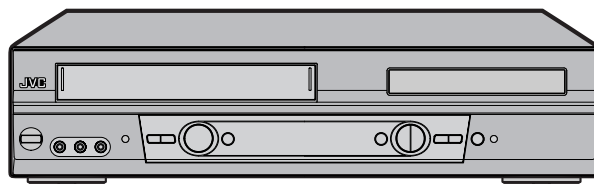


JVC

SERVICE MANUAL

DVD/CD PLAYER Hi-Fi STEREO VIDEO CASSETTE RECORDER

HR-XVC25Us, HR-XVC25Uc



VHS SQPB

4 HEAD Hi-Fi

19µm HEAD



WMA MP3 JPEG



SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-XVC25US.)*

GENERAL

Power supply:	AC 120V 60Hz
Power consumption:	Operation: 18W Stand by: 2W
Weight:	7.9lbs (3.6 kg)
Dimensions:	Width : 16-15/16 inches (430 mm) Height: 3-7/8 inches (99 mm) Depth : 9-13/16 inches (249 mm)
Inputs/Outputs:	
Video:	In: 1Vp-p/75 ohm Out: 1Vp-p/75 ohm
Audio:	In: -8 dBm/50k ohm Out: -8 dBm/1k ohm
Antenna:	UHF/VHF IN/OUT: 75 ohm coaxial
Hi-Fi Frequency Response:	20Hz to 20,000Hz
Hi-Fi Dynamic Range:	More than 90dB

VCR section

Video Head:	4 Rotary Heads
Audio Track:	Hi-Fi Sound - 2 Tracks / MONO Sound - 1 Track
Tuner:	181 Channel Freq. Synthesized VHF 2-13 UHF 14-69 CATV 14-36 (A)-(W) 37-59 (AA)-(WW) 60-85 (AAA)-(ZZZ) 86-94 (86)-(94) 95-99 (A-5)-(A-1) 100-125 (100)-(125) 01 (5A)

RF Channel Output:	Channel 3 or 4, Switchable
F.FWD/REW Time:	Approx. 1 minute 48 seconds (with T-120 Cassette Tape) (at+25°C)

DVD section

Signal system:	NTSC
Applicable disc:	DVD (12cm, 8cm), CD (12cm, 8cm)
Audio characteristics:	DVD: 4Hz - 22kHz CD: 4Hz - 20kHz
Frequency response:	90dB
S/N Ratio:	0.02%
Harmonic distortion:	Less than 0.01% Wrms
Wow and flutter:	More than 90dB
Dynamic range:	Video : (RCA) 1 Vp-p/75 ohm Audio : (RCA) -8 dBm/1k ohm Digital Audio : 0.5Vp-p 75 ohm
Output:	CD : Wavelength: 775 - 805 nm Maximum output power: 0.5 mW DVD : Wavelength: 640 - 660 nm Maximum output power: 1.0 mW
Pickup:	

ACCESSORIES:

Remote control x 1
Batteries (2 x AA)
75 ohm Coaxial Cable x 1
AUDIO/VIDEO Cable x 1

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the \triangle symbol and shaded (■) parts are critical for safety.
Replace only with specified part numbers.
Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
Caution for continued protection against fire hazard.
Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
1) Wires covered with PVC tubing
2) Double insulated wires
3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
1) Insulation Tape 3) Spacers 5) Barrier
2) PVC tubing 4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

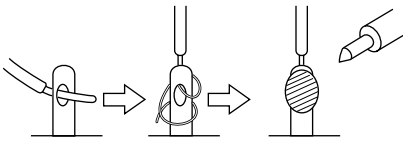


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

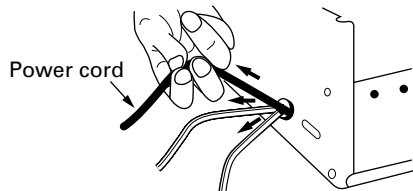


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

- 1) **Connector part number** : E03830-001
- 2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- 3) **Replacement procedure**
 - (1) Remove the old connector by cutting the wires at a point close to the connector.
Important : Do not reuse a connector (discard it).

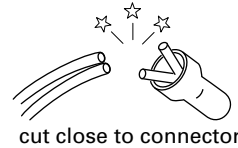


Fig.3

- (2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

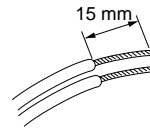


Fig.4

- (3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

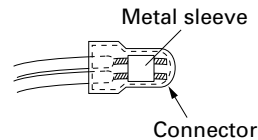


Fig.5

- (4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

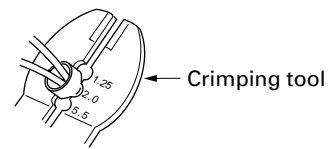


Fig.6

- (5) Check the four points noted in Fig.7.

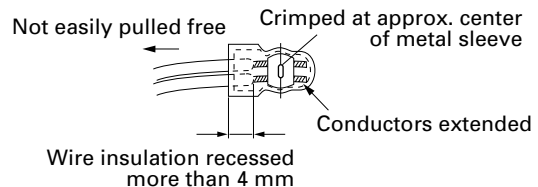


Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

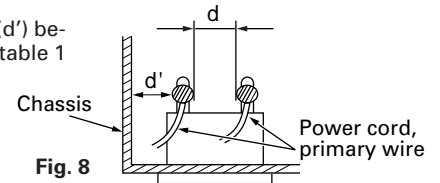
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

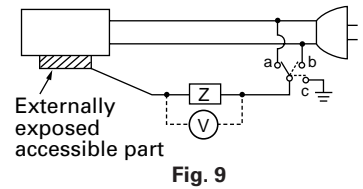


4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

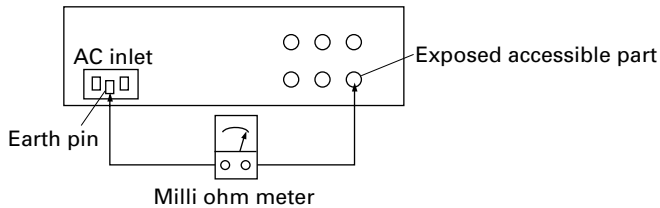


5. Grounding (Class I model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.



Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	$Z \leq 0.1 \text{ ohm}$
Europe & Australia	$Z \leq 0.5 \text{ ohm}$

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	$R \geq 1 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3 \text{ mm}$
100 to 240 V			AC 1.5 kV 1 minute	$d, d' \geq 4 \text{ mm}$
110 to 130 V	USA & Canada	$1 \text{ M}\Omega \leq R \leq 12 \text{ M}\Omega/500 \text{ V DC}$	AC 1 kV 1 minute	$d, d' \geq 3.2 \text{ mm}$
110 to 130 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II)	$d \geq 4 \text{ mm}$
200 to 240 V			AC 1.5 kV 1 minute (Class I)	$d' \geq 8 \text{ mm}$ (Power cord) $d' \geq 6 \text{ mm}$ (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
		50 kΩ	$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

1-1: TOP CABINET AND FRONT CABINET (Refer to Fig. 1-1)

1. Remove the 5 screws ①.
2. Remove the Top Cabinet in the direction of arrow (A).
3. Disconnect the following connector: (CP651).
4. Unlock the 8 supports ②.
5. Remove the Front Cabinet in the direction of arrow (B).
6. Remove the 2 screws ③.
7. Remove the Operation PCB in the direction of arrow (C).

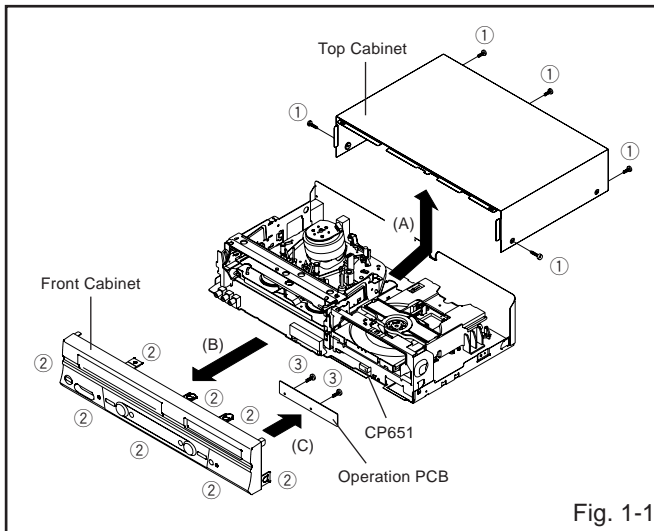


Fig. 1-1

1-2: FLAP (Refer to Fig. 1-2)

1. Open Flap to 90° and flex in direction of arrow (A), at the same time slide in direction of arrow (B).
2. Then lift in direction of arrow (C).

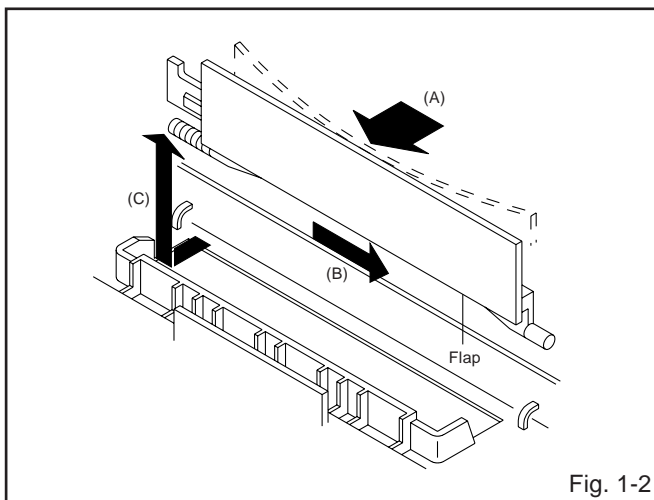


Fig. 1-2

1-3: DVD DECK (Refer to Fig. 1-3)

1. Make the short circuit on the position as shown Fig. 1-3 using a soldering. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Unlock the support ① and remove the Deck Top Holder in the direction of arrow (A).
3. Remove the 2 screws ②.
4. Remove the screw ③.
5. Remove the screw ④.
6. Disconnect the following connectors: (CP2601, CP2602, CP2603).
7. Remove the DVD Deck in the direction of arrow (B).
8. Remove the 3 screws ⑤.
9. Remove the Front Angle in the direction of arrow (C).
10. Remove the screw ⑥.
11. Remove the DVD Angle.

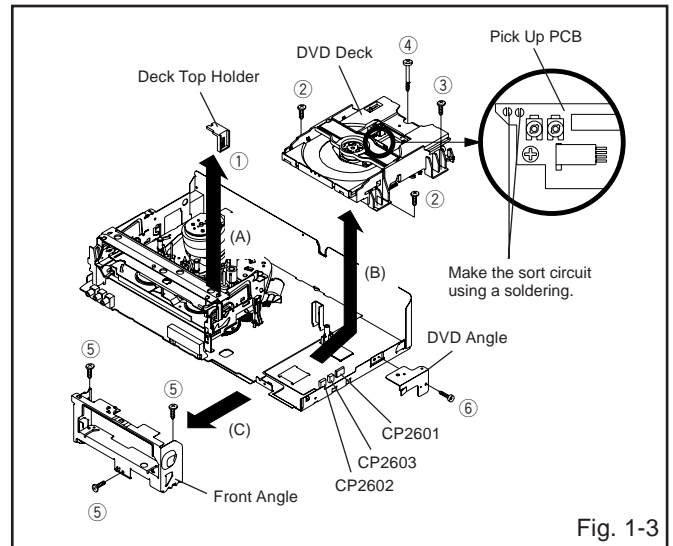


Fig. 1-3

NOTE

When the installation of the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

DISASSEMBLY INSTRUCTIONS

1-4: DVD PCB (Refer to Fig. 1-4)

1. Remove the 3 screws ①.
2. Remove the 4 screws ②.
3. Disconnect the following connectors: (CP4002 and CP8102).
4. Remove the DVD PCB in the direction of arrow.

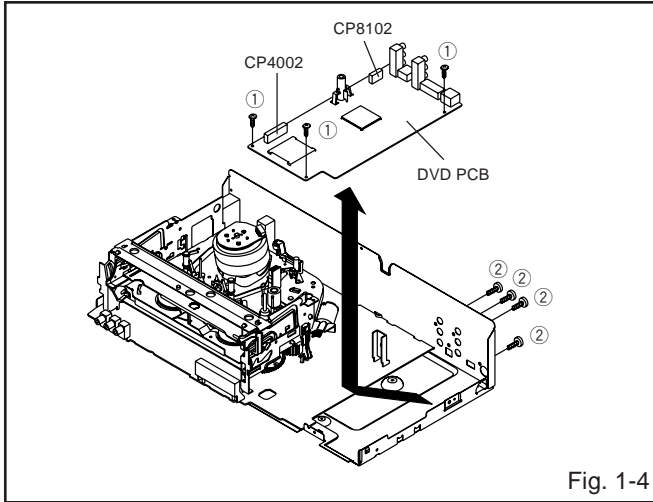


Fig. 1-4

1-6: VCR PCB (Refer to Fig. 1-6)

1. Remove the screw ①.
2. Remove the screw ②.
3. Remove the screw ③.
4. Remove the 3 Pin Shield.
5. Remove the VCR PCB in the direction of arrow.

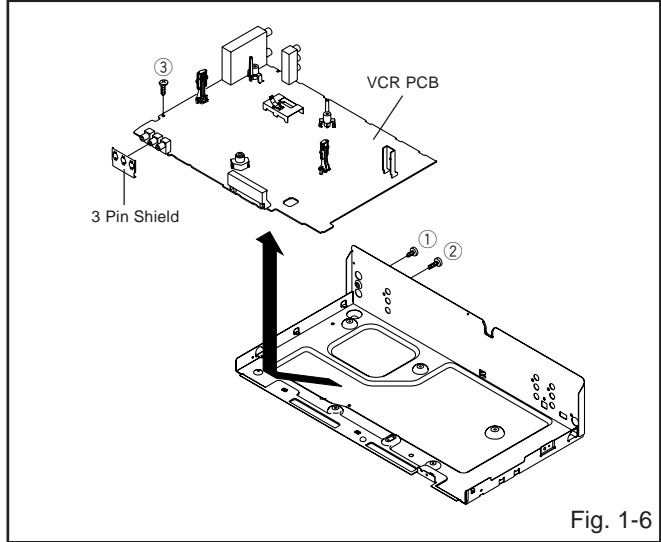


Fig. 1-6

1-5: VCR DECK (Refer to Fig. 1-5)

NOTE

Do not remove the cable at the FE Head section. The FE Head may be damaged if you remove the cable by force.

1. Move the Cassette Holder Ass'y to the back side.
2. Remove the screw ①.
3. Remove the FE Head.
4. Remove the 3 screws ②.
5. Disconnect the following connectors: (CP101, CP102, and CP3001).
6. Remove the AC Head Cover and VCR Deck in the direction of arrow.

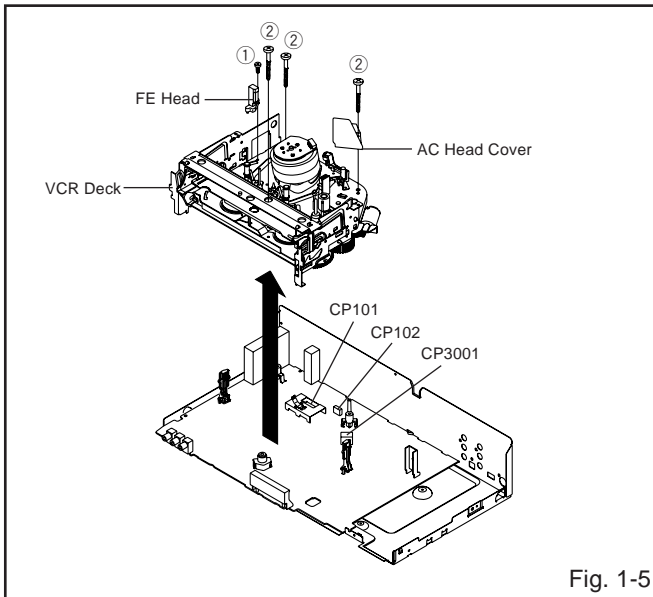


Fig. 1-5

DISASSEMBLY INSTRUCTIONS

2. REMOVAL OF VCR DECK PARTS

2-1: TOP BRACKET (Refer to Fig. 2-1)

1. Extend the 2 supports ①.
2. Slide the 2 supports ② and remove the Top Bracket.

NOTE

1. After the installation of the Top Bracket, bend the support ① so that the Top Bracket is fixed.

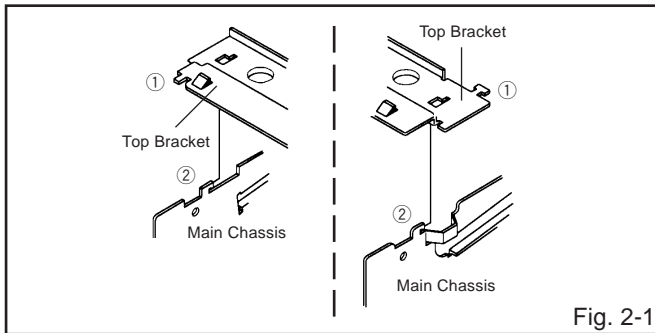


Fig. 2-1

2-2: CASSETTE HOLDER ASS'Y (Refer to Fig. 2-2)

1. Move the Cassette Holder Ass'y to the front side.
2. Push the Locker R to remove the Cassette Side R.
3. Remove the Cassette Side L.

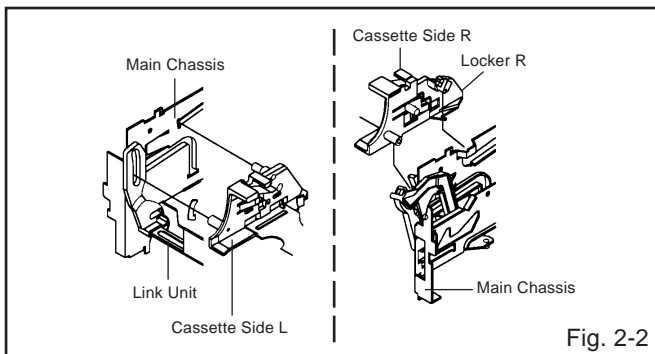


Fig. 2-2

2-3: CASSETTE SIDE L/R (Refer to Fig. 2-3-A)

1. Remove the Locker Spring.
2. Unlock the 4 supports ① and then remove the Cassette Side L/R.
3. Unlock the support ② and then remove the Locker R.

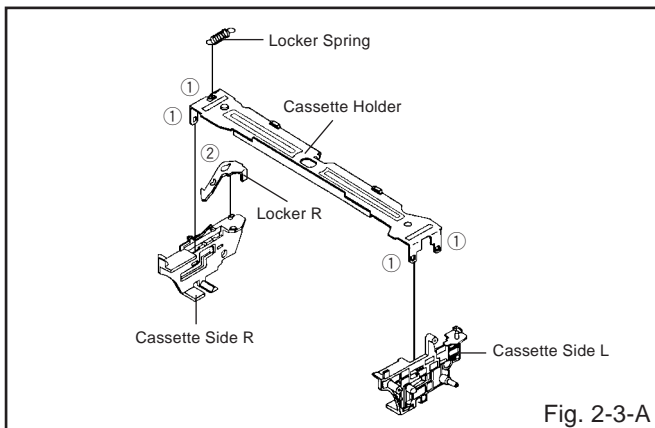


Fig. 2-3-A

NOTE

1. In case of the Locker R installation, check if the one position of Fig. 2-3-B are correctly locked.
2. When you install the Cassette Side R, be sure to move the Locker R after installing.

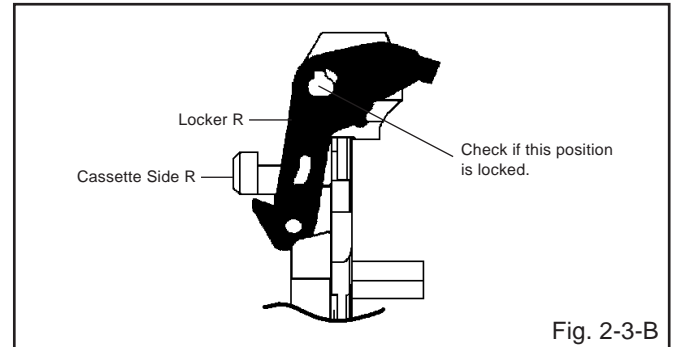


Fig. 2-3-B

2-4: LINK UNIT (Refer to Fig. 2-4)

1. Set the Link Unit to the Eject position.
2. Unlock the support ①.
3. Remove the (A) side of the Link Unit first, then remove the (B) side.

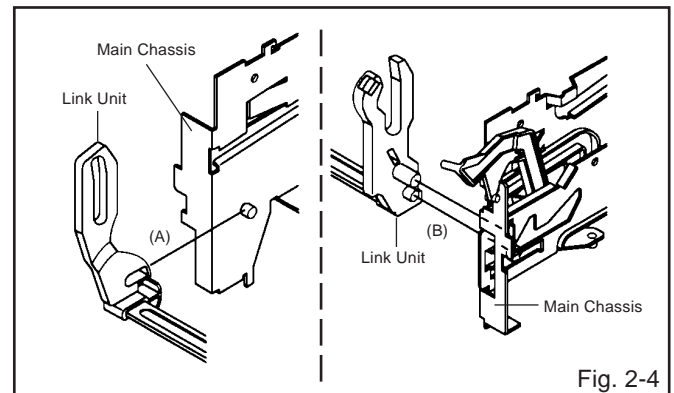


Fig. 2-4

2-5: LINK LEVER/FLAP LEVER (Refer to Fig. 2-5)

1. Extend the support ①.
2. Remove the Link Lever.
3. Remove the Flap Lever.

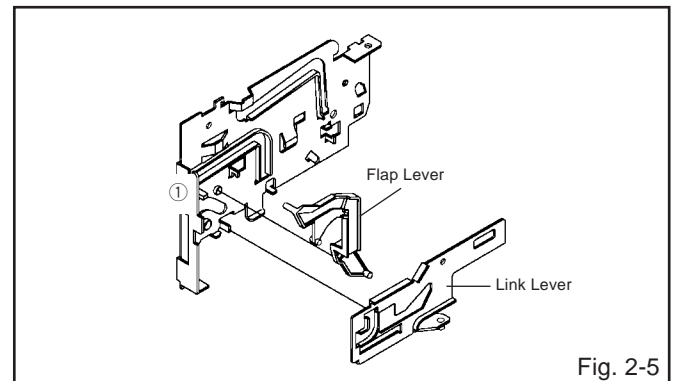


Fig. 2-5

DISASSEMBLY INSTRUCTIONS

2-6: LOADING MOTOR/WORM (Refer to Fig. 2-6-A)

1. Remove the screw ①.
2. Remove the Loading Motor.
3. Remove the Worm.

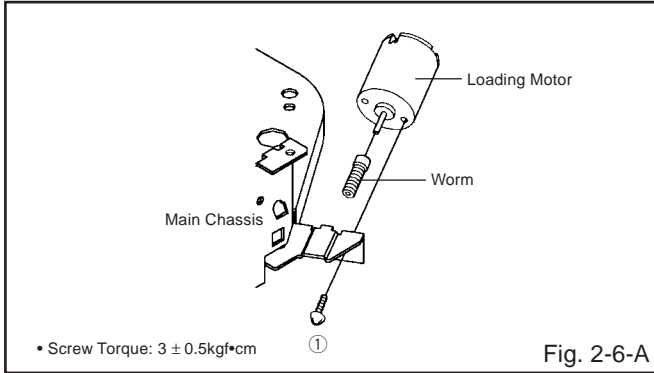


Fig. 2-6-A

NOTE

1. In case of the Worm installation, check if the value of the Fig. 2-6-B is correct.
2. In case of the Loading Motor installation, hook the wire on the Cassette Opener as shown Fig. 2-6-C.
3. When installing the wires between Capstan DD Unit and Loading Motor, connect them correctly as shown Fig. 2-6-D.

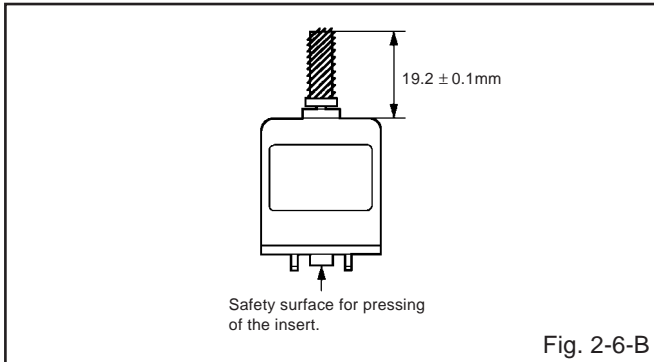


Fig. 2-6-B

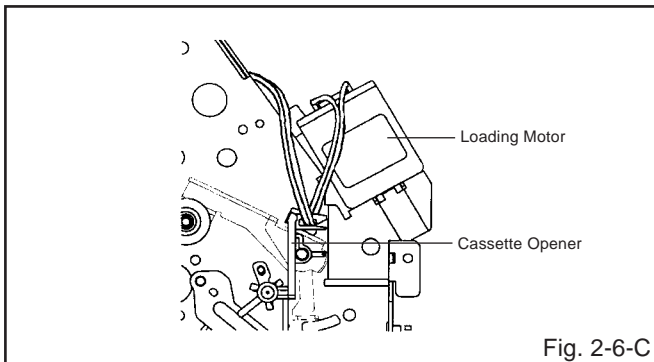


Fig. 2-6-C

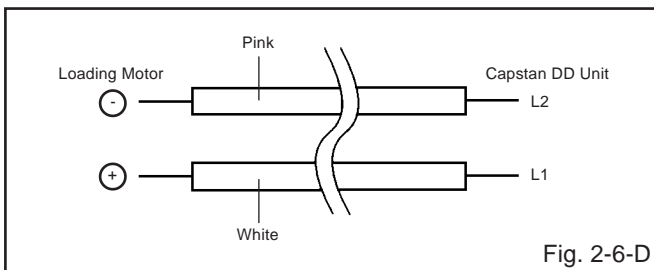


Fig. 2-6-D

2-7: TENSION ASS'Y (Refer to Fig. 2-7-B)

1. Turn the Pinch Roller Cam clockwise so that the Tension Holder hook is set to the position of Fig. 2-7-A to move the Tension Arm Ass'y.
2. Remove the Tension Spring.
3. Unlock the 2 supports ① and remove the Tension Band.
4. Unlock the support ② and remove the Tension Arm Ass'y.
5. Unlock the support ③ and remove the Tension Connect.
6. Float the hook ④ and turn it clockwise then remove the Tension Holder.

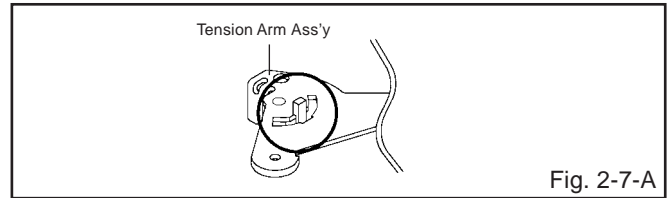


Fig. 2-7-A

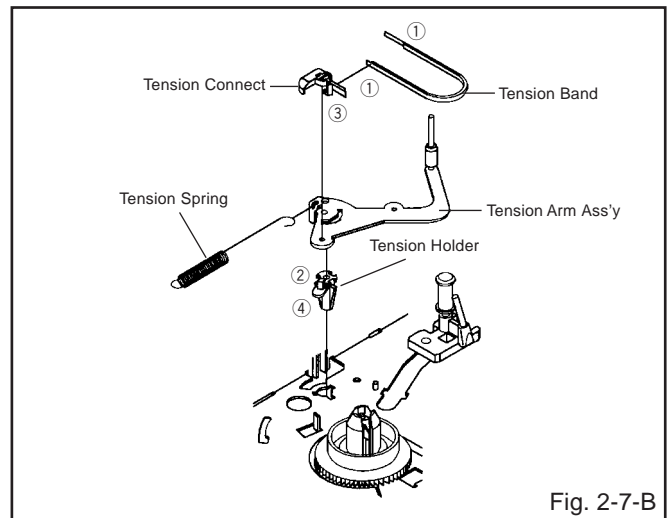


Fig. 2-7-B

NOTE

1. In case of the Tension Band installation, note the direction of the installation. (Refer to Fig. 2-7-C)
2. In case of the Tension Band installation, install correctly as Fig. 2-7-D.
3. In case of the Tension Connect installation, install as the circled section of Fig. 2-7-E.

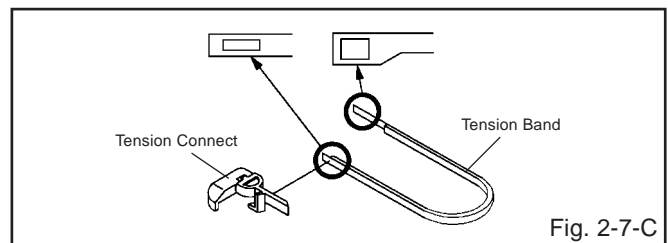


Fig. 2-7-C

DISASSEMBLY INSTRUCTIONS

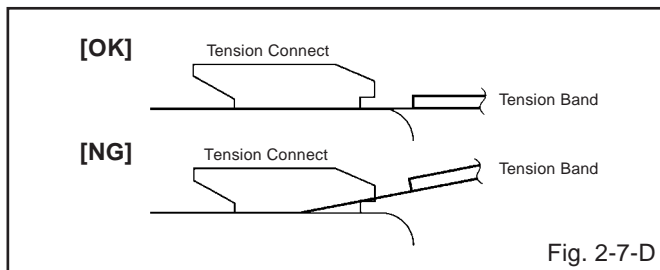


Fig. 2-7-D

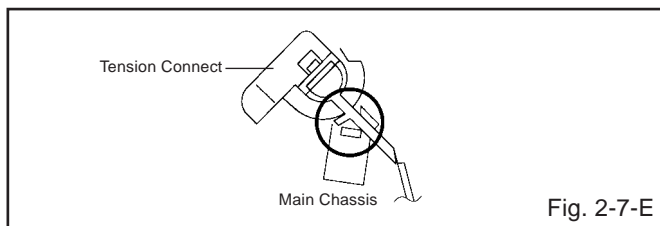


Fig. 2-7-E

2-8: T BRAKE ARM/T BRAKE BAND (Refer to Fig. 2-8-A)

1. Remove the T Brake Spring.
2. Turn the T Brake Arm clockwise and bend the hook section to remove it.
3. Unlock the 2 supports ① and remove the T Brake Band.

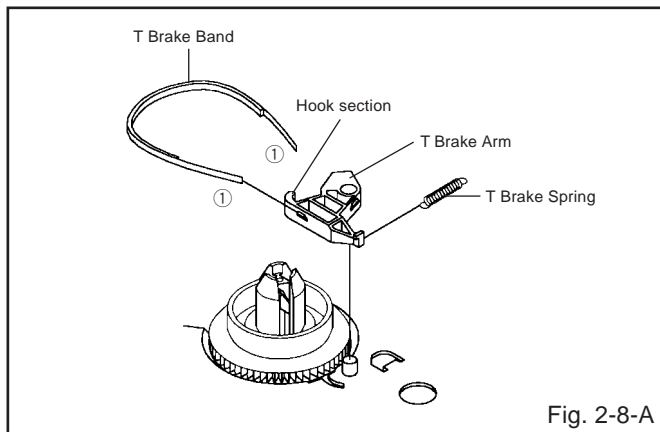


Fig. 2-8-A

NOTE

1. In case of the T Brake Band installation, install correctly as Fig. 2-8-B.

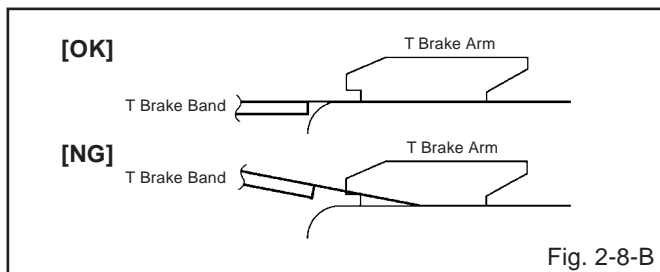


Fig. 2-8-B

2-9: S REEL/T REEL/IDLER ARM ASS'Y/IDLER GEAR (Refer to Fig. 2-9-A)

1. Remove the S Reel and T Reel.
2. Remove the 2 Polyslider Washers ①.
3. Remove the Idler Arm Ass'y and Idler Gear.

NOTE

1. Take care not to damage the gears of the S Reel and T Reel.
2. The Polyslider Washer may be remained on the back of the reel.
3. Take care not to damage the shaft.
4. Do not touch the section "A" of S Reel and T Reel. (Use gloves.) (Refer to Fig. 2-9-A) Do not adhere the stains on it.
5. When you install the reel, clean the shaft and grease it (FG-84M). (If you do not grease, noise may be heard in FF/REW mode.)
6. After installing the reel, adjust the height of the reel. (Refer to MECHANICAL ADJUSTMENT)

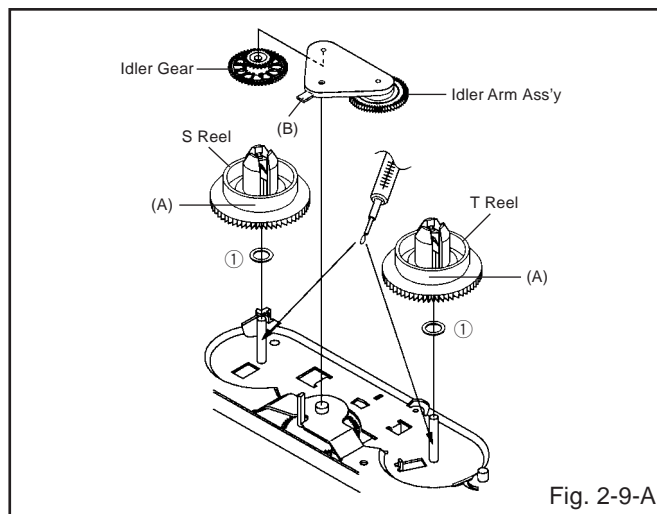


Fig. 2-9-A

NOTE

1. In case of the S Reel and T Reel installation, check if the correct parts are installed. (Refer to Fig. 2-9-B)
2. In case of the Idler Arm Ass'y installation, install correctly as Fig. 2-9-C. And also set it so that the section "B" of Fig. 2-9-A is placed under the Main Chassis tab.

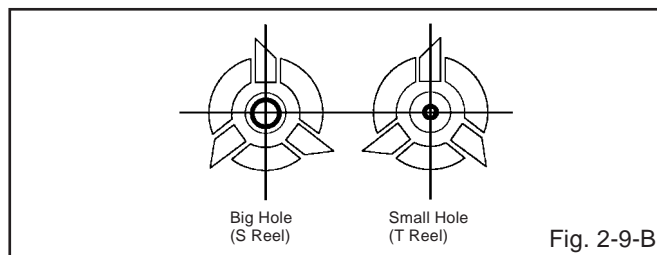


Fig. 2-9-B

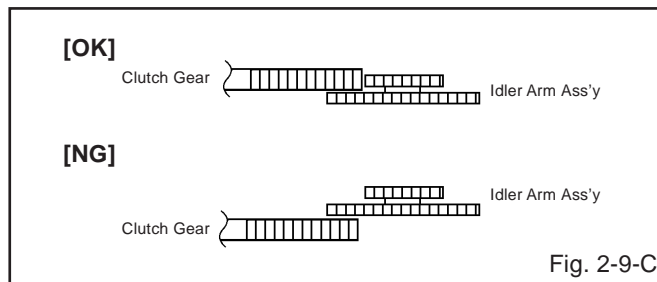


Fig. 2-9-C

DISASSEMBLY INSTRUCTIONS

2-10: CASSETTE OPENER/PINCH ROLLER BLOCK/P5 ARM ASS'Y (Refer to Fig. 2-10-A)

1. Unlock the support ① and remove the Cassette Opener.
2. Remove the Pinch Roller Block and P5 Arm Ass'y.

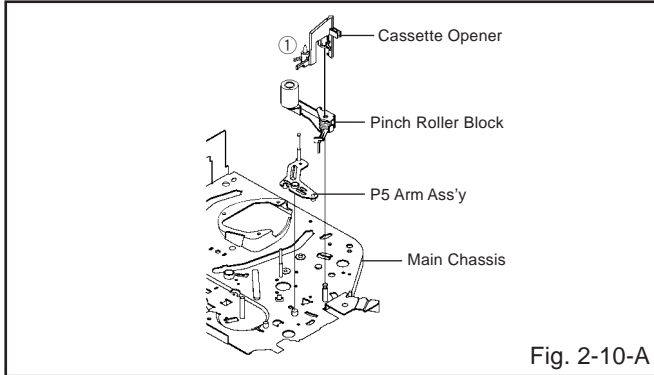


Fig. 2-10-A

NOTE

1. Do not touch the Pinch Roller. (Use gloves.)
2. In case of the Pinch Roller Block and the Pinch Roller Cam installation, install correctly as Fig. 2-10-B.

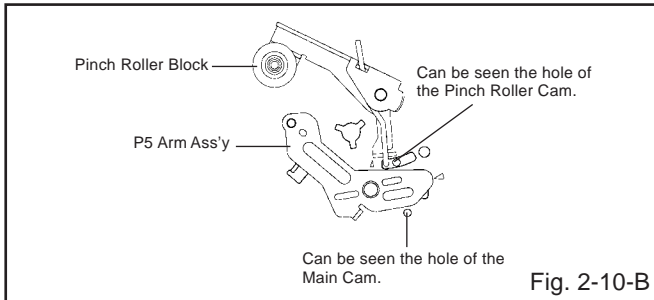


Fig. 2-10-B

2-11: A/C HEAD (Refer to Fig. 2-11-A)

1. Remove the screw ①.
2. Remove the A/C Head Base.
3. Remove the 3 screws ②.
4. Remove the A/C Head and A/C Head Spring.

NOTE

1. Do not touch the A/C Head. (Use gloves.)
2. When you install the A/C Head Spring, install as shown in Fig. 2-11-B.
3. When you install the A/C Head, tighten the screw (1) first, then tighten the screw (2), finally tighten the screw (3).

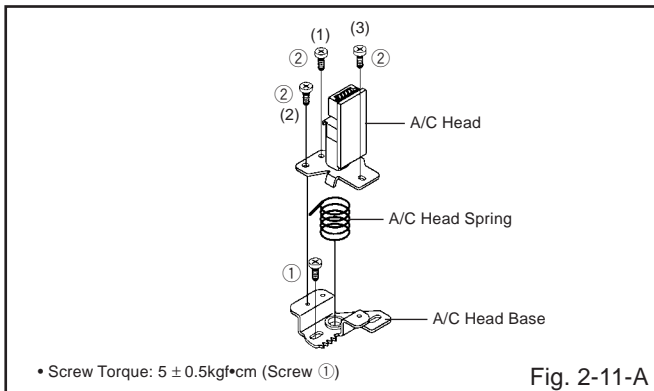


Fig. 2-11-A

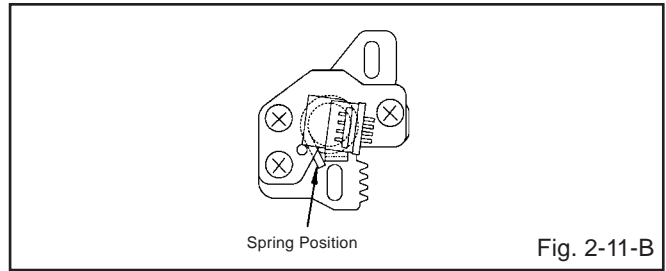


Fig. 2-11-B

2-12: FE HEAD (RECORDER ONLY) (Refer to Fig. 2-12)

1. Remove the screw ①.
2. Remove the FE Head.

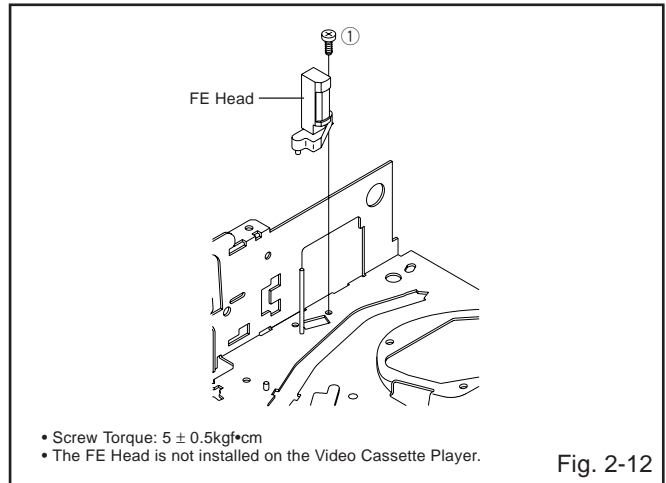


Fig. 2-12

2-13: CYLINDER UNIT ASS'Y (Refer to Fig. 2-13)

1. Disconnect the following connector: (CD2001)
2. Remove the 3 screws ①.
3. Remove the Cylinder Unit Ass'y.

NOTE

1. When you install the Cylinder Unit Ass'y, tighten the screws from (1) to (3) in order while pulling the Ass'y toward the left front direction.

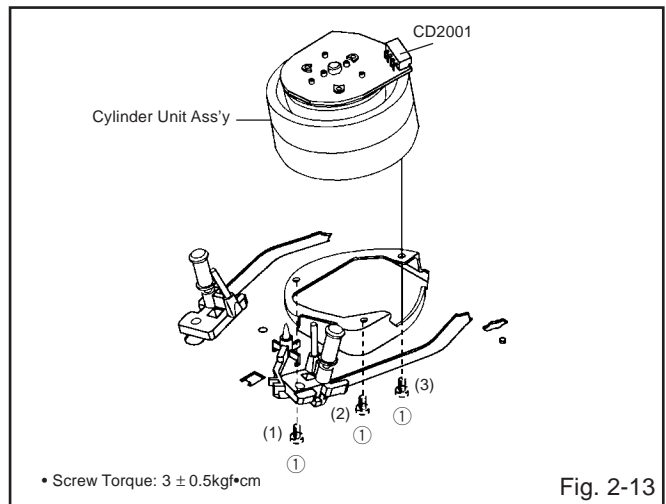
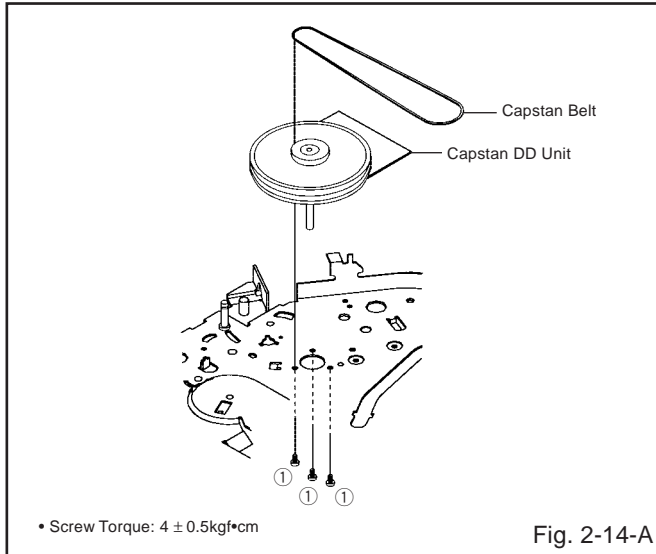


Fig. 2-13

DISASSEMBLY INSTRUCTIONS

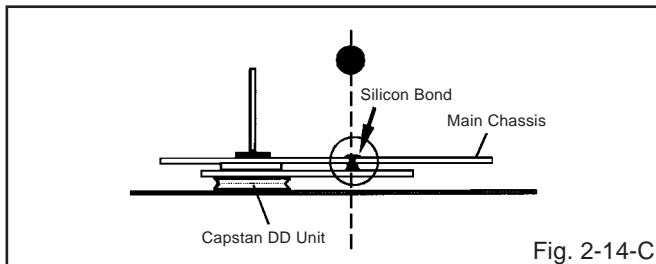
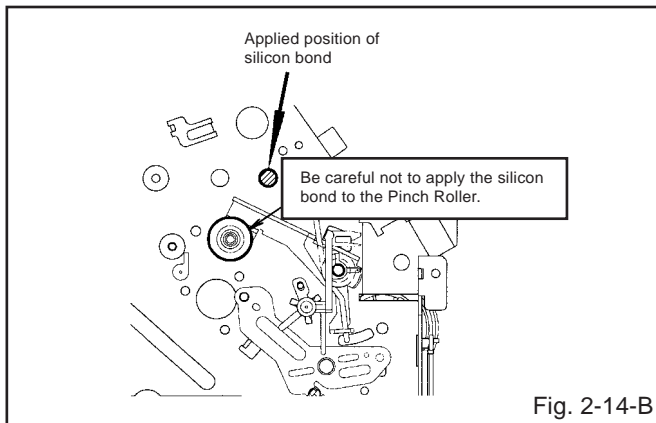
2-14: CAPSTAN DD UNIT (Refer to Fig. 2-14-A)

1. Remove the Capstan Belt.
2. Remove the 3 screws ①.
3. Remove the Capstan DD Unit.



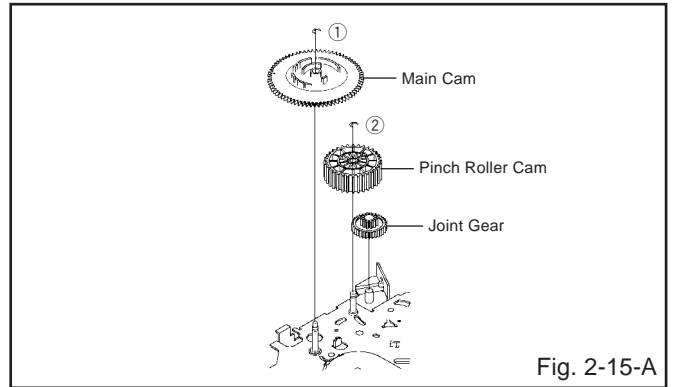
NOTE

1. In case of the Capstan DD Unit installation, apply the silicon bond (TSE3843-W) on the position Fig. 2-14-B correctly. (If no silicon bond applied, abnormal noise will be heard on the deck operation.)
(Refer to Fig. 2-14-B, C)



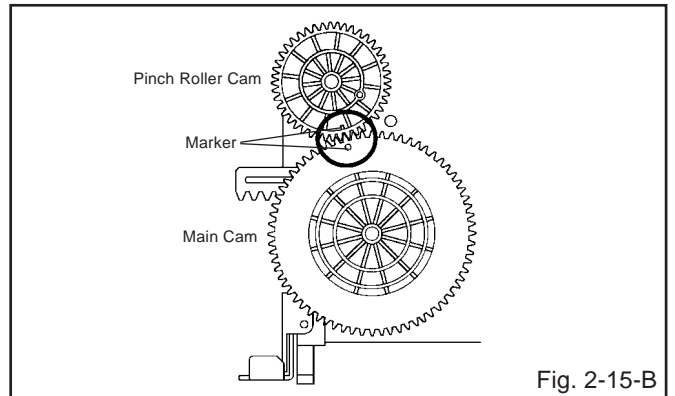
2-15: MAIN CAM/PINCH ROLLER CAM/JOINT GEAR (Refer to Fig. 2-15-A)

1. Remove the E-Ring ①, then remove the Main Cam.
2. Remove the E-Ring ②, then remove the Pinch Roller Cam and Joint Gear.



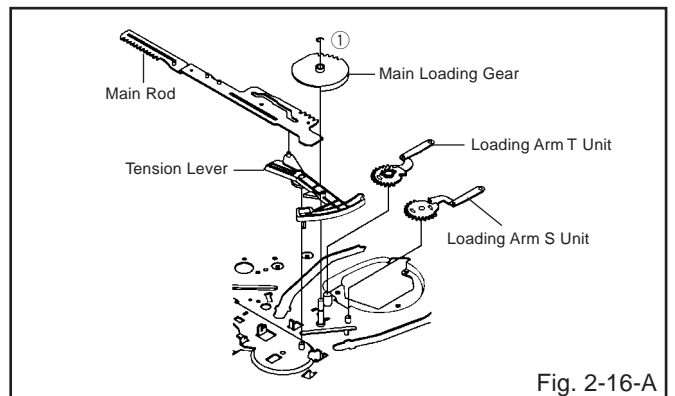
NOTE

1. In case of the Pinch Roller Cam and Main Cam installation, install them as the circled section of Fig. 2-15-B so that the each markers are met. (Refer to Fig. 2-15-B) And also can be seen the Main Chassis hole through the Main Cam maker hole.



2-16: LOADING GEAR S/T UNIT (Refer to Fig. 2-16-A)

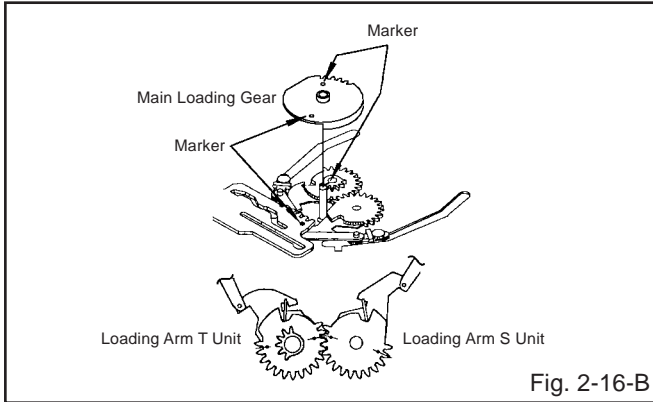
1. Remove the E-Ring ① and remove the Main Loading Gear.
2. Remove the Main Rod, Tension Lever, Loading Arm S Unit and Loading Arm T Unit.



DISASSEMBLY INSTRUCTIONS

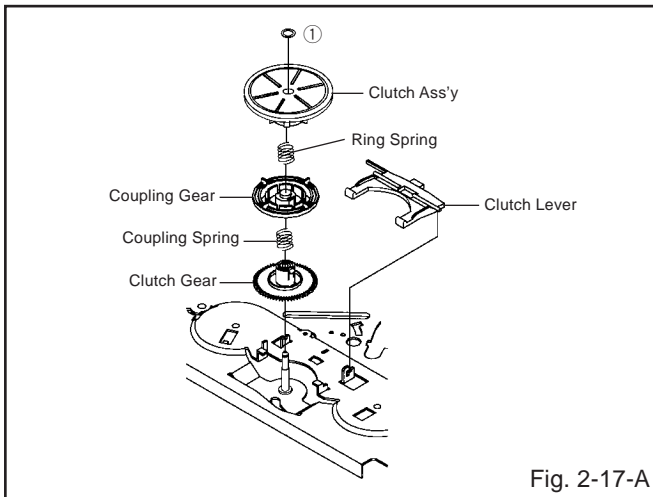
NOTE

1. When you install the Loading Arm S Unit, Loading Arm T Unit and Main Loading Gear, align each marker. (Refer to Fig. 2-16-B)



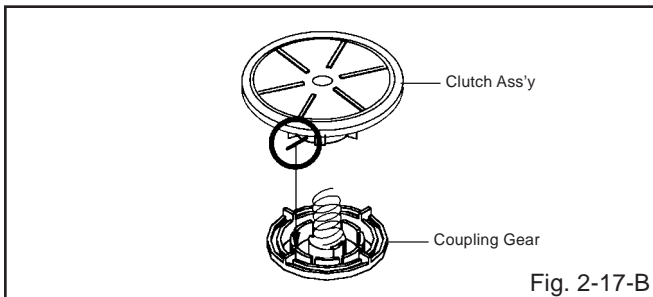
2-17: CLUTCH ASS'Y/RING SPRING/CLUTCH LEVER/CLUTCH GEAR (Refer to Fig. 2-17-A)

1. Remove the Polyslider Washer ①.
2. Remove the Clutch Ass'y and Ring Spring.
3. Remove the Clutch Lever.
4. Remove the Coupling Gear, Coupling Spring and Clutch Gear.



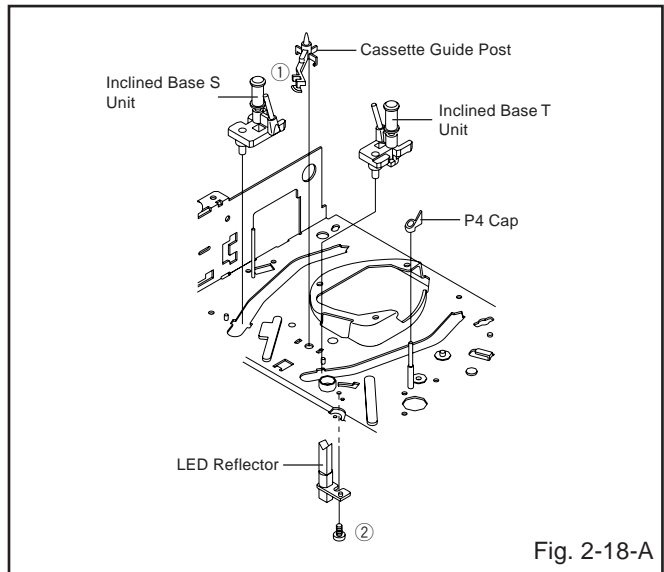
NOTE

1. In case of the Clutch Ass'y installation, install it with inserting the spring of the Clutch Ass'y into the dent of the Coupling Gear. (Refer to Fig. 2-17-B)



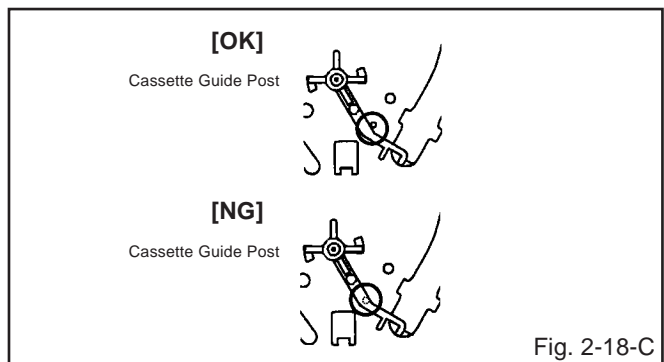
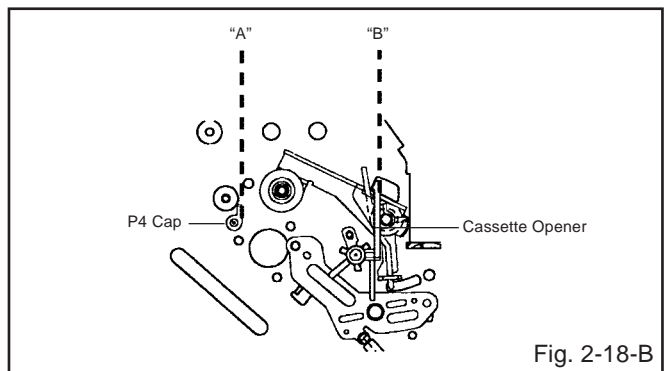
2-18: CASSETTE GUIDE POST/INCLINED BASE S/T UNIT/P4 CAP (Refer to Fig. 2-18-A)

1. Remove the P4 Cap.
2. Unlock the support ① and remove the Cassette Guide Post.
3. Remove the Inclined Base S/T Unit.
4. Remove the screw ②.
5. Remove the LED Reflector.



NOTE

1. Do not touch the roller of Guide Roller.
2. In case of the P4 Cap installation, install it with parallel for "A" and "B" of Fig. 2-18-B.
3. In case of the Cassette Guide Post installation, install correctly as the circled section of Fig. 2-18-C.



DISASSEMBLY INSTRUCTIONS

3. REMOVAL OF DVD DECK PARTS

NOTE

1. Do not disassemble the DVD DECK PARTS except listed parts here. Minute adjustments are needed if the disassemble is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

3-1: TRAY (Refer to Fig. 3-1-A)

1. Set the Tray opened. (Refer to the DISC REMOVAL METHOD AT NO POWER SUPPLY)
2. Unlock the support ① and remove the Tray.

