

Service Manual

Professional Digital Audio Tape Deck

SV-3700

**Color**

(H)... Gray Type

Area

Country Code	Area	Color
(EB)	Great Britain.	(H)
(EG)	F.R. Germany & Italy.	

SPECIFICATIONS

Signaling Format

Tape recording system: Rotary head type DAT
 Sampling frequencies:
 For recording: 48 kHz/44.1 kHz
 (analog/digital input)
 32 kHz (digital input only)
 For playback: 48 kHz/44.1 kHz/32 kHz
 (selected automatically)
 No. of quantizing bits: 16-bit linear
 No. of channels: 2 (stereo)

Audio Parameters (Recording and Playback System)

Frequency response:
 For 48 kHz: 10 Hz~22 kHz (± 0.5 dB)
 For 44.1 kHz: 10 Hz~20 kHz (± 0.5 dB)
 Signal to noise ratio: Greater than 92 dB. DIN audio
 (dynamic range) weighted
 (22.4 Hz to 22.4 kHz bandpass)
 Total harmonic distortion: Less than 0.05% (1 kHz, +4 dBu)
 Less than 0.007% (1 kHz, +22 dBu)
 Wow and flutter: Unmeasurable

General

Power supply: 110 V/127 V/220 V/240 V AC,
 50/60 Hz
 Power consumption: 35 W
 External dimensions: 43×12.2×31.5 cm
 (W×H×D) (16 $\frac{7}{8}$ "×4 $\frac{3}{4}$ "×12 $\frac{3}{8}$ ")
 Weight: 6.14 kg (13 $\frac{1}{2}$ pounds)

Input/Output Jacks

Analog

Input jacks: XLR-3 type
 Nominal input level: +4 dBu (−18 dB rec level)/
 Input impedance: 10 k Ω balanced
 Output jacks: XLR-3 type
 Nominal output level: +4 dBu/−10 dBu (switch selectable)/
 Output impedance: 75 Ω balanced
 Phones output: Max. 30 mW/32 Ω
 (matching impedance 8~600 Ω)

Digital (AES/EBU type)

Input jacks: XLR-3 type/100 Ω balanced
 Output jacks: XLR-3 type/20 Ω balanced

Digital (IEC TYPE II)

Input jack: RCA phono type (coaxial)/75 Ω
 Output jack: RCA phono type (coaxial)/75 Ω

Mechanism

Heads: Amorphous ferrite composite type
 Cylinder diameter: 30 mm
 Cylinder rotation speed: 2,000 r.p.m.
 (recording and playback)
 Tape speed: 3.15 mm/sec., 12.225 mm/sec.
 (selected automatically)
 Search speed: Up to 250 times normal playback
 speed
 FF/Rewind speed: Up to 400 times normal playback
 speed
 FF/Rewind time: Approx. 27 sec. (2 hours DAT tape)

Note:

Specifications are subject to change without notice.
 Weight and dimensions are approximate.

Panasonic

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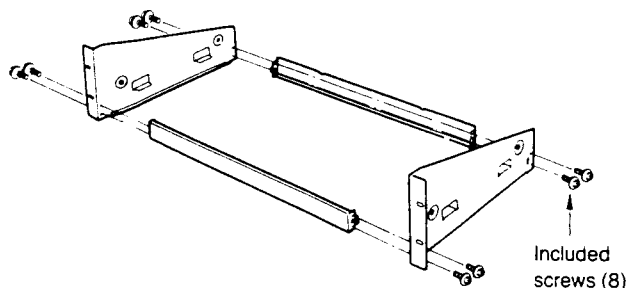
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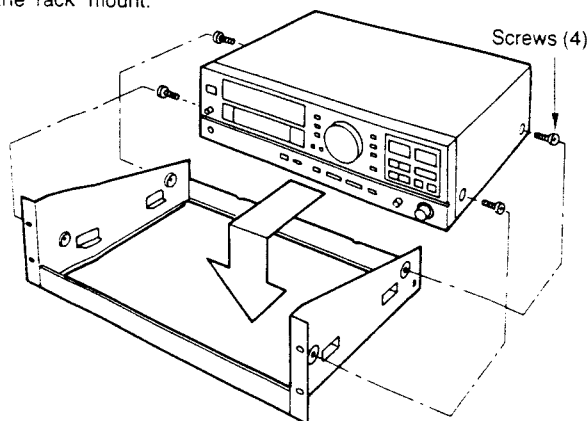
■ INSTALLATION

Installation of rack mount kit

1. Assemble the rack ears and panel, and tighten with included screws.



2. Remove the 4 screws on side enclosure, and attach the unit to the rack mount.



Notes on placement

- This unit is a precision instrument. Be sure to place it on a flat surface.

- Avoid places such as the following:

- Near any equipment or device that generates strong magnetism.
- On any heat-generating equipment or device, or in any place where the temperature is high (35°C or higher).
- Extremely cold places (5°C or below).
- Near an AM/FM tuner or TV.
(It may produce noise in the broadcast, or disturb the TV picture.)
- For long periods of time in direct sunlight.
- In dusty or smoky locations.
- In locations prone to vibrations.
- In locations where the rear panel is less than 10 cm (about 4") away from the wall or back of an audio rack.

- Do not place heavy objects, other than system components, on top of the unit.

- When carrying or storing the unit, handle it with care so it is not subjected to any strong bumps.

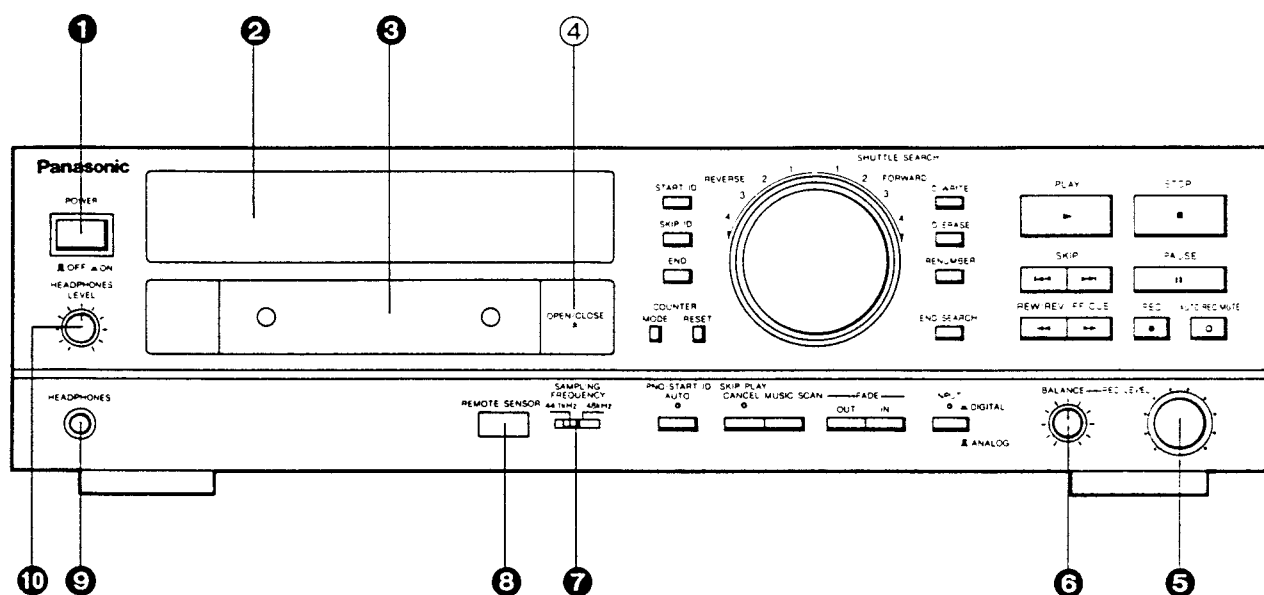
- To avoid problems due to vibration.

- Do not place a book or similar object under this unit.
- Do not route the connection cables (of this or other units) across the operation panel, across the top, or under the unit.

LOCATION OF CONTROLS

The functions indicated by the black numbers (with white background, ④ etc.) can also be activated using the remote control transmitter.

Front panel



① POWER switch (POWER)

② Display panel
See page 10.

③ Cassette holder

④ OPEN/CLOSE button (▲ OPEN/CLOSE)

⑤ REC LEVEL control (REC LEVEL)
Use to adjust the recording level of left and right channels.

⑥ REC BALANCE control (BALANCE)
Use to adjust recording balance between left and right channels.

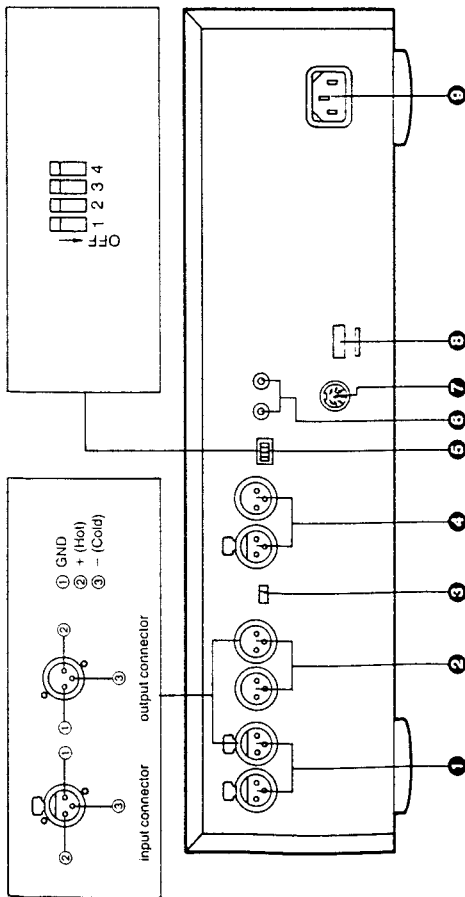
⑦ SAMPLING FREQUENCY selector
Select the sampling frequency when making analog recordings. (44.1 kHz or 48 kHz)

⑧ Remote control signal sensor (REMOTE SENSOR)

⑨ Phones jack (HEADPHONES)
A 6 mm connector for standard stereo headphones.

⑩ Phone level control (HEADPHONES LEVEL)
Use this control to adjust the output level to the headphones.

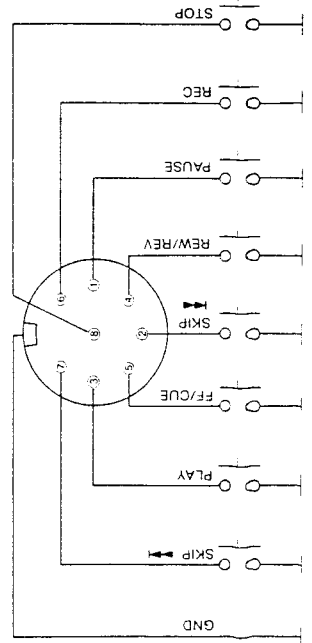
CONNECTIONS



- 1 ANALOG IN terminals**
These are balanced analog audio XLR input connectors.
- 2 ANALOG OUT terminals**
These are balanced analog audio XLR output connectors.
- 3 OUTPUT LEVEL selector (+4 dBu/-10 dBu)**
Select the nominal output level (nominal level for a peak level meter display of -18 dB).
- 4 AES/EBU terminals (IN/OUT)**
These terminals are for input or output of signals for the professional digital interface.
- 5 DIP switch settings**
These are used for the following settings:
 - Digital Input Selection (IEC TYPE II or AES/EBU)
 - SCMS ID 6 Status for AES/EBU Input
 - Blank Skip Mode in Program Search
 For further details, see page 35.
- 6 IEC TYPE II (IEC 958) jacks (IN/OUT)**
These terminals are for input or output of digital signals from/to a consumer unit.
- 7 REMOTE CONTROL jack (PARALLEL) ※**
- 8 Hour meter (5000H)**
Shows the number of hours of head usage in recording and playback.
- 9 AC IN jack**
Connect to the grounded AC outlet with the included AC power supply cord.

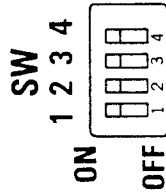
- These are used for the following settings:
- Digital Input Selection (IEC TYPE II or AES/EBU)
 - SCMS ID 6 Status for AES/EBU Input
 - Blank Skip Mode in Program Search
- For further details, see page 35.

Parallel Input Terminals



DIP SWITCH SETTINGS

DIP Switch on the Rear Panel



Following settings can be made by using DIP switches.

Switch Setting	Function (UP=1, DOWN=0)
1 Digital Input Selection	1=IEC 958 0=AES/EBU
2 SCMS ID6 Status for AES/EBU Input	SW2 SW3 ID Meaning 0 00 Copy Free 1 0 10 No further copies 1 1 11 One copy allowed
4 Blank Skip Mode in Program Search	1=ON 0=OFF SV-3700 will advance to the next selection on Program Play mode, if approximately two seconds of silence are encountered.

Note:
IEC 958 is shown as IEC TYPE II on the rear panel of SV-3700.

SCMS Copy Protection

The Serial Copy Management System (SCMS) is designed to control digital-to-digital DAT copying that a consumer can perform on various digital audio material, including Compact Discs, pre-recorded DAT tapes, and other material via IEC 958 "consumer use" digital audio interfaces (also commonly referred to as "SP DIF" and LMA CIP 340). SCMS does not affect the ability to make copies using a DAT recorder's analog inputs and outputs, nor does it apply to digital-to-digital copies made via the AES/EBU professional digital audio interface.

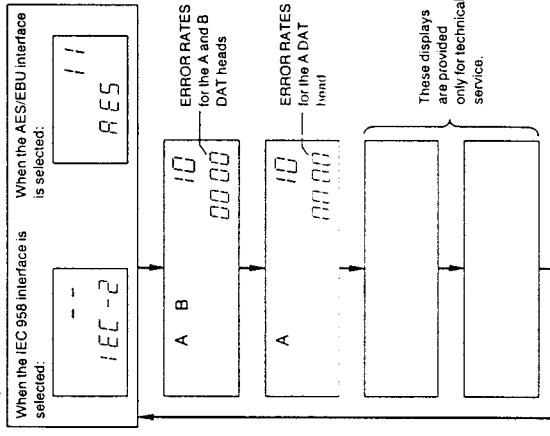
Only one serial (or generational) digital-to-digital copy can be made from a copyright protected source, such as a commercial CD or pre-recorded DAT. Serial Copy Management System labels are generated onto tape each time an SCMS-equipped consumer DAT machine records an audio signal to tape, no matter whether the source is from the analog or digital inputs.

Technically, the SCMS labels for DAT are encoded into the SubCode sections of the main digital data area, specifically "ID6". The SV-3700's rear-panel DIP switches allow the user to preset the SCMS status bits of ID6 onto the DAT recording. For legal reasons, the ID6 bits are only modified if the source input is the AES/EBU Digital I/O; during digital copying via the IEC "consumer use" input, the SV-3700 simply copies across the current status of SCMS codes indicated by the Channel Status. To prevent a master DAT tape being copied on a consumer deck, for example, you might select switch setting for "ID6=10", which would prevent any further digital copying of this copyrighted cassette via a consumer DAT. Alternatively, you might select "ID6=00", so that any number of digital copies could be made on a consumer deck. Selection of "ID6=11" will designate a final copyright protected pre-recorded product, which would behave the same way on consumer SCMS-equipped DAT decks as a normal commercial release.

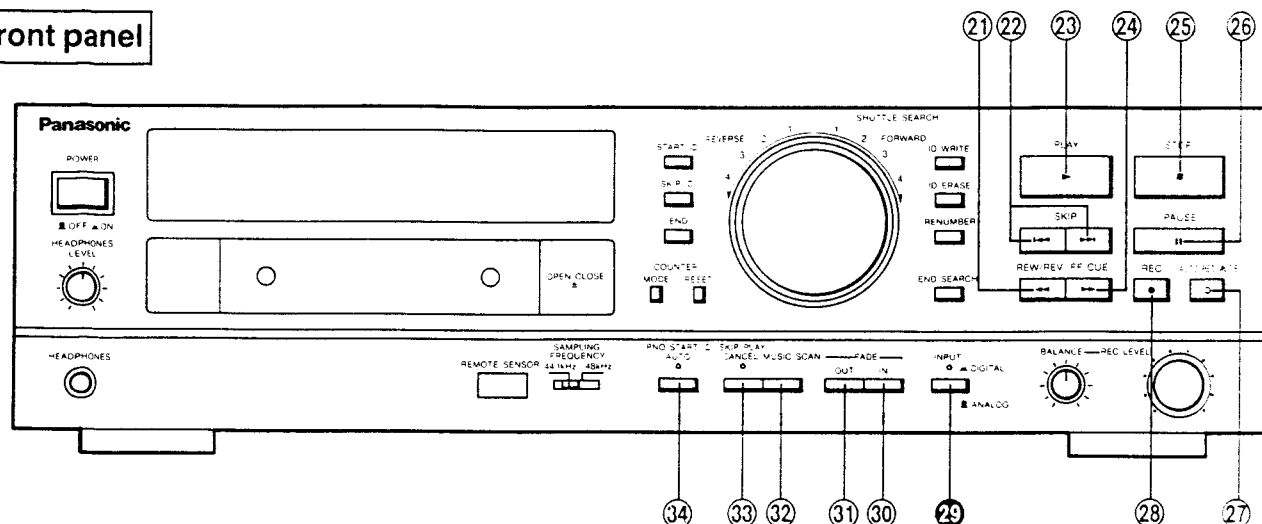
DISPLAYING SCMS STATUS AND ERROR RATES

The SCMS status of a DAT recording can be displayed on the SV-3700 by simultaneously pressing the front-panel COUNTER MODE, RESET and PAUSE buttons. Now shown within the normal Time Display window will be the type of digital interface that has been selected via the rear-panel DIP switch—AES/EBU or IEC 958 "consumer use"—while the PNO display now shows the ID6 value of the recording, 00, 10 or 11. If the COUNTER MODE button is pressed for a second time, the SV-3700 will display ERROR RATES; the mode can be cancelled by hitting the RESET button.

Each time the COUNTER MODE button is pressed, the display changes as follows:



Front panel

**21 REW/REV button (◀◀ REW/REV)**

Use to rewind the tape, or for audible high-speed search in play mode (review).

22 SKIP buttons (◀◀•▶▶ SKIP)

Use the skip buttons to advance to the desired program. The ▶▶ button skips the program forward. The ◀◀ button skips the program backward. Repeated pressing of the Skip buttons causes the unit to skip forwards or backwards several programs.

23 PLAY button/indicator (▶ PLAY)

Use to initiate recording or playback mode. Use also to record program numbers manually.

24 FF/CUE button (▶▶ FF/CUE)

Use to advance the tape rapidly, or for audible high-speed search (cue).

25 STOP button (■ STOP)

Use to stop all functions. This button also clears the program memory.

26 PAUSE button/indicator (|| PAUSE)

Use to temporarily interrupt playback or recording mode.

27 AUTO REC MUTE button (□ AUTO REC MUTE)

Use to automatically insert a silent passage approximately four seconds long during a recording.

28 RECORD button/indicator (● REC)

Use to place the unit in record standby mode.

29 INPUT selector button/indicator (INPUT)

Use to select digital or analog recording input.

30 FADE IN button (FADE IN)

Use to start recording and increase the sound level gradually for approx. 2½ seconds, until full record level is reached.

31 FADE OUT button (FADE OUT)

Use to end a recording by gradually reducing the recorded sound level for approx. 5 seconds.

32 MUSIC SCAN button (MUSIC SCAN)

Use to play back the beginning of each recorded program on the tape for about 15 seconds. This is useful for quick identification of program contents.

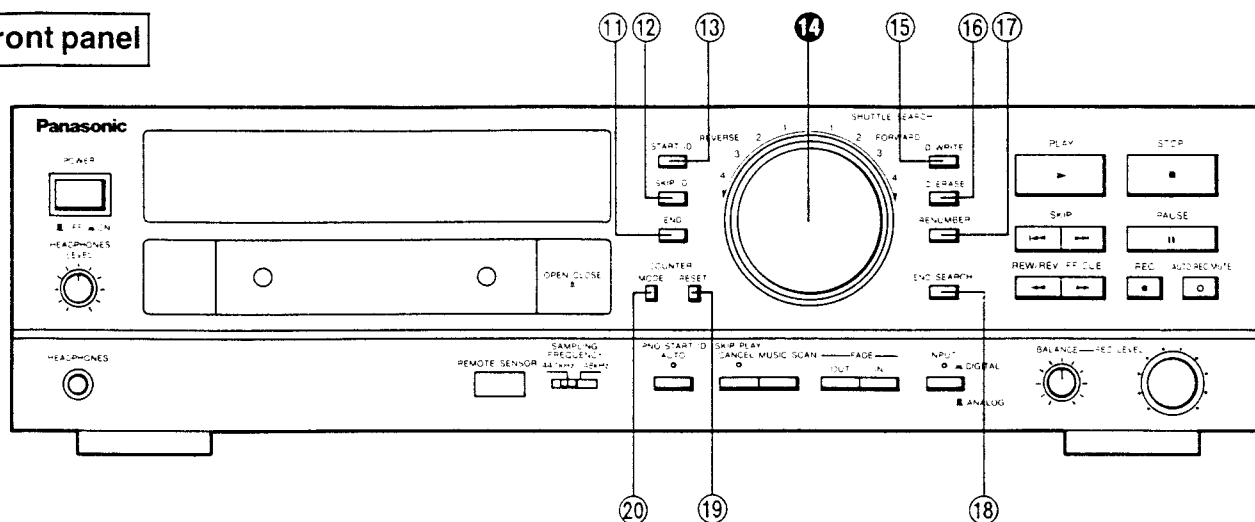
33 SKIP PLAY CANCEL button/indicator (SKIP PLAY CANCEL)

Use to release skip mode.

34 PNO/START ID AUTO button/indicator (PNO/START ID AUTO)

Use to automatically record program numbers or Start ID's during recording or indexing by detecting the beginning of signal after a blank position.

Front panel



⑪ END button (END)

Use to record an End Mark on a recording.

⑫ SKIP ID button (SKIP ID)

Use to enter the Skip ID mode.

⑬ START ID button (START ID)

Use to enter the Start ID mode.

⑭ SHUTTLE SEARCH dial (SHUTTLE SEARCH)

Use to locate specific places on the tape during play and pause modes at high speed, in either forward or reverse directions.

⑮ ID WRITE button (ID WRITE)

Use to record Start or Skip ID's during indexing*.

*Indexing allows certain DAT subcode data that has been recorded on the tape to be changed without affecting the actual program recording.

With this unit, the following types of indexing are possible.

1. Recording or erasure of Start ID's at the beginning of a program
2. Recording or erasure of Skip ID's
3. Renumber function

⑯ ID ERASE button (ID ERASE)

Use to erase Start or Skip ID's during indexing.

⑰ RENUMBER button (RENUMBER)

Use to assign program numbers (01, 02, 03...) to Start ID's recorded during indexing.

⑱ END SEARCH button (END SEARCH)

Use to advance at high speed to the end of the recorded portion of the tape.

Use also to continue recording from the last recorded position, or to find the total number of programs or total time recorded on the tape (in the case of tapes where absolute time and program numbers have been recorded).

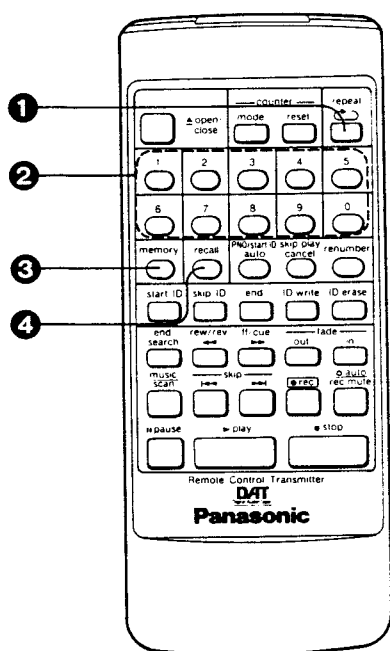
⑲ COUNTER RESET button (COUNTER RESET)

Use to reset the tape counter to "0000" (when the display mode is set to tape counter).

⑳ COUNTER MODE button (COUNTER MODE)

Use to select the desired counter mode, between Absolute time, Program time, Time Remaining, TOC and tape counter.

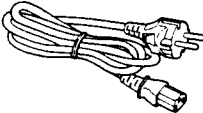
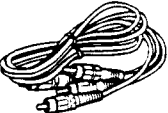
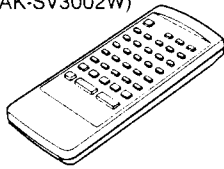
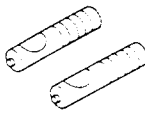
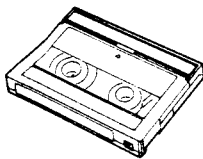
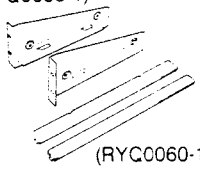
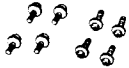
Remote control transmitter



- 1 Repeat button (repeat )**
Use to repeat playback of a tape or a programmed sequence.
- 2 Program buttons (1~9, 0)**
Use to select program numbers, to cue to a desired program, etc.
- 3 Memory button (memory)**
Use to program a random playback sequence.
- 4 Recall button (recall)**
Use to display and check program numbers that have been memorized.

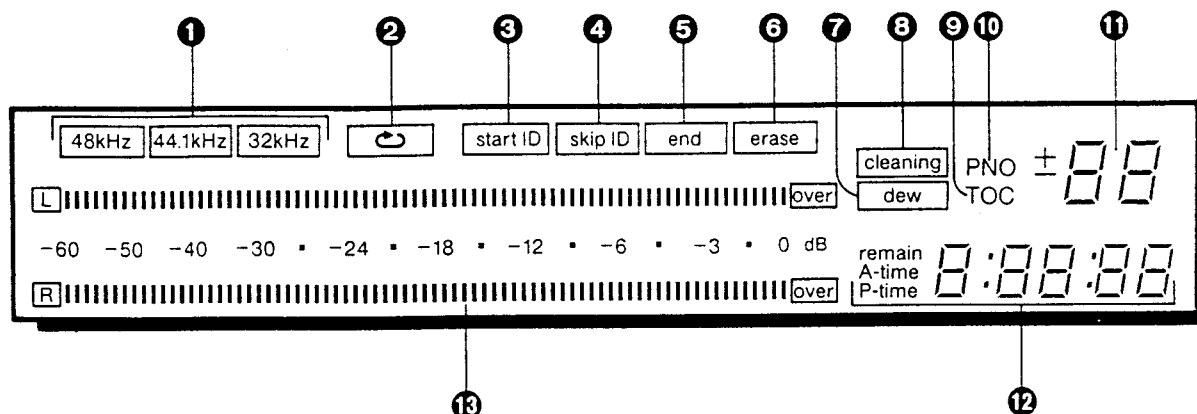
Unnumbered buttons on the remote control transmitter function identically to their corresponding parts on the unit.

ACCESSORIES

• AC power supply cord 1 (SJAD8 (EB) RJA0003-K (EG)) 	• Coaxial cable 1 (SJPD19-1E) 	• Remote control transmitter 1 (RAK-SV3002W) 	• Batteries 2 (UM-4NEP-2S) 
• Cleaning tape 1 (RT-RCLP) 	• Rack mount kit 1 (RYQ0059-1) 	• Screws 8 (XYN3 + F10FZ) 	

Note: Configuration of AC power supply cord differs according to area.

Display panel



1 Sampling frequency indicators

Displays sampling frequency of digital signals during recording or playback.

Changes automatically depending on input signal.

2 Repeat indicator

This indicator is used for repeat loop-play function.

Indicates that all programs or memorized programs can be played back repeatedly ().

3 start ID indicator

Indicates that a Start ID is being or has been recorded.

4 skip ID indicator

Indicates that a Skip ID is being or has been recorded.

5 end indicator

Indicates that an End Mark is being or has been recorded.

6 erase indicator

Indicates that a Start ID or Skip ID is being erased.

7 dew indicator

Indicates the formation of dew within the unit.

8 cleaning indicator

Indicates that the DAT heads need cleaning.

(See page 38.)

9 TOC (table of contents) indicator

Indicates the total program count and tape length of a tape onto which the TOC information has been recorded.

10 PNO (program number) indicator

Indicates the number of the current program.

11 Program number display

Displays the TOC information when TOC indicator appears. Displays the number of the program when PNO indicator appears.

12 Counter display panel

The following are displayed according to the setting of the counter mode button:

- 1) absolute time
This display is always shown when power is first switched on.
- 2) program time
- 3) remaining time
- 4) TOC information
- 5) tape counter

13 Peak level meter

Recording level in recording and playback level during playback are indicated by a bar graph. Standard I/O level of $+4/-10$ dBu is shown at -18 dB.

■ SV-3700 DAT MAINTENANCE CHART

• REGULAR MAINTENANCE

The purpose of periodic maintenance as recommended is to keep the equipment in the best possible operating condition throughout its useful life. Observance of this maintenance schedule ensures that maximum performance and reliability is obtained from the machine.

Regular maintenance is necessary because the DAT Recorder is a high-technology piece of equipment, containing DC motors, head cylinder assemblies, and a complex mechanism. These components deteriorate over time. Dust and dirt can clog the head gap, which affects the sound. In light of this, it is very important that overall maintenance be performed according to the maintenance chart to avoid problems resulting from heavy image. Maintenance should also be performed after any repairs on the equipment.

Maintenance is particularly recommended for DAT Recorders used in commercial and broadcast applications for several reasons. Installation and application are frequently under less than ideal conditions, such as long usage times and poor environmental conditions. All of this adversely affects the life span and performance of the machine. Regular maintenance assures that the purchaser obtains maximum value for this expenditure.

Note: Refer to the hour meter to know when to perform the maintenance.

Part Name	Part Number	500	1000	1500	2000	2500	3000	3500	4000	4500	5000
Upper Cylinder	VEH0460	○	●	○	●	○	●	○	●	○	●
Cylinder Unit	VEG0752	○	○	○	○	○	○	○	○	○	●
S. Load Arm Ass'y	RXL0052										●
T. Load Arm Ass'y	RXL0054										●
Load Cam	RDK0006-1						●				
Capstan Unit	REM0001	○	○	○	○	○	○	○	○	○	●
Post Roller	RXP0008	○	○	○	○	○	○	○	○	○	●
Guide Roller	RXP0027	○	○	○	○	○	○	○	○	○	●
Pinch Roller	1NB0001ZA	○	○	○	○	○	●	○	○	○	○
S. Reel Ass'y	RXR0006										●
T. Reel Ass'y	RXR0007										●
BT Lever	RXL0048										●
Tension Band Ass'y	RXL0036						●				
S. Brake Ass'y	RXL0049						●				
T. Brake Ass'y	RXL0050						●				
Idler Gear	RDG0071										●
Mode Motor Ass'y	REM0009								●		
Mode Cam	RDK0007-1										●
M Gear B	RDG0067										●
Drive Gear Ass'y	RXG0011						●				
Idler Gear (F)	RDG0069										●
Idler Gear (P)	RDG0068										●
Mode SW Ass'y	RES0002						●				
Load SW Ass'y	RES0001										●
Cassette SW	EVQWR4002										●
Earth Terminal	RUS740ZA										●
Loading Motor	MMN-6FBRC8S										●
Belt	SMQ20025										●
Leaf SW	SSPD18										●

● Replacement, ○ Cleaning

• DAT Head and Tape Transport Cleaning

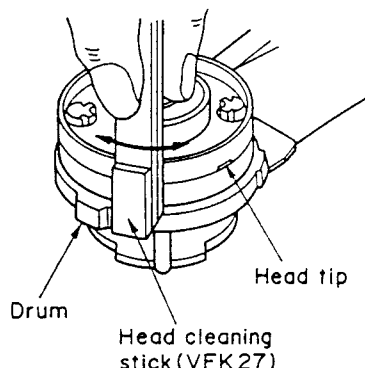
Through normal usage of any tape machine, dirt and debris from the tape accumulates on the heads, which eventually causes performance problems. By using a cleaning cassette regularly, dirt buildup can be minimized, prolonging the life of the tape heads, and also keeping tape posts, tape guides, and the pinch roller clean.

• CLEANING

1. Play the cleaning cassette (Panasonic Part No. RT-RCLP) for 15-20 seconds.
2. Do not use the same part of the cleaning tape more than once.
3. Clean all tape contact surface, including A/C head upper and lower drum, thoroughly with a soft cloth soaked in alcohol.
4. Clean both heads by gently rubbing in a horizontal direction, as depicted, using a head cleaning stick (VFK27) or a lint free cloth moistened with alcohol.
5. Wipe all tape contact surfaces, including upper and lower drum, with a dry soft cloth to ensure that all residual moisture is removed from the tape contact surfaces.

Note:

1. When cleaning the upper drum, hold it secure with your finger tips.
2. Use solvents sparingly, excess alcohol will dilute and remove the bearing lubricant in the capstan motor and rotary guides.



• IMPORTANT

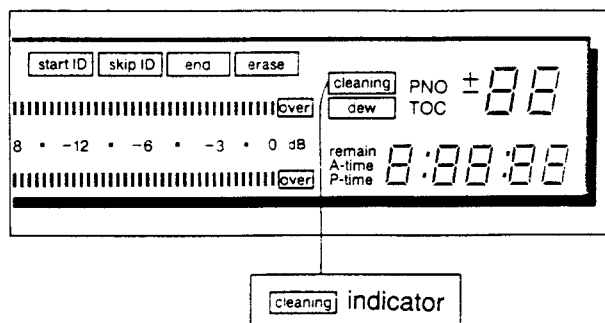
After cleaning the head and tape contact surfaces, check the error rate using the error rate reference tape (Part No. RD-ER01). Target error rate is less than 50. A unit with a new head cylinder should be capable of producing error rates below 10, as long as the reference tape is in good condition.

For information on how to display the error rate, see page 84.

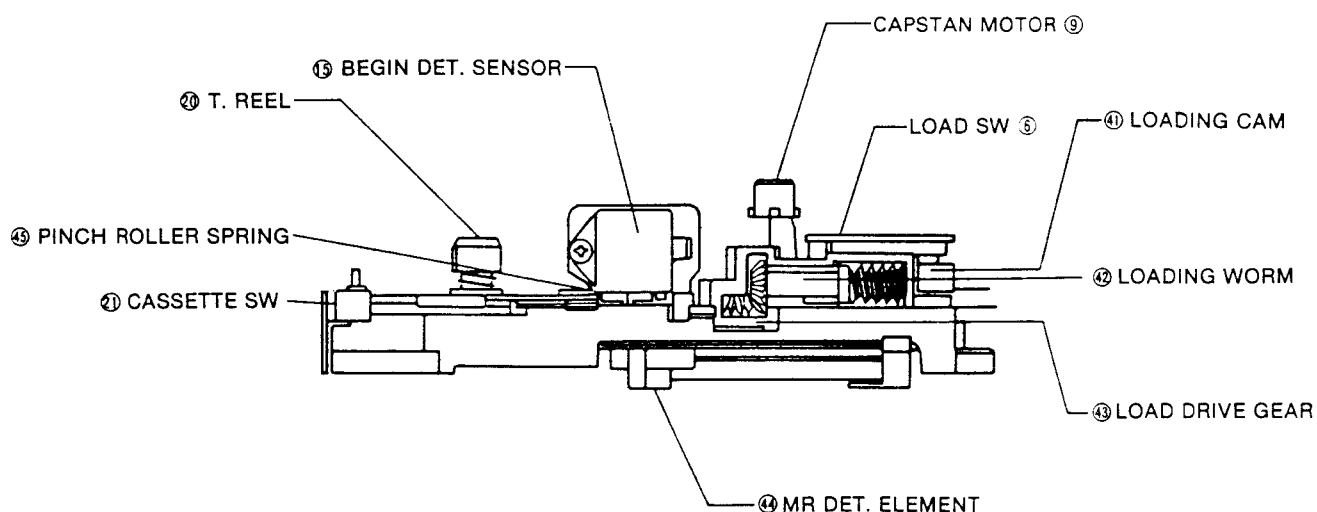
REGARDING THE CLEANING INDICATOR...

The cleaning indicator will illuminate when the error rate remains higher than 1000 for more than 10 seconds.

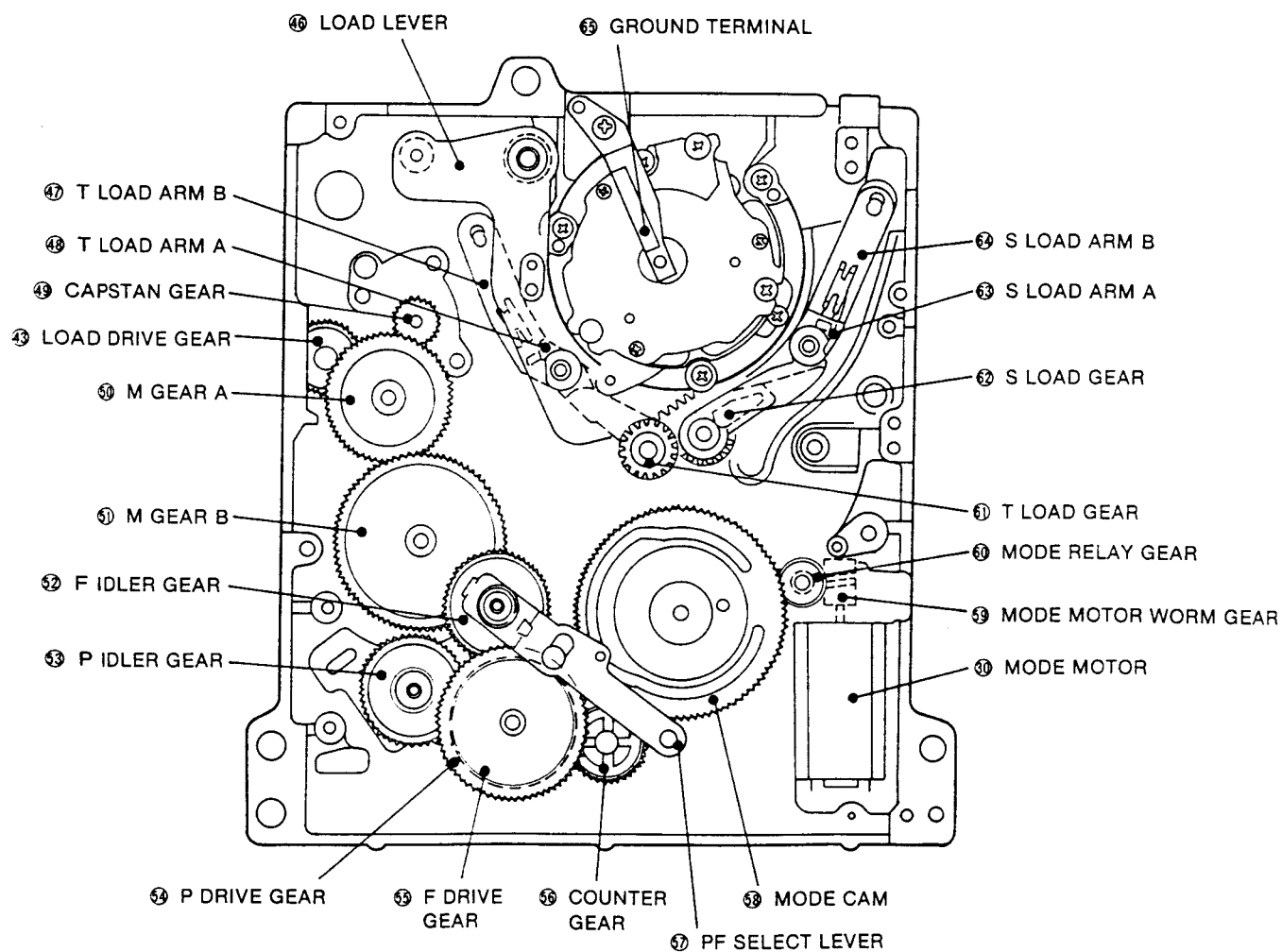
Although dirt and debris are the most common cause of an elevated error rate, there are other conditions that may cause it. Therefore, do not assume that a cleaning indication means that the head is dirty.



