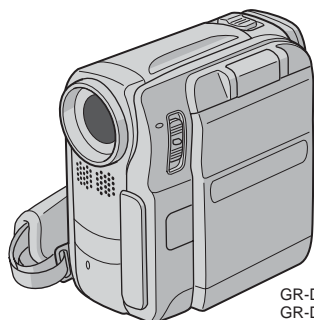


# JVC

## SERVICE MANUAL

DIGITAL VIDEO CAMERA

**GR-DX107EK, GR-DX107EX, GR-DX107EY,  
GR-DX107EZ, GR-DX307EK, GR-DX307EX,  
GR-DX307EY, GR-DX307EZ, GR-DX317EX**



Mini **DV** PAL



*MultiMediaCard*

GR-DX107EK, GR-DX107EX, GR-DX107EY, GR-DX107EZ[M4D3S9]  
GR-DX307EK, GR-DX307EX, GR-DX307EY, GR-DX307EZ, GR-DX317EX[M4D3M9]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

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# SPECIFICATION

## Camcorder

### For General

**Power supply**

DC 11 V (Using AC Adapter)  
DC 7.2 V (Using battery pack)

**Power consumption**

Approx. 3.3 W (4.0 W\*) (LCD monitor off, viewfinder on)  
Approx. 4.1 W (4.8 W\*) (LCD monitor on, viewfinder off)  
\* Using LED Light

**Dimensions (W x H x D)**

52 mm x 94 mm x 95 mm  
(with the LCD monitor closed and the viewfinder pushed back in)

**Weight**

Approx. 445 g  
(without battery, cassette, memory card, lens cap and grip strap)  
Approx. 520 g  
(incl. battery, cassette, memory card, lens cap and grip strap)

**Operating temperature**

0°C to 40°C

**Operating humidity**

35% to 80%

**Storage temperature**

-20°C to 50°C

**Pickup**

1/4.5" CCD

**Lens**

F 1.8, f = 3.2 mm to 32 mm, 10:1 power zoom lens

**Filter diameter**

ø27 mm

**LCD monitor**

3.0"/2.5"\*\*\* diagonally measured, LCD panel/TFT active matrix system

\* GR-DX317/307

\*\* GR-DX107

**Viewfinder**

Electronic viewfinder with 0.3" colour LCD

**Speaker**

Monaural

**LED Light**

Effective distance: 1.5 m

### For Digital Video Camera

**Format**

DV format (SD mode)

**Signal format**

PAL standard

**Recording/Playback format**

Video: Digital component recording  
Audio: PCM digital recording, 32 kHz 4-channel (12-BIT),  
48 kHz 2-channel (16-BIT)

**Cassette**

Mini DV cassette

**Tape speed**

SP: 18.8 mm/s, LP: 12.5 mm/s

**Maximum recording time (using 80 min. cassette)**

SP: 80 min., LP: 120 min.

### For Digital Still Camera

**Storage media**

SD Memory Card/MultiMediaCard

**Compression system**

Still image: JPEG (compatible)  
Moving image: MPEG4 (compatible)

**File size**

Still image:  
4 modes (1600 x 1200 pixels/1280 x 960 pixels/  
1024 x 768 pixels/640 x 480 pixels)

Moving image:

1 mode (160 x 120 pixels)

**Picture quality**

2 modes (FINE/STANDARD)

**Approximate number of storable images**

☞ pg. 21

### For Connectors

**AV**

S-Video input:

Y: 0.8 V to 1.2 V (p-p), 75 Ω, analogue

C: 0.2 V to 0.4 V (p-p), 75 Ω, analogue

S-Video output:

Y: 1.0 V (p-p), 75 Ω, analogue

C: 0.29 V (p-p), 75 Ω, analogue

Video input: 0.8 V to 1.2 V (p-p), 75 Ω, analogue

Video output: 1.0 V (p-p), 75 Ω, analogue

Audio input: 300 mV (rms), 50 kΩ, analogue, stereo

Audio output: 300 mV (rms), 1 kΩ, analogue, stereo

Edit: ø3.5 mm, 2-pole

**Microphone input**

ø3.5 mm, stereo

**DV**

Input/output: 4-pin, IEEE 1394 compliant

**USB**

Mini USB-B type, USB 1.1/2.0 (Full speed; 12Mbps)  
compliant

### AC Adapter

**Power requirement**

AC 110 V to 240 V~, 50 Hz/60 Hz

**Output**

DC 11 V ---, 1 A

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

# SECTION 1 PRECAUTIONS

## 1.1 SAFTY 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.

### 1.1.1 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  $\Delta$  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:
  - Wires covered with PVC tubing
  - Double insulated wires
  - High voltage leads
- (5) Use specified insulating materials for hazardous live parts.  
Note especially:
  - Insulation Tape
  - PVC tubing
  - Spacers
  - Insulation sheets for transistors
  - Barrier
- (6) When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

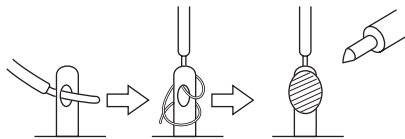


Fig.1-1-1

- (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.

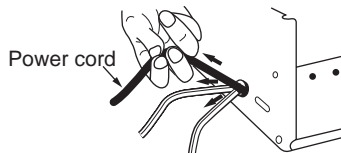


Fig.1-1-2

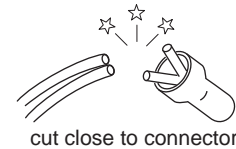
- (10) Also check areas surrounding repaired locations.
- (11) Products using cathode ray tubes (CRTs) In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray

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 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.

- **Connector part number** :E03830-001
- **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
- **Replacement procedure**

- a) Remove the old connector by cutting the wires at a point close to the connector. Important : Do not reuse a connector (discard it).



cut close to connector

Fig.1-1-3

- b) 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.

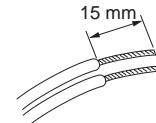


Fig.1-1-4

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

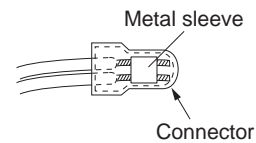


Fig.1-1-5

- d) As shown in Fig.1-1-6, 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.

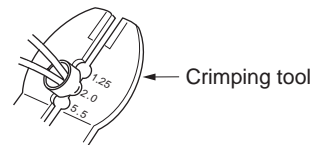


Fig.1-1-6

- e) Check the four points noted in Fig.1-1-7.

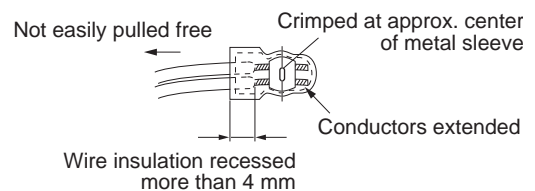


Fig.1-1-7

### 1.1.2 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 Fig.1-1-11 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 Fig.1-1-11 below.

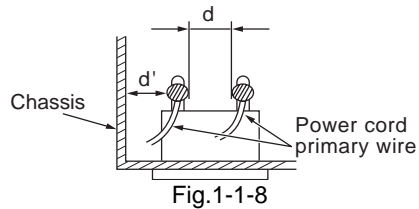


Fig.1-1-8

#### (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 Fig.1-1-9 and following Fig.1-1-12.

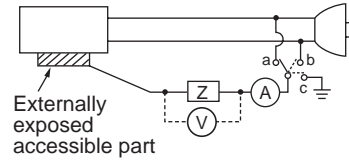
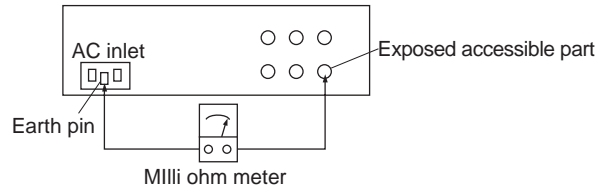


Fig.1-1-9

#### (5) Grounding (Class 1 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 Fig.1-1-10 and grounding specifications.



Grounding Specifications

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

Fig.1-1-10

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)

Fig.1-1-11

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

Fig.1-1-12

#### NOTE :

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

## SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

The following table indicate main different points between models GR-DX107EK, GR-DX107EX, GR-DX107EY, GR-DX107EZ, GR-DX307EK, GR-DX307EX, GR-DX307EY, GR-DX307EZ and GR-DX317EX.

MODEL	GR-DX107EK	GR-DX107EX	GR-DX107EY	GR-DX107EZ	GR-DX307EK
LCD MONITOR	2.5INCH	2.5INCH	2.5INCH	2.5INCH	3.0INCH
BODY COLOR	Silver & Silver	Silver & Black	Silver & Black	Silver & Black	Silver & Black
AC CORD	BS PULG	CEE PULG	CEE PULG	CEE PULG	BS PULG
BATTERY PACK	BN-V107U-S	BN-V107U-S	BN-V107U-S	BN-V107U-S	BN-V107U-S

MODEL	GR-DX307EX	GR-DX307EY	GR-DX307EZ	GR-DX317EX
LCD MONITOR	3.0INCH	3.0INCH	3.0INCH	3.0INCH
BODY COLOR	Silver & Black	Silver & Black	Silver & Black	D.Gray & Black
AC CORD	CEE PULG	CEE PULG	CEE PULG	CEE PULG
BATTERY PACK	BN-V107U-S	BN-V107U-S	BN-V107U-S	BN-V107U

# SECTION 3 DISASSEMBLY

## 3.1 BEFORE ASSEMBLY AND DISASSEMBLY

### 3.1.1 Precautions

- Be sure to disconnect the power supply unit prior to mounting and soldering of parts.
- Prior to removing a component part that needs to disconnect its connector(s) and its screw(s), first disconnect the wire(s) from the connector(s), and then remove the screw(s).
- When connecting/disconnecting wires, pay enough attention not to damage the connectors.
- When inserting the flat wire to the connector, pay attention to the direction of the flat wire.
- Be careful in removing the parts to which some spacer or shield is attached for reinforcement or insulation.
- When replacing chip parts (especially IC parts), first remove the solder completely to prevent peeling of the pattern.
- Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at a torque of 0.088N·m (0.9kgf·cm). However, 0.088N·m (0.9kgf·cm) is a value at the time of production. At the time of service, perform the procedure at a torque 10% less than 0.088N·m (0.9kgf·cm). (See "SERVICE NOTE" as for tightening torque.)

### 3.1.2 Destination of connectors

Two kinds of double-arrows in connection tables respectively show kinds of connector/wires.

↔ : Flat wire    ↔ : Wire    ↔ : Board to board (B-B)  
 □ : The connector of the side to remove

CONN. No.	CONNECTOR				PIN No.	
CN2a	MAIN	CN101	↔	MONI BW	CN761	40
CN2b	MAIN	CN103	↔	MINI BW	CN762	10

### 3.1.3 Disconnection of connectors (Wires)

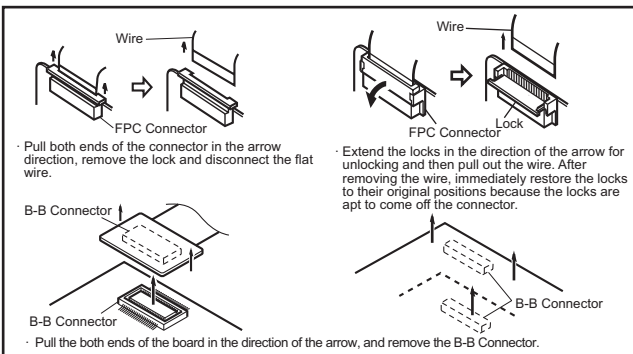


Fig.3-1-1

### 3.1.4 Tools required for disassembly and assembly

Torque driver YTU94088	Bit YTU94088-003	Tweezers P-895
Chip IC replacement jig PTS40844-2	Cleaning cloth KSMM-01	

Fig.3-1-2

### • Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

### • Bit

This bit is slightly longer than those set in conventional torque drivers.

### • Tweezers

To be used for removing and installing parts and wires.

### • Chip IC replacement jig

To be used for replacement of IC.

### • Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

## 3.2 ASSEMBLY AND DISASSEMBLY OF MAIN PARTS

### 3.2.1 Assembly and disassembly

When reassembling, perform the step(s) in reverse order.

STEP No.	PART	Fig. No.	POINT	NOTE
[1]	TOP COVER ASSY	Fig.C1	4(S1a), 3(L1a),CN1a	-
[2]	UPPER ASSY (Inc. VF ASSY, SPEAKER/MONITOR)	Fig.C2-1	(S2a),2(S2b),3(S2c) 2(SD1a), L2,CN2a,b	-
[8]	E.VF UNIT(B/W)	Fig.C2-2	2(S8),L8,CN8a	NOTE 8

(\*1) (\*2) (\*3) (\*4) (\*5)

### (\*1) Order of steps in Procedure

When reassembling, preform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

### (\*2) Part to be removed or installed.

### (\*3) Fig. No. showing Procedure or Part Location.

C = CABINET

### (\*4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

S = Screw

L = Lock, Release, Hook

SD = Solder

CN = Connector

### [Example]

- 4 (S1a) = Remove 4 S1a screws.
- 3 (L1a) = Disengage 3 L1a hooks.
- 2 (SD1a) = Unsolder 2 SD1a points.
- CN1a = Remove a CN1a connector.

### (\*5) Adjustment information for installation.

### 3.2.2 ASSEMBLY/DISASSEMBLY OF CABINET PARTS AND ELECTRICAL PARTS

#### ●Disassembly procedure

STEP No.	PART NAME	Fig. No.	POINT	NOTE
[1]	CASSETTE COVER ASSY	Fig.C1	GRIP BELT ASSY,2(S1),HOOK(F)(S1),L1a,COVER(ADJ),4(S1),L1b	NOTE1
[2]	SIDE COVER(R)	Fig.C2	(S2a),(S2b),L2a,L2b	-
[3]	TOP COVER		2(S3),2(L3)	-
[4]	SIDE COVER(L)ASSY	Fig.C3	6(S4a),(S4b),(S4c),COVER(DV)ASSY JACK COVER ASSY	NOTE4a, b
[5]	UPPER CASE ASSY	Fig.C4	(S5),L5,COVER(JIG CON),4(S5),CN5	NOTE5
[6]	FRONT COVER ASSY	Fig.C5	5(S6),CN6	NOTE6
[7]	MIC ASSY		2(S7)	NOTE7
[8]	REAR COVER ASSY	Fig.C6	2(S8),L8a,2(L8b),L8c,CN8	NOTE8
[9]	MONITOR BOARD	Fig.C7	2(S9),3(L9a),BKT(TOP)ASSY CN9a,b,6(S9),L9b,2(L9c)	NOTE9
[10]	SD BOARD ASSY	Fig.C8	CN10,(S10)	-
[11]	LOWER UNIT ASSY (INCLUDE VF ASSY/OP BLOCK ASSY)		CN11a,b,c,d,e,3(S11)	-
[12]	VF ASSY	Fig.C9	4(S12)	NOTE12a, b
[13]	OP BLOCK ASSY/CCD BOARD ASSY		(S13),2(L13)	NOTE13
[14]	MAIN BOARD ASSY	Fig.C10	2(S14),2(L14a),SHIELD COVER CN14a,b,c,L14b	NOTE14
[15]	MDA BOARD ASSY	Fig.C11	CN15a,b,c,d,2(S15)	-
[16]	MECHANISM ASSY		(S16a),BKT(PRE-REC),3(S16b) BKT(MECHA)ASSY	NOTE16

#### NOTE1:

Before removing the CASSETTE COVER ASSEMBLY, remove the GRIP BELT ASSEMBLY.

#### NOTE4a:

During the procedure, be careful in handling the parts.

#### NOTE4b:

In attaching the SIDE COVER (L) ASSEMBLY, attach the COVER (JACK, DV) ASSEMBLY at the same time.

#### NOTE5:

In removing the UPPER CASE ASSEMBLY, be careful not to damage connectors.

#### NOTE6:

In attaching the FRONT COVER ASSEMBLY, be careful not to cut or damage wires.

#### NOTE7:

In attaching the MIC ASSEMBLY, be careful not to cut or damage wires.

#### NOTE8:

When attaching the REAR COVER ASSEMBLY, be careful about the position of switch.

#### NOTE9:

For the disassembly procedure of the MONITOR ASSEMBLY, see "3.2.3 DISASSEMBLY of [9] MONITOR ASSEMBLY"

#### NOTE12a:

Pull out the VF ASSEMBLY, and remove one screw (No.46).

#### NOTE12b:

For the disassembly procedure of the VF ASSEMBLY, see "3.2.4 DISASSMBLY of [12] VF ASSEMBLY"

#### NOTE13:

For the disassembly procedure of the OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY, see "3.2.5 DISASSEMBLY of [13] OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY"

#### NOTE14:

In removing the MAIN BOARD ASSEMBLY, remove the SPACER.

#### NOTE16:

Be careful in handling the parts.

#### ●Destination of connectors

CN.NO.	CONNECTOR					PIN NO.
	MAIN					
CN5	MAIN	CN115	⇔	SUB OPE UNIT	-	6
CN6	MAIN	CN111	↔	MIC ASSY	-	4
CN8	MAIN	CN109	⇔	CAMERA OPE UNIT	-	13
CN9a	MAIN	CN104	⇔	MONITOR	CN7601 /CN7602	39/20, 20
CN9b	MAIN	CN108	⇔	POWER OPE UNIT	-	7
CN10	MAIN	CN114	⇔	SD	CN701	12
CN11a	MAIN	CN112	⇔	FRONT	CN401	12
CN11b	MAIN	CN107	⇔	OP BLOCK ASSY	-	28
CN11c	MAIN	CN102	⇔	CCD	CN5501	20
CN11d	MAIN	CN101	⇔	BATT. TERM.	-	21
CN11e	MAIN	CN113	⇔	VF FPC ASSY	-	22/20
CN14a	MAIN	CN106	⇔	SENSOR	-	16
CN14b	MAIN	CN103	⇔	MDA	CN305	30
CN14c	MAIN	CN110	⇔	HEAD	-	8
CN15a	MDA	CN301	⇔	CAPSTAN MOTOR	-	18
CN15b	MDA	CN302	⇔	DRUM MOTOR	-	11
CN15c	MDA	CN303	⇔	ROTARY ENCODER SW	-	6
CN15d	MDA	CN304	⇔	LOADING MOTOR	-	6

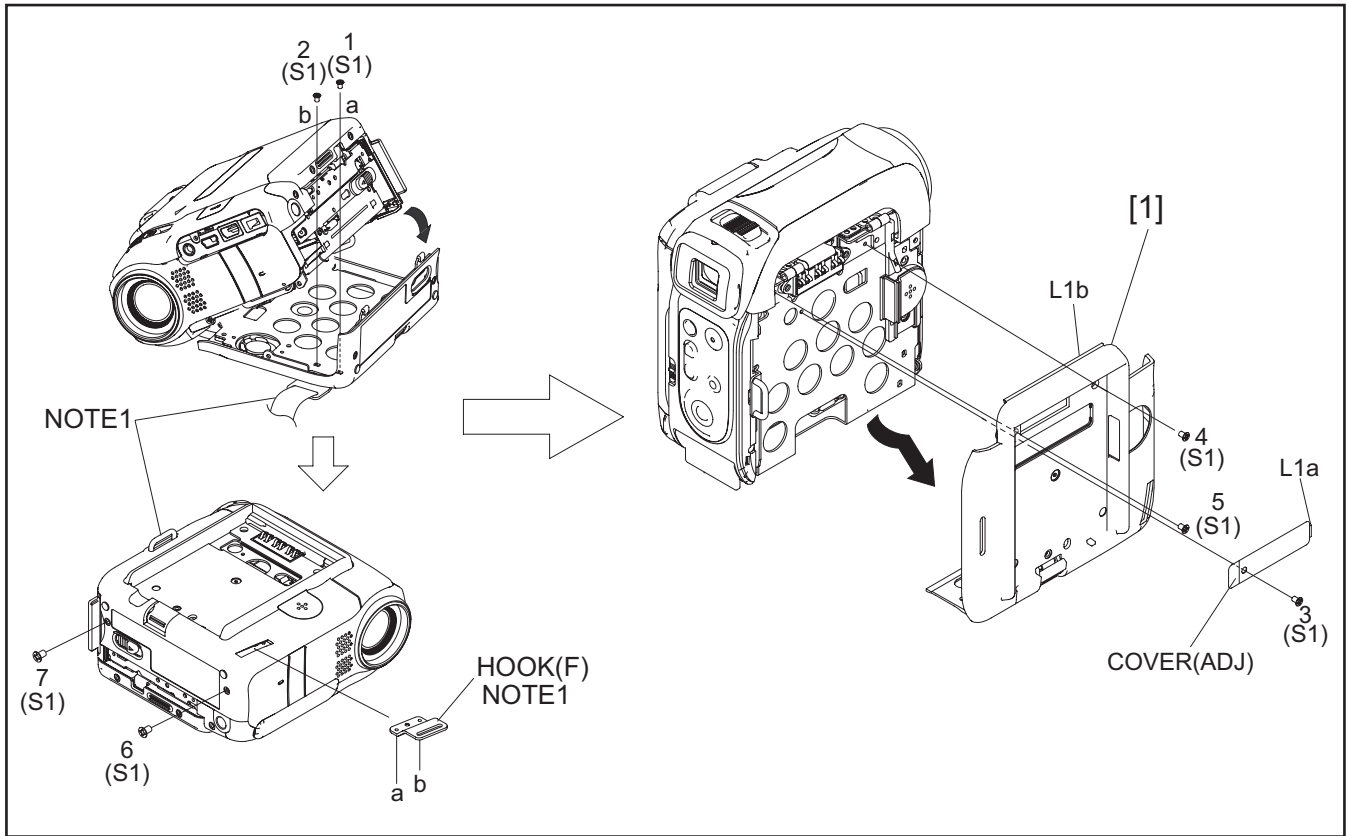


Fig.C1

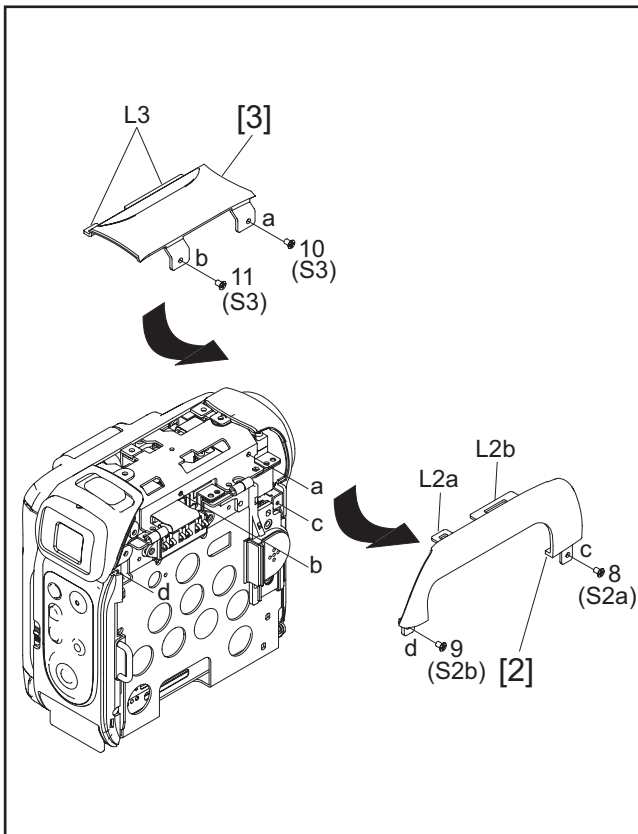


Fig.C2

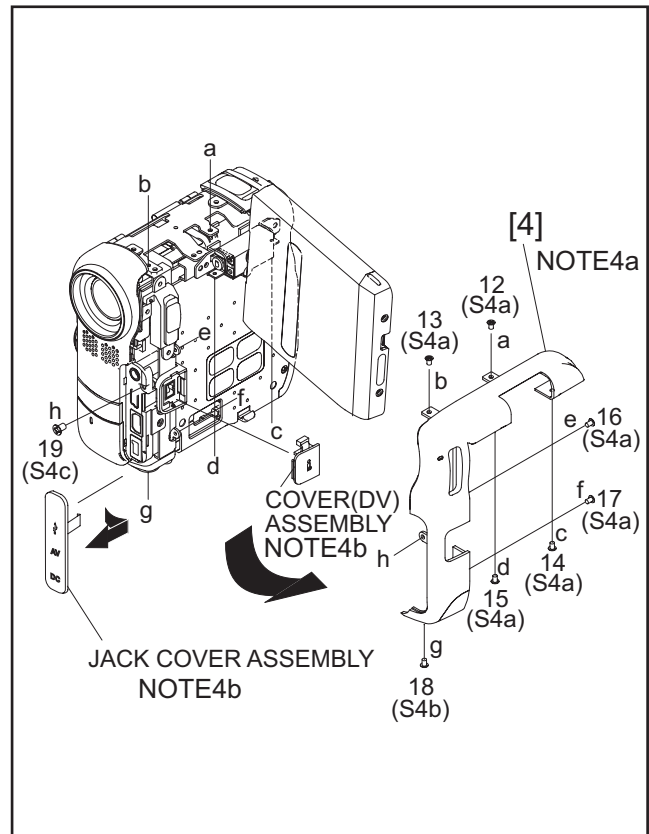


Fig.C3



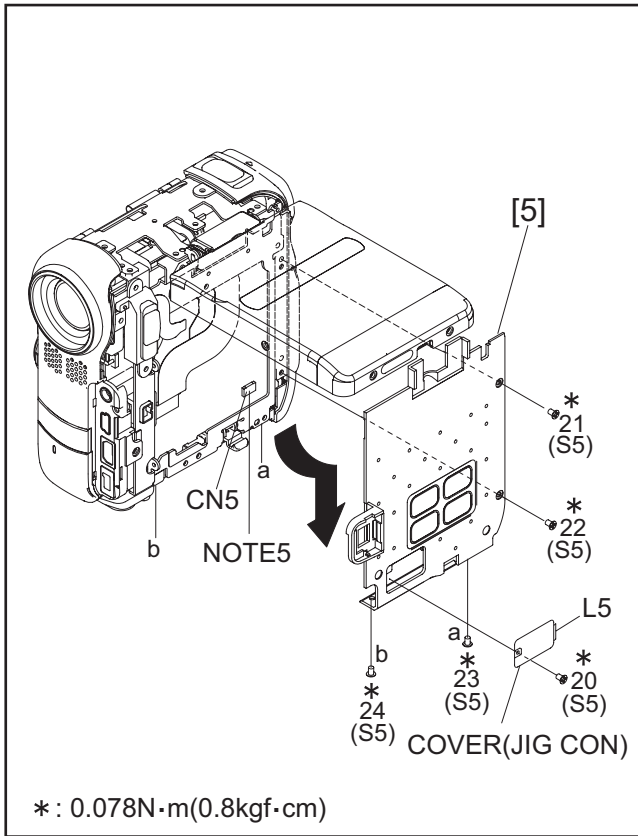


Fig.C4

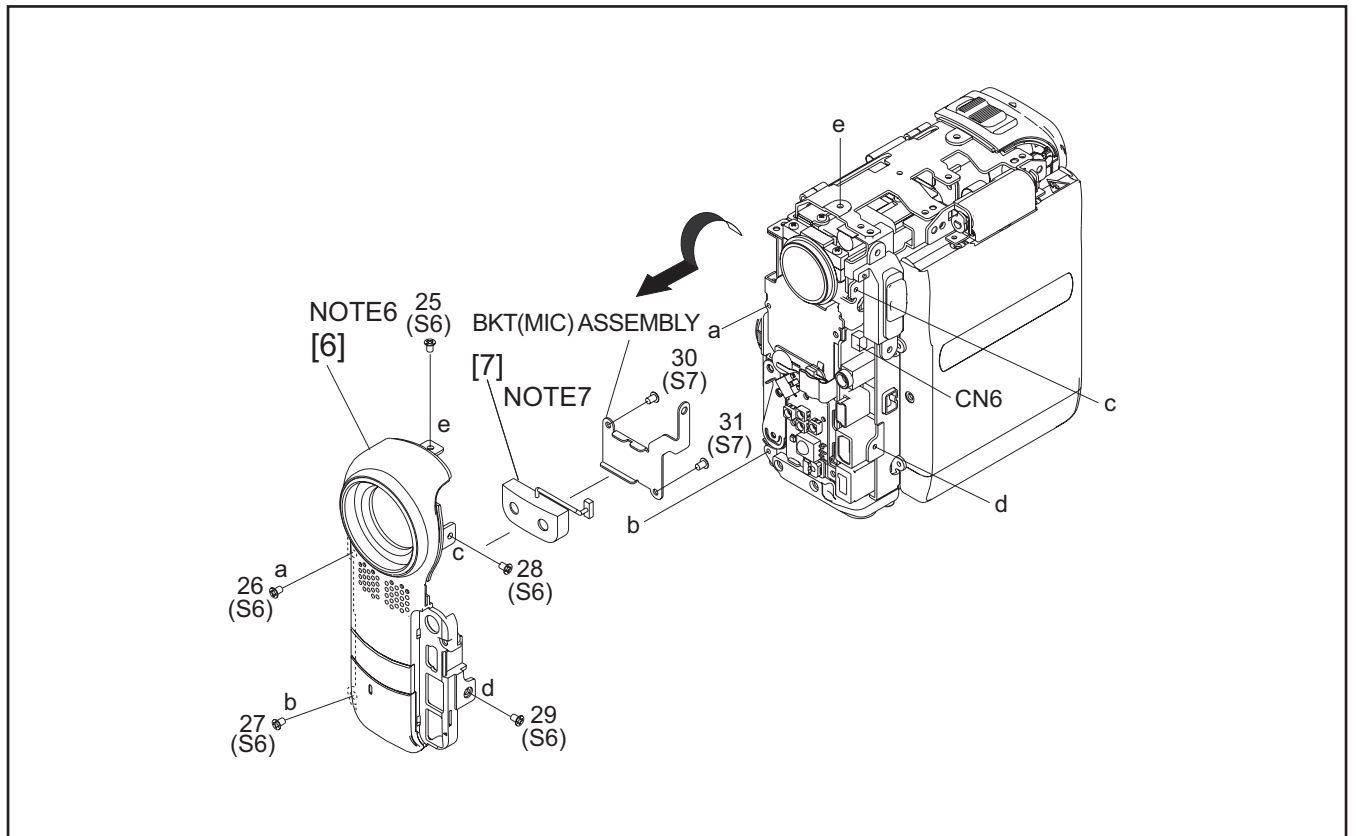


Fig.C5

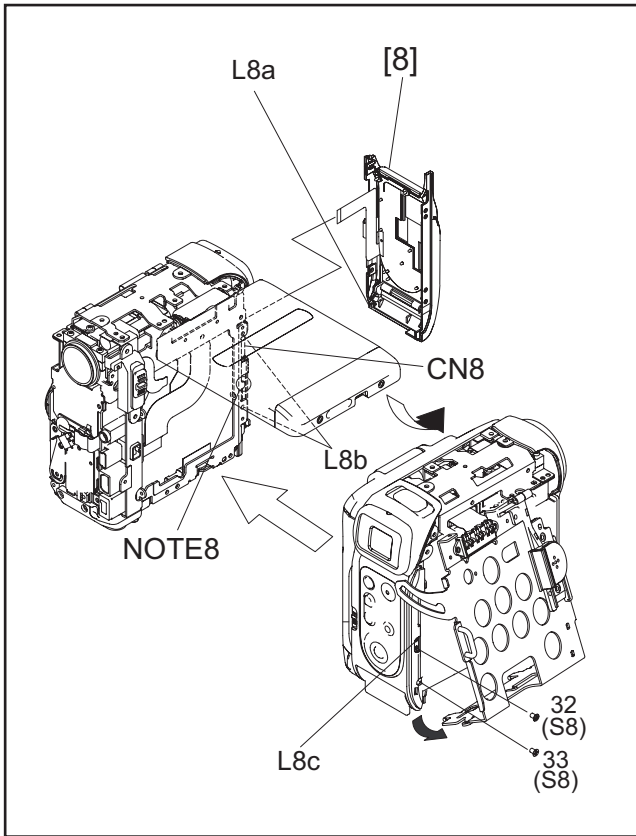


Fig.C6

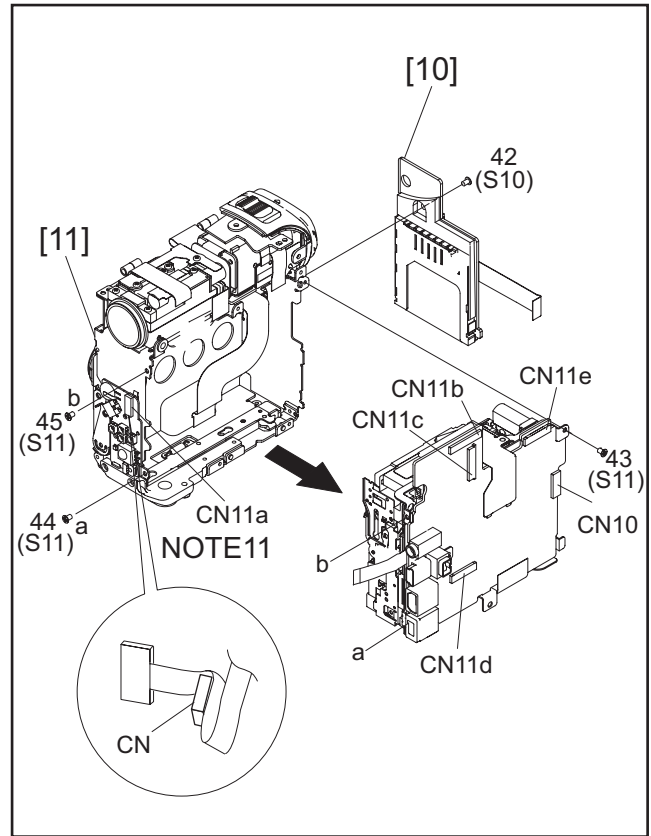


Fig.C8

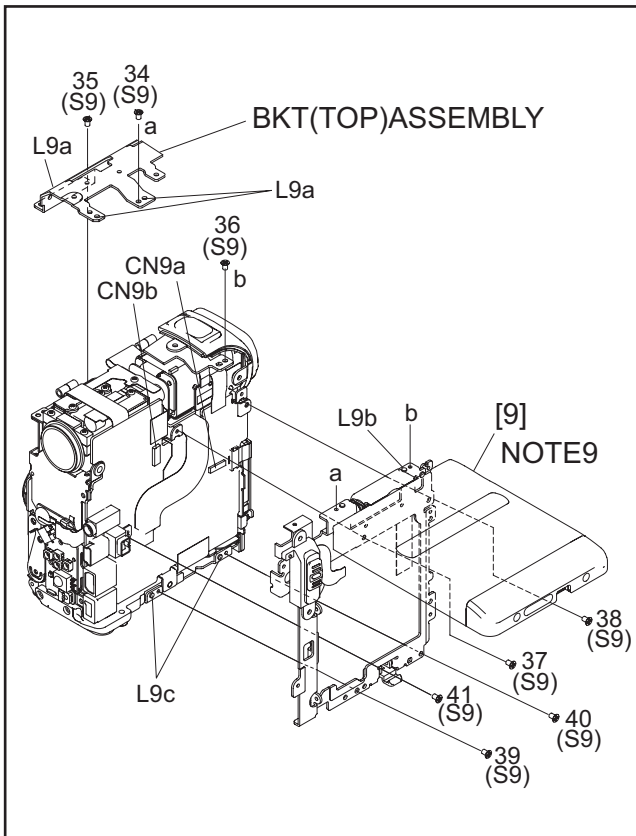


Fig.C7

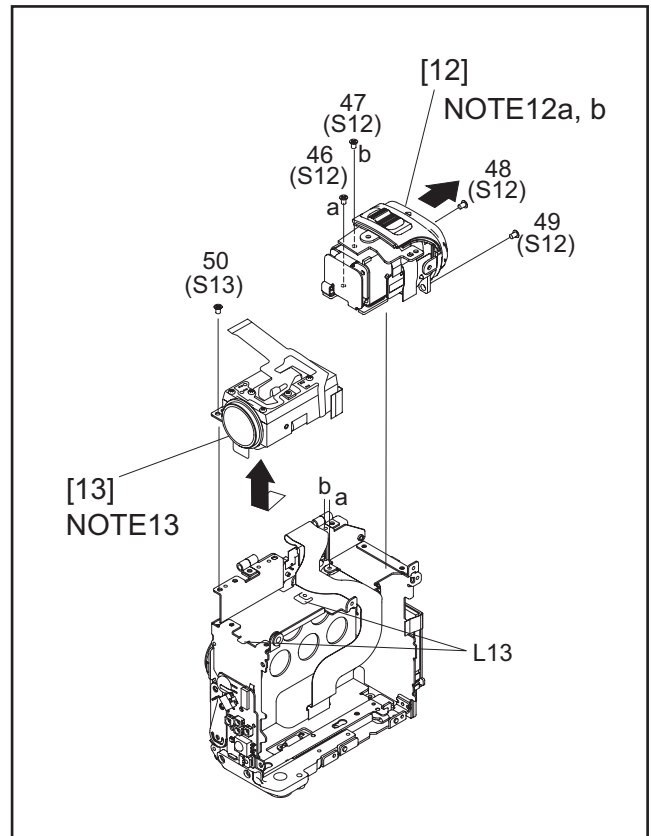


Fig.C9

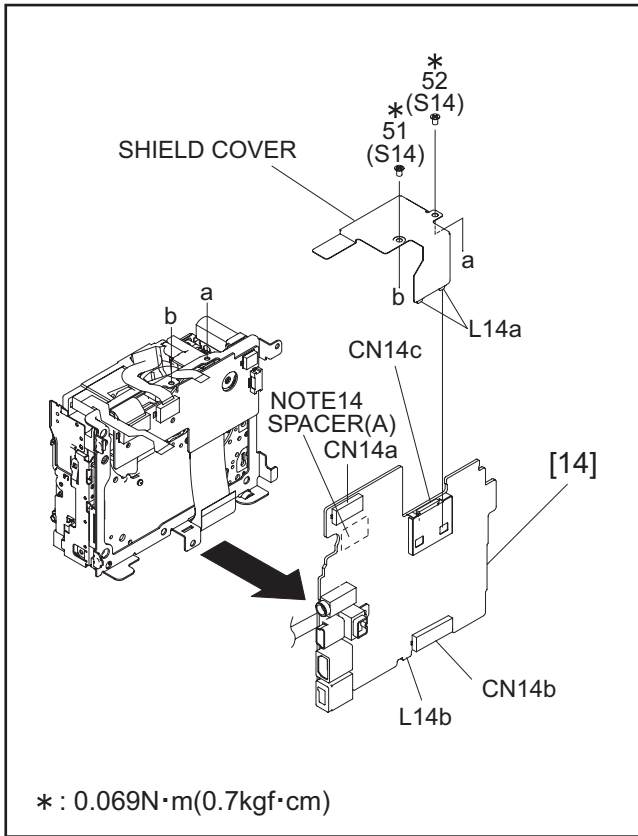


Fig.10

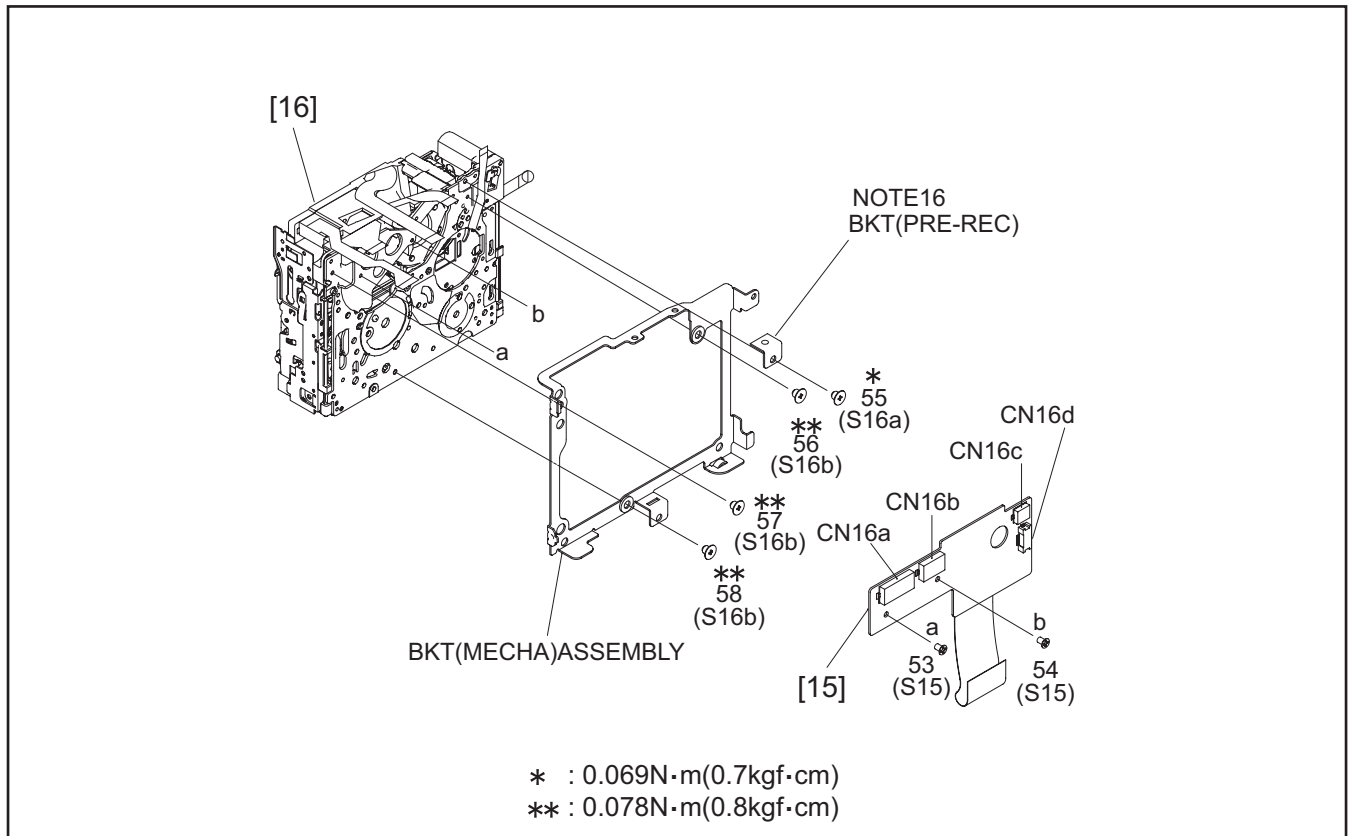


Fig.C11

### 3.2.3 DISASSEMBLY of [9] MONITOR ASSEMBLY

#### ●CAUTIONS

- (1) During the procedure, be careful in handling the LCD MODULE, etc., especially not to damage or soil the monitor screen. If it is soiled with fingerprints, etc., gently clean it with chamois or the cleaning cloth.
- (2) Since the BACKLIGHT is soldered to the BOARD ASSEMBLY (SD9), the BACKLIGHT should not be separated from the BOARD ASSEMBLY except when replacing the BACKLIGHT.
- (3) Remove the POWER (OPE) UNIT if necessary.

#### ●Disassembly

- (1) Remove the three screws (1-3) so that the FPC moves easily.
- (2) Remove the two screws (4 and 5), and remove the MONITOR ASSEMBLY from the FRAME (UP) ASSEMBLY.

- (3) While removing the five screws (6-10) in numerical order and disengaging the two hooks (L9a and L9b) in alphabetical order, remove the MONITOR COVER ASSY.
- (4) Remove the SWITCH BOARD from the MONITOR CASE.
- (5) Unlock the two connectors CN9a and CN9b, and raise and remove the HINGE UNIT ASSEMBLY.

#### NOTE9a:

During the procedure, be careful in handling the FPC ASSEMBLY.

- (6) Unlock one connector CN9c, and remove the FPC.
- (7) Remove one screw (11), and remove the MONITOR BOARD ASSEMBLY together with the BACKLIGHT.
- (8) Remove the LCD BRACKET (2).
- (9) Remove the LCD MODULE.
- (10) Remove the LCD BRACKET (1).

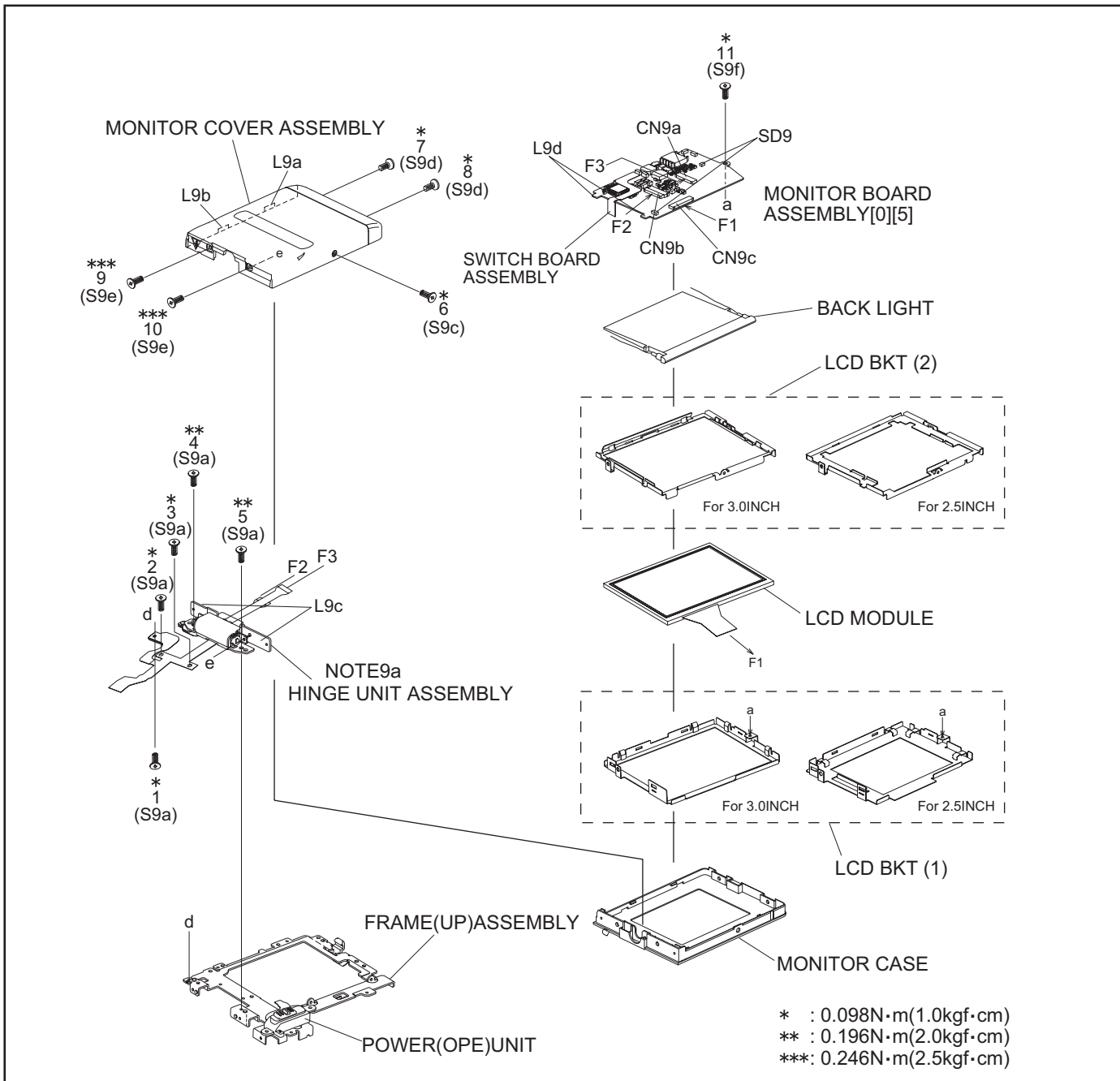


Fig.3-2-3

### 3.2.4 DISASSEMBLY of [12] VF ASSEMBLY

#### ●Disassembly

(1) Remove the EYE CUP.

##### NOTE12a:

After the EYE CUP is removed, be careful of handling the EYE CUP since the SHEET (LENS) is removed.

##### NOTE12b:

In attaching the EYE CUP, be careful of the attachment direction of the SHEET (LENS).

(2) Remove the three screws (1-3) and remove the HOLDER (EYE).

(3) Remove one screw (4) and remove the BRACKET (TOP2).

(4) Remove the two screws (5 and 6), lift the VF COVER in a direction of arrow, and remove the VF COVER from the ZOOM UNIT.

(5) Remove the FPC from one connector (CN12a), remove one screw (7), and remove the ZOOM UNIT.

(6) Remove the two screws (8 and 9), and remove the BRACKET.

(7) Remove the FPC attached to the GUIDE (OUTER) little by little so that the FPC moves easily, and remove the COVER (VF) from the GUIDE (OUTER).

##### NOTE12c:

Be careful enough not to cut or damage the removed FPC since the FPC is attached again.

##### NOTE12d:

Disassemble the COVER (VF) if necessary. In an attachment procedure, confirm that the LEVER (1) moves smoothly.

(8) Remove the two screws (10 and 11), and remove the FRAME ASSEMBLY.

(9) Remove the SPACER (A), and remove the FPC from one connector (CN12b).

(10) Remove the two screws (12 and 13), and remove the VF BOARD ASSEMBLY.

##### NOTE12e:

Disassemble the FRAME ASSEMBLY if necessary. In an assembly procedure, be careful not to insert foreign materials inside the VF and not to soil the VF.

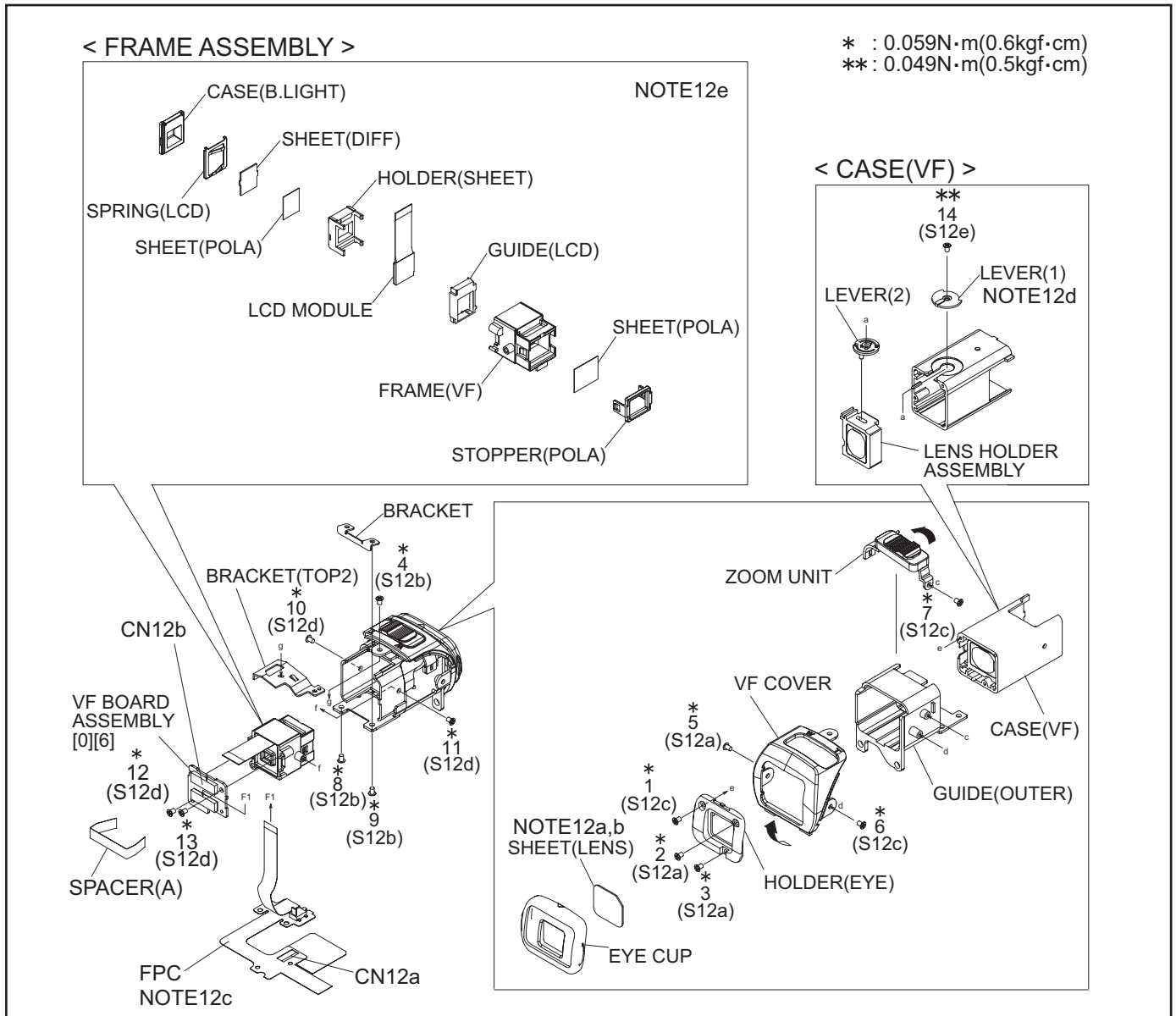


Fig.3-2-4

### 3.2.5 DISASSEMBLY of [13] OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

#### ●CAUTIONS

- (1) During the procedure, remove the OP BLOCK ASSEMBLY if necessary. When removing the OP BLOCK ASSEMBLY, be careful not to damage the lens.
- (2) During the procedure, be careful in handling CCD IMAGE SENSOR, OP LPF, lens, and so on. Be careful not to damage or soil the surface of them. If they are soiled with fingerprints, etc., gently clean them with chamois or the cleaning cloth.
- (3) When products are shipped from the factory, protection seals are applied onto transparent glass of some CCD image sensors. Leave the protection seal as it is, and take it off just before assembling the CCD image sensor to the OP BLOCK ASSEMBLY.
- (4) When removing OP LPF, be careful of the attachment direction of OP LPF. (Marking is attached to some OP LPFs.) When reassembling OP LPF, reattach OP LPF to the original position.

#### ●Disassembly procedure of OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

- (1) Unsolder the fourteen soldered parts (SD13) on the CCD BOARD ASSEMBLY, and remove the CCD BOARD ASSEMBLY.
- (2) Remove the two screws (1 and 2), and remove the CCD BASE ASSEMBLY.

#### NOTE13a:

When removing the CCD BASE ASSEMBLY, be careful in handling a sheet and OP LPF since a sheet or OP LPF may be removed together with the CCD BASE ASSEMBLY.

#### NOTE13b:

When replacing the CCD image sensor, don't remove the CCD image sensor from the CCD BASE ASSEMBLY. Instead, replace the entire CCD BASE ASSEMBLY.

#### ●Assembly procedure of OP BLOCK ASSEMBLY/CCD BOARD ASSEMBLY

- (1) Attach the OP LPF to the OP BLOCK ASSEMBLY, and then the sheet to the OP BLOCK ASSEMBLY.

#### NOTE13c:

- When attaching OP LPF to the OP BLOCK ASSEMBLY, be careful about the attachment direction.
- (2) Attach the CCD ASSEMBLY so that the sheet is not shifted, and attach the CCD ASSEMBLY and the sheet to the OP BLOCK ASSEMBLY by tightening them with the two screws (1 and 2).
  - (3) Insert the CCD BOARD ASSEMBLY to the CCD BASE ASSEMBLY, and solder the fourteen points (SD13).

#### ●Replacement of service repair parts

Service repair parts of the OP BLOCK ASSEMBLY are as follows. When replacing the parts, be careful not to cut or damage the FPC, and not to damage the parts due to soldering (overheat).

- (1) FOCUS MOTOR
- (2) ZOOM MOTOR
- (3) IRIS MOTOR

#### NOTE13d:

When replacing the FOCUS MOTOR or the ZOOM MOTOR, lift the FPC approx.0.5mm away from the jack to solder the FPC.

#### NOTE13e:

Iris motor unit contains the FPC ASSEMBLY and the SENSOR × 2.

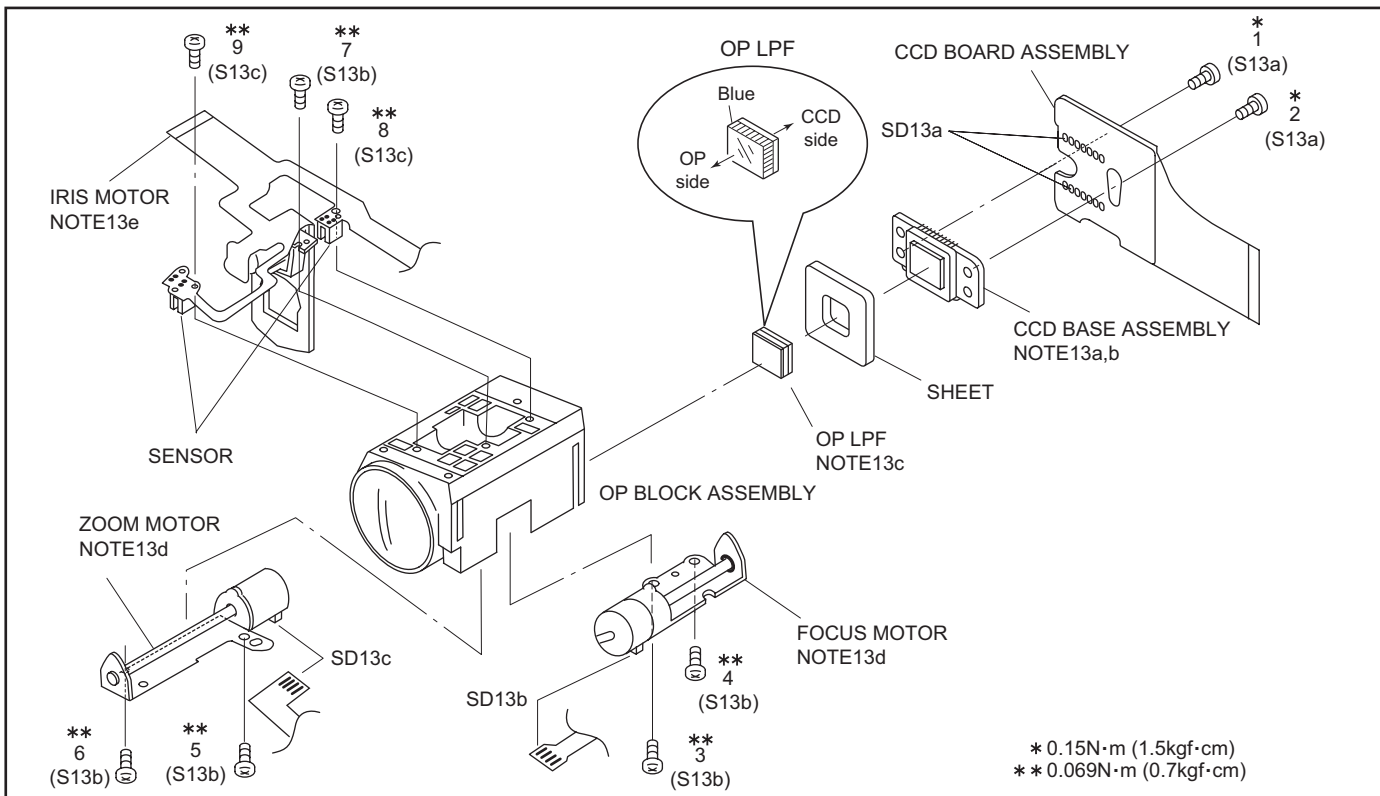


Fig.3-2-5

## SECTION 4 ADJUSTMENT

### 4.1 PREPARATION

#### 4.1.1 Precaution

Camera system and deck system of this model are specially adjusted by using PC.