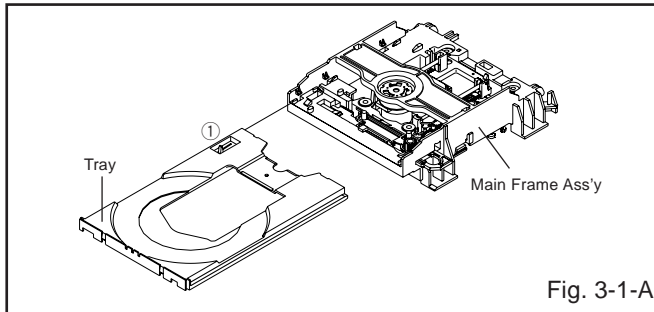


Fig. 3-1-A

NOTE

1. In case of the Tray installation, install them as the circled section of Fig. 3-1-B so that the each markers are met.

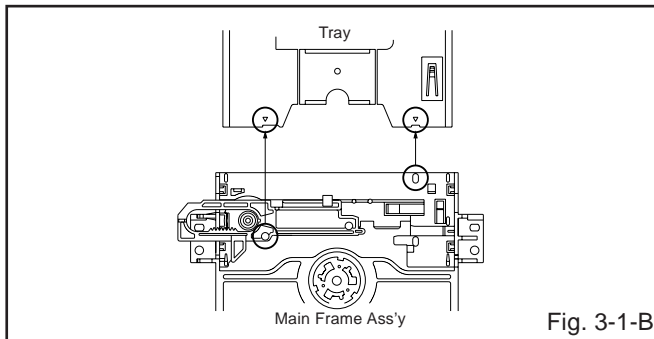


Fig. 3-1-B

3-2: MAIN CHASSIS ASS'Y (Refer to Fig. 3-2-A)

1. Remove the Main Chassis Ass'y from the Insulator (R).
2. Unlock the support ①.
3. Remove the Main Chassis Ass'y.

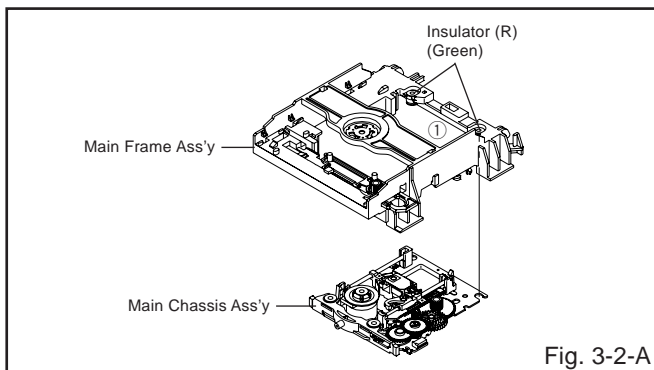


Fig. 3-2-A

NOTE

1. In case of the Main Chassis Ass'y, install it from (1) to (6) in order. (Refer to Fig. 3-2-B)

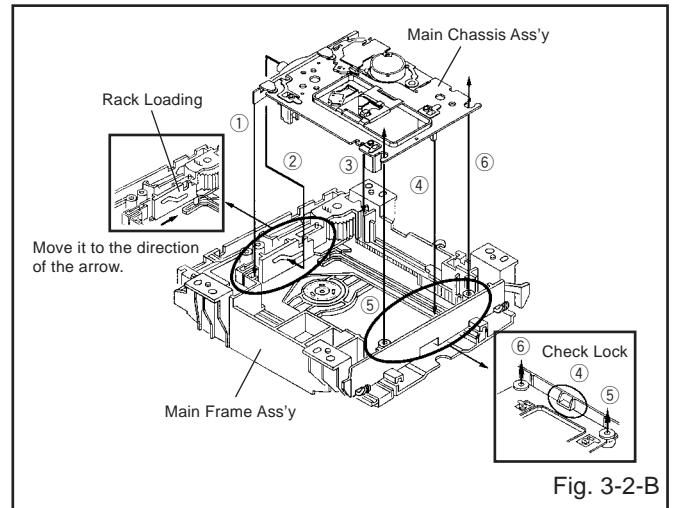


Fig. 3-2-B

3-3: RACK LOADING/MAIN GEAR/ RACK LOADING SPRING (Refer to Fig. 3-3)

1. Press down the catcher ① and slide the Rack Loading.
2. Remove the Rack Loading, Rack Loading Spring and Main Gear.

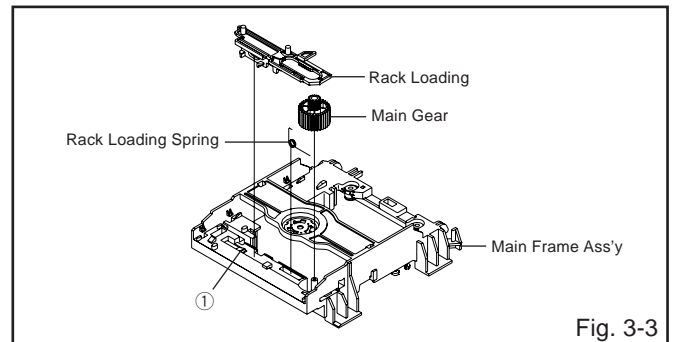


Fig. 3-3

3-4: CLAMPER ASS'Y/INSULATOR(R)/LEVER SWITCH (Refer to Fig. 3-4-A)

1. Remove the screw ①.
2. Remove the Lever Switch.
3. Remove the 2 Insulator (R).
4. Press the Clamper and rotate the Clamper Plate clockwise, then unlock the 3 supports ②.
5. Remove the Clamper Plate, Clamper Magnet and Clamper.

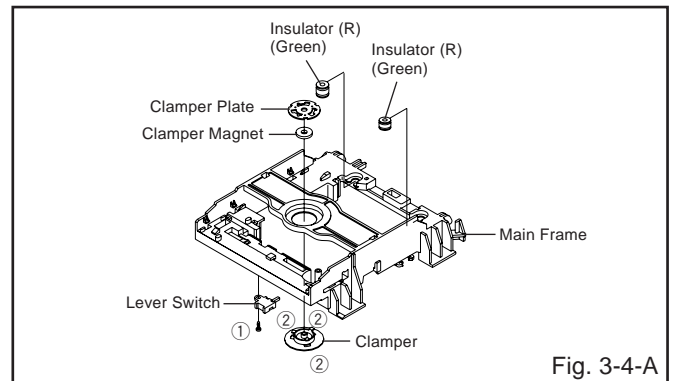
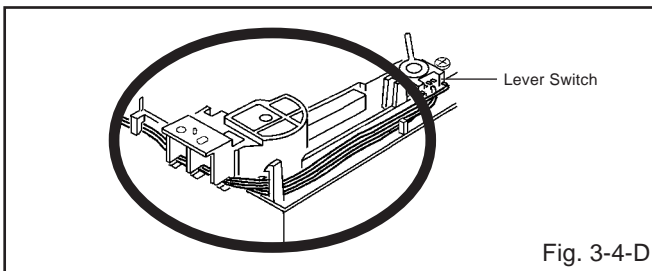
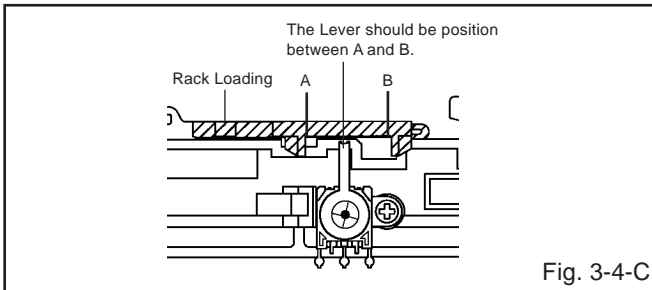
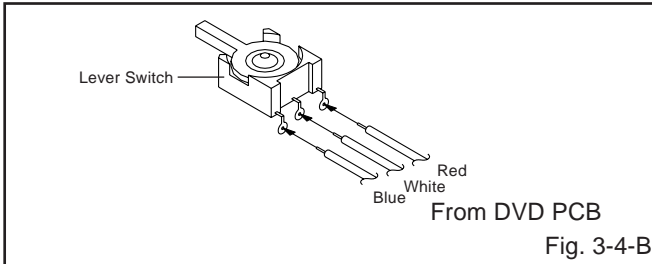


Fig. 3-4-A

DISASSEMBLY INSTRUCTIONS

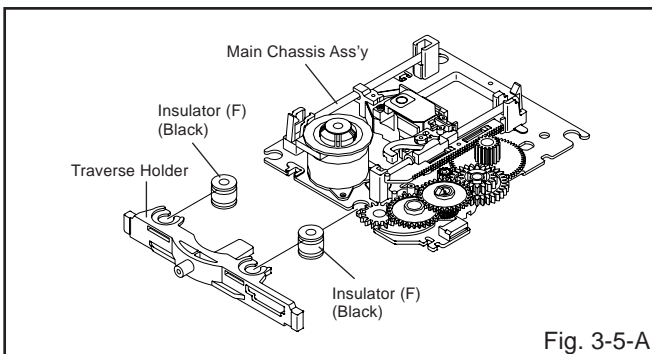
NOTE

1. When installing the Clamper Magnet, install it with the green face up.
2. When installing the wire of the Lever Switch, install it correctly as Fig. 3-4-B.
3. When installing the Lever Switch, install it correctly as Fig. 3-4-C.
4. In case of the Lever Switch installation, hook the wire on the Main Frame as shown Fig. 3-4-D.



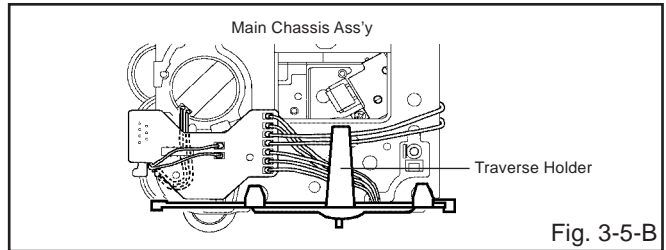
3-5: TRAVERSE HOLDER/INSULATOR (F) (Refer to Fig. 3-5-A)

1. Remove the Traverse Holder.
2. Remove the 2 Insulator (F).



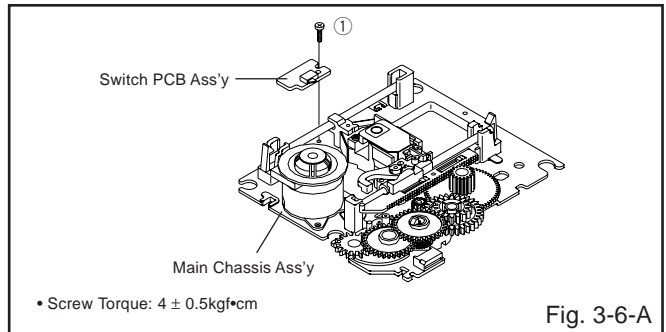
NOTE

1. After the installing of the Traverse Holder, check if the wire is like Fig. 3-5-B.



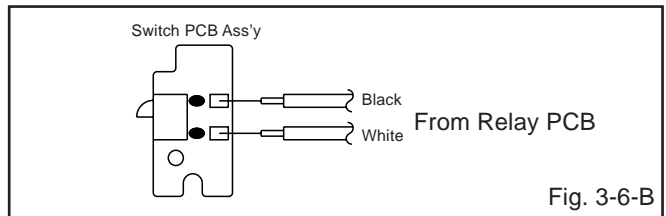
3-6: SWITCH PCB ASS'Y (Refer to Fig. 3-6-A)

1. Remove the screw ①.
2. Remove the Switch PCB Ass'y.



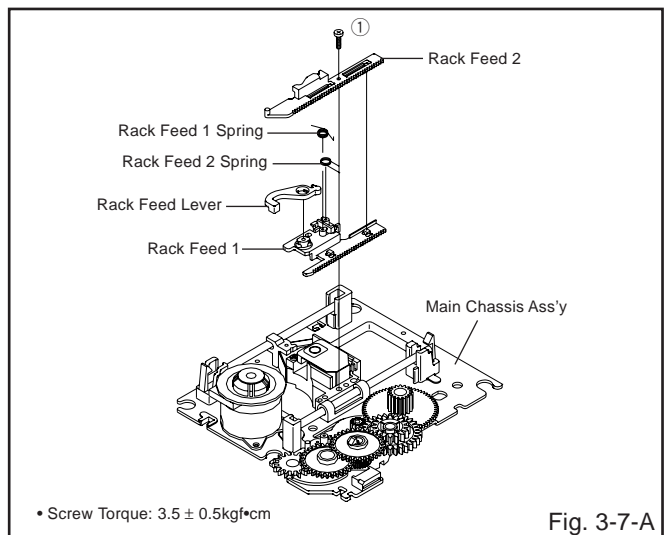
NOTE

1. When installing the wire of the Switch PCB, install it correctly as Fig. 3-6-B.



3-7: RACK FEED ASS'Y (Refer to Fig. 3-7-A)

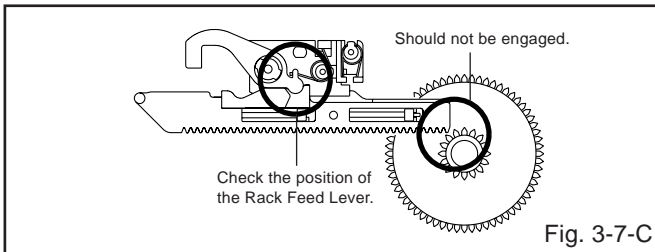
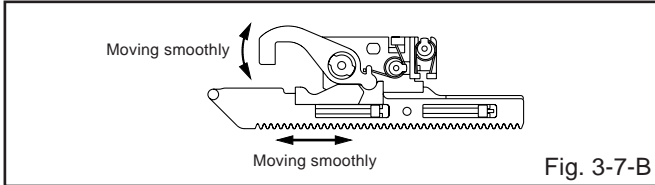
1. Remove the screw ①.
2. Remove the Rack Feed 1/2 Spring, Rack Feed 1/2 and Rack Feed Lever.



DISASSEMBLY INSTRUCTIONS

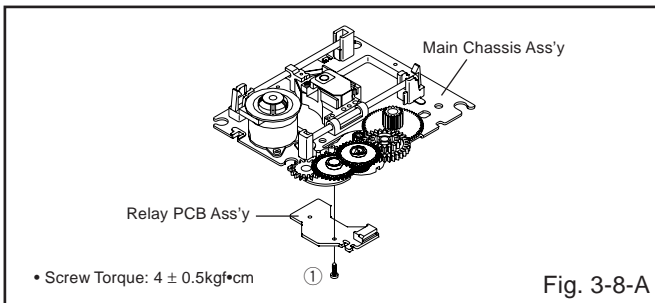
NOTE

1. After the assembly of the Rack Feed, check if the Rack Feed 1/2 is moving smoothly. (Refer to Fig. 3-7-B)
2. In case of the Rack Feed Ass'y installation, install correctly as Fig. 3-7-C.



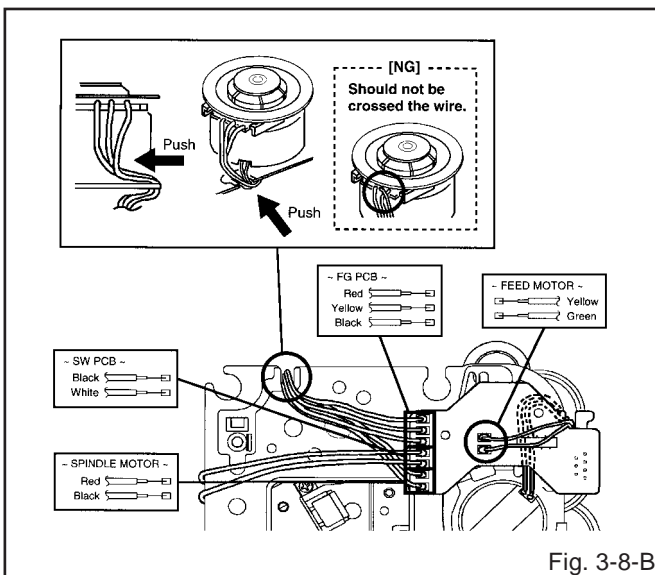
3-8: RELAY PCB ASS'Y (Refer to Fig. 3-8-A)

1. Remove the screw ①.
2. Remove the Relay PCB Ass'y.



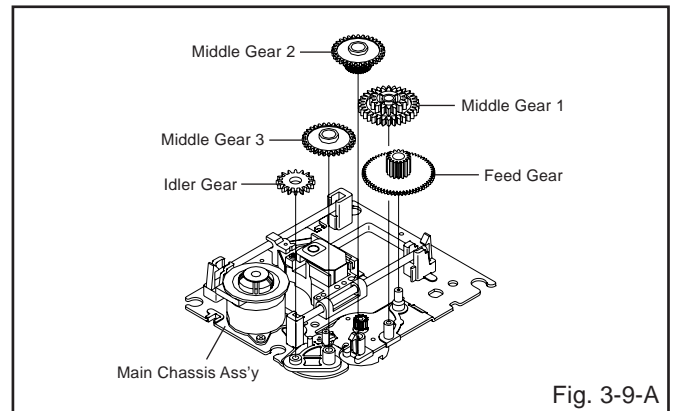
NOTE

1. When installing the wire of the Relay PCB, install it correctly as Fig. 3-8-B.



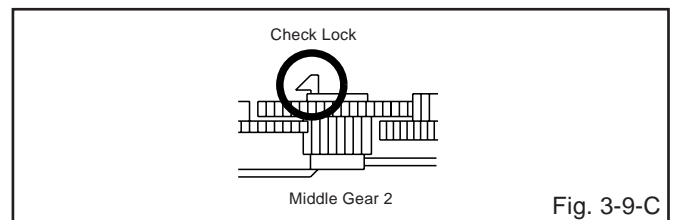
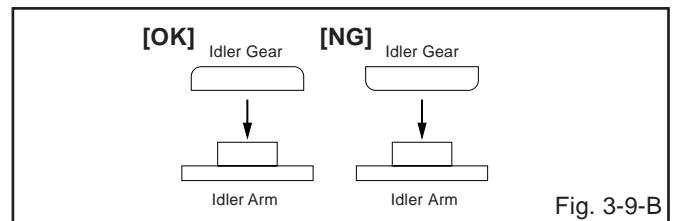
3-9: GEAR (Refer to Fig. 3-9-A)

1. Unlock the support ①.
2. Remove the Middle Gear 1/2/3, Idler Gear and Feed Gear.



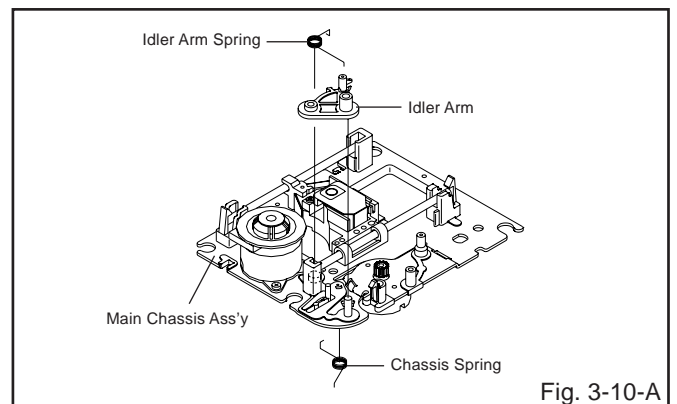
NOTE

1. In case of the Idler Gear installation, install correctly as Fig. 3-9-B.
2. When installing the Middle Gear 2, check if the Middle Gear 2 is locked correctly as Fig. 3-9-C.



3-10: IDLER ARM (Refer to Fig. 3-10-A)

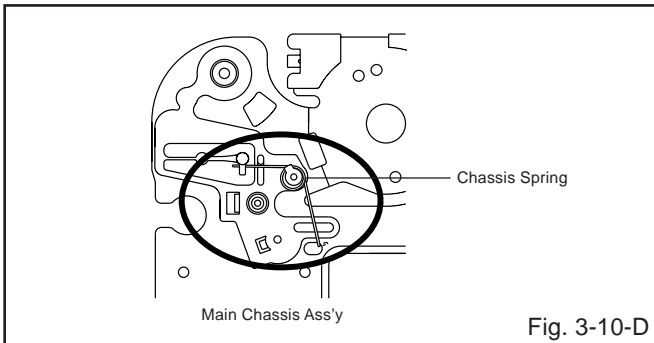
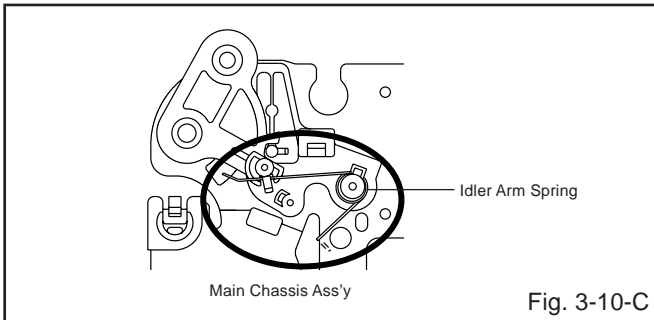
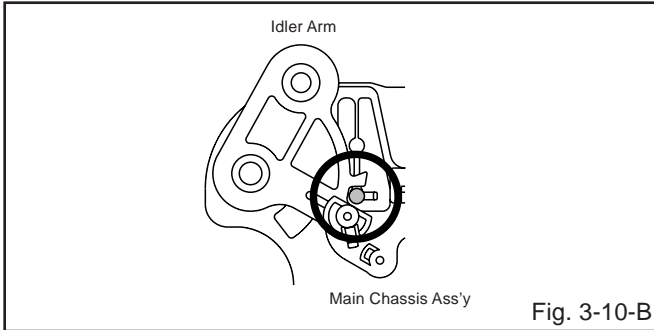
1. Remove the Idler Arm Spring.
2. Remove the Chassis Spring.
3. Remove the Idler Arm.



DISASSEMBLY INSTRUCTIONS

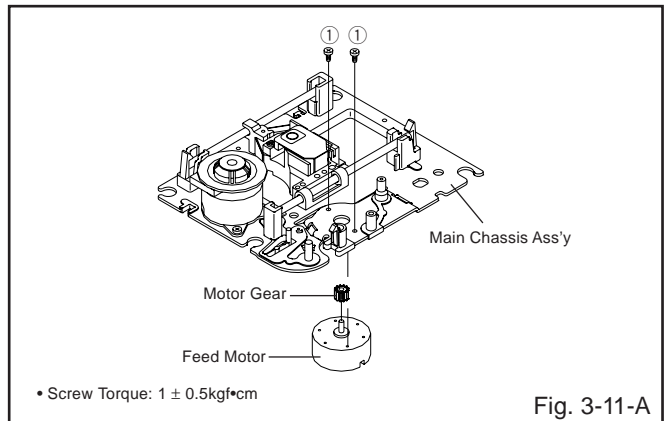
NOTE

1. In case of the Idler Arm installation, install as the circled section of Fig. 3-10-B.
2. In case of the Idler Arm Spring installation, install as the circled section of Fig. 3-10-C.
3. In case of the Chassis Spring installation, install as the circled section of Fig. 3-10-D.



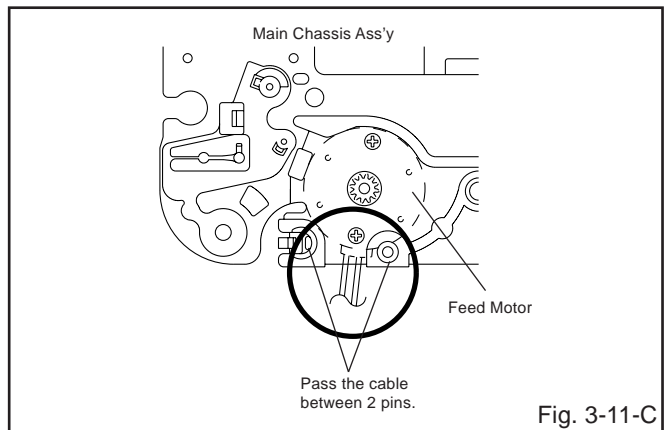
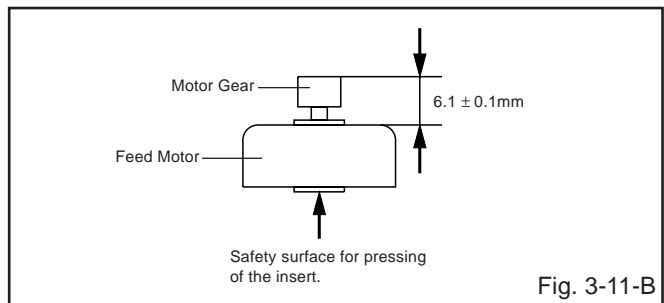
3-11: FEED MOTOR (Refer to Fig. 3-11-A)

1. Remove the 2 screws ①.
2. Remove the Feed Motor.
3. Remove the Motor Gear.



NOTE

1. In case of the Motor Gear installation, check if the value of the Fig. 3-11-B is correct.
2. When installing the Feed Motor, check if the cable is positioned as Fig. 3-11-C.



KEY TO ABBREVIATIONS

A	A/C	: Audio/Control	H.SW	: Head Switch
	ACC	: Automatic Color Control	Hz	: Hertz
	AE	: Audio Erase	I IC	: Integrated Circuit
	AFC	: Automatic Frequency Control	IF	: Intermediate Frequency
	AFT	: Automatic Fine Tuning	IND	: Indicator
	AFT DET	: Automatic Fine Tuning Detect	INV	: Inverter
	AGC	: Automatic Gain Control	K KIL	: Killer
	AMP	: Amplifier	L L	: Left
	ANT	: Antenna	LED	: Light Emitting Diode
	A.PB	: Audio Playback	LIMIT AMP	: Limiter Amplifier
	APC	: Automatic Phase Control	LM, LDM	: Loading Motor
	ASS'Y	: Assembly	LP	: Long Play
	AT	: All Time	L.P.F	: Low Pass Filter
	AUTO	: Automatic	LUMI.	: Luminance
	A/V	: Audio/Video	M M	: Motor
B	BGP	: Burst Gate Pulse	MAX	: Maximum
	BOT	: Beginning of Tape	MINI	: Minimum
	BPF	: Bandpass Filter	MIX	: Mixer, mixing
	BRAKE SOL	: Brake Solenoid	MM	: Monostable Multivibrator
	BUFF	: Buffer	MOD	: Modulator, Modulation
	B/W	: Black and White	MPX	: Multiplexer, Multiplex
C	C	: Capacitance, Collector	MS SW	: Mecha State Switch
	CASE	: Cassette	N NC	: Non Connection
	CAP	: Capstan	NR	: Noise Reduction
	CARR	: Carrier	O OSC	: Oscillator
	CH	: Channel	OPE	: Operation
	CLK	: Clock	P PB	: Playback
	CLOCK (SY-SE)	: Clock (Syscon to Servo)	PB CTL	: Playback Control
	COMB	: Combination, Comb Filter	PB-C	: Playback-Chrominance
	CONV	: Converter	PB-Y	: Playback-Luminance
	CPM	: Capstan Motor	PCB	: Printed Circuit Board
	CTL	: Control	P. CON	: Power Control
	CYL	: Cylinder	PD	: Phase Detector
	CYL-M	: Cylinder-Motor	PG	: Pulse Generator
	CYL SENS	: Cylinder-Sensor	P-P	: Peak-to Peak
D	DATA (SY-CE)	: Data (Syscon to Servo)	R R	: Right
	dB	: Decibel	REC	: Recording
	DC	: Direct Current	REC-C	: Recording-Chrominance
	DD Unit	: Direct Drive Motor Unit	REC-Y	: Recording-Luminance
	DEMOD	: Demodulator	REEL BRK	: Reel Brake
	DET	: Detector	REEL S	: Reel Sensor
	DEV	: Deviation	REF	: Reference
E	E	: Emitter	REG	: Regulated, Regulator
	EF	: Emitter Follower	REW	: Rewind
	EMPH	: Emphasis	REV, RVS	: Reverse
	ENC	: Encoder	RF	: Radio Frequency
	ENV	: Envelope	RMC	: Remote Control
	EOT	: End of Tape	RY	: Relay
	EQ	: Equalizer	S S. CLK	: Serial Clock
	EXT	: External	S. COM	: Sensor Common
F	F	: Fuse	S. DATA	: Serial Data
	FBC	: Feed Back Clamp	SEG	: Segment
	FE	: Full Erase	SEL	: Select, Selector
	FF	: Fast Forward, Flipflop	SENS	: Sensor
	FG	: Frequency Generator	SER	: Search Mode
	FL SW	: Front Loading Switch	SI	: Serial Input
	FM	: Frequency Modulation	SIF	: Sound Intermediate Frequency
	FSC	: Frequency Sub Carrier	SO	: Serial Output
	FWD	: Forward	SOL	: Solenoid
G	GEN	: Generator	SP	: Standard Play
	GND	: Ground	STB	: Serial Strobe
H	H.P.F	: High Pass Filter	SW	: Switch

KEY TO ABBREVIATIONS

SYNC	: Synchronization
SYNC SEP	: Sync Separator, Separation
TR	: Transistor
TRAC	: Tracking
TRICK PB	: Trick Playback
TP	: Test Point
UNREG	: Unregulated
V	: Volt
VCO	: Voltage Controlled Oscillator
VIF	: Video Intermediate Frequency
VP	: Vertical Pulse, Voltage Display
V.PB	: Video Playback
VR	: Variable Resistor
V.REC	: Video Recording
VSF	: Visual Search Fast Forward
VSR	: Visual Search Rewind
VSS	: Voltage Super Source
V-SYNC	: Vertical-Synchronization
VT	: Voltage Tuning
X'TAL	: Crystal
Y/C	: Luminance/Chrominance

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit or on the main unit and on the remote control for more than a standard time (second).

Set Key	Set Key	Standard Time (seconds)	Operations
CH UP	FF	2	PLAY/REC total hours are displayed on the TV Monitor. Refer to the "PREVENTIVE CHECKS AND SERVICE INTERVALS" (CONFIRMATION OF HOURS USED). Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
CH UP	STOP	2	Adjust the SWITCHING POINT automatically. Refer to the "ELECTRICAL ADJUSTMENT" (SWITCHING POINT).
CH UP	PLAY	2	Initialization of the factory on VCR. NOTE: Do not use this for the normal servicing. If you set a factory initialization, the memories are reset such as the clock setting, the channel setting, and PLAY/REC total hours.
CH DOWN	POWER	2	VCR operation mode at no connection of DVD. Refer to the "PREPARATION FOR SERVICING" NOTE: Although the DVD is connected, the DVD mode cannot be selected.

Set Key	Remocon Key	Standard Time (seconds)	Operations
REC	4	2	Initialization of the factory on DVD. NOTE: The function will only work without the setting of DVD disc at DVD mode. Do not use this for the normal servicing.
REC	6	2	DVD Write mode. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: The function will only work at the DVD stop mode. Do not use this for the normal servicing.
STOP	1	3	Check for the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE". NOTE: The function will only work at the DVD stop mode. Do not use this for the normal servicing.
STOP	7	3	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL". NOTE: The function will only work without the setting of DVD disc at DVD mode.

<NOTE> WHEN "N" IS ALWAYS BEING DISPLAYED ON THE TV MONITOR. (REMOTE CONTROLLER FORMAT)

This product is usable the remote controller which is used by DVD+VHS of the other brand.

If "N" is always being displayed on the TV monitor, can not control from provided remote controller since this product is other brand format.

• **How to return a JVC format.**

Turn off the power of the set and push the CHANNEL+ button and the REC button of the set simultaneously.

PARENTAL CONTROL - RATING LEVEL (4 DIGIT PASSWORD CANCELLATION)

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn Unit ON.
2. Press and hold the '7' key on the remote control unit.
3. Simultaneously press and hold the 'STOP' key on the front panel.
4. Hold both keys for more than 3 seconds.
5. The On Screen Display message 'PASSWORD CLEAR' will appear.
6. The 4 digit password has now been cleared.

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

NOTE: No need setting for after INI 2E.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	0E	30	BA	60	64	64	4A	86	0B	2B	86	32	8A	08	0A	0F
10	AF	97	95	8A	A0	90	31	04	88	A5	9F	3A	00	10	BF	00
20	3A	11	22	70	61	2A	3A	00	0B	00	00	85	A2	B0	00	---

Table 1

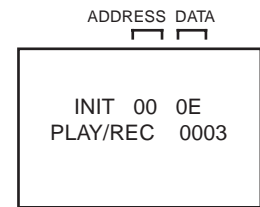


Fig. 1

1. Connect the set to TV Monitor.
 2. Turn on the POWER.
 3. Press both CH UP button on the set and the FF button on the set for more than 2 seconds.
ADDRESS and DATA will appear on TV Monitor as **Fig 1**.
 4. ADDRESS is now selected and should "blink". Using the SET + or - button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
 5. Press ENTER to select DATA. When DATA is selected, it will "blink".
 6. Again, step through the DATA using SET + or - button until required DATA value has been selected.
 7. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
 8. Repeat steps 4 to 7 until all data has been checked.
 9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.
After the data input, set to the initializing of shipping.
 10. Turn on the POWER.
 11. Press both CH UP button on the set and the PLAY button on the set for more than 2 seconds.
 12. After the finishing of the initializing of shipping, the unit will turn off automatically.
- The unit will now have the correct DATA for the new MEMORY IC.

PREVENTIVE CHECKS AND SERVICE INTERVALS

The following standard table depends on environmental conditions and usage.

Parts replacing time does not mean the life span for individual parts.

Also, long term storage or misuse may cause transformation and aging of rubber parts.

The following list means standard hours, so the checking hours depends on the conditions.

Parts Name	Time 500 hours	1,000 hours	1,500 hours	2,000 hours	2,500 hours	Notes
Audio Control Head	■	■	■	●	●	Clean those parts in contact with the tape.
Full Erase Head (Recorder only)	■	■	■	●	●	
Capstan Belt		●	●	●	●	Clean the rubber, and parts which the rubber touches.
Pinch Roller	■	●	●	●	●	
Capstan DD Unit		●	●	●	●	
Loading Motor					●	
Tension Band		●	●	●	●	
T Brake Band		●	●	●	●	
Clutch Ass'y		●	●	●	●	
Idler Arm Ass'y		●	●	●	●	
Capstan Shaft	■	■	■	■	■	
Tape Running Guide Post	■	■	■	■	■	Replace when rolling becomes abnormal.
Cylinder Unit	■	●	●	●	●	Clean the Head

■ : Clean
● : Check it and if necessary, replace it.

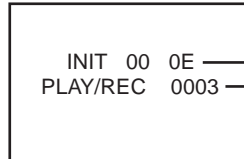
CONFIRMATION OF HOURS USED

PLAY/REC total hours can be checked on the FIP.

Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Connect the set to TV Monitor.
2. Turn on the POWER.
3. Press both CH UP button on the set and the FF button on the set for more than 2 seconds.
4. After the confirmation of using hours, turn off the power.



Initial setting content of MEMORY IC.
PLAY/REC total hours.
= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

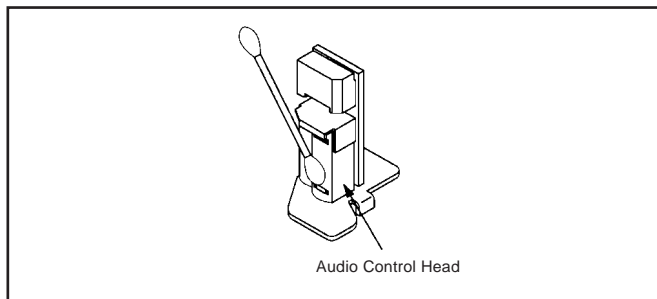
CLEANING

NOTE

After cleaning the heads with isopropyl alcohol, do not run a tape until the heads dry completely. If the heads are not completely dry and alcohol gets on the tape, damage may occur.

1. AUDIO CONTROL HEAD

Clean the Audio Control Head with the cotton stick soaked by alcohol. Clean the full erase head in the same manner. **(Refer to the figure below.)**



2. TAPE RUNNING SYSTEM

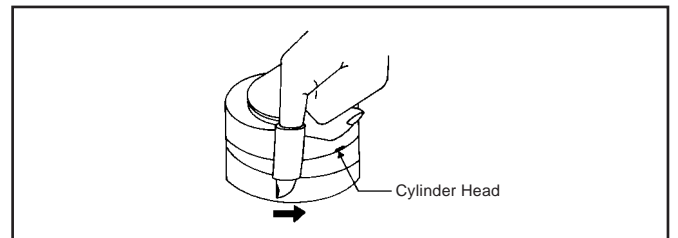
When cleaning the tape transport system, use the gauze moistened with isopropyl alcohol.

3. CYLINDER

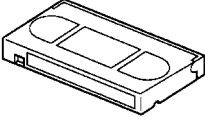
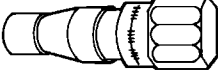
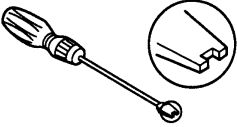
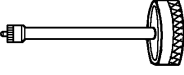
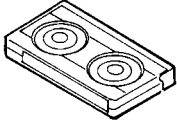
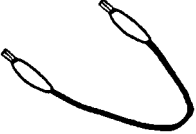
Wrap a piece of chamois around your finger. Dip it in isopropyl alcohol. Hold it to the cylinder head softly. Turn the cylinder head counterclockwise to clean it (in the direction of the arrow). **(Refer to the figure below.)**

NOTE

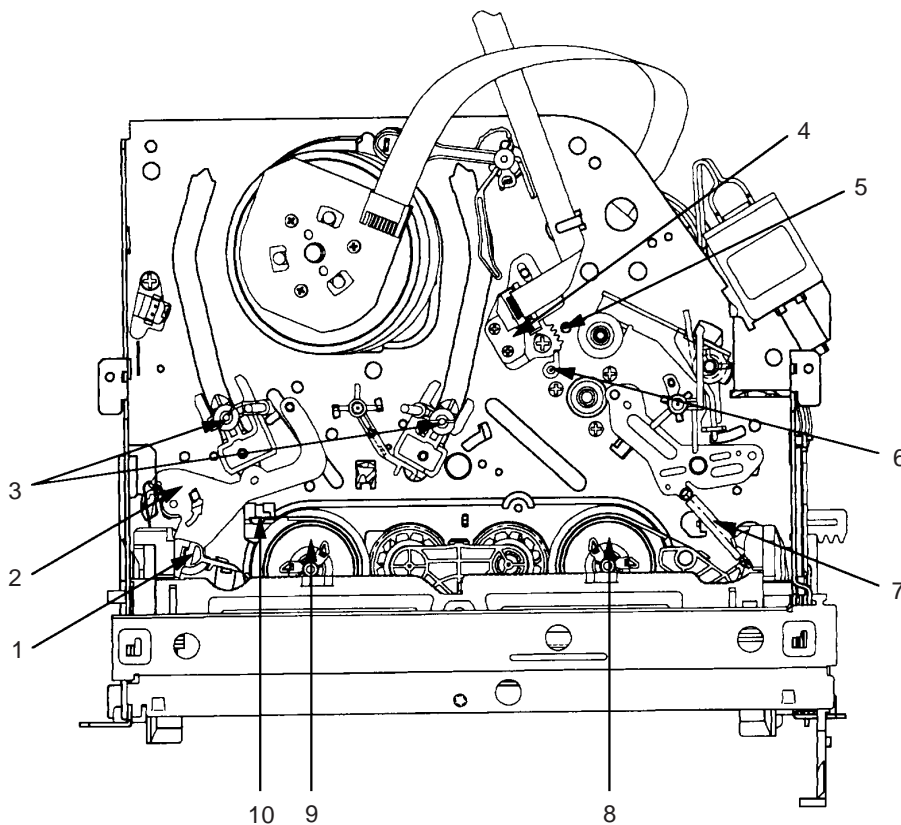
Do not exert force against the cylinder head. Do not move the chamois upward or downward on the head. Use the chamois one by one.



SERVICING FIXTURES AND TOOLS

<p>(4 heads model) VHS Alignment Tape MHP</p> 	<p>Torque Gauge PUJ48075-2</p> 	<p>Roller Driver PTU94002-2</p> 	<p>X-JG153 X Value Adjustment Screwdriver</p> 
<p>Torque Tape</p> 	<p>Short Jumper</p> 		

MECHANISM ADJUSTMENT PARTS LOCATION GUIDE

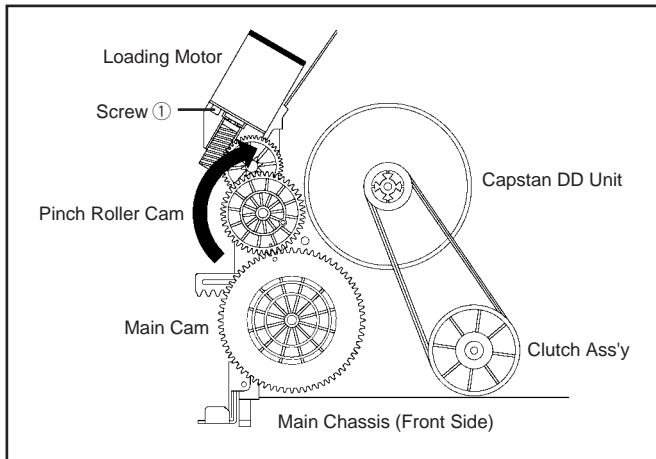


1. Tension Connect
2. Tension Arm
3. Guide Roller
4. Audio/Control Head
5. X value adjustment driver hole
6. P4 Post
7. T Brake Spring
8. T Reel
9. S Reel
10. Adjusting section for the Tension Arm position

MECHANICAL ADJUSTMENTS

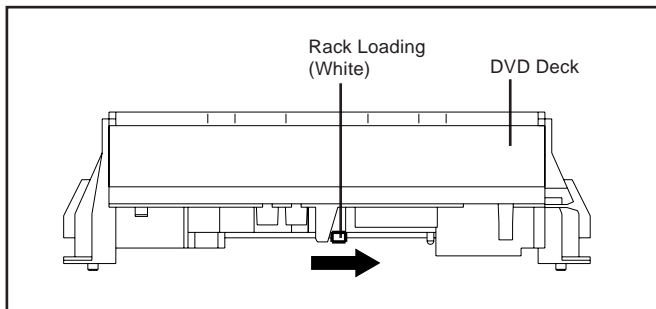
TAPE REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Top Cabinet, Front Cabinet and DVD Block. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Remove the screw ① of the Deck Chassis and remove the Loading Motor. **(Refer to Fig. 2)**
3. Rotate the Pinch Roller Cam in the direction of the arrow by hand to slacken the Video Tape.
4. Rotate the Clutch Ass'y either of the directions to wind the Video Tape in the Cassette Case.
5. Repeat the above step 3~4. Then take out the Video Cassette from the Deck Chassis.
Be careful not to scratch on the tape.



DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Top Cabinet and Front Cabinet. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Slide the Rack Loading (White) toward the arrow direction by using a minus driver to release the lock. **(Refer to Fig. 1)**
3. Draw the Tray.



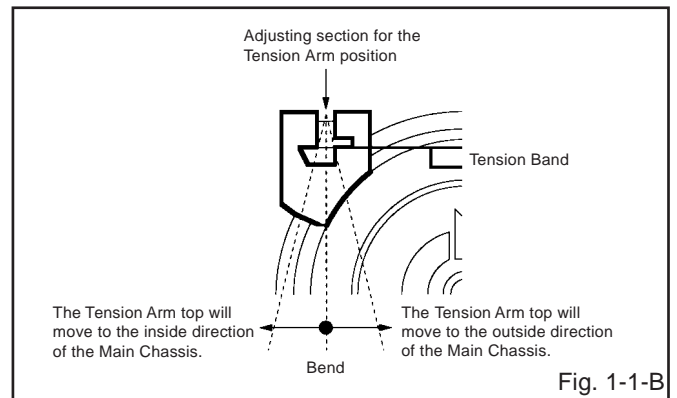
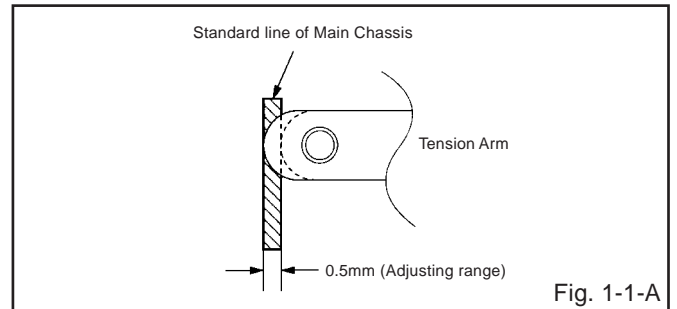
1. CONFIRMATION AND ADJUSTMENT

Read the following NOTES before starting work.

- Place an object which weighs between 450g~500g on the Cassette Tape to keep it steady when you want to make the tape run without the Cassette Holder. (Do not place an object which weighs over 500g.)

1-1: CONFIRMATION AND ADJUSTMENT OF TENSION POST POSITION

1. Set to the PLAY mode.
2. Adjust the adjusting section for the Tension Arm position so that the Tension Arm top is within the standard line of Main Chassis.
3. While turning the S Reel clockwise, confirm that the edge of the Tension Arm is located in the position described above.



1-2: CONFIRMATION OF PLAYBACK TORQUE AND BACK TENSION TORQUE DURING PLAYBACK

1. After confirmation and adjustment of Tension Post position **(Refer to item 1-1)**, load the cassette type torque tape and set to the PLAY mode.
2. Confirm that the right meter of the torque tape indicates 50~90gf•cm during playback in SP mode.
3. Confirm that the left meter of the torque tape indicates 25~40gf•cm during playback in SP mode.

1-3: CONFIRMATION OF VSR TORQUE

1. Install the Torque Gauge on the S Reel. Set to the Picture Search (Rewind) mode. **(Refer to Fig.1-2-B)**
2. Then, confirm that it indicates 120~180gf•cm.

NOTE

Install the Torque Gauge on the reel disk firmly. Press the REW button to turn the reel disk.

MECHANICAL ADJUSTMENTS

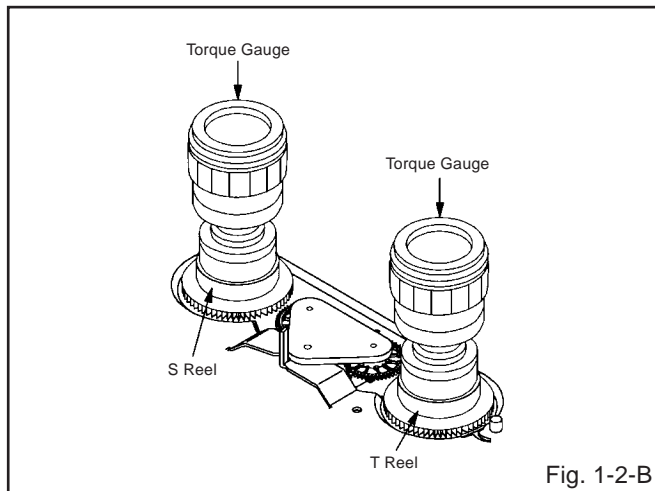
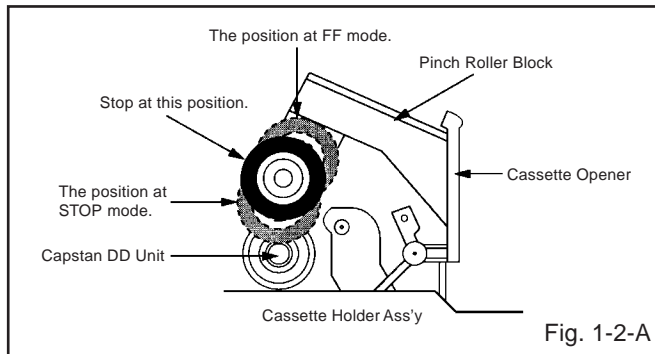
1-4: CONFIRMATION OF REEL BRAKE TORQUE

(S Reel Brake) (Refer to Fig. 1-2-B)

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of Fig. 1-2-A.
2. Move the Idler Ass'y from the S Reel.
3. Install the Torque Gauge on the S Reel. Turn the Torque Gauge clockwise.
4. Then, confirm that it indicates 60~100gf•cm.

(T Reel Brake) (Refer to Fig. 1-2-B)

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of Fig. 1-2-A.
2. Move the Idler Ass'y from the T Reel.
3. Install the Torque Gauge on the T reel. Turn the Torque Gauge counterclockwise.
4. Then, confirm that it indicates 30~50gf•cm.



NOTE

If the torque is out of the range, replace the following parts.

Check item	Replacement Part
1-3	Idler Ass'y/Clutch Ass'y
1-4	S Reel side: S Reel/Tension Band/Tension Connect/Tension Arm Ass'y T Reel side: T Reel/T Brake Band//T Brake Spring/T Brake Arm

2. CONFIRMATION AND ADJUSTMENT OF TAPE RUNNING MECHANISM

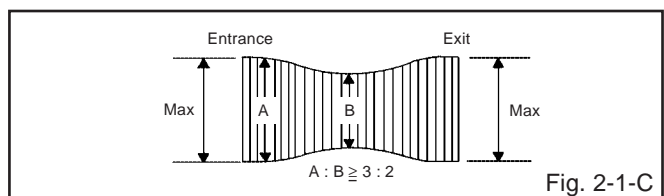
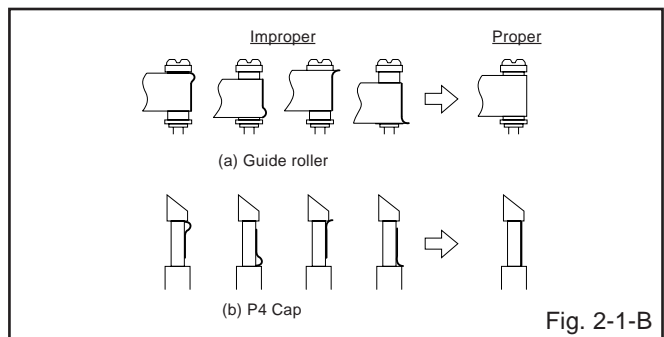
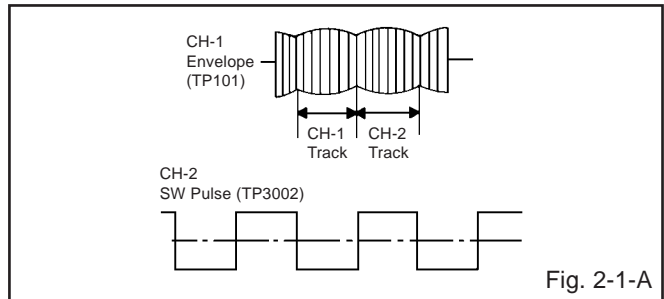
Tape Running Mechanism is adjusted precisely at the factory. Adjustment is not necessary as usual. When you replace the parts of the tape running mechanism because of long term usage or failure, the confirmation and adjustment are necessary.

2-1: GUIDE ROLLER

1. Playback the VHS Alignment Tape (MHP).
2. Connect CH-1 of the oscilloscope to TP101 (Envelope) and CH-2 to TP3002 (SW Pulse).
3. Press and hold the Tracking-Auto button on the remote control more than 2 seconds to set tracking to center.
4. Trigger with SW Pulse and observe the envelope. (Refer to Fig. 2-1-A)
5. When observing the envelope, adjust the Roller Driver (PTU94002-2) slightly until the envelope will be flat. Even if you press the Tracking Button, adjust so that flatness is not moved so much. (Refer to Fig. 2-1-B)
6. Adjust so that the A : B ratio is better than 3 : 2 as shown in Fig. 2-1-C, even if you press the Tracking Button to move the envelope (The envelope waveform will begin to decrease when you press the Tracking Button).
7. Adjust the PG shifter during playback. (Refer to the ELECTRICAL ADJUSTMENTS)

NOTE

After adjustment, confirm and adjust A/C head. (Refer to item 2-2)

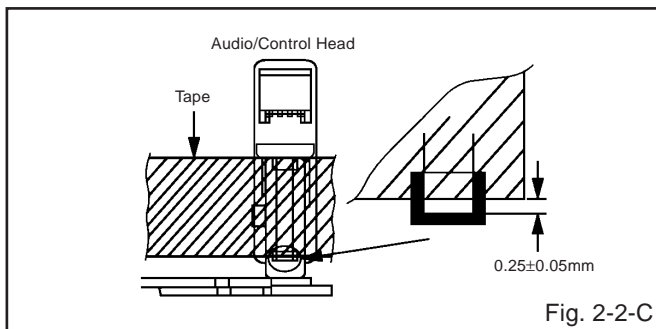
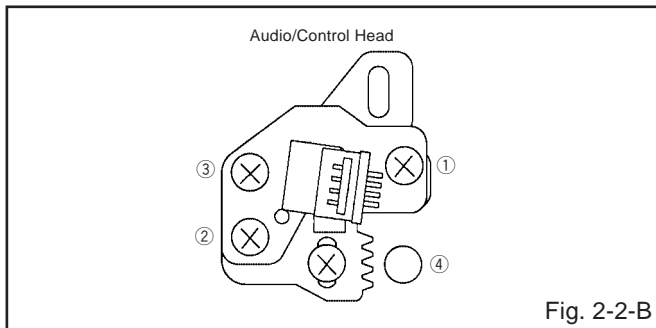
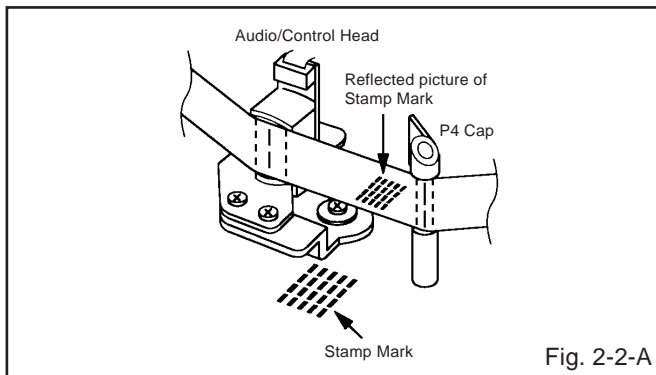


MECHANICAL ADJUSTMENTS

2-2: CONFIRMATION AND ADJUSTMENT OF AUDIO/CONTROL HEAD

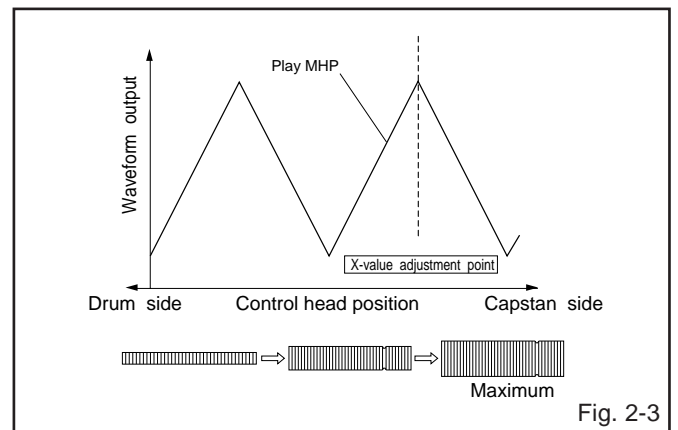
When the Tape Running Mechanism does not work well, adjust the following items.

1. Playback the VHS Alignment Tape (**MHP**).
2. Confirm that the reflected picture of stamp mark is appeared on the tape prior to P4 Post as shown in **Fig. 2-2-A**.
 - a) When the reflected picture is distorted, turn the screw ① clockwise until the distortion is disappeared.
 - b) When the reflected picture is not distorted, turn the screw ① counterclockwise until little distortion is appeared, then adjust the a).
3. Turn the screw ② to set the audio level to maximum.
4. Confirm that the bottom of the Audio/ Control Head and the bottom of the tape is shown in **Fig. 2-2-C**.
 - c) When the height is not correct, turn the screw ③ to adjust the height. Then, adjust the 1~3 again.



2-3: TAPE RUNNING ADJUSTMENT (X VALUE ADJUSTMENT)

1. Confirm and adjust the position of the Tension Post. (**Refer to item 1-1**)
2. Adjust the Guide Roller. (**Refer to item 2-1**)
3. Confirm and adjust the Audio/Control Head. (**Refer to item 2-2**)
4. Connect CH-1 of the oscilloscope to **TP3002**, CH-2 to **TP101** and CH-3 to **Audio Out**.
5. Playback the VHS Alignment Tape (**MHP**).
6. Press and hold the Tracking-Auto button on the remote control more than 2 seconds to set tracking to center.
7. Set the X Value adjustment driver (**X-JG153**) to the ④ of **Fig. 2-2-B**. At first, turn the Audio/Control Head position fully toward the capstan side. Then adjust X Value to turn it back gradually toward the cylinder side and stop on the second peak point position of the envelope.



8. Perform tracking operation and confirm the envelope is maximum on the tracking center position.
9. Playback the VHS Alignment Tape (**MHP-L**).
10. Perform tracking operation and confirm the envelope is maximum on the tracking center position. If envelope is not maximum, should be fine-tune the X-VALUE.

ELECTRICAL ADJUSTMENTS

Read and perform this adjustment when repairing the circuits or replacing electrical parts or PCB assemblies.

1. BASIC ADJUSTMENT

CAUTION

When you exchange IC and Transistor for a heat sink, apply the silicon grease (**YG6260M**) on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

1-1: SWITCHING POINT

CONDITIONS

MODE-PLAYBACK
Input Signal-Alignment Tape (**MHP**)

INSTRUCTIONS

1. Connect CH-1 on the oscilloscope to **TP3002** and CH-2 to **TP8001**.
2. Playback the alignment tape. (**MHP**)
3. Press and hold the Tracking-Auto button on the remote control more than 2 seconds to set tracking to center.
4. Press both CH UP button on the set and the STOP button on the set for more than 2 seconds.

