

JVC

SERVICE MANUAL

VIDEO CASSETTE RECORDER

HR-S7600EU/S7611EU



Hi-Fi SVHS
625
SHOWVIEW[®]

SPECIFICATIONS

GENERAL

Power requirement	: AC 220 – 240 V~, 50/60 Hz
Power consumption	
Power on	: 24 W
Power off	: 5.5 W
Temperature	
Operating	: 5°C to 40°C
Storage	: -20°C to 60°C
Operating position	: Horizontal only
Dimensions (WxHxD)	: 400 x 94 x 347 mm
Weight	: 3.9 kg
Format	: S-VHS/VHS PAL standard
Maximum recording time	
(SP)	: 240 min. with E-240 video cassette
(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields
Recording system	: DA4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 250 lines (VHS) 400 lines (S-VHS)
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin SCART connectors : IN/OUT x 1, IN/DECODER x 1 RCA connectors: VIDEO IN x 1, AUDIO IN x 1, AUDIO OUT x 1 S-Video connectors: IN x 1, OUT x 1

TUNER/TIMER

TV channel storage capacity	: 99 positions (+AUX position)
Tuning system	: Frequency synthesized tuner
Channel coverage	: VHF 47 – 89/104 – 300/ 302 – 470MHz UHF 470 – 862MHz
Aerial output	: UHF channels 22 – 69 (Adjustable)
Memory backup time	: Approx. 60 min.

ACCESSORIES

Provided accessories	: RF cable, Infrared remote control unit, "R6" battery x 2
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*Specifications shown are for SP mode unless otherwise specified.
E. & O.E. Design and specifications subject to change without notice.*

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The following table lists the differing point between Models (HR-S7600EU and HR-S7611EU) in this series.

	HR-S7600EU	HR-S7611EU
COSMETIC (FRONT PANEL)	CHAMPAGNE	BLACK

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.

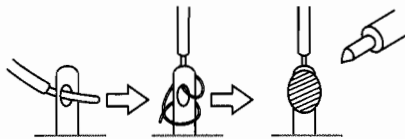


Fig.1

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.

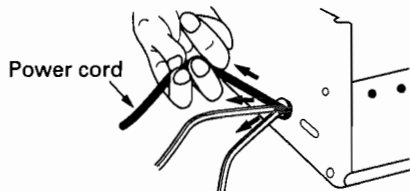


Fig.2

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.

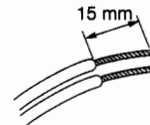


Fig.4

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

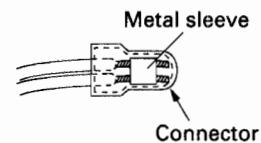


Fig.5

(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.

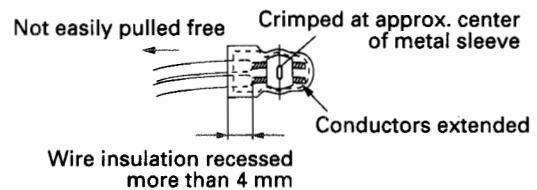


Fig.7

● 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.

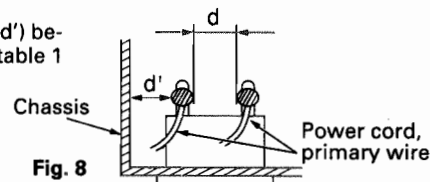


Fig. 8

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.

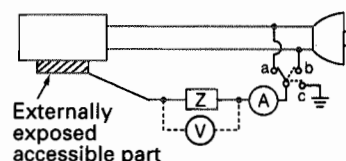


Fig. 9

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.

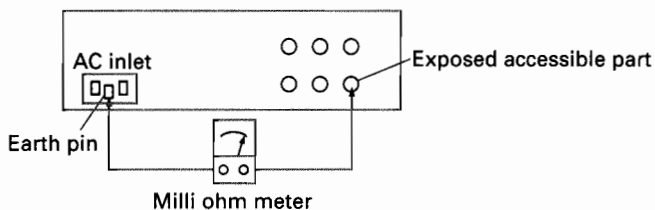


Fig. 10

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 200 to 240 V	Europe & Australia	$R \geq 10 \text{ M}\Omega/500 \text{ V DC}$	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	$d \geq 4 \text{ mm}$ $d' \geq 8 \text{ mm}$ (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		$i \leq 1 \text{ mA rms}$	Exposed accessible parts
110 to 130 V	USA & Canada		$i \leq 0.5 \text{ mA rms}$	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia		$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Antenna earth terminals
			$i \leq 0.7 \text{ mA peak}$ $i \leq 2 \text{ mA dc}$	Other terminals

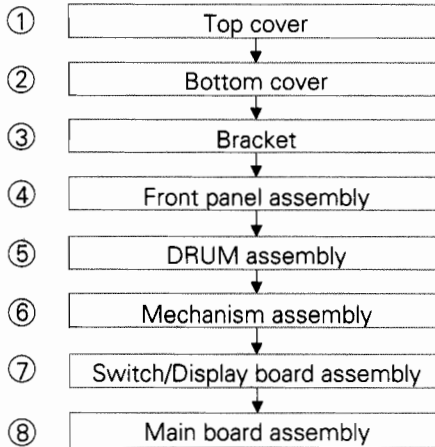
Table 2 Leakage current specifications for each region

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

SECTION 1 DISASSEMBLY

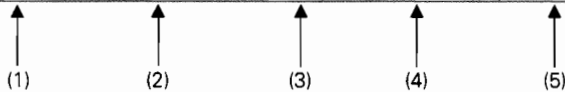
1.1 DISASSEMBLY FLOW CHART

This flowchart lists the disassembling steps for the cabinet parts and P.C. boards in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally laid.



1.2 HOW TO READ THE DISASSEMBLY AND ASSEMBLY

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2)	
②	BOTTOM COVER	D2	(S3), 7(L1)	
③	BRACKET	D3	2(S4)	
④	FRONT PANEL ASSEMBLY	D4	7(L2), (S5), CN3012(WR1), CN7192(WR2), JOG SHUTTLE, JACK BOARD ASSY	<NOTE 1> <NOTE 2>



- (1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) NO. of parts Figures.
 - (2) Part name to be removed or installed.
 - (3) Fig.No. showing procedure or part location
 - (4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered. P = Spring, W = Washer, S = Screw, L = Locking tab, CNxx(WRxx) = Remove the wire (WRxx) from the connector (CNxx).
- NOTE:** The bracketed () WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.
- (5) Adjustment information for installation

1.3 DISASSEMBLY/ASSEMBLY METHOD

STEP /LOC NO.	PART NAME	FIG. NO.	POINT	NOTE
①	TOP COVER	D1	4(S1), (S2)	
②	BOTTOM COVER	D2	(S3), 7(L1)	
③	BRACKET	D3	2(S4)	
④	FRONT PANEL ASSEMBLY	D4	7(L2), (S5), CN3012(WR1), CN7192(WR2), JOG SHUTTLE, JACK BOARD ASSY	<NOTE 1> <NOTE 2>
⑤	DRUM ASSEMBLY	D5	3(S6), 4(L3), (L4), (P1), CN1(WR3), CN1(WR4), INERTIA PLATE, ROLLER ARM ASSY	<NOTE 2>
⑥	MECHANISM ASSEMBLY	D6	2(S7), (S8), (S9), 2(L5), CN1(WR5)	<NOTE 2> <NOTE 3>
⑦	SWITCH/DISPLAY BOARD ASSEMBLY	D7	7(L6), (L7), CN7001(WR6), CN7191(WR7), REC SAFETY BOARD ASSY	<NOTE 2> <NOTE 4>
⑧	MAIN BOARD ASSEMBLY	D8	2(S10), (L8)	

<NOTE1>

- Before attaching the Front panel assembly, ensure that the door opener Ⓐ is in the lower position.

<NOTE2>

- When inserting the flat wire into the connector, be careful not to make a mistake in the positioning of its electrodes.

<NOTE3>

- When it is required to remove the screws (S7) retaining the Mechanism assembly, please refer to the "Procedures for Lowering the Cassette holder assembly"(See on pages 1-3).
- When removing the Mechanism assembly only, unhook the two spacers connecting it with the Main board assembly with pliers from the back side of the Main board assembly first, and then remove the Mechanism assembly.
- When attaching the Mechanism assembly, be careful not to damage the sensors and switches on the Main board assembly. (D3001: LED, Q3002: Start sensor, Q3003: End sensor S3002: S tape detect switch).

<NOTE4>

- The REC safety board assembly is attached to the Switch/Display board assembly. It is therefore necessary to remove the REC safety board assembly before removing the Switch/Display board assembly.

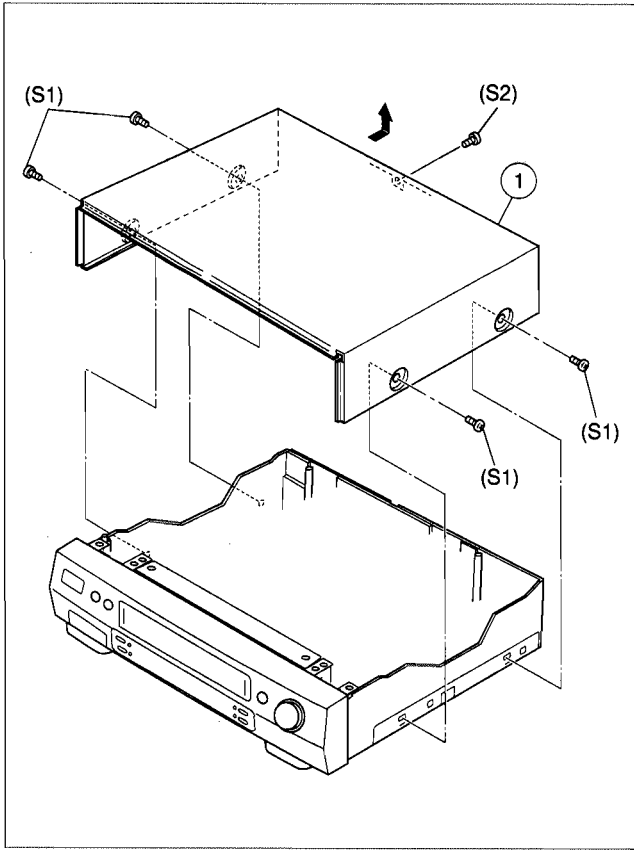


Fig. D1

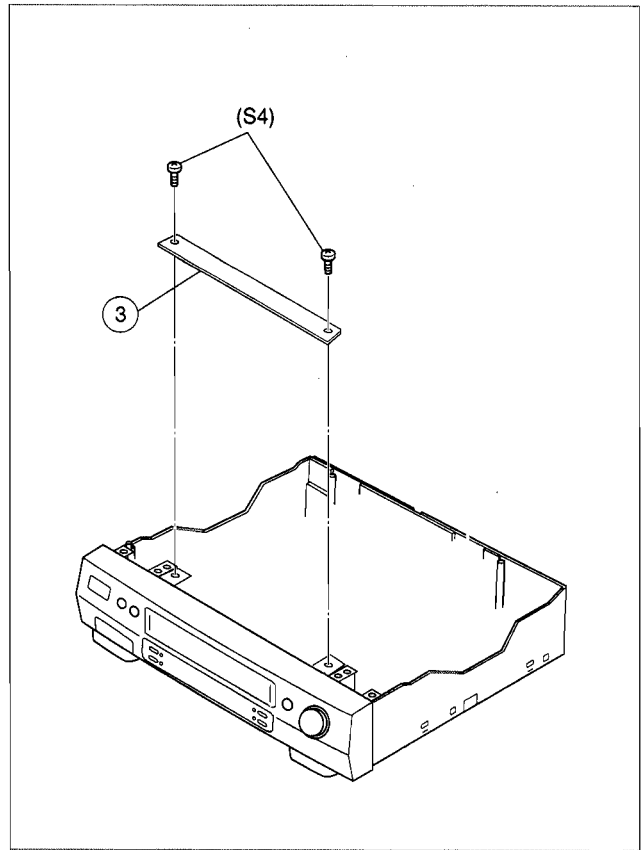


Fig. D3

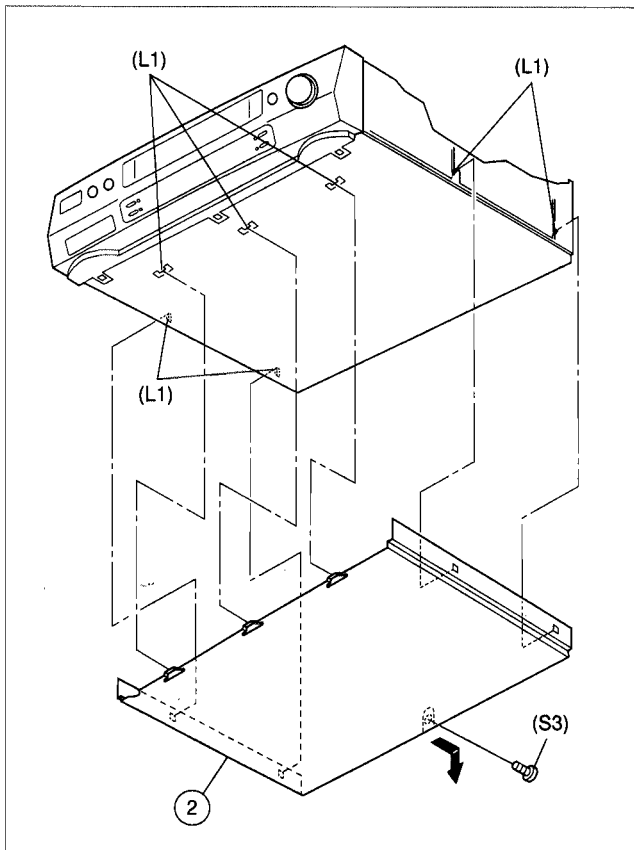


Fig. D2

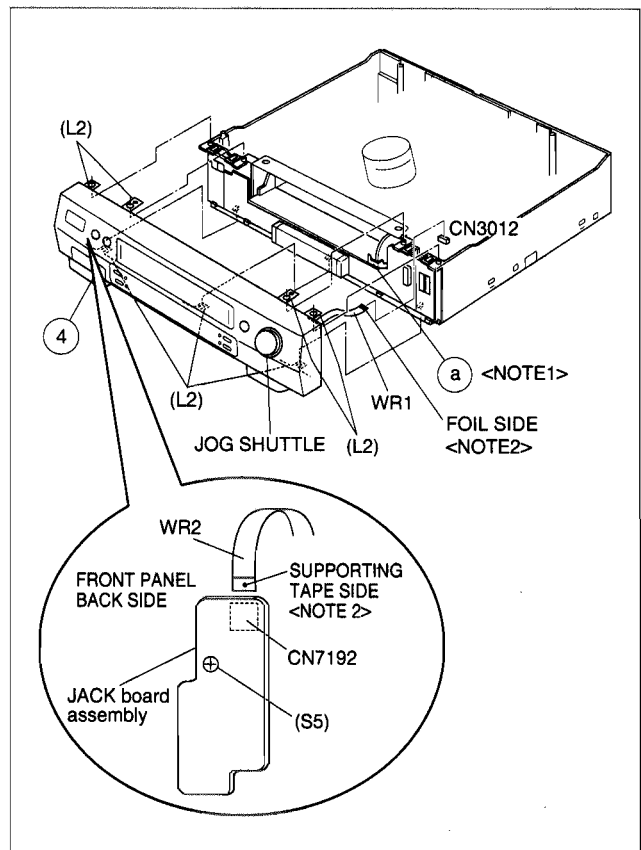


Fig. D4

NOTE : When installing the DRUM assembly, secure the screws (S6) in the order of A, B, C.

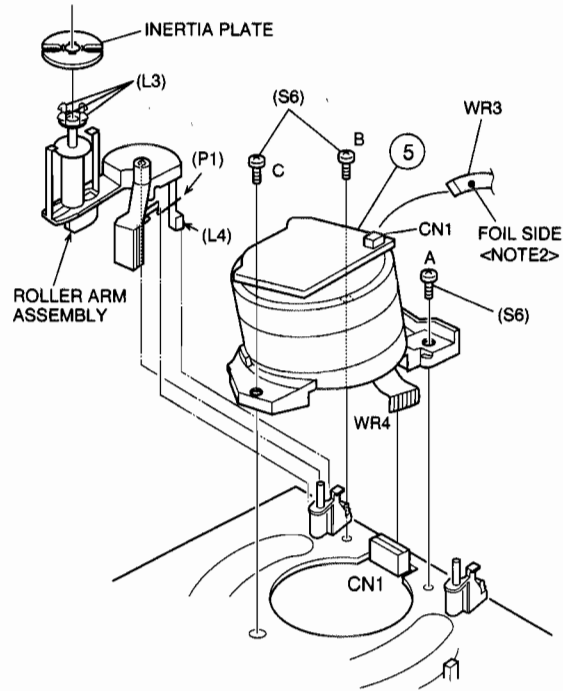


Fig. D5

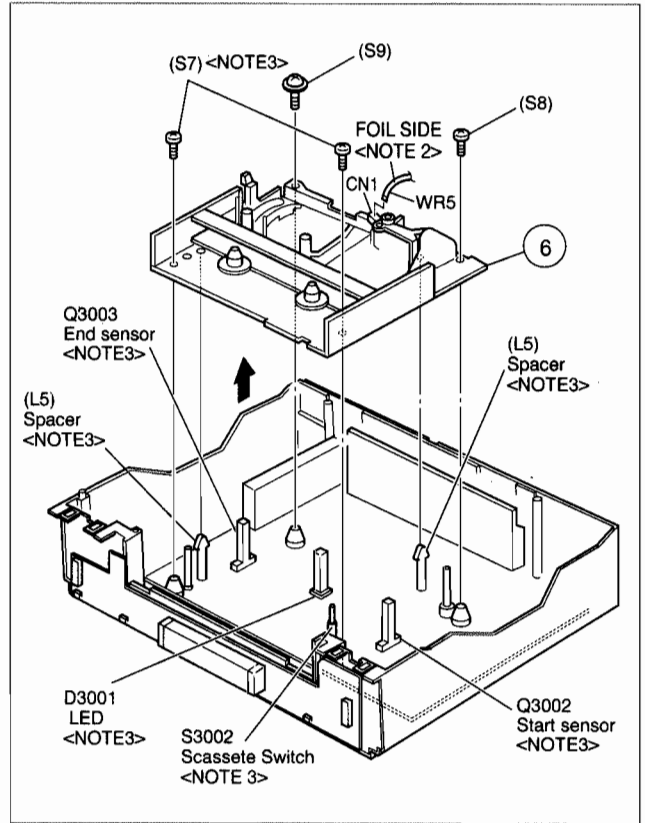


Fig. D6

Procedures for Lowering the Cassette holder assembly

As the mechanism of this unit is integrated with the Housing assembly, the holder must be lowered and the two screws unscrewed when removing the Mechanism assembly.

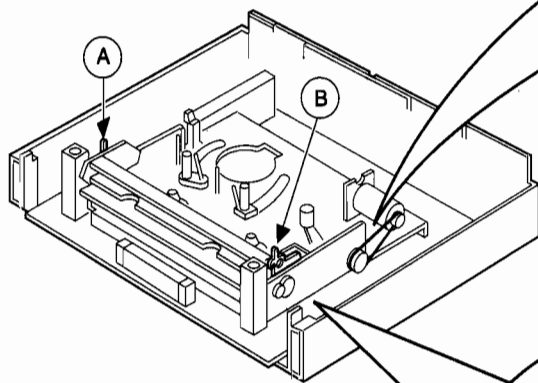


Fig. 1

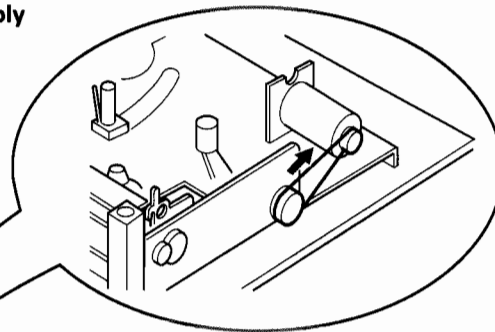


Fig. 2

Turn the loading motor pulley in the direction as indicated by Fig.2. As both (A) and (B) levers are lodged twice, push the levers in the direction as indicated by Fig.3 to release them. When pushing the levers, do it in the order of (A), (B), (B), (A). When the holder has been lowered, turn the pulley until the cassette holder is securely in place without allowing any up/down movement.

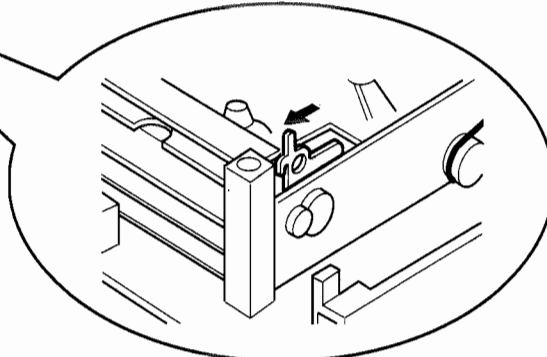


Fig. 3

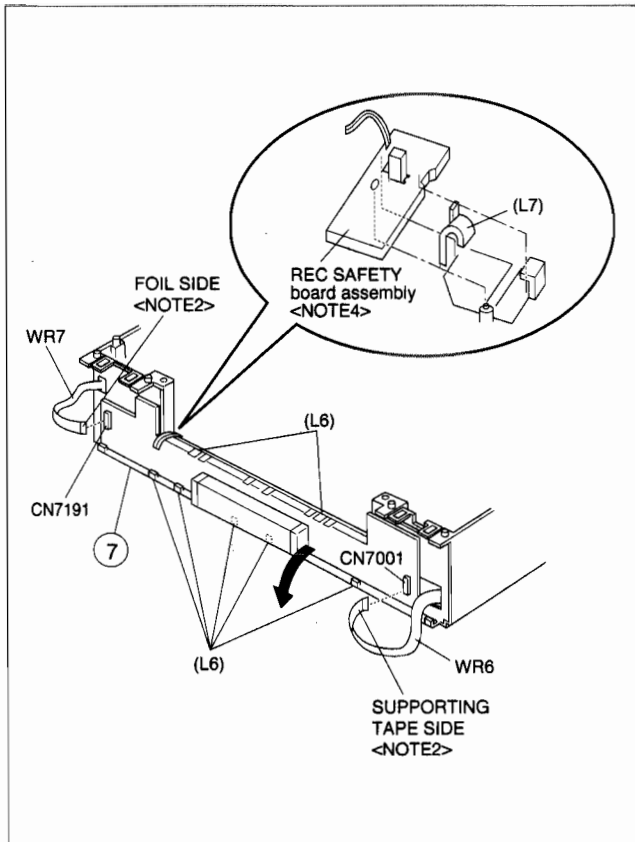


Fig. D7

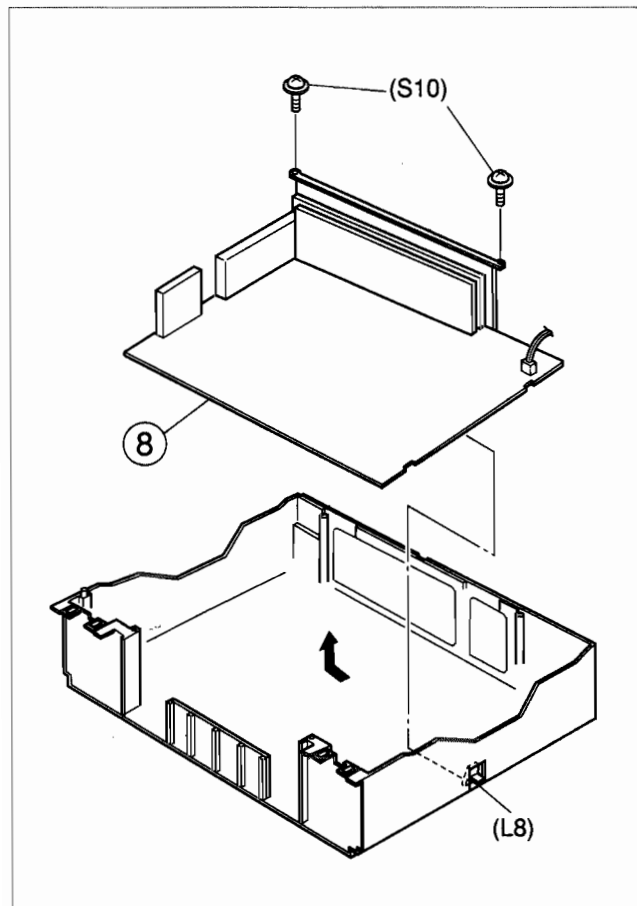


Fig. D8

1.4 SERVICE POSITION

In order to facilitate diagnosis and the repair of the Mechanism assembly, this unit is constructed so as to allow the Mechanism and Main board assemblies to be removed together from the Chassis assembly.

1.4.1 How to take out the Mechanism and Main board assemblies

- (1) Remove the Top cover, Bracket, Front panel assembly and JACK board assembly. (Refer to page 1-2 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
- (2) Lower the cassette holder, and make the preparations required in order to remove the screws from the Mechanism assembly. (Refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
- (3) Take out 2 screws (A), 1 screw (B) and 1 screw (C) as shown in Fig. 1-4-1.
- (4) Remove the flat wires from CN3011 and CN7504 on the Main board assembly.

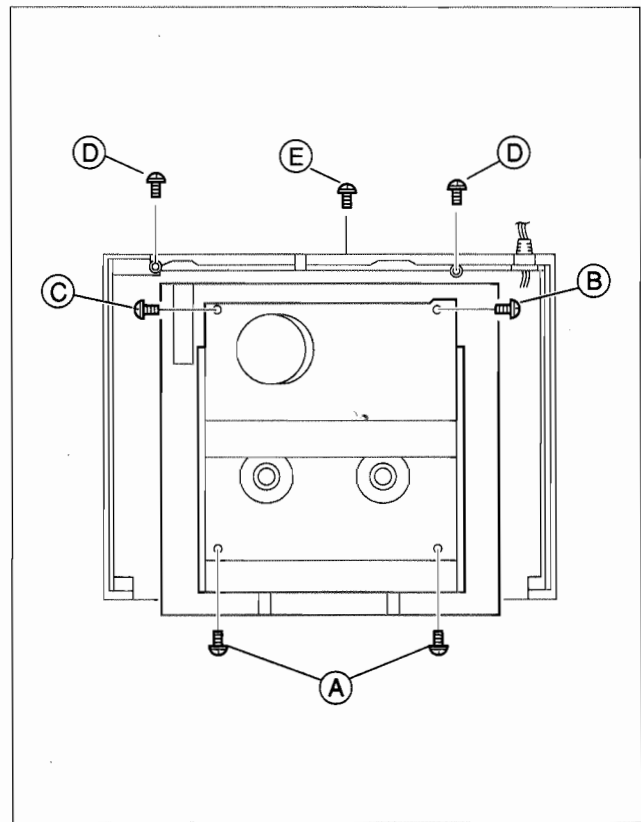


Fig. 1-4-1

- (5) Take out 2 screws (D) and 1 screw (E) as shown in Fig. 1-4-1.
- (6) Remove the hook (F) while holding the edge of the Main board assembly, and remove the Main board and Mechanism assemblies together. At this stage be careful of the power cord and prongs of the jacks on the back side. (Refer to Fig. 1-4-2.)
- (7) Remove the Switch/Display board assembly and REC safety board assembly. (Refer to page 1-4 of 1.3 DISASSEMBLY/ASSEMBLY METHOD. Take care not to pull the flat wires (Fig. D7) from CN7001 and CN7191.)

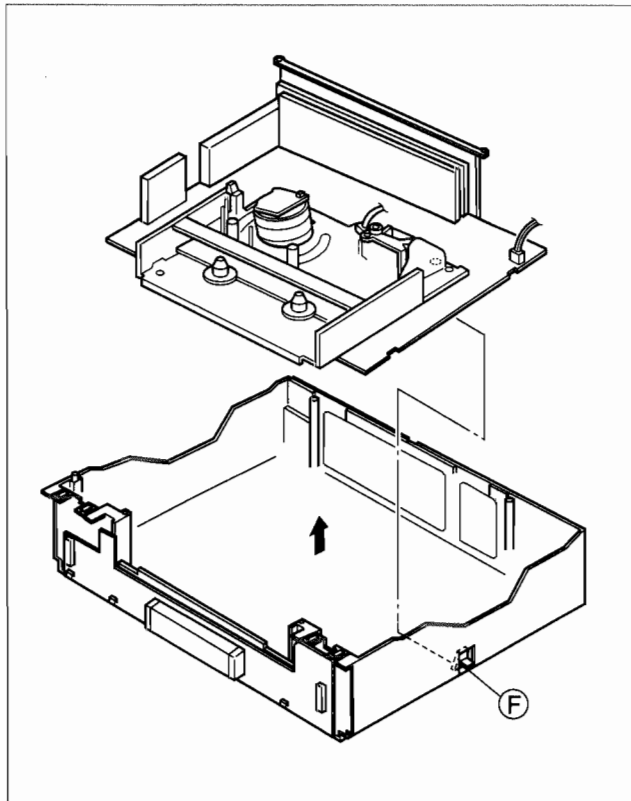


Fig. 1-4-2

- (8) Place the Switch/Display board assembly, REC safety board assembly and Jack board assembly on the front side of the Mechanism and Main board assemblies which was removed at the step (6), then connect the flat wires into CN3011 and CN7504 of the Main board assembly and CN7192 of the Jack board assembly. (Refer to Fig. 1-4-3.)

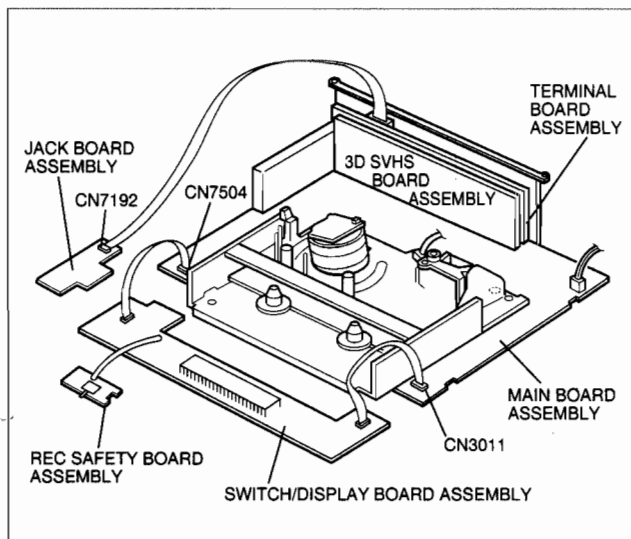


Fig. 1-4-3

- (9) Connect the power cord to the wall socket, and lift the cassette holder.
(Before turning on the power make sure that there is nothing which may produce a short circuit, such as faulty soldering.)

Note: When carrying out diagnosis and repair of the Main board assembly in the service position, be sure to ground both the Main board and the Mechanism assemblies.

If they are improperly grounded, there may be noise on the playback picture or the FDP counter display may move even when the mechanism is kept in an inoperative status.

1.4.2 Precautions for cassette loading in the "SERVICE POSITION"

The REC safety board assembly detects cassette loading as well as cassette tabs. Therefore, after the assembly has been removed in the "SERVICE POSITION", it is required to set the switch manually on the REC safety board assembly when a cassette is loaded.

1.4.3 Cassette loading and ejection methods in the "SERVICE POSITION" (See Fig. 1-4-3).

- (1) Insert a cassette halfway in the Cassette holder assembly.
- (2) Set the switch on the REC safety board assembly to ON (by pressing the switch).
- (3) As soon as the cassette starts to be loaded, set the switch on the REC safety board assembly to OFF (by releasing the switch).
- (4) Now the desired operation (recording, playback, fast forward, rewind, etc.) is possible in this status (the status shown in Fig.1-4-3).

NOTES: • When performing diagnostics of the tape playback or the recording condition in the "SERVICE POSITION", enter the desired mode before turning the set upside down, and do not change the mode when performing diagnostics while the set is placed upside down. If you want to switch the mode, turn the set to the normal position (the status shown in Fig.1-4-3).

• In the "SERVICE POSITION", the cassette tabs cannot be detected and recording becomes possible even with a cassette with broken tabs such as the alignment tape. Be very careful not to erase important tapes.

- (5) The switch on the REC safety board assembly does not have to be operated when ejecting a tape. But be sure to turn the set to the normal position before ejecting the tape.

1.5 MECHANISM SERVICE MODE

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the "MECHANISM SERVICE MODE".

1.5.1 How to set the "MECHANISM SERVICE MODE"

- (1) Disconnect VCR from AC.
- (2) Connect TPGND and TP7001 (TEST) on the Switch/Display board assembly with a jump wire.
- (3) Connect VCR to AC.
- (4) Press the POWER button.
- (5) With lock levers (A)(B) on the left and right of the Cassette holder assembly pulled toward the front, slide the holder in the same direction as the cassette insertion direction. (For the positions of lock levers (A)(B), refer to the "Procedures for Lowering the Cassette holder assembly" on pages 1-3 of 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
- (6) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.

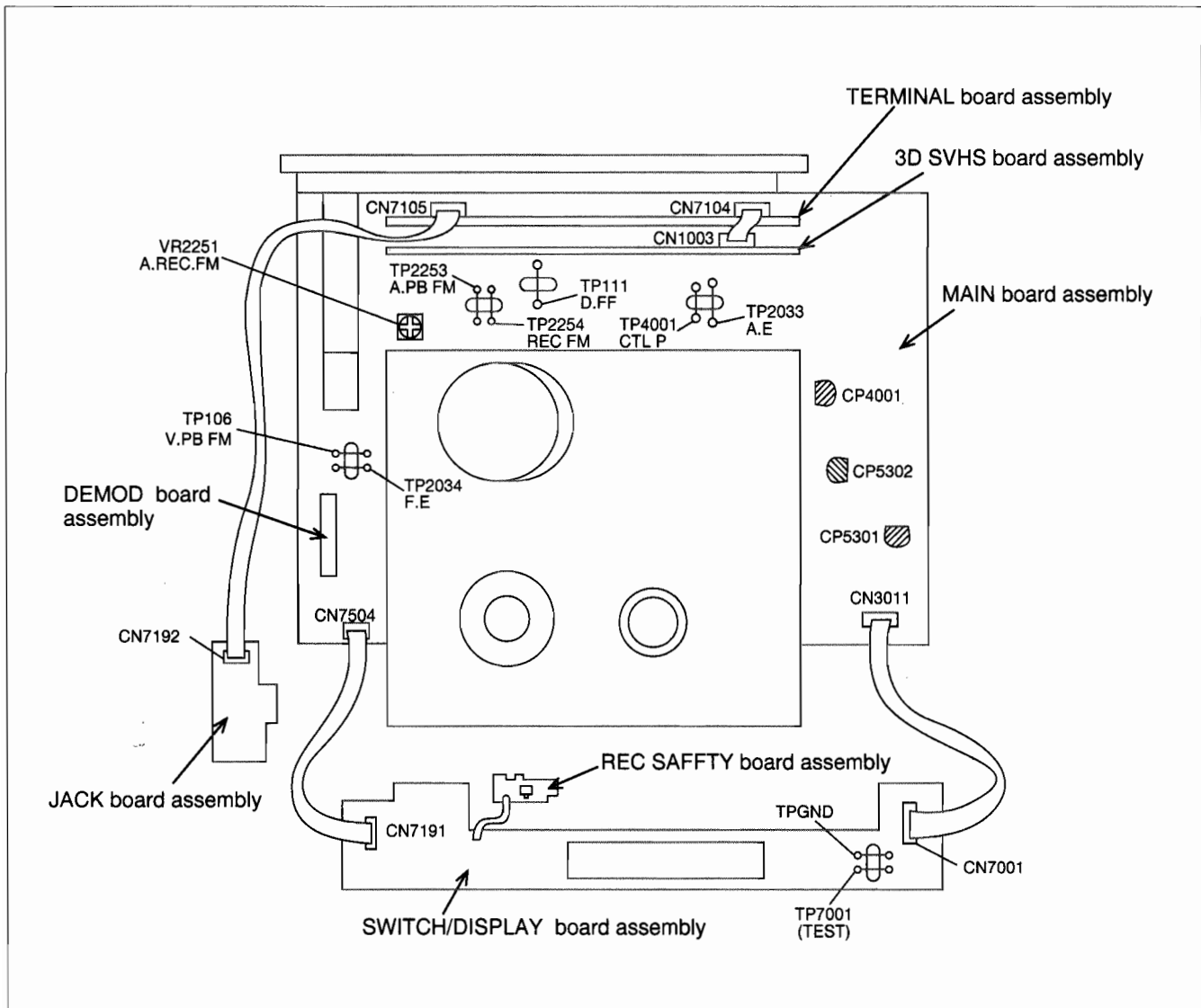


Fig. 1-5-1

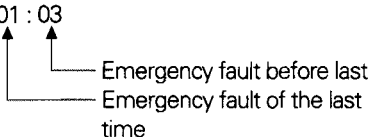
1.6 EMERGENCY DISPLAY FUNCTION

This product has the function to store the last two previous emergency faults which can be displayed in the FDP when servicing.

1.6.1 How to display record of an emergency faults

Note: Put the unit into A mode by using the VCR remote controller. (When it is in B mode, the preset remote control codes are not accepted.)

- (1) Press the "N" button of the presetting unit and the two previous emergency faults are shown in the FDP.
- (2) Press the "N" button of the presetting unit again to return to the normal mode.

[Example] E : 01 : 03


[Example] E : — : — ← No record of emergency

1.6.3 How to clear emergency record

Press the COUNTER RESET button on the remote controller in the emergency record display mode, and the record of the emergency fault(s) is cleared.

1.6.2 Detail of emergency faults

EMG DATA	Symptom	Detect mode	Resulting mode
E : 01	Loading motor rotates for more than 8 Sec without shift to next mode.	Loading	POWER OFF
E : 02	Loading motor rotates for more than 8 Sec without shift to next mode.	Unloading	POWER OFF
E : 03	TU REEL FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	POWER OFF
E : 04	DRUM FF input is absent. (for more than 3 Sec)	REC/PLAY SEARCH FF/SEARCH REW	POWER OFF
E : 06	CAPSTAN FG input is absent. (for more than 4 Sec)	REC/PLAY/FF/REW SEARCH FF/SEARCH REW	POWER OFF
E : 07	No SWD5V/12V	POWER ON	POWER OFF

Table 1-6-1 EMERGENCY FAULTS

1.7 SYSCON CIRCUIT

1.7.1 Syscon CPU pin function (IC3001) 1/2

PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBIAS	-	CTL BIAS VOLTAGE
5	CTLFB	IN	CTL PULSE FEEDBACK
6	CTLAMPOUT	OUT	CTL PULSE OUTPUT
7	CTLSMTIN	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	SVHS MODE:H
12	SECAM DET/KILLER OUT	-	NC
13	VIDEO ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
14	START SENSOR	IN	START SENSOR
15	END SENSOR	IN	END SENSOR
16	IND(L)	IN	AUDIO INPUT (LCH) FOR THE FDP AUDIO INDICATOR
17	DD ABS	-	NC
18	SCR ID	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE:H)
19	IND(R)	IN	AUDIO INPUT (RCH) FOR THE FDP AUDIO INDICATOR
20	BS ANT/AFC	IN	TUNING CLOCK
21	LED/RF AGC	-	NC
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV.INPUT/NON HiFi MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP REV(L)	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD:H/REV:L)
29	RC	IN	REMOTE CONTROL DATA INPUT
30	R.PAUSE/COMPU IN	IN	REMOTE PAUSE CONTROL
31	P50 IN	IN	CONTROL SIGNAL FOR TV LINK
32	LMC3	OUT	LOADING MOTOR DRIVE(3)
33	P50 OUT/COMPU OUT	OUT	CONTROL SIGNAL FOR TV LINK
34	EE(L)	OUT	EE/PB CONTROL (EE MODE:L)
35	LMC1	OUT	LOADING MOTOR DRIVE(1)
36	LMC2	OUT	LOADING MOTOR DRIVE(2)
37	P.CTL(H)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
38	SB G(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	STB/TEST	OUT	STROBE SIGNAL (FOR FDP DRIVER)
40	POWER DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	REC SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
42	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
43	VSS	-	GND
44	TRICK(H)	OUT	SPECIAL PLAYBACK:H
45	VCC	-	SYSTEM POWER
46	N.REC(H)	OUT	NORMAL AUDIO REC MODE CONTROL (REC:H)
47	3.58NTSC	-	NC
48	SUB CLK	-	NC
49	I2C DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE ON-SCREEN IC
50	I2C CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR THE ON-SCREEN IC
51	S.DATA TOSYS	IN	SERIAL DATA TRANSFER OUTPUT FROM THE ON-SCREEN IC TO THE FDP DRIVER
52	S.DATA FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	LOCK(L)	IN	TUNING PLL LOCK DETECT: L

Table 1-7-1 SYSCON CPU pin function(1/2)

1.7.2 Syscon CPU pin function (IC3001) 2/2

PIN NO.	LABEL	IN/OUT	FUNCTION
57	TU CE	OUT	CHIP ENABLE OF THE TUNER UNIT
58	JUST CLK/CCIR(H)	OUT	NC/EXCEPT FOR NTSC:L
59	SW1	OUT	TUNER "L" SYSTEM MODE:H
60	TU CLK	OUT	CLOCK FOR DATA TRANSFER TO THE TUNER UNIT
61	TU DATA	OUT	TUNING DATA
62	FWE	-	NC
63	NMI(L)	-	NC
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES(L)	-	RESET TERMINAL (RESETO:N:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC	-	SYSTEM POWER
71	MODE	-	NC
72	TU A MUTE(H)	OUT	TUNER AUDIO MUTE CONTROL (MUTE:H)
73	TU V MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	SW2	OUT	TUNER SYSTEM "L" MODE:L
78	FULL E ON(H)	OUT	FULL ERASE HEAD ON
79	CNR ON(H)	-	NC
80	V.P.CTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	ET REC(H)	-	NC
82	VCC	-	SYSTEM POWER
83	SLOW	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE
84	VSS	-	GND
85	SP SHORT(H)	OUT	MODE SELECT
86	LP SHORT(H)	OUT	MODE SELECT
87	SP(H)/S PB(H)	-	NC
88	A.REC ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	SECAM(H)	-	NC
90	HEAD SEL	-	NC
91	OSD CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
92	SYNC DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL (DETECTED:H)
93	P.MUTE(L)	OUT	PICTURE MUTE CONTROL (MUTE:L)
94	JSB/STLB	IN	INPUT FOR THE JOG SHUTTLE
95	SHTL(L)/JOGA	IN	INPUT FOR THE JOG SHUTTLE
96	THROUGH(H)	-	NC
97	JSA/STLA	IN	INPUT FOR THE JOG SHUTTLE
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	SUB RESET/V.UP(H)	OUT	NC/HIGH SPEED FF/REW TURBO SEARCH:H
104	S.CASS(H)	IN	DETECTION SIGNAL FOR SVHS CASSETTE (SVHS:H)
105	PERI 1S	IN	INPUT FOR THE TERMINAL SLIDE SW POSI IN THE SAT MODE
106	LOCK(L)/P.SAVE(L)	OUT	NC/POWER SAVE:L
107	DPG	IN	DRUM PICKUP PULSE INPUT (SWITCHING PULSE)
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

Table 1-7-2 SYSCON CPU pin function(2/2)

SECTION 2 MECHANISM ADJUSTMENT

2.1 BEFORE STARTING REPAIR AND ADJUSTMENT

2.1.1 Precautions

- (1) Unplug the power cable of the main unit before using your soldering iron.
- (2) Take care not to cause any damage to the conductor wires when plugging and unplugging the connectors.
- (3) Do not randomly handle the parts without identifying where the trouble is.
- (4) Exercise enough care not to damage the lugs, etc. during the repair work.
- (5) When installing the front panel assembly, be sure to hook the lug on the back side of the cassette door to the door opener of the cassette holder. If this operation is neglected it will not be possible to remove the cassette when ejecting because the housing door cannot be opened.

2.1.2 Checking for Proper Mechanical Operations

Enter the mechanism service mode when you want to operate the mechanism when no cassette is loaded. (See 1.5 MECHANISM SERVICE MODE.)

2.1.3 Manually Removing the Cassette Tape

1. In case of electrical failures

If you cannot remove the cassette tape which is loaded because of any electrical failure, manually remove it by taking the following steps.

- (1) Unplug the power cable and remove the top cover, bracket and front panel assembly. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
- (2) Unload the cassette by manually turning the loading motor of the mechanism assembly toward the front. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig.2-1-1.)
- (3) Bring the pole base assembly (supply or take-up side) to a pause when it reaches the position where it is hidden behind the cassette tape.
- (4) Move the top guide toward the drum while holding down the lug **(A)** of the bracket retaining the top guide. Likewise hold part **(B)** down and remove the top guide. Section **(C)** of the top guide is then brought under the cassette lid. Then remove the top guide by pressing the whole cassette tape down. (See Fig.2-1-2.)
- (5) Remove the cassette tape by holding both the slackened tape and the cassette lid.
- (6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

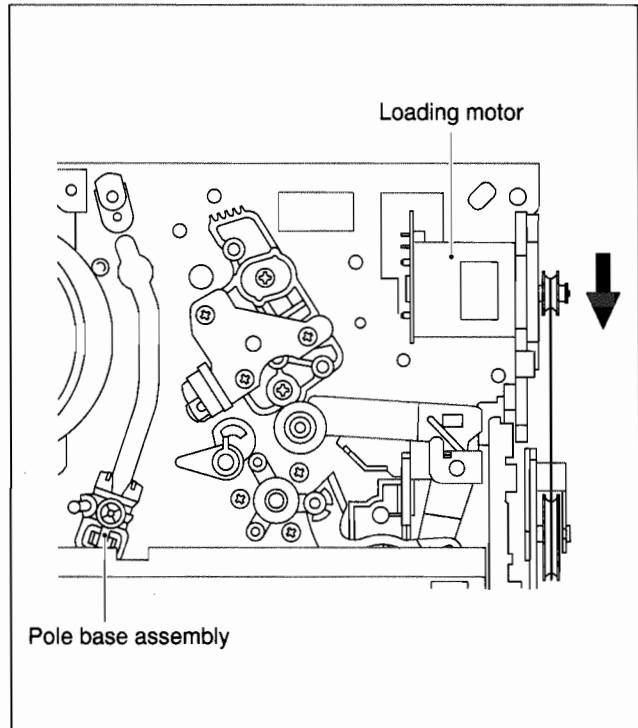


Fig. 2-1-1

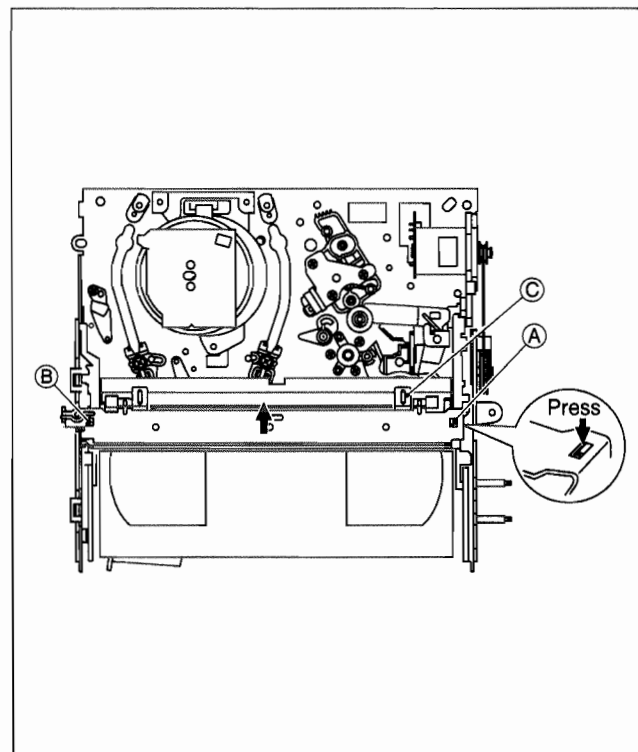


Fig. 2-1-2

2. In case of mechanical failure

If you cannot remove the cassette tape which is loaded because of any mechanical failure, manually remove it by taking the following steps.

- (1) Unplug the power cable and remove the top cover, front panel assembly and others so that the mechanism assembly is visible. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
- (2) While keeping the tension arm assembly of the mechanism assembly free from tension, pull the tape on the pole base assembly (supply or take-up side) out of the guide roller. (See Fig.2-1-3.)

- (3) Take the spring of the pinch roller arm assembly off the hook of the press lever assembly, and detach it from the tape. (See Fig.2-1-4.)

- (4) In the same way as in the electrical failure instructions in 2.1.3 (4), remove the top guide.

- (5) Raise the cassette tape cover. By keeping it in that position, draw out the cassette tape case from the cassette holder and take out the tape.

- (6) By hanging the pinch roller arm assembly spring back on the hook, take up the slack of the tape into the cassette.

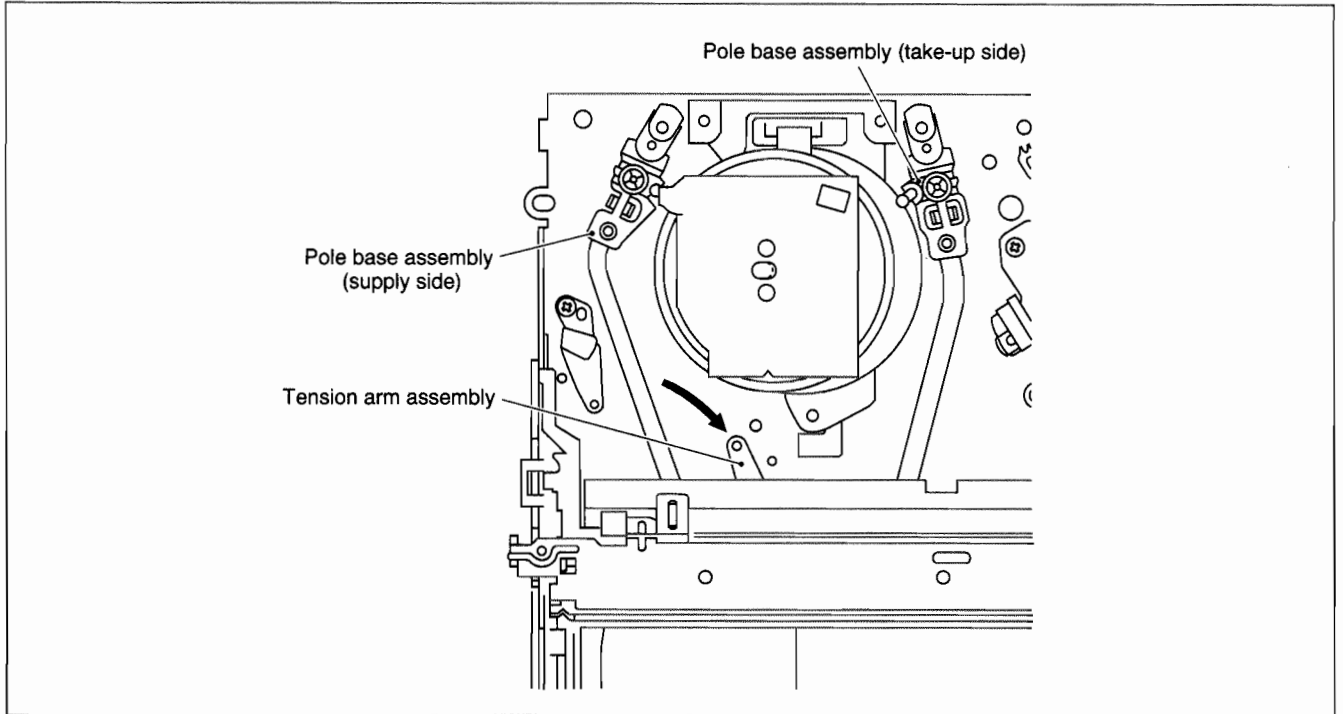


Fig. 2-1-3

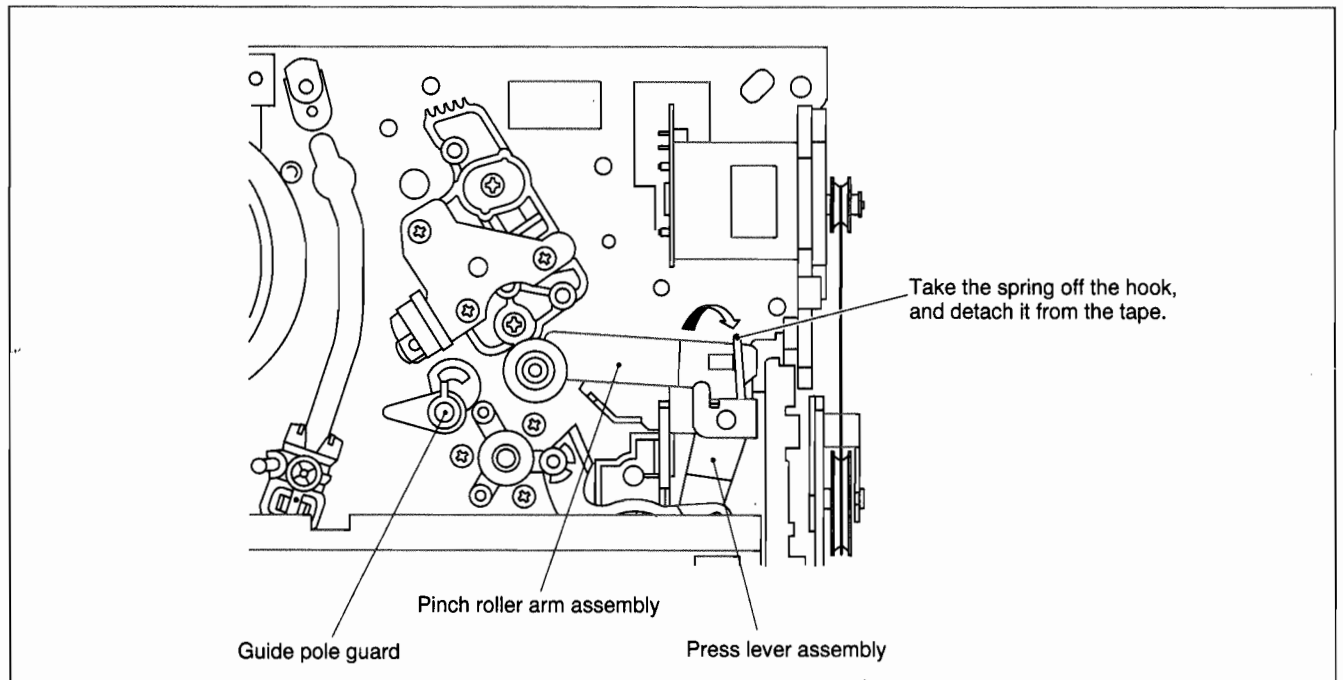


Fig. 2-1-4

2.1.4 Jigs and Tools Required for Adjustment

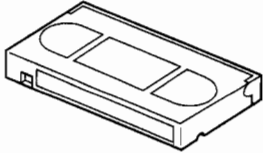
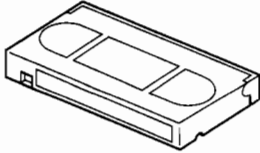
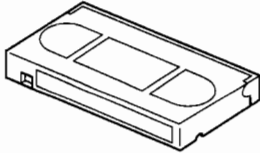


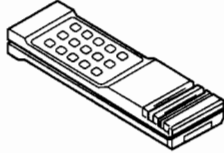
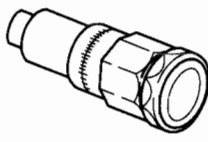
Alignment tape (SP) MHPE	Alignment tape (LP) MHPE-L	Back tension cassette gauge PUJ48076-2	A/C head position bit PTU94010
			
Roller driver PTU94002	Presetting unit PTU94008	Torque gauge PUJ48075-2	
			

Table 2-1-1 Jigs and tools required for adjustment

2.1.5 Maintenance and Inspection

1. Location of major mechanical parts

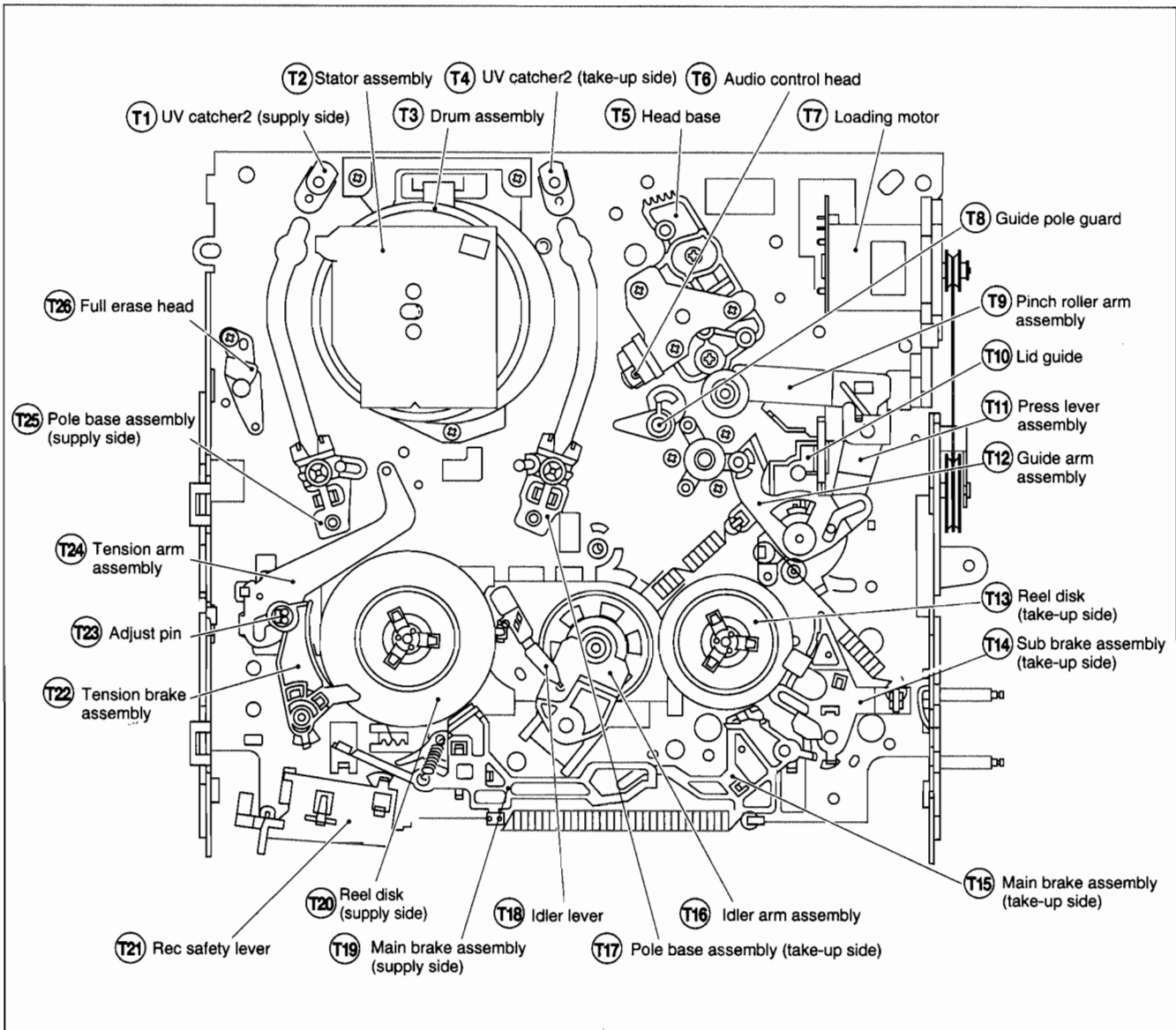


Fig. 2-1-5 Mechanism assembly top side

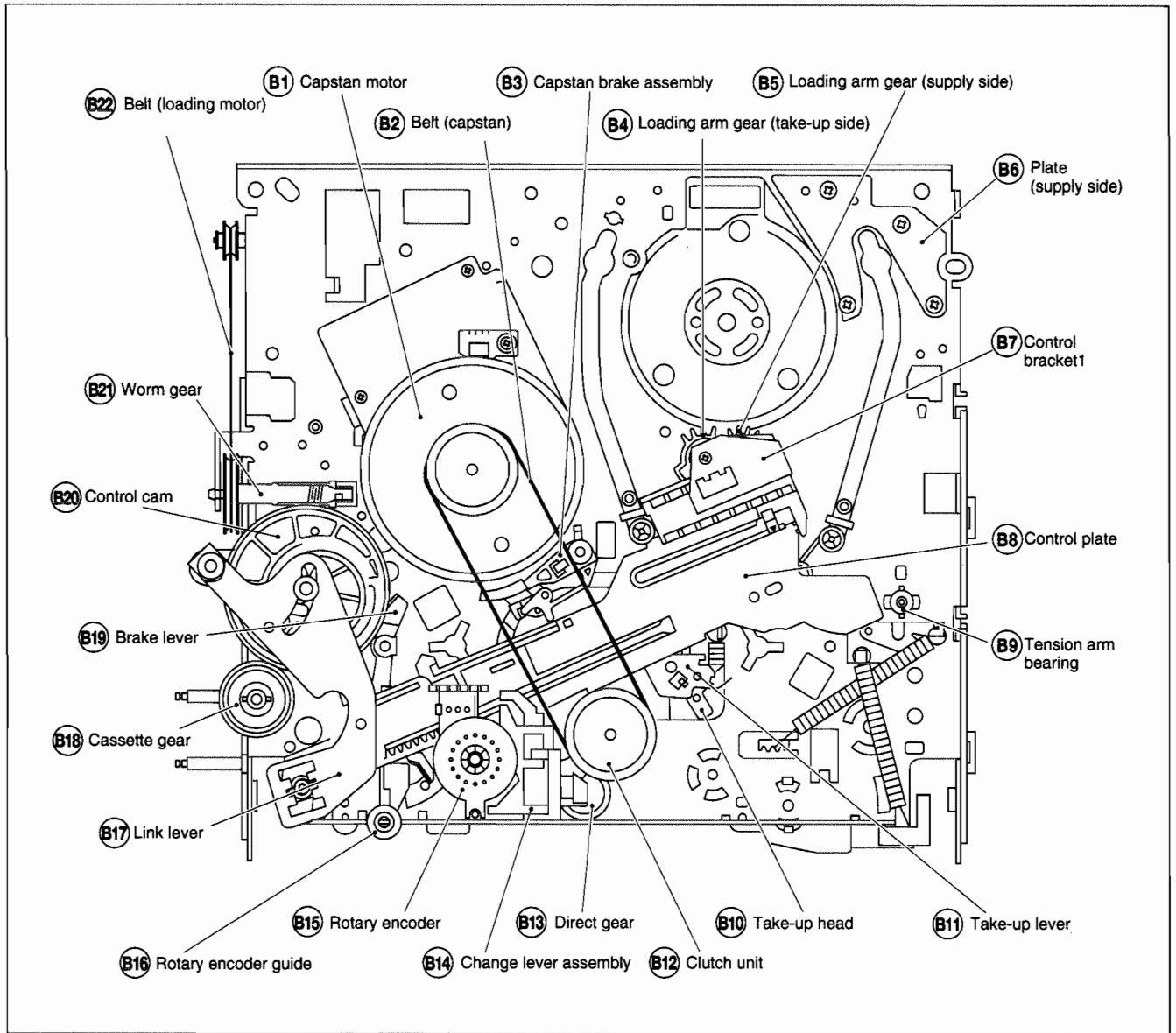


Fig. 2-1-6 Mechanism assembly bottom side

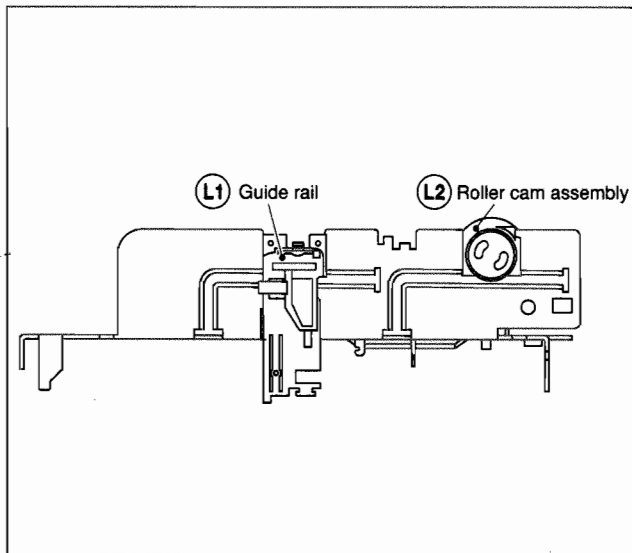


Fig. 2-1-7 Mechanism assembly left side

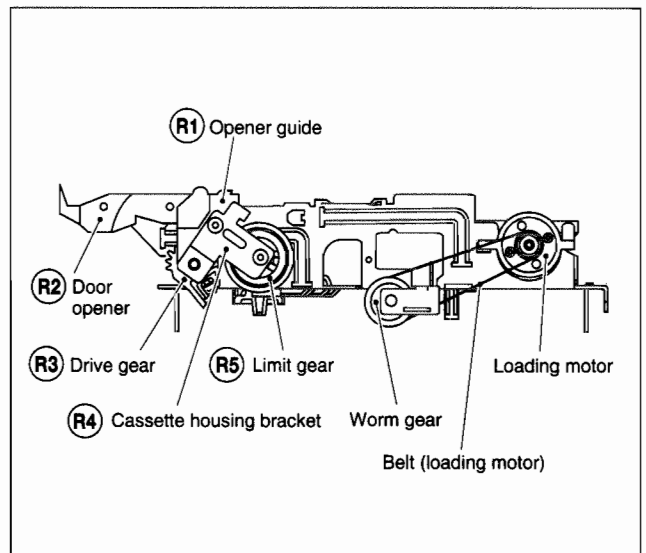


Fig. 2-1-8 Mechanism assembly right side

2. Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.