However, if parts such as the following are replaced, an adjustment is required. The adjustment must be performed in a Service Center equipped with the concerned facilities.

- OP BLOCK ASSEMBLY
- EEP ROM (IC1005 of MAIN board)

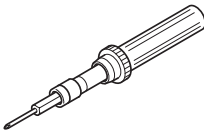
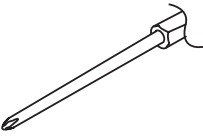
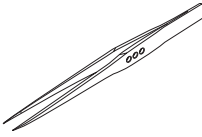
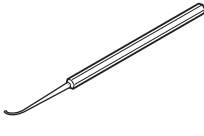
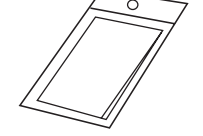
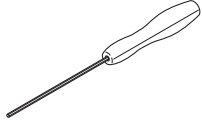
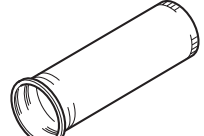

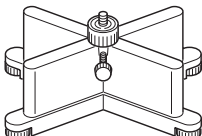
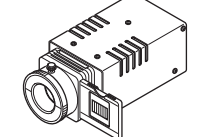
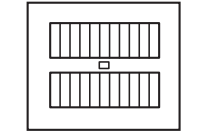
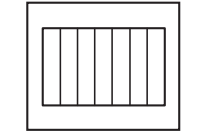
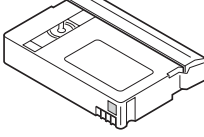
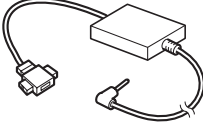
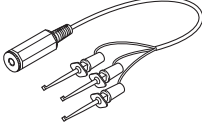
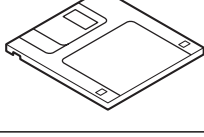
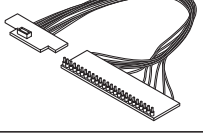
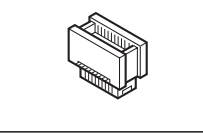
In the event of malfunction with electrical circuits, first find a defective portion with the aid of proper test instruments as shown in the following electrical adjustment procedure, and then commence necessary repair/ replacement/adjustment.

- In observing chip TP, use IC clips, etc. to avoid any stress. Prior to replacement of chip parts (especially IC), remove the solder completely to prevent peeling of the pattern.
- Use a patch cord if necessary. As for a patch cord, see the BOARD INTERCONNECTIONS.
- Since connectors are fragile, carefully handle them in disconnecting and connecting the FPC.

#### 4.1.2 REQUIRED TEST EQUIPMENT

- Personal computer (for Windows)
- Color TV monitor
- Oscilloscope (dual-trace type, observable 100MHz or higher frequency). The one observable 300 MHz or higher frequency is recommended.
- Digital voltmeter
- DC power supply or AC adapter
- Frequency counter (with threshold level adjuster)

### 4.1.3 TOOLS REQUIRED FOR ADJUSTMENT

Torque Driver YTU94088	Bit YTU94088-003	Tweezers P-895
		
Chip IC Replacement Jig PTS40844-2	Cleaning Cloth KSM-01	Guide Driver (Hexagonal) D-770-1.27
		
INF Adjustment Lens YTU92001B	INF Adjustment Lens Holder YTU94087	Camera Stand YTU93079
		
Light box Assembly YTU93096A	Gray Scale Chart YTU94133A	Color Bar Chart YTU94133C
		
Alignment Tape MC-2	PC Cable QAM0099-005	Communication Cable YTU93107A
		
Service Support System YTU94057-80	Jig Connector Cable YTU93106C	Extension Connector YTU94145D-40
		

#### • Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

#### • Bit

This bit is slightly longer than those set in conventional torque drivers.

#### • Tweezers

To be used for removing and installing parts and wires.

#### • Chip IC replacement jig

To be used for adjustment of the camera system.

#### • Cleaning cloth

Recommended the Cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

- **Guide driver (Hexagonal)**

To be used to turn the guide roller to adjustment of the linearity of playback envelope.

- **INF adjustment lens**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **INF lens holder**

To be used together with the Camera stand for operating the Videocamera in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring. For the usage of the INF lens holder, refer to the Service Bulletin No. YA-SB-10035.

- **Camera stand**

To be used together with the INF adjustment lens holder. For the usage of the Camera stand, refer to the Service Bulletin No. YA-SB-10035.

- **Light box assembly**

To be used for adjustment of the camera system. For the usage of the Light box assembly, refer to the Service Bulletin No. YA-SB-10035.

- **Gray scale chart**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **Color bar chart**

To be used for adjustment of the camera system. For the usage of the INF adjustment lens, refer to the Service Bulletin No. YA-SB-10035.

- **Alignment tape**

To be used for check and adjustment of interchangeability of the mechanism.

- **PC cable**

To be used to connect the Videocamera and a personal computer with each other when a personal computer issued for adjustment.

- **Communication cable**

Connect the Communication cable between the PC cable and Jig connector cable when performing a PC adjustment.

- **Service support system**

To be used for adjustment with a personal computer. Software can be downloaded also from JS-net.

- **Jig connector cable**

Connected to JIG CONNECTOR of the main board and used for electrical adjustment, etc.

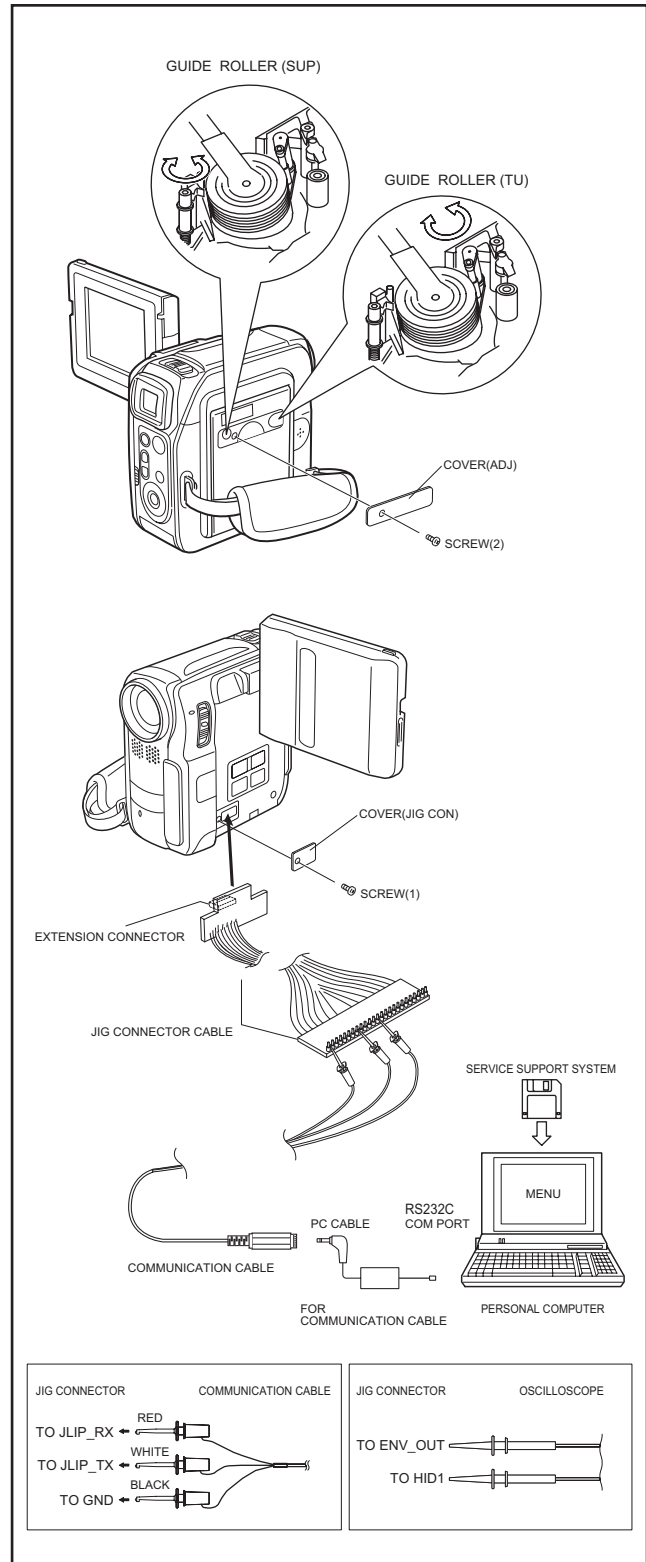
- **Extension connector**

Connect this extension connector to the connector of the Jig connector cable for extending the cable connector.

## 4.2 JIG CONNECTOR CABLE CONNECTION

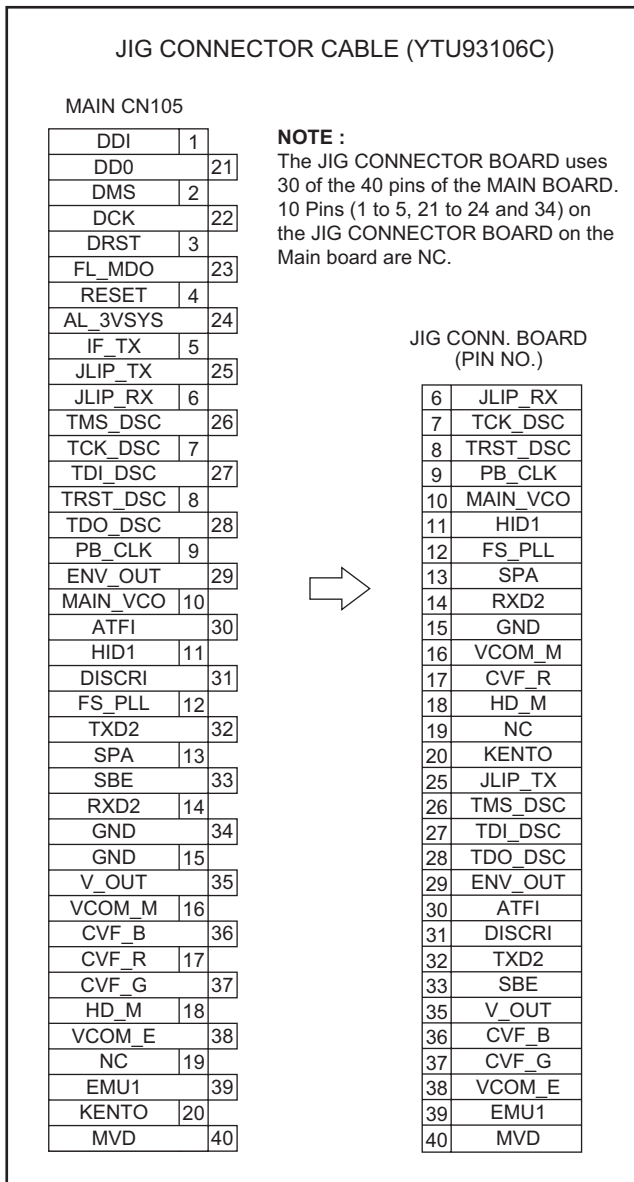
- Remove one screw (1), and remove the COVER (JIG CON).
- As the figure shows, insert JIG CONNECTOR CABLE in JIG CONNECTOR by using the EXTENSION CONNECTOR so that the wire side faces downward.

### ■ Connection procedure





## ■ Jig connector diagrams



## 4.3 MECHANISM COMPATIBILITY ADJUSTMENT

### 4.3.1 Tape pattern adjustment

**NOTE:**

Prior to the adjustment, remove the COVER (ADJ).

- (1) Play back the compatibility adjustment tape.
- (2) While triggering the HID1, observe the waveform of ENV\_OUT.
- (3) Set the manual tracking mode (ATF OFF).
- (4) Confirm that the waveform is entirely parallel and straight, and free from remarkable level-down, through the tracking operation.

Make the confirmation as follows if necessary.

- (5) If level-down is observed on the left hand side of the waveform, straighten the level by turning the GUIDE ROLLER (SUP).  
If level-down is observed on the right hand side of the waveform, straighten the level by turning the GUIDE ROLLER (TU).
- (6) After the adjustment, try the unloading motion once, and confirm that the waveform is flat when the tape has been played back again.
- (7) Play back the self-recording.
- (8) Confirm that the waveform is flat.



Fig.4-3-1

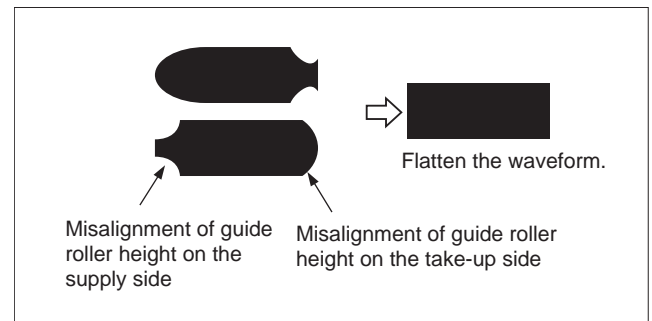


Fig.4-3-2

## 4.4 ELECTRICAL ADJUSTMENT

Electrical adjustment is performed by using a personal computer and software for SERVICE SUPPORT SYSTEM. Read README.TXT file to use the software properly.

As for the connection of cables, see "4.2 JIG CONNECTOR CABLE CONNECTION".

# SECTION 5 TROUBLE SHOOTING

## 5.1 SERVICE NOTE

### CABINET PARTS AND ELECTRICAL PARTS

Symbol No.	[1]	[2]	[3]	[4]	[5]
Removing order of screw	1	2	3	4	5
Place to stick screw	*	*	*	*	*
Reference drawing (Fig.No.)	C1				C2
Screw tightening torque	I				II

### CABINET PARTS AND ELECTRICAL PARTS

Symbol No.	[6]	[7]	[8]	[9]	[10]	[11]
Removing order of screw	25	26	27	28	29	30
Place to stick screw	*	*	*	*	*	*
Reference drawing (Fig.No.)	C5					
Screw tightening torque	C6					

### CABINET PARTS AND ELECTRICAL PARTS

Symbol No.	[12]	[13]	[14]	[15]	[16]
Removing order of screw	46	47	48	49	50
Place to stick screw	*	*	*	*	*
Reference drawing (Fig.No.)	C9				
Screw tightening torque	I	III	IV	V	VI

### [9] MONITOR ASSEMBLY

Removing order of screw	1	2	3	4	5	6	7	8	9	10	11
Place to stick screw	*	*	*	*	*	*	*	*	*	*	*
Reference drawing (Fig.No.)	3-2-3										
Screw tightening torque	IV	V	V	IV	VI	VI	IV	IV	VI	IV	IV

### [12] VF ASSEMBLY

Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Place to stick screw	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Reference drawing (Fig.No.)	3-2-4													
Screw tightening torque	VIII													

### NOTE:

- \* : Don't reuse the screw, because screw lock bond was applied to them.
- Pay careful attention to tightening torque for each screw.

I : 0.088N·m (0.9kgf·cm)  
 IV : 0.098N·m (1.0kgf·cm)  
 VII : 0.019N·m (0.2kgf·cm)  
 X : 0.15N·m (1.5kgf·cm)

II : 0.078N·m (0.8kgf·cm)  
 V : 0.196N·m (2.0kgf·cm)  
 VIII : 0.059N·m (0.6kgf·cm)

III : 0.069N·m (0.7kgf·cm)  
 VI : 0.246N·m (2.5kgf·cm)  
 IX : 0.049N·m (0.5kgf·cm)

[13] OP BLOCK ASSEMBLY / CCD BOARD ASSEMBLY	1	2	3	4	5	6	7	8	9
	*	*	*	*	*	*	*	*	*
	3-2-5								
	X								

## 5.2 TAKE OUT CASSETTE TAPE

The following procedure is a method for taking out the cassette tape in case the cassette tape cannot be ejected due to an electrical failure. The following procedure is a simplified method; therefore, for more reliable operation, it is recommended that you should remove exterior parts so that you can take out the tape without excessive force.

- (1) Remove the Power Unit (battery or DC cord) from the set.
- (2) Open the CASSETTE COVER till it is completely opened and fixed.
- (3) Attach a PVC tape as shown in the figure.

**NOTE:**

Be careful of cassette tape damage caused because the Cassette Housing Assembly is moved upward at the unloading end (Eject mode).

- (4) To set the Slide Deck Assembly to the unloading end, apply DC 3V to the electrode (terminal) on the top surface of the LOADING MOTOR that is seen through a space of VF side.

**NOTE:**

Be careful not to attach grease or a similar substance to the surface of the cassette tape on the tape transport system.

- (5) Wind the cassette tape by directly turning the Reel Disk Assembly (SUP) from the backside of the SLIDE DECK ASSEMBLY by using a sharp tool (Chip IC replacement tool).
- (6) Confirm that the cassette tape is completely wound, and then peel off the PVC tape from the CASSETTE HOUSING ASSEMBLY and take out the cassette tape.

**NOTE:**

To confirm that the cassette tape is completely wound, confirm that one REEL DISK ASSEMBLY (TU) rotates as you rotate the other REEL DISK ASSEMBLY (SUP).

- (7) Make sure that grease or a similar substance is not attached to the surface of the tape taken out in the procedure (6). Similarly, also make sure that grease or a similar substance is not attached on the MECHANISM ASSEMBLY, especially the tape transport system.

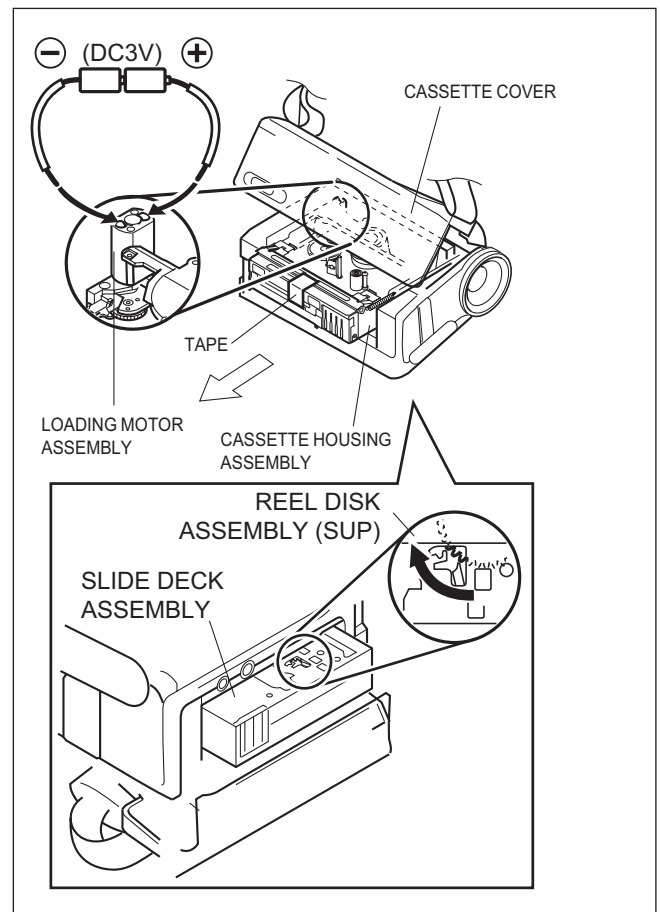


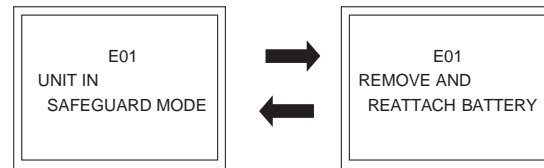
Fig.5-2-1

### 5.3 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the syscon CPU, an error number (E01, as an example) is displayed on the LCD monitor or (in the electronic view finder). In every error status, such the message as shown below alter nately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



LCD display	Emergency mode	Details	Possible cause																		
E01	LOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the loading direction for 4 seconds or more. This error is defined as [E01].	<ol style="list-style-type: none"> <li>1. The mechanism is locked during mode shift.</li> <li>2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.</li> <li>3. No power is supplied to the loading MDA.</li> </ol>																		
E02	UNLOADING	In the case the encoder position is not shifted to the next point though the loading motor has rotated in the unloading direction for 4 seconds or more. This error is defined as [E02].	<ol style="list-style-type: none"> <li>1. The mechanism is locked during mode shift.</li> <li>2. The mechanism is locked at the mechanism loading end, because the encoder position is skipped during mechanism mode shift.</li> </ol>																		
E03	TU & SUP REEL FG	<p>In the case no REEL FG is produced for seconds shown in the table below or more in the capstan rotation mode after loading was complete, the mechanism mode is shifted to STOP with the pinch roller set off. This error is defined as [E03]. However, no REEL EMG is detected in the SLW/STILL mode.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>REEL(SUP)</th> <th>REEL(TU)</th> </tr> </thead> <tbody> <tr> <td>PB/REC</td> <td>3 SEC</td> <td>3 SEC</td> </tr> <tr> <td>S-FWD</td> <td>3 SEC</td> <td>0.3 SEC</td> </tr> <tr> <td>S-REW</td> <td>0.3 SEC</td> <td>3 SEC</td> </tr> <tr> <td>FF</td> <td>3 SEC</td> <td>0.1 SEC</td> </tr> <tr> <td>REW</td> <td>0.1 SEC</td> <td>3 SEC</td> </tr> </tbody> </table>		REEL(SUP)	REEL(TU)	PB/REC	3 SEC	3 SEC	S-FWD	3 SEC	0.3 SEC	S-REW	0.3 SEC	3 SEC	FF	3 SEC	0.1 SEC	REW	0.1 SEC	3 SEC	<ol style="list-style-type: none"> <li>1. The idler gear does not engage with the reel disk well.</li> <li>2. Though the idler gear and reel disk are engaged with each other, the tape is not wound because of overload to the mechanism.</li> <li>3. No FG pulse is output from the reel sensor.</li> <li>4. No power is supplied to the reel sensor.</li> <li>5. Tape transport operation takes place with a cassette having no tape inside.</li> <li>6. The tape slackens and no pulse is produced until the slack is taken up and the tape comes into the normal status.</li> </ol>
	REEL(SUP)	REEL(TU)																			
PB/REC	3 SEC	3 SEC																			
S-FWD	3 SEC	0.3 SEC																			
S-REW	0.3 SEC	3 SEC																			
FF	3 SEC	0.1 SEC																			
REW	0.1 SEC	3 SEC																			
E04	DRUM FG	In the case there is no DRUM FG input in the drum rotation mode for 4 seconds or more. This error is defined as [E04], and the mechanism mode is shifted to STOP with the pinch roller set off.	<ol style="list-style-type: none"> <li>1. The drum cannot be started or drum rotation is stopped because tape transport load is too high. <ol style="list-style-type: none"> <li>1) Tape tension is extremely high.</li> <li>2) The tape is damaged or soiled with grease, etc.</li> </ol> </li> <li>2. The DRUM FG signal is not received by the syscon CPU. <ol style="list-style-type: none"> <li>1) Disconnection in the middle of the signal line.</li> <li>2) Failure of the DRUM FG pulse generator (hall element).</li> </ol> </li> <li>3. No drum control voltage is supplied to the MDA.</li> <li>4. No power is supplied to the DRUM MDA.</li> </ol>																		
E05	-	-	-																		
E06	CAPSTAN FG	In the case no CAPSTAN FG is produced in the capstan rotation mode for 2 seconds or more. This error is defined as [E06], and the mechanism mode is shifted to STOP with the pinch roller set off. However, no CAPSTAN EMG is detected in the STILL/FF/REW mode.	<ol style="list-style-type: none"> <li>1. The CAPSTAN FG signal is not received by the syscon CPU. <ol style="list-style-type: none"> <li>1) Disconnection in the middle of the signal line.</li> <li>2) Failure of the CAPSTAN FG pulse generator (MR element).</li> </ol> </li> <li>2. No capstan control voltage is supplied to the MDA.</li> <li>3. The capstan cannot be started or capstan rotation is stopped because tape transport load is too high. <ol style="list-style-type: none"> <li>1) Tape tension is extremely high. (Mechanical locking)</li> <li>2) The tape is damaged or soiled with grease, etc. (Tape tangling occurs, etc.)</li> </ol> </li> </ol>																		

Fig.5-3-1



**JVC**

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY CAMCORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YF046)



Printed in Japan  
WPC

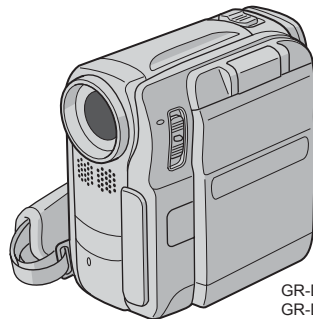
# JVC

## SCHEMATIC DIAGRAMS

DIGITAL VIDEO CAMERA

**GR-DX107EK, GR-DX107EX, GR-DX107EY,  
GR-DX107EZ, GR-DX307EK, GR-DX307EX,  
GR-DX307EY, GR-DX307EZ, GR-DX317EX**

CD-ROM No.SML200405



Mini **DV** PAL



*MultiMediaCard*


GR-DX107EK, GR-DX107EX, GR-DX107EY, GR-DX107EZ[M4D3S9]  
GR-DX307EK, GR-DX307EX, GR-DX307EY, GR-DX307EZ, GR-DX317EX[M4D3M9]

For disassembling and assembling of MECHANISM ASSEMBLY, refer to the SERVICE MANUAL No.86700(MECHANISM ASSEMBLY).

## 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 $\Omega$  (1000 $\Omega$ ), M: M $\Omega$  (1000K $\Omega$ )

2) All capacitance values are in  $\mu$ F, (P: PF).

3) All inductance values are in  $\mu$ H, (m: mH).

4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

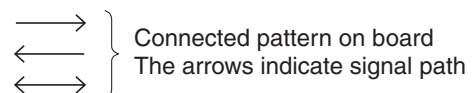
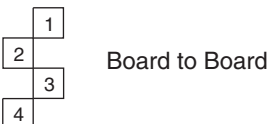
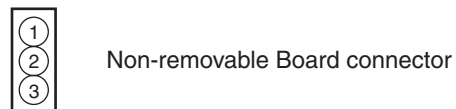
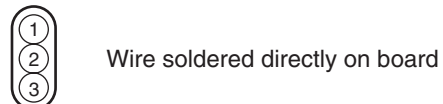
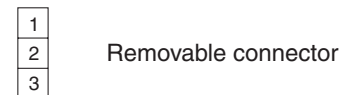
**Note: The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.**

#### 2. Indications of control voltage

AUX : Active at high.

$\overline{\text{AUX}}$  or AUX(L) : Active at low.

#### 3. Interpreting Connector indications



**Note: For the destination of each signal and further line connections that are cut off from the diagram, refer to "BOARD INTERCONNECTIONS"**

#### 4. Voltage measurement

1) Regulator (DC/DC CONV) circuits

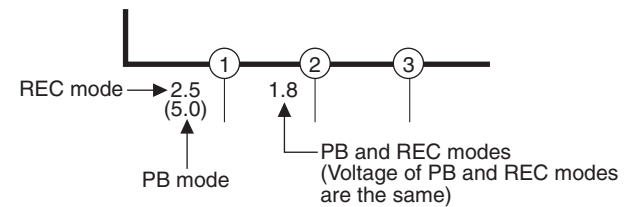
REC : Colour bar signal.

PB : Alignment tape (Colour bar).

— : Unmeasurable or unnecessary to measure.

2) Indication on schematic diagram

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

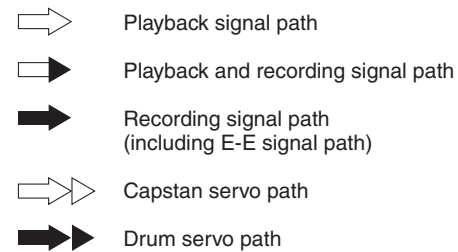


**Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.**

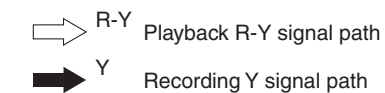
#### 5. Signal path Symbols

The arrows indicate the signal path as follows.

**NOTE : The arrow is DVC unique object.**



(Example)



#### 6. Indication of the parts for adjustments

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



#### 7. 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) :

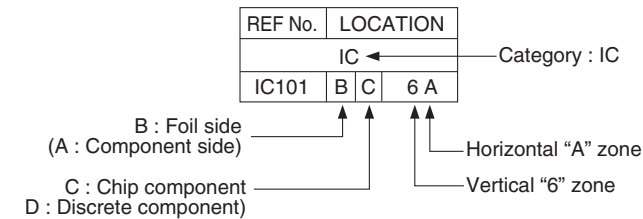
Parts on the foil side seen from foil face (pattern face) are indicated.

2) Component side (A side) :

Parts on the component side seen from component face (parts face) indicated.

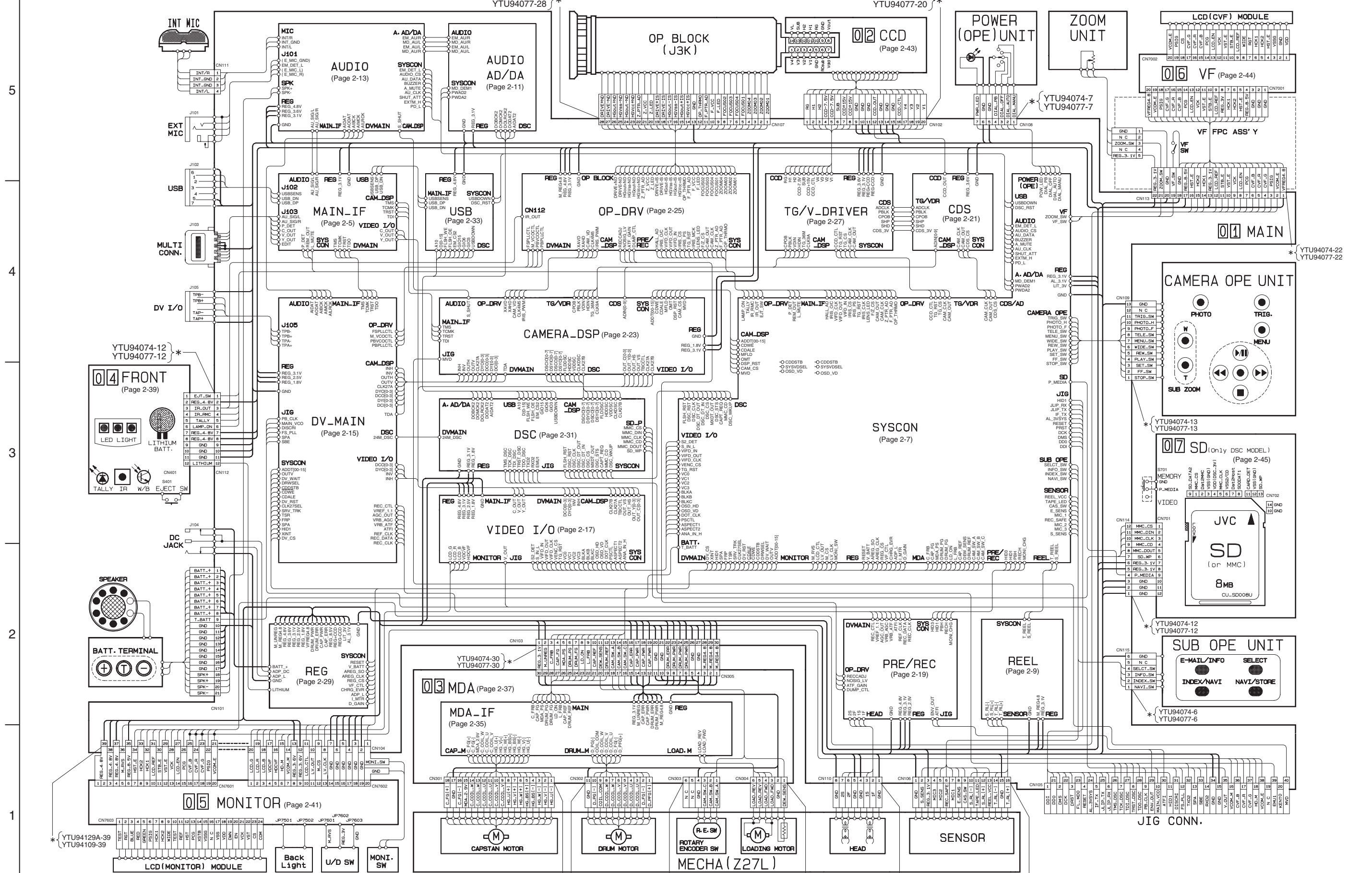
### 2. Parts location guides

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).**

**BOARD INTERCONNECTION**

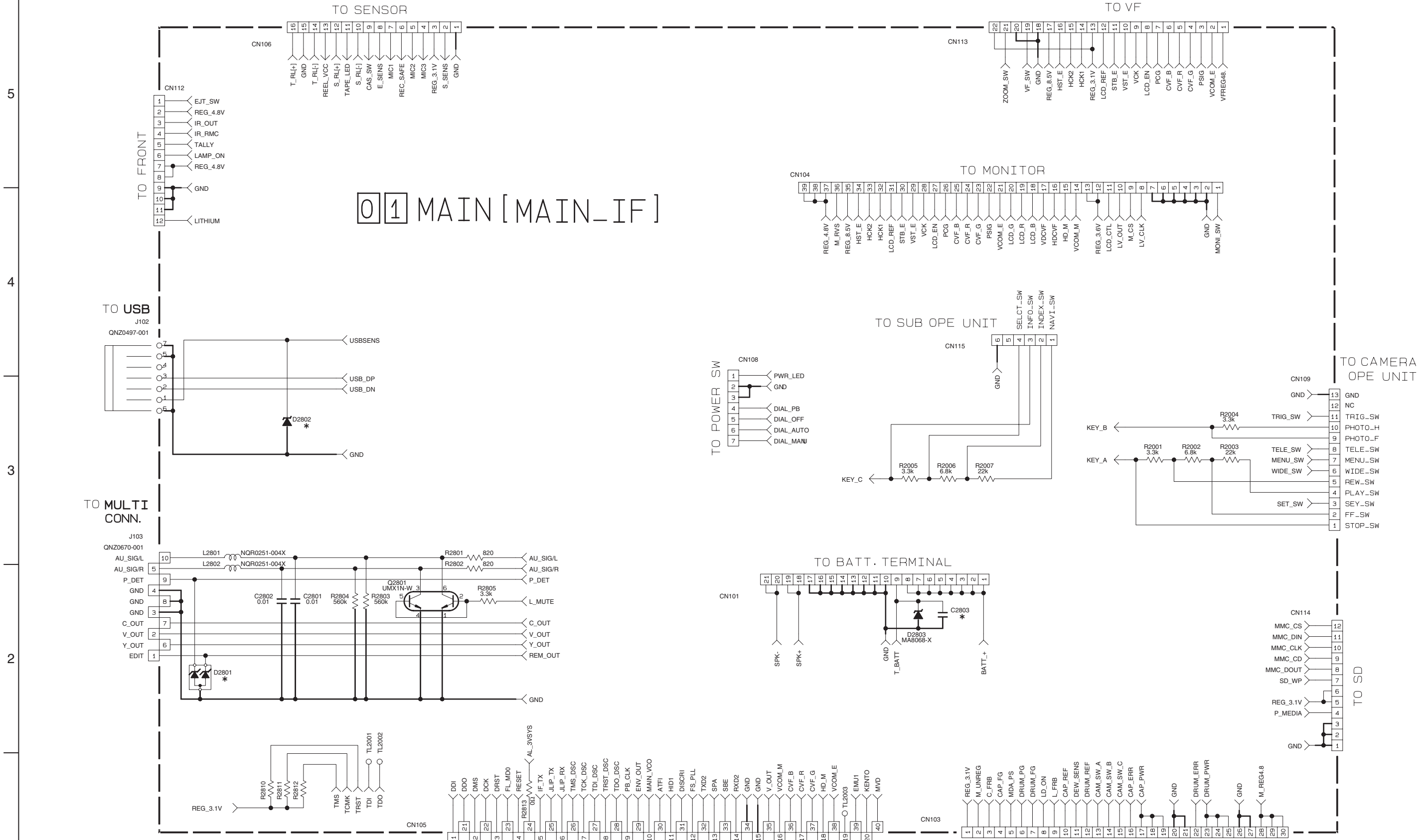


NOTE : \*: The number of patch cords are indicated by interconnected.

YTU94074-18  
YTU94077-18  
YTU94074-11  
YTU94077-11  
YTU94074-6  
YTU94077-6  
YTU94074-8  
YTU94077-8  
YTU94074-16  
YTU94077-16

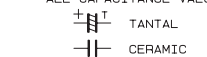


# MAIN(MAIN\_IF) SCHEMATIC DIAGRAM



01 MAIN [MAIN\_IF]

NOTES: UNLESS OTHERWISE SPECIFIED,  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.



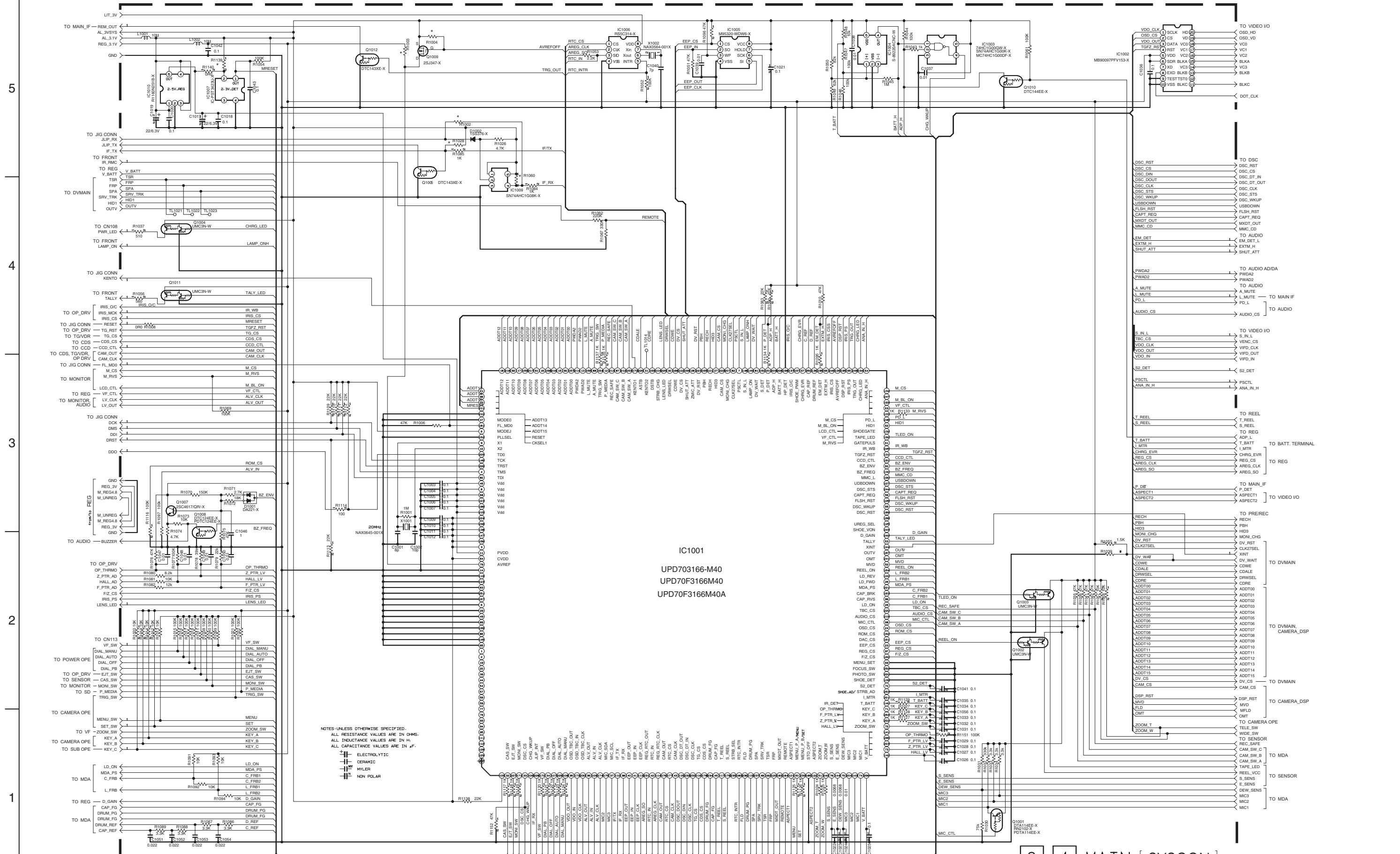
\* NO WEAR

Symbol No. 2801~2850

LAST NO.	VACANT NO.
R 2812	2806-2807-2808-2809
C 2803	
D 2803	
L 2806	2803-2804-2805
Q 2801	

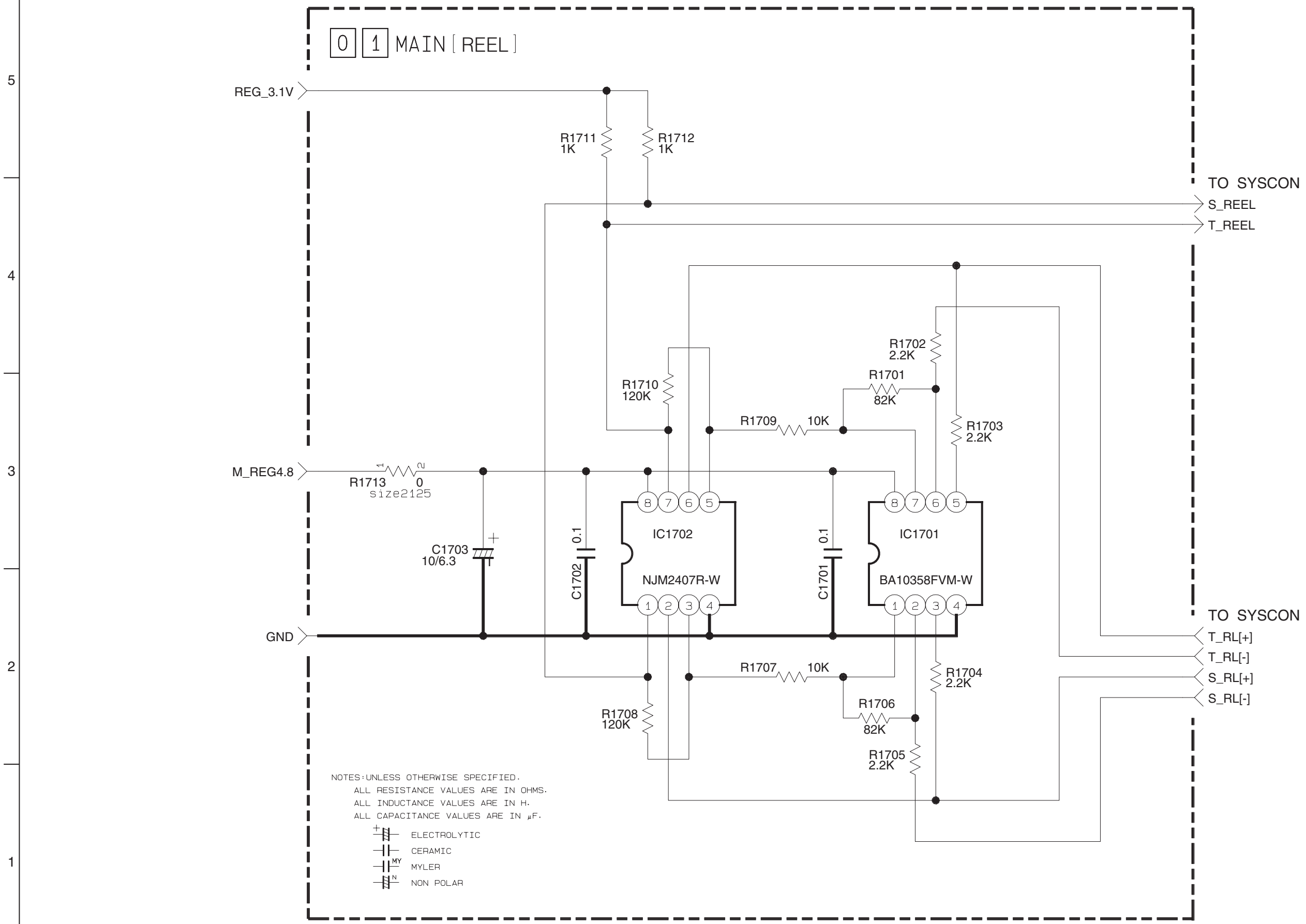
NOTE : The parts with marked (\*) is not used.

# MAIN(SYSCON) SCHEMATIC DIAGRAM



0 1 MAIN [ SYSCON ]

■ MAIN(REEL) SCHEMATIC DIAGRAM



■ MAIN(AUDIO AD/DA) SCHEMATIC DIAGRAM

0 1 MAIN [AUDIO AD/DA]

TO AUDIO

MD\_AU/L

MD\_AU/R

EM\_AU/R

EM\_AU/L

TO DSC

DOBCK2

DOMCK2

DOLRCK2

DODAT2

AIDAT2

TO SYSCON

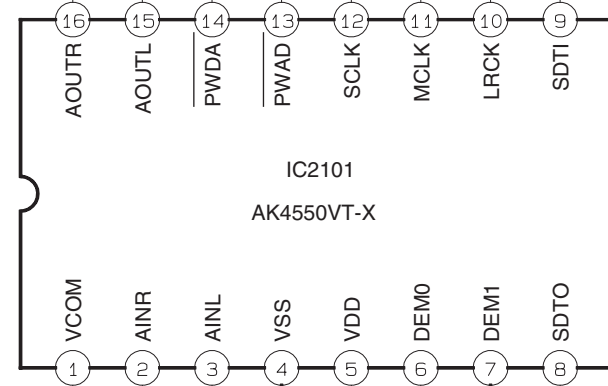
PWDA2

PWAD2

TO REG

REG\_3.1V

GND



R2101  
470

R2102  
470

C2106  
0.1

C2107  
0.1

C2108  
4.7/6.3

C2104  
0.0022

C2103  
0.0022

C2105  
10/6.3

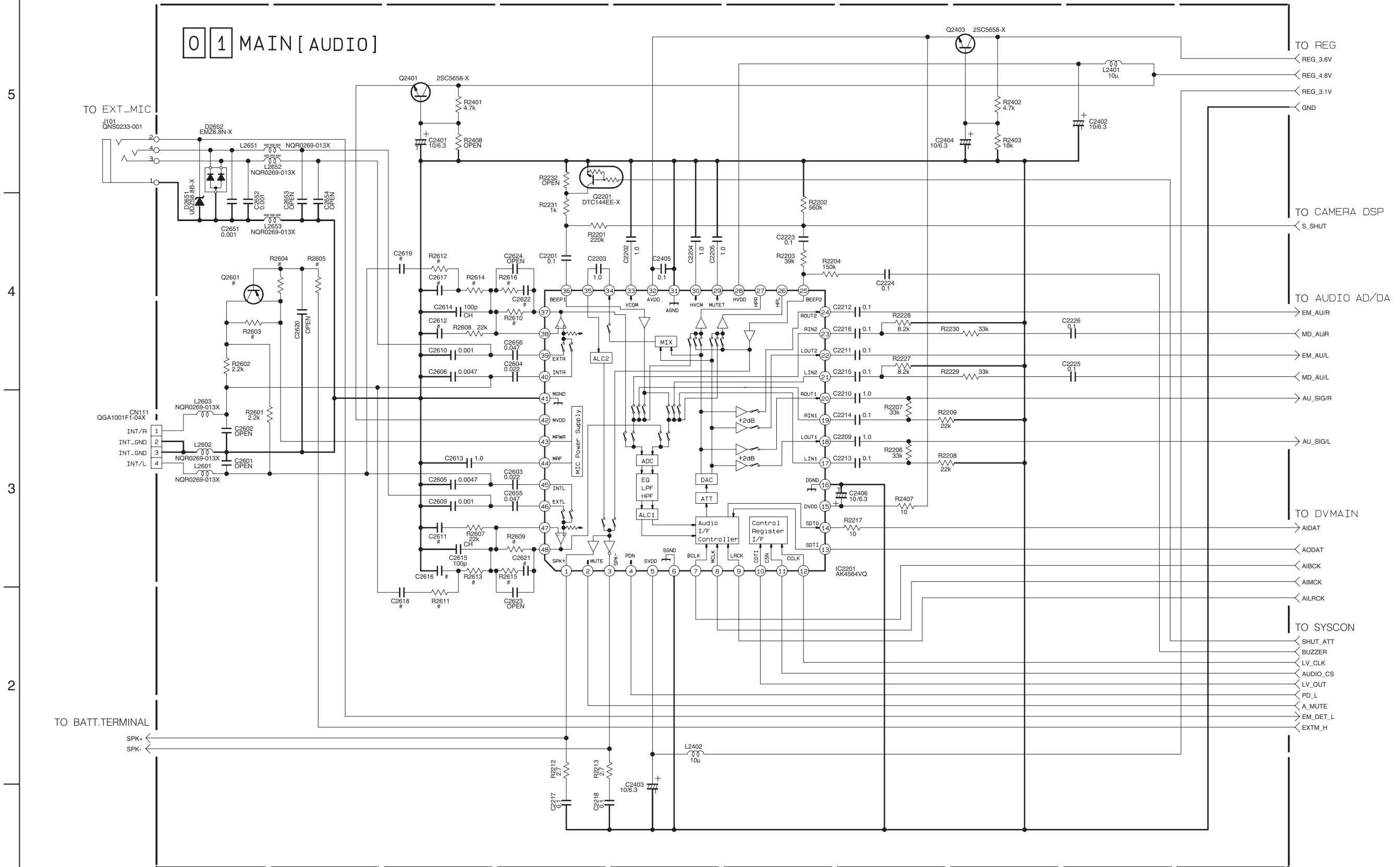
L2101  
10μ

C2102  
1.0

C2101  
1.0

NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN μF.  
CERAMIC  
TANTAL

# MAIN(AUDIO) SCHEMATIC DIAGRAM



0 1 MAIN [ AUDIO ]

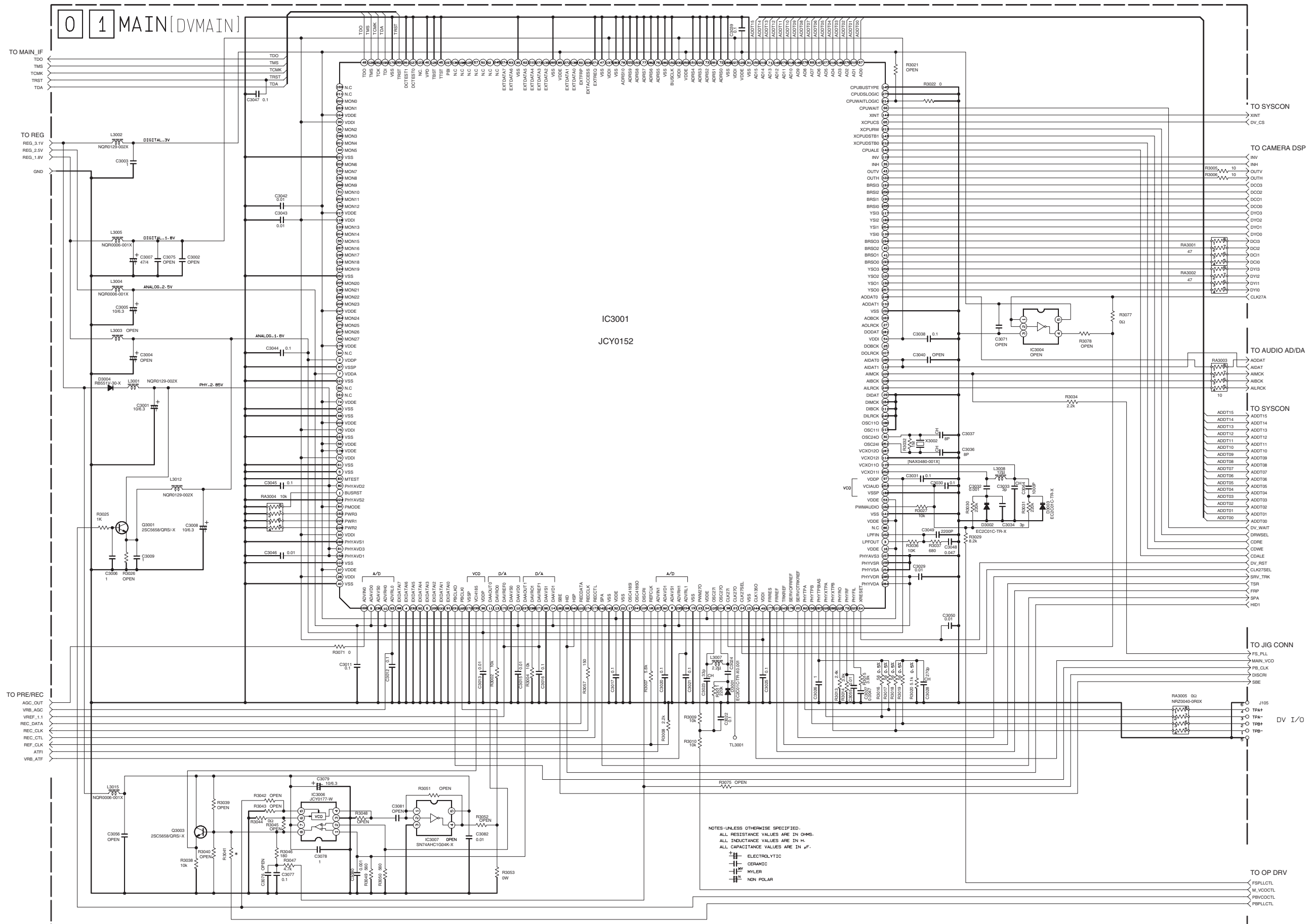
NOTES UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 □ CERAMIC □ TANTAL

# EXCHANGE PARTS LIST

	Q2601	R2603	R2604	R2605	R2609	R2610	R2611	R2612	R2613	R2614	R2615	R2616	C2611	C2612	C2616	C2617	C2618	C2619	C2621	C2622
NTSC	OPEN	0Ω	OPEN	220k	220k	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	1.0	1.0	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
PAL	2SA2029	OPEN	10k	3.3k	330k	330k	10k	10k	10k	10k	330k	330k	0.1	0.1	0.01	0.01	0.1	0.1	0.001	0.001

	Symbol No. 22** AUDIO		Symbol No. 24** REG		Symbol No. 26** MIC AMP	
	LAST No.	VACANT No.	LAST No.	VACANT No.	LAST No.	VACANT No.
R	2232	05-10-11-14-15-16-18-19-20-21-22-23-24-25-26-	2408		2616	06-
C	2226	06-07-08-19-20-21-22-	2406		2656	07-08-25-50-
D					2652	
Q	2201		2403	02-	2601	
L			2402		2603	
IC	2201					

■ MAIN(DVMAIN) SCHEMATIC DIAGRAM

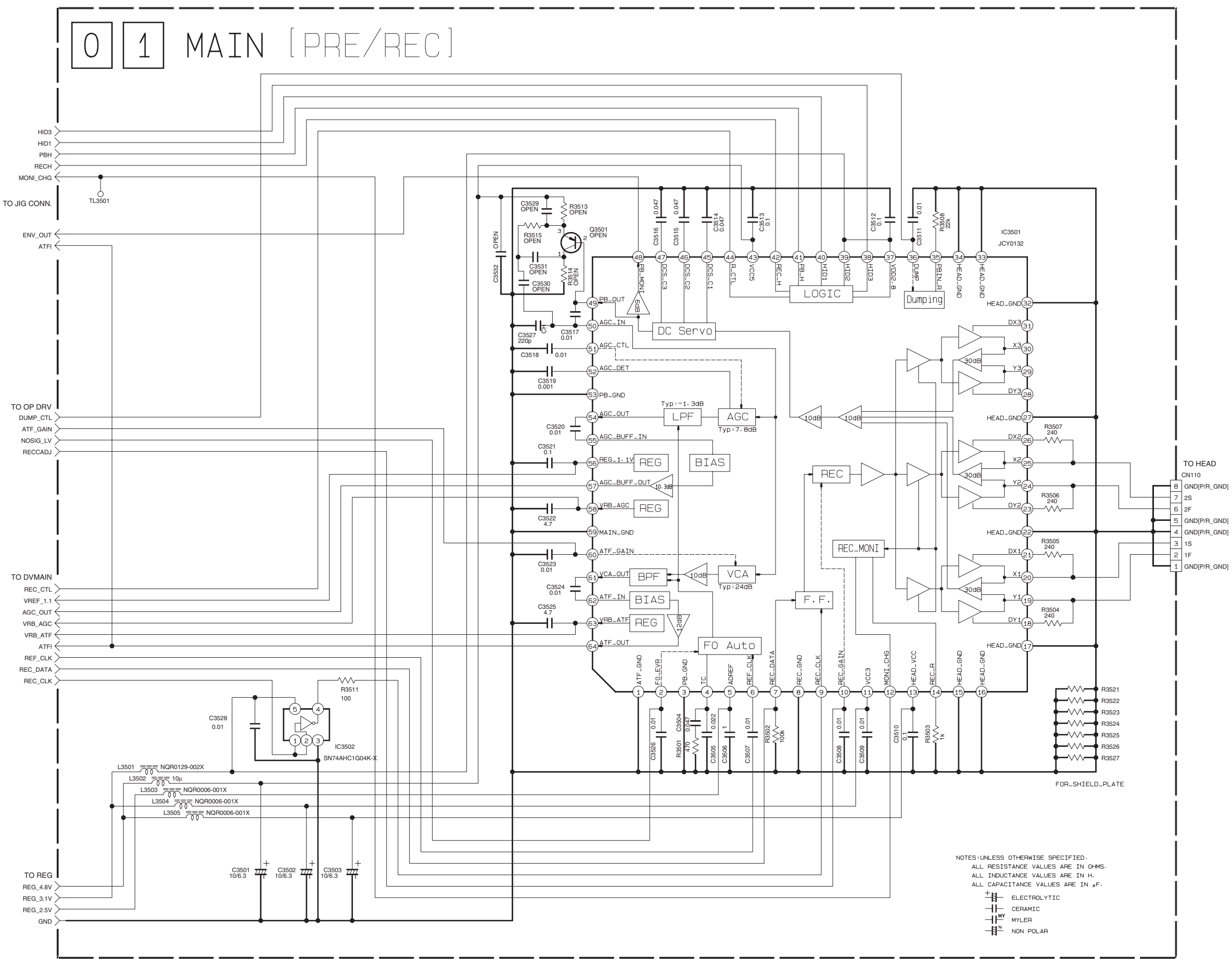


NOTE : The parts with marked (\*) is not used.



