7835 East McClain Drive
Scottsdale, Arizona 85260-1732
USA

(480) 998-3400
E-Mail : parts@sensoryscience.com

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SERVICE MANUAL

DVR4000/4500

DVD-VCR COMBINATION

DVR4000
DVR4500

SERVICE Manual

DVD-VCR COMBINATION

CONTENTS

1. Precautions

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all pretective devices, including : control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people--particularly children --might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (See Fig. 1-1) :
   Warning : Do not use an isolation transformer during this test. Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI C101.1, *Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

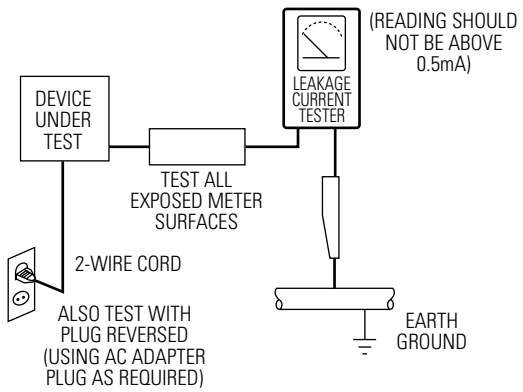


Fig. 1-1 AC Leakage Test

5. With the unit completely reassembled, plug the AC line cord directly the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known erath ground (metal water pipe, conduit, etc.) and all exposed metal parts, including : antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

6. Antenna Cold Check :
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong.
   Connect the other lead to the coaxial connector.

7. Some semiconductor ("solid state") devices are easily damaged by static electricity.
   Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

8. Immediately before handling sny semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging Wrist-strap device. (Be sure to remove it prior to applying power--this is an electric shock precaution.)

9. Design Alteration Warning :
   Never alter or add to the mechanical or electrical design of this unit. Example : Do not add auxiliary audio or video connectors.
   Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

10. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

11. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

12. Observe the original lead dress, especially near the following areas : Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

13. Product Safety Notice :
    Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original--even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠ or ⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications. A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Handling the optical pick-up

The laser diode in the optical pick up may suffer electrostatic breakdown because of potential static electricity from clothing and your body.

The following method is recommended.

(1) Place a conductive sheet on the work bench (The black sheet used for wrapping repair parts.)

(2) Place the set on the conductive sheet so that the chassis is grounded to the sheet.

(3) Place your hands on the conductive sheet(This gives them the same ground as the sheet.)

(4) Remove the optical pick up block

(5) Perform work on top of the conductive sheet. Be careful not to let your clothes or any other static sources to touch the unit.

- Be sure to put on a wrist strap grounded to the sheet.
- Be sure to lay a conductive sheet made of copper etc. Which is grounded to the table.

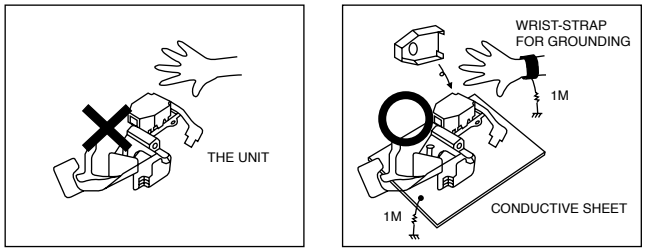


Fig.1-2

(6) Short the short terminal on the PCB, which is inside the Pick-Up ASS'Y, before replacing the Pick-Up. (The short terminal is shorted when the Pick-Up Ass'y is being lifted or moved.)

(7) After replacing the Pick-up, open the short terminal on the PCB.

1-3 Pick-up disassembly and reassembly

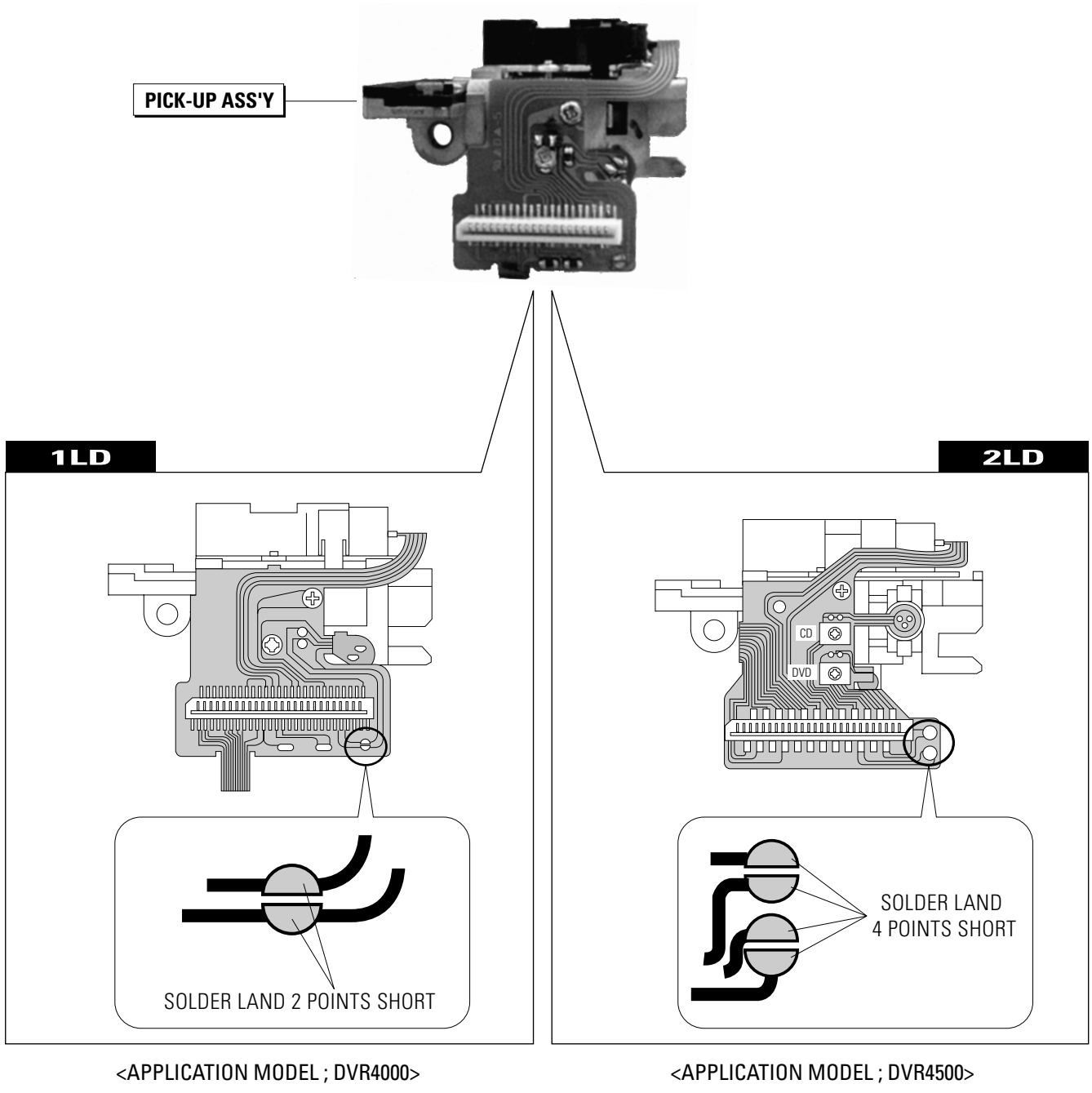
1-3-1 Disassembly

1) Remove the power cord.
2) Disassemble the Deck-Assy.
3) Make solder land 2 points short (2LD ; 4 points) on Pick-up. (See Fig. 1-3)
4) Disassembly the Pick-up.

1-3-2 Assembly

1) Replace the Pick-up.
2) Remove the soldering 2 points (2LD ; 4 points) on Pick-up.
3) Reassemble the Deck-Assy.

Note : If the assembly and disassembly are not done in correct sequence, the Pick-up may be damaged.



<APPLICATION MODEL ; DVR4000>

<APPLICATION MODEL ; DVR4500>

Fig. 1-3

2. Product Specifications

INPUT

AUDIO	2 Stereo audio inputs, RCA Connector, -8dbm, 47Kohm, front and rear
VIDEO	2 Composite video inputs, RCA Connector, 75ohm, 1Vp-p
RF	Antenna or CATV Input, F-Connector, 75ohm

OUTPUT

AUDIO	2 Stereo audio outputs, RCA Connector, -8dbm, 1.5Kohm
DVD only :	2 Digital audio outputs, 1 optical, 1 coaxial
VIDEO	1 Composite video output, RCA Connector, 75ohm, 1Vp-p
DVD only :	1 S-Video output, S-Connector, 75ohm, Y = 1.0Vp-p, C = 0.286Vp-p
DVD only :	1 Component video output, 75ohm, Y = 1.0Vp-p, Pb = 0.7Vp-p, Pr = 0.7Vp-p
RF	Channel 3 or 4

VCR SPECIFICATIONS

VIDEO SYSTEM	1/2-inch VHS system, 4 rotary head helical scanning; FM azimuth luminance; chrominance: converted sub system phase shift
AUDIO TRACK	Normal: 1 track; Hi-Fi: 2 track
PLAY/RECORD TIME	T-180 tape: SP 3 hours, SLP 9 hours
FF/REW TIME	T-120 tape: <2 minutes
HEADS	
Video:	DA 4 rotary Duraheads™
Audio :	2 rotary heads (Hi-Fi); 1 stationary head (Linear)
Control :	1 stationary head
Erase :	1 full track, 1 audio track
WOW & FLUTTER	Less than 0.005% (Hi-Fi)
FREQ. RESPONSE	20-20,000 Hz (Hi-Fi)

DVD SPECIFICATIONS

DISC COMPATIBILITY	CD, CD-R (DVR4500 only) DVD-Video, CD-Digital Audio (5" and 3.5"), CD-Video
FREQ. RESPONSE	96/48 kHz Sampling: 4 Hz-22kHz
S/N RATIO	110dB
DYNAMIC RANGE	96dB
THD	0.003%

SYSTEM SPECIFCATIONS

POWER REQUIREMENT	120V AC, 60 Hz, 27 watts
CLOCK BACKUP TIME	~6 hours
ENVIRONMENT	41-104° F (5-40°C) ; 10%-75% humidity
WEIGHT	21.5 lbs.

MEMO

3. Disassembly and Reassembly

3-1 Cabinet and PCB

3-1-1 Cabinet Top Removal

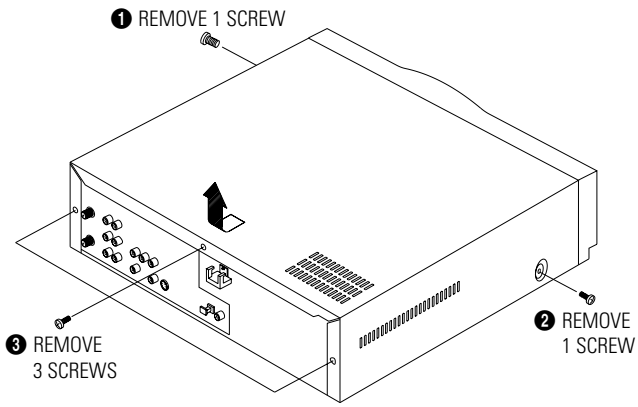


Fig. 3-1 Cabinet Top Removal

3-1-2 Decoration-LEG Removal

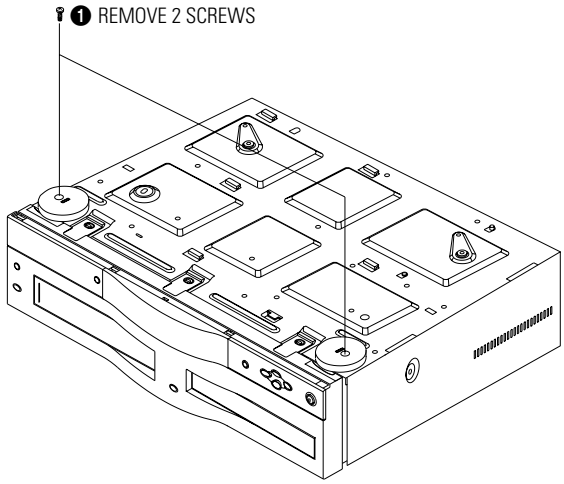
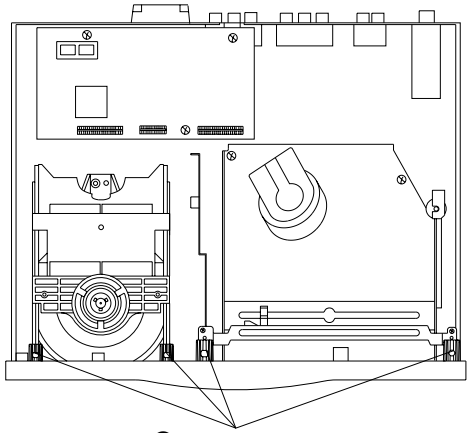


Fig. 3-2 Decoration-LEG Removal

3-1-3 Ass'y Front Panel Removal



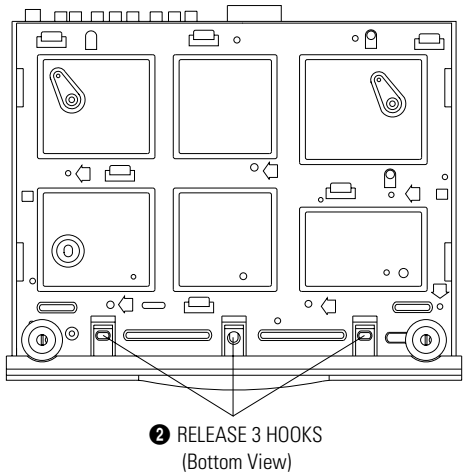


Fig. 3-3 Ass'y Front Panel Removal

3-1-4 Function-Timer PCB Removal

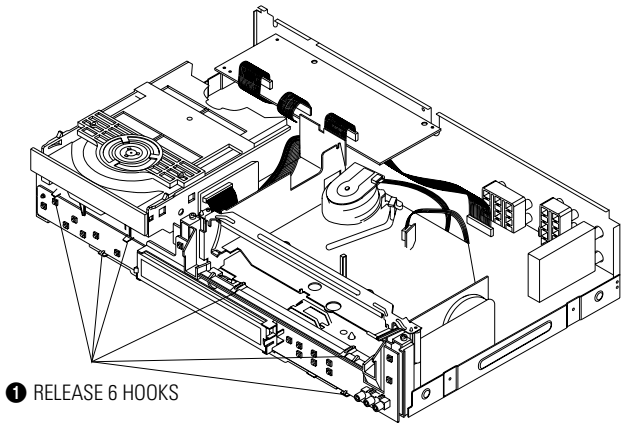


Fig. 3-4 Function-Timer PCB Removal

3-1-5 Chassis Removal

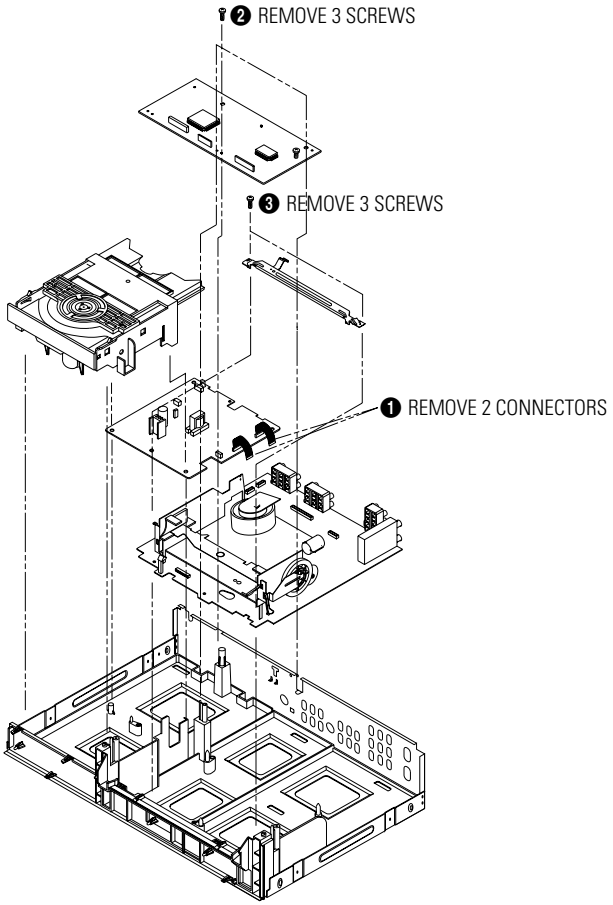


Fig. 3-5 Chassis Removal

3-1-6 VCR Main PCB Removal

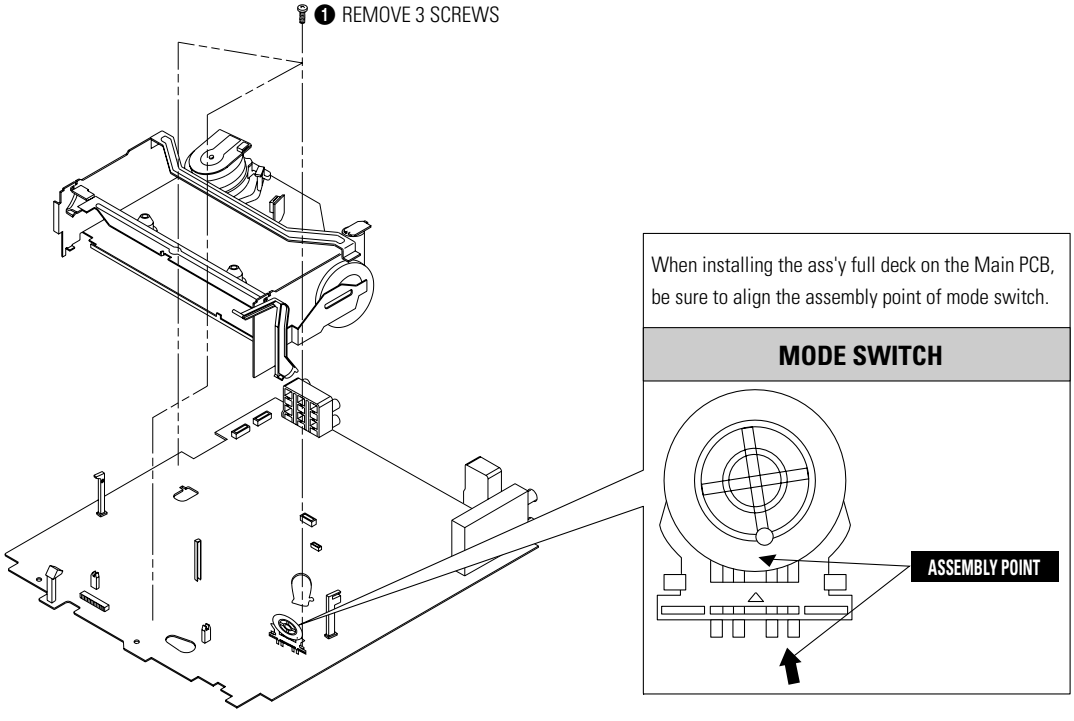


Fig. 3-6 VCR Main PCB Removal

3-2 Circuit Board Locations

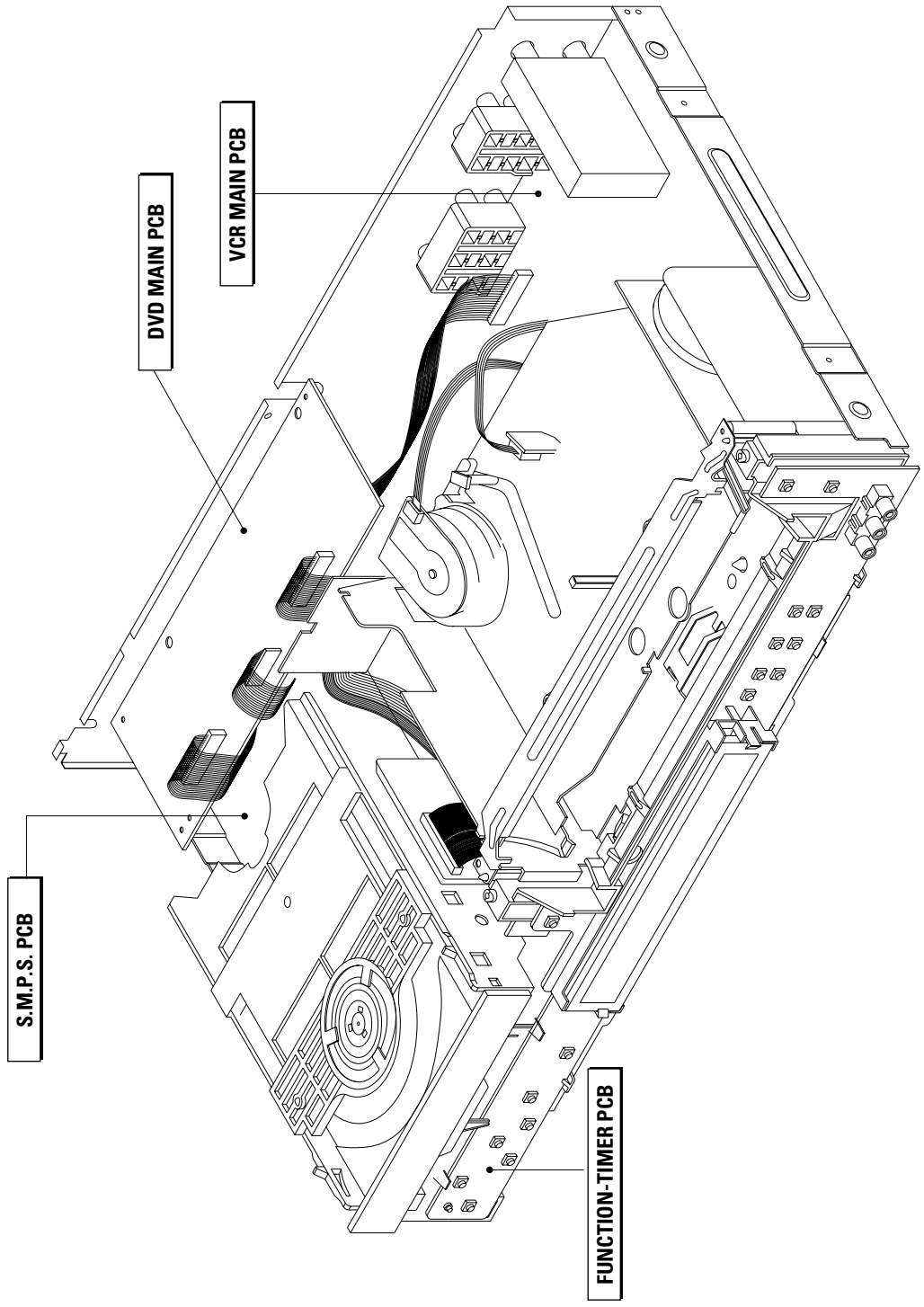


Fig. 3-7 Circuit Board Locations

3-3 VCR Deck Parts Locations

3-3-1 Top View

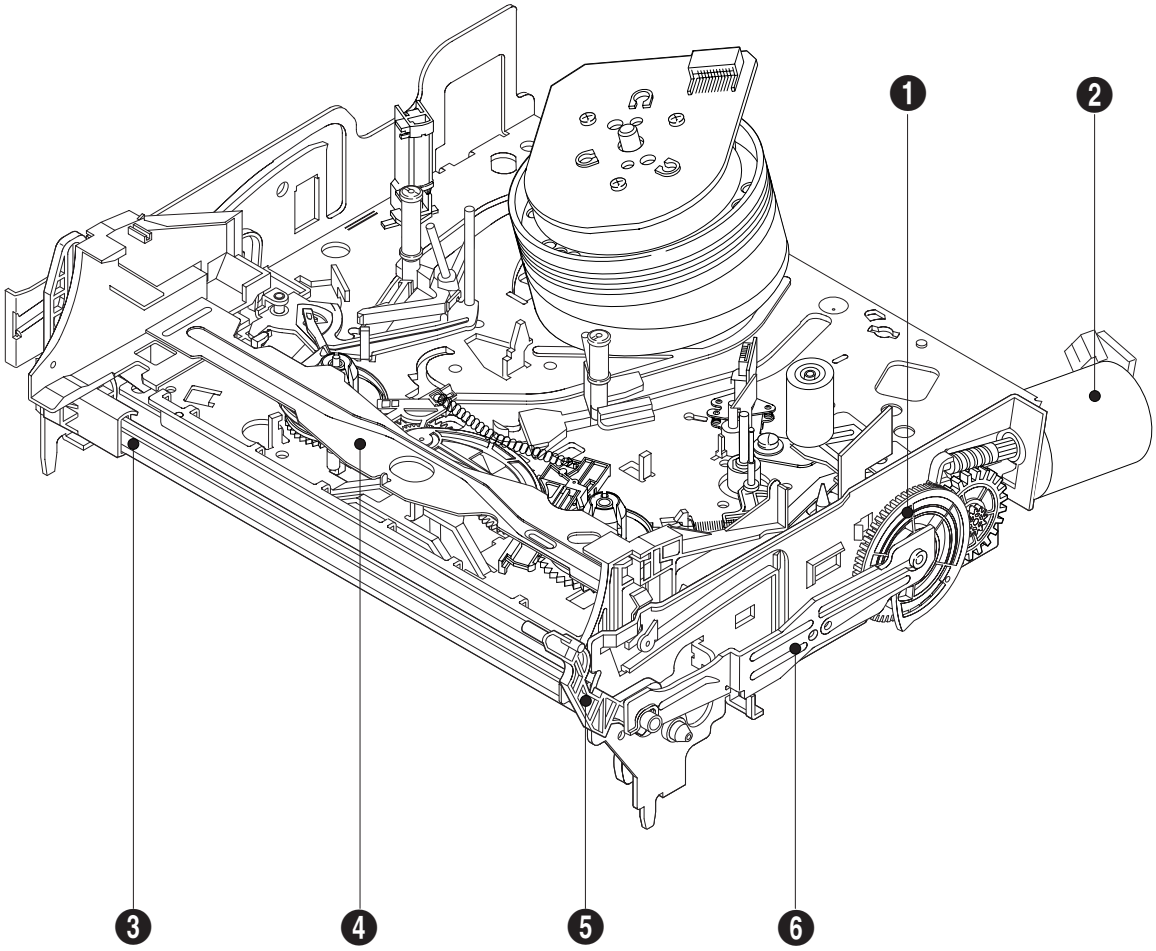


Fig. 3-8 Top parts Location-1

1. GEAR FL CAM
2. MOTOR LOADING ASS'Y
3. LEVER FL ARM ASS'Y
4. HOLDER FL CASSETTE ASS'Y
5. LEVER FL DOOR
6. SLIDER FL DRIVE

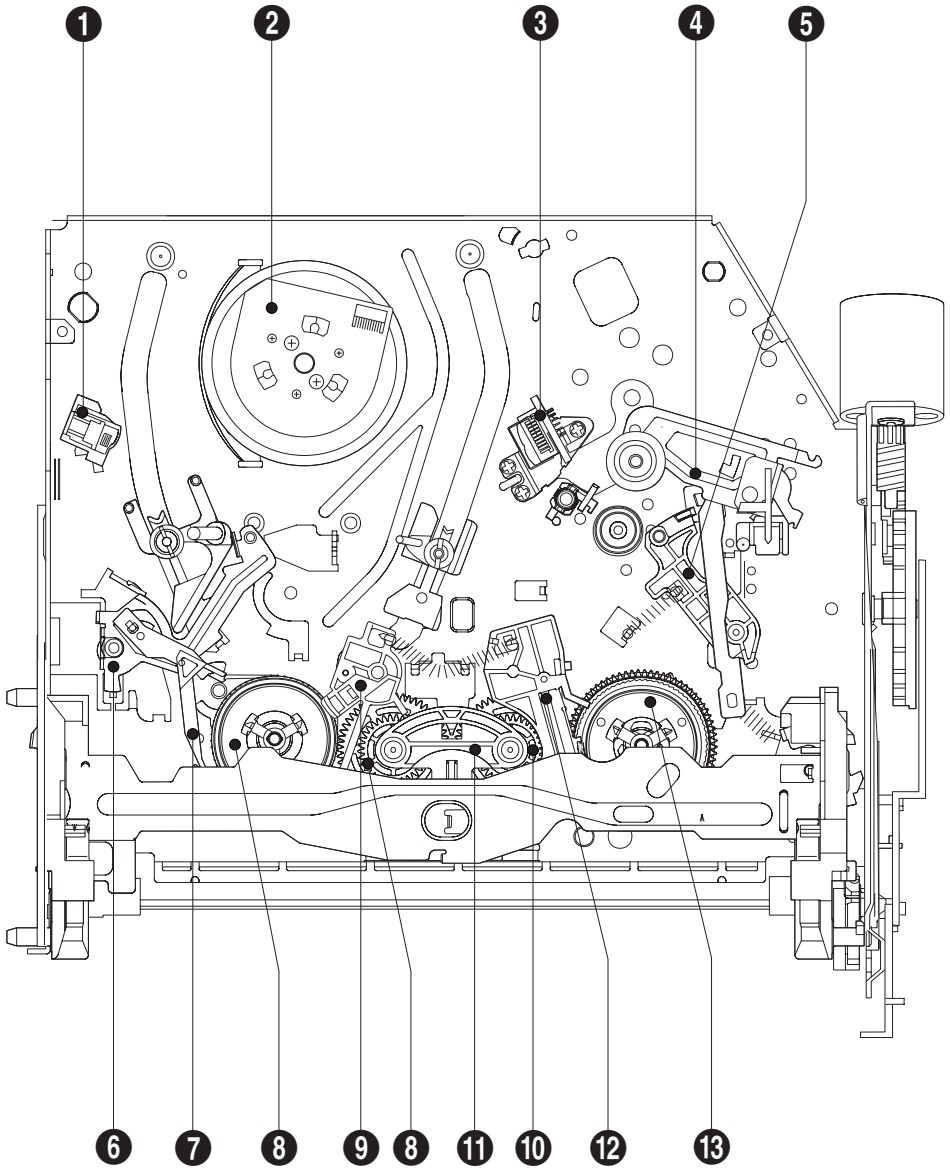


Fig. 3-9 Top Parts Location-2

1. FE HEAD
2. CYLINDER ASS'Y
3. ACE HEAD ASS'Y
4. LEVER UNIT PINCH ASS'Y
5. LEVER #9 GUIDE ASS'Y
6. LEVER TENSION ASS'Y
7. BAND BRAKE ASS'Y
8. DISK S REEL
9. LEVER S BRAKE ASS'Y
10. GEAR IDLE
11. LEVER IDLE
12. LEVER T BRAKE ASS'Y
13. DISK T REEL

3-3-2 Bottom View

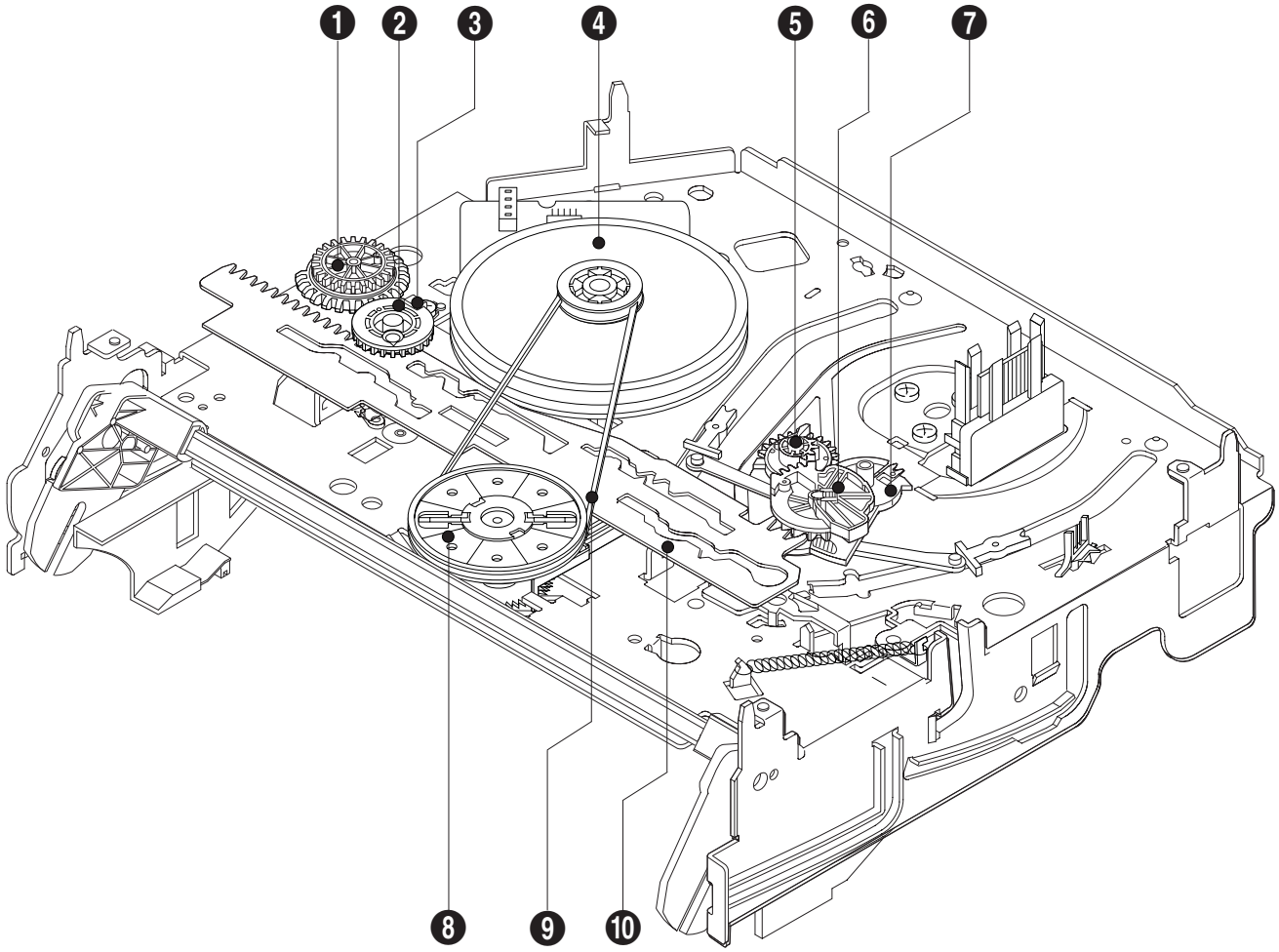


Fig. 3-10 Bottom Parts Location

1. GEAR JOINT 1
2. GEAR JOINT 2
3. BRAKET GEAR
4. MOTOR CAPSTAN ASS'Y
5. LEVER T LOAD ASS'Y
6. GEAR LOADING DRIVE
7. LEVER S LOAD ASS'Y
8. HOLDER CLUTCH ASS'Y
9. BELT PULLEY
10. SLIDER CAM

3-4 VCR Deck

3-4-1 Lever FL Door Removal

1) Push the Holder FL Cassette Ass'y ❶ about 20mm in the direction of arrow "A".
2) Rotate the Lever FL Door ❷ in the direction of arrow "B".
3) Release the Hook ❸ and Remove the Lever FL Door ❷ in the direction of arrow "C".

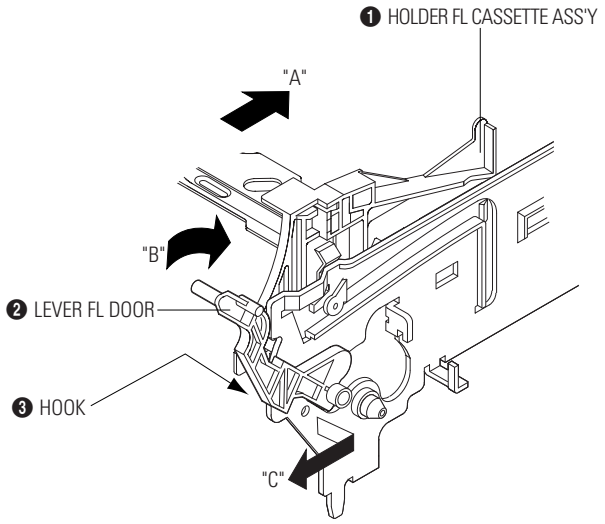


Fig. 3-11 Lever FL Door Removal

3-4-2 Holder FL Cassette Ass'y Removal

1) Pull the Holder FL Cassette Ass'y ❶ to the eject position.
2) Pull the Holder FL Cassette Ass'y ❶ as grasping the Holder FL Cassette Ass'y ❶ and Lever FL Cassette-R ❷ in the same time to release hooking from Main Base until the Boss [A] of Holder FL Cassette Ass'y ❶ is taken out from the Rail [B].
3) Lift the Holder FL Cassette Ass'y ❶, in this time, you have to grasp the Lever FL Cassette-R ❷ Continuously until the Holder FL Cassette Ass'y ❶ is taken out completely.

Note : Be sure to insert Lever FL Cassette-R ❷ in the direction of "A" to prevent separation and breakage of the Lever FL Cassette-R ❷ at disassembling and reassembling.

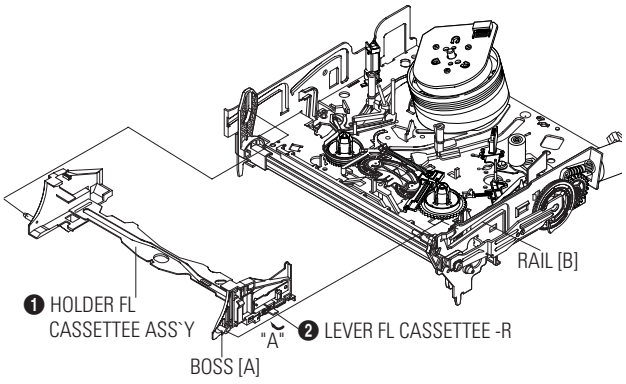


Fig. 3-12 Holder FL Cassette Ass'y Removal

3-4-3 Slider FL Drive, Gear FL Cam Removal

1) Pull the Slider FL Drive ❶ to the front direction.
2) Remove the Slider FL Drive ❶ in the direction of arrow. (Refer to Fig. 3-13)
3) Remove the Gear FL cam ❷.

Note : When reinstalling be sure to reassemble Slider FL drive ❶ after you insert the Boss of Lever FL ARM-R in Groove of Slider Fl drive ❶.

Assembly : Align the Gear FL Cam ❶ with the Gear worm wheel Post as shown drawing.
(Refer to Timing point)

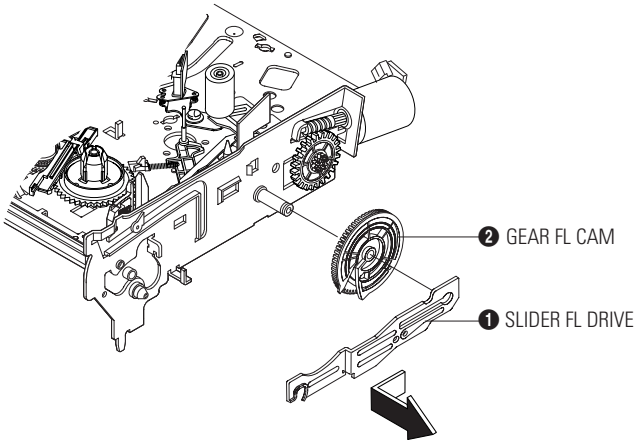


Fig. 3-13 Slider FL Drive Removal

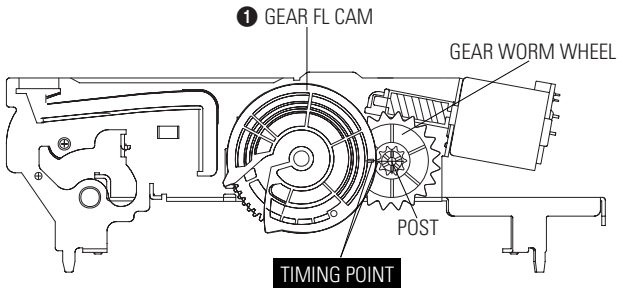


Fig. 3-14 Gear FL Cam, Gear Worm

3-4-4 Lever FL Arm Ass'y Removal

1) Push the hole "A" in the direction of arrow "B" use the pin.(about Dia. 2.5)
2) Pull out the Lever FL Arm Ass'y ❶ from the Boss of Main Base.
3) Remove the Lever FL Arm Ass'y ❶ in the direction of arrow "C".

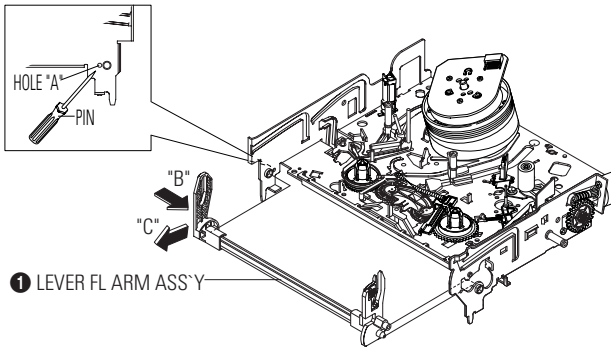


Fig. 3-15 Lever FL Arm Ass'y Removal

3-4-5 Gear Worm Wheel Removal

1) Remove the Gear Worm wheel ❶.

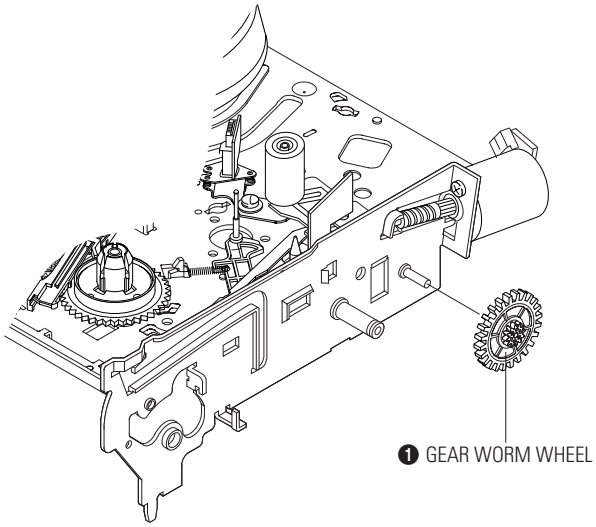


Fig. 3-16 Gear Worm Wheel Removal

3-4-6 Motor Loading Ass'y Removal

1) Remove the screw ❶.
2) Remove the Motor Loading Ass'y ❷.

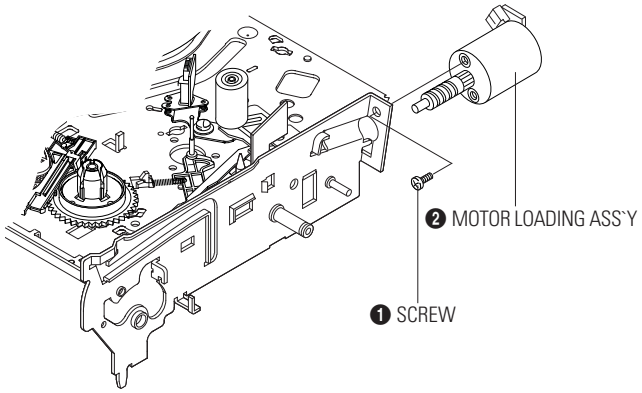


Fig. 3-17 Motor Loading Ass'y Removal

3-4-7 Bracket Gear, Gear Joint 2, 1 Removal

1) Remove the Screw ❶.
2) Remove the Bracket Gear ❷.
3) Remove the Gear Joint 2 ❸.
4) Remove the Gear Joint 1 ❹.

Assembly :
1) Be sure to align dot mark of Gear Joint 1 ❶ with dot mark of Gear Joint 2 ❷ as shown Fig 3-19. (Refer to Timing point1)
2) Confirm the Timing Point 2 of the Gear Joint 2 ❷ and Slider Cam ❸.

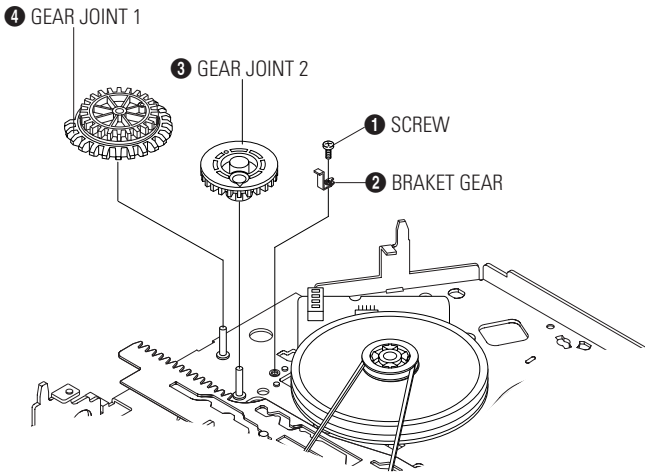


Fig. 3-18 Bracket Gear, Gear Joint 1,2 Removal

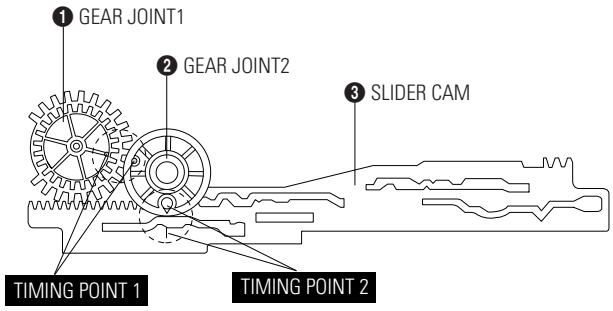


Fig. 3-19 Gear Joint 1,2 Assembly

3-4-8 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Removal

1) Remove the Belt Pulley. (Refer to Fig. 3-37)
2) Remove the Gear Loading Drive ❶ after releasing Hook [A] in the direction arrow as shown in detail drawing.
3) Remove the Slider Cam ❷.
4) Remove the Lever Load ❸, Link Load ❺ & Lever Load ❹, Link Load ❻.

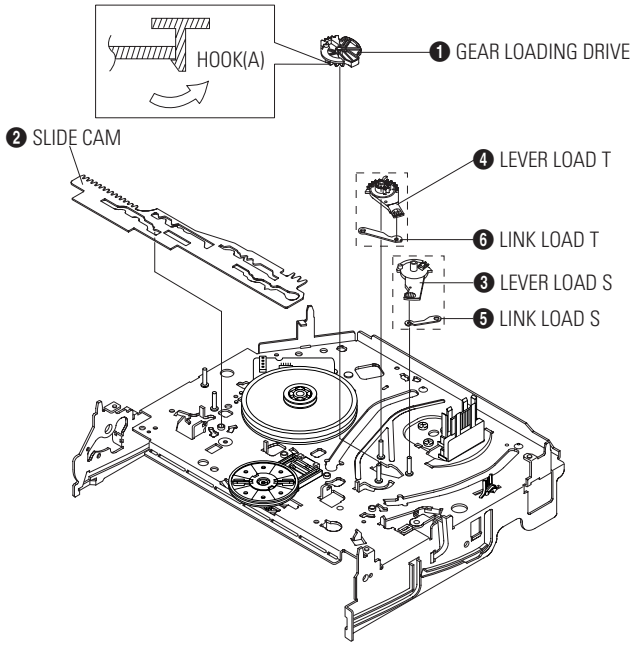


Fig. 3-20 Gear Loading Drive, Slider Cam, Lever T, S Load Ass'y Removal

3-4-9 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Assembly

1) When reinstalling, be sure to align dot of Lever Load T Ass'y ❶ with dot of Lever Load S Ass'y ❷ as shown in drawing, (Refer to Timing Point 1).
2) Insert the Pin A,B,C,D into the Slider Cam ❸ hole,
3) Be sure to align dot of Lever Load T ❶ and dot of Gear Loading Drive ❹, (Refer to Timing Point 2).
4) Aline dot of Gear Loading drive ❹ with mark of Slider Cam ❸ as shown in drawing (Refer to Timing Point 3).

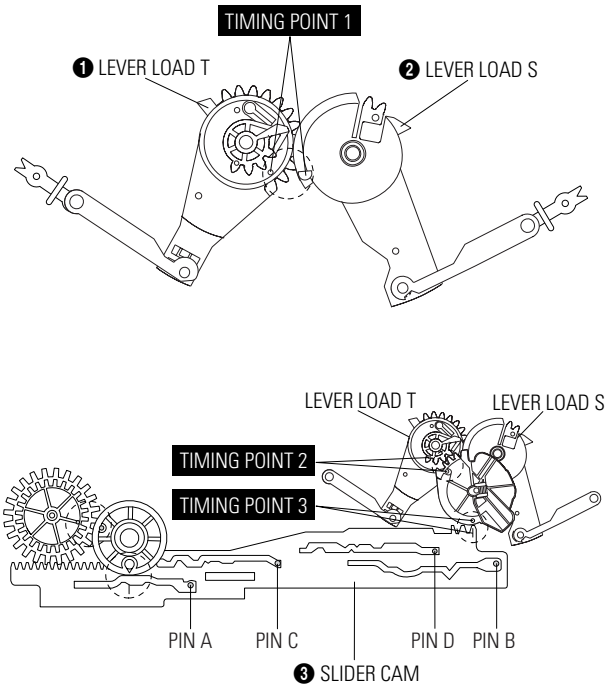


Fig. 3-21 Gear Loading Drive, Slider Cam, Lever Load S, T Ass'y Assembly

3-4-10 Lever Pinch Drive, Lever Tension Drive Removal

1) Remove the Lever Pinch Drive ❶, Lever Tension Drive ❷.

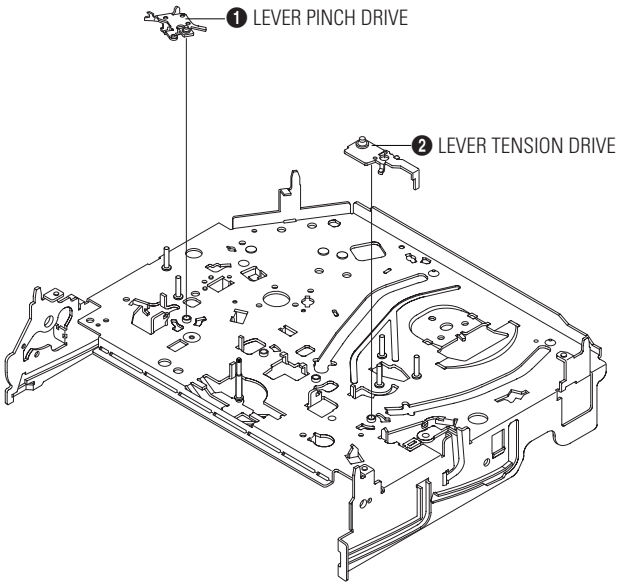


Fig. 3-22 Lever Pinch Drive, Lever Tension Drive Removal

3-4-11 Lever Tension Ass'y, Band Brake Ass'y Removal

1) Remove the Lever Brake S Ass'y (Refer to Fig 3-24).
2) Remove the Spring Tension Lever ❶.
3) Rotate stopper of Main Base in the direction of arrow "A".
4) Lift the Lever Tension Ass'y ❷ & Band brake Ass'y ❸.

Note :
1) When replacing the Lever Tension Ass'y ❷, be sure to apply Grease on the post,
2) Take care not to touch stain on the felt side, and not to be folder and broken Band brake Ass'y
3) After Lever Tension Ass'y seated, Rotate stopper of Main Base to the Mark[B].

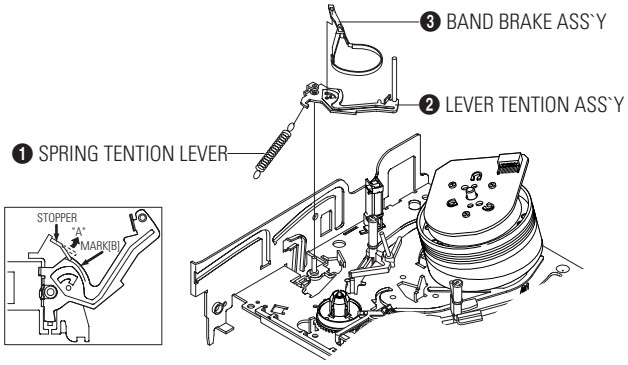


Fig. 3-23 Lever Tension Ass'y, Band Brake Ass'y Removal

3-4-12 Lever Brake S, T Ass'y Removal

1) Release the Hook [A] and the Hook [B], [C] in the direction of arrow as shown in Fig 3-24.
2) Lift the Lever S, T Brake Ass'y ❶, ❷ with spring brake ❸.

Assembly :
1)Assembly the Lever S Brake Ass'y ❶ on the Main Base.
2)Assembly the Lever T Brake Ass'y ❷ with spring brake ❸.

Note : Take extreme care not to be folded and transformed Spring Brake at removing or reinstalling.

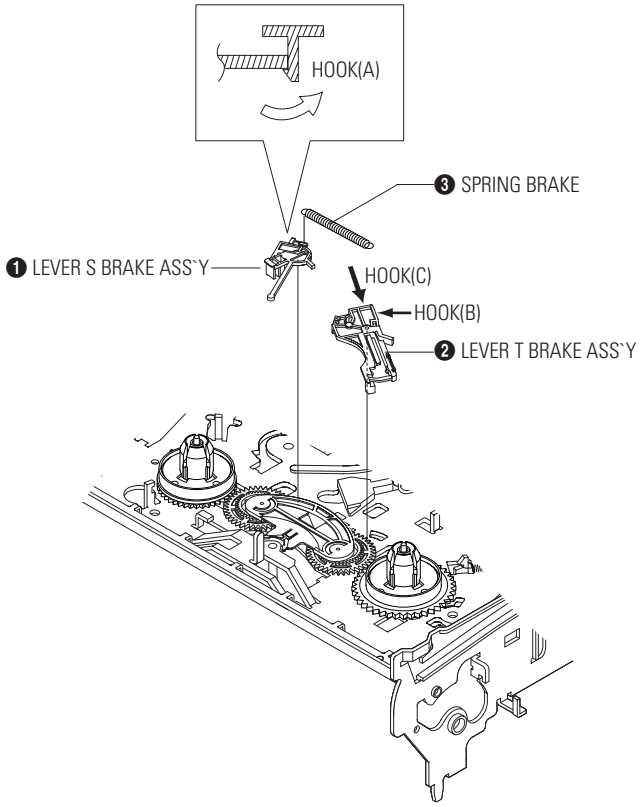


Fig. 3-24 Lever Brake S, T Ass'y Removal

3-4-13 Gear Idle Ass'y Removal

1) Push the Lever Idle ❶ in the direction of arrow "A", "B".
2) Lift the Lever Idle ❶.

Assembly :
1) Apply oil in two Bosses of Lever Idle ❶.
2) Assemble the Gear Idle ❷ with the Lever Idle ❶.

Note : When replacing the Gear Idle ❷, be sure to add oil in the boss of Lever Idle ❶.

