475) : Digital filter

Pin No.	Mark	I/O Division	Function
1	LRCK	I	Clock input
2	BCLK	I	Serial data clock input
3	SRDATA	I	Serial data input
4	COT1	—	Ground
5	COT2		
6	TEST		
7	VDD	I	Power supply (+5V input)
8	X2	—	Clock (f=33.8688 MHz)
9	X1		
10	VSS	—	Ground
11	AVDDL	I	Power supply (+5V input)
12	OUT.L	O	AF singal output (Lch)

Pin No.	Mark	I/O Division	Function
23	/TEST	I	+5 V input
24	VSS	—	Ground
25	CLVS	I	Spindle servo signal input
26	/TRON	O	Tracking servo signal output
27	MDATA	I	Command data input
28	MCLK	I	Command clock signal input
29	MLD	I	Command load signal input
30	SENSE	O	Sense signal output
31	/FLOCK	O	Focus servo signal output
32	/TLOCK	I	Tracking servo signal output
33	/RST	I	Reset signal input (L:Reset)
34	XI	I	Clock input (fXI= 16.9344MHz)
35	T0	—	Open
36	T1		
37	T2		
38	T3	—	Ground/
39	T4		
40	T5		
41	T6	—	Ground/
42	VDET		
43	TBAL		
44	TRCRS	I	Track cross signal input

Pin No.	Mark	I/O Division	Function
13	AVSS.L	—	Ground
14	AVSS.R	—	Ground
15	OUT.R	O	AF signal output (Rch)
16	AVDD.R	I	Power supply input
17	/RST	I	Reset signal input
18	PWM	—	—
19	TP	—	Ground
20	WVEL	I	High speed status signal input
21	DEMPH	I	De-emphassis signal input
22	CSEL	I	+5V input
23	192FS	—	—
24	768FS	O	Clock output (f=16.9344 MHz)

• IC706 (MN6650)

Pin No.	Mark
1	AVSS
2	IREF
3	ARF
4	DRF
5	DSLIF
6	PLLF
7	AVDD
8	RSEL
9	TBUS7
16	TBUS0
17	FLAG
18	IPFLAG
19	FCLK
20	BYTCK
21	WDCK
22	/RST
23	TX
24	LDG
25	RDG
26	SRDATA
27	SCK
28	LRCK
29	XCK
30	PMCK
31	CSEL
32	PSEL
33	X1
34	X2
35	VSS

• IC706 (MN6626) : Digital signal processor

Pin No.	Mark	I/O Division	Function
1	AVSS	—	Ground
2	IREF	I	Reference current input
3	ARF	I	RF signal input
4	DRF	I	DSL bias input
5	DSL F	O	DSL loop filter
6	PLL F	I	PLL loop filter
7	AVDD	I	Power supply (+5V input)
8	RSEL	I	+5V input
9	TBUS7	—	Test terminal (Ground)
16	TBUS0		
17	FLAG		
18	IPFLAG		
19	FCLK		
20	BYTCK		
21	WDCK		
22	/RST	I	Reset signal input
23	TX	O	Digital audio interface signal output
24	LDG	—	
25	RDG		
26	SRDATA	O	Serial data output
27	SCK	O	Serial bit clock output
28	LRCK	O	Clock output
29	XCK	O	Clock output (f=16.9344 MHz)
30	PMCK	—	
31	CSEL	I	+5V input
32	PSEL	—	Ground
33	X1	I	Clock input (f=16.9344MHz)
34	X2	—	
35	VSS	—	Ground

Pin No.	Mark	I/O Division	Function
36	SUBQ	O	Sub-code (Q data) output
37	SQCK	I	Sub-code (Q data) clock input f=7.3kHz
38	/CLDCK	—	
39	BLKCK	O	Sub-code block (Q data) clock f=75Hz
40	DEMPH	O	De-emphasis ON signal output
41	MEMP	I	Emphasis signal input
42	MLD	I	Command load signal input
43	MCLK	I	Command clock signal input
44	MDATA	I	Command data input
45	DMUTE	I	Muting control signal input
46	SMCK	O	Clock output (f=4.2336MHz)
47	STAT	O	Status signal output
48	CRC	—	
49	SUBC	—	
50	SBOCK	I	Clock for sub-code serial output
51	/TRON	I	Tracking servo ON signal input
52	CLVS	O	Spindle servo signal output
53	PC	—	
54	ECM	O	Spindle motor control signal output
55	ECS	O	Spindle motor control signal output
56	VDD	I	Power supply (+5V input)
57	/TEST	I	+5V input
58	SSEL	I	+5V input
59	MSEL	—	
60	RESY	—	
61	DO	I	Drop out signal input
62	EFM	—	
63	PCK		
64	PDO		

• IC901 (MND2410RLAA2) : Main microcomputer

Pin No.	Mark	I/O Division	Function
1	VDD	I	Power supply +5.6V
2	OSC1	I	Reference OSC terminal (connected to crystal oscillator 4 MHz)
3	OSC2	I	
4	VSS	—	GND
5	XI	I	Clock OSC terminal (connected to ceramic oscillator 32 kHz)
6	XO	O	
7	VREF—	I	Reference voltage input
8	ADIN7	I	Deck 2 Forward Rec. inh. switch select input terminal
9	ADIN6	I	Deck 2 cassette half detection signal input "HI" level in half detection switch in ON mode. "LOW" level in half detection switch in OFF mode.
10	ADIN5	I	Deck 1 cassette half detection signal input "HI" level in half detection switch in ON mode. "LOW" level in half detection switch in OFF mode.
11	ADIN4	—	Not used
12	ADIN3	I	Key control signal input (EDIT, TUNING, MODE, TITLE, DISPLAY, BAND)
13	ADIN2	I	Cassette operation control signal
14	ADIN1	I	CD operation control signal
15	ADIN0	I	Key control signal input (TIMER, SET, TAPE, SLEEP, CANCEL, TUNER)
16	VREF+	I	Reference voltage input (+5)
17	JOGA	I	JOG dial signal input
18	JOGB	I	JOG dial signal input
19	DC DET	—	Not used
20	PWM	—	Not used
21	MKDATA	—	Not used
22	MKCLK	—	Not used
23	ACLK	O	Audio control clock signal output
24	ADATA	O	Audio control data output
25	VOL B	I	Main volume control signal
26	PWRCNT	O	Output for voltage control signal
27	MUTE A	O	Output for muting control signal
28	VOL A	I	Main volume control signal
29	MBP1	—	Not used
30	MBP2	—	Not used
31	REMOCON IN	I	Remote control receiving signal
32	BLKCK	I	Sub-code block, clock signal (CD)
33	STATUS	I	CD start control signal input

Pin No.	Mark	I/O Division	Function
34	CD RST	I/O	CD reset control signal in/output
35	RST	I	Micro computer reset control signal input
36	MLD / PLL CL	O	CD Process signal output and PLL tuner clock signal output
37	MDATA / PLL CE	O	CD process data signal output and PLL tuner strobe signal output
38	MCLK / PLL DATA	O	CD Process clock control signal output and PLL tuner data signal output
39	SQCK	I	CD subcode clock signal
40	SUBQ	I	CD sub-code data input
41	NC	—	—
42	NC	—	—
43	CM	—	GND
44	TLOCK / TUNED	I	Tracking signal input and tuner received monitor signal input
45	FLOCK / STEREO	I	Focus Servo clock signal and FM ST received signal input
46	REST	I	Reset Signal input
47	CD OPEN	I	CD open detection switch signal input
48	CD CLOSE	I	CD close detection switch signal input
49	SENSE	I	DISC sense signal input
50	AC DET (HALT)	I	Power down detection signal input
51	NC	—	—
52	CS	I/O	8 bit signal data in/output
53	DATA	I/O	8 bit signal in/output
54	CLK	I/O	Serial clock data signal in/output
55	—	—	—
56	S. BASS	O	Super Bass control signal
57	MUTE C	—	—
58	NC	—	—
59	NC	—	—
60	SRDY	I/O	8 bit serial data in/output
61	—	—	GND
62	—	—	GND
63	—	—	GND
64	—	—	GND
65	—	—	GND
66	—	—	GND
67	—	—	GND
68 ~ 100	—	—	—

• IC951 (M50754-190SP) : FL microcomputer

Pin No.	Mark	I/O Division	Function
1	VCC	—	Power supply +5V
2	P65	I/O	Segment serial output for FL
3	P64	I/O	Segment serial output for FL
4	P63	O	Segment serial output for FL
5~15	NC	—	—
16	SRDY	I/O	Serial data (8 bit) in/output
17	CLK	I/O	Serial clock control signal in/output
18	NC	—	—
19	DATA	I/O	8 bit data control signal
20	CS	I/O	8 bit data control signal
21~23	NC	—	—
24	P51	—	GND

Pin No.	Mark	I/O Division	Function
25	HALT	I	Power off detection input "Level" = OFF
26	CNVSS	—	GND
27	RESET	I	Reset control signal input
28	XIN	I	Ceramic Oscillator connection (Input)
29	XOUT	O	Ceramic Oscillator connection (Output)
30	XCIN	—	GND
31	NC	—	—
32	VSS	—	GND
33	NC	—	—
34~37	P54~57	—	GND
38	-VP	I	Pull down voltage input
39	P1 ~ P14 1G ~ 12G	O	Segment signal output for FL

• IC307 (BU2040F-E2) : I/O Expander

Pin No.	Mark	I/O Division	Function
1	GND	—	GND
2	DATA	I	Data input
3	CLK	I	Clock input
4	CD	O	CD drive signal output
5	TAPE	O	TAPE drive signal output
6	TUN	O	TUNER drive signal output
7	MUT. B	O	Mute control (bit 2) output
8	MO/ST	O	MONO/STEREO drive signal output

Pin No.	Mark	I/O Division	Function
9	VOL.MUT	O	Muting controls signal drive signal output
10	BASS	O	BASS drive signal output
11	AUX	O	AUX drive signal output
12	ALTS1	O	Attenuator control (bit 1)
13	ALTS2	O	Attenuator control (bit 2)
14	LO OPEN	O	Open loop control signal output
15	LO CLOSE	O	Close loop control signal output
16	VDD	I	+5V

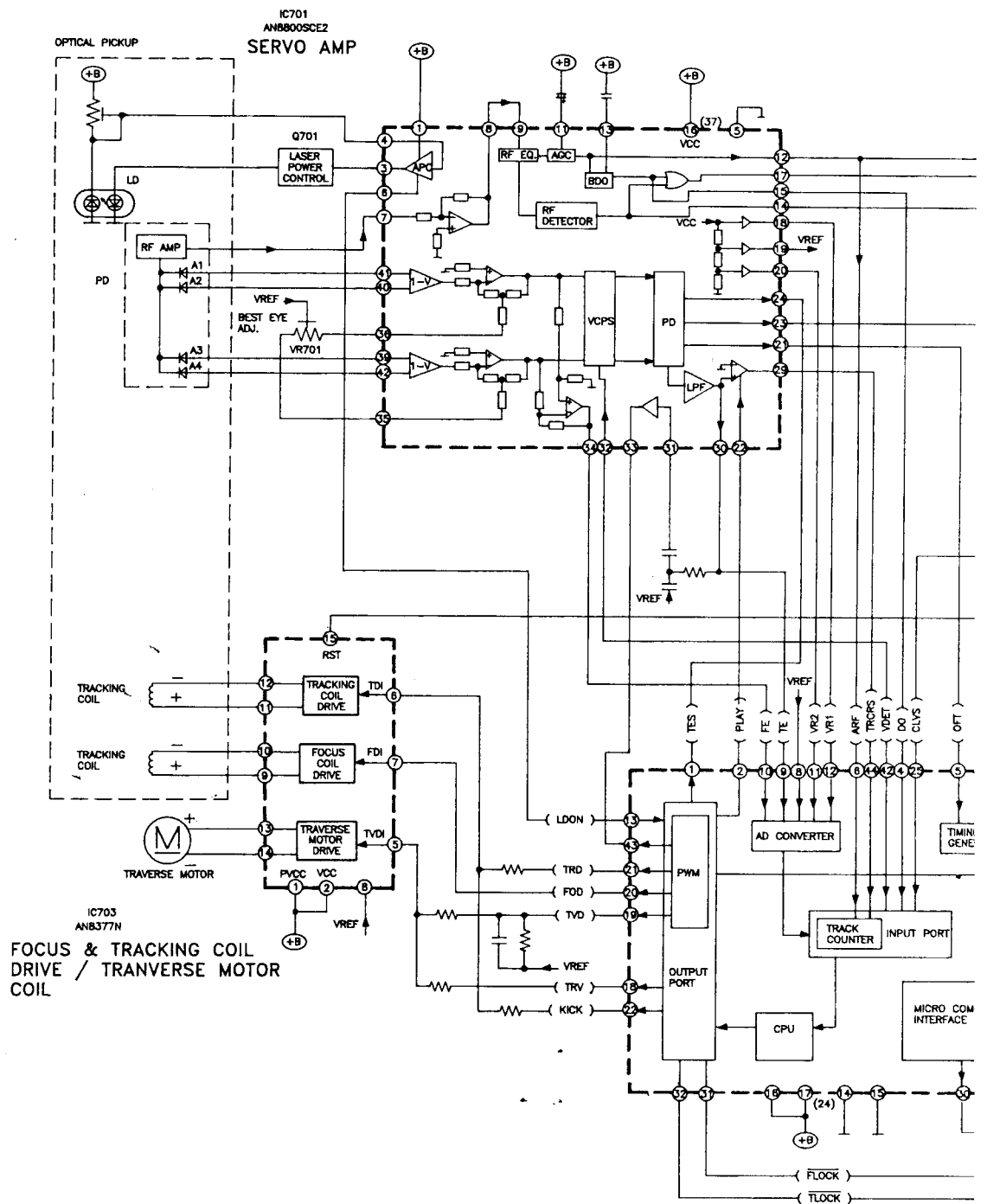
• Anode connection table

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G
P1	a	a	a	a	a	a	a	a	a	[4]	[5]	[DECK 1]	S1
P2	b	b	b	b	b	b	b	b	b	[3]	[6]	[DECK 2]	B1
P3	f	f	f	f	f	f	f	f	f	[2]	[7]	△ (a)	B2
P4	i	i	i	i	i	i	i	i	QUARTZ LOCK	[1]	[8]	△ (b)	B3
P5	h	h	h	h	h	h	h	h	-	B	[9]	△ (c)	B4
P6	j	j	j	j	j	j	j	j	-	A	[10]	△ (d)	B5
P7	g	g	g	g	g	g	g	g	g	[SIDE]	[11]	C	B6
P8	k	k	k	k	k	k	k	k	k	↺	[12]	↺	B7
P9	q	q	q	q	q	q	q	q	MHz	RANDOM	▷	▷	B8
P10	n	n	n	n	n	n	n	n	kHz	-	STEREO	[REC]	B9
P11	e	e	e	e	e	e	e	e	e	-	TIMER	[DOLBY NR]	[MULTI NC]
P12	m	m	m	m	m	m	m	m	-	PROGRAM	REC	-	-
P13	c	c	c	c	c	c	c	c	c	-	-	-	-
P14	d	d	d	d	d	d	d	d	d	ATLS	SLEEP	-	-
P15	-	col,1	-	-	-	-	col,1	-	-	[EDIT]	-	-	-
P16	-	col,2	-	-	-	col,2	col,2	-	col,2	ON	OFF	-	-

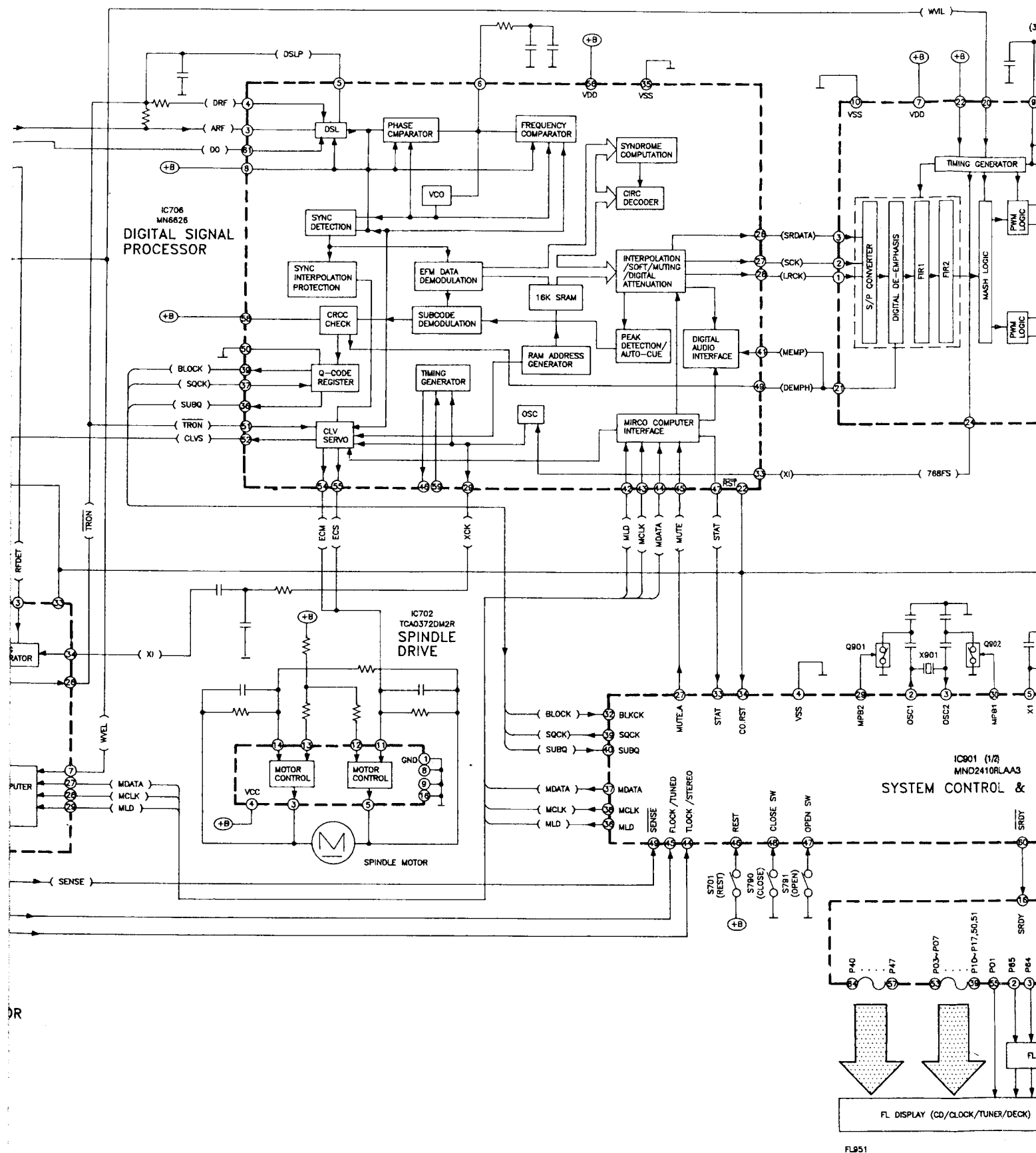
• Anode connection diagram

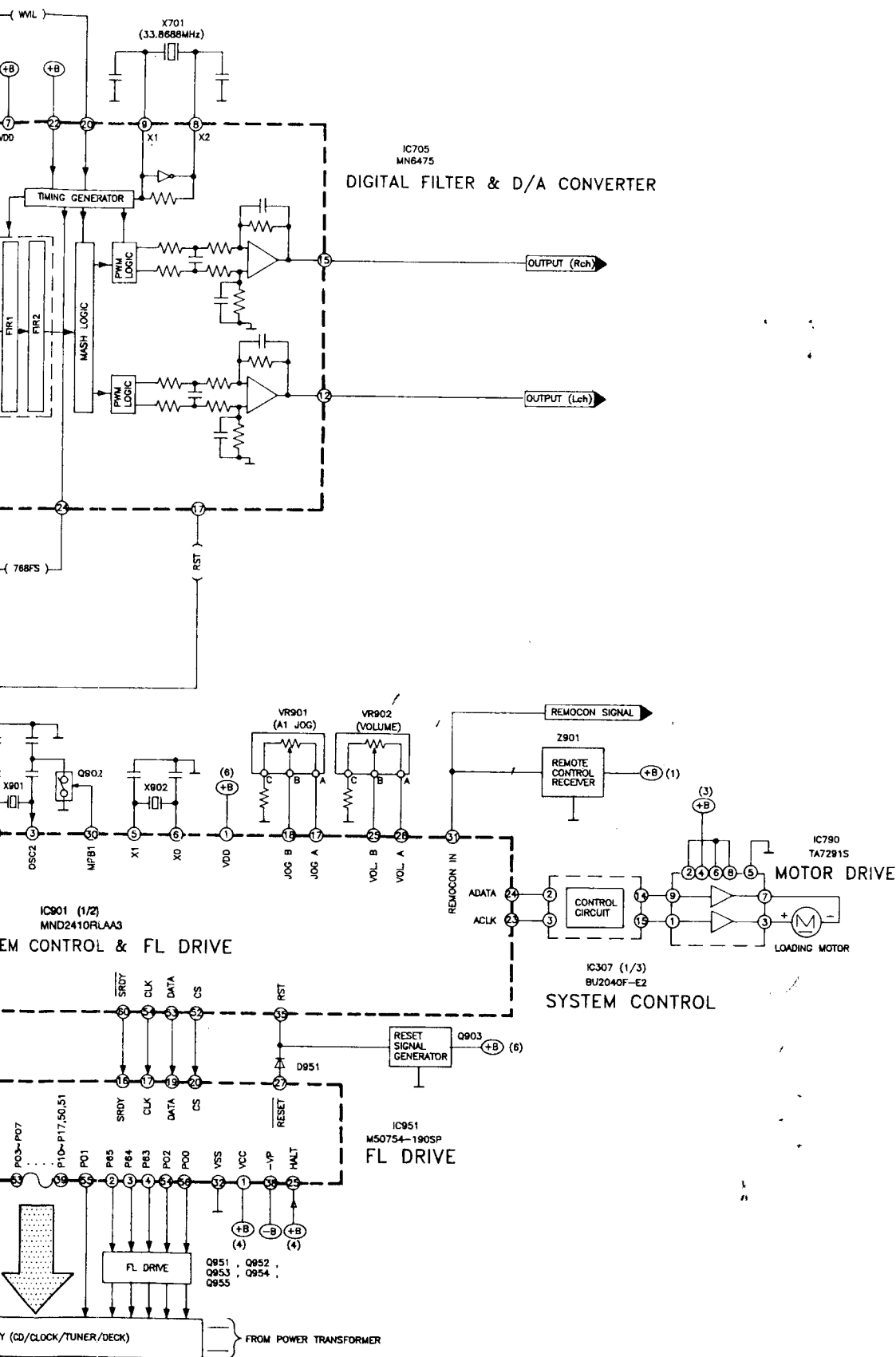
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P2	-	B2	B2	B2	B2	B2	-	B2
P3	-	B3	B3	B3	B3	B3	-	B3
P4	-	B4	B4	B4	B4	B4	-	B4
P5	-	B5	B5	B5	B5	B5	-	B5
P6	-	B6	B6	B6	B6	B6	-	B6
P7	-	B7	B7	B7	B7	B7	-	B7
P8	-	B8	B8	B8	B8	B8	-	B8
P9	-	B9	B9	B9	B9	B9	-	B9
P10	-	B10	B10	B10	B10	B10	-	B10
P11	-	B11	B11	B11	B11	B11	-	B11
P12	-	B12	B12	B12	B12	B12	-	B12
P13	-	B13	B13	B13	B13	B13	-	B13
P14	S1	-	-	-	-	-	S2	-
P15	-	-	-	-	-	-	KARAOKE	-
P16	-	-	-	-	-	-	SUPER BASS	-

BLOCK DIAGRAM

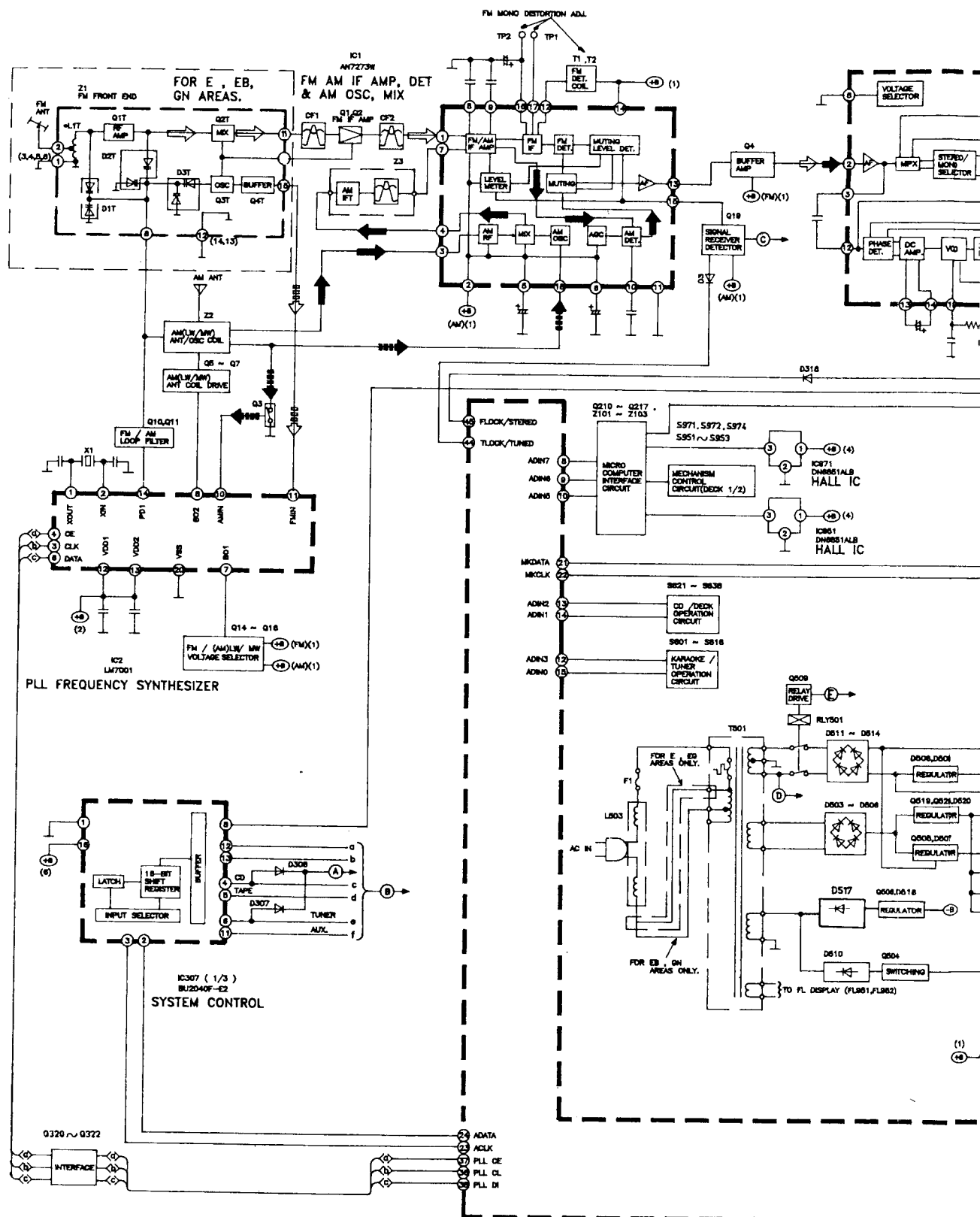


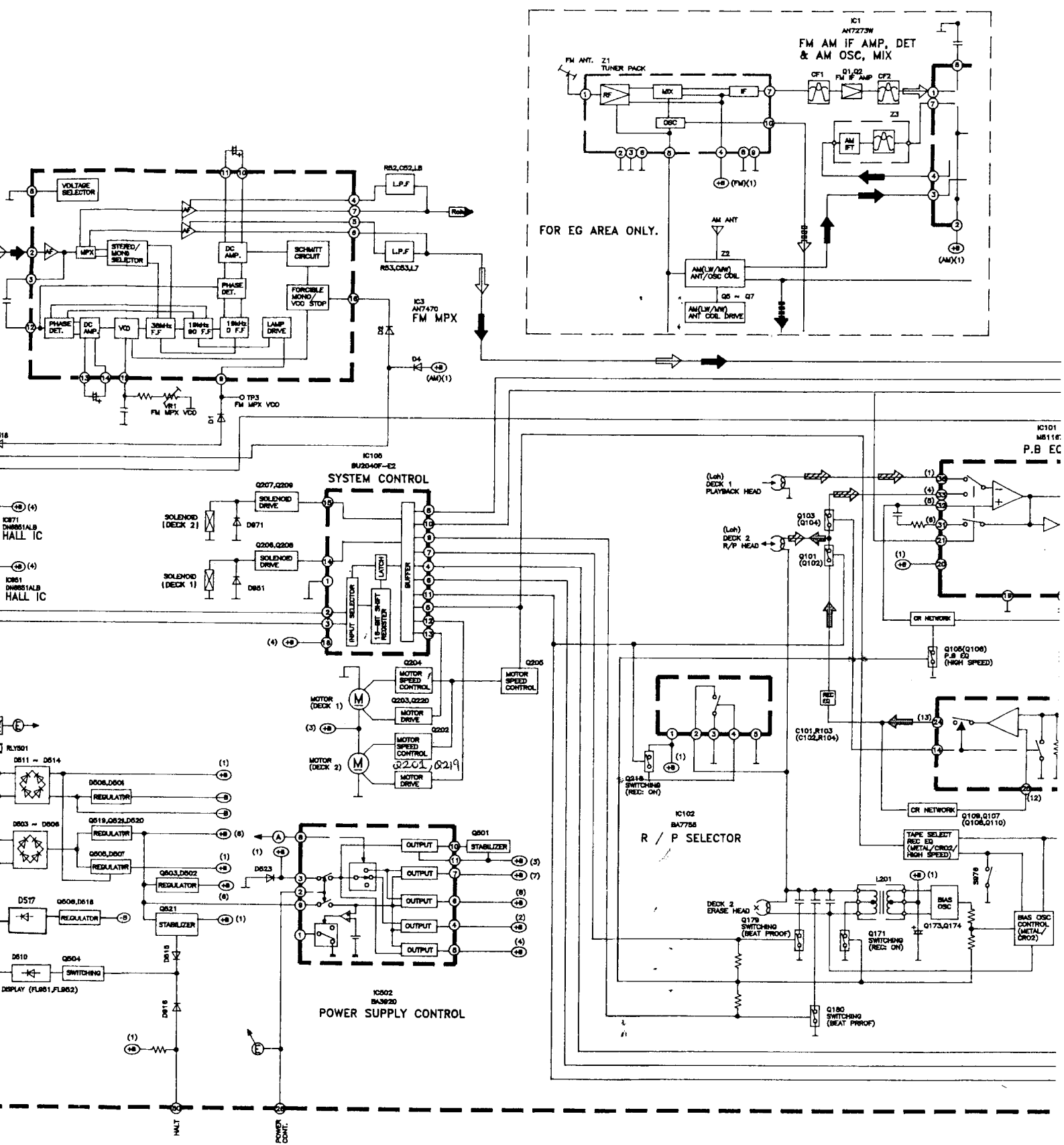
IC704
MN8550
SERVO PROCESSOR



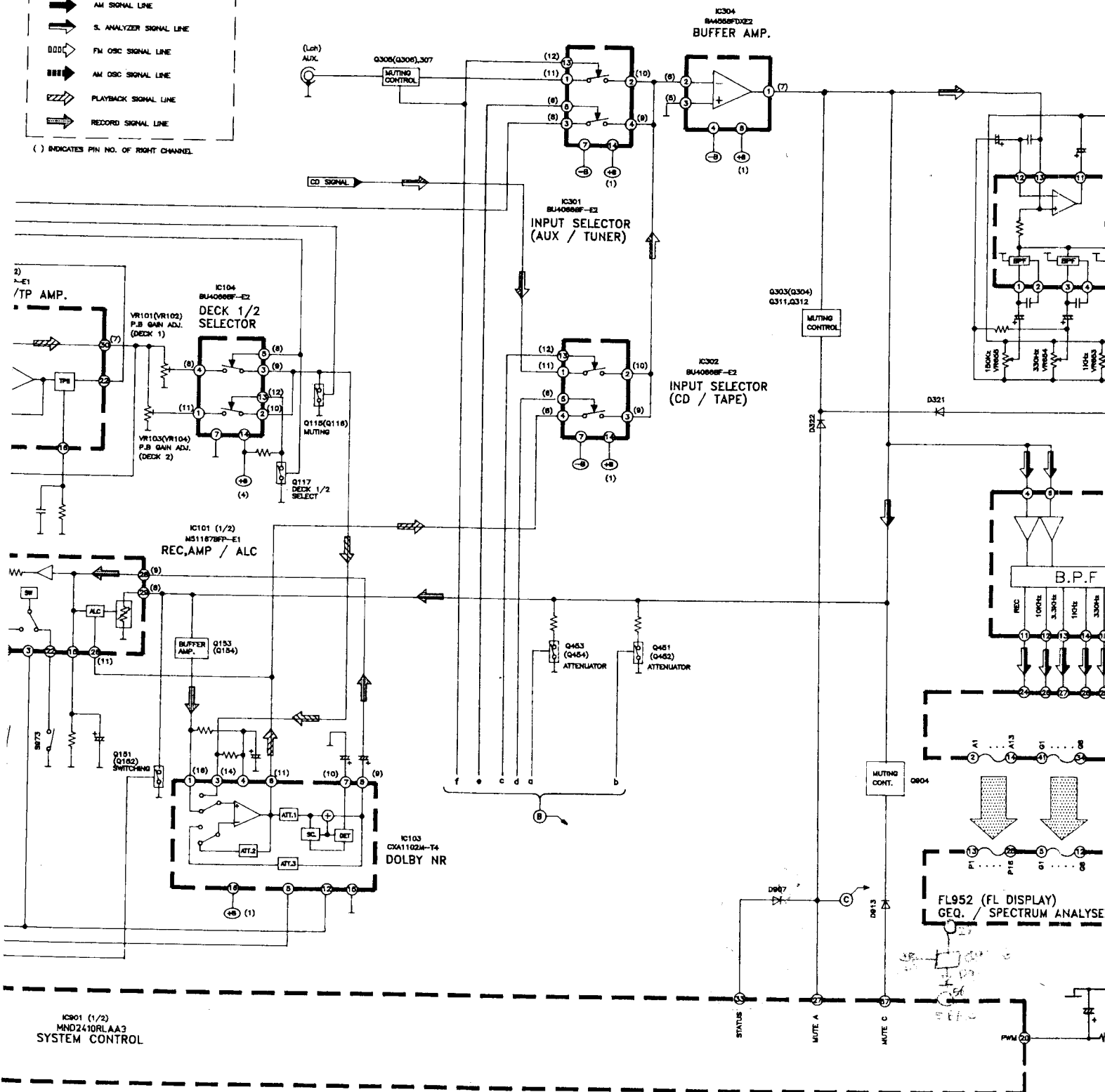
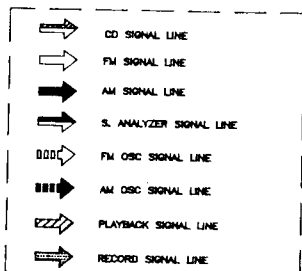