When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

- (1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth or Kimu-wipe with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.

Note: *Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.*

- (2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.
- (3) After cleaning, make sure that the cleaned parts are completely dry before using the video tape.

3. Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

- (1) See the mechanism assembly and disassembly diagrams (M4) for the lubricating or greasing spots. See Table 2-1-2 for the types of oil or grease to be used.

Type	Name	Serial No.	Symbols on the disassembly diagrams
Grease	Maltemp SH-P	KYODO-SH-P	AA
Oil	Cosmohydro HV56	COSMO-HV56	BB

Table 2-1-2 Grease and oil used for the unit

4. Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning, lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions. However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time, even if the set is not used.

System	Parts Name	Operation Hours	
		~1000H	~2000H
Tape transport	Upper drum assembly	★○	○
	A/C head	★○	★○
	Lower drum assembly	★	★○
	Pinch roller arm assembly	★	★
	Full erase head	★	★
	Tension arm assembly	★	★
	Capstan motor (Shaft)	★	★
	Guide arm assembly	★	★
Drive	Capstan motor		○
	Capstan brake assembly		○
	Main brake assembly		○
	Belt (Capstan)	○	○
	Belt (Loading motor)		○
	Loading motor		○
	Clutch unit		○
	Worm gear		○
	Control plate		○
Other	Brush	★○	★○
	Tension brake assembly	○	○
	Rotary encoder		○

★: Cleaning

○: Inspection or Replacement if necessary

Table 2-1-3

2.2 REPLACEMENT OF MAJOR PARTS

2.2.1 Before Starting Disassembling (Phase matching between mechanical parts)

The mechanism of this unit is closely linked with the rotary encoder and system controller circuits.

Since the system controller detects the status of mechanical operation in response to phases of the rotary encoder (internal switch positions), the mechanism may not operate properly unless such parts as the rotary encoder, control plate, loading arm gear, control cam, cassette gear, limit gear, relay gear and drive gear are installed in their correct positions.

Especially, this model is not provided with any cassette housing assembly, so that cassette loading and unloading must be accomplished by operation of the cassette holder assembly. The latter is in turn driven by such parts as the drive gear, relay gear and limit gear. Exercise enough care, therefore, to have the phases of all this gear matching one another.

(For information on phase matching of the mechanism, see the instructions on how to install individual parts.)

This unit is provided with a mechanism assembly mode. It is therefore necessary to enter this mode for assembling and disassembling procedures.

This mode is usually not in use, manually set it when it is required.

2.2.2 How to Set the Mechanism Assembling Mode

Remove the mechanism assembly and place it bottom side up. (See SECTION 1 DISASSEMBLY.) Turn the worm gear toward the front so that the guide hole of the control cam is brought into alignment with the hole at the mechanism assembly chassis. This position renders the mechanism assembling mode operational. Make sure that the control plate is located in alignment with the mark E. (See Fig.2-2-1.)

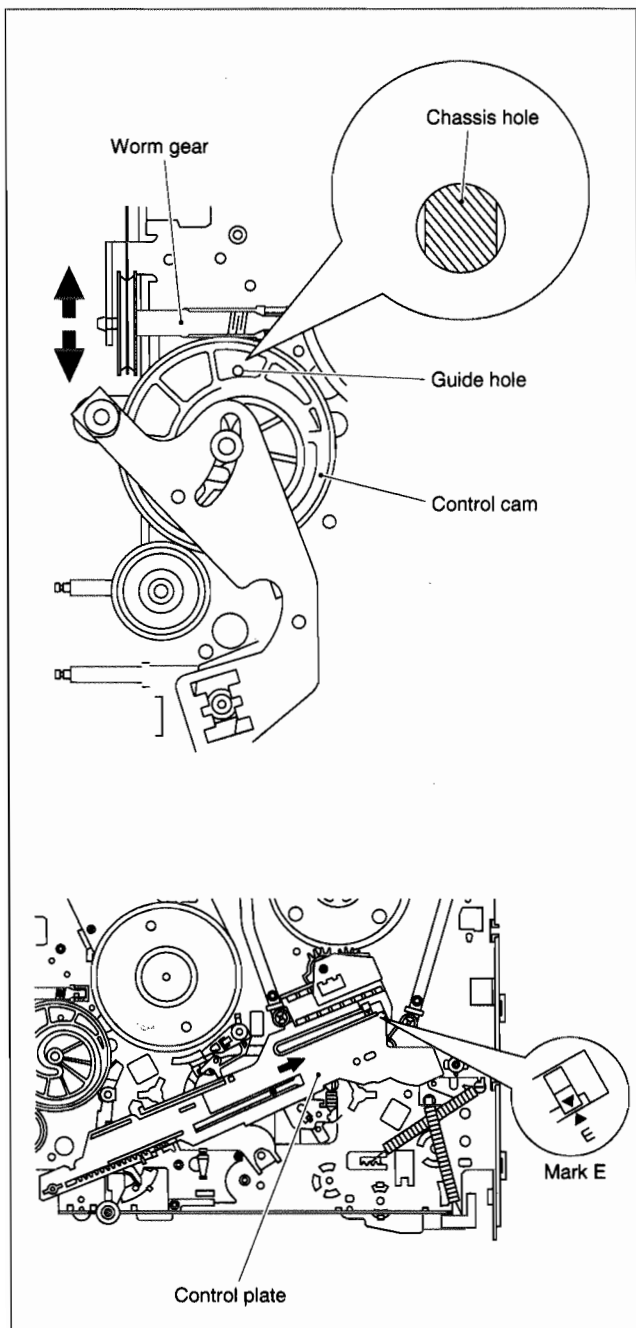


Fig. 2-2-1

2.2.3 Cassette Holder Assembly

1. How to remove

(1) Remove the guide rail and roller cam assembly. (See Fig.2-2-2.)

(3 lugs on the guide rail and one lug on the roller cam assembly)

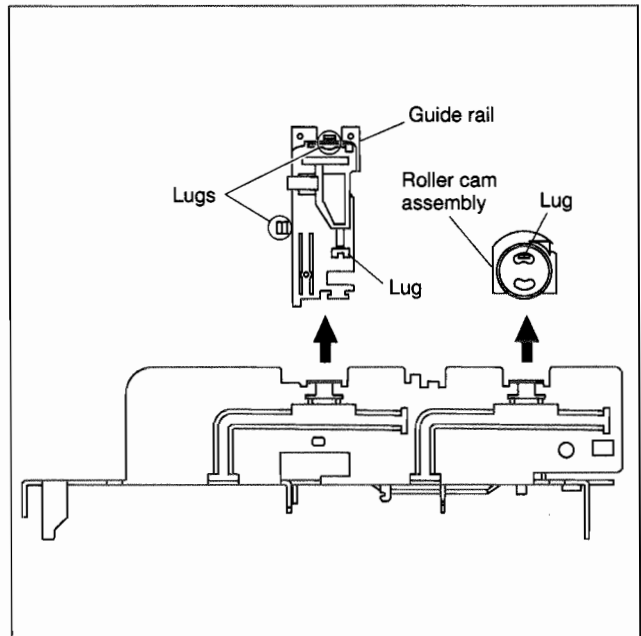


Fig. 2-2-2

(2) Remove the two slit washers and remove the cassette housing bracket. (See Fig.2-2-3.)

(3) Remove the opener guide, spring(A), door opener, relay gear and limit gear. (See Fig.2-2-3.)

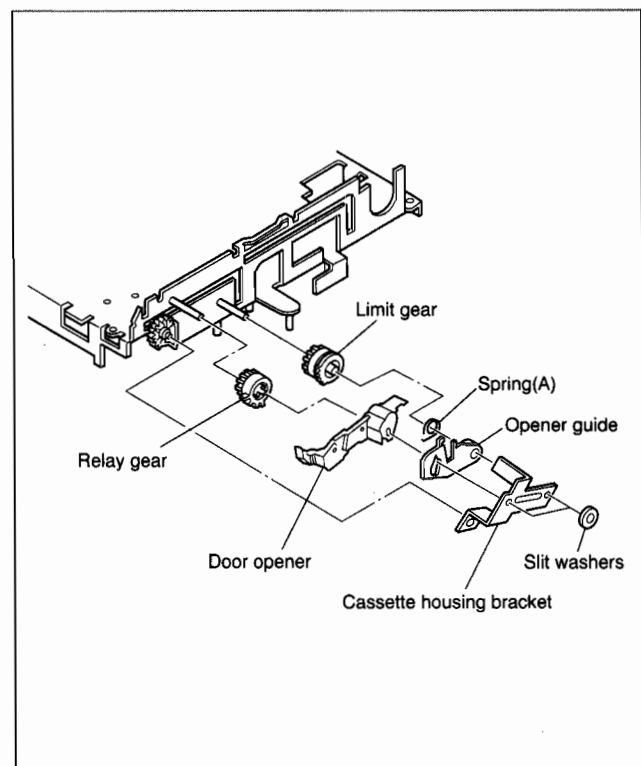


Fig. 2-2-3

- (4) While swinging the lock levers (R) and (L) of the cassette holder assembly toward the front, slide the cassette holder assembly until its legs come to where the guide rail and the roller cam assembly have been removed (so that the drive arm is upright). (See Fig.2-2-4.)

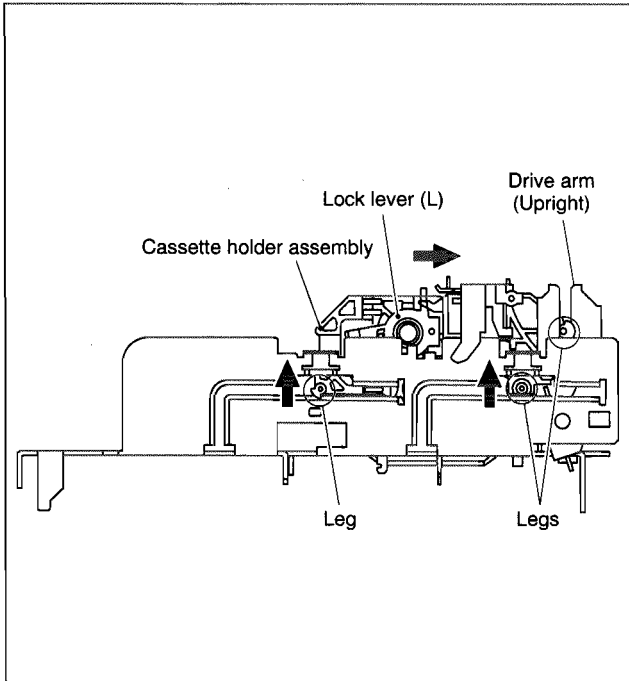


Fig. 2-2-4

- (5) While holding the left side of the cassette holder, lift the cassette holder assembly so that the three legs on the left side are all released. Then pull the legs (A) and (B) on the right side out of the rail and also pull up the leg (C). (See Fig.2-2-5 and Fig.2-2-6.)

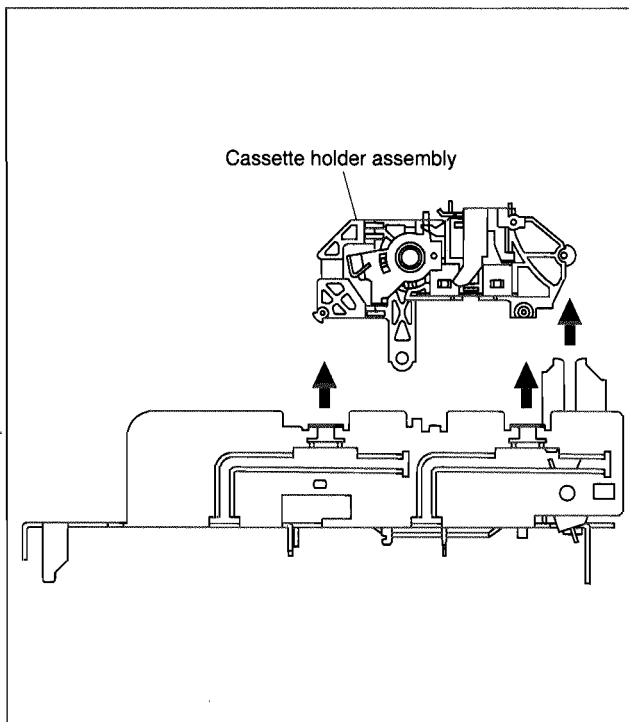


Fig. 2-2-5

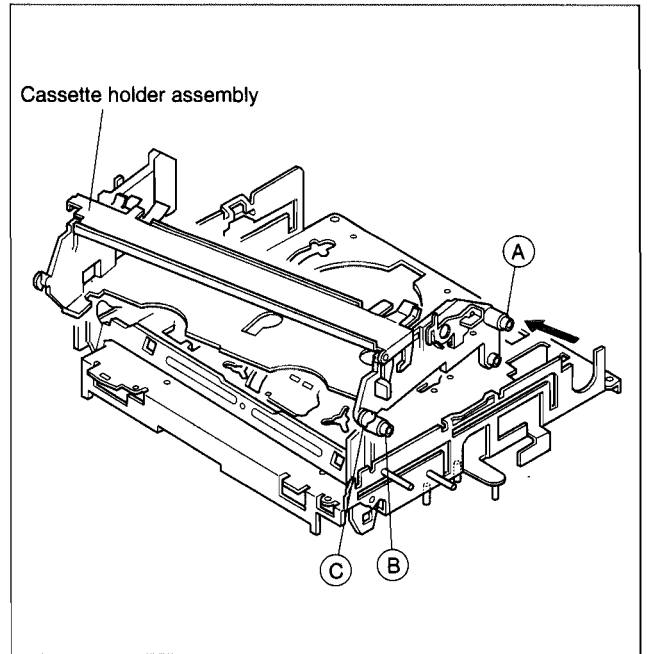


Fig. 2-2-6

- (6) Draw out the drive gear, and remove the drive arm.

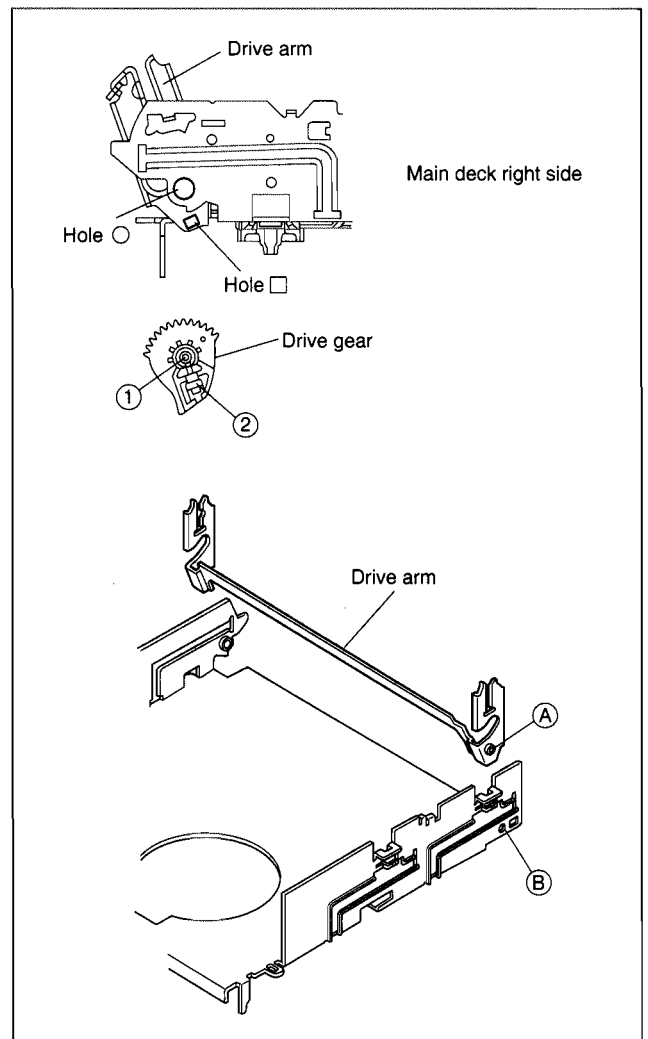


Fig. 2-2-7

2. How to install (Phase matching)

- (1) Insert the section (A) of the drive arm into the section (B) of the main deck.
- (2) Insert the section ① of the drive gear into the round hole, and the section ② into the square hole on the drive arm. (See Fig.2-2-7.)
- (3) Hold the drive arm upright and fit the leg (C) on the right side of the cassette holder assembly into the groove. (See Fig.2-2-8.)
- (4) While swinging the lock lever (R) of the cassette holder assembly toward the front, put the legs (A) and (B) into the rail. (See Fig.2-2-8.)
- (5) Drop the three legs on the left side of the cassette holder assembly into the groove at one time. (See Fig.2-2-9.)
- (6) Slide the whole cassette holder assembly toward the front to bring it to the eject end position.
- (7) Install the limit gear so that the notch on the outer circumference of the limit gear is brought into alignment with the guide hole on the main deck. (See Fig.2-2-10.)
- (8) Install so that the notch on the periphery of the relay gear is aligned with the notch of the main deck and that hole A of the relay gear is aligned with the hole A of the limit gear and that hole B of the relay gear is aligned with the hole B of the drive gear. (See Fig.2-2-10.)
- (9) Install the door opener, opener guide, spring(A) and cassette housing bracket and fasten the two slit washers.

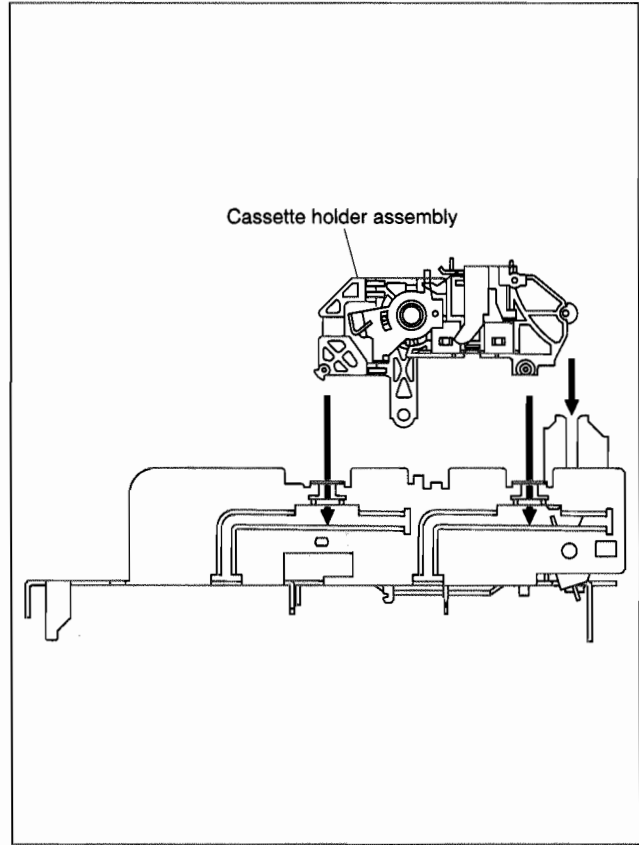


Fig. 2-2-9

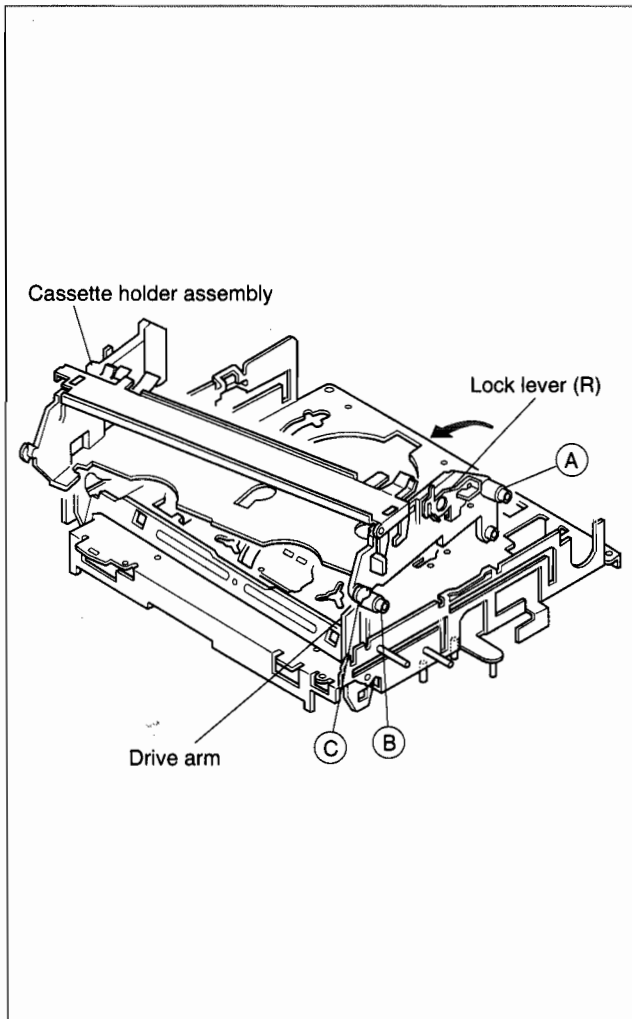


Fig. 2-2-8

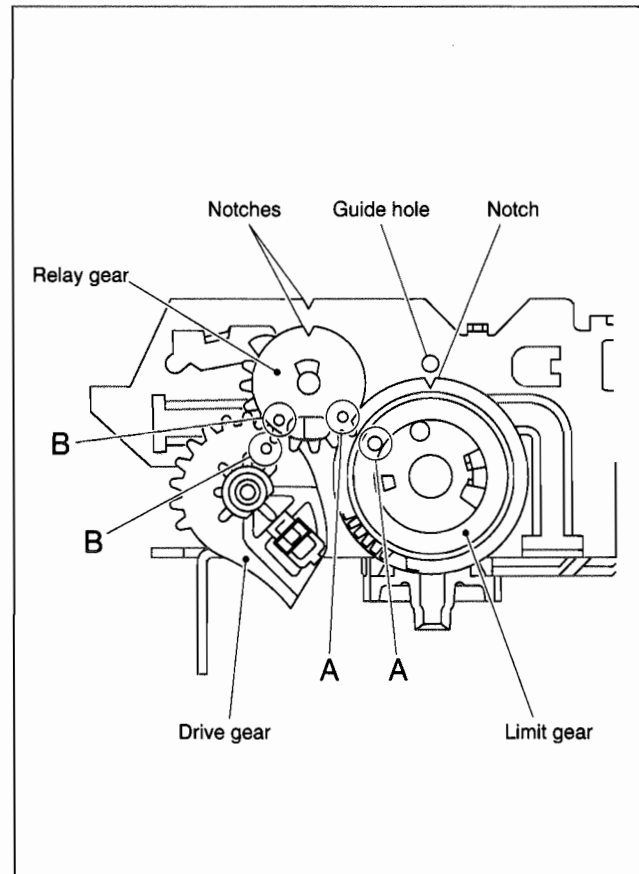


Fig. 2-2-10

2.2.4 Pinch Roller Arm Assembly

1. How to remove

- (1) Remove the spring from the hook of the press lever assembly.
- (2) Remove the slit washer and remove the pinch roller seat 2. (See Fig.2-2-11.)
- (3) Remove the pinch roller arm assembly by pulling it up.

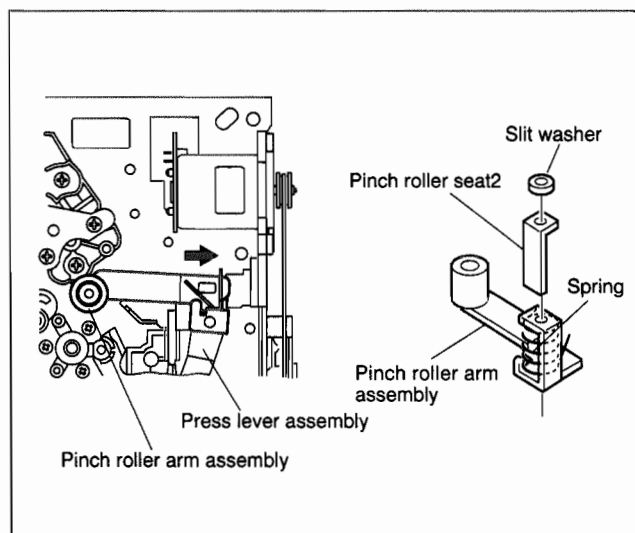


Fig. 2-2-11

2.2.5 Guide Arm Assembly and Press Lever Assembly

1. How to remove

- (1) Remove the spring and expand the lug of the lid guide in the arrow-indicated direction. Then remove the guide arm assembly by pulling it up.
- (2) Remove the press lever assembly by pulling it up. (See Fig.2-2-12.)

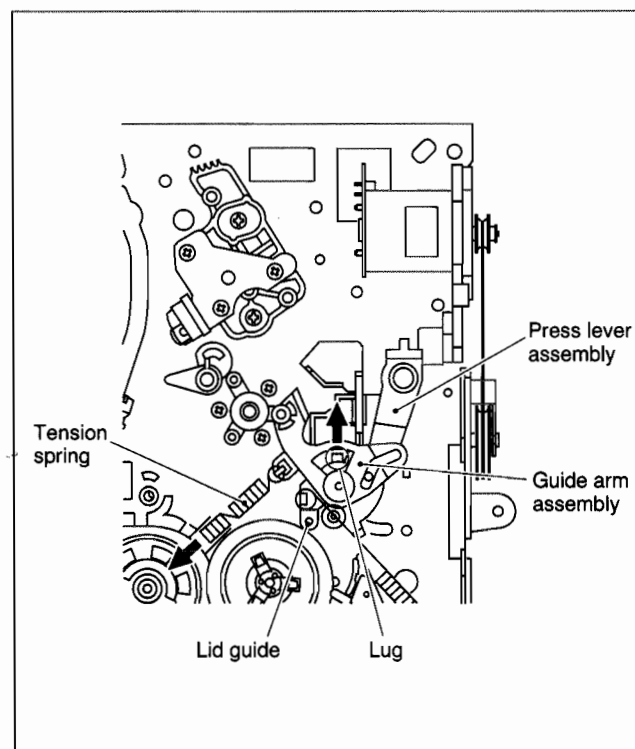


Fig. 2-2-12

2.2.6 Audio Control Head

1. How to remove

- (1) Remove the two screws (A) and remove the audio control head together with the head base.

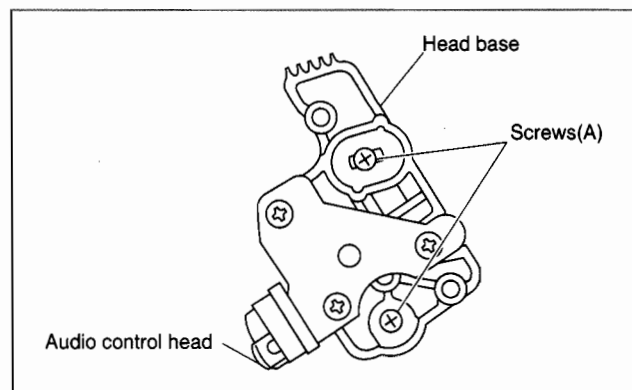


Fig. 2-2-13

- (2) When replacing only the audio control head, remove the three screws (B) while controlling the compression spring.

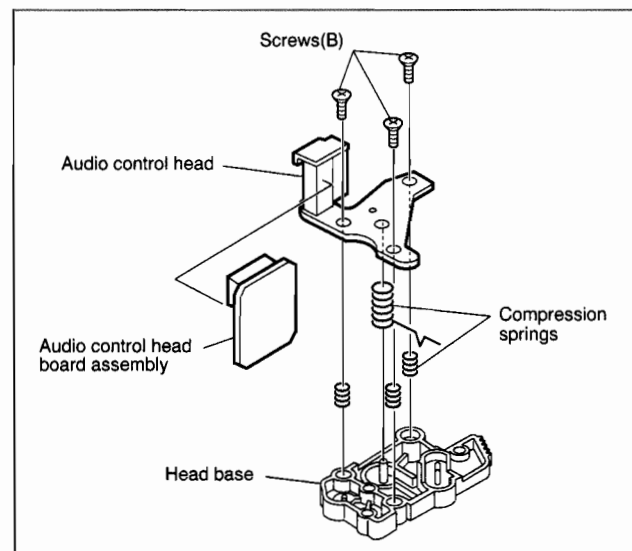


Fig. 2-2-14

2. How to install

- (1) To make the post-installation adjustment easier, set the temporary level as indicated in Fig.2-2-15. Also make sure that the screw center is brought into alignment with the center position of the slot.

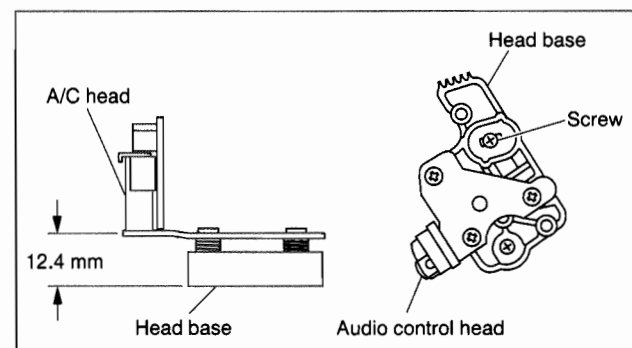


Fig. 2-2-15

2.2.7 Loading Motor

1. How to remove

- (1) Remove the belt wound around the worm gear.
- (2) Open the two lugs of the motor guide and remove the loading motor, loading motor board assembly and motor guide altogether by pulling them up.
- (3) When replacing the loading motor board assembly, take care with the orientation of the loading motor. (Install so that the loading motor label faces upward.)
- (4) When the motor pulley has been replaced, choose the fitting dimension as indicated in Fig.2-2-16.

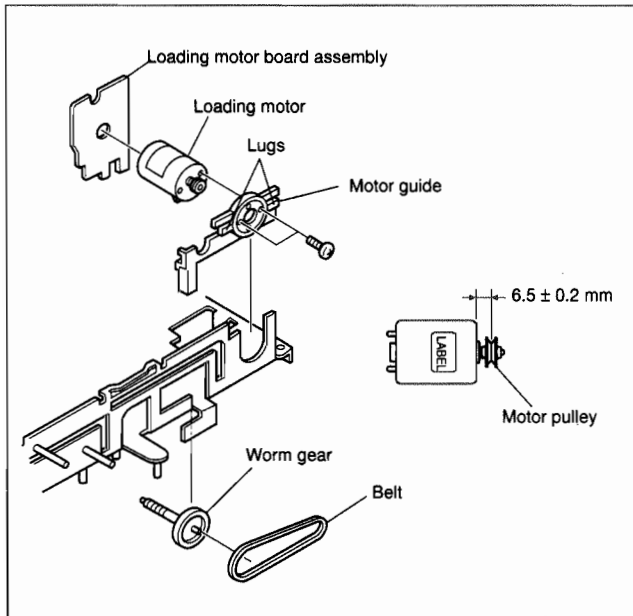


Fig. 2-2-16

2.2.8 Capstan Motor

1. How to remove

- (1) Remove the belt (capstan) on the mechanism assembly back side.
- (2) Remove the three screws (A) and remove the capstan motor.

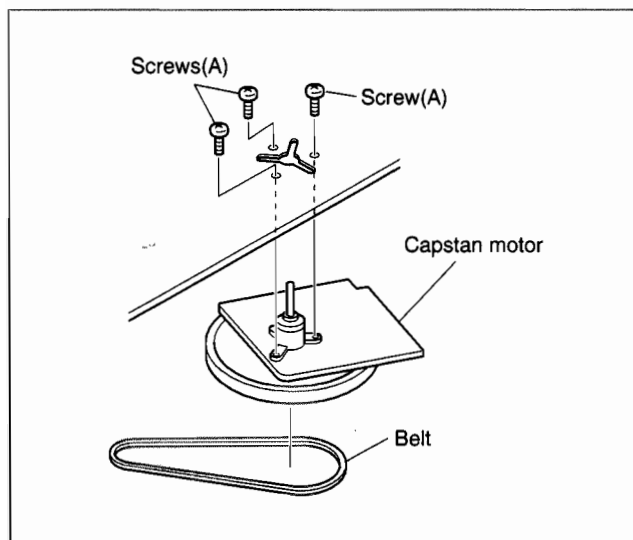


Fig. 2-2-17

2. How to install (Centering the mounting position)

When the capstan motor has once been removed and then reinstalled out of the initial correct position in the rotational direction, the capstan motor current may be unstable during operation in high or low temperatures. This may result in greater Wow & Flutter and occasionally in power breakdown because of current over - load. Install the capstan motor while following the procedure given below. (The capstan motor is centrally located when the unit is shipped from the factory.)

- (1) Provisionally tighten the three screws (A) securing the capstan motor.
- (2) Install the mechanism assembly to which the capstan motor is provisionally fastened on the bottom chassis which incorporates the Main board assembly. (No need to tighten the screws for mounting the mechanism.) Make sure that all the connectors for the mechanism assembly and the Main board assembly are correctly installed as indicated in Fig. 2-2-18.

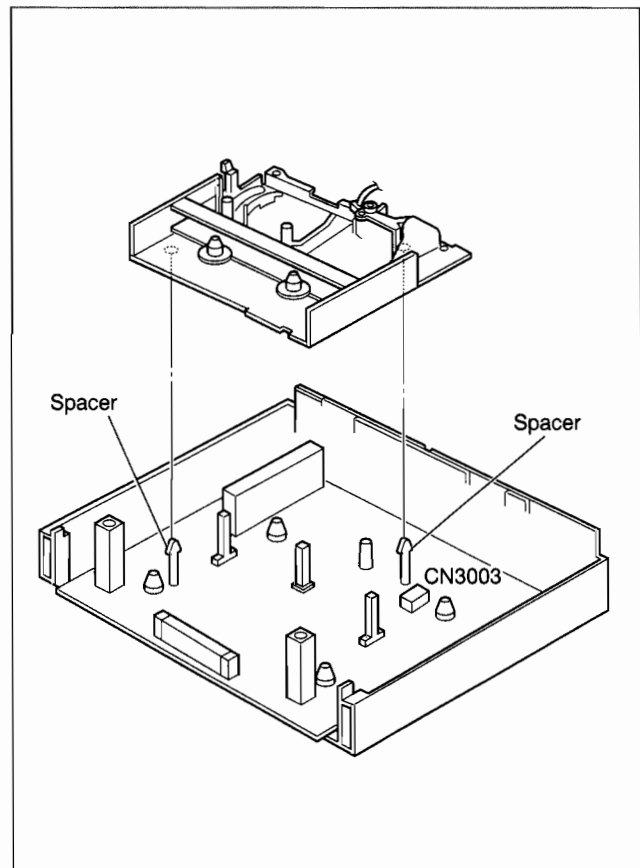


Fig. 2-2-18

- (3) Making sure that the connector CN3003 of the capstan motor is correctly mounted, and securely tighten the three screws (A).

Note: When the capstan motor has been replaced with a new one, perform recording in the LP mode for at least 2 minutes at normal temperatures immediately before starting the FF/REW or SEARCH operations (Aging).

2.2.9 Pole Base Assembly (supply or take-up side)

1. How to remove

- (1) Remove the UV catcher 2 on the removal side by loosening the screw (A).
- (2) Remove the pole base assembly on the supply side from the mechanism assembly by loosening the screw (B) on the mechanism assembly back side and sliding the pole base assembly toward the UV catcher 2.
- (3) As for the pole base assembly on the take-up side, turn the pulley of the loading motor to lower the cassette holder because the screw (B) is hidden under the control plate. (See the "Procedures for Lowering the Cassette holder assembly" of 1.3 DISASSEMBLY/ASSEMBLY METHOD.) Further turn the motor pulley to move the cassette holder until the screw (B) is no longer under the control plate (in the half-loading position). Then remove it as done for the supply side by removing the screw (B).

NOTE: After reinstalling the Pole base assembly and the UV catcher2, be sure to perform compatibility adjustment.

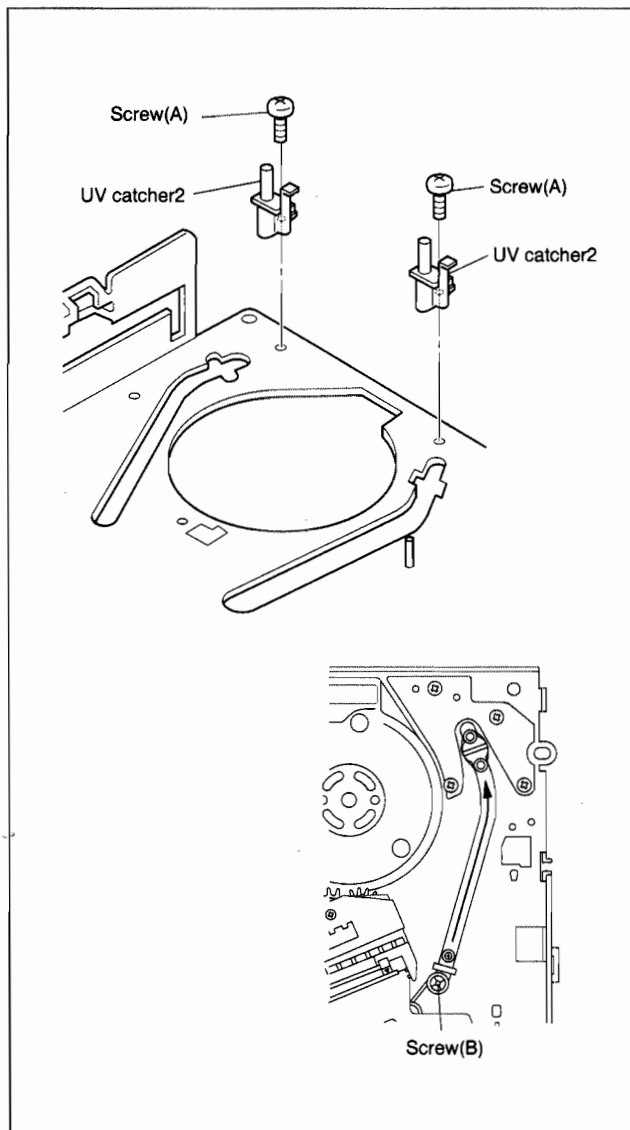


Fig. 2-2-19

2.2.10 Rotary Encoder

1. How to remove

- (1) Remove the screw (A) and remove the rotary encoder by pulling it up. (See Fig. 2-2-20.)

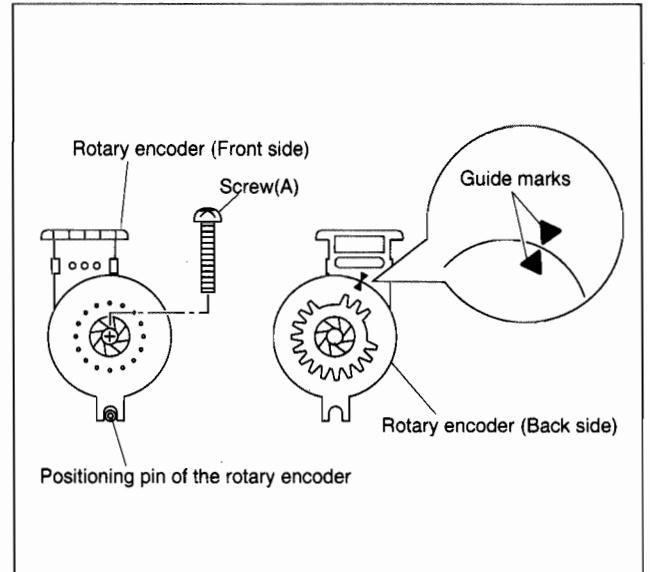


Fig. 2-2-20

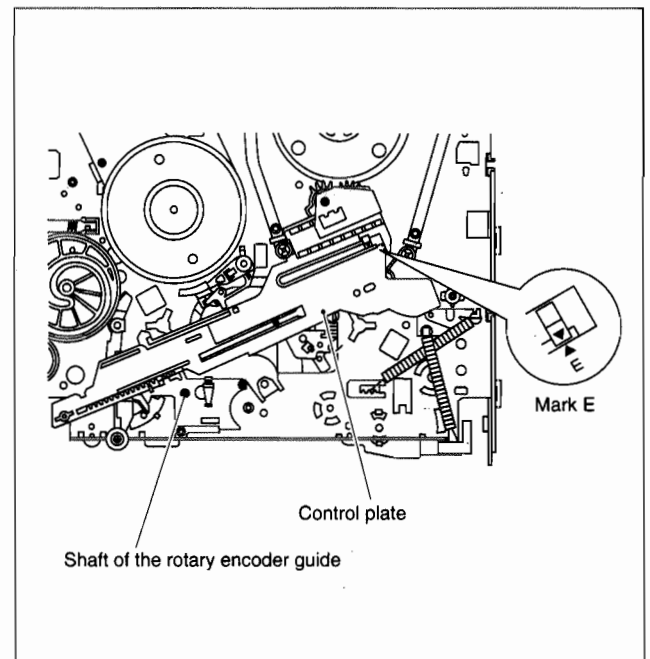


Fig. 2-2-21

2. How to install (Phase matching)

- (1) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft and bring the guide marks on the rotary encoder into alignment as indicated in Fig. 2-2-20. (See Fig. 2-2-20 and Fig. 2-2-21.)
- (2) Turn over the rotary encoder with its guide marks kept in alignment and install it by fitting on the shaft of the rotary encoder guide and the positioning pin.
- (3) Tighten the screw (A) to complete the installation.

2.2.11 Clutch Unit

- (1) Remove the belt wound around the capstan motor and the clutch unit.
- (2) Remove the slit washer and remove the clutch unit.

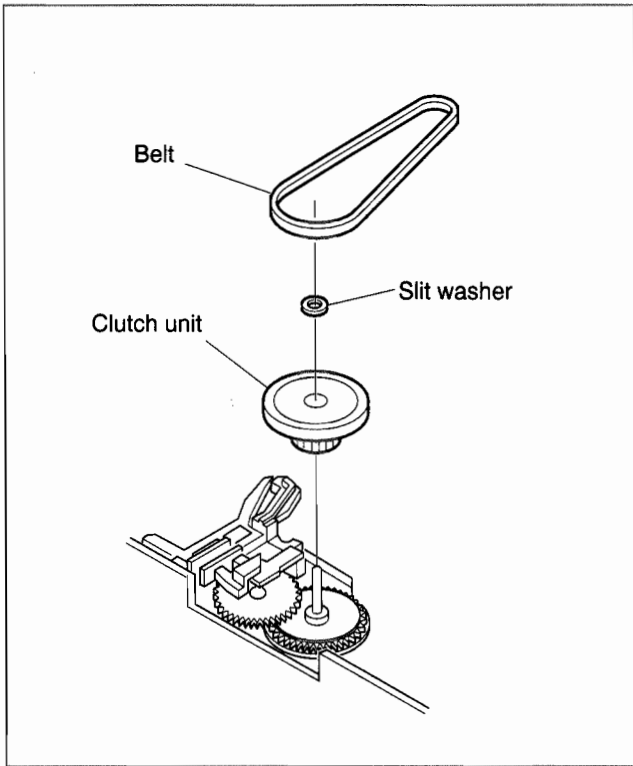


Fig. 2-2-22

1. How to remove

- (1) Release the two lugs of the rotary encoder guide in the arrow-indicated direction and remove the change lever assembly.
- (2) Remove the slit washer retaining the direct gear and remove the latter.
Take care so as not to lose the washer and spring. (See Fig.2-2-23.)

2. How to install

- (1) Install the clutch gear1, spring (A), spring (C), direct gear, spacer and others to the individual shafts of the main deck, and finally the slit washer. (See Fig.2-2-23.)
- (2) Let the spring (B) drops into the rotary encoder guide hole and install the change lever assembly. (Take care not to mistake a direction of the spring.) The point is to slightly lift the clutch gear1 and catch it from the both sides with the assembly. (See Fig.2-2-24.)

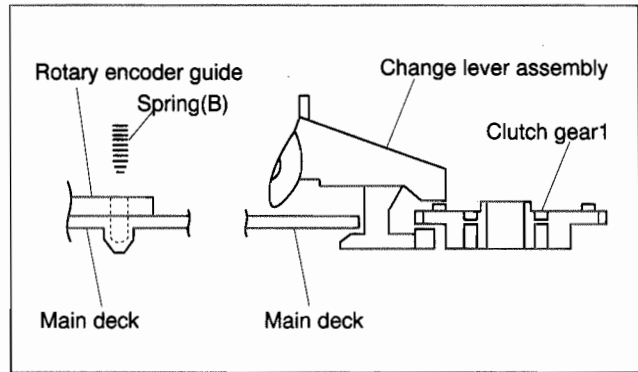


Fig. 2-2-24

2.2.12 Change Lever Assembly, Direct Gear and Clutch Gear1

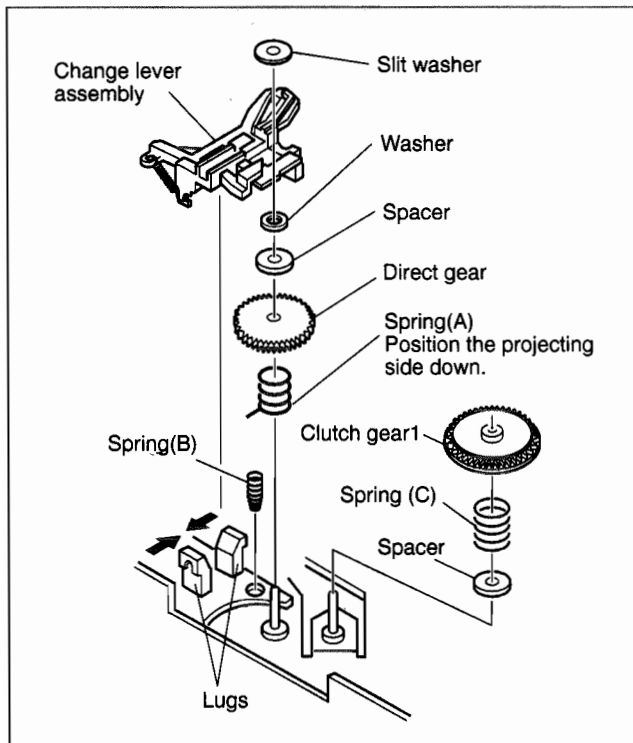


Fig. 2-2-23

2.2.13 Link Lever

1. How to remove

- (1) Remove the two slit washers.
- (2) Remove the link lever by lifting it from the shaft retained by the slit washers. Then swing the link lever counterclockwise and remove it from the locking section of the control plate.

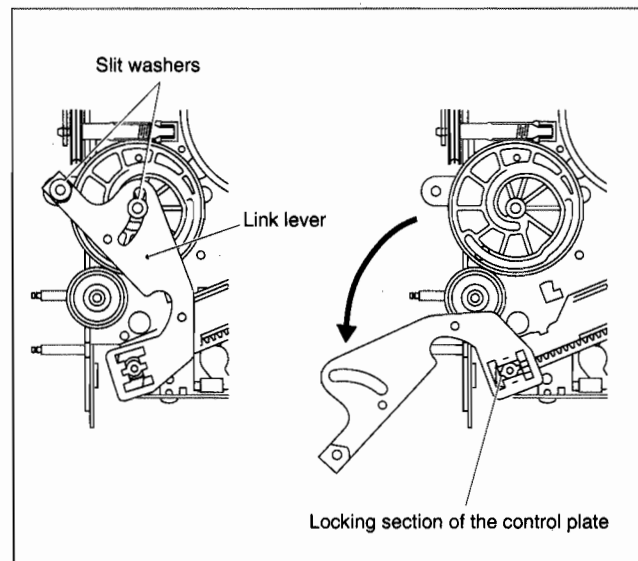


Fig. 2-2-25

2. How to install (Phase matching)

- (1) Slide the control plate so that its mark E is aligned with the mark ▼ on the loading arm gear shaft. (See Fig.2-2-26.)
- (2) Rotate the worm gear until the guide hole of the control cam is aligned exactly with the guide hole of the main deck. (See Fig.2-2-27.)
- (3) Insert the link lever into the locking section of the control plate. (See Fig.2-2-25.)
- (4) Rotate the link lever clockwise so that it is installed on the shafts in the center and on the left of the control cam.
- (5) Fasten the slit washers at these two points.

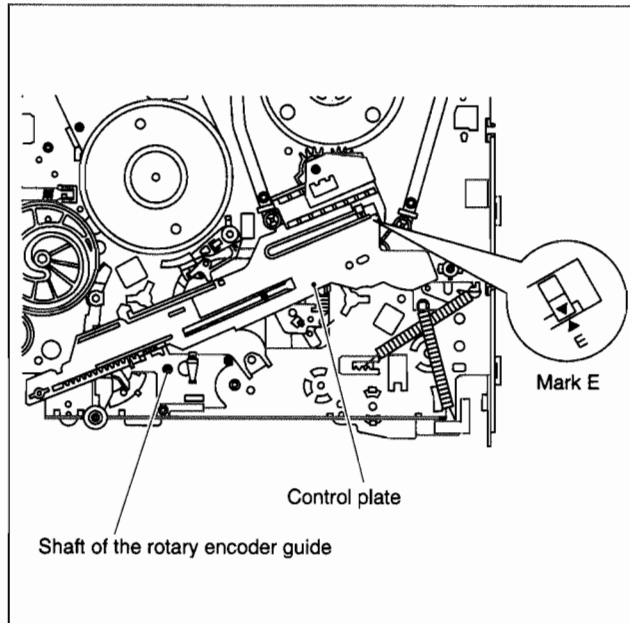


Fig. 2-2-26

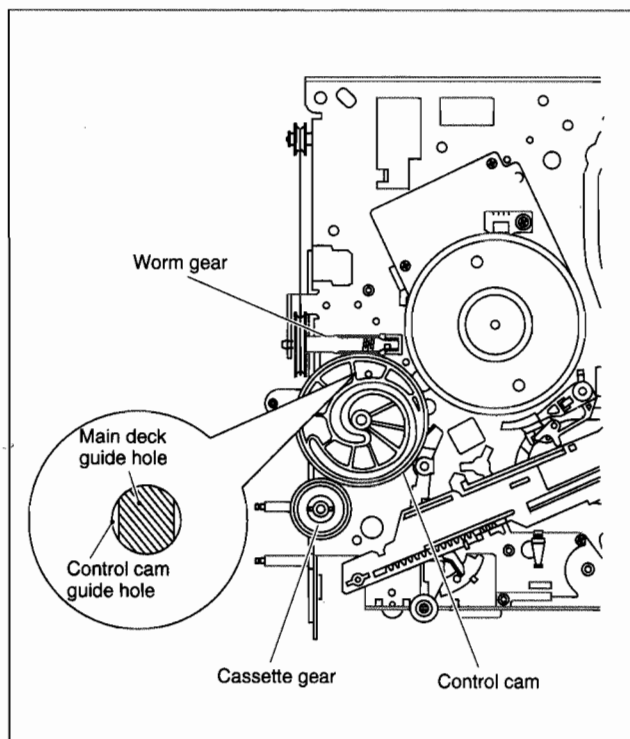


Fig. 2-2-27

2.2.14 Cassette Gear, Control Cam and Worm Gear

1. How to remove

- (1) Remove the control cam by lifting it.
- (2) Open the two lugs of the cassette gear outward and pull the latter off.
- (3) Remove the belt wound around the worm gear and the loading motor.
- (4) Open the lug of the lid guide outward and remove the worm gear.

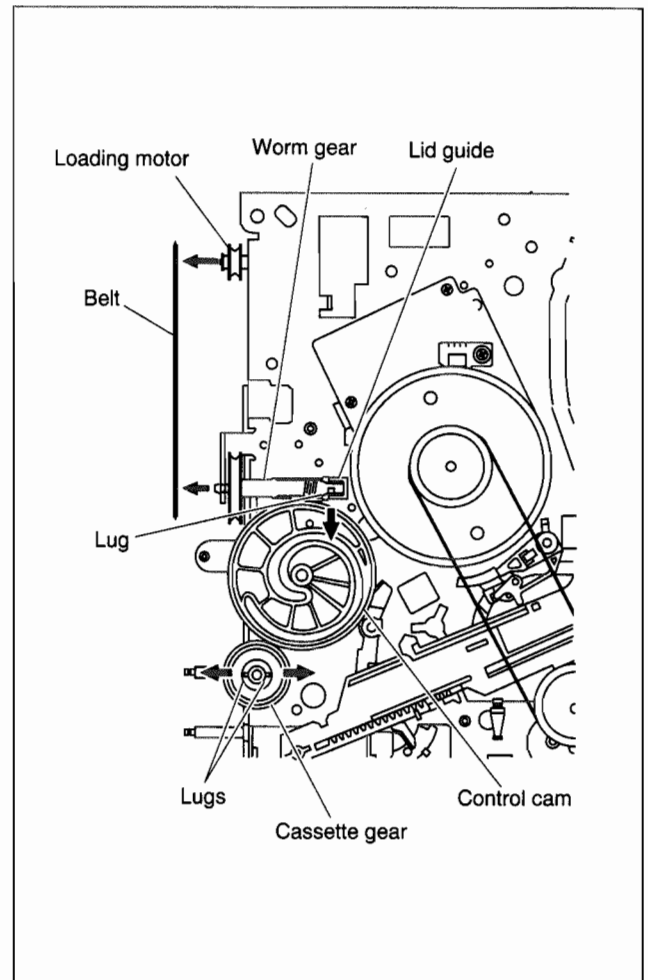


Fig. 2-2-28

2.2.15 Control Plate

1. How to remove

- (1) Remove the screw (A) retaining the control bracket 1 and remove the latter.
- (2) Slide the control plate as indicated by the arrow and remove the control plate. (See Fig.2-2-29.)

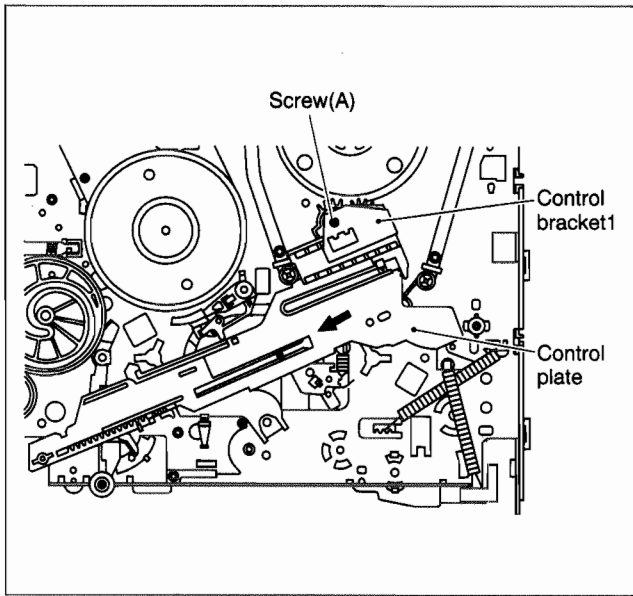


Fig. 2-2-29

2. How to install (Phase matching)

- (1) Adjust the position of the idler arm assembly pin as indicated in Fig.2-2-30 (to the left of centre of the R section).
- (2) Bring the guide hole of the take-up lever into alignment with the hole at the control plate guide and fix the position by inserting a 1.5 mm hexagonal wrench.
- (3) Install the control plate so that the section A of the loading arm gear shaft fits into the hole (A) of the control plate, the section B of the control plate guide into the hole (B), and the control plate comes under the section C of the rotary encoder guide and the section D of the loading arm gear shaft while press-fit the pole base assembly (supply side) as indicated by the arrow. It is important that the tension arm assembly shaft is positioned closer toward you than the control plate. (See Fig.2-2-31.)
- (4) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft. (See Fig.2-2-31.)
- (5) Pull off the hexagonal wrench for positioning.

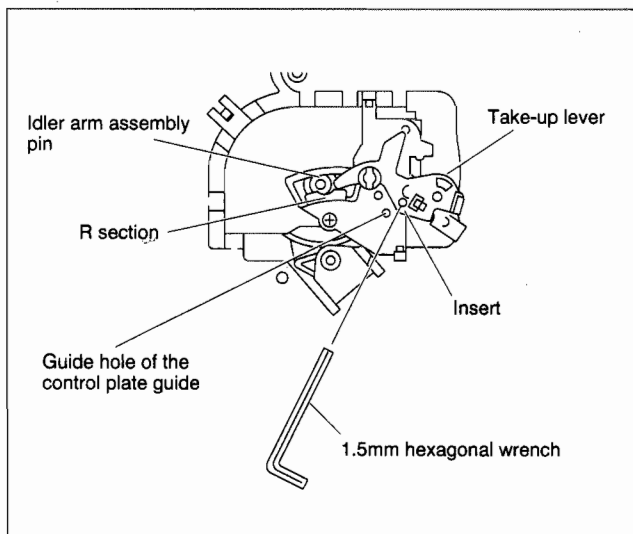


Fig. 2-2-30

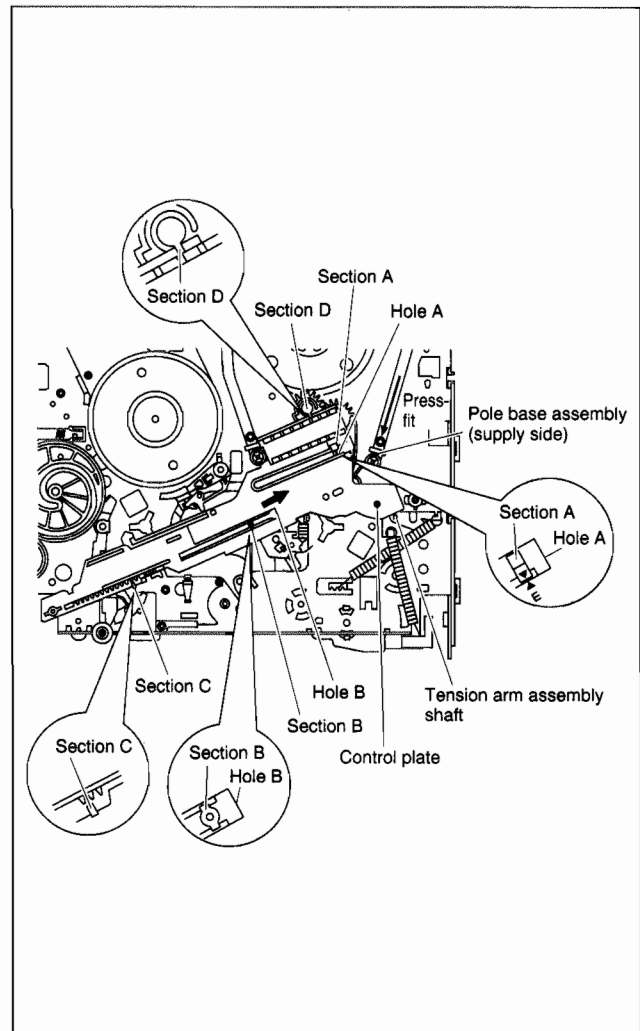


Fig. 2-2-31

2.2.16 Loading Arm Gear (supply or take-up side) and Loading Arm Gear Shaft

1. How to remove

- (1) Remove the loading arm gear (supply side) by loosening the screw (A). (See Fig. 2-2-32.)
- (2) Remove the screw (B) and remove the torsion arm from the pole base assembly (take-up side). (See Fig.2-2-32.)
- (3) Turn the loading arm gear (take-up side) clockwise so that the notch of the loading arm gear (take-up side) is in alignment with the projection of the loading arm gear shaft and lift it.
Likewise, turn the loading arm counterclockwise so that the notch is in alignment with the projection and remove the loading arm gear (take-up side). (See Fig.2-2-32 and Fig. 2-2-33.)
- (4) When removing the loading arm gear shaft, be sure of first removing the screw retaining the drum assembly (on the back side of the loading arm gear shaft). Then remove the screw (C) and remove the loading arm gear shaft by sliding it.

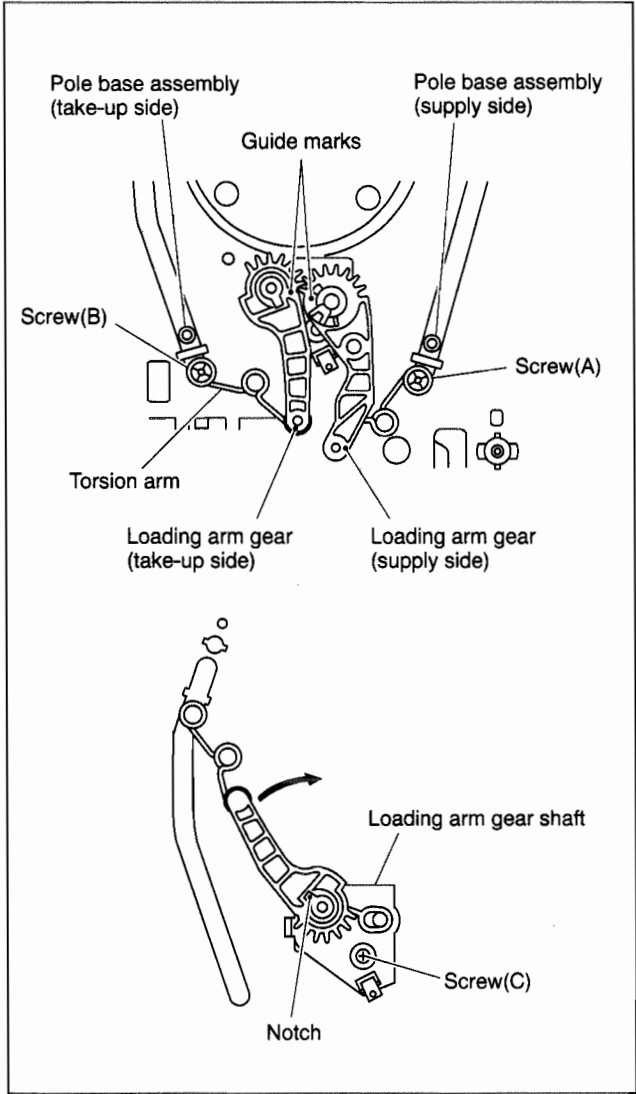


Fig. 2-2-32

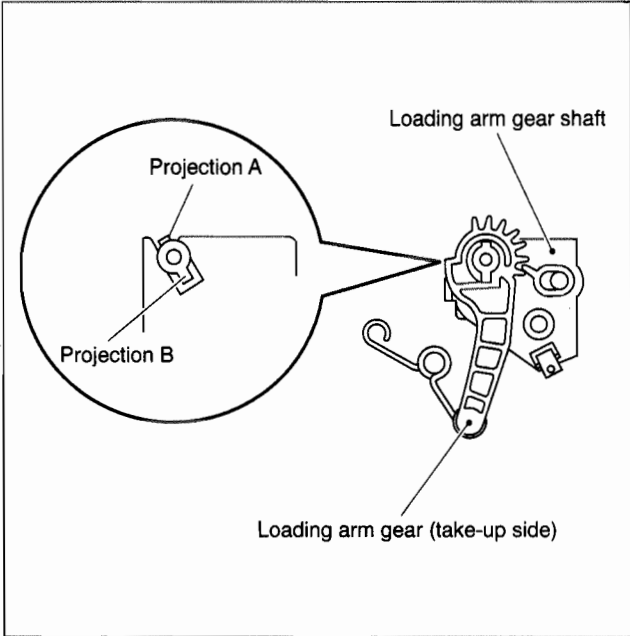


Fig. 2-2-33

2. How to install

- (1) Align the notch of the loading arm gear (take-up side) to the projection B of the loading arm gear shaft and slip it over. Then rotate it clockwise for alignment with the projection A and slip it down to the bottom. (See Fig.2-2-33.)
- (2) Then turn the loading arm gear (take-up side) counterclockwise. Hang the torsion arm on the pole base assembly (take-up side) and tighten the screw (B).
- (3) Install the loading arm gear (supply side) so that the guide mark of the loading arm gear (take-up side) is in alignment with the guide mark of the loading arm gear (supply side). Then hang the torsion arm on the pole base assembly (supply side) and tighten the screw (A). (See Fig.2-2-32.)

2.2.17 Take-up Lever, Take-up Head and Control Plate Guide

- (1) Remove the spring of the take-up lever from the main deck.
- (2) Remove the lug (A) of the take-up lever from the main deck and pull out the take-up lever and the take-up head together.
- (3) Remove the screw (A).
- (4) Align the idler arm assembly pin in the center of the R section of the control plate guide, remove the control plate guide lugs (B) and (C) from the main deck, and remove the control plate guide.