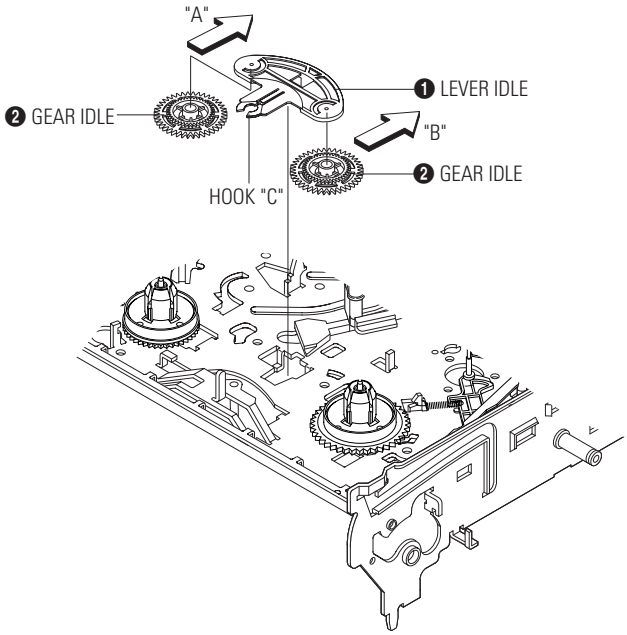


Fig. 3-25 Gear Idle Ass'y Removal

3-4-14 Disk S, T Reel Removal

1) Lift the Disk S, T Reel ❶, ❷.

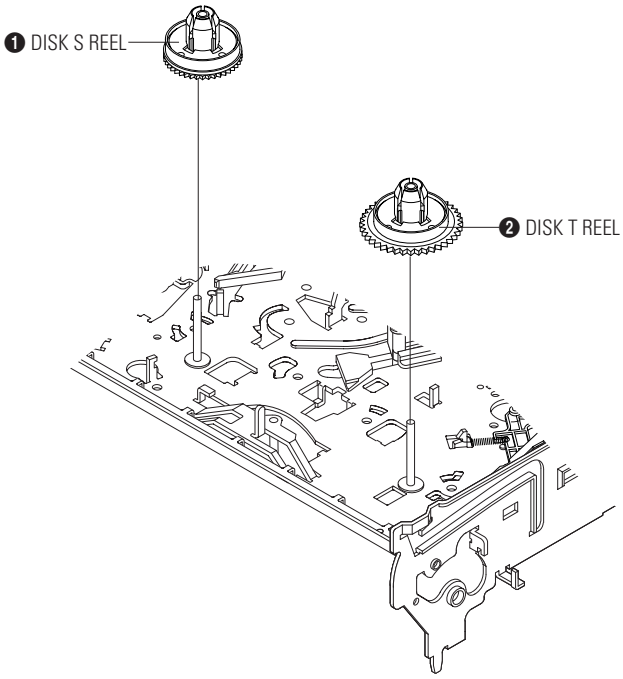


Fig. 3-26 Disk S, T Reel Removal

3-4-15 Holder Clutch Ass'y Removal

1) Remove the Washer Slit ❶.
2) Lift the Holder Clutch Ass'y ❷.

Note : When you reinstall Holder Clutch Ass'y
1) Check the condition of spring as shown in detail A.
2) Don't push Holder Clutch Ass'y down with excessive force Just insert Holder Clutch Ass'y into post center with dead force and Rotate it smoothly.
Be sure to confirm that spring is in the slit of Gear Center Ass'y as shown in detail B.

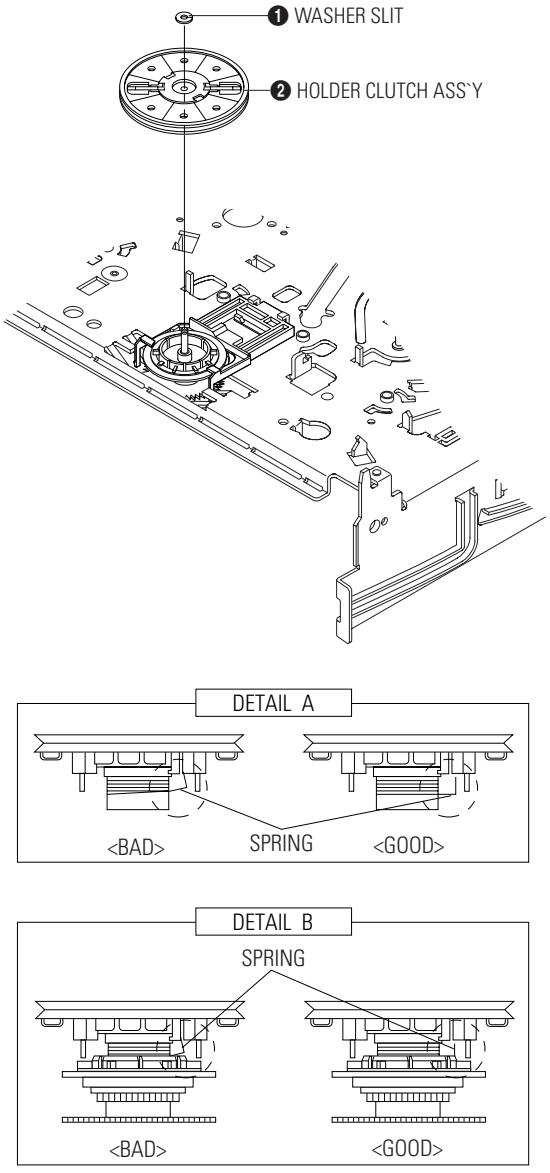


Fig. 3-27 Holder Clutch Ass'y Removal

3-4-16 Lever Up Down Ass'y, Gear Center Ass'y Removal

1) Remove the 2 hooks in the direction of arrow as shown Fig. 3-28 and lift the Lever Up Down Ass'y ❶.
2) Lift the Gear Center Ass'y ❷.

Assembly :
1) Insert the Lever Up Down Ass'y ❶ in the rectangular holes on Main Base as shown in Fig 3-29.
2) Lift the Lever Up Down Ass'y ❶ about 35 degree.(Refer to Fig 3-29)
3) Insert Ring of the Gear Center Ass'y ❷ in the Guide of the Lever Up Down Ass'y ❶.
4) Insert the Gear Center Ass'y ❷ in the post on Main Base.
5) Push down the Lever Up Down Ass'y ❶ for locking of the Hook.

Note :
1) Take care not to separate and sentence does not mark sense.
2) Be sure to confirm that Ring of the Gear Center Ass'y ❷ is in the Guide of the Lever Up Down Ass'y ❶ after finishing assembly of Lever Up Down Ass'y ❶ and Gear Center Ass'y ❷.

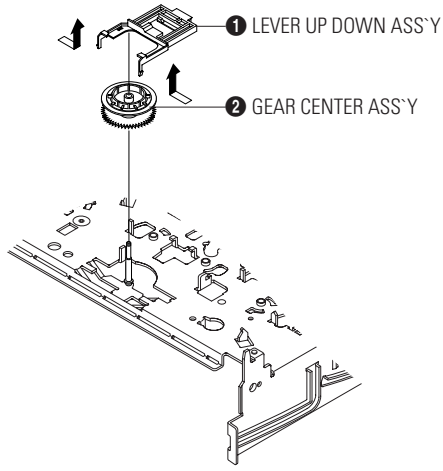


Fig. 3-28 Lever Up Down Ass'y Removal

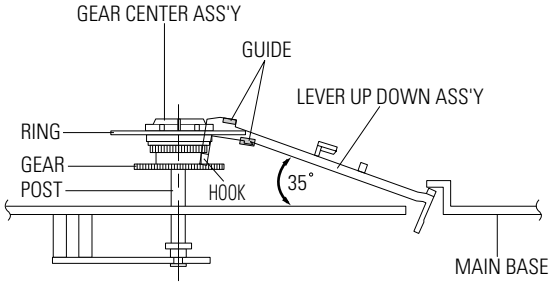


Fig. 3-29 Lever Up Down Ass'y Removal

3-4-17 Guide Cassette Door Removal

1) Lift the Hook [A].
2) Rotate the Guide Cassette Door ❶ in the direction of arrow.

Note : After reinstalling the Guide Cassette Door ❶ sure the Hook [A].

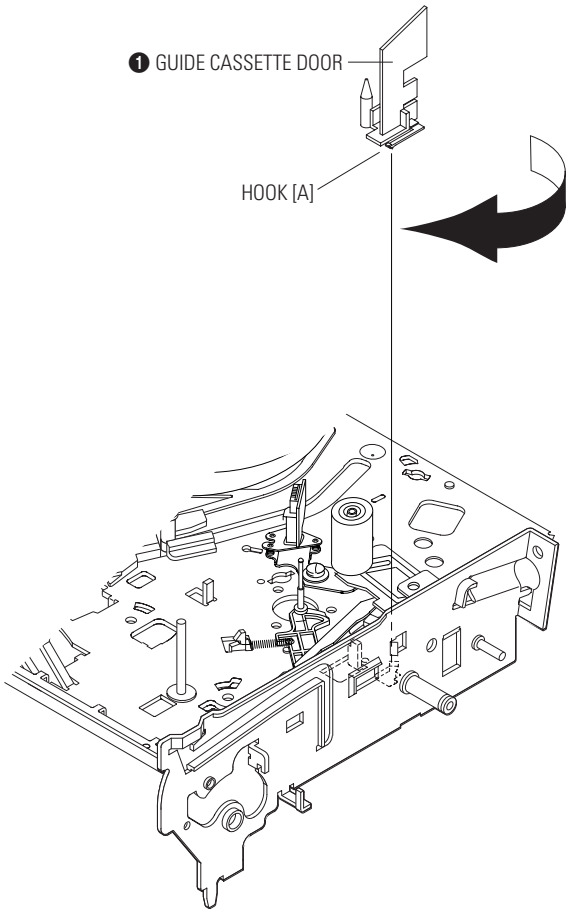


Fig. 3-30 Guide Cassette Door Removal

3-4-18 Lever Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

1) Lift the Unit Pinch Ass'y ❶.
2) Remove the Plate Joint ❷ from Lever Pinch Drive.
3) Remove the Spring Pinch Drive ❸.

Note :
1) Take extreme care not to touch the grease on the Roller Pinch.
2) When reinstalling, be sure to apply grease on the post pinch roller.

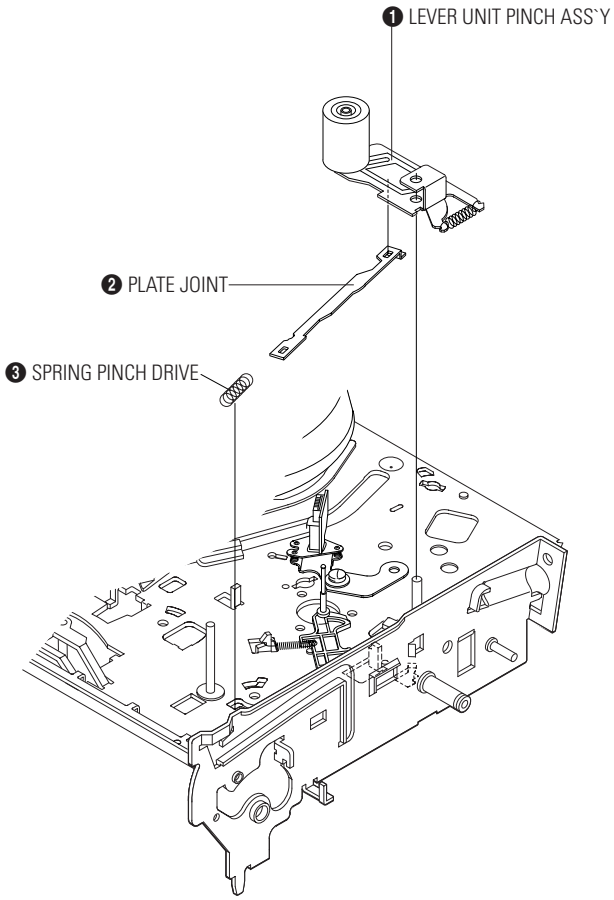


Fig. 3-31 Lever Unit Pinch Ass'y, Plate Joint, Spring Pinch Drive Removal

3-4-19 Lever #9 Guide Ass'y Removal

1) Remove the Spring #9 Guide ❶.
2) Lift the Spring #9 Guide Ass'y ❷ in the direction of arrow "A".

Note :
1) Take extreme care not to get grease on the tape Guide Post.
2) After reinstalling, check the bottom side of the Post #9 Guide to the top side of Main Base.

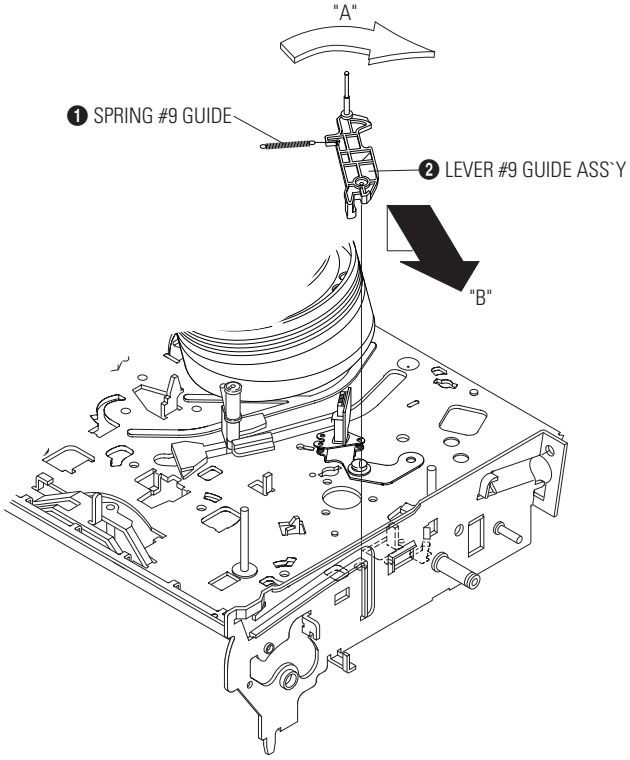


Fig. 3-32 Lever #9 Guide Ass'y Removal

3-4-20 FE Head Removal

1) Remove the screw ❶.
2) Lift the FE Head ❷.

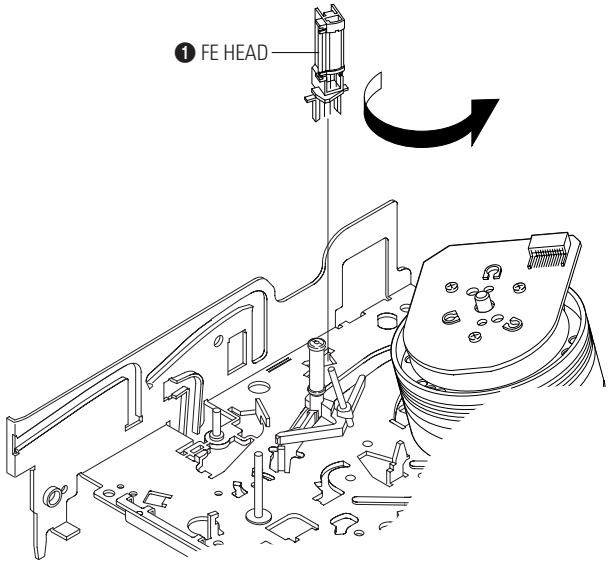


Fig. 3-33 FE Head Removal

3-4-21 ACE Head Removal

1) Pull out the FPC from connector of ACE Head Ass'y ❷.
2) Remove the screw ❶.
3) Lift the ACE Head Ass'y ❷.

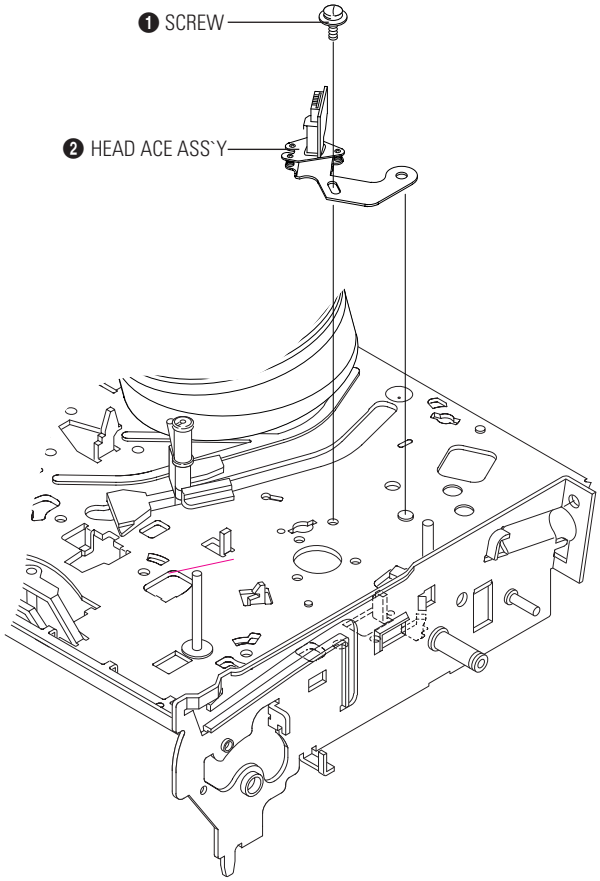


Fig. 3-34 ACE Head Removal

3-4-22 Slider S, T Ass'y Removal

1) Move the Slider S, T Ass'y ❶, ❷ to slot, and then lift it to remove. (Refer to arrow)

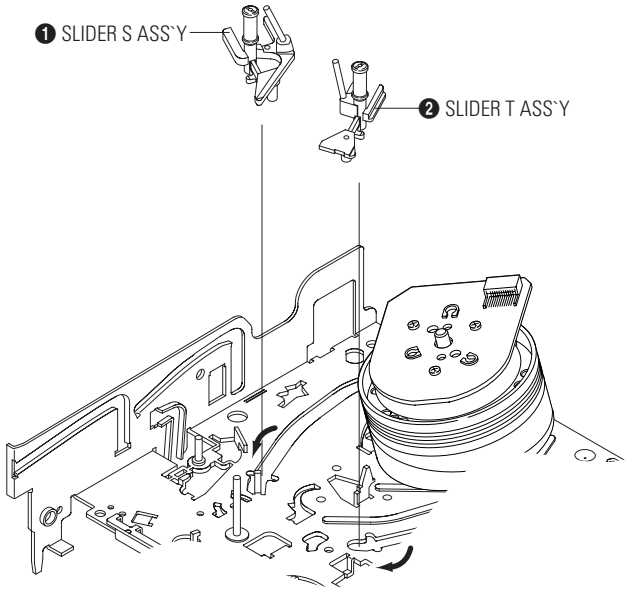


Fig. 3-35 Slider S, T Ass'y Removal

3-4-23 Plate Ground Deck, Cylinder Ass'y Removal

1) Remove the 3 Screws ❶.
2) Lift the Plate Ground Deck ❷.
3) Lift the Cylinder Ass'y ❸.

Assembly :
1) Match the 3 holes in the bottom of Cylinder ass'y ❸ to the 3 holes of Main Base as attending not to drop or knock the Cylinder ass'y ❸.
2) Tighten the 1 Screw ❶.
3) Match the Plate Ground Deck ❷ to the Hole of Base Main.
4) Tighten the other 2 Screws ❶.

Note :
1) Take care not to touch the Cylinder Ass'y ❸ and the tape guide post at reinstalling.
2) When reinstalling, Don't push down too much on Screw Driver.

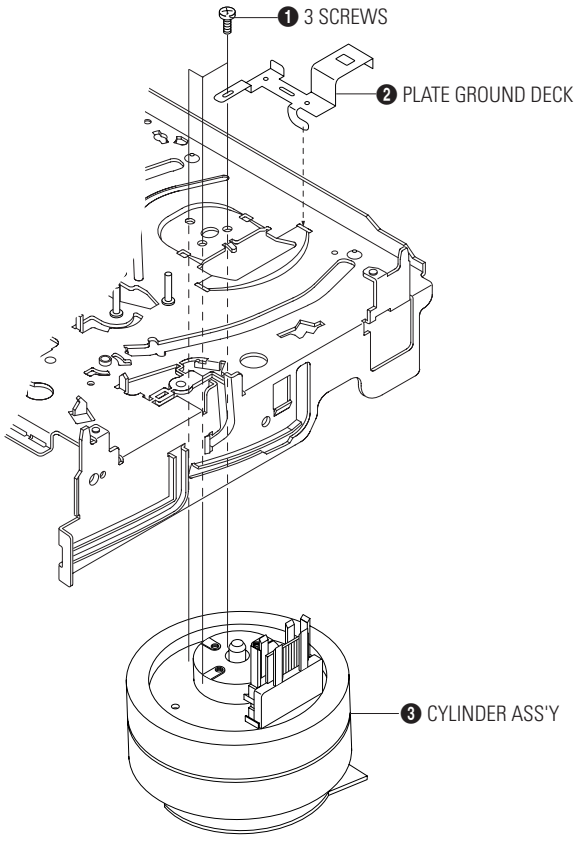


Fig. 3-36 Plate Ground Deck, Cylinder Ass'y Removal

3-4-24 Belt Pulley Removal

1) Remove the Belt Pulley ❶.

Note : Take extreme care not to get grease on Belt Pulley ❶ at assembling or reassembling.

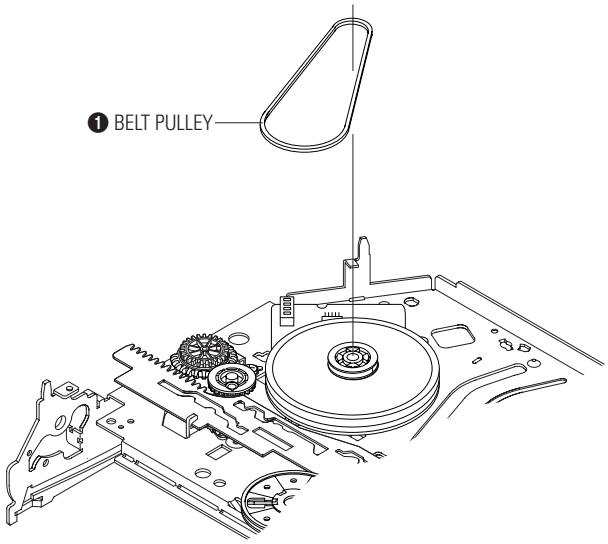


Fig. 3-37 Belt Pulley Removal

3-4-25 Level Head Cleaner Ass'y Removal (Optional)

1) Release the Hook ❶.
2) Lift the Lever Head Cleaner Ass'y ❷.

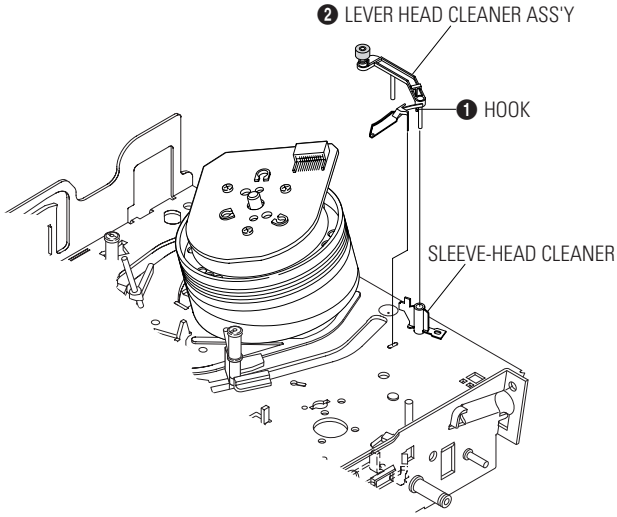


Fig. 3-38 Level Head Cleaner Ass'y Removal

3-4-26 Damper Capstan, Motor Capstan Ass'y Removal

1) Remove the Damper Capstan ❶ in the direction of arrow.
2) Remove the 3 Screws ❷.
3) Remove the Motor Capstan Ass'y ❸.

Assembly :
1) Match the 3 holes of Motor Capstan Ass'y ❸ to the 3 holes of Main Base. Be careful not to drop or knock the Motor Capstan Ass'y ❸.
2) Tighten the 3 Screws ❷ in the direction of arrow as shown detail drawing.
3) Assemble the Damper Capstan ❶.

Note : After tightening screws, check if there is gap between the head of screws and the top side of Main Base. There should have no gap between the head of screws and the top side of Main Base.
After reinstalling, adjusting the tape transport system again.

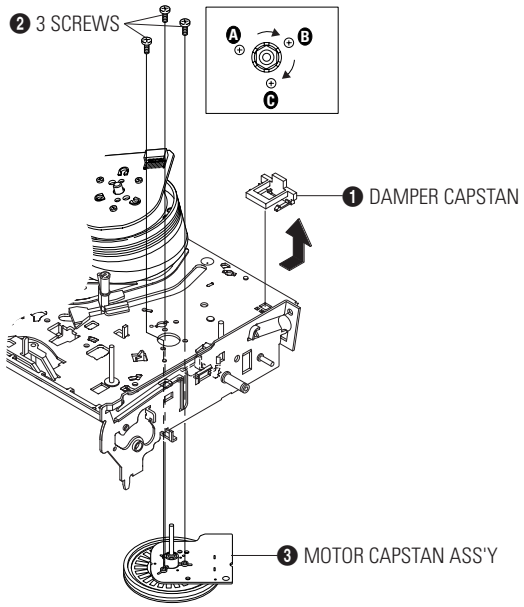


Fig.3-39 Damper Capstan,Motor Capstan Ass'y Removal

3-4-27 How to Eject the Cassette Tape (If the unit does not operate on condition that is inserted into housing ass'y)

1) Turn the Gear worm ❶ clockwise with screw driver.(Refer to arrow)
(Other method : Remove the Screw of Motor Load Ass'y, Separate the Motor Load Ass'y)

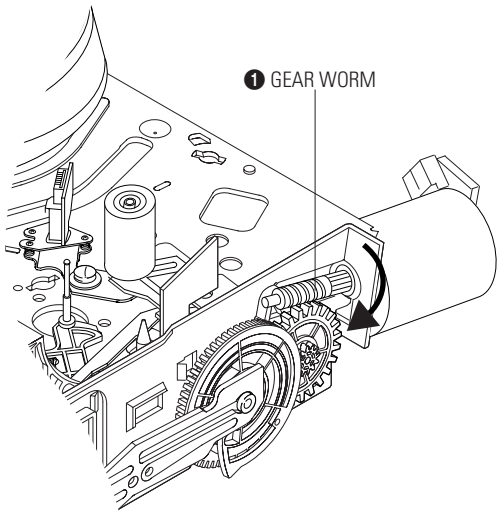


Fig. 3-40

2) When Slider S,T are approched in the position of unloading, rotate holder Clutch counterclockwise after inserting screw driver in the hole of frame's bottom in order to wind the unwinded tape. (Refer to Fig. 3-41)
(If you rotate Gear Worm ❶ continuously when tape is in state of unwinding, you may cause a tape contamination by grease and tape damage. Be sure to wind the unwinded tape in the state of set horizontly.)
3) Rotate Gear Worm ❶ clockwise using screw driver again up to the state of eject mode and then pick out the tape.(Refer to Fig. 3-40)

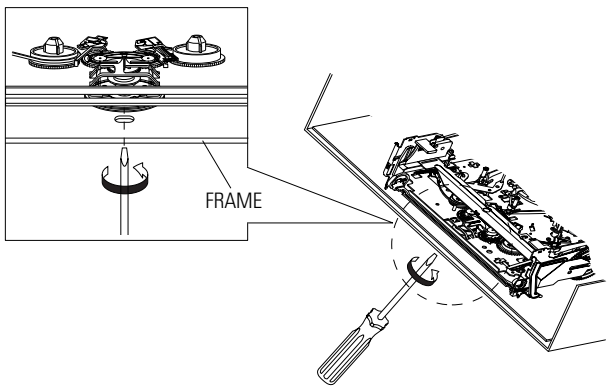


Fig. 3-41

3-5 The table of cleaning, Lubrication and replacement time about principal parts

1) The replacement time of parts is not life of parts.
2) The table 3-1 is that the VCR Set is in normal condition (normal temperature, normal humidity).
   The checking period may be changed owing to the condition of use, runtime and environmental conditions.
3) Life of the Cylinder Ass'y is depend on the condition of use.
4) See exploded view for location of each parts.

<Table 3-1>

*	Parts Name	Checking Period										Remark
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
TAPE PATH SYSTEM	POST TENSION	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	- To clean the parts, use patch and alcohol (solvent). - After cleaning, use the video tape after alcohol is gone away completely. - We recommend to use oil [EP-50] or solvent. - One or two drops of oil should be applied after cleaning with alcohol.
	SLANT POST S, T	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#8 GUIDE SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	CAPSTAN SHAFT	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#9 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	#3 GUIDE POST	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	Δ	
	GUIDE ROLLER S, T	Δ	Δ	Δ	O	O	O	O	O	O	O	
	CYLINDER ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	FE HEAD	Δ	Δ	Δ	O	O	O	O	O	O	O	
	ACE HEAD	Δ	O	O	O	O	O	O	O	O	O	
	PINCH ROLLER	Δ	O	O	O	O	O	O	O	O	O	
	POST REEL S, T		◆		◆		◆		◆		◆	- Periodic time of applying oil (Apply oil after cleaning) - The excessive applying oil may be the cause of malfunction.
	SLEEVE TENSION		◆		◆		◆		◆		◆	
	POST CENTER		◆		◆		◆		◆		◆	
	LEVER IDLE BOSS (2Point)		◆		◆		◆		◆		◆	
DRIVING SYSTEM	CAPSTAN MOTOR PULLEY	Δ	Δ	Δ	Δ	Δ	O	O	O	O	O	
	BELT PULLEY				O	O	O	O	O	O	O	
	HOLDER CLUTCH ASS'Y	Δ	O	O	O	O	O	O	O	O	O	
	GEAR CENTER ASS'Y		O	O	O	O	O	O	O	O	O	
	GEAR IDLE (2Point)		O	O	O	O	O	O	O	O	O	
	LOADING MOTOR		O	O	O	O	O	O	O	O	O	
BRAKE SYSTEM	BAND BRAKE ASS'Y		O	O	O	O	O	O	O	O	O	
	BRAKE T ASS'Y		O	O	O	O	O	O	O	O	O	

Δ : Cleaning O : Check and replacement in necessary ◆ : Add Oil

3-6 DVD Deck

3-6-1 Tray Disc Removal

1) Insert a Screw Driver ❶ into Emergency Hole ❷ and push the Slider Housing ❸ in the direction arrow “A”.
2) When the Tray Disc ❹ comes out a little, pull it in the direction arrow “B” by hand.
3) Pull the Tray Disc ❹ to disassemble , while simultaneously pushing 2 Stoppers ❺ (left, right) in the direction arrow “C”, “D”.

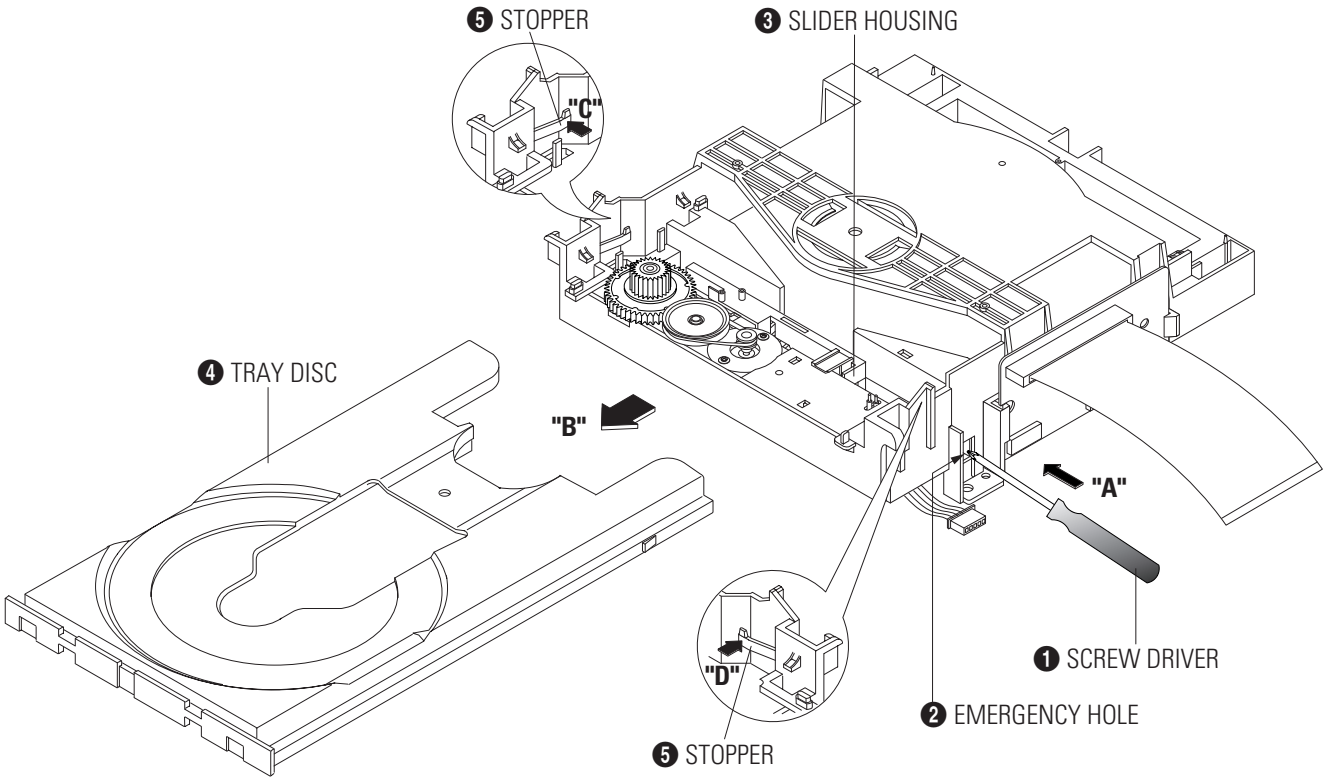


Fig. 3-42 Tray Disc Removal

3-6-2 Assy P/U Deck Removal

1) Disconnect DCN2 ❶, DCN3 ❷.
2) Lift down the Assy P/U Deck ❸ while simultaneously pushing 2 Hooks ❹, ❺ in the direction of arrow "A", "B".

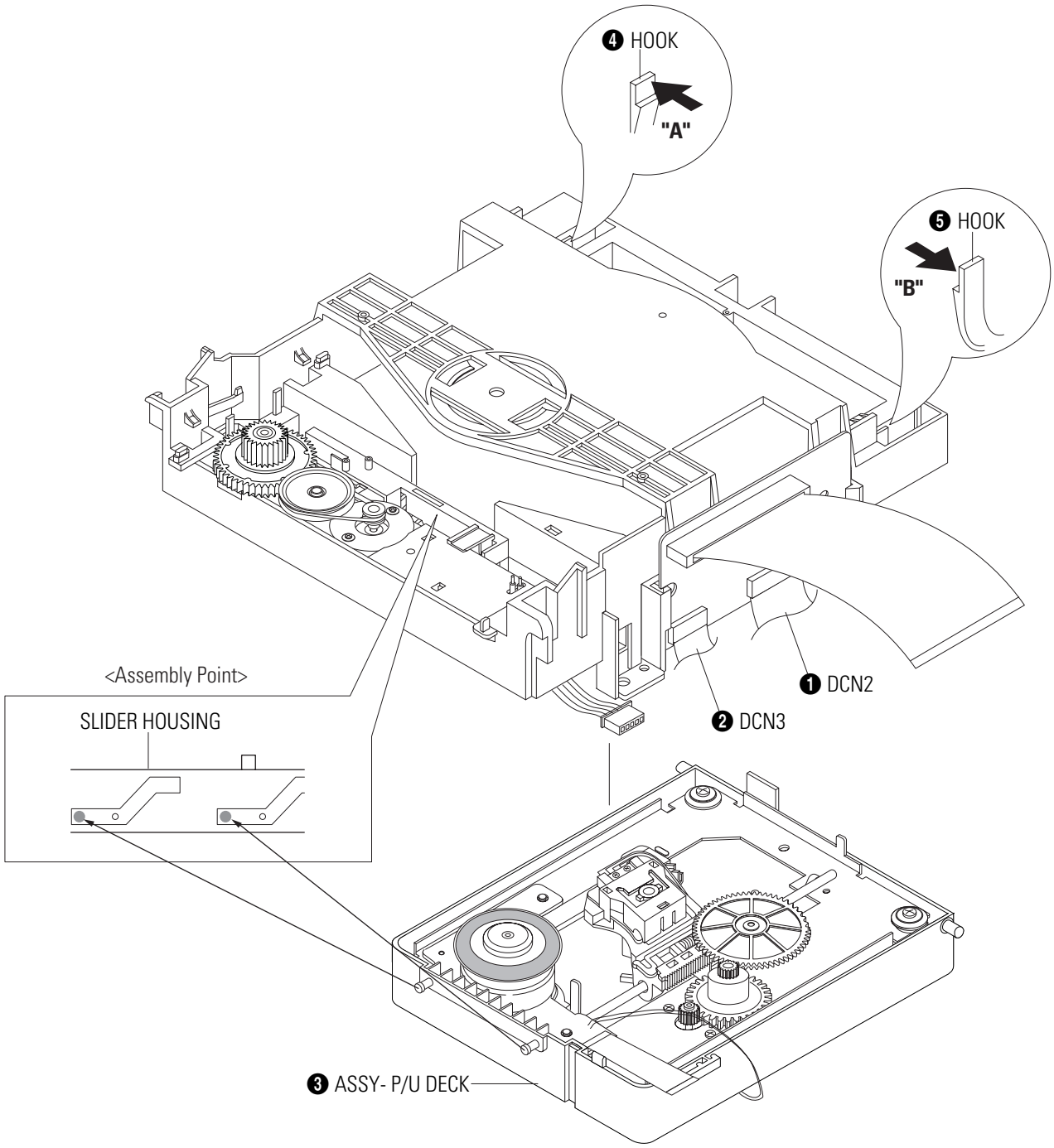


Fig. 3-43 Assy P/U Deck Removal

3-6-3 Housing Ass'y Removal

1) Remove Belt ❶.
2) Push the Hook ❷ in the direction arrow "A" and lift up Pulley Gear ❸.
3) Push the Slider Housing ❺ in the direction arrow "B" and lift up the Gear Tray ❹.
4) Lift up the Slider Housing ❺.
5) Remove the soldering ❻ of 2 points (Red, Black).
6) Remove 2 Screws ❼ and lift down the Motor Load Assy ❽.
7) Push the 3 Hooks ❾ bottom side in the direction arrow "C" and lift up the Housing PCB ❿.
8) Push the Hooks ⓫ and remove Deck PCB ⓬.

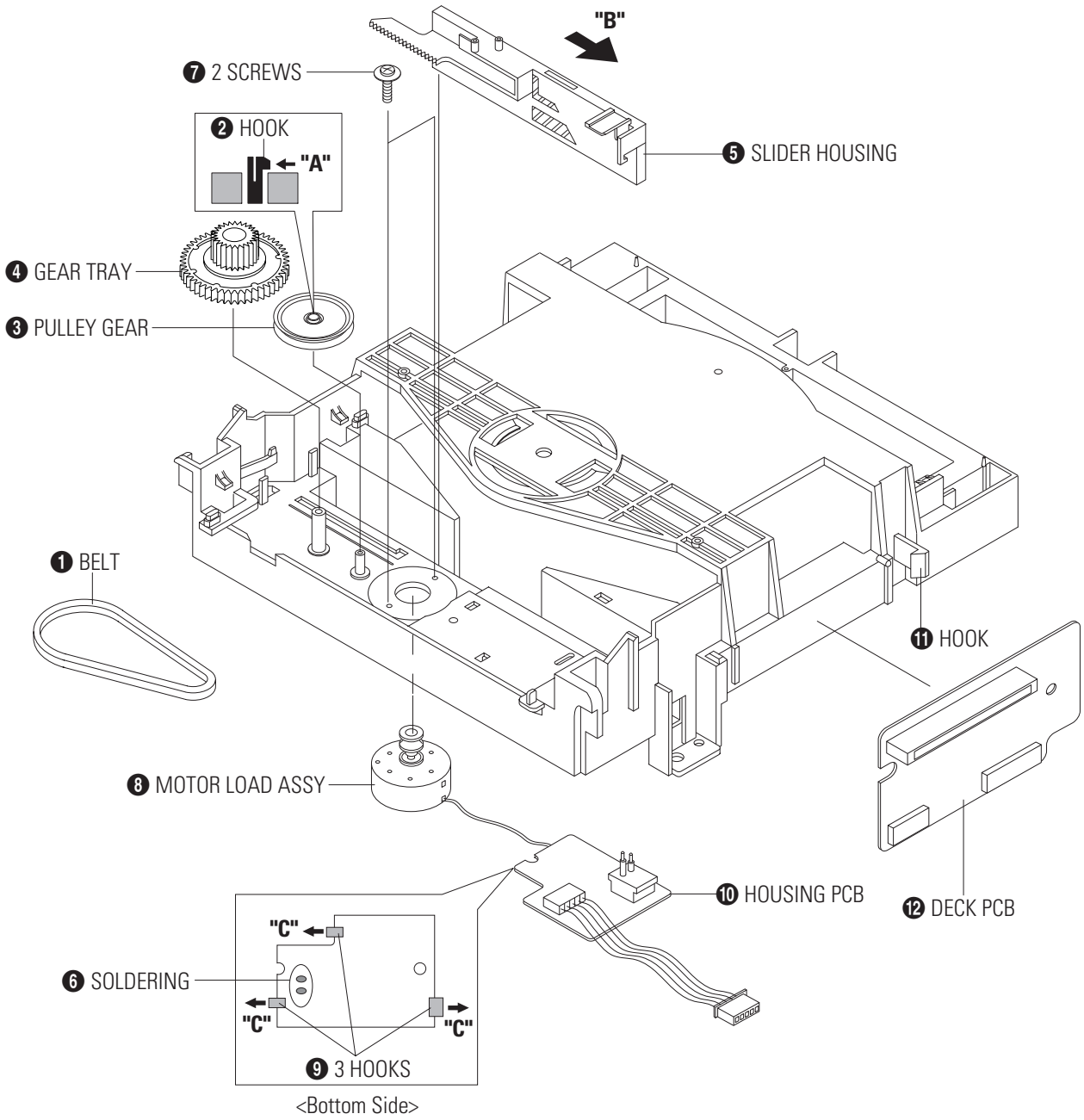


Fig. 3-44 Housing Ass'y Removal

3-6-4 Sub Chassis Removal

1) Remove the Soldering of Motor Feed (+, - wire) ❶.
2) Remove the 4 Screws ❷.
3) Lift up the Ass'y Brkt Deck ❸.

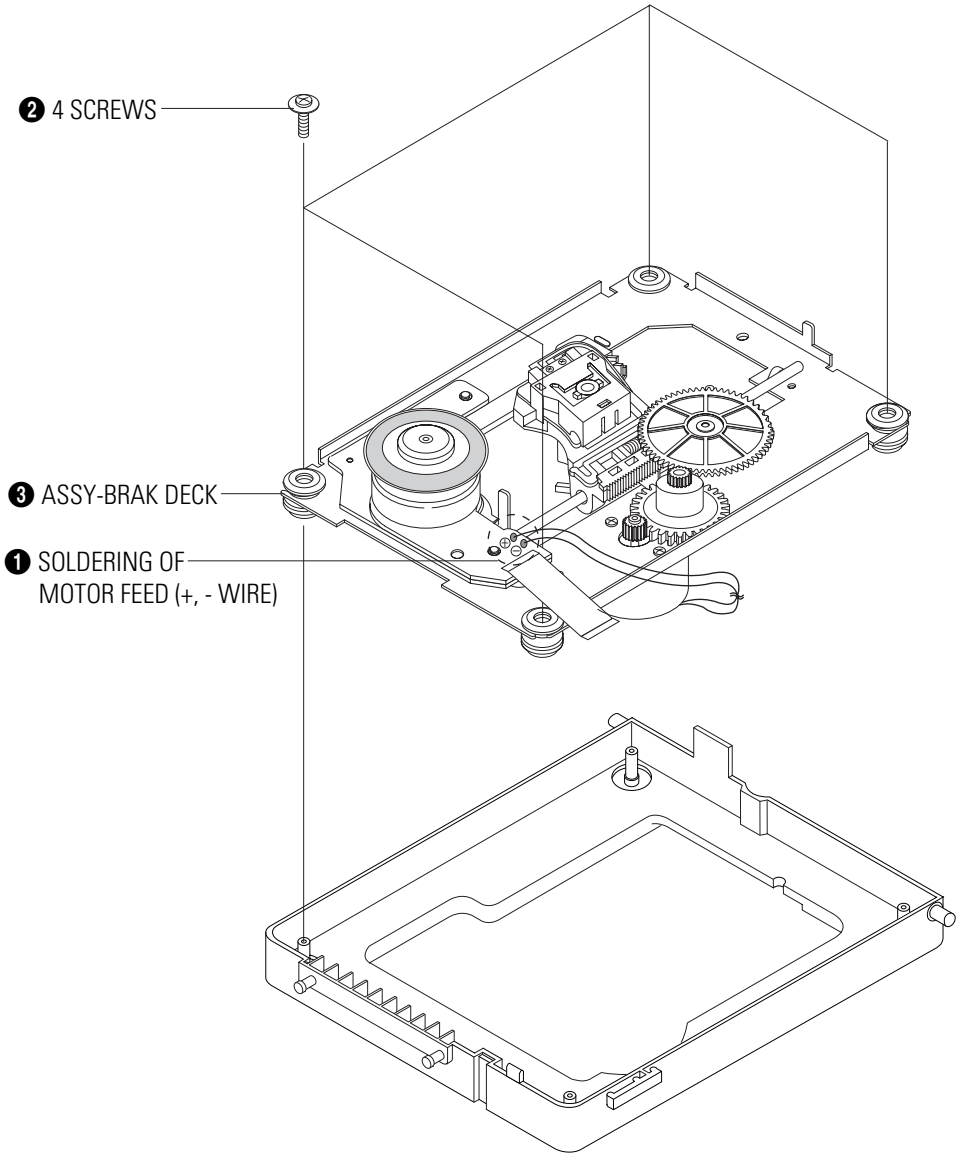


Fig. 3-45 Sub Chassis Removal

3-6-5 Ass'y Brkt Deck Removal

1) Remove Washer ❶.
2) Remove Gear Feed B ❷ , Gear Feed A ❸.
3) Remove 2 Screws ❹.
4) Remove Shaft Pick-Up ❺ and Pick-Up Assy ❻.
5) Remove 1 Screw ❼.
6) Remove 2 Screws ❽.
7) Remove 3 Spring Spindle ❾ and Motor Spindle Ass'y ❿.

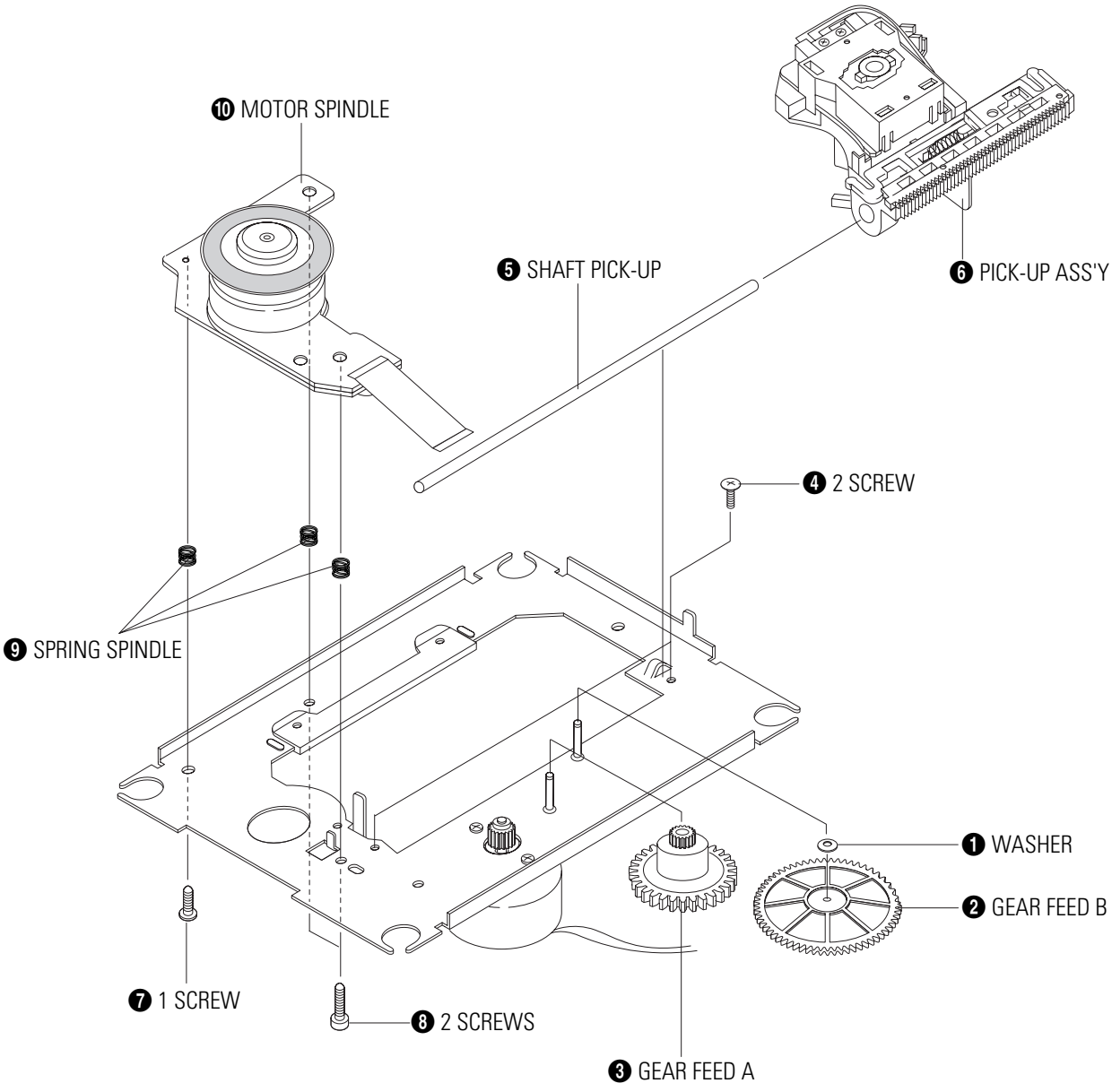


Fig. 3-46 Ass'y Brkt Deck Removal

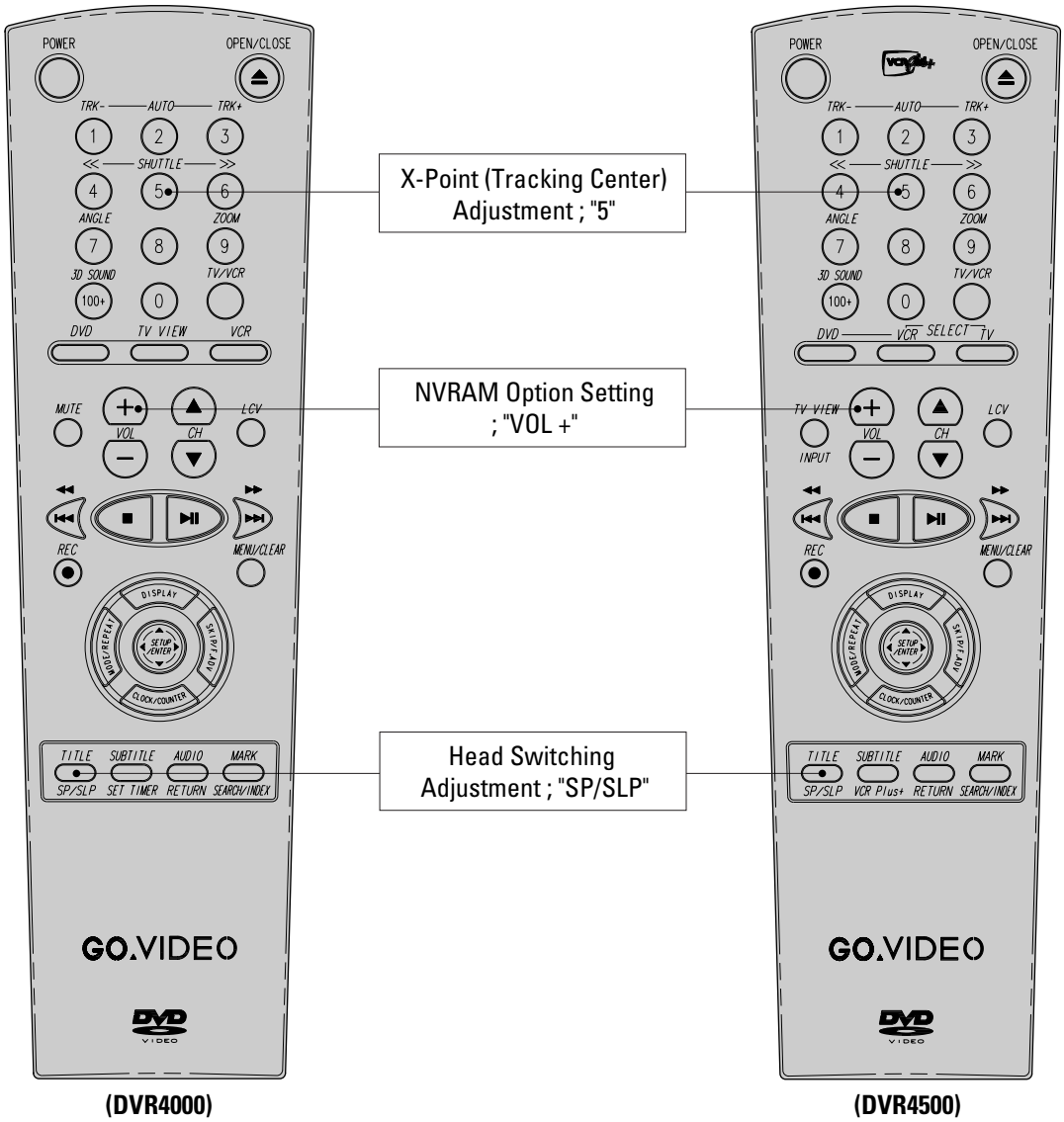
MEMO

4. VCR Alignment and Adjustments

4-1 Reference

1) X-Point (Tracking center) adjustment, “Head switching adjustment” and “NVRAM option setting” can be adjusted with remote control.
2) When replacing the VCR Main PCB Micom (IC601) and NVRAM (IC605 ; EEPROM) be sure to adjust the “Head switching adjustment” and “NVRAM option setting”.
3) When replacing the cylinder ass’y, be sure to adjust the “X-Point” and “Head switching adjustment”.
4) How to adjustment.
   - Press the “SW717 (TEST)” button on Function-Timer PCB to set the adjustment mode.
   - If the corresponding adjustment button is pressed, the adjustment is performed automatically.