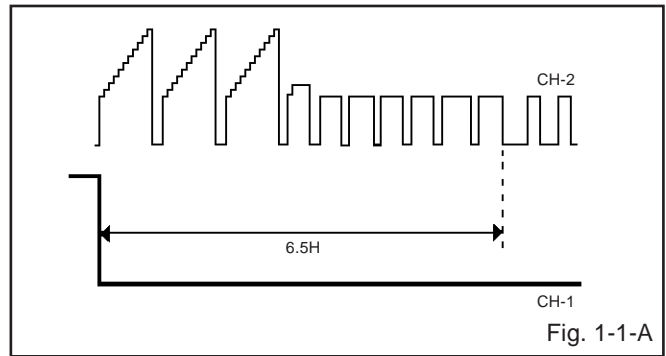


Fig. 1-1-A

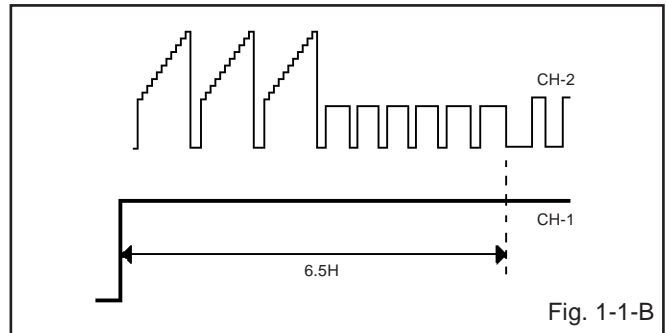
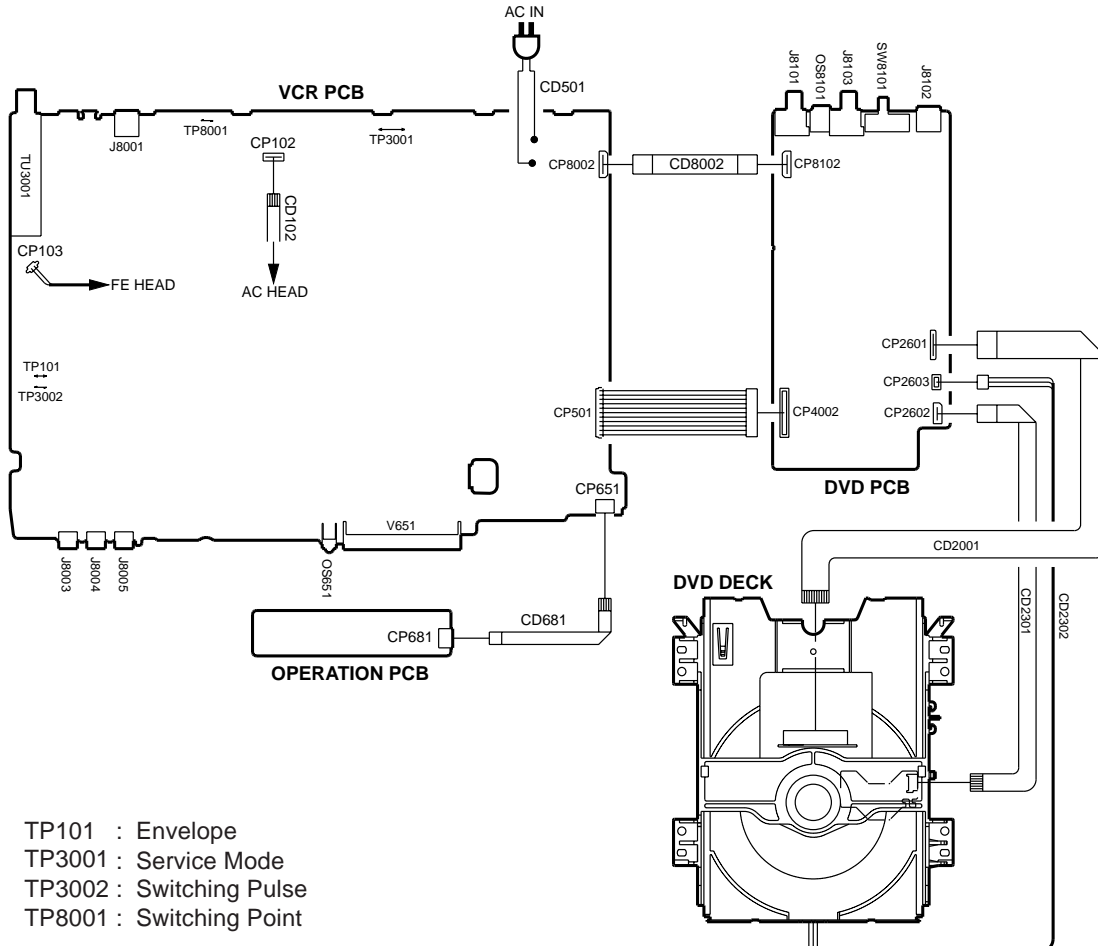


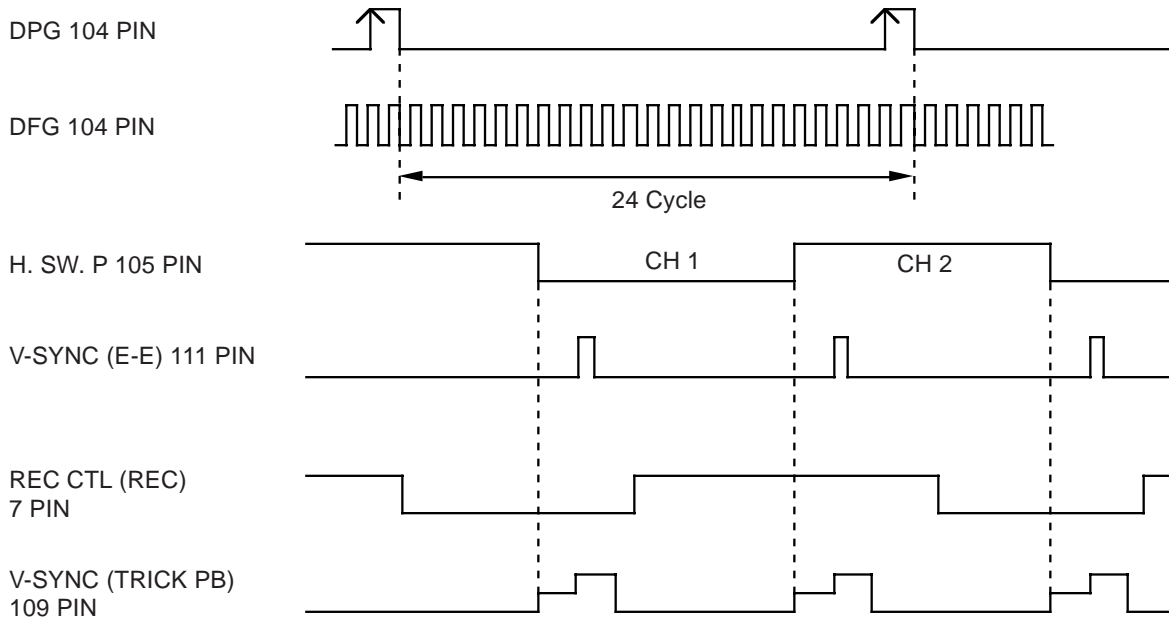
Fig. 1-1-B

ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (Connector Connections)



SERVO TIMING CHART

VCR PCB IC3001 (OEC0138A)



• WAVEFORM CHANGES DEPENDED ON THE TAPE SPEED

MECHANISM TIMING CHART

Please see the list below for the operational timing and the mode sensor output of the main parts on each mechanism modes.

MECHANISM MODE			EJECT	STBY	UNLOAD	STOP3	VSR	F.SLOW	PB	STOP2	FF/REW	
Mode Dealing Directions			←	→	←	←	→	→	→	←	→	
Revolutional Angle of MAIN CAM			0	3	15	100	206.3	226.4	255	272.2	303.7	323.8
Moving Quantity of MAIN ROD (mm)					0	18	21.5	26.5	29.5	35	38.5	
MODE SENSOR Output	MS-1	HIGH	[Timeline: HIGH from 0 to 100, LOW from 100 to 323.8]									
	MS-2	HIGH	[Timeline: HIGH pulses at 3, 15, 206.3, 226.4, 255, 272.2, 303.7, 323.8; LOW elsewhere]									
INCLINED BASE S/T UNIT												
PINCH ROLLER BLOCK												
P5 ARM ASS'Y					(T BRAKE:LOW)				P5-ON (T BRAKE HIGH)			
TENSION LEVER								S BRAKE:LOW		S BRAKE:HIGH		
TENSION ARM ASS'Y (S REEL BRAKE)									BRAKE-ON			
TENSION CONNECT (S REEL BRAKE)												
T BRAKE ARM (T REEL BRAKE)												
CLUTCH LEVER												
LINK UNIT												
FLAP LEVER												

IC DESCRIPTIONS

OEC0138A (IC3001)

No.	PORT	PIN NAME	I/O	DESCRIPRION
1	SVSS	SVSS	-	Ground.
2	CTL_REF	CTL_REF		Output terminal for CTL amp REF (1/2 SVCC)
3	CTL-H(+)	CTL-H(+)		Input and output terminal of Control Head.
4	CTL-H(-)	CTL-H(-)		Input terminal of Control Head.
5	CTL_BIAS	CTL_BIAS		Output terminal for bias.
6	CTL_FB	CTL_FB		Input terminal for CTL feedback
7	CTL_AMP(O)	CTL_AMP(O)		Output terminal for amp out.
8	CTL_AMP(I)	CTL_AMP(I)		Input terminal for CTL shumit amp .
9	CFG	CFG		Input terminal for CAPSTAN FG signal detection.
10	SVCC	SVCC		+ 5V (Servo)
11	AFC_PC	AFC_PC		AFC oscilator (external circuit).
12	AFC_OSC	AFC_OSC		AFC oscilator (external circuit).
13	AFC_LPF	AFC_LPF		LPF connection for AFC OSC.
14	CSYN/HSYN	CSYNC	OUT	Output terminal for composite SYNC.
15	VLPF/VSYN	VSYNC	IN	Input terminal for composite SYNC.(from 14pin)
16	CV_IN2	CV_IN2	IN	Composite Video input terminal.(for data slicer)
17	CV_IN1	CV_IN1	IN	Composite Video input terminal.(for OSD)
18	OSD VCC	OSDVCC	-	+ 5V
19	CV_OUT	CV_OUT	OUT	Composite Video output.(with OSD)
20	OSD_VSS	OSD_VSS	-	Ground.
21	4/2 FSC_OUT	4/2 FSC_OUT	OUT	4 FSC pulse.
22	4/2 FSC_IN	4/2 FSC_IN	IN	4 FSC pulse.
23	AVSS	AVSS	-	Ground.
24	AN-B	VIDEO_ENV	IN	Input terminal of video RF envelope.
25	AN-A	BOT-H	IN	Tape start sensor input signal.
26	AN-9	EOT-H	IN	Tape end sensor input signal.
27	AN8	MS_SEN-B	IN	Input terminal of mecha state sensor.
28	P07/AN7	MS_SEN-A	IN	
29	P06/AN6	KEY-B	IN	Main unit key input.
30	P05/AN5	KEY-A	IN	
31	P04/AN4	STEREO_SEL	IN	Input terminal for the judgement of voice reception condition.
32	P03/AN3	HI-FI_ENV	IN	Input terminal of HiFi RF envelope.
33	P02/AN2	AFT-S_CURVE	IN	AFT S CURVE input for tuner.
34	P01/AN1	SERVICE	IN	Input terminal for Service Mode.
35	P00/AN0	TAB SW	IN	Input terminal for judge the tape if it has TAB or not.
36	AVCC	AVCC	-	ON/OFF control Micon AD section.
37	P10/IRQ0	POWER_FAIL	IN	Input terminal of Power fail signal.
38	P11/IRQ1	REEL-S	IN	Input terminal of reel sensor supply.
39	P12/IRQ2	REEL-T	IN	Input terminal of reel sensor take up.

IC DESCRIPTIONS

OEC0138A (IC3001)

40	P13/IRQ3	VIDEO MUTE H	OUT	H for at AUTO_CLOCK in POWER OFF.
41	P14/IRQ4	POWER ON L	OUT	For control the user power switch ON/OFF.
42	P15/IRQ5	POWER ON-H	OUT	For control the user power switch ON/OFF.
43	P16/IC	REM_IN	IN	Receive the remote control signal.
44	P17/TMOW	DVD RESET	OUT	For control the DVD RESET.
45	P67/RP7/TMB	DVD POWER CTL	OUT	Output terminal for DVD power CTL.(3.3V/9V)
46	P66/RP6/ADTRG	DVD LED	OUT	The DVD LED light-up/put-off control output.
47	P65/RP5	VCR LED	OUT	The VCR LED light-up/put-off control output.
48	P64/RP4	1G/T-REC LED	OUT	LEM(LED Module) control terminal.
49	P63/RP3	2G/REC LED	OUT	LEM(LED Module) control terminal.
50	P62/RP2	3G/TV/VCR LED	OUT	LEM(LED Module) control terminal.
51	P61/RP1	4G	OUT	LEM(LED Module) control terminal.
52	P60/RP0	5G	OUT	LEM(LED Module) control terminal.
53	P37/TM0	Y/C CLOCK	OUT	Control terminal for Y/C. (CLOCK).
54	P36/BUZZ	Y/C DATA	OUT	Control terminal for Y/C.(DATA).
55	P35	SEG1	OUT	LEM(LED Module) control terminal.
56	VCC	VCC	-	Power of CPU.
57	VSS	VSS	-	Ground.
58	P27	SEG2	OUT	LEM(LED Module) control terminal.
59	P26	SEG3	OUT	LEM(LED Module) control terminal.
60	P25	SEG4	OUT	LEM(LED Module) control terminal.
61	P24/SCL1	IIC CLK	OUT	CLOCK terminal for IIC BUS communication.
62	P23/SDA1	IIC DATA	OUT	DATA terminal for IIC BUS communication.
63	P22/SCK1	SEG5	OUT	LEM(LED Module) control terminal.
64	P21/SO1	SO1/TX	OUT	Input terminal for DVD communication.(asynchronous)
65	P20/SI1	SI1/RX	IN	Output terminal for DVD communication.(asynchronous)
66	P47/RPTRG	SEG6	OUT	LEM(LED Module) control terminal.
67	P46/FTOB	SEG7	OUT	LEM(LED Module) control terminal.
68	P45/FTOA	SEG8	OUT	LEM(LED Module) control terminal.
69	P44/FTID	NC	OUT	Not used.
70	P43/FTIC	NC	OUT	Not used.
71	P42/FTIB	SEG9	OUT	LEM(LED Module) control terminal.
72	P41/FTIA	NC	OUT	Not used.
73	P40/PWM14	SEG10	OUT	LEM(LED Module) control terminal.
74	FEW	FEW	IN	FZTAT Write protect.
75	X2	X2	OUT	Subclock pulse(32.768KHz)
76	X1	X1	IN	
77	/RESET	/RESET	IN	RESET will be done when the voltage goes to HIGH after the reset signal.
78	OSC1	OSC1	IN	Connect the main crystal(10MHz)

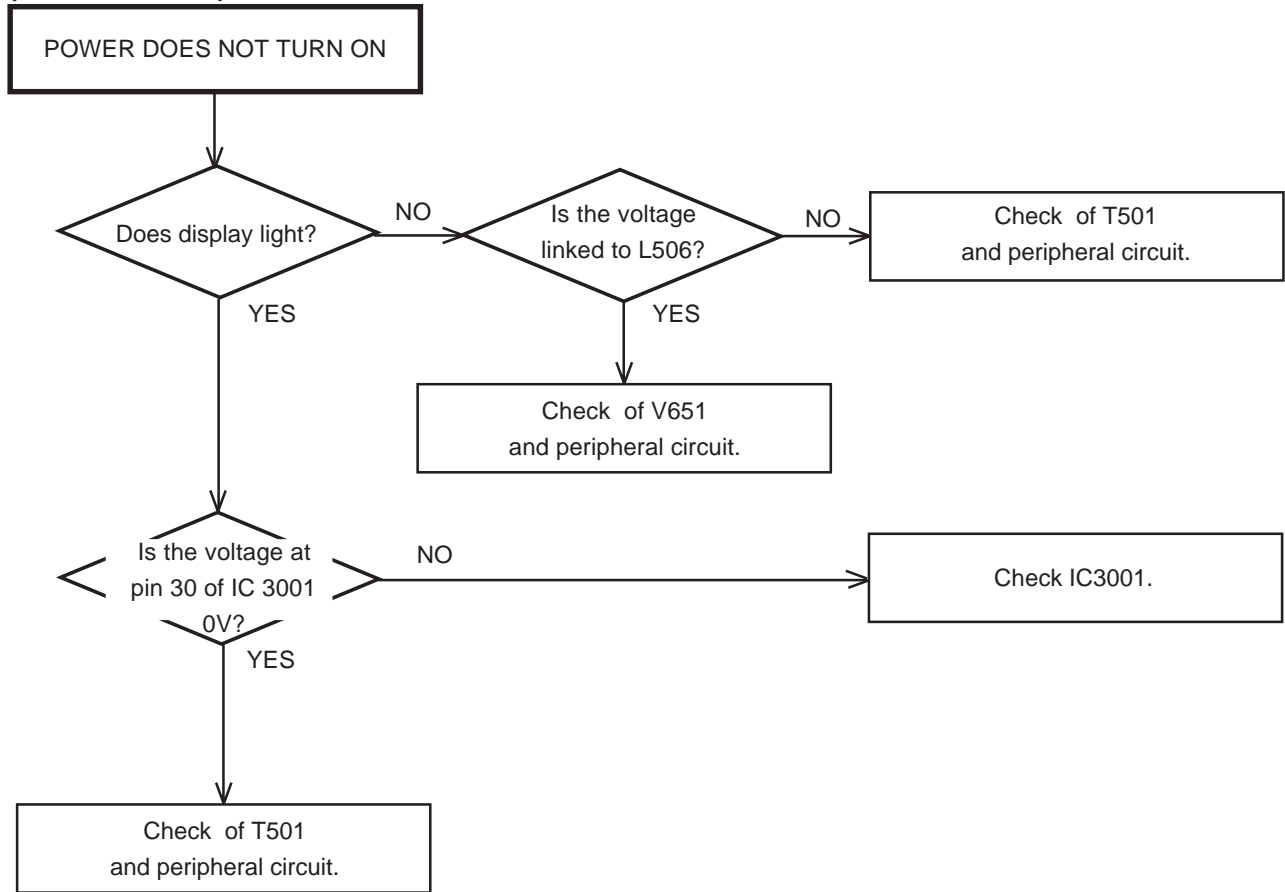
IC DESCRIPTIONS

OEC0138A (IC3001)

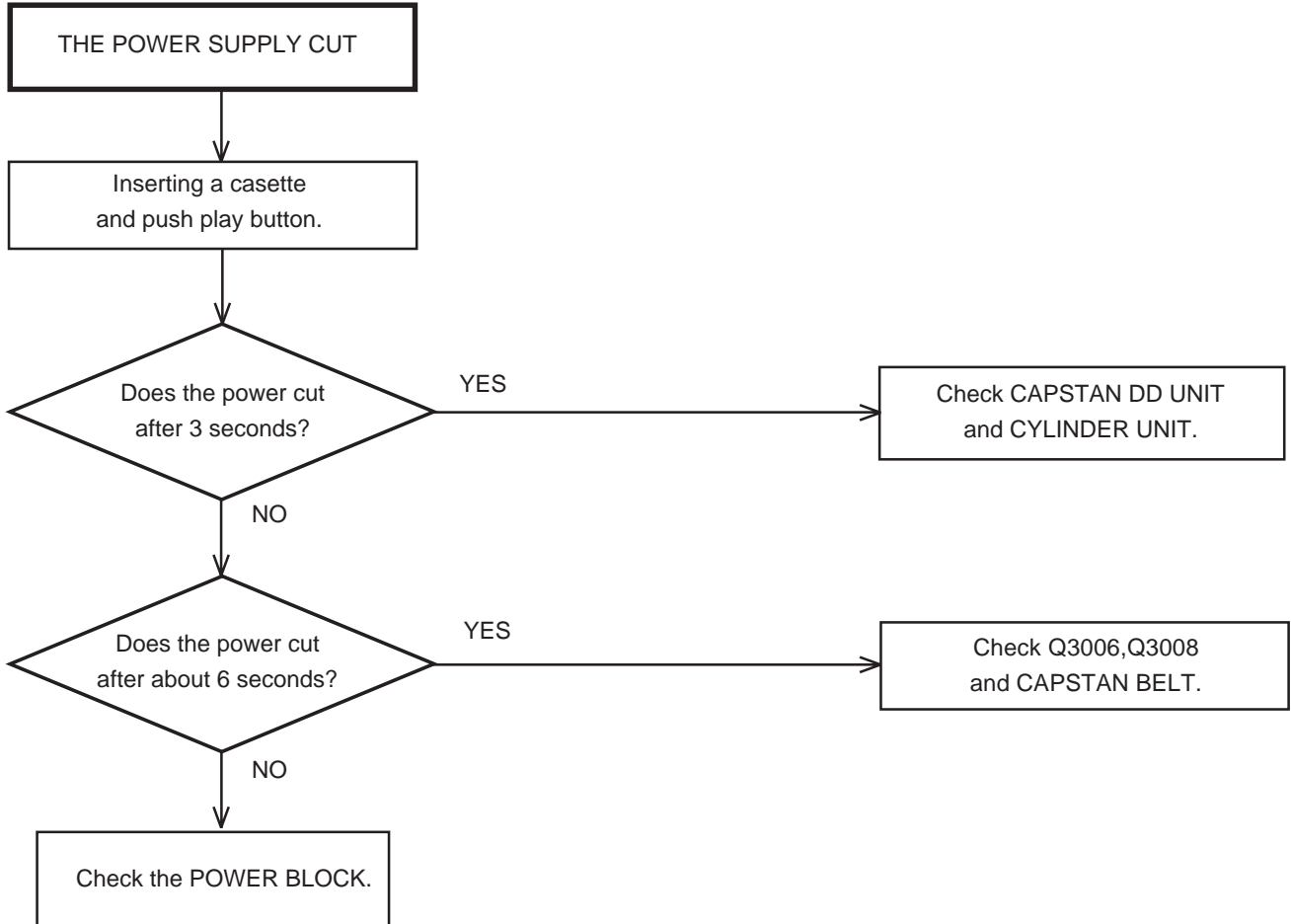
79	VSS	VSS	-	Ground.
80	OSC2	OSC2	OUT	Connect the main crystal(10MHz)
81	VCL	VCL	IN	Connect the capacitor
82	MD0	MD0	IN	FZTAT Write MODE.
83	P34/PWM2	NC	OUT	not used.
84	P33/PWM1	CAP_LIMIT	OUT	Switch the maximum output current of the Capstan Motor.
85	P32/PWM0	TUNER AUDIO MUTE-H	OUT	Output low at tuner and output high at external input/play.
86	P31/SV2	VCR-H	OUT	H for at PLAY in VCR MODE. L for except above case.
87	P30/SV1	POWER_MUTE	OUT	audio mute at POWER ON/OFF.
88	P70/PPG0	SYS_MUTE	OUT	audio mute for DVD at POWER ON/OFF.
89	P71/PPG1	NC	OUT	Not used.
90	P72/PPG2	NC	OUT	Not used.
91	P73/PPG3	AV SW_2	OUT	Control rear/front video signal.(at AV X 2)
92	P74/PPG4/RP8	AV SW_1	OUT	Control DVD/VCR video/audio signal.
93	P75/PPG5/RP9	Y/C CS	OUT	Control terminal for Y/C. (CHIP SELECT).
94	P76/PPG6/RPA	RF CH SW	OUT	3/4 ch Selection for the RF CH.
95	P77/RPG7/RPB	AUDIO_MUTE-H	OUT	L for at AUDIO MUTE and POWER OFF. H for except above case.
96	P80/YCO	V_REC_ST-H	OUT	On control of A/V recording(Whole width erase) circuit.
97	P81/EXCAP/YBO	LDM CTL	OUT	Loading motor control terminal.
98	P82/EXCTL	CAP_FWD-H	OUT	Capstan forward and backward command.
99	P83/C,ROT/R	C.ROTARY	OUT	Color Rotary Control output.
100	P84/H.AMP/SW/G	H.AMP.SW	OUT	Switching output of Head Amp SW.
101	P85/COMP/B	COMP	IN	Comparison results input of Playback Envelope level on SP/LP heads (4 heads).
102	P85/EZTTRG	CAP_FULL	OUT	Output the HIGH during the acceleration force of capstan motor at SLOW mode.
103	P87/DPG	CYL_SPEED_UP	OUT	Output terminal for correct cylinder during SLOW.
104	DFG	D FG/PG	IN	Input terminal for DRUM FG signal detection.
105	VIDEO_FF	VIDEO_H.SW	OUT	Output terminal of Video Head SW.
106	AUDIO_FF	HI-FI H.SW	OUT	Output terminal of HI-FI Head SW.
107	DRUM_PWM	DRUM_PWM	OUT	PWM output of Cylinder control.
108	CAP_PWM	CAP_PWM	OUT	PWM output of Capastan control.
109	V-PULSE	DUMMY_V-SYNC	OUT	Virtual V Pulse output.
110	SV VSS	SV VSS	-	Ground.
111	C.SYNC_IN	SYNC	IN	Input terminal for composite SYNC.
112	VCC	VCC(SV)	-	+ 5V

TROUBLESHOOTING GUIDE

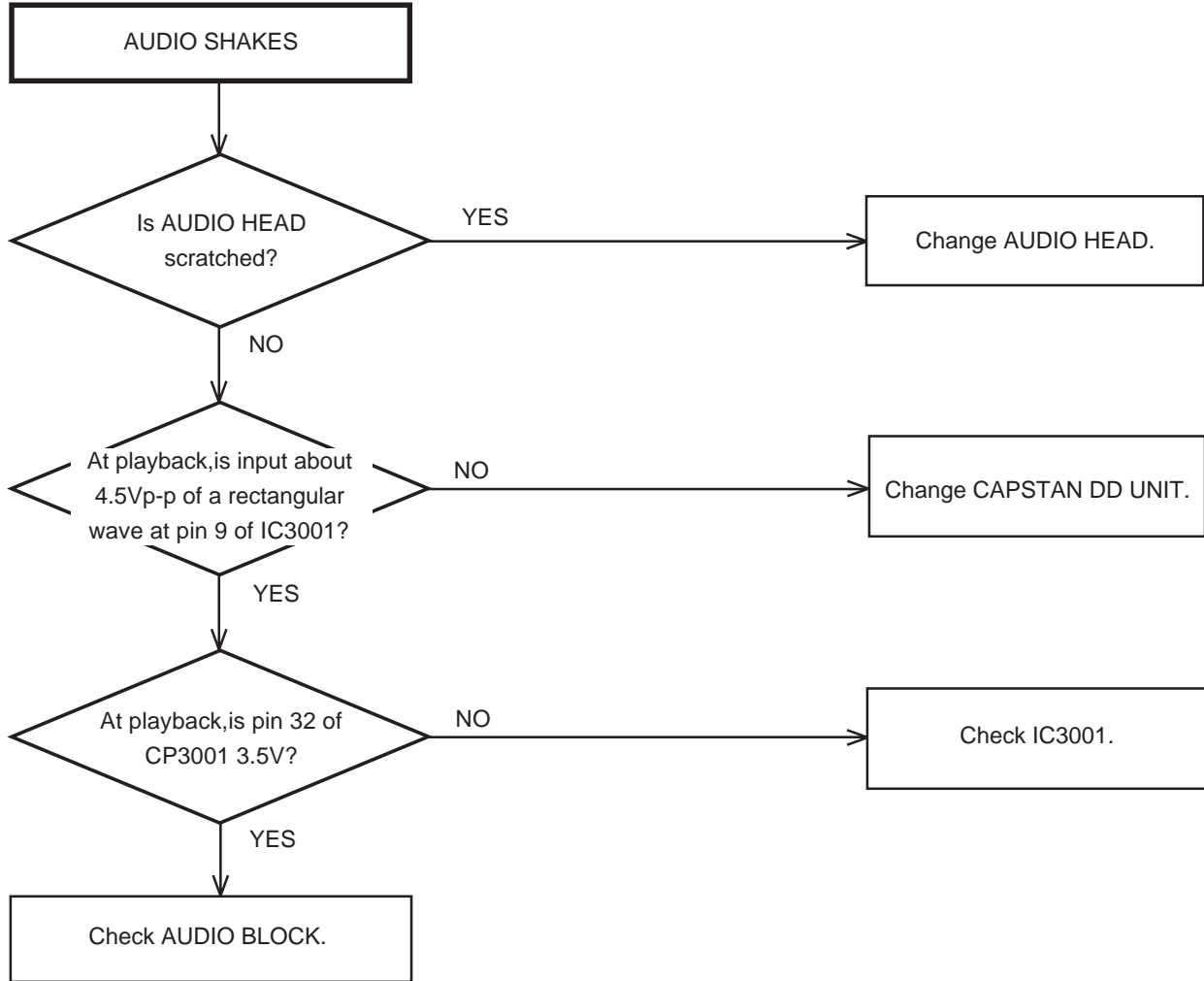
(VCR SECTION)