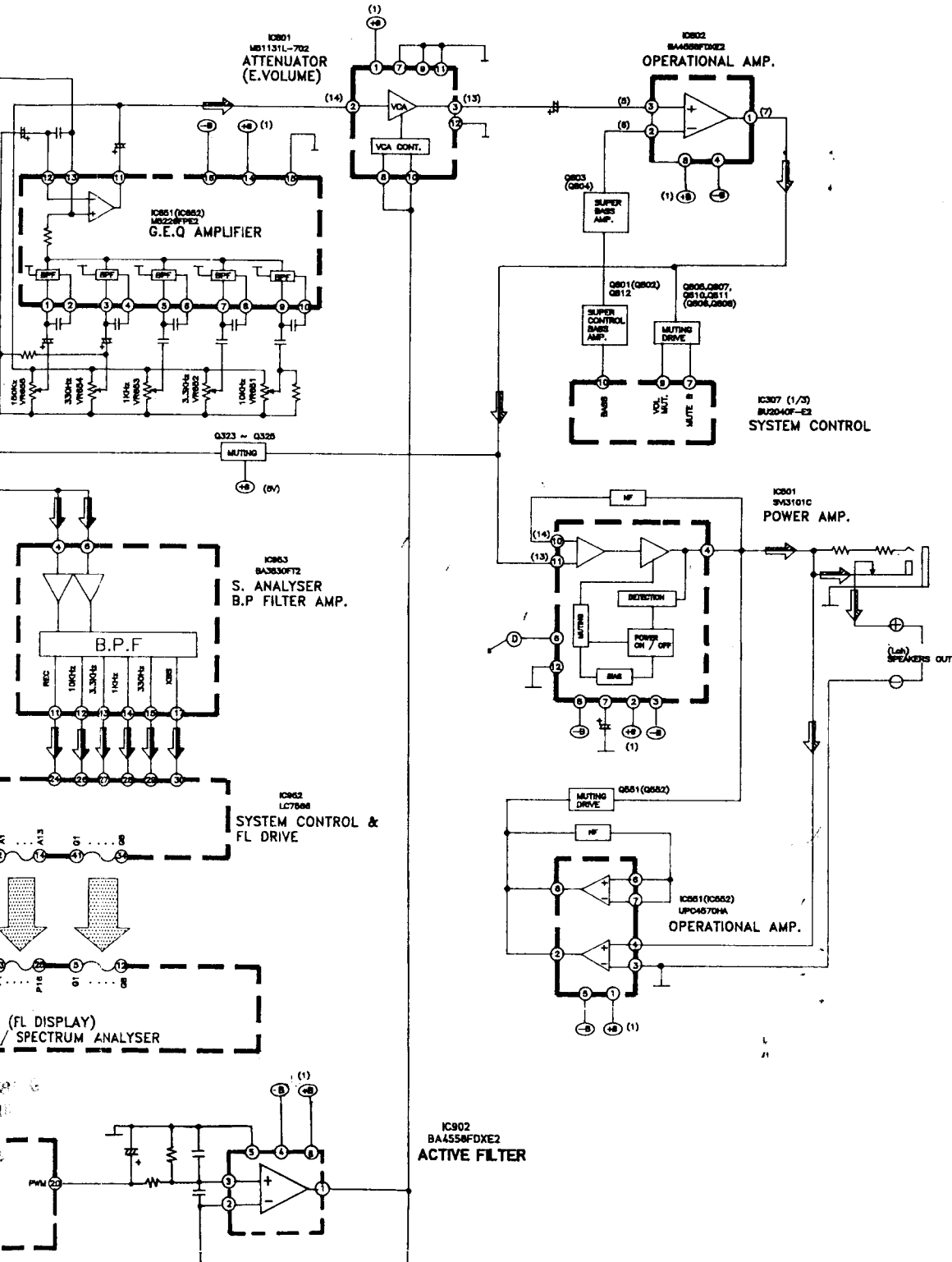
BLOCK DIAGRAM





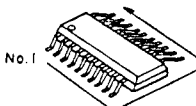
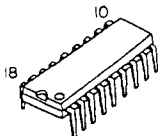
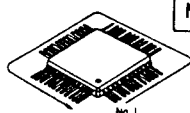
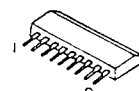
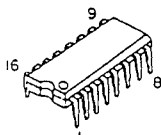
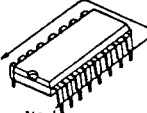
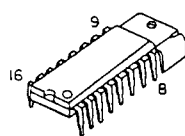
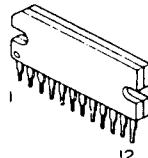
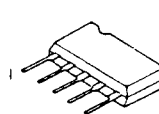
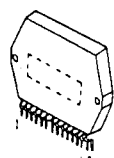
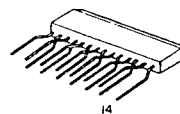
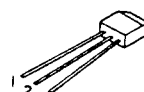
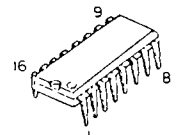
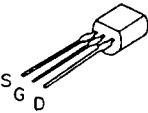
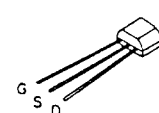
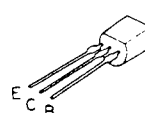
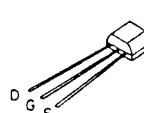
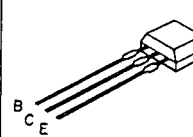
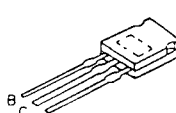
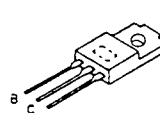
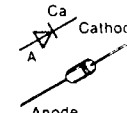
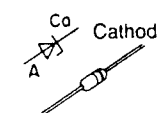
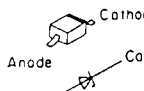
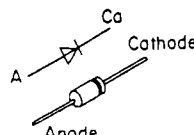
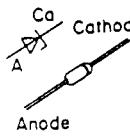
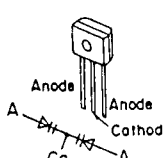
NOTES





ICRO
ER
53)

• TERMINAL GUIDE OF ICs, TRANSISTORS AND DIODES

BA4558FDXE2		No. 1 	<table><tr><td>TCA0372DM2R</td><td>16Pin</td><td>M51167BFP-E1</td><td>36Pin</td></tr><tr><td>MN6475</td><td>24Pin</td><td>M5226FPE2</td><td>16Pin</td></tr><tr><td>AN8800SCE2</td><td>42Pin</td><td>BU4066BF-E2</td><td>14Pin</td></tr><tr><td>BU2040F-E2</td><td>16Pin</td><td>BA3830FTA</td><td>18Pin</td></tr><tr><td>CXA1102M-T4</td><td>16Pin</td><td></td><td></td></tr></table>	TCA0372DM2R	16Pin	M51167BFP-E1	36Pin	MN6475	24Pin	M5226FPE2	16Pin	AN8800SCE2	42Pin	BU4066BF-E2	14Pin	BU2040F-E2	16Pin	BA3830FTA	18Pin	CXA1102M-T4	16Pin			AN7273W 
TCA0372DM2R	16Pin	M51167BFP-E1	36Pin																					
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AN8800SCE2	42Pin	BU4066BF-E2	14Pin																					
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CXA1102M-T4	16Pin																							
	<table><tr><td>MN6650</td><td>44Pin</td></tr><tr><td>MN6626</td><td>64Pin</td></tr><tr><td>MND2410RLAA3</td><td>100Pin</td></tr></table>	MN6650	44Pin	MN6626	64Pin	MND2410RLAA3	100Pin	TA7291S UPC4570HA 	LM7001 	 <table><tr><td>M50754-190SP</td><td>64Pin</td></tr><tr><td>LC7566</td><td>42Pin</td></tr></table>	M50754-190SP	64Pin	LC7566	42Pin										
MN6650	44Pin																							
MN6626	64Pin																							
MND2410RLAA3	100Pin																							
M50754-190SP	64Pin																							
LC7566	42Pin																							
AN8377N 	BA3920 	BA7755 	SVI3101C 	M51131L-702 	DN6851ALB 																			
AN7470 	2SK301QTA 	2SK544F-AC 		2SB621RTA 2SD1302STA 2SD592RTA 2SD965RTA 2SC1675FL1L2 2SA564RTA 2SC2001KTA 2SA564QTA	2SJ40CDTA 																			
	BA1A4ZTA BN1A4MTA BA1L4ZTA 2SC2784FTA 2SC2787LTA 2SD1450STA	BA1A4MTA BN1L3NTA BA1L4MTA 2SC2785FTA 2SC2786MTA 2SA933SSTA		RVTDTA114EST RVTDTA124EST RVTDTA143XST RVTDTA144TST 2SC1740SLNET 2SC1740SLNST 2SC1740SQSTA	2SB1357ETA 2SD2037EFTA 																			
2SB1185E 2SD1762DE 	2SB709 		1SS291TA 1SR35200TB RVD1SS133TA	MA4300MHTA 	MA110TW 																			
RLI54M11 1D3E 		RVDMTZ4R7BTA RVDMTZ3R6BTA RVDMTZ8R2CTA RVDMTZ15CTA RVDMTZ12CTA RVDMTZ6R2CTA	RVDMTZ5R6CTA RVDMTZ6R2BTA RVDMTZ6R8ATA RVDMTZ6R8BTA RVDMTZ5R1CTA	SVC211SPA-PL 																				

■ **SCHEMATIC DIAGRAM** (Parts list on page 74 ~ 85)

(This schematic diagram may be modified at any time with the development of new technology)

Note :

< for CD circuit S >

- S701 : Reset switch.
- S790, 791 : Disc tray open/close detection switch.
- VR701 : Best eye adjustment VR.

————— / ———— : Positive voltage lines and negative voltage lines.

➡ : CD signal lines.

< for Mechanism control circuit >

- S951 : Deck 1 mode detect switch.
- S952 : Deck 1 tape detect switch.
- S953 : Deck 1 tape select switch.
- S971 : Deck 2 mode detect switch.
- S972 : Deck 2 tape detect switch.
- S973 : Deck 2 tape tab switch (REV).
- S974 : Deck 2 tape tab switch (FWD).
- S975 : Deck 2 tape select switch (CrO₂).
- S976 : Deck 2 tape select switch (Metal).
- VR101 : Deck 1 Lch playback gain adjustment VR (Dolby).
- VR102 : Deck 1 Rch playback gain adjustment VR (Dolby).
- VR103 : Deck 2 Lch playback gain adjustment VR (Dolby).
- VR104 : Deck 2 Rch playback gain adjustment VR (Dolby).
- VR201 : Deck 1 tape speed adjustment VR (Normal).
- VR202 : Deck 2 tape speed adjustment VR (Normal).
- VR203 : Deck 2 tape speed adjustment VR (High).

General

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis.
- Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.
 - * The parenthesized are the values of voltage generated during playing (Test disc 1 kHz, L + R, 0 dB), others are voltage values in stop mode.

<< >>.....Tape Recording No mark.....Tape Playback

- Important safety notice:
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts,

Caution!

- IC, LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
- Cover the parts boxes made of plastics with aluminium foil.
 - Ground the soldering iron.
 - Put a conductive mat on the work table.
 - Do not touch the pins of IC or LSI with fingers directly.

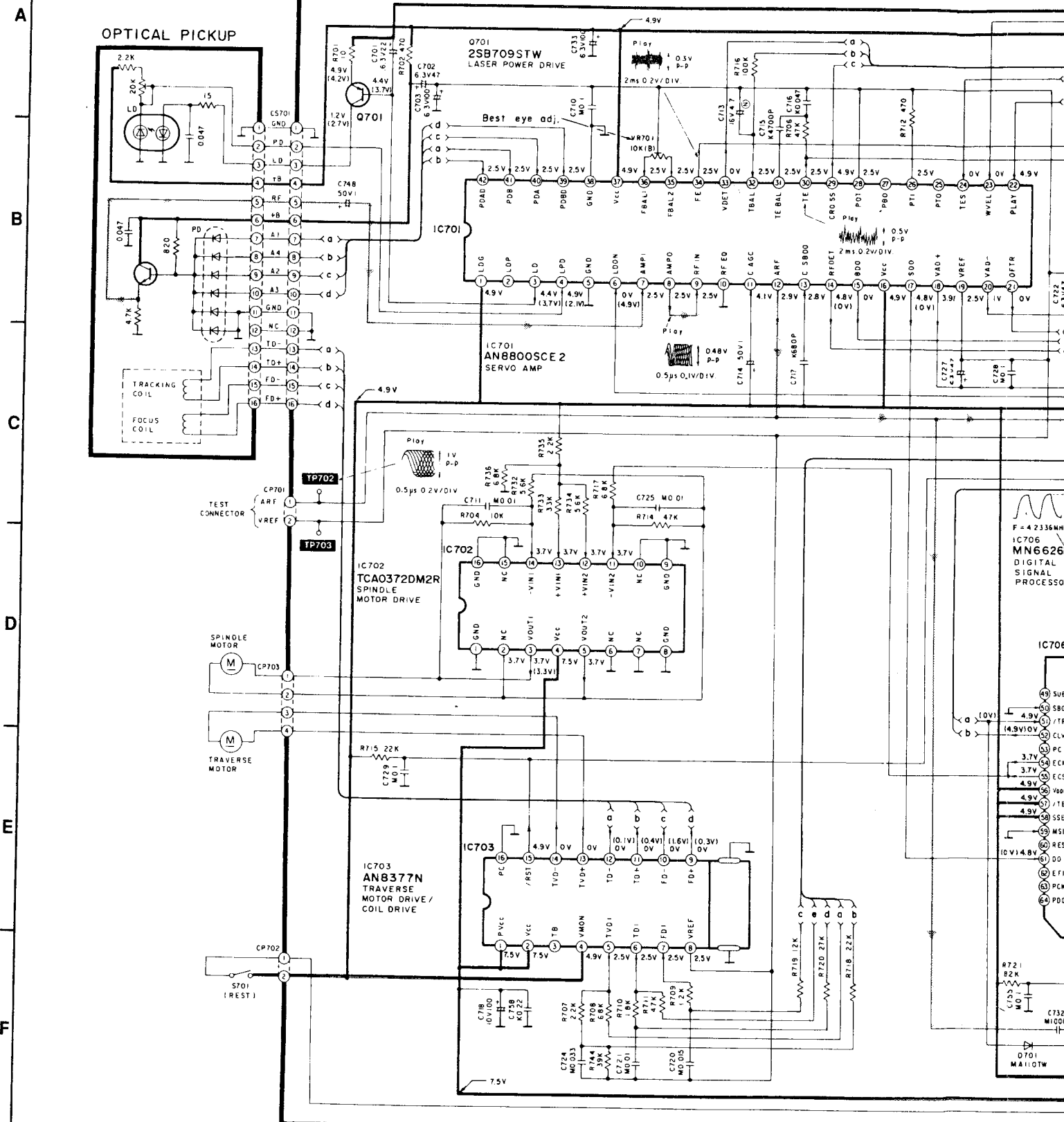
➡ : Playback signal lines

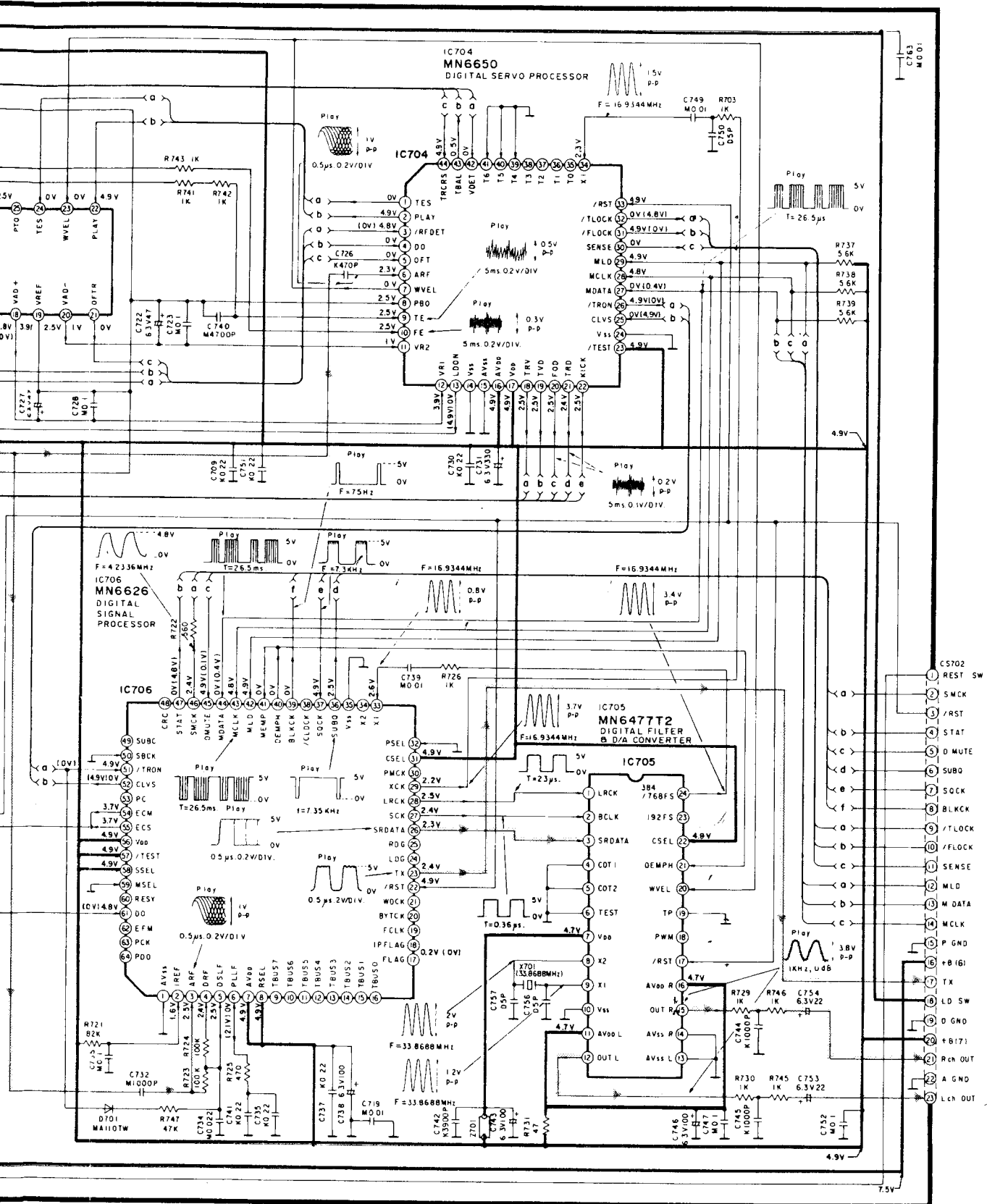
➡ : Recording signal lines

..... : CD signal lines

SCHEMATIC DIAGRAM

A SERVO CIRCUIT





To **E** MICRO
COMPUTER
CIRCUIT
(on page 53)

A

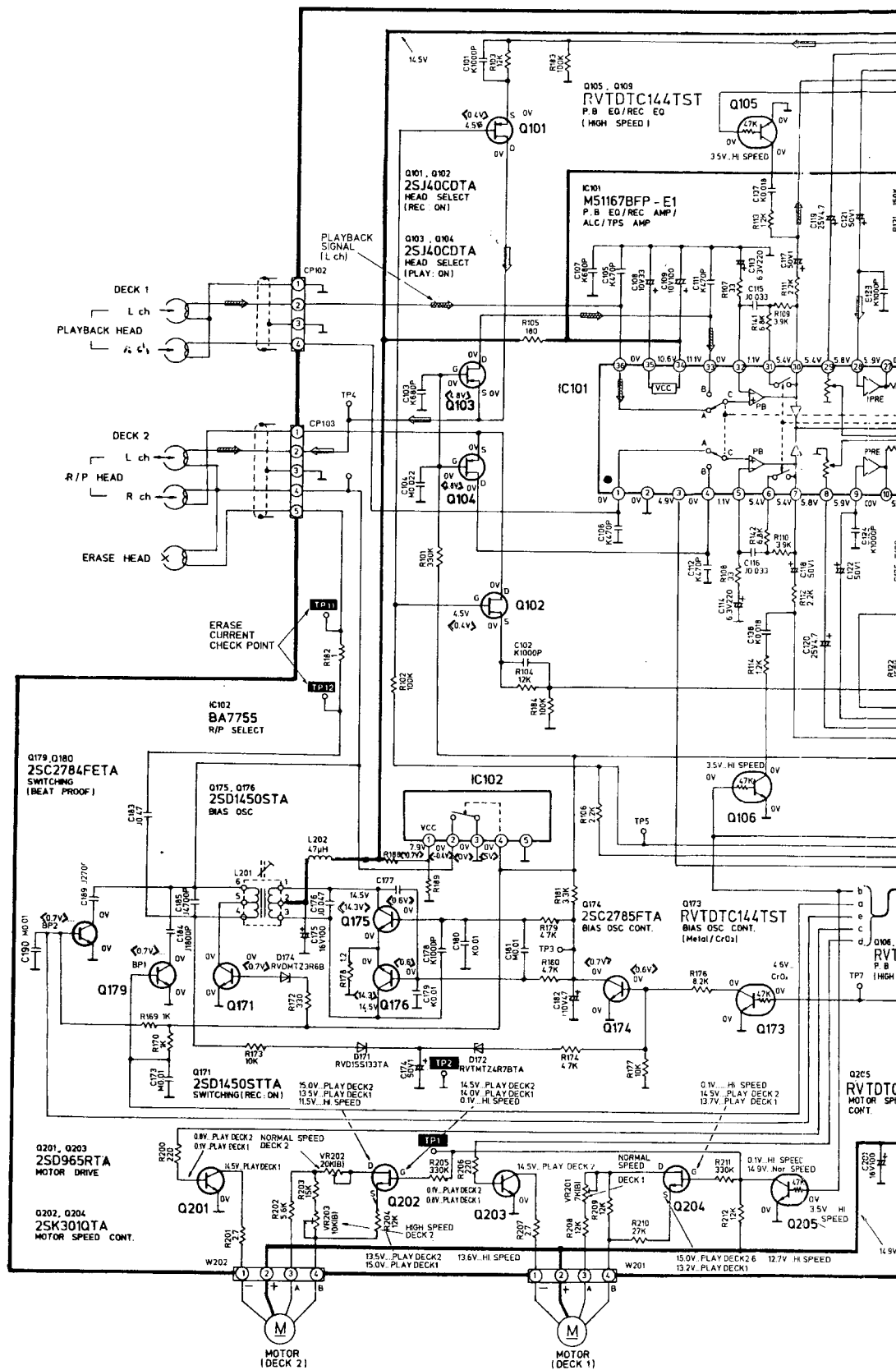
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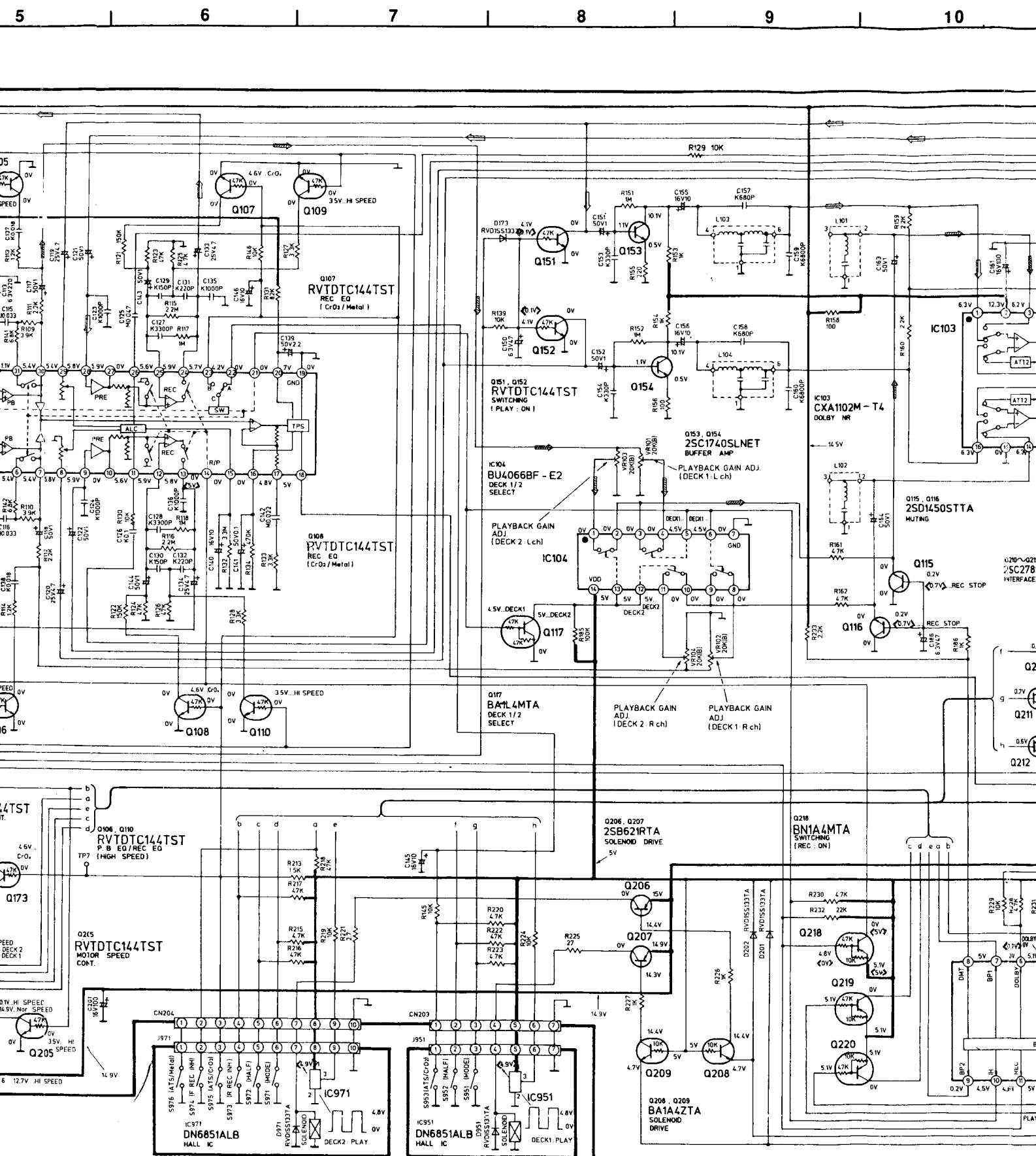
C

D

E

Fi







Note :**< for FL circuit >**

•S601 : Tuner switch	•S621 : REV mode switch
•S602 : CD switch	•S622 : Reset switch
•S603 : Aux. switch	•S623 : Dolby switch
•S604 : Tape switch	•S624 : Record switch
•S605 : Super bass switch	•S625 : Edit switch (Normal)
•S606 : Power on/off switch	•S626 : Edit switch (High Speed)
•S607 : Play timer switch	•S627 : Stop switch
•S608 : Record timer switch	•S628 : Rew switch
•S609 : Volume preset switch	•S629 : Play switch (REV)
•S610 : Set switch	•S630 : Play switch (FWD)
•S611 : Cancel switch	•S631 : FF switch
•S612 : FM mode switch	•S632 : Deck 1/2 switch
•S613 : Band switch	•S633 : Stop switch (CD)
•S614 : Tuning switch	•S634 : Play switch (CD)
•S615 : CD edit switch	•S635 : Pause switch (CD)
•S616 : Display switch	•S636 : FWD skip switch (CD)
•S617 : Clock / Timer switch	•S637 : REV skip switch (CD)
•S618 : Sleep switch	•S638 : Open / Close switch (CD)

•VR651 : Graphic E.Q. (10kHz) control VR
 •VR652 : Graphic E.Q. (3.3kHz) control VR
 •VR653 : Graphic E. Q. (1kHz) control VR
 •VR654 : Graphic E.Q. (330Hz) control VR

•VR655 : Graphic E.Q. (100Hz) control VR
 •VR901 : AI jog control VR
 •VR902 : Main volume control VR

< for tuner circuit >

•VR1 : VCO adjustment VR

< for main circuit >

•S790 : Disk tray close detect switch
 •S791 : Disk tray open detect switch

General

•DC voltages measurement are taken with electronic voltmeter.
 The negative terminal of the battery provides negative meter connection point.