■ MAIN(PRE/REC) SCHEMATIC DIAGRAM

0 1 MAIN [PRE/REC]

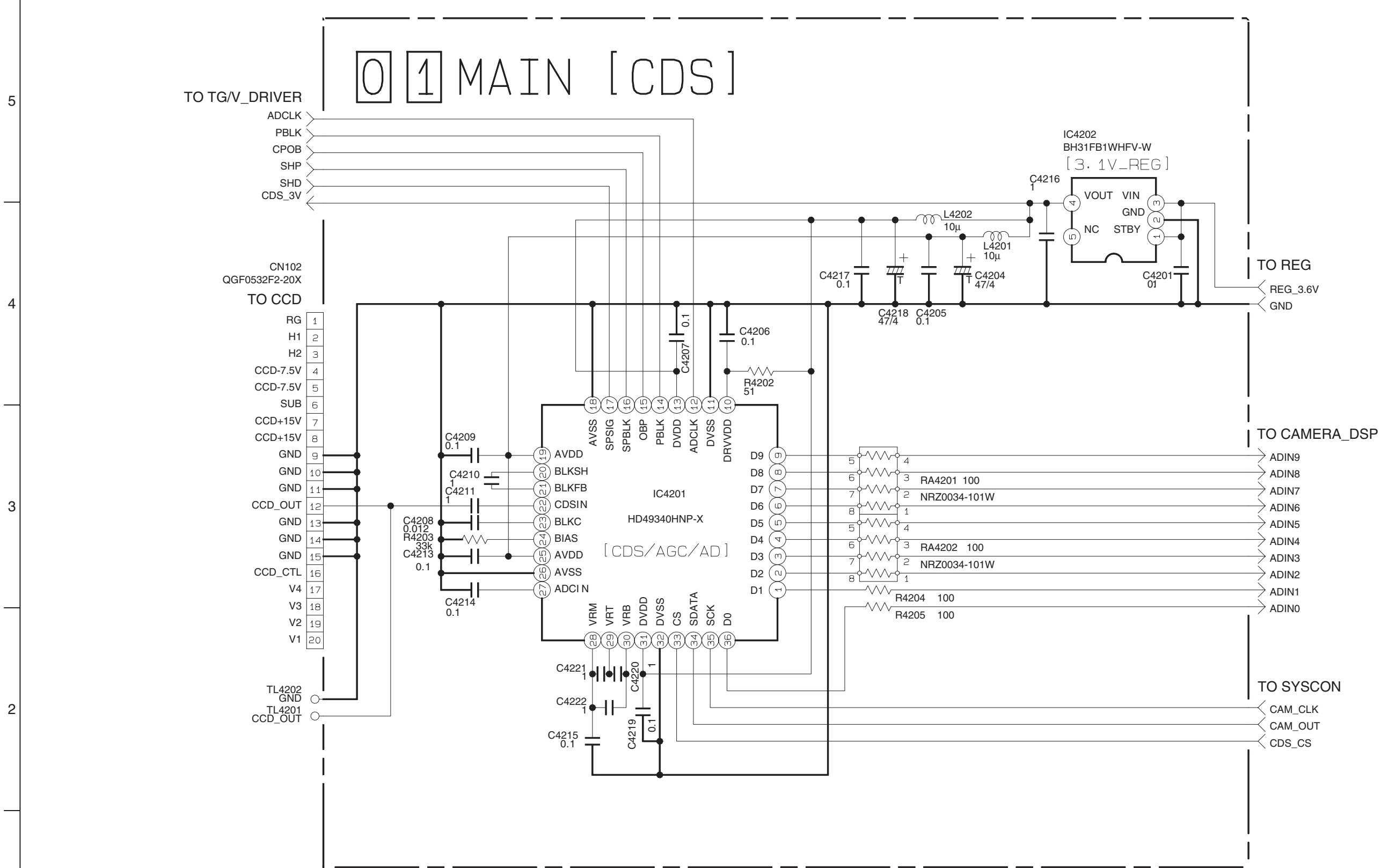


NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR



■ MAIN(CDS) SCHEMATIC DIAGRAM



NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

LAST NO	VACANT NO
R 4205	4201
C 4222	4202 4203 4212
L 4202	
IC 4202	
RA 4202	
TL 4202	



MAIN(OP DRV) SCHEMATIC DIAGRAM

0 1 MAIN [ OP DRV ]

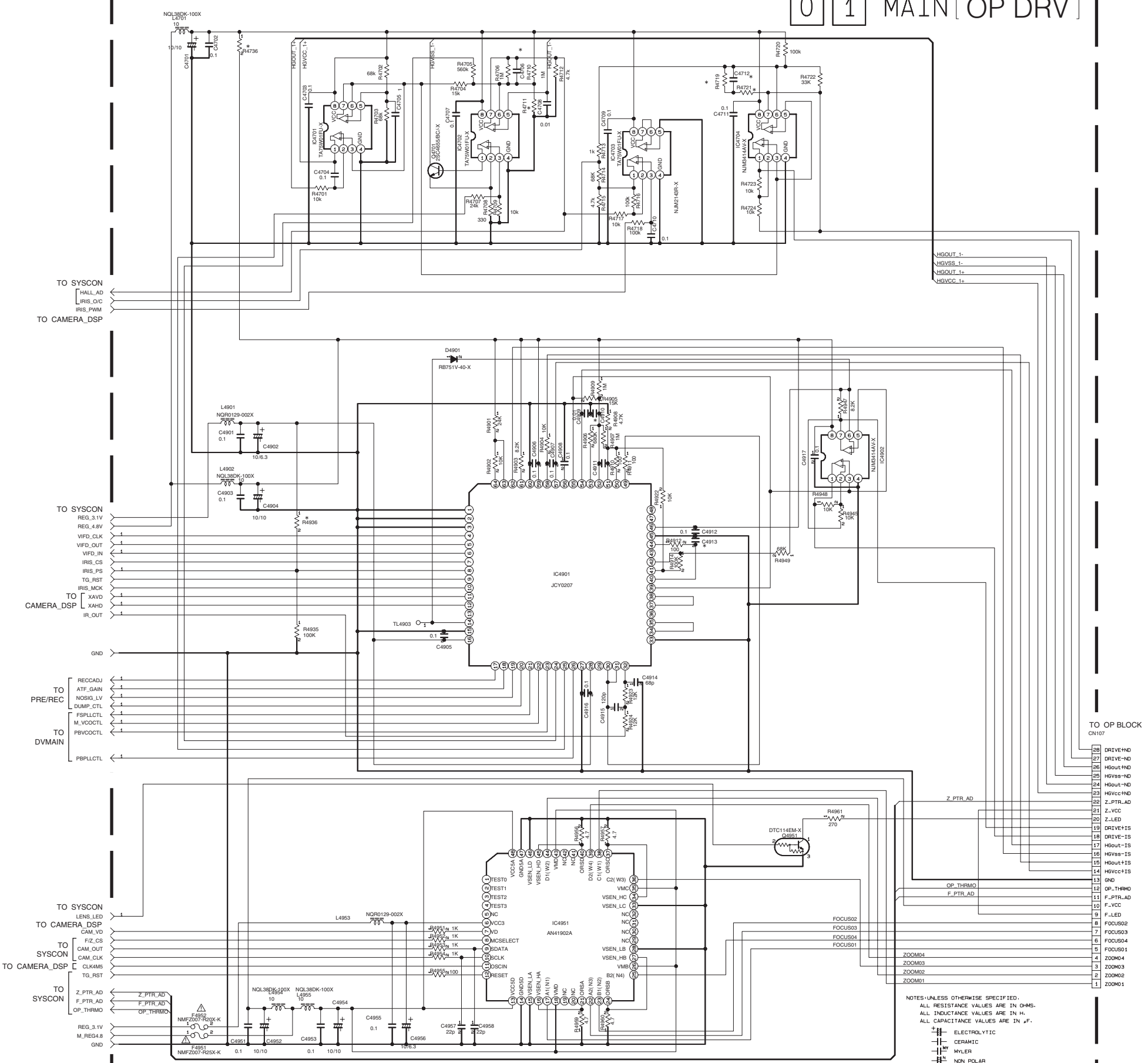
5

4

3

2

1



NOTE : The parts with marked (\*) is not used.

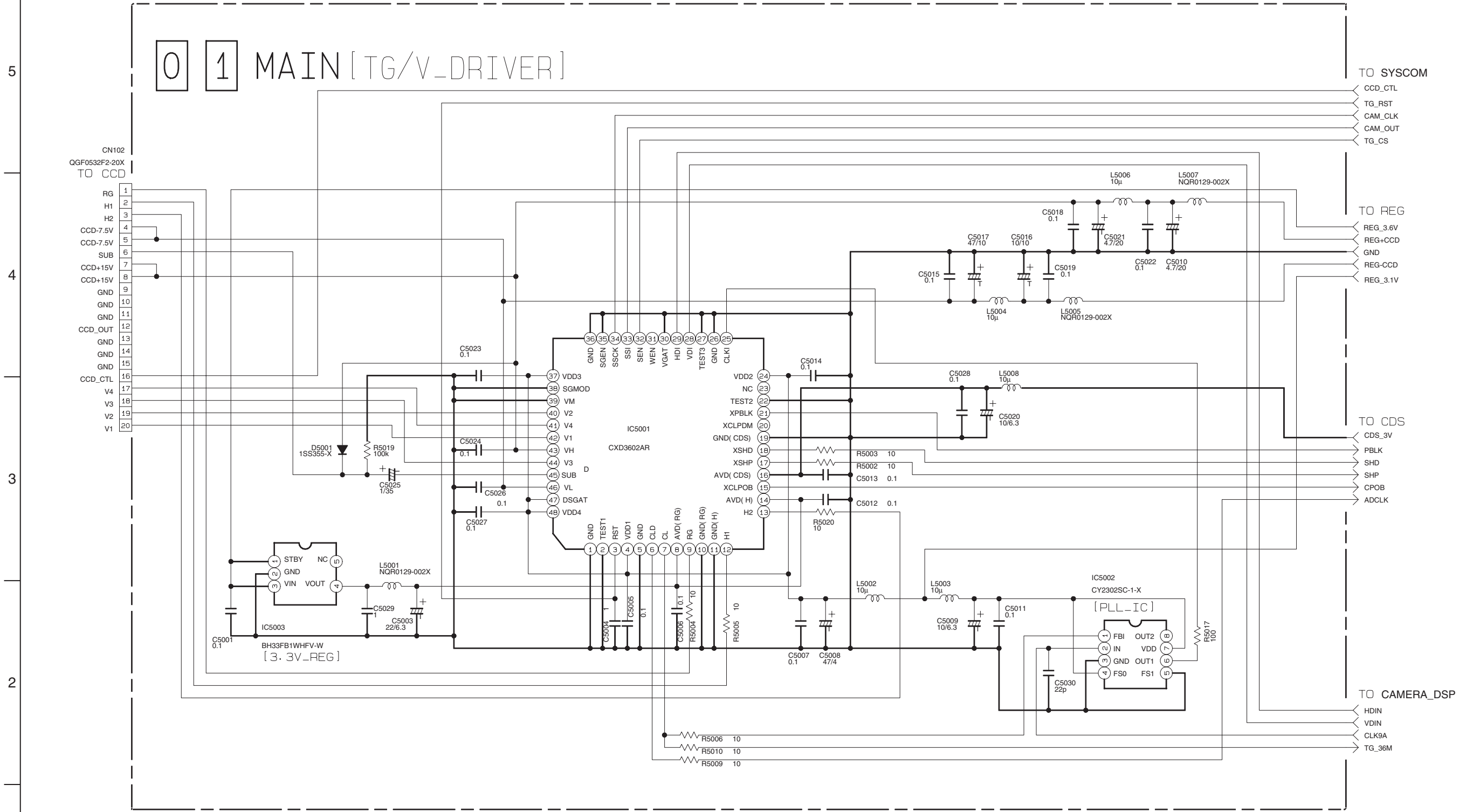
NOTES-UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN µF.  
 ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

A B C D 2-25 2-26 E F G

TO OP BLOCK  
CN107

28	DRIVE+ND
27	DRIVE-ND
26	Hgout+ND
25	Hgout-ND
24	Hgout+ND
23	Hgout-ND
22	Z_PTR_AD
21	Z_VCC
20	Z_LED
19	DRIVE+IS
18	DRIVE-IS
17	Hgout+IS
16	Hgout-IS
15	Hgout+IS
14	Hgout-IS
13	GND
12	OP_THRMO
11	F_PTR_AD
10	F_VCC
9	F_LED
8	FOCUS02
7	FOCUS03
6	FOCUS04
5	FOCUS01
4	ZOOM04
3	ZOOM03
2	ZOOM02
1	ZOOM01

■ MAIN(TG/V\_DRIVER) SCHEMATIC DIAGRAM



0 1 MAIN [TG/V\_DRIVER]

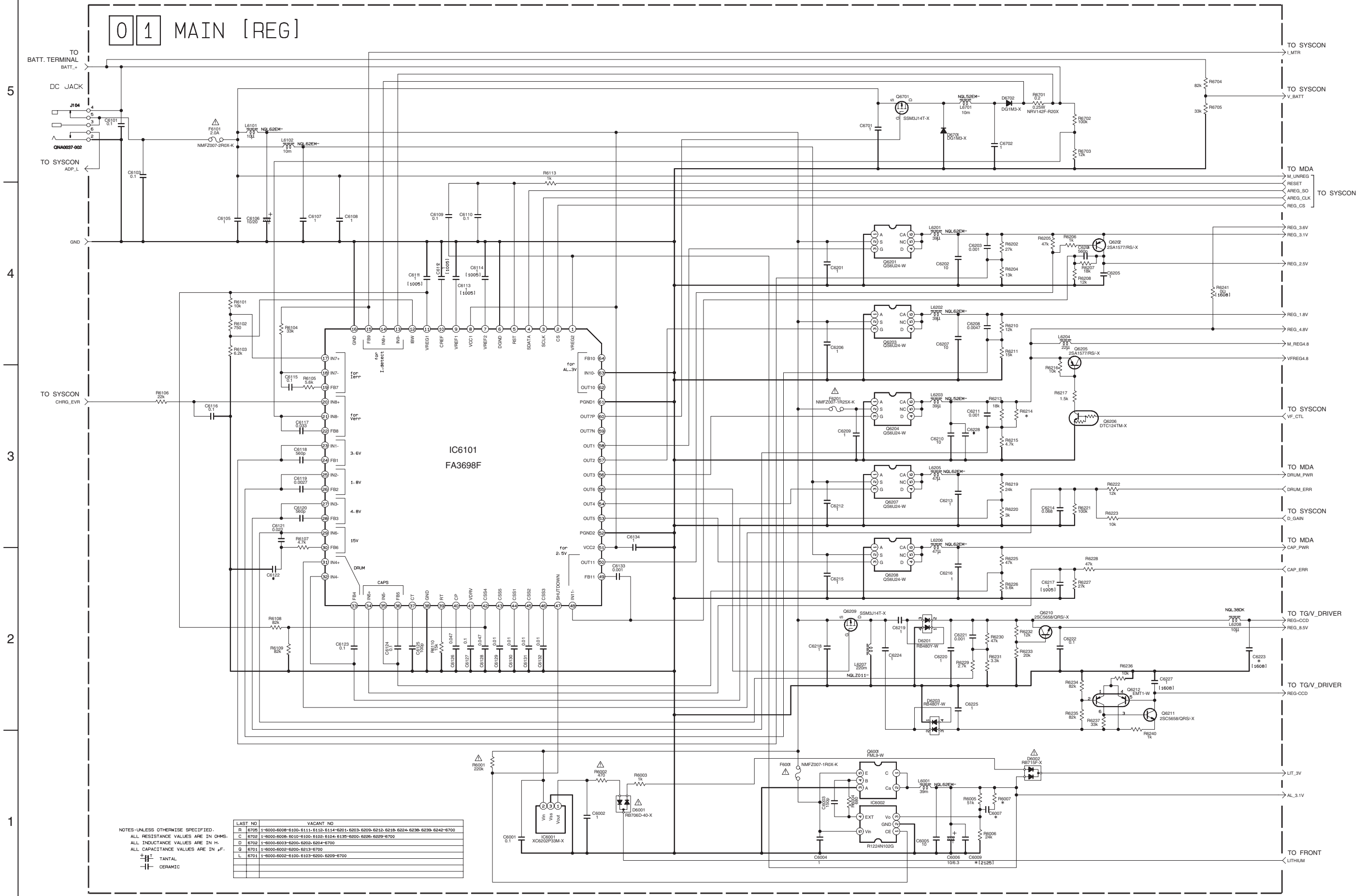
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

LAST NO	VACANT NO
R 5020	5007 5008 5011 5012 5013 5014 5015 5016 5001 5018
C 5030	5002
D 5001	
IC 5003	
L 5008	

# MAIN(REG) SCHEMATIC DIAGRAM

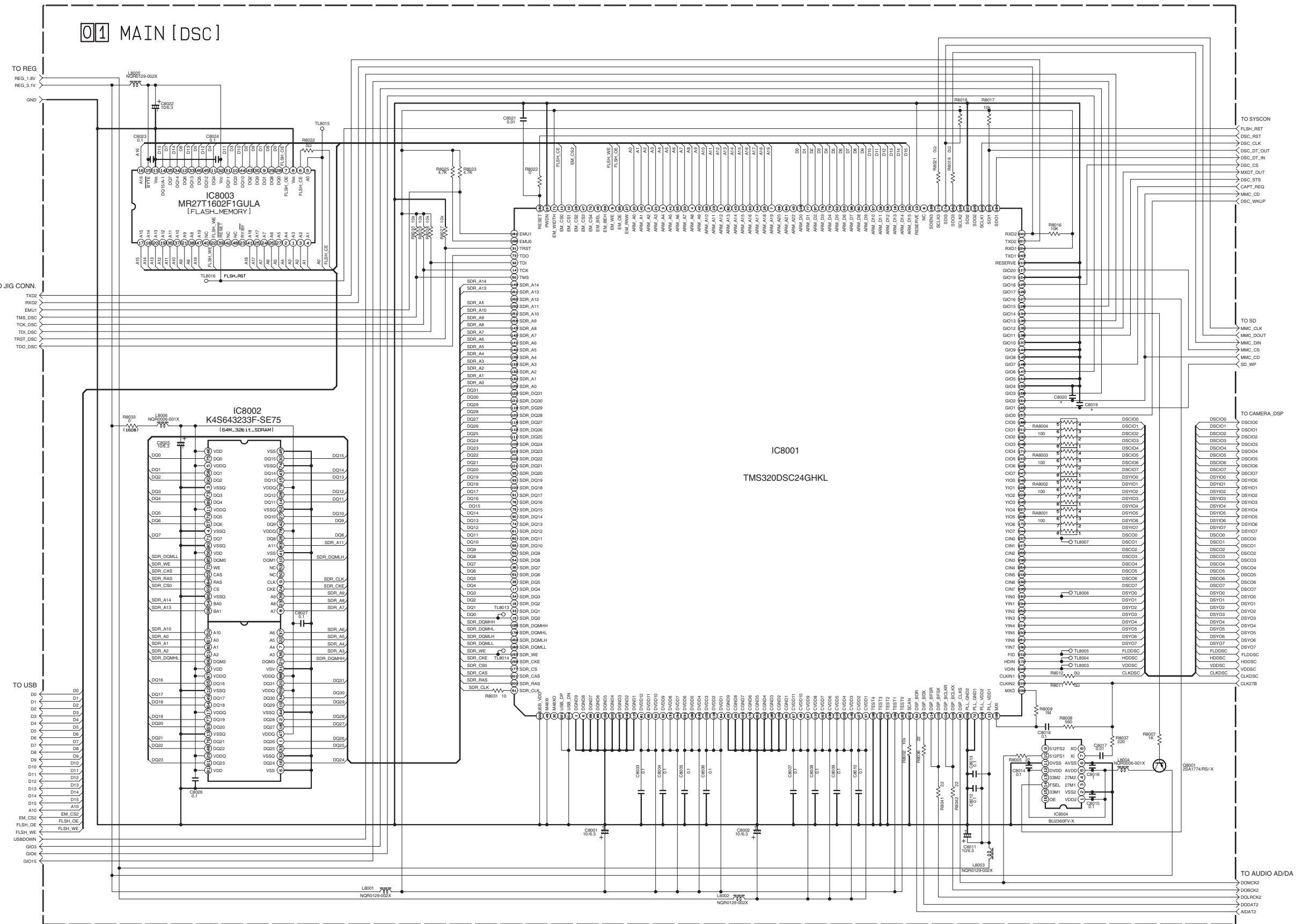
01 MAIN [REG]



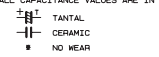
NOTE : The parts with marked (\*) is not used.

■ MAIN(DSC) SCHEMATIC DIAGRAM

01 MAIN [DSC]



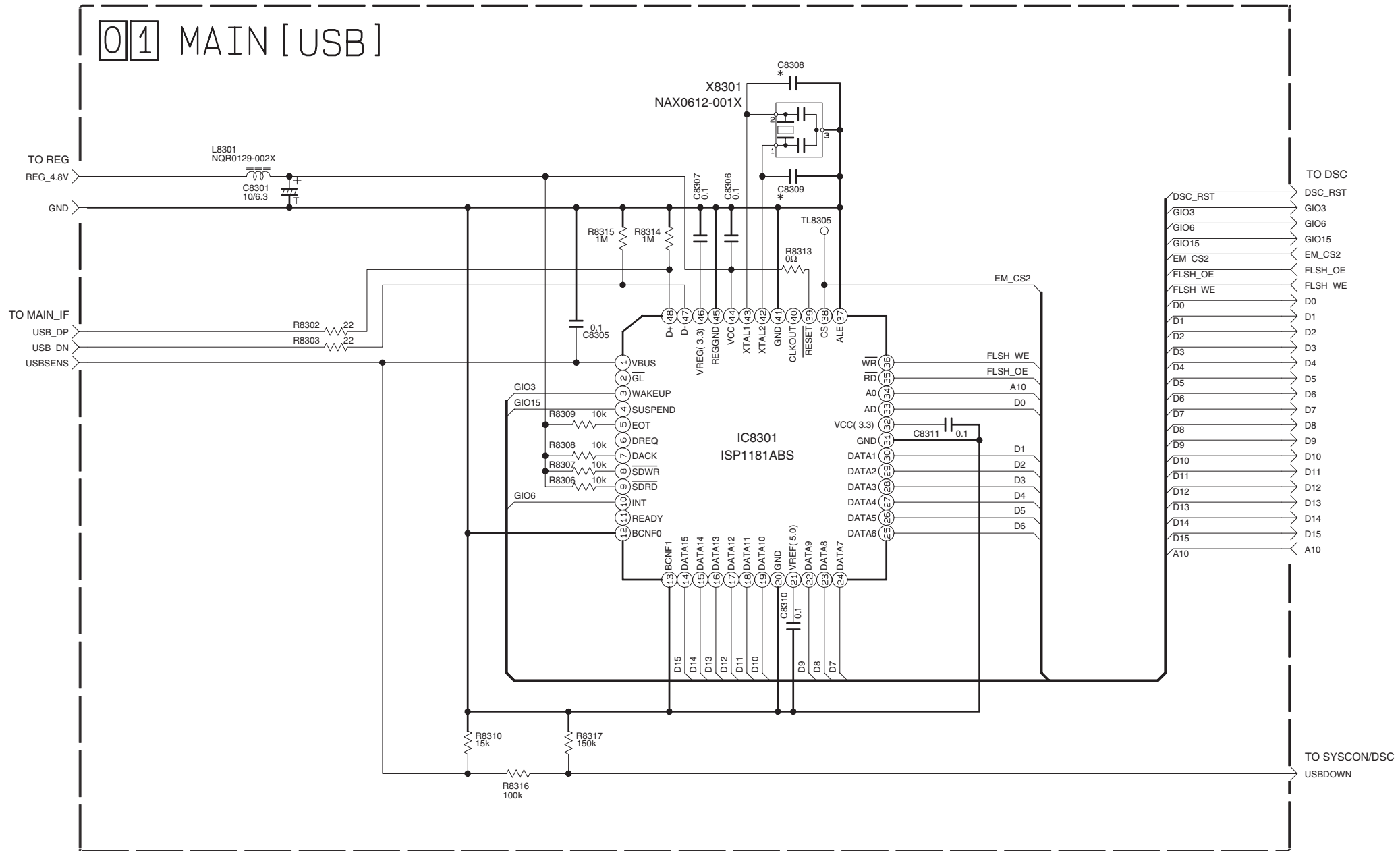
NOTES: UNLESS OTHERWISE SPECIFIED:  
 ALL RESISTANCE VALUES ARE IN OHM.  
 ALL INDUCTANCE VALUES ARE IN nH.  
 ALL CAPACITANCE VALUES ARE IN nF.



LAST NO.	VACANT NO.
R	R8001-R8003-4-R8006-R8010-R8013-15-R8020-R8024-R8026-R8034-35-R8038-40
C	C8007
G	G8001
L	L8008
RA	RA8004
IC	IC8004

NOTE : The parts with marked (\*) is not used.

■ MAIN(USB) SCHEMATIC DIAGRAM



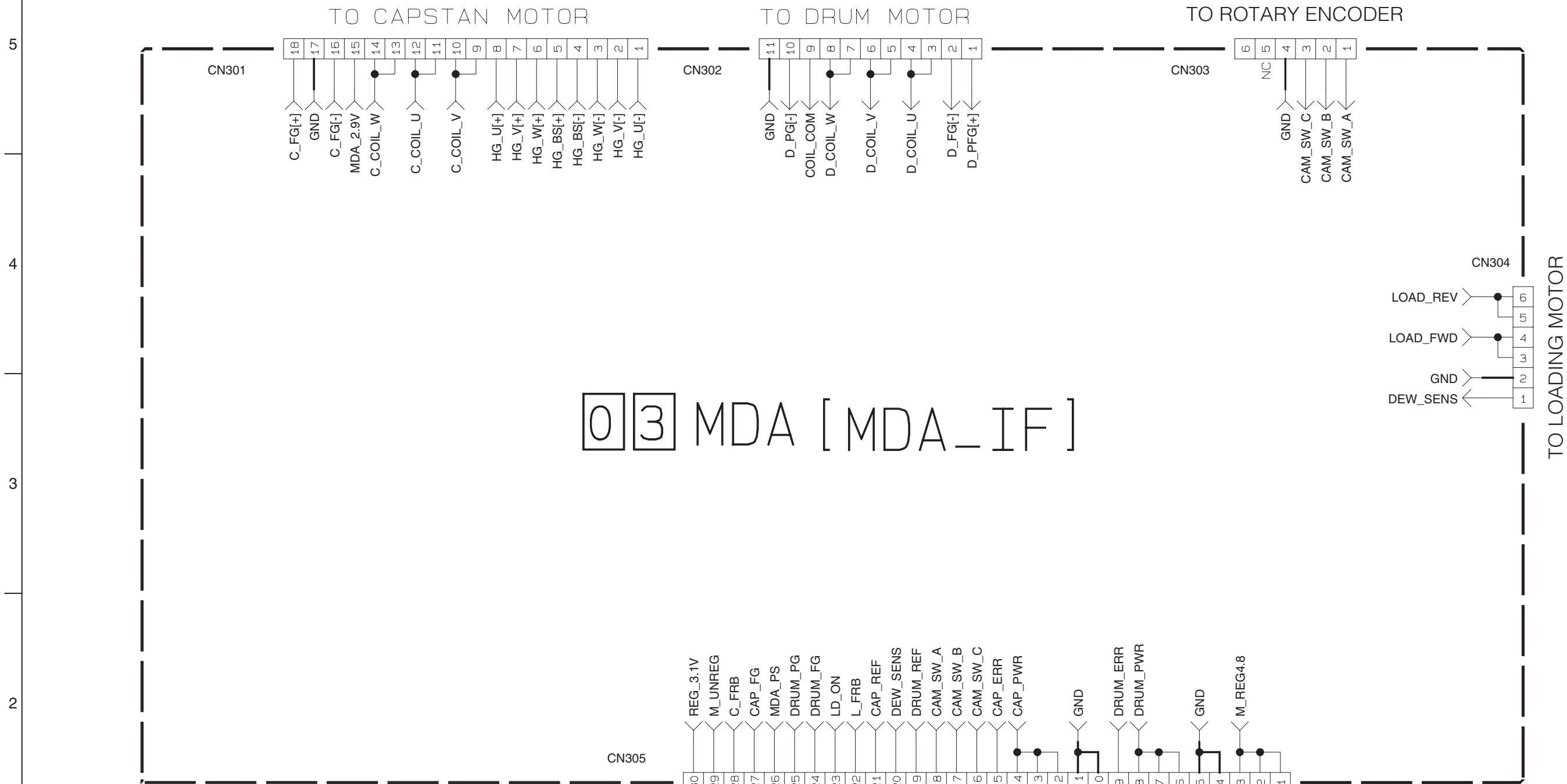
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN  $\mu$ F.



TANTAL  
 CERAMIC  
 \* NO WEAR

LAST NO	VACANT NO
R 8017	8301-8304-5, 8311-12
C 8311	8302-4
L 8301	
X 8301	
IC 8301	

NOTE : The parts with marked (\*) is not used.

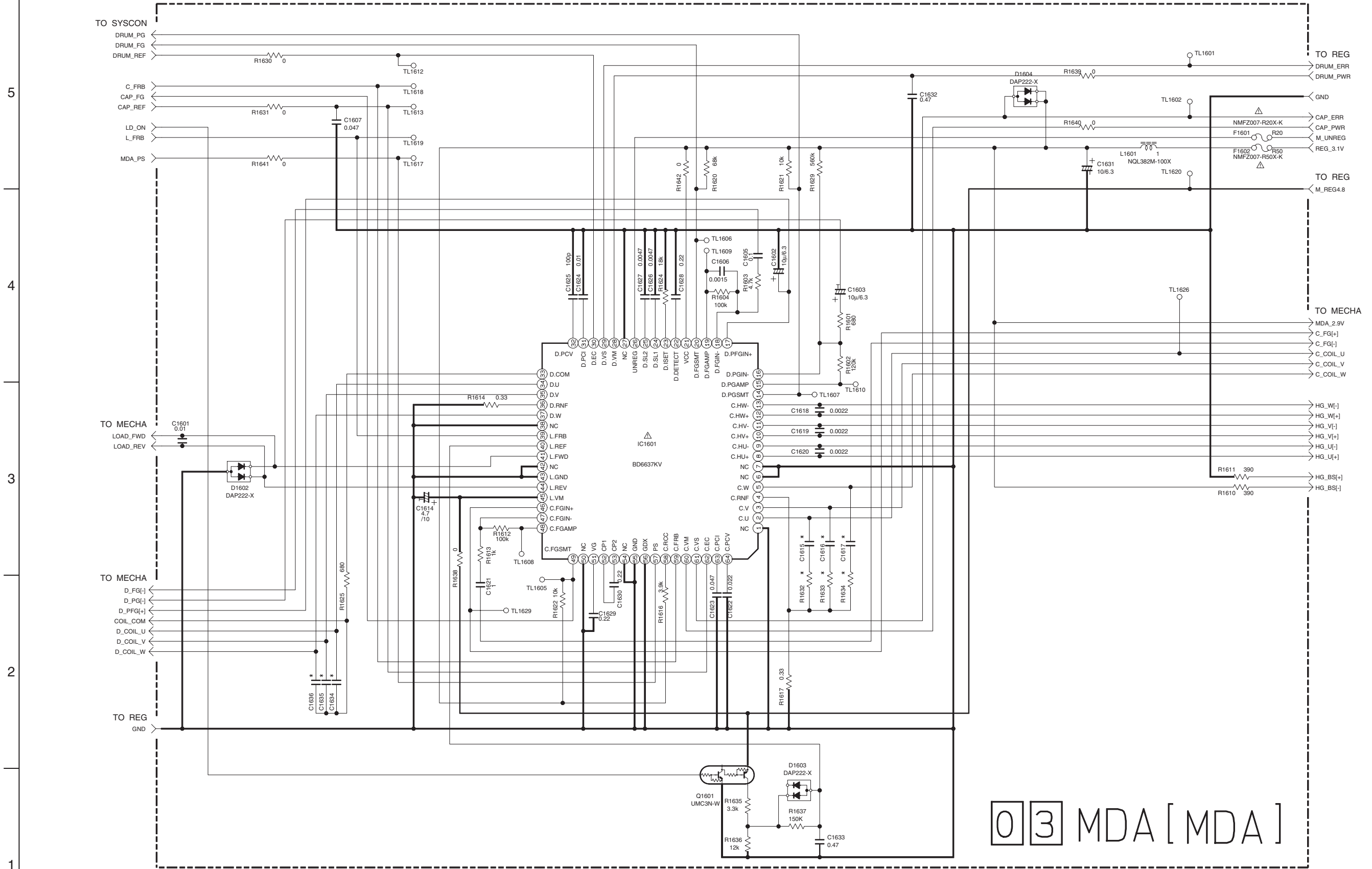
■ MDA(MDA\_IF) SCHEMATIC DIAGRAM



NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN  $\mu$ F.  
 CERAMIC  TANTALUM  
 ※ NO WEAR



# MDA(MDA) SCHEMATIC DIAGRAM



03 MDA [MDA]

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

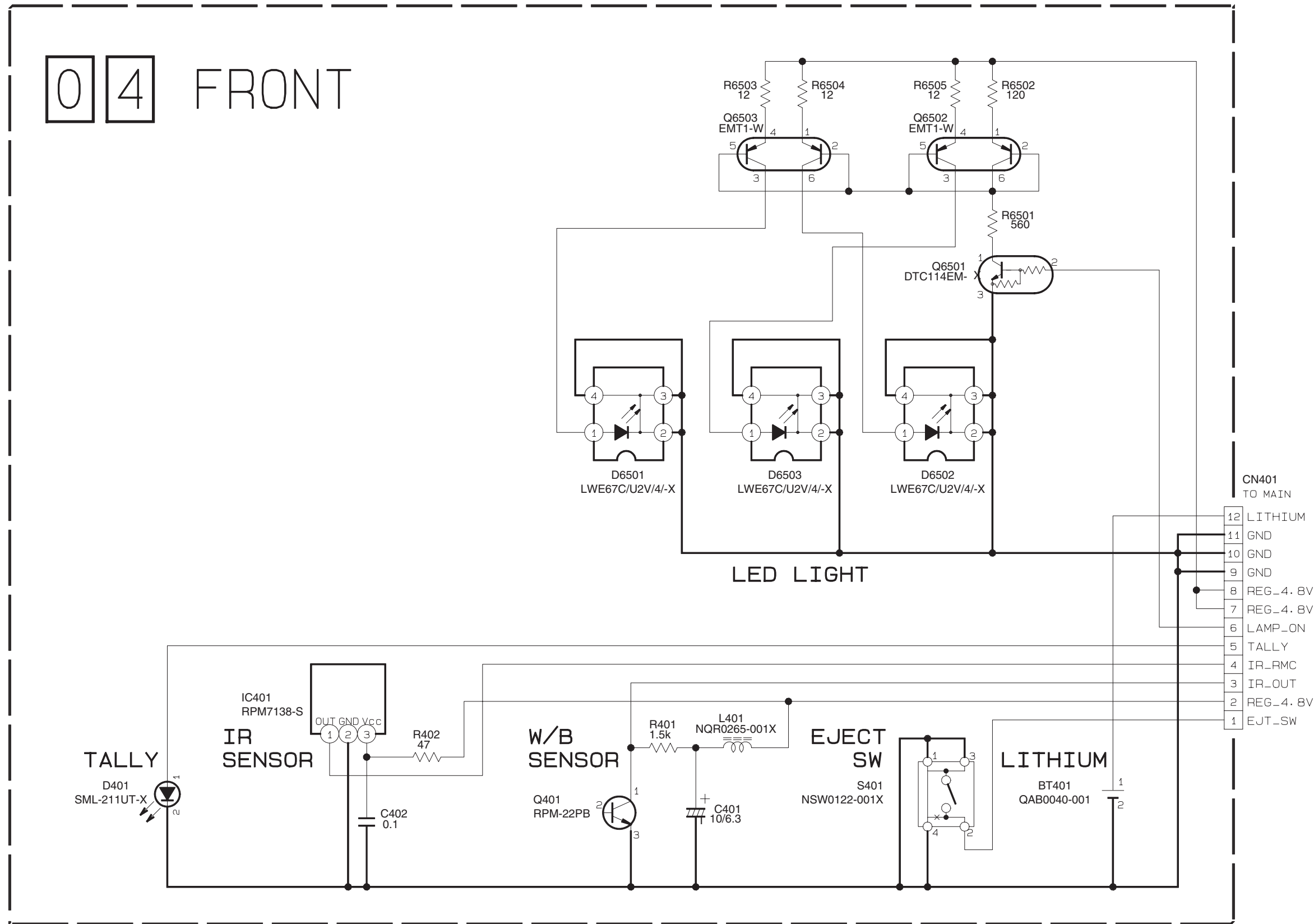
- ⊕ ELECTROLYTIC
- ⊖ CERAMIC
- MY MYLER
- NON POLAR

LAST NO	VACANT NO
R 1642	1605-1609-1615-1618-1619-1623-1626-1628
C 1636	1604-1608-1613
D 1604	1601
Q 1601	
L 1601	
IC 1601	
F 1602	



NOTE : The parts with marked (\*) is not used.

FRONT SCHEMATIC DIAGRAM

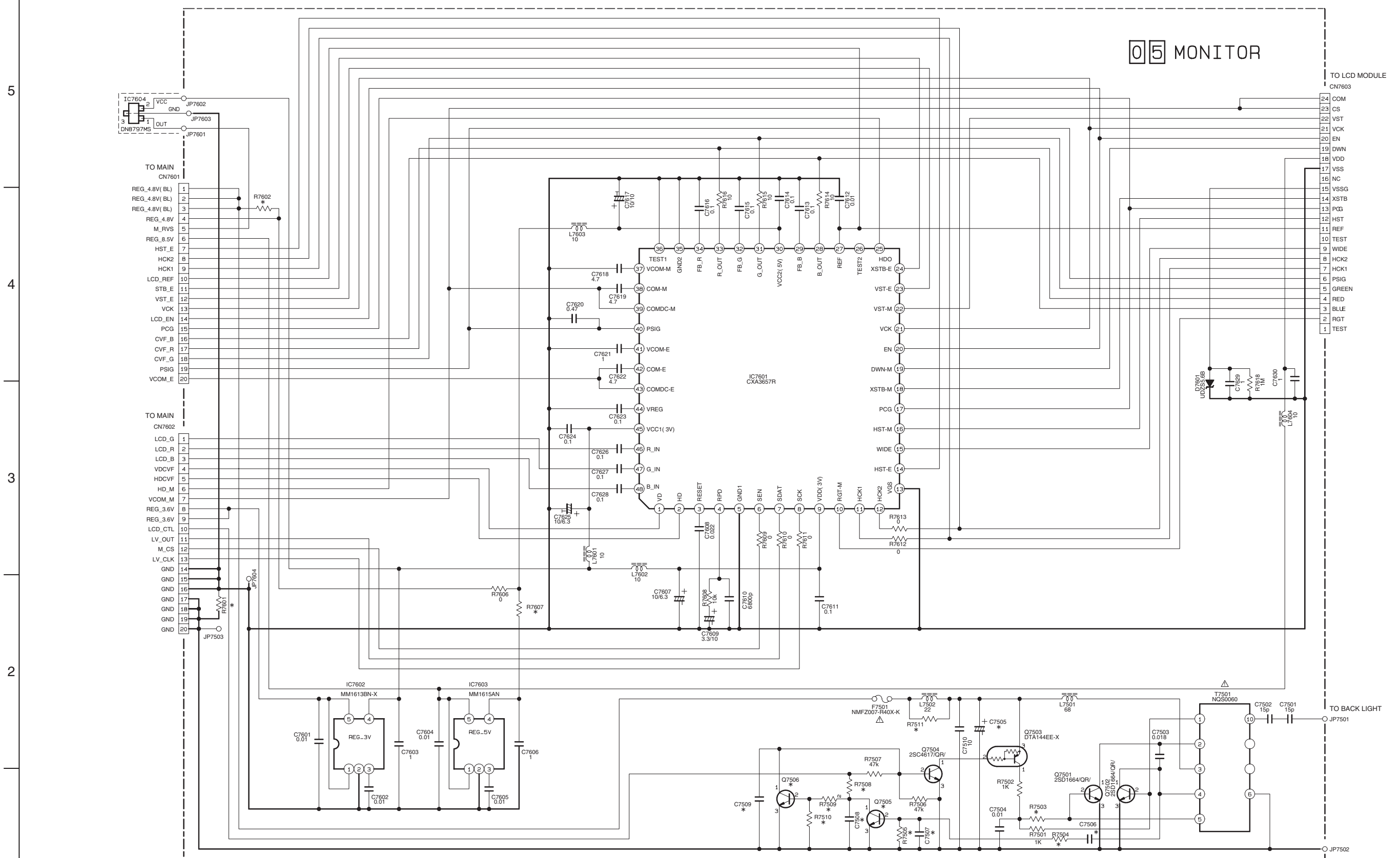
04 FRONT



- CN401 TO MAIN
- 12 LITHIUM
  - 11 GND
  - 10 GND
  - 9 GND
  - 8 REG\_4.8V
  - 7 REG\_4.8V
  - 6 LAMP\_ON
  - 5 TALLY
  - 4 IR\_RMC
  - 3 IR\_OUT
  - 2 REG\_4.8V
  - 1 EJT\_SW

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 CERAMIC  TANTAL  
 ※ NO WEAR

# MONITOR SCHEMATIC DIAGRAM



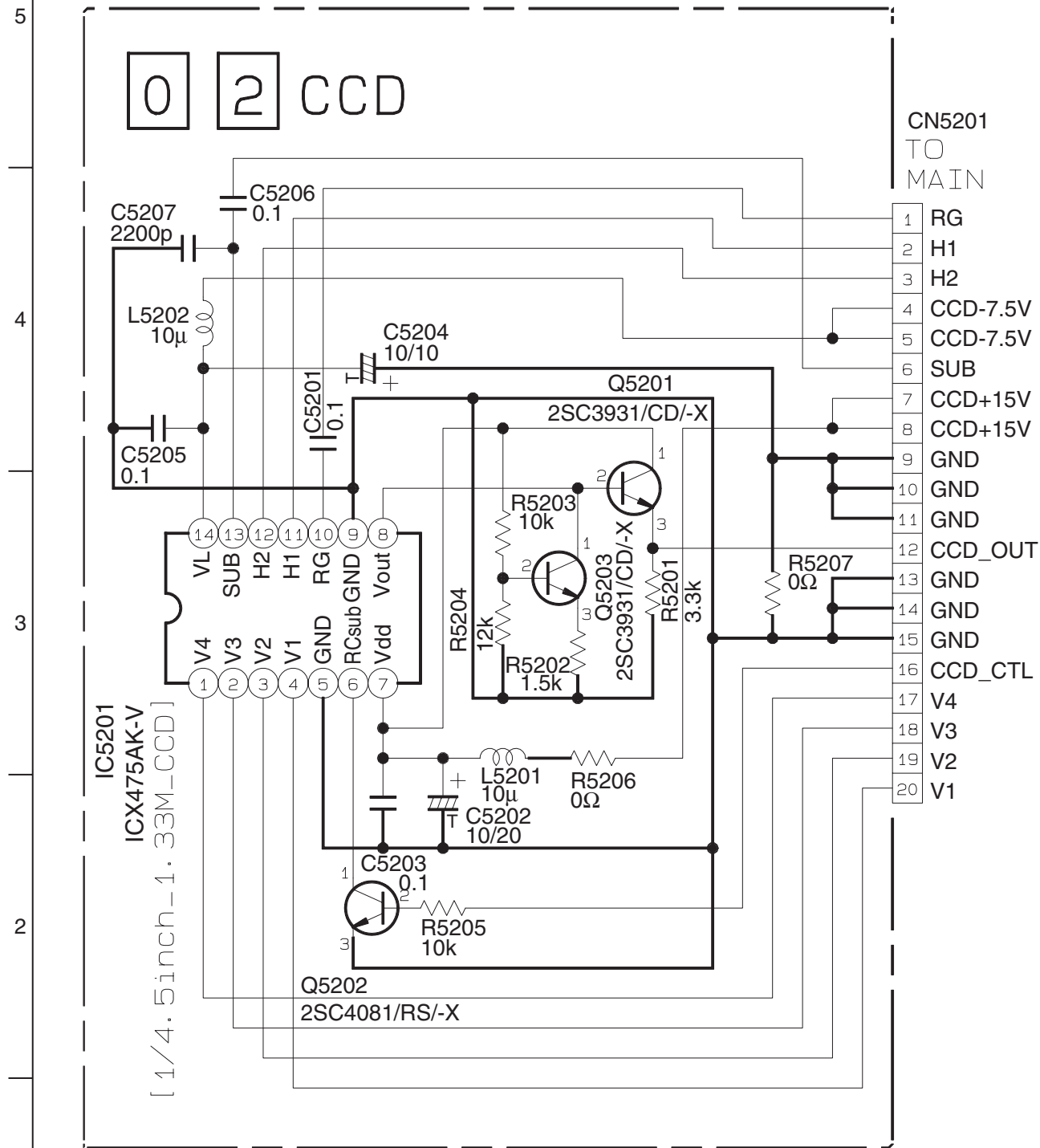
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 TANTAL  
 CERAMIC

LAST NO	VACANT NO
R 7618	R7603 R7604 R7605 R7617
C 7630	
D 7601	
Q 7601	
L 7604	

NOTE : The parts with marked (\*) is not used.

## CCD SCHEMATIC DIAGRAM

- NOTES :
- For the destination of each signal and further line connections that are cut off from this diagram, refer to "BOARD INTERCONNECTIONS".
  - When ordering parts, be sure to order according to the Part Number indicated in the Parts List.
  - IC5501 is incorporated in the CCD base assembly.  
When IC5201 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.



SYMBOL	LAST_No.
R	5207
C	5207
Q	5203
L	5202
IC	5201
CN	5201

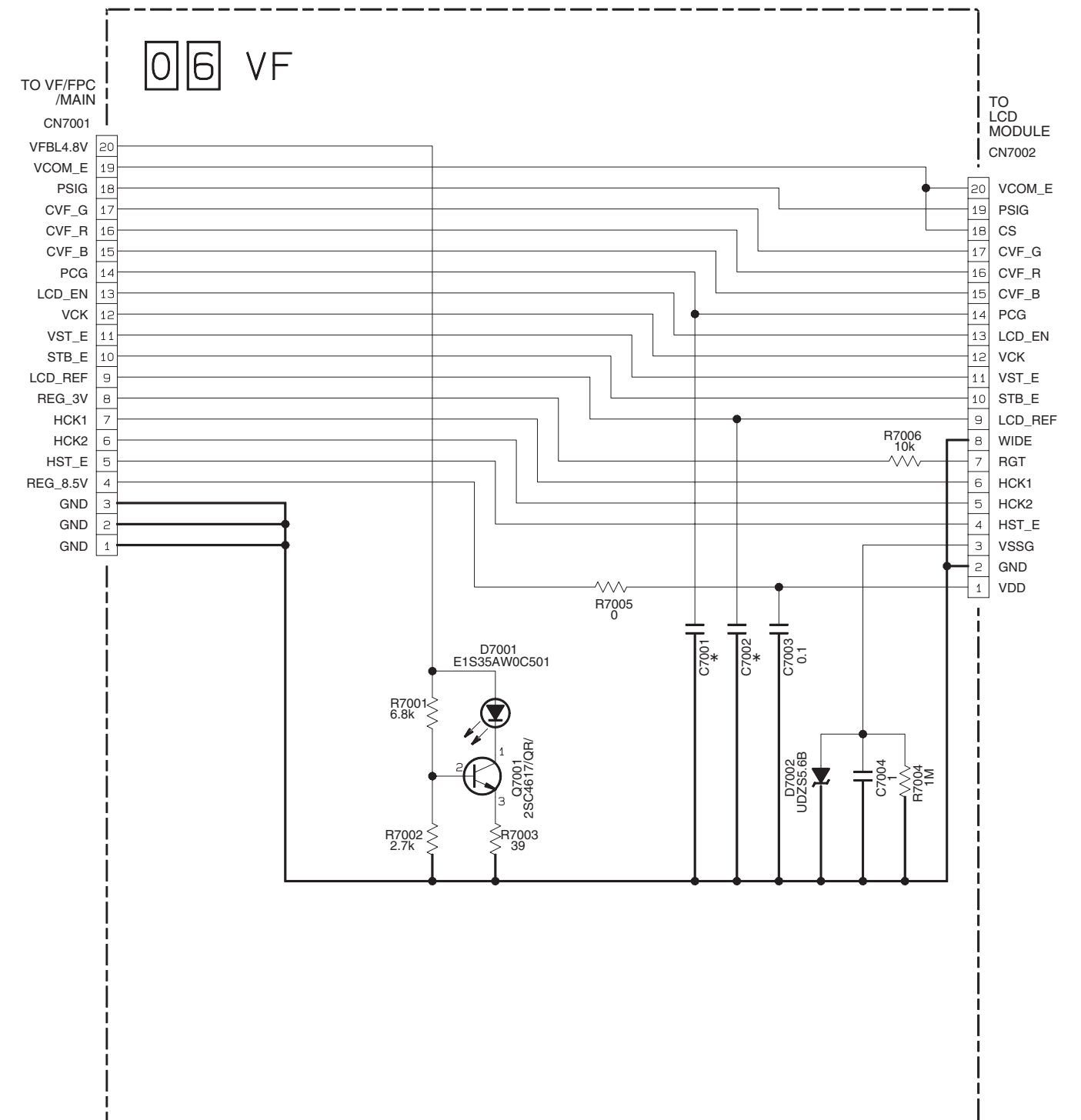
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

NOTE : The parts with marked (\*) is not used.

y40129001a\_rev0.1

## VF SCHEMATIC DIAGRAM



NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

- TANTAL
- CERAMIC

NOTE : The parts with marked (\*) is not used.

y30272001a\_rev0.1

SD SCHEMATIC DIAGRAM

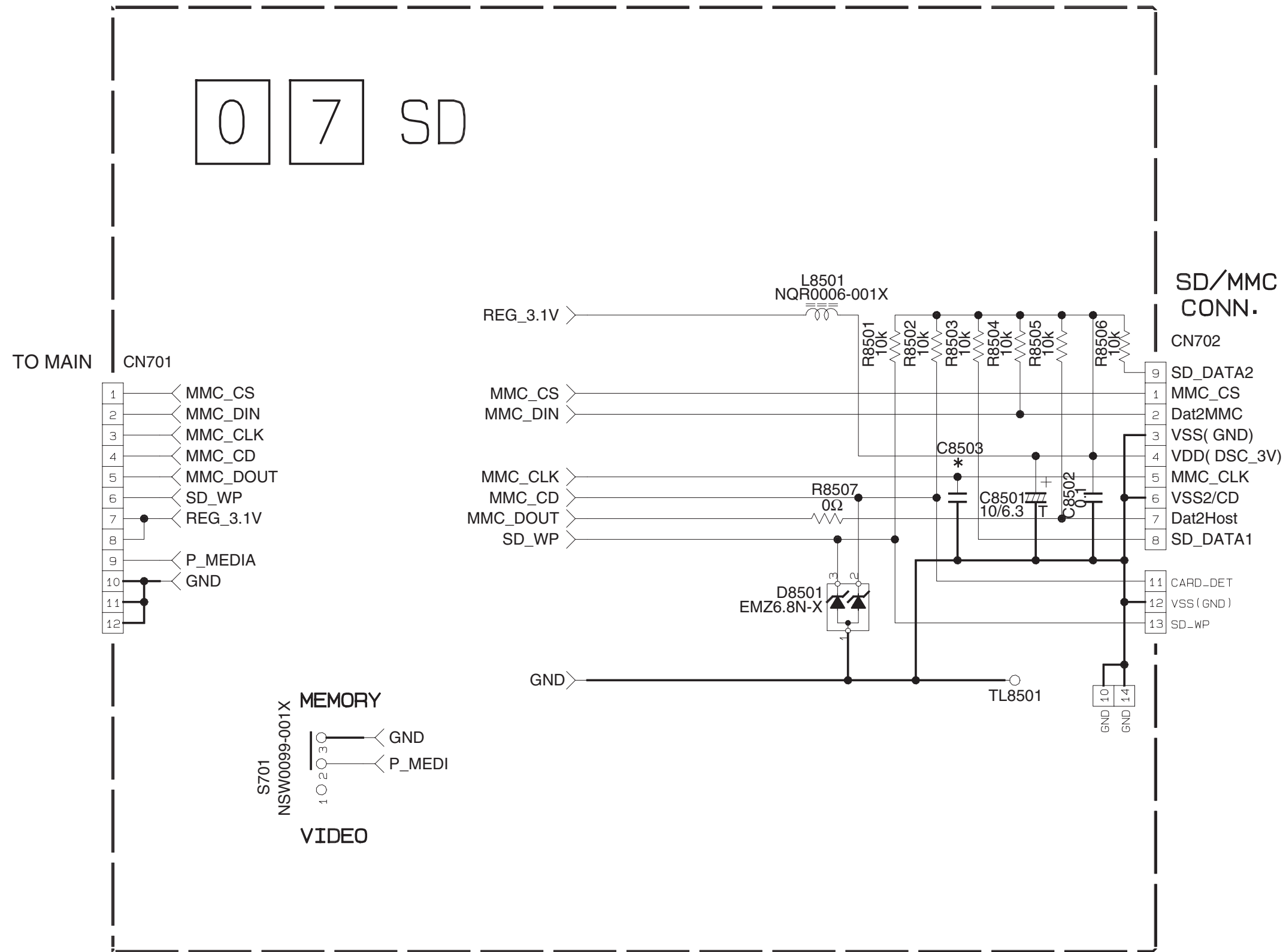
5

4

3

2

1



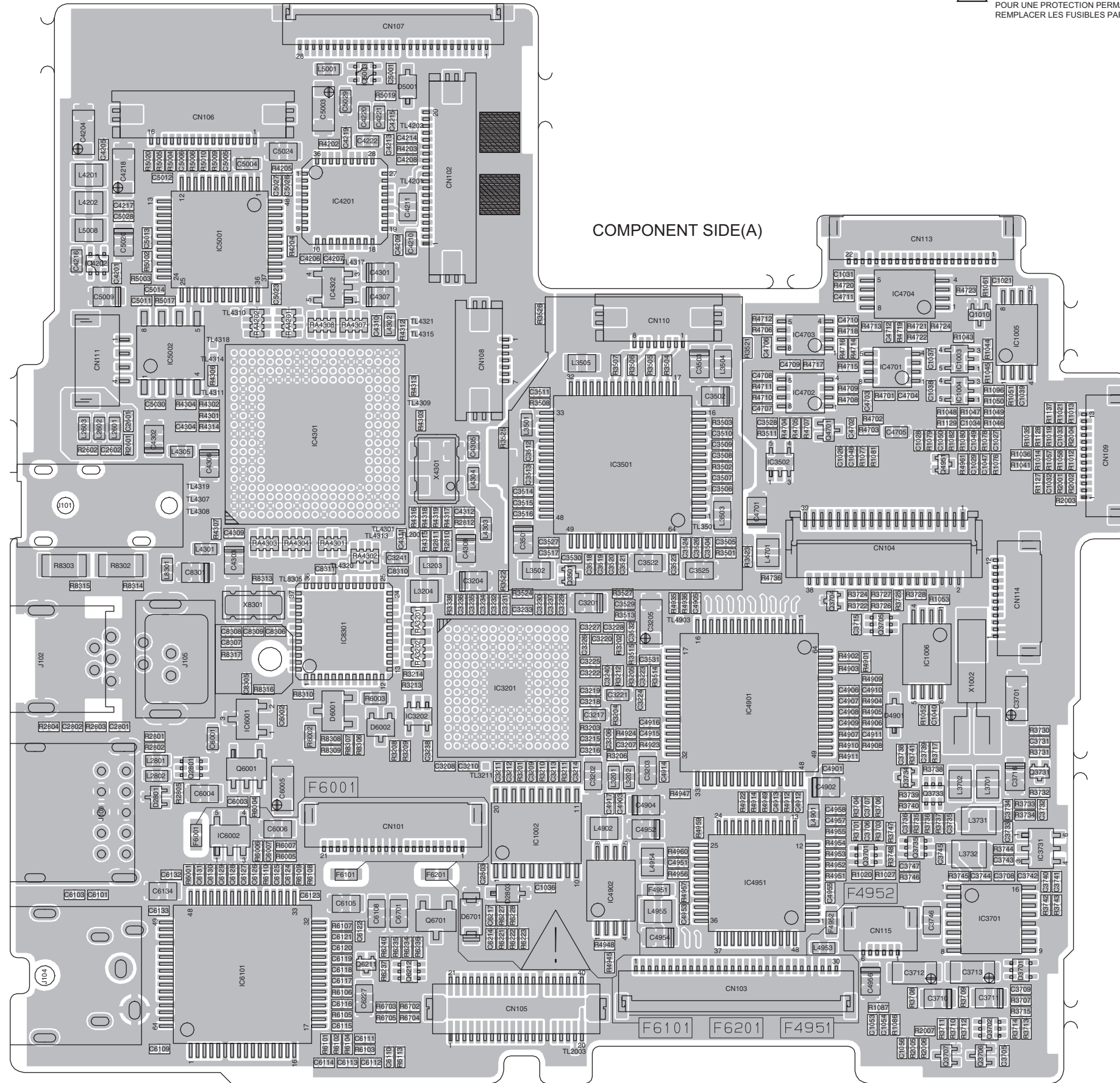
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN µF.  
 CERAMIC TANTAL  
 ※ NO WEAR

NOTE : The parts with marked (\*) is not used.