4-1-1 Location of adjustment button of remote control



Remote Control for adjustment is not supplied as a Service Jig.

Fig. 4-1

4-1-2 SW717 (TEST) location for adjustment mode setting

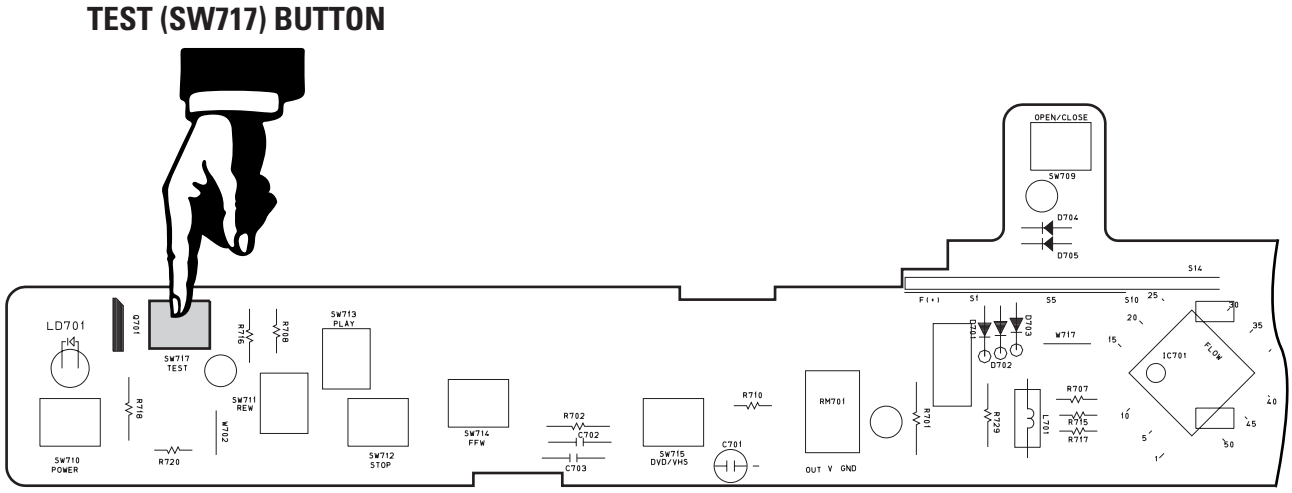


Fig. 4-2 Function-Timer PCB (Top View)

4-2 Mechanical Adjustment

4-2-1 Tape Transport System and Adjustment Locations

The tape transport system has been adjusted precisely in the factory. Alignment is not necessary except for the following :
1) Noise observed on the screen.
2) Tape damage.
3) Parts replacement in the tape transport system.

Lower flange height of tape guide is used as the reference for the transport adjustment.
To maintain the height of the tape guide and prevent damage, do not apply excessive force onto the main base.

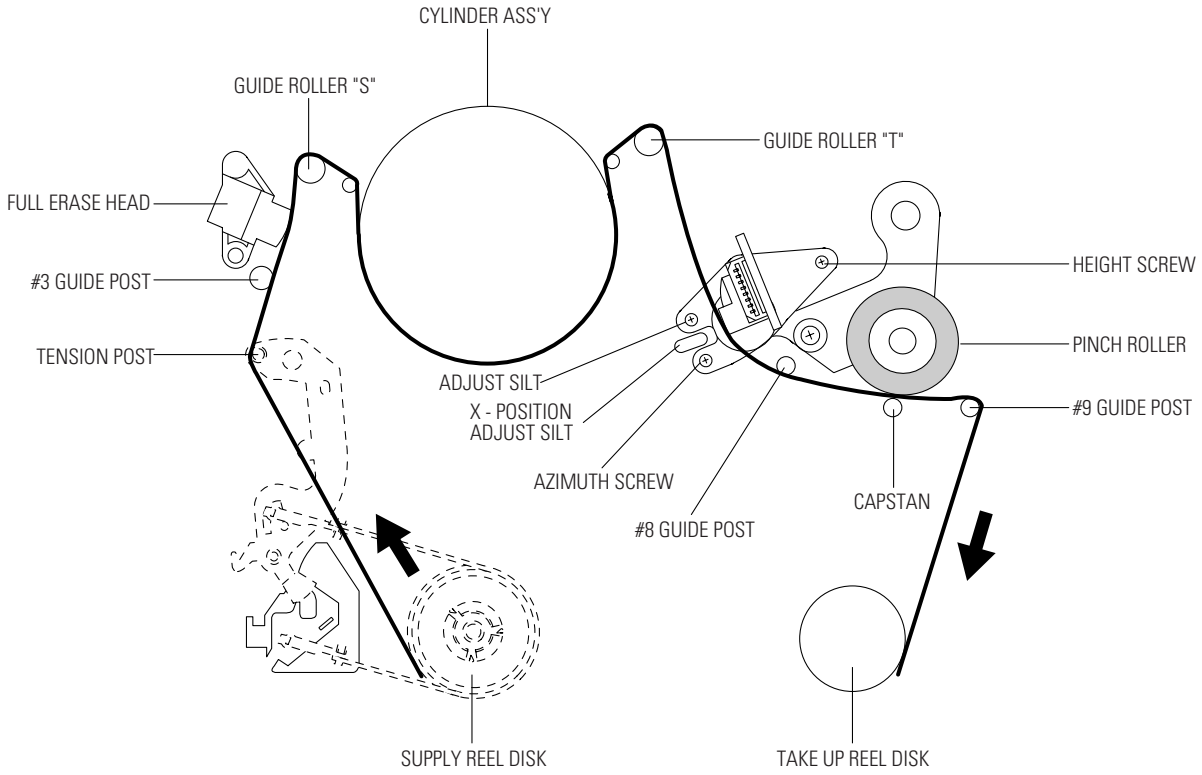


Fig. 4-3 Location of Tape Transport Adjustment

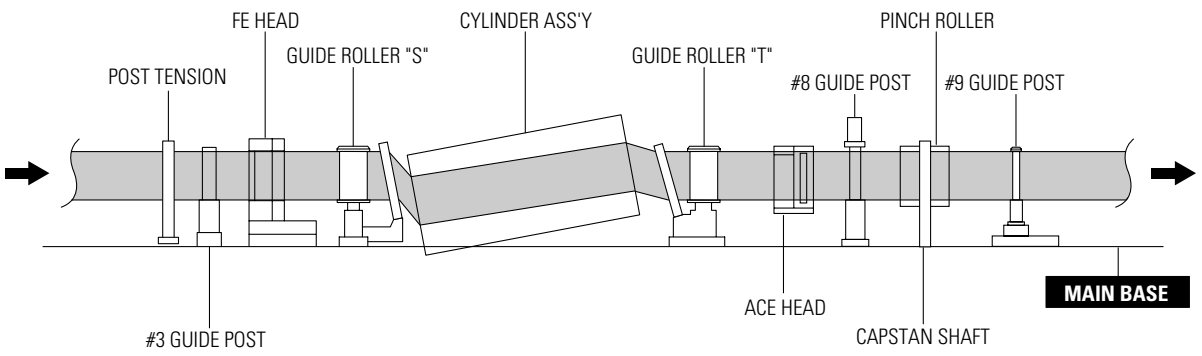


Fig. 4-4 Tape Travel Diagram

4-2-2 Tape Transport System Adjustment

When parts are replaced, perform the required adjustments by referring to procedures for the tape transport system. If there are any changes to the tape path, first run a T-120 tape and make sure excessive tape wrinkle does not occur at the tape guides.

1) If tape wrinkle is observed at the guide roller S, T, turn the guide roller S, T until wrinkle disappears.
2) If the tape wrinkle is still observed at the tape guide, perform the tilt adjustment of the ACE head.

(1) ACE Head Assembly Adjustment

Test point :	TP2 (Audio Output)
	TP3 (Envelope)
	TP4 (H'D S/W -Trigger)
	TP5 (Control Pulse)

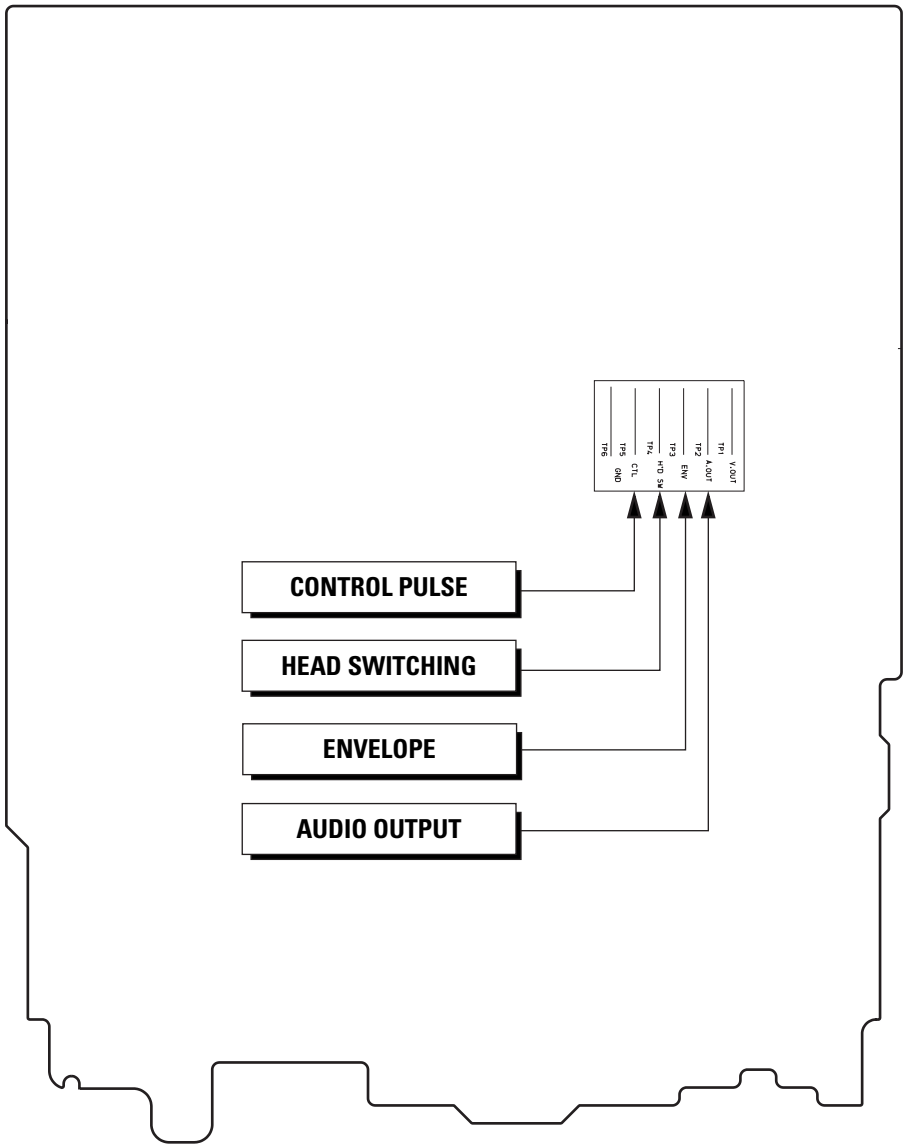


Fig. 4-5 Location of Test point (VCR Main PCB-Top View)

a. ACE HEAD HEIGHT ADJUSTMENT

1) Run the alignment tape (Color bar) in the playback mode.
2) Observe surface of the audio head using a dental mirror.
3) Turn screw (C) clockwise or counterclockwise until the gap of lower tape edge and the lower edge of the control head is about 0.25mm.
(Refer to Fig. 4-6 and 4-7)

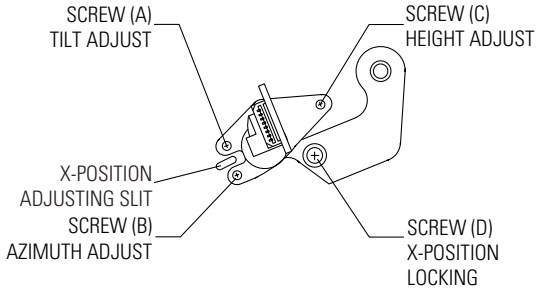


Fig. 4-6 Location of ACE Head Adjustment Screw

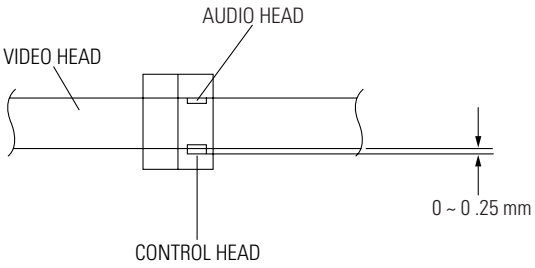


Fig. 4-7 ACE Head Height Adjustment

b. ACE HEAD TILT ADJUSTMENT

1) Playback a blank tape and observe the position of the tape at the lower flange of tape guide.
2) Confirm that there is no curl or wrinkle at the lower flange of tape guide as shown in Fig. 4-8 (B).
3) If a curl or wrinkle of the tape occurs, slightly turn the screw (A) tilt adjust on the ACE head ass'y.
4) Reconfirm the ACE head height.

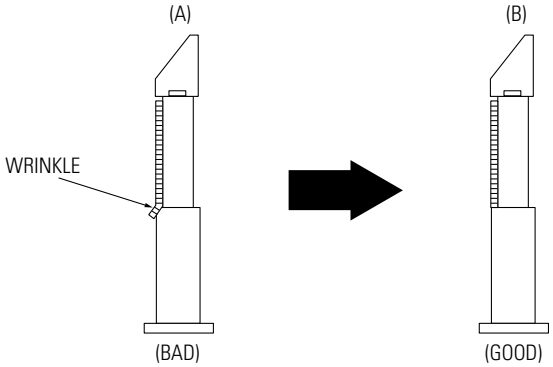


Fig. 4-8 Tape Guide Check

c. AUDIO AZIMUTH ADJUSTMENT

1) Load alignment tape (Mono scope) and playback the 7KHz signal.
2) Connect channel-1 scope probe to audio output.
3) Adjust screw (B) to achieve maximum audio level. (See Fig. 4-6)

d. ACE HEAD POSITION (X-POINT) ADJUSTMENT

1) Playback the alignment tape (Color bar).
2) Press the "SW717 (TEST)" button on F/Timer PCB to set the adjustment mode. (See Fig. 4-2)
3) Press the "5" button of remote control then adjustment is operated automatically. (See Fig. 4-1)
4) Connect the CH-1 probe to "Envelope" the CH-2 probe to "H'D switching pulse" and then trigger to CH-1.
5) Insert the (-) driver into the X-Point adjustment hole and adjust it so that envelope waveform is maximum.

(2) Linearity adjustment (Guide roller S, T adjustment)

1) Playback the Mono Scope alignment tape (SP mode).
2) Observe the video envelope signal on an oscilloscope (triggered by the video switching pulse).
3) Make sure the video envelope waveform (at its minimum) meets the specification shown in Fig. 4-9.
   If it does not, adjust as follows :

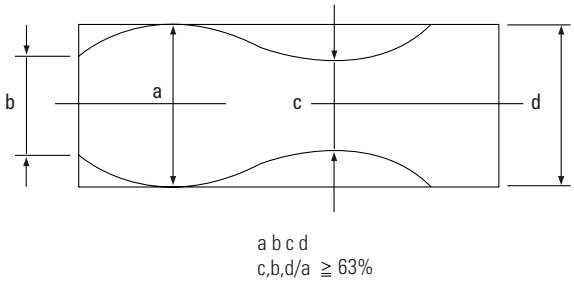


Fig. 4-9 Envelope Waveform Adjustment

Note :
a=Maximum output of the video RF envelope.
b=Minimum output of the video RF envelope at the entrance side.
c=Minimum output of the video RF envelope at the center point.
d=Maximum output of the video RF envelope at the exit side.

4) If the section A in Fig. 4-10 does not meet the specification, adjust the guide roller S up or down.
5) If the section B in Fig. 4-10 does not meet the specification, adjust the guide roller T up or down.

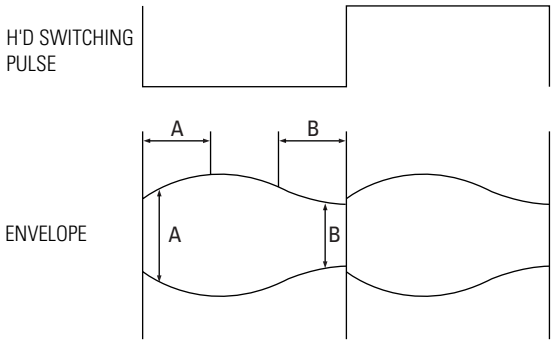


Fig. 4-10 Adjustment Points

6) Play back the Mono Scope alignment tape (SP mode).
7) Connect an oscilloscope CH-1 to the "Envelope" and CH-2 to the "H'D SW Pulse" for triggering.
8) Turn the guide roller heads with a flat head (▬) driver to obtain a flat video RF envelope as shown in Fig. 4-11.

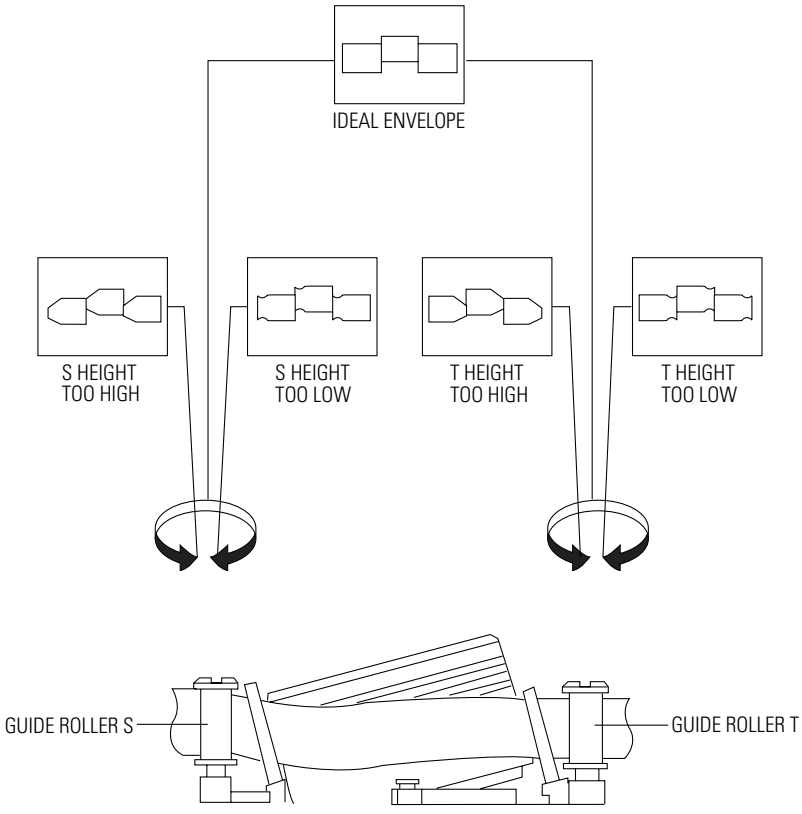


Fig. 4-11 Guide Roller S, T Height Adjustment

(3) Check Transitional Operation from RPS to Play

Check transition from RPS mode to play mode :
Using a pre-recorded SP tape, make sure the entry side of envelope comes to an appropriate steady state within 3 seconds (as shown in Fig. 4-12).
If the envelope waveform does not reach specified peak-to peak amplitude within 3 seconds, adjust as follows :

1) Make sure there is no gap between the supply roller lower flange and the tape.
   If there is a gap, adjust the supply guide roller again.
2) Change operation mode from the RPS to the play mode (again) and make sure the entry side of envelope rises within 3 second.

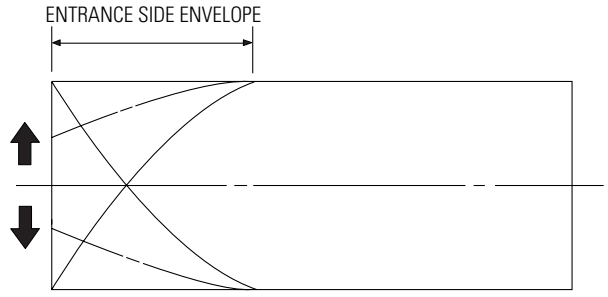


Fig. 4-12 Video Envelope Rising when Operation mode Changes from RPS to Play Mode

(4) Envelope Check

1) Make recordings on T-120 (E-120) and T-160 (E-180) tape.
   Make sure the playback output envelope meets the specification as shown in Fig. 4-13.
2) Play back a self recorded tape (recording made on the unit using with T-120 (E-120).
   The video envelope should meet the specification as shown in Fig. 4-13.
   In SP mode, (A) should equal (B).
   If the head gap is wide, upper cylinder should be checked.

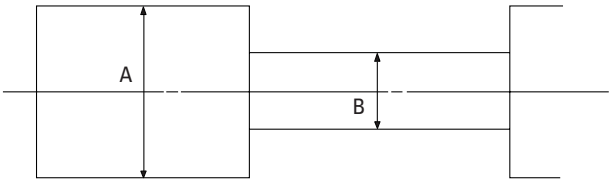


Fig. 4-13 Envelope Input and Output Level

(5) Tape Wrinkle Check

1) Run the T-160 (E-180) tape in the playback, FPS, RPS and Pause modes and observe tape wrinkle at each guide.
2) If excessive tape wrinkle is observed, perform the following adjustments in Playback mode :

- Tape wrinkle at the guide roller S, T section : Linearity adjustment.
- Tape wrinkle at tape guide flange : ACE head assembly coarse adjustment.

4-2-3 Reel Torque

1) The rotation of the capstan motor causes the holder clutch ass'y to rotate through the belt pulley.
2) The spring wrap PLAY/REV of holder clutch ass'y drives the disk reel S, T through gear idle by rotation of gear center ass'y.
3) Brake is operated by slider cam at FF/REW mode.
4) Transportation of accurate driving force is done by gears. (Gear Center Ass'y)

Note : If the spec. does not meet the followings specifications, replace the holder clutch ass'y and then recheck.

<Table 4-1>

MODE	TORQUE g/cm	GAUGE
PB	82.5 ± 27.5	Cassette Torquemeter
RPS	145 ± 30	

4-2-4 Location adjustment and Confirmation of Tension Post

1) Remove the holder cassette ass'y and then push the lever FL Arm-R to the direction of loading.
2) Push the lever tension drive ❶ in the direction of arrow. (See Fig. 4-14)
3) Turn the gear worm wheel ❷ clockwise so that "Timing Point" of the slider FL drive ❸ and gear FL cam ❹ can be aligned (See Fig. 4-15)

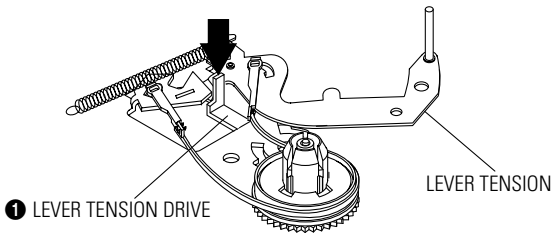


Fig. 4-14

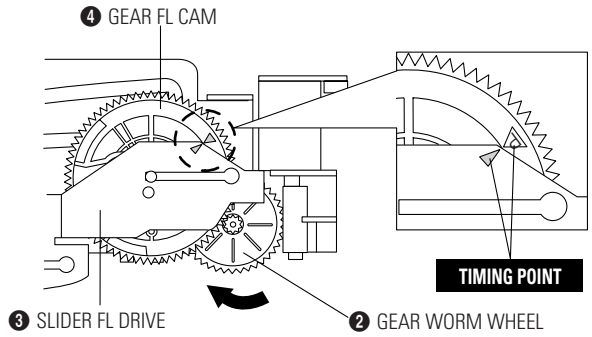


Fig. 4-15

4) As rotating Disk S Reel ❶ clockwise and the region of adjusting in the Main Base (in shape of slit) clockwise or counterclockwise after inserting screw driver in the slit on Main Base. Adjust the left end edge of Lever Tension Ass'y ❸ to 1.3 +1.5/-0.5mm from the location of mark in the Main Base.
5) As rotating Disk S Reel ❶, double-check the location of the left end edge of Lever Tension Ass'y and the quantity of crossing from mark on Main Base. (+1.0/-0.5mm)

Counterclockwise : Torque UP
Clockwise : Torque DOWN

Back Tension should be 56 ± 15g.cm at inspecting it with Back Tension Meter.

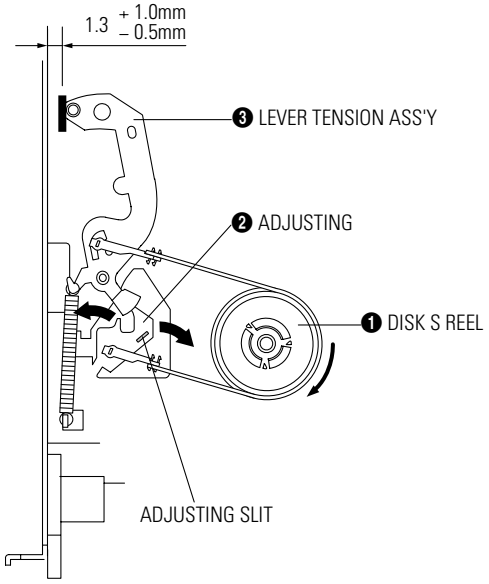


Fig. 4-16 Tension Pole and Back Tension Adjustment

Note :
1) Mark on Main Base is located in about 1.3mm from inside of bending line.
2) Be careful not to deform the region of adjusting on Main Base up and down at adjusting.

4-3 Head Switching Point Adjustment

1) Playback the alignment tape.
2) Press the “SW717 (TEST)” button on Function-Timer PCB to set the adjustment mode. (See Fig. 4-2)
3) Press the “SP/SLP” button of remote control then adjustment is operated automatically. (See Fig. 4-1)

4-4 NVRAM Option Setting

1) NVRAM Option is adjusted at production line basically.
2) In case VCR Main PCB Micom (IC601) and NVRAM (IC605 ; EEPROM) is replaced, be sure to set the corresponding option number of the reqaired model. (If the option is not set, the unit is not operated.)

1) Press the “SW717 (TEST)” button on Function-Timer PCB to set the adjustment mode. (See Fig. 4-2)
2) Press the “VOL +” button on the remote control about 5 seconds then option setting is appeared. (See Fig. 4-17)
3) Select the option number (See table 4-2) of corresponding model with “SKIP/F.ADV”, “MODE/REPEAT”, “CLOCK/COUNTER” button on the remote control.
4) If selecting the option number is completed, press the “DISPLAY” button of remote control. (If “DISPLAY” button is pressed, the selected number is changes reversed color. ; See Fig. 4-17)
5) Press the “SET UP/ENTER” button of remote control again to store the option number. (“PLEASE WAIT” is displayed for a second as shown Fig. 4-18 and this setting is completed.)

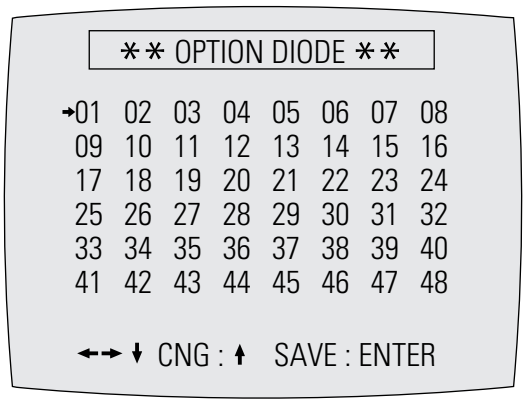


Fig. 4-17

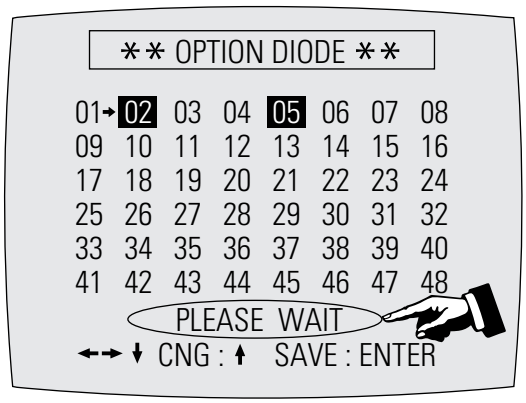


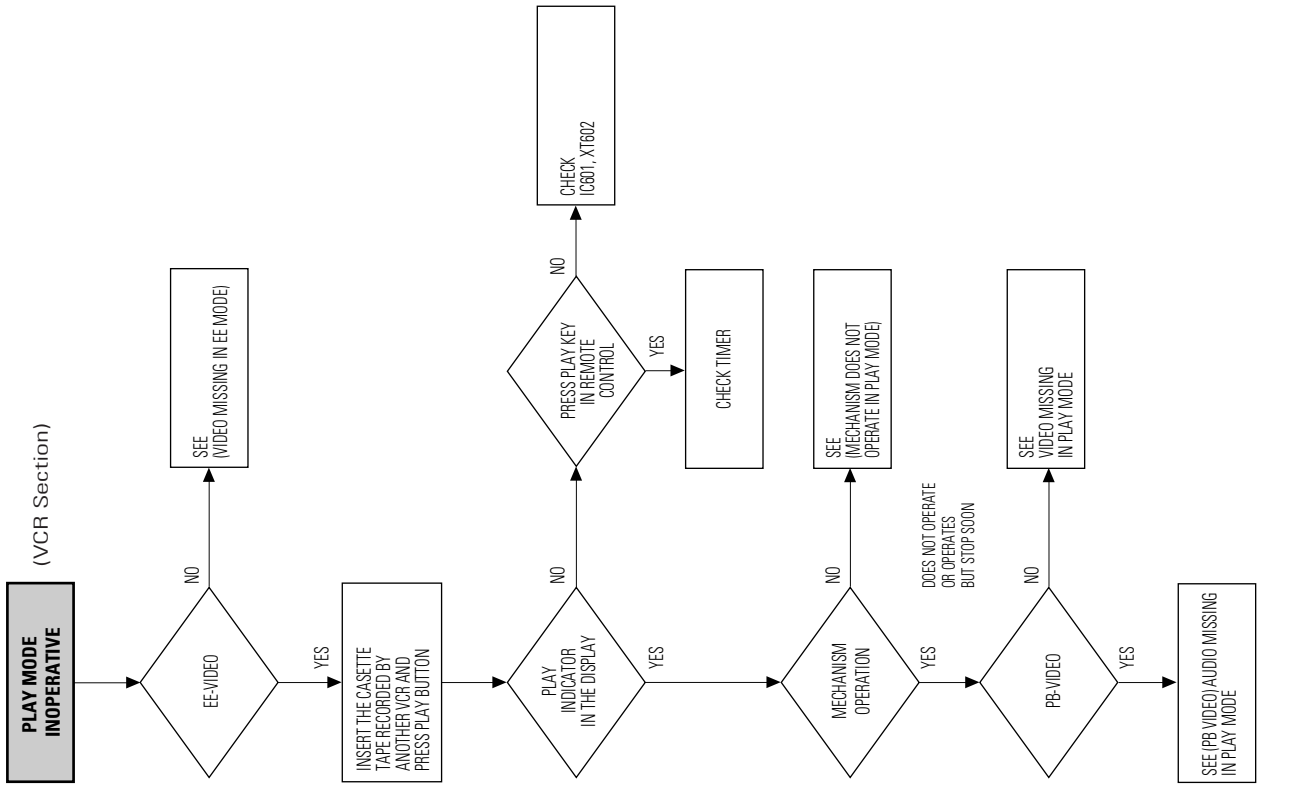
Fig. 4-18

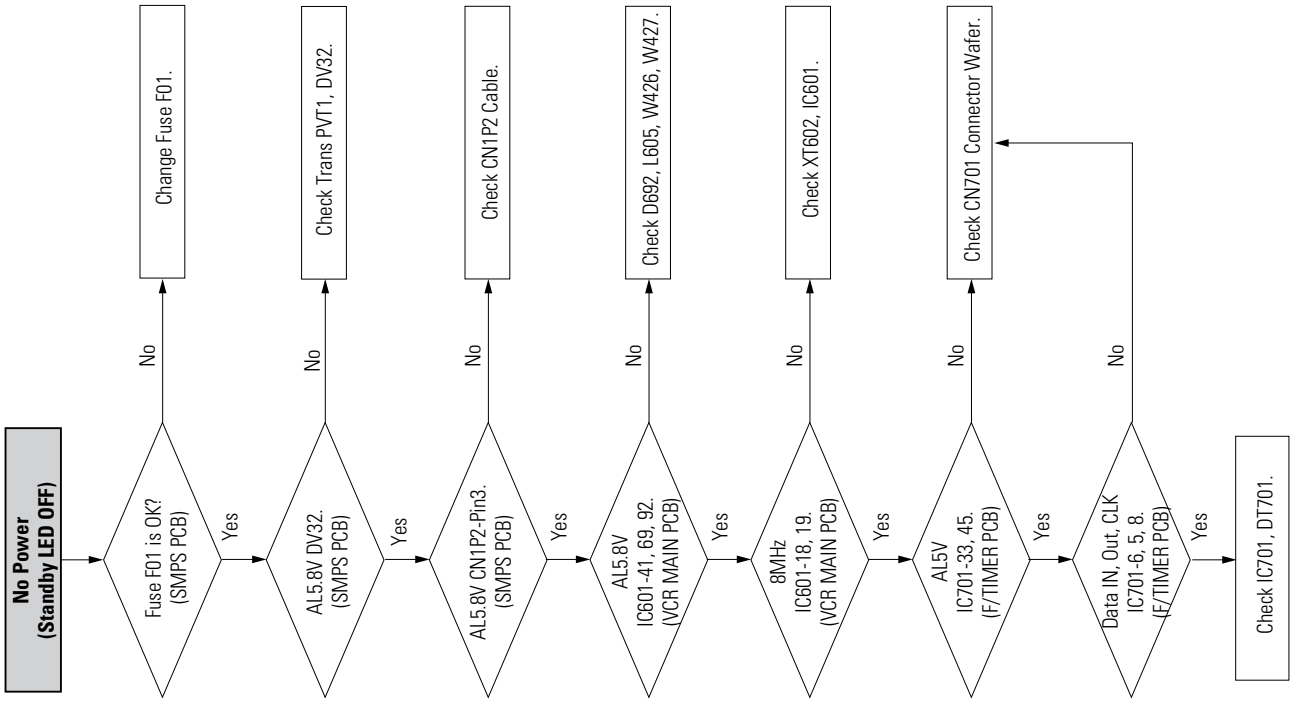
<Table 4-2 NVRAM Option Table>

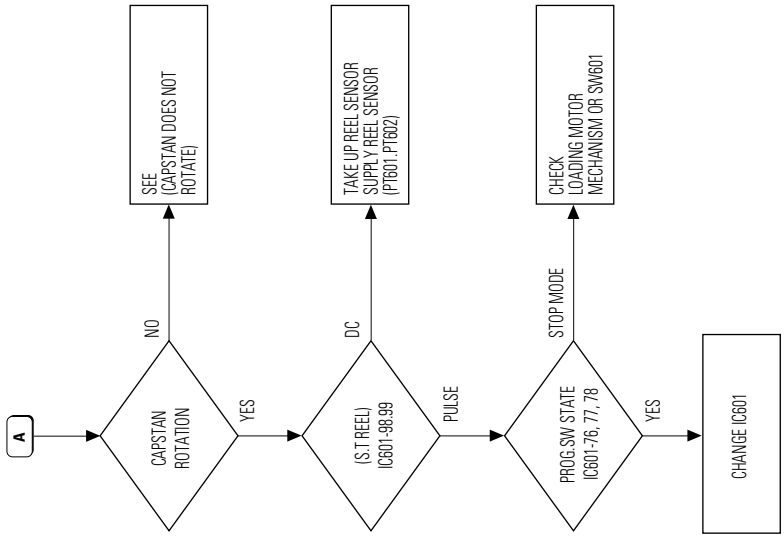
MODEL	OPTION NUMBER
DVR4000	2, 4, 11, 19, 23, 26, 27, 29
DVR4500	2, 4, 11, 19, 22, 23, 26, 27, 29

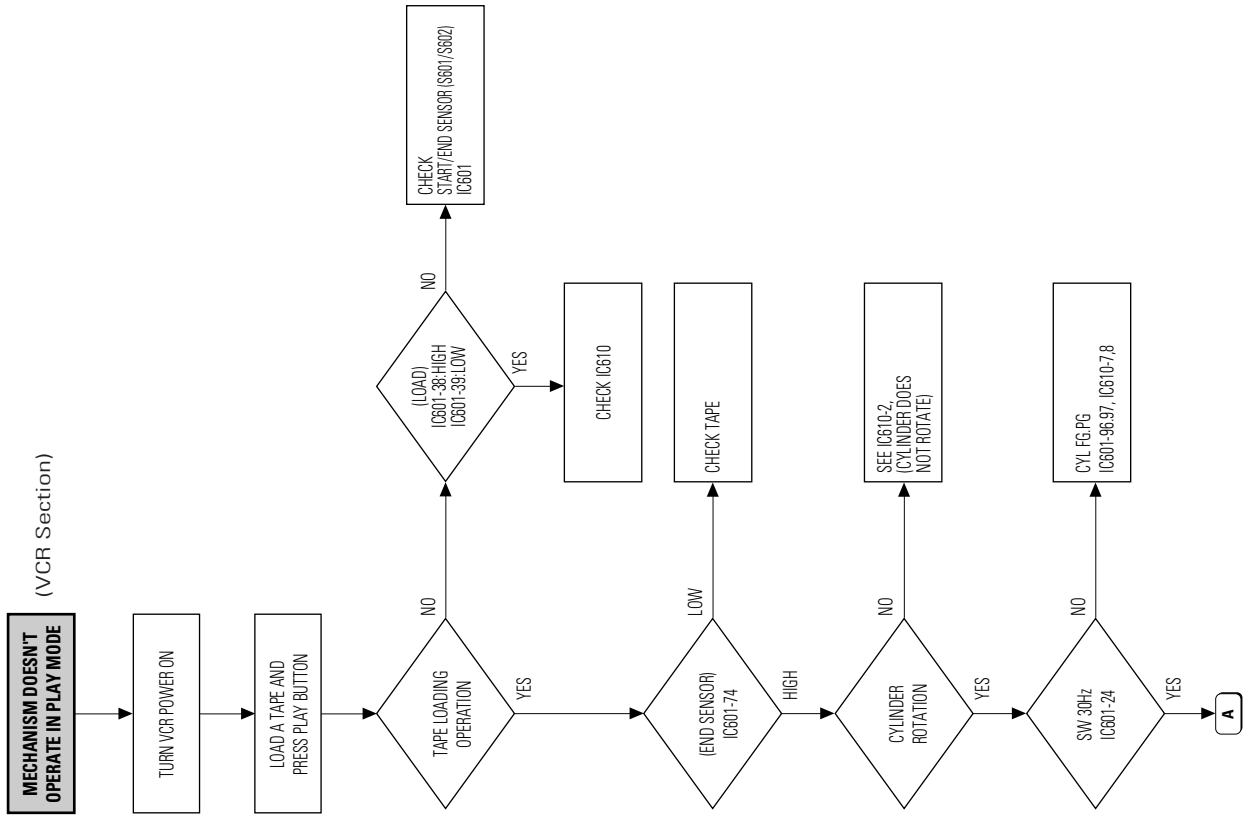
MEMO

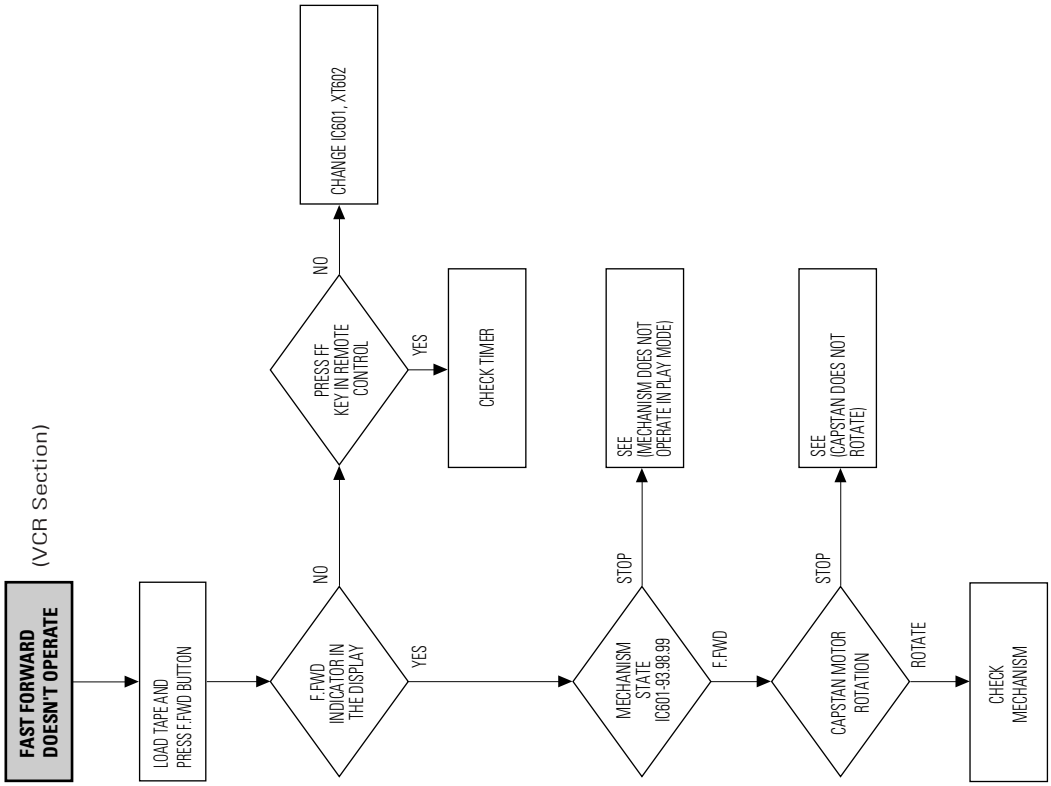
5. Troubleshooting

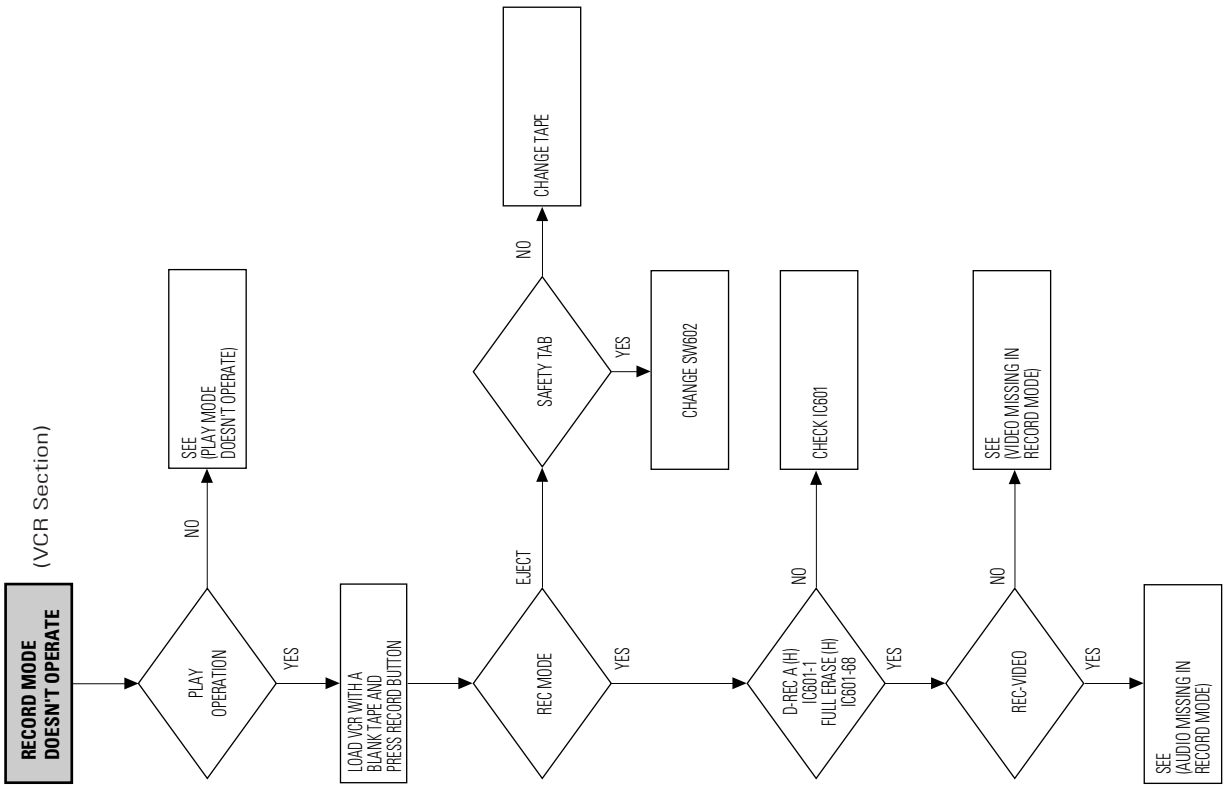


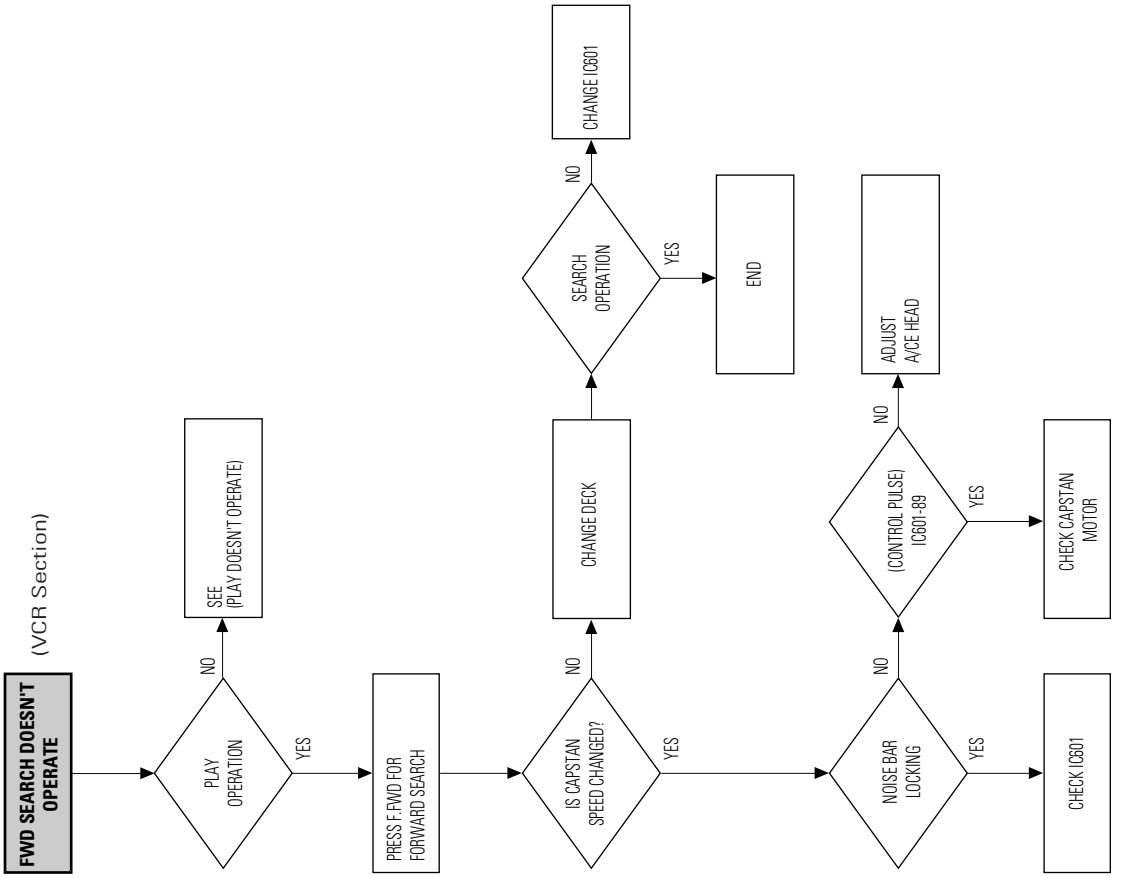


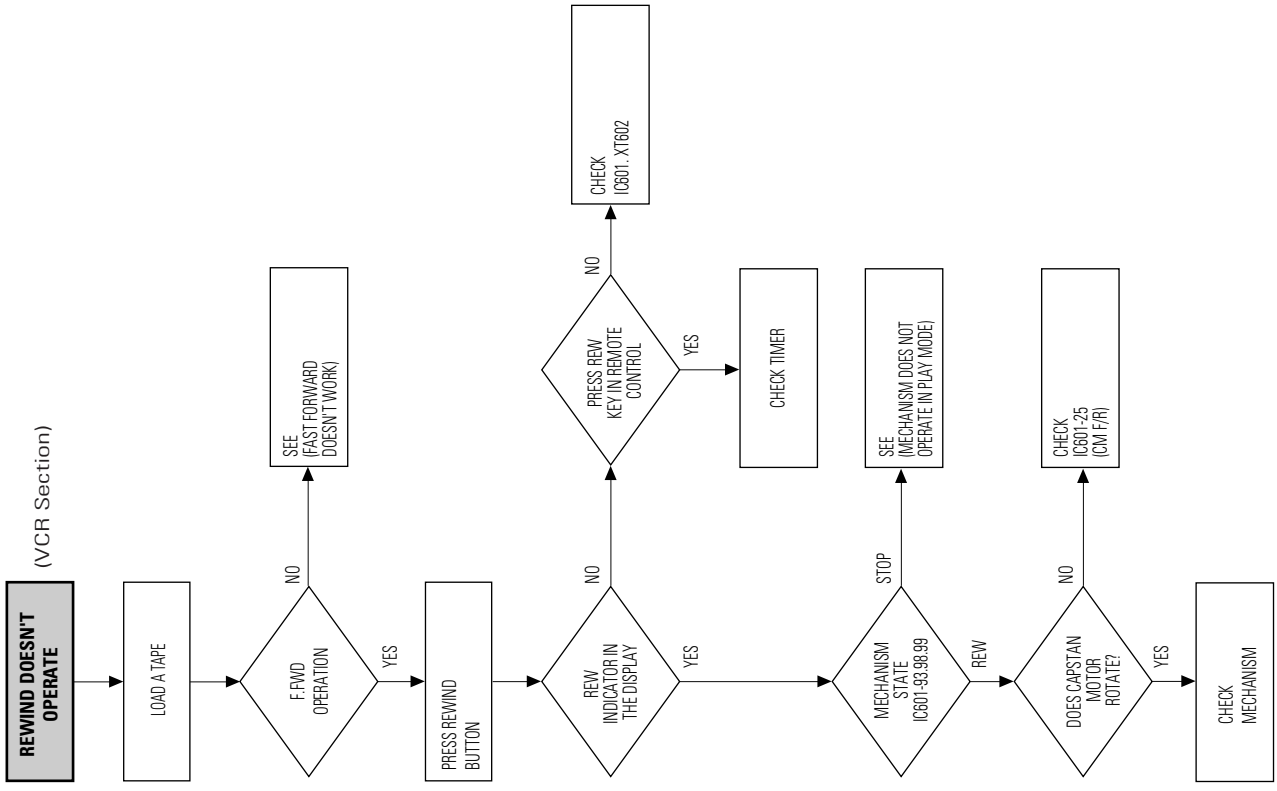

A
CAPSTAN ROTATION
NO
SEE (CAPSTAN DOES NOT ROTATE)
YES
(S.T REEL) IC601-98,99
DC
TAKE UP REEL SENSOR SUPPLY REEL SENSOR (PT601, PT602)
PULSE
PROG.SW STATE IC601-76, 77, 78
STOP MODE
CHECK LOADING MOTOR MECHANISM OR SW601
YES
CHANGE IC601

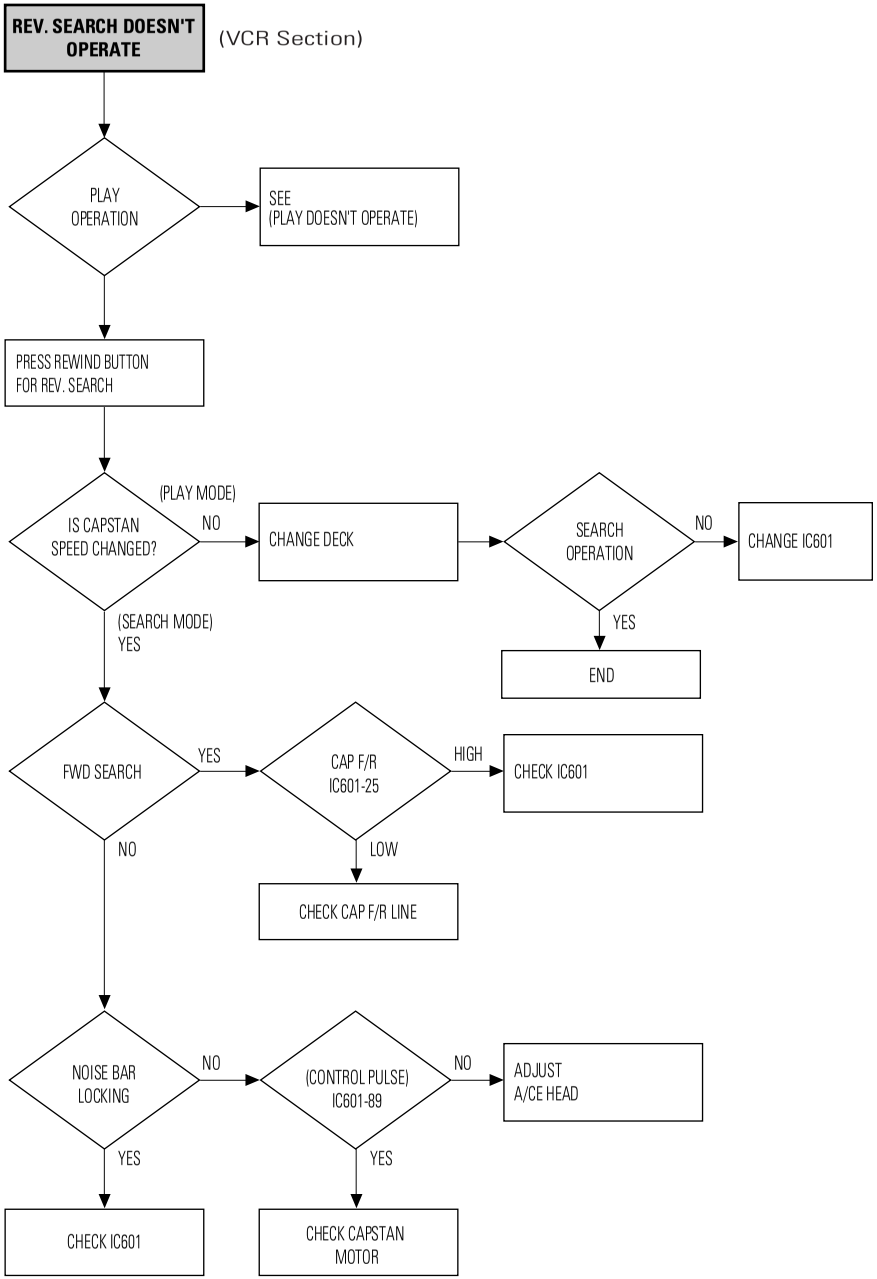

(VCR Section)
MECHANISM DOESN'T OPERATE IN PLAY MODE
TURN VCR POWER ON
LOAD A TAPE AND PRESS PLAY BUTTON
TAPE LOADING OPERATION
NO
CHECK START/END SENSOR (S601/S602) IC601
YES
(LOAD) IC601-38:HIGH IC601-39:LOW
NO
CHECK IC610
YES
(END SENSOR) IC601-74
LOW
CHECK TAPE
HIGH
CYLINDER ROTATION
NO
SEE IC610-2, (CYLINDER DOES NOT ROTATE)
YES
SW 30Hz IC601-24
NO
CYL FG,PG IC601-96,97, IC610-7,8
YES
A