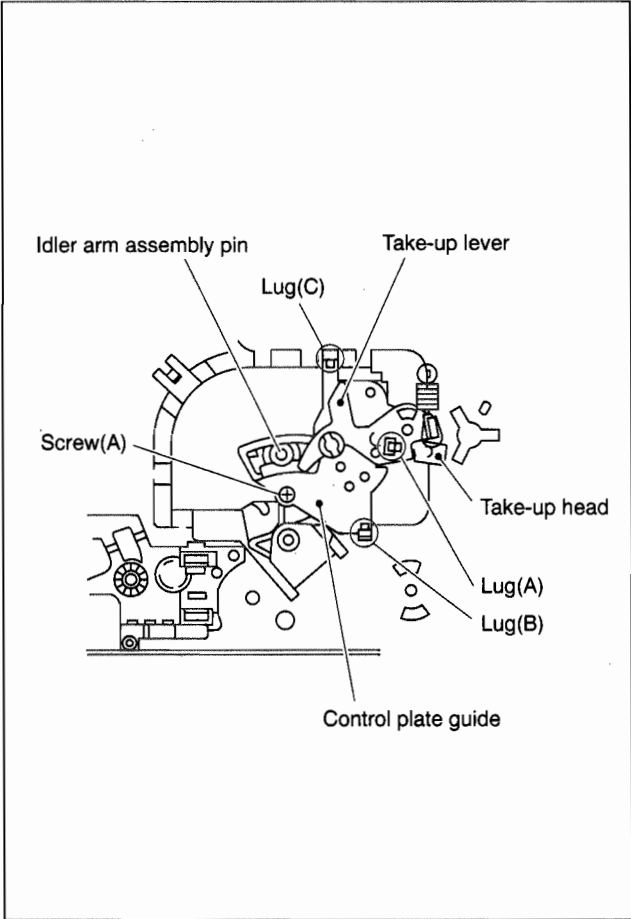


Fig. 2-2-34

2.2.18 Capstan Brake Assembly

1. How to remove

- (1) Move the lug (A) of the capstan brake assembly in the arrow-indicated direction so that it comes into alignment with the notch of the main deck. (See Fig. 2-2-35.)
- (2) Remove the lug (B) of the capstan brake assembly from the main deck and remove the capstan brake assembly.

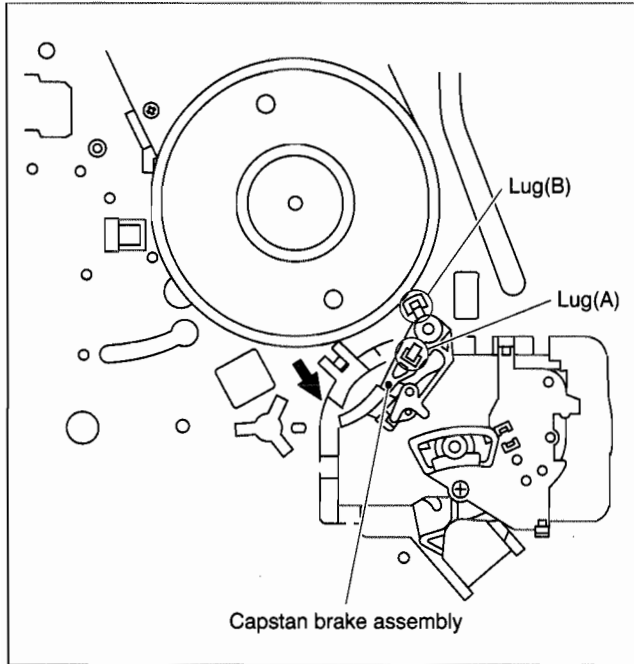


Fig. 2-2-35

2.2.19 Sub Brake Assembly (take-up side)

1. How to remove

- (1) Remove the spring attached to the lid guide and sub brake assembly (take-up side).
- (2) Bring the lug (A) of the sub brake assembly (take-up side) into alignment with the notch of the main deck.
- (3) Remove the lugs (B) and (C) of the sub brake assembly (take-up side) from the main deck and remove the sub brake assembly (take-up side).

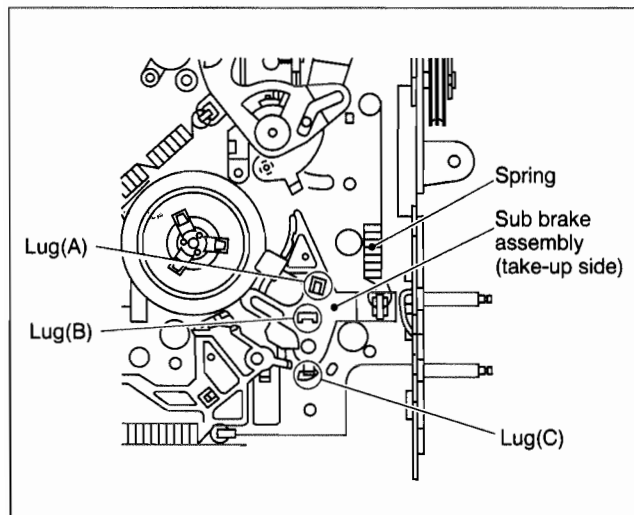


Fig. 2-2-36

2.2.20 Main Brake Assembly (take-up side), Reel Disk (take-up side) and Main Brake Assembly (supply side)

1. How to remove

- (1) Move the main brake assembly (take-up side) in the arrow-indicated direction and remove the reel disk (take-up side).
- (2) Remove the spring attached to the main brake assembly.
- (3) Remove the lug (A) of the main brake assembly (take-up side) and pull out the lug (B) after bringing it into alignment with the main deck notch.
- (4) Remove the lugs (C), (D) and (E) of the main brake assembly (supply side) from the main deck and pull them off. (See Fig. 2-2-37.)

Note: If the main brake assembly is difficult to remove, press it and hold the adjustment pin from the back side of the main deck when attempting to remove it.

After the adjustment pin has been removed or the main brake assembly or the reel disk on the supply or take-up side have been replaced, it is required to adjust the main brake assembly torque. See page 2-23 for the detailed adjustment procedures.

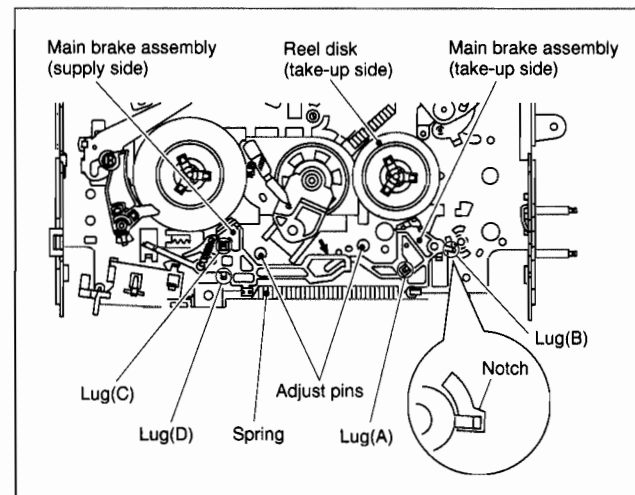


Fig. 2-2-37

- (5) When installing the main brake assembly (take-up side), slide the brake lever in the direction as indicated by the arrow to prevent it from hitting the projection of the main brake assembly (take-up side). (See Fig. 2-2-38.)

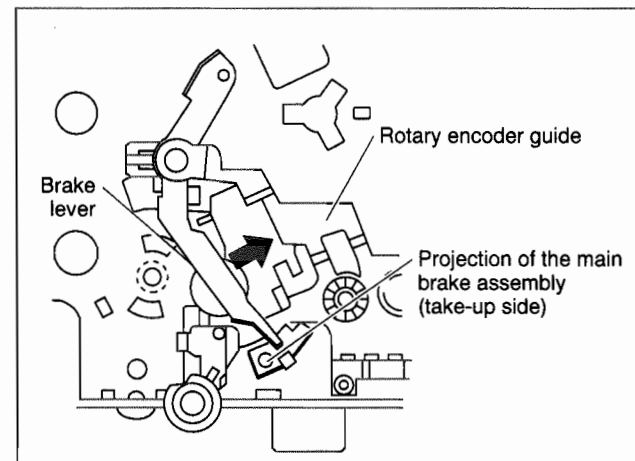


Fig. 2-2-38

2.2.21 Tension Brake Assembly, Reel Disk (supply side) and Tension Arm Assembly

1. How to remove

- (1) Remove the three lugs of the tension brake assembly from the main deck and pull them off.
- (2) Remove the reel disk (supply side) by loosening in the arrow-indicated direction the main brake assembly (supply side).
- (3) Remove the tension spring on the back of the main deck. Then release the lug of the tension arm bearing in the arrow-indicated direction and draw out the tension arm assembly. (See Fig. 2-2-39.)

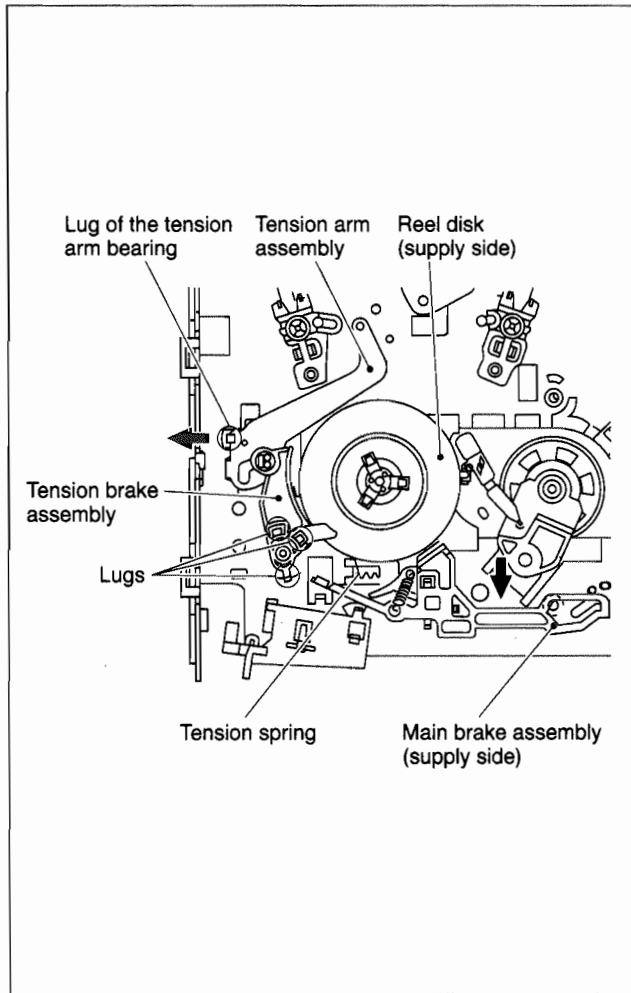


Fig. 2-2-39

2.2.22 Idler Lever, Idler Arm Assembly

1. How to remove

- (1) Remove the lug of the idler lever from the main deck and remove the hook fitted in the idler arm assembly hole by lifting it.
- (2) Remove the slit washer and pull out the idler arm assembly.

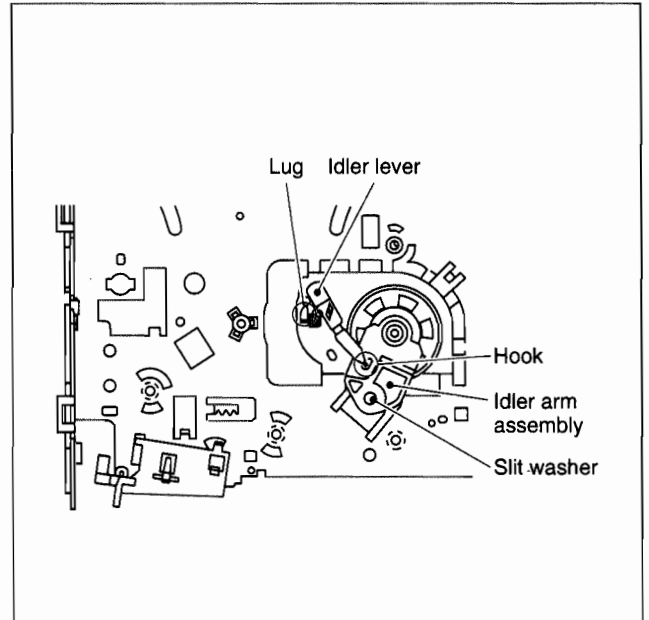


Fig. 2-2-40

2.2.23 Stator Assembly

- (1) Remove the flat cable.
- (2) Remove the two screws (A).
- (3) Remove the stator assembly by lifting in the arrow-indicated direction. (Take care that the brush spring does not jump out.)
- (4) After installation, be sure to perform the PB switching point adjustment according to the electrical adjustment procedure.

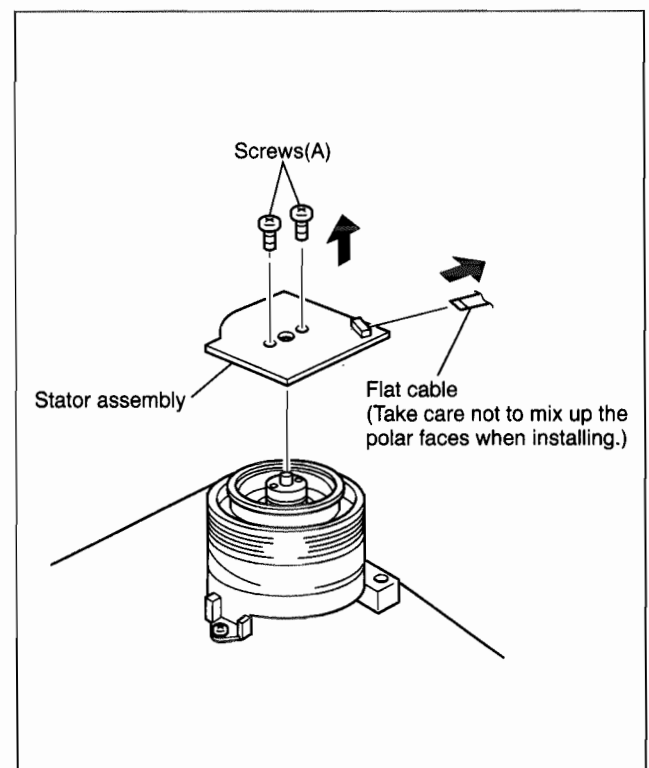


Fig. 2-2-41

2.2.24 Rotor Assembly

- (1) Remove the stator assembly.
- (2) Remove the two screws (B) and remove the rotor assembly.

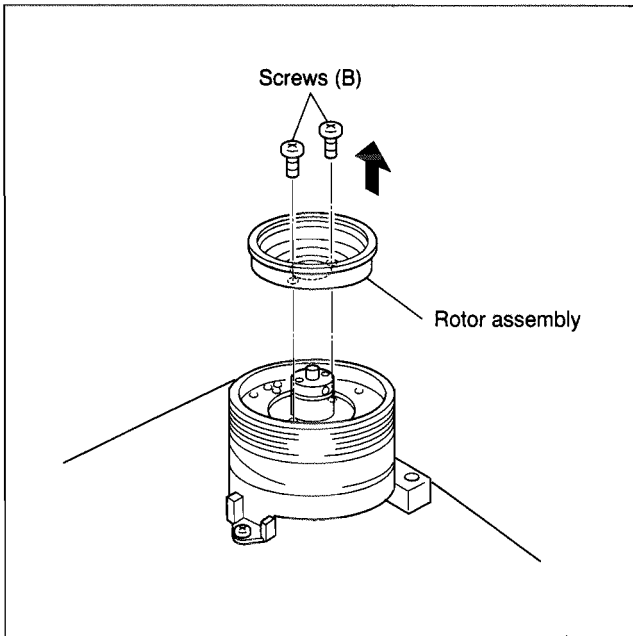


Fig. 2-2-42

Note: When installing the rotor assembly, note that a normal picture cannot be obtained without ensuring the phase matching as mentioned below.

- (3) Match the phases of the upper drum assembly and the rotor assembly as indicated in Fig.2-2-43.
- (4) Place the upper drum assembly hole (a) over the rotor assembly holes (b) (with three holes to be aligned) and tighten the two screws (B). (See Fig.2-2-43.)

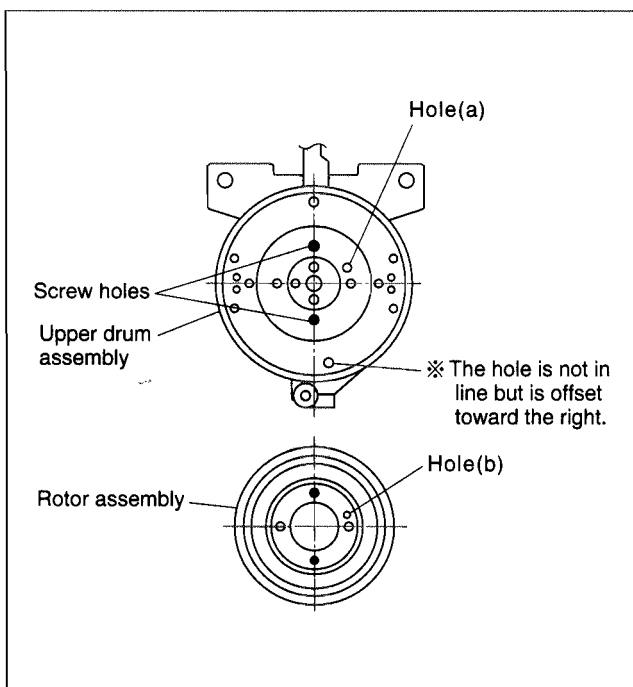


Fig. 2-2-43

2.2.25 Upper Drum Assembly

1. How to remove

- (1) Remove the stator assembly and rotor assembly.
- (2) Loosen the screw of the collar assembly using a 1.5 mm hexagonal wrench and remove the collar assembly. Also remove the brush, spring and cap at one time.
- (3) Remove the upper drum assembly and remove the washer using tweezers.

Note: When replacement is required, control the up-down movement of the brush. Never apply grease.

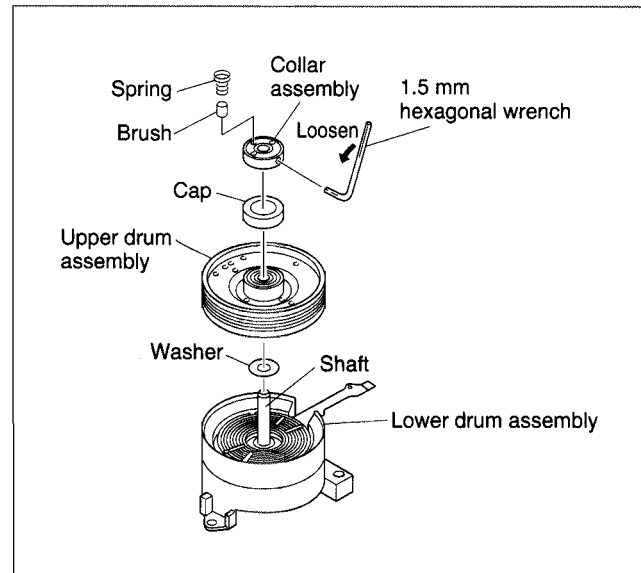


Fig. 2-2-44

2. How to install

- (1) Clean the coil parts of the lower drum assembly and the newly installed upper drum assembly with an air brush in advance. (See Fig.2-2-45.)
- (2) Install a new washer and upper drum assembly on the drum shaft. (See Fig.2-2-44.)

Note: When replacing the upper drum assembly, replace it together with the washer.

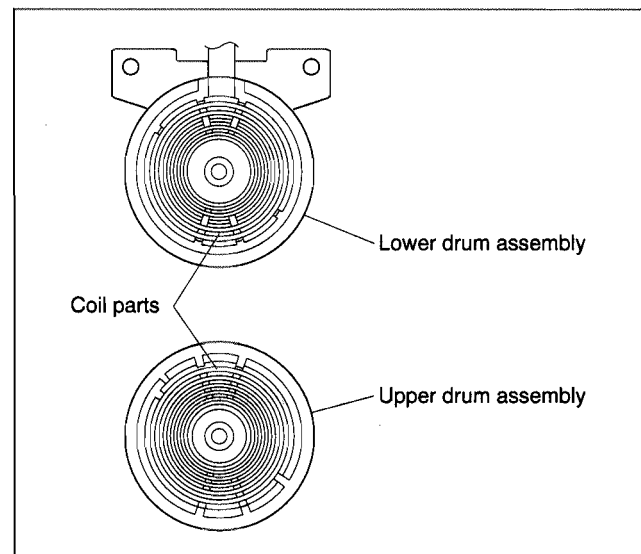


Fig. 2-2-45

- (3) Install the cap to the upper drum assembly.
- (4) Position the collar assembly as indicated in Fig.2-2-46 while controlling its up-down movement.

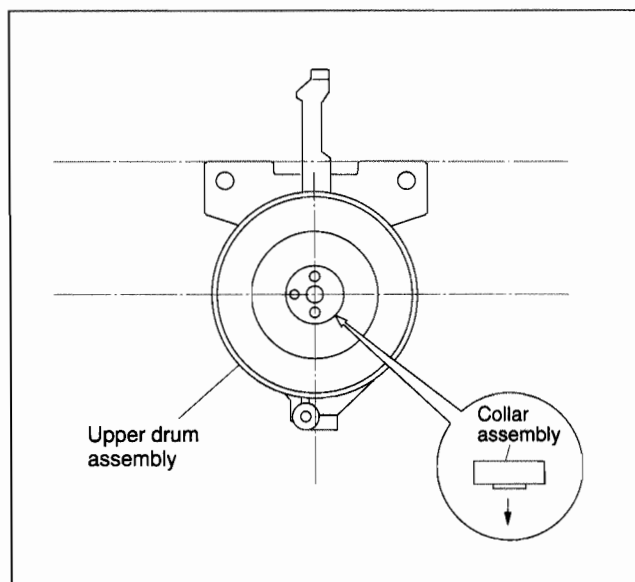


Fig. 2-2-46

- (5) Secure the collar assembly in position with a hexagonal wrench while pressing its top with the fingers.

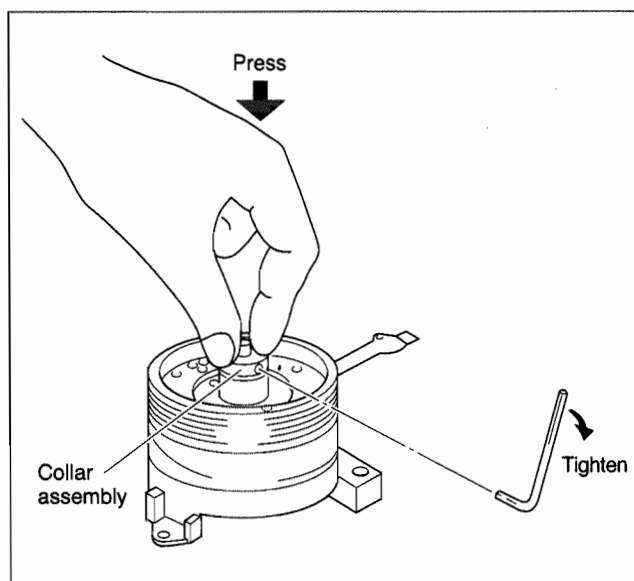


Fig. 2-2-47

- (6) After installation, gently turn the upper drum assembly with your hand to make sure that it turns normally. Then install the brush and the spring.
- (7) Install the rotor assembly and stator assembly according to Fig 2-2-41 and 2-2-42.
- (8) When installation is complete, clean the upper drum assembly and lower drum assembly and carry out the following adjustments.
 - PB switching point adjustment
 - Slow tracking adjustment
 - Compatibility adjustment (Be sure to check for compatibility for the LP mode.)

2.3 COMPATIBILITY ADJUSTMENT

- Notes:**
- Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the audio control head, drum assembly or any part of the tape transport system.
 - To avoid any damage to the alignment tape while performing the compatibility adjustment, get a separate cassette tape (for recording and play back) ready to be used for checking the initial tape running behavior.

2.3.1 Checking/Adjustment of FM Waveform Linearity

- (1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
- (2) Playing the alignment tape MHPE, observe the FM waveform.
- (3) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings tracking to the centre.)
- (4) Make sure that there is no significant level drop of the FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig.2-3-1.)
- (5) Reduce the FM waveform while pressing the channel buttons (▲, ▼) during playback. If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver (PTU94002) to make the FM waveform linear. If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the guide roller to make it linear. (See Fig.2-3-3.)
- (6) Then play MHPE-L and make sure that the FM waveform varies in parallel and linearly with the tracking operation. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
- (7) Unload the cassette tape once, play the alignment tape MHPE-L again and confirm the FM waveform.

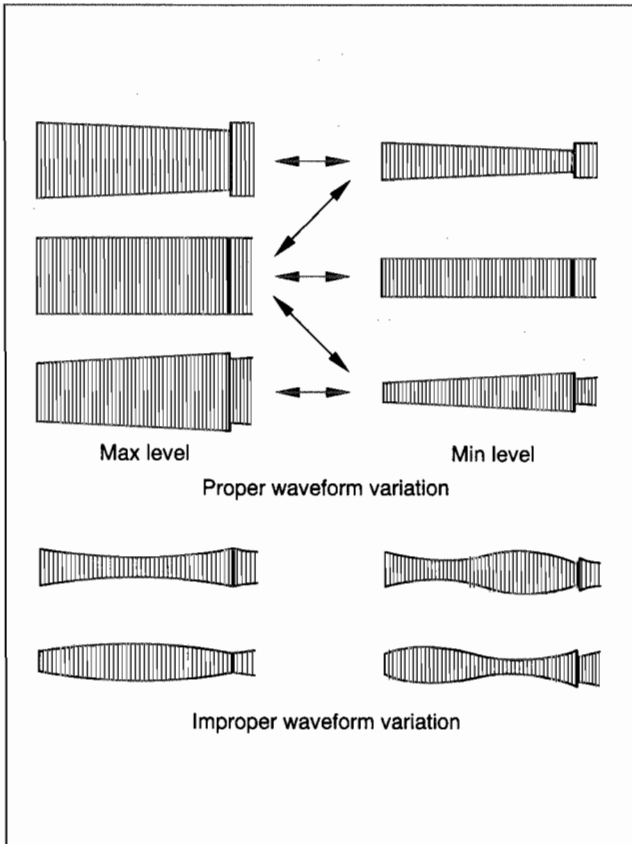


Fig. 2-3-1

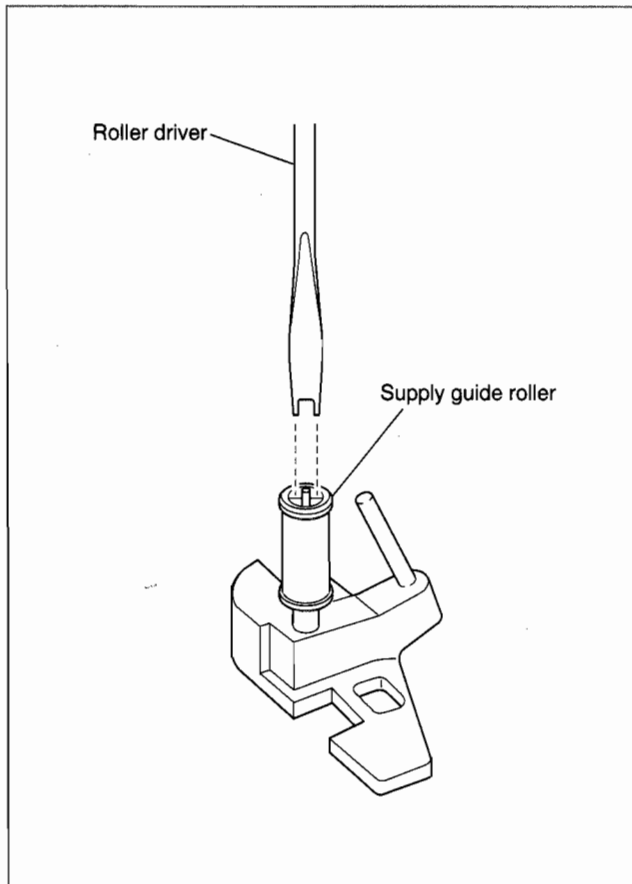


Fig. 2-3-2

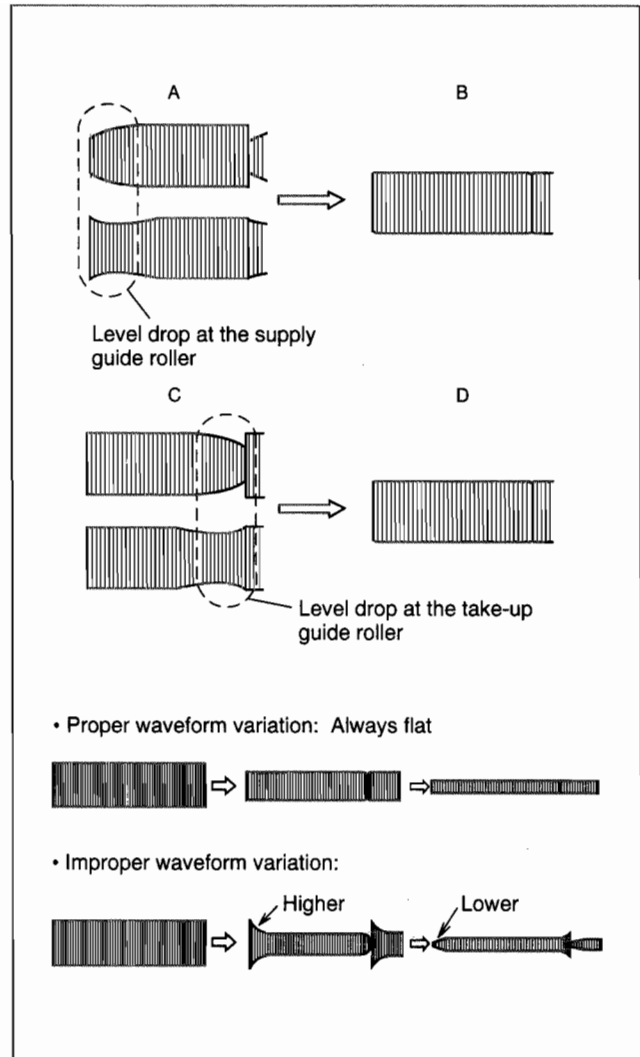


Fig. 2-3-3

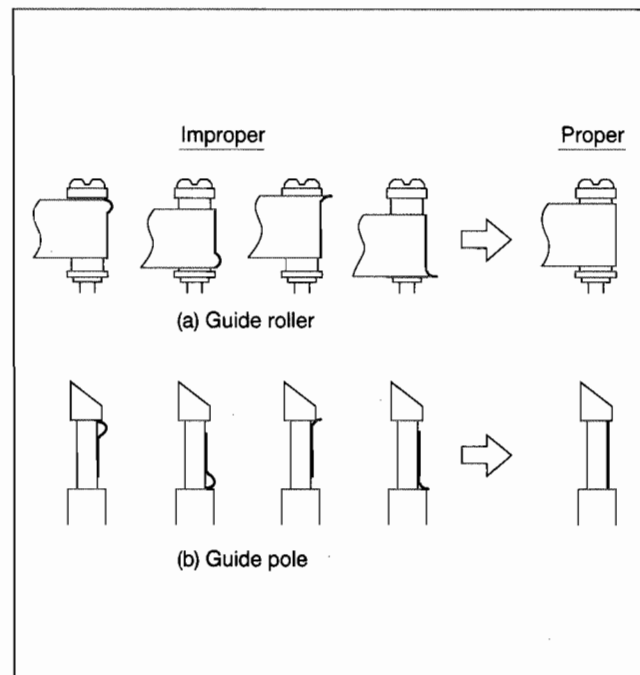


Fig. 2-3-4

2.3.2 Checking/Adjustment of the Height and Tilt of the Audio Control Head

Note: Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (See Fig.2-2-15.)

- (1) Connect CH-1 of the oscilloscope to AUDIO OUT and CH-2 to TP4001 (CTL.P) of the main board assembly and observe the waveforms on both channels in the ALT mode.
- (2) Play the alignment tape MHPE and adjust it by turning the screws (1), (2) and (3) little by little until the waveform of both the audio output signal and the control pulse reach maximum. The screw (1) and screw (3) are for adjustment of tilt and screw (2) for azimuth.

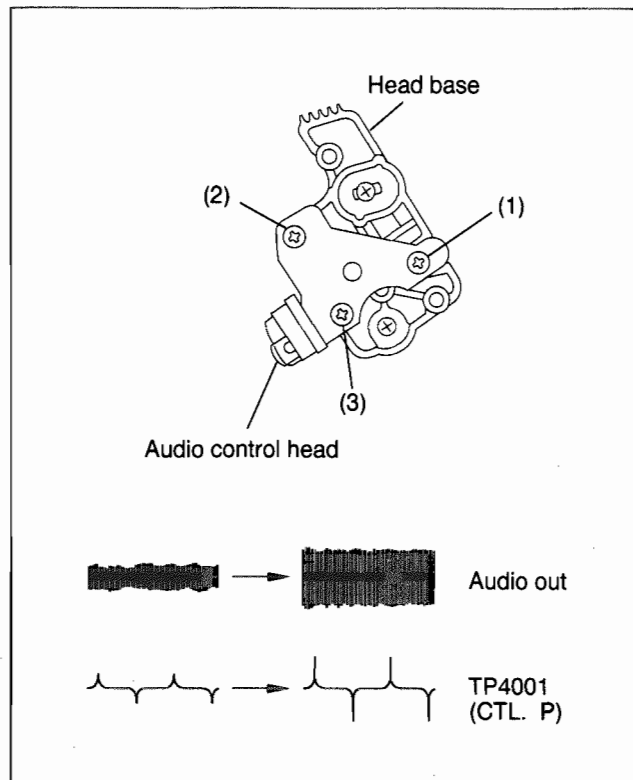


Fig. 2-3-5

2.3.3 Checking/Adjustment of the Audio Control Head Phase (X-Value)

- (1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
- (2) Play the alignment tape MHPE and observe the FM waveforms.
- (3) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings tracking to the centre.)
- (4) Loosen screws (4) and (5) so that the A/C head position bit (PTU94010) is set as indicated in Fig.2-3-6.
- (5) Turn the A/C head position bit fully toward the capstan. Then turn it back gradually toward the drum and stop on the second peak point position of the FM waveform output level. Then tighten the screw (4) temporarily.

- (6) Then play the alignment tape MHPE-L.
- (7) Press the channel buttons (▲, ▼) simultaneously during playback to enter the manual tracking mode. (This also brings the tracking to the centre.)
- (8) Perform the tracking operation and make sure that the FM waveform is at its maximum.
- (9) If it is not at maximum, loosen the temporarily tightened the screw (4) and turn the A/C head position bit to bring the audio control head to a position, around where the waveform reaches its maximum for the first time. Then tighten the screws (4) and (5).

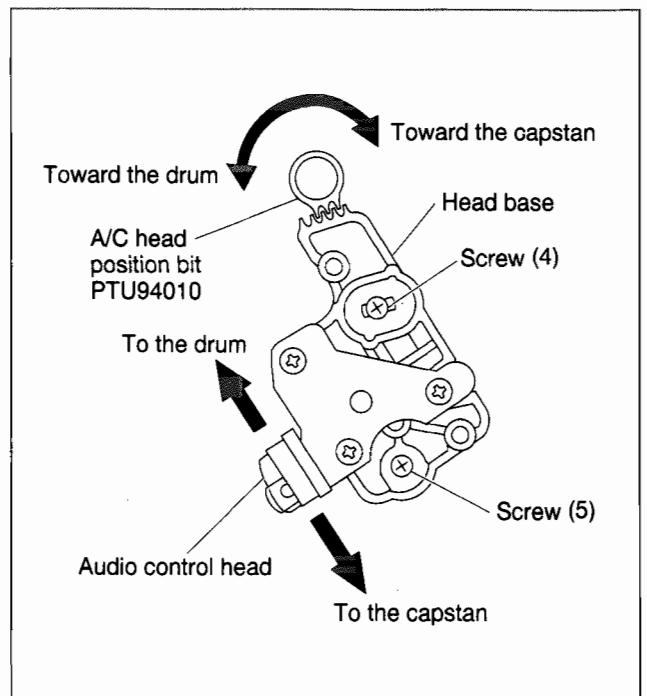


Fig. 2-3-6

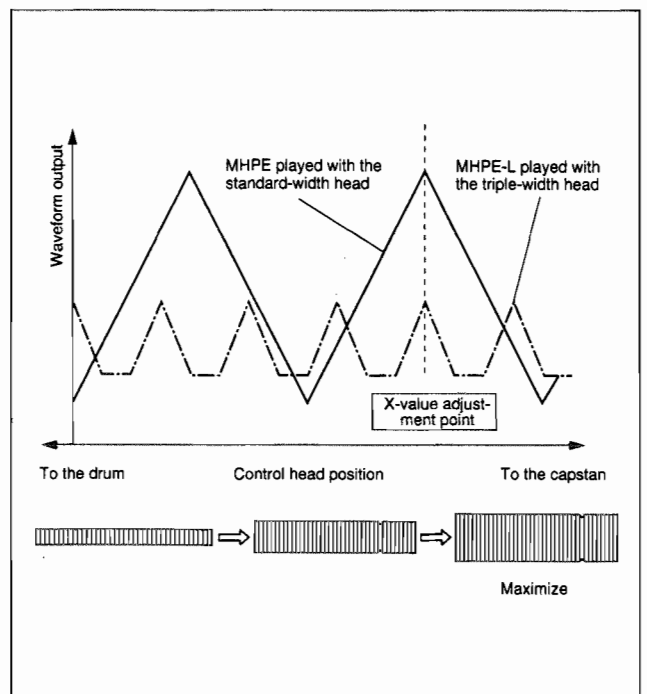


Fig. 2-3-7

2.3.4 Checking/Adjustment of the Standard Tracking Preset

Note: Set the remote control code of the video recorder to A mode.

(The unit set in B mode does not accept the remote control code of the presetting unit.)

- (1) Connect the oscilloscope to TP106(V. PB FM) of the main board assembly and to TP111(D.FF) of the main board assembly for external sync connection.
- (2) Playing the alignment tape MHPE-L and observing the FM waveform, make sure that the auto tracking operation is complete.
- (3) Press the "D" button of the presetting unit twice.
- (4) Make sure that the MHPE-L is not ejected.
- (5) If ejected, again perform the phase (X-value) adjustment of the audio control head.

2.3.5 Checking/Adjustment of the Tension Pole

- (1) Check the back tension cassette gauge (PUJ48076-2) to make sure that the indicator points to 25 - 51 gf•cm.
- (2) If the indicated value is outside this range, carry out the following adjustment steps.
 - 1) Select the mechanism servicing mode. (See 1.5 MECHANISM SERVICE MODE.)
 - 2) While in the Play mode, turn the adjustment pin with a straight-slot screwdriver while taking care not to touch the 2.5 mm dia. pole. (See Fig.2-3-8.)

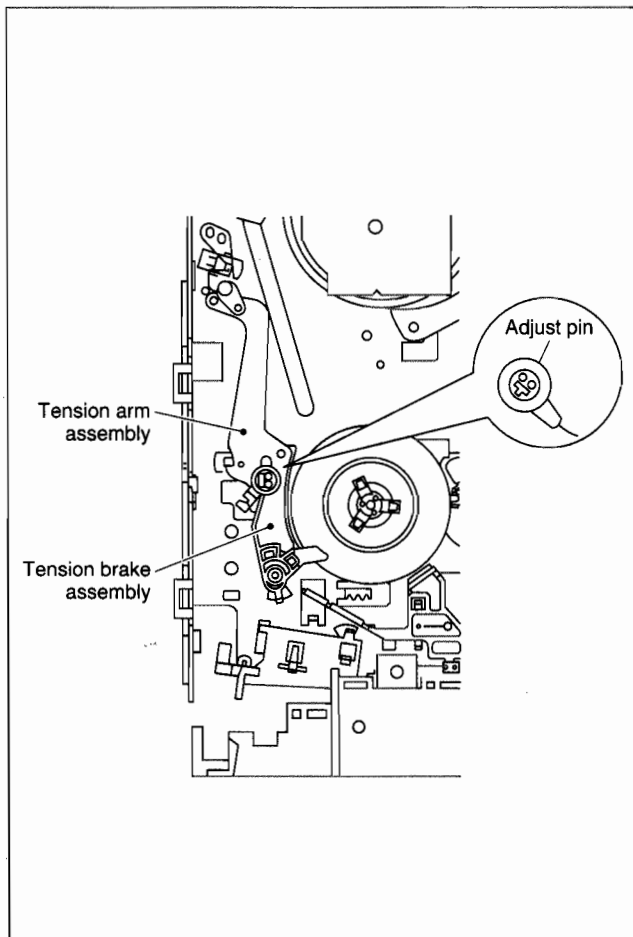


Fig. 2-3-8

2.3.6 Adjustment of the Tension Stud

- (1) Adjust so that the left side of the tension stud is on the extension of the notch line of the main deck. (See Fig. 2-3-9.)

Note: Adjustment is not usually necessary for the tension stud. Perform this adjustment only when it is out of position.

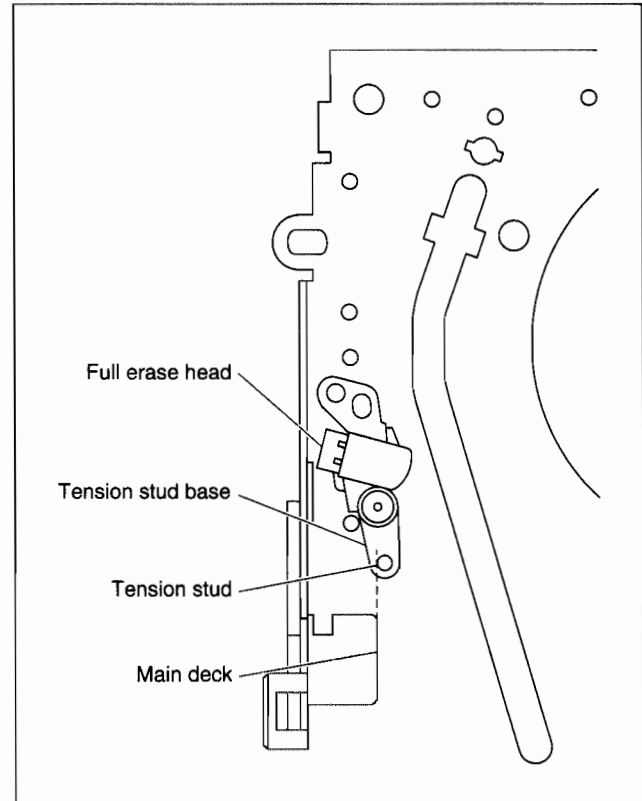


Fig. 2-3-9

2.3.7 Main Brake Torque Adjustment

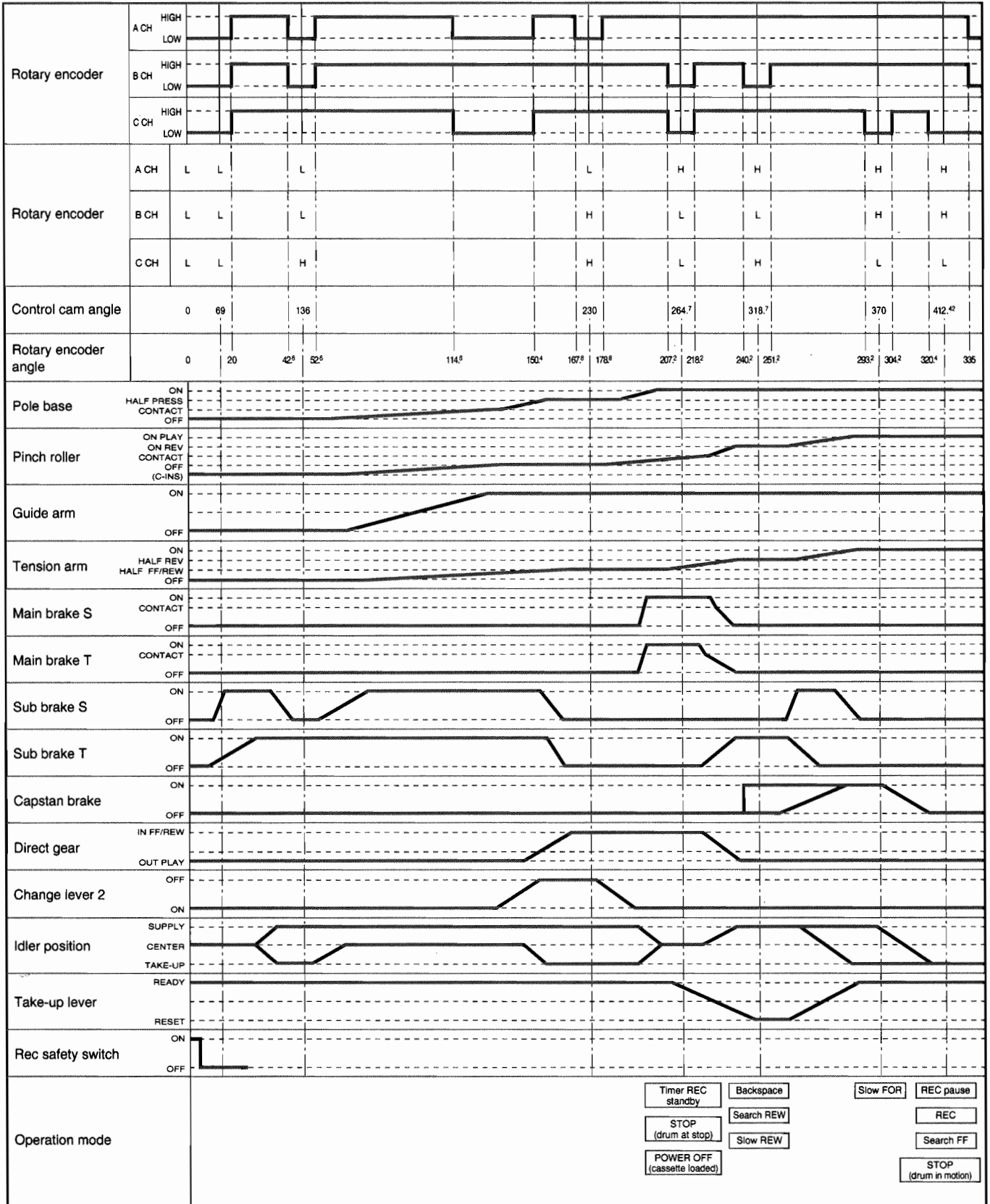
Note: Adjustment of the main brake torque is required after the adjustment pin has been removed or the main brake assembly or the reel disk on the supply or take-up side have been replaced, removed or attached.

- (1) Rotate the pulley of the loading motor by hand to align the mark ▼ on the loading arm gear shaft with the ST marking on the control plate (i.e. set to the STOP mode position).
- (2) Insert a torque gauge (PUJ48075-2) into the reel disk on the side to be played, hold the torque gauge lightly, rotate it clockwise when measuring the supply side torque or counterclockwise when measuring the take-up side torque, and read the value indicated at the moment the reel disk starts to slip.
- (3) Make sure that the main brake torque values on the supply and take-up sides are both between $23.5 - 78.4 \times 10^{-3} \text{ N}\cdot\text{m}$ (240 - 800 gf•cm). If the value is outside the specified range, adjust to the specified value by rotating the adjustment pin.

If an adjustment by using the adjustment pin is not possible, replace the main brake assembly.

Mechanism Timing Chart

Mechanism mode: EJECT END, CASS-UP, CASS-INS, FF/REW, STOP, REV, SLOW/STILL, PLAY
 Control plate mark: E, U, CI, FR, ST, R, SL, P



SECTION 3 ELECTRICAL ADJUSTMENT

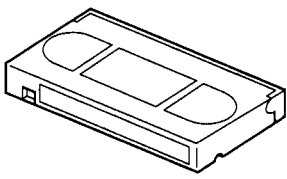
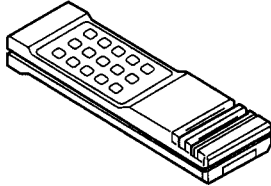
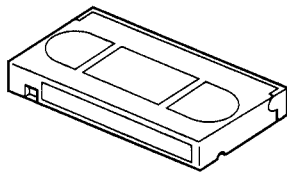
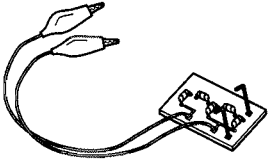
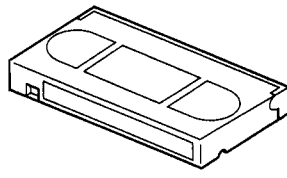
3.1 PRECAUTION

Electrical adjustment are required after replacing circuit components and certain mechanical parts. It is important to perform these adjustments only after all repairs and replacements have been completed. Also do not attempt these adjustments unless the proper equipments is available.

3.1.1 Required test equipment

- ① Colour television or monitor
- ② Oscilloscope: wide-band, dual-trace, triggered delayed sweep
- ③ Frequency counter
- ④ Signal generator: RF/IF sweep/marker
- ⑤ Signal generator: PAL colour bar, stairstep
- ⑥ Recording tape (VHS tape/S-VHS tape)
- ⑦ Digit-key remote controller(provided)

3.1.2 Required adjustment tools

Alignment tape (SP, stairstep) MHPE	Presetting unit PTU94008
	
Alignment tape (S-VHS, SP/LP, colour bar) MH-2H	LPF PTU93006
	
Alignment tape (SP, stairstep) -MHP	
	

3.1.3 Colour bar signal, colour bar pattern

- PAL colour bar signal

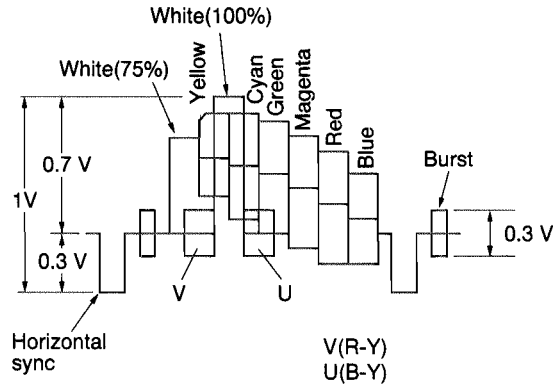


Fig.3-1-1 PAL colour bar signal waveform

- PAL colour bar pattern

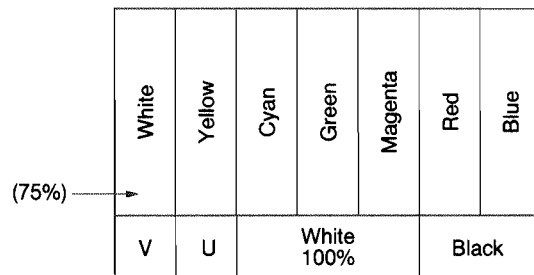


Fig.3-1-2 PAL colour bar pattern

Note:

*The system control circuit of this model has an automatic recognition about the ON-OFF control of the **DOCTOR SYSTEM**.*

3.2 SERVO CIRCUIT

- Notes:**
- Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.
 - Set the VCR to the mode A by the remote controller.

3.2.1 PB switching point

Signal	<ul style="list-style-type: none"> • Alignment tape [MHPE], Stairstep • Alignment tape [MHP], Stairstep
Mode	<ul style="list-style-type: none"> • PB • TBC : OFF
Equipment	<ul style="list-style-type: none"> • Oscilloscope
Measurement point	<ul style="list-style-type: none"> • VIDEO OUT TERMINAL
Trigger slope (-)	<ul style="list-style-type: none"> • TP111(D.FF)
Adjustment tool	<ul style="list-style-type: none"> • Presetting unit [PTU94008]
Specification	<ul style="list-style-type: none"> • $8.0 \pm 0.5H$ [MHPE] • $7.5 \pm 0.5H$ [MHP]

Note: • Use only the "E" and "F" buttons, depressing other buttons during adjustment may cause adjustment errors.

- (1) Playback the stairstep signal of the alignment tape [MHPE].
- (2) Connect an oscilloscope to VIDEO OUT TERMINAL and TP111 (negative slope), and then observe VIDEO OUT TERMINAL.
- (3) Adjust by pressing the "E" or "F" buttons of the presetting unit so that the switching point becomes $8.0 \pm 0.5H$ from V.sync.
- (4) Depress the STOP button.
- (5) Playback the stairstep signal of the alignment tape [MHP].
- (6) Adjust by pressing the "E" or "F" buttons of the presetting unit so that the switching point becomes $7.5 \pm 0.5H$ from V.sync.
- (7) Depress the STOP button.

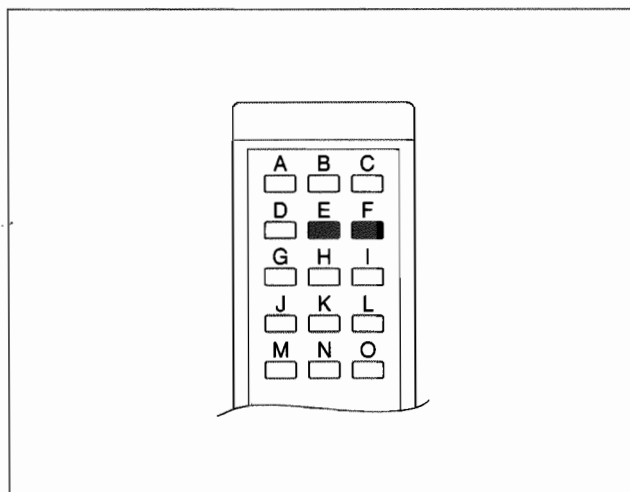


Fig. 3-2-1 Presetting unit

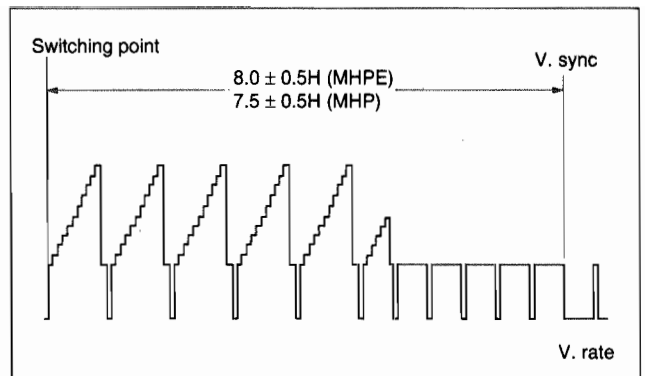


Fig. 3-2-2 PB switching point

3.2.2 Slow tracking preset

Signal	<ul style="list-style-type: none"> • Tuner or colour bar
Mode	<ul style="list-style-type: none"> • SP/LP : REC → PB(SLOW) • S-VHS
Equipment	<ul style="list-style-type: none"> • TV-Monitor
Adjustment tool	<ul style="list-style-type: none"> • Presetting unit (PTU94008)
Specification	<ul style="list-style-type: none"> • Minimum noise

Note: • Use only the "B" and "C" buttons, depressing other buttons during adjustment may cause adjustment errors.

- (1) Record a colour bar signal in the SP mode.
- (2) Playback the recorded signal on the FWD slow mode.
- (3) Set the tracking control to the centre position by simultaneously pressing the CH "+" and "-" buttons.
- (4) Observe the display on the TV monitor and adjust for optimum noise condition (best tracking) by depressing the "B" or "C" buttons of the presetting unit.
- (5) Depress the STOP button.
- (6) Confirm that the bar noise is not visible on the TV monitor in the slow mode.
- (7) Repeat steps (2) to (6) in the REV slow mode.
- (8) Repeat steps (1) to (7) in the LP mode.

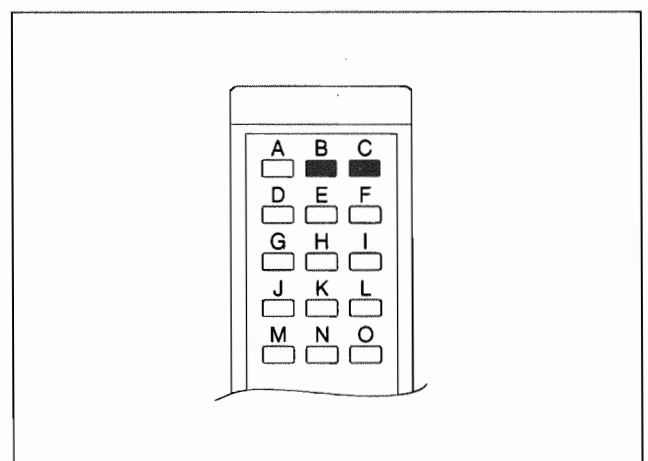


Fig. 3-2-3 Presetting unit

3.3 VIDEO CIRCUIT

- Notes:**
- Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.
 - VIDEO circuit adjustments are performed by the EVR system by use of the presetting unit and digit-key remote controller.
 - S-INPUT means Y/C separated video signal in the chart.
 - Set the VCR to the mode A by the remote controller.
 - Unless otherwise specified, set the VCR to the following mode.

B.E.S.T	OFF
PICTURE CONTROL	NORMAL
TBC	ON

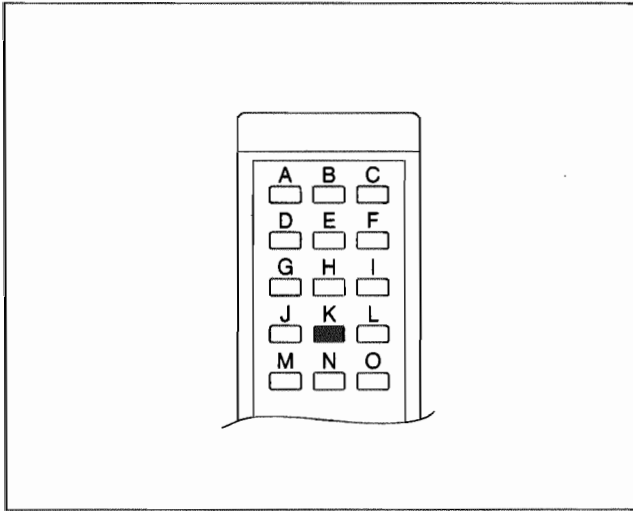


Fig. 3-3-1 Presetting unit

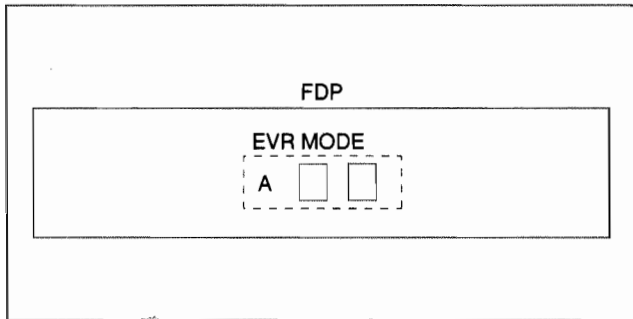


Fig. 3-3-2 EVR mode

3.3.1 EEY level

Signal	• Colour bar
Mode	• EE
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.03 Vp-p (terminated)

- (1) Connect an oscilloscope to Y OUT TERMINAL.
- (2) Set the EVR mode by pressing the "K" button of the presetting unit.
- (3) Set "A : 11" by twice pressing 1 button of the remote controller.
- (4) Adjust the CH "+" or "-" buttons for 1.00 ± 0.03 Vp-p. (See Fig. 3-3-3.)
- (5) Set the normal VCR mode by pressing the "K" button of the presetting unit again so adjustment data is memorized.

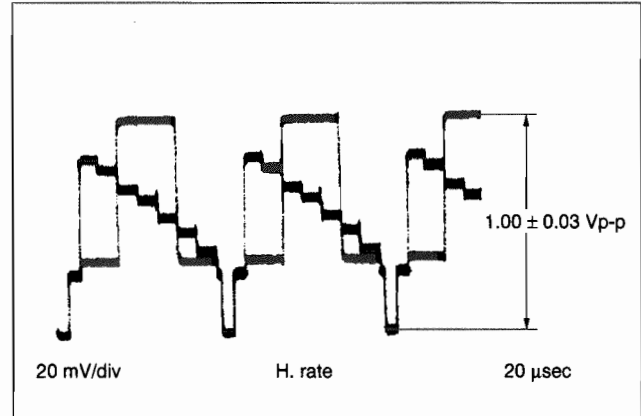


Fig. 3-3-3 EE Y level

3.3.2 SP/LP REC colour level

Signal	<ul style="list-style-type: none"> • Alignment tape [MH-2H] • Colour bar
Mode	<ul style="list-style-type: none"> • PB • REC → PB : SP/LP • S-VHS
Equipment	• Oscilloscope
Measurement point	• PB COLOUR
Trigger slope (-)	• TP111 (D.FF)
Adjustment tool	<ul style="list-style-type: none"> • Presetting unit [PTU94008] • Digit-key remote controller • LPF fixture [PTU93006]
EVR mode	• A : 2
Specification	<ul style="list-style-type: none"> • "B" × 150 ± 5% : SP • "B" × 110 ± 5% : LP

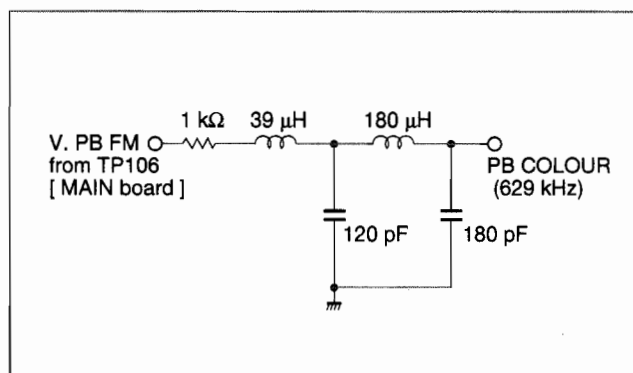


Fig. 3-3-4 LPF

- (1) Connect an oscilloscope to PB COLOUR of a LPF (refer to Fig. 3-3-4) and TP111 (negative slope) on the MAIN board.
- (2) Playback the SP colour bar signal of the MH-2H alignment tape.
- (3) Adjust by pressing the CH "+" or "-" buttons of the Front panel for maximum level of the color waveform and make a note of the higher colour level "B".
- (4) Press the STOP/EJECT button and eject the MH-2H alignment tape.
- (5) Set the EVR mode by pressing the "K" button of the pre-setting unit.
- (6) Set "A : 2" by pressing 2 button of the remote controller.
- (7) Before recording, adjust the CH "+" or "-" buttons of the remote controller so that the higher level channel becomes 150 ± 5% : SP (110 ± 5% : LP) of the note "B" level during playback as shown in Fig. 3-3-5.
- (8) Record a colour bar signal in the SP (LP) mode, and playback the recorded colour bar signal.
- (9) Set the normal VCR mode by pressing the "K" button again so adjustment data is memorized.

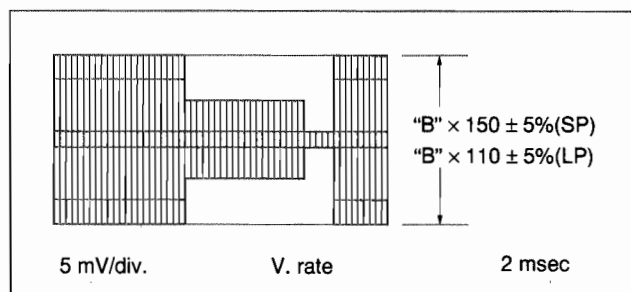


Fig. 3-3-5 REC colour level

3.3.3 PB Y level (S-VHS/VHS)

Signal	• Colour bar
Mode	<ul style="list-style-type: none"> • REC → PB : SP • S-VHS/VHS
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Adjustment tool	<ul style="list-style-type: none"> • Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 11
Specification	• 1.00 ± 0.03 Vp-p (terminated)

- (1) Connect an oscilloscope to Y OUT TERMINAL.
- (2) Set the EVR mode by pressing the "K" button of the pre-setting unit.
- (3) Set "A : 11" by twice pressing 1 button of the remote controller.
- (4) Record a colour bar signal in the S-VHS mode, and playback the recorded colour bar signal.
- (5) Adjust the CH "+" or "-" buttons for 1.00 ± 0.03 Vp-p as shown in Fig. 3-3-6.
- (6) Set the normal VCR mode by pressing the "K" button of the pre-setting unit again so adjustment data is memorized.
- (7) Repeat steps (1) to (6) in the VHS mode.