■ MAIN CIRCUIT BOARD

<01> MAIN  
YB10472-01-01

CAUTION :  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).  
ATTENTION :  
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE,  
REMPLEZ LES FUSIBLES PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.



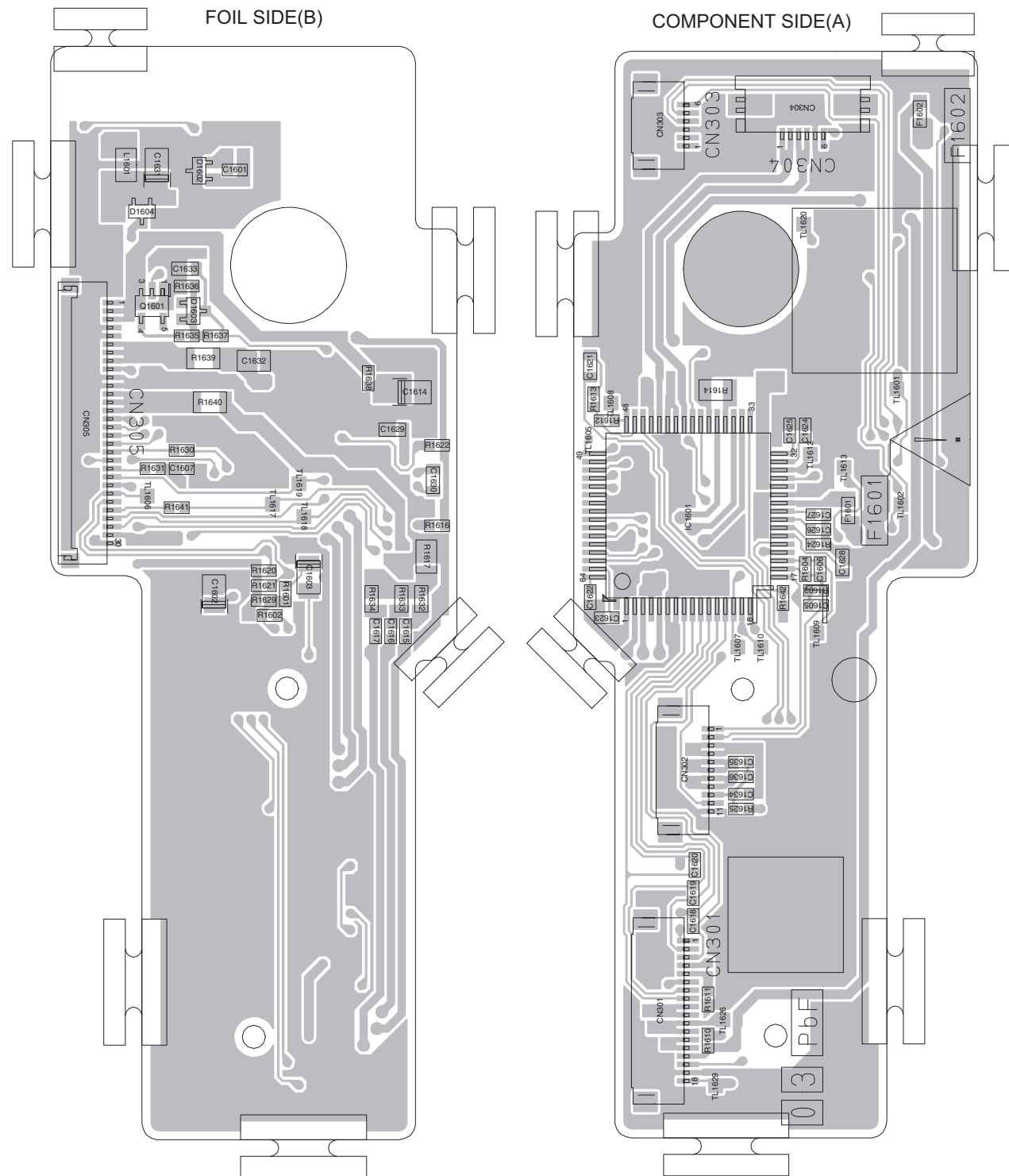


■ MDA CIRCUIT BOARD

<03> MDA  
YB10459-01-01

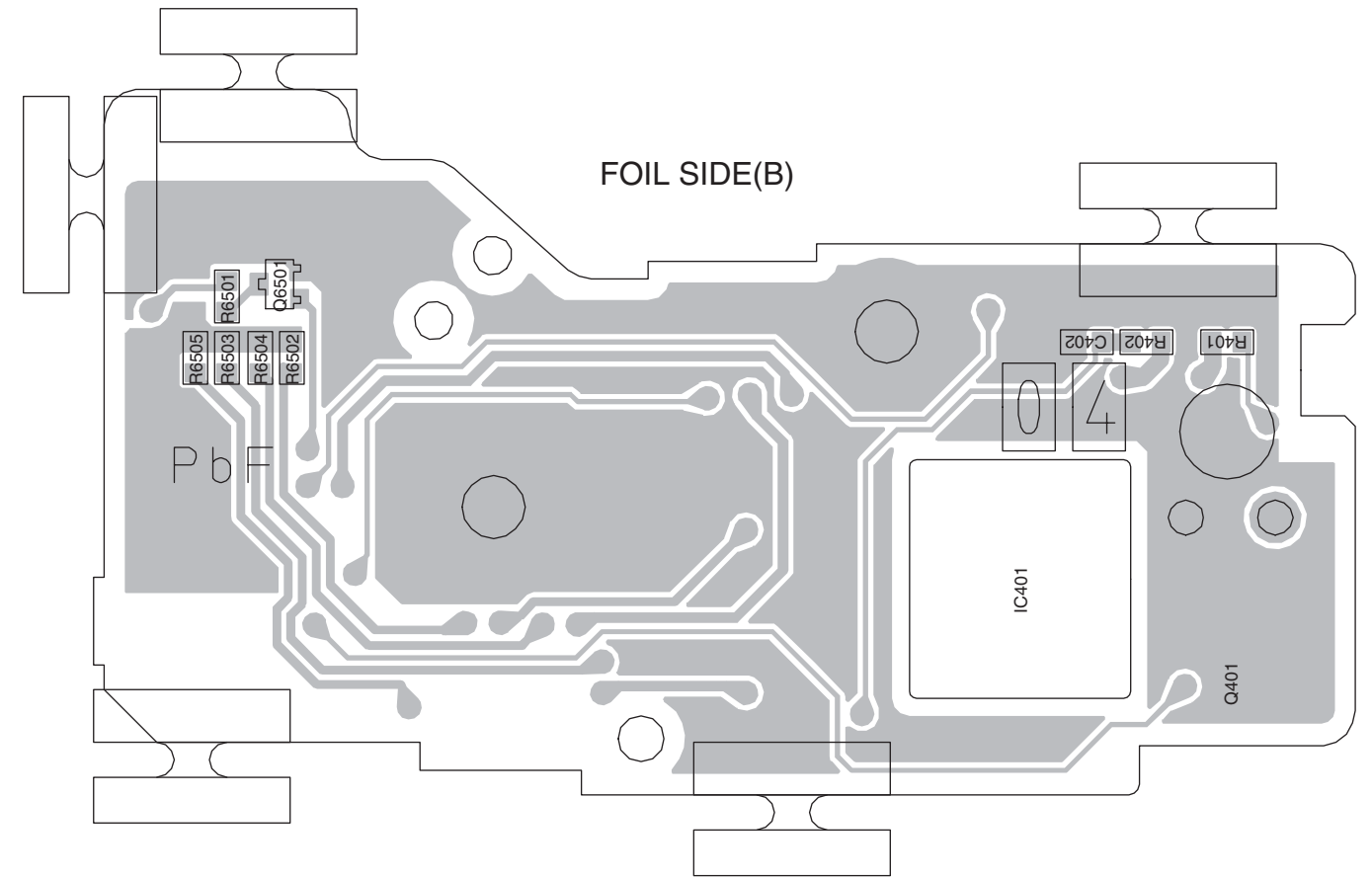


CAUTION :  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).  
ATTENTION :  
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDIE,  
REMPLEZ LES FUSIBLES PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.

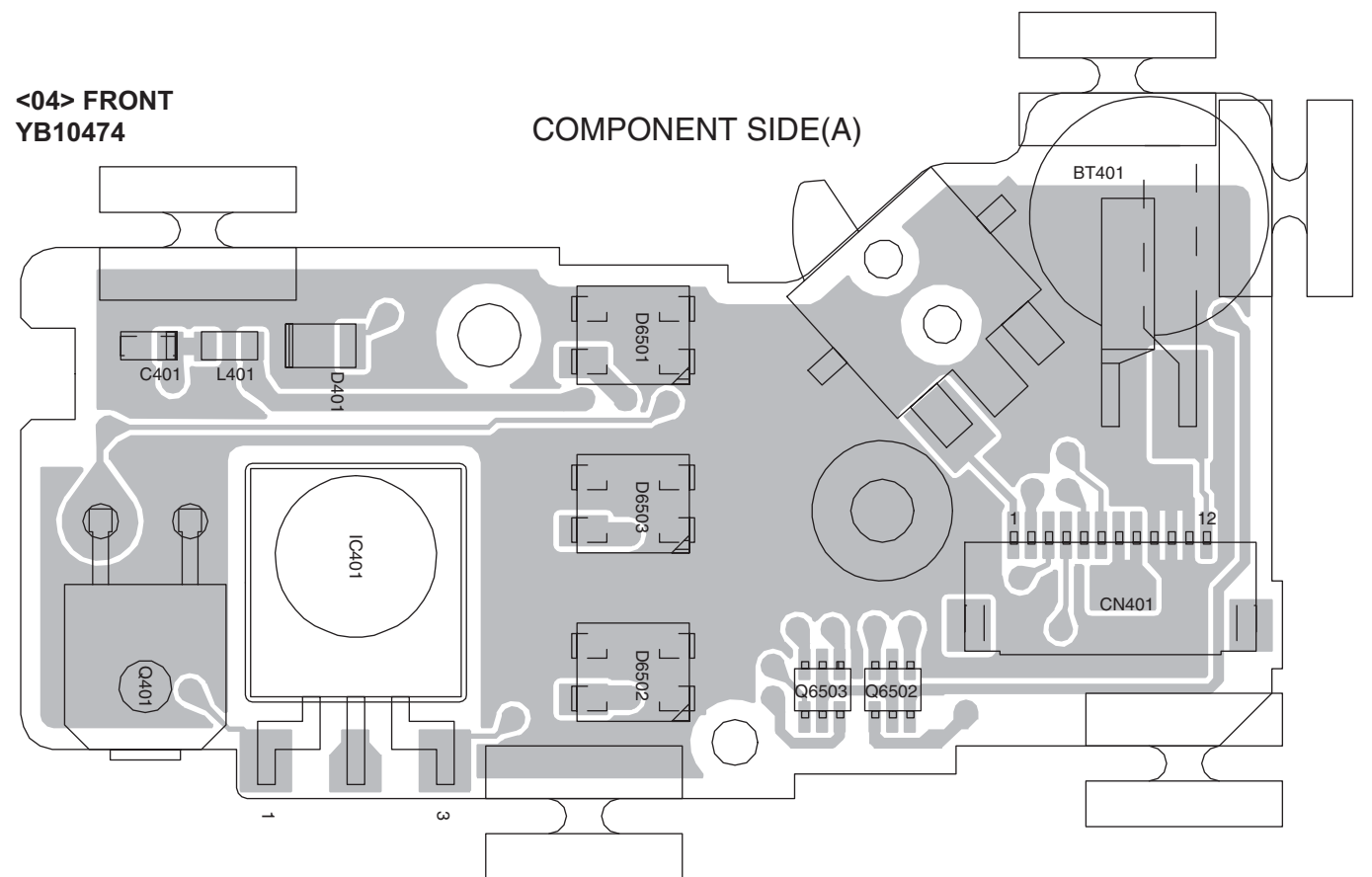


■ FRONT CIRCUIT BOARD

<04> FRONT  
YB10474



<04> FRONT  
YB10474



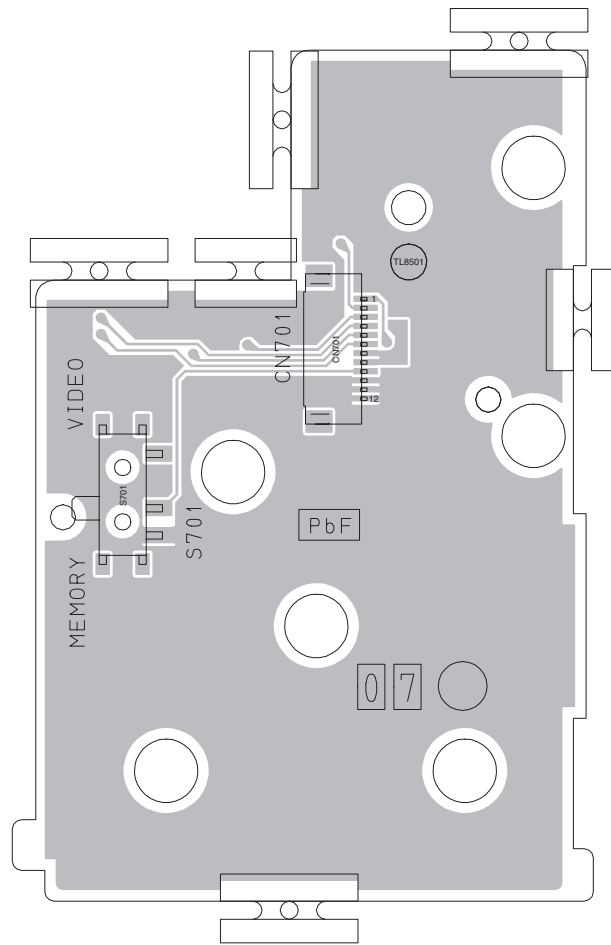




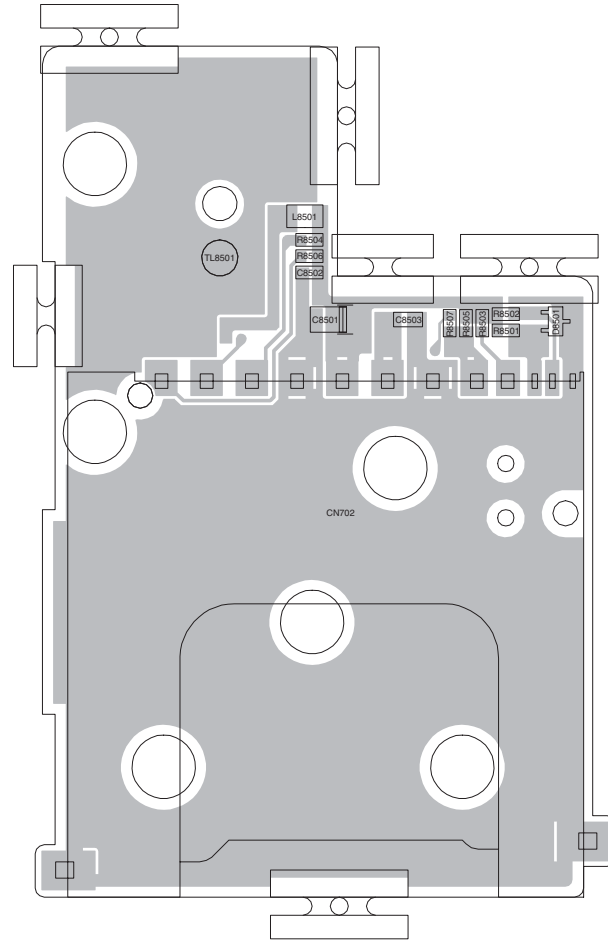
■ SD CIRCUIT BOARD

<07> SD  
YB10463

FOIL SIDE(B)

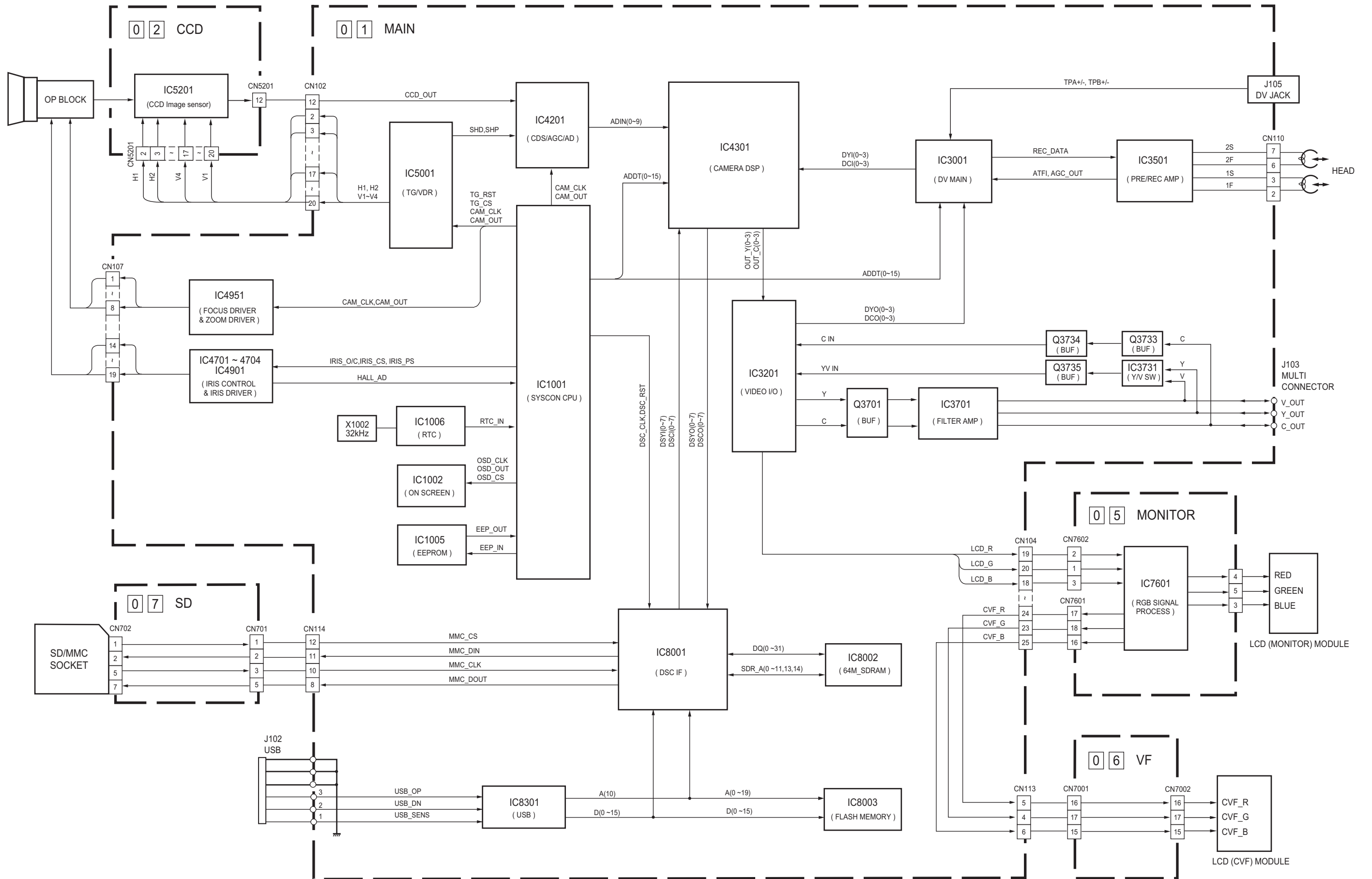


COMPONENT SIDE(A)





VIDEO SYSTEM BLOCK DIAGRAM



# VOLTAGE CHARTS

## <MAIN IF>

MODE PIN NO.	REC	PLAY
Q2801		
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0

## <SYSCON>

MODE PIN NO.	REC	PLAY
IC1001	-	-
IC1002		
1	2.8	2.8
2	2.5	2.5
3	0.3	0.3
4	3.0	3.1
5	3.0	3.0
6	3.0	3.0
7	1.4	1.4
8	1.4	1.4
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0
19	2.9	3.0
20	2.8	2.8
IC1003		
1	0.0	0.0
2	3.1	3.0
3	0.0	0.0
4	3.1	3.1
5	3.0	3.1
IC1004		
1	1.3	1.3
2	0.0	0.0
3	1.5	1.4
4	0.0	0.0
5	3.1	3.1
IC1005		
1	3.0	3.1
2	0.0	0.0
3	3.1	3.1
4	0.0	0.0
5	0.0	0.0
6	3.1	3.1
7	3.1	3.1
8	3.1	3.1
IC1006		
1	0.0	0.0
2	3.0	3.0
3	0.0	0.0
4	0.0	0.0
5	3.0	3.0
6	0.4	0.4
7	0.2	0.2
8	3.1	3.2
IC1007		
1	3.1	3.1
2	2.5	2.5
3	0.0	0.0
4	0.0	0.0
IC1009		
1	3.1	3.1
2	3.1	3.1
3	0.0	0.0
4	3.1	3.1
5	3.1	3.0
IC1010		
1	3.1	3.1
2	0.0	0.0
3	3.1	3.1
4	2.4	3.0
5	3.1	2.4
Q1001		
E	3.0	3.0
C	3.0	3.0
B	3.1	3.1
Q1002		
1	0.0	0.0
2	3.0	3.1
3	3.0	3.0
4	2.8	2.8
5	0.0	0.0
Q1003		
1	0.0	0.0
2	0.0	0.0
3	3.0	3.1
4	0.0	0.0
5	3.0	3.0
Q1004		
1	0.0	0.0
2	3.0	3.1
3	3.0	3.0
4	3.0	3.0
5	0.0	0.0
Q1005		
E	0.0	0.0
C	0.0	0.0
B	0.0	0.0
Q1007		

MODE PIN NO.	REC	PLAY
E	0.0	0.0
C	0.6	2.9
B	0.5	0.6
Q1008		
E	0.0	0.0
C	0.0	0.0
B	3.0	3.1
Q1009		
S	0.0	0.0
D	3.0	3.1
G	3.0	3.0
Q1010		
E	0.0	0.0
C	3.0	3.0
B	0.0	0.0
Q1011		
1	0.0	0.0
2	3.1	0.0
3	3.0	3.0
4	2.9	0.0
5	0.0	3.0
Q1012		
E	0.0	0.0
C	0.0	0.0
B	0.0	0.0

## <REEL>

MODE PIN NO.	REC	PLAY
IC1701		
1	3.6	-
2	1.4	1.4
3	1.4	1.3
4	0.0	0.0
5	1.5	1.4
6	1.2	1.4
7	-	-
8	4.8	4.8
IC1702		
1	-	-
2	1.4	1.4
3	-	-
4	0.0	0.0
5	-	-
6	1.5	1.4
7	0.0	-
8	4.8	4.8

## <AUDIO AD/DA>

MODE PIN NO.	REC	PLAY
IC2101		
1	0.0	0.0
2	0.0	1.2
3	0.0	0.0
4	0.0	0.0
5	3.0	3.0
6	3.1	3.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.7	0.7
12	0.1	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0

## <AUDIO>

MODE PIN NO.	REC	PLAY
IC2201		
1	0.0	1.5
2	0.0	0.0
3	0.0	1.5
4	3.0	3.1
5	3.0	3.1
6	0.0	0.0
7	1.5	1.5
8	1.5	1.4
9	1.5	1.5
10	0.0	0.0
11	0.0	3.0
12	3.0	0.0
13	1.6	1.3
14	1.6	1.5
15	3.0	3.0
16	0.0	0.0
17	1.5	1.5
18	0.0	0.5
19	1.5	1.5
20	0.0	0.0
21	1.5	0.0
22	0.0	2.4
23	0.0	0.0
24	0.0	0.0
25	0.1	1.5
26	0.0	0.0
27	0.0	0.0
28	0.1	4.8
29	0.0	0.0
30	2.4	2.3
31	0.0	0.0
32	0.0	3.0
33	1.5	0.0
34	0.0	1.5
35	0.0	1.4
36	1.5	1.5
37	1.6	1.4
38	1.5	1.5
39	1.5	0.0
40	1.5	0.1
41	0.0	0.0
42	4.1	4.5
43	2.6	0.0
44	4.0	4.4
45	1.5	0.0
46	1.5	0.0
47	1.5	1.4
48	1.5	1.4
Q2201		
E	0.0	0.0
C	1.5	1.4
B	0.0	0.0
Q2401		
E	4.1	4.6
C	4.8	4.8
B	4.7	4.8
Q2403		
E	3.1	3.0
C	4.6	4.7
B	3.7	3.6
Q2601		
E	2.7	0.0
C	2.7	0.0
B	2.7	0.0

## <DV MAIN>

MODE PIN NO.	REC	PLAY
IC3001	-	-
IC3006		
1	0.0	0.2
2	0.0	0.4
3	0.0	0.0
4	2.1	2.1
5	0.9	0.9
6	0.0	0.0
7	3.0	3.0
8	1.6	1.6
Q3001		
E	1.8	1.7
C	2.8	2.9
B	2.2	2.4
Q3003		
E	1.1	1.1
C	3.0	3.0
B	1.7	1.7

## <VIDEO I/O>

MODE PIN NO.	REC	PLAY
IC3201	-	-
IC3701		
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	4.8	4.8
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	1.6	1.5
15	4.8	4.8
16	0.0	0.0
IC3731		
1	3.1	3.1
2	1.2	1.2
3	4.8	4.8
4	1.3	1.3
5	0.0	0.0
6	1.5	1.5
Q3701		
1	0.6	0.6
2	0.0	0.0
3	0.0	0.0
4	1.3	1.3
5	0.7	0.7
6	0.0	0.0
Q3702		
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	4.7	4.8
5	4.3	4.4
6	4.4	4.4
Q3704		
E	0.7	0.7
C	0.0	0.0
B	0.1	0.1
Q3705		
1	0.7	0.7
2	0.0	0.0
3	0.0	0.0
4	0.5	0.7
5	0.1	0.0
6	0.0	0.0
Q3706		
E	0.0	0.0
C	0.0	0.0
B	0.0	0.0
Q3707		
E	0.0	0.0
C	0.0	0.0
B	0.0	0.0
Q3731		
E	0.0	0.0
C	4.8	4.8
B	0.0	0.0
Q3733		
1	1.7	1.8
2	2.4	2.4
3	2.8	2.9
4	4.7	4.8
5	4.2	4.2
6	4.2	4.2
Q3734		
E	2.2	2.3
C	4.8	4.8
B	2.8	2.9
Q3735		
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	1.4	1.4
5	0.8	0.8
6	4.8	4.8

## <PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501	-	-
IC3502		
1	1.5	0.0
2	1.5	0.0
3	0.0	0.0
4	1.1	3.0
5	3.0	3.1

## <CDS>

MODE PIN NO.	REC	PLAY
IC4201		
1	1.3	3.1
2	1.2	0.0
3	0.8	0.0
4	0.3	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	1.2	0.0
10	3.0	3.1
11	0.0	0.0
12	1.6	0.0
13	3.1	3.1
14	2.6	0.0
15	3.0	0.0
16	2.3	0.0
17	2.3	0.0
18	0.0	0.0
19	3.1	

<TG/V DRIVER>

MODE PIN NO.	REC	PLAY
IC5001		
1	0.0	0.0
2	0.0	0.0
3	3.0	3.0
4	3.0	3.1
5	0.0	0.0
6	1.5	0.0
7	1.6	1.6
8	3.2	3.3
9	0.6	0.0
10	0.0	0.0
11	0.0	0.0
12	1.7	0.0
13	1.5	0.0
14	3.3	3.3
15	3.0	0.0
16	3.1	3.0
17	2.3	0.0
18	2.3	0.0
19	0.0	0.0
20	3.1	0.0
21	2.6	0.0
22	0.0	0.0
23	0.0	0.0
24	3.0	3.1
25	1.4	1.4
26	0.0	0.0
27	0.0	0.0
28	3.0	0.0
29	2.7	0.0
30	0.0	0.0
31	0.1	0.0
32	3.1	3.1
33	0.0	0.0
34	3.0	3.1
35	0.0	0.0
36	0.0	0.0
37	3.0	3.0
38	0.0	0.0
39	0.0	0.0
40	-0.3	0.0
41	-7.2	0.0
42	-7.2	0.0
43	15.2	15.2
44	-0.2	0.0
45	-7.7	-7.8
46	-7.7	-7.8
47	2.8	3.0
48	3.0	3.1
IC5002		
1	1.6	1.6
2	1.5	1.5
3	0.0	0.0
4	3.0	3.0
5	0.0	0.0
6	1.3	1.4
7	3.0	3.0
8	1.4	1.4
IC5003		
1	4.8	4.8
2	0.0	0.0
3	4.8	4.8
4	3.3	3.3
5	0.0	0.0

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	11.0	11.0
2	3.3	3.0
3	0.0	0.0
IC6002		
1	8.1	8.1
2	0.0	0.0
3	0.9	1.0
4	10.4	10.4
5	11.0	11.0
IC6101		
1	3.1	3.1
2	3.1	3.0
3	3.0	3.1
4	0.0	0.0
5	3.1	3.1
6	0.0	0.0
7	1.2	1.2
8	11.0	11.0
9	1.0	1.0
10	1.2	1.2
11	2.2	2.1
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.1	0.1
18	0.0	0.0
19	2.1	2.1
20	0.9	0.9
21	0.0	0.0
22	2.1	0.1
23	1.0	1.0
24	0.6	0.7
25	0.9	1.0
26	0.5	0.6
27	1.0	1.0
28	0.8	0.8
29	0.9	1.0
30	0.6	0.7
31	0.2	0.3
32	0.2	0.2
33	0.6	0.6
34	0.1	0.1
35	0.0	0.0
36	0.5	0.5
37	0.8	0.8
38	0.0	0.0
39	1.0	1.0
40	0.0	0.0
41	2.5	2.4
42	1.1	1.0
43	0.0	0.0
44	2.1	2.1
45	2.2	2.2
46	2.1	2.1
47	8.1	8.2
48	0.9	1.0
49	1.0	0.9
50	2.3	2.1
51	11.0	11.0
52	0.0	0.0
53	0.0	0.9
54	0.1	8.6
55	8.1	8.1
56	5.9	5.9
57	9.0	9.0
58	7.8	7.8
59	0.0	0.0
60	11.0	11.0
61	0.0	0.0
62	0.0	0.0
63	0.0	0.0
64	5.3	5.3
Q6001		
1	11.0	11.0
2	10.8	10.9
3	0.0	0.0
4	3.1	3.1
5	3.1	3.1
Q6201		
1	0.0	0.0
2	11.0	11.0
3	7.8	7.8
4	3.1	3.1
5	3.1	3.1
6	3.1	3.1
Q6202		
E	3.0	3.0
C	2.5	2.5
B	2.3	2.3
Q6203		
1	0.0	0.0
2	11.0	11.0
3	9.1	9.0

MODE PIN NO.	REC	PLAY
4	1.7	1.8
5	1.7	1.8
6	1.8	1.8
Q6204		
1	0.0	0.0
2	11.0	11.0
3	5.9	6.0
4	4.9	4.9
5	4.8	4.8
6	4.9	4.9
Q6205		
E	4.8	4.8
C	0.0	0.0
B	4.8	4.8
Q6206		
E	0.0	0.0
C	4.8	4.8
B	0.0	0.0
Q6207		
1	0.0	0.0
2	11.0	11.0
3	8.7	8.6
4	3.0	2.9
5	3.0	3.0
6	3.0	2.9
Q6208		
1	0.0	0.0
2	11.0	11.0
3	9.7	9.7
4	1.1	1.2
5	1.1	1.1
6	1.1	1.1
Q6209		
S	8.1	8.1
D	11.0	11.0
G	0.0	0.0
Q6210		
E	8.9	8.9
C	15.2	15.2
B	9.4	9.5
Q6211		
E	-13.6	-15.3
C	-7.7	-7.8
B	-13.0	-14.8
Q6212		
1	-7.1	-7.2
2	-7.6	-7.7
3	-15.3	-15.4
4	-7.1	-7.2
5	-7.5	-7.8
6	-13.0	-14.9
Q6701		
S	11.0	11.0
D	10.9	11.0
G	0.0	0.0

MODE PIN NO.	REC	PLAY
IC8001	-	-
IC8002	-	-
IC8003	-	-
IC8004		
1	0.7	0.7
2	0.0	0.0
3	0.7	0.7
4	0.7	0.7
5	0.7	0.7
6	0.0	0.0
7	0.1	0.2
8	0.1	0.1
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.7
13	0.8	0.7
14	0.0	0.0
15	0.7	0.7
16	0.0	0.0
Q8001		
E	3.0	3.1
C	0.7	0.7
B	2.5	2.5

<USB>

MODE PIN NO.	REC	PLAY
IC8301		
1	0.0	0.0
2	0.1	0.1
3	0.0	0.0
4	3.2	3.2
5	4.8	4.8
6	0.0	0.0
7	4.8	4.8
8	4.8	4.8
9	4.8	4.8
10	3.2	3.2
11	3.2	3.2
12	0.0	0.0
13	0.0	0.0
14	2.3	2.3
15	2.3	2.3
16	2.3	2.3
17	2.3	2.3
18	2.3	2.3
19	2.3	0.0
20	0.0	0.0
21	3.2	3.2
22	2.3	2.3
23	2.2	2.2
24	0.0	0.0
25	0.0	0.0
26	0.1	0.0
27	0.1	0.0
28	0.1	0.0
29	0.0	0.0
30	0.0	0.0
31	0.0	0.0
32	3.2	3.2
33	0.0	0.0
34	0.0	0.0
35	3.0	3.1
36	3.0	3.0
37	0.0	0.0
38	3.0	3.1
39	4.8	4.8
40	3.2	0.0
41	0.0	0.1
42	-	-
43	-	-
44	-	-
45	-	-
46	-	-
47	-	-
48	-	-

<MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	0.5	0.4
3	0.2	0.4
4	0	0
5	0.4	0.5
6	0	0
7	0	0
8	1.5	1.5
9	1.5	1.5
10	1.5	1.5
11	1.5	1.5
12	1.5	1.5
13	1.5	1.5
14	2.7	2.8
15	1.2	1.2
16	1.5	1.5
17	1.5	1.5
18	1.5	1.5
19	1.5	1.5
20	0	1.5
21	0	3.0
22	0	0.7
23	0	0.4
24	1.4	0
25	1.4	1.4
26	0	11.0
27	0	0
28	2.7	2.8
29	0.7	0.6
30	0	0
31	0	0.6
32	1.0	1.0
33	1.2	1.3
34	1.2	1.3
35	1.3	1.3
36	0	0
37	1.2	0
38	0	0
39	1.5	1.5
40	0	0
41	0	0
42	0	0
43	0	0
44	0	0
45	4.8	4.8
46	1.5	1.5
47	1.5	1.6
48	0	1.5
49	1.5	1.5
50	0	0
51	13.9	14.3
52	2.4	2.4
53	12.4	12.5
54	0	0
55	0	0
56	0	0
57	3.1	3.1
58	2.9	2.9
59	0	0
60	1.1	1.0
61	0.3	0.3
62	1.5	1.5
63	0.7	0.7
64	1.0	1.0
Q1601		
1	0	0
2	0	0
3	4.9	4.8
4	0	0
5	4.8	4.8

<FRONT>

MODE PIN NO.	REC	PLAY
IC401		
1	4.3	4.4
2	0	-0.1
3	4.7	4.6
Q401		
1	4.6	4.6
2	-	-
3	-0.1	-0.1
Q6501		
E	-0.1	-0.1
C	4.3	4.3
B	-0.1	-0.1
Q6502		
1	4.7	4.7
2	4.3	4.3
3	0	0
4	4.7	4.7
5	4.3	4.3
6	0	0
Q6503		
1	4.7	4.7
2	4.3	4.3
3	0	0
4	4.7	4.7
5	4.3	4.3
6	0	0
Q6504		
E	4.7	4.7
C	4.3	4.3
B	4.3	4.3

<MONITOR>

MODE PINNO.	EE
IC7601	
1	3.0
2	2.8
3	3.0
4	1.6
5	0
6	3.1
7	3.1
8	3.1
9	3.1
10	3.1
11	1.5
12	1.5
13	0
14	0
15	0
16	0
17	0.2
18	3.1
19	3.1
20	2.8
21	1.5
22	0
23	0
24	0
25	0.3
26	0
27	1.5
28	2.5
29	1.5
30	4.7
31	2.5
32	1.4
33	2.5
34	1.5
35	0
36	0
37	4.0
38	2.0
39	2.1
40	2.5
41	4.1
42	2.0
43	2.5
44	2.0
45	3.1
46	2.1
47	2.0
48	2.1
IC7602	
1	3.6
2	0
3	1.3
4	3.1
5	3.6



# JVC

VICTOR COMPANY OF JAPAN, LIMITED

AV & MULTIMEDIA COMPANY CAMCORDER CATEGORY 12, 3-chome, Moriya-cho, kanagawa-ku, Yokohama, kanagawa-prefecture, 221-8528, Japan

(No.YF046)



Printed in Japan  
WPC

# PARTS LIST

## SAFETY PRECAUTION

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

## BEWARE OF BOGUS PARTS

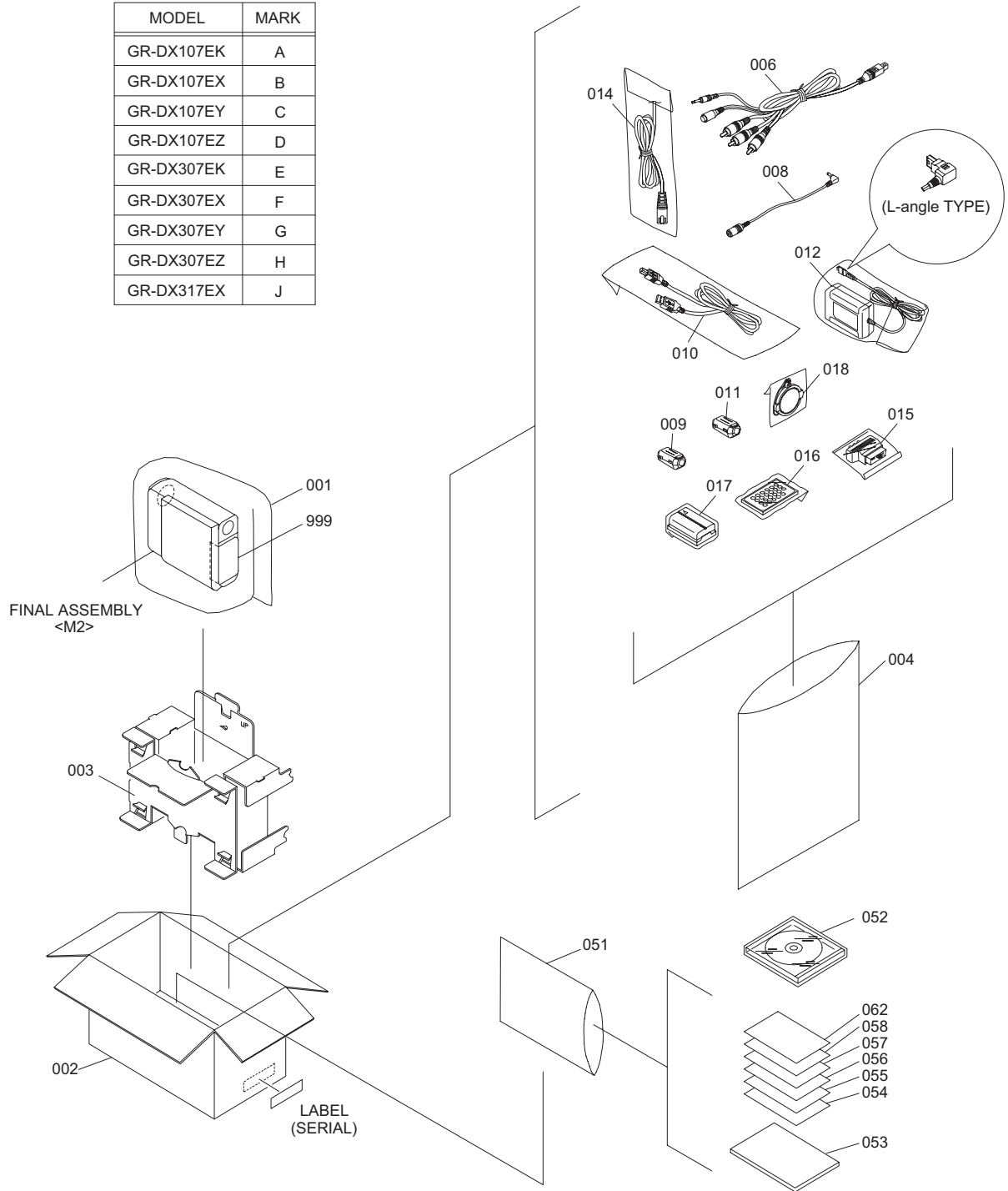
Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

### 1. EXPLODED VIEW

#### 1.1 PACKING AND ACCESSORY ASSEMBLY <M1>

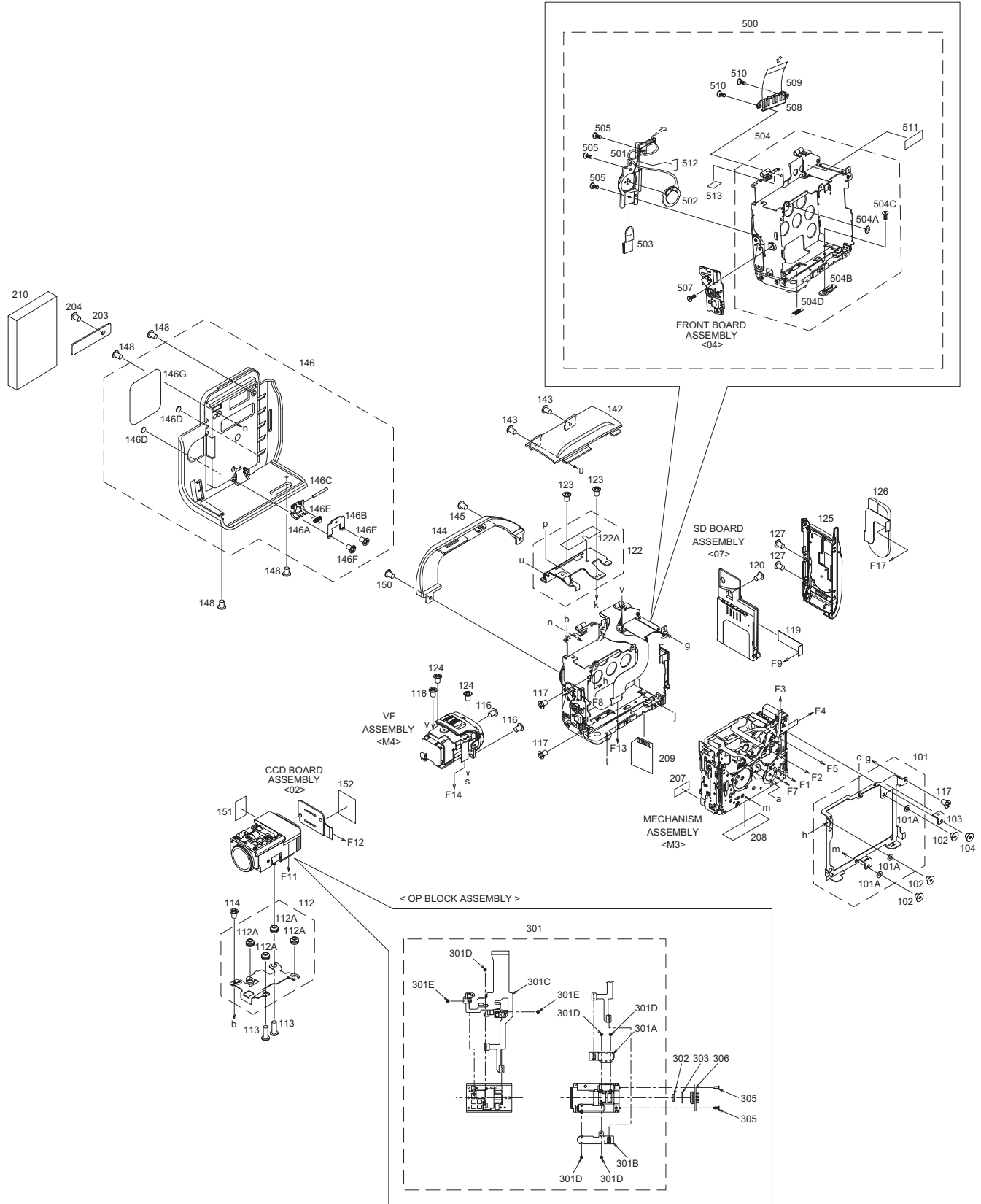
The instruction manual to be provided with this product will differ according to the destination.

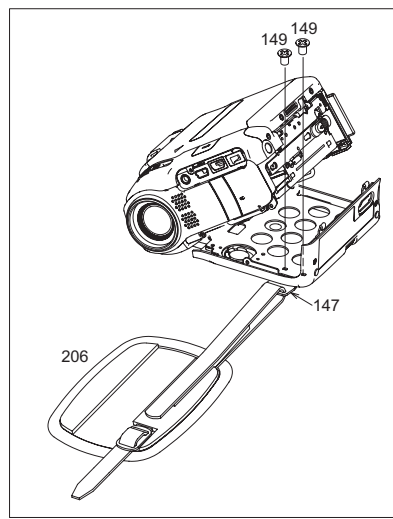
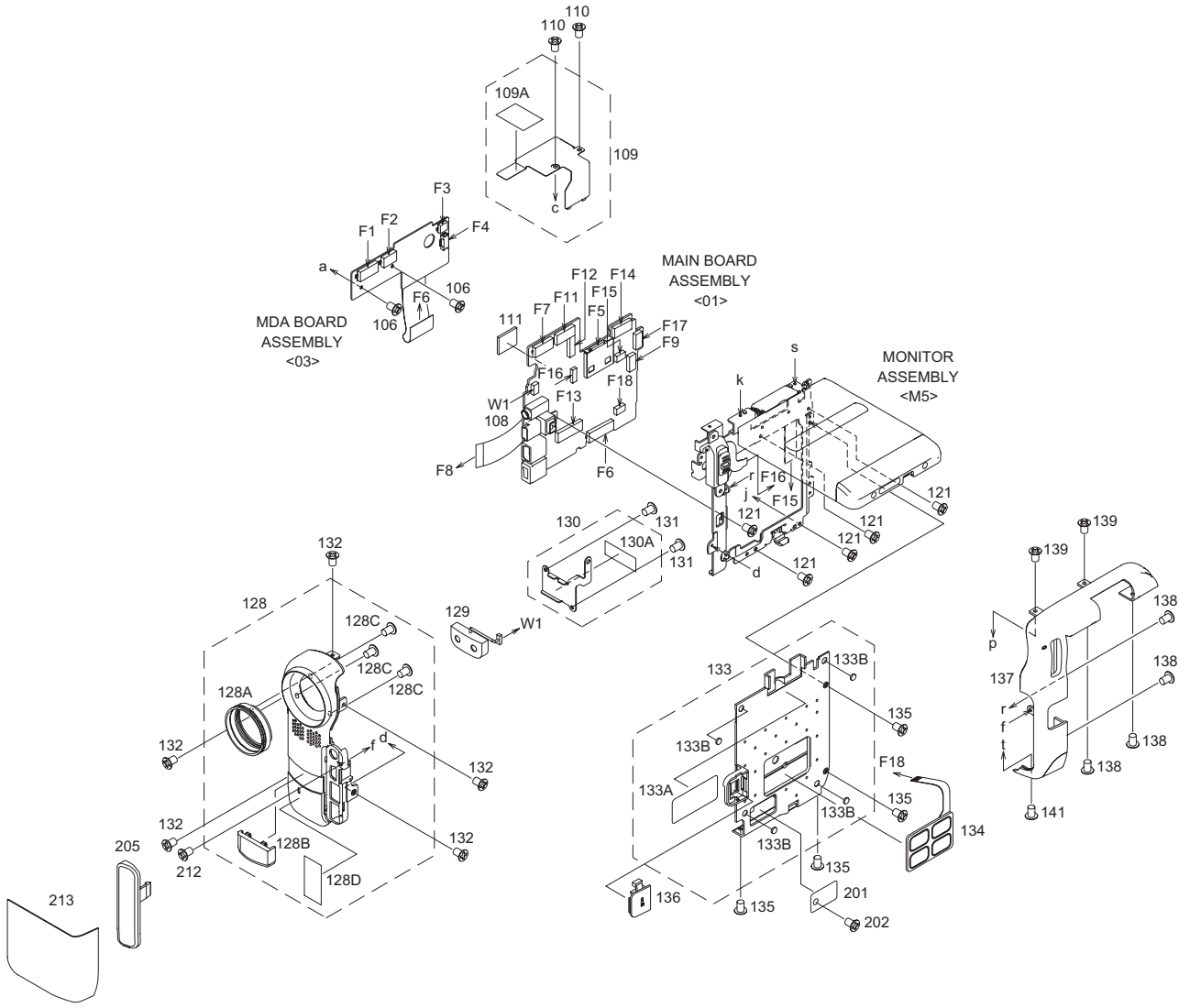
MODEL	MARK
GR-DX107EK	A
GR-DX107EX	B
GR-DX107EY	C
GR-DX107EZ	D
GR-DX307EK	E
GR-DX307EX	F
GR-DX307EY	G
GR-DX307EZ	H
GR-DX317EX	J