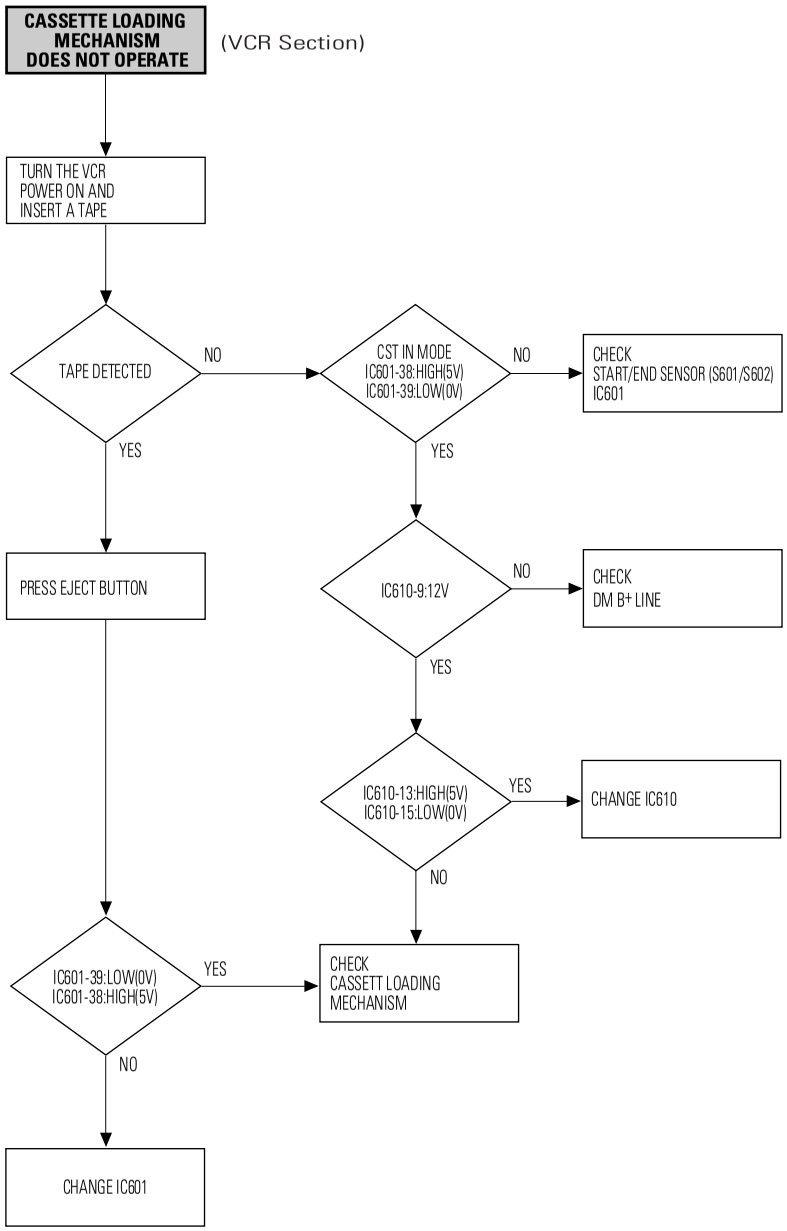

FAST FORWARD DOESN'T OPERATE
(VCR Section)
LOAD TAPE AND PRESS F.FWD BUTTON
F.FWD INDICATOR IN THE DISPLAY
NO
YES
PRESS FF KEY IN REMOTE CONTROL
NO
YES
CHANGE IC601, XT602
CHECK TIMER
MECHANISM STATE IC601-93.98.99
STOP
F.FWD
SEE (MECHANISM DOES NOT OPERATE IN PLAY MODE)
CAPSTAN MOTOR ROTATION
STOP
ROTATE
SEE (CAPSTAN DOES NOT ROTATE)
CHECK MECHANISM

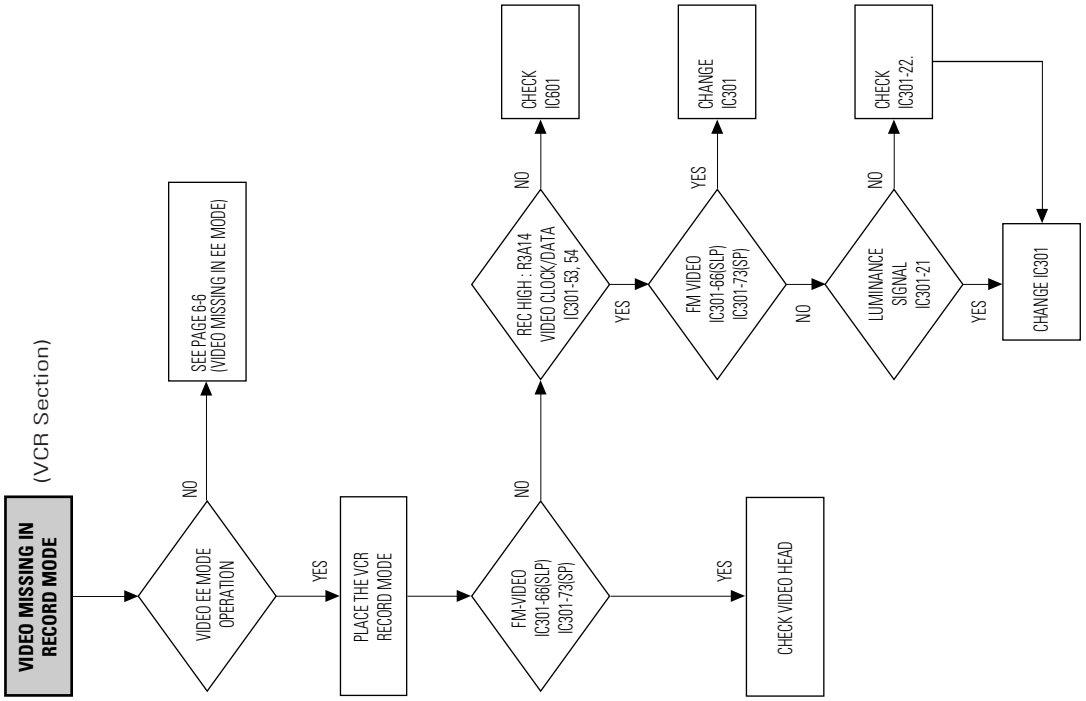

RECORD MODE DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
NO
YES
SEE (PLAY MODE DOESN'T OPERATE)
LOAD VCR WITH A BLANK TAPE AND PRESS RECORD BUTTON
REC MODE
EJECT
YES
SAFETY TAB
NO
YES
CHANGE SW602
CHANGE TAPE
D-REC A (H) IC601-1 FULL ERASE (H) IC601-68
NO
YES
CHECK IC601
REC-VIDEO
NO
YES
SEE (VIDEO MISSING IN RECORD MODE)
SEE (AUDIO MISSING IN RECORD MODE)

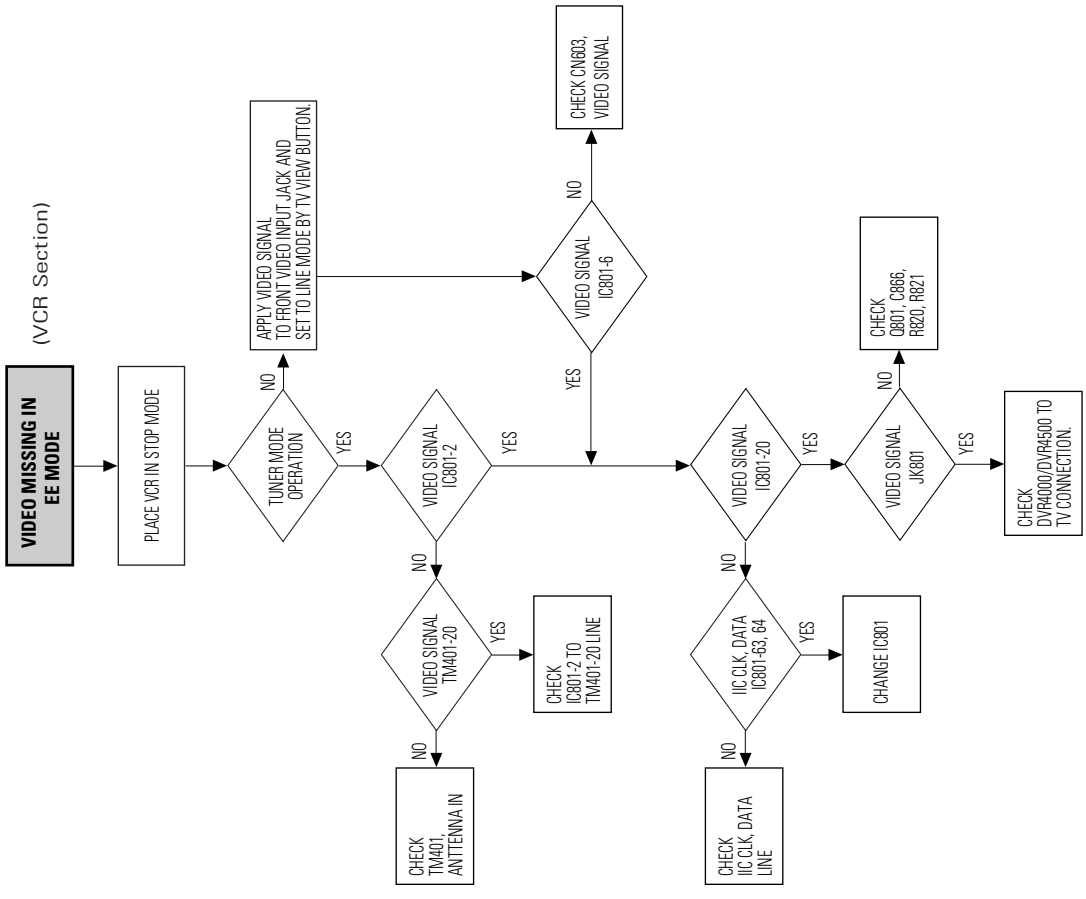

FWD SEARCH DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
NO
SEE (PLAY DOESN'T OPERATE)
YES
PRESS F.FWD FOR FORWARD SEARCH
IS CAPSTAN SPEED CHANGED?
NO
CHANGE DECK
YES
SEARCH OPERATION
NO
CHANGE IC601
YES
END
NOISE BAR LOCKING
NO
(CONTROL PULSE) IC601-89
NO
ADJUST A/CE HEAD
YES
CHECK CAPSTAN MOTOR
YES
CHECK IC601


REWIND DOESN'T OPERATE
(VCR Section)
LOAD A TAPE
F.FWD OPERATION
NO
SEE (FAST FORWARD DOESN'T WORK)
YES
PRESS REWIND BUTTON
REW INDICATOR IN THE DISPLAY
NO
PRESS REW KEY IN REMOTE CONTROL
NO
CHECK IC601: XT602
YES
CHECK TIMER
YES
MECHANISM STATE IC601-93.98.99
STOP
SEE (MECHANISM DOES NOT OPERATE IN PLAY MODE)
REW
DOES CAPSTAN MOTOR ROTATE?
NO
CHECK IC601-25 (CM F/R)
YES
CHECK MECHANISM

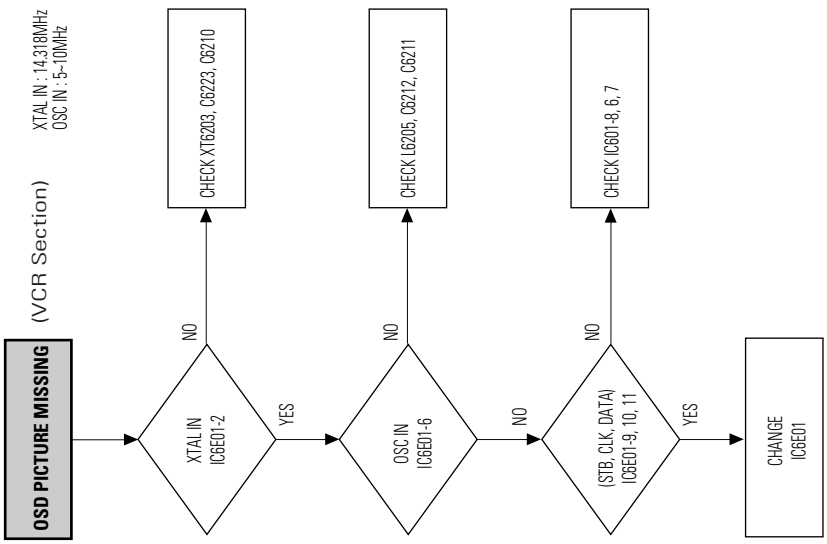

REV. SEARCH DOESN'T OPERATE
(VCR Section)
PLAY OPERATION
SEE (PLAY DOESN'T OPERATE)
PRESS REWIND BUTTON FOR REV. SEARCH
IS CAPSTAN SPEED CHANGED?
(PLAY MODE)
NO
CHANGE DECK
SEARCH OPERATION
NO
CHANGE IC601
YES
END
(SEARCH MODE)
YES
FWD SEARCH
YES
CAP F/R IC601-25
HIGH
CHECK IC601
LOW
CHECK CAP F/R LINE
NO
NOISE BAR LOCKING
NO
(CONTROL PULSE) IC601-89
NO
ADJUST A/CE HEAD
YES
YES
CHECK IC601
CHECK CAPSTAN MOTOR

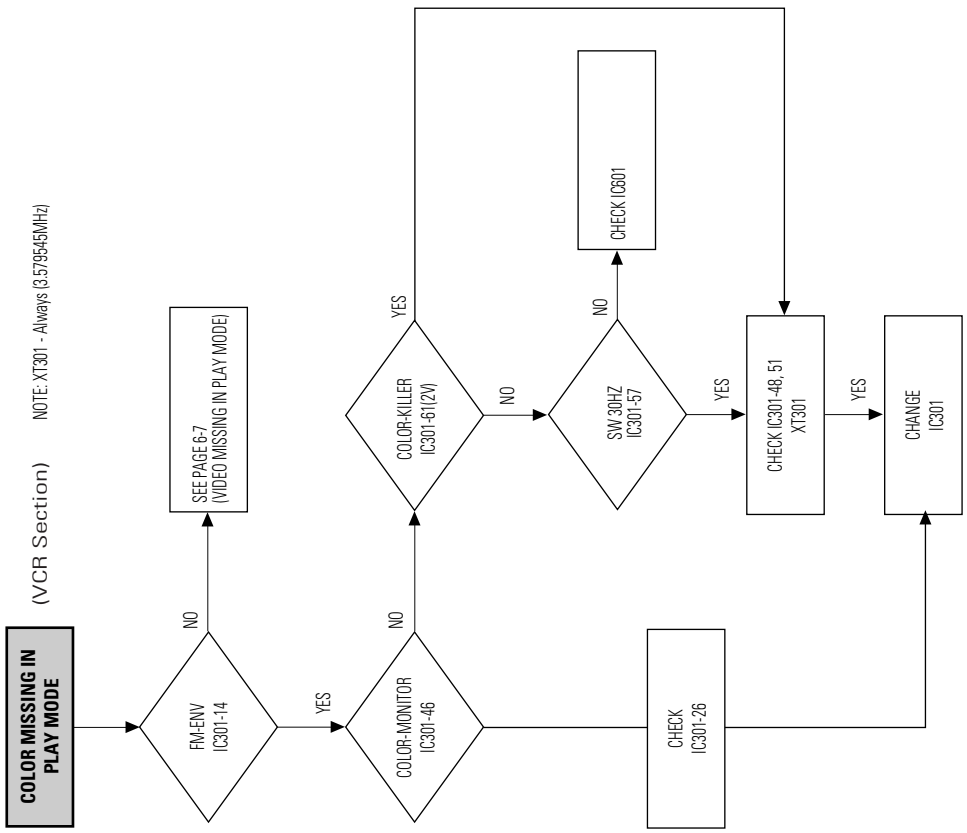

CASSETTE LOADING MECHANISM DOES NOT OPERATE
(VCR Section)
TURN THE VCR POWER ON AND INSERT A TAPE
TAPE DETECTED
NO
CST IN MODE IC601-38:HIGH(5V) IC601-39:LOW(0V)
NO
CHECK START/END SENSOR (S601,S602) IC601
YES
YES
PRESS EJECT BUTTON
IC610-9:12V
NO
CHECK DM B+ LINE
YES
IC610-13:HIGH(5V) IC610-15:LOW(0V)
YES
CHANGE IC610
NO
IC601-39:LOW(0V) IC601-38:HIGH(5V)
YES
CHECK CASSETT LOADING MECHANISM
NO
CHANGE IC601

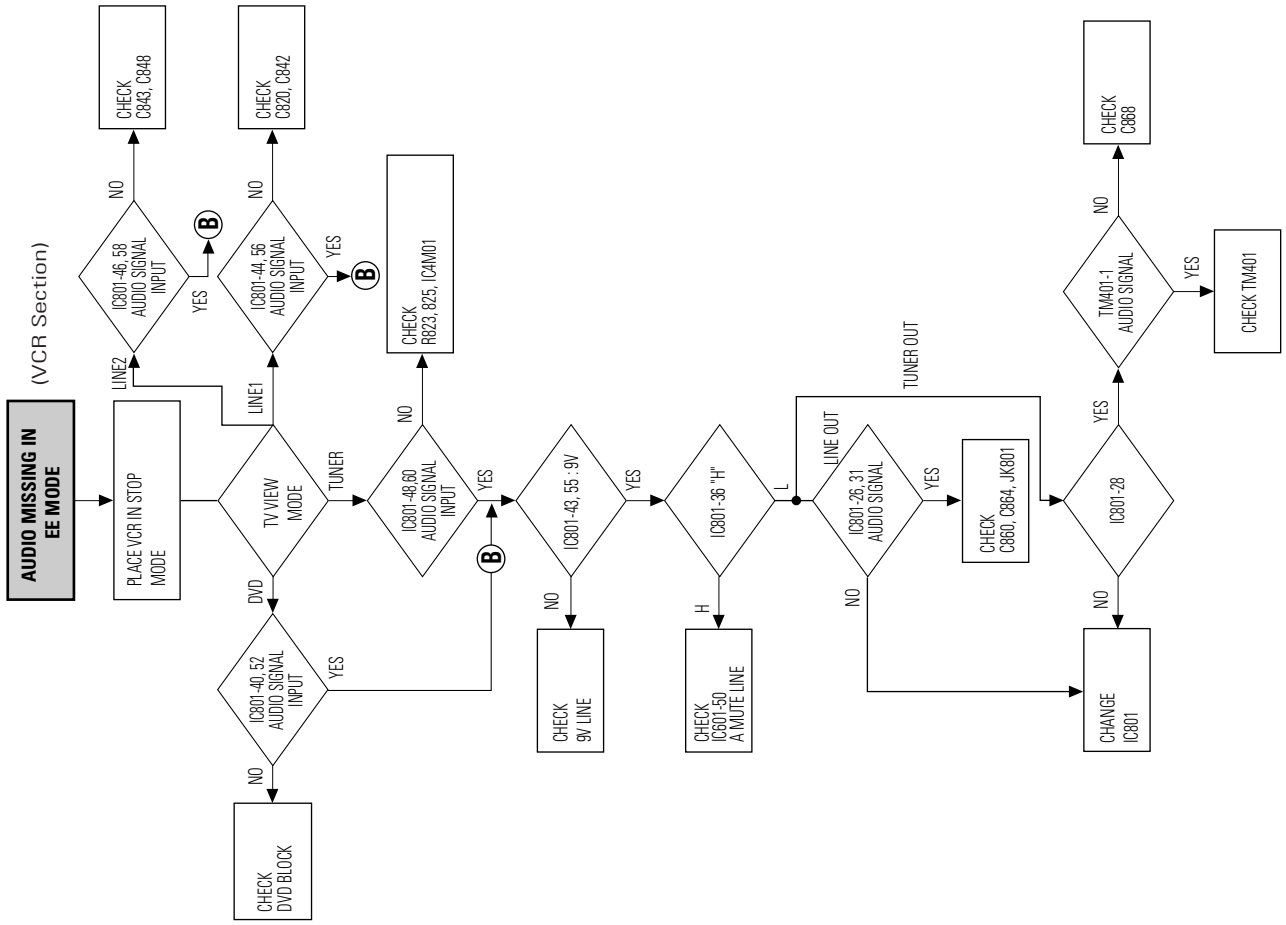

VIDEO MISSING IN RECORD MODE
(VCR Section)
VIDEO EE MODE OPERATION
NO
SEE PAGE 6-6 (VIDEO MISSING IN EE MODE)
YES
PLACE THE VCR RECORD MODE
FM-VIDEO IC301-66(SLP) IC301-73(SP)
NO
REC HIGH : R3A14 VIDEO CLOCK/DATA IC301-53, 54
NO
CHECK IC601
YES
FM VIDEO IC301-66(SLP) IC301-73(SP)
YES
CHANGE IC301
NO
LUMINANCE SIGNAL IC301-21
NO
CHECK IC301-22.
YES
CHANGE IC301
YES
CHECK VIDEO HEAD

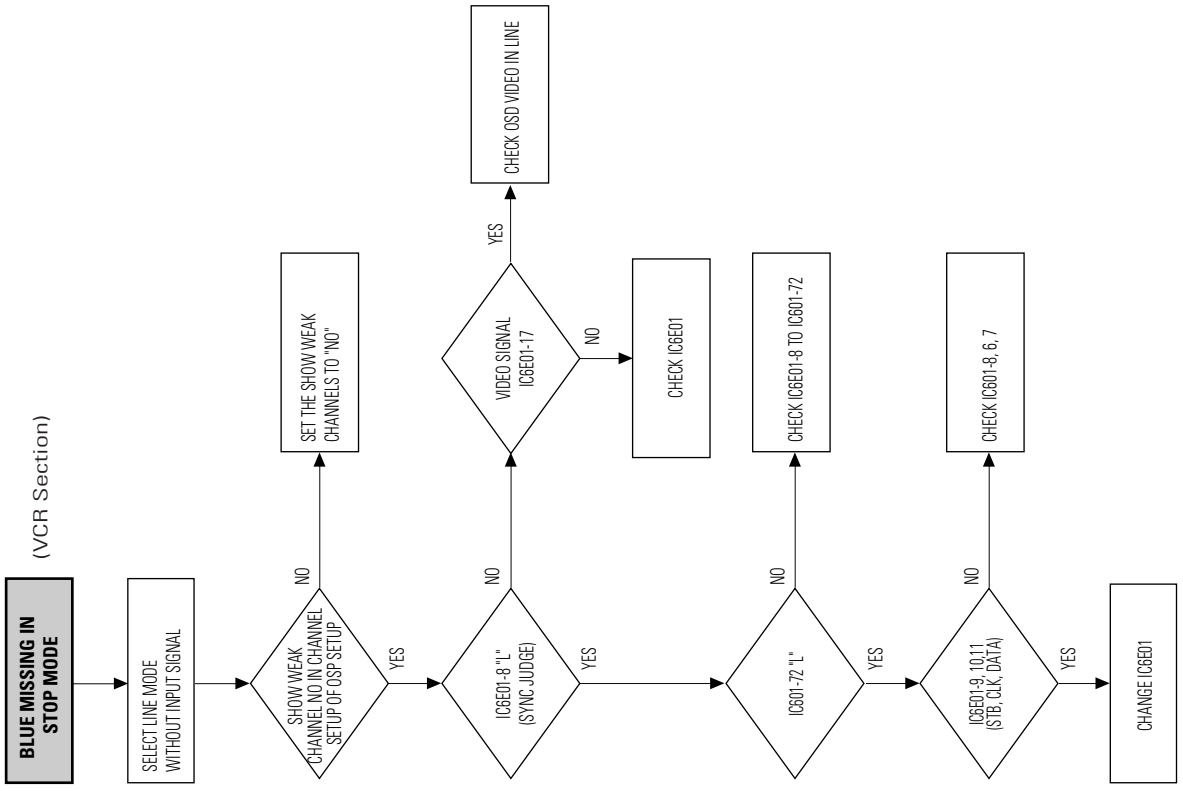

VIDEO MISSING IN EE MODE
(VCR Section)
PLACE VCR IN STOP MODE
TUNER MODE OPERATION
NO
APPLY VIDEO SIGNAL TO FRONT VIDEO INPUT JACK AND SET TO LINE MODE BY TV VIEW BUTTON.
YES
VIDEO SIGNAL IC801-2
NO
CHECK CN603, VIDEO SIGNAL
NO
VIDEO SIGNAL IC801-6
YES
VIDEO SIGNAL TM401-20
NO
CHECK TM401, ANTTENNA IN
YES
CHECK IC801-2 TO TM401-20 LINE
VIDEO SIGNAL IC801-20
NO
IIC CLK, DATA IC801-63, 64
NO
CHECK IIC CLK, DATA LINE
YES
CHANGE IC801
NO
CHECK Q801, C866, R820, R821
VIDEO SIGNAL JK801
NO
YES
CHECK DVR4000/DVR4500 TO TV CONNECTION.

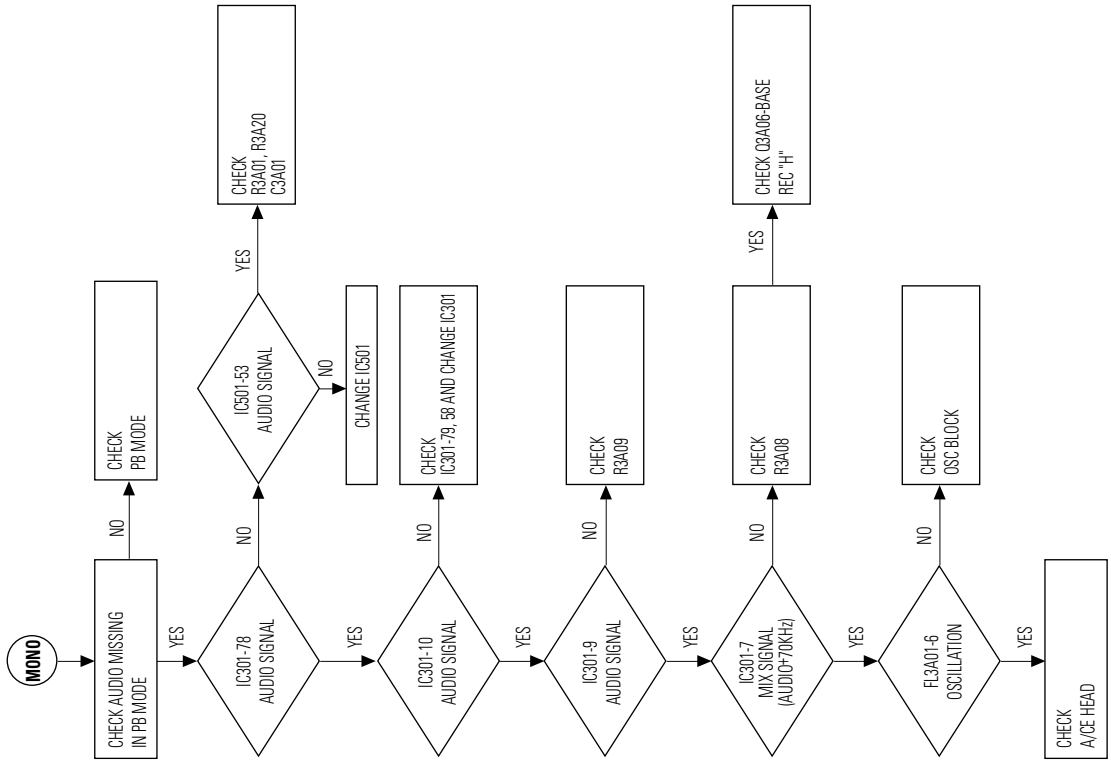
COLOR MISSING IN RECORD MODE
(VCR Section)
NOTE: XT301 - Always (3.579545MHz)
(VIDEO IN) RECORD MODE
NO
SEE PAGE 6-6 (VIDEO MISSING IN RECORD MODE)
YES
COLOR-MONITOR IC301-46
YES
CHECK XT301
NO
CHANGE XT301
YES
CHANGE IC301
NO
COLOR-KILLER IC301-61(2V)
YES
CHECK THE REC LINE
NO
CHANGE IC301
VIDEO MISSING IN PLAY MODE
(VCR Section)
VIDEO EE MODE OPERATION
NO
SEE PAGE 6-6 (VIDEO MISSING IN EE MODE)
YES
PLACE THE VCR PLAY MODE
VIDEO FM IC301-14
NO
H'D SW IC301-57
NO
CHECK IC601-24
YES
CHECK VIDEO HEAD
YES
VIDEO IC301-22
NO
CHECK C305
YES
VIDEO IC301-26
YES
VIDEO IC801-12
YES
VIDEO IC801-20
YES
CHECK VIDEO OUT LINE
NO
CHECK IC801
NO
CHECK Q802
NO
CHANGE IC301

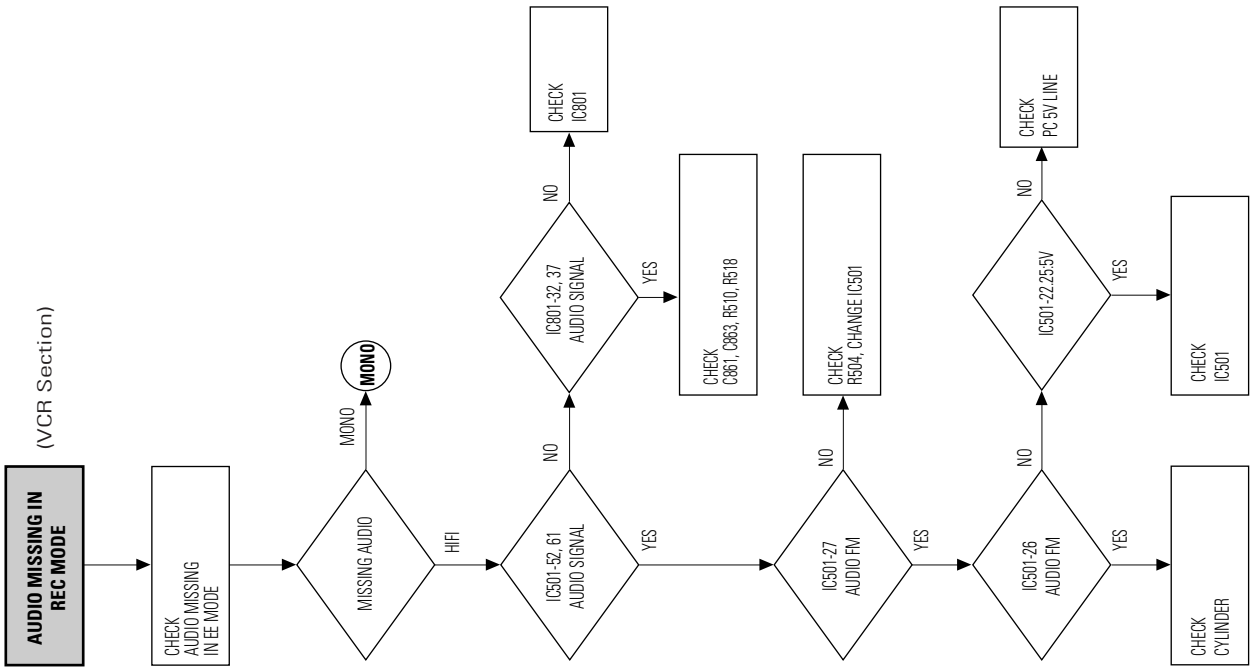

OSD PICTURE MISSING
(VCR Section)
XTAL IN : 14.318MHz
OSC IN : 5~10MHz
XTAL IN
IC6E01-2
NO
YES
CHECK XT6203, C6223, C6210
OSC IN
IC6D01-6
NO
NO
CHECK L6205, C8212, C6211
(STB, CLK, DATA)
IC6E01-9, 10, 11
NO
NO
CHECK IC601-8, 6, 7
YES
CHANGE
IC6E01

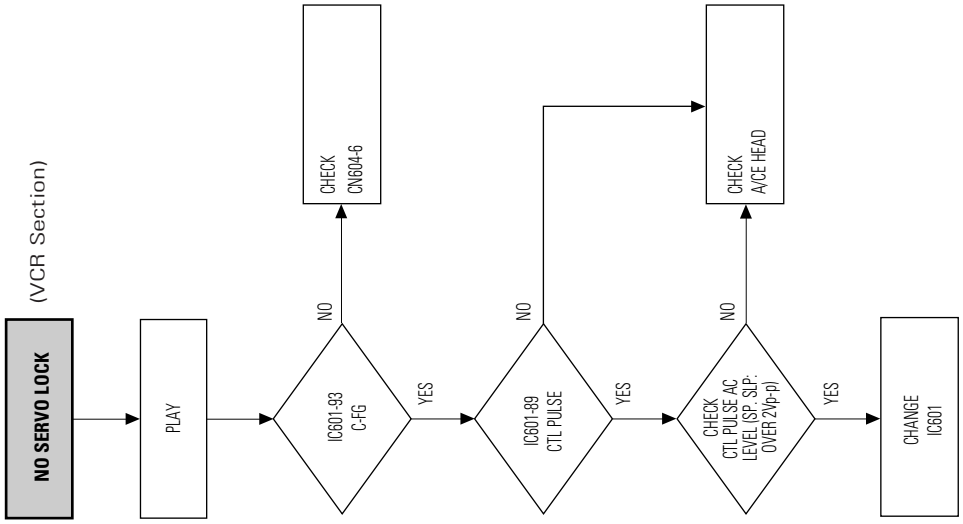

COLOR MISSING IN
PLAY MODE
(VCR Section)
NOTE: XT301 - Always (3.579545MHz)
FM-ENV
IC301-14
NO
SEE PAGE 6-7
(VIDEO MISSING IN PLAY MODE)
YES
COLOR-MONITOR
IC301-46
NO
CHECK
IC301-26
COLOR-KILLER
IC301-61(2V)
YES
NO
SW 30HZ
IC301-57
NO
CHECK IC601
YES
CHECK IC301-48, 51
XT301
YES
CHANGE
IC301

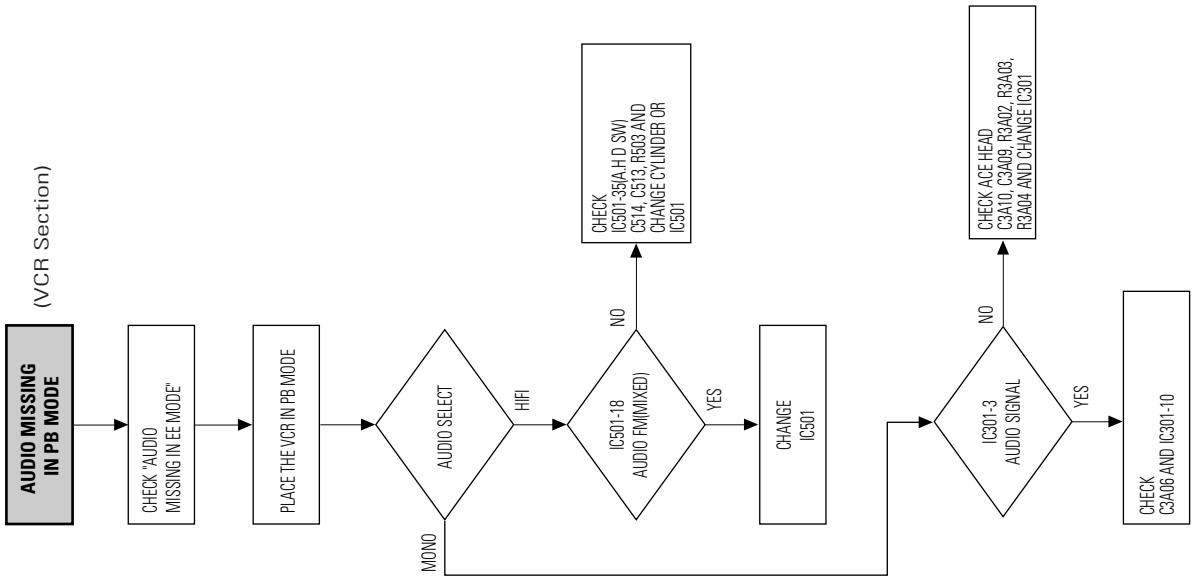

AUDIO MISSING IN EE MODE
(VCR Section)
PLACE VCR IN STOP MODE
TV VIEW MODE
TUNER
DVD
LINE1
LINE2
IC801-46, 58 AUDIO SIGNAL INPUT
IC801-44, 56 AUDIO SIGNAL INPUT
IC801-48,60 AUDIO SIGNAL INPUT
IC801-40, 52 AUDIO SIGNAL INPUT
IC801-43, 55 : 9V
IC801-36 "H"
IC801-26, 31 AUDIO SIGNAL
IC801-28
TM401-1 AUDIO SIGNAL
YES
NO
B
H
L
TUNER OUT
LINE OUT
CHECK C843, C848
CHECK C820, C842
CHECK R823, 825, IC4M01
CHECK DVD BLOCK
CHECK 9V LINE
CHECK IC801-50 A MUTE LINE
CHECK C860, C864, JK801
CHANGE IC801
CHECK C868
CHECK TM401

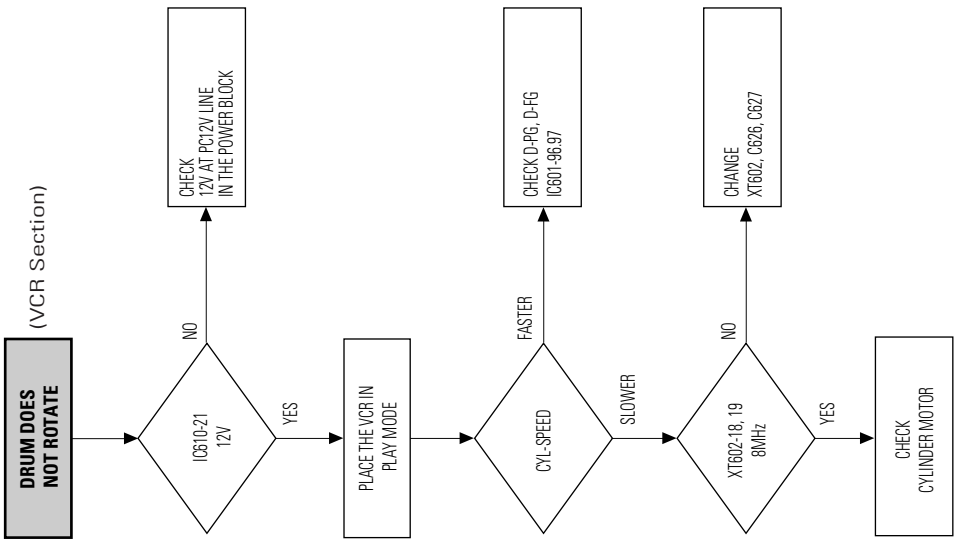

BLUE MISSING IN STOP MODE
(VCR Section)
SELECT LINE MODE WITHOUT INPUT SIGNAL
SHOW WEAK CHANNEL NO IN CHANNEL SETUP OF OSP SETUP
SET THE SHOW WEAK CHANNELS TO "NO"
IC6E01-8 "L" (SYNC JUDGE)
VIDEO SIGNAL IC6E01-17
CHECK OSD VIDEO IN LINE
CHECK IC6E01
IC801-72 "L"
CHECK IC6E01-8 TO IC801-72
(IC6E01-9, 10,11 (STB, CLK, DATA)
CHECK IC801-8, 6, 7
CHANGE IC6E01
YES
NO

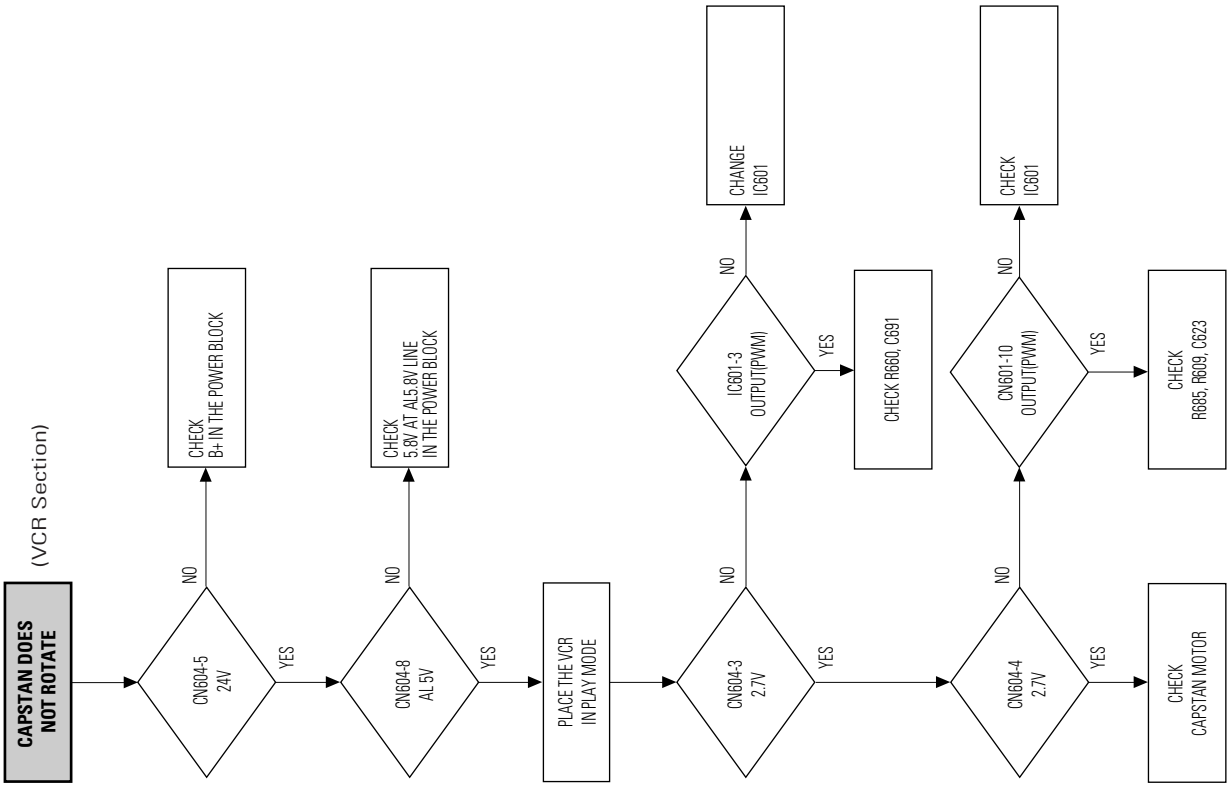

(MONO)
CHECK AUDIO MISSING IN PB MODE
IC301-78 AUDIO SIGNAL
IC301-10 AUDIO SIGNAL
IC301-9 AUDIO SIGNAL
IC301-7 MIX SIGNAL (AUDIO-70KHz)
FL3A01-6 OSCILLATION
CHECK A/CE HEAD
NO
YES
CHECK PB MODE
IC501-53 AUDIO SIGNAL
CHANGE IC301
CHECK R3A01, R3A20 C3A01
CHECK IC301-79, 58 AND CHANGE IC301
CHECK R3A09
CHECK R3A08
CHECK OSC BLOCK
CHECK Q3A06-BASE REC "H"

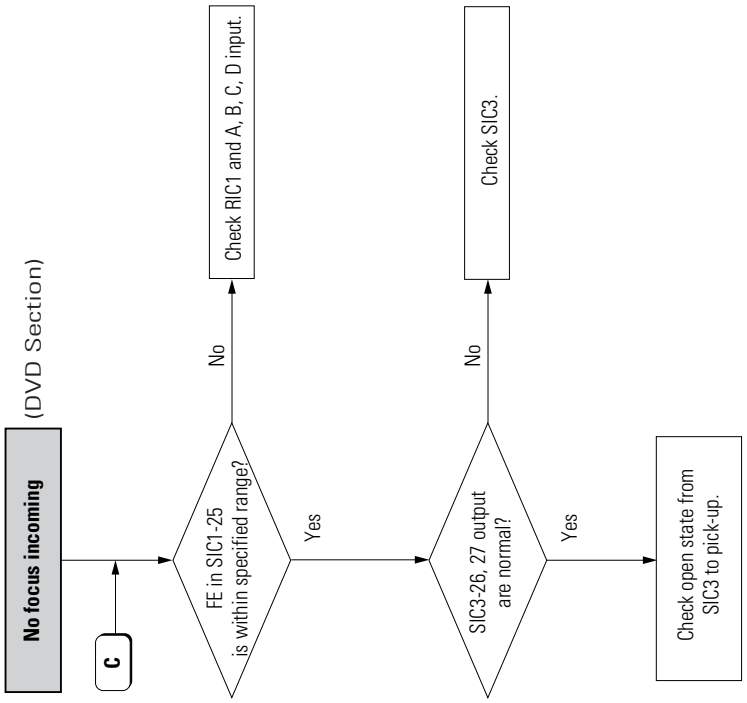

AUDIO MISSING IN REC MODE
(VCR Section)
CHECK AUDIO MISSING IN EE MODE
MISSING AUDIO
MONO
(MONO)
HIFI
IC501-52, 61 AUDIO SIGNAL
IC801-32, 37 AUDIO SIGNAL
CHECK IC801
CHECK C861, C863, R510, R518
IC501-27 AUDIO FM
CHECK R504, CHANGE IC501
IC501-26 AUDIO FM
IC501-22,25,5V
CHECK PC 5V LINE
CHECK CYLINDER
CHECK IC501
NO
YES

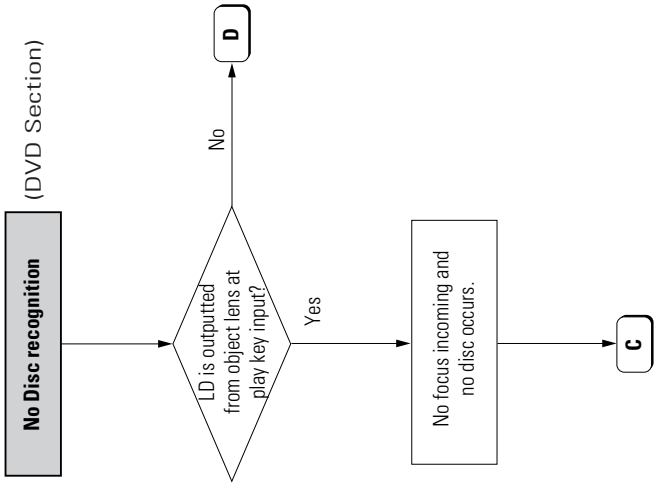

NO SERVO LOCK
(VCR Section)
PLAY
IC601-93
C-FG
NO
YES
CHECK
CN604-6
IC601-89
CTL PULSE
NO
YES
CHECK
A/CE HEAD
CHECK
CTL PULSE AC
LEVEL (SP: SLP:
OVER 2Vp-p)
NO
YES
CHANGE
IC601

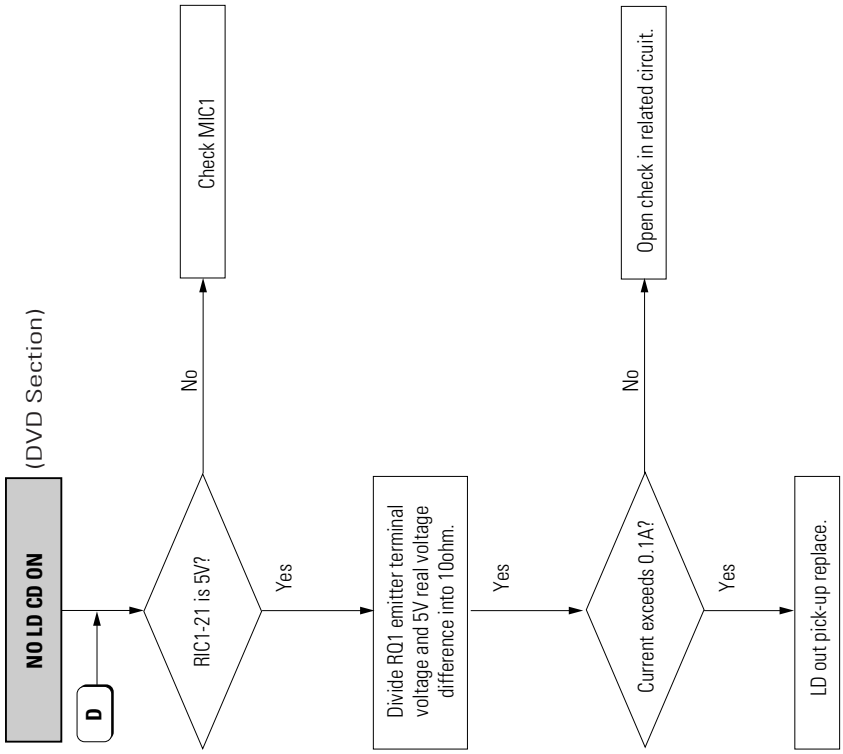

AUDIO MISSING
IN PB MODE
(VCR Section)
CHECK "AUDIO
MISSING IN EE MODE"
PLACE THE VCR IN PB MODE
AUDIO SELECT
HIFI
MONO
IC501-18
AUDIO FM(MIXED)
NO
YES
CHECK
IC501-35(A.H.D SW),
C514, C513, R503 AND
CHANGE CYLINDER OR
IC501
CHANGE
IC501
IC301-3
AUDIO SIGNAL
NO
YES
CHECK A/CE HEAD
C3A10, C3A09, R3A02, R3A03,
R3A04 AND CHANGE IC301
CHECK
C3A06 AND IC301-10

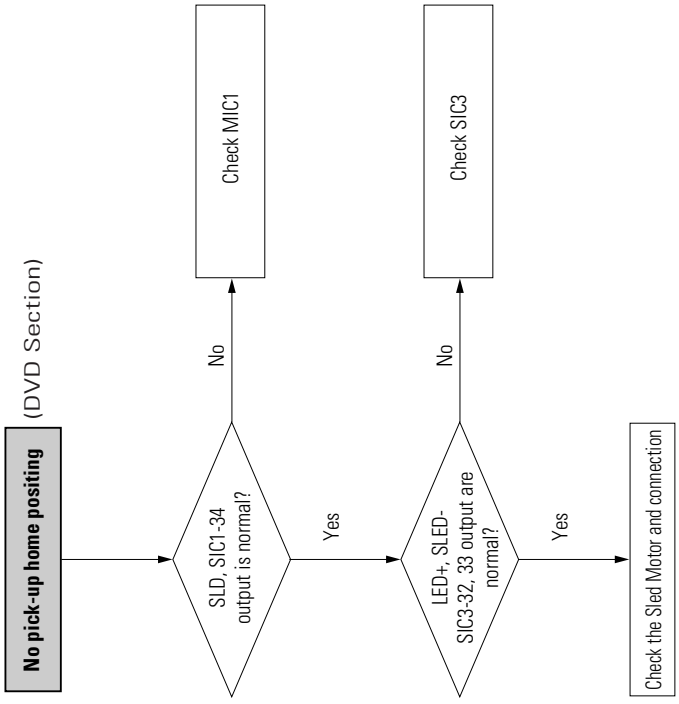

DRUM DOES NOT ROTATE
(VCR Section)
IC610-21 12V
NO
CHECK 12V AT PC12V LINE IN THE POWER BLOCK
YES
PLACE THE VCR IN PLAY MODE
CYL-SPEED
FASTER
CHECK D-PG, D-FG IC601-96,97
SLOWER
XT602-18, 19 8MHz
NO
CHANGE XT602, C626, C627
YES
CHECK CYLINDER MOTOR

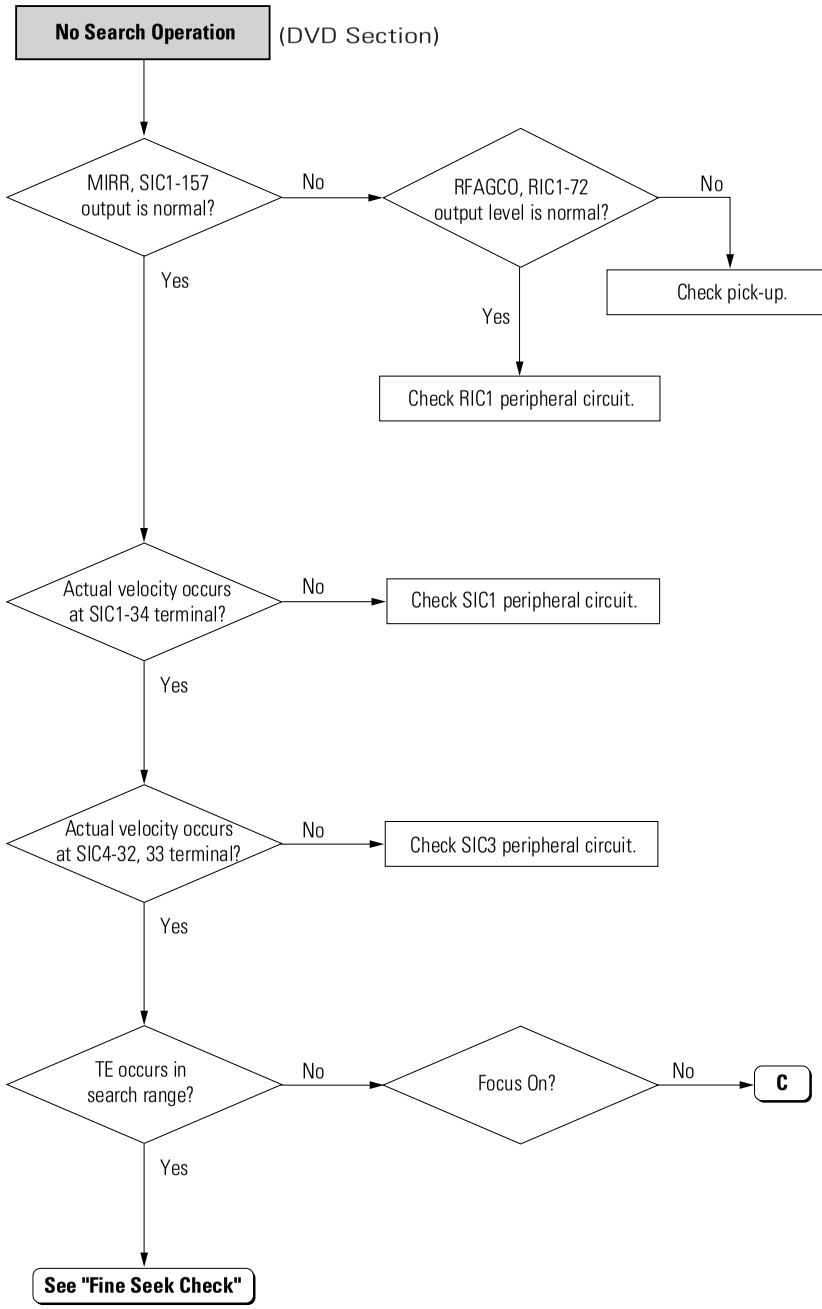

CAPSTAN DOES NOT ROTATE
(VCR Section)
CN604-5 24V
NO
CHECK B+ IN THE POWER BLOCK
YES
CN604-8 AL5V
NO
CHECK 5.6V AT AL5.6V LINE IN THE POWER BLOCK
YES
PLACE THE VCR IN PLAY MODE
CN604-3 2.7V
NO
IC601-3 OUTPUT(PWM)
NO
CHANGE IC601
YES
CHECK R660, C691
YES
CN604-4 2.7V
NO
CN601-10 OUTPUT(PWM)
NO
CHECK IC601
YES
CHECK R685, R609, C623
YES
CHECK CAPSTAN MOTOR

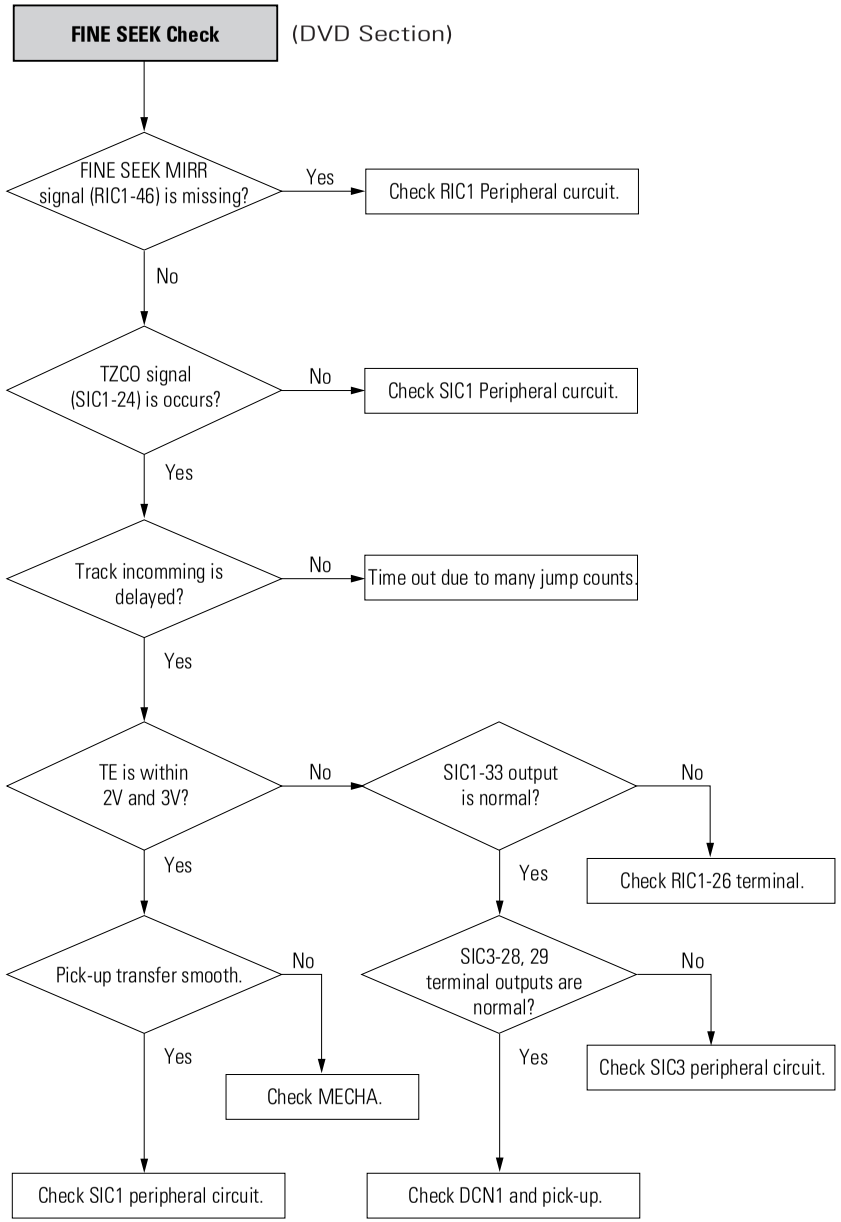

No focus incoming
(DVD Section)
C
FE in SIC1-25
is within specified range?
No
Check RIC1 and A, B, C, D input.
Yes
SIC3-26, 27 output
are normal?
No
Check SIC3.
Yes
Check open state from
SIC3 to pick-up.