No mark....Tape Playback < >....FM mode
 CD mode
 ()....AM mode
 { }....Tuner mode []....Other mode
 []....Aux. mode ()....TAPE mode

•Important safety notice:

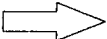
Components identified by  mark have special characteristics important for safety.
 When replacing any of these components, use only manufacturer's specified parts.

Caution !

IC and LSI are sensitive to static electricity.
 Secondary-trouble can be prevented by taking care during repair.
 *Cover the parts boxes made of plastics with aluminum foil.
 *Ground the soldering iron.
 *Put a conductive mat on the work table.
 *Do not touch the pins of IC or LSI with fingers directly.

•This schematic diagram may be modified at any time with the development of new technology.

 : Positive Voltage Line

 : FM Signal Line

 : AM Signal Line

 : AF (FM / AM) Signal Line

 : AM Osc Signal Line

 : FM Osc Signal Line

 : Negative Voltage Line

 : Recording Signal Line

 : Playback Signal Line

 : Positive Voltage Line

 : Negative Voltage Line

 : CD Signal Line

SCHEMATIC DIAGRAM

1

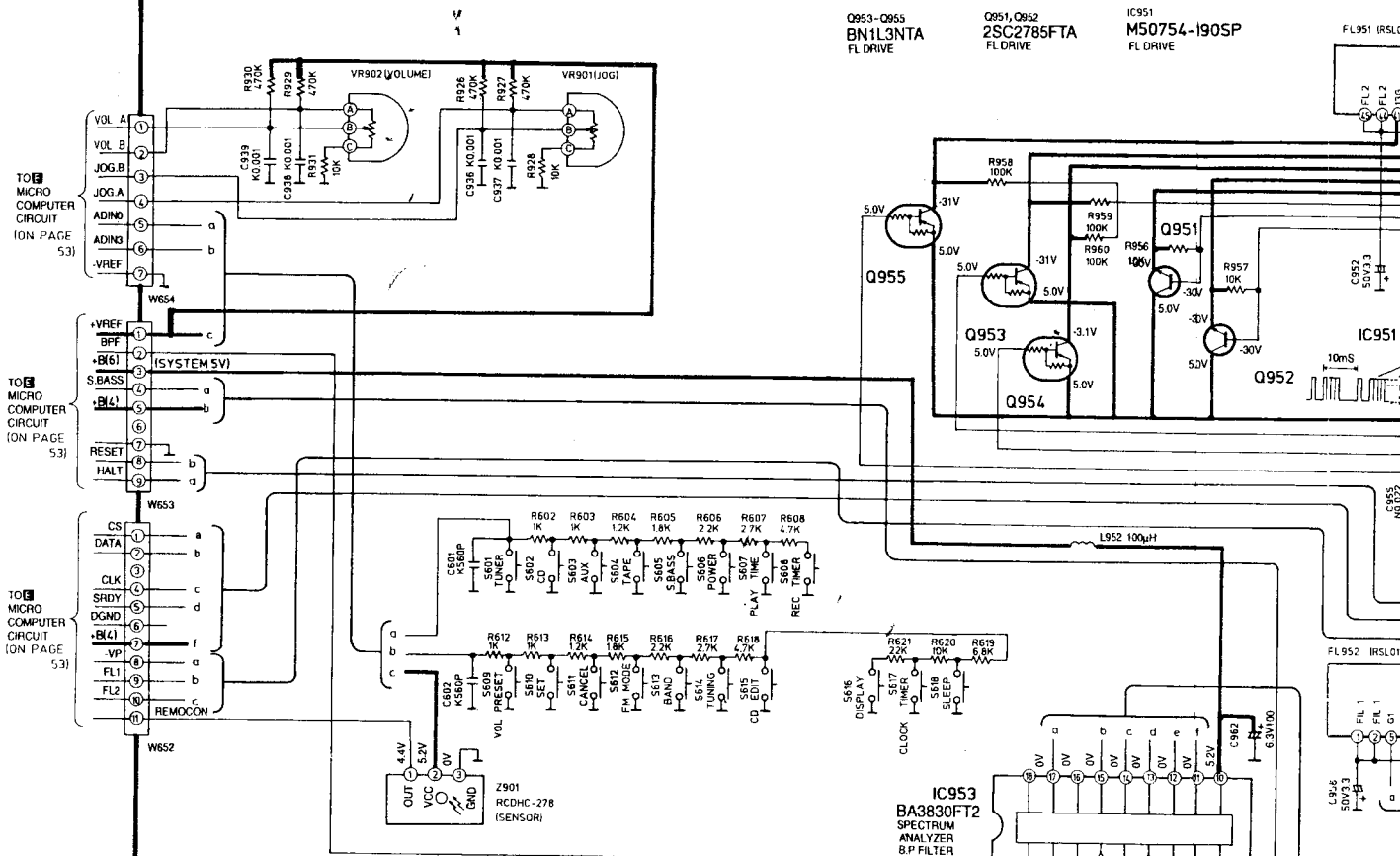
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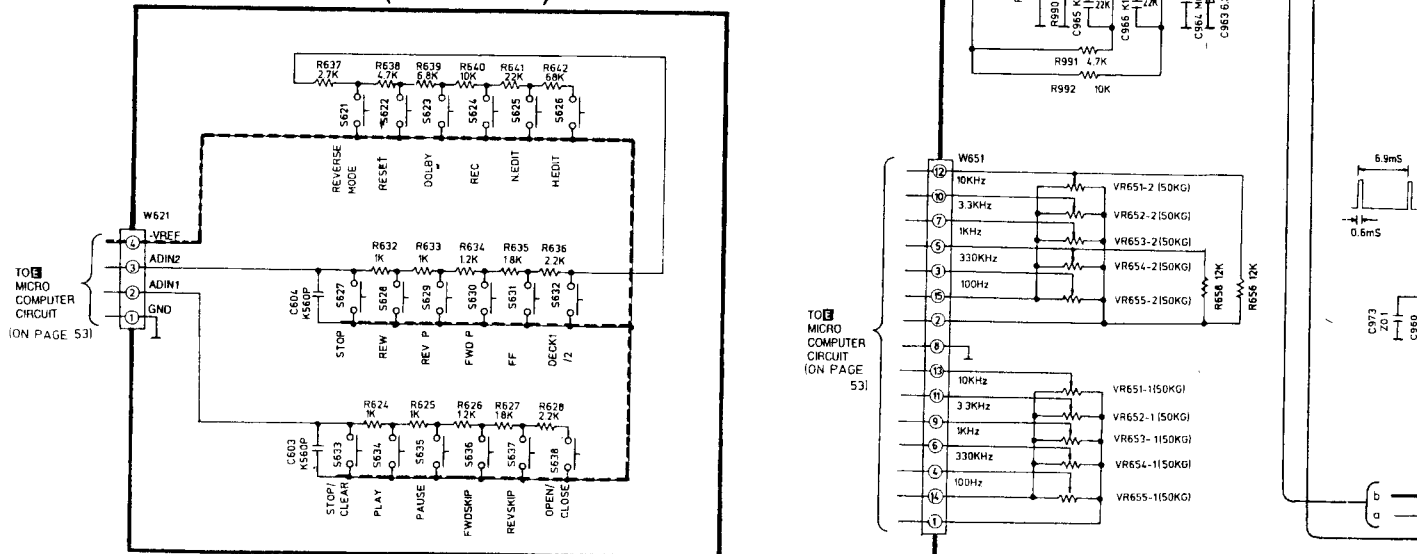
4

5

FL DRIVE CIRCUIT



OPERATION (CD/DECK) CIRCUIT



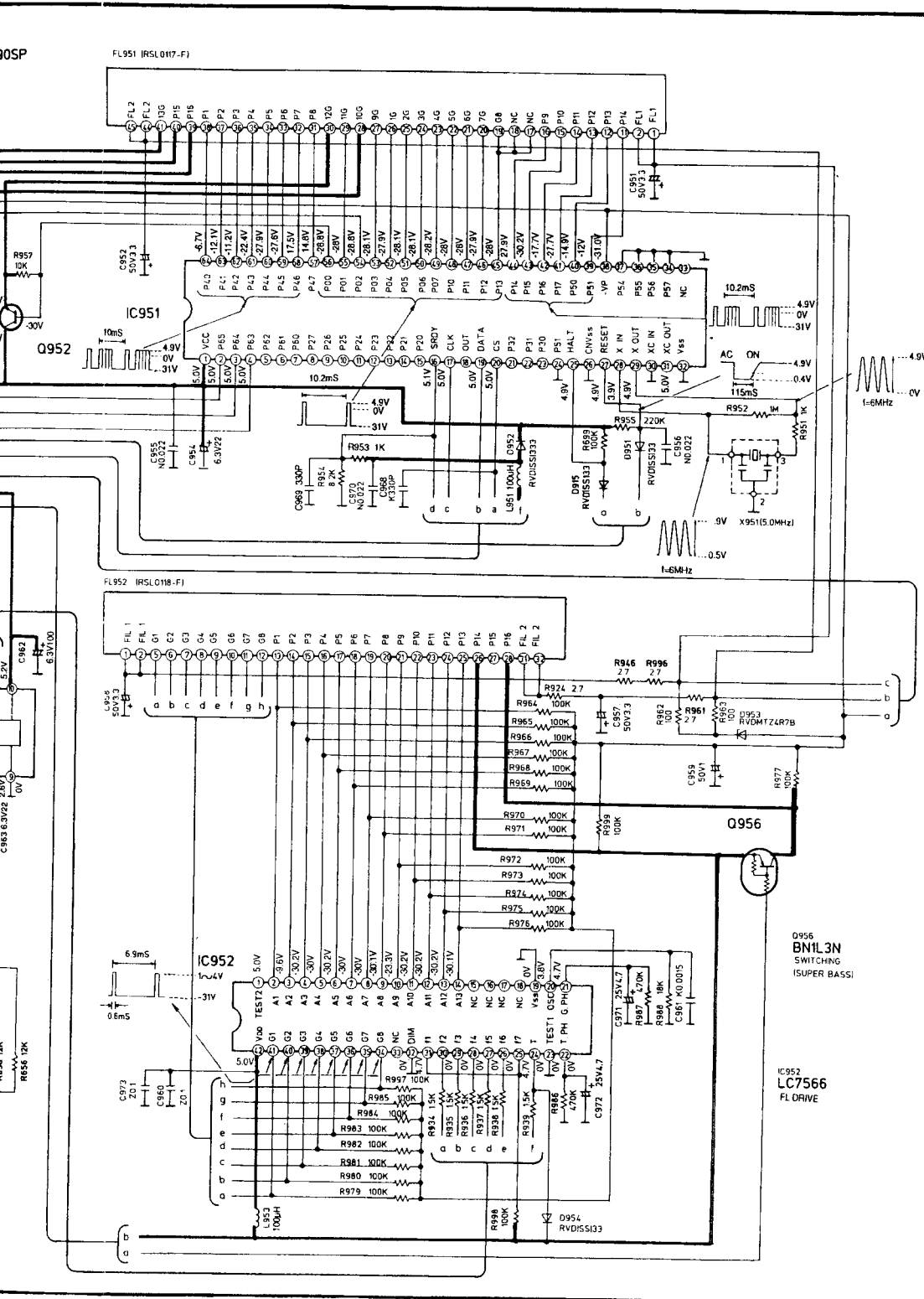
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7

8

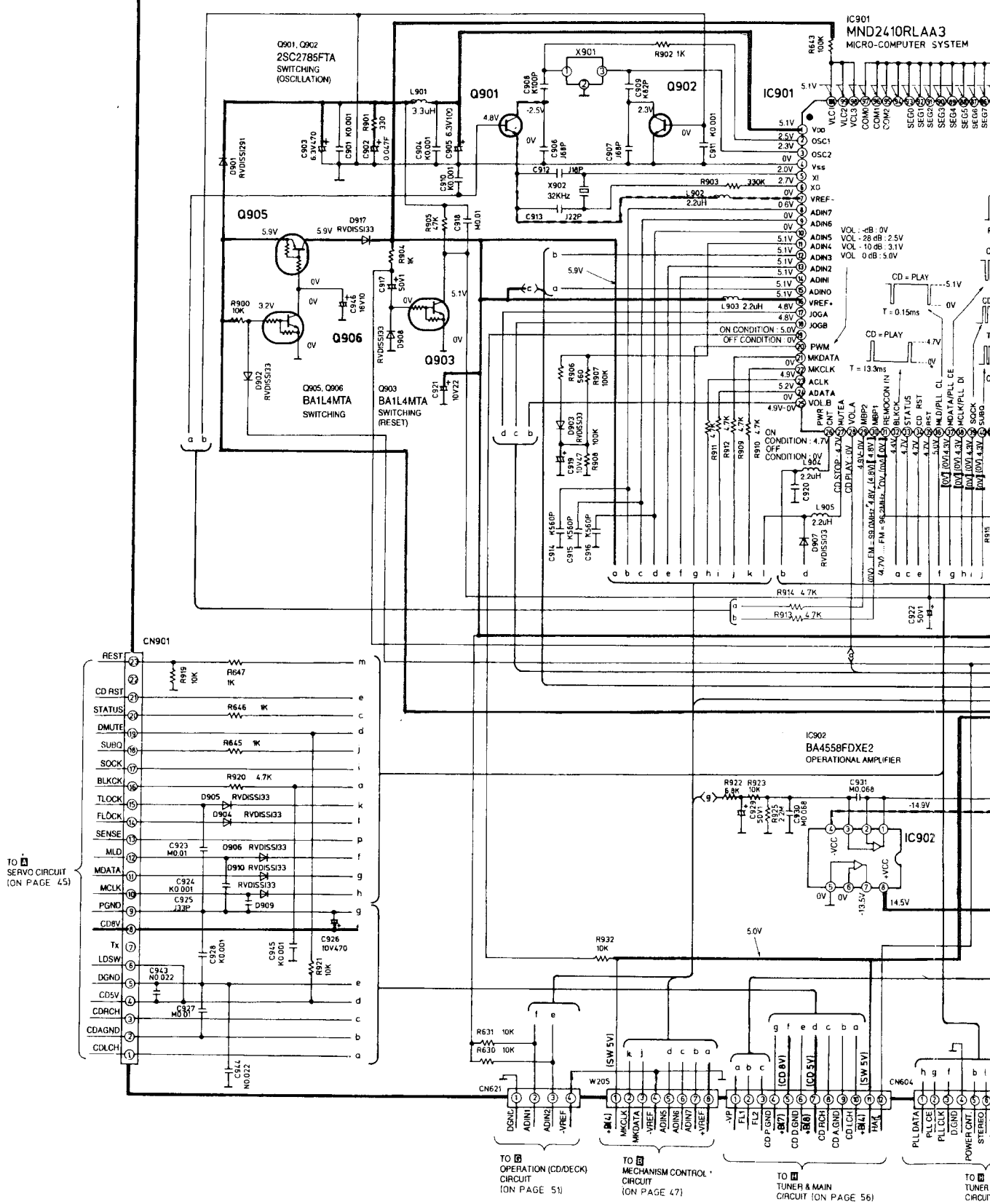
9

10



SCHEMATIC DIAGRAM

MICRO COMPUTER P.C.B



- 54 -

SCHEMATIC DIAGRAM

1

2

3

4

5

A

B

C

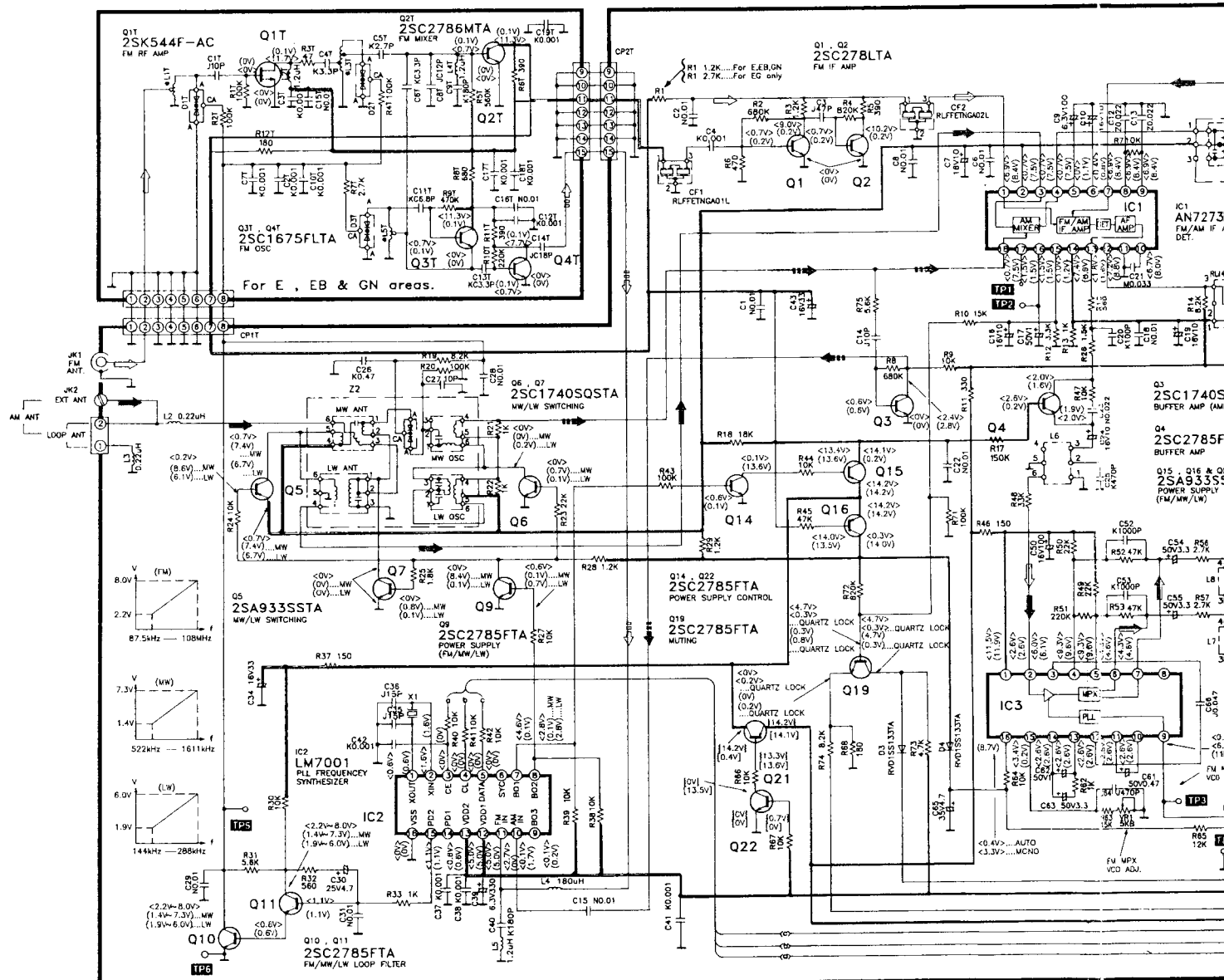
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E

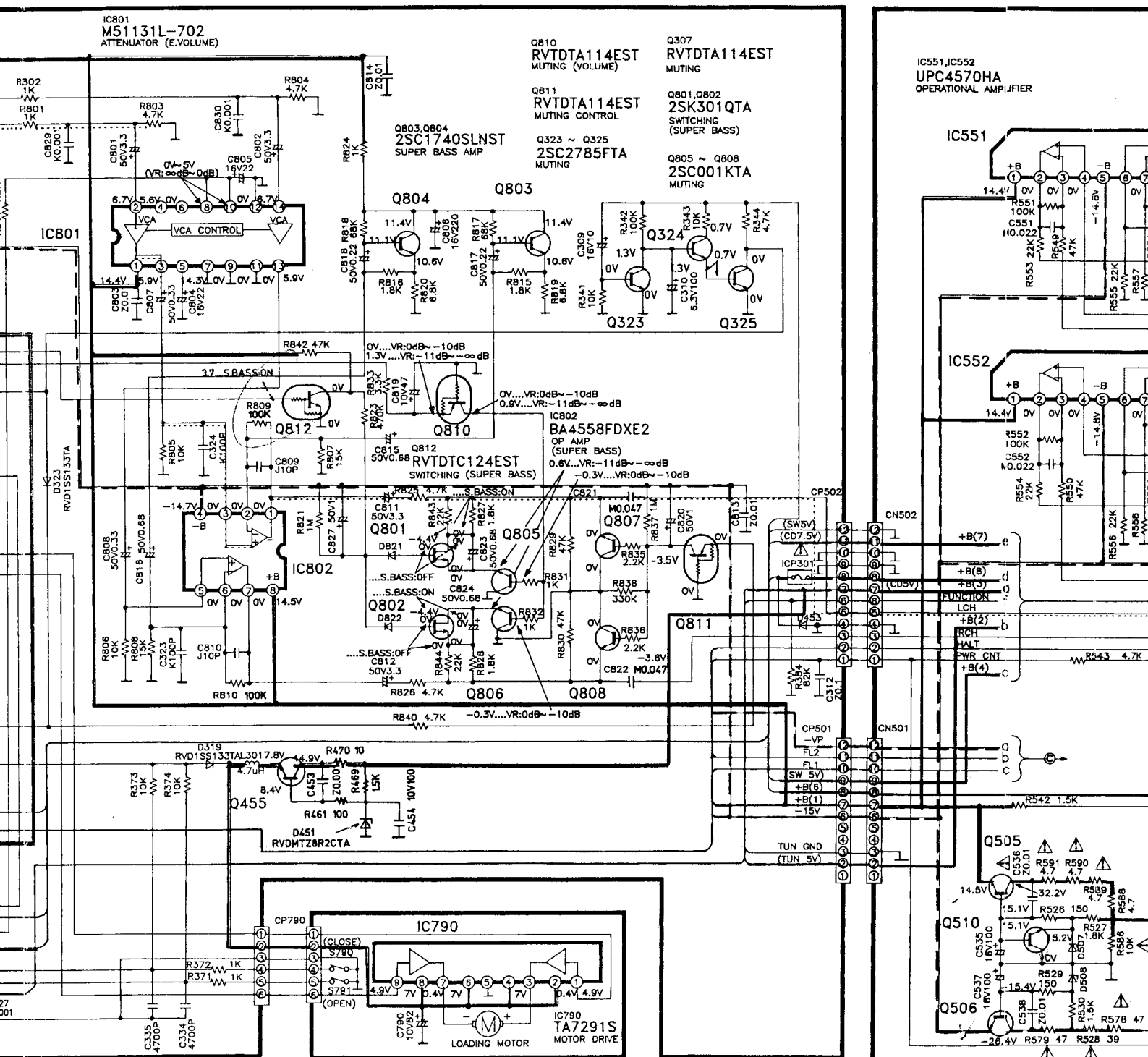
F

M TUNER BLOCK CIRCUIT

H TUNER CIRCUIT



POWER AMP. C



K LOADING MOTOR CIRCUIT

11

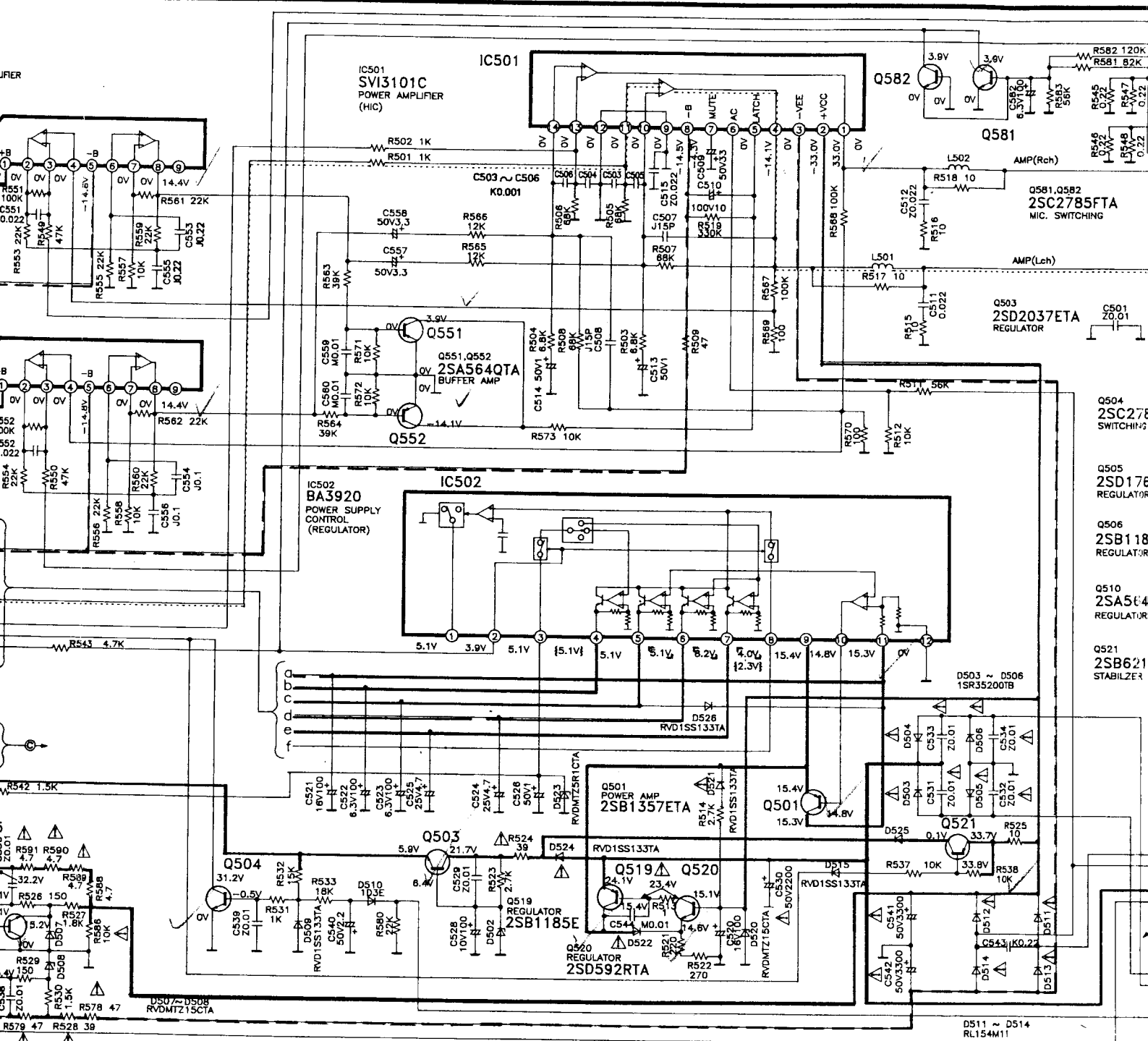
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13

14

15

POWER AMP. CIRCUIT



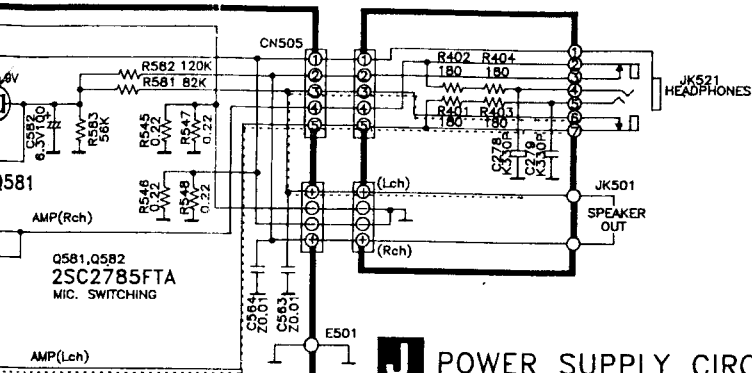
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17

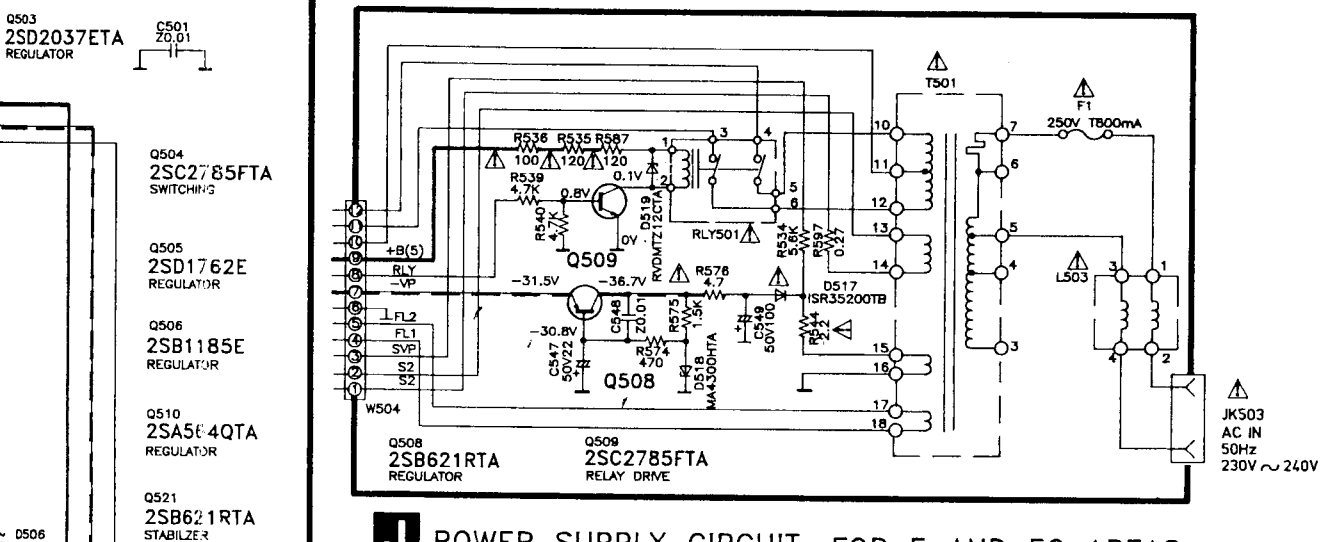
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19

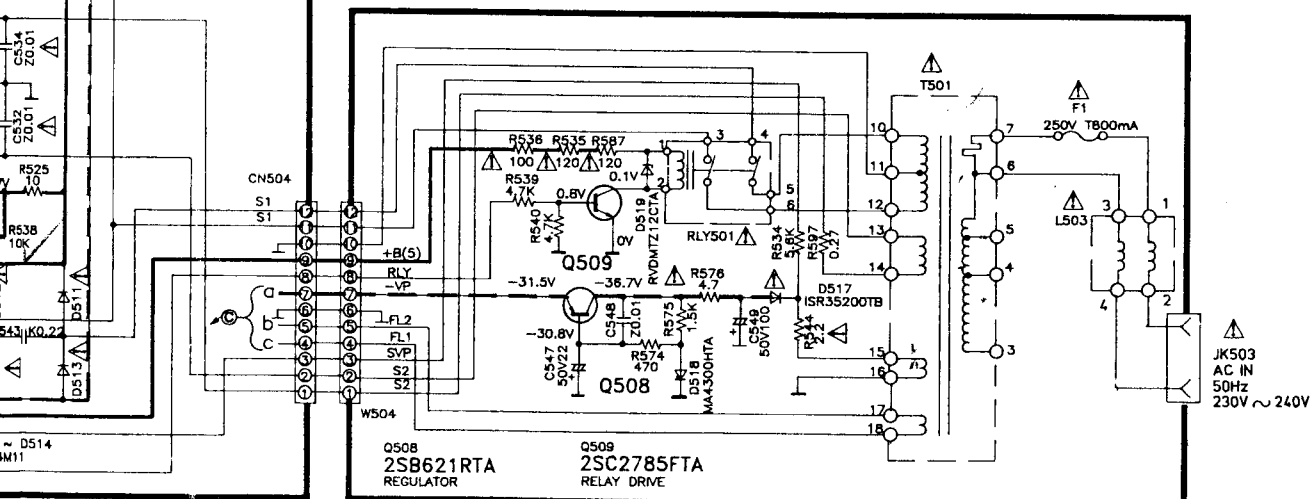
L HEADPHONE/SPEAKER CIRCUIT



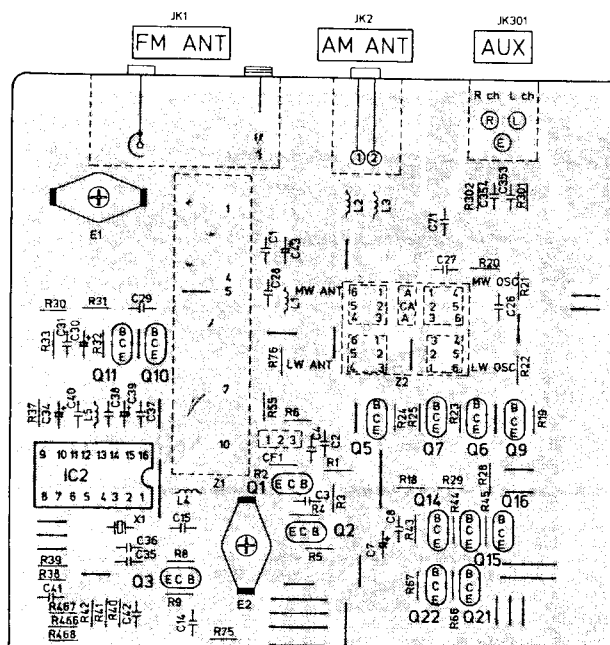
J POWER SUPPLY CIRCUIT FOR EB AND GN AREAS.