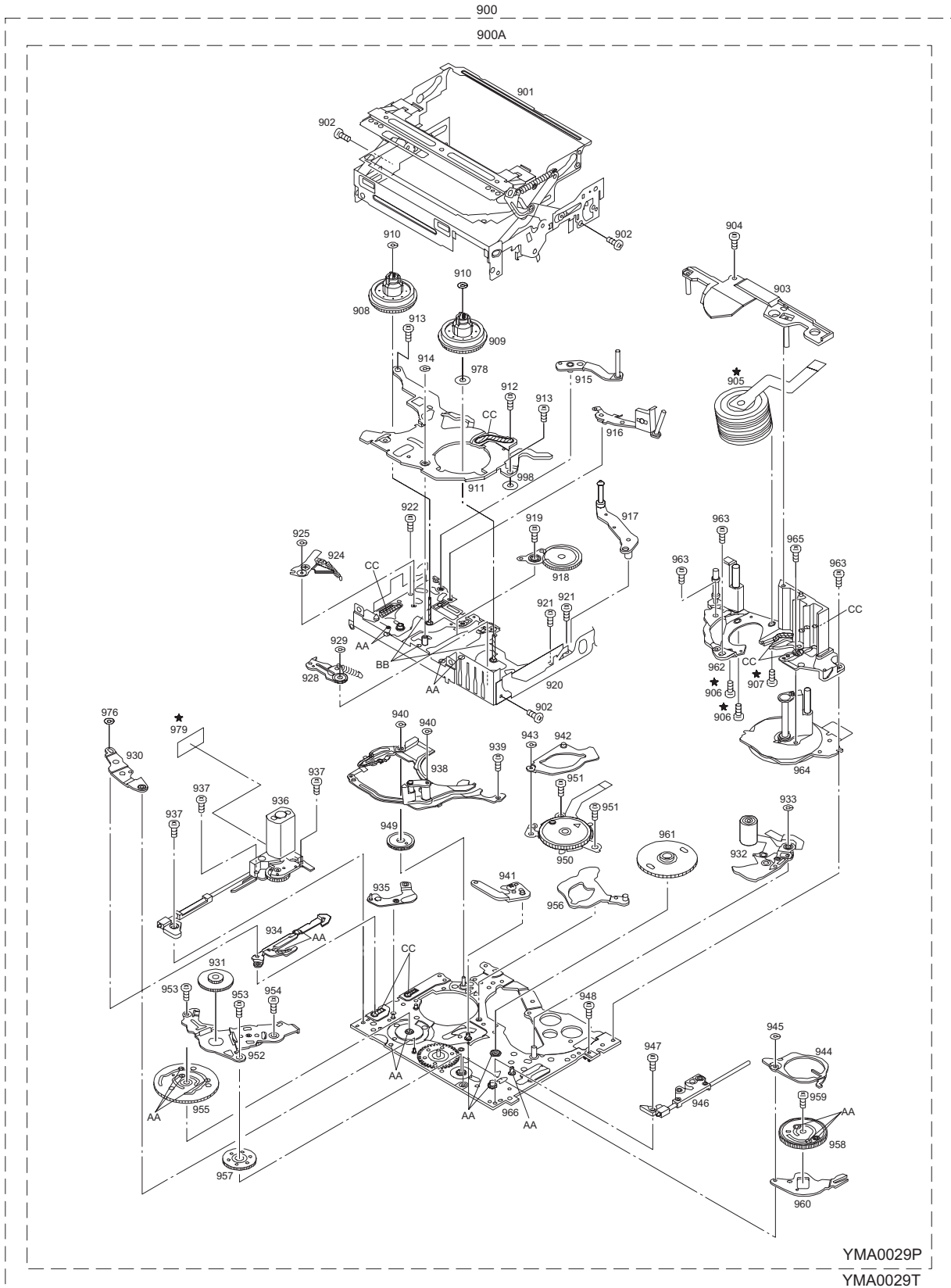


## 1.2 FINAL ASSEMBLY <M2>



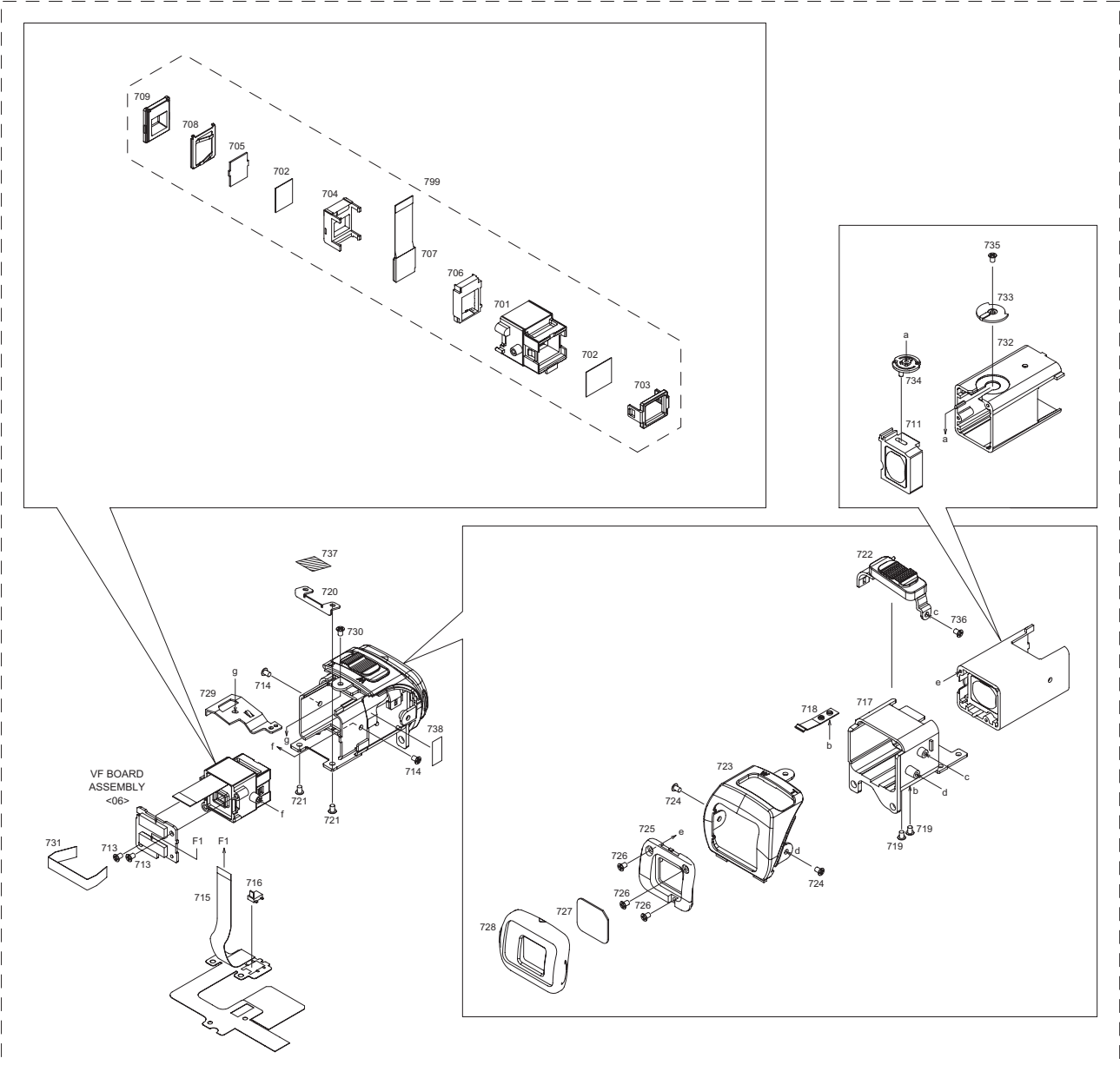


### 1.3 MECHANISM ASSEMBLY <M3>



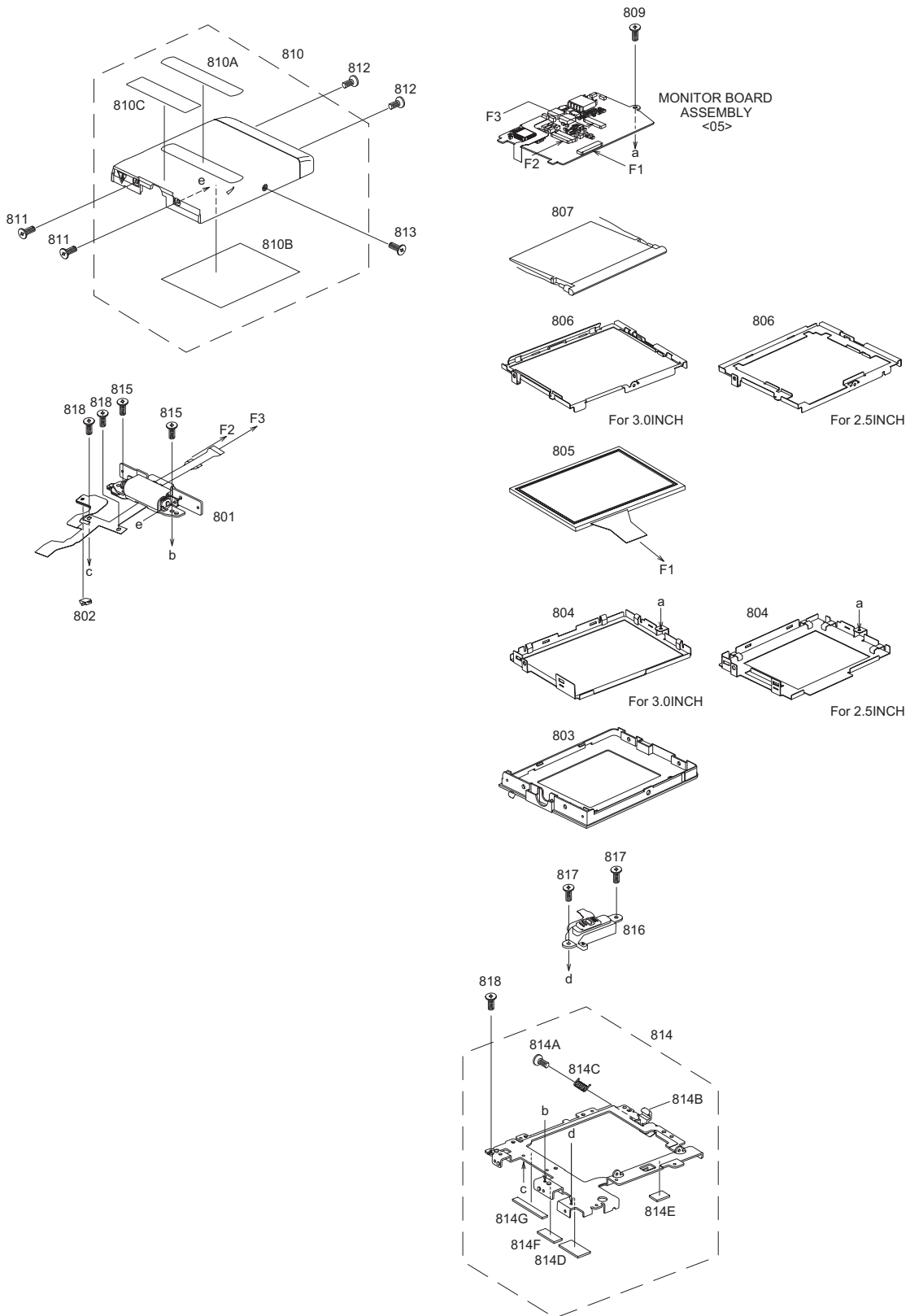
# 1.4 VF ASSEMBLY <M4>

700



# 1.5 MONITOR ASSEMBLY <M5>

800



MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

## 2. PARTS LIST

### PACKING AND ACCESSORY ASSEMBLY <M1>

△ Symbol No.	Part No.	Part Name	Description	Local
001	LY30023-003A	POLY BAG		
002	LY34283-004A	PACKING CASE		A
002	LY34283-001A	PACKING CASE		B,C,D,E,F,G,H
002	LY34283-002A	PACKING CASE		J
003	LY21227-001B	CUSHION		
004	QPA02503505P	POLY BAG	25cm x 35cm	
006	QAM0542-002	MULTI CABLE	MULTI	
008	QAM0572-001	AUDIO CABLE	MIC	
009	QQR0917-002	CORE FILTER	MIC 2T	
010	QAM0538-001	USB CABLE	USB	
011	QQR0491-002	FERRITE CORE	USB 1T	
△ 012	LY21104-012A	AC ADAPTER	AP-V14E	
△ 012	or LY21153-003A	AC ADAPTER	AP-V15E	
△ 014	QMPP210-190-JR	POWER CORD(EK)	BS PULG 1.9m BLACK	A,E
△ 014	QMPL270-190-JR	POWER CORD(EK)	CEE PULG 1.9m BLACK	B,C,D,F,G,H,J
015	QAM0302-001	ADAPTOR PLUG	PERI-RCAS	
016	LY21186-002A	REMOTE CONTROL UNIT	RM-V720U	
△ 017	LY32203-003A	BATTERY PACK ASSY	BN-V107U	
018	LY34285-001A	HOOD CAP ASSY		
051	YQM30061-3	POLY BAG	DOCUMENT	A,E
051	QPA02003506	POLY BAG	DOCUMENT 20cm x 35cm	B,C,D,F,G,H,J
052	LY32210-082C	CD ROM ASSY		C,D,G,H
052	LY32210-081B	CD ROM ASSY		A,B,E,F,J
△ 053	LYT1302-001A	INST BOOK(EN)	(ENGLISH)	A,E
△ 053	LYT1302-007A	INST BOOK(DA)	(DANISH)	C,G
△ 053	LYT1302-008A	INST BOOK(FI)	(FINNISH)	C,G
△ 053	LYT1302-009A	INST BOOK(SW)	(SWEDISH)	C,G
△ 053	LYT1302-010A	INST BOOK(NO)	(NORWEGIAN)	C,G
△ 053	LYT1302-011A	INST BOOK(RU)	(RUSSIAN)	D,H
△ 053	LYT1302-012A	INST BOOK(CZ)	(CZECH)	D,H
△ 053	LYT1302-013A	INST BOOK(PO)	(POLISH)	D,H
△ 053	LYT1302-014A	INST BOOK(HU)	(HUNGARIAN)	D,H
△ 053	LYT1302-002A	INST BOOK(GE)	(GERMANY)	B,C,F,G,J
△ 053	LYT1302-003A	INST BOOK(FR)	(FRENCH)	B,F,J
△ 053	LYT1302-004A	INST BOOK(DU)	(DUTCH)	B,F,J
△ 053	LYT1302-005A	INST BOOK(SP)	(SPANISH)	B,F,J
△ 053	LYT1302-006A	INST BOOK(IT)	(ITALIAN)	B,F,J
△ 053	LYT1302-015A	INST BOOK(PT)	(PORTUGUESE)	B,F,J
054	LYT1247-001A	INST BOOK(SOFT.EN)	(SOFT.ENGLISH)	A,E
054	LYT1247-007A	INST BOOK(SOFT.DA)	(SOFT.DANISH)	C,G
054	LYT1247-008A	INST BOOK(SOFT.FI)	(SOFT.FINNISH)	C,G
054	LYT1247-009A	INST BOOK(SOFT.SW)	(SOFT.SWEDISH)	C,G
054	LYT1247-010A	INST BOOK(SOFT.NO)	(SOFT.NORWEGIAN)	C,G
054	LYT1247-011A	INST BOOK(SOFT.RU)	(SOFT.RUSSIAN)	D,H
054	LYT1247-002A	INST BOOK(SOFT.GE)	(SOFT.GERMANY)	B,C,F,G,J
054	LYT1247-003A	INST BOOK(SOFT.FR)	(SOFT.FRENCH)	B,F,J
054	LYT1247-004A	INST BOOK(SOFT.DU)	(SOFT.DUTCH)	B,F,J
054	LYT1247-005A	INST BOOK(SOFT.SP)	(SOFT.SPANISH)	B,F,J
054	LYT1247-006A	INST BOOK(SOFT.IT)	(SOFT.ITALIAN)	B,F,J
054	LYT1247-018A	INST BOOK(SOFT.PT)	(SOFT.PORTUGUESE)	B,F,J
055	-----	WARRANTY CARD		B,C,D,F,G,H,J
056	LYT0194-001B	Q.CARD(JUK)		A,E
057	YU30878	REGIST. CARD		A,E
058	BT-54008-6	GUARANTY CARD		A,E
062	LYT0858-008A	SHEET(HEAD.EY)		C,G
062	LYT0858-009A	SHEET(HEAD.EZER)		D,H
062	LYT0858-007A	SHEET(HEAD.EKEX)		A,B,E,F,J
999	LY44670-001A	SHEET		

### FINAL ASSEMBLY <M2>

△ Symbol No.	Part No.	Part Name	Description	Local
101	LY34147-001A	BKT(MECHA)ASSY		
101A	LY42796-001A	BUSH	(x3)	
102	LY30032-002A	SPECIAL SCREW	MECHA-BKT(x3)	
103	LY34174-001A	BKT(PRE-REC)		
104	LY30031-015A	SPECIAL SCREW	BKTP/R-MEC	
106	LY30031-015A	SPECIAL SCREW	MDAPWB-MEC(x2)	
108	WJT0137-001B	E-CARD WIRE	FRONT-MAIN	
109	LY34377-001A	SHIELD ASSY		
109A	LY44786-001A	SHEET(SHIELD)		

△ Symbol No.	Part No.	Part Name	Description	Local
110	LY30031-041A	SPECIAL SCREW	SH.P/R-M.B(x2)	
112	LY34237-001A	BKT(OPM)ASSY		
112A	LY34238-001A	BUSH	(x4)	
113	LY30032-021A	SPECIAL SCREW	OP-OP BKT(x2)	
114	LY30031-016A	SPECIAL SCREW		A,B,C,D,E,F,G,H
114	LY30031-0F7A	SPECIAL SCREW	OP/BKT-ARM	J
116	LY30031-016A	SPECIAL SCREW	VF-ARM(x3)	A,B,C,D,E,F,G,H
116	LY30031-0F7A	SPECIAL SCREW	VF-ARM(x3)	J
117	LY30031-016A	SPECIAL SCREW	M.BKT-ARM(x3)	A,B,C,D,E,F,G,H
117	LY30031-0F7A	SPECIAL SCREW	M.BKT-ARM(x3)	J
119	WJT0143-001A	E-CARD WIRE	SD-MAIN	
120	LY30031-016A	SPECIAL SCREW	SD PWB-ARM	A,B,C,D,E,F,G,H
120	LY30031-0F7A	SPECIAL SCREW	SD PWB-ARM	J
121	LY30031-016A	SPECIAL SCREW	FRMUP-ARM(x5)	A,B,C,D,E,F,G,H
121	LY30031-0F7A	SPECIAL SCREW	FRMUP-ARM(x5)	J
122	LY34282-001A	BKT(TOP)ASSY	JVM	
122A	LY44634-001A	SPACER	JVM	
123	LY30031-016A	SPECIAL SCREW	BKTT1-ARM(x2)	A,B,C,D,E,F,G,H
123	LY30031-0F7A	SPECIAL SCREW	BKTT1-ARM(x2)	J
124	LY30031-016A	SPECIAL SCREW	BKTT2-ARM(x2)	A,B,C,D,E,F,G,H
124	LY30031-0F7A	SPECIAL SCREW	BKTT2-ARM(x2)	J
125	LY33785-001H	REAR COVER ASSY(SD)		A,B,E,F
125	LY33785-001L	REAR COVER ASSY(SD)		C,D,G,H
125	LY33785-003A	REAR COVER ASSY(SD)		J
126	LY33787-001D	CAMERA OPE UNIT		
127	LY30031-016A	SPECIAL SCREW	REAR-ARM(x2)	A,B,C,D,E,F,G,H
127	LY30031-0F7A	SPECIAL SCREW	REAR-ARM(x2)	J
128	LY21255-004A	FRONT COVER ASSY	JVM	A
128	LY21255-001A	FRONT COVER ASSY	JVM	A,B,C,D,E,F,G,H
128A	LY34257-001A	HOOD		
128B	LY34262-001A	LIGHT WINDOW		
128C	LY30031-068A	SPECIAL SCREW	(x3)	
128D	LY30034-077A	SPACER(A)	JVM	C,D,G,H
129	LY34292-001A	MIC ASSY		C,D,G,H
129	LY33770-001B	MIC ASSY		A,B,E,F,J
130	LY44682-001A	BKT(MIC)ASSY	JVM	
130A	LY30034-072A	SPACER(A)	JVM	
131	LY30031-031A	SPECIAL SCREW	HOLDER-FRT(x2)	
132	LY30031-016A	SPECIAL SCREW	FRONT-ARM(x5)	A,B,C,D,E,F,G,H
132	LY30031-0F7A	SPECIAL SCREW	FRONT-ARM(x5)	J
△ 133	LY33901-001G	UPPER CASE ASSY		A,B,C,D,E,F,G,H
△ 133	LY33901-003A	UPPER CASE ASSY		J
133A	LY44602-001B	SHEET(CAUTION)		
133B	LY42350-001A	FOOT	(x4)	
134	LY33784-001A	SUB OPE UNIT		A,B,C,D,E,F,G,H
134	LY33784-003A	SUB OPE UNIT		J
135	LY30031-016A	SPECIAL SCREW	UPPR-FRMUP(x4)	A,B,C,D,E,F,G,H
135	LY30031-0F7A	SPECIAL SCREW	UPPR-FRMUP(x4)	J
136	LY33905-001C	COVER(DV)ASSY		A,B,C,D,E,F,G,H
136	LY33905-002A	COVER(DV)ASSY		J
137	LY33776-003A	SIDE COVER(L)ASSY		A,B,C,D,E,F,G,H
137	LY33776-004A	SIDE COVER(L)ASSY		J
138	LY30031-016A	SPECIAL SCREW	SCOVL-FRM(x4)	A,B,C,D,E,F,G,H
138	LY30031-0F7A	SPECIAL SCREW	SCOVL-FRM(x4)	J
139	LY30031-016A	SPECIAL SCREW	SCOVL-BKTT(x2)	A,B,C,D,E,F,G,H
139	LY30031-0F7A	SPECIAL SCREW	SCOVL-BKTT(x2)	J
141	LY30031-0E7A	SPECIAL SCREW	SCOVL-FRMU	
142	LY34280-003A	TOP COVER ASSY		A
142	LY34280-001A	TOP COVER ASSY		A,B,C,D,E,F,G,H
143	LY30031-016A	SPECIAL SCREW	TPCOV-BKTT(x4)	A,B,C,D,E,F,G,H
143	LY30031-0F7A	SPECIAL SCREW	TPCOV-BKTT(x2)	J
144	LY21249-001A	SIDE COVER		A,B,C,D,E,F,G,H
144	LY21249-002A	SIDE COVER		J
145	LY30031-027A	SPECIAL SCREW	SCOV-R-ARM	
△ 146	LY33778-001G	CASSETTE COVER ASSY		A,B,C,D,E,F,G,H
△ 146	LY33778-003B	CASSETTE COVER ASSY		J
146A	LY33779-001B	KNOB(B.LOCK)		
146B	LY33780-001B	HOLDER(B.LOCK)		
146C	LY44442-001A	SPRING SHAFT		
146D	LY42350-001A	FOOT	(x2)	
146E	LY44600-001B	TORSION SPRING		
146F	LY30031-002A	SPECIAL SCREW	HOLDER-RCA(x2)	
△ 146G	LY34385-001A	LABEL(C.COVER)		
147	LY33782-001A	HOOK(F)		
148	LY30031-016A	SPECIAL SCREW	C.COV-ARM(x4)	A,B,C,D,E,F,G,H
148	LY30031-0F7A	SPECIAL SCREW	C.COV-ARM(x4)	J
149	LY30031-016A	SPECIAL SCREW	HOOK-ARM(x2)	A,B,C,D,E,F,G,H

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
149	LY30031-0F7A	SPECIAL SCREW	HOOK-ARM(x2)	J
150	LY30031-016A	SPECIAL SCREW	SCOV-ARMF AB,C,D,E,F,G,H	
150	LY30031-0F7A	SPECIAL SCREW	SCOV-ARMF	J
151	LY30034-044A	SPACER(A)	OP FPC	
152	LY44710-001A	SHIELD (CCD PWB)	CCD PWB	
201	LY44560-001A	COVER(JIG CON)		A,B,C,D,E,F,G,H
201	LY44560-002A	COVER(JIG CON)		J
202	LY30031-016A	SPECIAL SCREW	COVJIG-FRM AB,C,D,E,F,G,H	
202	LY30031-0F7A	SPECIAL SCREW	COVJIG-FRM	J
203	LY34157-001B	COVER(ADJ)		A,B,C,D,E,F,G,H
203	LY34157-002A	COVER(ADJ)		J
204	LY30031-016A	SPECIAL SCREW	COVADJ-ARM AB,C,D,E,F,G,H	
204	LY30031-0F7A	SPECIAL SCREW	COVADJ-ARM	J
205	LY33907-001C	JACK COVER ASSY		A,B,C,D,E,F,G,H
205	LY33907-003A	JACK COVER ASSY		J
206	LY21225-001C	GRIP BELT ASSY		
207	LY40699-002A	LABEL(PUSH)		
208	LY32001-004A	LABEL(HOUSING)		
209	QAM0366-002	MEMORY CARD	SD 8MB*	
210	LY34386-001A	D.BATT.ASSY		A,B,C,D,E,F,G,H
210	LY34386-003A	D.BATT.ASSY		J
212	LY30031-023A	SPECIAL SCREW	SCOV-FRONT AB,C,D,E,F,G,H	
212	LY30031-031A	SPECIAL SCREW	SCOV-FRONT	J
213	LY30034-060A	SPACER(A)	F-WINDOW	
301	J3K-101A	OP BLOCK ASSY	JVM	
301A	LY34247-001A	FOCUS MOTOR		
301B	LY34246-001A	ZOOM MOTOR		
301C	LY34248-001A	IRIS MOTOR UNIT		
301D	QYSPSGU1440ZA	TAP SCREW	M1.4 x 4mm(x5)	
301E	QYSPSGU1430MA	TAP SCREW	M1.4 x 3mm(x2)	
302	LY44120-001A	OPTICAL LPF	JVM	
303	LY44653-001A	SHEET	JVM	
305	QYSPSGU1750ZA	TAP SCREW	JVM(x2)	
306	LYH30576-001A	CCD BASE ASSY		
500	LU04D303A	LOWER UNIT ASSY	JAPAN	A,B,C,D,E,F,G,H
500	LU04D304A	LOWER UNIT ASSY		J
501	LY33962-001D	COVER(SPK)		A,B,C,D,E,F,G,H
501	LY33962-002A	COVER(SPK)		J
502	QAS0196-001	SPEAKER		
503	LY33967-001B	BKT(SPEAKER)		
504	LY21190-002A	ARM ASSY		
504A	LY42796-003A	BUSH		
504B	LY34175-001A	KNOB(LOCK)		
504C	QYSPSGT1730ZA	TAP SCREW	KNOB	
504D	LY30001-023A	TENSION SPRING		
505	LY30031-016A	SPECIAL SCREW	COV(SPK-AR)(x3)	
507	LY30031-016A	SPECIAL SCREW	FRONTP-ARM	
508	LY32575-002A	BATTERY TERNIMAL		
509	QAL0549-001	FPC	BATT FPC	
510	LY30031-016A	SPECIAL SCREW	BATT.TE-AR(x2)	
511	LY30034-031A	SPACER(A)		
512	LY30034-056A	SPACER(A)		
513	LY30034-043A	SPACER(A)	ARM ASSY	

**\*NOTE:**

DATA FILE is not contained in MEMORY CARD of the service part.

Symbol No.	Part No.	Part Name	Description	Local
915	LY43725-001F	TENSION ARM ASSY		
916	LYH40269-001A	SLANT POLE ARM ASSY		
917	LY43731-001F	TAKE UP ARM ASSY		
918	LY31531-001E	SWING ARM ASSY		
919	YQ43893-9	MINI SCREW		
920	LYH30424-001A	SLIDE DECK FINAL ASSY		
921	YQ43893	MINI SCREW		(x2)
922	LY43023-001A	MINI SCREW		
924	LYH30419-001A	PAD ARM ASSY		
925	YQ44246	SLIT WASHER		
928	LYH40270-001A	TAKE UP BRAKE ASSY		
929	YQ44246	SLIT WASHER		
930	LY43684-001C	TENSION CONTROL LEVER ASSY		
931	LY32861-001B	CENTER GEAR		
932	LY31516-001J	PINCH ROLLER ARM FINAL ASSY		
933	YQ44246	SLIT WASHER		
934	LY43681-001B	TENSION CONTROL PLATE ASSY		
935	LY43687-001A	BRAKE CONTROL LEVER ASSY		
936	LYH30421-001A	MOTOR BRACKET ASSY		
937	YQ43893	MINI SCREW		(x3)
938	LYH30422-001A	GUIDE RAIL ASSY		
939	YQ43893	MINI SCREW		
940	YQ44246	SLIT WASHER		(x2)
941	LY32843-001F	SLIDE LEVER2 ASSY		
942	LY43690-001A	LOADING PLATE ASSY		
943	YQ44246	SLIT WASHER		
944	LY32858-001B	EJECT LEVER		
945	YQ44246	SLIT WASHER		
946	LYH40271-001A	BASE R ASSY		
947	YQ43893	MINI SCREW		
948	LY41945-001B	MINI SCREW		
949	LY43665-001A	MODE GEAR		
950	QSW0876-005	ROTARY ENCODER		
951	YQ43893	MINI SCREW		(x2)
952	LY32860-001E	GEAR COVER ASSY		
953	YQ43893	MINI SCREW		(x2)
954	YQ43893-4	MINI SCREW		
955	LY43676-001A	MAIN CAM ASSY		
956	LY41941-001B	SLIDE ARM ASSY		
957	LY43678-001A	CONNECT GEAR 2		
958	LY43679-001C	SUB CAM ASSY		
959	LY42120-001A	MINI SCREW		
960	LY43692-001A	CONTROL ARM ASSY		
961	LY32859-001A	REEL GEAR 1		
962	LY31508-004D	DRUM BASE ASSY		
963	LY43675-006B	MINI SCREW		(x3)
964	QAR0142-001	CAPSTAN MOTOR		
965	YQ43893	MINI SCREW		
966	LY10367-001M	MAIN DECK ASSY		
976	YQ44246	SLIT WASHER		
978	LY44609-001A	WASHER		
979	LY44502-001A	SPACER	JVM/BJVC	
998	QYWFM163013	WASHER	6.3mm/21.1mm x 0.01mm	

**VF ASSEMBLY <M4>**

**MECHANISM ASSEMBLY <M3>**

Symbol No.	Part No.	Part Name	Description	Local
900	YMA0029T	MECHA(A)ASSY	Y/E Y07442	
900A	YMA0029P	MECHA(A)ASSY	JVM/BJVC	
901	LY32870-001Q	CASSETTEHOUSING ASSY		
902	YQ43893-8	MINI SCREW		(x3)
903	LYH30420-001A	UPPER BASE ASSY		
904	QYSPSPU1425M	SCREW	M1.4 x 2.5mm	
905	YDV2102B	DRUM ASSY	M/B SET022	
906	LY44533-001A	DAMPER SCREW ASSY	JVM/BJVC(x2)	
907	LY44533-002A	DAMPER SCREW ASSY	JVM/BJVC	
908	LY31538-001G	REEL DISK ASSY		
909	LY31538-002J	REEL DISK ASSY		
910	YQ44246	SLIT WASHER		(x2)
911	LY10372-001J	REEL COVER ASSY		
912	LY42120-002A	MINI SCREW		
913	LY41945-003A	MINI SCREW		(x2)
914	YQ44246	SLIT WASHER		

Symbol No.	Part No.	Part Name	Description	Local
700	VU04D301E	VF UNIT ASSY		JAPAN
701	LY21135-001E	FRAME(VF)		
702	LY44417-001A	SHEET(POLA)		(x2)
703	LY33735-001A	STOPPER(POLA)		
704	LY33738-001A	HOLDER(SHEET)		
705	LY44419-001A	SHEET(DIFF)		
706	LY33736-001B	GUIDE(LCD)		
707	QLD0313-001	LCD MODULE		
708	LY33746-001A	SPRING(LCD)		
709	LY33739-001A	CASE(B.LIGHT)		
711	LY33799-001C	LENS HOLDER ASSY		
713	LY30031-031A	SPECIAL SCREW	VF PWB-FRM(x2)	
714	LY30031-031A	SPECIAL SCREW	CASE-FRM-L(x2)	
715	QAL0550-002	FPC	VF FPC	
716	NSW0200-001X	LEVER SWITCH		
717	LY21137-001C	GUIDE(OUTER)		
718	LY33804-001B	PLATE(CLICK)		
719	LY30031-005A	SPECIAL SCREW	OUTER-PLT(x2)	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
720	LY33805-001B	BRACKET		
721	LY30031-0E1A	SPECIAL SCREW	BKT-FPCPWB(x2)	
722	LY33803-001C	ZOOM UNIT		
723	LY21172-001D	VF COVER		
724	LY30031-002A	SPECIAL SCREW	COV-OUTER(x2)	
725	LY21171-001C	HOLDER(EYE)		
726	LY30031-0F6A	SPECIAL SCREW	HOLDR-CASE(x3)	
727	LY44548-001A	SHEET(LENS)		
728	LY21136-001D	EYE CUP		
729	LY33988-001A	BRACKET(TOP2)		
730	LY30031-0E1A	SPECIAL SCREW	COVVF-BKT2	
731	LY30034-035B	SPACER(A)	VF PWB	
732	LY21134-001E	CASE(VF)		
733	LY33801-001C	LEVER(1)		
734	LY33802-001B	LEVER(2)		
735	LY30031-026A	SPECIAL SCREW		
736	LY30031-002A	SPECIAL SCREW	SW-OUTER	
737	LY30034-051A	SPACER(A)	SW PWB	
738	LY30034-096A	SPACER(A)	ON CN	
799	LY34201-001D	FRAME ASSY		

### MONITOR ASSEMBLY <M5>

Symbol No.	Part No.	Part Name	Description	Local
△ 800	MU04D32505A	MONITOR UNIT ASSY	JAPAN A,B,C,D	
△ 800	MU04D33004A	MONITOR UNIT ASSY	JAPAN E,F,G,H	
△ 800	MU04D33005A	MONITOR UNIT ASSY	JAPAN J	
801	LY33795-001D	HINGE UNIT ASSY	A,B,C,D,E,F,G,H	
801	LY33795-002A	HINGE UNIT ASSY	J	
802	NSW0217-001X	DETECT SWITCH		
803	LY21191-001D	MONITOR CASE(25)	A,B,C,D	
803	LY21130-001D	MONITOR CASE(3)	E,F,G,H	
803	LY21130-002A	MONITOR CASE(3)	J	
804	LY33902-001A	LCD BKT 2.5(1)	A,B,C,D	
804	LY33793-001A	LCD BKT 3 (1)	E,F,G,H,J	
805	QLD0314-001	LCD MODULE	A,B,C,D	
805	QLD0315-001	LCD MODULE	E,F,G,H,J	
806	LY33903-001A	LCD BKT 2.5(2)	A,B,C,D	
806	LY33794-001A	LCD BKT 3 (2)	E,F,G,H,J	
807	QLL0157-001	BACK LIGHT	A,B,C,D	
807	QLL0158-001	BACK LIGHT	E,F,G,H,J	
809	LY30031-041A	SPECIAL SCREW	MONPWB-BKT	
△ 810	LY21131-005B	MONITOR COVER ASSY	A,B,C,D,E,F,G,H	
△ 810	LY21131-006B	MONITOR COVER ASSY	J	
810A	LY34281-001A	MARK	A,B,C,D,E,F,G,H	
810A	LY34281-002A	MARK	J	
810B	LY30034-069A	SPACER(A)		
810C	LY44689-001B	STICKER		
811	LY30031-013A	SPECIAL SCREW	MCOV-HINGE(x2) A,B,C,D,E,F,G,H	
811	LY30031-036A	SPECIAL SCREW	MCOV-HINGE(x2) J	
812	LY30031-0E6A	SPECIAL SCREW	MCOV2-BKT(x2)	
813	LY30031-0E5A	SPECIAL SCREW	MCOV1-FRM A,B,C,D,E,F,G,H	
813	LY30031-084A	SPECIAL SCREW	MCOV1-FRM J	
814	LY33977-001D	FRAME(UP)ASSY		
814A	LY30032-006A	SPECIAL SCREW		
814B	LY33975-001A	KNOB(MONI.LOCK)		
814C	LY44517-001B	TORSION SPRING		
814D	LY30034-049A	SPACER(A)		
814E	LY30034-057A	SPACER(A)		
814F	LY30034-065A	SPACER(A)		
814G	LY30034-070A	SPACER(A)	A,B,C,D,J	
815	LY30031-009A	SPECIAL SCREW	HING-FRMUP(x2)	
816	LY21128-001D	POWER(OPE)UNIT	A,B,C,D,E,F,G,H	
816	LY21128-002A	POWER(OPE)UNIT	J	
817	LY30031-016A	SPECIAL SCREW	FRMUP-POWE(x2)	
818	LY30031-005A	SPECIAL SCREW	FPC-FRMUP(x3)	

### MAIN BOARD ASSEMBLY <01>

Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10472A-01	MAIN BOARD ASSY		
IC1001	UPD703166-M40	IC(MICRO C ROM)	MASK	
IC1001 or	UPD70F3166M40	IC(MICRO C ROM)	FLASH	
IC1002	MB90097PFV153-X	IC(MICRO C ROM)	OSD	
IC1003	SN74AHC1G00K-X	IC		
IC1003 or	SN74AHC1G00DC-X	IC		
IC1004	S-89220ACNC-W	IC		
IC1005	M95320-WDW6-X	IC		
IC1006	RS5C314-X	IC		
IC1007	IC-PST3423U-X	IC		
IC1007 or	S-80823CNB-X	IC		
IC1009	SN74AHC1G08K-X	IC		
IC1009 or	SN74AHC1G08DC-X	IC(DIGITAL)		
IC1010	R1160N251B-X	IC		
IC1701	BA10358FVM-W	IC	REELAMP5V	
IC1702	NJM2407R-W	IC	REELSMT	
IC2101	AK4550VT-X	IC		
IC2201	AK4564VQ	IC	48P0.5	
IC3001	JCY0152	IC	JCY0152	
IC3006	JCY0177-W	IC		
IC3201	JCP8075	IC		
IC3501	JCY0132	IC		
IC3502	SN74AHC1G04K-X	IC		
IC3502 or	SN74AHC1G04DC-X	IC(DIGITAL)		
IC3701	BH7612FV-X	IC		
IC3731	MM1504XN-X	IC		
IC4201	HD49340HNP-X	IC	CDS/AD	
IC4202	BH31FB1WHFV-W	IC	REG 3.1V	
IC4301	JCY0183	IC	CAMERA DSP	
IC4302	R1160N121B-X	IC	REG1.2V	
IC4701	TA75W01FU-X	IC		
IC4702	TA75W01FU-X	IC		
IC4703	TA75W01FU-X	IC		
IC4704	NJM3414AV-X	IC		
IC4901	JCY0207	IC		
IC4902	NJM3414AV-X	IC		
IC4951	AN41902A	IC		
IC5001	CXD3602AR	IC	TG/V DRV	
IC5002	CY2302SC-1-X	IC	PLL 72MHZ	
IC5003	BH33FB1WHFV-W	IC	REG 3.3V	
IC6001	XC6202P33M-X	IC		
IC6002	R1224N102G-X	IC		
IC6101	FA3698F	IC	SW_REG IC	
IC8001	TMS320DSC24GHKL	IC	DSC24	
IC8002	K4S643233F-SE75	IC	64MSDRAM	
IC8002 or	K4S643233F-DE75	IC	64MSDRAM	
IC8003	MR27T1602F1GULA	IC(MICRO C ROM)	OTP	
IC8004	BU2360FV-X	IC	FS PLL	
IC8301	ISP1181ABS	IC	USBQNF.02.6	
Q1001	DTA114EE-X	DIGI TRANSISTOR		
Q1001 or	PDTA114EE-X	DIGI TRANSISTOR		
Q1001 or	RN2102-X	DIGI TRANSISTOR		
Q1001 or	BCR183T-X	DIGI TRANSISTOR		
Q1002	UMC3N-W	DIGI TRANSISTOR		
Q1003	UMC3N-W	DIGI TRANSISTOR		
Q1004	UMC3N-W	DIGI TRANSISTOR		
Q1005	DTC143XE-X	DIGI TRANSISTOR		
Q1005 or	UN921FJ-X	DIGI TRANSISTOR		
Q1007	2SC4617/QR/-X	TRANSISTOR		
Q1007 or	BC847BT-X	TRANSISTOR		
Q1007 or	2SD2216J/QR/-X	TRANSISTOR		
Q1008	DTC124EE-X	DIGI TRANSISTOR		
Q1008 or	PDTC124EE-X	DIGI TRANSISTOR		
Q1008 or	BCR141T-X	DIGI TRANSISTOR		
Q1009	2SJ347-X	MOS FET		
Q1010	DTC144EE-X	DIGI TRANSISTOR		
Q1011	UMC3N-W	DIGI TRANSISTOR		
Q1012	DTC143XE-X	DIGI TRANSISTOR		
Q2201	DTC144EE-X	DIGI TRANSISTOR		
Q2401	2SC5658/QRS/-X	TRANSISTOR		
Q2403	2SC5658/QRS/-X	TRANSISTOR		
Q2601	2SA2029/QRS/-X	TRANSISTOR		
Q2801	EMX1-W	TRANSISTOR		
Q3001	2SC5658/QRS/-X	TRANSISTOR		



MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
Q3003	2SC5658/QRS/-X	TRANSISTOR		
Q3701	EMT1-W	PAIR TRANSISTOR		
Q3702	EMZ1-W	PAIR TRANSISTOR		
Q3704	2SA2029/QRS/-X	TRANSISTOR		
Q3705	EMT1-W	PAIR TRANSISTOR		
Q3706	DTC114EE-X	DIGI TRANSISTOR		
Q3707	DTC114EE-X	DIGI TRANSISTOR		
Q3731	2SC5658/QRS/-X	TRANSISTOR		
Q3733	EMZ1-W	PAIR TRANSISTOR		
Q3734	2SC5658/QRS/-X	TRANSISTOR		
Q3735	EMZ1-W	PAIR TRANSISTOR		
Q4701	2SC4655J/BC/-X	TRANSISTOR		
Q4951	DTC114EM-X	DIGI TRANSISTOR		
Q6001	FML9-W	TRANSISTOR		
Q6201	QS6U24-W	MOS FET		
Q6202	2SA1577/RS/-X	TRANSISTOR		
Q6203	QS6U24-W	MOS FET		
Q6204	QS6U24-W	MOS FET		
Q6205	2SA1577/RS/-X	TRANSISTOR		
Q6206	DTC124TM-X	DIGI TRANSISTOR		
Q6207	QS6U24-W	MOS FET		
Q6208	QS6U24-W	MOS FET		
Q6209	SSM3J14T-X	MOS FET		
Q6210	2SC5658/QRS/-X	TRANSISTOR		
Q6211	2SC5658/QRS/-X	TRANSISTOR		
Q6212	EMT1-W	PAIR TRANSISTOR		
Q6701	SSM3J14T-X	MOS FET		
Q8001	2SA1774/RS/-X	TRANSISTOR	2SA1774	
Q8001	or 2SB1462J/RS/-X	TRANSISTOR		
D1001	DA221-X	DIODE ARRAY		
D1002	1SS376-X	SI DIODE		
D2652	EMZ6.8N-X	Z DIODE		
D2803	UDZS6.8B-X	Z DIODE		
D2803	or MA8068-X	Z DIODE		
D3001	EC2C01C-TR-X	VARI CAP DIODE		
D3002	EC2C01C-TR-X	VARI CAP DIODE		
D3003	EC2C01C-TR-X	VARI CAP DIODE		
D3004	RB551V-30-X	SB DIODE		
D4901	RB751V-40-X	SB DIODE		
D5001	1SS355-X	SI DIODE		
D5001	or MA111-X	SI DIODE		
△ D6001	RB706D-40-X	SB DIODE		
△ D6002	RB715F-X	SB DIODE		
D6201	RB480Y-W	SB DIODE		
D6203	RB480Y-W	SB DIODE		
D6701	DG1M3-X	SB DIODE		
D6702	DG1M3-X	SB DIODE		
C1001	NDCA1HJ-8R0W	C CAPACITOR	8pF 50V J	
C1002	NDCA1HJ-100W	C CAPACITOR	10pF 50V J	
C1003	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1004	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1005	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1006	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1007	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1009	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1010	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1011	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1012	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1017	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1018	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1019	NBE20JM-226X	TA E CAPACITOR	22uF 6.3V M	
C1020	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1021	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1022	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1023	NCBA1EK-682W	C CAPACITOR	6800pF 25V K	
C1024	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1025	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1026	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1027	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1028	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1029	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1031	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1032	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1033	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1034	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1035	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	

Symbol No.	Part No.	Part Name	Description	Local
C1036	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1037	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1038	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1039	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1040	NDCA1HJ-7R0W	C CAPACITOR	7pF 50V J	
C1041	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1042	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1043	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1046	NCF31AZ-105X	C CAPACITOR	1uF 10V Z	
C1047	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1048	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1049	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1050	NCFA1HZ-103W	C CAPACITOR	0.01uF 50V Z	
C1051	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C1052	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C1053	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C1054	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C1056	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C1701	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C1702	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C1703	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C2101	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2102	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2103	NCBA1HK-222W	C CAPACITOR	2200pF 50V K	
C2104	NCBA1HK-222W	C CAPACITOR	2200pF 50V K	
C2105	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2106	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2107	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2108	NBE90JM-475X	TA E CAPACITOR	4.7uF 6.3V M	
C2201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2202	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2203	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2204	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2205	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2209	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2210	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2211	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2212	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2215	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2216	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2217	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2218	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2225	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2226	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2401	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2402	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2403	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2404	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C2405	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2406	NBJ0JM-106X	TA E CAPACITOR	10uF 6.3V M	
C2603	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2604	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C2605	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2606	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C2609	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2610	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2611	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2612	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2613	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C2614	NDCA1HJ-101W	C CAPACITOR	100pF 50V J	
C2615	NDCA1HJ-101W	C CAPACITOR	100pF 50V J	
C2616	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C2617	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C2618	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2619	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C2621	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2622	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2651	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2652	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C2655	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C2656	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C2801	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C2802	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C2803	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C3001	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3232	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3003	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C3233	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3005	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3234	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3006	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C3235	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3007	NBE20GM-476X	TA E CAPACITOR	47uF 4V M		C3236	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3008	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3237	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3009	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C3240	NDCA1HJ-101W	C CAPACITOR	100pF 50V J	
C3011	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3501	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3012	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3502	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3013	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3503	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C3015	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3504	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C3016	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3505	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C3017	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3506	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C3020	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3507	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3021	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3508	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3022	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3509	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3023	NDCA1HJ-330W	C CAPACITOR	33pF 50V J		C3510	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3024	NCBA1HK-102W	C CAPACITOR	1000pF 50V K		C3511	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3025	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3512	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3026	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K		C3513	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3027	NCBA1EK-472W	C CAPACITOR	4700pF 25V J		C3514	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C3028	NDCA1EJ-271W	C CAPACITOR	270pF 25V J		C3515	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C3029	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3516	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C3030	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3517	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3031	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3518	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3032	NCBA1HK-102W	C CAPACITOR	1000pF 50V K		C3519	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3033	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J		C3520	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3034	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J		C3521	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3036	NDCA1HJ-8R0W	C CAPACITOR	8pF 50V J		C3522	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3037	NDCA1HJ-8R0W	C CAPACITOR	8pF 50V J		C3523	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3038	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3524	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3039	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3525	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3042	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3526	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3043	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3527	NDCA1EJ-221W	C CAPACITOR	220pF 25V J	
C3044	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3528	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3045	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3529	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C3046	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3706	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C3047	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3707	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3048	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K		C3708	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3049	NCBA1HK-222W	C CAPACITOR	2200pF 50V K		C3709	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3050	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3710	NBE90GM-226X	TA E CAPACITOR	22uF 4V M	
C3055	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3711	NBE90GM-226X	TA E CAPACITOR	22uF 4V M	
C3064	NCBA1HK-102W	C CAPACITOR	1000pF 50V K		C3712	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3077	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C3713	NBE20GM-107X	TA E CAPACITOR	100uF 4V M	
C3078	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C3715	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3079	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3731	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3080	NCBA1HK-102W	C CAPACITOR	1000pF 50V K		C3732	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3201	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3733	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	
C3202	NCB21AK-105X	C CAPACITOR	1uF 10V K		C3734	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	
C3203	NCB21AK-105X	C CAPACITOR	1uF 10V K		C3735	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3204	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		C3736	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C3205	NBE20GM-476X	TA E CAPACITOR	47uF 4V M		C3738	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3206	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3739	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3207	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3740	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C3208	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3741	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C3209	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3742	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3210	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3743	NDCA1HJ-3R0W	C CAPACITOR	3pF 50V J	
C3211	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3744	NDCA1HJ-5R0W	C CAPACITOR	5pF 50V J	
C3212	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3745	NDCA1HJ-330W	C CAPACITOR	33pF 50V J	
C3213	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3746	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C3214	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C3747	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C3215	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4201	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3216	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4204	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C3217	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C4205	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3218	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4206	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3219	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4207	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3220	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4208	NCBA1CK-123W	C CAPACITOR	0.012uF 16V K	
C3221	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		C4209	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3222	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4210	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3223	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4211	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C3224	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4213	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3225	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4214	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3226	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		C4215	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3227	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4216	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C3228	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4217	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3229	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4218	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C3230	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4219	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C3231	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		C4220	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

△ Symbol No.	Part No.	Part Name	Description	Local
C4221	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4222	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4301	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4302	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4303	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4304	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4305	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4306	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4307	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4308	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4309	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4310	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4311	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4312	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C4701	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4702	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4703	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4704	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4705	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C4707	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4708	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4709	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4710	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4711	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4712	NCBA0JK-224W	C CAPACITOR	0.22uF 6.3V K	
C4901	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4902	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4903	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4904	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4905	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4906	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4907	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4908	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4909	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C4912	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4914	NDCA1HJ-680W	C CAPACITOR	68pF 50V J	
C4915	NDCA1HJ-121W	C CAPACITOR	120pF 50V J	
C4916	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4917	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4951	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4952	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4953	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4954	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4955	NCFA1AZ-104W	C CAPACITOR	0.1uF 10V Z	
C4956	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C4957	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C4958	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C5001	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5003	NBE80JM-226X	TA E CAPACITOR	22uF 6.3V M	
C5004	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C5005	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5008	NBE20GM-476X	TA E CAPACITOR	47uF 4V M	
C5009	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C5010	NBZ0003-475X	TA E CAPACITOR	4.7uF 20V M	
C5011	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5012	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5013	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5014	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5015	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5016	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C5017	NBE41AM-476X	TA E CAPACITOR	47uF 10V M	
C5018	NCB21EK-104X	C CAPACITOR	0.1uF 25V K	
C5019	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5020	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C5021	NBZ0003-475X	TA E CAPACITOR	4.7uF 20V M	
C5022	NCB21EK-104X	C CAPACITOR	0.1uF 25V K	
C5023	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5024	NCB21EK-104X	C CAPACITOR	0.1uF 25V K	
C5025	NBP21VM-105X	TA E CAPACITOR	1uF 35V M	
C5026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5027	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5028	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C5029	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C5030	NDCA1HJ-220W	C CAPACITOR	22pF 50V J	
C6001	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C6002	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	

△ Symbol No.	Part No.	Part Name	Description	Local
C6003	NDCA1HJ-151W	C CAPACITOR	150pF 50V J	
C6004	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6005	NBE80JM-226X	TA E CAPACITOR	22uF 6.3V M	
C6006	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6101	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6103	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6105	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6106	NBP41DM-106X	TA E CAPACITOR	10uF 20V M	
C6107	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6108	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6109	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6110	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6111	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C6112	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C6113	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C6114	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C6115	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6116	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6117	NCBA1AK-333W	C CAPACITOR	0.033uF 10V K	
C6118	NCBA1HK-561W	C CAPACITOR	560pF 50V K	
C6119	NCBA1HK-272W	C CAPACITOR	2700pF 50V K	
C6120	NCBA1HK-561W	C CAPACITOR	560pF 50V K	
C6121	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C6122	NCBA1HK-471W	C CAPACITOR	470pF 50V K	
C6123	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6124	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6125	NDCA1HJ-101W	C CAPACITOR	100pF 50V J	
C6126	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C6127	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6128	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C6129	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6130	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6131	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6132	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C6133	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6134	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6201	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6202	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6203	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6204	NCBA1HK-561W	C CAPACITOR	560pF 50V K	
C6205	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6206	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6207	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6208	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C6209	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6210	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C6211	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6212	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6213	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6214	NCBA1AK-683W	C CAPACITOR	0.068uF 10V K	
C6215	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6216	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C6217	NCJA0JK-105W-A	C CAPACITOR	1uF 6.3V K	
C6218	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6219	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6220	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6221	NCBA1HK-102W	C CAPACITOR	1000pF 50V K	
C6222	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C6224	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6225	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6227	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6701	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C6702	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C8001	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8002	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8003	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8004	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8005	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8006	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8007	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8008	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8009	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8010	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8011	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8012	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8013	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8014	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C8015	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
C8016	NCB30JK-105X	C CAPACITOR	1uF 6.3V K		R1079	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
C8017	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		R1080	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
C8018	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1081	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
C8021	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K		R1082	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
C8022	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		R1083	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
C8023	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1084	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
C8024	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1085	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
C8025	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M		R1086	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
C8026	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1087	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
C8027	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1088	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
C8301	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M		R1089	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
C8305	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1090	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
C8306	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1091	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
C8307	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1092	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
C8310	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1093	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
C8311	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K		R1094	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1001	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J		R1095	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1006	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1096	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1008	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J		R1097	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1010	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1099	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1011	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1109	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1012	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1110	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1013	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1111	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1014	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1112	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1015	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1113	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1016	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1114	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R1017	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1116	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1018	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1117	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1019	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1118	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1020	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1119	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1021	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1120	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1022	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1121	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1024	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R1122	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1025	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R1123	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1026	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J		R1124	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1027	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R1125	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1030	NRSA6AJ-753W	MG RESISTOR	75kΩ 1/16W J		R1126	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1031	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J		R1127	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1032	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J		R1128	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1033	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J		R1129	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1034	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J		R1133	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1035	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1134	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1036	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1136	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1037	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J		R1137	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1038	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1138	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1040	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1140	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1041	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1151	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1042	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1152	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J	
R1043	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R1701	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R1044	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1702	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1045	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J		R1703	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1046	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1704	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1047	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1705	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R1048	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R1706	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R1049	NRSA6AJ-623W	MG RESISTOR	62kΩ 1/16W J		R1707	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1050	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J		R1708	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R1051	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R1709	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1052	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1710	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R1053	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J		R1711	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1054	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R1712	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1055	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J		R2001	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1056	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J		R2002	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R1057	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R2003	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1058	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R2004	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1061	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R2005	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1062	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J		R2006	NRSA6AJ-682W	MG RESISTOR	6.8kΩ 1/16W J	
R1067	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J		R2007	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1069	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R2101	NRSA6AJ-471W	MG RESISTOR	470Ω 1/16W J	
R1070	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J		R2102	NRSA6AJ-471W	MG RESISTOR	470Ω 1/16W J	
R1071	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J		R2201	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R1072	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J		R2202	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R1073	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R2203	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J	
R1074	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J		R2204	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R1075	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R2206	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R1076	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		R2207	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R1077	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R2208	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R1078	NRSA6AJ-393W	MG RESISTOR	39kΩ 1/16W J		R2209	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
					R2212	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
R2213	NRSA6AJ-2R7W	MG RESISTOR	2.7Ω 1/16W J	
R2217	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2227	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R2228	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R2229	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2230	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R2231	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R2401	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2402	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R2403	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R2407	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R2601	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2602	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R2604	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R2605	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R2607	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2608	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R2609	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R2610	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R2611	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R2612	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R2613	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R2614	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R2615	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R2616	NRSA6AJ-334W	MG RESISTOR	330kΩ 1/16W J	
R2801	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2802	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R2803	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2804	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R2805	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R2813	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3002	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3004	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3005	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3006	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R3007	NRSA6AJ-562W	MG RESISTOR	5.6kΩ 1/16W J	
R3008	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3009	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3010	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3011	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3013	NRSA6AJ-242W	MG RESISTOR	2.4kΩ 1/16W J	
R3014	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3015	NRSA6AJ-392W	MG RESISTOR	3.9kΩ 1/16W J	
R3016	NRVA6AD-560W	CMF RESISTOR	56Ω 1/16W D	
R3017	NRVA6AD-560W	CMF RESISTOR	56Ω 1/16W D	
R3018	NRVA6AD-560W	CMF RESISTOR	56Ω 1/16W D	
R3019	NRVA6AD-560W	CMF RESISTOR	56Ω 1/16W D	
R3020	NRVA6AD-512W	CMF RESISTOR	5.1kΩ 1/16W D	
R3025	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3027	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3029	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3030	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3031	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J	
R3032	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R3034	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3036	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3037	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J	
R3038	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3042	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R3043	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R3046	NRSA6AJ-181W	MG RESISTOR	180Ω 1/16W J	
R3047	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3049	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R3050	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R3057	NRSA6AJ-151W	MG RESISTOR	150Ω 1/16W J	
R3201	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3202	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R3203	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R3204	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3205	NRSA6AD-821W	MG RESISTOR	820Ω 1/16W D	
R3212	NRSA6AJ-151W	MG RESISTOR	150Ω 1/16W J	
R3213	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3214	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3501	NRSA6AJ-471W	MG RESISTOR	470Ω 1/16W J	
R3502	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3503	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3504	NRSA6AD-241W	MG RESISTOR	240Ω 1/16W D	
R3505	NRSA6AD-241W	MG RESISTOR	240Ω 1/16W D	

Symbol No.	Part No.	Part Name	Description	Local
R3506	NRSA6AD-241W	MG RESISTOR	240Ω 1/16W D	
R3507	NRSA6AD-241W	MG RESISTOR	240Ω 1/16W D	
R3508	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J	
R3511	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3521	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3522	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3523	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3524	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3525	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3526	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3527	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R3701	NRSA6AD-271W	MG RESISTOR	270Ω 1/16W D	
R3703	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3704	NRSA6AD-301W	MG RESISTOR	300Ω 1/16W D	
R3706	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R3707	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3708	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3709	NRSA6AD-680W	MG RESISTOR	68Ω 1/16W D	
R3710	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3711	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3712	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R3713	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3714	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J	
R3715	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R3722	NRSA6AD-750W	MG RESISTOR	75Ω 1/16W D	
R3724	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3725	NRSA6AD-750W	MG RESISTOR	75Ω 1/16W D	
R3726	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3727	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3728	NRSA6AD-750W	MG RESISTOR	75Ω 1/16W D	
R3730	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3731	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R3732	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R3733	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	
R3734	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J	
R3735	NRSA6AD-182W	MG RESISTOR	1.8kΩ 1/16W D	
R3736	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R3737	NRSA6AJ-183W	MG RESISTOR	18kΩ 1/16W J	
R3738	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J	
R3739	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3740	NRSA6AJ-821W	MG RESISTOR	820Ω 1/16W J	
R3741	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3742	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3743	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R3744	NRSA6AD-561W	MG RESISTOR	560Ω 1/16W D	
R3745	NRSA6AD-152W	MG RESISTOR	1.5kΩ 1/16W D	
R3746	NRSA6AJ-222W	MG RESISTOR	2.2kΩ 1/16W J	
R3747	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R3748	NRSA6AJ-474W	MG RESISTOR	470kΩ 1/16W J	
R4202	NRSA6AJ-510W	MG RESISTOR	51Ω 1/16W J	
R4203	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R4204	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4205	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4302	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R4303	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4304	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4306	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4307	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4312	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4313	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4314	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4315	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4316	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4317	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4318	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4319	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J	
R4701	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4702	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R4703	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R4704	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R4705	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R4706	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4707	NRSA6AJ-243W	MG RESISTOR	24kΩ 1/16W J	
R4708	NRSA6AJ-331W	MG RESISTOR	330Ω 1/16W J	
R4709	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4710	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4712	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R4713	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

△ Symbol No.	Part No.	Part Name	Description	Local	△ Symbol No.	Part No.	Part Name	Description	Local
R4714	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J		R6217	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R4715	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J		R6219	NRSA6AD-243W	MG RESISTOR	24kΩ 1/16W D	
R4716	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R6220	NRSA6AD-302W	MG RESISTOR	3kΩ 1/16W D	
R4717	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6221	NRSA6AD-104W	MG RESISTOR	100kΩ 1/16W D	
R4718	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R6222	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R4721	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R6223	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D	
R4722	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J		R6225	NRSA6AD-473W	MG RESISTOR	47kΩ 1/16W D	
R4723	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6226	NRSA6AD-562W	MG RESISTOR	5.6kΩ 1/16W D	
R4724	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6227	NRSA6AD-273W	MG RESISTOR	27kΩ 1/16W D	
R4901	NRSA6AJ-243W	MG RESISTOR	24kΩ 1/16W J		R6228	NRSA6AD-473W	MG RESISTOR	47kΩ 1/16W D	
R4902	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6229	NRSA6AJ-272W	MG RESISTOR	2.7kΩ 1/16W J	
R4903	NRSA6AJ-822W	MG RESISTOR	8.2kΩ 1/16W J		R6230	NRSA6AD-473W	MG RESISTOR	47kΩ 1/16W D	
R4904	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6231	NRSA6AD-332W	MG RESISTOR	3.3kΩ 1/16W D	
R4905	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J		R6232	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R4906	NRSA6AJ-684W	MG RESISTOR	680kΩ 1/16W J		R6233	NRSA6AD-203W	MG RESISTOR	20kΩ 1/16W D	
R4907	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J		R6234	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R4908	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J		R6235	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R4909	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J		R6236	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4910	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J		R6237	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J	
R4911	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J		R6240	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4912	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J		R6241	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R4914	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R6701	NRV142F-R20X	CMF RESISTOR	0.2Ω 1/4W F	
R4922	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R6702	NRSA6AD-104W	MG RESISTOR	100kΩ 1/16W D	
R4923	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J		R6703	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D	
R4924	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J		R6704	NRSA6AD-823W	MG RESISTOR	82kΩ 1/16W D	
R4935	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R6705	NRSA6AD-333W	MG RESISTOR	33kΩ 1/16W D	
R4945	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R8002	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4947	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J		R8005	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R4948	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J		R8007	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R4949	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J		R8008	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R4951	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R8009	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R4952	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R8016	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4953	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R8017	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4954	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		R8022	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R4955	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J		R8023	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R4956	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J		R8025	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R4957	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J		R8027	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4959	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J		R8028	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4960	NRSA6AJ-4R7W	MG RESISTOR	4.7Ω 1/16W J		R8029	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R4961	NRSA6AJ-271W	MG RESISTOR	270Ω 1/16W J		R8030	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R5002	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8031	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J	
R5003	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8032	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R5004	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8033	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R5005	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8036	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R5006	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8037	NRSA6AJ-221W	MG RESISTOR	220Ω 1/16W J	
R5009	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8041	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R5010	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8042	NRSA6AJ-220W	MG RESISTOR	22Ω 1/16W J	
R5017	NRSA6AJ-101W	MG RESISTOR	100Ω 1/16W J		R8302	NRS181J-220X	MG RESISTOR	22Ω 1/8W J	
R5019	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J		R8303	NRS181J-220X	MG RESISTOR	22Ω 1/8W J	
R5020	NRSA6AJ-100W	MG RESISTOR	10Ω 1/16W J		R8306	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6001	NRSA6AJ-224W	MG RESISTOR	220kΩ 1/16W J		R8307	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
△ R6002	NRSA63J-471X	MG RESISTOR	470Ω 1/16W J		R8308	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
△ R6003	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J		R8309	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R6004	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J		R8310	NRSA6AJ-153W	MG RESISTOR	15kΩ 1/16W J	
R6005	NRSA6AD-513W	MG RESISTOR	51kΩ 1/16W D		R8313	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R6006	NRSA6AD-243W	MG RESISTOR	24kΩ 1/16W D		R8314	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6101	NRSA6AD-103W	MG RESISTOR	10kΩ 1/16W D		R8315	NRSA6AJ-105W	MG RESISTOR	1MΩ 1/16W J	
R6102	NRSA6AJ-751W	MG RESISTOR	750Ω 1/16W J		R8316	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R6103	NRSA6AD-622W	MG RESISTOR	6.2kΩ 1/16W D		R8317	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R6104	NRSA6AJ-333W	MG RESISTOR	33kΩ 1/16W J		RA3001	NRZ0034-560W	NET RESISTOR	56Ω 1/32W J	
R6105	NRSA6AJ-562W	MG RESISTOR	5.6kΩ 1/16W J		RA3002	NRZ0034-560W	NET RESISTOR	56Ω 1/32W J	
R6106	NRSA6AJ-223W	MG RESISTOR	22kΩ 1/16W J		RA3003	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J	
R6107	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		RA3004	NRZ0034-103W	NET RESISTOR	10kΩ 1/32W J	
R6108	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J		RA3201	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6109	NRSA6AJ-823W	MG RESISTOR	82kΩ 1/16W J		RA3202	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6110	NRSA6AD-153W	MG RESISTOR	15kΩ 1/16W D		RA4201	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6113	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		RA4202	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6202	NRSA6AD-273W	MG RESISTOR	27kΩ 1/16W D		RA4301	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6204	NRSA6AD-133W	MG RESISTOR	13kΩ 1/16W D		RA4302	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6205	NRSA6AJ-473W	MG RESISTOR	47kΩ 1/16W J		RA4303	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6206	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J		RA4304	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6207	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D		RA4307	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J	
R6208	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D		RA4308	NRZ0034-100W	NET RESISTOR	10Ω 1/32W J	
R6210	NRSA6AD-123W	MG RESISTOR	12kΩ 1/16W D		RA8001	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6211	NRSA6AD-153W	MG RESISTOR	15kΩ 1/16W D		RA8002	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6213	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D		RA8003	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6215	NRSA6AD-472W	MG RESISTOR	4.7kΩ 1/16W D		RA8004	NRZ0034-101W	NET RESISTOR	100Ω 1/32W J	
R6216	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J						