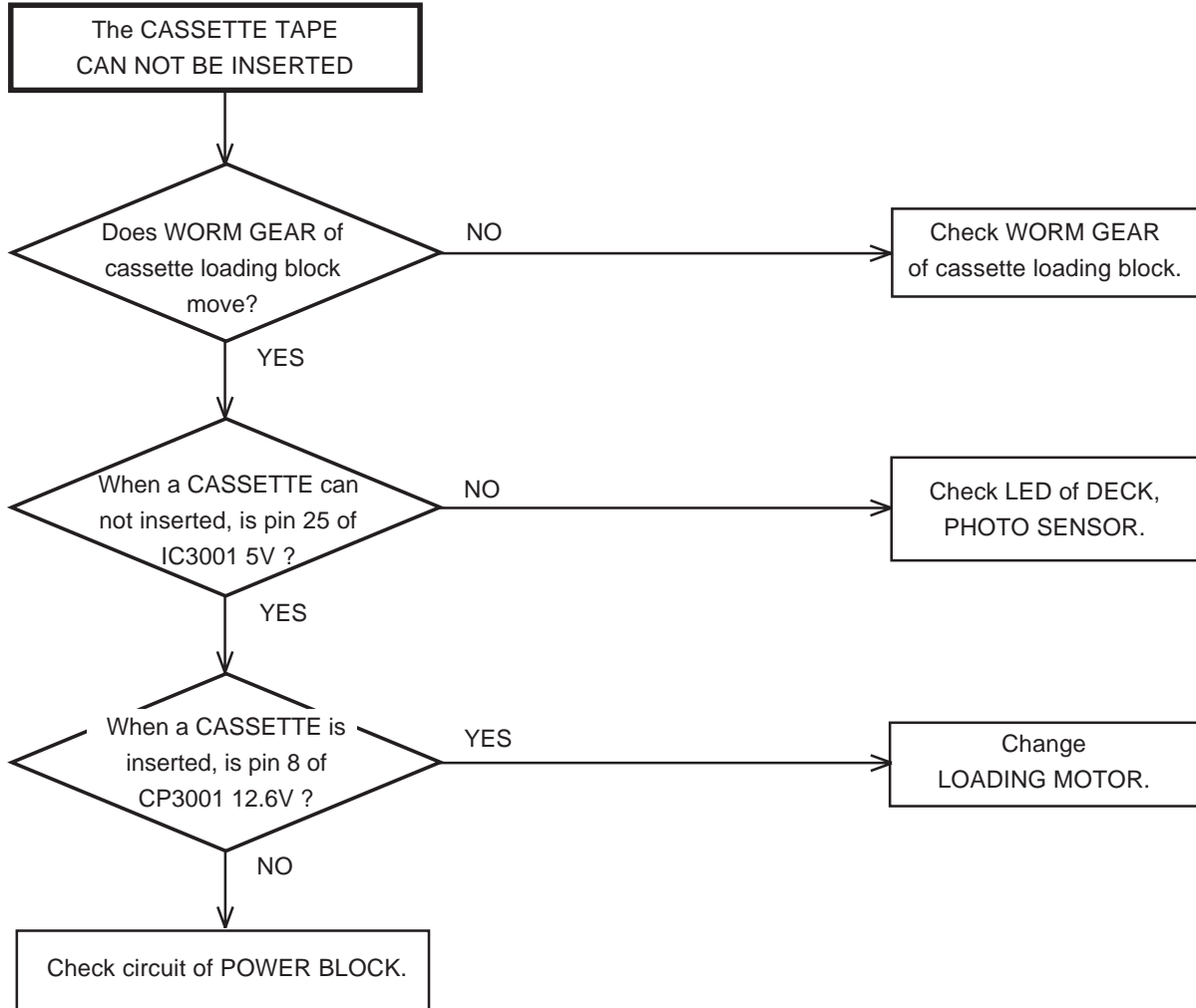
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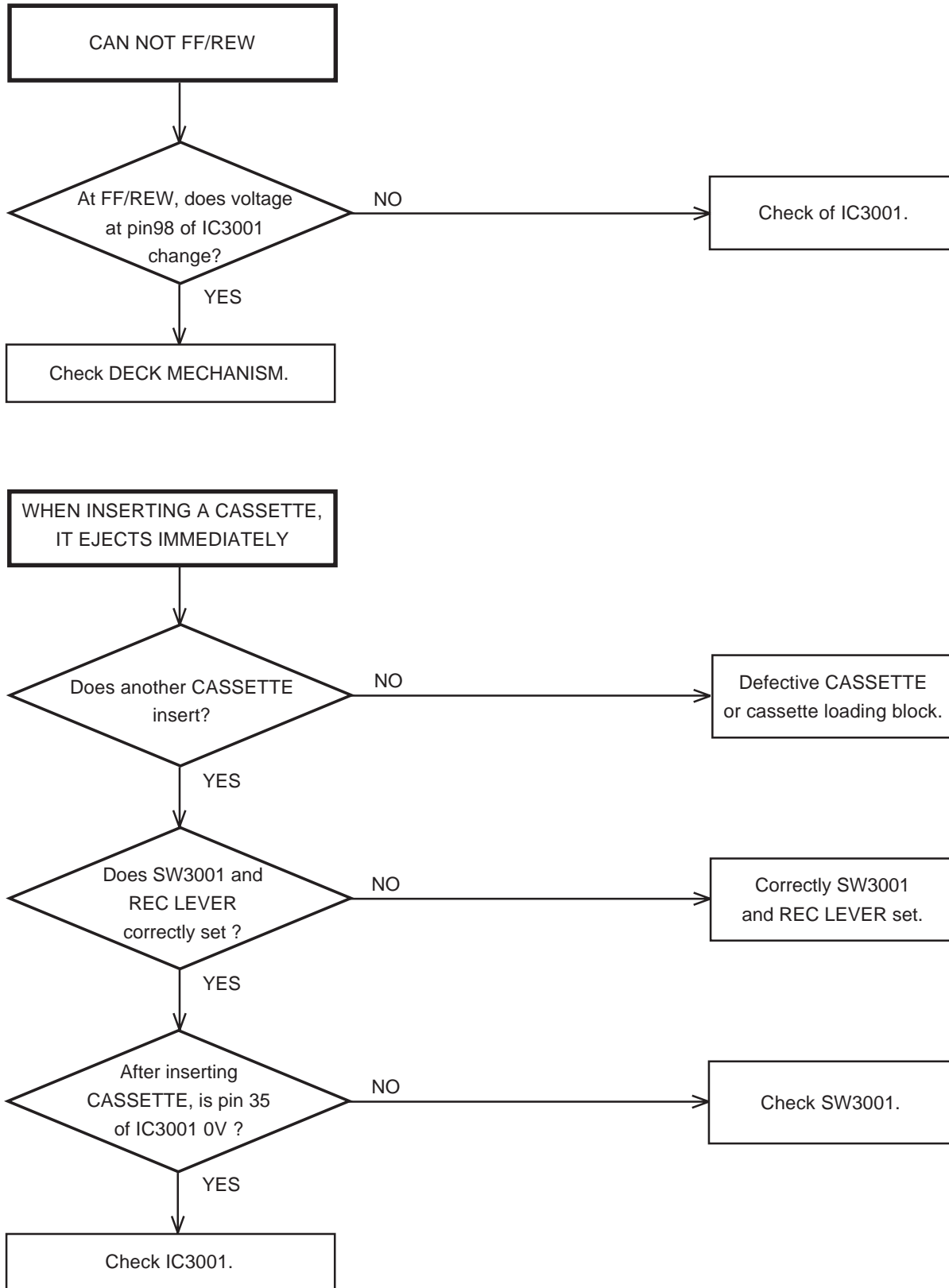
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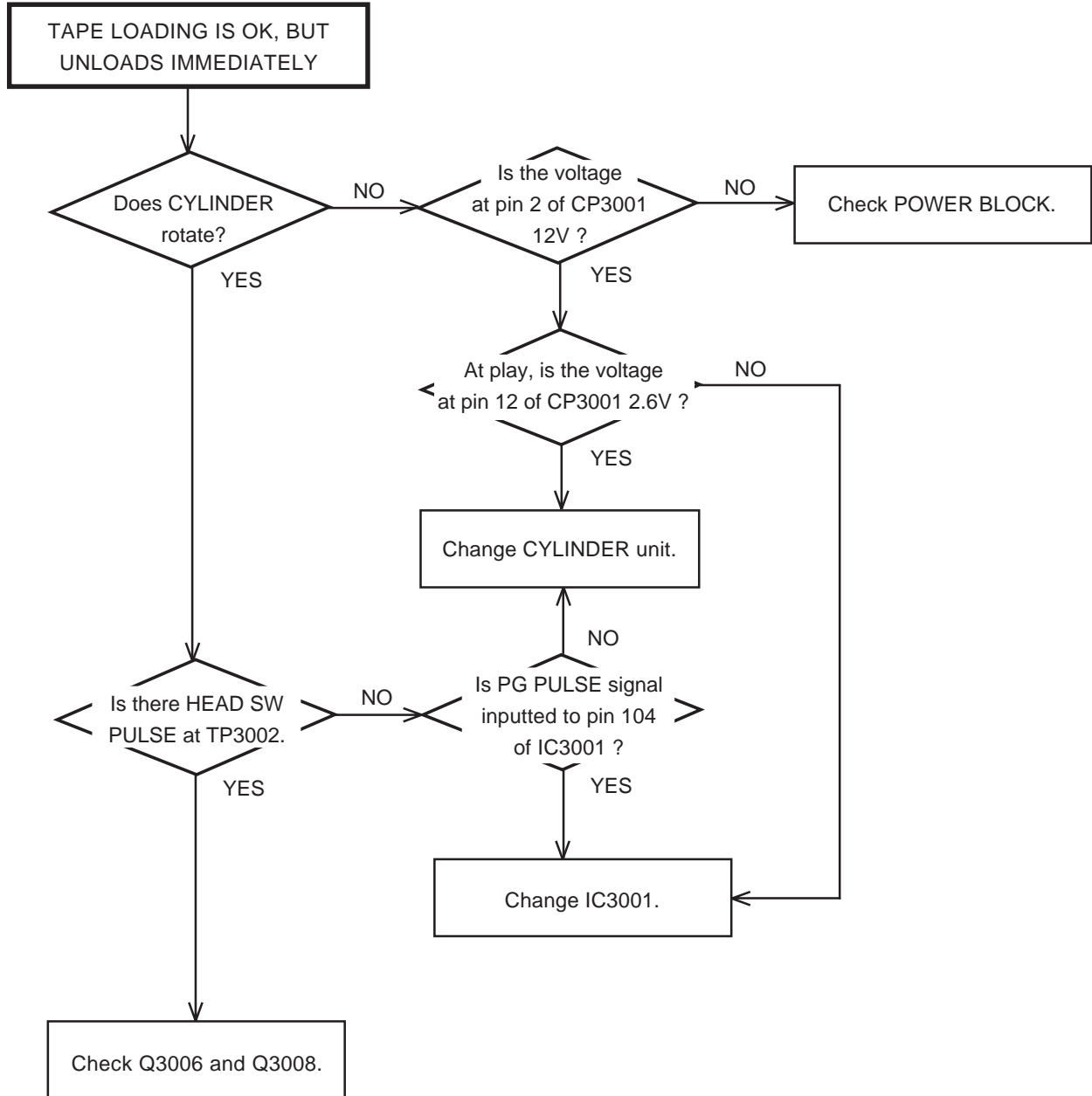
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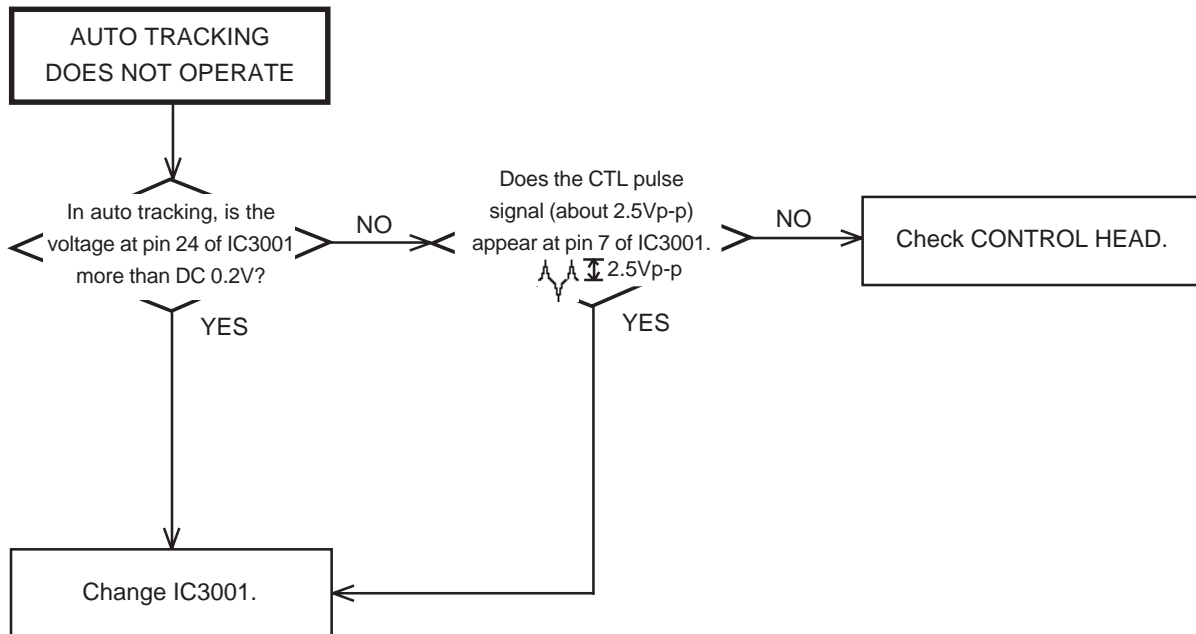
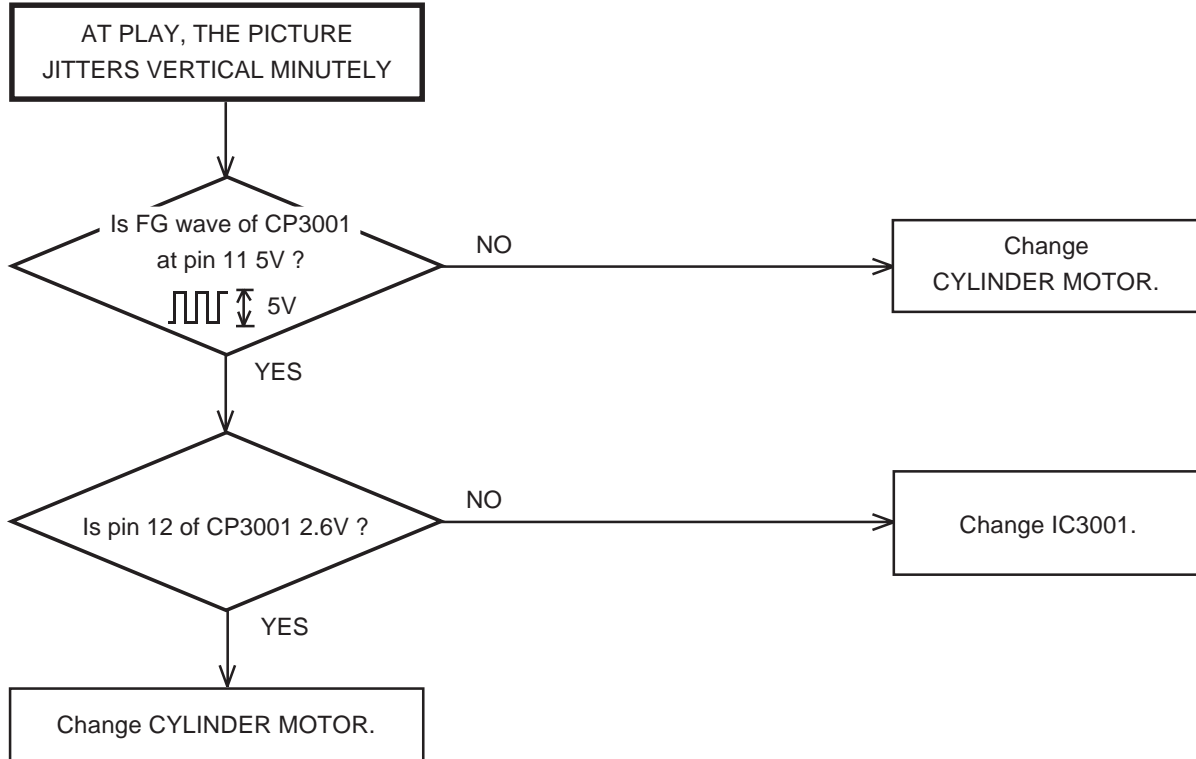
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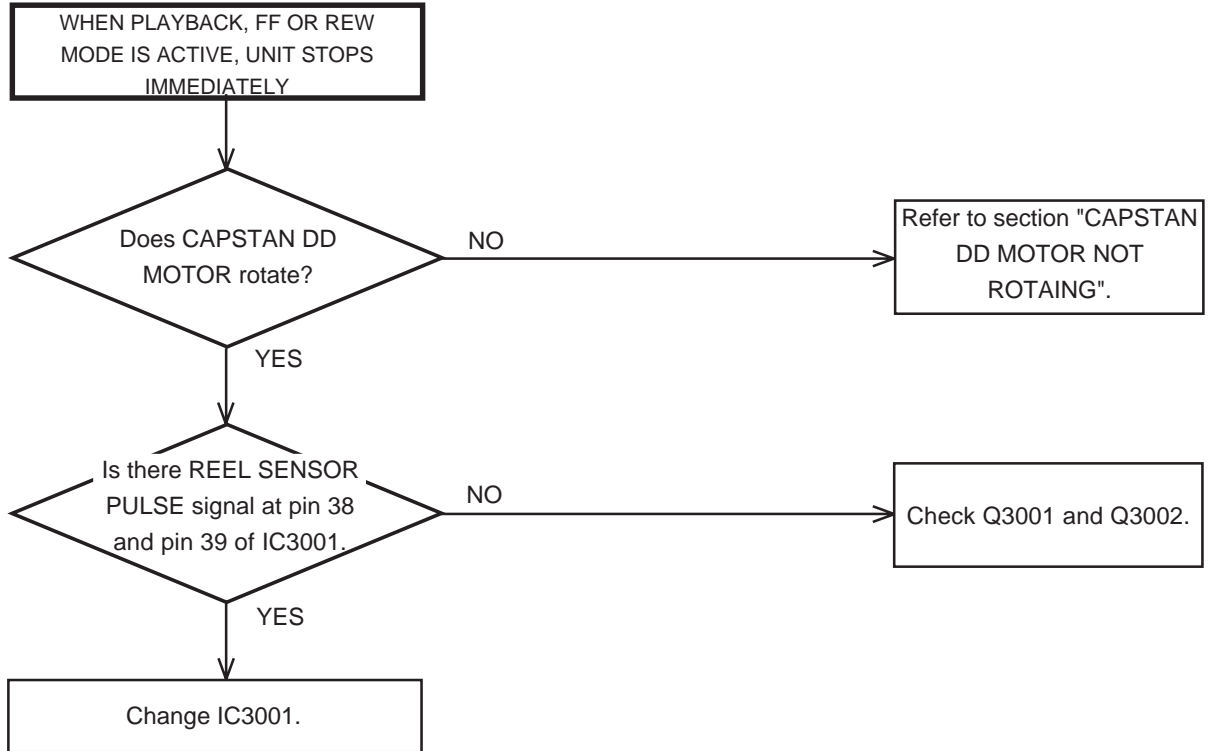
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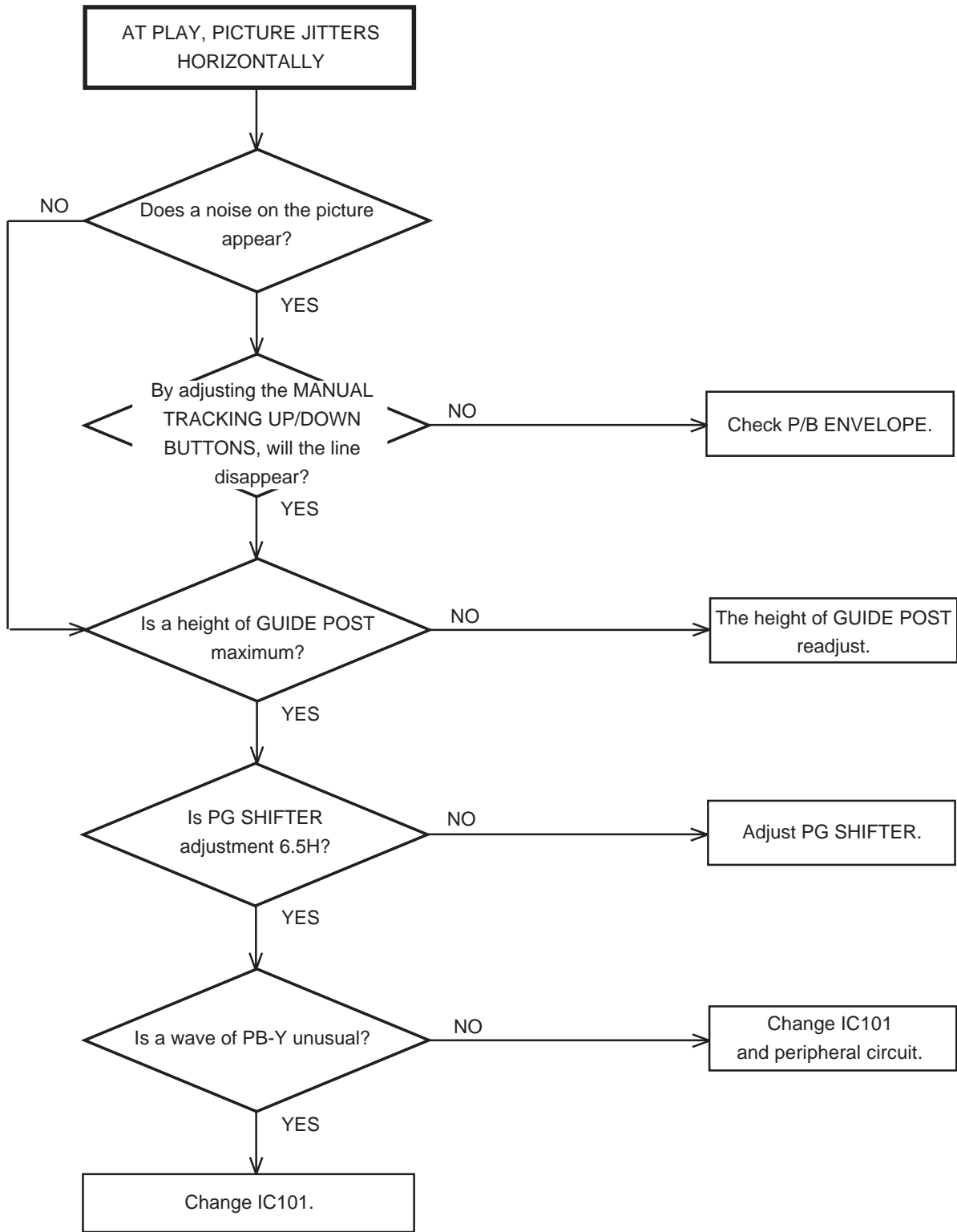
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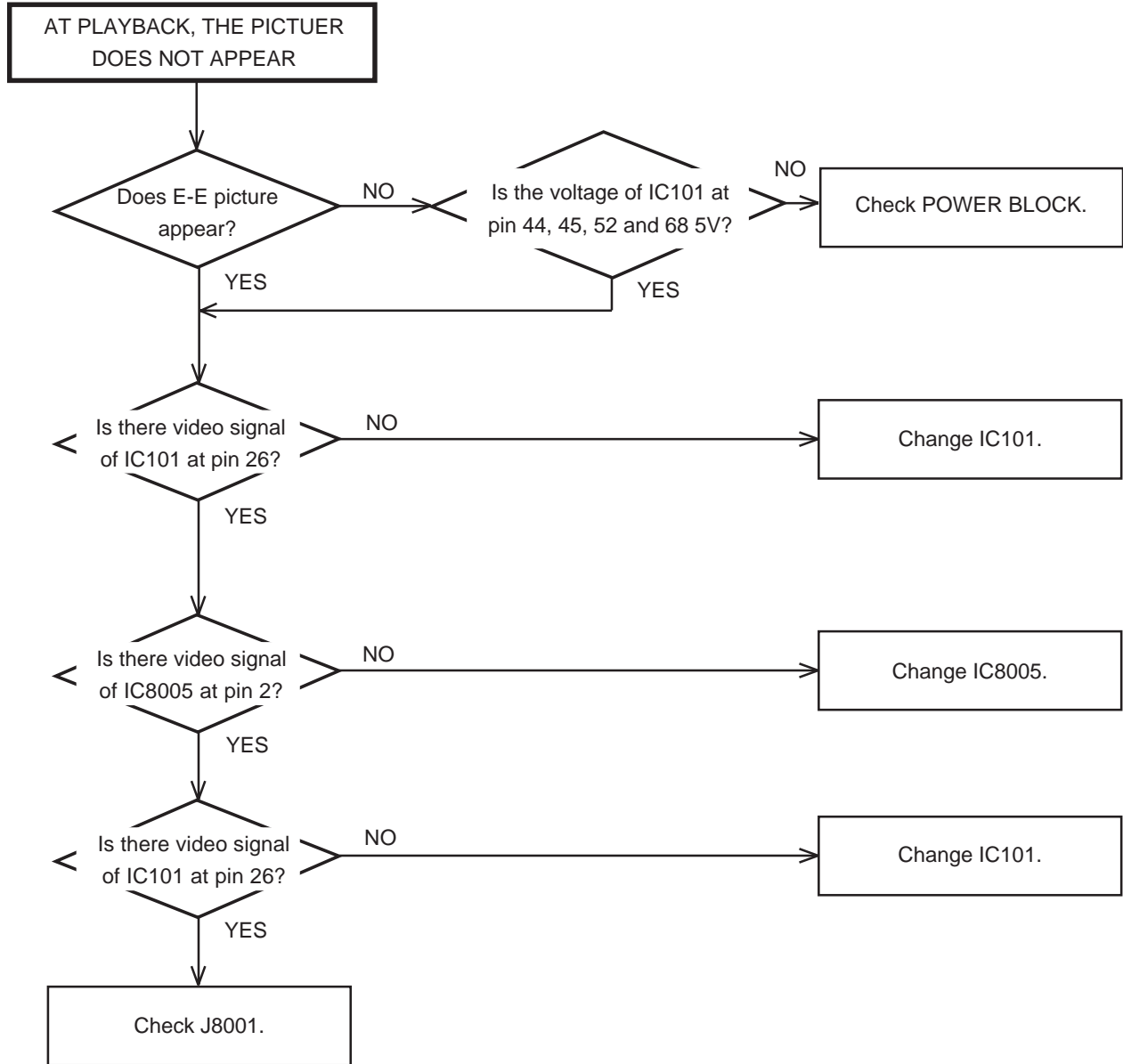
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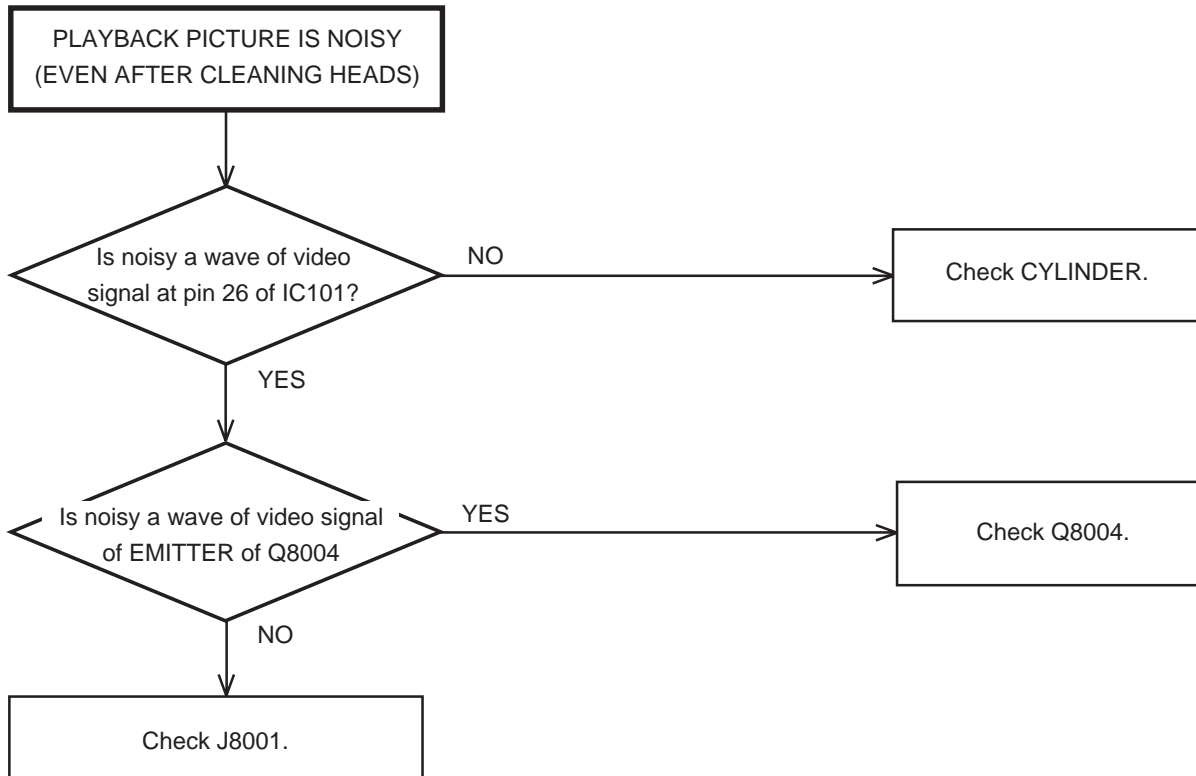
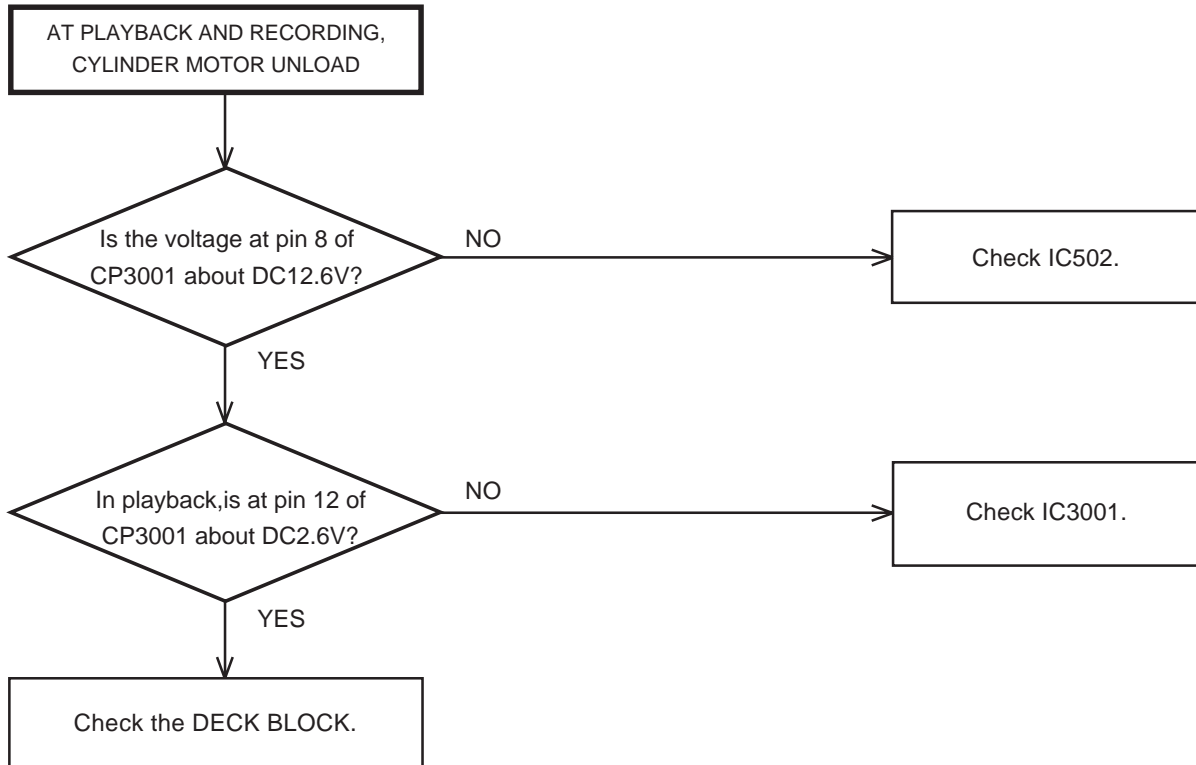
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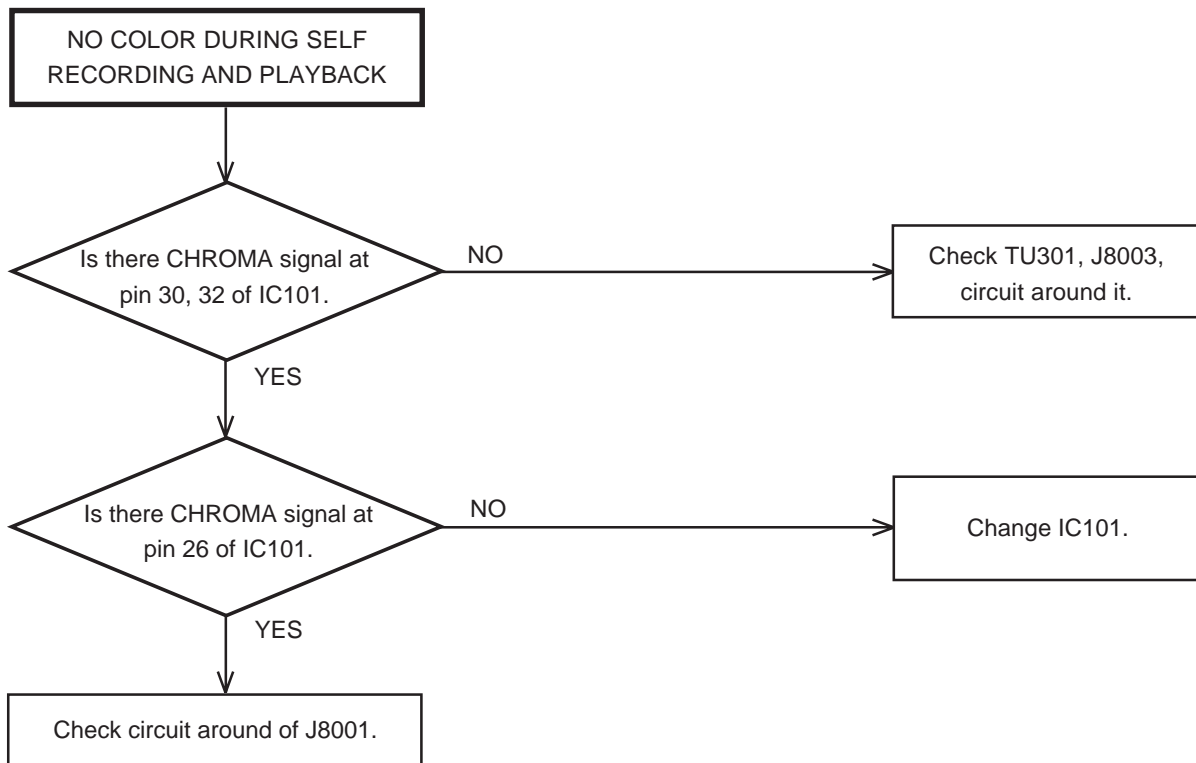
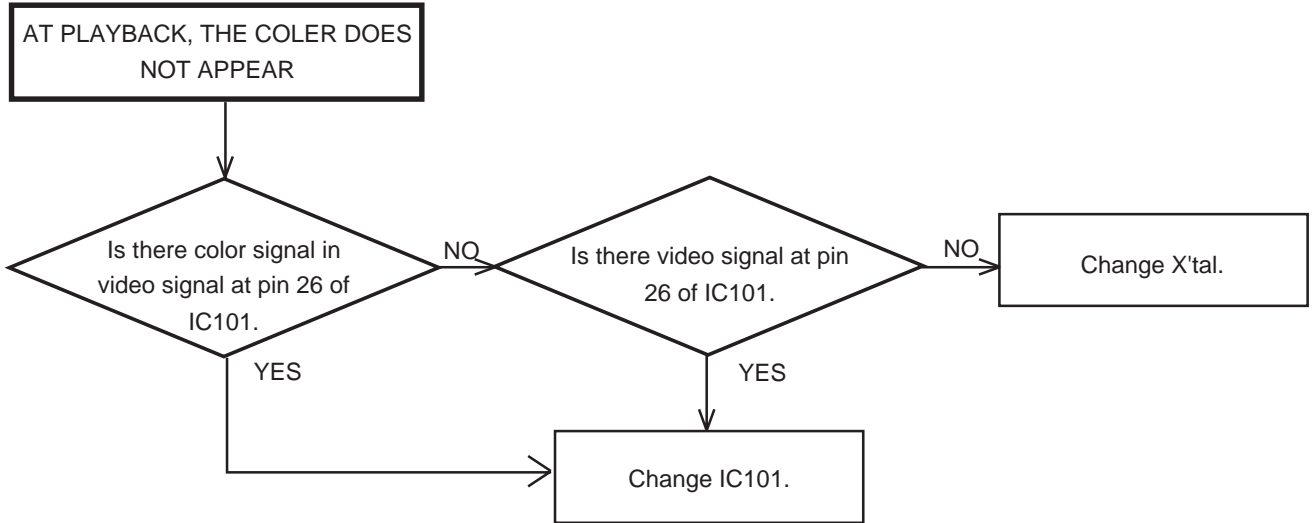
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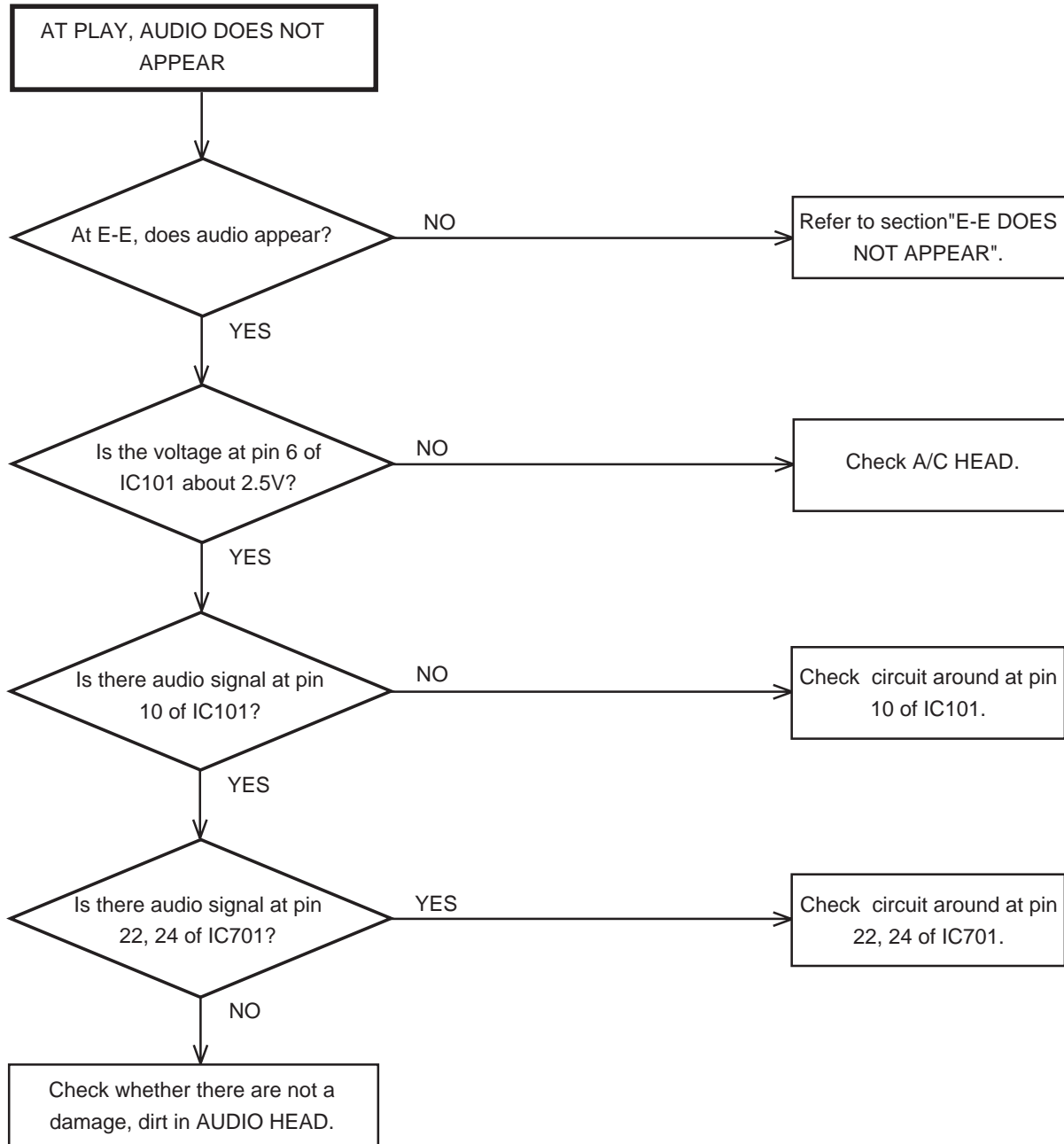
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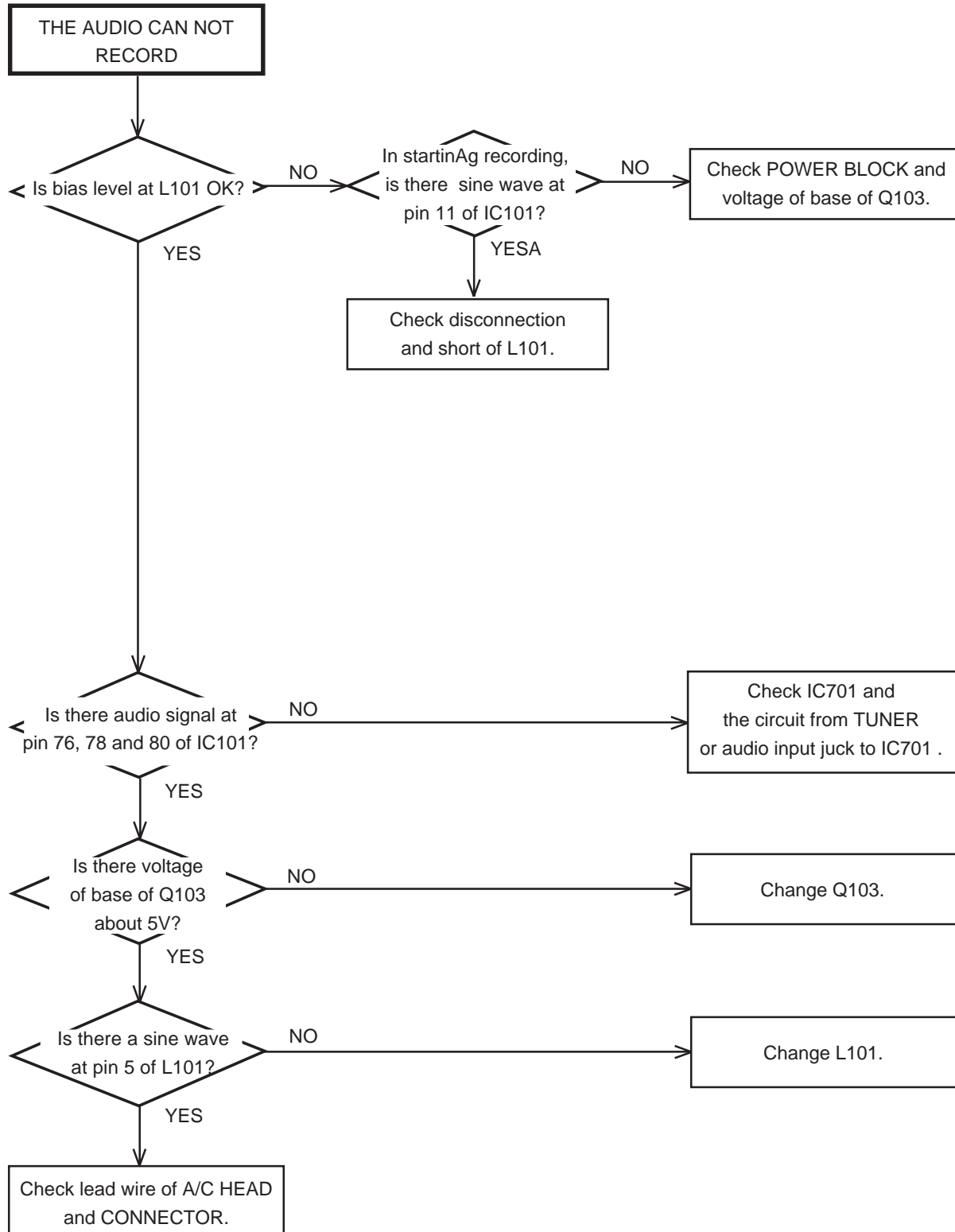
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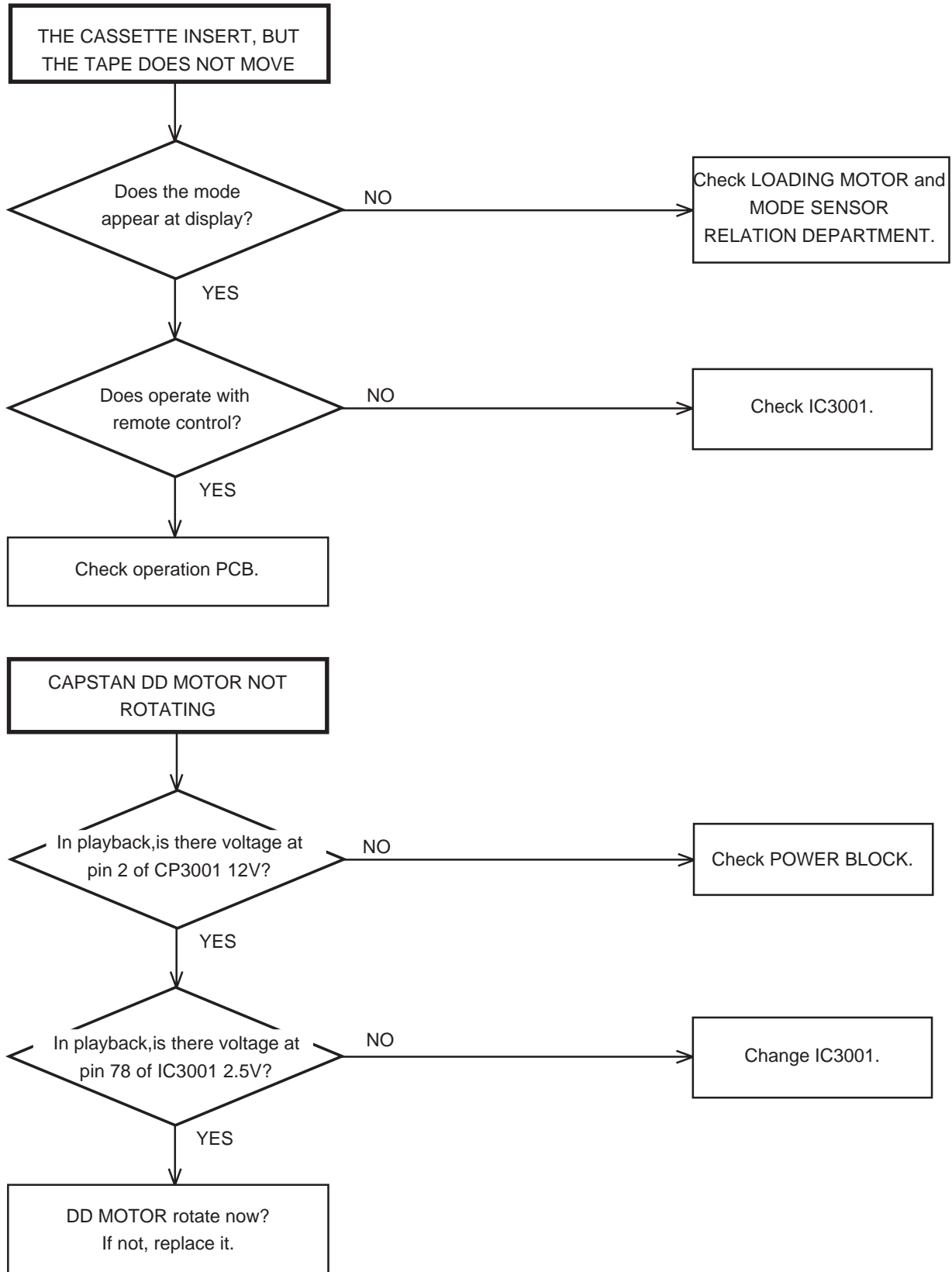
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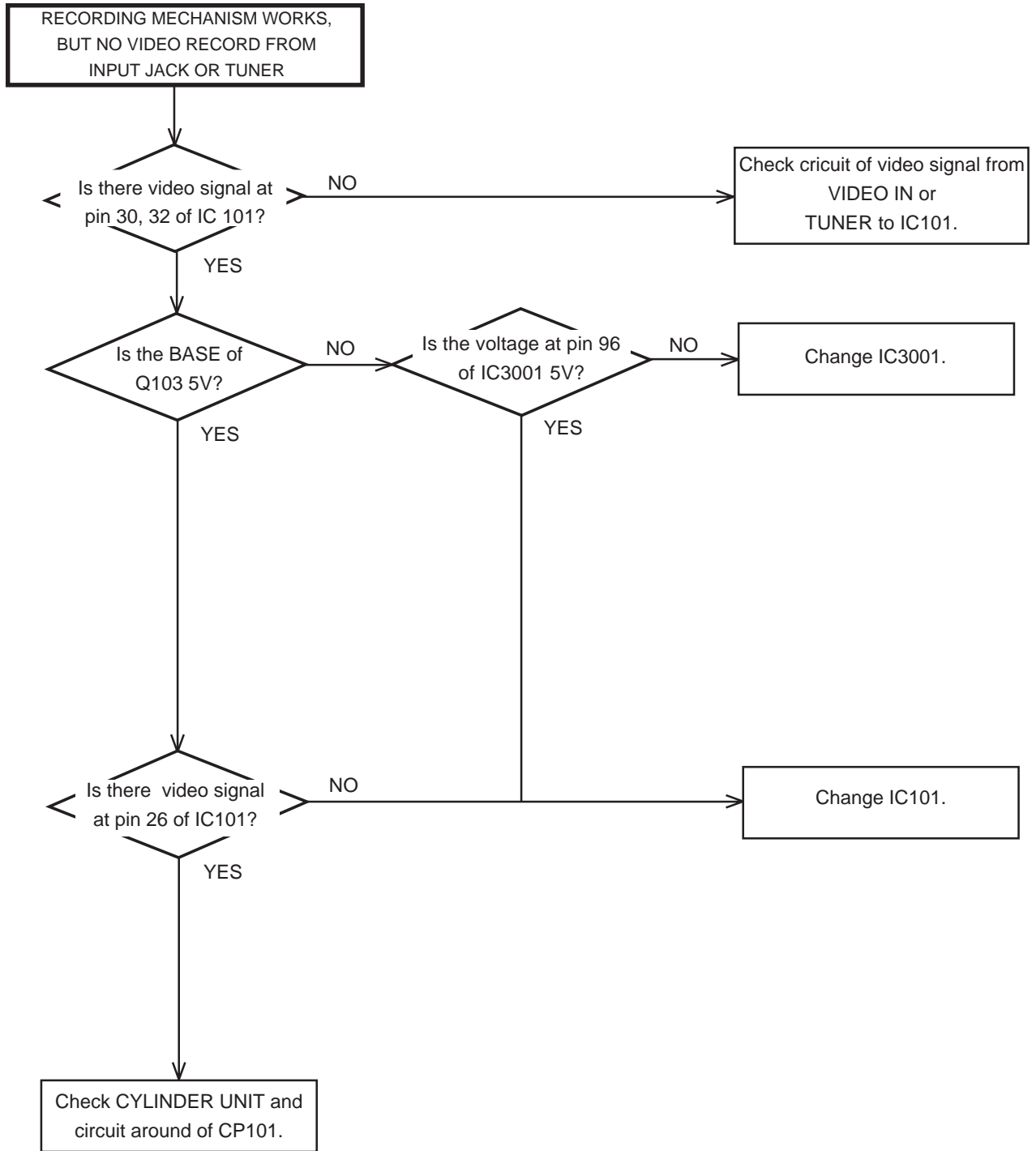
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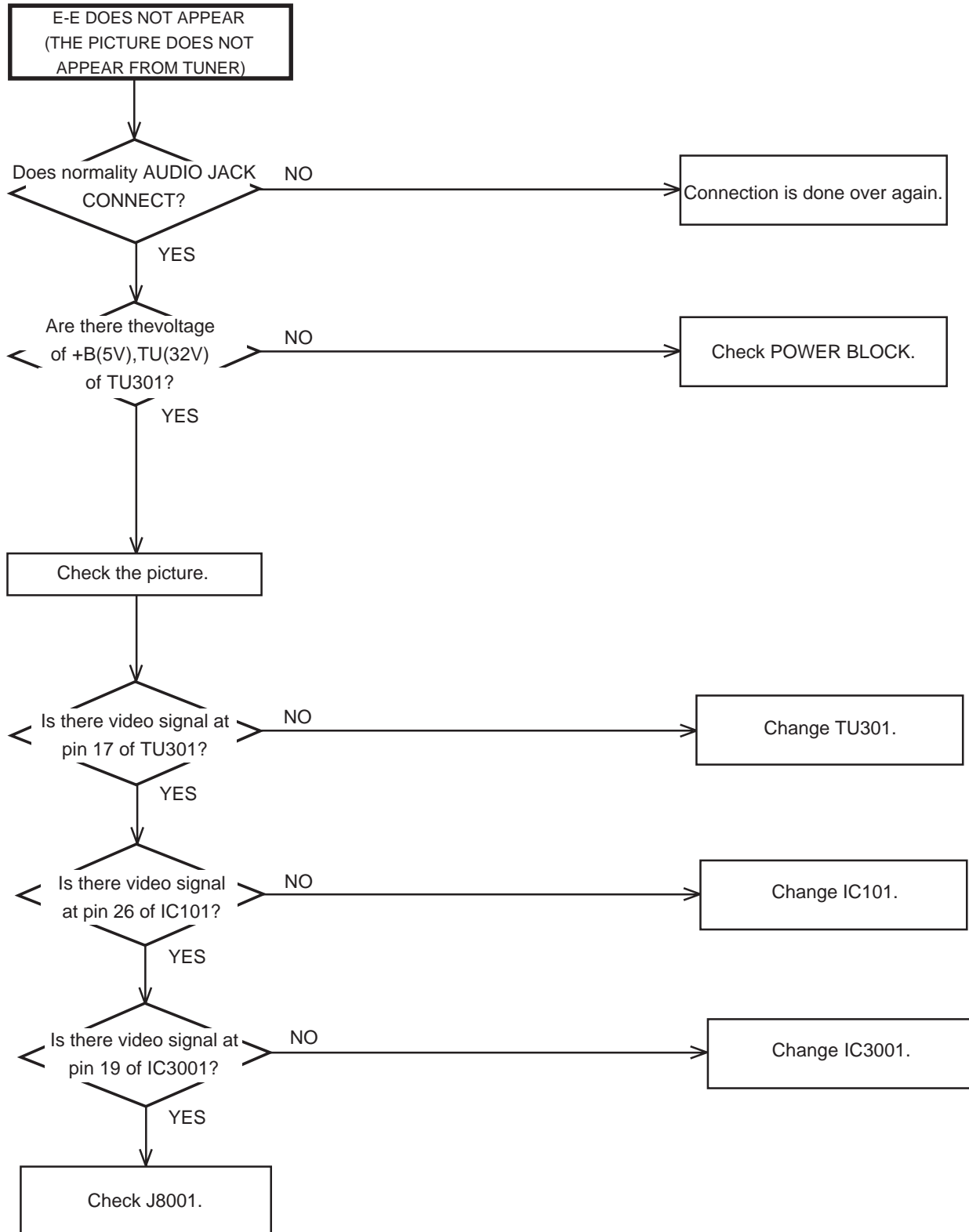
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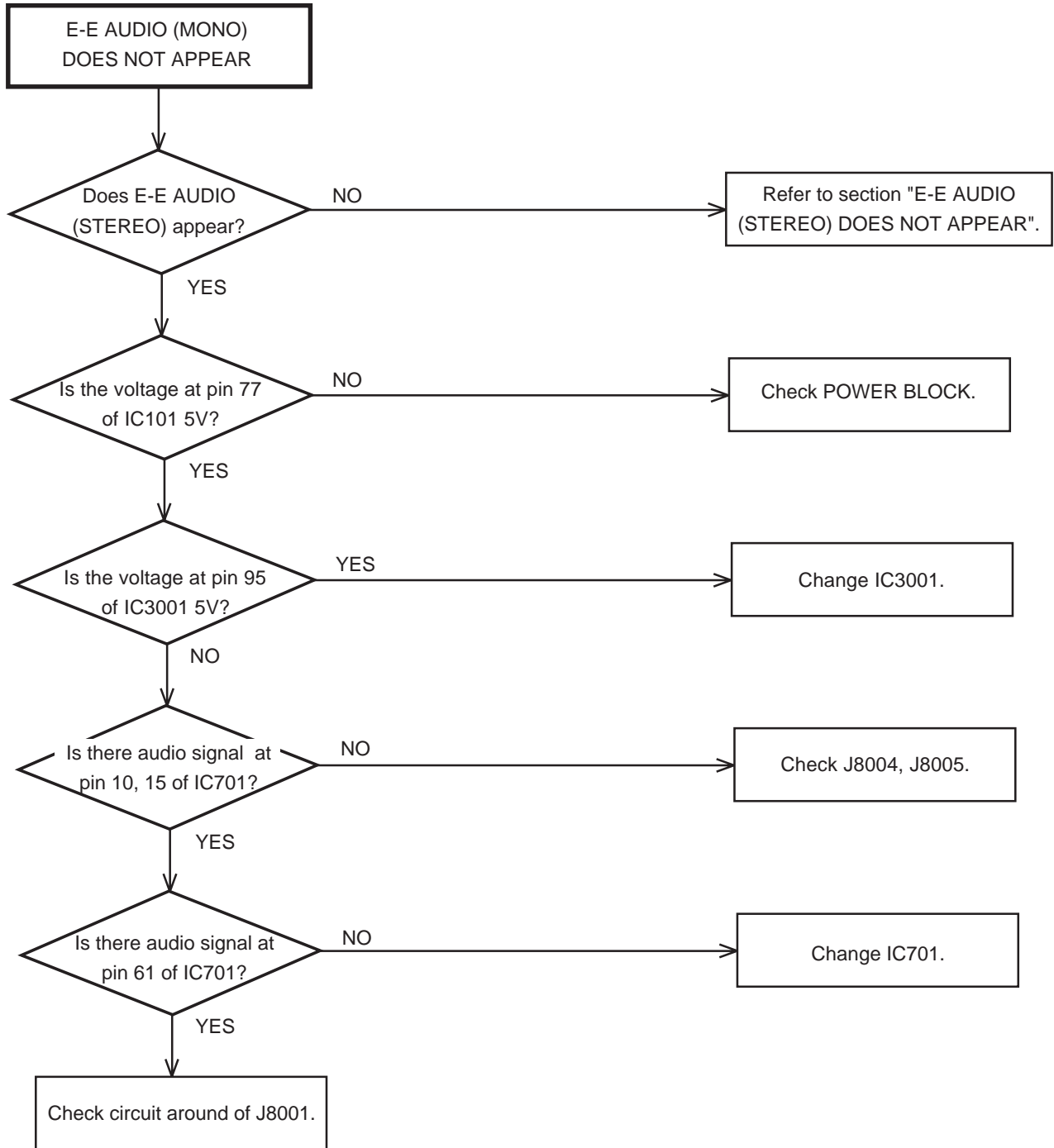
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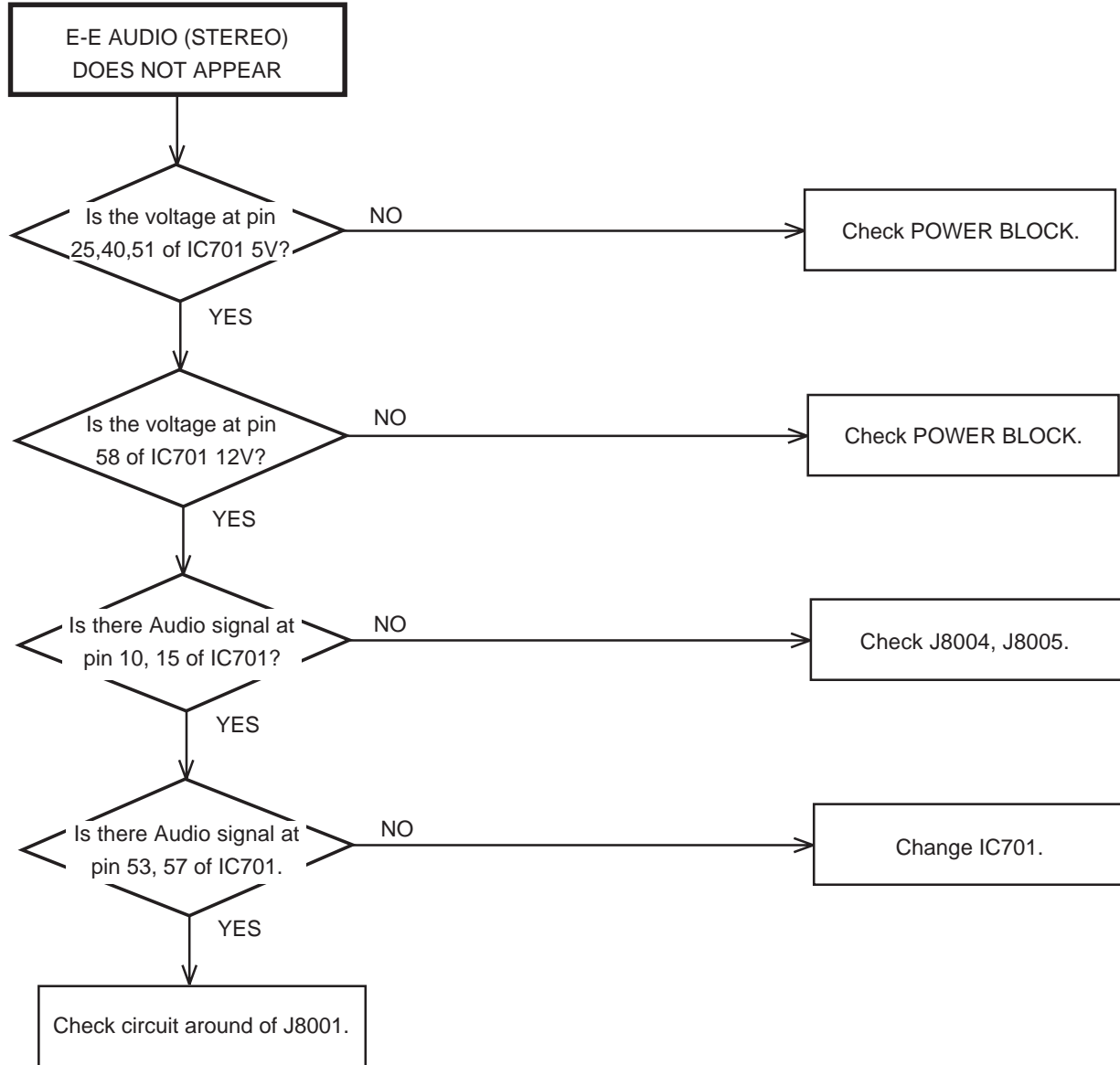
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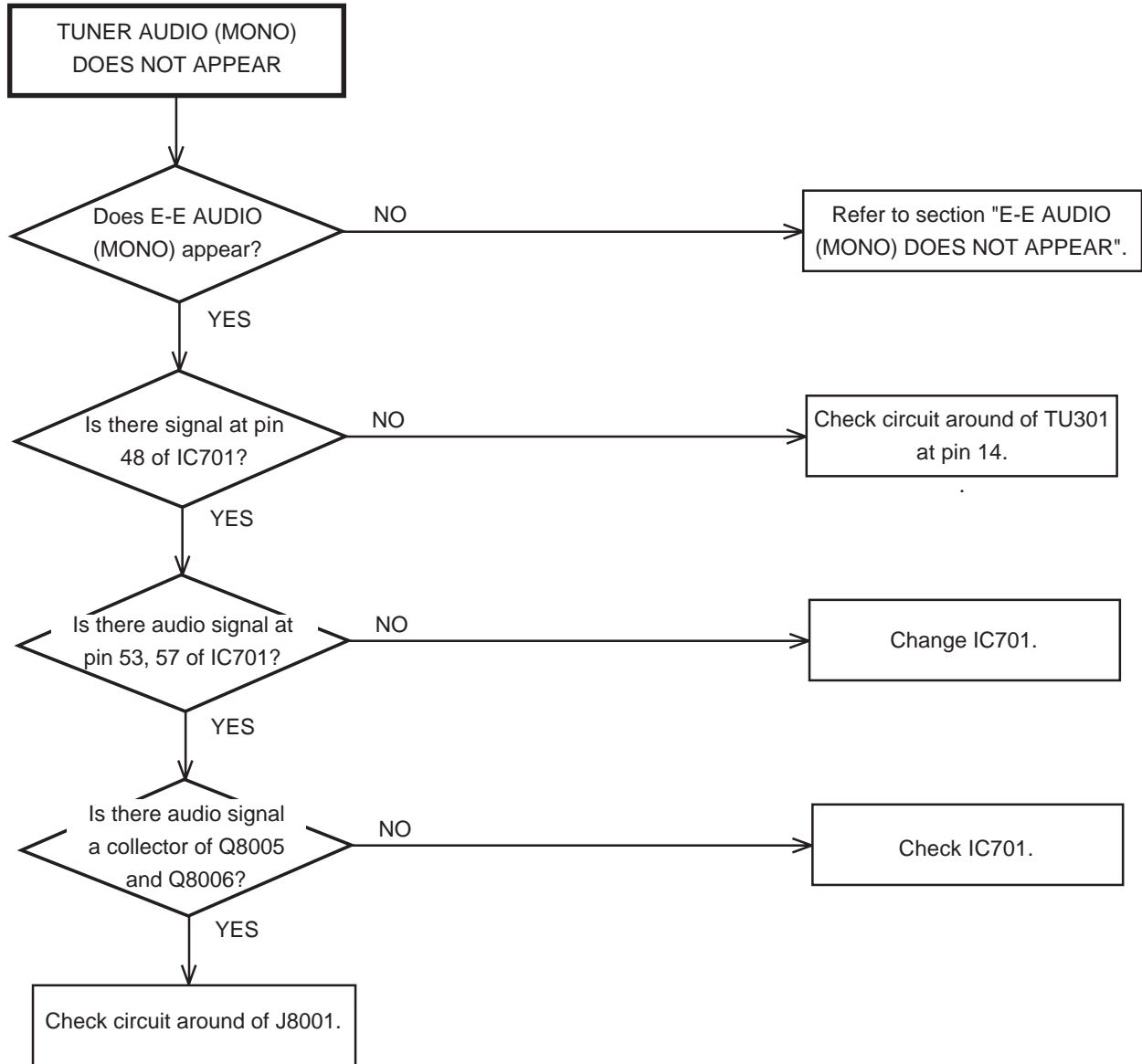
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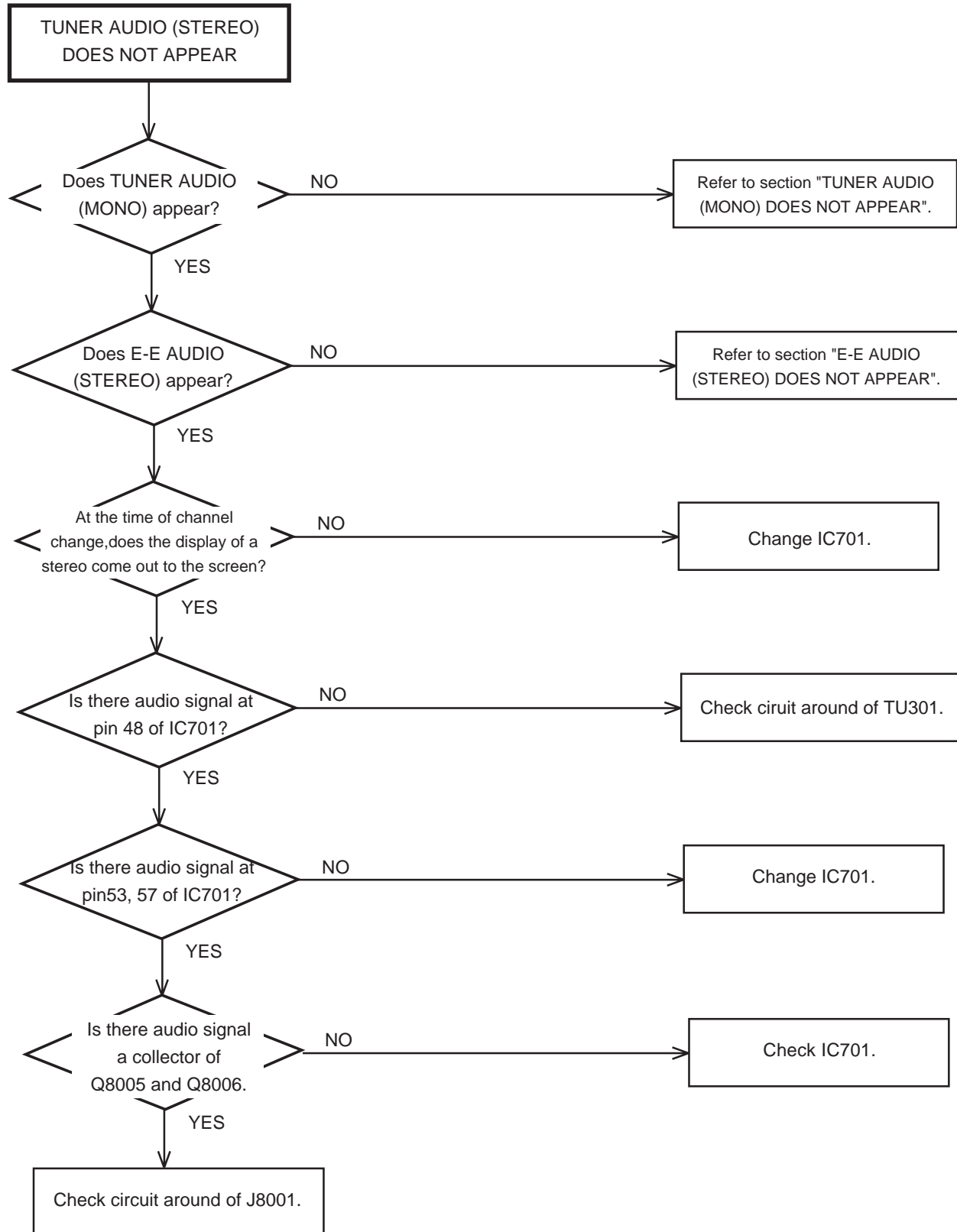
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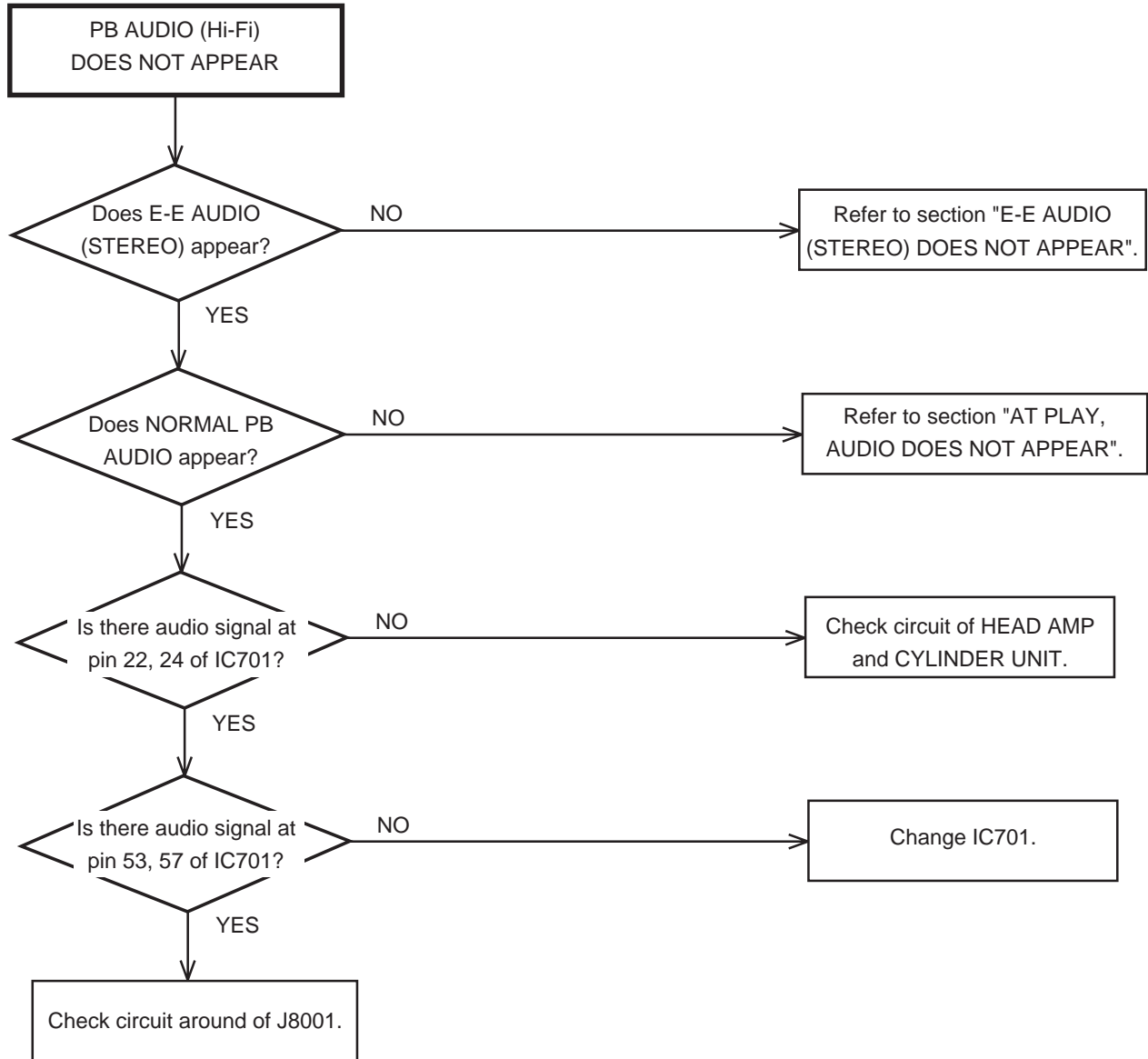
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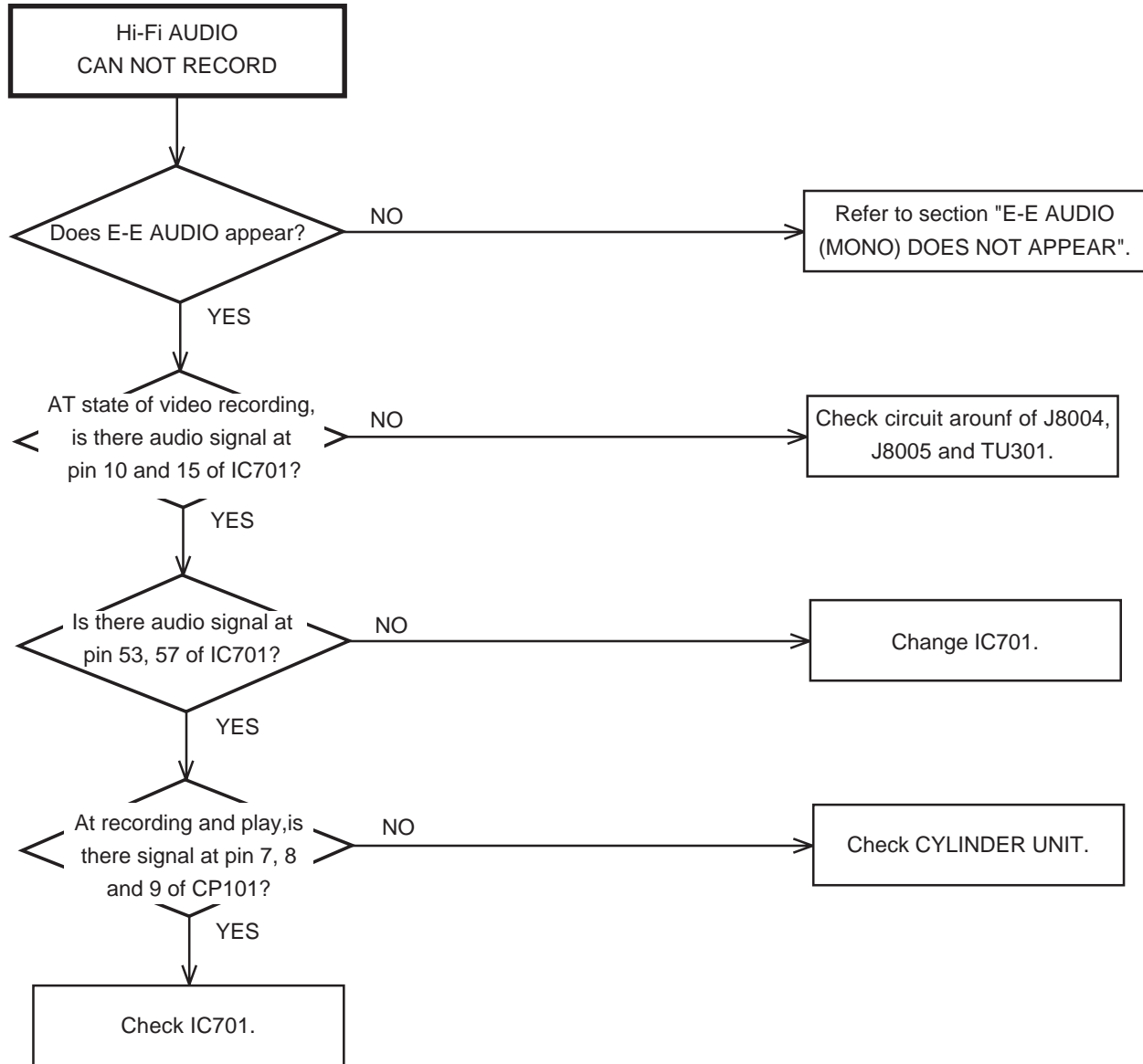
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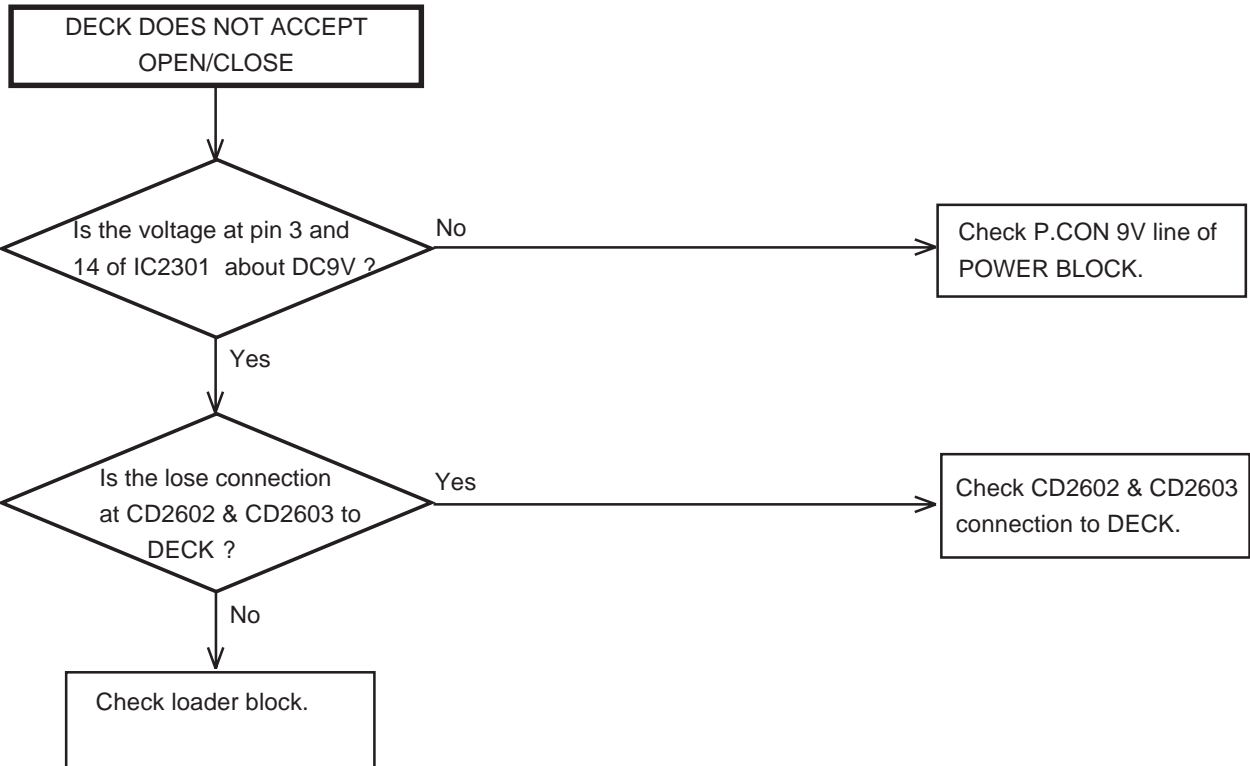


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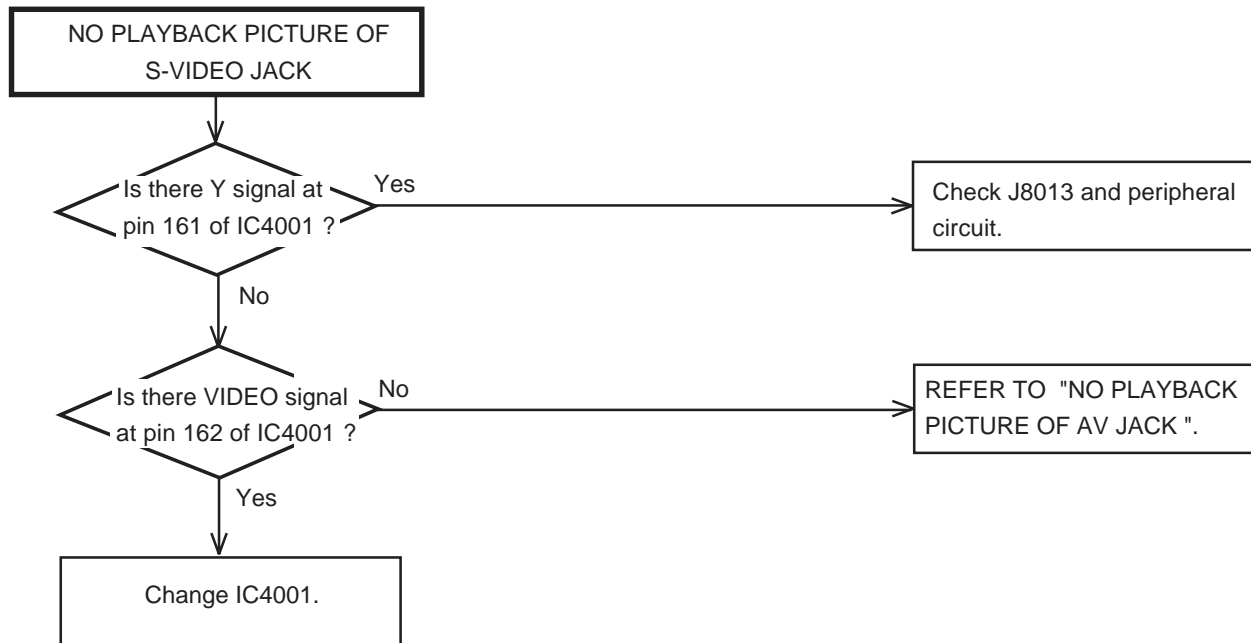
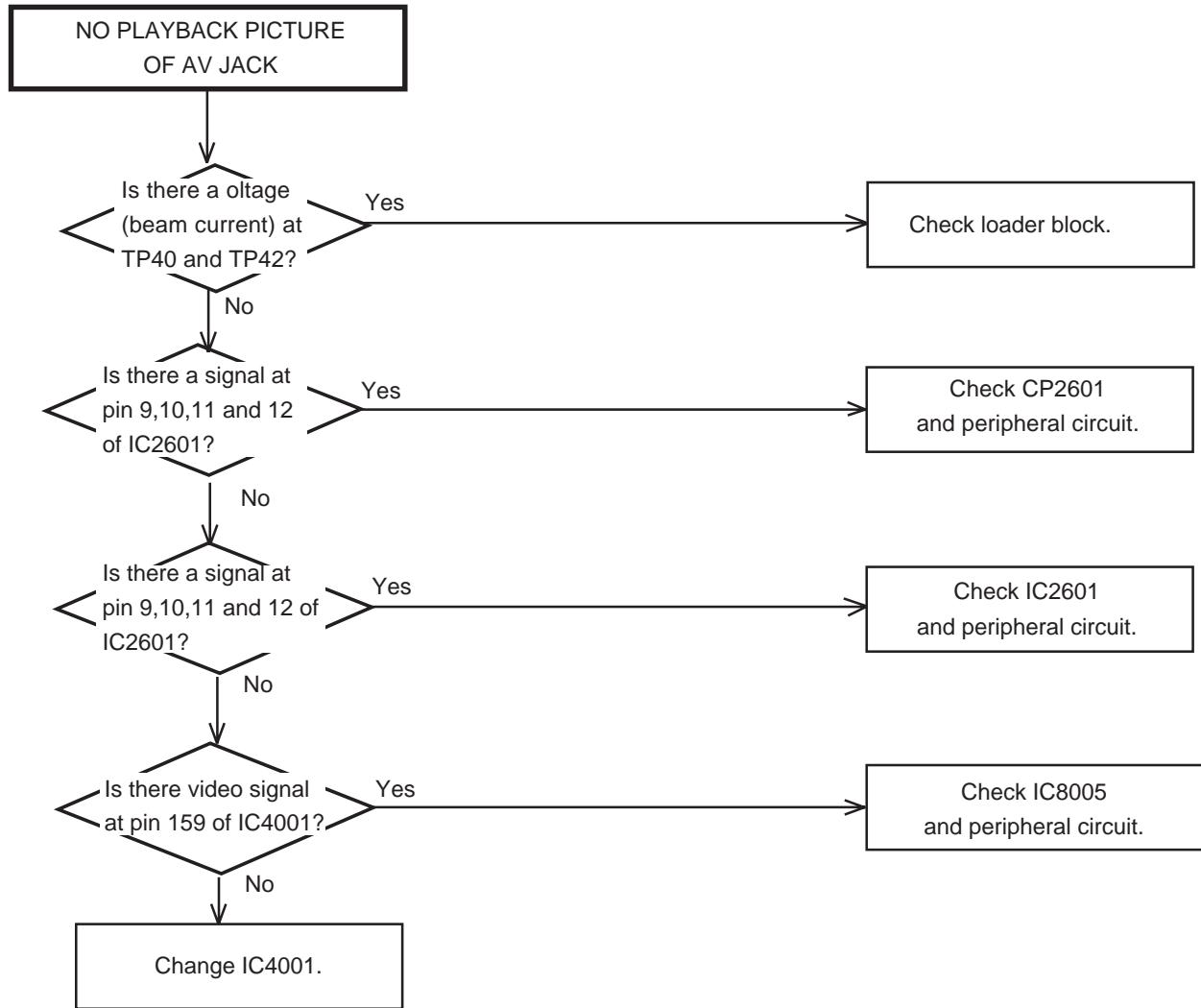