• Side view

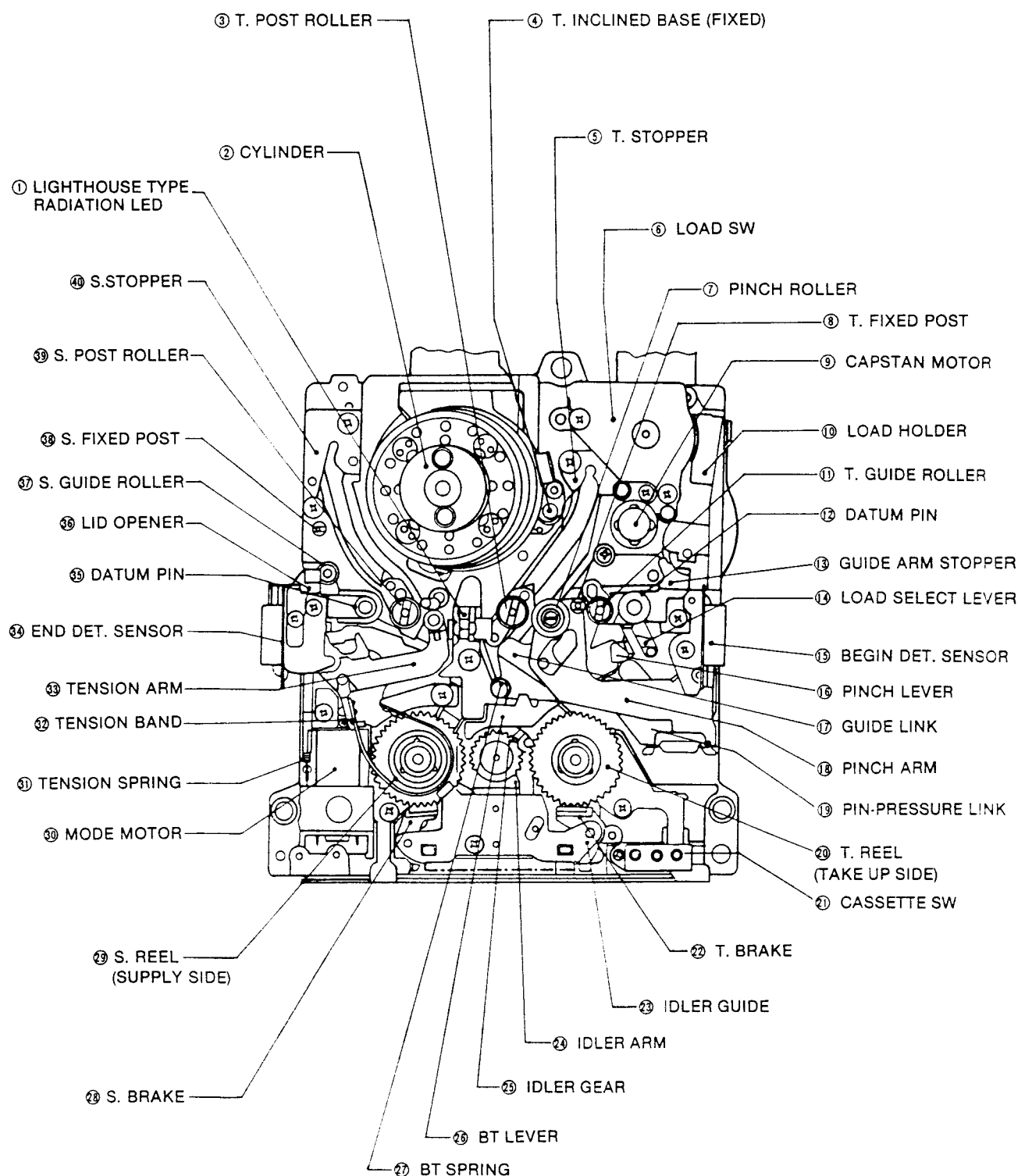


• Bottom view



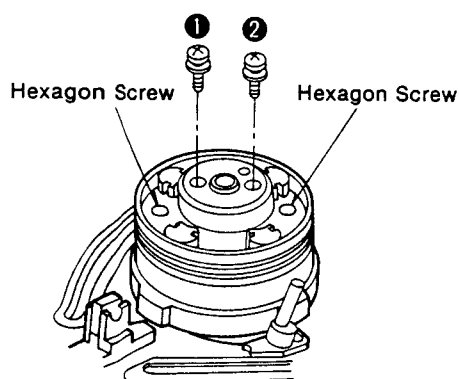
• MECHANISM COMPONENT LAYOUT

• Top view



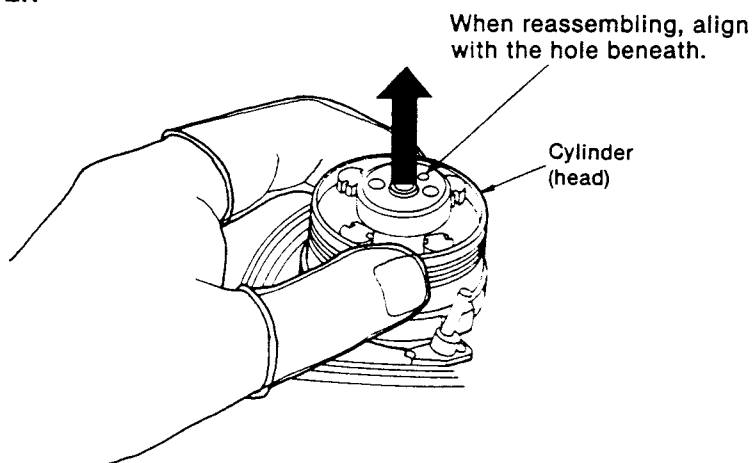
⑤⑨ M GEAR A	Transmits movement of capstan gear and load drive gear.	⑤⑨ MODE CAM	Uses movement transmitted from mode relay gear to detect mode positions.
⑤⑩ M GEAR B	Transmits movement of M gear A and F (R) idler gear, engages and disengages in accordance with mode.	⑤⑨ MODE MOTOR WORM GEAR	Transmits movement of mode motor and mode relay gear.
⑤⑪ F IDLER GEAR	Transmits movement of M gear B and F drive gear.	⑤⑩ MODE RELAY GEAR	Transmits movement of mode motor worm gear and mode cam.
⑤⑫ P IDLER GEAR	Transmits movement of M gear B and P drive gear.	⑤⑪ T LOAD GEAR	Transmits movement of load lever and S load gear.
⑤⑬ P DRIVE GEAR	Transmits movement of P idler gear and counter gear.	⑤⑫ S LOAD GEAR	Transmits movement of T load gear and S load arm A (B).
⑤⑭ F DRIVE GEAR	Transmits movement of F idler gear and counter gear.	⑤⑬ S LOAD ARM A	Uses movement transmitted from S load gear to play loading.
⑤⑮ COUNTER GEAR	Transmits movement of F (P) drive gear and idler gear, engages and disengages in accordance with mode.	⑤⑭ S LOAD ARM B	
⑤⑯ PF SELECT LEVER	Switches engagement and disengagement of F (P) idler gear in accordance with mode conditions.	⑤⑮ GROUND TERMINAL	Ground terminal for cylinder motor.

• REMOVAL OF THE UPPER CYLINDER



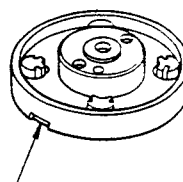
1. Remove the 2 screws (①, ②).

Caution: Please do not touch Hexagon screws.



2. Remove the cylinder (head) in the direction of the arrow.

Note: Do not touch the cylinder (head) with your bare hand; always be sure to wear a glove or other protection.

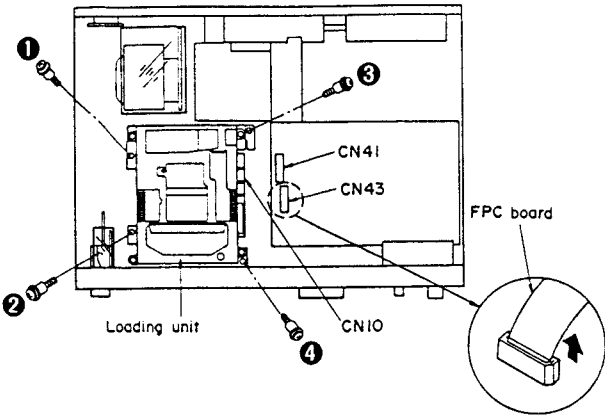
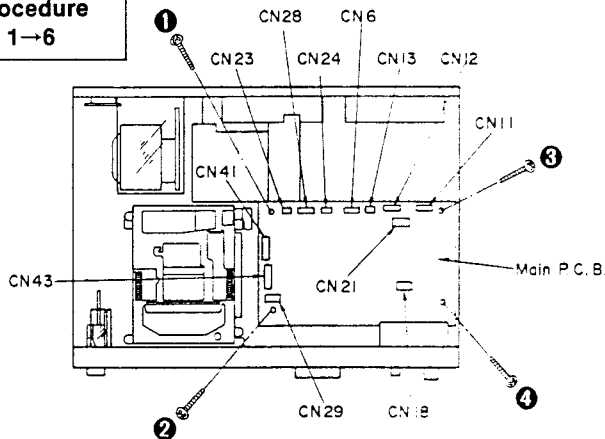
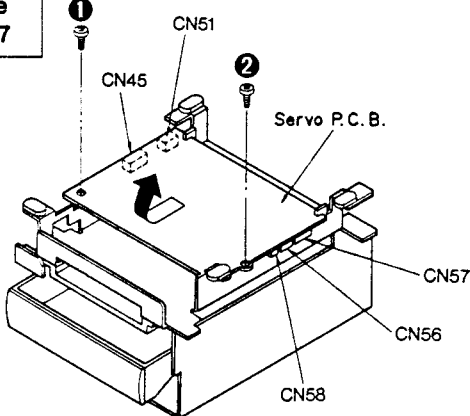
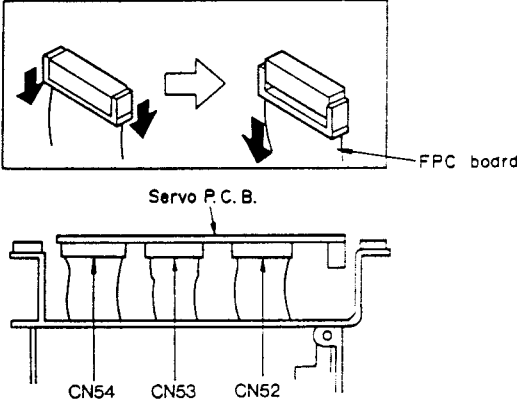
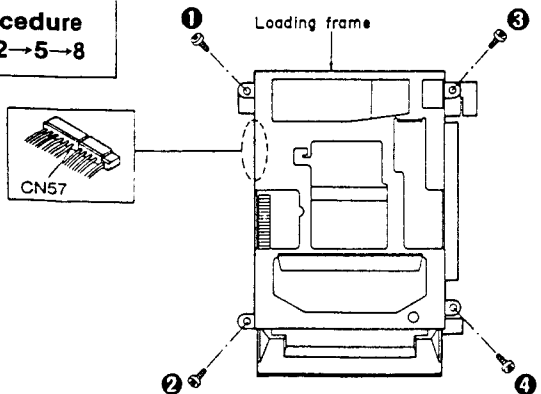
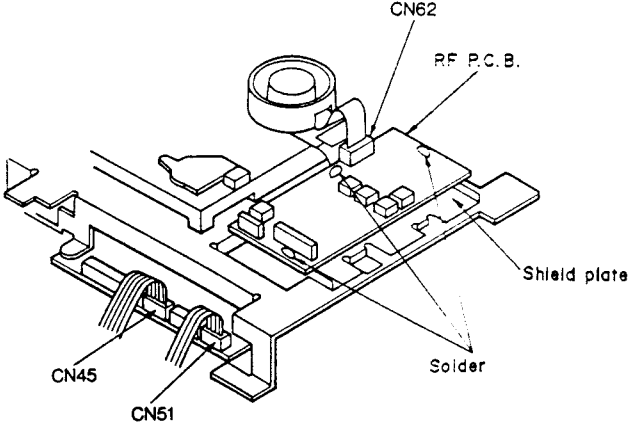


Be sure not to touch the head part.

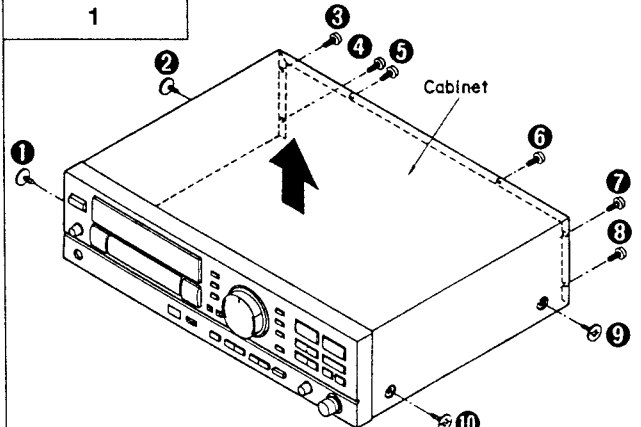
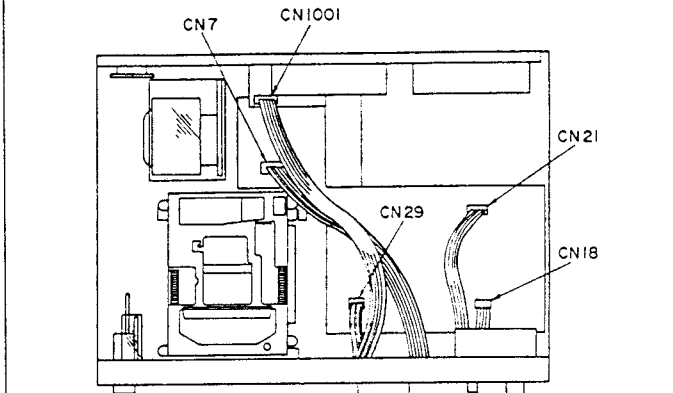
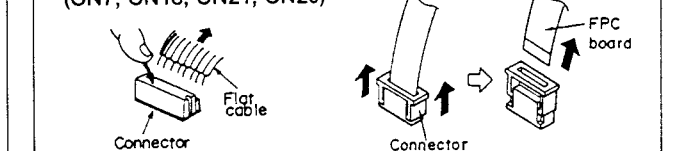
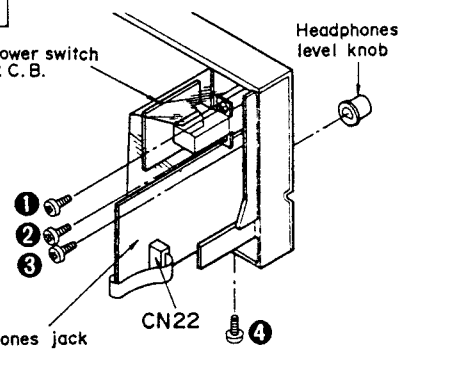
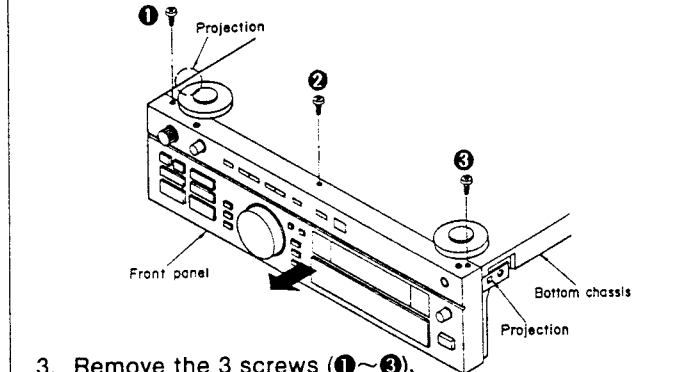
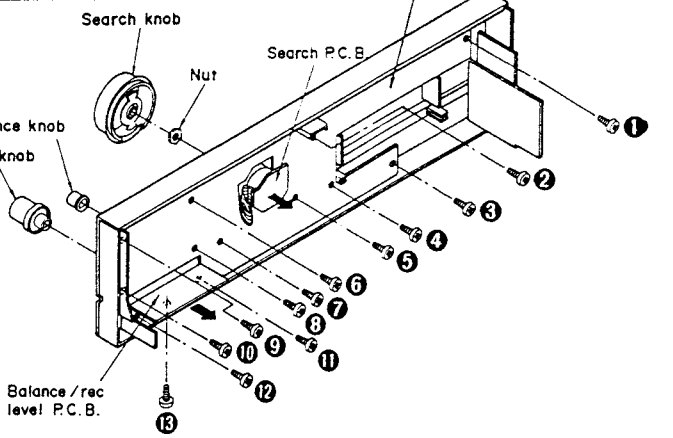
* When reassembling the cylinder (head), be sure that the direction is correct. (If it is assembled in the wrong direction, data read errors will occur.)

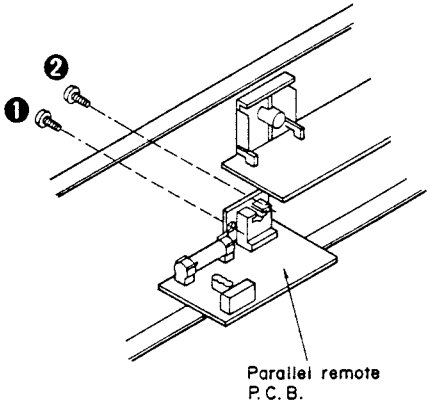
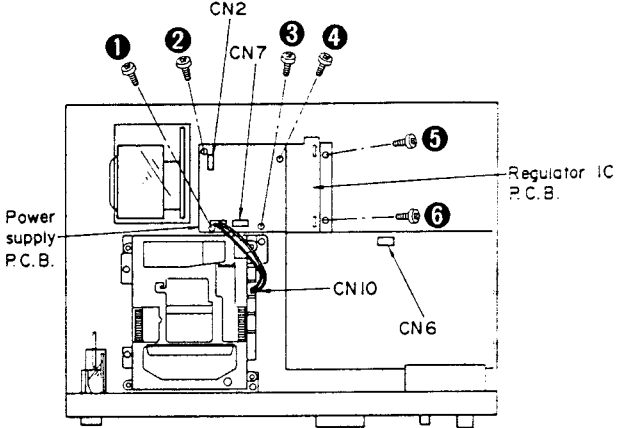
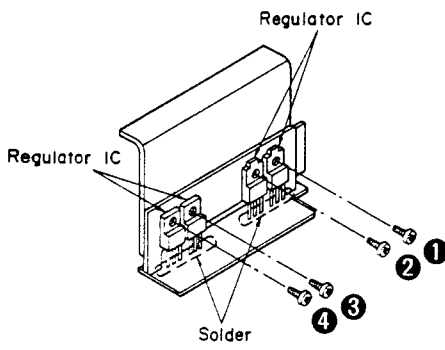
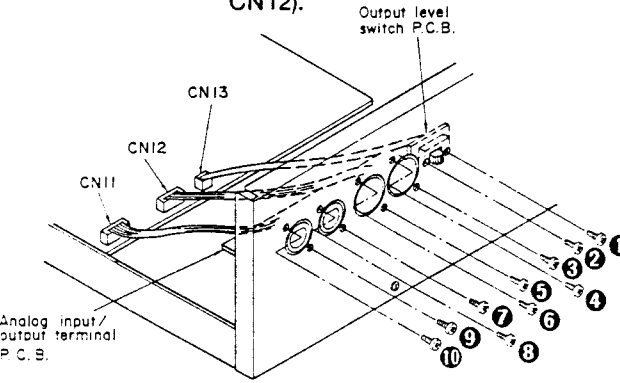
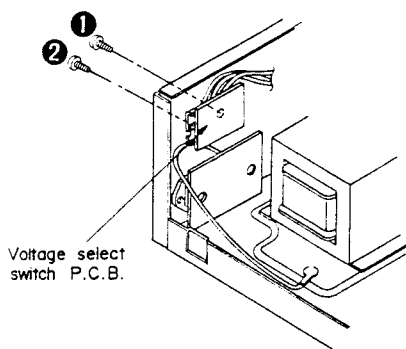
• MECHANISM CONTROLS AND FUNCTIONS

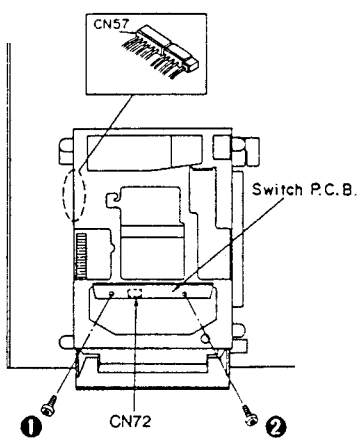
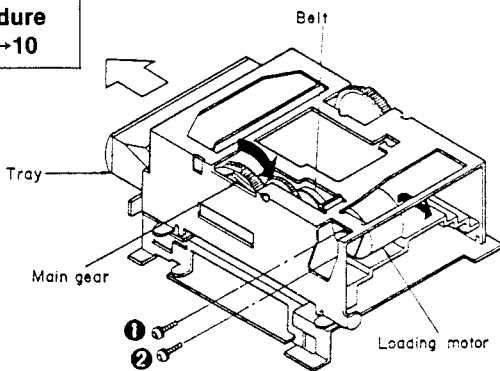
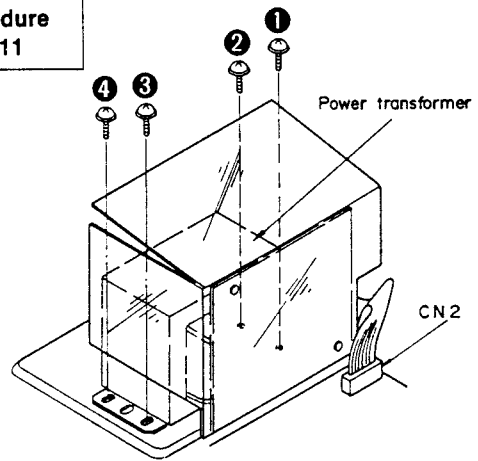
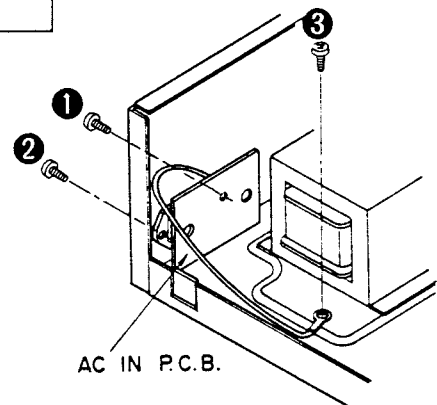
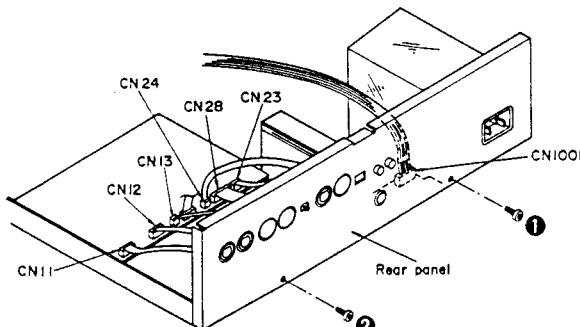
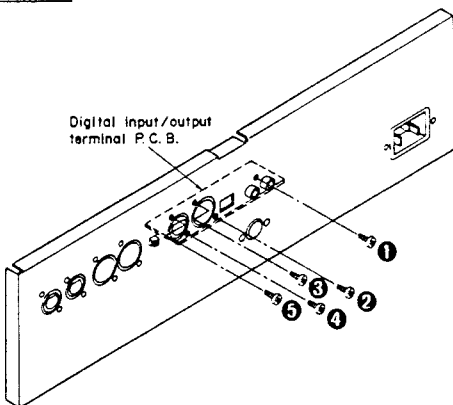
① LIGHT HOUSE TYPE RADIATION LED	Lighthouse-shaped, LEDs blink at start and end of tape.	⑳ IDLER GEAR	Transmits movement to S and T reels in accordance with mode.
② CYLINDER	30mm in diameter, 40 FG pulses, maintains specified speed of 1000 to 3000rpm.	㉑ BT LEVER	Applies back tension to T reel during review.
③ T. POST ROLLER	Regulates tape travel position (upper edge).	㉒ BT SPRING	Provides pressure for back tension lever.
④ T. INCLINED BASE (FIXED)	Regulates angle (90°) at which tape is wound around cylinder (stationary).	㉓ S. BRAKE	Presses brake shoe against S reel base gear to perform braking.
⑤ T. STOPPER	Determines position of T post roller base during loading.	㉔ S. REEL (SUPPLY SIDE)	Supply reel base, 64 FG pulses.
⑥ LOAD SW	Two-bit rotary switch, detects loading position.	㉕ MODE MOTOR	6.5V DC motor, switches mode by forward and reverse revolution.
⑦ PINCH ROLLER	Presses against tape during play and review.	㉖ TENSION SPRING	Provides back tension force of tension regulator.
⑧ T. FIXED POST	Regulates tape travel position.	㉗ TENSION BAND	Mounted to tension regulator, applies back tension to S reel base.
⑨ CAPSTAN MOTOR	1.5mm in diameter, 290 FG pulses.	㉘ TENSION ARM	Detects tape condition and applies back tension during play and review.
⑩ LOAD HOLDER	Contains loading drive gear and worm gear, engages and disengages M gear A.	㉙ END DET. SENSOR	Light-receiving element for LED (detection at end of tape).
⑪ T. GUIDE ROLLER	Regulates tape travel position (top edge).	㉚ DATUM PIN	Regulates width and height (left side) during loading of cassette tape.
⑫ DATUM PIN	Regulates width and height (right side) during loading of cassette tape.	㉛ LID OPENER	Opens cassette lid during loading of tape.
⑬ GUIDE ARM STOPPER	Determines position of T guide roller base K during loading.	㉜ S. GUIDE ROLLER	Regulates tape travel position (bottom edge).
⑭ LOAD SELECT LEVER	Switches engagement and disengagement of loading gear in accordance with loading conditions.	㉝ S. FIXED POST	Regulates tape travel (bottom edge).
⑮ BEGIN DET. SENSOR	Light-receiving element for LED (detection at start of tape).	㉞ S. POST ROLLER	Regulates tape travel position (top edge).
⑯ PINCH LEVER	Presses pinch roller against tape during play and review.	㉟ S. STOPPER	Determines position of S post roller base during loading.
⑰ GUIDE LINK	Links T post roller base and guide roller base.	㊱ LOADING CAM	Uses movement transmitted from loading worm to move loading lever.
⑱ PINCH ARM	Comprised of pinch roller and T holding post, presses against the capstan.	㊲ LOADING WORM	Transmits movement of loading drive gear and loading cam.
㉑ PIN-PRESSURE LINK	Connected by the pin pressure spring and the pinch arm.	㊳ LOAD DRIVE GEAR	Transmits movement of M gear A and loading worm, engages and disengages in accordance with mode.
㉒ T. REEL (TAKE UP SIDE)	Take-up reel base, 64 FG pulses.	㊴ MR DET. ELEMENT	Detects magnetic changes (290 pulses) of flywheel.
㉓ CASSETTE SW	Detects cassette information (mistaken erasure, cassette detection).	㊵ PINCH ROLLER SPRING	Mounted to the pinch arm, returns the pinch roller.
㉔ T. BRAKE	Presses brake gear against reel base gear to perform braking.	㊶ LOAD LEVER	Transmits movement of load cam and load gear.
㉕ IDLER GUIDE	Holding cover for idler arm and S and T brakes.	㊷ T LOAD ARM B	Uses movement transmitted from T load gear to play loading.
㉖ IDLER ARM	Moves left or right in accordance with mode condition, transmits movement of counter gear to S and T reels.	㊸ T LOAD ARM A	
		㊹ CAPSTAN GEAR	Uses movement transmitted from capstan motor to move M gear A.

Ref. No. 5	Removal of the loading unit	Ref. No. 6	Removal of the main P.C.B.
Procedure 1→2→5	 1. Remove the FPC board (CN43). 2. Remove the connectors (CN10, CN41). 3. Remove the 4 screws (①~④).	Procedure 1→6	 1. Remove the connectors (CN11, CN12, CN41). 2. Remove the flat cables (CN6, CN13, CN18, CN23, CN24, CN28, CN29). 3. Remove the FPC boards (CN21, CN43). 4. Remove the 4 screws (①~④).
Ref. No. 7	Removal of the servo P.C.B.		
Procedure 1→2→5→7	 1. Remove the connectors (CN45, CN51, CN56, CN57, CN58). 2. Remove the 2 screws (①, ②).		 3. Remove the servo P.C.B. in the direction of the arrow. 4. Remove the FPC boards (CN52, CN53, CN54).
Ref. No. 8	Removal of the RF P.C.B.		
Procedure 1→2→5→8	 1. Remove the 4 screws (①~④). 2. Remove the loading frame. 3. Remove the connector (CN57).		 4. Unsolder the shield plate. 5. Remove the FPC board (CN62). 6. Remove the connectors (CN45, CN51).

DISASSEMBLY INSTRUCTIONS

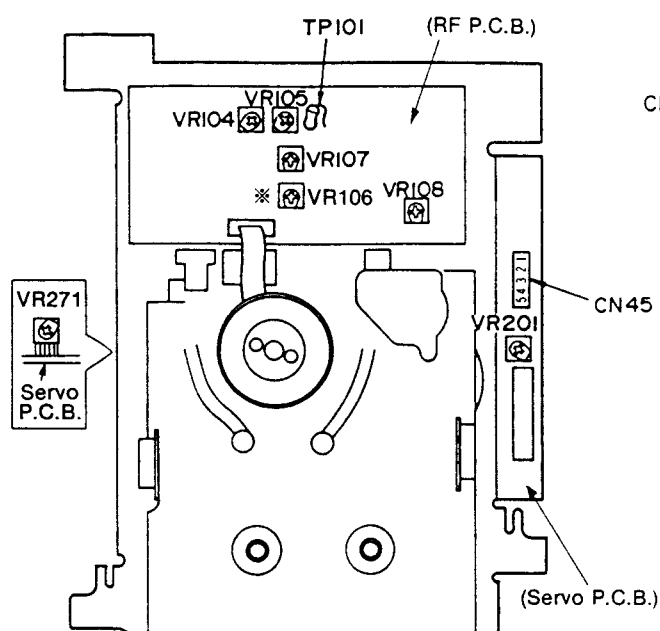
Ref. No. 1	Removal of the cabinet	Ref. No. 2	Removal of the front panel
Procedure 1	 • Remove the 10 screws (①~⑩).	Procedure 1→2	1. Remove the flat cables (CN7, CN18, CN21, CN29). 2. Remove the FPC board (CN1001). 
Ref. No. 3	Removal of the power switch P.C.B. and headphones jack P.C.B.	• Pull out the flat cable while pressing the connector. 1. Lift the connector. 2. Pull out the FPC board. (CN7, CN18, CN21, CN29) 	
Procedure 1→2→3	 ■ Power switch P.C.B. 1. Remove the 2 screws (①, ②). ■ Headphones jack P.C.B. 1. Remove the headphones level knob. 2. Remove the FPC board (CN22). 3. Remove the 2 screws (③, ④).	 3. Remove the 3 screws (①~③). 4. Remove the front panel from the projection of the bottom chassis.	
Ref. No. 4	Removal of the search P.C.B., operation P.C.B. and balance/rec level P.C.B.		
Procedure 1→2→4	■ Search P.C.B. 1. Pull out the search knob. 2. Remove the nut. ■ Operation P.C.B. 1. Remove the 10 screws (①~⑩). ■ Balance/rec level P.C.B. 1. Pull out the balance knob and rec level knob. 2. Remove the 3 screws (⑪~⑬).	Search knob Nut Balance knob Rec level knob Search P.C.B. Operation P.C.B. Balance/rec level P.C.B.	

Ref. No. 15	Removal of the parallel remote P.C.B.	Ref. No. 16	Removal of the power supply P.C.B. and regulator IC P.C.B.
Procedure 1→12→13→15	 Parallel remote P.C.B. • Remove the 2 screws (①, ②).	Procedure 1→12→13→16	 Power supply P.C.B. Regulator IC P.C.B. 1. Remove the connector (CN10). 2. Remove the flat cables (CN2, CN6, CN7). 3. Remove the 6 screws (①~⑥).
Ref. No. 17	Removal of the regulator IC	Ref. No. 18	Removal of the output level switch P.C.B. and analog input/output terminal P.C.B.
Procedure 1→12→13→16→17	1. Unsolder the regulator IC. 2. Remove the 4 screws (①~④).  Regulator IC Regulator IC Solder • When mounting the regulator IC, apply silicone compound (SZZ0L15 or equivalent) to the rear of the regulator IC.	Procedure 1→18	■ Output level switch P.C.B. 1. Remove the 2 screws (①, ②). 2. Remove the flat cable (CN13). ■ Analog input/output terminal P.C.B. 1. Remove the 8 screws (③~⑩). 2. Remove the flat cables (CN11, CN12).  Output level switch P.C.B. Analog input/output terminal P.C.B.
Ref. No. 19	Removal of the voltage select switch P.C.B.	 Voltage select switch P.C.B. • Remove the 2 screws (①, ②).	

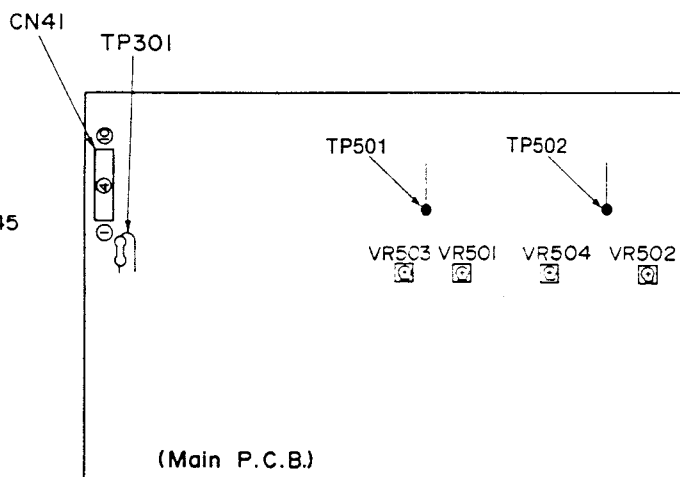
Ref. No. 9	Removal of the switch P.C.B.	Ref. No. 10	Removal of the loading motor
Procedure 1→2→9	 1. Remove the 2 screws (①, ②). 2. Remove the connectors (CN57, CN72).	Procedure 1→2→10	 1. Roll the main gear in the direction of the arrow, and draw out the tray. 2. Remove the belt. 3. Remove the 2 screws (①, ②). 4. Remove the loading motor in the direction of the arrow.
Ref. No. 11	Removal of the power transformer	Ref. No. 12	Removal of the AC IN P.C.B.
Procedure 1→11	 1. Remove the flat cable (CN2). 2. Remove the 4 screws (①~④).	Procedure 1→12	 • Remove the 3 screws (①~③).
Ref. No. 13	Removal of the rear panel	Ref. No. 14	Removal of the digital input/output terminal P.C.B.
Procedure 1→12→13	 1. Remove the connectors (CN11, CN12). 2. Remove the flat cables (CN13, CN23, CN24, CN28, CN1001). 3. Remove the 2 screws (①, ②)	Procedure 1→12→13→14	 • Remove the 5 screws (①~⑤).

• ELECTRICAL ADJUSTMENT

• Adjustment points



※ VR106 do not require adjustment; if the VR is replaced or require readjustment, set the dial to the center positions.

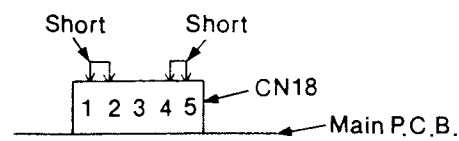


Equipment and Tools

- 2-channel 30 MHz oscilloscope with external trigger and dual time base
 - 2 oscilloscope probes (10 : 1)*
 - Frequency counter
 - AF oscillator (OSC)
 - Distortion analyser
 - DC electronic voltmeter (EVM)
 - Post roller adjustment screwdriver
 - : SZZV1102C
 - Standard test tapes
 - : RD-PG01 (PG reference tape)
 - : RD-ER01 (Error rate tape)
 - : RD-LR02 (Linearity adjustment tape)
 - Blank DAT cassette for recording and playback
 - : RT-R60P, RT-R90P, RT-R120P
 - Standard electrical tools and equipment
- * **NOTE:** The oscilloscope voltage settings in the charts and the waveform examples assume use of the specified 10: 1 probes.

Ref. No. 20	How to check the main P.C.B.
Procedure 20	

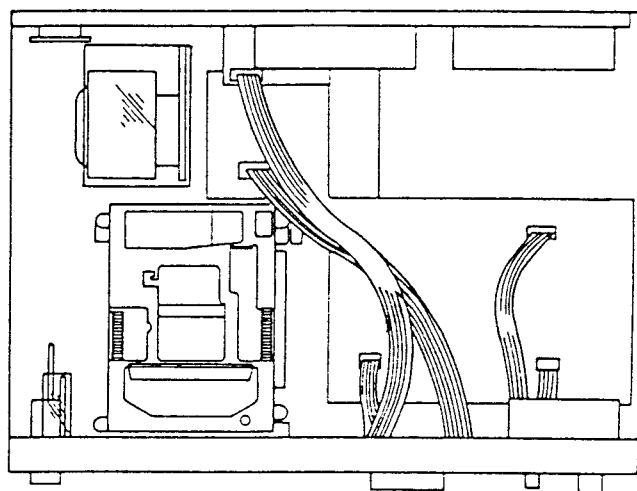
To gain access to the bottom of the main P.C.B., disconnect CN18 and CN21 in order to turn the board upward.
Connect a jumper wire between pins 1 & 2 and between pins 4 & 5 of CN18 when operating the unit in this condition.



MEASUREMENTS AND ADJUSTMENTS

• PREPARATION

- (1) Remove the cabinet
(Refer to Procedure 1 under "Disassembly Instructions").



■ If the loading unit is to be removed for adjustment, note the following.

(PREPARATIONS)

- (1) Remove the loading unit. (With the underside facing up.)
(Refer to Procedure 5 under "Disassembly Instructions." However, leave the flat cable and the connector as they are.)
- (2) Open the cassette holder.
- (3) Move the slider opening/closing plate of the removed loading unit in the direction indicated by the arrow in Fig. 1, and hook it above the prong of the reinforcement plate.
Caution: The slider opening/closing plate will be deformed if it is left as is.
- (4) Place a tape with the slider lock released in the mechanism.
- (5) Switch on the power and check the loading operation.