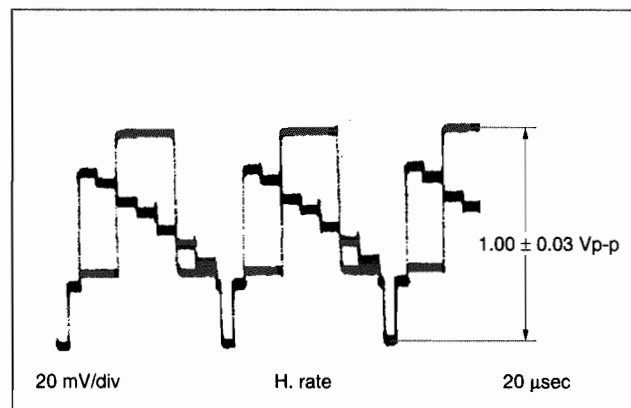


Fig. 3-3-6 PB Y level

3.3.4 S-VHS VIDEO EQ

Signal	<ul style="list-style-type: none"> • S INPUT • Video sweep
Mode	<ul style="list-style-type: none"> • REC → PB : SP/LP • S-VHS • Picture control REC : Normal PB : Edit
Equipment	• Oscilloscope
Measurement point	• Y OUT TERMINAL (75 ohm TERMINATION)
Trigger slope (-)	• TP111 (D.FF)
Adjustment tool	<ul style="list-style-type: none"> • Presetting unit [PTU94008] • Digit-key remote controller
EVR mode	• A : 3
Specification	<ul style="list-style-type: none"> • 3.6 ± 0.4 scale : SP • 3.2 ± 0.4 scale : LP

- (1) Connect an oscilloscope to Y OUT TERMINAL and TP111 (negative slope).
- (2) Record a video sweep signal in the S-VHS SP mode, then play it back.
- (3) Set the EVR mode by pressing the "K" button of the pre-setting unit.
- (4) Set "A : 3" by pressing 3 button of the remote controller.
- (5) When assuming the 100 kHz sweep signal marker on the bigger channel is four scales on the oscilloscope, adjust the CH "+" or "-" buttons on the front panel or the Digit-key remote controller so that the 3 MHz is set at 3.6 ± 0.4 scale (-1 ± 1.0 dB) while observing Y OUT of the S output. (See Fig. 3-3-7.)
- (6) Set the normal VCR mode by pressing the "K" button of the pre-setting unit again so adjustment data is memorized.
- (7) Carry out the step (3) and (4) in the S-VHS LP mode.
- (8) When assuming the 100 kHz sweep signal marker on the bigger channel is four scales on the oscilloscope, adjust the CH "+" or "-" buttons on the front panel or the Digit-key remote controller so that the 3 MHz is set at 3.2 ± 0.4 scale (-2 ± 1.0 dB) while observing Y OUT of the S output. (See Fig. 3-3-7.)

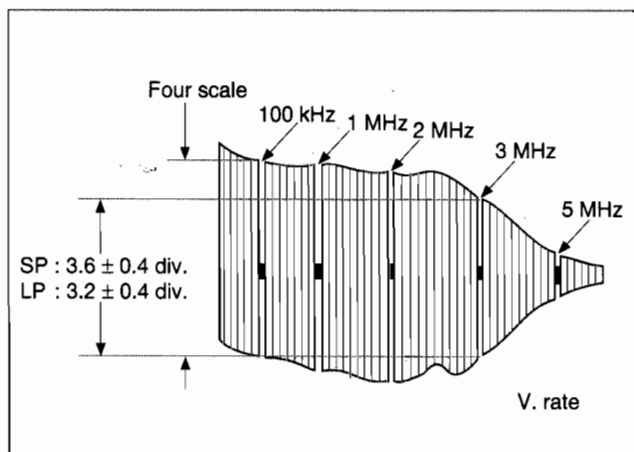


Fig. 3-3-7 S-VHS VIDEO EQ

3.3.5 D/A level

Signal	• Colour bar
Mode	<ul style="list-style-type: none"> • EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• CN1003-3 pin (Y OUT) [3D SVHS board]
Adjustment part	• VR1401 (D/A LEVEL) [3D SVHS board]
Specification (NOTE)	• 2.05 Vp-p (REFERENCE VALUE)

- (1) Connect the oscilloscope to the CN1003-3 pin(Y OUT) on the 3D SVHS board.
- (2) Confirm the Y level value during external S input.
- (3) Switch the input signal to the external input, then adjust the VR1401 on the 3D SVHS board so that the Y level value becomes the same level value which was confirmed at the step (2).

Note: • The adjusted value of 2.05 Vp-p is a reference value which should be obtained during external S input. The value should be adjusted to the one which was confirmed at step (2).

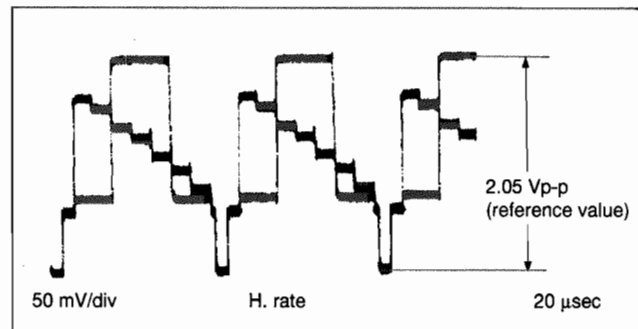


Fig. 3-3-8 D/A LEVEL

3.3.6 Pilot burst level

Signal	• Colour bar
Mode	<ul style="list-style-type: none"> • EE • S-VHS
Equipment	• Oscilloscope
Measurement point	• TP1001 (FSC PHASE) [3D SVHS board]
Adjustment part	• VR1002 (P. BURST LEVEL) [3D SVHS board]
Specification	• "B" x 110 ± 10%

- (1) Connect the oscilloscope to the TP1001 (FSC PHASE) on the 3D SVHS board.
- (2) Load an S-VHS tape then set the unit to the S-VHS EE mode.
- (3) Adjust the VR1002 of the 3D SVHS so that the pilot burst level becomes "B" x 110 ± 10% against the value of the burst level "B".

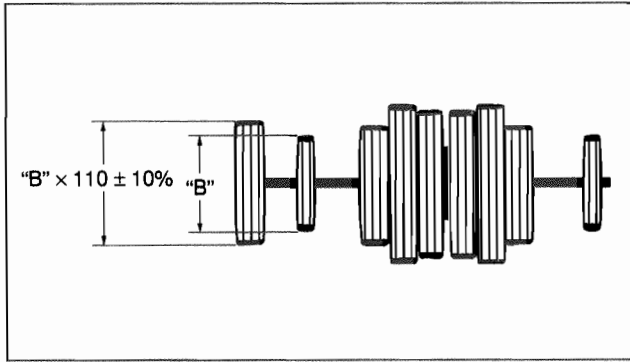


Fig. 3-3-9 PILOT BURST LEVEL

3.3.7 Auto picture

Signal	• Monoscope
Mode	• REC → PB : SP/LP • S-VHS
Adjustment tool	• Presetting unit [PTU94008]
Specification	• STOP mode

- (1) Record a monoscope signal in the SP mode.
- (2) Playback the recorded signal.
- (3) Press the "L" button of the presetting unit during playback.
- (4) Confirm that the VCR will go into the STOP mode.
- (5) Repeat steps (2) to (4) in the LP mode.

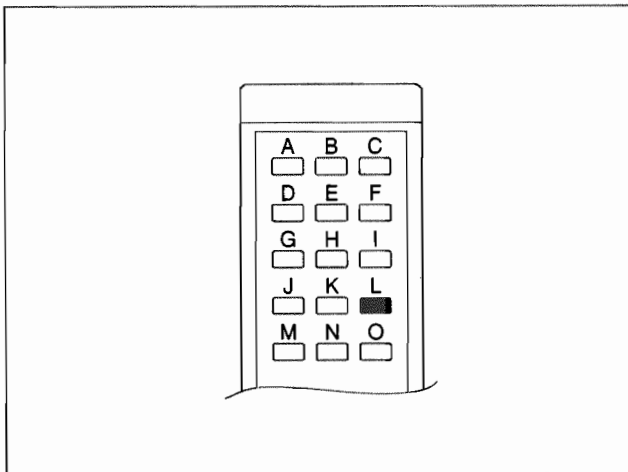


Fig. 3-3-10 Presetting unit

3.4 AUDIO CIRCUIT

- Notes:**
- Unless otherwise specified, all measurement point and adjustment parts are located on the MAIN BOARD.
 - This adjustment should be done after the video circuit SP and LP REC colour level are adjusted.
 - GND(Ground) should be taken from the tuner board shield.

3.4.1 REC FM level

Signal	• AUX • VIDEO : Colour bar • AUDIO : No signal
Mode	• REC → PB : LP • S-VHS • B.E.S.T : OFF
Equipment	• Oscilloscope
Measurement point	• TP2253 (A. PB FM)
Trigger slope (-)	• TP111 (D. FF)
Adjustment part	• VR2251 (A. REC. FM)
Specification	• 600 ± 100 mVp-p

- (1) Connect an oscilloscope to TP2253.
- (2) Record a colour bar signal without an audio signal in the S-VHS LP mode then playback.
- (3) Adjust VR2251 for 600 ± 100 mVp-p playback level of higher channel level before recording.
- (4) Confirm that the lower channel level is more than 450 mVp-p.

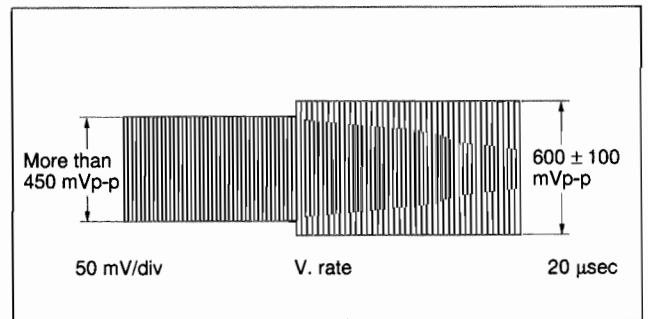


Fig. 3-4-1 Audio REC FM level

3.5 SYSCON CIRCUIT

- Notes:**
- Unless otherwise specified, all measurement points and adjustment parts are located on the MAIN BOARD.
 - When perform this adjustment, remove the MECHANISM assembly.

3.5.1 Timer clock

Signal	• No signal
Mode	• EE
Equipment	• Frequency counter
Measurement point	• IC3001-PIN61
Adjustment part	• C3025 (TIMER CLOCK)
Specification	• 1024.008 ± 0.001 Hz [976.5549 ± 0.0010 μsec.]

- (1) Connect the frequency counter to IC3001-PIN61.
- (2) Connect the short wire between IC3001-PIN24 and Vcc(5V).
- (3) Short the leads of capacitor C3026 once in order to reset IC3001.
- (4) Disconnect the short wire between IC3001-PIN24 and Vcc then connect it again.
- (5) Adjust C3025 trimmer capacitor so that the output from IC3001-PIN61 falls within 1024.008 ± 0.001 Hz (976.5549 ± 0.0010 μsec.) range.

3.6 ON SCREEN CIRCUIT

- Note:**
- Set the VCR to the mode A by the remote controller.

3.6.1 Character position

Signal	• No signal
Mode	• EE
Equipment	• TV-monitor
Adjustment tool	• Presetting unit [PTU94008] • Digit-key remote controller
Specification	• Character centre

- Note:**
- Use only the "H" button, depressing other buttons during adjustment may cause adjustment errors.

- (1) Press the MENU button and display the on screen character.
- (2) Observe the TV-monitor and centre position of character by pressing the "H" button of the presetting unit.

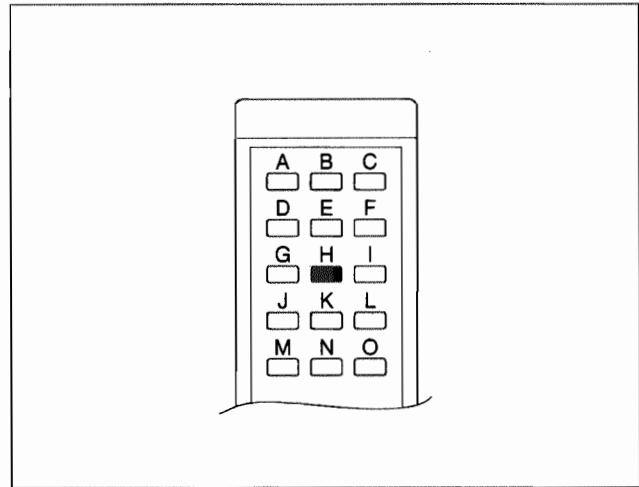


Fig. 3-6-1 Presetting unit

SECTION 4 CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions

The Components identified by the symbol are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

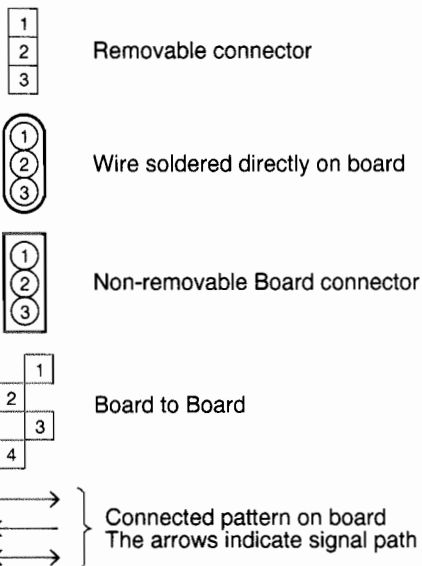
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K: K Ω (1000 Ω), M: M Ω (1000K Ω)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

3. Interpreting Connector indications

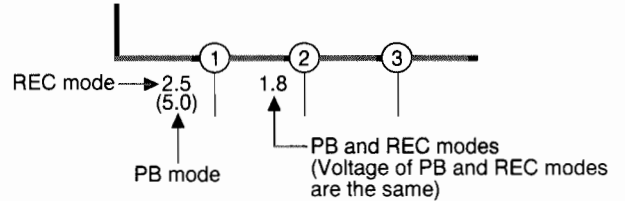


4. Voltage measurement

- 1) Video circuits
REC : Colour bar signal in SP mode, normal VHS mode
PB : Alignment tape, colour bar SP mode, normal VHS mode
— : Unmeasurable or unnecessary to measure
- 2) Audio circuits
REC : 1KHz, -8 dBs sine wave signal in SP mode, Normal VHS mode
PB : REC then playback it
- 3) Movie Camera circuits
Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode

4) Indication on schematic diagram

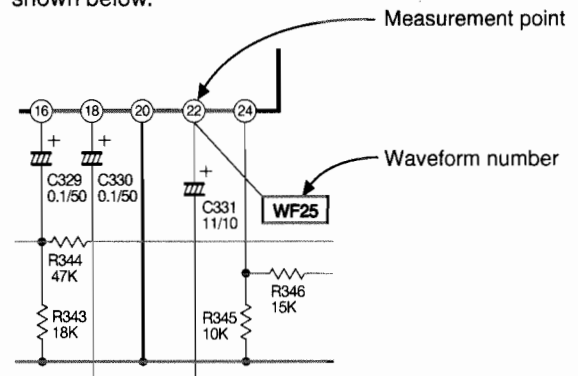
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



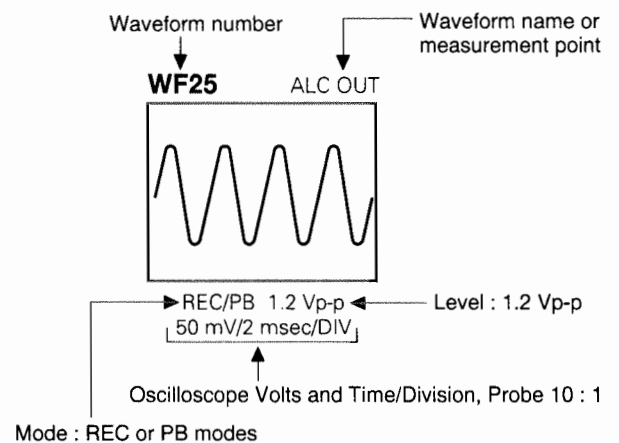
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

- 1) Video circuits
REC : Colour bar signal in SP mode, normal VHS mode
PB : Alignment tape, colour bar SP mode, normal VHS mode
- 2) Audio circuits
REC : 1KHz, -8 dBs sine wave signal in SP mode, normal VHS mode
PB : REC then playback it
- 3) Movie Camera circuits
Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
- 4) Indication on schematic diagram
Waveform indications on the schematic diagram are as shown below.








5) Waveform indications





6. Signal path Symbols

The arrows indicate the signal path as follows.

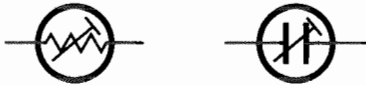
-  Playback signal path
-  Playback and recording signal path
-  Recording signal path (including E-E signal path)
-  Capstan servo path
-  Drum servo path

(Example)

-  R-Y Playback R-Y signal path
-  Y Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



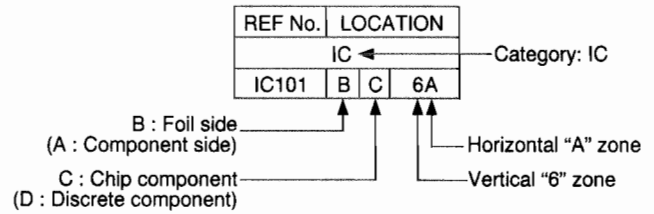
CIRCUIT BOARD NOTES

1. Foil and Component sides

- 1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.
- 2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS

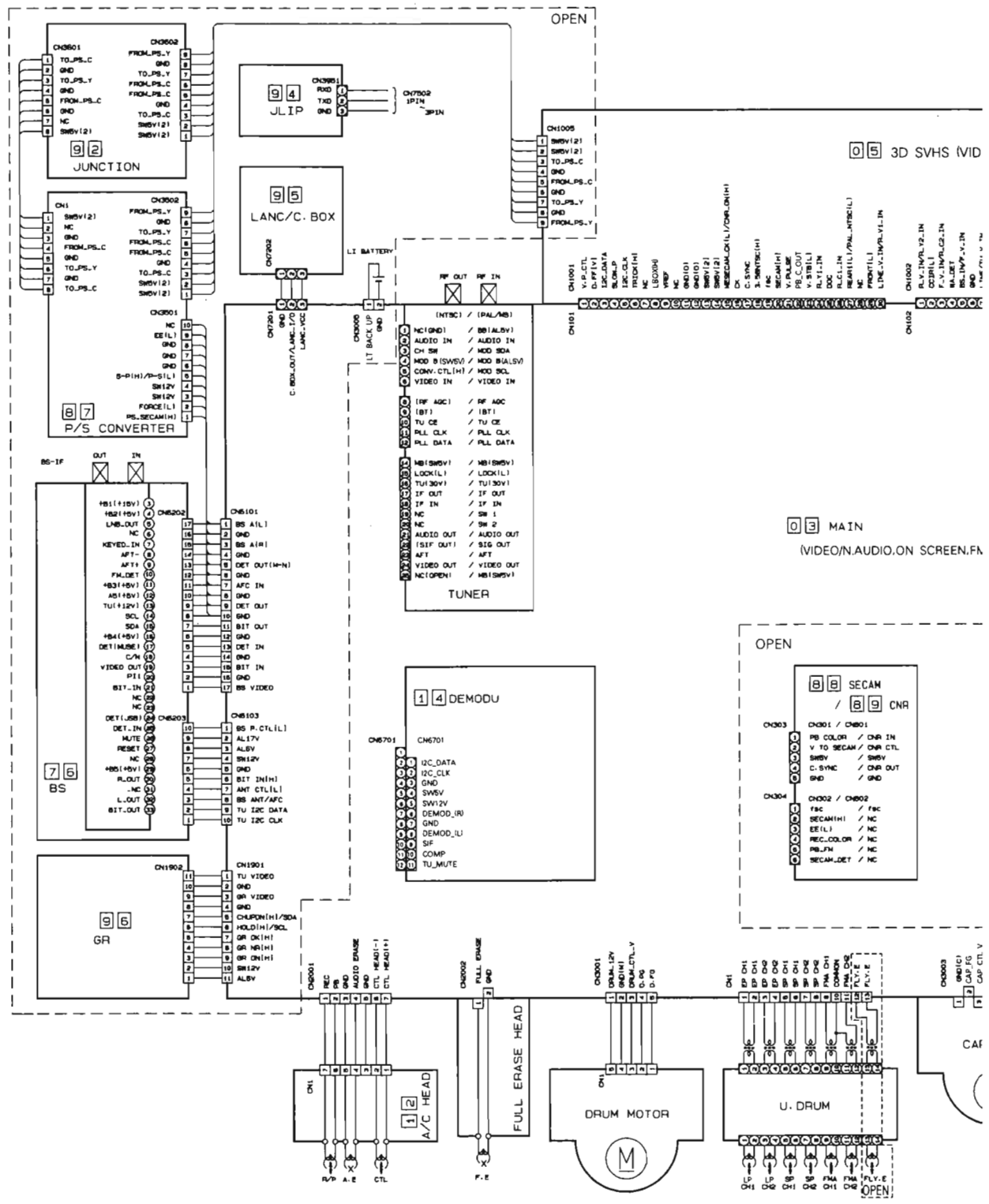
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4

3

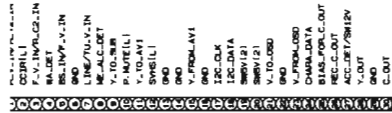
2

1

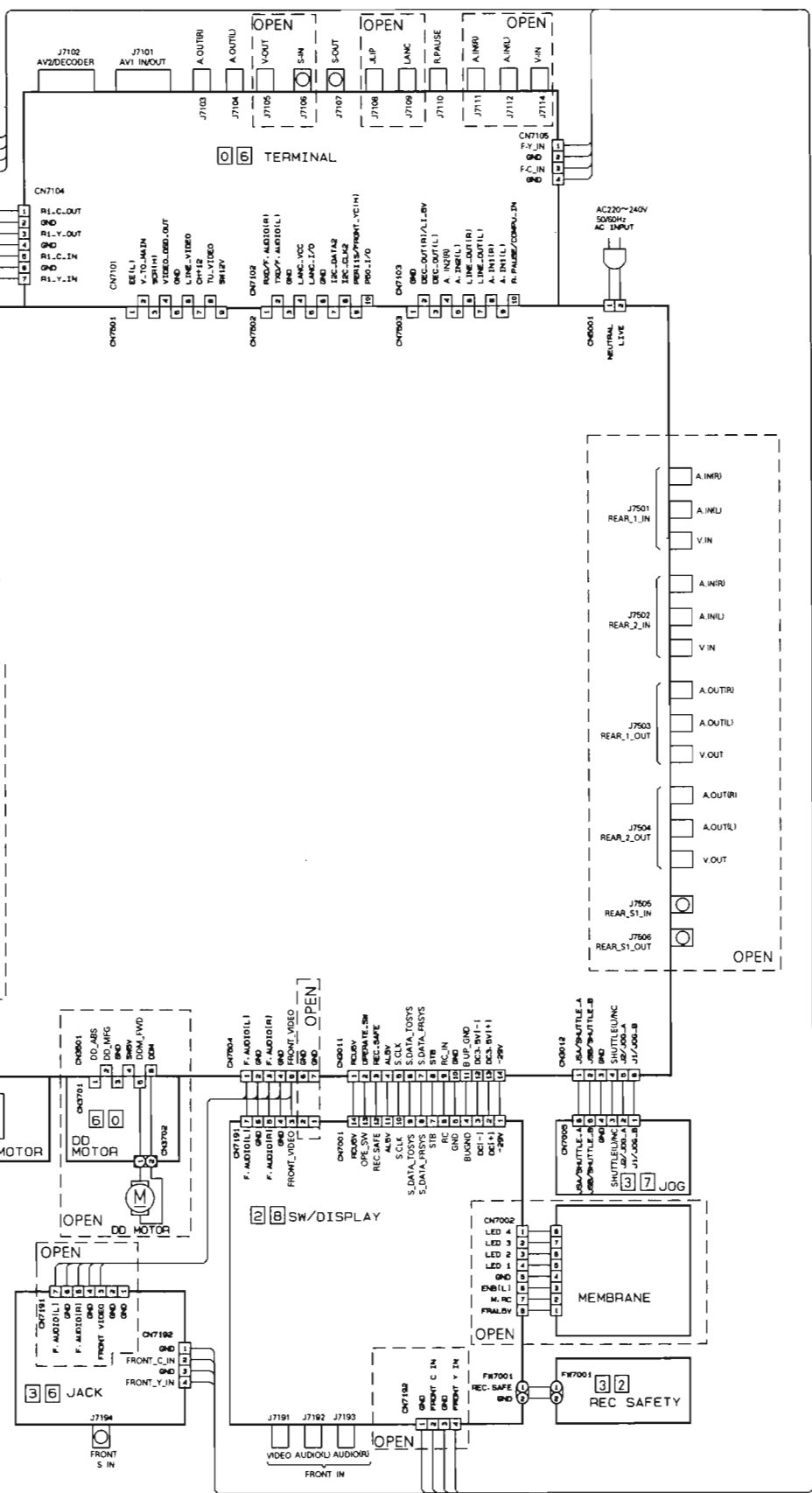
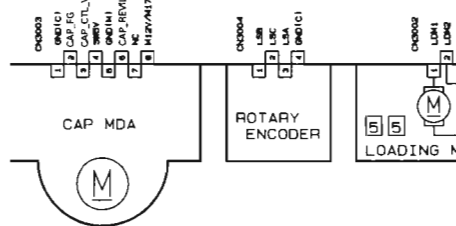
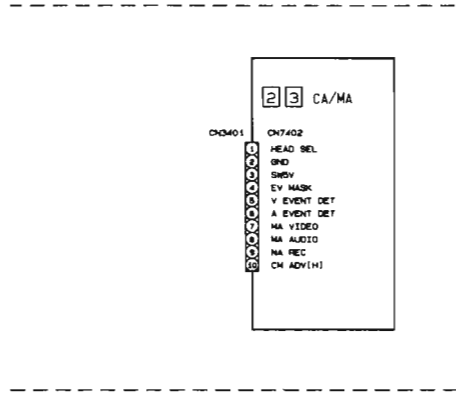


5 5	LOADING MOTOR
3 7	JOG
3 6	JACK
3 2	REC SAFETY
2 8	SH/DISPLAY
1 4	DEMODU
1 2	A/C HEAD
0 6	TERMINAL
0 5	3D SVHS MID
0 3	MAIN
NO	NAME

VHS (VIDEO, 3D/TBC)



SCREEN.FMA.SYSCON.TUNER.SW.REG.C.BOX_CTL.TERMINAL



4.2 VIDEO/N.AUDIO SCHEMATIC DIAGRAM

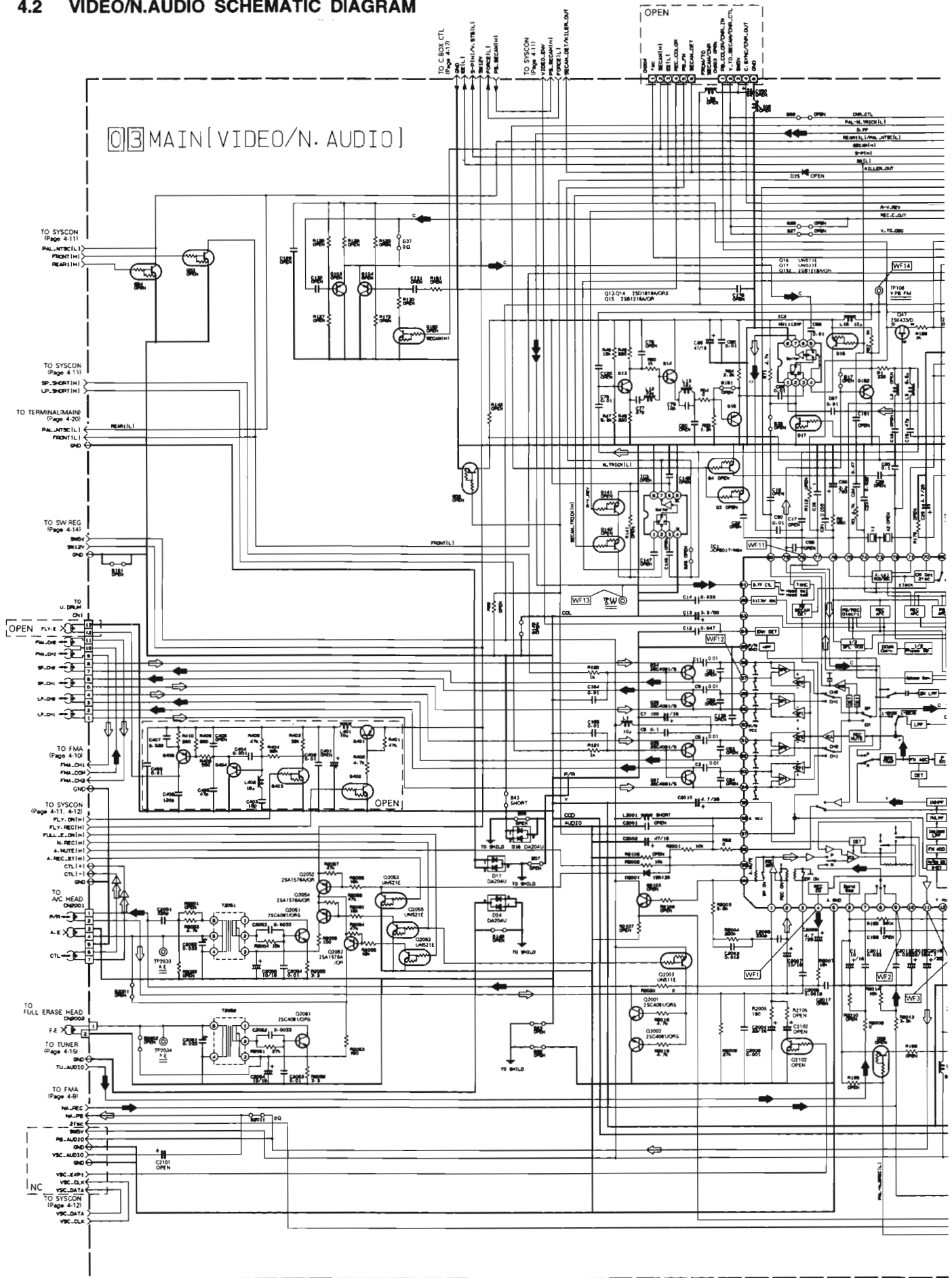
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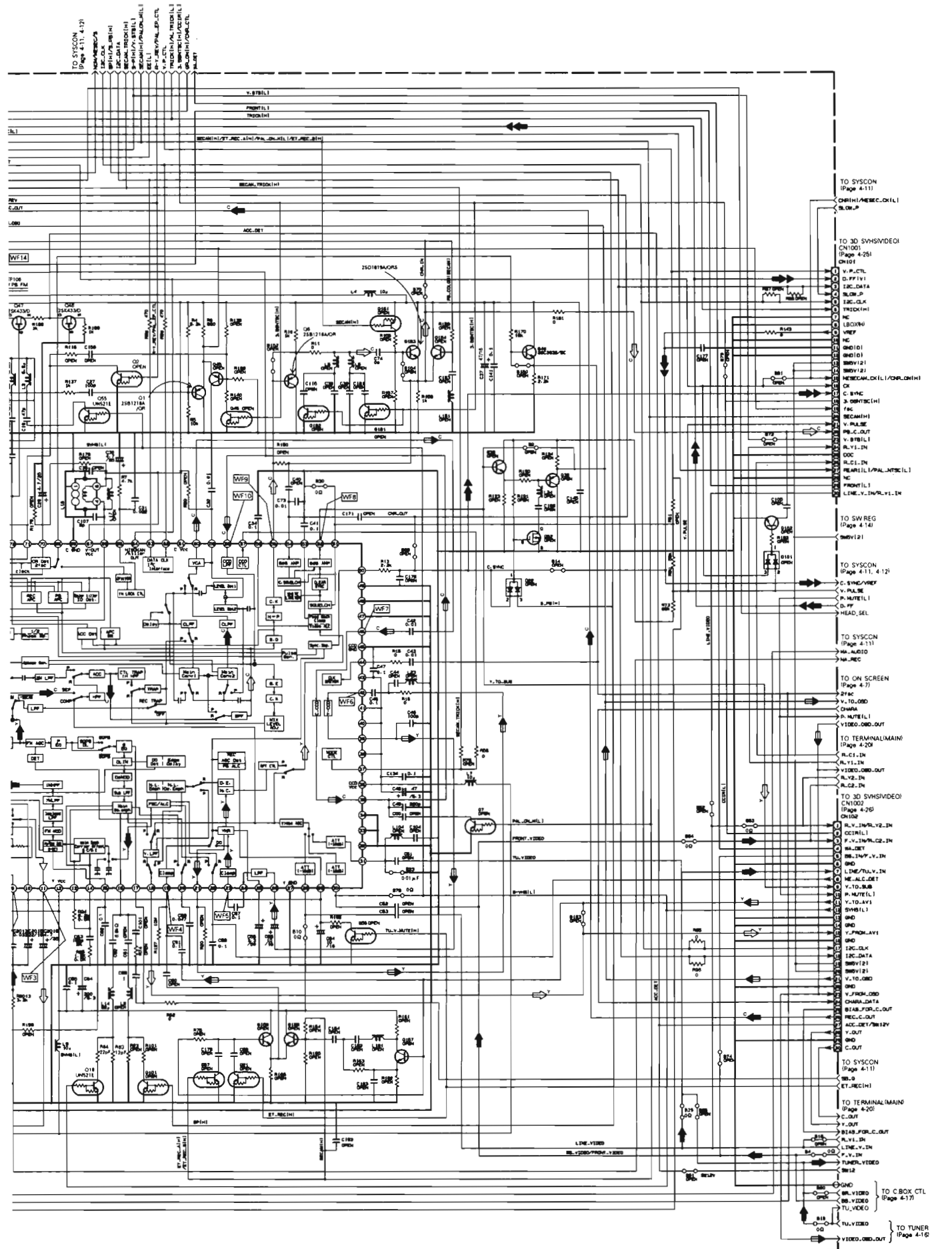
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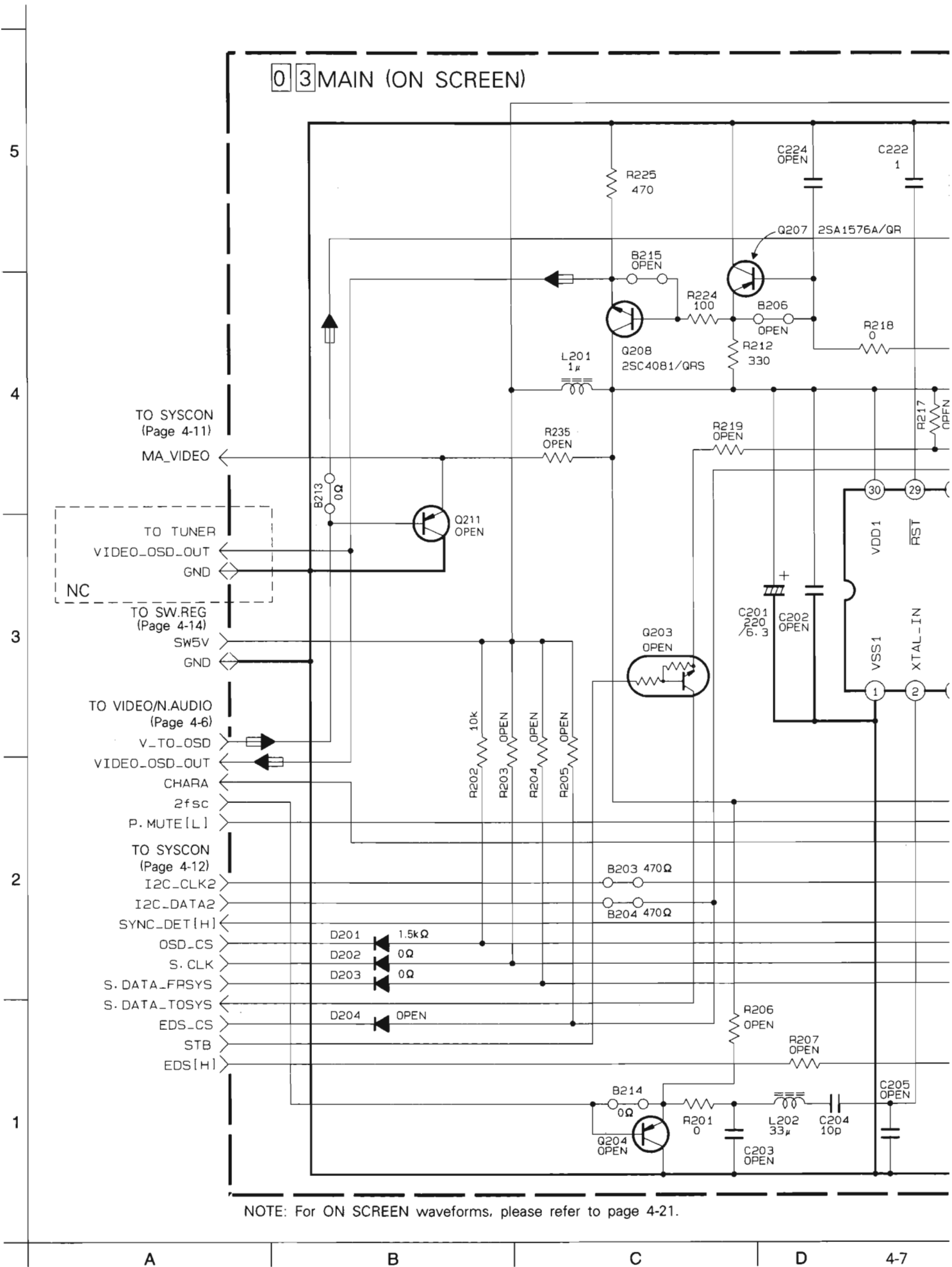
1

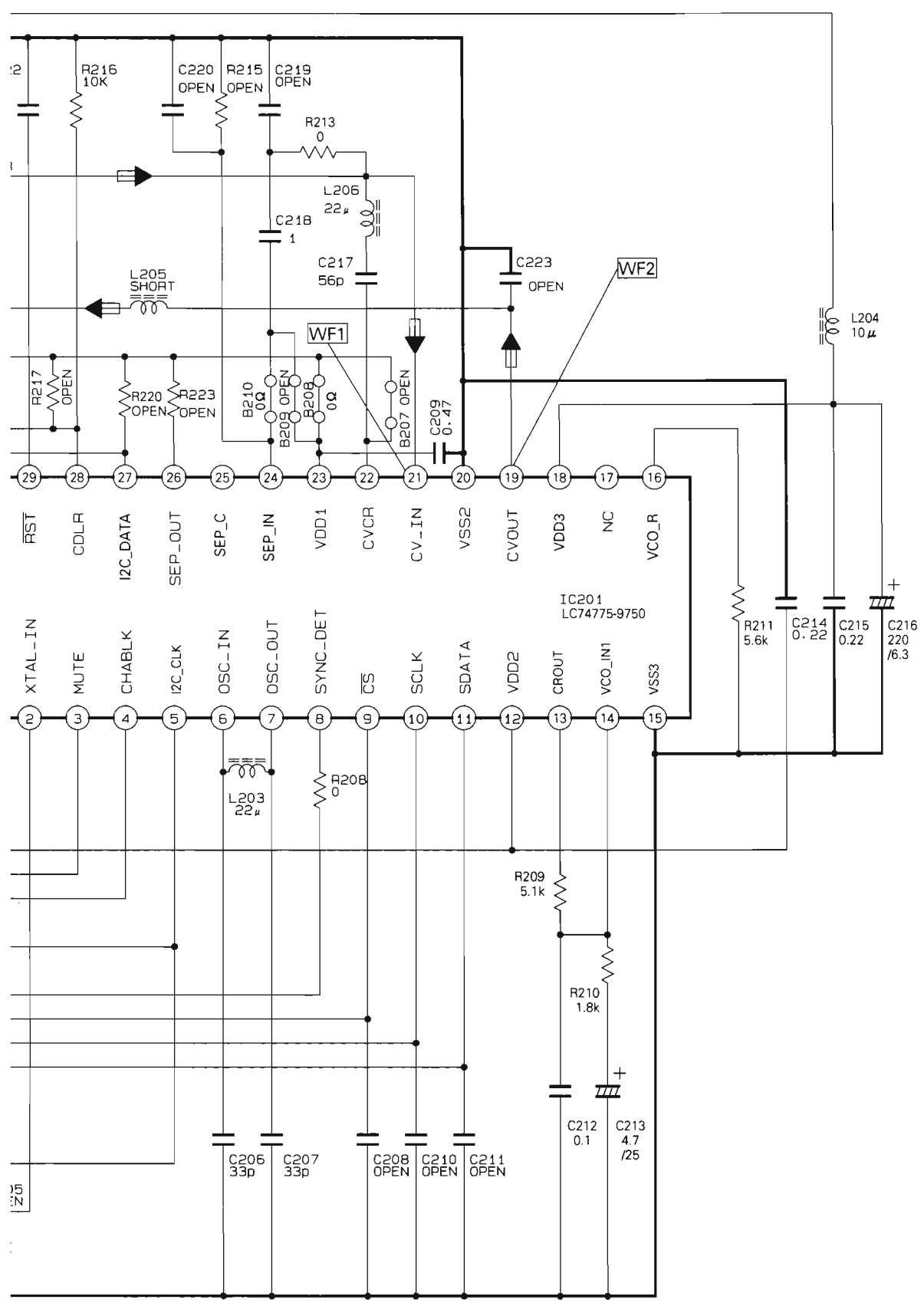


NOTE : For VIDEO/N.AUDIO waveforms, please refer to page 4-21.

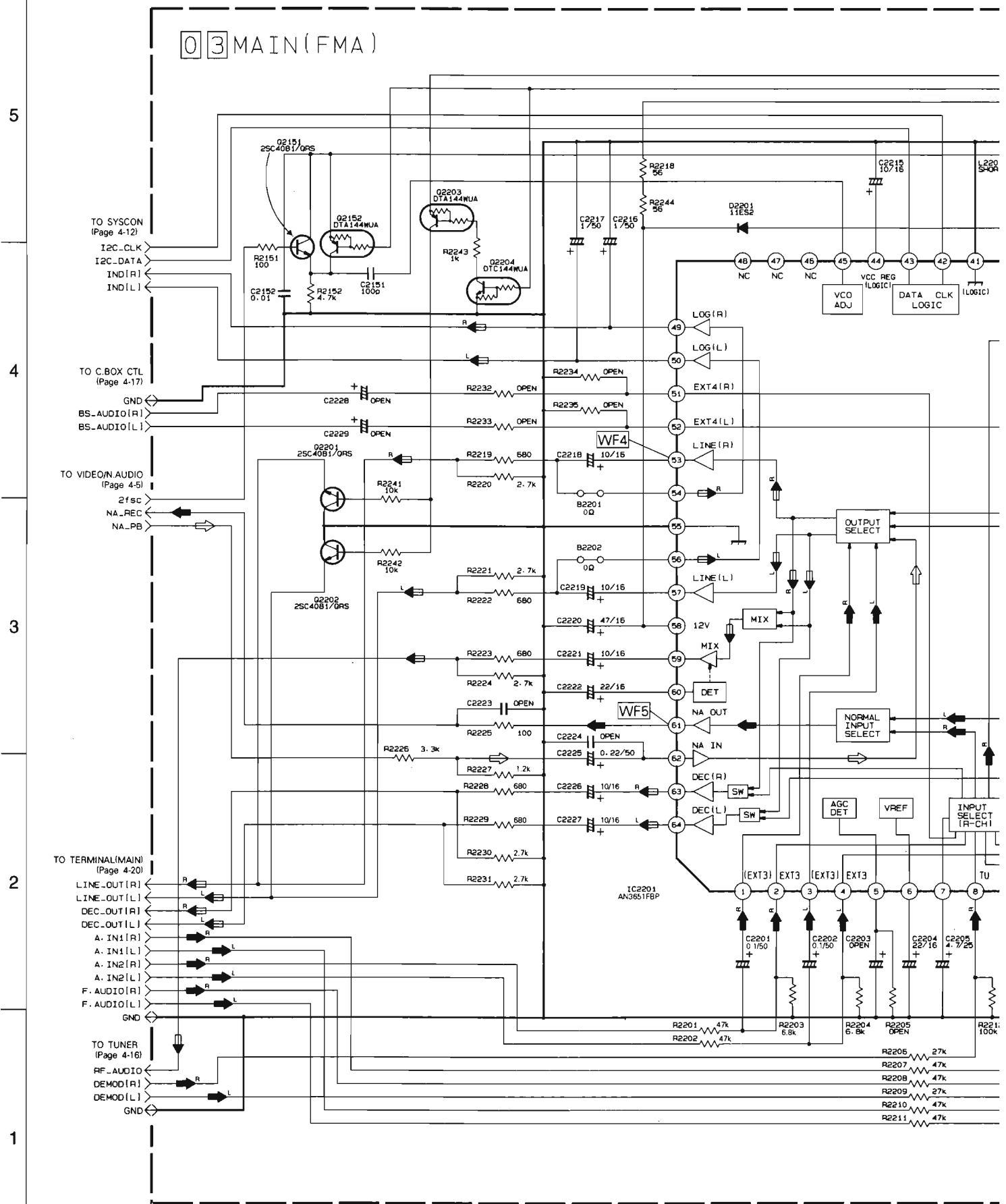


4.3 ON SCREEN SCHEMATIC DIAGRAM

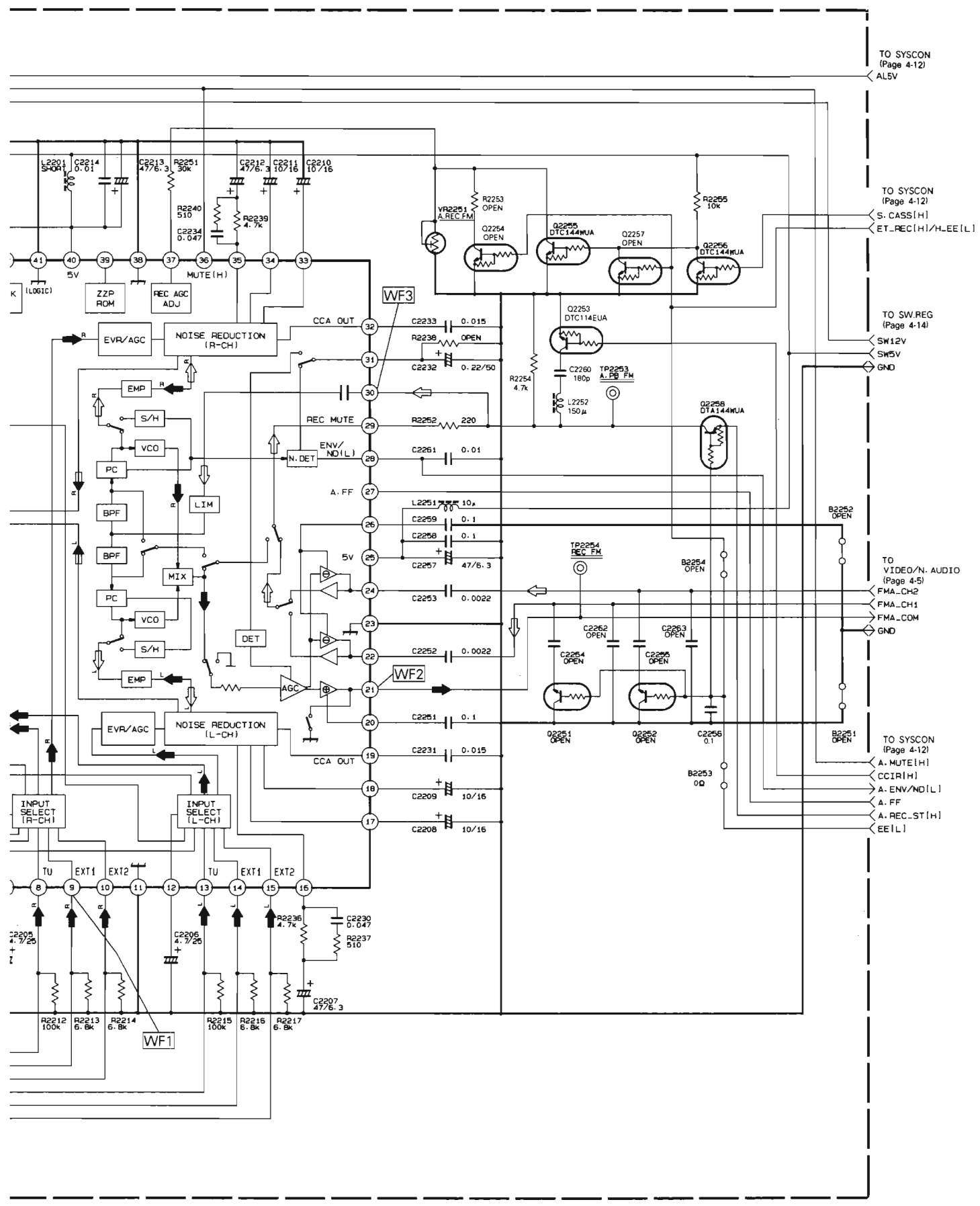




4.4 FMA SCHEMATIC DIAGRAM



NOTE: For FMA waveforms, please refer to page 4-21.



TO SYSCON
(Page 4-12)
ALS5V

TO SYSCON
(Page 4-12)
S. CASS(H)
ET-REC(H)/H.EE(L)

TO SW.REG
(Page 4-14)
SW12V
SW5V
GND

TO VIDEO/N. AUDIO
(Page 4-5)
FMA-CH2
FMA-CH1
FMA-COM
GND

TO SYSCON
(Page 4-12)
A. MUTE(H)
CCIR(H)
A. ENV/ND(L)
A. FF
A. REC-ST(H)
EE(L)

4-10

E

F

G

H

4.5 SYSTEM CONTROL SCHEMATIC DIAGRAM

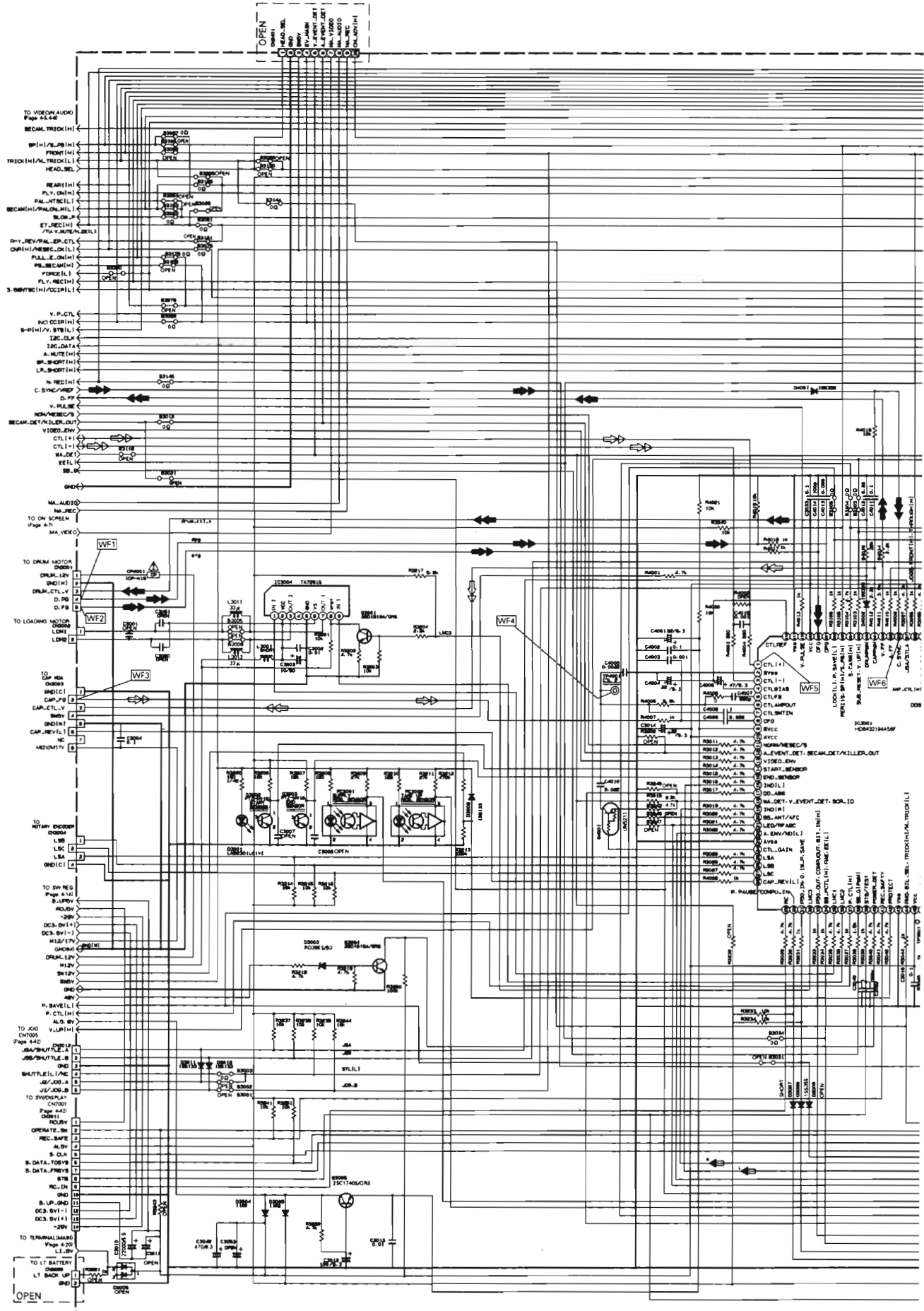
5

4

3

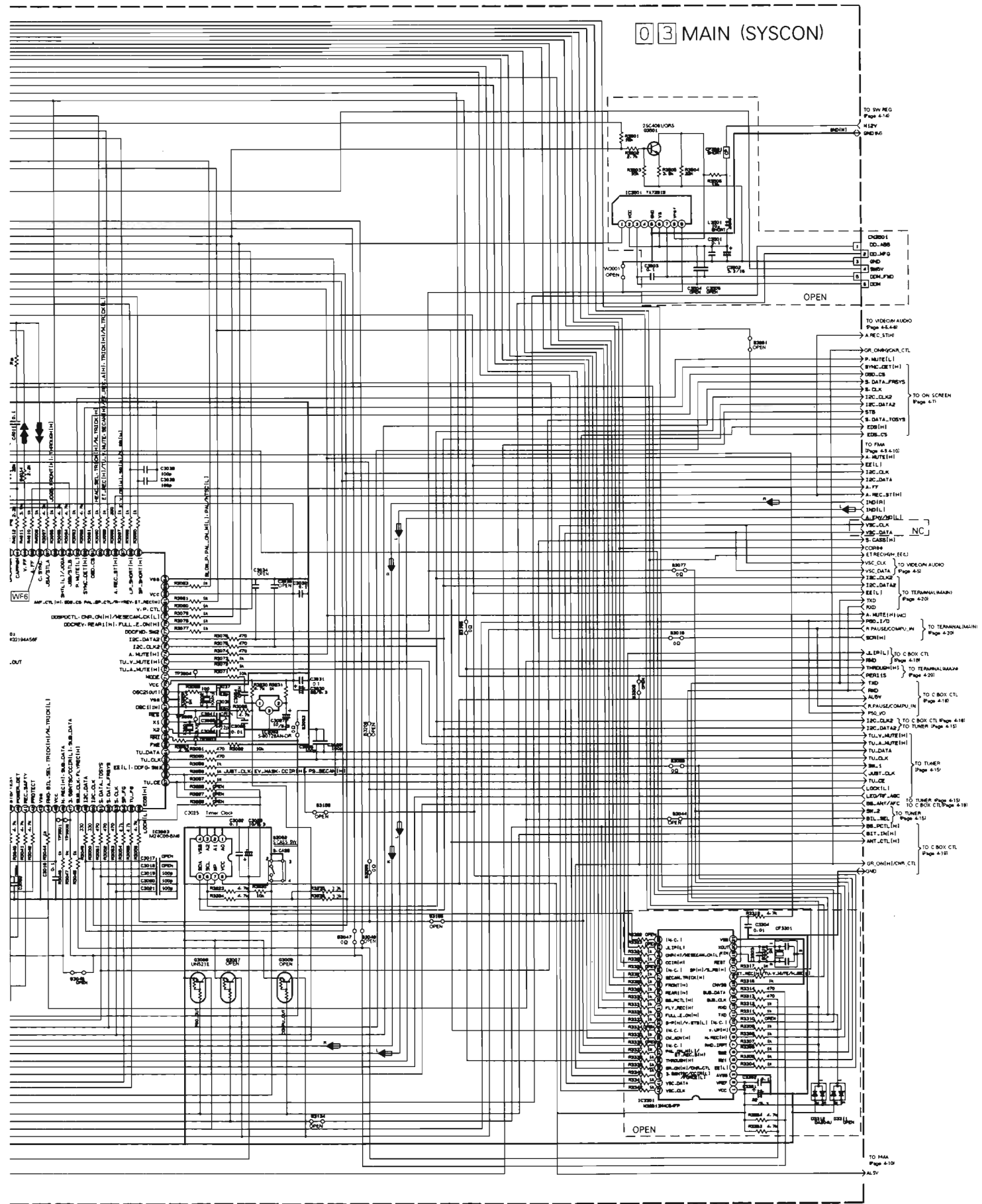
2

1



NOTES: 1. For SYSCON waveforms, please refer to page 4-21.
 2. The SYSTEM CONTROL circuit of this model has an automatic recognition about the ON/OFF contr

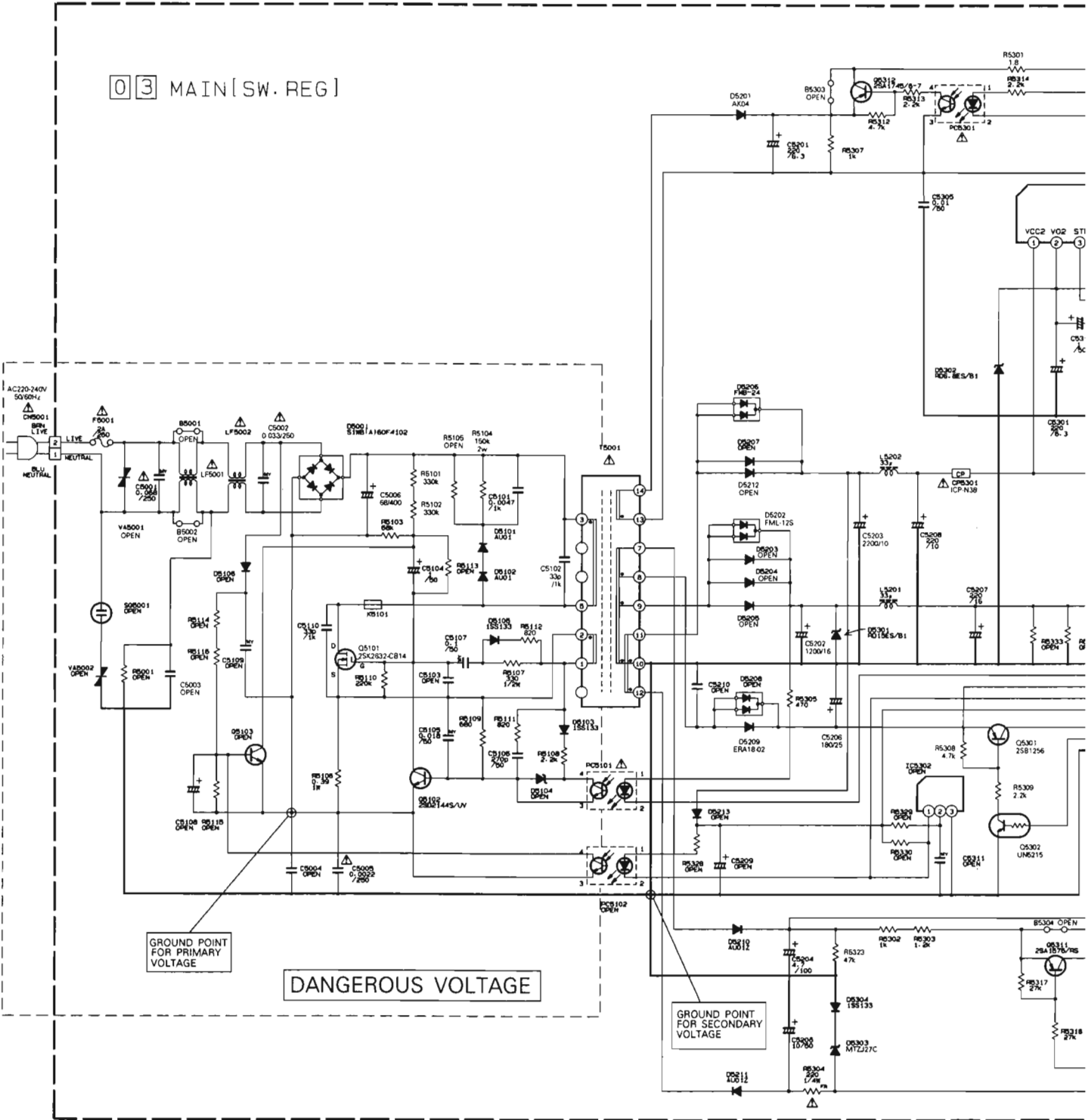
03 MAIN (SYSCON)



4.6 SWITCHING REGULATOR SCHEMATIC DIAGRAM

5
4
3
2
1

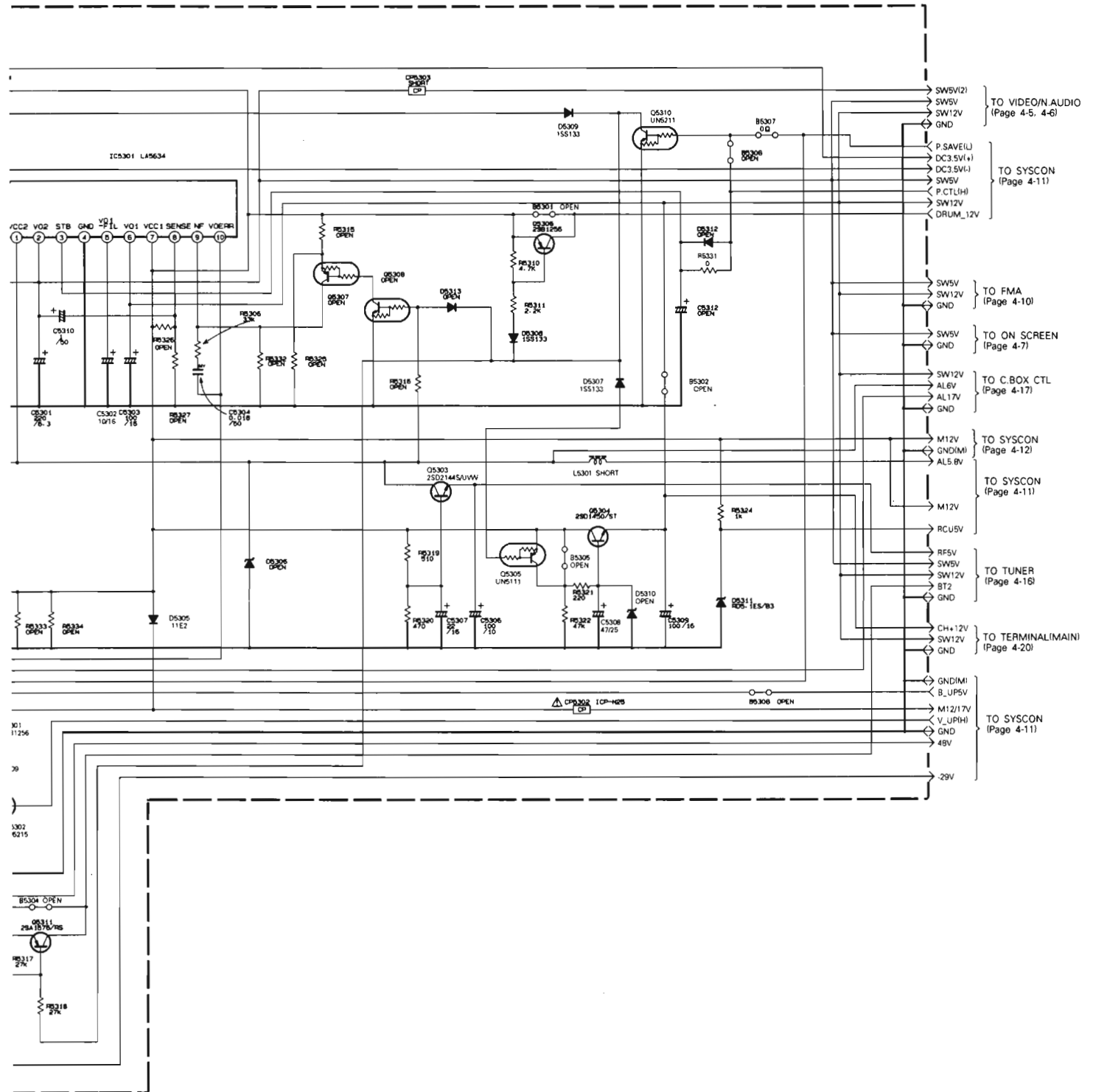
03 MAIN [SW. REG]