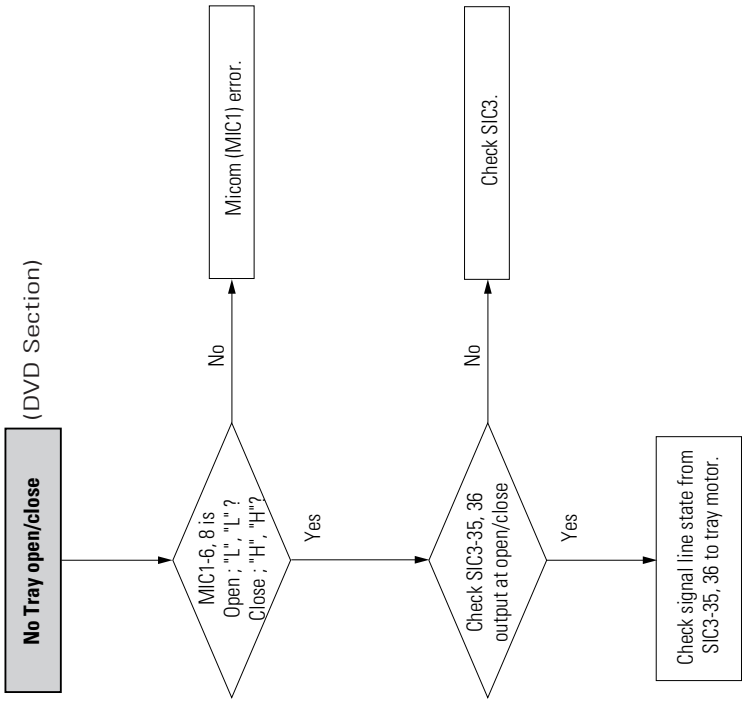

No Disc recognition
(DVD Section)
LD is outputted
from object lens at
play key input?
No
D
Yes
No focus incoming and
no disc occurs.
C

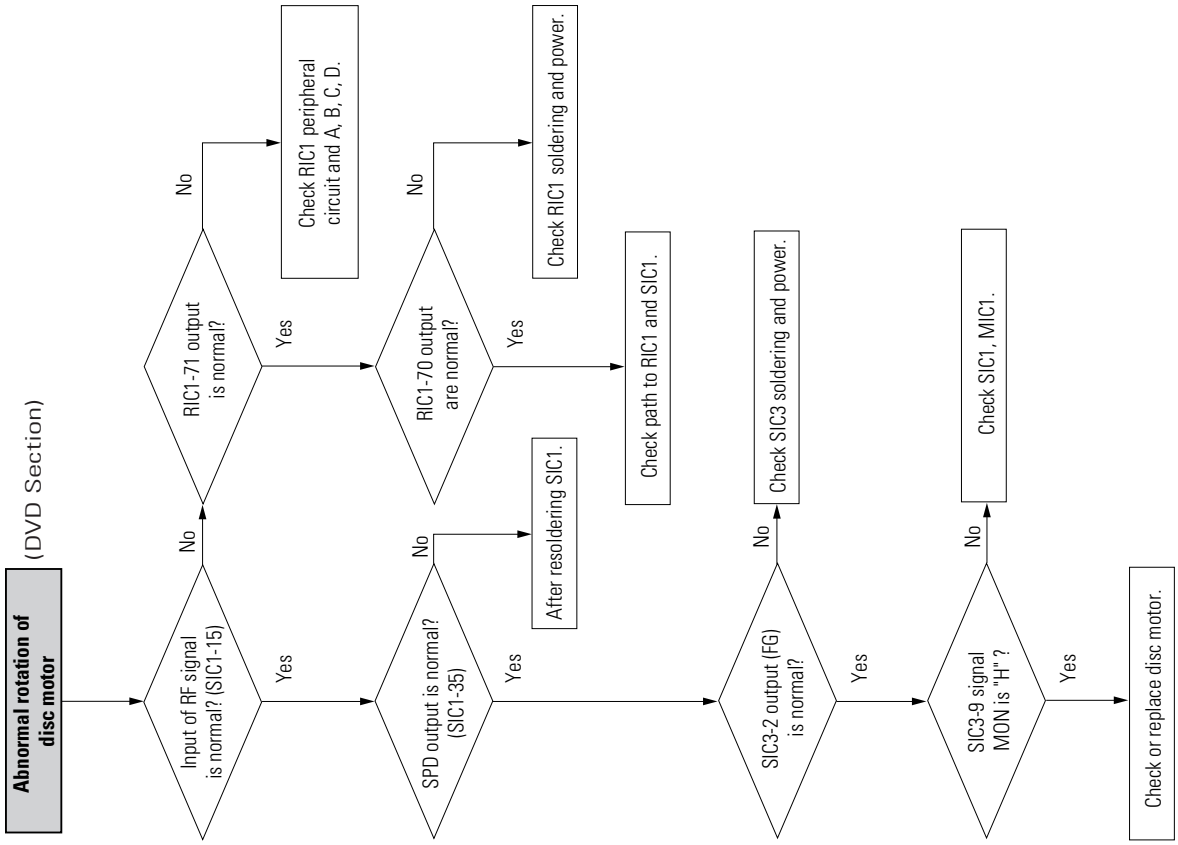

NO LD CD ON
(DVD Section)
D
RIC1-21 is 5V?
No
Check MIC1
Yes
Divide RQ1 emitter terminal voltage and 5V real voltage difference into 10ohm.
Yes
Current exceeds 0.1A?
No
Open check in related circuit.
Yes
LD out pick-up replace.

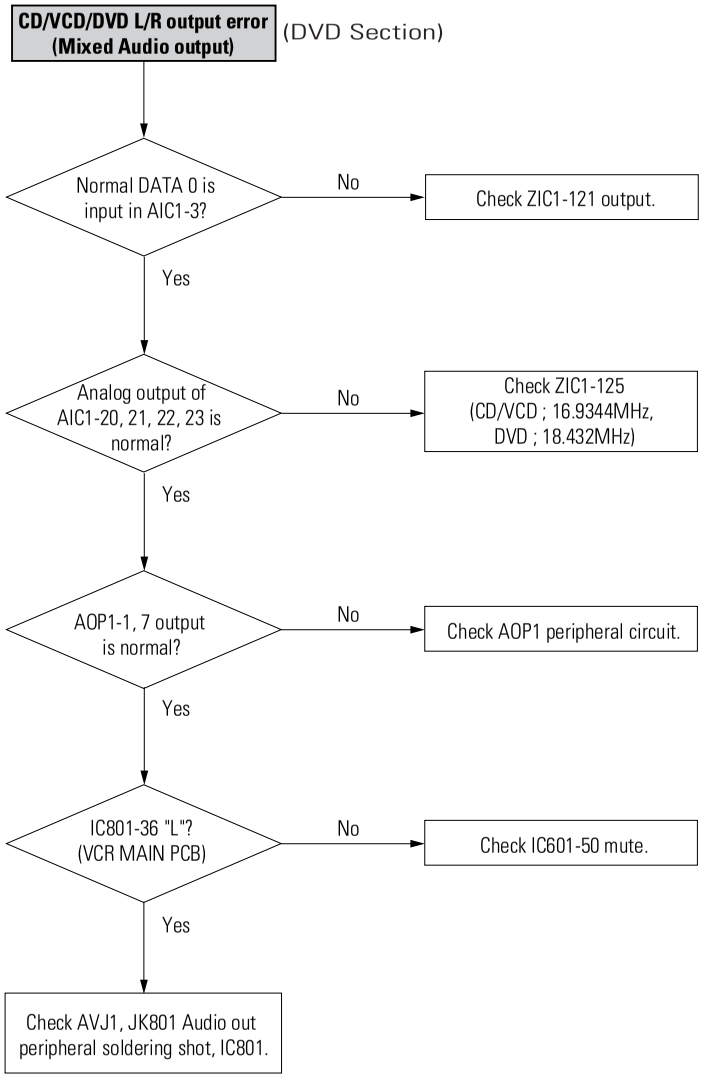

No pick-up home positing
(DVD Section)
SLD, SIC1-34 output is normal?
No
Check MIC1
Yes
LED+, SLED- SIC3-32, 33 output are normal?
No
Check SIC3
Yes
Check the Sled Motor and connection

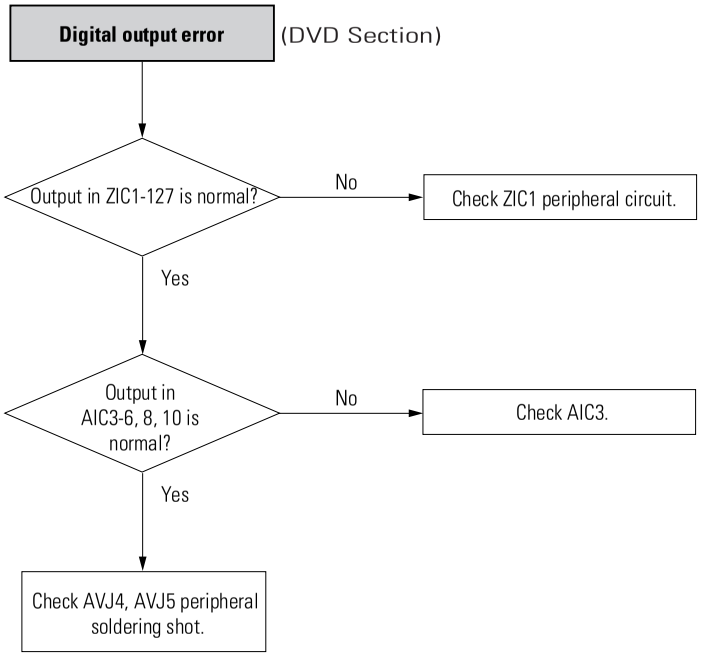

No Search Operation
(DVD Section)
MIRR, SIC1-157 output is normal?
No
RFAGCO, RIC1-72 output level is normal?
No
Check pick-up.
Yes
Check RIC1 peripheral circuit.
Yes
Actual velocity occurs at SIC1-34 terminal?
No
Check SIC1 peripheral circuit.
Yes
Actual velocity occurs at SIC4-32, 33 terminal?
No
Check SIC3 peripheral circuit.
Yes
TE occurs in search range?
No
Focus On?
No
C
Yes
See "Fine Seek Check"

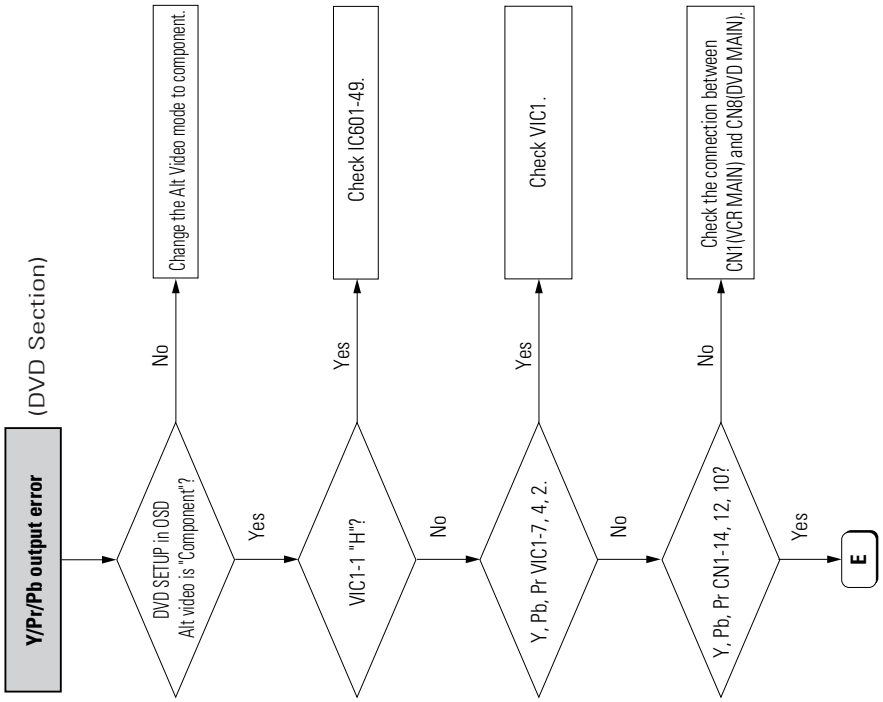

FINE SEEK Check
(DVD Section)
FINE SEEK MIRR signal (RIC1-46) is missing?
Yes
Check RIC1 Peripheral curcuit.
No
TZCO signal (SIC1-24) is occurs?
No
Check SIC1 Peripheral curcuit.
Yes
Track incomming is delayed?
No
Time out due to many jump counts.
Yes
TE is within 2V and 3V?
No
SIC1-33 output is normal?
No
Check RIC1-26 terminal.
Yes
Yes
Pick-up transfer smooth.
No
Check MECHA.
Yes
SIC3-28, 29 terminal outputs are normal?
No
Check SIC3 peripheral circuit.
Yes
Check SIC1 peripheral circuit.
Check DCN1 and pick-up.

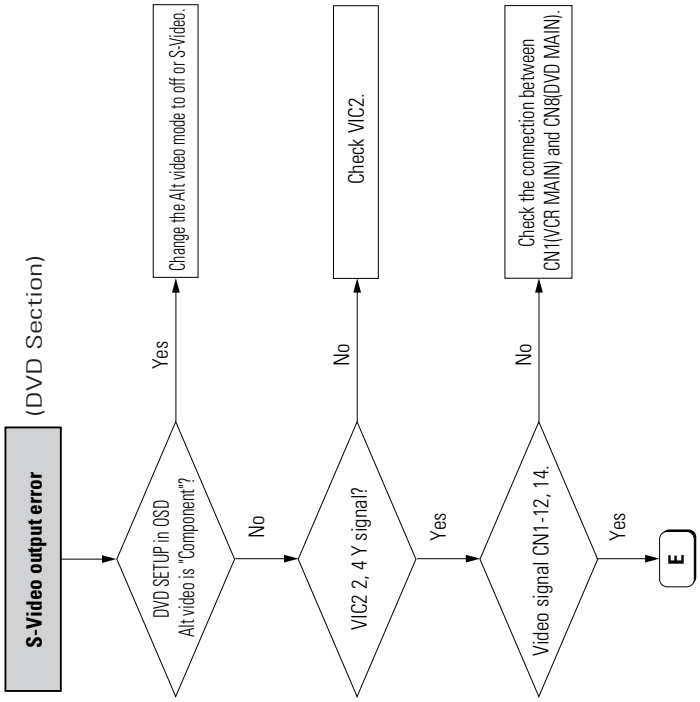

No Tray open/close
(DVD Section)
MIC1-6, 8 is
Open ; "L" , "L" ?
Close ; "H", "H"?
No
Micom (MIC1) error.
Yes
Check SIC3-35, 36
output at open/close
No
Check SIC3.
Yes
Check signal line state from
SIC3-35, 36 to tray motor.

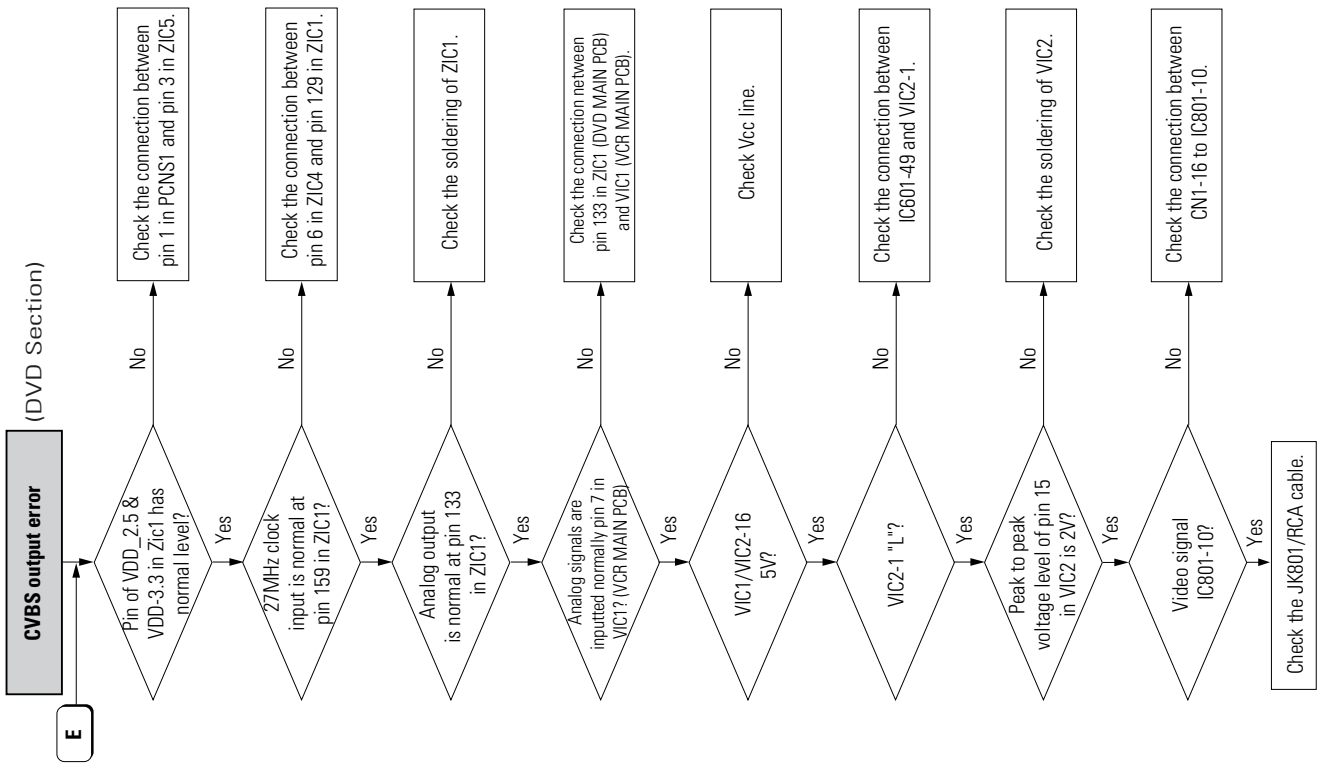

Abnormal rotation of
disc motor
(DVD Section)
Input of RF signal
is normal? (SIC1-15)
No
RIC1-71 output
is normal?
No
Check RIC1 peripheral
circuit and A, B, C, D.
Yes
RIC1-70 output
are normal?
No
Check RIC1 soldering and power.
Yes
Check path to RIC1 and SIC1.
SPD output is normal?
(SIC1-35)
No
After resoldering SIC1.
Yes
SIC3-2 output (FG)
is normal?
No
Check SIC3 soldering and power.
Yes
SIC3-9 signal
MON is "H" ?
No
Check SIC1, MIC1.
Yes
Check or replace disc motor.


CD/VCD/DVD L/R output error
(Mixed Audio output)
(DVD Section)
Normal DATA 0 is input in AIC1-3?
No
Check ZIC1-121 output.
Yes
Analog output of AIC1-20, 21, 22, 23 is normal?
No
Check ZIC1-125 (CD/VCD ; 16.9344MHz, DVD ; 18.432MHz)
Yes
AOP1-1, 7 output is normal?
No
Check AOP1 peripheral circuit.
Yes
IC801-36 "L"? (VCR MAIN PCB)
No
Check IC601-50 mute.
Yes
Check AVJ1, JK801 Audio out peripheral soldering shot, IC801.


Digital output error
(DVD Section)
Output in ZIC1-127 is normal?
No
Check ZIC1 peripheral circuit.
Yes
Output in AIC3-6, 8, 10 is normal?
No
Check AIC3.
Yes
Check AVJ4, AVJ5 peripheral soldering shot.


Y/Pr/Pb output error
(DVD Section)
DVD SETUP in OSD
Alt video is "Component"?
No
Change the Alt Video mode to component.
Yes
VIC1-1 "H"?
Yes
Check IC601-49.
No
Y, Pb, Pr VIC1-7, 4, 2.
Yes
Check VIC1.
No
Y, Pb, Pr CN1-14, 12, 10?
No
Check the connection between CN1(VCR MAIN) and CN8(DVD MAIN).
Yes
E

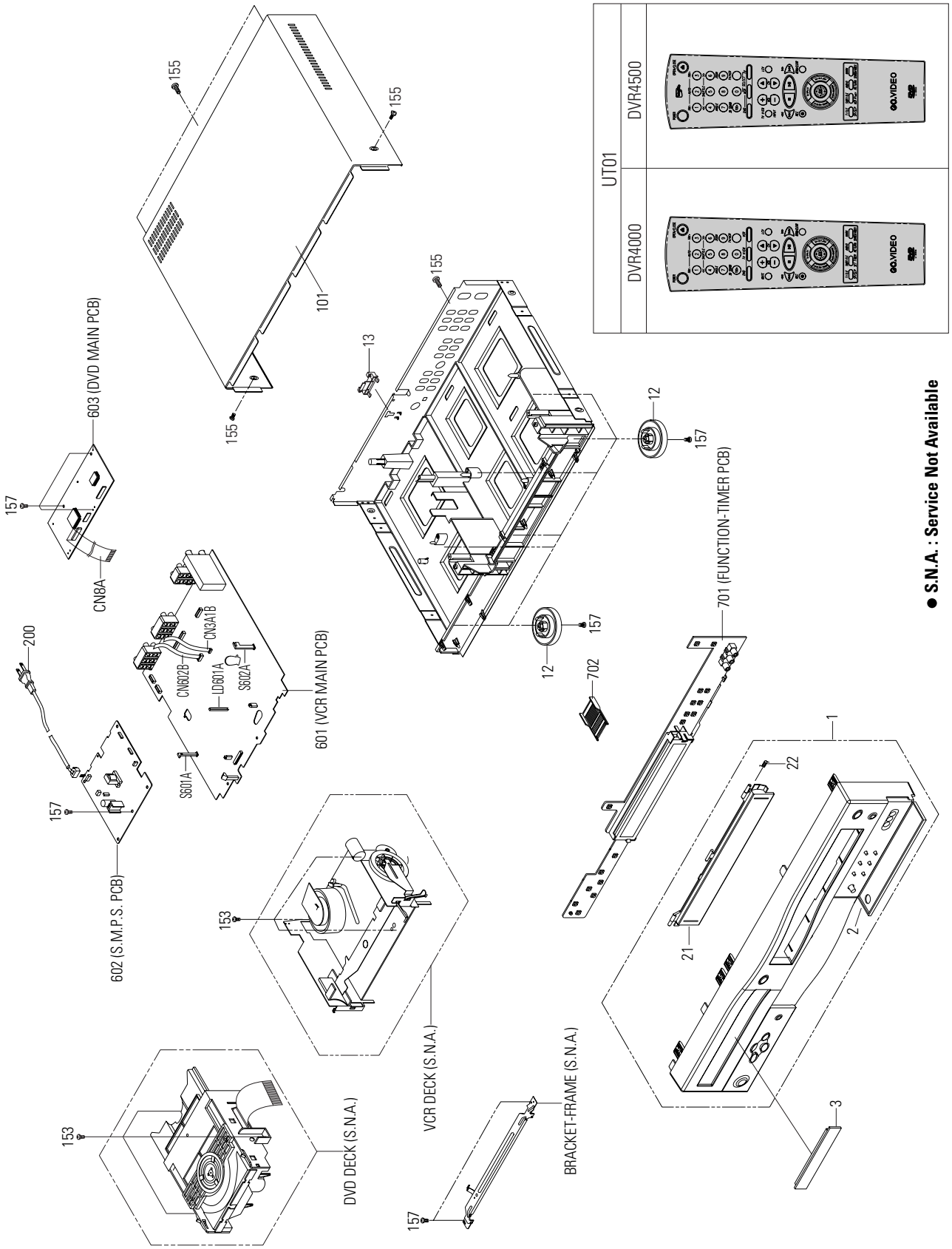

S-Video output error
(DVD Section)
DVD SETUP in OSD
Alt video is "Component"?
Yes
Change the Alt video mode to off or S-Video.
No
VIC2 2, 4 Y signal?
No
Check VIC2.
Yes
Video signal CN1-12, 14.
No
Check the connection between CN1(VCR MAIN) and CN8(DVD MAIN).
Yes
E


CVBS output error
(DVD Section)
E
Pin of VDD_2.5 & VDD-3.3 in Zic1 has normal level?
No
Check the connection between pin 1 in PCNS1 and pin 3 in ZIC5.
Yes
27MHz clock input is normal at pin 159 in ZIC1?
No
Check the connection between pin 6 in ZIC4 and pin 129 in ZIC1.
Yes
Analog output is normal at pin 133 in ZIC1?
No
Check the soldering of ZIC1.
Yes
Analog signals are inputted normally pin 7 in VIC1? (VCR MAIN PCB)
No
Check the connection netween pin 133 in ZIC1 (DVD MAIN PCB) and VIC1 (VCR MAIN PCB).
Yes
VIC1/VIC2-16 5V?
No
Check Vcc line.
Yes
VIC2-1 "L"?
No
Check the connection between IC601-49 and VIC2-1.
Yes
Peak to peak voltage level of pin 15 in VIC2 is 2V?
No
Check the soldering of VIC2.
Yes
Video signal IC801-10?
No
Check the connection between CN1-16 to IC801-10.
Yes
Check the JK801/RCA cable.

MEMO

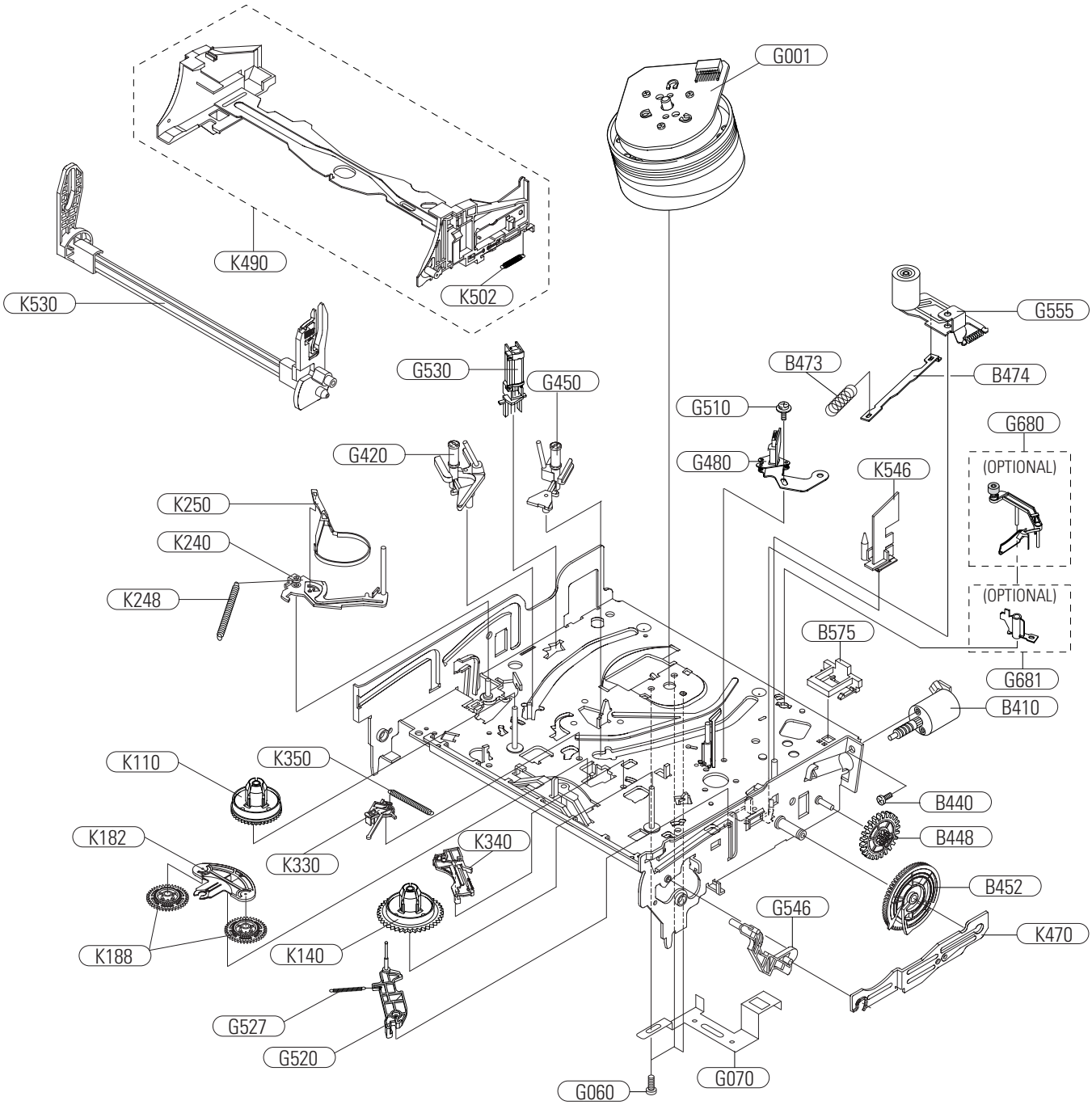
6. Exploded View and Parts List

6-1 Cabinet Assembly



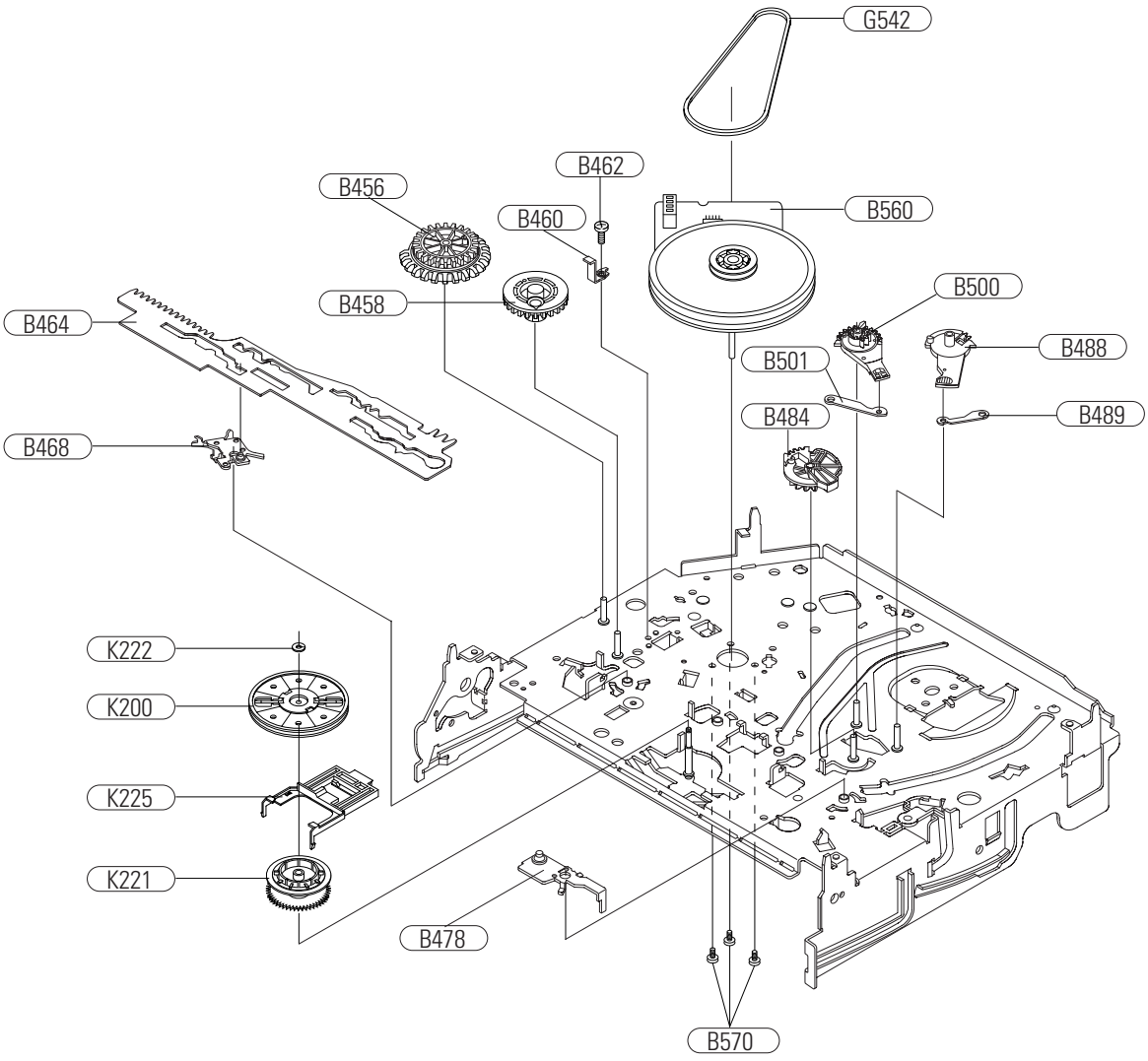
Loc. No	Parts No.	Description ; Specification	Remark
1	AC97-01155B	ASSY-PANEL;HIPS94V0,DVR4000,-	DVR4000
	AC97-01155D	ASSY-PANEL;HIPS94V0,DVR4500,-	DVR4500
2	AC64-00425B	DOOR-FRONT;DVS4000,ABS94HB,-,BLK,-,-,-	DVR4000
	AC64-00425C	DOOR-FRONT;DVR4500,ABS94HB,-,BLK,-,-,-	DVR4500
3	AC64-00759A	DOOR-TRAY;DVR4000,ABS94V0,-,BLK,-,-,-	DVR4000
	AC64-00818A	DOOR-TRAY;DVR4500,ABS94HB,-,BLK,-,-,-	DVR4500
12	AC64-42114A	DECORATION-LEG;SV-4500W,ABS94,HB,-,D/GRY	
13	AH61-00303A	HOLDER-CORD POWER;-,ABS 94HB,-,BLK,-,DVD	
21	AC64-00423B	DOOR-CASSETTE;DVR4000,ABS94HB,-,BLK,-,-,	DVR4000
	AC64-00423C	DOOR-CASSETTE;DVR4500,ABS94HB,-,BLK,-,-,	DVR4500
22	AC61-62032A	SPRING-MASK;X-9,-,SUS,-,4.4,-,SV-C130	
101	AC64-00429A	CABINET TOP;-,PCM(SECC),-,T0.6,-,TM6524,	DVR4000
	AC64-00429C	CABINET TOP;SV-DVD1E,-,PCM(SECC),-,SV-22	DVR4500
153	AC60-12126A	SCREW-BH;-,-,FE,FZY,BH,-,-,4*12,-,-	
155	6003-000275	SCREW-TAPTITE;BH,+,B,M3,L10,BLK ,SWCH101	
157	AC60-10063A	SCREW-TAPTITE;-,-,L12,ZPC3,+,-,M3,-,SWRC	
200	AC39-10200N	POWER-CORD;EP2,SPT-2,AWG#18,1.8MT,WAFER,	
601	AC92-00972A	ASSY PCB-MAIN;DVR-4000,A2/NICAM,A/DUB,SP	
602	AC92-00974A	ASSY PCB-SMPS;DVR-4000,A2/NICAM,A/DUB,SP	
603	AH92-01004D	ASSY PCB-MAIN;DVR-4000D/GVI,4H, COMBO, S	
701	AC92-00973A	ASSY PCB-F/T;DVR-4000,A2/NICAM,A/DUB,SP/	
702	3711-003460	CONNECTOR-HEADER;NOWALL,20P,1R,1.5mm,STR	
CN3A1B	3809-001206	CABLE-FLAT;30V,-20to+80C,140mm,6P,1.25mm	
CN602B	3809-001131	CABLE-FLAT;30V,80C,110MM,7P,1.25MM,UL289	
CN8A	3809-001264	CABLE-FLAT;30V,80C,260MM,35P,1.25MM,UL28	
LD601A	AC61-21009A	HOLDER-LED;-,POM(M90-44),-,BLK,-,X-9	
S601A	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	
S602A	AC61-21008A	HOLDER-SENSOR;-,POM(M90-44),-,BLK,-,X-9	
UT01	AC59-00052A	REMOCON-ASSY;DVR-4000,-,-,-,38KEY,-,-,-,	DVR4000
	AC59-00052D	REMOCON-ASSY;DVR-4500	DVR4500

6-2 VCR Mechanical Parts (Top Side)



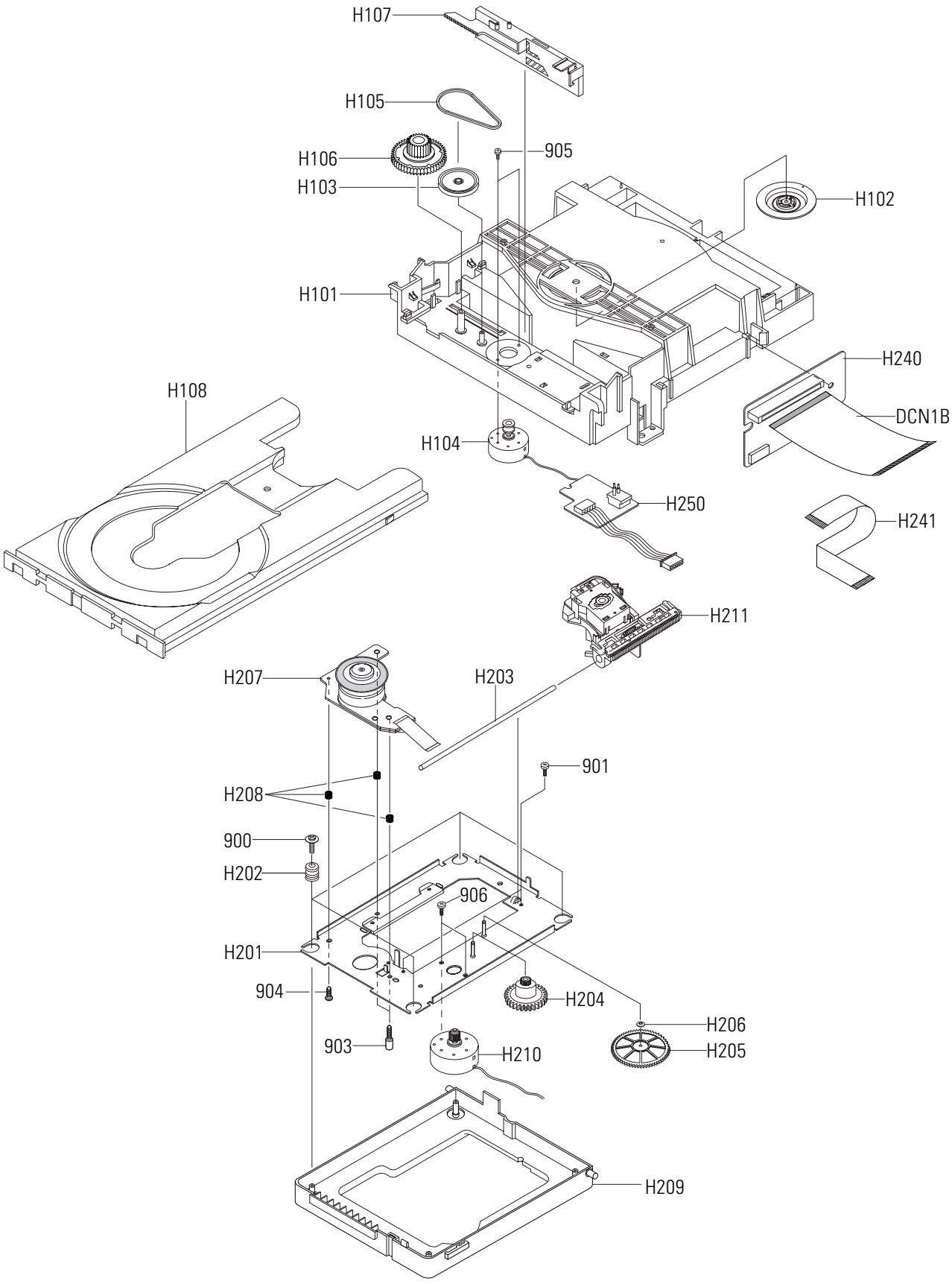
Loc. No	Parts No.	Description ; Specification	Remark
B410	AC31-00012A	MOTOR-LOADING ASSY;-,TS-10,-,-,-,-,-,-,-	
B440	AC60-10515A	SCREW-MACHINE;-,-,M3,L3,PH,+,-,-,ZPC,-	
B448	AC66-00008A	GEAR-WORM WHEEL;TS-10,POM,0.8,40,-,NAT,3	
B452	AC66-00011A	GEAR-FL CAM;TS-10,POM,0.8,59,-,BLK,48.48	
B473	AC61-00105A	SPRING-PINCH DRIVE;TS-10,SUS304-WPB,-,-,	
B474	AC61-30180A	PLATE-JOINT;X-9,SECC20/20,T0.8,-,-,-,-	
B575	AC47-00002A	DAMPER-CAPSTAN;TS-10,POM,-,-,BLACK	
G060	6006-001092	SCREW-ASS'Y MACH;WS,PH,+,M3.0,L6.0,ZPC(Y	
G070	AC61-00161A	PLATE-GROUND DECK;TS-10,SPTE,T0.3,-,-,-,	
G001	AC97-01507A	ASSY-CYLINDER;NTSC ,6HD,CTS10A,SEM 'S H	
G420	AC66-80142A	SLIDER-SUPPLY ASSY;-,X-9(TS),-,-,-,X-9	
G450	AC66-80141A	SLIDER-TAKE UP ASSY;-,X-9(TS),-,-,-,X-9	
G480	AC33-00009A	HEAD-ACE ASS'Y;-,PPS,TS-10,-,-	
G510	6006-001075	SCREW-ASS'Y TAPT;WSP,PH,+,M2.6,L5.0,ZPC(	
G520	AC66-00033A	LEVER-#9 GUIDE ASS'Y;TS-10,-,-,-,-,-,-,-	
G527	AC61-60553A	SPRING-#9 GUIDE;-,ES,SUS304-WPB,OD3.1,0.	
G530	AC33-00007A	HEAD-FE;-,-,HVFHP0043A,-,-	
G546	AC66-00005A	LEVER-FL DOOR;TS-10,POM,-,-,-,-,NAT,-	
G555	AC66-00032A	LEVER-UNIT PINCH ASS'Y;TS-10,-,-,-,-,-,-	
G680	AC66-30557A	LEVER-H/CLEANER ASSY;-,POM+URETHANE,-,-	(OPTIONAL)
G681	AC61-50686A	SLEEVE-HEAD CLEANER;-,POM,-,-,-,-,-,-,TS	(OPTIONAL)
K110	AC66-10267A	REEL-DISK S;X-9,POM,-,-,-,-,-,-	
K140	AC66-10268A	REEL-DISK T;X-9,POM,-,-,-,-,-,-	
K182	AC66-30524A	LEVER-IDLER;-,POM,-,-,-,-,-,-	
K188	AC66-00039A	GEAR-IDLE;TS-10,PET K3372,0.5,-,-,NTR,28	
K240	AC66-00035A	LEVER-TENSION ASS'Y;TS-10,SECC E20/20+SU	
K248	AC61-00107A	SPRING-TENSION LEVER;TS-10,SUS304-WPB,-,	
K250	AC69-00104A	BAND-BRAKE ASS'Y;TS-10,-,-,-,-,-,-	
K330	AC66-30550A	LEVER-S.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K340	AC66-30549A	LEVER-T.BRAKE ASSY;-,POM+SUS,-,-,-,X-9	
K350	AC61-00106A	SPRING-BRAKE;TS-10,SUS304-WPB,-,-,-,-,-,	
K470	AC66-00020A	SLIDER-FL DRIVE;TS-10,SECC E20/20,1.0,-,	
K490	AC61-00120A	HOLDER-FL CASS. ASS'Y;TS-10,-,-,-,-,-	
K502	AC61-60561A	SPRING-FL.LEVER-LR;-,ES,SUS304 WPB,PI2.7	

6-3 VCR Mechanical Parts (Bottom Side)



Loc. No	Parts No.	Description ; Specification	Remark
B456	AC66-00009A	GEAR-JOINT 1;TS-10,POM,1.5,17.5(22),-,NA	
B458	AC66-00012A	GEAR-JOINT 2;TS-10,POM,1.0,23,-,BLK,24.6	
B460	AC61-00090A	BRACKET-GEAR;TS-10,SECC E20/20,0.8,-,-,-	
B462	AC60-10517A	SCREW-TAP TITE;-,-,M2.6,L5,PH,+,-,-,ZPC,	
B464	AC66-00019A	SLIDER-CAM;TS-10,SECC E20/20,1.2,-,-,-,-	
B468	AC66-00017A	LEVER-PINCH DRIVE;TS-10,SECC E20/20,1.0	
B478	AC66-00016A	LEVER-TENSION DRIVE;TS-10,SECC E20/20,1	
B484	AC66-00030A	GEAR-LOADING DR. ASS'Y;TS-10,POM+SWPB,-,	
B488	AC66-00023A	LEVER-S LOADING;TS-10,POM,-,-,-,-,NAT,-	
B489	AC66-00021A	LINK-LOADING S;TS-10,SECC E20/20,0.8,-,-	
B500	AC66-00024A	LEVER-T LOADING;TS-10,POM,-,-,-,-,NAT,-	
B501	AC66-00022A	LINK-LOADING T;TS-10,SECC E20/20,0.8,-,-	
B560	AC31-00010A	MOTOR-CAPSTAN;-,SANKYO,-,-	
B570	AC60-10514A	SCREW-CAPSTAN;-,-,M2.6,L6,PH,+,-,-,-,-	
G542	AC66-60051A	BELT-PULLEY;-,5CM-70,2 * 2,-,71.3,-,X-9	
K200	AC61-21012A	HOLDER-CLUTCH ASSY;-,-,-,-,-,X-9	
K221	AC66-20581A	GEAR-CENTER ASSY;-,POM,M=0.5,-,HIGHT T.,	
K222	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
K225	AC66-00006A	LEVER-UP DOWN;TS-10,POM,-,-,-,-,NAT,-	

6-4 DVD Mechanical Parts



Loc. No	Parts No.	Description ; Specification	Remark
900	6003-001157	SCREW-TAPTITE;PWH,+,B,M2,L6,ZPC(YEL),SWR	
901	6001-001332	SCREW-MACHINE;FH,+,M2,L8,ZPC(YEL),SWRCH1	
903	6009-001245	SCREW-SPECIAL;SWRCH18A,NYLOCK,SOCKET,HEX	
904	6001-001196	SCREW-MACHINE;BH,+-,M2,L4,ZPC(YEL),SWRCH	DVR4000
	6001-001466	SCREW-MACHINE;BH,+,M2,L6,ZPC(BLK),SWRCH1	DVR4500
905	6001-001257	SCREW-MACHINE;PWH,+,M1.7,L3,ZPC(YEL),SWR	
906	AH60-00010A	SCREW-MACHINE-MOTOR;-,+,SWCH18AK,M1.7,L2	
H101	AH61-00512A	CHASSIS-HOUSING;DP-7,ABS(SR-0320),-,-,-	
DCN1B	3809-001265	CABLE-FLAT;30V,80C,300MM,35P,1.25MM,UL28	
H102	AH66-00111B	CLAMPER-ASSY;DP-5,POM+MAGNET,-,-,-,-,-	
H103	AH66-00123A	PULLEY-GEAR;DP-7,POM M90-44,-,-,-,-,-,-	
H104	AH31-00024A	MOTOR-LOAD ASSY;SM-2412L2,DP-7,-,-,-,-,-	
H105	6602-001076	BELT-RECTANGULAR;CR,T1.2,4.3%,1.2X25.1,B	
H106	AH66-00124A	GEAR-TRAY;DP-7,POM,M90-44,-,-,-,-,-,-,-	
H107	AH66-00125A	SLIDER-HOUSING;DP-7,POM,-,-,-,-,-,-	
H108	AH63-00217A	TRAY-DISC;POM,-,BLK,DP-7	
H201	AH97-00561C	ASSY-BKRT DECK;SECC+POM,DP-7,TSEC	DVR4000
	AH97-00561A	ASSY-BKRT-DECK;SECC+POM,DP-7,1LD(SEC)	DVR4500
H202	AH73-00023C	RUBBER-INSULATOR;DP-7,BUTYL RUBBER,-,10	
H203	AH61-50327A	SHAFT-P/U;DP,SUS420J2,OD3,L84.7,S/FINISH	
H204	AH66-00075A	GEAR-FEED A;-,POM M90-44,-,-,-,-,-,-,-,-	
H205	AH66-00076A	GEAR-FEED B;-,POM M90-44,-,-,-,-,-,-,-,-	
H206	AC60-30306A	WASHER-SLIT;-,-,ID2.1,OD5.0,T0.5,-,POLYS	
H207	AH31-00022A	MOTOR-SPINDLE ASSY;RSM-2610D,DP-7,-,-,-,	
H208	AH61-00403A	SPRING-SPINDLE;-,SWPB,-,CS,PI4.9,PI0.7,-	
H209	AH61-00513A	CHASSIS-SUB;DP-7,ABS(SR-0320),-,-,-,-,-	
H210	AH31-00016A	MOTOR-FEED ASSY;-,DP-5,-,-	
H211	AH30-00008B	PICK UP-ASSY;SOH-D1A,MILLENO(1LD),-,-,-,	DVR4000
	AH97-00708A	ASSY-PICK-UP;-,SOH-DM2,ASSY-PICK-UP	DVR4500
H240	AH92-00899A	ASSY-MILLENO DECK PCB 1LD;DVD-M101,MILLE	DVR4000
	AH92-00963A	ASSY-MILLENO DECK PCB 2LD;DVD-M101,MILLE	DVR4500
H241	3809-001253	CABLE-FLAT;30V,80C,180mm,20P,1mm,UL2896	DVR4000
	3809-001252	CABLE-FLAT;30V,80C,180mm,22P,1mm,UL2896	DVR4500
H250	AH92-00900B	ASSY PCB-DECK B;DVD-V1000,MILLENO DECK(B	DVR4000
	AH92-00900A	ASSY-HOUSING PCB;DVD-M101,MILLENO DECK(B	DVR4500