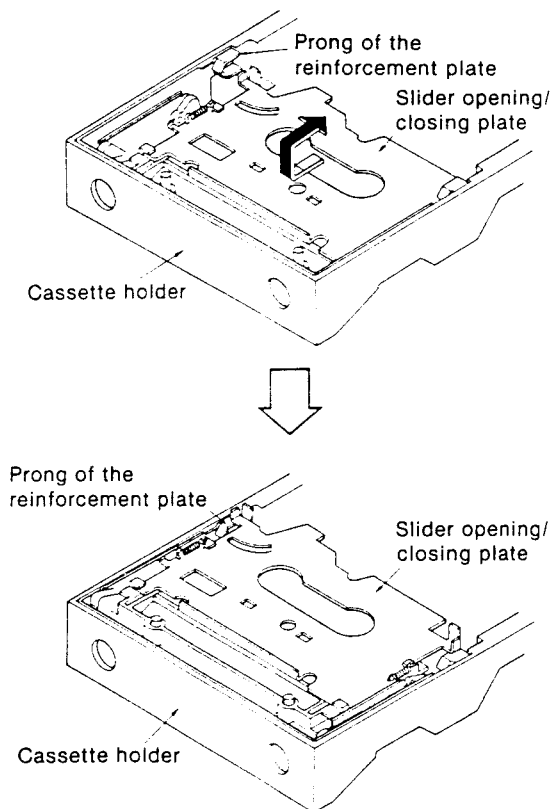


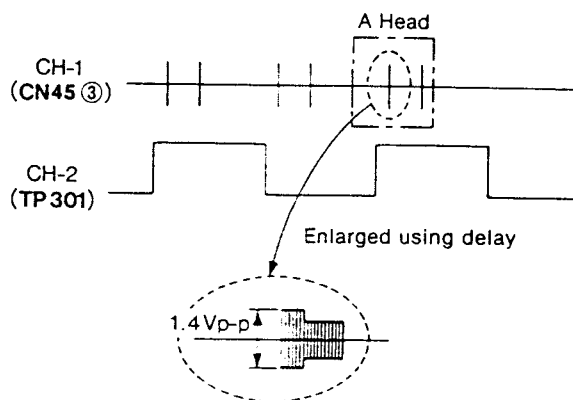
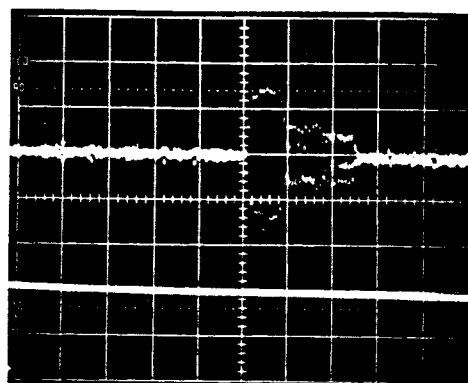
Fig. 1

3. ATF Gain Adjustment

1. Set up the oscilloscope and connect as shown below.

	CH-1	CH-2
Test point	CN45 ③ (PILOT)	TP301 (R3CP)
Volts/Div.	50mV	0.5V
Time/Div.	5msec.	
Delay	0.1msec.	
Trig.	CH-2	
AC-GND-DC	AC	DC
Adjustment point	VR107	

2. Load and play the error rate tape (RD-ER01).
3. Adjust the delay time for the dual time base to select and display the PILOT signal with the largest amplitude.
4. Adjust VR107 so that the amplitude of the PILOT signal is $1.4 \pm 0.2\text{Vp-p}$. Check the amplitudes of the other PILOT signals to insure that they are a minimum of 1.2Vp-p . If not optimize the adjustment of VR107 for the minimum signal level.



4. ATF RF Recording Level Adjustment

NOTE: This adjustment should only be made after confirming the playback "ATF Gain Adjustment" in step 3 above. Failing to do so will invalidate this adjustment.

1. Make a "0" level recording:
 - (a) Load a blank tape (RT-R60P etc.) into the unit.
 - (b) Put the unit into RECORD mode.
 - (c) Run the tape, recording for a minimum of 20 to 30 seconds.
 - (d) Rewind the tape to the beginning of the "0" level signal recording.
2. Connect and set up the oscilloscope as follows:

	CH-1	CH-2
Test point	CN45 ③ (PILOT)	TP301 (R3CP)
Volts/Div.	50mV	0.5V
Time/Div.	2msec.	
Delay Time/Div.	0.2msec.	
Trig.	CH-2	
AC-GND-DC	AC	DC
Adjustment point	VR104: Head A, VR105: Head B	

3. While playing back the blank signal portion of the tape, verify that the signal amplitude falls in the range of $1.4 \pm 0.2\text{Vp-p}$.

Standard value: $1.4 \pm 0.2\text{Vp-p}$

4. If the ATF signal is not within specification press the stop button and adjust VR104 and VR105 accordingly. Making finer adjustments as the trials approach the specified level.

LEVEL/HEAD	A: VR104	B: VR105
More than 1.6V	Turn ⤵	Turn ⤵
Less than 1.4V	Turn ⤴	Turn ⤴

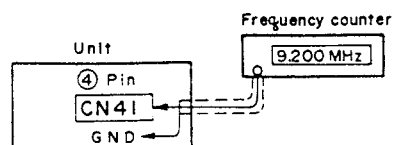
After making the adjustment, make another blank signal recording, on a different portion of the tape (use the END SEARCH feature), for 20 to 30 seconds. Rewind the tape to the beginning of the new recording and repeat from step 3 until the specification is met.

Note:

It is necessary to use a different portion of the tape for each trial because DAT does not erase the original signal, it "over writes" the new signal. Using a new portion of the tape will prevent maladjustment due to incomplete "over write" of the previously recorded signal.

1. PLL Free Run Adjustment

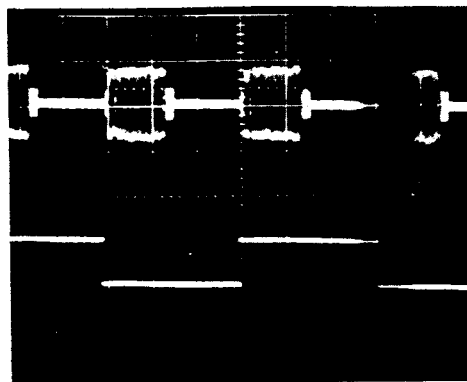
1. Connect the frequency counter as shown in figure.
2. Set the power switch to "ON".
3. Open the cassette holder drawer.
4. Adjust VR108 as required until the frequency counter reads 9.2 ± 0.2 MHz.



2. PG Phase Adjustment

1. Set up the oscilloscope and connect as shown below.

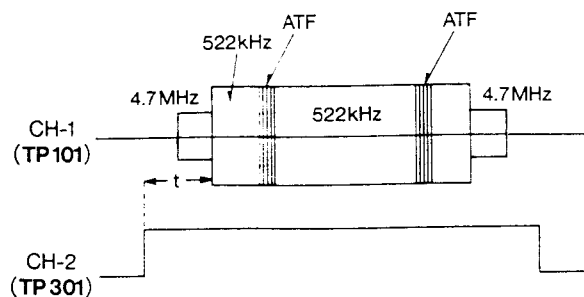
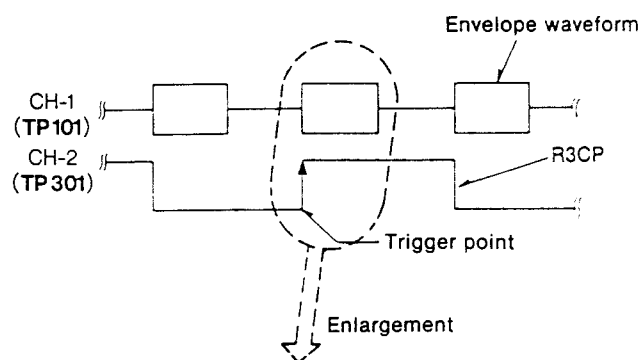
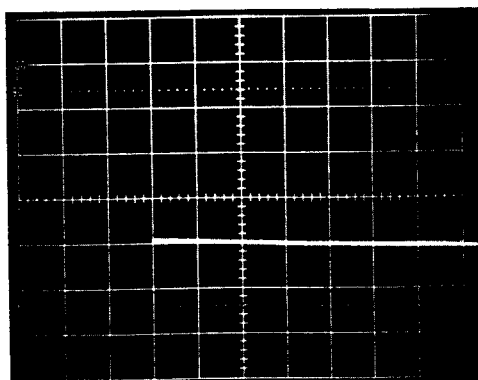
	CH-1	CH-2
Test point	TP101 (RPRF)	TP301 (R3CP)
Volts/Div.	50mV	0.5V
Time/Div.	5msec.	
Delay Time/Div.	50μsec.	
Trig.	CH-2	
AC-GND-DC	AC	DC
Adjustment point	VR201	



Note:

If the output levels of heads A and B are not equal, the "ATF RF Recording Level Adjustment" described in procedure 4 might be made improperly. Adjust the ATF RF Recording Level by following procedure 4 and then check the output level of the heads again. (At this time, it is not necessary to make adjustment described in procedure 2.)

2. Note the "t" time indicated on the PG reference tape (RD-PG01), then load and play the tape.
3. While the tape is being played, the waveform shown on the right should appear.
4. Adjust the delay time for the dual time base to display the leading edge of the CH-2 (R3CP) waveform.
5. The time from the leading edge of R3CP to the leading edge of the 522kHz portion of the RF waveform must be within $\pm 40\mu\text{sec}$ of the time indicated on the PG reference tape. Adjust VR201 as required, so that the time "t" (in the figure below), falls within specified limits.



t: Value (μsec) indicated on the standard tape $\pm 40\mu\text{sec}$.

7. BOT/EOT Detection Sensitivity Verification and Adjustment

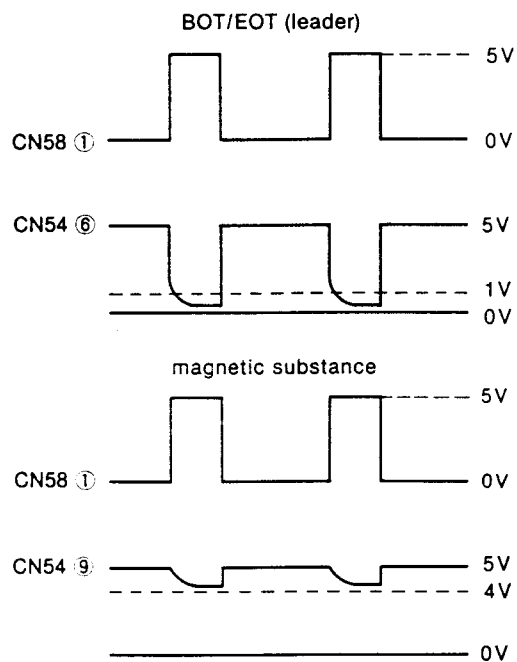
1. Make sure that the tape stops with the leader portion (the beginning and ending portion).

※ If the tape does not stop at the leader, make adjustment by following procedure outlined below.

- ① Insert a blank tape into the tape compartment of the set and press the playback button at the end of the tape.
- ② Set up the oscilloscope and connect as shown below.

	CH-1	CH-2
Test point	CN54 ⑥ (BOT/EOT) ⑨ (magnetic substance)	CN58 ①
Volts/Div.	0.2V	0.2V
Time/Div.	2msec.	
Delay	—	
Trig.	CH-2	
AC-GND-DC	AC	DC
Adjustment point	VR271	

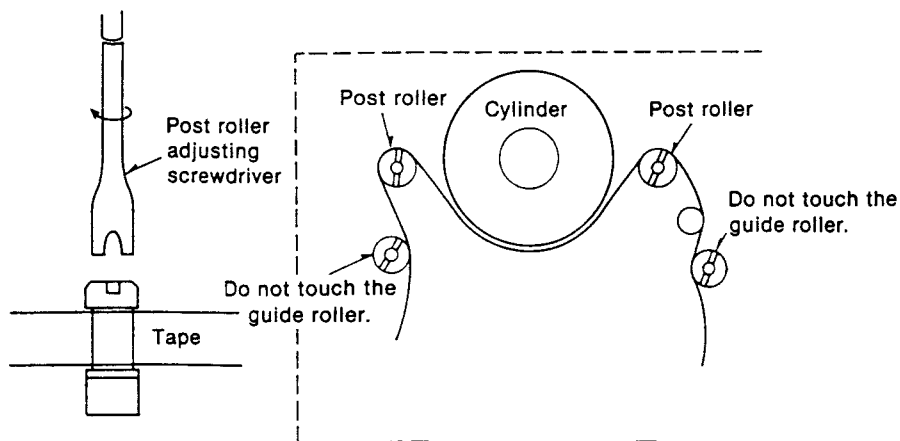
- ③ Adjust the amplitude of waveform to less than 1V at the magnetic substance and more than 4V at the leader on VR271.

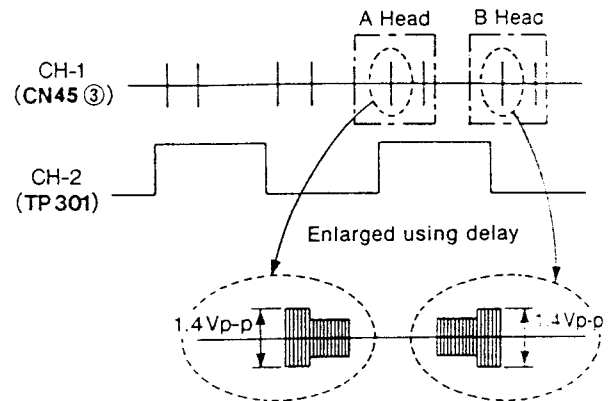
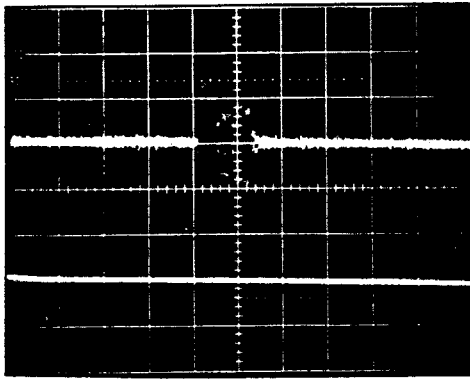


8. Linearity Adjustment

CAUTION: ONLY THE POST ROLLERS ARE USED FOR THE LINEARITY ADJUSTMENT. DO NOT ADJUST THE GUIDE ROLLERS.

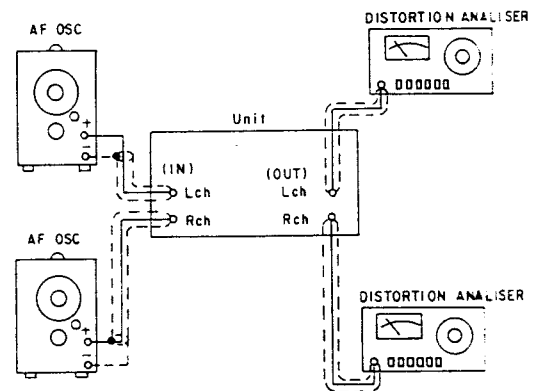
THIS ADJUSTMENT IS VERY CRITICAL AND AFFECTS COMPATIBILITY WITH OTHER DAT RECORDERS.





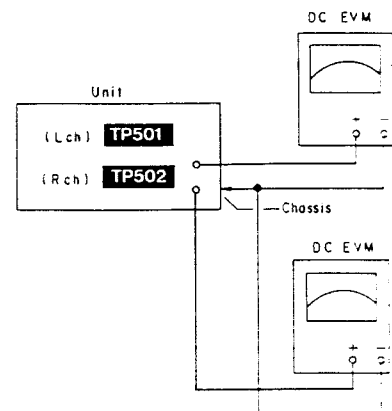
5. DAC Output Balance Adjustment

1. Load a blank tape for recording.
2. Use a signal generator to feed a 1 kHz signal to ANALOG IN.
3. Set the recorder to the record mode and adjust **INPUT VR** so that the level meter moves to **-20dB**.
4. Adjust **VR501 (Lch)** and **VR502 (Rch)** to minimize the distortion rate. (Reference distortion rate of about 0.05%)
5. After adjustment, check that the playback output is **-20dB ± 0.2dB** with respect to 0dB at 1 kHz.



6. DAC Offset Adjustment

1. Set the recorder to DIGITAL IN in the stop mode.
2. Connect a digital voltmeter to **TP501 (Lch)** and **TP502 (Rch)**.
3. Adjust **VR503 (Lch)** and **VR504 (Rch)** so that the voltage at the test point above is **0 ± 1 mV**.



■ TERMINAL FUNCTION OF IC'S

• IC101 (AN7030SE2): RF AMP.

Pin No.	Mark	I/O Division	Function
1	V _{CC} 1	I	Power supply terminal
2	ACH FB	O	Playback feed back signal (Ach)
3	ACH IN	I	Playback amp. signal (Ach)
4	GND 1	—	GND terminal
5	BCH IN	I	Playback amp. signal (Bch)
6	BCH FB	O	Playback feed back signal (Bch)
7	AREC PCM	I	RF recording level adj. terminal
8	AREC PLT		
9	AREC ATF		
10	BREC ATF		
11	BREC PLT		
12	BREC PCM		
13	REC CNT 1	I	Track pitch signal
14	REC CNT 2	I	ATF area det. signal
15	SRRF IN	I	Recording signal
16	GND 2	—	GND terminal
17	VREF	O	Reference voltage terminal (Not used, open)
18	AREC OUT	O	Recording signal (Ach)
19	BREC OUT	O	Recording signal (Bch)
20	BTL REC	O	Recording control signal
21	V _{CC} 2	I	Power supply terminal
22	REC ON	O	Recording drive terminal (REC: "H")
	PLAY ON	O	Playback drive terminal (PLAY: "H")

Pin No.	Mark	I/O Division	Function
24	HSW	I	Head switching signal
25	AR/RSEL	I	Not used, connected to power supply
26	R/PSEL	I	Recording/playback select signal (REC: "H", PLAY: "L")
27	EQ OUT	O	Equalization signal
28	EQ IN 3	I	Equalization amp. signal
29	EQ IN 2		
30	EQ IN 1		
31	BF REQ	I	Equalization amplitude drive terminal (Bch)
32	B PHASE	I	Equalization phase drive terminal (Bch)
33	B GAIN	I	Equalization gain drive terminal (Bch)
34	AF REQ	I	Equalization amplitude drive terminal (Ach)
35	A PHASE	I	Equalization phase drive terminal (Ach)
36	A GAIN	I	Equalization gain drive terminal (Ach)
37	SV RF	O	Playback signal
38	GND 3	—	GND terminal
39	A INT	I	Playback amp. signal (Ach)
40	B INT	I	Playback amp. signal (Bch)
41	B INT IN	O	Playback amp. signal (Bch)
42	A INT IN	O	Playback amp. signal (Ach)

1. Connect and set up the oscilloscope as follows:

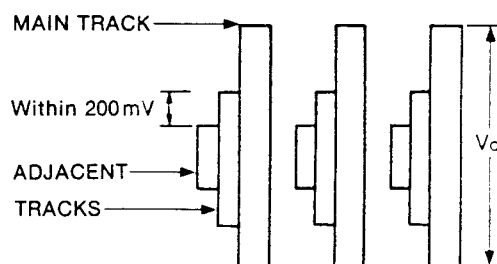
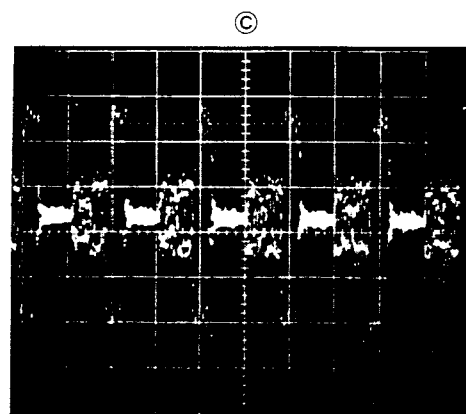
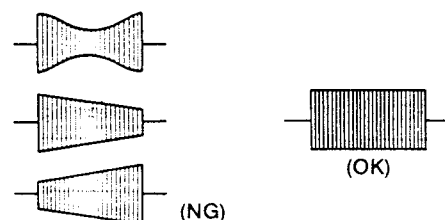
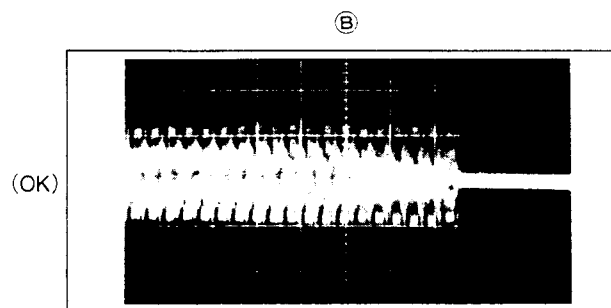
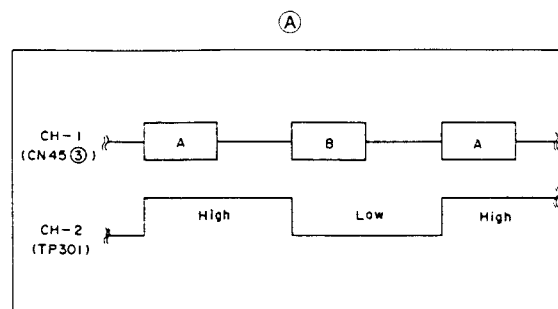
	CH-1	CH-2
Test point	CN45 ③ (PILOT)	TP301 (R3CP)
Volts/Div.	0.2V	2.0V
Time/Div.	Ⓐ 5msec. Ⓑ 1msec. Ⓒ 0.2msec.	
Delay Time/Div.	—	
Trig.	CH-2	
AC-GND-DC	AC	DC
Adjustment point	Post rollers (only)	

- Load and play the linearity adjustment tape (RD-LR02). Please use the recorded signal portion on tape (after 600 count from beginning of tape)
- Use the leading edge of the CH-2 (R3CP) waveform to trigger the oscilloscope to monitor the head "A" side of the RF signal envelope.
- While the tape is playing, gradually adjust the height of the POST ROLLERS until the RF envelope (B) is rectangular.

CAUTION 1:
ADJUSTMENTS MUST BE MADE VERY GRADUALLY.

CAUTION 2:
DO NOT "OVER ADJUST" the POST ROLLERS. It is unlikely that the POST ROLLERS will require more than a QUARTER of a turn in either direction to make the waveform rectangular.

- Adjust VR107 so that the amplitude (V_0) of the PILOT waveform Ⓒ is 1.0Vp-p.
- On the PILOT signal waveform Ⓒ, verify that the amplitude difference between adjacent tracks falls **within 200mV** (See figure below). If not, adjust the post rollers.
- Play the standard test tape (RD-ER01), and do "PG Phase adjustment" and "ATF gain adjustment" again.



• IC201 (MN6742SDR): Servo processor

Pin No.	Mark	I/O Division	Function
1	OP10A	O	Cylinder rotative stop signal
2	SCK	I	Serial clock signal
3	SDA	I/O	Serial data signal
4	OSC 1	I	System clock (8MHz) signal
5	OSC 2	O	
6	NRST	I	Reset signal
7	NC	—	Not connection
8	OP20A	O	SSP ready signal
9	NC	—	Not connection
10	V _{SS}	—	GND terminal
11	VHS	—	Not used, open
12	OP 101	O	CAPFG/RLFGT select signal
13	TP 2	O	R3CP/RLFGT select signal
14	TP 3	I	PLL off-set/parallel data signal
15	TP 4		
16	TP 5		
17	TP 6		
18	TP 7	I	PLL off-set/data effective flag terminal
19	TP 8	I	Not used, connected to power supply
20	MOS	I	Serial port/strobe signal
21	TST	I	Test mode terminal (Normal, connected to GND)
22	ENC	—	Connected to GND terminal
23	NC	—	Not connection
24	NC		
25	V _{DD}	I	Power supply terminal
26	NC	—	Not connection
27	RSW	—	Not used, open
28	HAS	O	A/D input select signal
29	IVM	—	Not used, connected to GND
30	VLP	—	Not used, open
31	STM	I	R3TU or RLFGT (64 P/R) signal
32	STR	I	Comparator reference signal of STM input

Pin No.	Mark	I/O Division	Function
33	CAE	O	Capstan velocity control signal
34	CYE	O	Cylinder velocity control signal
35	END	I	VREF or ATFTER voltage signal
36	VSX	I	CYLPG signal
37	ASH 1	I	Capstan FG or RLFGT signal after EXOR
38	NC	—	Not connection
39	AFB 1	O	Inverter amp. signal of ATFTER input (Not used, open)
40	NC	—	Not connection
41	AFG 1	I	ATF tracking error voltage terminal
42	ASH 2	O	Not used, connected to GND
43	AFB 2	O	Not used, open
44	NC	—	Not connection
45	AFG 2	I	Reference voltage terminal
46	VDA	I	Power supply terminal
47	VSA	—	GND terminal
48	ORE	O	Reference voltage terminal
49	IRE	I	
50	GND	—	GND terminal
51	IPL	O	Not used, open
52	NC	—	Not connection
53	CLP	I	Not used, connected to GND
54	CP 1	O	Not used, open
55	CP 2	I	Supply reel FG signal
56	NC	—	Not connection
57	NC		
58	CN 1	O	Not used, open
59	CN 2	I	Not used, connected to GND
60	CTL	O	Not used, open
61	PFG	I	Cylinder FG signal
62	PGM	I	Not used, connected to GND
63	CUL	O	Capstan rotative direction signal
64	NC	—	Not connection

• IC202 (MN53020SDQ): ATF

Pin No.	Mark	I/O Division	Function
1	NSNC	O	SYNC det. monitor terminal
2	SVAL	I	ATF select terminal
3	PCMOK	I	PCM playback monitor terminal
4	SPE	O	Starting pulse of counter track lock
5	SP 2	O	Sampling pulse signal for pilot signal of adjacent track
6	SP 1		
7	DCYLPG	I	Cylinder PG signal
8	DCAPFG 1	I	Capstan FG signal
9	DCAPFG 2		
10	DRLFGE	I	Take-up reel FG signal
11	DCYLFG	I	Cylinder FG signal
12	SYNC	I	ATF sync. det. terminal
13	NRST	I	Reset signal
14	R3CP	I	Timing signal for RF envelope signal control
15	ENVF		
16	FCH	I	System clock signal (9.408MHz)
17	V _{DD}	I	Power supply terminal
18	V _{SS}	—	GND terminal
19	MODE 1	I	SYNC det. select terminal (Not used, connected to GND)
20	HFCH	I	Clock signal for PLL off-set data
21	PLLOFS	I	PLL off-set data signal

Pin No.	Mark	I/O Division	Function
22	TEST 6	—	Not used, connected to GND
23	P MODE	I	Pulse width select terminal (Not used, open)
24 }	TEST 1 }	I	Test terminal (Not used, connected to GND)
28	TEST 5		
29	SPHT	—	Not used, open
30	HSWS	O	Head switching signal (33.33Hz)
31	HSWR		
32	SEL A	I	CAPFGTU signal select terminal
33	SEL B	I	R3TU signal select terminal
34	PLL 0	O	Output signal after decoded 4 bit parallel data of PLLOFS
35	PLL 1		
36	PLL 2		
37	PLL 3		
38	MODE 2	—	Not used, open
39	V _{SS} 2	—	GND terminal
40	V _{DD} 2	I	Power supply terminal
41	R3TU	O	Building-up edge signal of R3CP/DRLFGE
42	CAPFGTU	O	Capstan FG signal/Take-up reel FG signal
43	CAPER	O	Capstan rotative direction control signal
44	NLNR	O	Track linearity monitor terminal

• IC203 (AN8320NFA): Linear servo

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	FG1 AO	O	Capstan FG signal	26	LEDH 2	—	Constant current terminal (Not used, open)
2	FG1 AI	I	Capstan FG (—) signal	27	CYL FG	O	Cylinder FG signal
3	FG1 FI	I	Frequency characteristic setting terminal	28	CYF GSI	I	Cylinder schmidt comparator terminal
4	CYL PG	O	Cylinder PG signal	29	CYF GAO	O	Cylinder op. amp. terminal
5	PGVR	I	PG delay time adj. terminal	30	CYF GAI	I	Cylinder op. amp. (—) terminal
6	CYPGI	I	PG schmidt comparator terminal	31	NST BY	I	STAND BY signal (Not used, connected to power supply)
7	GND	—	GND terminal	32	TF GAI	I	Take-up reel op. amp. (—) terminal
8	SVRF	I	ATF terminal	33	TF GAO	I	Take-up reel op. amp. terminal
9	CPD	—	Det. capacity connection terminal	34	TF GSI	I	Take-up reel schmidt comparator terminal
10	CCI	O	Full-wave rectification buffer terminal	35	RLFGT	O	Take-up reel FG signal
11	CCO	I	Clamp circuit terminal	36	RLFGS	O	Supply reel FG signal
12	SP 1	I	SP 1 terminal	37	SF GSI	I	Supply reel schmidt comparator terminal
13	SP 2	I	SP 2 terminal	38	SF GAO	O	Supply reel op. amp. terminal
14	VSPE	I	SPE setting terminal	39	SF GAI	I	Supply reel op. amp. terminal
15	SPE	I	SPE terminal	40	V _{CC}	I	Power supply terminal
16	CSH	I	Hold capacity connection terminal	41	FG 2FI	—	Frequency characteristic setting terminal
17	ATFTER	O	ATF control command signal	42	FG 2AI	I	Capstan FG (—) signal
18	CFB	—	Phase compensation terminal	43	FG 2AO	O	Capstan FG signal
19	V _{CC}	I	Power supply terminal	44	FG 2SI	I	Capstan FG schmidt comparator terminal
20	ATFON	I	ATF ON terminal (Not used, connected to power supply)	45	CPFG 2	O	Capstan FG signal
21	PTBIA	—	Photo-transistor bias terminal (Not used, open)	46	FILSLD	I	Frequency characteristic DOWN terminal
22	VREF	O	Reference voltage terminal	47	CPFG 1	O	Capstan FG signal
23	LEDR 1	I	Bias voltage terminal	48	FG 1SI	I	Capstan FG schmidt comparator terminal
24	LEDH 1	—	Constant current terminal (Not used, open)				
25	LEDR 2	I	Bias voltage terminal				

• IC102 (AN7035SCE2): Playback PLL

Pin No.	Mark	I/O Division	Function
1	LPF	O	Buffer amp. 1 reference terminal
2	GND 1	—	GND terminal
3	ENVC	O	ENV time constant setting terminal
4	ENVR	I	ENV threshold voltage adj. terminal
5	RFENV	O	RF envelope signal
6	RSENV	O	RSENV time constant setting terminal
7	RSRF	I	RF signal
8	DELOUT	O	RF signal
9	DELIN 1	I	Delay (45°) signal
10	DELIN 2	I	Delay (90°) signal
11	PDOUT	O	Phase comparator signal
12	VREF	I	V/I converter reference voltage terminal
13	VCOV	I	OSC frequency control terminal
14	R/P	I	Recording/playback select terminal (Not used, connected to GND)
15	VCOR	I	PLL free run adj. terminal

Pin No.	Mark	I/O Division	Function
16	V _{CC} 1	I	Power supply terminal
17	VCOC 1	O	VCO terminal
18	VCOC 2	O	VCO terminal
19	V _{CC} 2	I	Power supply terminal
20	PLL CP 1	O	Clock (2CK) signal (Not used, open)
21	PLL CP 2	O	Clock (CK) signal
22	DEMCOD	O	NRZl demodulated signal for playback signal with PLL
23	SVSYNC	O	ATF sync. signal
24	GND 2	—	GND terminal
25	OP OUT 3	O	ATF 3 signal
26	OP IN 3	I	ATF 3 signal
27	OP OUT 2	O	ATF 2 signal
28	OP IN 2	I	ATF 2 signal
29	OP OUT 1	O	ATF 1 signal
30	OP IN 1	I	ATF 1 signal
31	VREF	I	Reference voltage terminal
32	SYNC IN	I	Output amp. 1 (+) signal

• IC405 (AK5326-VP): A/D converter

Pin No.	Mark	I/O Division	Function
1	AGND	—	Analog GND terminal
2	AINL	I	L ch analog signal input terminal
3	ZEROL	I	L ch zero level input terminal
4	VA+	I	Analog power supply terminal
5	VA-	I	Analog power supply terminal
6	APD	I	Analog power down terminal
7	ACAL	I	Analog calibration terminal
8	NC	—	Not connected
9	DCAL	O	Digital calibration terminal
10	DPD	I	Digital power down terminal
11	TST 1	I	Test terminal (Connected to GND)
12	TST 2		
13	TST 3		
14	L/R	I	Input channel select terminal

Pin No.	Mark	I/O Division	Function
15	SCLK	I	Serial data output clock terminal
16	SDATA	O	Serial data output terminal
17	VD1+	I	Digital power supply terminal
18	VD2+		
19	DGND	—	Digital GND terminal
20	DCLKA	I	Digital system clock terminal
21	NC	—	Not connected
22	ACLKA	O	Analog system clock terminal
23	CLKIN	I	Master clock terminal
24	LGND	—	Digital GND terminal
25	VL+	I	Digital power supply terminal
26	ZEROR	I	R ch zero level input terminal
27	AINR	I	R ch analog signal input terminal
28	VREF	O	Reference voltage terminal

• IC301 (MN188161SDM): System control

Pin No.	Mark	I/O Division	Function
1	V _{DD}	I	Power supply terminal
2 3 9	P 67 (SPDT 7) P 60 (SPDT 0)	I/O	Signal processor transfer address and data bus terminal
10	P 57 (SPRDY)	I	Signal processor data transfer command signal
11	P 56 (PBLANK)	I	Blank skip select ("H": no skip, "L": skip)
12	P 55 (R3CP)	I	Frame sync. signal
13	P 54 (PMID6B)	I	Main ID6 select terminal
14	P 53 (PMID6A)		
15	P 52	I	Not used, connected to resistor
16	P 51	I	Not used, connected to resistor
17	P 50 (PDIOSEL)	I	D I/O select terminal ("H": AES/EBU, "L": IEC)
18	EXI	—	Not used, connected to GND
19	EXO	—	Not used, open
20	NRST 1	I	Reset signal ("L": RESET)
21	P 47 (NSERVST)	O	Reset signal to servo block
22	P 46	—	Not used, open
23	P 45	—	
24	P 44	—	
25	P 43 (SLAD)	O	DIGITAL IN PLL/crystal select terminal ("L": PLL, "H": crystal)
26	P 42 (XCK32)	O	32kHz OSC control ("H": OSC, "L": STOP)
27	P 41 (XCK44)	O	44.1kHz OSC control ("H": OSC, "L": STOP)
28	P 40 (XCK48)	O	48kHz OSC control ("H": OSC, "L": STOP)
29	P 27 (NPRDY)	I	Transfer ready signal from panel control
30	OSC 1	I	Crystal OSC terminal
31	OSC 2	O	
32	V _{SS}	—	GND terminal
33	XI	—	Not used, open
34	XO	—	
35	P 26	—	Not used, connected to power supply
36	P 25 (RF ENV)	I	RF envelope signal

Pin No.	Mark	I/O Division	Function
37	P 37 (FLGCLK)	O	Clock signal of flag counter
38	P 36 (FLGDT)	O	Data signal of flag counter
39	P 35 (TP)	O	Track pitch signal ("L") (Not used, open)
40	P 34 (UNLOCK)	O	DIGITAL-IN PLL unlock signal ("L": det.)
41	P 33	—	Not used, open
42	P 32 (DISCHG)	O	DIGITAL-IN PLL discharge signal
43	P 31 (DINPLINH)	O	DIGITAL-IN PLL prohibition signal ("H": prohibition)
44	P 30 (ANRST)	O	Reset signal ("H": RESET) to DAC
45	P 21 (HSW)	I	Head switching pulse signal
46	P 20 (NMRDY)	I	Transfer command signal from mechanism control
47	P 01	—	Not used, open
48	P 00	—	
49	P 17 (PTXD)	O	Serial data transmission terminal
50	P 16 (PRXD)	I	Serial data reception terminal
51	P 15 (PCLK)	O	Serial data transmission/reception clock signal
52	P 14	—	Not used, open
53 56	P 13 (MDT 3) P 10 (MDT 0)	I/O	Transfer data bus of mechanism control
57	P 77	—	Not used, open
58	P 76 (NDEMP)	O	de-emphasis signal
59	P 75 (SGMTG)	O	Muting signal
60	P 74 (DOUTTH)	O	Digital out through select ("H": through)
61	P 73 (NRST 2)	O	Reset signal
62	P 72 (MSTB)	O	Transfer command terminal of mechanism control
63	P 71 (SPSTB)	O	Signal processor strobe signal
64	P 70 (SPAW)	O	Signal processor address setting signal

• IC271 (MN17541SDN2): Mechanism control

Pin No.	Mark	I/O Division	Function
1	NSBOA	I	Serial data signal
2	NRST	I	Reset signal
3	NSYNC	—	Not used, open
4	X 2		
5	X 1		
6	V _{SS}	—	GND terminal
7	OSC 2	O	Clock signal
8	OSC 1	I	
9	V _{DD}	I	Power supply terminal
10	NTC1B	I	Supply reel FG signal
11	NIRQ 0	I	Take-up reel FG signal
12	NIRQ 1	I	Transfer strobe signal of system control
13	P00 (MSTB)		
14	P 01 (MRDY)	O	Transfer ready signal of system control
15	P 02 (NSSTB)	O	Transfer strobe signal
16	P 03 (NSRDY)	I	Transfer ready signal
17	P 10 (ATFGT)	O	ATF gain ($\times 1/2$) select terminal
18	P 11 (REWGT)	O	REW FG • PG gain select terminal
19	P 12 (LPMOD)	—	Not used, open
20	P 13 (MODMT0)	O	Mode motor control signal
21	P 20 (MODMT1)		
22	P 21 (MODMT2)		
23	P 22	—	Not used, open
24	P23 (PLG)	O	Plunger control signal
25	P 30	—	Not used, open
26	P 31		
27	P 32 (LOAD 1)	O	Tray motor control (+) terminal
28	P 33 (LOAD 2)	O	Tray motor control (–) terminal
29	P 40	—	Not used, open
30	P 41 (DEW)	I	Dew sensor det. signal
31	P 42 (EOT)	I	Tape end det. signal
32	P 43 (BOT)	I	Tape begin det. signal
33	P 50 (OPEN)	I	Cassette open det. signal

Pin No.	Mark	I/O Division	Function
34	P 51 (CLOSE)	I	Cassette close det. signal
35	P 52 (LOAD S)	I	Loading start det. signal
36	P 53 (LOAD E)	I	Loading stop det. signal
37	P 60 (SW 2)	O	Test terminal (Not used, open)
38 } 40	P 61 (MMOD 0) } P 63 (MMOD 2)	I	Tape mode det. signal
41 } 44	P 70 (MBUS 0) } P 73 (MBUS 3)	I	Transfer bus terminal of system control
45	P 80 (RCC)	—	Not used, open
46	P 81 (FIL)	O	FILTER select signal
47	P 82 (ATFON)	—	Not used, open
48	P 83 (NSTBY)	—	Not used, open
49	P 90 (NSRST)	O	Reset signal
50	P 91 (LEDDRV)	O	Tape begin/end LED control signal
51	P 92 (PCMOK)	I	PCM playback det. signal
52	P 93 (SVAL 0)	I	ATF effective position setting terminal
53	NEXPS	I	Not used, connected to power supply
54	PA 0 (NSNCOK)	I	ATF sync. det. terminal
55	PA 1 (NLNOK)	I	Track linearity det. terminal
56	PA 2 (CAPER)	I	Capstan rotative direction command signal
57	PA 3	—	Not used, open
58 59	PB 0 (TH 1) PB 1 (TH 2)	I	Tape hall det. signal
60	NSBTB	I	Muting det. signal
61 62	NSBIB NSBOB	I	Test terminal (Not used, open)
63	NSBTA (SCLK)	O	Serial transfer clock signal
64	NSBIA (SDAT)	I/O	Serial transfer data signal

Pin No.	Mark	I/O Division	Function
79	SPDT 7	I/O	Address and data bus terminal
80	SPDT 6		
81	SPDT 5		
82	SPDT 4		
83	SPDT 3		
84	SPDT 2		
85	SPDT 1		
86	SPDT 0		
87	V _{SS}	—	GND terminal
88	TEST 4	—	Not used, connected to GND
89	V _{DD}	I	Power supply terminal
90	SPAW	I	Signal processor address setting terminal
91	SPSTB	I	Signal processor strobe signal
92	SPRDY	O	Data transfer command signal
93	UNLOK	O	PLL unlock signal
94	DISYND	—	Not used, open
95	NSTBY	I	Not used, connected to power supply
96	NRST	I	Reset signal
97	M7CK	—	Master clock signal (Not used, open)
98	R6CP/ (ENVT)	O	Timing signal for RF envelope signal control
99	R3CP		
100	V _{SS}	—	GND terminal
101	SRRF	O	Recording signal