GROUND POINT FOR PRIMARY VOLTAGE

DANGEROUS VOLTAGE

GROUND POINT FOR SECONDARY VOLTAGE



4.7 TUNER SCHEMATIC DIAGRAM

5

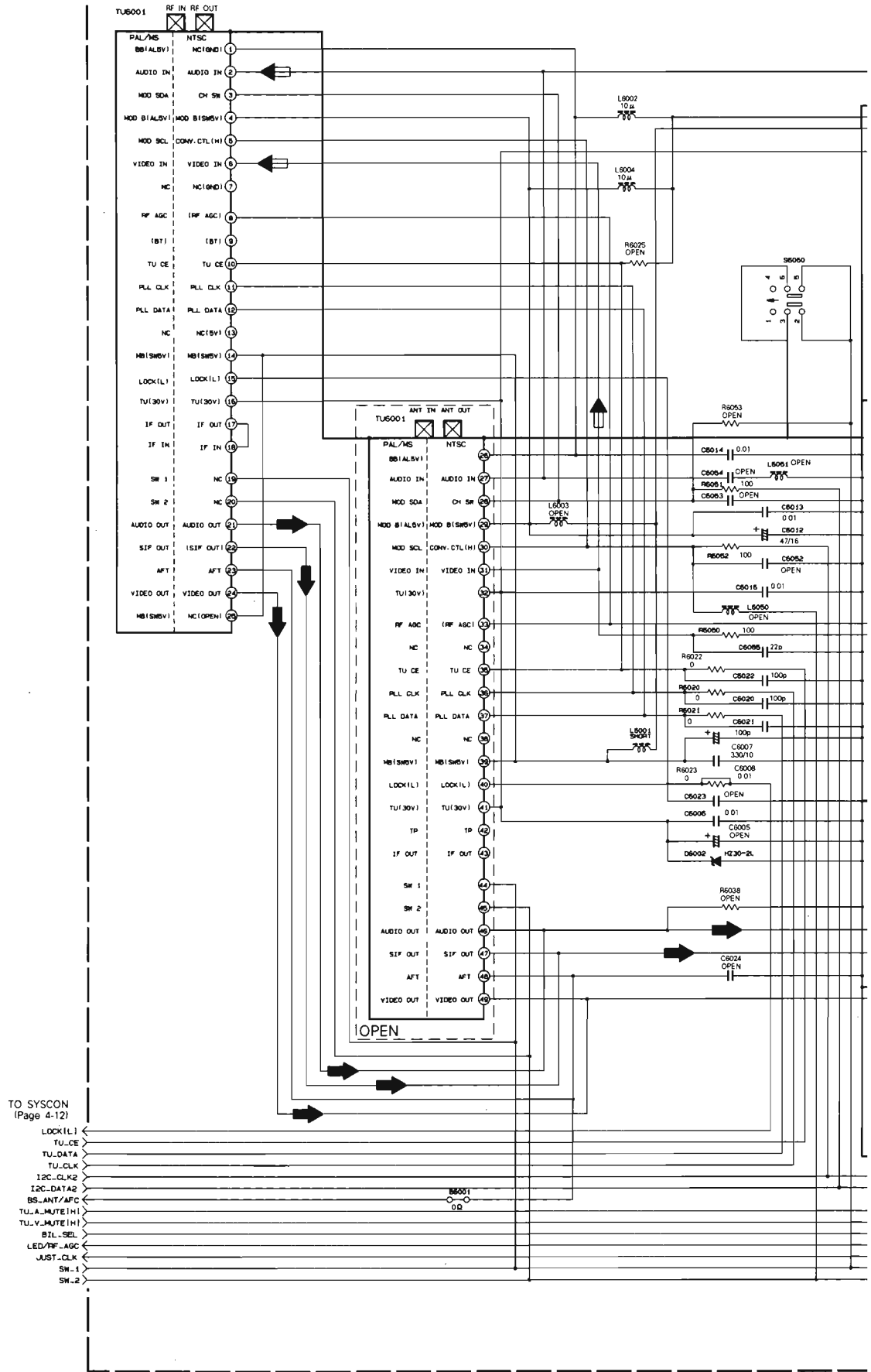
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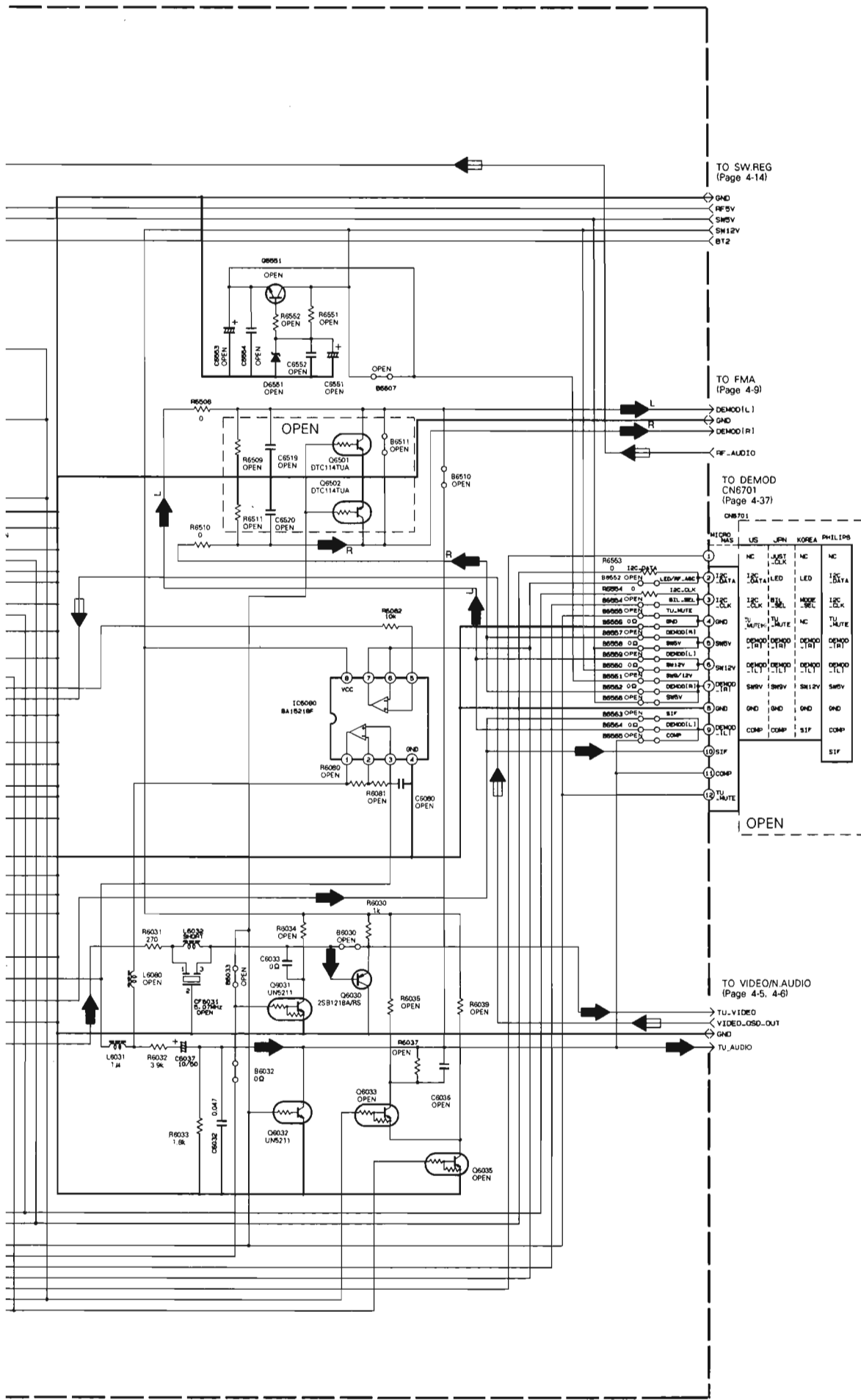
3

2

1

03 MAIN(TUNER)





TO SW.REG
(Page 4-14)

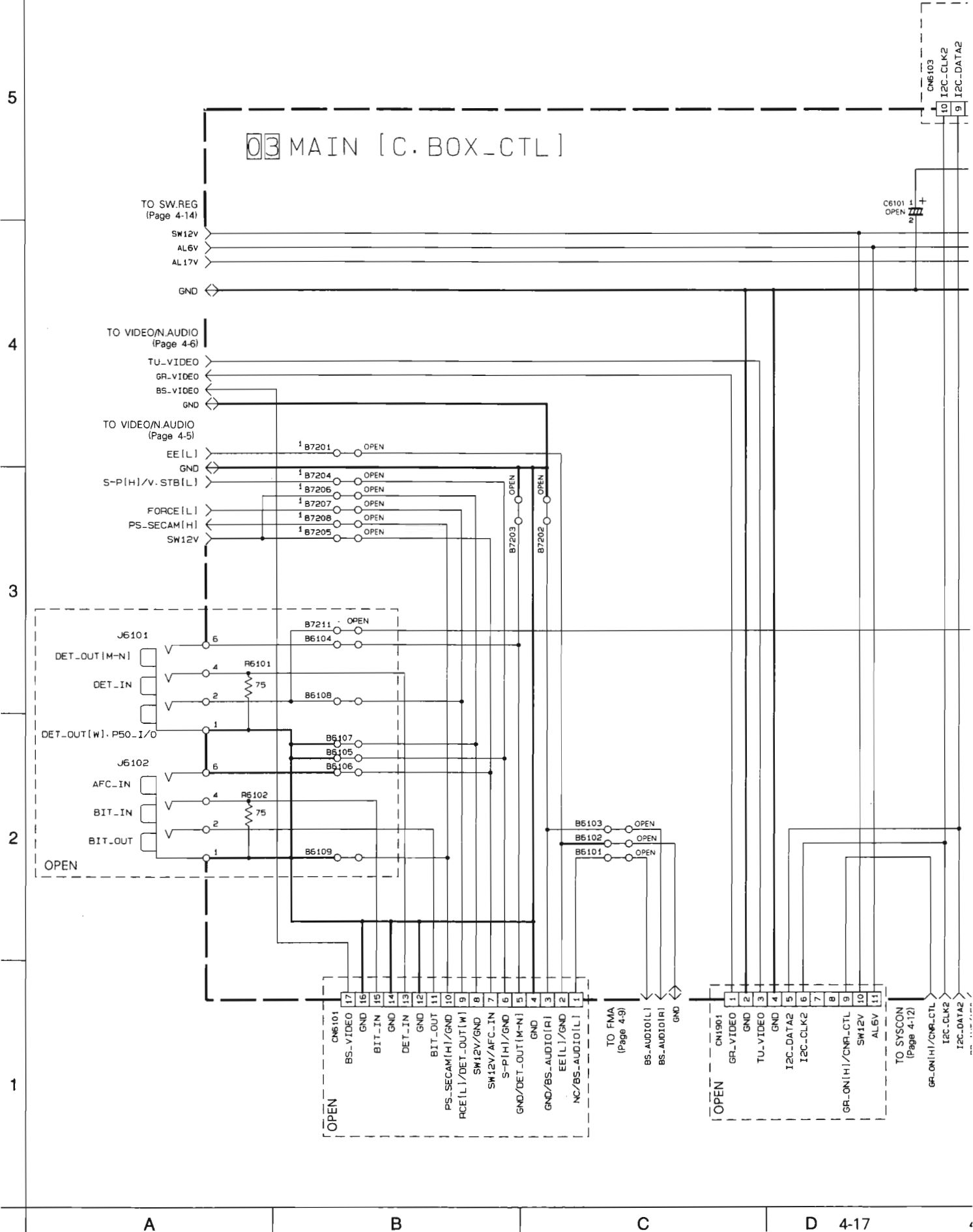
TO FMA
(Page 4-9)

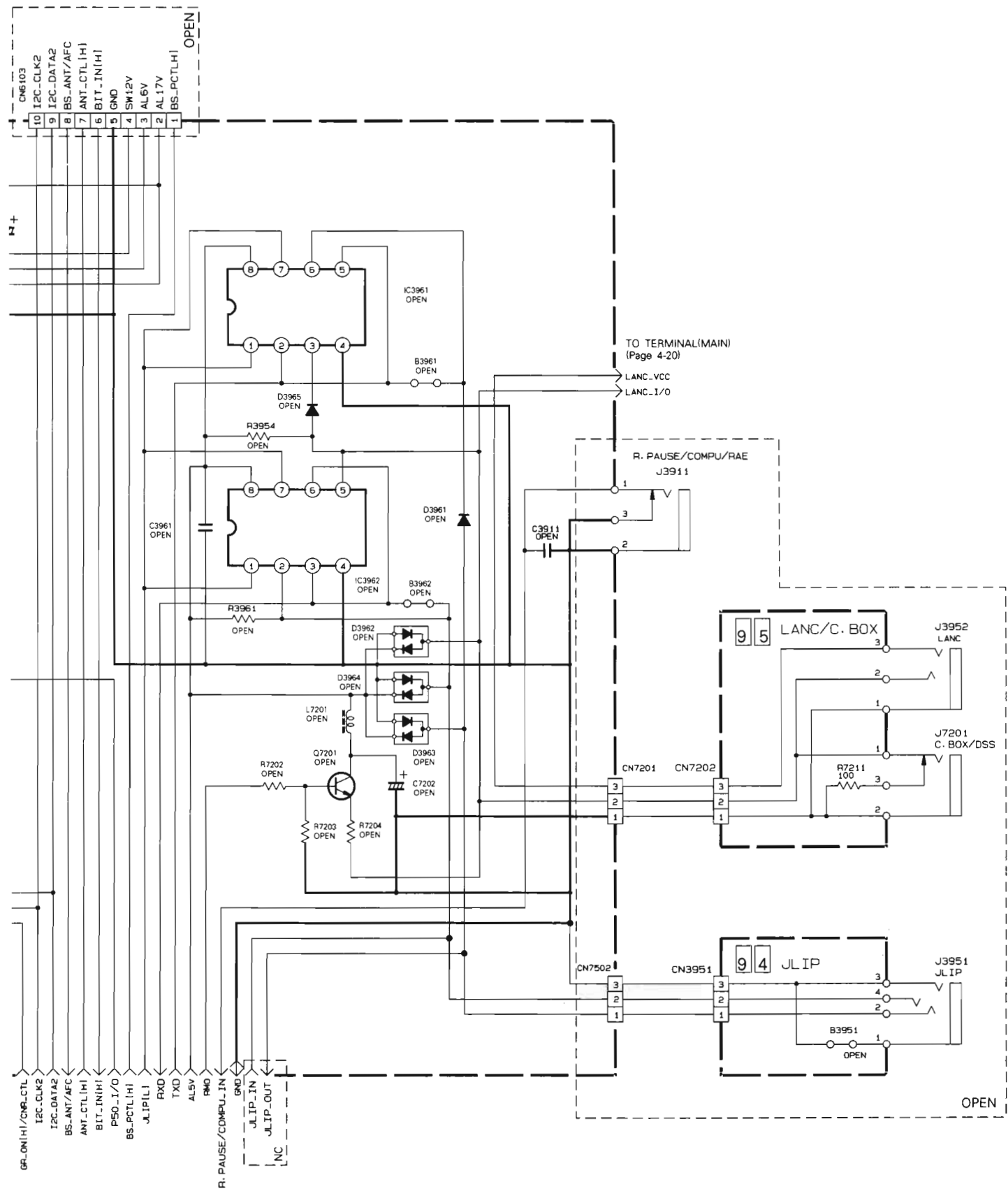
TO DEMOD
CN6701
(Page 4-37)

TO VIDEO/AUDIO
(Page 4-5, 4-6)

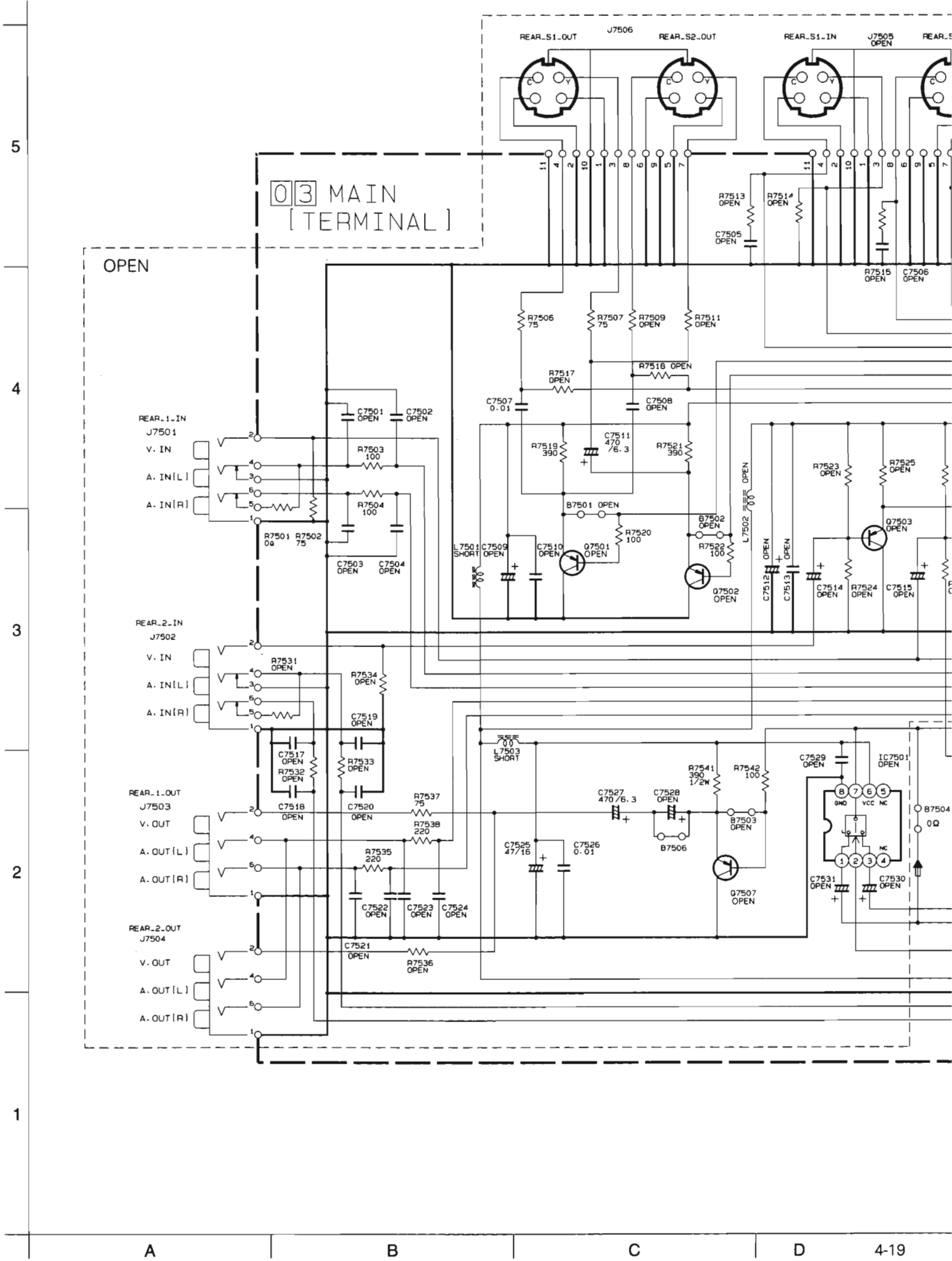
MICRO	TA85	US	JPN	KOREA	PHILIPS
R6553	D	I2C_DATA			
B6552	OPEN	LED_PWM_ABC			
R6554	D	I2C_CLK			
B6555	OPEN	I2C_SEL			
B6556	D	TU_MUTE			
B6557	OPEN	DEMOD_LR			
B6558	OPEN	DEMOD_LL			
B6559	OPEN	DEMOD_LR			
B6560	D	SW12V			
B6561	OPEN	SW5/12V			
B6562	D	DEMOD_LR			
B6563	OPEN	SW5V			
B6564	D	SIF			
B6565	OPEN	DEMOD_LL			
B6566	OPEN	COMP			

4.8 C.BOX CTL SCHEMATIC DIAGRAM





4.9 TERMINAL(MAIN) SCHEMATIC DIAGRAM

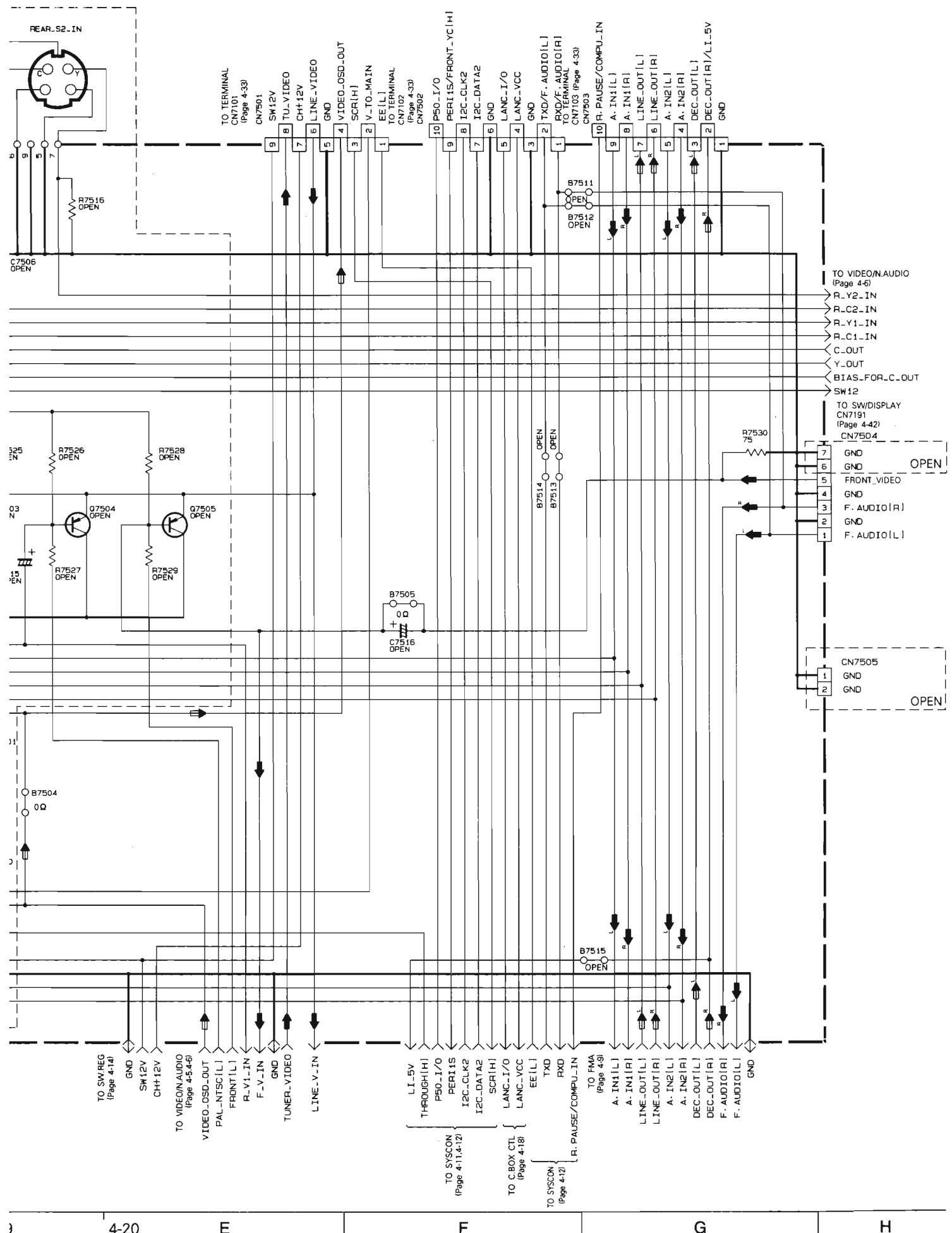


A

B

C

D



4-20

E

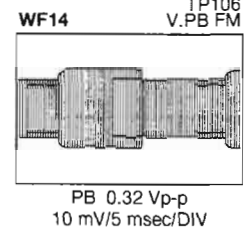
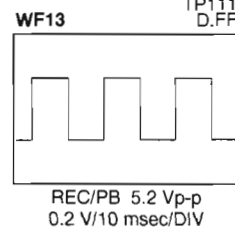
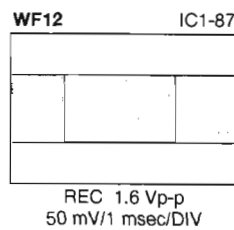
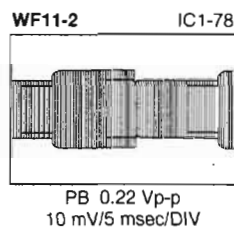
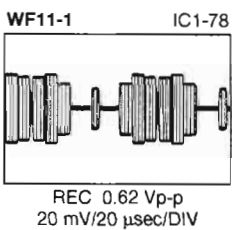
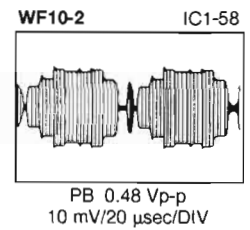
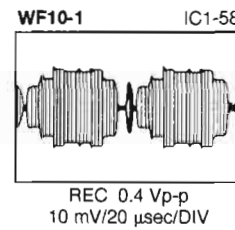
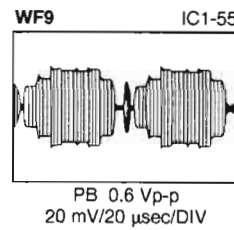
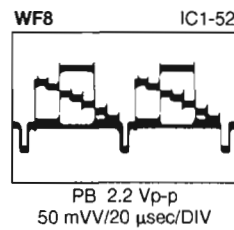
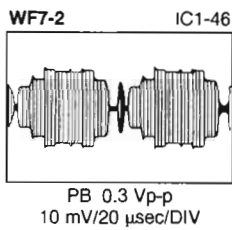
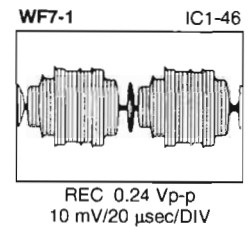
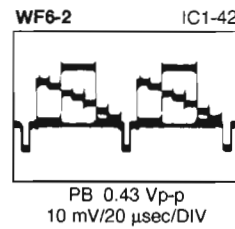
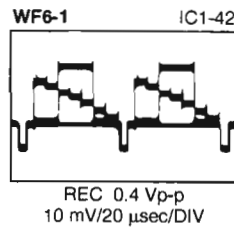
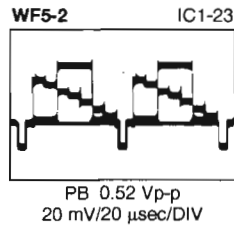
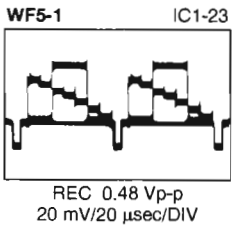
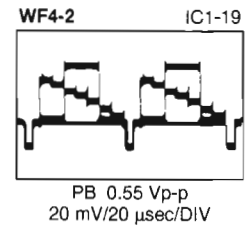
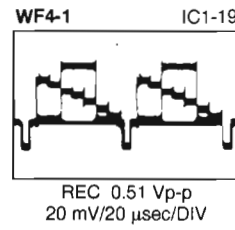
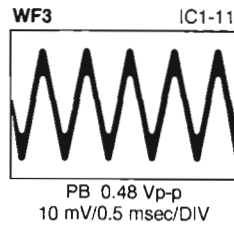
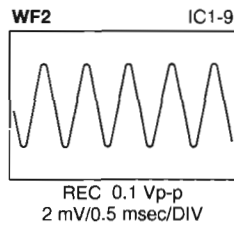
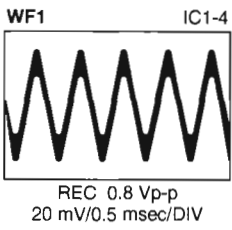
F

G

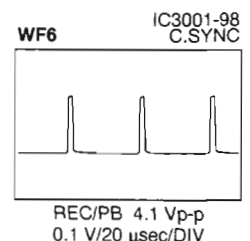
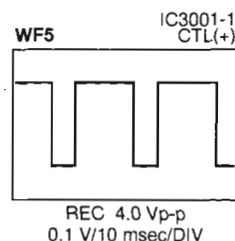
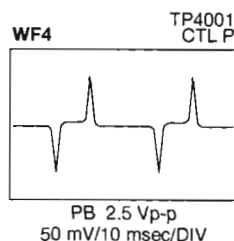
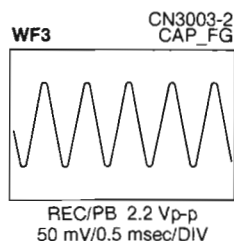
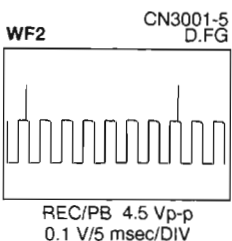
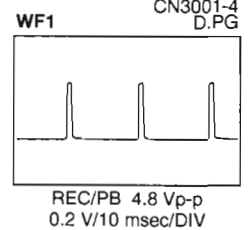
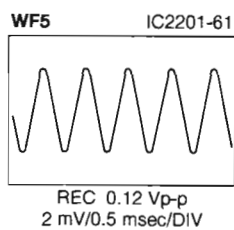
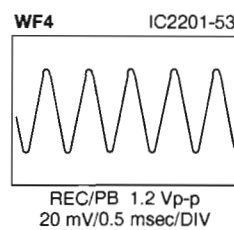
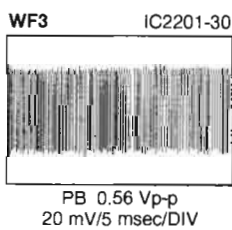
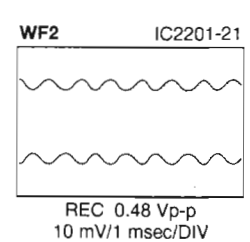
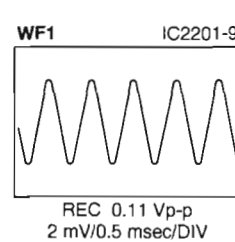
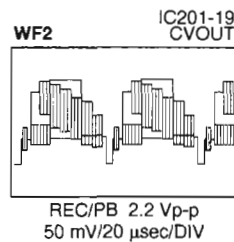
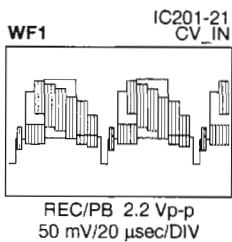
H

WAVEFORMS

— VIDEO/AUDIO —

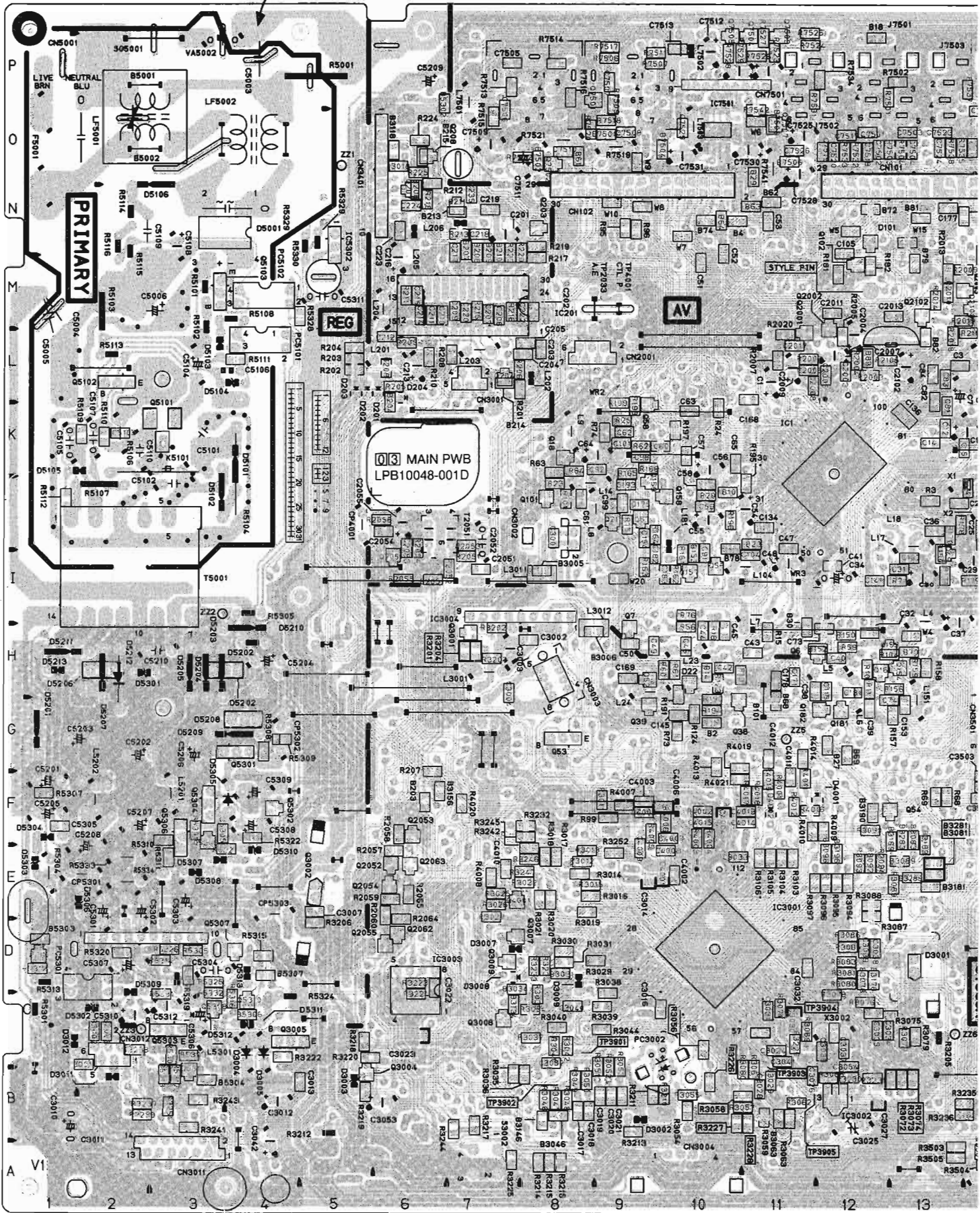


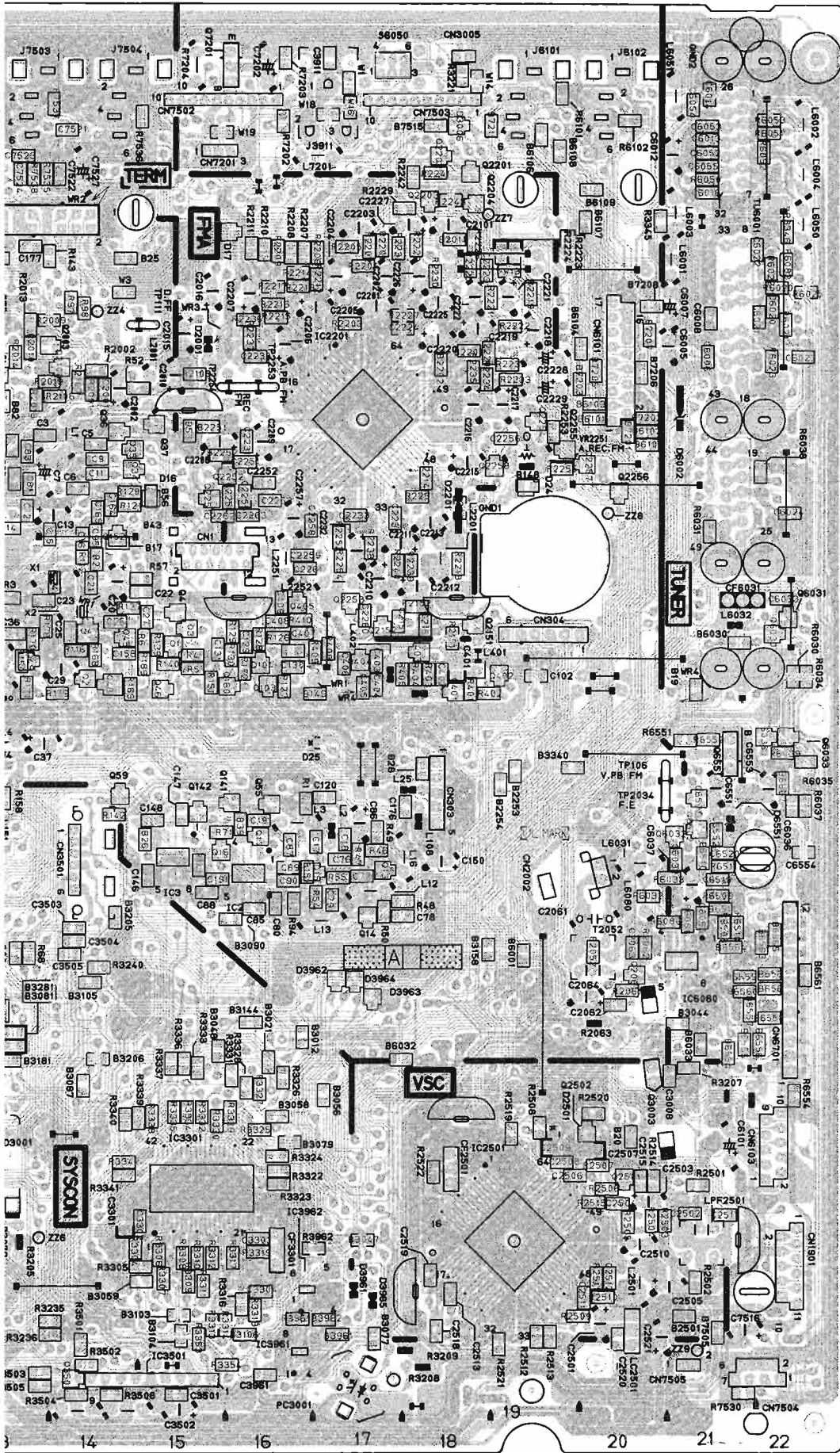
— ON SCREEN —



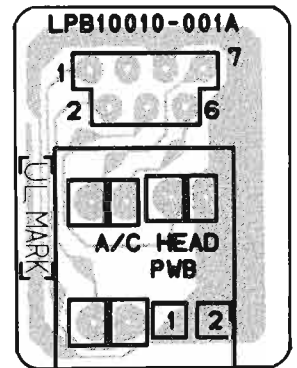
4.10 MAIN, A/C HEAD AND LOADING MOTOR CIRCUIT BOARDS

DANGEROUS VOLTAGE

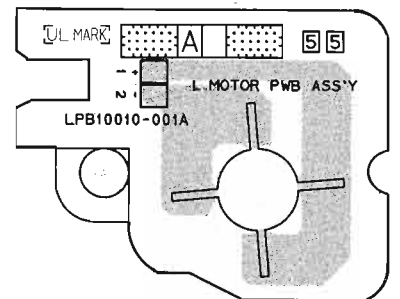




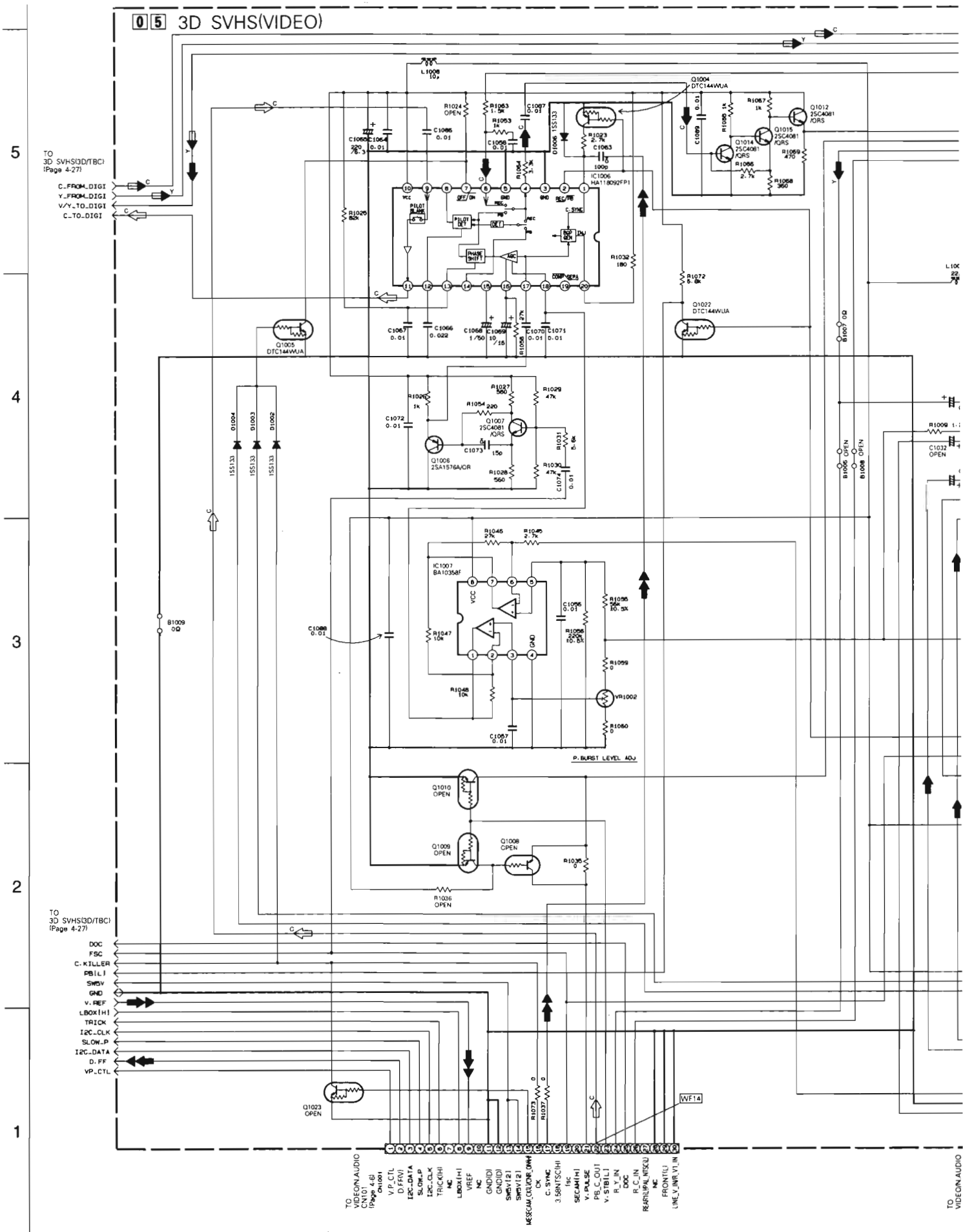
— A/C HEAD —



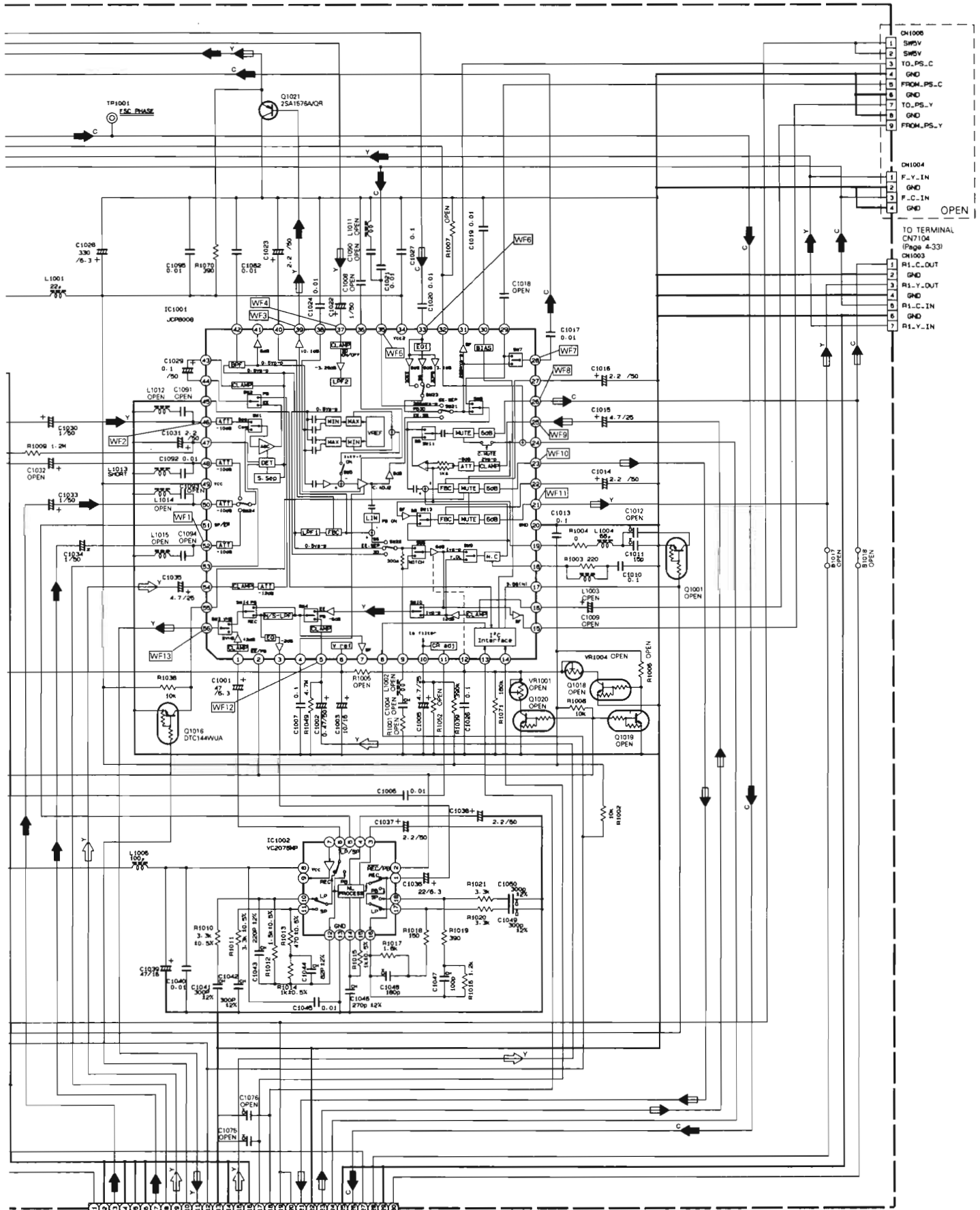
— LOADING MOTOR —



4.11 3D SVHS(VIDEO) SCHEMATIC DIAGRAM



NOTE : For 3D SVHS(VIDEO) waveforms, please refer to page 4-29.



TO VIDEO AUDIO
 CN1021 4-6
 R.V. INR_V2_IN CH1002
 CCRILU
 F.V. INR_C2_IN
 WALDET
 BS_INF_V_IN
 LINEU_V_IN
 ME_ALC_DET
 Y_TO_SUB
 P_MUTE(I)
 Y_TO_AVI
 SVS(I)
 GND
 Y_FREQ_AVI
 GND
 I2C_CLK
 I2C_DATA
 SWB(I)
 SWB(O)
 V_TO_GND
 GND
 V_FROM_GND
 CHANL_DATA
 BIAS FOR C_OUT
 REC_C_OUT
 REC_C_OUT
 ACC_DET/SWIZI
 Y_OUT
 GND
 C_OUT

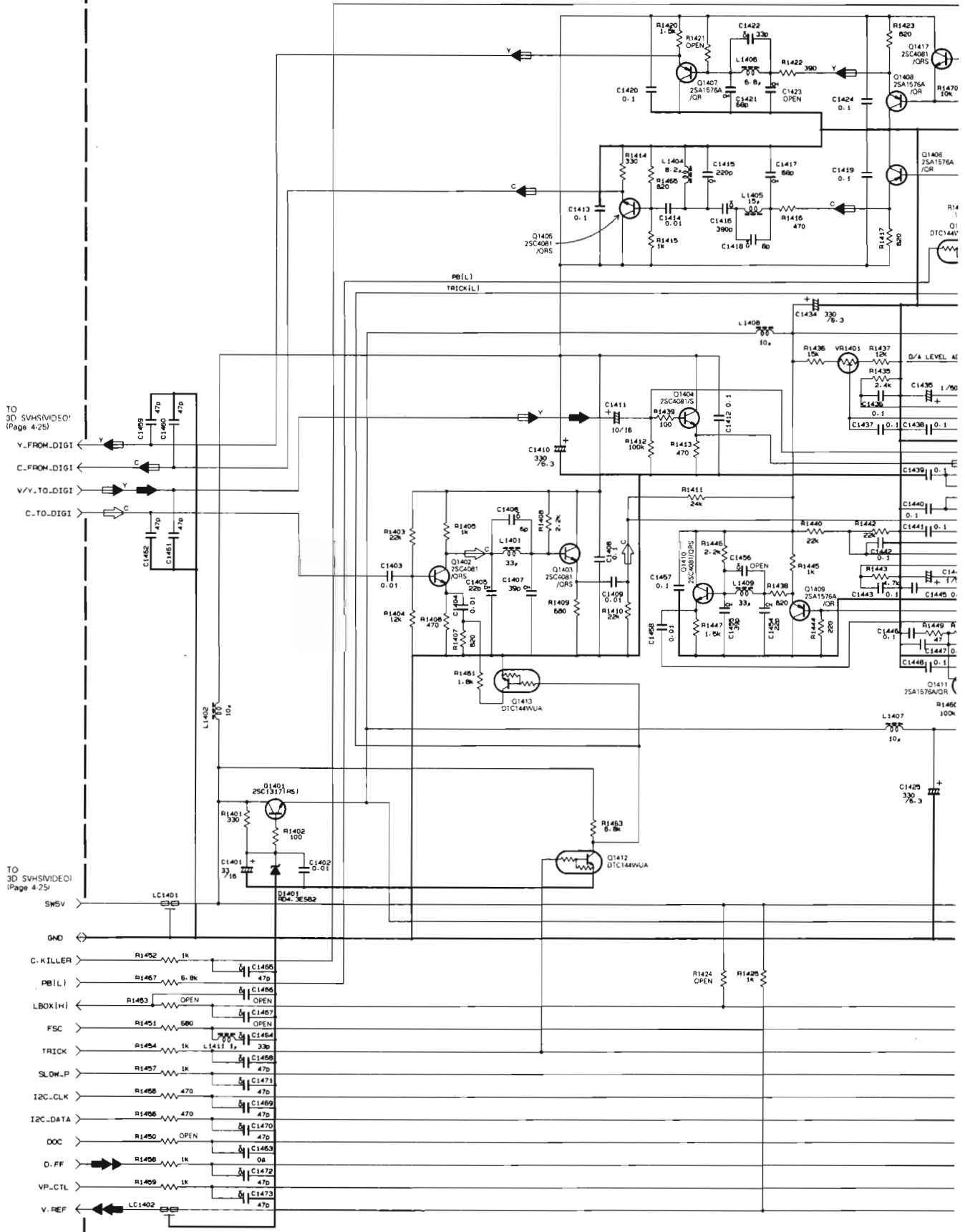
CH1006
 SW5V
 SW5V
 TO_PS_C
 GND
 FROM_PS_C
 GND
 TO_PS_Y
 GND
 FROM_PS_Y

CH1004
 F.-Y.-IN
 GND
 F.-C.-IN
 GND

TO TERMINAL
 CN7104
 (Page 4-33)
 CH1003
 R1.-C.-OUT
 GND
 R1.-Y.-OUT
 GND
 R1.-C.-IN
 GND
 R1.-Y.-IN

4.12 3D SVHS(3D/TBC) SCHEMATIC DIAGRAM

05 3D SVHS(3D/TBC)



TO 3D SVHSVIDEO!
(Page 4.25)

TO 3D SVHSVIDEO!
(Page 4.25)

5

4

3

2

1

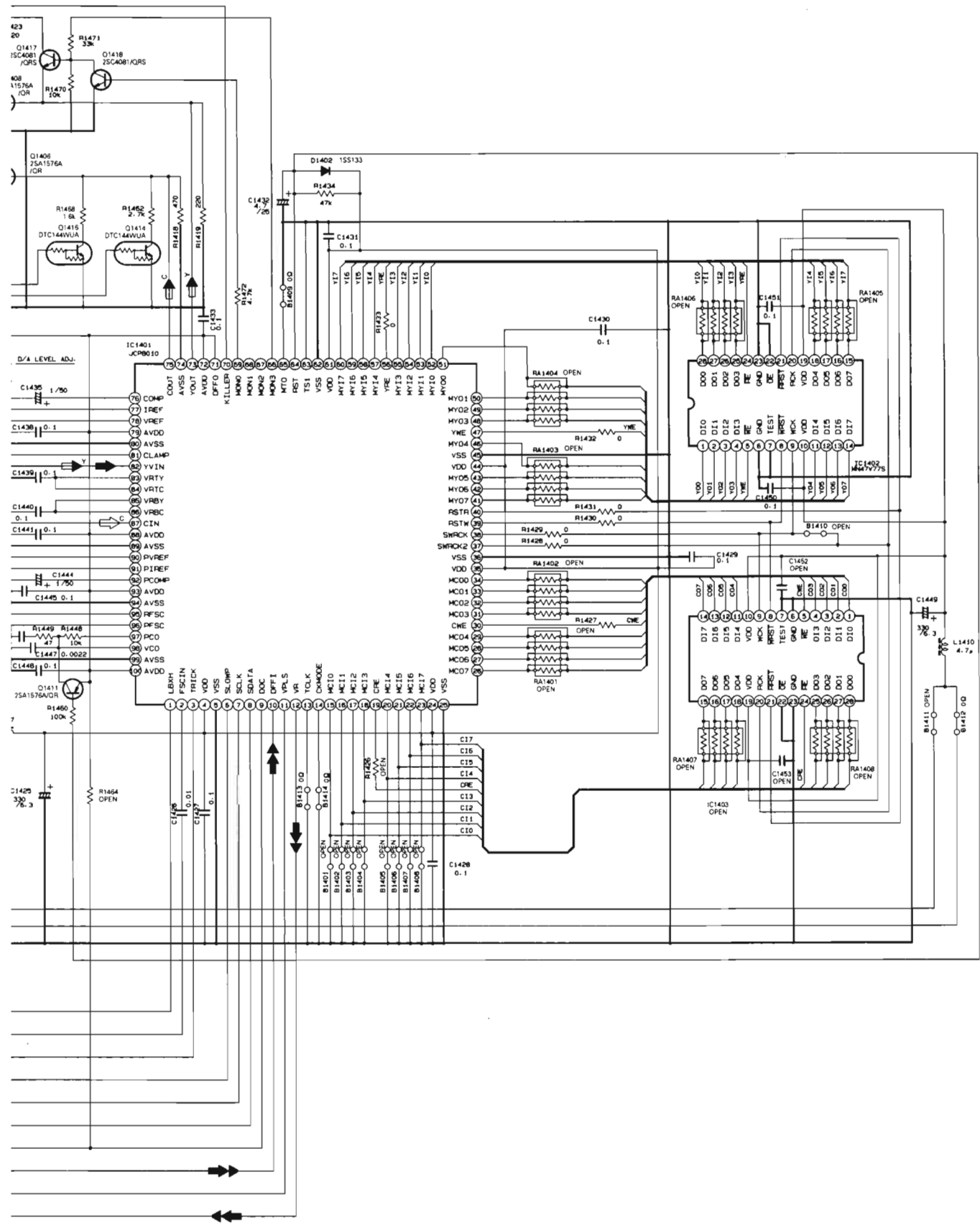
A

B

C

D

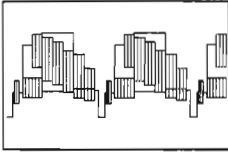
4-27



WAVEFORMS

— 3D SVHS(VIDEO) —

WF1 IC1001-52



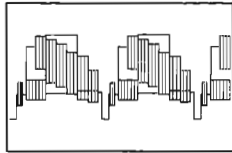
REC 0.76 Vp-p
20 mV/20 μsec/DIV

WF2 IC1001-46



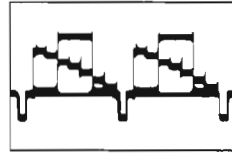
REC 1.0 Vp-p
20 mV/20 μsec/DIV

WF3-1 IC1001-39



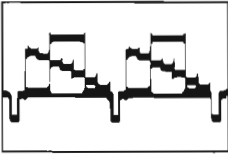
REC 1.8 Vp-p
50 mV/20 μsec/DIV

WF3-2 IC1001-39



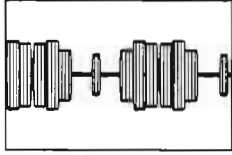
REC/PB 1.7 Vp-p
50 mV/20 μsec/DIV

WF4 IC1001-37



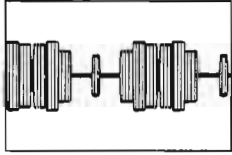
REC/PB 0.8 Vp-p
20 mV/20 μsec/DIV

WF5 IC1001-35



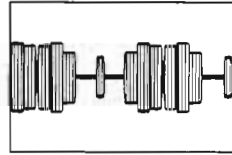
REC 0.65 Vp-p
20 mV/20 μsec/DIV

WF6-1 IC1001-33



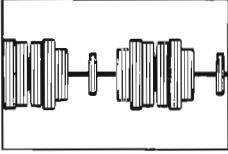
REC 0.35 Vp-p
10 mV/20 μsec/DIV

WF6-2 IC1001-33



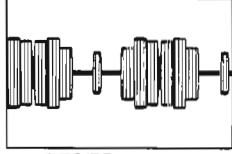
PB 0.5 Vp-p
10 mV/20 μsec/DIV

WF7 IC1001-28



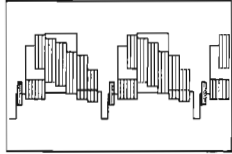
REC 0.7 Vp-p
20 mV/20 μsec/DIV

WF8 IC1001-26



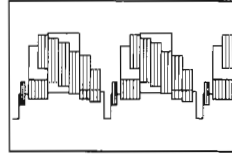
REC/PB 1.5 Vp-p
50 mV/20 μsec/DIV

WF9 IC1001-25



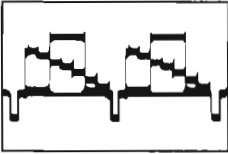
REC/PB 2.2 Vp-p
50 mV/20 μsec/DIV

WF10 IC1001-23



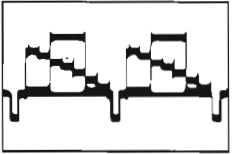
REC/PB 2.2 Vp-p
50 mV/20 μsec/DIV

WF11 IC1001-21



REC/PB 2.2 Vp-p
50 mV/20 μsec/DIV

WF12 IC1001-5



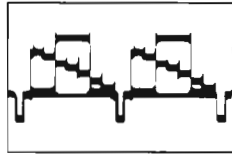
PB 0.56 Vp-p
20 mV/20 μsec/DIV

WF13-1 IC1001-56



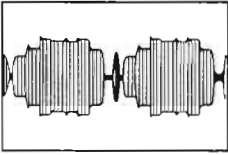
REC 0.52 Vp-p
20 mV/20 μsec/DIV

WF13-2 IC1001-56



PB 0.56 Vp-p
20 mV/20 μsec/DIV

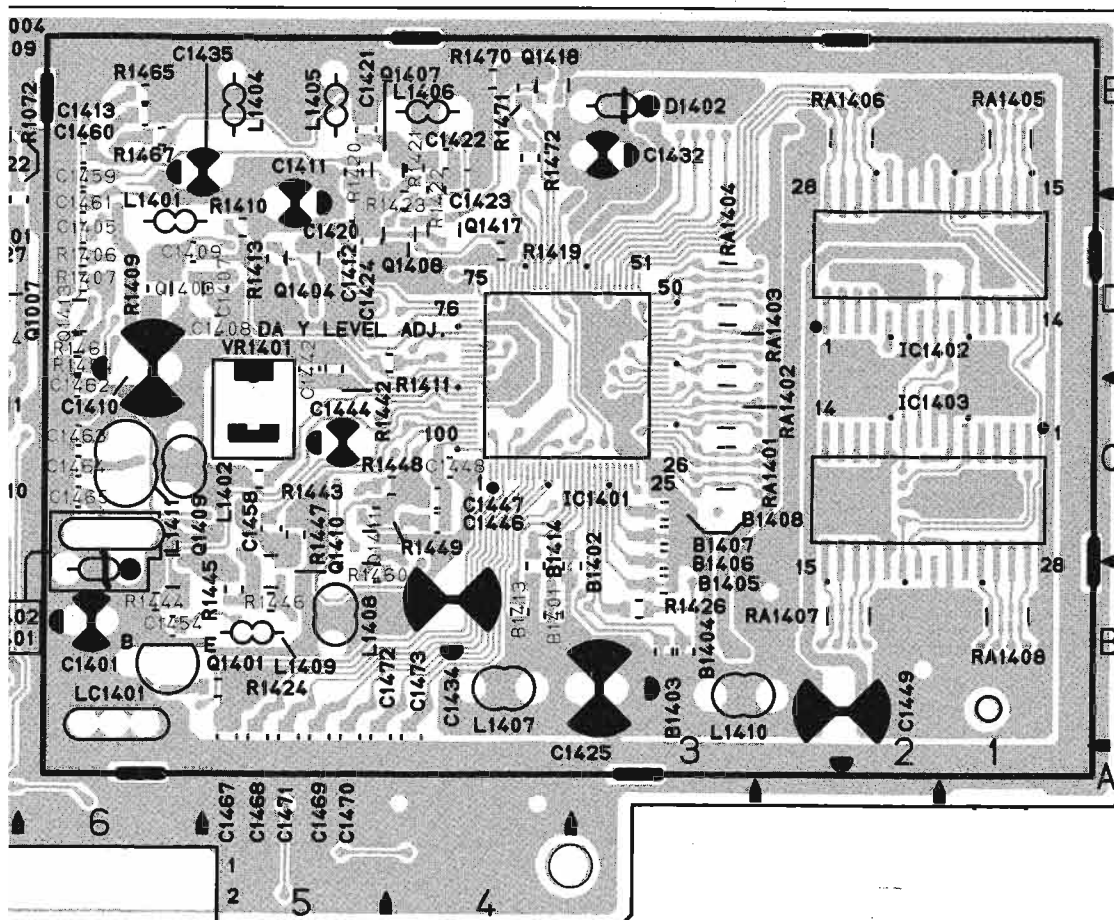
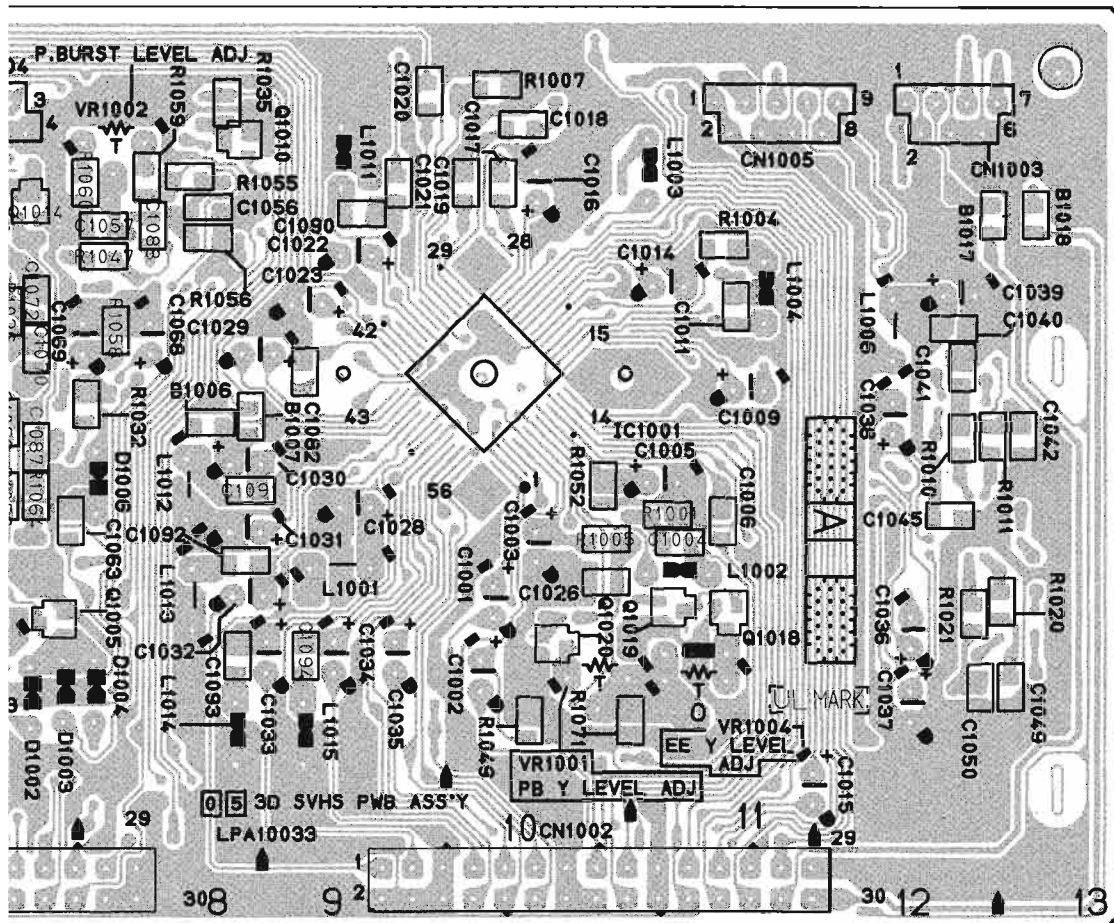
WF14 CN1001-22