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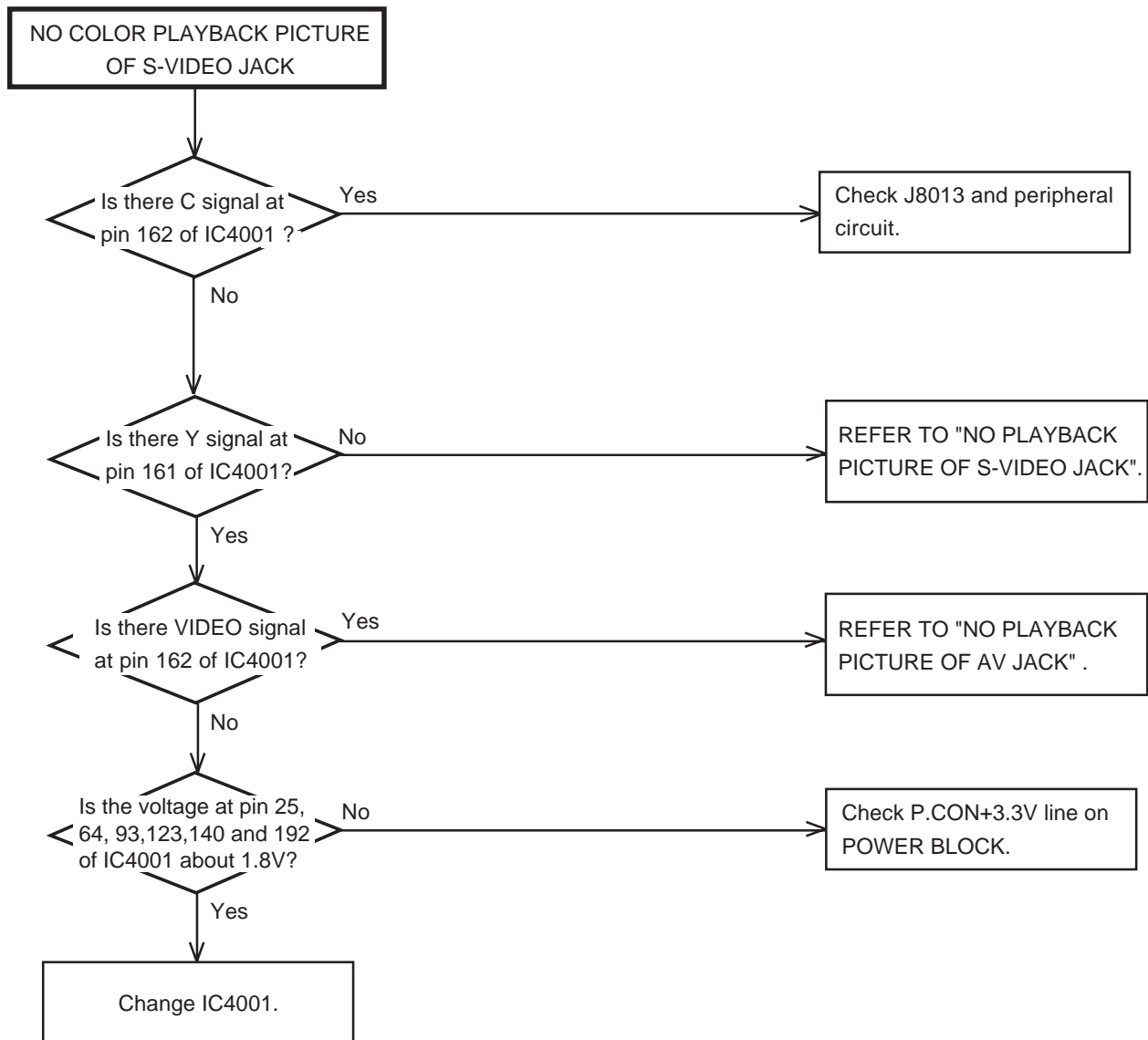
(DVD SECTION)



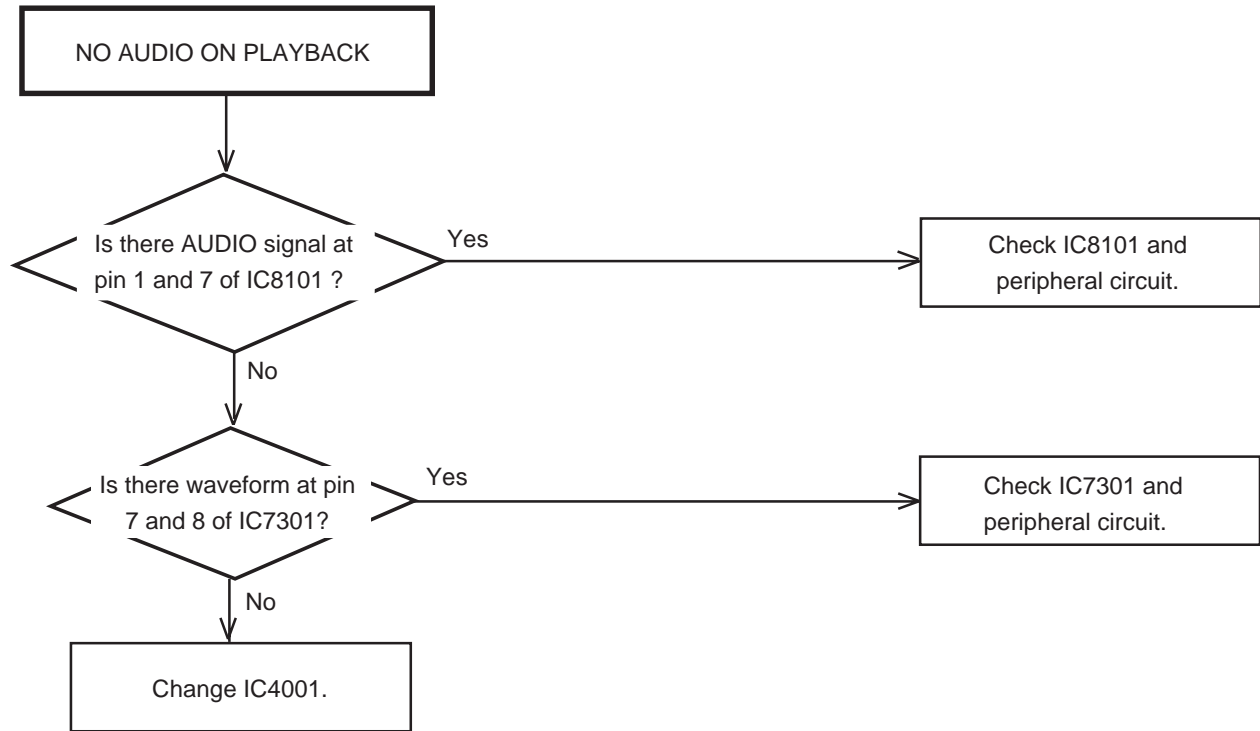
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TROUBLESHOOTING GUIDE



GENERAL SPECIFICATIONS [HR-XVC25US]

G-1	Outline of the product		DVD VIDEO PLAYER & VHS Player / Recorder	
G-2	DVD System	Color System	NTSC	
		Disc	DVD, CD-DA, CD-R/RW, VIDEO CD	
		Disc Diameter	120 mm , 80 mm	
		Deck	Disc Loading System	
			Motor	Front Disc Loading
				2 Motors
		Pick up		1-Lens 2-Beams System
		Playback time (Max)	DVD 1-Layer	135min (4.7GB)
			DVD 2-Layer	245min (8.5GB)
			CD	74min
			VIDEO CD	74min
		Search speed	Actual	Fwd 2-20 times / 4 step
				2-45 times (DVD, VIDEO CD)
Actual	4-40 times (CD)			
	Rev 2-20 times / 4 step			
Slow speed	Actual	2-45 times (DVD, VIDEO CD)		
		4-40 times (CD)		
	Actual	Fwd 1/7-1/2 times		
		Rev --		
Actual	Rev --			
	Actual	Rev --		
G-3	VCR System	System	VHS Player / Recorder	
		Video System	NTSC	
		Hi-Fi STEREO	Yes	
		NTSC PB(PAL60Hz)	No	
		Deck	DECK	
			Loading System	OVD-7
			Motor	Front
				3
		Heads	Video Head	4Head
			FM Audio Head	2Head
			Audio /Control	Mono/Yes
			Erase(Full Track Erase)	Yes
		Tape	Rec	PAL
		Speed		NTSC
			Play	PAL
				NTSC
		Fast Forward / Rewind Time (Approx.)	at 250C	FF:1'48"/REW:1'48"
with Cassette	T-120			
Forward/Reverse	NTSC or PAL-M	SP/SLP(EP) = 3x,5x / 9x,15x		
Picture Search	PAL or SECAM	-		
Frame Advance		Yes		
Slow Speed		1/10		
G-4	Tuning System	Broadcasting System	US System M	
		Tuner and	System	
		Receive CH	Destination	1Tuner
			Tuning System	US (w/CATV)
			Input Impedance	F-Synth
			CH Coverage	VHF/UHF 75 OHM
				2-69,4A,A-5-A-1,A-1
				J-W,W+1-W+84
		Intermediate	Picture(FP)	45.75 MHz
		Frequency	Sound(FS)	41.25 MHz
			FP-FS	4.50 MHz
		Preset CH		-
		RF Converter Output		Yes
			Channel	3 or 4 ch
			Level/Impedance	66 dBu / 75 Ohm
	Sound Selector	No		
Stereo/Dual TV Sound		US-ST		
Tuner Sound Muting		Yes		
G-5	Power	Power Source	AC	
			DC	120V 60Hz
		Power Consumption	Stand by	18 W at 120V 60Hz
			Per Year	2 W at 120V 60Hz
			-- W	
Protector	Power Fuse	Yes		

GENERAL SPECIFICATIONS [HR-XVC25US]

G-6	Regulation		Safety	UL / CSA
			Radiation	FCC / IC
			Laser	DHHS
G-7	Temperature		Operation	5oC - 40oC
			Storage	-20oC - 60oC
G-8	Operating Humidity			Less than 80% RH
G-9	Signal	Video Signal	Output Level	1 V p-p/75 ohm (DVD,VCR)
			S/N Ratio (Weighted)	65 dB(DVD) 50 dB(VCR)
			Horizontal Resolution	500 Lines (DVD) 230 Lines(VCR Mode)
		RGB Signal	Output Level	-
		Audio Signal	Input Level Microphone	-
			Input Level Line	-8 dBm/ 50k ohm(VCR)
			Output Level Line	-8 dBm/ 1k ohm (VCR, 0dBm=0.775Vrms) -12dBm/ 1k ohm (DVD, -20dBfs 0dBfs=2.0Vrms)
			Digital Output Level	0.5 V p-p / 75 ohm(DVD)
			S/N Ratio at (Weighted)	90dB(DVD), 42dB(VCR at SP)
			Harmonic Distortion (1KHz) Typical	0.02% (DVD), 1.5% (VCR at SP)
			Frequency Response : DVD Mode at DVD	4 Hz - 22 KHz
			DVD Mode at VIDEO CD	4 Hz - 20 KHz
			DVD Mode at CD	4 Hz - 20 KHz
			VCR Mode at SP	100Hz - 10kHz
			VCR Mode at LP	-
			VCR Mode at SLP	100Hz - 4kHz
			Hi-Fi Audio Signal	Dynamic Range : More than
				90dB
				Frequency Response
				20Hz ~20kHz
			Wow And Flutter : Less than	
			0.01 %Wrms	
			Channel Separation : More than	
			60 dB	
			Harmonic Distortion : Less than	
			0.01	

GENERAL SPECIFICATIONS [HR-XVC25US]

G-10	On Screen	Menu	Yes
	Display (DVD)	Menu Type	Character
		Language	Yes
		Menu	Yes
		Sub Title	Yes
		Audio	Yes
		Picture	Yes
		TV Screen Size	Yes
		OSD Display On/Off	Yes
		JPEG Interval	Yes
		Select Files	Yes
		Sound	Yes
		DRC (Dynamic Range Control)	Yes
		dts Decode	No
		Output (5.1ch/2ch)	No
		Surround On/Off	No
		Center On/Off	No
		Sub Woofer On/Off	No
		Parental	Yes
		Password Lock/Unlock	Yes
		Rating Level	Yes
		Other	Yes
		OSD Language (Set up Language)	Yes
		Output (RGB/Composite)	No
		Open	Yes
		Close	Yes
		No disc	Yes
		Reading	Yes
		Play	Yes
		Still/Pause	Yes
		Stop	Yes
		Prohibit Mark	Yes
		Step	Yes
		Skip (>>)	Yes
		Skip (<<)	Yes
		Random	Yes (CD, VIDEO CD, MP3, WMA, JPEG)
		Repeat	Yes
		Slow+ ##	Yes
		Slow- ##	No
		Search+ ##	Yes
		Search- ##	Yes
		Jump	Yes
		Resume	Yes
		Title No.	Yes
		Chapter No.	Yes
		Track No.	Yes
		Time	Yes
		Sub Title No.	Yes
		Angle No.	Yes
		Vocal On/Off	Yes
		Audio No.	Yes
		Audio Stereo L/R	Yes (VIDEO CD)
		Zoom	Yes
		Marker No.	Yes
		Spatializer (N-2-2)	Yes
		Program Play Back	Yes (CD, VIDEO CD, MP3, WMA, JPEG)
		MP3/WMA/JPEG	Folder Name File Name File No Time Track No
		Progressive Scan Out ON/OFF	Yes

GENERAL SPECIFICATIONS [HR-XVC25US]

	On Screen Display(VCR)	Menu	Menu Type	Yes	Character	
		Timer Rec Set		Yes		
		Auto Repeat On/Off		Yes		
		SAP On/Off		Yes		
		CH Set-Up		Yes		
			TV/CATV		Yes	
			Auto CH Memory		Yes	
			Add/Delete		Yes	
			System Set Up		Yes	
			Clock Set		Yes	(Calendar 12H)
			Language		Yes	
			No Noise Back Ground		Yes	
			Auto Clock		Yes	
			Standard Time		Yes	
			Daylight Saving Time		Yes	
			G-CODE (or SHOWVIEW or PLUSCODE) No. Entry			No
			Stereo, Audio Output, SAP		Yes	
			Play/Stop/FF/Rew/Rec/OTR(ITR)/T-Rec/Pause/Eject/Tape In (Symbol Mark)		Yes	
			CH/AV (LINE)		Yes	
			Clock		Yes	
			Repeat		Yes	
			Tape Counter		Yes	
			Index		Yes	
			Tape Speed		Yes	
			ATR / Manual Tracking		Yes	
			Hi-Fi		Yes	
			Zero Return		Yes	
		G-11	OSD Language	DVD OSD VCR OSD	Eng Fre Spa Eng Fre Spa	
G-12	Clock,Timer and Timer Back-up	Calendar		1990/1/1 ~ 2081/12/31		
		Timer Events		8 Program/ 1 Month		
		One Touch Recording Max Time		6 Hours		
		OTPB Valid Time			No	
		Timer Back-up (at Power Off Mode)		5 sec		
G-13	Display	DISPLAY		Yes		
		DISPLAY type		LED Module (Amber, "Rec" &Timer symbol = Red)		
		Clock/Counter,CH,Timer Rec,OTR, Play Rec,FF(Cue),Rew(Rev),Stop,ATR,Eject			No	
		VCR		Yes		
		DVD		Yes		
		CD		Yes		
		Clock		Yes (12h)		
			AM		No	
			PM	Yes		
		Counter	VCR	Yes (hour:min)		
			DVD	Yes (hour:min)		
			CD	Yes (min:sec)		
		Eject		Yes		
		Counter Remain			No	
		Play		Yes		
		Stop			No	
		Rec		Yes		
		FF / Cue			No	
		REW /Review			No	
		Pause/Still		Yes		
		OTR			No	
		T-Rec		Yes		
		Chapter			No	
		TITLE			No	
		TRACK		Yes		
		Repeat			No	
		Hi-Fi			No	
		SP			No	
		LP			No	
		SLP			No	
CH		Yes				
RF Output CH		Yes				
Tape In		Yes				
Remocon Custom Code		Yes				
Progressive Scan Out		Yes				

GENERAL SPECIFICATIONS [HR-XVC25US]

G-14	Remote Control	Unit	RC-GA	
		Glow in Dark Remocon	Yes	
		Format	JVC	
		Custom Code	43,53,6F,7F	
		Power Source	Voltage (D.C) UM size x pcs	3V UM-3 x 2 pcs
		Total Keys		50 Keys
		Keys	Power	Yes
			DISPLAY/CALL	Yes
			0	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			UP/CH+	Yes
			DOWN/CH-	Yes
			LEFT/ SET- / TRACKING- / VOL-	Yes
			RIGHT/ SET+ / TRACKING+ / VOL+	Yes
			VCR	Yes
			DVD	Yes
			TV/VCR	Yes
			DVD MENU	Yes
			TITLE	Yes
			SET UP MENU / VCR MENU	Yes
			SELECT/ENTER	Yes
			CLEAR / CANCEL	Yes
			RETURN	Yes
			PLAY	Yes
			STOP	Yes
			PAUSE/STILL/STEP	Yes
			FF (Cue) / SEARCH+	Yes
			REW (Review) / SEARCH-	Yes
	REC/OTR (ITR)	Yes		
	SKIP+ / INDEX+	Yes		
	SKIP- / INDEX-	Yes		
	AUDIO / AUDIO SELECT	Yes		
	ANGLE / COUNTER RESET	Yes		
	SUB TITLE/ATR	Yes		
	PLAY MODE/SPEED	Yes		
	T-REC	Yes		
	CLOCK / COUNTER	Yes		
	JUMP / ZERO RETURN	Yes		
	ZOOM	Yes		
	REPEAT A-B	Yes		
	SLOW (Forward)	Yes		
	MARKER	Yes		
	OPEN/CLOSE	Yes		
	CM SKIP	No		
	CM SKIP / PROGRESSIVE	Yes		
	TV POWER	Yes		
	TV INPUT	Yes		
	TV VOL+	Yes		
	TV VOL-	Yes		
	Slide SW	TV / VCR&DVD Select		
		Yes		

GENERAL SPECIFICATIONS [HR-XVC25US]

G-15	Features (DVD)	Auto Power Off		No	
		Parental Lock	Yes		
		Video CD Playback	Yes		
		MP3 Playback	Yes		
		WMA Playback	Yes		
		JPEG Playback	Yes		
		Progressive Scan Out	Yes		
		Digital Out	Dolby Digital	Yes	
			MPEG	Yes	
			PCM	Yes	
			DTS	Yes	
		Down Mix Out	(Dolby Digital)	Yes	
			(DTS)		No
		Spatializer (N-2-2)		Yes	
		Screen Saver			No
		Auto Stop			No
		Audio DAC		192kHz / 24bit	
	Features (VCR)	Auto Head Cleaning		No	
		Auto Tracking	Yes		
		HQ (VHS Standard High Quality)	Yes		
		Auto Power On, Auto Play, Auto Rewind, Auto Eject	Yes		
		Auto Power Off		No	
		Forward/Reverse Picture Search	Yes		
		VIDEO PLUS+ (SHOWVIEW, G-CODE)		No	
		One Touch Playback		No	
		Auto CH Memory	Yes		
		AREA CODE		No	
		Auto Clock Set	Yes		
		Index Search	Yes		
		SQPB (Option)	Yes		
		CATV	Yes		
		Energy Star		No	
		MTS (SAP)	Yes		
CM Skip (30sec x 6 Times)	Yes				
Copy Disc to Tape		Yes (by Conditioning)			
G-16	Accessories	Owner's Manual	Language	English	
			w/Guarantee Card	Yes	
		Remote Control Unit		Yes	
		Guarantee Card		No	
		Product Registration Card		Yes	
		Warning Sheet		No	
		Service Station List		No	
		Important Tag		No	
		AC Plug Adapter		No	
		Quick Set-up Sheet		No	
		Battery		Yes	
			UM size x pcs	UM-3 x 2 pcs	
		AC Cord		No	
		AV Cord (1.2m)		Yes	
		75 Ohm Coaxial Cable (0.9m)		Yes	
		S-Video Cable		No	
		21pin cable		No	
		800 No Sticker		No	
		Toll Free Insert Sheet		No	
		Safety Tip		No	

GENERAL SPECIFICATIONS [HR-XVC25US]

G-17	Interface	Switch	Front	Power	Yes	
				Play	Yes	
				Eject (VCR)	Yes	
				Stop	Yes	
				Rec/OTR	Yes	
				Open/Close (DVD)	Yes	
				CH +	Yes	
				CH -	Yes	
				FF/ Search(>>)	Yes	
				Rew/Search(<<)	Yes	
				Still/Pause	No	
				Shuttle (Search/REV/FWD)	No	
				DVD/VCR	Yes	
				Main Power SW	No	
				Rear	Attenuator	No
		S-Video/Component Video Selector	Yes			
		RF Out (Slide SW)	No			
		Volume	Main Power SW	No		
			Phones Volume	No		
			Mic Volume	No		
		Terminals	Front	Rec/OTR	No	
				Video In	RCA x 1 (Black)	
				Audio In	RCA x 2 (Stereo, Black)	
				Rear	Video Output	RCA x1 (Yellow) S-Video x 1 (DVD Signal Only) Component x1 (RCA 3pin, DVD Signal Only)
					Audio Output	RCA x 4(Stereo, Red/White) Coaxial x 1 (Digital Audio, DVD Signal Only)
			Rear	Optical Out (Option)	Yes (Digital Audio, DVD Signal Only)	
				Video Input (Option)	No	
				Audio Input (Option)	No	
				RF Input / Output	Yes	
				Euro Scart	No	
		Indicator	LED	AC Inlet	No	
				Power	No	
				Rec	No	
T-Rec	No					
TV/VCR	No					
DVD	Yes (GREEN)					
VCR	Yes (GREEN)					
Surround	No					
Level Meter	No					
G-18	Set Size			Approx. W x D x H (mm)		430 x 249 x 99
G-19	Weight	Net (Approx.)		3.6kg (7.9lbs)		
		Gross (Approx.)		4.7kg (10.4lbs)		
G-20	Carton	Master Carton		No		
		Content		--- Sets		
		Material		--- / ---		
		Dimensions W x D x H(mm)		---		
		Description of Origin		---		
		Gift Box		Yes		
		Material		Single Full Color Carton		
		W/Color Photo Label		No		
		Dimensions W x D x H(mm)		497 x 360 x 180		
		Design		As Per BUYER 's		
		Description of Origin		Yes		
Drop Test	Natural Dropping At		1 Corner / 3 Edges / 6 Surfaces			
	Height (cm)		80 cm			
Container Stuffing		1,985 Sets/40' container				
G-21	Cabinet Material	Cabinet Front		PS 94V2 or More / DECABROM		
		PCB		Non-Halogen Demand		
		Eyelet Demand		No		
G-22	Environment	Pb Free	Lead-free Solder	No		
			Other	No		
		Cd Free			No	

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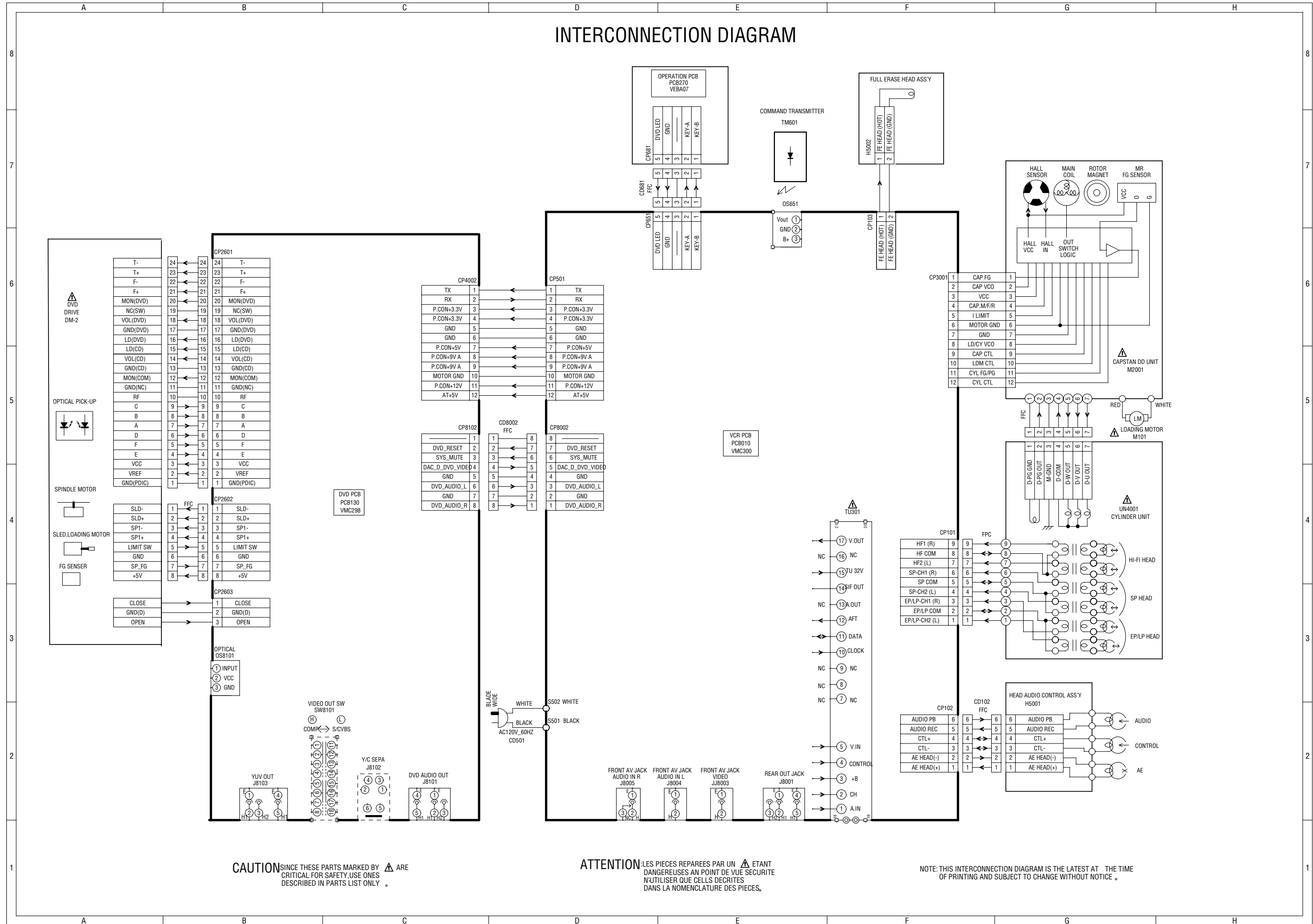


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SECTION 2 CHARTS AND DIAGRAMS

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

INTERCONNECTION DIAGRAM



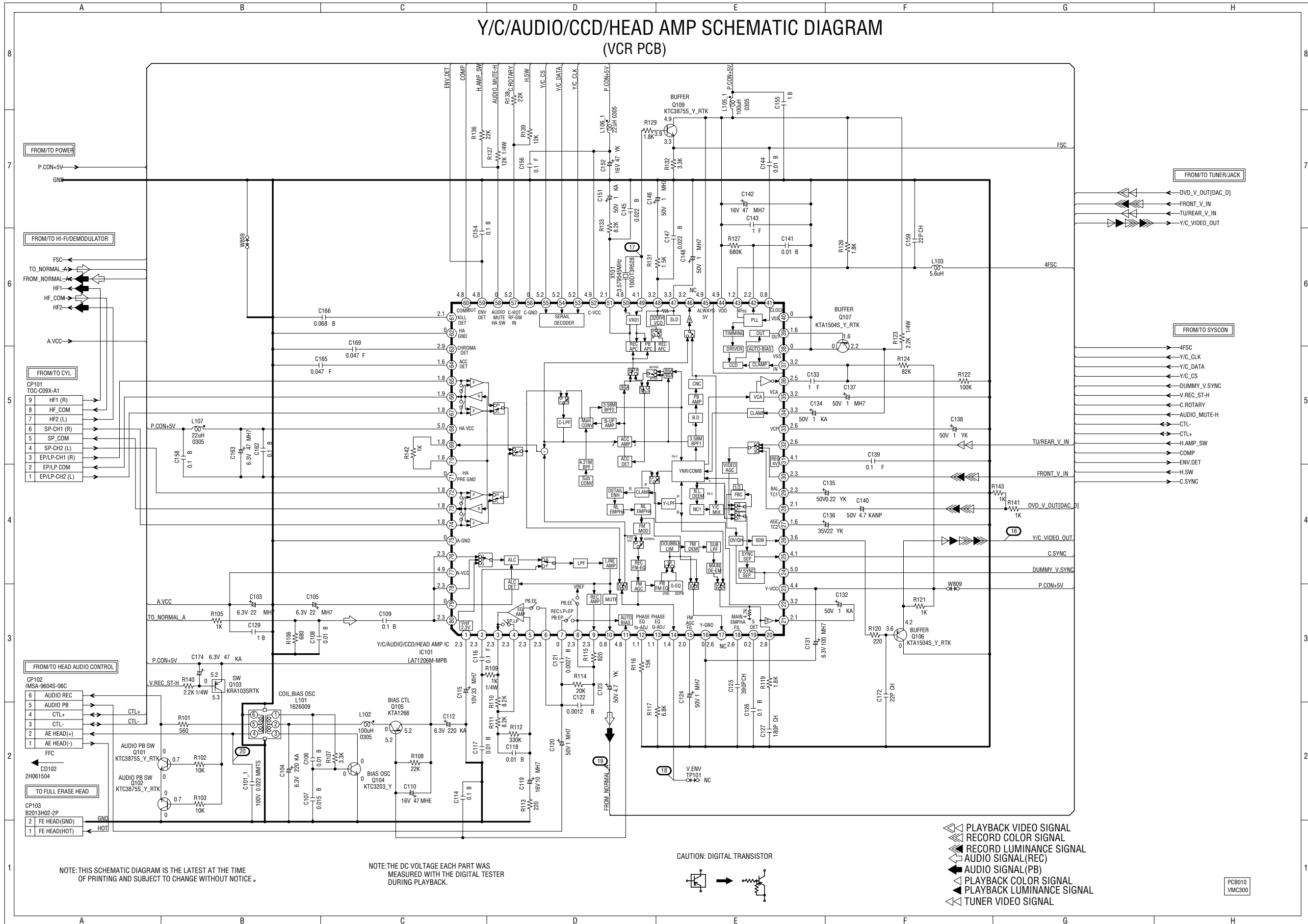
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AN POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

Y/C/AUDIO/CCD/HEAD AMP SCHEMATIC DIAGRAM (VCR PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION: DIGITAL TRANSISTOR

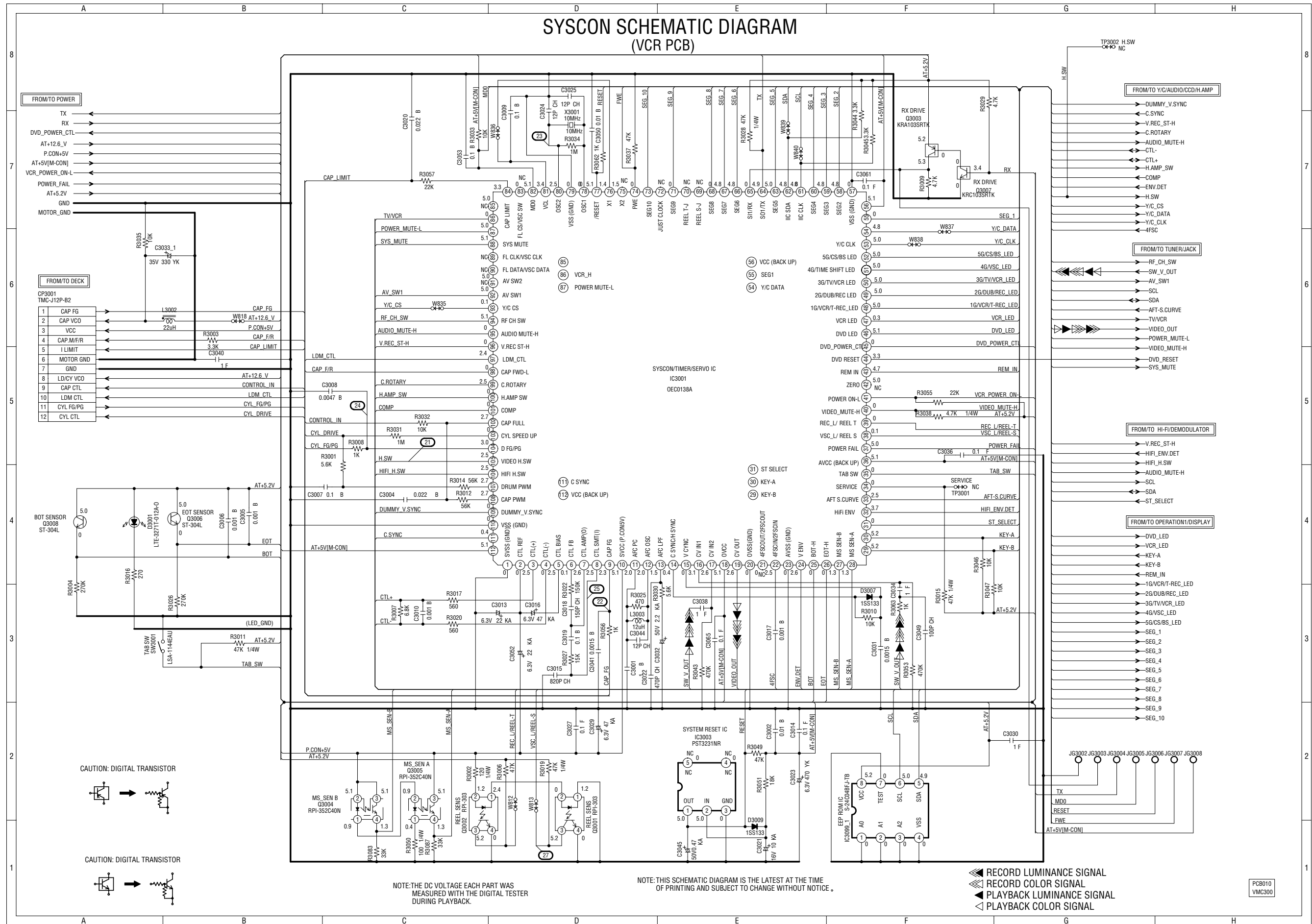


- ▶▶▶ PLAYBACK VIDEO SIGNAL
- ▶▶▶ RECORD COLOR SIGNAL
- ▶▶▶ RECORD LUMINANCE SIGNAL
- ▶▶▶ AUDIO SIGNAL (REC)
- ▶▶▶ AUDIO SIGNAL (PB)
- ▶▶▶ PLAYBACK COLOR SIGNAL
- ▶▶▶ PLAYBACK LUMINANCE SIGNAL
- ▶▶▶ TUNER VIDEO SIGNAL

PCB010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

SYSCON SCHEMATIC DIAGRAM (VCR PCB)



FROM/TO POWER

FROM/TO DECK

FROM/TO Y/C/AUDIO/CCD/HAMP

FROM/TO TUNER/JACK

FROM/TO HI-FI/DEMODULATOR

FROM/TO OPERATION/DISPLAY

CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

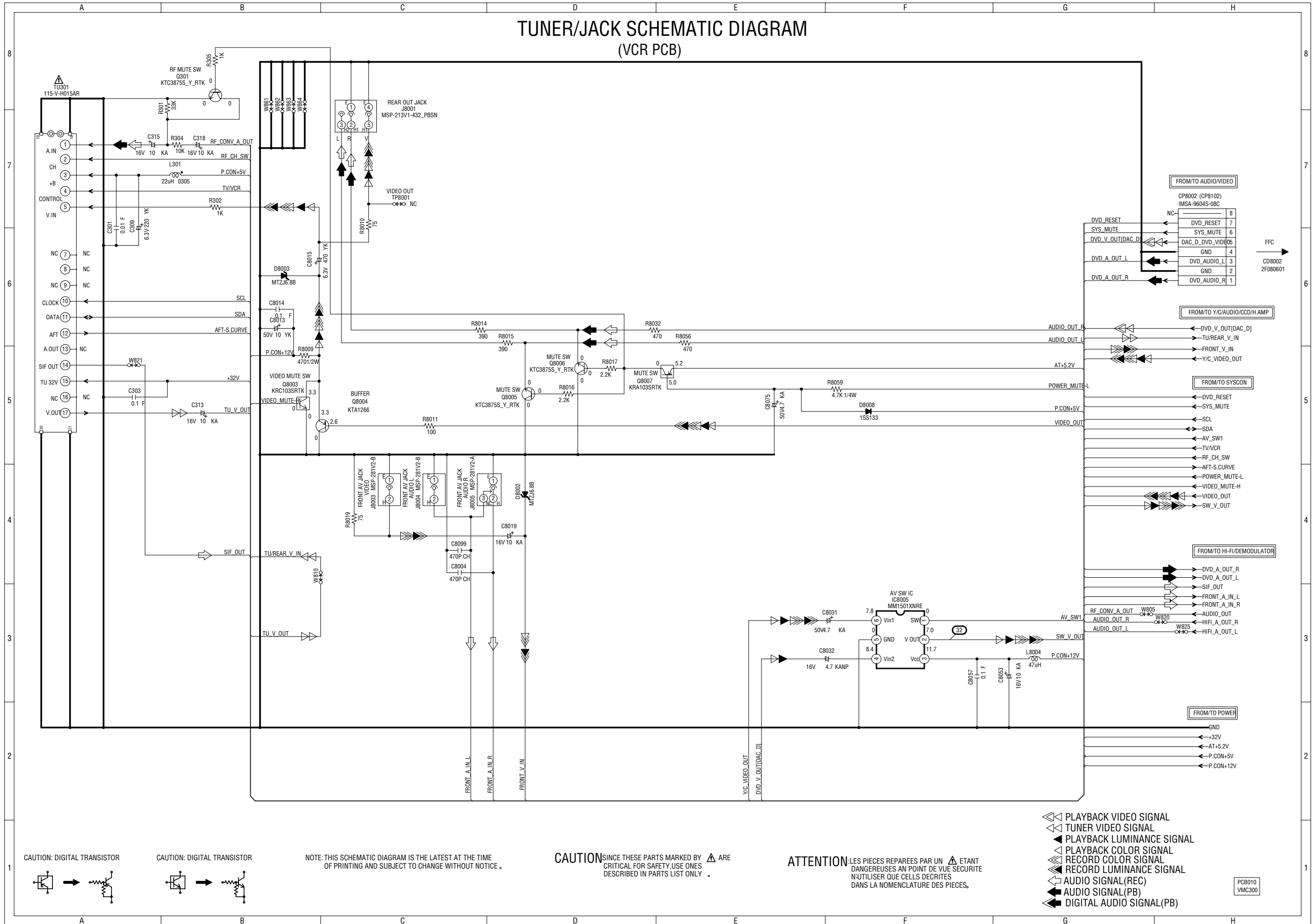
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

- ▶ RECORD LUMINANCE SIGNAL
- ▶ RECORD COLOR SIGNAL
- ▶ PLAYBACK LUMINANCE SIGNAL
- ▶ PLAYBACK COLOR SIGNAL

PC8010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

TUNER/JACK SCHEMATIC DIAGRAM (VCR PCB)



CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

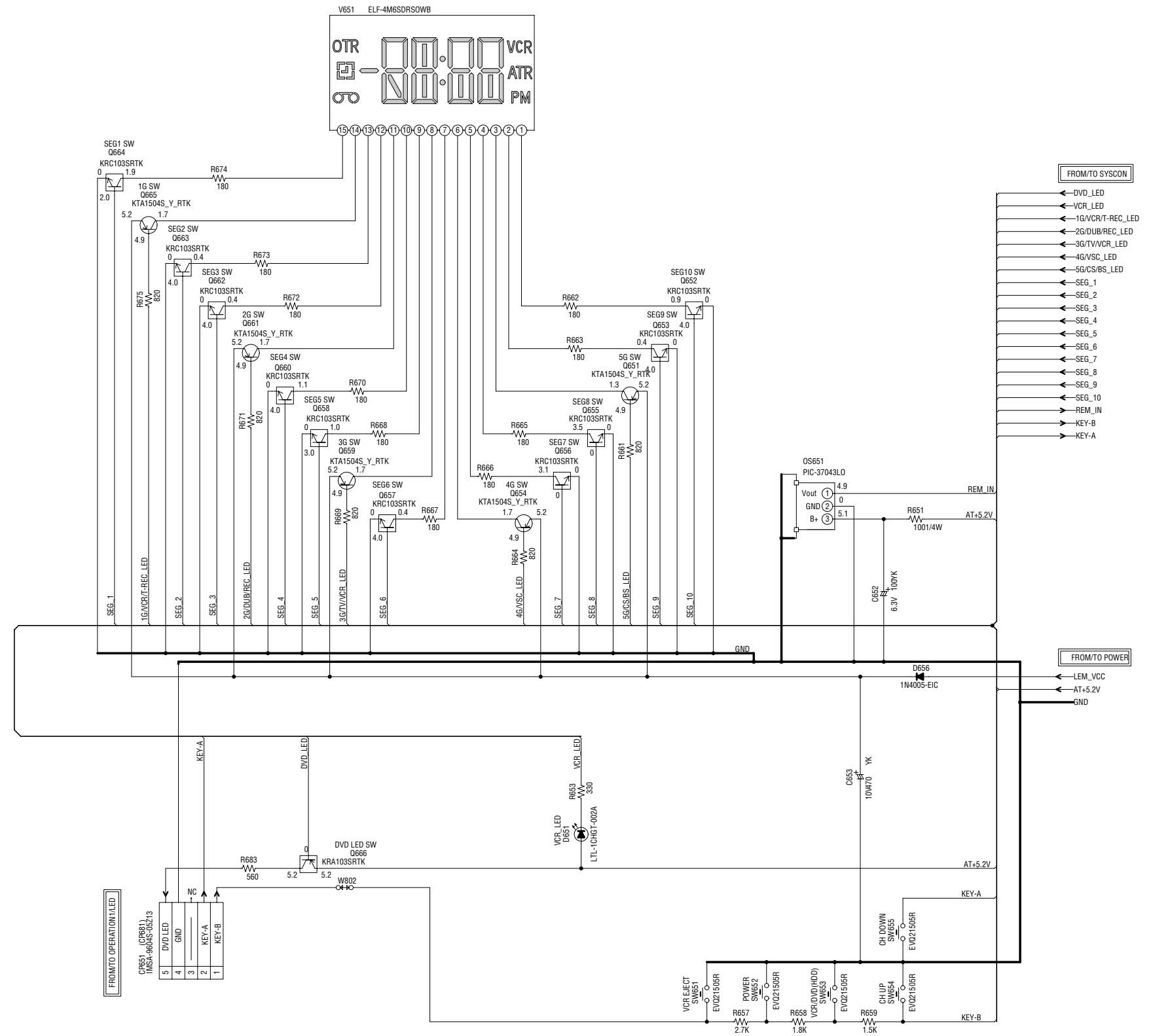
ATTENTION: LES PIÈCES RÉPARÉES PAR UN Δ ÉTANT DANGEREUSES AN POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

- ∇ PLAYBACK VIDEO SIGNAL
- ∇ TUNER VIDEO SIGNAL
- \blacktriangle PLAYBACK LUMINANCE SIGNAL
- \blacktriangle PLAYBACK COLOR SIGNAL
- \blacktriangle RECORD COLOR SIGNAL
- \blacktriangle RECORD LUMINANCE SIGNAL
- \blacktriangle AUDIO SIGNAL(REC)
- \blacktriangle AUDIO SIGNAL(PB)
- \blacktriangle DIGITAL AUDIO SIGNAL(PB)

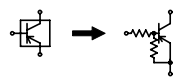
PC8010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

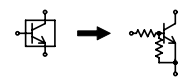
OPERATION/DISPLAY SCHEMATIC DIAGRAM (VCR PCB)



CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



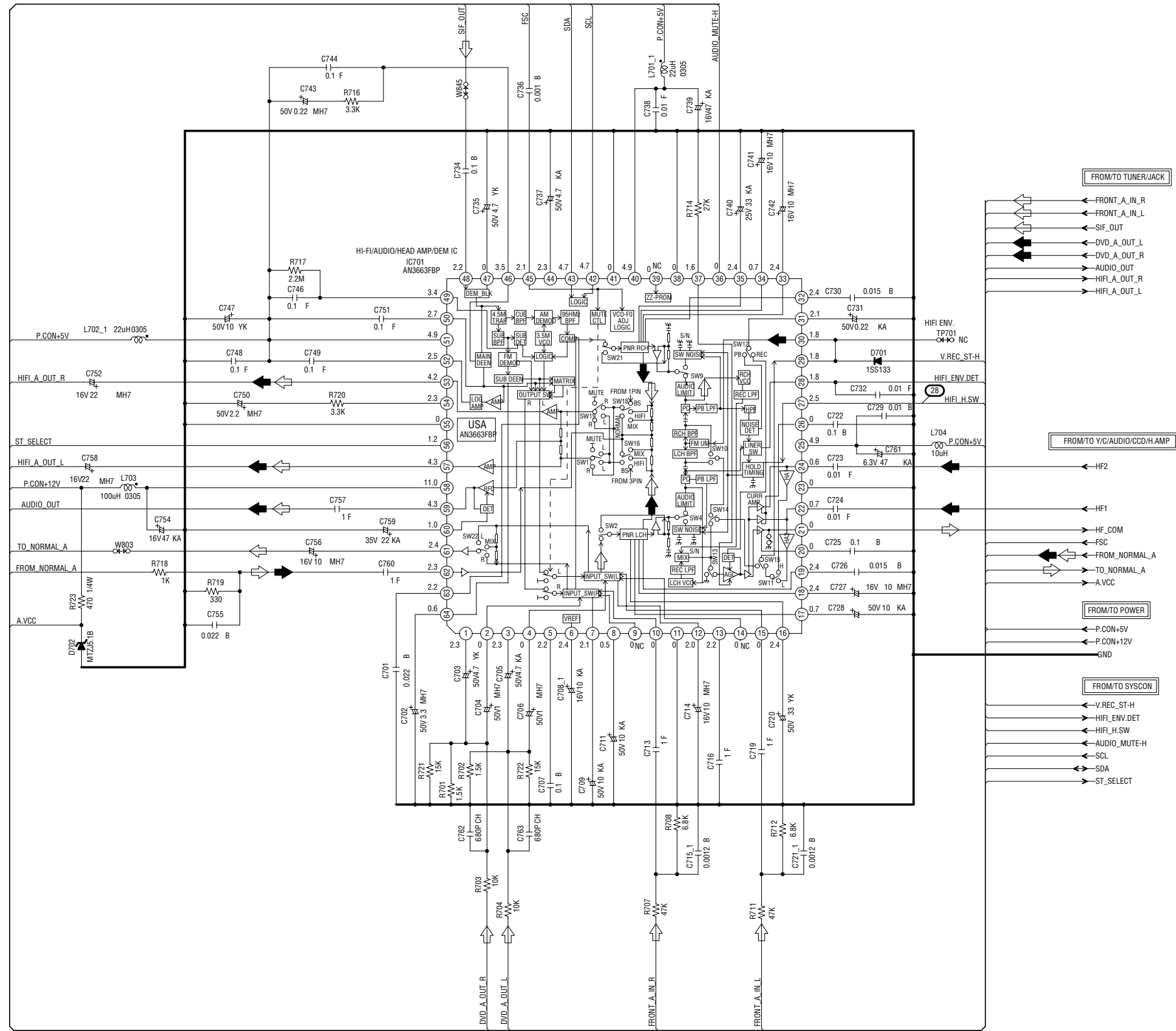
NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

PCB010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

Hi-Fi/DEMODULATOR SCHEMATIC DIAGRAM (VCR PCB)



NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

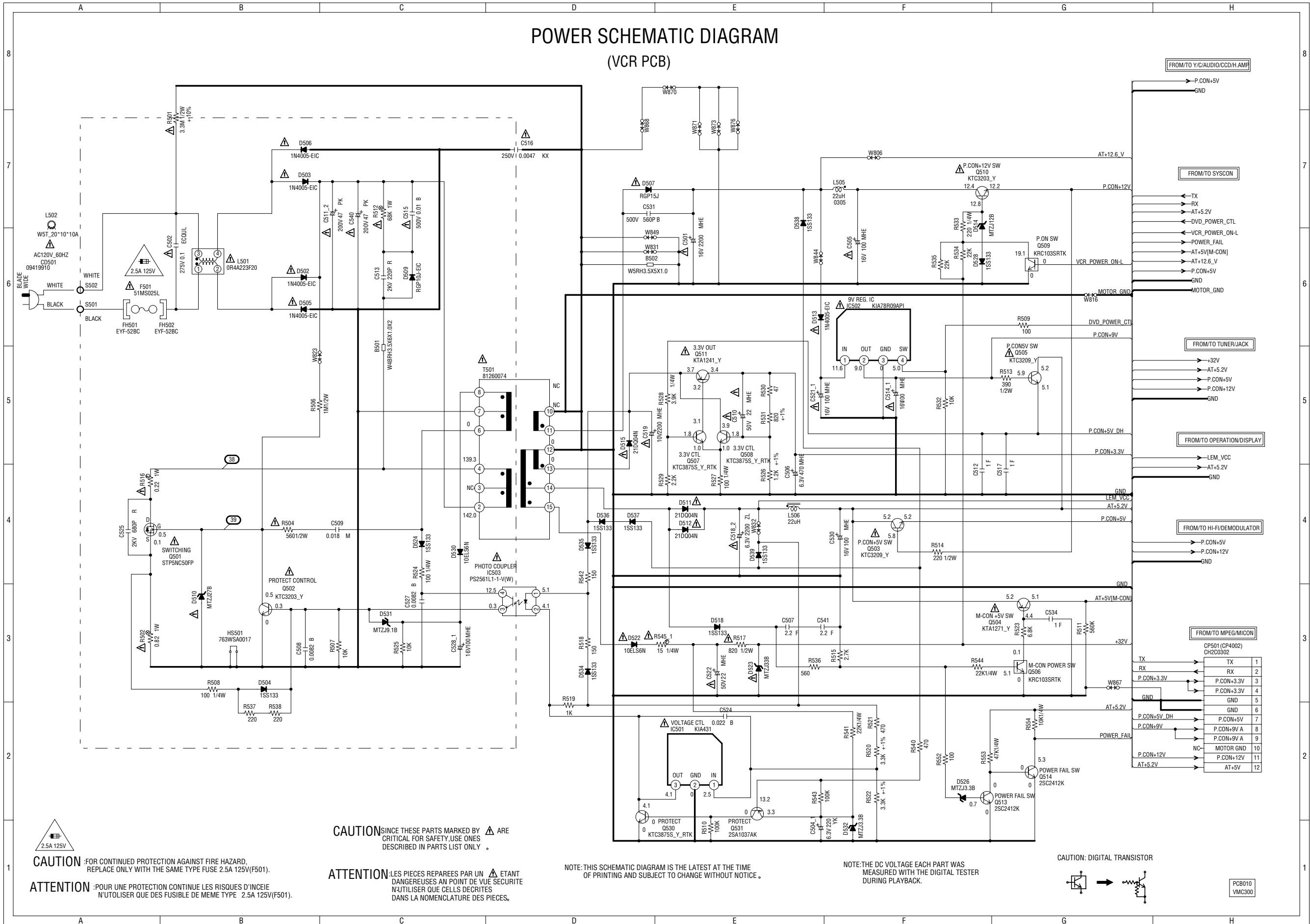
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

◁ AUDIO SIGNAL (REC)
◼ AUDIO SIGNAL (PB)

PCB010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

POWER SCHEMATIC DIAGRAM (VCR PCB)



CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 2.5A 125V(F501).

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 2.5A 125V(F501).