Pin No.	Mark	I/O Division	Function
102	V _{DD}	I	Power supply terminal
103	SRPR	O	Recording/playback select signal (REC: "H", PLAY: "L")
104	SRWND 2	O	ATF area det. signal
105	SRWND 1	O	Track pitch signal
106	PBDT	I	Playback signal
107	PBCK	I	Playback envelope signal
108	RFMSK	O	Not used, open
109	PLLOFS	O	PLL off-set information signal
110	HFCH	O	System clock signal
111	VFPLFS	O	PLL OFS effective information signal
112	EXFCH	—	Not used, connected to GND
113	EEMD	—	Not used, connected to GND
114	V _{SS}	—	GND terminal
115	SL NRZI	—	Not used, connected to GND
116	SELF CH0		
117	SELF CH1		
118	V _{DD}	I	Power supply terminal
119	M9CP	O	Master clock signal
120	HSW	I	Head switching signal
121	NR TRST	—	Not used, connected to power supply
122	SUBWND	—	Not used, open
123	IPF	O	Output terminal for flag counter
124	SUBC 1		

• IC501 (YM3404B): Digital filter

Pin No.	Mark	I/O Division	Function
1	SHL	O	1 DAC (ST="L"): Lch Deglitcher signal 2 DAC (ST="H"): L/Rch Deglitcher signal
2	X 0	O	Clock output (Not used, open)
3	X 1	I	Clock input
4	VDD 2	I	Power supply terminal
5	BCI	I	Bit clock signal
6	SDSY	I	R/L signal
7	SDI	I	Data input
8	VDD	I	Power supply terminal

Pin No.	Mark	I/O Division	Function
9	DLO	O	1 DAC (ST="L"): L/Rch data output terminal 2 DAC (ST="H"): Lch data output terminal
10	RDO	O	Rch data output (Not used, open)
11	WCO	O	Output data word clock
12	BCO	O	Bit clock signal
13	VSS	—	GND terminal
14	ST	I	1 DAC/2 DAC selector terminal
15	FEN	I	System clock selector terminal
16	SHR	O	1 DAC (ST="L"): R ch deglitch signal

• IC351 (MN6624): Digital signal processor

Pin No.	Mark	I/O Division	Function
1	PCMCIF	O	Flag counter terminal
2	IDPP		
3	IDP		
4	V _{DD}	I	Power supply terminal
5	TESTS	—	Not used, connected to GND
6	V _{SS}	—	GND terminal
7	CKIO FS	—	Not used, open
8	CKIO 128	O	Test terminal
9	CKIO 512	—	Not used, open
10	NDALOAD	—	Not used, open
11	DADAT	O	DA data signal
12	DALRCK	O	LR discrimination signal
13	DABCK	O	Serial bit clock signal
14	DAMCK	—	Not used, open
15	V _{DD}	I	Power supply terminal
16	TEST 6	—	Not used, open
17	V _{SS}	—	GND terminal
18	ADDAT	I	AD data signal
19	ADLRCK	O	LR discrimination signal (Not used, open)
20	ADBCK	O	Serial bit clock signal
21	ADMCK	O	External clock signal (Not used, open)
22	TX	O	Digital signal
23	RX	I	
24	VCOS L32	—	Not used, open
25	VCOS L44		
26	VCOS L48		
27	DIO REF	O	Digital signal (PLL control)
28	DIO VAR	O	
29	V _{DD}	I	Power supply terminal
30	DI 512	I	Digital signal (512FS)
31	V _{SS}	—	GND terminal
32	XO 4	—	Not used, open
33	XI 4	I	Crystal terminal (32kHz × 512)
34	TEST 0	—	Not used, connected to GND
35	XO 3	—	Not used, open
36	XI 3	I	Crystal terminal (44.1kHz × 512)
37	TEST 1	—	Not used, connected to GND
38	XO 2	—	Not used, open
39	XI 2	I	Crystal terminal (48kHz × 512)

Pin No.	Mark	I/O Division	Function
40	V _{DD}	I	Power supply terminal
41	XO 1	O	Crystal OSC terminal
42	XI 1	I	
43	V _{SS}	—	GND terminal
44	PC OUT	—	Not used, open
45	RAD 0	O	RAM address bus terminal
46	RAD 1		
47	RAD 2		
48	RAD 3		
49	RAD 4		
50	RAD 5		
51	RAD 6		
52	RAD 7		
53	V _{DD}	I	Power supply terminal
54	TEST 2	—	Not used, connected to GND
55	V _{SS}	—	GND terminal
56	RAD C	O	RAM address bus terminal
57	RAD E		
58	NWE	O	Write enable for memory
59	RAD D	O	RAM address bus terminal
60	RAD 8		
61	RAD 9		
62	RAD B		
63	NOE	O	Output enable for memory
64	RAD A	O	RAM address bus terminal
65	V _{DD}	I	Power supply terminal
66	NCS	O	Chip select terminal for memory
67	V _{SS}	—	GND terminal
68	RDT 7	I/O	RAM data bus terminal
69	RDT 6		
70	RDT 5		
71	RDT 4		
72	RDT 3		
73	RDT 2		
74	RDT 1		
75	RDT 0		
76	V _{SS}	—	GND terminal
77	TEST 3	—	Not used, connected to GND
78	V _{DD}	I	Power supply terminal

• IC601 (M50754-165FP): Panel control & FL drive

Pin No.	Mark	I/O Division	Function	Pin No.	Mark	I/O Division	Function
1	V _{SS}	—	GND terminal	33	P 55	I	Key return signal
2	P 27	O	Input select signal (DIGITAL→ANALOG)	34	P 54		
3	P 26	O	LED display drive terminal (PAUSE)	35	VP	I	Power supply terminal for FL drive
4	P 25	O	LED display drive terminal (REC)	36	P 51	O	Segment signal for FL drive
5	P 24	O	LED display drive terminal (PLAY)	37	P 50		
6 } 8	P 23 } P 21	I	Key return signal	38 } 45	P 17 } P 10		
9	P 20	O	Buffer control signal (Not used, connected to GND)	46	NC	—	Not connection
10	NC	—	Not connection	47	P 07	O	Segment signal for FL drive
11	NPRDY	O	Ready signal	48	P 06		
12	NTRCLK	I/O	Serial data transmission/reception clock signal	49	P 05		
13	RXD	O	Serial data transmission signal	50	P 04		
14	TXD	I	Serial data reception signal	51	P 03		
15	P 33	—	Not connection	52	P 02		
16	P 32	—	Connected to GND	53	P 01		
17	P 31	O	LED display drive terminal (S. PLAY)	54	P 00		
18	P 30	O	LED display drive terminal (A. PNO)	55	P 47		
19	INT 1	I	Remote control signal	56	P 46		
20	INT 2	I	Not used, connected to power supply	57	P 45		
21	CNV _{SS}	—	GND terminal	58	P 44		
22	RST	I	Reset signal ("L": RESET)	59	P 43		
23	NC	—	Not connection	60	P 42		
24	X IN	I	Master clock terminal (6MHz)	61	P 41		
25	X OUT	O		62	P 40		
26	NC	—	Not connection	63	V _{CC}	I	Power supply terminal
27	X CIN	—	Not used, connected to GND	64	V _{CC}		
28	X COUT	—	Not used, open	65	V _{SS}	—	GND terminal
29	V _{SS}	—	GND terminal	66	P 65	O	Digit signal for FL drive and key scan signal
30	NC	—	Not connection	67	P 64		
31	P 57	I	Key return signal	68	P 63		
32	P 56			69	P 62		
				70	P 61		
				71	P 60		
				72	NC	—	Not connection

• IC502 (MN53010PEH): Serial/Parallel converter

Pin No.	Mark	I/O Division	Function
1	WCO	O	Output data word clock (DALO, DBLO, DARO, DBRO)
2	DARO	O	Rch data output, (+) terminal
3	DBRO	O	Rch data output, (–) terminal
4	RST	I	Reset terminal, input data to "0"
5	SVDD	I	Power supply terminal
6	SVSS	I	GND terminal
7	F2DAC	I	"H": 2DAC 18-bit "L": 2DAC 17-bit
8	FLOAT	I	"H": 4DAC 18-bit "L": 4DAC 17-bit
9	PHASE	I	"H": Phase inversion "L": Normal mode
10	LRCK	I	Inverter input
11	NLRCK	O	LRCK signal inverter output
12	SIN	I	Data input
13	WCI	I	Input data word clock
14	BCI	I	Input data bit clock
15	VSS	—	GND terminal
16	NC	—	Not connected
17	VDD2	I	Power supply terminal
18	SHR	I	Rch Deglitcher signal

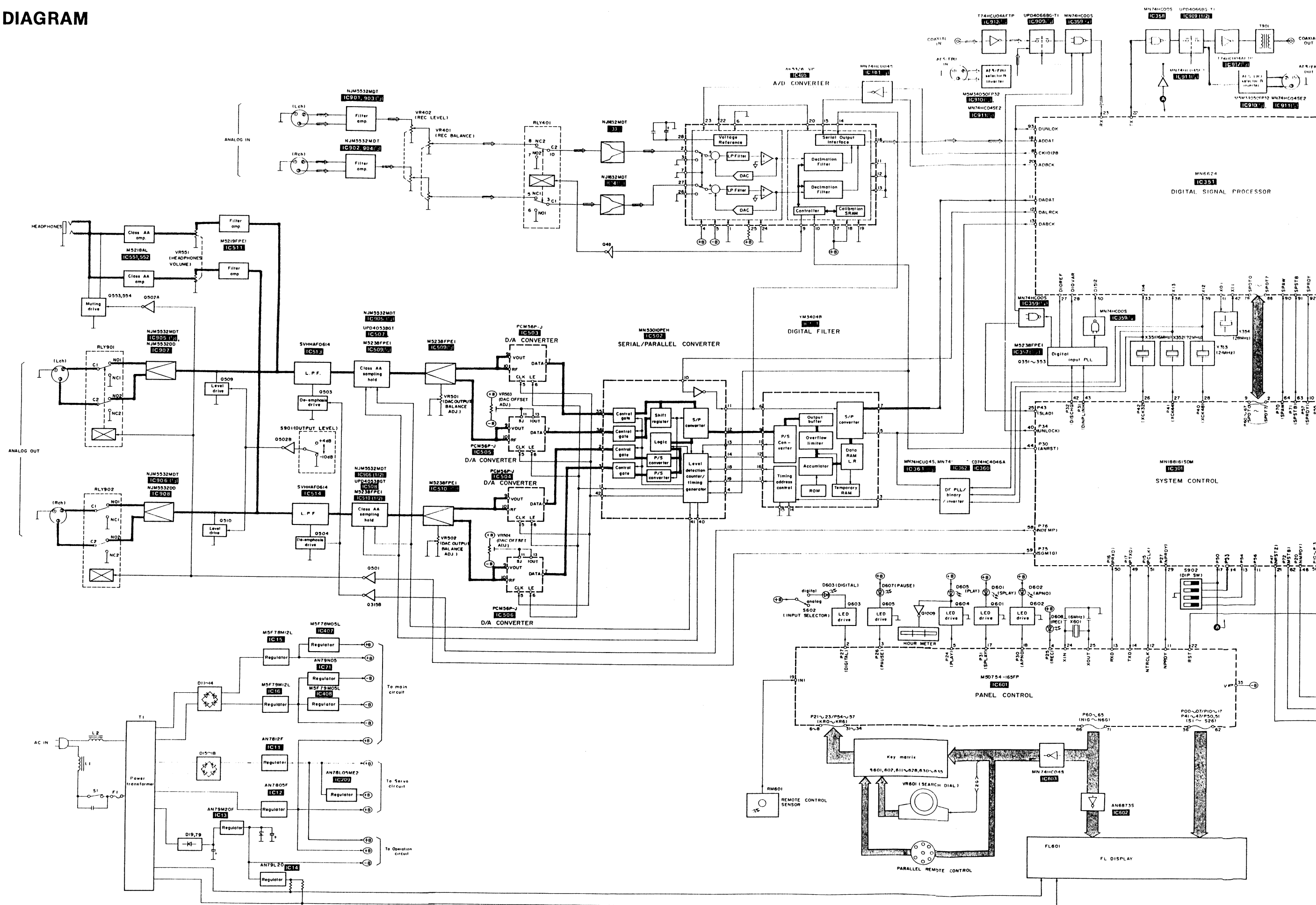
Pin No.	Mark	I/O Division	Function
19	SHL	I	Lch Deglitcher signal
20 } 31	NC	—	Not connected
			NORMAL MODE delay: 180ms TEST MODE delay: 1.45ms TEST MODE delay: 0.73ms TEST MODE delay: 0ms
32	NTEST 1	I	H L H L
33	NTEST 2	I	H H L L
34	NTEST 3	I	"H": Normal mode "L": Reset
35	DALO	O	Lch data output, (+) terminal
36	DBLO	O	Rch data output, (–) terminal
37	VDD	I	Power supply terminal
38	VSS2	—	GND terminal
39	NC	—	Not connected
40	GAIN	O	Gain selector signal [H: 0~–12dB L: below –12dB]
41	SH	O	Deglitch signal [H: sample L: Hold]
42	BCO	O	Output data bit clock

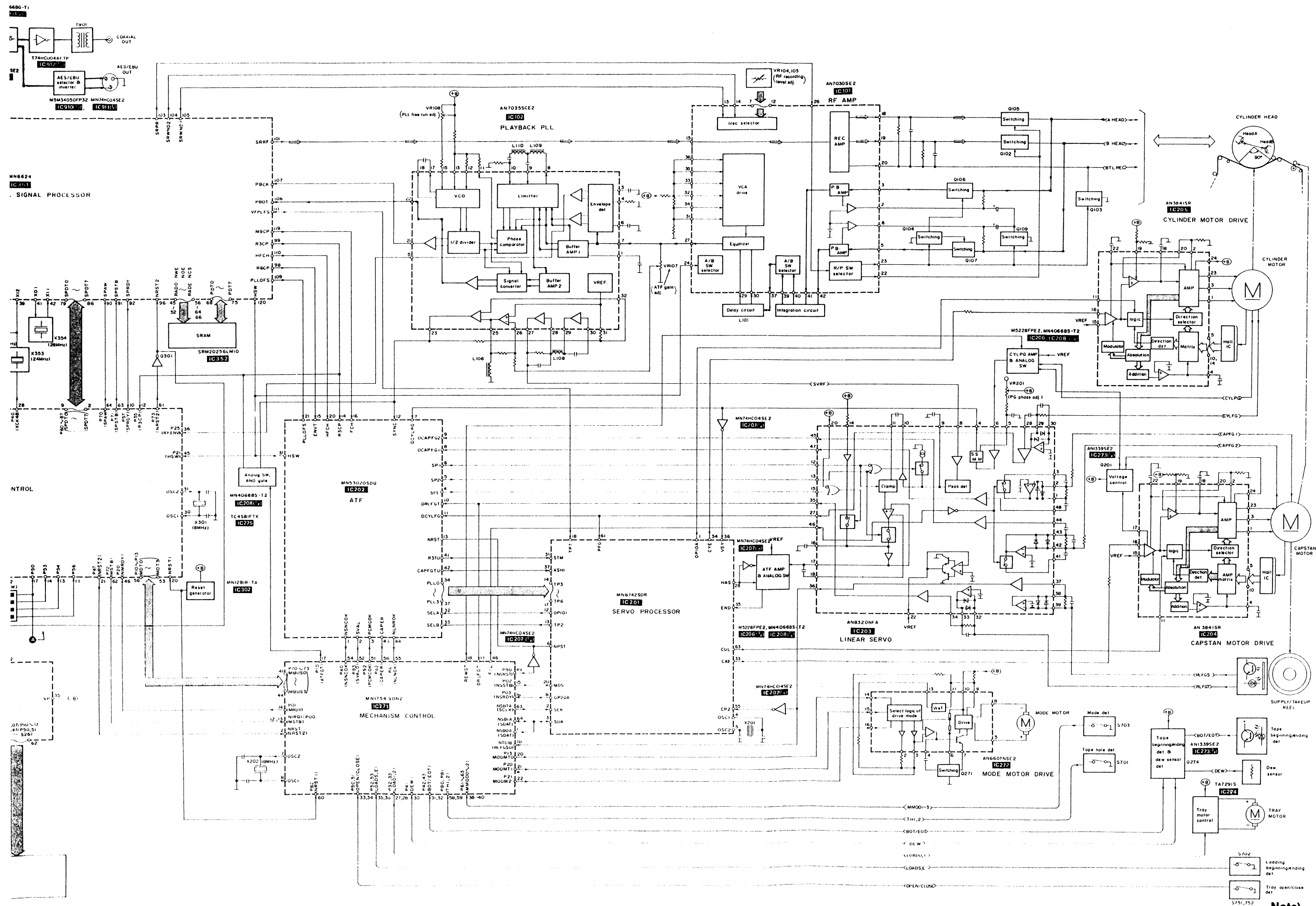
• IC503~IC506 (PCM56P-J): D/A converter

Pin No.	Mark	I/O Division	Function
1	–VS	I	Power supply terminal
2	DG	—	GND terminal
3	+VL	I	Power supply terminal
4	NC	—	Not connection
5	CLK	I	Clock signal
6	LE	I	Latch enable control signal
7	DATA	I	Data signal
8	–VL	I	Power supply terminal
9	V OUT	O	Voltage output terminal

Pin No.	Mark	I/O Division	Function
10	RF	O	Data signal
11	SJ	I	Operation amp. supply terminal
12	A • G	—	GND terminal
13	I OUT	O	Current output terminal
14	MSB	I	MSB adj. terminal (Not used, open)
15	R IN	—	Not used, open
16	+VS	I	Power supply terminal

BLOCK DIAGRAM



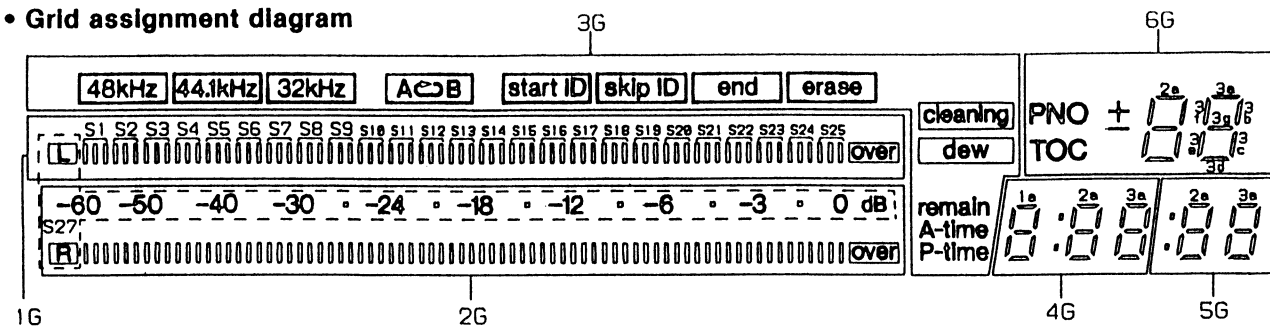


Note)

- : Playback signal
- : Recording signal

INTERNAL CONNECTION OF FL

• Grid assignment diagram



• Anode connection table

	1G	2G	3G	4G	5G	6G
S1	III	III	48KHz	-	-	-
S2	III	III	44.1KHz	-	-	-
S3	III	III	32KHz	-	-	-
S4	III	III	A	1a	-	-
S5	III	III	B	1b	-	-
S6	III	III	B	1f	-	-
S7	III	III	start ID	1g	-	PNO
S8	III	III	skip ID	1c	-	TOC
S9	III	III	end	1e	-	+
S10	III	III	erase	1d	-	-
S11	III	III	-	col,1	col,2	-
S12	III	III	-	2a	2a	2a
S13	III	III	cleaning	2b	2b	2b
S14	III	III	dew	2f	2f	2f
S15	III	III	-	2g	2g	2g
S16	III	III	remain	2c	2c	2c
S17	III	III	A-time	2e	2e	2e
S18	III	III	P-time	2d	2d	2d
S19	III	III	-	-	-	-
S20	III	III	-	3a	3a	3a
S21	III	III	-	3b	3b	3b
S22	III	III	-	3f	3f	3f
S23	III	III	-	3g	3g	3g
S24	III	III	-	3c	3c	3c
S25	III	III	-	3e	3e	3e
S26	over	over	-	3d	3d	3d
S27	L	R	-60~0 dB	-	-	-

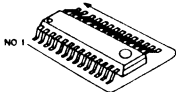
• Pin connection

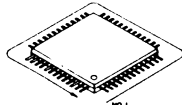
PIN NO.	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
CONNECTION	F	F	N	N	S	S	S	S	S	S	S	S	S	S	S
	2	2	P	P	1	2	3	4	5	6	7	8	9	10	11

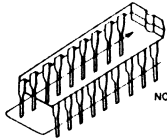
PIN NO.	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1	2	3	4	5	6	N	N	F	F
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	P	P	P	P	P	P	P	P	P	P	P	P	P	P	G	G	G	G	G	G	P	P	P	P

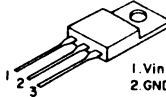
Note 1.)NP..... No pin.
2.)F1,F2..... Filament
3.)1G~6G..... Grid.

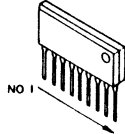
TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES

	TC4S81FTX	5 pin	AN3841SR	24 pin
	M5219FPE1	8 pin	AN6607NSE2	16 pin
	M5238FPE1			
	NJM5532MDT			
	AN1339SE2	14 pin	MN74HC163S	18 pin
	MN74HC04S			
	MN74HC04SE2			
	MN74HC04S			
	MN4066BS-T2			
	MN74HC00S			
T74HC04AFTP		AN7035SCE2	32 pin	
μPD4066BG-T1		AN7030SE2	42 pin	
M5228FPE2				

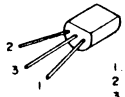
	MN53010PEH	42 pin
	AN8320NFA	48 pin
	MN6742SDR	64 pin
	MN17541SDN2	72 pin
	M50754-165FP	72 pin
	MN53020SDQ	44 pin
	MN6624	124 pin

	NJM5532DD	8 pin
	CD74HC4046A	16 pin
	PCM56P-J	28 pin
	YM3404B	64 pin
	AK5326-VP	64 pin
	MN188161SDM	64 pin

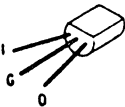
	AN7812F	3 pin
	AN7805F	
	(AN79M20F)	
	M5F78M12L	
	(M5F79M12L)	
	M5F78M05L	
	(M5F79M05L)	

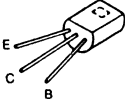
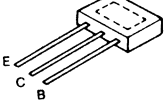
	M5218AL	8 pin
	TA7291S	9 pin

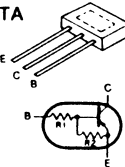
SVHHAF0614	7 pin
------------	-------

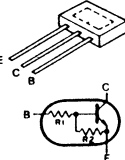
	1. Vin
	2. GND
	3. Vout
	(1. GND)
2. Vin	
3. Vout	

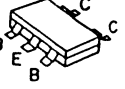
AN7812F	3 pin
AN7805F	
(AN79M20F)	
M5F78M12L	
(M5F79M12L)	
M5F78M05L	
(M5F79M05L)	

AN79L20	
AN79N05	

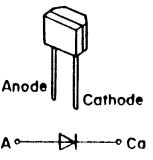
2SC1047DTA	
2SA1309STA	
2SA1309QRSTA	
2SC3311QRSTA	
2SC3315CTA	
2SD1450RSTTA	

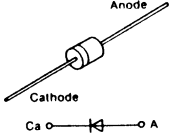
UN4124TA	
UN4111TA	
UN4114TA	

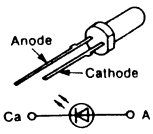
UN4212TA	
2SB709RTW	
DTA114EKTW	
2SC3937TW	
DTB113ZKTW	
UN5216TW	
DTA123JKTW	
DTC124EKTW	

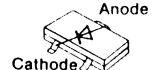
XN1112TW	
XN1212TW	

2SB956RTW	
2SD1280STW	

RVDSVC321	
Anode	
Cathode	
A	Ca

1SR35200TB	
MA165TA	
SVDS2V20	
1N4606TR	
1S2473TR	
MA719TA	

LN28RCPP-JF, LN31GPH-JF2	
LN49YPH-JF1, LN29RPH-JF1	

MA151ATW	
Anode	
Cathode	
A	Ca

MA701TW	
Cathode	
Anode	
A	Ca

SCHEMATIC DIAGRAM

(Parts list on pages 82~84, 94~96.)

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

Note 1:

- **S901** : Output level selector switch (+4dBu/-10dBu).
- **S902** : DIP switch.
- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
1K=1,000 (Ω), 1M=1,000k (Ω)
- Capacity are in micro-farads (μ F) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
- () Voltage values at recording mode.
- For measurement us EVM.
- Important safety notice
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

Part No.	Original Part No.	Supply Part No.
IC551, 552	M5218AL	M5218L

- (———) Indicates +B (bias).
- (- - -) indicates -B (bias).
- (.....) Indicates the flow of the playback signal.
- (———>) indicates the flow of the recording signal.

* 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 legs of IC or LSI with the fingers directly.

A

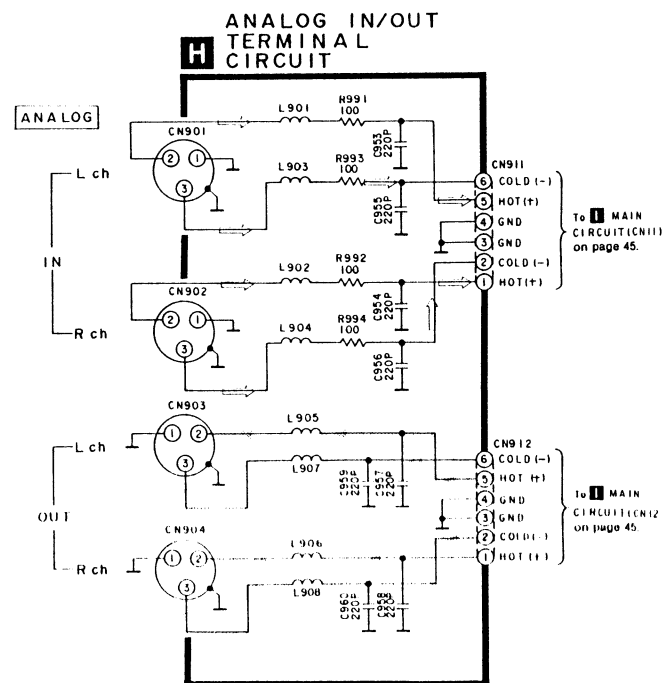
B

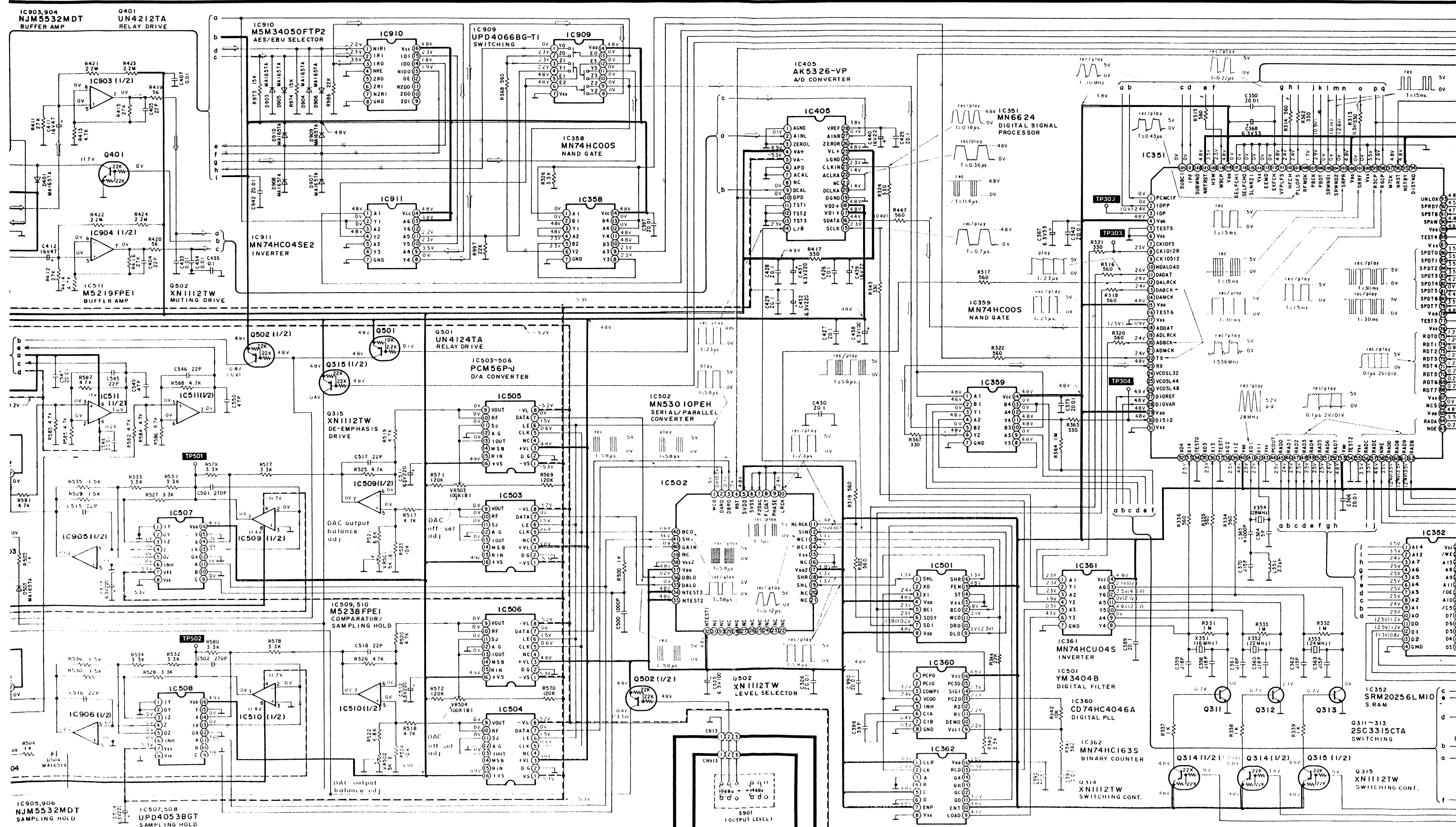
C

D

E

F







SERVO CIRCUIT

Note 2:

- **S701** : Tape hole detection switch.
- **S702** : Loading detection switch.
- **S703** : Mode detection switch.
- **S751** : Cassette tray open detection switch.
- **S752** : Cassette tray close detection switch.

• All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.

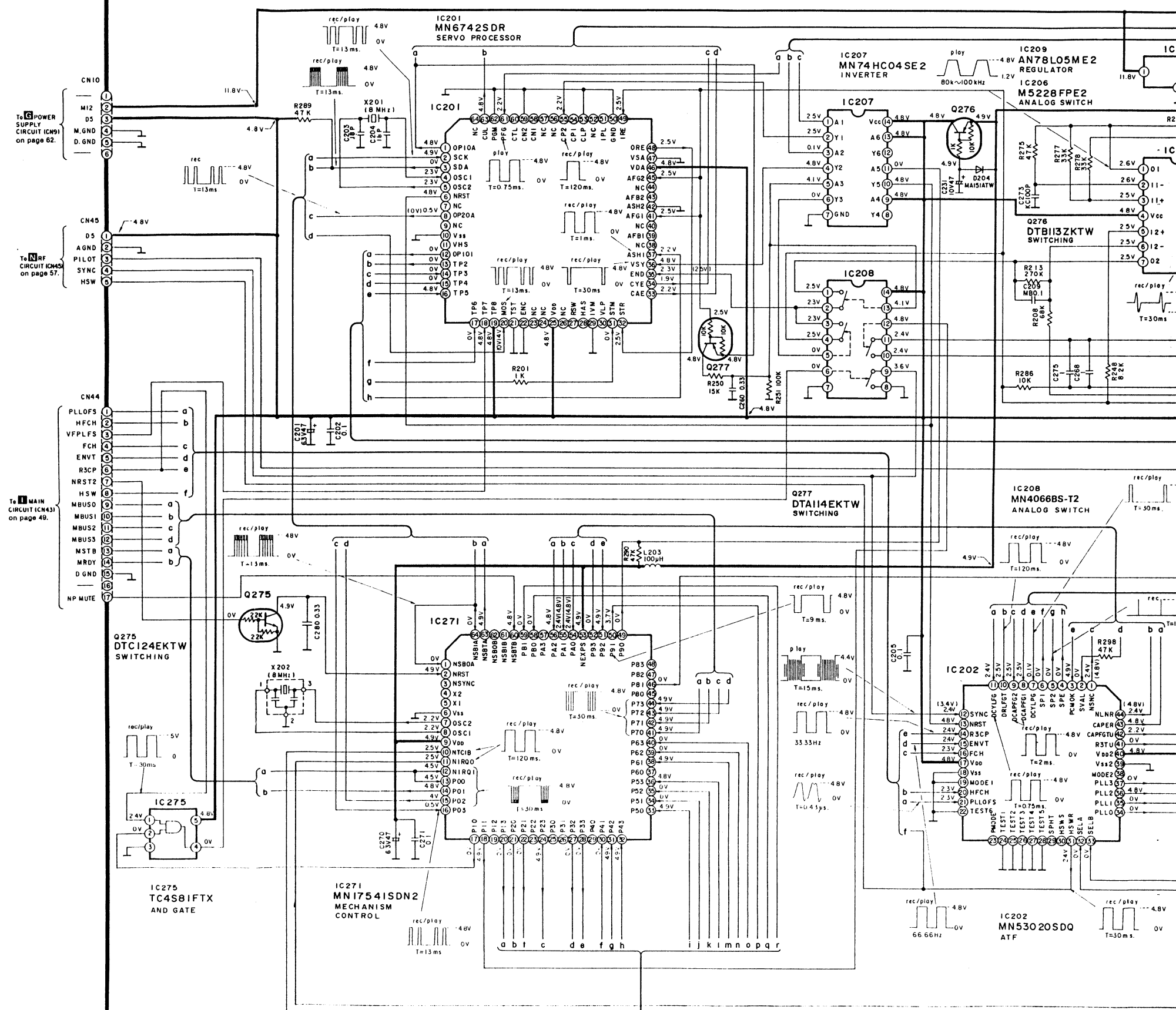
() Voltage values at recording mode.

For measurement us EVM.

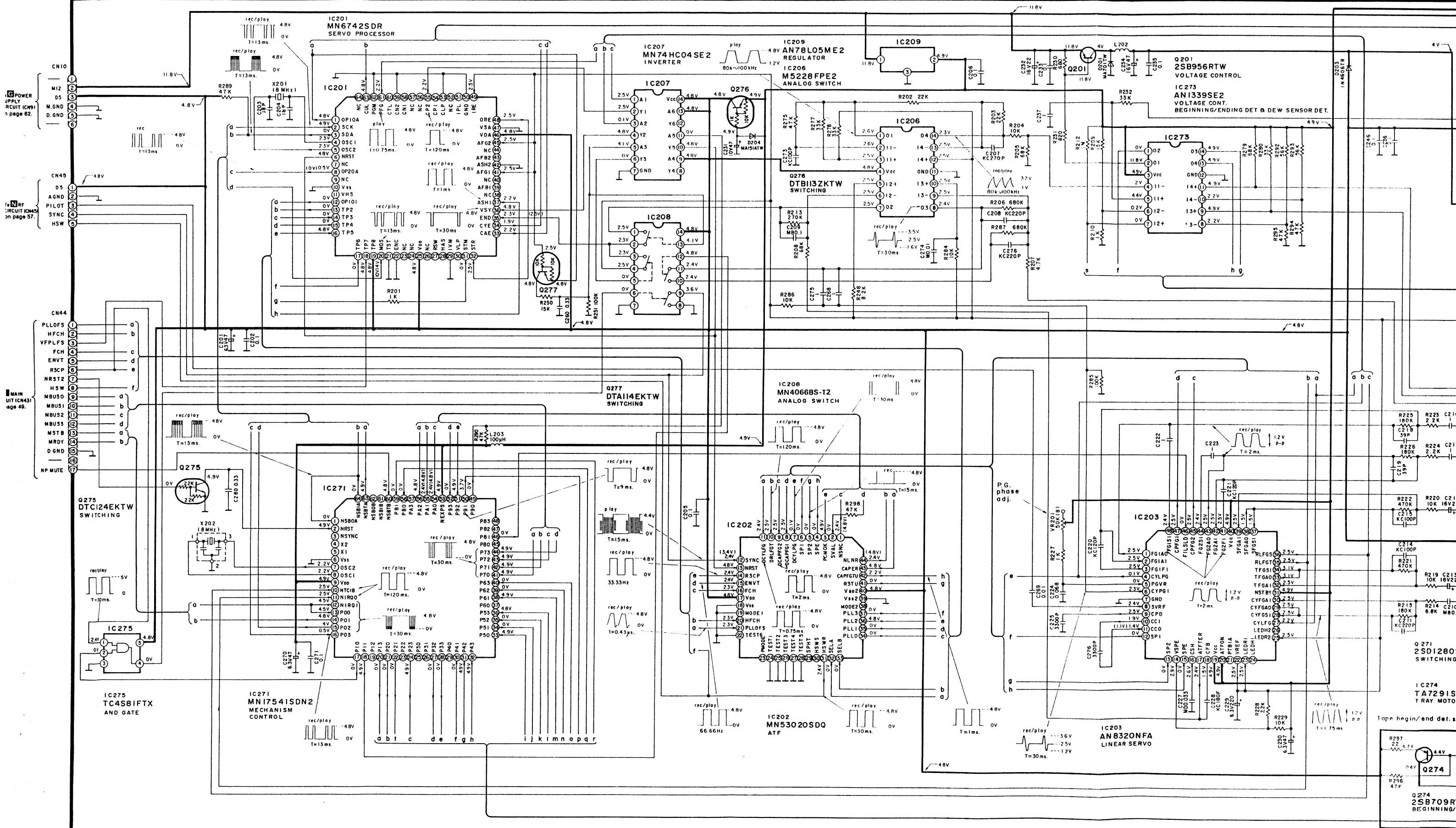
- Important safety notice
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

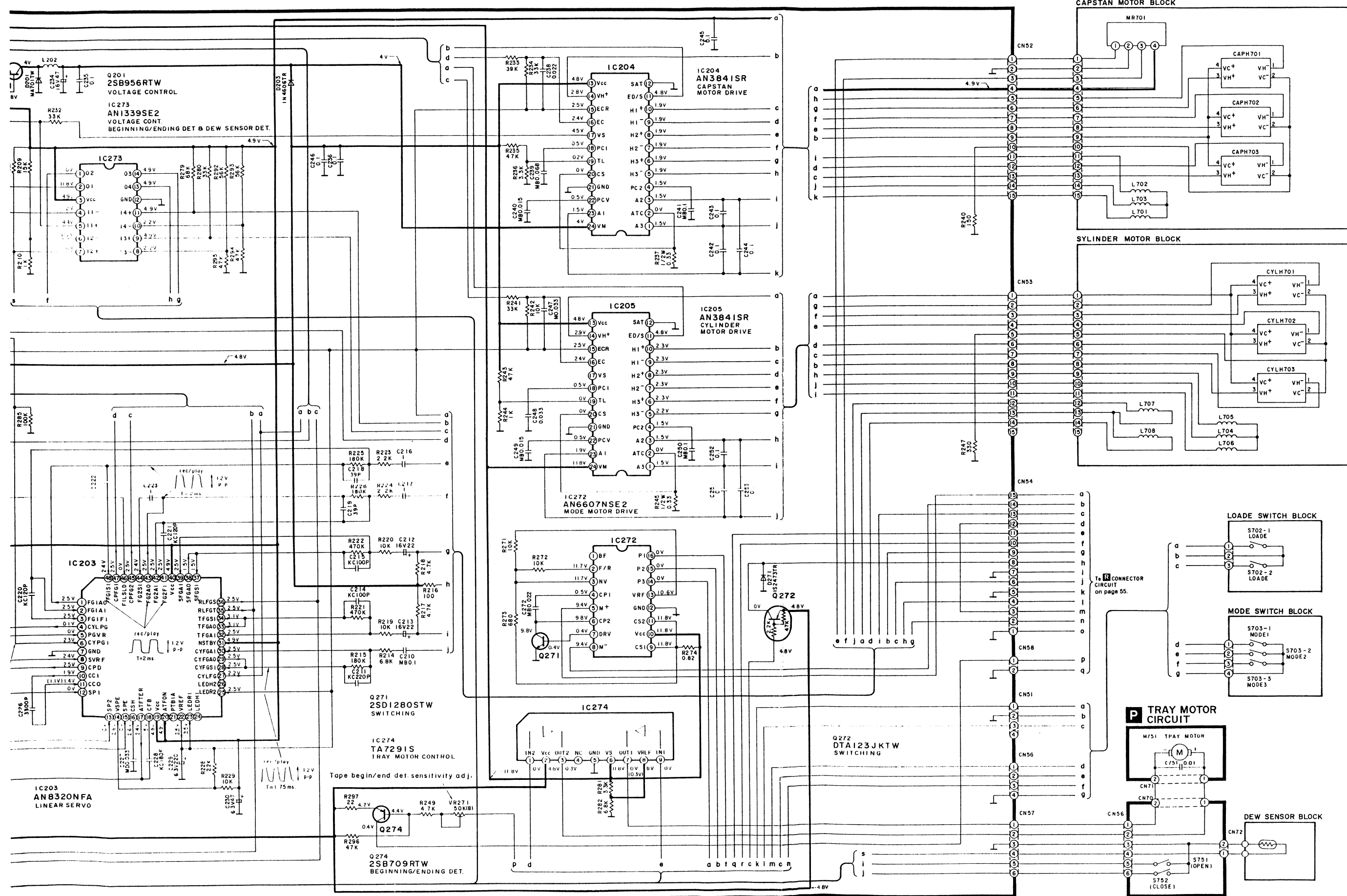
- (———) Indicates +B (bias).
- (- - -) Indicates -B (bias).
- ($\Rightarrow$) Indicates the flow of the playback signal.
- ($\Rightarrow$) Indicates the flow of the recording signal.