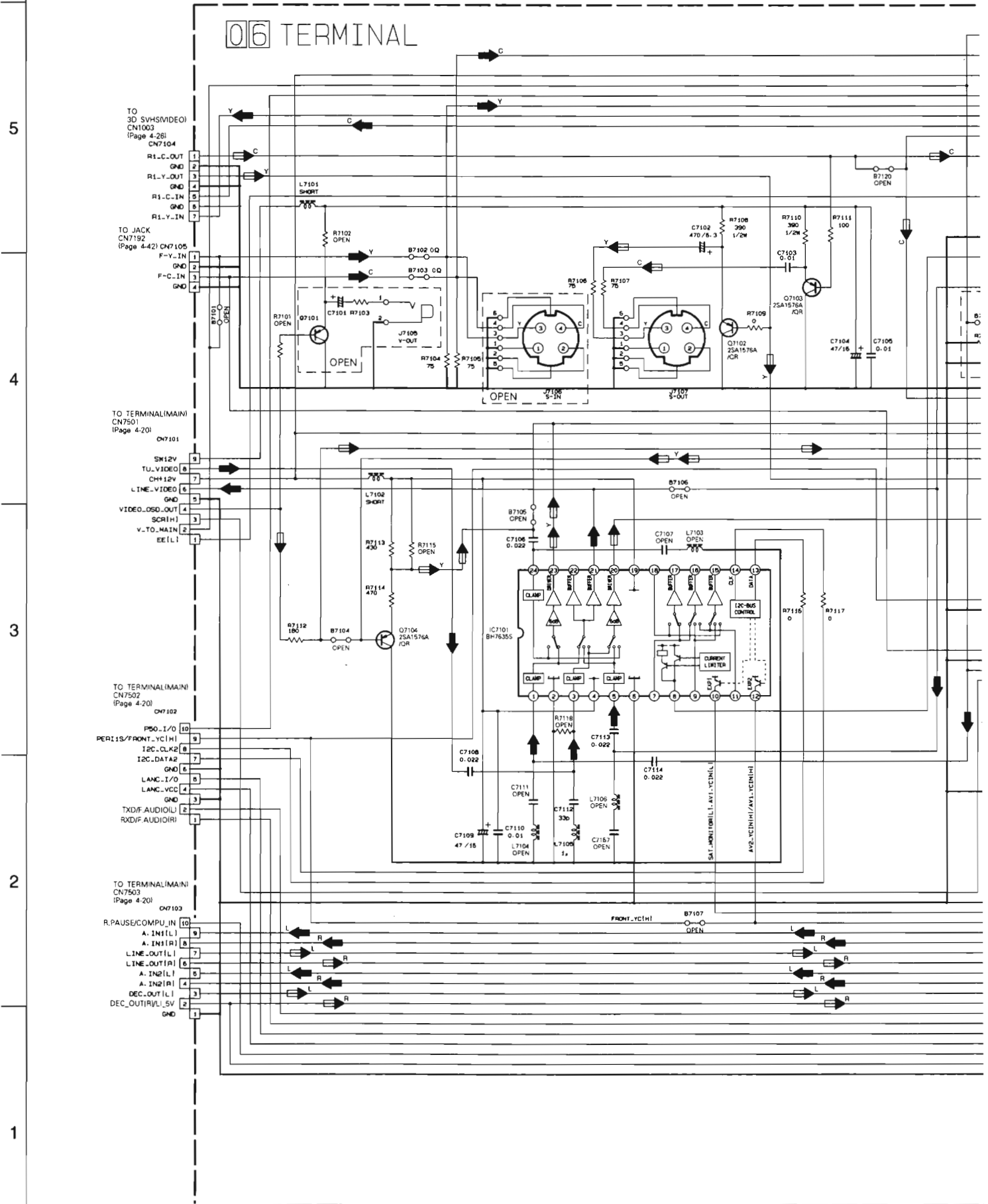
PB 0.62 Vp-p
20 mV/20 μsec/DIV

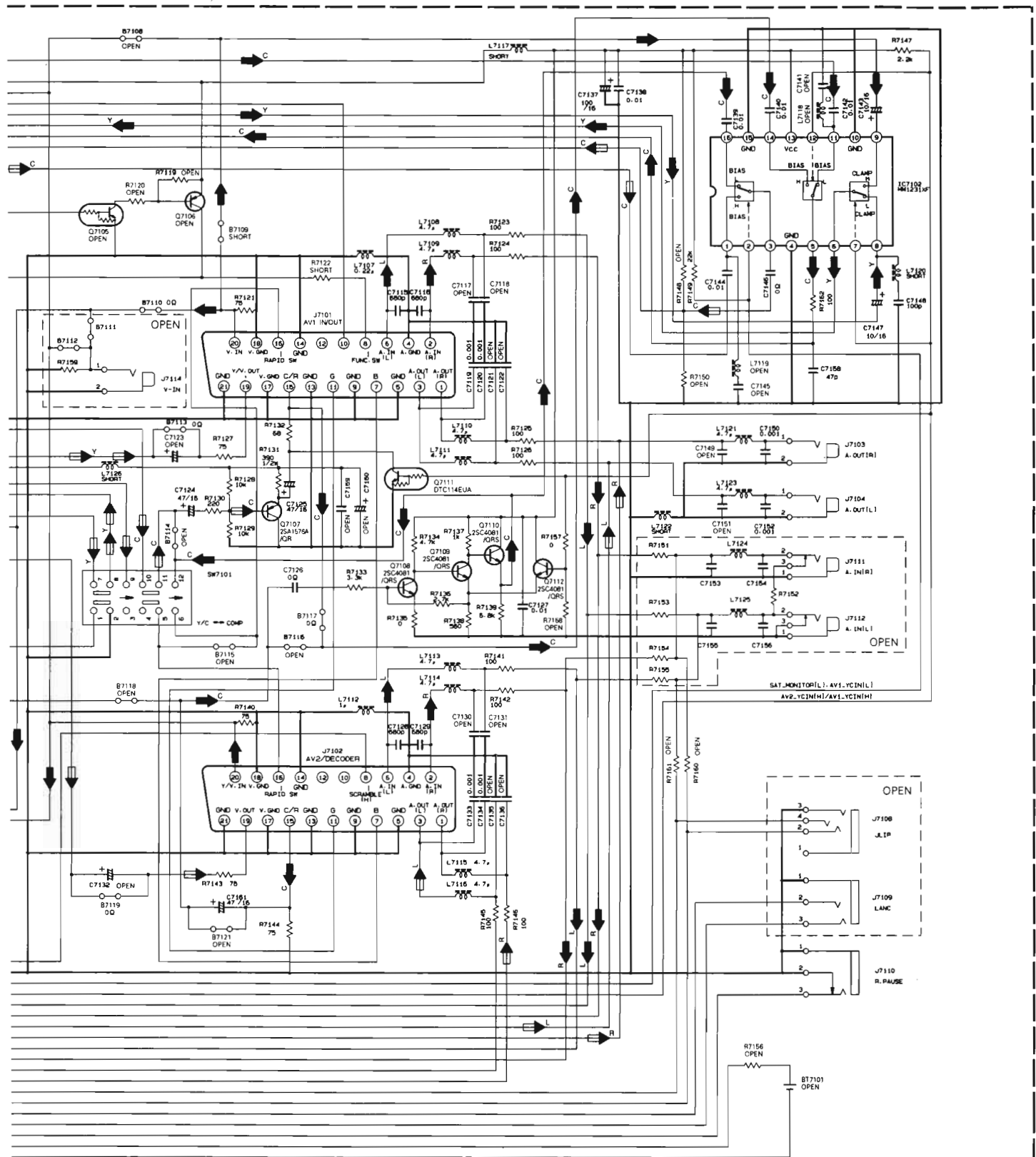
COMPONENT PARTS LOCATION GUIDE <3D SVHS>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR													
C1001	A D 10B	C1064	B C 7C	C1431	B C 3D	D1401	A D 6B	Q1404	A C 5D	R1048	A C 8D	R1434	B C 3D
C1002	A D 10B	C1065	A D 7B	C1432	A D 3E	D1402	A D 3E	Q1405	B C 6E	R1049	B C 10B	R1435	B C 4D
C1003	A D 10C	C1066	B C 7C	C1433	B C 4D	IC		Q1406	B C 4D	R1052	B C 10C	R1436	B C 5C
C1004	B C 11C	C1067	B C 7C	C1434	A D 4B	IC1001	B C 10D	Q1407	A C 5E	R1053	B C 7C	R1437	B C 5D
C1005	A D 11C	C1068	A D 8D	C1435	A D 5E	IC1002	A C 12C	Q1408	A C 4D	R1054	A C 7D	R1438	B C 5B
C1006	B C 11C	C1069	A D 8D	C1436	B C 4D	IC1006	A C 7C	Q1409	A C 6B	R1055	B C 8E	R1439	B C 5D
C1007	A C 10C	C1070	B C 7D	C1437	B C 5D	IC1007	A C 8D	Q1410	A C 5B	R1056	B C 8D	R1440	B C 5D
C1008	A C 9D	C1071	A C 8D	C1438	B C 4D	IC1401	A C 4D	Q1411	A C 5C	R1058	B C 8D	R1442	A C 5D
C1009	A D 11C	C1072	B C 7D	C1439	B C 4D	IC1402	A C 2D	Q1412	B C 5B	R1059	B C 8E	R1443	A C 5C
C1010	A C 10D	C1073	A C 7D	C1440	B C 4D	IC1403	A C 2C	Q1413	A C 6D	R1060	B C 8E	R1444	A C 6B
C1011	B C 11D	C1074	B C 7D	C1441	B C 4D	COIL		Q1414	B C 4D	R1063	A C 7B	R1445	A C 5B
C1012	A C 11D	C1075	A C 10A	C1442	A C 5D	L1001	A D 9B	Q1416	B C 5D	R1064	B C 7C	R1446	A C 5B
C1013	A C 9C	C1076	A C 10A	C1443	B C 5C	L1002	A D 11B	Q1417	A C 4D	R1065	A C 7E	R1447	A C 5C
C1014	A D 11D	C1082	B C 9D	C1444	A D 5C	L1003	A D 11D	Q1418	A C 4E	R1066	A C 7D	R1448	A C 4C
C1015	A D 12A	C1086	B C 7C	C1445	B C 4C	L1004	A D 11D	RESISTOR		R1067	A C 7E	R1449	A C 5C
C1016	A D 10D	C1087	B C 7C	C1446	A C 4C	L1006	A D 12D	R1001	B C 11C	R1068	B C 7D	R1450	B C 6C
C1017	B C 10E	C1088	B C 8D	C1447	A C 4C	L1008	A D 7B	R1002	A C 10C	R1069	B C 7D	R1451	B C 6C
C1018	B C 10E	C1089	A C 7E	C1448	A C 4C	L1011	A D 9E	R1003	A C 10D	R1070	A C 10D	R1452	B C 6C
C1019	B C 10E	C1090	B C 9D	C1449	A D 2B	L1012	A D 8C	R1004	B C 11D	R1071	B C 11B	R1453	B C 5B
C1020	B C 9E	C1091	B C 8C	C1450	B C 2D	L1013	A D 8B	R1005	B C 10C	R1072	A C 7D	R1454	B C 5B
C1021	B C 9E	C1092	B C 8B	C1451	B C 1E	L1014	A D 8A	R1006	A C 10B	R1073	B C 7A	R1455	B C 5B
C1022	A D 9D	C1093	B C 8B	C1452	B C 2C	L1015	A D 9A	R1007	B C 10E	R1401	B C 6B	R1456	B C 5B
C1023	A D 9D	C1094	B C 9B	C1453	B C 2B	L1401	A D 6D	R1008	A C 10B	R1402	B C 6B	R1457	B C 5B
C1024	A C 9C	C1095	A C 10D	C1454	A C 6B	L1402	A D 6C	R1009	A C 9C	R1403	B C 6D	R1458	B C 4B
C1026	B C 10B	C1401	A D 6B	C1455	B C 5B	L1404	A D 5E	R1010	B C 12C	R1404	A C 6D	R1459	B C 4B
C1027	A C 10D	C1402	B C 6B	C1456	B C 5B	L1405	A D 5E	R1011	B C 12C	R1405	B C 6D	R1460	A C 5B
C1028	A D 9C	C1403	B C 6D	C1457	B C 5B	L1406	A D 4E	R1012	A C 12C	R1406	A C 6D	R1461	A C 6D
C1029	A D 9D	C1404	B C 6D	C1458	A C 5C	L1407	A D 4B	R1013	A C 13C	R1407	A C 6D	R1462	B C 4D
C1030	A D 8C	C1405	A C 6D	C1459	A C 6E	L1408	A D 5B	R1014	A C 13C	R1408	B C 5D	R1463	B C 6B
C1031	A D 9C	C1406	B C 6D	C1460	A C 6E	L1409	A D 5B	R1015	A C 13C	R1409	A C 6D	R1464	B C 5C
C1032	A D 9B	C1407	A C 5D	C1461	A C 6D	L1410	A D 3B	R1016	A C 12B	R1410	A C 5D	R1465	A C 6E
C1033	A D 9B	C1408	A C 5D	C1462	A C 6C	L1411	A D 6C	R1017	A C 13B	R1411	A C 5D	R1467	A C 6E
C1034	A D 9B	C1409	A C 6D	C1463	A C 6C	TRANSISTOR		R1018	A C 13B	R1412	B C 5D	R1468	B C 4D
C1035	A D 9B	C1410	A D 6D	C1464	A C 6C	Q1001	A C 11D	R1019	A C 12B	R1413	A C 5D	R1470	A C 4E
C1036	A D 12B	C1411	A D 5D	C1465	A C 6C	Q1004	A C 8B	R1020	B C 13B	R1414	B C 6E	R1471	A C 4E
C1037	A D 12B	C1412	A C 5D	C1466	B C 6A	Q1005	B C 7B	R1021	B C 12B	R1415	B C 6E	R1472	A C 4E
C1038	A D 12C	C1413	A C 6E	C1467	A C 5B	Q1006	B C 7D	R1022	A C 8C	R1416	B C 5D	OTHER	
C1039	A D 12D	C1414	B C 6E	C1468	A C 5B	Q1007	A C 7D	R1023	A C 8C	R1417	B C 4D	LC1401	A D 6B
C1040	B C 12D	C1415	B C 5E	C1469	A C 5B	Q1008	A C 8E	R1024	B C 7C	R1418	B C 4D	LC1402	A D 6C
C1041	B C 12D	C1416	B C 5E	C1470	A C 5B	Q1009	A C 8E	R1025	A C 7D	R1419	A C 4D	RA1401	A C 3C
C1042	B C 13C	C1417	B C 5E	C1471	A C 5B	Q1010	B C 8E	R1026	B C 7D	R1420	A C 5E	RA1402	A C 3C
C1043	A C 12C	C1418	B C 5E	C1472	A C 5B	Q1012	B C 7E	R1027	A C 7D	R1421	A C 4E	RA1403	A C 3D
C1044	A C 13C	C1419	B C 4E	C1473	A C 4B	Q1014	B C 7D	R1028	A C 7D	R1422	A C 4E	RA1404	A C 3D
C1045	B C 12C	C1420	A C 5D	CONNECTOR		Q1015	A C 7E	R1030	A C 7D	R1423	A C 4D	RA1405	A C 1E
C1046	A C 13C	C1421	A C 5E	CN1001	A D 6A	Q1016	A C 10C	R1031	B C 7D	R1424	A C 5B	RA1406	A C 2E
C1047	A C 12B	C1422	A C 4E	CN1002	A D 9A	Q1018	B C 11B	R1032	B C 8C	R1425	B C 6B	RA1407	A C 2B
C1048	A C 13B	C1423	A C 4E	CN1003	A D 12E	Q1019	B C 11B	R1035	B C 8E	R1426	A C 3B	RA1408	A C 1B
C1049	B C 13B	C1424	A C 5D	CN1004	A D 7E	Q1020	B C 10B	R1036	A C 9E	R1427	B C 3C	TP1001	A D 7E
C1050	B C 12B	C1425	A D 3B	CN1005	A D 11E	Q1021	A C 9D	R1037	A C 7A	R1428	B C 3C	VR1001	A D 10B
C1056	B C 8D	C1426	B C 4C	DIODE		Q1022	A C 7E	R1038	A C 9C	R1429	B C 3C	VR1002	A D 8E
C1057	B C 8D	C1427	B C 4C	D1002	A D 7B	Q1023	B C 7B	R1039	A C 9C	R1430	B C 3E	VR1004	A D 11B
C1058	B C 7C	C1428	B C 3C	D1003	A D 7B	Q1401	A D 6B	R1045	A C 8D	R1431	B C 3D	VR1401	A D 5C
C1063	B C 7C	C1429	B C 3C	D1004	A D 8B	Q1402	B C 6D	R1046	A C 8D	R1432	B C 3D		
		C1430	B C 3D	D1006	A D 8C	Q1403	A C 6D	R1047	B C 8D	R1433	B C 3D		

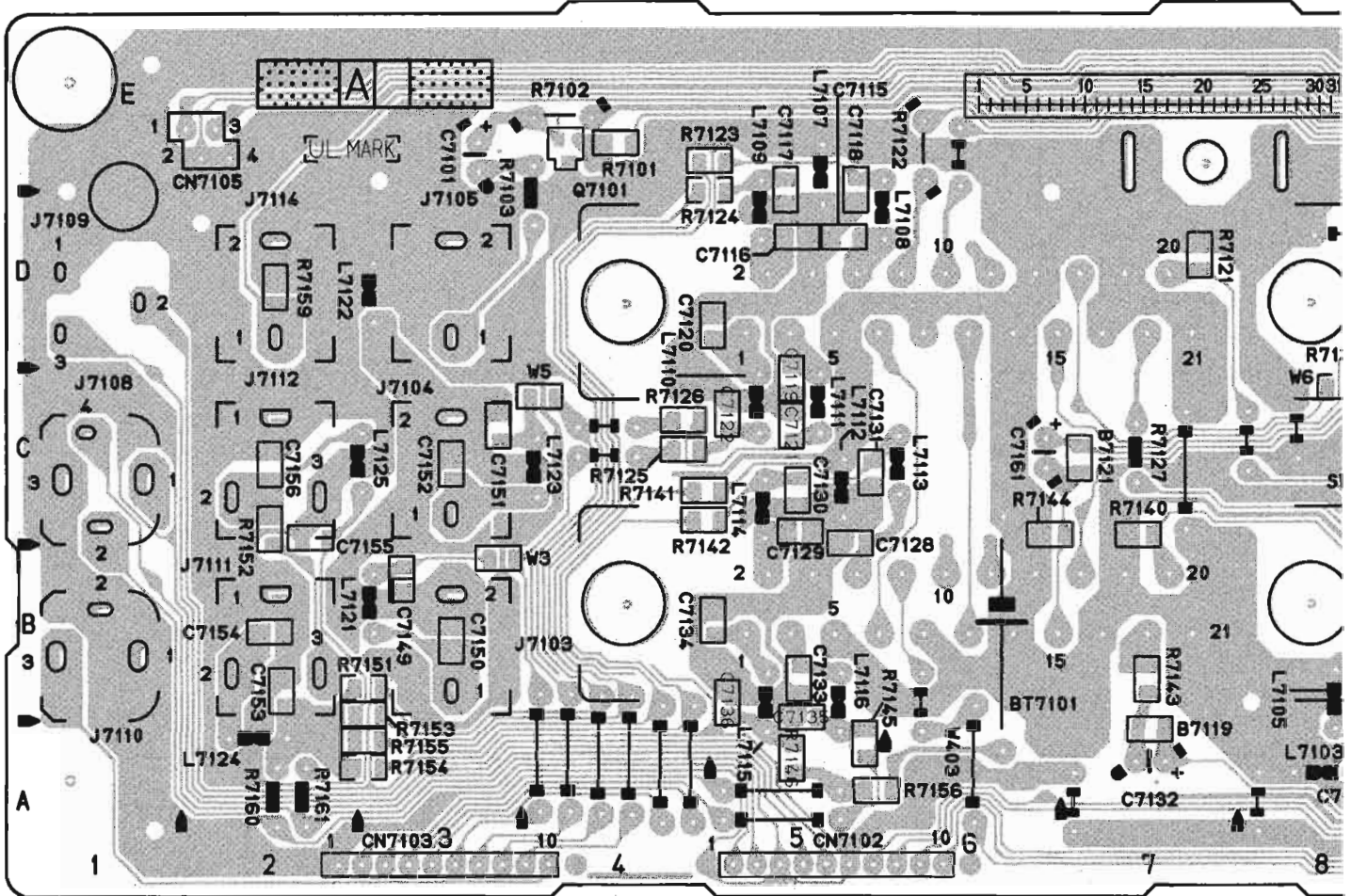


4.14 TERMINAL SCHEMATIC DIAGRAM



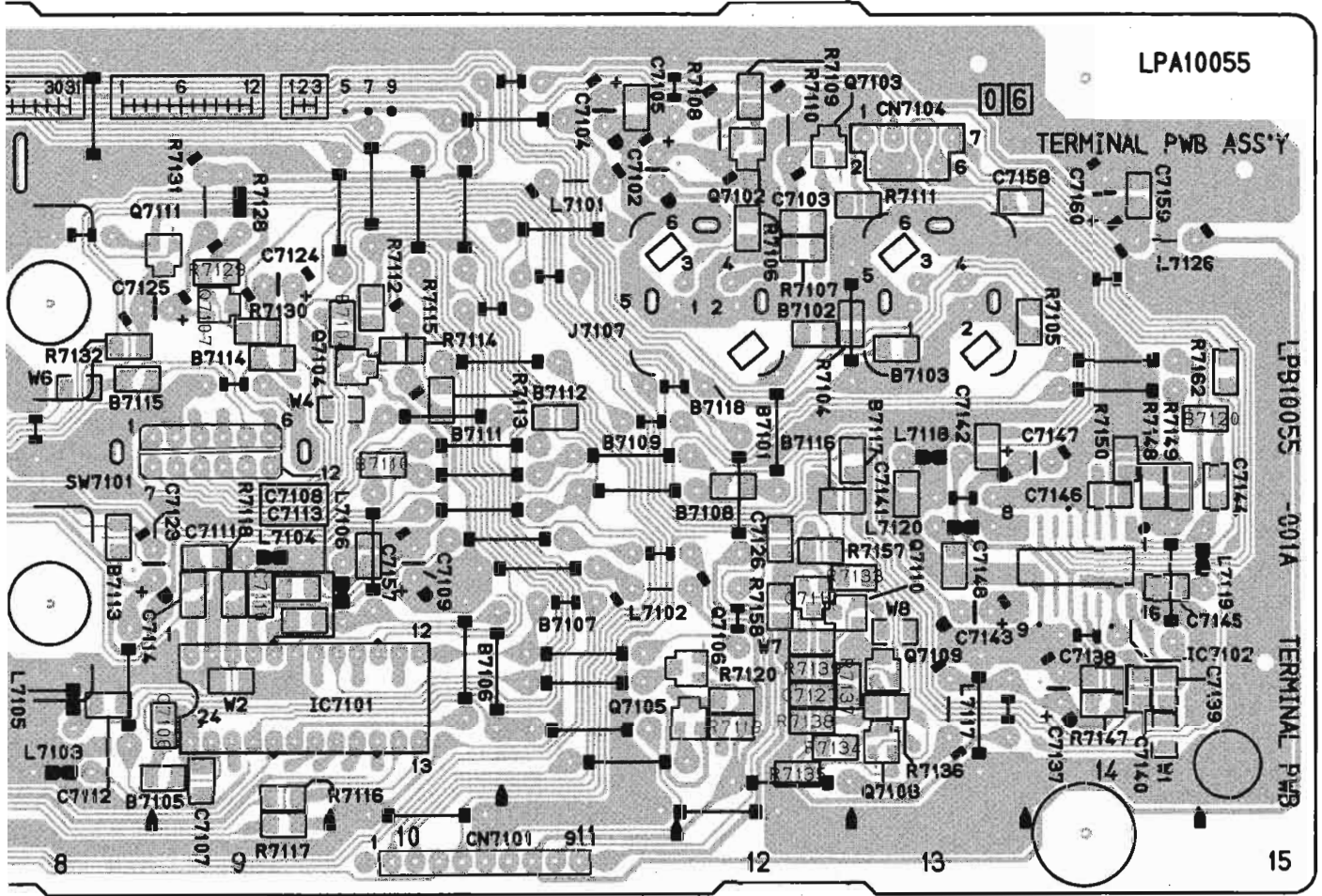


4.15 TERMINAL CIRCUIT BOARD



COMPONENT PARTS LOCATION GUIDE <TERMINAL>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION		
CAPACITOR															
C7101	A D 3E	C7128	B C 5C	C7156	B C 2C	J7111	A D 2B	L7125	A D 3C	R7112	B C 10D	R7140	B C 7C		
C7102	A D 11E	C7129	B C 5C	C7157	B C 10B	J7112	A D 2C	L7126	A D 14D	R7113	B C 10C	R7141	B C 4C		
C7103	B C 12D	C7130	B C 5C	C7158	B C 13D	J7114	A D 2D	TRANSISTOR				R7114	B C 10D	R7142	B C 4C
C7104	A D 11E	C7131	B C 5C	C7159	B C 14D	COIL				Q7101	B C 4E	R7115	A D 10C	R7143	B C 7B
C7105	B C 11E	C7132	A D 7A	C7160	A D 14D	L7101	A D 11E	Q7102	B C 12E	R7116	B C 9A	R7144	B C 6C		
C7106	B C 9A	C7133	B C 5B	C7161	A D 6C	L7102	A D 12B	Q7103	B C 12E	R7117	B C 9A	R7145	B C 5A		
C7107	B C 9A	C7134	B C 5B	CONNECTOR				Q7104	B C 10D	R7118	B C 9B	R7146	B C 5A		
C7108	B C 9B	C7135	B C 5B	CN7101	A D 10A	L7103	A D 8A	Q7105	B C 12B	R7119	B C 12A	R7147	B C 14B		
C7109	A D 10B	C7136	B C 5B	CN7102	A D 5A	L7104	A D 9B	Q7106	B C 12B	R7120	B C 12B	R7148	B C 14C		
C7110	B C 9B	C7137	A D 14B	CN7103	A D 2A	L7105	A D 8A	Q7107	B C 9D	R7121	B C 7D	R7149	B C 14C		
C7111	B C 9B	C7138	B C 14B	CN7104	A D 13E	L7106	A D 10B	Q7108	B C 13A	R7122	A D 6E	R7150	B C 14C		
C7112	B C 8B	C7139	B C 14B	CN7105	A D 2E	L7107	A D 5E	Q7109	B C 13B	R7123	B C 5E	R7151	B C 3B		
C7113	B C 9B	C7140	B C 14B	IC				L7108	A D 5D	R7124	B C 5E	R7152	B C 2C		
C7114	B C 9B	C7141	B C 13C	IC7101	A D 9B	L7109	A D 5D	Q7110	B C 12B	R7125	B C 4C	R7153	B C 3B		
C7115	B C 5D	C7142	B C 13C	IC7102	B C 14B	L7110	A D 5C	Q7111	B C 9D	R7126	B C 4C	R7154	B C 3A		
C7116	B C 5D	C7143	A D 13B	JACK				L7111	A D 5C	Q7112	B C 12B	R7127	A D 7C	R7155	B C 3A
C7117	B C 5E	C7144	B C 15C	J7101	A D 6D	L7112	A D 5C	RESISTOR				R7128	A D 9E	R7156	B C 5A
C7118	B C 5E	C7145	B C 14B	J7102	A D 6B	L7113	A D 5C	R7101	B C 4E	R7129	B C 9D	R7157	B C 12B		
C7119	B C 5C	C7146	B C 14C	J7103	A D 3B	L7114	A D 5C	R7102	A D 3E	R7130	B C 9D	R7158	B C 12B		
C7120	B C 5D	C7147	A D 13C	J7104	A D 3C	L7115	A D 5B	R7103	A D 3E	R7131	A D 9D	R7159	B C 2D		
C7121	B C 5C	C7148	B C 13B	J7105	A D 3D	L7116	A D 5B	R7104	B C 12D	R7132	B C 8D	R7160	A D 2A		
C7122	B C 5C	C7149	B C 3B	J7106	A D 13D	L7117	A D 13A	R7105	B C 14D	R7133	B C 13B	R7161	A D 2A		
C7123	A D 9B	C7150	B C 3B	J7107	A D 12D	L7118	A D 13C	R7106	B C 12D	R7134	B C 12A	R7162	B C 15C		
C7124	A D 9D	C7151	B C 3C	J7108	A D 1C	L7119	A D 15B	R7107	B C 12D	R7135	B C 12A	OTHER			
C7125	A D 9D	C7152	B C 3C	J7109	A D 1D	L7120	A D 13C	R7108	A D 12E	R7136	B C 13B	BT7101	A D 6B		
C7126	B C 12C	C7153	B C 2B	J7110	A D 1B	L7121	A D 3B	R7109	B C 12E	R7137	B C 12B	SW7101	A D 9C		
C7127	B C 12B	C7154	B C 2B			L7122	A D 3D	R7110	A D 12E	R7138	B C 12A				
		C7155	B C 2C			L7123	A D 4C	R7111	B C 13D	R7139	B C 12B				
						L7124	A D 2A								

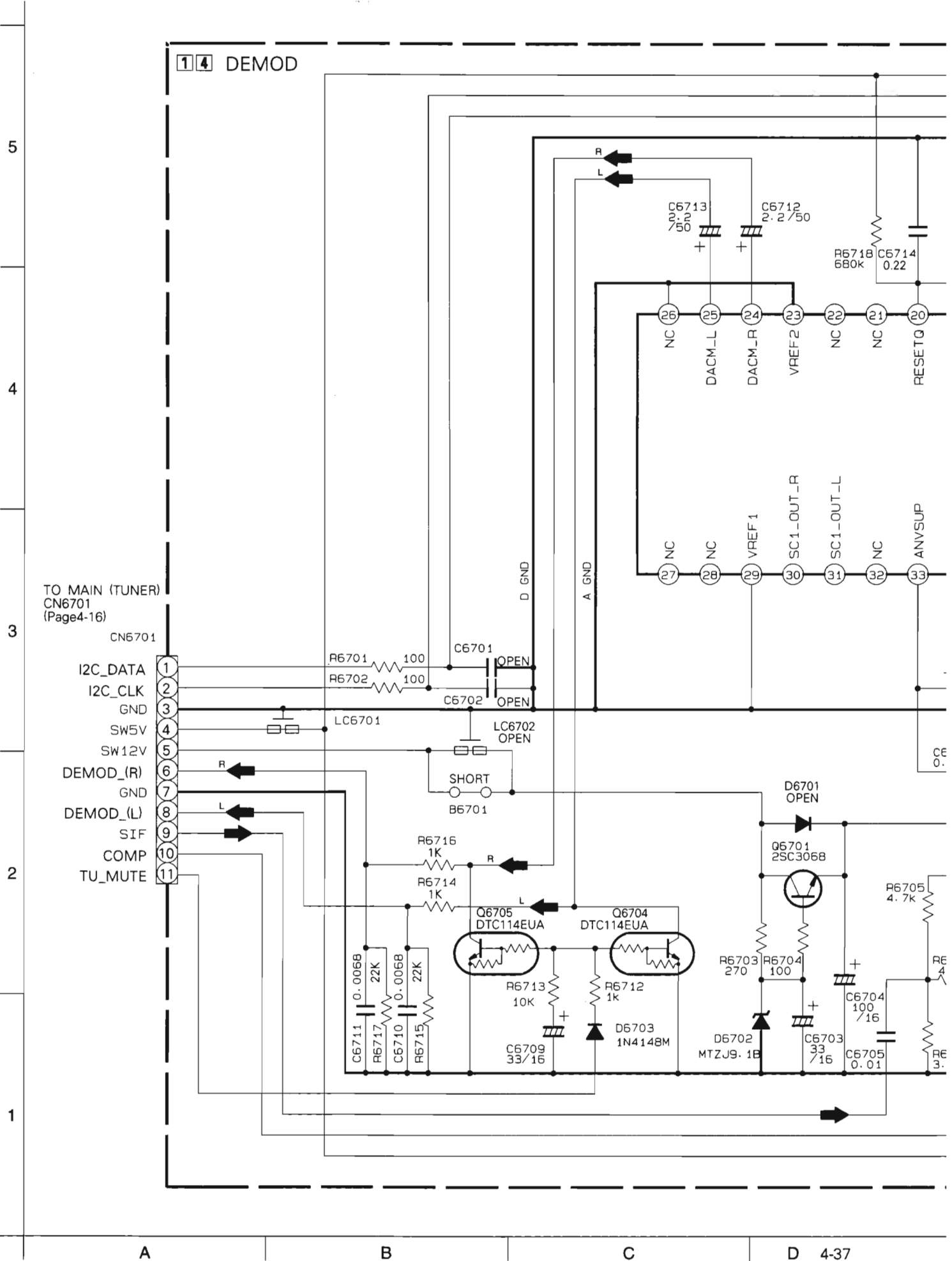


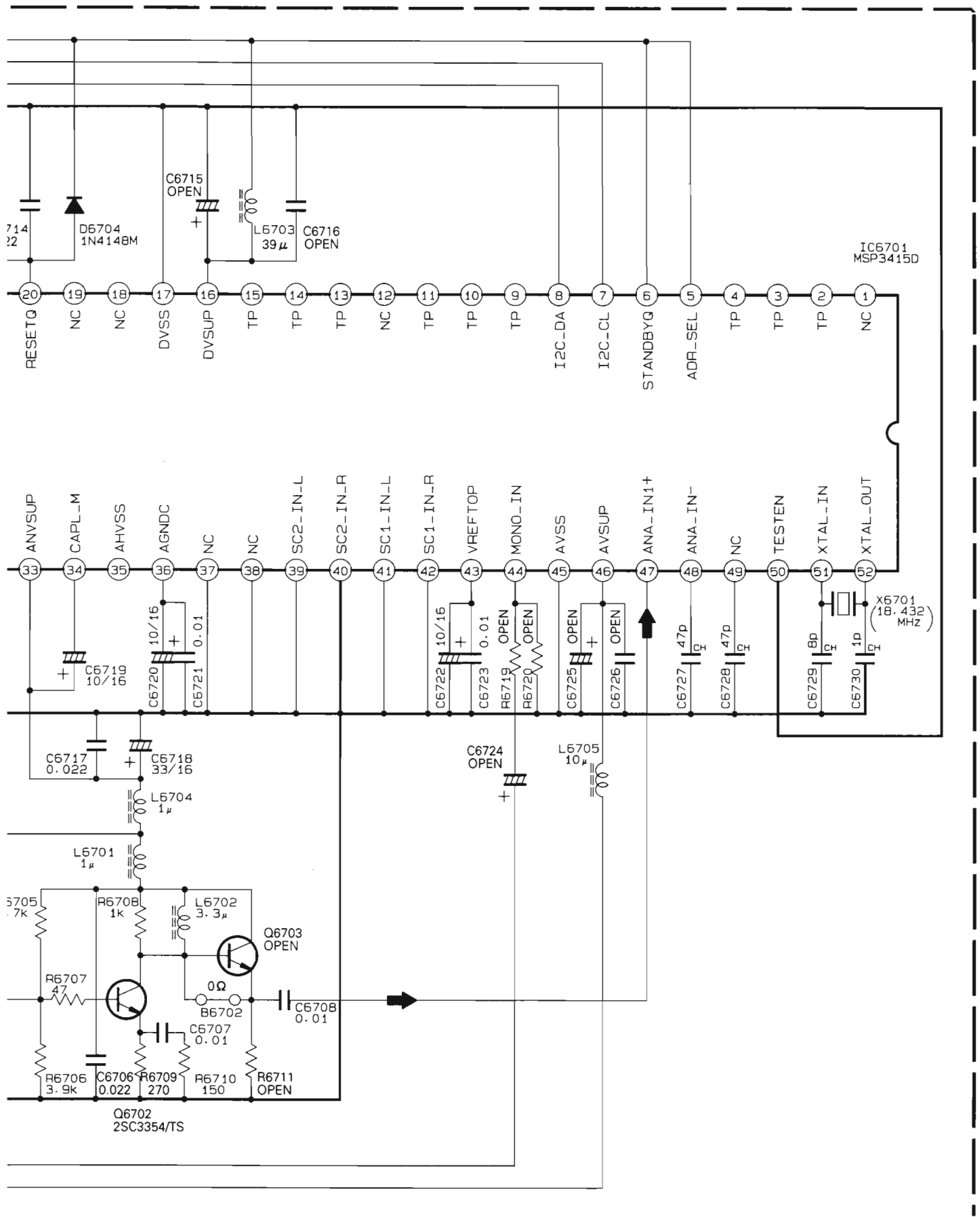
LPA10055

TERMINAL PWB ASS'Y

LPA10055 -001A
TERMINAL PWB

4.16 DEMODULATOR SCHEMATIC DIAGRAM





4-38

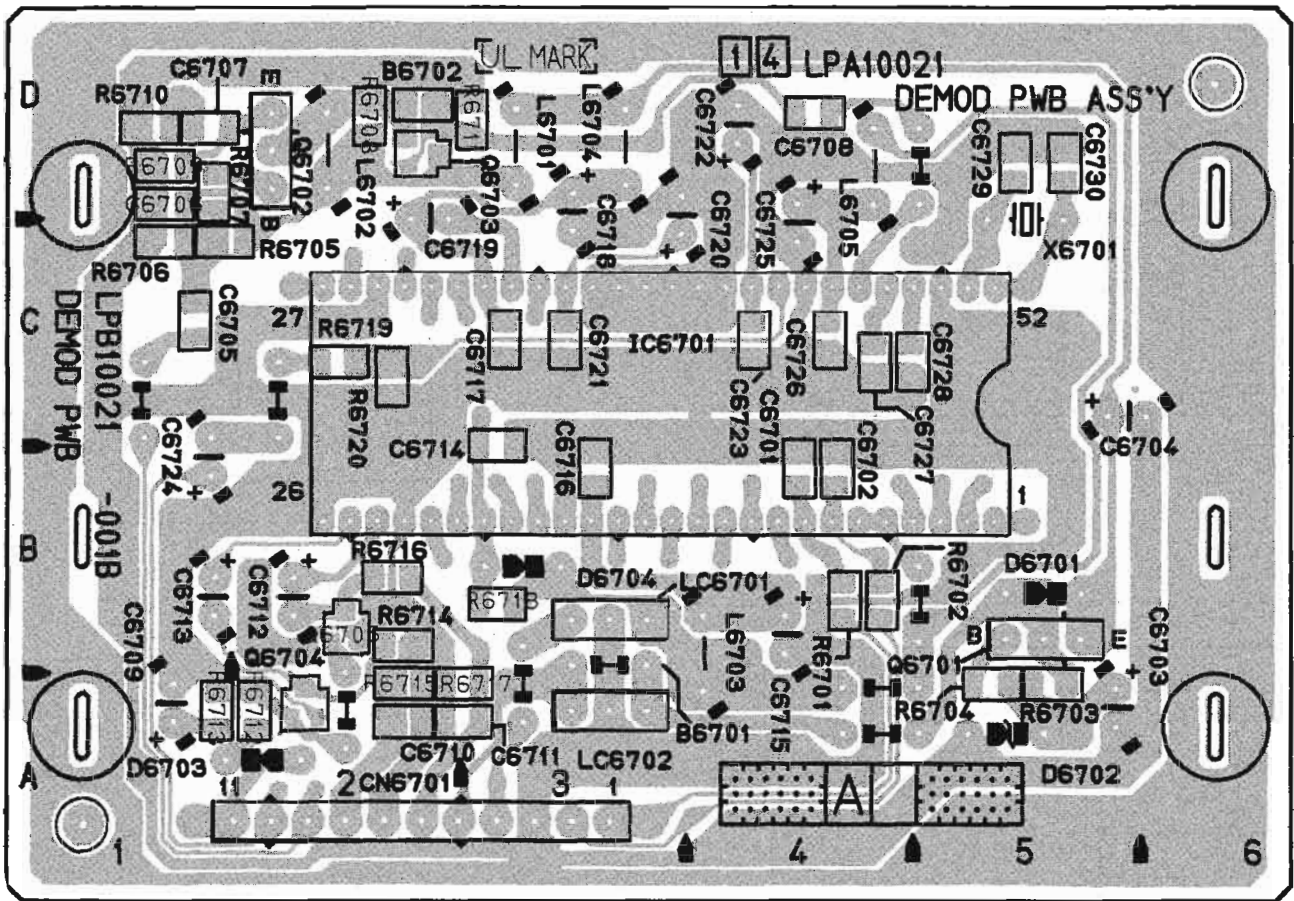
E

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G

H

4.17 DEMODULATOR CIRCUIT BOARD

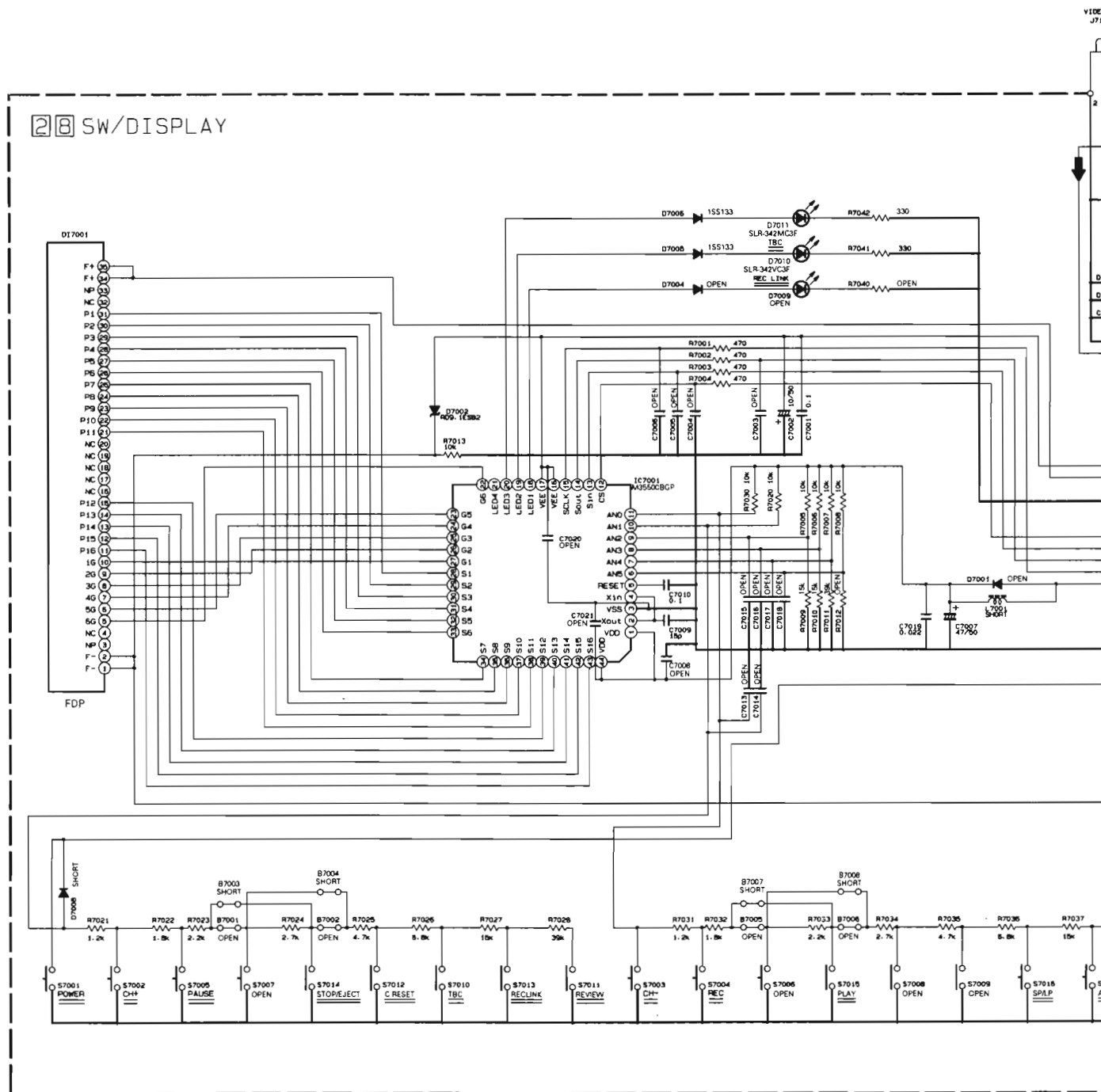


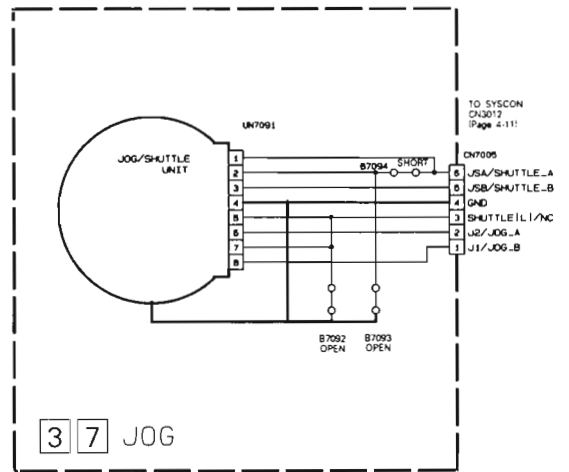
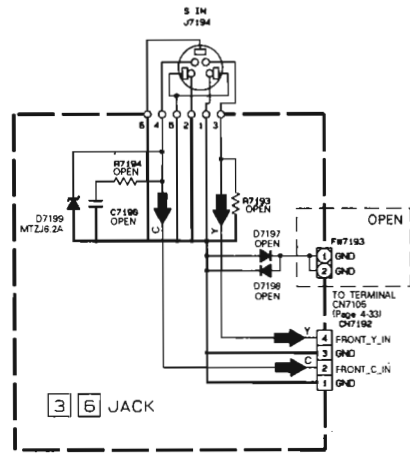
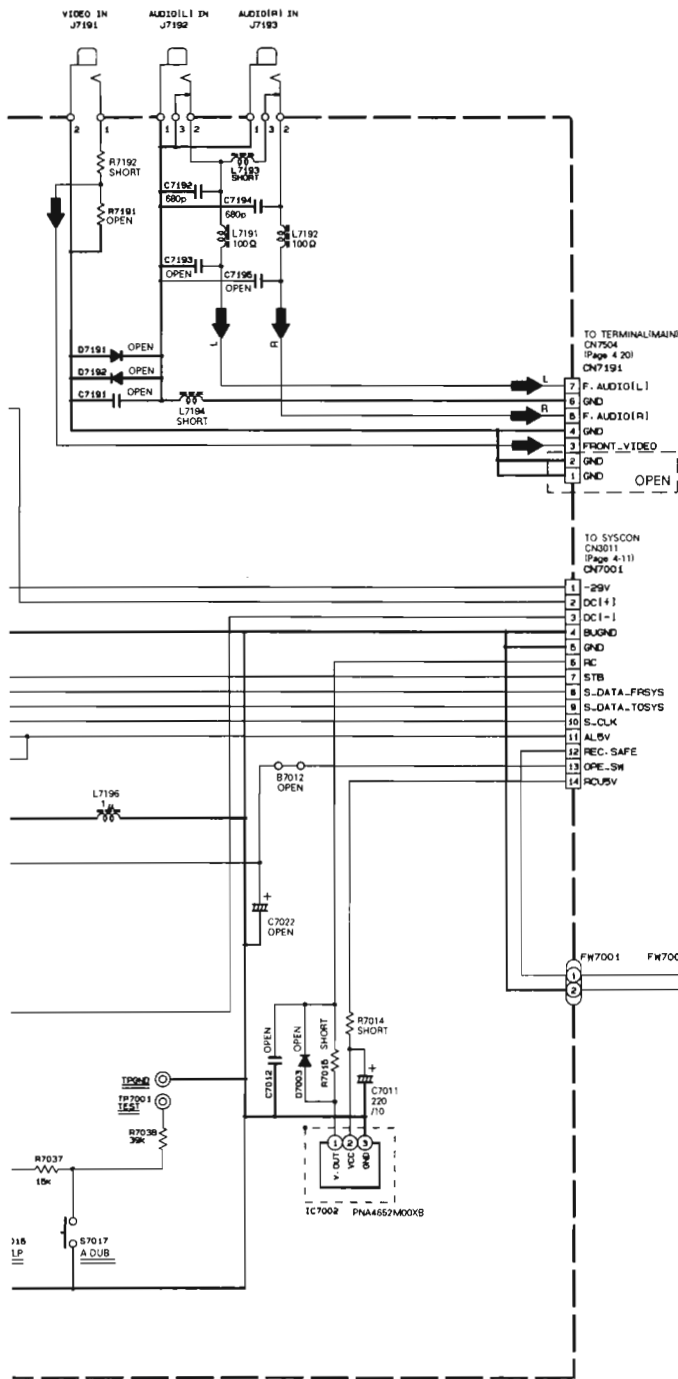
COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		C6717	B C 3C	DIODE		TRANSISTOR		R6710	B C 1D
C6701	B C 4B	C6718	A D 3D	D6701	A D 5B	Q6701	A D 5B	R6711	B C 3D
C6702	B C 4B	C6719	A D 2D	D6702	A D 5A	Q6702	A D 2D	R6712	B C 2A
C6703	A D 5A	C6720	A D 4C	D6703	A D 2A	Q6703	B C 2D	R6713	B C 2A
C6704	A D 5C	C6721	B C 3C	D6704	A D 3B	Q6704	B C 2A	R6714	B C 2B
C6705	B C 1C	C6722	A D 4D	IC		Q6705	B C 2B	R6715	B C 2A
C6706	B C 1D	C6723	B C 4C	IC6701	A D 5B	RESISTOR		R6716	B C 2B
C6707	B C 1D	C6724	A D 1B	COIL		R6701	B C 4B	R6717	B C 3A
C6708	B C 4D	C6725	A D 4D	L6701	A D 3D	R6702	B C 4B	R6718	B C 3B
C6709	A D 1A	C6726	B C 4C	L6702	A D 2D	R6703	B C 5A	R6719	B C 2C
C6710	B C 2A	C6727	B C 4C	L6703	A D 4A	R6704	B C 5A	R6720	B C 2C
C6711	B C 3A	C6728	B C 5C	L6704	A D 3D	R6705	B C 2C	OTHER	
C6712	A D 2B	C6729	B C 5D	L6705	A D 4D	R6706	B C 1C	LC6701	A D 3B
C6713	A D 1B	C6730	B C 5D	CONNECTOR		R6707	B C 1D	LC6702	A D 3A
C6714	B C 3C			CN6701	A D 3A	R6708	B C 2D		
C6715	A D 4B					R6709	B C 1D		
C6716	B C 3B								

4.18 SWITCH/DISPLAY, REC SAFETY, JACK AND JOG SCHEMATIC DIAGRAMS

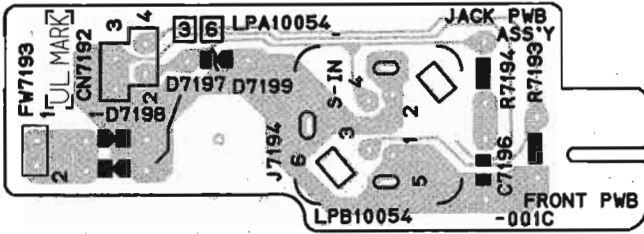
28 SW/DISPLAY



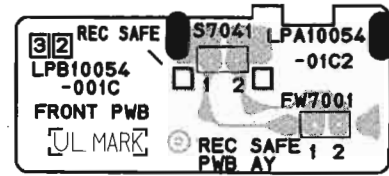


4.19 SWITCH/DISPLAY, REC SAFETY, JACK AND JOG CIRCUIT BOARDS

— JACK —



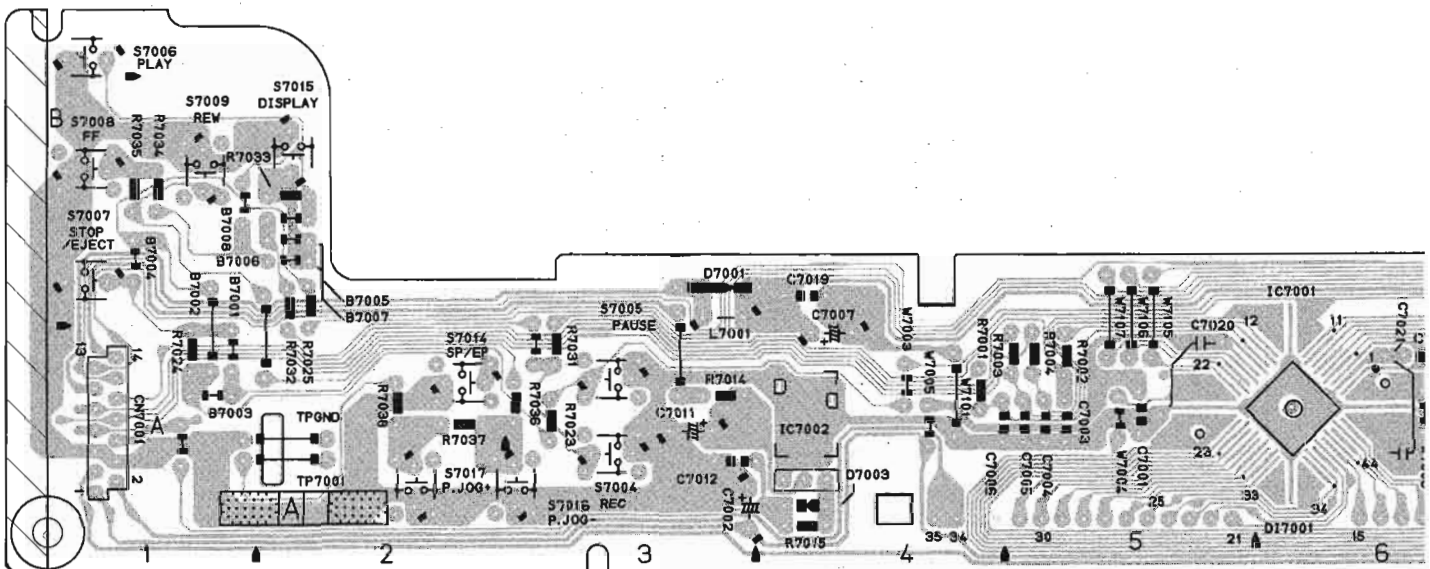
— REC SAFETY —



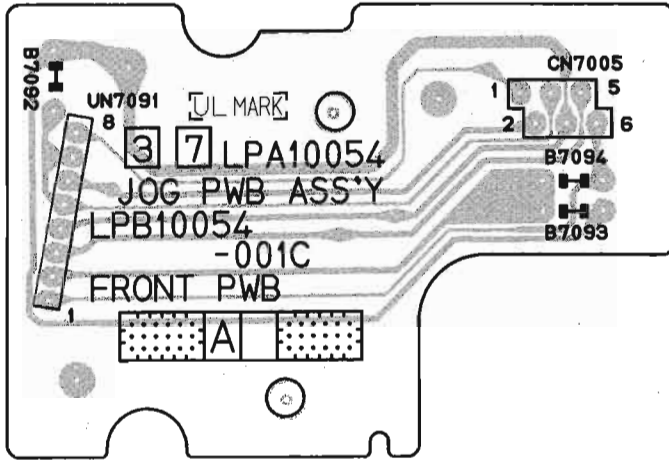
COMPONENT PARTS LOCATION GUIDE <SW/DISPLAY>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	
CAPACITOR												
C7001	A D 5A	C7021	A D 6A	D7011	A D 10B	R7003	A D 5A	R7027	A D 10B	S7004	A D 3A	
C7002	A D 3A	C7022	A D 10B	D7191	A D 10A	R7004	A D 5A	R7028	A D 10B	S7005	A D 3A	
C7003	A D 5A	C7191	A D 10A	D7192	A D 11A	R7005	A D 7A	R7030	A D 7A	S7006	A D 1C	
C7004	A D 5A	C7192	A D 11A	IC			R7006	A D 7A	R7031	A D 3B	S7007	A D 1B
C7005	A D 5A	C7193	A D 11A	IC7001	B C 6A	R7007	A D 7A	R7032	A D 2A	S7008	A D 1B	
C7006	A D 4A	C7194	A D 10A	IC7002	A D 4A	R7008	A D 7A	R7033	A D 2B	S7009	A D 1B	
C7007	A D 4A	C7195	A D 11A	JACK			R7009	A D 7A	R7034	A D 1B	S7010	A D 10B
C7008	A D 6A	CONECTOR			J7191	A D 11A	R7010	A D 7A	R7035	A D 1B	S7011	A D 10B
C7009	A D 6A	CN7001	A D 1A	J7192	A D 11A	R7011	A D 7A	R7036	A D 3A	S7012	A D 8A	
C7010	A D 6A	CN7191	A D 11B	J7193	A D 10A	R7012	A D 7A	R7037	A D 2A	S7013	A D 8A	
C7011	A D 3A	DIODE			COIL			R7013	A D 7A	R7038	A D 2A	
C7012	A D 3A	D7001	A D 3B	L7001	A D 9C	R7014	A D 3A	R7040	A D 8A	S7015	A D 2B	
C7013	A D 7A	D7002	A D 7A	L7191	A D 11A	R7015	A D 4A	R7041	A D 8A	S7016	A D 3A	
C7014	A D 7A	D7003	A D 4A	L7192	A D 10A	R7020	A D 7A	R7042	A D 10B	S7017	A D 2A	
C7015	A D 7A	D7004	A D 8B	L7193	A D 10A	R7021	A D 9A	R7191	A D 11A	OTHER		
C7016	A D 7A	D7005	A D 8B	L7194	A D 11A	R7022	A D 7A	R7192	A D 11A	DI7001	A D 6A	
C7017	A D 7A	D7006	A D 10B	L7196	A D 8A	R7023	A D 3A	SWITCH			FW7001	A D 9B
C7018	A D 6A	D7008	A D 9A	RESISTOR			R7024	A D 1A	S7001	A D 11B	TP7001	A D 1A
C7019	A D 4B	D7009	A D 8A	R7001	A D 4A	R7025	A D 2A	S7002	A D 9A	TPGND	A D 1A	
C7020	A D 5A	D7010	A D 8A	R7002	A D 5A	R7026	A D 10B	S7003	A D 9A			

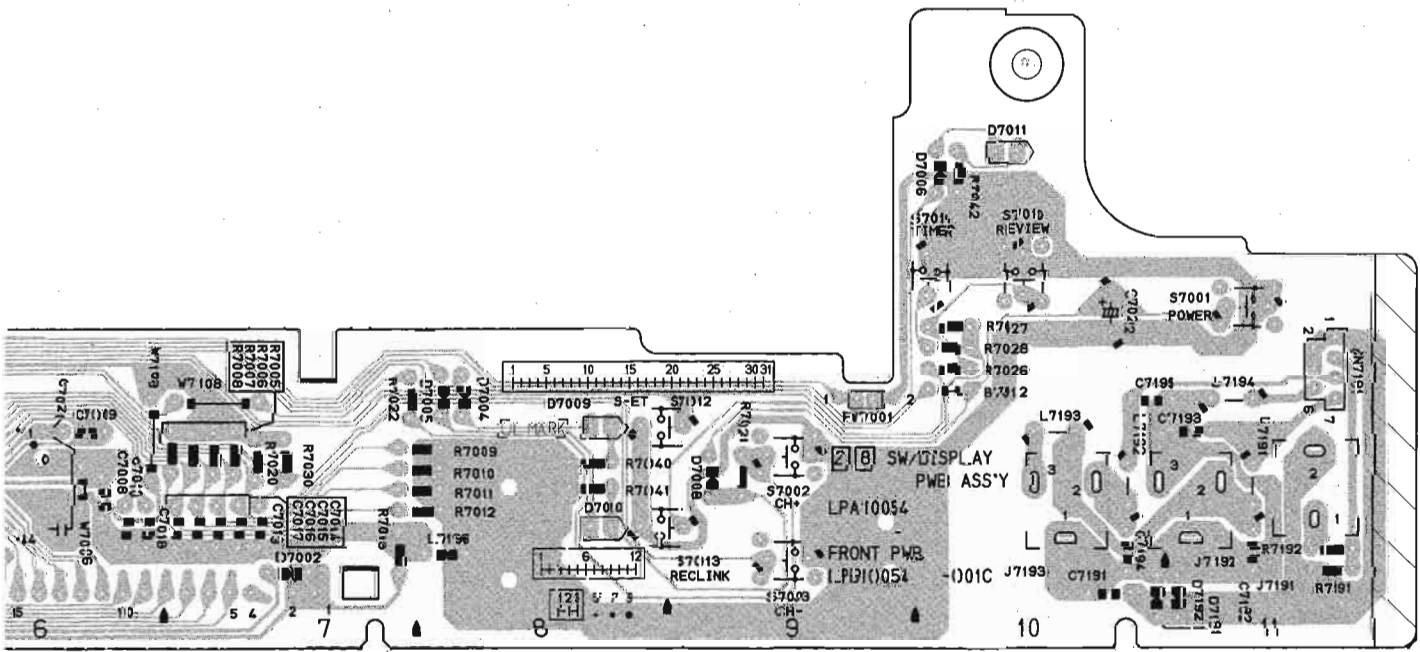
— SWITCH/DISPLAY —



— JOG —

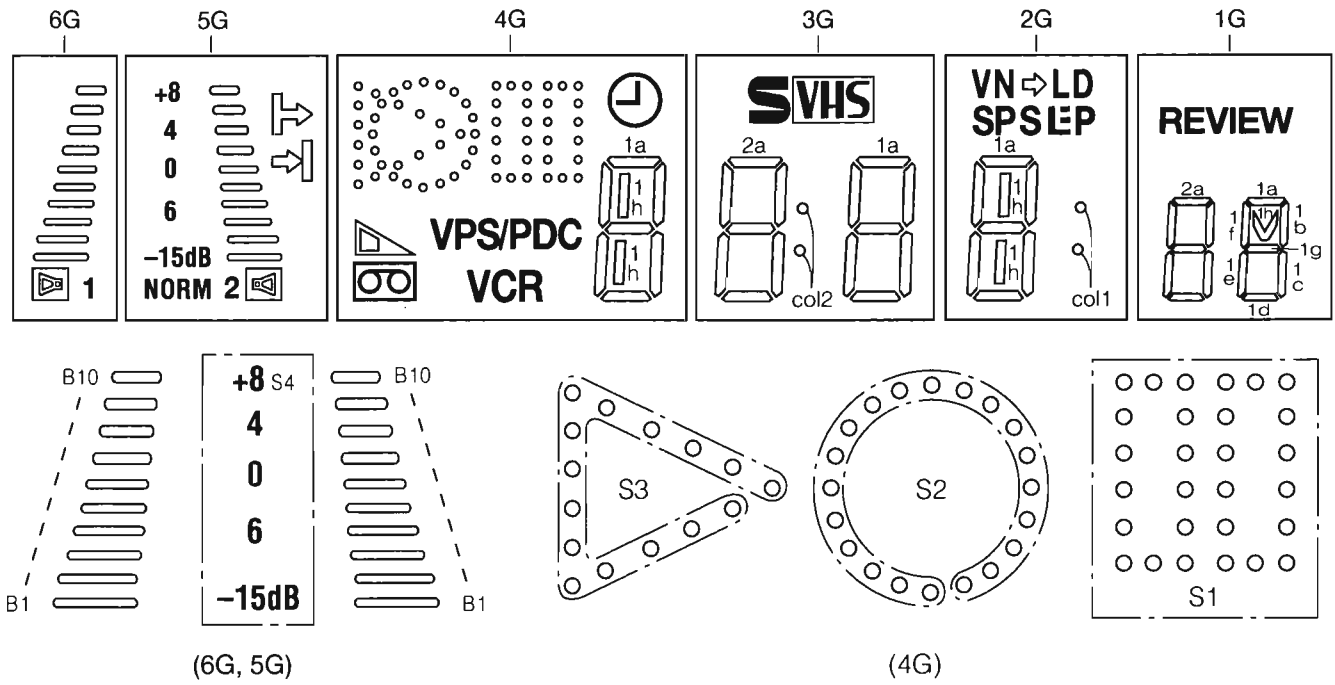


IN
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 IB
 IB
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 1



4.20 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



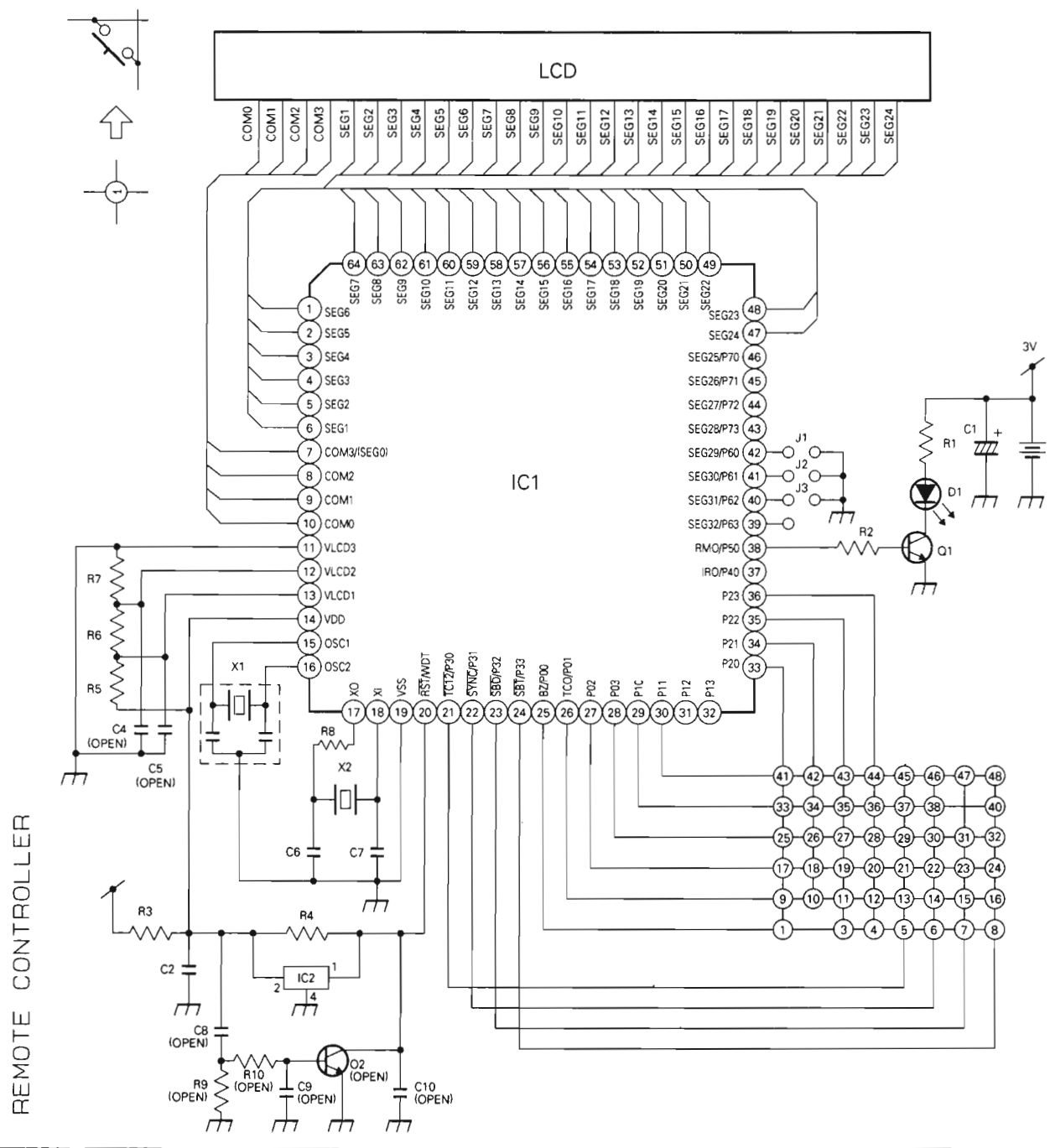
ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P 1	—		S2	1a	1a	1a
P 2	—		S1	1b	1b	1b
P 3	—	S4	S3	1f	1f	1f
P 4	—	NORM	VPS/PDC	1g	1g	1g
P 5	1	2		1c	1c	1c
P 6				1e	1e	1e
P 7	B10	B10		1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	1a	2a	col1	2a
P10	B7	B7	1b	2b		2b
P11	B6	B6	1f	2f	VN	2f
P12	B5	B5	1g	2g	LD	2g
P13	B4	B4	1c	2c	SP	2c
P14	B3	B3	1e	2e	S _(SEP)	2e
P15	B2	B2	1d	2d	: _(SEP)	2d
P16	B1	B1	1h	SVHS	LP _(SEP)	REVIEW

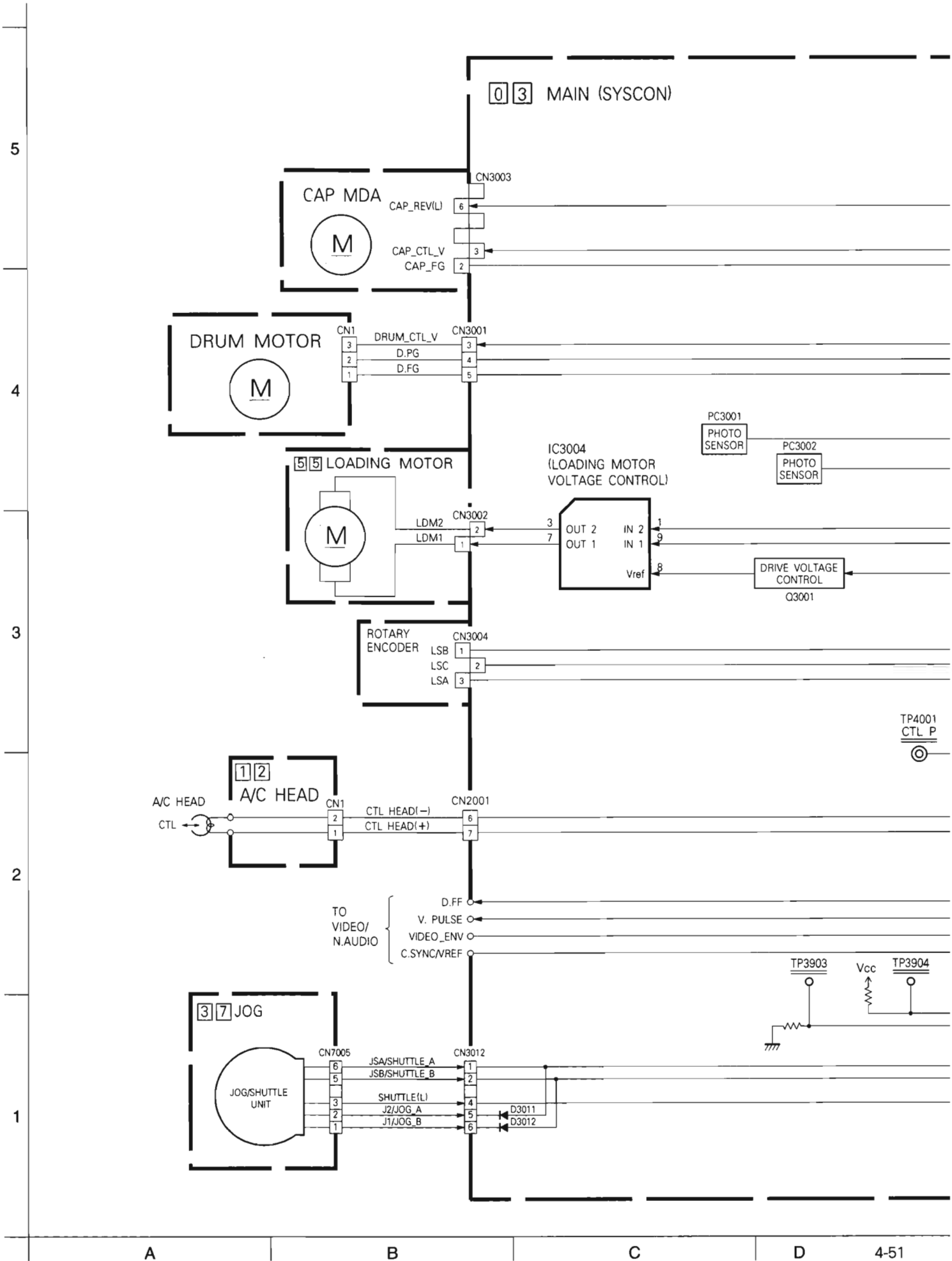
4.21 REMOTE CONTROL SCHEMATIC DIAGRAM

- NOTES:
 1. All parts shown in this schematic are critical for safety.
 2. This schematic is only for reference.
 Avoid replacing individual parts.
 Replace the entire unit only.