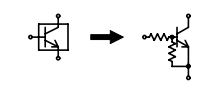
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION :LES PIECES REPARÉES PAR UN ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

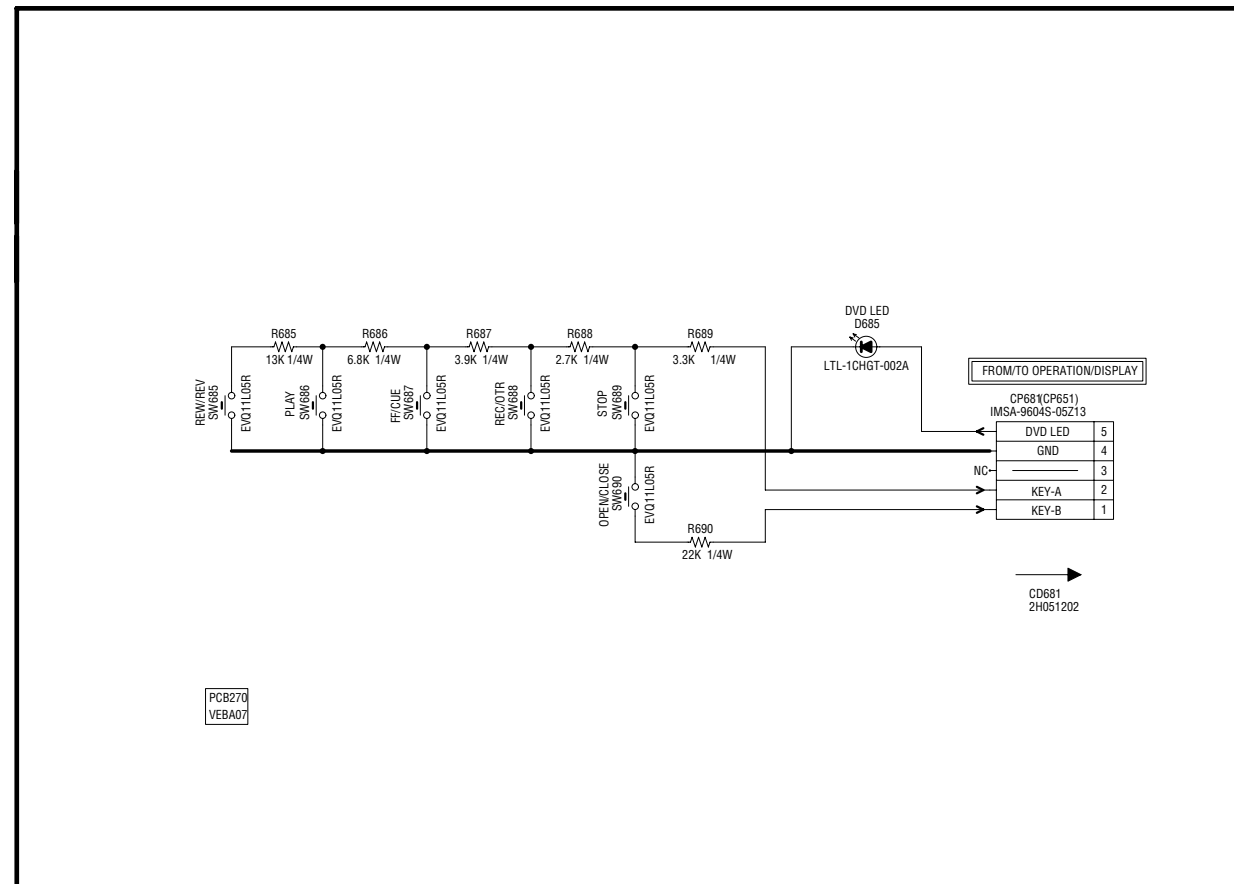
CAUTION: DIGITAL TRANSISTOR



PC8010
VMC300

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

OPERATION/LED SCHEMATIC DIAGRAM (OPERATION PCB)

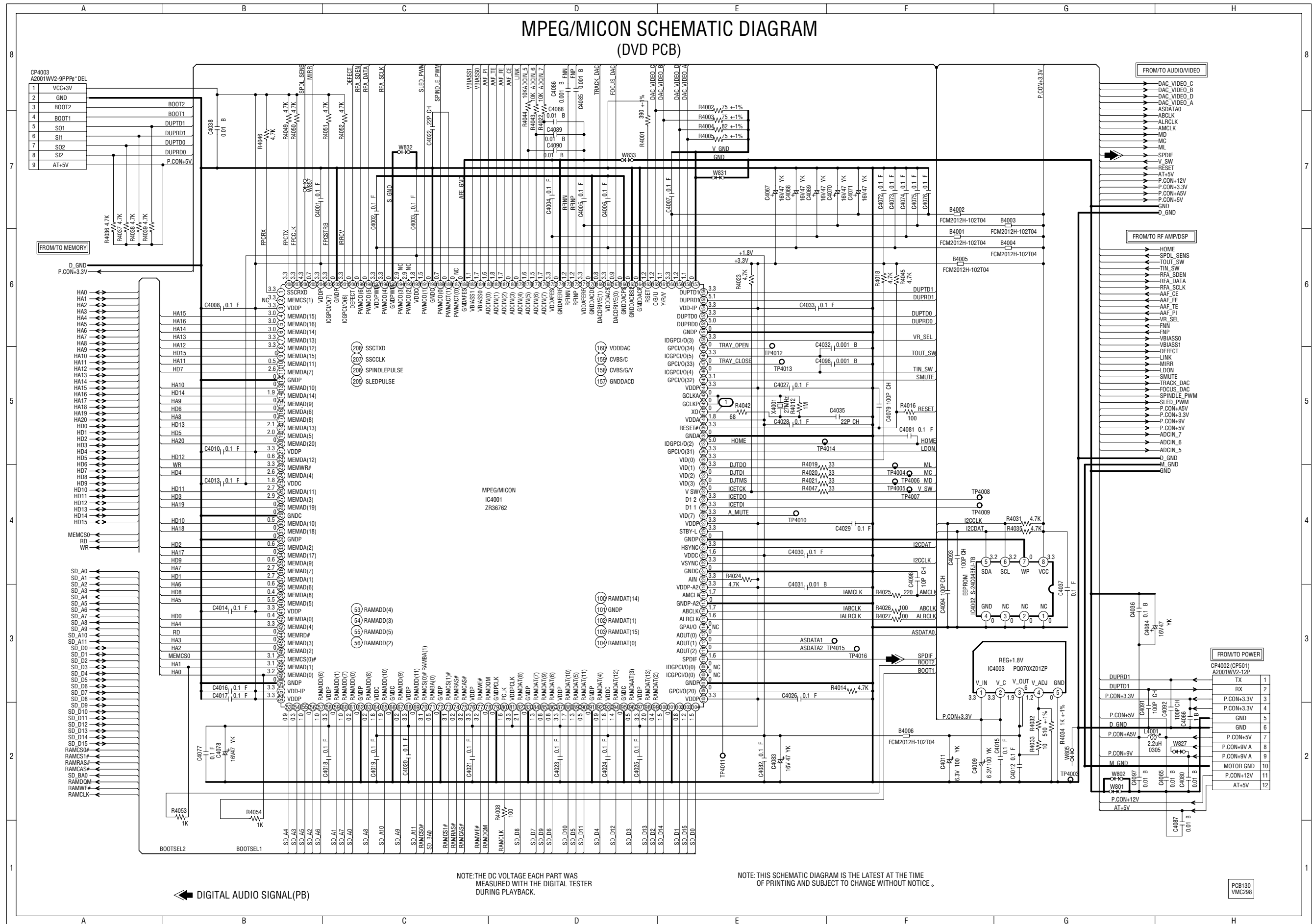


NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

MPEG/MICON SCHEMATIC DIAGRAM (DVD PCB)



NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

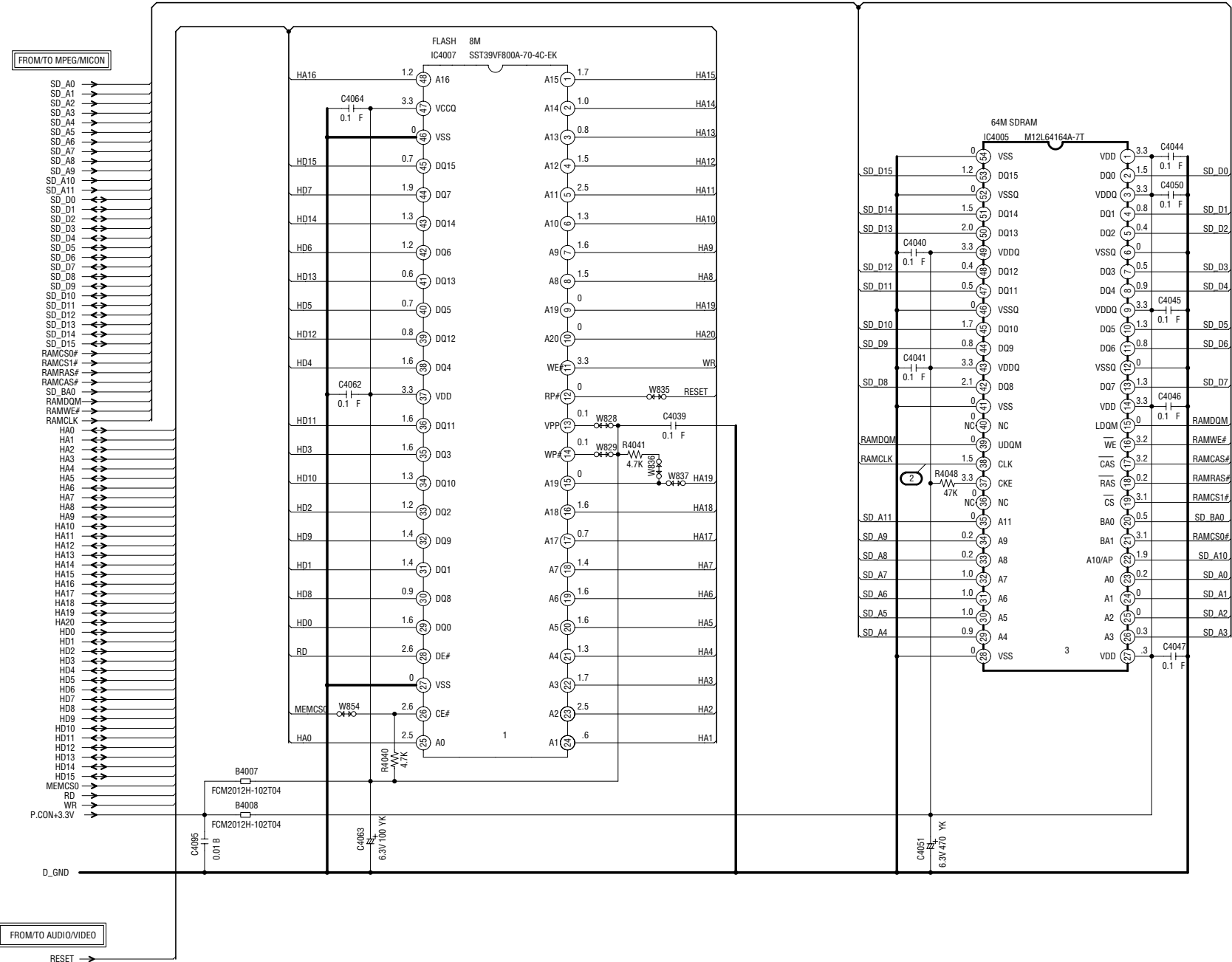
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

← DIGITAL AUDIO SIGNAL (PB)

PCB130 VMC298

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

MEMORY SCHEMATIC DIAGRAM (DVD PCB)



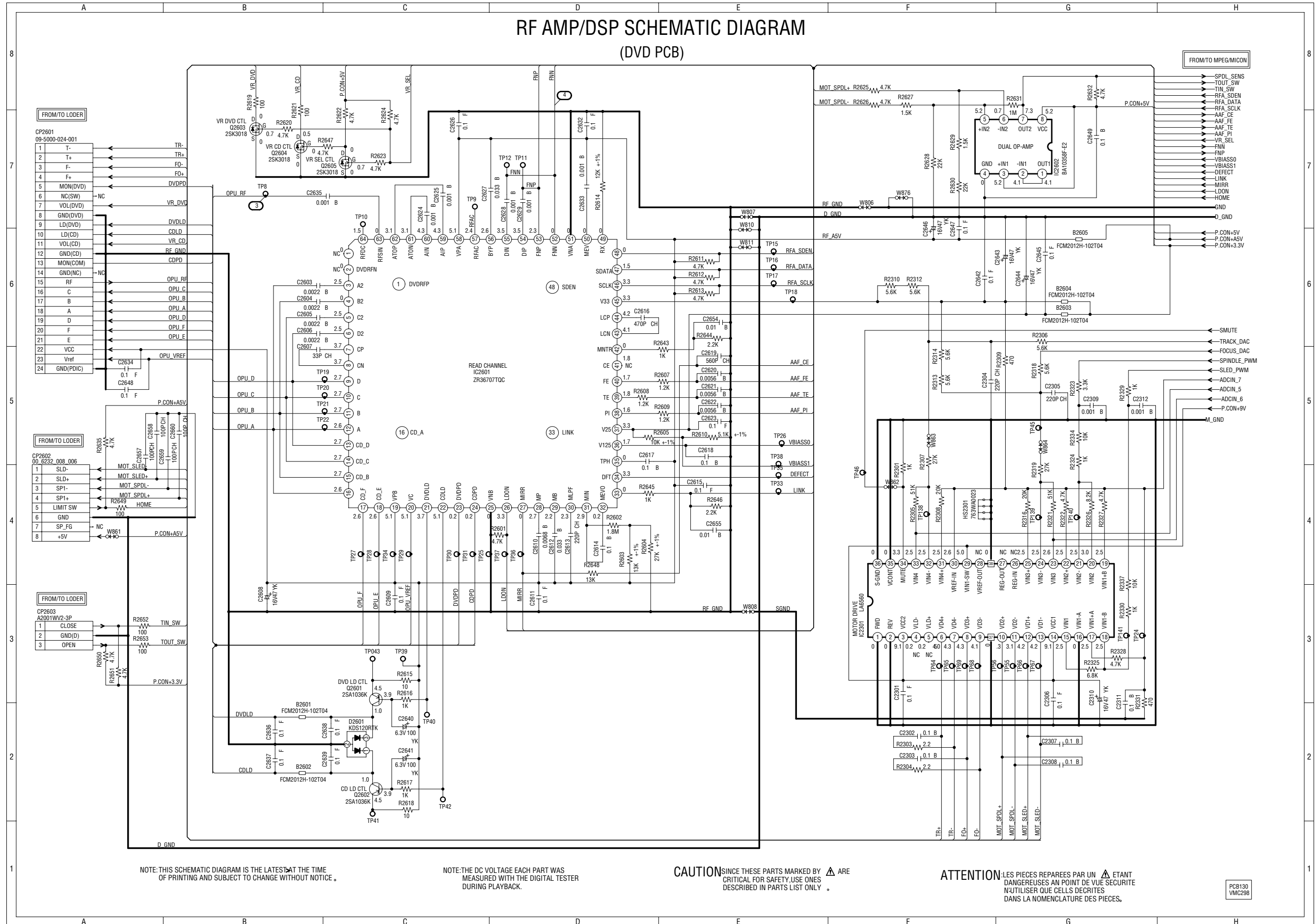
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
VMC298

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only.
When replacing the parts, refer to the Parts List.

RF AMP/DSP SCHEMATIC DIAGRAM (DVD PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

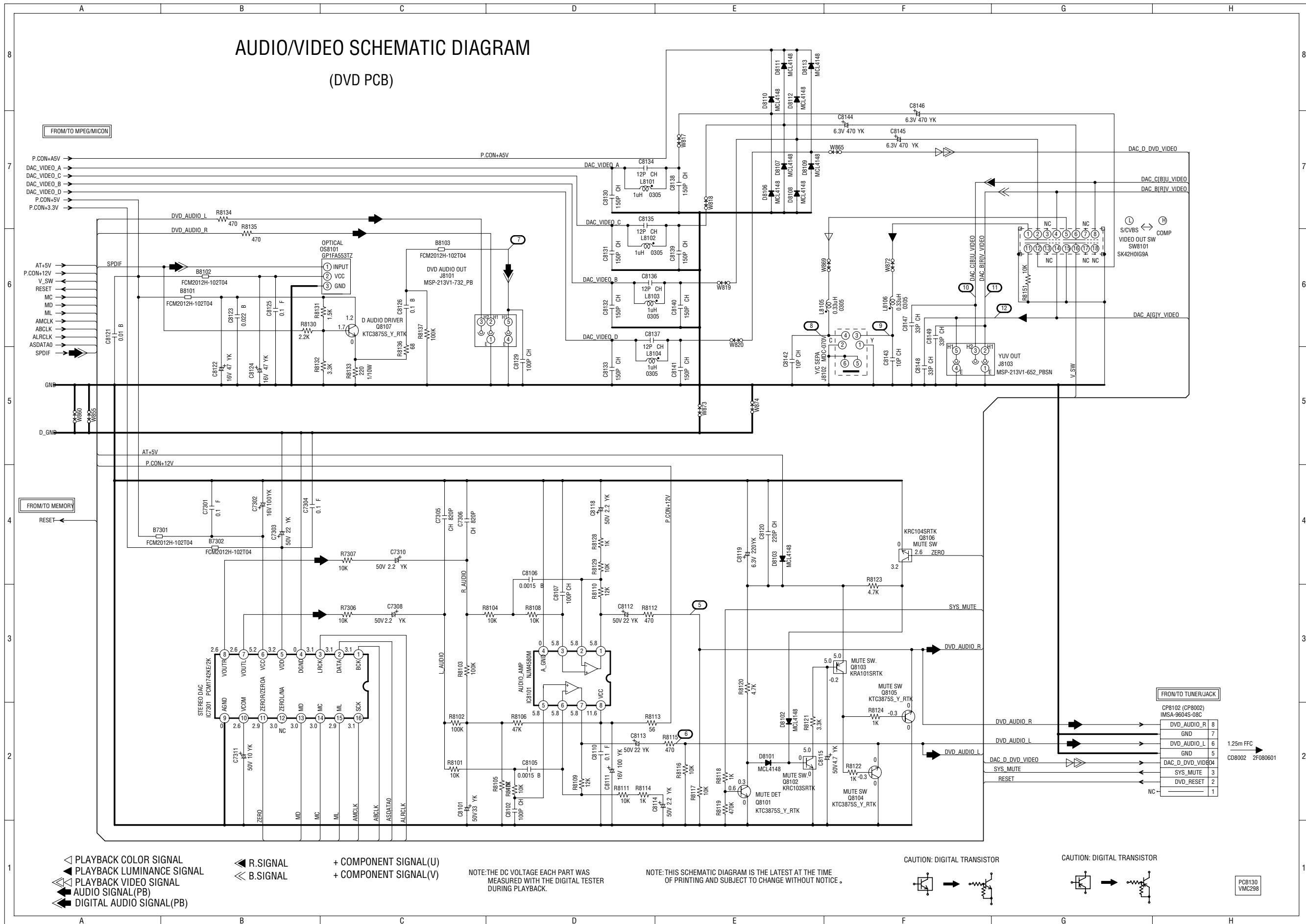
CAUTION SINCE THESE PARTS MARKED BY Δ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIECES REPAREES PAR UN Δ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

PCB130
VMC298

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

AUDIO/VIDEO SCHEMATIC DIAGRAM (DVD PCB)



- ▷ PLAYBACK COLOR SIGNAL
- ◀ R.SIGNAL
- ◀ B.SIGNAL
- ▷ PLAYBACK LUMINANCE SIGNAL
- ◀ COMPONENT SIGNAL(U)
- ◀ COMPONENT SIGNAL(V)
- ▷ PLAYBACK VIDEO SIGNAL
- ◀ AUDIO SIGNAL(PB)
- ◀ DIGITAL AUDIO SIGNAL(PB)

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

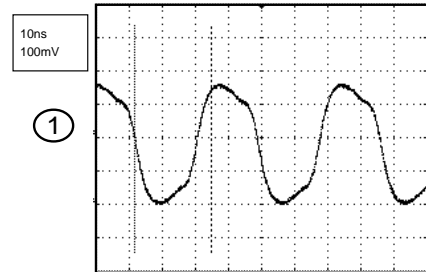
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: DIGITAL TRANSISTOR

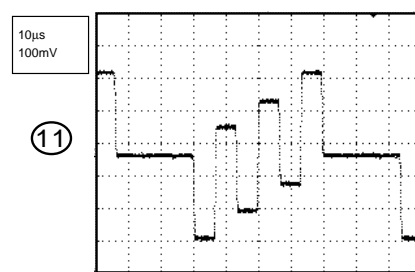
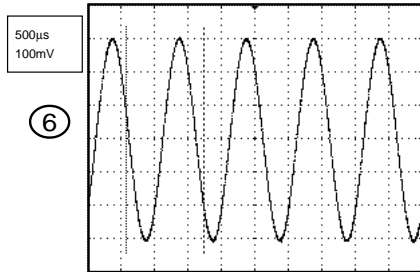
CAUTION: DIGITAL TRANSISTOR

PCB130
VMC298

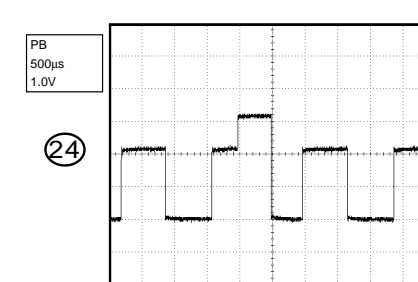
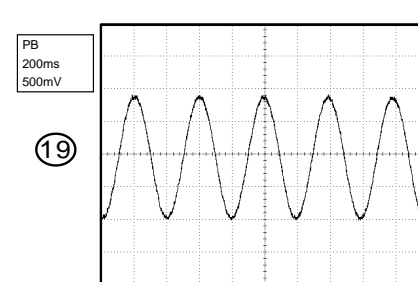
MPEG/MICON



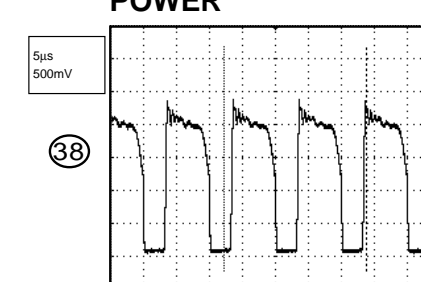
WAVEFORMS



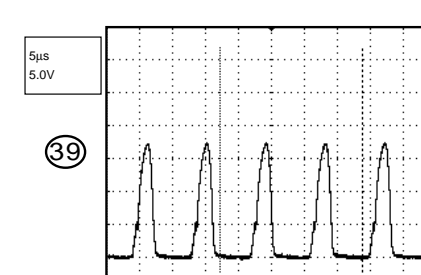
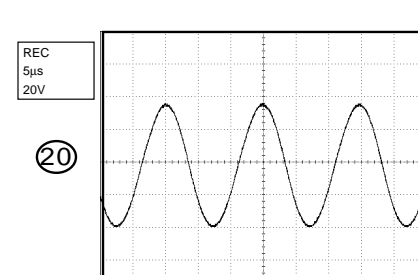
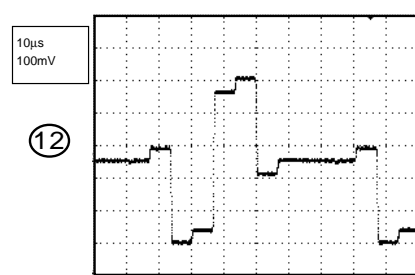
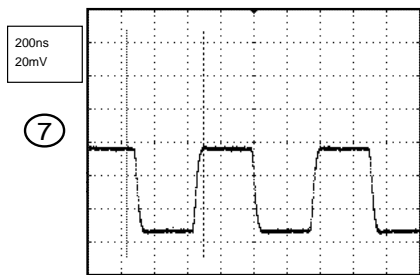
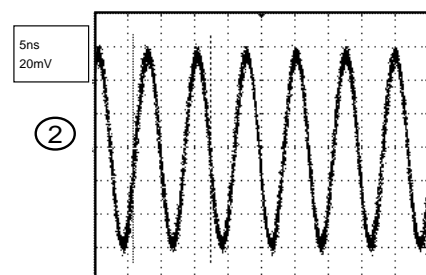
WAVEFORMS



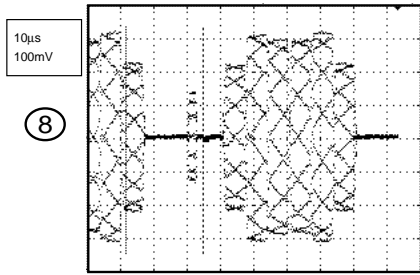
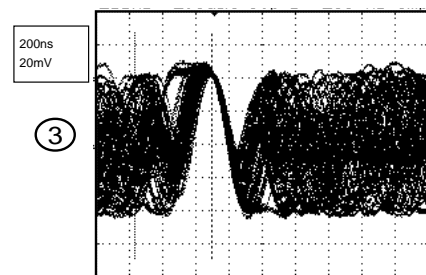
POWER



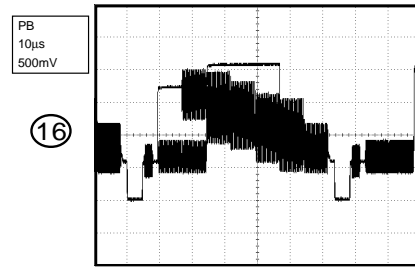
MEMORY



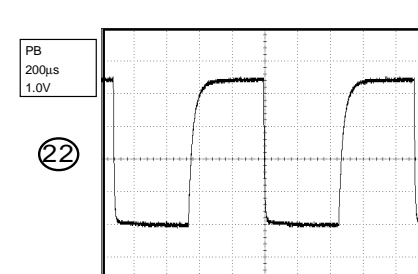
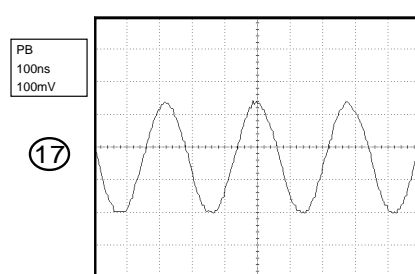
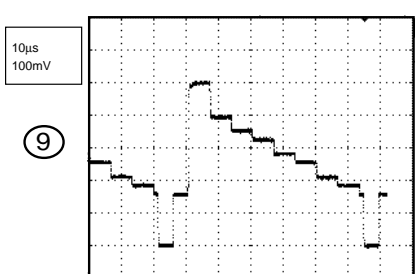
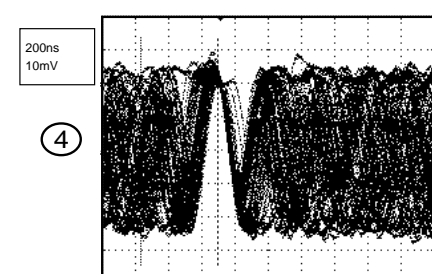
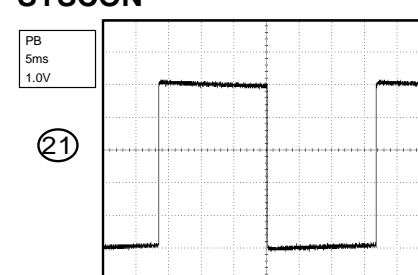
RF AMP/DSP



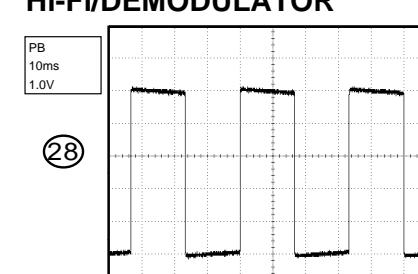
Y/C/AUDIO/CCD/HEAD AMP



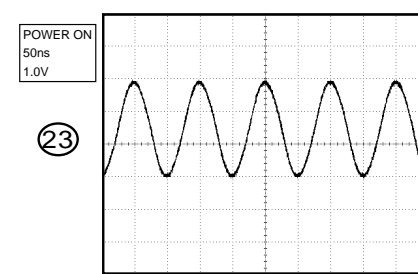
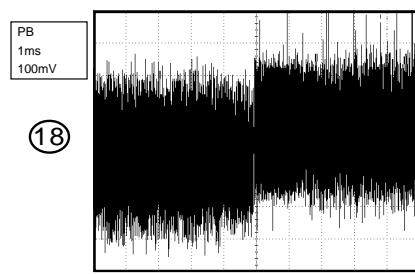
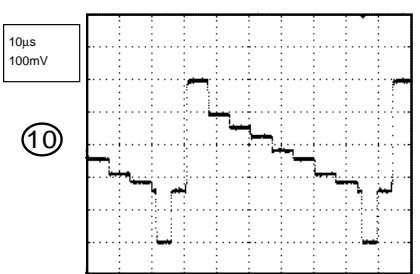
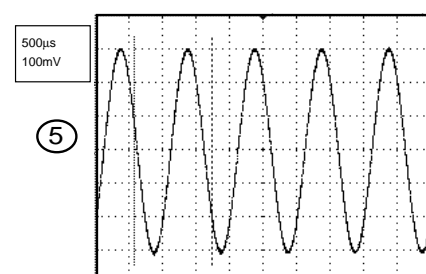
SYSCON



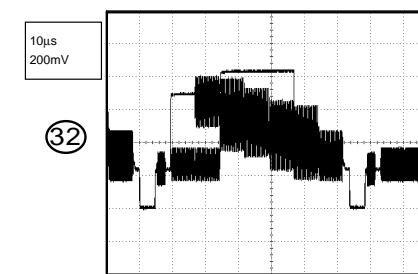
Hi-Fi/DEMODULATOR



AUDIO/VIDEO



TUNER/JACK



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

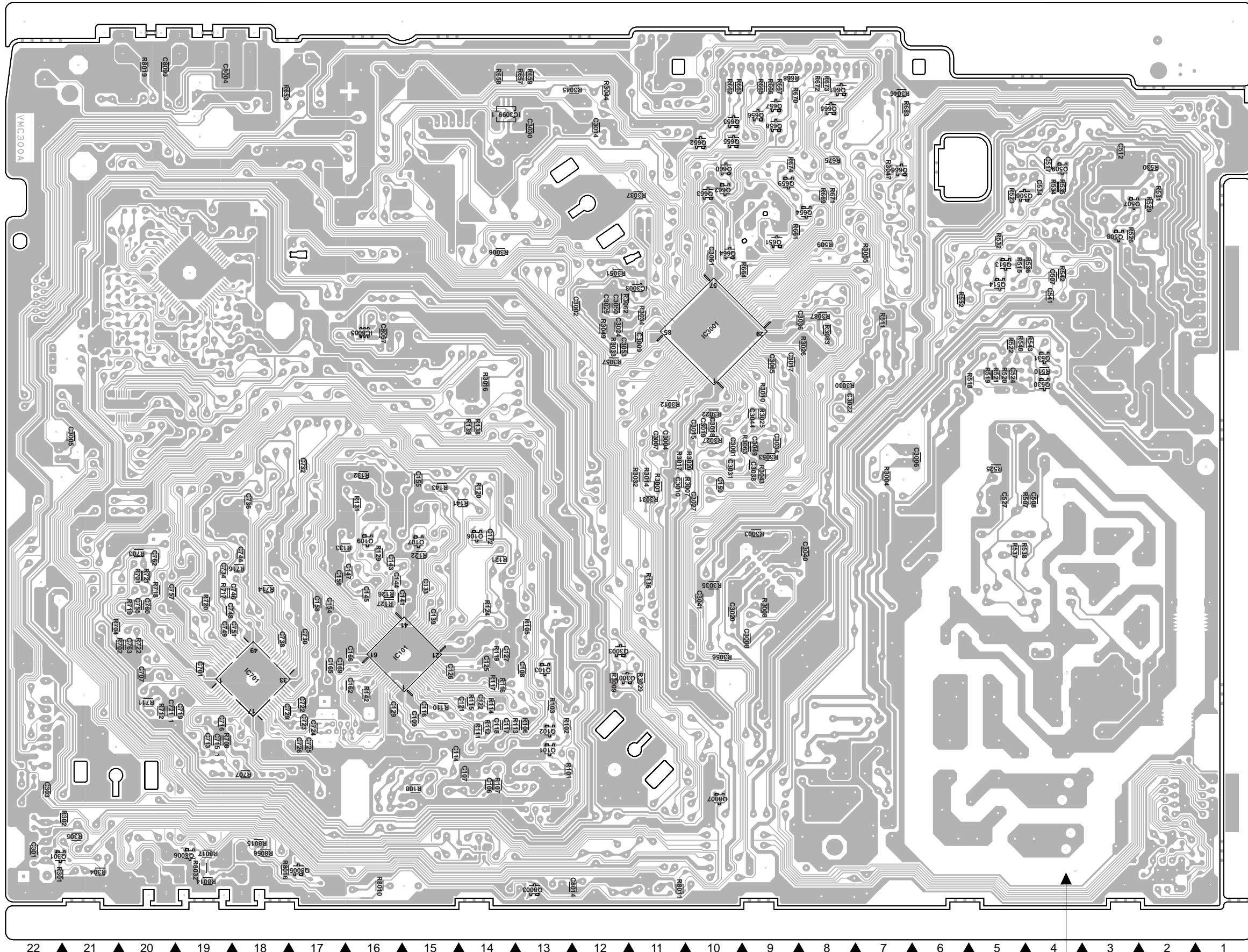
PRINTED CIRCUIT BOARDS

VCR (CHIP MOUNTED PARTS)

SOLDER SIDE



CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).
 ATTENTION : REPLACER PAR DES FUSIBLE DE MEME TYPE.



COMPONENT PARTS LOCATION GUIDE

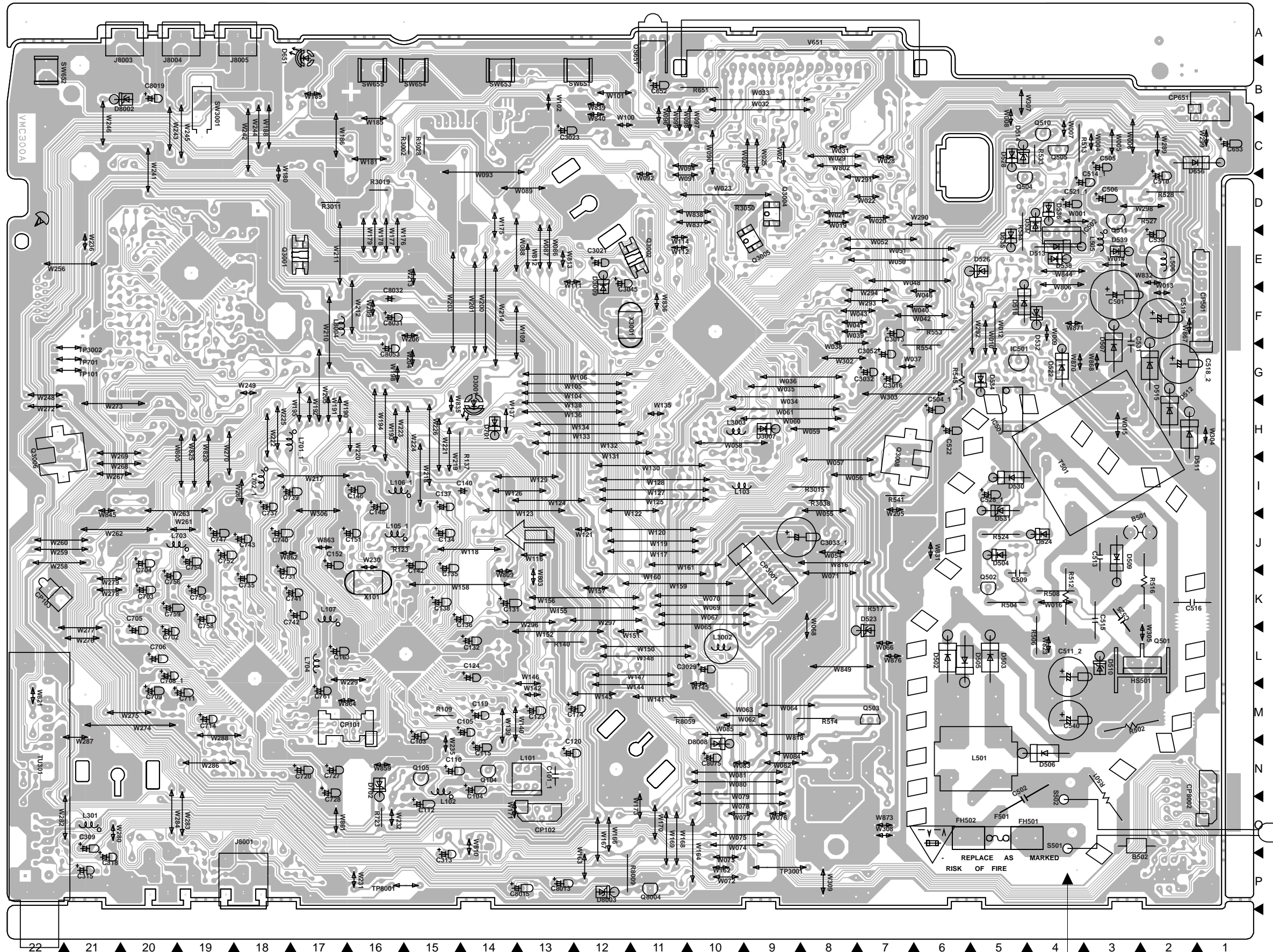
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CAPACITOR					
C103	15M	C739	18I	D701	14H
C104	14N	C740	18J	D702	16O
C105	15M	C741	18K	D3001	14H
C106	14N	C742	18K	D3007	9H
C107	14N	C743	18J	D3009	12E
C108	13L	C744	18J	D8002	21B
C109	15M	C746	18K	D8003	12P
C110	15N	C747	19J	D8008	10N
C112	15O	C748	19K		
C114	15N	C749	19L	FUSE	
C115	14N	C750	19K	F501	5O
C116	15M	C751	18L		
C117	14M	C752	19J	IC	
C118	14M	C754	19J	IC101	15L
C119	14M	C755	20K	IC501	5G
C120	13N	C756	20K	IC502	4E
C121	14M	C757	20K	IC503	5G
C122	14M	C758	19K	IC701	18L
C123	13M	C759	20K	IC3001	10F
C124	14M	C760	20K	IC3003	11F
C125	14L	C761	17M	IC3099	14B
C126	15L	C762	20J	IC8005	16F
C127	14L	C763	20L		
C129	16M	C101_1	13N	COIL	
C131	14K	C3001	10H	L101	13N
C132	14L	C3002	12F	L102	15N
C133	15K	C3004	11H	L103	9I
C134	15J	C3005	21H	L107	17K
C135	15J	C3006	6I	L301	21O
C136	15K	C3007	11H	L501	6N
C137	15I	C3008	9L	L505	3E
C138	15K	C3009	11F	L506	2E
C139	15K	C3010	11I	L703	19J
C140	15I	C3013	7F	L704	17L
C141	16K	C3014	12C	L105_1	16J
C142	15J	C3015	10H	L106_1	15I
C143	16J	C3016	7G	L3002	10L
C144	16K	C3017	9G	L3003	9H
C145	16K	C3018	10H	L701_1	18H
C146	16I	C3019	10H	L702_1	18I
C147	16K	C3020	10K	L8004	17F
C148	16I	C3021	12E		
C151	17J	C3022	8G	TRANSISTOR	
C152	17J	C3023	13C	OS651	11A
C153	17J	C3024	12F	Q101	13N
C154	17K	C3025	12F	Q102	13M
C155	15I	C3027	10I	Q103	13L
C156	17K	C3029	10L	Q104	14N
C158	17K	C3030	13C	Q105	15N
C159	10I	C3031	10I	Q106	14J
C162	16M	C3032	7G	Q107	15J
C163	17L	C3034	9H	Q109	16J
C165	17L	C3036	8F	Q301	22P
C166	16L	C3038	9I	Q501	3L
C169	17L	C3040	8J	Q502	5K
C172	14J	C3041	10K	Q503	7M
C174	13M	C3044	9H	Q504	4D
C301	22O	C3045	12E	Q505	4C
C303	22N	C3049	9H	Q506	5D
C309	21O	C3050	12F	Q507	3D
C313	15P	C3052	7G	Q508	3E
C315	21P	C3053	12G	Q509	4C
C318	21P	C3061	10E	Q510	4C
C501	3F	C3065	9G	Q511	3D
C502	4N	C504_1	6H	Q513	5E
C505	3C	C511_2	4L	Q514	5E
C506	3D	C514_1	4D	Q530	4G
C507	4E	C518_2	2G	Q531	4G
C508	4I	C521_1	4D	Q651	9E
C509	5K	C528_1	5I	Q652	10C
C510	2D	C708_1	20L	Q653	10C
C512	3C	C715_1	19N	Q654	8D
C515	3J	C721_1	20M	Q655	10C
C516	3K	C8004	19B	Q656	9B
C517	4C	C8013	13P	Q657	9B
C519	2F	C8014	12P	Q658	9C
C522	6H	C8015	14P	Q659	9D
C524	5G	C8019	20B	Q660	10C
C525	3K	C8031	16F	Q661	8B
C527	5I	C8032	16F	Q662	10D
C530	2E	C8053	16G	Q663	10D
C531	3F	C8057	16F	Q664	10E
C534	4D	C8075	10N	Q665	7B
C540	4M	C8099	20B	Q666	7C
C541	4F	C3033_1	9J	Q3001	17E
C652	11B	CD501	10	Q3002	12E
C653	1C			Q3003	12L
C701	19L			Q3004	9D
C702	20L	D502	6L	Q3005	10E
C703	20K	D503	5L	Q3006	22H
C704	20J	D504	5J	Q3007	12L
C705	20L	D505	6M	Q3008	7I
C706	20L	D506	5N	Q8003	13P
C707	20L	D507	3F	Q8004	11P
C709	20M	D509	3K	Q8005	17P
C711	20M	D510	3L	Q8006	19P
C713	19N	D511	2H	Q8007	10O
C714	19M	D512	2G		
C716	19M	D514	4E	RESISTOR	
C719	19M	D515	5C	R101	13N
C720	17N	D518	2G	R102	13M
C722	17M	D523	5E	R103	13M
C723	17M	D524	4G	R105	13L
C724	17M	D523	8L	R106	13M
C725	17N	D524	4J	R107	14N
C726	17N	D526	6E	R108	15N
C727	17N	D528	5C	R109	15M
C728	17N	D530	5I	R110	15M
C729	18M	D531	5I	R111	14M
C730	17L	D532	4F	R112	14M
C731	18K	D534	5G	R113	14M
C732	17I	D535	5E	R114	14M
C734	19K	D536	4D	R115	14M
C735	18K	D537	4D	R116	14M
C736	18I	D538	4E	R117	14M
C737	18I	D539	3E	R119	14L
C738	18L	D651	17A	R120	14I
		D656	1C	R121	14J

DANGEROUS VOLTAGE

PRINTED CIRCUIT BOARDS

VCR (INSERTED PARTS)
SOLDER SIDE

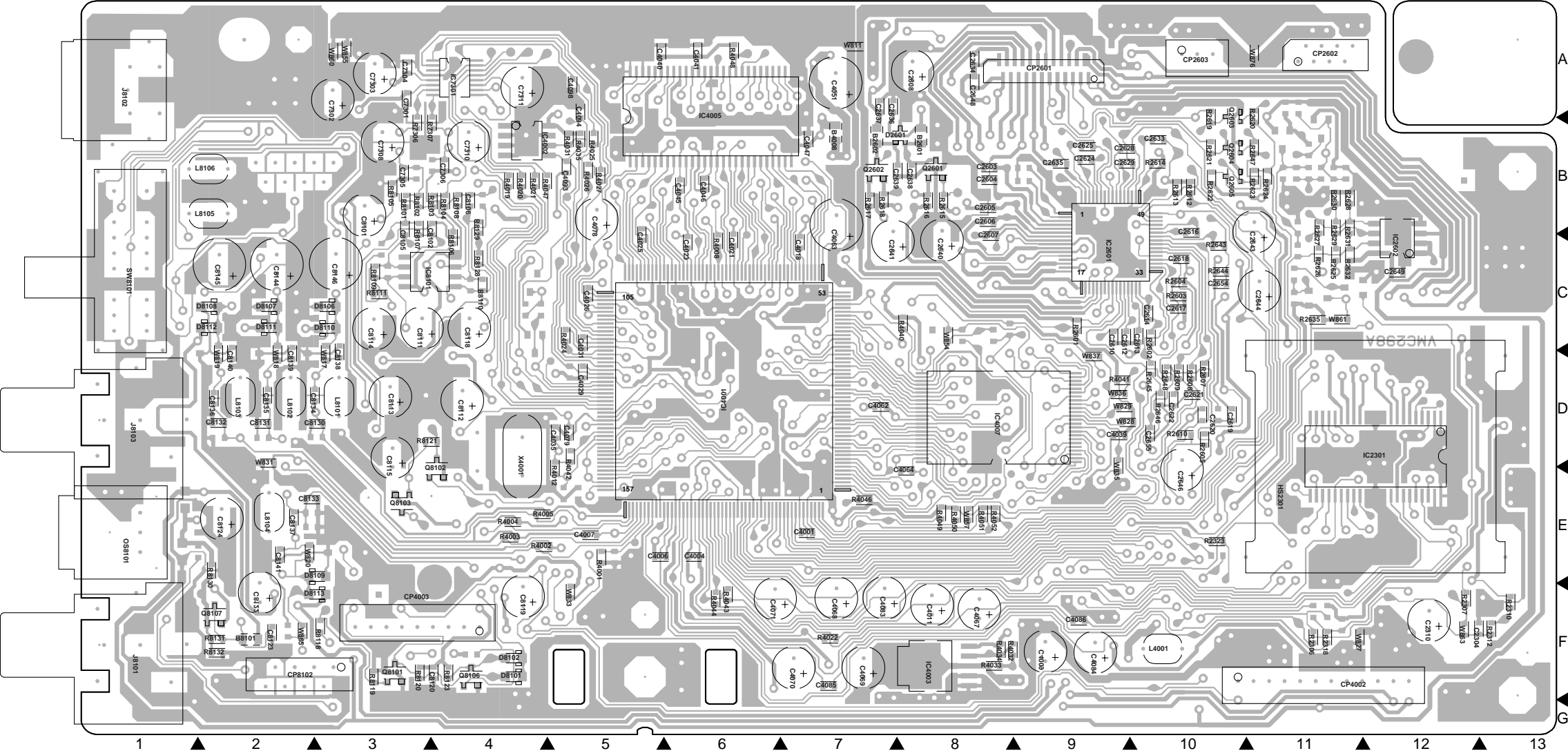
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R124	14K	R3022	10H
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R127	16K	R3026	8G
R129	16J	R3027	10H
R131	16I	R3028	15C
R132	16I	R3029	11L
R133	17J	R3030	8G
R136	11K	R3031	11I
R137	15H	R3032	11I
R138	14H	R3033	12G
R139	14H	R3034	11F
R140	12L	R3035	10K
R141	14I	R3037	11D
R142	16M	R3038	9I
R143	15I	R3043	9I
R301	22P	R3044	12B
R302	21O	R3045	12B
R304	21P	R3046	7C
R305	21O	R3047	7B
R501	3N	R3049	12F
R502	2M	R3050	9D
R504	5K	R3051	12E
R506	4K	R3053	9I
R507	5I	R3055	7E
R508	4K	R3056	10L
R509	8E	R3057	12G
R510	4G	R3062	12F
R511	7F	R3063	9H
R512	4J	R3083	8F
R513	4C	R3087	8F
R514	8M	R545_1	6G
R515	5E	R8009	12P
R516	2J	R8010	16P
R517	7K	R8011	11P
R518	5G	R8014	19P
R519	5G	R8015	18O
R520	5G	R8016	18P
R521	5G	R8017	19P
R522	5G	R8019	20B
R523	5D	R8032	19P
R524	5J	R8056	18P
R525	5I	R8059	10M
R526	3E		
R527	2D	SWITCH	
R528	2D	SW651	12B
R529	2D	SW652	22B
R530	2C	SW653	14B
R531	2D	SW654	15B
R532	5E	SW655	16B
R533	4C	SW3001	19C
R534	4D		
R535	4D	TEST POINT	
R536	4E	TP101	21G
R537	5J	TP701	21G
R538	5J	TP3001	8P
R540	5G	TP3002	21G
R541	7I	TP8001	15P
R542	4E		
R543	4G	OTHER	
R544	5D	B502	2O
R552	6F	CP101	16M
R553	6F	CP102	13O
R554	6G	CP103	22K
R651	10B	CP501	1B
R653	18B	CP651	1F
R657	13B	CP3001	9J
R658	14B	CP8002	10A
R659	13B	FH501	5O
R661	9E	FH502	3L
R662	10B	H5501	18P
R663	10B	J8001	18P
R664	9E	J8003	20A
R665	9E	J8004	19A
R666	9B	J8005	18A
R667	9B	JG3002	14C
R668	9B	JG3003	15C
R669	8D	JG3004	14D
R670	9B	JG3005	16D
R671	8D	JG3006	12F
R672	8B	JG3007	14E
R673	8B	JG3008	14D
R674	9C	S501	4O
R675	8C	S502	4O
R683	7B	T501	4I
R701	20K	TU301	22P
R702	20L	V651	10B
R703	20J	X101	16K
R704	21L	X3001	12F
R707	18N		
R708	19N		
R711	20M		
R712	20M		
R714	18K		
R716	18J		
R717	19K		
R718	20K		
R719	20K		
R720	19K		
R721	20K		
R722	20L		
R723	16O		
R3001	11I		
R3002	15C		
R3003	9J		
R3004	7I		
R3006	14E		
R3007	10I		
R3008	9K		
R3009	12L		
R3010	9G		
R3011	17D		
R3012	11H		
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R3015	8I		
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DANGEROUS VOLTAGE

PRINTED CIRCUIT BOARDS

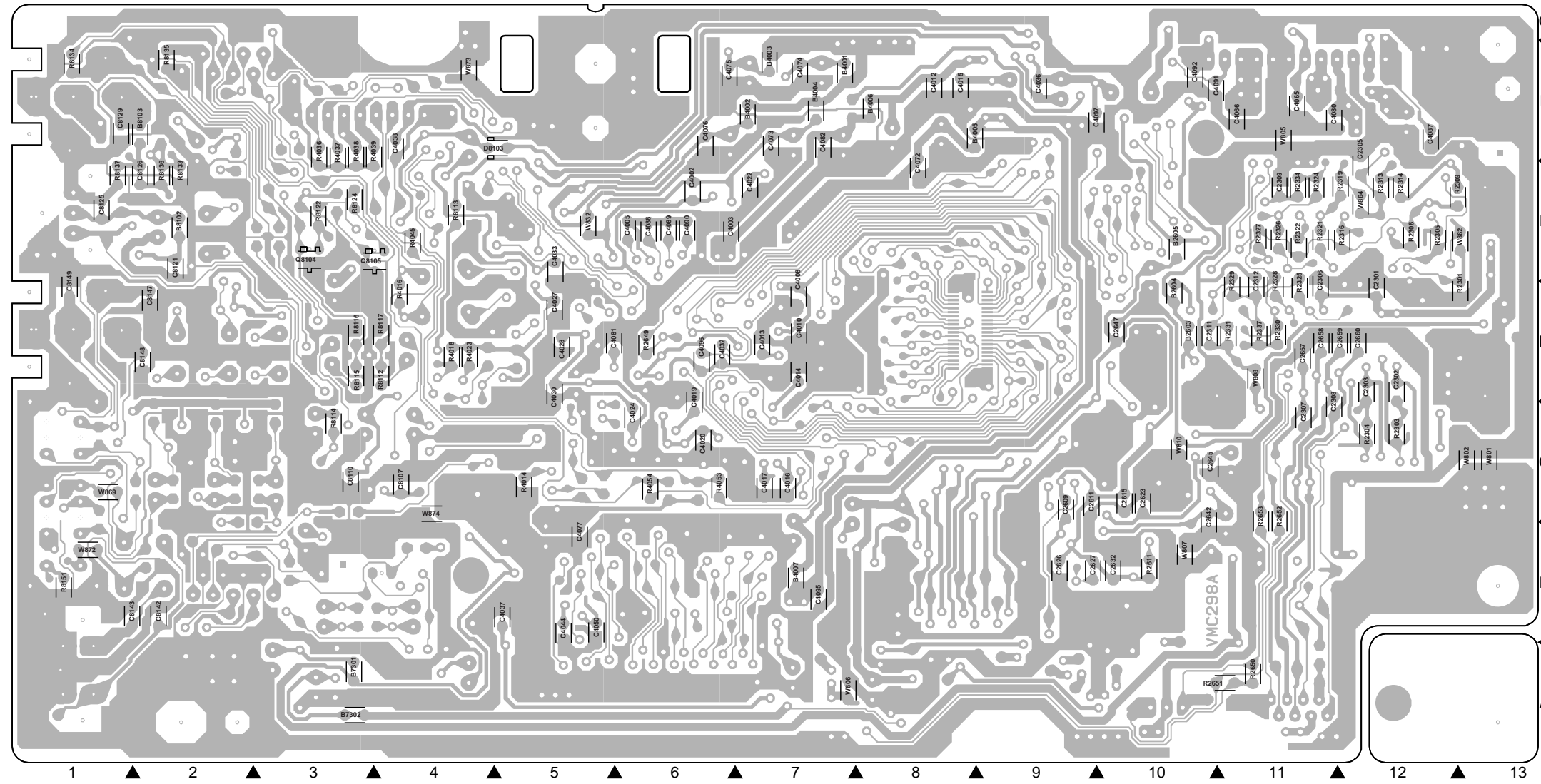
DVD (TOP SIDE)



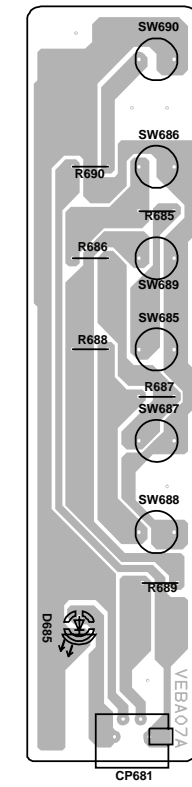
COMPONENT PARTS LOCATION GUIDE <DVD> VMC298A

REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION	REF.NO. LOCATION										
CAPACITOR																																	
C2618	10C	C2648	8A	C4021	6C	C4064	8E	C4092	10F	C8119	4F	C8149	1D	COIL		R2306	11F	R2605	10D	R2643	10C	R4026	5B	R8101	3B	R8132	2F	TP27	8C	TP140	11E	B4007	7B
C2301	12D	C2619	10D	C2649	12C	C4022	7E	C4065	11F	C4093	5B	C8120	4F	L4001	10F	R2307	12F	R2607	10D	R2644	10C	R4027	5B	R8102	3B	R8133	2E	TP28	8B	TP141	11D	B4008	7B
C2302	12D	C2620	10D	C2654	10C	C4023	6C	C4066	11F	C4094	5A	C8121	2E	L8101	11F	R2308	12E	R2608	10D	R2645	10D	R4031	5B	R8103	4B	R8134	10F	TP29	8A	TP4003	7A	B7301	3A
C2303	12D	C2621	10D	C2655	10D	C4024	6C	C4067	8F	C4095	7B	C8122	2F	L8102	2D	R2309	13E	R2609	10D	R2646	10D	R4032	9F	R8104	4B	R8135	2F	TP30	9B	TP4004	4A	B7302	3A
C2304	13F	C2622	10D	C2657	11D	C4025	5C	C4068	6C	C4096	6D	C8123	2F	L8103	2D	R2310	6D	R2610	10D	R2647	11B	R4033	8F	R8105	3B	R8136	2E	TP31	9B	TP4005	4A	B8101	2F
C2305	12E	C2623	10C	C2658	11D	C4026	5C	C4069	7F	C4097	7F	C8124	2E	L8104	2E	R2312	13F	R2611	10B	R2648	10D	R4034	8F	R8106	4C	R8137	1E	TP33	10D	TP4006	4A	B8102	2E
C2306	11D	C2624	9B	C2659	12D	C4027	5D	C4070	7A	C4098	5A	C8125	1E	L8105	7F	R2313	12E	R2612	10B	R2649	6D	R4035	5B	R8107	3B	R8151	1B	TP34	10B	TP4007	3B	B8103	2F
C2307	11C	C2625	9B	C2660	12D	C4028	5D	C4071	6E	C7301	3A	C8126	2E	L8106	1B	R2314	12E	R2613	10B	R2650	11A	R4036	3F	R8108	4B	TP35	10C	TP4008	4D	CP2601	9A		
C2308	11C	C2626	9B	C4001	7E	C4029	5D	C4072	8E	C7302	1F	D8107	2C	L8106	1B	R2316	12E	R2614	10B	R2651	11A	R4037	3F	R8109	3C	TP36	10D	TP4009	4D	CP2602	11A		
C2309	11E	C2627	9B	C4002	6E	C4030	5D	C4073	7F	C7303	3A	C8130	3D	Q2601	8B	R2318	11F	R2615	8B	R2652	11C	R4038	3F	R8110	4C	TP37	9C	TP4010	5D	CP2603	10A		
C2310	12F	C2628	9B	C4003	6E	C4031	5C	C4074	7F	C7304	2D	D8109	3E	Q2602	7B	R2319	12E	R2616	8B	R2653	11C	R4039	4F	R8111	3C	TP38	10E	TP4011	5C	CP4002	10F		
C2311	10D	C2629	9B	C4004	6E	C4032	6D	C4075	6F	C7305	3B	D8110	3C	Q2603	10A	R2321	11E	R2617	7B	R4001	5E	R4040	8C	R8112	4D	TP39	8A	TP4012	5D	CP8102	3F		
C2312	11D	C2632	10B	C4005	6E	C4033	5E	C4076	6F	C7306	6F	D8111	2C	Q2604	10B	R2322	4B	R2618	7B	R4002	4E	R4041	9D	R8113	4E	TP8	9B	TP4013	5D	HS2301	12D		
C2603	8B	C2633	10B	C4006	5E	C4035	5D	C4077	5B	C7308	3B	D8112	2C	Q2604	10B	R2323	10E	R2619	10B	R4003	4E	R4042	5D	R8114	3C	TP9	9B	TP4014	6D	J8101	1F		
C2604	8B	C2634	8A	C4007	5E	C4036	9F	C4078	5B	C7310	4B	D8113	3F	Q2605	10B	R2324	11E	R2620	11A	R4004	4E	R4043	6F	R8115	3D	TP10	9B	TP4015	6C	J8102	1A		
C2605	8B	C2635	9B	C4008	7D	C4037	5B	C4079	5D	C7311	4A	D8113	3F	Q8101	3F	R2325	11D	R2621	10B	R4005	4E	R4044	6F	R8116	3D	TP11	9B	TP4016	6C	J8103	1D		
C2606	8B	C2636	7A	C4009	9F	C4038	4F	C4080	11F	C8101	11F	D8113	3F	Q8102	4E	R2326	3B	R2622	10B	R4006	6C	R4045	4E	R8117	4D	TP12	10B	TP45	12E	OS8101	1E		
C2607	8C	C2637	7A	C4010	7D	C4039	9D	C4081	5D	C8102	3D	IC2301	12D	Q8103	3E	R2327	11E	R2623	11B	R4012	5E	R4046	7E	R8118	3F	TP15	10C	TP46	8E	X4001	4D		
C2608	8A	C2638	8B	C4011	8F	C4040	5A	C4082	7F	C8105	4B	IC2601	9C	Q8104	3E	R2328	3B	R2624	10B	R4014	5C	R4047	5B	R8119	3F	TP16	10B	TP47	11C	B2602	7B		
C2609	9C	C2639	8B	C4012	8F	C4041	6A	C4083	7F	C8106	4B	IC2602	12C	Q8105	4E	R2329	11D	R2625	11C	R4016	4D	R4048	6A	R8120	3F	TP17	10B	TP48	11C	B2603	10D		
C2610	9C	C2640	8C	C4013	7D	C4044	5B	C4084	7D	C8107	4C	IC4001	6D	Q8106	4E	R2330	4D	R2626	11C	R4018	4D	R4049	8E	R8121	4D	TP18	10B	TP49	9A	B2604	10D		
C2611	9C	C2641	7C	C4014	7D	C4045	6B	C4085	7F	C8110	3C	IC4002	4B	Q8107	2F	R2331	11D	R2627	11B	R4019	4B	R4050	8E	R8122	3E	TP19	8B	TP65	9A	B2605	10E		
C2612	9C	C2642	10B	C4015	8F	C4046	6B	C4086	9F	C8111	8F	IC4003	8F	R2334	3C	R2334	3C	R2628	11B	R4020	4B	R4051	8E	R8123	4F	TP20	8B	TP66	11C	B4001	7F		
C2613	10C	C2643	11C	C4016	7C	C4047	7B	C4087	12F	C8112	4D	IC4005	6A	R2337	3E	R2337	3E	R2629	11B	R4021	4B	R4052	8E	R8124	3E	TP21	9B	TP67	11C	B4002	7F		
C2614	10C	C2644	11C	C4017	7C	C4050	5B	C4088	6E	C8113	6E	IC4007	8D	R2301	13D	R2601	9C	R2630	11B	R4022	7F	R4053	6C	R8128	4C	TP22	8B	TP68	9A	B4003	7F		
C2615	10C	C2645	10C	C4018	7C	C4051	7A	C4089	6E	C8114	3C	IC7301	3C	R2303	12C	R2602	10C	R2631	11B	R4023	4D	R4054	6C	R8129	4B	TP24	12E	TP69	10A	B4004	7F		
C2616	10B	C2646	10E	C4019	6C	C4062	7D	C4090	6E	C8115	10E	IC8101	4A	R2304	12C	R2603	10C	R2632	11C	R4024	5C	R7306	3B	R8130	2E	TP25	9A	TP138	12E	B4005	8F		
C2617	10C	C2647	10D	C4020	6C	C4063	7C	C4091	10F	C8118	4C	C8148	2D	R2305	12E	R2604	10C	R2635	11C	R4025	5B	R7307	4B	R8131	2F	TP26	10E	TP139	11E	B4006	8F		