- The "IC701, IC702, Q701, Q702, D701, MR701, L701~708, CAPH701~703, CYLH701~703" parts are not supplied separately and are thus not found on the replacement parts list.

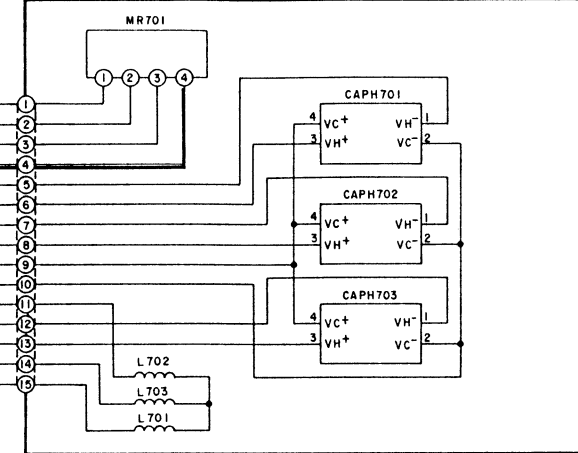


SERVO CIRCUIT

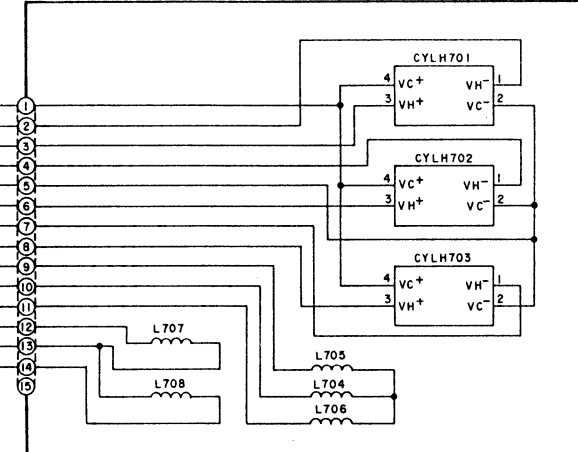




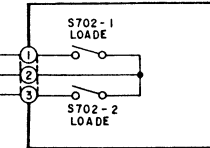
CAPSTAN MOTOR BLOCK



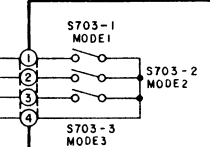
SYLINDER MOTOR BLOCK



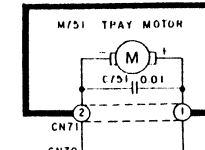
LOADE SWITCH BLOCK



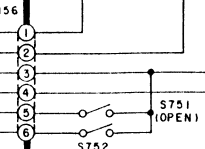
MODE SWITCH BLOCK



P TRAY MOTOR CIRCUIT

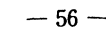


Q SWITCH CIRCUIT





NRF CONTACT



Note 3:

- S1 : Power switch (POWER).
- S2 : Voltage selector switch.
- S601 : Sampling frequency selector switch. (SAMPLING FREQUENCY) (44.1kHz → 48kHz).
- S602 : Input selector switch (INPUT) (DIGITAL/ANALOG).
- S611 : ID erase switch (ID ERASE).
- S612 : End search switch (END SEARCH).
- S613 : Start ID switch (START ID).
- S614 : Skip ID switch (SKIP ID).
- S615 : End switch (END).
- S616 : Counter reset switch (COUNTER RESET).
- S617 : Renumber switch (RENUMBER).
- S618 : Rew/rev switch (REW/REV).
- S619 : FF/cue switch (FF/CUE).
- S620 : Fade out switch (FADE OUT).
- S621 : Fade in switch (FADE IN).
- S622 : PNO/start ID auto switch (PNO/START ID AUTO).
- S623 : Counter mode switch (COUNTER MODE).
- S624, 625 : Skip switches (SKIP). [S624 ◀◀, S625 ▶▶]
- S626 : Pause switch (PAUSE).
- S627 : Record switch (REC).
- S628 : Auto rec mute switch (AUTO REC MUTE).
- S630 : ID write switch (ID WRITE).
- S631 : Play switch (PLAY).
- S632 : Stop switch (STOP).
- S633 : Skip play cancel switch (SKIP PLAY CANCEL).
- S634 : Music scan switch (MUSIC SCAN).
- S635 : Open/close switch (OPEN/CLOSE).

All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.

().....Voltage values at recording mode.

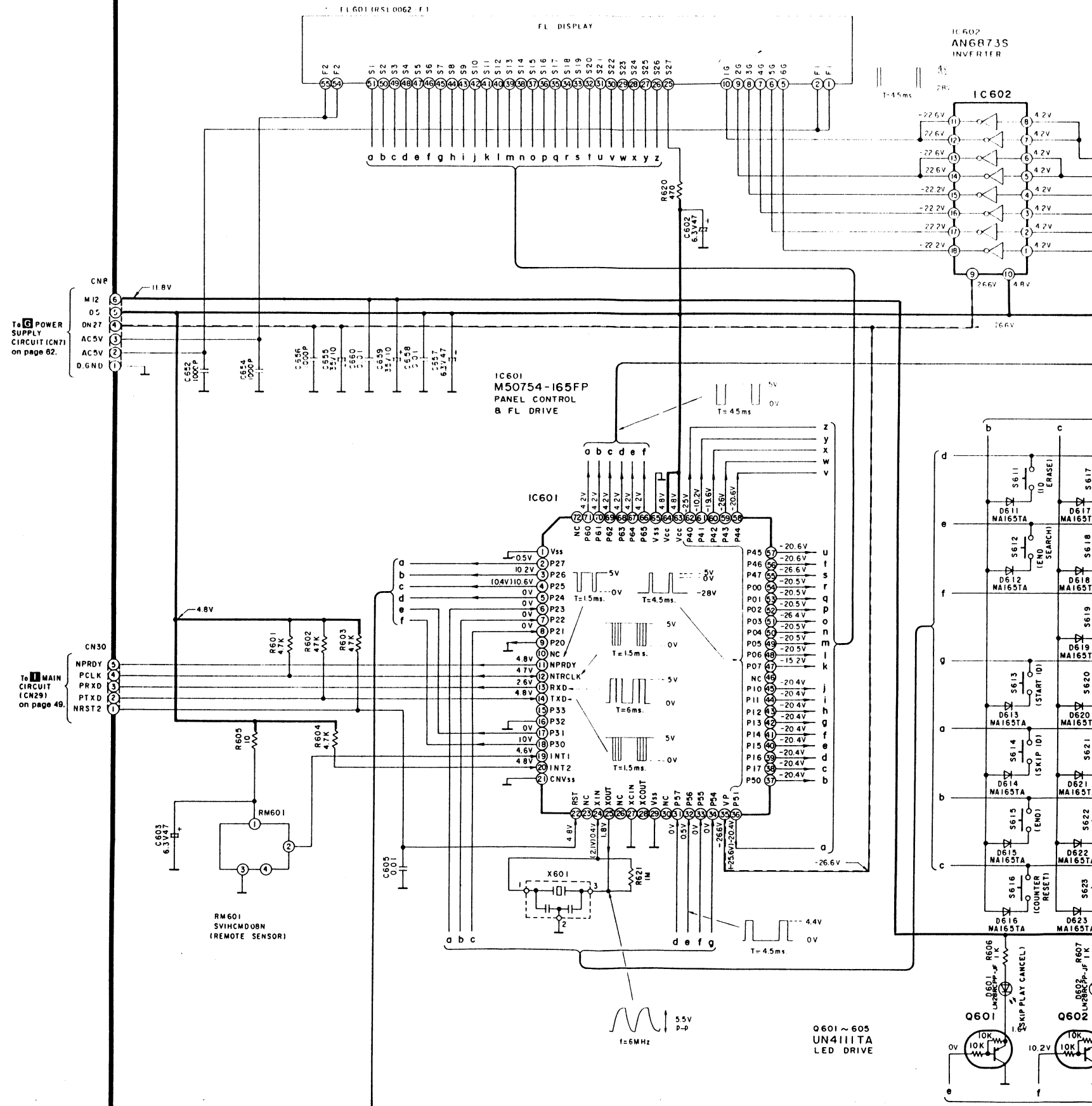
For measurement us EVM.

Important safety notice

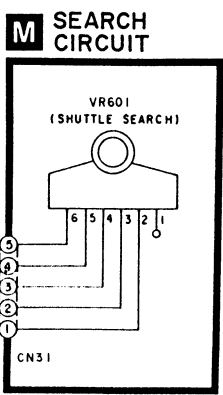
Components identified by Δ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

- (—) indicates +B (bias).
- (- - -) indicates -B (bias).
- (>) indicates the flow of the playback signal.
- (>) indicates the flow of the recording signal.

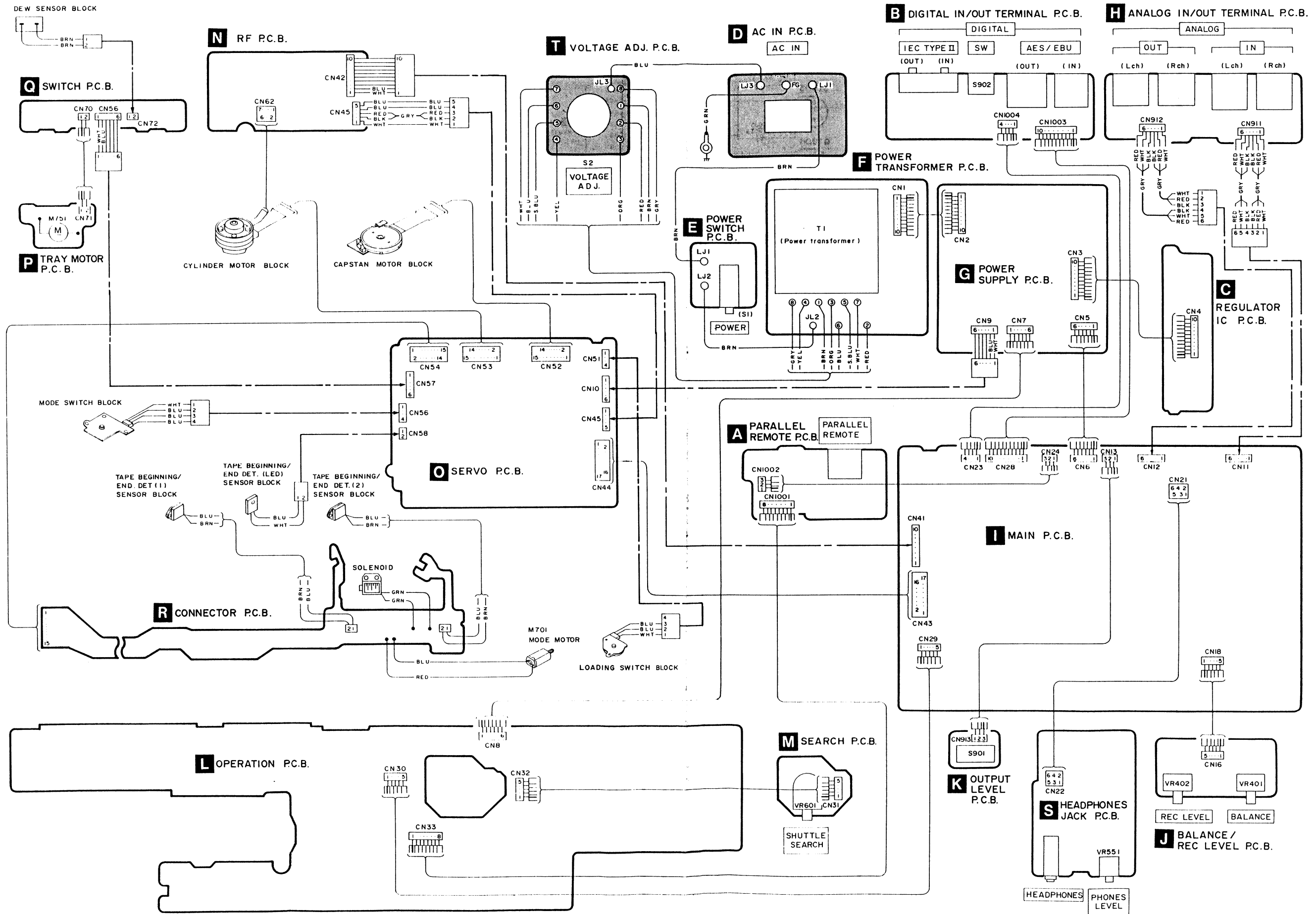
L OPERATION CIRCUIT



L

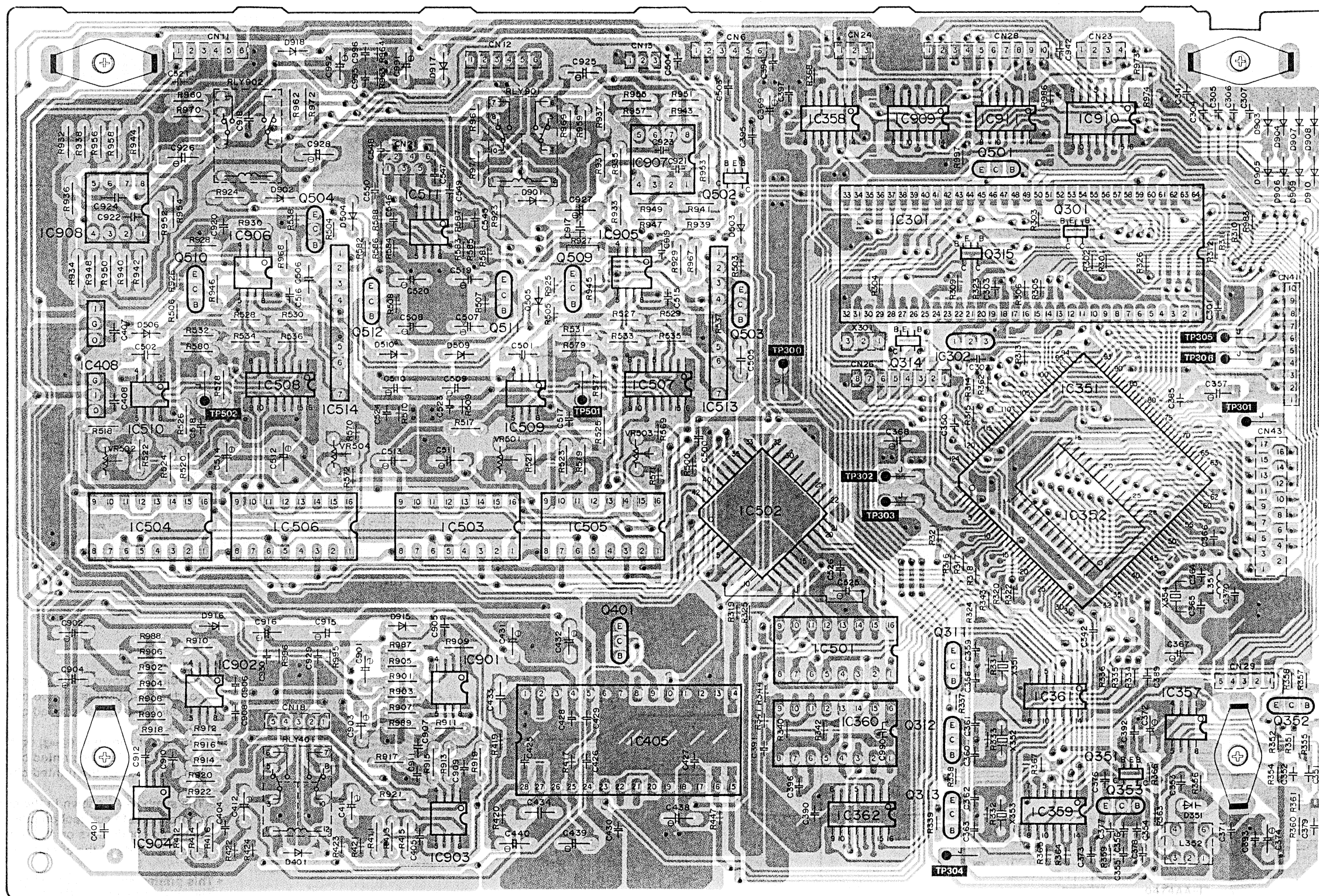


■ WIRING CONNECTION DIAGRAM



PRINTED CIRCUIT BOARDS

MAIN P.C.B. (RFKBV3700EBI)

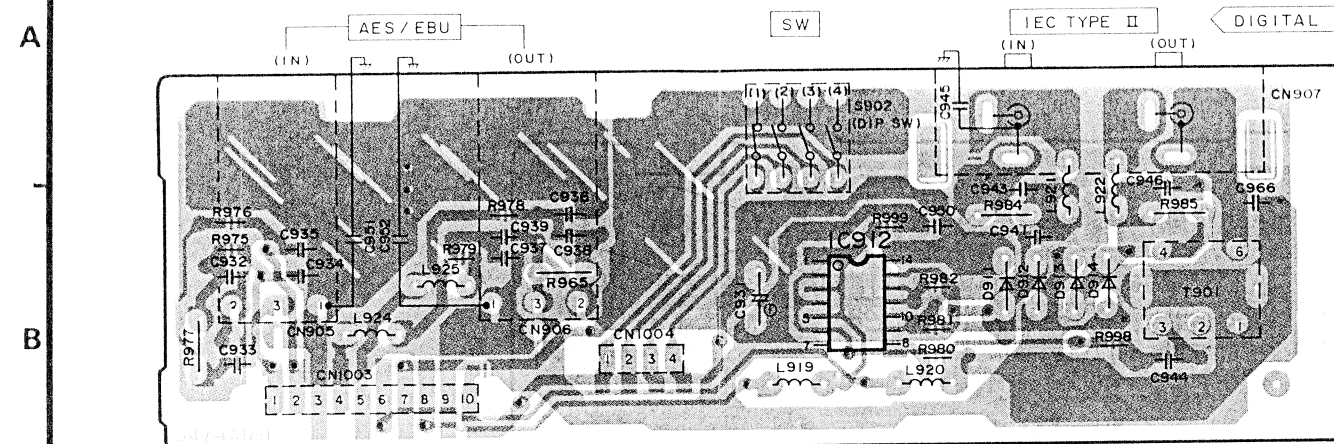


Notes:

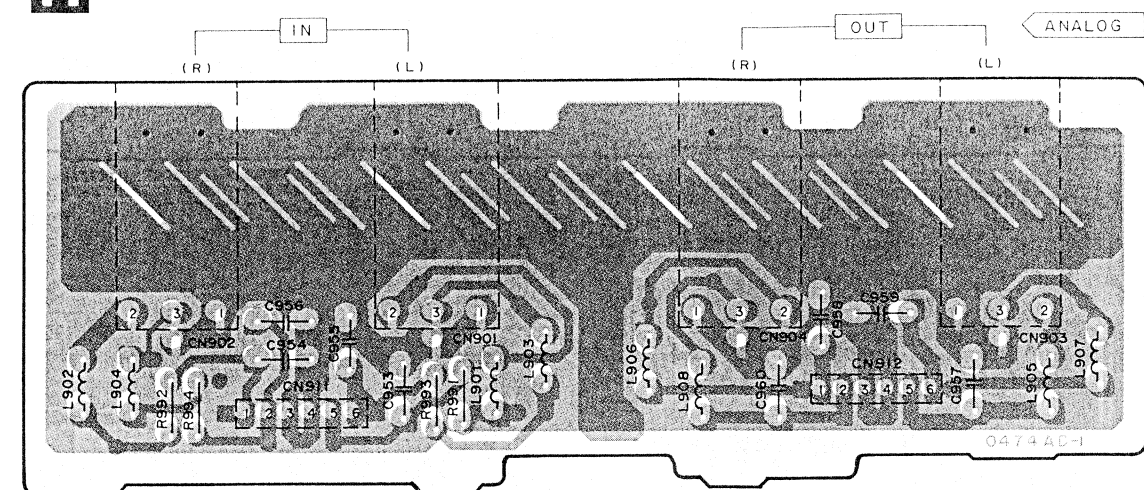
1. The circuit shown in () on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in () on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (*) shown in the circuit board indicate connection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

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

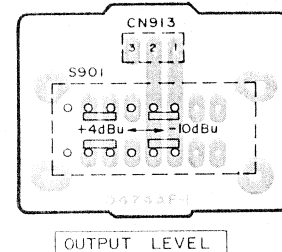
B DIGITAL IN/OUT TERMINAL P.C.B. (RFKBV3700EBA)



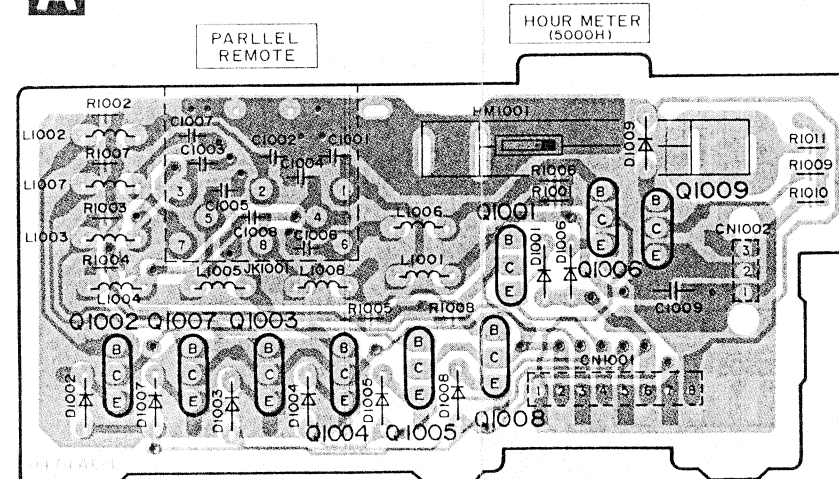
ANALOG IN/OUT TERMINAL P.C.B. (RFKBV3700EBA)



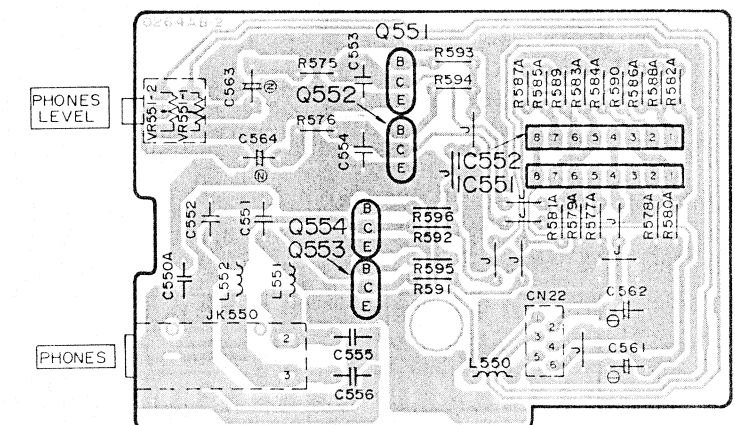
K OUTPUT LEVEL P.C.B.
(RFKBV3700EBA)



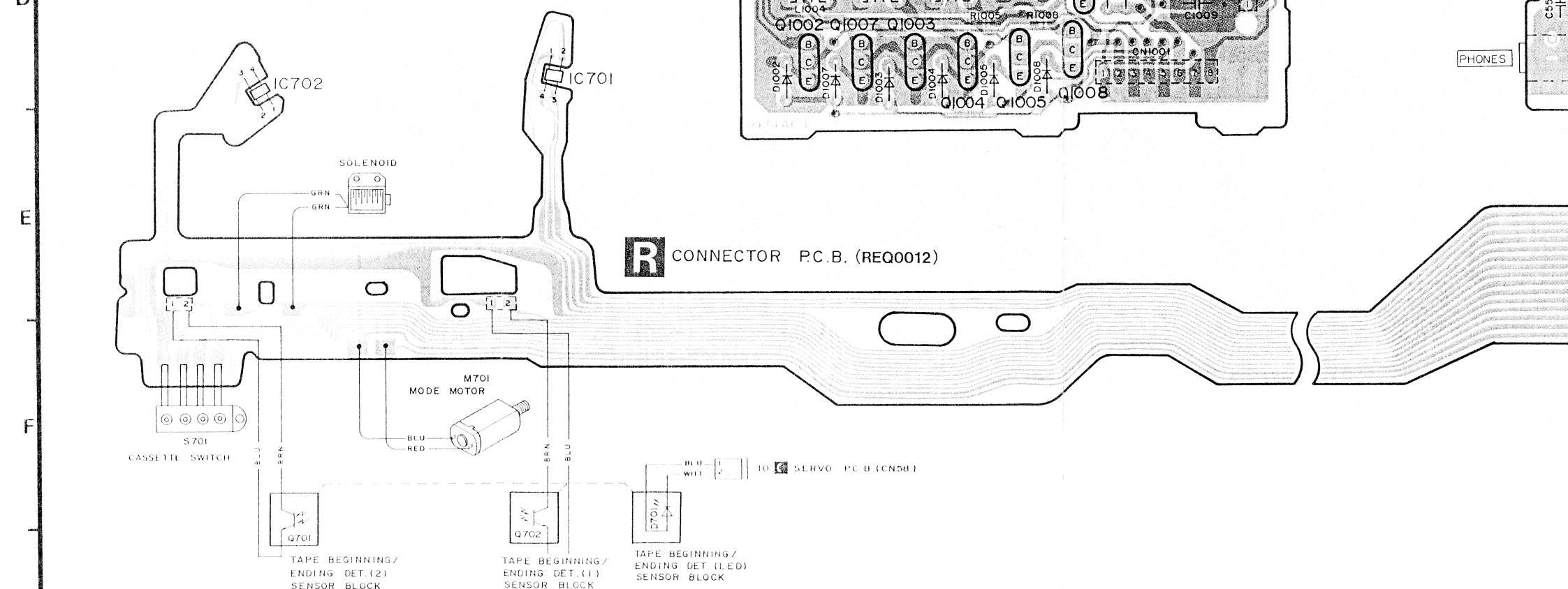
A PARALLEL REMOTE P.C.B. (RFKBV3700EBA)



S HEADPHONES JACK P.C.B. (REP0694A)



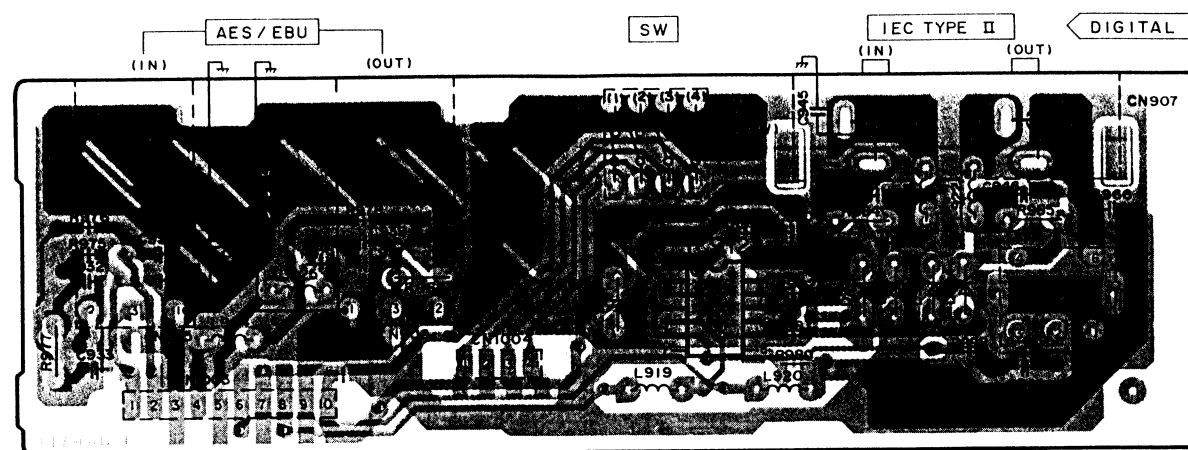
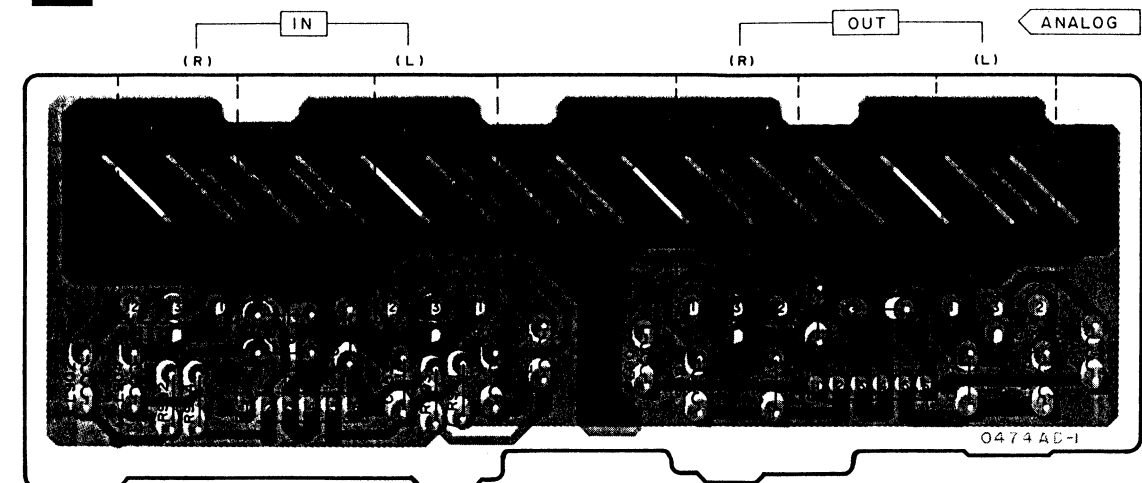
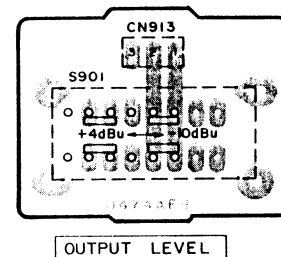
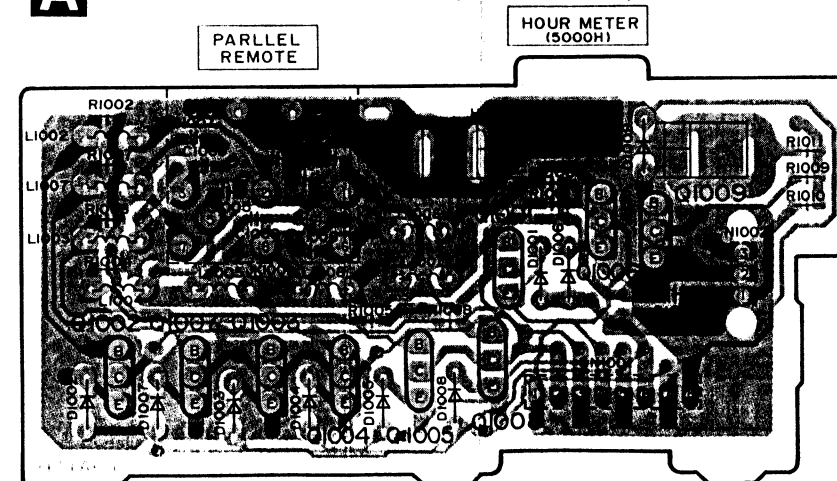
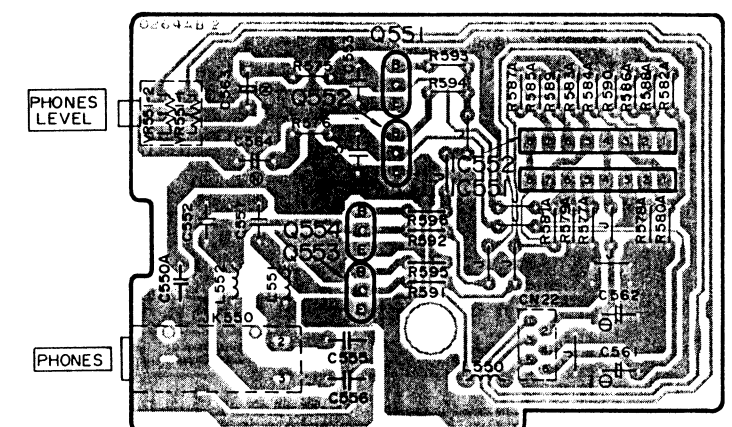
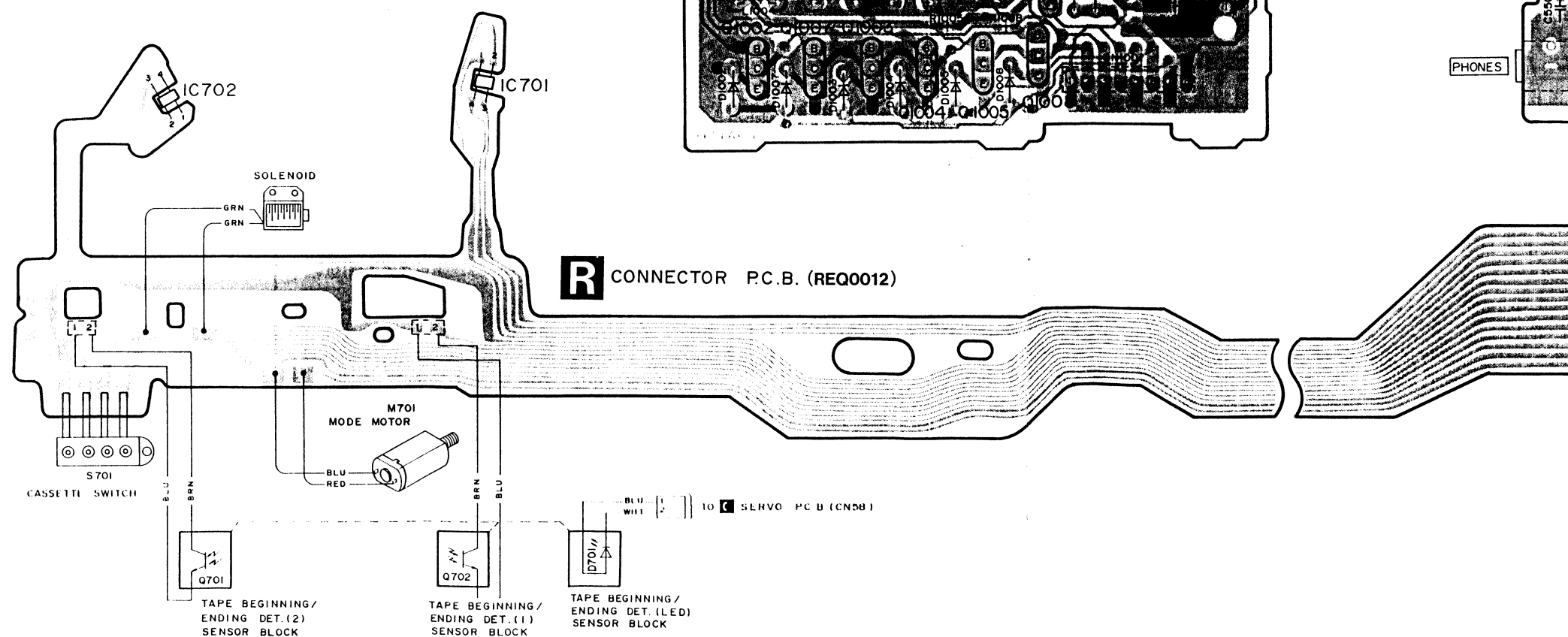
R CONNECTOR P.C.B. (REQ0012)



Notes:

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.

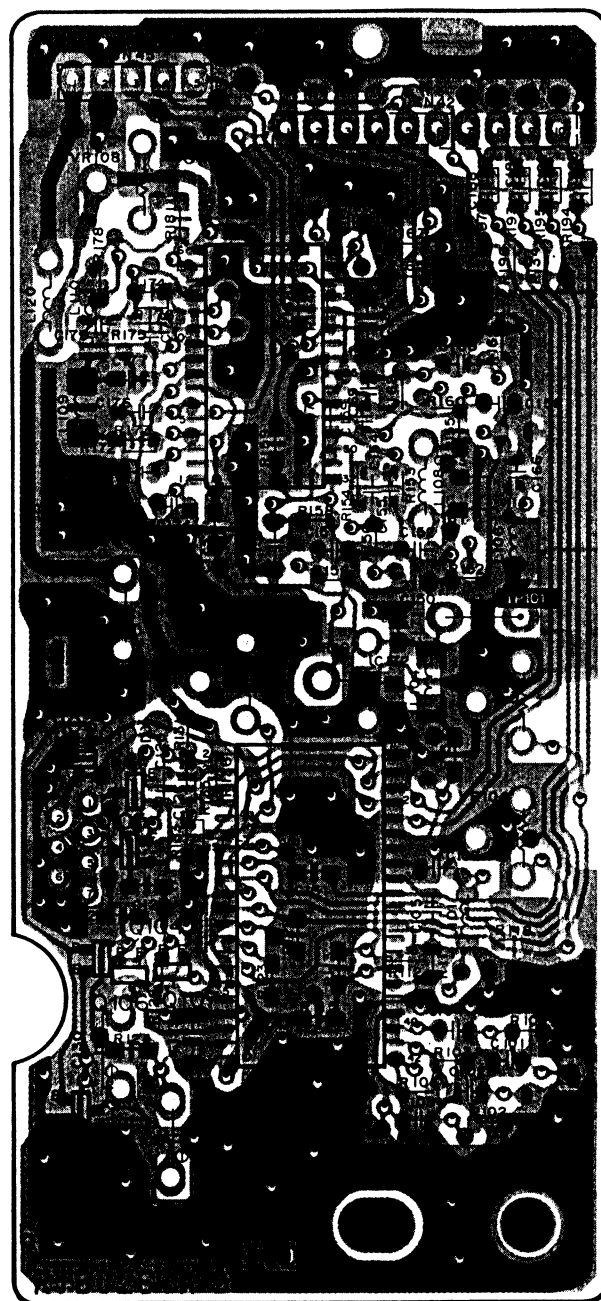
- This printed circuit board may be modified at any time with the developement of new technology.