J POWER SUPPLY CIRCUIT FOR E AND EG AREAS.

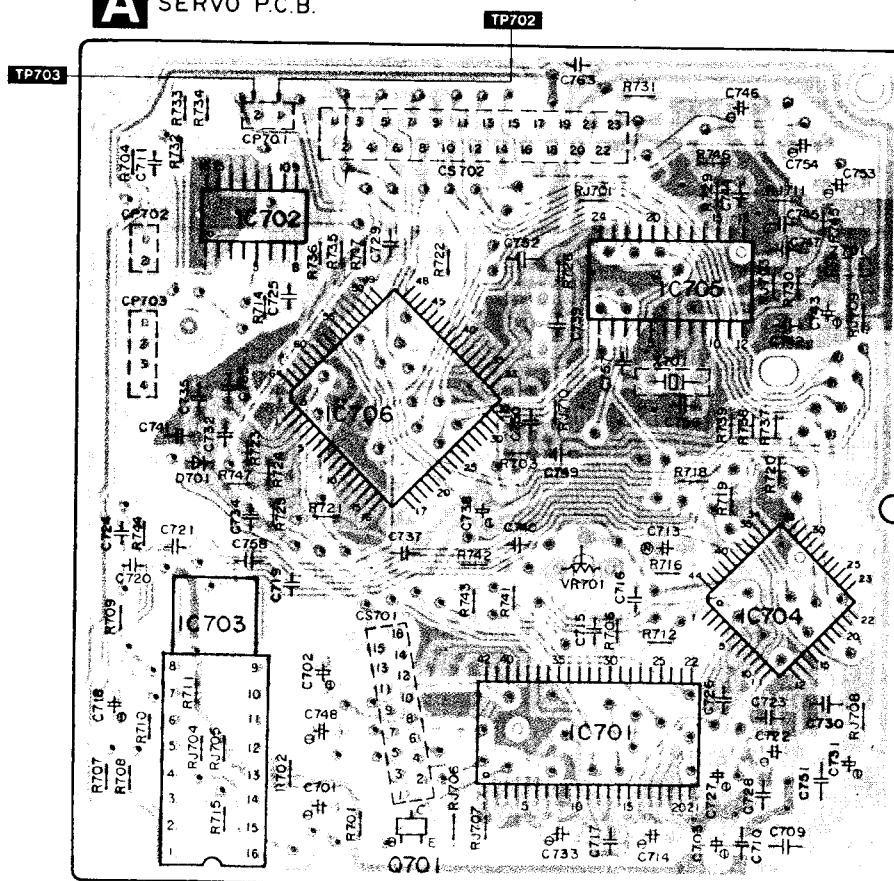


PRINTED CIRCUIT BOARDS



TUNER & MAIN P.C.B. **H**
(REP1378D).....EG

A SERVO P.C.B.



FM VCO ADJ. POINT

TP5

VCO GND

TP6

FM MONO DISTORTION
ADJ. POINT

TP1

FM MONO DISTORTION
ADJ. POINT

TP2

FM VCO
ADJ. POINT

TP3

MPX
GND

TP8



FOR E, EB, GN ONLY

0

11

12

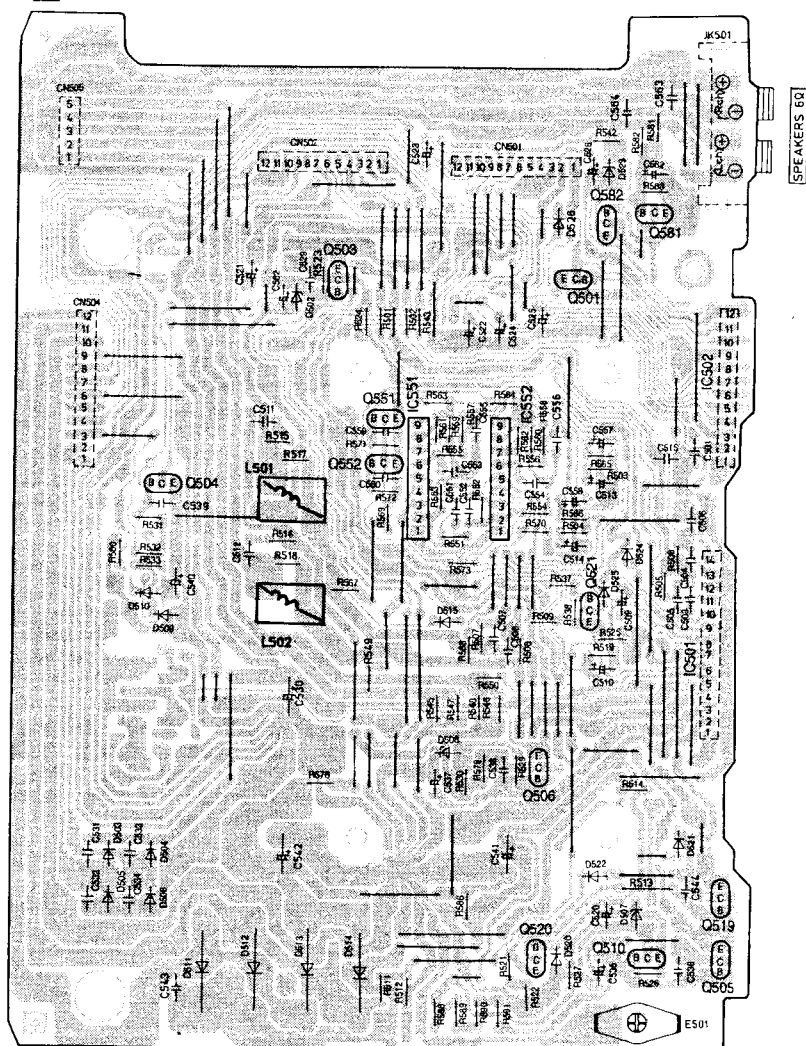
13

14

15

(REP1378C)....E,EB
(REP1378F).....GN

POWER AMP P.C.B



(REP1382C)...E,EG
(REP1382B)....EB
(REP1382D)....GN

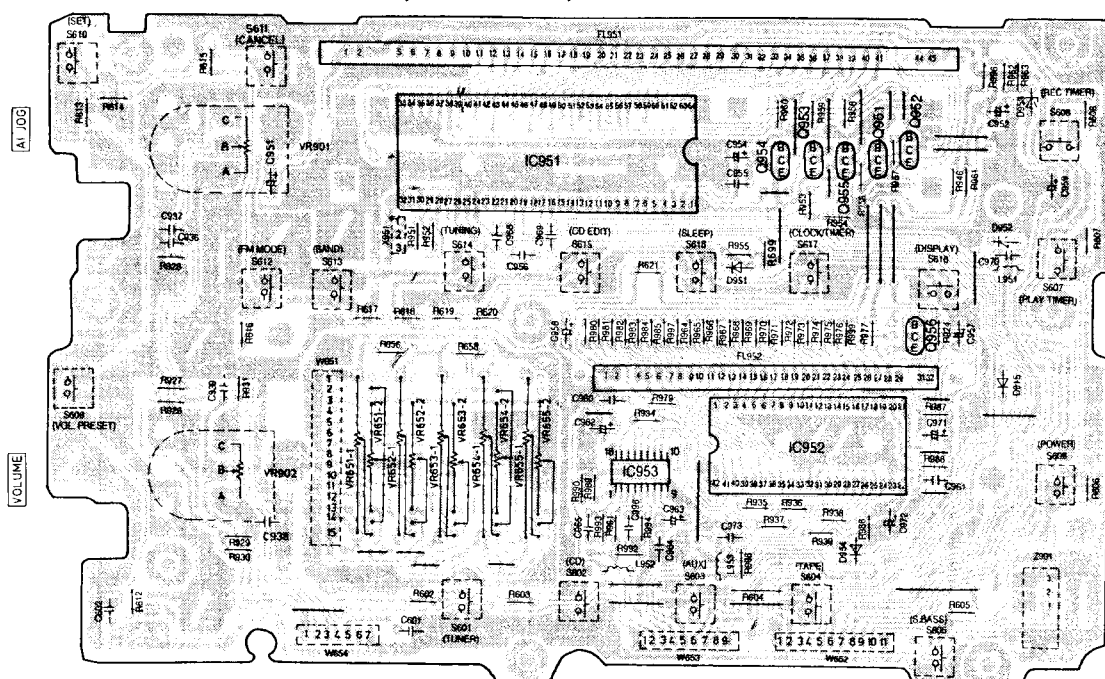
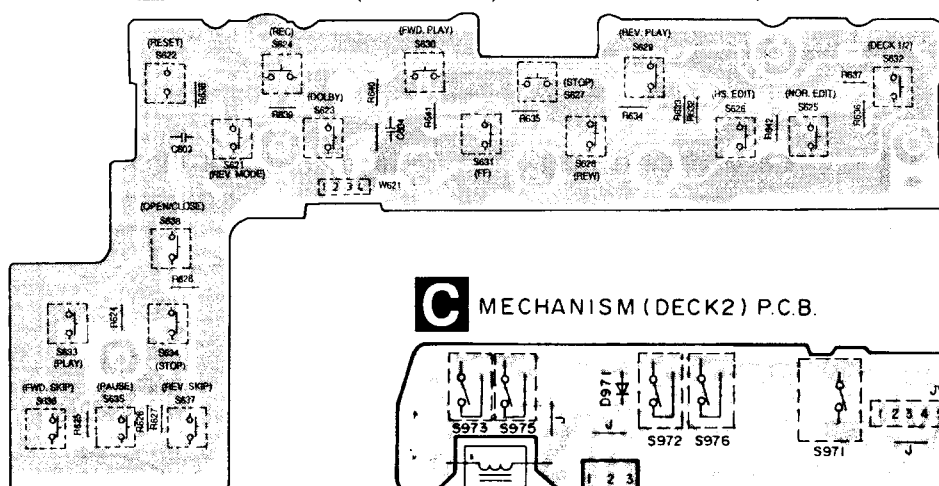
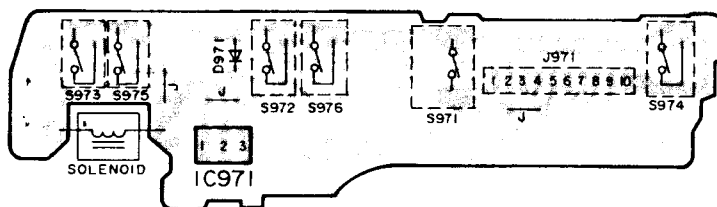
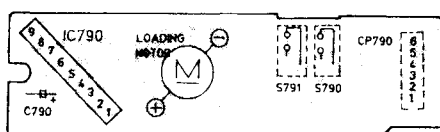
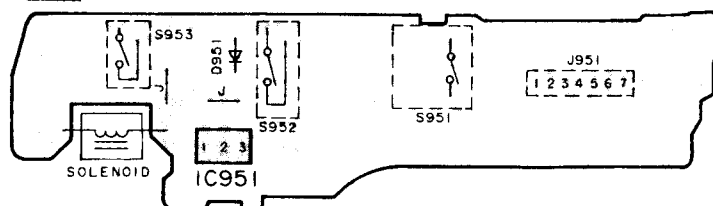
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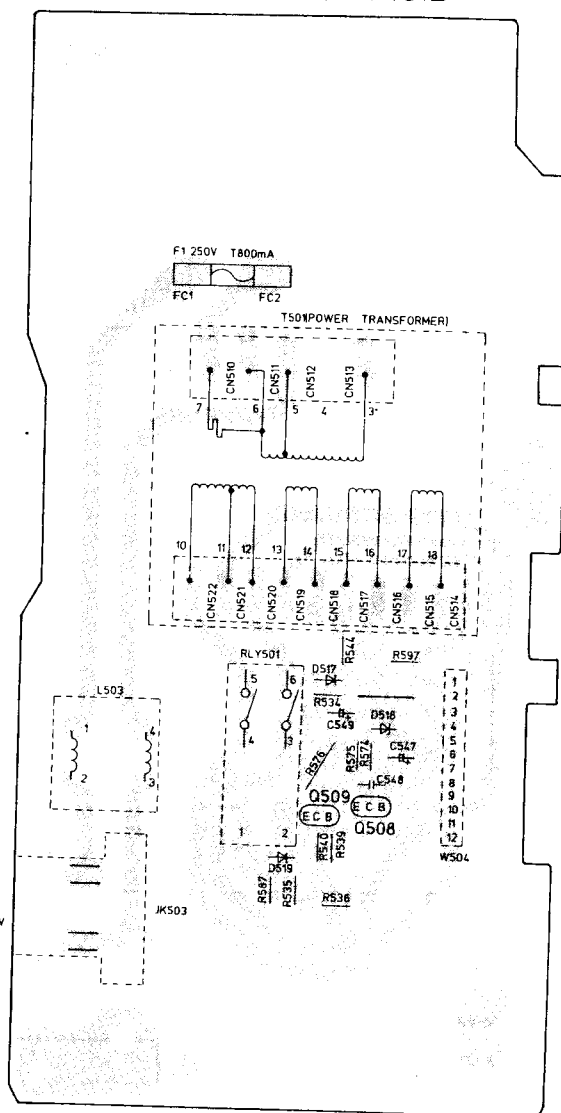
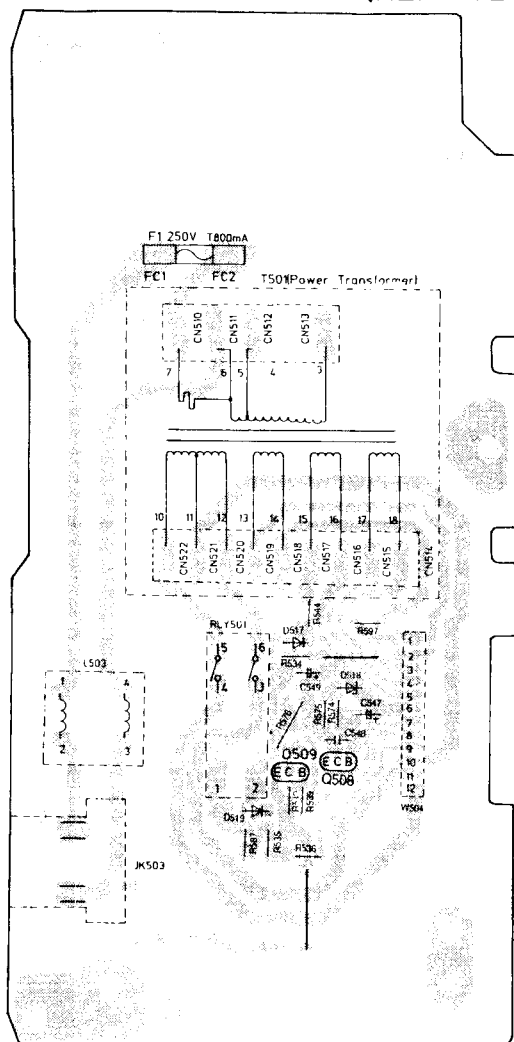
This diagram shows a front view of the small outline type IC mounting surface.

1. The circuit shown in () on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in () on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols () shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.

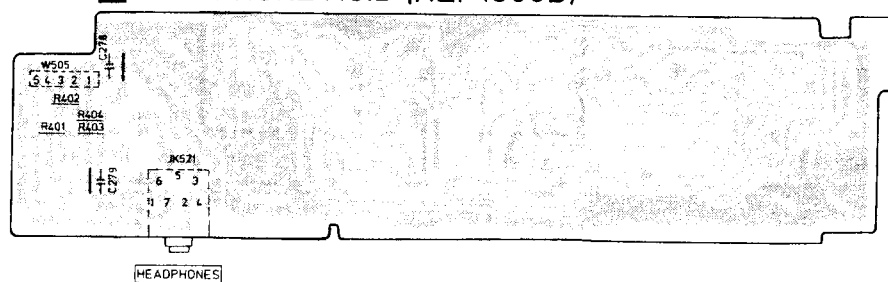
- This circuit board diagram may be modified at any time with the development of new technology.

PRINTED CIRCUIT BOARDS (Main P.C.B.)

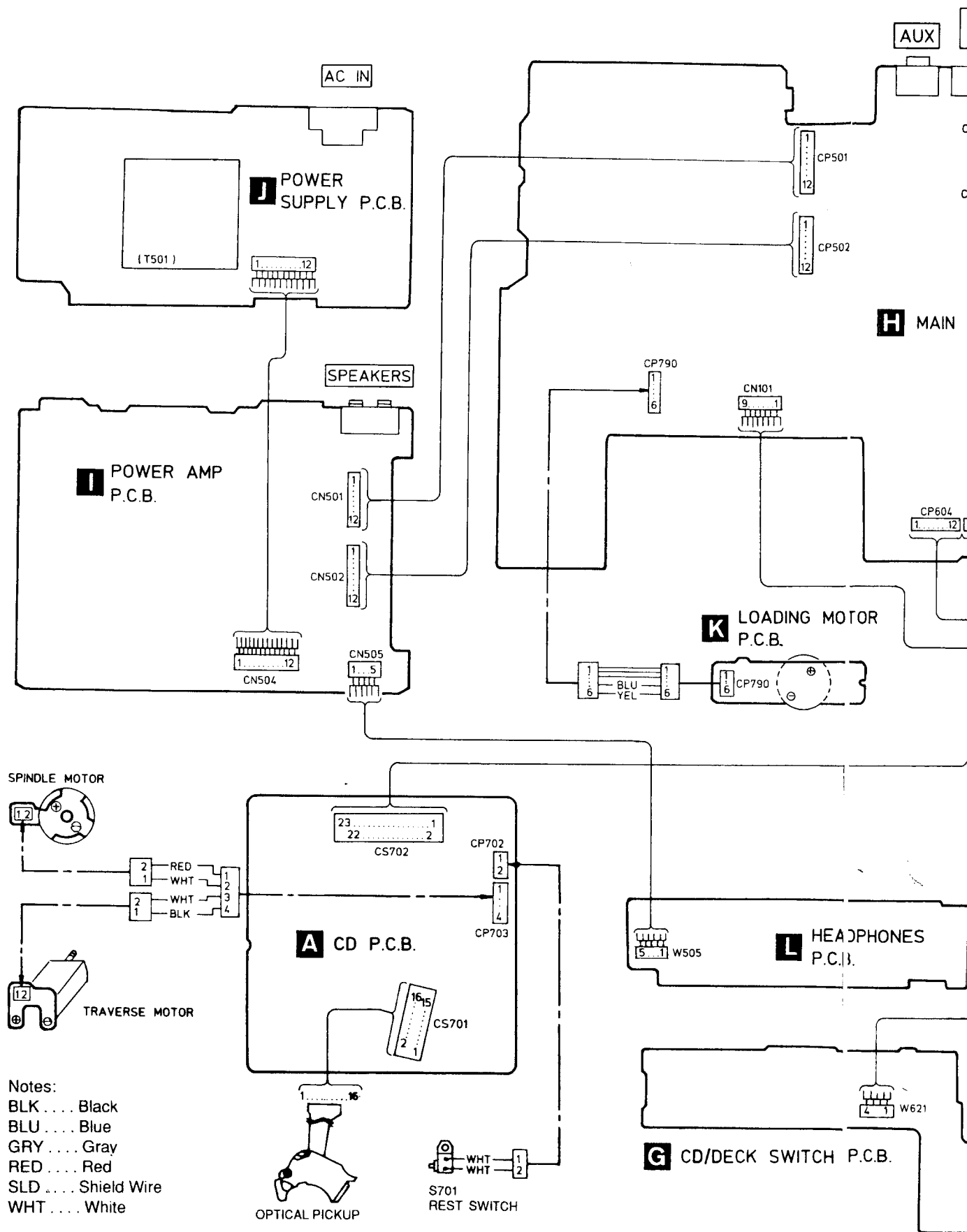
F FL DRIVE P.C.B (REP1380B)

G OPERATION (CD/DECK) P.C.B (REP1380B)

C MECHANISM (DECK2) P.C.B.

K LOADING MOTOR P.C.B (REP0767)

D MECHANISM (DECK1) P.C.B.


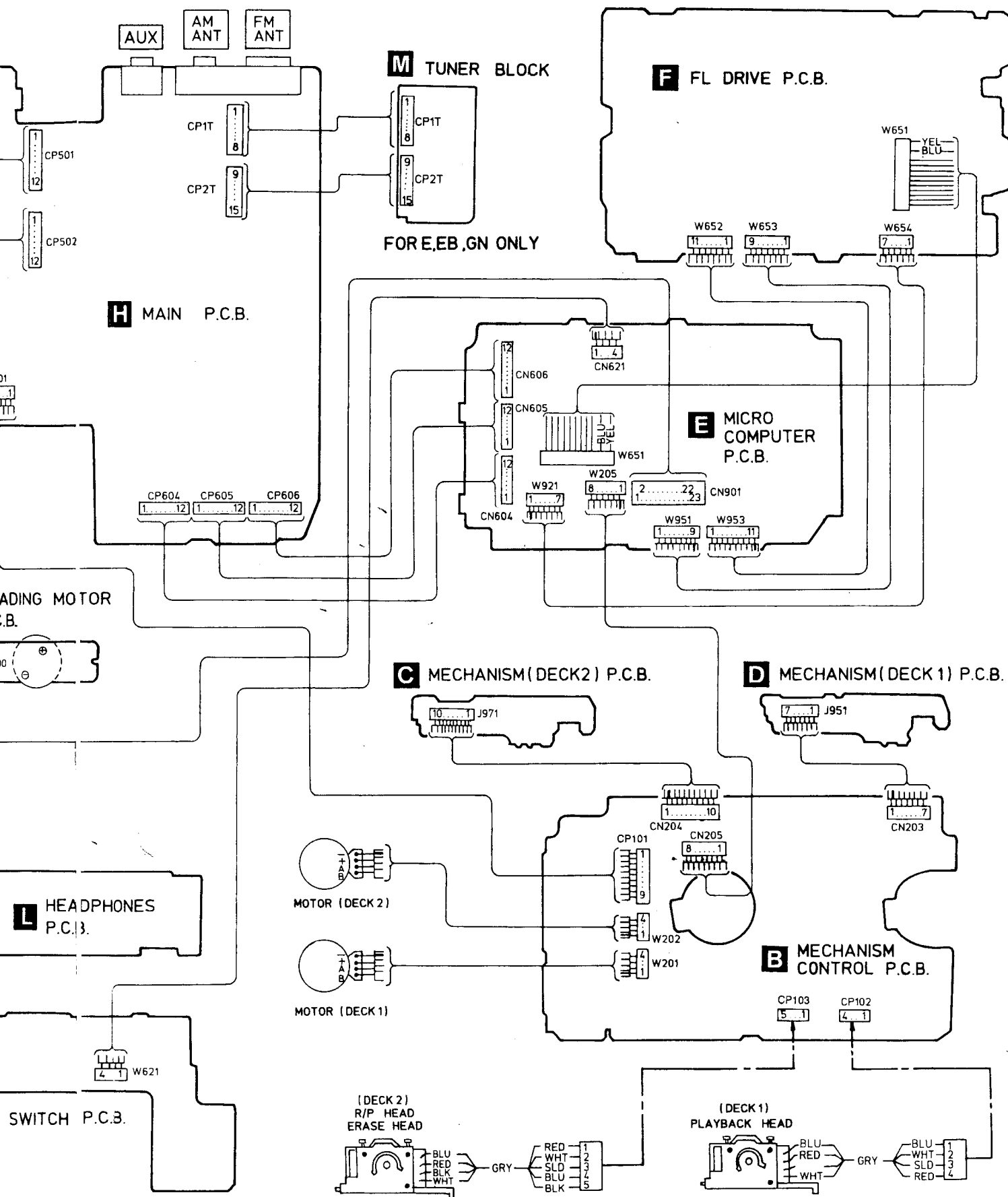


(REP1382D)....GN



■ WIRING CONNECTION DIAGRAM

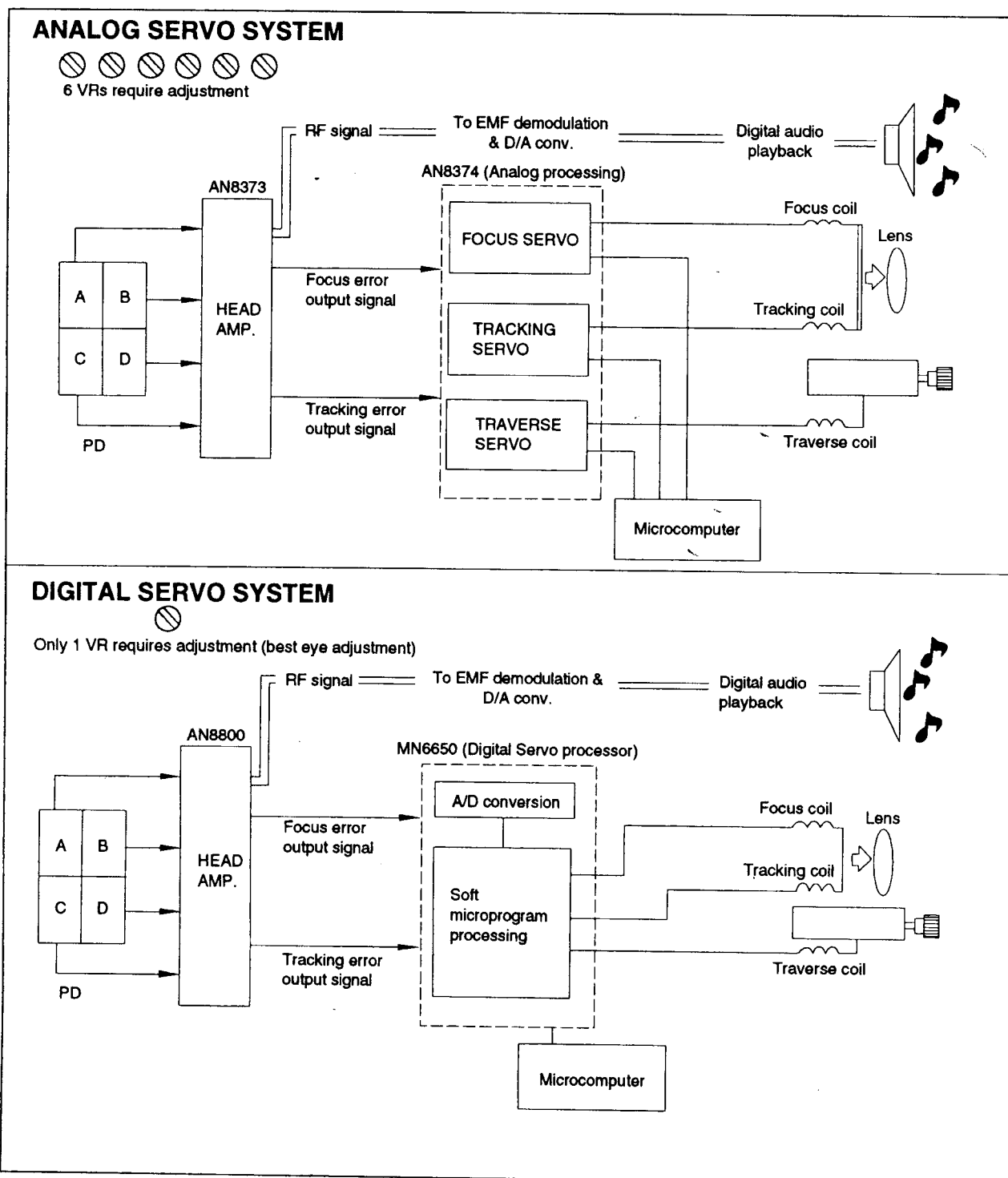




DIGITAL SERVO SYSTEM

The newly-developed digital servo system is adopted in the servo circuit of the unit's CD player instead of the ordinary analog servo system.

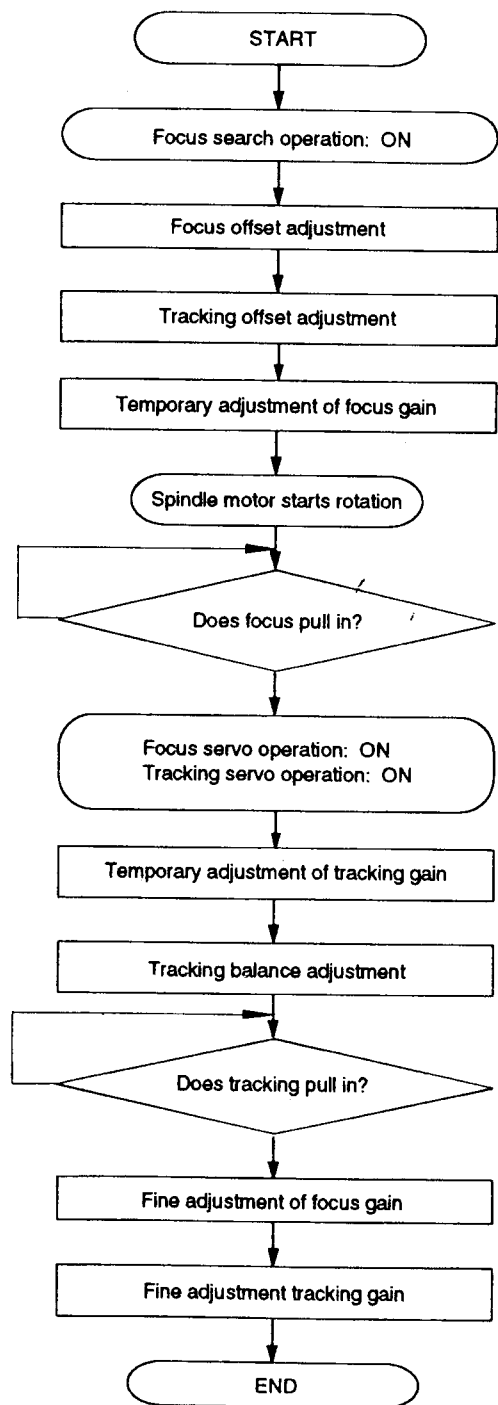
- The diagrams shown below represent differences between the analog servo and digital servo systems. The HEAD AMP. output signals (i.e., focus error and tracking error output signals) are analog. These analog signals are converted to the 8-bits digital signals through the MN6650. The MN6650 performs the following adjustments automatically; focus offset, tracking offset, focus gain, tracking gain and tracking balance adjustments. The outputs from the MN6650 such as the focus coil driving signal, tracking coil driving signal, and traverse motor driving signal are converted to analog signals again and sent to the coils and motor to perform proper servo control for a disc.