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
L1001	NQL402M-100X	COIL	10uH M	
L1002	NQL402M-100X	COIL	10uH M	
L2101	NQL402M-100X	COIL	10uH M	
L2401	NQL402M-100X	COIL	10uH M	
L2402	NQL402M-100X	COIL	10uH M	
L2601	NQR0269-013X	FERRITE BEADS		
L2602	NQR0269-013X	FERRITE BEADS		
L2603	NQR0269-013X	FERRITE BEADS		
L2651	NQR0269-013X	FERRITE BEADS		
L2652	NQR0269-013X	FERRITE BEADS		
L2653	NQR0269-013X	FERRITE BEADS		
L2801	NQR0251-004X	FERRITE BEADS		
L2802	NQR0251-004X	FERRITE BEADS		
L3001	NQR0129-002X	FERRITE BEADS		
L3002	NQR0129-002X	FERRITE BEADS		
L3004	NQR0006-001X	FERRITE BEADS		
L3005	NQR0006-001X	FERRITE BEADS		
L3007	NQL085J-2R2X	COIL	2.2uH J	
L3008	NQL085J-120X	COIL	12uH J	
L3012	NQR0129-002X	FERRITE BEADS		
L3015	NQR0006-001X	FERRITE BEADS		
L3201	NQR0129-002X	FERRITE BEADS		
L3202	NQR0129-002X	FERRITE BEADS		
L3203	NQR0006-001X	FERRITE BEADS		
L3204	NQL38DK-100X	P COIL	10uH K	
L3501	NQR0129-002X	FERRITE BEADS		
L3502	NQL402M-100X	COIL	10uH M	
L3503	NQR0006-001X	FERRITE BEADS		
L3504	NQR0006-001X	FERRITE BEADS		
L3505	NQR0006-001X	FERRITE BEADS		
L3701	NQL38DK-100X	P COIL	10uH K	
L3731	NQL085J-6R8X	COIL	6.8uH J	
L3732	NQL085J-6R8X	COIL	6.8uH J	
L4201	NQL38DK-100X	P COIL	10uH K	
L4202	NQL38DK-100X	P COIL	10uH K	
L4301	NQR0129-002X	FERRITE BEADS		
L4302	NQR0129-002X	FERRITE BEADS		
L4303	NQR0129-002X	FERRITE BEADS		
L4304	NQR0129-002X	FERRITE BEADS		
L4305	NQR0129-002X	FERRITE BEADS		
L4701	NQL38DK-100X	P COIL	10uH K	
L4901	NQR0129-002X	FERRITE BEADS		
L4902	NQL38DK-100X	P COIL	10uH K	
L4953	NQR0129-002X	FERRITE BEADS		
L4954	NQL38DK-100X	P COIL	10uH K	
L4955	NQL38DK-100X	P COIL	10uH K	
L5001	NQR0129-002X	FERRITE BEADS		
L5002	NQL38DK-100X	P COIL	10uH K	
L5003	NQL38DK-100X	P COIL	10uH K	
L5004	NQL38DK-100X	P COIL	10uH K	
L5005	NQR0129-002X	FERRITE BEADS		
L5006	NQL38DK-100X	P COIL	10uH K	
L5007	NQR0129-002X	FERRITE BEADS		
L5008	NQL38DK-100X	P COIL	10uH K	
L6001	NQL62EM-390X	INDUCTOR	39uH M	
L6101	NQL62EM-100X	COIL	10uH M	
L6102	NQL62EM-100X	COIL	10uH M	
L6201	NQL62EM-390X	COIL	39uH M	
L6202	NQL62EM-390X	COIL	39uH M	
L6203	NQL52EM-390X	INDUCTOR	39uH M	
L6204	NQL144K-220X	P COIL	22uH K	
L6205	NQL62EM-470X	COIL	47uH M	
L6206	NQL62EM-470X	COIL	47uH M	
L6207	NQLZ011-221X	COIL	220uH M	
L6208	NQL38DK-100X	P COIL	10uH K	
L6701	NQL52EM-100X	COIL	10uH M	
L8001	NQR0129-002X	FERRITE BEADS		
L8002	NQR0129-002X	FERRITE BEADS		
L8003	NQR0129-002X	FERRITE BEADS		
L8004	NQR0006-001X	FERRITE BEADS		
L8005	NQR0129-002X	FERRITE BEADS		
L8006	NQR0006-001X	FERRITE BEADS		
L8301	NQR0129-002X	FERRITE BEADS		
CN101	QGF0532F2-21X	CONNECTOR	BATT.TERM. FFC/FPC (1-21)	
CN102	QGF0517F2-20X	CONNECTOR	CCD FFC/FPC (1-20)	
CN103	QGF0537F2-30X	CONNECTOR	MDA PWB FFC/FPC (1-30)	
CN104	QGF0307F2-39W	CONNECTOR	MONI PWB FFC/FPC (1-39)	

Symbol No.	Part No.	Part Name	Description	Local
CN105	QGB0512L4-40X	CONNECTOR	JIG CN B-B (1-40)	
CN106	QGF0517F2-16X	CONNECTOR	SENSOR FFC/FPC (1-16)	
CN107	QGF0530F3-28W	CONNECTOR	OP FFC/FPC (1-28)	
CN108	QGF0517F2-07X	CONNECTOR	POWER SW FFC/FPC (1-7)	
CN109	QGF0532F2-13X	CONNECTOR	OPERATION FFC/FPC (1-13)	
CN110	QGF0517F1-08X	CONNECTOR	HEAD FFC/FPC (1-8)	
CN111	QGA1001F1-04X	CONNECTOR	INT MIC W-B (1-4)	
CN112	QGF0517F2-12X	CONNECTOR	FRONT PWB FFC/FPC (1-12)	
CN113	QGF0532F2-22X	CONNECTOR	VF PWB FFC/FPC (1-22)	
CN114	QGF0532F2-12X	CONNECTOR	SD PWB FFC/FPC (1-12)	
CN115	QGF0532F2-06X	CONNECTOR	SUB OPE. FFC/FPC (1-6)	
△ F4951	NMFZ007-R25X-K	FUSE	0.25A 50V	
△ F4952	NMFZ007-R20X-K	FUSE	0.2A 50V	
△ F6001	NMFZ007-1R0X-K	FUSE	1A 32V	
△ F6101	NMFZ007-2R0X-K	FUSE	2A 32V	
△ F6201	NMFZ007-1R25X-K	FUSE	1.25A 32V	
J101	QNS0233-001	3.5 JACK	EXT MIC	
J102	QNZ0497-001	USB(B) CONNECTOR	USB	
J103	QNZ0669-002	M C CONNECTOR	MULTI	
J104	QNA0037-002	DC JACK	DC JACK	
J105	QNZ0518-002	D CONNECTOR	DV	
X1001	NAX0645-001X	CRYSTAL		
X1002	NAX0564-001X	CRYSTAL		
X3002	NAX0480-001X	CRYSTAL		
X4301	NAX0587-001X	CXO	54MHZ 5*3	
X8301	NAX0612-001X	C RESONATOR		
OT1	LY30034-024A	SPACER(A)	IC8003	
OT2	LY44158-001A	SHEET(SHIELD)		
OT3	LY44621-001A	SPACER	YSK ONLY	
OT4	LY44622-001A	SPACER	YSK ONLY	
OT5	LY30034-063A	SPACER(A)	BATT FPC	
SD1	LY34062-001A	SHIELD CASE	PRE/REC	

### CCD BOARD ASSEMBLY <02>

Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10473A-01	CCD BOARD ASSY		
Q5201	2SC3931/CD/-X	TRANSISTOR	CCD OUT	
Q5202	2SC4081/RS/-X	TRANSISTOR	VSUB CTL	
Q5203	2SC3931/CD/-X	TRANSISTOR	CCD BUFFER	
C5201	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5202	NBZ0018-106X	TA E CAPACITOR	10uF 20VM	
C5203	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C5204	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C5205	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C5206	NCB31EK-104X	C CAPACITOR	0.1uF 25V K	
C5207	NCB31HK-222X	C CAPACITOR	2200pF 50V K	
R5201	NRSA63J-332X	MG RESISTOR	3.3kΩ 1/16W J	
R5202	NRSA63J-152X	MG RESISTOR	1.5kΩ 1/16W J	
R5203	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R5204	NRSA63J-123X	MG RESISTOR	12kΩ 1/16W J	
R5205	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R5206	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R5207	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
L5201	NQL38DK-100X	P COIL	10uH K	
L5202	NQL38DK-100X	P COIL	10uH K	

### MDA BOARD ASSEMBLY <03>

Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10459A-01	MDA BOARD ASSY		
△ IC1601	BD6637KV	IC	MDA 64PIN	
Q1601	UMC3N-W	DIGI TRANSISTOR	LD ON	
D1602	DAP222-X	DIODE ARRAY	LD OUT	

MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

△ Symbol No.	Part No.	Part Name	Description	Local
D1602	or MA132WA-X	SI DIODE		
D1603	DAP222-X	DIODE ARRAY	LD ON	
D1603	or MA132WA-X	SI DIODE		
D1604	DAP222-X	DIODE ARRAY	C.ERR-3V	
D1604	or MA132WA-X	SI DIODE		
C1601	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1602	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C1603	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C1605	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
C1606	NCBA1HK-152W	C CAPACITOR	1500pF 50V K	
C1607	NCBA1CK-473W	C CAPACITOR	0.047uF 16V K	
C1614	NBE91AM-475X	TA E CAPACITOR	4.7uF 10V M	
C1618	NCBA1HK-222W	C CAPACITOR	2200pF 50V K	
C1619	NCBA1HK-222W	C CAPACITOR	2200pF 50V K	
C1620	NCBA1HK-222W	C CAPACITOR	2200pF 50V K	
C1621	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C1622	NCBA1CK-223W	C CAPACITOR	0.022uF 16V K	
C1623	NCBA1AK-473W	C CAPACITOR	0.047uF 10V K	
C1624	NCBA1CK-103W	C CAPACITOR	0.01uF 16V K	
C1625	NDCA1HJ-101W	C CAPACITOR	100pF 50V J	
C1626	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C1627	NCBA1EK-472W	C CAPACITOR	4700pF 25V K	
C1628	NCB31CK-224X	C CAPACITOR	0.22uF 16V K	
C1629	NCJ31EK-224X-A	C CAPACITOR	0.22uF 25V K	
C1630	NCJ31EK-224X-A	C CAPACITOR	0.22uF 25V K	
C1631	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C1632	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C1633	NCB30JK-474X	C CAPACITOR	0.47uF 6.3V K	
R1601	NRSA6AJ-681W	MG RESISTOR	680Ω 1/16W J	
R1602	NRSA6AJ-124W	MG RESISTOR	120kΩ 1/16W J	
R1603	NRSA6AJ-472W	MG RESISTOR	4.7kΩ 1/16W J	
R1604	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1610	NRSA6AJ-391W	MG RESISTOR	390Ω 1/16W J	
R1611	NRSA6AJ-391W	MG RESISTOR	390Ω 1/16W J	
R1612	NRSA6AJ-104W	MG RESISTOR	100kΩ 1/16W J	
R1613	NRSA6AJ-102W	MG RESISTOR	1kΩ 1/16W J	
R1614	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1616	NRSA6AD-392W	MG RESISTOR	3.9kΩ 1/16W D	
R1617	NRZ0072-R330X	MG RESISTOR	0.33Ω 1/4W F	
R1620	NRSA6AJ-683W	MG RESISTOR	68kΩ 1/16W J	
R1621	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1622	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R1624	NRSA6AD-183W	MG RESISTOR	18kΩ 1/16W D	
R1625	NRSA6AD-681W	MG RESISTOR	680Ω 1/16W D	
R1629	NRSA6AJ-564W	MG RESISTOR	560kΩ 1/16W J	
R1630	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1631	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1635	NRSA6AJ-332W	MG RESISTOR	3.3kΩ 1/16W J	
R1636	NRSA6AJ-123W	MG RESISTOR	12kΩ 1/16W J	
R1637	NRSA6AJ-154W	MG RESISTOR	150kΩ 1/16W J	
R1638	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1639	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R1640	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J	
R1641	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
R1642	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
L1601	NQL382M-100X	COIL	10uH M	
CN301	QGF0532F2-18X	CONNECTOR	CAPSTAN FFC/FPC (1-18)	
CN302	QGF0532F2-11X	CONNECTOR	DRUM MOTOR FFC/FPC (1-11)	
CN303	QGF0532F2-06X	CONNECTOR	R.ENCODER FFC/FPC (1-6)	
CN304	QGF0517F2-06X	CONNECTOR	LOAD MOTOR FFC/FPC (1-6)	
CN305	QGF0537F1-30X	CONNECTOR	MAIN PWB FFC/FPC (1-30)	
△ F1601	NMFZ007-R20X-K	FUSE	0.2A 50V	
△ F1602	NMFZ007-R50X-K	FUSE	0.5A 50V	
OT1	LY44587-001B	SHEET(MDA)	MECHA	
OT2	LY30034-080A	SPACER(A)	IC1601	
OT3	LY30034-036A	SPACER(A)	FOR IC1001	
OT4	LY30034-037A	SPACER(A)	FOR IC2201	
WR1	WJT0142-001B	E-CARD WIRE	MAIN PWB	

### FRONT BOARD ASSEMBLY <04>

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10474A	FRONT BOARD ASSY		
IC401	RPM7138-S	IR DETECT UNIT	IR	
Q401	RPM-22PB	PHOTO TRANSISTOR	W/B	
Q6501	DTC114EM-X	DIGI TRANSISTOR		
Q6502	EMT1-W	PAIR TRANSISTOR		
Q6503	EMT1-W	PAIR TRANSISTOR		
D401	SML-211UT-X	LED	TALLY	
D6501	LWE67C/U2V45C/X	LED	WHITE	
D6501	or LWE67C/U2V/4/-X	LED	WHITE	
D6502	LWE67C/U2V45C/X	LED	WHITE	
D6502	or LWE67C/U2V/4/-X	LED	WHITE	
D6503	LWE67C/U2V45C/X	LED	WHITE	
D6503	or LWE67C/U2V/4/-X	LED	WHITE	
C401	NBXJ0JM-106X	TA E CAPACITOR	10uF 6.3V M	
C402	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
R401	NRSA6AJ-152W	MG RESISTOR	1.5kΩ 1/16W J	
R402	NRSA6AJ-470W	MG RESISTOR	47Ω 1/16W J	
R6501	NRSA6AJ-561W	MG RESISTOR	560Ω 1/16W J	
R6502	NRSA6AJ-121W	MG RESISTOR	120Ω 1/16W J	
R6503	NRSA6AJ-120W	MG RESISTOR	12Ω 1/16W J	
R6504	NRSA6AJ-120W	MG RESISTOR	12Ω 1/16W J	
R6505	NRSA6AJ-120W	MG RESISTOR	12Ω 1/16W J	
L401	NQR0265-001X	FERRITE BEADS		
BT401	QAB0040-001	LITHIUM BATTERY		
CN401	QGF0532F2-12X	CONNECTOR	MAIN PWB FFC/FPC (1-12)	
S401	NSW0122-001X	DETECT SWITCH	EJECT SW	
OT1	LY30034-038A	SPACER(A)	BT401	
OT2	LY30034-028A	SPACER(A)	Q401	
OT3	LY30034-042A	SPACER(A)	FOR FFC	

### MONITOR BOARD ASSEMBLY <05>

△ Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10461A-02	MONITOR BOARD ASSY		
IC7601	CXA3657R	IC	SONY MT+VF	
IC7602	MM1613BN-X	IC	3.1V	
IC7604	DN8797MS-X	IC		
Q7501	2SD1664/QR/-W	TRANSISTOR		
Q7502	2SD1664/QR/-W	TRANSISTOR		
Q7503	DTA144EE-X	DIGI TRANSISTOR		
Q7503	or RN2104-X	DIGI TRANSISTOR		
Q7503	or UN9113J-X	DIGI TRANSISTOR		
Q7504	2SC4617/QR/-X	TRANSISTOR		
Q7504	or 2SC4738/YG/-X	TRANSISTOR		
D7601	UDZ55.6B-X	Z DIODE		
C7501	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7502	NCZ1016-150X	C CAPACITOR	15pF 2kV J	
C7503	NFV41HJ-183X	MPPS CAPACITOR	0.018uF 50V J	
C7504	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7510	NCB10JK-106X	C CAPACITOR	10uF 6.3V K	
C7602	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7603	NCB30JK-105X	C CAPACITOR	1uF 6.3V K	
C7607	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7608	NCB31CK-223X	C CAPACITOR	0.022uF 16V K	
C7609	NBE21AM-335X	TA E CAPACITOR	3.3uF 10V M	
C7610	NCB31HK-682X	C CAPACITOR	6800pF 50V K	
C7611	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7612	NCB31EK-103X	C CAPACITOR	0.01uF 25V K	
C7613	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7614	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7615	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	



MODEL	MARK	MODEL	MARK	MODEL	MARK
GR-DX107EK	A	GR-DX107EZ	D	GR-DX307EY	G
GR-DX107EX	B	GR-DX307EK	E	GR-DX307EZ	H
GR-DX107EY	C	GR-DX307EX	F	GR-DX317EX	J

Symbol No.	Part No.	Part Name	Description	Local
C7616	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7617	NBE21AM-106X	TA E CAPACITOR	10uF 10V M	
C7618	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C7619	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C7620	NCB21CK-474X	C CAPACITOR	0.47uF 16V K	
C7621	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7622	NCB20JM-475X	C CAPACITOR	4.7uF 6.3V M	
C7623	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7624	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7625	NBE20JM-106X	TA E CAPACITOR	10uF 6.3V M	
C7626	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7627	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7628	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7629	NCB21CK-105X	C CAPACITOR	1uF 16V K	
C7630	NCB21CK-105X	C CAPACITOR	1uF 16V K	

R7501	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7502	NRSA63J-102X	MG RESISTOR	1kΩ 1/16W J	
R7506	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R7507	NRSA63J-473X	MG RESISTOR	47kΩ 1/16W J	
R7606	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7608	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
R7609	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7610	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7611	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7612	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7613	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7614	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R7615	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R7616	NRSA63J-100X	MG RESISTOR	10Ω 1/16W J	
R7618	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	

L7501	NQL76EM-680X	COIL	68uH M	
L7502	NQL76EM-220X	COIL	22uH M	
L7601	NQL04DK-100X	COIL	10uH K A,B,C,D,J	
L7602	NQL04DK-100X	COIL	10uH K E,F,G,H	
L7602	NRSA02J-0R0X	MG RESISTOR	0Ω 1/10W J A,B,C,D,J	
L7603	NQL38DK-101X	P COIL	100uH K	
L7604	NQL04DK-100X	COIL	10uH K	
△ T7501	NQS0060-001X	SW TARN SF		

CN7601	QGF0530F3-20W	CONNECTOR	MAIN FFC/FPC (1-20)	
CN7602	QGF0530F3-20W	CONNECTOR	MAIN FFC/FPC (1-20)	
CN7603	QGF0530F3-24W	CONNECTOR	LCD FFC/FPC (1-24)	
△ F7501	NMFZ007-R40X-K	FUSE	0.4A 50V	
OT1	LY44581-001A	SHEET(CUSHION)		
WR1	QAL0548-001	FPC		

### VF BOARD ASSEMBLY <06>

Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10462A	VF BOARD ASSY		
Q7001	2SC4617/QR/-X	TRANSISTOR		
Q7001	or 2SC4738/YG/-X	TRANSISTOR		
D7001	E1S35AW0C501-X	LED		
D7002	UDZS5.6B-X	Z DIODE		
C7003	NCB31CK-104X	C CAPACITOR	0.1uF 16V K	
C7004	NCB21CK-105X	C CAPACITOR	1uF 16V K	
R7001	NRVA63D-682X	CMF RESISTOR	6.8kΩ 1/16W D	
R7002	NRVA63D-272X	CMF RESISTOR	2.7kΩ 1/16W D	
R7003	NRVA63D-390X	CMF RESISTOR	39Ω 1/16W D	
R7004	NRSA63J-105X	MG RESISTOR	1MΩ 1/16W J	
R7005	NRSA63J-0R0X	MG RESISTOR	0Ω 1/16W J	
R7006	NRSA63J-103X	MG RESISTOR	10kΩ 1/16W J	
CN7001	QGF0532F2-20X	CONNECTOR	MAIN FFC/FPC (1-20)	
CN7002	QGF0532F2-20X	CONNECTOR	LCD FFC/FPC (1-20)	

### SD BOARD ASSEMBLY <07>

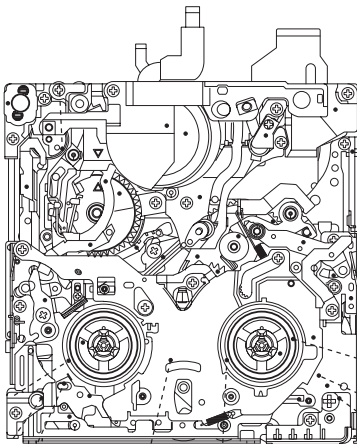
Symbol No.	Part No.	Part Name	Description	Local
PW1	YB10463A-01	SD BOARD ASSY		
D8501	EMZ6.8N-X	Z DIODE		
C8501	NBZ0015-106X	TA E CAPACITOR	10uF 6.3V M	
C8502	NCBA1AK-104W	C CAPACITOR	0.1uF 10V K	
R8501	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8502	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8503	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8504	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8505	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8506	NRSA6AJ-103W	MG RESISTOR	10kΩ 1/16W J	
R8507	NRSA6AJ-0R0W	MG RESISTOR	0Ω 1/16W J	
L8501	NQR0006-001X	FERRITE BEADS		
CN701	QGF0532F2-12X	CONNECTOR	MAIN PWB FFC/FPC (1-12)	
CN702	NNZ0104-001X	SD CARD CONNE	SD CN	
S701	NSW0099-001X	SLIDE SWITCH	DSC/VIDEO	
OT1	LY30034-026B	SPACER(A)	SD CN	
OT2	LY30034-068A	SPACER(A)	DSC/VIDEO	

# JVC

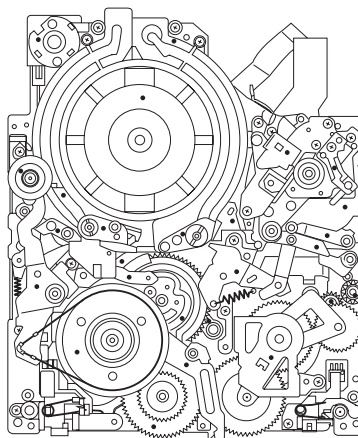
## SERVICE MANUAL

MECHANISM ASSEMBLY

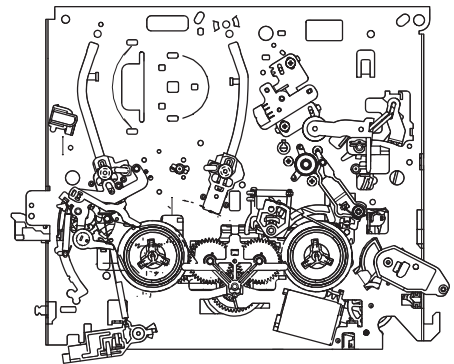
### DVC MECHANISM VHS-C MECHANISM VHS MECHANISM



<DVC MECHANISM>



<VHS-C MECHANISM>



<VHS MECHANISM>

#### TABLE OF CONTENTS

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2	SPECIFIC SERVICE INSTRUCTIONS .....	2-1
3	PARTS LIST .....	3-1

# SECTION 1 JIGS AND TOOLS

## 1.1 TOOLS REQUIRED FOR ADJUSTMENTS

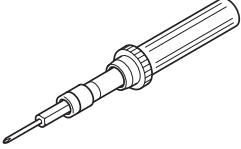
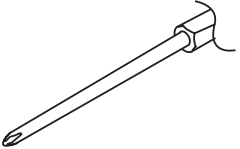
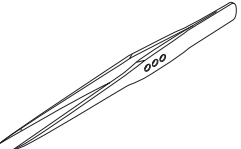
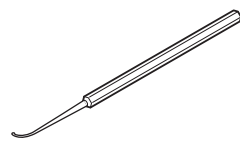
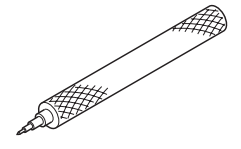
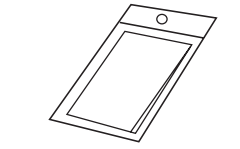
<p>1. Torque driver YTU94088</p> 	<p>2. Bit YTU94088-003</p> 
<p>3. Tweezers P-895</p> 	<p>4. Chip IC replacement jig PTS40844-2</p> 
<p>5. Slit washer installation jig YTU94121A</p> 	<p>6. Cleaning cloth KSMM-01</p> 

Fig.1-1-1

### 1. Torque driver

Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

### 2. Bit

This bit is slightly longer than those set in conventional torque drivers.

### 3. Tweezers

To be used for removing and installing parts and wires.

### 4. Chip IC replacement jig

To be used for replacement of part.

### 5. Slit washer installation jig

To be used to install slit washers.

### 6. Cleaning cloth

Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

## SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

### 2.1 DVC MECHANISM

#### 2.1.1 Precautions

- (1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.055 N•m (0.56 kgf•cm).
- (2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
- (3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
- (4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

#### 2.1.2 Notes on procedure for disassembly/assembly

The disassembling procedure table (Fig. 2-1-10 on page 2-4, a part of the table is shown below for reference) shows the procedure to disassemble/reassemble mechanism parts.

Carefully read the following explanation before starting actual disassembling/reassembling work. The item numbers (circled numbers) in the following explanation correspond to those appearing under respective columns of the table.

#### Example

NO.	PART NAME	FIG.	POINT	NOTE	REMARKS	
[ 1 ]	CASSETTE HOUSING ASSY	T	Fig.2-4-3	3(S1),(L1a)-(L1e)	NOTE 1 a,b,c,d	ADJUSTMENT
[ 2 ]	UPPER BASE ASSY	T	Fig.2-4-4	(S2),(L2a),(L2b)	NOTE 2	
[ 3 ]	DRUM ASSY	T		(S3a),2(S3b)	NOTE 3 a,b	
[ 4 ]	REEL DISK ASSY(SUP)	T	Fig.2-4-5	(W4)	NOTE 4 a	
[ 5 ]	REEL DISK ASSY(TU)	T		(W5a),(W5b),(W5c)	NOTE 5 a,b	
[ 6 ]	REEL COVER ASSY	T		(W6),(S6a),2(S6b)	NOTE 6	ADJUSTMENT

\*1 ↑

\*2 ↑

\*3 ↑

\*4 ↑

\*5 ↑

\*6 ↑

\*7 ↑

\*1 Numbers appearing in this column indicate the order to remove parts. When reassembling, follow these numbers in the reverse order. Circled numbers in this column correspond to those appearing in drawings of this section.

\*2 This column shows part names corresponding to numbers in the left column.

\*3 The symbol (T or B) appearing in this column shows the side which the objective part is mounted on.

T = the upper side, B = the lower side

\*4 Symbols appearing in this column indicate drawing numbers.

\*5 This column indicates parts and points such as screws, washers, springs, and others to be removed/fitted for disassembling/reassembling the mechanism. Besides such the parts, this column occasionally indicates working points.

P = Spring  
W = Washer  
S = Screw

\* = Lock (L), soldering (SD), shield, connector (CN), etc.

\*6 Numbers in this column represent the numbers of notes in the text.

(For parts that need phase adjustment after reassembling, refer to "MECHANISM ADJUSTMENTS".)

\*7 This column indicates required after-disassembling/reassembling work such as phase adjustment or mechanism adjustment.

#### Example

- Remove (W1)=Washer W1.
- Remove the solder at (SD1)=Point SD1.
- Disconnect A = Connector A.

## 2.1.3 DISASSEMBLY AND ASSEMBLY OF MECHANISM ASSEMBLY

### 2.1.3.1 General statement

The mechanism should generally be disassembled/assembled in the C.IN mode (ASSEMBLY mode). (Refer to Fig. 2-1-1,2-1-2.) However, when the mechanism is removed from the main body, it is set in the STOP mode. Therefore, after the mechanism is removed from the main body, supply 3 V DC to the electrode on the top of the loading motor to enter the mechanism mode into the C IN mode compulsorily.

#### <Mechanism assembly/Cassette housing assembly>

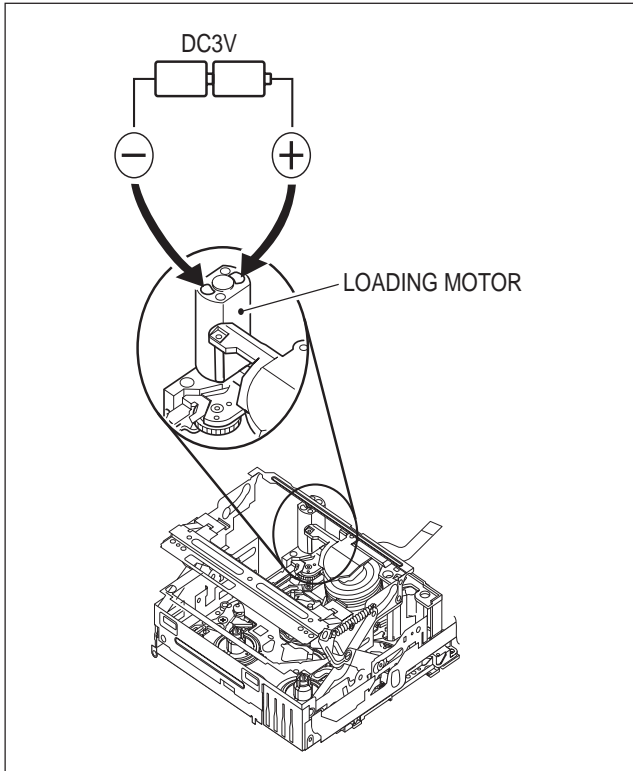


Fig.2-1-1

#### <Back side of the mechanism assembly>

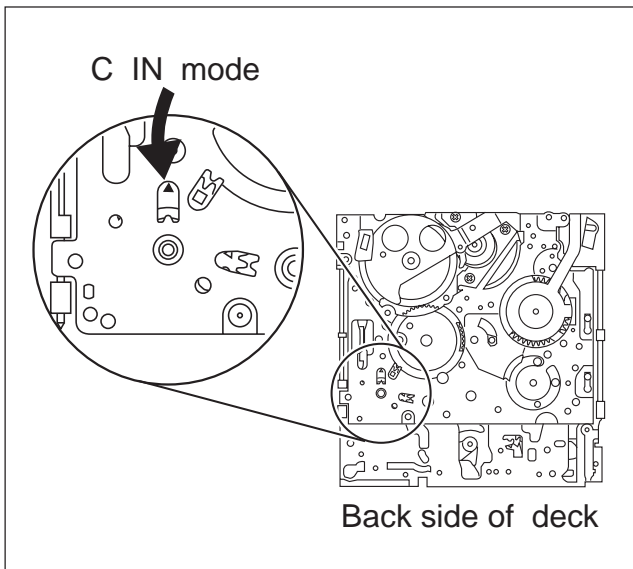


Fig.2-1-2

### 2.1.3.2 Explanation of mechanism mode

The mechanism mode of this model is classified into five modes as shown in Fig. 2-1-9. Each mechanism mode can be distinguished from others by the relative position of "△", "○", "○", "□" marks on the sub cam gear to the inner or outer protrusion on the main deck.

Refer to Fig. 2-1-3 to 2-1-8 below.

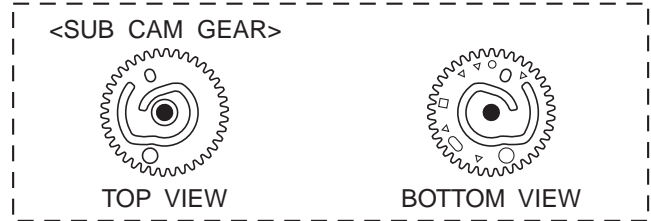


Fig.2-1-3

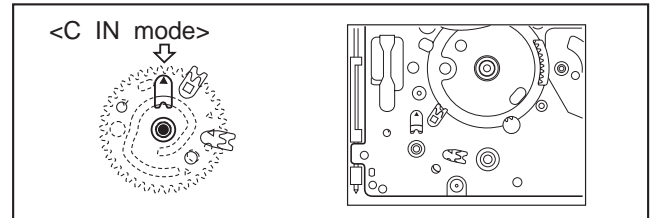


Fig.2-1-4

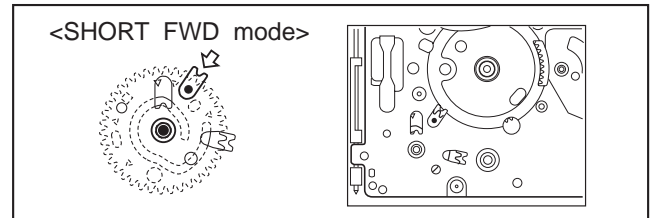


Fig.2-1-5

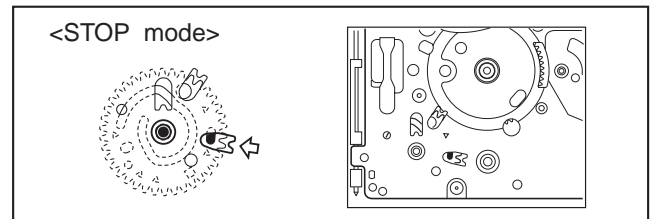


Fig.2-1-6

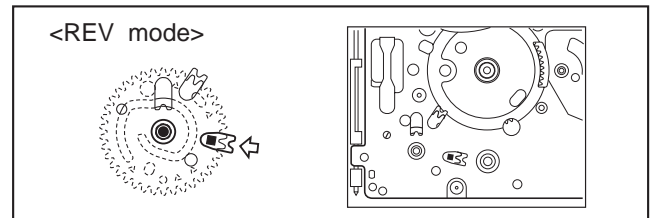


Fig.2-1-7

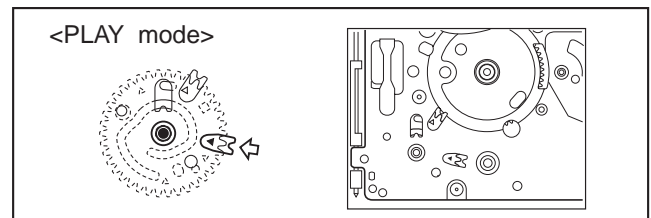


Fig.2-1-8

### 2.1.3.3 Mechanism timing chart

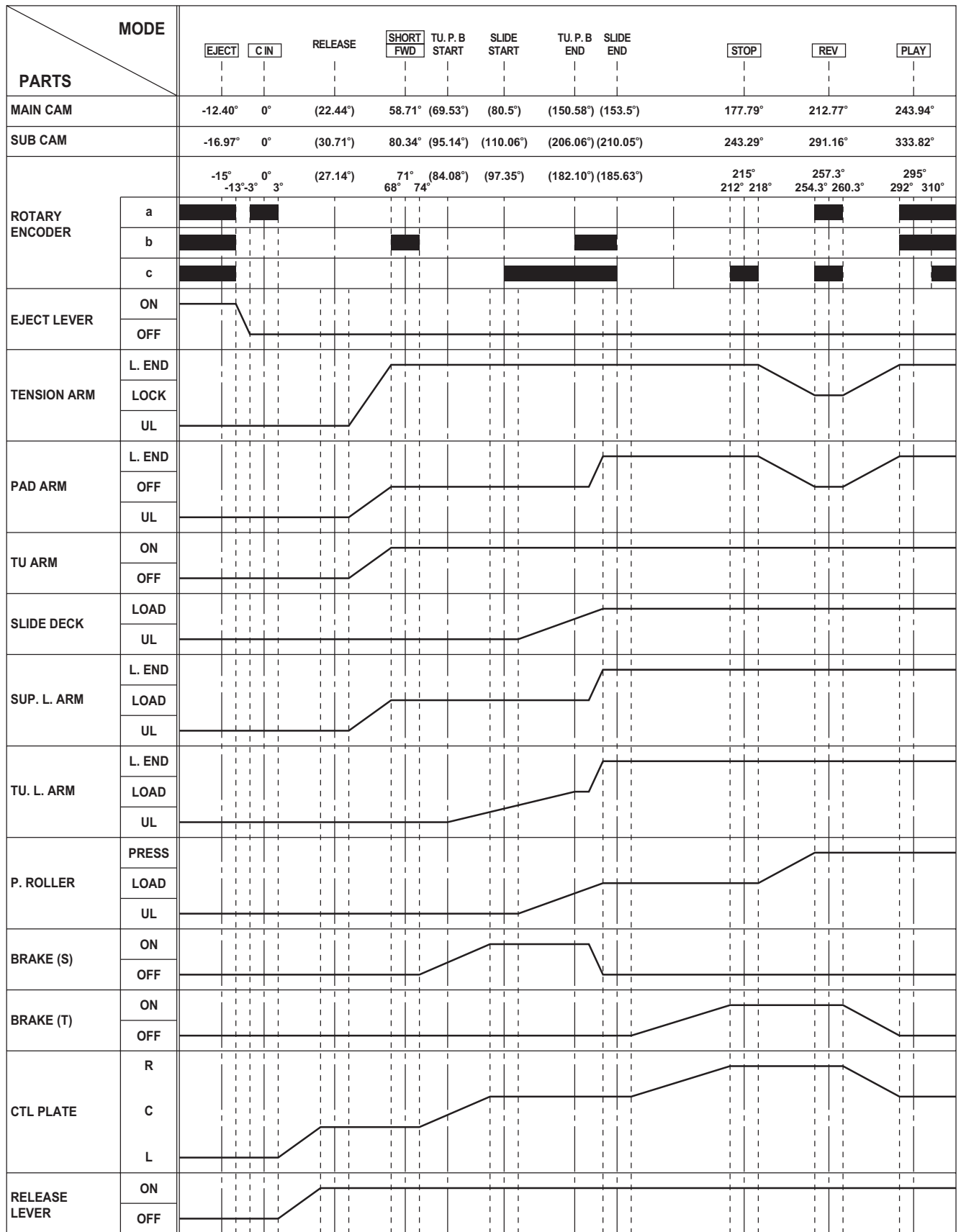


Fig.2-1-9

## 2.1.4 DISASSEMBLY PROCEDURE TABLE

MARK: # After assembly, perform adjustments.

NO.	PART NAME		FIG.	POINT	NOTE	REMARKS
[ 1 ]	CASSETTE HOUSING ASSY	T	Fig.2-1-14	3(S1),(L1a)-(L1e)	NOTE 1 a,b,c,d	ADJUSTMENT
[ 2 ]	UPPER BASE ASSY	T	Fig.2-1-15	(S2),(L2a),(L2b)	NOTE 2	
[ 3 ]	DRUM ASSY	T		(S3a),2(S3b)	NOTE 3 a,b	ADJUSTMENT
[ 4 ]	REEL DISK ASSY(SUP)	T	Fig.2-1-16	(W4)	NOTE 4	
[ 5 ]	REEL DISK ASSY(TU)	T		(W5a),(W5b)	NOTE 5 a,b	
[ 6 ]	REEL COVER ASSY	T		(W6),2(S6a),(S6b)	NOTE 6	
[ 7 ]	TENSION ARM ASSY	T	Fig.2-1-17	(L7)	NOTE 7	ADJUSTMENT / #
[ 8 ]	SLANT POLE ARM ASSY	T		(P8)	NOTE 8	ADJUSTMENT
[ 9 ]	TU ARM ASSY	T		(L9)	NOTE 9	ADJUSTMENT
[10]	SWING ARM ASSY	T		(S10)	NOTE 10	ADJUSTMENT
[11]	SLIDE DECK ASSY	T	Fig.2-1-18	2(S11a),(S11b),2(L11a), 2(L11b),(L11c)	NOTE 11a,b	ADJUSTMENT / #
[12]	PAD ARM ASSY	T	Fig.2-1-19	(P12),(L12),(W12)	NOTE 12	ADJUSTMENT / #
[13]	-	-		-	-	
[14]	TU BRAKE ASSY	T		(P14),(L14),(W14)	NOTE 14	ADJUSTMENT
[15]	TENSION CTL LEVER ASSY	T	Fig.2-1-20	(W15)	NOTE 15	ADJUSTMENT
[16]	CENTER GEAR	T		-	NOTE 16	
[17]	PINCH ROLLER ARM F. ASSY	T		(W17)	NOTE 17	ADJUSTMENT
[18]	TENSION CTL PLATE ASSY	T		-	NOTE 18	ADJUSTMENT
[19]	BRAKE CTL LEVER ASSY	T		-	NOTE 19	ADJUSTMENT
[20]	MOTOR BRACKET ASSY	T	Fig.2-1-21	3(S20),(L20a),2(L20b)	NOTE 20	ADJUSTMENT
[21]	GUIDE RAIL ASSY	T		2(W21),(S21),2(L21a),(L21b)	NOTE 21	ADJUSTMENT
[22]	SLIDE LEVER 2 ASSY	T		-	NOTE 22	ADJUSTMENT / #
[23]	LOADING PLATE ASSY	T		(W23)	NOTE 23	ADJUSTMENT
[24]	MODE GEAR	T		-	NOTE 24	
[25]	EJECT LEVER	T		(W25)	NOTE 25	ADJUSTMENT
[26]	BASE R ASSY	T	Fig.2-1-22	(S26a),(S26b),2(L26)	NOTE 26	ADJUSTMENT
[27]	ROTARY ENCODER	T		2(S27)	NOTE 27	PHASE ADJUSTMENT
[28]	GEAR COVER ASSY	T		(S28a),2(S28b)	-	
[29]	MAIN CAM ASSY	T		-	NOTE 29	PHASE ADJUSTMENT
[30]	SLIDE ARM ASSY	T	Fig.2-1-23	-	NOTE 30	ADJUSTMENT
[31]	CONNECT GEAR 2	T		-	NOTE 31	
[32]	SUB CAM ASSY	T		(S32)	NOTE 32	PHASE ADJUSTMENT
[33]	CONTROL ARM ASSY	T		-	NOTE 33	ADJUSTMENT
[34]	REEL GEAR 1	T		-	NOTE 34	
[35] / [36]	DRUM BASE ASSY/ CAPSTAN MOTOR	T	Fig.2-1-24	3(S35)	NOTE 35a,b	ADJUSTMENT
[36]	CAPSTAN MOTOR	T		(S36)	NOTE 36	ADJUSTMENT
[37]	MAIN DECK ASSY	T		-	-	

Fig.2-1-10

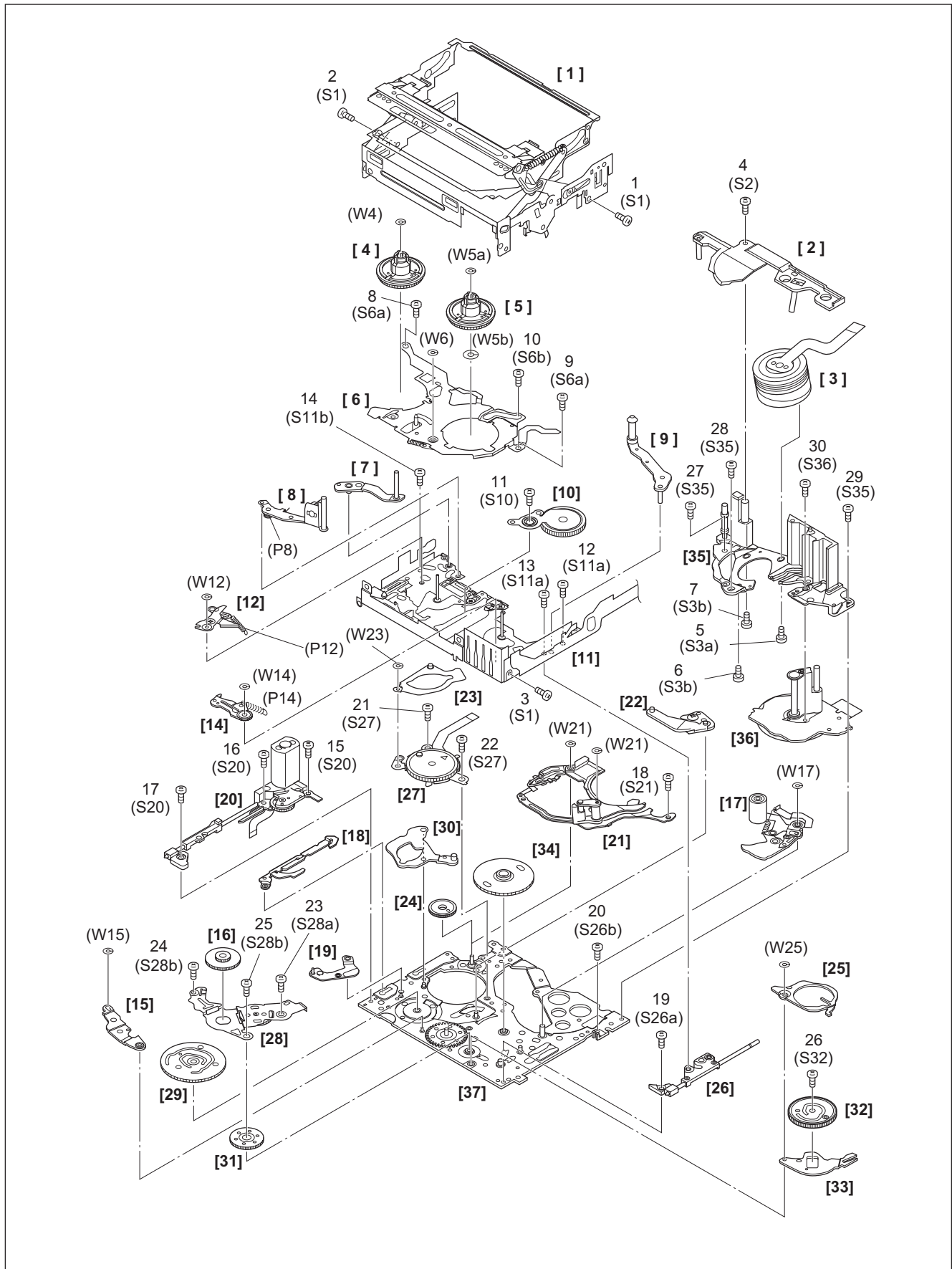


Fig.2-1-11



< TOP VIEW >

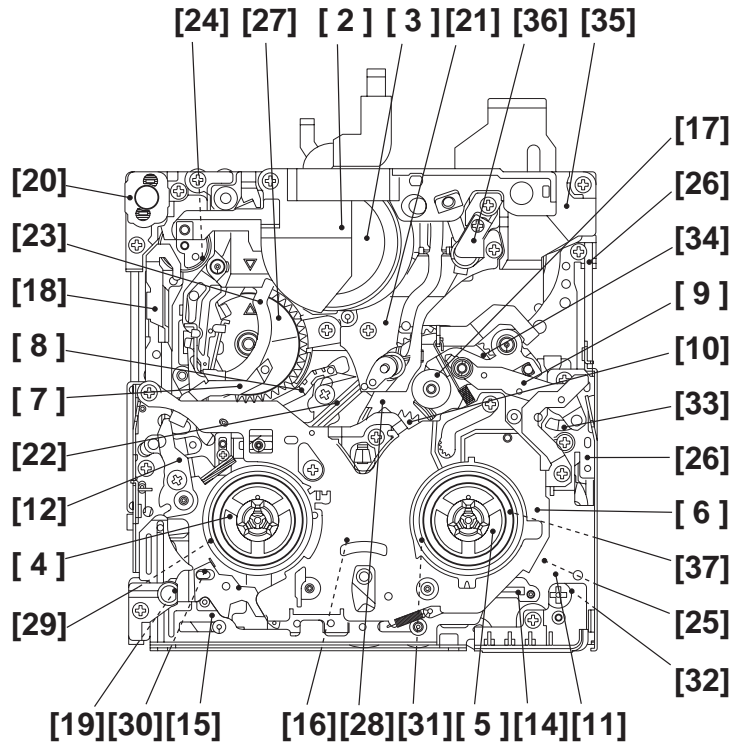


Fig.2-1-12

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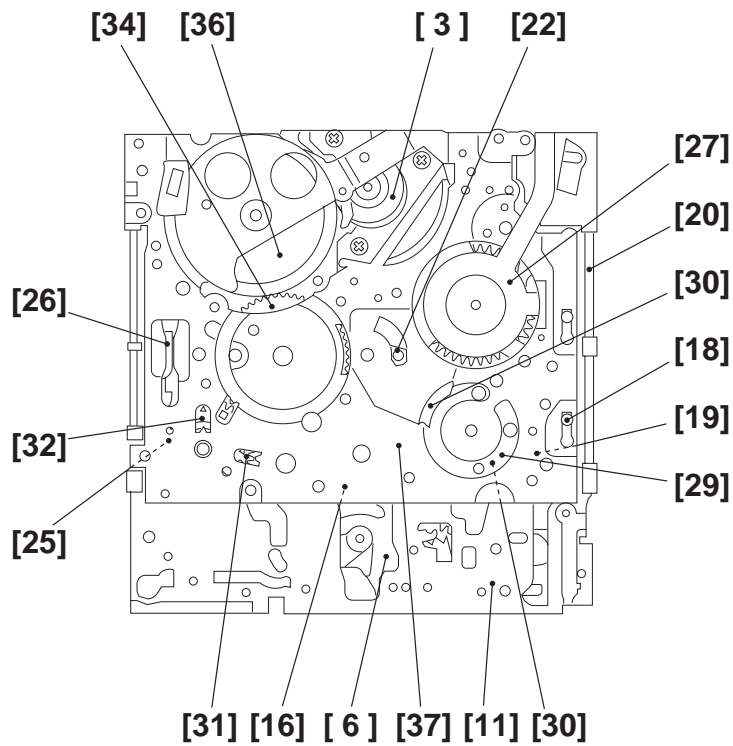


Fig.2-1-13

**2.1.5 DISASSEMBLY/ASSEMBLY**

**2.1.5.1 [ 1 ] CASSETTE HOUSING ASSY**

**NOTE 1a:**

Be careful not to damage any of the parts during work.

**NOTE 1b:**

Special care is required in mounting.

**NOTE 1c:**

When mounting, the CASSETTE HOUSING ASSY should be attached in the Eject status. Pay heed to the positions of the LOCK LEVER and EJECT LEVER during mounting.

**NOTE 1d:**

When mounting, be sure to locate the FPC in the gap.

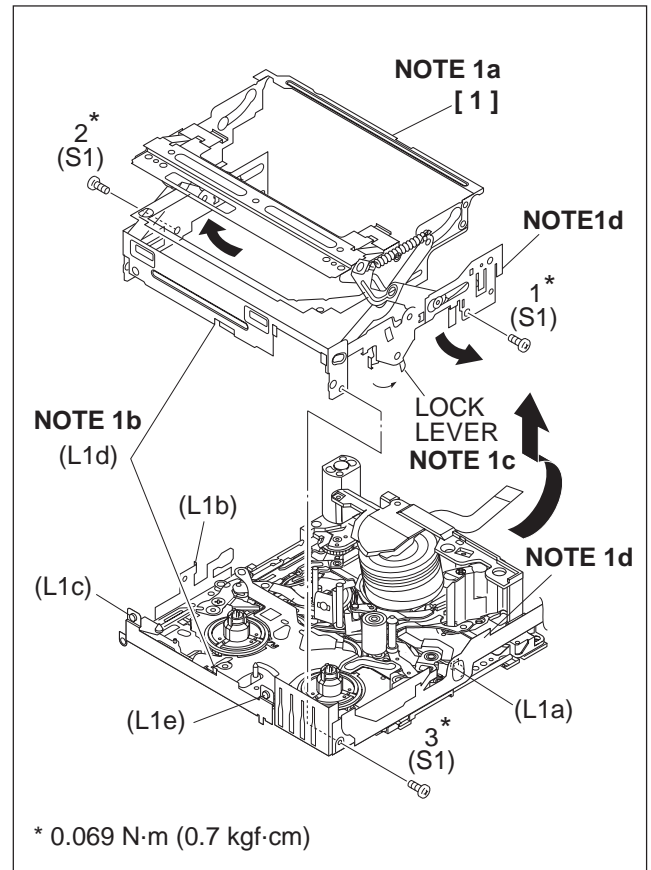
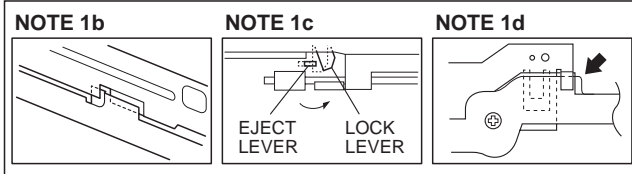


Fig.2-1-14

**2.1.5.2 [ 2 ] UPPER BASE ASSY**

**[ 3 ] DRUM ASSY**

**NOTE 2:**

When mounting, be sure to insert the FPC reinforcing sheet.

**NOTE 3a:**

Be mindful of scratches or damage during work.

**NOTE 3b:**

Be careful not to attach screws incorrectly.

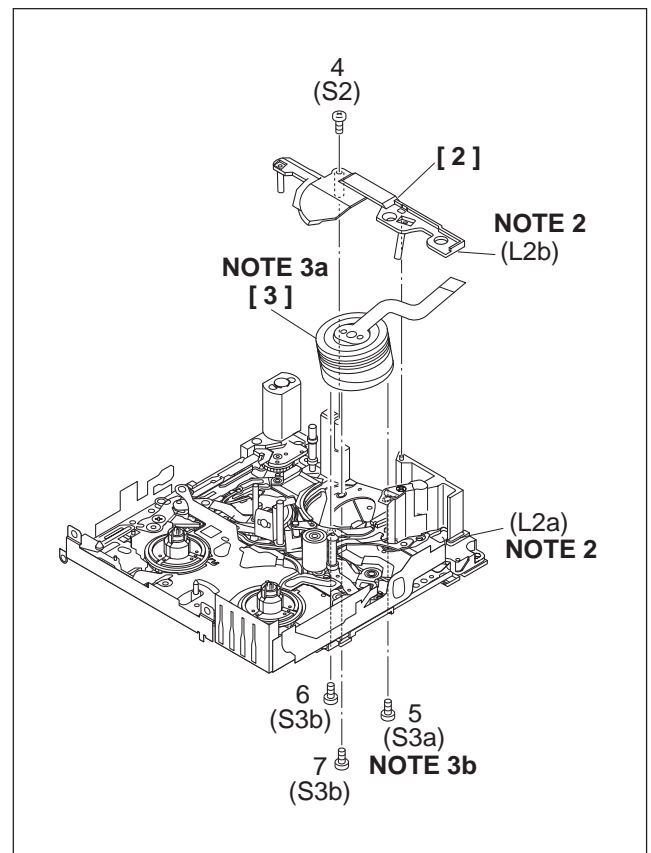
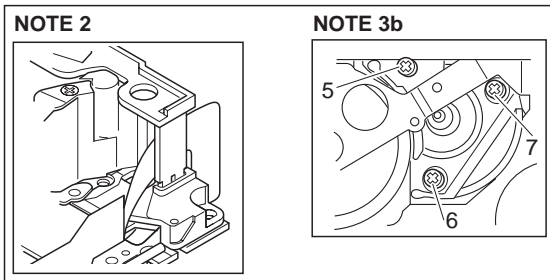


Fig.2-1-15

2.1.5.3 [ 4 ] REEL DISK ASSY(SUP)  
 [ 5 ] REEL DISK ASSY(TU)  
 [ 6 ] REEL COVER ASSY

**NOTE 4:**

Be careful not to attach the REEL DISK wrongly. The Supply side can be identified by the white color at the center.

**NOTE 5a:**

Be careful not to attach the REEL DISK wrongly. The Take-up side can be identified by the black color at the center.

**NOTE 5b**

The washer is inserted under the REEL DISK.  
 Be careful not to lose the washer.  
 Two washers are inserted under the REEL DISK in some products manufactured earlier, but one washer is inserted in the products manufactured recently and in the future.  
 See the parts list, and use the parts written in the parts list.

**NOTE 6:**

- Perform the following steps for mounting.
- (1) Align the hole with the pin.
  - (2) Attach the [17] PINCH ROLLER ARM FINAL ASSY by aligning the positions.
  - (3) Attach the SLIDE DECK ASSY (POINT[A]) by aligning the positions.
  - (4) Check that the parts below them are located in the correct positions.
  - (5) Tighten the 2 screws.
  - (6) Tighten the screw.
  - (7) Attach the 1 SLIT WASHER parts.