B DIGITAL IN/OUT TERMINAL P.C.B. (RFKBV3700EBA)**H** ANALOG IN/OUT TERMINAL P.C.B. (RFKBV3700EBA)**K** OUTPUT LEVEL P.C.B. (RFKBV3700EBA)**A** PARALLEL REMOTE P.C.B. (RFKBV3700EBA)**S** HEADPHONES JACK P.C.B. (REP0694A)**R** CONNECTOR P.C.B. (REQ0012)**Notes:**

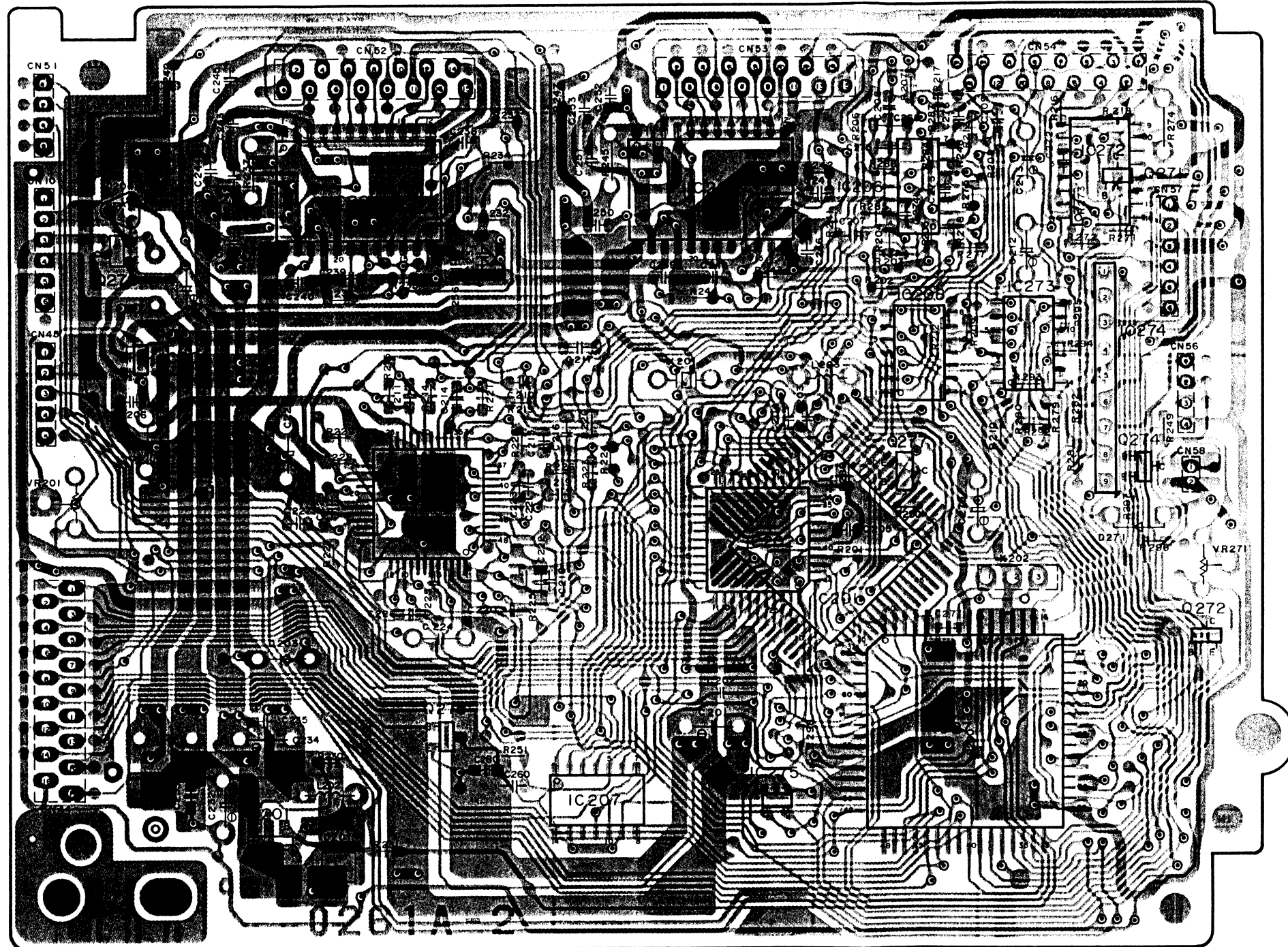
1. The circuit shown in (B) on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in (H) on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (•) shown in the circuit board indicate connection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

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

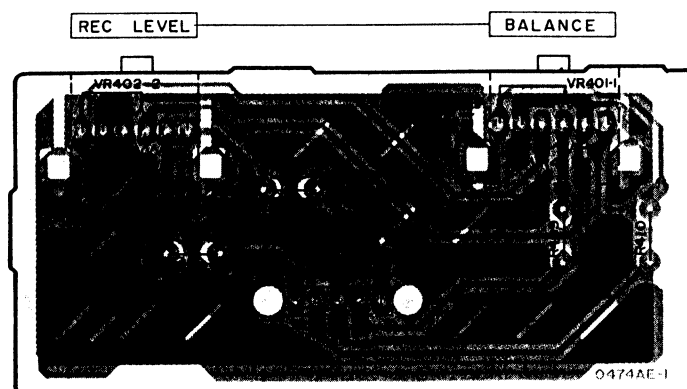
N RF P.C.B. (RFKBV3700-N)



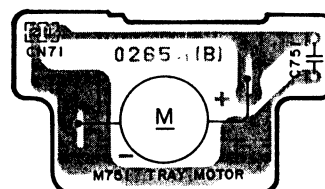
O SERVO P.C.B. (RFKBV3700-O)



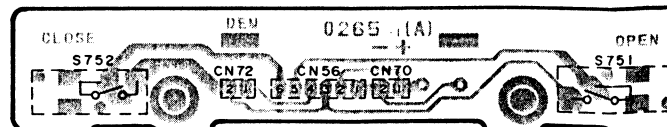
J BALANCE / REC LEVEL P.C.B. (RFKBV3700EBA)



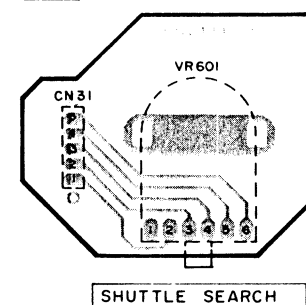
P TRAY MOTOR P.C.B. (REP0421A)

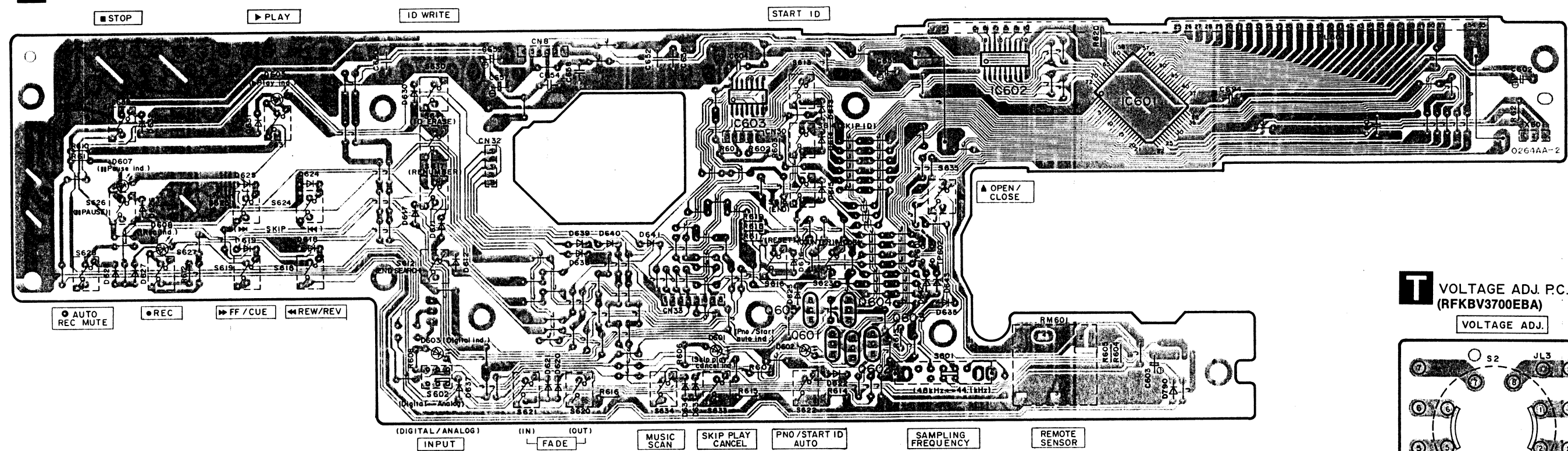
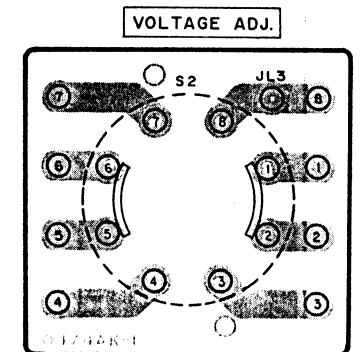
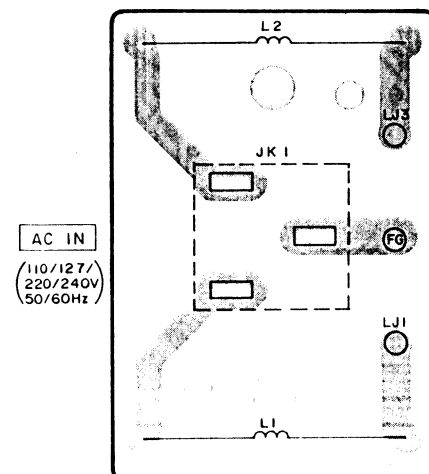
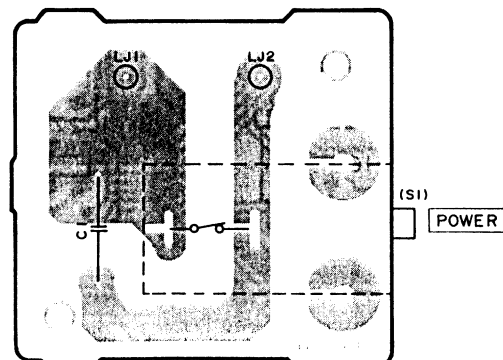
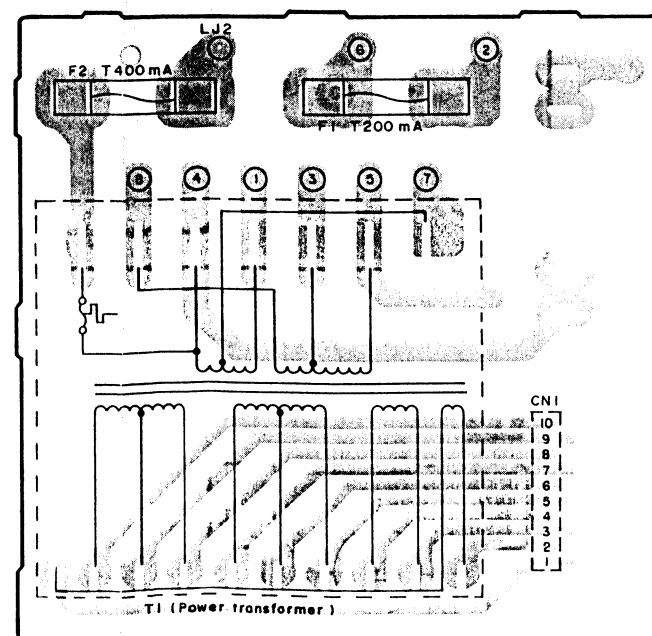
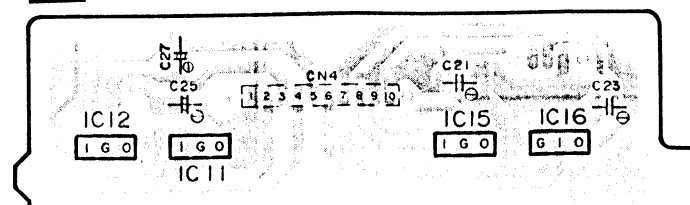
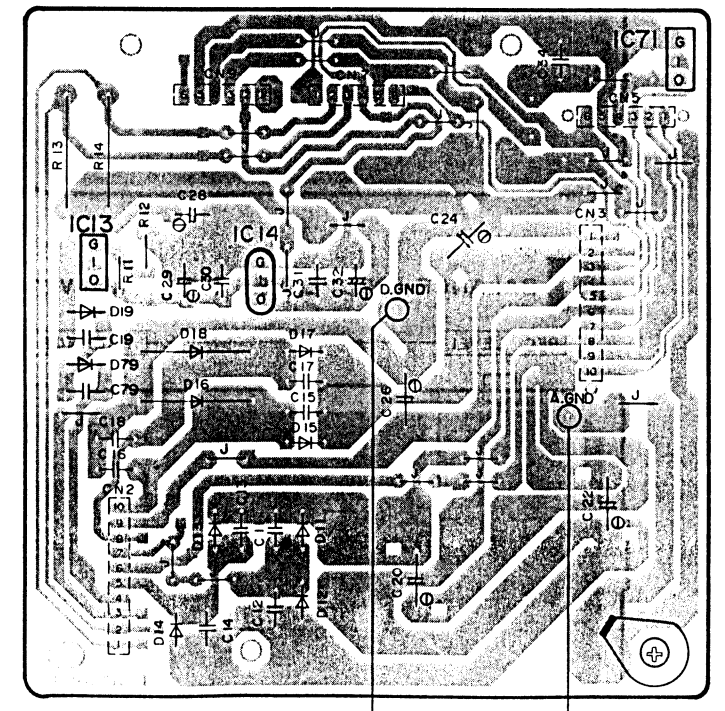


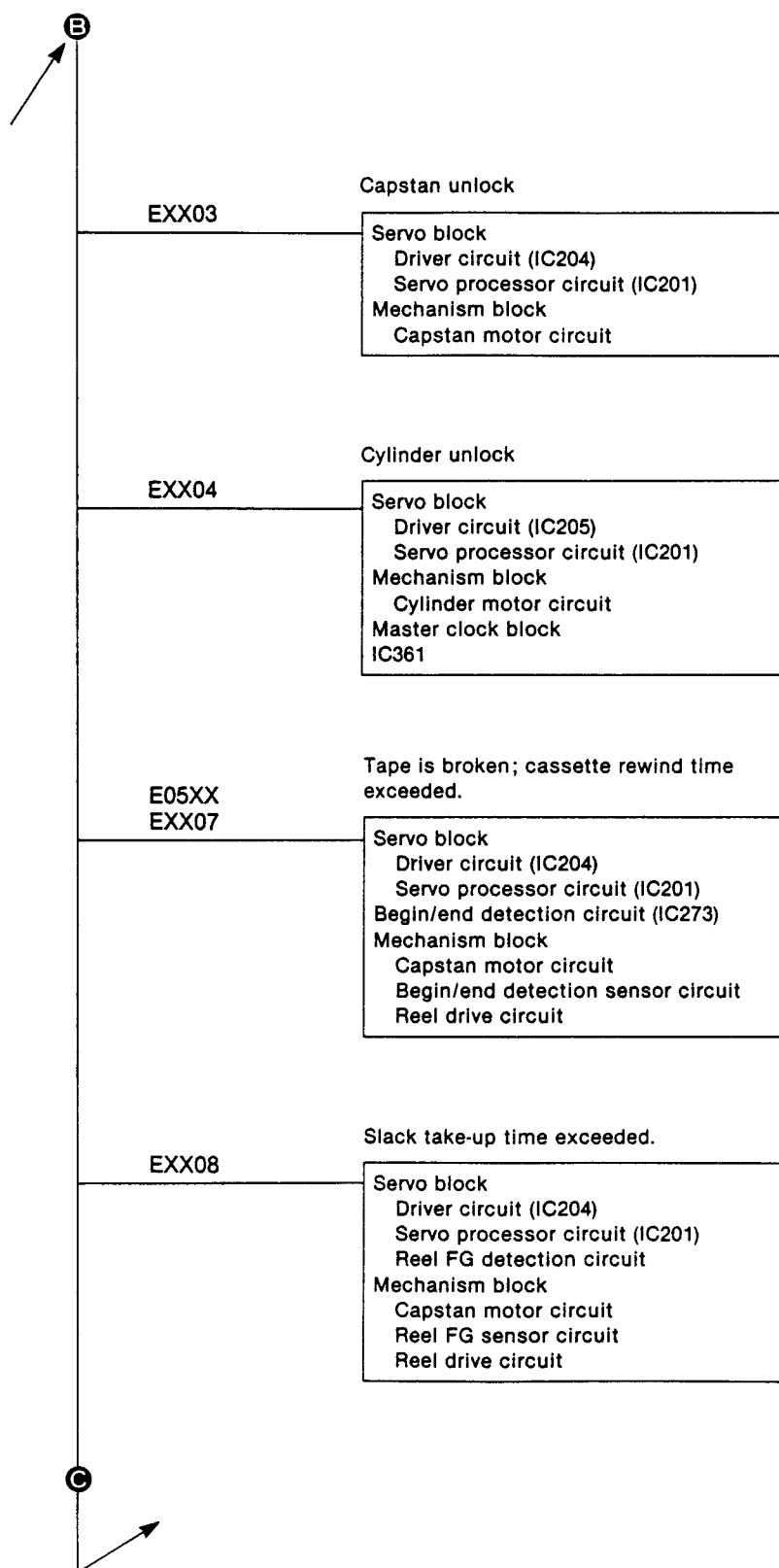
Q SWITCH P.C.B. (REP0421A)



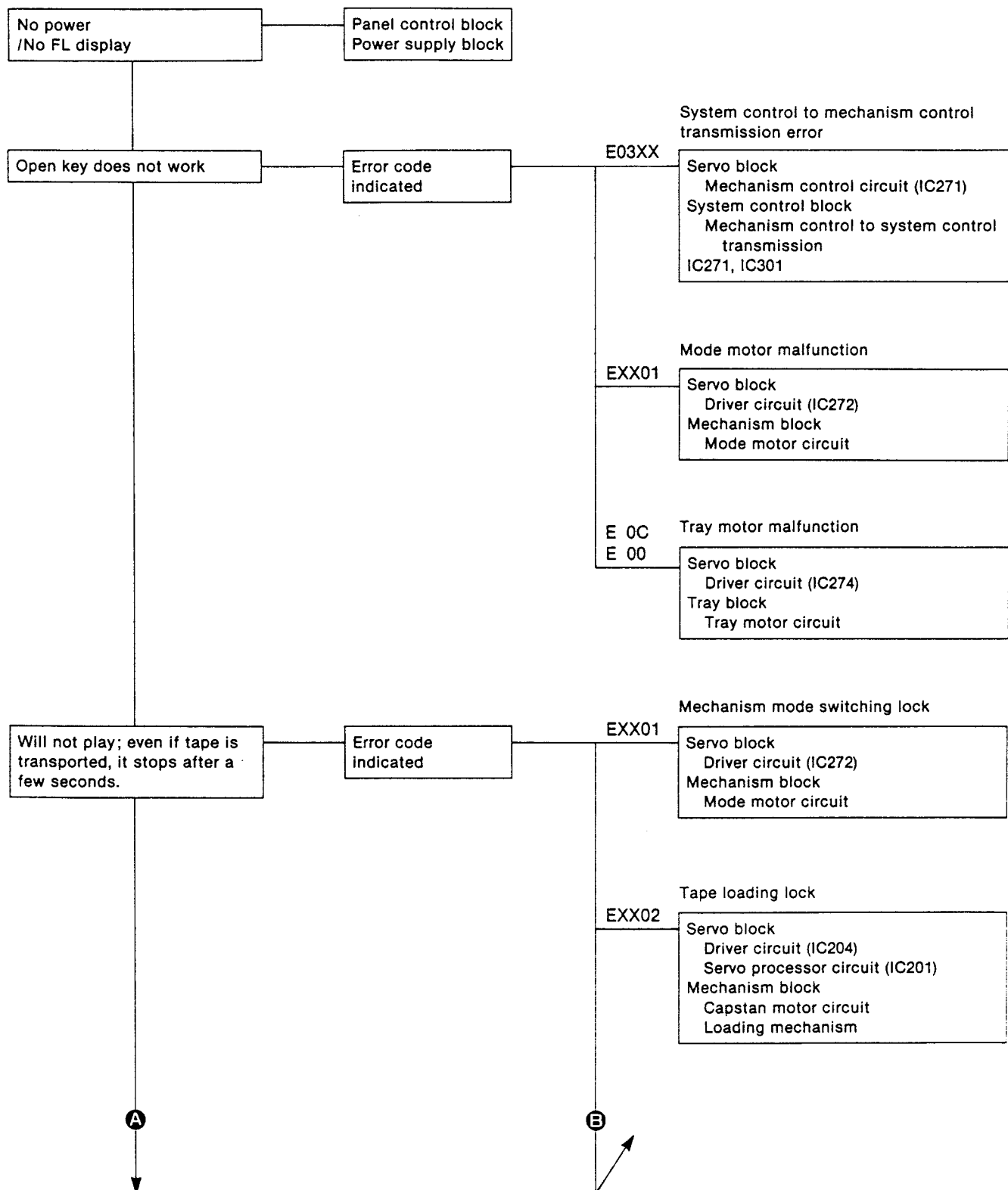
M SEARCH P.C.B. (REP0694A)

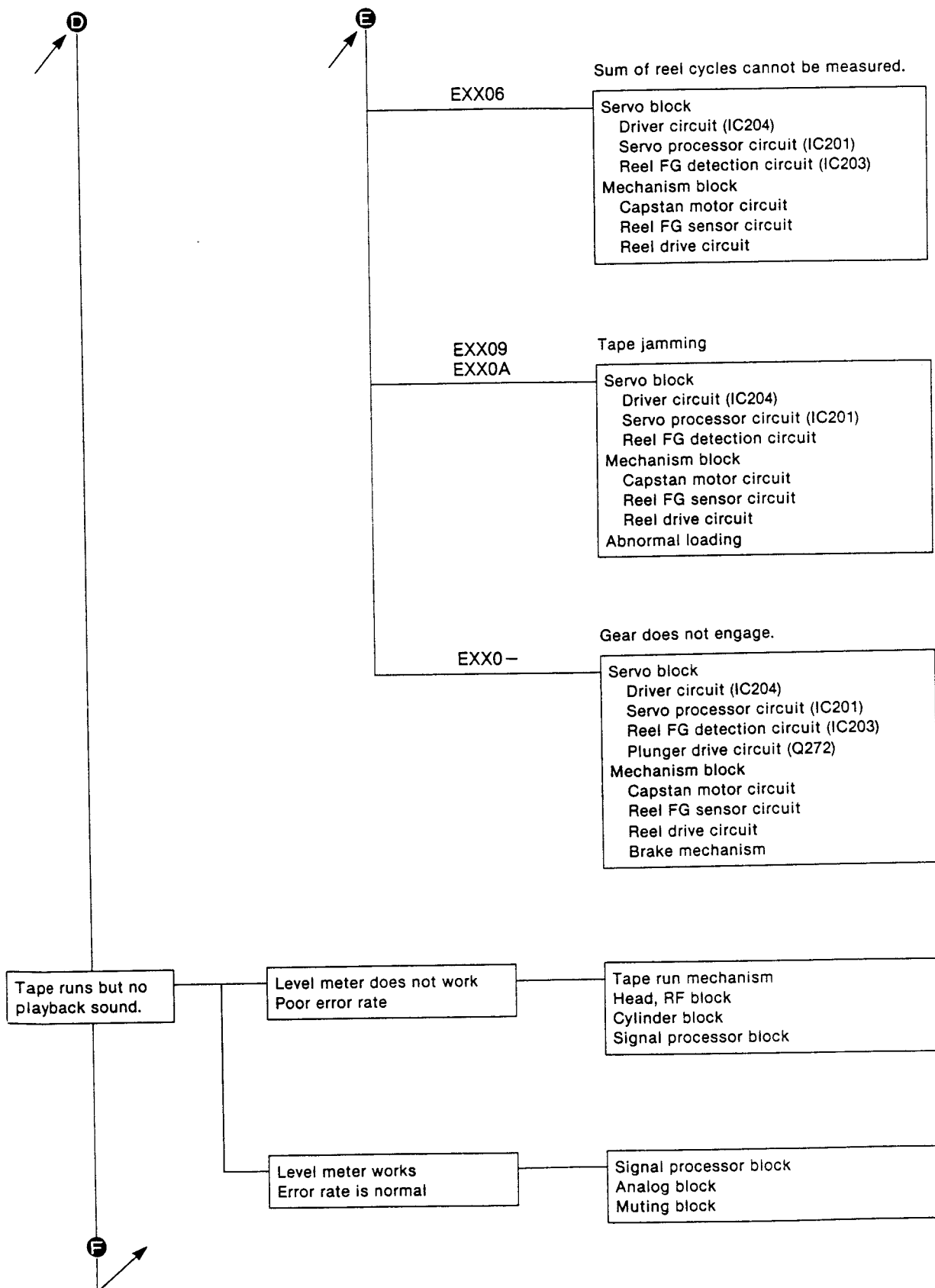


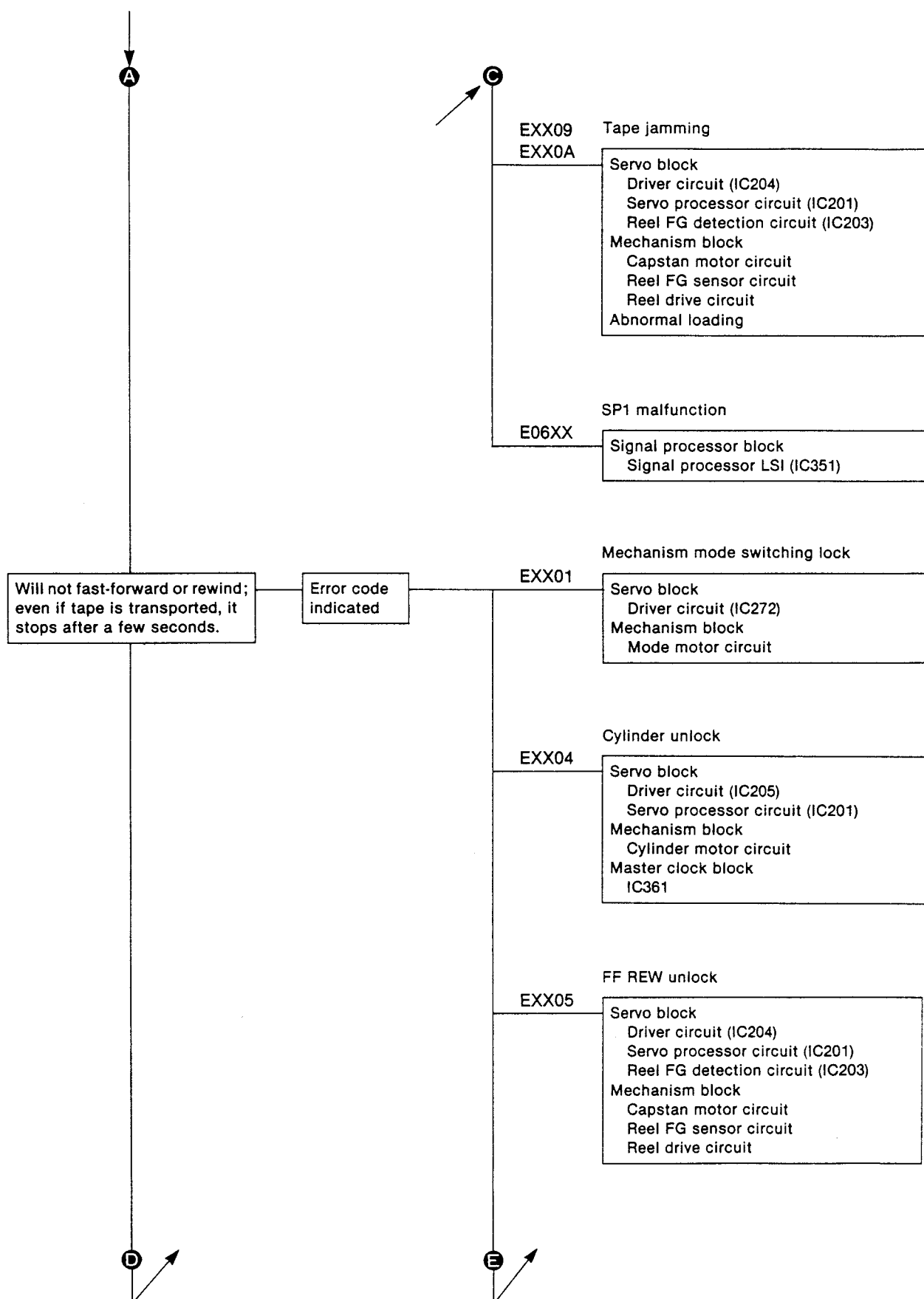
L OPERATION P.C.B. (REP0694A)**T** VOLTAGE ADJ. P.C.B. (RFKBV3700EBA)**D** AC IN P.C.B. (RFKBV3700EBA)**E** POWER SWITCH P.C.B. (RFKBV3700EBA)**F** POWER TRANSFORMER P.C.B. (RFKBV3700EBA)**C** REGULATOR IC P.C.B. (REP0693A)**G** POWER SUPPLY P.C.B. (REP0693A)

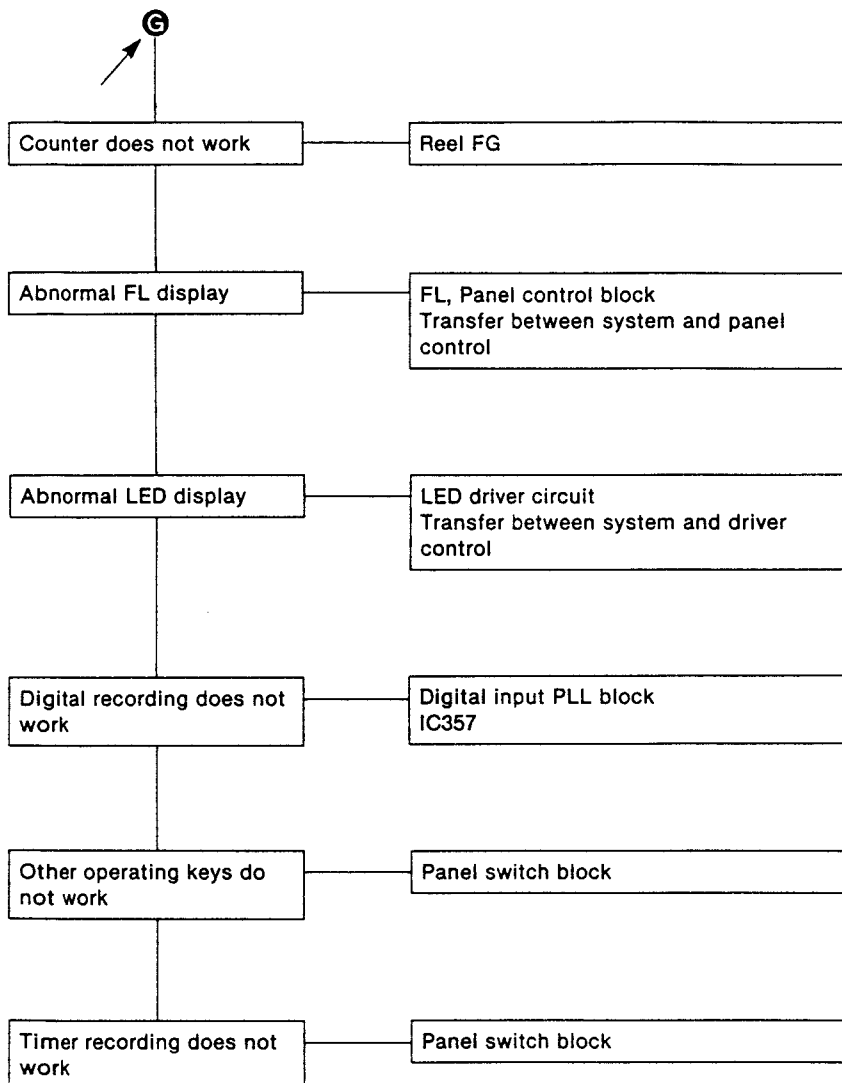


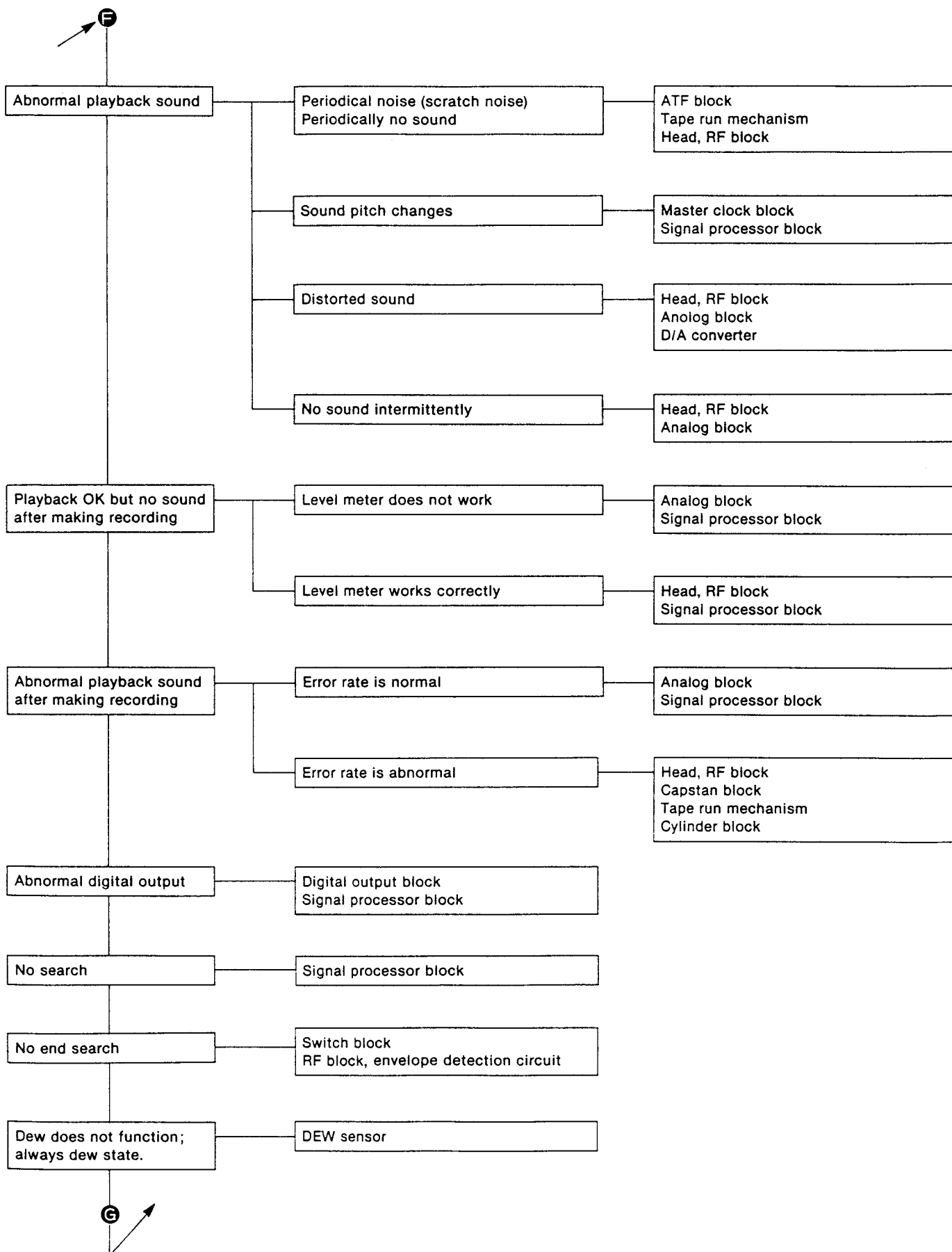
■ TROUBLESHOOTING











■ ABOUT THE ERROR RATE

If the error rate is normal, it can be judged that everything up to signal processing, meaning the operation of the RF head mechanism, is normal.

Thus, when there is a problem with playback, if the error is normal, it can be assumed that the origin of the problem is in the analog system.

■ ABOUT THE LEVEL METER

Just as for the error rate, if the level meter is operating normally, it indicates that the signal is reaching signal processing.

In other words, if there is no problem with the level meter during playback, it indicates that the head and the RF are outputting the signal.

In addition, if there is no problem with the level meter during recording, it indicates that the analog system (input amplifier and AD) is functioning normally.

■ ERROR RATE DISPLAY FUNCTION

1. Setting the error rate display mode

Simultaneously press the counter mode key, the counter reset key, and the pause key.

Note:

If the counter reset key is released before the other keys, the mode will not change to the error rate display mode.

(1) The digital input mode will be displayed:

If "AES" is displayed, it indicates the AES/EBU mode. If "IEC-2" mode is displayed, it indicates the IEC Type II mode.

2. Changing to the following displays

Press the counter mode key successively.

(2) The error rates for head A and head B will be displayed: FLs A and B will light up (max 9984).

(3) The error rate for head A will be displayed: FL A will light up (max 4992).

(4) The operation modes for the system control (left) and the mechanism control (right) will be displayed.

(5) The error codes for the system control (left) and the mechanism control (right) will be displayed. (If the tray is open, the error codes will be cleared.)

(6) The display will return to (1).

3. Returning to the normal mode

Press the counter reset key: the mode will change to the A time display mode.