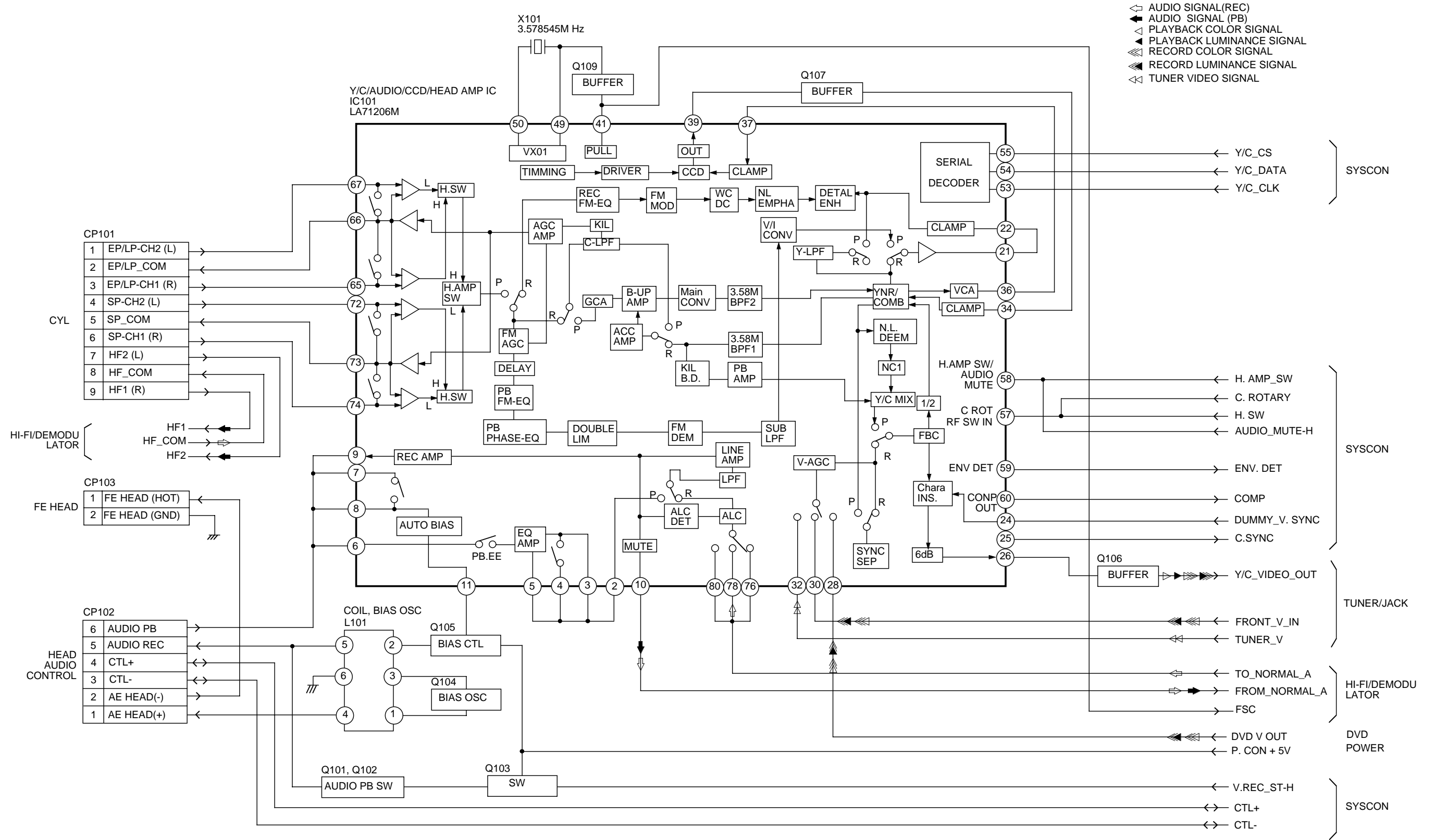
PRINTED CIRCUIT BOARDS
DVD (BOTTOM SIDE)



PRINTED CIRCUIT BOARDS
OPERATION
SOLDER SIDE

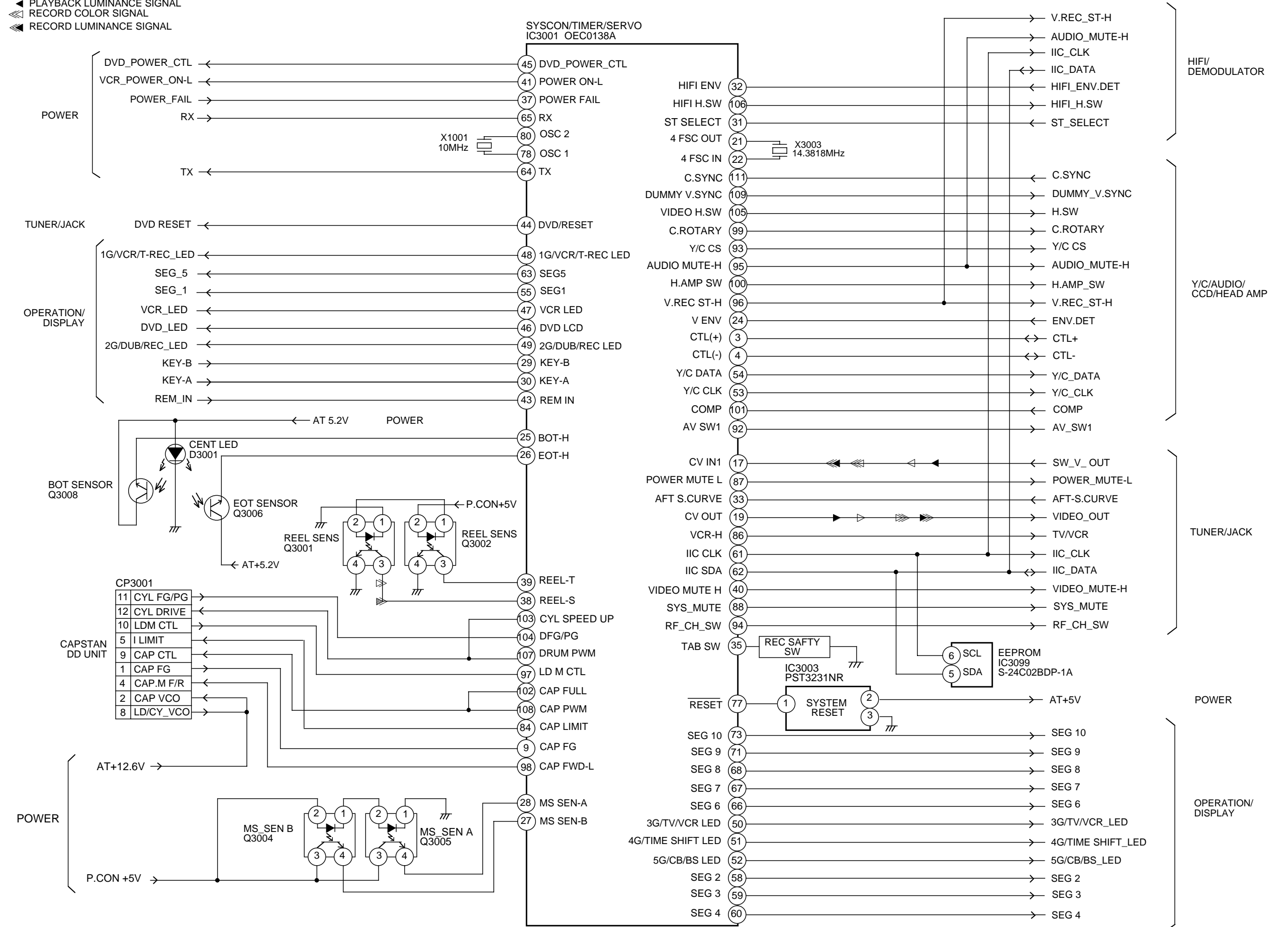


Y/C/AUDIO/CCD/HEAD AMP BLOCK DIAGRAM

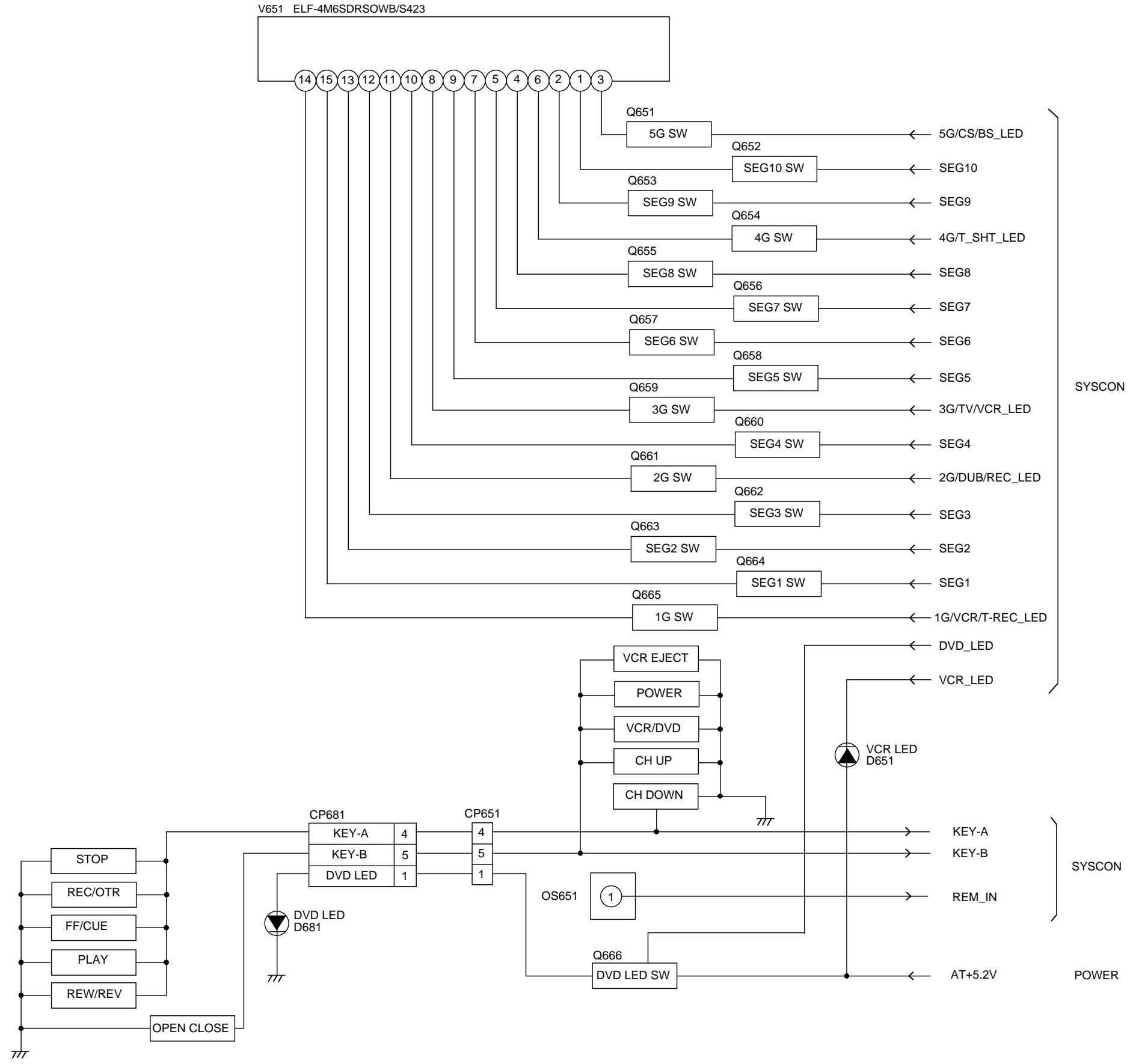


SYSTEM CONTROL BLOCK DIAGRAM

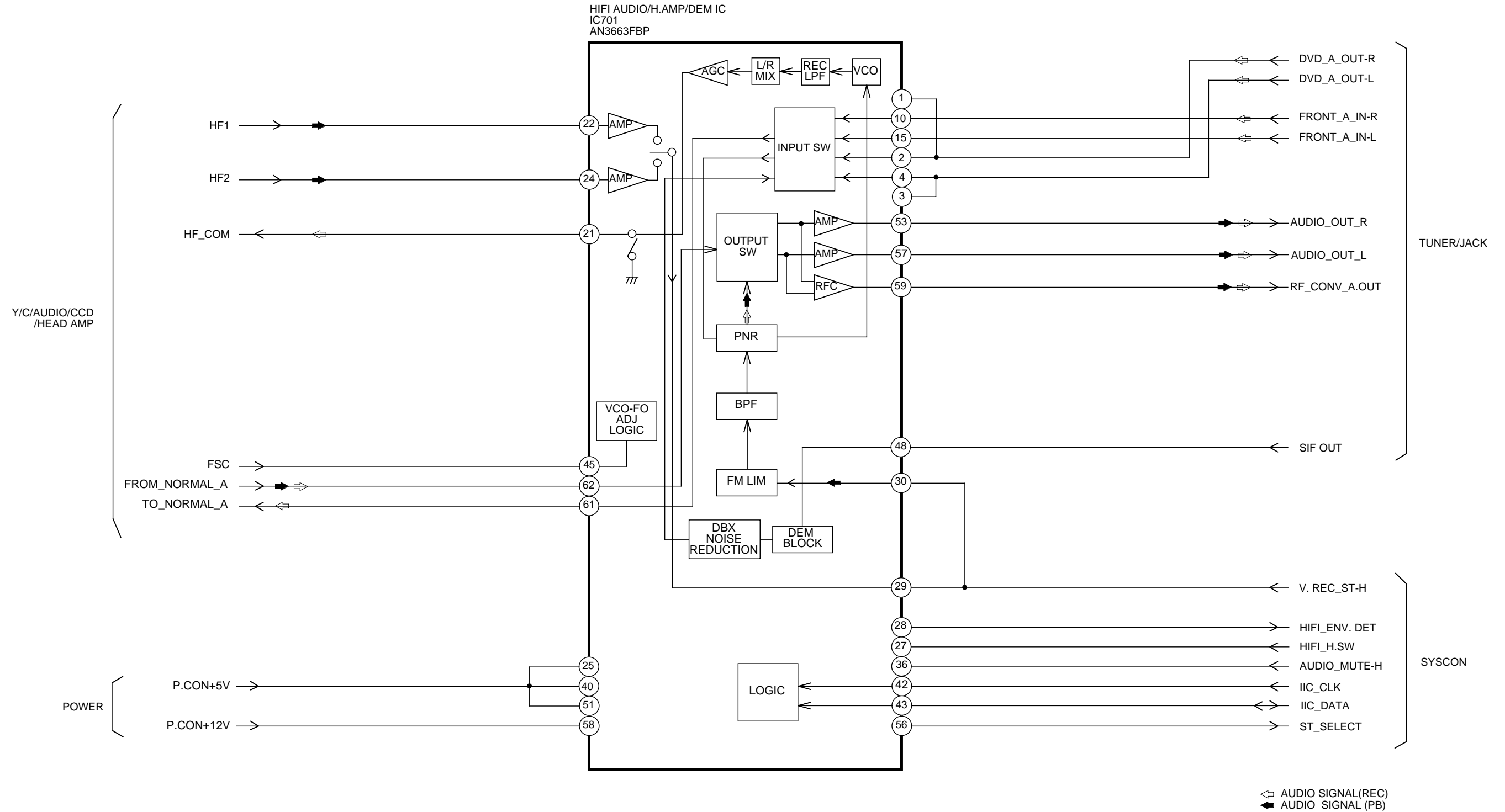
- ▷ PLAYBACK COLOR SIGNAL
- ◀ PLAYBACK LUMINANCE SIGNAL
- ◀ RECORD COLOR SIGNAL
- ◀ RECORD LUMINANCE SIGNAL



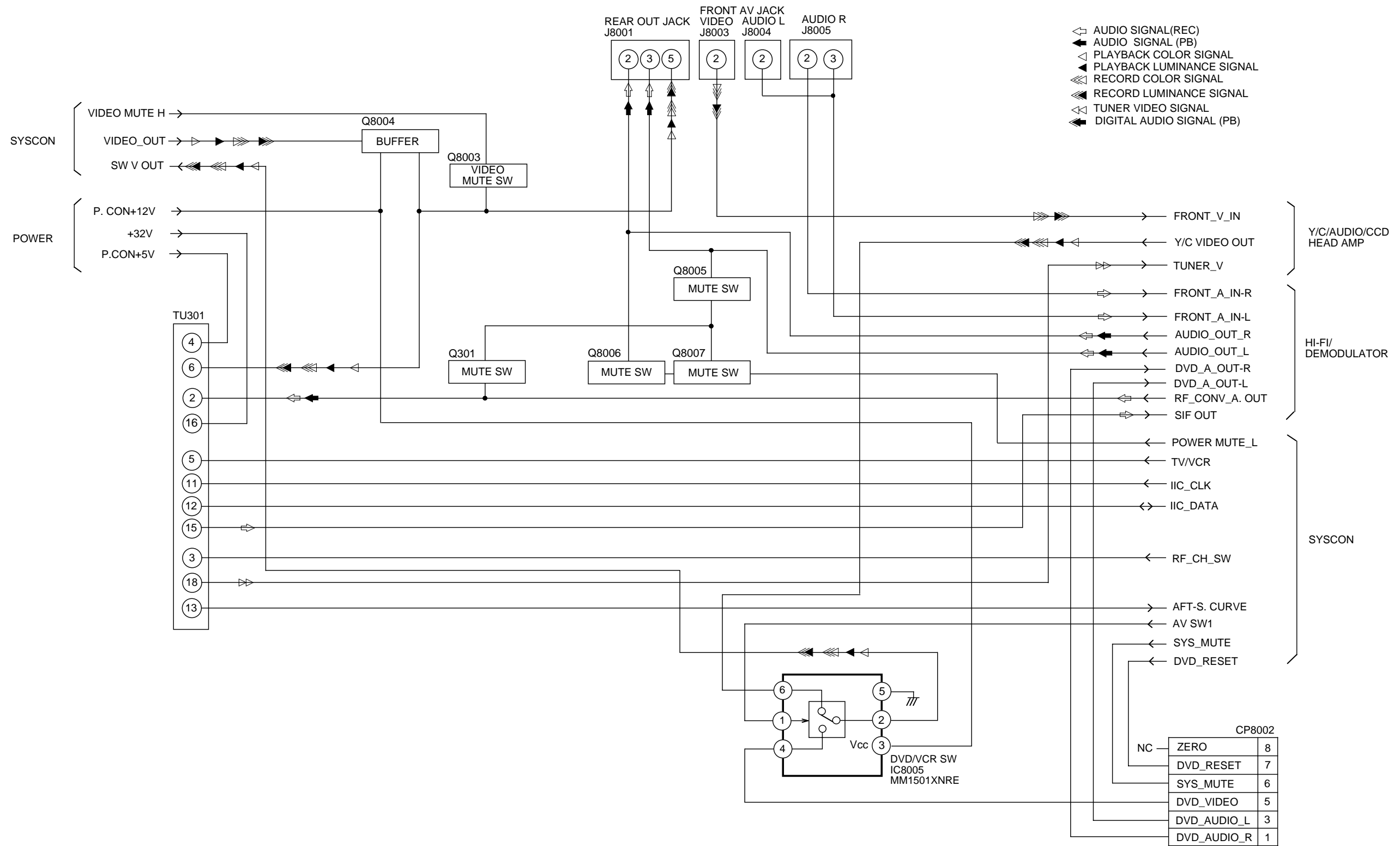
OPERATION/DISPLAY BLOCK DIAGRAM



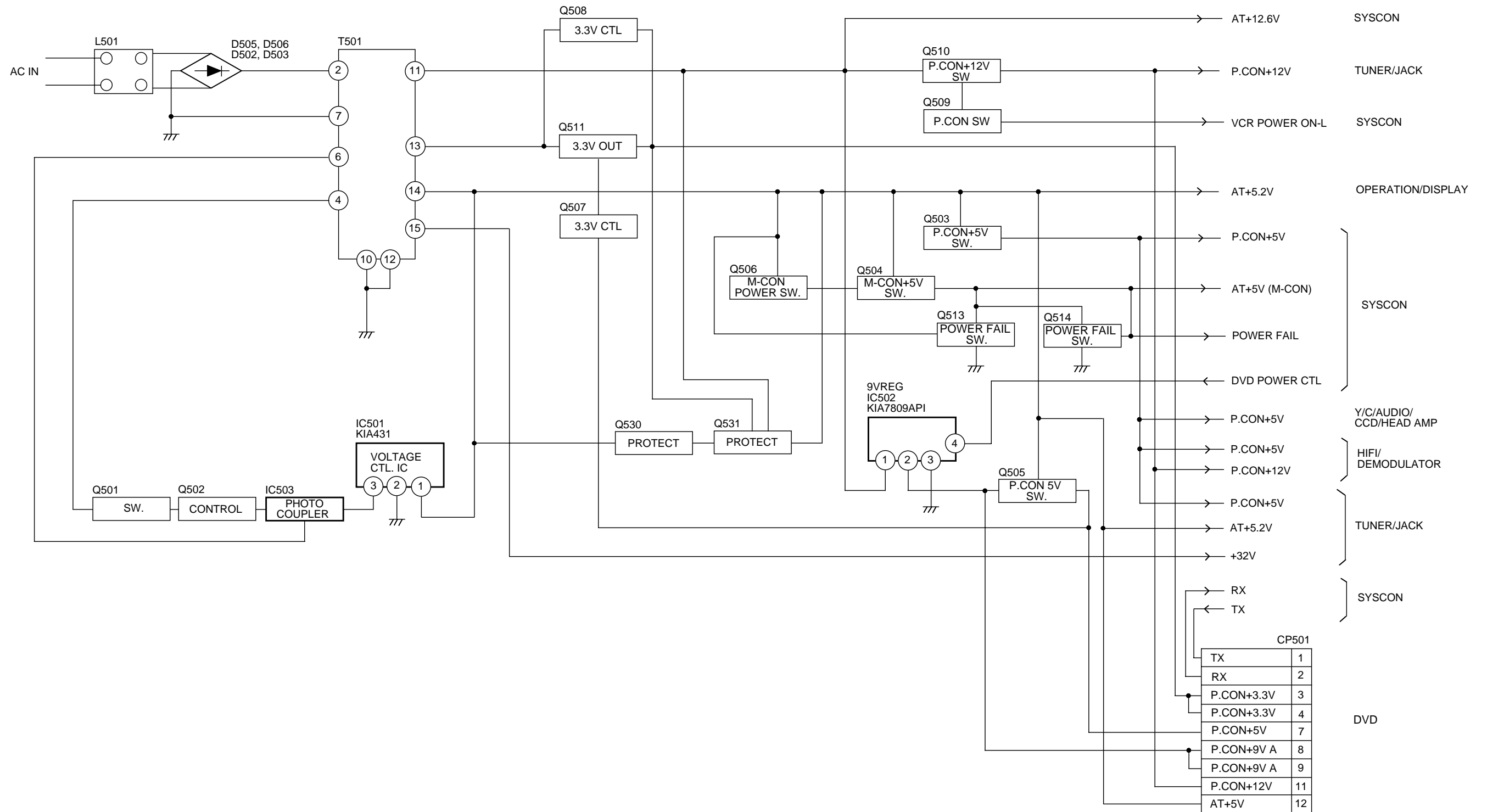
HiFi/DEMODULATOR BLOCK DIAGRM



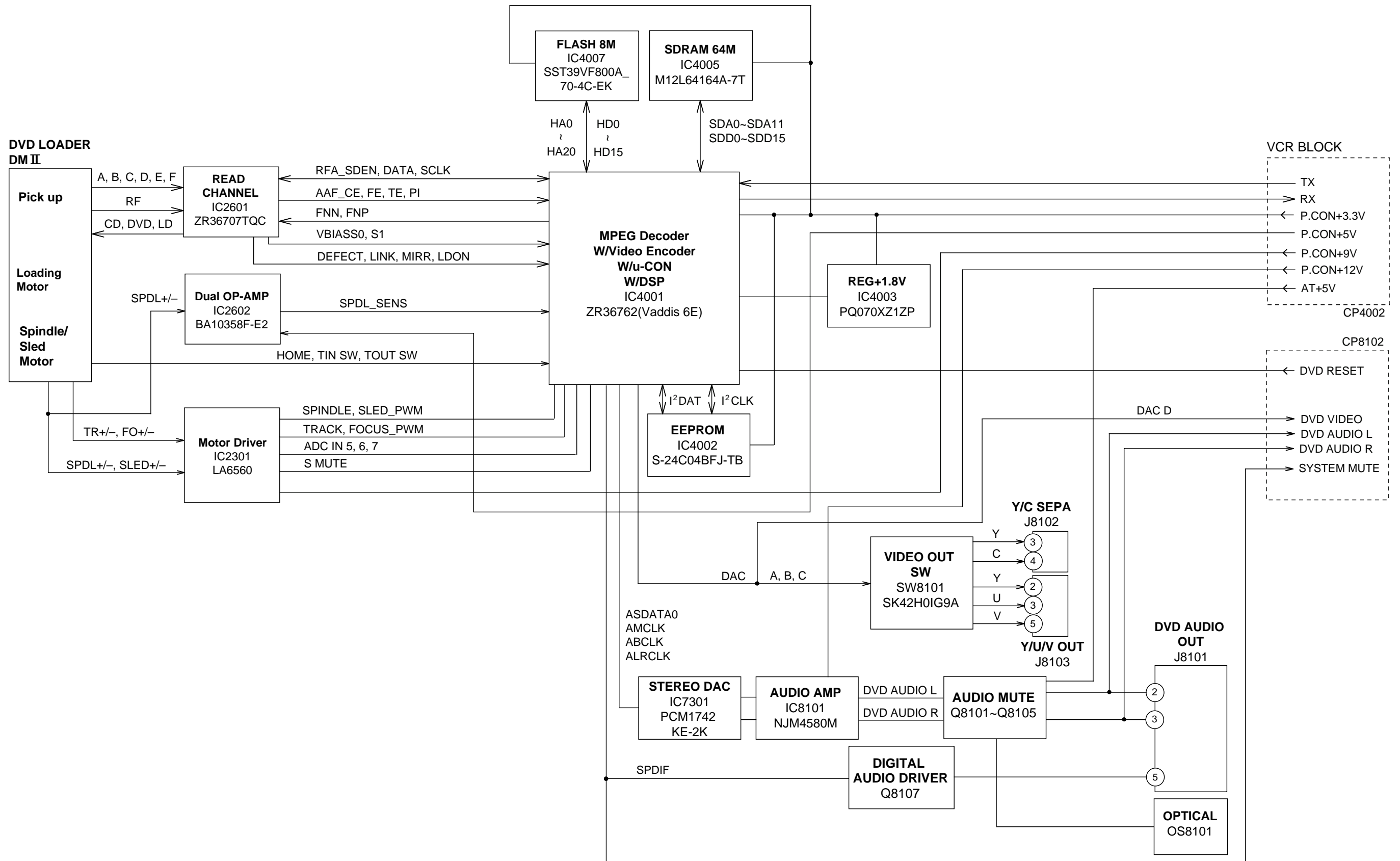
TUNER/JACK BLOCK DIAGRAM



POWER BLOCK DIAGRAM



DVD BLOCK DIAGRAM



SECTION 3 PARTS LIST

3.1 EXPLODED VIEW SAFETY PRECAUTION

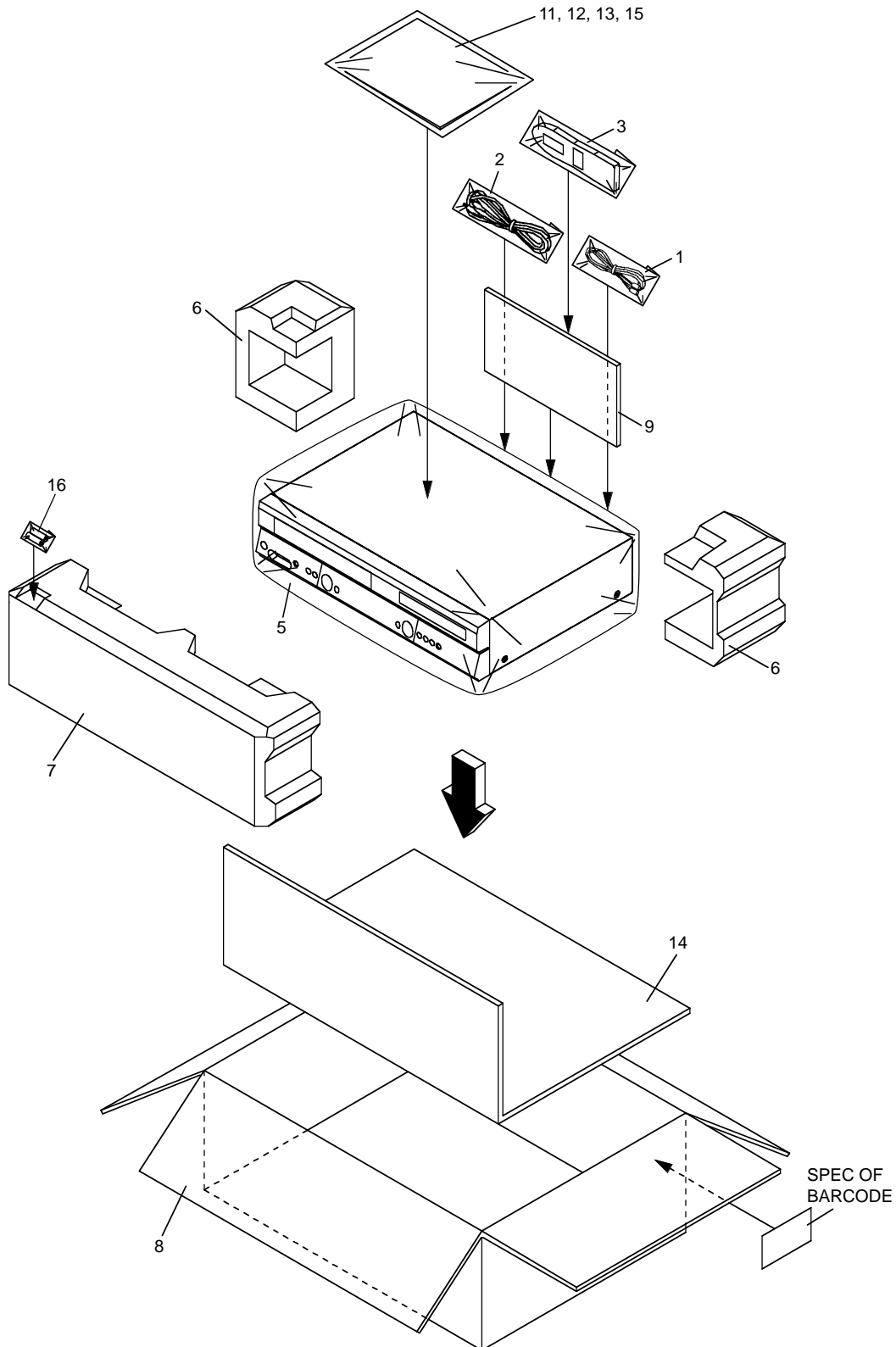
Parts identified by the  symbol are critical for safety. Replace only with specified part numbers.

BEWARE OF BOGUS PARTS

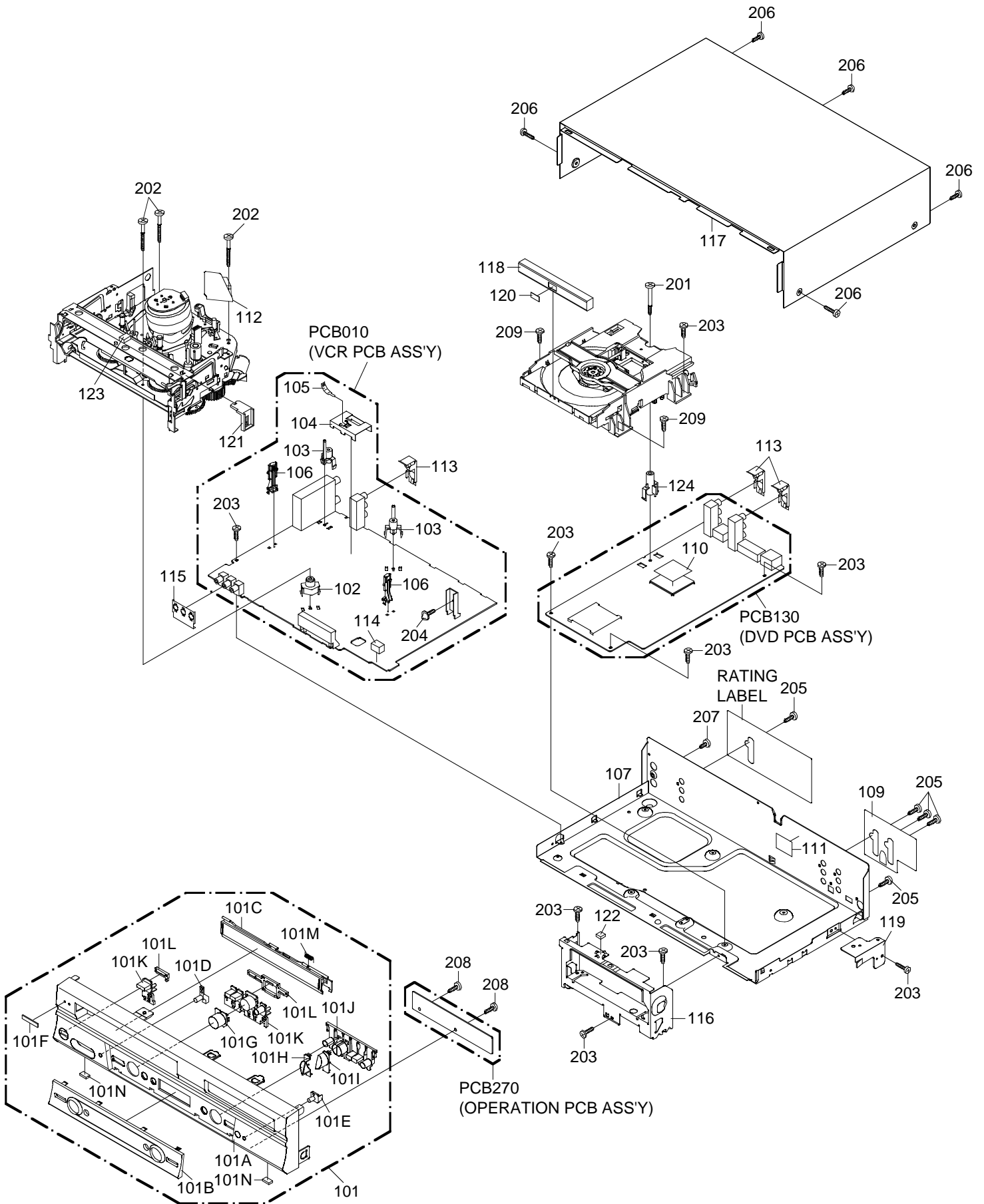
Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

3.1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

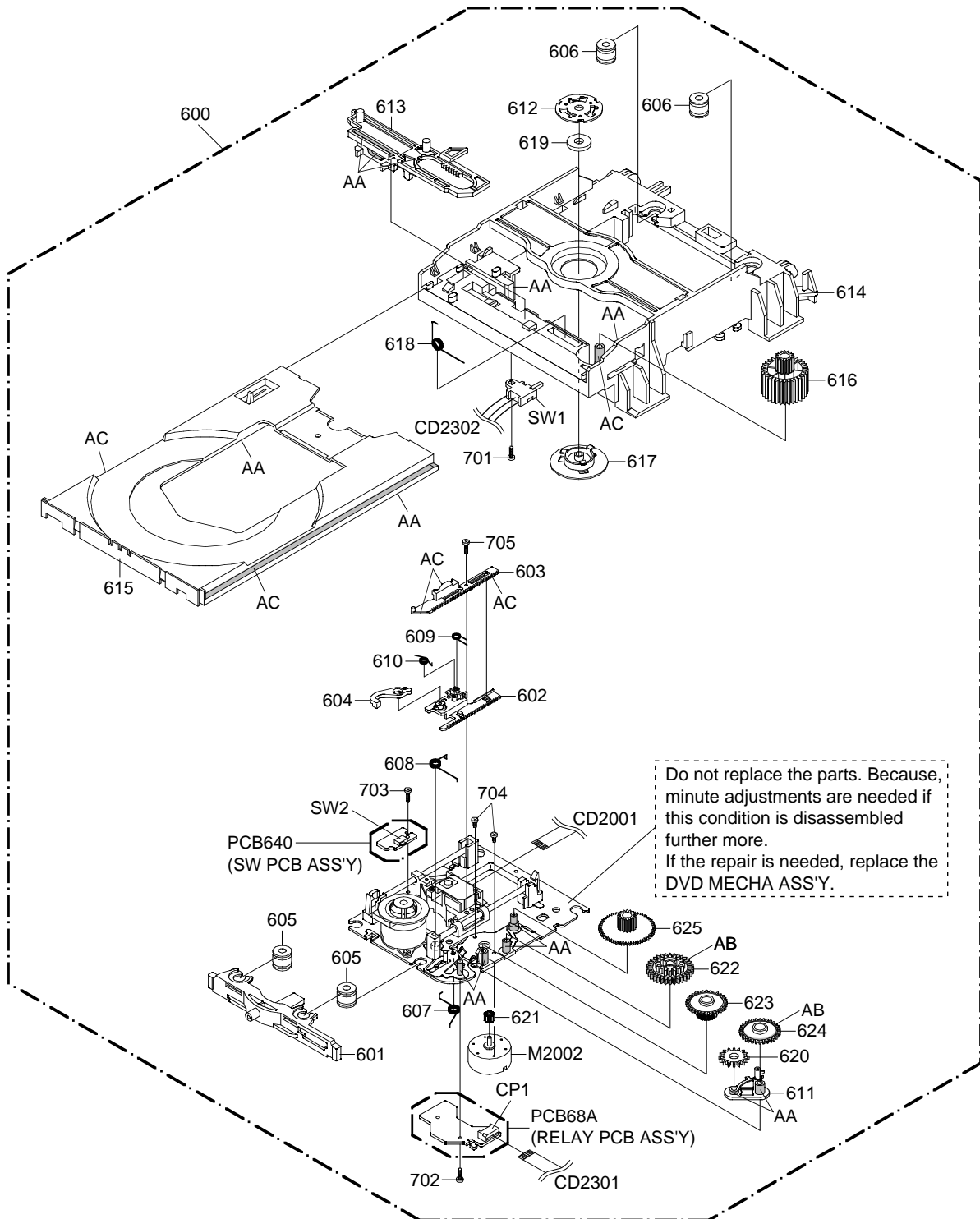
The instruction manual to be provided with this product will differ according to the destination.



3.1.2 FINAL ASSEMBLY <M2>



3.1.3 MECHANISM ASSEMBLY(DVD) <MN>

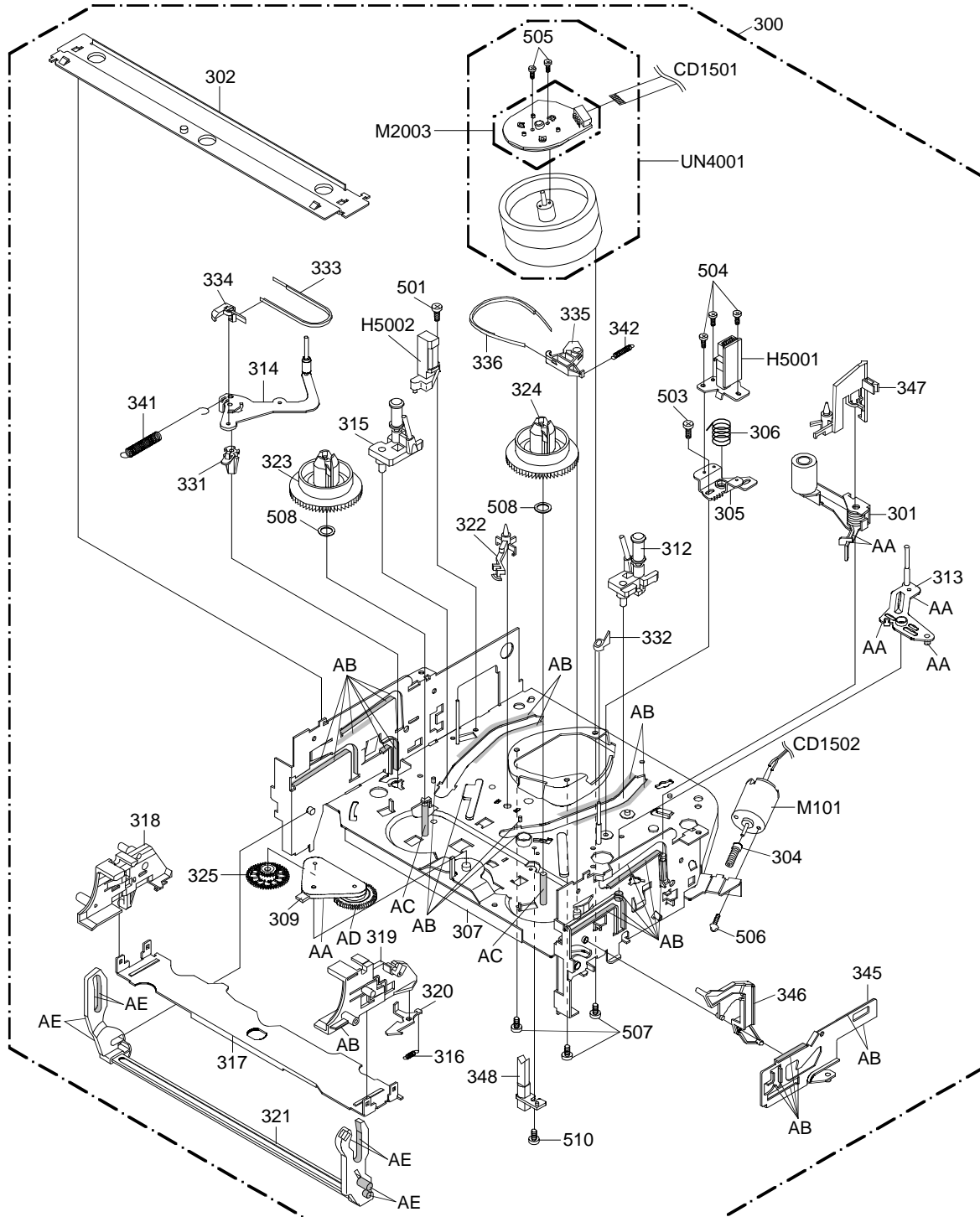


CLASS	PART NO.	MARK
GREASE	G-555G	AA
	G-337F	AB
	SF-112	AC

NOTE: Applying positions AA, AB and AC for the grease are displayed for this section. Check if the correct grease is applied for each position.

3.1.4 MECHANISM ASSEMBLY(VCR) <M4>

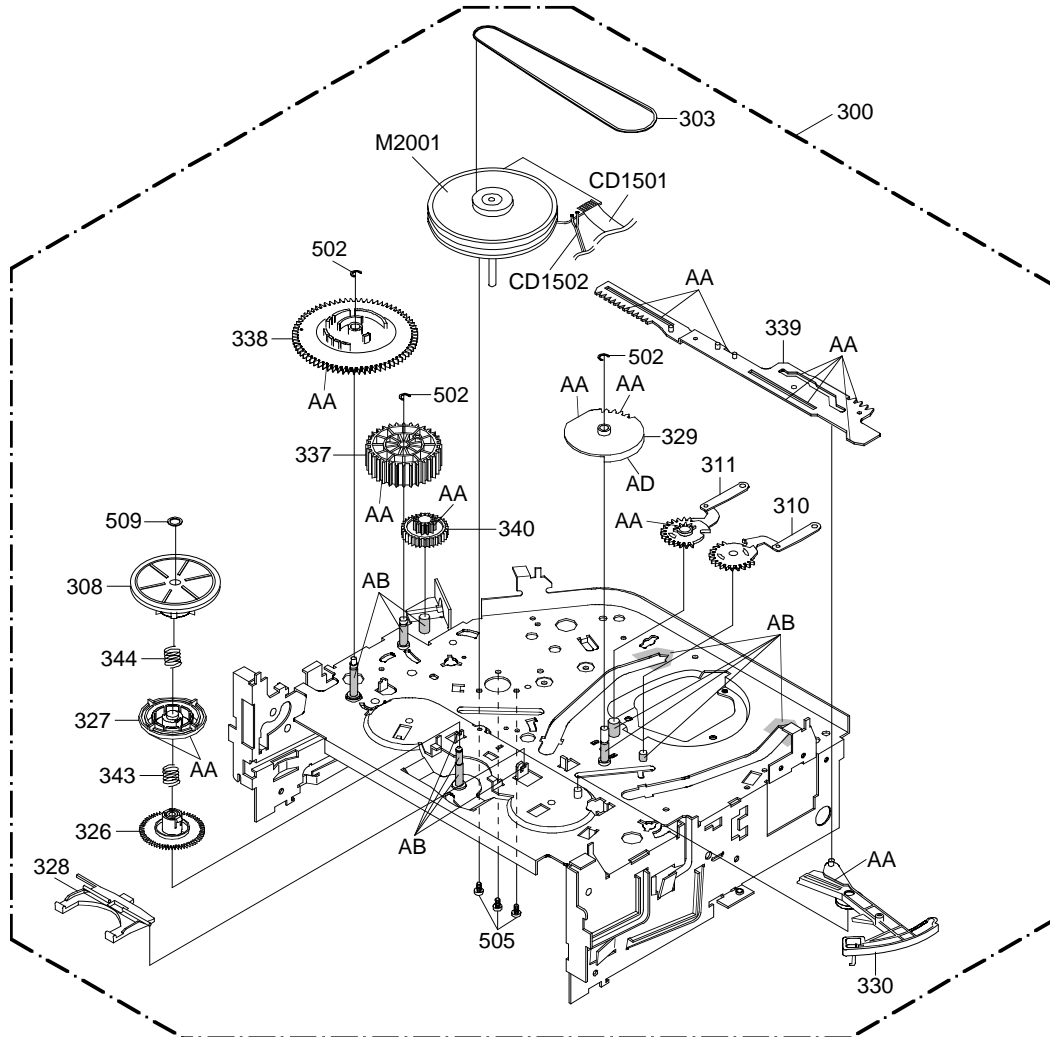
[TOP VIEW]



CLASS	PART NO.	MARK
GREASE	G-555G	AA
	MG-33	AB
	FG-84M	AC
	FL-721	AD
	G-313Y	AE

NOTE: Applying positions AA, AB, AC, AD and AE for the grease are displayed for this section. Check if the correct grease is applied for each position.

[BOTTOM VIEW]



CLASS	PART NO.	MARK
GREASE	G-555G	AA
	MG-33	AB
	FG-84M	AC
	FL-721	AD
	G-313Y	AE

NOTE: Applying positions AA, AB, AC, AD and AE for the grease are displayed for this section. Check if the correct grease is applied for each position.

3.2 PARTS LIST

#	△ REF No.	PART No.	PART NAME, DESCRIPTION

PACKING AND ACCESSORY PARTS LIST<M1>			
1		PEAC0294-03	RF CABLE
2		QAM0174-001	CABLE ASSY(AUDIO/VIDEO)
3		X-076D0GA030	TRANSMITTER LP21036-024
5		X-791WHA0100	GIFT SHEET
6		X-792WHA0475	PACKAGE,BACK
7		X-792WHA0479	PACKAGE,FRONT
8		X-793WCD1498	GIFT BOX
9		X-795WCA0662	PAD,DVD/VR 155x250
11		X-JB5UD200	POLYBAG,INSTRUCTION(RED CAUTION)
12		X-J2B00317	REGISTRATION CARD (FOR USA ONLY)
13		X-J2C51201A	INSTRUCTION BOOK (E)
13		X-J2C51301A	INSTRUCTION BOOK (F) (FOR CANADA ONLY)
14		X-795WCA0671	PAD,L
15		X-J2B00402C	GUARANTEE CARD (FOR CANADA ONLY)
16		—————	BATTERY,MANGAN R6P(AR)XICI

FINAL PARTS LIST<M2>

101		X-A2C512H720	CABINET,FRONT ASSY
101A		X-701WPJ1219	CABINET,FRONT
101B		X-711WPD0635	PLATE,DISPLAY
101C		X-712WPJ0802	FLAP
101D		X-713WPA0268	GLASS,LED-VCR
101E		X-713WPA0269	GLASS,LED-DVD
101F		X-7235380009	BADGE,BRAND
101G		X-735WPD0766	BUTTON,VCR/DVD
101H		X-735WPD0767	BUTTON,STOP
101I		X-735WPD0768	BUTTON,PLAY
101J		X-735WPJ0231	BUTTON,FRAME-DVD
101K		X-735WPJ0233	BUTTON,FRAME-VCR
101L		X-738WPA0069	STOPPER,BUTTON
101M		X-743WKA0042	SPRING,FLAP
101N		X-800WFA0051	CUSHION,LEG
102		X-701WPA0686	HOLDER,DECK
103		X-701WPA0751	HOLDER,DECK
104		X-752WSA0230	SHIELD,CASE HEAD AMP
105		X-753WUAA006	SPRING,EARTH HEAD AMP
106		X-85OP700038	HOLDER,END SENSOR
107		X-702WSA0183	PLATE,BOTTOM
109		X-7230007673	SHEET,JACK
110		X-7232020748	SHEET,IC
111		X-7260000342	SHEET,CAUTION
112		X-752WSA0275	COVER,AC HEAD
113		X-752WSA0290	SHIELD,COMPO
114		X-800WFA0046	CUSHION
115		X-752WUAA001	SHIELD,3PIN
116		X-761WSA0101	ANGLE,FRONT
117		X-702WSB0081	CABINET,TOP
118		X-712WPJ0806	PLATE,TRAY-FRONT
119		X-761WSA0125	ANGLE,DVD
120		X-7235630001	SHEET,DVD(NEW)
121		X-761WPA0262	HOLDER,DECK TOP
122		X-8965TS1010	CUSHION 65TS10-10H L10
123		X-8965TS1017	CUSHION 65TS10-10H L17.5
124		X-761WPA0282	HOLDER,DVD

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
201		X-8154730414	SCREW,TAP TITE(B) M3x41R
202		X-8109130B94	SCREW,TAP TITE(B) R PAN 3x29
203		X-8109230704	SCREW,TAP TITE(B) R BIND 3x7
204		X-8109130A04	SCREW,TAP TITE(B) WH7 3x10
205		X-8109230804	SCREW,TAP TITE(B) BIND 3x8
206		X-8109K30601	SCREW,TAP TITE(B) BIND(3D) 3x6
207		X-8107130404	SCREW,TAP TITE(S) PAN 3x4
208		X-8110226804	SCREW,TAP TITE(P) BIND 2.6x8
209		X-8102230804	SCREW,BIND M3x8
CD102		X-122H061504	CORD,MAIN CP102 - A/C HEAD 2H061504
CD8002		X-122F080601	CORD,MAIN CP8002 - DVD CP8102 2F080601

MECHANISM PARTS LIST (VCR) <M4>

300		X-A2C301N420K	DECK ASSY A2C301N420K
301		X-85OA400234	PINCH ROLLER BLOCK
302		X-85OP900746	BRACKET,TOP 3V
303		X-85OP200290	BELT,CAPSTAN (S)
304		X-85OP600581	WORM
305		X-85OP500083	BASE,AC HEAD
306		X-85OP800324	SPRING,AC HEAD
307		X-85OA000459	MAIN CHASSIS ASS'Y
308		X-85OA200089	CLUTCH ASS'Y
309		X-85OA200090	ARM IDLER ASS'Y
310		X-85OA300065	LOADING ARM S UNIT
311		X-85OA300066	LOADING ARM T UNIT
312		X-85OA400223	INCLINED BASE T UNIT 3S
313		X-85OA400232	P5 ARM ASS'Y 2
314		X-85OA400235	TENSION ARM ASS'Y 2
315		X-85OA400231	INCLINED BASE S UNIT
316		X-85OP800367	SPRING,LOCKER
317		X-85OP900736	CASS,HOLDER
318		X-85OP900748	CASS,SIDE L
319		X-85OP900749	CASS,SIDE R
320		X-85OP900739	LOCKER,R
321		X-85OA900228	LINK UNIT
322		X-85OP000496	POST,CASS GUIDE
323		X-85OP200316	REEL,S (S)
324		X-85OP200317	REEL,T (S)
325		X-85OP200308	GEAR,IDLER
326		X-85OP200311	GEAR,CLUTCH
327		X-85OP200312	GEAR,COUPLING
328		X-85OP200313	LEVER,CLUTCH
329		X-85OP300194	GEAR,MAIN LOADING
330		X-85OP400490	LEVER,TENSION
331		X-85OP400492	HOLDER,TENSION
332		X-85OP400520	CAP.P4
333		X-85OP400542	BAND,TENSION
334		X-85OP400533	CONNECT,TENSION
335		X-85OP600573	ARM,BRAKE T
336		X-85OP600584	BAND,BRAKE T
337		X-85OP600577	CAM,PINCH ROLLER
338		X-85OP600578	CAM,MAIN
339		X-85OP600579	ROD,MAIN
340		X-85OP600582	GEAR,JOINT
341		X-85OP800322	SPRING,TENSION
342		X-85OP800360	SPRING,BRAKE T
343		X-85OP800355	SPRING,COUPLING

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	
344		X-85OP800356	SPRING,RING	
345		X-85OP900750	LEVER,LINK 2	
346		X-85OP900744	LEVER,FLAP	
347		X-85OP900745	CASS,OPENER	
348		X-85OP700035	REFLECTOR,LED	
501		X-8107226804	SCREW,TAP TITE(S) BIND	2.6x8
502		X-83ETW30000	E-RING	3.0
503		X-8107226404	SCREW,TAP TITE(S) BIND	2.6x4
504		X-8102120604	SCREW,PAN	M2x6
505		X-8109126604	SCREW,TAP TITE(B) PAN	2.6x6
506		X-810A130404	SCREW/WASHER(A)	M3x4
507		X-810A126504	SCREW/WASHER(A)	M2.6x5
508		X-82Q264713N	POLYSLIDER WASHER	2.6x4.7xT0.13
509		X-82P184505N	POLYSLIDER WASHER(CUT)	1.8x4.5xT0.5
510		X-8107226604	SCREW,TAP TITE(S) BIND	2.6x6
CD1501		X-122H071704	CORD JUMPER	2H071704
CD1502		X-122Y021902	CORD JUMPER	2Y021902
H5001		X-1523Q91003	HEAD (AUDIO CONTROL)	VTR-1X2RPE22-756
H5002		X-1543Q02014	HEAD (FULL ERASE)VTR	1X2ERS11-154
△ M101		X-1596P98001	MOTOR (LOADING)	MXN13FB12K3
△ M2001		X-1510S98038	CAPSTAN DD UNIT	F2QVB33
M2003		X-1589S11017	MICRO MOTOR	I2OAL05
△ UN4001		X-A2C301N500	CYLINDER UNIT ASS'Y	A2C301N500

MECHANISM PARTS LIST (DVD) <MN>

600		X-A5E601V650	DVD MECHA ASSY	A5E601V650
601		X-92P100022A	TRAVERSE HOLDER	
602		X-92P100032A	RACK,FEED 1	
603		X-92P100033A	RACK,FEED 2	
604		X-92P100035A	LEVER,RACK FEED	
605		X-92P200006A	INSULATOR(F)	
606		X-92P200007A	INSULATOR(R)	
607		X-92P300008A	SPRING,CHASSIS	
608		X-92P300005A	SPRING,ARM IDLER	
609		X-92P300006A	SPRING,RACK FEED 2	
610		X-92P300007A	SPRING,RACK FEED 1	
611		X-92P100031A	ARM,IDLER	
612		X-92P000001A	CLAMPER PLATE	
613		X-92P100019A	RACK,LOADING	
614		X-92P100020A	MAIN FRAME M	
615		X-92P100021A	TRAY	
616		X-92P100023A	GEAR,MAIN	
617		X-92P100024A	CLAMPER	
618		X-92P300002A	SPRING,RACK LOADING	
619		X-92P400002A	MAGNET,CLAMPER	
620		X-92P100030A	GEAR,IDLER	
621		X-92P100025A	GEAR,MOTOR	
622		X-92P100026A	GEAR,MIDDLE 1	
623		X-92P100027A	GEAR,MIDDLE 2	
624		X-92P100028A	GEAR,MIDDLE 3	
625		X-92P100029A	GEAR,FEED	
701		X-8110226804	SCREW,TAP TITE(P) BIND	2.6x8
702		X-8110120604	SCREW,TAP TITE(P) PAN	2x6
703		X-8107220504	SCREW,TAP TITE(S) BIND	2x5
704		X-8140117254	SCREW,PAN	M1.7x2.5 P3
705		X-8110220804	SCREW,TAP TITE(P) BIND	2x8
CD2001		X-122H001901	CORD,DVD CP2601 - DVD DECK	2H001901
CD2301		X-122H080701	CORD,DVD CP2602 - DVD DECK	2H080701