MEMO

7. Electrical Parts List

Loc.No	Part No	Description ; Specification	Remark
601	**AC92-00972A**	**ASSY PCB-VCR MAIN;DVR-4000,A2/NICAM,A/DUB,SP**	
SYSTEM CONTROL/SERVO PARTS			
C605	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C606	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C607	2401-001775	C-AL;470nF,20%,50V,GP,TP,4x7,5	
C608	2401-002259	C-AL;0.1F,+80-20%,5.5V,-,TP,12.5x11	
C610	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C620	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C6202	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C621	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5	
C623	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C624	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C625	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C626	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C627	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C633	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C634	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C635	2203-000495	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,2012	
C636	2203-000495	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,2012	
C637	2203-000938	C-CERAMIC,CHIP;0.47nF,5%,50V,NP0,TP,2012	
C638	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
C639	2203-000239	C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,2012	
C640	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C641	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C645	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C646	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C650	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C651	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C652	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C653	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C654	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012	
C655	2203-000727	C-CERAMIC,CHIP;3.9nF,10%,50V,X7R,TP,2012	
C656	2203-000727	C-CERAMIC,CHIP;3.9nF,10%,50V,X7R,TP,2012	
C657	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C658	2203-000575	C-CERAMIC,CHIP;220NF,10%,25V,X7R,TP,2012	
C659	2203-001137	C-CERAMIC,CHIP;68nF,+80-20%,50V,Y5V,TP,2	
C660	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C661	2202-000854	C-CERAMIC,MLC-AXIAL;47nF,30%,50V,Y5R,TP,	
C662	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C663	2203-001592	C-CERAMIC,CHIP;1nF,5%,50V,X7R,TP,2012	
C665	2401-001733	C-AL;1uF,20%,50V,BP,TP,4x7,2.5	
C666	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012	
C667	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012	
C668	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012	
C669	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C671	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C6802	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C6803	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C6804	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C688	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C691	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C692	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CN1P1	3711-000596	CONNECTOR-HEADER;BOX,10P,1R,2mm,STRAIGHT	
CN601	AC39-20817S	LEAD CONNECTOR-ASSY;DP,SMH200-02,YBH200-	
CN602	3708-001302	CONNECTOR-FPC/FC/PIC;7P,1.25mm,STRAIGHT,	
CN603	3710-001146	CONNECTOR-SOCKET;20P,1R,1.5mm,ANGLE,SN	
CN604	3711-003749	CONNECTOR-HEADER;BOX,8P,2R,2mm,STRAIGHT,	
D603	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D613	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D620	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
D688	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	

Loc.No	Part No	Description ; Specification	Remark
D692	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
IC601	AC09-00030A	IC MCU;UPD78F4928,100PIN,QFP,-,16BIT,PLA	
IC604	AC14-12009W	IC-RESET;PST572K,TO-92,R59-1766 2.5V	
IC605	1103-001149	IC-EEPROM;524C80D41,4KBit,DIP,8P,300MIL,	
IC608	1203-000515	IC-VOL. DETECTOR;7042,TO-92,3P,177MIL,PL	
IC610	1003-001318	IC-MOTOR DRIVER;LB11880,DIP,30P,417MIL,-	
L603	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L604	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L605	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L606	2701-000113	INDUCTOR-AXIAL;100uH,5%,2.5x3.4mm	
L6801	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LD601	0601-000517	LED-IR;RECTANGULA,4x6.0mm,75mW,6V,950	
PT601	0604-001206	PHOTO-INTERRUPTER;TR,-,150mW,CY5894102,B	
PT602	0604-001122	PHOTO-INTERRUPTER;TR,0.065%,150mW,DIP-4,	
Q6801	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6803	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6804	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
R608	2007-001039	R-CHIP;56KOHM,5%,1/10W,DA,TP,2012	
R609	2007-001039	R-CHIP;56KOHM,5%,1/10W,DA,TP,2012	
R610	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R611	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R612	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R613	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
R614	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R615	2003-000111	R-METAL OXIDE;0.47ohm,5%,1W,AD,TP,4.3x12	
R616	2001-000850	R-CARBON;560KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R617	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R618	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R619	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R620	2001-000273	R-CARBON;100KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R621	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R631	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R632	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R633	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R641	2007-000931	R-CHIP;470OHM,5%,1/10W,DA,TP,2012	
R642	2007-000931	R-CHIP;470OHM,5%,1/10W,DA,TP,2012	
R644	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R647	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
R651	2001-000010	R-CARBON;68KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R652	2001-000568	R-CARBON;27OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R657	2007-001124	R-CHIP;68KOHM,1%,1/10W,DA,TP,2012	
R660	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R661	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R666	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R667	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R668	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R669	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R670	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R671	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R672	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R673	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
R674	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R675	2001-000032	R-CARBON;180OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R676	2007-000738	R-CHIP;30KOHM,5%,1/10W,DA,TP,2012	
R677	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R678	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R679	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6801	2001-000384	R-CARBON;160OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6802	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6803	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6804	2001-000628	R-CARBON;300OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R682	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc.No	Part No	Description ; Specification	Remark
R685	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R688	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R691	2001-000515	R-CARBON;2200HM,5%,1/8W,AA,TP,1.8X3.2MM	
R692	2001-000036	R-CARBON;3300HM,5%,1/4W,AA,TP,2.4X6.4MM	
R696	2001-000071	R-CARBON;22KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
S601	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
S602	0603-001011	PHOTO-TR;NPN,35V,6V,50mA,75mW,BK	
SVJ1	AC37-22002R	JACK-DC;12.5mm,DUAE-9812,4P,BULK,8PIN	
SW601	AC34-20100A	SWITCH-MODE;-,-,X-9,-	
SW602	AC34-20100B	SWITCH-REC;-,-,X-9,-	
W007	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
W024	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W071	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
W103	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W174	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W242	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W255	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W259	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W293	2001-000362	R-CARBON;1500HM,5%,1/8W,AA,TP,1.8X3.2MM	
W304	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
W325	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
W326	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
W327	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
W329	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
XT601	2801-003318	CRYSTAL-UNIT;32.768KHz,20ppm,28-AAP,12.5	
XT602	2801-003139	CRYSTAL-UNIT;8MHz,50ppm,28-AAA,22pF,80oh	
ZD601	0403-000555	DIODE-ZENER;MTZ30D,30V,29.02-30.51V,500m	
A/V PARTS			
C301	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C302	2203-001721	C-CERAMIC,CHIP;360pF,5%,50V,NPO,TP,2012,	
C304	2203-000408	C-CERAMIC,CHIP;0.18nF,5%,50V,NP0,TP,2012	
C305	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C306	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C307	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C308	2401-000922	C-AL;22uF,20%,16V,GP,TP,5x5,5	
C310	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C312	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C313	2401-000407	C-AL;10uF,20%,16V,GP,TP,3.5x5,2.5	
C314	2203-000476	C-CERAMIC,CHIP;1000nF,+80-20%,16V,Y5V,TP	
C315	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C316	2401-001915	C-AL;1uF,20%,50V,GP,TP,3x5,5	
C317	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C318	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C320	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C321	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C322	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C323	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C324	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C325	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C326	2203-000609	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,2012	
C327	2401-001915	C-AL;1uF,20%,50V,GP,TP,3x5,5	
C328	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C329	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C331	2203-000966	C-CERAMIC,CHIP;47nF,+80-20%,50V,Y5V,TP,2	
C332	2203-000966	C-CERAMIC,CHIP;47nF,+80-20%,50V,Y5V,TP,2	
C333	2203-000966	C-CERAMIC,CHIP;47nF,+80-20%,50V,Y5V,TP,2	
C334	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C335	2203-000237	C-CERAMIC,CHIP;100pF,5%,50V,NPO,TP,2012,	
C358	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C359	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C360	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C371	2203-001077	C-CERAMIC,CHIP;0.056nF,5%,50V,NP0,TP,201	
C3A01	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C3A02	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C3A03	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	

Loc.No	Part No	Description ; Specification	Remark
C3A04	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C3A05	2401-002069	C-AL;33uF,20%,16V,GP,TP,6.3x5,5	
C3A06	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C3A07	2203-001214	C-CERAMIC,CHIP;8.2nF,10%,50V,X7R,TP,2012	
C3A08	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C3A09	2401-000407	C-AL;10uF,20%,16V,GP,TP,3.5x5,2.5	
C3A10	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C3A11	2301-000174	C-FILM,PEF;15nF,5%,100V,TP,7.2x4.0x7.5mm	
C3A12	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C3A13	2301-000161	C-FILM,PEF;12nF,5%,50V,TP,6.5X5.5X3.0X5,	
C3A14	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A15	2203-001128	C-CERAMIC,CHIP;0.68nF,10%,50V,X7R,TP,201	
C3A16	2203-000495	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,2012	
C3A17	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C3A18	2301-000314	C-FILM,PEF;8.2nF,5%,50V,TP,6.5x3.0x5.5mm	
C3A19	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C3A20	2301-001014	C-FILM,PEF;6.8nF,5%,50V,TP,7x3x6,5mm	
C3A21	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C3D01	2301-001388	C-FILM,PEF;47nF,5%,100V,TP,7.5x4.5x10.5m	
C3D02	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C3D03	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C3D04	2203-000891	C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,2012	
C3D05	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
CN301	3708-000391	CONNECTOR-FPC/FC/PIC;10P,1.25MM,STRAIGHT	
CN3A01	3708-001165	CONNECTOR-FPC/FC/PIC;6P,1.25mm,STRAIGHT,	
CN3A02	3710-001648	CONNECTOR-SOCKET;2P,1R,2.5mm,STRAIGHT,SN	
FL3A01	AC27-80100C	COIL-OSC;7mm,2.4mH,-	
FL3D01	AC27-82001C	COIL-BIAS OSC;B02,W(TOKO)VX1850,-	
IC301	1204-001832	IC-VIDEO PROCESS;LA71201,QFP,80P,-,PLAST	
L301	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L302	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L303	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L304	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3A01	2702-000120	INDUCTOR-RADIAL;15mH,5%,6.2x7.4mm	
L3A02	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3A03	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L3D01	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
Q302	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q303	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q3A01	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3A03	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A04	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A05	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3A06	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q3D01	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
Q3D02	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
Q3D03	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-	
R301	2001-000008	R-CARBON;15KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R302	2007-001055	R-CHIP;6.2KOHM,5%,1/10W,DA,TP,2012	
R303	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R304	2007-000267	R-CHIP;1.8KOHM,5%,1/10W,DA,TP,2012	
R305	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R308	2001-000508	R-CARBON;220KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R309	2001-000004	R-CARBON;200KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R310	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012	
R311	2007-001113	R-CHIP;680KOHM,5%,1/10W,DA,TP,2012	
R312	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
R313	2007-000267	R-CHIP;1.8KOHM,5%,1/10W,DA,TP,2012	
R314	2007-000241	R-CHIP;1.5KOHM,5%,1/10W,DA,TP,2012	
R315	2007-001177	R-CHIP;8.2KOHM,5%,1/10W,DA,TP,2012	
R316	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012	
R317	2007-000457	R-CHIP;18KOHM,5%,1/10W,DA,TP,2012	
R318	2007-000457	R-CHIP;18KOHM,5%,1/10W,DA,TP,2012	
R319	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R320	2007-000241	R-CHIP;1.5KOHM,5%,1/10W,DA,TP,2012	
R334	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	

Loc.No	Part No	Description ; Specification	Remark
R343	2007-001001	R-CHIP;510OHM,5%,1/10W,DA,TP,2012	
R344	2007-001001	R-CHIP;510OHM,5%,1/10W,DA,TP,2012	
R346	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A01	2007-000710	R-CHIP;3.9KOHM,5%,1/10W,DA,TP,2012	
R3A02	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
R3A03	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A04	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012	
R3A05	2007-000757	R-CHIP;330KOHM,5%,1/10W,DA,TP,2012	
R3A06	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A07	2001-000563	R-CARBON;27KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A08	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
R3A09	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A11	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A12	2001-000458	R-CARBON;2.2OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A13	2007-000931	R-CHIP;470OHM,5%,1/10W,DA,TP,2012	
R3A14	2001-000522	R-CARBON;22KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A16	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A17	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A18	2001-000613	R-CARBON;3.9KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A19	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R3A20	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R3A24	2007-000586	R-CHIP;22KOHM,5%,1/10W,DA,TP,2012	
R3D01	2007-000947	R-CHIP;47OHM,5%,1/10W,DA,TP,2012	
R3D02	2007-000586	R-CHIP;22KOHM,5%,1/10W,DA,TP,2012	
R3D03	2007-000881	R-CHIP;4.7OHM,5%,1/10W,DA,TP,2012	
XT301	2801-003610	CRYSTAL-UNIT;3.579545MHz,8ppm,28-AAA,S,1	
TM-BLOCK			
C401	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C402	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C403	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C404	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
R401	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R402	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
SW401	3408-001042	SWITCH-SLIDE;DC 12V,100mA,-,OFF-ON,-	
TM401	AC40-00012A	TM BLOCK;TMDH2A32A,NTSC-M,181CH,-,25DB,	
DIGITAL AUDIO PARTS			
AC10	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AC11	2301-000423	C-FILM,PEF;3.3nF,5%,100V,TP,7x10x4.5mm,5	
AC12	2203-000392	C-CERAMIC,CHIP;0.015nF,5%,50V,SL,TP,2012	
AC13	2301-000423	C-FILM,PEF;3.3nF,5%,100V,TP,7x10x4.5mm,5	
AC14	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
AC15	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
AC201	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AC202	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
AC203	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AC4	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
AC5	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
AC6	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
AC7	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
AC76	2203-000938	C-CERAMIC,CHIP;0.47nF,5%,50V,NP0,TP,2012	
AC78	2203-001388	C-CERAMIC,CHIP;10nF,5%,50V,X7R,TP,2012	
AC8	2301-000402	C-FILM,PEF;1nF,5%,50V,TP,5x7x2.8mm,5mm	
AC87	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AC9	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AC96	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
AE1	2401-002042	C-AL;220uF,20%,10V,GP,TP,6.3x11,5	
AE11	2401-002042	C-AL;220uF,20%,10V,GP,TP,6.3x11,5	
AE12	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
AE17	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
AE2	2401-002042	C-AL;220uF,20%,10V,GP,TP,6.3x11,5	
AE21	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
AE3	2401-002042	C-AL;220uF,20%,10V,GP,TP,6.3x11,5	
AE6	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
AE9	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	

Loc.No	Part No	Description ; Specification	Remark
AIC1	1002-001213	IC-D/A CONVERTER;AK4393VF,24BIT,SOP,28P,	
AIC3	AH14-10004R	IC;M74HCU04,SOP,TAPE 14P	
AL1	2702-000106	INDUCTOR-RADIAL;100uH,10%,6.2x7.4mm	
AL201	2901-001125	FILTER-EMI ON BOARD;50V,0.5A,-,220pF,7x2	
AOP1	1201-000163	IC-OP AMP;4560,SOP,8P,173MIL,DUAL,100V/m	
AR10	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR11	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AR14	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR15	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR16	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR17	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR18	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
AR19	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
AR2	2007-000267	R-CHIP;1.8KOHM,5%,1/10W,DA,TP,2012	
AR201	2007-000766	R-CHIP;330OHM,5%,1/10W,DA,TP,2012	
AR202	2007-001247	R-CHIP;91OHM,5%,1/10W,DA,TP,2012	
AR203	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR21	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR22	2007-000572	R-CHIP;220OHM,5%,1/10W,DA,TP,2012	
AR28	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR29	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR3	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR30	2007-000468	R-CHIP;1KOHM,5%,1/10W,DA,TP,2012	
AR31	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR32	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
AR33	2007-000221	R-CHIP;1.2KOHM,5%,1/10W,DA,TP,2012	
AR35	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012	
AR36	2007-000572	R-CHIP;220OHM,5%,1/10W,DA,TP,2012	
AR4	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR5	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR6	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR7	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR8	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
AR9	2001-000258	R-CARBON;1.8KOHM,5%,1/8W,AA,TP,1.8X3.2M	
AVJ4	3707-001005	CONNECTOR-OPTICAL;PLUG,SM,-,4.4/2.0MM	
AVJ5	3722-001053	JACK-RCA;1P,3.2mm,NI,BLK,-	
C505	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C508	2203-000891	C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,2012	
C509	2203-000716	C-CERAMIC,CHIP;3.3nF,10%,50V,X7R,TP,2012	
C512	2203-001665	C-CERAMIC,CHIP;0.56nF,10%,50V,X7R,TP,201	
C513	2203-001388	C-CERAMIC,CHIP;10nF,5%,50V,X7R,TP,2012	
C516	2203-000716	C-CERAMIC,CHIP;3.3nF,10%,50V,X7R,TP,2012	
C517	2203-000891	C-CERAMIC,CHIP;4.7nF,10%,50V,X7R,TP,2012	
C519	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C523	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C527	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
FR10	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR11	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR12	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR13	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR24	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
FR26	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
HR1	2001-000786	R-CARBON;47KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
VC16	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
HI-FI/MTS PARTS			
C4M01	2203-000476	C-CERAMIC,CHIP;1000nF,+80-20%,16V,Y5V,TP	
C4M02	2203-001035	C-CERAMIC,CHIP;5.6nF,10%,50V,X7R,TP,2012	
C4M03	2203-000323	C-CERAMIC,CHIP;12nF,10%,50V,X7R,TP,2012,	
C4M04	2203-000476	C-CERAMIC,CHIP;1000nF,+80-20%,16V,Y5V,TP	
C4M06	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C4M07	2203-001724	C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP	
C4M08	2203-001724	C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP	
C4M09	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C4M10	2203-001724	C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP	
C4M13	2401-001020	C-AL;3.3UF,20%,50V,GP,TP,4X7,5	

Loc.No	Part No	Description ; Specification	Remark
C4M14	2203-001724	C-CERAMIC,CHIP;4700NF,+80-20%,16V,Y5V,TP	
C4M15	2401-000407	C-AL;10uF,20%,16V,GP,TP,3.5x5,2.5	
C4M16	2203-000476	C-CERAMIC,CHIP;1000nF,+80-20%,16V,Y5V,TP	
C4M17	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C4M18	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C4M19	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C4M20	2203-000533	C-CERAMIC,CHIP;2.7nF,10%,50V,X7R,TP,2012	
C4M21	2203-000966	C-CERAMIC,CHIP;47nF,+80-20%,50V,Y5V,TP,2	
C501	2401-000407	C-AL;10uF,20%,16V,GP,TP,3.5x5,2.5	
C502	2401-001915	C-AL;1uF,20%,50V,GP,TP,3x5,5	
C503	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C504	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C506	2401-000922	C-AL;22uF,20%,16V,GP,TP,5x5,5	
C507	2401-000918	C-AL;22uF,20%,16V,GP,-,6.3x7,5	
C510	2401-003107	C-AL;47uF,20%,16V,GP,TP,5x7,5	
C511	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
C514	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C515	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C518	2401-001169	C-AL;33uF,20%,16V,GP,-,6.3x7,2.5mm	
C520	2401-001915	C-AL;1uF,20%,50V,GP,TP,3x5,5	
C521	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
C522	2401-001915	C-AL;1uF,20%,50V,GP,TP,3x5,5	
C524	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C525	2401-001250	C-AL;4.7uF,20%,35V,GP,TP,4x5,5	
C526	2401-001507	C-AL;47uF,20%,16V,GP,TP,6.3x5,5	
C530	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
IC501	1204-001479	IC-AUDIO PROCESSOR;LA72634AM,QFP,64P,400	
L4M01	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L502	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L503	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
R4M01	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
R4M02	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
R4M04	2007-000477	R-CHIP;1MOHM,5%,1/10W,DA,TP,2012	
R4M05	2007-001097	R-CHIP;62KOHM,5%,1/10W,DA,TP,2012	
R4M06	2007-000686	R-CHIP;3.3KOHM,5%,1/10W,DA,TP,2012	
R4M07	2007-000844	R-CHIP;3KOHM,5%,1/10W,DA,TP,2012	
R4M08	2007-000710	R-CHIP;3.9KOHM,5%,1/10W,DA,TP,2012	
R4M13	2007-000282	R-CHIP;100KOHM,5%,1/10W,DA,TP,2012	
R503	2007-000931	R-CHIP;470OHM,5%,1/10W,DA,TP,2012	
R504	2007-000518	R-CHIP;2.7KOHM,5%,1/10W,DA,TP,2012	
R509	2007-001055	R-CHIP;6.2KOHM,5%,1/10W,DA,TP,2012	
R510	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R511	2001-000331	R-CARBON;12KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R512	2007-000774	R-CHIP;33KOHM,5%,1/10W,DA,TP,2012	
R514	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R516	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R517	2007-001055	R-CHIP;6.2KOHM,5%,1/10W,DA,TP,2012	
R518	2001-000766	R-CARBON;43KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R523	2007-000565	R-CHIP;220KOHM,5%,1/10W,DA,TP,2012	
R524	2007-000518	R-CHIP;2.7KOHM,5%,1/10W,DA,TP,2012	
R525	2007-000671	R-CHIP;2KOHM,5%,1/10W,DA,TP,2012	
R570	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
R571	2001-000281	R-CARBON;1000HM,5%,1/8W,AA,TP,1.8X3.2MM	
VR4M01	2103-000307	VR-SEMI;22Kohm,30%,1/10W,TOP	
OSD PARTS			
C6204	2401-001545	C-AL;47uF,20%,25V,GP,TP,6.3x7mm,2.5	
C6205	2203-001164	C-CERAMIC,CHIP;0.068nF,5%,50V,SL,TP,2012	
C6206	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6207	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
C6208	2401-002095	C-AL;47uF,20%,25V,GP,TP,6.3x5,5	
C6209	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C6210	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C6211	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C6212	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C6223	2203-000634	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,201	
C6264	2203-001579	C-CERAMIC,CHIP;15nF,10%,50V,NP0,TP,2012	
C6E01	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
D6202	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D6205	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
IC4M01	1209-001116	IC-ETC, LINEAR;CXA2104S,DIP,30P,-,PLASTI	
IC6E01	AC09-00116A	IC-OSD/EDS IC;LC74785JM-9793,LC74785JM-9	
L6203	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L6204	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L6205	2701-000181	INDUCTOR-AXIAL;33uH,5%,2.4x3.4mm	
Q6201	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6202	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q6203	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
Q6210	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
R6206	2007-000822	R-CHIP;390OHM,5%,1/10W,DA,TP,2012	
R6207	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012	
R6230	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6231	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R6232	2001-001035	R-CARBON;910HM,5%,1/8W,AA,TP,1.8X3.2MM	
R6280	2007-000872	R-CHIP;4.7KOHM,5%,1/10W,DA,TP,2012	
R6281	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R6282	2007-000241	R-CHIP;1.5KOHM,5%,1/10W,DA,TP,2012	
R6283	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012	
R6284	2007-000493	R-CHIP;2.2KOHM,5%,1/10W,DA,TP,2012	
R6285	2001-000947	R-CARBON;7.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R6286	2007-001149	R-CHIP;750KOHM,5%,1/10W,DA,TP,2012	
R6E01	2007-000300	R-CHIP;10KOHM,5%,1/10W,DA,TP,2012	
R6E02	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
XT6203	2801-001384	CRYSTAL-UNIT;14.31818MHz,30ppm,28-AAA,16	
INPUT-OUTPUT PARTS			
AVJ1	3722-001570	JACK-RCA;5P/6P,3.5mm,NI,BLK,-	
C801	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C802	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C803	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C804	2203-001245	C-CERAMIC,CHIP;0.082nF,5%,50V,NP0,TP,201	
C805	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C806	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C807	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C808	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C812	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C816	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C817	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C820	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C830	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C832	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
C836	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C839	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C842	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C843	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C844	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C845	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C847	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C848	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C850	2203-000260	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,2012	
C860	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C861	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C862	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C863	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C864	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C865	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C866	2401-001353	C-AL;470uF,20%,10V,GP,TP,8x11.5,5	
C867	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C868	2401-000463	C-AL;10uF,20%,35V,GP,-,5x5,2mm	
C869	2401-000407	C-AL;10uF,20%,16V,GP,TP,3.5x5,2.5	
C871	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
C872	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	

Loc.No	Part No	Description ; Specification	Remark
C895	2203-000408	C-CERAMIC,CHIP;0.18nF,5%,50V,NP0,TP,2012	
IC801	AC14-12015T	IC;SV1274/LA7274M,QFP,64PIN,-,-	
JK801	AC37-20001G	JACK-RCA;DPAE-,6P,HIFI,PI3.3	
L801	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L802	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L803	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
L804	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
Q801	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q802	0501-000303	TR-SMALL SIGNAL;KSA733,PNP,250mW,TO-92,T	
Q803	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
R801	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R802	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R803	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R804	2007-001166	R-CHIP;75OHM,5%,1/10W,DA,TP,2012	
R812	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R820	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R821	2001-000025	R-CARBON;75OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R826	2001-000977	R-CARBON;8.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R830	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R832	2001-000800	R-CARBON;5.1KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R833	2001-000812	R-CARBON;5.6KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R834	2001-000032	R-CARBON;180OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R835	2001-000241	R-CARBON;1.5KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R841	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R842	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R843	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R844	2007-000941	R-CHIP;47KOHM,5%,1/10W,DA,TP,2012	
R851	2007-000290	R-CHIP;100OHM,5%,1/10W,DA,TP,2012	
R852	2007-000290	R-CHIP;100OHM,5%,1/10W,DA,TP,2012	
VC12	2203-000784	C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,2012	
VC17	2203-000192	C-CERAMIC,CHIP;100nF,+80-20%,50V,Y5V,TP,	
VC18	2203-000784	C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,2012	
VC4	2203-000784	C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,2012	
VC9	2203-000784	C-CERAMIC,CHIP;0.33nF,5%,50V,NP0,TP,2012	
VE1	2401-000369	C-AL;100uF,20%,6.3V,GP,-,6.3x11,5	
VE10	2401-000369	C-AL;100uF,20%,6.3V,GP,-,6.3x11,5	
VE11	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
VE2	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
VE3	2401-000369	C-AL;100uF,20%,6.3V,GP,-,6.3x11,5	
VE4	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
VE5	2401-001353	C-AL;470uF,20%,10V,GP,TP,8x11.5,5	
VE6	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
VE9	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
VIC1	1201-001419	IC-VIDEO AMP;7660,SSOP,16P,173MIL,TRIPLE	
VIC2	1201-001419	IC-VIDEO AMP;7660,SSOP,16P,173MIL,TRIPLE	
VL1	2701-000145	INDUCTOR-AXIAL;1uH,5%,2.4x3.4mm	
VL3	2701-000145	INDUCTOR-AXIAL;1uH,5%,2.4x3.4mm	
VL5	2701-000145	INDUCTOR-AXIAL;1uH,5%,2.4x3.4mm	
VL7	2701-000145	INDUCTOR-AXIAL;1uH,5%,2.4x3.4mm	
VR10	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
VR11	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
VR22	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
VR23	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
VR24	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
602	**AC92-00974A**	**ASSY PCB-SMPS;DVR-4000,A2/NICAM,A/DUB,SP**	
S.M.P.S. PARTS			
BDD1	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
BDV1	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
BDV3	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
BDV4	3301-000297	CORE-FERRITE BEAD;AA,3.6x1.2x5.7mm,1400,	
C01	2305-001021	C-FILM,MPEF;100nF,20%,275V,TP,17.5x7x13.	⚠
C02	2201-000795	C-CERAMIC,DISC;10nF,10%,400V,Y5P,TP,15x1	⚠
C03	2201-000812	C-CERAMIC,DISC;2.2nF,20%,400V,Y5U,BK,12.	⚠
C04	2201-000916	C-CERAMIC,DISC;100pF,10%,400V,Y5U,TP,10x	⚠

Loc.No	Part No	Description ; Specification	Remark
C05	2201-000916	C-CERAMIC,DISC;100pF,10%,400V,Y5U,TP,10x	
C10	2401-003365	C-AL;150uF,20%,200V,GP,TP,18x25,7.5	
CD11	2401-001235	C-AL;4.7uF,20%,250V,WT,TP,10x12.5,5	
CD12	2201-000012	C-CERAMIC,DISC;0.22nF,10%,1kV,Y5P,TP,6.3	
CD13	2401-000905	C-AL;22uF,20%,16V,BP,-,6x11,2.5mm	
CD14	2301-000180	C-FILM,PEF;18nF,0.05,100V,TP,7.2x4.5x8.0	
CD15	2301-000424	C-FILM,PEF;3.3nF,5%,50V,TP,5.5x7x3mm,5mm	
CD16	2301-000417	C-FILM,PEF;24nF,5%,50V,TP,6.5x10.5x4mm,5	
CD30	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CD31	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5	
CD32	2401-003480	C-AL;1000UF,20%,10V,LZ,TP,10X16MM,5	
CD33	2401-001353	C-AL;470uF,20%,10V,GP,TP,8x11.5,5	
CD34	2401-003480	C-AL;1000UF,20%,10V,LZ,TP,10X16MM,5	
CD35	2401-003046	C-AL;47uF,20%,50V,WT,TP,6.3x11,2.5	
CD36	2401-001353	C-AL;470uF,20%,10V,GP,TP,8x11.5,5	
CD37	2301-000129	C-FILM,PEF;100nF,5%,50V,TP,10X9X4.3X5,5m	
CN01	3711-000178	CONNECTOR-HEADER;1WALL,2P,1R,3.96mm,STRA	
CN02	AC39-00055A	CBF HARNESS;SV-DVD1E,-,-,10P,80,-,-,5264	
CN03	3711-000596	CONNECTOR-HEADER;BOX,10P,1R,2mm,STRAIGHT	
CN04	AC39-00071A	CBF HARNESS;001-003009,-,-,10P,80,-,-,52	
CV11	2401-001235	C-AL;4.7uF,20%,250V,WT,TP,10x12.5,5	
CV12	2201-000012	C-CERAMIC,DISC;0.22nF,10%,1kV,Y5P,TP,6.3	
CV13	2401-000905	C-AL;22uF,20%,16V,BP,-,6x11,2.5mm	
CV14	2301-000180	C-FILM,PEF;18nF,0.05,100V,TP,7.2x4.5x8.0	
CV15	2301-000423	C-FILM,PEF;3.3nF,5%,100V,TP,7x10x4.5mm,5	
CV16	2301-000417	C-FILM,PEF;24nF,5%,50V,TP,6.5x10.5x4mm,5	
CV30	2401-003137	C-AL;330UF,20%,50V,WT,TP,10X16MM,5	
CV31	2401-001126	C-AL;330uF,20%,25V,WT,TP,10x12.5,5	
CV32	2401-003480	C-AL;1000UF,20%,10V,LZ,TP,10X16MM,5	
CV33	2401-001479	C-AL;470uF,20%,10V,GP,TP,-,-	
CV34	2401-001126	C-AL;330uF,20%,25V,WT,TP,10x12.5,5	
CV35	2401-000385	C-AL;10uF,20%,100V,GP,TP,6.3x11,5	
CV37	2301-000129	C-FILM,PEF;100nF,5%,50V,TP,10X9X4.3X5,5m	
D01	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D02	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D03	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
D04	0402-001196	DIODE-RECTIFIER;1T5,600V,1A,TS-1,TP	
DD10	0402-000012	DIODE-RECTIFIER;UF4007,1KV,1A,DO-41,TP	
DD11	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DD12	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DD30	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
DD31	0402-001194	DIODE-RECTIFIER;UG2D,200V,2A,DO-204AC,TP	
DD32	0404-001097	DIODE-SCHOTTKY;SG45,45V,7500mA,TO-220A,B	
DD33	0404-001097	DIODE-SCHOTTKY;SG45,45V,7500mA,TO-220A,B	
DD34	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DD35	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DD36	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
DV10	0402-000012	DIODE-RECTIFIER;UF4007,1KV,1A,DO-41,TP	
DV11	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DV12	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DV30	0402-001195	DIODE-RECTIFIER;F1T4,400V,1.0A,TS-1,TP	
DV31	0402-001194	DIODE-RECTIFIER;UG2D,200V,2A,DO-204AC,TP	
DV32	0404-001097	DIODE-SCHOTTKY;SG45,45V,7500mA,TO-220A,B	
DV34	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DV35	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
F01	3601-001122	FUSE-CARTRIDGE;250V,1.6A,FAST-ACTING,GLA	⚠
ICD02	0604-000186	PHOTO-COUPLER;TR,-,200mW,DIP-4,ST	
ICD03	AC14-12006D	IC;KA431Z,TO-92,TAPING	
ICV02	0604-000186	PHOTO-COUPLER;TR,-,200mW,DIP-4,ST	
ICV03	AC14-12006D	IC;KA431Z,TO-92,TAPING	
L01	AC29-00002A	FILTER LINE NOISE;-,30mH,-,-,BLF-2116	
LD31	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
LV31	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
LV32	AC27-12001N	COIL-CHOKE;10UH-15%,RA,K-30,Q80,150KHZ,-	
PTD1	AC26-00002J	TRANS SWITCHING;EE2621,COMBO II DVD,-,-	⚠
PTV1	AC26-00002K	TRANS SWITCHING;EE2621,COMBO II VCR,-,-	⚠

Loc.No	Part No	Description ; Specification	Remark
QD01	0502-001123	TR-POWER;KTC4419,NPN,30W,TO-220,ST,10-4	
QD02	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
QV01	0502-001123	TR-POWER;KTC4419,NPN,30W,TO-220,ST,10-4	
QV02	0501-000442	TR-SMALL SIGNAL;KTC3203-Y,NPN,400MW,T0-9	
R01	2002-000320	R-COMPOSITION;1.8Mohm,10%,1/2W,AA,TP,3.5	
R10	2006-000262	R-CEMENT;2.7ohm,10%,2W,CB,TP,7.5x11x20.	
RD11	2003-002117	R-METAL OXIDE(S);330Kohm,5%,1W,AA,TP,3.3	
RD12	2003-000314	R-METAL OXIDE;47ohm,5%,2W,AE,TP,6x16mm	
RD13	2003-000314	R-METAL OXIDE;47ohm,5%,2W,AE,TP,6x16mm	
RD14	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
RD15	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
RD16	2001-000995	R-CARBON;820OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RD17	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RD18	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RD19	2003-000119	R-METAL OXIDE;0.68ohm,5%,2W,AE,TP,6x16mm	
RD30	2001-000440	R-CARBON;10HM,5%,1/8W,AA,TP,1.8X3.2MM	
RD31	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RD32	2001-000221	R-CARBON;1.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RD33	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RD34	2004-000869	R-METAL;3Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
RD35	2004-000459	R-METAL;2.2Kohm,1%,1/8W,AA,TP,1.8x3.2m	
RD36	2003-000264	R-METAL OXIDE;300ohm,5%,1W,AD,TP,4.3x12m	
RV11	2003-002117	R-METAL OXIDE(S);330Kohm,5%,1W,AA,TP,3.3	
RV12	2003-000314	R-METAL OXIDE;47ohm,5%,2W,AE,TP,6x16mm	
RV13	2003-000314	R-METAL OXIDE;47ohm,5%,2W,AE,TP,6x16mm	
RV14	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
RV15	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
RV16	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RV17	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RV18	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RV19	2003-000119	R-METAL OXIDE;0.68ohm,5%,2W,AE,TP,6x16mm	
RV31	2001-000281	R-CARBON;100OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RV32	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RV33	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RV34	2004-000869	R-METAL;3Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
RV35	2004-000459	R-METAL;2.2Kohm,1%,1/8W,AA,TP,1.8x3.2m	
VA01	1405-001026	VARISTOR;470V,600A,9x7mm,TP	⚠
ZDD1	0403-001036	DIODE-ZENER;1N4745A,16V,5%,1W,DO-41,TP	
ZDV1	0403-000571	DIODE-ZENER;UZP43B,43V,40-46V,1W,DO-41,T	
POWER PARTS			
CDP01	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
CDP02	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CDP03	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CDP04	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CDP06	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CDP07	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CDP08	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CDP09	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CDP10	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CVP01	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CVP02	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CVP03	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CVP04	2401-000598	C-AL;1uF,20%,50V,GP,TP,4x7,5	
CVP05	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CVP06	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CVP07	2401-002299	C-AL;4.7uF,20%,50V,GP,TP,5x7,5	
CVP08	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
CVP09	2401-001730	C-AL;10uF,20%,50V,GP,TP,5x11,2.5	
DDP1	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DDP2	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DDP3	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DDP5	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
DVP1	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DVP2	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DVP3	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	

Loc.No	Part No	Description ; Specification	Remark
DVP5	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
DVP6	0402-000127	DIODE-RECTIFIER;1N4002,100V,1A,DO-41,TP	
ICDP1	1203-000122	IC-NEGA.FIXED REG.;7908,TO-220,3P,-,PLAS	
ICDP2	1203-002185	IC-VOLTAGE REGULATOR;3RD13,TO-220,4P,402	
QDP1	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QDP2	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QDP5	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QDP6	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
QDP7	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
QVP1	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QVP2	0504-000142	TR-DIGITAL;KSR2001,PNP,300MW,4.7K/4.7K,T	
QVP3	0501-000398	TR-SMALL SIGNAL;KSC945,NPN,250mW,TO-92,T	
QVP4	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QVP5	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
QVP6	0501-000616	TR-SMALL SIGNAL;KSC2328A-Y,NPN,1W,TO-92L	
RDP1	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RDP2	2001-000405	R-CARBON;180OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RDP4	2001-000032	R-CARBON;180OHM,5%,1/4W,AA,TP,2.4X6.4MM	
RDP5	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RDP6	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RVP1	2001-000855	R-CARBON;560OHM,5%,1/4W,AA,TP,2.4X6.4MM	
RVP2	2001-000362	R-CARBON;150OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RVP3	2001-000449	R-CARBON;2.2KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RVP4	2001-000969	R-CARBON;75OHM,5%,1/8W,AA,TP,1.8X3.2MM	
RVP5	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RVP6	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
RVP7	2001-000062	R-CARBON;470OHM,5%,1/4W,AA,TP,2.4X6.4MM	
RVP8	2001-000113	R-CARBON;18KOHM,5%,1/4W,AA,TP,2.4X6.4MM	
ZDDP1	0403-000555	DIODE-ZENER;MTZ30D,30V,29.02-30.51V,500m	
ZDDP2	0403-000717	DIODE-ZENER;MTZJ5.1B,5.1V,4.94-5.2V,500m	
ZDDP3	0403-001322	DIODE-ZENER;MTZJ8.2B,7.78-8.19V,500mW,DO	
ZDVP1	0403-001211	DIODE-ZENER;MTZJ12B,11.44-12.03V,500MW,D	
ZDVP2	0403-000720	DIODE-ZENER;MTZJ9.1B,9.1V,8.57-9.01V,500	
ZDVP3	0403-000717	DIODE-ZENER;MTZJ5.1B,5.1V,4.94-5.2V,500m	
ZDVP4	0403-000390	DIODE-ZENER;UZP33B,33V,31.4-34.6V,1W,DO-	
603	**AH92-01004D**	**ASSY PCB-DVD MAIN;DVR-4000D/GVI,4H, COMBO, S**	
CN8	3708-001364	CONNECTOR-FPC/FC/PIC;35P,1.25MM,STRAIGHT	
DCN1	3708-001364	CONNECTOR-FPC/FC/PIC;35P,1.25MM,STRAIGHT	
DCN2	3711-001018	CONNECTOR-HEADER;BOX,5P,1R,2mm,STRAIGHT,	
MC1	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC10	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC11	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
MC12	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC13	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC14	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC15	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC16	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC17	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC18	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
MC19	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
MC2	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC3	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
MC4	2203-000426	C-CERAMIC,CHIP;0.018nF,5%,50V,NP0,TP,160	
MC5	2203-000426	C-CERAMIC,CHIP;0.018nF,5%,50V,NP0,TP,160	
MC6	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC7	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
MC8	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MC9	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
MIC1	0903-001224	IC-MICROCONTROLLER;91C219,16Bit,QFP,100P	
MIC2	3704-000472	SOCKET-IC;32P,DIP,SN,2.54mm	
MIC2B	1102-001090	IC-EPROM;27C081,1MX8BIT,DIP,32P,600MIL,1	
MIC3	1106-001341	IC-SRAM;15M256,32Kx8Bit,SOP,28P,346MIL	
MIC4	1103-001204	IC-EEPROM;24C021,256x8Bit,SOP,8P,150MIL,	
MIC5	0801-002097	IC-CMOS LOGIC;7ST08,AND GATE,SOP,5P,110M	
MIC6	0801-002143	IC-CMOS LOGIC;7S32,OR GATE,SOT-23,5P,63M	

Loc.No	Part No	Description ; Specification	Remark
MIC7	0801-002517	IC-CMOS LOGIC;7SET00,NAND GATE,SOP,5P,63	
MR1	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR10	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR11	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR13	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR14	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR15	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR16	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR17	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR18	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR2	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR21	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
MR23	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR25	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR3	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR32	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
MR4	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MR6	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR7	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
MR8	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
MR9	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
MY1	2802-001152	RESONATOR-CERAMIC;20MHZ,0.5%,TP,5.5X3.5X	
PC1	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
PC2	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
PC3	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
PC4	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
PC5	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
PC6	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
PCN1	3711-000596	CONNECTOR-HEADER;BOX,10P,1R,2mm,STRAIGHT	
PE1	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
PE2	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
PE3	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
PE4	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
PE5	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
PIC1	1203-002178	IC-VOLTAGE REGULATOR;1563,SOP,7P,173MIL,	
R1	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
R2	2007-000080	R-CHIP;2Kohm,5%,1/16W,DA,TP,1608	
R3	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
R4	2007-000080	R-CHIP;2Kohm,5%,1/16W,DA,TP,1608	
RC1	2203-000560	C-CERAMIC,CHIP;220nF,+80-20%,25V,Y5V,TP,	
RC14A	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC15	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC16	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
RC17	2203-000975	C-CERAMIC,CHIP;47nF,10%,25V,X7R,TP,1608,	
RC18	2203-000975	C-CERAMIC,CHIP;47nF,10%,25V,X7R,TP,1608,	
RC19	2203-000560	C-CERAMIC,CHIP;220nF,+80-20%,25V,Y5V,TP,	
RC2	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC20	2203-000236	C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608	
RC21	2203-000560	C-CERAMIC,CHIP;220nF,+80-20%,25V,Y5V,TP,	
RC22	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC23	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC24	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC26	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC27	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC3	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC30	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC31	2203-000236	C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608	
RC32	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC33	2203-005065	C-CERAMIC,CHIP;1000nF,+80-20%,10V,Y5V,TP	
RC34	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
RC35	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC37	2203-000236	C-CERAMIC,CHIP;0.1nF,5%,50V,NP0,TP,1608	
RC38	2203-000140	C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608	
RC4	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC41	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC5	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	

Loc.No	Part No	Description ; Specification	Remark
RC50	2203-001607	C-CERAMIC,CHIP;0.22nF,5%,50V,NP0,TP,1608	
RC6	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC7	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RC8	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
RE1	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE10	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
RE12	2401-000913	C-AL;22uF,20%,16V,GP,TP,5x11,5	
RE13	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE14	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE22	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE29	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE39	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RE40	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
RE41	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
RIC1	AH13-00007A	IC ASIC;KS1462,DVD-611/XAA,80,+5V,-40t	
RL11	3301-000353	CORE-FERRITE BEAD;AB,120ohm,2x1.25x0.9mm	
RL3	2703-000398	INDUCTOR-SMD;10uH,10%,3.2x2.5x2.2mm	
RQ1	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW,SOT-	
RQ2	0501-000279	TR-SMALL SIGNAL;KSA1182-Y,PNP,150mW,SOT-	
RQ3	0504-000128	TR-DIGITAL;-,NPN,200MW,22K/22K,SOT-23,TP	
RR1	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
RR10	2007-000312	R-CHIP;10OHM,5%,1/8W,DA,TP,3216	
RR12	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
RR13	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
RR14	2007-000097	R-CHIP;47Kohm,5%,1/16W,DA,TP,1608	
RR15	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
RR16	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
RR2	2007-000100	R-CHIP;68Kohm,5%,1/16W,DA,TP,1608	
RR21	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
RR22	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
RR23	2007-000655	R-CHIP;27Kohm,5%,1/16W,DA,TP,1608	
RR24	2007-000134	R-CHIP;33Kohm,5%,1/16W,DA,TP,1608	
RR26	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
RR3	2007-000093	R-CHIP;20Kohm,5%,1/16W,DA,TP,1608	
RR32	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
RR33	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
RR34	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
RR36	2007-001235	R-CHIP;910Kohm,5%,1/16W,DA,TP,1608	
RR4	2007-000086	R-CHIP;5.6Kohm,5%,1/16W,DA,TP,1608	
RR42	2007-000086	R-CHIP;5.6Kohm,5%,1/16W,DA,TP,1608	
RR6	2007-001056	R-CHIP;6.2Kohm,5%,1/16W,DA,TP,1608	
RR7	2007-000077	R-CHIP;470ohm,5%,1/16W,DA,TP,1608	
RR8	2007-000312	R-CHIP;10OHM,5%,1/8W,DA,TP,3216	
RR9	2007-000077	R-CHIP;470ohm,5%,1/16W,DA,TP,1608	
SC10	2203-001634	C-CERAMIC,CHIP;33nF,10%,50V,X7R,TP,1608,	
SC11	2203-000715	C-CERAMIC,CHIP;3.3nF,10%,50V,X7R,TP,1608	
SC12	2203-000140	C-CERAMIC,CHIP;1.5nF,10%,50V,X7R,TP,1608	
SC13	2203-001652	C-CERAMIC,CHIP;470nF,+80-20%,16V,Y5V,TP,	
SC14	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC15	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC16	2203-002398	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,1608	
SC17	2203-001126	C-CERAMIC,CHIP;0.68nF,10%,50V,X7R,TP,160	
SC18	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC19	2203-002398	C-CERAMIC,CHIP;22nF,10%,50V,X7R,TP,1608	
SC2	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC20	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC21	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC23	2203-000491	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,1608	
SC24	2203-000491	C-CERAMIC,CHIP;2.2nF,10%,50V,X7R,TP,1608	
SC25	2203-000372	C-CERAMIC,CHIP;15nF,10%,50V,X7R,TP,1608,	
SC26	2203-000372	C-CERAMIC,CHIP;15nF,10%,50V,X7R,TP,1608,	
SC27	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC28	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC29	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC30	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC32	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	

Loc.No	Part No	Description ; Specification	Remark
SC33	2203-000681	C-CERAMIC,CHIP;0.027nF,5%,50V,NP0,TP,160	
SC34	2203-000681	C-CERAMIC,CHIP;0.027nF,5%,50V,NP0,TP,160	
SC35	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC36	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC37	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC38	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC39	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
SC40	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
SC41	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
SC42	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC43	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
SC44	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC45	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC46	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC47	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC48	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
SC49	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC50	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC51	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC52	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC54	2203-001222	C-CERAMIC,CHIP;820pF,10%,50V,X7R,TP,1608	
SC55	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC56	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC57	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC58	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC59	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC60	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC61	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC62	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC63	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC7	2203-001222	C-CERAMIC,CHIP;820pF,10%,50V,X7R,TP,1608	
SC8	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC9	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
SC90	2203-000975	C-CERAMIC,CHIP;47nF,10%,25V,X7R,TP,1608,	
SE1	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
SE10	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
SE11	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
SE2	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
SE3	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
SE4	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
SE6	2401-001225	C-AL;4.7uF,20%,16V,GP,TP,3x5,5	
SE7	2401-001225	C-AL;4.7uF,20%,16V,GP,TP,3x5,5	
SE8	2401-001225	C-AL;4.7uF,20%,16V,GP,TP,3x5,5	
SE9	2401-002144	C-AL;47uF,20%,16V,GP,TP,5x11,5	
SIC1	AH13-00006A	IC ASIC;KS1454,DVD-611/XAA,160,+3.3V,+	
SIC2	1105-001243	IC-DRAM;416C256,256KX16BIT,SOJ,40P,400	
SIC3	1003-001298	IC-MOTOR DRIVER;KA3017,HQFP,48P,550MIL,1	
SIC4	0801-002097	IC-CMOS LOGIC;7ST08,AND GATE,SOP,5P,110M	
SQ1	0504-000156	TR-DIGITAL;KSR2103,PNP,200MW,22K/22K,SOT	
SR1	2007-000381	R-CHIP;13Kohm,5%,1/16W,DA,TP,1608	
SR14	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
SR15	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR16	2007-000133	R-CHIP;330Kohm,5%,1/16W,DA,TP,1608	
SR18	2007-000102	R-CHIP;100Kohm,5%,1/16W,DA,TP,1608	
SR19	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
SR20	2007-001235	R-CHIP;910Kohm,5%,1/16W,DA,TP,1608	
SR21	2007-000092	R-CHIP;15Kohm,5%,1/16W,DA,TP,1608	
SR23	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
SR24	2007-000091	R-CHIP;12Kohm,5%,1/16W,DA,TP,1608	
SR25	2007-000093	R-CHIP;20Kohm,5%,1/16W,DA,TP,1608	
SR26	2007-000092	R-CHIP;15Kohm,5%,1/16W,DA,TP,1608	
SR27	2007-000092	R-CHIP;15Kohm,5%,1/16W,DA,TP,1608	
SR29	2007-000124	R-CHIP;2.2Kohm,5%,1/16W,DA,TP,1608	
SR30	2007-000124	R-CHIP;2.2Kohm,5%,1/16W,DA,TP,1608	
SR31	2007-000124	R-CHIP;2.2Kohm,5%,1/16W,DA,TP,1608	
SR32	2007-000124	R-CHIP;2.2Kohm,5%,1/16W,DA,TP,1608	

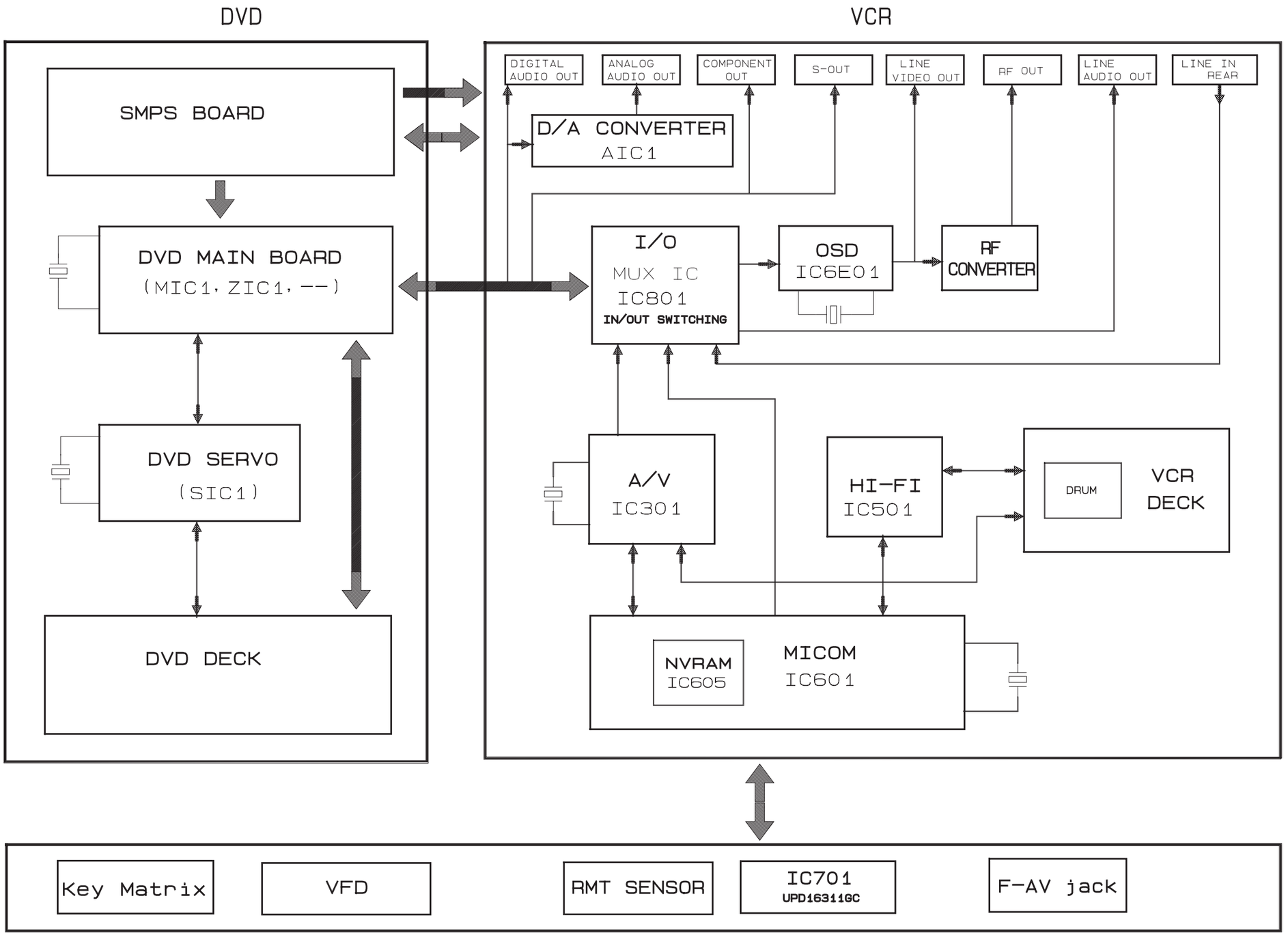
Loc.No	Part No	Description ; Specification	Remark
SR4	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
SR40	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
SR44	2007-000109	R-CHIP;1Mohm,5%,1/16W,DA,TP,1608	
SR48	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
SR49	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR50	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR51	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR55	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR56	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR57	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
SR58	2007-000082	R-CHIP;3.3Kohm,5%,1/16W,DA,TP,1608	
SR59	2007-000087	R-CHIP;6.8Kohm,5%,1/16W,DA,TP,1608	
SR60	2007-000082	R-CHIP;3.3Kohm,5%,1/16W,DA,TP,1608	
SR61	2007-000107	R-CHIP;470Kohm,5%,1/16W,DA,TP,1608	
SR67	2007-000034	R-CHIP;1OHM,5%,1/4W,DA,TP,3216	
SR68	2007-000034	R-CHIP;1OHM,5%,1/4W,DA,TP,3216	
SR69	2007-000655	R-CHIP;27Kohm,5%,1/16W,DA,TP,1608	
SR70	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR71	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR72	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR73	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR74	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
SR75	2007-000093	R-CHIP;20Kohm,5%,1/16W,DA,TP,1608	
SR76	2007-000093	R-CHIP;20Kohm,5%,1/16W,DA,TP,1608	
SR77	2007-000092	R-CHIP;15Kohm,5%,1/16W,DA,TP,1608	
SR79	2007-000090	R-CHIP;10Kohm,5%,1/16W,DA,TP,1608	
SR8	2007-000799	R-CHIP;360ohm,5%,1/16W,DA,TP,1608	
SR9	2007-000097	R-CHIP;47Kohm,5%,1/16W,DA,TP,1608	
SY1	2801-000261	CRYSTAL-UNIT;33.8688MHZ,50PPM,28-AAA,12P	
VR1	2104-001068	VR-SMD;10Kohm,25%,1/20W,TOP	
ZC1	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC10	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC11	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC12	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC13	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC14	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC15	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC16	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC17	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC18	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC19	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC2	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC29	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC3	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC37	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC38	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC39	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC4	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
ZC40	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC41	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC42	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC43	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
ZC44	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC45	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC46	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC47	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC48	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC49	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC5	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
ZC50	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC51	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC56	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC58	2203-000440	C-CERAMIC,CHIP;1nF,10%,50V,X7R,TP,1608,-	
ZC59	2203-005148	C-CERAMIC,CHIP;100nF,10%,16V,X7R,TP,1608	
ZC6	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
ZC60	2203-000681	C-CERAMIC,CHIP;0.027nF,5%,50V,NP0,TP,160	