■ KEY POINTS FOR TROUBLESHOOTING

Mechanism block

- Loading mechanism
 - Post roller
 - Tension regulator
 - Pinch roller
 - Brake lever
- Brake mechanism
 - Brake lever
 - Solenoid
 - Solenoid driver
- Mechanism switch block
 - Tape hole detection switch
 - Cassette detection switch
 - Holder switch
- Reel FG block
 - Detection photo transistor
 - Detection LED
 - Reel FG amp (servo P.C.B.)
- FPC & FPC connector

Power supply block

- Power supply regulator output
- Fuse

Capstan block

- Capstan FG
- FG amp
- Motor driver output
- Motor current

Cylinder block

- Cylinder FG
- Cylinder PG
- FG amp
- PG amp
- Motor driver output
- Motor current

Mode motor block

- Mode motor
- Mode switch
- Mode motor driver circuit

ATF block

- RF ATF output
- ATF SYNC output
- ATF select circuit
- ATF gate allay

Master clock block

- 28MHz oscillator
- 16MHz, 22MHz, 24 MHz oscillate and select circuit

Signal processor block

- Data & clock to D/A
- Data & clock to A/D
- All clocks

Panel switch block

- Switch
- Panel control IC

Digital output block

- Digital output PB

Head, RF block

- Head FPC & FPC connector
- Head dirty
- Head cracked or damaged
- RF recording current
- Playback eye pattern

Panel control block

- Panel control block
- Transfer between panel and system control
- Panel control reset

Tape begin/end detection block

- Begin/end detection photo transistor
- Begin/end detection LED
- Comparator circuit
- FPC & FPC connector

Analog block

- Input amplifier
- Output amplifier
- Muting circuit
- A/D converter
- D/A converter

REPLACEMENT PARTS LIST

Notes : * Important safety notice:

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

* 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.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT (S)		IC603	MN74HC04S	IC, INVERTER	
				IC901-906	NJM5532MDT	IC, BUFFER AMP	
				IC907, 908	NJM5532DD	IC, BUFFER AMP	
IC11	AN7812F	IC, REGULATOR		IC909	UPD4066BG-T1	IC, ANALOG SWITCH	
IC12	AN7805F	IC, REGULATOR		IC910	M5M34050FTP2	IC, AES/EBU SELECTOR	
IC13	AN79M20F	IC, REGULATOR		IC911	MN74HC04SE2	IC, INVERTER	
IC14	AN79L20	IC, REGULATOR		IC912	T74HCU04AFTP	IC, INVERTER	
IC15	M5F78M12L	IC, REGULATOR					
IC16	M5F79M12L	IC, REGULATOR				TRANSISTOR (S)	
IC71	AN79N05	IC, REGULATOR					
IC101	AN7030SE2	IC, RF AMP		Q102-105	UN5216-Q	TRANSISTOR	
IC102	AN7035SCE2	IC, PLAYBACK PLL		Q106, 107	2SC3937TW	TRANSISTOR	
IC201	MN6742SDR	IC, SERVO PROCESSOR		Q109	UN5216-Q	TRANSISTOR	
IC202	MN53020SDQ	IC, ATF		Q201	2SB956R	TRANSISTOR	
IC203	AN8320NFA	IC, LINEAR SERVO		Q271	2SD1280STW	TRANSISTOR	
IC204, 205	AN3841SR	IC, MOTOR DRIVE		Q272	DTA123JKTW	TRANSISTOR	
IC206	M5228FPE2	IC, ANALOG SWITCH		Q274	2SB709RTW	TRANSISTOR	
IC207	MN74HC04SE2	IC, INVERTER		Q275	DTA124EKTW	TRANSISTOR	
IC208	MN4066BS-T2	IC, ANALOG SWITCH		Q276	DTB113ZKTW	TRANSISTOR	
IC209	AN78L05ME2	IC, REGULATOR		Q277	DTA114EKTW	TRANSISTOR	
IC271	MN17541SDN2	IC, MECHANISM CONTROL		Q301	XN1212TW	TRANSISTOR	
IC272	AN6607NSE2	IC, MOTOR DRIVE		Q311-313	2SC3315CTA	TRANSISTOR	
IC273	AN1339SE2	IC, VOLTAGE CONTROL		Q314, 315	XN1112TW	TRANSISTOR	
IC274	TA7291S	IC, TRAY MOTOR CONTROL		Q351	XN1212TW	TRANSISTOR	
IC275	TC4S81FTX	IC, AND GATE		Q352	2SA1309A-R	TRANSISTOR	
IC301	MN188161SDM	IC, SYSTEM CONTROL		Q353	2SC1047DTA	TRANSISTOR	
IC302	MN1281R-TA	IC, RESET GENERATOR		Q401	UN4212TA	TRANSISTOR	
IC351	MN6624	IC, DIGITAL SIGNAL PROCESSOR		Q501	UN4124TA	TRANSISTOR	
IC352	SRM20256LM10	IC, S. RAM		Q502	XN1112TW	TRANSISTOR	
IC357	M5238FPE1	IC, DIGITAL INPUT PLL		Q503, 504	2SC3315CTA	TRANSISTOR	
IC358, 359	MN74HC00S	IC, NAND GATE		Q509, 510	2SC3315CTA	TRANSISTOR	
IC360	CD74HC4046A	IC, DF PLL		Q511	2SC3311A-Q	TRANSISTOR	
IC361	MN74HCU04S	IC, INVERTER		Q512	2SA1309A-R	TRANSISTOR	
IC362	MN74HC163S	IC, BINARY COUNTER		Q551-554	2SD1450RTA	TRANSISTOR	
IC405	AK5326-VP	IC, A/D CONVERTER		Q601-605	UN4111	TRANSISTOR	
IC407	M5F78M05L	IC, REGULATOR		Q1001-1009	UN4114TA	TRANSISTOR	
IC408	M5F79M05L	IC, REGULATOR					
IC501	YM3404B	IC, DIGITAL FILTER				DIODE (S)	
IC502	MN53010PEH	IC, SERIAL/PARALLEL CONV.					
IC503-506	PCM56P-J	IC, D/A CONVERTER		D11-15	1SR35200TB	DIODE	Δ
IC507, 508	UPD4053BGT	IC, SAMPLING HOLD		D16	SVDS2V20	DIODE	Δ
IC509, 510	M5238FPE1	IC, OP. AMP		D17	1SR35200TB	DIODE	Δ
IC511	M5219FPE1	IC, BUFFER		D18	SVDS2V20	DIODE	Δ
IC513, 514	SVHAF0614	IC, L. P. F.		D19	1SR35200TB	DIODE	Δ
IC551, 552	M5218L	IC, CLASS AA AMP		D79	1SR35200TB	DIODE	Δ
IC601	M50754-165FP	IC, PANEL CONTROL		D201	MA701TX	DIODE	
IC602	AN6873S	IC, INVERTER		D203	1N4606TR	DIODE	

■ ERROR CODE TABLE

Error code (Note. 1)	System control error code		Mechanism control error code	
	Processing (Note 2)	Contents	Processing (Note 2)	Contents
1	Test operation	R3CP clock malfunction	Unload	Mechanism mode switching lock
2	Test operation	HSW clock malfunction	Unload	Tape loading lock
3	Transmission omitted	Faulty transmission of the mechanism control	Unload	Capstan unlock
4	Unload	Still protection during operation	Unload	Cylinder unlock
5	Unload	Broken tape	Unload	Reel unlock
6	Unload	Faulty transmission of SP1	Unload	Sum of reel cycles cannot be measured.
7			Unload	In-cassette rewind time exceeded.
8			Unload	Slack tape-up time exceeded.
9			Unload	Tape jamming (Supply side)
A			Unload	Tape jamming (Take-up side)
B (—)			Unload	Gear does not engage.
C			Tray stop	Initial tray setting not possible.
O		—		No error
FF (blank)		No error		—

Note 1: Display mode

E	X1	X2
---	----	----

E: Indicates that mode is the error rate display mode.
 X1: System control error code
 X2: Mechanism control error code

Note 2: Processing when an error occurs

Test operation:

Internal clock of the system control temporarily connects for operation.

Transmission omitted:

Transmission processing stopped.

Unload:

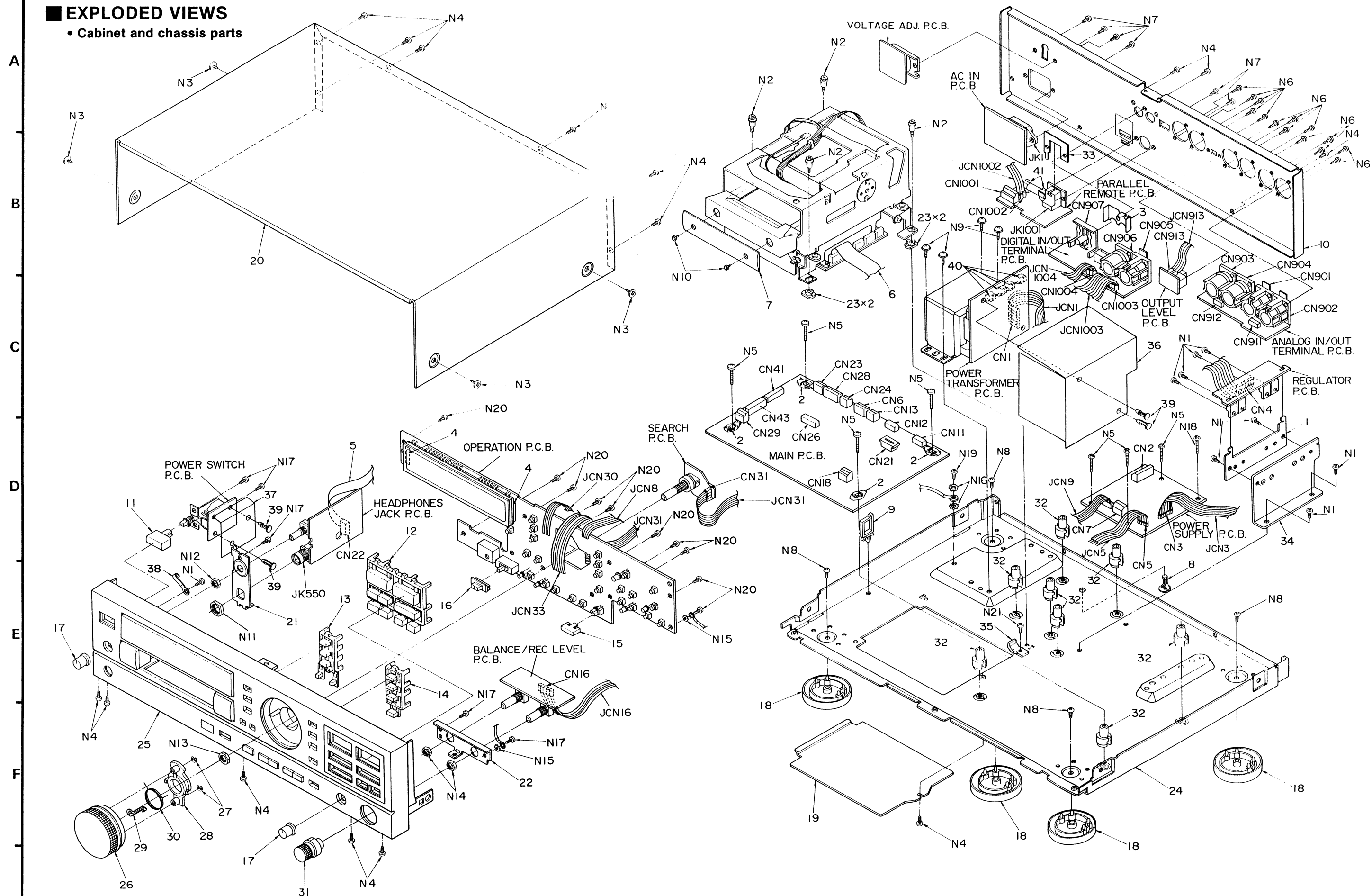
Tape is unloaded.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
S634	EVQQTG05R	SW, MUSIC SCAN		CN1004	RHR1912A	CONNECTOR (4P)	
S635	EVQQTG05R	SW, OPEN/CLOSE					
S701	EVQWR4002	SW, TAPE HOLE DET.				METER	
S702	EVQWXM001	SW, LOAD DET.					
S703	EVQWXM001	SW, MODE DET.		RM1001	RSE0001	HOUR METER	
S751, 752	SSPD18-1	SW, LEAF (OPEN/CLOSE)					
S901	SSS189	SW, OUTPUT LEVEL SELECTOR				CONNECTOR ASS' Y	
S902	RST1D001	SW, DIP					
				JCN1	RWJ0710130QQ	CONNECTOR ASS' Y (10P)	
		JACK (S)		JCN3	RWJ0710110QQ	CONNECTOR ASS' Y (10P)	
				JCN5	RWJ0706200QQ	CONNECTOR ASS' Y (6P)	
JK1	SJVD06	AC INLET	△	JCN8	RWJ1006400KQ	CONNECTOR ASS' Y (6P)	
JK550	SJJD19	HEADPHONES		JCN9	REZ0121A	CONNECTOR ASS' Y (6P)	
JK1001	QJS1955H	PARALLEL REMOTE		JCN16	RWJ0705110QQ	CONNECTOR ASS' Y (5P)	
				JCN30	RWJ1005230KQ	CONNECTOR ASS' Y (5P)	
		CONNECTOR (S) & TERMINAL (S)		JCN31	RWJ1005070KQ	CONNECTOR ASS' Y (5P)	
				JCN33	RWJ1008530KQ	CONNECTOR ASS' Y (8P)	
CN1	RHR1972A	CONNECTOR (10P)		JCN42	REZ0125A	CONNECTOR ASS' Y (10P)	
CN2	SJSD1005	CONNECTOR (10P)		JCN46	REZ0126A	CONNECTOR ASS' Y (5P)	
CN3, 4	RHR1972A	CONNECTOR (10P)		JCN56	REZ0127A	CONNECTOR ASS' Y (6P)	
CN5	RHR1932A	CONNECTOR (6P)		JCN70	REZ0138A-1	CONNECTOR ASS' Y (2P)	
CN6, 7	RJS6T42A	CONNECTOR (6P)		JCN913	RWJ0703230QQ	CONNECTOR ASS' Y (3P)	
CN10-12	RJP6G272A	CONNECTOR (6P)		JCN1002	RWJ0703230QQ	CONNECTOR ASS' Y (3P)	
CN13	RJS3T42A	CONNECTOR (3P)		JCN1003	RWJ0710150QQ	CONNECTOR ASS' Y (10P)	
CN16	RHR1922A	CONNECTOR (5P)		JCN1004	RWJ0704150QQ	CONNECTOR ASS' Y (4P)	
CN18	RJS5T42A	CONNECTOR (5P)					
CN21, 22	RJS6Q82A	CONNECTOR (6P)				RELAY (S)	
CN23	RJS4T42A	CONNECTOR (4P)					
CN24	RJS3T42A	CONNECTOR (3P)		RLY401	AG80239	RELAY	
CN26	RJP8G272A	CONNECTOR (8P)		RLY901, 902	AG80239	RELAY	
CN28	SJSD1005	CONNECTOR (10P)					
CN29	RJS5T42A	CONNECTOR (5P)				SENSOR	
CN31	RHR1922A	CONNECTOR (5P)					
CN41	RJP10G272A	CONNECTOR (10P)		RM601	SVIHCMD08N	REMOTE CONTROL SENSOR	
CN43, 44	SJSD1721	CONNECTOR (17P)					
CN45	RJP5G272A	CONNECTOR (5P)					
CN51	RJP3G272A	CONNECTOR (4P)					
CN52-54	RJU051W015	CONNECTOR (15P)					
CN56	RJP4G282A	CONNECTOR (4P)					
CN57	RJP6G282A	CONNECTOR (6P)					
CN58	RJT036W002	CONNECTOR (2P)					
CN62	RJS7Q112A	CONNECTOR (7P)					
CN901, 902	RJJ93MS02	ANALOG IN TERMINAL					
CN903, 904	RJJ93MS01	ANALOG OUT TERMINAL					
CN905	RJJ93MS02	AES/EBU IN TERMINAL					
CN906	RJJ93MS01	AES/EBU OUT TERMINAL					
CN907	SJF3057-7A-1	IEC TYPE2 IN/OUT TERMINAL					
CN911, 912	REZ0294A	CONNECTOR (6P)					
CN913	RHR1902A	CONNECTOR (3P)					
CN1001	RJS8T42A	CONNECTOR (8P)					
CN1002	RHR1902A	CONNECTOR (3P)					
CN1003	RHR1972A	CONNECTOR (10P)					

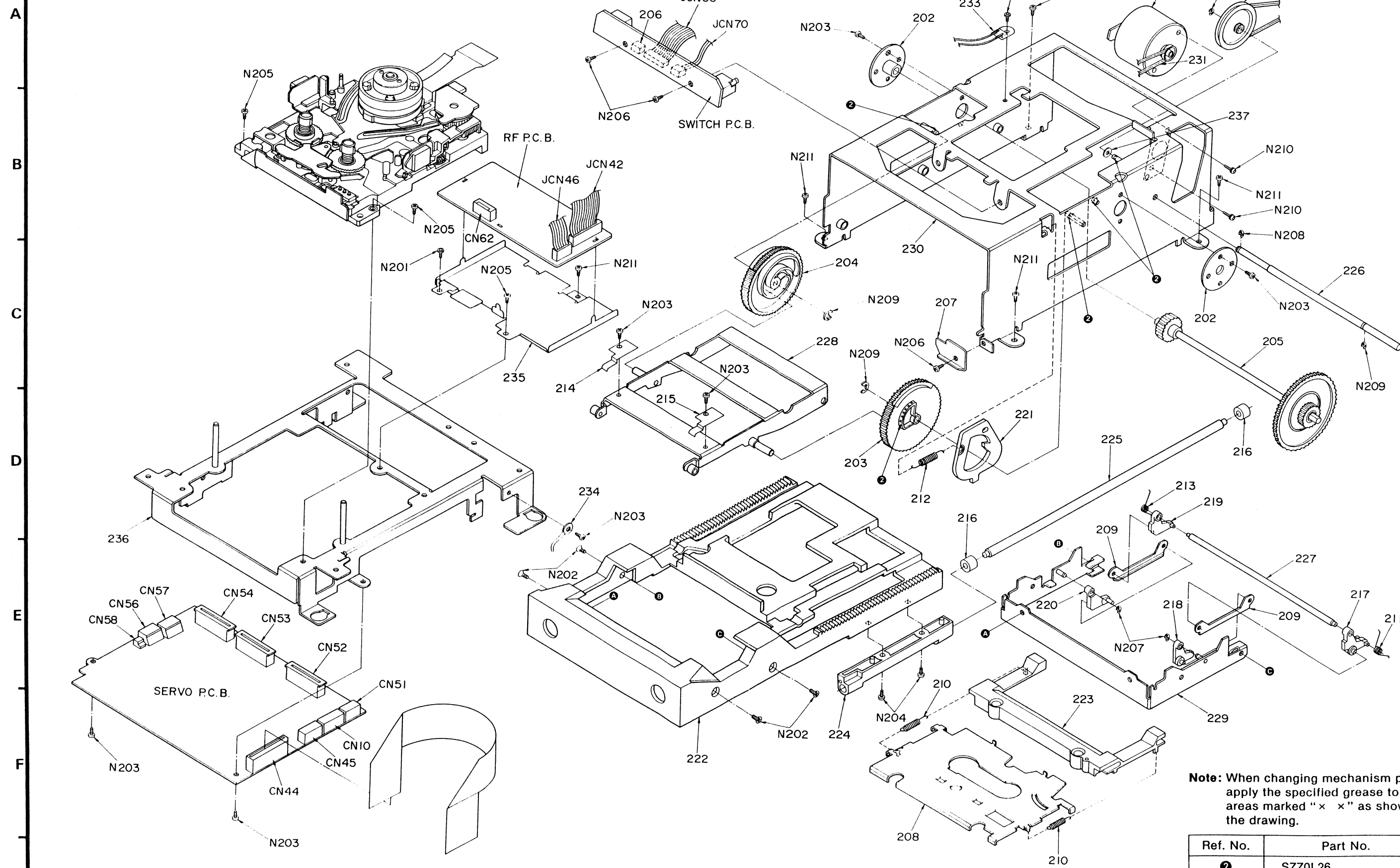
Ref.No.	Part No.	Part Name & Description	Remarks	Ref.No.	Part No.	Part Name & Description	Remarks
D204	MA151ATW	DIODE					
D271	1S2473TR	DIODE		T1	SLT5M523	POWER TRANSFORMER	△
D351	RVDSVC321	DIODE		T901	RLZ0006-0	TRANSFORMER	
D401	MA165	DIODE				OSCILLATOR(S)	
D503-506	MA165	DIODE					
D509, 510	MA719TA	DIODE					
D601-603	LN28RCPP-JF	DIODE		X201	RSXC8M00J01T	OSCILLATOR	
D605	LN31GPH-JF2	DIODE		X202	RSXY8M00M01T	OSCILLATOR	
D607	LN49YPH-JF1	DIODE		X301	RSXY8M00M01T	OSCILLATOR	
D608	LN29RPH-JF1	DIODE		X351	RSXC16M3J01	OSCILLATOR	
D611-628	MA165	DIODE		X352	RSXC22M5J01	OSCILLATOR	
D630-635	MA165	DIODE		X353	RSXC24M5J01	OSCILLATOR	
D637-643	MA165	DIODE		X354	RSXA28M2J01	OSCILLATOR	
D790	MA165	DIODE		X601	RSXY6M00M01T	OSCILLATOR	
D901-914	MA165	DIODE				DISPLAY TUBE	
D915-918	MA719TA	DIODE					
D1001-1009	MA165	DIODE		FL601	RSL0062-F	DISPLAY TUBE	
		VARIABLE RESISTOR(S)				FUSE(S) & HOLDER(S)	
VR104, 105	EVNDXAA00B53	V. R. RF RECORDING LEVEL ADJ.		F1	XBA2C02TB0S	FUSE (250V 200mA)	△
VR106	EVNDXAA00B14	V. R. RF RECORDING LEVEL ADJ.		F2	XBA2C04TB0S	FUSE (250V 400mA)	△
VR107, 108	EVNDXAA00B13	V. R. ATF GAIN ADJ.				SWITCH(ES)	
VR201	EVNDXAA00B54	V. R. PG PHASE ADJ.					
VR271	EVNDCAA03B54	V. R. TAPE BEGIN/END DET. ADJ.					
VR401	EVJC51F04703	V. R. REC BALANCE		S1	ESB8249V	SW. POWER	△
VR402	EVJC20F02A24	V. R. REC LEVEL		S2	ESE37263	SW. VOLTAGE SELECTOR	△
VR501, 502	EVNDXAA00B53	V. R. DAC OUTPUT BALANCE ADJ.		S601	ESD1511201	SW. SAMPLING FREQ. SELECTOR	
VR503, 504	EVNDXAA00B15	V. R. DAC OFF-SET ADJ.		S602	ESB64801	SW. ANALOG/DIGITAL SELECTOR	
VR551	EVU57A022A14	V. R. HEADPHONES LEVEL		S611	EVQQTG05R	SW. ERASE	
VR601	EVQWYS00004E	V. R. SEARCH DIAL		S612	EVQQTG05R	SW. END SEARCH	
		COIL(S)		S613	EVQQTG05R	SW. START ID	
				S614	EVQQTG05R	SW. SKIP ID	
L1, 2	SLQX400-D	COIL	△	S615	EVQQTG05R	SW. END	
L101	ELJFA470KF	COIL		S616	EVQQTG05R	SW. COUNTER RESET	
L104	ELJFA180KF	COIL		S617	EVQQTG05R	SW. RENUMBER	
L106	ELJFA101KF	COIL		S618	EVQQTG05R	SW. REW	
L108	RLQZB471KT-D	COIL		S619	EVQQTG05R	SW. FF	
L109, 110	ELJFA180KF	COIL		S620	EVQQTG05R	SW. FADE OUT	
L120	RLQZB101KT-D	COIL		S621	EVQQTG05R	SW. FADE IN	
L202	RLM9R001-Z	COIL		S622	EVQQTG05R	SW. AUTO PNO	
L203	RLQZB101KT-D	COIL		S623	EVQQTG05R	SW. COUNTER MODE	
L351	RLQZB2R2KT-D	COIL		S624	EVQQTG05R	SW. REVERSE SKIP	
L352	RL03B002-M	COIL		S625	EVQQTG05R	SW. FORWARD SKIP	
L550-552	EXCELD35V	COMBINATION PART		S626	EVQQTG05R	SW. PAUSE	
L901-908	EXCELD35V	COMBINATION PART		S627	EVQQTG05R	SW. REC	
L919-922	EXCELD35V	COMBINATION PART		S628	EVQQTG05R	SW. AUTO REC MUTE	
L924, 925	EXCELD35V	COMBINATION PART		S630	EVQQTG05R	SW. WRITE	
L1001-1008	EXCELD35V	COMBINATION PART		S631	EVQQTG05R	SW. PLAY	
		TRANSFORMER(S)		S632	EVQQTG05R	SW. STOP	
				S633	EVQQTG05R	SW. SKIP PLAY CANCEL	

■ EXPLODED VIEWS

- **Cabinet and chassis parts**



• Loading parts



Note: When changing mechanism parts, apply the specified grease to the areas marked "x x" as shown in the drawing.

Ref. No.	Part No.
②	SZZ0L26

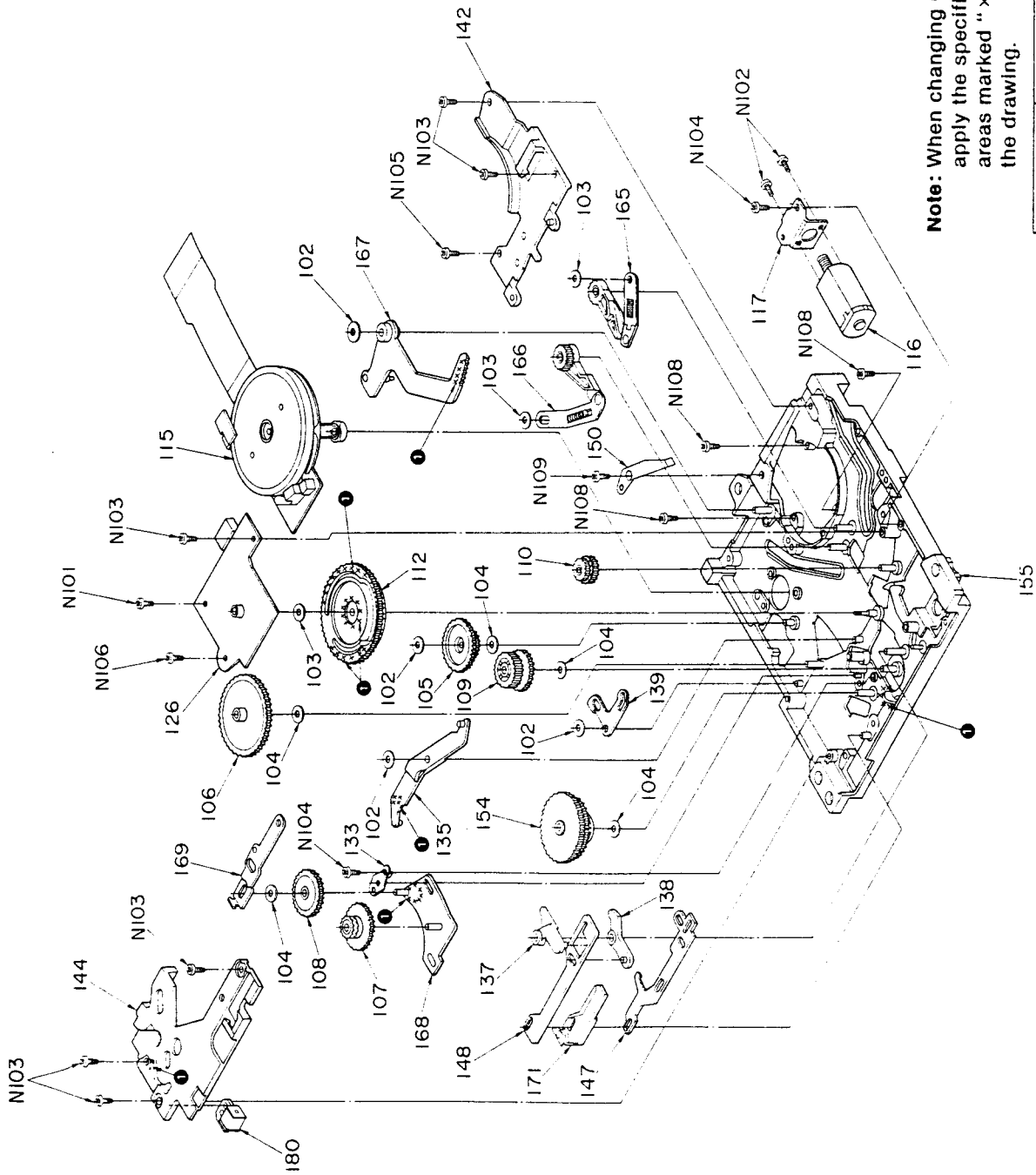
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(Bottom view)



Note: When changing mechanism parts, apply the specified grease to the areas marked "x x" as shown in the drawing.

Ref. No.	Part No.
1	RZZ0L05

(Top view)

This diagram illustrates the exploded view of the top view of a mechanical assembly. The components are labeled with numbers and alphanumeric codes, indicating their assembly sequence and position. The assembly includes a central shaft with gears (179-1, 179-2, 172, 173-1, 173-2, 173-3, 173-4, 173-5, 173-6, 173-7, 173-8, 173-9, 173-10, 173-11, 173-12, 173-13, 173-14, 173-15, 173-16, 173-17, 173-18, 173-19, 173-20, 173-21, 173-22, 173-23, 173-24, 173-25, 173-26, 173-27, 173-28, 173-29, 173-30, 173-31, 173-32, 173-33, 173-34, 173-35, 173-36, 173-37, 173-38, 173-39, 173-40, 173-41, 173-42, 173-43, 173-44, 173-45, 173-46, 173-47, 173-48, 173-49, 173-50, 173-51, 173-52, 173-53, 173-54, 173-55, 173-56, 173-57, 173-58, 173-59, 173-60, 173-61, 173-62, 173-63, 173-64, 173-65, 173-66, 173-67, 173-68, 173-69, 173-70, 173-71, 173-72, 173-73, 173-74, 173-75, 173-76, 173-77, 173-78, 173-79, 173-80, 173-81, 173-82, 173-83, 173-84, 173-85, 173-86, 173-87, 173-88, 173-89, 173-90, 173-91, 173-92, 173-93, 173-94, 173-95, 173-96, 173-97, 173-98, 173-99, 173-100, 173-101, 173-102, 173-103, 173-104, 173-105, 173-106, 173-107, 173-108, 173-109, 173-110, 173-111, 173-112, 173-113, 173-114, 173-115, 173-116, 173-117, 173-118, 173-119, 173-120, 173-121, 173-122, 173-123, 173-124, 173-125, 173-126, 173-127, 173-128, 173-129, 173-130, 173-131, 173-132, 173-133, 173-134, 173-135, 173-136, 173-137, 173-138, 173-139, 173-140, 173-141, 173-142, 173-143, 173-144, 173-145, 173-146, 173-147, 173-148, 173-149, 173-150, 173-151, 173-152, 173-153, 173-154, 173-155, 173-156, 173-157, 173-158, 173-159, 173-160, 173-161, 173-162, 173-163, 173-164, 173-165, 173-166, 173-167, 173-168, 173-169, 173-170, 173-171, 173-172, 173-173, 173-174, 173-175, 173-176, 173-177, 173-178, 173-179, 173-180, 173-181, 173-182, 173-183, 173-184, 173-185, 173-186, 173-187, 173-188, 173-189, 173-190, 173-191, 173-192, 173-193, 173-194, 173-195, 173-196, 173-197, 173-198, 173-199, 173-200, 173-201, 173-202, 173-203, 173-204, 173-205, 173-206, 173-207, 173-208, 173-209, 173-210, 173-211, 173-212, 173-213, 173-214, 173-215, 173-216, 173-217, 173-218, 173-219, 173-220, 173-221, 173-222, 173-223, 173-224, 173-225, 173-226, 173-227, 173-228, 173-229, 173-230, 173-231, 173-232, 173-233, 173-234, 173-235, 173-236, 173-237, 173-238, 173-239, 173-240, 173-241, 173-242, 173-243, 173-244, 173-245, 173-246, 173-247, 173-248, 173-249, 173-250, 173-251, 173-252, 173-253, 173-254, 173-255, 173-256, 173-257, 173-258, 173-259, 173-260, 173-261, 173-262, 173-263, 173-264, 173-265, 173-266, 173-267, 173-268, 173-269, 173-270, 173-271, 173-272, 173-273, 173-274, 173-275, 173-276, 173-277, 173-278, 173-279, 173-280, 173-281, 173-282, 173-283, 173-284, 173-285, 173-286, 173-287, 173-288, 173-289, 173-290, 173-291, 173-292, 173-293, 173-294, 173-295, 173-296, 173-297, 173-298, 173-299, 173-300, 173-301, 173-302, 173-303, 173-304, 173-305, 173-306, 173-307, 173-308, 173-309, 173-310, 173-311, 173-312, 173-313, 173-314, 173-315, 173-316, 173-317, 173-318, 173-319, 173-320, 173-321, 173-322, 173-323, 173-324, 173-325, 173-326, 173-327, 173-328, 173-329, 173-330, 173-331, 173-332, 173-333, 173-334, 173-335, 173-336, 173-337, 173-338, 173-339, 173-340, 173-341, 173-342, 173-343, 173-344, 173-345, 173-346, 173-347, 173-348, 173-349, 173-350, 173-351, 173-352, 173-353, 173-354, 173-355, 173-356, 173-357, 173-358, 173-359, 173-360, 173-361, 173-362, 173-363, 173-364, 173-365, 173-366, 173-367, 173-368, 173-369, 173-370, 173-371, 173-372, 173-373, 173-374, 173-375, 173-376, 173-377, 173-378, 173-379, 173-380, 173-381, 173-382, 173-383, 173-384, 173-385, 173-386, 173-387, 173-388, 173-389, 173-390, 173-391, 173-392, 173-393, 173-394, 173-395, 173-396, 173-397, 173-398, 173-399, 173-400, 173-401, 173-402, 173-403, 173-404, 173-405, 173-406, 173-407, 173-408, 173-409, 173-410, 173-411, 173-412, 173-413, 173-414, 173-415, 173-416, 173-417, 173-418, 173-419, 173-420, 173-421, 173-422, 173-423, 173-424, 173-425, 173-426, 173-427, 173-428, 173-429, 173-430, 173-431, 173-432, 173-433, 173-434, 173-435, 173-436, 173-437, 173-438, 173-439, 173-440, 173-441, 173-442, 173-443, 173-444, 173-445, 173-446, 173-447, 173-448, 173-449, 173-450, 173-451, 173-452, 173-453, 173-454, 173-455, 173-456, 173-4

Ref.No.	Part No.	Part Name & Description	Remarks	Ref.No.	Part No.	Part Name & Description	Remarks
125	EVQWYN001	LOAD SW ASS'Y		175	RXQ0057	T. INCLINED BASE ASS'Y	
126	EVQWXM001	MODE SW ASS'Y		176	RXQ0079-1	LOAD HOLDER ASS'Y	
127	RMB0061	SPRING, FIXED POST		177	RXR0006	S. REEL ASS'Y	
128	RMB0063	SPRING, GUIDE ROLLER		178	RXR0007	T. REEL ASS'Y	
129	RMB0071	SPRING, S. REEL		179	VEG0752-1	CYLINDER UNIT	
130	RMB0073-1	SPRING, T. REEL		179-1	VEH0460	UPPER CYLINDER	
131	RMB0074	SPRING, TENSION		179-2	VHD0593	SCREW	
132	RMB0075	SPRING, BRAKE		180	RSJ0006	PUNGER	
133	RMC0034	ANGLE		181	QBW2081A	WASHER	
134	RME0037-1	SPRING, BT		182	RXP0027	GUIDE ROLLER	
135	RML0088	LEVER, PINCH		183	RHW12009	GUIDE WASHER	
136	RML0090	LEVER, TENSION				SCREWS	
137	RML0094	LEVER, S. BRAKE					
138	RML0095	LEVER, T. BRAKE					
139	RML0103	LEVER, LOAD SELECT		N101	QHQ1371	SCREW	
140	RMQ0052	S. STOPPER		N102	XQN14+C16	SCREW	
141	RMQ0053	T. STOPPER		N103	RHQ0014	SCREW	
142	RMQ0055	LOAD GUIDE HOLDER		N104	RHQ0007	SCREW	
143	RMQ0056-1	GUIDE ARM STOPPER		N105	RHQ0015	SCREW	
144	RMQ0058	MODE GUIDE PLATE		N106	RHQ0016	SCREW	
145	RMQ0062	IDLER GUIDE		N107	RHQ0017	SCREW	
146	RMQ0063	TENSION SPRING HOOK		N108	XQN16+A45T	SCREW	
147	RMQ0064-1	S. BRAKE DRIVE PALTE		N109	XQN2+A2	SCREW	
148	RMQ0065-1	T. BRAKE DRIVE PLATE		N110	RHQ0018	SCREW	
149	RNW172ZA	WASHER		N111	RHQ0019	SCREW	
150	RUS740ZA	EARTH ANGLE		N112	RHQ0020	SCREW	
151	RDG0071	IDLER GEAR				LOADING PARTS	
152	RMB0069-1	IDLER SPRING					
153	RXL0051	IDLER ARM ASS'Y		201	RFKPVDA10-K	MOTOR ASS'Y	
154	RXG0011-2	DRIVE GEAR		202	RDB0032	HOLDER, GEAR SHAFT	
155	RXK0019	CHASSIS UNIT		203	RDG0120-2	MAIN GEAR	
156	RXL0035-4	TENSION ARM ASS'Y		204	RDG0122-1	MAIN GEAR	
157	RXL0036	TENSION BAND ASS'Y		205	RFKNVDA10BK	GEAR SHAFT ASS'Y	
158	RMB0066	PIN-PRESSURE SPRING		206	RJP2G272A	CONNECTOR(CN72)	
159	RMB0067	PINCH ROLLER SPRING		207	RMA0194	SHAFT FRAME	
160	RMM0036	PIN-PRESSURE LINK		208	RMA0197	ANGLE CASSETTE HOLDER	
161	RXL0046	PINCH ARM ASS'Y		209	RMA0200	HOLDER ARM	
162	RXL0048	BT LEVER ASS'Y		210	RMB0110	SPRING	
163	RXL0049	S. BRAKE ASS'Y		211	RMB0111	SPRING	
164	RXL0050	T. BRAKE ASS'Y		212	RMB0131	SPRING	
165	RXL0052-1	S. LOAD ARM		213	RMB0144	SPRING	
166	RXL0054-1	T. LOAD ARM		214	RMC0050	ANGLE	
167	RXL0056-2	LOAD LEVER		215	RMC0051	ANGLE	
168	RXL0057	P. F. IDLER ASS'Y		216	RMG0090	RUBBER	
169	RXL0058	LEVER, P. F. SELECTION		217	RML0139-1	HOLDER, SHAFT	
170	RXM0018	GUIDE LINK ASS'Y		218	RML0140-1	HOLDER	
171	RXM0019	PLUNGER LINK ASS'Y		219	RML0141-1	HOLDER, SHAFT	
172	RXP0016-2	S. POST ROLLER ASS'Y		220	RML0142-1	HOLDER	
172-1	RXP0008	POST ROLLER		221	RML0150-1	HOLDER, MAIN GEAR	
173	RXP0017-1	T. POST ROLLER ASS'Y		222	RMR0206	TRAY	
173-1	RXP0008	POST ROLLER		223	RMR0207	CASSETTE HOLDER	
174	RXP0020-1	T. GUIDE ROLLER					

REPLACEMENT PARTS LIST

Notes : * Important safety notice:

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

* 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.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS		N1	XTB3+8J	SCREW	
				N2	SHDD4-1	SCREW	
				N3	SNE2095-5	SCREW	
1	RMY0030	RADIATOR		N4	XTBS3+8JFZ1	SCREW	
2	SNE1004-1	GND PLATE		N5	XTB3+16JFR	SCREW	
3	SMN2080	EARTH PLATE		N6	XSN26+4FZ	SCREW	
4	RMA0202	FL HOLDER		N7	XTBS3+8FFZ1	SCREW	
5	REZ0136A	CONNECTOR		N8	XTV3+6G	SCREW	
6	REZ0137A	CONNECTOR		N9	XTW3+6T	SCREW	
7	RGK0165A-H	TRAY ORNAMENT		N10	XVE3A4FP	SCREW	
8	RGQ0059	CARD SPACER		N11	XNS12	NUT	
9	RGQ0046	WIRE SADDLE		N12	XNS7S	NUT	
10	RFKHV3700EBH	REAR PANEL ASS'Y		N13	XNS8S	NUT	
11	RGU0030A	BUTTON, POWER		N14	XNS9	NUT	
12	RGU0235-H	BUTTON, OPERATION A		N15	XWC2B	WASHER	
13	RGU0236-H	BUTTON, OPERATION B		N16	XWC4B	WASHER	
14	RGU0237-H	BUTTON, OPERATION C		N17	XTB3+8GFR	SCREW	
15	RGU0238	BUTTON, SWITCH		N18	XYA3+CJ16FR	SCREW	
16	RGV0033	KNOB, SAMPLING FREQUENCY		N19	XTB4+8F	SCREW	
17	RGW0055	KNOB, BALANCE/H. P. LEVEL		N20	XTB3+10GFR	SCREW	
18	RKA0009-K	FOOT		N21	XTB3+6F	SCREW	
19	RKF0089	HOLDER(SERVO P. C. B.)					
20	RKM0076-H	CABINET				MECHANISM PARTS	
21	RMA0192	HOLDER(HEADPHONES)					
22	RMA0193	HOLDER(BALANCE/REC LEVEL)		101	EVQWR4002	CASSETTE SW.	
23	RMG0134	MECHANISM SUPPORT		102	QBW2008	WASHER	
24	RMK0068-2	CHASSIS		103	QBW2030	WASHER	
25	RFKGV3700PH	FRONT PANEL ASS'Y		104	QBW2059	WASHER	
26	RFKQV3700PH	SHUTTLE KNOB ASS'Y		105	RDG0066-1	MAIN GEAR A	
27	CSTW-2	RING		106	RDG0067	MAIN GEAR B	
28	SHRD202	RESIN PARTS		107	RDG0068	IDLER GEAR(P)	
29	SHR9451	SPRING		108	RDG0069	IDLER GEAR(F)	
30	SUSD162-1	SPRING		109	RDG0070	COUNTER GEAR	
31	RYQ0049-1	KNOB, REC LEVEL		110	RDG0073-1	MODE REPEATING GEAR	
32	SHE185-1	P. C. B. SUPPORT		111	RDK0006-1	LOAD CAM	
33	RMA0408	ANGLE		112	RDK0007-1	MODE CAM	
34	RMY0047-1	RADIATOR		113	RDP0020	FIXED POST	
35	RMG0117	EARTH PLATE		114	RDP0021	FIXED POST FLANGE	
36	RMZ0095-1	INSULATION SHEET(A)		115	REM0001	CAPSTAN UNIT	
37	RMZ0096	INSULATION SHEET(B)		116	REM0009	MODE MOTOR ASS'Y	
38	SHR330	BINDER		117	RMN0028	HOLDER, MODE MOTOR	
39	SHR9815	RIVET		118	REQ0012	INTERFACE P. C. B.	
40	SJT347	FUSE HOLDER		119	REQ0014	BEGIN/END DET. SENSOR ASS'Y	
41	SJT345	HOUR METER HOLDER		120	RMN0030	BEGIN DET. ANGLE	
				122	RMN0029	END DET. ANGLE	
		SCREWS		123	RMQ0059	LEAD OPENER	
				124	REQ0018	BEGIN/END DET. LED ASS'Y	