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		CD2302	X-06CH232101 CORD,DVD CP2602 - DVD DECK CH232101
		CP1	X-069JV80180 CONNECTOR PCB SIDE IMSA-9615S-08C-P
△	M2002	X-1515S98001	FEED MOTOR BCD3B81
	PCB640	X-A5E601V640	SW PCB ASS'Y VEBA17A
	PCB68A	X-A5E601V680	RELAY PCB ASS'Y VEBA12A
	SW1	X-0515S32001	SWITCH SSS-23-6
	SW2	X-0500S01032	PUSH LEVER SWITCH SW1AB-271-10A

VCR BOARD ASSEMBLY <03>

PCB010	X-A2C512H010	VCR MT PCB ASS'Y	
R101	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R102	NRSA63J-103X	MG RESISTOR	10KΩ,1/16W
R103	NRSA63J-103X	MG RESISTOR	10KΩ,1/16W
R105	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R106	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R107	NRSA63J-332X	MG RESISTOR	3.3KΩ,1/16W
R108	NRSA63J-223X	MG RESISTOR	22KΩ,1/16W
R109	QRE141J-102Y	RESISTOR	1KΩ,1/4W
R110	NRSA63J-822X	MG RESISTOR	8.2KΩ,1/16W
R111	NRSA63J-822X	MG RESISTOR	8.2KΩ,1/16W
R112	NRSA63J-334X	MG RESISTOR	330KΩ,1/16W
R113	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R114	NRSA02J-203X	MG RESISTOR	20KΩ,1/16W
R115	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R116	NRSA63J-153X	MG RESISTOR	15KΩ,1/16W
R117	NRSA63J-682X	MG RESISTOR	6.8KΩ,1/16W
R119	NRSA63J-182X	MG RESISTOR	1.8KΩ,1/16W
R120	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R121	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R122	NRSA63J-104X	MG RESISTOR	100KΩ,1/16W
R123	QRE141J-222Y	RESISTOR	2.2KΩ,1/4W
R124	NRSA63J-823X	MG RESISTOR	82KΩ,1/16W
R126	NRSA63J-182X	MG RESISTOR	1.8KΩ,1/16W
R127	NRSA02J-684X	MG RESISTOR	680KΩ,1/16W
R129	NRSA63J-182X	MG RESISTOR	1.8KΩ,1/16W
R131	NRSA63J-152X	MG RESISTOR	1.5KΩ,1/16W
R132	NRSA63J-332X	MG RESISTOR	3.3KΩ,1/16W
R133	NRSA63J-822X	MG RESISTOR	8.2KΩ,1/16W
R136	NRSA63J-223X	MG RESISTOR	22KΩ,1/16W
R137	QRE141J-123Y	RESISTOR	12KΩ,1/4W
R138	NRSA63J-223X	MG RESISTOR	22KΩ,1/16W
R139	NRSA63J-123X	MG RESISTOR	12KΩ,1/16W
R140	QRE141J-222Y	RESISTOR	2.2KΩ,1/4W
R141	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R142	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R143	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R301	NRSA63J-333X	MG RESISTOR	33KΩ,1/16W
R302	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
R304	NRSA63J-103X	MG RESISTOR	10KΩ,1/16W
R305	NRSA63J-102X	MG RESISTOR	1KΩ,1/16W
△ R501	X-R0G3K2335K	RESISTOR	3.3MΩ,1/2W
△ R502	X-R3X181R82J	OMF RESISTOR	0.82Ω,1W
△ R504	QRE121J-561Y	RESISTOR	560Ω,1/2W
R506	QRE121J-105Y	RESISTOR	1MΩ,1/2W
R507	NRSA63J-103X	MG RESISTOR	10KΩ,1/16W

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
	R508	NRSA02J-101X	MG RESISTOR 100Ω,1/4W		R701	NRSA63J-152X	MG RESISTOR 1.5KΩ,1/16W
	R509	NRSA63J-101X	MG RESISTOR 100Ω,1/16W		R702	NRSA63J-152X	MG RESISTOR 1.5KΩ,1/16W
	R510	NRSA63J-104X	MG RESISTOR 100KΩ,1/16W		R703	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R511	NRSA63J-564X	MG RESISTOR 560KΩ,1/16W		R704	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
△	R512	X-R3X181683J	OMF RESISTOR 68KΩ,1W		R707	NRSA63J-473X	MG RESISTOR 47KΩ,1/16W
	R513	QRE121J-391Y	RESISTOR 390Ω,1/2W		R708	NRSA63J-682X	MG RESISTOR 6.8KΩ,1/16W
	R514	QRE121J-221Y	RESISTOR 220Ω,1/2W		R711	NRSA63J-473X	MG RESISTOR 47KΩ,1/16W
	R515	NRSA63J-272X	MG RESISTOR 2.7KΩ,1/16W		R712	NRSA63J-682X	MG RESISTOR 6.8KΩ,1/16W
△	R516	X-R63581R22J	FUSI RESISTOR 0.22Ω,1W		R714	NRSA63J-273X	MG RESISTOR 27KΩ,1/16W
△	R517	X-R002T2821J	RESISTOR 820Ω,1/2W		R716	NRSA63J-332X	MG RESISTOR 3.3KΩ,1/16W
	R518	NRSA63J-151X	MG RESISTOR 150Ω,1/16W		R717	NRSA63J-225X	MG RESISTOR 2.2MΩ,1/16W
	R519	NRSA63J-102X	MG RESISTOR 1KΩ,1/16W		R718	NRSA63J-102X	MG RESISTOR 1KΩ,1/16W
	R520	NRSA02F-332X	MG RESISTOR 3.3KΩ,1/16W		R719	NRSA63J-331X	MG RESISTOR 330Ω,1/16W
	R521	NRSA63J-471X	MG RESISTOR 470Ω,1/16W		R720	NRSA63J-332X	MG RESISTOR 3.3KΩ,1/16W
	R522	NRSA02F-332X	MG RESISTOR 3.3KΩ,1/16W		R721	NRSA63J-153X	MG RESISTOR 15KΩ,1/16W
	R523	NRSA63J-682X	MG RESISTOR 6.8KΩ,1/16W		R722	NRSA63J-153X	MG RESISTOR 15KΩ,1/16W
	R524	NRSA02J-101X	MG RESISTOR 100Ω,1/4W		R723	QRE141J-471Y	RESISTOR 470Ω,1/4W
	R525	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W		R3001	NRSA63J-562X	MG RESISTOR 5.6KΩ,1/16W
	R526	X-R803R9122F	MG RESISTOR 1.2KΩ,1/16W		R3002	QRE141J-121Y	RESISTOR 120Ω,1/4W
	R527	NRSA02J-101X	MG RESISTOR 100Ω,1/4W		R3003	NRSA63J-332X	MG RESISTOR 3.3KΩ,1/16W
	R528	QRE141J-392Y	RESISTOR 3.9KΩ,1/4W		R3004	NRSA02J-274X	MG RESISTOR 270KΩ,1/16W
	R529	NRSA63J-222X	MG RESISTOR 2.2KΩ,1/16W		R3006	NRSA63J-473X	MG RESISTOR 47KΩ,1/16W
	R530	NRSA63J-470X	MG RESISTOR 47Ω,1/16W		R3007	NRSA63J-682X	MG RESISTOR 6.8KΩ,1/16W
	R531	NRSA63F-821X	MG RESISTOR 820Ω,1/16W		R3008	NRSA63J-102X	MG RESISTOR 1KΩ,1/16W
	R532	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W		R3009	NRSA63J-472X	MG RESISTOR 4.7KΩ,1/16W
	R533	QRE141J-221Y	RESISTOR 220Ω,1/4W		R3010	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R534	NRSA02J-223X	MG RESISTOR 22KΩ,1/10W		R3011	QRE141J-473Y	RESISTOR 47KΩ,1/4W
	R535	NRSA02J-223X	MG RESISTOR 22KΩ,1/10W		R3012	NRSA63J-563X	MG RESISTOR 56KΩ,1/16W
	R536	NRSA63J-561X	MG RESISTOR 560Ω,1/16W		R3014	NRSA63J-563X	MG RESISTOR 56KΩ,1/16W
	R537	NRSA63J-221X	MG RESISTOR 220Ω,1/16W		R3015	QRE141J-473Y	RESISTOR 47KΩ,1/4W
	R538	NRSA63J-221X	MG RESISTOR 220Ω,1/16W		R3016	NRSA02J-271X	MG RESISTOR 270Ω,1/10W
	R540	NRSA63J-471X	MG RESISTOR 470Ω,1/16W		R3017	NRSA63J-561X	MG RESISTOR 560Ω,1/16W
	R541	QRE141J-223Y	RESISTOR 22KΩ,1/4W		R3019	QRE141J-473Y	RESISTOR 47KΩ,1/4W
	R542	NRSA63J-151X	MG RESISTOR 150Ω,1/16W		R3020	NRSA63J-561X	MG RESISTOR 560Ω,1/16W
	R543	NRSA63J-104X	MG RESISTOR 100KΩ,1/16W		R3022	NRSA02J-154X	MG RESISTOR 150KΩ,1/16W
	R544	QRE141J-223Y	RESISTOR 22KΩ,1/4W		R3025	NRSA63J-471X	MG RESISTOR 470Ω,1/16W
△	R545	X-R65584150J	R,FUSE 15Ω,1/4W		R3026	NRSA02J-274X	MG RESISTOR 270KΩ,1/16W
	R552	NRSA63J-101X	MG RESISTOR 100Ω,1/16W		R3027	NRSA63J-153X	MG RESISTOR 15KΩ,1/16W
	R553	QRE141J-473Y	RESISTOR 47KΩ,1/4W		R3028	QRE141J-473Y	RESISTOR 47KΩ,1/4W
	R554	QRE141J-103Y	RESISTOR 10KΩ,1/4W		R3029	NRSA63J-472X	MG RESISTOR 4.7KΩ,1/16W
	R651	NRSA02J-101X	MG RESISTOR 100Ω,1/4W		R3030	NRSA63J-562X	MG RESISTOR 5.6KΩ,1/16W
	R653	NRSA63J-331X	MG RESISTOR 330Ω,1/16W		R3031	NRSA63J-105X	MG RESISTOR 1MΩ,1/16W
	R657	NRSA63J-272X	MG RESISTOR 2.7KΩ,1/16W		R3032	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R658	NRSA63J-182X	MG RESISTOR 1.8KΩ,1/16W		R3033	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R659	NRSA63J-152X	MG RESISTOR 1.5KΩ,1/16W		R3034	NRSA63J-105X	MG RESISTOR 1MΩ,1/16W
	R661	NRSA63J-821X	MG RESISTOR 820Ω,1/16W		R3035	NRSA02J-103X	MG RESISTOR 10KΩ,1/10W
	R662	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3037	NRSA63J-473X	MG RESISTOR 47KΩ,1/16W
	R663	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3038	QRE141J-472Y	RESISTOR 4.7KΩ,1/4W
	R664	NRSA63J-821X	MG RESISTOR 820Ω,1/16W		R3043	NRSA63J-474X	MG RESISTOR 470KΩ,1/16W
	R665	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3044	NRSA63J-332X	MG RESISTOR 3.3KΩ,1/16W
	R666	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3045	NRSA63J-332X	MG RESISTOR 3.3KΩ,1/16W
	R667	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3046	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R668	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3047	NRSA63J-103X	MG RESISTOR 10KΩ,1/16W
	R669	NRSA63J-821X	MG RESISTOR 820Ω,1/16W		R3049	NRSA63J-473X	MG RESISTOR 47KΩ,1/16W
	R670	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3050	NRSA02J-101X	MG RESISTOR 100Ω,1/4W
	R671	NRSA63J-821X	MG RESISTOR 820Ω,1/16W		R3051	NRSA63J-562X	MG RESISTOR 18KΩ,1/16W
	R672	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3053	NRSA63J-474X	MG RESISTOR 470KΩ,1/16W
	R673	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3055	NRSA63J-223X	MG RESISTOR 22KΩ,1/16W
	R674	NRSA63J-181X	MG RESISTOR 180Ω,1/16W		R3056	NRSA63J-102X	MG RESISTOR 1KΩ,1/16W
	R675	NRSA63J-821X	MG RESISTOR 820Ω,1/16W		R3057	NRSA63J-223X	MG RESISTOR 22KΩ,1/16W
	R683	NRSA63J-561X	MG RESISTOR 560Ω,1/16W		R3062	NRSA63J-102X	MG RESISTOR 1KΩ,1/16W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
R3063			NRSA63J-102X	MG RESISTOR	C156			NCF21HZ-104X	CAPACITOR
R3083			NRSA63J-333X	MG RESISTOR	C158			NCB31CK-104X	CAPACITOR
R3087			NRSA63J-333X	MG RESISTOR	C159			X-CS0PCH4H1J	CAPACITOR
R8009			QRE121J-471Y	RESISTOR	C162			NCB31CK-104X	CAPACITOR
R8010			NRSA02J-750X	MG RESISTOR	C163			X-E524U0470D	E CAPACITOR
R8011			NRSA63J-101X	MG RESISTOR	C165			NCB31HK-473X	CAPACITOR
R8014			NRSA02J-391X	MG RESISTOR	C166			NCB21HK-683X	CAPACITOR
R8015			NRSA02J-391X	MG RESISTOR	C169			NCB31HK-473X	CAPACITOR
R8016			NRSA63J-222X	MG RESISTOR	C172			X-CS0PCH4H1J	CAPACITOR
R8017			NRSA63J-222X	MG RESISTOR	C174			QEKJ0JM-476Z	E CAPACITOR
R8019			NRSA02J-750X	MG RESISTOR	C301			NCF31HZ-103X	CAPACITOR
R8032			NRSA63J-471X	MG RESISTOR	C303			NCZ31HZ-104X	CAPACITOR
R8056			NRSA63J-471X	MG RESISTOR	C309			QETN0JM-227Z	E CAPACITOR
R8059			QRE141J-472Y	RESISTOR	C313			QEKJ1CM-106Z	E CAPACITOR
C101			X-P232W1223J	CAPACITOR	C315			QEKJ1CM-106Z	E CAPACITOR
C103			X-E524U0220D	E CAPACITOR	C318			QEKJ1CM-106Z	E CAPACITOR
C104			QEKJ0JM-227Z	E CAPACITOR	△ C501			X-E5EZF2222M	E CAPACITOR
C105			X-E524U0220D	E CAPACITOR	△ C502			X-P2122B104M	CMP
C106			NCB31HK-103X	CAPACITOR	C504			QETN0JM-227Z	E CAPACITOR
C107			NCB31HK-153X	CAPACITOR	△ C505			X-E5E2U2101M	E CAPACITOR
C108			NCB31HK-103X	CAPACITOR	C506			X-E5E2U0471M	E CAPACITOR
C109			NCB31CK-104X	CAPACITOR	C507			NCF21CZ-2R2X	CAPACITOR
C110			X-E5E2U2470M	E CAPACITOR	C508			X-CS0PB04W3K	CAPACITOR
C112			QEKJ0JM-227Z	E CAPACITOR	C509			QFN31HJ-183Z	F CAPACITOR
C114			NCB31CK-104X	CAPACITOR	C510			X-E5E2U5220M	E CAPACITOR
C115			X-E524U1330D	E CAPACITOR	△ C511			X-E62QFC470M	E CAPACITOR
C116			NCB31EZ-104X	CAPACITOR	C512			NCF31AZ-105X	CAPACITOR
C117			NCB31HK-103X	CAPACITOR	C513			X-C0PLRR7H2K	CAPACITOR
C118			NCB31HK-103X	CAPACITOR	△ C514			X-E5E2U2101M	E CAPACITOR
C119			X-E524U2100D	E CAPACITOR	△ C515			QCB12HK-103	CAPACITOR
C120			X-E524U5010D	E CAPACITOR	△ C516			X-CD39E0MQ3M	CAPACITOR
C121			NCB31HK-272X	CAPACITOR	C517			NCF31AZ-105X	CAPACITOR
C122			NCB31HK-122X	CAPACITOR	△ C518			QCEP0JM-228	E CAPACITOR
C123			X-E02LU54R7M	E CAPACITOR	△ C519			X-E5E201222M	E CAPACITOR
C124			X-E524U5010D	E CAPACITOR	△ C521			X-E5E2U2101M	E CAPACITOR
C125			X-CS0PCH4N2J	CAPACITOR	△ C522			X-E5E2U5220M	E CAPACITOR
C126			NCB31CK-104X	CAPACITOR	C524			X-CS0PB04H4K	CAPACITOR
C127			X-CS0PCH4G2J	CAPACITOR	C525			X-C0PLRR7U2K	CAPACITOR
C129			X-CS0RB0216K	CAPACITOR	C527			X-CS0PB04W3K	CAPACITOR
C131			X-E524U0101D	E CAPACITOR	C528			X-E5E2U2101M	E CAPACITOR
C132			QEKJ1HM-105Z	E CAPACITOR	C530			X-E5E2U2101M	E CAPACITOR
C133			NCF31AZ-105X	CAPACITOR	C531			QCB32HK-561Z	CAPACITOR
C134			QEKJ1HM-105Z	E CAPACITOR	C534			NCF31AZ-105X	CAPACITOR
C135			X-E02LU5R22M	E CAPACITOR	△ C540			X-E62QFC470M	E CAPACITOR
C136			QETN1VM-226Z	E CAPACITOR	C541			NCF21CZ-2R2X	CAPACITOR
C137			X-E524U5010D	E CAPACITOR	C652			QETN0JM-107Z	E CAPACITOR
C138			QETN1HM-105Z	E CAPACITOR	C653			QETL1AM-477	E CAPACITOR
C139			NCB31EZ-104X	CAPACITOR	C701			X-CS0PB04H4K	CAPACITOR
C140			X-E00NU54R7M	E CAPACITOR	C702			X-E524U53R3D	E CAPACITOR
C141			NCB31HK-103X	CAPACITOR	C703			X-E02LU54R7M	E CAPACITOR
C142			X-E524U2470D	E CAPACITOR	C704			X-E524U5010D	E CAPACITOR
C143			NCF31AZ-105X	CAPACITOR	C705			QEKJ1HM-475Z	E CAPACITOR
C144			NCB31HK-103X	CAPACITOR	C706			X-E524U5010D	E CAPACITOR
C145			X-CS0PB04H4K	CAPACITOR	C707			NCB31CK-104X	CAPACITOR
C146			X-E524U5010D	E CAPACITOR	C708			QEKJ1CM-106Z	E CAPACITOR
C147			X-CS0PB04H4K	CAPACITOR	C709			X-E50HU5100M	E CAPACITOR
C148			X-E524U5010D	E CAPACITOR	C711			X-E50HU5100M	E CAPACITOR
C151			QEKJ1HM-105Z	E CAPACITOR	C713			NCF31AZ-105X	CAPACITOR
C152			QETN1CM-476Z	E CAPACITOR	C714			X-E524U2100D	E CAPACITOR
C154			NCB31CK-104X	CAPACITOR	C715			NCB31HK-122X	CAPACITOR
C155			X-CS0RB0216K	CAPACITOR	C716			NCF31AZ-105X	CAPACITOR

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C719		NCF31AZ-105X	CAPACITOR 1μF,10V	C3023		QETN0JM-477Z	E CAPACITOR 470μF,6.3V
C720		QETN1HM-336Z	E CAPACITOR 33μF,50V	C3024		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C721		NCB31HK-122X	CAPACITOR 0.0012μF,50V	C3025		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C722		NCB31CK-104X	CAPACITOR 0.1μF,16V	C3027		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C723		NCF31HZ-103X	CAPACITOR 0.01μF,50V	C3029		QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V
C724		NCF31HZ-103X	CAPACITOR 0.01μF,50V	C3030		NCF31AZ-105X	CAPACITOR 1μF,10V
C725		NCB31CK-104X	CAPACITOR 0.1μF,16V	C3031		NCB31HK-152X	CAPACITOR 0.0015μF,50V
C726		NCB31HK-153X	CAPACITOR 0.015μF,50V	C3032		QEKJ1HM-225Z	E CAPACITOR 2.2μF,50V
C727		X-E524U2100D	E CAPACITOR 10μF,16V	C3033		QETN1VM-337Z	E CAPACITOR 330μF,35V
C728		X-E50HU5100M	E CAPACITOR 10μF,50V	C3034		NCF31AZ-105X	CAPACITOR 1μF,10V
C729		NCB31HK-103X	CAPACITOR 0.01μF,50V	C3036		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C730		NCB31HK-153X	CAPACITOR 0.015μF,50V	C3038		NCF31AZ-105X	CAPACITOR 1μF,10V
C731		X-E50HU5R22M	E CAPACITOR 0.22μF,50V	C3040		NCF31AZ-105X	CAPACITOR 1μF,10V
C732		NCF31HZ-103X	CAPACITOR 0.01μF,50V	C3041		NCB31HK-152X	CAPACITOR 0.0015μF,50V
C734		NCB31CK-104X	CAPACITOR 0.1μF,16V	C3044		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C735		X-E02LU54R7M	E CAPACITOR 4.7μF,50V	C3045		QEKJ1HM-474Z	E CAPACITOR 0.47μF,50V
C736		NCB31HK-102X	CAPACITOR 0.001μF,50V	C3049		NDC31HJ-101X	CAPACITOR 100pF,50V
C737		QEKJ1HM-475Z	E CAPACITOR 4.7μF,50V	C3050		NCB31HK-103X	CAPACITOR 0.01μF,50V
C738		NCF31HZ-103X	CAPACITOR 0.01μF,50V	C3052		QEKJ0JM-226Z	E CAPACITOR 22μF,6.3V
C739		QEKJ1CM-476Z	E CAPACITOR 47μF,16V	C3053		NCB31CK-104X	CAPACITOR 0.1μF,16V
C740		X-E50HU3330M	E CAPACITOR 33μF,25V	C3061		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C741		X-E524U2100D	E CAPACITOR 10μF,16V	C3065		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C742		X-E524U2100D	E CAPACITOR 10μF,16V	C8004		NDC31HJ-471X	CAPACITOR 470pF,50V
C743		X-E524U5R22D	E CAPACITOR 0.22μF,50V	C8013		QETN1HM-106Z	E CAPACITOR 10μF,50V
C744		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8014		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C746		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8015		QETN0JM-477Z	E CAPACITOR 470μF,6.3V
C747		QETN1HM-106Z	E CAPACITOR 10μF,50V	C8019		QEKJ1CM-106Z	E CAPACITOR 10μF,16V
C748		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8031		QEKJ1HM-475Z	E CAPACITOR 4.7μF,50V
C749		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8032		X-E00NU24R7M	E CAPACITOR 4.7μF,16V
C750		X-E524U52R2D	E CAPACITOR 2.2μF,50V	C8053		QEKJ1CM-106Z	E CAPACITOR 10μF,16V
C751		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8057		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C752		X-E524U2220D	E CAPACITOR 22μF,16V	C8075		QEKJ1HM-475Z	E CAPACITOR 4.7μF,50V
C754		QEKJ1CM-476Z	E CAPACITOR 47μF,16V	C8099		NDC31HJ-471X	CAPACITOR 470pF,50V
C755		X-CS0PB04H4K	CAPACITOR 0.022μF,50V	△ D502		X-D2WXN40050	DIODE 1N4005-EIC
C756		X-E524U2100D	E CAPACITOR 10μF,16V	△ D503		X-D2WXN40050	DIODE 1N4005-EIC
C757		NCF31AZ-105X	CAPACITOR 1μF,10V	D504		1SS133-T2	DIODE
C758		X-E524U2220D	E CAPACITOR 22μF,16V	△ D505		X-D2WXN40050	DIODE 1N4005-EIC
C759		X-E50HU4220M	E CAPACITOR 22μF,35V	△ D506		X-D2WXN40050	DIODE 1N4005-EIC
C760		NCF31AZ-105X	CAPACITOR 1μF,10V	△ D507		X-D23TGP15J0	DIODE RGP15J-G23
C761		QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	D509		X-D2WXGP10J0	FR DIODE RGP10J-EIC
C762		X-CS0PCH4U2J	CAPACITOR 680pF,50V	△ D510		MTZJ27B-T2	ZENER
C763		X-CS0PCH4U2J	CAPACITOR 680pF,50V	△ D511		X-D28T21DQN4	DIODE,SCHOTTKY 21DQ04N-TA2B1
C3001		X-CS0RB0216K	CAPACITOR 1μF,16V	△ D512		X-D28T21DQN4	DIODE,SCHOTTKY 21DQ04N-TA2B1
C3002		NCB31HK-103X	CAPACITOR 0.01μF,50V	D513		X-D2WXN40050	DIODE 1N4005-EIC
C3004		X-CS0PB04H4K	CAPACITOR 0.022μF,50V	D514		MTZJ12C-T2	ZENER
C3005		NCB31HK-102X	CAPACITOR 0.001μF,50V	△ D515		X-D28T21DQN4	DIODE,SCHOTTKY 21DQ04N-TA2B1
C3006		NCB31HK-102X	CAPACITOR 0.001μF,50V	D518		1SS133-T2	DIODE
C3007		NCB31CK-104X	CAPACITOR 0.1μF,16V	△ D522		X-D28TELS6N6	RECTIFIER 10ELS6N-TA1B2
C3008		NCB31HK-472X	CAPACITOR 0.0047μF,50V	△ D523		MTZJ33B-T2	ZENER
C3009		NCB31CK-104X	CAPACITOR 0.1μF,16V	D524		1SS133-T2	DIODE
C3010		NCB31HK-102X	CAPACITOR 0.001μF,50V	D526		MTZJ3.3B	ZENER
C3013		QEKJ0JM-226Z	E CAPACITOR 22μF,6.3V	D528		1SS133-T2	DIODE
C3014		NCB31EZ-104X	CAPACITOR 0.1μF,25V	D530		X-D28TELS6N6	RECTIFIER 10ELS6N-TA1B2
C3015		X-CS0PCH4W2J	CAPACITOR 820pF,50V	D531		MTZJ9.1B	DIODE,ZENER
C3016		QEKJ0JM-476Z	E CAPACITOR 47μF,6.3V	D532		MTZJ3.3B	ZENER
C3017		NCB31HK-102X	CAPACITOR 0.001μF,50V	D534		1SS133-T2	DIODE
C3018		NDC31HJ-151X	CAPACITOR 150pF,50V	D535		1SS133-T2	DIODE
C3019		NCB31CK-104X	CAPACITOR 0.1μF,16V	D536		1SS133-T2	DIODE
C3020		X-CS0PB04H4K	CAPACITOR 0.022μF,50V	D537		1SS133-T2	DIODE
C3021		QEKJ1CM-106Z	E CAPACITOR 10μF,16V	D538		1SS133-T2	DIODE
C3022		NDC31HJ-471X	CAPACITOR 470pF,50V	D539		1SS133-T2	DIODE

#	△	REF No.	PART No.	PART NAME, DESCRIPTION		#	△	REF No.	PART No.	PART NAME, DESCRIPTION	
		D651	X-0021E5Q212	LED	LTL-1CHGT-002A			Q3002	X-0002700690	PHOTO COUPLER	RPI-303
		D656	X-D2WXN40050	DIODE	1N4005-EIC			Q3003	X-TPAAC05002	TRANSISTOR	KRA103SR TK
		D701	1SS133-T2	DIODE				Q3004	X-0002700680	PHOTO TRANSISTOR	RPI-352C40N
		D702	MTZJ5.1B	DIODE,ZENER				Q3005	X-0002700680	PHOTO TRANSISTOR	RPI-352C40N
		D3001	X-0010E00330	INFRARED LED	LTE-3271T-012A-O			Q3006	X-0000M00390	PHOTO TRANSISTOR	ST-304L
		D3007	1SS133-T2	DIODE				Q3008	X-0000M00390	PHOTO TRANSISTOR	ST-304L
		D3009	1SS133-T2	DIODE				Q3007	KRC103S-X	TRANSISTOR	
		D8002	MTZJ6.8B-T2	ZENER				Q8003	KRC103S-X	TRANSISTOR	
		D8003	MTZJ6.8B-T2	ZENER				Q8004	X-TAATA12660	TRANSISTOR	KTA1266-AT(Y,GR)
		D8008	1SS133-T2	DIODE				Q8005	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK
		V651	X-0040F34001	LED DISPLAY	ELF-4M6SDRSOWB/S423			Q8006	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK
		IC101	X-I03F3206M0	IC	LA71206M-MPB			Q8007	X-TPAAC05002	TRANSISTOR	KRA103SR TK
△		IC501	X-I1KJ9A4310	IC	KIA431			B501	X-024HT03563	CORE,BEADS	
△		IC502	X-I1KA98R09A	IC	KIA78R09API			B502	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
△		IC503	X-000220001W	PHOTO COUPLER	PS2561L1-1-V(W)			L101	X-031626009R	COIL,BIAS OSC	
		IC701	AN3663FBP	IC				L102	QQL29BJ-101Z	COIL	100μH
		IC3001	X-I54F50138A	IC	OEC0138A			L103	QQL071J-5R6Y	COIL	5.6μH
		IC3003	X-I9UF032310	IC	PST3231NR			L105	QQL29BJ-101Z	COIL	100μH
		IC3099	X-A2C512K015	IC	S-24C04BFJ-TB			L106	QQL29BJ-220Z	COIL	22μH
		IC8005	MM1501XN-X	IC				L107	QQL29BJ-220Z	COIL	22μH
		Q101	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			L301	QQL29BJ-220Z	COIL	22μH
		Q102	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK		△	L501	X-029T000107	COIL,LINE FILTER	0R4A223F20
		Q103	X-TPAAC05002	TRANSISTOR	KRA103SR TK			L502	X-02AHB0A0A4	CORE,FERRITE	W5T_20*10*10A
		Q104	X-TCAT032034	TRANSISTOR	KTC3203_Y-AT			L505	QQL29BJ-220Z	COIL	22μH
		Q105	X-TAATA12660	TRANSISTOR	KTA1266-AT(Y,GR)		△	L506	X-021W7A220K	COIL	22μH
		Q106	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK			L701	QQL29BJ-220Z	COIL	22μH
		Q107	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK			L702	QQL29BJ-220Z	COIL	22μH
		Q109	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			L703	QQL29BJ-101Z	COIL	100μH
		Q301	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			L704	X-0216A6100K	COIL	10μH
△		Q501	X-TJXG5NC500	FET	STP5NC50FP			L3002	X-021W7A220K	COIL	22μH
△		Q502	X-TCAT032034	TRANSISTOR	KTC3203_Y-AT			L3003	QQL071J-120Y	COIL	12μH
△		Q503	X-TCAT03209Y	TRANSISTOR	KTC3209_Y-AT			L8004	QQL071J-470Y	COIL	47μH
△		Q504	X-TAAT012714	TRANSISTOR	KTA1271_Y-AT		△	T501	X-0481260074	TRANSFORMER,SWITCHING	81260074
△		Q505	X-TCAT03209Y	TRANSISTOR	KTC3209_Y-AT			J8001	X-060J411018	RCA JACK	
		Q506	KRC103S-X	TRANSISTOR				J8003	X-060J401087	RCA JACK	
		Q507	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			J8004	X-060J401087	RCA JACK	
		Q508	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			J8005	X-060J421025	RCA JACK	
		Q509	KRC103S-X	TRANSISTOR				SW651	QSW0456-001Z	TACT SWITCH,VCR EJECT	
△		Q510	X-TCAT032034	TRANSISTOR	KTC3203_Y-AT			SW652	QSW0456-001Z	TACT SWITCH,POWER	
△		Q511	X-TAAT01241Y	TRANSISTOR	KTA1241_Y-AT			SW653	QSW0456-001Z	TACT SWITCH,VCR/DVD	
		Q513	2SC2412K/RS/-X	TRANSISTOR				SW654	QSW0456-001Z	TACT SWITCH,CH UP	
		Q514	2SC2412K/RS/-X	TRANSISTOR				SW655	QSW0456-001Z	TACT SWITCH,CH DOWN	
		Q530	X-TCAA3875SY	TRANSISTOR	KTC3875S_Y_RTK			SW3001	X-0508S11001	LEAF SWITCH	
		Q531	2SA1037AK/RS/-X	TRANSISTOR				CP101	X-0697290620	CONNECTOR PCB SIDE	
		Q651	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK			CP102	QFG1208C1-06	CONNECTOR,PCB SIDE	IMS9-9604S-06C
		Q652	KRC103S-X	TRANSISTOR				CP651	X-069J750019	CONNECTOR PCB SIDE	
		Q653	KRC103S-X	TRANSISTOR				CP3001	X-06972C0010	CONNECTOR PCB SIDE	
		Q654	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK			CP8002	QFG1208C1-08	CONNECTOR,PCB SIDE	IMS9-9604S-08C
		Q655	KRC103S-X	TRANSISTOR				X101	X-100DT3R528	CRYSTAL	HC-49/U
		Q656	KRC103S-X	TRANSISTOR				X3001	X-100BT01004	CRYSTAL	HC-49U/S
		Q657	KRC103S-X	TRANSISTOR			△	TU301	X-0162300033	RF UNIT	115-V-H015AR
		Q658	KRC103S-X	TRANSISTOR				CP103	X-067U002019	WIRE HOLDER	B2013H02-2P
		Q659	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK		△	F501	QMF51U1-2R5-J8	FUSE	
		Q660	KRC103S-X	TRANSISTOR				FH501	X-06710T0006	FUSE HOLDER	
		Q661	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK			FH502	X-06710T0006	FUSE HOLDER	
		Q662	KRC103S-X	TRANSISTOR			△	CD501	X-1209419910	CORD,AC BUSH	9419910
		Q663	KRC103S-X	TRANSISTOR				CP501	X-06CH2C0302	CORD,JUMPER	CH2C0302
		Q664	KRC103S-X	TRANSISTOR				OS651	X-077Q037001	REMOTE RECEIVER	
		Q665	X-TAAA1504SY	TRANSISTOR	KTA1504S_Y_RTK						
		Q666	X-TPAAC05002	TRANSISTOR	KRA103SR TK						
		Q3001	X-0002700690	PHOTO COUPLER	RPI-303						

▲ REF No. PART No. PART NAME, DESCRIPTION

OPERATION BOARD ASSEMBLY <28>

PCB270	X-A2C512X270	OPERATION PCB ASSY	
R685	QRE141J-133Y	RESISTOR	13KΩ, 1/4W
R686	QRE141J-682Y	RESISTOR	6.8KΩ, 1/4W
R687	QRE141J-392Y	RESISTOR	3.9KΩ, 1/4W
R688	QRE141J-272Y	RESISTOR	2.7KΩ, 1/4W
R689	QRE141J-332Y	RESISTOR	3.3KΩ, 1/4W
R690	QRE141J-223Y	RESISTOR	22KΩ, 1/4W
D685	X-0021E5Q212	LED	LTL-1CHGT-002A
SW685	QSW0707-001Z	TACT SWITCH, REV/REW	
SW686	QSW0707-001Z	TACT SWITCH, PLAY	
SW687	QSW0707-001Z	TACT SWITCH, FF/CUE	
SW688	QSW0707-001Z	TACT SWITCH, REC/OTR	
SW689	QSW0707-001Z	TACT SWITCH, STOP	
SW690	QSW0707-001Z	TACT SWITCH, OPEN/CLOSE	
CD681	X-122H051202	CORD, OPE CP681 - MAIN CP651 2H051202	
CP681	X-069J750019	CONNECTOR PCB SIDE	

DVD BOARD ASSEMBLY <50>

PCB130	X-A2C512H130	DVD PCB ASS'Y	
R2301	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2303	NRSA63J-2R2X	MG RESISTOR	2.2Ω, 1/16W
R2304	NRSA63J-2R2X	MG RESISTOR	2.2Ω, 1/16W
R2305	NRSA63J-513X	MG RESISTOR	51KΩ, 1/16W
R2306	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2307	NRSA63J-273X	MG RESISTOR	27KΩ, 1/16W
R2308	NRSA02J-203X	MG RESISTOR	20KΩ, 1/16W
R2309	NRSA63J-471X	MG RESISTOR	470Ω, 1/16W
R2310	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2312	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2313	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2314	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2316	NRSA02J-203X	MG RESISTOR	20KΩ, 1/16W
R2318	NRSA63J-562X	MG RESISTOR	5.6KΩ, 1/16W
R2319	NRSA63J-273X	MG RESISTOR	27KΩ, 1/16W
R2321	NRSA63J-513X	MG RESISTOR	51KΩ, 1/16W
R2322	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2323	NRSA63J-332X	MG RESISTOR	3.3KΩ, 1/16W
R2324	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2325	NRSA63J-682X	MG RESISTOR	6.8KΩ, 1/16W
R2326	NRSA63J-822X	MG RESISTOR	8.2KΩ, 1/16W
R2327	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2328	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2329	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2330	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2331	NRSA63J-471X	MG RESISTOR	470Ω, 1/16W
R2334	NRSA63J-103X	MG RESISTOR	10KΩ, 1/16W
R2337	NRSA63J-103X	MG RESISTOR	10KΩ, 1/16W
R2601	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2602	NRSA63J-185X	MG RESISTOR	1.8MΩ, 1/16W
R2603	NRSA63F-133X	MG RESISTOR	13KΩ, 1/16W
R2604	NRSA63F-273X	MG RESISTOR	27KΩ, 1/16W
R2605	NRSA63F-103X	MG RESISTOR	10KΩ, 1/16W

▲ REF No. PART No. PART NAME, DESCRIPTION

R2607	NRSA63J-122X	MG RESISTOR	1.2KΩ, 1/16W
R2608	NRSA63J-122X	MG RESISTOR	1.2KΩ, 1/16W
R2609	NRSA63J-122X	MG RESISTOR	1.2KΩ, 1/16W
R2610	NRSA63F-512X	MG RESISTOR	5.1KΩ, 1/16W
R2611	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2612	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2613	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2614	NRSA63F-123X	MG RESISTOR	12KΩ, 1/16W
R2615	NRSA63J-100X	MG RESISTOR	10Ω, 1/16W
R2616	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2617	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2618	NRSA63J-100X	MG RESISTOR	10Ω, 1/16W
R2619	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R2620	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2621	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R2622	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2623	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2624	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2625	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2626	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2627	NRSA63J-152X	MG RESISTOR	1.5KΩ, 1/16W
R2628	NRSA63J-223X	MG RESISTOR	22KΩ, 1/16W
R2629	NRSA63J-152X	MG RESISTOR	1.5KΩ, 1/16W
R2630	NRSA63J-223X	MG RESISTOR	22KΩ, 1/16W
R2631	NRSA63J-105X	MG RESISTOR	1MΩ, 1/16W
R2632	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2635	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2643	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2644	NRSA63J-222X	MG RESISTOR	2.2KΩ, 1/16W
R2645	NRSA63J-102X	MG RESISTOR	1KΩ, 1/16W
R2646	NRSA63J-222X	MG RESISTOR	2.2KΩ, 1/16W
R2647	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2648	NRSA02J-133X	MG RESISTOR	13KΩ, 1/16W
R2649	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R2650	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2651	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R2652	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R2653	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R4001	NRSA02F-391X	MG RESISTOR	390Ω, 1/16W
R4002	NRSA63F-750X	MG RESISTOR	75Ω, 1/16W
R4003	NRSA63F-750X	MG RESISTOR	75Ω, 1/16W
R4004	NRSA02F-820X	MG RESISTOR	82Ω, 1/16W
R4005	NRSA63F-750X	MG RESISTOR	75Ω, 1/16W
R4008	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R4012	NRSA63J-105X	MG RESISTOR	1MΩ, 1/16W
R4014	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R4016	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R4018	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R4019	NRSA63J-330X	MG RESISTOR	33Ω, 1/16W
R4020	NRSA63J-330X	MG RESISTOR	33Ω, 1/16W
R4021	NRSA63J-330X	MG RESISTOR	33Ω, 1/16W
R4022	NRSA63J-103X	MG RESISTOR	10KΩ, 1/16W
R4023	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R4024	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R4025	NRSA63J-221X	MG RESISTOR	220Ω, 1/16W
R4026	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R4027	NRSA63J-101X	MG RESISTOR	100Ω, 1/16W
R4031	NRSA63J-472X	MG RESISTOR	4.7KΩ, 1/16W
R4032	NRSA63F-511X	MG RESISTOR	510Ω, 1/16W
R4033	NRSA63J-100X	MG RESISTOR	10Ω, 1/16W
R4034	NRSA63F-102X	MG RESISTOR	1KΩ, 1/16W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION	
R4035			NRSA63J-472X	MG RESISTOR	C2305			NDC31HJ-221X	CAPACITOR	220pF,50V
R4036			NRSA63J-472X	MG RESISTOR	C2306			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R4037			NRSA63J-472X	MG RESISTOR	C2307			NCB31CK-104X	CAPACITOR	0.1μF,16V
R4038			NRSA63J-472X	MG RESISTOR	C2308			NCB31CK-104X	CAPACITOR	0.1μF,16V
R4039			NRSA63J-472X	MG RESISTOR	C2309			NCB31HK-102X	CAPACITOR	0.001μF,50V
R4040			NRSA63J-472X	MG RESISTOR	C2310			QETN1CM-476Z	E CAPACITOR	47μF,16V
R4041			NRSA63J-472X	MG RESISTOR	C2311			NCB31CK-104X	CAPACITOR	0.1μF,16V
R4042			NRSA02J-680X	MG RESISTOR	C2312			NCB31HK-102X	CAPACITOR	0.001μF,50V
R4043			NRSA63J-103X	MG RESISTOR	C2603			NCB31HK-222X	CAPACITOR	0.0022μF,50V
R4044			NRSA63J-103X	MG RESISTOR	C2604			NCB31HK-222X	CAPACITOR	0.0022μF,50V
R4045			NRSA63J-472X	MG RESISTOR	C2605			NCB31HK-222X	CAPACITOR	0.0022μF,50V
R4046			NRSA63J-472X	MG RESISTOR	C2606			NCB31HK-222X	CAPACITOR	0.0022μF,50V
R4047			NRSA63J-330X	MG RESISTOR	C2607			NDC31HJ-330X	CAPACITOR	33pF,50V
R4048			NRSA63J-473X	MG RESISTOR	C2608			QETN1CM-476Z	E CAPACITOR	47μF,16V
R4049			NRSA63J-472X	MG RESISTOR	C2609			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R4050			NRSA63J-472X	MG RESISTOR	C2610			NCB31HK-682X	CAPACITOR	0.0068μF,50V
R4051			NRSA63J-472X	MG RESISTOR	C2611			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R4052			NRSA63J-472X	MG RESISTOR	C2612			NCB31HK-333X	CAPACITOR	0.033μF,25V
R4053			NRSA63J-102X	MG RESISTOR	C2613			NDC31HJ-221X	CAPACITOR	220pF,50V
R4054			NRSA63J-102X	MG RESISTOR	C2614			NCB31CK-104X	CAPACITOR	0.1μF,16V
R7306			NRSA63J-103X	MG RESISTOR	C2615			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R7307			NRSA63J-103X	MG RESISTOR	C2616			NDC31HJ-471X	CAPACITOR	470pF,50V
R8101			NRSA63J-103X	MG RESISTOR	C2617			NCB31CK-104X	CAPACITOR	0.1μF,16V
R8102			NRSA63J-104X	MG RESISTOR	C2618			NCB31CK-104X	CAPACITOR	0.1μF,16V
R8103			NRSA63J-104X	MG RESISTOR	C2619			NDC31HJ-561X	CAPACITOR	560pF,50V
R8104			NRSA63J-103X	MG RESISTOR	C2620			NCB31HK-562X	CAPACITOR	0.0056μF,50V
R8105			NRSA63J-473X	MG RESISTOR	C2621			NCB31HK-562X	CAPACITOR	0.0056μF,50V
R8106			NRSA63J-473X	MG RESISTOR	C2622			NCB31HK-562X	CAPACITOR	0.0056μF,50V
R8107			NRSA63J-103X	MG RESISTOR	C2623			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8108			NRSA63J-103X	MG RESISTOR	C2624			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8109			NRSA63J-123X	MG RESISTOR	C2625			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8110			NRSA63J-123X	MG RESISTOR	C2626			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8111			NRSA63J-103X	MG RESISTOR	C2627			NCB31HK-333X	CAPACITOR	0.033μF,25V
R8112			NRSA63J-471X	MG RESISTOR	C2628			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8113			NRSA02J-560X	MG RESISTOR	C2629			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8114			NRSA63J-102X	MG RESISTOR	C2632			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8115			NRSA63J-471X	MG RESISTOR	C2633			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8116			NRSA63J-103X	MG RESISTOR	C2634			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8117			NRSA63J-103X	MG RESISTOR	C2635			NCB31HK-102X	CAPACITOR	0.001μF,50V
R8118			NRSA63J-102X	MG RESISTOR	C2636			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8119			NRSA63J-474X	MG RESISTOR	C2637			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8120			NRSA63J-472X	MG RESISTOR	C2638			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8121			NRSA63J-332X	MG RESISTOR	C2639			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8122			NRSA63J-102X	MG RESISTOR	C2640			QETN0JM-107Z	E CAPACITOR	100μF,6.3V
R8123			NRSA63J-472X	MG RESISTOR	C2641			QETN0JM-107Z	E CAPACITOR	100μF,6.3V
R8124			NRSA63J-102X	MG RESISTOR	C2642			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8128			NRSA63J-102X	MG RESISTOR	C2643			QETN1CM-476Z	E CAPACITOR	47μF,16V
R8129			NRSA63J-103X	MG RESISTOR	C2644			QETN1CM-476Z	E CAPACITOR	47μF,16V
R8130			NRSA63J-222X	MG RESISTOR	C2645			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8131			NRSA63J-152X	MG RESISTOR	C2646			QETN1CM-476Z	E CAPACITOR	47μF,16V
R8132			NRSA63J-332X	MG RESISTOR	C2647			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8133			NRSA02J-221X	MG RESISTOR	C2648			NCB31EZ-104X	CAPACITOR	0.1μF,25V
R8134			NRSA63J-471X	MG RESISTOR	C2649			NCB31CK-104X	CAPACITOR	0.1μF,16V
R8135			NRSA63J-471X	MG RESISTOR	C2654			NCB31HK-103X	CAPACITOR	0.01μF,50V
R8136			NRSA02J-680X	MG RESISTOR	C2655			NCB31HK-103X	CAPACITOR	0.01μF,50V
R8137			NRSA63J-104X	MG RESISTOR	C2657			NDC31HJ-101X	CAPACITOR	100pF,50V
R8151			NRSA63J-103X	MG RESISTOR	C2658			NDC31HJ-101X	CAPACITOR	100pF,50V
C2301			NCB31EZ-104X	CAPACITOR	C2659			NDC31HJ-101X	CAPACITOR	100pF,50V
C2302			NCB31CK-104X	CAPACITOR	C2660			NDC31HJ-101X	CAPACITOR	100pF,50V
C2303			NCB31CK-104X	CAPACITOR	C4001			NCB31EZ-104X	CAPACITOR	0.1μF,25V
C2304			NDC31HJ-221X	CAPACITOR	C4002			NCB31EZ-104X	CAPACITOR	0.1μF,25V

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C4003		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4079		NDC31HJ-101X	CAPACITOR 100pF,50V
C4004		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4080		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4005		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4081		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4006		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4082		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4007		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4083		QETN1CM-476Z	E CAPACITOR 47μF,16V
C4008		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4084		QETN1CM-476Z	E CAPACITOR 47μF,16V
C4009		QETN0JM-107Z	E CAPACITOR 100μF,6.3V	C4085		NCB31HK-102X	CAPACITOR 0.001μF,50V
C4010		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4086		NCB31HK-102X	CAPACITOR 0.001μF,50V
C4011		QETN0JM-107Z	E CAPACITOR 100μF,6.3V	C4087		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4012		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4088		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4013		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4089		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4014		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4090		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4015		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4091		NDC31HJ-101X	CAPACITOR 100pF,50V
C4016		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4092		NDC31HJ-101X	CAPACITOR 100pF,50V
C4017		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4093		NDC31HJ-101X	CAPACITOR 100pF,50V
C4018		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4094		NDC31HJ-101X	CAPACITOR 100pF,50V
C4019		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4095		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4020		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4096		NCB31HK-102X	CAPACITOR 0.001μF,50V
C4021		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C4097		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4022		X-CS0PCH4H1J	CAPACITOR 22pF,50V	C4098		NDC31HJ-100X	CAPACITOR 10pF,50V
C4023		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7301		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4024		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7302		X-E02LU2101M	E CAPACITOR 100μF,16V
C4025		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7303		QETL1HM-226	E CAPACITOR 22μF,50V
C4026		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7304		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4027		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7305		X-CS0PCH4W2J	CAPACITOR 820pF,50V
C4028		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7306		X-CS0PCH4W2J	CAPACITOR 820pF,50V
C4029		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7308		X-E02LU52R2M	E CAPACITOR 2.2μF,50V
C4030		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C7310		X-E02LU52R2M	E CAPACITOR 2.2μF,50V
C4031		NCB31HK-103X	CAPACITOR 0.01μF,50V	C7311		QETN1HM-106Z	E CAPACITOR 10μF,50V
C4032		NCB31HK-102X	CAPACITOR 0.001μF,50V	C8101		QETN1HM-336Z	E CAPACITOR 33μF,50V
C4033		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8102		NDC31HJ-101X	CAPACITOR 100pF,50V
C4035		X-CS0PCH4H1J	CAPACITOR 22pF,50V	C8105		NCB31HK-152X	CAPACITOR 0.0015μF,50V
C4036		NCB31CK-104X	CAPACITOR 0.1μF,16V	C8106		NCB31HK-152X	CAPACITOR 0.0015μF,50V
C4037		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8107		NDC31HJ-101X	CAPACITOR 100pF,50V
C4038		NCB31HK-103X	CAPACITOR 0.01μF,50V	C8110		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4039		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8111		X-E02LU2101M	E CAPACITOR 100μF,16V
C4040		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8112		QETL1HM-226	E CAPACITOR 22μF,50V
C4041		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8113		QETL1HM-226	E CAPACITOR 22μF,50V
C4044		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8114		X-E02LU52R2M	E CAPACITOR 2.2μF,50V
C4045		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8115		X-E02LU54R7M	E CAPACITOR 4.7μF,50V
C4046		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8118		X-E02LU52R2M	E CAPACITOR 2.2μF,50V
C4047		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8119		QETN0JM-227Z	E CAPACITOR 220μF,6.3V
C4050		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8120		NDC31HJ-221X	CAPACITOR 220pF,50V
C4051		QETN0JM-477Z	E CAPACITOR 470μF,6.3V	C8121		NCB31HK-103X	CAPACITOR 0.01μF,50V
C4062		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8122		QETN1CM-476Z	E CAPACITOR 47μF,16V
C4063		QETN0JM-107Z	E CAPACITOR 100μF,6.3V	C8123		X-CS0PB04H4K	CAPACITOR 0.022μF,50V
C4064		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8124		QETN1CM-476Z	E CAPACITOR 47μF,16V
C4065		NCB31HK-103X	CAPACITOR 0.01μF,50V	C8125		NCB31EZ-104X	CAPACITOR 0.1μF,25V
C4066		NCB31AK-105X	CAPACITOR 1μF,10V	C8126		NCB31CK-104X	CAPACITOR 0.1μF,16V
C4067		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8129		NDC21HJ-101X	CAPACITOR 100pF,50V
C4068		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8130		NDC31HJ-151X	CAPACITOR 150pF,50V
C4069		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8131		NDC31HJ-151X	CAPACITOR 150pF,50V
C4070		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8132		NDC31HJ-151X	CAPACITOR 150pF,50V
C4071		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8133		NDC31HJ-151X	CAPACITOR 150pF,50V
C4072		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8134		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C4073		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8135		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C4074		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8136		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C4075		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8137		X-CS0PCH4B1J	CAPACITOR 12pF,50V
C4076		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8138		NDC31HJ-151X	CAPACITOR 150pF,50V
C4077		NCB31EZ-104X	CAPACITOR 0.1μF,25V	C8139		NDC31HJ-151X	CAPACITOR 150pF,50V
C4078		QETN1CM-476Z	E CAPACITOR 47μF,16V	C8140		NDC31HJ-151X	CAPACITOR 150pF,50V

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
C8141			NDC31HJ-151X	CAPACITOR 150pF,50V	L4001			QQL29BJ-2R2Z	COIL 2.2μH
C8142			NDC21HJ-100X	CAPACITOR 10pF,50V	L8101			QQL29BK-1R0Z	COIL 1μH
C8143			NDC21HJ-100X	CAPACITOR 10pF,50V	L8102			QQL29BK-1R0Z	COIL 1μH
C8144			QETN0JM-477Z	E CAPACITOR 470μF,6.3V	L8103			QQL29BK-1R0Z	COIL 1μH
C8145			QETN0JM-477Z	E CAPACITOR 470μF,6.3V	L8104			QQL29BK-1R0Z	COIL 1μH
C8146			QETN0JM-477Z	E CAPACITOR 470μF,6.3V	L8105			QQL29BK-R33Z	COIL 0.33μH
C8147			X-CS0RCH4L1J	CAPACITOR 33pF,50V	L8106			QQL29BK-R33Z	COIL 0.33μH
C8148			X-CS0RCH4L1J	CAPACITOR 33pF,50V	J8101			X-060J411029	RCA JACK MSP-213V1-732_PBSN
C8149			X-CS0RCH4L1J	CAPACITOR 33pF,50V	J8102			X-063D700005	JACK
D2601			X-DDARDS1200	DIODE KDS120RTK	J8103			X-060J411024	RCA JACK
D8101			X-DDDRL41480	DIODE MCL4148	SW8101			X-0510Y24001	SWITCH SLIDE SK42H0IG9A
D8102			X-DDDRL41480	DIODE MCL4148	CP2601			X-069GYOT079	CONNECTOR,PCB SIDE 09-5000-024-001-006
D8103			X-DDDRL41480	DIODE MCL4148	CP2602			X-069EV83010	CONNECTOR,PCB SIDE 00_6232_008_006_800
D8106			X-DDDRL41480	DIODE MCL4148	CP2603			X-069S230629	CONNECTOR,PCB SIDE A2001WV2-3P
D8107			X-DDDRL41480	DIODE MCL4148	CP4002			X-069S2C0629	CONNECTOR,PCB SIDE A2001WV2-12P
D8108			X-DDDRL41480	DIODE MCL4148	CP4003			X-069S290629	CONNECTOR,PCB SIDE A2001WV2-9P
D8109			X-DDDRL41480	DIODE MCL4148	CP8102			QFG1208C1-08	CONNECTOR,PCB SIDE IMSA-9604S-08C
D8110			X-DDDRL41480	DIODE MCL4148	X4001			X-100BT02701	CRYSTAL 27MHz
D8111			X-DDDRL41480	DIODE MCL4148	OS8101			X-07A9000006	OPTICAL DEVICE GP1FA553TZ
D8112			X-DDDRL41480	DIODE MCL4148					
D8113			X-DDDRL41480	DIODE MCL4148					
IC2301			X-I03F065600	IC LA6560					
IC2601			X-ICQK067070	IC ZR36707TQC					
IC2602			BA10358F-XE	IC					
IC4001			X-ICQK067620	IC ZR36762					
IC4002			S-24C02BFJ-X	IC					
IC4003			X-I0GF9XZ010	IC PQ070XZ01ZP					
IC4005			X-IF9J0164A7	IC M12L64164A-7T					
IC4007			X-ICMJ0800A7	IC SST39VF800A-70-4C-EK					
IC7301			X-I17F0742K0	IC PCM1742KE/2K					
IC8101			NJM4580M	IC					
Q2601			2SA1036K/QR/-X	TRANSISTOR 2SA1036KT146					
Q2602			2SA1036K/QR/-X	TRANSISTOR 2SA1036KT146					
Q2603			X-T27T030180	FET 2SK3018					
Q2604			X-T27T030180	FET 2SK3018					
Q2605			X-T27T030180	FET 2SK3018					
Q8101			X-TCAA3875SY	TRANSISTOR KTC3875S_Y_RTK					
Q8102			X-TNAAC05002	COMPOUND TRANSISTOR					
Q8103			X-TPAAA05001	TRANSISTOR KRA101SR TK					
Q8104			X-TCAA3875SY	TRANSISTOR KTC3875S_Y_RTK					
Q8105			X-TCAA3875SY	TRANSISTOR KTC3875S_Y_RTK					
Q8106			X-TNAAD05001	TRANSISTOR KRC104SR TK					
Q8107			X-TCAA3875SY	TRANSISTOR KTC3875S_Y_RTK					
B2601			X-024HC31022	CORE,BEADS					
B2602			X-024HC31022	CORE,BEADS					
B2603			X-024HC31022	CORE,BEADS					
B2604			X-024HC31022	CORE,BEADS					
B2605			X-024HC31022	CORE,BEADS					
B4001			X-024HC31022	CORE,BEADS					
B4002			X-024HC31022	CORE,BEADS					
B4003			X-024HC31022	CORE,BEADS					
B4004			X-024HC31022	CORE,BEADS					
B4005			X-024HC31022	CORE,BEADS					
B4006			X-024HC31022	CORE,BEADS					
B4007			X-024HC31022	CORE,BEADS					
B4008			X-024HC31022	CORE,BEADS					
B7301			X-024HC31022	CORE,BEADS					
B7302			X-024HC31022	CORE,BEADS					
B8101			X-024HC31022	CORE,BEADS					
B8102			X-024HC31022	CORE,BEADS					
B8103			X-024HC31022	CORE,BEADS					