2. The servo processor IC MN6650 of the newly-developed digital servo circuit automatically performs the following adjustments which were originally adjusted in the conventional analog servo circuit:
 (1) Focus offset, (2) Tracking offset, (3) Focus gain, (4) Tracking gain, and (5) Tracking balance. Therefore, you do not have to perform the above-mentioned electrical adjustments manually. Only the best eye (PD balance) needs to be adjusted. You can obtain an optimum servo control for a disc to play.
 [You must perform the best eye (PD balance) adjustment manually.]

The following flow chart shows the sequence of automatic adjustments.

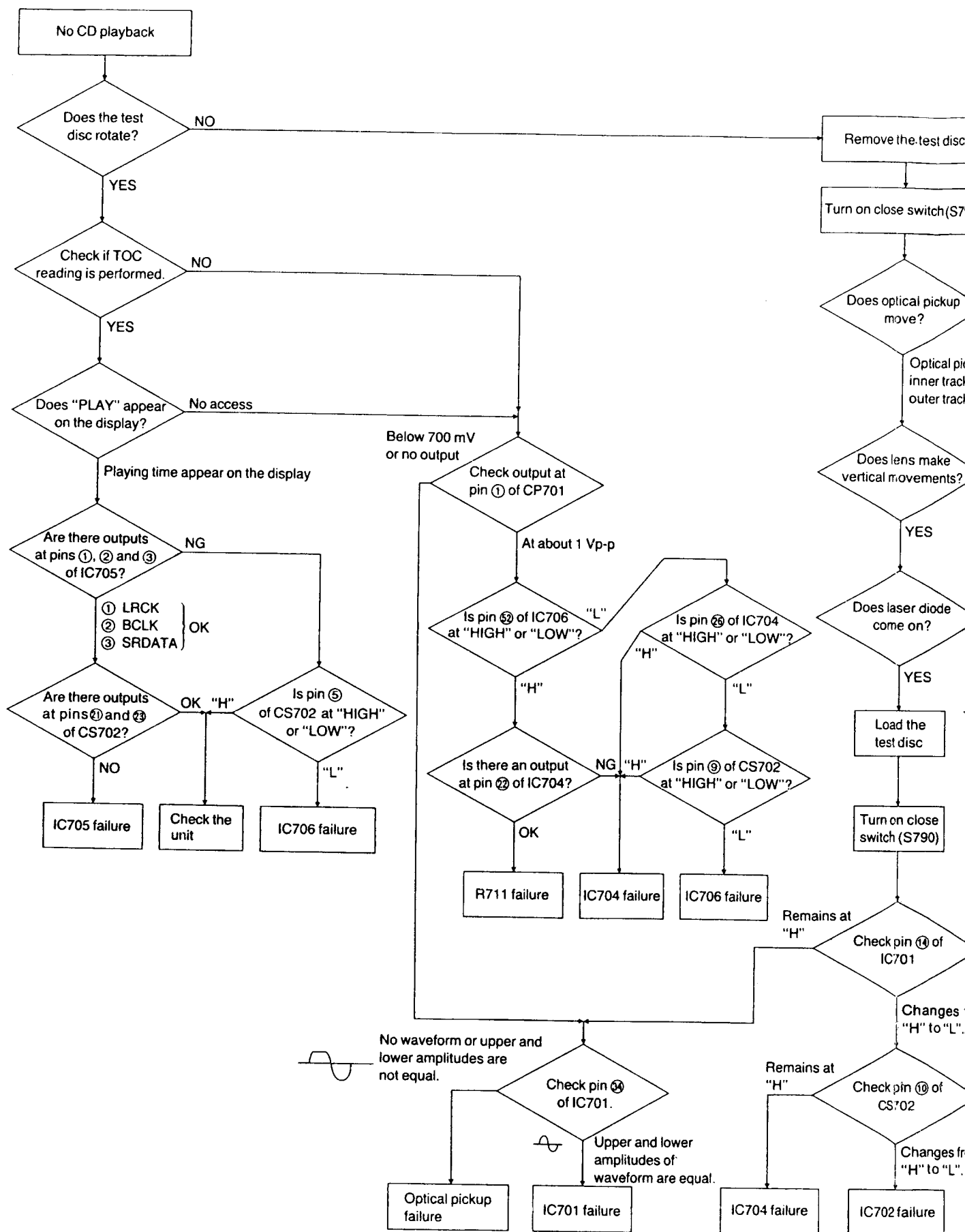
• Flow chart on automatic adjustment sequence

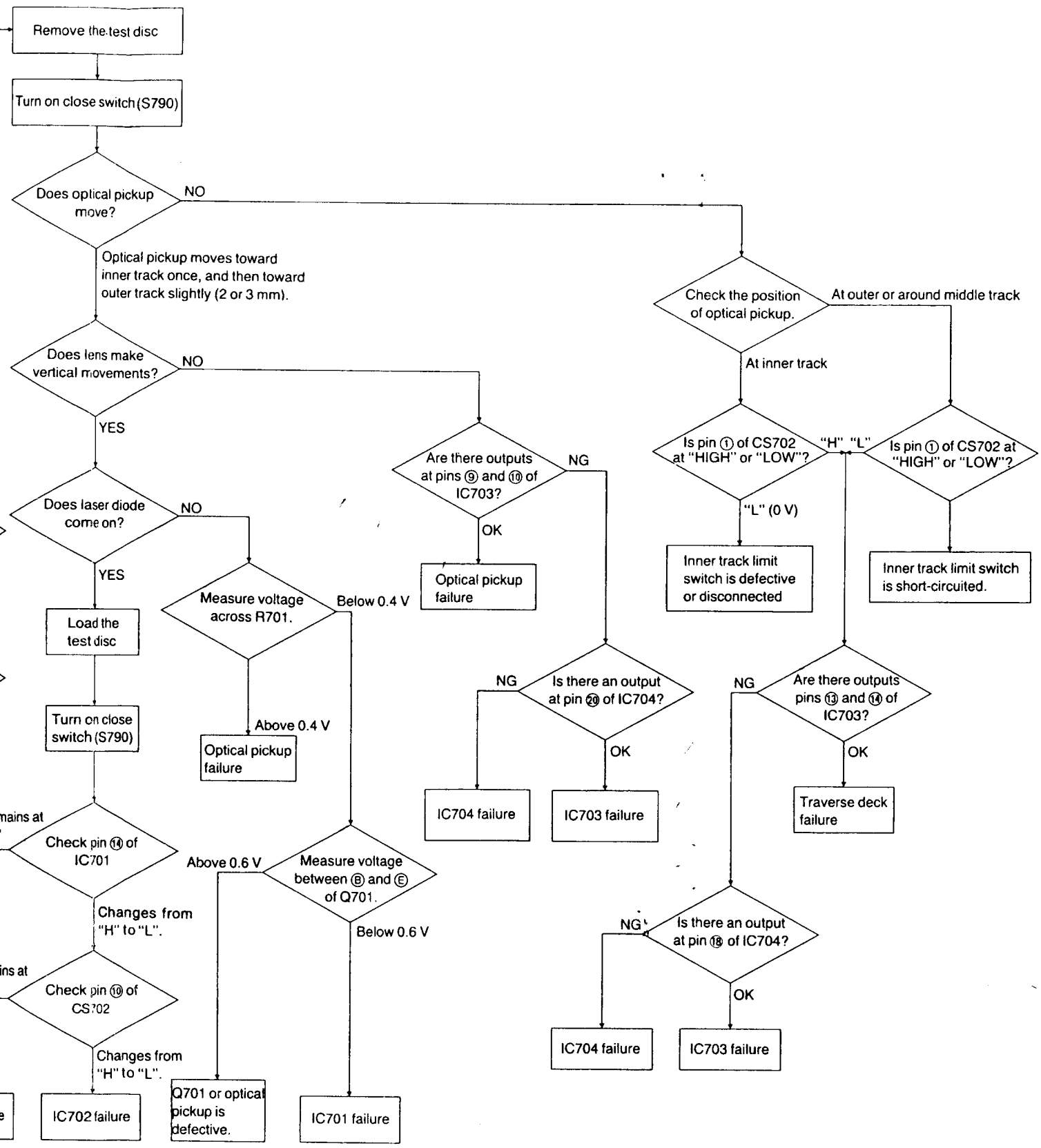


- Because the microcomputer precisely performs automatic adjustments as shown in the flow chart, it will take approx. 5 seconds to finish reading TOC data if a used disc is eccentric one or its surface is warped.

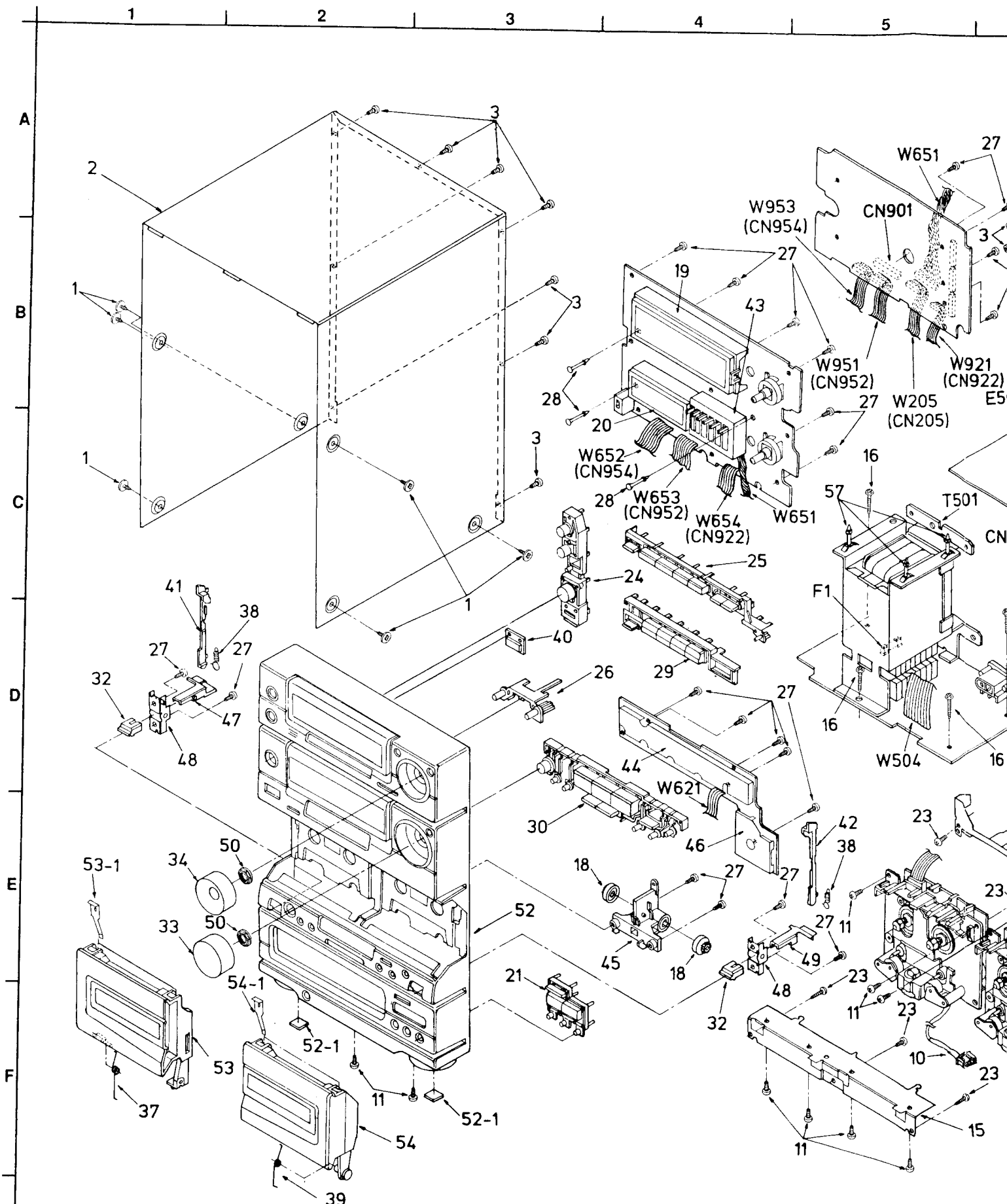
Approx. 2.5sec.

■ TROUBLESHOOTING GUIDE

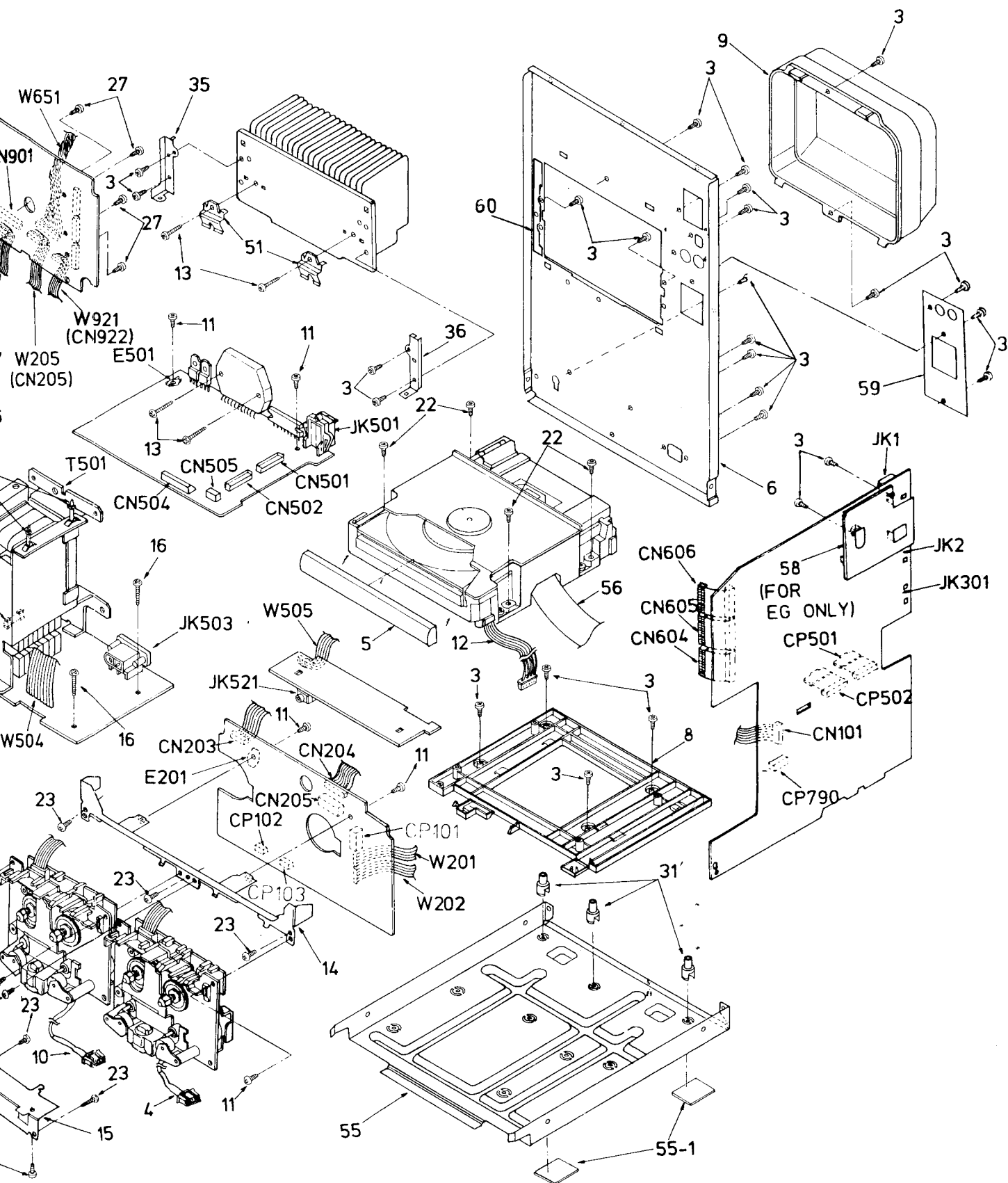




CABINET PARTS LOCATION



5 | 6 | 7 | 8 | 9 | 10



REPLACEMENT PARTS LIST

Notes : * Important safety notice:

Components identified by $\triangle$ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

* The parenthesized indications in the Remarks columns specify the areas. (refer to the cover page for area.)

Parts without these indications can be used for all areas.

[M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
				37	RMB0237	CASS. OPEN SPRING L	[M]
		CABINET & CHASSIS		38	RMB0239	EJECT ROD SPRING	[M]
				39	RMB0238	CASS. OPEN SPRING R	[M]
1	RHD30007	SCREW		40	RKW0209-Q	SENSOR WINDOW	[M]
2	RFKKACH33PK	TOP CABINET ASS'Y	[M]	41	RMM0087	EJECT ROD L	[M]
3	XTB3+8JFZ	SCREW		42	RMM0088	EJECT ROD R	[M]
4	REX0305	R/P HEAD WIRE	[M]	43	RSC0269	GEQ SHIELD PLATE	[M]
5	RGK0473-K	CD LID	[M]	44	RSC0271	CASSETTE SHIELD PLATE	[M]
6	RGR0141B-B	REAR PANEL	[M] (E)	45	RMS0352	DAMPER GEAR HOLDER	[M]
6	RGR0141B-C	REAR PANEL	[M] (EB)	46	RSC0272	CD SHIELD PLATE	[M]
6	RGR0141B-A	REAR PANEL	[M] (EG)	47	RML0252	EJECT LEVER L	[M]
6	RGR0141B-D	REAR PANEL	[M] (GN)	48	RML0254	EJECT LEVER STAND	[M]
8	RMR0535-W	CD SUPPORT	[M]	49	RML0253	EJECT LEVER R	[M]
9	RMV0047	HEAT SINK COVER	[M]	50	SNE4021	NUT	
10	REX0450	WIRE ASS'Y	[M]	51	RMC0158-S	TRANSISTOR HOLDER	[M]
11	XTV26+6F	SCREW		52	RFKGACH33EK	FRONT PANEL ASS'Y	[M]
12	REX0435	WIRE ASS'Y	[M]	52-1	SHS3276	LEG FELT (5MM)	[M]
13	XTW3+15T	SCREW		53	RFKLACH33PAK	CASS. LID (L) ASS'Y	[M]
14	RMA0570	CASSETTE ANGLE/UPPER	[M]	53-1	RUS757ZAA	SPRING	[M]
15	RMA0571	CASSETTE ANGLE/LOWER	[M]	54	RFKLACH33PBK	CASS. LID (R) ASS'Y	[M]
16	XTB3+20J	SCREW		54-1	RUS757ZAA	SPRING	[M]
18	RDG0129	DAMPER GEAR	[M]	55	RFKJACH33PK	BOTTOM BOARD ASS'Y	[M]
19	RMN0173	TUNER FL HOLDER	[M]	55-1	SHG1654-S	LEG FELT (1.6MM)	[M]
20	RSC0268	SPE-ANA HOLDER	[M]	56	REE0395	FFC	[M]
21	RGU0743-K	BUTTON, CD	[M]	57	SHR9755	POWER PCB SUPPORT	
22	XTB3+12JFZ	SCREW		58	RSC0279	TUNER SHIELD PLATE	[M](EG)
23	XTB3+12JFR	SCREW		59	RMQ0302	HEAT PROTECTOR	[M]
24	RGU0737-K	BUTTON, POWER/TIMER	[M]	60	RMQ0306	HEAT PROTECTOR SHEET	[M]
25	RGU0738-K	BUTTON, TUNER	[M]				
26	RGU0741-K	BUTTON, SET/CANCEL	[M]			WIRES	
27	XTBS26+10J	SCREW					
28	SHR8005	PANEL PCB SUPPORT		W504	REX0451	WIRE ASS'Y	[M]
29	RGU0739-K	BUTTON, INPUT SEL.	[M]	W651	REX0434	WIRE ASS'Y	[M]
30	RGU0742-K	BUTTON, CASSETTE	[M]				
31	SHE187-3	TRANS PCB SUPPORT					
32	RGU0750-K	KNOB, EJECT	[M]				
33	RGW0148-K	KNOB, VOLUME	[M]				
34	RGW0147-K	KNOB, AI JOG	[M]				
35	RMA0575	HEAT SINK ANGLE L	[M]				
36	RMA0576	HEAT SINK ANGLE R	[M]				

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS		Q9	2SC2785FTA	TRANSISTOR	
				Q10	2SC2785FTA	TRANSISTOR	
				Q11	2SC2785FTA	TRANSISTOR	
IC1	AN7273W	IC, FM AM IF & DET		Q14	2SC2785FTA	TRANSISTOR	
IC2	LM7001	IC, PLL		Q15	2SA933SSTA	TRANSISTOR	
IC3	AN7470	IC, FM MPX		Q16	2SA933SSTA	TRANSISTOR	
IC101	M51167BFP-E1	IC, REC/PLAY		Q19	2SC2785FTA	TRANSISTOR	
IC102	BA7755	IC, ANALOG SW		Q21	2SA933SSTA	TRANSISTOR	
IC103	CXA1102M-T4	IC, DOLBY		Q22	2SC2785FTA	TRANSISTOR	
IC104	BU4066BF-E2	IC, ANALOG SW		Q101	2SJ40CDTA	TRANSISTOR	
IC105	BU2040F-E2	IC, I/O EXPANDER	[M]	Q102	2SJ40CDTA	TRANSISTOR	
IC301	BU4066BF-E2	IC, ANALOG SW		Q103	2SJ40CDTA	TRANSISTOR	
IC302	BU4066BF-E2	IC, ANALOG SW		Q104	2SJ40CDTA	TRANSISTOR	
IC304	BA4558FDXE2	IC, OP AMP	[M]	Q105	RVTDTTC144TST	TRANSISTOR	[M]
IC307	BU2040F-E2	IC, I/O EXPANDER	[M]	Q106	RVTDTTC144TST	TRANSISTOR	[M]
IC501	SVI3101C	IC, HIC	△	Q107	RVTDTTC144TST	TRANSISTOR	[M]
IC502	BA3920	IC, REGULATOR	△	Q108	RVTDTTC144TST	TRANSISTOR	[M]
IC551	UPC4570HA	IC, OP AMP	[M]	Q109	RVTDTTC144TST	TRANSISTOR	[M]
IC552	UPC4570HA	IC, OP AMP	[M]	Q110	RVTDTTC144TST	TRANSISTOR	
IC651	M5226FPE2	IC, G.EQ		Q115	2SD1450STA	TRANSISTOR	
IC652	M5226FPE2	IC, G.EQ		Q116	2SD1302STA	TRANSISTOR	
IC801	M51131L-702	IC, ELECTRONIC VOLUME		Q117	BA1L4MTA	TRANSISTOR	[M]
IC802	BA4558FDXE2	IC, OP AMP	[M]	Q151	RVTDTTC144TST	TRANSISTOR	[M]
IC901	MND2410RLAA3	IC, MAIN MICRO-COM	[M]	Q152	RVTDTTC144TST	TRANSISTOR	[M]
IC902	BA4558FDXE2	IC, OP AMP	[M]	Q153	2SC1740SLNET	TRANSISTOR	
IC951	M50754-190SP	IC, FL MICRO-COM	[M] (MAIN)	Q154	2SC1740SLNET	TRANSISTOR	
IC952	LC7566	IC, FL		Q171	2SD1302STA	TRANSISTOR	
IC953	BA3830FT2	IC, BANDPASS FILTER		Q173	RVTDTTC144TST	TRANSISTOR	[M]
IC951	DN6851ALB	IC, HALL (DECK1)	(DECK)	Q174	2SC2785FTA	TRANSISTOR	
IC971	DN6851ALB	IC, HALL (DECK2)	(DECK)	Q175	2SD1302STA	TRANSISTOR	
		IC PROTECTOR		Q176	2SD1302STA	TRANSISTOR	
				Q179	2SC2784FTA	TRANSISTOR	[M]
ICP301	SRUN20T	IC PROTECTOR		Q180	2SC2784FTA	TRANSISTOR	[M]
		TRANSISTORS		Q201	2SD965RTA	TRANSISTOR	
				Q202	2SK301QTA	TRANSISTOR	[M]
				Q203	2SD965RTA	TRANSISTOR	
Q1	2SC2787LTA	TRANSISTOR		Q204	2SK301QTA	TRANSISTOR	[M]
Q1T	2SK544F-AC	TRANSISTOR	(E/EB/GN)	Q205	RVTDTTC144TST	TRANSISTOR	[M]
Q2T	2SC2786MTA	TRANSISTOR	(E/EB/GN)	Q206	2SB621RTA	TRANSISTOR	
Q2	2SC2787LTA	TRANSISTOR		Q207	2SB621RTA	TRANSISTOR	
Q3T	2SC1675FL1L2	TRANSISTOR	(E/EB/GN)	Q208	BA1A4ZTA	TRANSISTOR	[M]
Q3	2SC1740SQSTA	TRANSISTOR		Q209	BA1A4ZTA	TRANSISTOR	[M]
Q4T	2SC1675FL1L2	TRANSISTOR	(E/EB/GN)	Q210	2SC2785FTA	TRANSISTOR	
Q4	2SC2785FTA	TRANSISTOR		Q211	2SC2785FTA	TRANSISTOR	
Q5	2SA933SSTA	TRANSISTOR		Q212	2SC2785FTA	TRANSISTOR	
Q6	2SC1740SQSTA	TRANSISTOR		Q213	2SC2785FTA	TRANSISTOR	
Q7	2SC1740SQSTA	TRANSISTOR		Q214	2SC2785FTA	TRANSISTOR	
				Q215	2SC2785FTA	TRANSISTOR	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
Q216	2SC2785FTA	TRANSISTOR		Q901	2SC2785FTA	TRANSISTOR	
Q217	2SC2785FTA	TRANSISTOR		Q902	2SC2785FTA	TRANSISTOR	
Q218	BN1A4MTA	TRANSISTOR	[M]	Q903	BA1L4MTA	TRANSISTOR	[M]
Q219	BN1L3NTA	TRANSISTOR	[M]	Q904	2SC2785FTA	TRANSISTOR	
Q220	BN1L3NTA	TRANSISTOR	[M]	Q905	BN1A4MTA	TRANSISTOR	[M]
Q303	2SC2001KTA	TRANSISTOR		Q906	BA1A4MTA	TRANSISTOR	[M]
Q304	2SC2001KTA	TRANSISTOR		Q951	2SC2785FTA	TRANSISTOR	
Q305	2SC2785FTA	TRANSISTOR		Q952	2SC2785FTA	TRANSISTOR	
Q306	2SC2785FTA	TRANSISTOR		Q953	BN1L3NTA	TRANSISTOR	[M]
Q307	RVTDTA114EST	TRANSISTOR		Q954	BN1L3NTA	TRANSISTOR	[M]
Q311	RVTDTA114EST	TRANSISTOR		Q955	BN1L3NTA	TRANSISTOR	[M]
Q312	RVTDTA124EST	TRANSISTOR	[M]	Q956	BN1L3NTA	TRANSISTOR	[M]
Q320	RVTDTA143XST	TRANSISTOR					
Q321	RVTDTA143XST	TRANSISTOR				DIODES	
Q322	RVTDTA143XST	TRANSISTOR					
Q323	2SC2785FTA	TRANSISTOR		D1T	SVC211SPA-AL	DIODE	(E/EB/GN)
Q324	2SC2785FTA	TRANSISTOR		D1	RVD1SS133TA	DIODE	
Q325	2SC2785FTA	TRANSISTOR		D2T	SVC211SPA-AL	DIODE	(E/EB/GN)
Q451	2SC2785FTA	TRANSISTOR		D2	RVD1SS133TA	DIODE	
Q452	2SC2785FTA	TRANSISTOR		D3T	SVC211SPA-AL	DIODE	(E/EB/GN)
Q453	2SC2785FTA	TRANSISTOR		D3	RVD1SS133TA	DIODE	
Q454	2SC2785FTA	TRANSISTOR		D4	RVD1SS133TA	DIODE	
Q455	2SD2037EFTA	TRANSISTOR		D171	RVD1SS133TA	DIODE	
Q501	2SB1357ETA	TRANSISTOR	[M] △	D172	RVDMTZ4R7BTA	DIODE	
Q503	2SD2037EFTA	TRANSISTOR		D173	RVD1SS133TA	DIODE	
Q504	2SC2785FTA	TRANSISTOR		D174	RVDMTZ3R6BTA	DIODE	[M]
Q505	2SD1762DE	TRANSISTOR	△	D201	RVD1SS133TA	DIODE	
Q506	2SB1185E	TRANSISTOR		D202	RVD1SS133TA	DIODE	
Q508	2SB621RTA	TRANSISTOR		D301	RVDMTZ6R2BTA	DIODE	
Q509	2SC2785FTA	TRANSISTOR		D307	RVD1SS133TA	DIODE	
Q519	2SB1185E	TRANSISTOR	△	D308	RVD1SS133TA	DIODE	
Q520	2SD592RTA	TRANSISTOR	△	D315	RVD1SS133TA	DIODE	
Q521	2SB621RTA	TRANSISTOR		D316	RVD1SS133TA	DIODE	
Q551	2SA564QTA	TRANSISTOR		D317	RVD1SS133TA	DIODE	
Q552	2SA564QTA	TRANSISTOR		D318	RVD1SS133TA	DIODE	
Q581	2SC2785FTA	TRANSISTOR		D319	RVD1SS133TA	DIODE	
Q582	2SC2785FTA	TRANSISTOR		D320	RVD1SS133TA	DIODE	
Q801	2SK301QTA	TRANSISTOR	[M]	D321	RVD1SS133TA	DIODE	
Q802	2SK301QTA	TRANSISTOR	[M]	D322	RVD1SS133TA	DIODE	
Q803	2SC1740SLNST	TRANSISTOR		D323	RVD1SS133TA	DIODE	
Q804	2SC1740SLNST	TRANSISTOR		D324	RVD1SS133TA	DIODE	
Q805	2SC2001KTA	TRANSISTOR		D451	RVDMTZ8R2CTA	DIODE	[M]
Q806	2SC2001KTA	TRANSISTOR		D453	RVDMTZ6R8BTA	DIODE	
Q807	2SC2001KTA	TRANSISTOR		D502	RVDMTZ6R8ATA	DIODE	[M]
Q808	2SC2001KTA	TRANSISTOR		D503	1SR35200TB	DIODE	△
Q810	RVTDTA114EST	TRANSISTOR		D504	1SR35200TB	DIODE	△
Q811	RVTDTA114EST	TRANSISTOR		D505	1SR35200TB	DIODE	△
Q812	RVTDTA124EST	TRANSISTOR	[M]	D506	1SR35200TB	DIODE	△