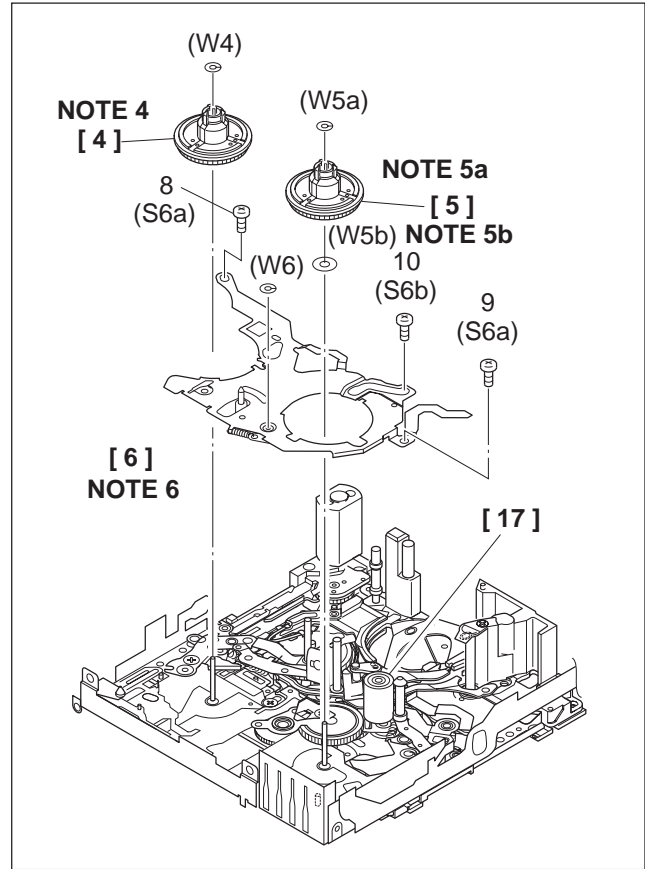
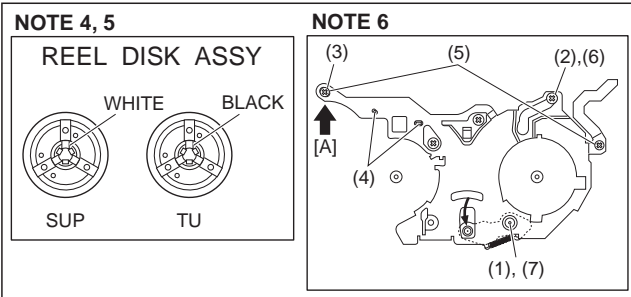


Fig.2-1-16



2.1.5.4 [ 7 ] TENSION ARM ASSY  
 [ 8 ] SLANT POLE ARM ASSY  
 [ 9 ] TU ARM ASSY  
 [10] SWING ARM ASSY

**NOTE 7:**

When detaching, remove the spring of the [12] PAD ARM ASSY in advance.  
 Pay attention to the attachment position.

**NOTE 8:**

When mounting the SLANT POLE ARM ASSY, hook the spring onto the lug as in diagram A, and fit the combination onto the SLIDE DECK ASSY. After fitting, hook the spring onto the lug of the SLIDE DECK ASSY as in diagram B.  
 Be careful not to lose the spring.

**NOTE 9:**

Pay attention to the attachment position.

**NOTE 10:**

When detaching, remove the screw then remove the SWING ARM ASSY by pulling it up and turning it.

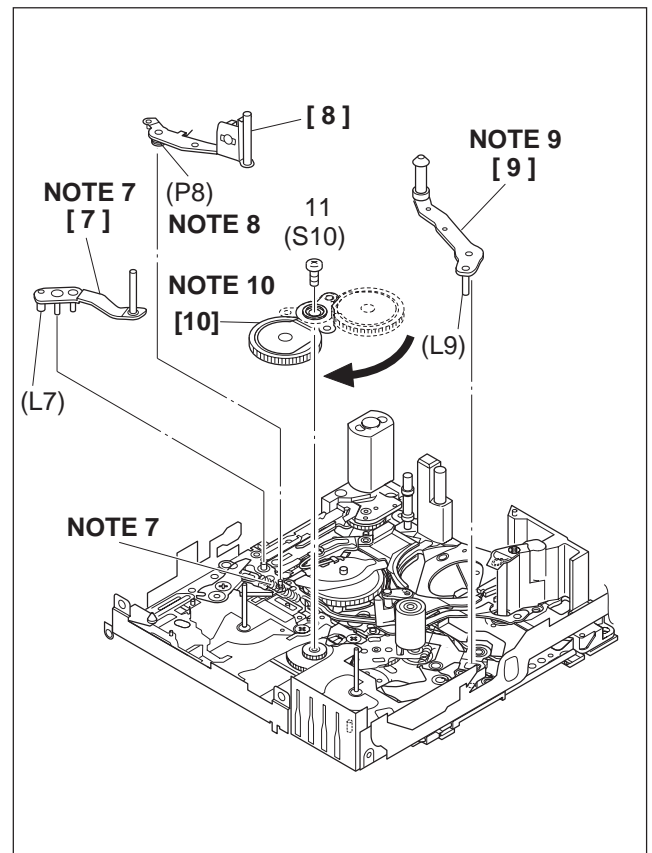
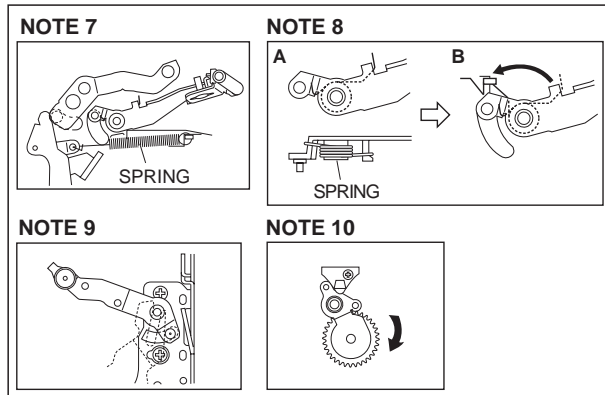


Fig.2-1-17

### 2.1.5.5 [11] SLIDE DECK ASSY

#### NOTE 11a:

Each of the parts on the SLIDE DECK ASSY can be replaced separately.  
When detaching the assembly, if there is no need to replace any of its parts, remove the SLIDE DECK ASSY as it is.

#### NOTE 11b:

When mounting, pay attention to the positions of the [22] SLIDE LEVER 2 ASSY studs and the [19] BRAKE CTL LEVER ASSY.

When mounting, position the CONTROL PLATE on the left side.

Pay attention to the position of the SLIDE GUIDE PLATE during mounting.

#### NOTE 11b

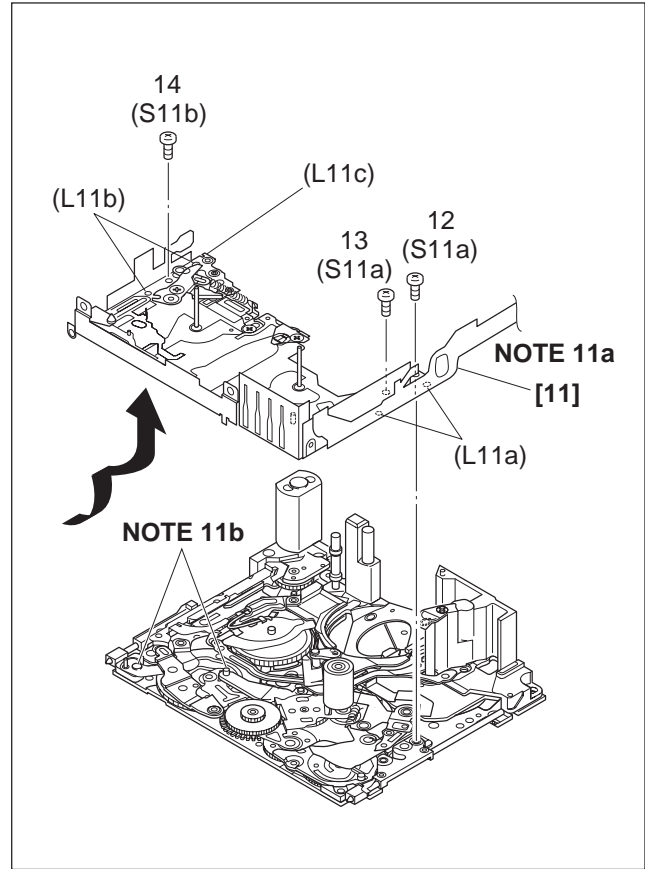
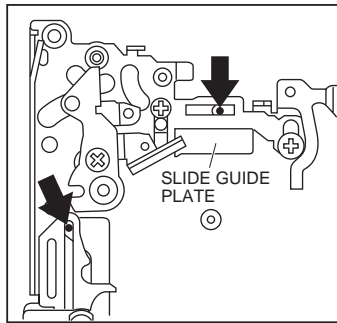


Fig.2-1-18

### 2.1.5.6 [12] PAD ARM ASSY

[13] -

[14] TU BRAKE ASSY

#### NOTE 12:

The spring may have already been disengaged when the [ 8 ] SLANT POLE ARM ASSY was removed.

#### NOTES 14:

When mounting, pay attention to the correct positioning.  
Mount the CONTROL PLATE by moving it fully toward the left side.

#### NOTE 12,14

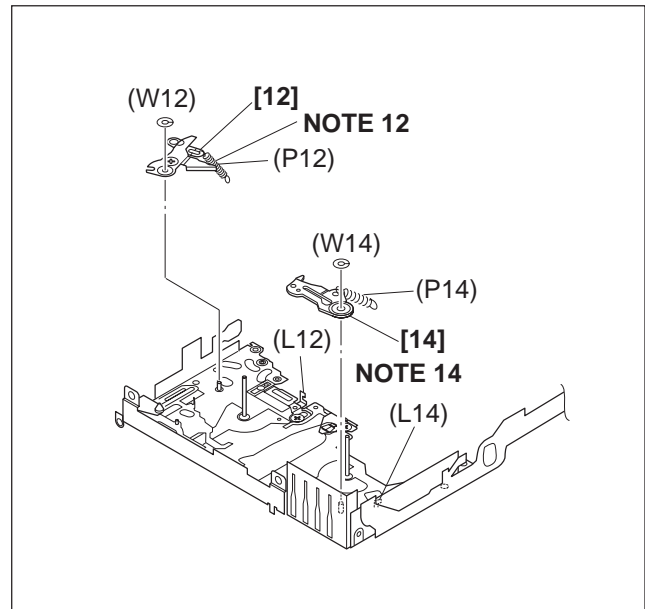
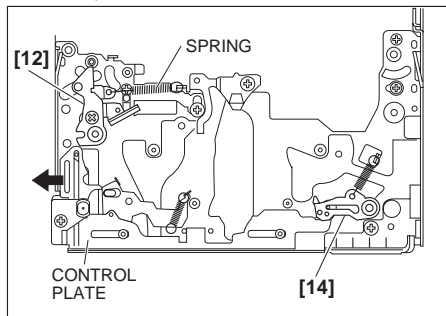


Fig.2-1-19

- 2.1.5.7 [15] TENSION CTL LEVER ASSY
- [16] CENTER GEAR
- [17] PINCH ROLLER ARM FINAL ASSY
- [18] TENSION CTL PLATE ASSY
- [19] BRAKE CTL LEVER ASSY

**NOTES 15/16:**

When mounting, pay attention to the correct positioning.

**NOTE 17:**

Take care against grease attachment during work.

**NOTES 18/19:**

When mounting, pay attention to the correct positioning.

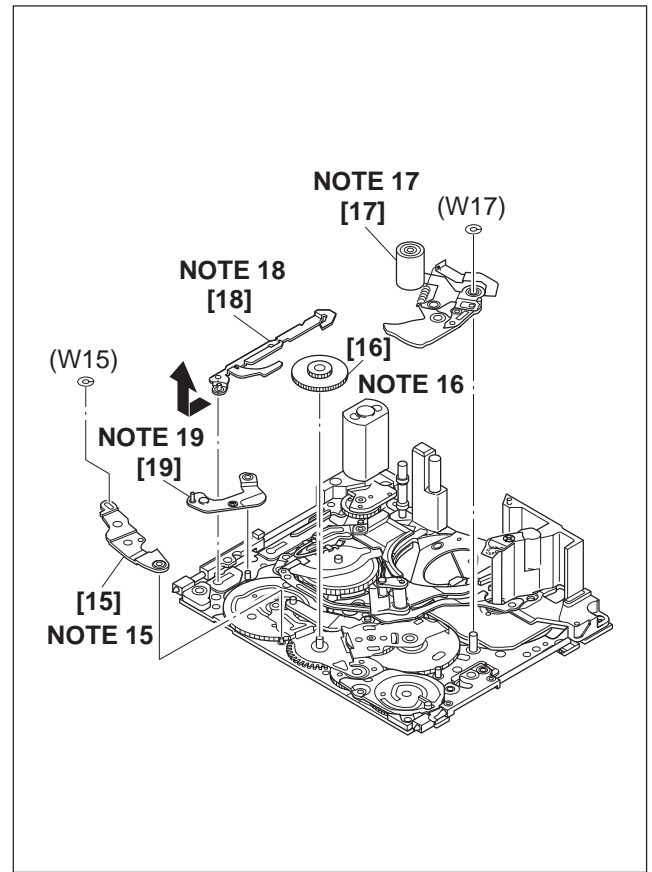
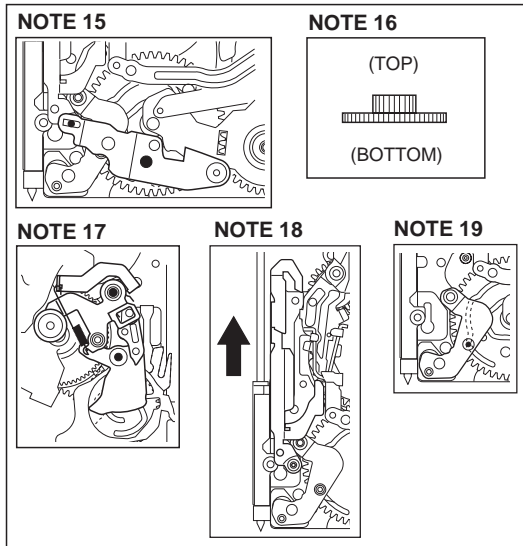


Fig.2-1-20

- 2.1.5.8 [20] MOTOR BRACKET ASSY
- [21] GUIDE RAIL ASSY
- [22] SLIDE LEVER 2 ASSY
- [23] LOADING PLATE ASSY
- [24] MODE GEAR
- [25] EJECT LEVER

**NOTE 20:**

When mounting, pay attention to the positioning of the sliding parts.

**NOTE 21:**

When mounting, take care that no part is allowed to float or rattle.

**NOTES 22/23/24/25:**

When mounting, pay attention to the correct positioning.

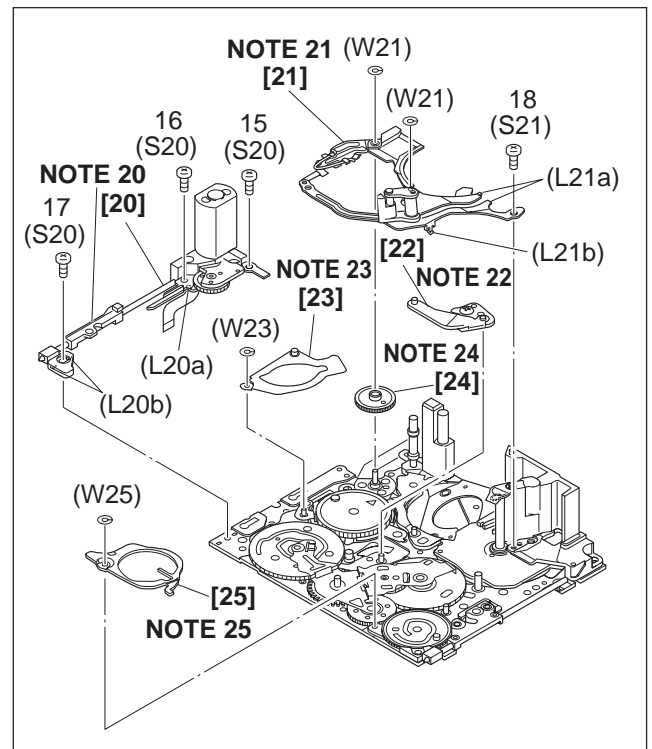
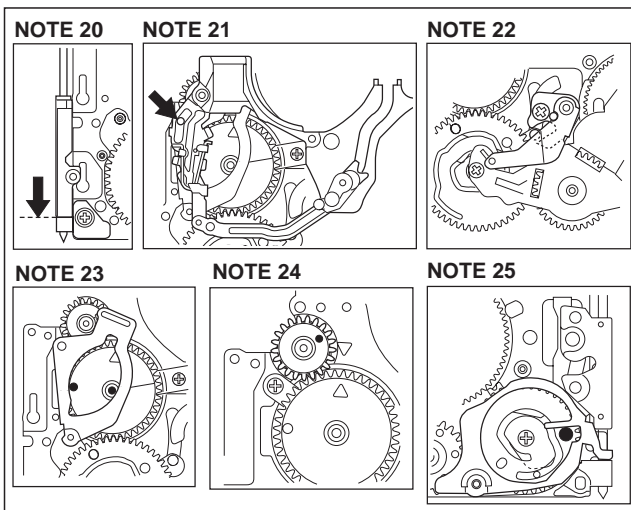


Fig.2-1-21

- 2.1.5.9 [26] BASE R ASSY
- [27] ROTARY ENCODER
- [28] GEAR COVER ASSY
- [29] MAIN CAM ASSY

**NOTE 26:**

When mounting, fold the sliding part to the inner side.

**NOTE 27:**

When mounting, pay attention to the correct positioning and the FPC layout.

**NOTE 29:**

When mounting, pay attention to the correct positioning.

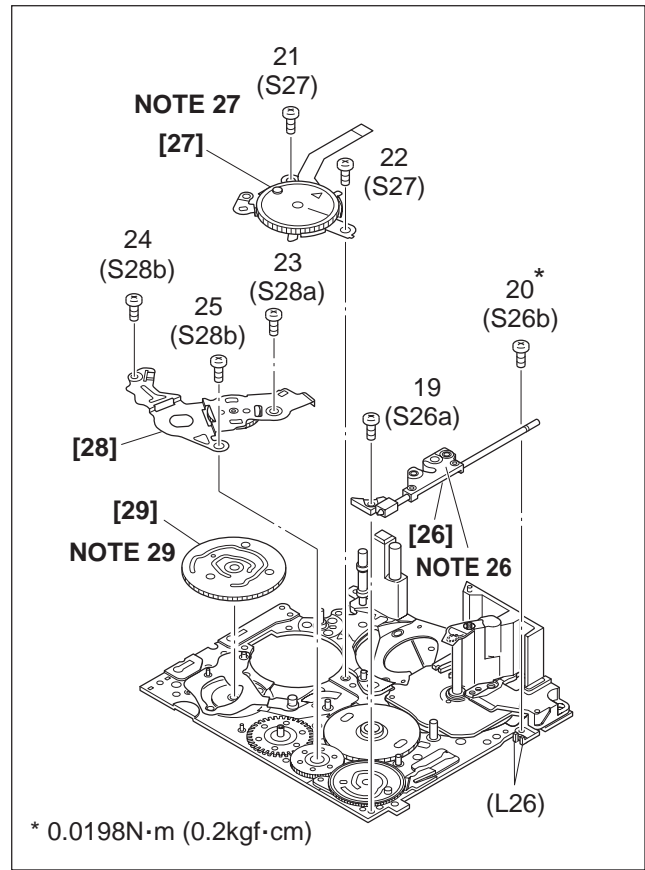
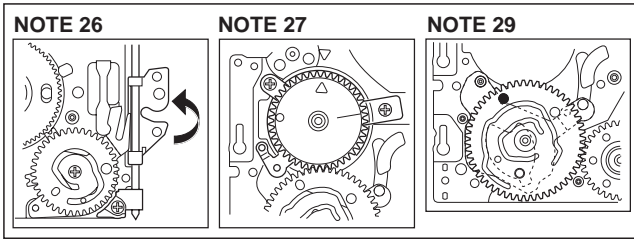


Fig.2-1-22

- 2.1.5.10 [30] SLIDE ARM ASSY
- [31] CONNECT GEAR 2
- [32] SUB CAM ASSY
- [33] CONTROL ARM ASSY
- [34] REEL GEAR 1

**NOTE 30:**

When mounting, pay attention to the correct positioning.

**NOTE 31:**

When mounting, pay attention to the position of the front and back.

**NOTES 32/33/34:**

When mounting, pay attention to the correct positioning.

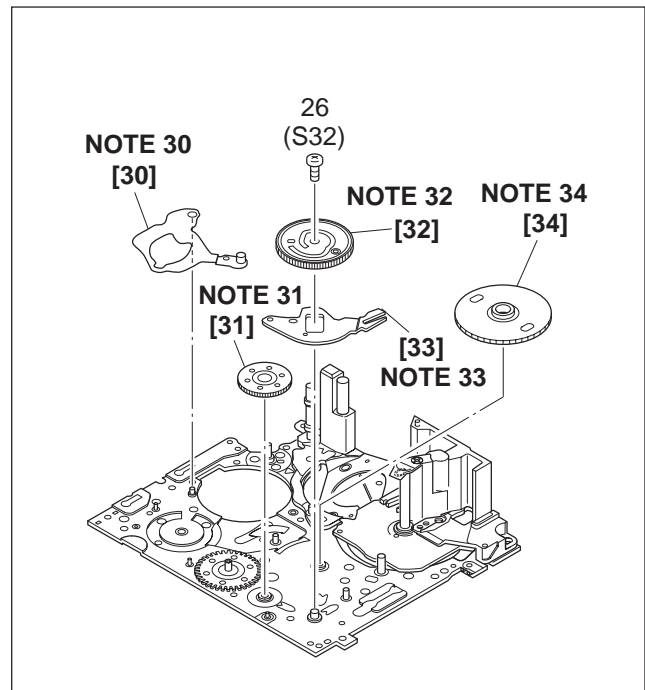
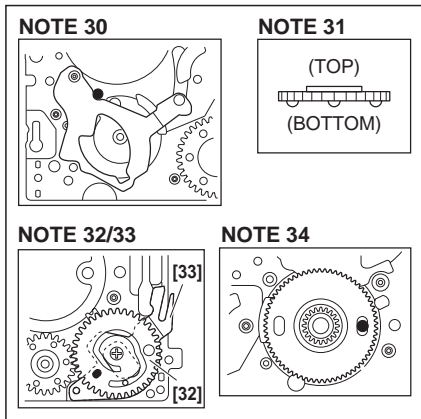


Fig.2-1-23

**2.1.5.11 [35] DRUM BASE ASSY  
[36] CAPSTAN MOTOR  
[37] MAIN DECK ASSY**

**NOTES 35a/36:**

Since [36]CAPSTAN MOTOR is attached to [35]DRUM BASE ASSY, remove [36]CAPSTAN MOTOR together with [35]DRUM BASE ASSY when removing [36]CAPSTAN MOTOR.

[36]CAPSTAN MOTOR should not be separated from [35]DRUM BASE ASSY except when replacing them.

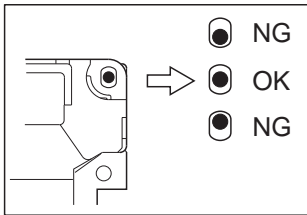
**NOTE 35b:**

It is very important to attach [35]DRUM BASE ASSY to the proper position.

Especially, improper engagement of [36]CAPSTAN MOTOR with [34]REEL GEAR 1 causes operational deflection or abnormal sound. Therefore, confirm the attachment position before disassembly procedure.

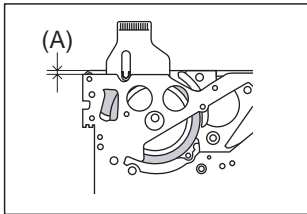
See the following figure as for the proper attachment position.

**NOTE 35b**



When [35]DRUM BASE ASSY is properly attached, the screw hole tends to be located at the center of the oval.

When the screw hole is located far from the center of the oval, operational deflection or abnormal sound may occur.



Before removing [35]DRUM BASE ASSY, confirm the position of [35]DRUM BASE ASSY by seeing the length (A), as shown in the left figure.

When reattaching [35]DRUM BASE ASSY, confirm the position to reattach [35]DRUM BASE ASSY by seeing the length (A). Be sure to reattach [35]DRUM BASE ASSY to the same position as it has been before the removing procedure.

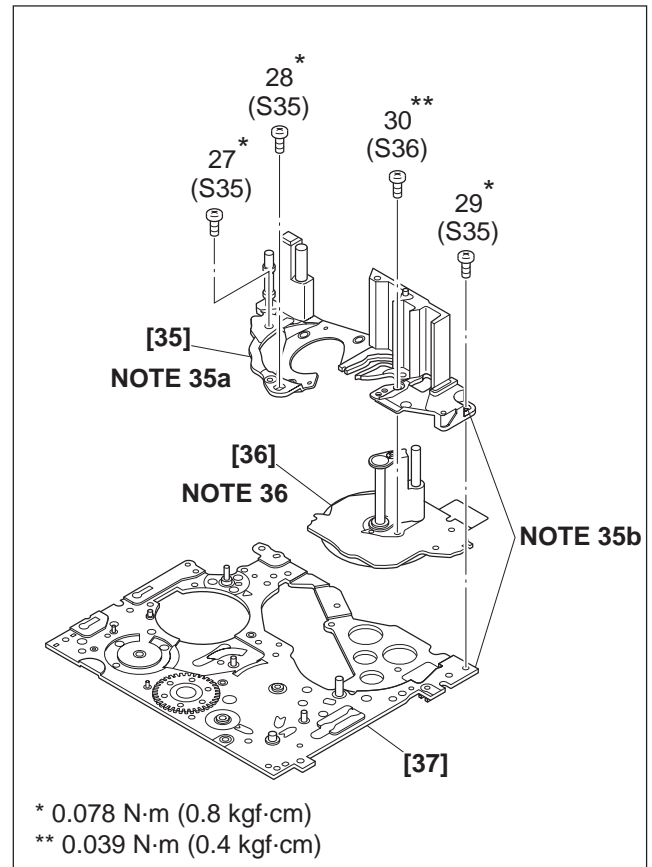


Fig.2-1-24



## 2.1.6 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

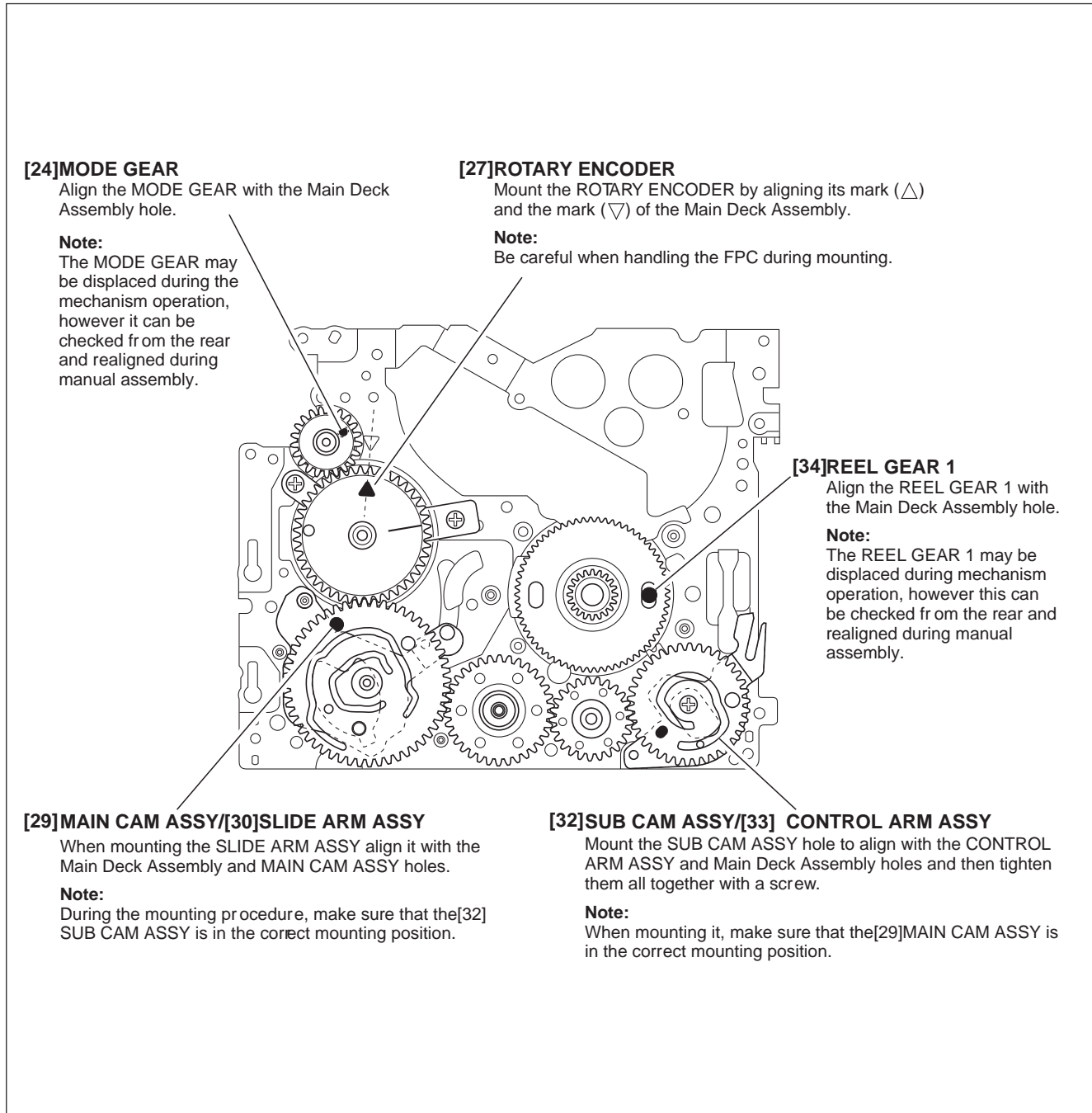


Fig.2-1-25

## 2.1.7 MECHANISM ADJUSTMENTS

### 2.1.7.1 Adjustment of the slide guide plate

Use Fig. 2-1-26 as the reference unless otherwise specified.

- (1) Set the PLAY mode. See Fig. 2-1-8.
- (2) Loosen the screws (A, B).
- (3) With the Main Deck and Slide Deck Assemblies pushed into the unit, tighten the screws (A, B) while applying pressure to the stud (shaft) on the Slide Guide plate.

The pressure applied should be enough to enable utilization of the rebounding force of the springs.

The tightening torque should be 0.069 N•m (0.7 kgf•cm).

- (4) Check the operation.

Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

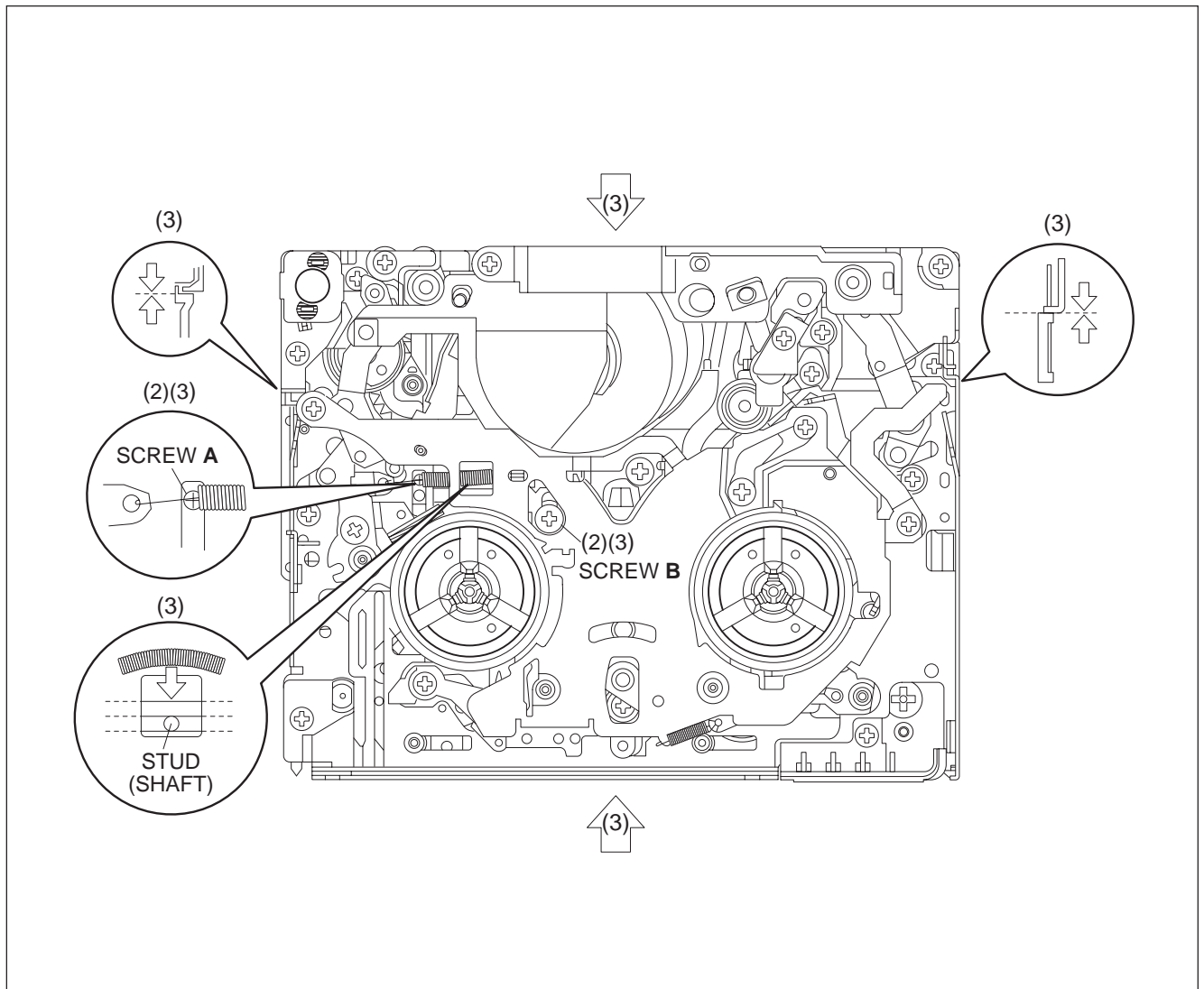


Fig.2-1-26

### 2.1.7.2 Adjustment of the Tension Arm and Pad Arm Assemblies

Use Fig. 2-1-27 as the reference unless otherwise specified.

- (1) Set the PLAY mode.  
See Fig. 2-1-8.
- (2) Loosen the screw **A**.
- (3) With the take-up side at the bottom, align the extreme end of the Tension Arm Assembly with the crossed grooves on the screw **B** that retains the Loading Motor Assembly and then tighten the screw **A**.  
The tightening torque should be  $0.069 \text{ N}\cdot\text{m}$  ( $0.7 \text{ kgf}\cdot\text{cm}$ ).
- (4) Check the operation.  
Repeat unloading and loading several times and make sure that the Tension Arm Assembly is located within the normal range.

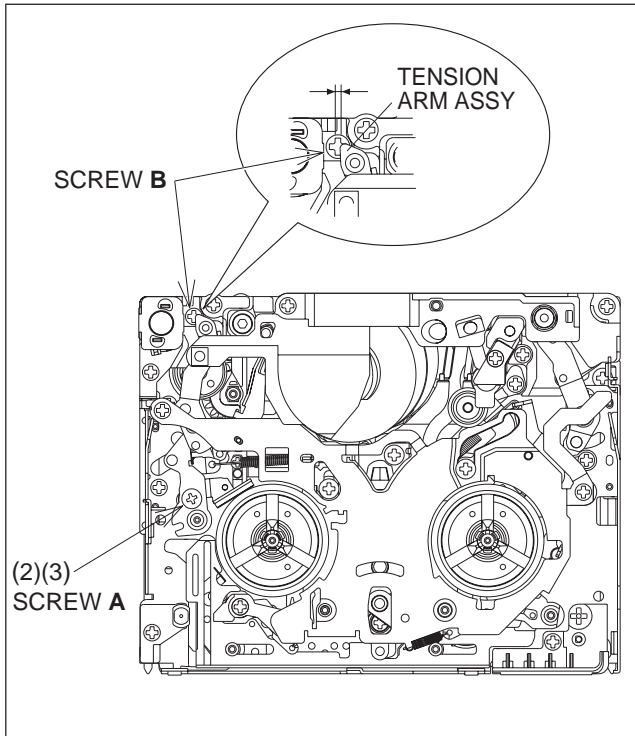


Fig.2-1-27

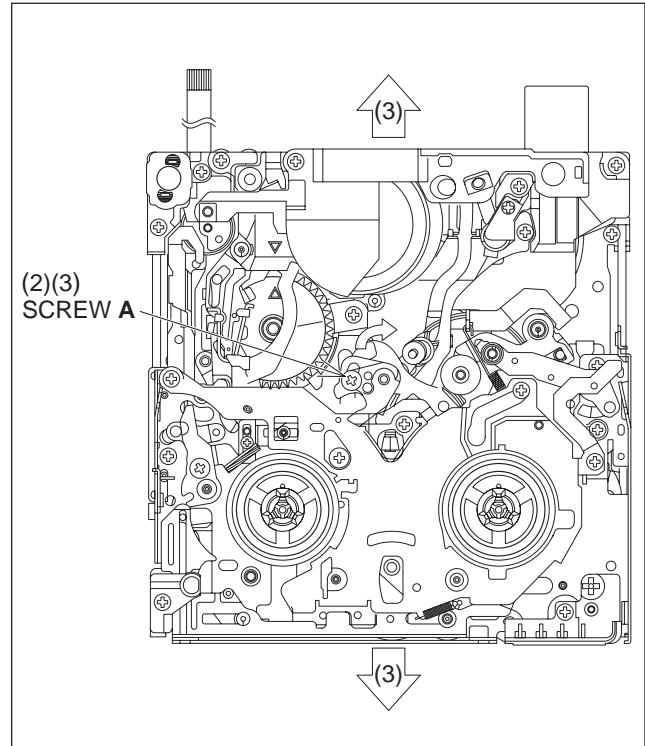


Fig.2-1-28

### 2.1.7.3 Adjustment of the Slide Lever 2

Use Fig. 2-1-28 as the reference unless otherwise specified.

- (1) Set the C IN mode.  
See Fig. 2-1-4.
- (2) Loosen the screw **A**.
- (3) Set the Main Deck and Slide Deck Assemblies apart so that they do not rattle, then tighten the screw **A** by screwing it fully toward the Drum Assembly.  
The tightening torque should be  $0.069 \text{ N}\cdot\text{m}$  ( $0.7 \text{ kgf}\cdot\text{cm}$ ).
- (4) Check the operation.  
Repeat unloading and loading several times and make sure that these operations can be performed smoothly without producing rattles.

**2.1.8 SERVICE NOTE**

Use the following chart to manage mechanism parts that are removed for disassembling the mechanism.

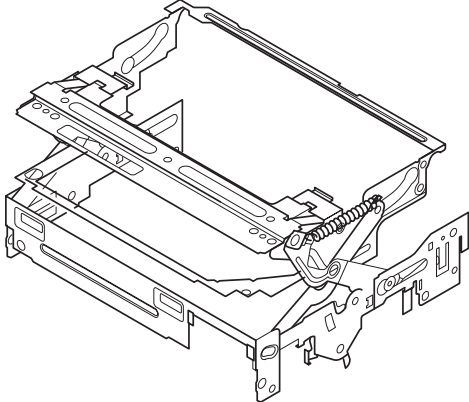
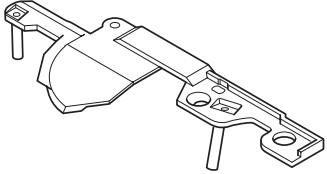
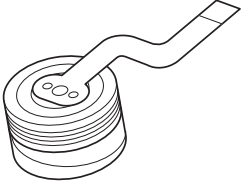
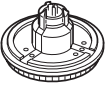

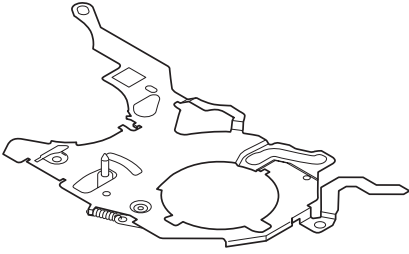

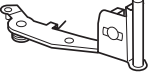
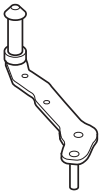

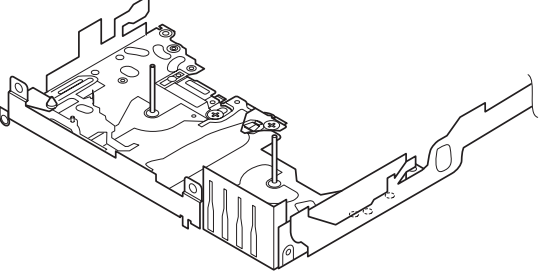

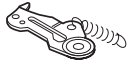
Fig.2-1-14	<p><b>[ 1 ] CASSETTE HOUSING ASSY</b></p> 	<p><b>[ 2 ] UPPER BASE ASSY</b></p> 		
Fig.2-1-15	<p><b>[ 3 ] DRUM ASSY</b></p> 	<p>Fig.2-1-16</p> <p><b>[ 4 ] REEL DISK ASSY(SUP)</b></p>  <p><b>[ 5 ] REEL DISK ASSY(TU)</b></p> 	<p><b>[ 6 ] REEL COVER ASSY</b></p> 	
Fig.2-1-17	<p><b>[ 7 ] TENSION ARM ASSY</b></p> 	<p><b>[ 8 ] SLANT POLE ARM ASSY</b></p> 	<p><b>[ 9 ] TU ARM ASSY</b></p> 	<p><b>[10] SWING ARM ASSY</b></p> 
Fig.2-1-18	<p><b>[11] SLIDE DECK ASSY</b></p> 	<p>Fig.2-1-19</p> <p><b>[12] PAD ARM ASSY</b></p> 	<p><b>[13]</b></p> <p>—</p>	<p><b>[14] TU BRAKE ASSY</b></p> 

Fig.2-1-29

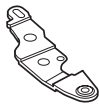


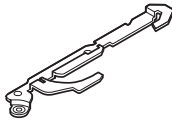

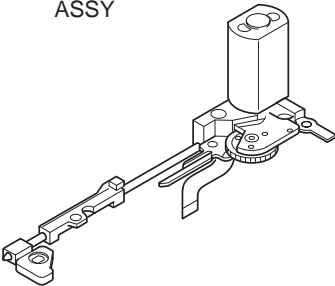
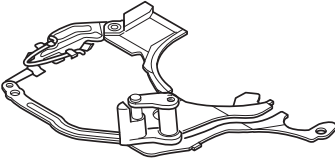



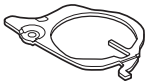
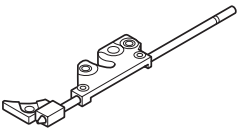
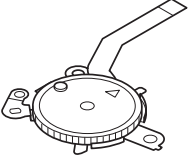
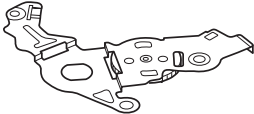

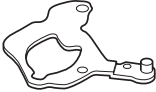



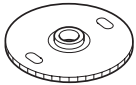
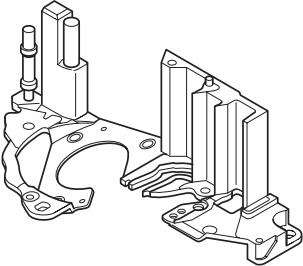
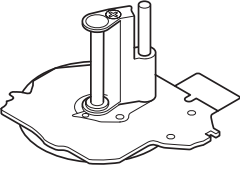
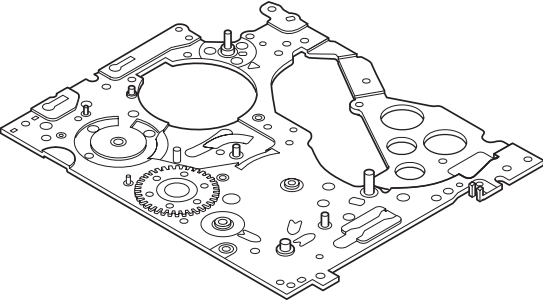
Fig.2-1-20	<b>[15] TENSION CTL LEVER ASSY</b> 	<b>[16] CENTER GEAR</b> 	<b>[17] PINCH ROLLER ARM F ASSY</b> 	<b>[18] TENSION CTL PLATE ASSY</b> 	<b>[19] BRAKE CTL LEVER ASSY</b> 
Fig.2-1-21	<b>[20] MOTOR BRACKET ASSY</b> 	<b>[21] GUIDE RAIL ASSY</b> 	<b>[22] SLIDE LEVER 2 ASSY</b> 	<b>[23] LOADING PLATE ASSY</b> 	
			<b>[24] MODE GEAR</b> 	<b>[25] EJECT LEVER</b> 	
Fig.2-1-22	<b>[26] BASE R ASSY</b> 	<b>[27] ROTARY ENCODER</b> 	<b>[28] GEAR COVER ASSY</b> 	<b>[29] MAIN CAM ASSY</b> 	
Fig.2-1-23	<b>[30] SLIDE ARM ASSY</b> 	<b>[31] CONNECT GEAR 2</b> 	<b>[32] SUB CAM ASSY</b> 	<b>[33] CONTROL ARM ASSY</b> 	<b>[34] REEL GEAR 1</b> 
Fig.2-1-24	<b>[35] DRUM BASE ASSY</b> 		<b>[36] CAPSTAN MOTOR</b> 	<b>[37] MAIN DECK ASSY</b> 	

Fig.2-1-30

### 2.1.9 SERVICE NOTE

Use the following chart to manage screws.

Symbol No.	[1]	[2]	[3]	[6]	[10]	[11]	[20]	[21]	[22]											
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Place to stick screw																				
Reference drawing (Fig. No.2-1-**)	14				15															
Screw tightening torque	I				16								17	18		21				22
	II										III									

Symbol No.	[27]	[28]	[32]	[35]	[36]						
Removing order of screw	21	22	23	24	25	26	27	28	29	30	
Place to stick screw											
Reference drawing (Fig. No.2-1-**)	22					23		24			
Screw tightening torque	II					IV					V

<NOTE>

·Pay careful attention to tightening torque for each screw.

- I : 0.069N·m(0.7kgf·cm)
- II : 0.055N·m(0.56kgf·cm)
- III : 0.0198N·m(0.2kgf·cm)
- IV : 0.078N·m(0.8kgf·cm)
- V : 0.039N·m(0.4kgf·cm)

Fig.2-1-31

## 2.1.10 REMARKS

### 2.1.10.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.1.10.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.1 DVC MECHANISM ASSEMBLY. Fig.2-1-32 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB
Grease (HANARL)	RX-410R	CC

specifies oil and grease to be used

Fig.2-1-32

## 2.2 VHS-C MECHANISM

### 2.2.1 Precautions

- (1) When fastening parts, pay careful attention to the tightening torque of each screw. Unless otherwise specified, tighten a screw with the torque of 0.216 N•m (2.2 kgf•cm). Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.
- (2) Be sure to disconnect the set from the power supply before fastening and soldering parts.
- (3) When disconnecting/connecting wires, be careful not to get them and their connectors damaged.
- (4) When replacing parts, be very careful neither to damage other parts nor to fit wrong parts by mistake.

#### Example

STEP/LOC. No.	PART NAME	T	FIG.	REMOVAL	INSTALLATION
				POINT	ADJUSTMENT CONDITION NOTE
[1]	ROLLER BASE ASSEMBLY	T	M1	(S1)	—
[2]	TENSION ARM ASSEMBLY	T	M1	(P1), (W1a)	—
[3]	REEL DISC (SUP)	T	M1	(W1a), (W1b)	—

↑ \*1                      ↑ \*2                      ↑ \*3    ↑ \*4                      ↑ \*5                      ↑ \*6

### 2.2.2 How to read the disassembly and assembly

- \*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 to Name be removed or installed.
- \*3 Location of part.  
T = The Upper side  
B = The Lower side
- \*4 Fig. No. showing Procedure or Part Location.  
M = Mechanism
- \*5 Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.  
P = Spring  
W = Washer  
S = Screw  
\* = Unhook, unlock, release, unplug or unsolder.

#### Example

- Remove (W1)=Washer W1.
  - Remove the solder at (SD1)=Point SD1.
  - Disconnect A = Connector A.
- \*6 Adjustment information for installation.  
(+) = Refer to Exploded Views for Lubrication information.



### 2.2.3 DISASSEMBLY/ASSEMBLY PROCEDURE TABLE

This procedure starts with the condition that the cabinet parts and deck parts. Also, all the following procedures for adjustment and parts replacement should be performed in STOP mode. When reassembling, perform the step(s) in the reverse order.

STEP/LOC. No.	PART NAME		FIG.	REMOVAL	INSTALLATION
				POINT	ADJUSTMENT CONDITION NOTE
[1]	ROLLER BASE ASSY	T	M1	(1)	-
[2]	TENSION ARM ASSY	T	M1	(P1), (W1a)	-
[3]	REEL DISC	T	M1	(W1a), (W1b)	-
[4]	SLANT ARM ASSY	T	M1	(W1a)	-
[5]	CANCEL LEVER ASSY	T	M2	(W2)	-
[6]	EJECT LEVER ASSY	T	M2	(W2)	-
[7]	CASSETTE GUIDE (LEFT)	T	M2	(2)	-
[8]	SUPPLY CLUTCH ASSY	T	M2	(W2)	-
[9]	WHEEL GEAR	T	M2	(W2)	See, Adjustment procedure for Section 2.2.5
[10]	ROTARY ENCODER	B	M3	4(S3a)	The function of this part varies according to the ASSY (VHS/SVHS) which this part is incorporated in. (Refer to fig. 2-2-6)
[11]	TIMING BELT	B	M3	-	-
[12]	CENTER PULLEY UNIT	T/B	M3	2(S3a)	-
[13]	CASSETTE GUIDE (R) ASSY	T	M3	(S3b), (P3)	(Only use SVHS model)
[14]	TAKE UP GEAR	T	M3	(W3a)	-
[15]	BRAKE SUB GEAR	T	M3	(W3a)	-
[16]	PINCH ROLLER ARM ASSY	T	M3	(W3b)	-
[17]	TAKE UP GUIDE ARM ASSY	T	M3	(W3a)	-
[18]	LINK ARM ASSY	T	M4	(W4)	-
[19]	LED GUIDE	T	M4	(S4a)	-
[20]	A/C HEAD UNIT	T	M4	2(S4b)	-
[21]	SLANT POLE BASE ASSY	T	M5	(S5a)	-
[22]	CAPSTAN MOTOR	T	M5	3(S5a)	-
[23]	MOTOR BASE	T	M5	2(S5b), (S5c)	-
[24]	BRUSH	B	M6	(S6a)	-
[25]	DRUM FINAL ASSY	T/B	M6	2(S6b), 2(S6c) *CATCHER	-
[26]	GUIDE RAIL	T	M6	7(S6d), 8(S6d)	(Refer to part list.)
[27]	POLE BASE (S)ASSY	T	M6	-	-
[28]	POLE BASE (T)ASSY	T	M6	-	-
[29]	COVER PLATE	T	M7	-	-
[30]	DRIVE LEVER ASSY	T	M7	-	-
[31]	MOTOR BRACKET ASSY	T	M7	3(S7)	-
[32]	CONTROL CAM	T	M8	(W8a)	See, Adjustment procedure for Section 2.2.5
[33]	LINK LEVER	T	M8	-	See, Adjustment procedure for Section 2.2.5
[34]	MIDDLE GEAR	T	M8	-	-
[35]	LOADING GEAR(T) ASSY	T	M8	(W8b)	See, Adjustment procedure for Section 2.2.5
[36]	LOADING GEAR(S) ASSY	T	M8	(W8b)	-
[37]	LOADING RING ASSY	T	M8	4(S8)	See, Adjustment procedure for Section 2.2.5