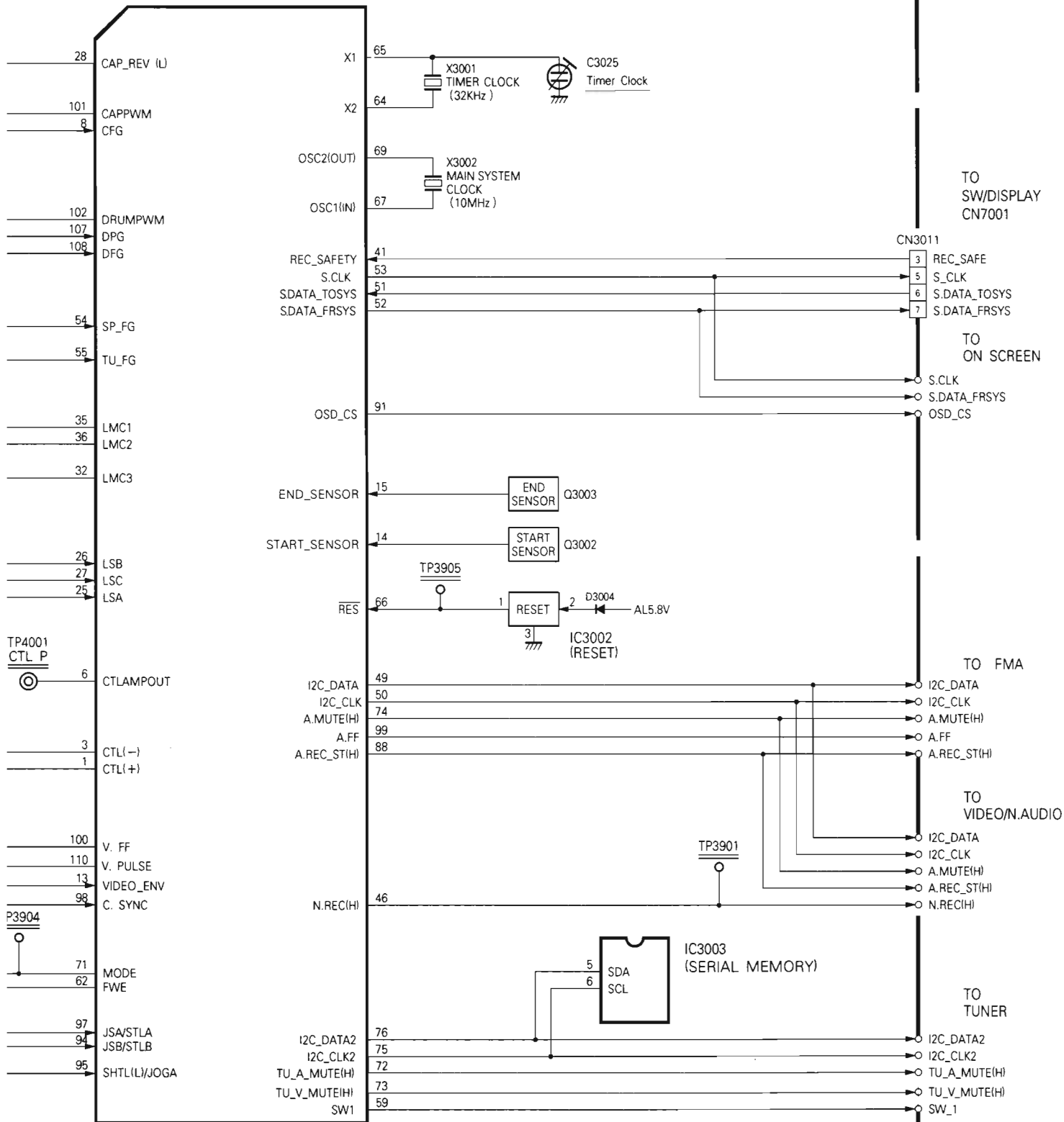
KEY No.	KEY NAME
1	DATE -
3	FF
4	VCR -
5	START -
6	REW
7	PLAY
8	STOP -
9	9WEEKLY
10	SP/LPI/-
11	TRANS
12	TIMER
13	CANCEL
14	7MPS
15	0/AUX
16	8/DAILY
17	DATE +
18	MENU
19	VCR +
20	OK
21	PROG
22	START +
23	PROG CHECK
24	STOP +
25	6
26	3
27	CMG30 SEC
28	RE-VIEW
29	1
30	4
31	2
32	5
33	▼/TV CH -
34	▲/TV CH +
35	>>/VOL +
36	PAUSE
37	REC
38	<</VOL -
40	STOP
41	CABLE/SAT
42	DISPLAY/ENTER
43	POWER
44	TV/CR
45	PROGIG Code)
46	VCR
47	AUDIO/MUTE
48	TV
37 + 7	REC START
37 + 3 6	REC PAUSE



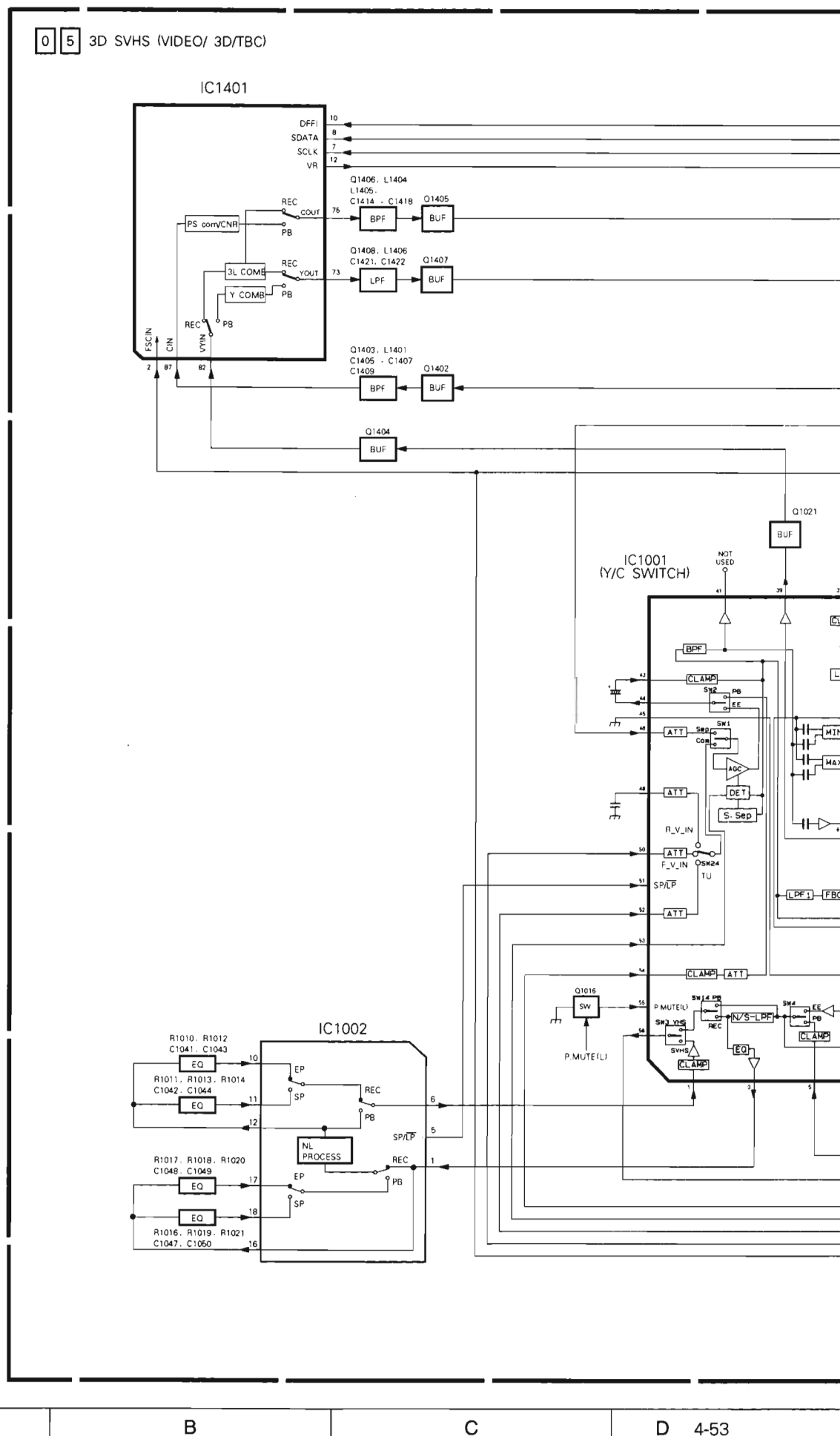
4.23 SYSTEM CONTROL BLOCK DIAGRAM

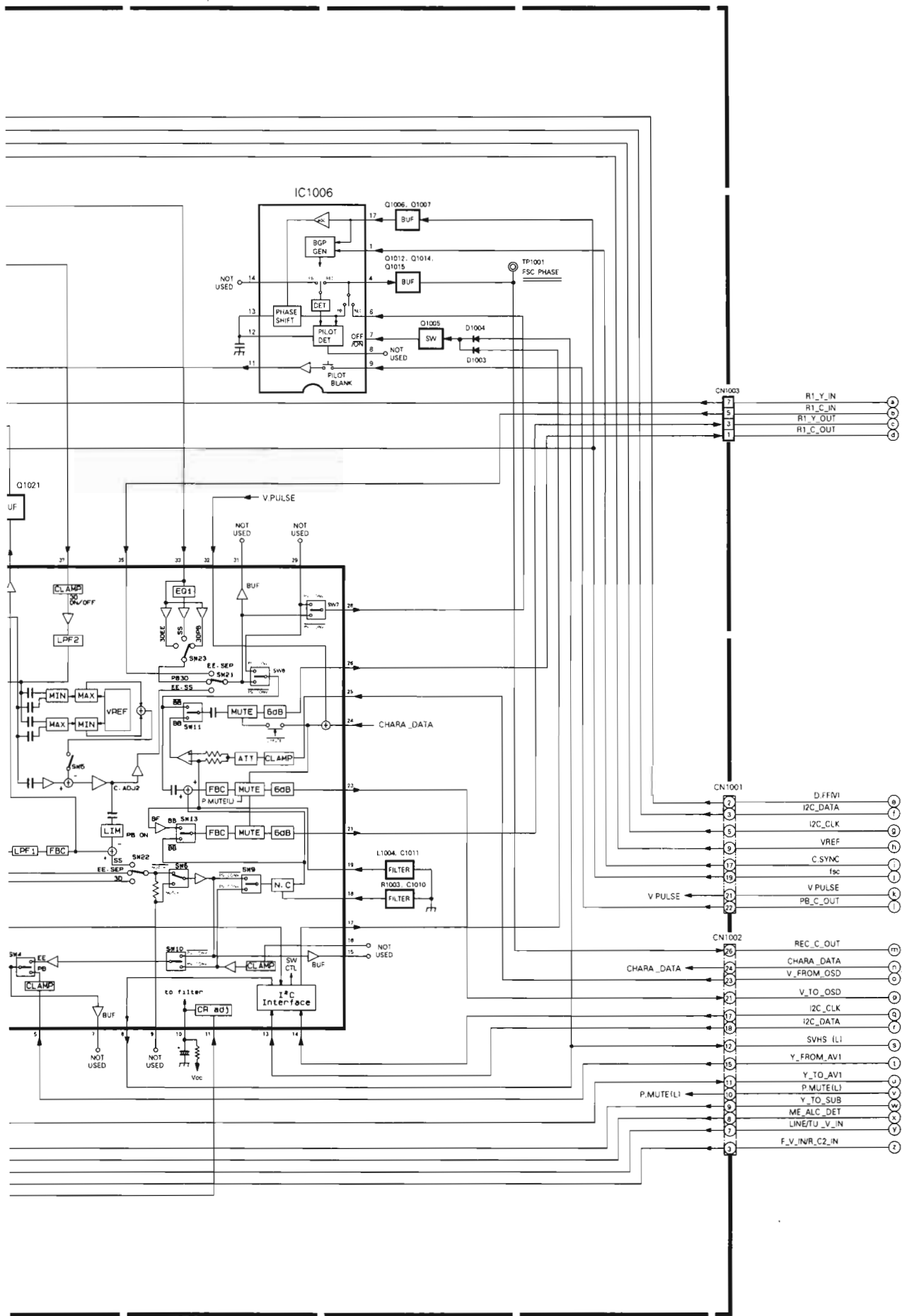


IC3001
(SYSTEM CONTROL MICRO PROCESSOR)



4.24 VIDEO BLOCK DIAGRAM





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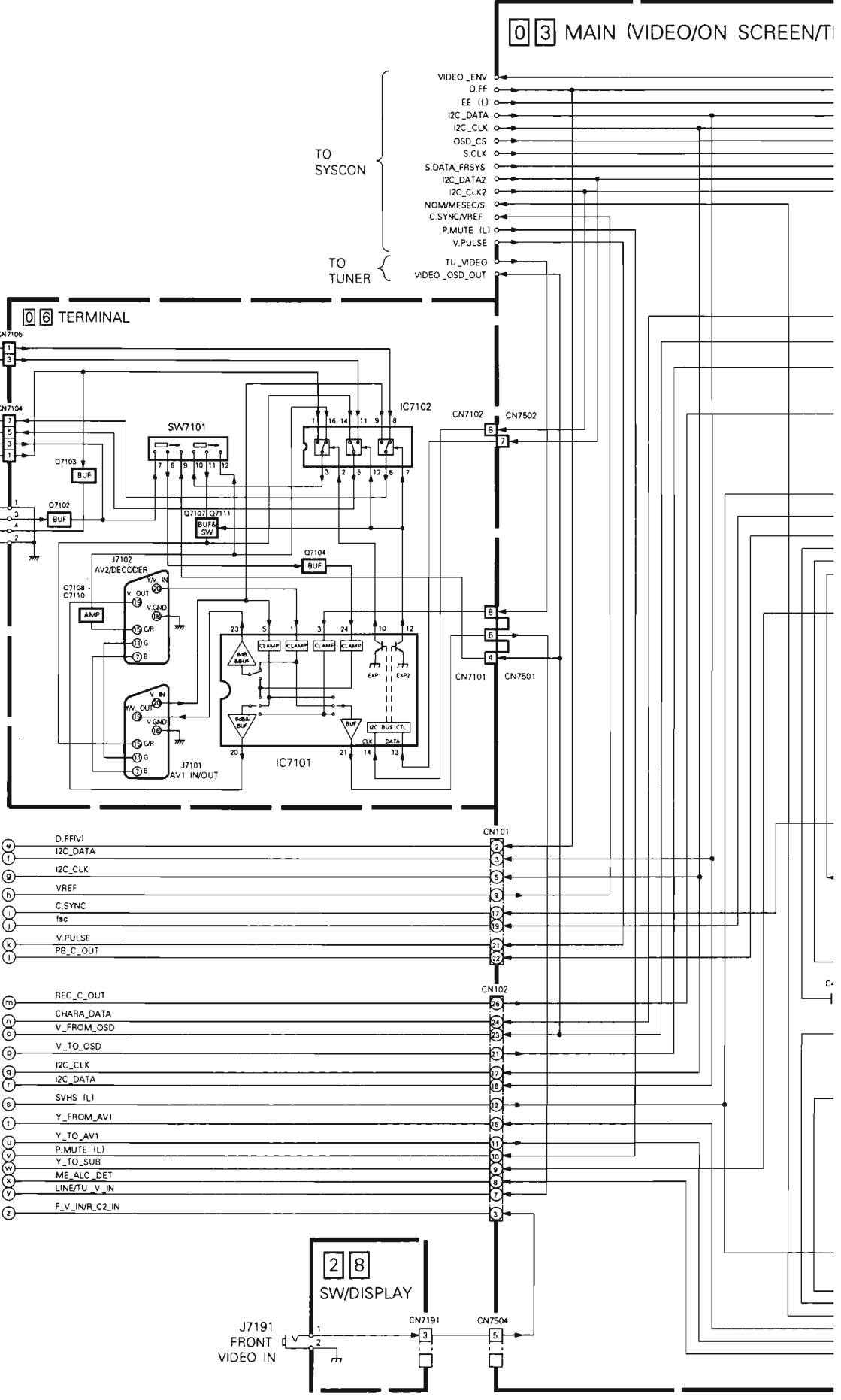
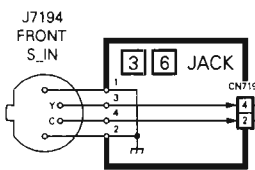
B

C

D

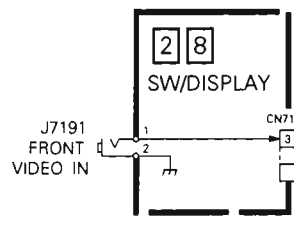
4-55

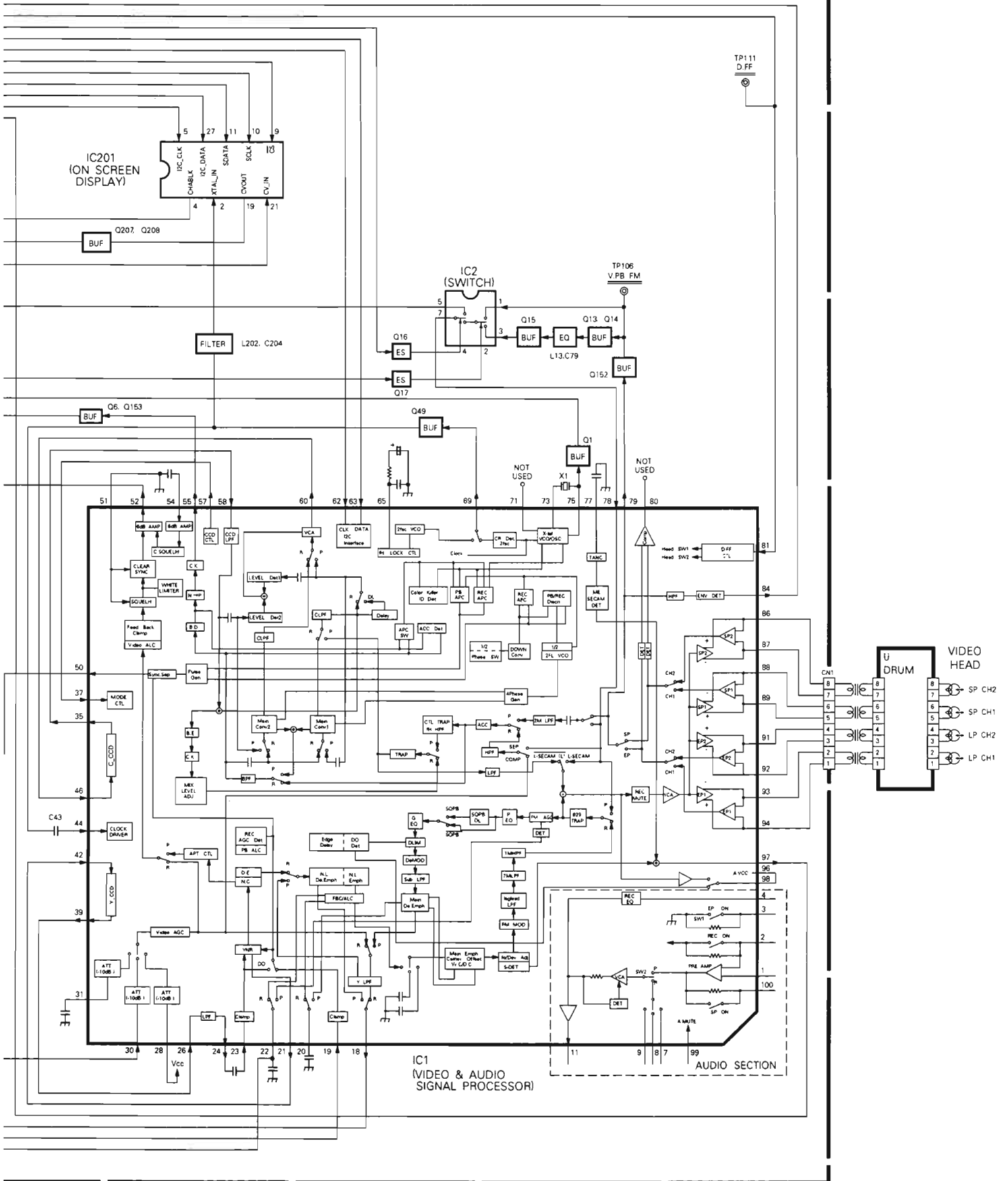
0 3 MAIN (VIDEO/ON SCREEN/T



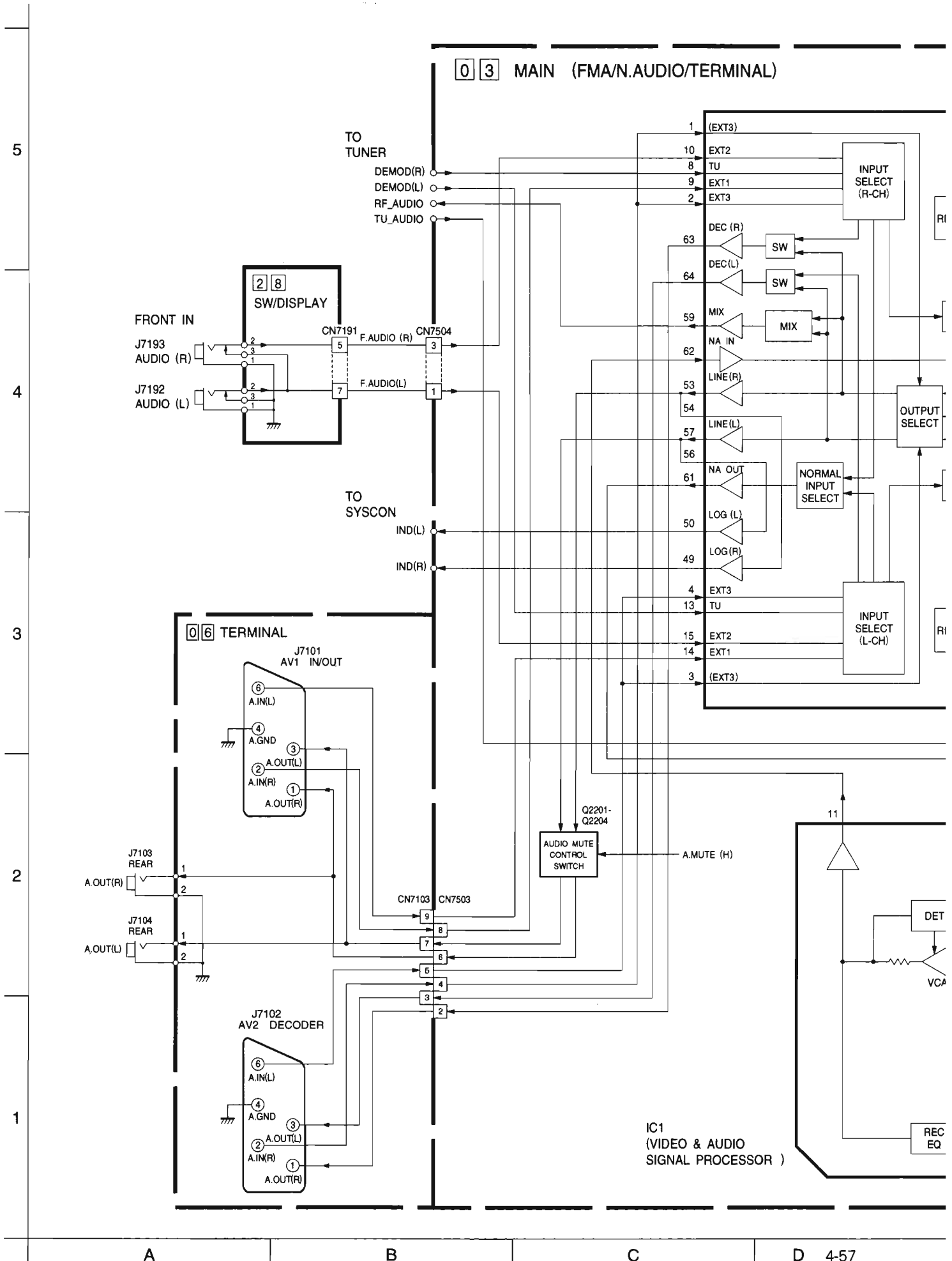
- (8) D.FRV1
- (I) I2C_DATA
- (9) I2C_CLK
- (H) VREF
- (J) C.SYNC
- (K) fsc
- (L) V.PULSE
- (M) PB_C_OUT

- (N) REC_C_OUT
- (O) CHARA_DATA
- (P) V_FROM_OSD
- (Q) V_TO_OSD
- (R) I2C_CLK
- (S) I2C_DATA
- (T) SVHS (L)
- (U) Y_FROM_AV1
- (V) Y_TO_AV1
- (W) P.MUTE (L)
- (X) Y_TO_SUB
- (Y) ME_ALC_DET
- (Z) LINE/TU_V_IN
- (1) F_V_IN/R_C2_IN





4.25 AUDIO BLOCK DIAGRAM

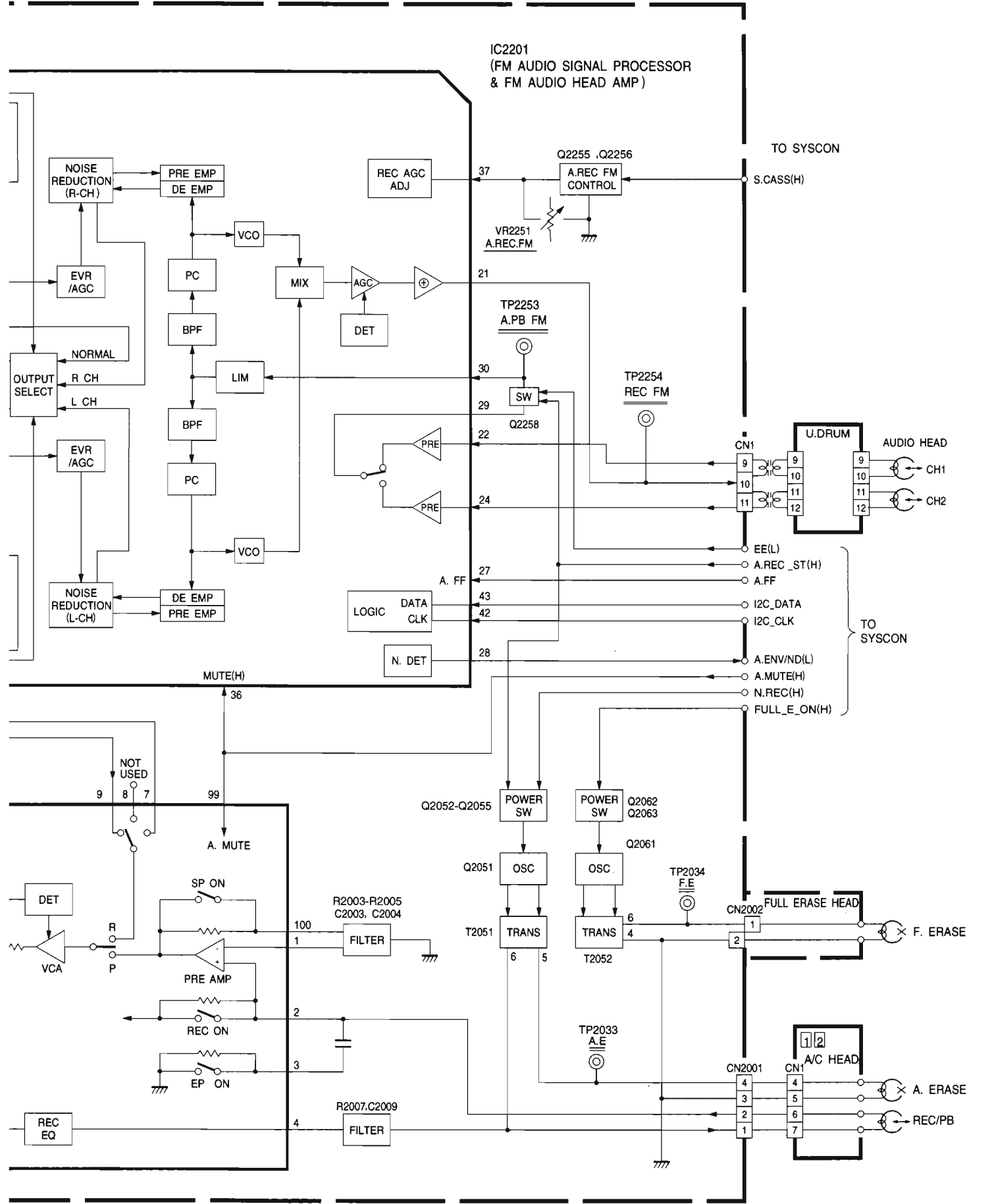


A

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D 4-57



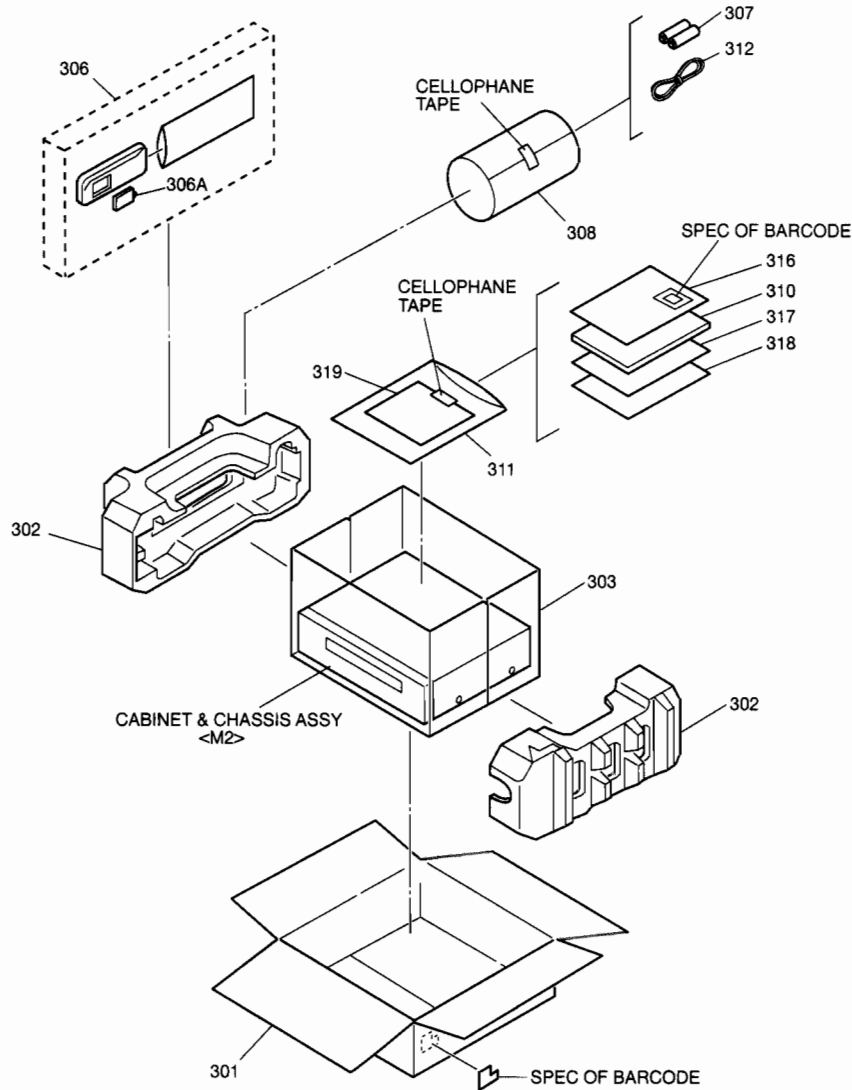
SECTION 5 PARTS LIST

SAFETY PRECAUTION

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

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

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



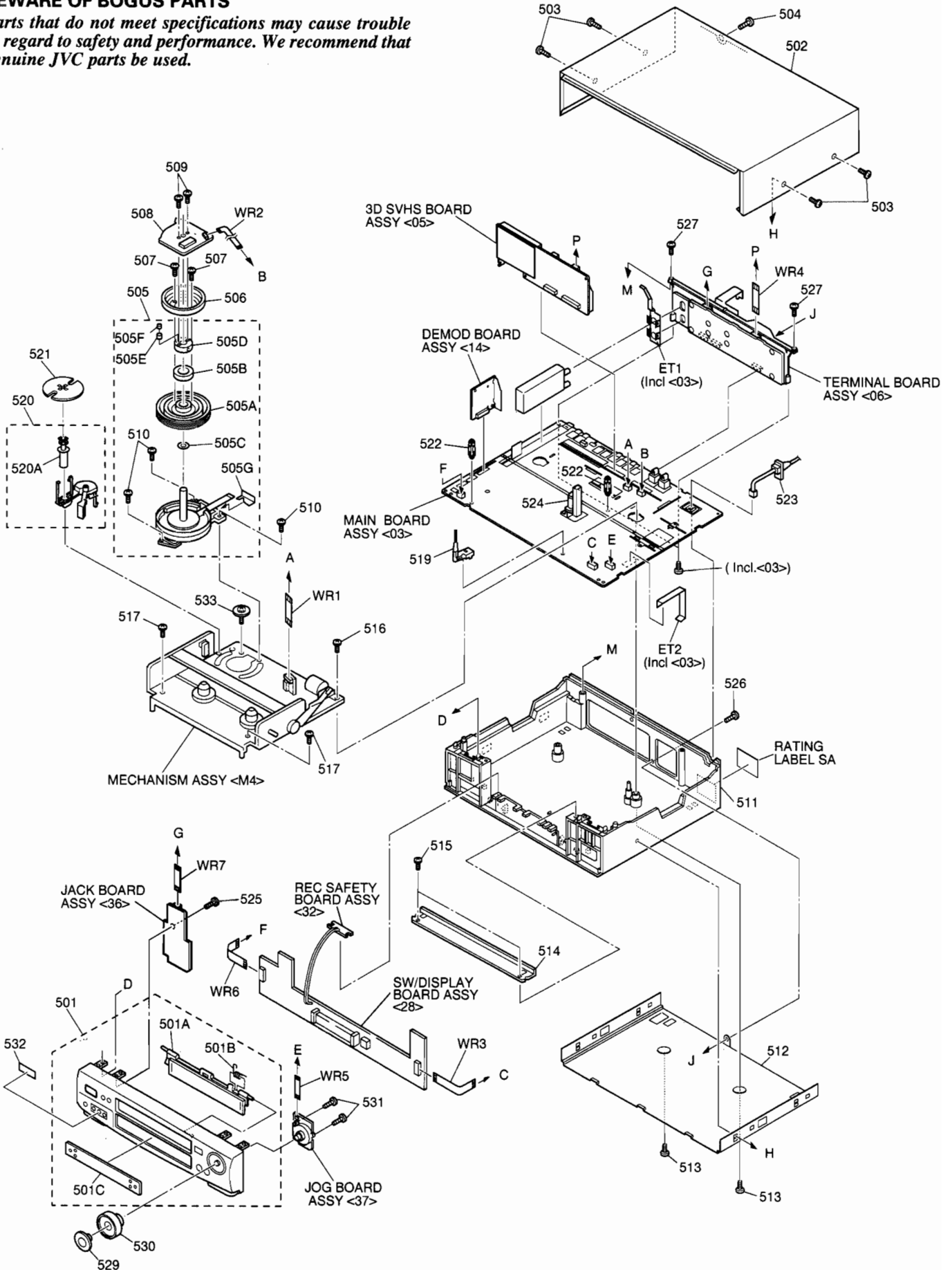
# \triangle	REF No.	PART No.	PART NAME, DESCRIPTION	# \triangle	REF No.	PART No.	PART NAME, DESCRIPTION

PACKING AND ACCESSORY ASSEMBLY <M1>							
		301	LP30615-001A			LPT0249-005A	INST.BOOK(SP)
			LP30615-009A			LPT0249-006A	INST.BOOK(IT)
		302	LP30606-002B			LPT0249-007A	INST.BOOK(DA)
		303	PQM30021-95			LPT0249-008A	INST.BOOK(FI)
		306	LP20667-003C			LPT0249-009A	INST.BOOK(SW)
			LP20667-002C			LPT0249-010A	INST.BOOK(NO)
		306A	LP40225-002A			LPT0249-011A	INST.BOOK(PT)
			LP40225-003A			LPT0249-012A	INST.BOOK(GR)
		307	-			LPT0249-013A	INST.BOOK(CZ)
		308	QPC02202230P			LPT0249-014A	INST.BOOK(PO)
						LPT0249-015A	INST.BOOK(HU)
\triangle	310		LPT0249-001A		311	QPC02503530P	POLY BAG
\triangle			LPT0249-002A		312	PEAC0300-02	RF CABLE
\triangle			LPT0249-003A		316	BT-54013-1	WARRANTY CARD
\triangle			LPT0249-004A		317	PQ45146-170	SHEET(SPAIN),S7600EU
						PQ45146-173	SHEET(SPAIN),S7611EU
					318	LP40605-001A	SHEET
					319	LPT0248-018A	SHEET(ATTENTION)

5.2 CABINET AND CHASSIS ASSEMBLY <M2>

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.

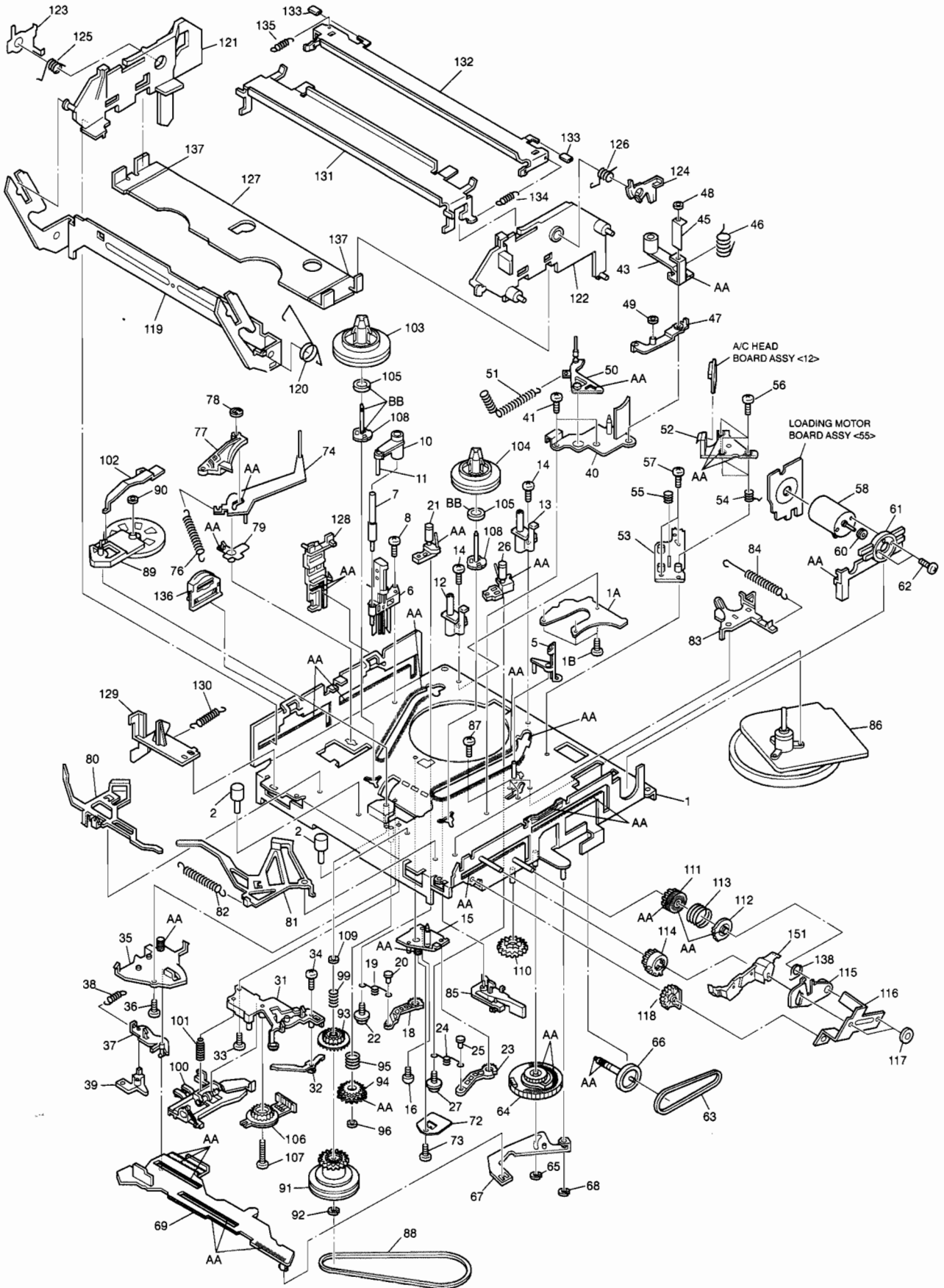


#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
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CABINET AND CHASSIS ASSEMBLY <M2>

△	501	LP10217-007C	FRONT PANEL ASSY,S7600EU
		LP10217-014C	FRONT PANEL ASSY,S7611EU
	501A	LP20342-033A	CASSETTE DOOR,S7600EU
		LP20342-038A	CASSETTE DOOR,S7611EU
	501B	PQ46448	TORSION SPRING
	501C	LP30531-004B	DISPLAY WINDOW,S7600EU
		LP30531-010B	DISPLAY WINDOW,S7611EU
△	502	PQ11676-91	TOP COVER,S7611EU
△		PQ11676-87	TOP COVER,S7600EU
	503	QYTDSF3010M	SCREW,X4 TOP COVER(SIDE) S7611EU
		QYTDSF3010R	SCREW,X4 TOP COVER(SIDE) S7600EU
	504	QYTDSF3010M	SCREW,TOP COVER(REAR)
	505	LP20617-011A	DRUM SUB ASSY
	505A	LP20616-005A	UPPER DRUM ASSY
	505B	PDM4439	CAP
	505C	PDM4444-19-2	WASHER
	505D	LP40572-001A	COLLAR ASSY
	505E	LP40323-001A	CONTACT
	505F	LP30004-014A	COMPRESSION SPRING
	505G	LP40174-001B	FPC PLATE
	506	PDZ0179-1-4	ROTOR ASSY
	507	QYSPSP3006Z	SCREW,X2
	508	PDZ0180-1-2	STATOR ASSY
	509	QYSPSPH2606Z	SCREW,X2
	510	QYTDST2610Z	SCREW,X3 DRUM
△	511	LP10116-003G	BOTTOM CHASSIS
△	512	PQ11668-2-11	BOTTOM COVER
	513	QYTDSF3010Z	SCREW,X2 BOTTOM COVER
	514	LP30312-001B	BRACKET(CHASSIS)
	515	QYTDSF3010Z	SCREW,X2 BRACKET(CHASSIS)
	516	QYTDSF4012Z	SCREW,MECHA
	517	QYTDSF3010Z	SCREW,X2 MECHA
	519	LP40407-001A	KNOB ASSY
	520	LP40370-001E	ROLLER ARM ASSY
	520A	PDM4311A-1	ROLLER ASSY
	521	PQ45160	INERTIA PLATE
	522	LP40226-001A	PC SUPPORT,X2
△	523	QMP4A10-170	POWER CORD
	524	LP40253-001B	STOPPER
	525	QYTDSF3010Z	SCREW,S JACK BOARD
	526	QYTDSF3010M	SCREW,TERMINAL
	527	QYTSPFG3010Z	SCREW,X2 TERMINAL
	529	LP30121-001A	KNOB(JOG),S7611EU
		LP30121-005A	KNOB(JOG),S7600EU
	530	LP30120-001A	KNOB SHUTTLE,S7611EU
		LP30120-005A	KNOB SHUTTLE,S7600EU
	531	QYTDSF2608Z	SCREW,X2 JOG
	532	LP30532-001A	CAP(JACK),S7600EU
		LP30532-003A	CAP(JACK),S7611EU
	533	PQ40413	SPECIAL SCREW,MECHA
	WR1	QUQ112-0714CG	FFC WIRE,A/C HEAD CN2001
	WR2	QUQ212-0520CG	FFC WIRE,DRUM CN3001
	WR3	QUQ112-1414CG	FFC WIRE,DISPLAY CN3011
	WR4	QUQ112-0708CG	FFC WIRE,TERMINAL CN1003
	WR5	QUQ112-0616CG	FFC WIRE,JOG CN3012
	WR6	QUQ212-0516CG	FFC WIRE,JACK CN7504
	WR7	QUQ212-0446CG	FFC WIRE,S JACK CN7105

5.3 MECHANISM ASSEMBLY <M4>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	COSMO-HV56	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

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

MECHANISM ASSEMBLY <M4>							
1		LP20228-008H	MAIN DECK ASSY	73		QYTDSF2608M	SCREW
1A		LP40275-003A	PLATE(SUPPLY)	74		LP40108-002A	TENSION ARM ASSY
1B		QYTDST2606Z	SCREW,X4	76		LP30003-010A	TENSION SPRING
2		PQ46302-1-3	ADJUST PIN,X2	77		LP40109-003D	TENSION BRAKE ASSY
5		LP30492-002B	GIDE POLE GUARD	78		PQ46302-1-3	ADJUST PIN
6		NAH0001-001	FULL ERASE HEAD	79		LP30232-002A	T.ARM BEARING
7		LP40098-001B	GUIDE POLE(SUPPLY)	80		LP40532-004A	MAIN BRAKE ASSY (SUPPLY)
8		QYTDST2608Z	SCREW,FE HEAD	81		LP40111-006A	MAIN BRAKE AY (TAKE-UP)
10		LP30459-002A	TENSION STUD BASE	82		LP30003-002A	TENSION SPRING
11		LP40367-002A	TENSION STUD	83		LP40112-001F	SUB BRAKE ASSY(TAKE UP)
12		LP30409-002C	UV CATCHER 2	84		LP40357-002A	TENSION SPRING
13		LP30409-002C	UV CATCHER 2	85		LP40461-001A	CAPSTAN BRAKE ASSY
14		QYTPST2606Z	SCREW,X2 UV CATCHER	86		QAR0087-003	CAPSTAN MOTOR
15		LP30223-003C	LOADING ARM GEAR SHAFT	87		QYTDSF2606M	SCREW,X3
16		QYTDST2606Z	SCREW	88		LP30005-007A	BELT,CAPSTAN MOTOR
18		LP30224-001A	LOADING ARM GEAR(SUPPLY)	89		LP40114-008A	IDLER ARM ASSY
19		LP40099-001A	TORSION ARM	90		LP30016-001A	SLIT WASHER
20		LP40100-001A	PIN	91		LP40576-001A	CLUTCH UNIT 2
21		LP40101-002C	POLE BASE ASSY(SUPPLY)	92		PQM30017-47	SLIT WASHER
22		QYSPSTG2606Z	SCREW	93		LP40446-002B	CLUTCH GEAR 1
23		LP40103-002B	LOADING ARM GEAR(TAKE UP)	94		LP40442-001A	DIRECT GEAR
24		LP40099-001A	TORSION ARM	95		LP40483-002A	COMPRESSION SPRING,D.GEAR
25		LP40100-001A	PIN	96		LP30016-001A	SLIT WASHER,D.GEAR
26		LP40104-003A	POLE BASE ASSY(TAKE UP)	99		LP40554-001A	COMPRESSION SPRING,C.GEAR1
27		QYSPSTG2606Z	SCREW	100		LP40484-001F	CHANGE LEVER ASSY
31		LP20233-003J	ROTARY ENCODER GUIDE	101		LP40512-002B	COMPRESSION SPRING
32		LP30499-001C	BRAKE LEVER	102		LP30236-002B	IDLER LEVER
33		QYTPST2606Z	SCREW	103		LP40420-001A	REEL DISK ASSY(SUPPLY)
34		QYTPST2608Z	SCREW	104		LP40421-001A	REEL DISK ASSY(TAKE UP)
35		LP30226-004B	CONTROL PLATE GUIDE	105		LP30017-015A	SPACER,X2
36		QYTPST2605Z	SCREW	106		QSW0554-003	ROTARY ENCODER
37		LP30249-003B	TAKE UP LEVER	108		LP40123-001A	REEL SHAFT,X2
38		LP30003-006A	TENSION SPRING	107		QYTPST2620Z	SCREW,R.ENCODER
39		LP40119-002A	T.UP HEAD	109		LP30017-019A	SPACER,C.GEAR1
40		LP20234-004B	LID GUIDE	110		LP30237-002B	CASSETTE GEAR
41		QYTDST2606Z	SCREW,X2	111		LP30239-002F	LIMIT GEAR(1)
43		LP40105-001B	PINCH ROLLER ARM ASSY	112		LP30240-002G	LIMIT GEAR(2)
45		LP40478-001A	PINCH ROLLER SHEET2	113		LP40136-001E	TORSION SPRING
46		LP40148-002A	TORSION SPRING	114		LP30242-002A	RELAY GEAR
47		LP40149-001B	P.LEVER ASSY	115		LP30339-002D	OPENER GUIDE
48		LP30016-002A	SLIT WASHER	116		LP40214-001B	C.H.BRACKET
50		LP40106-002E	GUIDE ARM ASSY	117		PQM30017-47	SLIT WASHER
51		LP40134-001C	TENSION SPRING	118		LP30243-001D	DRIVE GEAR
52		QAH0010-004	AC HEAD	119		LP20240-001C	DRIVE ARM
53		LP30228-001A	HEAD BASE	120		LP40137-001A	TORSION SPRING
54		LP30004-013A	COMPRESSION SPRING,X3	121		LP10081-002L	SIDE HOLDER(L)
55		LP40236-001A	COMPRESSION SPRING	122		LP10082-002M	SIDE HOLDER(R)
56		LP40213-002B	SPECIAL SCREW,X3	123		LP30255-006A	LOCK LEVER(L)
57		QYTDST2608Z	SCREW,X2	124		LP30256-001H	LOCK LEVER(R)
58		QAR0023-001	LOADING MOTOR	125		LP40168-001A	TORSION SPRING(L)
60		PQ43546-1-2	MOTOR PULLEY	126		LP40218-001B	TORSION SPRING(R)
61		LP30230-003A	MOTOR GUIDE	127		LP30257-001F	CASSETTE HOLDER
62		QYTPSP3003Z	SCREW,X2	128		LP30244-002G	GUIDE RAIL
63		LP30005-003A	BELT,LOADING MOTOR	129		LP30245-002E	REC SAFETY LEVE
64		LP20791-002B	CONTROL CAM	130		LP30003-004A	TENSION SPRING
65		PQM30017-24	SLIT WASHER	131		LP20578-001C	TOP GUIDE
66		LP40120-001A	WORM GEAR	132		LP30500-001C	HOLD PLATE
67		LP40107-002A	LINK LEVER ASSY	133		LP40450-003A	PAD,X2 HOLD PLATE
68		PQM30017-24	SLIT WASHER	134		LP30003-025B	TENSION SPRING
69		LP10201-002E	CONTROL PLATE	135		LP30003-024A	TENSION SPRING
72		LP40379-001B	CONTROL BRACKET(1)	136		LP40481-003A	ROLLER CAM ASSY
				137		LP30019-014A	PAD,X2 CASSETTE HOLDER
				138		LP40545-001A	TORSION SPRING,OPENER GUIDE
				151		LP20324-002F	DOOR OPENER

5.4 ELECTRICAL PARTS LIST

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

MAIN BOARD ASSEMBLY <03>			
PW1		LPA10048-71E	MAIN BOARD ASSY
IC1		JCP8017-MSA	IC
IC2		MM1113XF	IC
IC201		LC74775-9750	IC
IC2201		AN3651FBP	IC
IC3001		HD6432194A56F	IC
IC3002		S-80728AN-DR-X	IC
		or S-80828ANUP-W	IC
IC3003		M24C08-BN6	IC
		or AT24C08-10PC	IC
		or S-24C08ADP	IC
		or X24C08P	IC
		or 24LC08B/P	IC
IC3004		TA7291S	IC
IC5301		LA5634-N	IC
IC6080		BA15218F-XE	IC
Q1		2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SA1576A/QR/-X	TRANSISTOR
Q6		2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SA1576A/QR/-X	TRANSISTOR
Q13		2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
Q14		2SD1819A/QRS/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q15		2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SA1576A/QR/-X	TRANSISTOR
Q16		UN511E	TRANSISTOR
		or PDTA144WU	TRANSISTOR
		or RN2309	TRANSISTOR
		or DTA144WU	TRANSISTOR
Q17		UN521E	TRANSISTOR
		or PDTC144WU	TRANSISTOR
		or RN1309	TRANSISTOR
		or DTC144WU	TRANSISTOR
Q18		UN521E	TRANSISTOR
		or PDTC144WU	TRANSISTOR
		or RN1309	TRANSISTOR
		or DTC144WU	TRANSISTOR
Q34		2SC4081/S/-X	TRANSISTOR
Q35		2SC4081/S/-X	TRANSISTOR
Q36		2SC4081/S/-X	TRANSISTOR
Q37		2SC4081/S/-X	TRANSISTOR
Q47		2SK433/D/-W	JUNCTION FET
Q48		2SK433/D/-W	JUNCTION FET
Q49		2SC3936/BC/-X	TRANSISTOR
Q55		UN521E	TRANSISTOR
		or RN1309	TRANSISTOR
		or DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
Q152		2SB1218A/QR/-X	TRANSISTOR
		or 2SA1576A/QRS/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
Q153		2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
Q207		2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SA1576A/QR/-X	TRANSISTOR
Q208		2SD1819A/QRS/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q2001		2SC4081/QRS/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q2002		2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
Q2003		DTA144WU	TRANSISTOR
		or PDTA144WU	TRANSISTOR
		or RN2309	TRANSISTOR
		or UN511E	TRANSISTOR
Q2051		2SC4081/QRS/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q2052		2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
Q2053		DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
Q2054		2SA1576A/QR/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
Q2055		DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
Q2061		2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
Q2062		2SA1576A/QR/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
Q2063		DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
		or UN521E	TRANSISTOR
		or RN1309	TRANSISTOR
Q2151		2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
Q2152		DTA144WU	TRANSISTOR
		or PDTA144WU	TRANSISTOR
		or RN2309	TRANSISTOR
		or UN511E	TRANSISTOR
Q2201		2SC4081/QRS/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q2202		2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
Q2203		DTA144WU	TRANSISTOR
		or PDTA144WU	TRANSISTOR

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
			or UN511E	TRANSISTOR				or PDTC114EU	TRANSISTOR
			or RN2309	TRANSISTOR	Q5311		2SA1576A/RS/-X	TRANSISTOR	
Q2204			DTC144WU	TRANSISTOR			or 2SB1218A/RS/-X	TRANSISTOR	
			or PDTC144WU	TRANSISTOR	Q5312		2SA1745/6-7/-X	TRANSISTOR	
			or UN521E	TRANSISTOR	Q6030		2SB1218A/RS/-X	TRANSISTOR	
			or RN1309	TRANSISTOR	Q6031		UN5211	TRANSISTOR	
Q2253			DTC114EU	TRANSISTOR			or RN1302	TRANSISTOR	
			or PDTC114EU	TRANSISTOR			or PDTC114EU	TRANSISTOR	
			or RN1302	TRANSISTOR			or DTC114EU	TRANSISTOR	
			or UN5211	TRANSISTOR	Q6032		UN5211	TRANSISTOR	
Q2255			DTC144WU	TRANSISTOR			or RN1302	TRANSISTOR	
			or PDTC144WU	TRANSISTOR			or PDTC114EU	TRANSISTOR	
			or RN1309	TRANSISTOR			or DTC114EU	TRANSISTOR	
			or UN521E	TRANSISTOR	D16		DA204U	DIODE	
Q2256			DTC144WU	TRANSISTOR	D17		DA204U	DIODE	
			or PDTC144WU	TRANSISTOR	D24		DA204U	DIODE	
			or UN521E	TRANSISTOR	D201		NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
			or RN1309	TRANSISTOR	D202		NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
Q2258			DTA144WU	TRANSISTOR	D203		NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
			or PDTA144WU	TRANSISTOR	D2001		1SS133	DIODE	
			or UN511E	TRANSISTOR			or 1N4148M	DIODE	
			or RN2309	TRANSISTOR	D2201		11ES2	DIODE	
Q3001			2SD1819A/QRS/-X	TRANSISTOR	D3001		LNB2301L01VI	LE DIODE	
			or 2SC4081/QRS/-X	TRANSISTOR	D3002		1SS133	DIODE	
			or 2PC4081/R/-X	TRANSISTOR	D3003		RD39ES/B3/-T2	ZENER DIODE	
Q3002			PTZ-NV16	PHOTO TRANSISTOR			or MTZJ39C	ZENER DIODE	
Q3003			PTZ-NV16	PHOTO TRANSISTOR	D3004		11E2-T5	DIODE	
Q3004			2SD1819A/QRS/-X	TRANSISTOR	D3005		11E2-T5	DIODE	
			or 2PC4081/R/-X	TRANSISTOR	D3008		1SS355	DIODE	
			or 2SC4081/QRS/-X	TRANSISTOR	D3011		1SS133	DIODE	
Q3005			2SC1740S/QRS/-T	TRANSISTOR	D3012		1SS133	DIODE	
			or 2SC3199/YG/-T	TRANSISTOR	D4001		1SS355	DIODE	
Q3008			UN521E	TRANSISTOR	D4002		1SS355	DIODE	
			or RN1309	TRANSISTOR	D5001		S1WB(A)60F4102	BRIDGE DIODE	
			or DTC144WU	TRANSISTOR			or S1WB(A)60F4072X	BRIDGE DIODE	
			or PDTC144WU	TRANSISTOR			or S1WB(A)60F4062X	BRIDGE DIODE	
Q4001			UN5211	TRANSISTOR	D5101		AU01	FR DIODE	
			or RN1302	TRANSISTOR			or ERA18-04-T2	FR DIODE	
			or DTC114EU	TRANSISTOR			or 1SR153-400-T2	FR DIODE	
			or PDTC114EU	TRANSISTOR			or 10ELS4	FR DIODE	
Q5101			2SK2632-CB14	POWER MOS FET			or PG104RS	FR DIODE	
			or 2SK2632	POWER MOS FET	D5102		AU01	FR DIODE	
			or 2SK2129	POWER MOS FET			or PG104RS	FR DIODE	
			or 2SK2129-LT	POWER MOS FET			or 10ELS4	FR DIODE	
Q5102			2SD2144S/UV/-T	TRANSISTOR			or ERA18-04-T2	FR DIODE	
Q5301			2SB1256	TRANSISTOR			or 1SR153-400-T2	FR DIODE	
Q5302			DTC114TU	TRANSISTOR	D5103		1SS133	DIODE	
			or PDTC114TU	TRANSISTOR	D5105		1SS133	DIODE	
			or RN1311	TRANSISTOR	D5201		AK04	DIODE	
			or UN5215	TRANSISTOR			or 1S4	SB DIODE	
Q5303			2SD2144S/UVW/-T	TRANSISTOR			or 11EQS04	SB DIODE	
Q5304			2SD1450/ST/-T	TRANSISTOR	D5202		FML-12S	FR DIODE	
			or 2SD1302/ST/-T	TRANSISTOR			or MA644	FR DIODE	
Q5305			UN5111	TRANSISTOR			or YG901C2	FR DIODE	
			or RN2302	TRANSISTOR			or FCF06A20	FR DIODE	
			or DTA114EU	TRANSISTOR	D5206		FMB-24	BARRIER DIODE	
			or PDTA114EU	TRANSISTOR			or FSQ05A04B	SB DIODE	
Q5306			2SB1256	TRANSISTOR			or MA7D49	SB DIODE	
Q5310			UN5211	TRANSISTOR			or YG801C04	SB DIODE	
			or RN1302	TRANSISTOR	D5209		ERA18-02-T2	FR DIODE	
			or DTC114EU	TRANSISTOR			or PG104RS	FR DIODE	