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
D507	RVDMTZ15CTA	DIODE	[M]	VR103	RVNCC24B1T-A	VR, PB GAIN ADJ (D2:L)	
D508	RVDMTZ15CTA	DIODE	[M]	VR104	RVNCC24B1T-A	VR, PB GAIN ADJ (D2:R)	
D509	RVD1SS133TA	DIODE		VR201	RVNCC73B1T-A	VR, TAPE SPEED ADJ. (D1)	
D510	1D3E	DIODE	[M] $\triangle$	VR202	RVNCC24B1T-A	VR, TAPE SPEED ADJ. (D2)	
D511	RL154M11	DIODE	[M] $\triangle$	VR203	RVNCC14B1T-A	VR, TAPE SPEED ADJ. (D2)	
D512	RL154M11	DIODE	[M] $\triangle$	VR651	EWAJQAW05G54	VR, G.EQ (10KHz)	[M]
D513	RL154M11	DIODE	[M] $\triangle$	VR652	EWAJQAW05G54	VR, G.EQ (3.3KHz)	[M]
D514	RL154M11	DIODE	[M] $\triangle$	VR653	EWAJQAW05G54	VR, G.EQ (1KHz)	[M]
D515	RVD1SS133TA	DIODE		VR654	EWAJQAW05G54	VR, G.EQ (330Hz)	[M]
D517	1SR35200TB	DIODE	$\triangle$	VR655	EWAJQAW05G54	VR, G.EQ (100Hz)	[M]
D518	MA4300MHTA	DIODE		VR901	EVQWPJF1524B	VR, AI JOG	[M]
D519	RVDMTZ12CTA	DIODE		VR902	EVQWQAF1524B	VR, MAIN	[M]
D520	RVDMTZ15CTA	DIODE	[M]				
D521	RVD1SS133TA	DIODE	$\triangle$			COMPONENT COMBINATION	
D522	RVD1SS133TA	DIODE	$\triangle$				
D523	RVDMTZ5R1CTA	DIODE		Z1	ENV17283G1	TUNER PACK	[M] (EG)
D524	RVD1SS133TA	DIODE	$\triangle$	Z2	RLA6Z002-T	COMPONENT COMBINATION	
D525	RVD1SS133TA	DIODE		Z3	RLI2Z003-T	COMPONENT COMBINATION	[M]
D526	RVD1SS133TA	DIODE		Z101	EXBF6L306SYV	COMPONENT COMBINATION	
D821	RVD1SS133TA	DIODE		Z102	EXBF6L306SYV	COMPONENT COMBINATION	
D822	RVD1SS133TA	DIODE		Z103	EXBF6L306SYV	COMPONENT COMBINATION	
D901	1SS291TA	DIODE		Z901	RCDHC-278	INFRARED SENSOR	
D902	RVD1SS133TA	DIODE					
D903	RVD1SS133TA	DIODE				COILS & TRANSFORMERS	
D904	RVD1SS133TA	DIODE					
D905	RVD1SS133TA	DIODE		L1	RLQZP1R2KT-Y	COIL	(EG)
D906	RVD1SS133TA	DIODE		L2	ELEPKR22MA	COIL	
D907	RVD1SS133TA	DIODE		L2T	RLQZP1R2KT-Y	COIL, RF CHOKE	(E/EB/GN)
D908	RVD1SS133TA	DIODE		L3	ELEPKR22MA	COIL	
D909	RVD1SS133TA	DIODE		L4	RLQZPR82KT-Y	COIL, RF CHOKE	
D910	RVD1SS133TA	DIODE		L4T	RLQZP1R2KT-Y	COIL, RF CHOKE	(E/EB/GN)
D911	RVD1SS133TA	DIODE		L5	RLQZP1R2KT-Y	COIL, RF CHOKE	
D913	RVD1SS133TA	DIODE		L6	SLM1B10-1M	COIL, AB FILTER	
D914	RVD1SS133TA	DIODE		L7	RLM2B003-K	COIL, MPX FILTER	
D915	RVD1SS133TA	DIODE		L8	RLM2B003-K	COIL, MPX FILTER	
D916	RVD1SS133TA	DIODE		L101	RLE9B001-1M	COIL, TRAP	[M]
D917	RVD1SS133TA	DIODE		L102	RLE9B001-1M	COIL, TRAP	[M]
D951	RVD1SS133TA	DIODE		L103	RLE2B001-1M	COIL, TRAP	[M]
D952	RVD1SS133TA	DIODE		L104	RLE2B001-1M	COIL, TRAP	[M]
D953	RVDMTZ4R7BTA	DIODE		L201	RL08C002-T	COIL, BIAS OSC	
D954	RVD1SS133TA	DIODE		L202	RLQZB470KT-D	COIL, RF CHOKE	
D971	RVD1SS133TA	DIODE		L301	RLQZB470KT-D	COIL	[M]
				L501	SLQY07G-40	COIL	
		VARIABLE RESISTORS		L502	SLQY07G-40	COIL	
				L503	RLQZ600-W	COIL, AC LINE FILTER	[M] $\triangle$
VR1	EVNDXAA00B53	VR, FM MPX VCO ADJ.		L901	RLQZP3R3KT-Y	COIL, RF CHOKE	
VR101	RVNCC24B1T-A	VR, PB GAIN ADJ (DECK1:L)		L902	RLQZP2R2KT-Y	COIL, RF CHOKE	
VR102	RVNCC24B1T-A	VR, PB GAIN ADJ (DECK1:R)		L903	RLQZP2R2KT-Y	COIL, RF CHOKE	

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
L904	RLQZP2R2KT-Y	COIL, RF CHOKE		S612	EVQ21405R	SW, FM MODE	
L905	RLQZP2R2KT-Y	COIL, RF CHOKE		S613	EVQ21405R	SW, BAND	
L951	RLQZP101KT-Y	COIL, RF CHOKE		S614	EVQ21405R	SW, TUNING	
L952	RLQZP101KT-Y	COIL, RF CHOKE		S615	EVQ21405R	SW, CD EDIT	
L953	RLQZP101KT-Y	COIL, RF CHOKE		S616	EVQ21405R	SW, DISPLAY	
T1	RLI4B002-Z	COIL, FM DET		S617	EVQ21405R	SW, CLOCK/TIMER	
T2	RLI4B003-Z	COIL, FM DET		S618	EVQ21405R	SW, SLEEP	
T501	RTP1M3B004-V	POWER TRANSFORMER	[M] Δ	S621	EVQ21405R	SW, REV. MODE	
				S622	EVQ21405R	SW, RESET	
		CERAMIC FILTER		S623	EVQ21405R	SW, DOLBY	
				S624	EVQ21405R	SW, REC	
CF1	RLFFETNGA01L	FM CF		S625	EVQ21405R	SW, NOR. EDIT	
CF2	RLFFETNGA02L	FM CF		S626	EVQ21405R	SW, HS. EDIT	
				S627	EVQ21405R	SW, STOP	
		CRYSTAL RESONATORS		S628	EVQ21405R	SW, REW	
				S629	EVQ21405R	SW, REV. PLAY	
X1	SVQ49U722T-S	CRYSTAL 7.2MHZ		S630	EVQ21405R	SW, FWD. PLAY	
X901	RSXZ4M19M01T	CERAMIC RESONATOR	[M]	S631	EVQ21405R	SW, FF	
X902	RSXD32K7S02	CRYSTAL	[M]	S632	EVQ21405R	SW, DECK 1/2	
X951	RSXY6M00M01T	CRYSTAL 6MHZ	[M]	S633	EVQ21405R	SW, STOP(CD)	
				S634	EVQ21405R	SW, PLAY(CD)	
		FUSES		S635	EVQ21405R	SW, PAUSE(CD)	
				S636	EVQ21405R	SW, FWD. SKIP(CD)	
F1	XBA2C08TB0	FUSE	Δ	S637	EVQ21405R	SW, REV. SKIP(CD)	
				S638	EVQ21405R	SW, OPEN/CLOSE(CD)	
		FUSE CLIPS		S951	RSH1A89ZB-U	SW, MODE (DECK1)	
				S952	RSH1A90YB-U	SW, HALF (DECK1)	
FC1	EYF52BC	FUSE CLIP		S953	RSH1A90YB-U	SW, ATS (DECK1)	
FC2	EYF52BC	FUSE CLIP		S971	RSH1A89ZB-U	SW, MODE (DECK2)	
				S972	RSH1A90YB-U	SW, HALF (DECK2)	
		DISPLAY TUBE		S973	RSH1A90YB-U	SW, R. REC INHL (DECK2)	
				S974	RSH1A90YB-U	SW, F.REC INHL (DECK2)	
FL951	RSL0117-F	MAIN FL	[M]	S975	RSH1A90YB-U	SW, ATS (DECK2)	
FL952	RSL0118-F	G.EQ FL	[M]	S976	RSH1A90YB-U	SW, ATS (DECK2)	
		SWITCHES				JACKS	
S601	EVQ21405R	SW, TUNER		JK1	RJH5301	JACK, ANT TERMINAL	[M] (GN)
S602	EVQ21405R	SW, CD		JK1	RJH8201	JACK, ANT TERMINAL	[M](E/EB/EG)
S603	EVQ21405R	SW, AUX		JK2	SJS208	JACK, LOOP ANT TERMINAL	
S604	EVQ21405R	SW, TAPE		JK301	SJF3068N	JACK, RCA TERMINAL	
S605	EVQ21405R	SW, S.BASS		JK501	SJF5406-1	JACK, SP TERMINAL	[M]
S606	EVQ21405R	SW, POWER		JK503	SJS9236	JACK, AC INLET	Δ (E/EB/EG)
S607	EVQ21405R	SW, PLAY TIMER		JK503	SJSD16	JACK, AC INLET	Δ (GN)
S608	EVQ21405R	SW, REC TIMER		JK521	RJJD7S2YA-C	JACK, HP	
S609	EVQ21405R	SW, VOL. PRESET					
S610	EVQ21405R	SW, SET					
S611	EVQ21405R	SW, CANCEL					

- 80 -

RESISTORS & CAPACITORS

Notes : * Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
	RESISTORS							
R1T (E/B/GN)	ERDS2TJ104T	100K 1/4W	R29	ERDS2TJ122T	1.2K 1/4W	R103	ERDS2TJ123T	12K 1/4W
R1 (E/B/GN)	ERDS2TJ122T	1.2K 1/4W	R30	ERDS2TJ103T	10K 1/4W	R104	ERDS2TJ123T	12K 1/4W
R1 (EG)	ERDS2TJ272T	2.7K 1/4W	R31	ERDS2TJ562T	5.6K 1/4W	R105	ERDS2TJ181T	180 1/4W
R2T (E/B/GN)	ERDS2TJ104T	100K 1/4W	R32	ERDS2TJ561T	560 1/4W	R106	ERDS2TJ222T	2.2K 1/4W
R2	ERDS2TJ684T	680K 1/4W	R33	ERDS2TJ102T	1K 1/4W	R107	ERDS2TJ330T	33 1/4W
R3	ERDS2TJ122T	1.2K 1/4W	R37	ERDS2TJ151T	150 1/4W	R108	ERDS2TJ330T	33 1/4W
R3T (E/B/GN)	ERDS2TJ470T	47 1/4W	R38	ERDS2TJ103T	10K 1/4W	R109	ERDS2TJ392T	3.9K 1/4W
R4T (E/B/GN)	ERDS2TJ104T	100K 1/4W	R39	ERDS2TJ103T	10K 1/4W	R110	ERDS2TJ392T	3.9K 1/4W
R4	ERDS2TJ824T	820K 1/4W	R40	ERDS2TJ103T	10K 1/4W	R111	ERDS2TJ222T	2.2K 1/4W
R5	ERDS2TJ391T	390 1/4W	R41	ERDS2TJ103T	10K 1/4W	R112	ERDS2TJ222T	2.2K 1/4W
R5T (E/B/GN)	ERDS2TJ564T	560K 1/4W	R42	ERDS2TJ103T	10K 1/4W	R113	ERDS2TJ122T	1.2K 1/4W
R6T (E/B/GN)	ERDS2TJ391T	390 1/4W	R43	ERDS2TJ104T	100K 1/4W	R114	ERDS2TJ122T	1.2K 1/4W
R6	ERDS2TJ471T	470 1/4W	R44	ERDS2TJ103T	10K 1/4W	R115	ERDS2TJ225T	2.2M 1/4W
R7	ERDS2TJ103T	10K 1/4W	R45	ERDS2TJ473T	47K 1/4W	R116	ERDS2TJ225T	2.2M 1/4W
R7T (E/B/GN)	ERDS2TJ272T	2.7K 1/4W	R46	ERDS2TJ151T	150 1/4W	R117	ERDS2TJ105T	1M 1/4W
R8T (E/B/GN)	ERDS2TJ681T	680 1/4W	R47	ERDS2TJ103T	10K 1/4W	R118	ERDS2TJ105T	1M 1/4W
R8	ERDS2TJ684T	680K 1/4W	R48	ERDS2TJ333T	33K 1/4W	R121	ERDS2TJ154T	150K 1/4W
R9	ERDS2TJ103T	10K 1/4W	R49	ERDS2TJ223T	22K 1/4W	R122	ERDS2TJ154T	150K 1/4W
R9T (E/B/GN)	ERDS2TJ474T	470K 1/4W	R50	ERDS2TJ223T	22K 1/4W	R123	ERDS2TJ473T	47K 1/4W
R10	ERDS2TJ153T	15K 1/4W	R51	ERDS2TJ224T	220K 1/4W	R124	ERDS2TJ473T	47K 1/4W
R10T (E/B/GN)	ERDS2TJ224T	220K 1/4W	R52	ERDS2TJ473T	47K 1/4W	R125	ERDS2TJ472T	4.7K 1/4W
R11	ERDS2TJ331T	330 1/4W	R53	ERDS2TJ473T	47K 1/4W	R126	ERDS2TJ472T	4.7K 1/4W
R11T (E/B/GN)	ERDS2TJ391T	390 1/4W	R55 (EG)	ERDS2TJ102T	1K 1/4W	R127	ERDS2TJ332T	3.3K 1/4W
R12T (E/B/GN)	ERDS2TJ181T	180 1/4W	R56	ERDS2TJ272T	2.7K 1/4W	R128	ERDS2TJ332T	3.3K 1/4W
R12	ERDS2TJ332T	3.3K 1/4W	R57	ERDS2TJ272T	2.7K 1/4W	R129	ERDS2TJ103T	10K 1/4W
R13	ERDS2TJ102T	1K 1/4W	R58	ERDS2TJ562T	5.6K 1/4W	R130	ERDS2TJ103T	10K 1/4W
R14	ERDS2TJ822T	8.2K 1/4W	R59	ERDS2TJ562T	5.6K 1/4W	R131	ERDS2TJ823T	82K 1/4W
R15	ERDS2TJ222T	2.2K 1/4W	R60	ERDS2TJ102T	1K 1/4W	R132	ERDS2TJ335T	3.3M 1/4W
R16	ERDS2TJ561T	560 1/4W	R61	ERDS2TJ102T	1K 1/4W	R133	ERDS2TJ332T	3.3K 1/4W
R17	ERDS2TJ154T	150K 1/4W	R62	ERDS2TJ102T	1K 1/4W	R134	ERDS2TJ474T	470K 1/4W
R18	ERDS2TJ183T	18K 1/4W	R63	ERDS2TJ153T	15K 1/4W	R137	ERDS2TJ103T	10K 1/4W
R19	ERDS2TJ822T	8.2K 1/4W	R64	ERDS2TJ103T	10K 1/4W	R138	ERDS2TJ103T	10K 1/4W
R20	ERDS2TJ104T	100K 1/4W	R65	ERDS2TJ123T	12K 1/4W	R139	ERDS2TJ103T	10K 1/4W
R21	ERDS2TJ102T	1K 1/4W	R66	ERDS2TJ103T	10K 1/4W	R141	ERDS2TJ682T	6.8K 1/4W
R22	ERDS2TJ102T	1K 1/4W	R67	ERDS2TJ103T	10K 1/4W	R142	ERDS2TJ682T	6.8K 1/4W
R23	ERDS2TJ223T	22K 1/4W	R68	ERDS2TJ181T	180 1/4W	R143	ERDS2TJ222T	2.2K 1/4W
R24	ERDS2TJ103T	10K 1/4W	R71	ERDS2TJ104T	100K 1/4W	R144	ERDS2TJ222T	2.2K 1/4W
R25	ERDS2TJ182T	1.8K 1/4W	R72	ERDS2TJ824T	820K 1/4W	R145	ERDS2TJ103T	10K 1/4W
R26	ERDS2TJ152T	1.5K 1/4W	R73	ERDS2TJ472T	4.7K 1/4W	R146	ERDS2TJ103T	10K 1/4W
R27	ERDS2TJ103T	10K 1/4W	R74	ERDS2TJ822T	8.2K 1/4W	R149	ERDS2TJ272T	2.7K 1/4W
R28	ERDS2TJ122T	1.2K 1/4W	R75	ERDS2TJ562T	5.6K 1/4W	R150	ERDS2TJ272T	2.7K 1/4W
			R76 (EG)	ERDS2TJ121T	120 1/4W	R151	ERDS2TJ105T	1M 1/4W
			R101	ERDS2TJ334T	330K 1/4W	R152	ERDS2TJ105T	1M 1/4W
			R102	ERDS2TJ104T	100K 1/4W	R153	ERDS2TJ102T	1K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R154	ERDS2TJ102T	1K 1/4W	R222	ERDS2TJ473T	47K 1/4W	R341	ERDS2TJ103T	10K 1/4W
R155	ERDS2TJ221T	220 1/4W	R223	ERDS2TJ472T	4.7K 1/4W	R342	ERDS2TJ104T	100K 1/4W
R156	ERDS2TJ221T	220 1/4W	R224	ERDS2TJ103T	10K 1/4W	R343	ERDS2TJ103T	10K 1/4W
R158	ERDS2TJ221T	220 1/4W	R225	ERDS2TJ2R7T	2.7 1/4W	R344	ERDS2TJ472T	4.7K 1/4W
R159	ERDS2TJ222T	2.2K 1/4W	R226	ERDS2TJ102T	1K 1/4W	R359	ERDS2TJ122T	1.2K 1/4W
R160	ERDS2TJ222T	2.2K 1/4W	R227	ERDS2TJ102T	1K 1/4W	R360	ERDS2TJ122T	1.2K 1/4W
R161	ERDS2TJ472T	4.7K 1/4W	R228	ERDS2TJ472T	4.7K 1/4W	R364	ERDS2TJ183T	18K 1/4W
R162	ERDS2TJ472T	4.7K 1/4W	R229	ERDS2TJ103T	10K 1/4W	R371	ERDS2TJ102T	1K 1/4W
R163	ERDS2TJ433T	43K 1/4W	R230	ERDS2TJ472T	4.7K 1/4W	R372	ERDS2TJ102T	1K 1/4W
R169	ERDS2TJ102T	1K 1/4W	R231	ERDS2TJ472T	4.7K 1/4W	R373	ERDS2TJ103T	10K 1/4W
R170	ERDS2TJ102T	1K 1/4W	R232	ERDS2TJ102T	1K 1/4W	R374	ERDS2TJ103T	10K 1/4W
R172	ERDS2TJ331T	330 1/4W	R233	ERDS2TJ222T	2.2K 1/4W	R376	ERDS2TJ103T	10K 1/4W
R173	ERDS2TJ103T	10K 1/4W	R234	ERDS2TJ472T	4.7K 1/4W	R377	ERDS2TJ222T	2.2K 1/4W
R174	ERDS2TJ472T	4.7K 1/4W	R235	ERDS2TJ104T	100K 1/4W	R379	ERDS2TJ104T	100K 1/4W
R176	ERDS2TJ822T	8.2K 1/4W	R236	ERDS2TJ104T	100K 1/4W	R380	ERDS2TJ104T	100K 1/4W
R177	ERDS2TJ103T	10K 1/4W	R237	ERDS2TJ100T	10 1/4W	R381	ERDS2TJ392T	3.9K 1/4W
R178	ERDS2TJ1R2T	1.2 1/4W	R301	ERDS2TJ223T	22K 1/4W	R382	ERDS2TJ103T	10K 1/4W
R179	ERDS2TJ472T	4.7K 1/4W	R302	ERDS2TJ223T	22K 1/4W	R383	ERDS2TJ103T	10K 1/4W
R180	ERDS2TJ472T	4.7K 1/4W	R303	ERDS2TJ222T	2.2K 1/4W	R384	ERDS2TJ823T	82K 1/4W
R181	ERDS2TJ332T	3.3K 1/4W	R304	ERDS2TJ222T	2.2K 1/4W	R389	ERDS2TJ822T	8.2K 1/4W
R182	ERDS2TJ1R0T	1 1/4W	R305	ERDS2TJ222T	2.2K 1/4W	R390	ERDS2TJ272T	2.7K 1/4W
R183	ERDS2TJ104T	100K 1/4W	R306	ERDS2TJ222T	2.2K 1/4W	R391	ERDS2TJ332T	3.3K 1/4W
R184	ERDS2TJ104T	100K 1/4W	R308	ERDS2TJ334T	330K 1/4W	R392	ERDS2TJ103T	10K 1/4W
R185	ERDS2TJ104T	100K 1/4W	R309	ERDS2TJ222T	2.2K 1/4W	R393	ERDS2TJ103T	10K 1/4W
R186	ERDS2TJ102T	1K 1/4W	R311	ERDS2TJ152T	1.5K 1/4W	R394	ERDS2TJ103T	10K 1/4W
R188	ERDS2TJ102T	1K 1/4W	R312	ERDS2TJ121T	120 1/4W	R395	ERDS2TJ103T	10K 1/4W
R189	ERDS2TJ472T	4.7K 1/4W	R313	ERDS2TJ682T	6.8K 1/4W	R397	ERDS2TJ563T	56K 1/4W
R200	ERDS2TJ221T	220 1/4W	R314	ERDS2TJ682T	6.8K 1/4W	R398	ERDS2TJ563T	56K 1/4W
R201	ERDS2TJ2R7T	2.7 1/4W	R315	ERDS2TJ273T	27K 1/4W	R401	ERDS2TJ181T	180 1/4W
R202	ERDS2TJ562T	5.6K 1/4W	R316	ERDS2TJ273T	27K 1/4W	R402	ERDS2TJ181T	180 1/4W
R203	ERDS2TJ153T	15K 1/4W	R317	ERDS2TJ562T	5.6K 1/4W	R403	ERDS2TJ181T	180 1/4W
R204	ERDS2TJ123T	12K 1/4W	R318	ERDS2TJ562T	5.6K 1/4W	R404	ERDS2TJ181T	180 1/4W
R205	ERDS2TJ334T	330K 1/4W	R319	ERDS2TJ223T	22K 1/4W	R451	ERDS2TJ273T	27K 1/4W
R206	ERDS2TJ221T	220 1/4W	R320	ERDS2TJ223T	22K 1/4W	R452	ERDS2TJ273T	27K 1/4W
R207	ERDS2TJ2R7T	2.7 1/4W	R321 (E)BGN	ERDS2TJ222T	2.2K 1/4W	R453	ERDS2TJ102T	1K 1/4W
R208	ERDS2TJ123T	12K 1/4W	R321 (EG)	ERDS2TJ392T	3.9K 1/4W	R454	ERDS2TJ102T	1K 1/4W
R209	ERDS2TJ123T	12K 1/4W	R322 (E)BGN	ERDS2TJ222T	2.2K 1/4W	R455	ERDS2TJ222T	2.2K 1/4W
R210	ERDS2TJ272T	2.7K 1/4W	R322 (EG)	ERDS2TJ392T	3.9K 1/4W	R456	ERDS2TJ222T	2.2K 1/4W
R211	ERDS2TJ334T	330K 1/4W	R323	ERDS2TJ103T	10K 1/4W	R457	ERDS2TJ821T	820 1/4W
R212	ERDS2TJ123T	12K 1/4W	R324	ERDS2TJ103T	10K 1/4W	R458	ERDS2TJ821T	820 1/4W
R213	ERDS2TJ152T	1.5K 1/4W	R325	ERDS2TJ392T	3.9K 1/4W	R459	ERDS2TJ102T	1K 1/4W
R215	ERDS2TJ472T	4.7K 1/4W	R326	ERDS2TJ105T	1M 1/4W	R460	ERDS2TJ102T	1K 1/4W
R216	ERDS2TJ473T	47K 1/4W	R327	ERDS2TJ153T	15K 1/4W	R461	ERDS2TJ101T	100 1/4W
R217	ERDS2TJ473T	47K 1/4W	R328	ERDS2TJ153T	15K 1/4W	R462	ERDS2TJ472T	4.7K 1/4W
R218	ERDS2TJ473T	47K 1/4W	R329	ERDS2TJ154T	150K 1/4W	R463	ERDS2TJ104T	100K 1/4W
R219	ERDS2TJ103T	10K 1/4W	R330	ERDS2TJ154T	150K 1/4W	R464	ERDS2TJ104T	100K 1/4W
R220	ERDS2TJ472T	4.7K 1/4W	R339	ERDS2TJ332T	3.3K 1/4W	R465	ERDS2TJ104T	100K 1/4W
R221	ERDS2TJ2R7T	2.7 1/4W	R340	ERDS2TJ332T	3.3K 1/4W	R466	ERDS2TJ222T	2.2K 1/4W

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R467	ERDS2TJ222T	2.2K 1/4W	R548	ERX1SJR22E	0.22 1W	R607	ERDS2TJ272T	2.7K 1/4W
R468	ERDS2TJ222T	2.2K 1/4W	R549	ERDS2TJ473T	47K 1/4W	R608	ERDS2TJ472T	4.7K 1/4W
R469	ERDS2TJ152T	1.5K 1/4W	R550	ERDS2TJ473T	47K 1/4W	R611	ERDS2TJ103T	10K 1/4W
R470	ERG1SJ100E	10 1W	R551	ERDS2TJ104T	100K 1/4W	R612	ERDS2TJ102T	1K 1/4W
R501	ERDS2TJ102T	1K 1/4W	R552	ERDS2TJ104T	100K 1/4W	R613	ERDS2TJ102T	1K 1/4W
R502	ERDS2TJ102T	1K 1/4W	R553	ERDS2TJ223T	22K 1/4W	R614	ERDS2TJ122T	1.2K 1/4W
R503	ERDS2TJ682T	6.8K 1/4W	R554	ERDS2TJ223T	22K 1/4W	R615	ERDS2TJ182T	1.8K 1/4W
R504	ERDS2TJ682T	6.8K 1/4W	R555	ERDS2TJ223T	22K 1/4W	R616	ERDS2TJ222T	2.2K 1/4W
R505	ERDS2TJ683T	68K 1/4W	R556	ERDS2TJ223T	22K 1/4W	R617	ERDS2TJ272T	2.7K 1/4W
R506	ERDS2TJ683T	68K 1/4W	R557	ERDS2TJ103T	10K 1/4W	R618	ERDS2TJ472T	4.7K 1/4W
R507	ERDS2TJ683T	68K 1/4W	R558	ERDS2TJ103T	10K 1/4W	R619	ERDS2TJ682T	6.8K 1/4W
R508	ERDS2TJ683T	68K 1/4W	R559	ERDS2TJ223T	22K 1/4W	R620	ERDS2TJ103T	10K 1/4W
R509	ERD25FVJ470T	47 1/4W	R560	ERDS2TJ223T	22K 1/4W	R621	ERDS2TJ223T	22K 1/4W
R511	ERDS2TJ563T	56K 1/4W	R561	ERDS2TJ223T	22K 1/4W	R624	ERDS2TJ102T	1K 1/4W
R512	ERDS2TJ103T	10K 1/4W	R562	ERDS2TJ223T	22K 1/4W	R625	ERDS2TJ102T	1K 1/4W
R513	ERDS2TJ1R0T	1 1/4W	R563	ERDS2TJ393T	39K 1/4W	R626	ERDS2TJ122T	1.2K 1/4W
R514	ERDS1FVJ272T	2.7K 1/2W Δ	R564	ERDS2TJ393T	39K 1/4W	R627	ERDS2TJ182T	1.8K 1/4W
R515	ERDS1FVJ100T	10 1/2W Δ	R565	ERDS2TJ123T	12K 1/4W	R628	ERDS2TJ222T	2.2K 1/4W
R516	ERDS1FVJ100T	10 1/2W Δ	R566	ERDS2TJ123T	12K 1/4W	R630	ERDS2TJ103T	10K 1/4W
R517	ERDS2TJ100T	10 1/4W	R567	ERDS2TJ104T	100K 1/4W	R631	ERDS2TJ103T	10K 1/4W
R518	ERDS2TJ100T	10 1/4W	R568	ERDS2TJ104T	100K 1/4W	R632	ERDS2TJ102T	1K 1/4W
R519	ERDS2TJ334T	330K 1/4W	R569	ERDS2TJ101T	100 1/4W	R633	ERDS2TJ102T	1K 1/4W
R521	ERDS1FVJ221T	220 1/2W Δ	R570	ERDS2TJ101T	100 1/4W	R634	ERDS2TJ122T	1.2K 1/4W
R522	ERDS1FVJ271T	270 1/2W Δ	R571	ERDS2TJ103T	10K 1/4W	R635	ERDS2TJ182T	1.8K 1/4W
R523	ERDS2TJ272T	2.7K 1/4W	R572	ERDS2TJ103T	10K 1/4W	R636	ERDS2TJ222T	2.2K 1/4W
R524	ERD2FCG390	39 1/4W Δ	R573	ERDS2TJ103T	10K 1/4W	R637	ERDS2TJ272T	2.7K 1/4W
R525	ERDS1FVJ100T	10 1/2W Δ	R574	ERDS2TJ471T	470 1/4W	R638	ERDS2TJ472T	4.7K 1/4W
R526	ERDS2TJ151T	150 1/4W	R575	ERDS2TJ152T	1.5K 1/4W	R639	ERDS2TJ682T	6.8K 1/4W
R527	ERDS1FVJ182T	1.8K 1/2W Δ	R576	ERD2FCJ4R7P	4.7 1/4W Δ	R640	ERDS2TJ103T	10K 1/4W
R528	ERD2FCG390	39 1/4W Δ	R578	ERDS1FVJ470T	47 1/2W Δ	R641	ERDS2TJ223T	22K 1/4W
R529	ERDS2TJ151T	150 1/4W	R579	ERDS1FVJ470T	47 1/2W Δ	R642	ERDS2TJ683T	68K 1/4W
R530	ERDS1FVJ152T	1.5K 1/2W Δ	R580	ERDS2TJ223T	22K 1/4W	R643	ERDS2TJ104T	100K 1/4W
R531	ERDS2TJ102T	1K 1/4W	R581	ERDS2TJ823T	82K 1/4W	R645	ERDS2TJ102T	1K 1/4W
R532	ERDS2TJ153T	15K 1/4W	R582	ERDS2TJ124T	120K 1/4W	R646	ERDS2TJ102T	1K 1/4W
R533	ERDS2TJ183T	18K 1/4W	R583	ERDS2TJ563T	56K 1/4W	R647	ERDS2TJ102T	1K 1/4W
R534	ERDS2TJ562T	5.6K 1/4W	R586	ERDS2TJ103T	10K 1/4W Δ	R651	ERDS2TJ472T	4.7K 1/4W
R535	ERDS1FVJ121T	120 1/2W Δ	R587	ERDS1FVJ121T	120 1/2W Δ	R652	ERDS2TJ472T	4.7K 1/4W
R536	ERDS1FVJ101T	100 1/2W Δ	R588	ERDS1FVJ4R7T	4.7 1/2W Δ	R653	ERDS2TJ103T	10K 1/4W
R537	ERDS2TJ103T	10K 1/4W	R589	ERDS1FVJ4R7T	4.7 1/2W Δ	R654	ERDS2TJ103T	10K 1/4W
R538	ERDS2TJ103T	10K 1/4W	R590	ERDS1FVJ4R7T	4.7 1/2W Δ	R655	ERDS2TJ682T	6.8K 1/4W
R539	ERDS2TJ472T	4.7K 1/4W	R591	ERDS1FVJ4R7T	4.7 1/2W Δ	R656	ERDS2TJ682T	6.8K 1/4W
R540	ERDS2TJ472T	4.7K 1/4W	R597	ERX12SJR27E	0.27 1/2W Δ (M)	R657	ERDS2TJ123T	12K 1/4W
R542	ERDS2TJ152T	1.5K 1/4W	R601	ERDS2TJ103T	10K 1/4W	R658	ERDS2TJ123T	12K 1/4W
R543	ERDS2TJ472T	4.7K 1/4W	R602	ERDS2TJ102T	1K 1/4W	R659	ERDS2TJ181T	180 1/4W
R544	ERDS2TJ1R0T	1 1/4W Δ	R603	ERDS2TJ102T	1K 1/4W	R660	ERDS2TJ181T	180 1/4W
R545	ERX1SJR22E	0.22 1W	R604	ERDS2TJ122T	1.2K 1/4W	R681	ERDS2TJ271T	270 1/4W
R546	ERX1SJR22E	0.22 1W	R605	ERDS2TJ182T	1.8K 1/4W	R682	ERDS2TJ271T	270 1/4W
R547	ERX1SJR22E	0.22 1W	R606	ERDS2TJ222T	2.2K 1/4W	R699	ERDS2TJ104T	100K 1/4W