RESISTORS & CAPACITORS

Notes : * Capacity value are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
 * Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM) , 1M=1,000k (OHM)

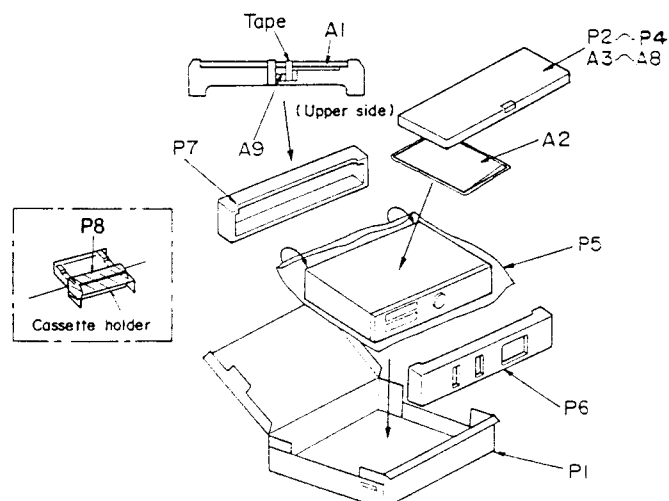
Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
		RESISTORS						
R11	ERDS2TJ392T	1/4W 3.9K	R209	ERJ6GEYJ153V	1/10W 15K	R294-296	ERJ6GEYJ473V	1/10W 47K
R12	ERD25FJ102	1/4W 1K Δ	R210	ERJ6GEYJ102V	1/10W 1K	R297	ERJ6GEYJ220	1/10W 22
R13, 14	ERG1ANJP560S	1W 56	R212	ERJ6GEYJ105	1/10W 1M	R298	ERJ6GEYJ473V	1/10W 47K
R101, 102	ERJ6GEYJ221V	1/10W 220	R213	ERJ6GEYJ274V	1/10W 270K	R301-306	ERJ6GEYJ332V	1/10W 3.3K
R103, 104	ERJ6GEYJ681V	1/10W 680	R214	ERJ6GEYJ682V	1/10W 6.8K	R309-312	ERJ6GEYJ332V	1/10W 3.3K
R112, 113	ERJ6GEYJ332V	1/10W 3.3K	R215	ERJ6GEYJ184V	1/10W 180K	R313	ERJ6GEYJ331V	1/10W 330
R115	ERJ6GEYJ332V	1/10W 3.3K	R216	ERJ6GEYJ101V	1/10W 100	R314-320	ERJ6GEYJ561V	1/10W 560
R117	ERJ6GEYJ102V	1/10W 1K	R217, 218	ERJ6GEYJ472V	1/10W 4.7K	R321	ERJ6GEYJ331V	1/10W 330
R118	ERJ6GEYJ471V	1/10W 470	R219, 220	ERJ6GEYJ103V	1/10W 10K	R322	ERJ6GEYJ561V	1/10W 560
R123	ERJ6GEYJ822V	1/10W 8.2K	R221, 222	ERJ6GEYJ474V	1/10W 470K	R323	ERJ6GEYJ473V	1/10W 47K
R124	ERJ6GEYJ152V	1/10W 1.5K	R223, 224	ERJ6GEYJ222V	1/10W 2.2K	R324	ERJ6GEYJ331V	1/10W 330
R126	ERJ6GEYJ152V	1/10W 1.5K	R225, 226	ERJ6GEYJ184V	1/10W 180K	R325	ERJ6GEYJ561V	1/10W 560
R128	ERJ6GEYJ822V	1/10W 8.2K	R227	ERJ6GEYJ102V	1/10W 1K	R326	ERJ6GEYJ332V	1/10W 3.3K
R131	ERJ6GEYJ331V	1/10W 330	R228	ERJ6GEYJ222V	1/10W 2.2K	R331-333	ERJ6GEYJ105	1/10W 1M
R132, 133	ERJ6GEYJ221V	1/10W 220	R229	ERJ6GEYJ103V	1/10W 10K	R334-336	ERJ6GEYJ561V	1/10W 560
R134	ERJ6GEYJ102V	1/10W 1K	R230	ERJ6GEYJ681V	1/10W 680	R337-339	ERJ6GEYJ102V	1/10W 1K
R135, 136	ERJ6GEYJ471V	1/10W 470	R231	ERJ6GEYJ821V	1/10W 820	R340	ERJ6GEYJ332V	1/10W 3.3K
R150	ERJ6GEYJ102V	1/10W 1K	R232	ERJ6GEYJ333V	1/10W 33K	R341	ERJ6GEYJ561V	1/10W 560
R151, 152	ERJ6GEYJ471V	1/10W 470	R233	ERJ6GEYJ393V	1/10W 39K	R342	ERJ6GEYJ103V	1/10W 10K
R153	ERJ6GEYJ223V	1/10W 22K	R234	ERJ6GEYJ333V	1/10W 33K	R343	ERJ6GEYJ331V	1/10W 330
R154, 155	ERJ6GEYJ471V	1/10W 470	R235	ERJ6GEYJ473V	1/10W 47K	R344	ERJ6GEYJ223V	1/10W 22K
R156, 157	ERJ6GEYJ222V	1/10W 2.2K	R236	ERJ6GEYJ332V	1/10W 3.3K	R351, 352	RRJ6GCAD822T	1/10W 8.2K
R158	ERJ6GEYJ102V	1/10W 1K	R237	ERX12SJR33E	1/2W 0.33	R354	RRJ6GCAD822T	1/10W 8.2K
R159	ERJ6GEYJ223V	1/10W 22K	R240	ERJ6GEYJ151V	1/10W 150	R355	ERJ6GEYJ102V	1/10W 1K
R160	ERJ6GEYJ221V	1/10W 220	R241	ERJ6GEYJ333V	1/10W 33K	R356-358	ERJ6GEYJ103V	1/10W 10K
R162	ERJ6GEYJ472V	1/10W 4.7K	R242	ERJ6GEYJ103V	1/10W 10K	R359	ERJ6GEYJ102V	1/10W 1K
R164, 165	ERJ6GEYJ472V	1/10W 4.7K	R243	ERJ6GEYJ473V	1/10W 47K	R360	RRJ6GCAD183T	1/10W 18K
R167	ERJ6GEYJ332V	1/10W 3.3K	R244	ERJ6GEYJ102V	1/10W 1K	R361	RRJ6GCAD153T	1/10W 15K
R168	ERJ6GEYJ102V	1/10W 1K	R245	ERX12SJR33E	1/2W 0.33	R362	ERJ6GEYJ331V	1/10W 330
R169	ERJ6GEYJ471V	1/10W 470	R247	ERJ6GEYJ331V	1/10W 330	R363	ERJ6GEYJ103V	1/10W 10K
R172	ERJ6GEYJ102V	1/10W 1K	R248	ERJ6GEYJ822V	1/10W 8.2K	R364	ERJ6GEYJ105	1/10W 1M
R173, 174	ERJ6GEYJ222V	1/10W 2.2K	R249	ERJ6GEYJ472V	1/10W 4.7K	R365	ERJ6GEYJ331V	1/10W 330
R175	ERJ6GEYJ151V	1/10W 150	R250	ERJ6GEYJ153V	1/10W 15K	R366	RRJ6GCAD683T	1/10W 68K
R176	ERJ6GEYJ104V	1/10W 100K	R251	ERJ6GEYJ104V	1/10W 100K	R367	ERJ6GEYJ331V	1/10W 330
R178	ERJ6GEYJ820V	1/10W 82	R271, 272	ERJ6GEYJ103V	1/10W 10K	R368	ERJ6GEYJ561V	1/10W 560
R181	ERJ6GEYJ331V	1/10W 330	R273	ERJ6GEYJ681V	1/10W 680	R409, 410	ERDAS3J102T	1/4W 1K
R193-195	ERJ6GEYJ102V	1/10W 1K	R274	ERSB39JR82U	1/4W 0.82	R411, 412	ERDAS3J273T	1/4W 27K
R196	ERJ6GEYJ103V	1/10W 10K	R275	ERJ6GEYJ473V	1/10W 47K	R413, 414	ERDAS3J472T	1/4W 4.7K
R197	ERJ6GEYJ102V	1/10W 1K	R277, 278	ERJ6GEYJ333V	1/10W 33K	R415, 416	ERDAS3J273T	1/4W 27K
R201	ERJ6GEYJ102V	1/10W 1K	R279	ERJ6GEYJ683V	1/10W 68K	R417	ERJ6GEYJ331V	1/10W 330
R202, 203	ERJ6GEYJ223V	1/10W 22K	R280	ERJ6GEYJ333V	1/10W 33K	R419, 420	ERJ6GEYJ560V	1/10W 56
R204	ERJ6GEYJ103V	1/10W 10K	R281	ERJ6GEYJ332V	1/10W 3.3K	R421-424	ERJ6GEYJ225V	1/10W 2.2M
R205	ERJ6GEYJ683V	1/10W 68K	R282	ERJ6GEYJ682V	1/10W 6.8K	R447	ERJ6GEYJ561V	1/10W 560
R206	ERJ6GEYJ684V	1/10W 680K	R284	ERJ6GEYJ103V	1/10W 10K	R500	ERJ6GEYJ102V	1/10W 1K
R207	ERJ6GEYJ472V	1/10W 4.7K	R285	ERJ6GEYJ104V	1/10W 100K	R503-508	ERJ6GEYJ102V	1/10W 1K
R208	ERJ6GEYJ683V	1/10W 68K	R286	ERJ6GEYJ103V	1/10W 10K	R509, 510	ERJ6GEYJ473V	1/10W 47K
			R287	ERJ6GEYJ684V	1/10W 680K	R517-520	ERDAS3J472T	1/4W 4.7K
			R289, 290	ERJ6GEYJ473V	1/10W 47K	R521, 522	ERDS2TJ682T	1/4W 6.8K
			R292, 293	ERJ6GEYJ563V	1/10W 56K	R523, 524	ERDS2TJ103	1/4W 10K

Ref. No.	Part No.	Part Name & Description	Remarks
224	RMR0209-1	SHAFT ANGLE	
225	RMS0158-1	SHAFT	
226	RMS0160	SHAFT	
227	RMS0165	SHAFT	
228	RXA0046	SUB FRAME	
229	RXA0047	CASSETTE HOLDER	
230	RXK0059	FRAME	
231	SMQ20025	BELT	
232	SMQ40032	PULLEY GEAR	
233	EYH-S78A4	DEW SENSOR	
234	SHE36-3	EARTH TERMINAL	
235	RSC0066	SHIELD PLATE	
236	RXA0060	MECHANISM FRAME	
237	RMX0044	WASHER	
		SCREWS	
N201	XSN2+3	SCREW	
N202	XSS26+4FZ	SCREW	
N203	XTB3+6J	SCREW	
N204	XTN3+10G	SCREW	
N205	XTN3+6F	SCREW	
N207	XUC15FT	WASHER	
N208	XUC2FT	WASHER	
N209	XUC3FT	WASHER	
N210	XYN26+C33	SCREW	
N211	XTB3+6F	SCREW	
		PACKING MATERIAL	
P1	RPG0860	PACKING CASE	
P2	RPN0391-1	PAD	
P3	RPN0392	PAD	
P4	XZB09X10C03	PROTECTION BAG (SCREW)	
P5	RPF0017	PROTECTION BAG (UNIT)	
P6	RPN0221	PAD (FRONT)	
P7	RPN0222-1	PAD (BACK)	
P8	RPH0065	TRAY COVER	
		ACCESSORIES	
A1	RAK-SV3002W	REMOTE CONTROL TRANSMITTER	
A1-1	RKR0008	BATTERY COVER	
A2	RQF0901A	INSTRUCTION MANUAL	
A3	SJPD19-1E	COAXIAL CABLE	
A4	SJAD8	AC POWER SUPPLY CORD	(EB) △
A4	RJA0003-K	AC POWER SUPPLY CORD	(EG) △
A5	RYQ0059-1	RACK MOUNT KIT	
A6	RYQ0060-1	RACK MOUNT KIT	
A7	XYN3+F10FZ	SCREW	
A8	RT-RCLP	CLEANING TAPE	
A9	UM-4NEP-2S	BATTERY	

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT	
		BOARDS ASS'Y	
PCB1	REPO814B	MAIN P. C. B. ASS'Y	(NLA)
PCB1-1	RFKBV3700EBA	PARALLEL REMOTE P. C. B.	(NLA)
		DIGITAL TERMINAL P. C. B.	(NLA)
		AC IN P. C. B.	(NLA)
		POWER SWITCH P. C. B.	(NLA)
		POWER TRANSFORMER P. C. B.	(NLA)
		ANALOG TERMINAL P. C. B.	(NLA)
		BALANCE/REC LEVEL P. C. B.	(NLA)
		OUTPUT LEVEL P. C. B.	(NLA)
		VOLTAGE SELECTOR P. C. B.	(NLA)
PCB1-2	RFKBV3700EB1	MAIN P. C. B.	(NLA)
PCB2	REPO693A	REGULATOR IC P. C. B.	(NLA)
		POWER SUPPLY P. C. B.	(NLA)
PCB3	REPO694A	OPERATION P. C. B.	(NLA)
		SEARCH P. C. B.	(NLA)
		HEADPHONES JACK P. C. B.	(NLA)
PCB4	REPO417A	RF P. C. B., SERVO P. C. B. ASS'Y	(NLA)
PCB4-1	RFKBV3700-N	RF P. C. B.	(NLA)
PCB4-2	RFKBV3700-O	SERVO P. C. B.	(NLA)
PCB5	REPO421A	TRAY MOTOR P. C. B.	(NLA)
		SWITCH P. C. B.	(NLA)
PCB6	REQ0012	CONNECTOR P. C. B.	(NLA)
		MECHANISM ASS'Y	
MECH1	RAA1001	MECHANISM UNIT	(NLA)

Note: Printed circuit board assembly and mechanism assembly with mark (NLA) is no longer available after discontinuation of the product.

PACKING



Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
C227	ECUV1E333MDN	25V 0.033U	C376	ECUV1E103KBN	25V 0.01U	C660	ECBT1E103ZF	25V 0.01U
C228	ECUV1H181KCN	50V 180P	C377, 378	ECUV1E223MBN	25V 0.022U	C694	ECBT1E103ZF	25V 0.01U
C229	ECEA0JK221B	6.3V 220U	C379	ECUV1E104ZFN	25V 0.1U	C751	ECKW1H103ZF5	50V 0.01U
C230	ECEA0JK470	6.3V 47U	C385	ECUV1H103ZFN	50V 0.01U	C901-904	ECEA1CPZ470B	16V 47U
C231	ECEA1AU470	10V 47U	C389	ECUV1E104ZFN	25V 0.1U	C905-912	ECUV1H220JCN	50V 22P
C232	ECEA1CK220	16V 22U	C390	ECUV1H103ZFN	50V 0.01U	C913, 914	ECEA1CPZ470B	16V 47U
C233	ECUV1E104ZFN	25V 0.1U	C391	ECUV1E103KBN	25V 0.01U	C915, 916	ECEA1CPZ101B	16V 100U
C234	ECEA1CK470	16V 47U	C392-395	ECUV1H103ZFN	50V 0.01U	C917, 918	ECUV1H103ZFN	50V 0.01U
C235, 236	ECUV1E104ZFN	25V 0.1U	C396	ECUV1H390JCN	50V 39P	C919, 920	ECUV1H220JCN	50V 22P
C237	ECUV1C105ZFM	16V 1U	C397	ECUV1H103ZFN	50V 0.01U	C921-924	ECUV1H150JCN	50V 15P
C238	ECUV1E223MBN	25V 0.022U	C401	ECUV1E104ZFN	25V 0.1U	C925-928	ECEA1CPZ221B	16V 220U
C239	ECUV1E683MBN	25V 0.068U	C404, 405	ECUV1H220JCN	50V 22P	C929, 930	ECUV1H103ZFN	50V 0.01U
C240	ECUV1E153MBN	25V 0.015U	C407, 408	ECUV1H103ZFN	50V 0.01U	C931	ECEA0JU330	6.3V 33U
C241	ECUV1E104MBN	25V 0.1U	C411, 412	ECEA1CPZ470B	16V 47U	C932, 933	ECUV1E224ZFN	25V 0.22U
C242-246	ECUV1E104ZFN	25V 0.1U	C425-430	ECUV1E104ZFN	25V 0.1U	C934-937	ECUV1H470KCN	50V 47P
C247, 248	ECUV1E333MDN	25V 0.033U	C431, 432	ECEA0JPZ221B	6.3V 220U	C938, 939	ECUV1E224ZFN	25V 0.22U
C249	ECUV1E153MBN	25V 0.015U	C433, 434	ECQB1H103JZ	50V 0.01U	C941, 942	ECUV1H103ZFN	50V 0.01U
C250	ECUV1E104MBN	25V 0.1U	C435	ECUV1E104ZFN	25V 0.1U	C943	ECUV1H470KCN	50V 47P
C251-253	ECUV1E104ZFN	25V 0.1U	C438	ECEA0JU101B	6.3V 100U	C944	ECUV1H103ZFN	50V 0.01U
C260	ECUV1E334ZFM	25V 0.33U	C439, 440	ECEA1CU220	16V 22U	C945	ECKW1H103ZF5	50V 0.01U
C268	ECUV1C105ZFM	16V 1U	C500	ECUV1H102KBN	50V 1000P	C946	ECUV1H470KCN	50V 47P
C269	ECUV1E103KBN	25V 0.01U	C501, 502	ECHR1H271JZ3	50V 270P	C950	ECUV1H103ZFN	50V 0.01U
C270	ECEA0JK470	6.3V 47U	C503, 504	ECUV1H103ZFN	50V 0.01U	C951, 952	ECKW1H103ZF5	50V 0.01U
C271	ECUV1E104ZFN	25V 0.1U	C505, 506	ECHR1H103JZ3	50V 0.01U	C953-960	ECHR1H221JZ3	50V 220P
C272	ECUV1E223MBN	25V 0.022U	C507, 508	ECEA1CU101	16V 100U	C966	ECUV1H103ZFN	50V 0.01U
C273	ECUV1H101KCN	50V 100P	C509, 510	ECEA1CPZ101B	16V 100U	C990	ECUV1H103ZFN	50V 0.01U
C274	ECUV1E103KBN	25V 0.01U	C511-514	ECEA0JPZ221B	6.3V 220U	C991, 992	ECEA1CU331	16V 330U
C275	ECUV1C105ZFM	16V 1U	C515-518	ECUV1H220JCN	50V 22P	C995, 996	ECUV1H103ZFN	50V 0.01U
C276	ECUV1H221KCN	50V 220P	C519, 520	ECEA1CU101	16V 100U	C1001-1003	ECUV1H103ZFN	50V 0.01U
C280	ECUV1C334ZFN	16V 0.33U	C521	ECUV1E104ZFN	25V 0.1U			
C301-307	ECUV1H103ZFN	50V 0.01U	C523, 524	ECUV1H103ZFN	50V 0.01U			
C341	ECUV1E104ZFN	25V 0.1U	C525	ECEA0JU101B	6.3V 100U			
C342	ECUV1H103ZFN	50V 0.01U	C526	ECUV1H103ZFN	50V 0.01U			
C350	ECUV1H103ZFN	50V 0.01U	C545, 546	ECUV1H220JCN	50V 22P			
C351	ECUV1E473MBN	25V 0.047U	C547, 548	ECUV1H103ZFN	50V 0.01U			
C352	ECUV1H820JCN	50V 82P	C549	ECUV1H470KCN	50V 47P			
C353	ECUV1H471JCN	50V 470P	C550A	ECQV1H104JZ3	50V 0.1U			
C354, 355	ECUV1H221JCN	50V 220P	C550	ECUV1H470KCN	50V 47P			
C356	ECUV1H151JCN	50V 150P	C551, 552	ECQV1H104JZ3	50V 0.1U			
C357	ECEA0JU330	6.3V 33U	C553, 554	ECKT1H101KB	50V 100P			
C358-361	ECUV1H180JCN	50V 18P	C555, 556	ECQV1H104JZ3	50V 0.1U			
C362, 363	ECUV1H150JCN	50V 15P	C561, 562	ECEA1CU220	16V 22U			
C364	ECUV1H050CCN	50V 5P	C563, 564	ECEA1CN100SB	16V 10U			
C365	ECUV1H102KBN	50V 1000P	C602, 603	ECEA0JK470	6.3V 47U			
C366	ECUV1H103ZFN	50V 0.01U	C604, 605	ECBT1E103ZF	25V 0.01U			
C367, 368	ECEA0JU330	6.3V 33U	C652	ECBT1H102KB5	50V 1000P			
C369	ECEA0JU221	6.3V 220U	C654	ECBT1H102KB5	50V 1000P			
C370	ECUV1H150JCN	50V 15P	C655	ECEA1VK100B	35V 10U			
C371	ECUV1E104ZFN	25V 0.1U	C656	ECBT1H102KB5	50V 1000P			
C372	ECEA0JU330	6.3V 33U	C657	ECEA0JK470	6.3V 47U			
C373	ECUV1H103ZFN	50V 0.01U	C658	ECBT1E103ZF	25V 0.01U			
C374	ECEA0JU330	6.3V 33U	C659	ECEA1VK100B	35V 10U			

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
R525, 526	ERDAS3J472T	1/4W 4.7K	R931-938	ERDS2TKF1002	1/4W 10K	C79	ECKR1H1032F5	50V 0.01U
R527, 528	ERDAS3J332T	1/4W 3.3K	R939, 940	ERDS2TKF3903	1/4W 390K	C101, 102	ECUV1H222KBN	50V 2200P
R529, 530	ERDAS3J152T	1/4W 1.5K	R941-944	ERDS2TKF2002	1/4W 20K	C103, 104	ECUV1H471KCN	50V 470P
R531-534	ERDAS3J332T	1/4W 3.3K	R945, 946	ERDAS3J122T	1/4W 1.2K	C105	ECUV1H470JCN	50V 47P
R535, 536	ERDAS3J152T	1/4W 1.5K	R947, 948	ERDS2TKF5103	1/4W 510K	C107	ECUV1H222KBN	50V 2200P
R537, 538	ERJ6GEYJ105	1/10W 1M	R949, 950	ERDS2TKF2202	1/4W 22K	C110	ECEA0JK221B	6.3V 220U
R569-572	ERJ6GEYJ124V	1/10W 120K	R951-954	ERDS2TKF75R0	1/4W 75.0	C123	ECUV1C1052FM	16V 1U
R575, 576	ERDS2TJ102	1/4W 1K	R955, 956	ERDS2TKF5103	1/4W 510K	C124, 125	ECUV1H472KBN	50V 4700P
R577	ERDAS3J332T	1/4W 3.3K	R957, 958	ERDS2TKF2202	1/4W 22K	C126, 127	ECUV1H470JCN	50V 47P
R577A	ERDS2TJ103	1/4W 10K	R959-962	ERDAS3J103T	1/4W 10K	C129, 130	ECEA0JKS220B	6.3V 22U
R578	ERDAS3J332T	1/4W 3.3K	R963, 964	ERJ6GEYJ473V	1/10W 47K	C131	ECUV1H222KBN	50V 2200P
R578A	ERDS2TJ103	1/4W 10K	R965	ERDS2TJ561	1/4W 560	C150	ECUV1H471KCN	50V 470P
R579	ERDAS3J332T	1/4W 3.3K	R967, 968	ERDAS3J472T	1/4W 4.7K	C151	ECUV1H222KBN	50V 2200P
R579A	ERDS2TJ123	1/4W 12K	R969-972	ERDS2TJ331	1/4W 330	C152	ECUV1H102KBN	50V 1000P
R580	ERDAS3J332T	1/4W 3.3K	R973, 974	ERJ6GEYJ153V	1/10W 15K	C154	ECUV1H220JCN	50V 22P
R580A	ERDS2TJ123	1/4W 12K	R975, 976	ERJ6GEYJ101V	1/10W 100	C155, 156	ECUV1H102KBN	50V 1000P
R581A	ERDS2TJ104	1/4W 100K	R977	ERD25FJ101	1/4W 100 Δ	C157	ECUV1C1052FM	16V 1U
R581	ERJ6GEYJ472V	1/10W 4.7K	R978, 979	ERJ6GEYJ100	1/10W 10	C159	ECUV1H220JCN	50V 22P
R582A	ERDS2TJ104	1/4W 100K	R980	ERJ6GEYJ331V	1/10W 330	C161	ECUV1H562KBN	50V 5600P
R582	ERJ6GEYJ472V	1/10W 4.7K	R981	ERJ6GEYJ334V	1/10W 330K	C163	ECUV1H562KBN	50V 5600P
R583A	ERDAS3G100T	1/4W 10	R982	ERJ6GEYJ473V	1/10W 47K	C166	ECUV1E153MBN	25V 0.015U
R583	ERJ6GEYJ472V	1/10W 4.7K	R983	ERJ6GEYJ332V	1/10W 3.3K	C167	ECUV1H102KBN	50V 1000P
R584A	ERDAS3G100T	1/4W 10	R984, 985	ERDS2TJ750	1/4W 75	C168	ECUV1H270JCN	50V 27P
R584	ERJ6GEYJ472V	1/10W 4.7K	R986	ERJ6GEYJ223V	1/10W 22K	C169	ECUV1H100JCN	50V 10P
R585A	ERDAS3G330T	1/4W 33	R987-990	ERDAS3J392T	1/4W 3.9K	C171, 172	ECUV1H680JCN	50V 68P
R585	ERJ6GEYJ472V	1/10W 4.7K	R991-994	ERDAS3J101T	1/4W 100	C173	ECUV1H471KCN	50V 470P
R586A	ERDAS3G330T	1/4W 33	R995, 996	ERJ6GEYJ473V	1/10W 47K	C174	ECUV1E104MBN	25V 0.1U
R586	ERJ6GEYJ472V	1/10W 4.7K	R997	ERJ6GEYJ223V	1/10W 22K	C175	ECUV1H472KBN	50V 4700P
R587A	ERDAS3G332T	1/4W 3.3K	R998	ERJ6GEYJ101V	1/10W 100	C176	ECUV1E333MDN	25V 0.033U
R587	ERJ6GEYJ472V	1/10W 4.7K	R999	ERJ6GEYJ223V	1/10W 22K	C177, 178	ECUV1H101KCN	50V 100P
R588A	ERDAS3G332T	1/4W 3.3K	R1001-1008	ERJ6GEYJ103V	1/10W 10K	C179	ECUV1E104MBN	25V 0.1U
R588	ERJ6GEYJ472V	1/10W 4.7K	R1009	ERJ6GEYJ272V	1/10W 2.7K	C181	ECUV1C1052FM	16V 1U
R589, 590	ERDAS3G102T	1/4W 1K	R1010	ERJ6GEYJ271V	1/10W 270	C165, 186	ECUV1H331KCN	50V 330P
R591, 592	ERDS2EJ121	1/4W 120	R1011	ERJ6GEYJ394V	1/10W 390K	C187	ECUV1H470JCN	50V 47P
R593-596	ERDS2TJ222	1/4W 2.2K				C188	ECUV1H331KCN	50V 330P
R601-604	ERDS2TJ472	1/4W 4.7K			CAPACITORS	C190	ECUV1H180JCN	50V 18P
R605	ERDS2TJ100	1/4W 10				C201	ECEA0JK470	6.3V 47U
R606-608	ERDS2TJ102	1/4W 1K	C1	ECKWKC103PF2	400V 0.01U Δ	C202	ECUV1E104ZFN	25V 0.1U
R610, 611	ERDS2TJ471	1/4W 470	C11-19	ECKR1H1032F5	50V 0.01U	C203, 204	ECUV1H180JCN	50V 18P
R612	ERDS2TJ102	1/4W 1K	C20	ECEA1EP2332E	25V 3300U	C205, 206	ECUV1E104ZFN	25V 0.1U
R613-619	ERDS2TJ103	1/4W 10K	C21	ECEA1CU100	16V 10U	C207	ECUV1H271KCN	50V 270P
R620	ERDS2TJ471	1/4W 470	C22	ECEA1EP2332E	25V 3300U	C208	ECUV1H221KCN	50V 220P
R621	ERDS2TJ105T	1/4W 1M	C23	ECEA1CU100	16V 10U	C209, 210	ECUV1E104MBN	25V 0.1U
R901-904	ERDAS3J392T	1/4W 3.9K	C24	ECES1EU682G	25V 6800U	C211	ECUV1H221KCN	50V 220P
R905-908	ERDAS3J102T	1/4W 1K	C25	ECEA1CU100	16V 10U	C212, 213	ECEA1CK220	16V 22U
R909-912	ERDAS3J392T	1/4W 3.9K	C26	ECEA1CU472E	16V 4700U	C214, 215	ECUV1H101KCN	50V 100P
R913-920	ERDAS3J332T	1/4W 3.3K	C27	ECEA1CU100	16V 10U	C216, 217	ECUV1C1052FM	16V 1U
R921, 922	ERDAS3J102T	1/4W 1K	C28	ECEA1HJ221B	50V 220U	C218, 219	ECUV1H390KCN	50V 39P
R923, 924	ERD25FJ331	1/4W 330 Δ	C29	ECEA1VU330	35V 33U	C220, 221	ECUV1H121KCN	50V 120P
R925, 926	ERJ6GEYJ105	1/10W 1M	C30, 31	ECKR1H1032F5	50V 0.01U	C222, 223	ECUV1C1052FM	16V 1U
R927, 928	ERDAS3J332T	1/4W 3.3K	C32	ECEA1EU470	25V 47U	C224	ECQV1H683J23	50V 0.068U
R929, 930	ERDAS3J562T	1/4W 5.6K	C34	ECKR1H1032F5	50V 0.01U	C225, 226	ECUV1H332MBN	50V 3300P

■ Distinguishing by Serial No. Suffix

A. Suffix of a set with Old type remote sensor used in it

Serial No.:

□ □ □ □ □ F □ □ □ □ □

"F" Old type remote sensor

Product manufactured in Nov., '94 or before

B. Suffix of a set with New type remote sensor used in it

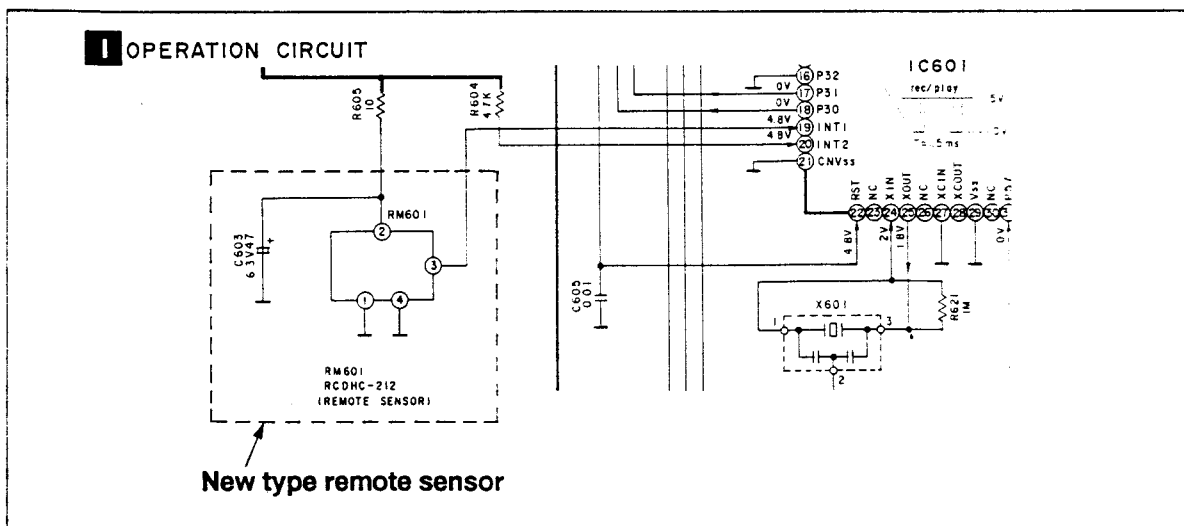
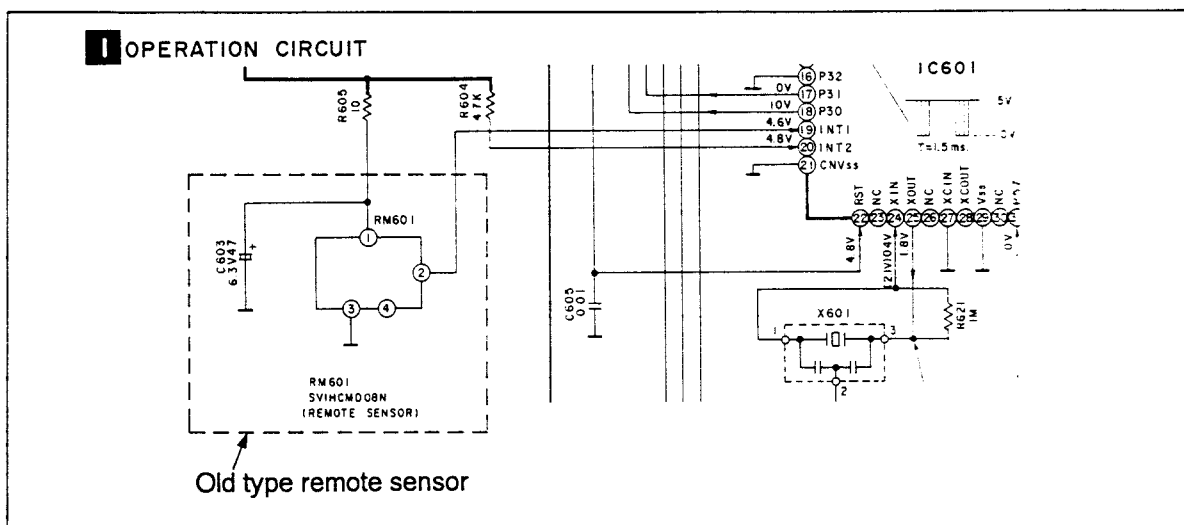
Serial No.:

□ □ □ □ □ G □ □ □ □ □

"G" New type remote sensor

Product manufactured in Dec., '94 onward

■ SCHEMATIC DIAGRAM (SV-3700 Service Manual on page 59.)



Service Manual

Professional Digital Audio Tape Deck

SV-3700

Supplement

Colour

(H).....Gray Type

Area

Suffix for Model No.	Area	Colour
(EB)	Gerat Britain.	(H)
(EG)	Europe.	

Please file and use this supplement manual together with the service manual for Model No. SV-3700, Order No. AD9010314C2.

CHANGES

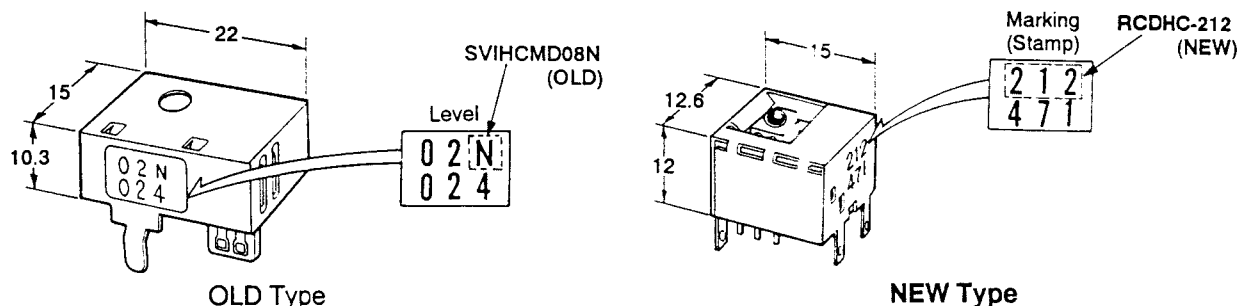
- We inform you that the remote sensor used for the subject model has been changed since midway of production.

■ REPLACEMENT PARTS LIST (SV-3700 Service Manual on page 84.)

Ref. No.	Parts No.		Part Name & Description	Remarks
	OLD	NEW		
RM601	SVIHCMD08N	RCDHC-212	REMOTE SENSOR	

NOTE: When replacing the remote sensor of a set during service work, check if the type of the remote sensor is New or Old and use a replacement remote sensor of the same type.

■ How to distinguish between New type and Old type remote sensors.



△ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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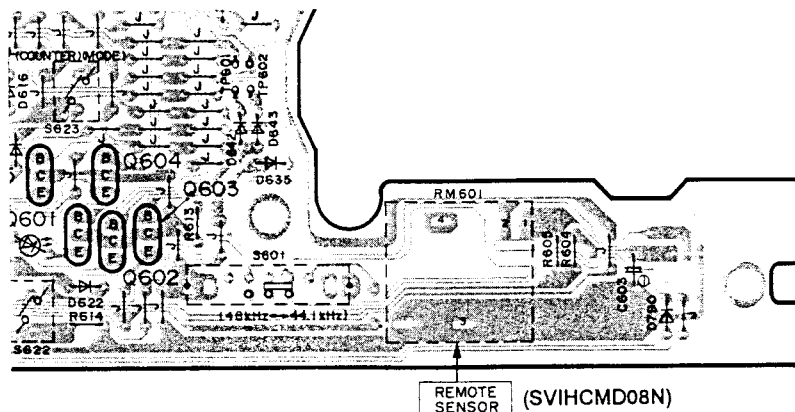
PRINTED CIRCUIT BOARDS (SV-3700 Service Manual on page 72.)

There are 2 types of PC boards used for Model SV-3700, P.C.B 1 and P.C.B 2.

I OPERATION P.C.B. (REP1952A)

Remote sensors mounted to Type 1 PC boards are Old type remote sensors only.

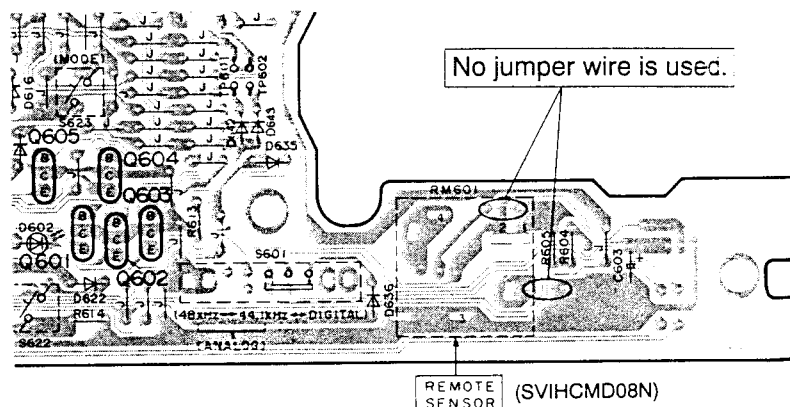
P.C.B 1



I OPERATION P.C.B. (REP1952A)

NO JUMPER WIRE IS USED Old type remote sensor is used.

P.C.B 2



JUMPER WIRE IS USED New type remote sensor is used.