Loc.No	Part No	Description ; Specification	Remark
ZC61	2007-000070	R-CHIP;0ohm,5%,1/16W,DA,TP,1608	
ZC62	2203-000681	C-CERAMIC,CHIP;0.027nF,5%,50V,NP0,TP,160	
ZC63	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
ZC66	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC67	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC68	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC69	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC7	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC70	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC78	2203-000626	C-CERAMIC,CHIP;0.022nF,5%,50V,NP0,TP,160	
ZC8	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZC81	2203-000815	C-CERAMIC,CHIP;0.033nF,5%,50V,NP0,TP,160	
ZC82	2203-000815	C-CERAMIC,CHIP;0.033nF,5%,50V,NP0,TP,160	
ZC83	2203-000815	C-CERAMIC,CHIP;0.033nF,5%,50V,NP0,TP,160	
ZC84	2203-000815	C-CERAMIC,CHIP;0.033nF,5%,50V,NP0,TP,160	
ZC9	2203-000257	C-CERAMIC,CHIP;10nF,10%,50V,X7R,TP,1608	
ZD1	0402-000309	DIODE-RECTIFIER;1SR154-400,400V,1A,PSM	
ZE30	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
ZE34	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
ZE36	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
ZE37	2401-000414	C-AL;10uF,20%,16V,GP,TP,4x7,5	
ZIC1	1204-001673	IC-DECODER;ZIVA4.1,QFP,208P,1100MIL,PLAS	
ZIC2	1105-001344	IC-DRAM;638165,4Mx16Bit,TSOP,54P,400MI	
ZIC4	AH14-10004R	IC;M74HCU04,SOP,TAPE 14P	
ZL10	2703-000398	INDUCTOR-SMD;10uH,10%,3.2x2.5x2.2mm	
ZL12	2703-000398	INDUCTOR-SMD;10uH,10%,3.2x2.5x2.2mm	
ZL13	3301-001419	CORE-FERRITE BEAD;AB,220ohm,1.6x0.8x0.8m	
ZL14	3301-001419	CORE-FERRITE BEAD;AB,220ohm,1.6x0.8x0.8m	
ZL15	3301-001419	CORE-FERRITE BEAD;AB,220ohm,1.6x0.8x0.8m	
ZL16	3301-001419	CORE-FERRITE BEAD;AB,220ohm,1.6x0.8x0.8m	
ZL2	3301-001414	CORE-FERRITE BEAD;AB,750ohm,2x1.25x0.85m	
ZL5	2007-000023	R-CHIP;120OHM,5%,1/10W,DA,TP,2012	
ZL6	3301-000353	CORE-FERRITE BEAD;AB,120ohm,2x1.25x0.9mm	
ZL7	3301-000353	CORE-FERRITE BEAD;AB,120ohm,2x1.25x0.9mm	
ZL9	3301-000353	CORE-FERRITE BEAD;AB,120ohm,2x1.25x0.9mm	
ZR10	2007-000070	R-CHIP;0ohm,5%,1/16W,DA,TP,1608	
ZR16	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR17	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR18	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR2	2007-000113	R-CHIP;33ohm,5%,1/16W,DA,TP,1608	
ZR23	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR27	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
ZR28	2007-000084	R-CHIP;4.7Kohm,5%,1/16W,DA,TP,1608	
ZR29	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR3	2007-000113	R-CHIP;33ohm,5%,1/16W,DA,TP,1608	
ZR35	3301-001309	CORE-FERRITE BEAD;AB,47ohm,1.6x0.8x0.8mm	
ZR4	2007-000113	R-CHIP;33ohm,5%,1/16W,DA,TP,1608	
ZR5	2007-000113	R-CHIP;33ohm,5%,1/16W,DA,TP,1608	
ZR6	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR68	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR69	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR7	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR70	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR72	2011-000816	R-NETWORK;100ohm,5%,63mW,L,CHIP,8P,TP	
ZR73	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR74	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR75	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR76	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR77	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR78	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR79	2007-007332	R-CHIP;1.18KOHM,1%,1/10W,DA,TP,2012	
ZR8	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR84	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR86	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR88	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR89	2007-000109	R-CHIP;1Mohm,5%,1/16W,DA,TP,1608	
ZR9	2007-001164	R-CHIP;75ohm,1%,1/16W,DA,TP,1608	
ZR91	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR92	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR93	2007-000074	R-CHIP;100ohm,5%,1/16W,DA,TP,1608	
ZR94	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR95	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZR96	2007-000078	R-CHIP;1Kohm,5%,1/16W,DA,TP,1608	
ZY1	2801-003554	CRYSTAL-UNIT;27MHz,10ppm,28-AAM,12pF,40o	
701	**AC92-00973A**	**ASSY PCB-F/T;DVR-4000,A2/NICAM,A/DUB,SP/**	
C701	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C702	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C703	2202-000173	C-CERAMIC,MLC-AXIAL;1nF,10%,50V,Y5P,TP,1	
C705	2401-002165	C-AL;100uF,20%,16V,GP,TP,6.3x7,5	
C706	2202-000807	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C707	2202-000243	C-CERAMIC,MLC-AXIAL;33pF,5%,50V,SL,TP,3.	
C711	2202-000797	C-CERAMIC,MLC-AXIAL;10NF,30%,16V,Y5S,TP,	
C712	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
C713	2202-000183	C-CERAMIC,MLC-AXIAL;2.2NF,20%,16V,Y5R,TP	
CN701	3710-001145	CONNECTOR-SOCKET;20P,1R,1.5mm,STRAIGHT,S	
D701	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D702	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D703	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D704	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
D705	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DT701	AC07-00009A	VF DISPLAY;HNV-11SM12,DVR-5000,20.5X135.	
IC701	1003-001039	IC-VFD;UPD16311GC-AB6,QFP,52P,-,-,-40	
JK701	AC37-22002H	JACK-PIN;3.2mm,DPSE-9826,3P,10mm,ARREY	
L701	2701-000002	INDUCTOR-AXIAL;100uH,10%,4.2x9.8mm	
LD701	0601-000497	LED;ROUND,GRN,3.1mm,565nm	
Q701	0504-000119	TR-DIGITAL;KSR1004,NPN,300MW,47K/47K,TO-	
R701	2001-000333	R-CARBON;12OHM,5%,1/4W,AA,TP,2.4X6.4MM	
R702	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R705	2001-000633	R-CARBON;30KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R706	2001-000864	R-CARBON;56KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R707	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R708	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R710	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R711	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R712	2001-000429	R-CARBON;1KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R713	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R714	2001-000780	R-CARBON;470OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R715	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R716	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R717	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R718	2001-000660	R-CARBON;33KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
R719	2001-000734	R-CARBON;4.7KOHM,5%,1/8W,AA,TP,1.8X3.2M	
R720	2001-000832	R-CARBON;510OHM,5%,1/8W,AA,TP,1.8X3.2MM	
R729	2001-000290	R-CARBON;10KOHM,5%,1/8W,AA,TP,1.8X3.2MM	
RM701	AC59-60060A	MODULE-REMOCON;GP1U281R,SHARP,38KHZ,-,-,	
SW701	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW702	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW703	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW704	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW705	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW706	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW707	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW708	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW709	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW710	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW711	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW712	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW713	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW714	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW715	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
SW716	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	

Loc.No	Part No	Description ; Specification	Remark
SW717	3404-001008	SWITCH-TACT;15V,20mA,160gf,6x7.9x3.5mm,S	
ZD701	0403-000357	DIODE-ZENER;UZ5.6BM,5.6V,5.4-5.8V,500mW,	
H240	**AH97-00563D**	**ASSY-DVD DECK;DP-7,1LD,COMBO2(MILLENO)**	**DVR4000**
DC1	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
DCN1	3708-001364	CONNECTOR-FPC/FC/PIC;35P,1.25MM,STRAIGHT	
DCN2	3708-001588	CONNECTOR-FPC/FC/PIC;20P,1mm,ANGLE,SN	
DCN3	3708-001589	CONNECTOR-FPC/FC/PIC;13P,1mm,ANGLE,SN	
DD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DR1	2001-000924	R-CARBON;680OHM,5%,1/8W,AA,TP,1.8X3.2MM	
DR2	2001-000325	R-CARBON;120OHM,5%,1/8W,AA,TP,1.8X3.2MM	
DR3	2001-000325	R-CARBON;120OHM,5%,1/8W,AA,TP,1.8X3.2MM	
H240	**AH92-00963A**	**ASSY-MILLENO DECK PCB 2LD;DVD-M101,MILLE**	**DVR4500**
DC1	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
DC2	2202-002037	C-CERAMIC,MLC-AXIAL;100nF,80-20%,50V,Y5V	
DCN1	3708-001364	CONNECTOR-FPC/FC/PIC;35P,1.25MM,STRAIGHT	
DCN2	3708-001593	CONNECTOR-FPC/FC/PIC;22P,1mm,ANGLE,SN	
DCN3	3708-001589	CONNECTOR-FPC/FC/PIC;13P,1mm,ANGLE,SN	
DD1	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DD2	0401-000101	DIODE-SWITCHING;1N4148,100V,200mA,DO-35,	
DR1	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
DR2	2001-000515	R-CARBON;220OHM,5%,1/8W,AA,TP,1.8X3.2MM	
DR3	2001-000325	R-CARBON;120OHM,5%,1/8W,AA,TP,1.8X3.2MM	
DR4	2001-000325	R-CARBON;120OHM,5%,1/8W,AA,TP,1.8X3.2MM	
H250	**AH92-00900A**	**ASSY-HOUSING PCB;DVD-M101,MILLENO DECK(B**	
HCN1	AH39-00266A	CONNECT WIRE;-,#26,-,-,-,WHT/BLK,-,-,-,-	
HSW1	3409-001119	SWITCH-DETECTOR;5V DC,1.0A,DPST,30gf,-	

Loc.No	Part No	Description ; Specification	Remark

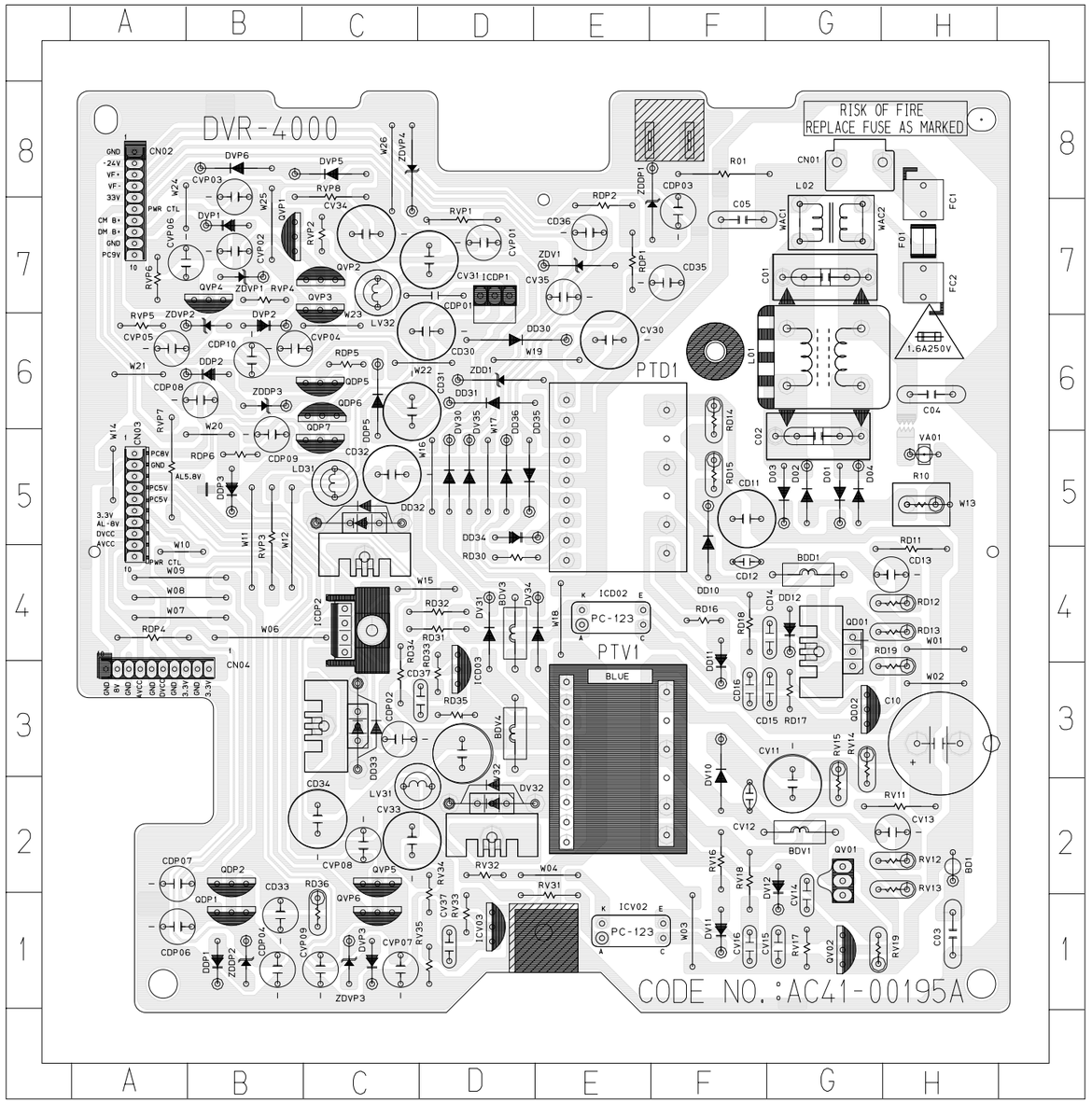
8. Block Diagram



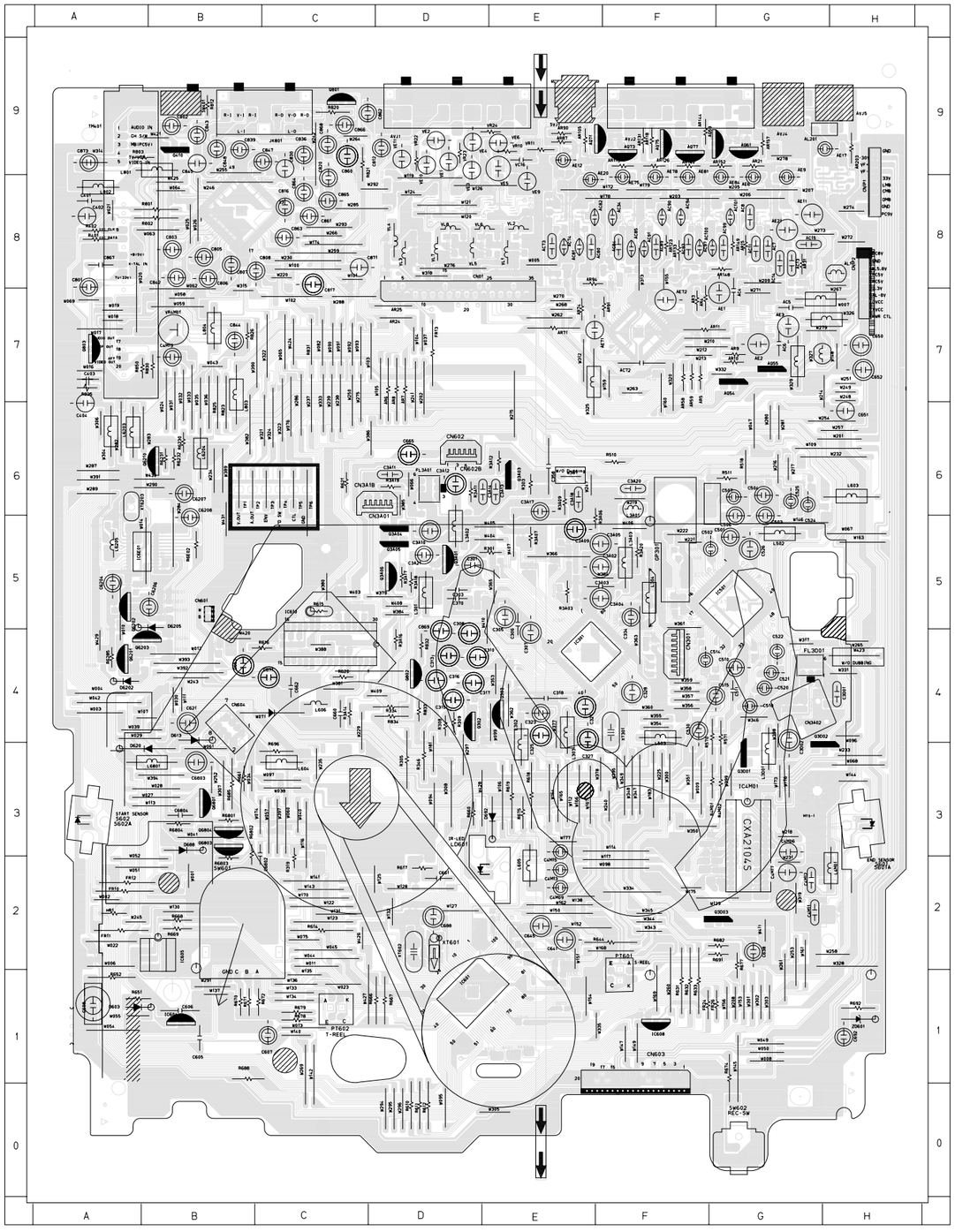
MEMO

9. PCB Diagrams

9-1 S.M.P.S.


DVR-4000
RISK OF FIRE
REPLACE FUSE AS MARKED
PTD1
PTV1
PC-123
BLUE
1.6A250V
CODE NO. : AC41-00195A

9-2 VCR Main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FL3001
W/O DUBBING
CN602
CN3A1B
CN3A01
CN603
SW602
REC-SW
PTG01
T-REEL
PTG02
T-REEL
XTAL601
IC1M01
IC601
IC3A01
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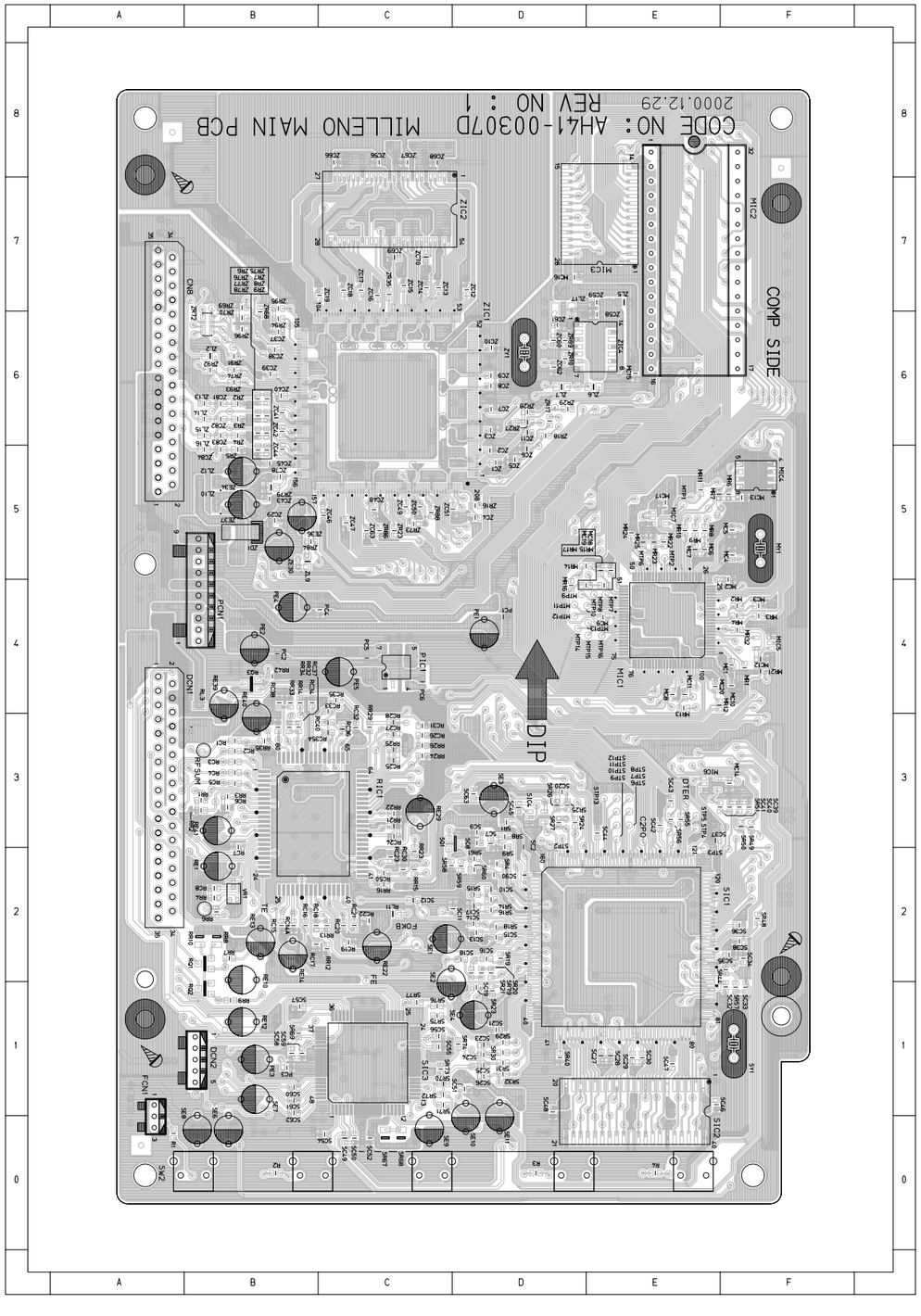
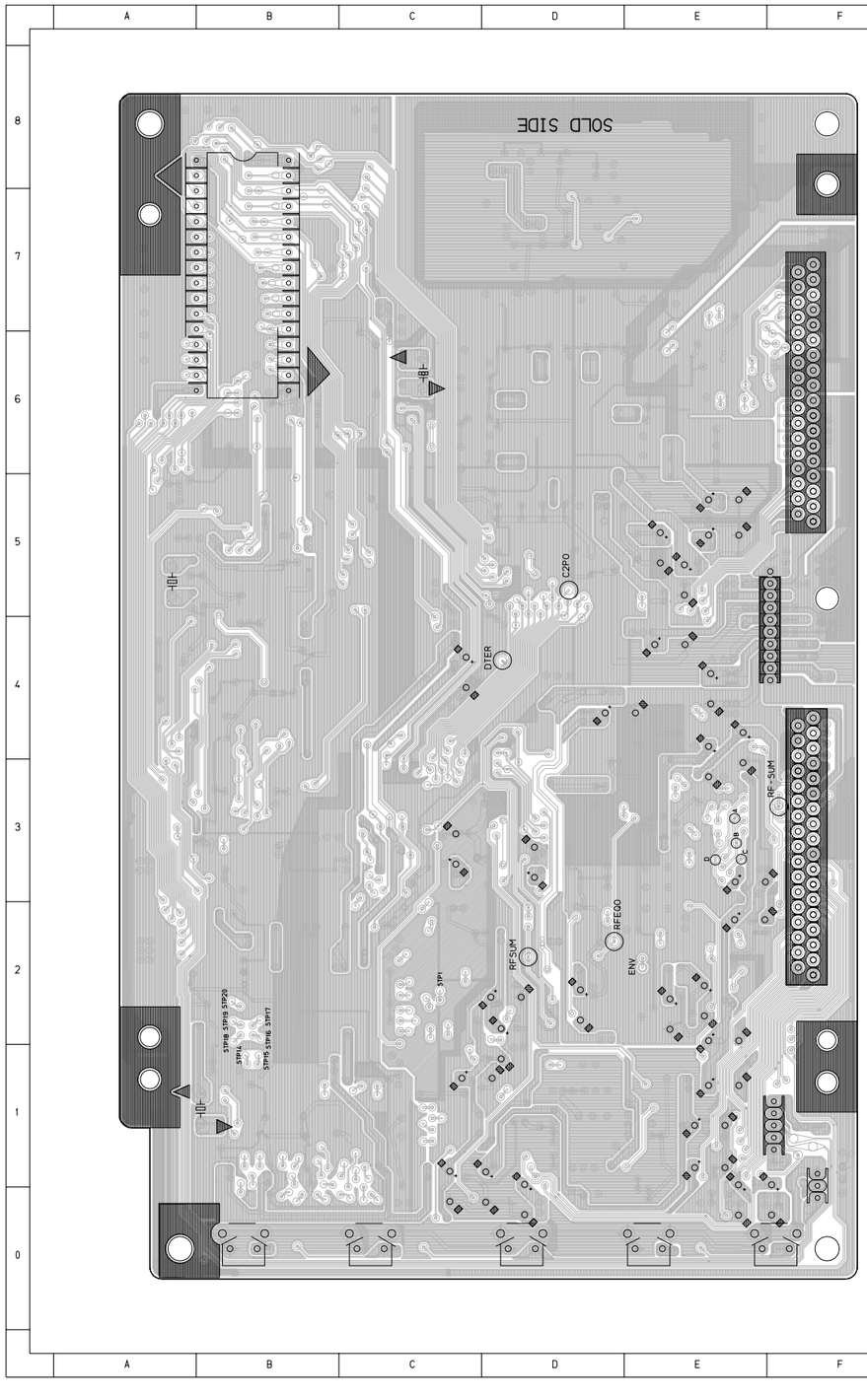
IC3M80
IC3A90
IC3M90

9-3 DVD Main

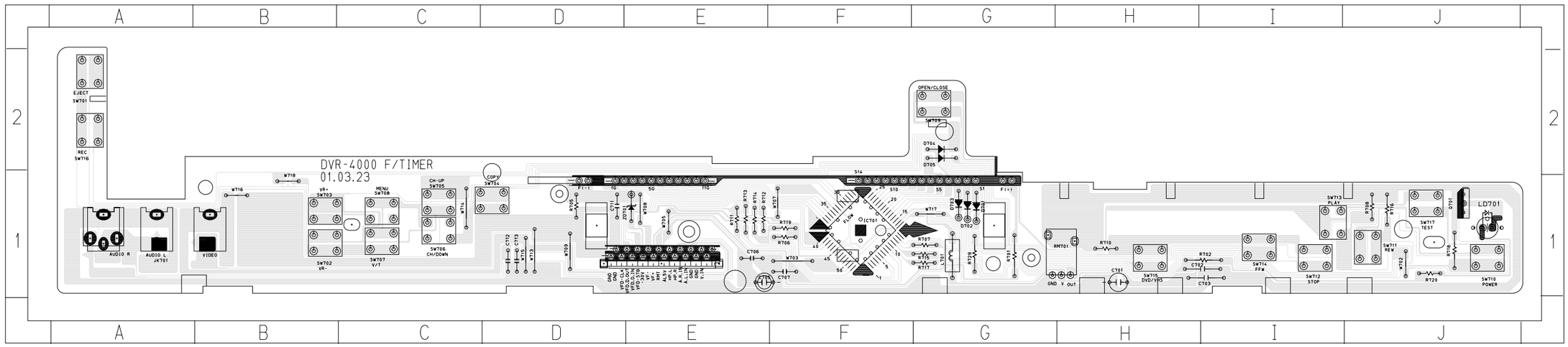
COMPONENT SIDE



SOLDER SIDE

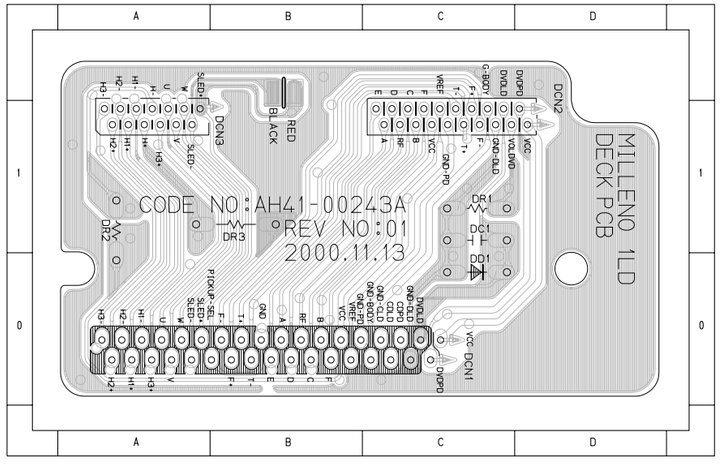


9-4 Function-Timer

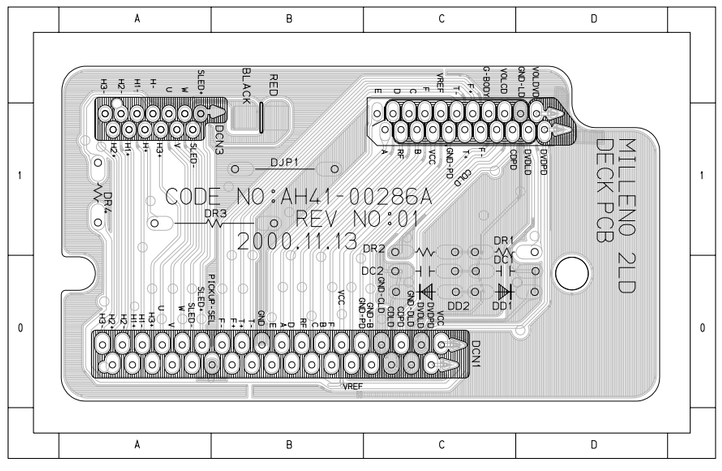


9-5 DVD-Deck

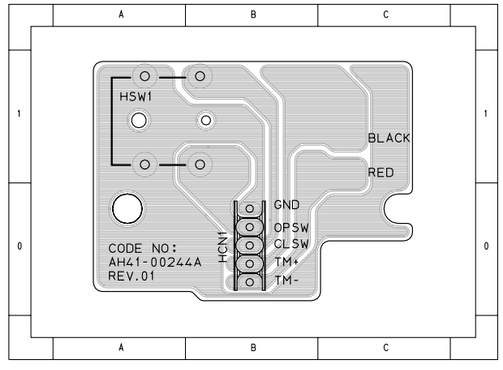
DVR4000/1 LD



DVR4500/2 LD

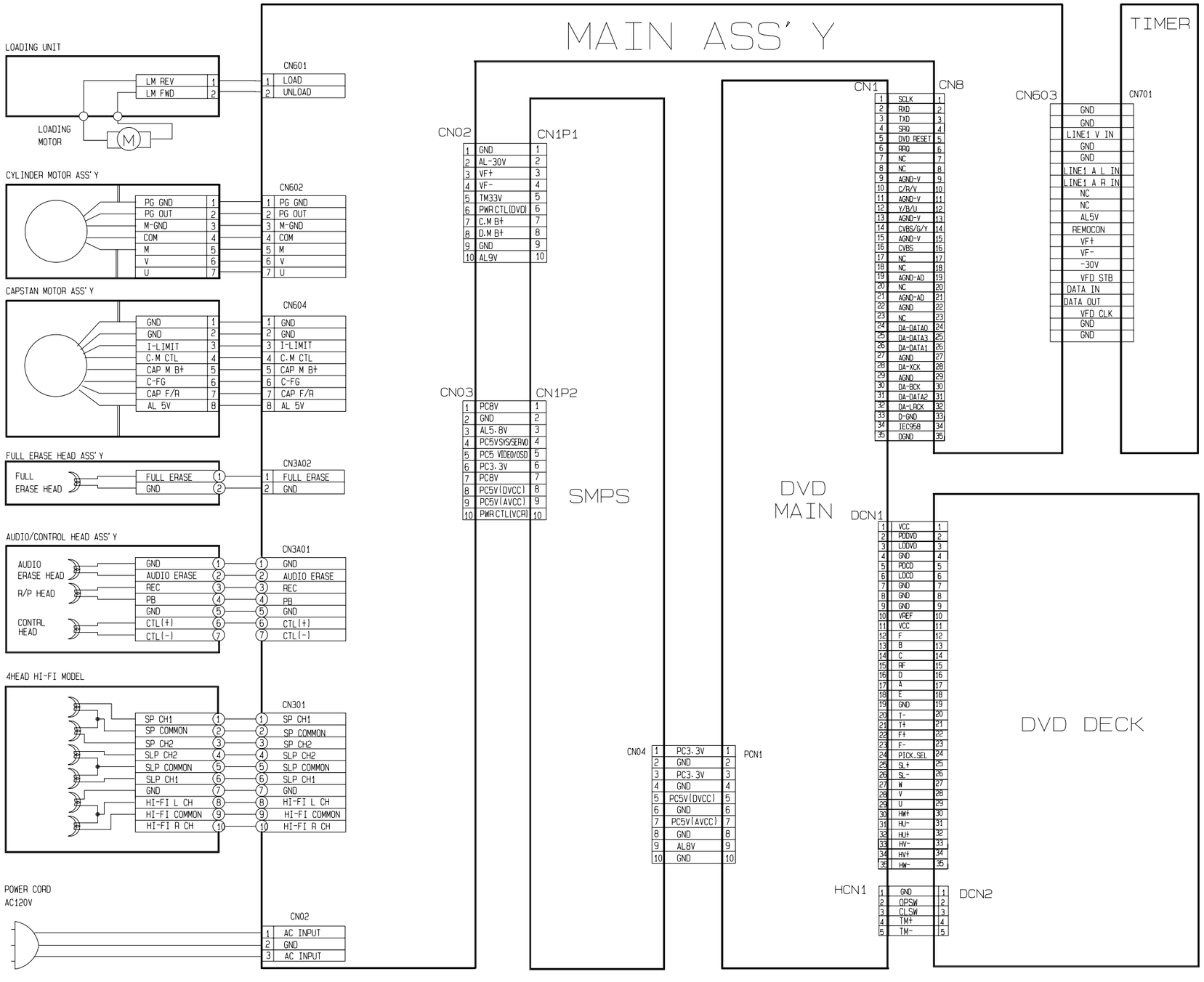


9-6 Housing



MEMO

10. Wiring Diagram



MEMO

11. Schematic Diagrams

VCR Main PCB

DVD Main PCB

Note

For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

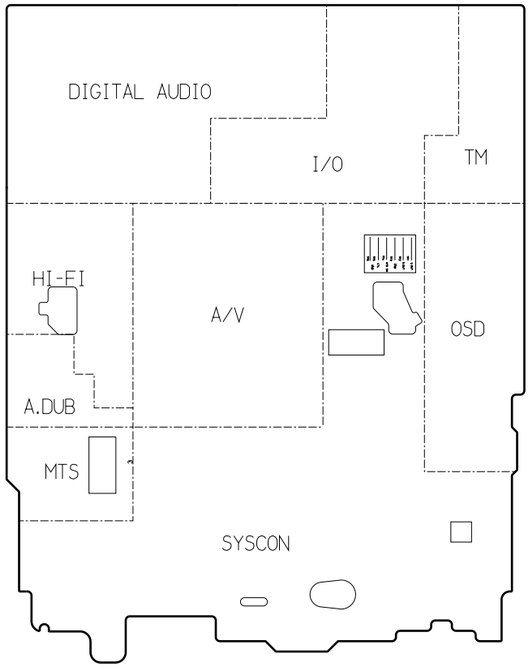
Special note :
Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

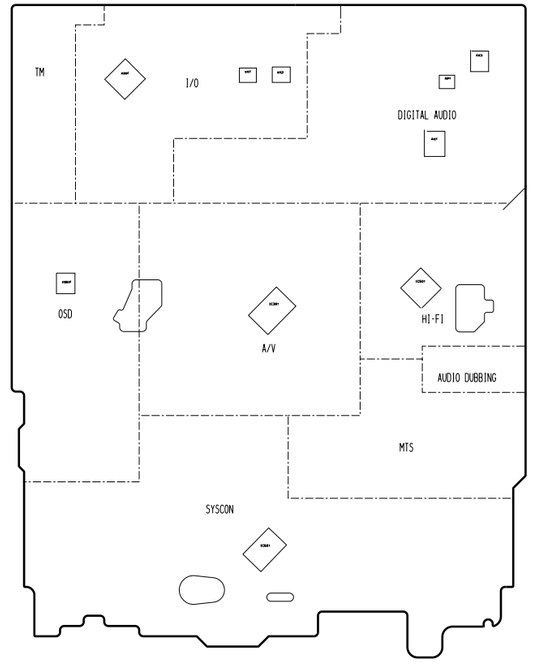
Note :
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

Important safety notices :
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components. Use only the same type.

◆ Block Identification of Main PCB

VCR MAIN PCB

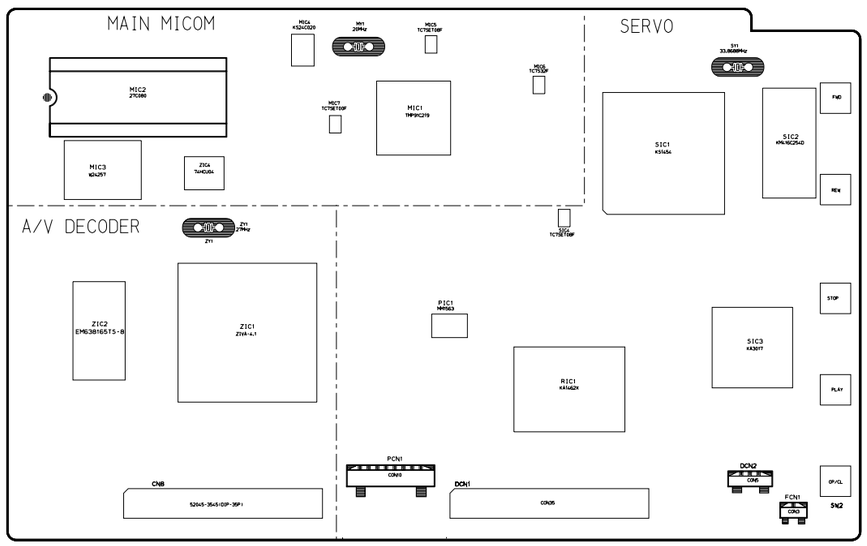




<Component Side>

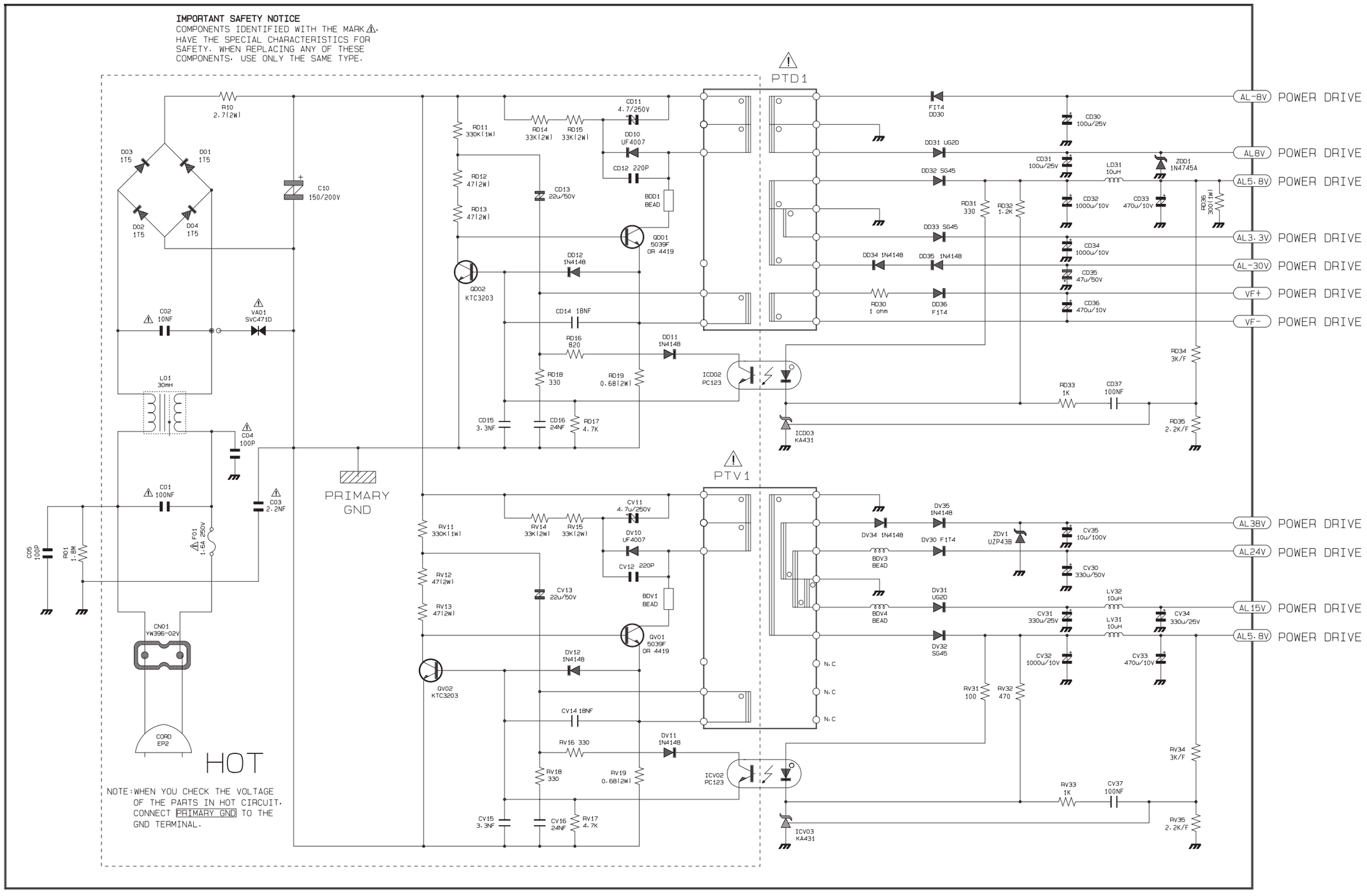
<Conductor Side>

DVD MAIN PCB

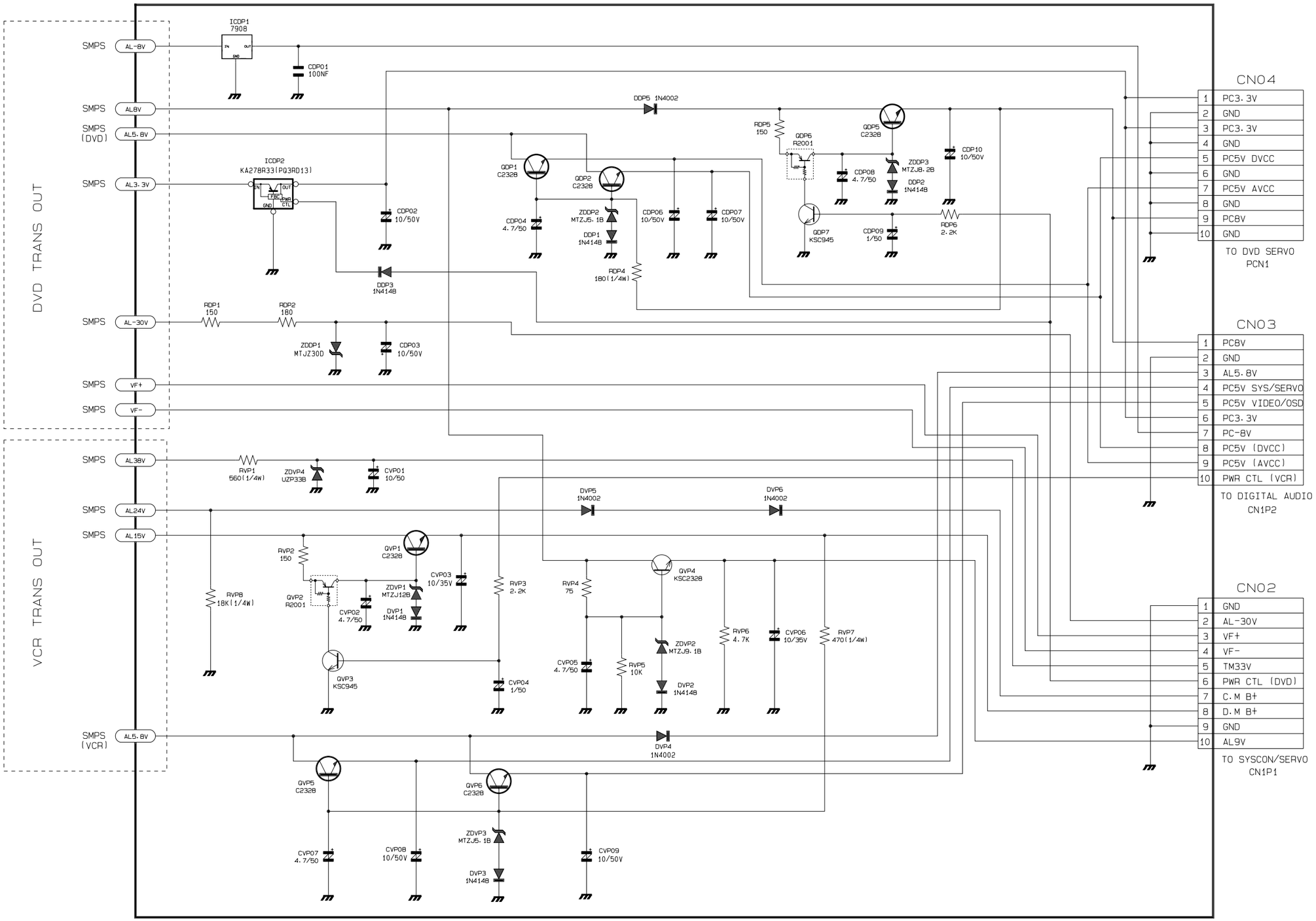


<Component Side>

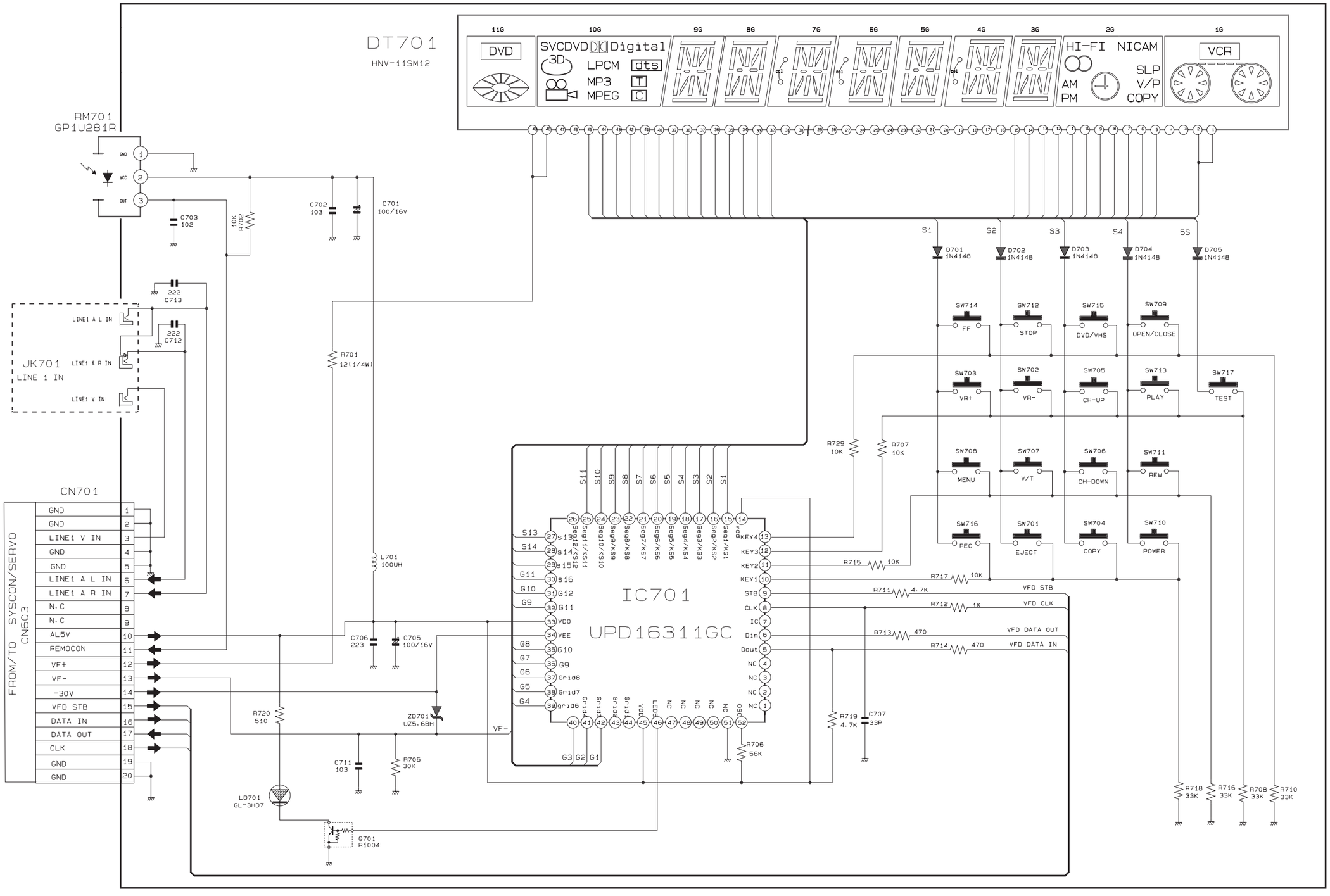
11-1 S.M.P.S.


IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED WITH THE MARK ⚠.
HAVE THE SPECIAL CHARACTERISTICS FOR
SAFETY. WHEN REPLACING ANY OF THESE
COMPONENTS. USE ONLY THE SAME TYPE.
PTD1
PTV1
PRIMARY GND
HOT
NOTE: WHEN YOU CHECK THE VOLTAGE OF THE PARTS IN HOT CIRCUIT. CONNECT PRIMARY GND TO THE GND TERMINAL.
AL-8V POWER DRIVE
AL8V POWER DRIVE
AL5.8V POWER DRIVE
AL3.3V POWER DRIVE
AL-30V POWER DRIVE
VF+ POWER DRIVE
VF- POWER DRIVE
AL38V POWER DRIVE
AL24V POWER DRIVE
AL15V POWER DRIVE
AL5.8V POWER DRIVE
N.C
N.C
N.C

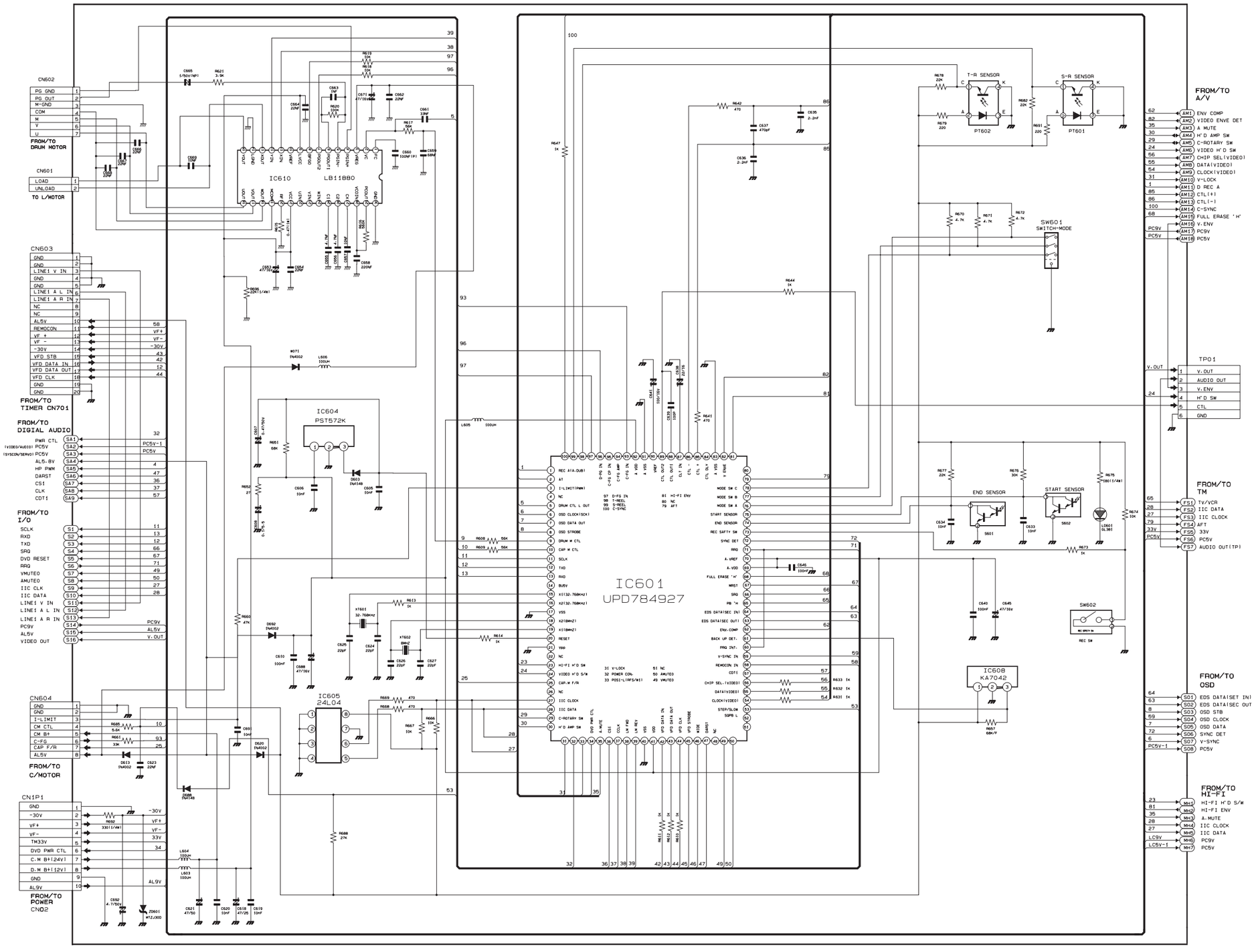
11-2 Power


DVD TRANS OUT
SMPS AL-8V
SMPS AL8V
SMPS (DVD) AL5.8V
SMPS AL3.3V
SMPS AL-30V
SMPS VF+
SMPS VF-
ICDP1 7908
CDP01 100NF
ICDP2 KA278R33(PQ3RD13)
CDP02 10/50V
DDP3 1N4148
DDP5 1N4002
QDP1 C2328
QDP2 C2328
CDP04 4.7/50
ZDDP2 MTZJ5.1B
DDP1 1N4148
CDP06 10/50V
CDP07 10/50V
RDP4 180(1/4W)
RDP5 150
QDP6 R2001
QDP5 C2328
CDP08 4.7/50
ZDDP3 MTZJ8.2B
DDP2 1N4148
CDP10 10/50V
QDP7 KSC945
CDP09 1/50
RDP6 2.2K
RDP1 150
RDP2 180
ZDDP1 MTJZ30D
CDP03 10/50V
CN04
1 PC3.3V
2 GND
3 PC3.3V
4 GND
5 PC5V DVCC
6 GND
7 PC5V AVCC
8 GND
9 PC8V
10 GND
TO DVD SERVO PCN1
CN03
1 PC8V
2 GND
3 AL5.8V
4 PC5V SYS/SERVO
5 PC5V VIDEO/OSD
6 PC3.3V
7 PC-8V
8 PC5V (DVCC)
9 PC5V (AVCC)
10 PWR CTL (VCR)
TO DIGITAL AUDIO CN1P2
VCR TRANS OUT
SMPS AL38V
SMPS AL24V
SMPS AL15V
SMPS (VCR) AL5.8V
RVP1 560(1/4W)
ZDVP4 UZP33B
CVP01 10/50
DVP5 1N4002
DVP6 1N4002
RVP2 150
QVP1 C2328
CVP03 10/35V
ZDVP1 MTZJ12B
QVP2 R2001
CVP02 4.7/50
DVP1 1N4148
RVP3 2.2K
RVP8 18K(1/4W)
QVP3 KSC945
CVP04 1/50
RVP4 75
QVP4 KSC2328
ZDVP2 MTZJ9.1B
DVP2 1N4148
RVP6 4.7K
CVP06 10/35V
RVP7 470(1/4W)
CVP05 4.7/50
RVP5 10K
DVP4 1N4002
QVP5 C2328
QVP6 C2328
ZDVP3 MTZJ5.1B
DVP3 1N4148
CVP07 4.7/50
CVP08 10/50V
CVP09 10/50V
CN02
1 GND
2 AL-30V
3 VF+
4 VF-
5 TM33V
6 PWR CTL (DVD)
7 C.M B+
8 D.M B+
9 GND
10 AL9V
TO SYSCON/SERVO CN1P1

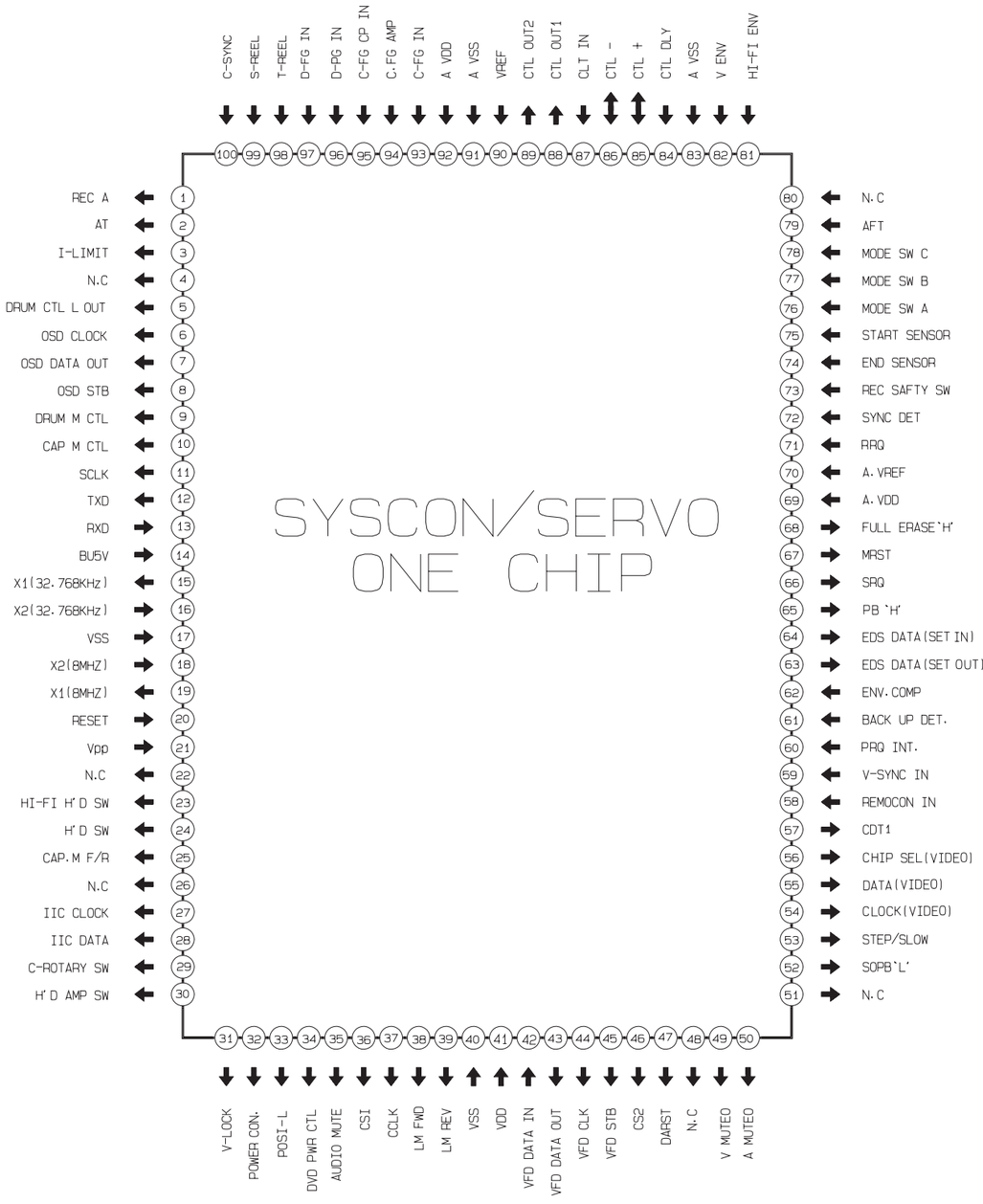
11-3 Function-Timer



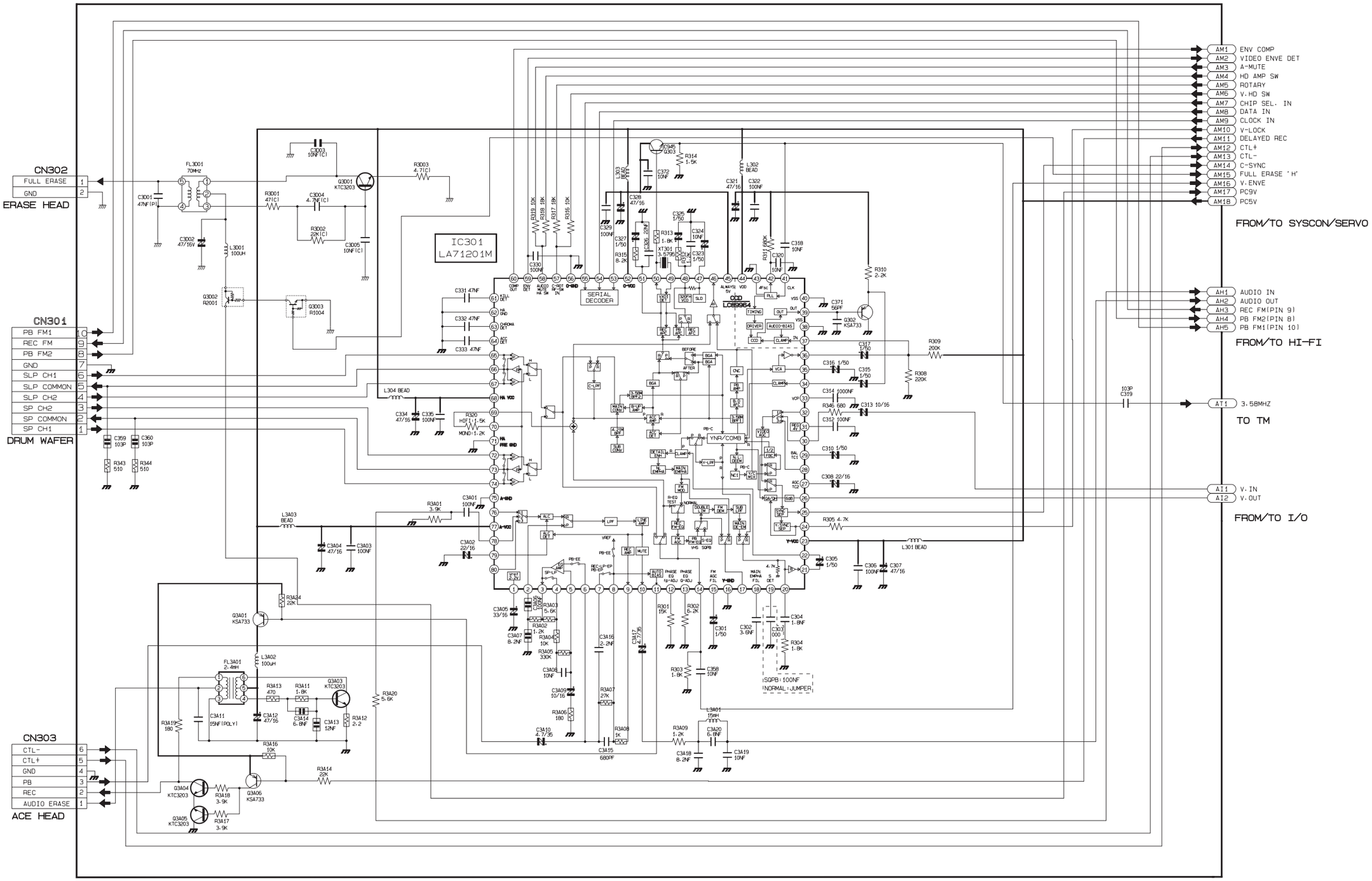
11-4 System Control/Servo



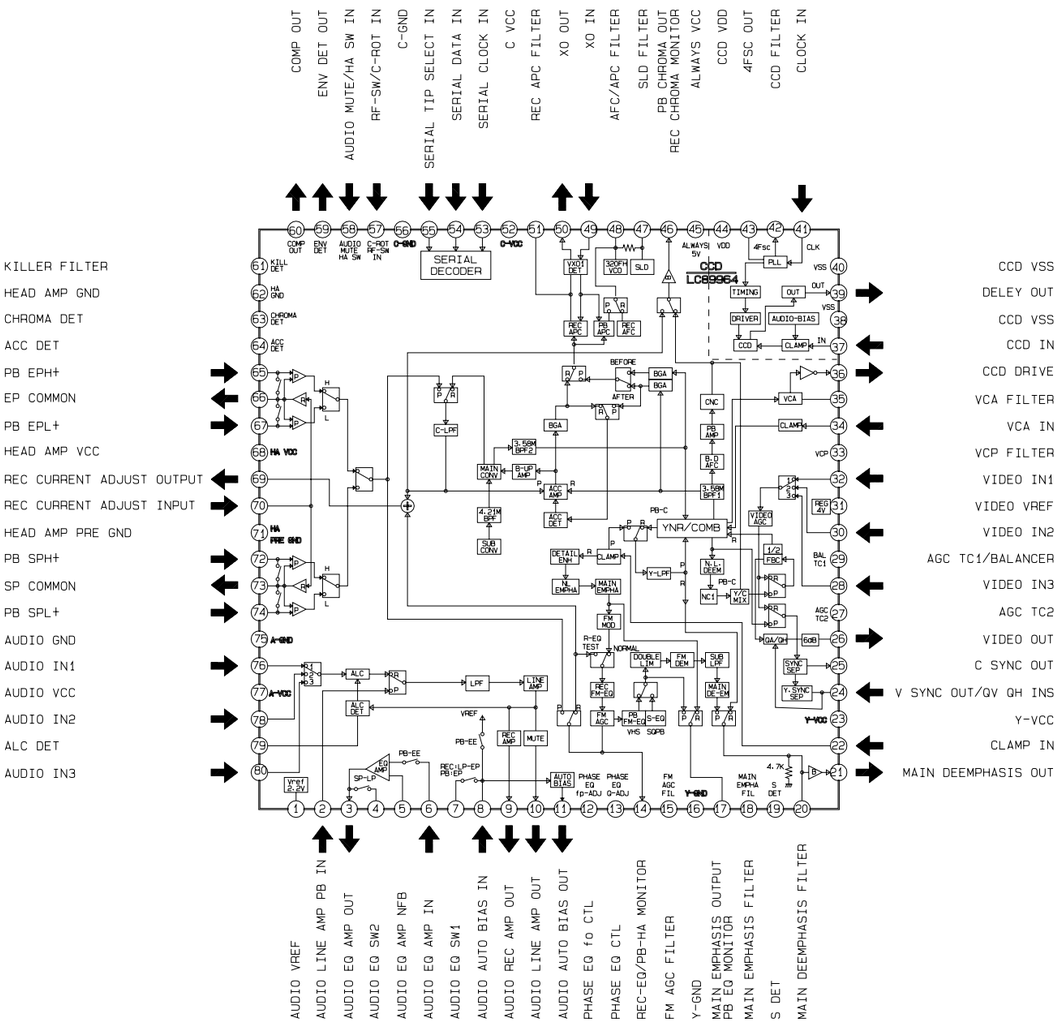
IC601 uPD784927



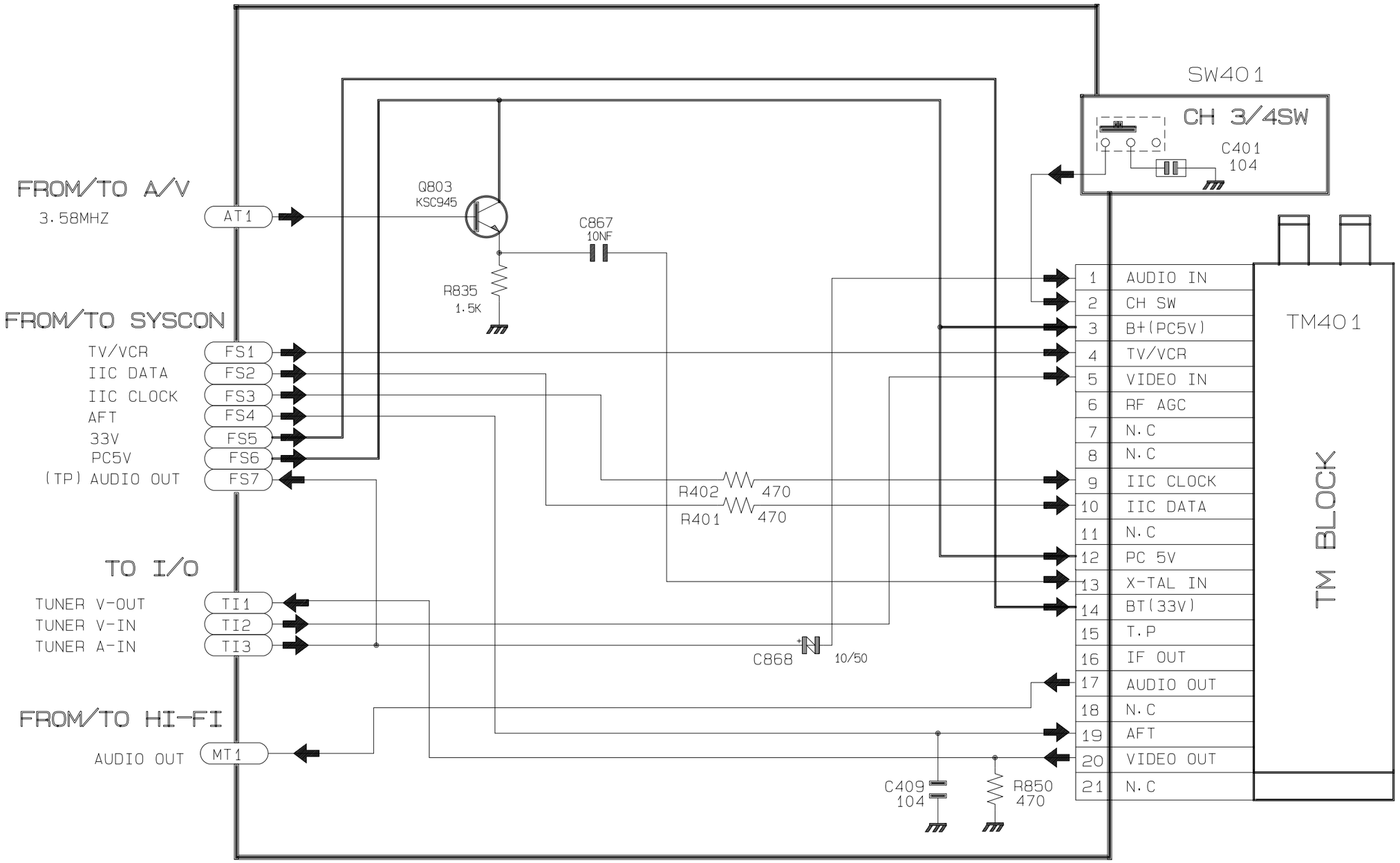
11-5 A/V


CN302
FULL ERASE 1
GND 2
ERASE HEAD
CN301
PB FM1 10
REC FM 9
PB FM2 8
GND 7
SLP CH1 6
SLP COMMON 5
SLP CH2 4
SP CH2 3
SP COMMON 2
SP CH1 1
DRUM WAFER
CN303
CTL- 6
CTL+ 5
GND 4
PB 3
REC 2
AUDIO ERASE 1
ACE HEAD
IC301
LA71201M
SERIAL DECODER
LC89964
YNR/COMB
AM1 ENV COMP
AM2 VIDEO ENVE DET
AM3 A-MUTE
AM4 HD AMP SW
AM5 ROTARY
AM6 V.HD SW
AM7 CHIP SEL. IN
AM8 DATA IN
AM9 CLOCK IN
AM10 V-LOCK
AM11 DELAYED REC
AM12 CTL+
AM13 CTL-
AM14 C-SYNC
AM15 FULL ERASE 'H'
AM16 V.ENVE
AM17 PC9V
AM18 PC5V
FROM/TO SYSCON/SERVO
AH1 AUDIO IN
AH2 AUDIO OUT
AH3 REC FM(PIN 9)
AH4 PB FM2(PIN 8)
AH5 PB FM1(PIN 10)
FROM/TO HI-FI
AT1 3.58MHZ
TO TM
AI1 V. IN
AI2 V. OUT
FROM/TO I/O
SQPB : 100NF
NORMAL : JUMPER

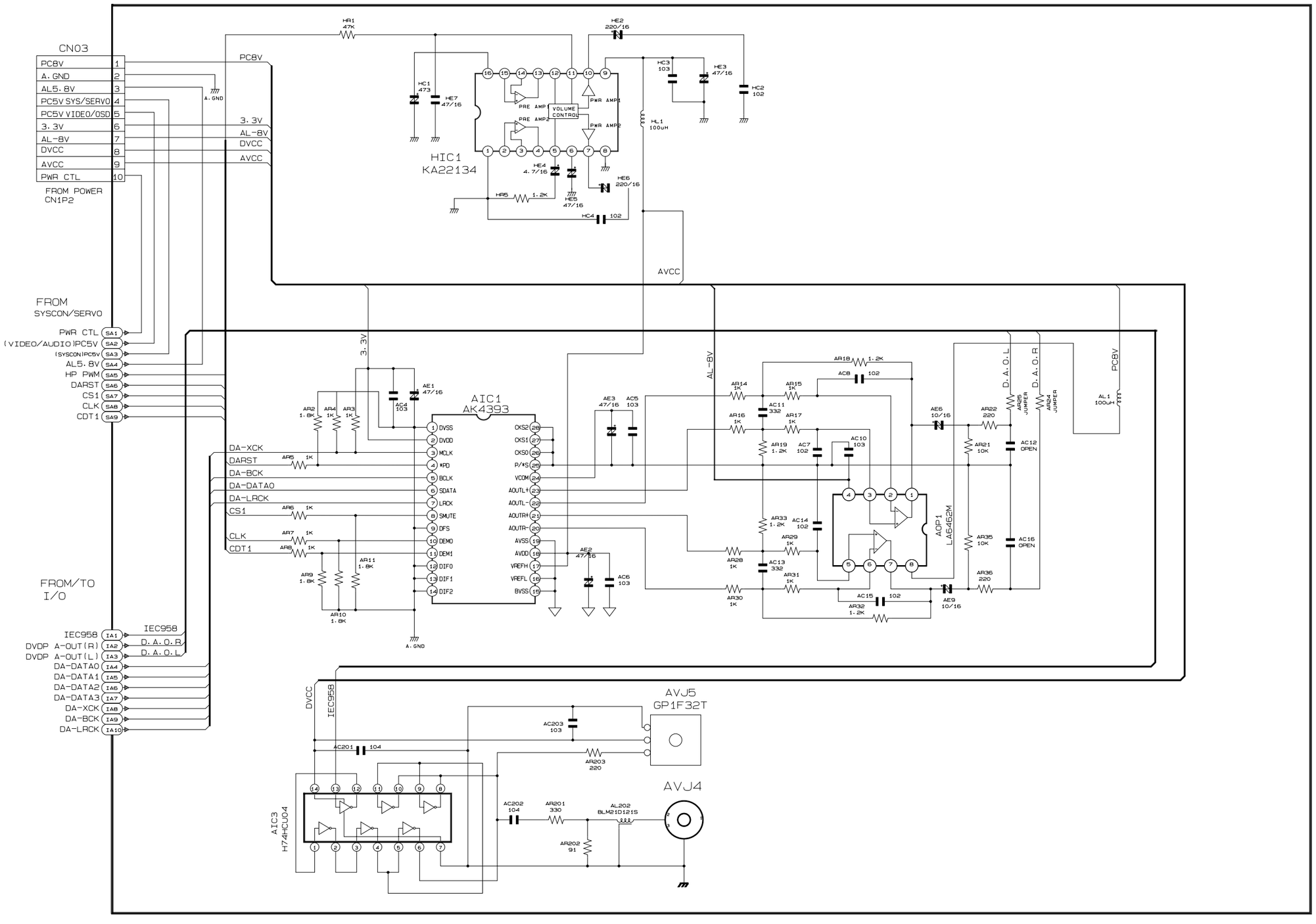
IC301 LA71201M



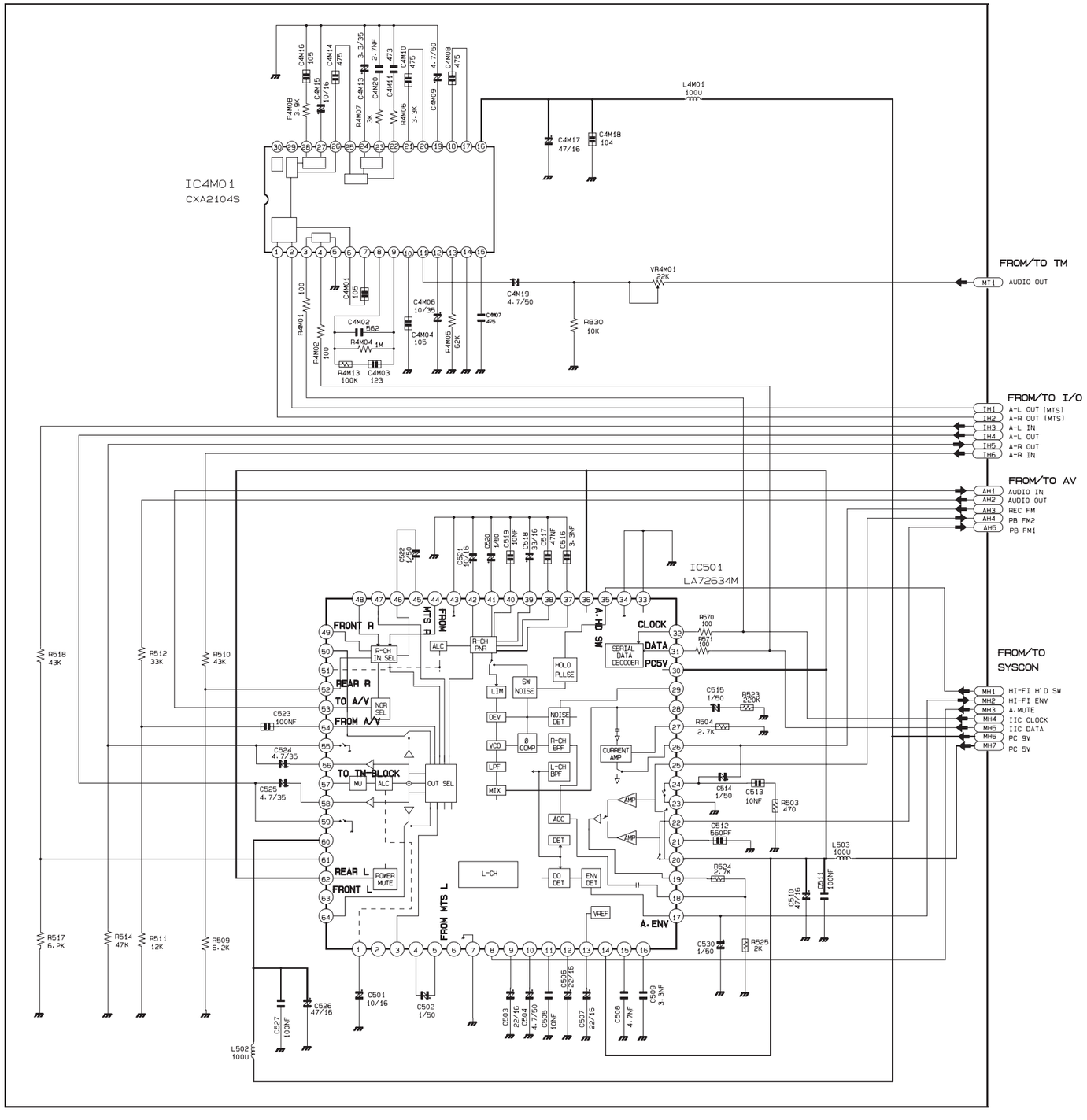
11-6 TM-Blcok


SW401
CH 3/4SW
C401
104
FROM/TO A/V
3.58MHZ
AT1
Q803
KSC945
C867
10NF
R835
1.5K
FROM/TO SYSCON
TV/VCR
IIC DATA
IIC CLOCK
AFT
33V
PC5V
(TP) AUDIO OUT
FS1
FS2
FS3
FS4
FS5
FS6
FS7
R402
470
R401
470
TO I/O
TUNER V-OUT
TUNER V-IN
TUNER A-IN
TI1
TI2
TI3
C868
10/50
FROM/TO HI-FI
AUDIO OUT
MT1
C409
104
R850
470
TM401
1 AUDIO IN
2 CH SW
3 B+(PC5V)
4 TV/VCR
5 VIDEO IN
6 RF AGC
7 N.C
8 N.C
9 IIC CLOCK
10 IIC DATA
11 N.C
12 PC 5V
13 X-TAL IN
14 BT(33V)
15 T.P
16 IF OUT
17 AUDIO OUT
18 N.C
19 AFT
20 VIDEO OUT
21 N.C
TM BLOCK

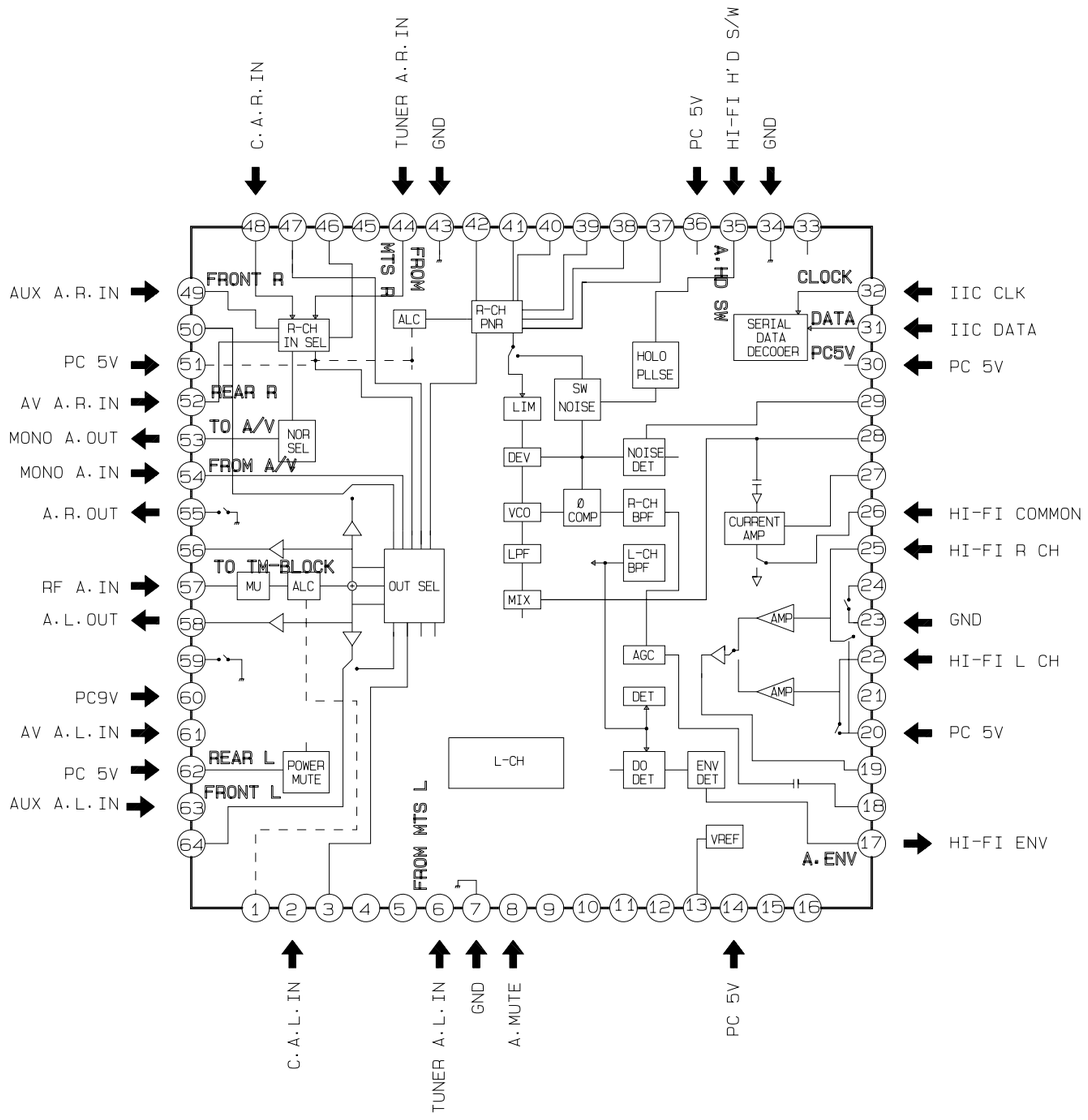
11-7 Digital Audio



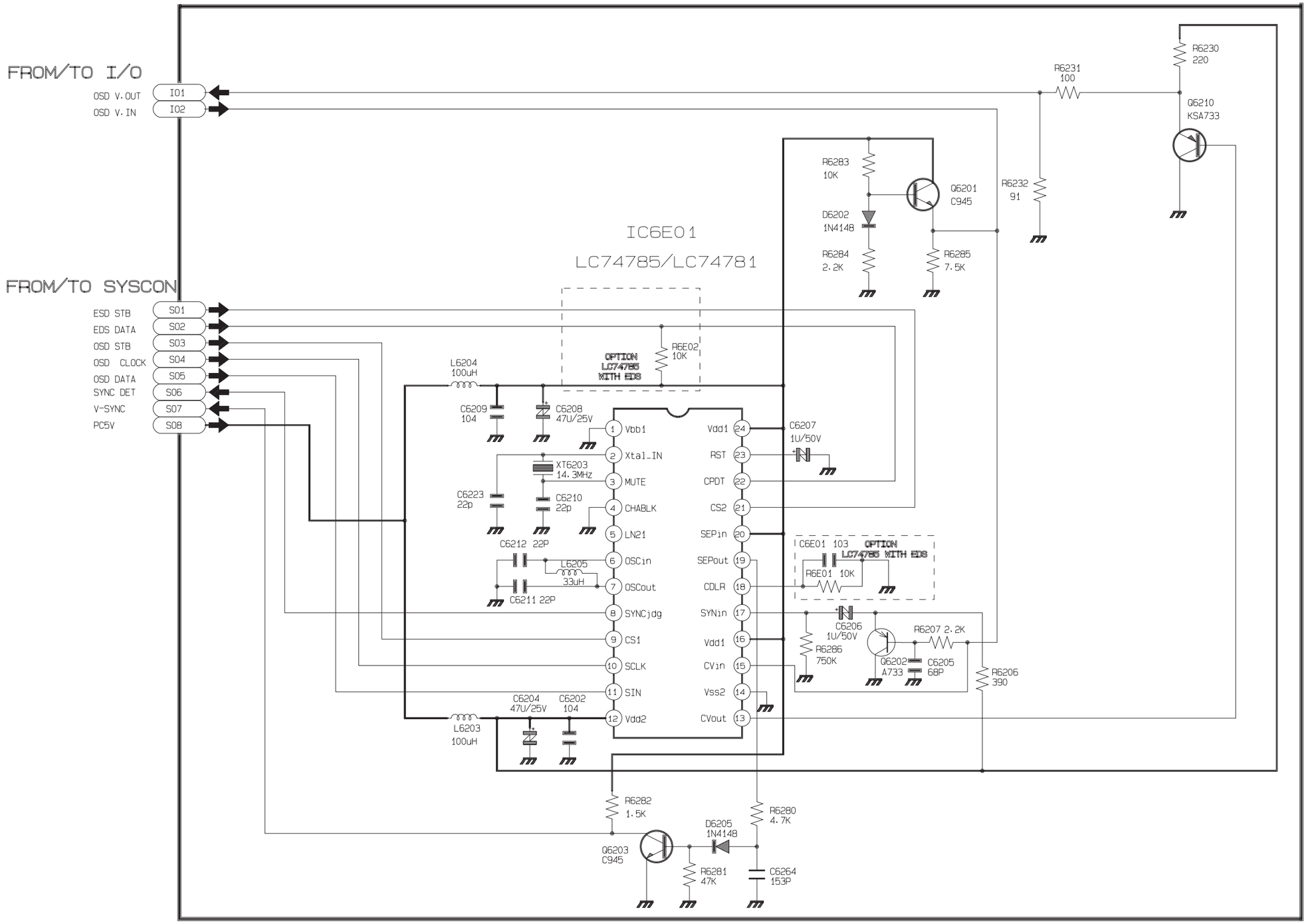
11-8 Hi-Fi/MTS


IC4M01
CXA2104S
IC501
LA72634M
FROM/TO TM
MT1 AUDIO OUT
FROM/TO I/O
IH1 A-L OUT (MTS)
IH2 A-R OUT (MTS)
IH3 A-L IN
IH4 A-L OUT
IH5 A-R OUT
IH6 A-R IN
FROM/TO AV
AH1 AUDIO IN
AH2 AUDIO OUT
AH3 REC FM
AH4 PB FM2
AH5 PB FM1
FROM/TO SYSCON
MH1 HI-FI H'D SW
MH2 HI-FI ENV
MH3 A.MUTE
MH4 IIC CLOCK
MH5 IIC DATA
MH6 PC 9V
MH7 PC 5V
FRONT R
REAR R
TO A/V
FROM A/V
TO TM BLOCK
REAR L
FRONT L
FROM MTS R
FROM MTS L
TO AV SW
CLOCK
DATA
PC5V
A.ENV
R-CH IN SEL
R-CH PNR
ALC
SERIAL DATA DECODER
HOLO PLLSE
SW NOISE
NOISE DET
R-CH BPF
L-CH BPF
CURRENT AMP
AGC
DET
DO DET
ENV DET
VREF
L-CH
L1M
DEV
VCO
LPF
MIX
Ø COMP
NOR SEL
MU
OUT SEL
POWER MUTE
L4M01 100U
C4M17 47/16
C4M18 104
VR4M01 22K
C4M19 4.7/50
RB30 10K
C4M16 105
C4M15 10/16
C4M14 475
C4M13 3.3/35
C4M20 2.7NF
C4M11 473
C4M10 475
C4M09 4.7/50
C4M08 475
R4M08 3.9K
R4M07 3K
R4M06 3.3K
C4M01 105
C4M02 562
C4M04 105
C4M06 10/35
C4M07 275
R4M01 100
R4M02 100
R4M04 1M
R4M13 100K
C4M03 123
R4M05 62K
C523 100NF
C524 4.7/35
C525 4.7/35
R518 43K
R512 33K
R510 43K
R517 6.2K
R514 47K
R511 12K
R509 6.2K
C528 1/50
C529 1/50
C530 1/50
C519 10NF
C518 33/16
C517 47NF
C516 3.3NF
C521 10/16
C501 10/16
C502 1/50
C526 47/16
C527 100NF
L502 100U
C503 22/16
C504 4.7/50
C505 10NF
C506 22/16
C507 22/16
C508 4.7NF
C509 3.3NF
R570 100
R571 100
C515 1/50
R523 220K
R504 2.7K
C514 1/50
C513 10NF
R503 470
C512 560PF
L503 100U
R524 2.7K
C510 47/16
C511 100NF
C530 1/50
R525 2K

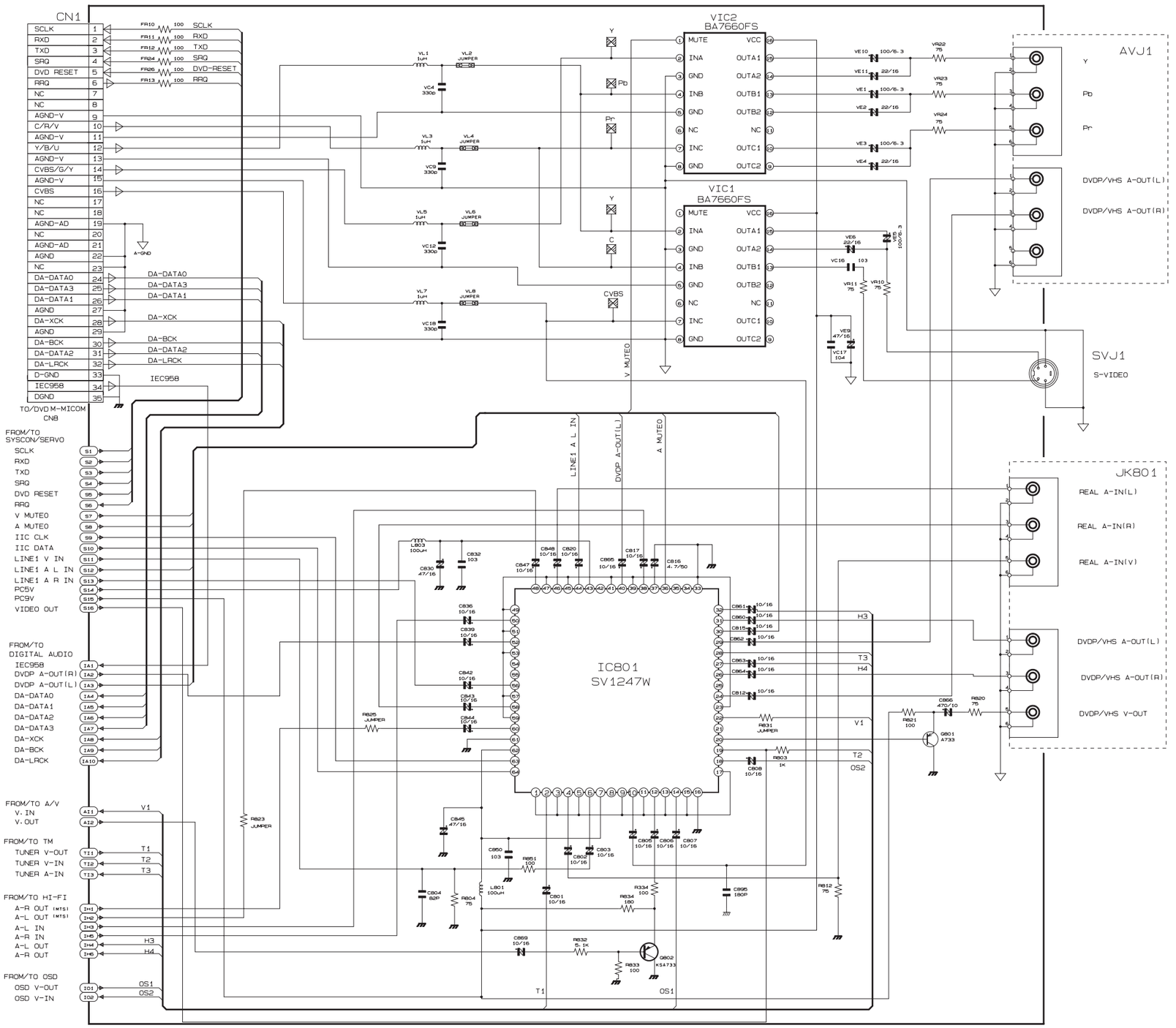
IC501 LA72634AM



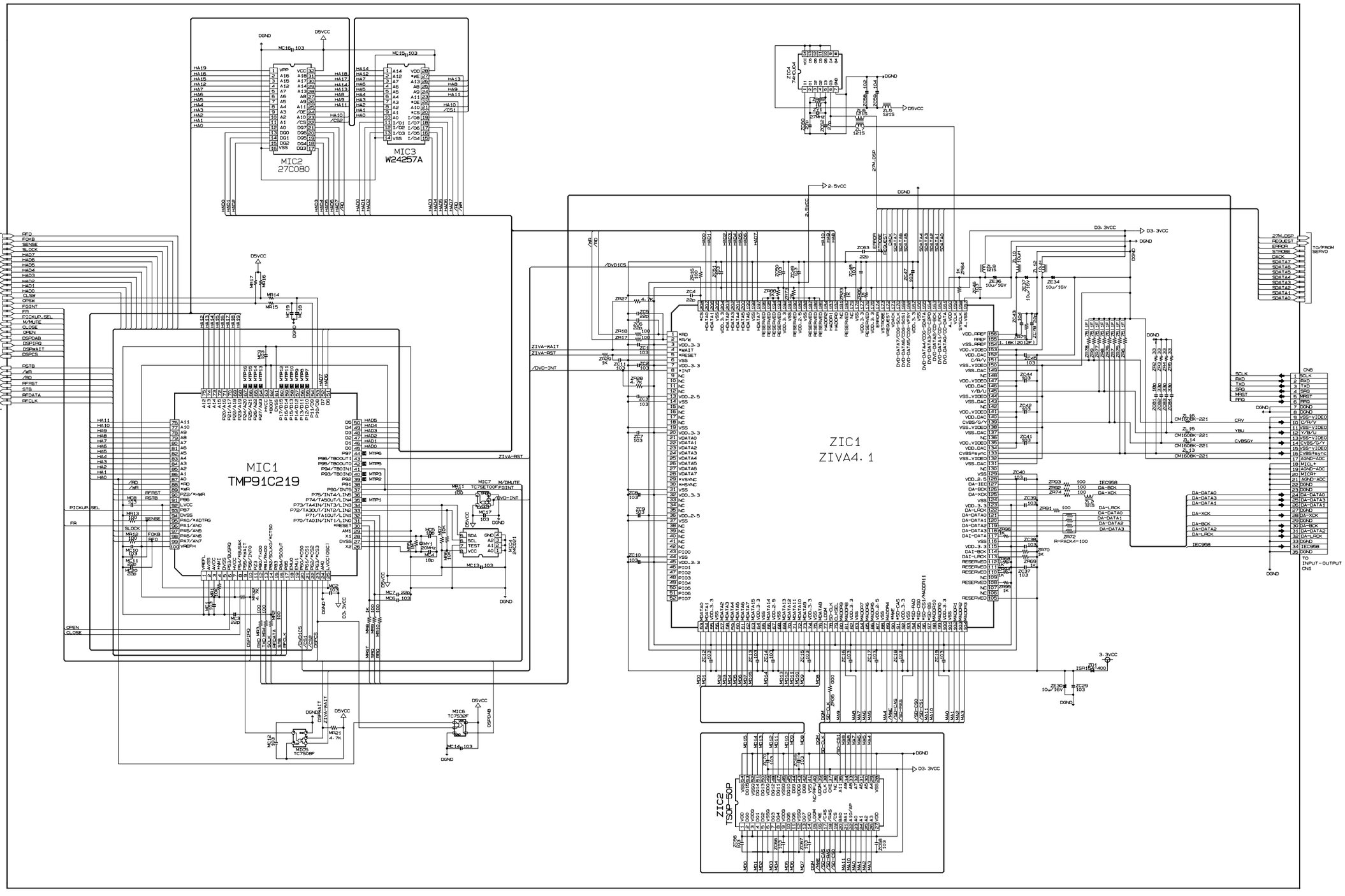
11-9 OSD


FROM/TO I/O
OSD V.OUT
OSD V.IN
IO1
IO2
FROM/TO SYSCON
ESD STB
EDS DATA
OSD STB
OSD CLOCK
OSD DATA
SYNC DET
V-SYNC
PC5V
S01
S02
S03
S04
S05
S06
S07
S08
IC6E01
LC74785/LC74781
R6230 220
R6231 100
Q6210 KSA733
R6232 91
R6283 10K
Q6201 C945
D6202 1N4148
R6284 2.2K
R6285 7.5K
OPTION LC74785 WITH EDS
R6E02 10K
L6204 100uH
C6209 104
C6208 47U/25V
XT6203 14.3MHz
C6223 22p
C6210 22p
C6212 22P
L6205 33uH
C6211 22P
C6204 47U/25V
C6202 104
L6203 100uH
1 Vbb1
2 Xtal_IN
3 MUTE
4 CHABLK
5 LN21
6 OSCin
7 OSCout
8 SYNCjdg
9 CS1
10 SCLK
11 SIN
12 Vdd2
Vdd1 24
RST 23
CPDT 22
CS2 21
SEPin 20
SEPout 19
CDLR 18
SYNin 17
Vdd1 16
CVin 15
Vss2 14
CVout 13
C6207 1U/50V
C6E01 103 OPTION LC74785 WITH EDS
R6E01 10K
C6206 1U/50V
R6286 750K
Q6202 A733
R6207 2.2K
C6205 68P
R6206 390
R6282 1.5K
Q6203 C945
D6205 1N4148
R6280 4.7K
R6281 47K
C6264 153P

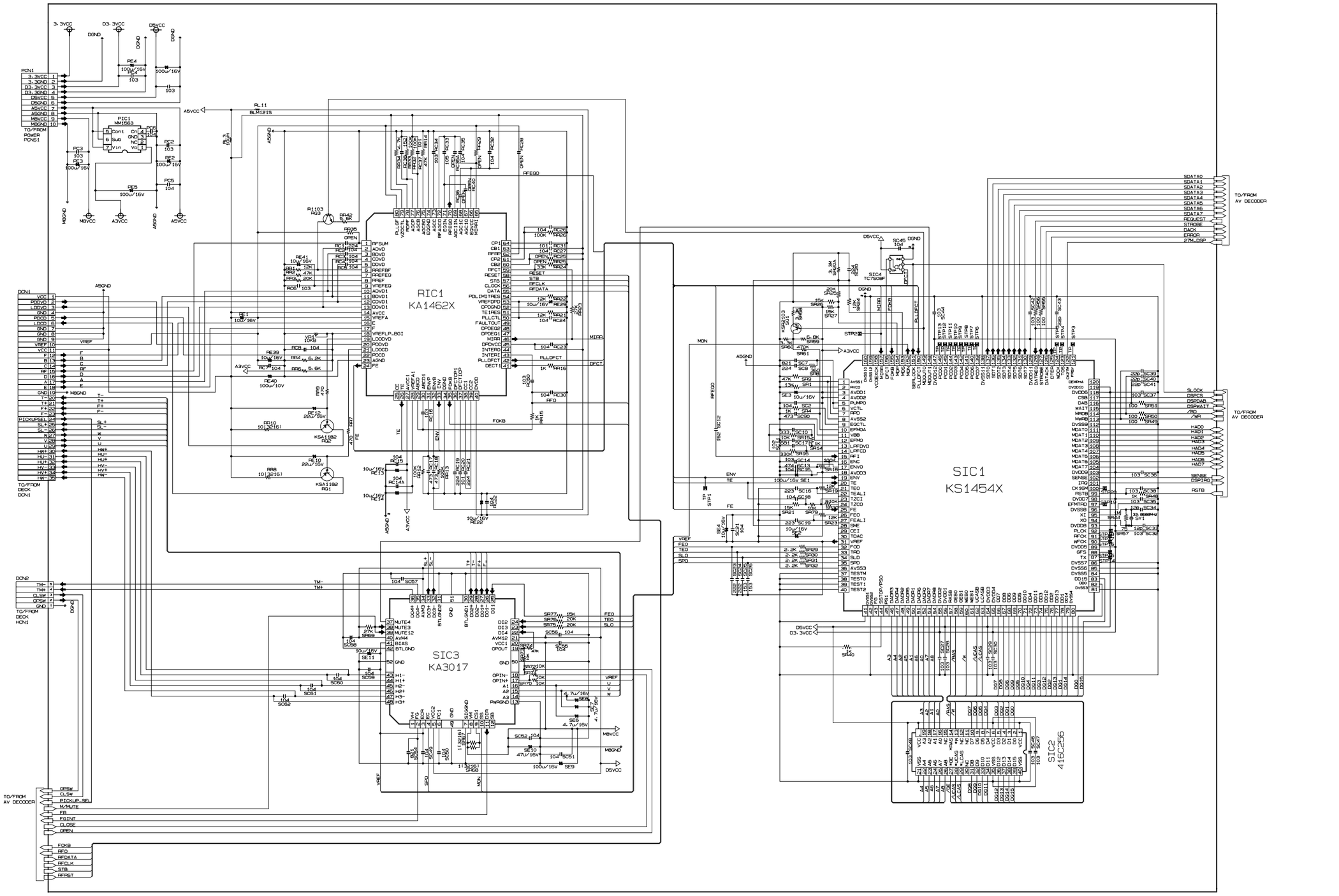
11-10 Input-Output



11-11 DVD Main-Micom/AV Decoder

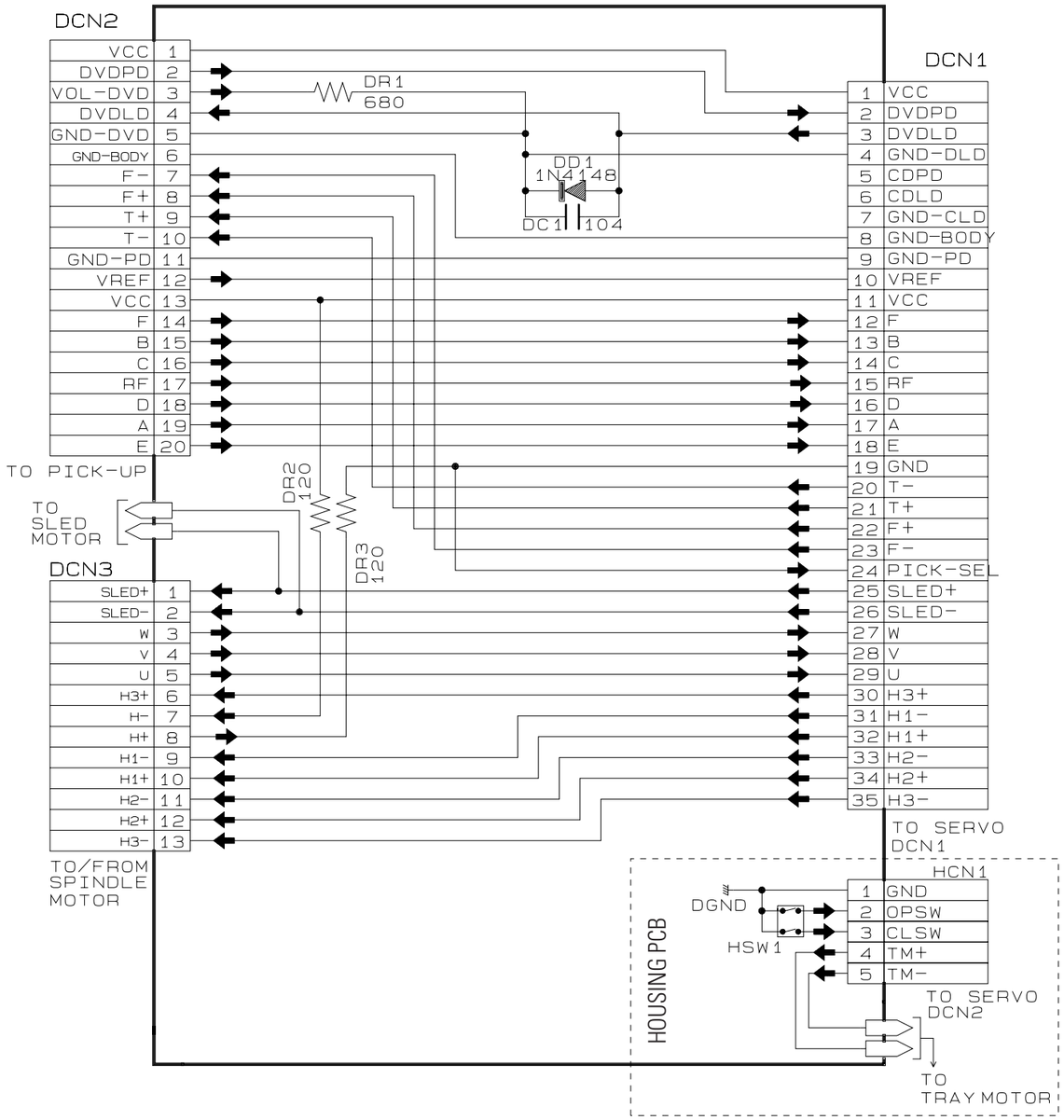


11-11 Servo


RIC1
KA1462X
SIC1
KS1454X
SIC3
KA3017
SIC2
416C256
TO/FROM
AV DECODER
TO/FROM
DECK
DCN1
TO/FROM
POWER
PCNS1
TO/FROM
DECK
HCN1
TO/FROM
AV DECODER

11-16 DVD Deck

DVR4000; 1 LD



DVR4500; 2 LD