[illegible]

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R801	ERDS2TJ102T	1K 1/4W	R911	ERDS2TJ472T	4.7K 1/4W	R960	ERDS2TJ104T	100K 1/4W
R802	ERDS2TJ102T	1K 1/4W	R912	ERDS2TJ472T	4.7K 1/4W	R961	ERDS2TJ2R7T	2.7 1/4W
R803	ERDS2TJ472T	4.7K 1/4W	R913	ERDS2TJ472T	4.7K 1/4W	R962	ERDS2TJ101T	100 1/4W
R804	ERDS2TJ472T	4.7K 1/4W	R914	ERDS2TJ472T	4.7K 1/4W	R963	ERDS2TJ101T	100 1/4W
R805	ERDS2TJ103T	10K 1/4W	R915	ERDS2TJ224T	220K 1/4W	R964	ERDS2TJ104T	100K 1/4W
R806	ERDS2TJ103T	10K 1/4W	R916	ERDS2TJ104T	100K 1/4W	R965	ERDS2TJ104T	100K 1/4W
R807	ERDS2TJ153T	15K 1/4W	R917	ERDS2TJ104T	100K 1/4W	R966	ERDS2TJ104T	100K 1/4W
R808	ERDS2TJ153T	15K 1/4W	R918	ERDS2TJ103T	10K 1/4W	R967	ERDS2TJ104T	100K 1/4W
R809	ERDS2TJ104T	100K 1/4W	R919	ERDS2TJ103T	10K 1/4W	R968	ERDS2TJ104T	100K 1/4W
R810	ERDS2TJ104T	100K 1/4W	R920	ERDS2TJ472T	4.7K 1/4W	R969	ERDS2TJ104T	100K 1/4W
R815	ERDS2TJ182T	1.8K 1/4W	R921	ERDS2TJ103T	10K 1/4W	R970	ERDS2TJ104T	100K 1/4W
R816	ERDS2TJ182T	1.8K 1/4W	R922	ERDS2TJ682T	6.8K 1/4W	R971	ERDS2TJ104T	100K 1/4W
R817	ERDS2TJ683T	68K 1/4W	R923	ERDS2TJ103T	10K 1/4W	R972	ERDS2TJ104T	100K 1/4W
R818	ERDS2TJ683T	68K 1/4W	R924	ERDS2TJ2R7T	2.7 1/4W	R973	ERDS2TJ104T	100K 1/4W
R819	ERDS2TJ682T	6.8K 1/4W	R925	ERDS2TJ225T	2.2M 1/4W	R974	ERDS2TJ104T	100K 1/4W
R820	ERDS2TJ682T	6.8K 1/4W	R926	ERDS2TJ474T	470K 1/4W	R975	ERDS2TJ104T	100K 1/4W
R821	ERDS2TJ105T	1M 1/4W	R927	ERDS2TJ474T	470K 1/4W	R976	ERDS2TJ104T	100K 1/4W
R823	ERDS2TJ474T	470K 1/4W	R928	ERDS2TJ103T	10K 1/4W	R977	ERDS2TJ104T	100K 1/4W
R824	ERDS2TJ102T	1K 1/4W	R929	ERDS2TJ474T	470K 1/4W	R979	ERDS2TJ104T	100K 1/4W
R825	ERDS2TJ472T	4.7K 1/4W	R930	ERDS2TJ474T	470K 1/4W	R980	ERDS2TJ104T	100K 1/4W
R826	ERDS2TJ472T	4.7K 1/4W	R931	ERDS2TJ103T	10K 1/4W	R981	ERDS2TJ104T	100K 1/4W
R827	ERDS2TJ182T	1.8K 1/4W	R932	ERDS2TJ103T	10K 1/4W	R982	ERDS2TJ104T	100K 1/4W
R828	ERDS2TJ182T	1.8K 1/4W	R933	ERDS2TJ472T	4.7K 1/4W	R983	ERDS2TJ104T	100K 1/4W
R829	ERDS2TJ473T	47K 1/4W	R934	ERDS2TJ152T	1.5K 1/4W	R984	ERDS2TJ104T	100K 1/4W
R830	ERDS2TJ473T	47K 1/4W	R935	ERDS2TJ152T	1.5K 1/4W	R985	ERDS2TJ104T	100K 1/4W
R831	ERDS2TJ102T	1K 1/4W	R936	ERDS2TJ152T	1.5K 1/4W	R986	ERDS2TJ474T	470K 1/4W
R832	ERDS2TJ102T	1K 1/4W	R937	ERDS2TJ152T	1.5K 1/4W	R987	ERDS2TJ474T	470K 1/4W
R833	ERDS2TJ332T	3.3K 1/4W	R938	ERDS2TJ152T	1.5K 1/4W	R988	ERDS2TJ183T	18K 1/4W
R835	ERDS2TJ222T	2.2K 1/4W	R939	ERDS2TJ152T	1.5K 1/4W	R989	ERDS2TJ274T	270K 1/4W
R836	ERDS2TJ222T	2.2K 1/4W	R940	ERDS2TJ102T	1K 1/4W	R990	ERDS2TJ154T	150K 1/4W
R837	ERDS2TJ105T	1M 1/4W	R941	ERDS2TJ103T	10K 1/4W	R991	ERDS2TJ472T	4.7K 1/4W
R838	ERDS2TJ334T	330K 1/4W	R942	ERDS2TJ104T	100K 1/4W	R992	ERDS2TJ103T	10K 1/4W
R840	ERDS2TJ472T	4.7K 1/4W	R943	ERDS2TJ102T	1K 1/4W	R993	ERDS2TJ223T	22K 1/4W
R841	ERDS2TJ152T	1.5K 1/4W	R944	ERDS2TJ102T	1K 1/4W	R994	ERDS2TJ223T	22K 1/4W
R842	ERDS2TJ473T	47K 1/4W	R945	ERDS2TJ102T	1K 1/4W	R995	ERDS2TJ102T	1K 1/4W
R843	ERDS2TJ223T	22K 1/4W	R946	ERDS2TJ2R7T	2.7 1/4W	R996	ERDS2TJ2R7T	2.7 1/4W
R844	ERDS2TJ223T	22K 1/4W	R947	ERDS2TJ102T	1K 1/4W	R997	ERDS2TJ104T	100K 1/4W
R900	ERDS2TJ103T	10K 1/4W	R948	ERDS2TJ104T	100K 1/4W	R998	ERDS2TJ104T	100K 1/4W
R901	ERDS2TJ331T	330 1/4W	R950	ERDS2TJ102T	1K 1/4W	R999	ERDS2TJ104T	100K 1/4W
R902	ERDS2TJ102T	1K 1/4W	R951	ERDS2TJ102T	1K 1/4W			
R903	ERDS2TJ334T	330K 1/4W	R952	ERDS2TJ105T	1M 1/4W		CAPACITORS	
R904	ERDS2TJ102T	1K 1/4W	R953	ERDS2TJ102T	1K 1/4W			
R905	ERDS2TJ473T	47K 1/4W	R954	ERDS2TJ822T	8.2K 1/4W	C1	ECBT1C103NS5	0.01 16V
R906	ERDS2TJ561T	560 1/4W	R955	ERDS2TJ224T	220K 1/4W	C1T(EBAGN)	ECBT1H100JC5	10P 50V
R907	ERDS2TJ104T	100K 1/4W	R956	ERDS2TJ103T	10K 1/4W	C2	ECBT1C103NS5	0.01 16V
R908	ERDS2TJ104T	100K 1/4W	R957	ERDS2TJ103T	10K 1/4W	C2T(EBAGN)	ECBT1H102KB5	0.001 50V
R909	ERDS2TJ472T	4.7K 1/4W	R958	ERDS2TJ104T	100K 1/4W	C3T(EBAGN)	ECBT1H102KB5	0.001 50V
R910	ERDS2TJ472T	4.7K 1/4W	R959	ERDS2TJ104T	100K 1/4W	C3	ECBT1H470J5	47P 50V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C4	ECBT1H102KB5	0.001 50V	C38	ECBT1H102KB5	0.001 50V	C128	ECBT1C332KR5	3300P 16V
C4T(B/BAGN)	ECBT1H3R3KC5	3.3P 50V	C39	ECEA0JU221B	220 6.3V	C129	ECBT1H151KB5	150P 50V
C5	ECBT1H150J5	15P 50V	C40	ECBT1H181KB5	180P 50V	C130	ECBT1H151KB5	150P 50V
C5T(B/BAGN)	ECBT1H2R7KC5	2.7P 50V	C41	ECBT1H102KB5	0.001 50V	C131	ECBT1H221KB5	220P 50V
C6	ECBT1C103NS5	0.01 16V	C42	ECBT1H102KB5	0.001 50V	C132	ECBT1H221KB5	220P 50V
C6T(B/BAGN)	ECBT1H3R3KC5	3.3P 50V	C43	ECEA1CU330B	33 16V	C133	ECEA1EU4R7B	4.7 25V
C7	ECEA1CU100B	10 16V	C50	ECEA1CU101B	100 16V	C134	ECEA1EU4R7B	4.7 25V
C7T(B/BAGN)	ECBT1H102KB5	0.001 50V	C52	ECBT1H102KB5	0.001 50V	C135	ECBT1H102KB5	0.001 50V
C8	ECBT1C103NS5	0.01 16V	C53	ECBT1H102KB5	0.001 50V	C136	ECBT1H102KB5	0.001 50V
C8T(B/BAGN)	ECBT1H120JC5	12P 50V	C54	ECEA1HU3R3B	3.3 50V	C137	ECFR1C183KR	0.018 16V
C9	ECEA0JU101B	100 6.3V	C55	ECEA1HU3R3B	3.3 50V	C138	ECFR1C183KR	0.018 16V
C9T(B/BAGN)	ECBT1H181KB5	180P 50V	C56	ECFR1C392JR	3900P 16V	C139	ECEA1HU2R2B	2.2 50V
C10	ECEA1CU100B	10 16V	C57	ECFR1C392JR	3900P 16V	C140	ECEA1CU100B	10 16V
C10T(B/BAGN)	ECBT1H102KB5	0.001 50V	C58	ECFR1C822JR	8200P 16V	C141	ECEA1HU0R1B	0.1 50V
C11	ECBT1H330J5	33P 50V	C59	ECFR1C822JR	8200P 16V	C142	ECFR1C223MR	0.022 16V
C11T(B/BAGN)	ECBT1H6R8KC5	6.8P 50V	C61	ECEA1HUR47	0.47 50V	C143	ECEA1HU010B	1 50V
C12	ECKR1H223ZF5	0.022 50V	C62	ECEA1HU010B	1 50V	C144	ECEA1HU010B	1 50V
C12T(B/BAGN)	ECBT1H102KB5	0.001 50V	C63	ECEA1HU3R3B	3.3 50V	C145	ECEA1CU100B	10 16V
C13	ECKR1H223ZF5	0.022 50V	C64	ECQP2A471JZT	470P 100V	C146	ECEA1CU100B	10 16V
C13T(B/BAGN)	ECBT1H3R3KC5	3.3P 50V	C65	ECEA1VU4R7B	4.7 35V	C150	ECEA1AU470B	47 10V
C14	ECBT1H100JC5	10P 50V	C66	ECQV1H473JZ3	0.047 50V	C151	ECEA1HU010B	1 50V
C14T(B/BAGN)	ECBT1H180JC5	18P 50V	C71	ECBT1H104ZF5	0.1 50V	C152	ECEA1HU010B	1 50V
C15	ECBT1C103NS5	0.01 16V	C101	ECBT1H102KB5	0.001 50V	C153	ECBT1H331KB5	330P 50V
C15T(B/BAGN)	ECBT1C103NS5	0.01 16V	C102	ECBT1H102KB5	0.001 50V	C154	ECBT1H331KB5	330P 50V
C16	ECEA1CU100B	10 16V	C103	ECBT1H681KB5	680P 50V	C155	ECEA1CU100B	10 16V
C16T(B/BAGN)	ECBT1C103NS5	0.01 16V	C104	ECFR1C223MR	0.022 16V	C156	ECEA1CU100B	10 16V
C17	ECEA1HU010B	1 50V	C105	ECBT1H471KB5	470P 50V	C157	ECBT1H681KB5	680P 50V
C17T(B/BAGN)	ECBT1H102KB5	0.001 50V	C106	ECBT1H471KB5	470P 50V	C158	ECBT1H681KB5	680P 50V
C18	ECBT1C103NS5	0.01 16V	C107	ECBT1H681KB5	680P 50V	C159	ECBT1C682KR5	6800P 16V
C18T(B/BAGN)	ECBT1H102KB5	0.001 50V	C108	ECEA1AU330B	33 10V	C160	ECBT1C682KR5	6800P 16V
C19	ECEA1CU100B	10 16V	C109	ECEA1AU101B	100 10V	C161	ECEA1CU101B	100 16V
C19T(B/BAGN)	ECBT1H102KB5	0.001 50V	C111	ECBT1H471KB5	470P 50V	C162	ECA0JM471B	470P 6.3V
C20	ECBT1H101KB5	100P 50V	C112	ECBT1H471KB5	470P 50V	C163	ECEA1HU010B	1 50V
C21	ECFR1C333MR	0.033 16V	C113	ECEA0JU221B	220 6.3V	C164	ECEA1HK010B	1 50V
C22	ECBT1C103NS5	0.01 16V	C114	ECEA0JU221B	220 6.3V	C165	ECEA1CK100B	10 16V
C23	ECBT0J223NS5	0.022 6.3V	C115	ECFR1C333JR	0.033 16V	C166	ECEA1CU100B	10 16V
C24	ECEA1CU100B	10 16V	C116	ECFR1C333JR	0.033 16V	C167	ECEA50ZR68B	0.68 50V
C25	ECBT1H471KB5	470P 50V	C117	ECEA1HK010B	1 50V	C168	ECEA50ZR68B	0.68 50V
C26	ECFR1C473KR	0.047 16V	C118	ECEA1HU010B	1 50V	C169	ECEA1EU4R7B	4.7 25V
C27	ECBT1H100JC5	10P 50V	C119	ECEA1EU4R7B	4.7 25V	C170	ECEA1EU4R7B	4.7 25V
C28	ECBT1C103NS5	0.01 16V	C120	ECEA1EU4R7B	4.7 25V	C171	ECEA0JKS470B	47 6.3V
C29	ECBT1C103NS5	0.01 16V	C121	ECEA1HU010B	1 50V	C173	ECBT1C103MS5	0.01 16V
C30	ECEA25M4R7RB	4.7 25V	C122	ECEA1HU010B	1 50V	C174	ECEA1EU4R7B	4.7 25V
C31	ECBT1C103NS5	0.01 16V	C123	ECBT1H102KB5	0.001 50V	C175	ECEA1CU101B	100 16V
C34	ECEA1CU330B	33 16V	C124	ECBT1H102KB5	0.001 50V	C176	ECQV1H473JZ3	0.047 50V
C35	ECBT1H150J5	15P 50V	C125	ECFR1C473MR	0.047 16V	C177	ECBT1H102KB5	0.001 50V
C36	ECBT1H150J5	15P 50V	C126	ECFR1C473MR	0.047 16V	C178	ECBT1H102KB5	0.001 50V
C37	ECBT1H102KB5	0.001 50V	C127	ECBT1C332KR5	3300P 16V	C179	ECBT1C103MS5	0.01 16V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C180	ECFR1C103MR	0.01 16V	C353	ECBT1H101KB5	100P 50V	C552	ECBT0J223MS5	0.022 6.3V
C181	ECBT1C103MS5	0.01 16V	C354	ECBT1H101KB5	100P 50V	C553	ECQV1H104JZ3	0.1 50V
C182	ECEA1EU4R7B	4.7 25V	C451	ECKR1H103ZF5	0.01 50V	C554	ECQV1H104JZ3	0.1 50V
C183	ECQV1H474JZ3	0.47 50V	C452	ECKR1H103ZF5	0.01 50V	C555	ECQV1H224JZ3	0.22 50V
C184	ECQP1152JZ	1500P 100V	C453	ECKR1H103ZF5	0.01 50V	C556	ECQV1H224JZ3	0.22 50V
C185	ECQP2A472JZ	4700P 100V	C454	ECEA1AU101B	100 10V	C557	ECEA1HU3R3B	3.3 50V
C186	ECEA1AU470B	47 10V	C501	ECFR1E104ZF5	0.1 25V	C558	ECEA1HU3R3B	3.3 50V
C187	ECBT1H101KB5	100P 50V	C503	ECBT1H102KB5	0.001 50V	C559	ECBT1C103MS5	0.01 16V
C188	ECBT1H101KB5	100P 50V	C504	ECBT1H102KB5	0.001 50V	C560	ECBT1C103MS5	0.01 16V
C189	ECQP1272JZ	2700P 100V	C505	ECBT1H102KB5	0.001 50V	C563	ECKR1H103ZF5	0.01 50V
C190	ECBT1C103MS5	0.01 16V	C506	ECBT1H102KB5	0.001 50V	C564	ECKR1H103ZF5	0.01 50V
C201	ECEA1CK101B	100 16V	C507	ECBT1H150JC5	15P 50V	C582	ECEA0JN101SB	100 6.3V
C202	ECBT1H104ZF5	0.1 50V	C508	ECBT1H150JC5	15P 50V	C601	ECBT1H561KB5	560P 50V
C278	ECBT1H331KB5	330P 50V	C509	ECEA1HU220B	22 50V	C602	ECBT1H561KB5	560P 50V
C279	ECBT1H331KB5	330P 50V	C510	ECEA2AU100B	10 100V	C603	ECBT1H561KB5	560P 50V
C302	ECFR1E104ZF5	0.1 25V	C511	ECKR1H223ZF5	0.022 50V	C604	ECBT1H561KB5	560P 50V
C303	ECFR1E104ZF5	0.1 25V	C512	ECKR1H223ZF5	0.022 50V	C651	ECEA1CU330B	33 16V
C304	ECEA1EU4R7B	4.7 25V	C513	ECEA1HU010B	1 50V	C652	ECEA1CU330B	33 16V
C305	ECEA1HU3R3B	3.3 50V	C514	ECEA1HU010B	1 50V	C653	ECBT1C682MR5	6800P 16V
C306	ECEA1HU3R3B	3.3 50V	C515	ECBT1E223ZF5	0.022 25V	C654	ECBT1C682MR5	6800P 16V
C307	ECEA1HU3R3B	3.3 50V	C520	ECEA1CU101B	100 16V	C655	ECBT1H471KBY	470P 50V
C308	ECEA1HU3R3B	3.3 50V	C521	ECEA1CU101B	100 16V	C656	ECBT1H471KBY	470P 50V
C309	ECEA1CU100B	10 16V	C522	ECEA0JU101B	100 6.3V	C657	ECFR1C223KR	0.022 16V
C310	ECEA0JU101B	100 6.3V	C523	ECEA0JU101B	100 6.3V	C658	ECFR1C223KR	0.022 16V
C312	ECFR1E104ZF5	0.1 25V	C524	ECEA1EU4R7B	4.7 25V	C659	ECBT1C152KR5	1500P 16V
C323	ECBT1H101KB5	100P 50V	C525	ECEA1EU4R7B	4.7 25V	C660	ECBT1C152KR5	1500P 16V
C324	ECBT1H101KB5	100P 50V	C526	ECEA1HU010B	1 50V	C661	ECFR1C683KR	0.068 16V
C327	ECBT1H102KB5	0.001 50V	C528	ECEA1AU101B	100 10V	C662	ECFR1C683KR	0.068 16V
C328	ECBT1H102KB5	0.001 50V	C529	ECKR1H103ZF5	0.01 50V	C663	ECBT1C472KR5	4700P 16V
C329	ECEA1HU010B	1 50V	C530	ECEA1HU222E	2200 50V 	C664	ECBT1C472KR5	4700P 16V
C330	ECKR1H103ZF5	0.01 50V	C531	ECKR1H103ZF5	0.01 50V 	C665	ECEA1HUR22B	0.22 50V
C331	ECBT1H151KB5	150P 50V	C532	ECKR1H103ZF5	0.01 50V 	C666	ECEA1HUR22B	0.22 50V
C332	ECBT1H151KB5	150P 50V	C533	ECKR1H103ZF5	0.01 50V 	C667	ECFR1C153KR	0.015 16V
C333	ECBT1H151KB5	150P 50V	C534	ECKR1H103ZF5	0.01 50V 	C668	ECFR1C153KR	0.015 16V
C334	ECKR1H472KB5	4700P 50V	C535	ECEA1CU101B	100 16V	C669	ECEA1HKR68B	0.68 50V
C335	ECKR1H472KB5	4700P 50V	C536	ECBT1E103ZF5	0.01 25V 	C670	ECEA1HKR68B	0.68 50V
C336	ECBT1H330J5	33P 50V	C537	ECEA1CU101B	100 16V	C671	ECFR1C473KR	0.047 16V
C337	ECBT1H330J5	33P 50V	C538	ECKR1H103ZF5	0.01 50V	C672	ECFR1C473KR	0.047 16V
C338	ECBT1H102KB5	0.001 50V	C539	ECKR1H103ZF5	0.01 50V	C673	ECEA1EU4R7B	4.7 25V
C341	ECEA1HU010B	1 50V	C540	ECEA1HU2R2B	2.2 50V	C674	ECEA1EU4R7B	4.7 25V
C342	ECEA1HU010B	1 50V	C541	ECEA1HU332UE	3300 50V 	C675	ECEA1CU100B	10 16V
C344	ECBT1H102KB5	0.001 50V	C542	ECEA1HU332UE	3300 50V 	C676	ECEA1CU100B	10 16V
C345	ECKR1H101KB5	100P 50V	C543	ECQE1224JZ	0.22 100V	C677	ECBT1H101KB5	100P 50V
C346	ECBT1H102KB5	0.001 50V	C544	ECBT1C103MS5	0.01 16V	C678	ECBT1H101KB5	100P 50V
C347	ECBT1H102KB5	0.001 50V	C547	ECEA1HU330B	33 50V	C679	ECBT1H101KB5	100P 50V
C348	ECFR1E104ZF5	0.1 25V	C548	ECKR1H103ZF5	0.01 50V	C680	ECBT1H101KB5	100P 50V
C349	ECFR1E104ZF5	0.1 25V	C549	ECEA1HU101B	100 50V 	C681	ECEA1CU100B	10 16V
C350	ECBT1H151KB5	150P 50V	C551	ECBT0J223MS5	0.022 6.3V	C682	ECEA1CU100B	10 16V

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C801	ECEA1HU3R3B	3.3 50V	C922	ECEA1HU010B	1 50V	R704	ERJ6GEYJ103V	10K 1/10W
C802	ECEA1HU3R3B	3.3 50V	C923	ECBT1C103MS5	0.01 16V	R706	ERJ6GEYJ473V	47K 1/10W
C803	ECKR1H103ZF5	0.01 50V	C924	ECBT1H102KB5	0.001 50V	R707	ERJ6GEYJ222V	2.2K 1/10W
C804	ECEA1CU220B	22 16V	C925	ECBT1H330J5	33P 50V	R708	ERJ6GEYJ683V	68K 1/10W
C805	ECEA1CU220B	22 16V	C926	ECEA1AU471B	470 10V	R709	ERJ6GEYJ122V	1.2K 1/10W
C806	ECEA1CU221B	220 16V	C927	ECBT1C103MS5	0.01 16V	R710	ERJ6GEYJ182V	1.8K 1/10W
C807	ECEA1HUR33B	0.33 50V	C928	ECBT1H102KB5	0.001 50V	R711	ERJ6GEYJ473V	47K 1/10W
C808	ECEA1HUR33B	0.33 50V	C929	ECEA1HU010B	1 50V	R712	ERJ6GEYJ471V	470 1/10W
C809	ECBT1H100JC5	10P 50V	C930	ECFR1C683MR	0.068 16V	R714	ERJ6GEYJ473V	47K 1/10W
C810	ECBT1H100JC5	10P 50V	C931	ECFR1C683MR	0.068 16V	R715	ERJ6GEYJ223V	22K 1/10W
C811	ECEA1HU3R3B	3.3 50V	C936	ECBT1H102KB5	0.001 50V	R716	ERJ6GEYJ104V	100K 1/10W
C812	ECEA1HU3R3B	3.3 50V	C937	ECBT1H102KB5	0.001 50V	R717	ERJ6GEYJ682V	6.8K 1/10W
C813	ECKR1H103ZF5	0.01 50V	C938	ECBT1H102KB5	0.001 50V	R718	ERJ6GEYJ223V	22K 1/10W
C814	ECKR1H103ZF5	0.01 50V	C939	ECBT1H102KB5	0.001 50V	R719	ERJ6GEYJ123V	12K 1/10W
C815	ECEA1HKKR68B	0.68 50V	C943	ECBT0J223NS5	0.022 6.3V	R720	ERJ6GEYJ.273V	27K 1/10W
C816	ECEA1HKKR68B	0.68 50V	C944	ECBT0J223NS5	0.022 6.3V	R721	ERJ6GEYJ823	82K 1/10W
C817	ECEA1HUR22B	0.22 50V	C945	ECBT1H102KB5	0.001 50V	R722	ERJ6GEYJ102V	1K 1/10W
C818	ECEA1HUR22B	0.22 50V	C946	ECEA1CU100B	10 16V	R723,724	ERJ6GEYJ104V	100K 1/10W
C819	ECEA1AU470B	47 10V	C951	ECEA1HKS3R3B	3.3 50V	R725	ERJ6GEYJ471V	470 1/10W
C820	ECEA1HU010B	1 50V	C952	ECEA1HKS3R3B	3.3 50V	R726	ERJ6GEYJ102V	1K 1/10W
C821	ECFR1C473MR	0.047 16V	C954	ECEA0JKS220	22 6.3V	R729,730	ERJ6GEYJ102V	1K 1/10W
C822	ECFR1C473MR	0.047 16V	C955	ECBT0J223NS5	0.022 6.3V	R731	ERJ8GEYJ470V	47 1/8W
C823	ECEA1HKKR68B	0.68 50V	C956	ECBT0J223NS5	0.022 6.3V	R732	ERJ6GEYJ562V	5.6K 1/10W
C824	ECEA1HKKR68B	0.68 50V	C957	ECEA1HKS3R3B	3.3 50V	R733	ERJ6GEYJ332V	3.3K 1/10W
C827	ECEA1HU010B	1 50V	C958	ECEA1HKS3R3B	3.3 50V	R734	ERJ6GEYJ562V	5.6K 1/10W
C829	ECBT1H102KB5	0.001 50V	C959	ECEA1HK010B	1 50V	R735	ERJ6GEYJ222V	2.2K 1/10W
C830	ECBT1H102KB5	0.001 50V	C960	ECBT1H104ZF5	0.1 50V	R736	ERJ6GEYJ682V	6.8K 1/10W
C901	ECBT1H102KB5	0.001 50V	C961	ECBT1C152KR5	1500P 16V	R737-739	ERJ6GEYJ562V	5.6K 1/10W
C902	EECS5R5H473	47K 5.5V [M]	C962	ECEA0JKS101B	100 6.3V	R741-743	ERJ6GEYJ102V	1K 1/10W
C903	ECEA0JU471B	470 6.3V	C963	ECEA0JKS220	22 6.3V	R744	ERJ6GEYJ393V	39K 1/10W
C904	ECBT1H102KB5	0.001 50V	C964	ECBT1C222MR5	2200P 16V	R745,746	ERJ6GEYJ102V	1K 1/10W
C905	ECEA0JU101B	100 6.3V	C965	ECBT1H151KB5	150P 50V	R747	ERJ6GEYJ473V	47K 1/10W
C906	ECBT1H680J5	68P 50V	C966	ECBT1H151KB5	150P 50V	R748	ERJ8GEYJ180V	18 1/8W
C907	ECBT1H680J5	68P 50V	C967	ECEA1EU4R7B	4.7 25V			
C908	ECBT1H101KB5	100P 50V	C968	ECBT1H331KB5	330P 50V		CAPACITORS	
C909	ECBT1H820KB5	82P 50V	C969	ECBT1H331KB5	330P 50V			
C910	ECBT1H102KB5	0.001 50V	C970	ECBT0J223NS5	0.022 6.3V	C701	ECEA0JKA220	22 6.3V
C911	ECBT1H102KB5	0.001 50V	C971	ECEA1EU4R7	4.7 25V	C702	ECEA0JKS470	47 6.3V
C912	ECBT1H180JC5	18P 50V	C972	ECEA1EU4R7	4.7 25V	C703	ECEA0JKS101I	100 6.3V
C913	ECBT1H220JC5	22P 50V	C973	ECBT1H104ZF5	0.1 50V	C709	ECUV1C224KBM	0.22 16V
C914	ECBT1H561KB5	560P 50V	C999	ECEA1CU471B	470 16V	C710	ECUV1C104MBM	0.1 16V
C915	ECBT1H561KB5	560P 50V				C711	ECUV1E103MBN	0.01 25V
C916	ECBT1H561KB5	560P 50V		<SERVO P.C.B.>		C713	ECEA1CSN4R7I	4.7 16V
C917	ECEA1HU010B	1 50V		RESISTORS		C714	ECEA1HKS010	1 50V
C918	ECBT1C103MS5	0.01 16V				C715	ECUV1H472KBN	4700P 50V
C919	ECEA1AU470B	47 10V	R701	ERJ6GEYJ100	10 1/10W	C716	ECUV1C473KBN	0.047 16V
C920	ECBT1C103MS5	0.01 16V	R702	ERJ6GEYJ471V	470 1/10W	C717	ECUV1H681KBN	680P 50V
C921	ECEA1AU220B	22 10V	R703	ERJ6GEYJ102V	1K 1/10W	C718	ECEA1AKS1011	100 10V