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		or 1SR153-400-T2	FR DIODE	R96		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
		or 10ELS2	FR DIODE	R120		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
D5210		AU01Z	FR DIODE	R121		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		or ERA18-02-T2	FR DIODE	R137		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		or PG104RS	FR DIODE	R143		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
		or 10ELS2	FR DIODE	R158		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
D5211		or 1SR153-400-T2	FR DIODE	R168		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		AU01Z	FR DIODE	R169		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		or ERA18-02-T2	FR DIODE	R170		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
		or 1SR153-400-T2	FR DIODE	R171		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
		or PG104RS	FR DIODE	R181		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
		or 10ELS2	FR DIODE	R195		NRSA02J-684X	MG RESISTOR 680kΩ,1/10W
D5301		MTZJ15A	ZENER DIODE	R197		NRSA02J-106X	MG RESISTOR 10MΩ,1/10W
		or RD15ES/B1/-T2	ZENER DIODE	R201		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
D5302		MTZJ6.8A	ZENER DIODE	R202		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
		or RD6.8ES/B1/-T2	ZENER DIODE	R208		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
D5303		MTZJ27C	ZENER DIODE	R209		NRSA02J-512X	MG RESISTOR 5.1kΩ,1/10W
		or RD27ES/B3/-T2	ZENER DIODE	R210		NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
D5304		1SS133	DIODE	R211		NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W
D5305		11E2-T5	DIODE	R212		NRSA02J-331X	MG RESISTOR 330Ω,1/10W
D5307		1SS133	DIODE	R213		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
D5308		1SS133	DIODE	R216		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
D5309		1SS133	DIODE	R218		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
D5311		RD5.1ES/B3/-T2	ZENER DIODE	R224		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
		or MTZJ5.1C	ZENER DIODE	R225		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
D6002		HZ30-2L-T2	ZENER DIODE	R2001		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
		or HZ30-2LTD	Z DIODE (M)	R2002		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R1		NRSA02J-331X	MG RESISTOR 330Ω,1/10W	R2003		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R2		NRSA02J-561X	MG RESISTOR 560Ω,1/10W	R2004		NRSA02J-224X	MG RESISTOR 220kΩ,1/10W
R3		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R2005		NRSA02J-181X	MG RESISTOR 180Ω,1/10W
R4		NRSA02J-822X	MG RESISTOR 8.2kΩ,1/10W	R2006		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W
R5		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R2007		NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R6		NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R2009		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R2013		NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W
R10		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R2014		NRSA02J-153X	MG RESISTOR 15kΩ,1/10W
R11		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2018		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R13		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W	R2019		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R15		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2020		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R16		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2053		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R24		NRVA02D-622X	CMF RESISTOR 6.2kΩ,1/10W	R2054		NRSA02J-153X	MG RESISTOR 15kΩ,1/10W
R25		NRVA02D-152X	CMF RESISTOR 1.5kΩ,1/10W	R2055		NRSA02J-3R3X	MG RESISTOR 3.3Ω,1/10W
R46		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R2056		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R47		NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W	R2057		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R48		NRSA02J-221X	MG RESISTOR 220Ω,1/10W	R2058		NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R49		NRSA02J-221X	MG RESISTOR 220Ω,1/10W	R2059		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R50		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R2060		NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R52		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2061		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W
R54		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2062		NRSA02J-3R3X	MG RESISTOR 3.3Ω,1/10W
R55		NRSA02J-122X	MG RESISTOR 1.2kΩ,1/10W	R2063		QRE141J-151Y	RESISTOR 150Ω,1/4W
R56		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2064		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R57		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R2065		NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R60		NRSA02J-563X	MG RESISTOR 56kΩ,1/10W	R2151		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R62		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2152		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R63		NDC21HJ-120X	CAPACITOR 12pF,50V	R2201		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R64		NDC21HJ-220X	CAPACITOR 22pF,50V	R2202		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R68		NRSA02J-471X	MG RESISTOR 470Ω,1/10W	R2203		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R69		NRSA02J-471X	MG RESISTOR 470Ω,1/10W	R2204		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R71		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R2206		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W
R73		NRSA02J-683X	MG RESISTOR 68kΩ,1/10W	R2207		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R94		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W	R2208		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R95		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R2209		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
R2210			NRSA02J-473X	MG RESISTOR 47kΩ,1/10W	R3042			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2211			NRSA02J-473X	MG RESISTOR 47kΩ,1/10W	R3044			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2212			NRSA02J-104X	MG RESISTOR 100kΩ,1/10W	R3046			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2213			NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R3047			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2214			NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R3048			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2215			NRSA02J-104X	MG RESISTOR 100kΩ,1/10W	R3049			NRSA02J-331X	MG RESISTOR 330Ω,1/10W
R2216			NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R3050			NRSA02J-331X	MG RESISTOR 330Ω,1/10W
R2217			NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R3051			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2218			NRSA02J-560X	MG RESISTOR 56Ω,1/10W	R3052			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2219			NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R3053			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2220			NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R3054			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2221			NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R3055			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2222			NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R3056			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2223			NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R3057			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2224			NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R3058			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2225			NRSA02J-101X	MG RESISTOR 100Ω,1/10W	R3059			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2226			NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W	R3060			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2227			NRSA02J-122X	MG RESISTOR 1.2kΩ,1/10W	R3061			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2228			NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R3062			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R2229			NRSA02J-681X	MG RESISTOR 680Ω,1/10W	R3063			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2230			NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R3066			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R2231			NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R3069			NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R2236			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3071			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R2237			NRSA02J-511X	MG RESISTOR 510Ω,1/10W	R3072			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2239			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3073			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2240			NRSA02J-511X	MG RESISTOR 510Ω,1/10W	R3074			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2241			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R3075			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2242			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R3076			NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R2243			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3077			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2244			NRSA02J-560X	MG RESISTOR 56Ω,1/10W	R3078			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2251			NRSA02J-303X	MG RESISTOR 30kΩ,1/10W	R3079			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2252			NRSA02J-221X	MG RESISTOR 220Ω,1/10W	R3080			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2254			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3081			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R2255			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R3083			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3011			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3085			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3012			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3086			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3013			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3087			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3014			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3088			NRSA02J-221X	MG RESISTOR 220Ω,1/10W
R3015			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3089			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3016			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3090			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3017			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3091			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3018			NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R3092			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3019			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3093			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3020			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3094			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3021			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3095			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3022			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3096			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3025			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3097			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3026			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3103			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3027			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3104			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3029			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3105			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3030			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3106			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R3031			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3201			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R3033			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3202			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R3034			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3203			NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R3035			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3204			NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
R3036			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3205			QRE141J-181Y	RESISTOR 180Ω,1/4W
R3037			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3206			NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R3038			NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W	R3207			NRSA02J-183X	MG RESISTOR 18kΩ,1/10W
R3039			NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R3208			QRE141J-181Y	RESISTOR 180Ω,1/4W
R3040			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3209			QRE141J-273Y	RESISTOR 27kΩ,1/4W
R3041			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	R3210			NRSA02J-181X	MG RESISTOR 180Ω,1/10W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
R3211			NRSA02J-273X	MG RESISTOR	R5302			NRSA02J-102X	MG RESISTOR
R3212			QRE141J-474Y	RESISTOR	R5303			NRSA02J-122X	MG RESISTOR
R3213			NRSA02J-334X	MG RESISTOR	△ R5304			QRZ9005-221X	FUSI RESISTOR
R3214			NRSA02J-103X	MG RESISTOR	R5305			QRE141J-471Y	RESISTOR
R3215			NRSA02J-103X	MG RESISTOR	R5306			NRSA02J-333X	MG RESISTOR
R3216			NRSA02J-103X	MG RESISTOR	R5307			NRSA02J-102X	MG RESISTOR
R3217			NRSA02J-562X	MG RESISTOR	R5308			NRSA02J-472X	MG RESISTOR
R3218			NRSA02J-472X	MG RESISTOR	R5309			NRSA02J-222X	MG RESISTOR
R3219			NRSA02J-472X	MG RESISTOR	R5310			NRSA02J-472X	MG RESISTOR
R3220			NRSA02J-104X	MG RESISTOR	R5311			NRSA02J-222X	MG RESISTOR
R3222			NRSA02J-472X	MG RESISTOR	R5312			NRSA02J-472X	MG RESISTOR
R3223			NRSA02J-472X	MG RESISTOR	R5313			QRE141J-222Y	RESISTOR
R3224			NRSA02J-472X	MG RESISTOR	R5314			NRSA02J-222X	MG RESISTOR
R3225			NRSA02J-103X	MG RESISTOR	R5317			NRSA02J-273X	MG RESISTOR
R3229			NRSA02J-105X	MG RESISTOR	R5318			NRSA02J-273X	MG RESISTOR
R3230			NRSA02J-472X	MG RESISTOR	R5319			QRE141J-511Y	RESISTOR
R3231			NRSA02J-102X	MG RESISTOR	R5320			NRSA02J-471X	MG RESISTOR
R3233			NRSA02J-103X	MG RESISTOR	R5321			NRSA02J-221X	MG RESISTOR
R3234			NRSA02J-103X	MG RESISTOR	R5322			NRSA02J-473X	MG RESISTOR
R3235			NRSA02J-332X	MG RESISTOR	R5323			QRE141J-473Y	RESISTOR
R3236			NRSA02J-332X	MG RESISTOR	R5324			QRE141J-102Y	RESISTOR
R3237			NRSA02J-103X	MG RESISTOR	R5331			NRSA02J-0R0X	MG RESISTOR
R3238			NRSA02J-103X	MG RESISTOR	R6020			NRSA02J-0R0X	MG RESISTOR
R3239			NRSA02J-103X	MG RESISTOR	R6021			NRSA02J-0R0X	MG RESISTOR
R3240			NRSA02J-103X	MG RESISTOR	R6022			NRSA02J-0R0X	MG RESISTOR
R3241			NRSA02J-103X	MG RESISTOR	R6023			NRSA02J-0R0X	MG RESISTOR
R3242			NRSA02J-472X	MG RESISTOR	R6030			NRSA02J-102X	MG RESISTOR
R3244			NRSA02J-103X	MG RESISTOR	R6031			NRSA02J-271X	MG RESISTOR
R3251			NRSA02J-103X	MG RESISTOR	R6032			NRSA02J-392X	MG RESISTOR
R4001			NRSA02J-472X	MG RESISTOR	R6033			NRSA02J-182X	MG RESISTOR
R4003			NRSA02J-561X	MG RESISTOR	R6050			NRSA02J-101X	MG RESISTOR
R4004			NRSA02J-561X	MG RESISTOR	R6051			NRSA02J-101X	MG RESISTOR
R4005			NRSA02J-562X	MG RESISTOR	R6052			NRSA02J-101X	MG RESISTOR
R4006			NRSA02J-0R0X	MG RESISTOR	R6082			NRSA02J-103X	MG RESISTOR
R4007			NRSA02J-102X	MG RESISTOR	R6508			NRSA02J-0R0X	MG RESISTOR
R4008			NRSA02J-102X	MG RESISTOR	R6510			NRSA02J-0R0X	MG RESISTOR
R4009			NRSA02J-102X	MG RESISTOR	R6553			QRE141J-0R0Y	RESISTOR
R4010			NRSA02J-102X	MG RESISTOR	R6554			NRSA02J-0R0X	MG RESISTOR
R4011			NRSA02J-392X	MG RESISTOR	R7530			NRSA02J-750X	MG RESISTOR
R4012			NRSA02J-222X	MG RESISTOR	VR2251			QVP0039-473Z	TRIM RESISTOR,A.REC.FM
R4013			NRSA02J-102X	MG RESISTOR	C1			QEKJ1CM-106	E CAPACITOR
R4014			NRSA02J-222X	MG RESISTOR	C3			NCB21HK-103X	CAPACITOR
R4015			NRSA02J-223X	MG RESISTOR	C5			NCB21HK-103X	CAPACITOR
R4016			NRSA02J-103X	MG RESISTOR	C6			NCB21EK-104X	CAPACITOR
R4017			NRSA02J-102X	MG RESISTOR	C7			QETN1CM-107	E CAPACITOR
R4018			NRSA02J-102X	MG RESISTOR	C9			NCB21HK-103X	CAPACITOR
R4019			NRSA02J-103X	MG RESISTOR	C11			NCB21HK-103X	CAPACITOR
R4020			NRSA02J-103X	MG RESISTOR	C12			NCB21EK-473X	CAPACITOR
R4021			NRSA02J-103X	MG RESISTOR	C13			QERF1HM-335	E CAPACITOR
R5101			QRE141J-334Y	RESISTOR	C14			NCB21EK-333X	CAPACITOR
R5102			QRE141J-334Y	RESISTOR	C16			NCF21CZ-105X	CAPACITOR
R5103			QRE141J-683Y	RESISTOR	C19			NDC21HJ-470X	CAPACITOR
R5104			QRG029J-154G	OMF RESISTOR	C20			QEKJ1HM-225	E CAPACITOR
R5106			QRT01DJ-R39X	MF RESISTOR	C21			NCB21CK-563X	CAPACITOR
R5107			QRE121J-331Y	RESISTOR	C23			NCB21HK-223X	CAPACITOR
R5108			QRE141J-222Y	RESISTOR	C24			NCB21CK-474X	CAPACITOR
R5109			NRSA02J-681X	MG RESISTOR	C25			NCB21EK-104X	CAPACITOR
R5110			NRSA02J-224X	MG RESISTOR	C27			NDC21HJ-101X	CAPACITOR
R5111			NRSA02J-821X	MG RESISTOR	C29			QEKJ1EM-475	E CAPACITOR
R5112			NRSA02J-821X	MG RESISTOR	C30			QEKJ1EM-475	E CAPACITOR
R5301			QRE141J-1R8Y	RESISTOR	C31			NCB21HK-223X	CAPACITOR

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C32		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2010		QEKJ1EM-475	E CAPACITOR 4.7μF,25V
C34		QFVF1HJ-104Z	F CAPACITOR 0.1μF,50V	C2011		NCB21EK-333X	CAPACITOR 0.033μF,25V
C37		QEKJ1CM-476	E CAPACITOR 47μF,16V	C2013		NCB21EK-333X	CAPACITOR 0.033μF,25V
C41		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2015		QEKJ1CM-226	E CAPACITOR 22μF,16V
C42		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2016		QEKJ1EM-475	E CAPACITOR 4.7μF,25V
C43		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2051		NCB21HK-331X	CAPACITOR 330pF,50V
C45		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2052		QFLC1HJ-333Z	F CAPACITOR 0.033μF,50V
C46		NDC21HJ-101X	CAPACITOR 100pF,50V	C2053		NCB21HK-332X	CAPACITOR 0.0033μF,50V
C47		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2054		NCB21HK-103X	CAPACITOR 0.01μF,50V
C48		QEKJ0JM-476	E CAPACITOR 47μF,6.3V	C2055		QEKJ1CM-106	E CAPACITOR 10μF,16V
C49		NDC21HJ-221X	CAPACITOR 220pF,50V	C2061		QFLC1HJ-333Z	F CAPACITOR 0.033μF,50V
C54		QEKJ1CM-106	E CAPACITOR 10μF,16V	C2062		NCB21HK-332X	CAPACITOR 0.0033μF,50V
C55		QEKJ1CM-106	E CAPACITOR 10μF,16V	C2063		NCB21HK-103X	CAPACITOR 0.01μF,50V
C56		QEKJ1HM-335	E CAPACITOR 3.3μF,50V	C2064		QEKJ1CM-106	E CAPACITOR 10μF,16V
C57		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2151		NDC21HJ-101X	CAPACITOR 100pF,50V
C58		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2152		NCB21HK-103X	CAPACITOR 0.01μF,50V
C59		NCB21EK-473X	CAPACITOR 0.047μF,25V	C2201		QEKJ1HM-104	E CAPACITOR 0.1μF,50V
C62		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2202		QEKJ1HM-104	E CAPACITOR 0.1μF,50V
C63		NDC21HG-151X	CAPACITOR 150pF,50V	C2204		QEKJ1CM-226	E CAPACITOR 22μF,16V
C64		QEKJ0JM-227	E CAPACITOR 220μF,6.3V	C2205		QEKJ1EM-475	E CAPACITOR 4.7μF,25V
C65		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2206		QEKJ1EM-475	E CAPACITOR 4.7μF,25V
C73		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2207		QEKJ0JM-476	E CAPACITOR 47μF,6.3V
C74		NRSA02J-0R0X	MG RESISTOR 0Ω, 1/10W	C2208		QEKJ1CM-106	E CAPACITOR 10μF,16V
C76		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2209		QEKJ1CM-106	E CAPACITOR 10μF,16V
C77		NDC21HJ-270X	CAPACITOR 27pF,50V	C2210		QEKJ1CM-106	E CAPACITOR 10μF,16V
C79		NDC21HJ-120X	CAPACITOR 12pF,50V	C2211		QEKJ1CM-106	E CAPACITOR 10μF,16V
C85		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2212		QEKJ0JM-476	E CAPACITOR 47μF,6.3V
C86		QEKJ1CM-476	E CAPACITOR 47μF,16V	C2213		QERF0JM-476	E CAPACITOR 47μF,6.3V
C87		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2214		NCB21HK-103X	CAPACITOR 0.01μF,50V
C88		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2215		QEKJ1CM-106	E CAPACITOR 10μF,16V
C89		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2216		QEKJ1HM-105	E CAPACITOR 1μF,50V
C90		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2217		QEKJ1HM-105	E CAPACITOR 1μF,50V
C91		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2218		QEKJ1CM-106	E CAPACITOR 10μF,16V
C92		NRSA02J-682X	MG RESISTOR 6.8kΩ, 1/10W	C2219		QEKJ1CM-106	E CAPACITOR 10μF,16V
C98		NCF21CZ-105X	CAPACITOR 1μF,16V	C2220		QEKJ1CM-476	E CAPACITOR 47μF,16V
C107		NDC21HJ-5R0X	CAPACITOR 5pF,50V	C2221		QEKJ1CM-106	E CAPACITOR 10μF,16V
C134		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2222		QEKJ1CM-226	E CAPACITOR 22μF,16V
C141		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2225		QEKJ1HM-224	E CAPACITOR 0.22μF,50V
C164		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2226		QEKJ1CM-106	E CAPACITOR 10μF,16V
C165		NCB21HK-103X	CAPACITOR 0.01μF,50V	C2227		QEKJ1CM-106	E CAPACITOR 10μF,16V
C201		QEKJ0JM-227	E CAPACITOR 220μF,6.3V	C2230		NCB21CK-473X	CAPACITOR 0.047μF,16V
C204		NDC21HJ-100X	CAPACITOR 10pF,50V	C2231		NCB21HK-153X	CAPACITOR 0.015μF,50V
C206		NDC21HJ-330X	CAPACITOR 33pF,50V	C2232		QEKJ1HM-224	E CAPACITOR 0.22μF,50V
C207		NDC21HJ-330X	CAPACITOR 33pF,50V	C2233		NCB21HK-153X	CAPACITOR 0.015μF,50V
C209		NCB21CK-474X	CAPACITOR 0.47μF,16V	C2234		NCB21CK-473X	CAPACITOR 0.047μF,16V
C212		NCB21EK-104X	CAPACITOR 0.1μF,25V	C2251		NCB21EK-104X	CAPACITOR 0.1μF,25V
C213		QEKJ1EM-475	E CAPACITOR 4.7μF,25V	C2252		NCB21HK-222X	CAPACITOR 0.0022μF,50V
C214		NCB21CK-224X	CAPACITOR 0.22μF,16V	C2253		NCB21HK-222X	CAPACITOR 0.0022μF,50V
C215		NCB21CK-224X	CAPACITOR 0.22μF,16V	C2256		NCF21EZ-104X	CAPACITOR 0.1μF,25V
C216		QEKJ0JM-227	E CAPACITOR 220μF,6.3V	C2257		QERF0JM-476	E CAPACITOR 47μF,6.3V
C217		NDC21HJ-560X	CAPACITOR 56pF,50V	C2258		NCB21EK-104X	CAPACITOR 0.1μF,25V
C218		NCB21AK-105X	CAPACITOR 1μF,10V	C2259		NCB21EK-104X	CAPACITOR 0.1μF,25V
C222		NCB21AK-105X	CAPACITOR 1μF,10V	C2260		NDC21HJ-181X	CAPACITOR 180pF,50V
C2002		QEKJ1CM-476	E CAPACITOR 47μF,16V	C2261		NCB21HK-103X	CAPACITOR 0.01μF,50V
C2003		NCB21HK-123X	CAPACITOR 0.012μF,50V	C3002		NCB21HK-103X	CAPACITOR 0.01μF,50V
C2004		QEKJ1CM-226	E CAPACITOR 22μF,16V	C3003		QEKJ1HM-106	E CAPACITOR 10μF,50V
C2005		NCB21HK-102X	CAPACITOR 0.001μF,50V	C3004		NCB21EK-104X	CAPACITOR 0.1μF,25V
C2006		NCB21HK-331X	CAPACITOR 330pF,50V	C3010		QEZ0244-229	EDL CAPACITOR 0.0022F
C2007		QEKJ1CM-106	E CAPACITOR 10μF,16V	C3012		QEKJ0JM-107	E CAPACITOR 100μF,6.3V
C2008		NCB21HK-152X	CAPACITOR 0.0015μF,50V	C3013		NCB21HK-103X	CAPACITOR 0.01μF,50V
C2009		QEKJ1EM-475	E CAPACITOR 4.7μF,25V	C3014		NBE20JM-226X	T CAPACITOR 22μF,6.3V

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C3016		NCB21EK-104X	CAPACITOR 0.1μF,25V	C5306		QETN1AM-107	E CAPACITOR 100μF,10V
C3019		NDC21HJ-101X	CAPACITOR 100pF,50V	C5307		QETN1CM-226	E CAPACITOR 22μF,16V
C3020		NDC21HJ-101X	CAPACITOR 100pF,50V	C5308		QETN1EM-476	E CAPACITOR 47μF,25V
C3021		NDC21HJ-101X	CAPACITOR 100pF,50V	C5309		QETN1CM-107	E CAPACITOR 100μF,16V
C3022		NCB21EK-104X	CAPACITOR 0.1μF,25V	C5310		QEKJ1HM-105	E CAPACITOR 1μF,50V
C3023		NBE20JM-106X	T CAPACITOR 10μF,6.3V	C6006		NCB21HK-103X	CAPACITOR 0.01μF,50V
C3024		NDC21HJ-220X	CAPACITOR 22pF,50V	C6007		QETN1AM-337	E CAPACITOR 330μF,10V
C3025		QAT3725-300Z	TRIM CAPACITOR,TIMER CLOCK	C6008		NCB21HK-103X	CAPACITOR 0.01μF,50V
C3026		NCB21HK-103X	CAPACITOR 0.01μF,50V	C6012		QEKJ1CM-476	E CAPACITOR 47μF,16V
C3027		NBE20JM-106X	T CAPACITOR 10μF,6.3V	C6013		NCB21HK-103X	CAPACITOR 0.01μF,50V
C3028		NDC21HJ-101X	CAPACITOR 100pF,50V	C6014		NCB21HK-103X	CAPACITOR 0.01μF,50V
C3029		NDC21HJ-101X	CAPACITOR 100pF,50V	C6016		NCB21HK-103X	CAPACITOR 0.01μF,50V
C3030		NBE20JM-226X	T CAPACITOR 22μF,6.3V	C6020		NDC21HJ-101X	CAPACITOR 100pF,50V
C3031		NCB21EK-104X	CAPACITOR 0.1μF,25V	C6021		NDC21HJ-101X	CAPACITOR 100pF,50V
C3032		NCB21EK-104X	CAPACITOR 0.1μF,25V	C6022		NDC21HJ-101X	CAPACITOR 100pF,50V
C3033		NCB21EK-104X	CAPACITOR 0.1μF,25V	C6032		NCB21HK-473X	CAPACITOR 0.047μF,50V
C3036		NDC21HJ-180X	CAPACITOR 18pF,50V	C6033		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
C3037		NDC21HJ-120X	CAPACITOR 12pF,50V	C6037		QEKJ1HM-106	E CAPACITOR 10μF,50V
C3038		NDC21HJ-101X	CAPACITOR 100pF,50V	C6055		NDC21HJ-220X	CAPACITOR 22pF,50V
C3039		NDC21HJ-101X	CAPACITOR 100pF,50V	L1		QQL29BJ-100Z	COIL 10μH
C3040		NCF21CZ-105X	CAPACITOR 1μF,16V	L3		QQL071J-6R8Y	COIL 6.8μH
C3042		QETJ0JM-477	E CAPACITOR 470μF,6.3V	L4		QQL29BJ-100Z	COIL 10μH
C4001		NBE20JM-226X	T CAPACITOR 22μF,6.3V	L7		QQL29BJ-100Z	COIL 10μH
C4002		NCB21EK-104X	CAPACITOR 0.1μF,25V	L9		QQL29BJ-100Z	COIL 10μH
C4003		NCB21HK-102X	CAPACITOR 0.001μF,50V	L12		QQL071J-330Y	COIL 33μH
C4004		NBE20JM-226X	T CAPACITOR 22μF,6.3V	L13		QQL071J-120Y	COIL 12μH
C4005		NCB21HK-222X	CAPACITOR 0.0022μF,50V	L14		QQL071J-820Y	COIL 82μH
C4006		NBE40JM-476X	T CAPACITOR 47μF,6.3V	L16		QQL29BJ-100Z	COIL 10μH
C4007		NCB21HK-561X	CAPACITOR 560pF,50V	L18		QQR0967-001	COIL 12μH
C4008		NCB21AK-105X	CAPACITOR 1μF,10V	L201		QQL29BK-1R0Z	COIL 1μH
C4009		NCB21HK-563X	CAPACITOR 0.056μF,50V	L202		QQL071J-330Y	COIL 33μH
C4010		NCB21EK-223X	CAPACITOR 0.022μF,25V	L203		QQL071J-220Y	COIL 22μH
C4011		NCB21EK-104X	CAPACITOR 0.1μF,25V	L204		QQL29BJ-100Z	COIL 10μH
C4012		NCB21EK-224X	CAPACITOR 0.22μF,25V	L206		QQL071J-220Y	COIL 22μH
C4013		NCB21HK-563X	CAPACITOR 0.056μF,50V	L2251		QQL29BJ-100Z	COIL 10μH
C4014		NDC21HJ-101X	CAPACITOR 100pF,50V	L2252		QQL29BJ-151Z	COIL 150μH
C4015		NCB21HJ-102X	CAPACITOR 0.001μF,50V	L3011		NQL03BK-330X	COIL 33μH
△ C5001		QFZ9051-683	F CAPACITOR 0.068μF,250V	L3012		NQL03BK-330X	COIL 33μH
△ C5002		QFZ9051-333	F CAPACITOR 0.033μF,250V	L5201		PELN1184	COIL 33μH
△ C5005		QCZ9071-222	CAPACITOR 0.0022μF,250V	L5202		PU60944-330K	COIL 33μH
C5006		QEZ0375-686	E CAPACITOR 68μF,400V	L6002		QQL29BJ-100Z	COIL 10μH
C5101		QCZ0212-472	CAPACITOR 0.0047μF,1kV	L6004		QQL29BJ-100Z	COIL 10μH
C5102		QCZ0302-330Z	CAPACITOR 33pF,1kV	L6031		QQL29BK-1R0Z	COIL 1μH
C5104		QETN1HM-105	E CAPACITOR 1μF,50V	X1		QAX0530-001	CRYSTAL RESONATOR
C5105		QFN31HJ-183	F CAPACITOR 0.018μF,50V	X3001		QAX0445-001	CRYSTAL RESONATOR
C5106		QCBB1HJ-271	CAPACITOR 270pF,50V	X3002		QAX0527-001	CRYSTAL RESONATOR
C5107		QFV91HJ-104	F CAPACITOR 0.1μF,50V	S3002		QSW0695-001	PUSH SWITCH
C5110		QCZ0302-330Z	CAPACITOR 33pF,1kV	K5101		QQR0678-001Z	FERRITE BEAD
C5201		QEMU0JM-227	E CAPACITOR 220μF,6.3V	PC3001		GP3S123	IC(PHOTO SENSOR
C5202		QEMT1CM-128	E CAPACITOR 1200μF,16V	PC3002		GP3S123	IC(PHOTO SENSOR
C5203		QEMT1AM-228	E CAPACITOR 2200μF,10V	△ PC5101		PC123F2	PH COUPLER
C5204		QETN2AM-475	E CAPACITOR 4.7μF,100V	△ PC5301		PS2501-1	PH COUPLER
C5205		QETN1HM-106	E CAPACITOR 10μF,50V	T2051		PELN0860	OSC TRANSFORMER
C5206		QEMU1EM-187	E CAPACITOR 180μF,25V	T2052		PELN0861	OSC TRANSFORMER
C5207		QETN1CM-227	E CAPACITOR 220μF,16V	△ T5001		QQS0033-001	SW TRANSFORMER
C5208		QETN1AM-227	E CAPACITOR 220μF,10V	TU6001		QAU0107-001	TUNER
C5301		QEMU0JM-227	E CAPACITOR 220μF,6.3V	ET1		PQ21623-1-5	EARTH PLATE(RF)
C5302		QEKJ1CM-106	E CAPACITOR 10μF,16V	ET2		LP40547-001A	EARTH PLATE
C5303		QETN1CM-107	E CAPACITOR 100μF,16V	SD1		LP30563-001B	SHIELD CASE(PRE/REC)
C5304		QFLC1HJ-183Z	F CAPACITOR 0.018μF,50V	△ HS1		LP40515-001A	HEAT SINK,Q5101
C5305		NCB21HK-103X	CAPACITOR 0.01μF,50V	HS2		LP40479-001B	HEAT SINK,IC5301

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		OT1	QYTDSEF3010Z SCREW,X2 TERMINAL BOARD
		OT2	QYTDST3008Z SCREW,Q5101
		OT3	QYTDST3006Z SCREW,IC5301
		FC5001	QNG0006-001Z FUSE CLIP,F5001
		FC5002	QNG0006-001Z FUSE CLIP,F5001
△		LF5001	PELN1204-01-01 LINE FILTER
△		LF5002	QQR0608-001 LINE FILTER
		CN1	QGF1028C1-11 FPC CONNECTOR,(1-11)U.DRUM
		CN2001	QGF1207C1-07 FPC CONNECTOR,(1-7)A/C HEAD
		CN2002	QGB2532J1-02 CONNECTOR,(1-2)FE HEAD
		CN3001	QGF1207C1-05 FPC CONNECTOR,(1-5)DRUM MDA
		CN3002	QGB2532J1-02 CONNECTOR,(1-2)L.MOTOR
		CN3003	QGB2015M2-08 CONNECTOR,(1-8)CAP.MOTOR
		CN3004	QGB2534J2-04 CONNECTOR,(1-4)ROTARY ENCODER
		CN3011	QGF1207C1-14 FPC CONNECTOR,(1-14)FRONT
		CN3012	QGF1207C1-06 FPC CONNECTOR,(1-6)JOG
△		CN5001	QGA7901C3-02 CONNECTOR,(1-2)AC IN
		CN7501	QGB2024K1-09S CONNECTOR,(1-9)TERMINAL
		CN7502	QGB2024K1-10S CONNECTOR,(1-10)TERMINAL
		CN7503	QGB2024K1-10S CONNECTOR,(1-10)TERMINAL
		CN7504	QGF1207C1-05 FPC CONNECTOR,(1-5)FRONT
△		CP4001	ICP-N15 CIRCUIT PROTECTOR
△		CP5301	ICP-N38 CIRCUIT PROTECTOR
△		CP5302	ICP-N25 CIRCUIT PROTECTOR
△		F5001	QMF51E2-2R0J1 FUSE T2.0A,AC250V

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		Q1016	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1021	2SA1576A/QR/-X TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		Q1022	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1401	2SC1317/RS/-T TRANSISTOR
		Q1402	2SC4081/QRS/-X TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		Q1403	2SC4081/QRS/-X TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		Q1404	2SC4081/S/-X TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		Q1405	2SC4081/QRS/-X TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		Q1406	2SA1576A/QR/-X TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		Q1407	2SA1576A/QR/-X TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		Q1408	2SA1576A/QR/-X TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		Q1409	2SA1576A/QR/-X TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		Q1410	2SC4081/QRS/-X TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		Q1411	2SA1576A/QR/-X TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		Q1412	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1413	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1414	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1416	DTC144WU TRANSISTOR
		or RN1309	TRANSISTOR
		or UN521E	TRANSISTOR
		Q1417	2SC4081/QRS/-X TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		Q1418	2SC4081/QRS/-X TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		D1002	1SS133 DIODE
		or 1N4148M	DIODE
		D1003	1SS133 DIODE

3D SVHS BOARD ASSEMBLY <05>

PW1	LPA10033-10A	3D SVHS BOARD ASSY
IC1001	JCP8008	IC
IC1002	VC2076MP-XE	IC
IC1006	HA118092FP1	IC
IC1007	BA10358F-XE	IC
IC1401	JCP8010-2	IC(DIGITAL)
IC1402	MN47V77S-XE	IC
Q1004	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q1005	DTC144WU	TRANSISTOR
	or RN1309	TRANSISTOR
	or UN521E	TRANSISTOR
Q1006	2SA1576A/QR/-X	TRANSISTOR
	or 2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q1007	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q1012	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
Q1014	2SC4081/QRS/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
Q1015	2SC4081/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR
	or 2SD1819A/QRS/-X	TRANSISTOR

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		or 1N4148M	DIODE	R1073		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
D1004		1SS133	DIODE	R1401		NRSA02J-331X	MG RESISTOR 330Ω,1/10W
		or 1N4148M	DIODE	R1402		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
D1006		1SS133	DIODE	R1403		NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
		or 1N4148M	DIODE	R1404		NRSA02J-123X	MG RESISTOR 12kΩ,1/10W
D1401		RD4.3ES/B2/-T2	ZENER DIODE	R1405		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		or MTZJ4.3B	ZENER DIODE	R1406		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
D1402		1SS133	DIODE	R1407		NRSA02J-821X	MG RESISTOR 820Ω,1/10W
		or 1N4148M	DIODE	R1408		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
R1002		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R1409		NRSA02J-681X	MG RESISTOR 680Ω,1/10W
R1003		NRSA02J-221X	MG RESISTOR 220Ω,1/10W	R1410		NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
R1004		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R1411		NRSA02J-243X	MG RESISTOR 24kΩ,1/10W
R1008		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R1412		NRSA02J-104X	MG RESISTOR 100kΩ,1/10W
R1009		NRSA02J-125X	MG RESISTOR 1.2MΩ,1/10W	R1413		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R1010		NRVA02D-332X	CMF RESISTOR 3.3kΩ,1/10W	R1414		NRSA02J-331X	MG RESISTOR 330Ω,1/10W
R1011		NRVA02D-332X	CMF RESISTOR 3.3kΩ,1/10W	R1415		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1012		NRVA02D-152X	CMF RESISTOR 1.5kΩ,1/10W	R1416		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R1013		NRVA02D-471X	CMF RESISTOR 470Ω,1/10W	R1417		NRSA02J-821X	MG RESISTOR 820Ω,1/10W
R1014		NRVA02D-102X	CMF RESISTOR 1kΩ,1/10W	R1418		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R1015		NRVA02D-102X	CMF RESISTOR 1kΩ,1/10W	R1419		NRSA02J-221X	MG RESISTOR 220Ω,1/10W
R1016		NRSA02J-122X	MG RESISTOR 1.2kΩ,1/10W	R1420		NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W
R1017		NRSA02J-162X	MG RESISTOR 1.6kΩ,1/10W	R1422		NRSA02J-391X	MG RESISTOR 390Ω,1/10W
R1018		NRSA02J-151X	MG RESISTOR 150Ω,1/10W	R1423		NRSA02J-821X	MG RESISTOR 820Ω,1/10W
R1019		NRSA02J-391X	MG RESISTOR 390Ω,1/10W	R1425		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1020		NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W	R1428		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1021		NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W	R1429		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1023		NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R1430		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1025		NRSA02J-823X	MG RESISTOR 82kΩ,1/10W	R1431		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1026		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R1432		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1027		NRSA02J-561X	MG RESISTOR 560Ω,1/10W	R1433		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R1028		NRSA02J-561X	MG RESISTOR 560Ω,1/10W	R1434		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
R1029		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W	R1435		NRSA02J-242X	MG RESISTOR 2.4kΩ,1/10W
R1030		NRSA02J-473X	MG RESISTOR 47kΩ,1/10W	R1436		NRSA02J-153X	MG RESISTOR 15kΩ,1/10W
R1031		NRSA02J-562X	MG RESISTOR 5.6kΩ,1/10W	R1437		NRSA02J-123X	MG RESISTOR 12kΩ,1/10W
R1032		NRSA02J-181X	MG RESISTOR 180Ω,1/10W	R1438		NRSA02J-821X	MG RESISTOR 820Ω,1/10W
R1035		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R1439		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R1037		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R1440		NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
R1038		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R1442		NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
R1039		NRSA02J-394X	MG RESISTOR 390kΩ,1/10W	R1443		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R1045		NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R1444		NRSA02J-221X	MG RESISTOR 220Ω,1/10W
R1046		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W	R1445		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1047		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R1446		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
R1048		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W	R1447		NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W
R1049		NRSA02J-475X	MG RESISTOR 4.7MΩ,1/10W	R1448		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R1053		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R1449		NRSA02J-470X	MG RESISTOR 47Ω,1/10W
R1054		NRSA02J-221X	MG RESISTOR 220Ω,1/10W	R1451		NRSA02J-681X	MG RESISTOR 680Ω,1/10W
R1055		NRVA02D-563X	CMF RESISTOR 56kΩ,1/10W	R1452		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1056		NRVA02D-224X	CMF RESISTOR 220kΩ,1/10W	R1454		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1058		NRSA02J-273X	MG RESISTOR 27kΩ,1/10W	R1455		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R1059		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R1456		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R1060		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W	R1457		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1063		NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W	R1458		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1064		NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W	R1459		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R1065		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R1460		NRSA02J-104X	MG RESISTOR 100kΩ,1/10W
R1066		NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W	R1461		NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
R1067		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W	R1462		NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W
R1068		NRSA02J-361X	MG RESISTOR 360Ω,1/10W	R1463		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R1069		NRSA02J-471X	MG RESISTOR 470Ω,1/10W	R1465		NRSA02J-821X	MG RESISTOR 820Ω,1/10W
R1070		NRSA02J-391X	MG RESISTOR 390Ω,1/10W	R1467		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R1071		NRSA02J-104X	MG RESISTOR 100kΩ,1/10W	R1468		NRSA02J-162X	MG RESISTOR 1.6kΩ,1/10W
R1072		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W	R1470		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W

#	△	REF No.	PART No.	PART NAME, DESCRIPTION	#	△	REF No.	PART No.	PART NAME, DESCRIPTION
R1471			NRSA02J-333X	MG RESISTOR 33kΩ,1/10W	C1074			NCB21HK-103X	CAPACITOR 0.01μF,50V
R1472			NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W	C1082			NCB21HK-103X	CAPACITOR 0.01μF,50V
VR1002			QVZ3521-104Z	V RESISTOR,P,BURST LEVEL	C1086			NCB21HK-103X	CAPACITOR 0.01μF,50V
VR1401			QVP0039-103Z	TRIM RESISTOR,D/A LEVEL	C1087			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1001			QEKJ0JM-476	E CAPACITOR 47μF,6.3V	C1088			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1002			QEKJ1HM-474	E CAPACITOR 0.47μF,50V	C1089			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1003			QEKJ1CM-106	E CAPACITOR 10μF,16V	C1092			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1005			QEKJ1EM-475	E CAPACITOR 4.7μF,25V	C1095			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1006			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1401			QEKJ1CM-336	E CAPACITOR 33μF,16V
C1007			NCF21EZ-104X	CAPACITOR 0.1μF,25V	C1402			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1010			NCF21EZ-104X	CAPACITOR 0.1μF,25V	C1403			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1011			NDC21HJ-150X	CAPACITOR 15pF,50V	C1404			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1013			NCF21EZ-104X	CAPACITOR 0.1μF,25V	C1405			NDC21HJ-220X	CAPACITOR 22pF,50V
C1014			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1406			NDC21HJ-6R0X	CAPACITOR 6pF,50V
C1015			QEKJ1EM-475	E CAPACITOR 4.7μF,25V	C1407			NDC21HJ-390X	CAPACITOR 39pF,50V
C1016			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1408			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1017			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1409			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1019			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1410			QEKJ0JM-337	E CAPACITOR 330μF,6.3V
C1020			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1411			QEKJ1CM-106	E CAPACITOR 10μF,16V
C1021			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1412			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1022			QEKJ1HM-105	E CAPACITOR 1μF,50V	C1413			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1023			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1414			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1024			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1415			NDC21HJ-221X	CAPACITOR 220pF,50V
C1026			NCF21EZ-104X	CAPACITOR 0.1μF,25V	C1416			NDC21HJ-391X	CAPACITOR 390pF,50V
C1027			NCF21EZ-104X	CAPACITOR 0.1μF,25V	C1417			NDC21HJ-680X	CAPACITOR 68pF,50V
C1028			QEKJ0JM-337	E CAPACITOR 330μF,6.3V	C1418			NDC21HJ-8R0X	CAPACITOR 8pF,50V
C1029			QEKJ1HM-104	E CAPACITOR 0.1μF,50V	C1419			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1030			QEKJ1HM-105	E CAPACITOR 1μF,50V	C1420			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1031			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1421			NDC21HJ-680X	CAPACITOR 68pF,50V
C1033			QEKJ1HM-105	E CAPACITOR 1μF,50V	C1422			NDC21HJ-330X	CAPACITOR 33pF,50V
C1034			QEPF1HM-105	NP E CAPACITOR 1μF,50V	C1424			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1035			QEKJ1EM-475	E CAPACITOR 4.7μF,25V	C1425			QEKJ0JM-337	E CAPACITOR 330μF,6.3V
C1036			QEKJ0JM-226	E CAPACITOR 22μF,6.3V	C1426			NCB21HK-103X	CAPACITOR 0.01μF,50V
C1037			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1427			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1038			QEKJ1HM-225	E CAPACITOR 2.2μF,50V	C1428			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1039			QEKJ1CM-476	E CAPACITOR 4.7μF,16V	C1429			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1040			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1430			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1041			NDC21HG-301X	CAPACITOR 300pF,50V	C1431			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1042			NDC21HG-301X	CAPACITOR 300pF,50V	C1432			QEKJ1EM-475	E CAPACITOR 4.7μF,25V
C1043			NDC21HG-221X	CAPACITOR 220pF,50V	C1433			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1044			NDC21HG-820X	CAPACITOR 82pF,50V	C1434			QEKJ0JM-337	E CAPACITOR 330μF,6.3V
C1045			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1435			QEKJ1HM-105	E CAPACITOR 1μF,50V
C1046			NDC21HG-271X	CAPACITOR 270pF,50V	C1436			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1047			NDC21HJ-101X	CAPACITOR 100pF,50V	C1437			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1048			NDC21HJ-181X	CAPACITOR 180pF,50V	C1438			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1049			NDC21HG-301X	CAPACITOR 300pF,50V	C1439			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1050			NDC21HG-301X	CAPACITOR 300pF,50V	C1440			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1056			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1441			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1057			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1442			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1058			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1443			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1063			NDC21HJ-101X	CAPACITOR 100pF,50V	C1444			QEKJ1HM-105	E CAPACITOR 1μF,50V
C1064			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1445			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1065			QEKJ0JM-227	E CAPACITOR 220μF,6.3V	C1446			NCB21EK-104X	CAPACITOR 0.1μF,25V
C1066			NCB21EK-223X	CAPACITOR 0.022μF,25V	C1447			NCB21HK-222X	CAPACITOR 0.0022μF,50V
C1067			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1448			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1068			QEKJ1HM-105	E CAPACITOR 1μF,50V	C1449			QEKJ0JM-337	E CAPACITOR 330μF,6.3V
C1069			QEKJ1CM-106	E CAPACITOR 10μF,16V	C1450			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1070			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1451			NCF21EZ-104X	CAPACITOR 0.1μF,25V
C1071			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1454			NDC21HJ-220X	CAPACITOR 22pF,50V
C1072			NCB21HK-103X	CAPACITOR 0.01μF,50V	C1455			NDC21HJ-390X	CAPACITOR 39pF,50V
C1073			NDC21HJ-150X	CAPACITOR 15pF,50V	C1457			NCF21EZ-104X	CAPACITOR 0.1μF,25V

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C1458		NCB21HK-103X	CAPACITOR 0.01μF,50V
C1459		NDC21HJ-470X	CAPACITOR 47pF,50V
C1460		NDC21HJ-470X	CAPACITOR 47pF,50V
C1461		NDC21HJ-470X	CAPACITOR 47pF,50V
C1462		NDC21HJ-470X	CAPACITOR 47pF,50V
C1463		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
C1464		NDC21HJ-330X	CAPACITOR 33pF,50V
C1465		NDC21HJ-470X	CAPACITOR 47pF,50V
C1468		NDC21HJ-470X	CAPACITOR 47pF,50V
C1469		NDC21HJ-470X	CAPACITOR 47pF,50V
C1470		NDC21HJ-470X	CAPACITOR 47pF,50V
C1471		NDC21HJ-470X	CAPACITOR 47pF,50V
C1472		NDC21HJ-470X	CAPACITOR 47pF,50V
C1473		NDC21HJ-470X	CAPACITOR 47pF,50V
L1001		QQL29BJ-220Z	COIL 22μH
L1004		QQL071J-680Y	COIL 68μH
L1006		QQL29BJ-101Z	COIL 100μH
L1008		QQL29BJ-100Z	COIL 10μH
L1401		QQL071J-330Y	COIL 33μH
L1402		QQL29BJ-100Z	COIL 10μH
L1404		QQL071J-8R2Y	COIL 8.2μH
L1405		QQL071J-150Y	COIL 15μH
L1406		QQL071J-6R8Y	COIL 6.8μH
L1407		QQL29BJ-100Z	COIL 10μH
L1408		QQL29BJ-100Z	COIL 10μH
L1409		QQL071J-330Y	COIL 33μH
L1410		QQL29BJ-4R7Z	COIL 4.7μH
L1411		QQL071J-1R0Y	COIL 1μH
LC1401		QQR0657-013Z	NOISE FILTER
LC1402		QQR0657-010Z	NOISE FILTER
BK1		LP40077-001A	BRACKET(BOARD)
SD1		LP30621-001A	SHIELD CASE(SVHS 3D)
SD2		LP30406-001A	SHIELD PLATE(SVHS)
CN1001		QGG2503K2-30	HEADER PIN
CN1002		QGG2503K2-30	HEADER PIN
CN1003		QGF1217F1-07	FPC CONNECTOR,(1-7)TERMINAL

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
		or 2SC4081/QRS/-X	TRANSISTOR
Q7109		2SD1819A/QRS/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q7110		2SD1819A/QRS/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
Q7111		UN5211	TRANSISTOR
		or PDTC114EU	TRANSISTOR
		or RN1302	TRANSISTOR
		or DTC114EU	TRANSISTOR
Q7112		2SD1819A/QRS/-X	TRANSISTOR
		or 2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
R7104		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7105		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7106		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7107		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7108		QRE123J-391X	RESISTOR 390Ω,1/2W
R7109		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7110		QRE123J-391X	RESISTOR 390Ω,1/2W
R7111		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7112		NRSA02J-181X	MG RESISTOR 180Ω,1/10W
R7113		NRSA02J-431X	MG RESISTOR 430Ω,1/10W
R7114		NRSA02J-471X	MG RESISTOR 470Ω,1/10W
R7116		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7117		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7121		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7123		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7124		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7125		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7126		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7127		QRE141J-750Y	RESISTOR 75Ω,1/4W
R7128		QRE141J-103Y	RESISTOR 10kΩ,1/4W
R7129		NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
R7130		NRSA02J-221X	MG RESISTOR 220Ω,1/10W
R7131		QRE123J-391X	RESISTOR 390Ω,1/2W
R7132		NRSA02J-680X	MG RESISTOR 68Ω,1/10W
R7133		NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W
R7134		NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
R7135		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7136		NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W
R7137		NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
R7138		NRSA02J-561X	MG RESISTOR 560Ω,1/10W
R7139		NRSA02J-682X	MG RESISTOR 6.8kΩ,1/10W
R7140		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7141		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7142		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7143		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7144		NRSA02J-750X	MG RESISTOR 75Ω,1/10W
R7145		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7146		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
R7147		NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
R7149		NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
R7157		NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
R7162		NRSA02J-101X	MG RESISTOR 100Ω,1/10W
C7102		QETJ0JM-477	E CAPACITOR 470μF,6.3V
C7103		NCB21HK-103X	CAPACITOR 0.01μF,50V
C7104		QEKJ1CM-476	E CAPACITOR 47μF,16V
C7105		NCB21HK-103X	CAPACITOR 0.01μF,50V
C7106		NCB21HK-223X	CAPACITOR 0.022μF,50V

TERMINAL BOARD ASSEMBLY <06>

PW1	LPA10055-02A	TERMINAL BOARD ASSY
IC7101	BH7635S	IC
IC7102	MM1231XF	IC
Q7102	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
Q7103	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q7104	2SB1218A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
Q7107	2SB1218A/QR/-X	TRANSISTOR
	or 2SA1576A/QR/-X	TRANSISTOR
	or 2PA1576/R/-X	TRANSISTOR
Q7108	2SD1819A/QRS/-X	TRANSISTOR
	or 2PC4081/R/-X	TRANSISTOR

#	△ REF No.	PART No.	PART NAME, DESCRIPTION	
C7108		NCB21HK-223X	CAPACITOR	0.022μF,50V
C7109		QEKJ1CM-476	E CAPACITOR	47μF,16V
C7110		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7112		NDC21HJ-330X	CAPACITOR	33pF,50V
C7113		NCB21HK-223X	CAPACITOR	0.022μF,50V
C7114		NCB21HK-223X	CAPACITOR	0.022μF,50V
C7115		NCB21HK-681X	CAPACITOR	680pF,50V
C7116		NCB21HK-681X	CAPACITOR	680pF,50V
C7119		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7120		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7124		QEKJ1CM-476	E CAPACITOR	47μF,16V
C7125		QEKJ1CM-476	E CAPACITOR	47μF,16V
C7126		NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
C7127		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7128		NCB21HK-681X	CAPACITOR	680pF,50V
C7129		NCB21HK-681X	CAPACITOR	680pF,50V
C7133		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7134		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7137		QEKJ1CM-107	E CAPACITOR	100μF,16V
C7138		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7139		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7140		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7142		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7143		QEKJ1CM-106	E CAPACITOR	10μF,16V
C7144		NCB21HK-103X	CAPACITOR	0.01μF,50V
C7146		NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
C7147		QEKJ1CM-106	E CAPACITOR	10μF,16V
C7148		NDC21HJ-101X	CAPACITOR	100pF,50V
C7150		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7152		NCB21HK-102X	CAPACITOR	0.001μF,50V
C7158		NDC21HJ-470X	CAPACITOR	47pF,50V
C7161		QEKJ1CM-476	E CAPACITOR	47μF,16V
L7105		QQL231J-1R0Y	COIL	1μH
L7107		QQL231J-R22Y	COIL	0.22μH
L7108		QQL231J-4R7Y	COIL	4.7μH
L7109		QQL231J-4R7Y	COIL	4.7μH
L7110		QQL231J-4R7Y	COIL	4.7μH
L7111		QQL231J-4R7Y	COIL	4.7μH
L7112		QQL231J-1R0Y	COIL	1μH
L7113		QQL231J-4R7Y	COIL	4.7μH
L7114		QQL231J-4R7Y	COIL	4.7μH
L7115		QQL231J-4R7Y	COIL	4.7μH
L7116		QQL231J-4R7Y	COIL	4.7μH
L7121		QQL231J-4R7Y	COIL	4.7μH
L7123		QQL231J-4R7Y	COIL	4.7μH
SW7101		QSW0693-001	SLIDE SWITCH	
ET1		PQ21987-1-1	EARTH PLATE(TERMINAL)	
△ TB1		LP30562-002A	TERMINAL BOARD ASSY	
OT1		QYTDSF3008Z	SCREW,X8	
J7101		PEMC1177	RGB21PIN SOCKET,AV1	
J7102		PEMC1177	RGB21PIN SOCKET,AV2	
J7103		QNN0023-002	PIN JACK,A.OUT(R)	
J7104		QNN0023-003	PIN JACK,A.OUT(L)	
J7107		QND0009-001	S JACK,S OUT	
J7110		PU60659	MINI JACK,R.PAUSE	
CN7101		QGB2024J1-09S	CONNECTOR,(1-9)MAIN	
CN7102		QGB2024J1-10S	CONNECTOR,(1-10)MAIN	
CN7103		QGB2024J1-10S	CONNECTOR,(1-10)MAIN	
CN7104		QGF1208F1-07	FPC CONNECTOR,(1-7)	
CN7105		QGF1208F1-04	FPC CONNECTOR,(1-4)	

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

AUDIO CONTROL HEAD BOARD ASSEMBLY <12>				
PW1		LPA10010-01A1	A/C HEAD BOARD ASSY	
CN1		QGF1208F1-07	FPC CONNECTOR	

DEMOD BOARD ASSEMBLY <14>				
PW1		LPA10021-03B	DEMOD BOARD ASSY	
IC6701		MSP34VCD	IC	
		or MSP3415D	IC	
Q6701		2SC3068	TRANSISTOR	
Q6702		2SC3354/TS-T	TRANSISTOR	
Q6704		DTC114EU	TRANSISTOR	
		or UN5211	TRANSISTOR	
		or PDTC114EU	TRANSISTOR	
Q6705		DTC114EU	TRANSISTOR	
		or UN5211	TRANSISTOR	
		or PDTC114EU	TRANSISTOR	
D6702		MTZJ9.1B	ZENER DIODE	
D6703		1N4148M	DIODE	
		or 1SS133	DIODE	
D6704		1N4148M	DIODE	
		or 1SS133	DIODE	
R6701		NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R6702		NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R6703		NRSA02J-271X	MG RESISTOR	270Ω,1/10W
R6704		NRSA02J-101X	MG RESISTOR	100Ω,1/10W
R6705		NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
R6706		NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
R6707		NRSA02J-470X	MG RESISTOR	47Ω,1/10W
R6708		NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6709		NRSA02J-271X	MG RESISTOR	270Ω,1/10W
R6710		NRSA02J-151X	MG RESISTOR	150Ω,1/10W
R6712		NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6713		NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
R6714		NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6715		NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
R6716		NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
R6717		NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
R6718		NRSA02J-684X	MG RESISTOR	680kΩ,1/10W
C6703		QEKJ1CM-336	E CAPACITOR	33μF,16V
C6704		QEKJ1CM-107	E CAPACITOR	100μF,16V
C6705		NCB21HK-103X	CAPACITOR	0.01μF,50V
C6706		NCB21HK-223X	CAPACITOR	0.022μF,50V
C6707		NCB21HK-103X	CAPACITOR	0.01μF,50V
C6708		NCB21HK-103X	CAPACITOR	0.01μF,50V
C6709		QEKJ1CM-336	E CAPACITOR	33μF,16V
C6710		NCB21HK-682X	CAPACITOR	0.0068μF,50V
C6711		NCB21HK-682X	CAPACITOR	0.0068μF,50V
C6712		QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C6713		QEKJ1HM-225	E CAPACITOR	2.2μF,50V
C6714		NCF21CZ-224X	CAPACITOR	0.22μF,16V
C6717		NCB21HK-223X	CAPACITOR	0.022μF,50V
C6718		QEKJ1CM-336	E CAPACITOR	33μF,16V
C6719		QEKJ1CM-106	E CAPACITOR	10μF,16V

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
C6720	QEKJ1CM-106	E CAPACITOR	10μF,16V
C6721	NCB21HK-103X	CAPACITOR	0.01μF,50V
C6722	QEKJ1CM-106	E CAPACITOR	10μF,16V
C6723	NCB21HK-103X	CAPACITOR	0.01μF,50V
C6727	NDC21HJ-470X	CAPACITOR	47pF,50V
C6728	NDC21HJ-470X	CAPACITOR	47pF,50V
C6729	NDC21HJ-8R0X	CAPACITOR	8pF,50V
C6730	NDC21HJ-1R0X	CAPACITOR	1pF,50V
L6701	QQL29BK-1R0Z	COIL	1μH
L6702	QQL29BJ-3R3Z	COIL	3.3μH
L6703	QQL231J-390Y	COIL	39μH
L6704	QQL29BK-1R0Z	COIL	1μH
L6705	QQL231J-100Y	COIL	10μH
LC6701	QQR0657-013	NOISE FILTER	
X6701	QAX0443-001	CRYSTAL RESONATOR	
BK1	LP40077-001A	BRACKET(BOARD)	
CN6701	QGG2502K1-11	HEADER PIN(1-11)	

#	△ REF No.	PART No.	PART NAME, DESCRIPTION
R7032	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
R7033	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
R7034	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
R7035	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
R7036	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
R7037	QRE141J-153Y	RESISTOR	15kΩ,1/4W
R7038	QRE141J-393Y	RESISTOR	39kΩ,1/4W
R7041	QRE141J-331Y	RESISTOR	330Ω,1/4W
R7042	QRE141J-331Y	RESISTOR	330Ω,1/4W
C7001	QCFB1HZ-104	CAPACITOR	0.1μF,50V
C7002	QETC1HM-106	E CAPACITOR	10μF,50V
C7007	QETN1HM-476	E CAPACITOR	47μF,50V
C7009	QCSB1HJ-150	CAPACITOR	15pF,50V
C7010	QCFB1HZ-104	CAPACITOR	0.1μF,50V
C7011	QETN1AM-227	E CAPACITOR	220μF,10V
C7019	QDVB1EZ-223Y	CAPACITOR	0.022μF,25V
C7192	QCB1HJ-681	CAPACITOR	680pF,50V
C7194	QCB1HJ-681	CAPACITOR	680pF,50V
L7191	QRE141J-101Y	RESISTOR	100Ω,1/4W
L7192	QRE141J-101Y	RESISTOR	100Ω,1/4W
L7196	QQL231J-1R0Y	COIL	1μH
S7001	QSW0456-002Z	TACT SWITCH,POWER	
S7002	QSW0456-002Z	TACT SWITCH,CH+	
S7003	QSW0456-002Z	TACT SWITCH,CH-	
S7004	QSW0456-002Z	TACT SWITCH,REC	
S7005	QSW0456-002Z	TACT SWITCH,PAUSE	
S7010	QSW0456-002Z	TACT SWITCH,TBC	
S7011	QSW0456-002Z	TACT SWITCH,REVIEW	
S7012	QSW0456-002Z	TACT SWITCH,C.RESET	
S7013	QSW0456-002Z	TACT SWITCH,REC LINK	
S7014	QSW0456-002Z	TACT SWITCH,STOP/EJECT	
S7015	QSW0456-002Z	TACT SWITCH,PLAY	
S7016	QSW0456-002Z	TACT SWITCH,SP/LP	
S7017	QSW0456-002Z	TACT SWITCH,A.DUB	
DI7001	QLF0032-002	FL TUBE	
HD1	PQ34668	FDP HOLDER(L),DI7001	
HD2	PQ34669	FDP HOLDER(R),DI7001	
HD4	PQM30038-7	LED HOLDER,D7010	
HD5	PQM30038-7	LED HOLDER,D7011	
J7191	PEMC1009-04	PIN JACK,VIDEO IN	
J7192	PEMC1010-03	PIN JACK(SW),A(L)IN	
J7193	PEMC1010-02	PIN JACK(SW),A(R)IN	
CN7001	QGF1207C1-14	FPC CONNECTOR,(1-14)MAIN	
CN7191	QGF1207C1-05	FPC CONNECTOR,(3-7)MAIN	

SW/DISPLAY BOARD ASSEMBLY <28>

PW1	LPA10054-07C1	DISPLAY BOARD ASSY	
IC7001	M35500BGP	IC	
	or M35500AGP	IC	
	or M35500BFP	IC	
IC7002	PNA4652M00XB	IR DETECT UNIT	
	or GP1U281X	IR DETECT UNIT	
D7002	RD9.1ES/B2/-T2	ZENER DIODE	
	or MTZJ9.1B	ZENER DIODE	
	or UZ9.1BSB	ZENER DIODE	
D7005	1SS133	DIODE	
D7006	1SS133	DIODE	
D7010	SLR-342VC3F	LE DIODE	
D7011	SLR-342MC3F	LE DIODE	
R7001	QRE141J-471Y	RESISTOR	470Ω,1/4W
R7002	QRE141J-471Y	RESISTOR	470Ω,1/4W
R7003	QRE141J-471Y	RESISTOR	470Ω,1/4W
R7004	QRE141J-471Y	RESISTOR	470Ω,1/4W
R7005	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7006	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7007	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7008	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7009	QRE141J-153Y	RESISTOR	15kΩ,1/4W
R7010	QRE141J-153Y	RESISTOR	15kΩ,1/4W
R7011	QRE141J-393Y	RESISTOR	39kΩ,1/4W
R7013	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7020	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7021	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
R7022	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
R7023	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
R7024	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
R7025	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
R7026	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
R7027	QRE141J-153Y	RESISTOR	15kΩ,1/4W
R7028	QRE141J-393Y	RESISTOR	39kΩ,1/4W
R7030	QRE141J-103Y	RESISTOR	10kΩ,1/4W
R7031	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W

REC SAFETY BOARD ASSEMBLY <32>

PW2	LPA10054-01C2	REC SAFETY BOARD ASSY	
S7041	QSW0602-003	PUSH SWITCH	
FW7001	QUM032-07A4A4	PARA RIBON WIRE	

Δ REF No. PART No. PART NAME, DESCRIPTION

Δ REF No. PART No. PART NAME, DESCRIPTION

JACK BOARD ASSEMBLY <36>

PW4	LPA10054-07C4	JACK BOARD ASSY
J7194	QND0009-001	S JACK,S VIDEO
CN7192	QGF1207F1-04	FPC CONNECTOR(1-4)MAIN

JOG BOARD ASSEMBLY <37>

PW3	LPA10054-03C3	JOG BOARD ASSY
UN7091	PEME0786-02	JOG SHUTTLE ASSY
CN7005	QGF1207F1-06	FPC CONNECTOR,(1-6)MAIN

LOADING MOTOR BOARD ASSEMBLY <55>

PW2	LPA10010-01A2	LOADING MOTOR BOARD ASSY
C1	QFV61HJ-104	F CAPACITOR 0.1μF,50V
OT1	PU59915-105	#500SPACER0.01,C1
CN1	QGB2533K1-02	CONNECTOR



JVC

VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

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