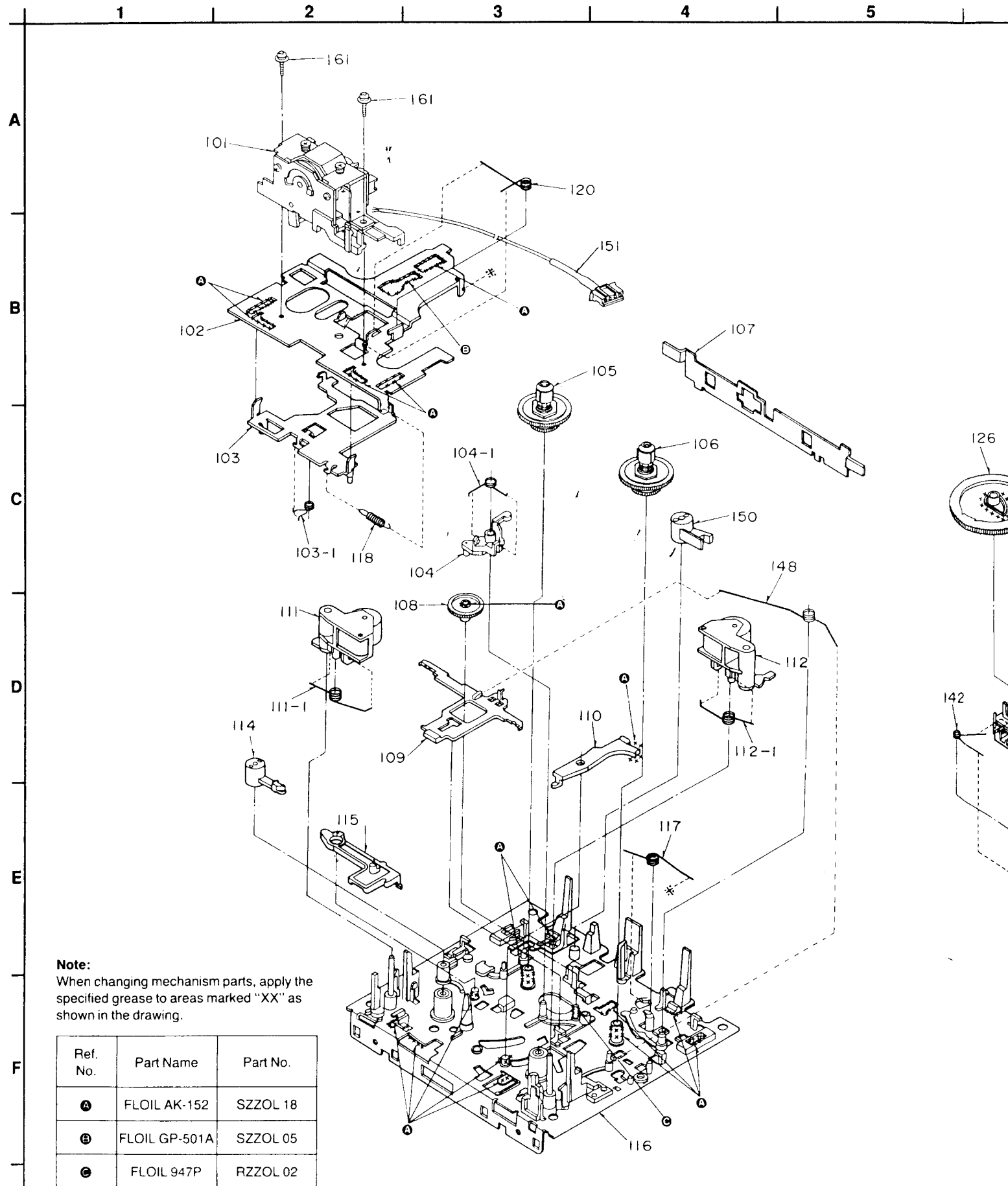
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C719	ECUV1E103MBN	0.01 25V	C732	ECUV1H102MBN	1000P 50V	C746	ECEA0JKS101I	100 6.3V
C720	ECUV1E153MBN	0.015 25V	C733	ECEA0JKS101I	100 6.3V	C747	ECUV1C104MBM	0.1 16V
C721	ECUV1E103MBN	0.01 25V	C734	ECUV1E223MBN	0.022 25V	C748	ECEA1HKS010	1 50V
C722	ECEA0JKS470	47 6.3V	C735	ECUV1C224KBM	0.22 16V	C749	ECUV1E103MBN	0.01 25V
C723	ECUV1C104MBM	0.1 16V	C737	ECUV1C224KBM	0.22 16V	C750	ECUV1H050DCN	5P 50V
C724	ECUV1E333MBN	0.033 25V	C738	ECEA0JKS101I	100 6.3V	C751	ECUV1C224KBM	0.22 16V
C725	ECUV1E103MBN	0.01 25V	C739	ECUV1E103MBN	0.01 25V	C752	ECUV1C104MBM	0.1 16V
C726	ECUV1H471KBN	470P 50V	C740	ECUV1H472MBN	4700P 50V	C753,754	ECEA1HKS010	1 50V
C727	ECEA0JKS470	47 6.3V	C741	ECUV1C224KBM	0.22 16V	C755	ECUV1C104MBM	0.1 16V
C728,729	ECUV1C104MBM	0.1 16V	C742	ECUV1C104MBM	0.1 16V	C756,757	ECUV1H050DCN	5P 50V
C730	ECUV1C224KBM	0.22 16V	C743	ECEA0JKS331I	330 6.3V	C758	ECUV1C224KBM	0.22 16V
C731	ECEA0JKS331I	330 6.3V	C744,745	ECUV1H102KBN	1000P 50V	C763	ECUV1E103MBN	0.01 25V

MECHANISM PARTS LOCATION

Notes : [M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS LIST		127-1	RNW139ZA	WASHER	
				128	IDW0038ZA	FLYWHEEL (R) ASSY	
		DECK 1		128-1	RNW138ZA	WASHER	
				129	IDG0006ZA	REEL TABLE GEAR	
101	RXQ0051-2	HEAD BLOCK (PLAYBACK)		130	RUB513ZD	ARM	
102	RUA793ZF	HEAD PANEL		131	IUB0091ZA	LEVER	
103	RUB501ZB	ROD		131-1	RUW146ZA	SPRING	
103-1	RUW143ZA	SPRING		132	IDR0011ZA	MAIN PULLEY	
104	IUB0089ZA	ARM		133	RDV90ZB	BELT	
104-1	RUW148ZA	SPRING		134	RDG5769ZA	REEL TABLE GEAR	
105	IDM0018ZA	REEL TABLE (R)		135	RUQ111ZB	SPRING	
106	IDM0017ZA	REEL TABLE (F)		136	RUW145ZA	SPRING	
107	RML0069-1	LEVER		137	IUB0090ZA	ROD	
108	RDG5772ZC	GEAR		137-1	RUB512ZB	FF ROD	
109	RUB508ZA	BRAKE ROD		138	RDG5773ZA	GEAR	
110	RUB506ZA	LEVER		139	RUQ112ZA	SPRING	
111	IUB0088ZA	ARM (R)		140	RUS609ZC	TAPE PRESSURE SPRING	
111-1	RUW141ZA	SPRING		141	RUB514ZC	LEVER	
112	IUB0087ZA	ARM (F)		142	RUW147ZA	SPRING	
112-1	RUW140ZA	SPRING		143	RUB515ZA	LEVER	
114	RNL1ZD	DAMPER ARM A		144	RUB509ZA	LEVER	
115	RUB503ZD	MAIN LEVER		145	RDV108ZA	CAPSTAN BELT	
116	RUA792XE	CHASSIS	[M]	148	RUW144ZA	SPRING	
117	RUW142ZA	SPRING		149	RHG3032ZA	RUBBER CUSHION	
118	RUD105ZA	SPRING		150	RNL180ZB	DAMPER ARM B	
120	RUW139ZA	SPRING		151	REX0450	LEAD WIRE BLOCK (4P)	[M]
121	RFM133ZA	DC MOTOR		161	XTW2+6L	SCREW	
122	IUE0015ZA	PLUNGER		163	XTN26+7J	SCREW	
123	RUB428ZE	MOVING IRON CORE		164	RHE5203ZA	SCREW	
124	RUL1030ZE	FW BRACKET	[M]	165	XTW2+8S	SCREW	
125	RMD5014ZC	FW SUPPORT BASE		166	XYC4+JF16	SCREW	
126	RDG5927ZG	GEAR		167	RHD26002	SCREW	
127	IDW0037ZA	FLYWHEEL (F) ASSY		168	RJS1017ZA	CONNECTOR (10P) , J971	

MECHANISM PARTS LOCATION • Deck 1



6

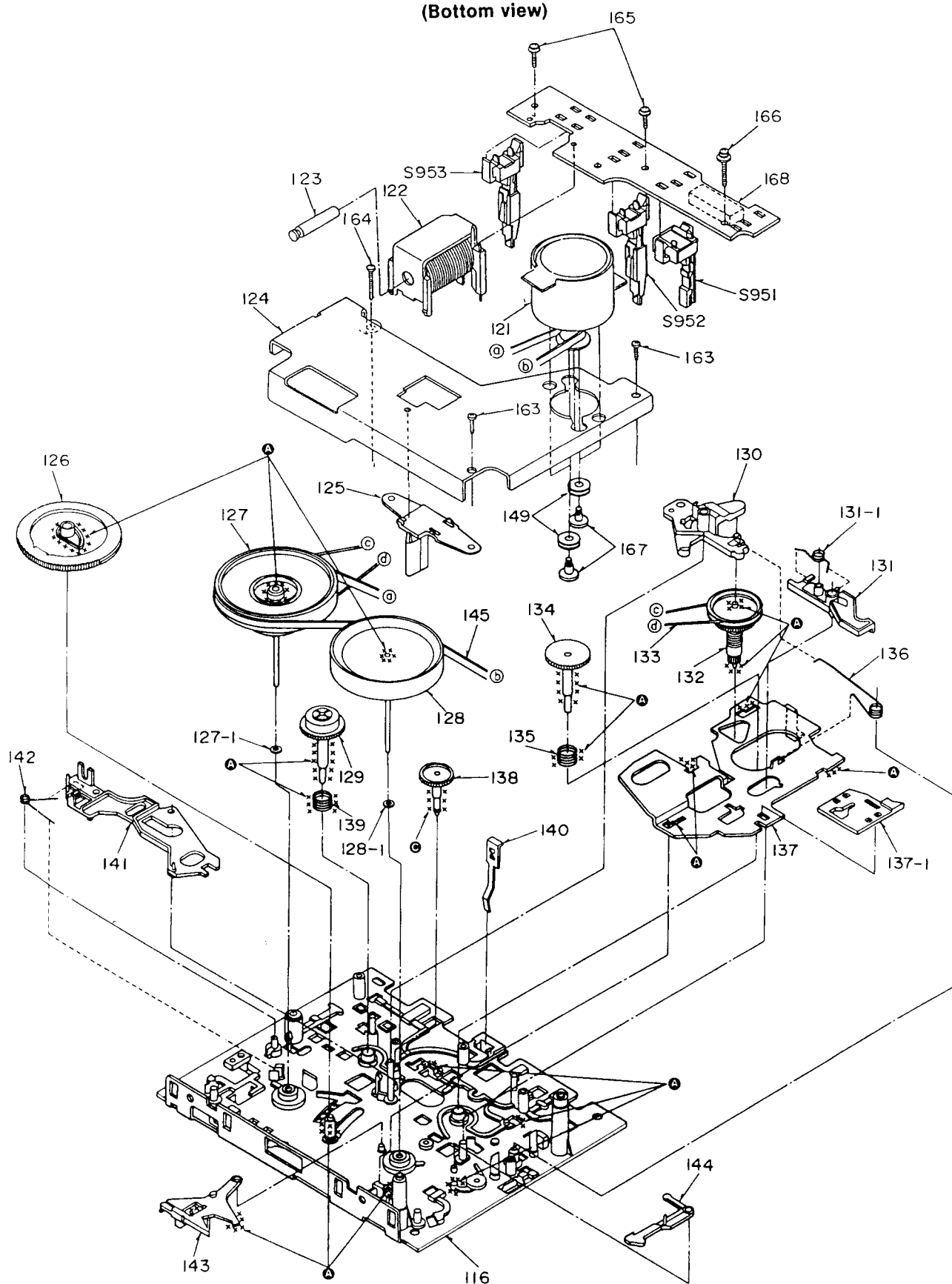
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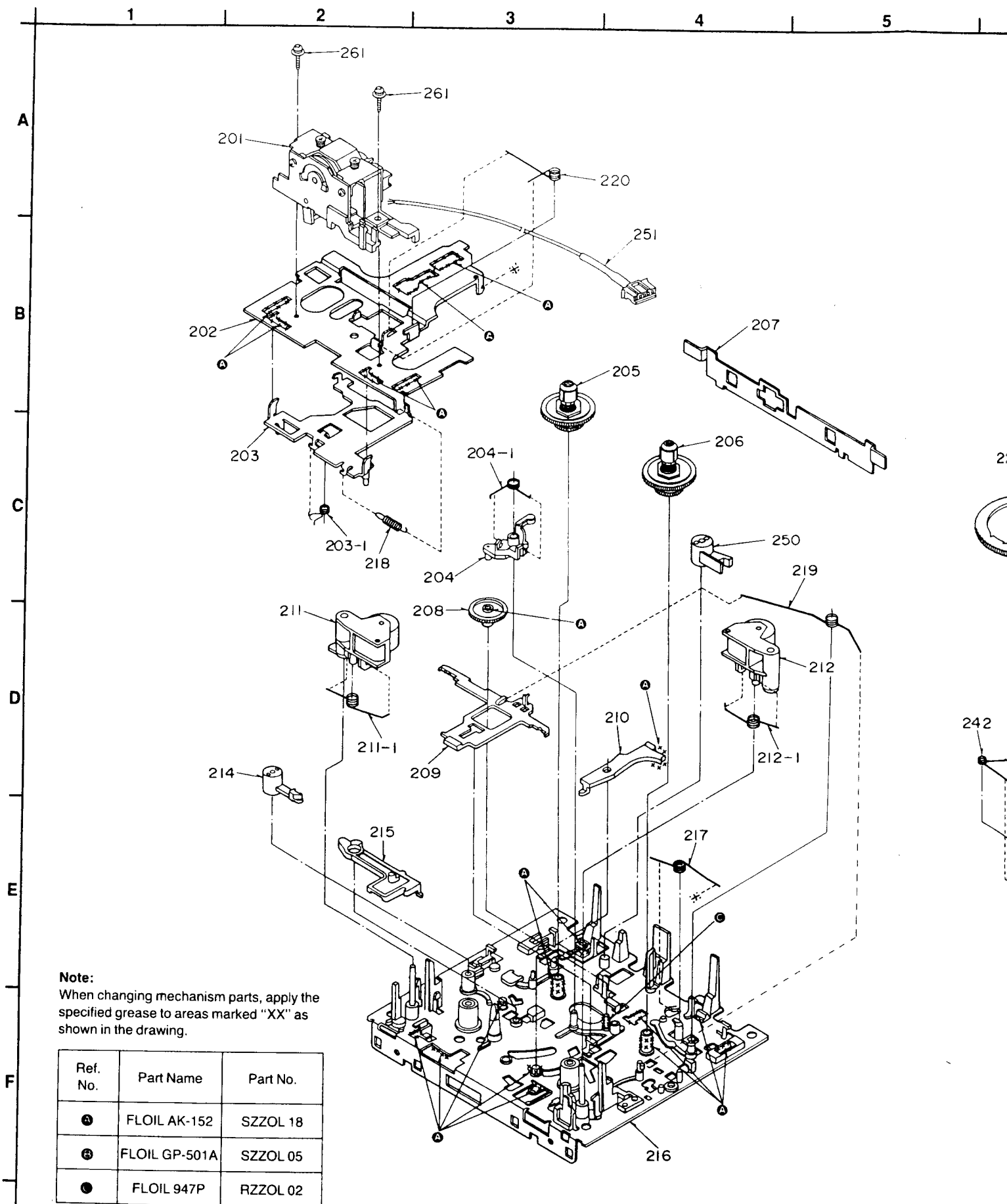
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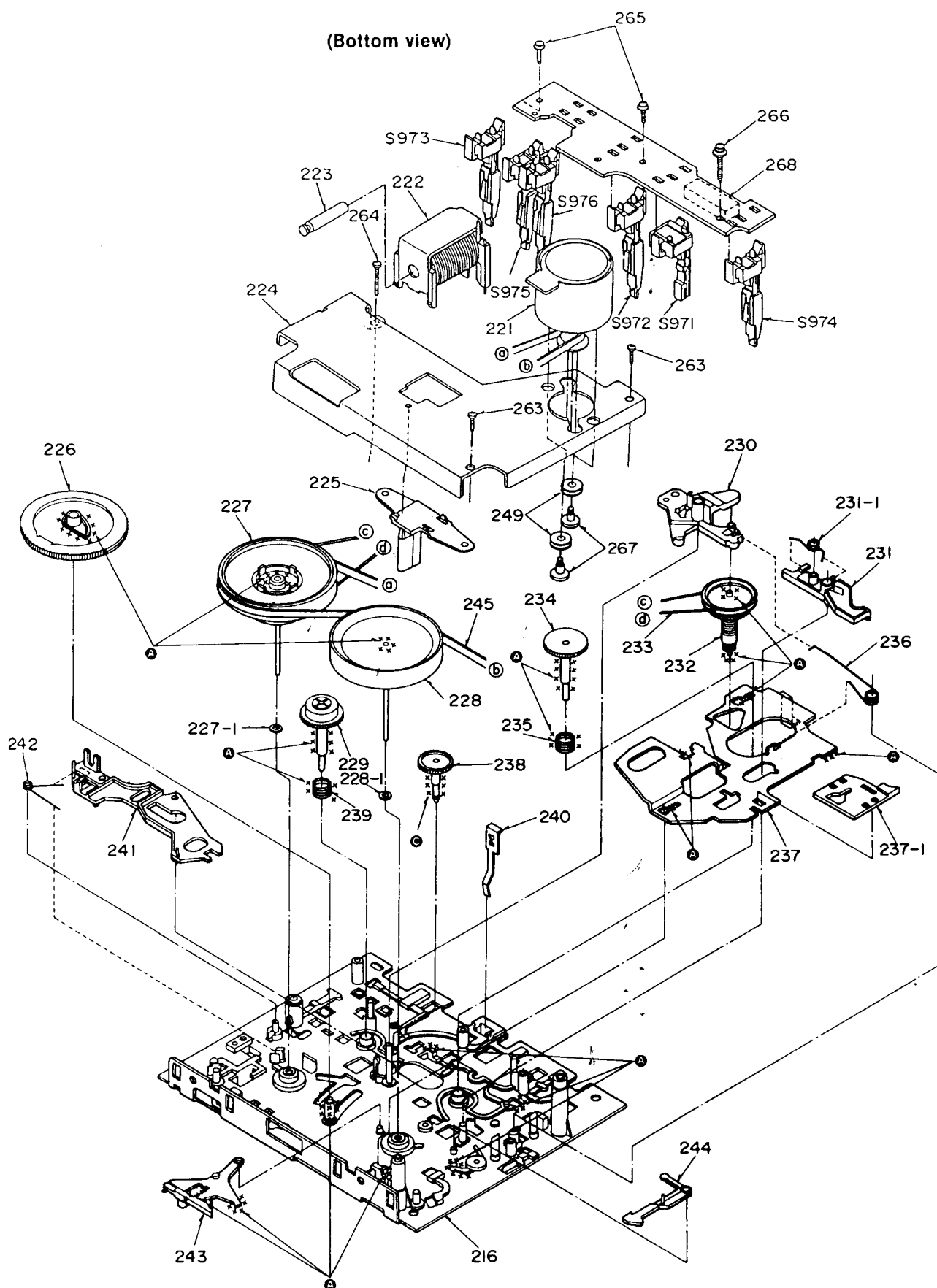
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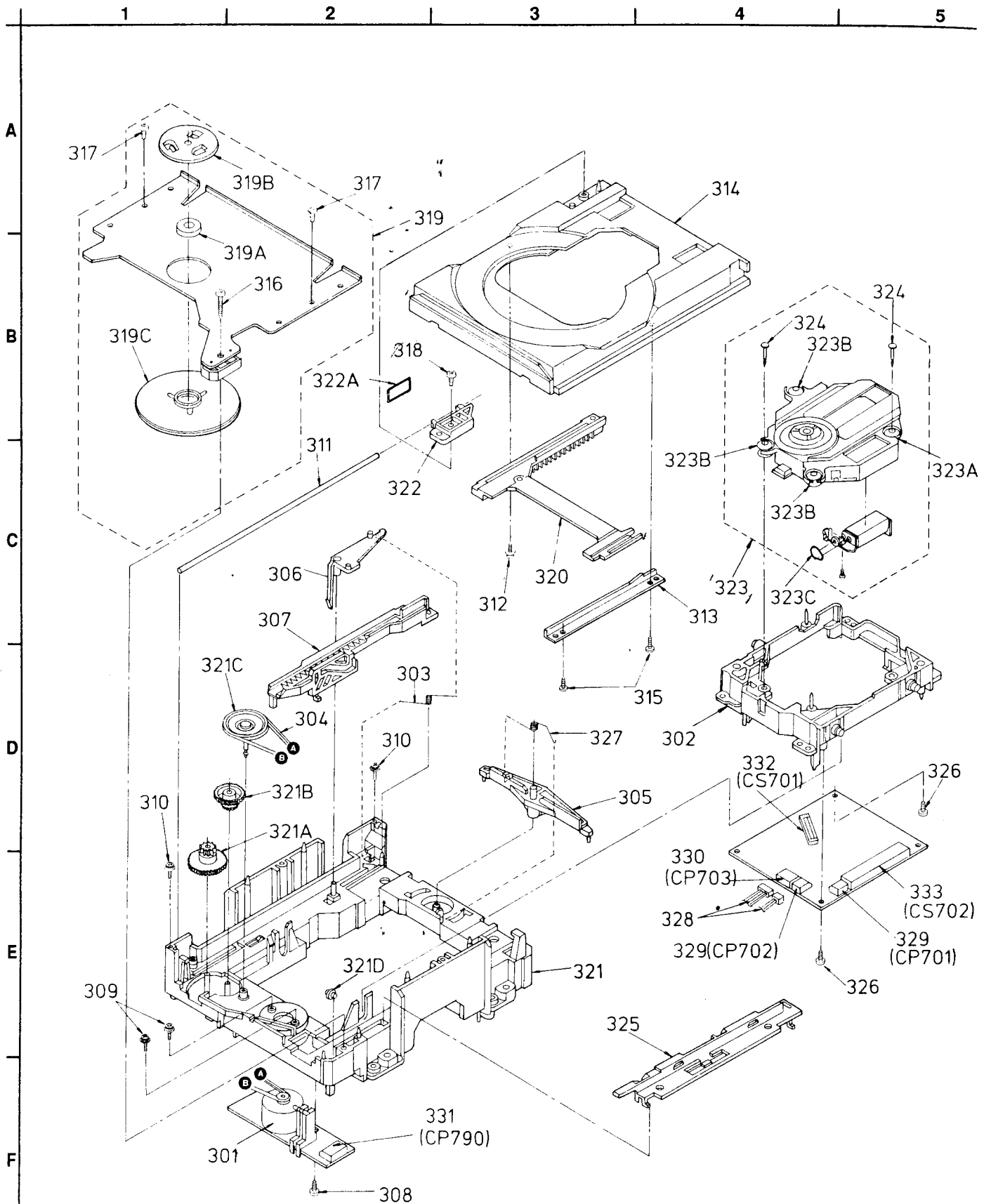
MECHANISM PARTS LOCATION

• Deck 2





TRAVERSE DECK LOCATION



REPLACEMENT PARTS LIST

Notes : * Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

- When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- The parenthesized indications in the Remarks columns specify the areas. (refer to the cover page for area.)

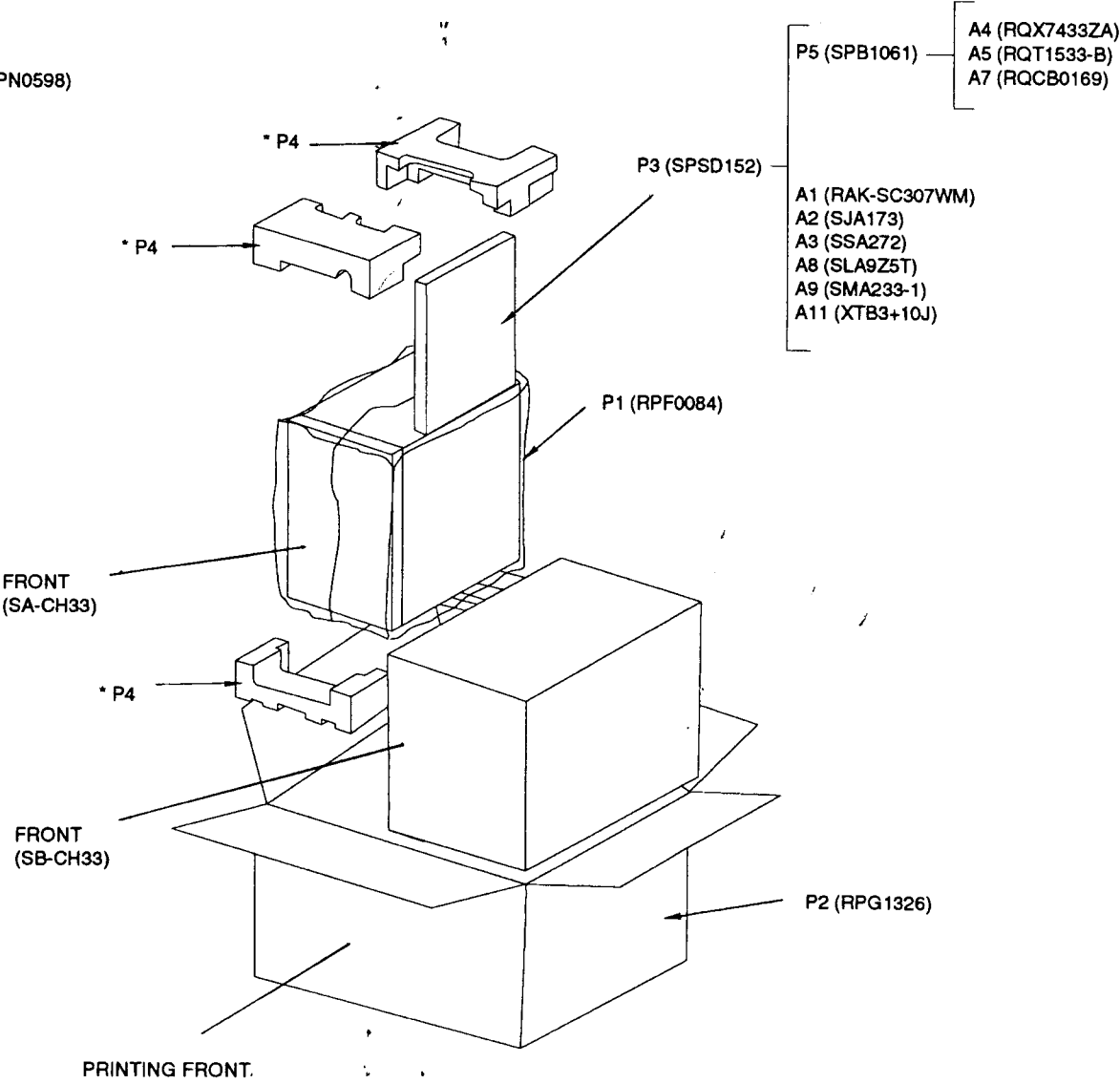
Parts without these indications can be used for all areas.

[M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No	Part No.	Part Name & Description	Remarks	Ref. No	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK		327	RME0087	SPRING	
301	REM0019	MOTOR ASS'Y		328	REE0217-1	CABLE ASS'Y	
302	RMK0105	CHASSIS		329	RJP2G17ZA	CONNECTOR (CP701, CP702)	
303	RME0063	SPRING		330	RJP4G17ZA	CONNECTOR (CP703)	
304	RMG0158	BELT		331	RJP6G17ZA	CONNECTOR (CP790)	
305	RML0177	LEVER		332	RJU035T016-1	CONNECTOR (CS701)	
306	RML0178	LEVER		333	RJS1A6723-1Q	CONNECTOR (CS702)	
307	RMM0058	SLIDE PLATE				PACKING MATERIALS	
308	XTN26+6G	SCREW		A1	RAK-SC307WM	REMOTE CONTROL UNIT	[M]
309	XYN2+F6FZ	SCREW		A1-1	RKK0008-KE	BATTERY COVER	[M]
310	RHD20012	SCREW		A2	RJA0019-U	AC CORD	[M](EEG) Δ
311	RMU0046	SHAFT		A2	SJA193-1	AC CORD	(EB) Δ
312	RHD20009-1	SCREW		A2	SJA173	AC CORD	(GN) Δ
313	RMA0328	GUIDE		A3	SSA270M	FM ANT	(E,EB,EG)
314	RMK0103	TRAY		A3	SSA272	FM ANT	(GN)
315	XTN2+8G	SCREW		A4	RQA0013	GUARANTEE CARD	(E,EB,EG)
316	XTB3+25GFZ	SCREW		A4	RQX7433ZA	GUARANTEE CARD	(GN)
317	XTN26+6G	SCREW		A5	RQT1531-G	INST. MNL. (ENG/ESP/FRN)	[M] (E)
318	XTN3+8JFZ	SCREW		A5	RQT1533-B	INSTRUCTION MANUAL	[M](EB,GN)
319	RXQ0122	DISC CLAMPER ASS'Y		A5	RQT1530-D	INSTRUCTION MANUAL	[M] (EG)
319A	RHM245ZA	MAGNET		A6	RQT1532-E	INST. MNL. (DEU/NED/SVN)	[M] (E)
319B	RMR0334	MAGNET HOLDER		A7	RQCB0169	SERVICE CENTER LIST	
319C	RXQ0123	DISC PAD		A8	SLA9Z5T	LOOP ANT	[M]
320	RFKNLDN7N-K	DRIVE GEAR (2) ASS'Y		A9	SMA233-1	ANT HOLDER	
321	RFKJXDT77-H	MECHANICAL CHASSIS ASS'Y		A10	SJP9009	ANT ADAPTOR	(EB)
321A	RDG0142	GEAR		A11	XTB3+10J	SCREW	
321B	RDG0143	GEAR				ACCESSORIES	
321C	RDP0041	PULLEY					
321D	SDRD14	ROLLER					
322	RFKNXDT77C-H	SHAFT HOLDER		P1	RPF0084	BAG(SET)	[M]
322A	RMG0159	RUBBER		P2	RPG1172	GIFT BOX	[M](E,EB,EG)
323	SODD110Z	TRAVERSE UNIT		P2	RPG1326	GIFT BOX	[M] (GN)
323A	SHGD112	RUBBER A		P3	SPSD152	ACCESSORY CASE	
323B	SHGD113-1	RUBBER B		P4	RPN0605	POLYFOAM	[M](E,EB,EG)
323C	RDV0014	BELT		P4	RPN0598	POLYFOAM	[M] (GN)
324	RMS0123-1	PIN		P5	SPB1061	VINYL BAG	
325	RMM0059	SLIDE PLATE					
326	XTV26+6G	SCREW					

■ PACKING (SC-CH33GN)

* P4 (RPN0598)



• SA-CH33 (E,EB,EG)