Fig.2-2-1

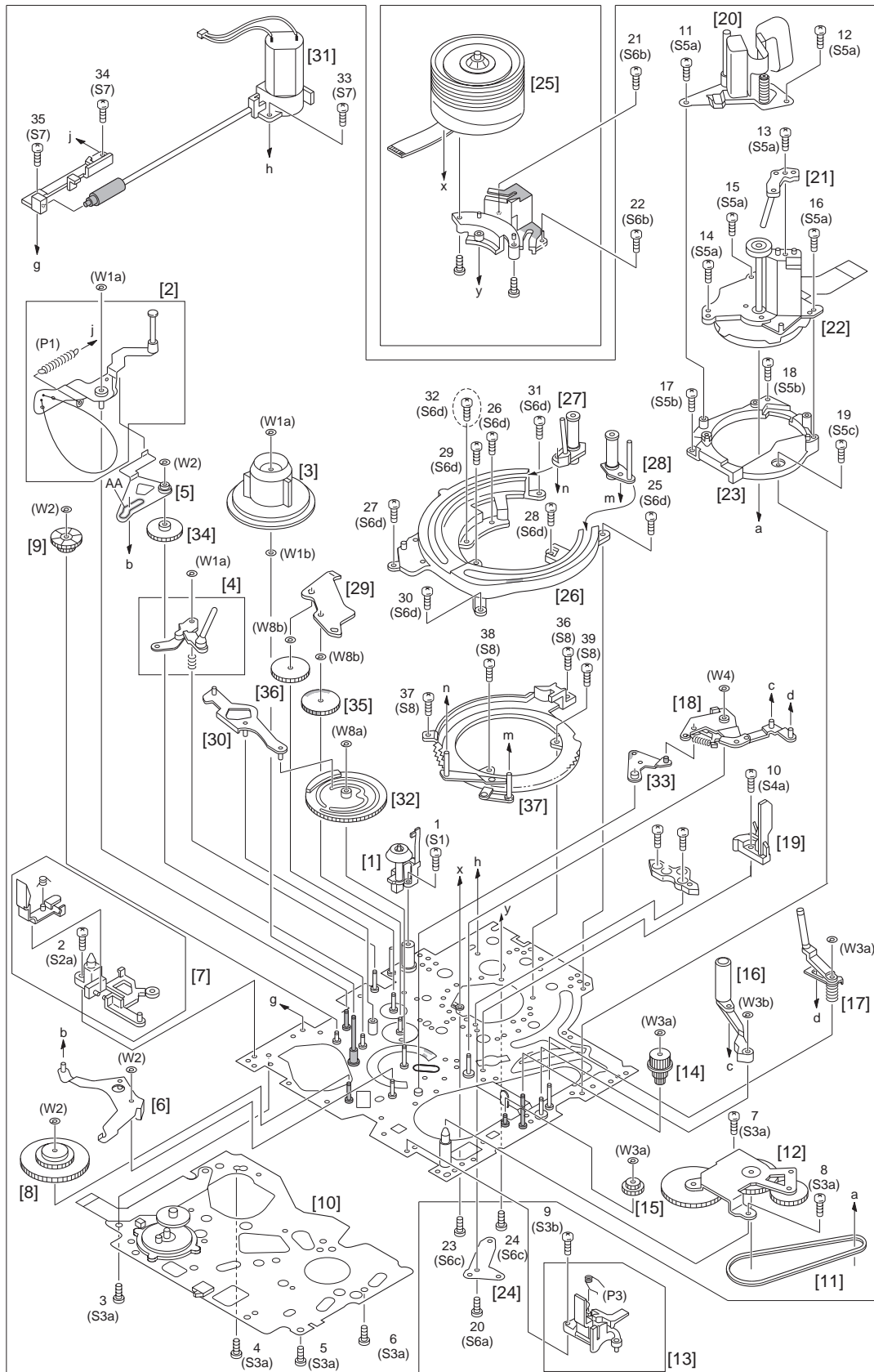


Fig.2-2-2

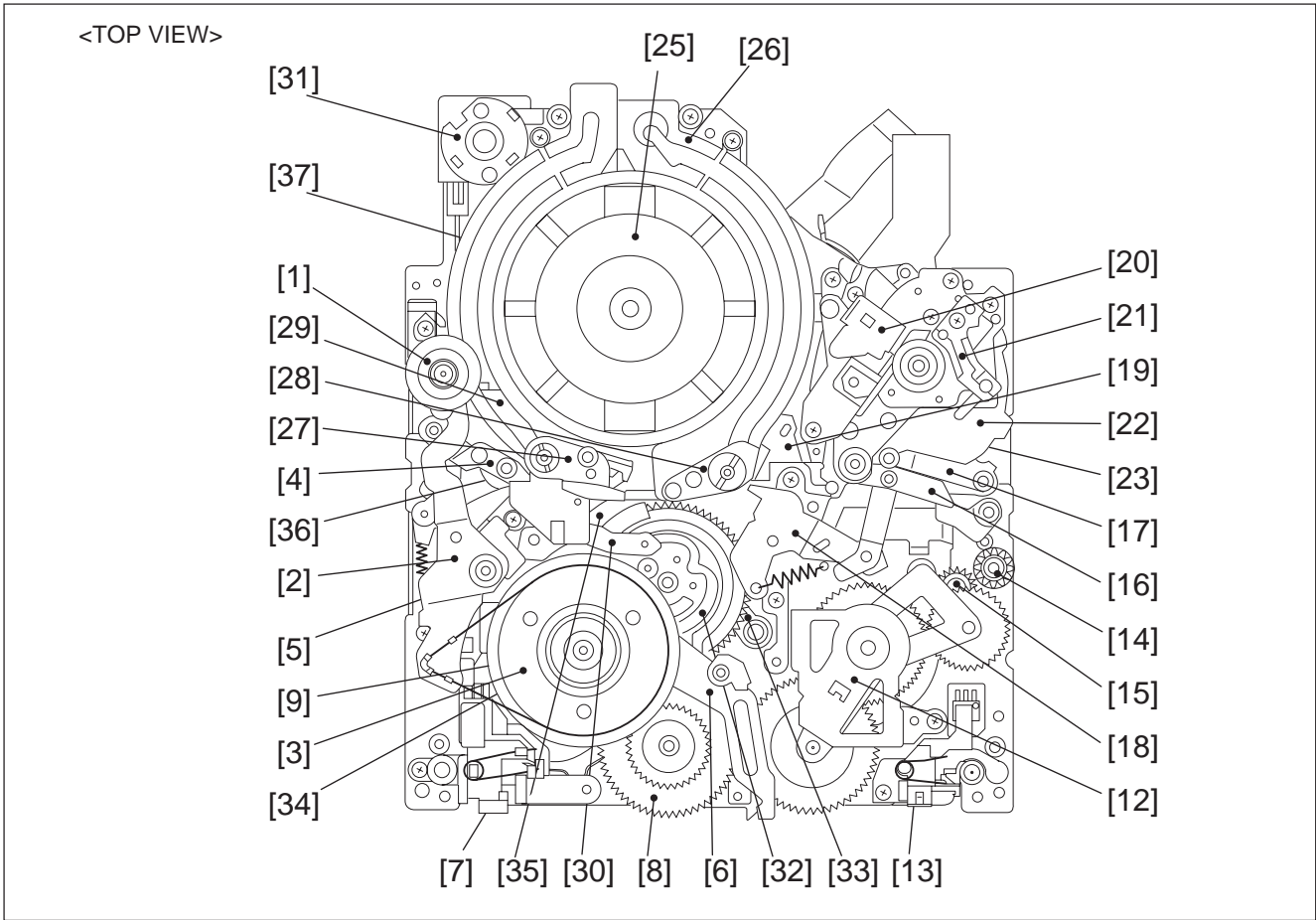


Fig.2-2-3

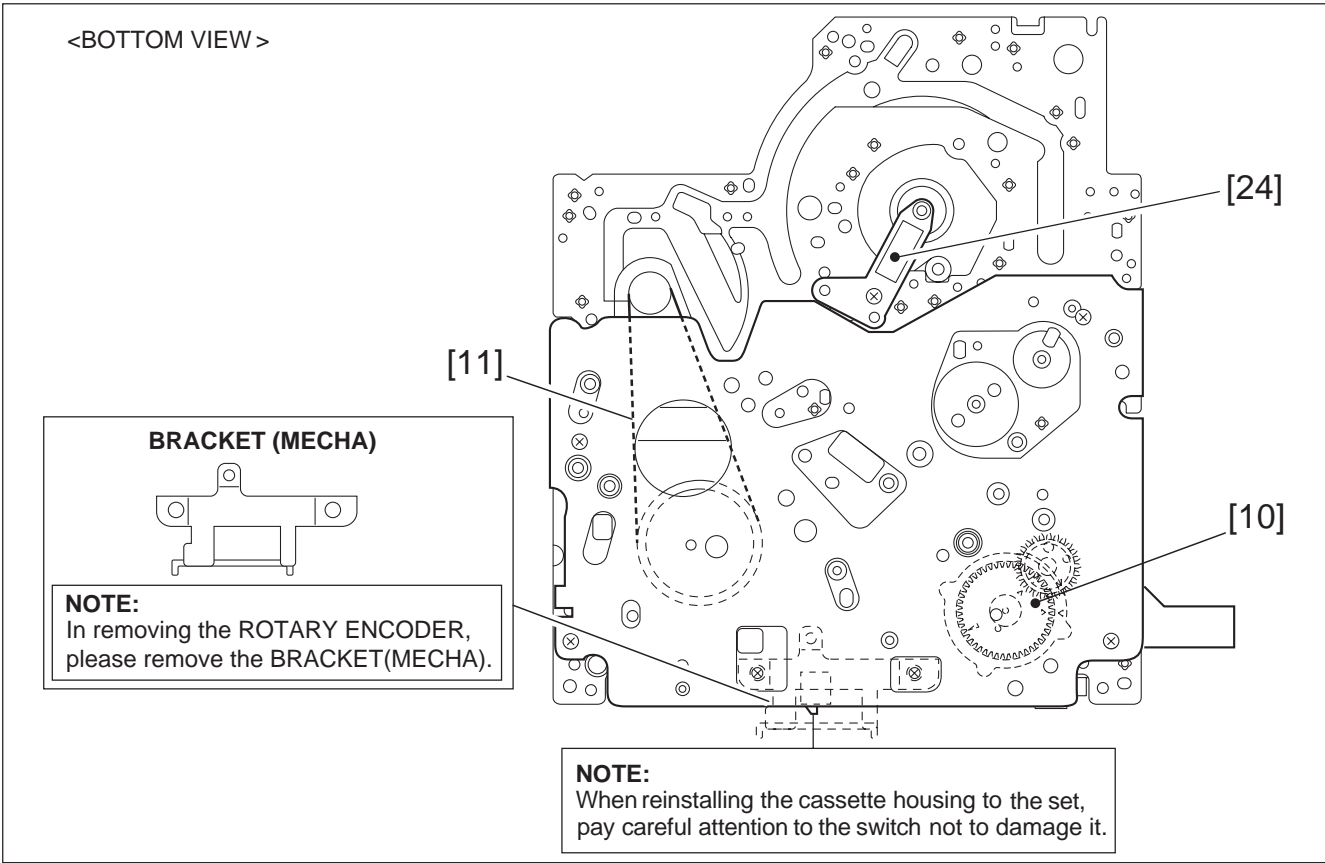


Fig.2-2-4

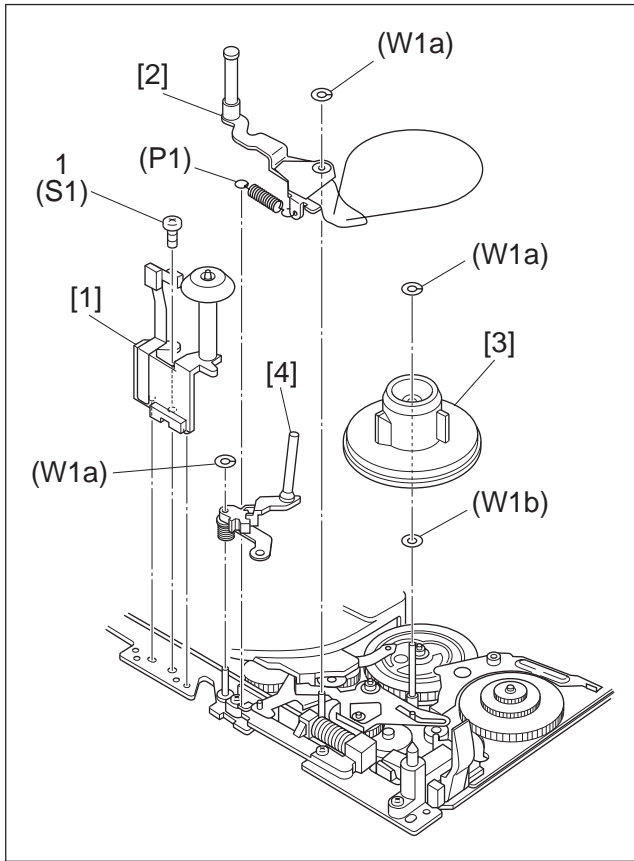


Fig.M1

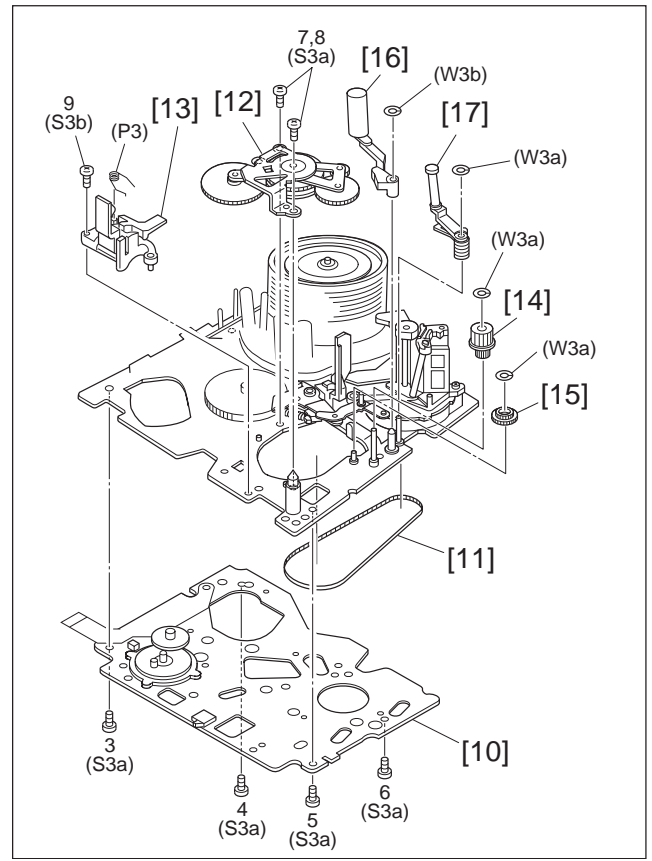


Fig.M3

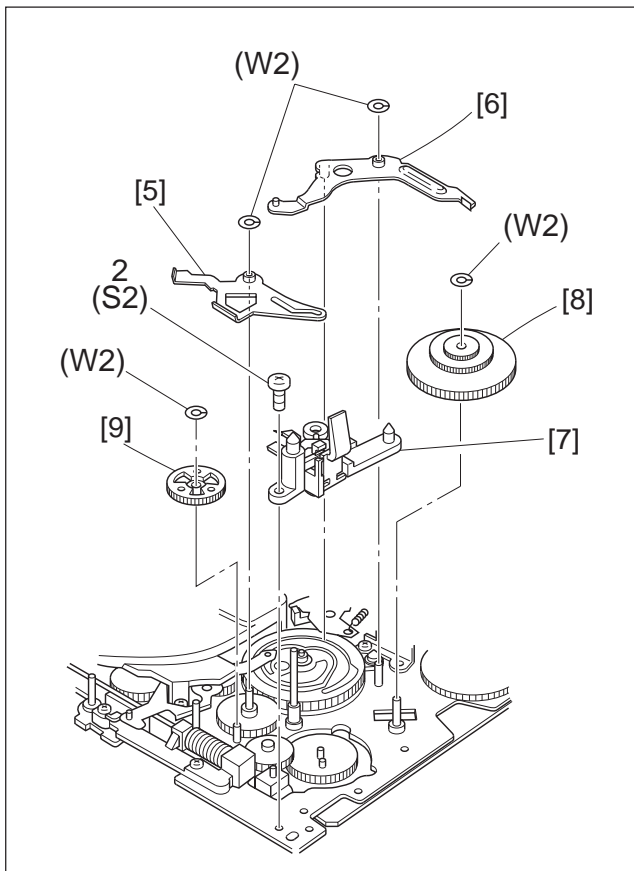
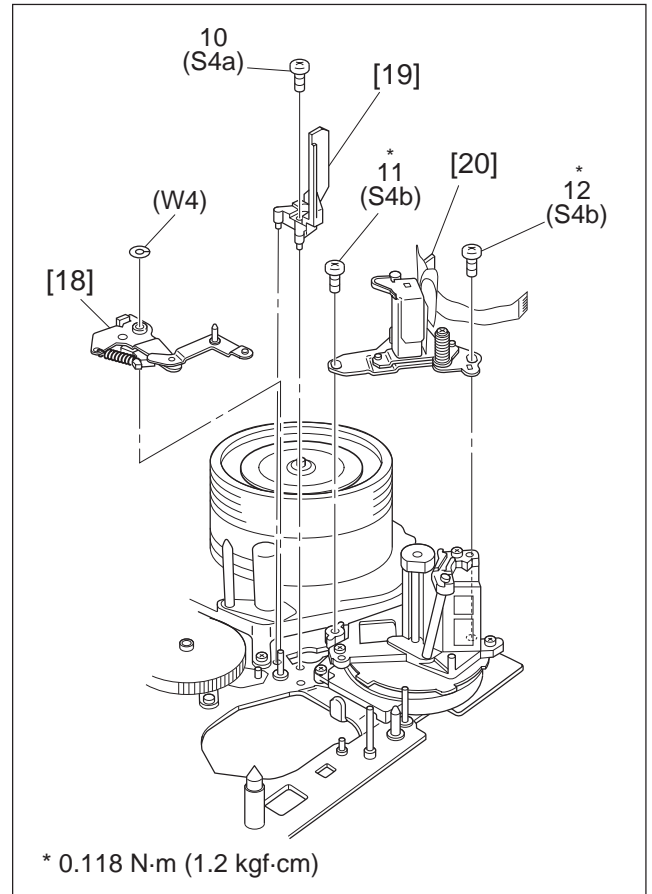


Fig.M2



\* 0.118 N-m (1.2 kgf-cm)

Fig.M4

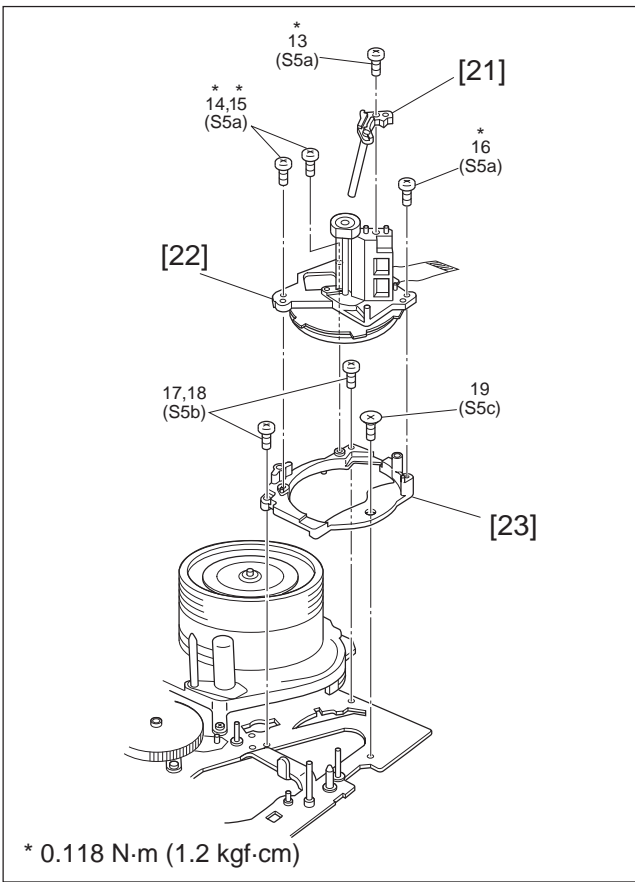


Fig.M5

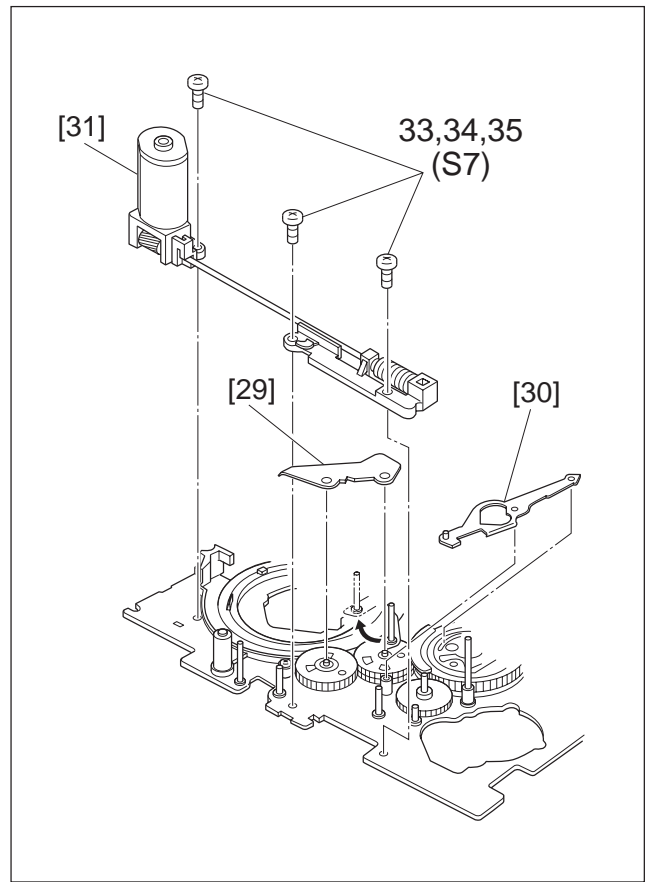


Fig.M7

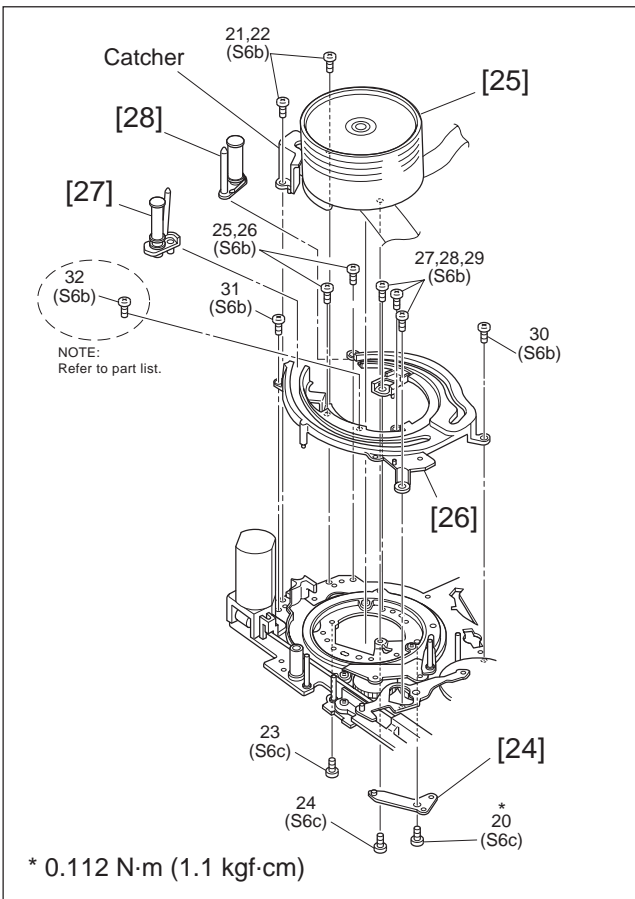


Fig.M6

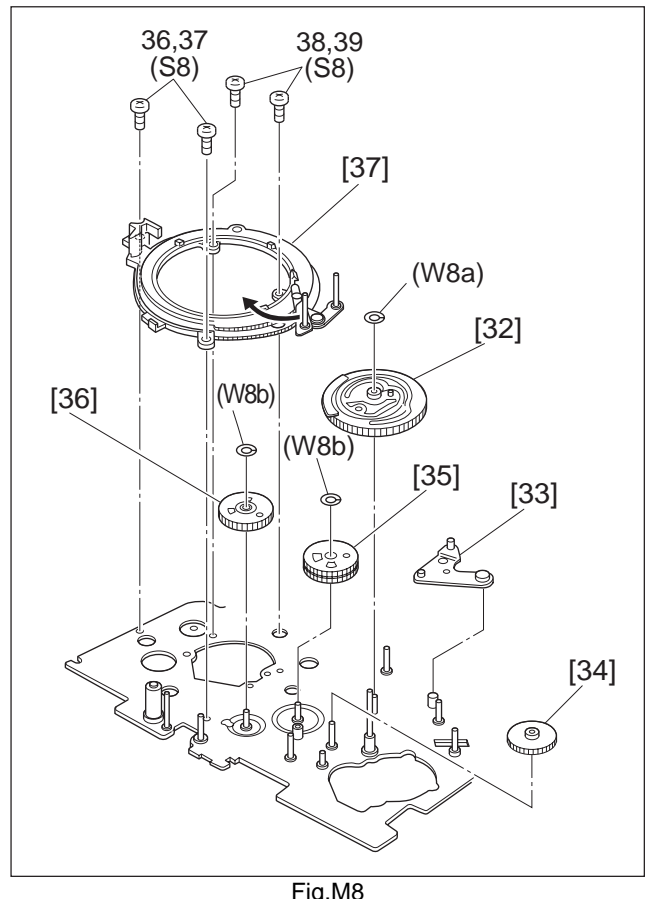


Fig.M8

## 2.2.4 CHECKUP AND ADJUSTMENT OF MECHANISM PHASE

### NOTE:

Pay careful attention to the installing order and phase of mechanism parts of the loading system.

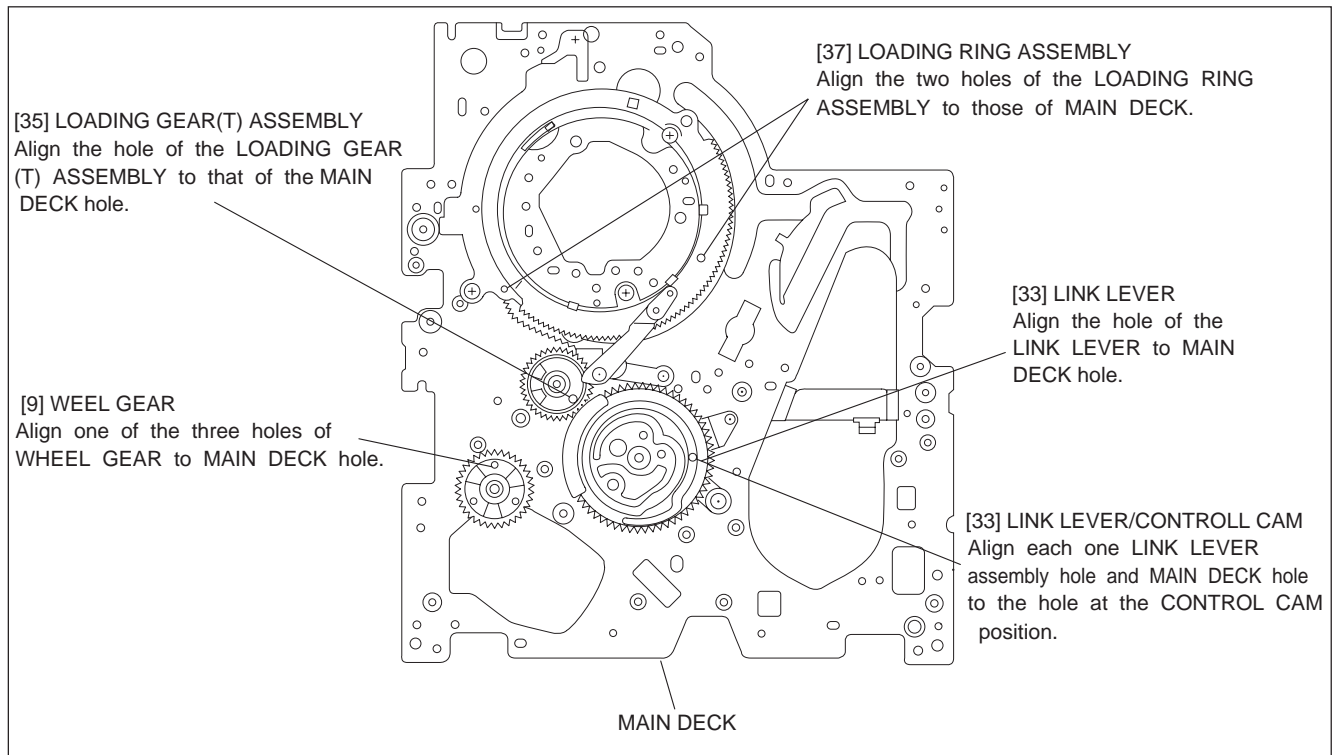


Fig.2-2-5 Top of main deck

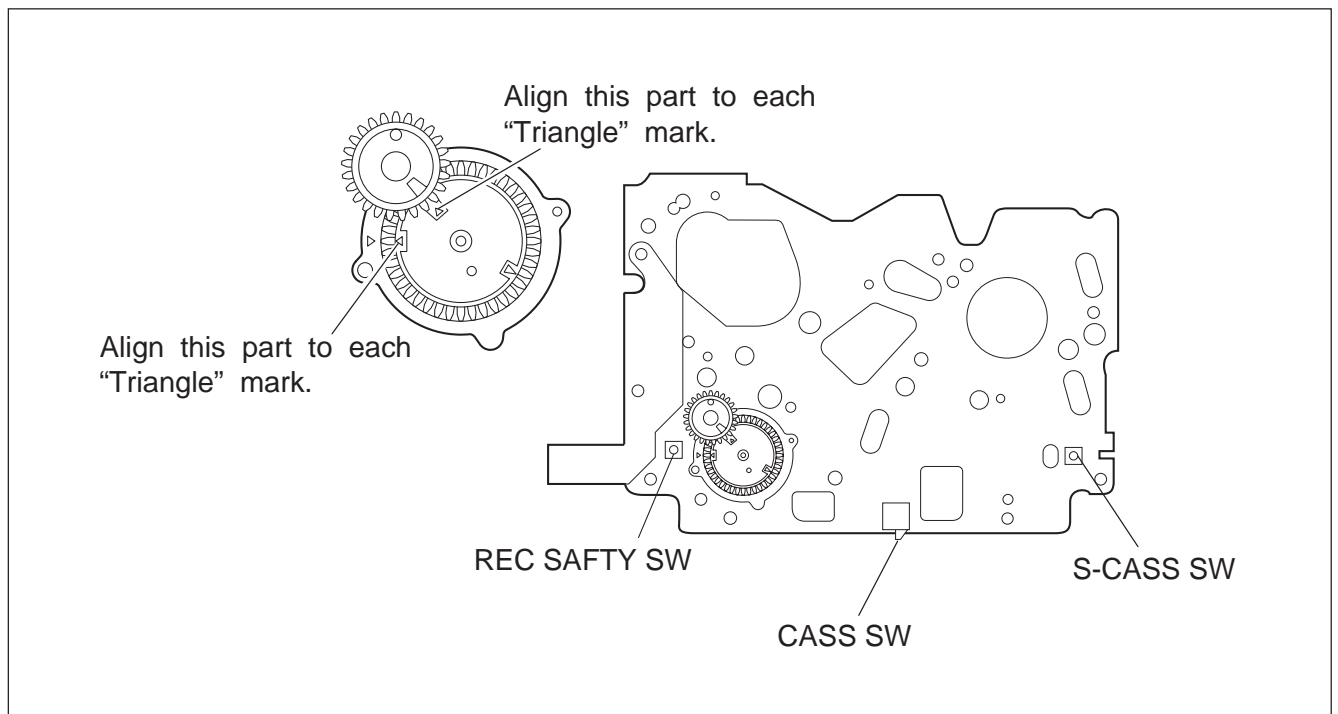


Fig.2-2-6 Rotary encoder

### 2.2.5 SERVICE NOTE

Use the following chart to manage screws.

Symbol No.	[1]	[7]	[10]	[12]	[13]	[19]	[20]	[21]	[22]	[23]									
Removing order of screw	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Place to stick screw																			
Reference drawing (Fig. No.)	M1	M2	M3			M4			M5										
Screw tightening torque	I										II								I

Symbol No.	[24]	[25]	[26]	[31]	[37]															
Removing order of screw	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Place to stick screw																				
Reference drawing (Fig. No.)			M6																	
Screw tightening torque	I										M7								M8	

Fig.2-2-7

<NOTE>

· Pay careful attention to tightening torque for each screw.  
 Torque setting value of torque driver is limited. At the values over the maximum torque setting value, fasten a screw manually not to damage the screw thread.

I : 0.216N·m(2.2kgf·cm)      II : 0.118N·m(1.2kgf·cm)      III : 0.112N·m(1.1kgf·cm)

## 2.2.6 REMARKS

### 2.2.6.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.2.6.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.2 VHS-C MECHANISM ASSEMBLY. Fig.2-2-8 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-JB	AA
Oil	YTU94027	BB

specifies oil and grease to be used

Fig.2-2-8



## 2.3 VHS MECHANISM

### 2.3.1 Notes

This model's mechanism relates closely to the rotary encoder and system control circuit (the rotary encoder is meshed with the control cam).

The system control circuit detects the mechanism condition using the rotary encoder's phase (internal switch phase). Therefore, the parts such as the rotary encoder, control plate, loading gear and control cam need to be installed correctly in order for the mechanism to operate properly. (For the mechanism phase adjustment, refer to the installation of each part.)

- Before using a soldering iron, be sure to disconnect the power plug from the AC outlet.
- Do not touch any of the adjustment points until a defect position is specified.
- When plugging or unplugging the connector, be sure not to damage the wire.
- Be sure the springs are hooked all the way around and in the correct direction.
- When performing repairs, take care not to damage a catch, etc.

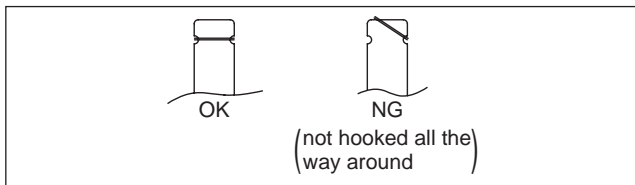


Fig.2-3-1

### 2.3.2 Mechanism operation check

When the mechanism is operated without a cassette loaded, operate the mechanism in the mechanism service mode.

### 2.3.3 Setting the mechanism assembling mode

The mechanism-assembling mode is provided with this mechanism. When disassembling and assembling, it is required to engage this mode.

Set the mode by adopting the following procedures.

- (1) Remove the mechanism assembly using the disassembling procedure.
- (2) Turn gear (a) of the loading motor manually to set the mechanism assembly to the eject end mode. Make sure that the main deck is connected to the guide hole (a) of the drive lever and the seal (a) of the main deck is connected to the mark "E" of the control plate. This condition is called the mechanism-assembling mode.

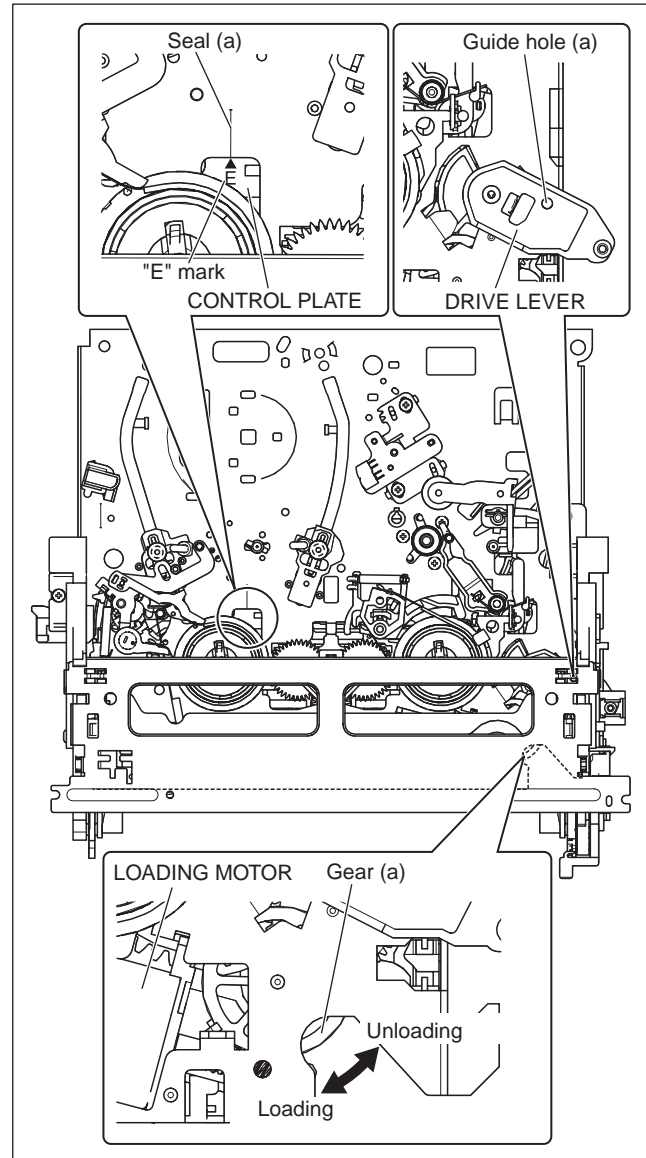


Fig.2-3-2

### 2.3.4 Layout of the main mechanism parts

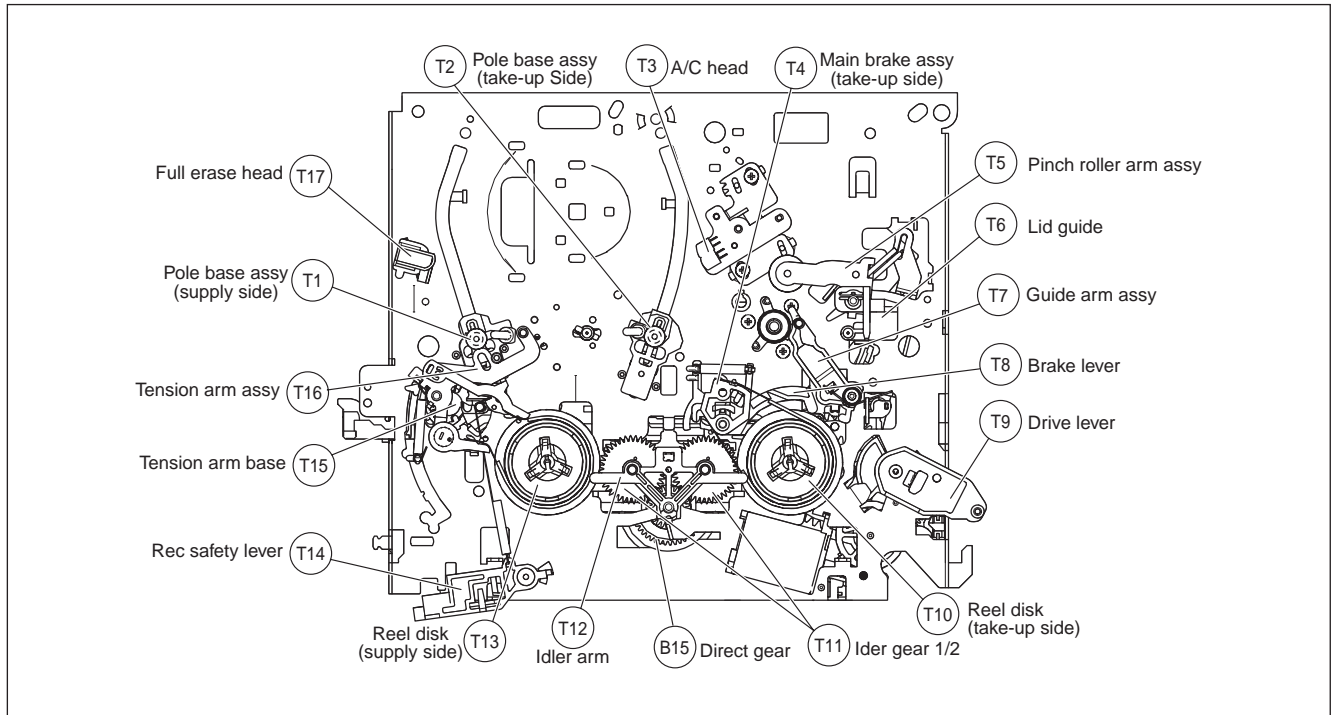


Fig.2-3-3

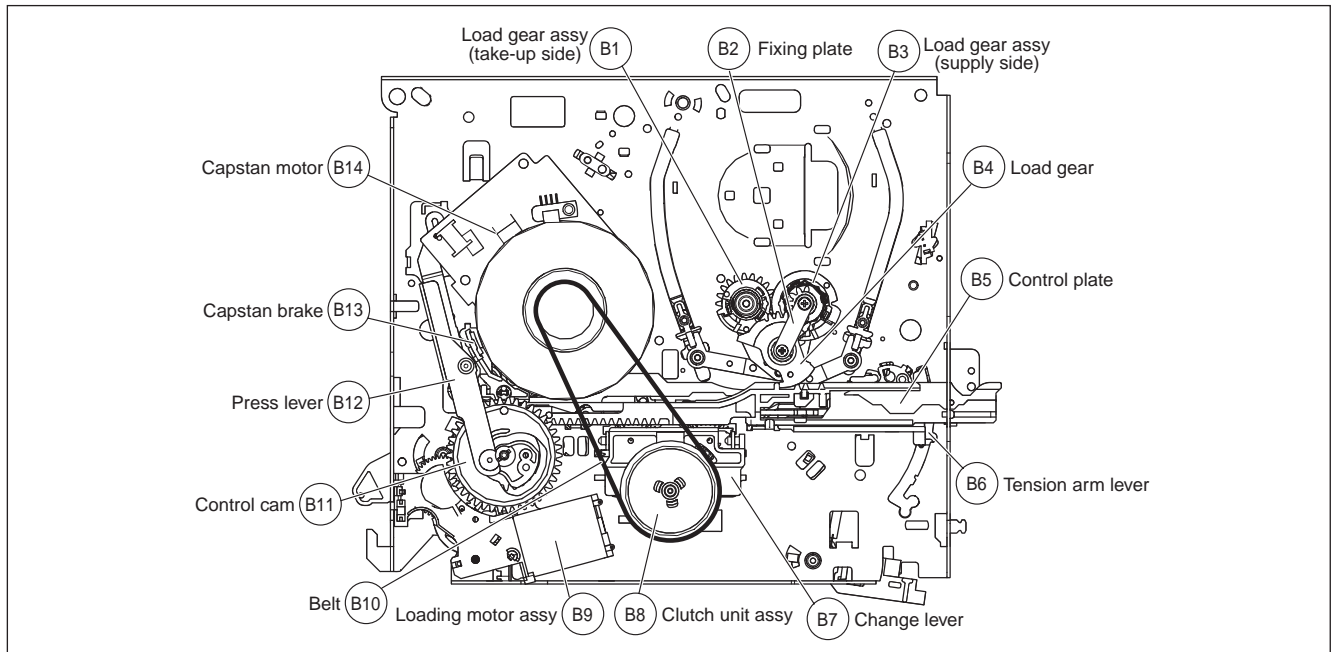


Fig.2-3-4

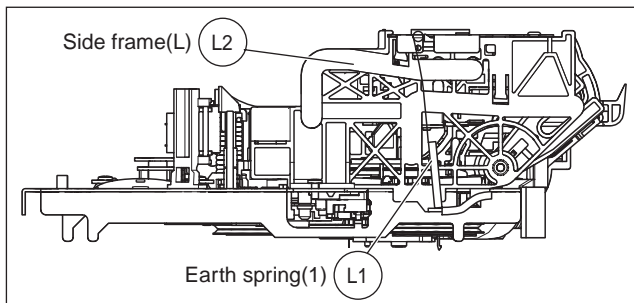


Fig.2-3-5

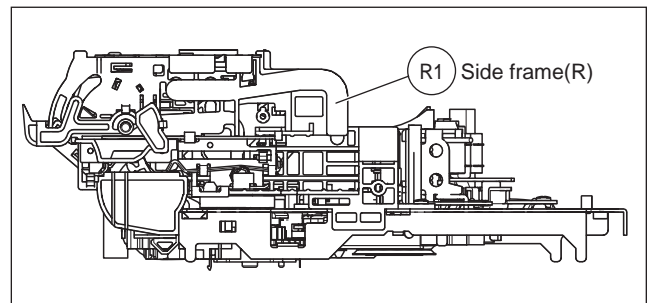


Fig.2-3-6

### 2.3.5 Disassembling procedure table

This table shows the order of parts removal when replacing each part. For replacement, remove the parts in the order of 1 to 13 shown in the table and install the parts in the reverse order.

The symbol number before each part name shows the number in the figure "Layout of the main mechanism parts". T and B on the right of each part name show the side from which the part should be removed (T: From the front of the mechanism, B: From the rear of the mechanism, T/B: From both sides).

Symbols and numbers	Symbols and numbers		Front(T)/Back(B) of mechanism	Number of removal steps	L1	-	-	L2	-	R1	T6	T12	T11	T4	T10	T16	T15	B12	B11	B13	B9	B10	B2	B4	B3	B1	B5	B8	B15
	Removal parts	(Reference items) Replacement parts			Earth spring (1)	Top frame	Cassette holder	Side frame (L)	Drive arm	Side frame (R)	Lid guide	Idler arm	Idler gear 1/2	Main brake (T)	Reel disk (T)	Tension arm	Tension arm base	Press lever	Control cam	Capstan brake assy	Loading motor assy	Belt	Fixing plate	Load gear	Loading gear assy (S)	Loading gear assy (T)	Control plate	Clutch unit	Direct gear
L1	2.1	Earth spring (1)	T	1																									
-	2.1	Top frame	T	2	1																								
-	2.1	Cassette holder	T	3	1	2																							
L2	2.1	Side frame (L)	T	3	1	2																							
-	2.1	Drive arm	T	5	1	2	3	4																					
R1	2.1	Side frame (R)	T	3	1	2																							
T3	2.2	A/C head	T	1																									
T17	-	FE head	T/B	1																									
T7	2.3	Guide arm assy	T	1																									
T6	2.3	Lid guide	T	1																									
T5	2.3	Pinch roller arm assy	T	2						1																			
T12	2.4	Idler arm	T	4	1	2	3																						
T11	2.4	Idler gear 1/2	T	5	1	2	3					4																	
T4	2.5	Main brake assy (T)	T	6	1	2	3					4	5																
T10	2.5	Reel disk (T)	T	7	1	2	3					4	5	6															
T16	2.5	Tension arm	T	6	1	2	3					4	5																
T13	2.5	Reel disk (S)	T	7	1	2	3					4	5		6														
T15	2.5	Tension arm base	T	7	1	2	3					4	5		6														
-	-	T-up head	T	8	1	2	3					4	5		6	7													
-	-	T-up lever	T	8	1	2	3					4	5		6	7													
T8	2.5	Brake lever	T	8	1	2	3					4	5	6	7														
T14	2.5	Rec safety lever	T	7	1	2	3	4	5	6																			
B12	2.6	Press lever	B	1																									
B11	2.6	Control cam	B	2														1											
B13	2.6	Capstan brake assy	B	3														1	2										
B9	2.6	Loading motor assy	B	4														1	2	3									
B10	2.7	Belt	B	1																									
B14	2.7	Capstan motor	T/B	2																		1							
-	-	Wire holder	T/B	1																									
B2	2.7	Fixing plate	B	1																									
B4	2.7	Load gear	B	2																			1						
B3	2.7	Loading gear assy(S)	B	3																				1	2				
B1	2.7	Loading gear assy(T)	B	4																				1	2	3			
T1	-	Pole base assy(S)	T/B	4																				1	2	3			
T2	-	Pole base assy(T)	T/B	5																				1	2	3	4		
-	-	Load gear base	B	5																				1	2	3	4		
B5	2.7	Control plate	B	6														1	2				3	4	5				
T9	-	Drive lever	T/B	10	1	2	3	4	5	6								7	8			9							
B8	2.8	Clutch unit	B	2																								1	
B15	2.8	Direct gear	B	3																									2
B7	-	Change lever	T/B	6								1	2															4	5
B6	-	Tension arm lever	T/B	14	1	2	3					4	5		6	7	8	9				10	11	12			13		

## 2.3.6 REPLACEMENT OF THE MAIN MECHANISM PARTS

### 2.3.6.1 Cassette holder

#### 2.3.6.1.1 Removal

- (1) Remove the screws (a) and (b).
- (2) Hold up the top frame, cassette holder assembly, drive arm assembly and side frames (L/R) all together and remove them by releasing the hooks (a) and (b).

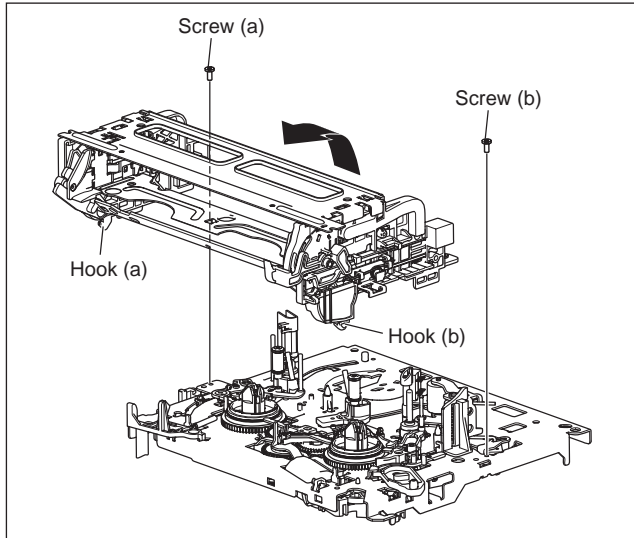


Fig.2-3-7

#### 2.3.6.1.2 Installation (phase adjustment)

- (1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
- (2) Hook the main deck to hooks (a) and (b).
- (3) Place the projection of the drive lever to section (a) of the side frame (R) and install the cassette holder to the main deck. Make sure that the bosses of the side frame (L/R) connect with the holes (a) and (b) of the main deck.
- (4) Secure screws (a) and (b).

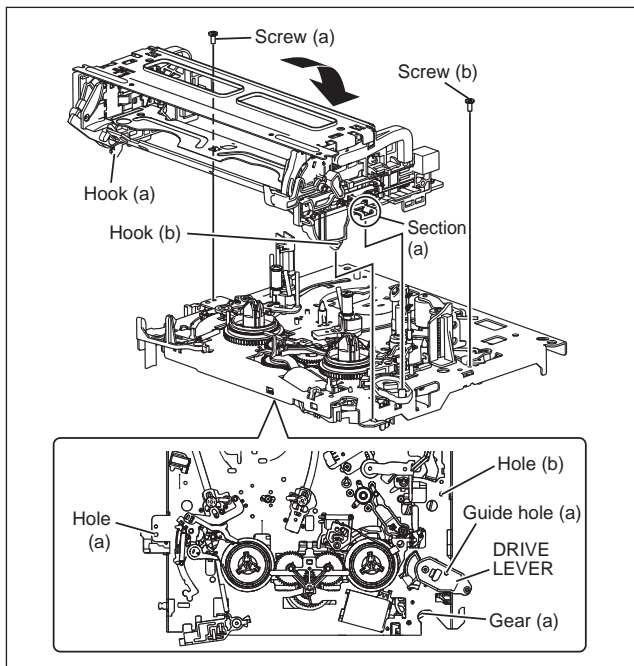


Fig.2-3-8

#### 2.3.6.1.3 Disassembling

- (1) Release hook (a) to remove the earth spring (1) from the top frame.
- (2) Release the catches (a) and (b) and pull the top frame in the direction shown by the arrow (a) to remove it.
- (3) Pull out the side frame (R).
- (4) Pull out the cassette holder assembly and drive arm assembly from the side frame (L).

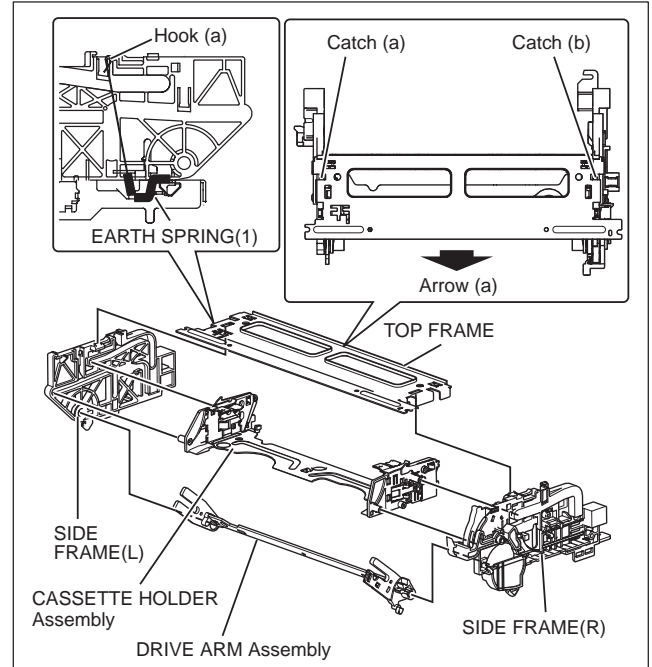


Fig.2-3-9

#### 2.3.6.1.4 Assembling (installation and phase adjustment)

- (1) Turn gear (a) of the loading motor assembly so that the main deck connects to the guide hole (a) of the drive lever.
- (2) Place the projection of the drive lever on section (a) of the side frame (R) and install the side frame (R) to the main deck.
- (3) Secure screw (b).
- (4) Place section (b) of the drive arm on the gear of the side frame (R). Make sure that the pin of the door opener connects with section (c) of the drive arm.
- (5) Place the drive arm on section (d) of the side frame (L) and install the side frame (L) on the main deck. Be sure to connect the earth spring (1) to the side frame (L).
- (6) Secure screw (a).
- (7) Turn gear (a) of the loading motor assembly until the drive arm is vertical.
- (8) Place the slit of the side frame (L/R) at the foot of the cassette holder assembly and install the cassette holder.
- (9) Place the top frame on the position guide (a) of the side frame (L/R) and push it in the direction shown by the arrow (a) for installation.
- (10) Hook the earth spring (1) to the hook (a) of the top frame.

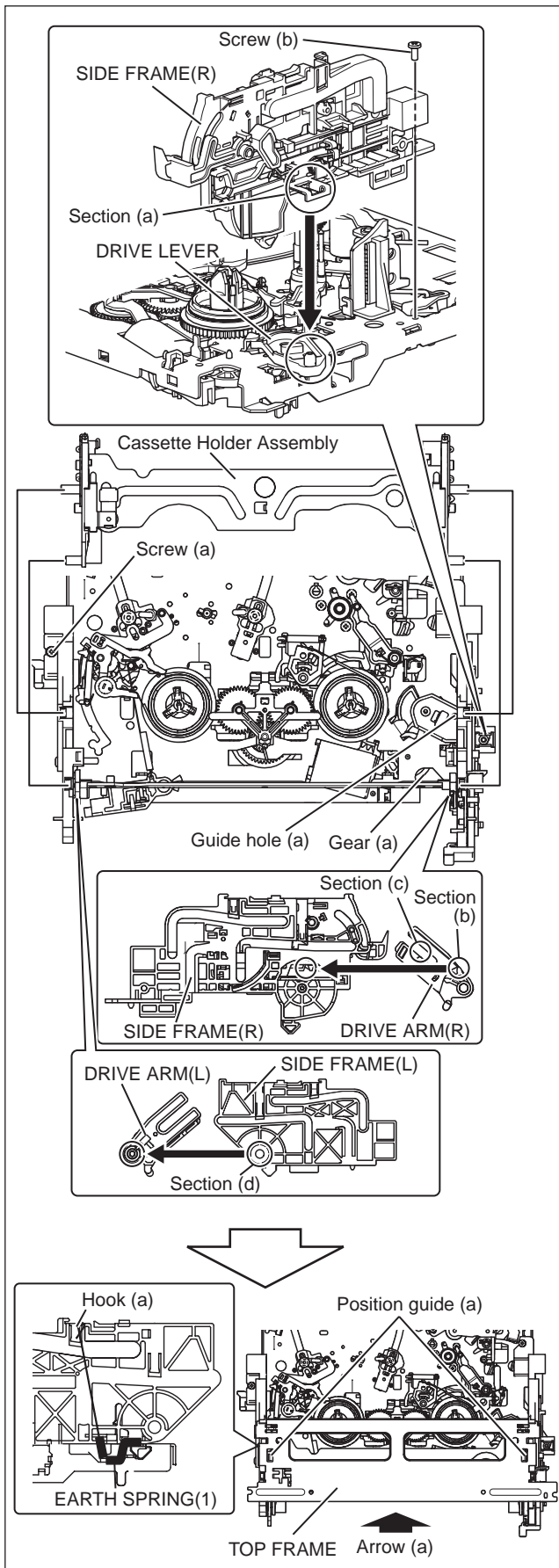


Fig.2-3-10

### 2.3.6.2 A/C head

#### 2.3.6.2.1 Removal

- (1) Remove screws (a) and (b).
- (2) Remove the A/C head together with the head base.
- (3) Remove the screws (c), (d) and (e) to remove the spring (a) and the A/C head from the Head base.

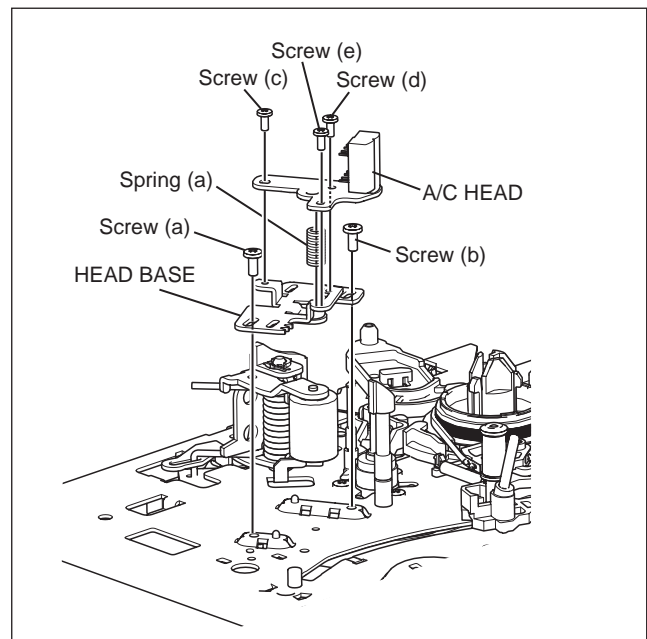


Fig.2-3-11

#### 2.3.6.2.2 Installation (initial setting)

To install the A/C head to the head base, secure the screws in the order of (c), (d) and (e). To make the adjustment easy, temporarily elevate the A/C head.

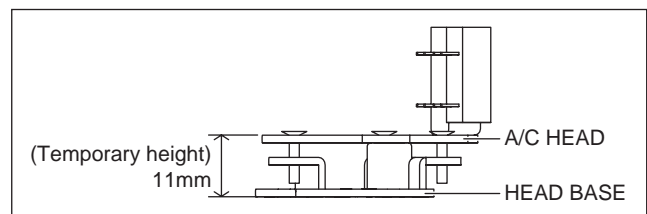


Fig.2-3-12

### 2.3.6.3 Guide arm, pinch roller arm

#### 2.3.6.3.1 Removal

- (1) Remove the spring (a) from the hook (a) and detach the guide arm assembly.
- (2) Release the catch (a) to remove the lid guide.
- (3) Remove the spring (b) from the hook (b) and detach the pinch roller arm assembly.

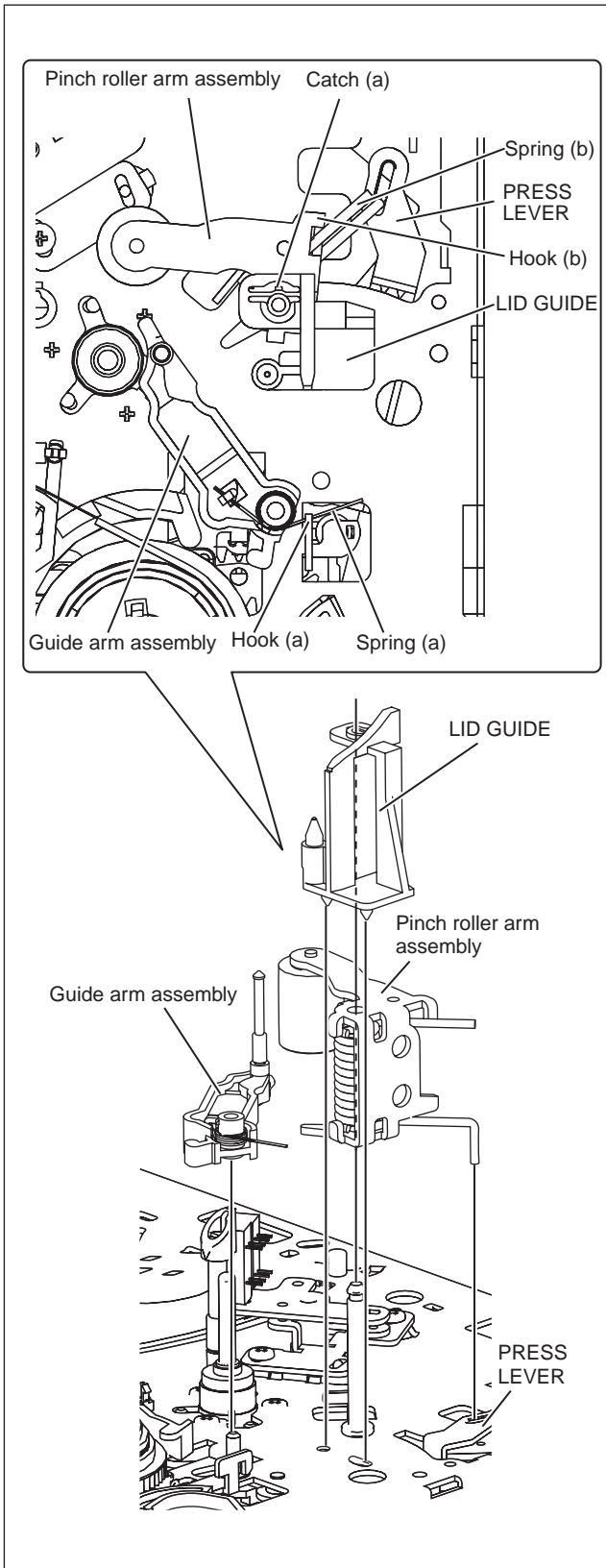


Fig.2-3-13

### 2.3.6.4 Idler arm, idler gear 1/2

#### 2.3.6.4.1 Removal

- (1) Release the catches (a) and (b) to detach the idler arm.
- (2) Detach the idler gear 1/2.

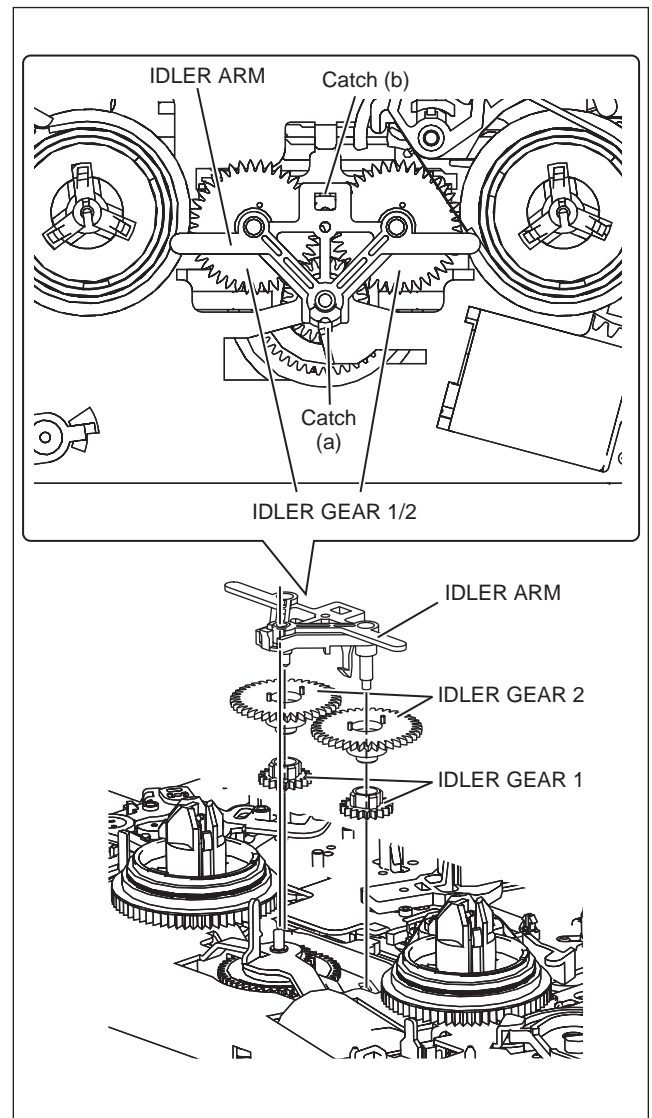


Fig.2-3-14

### 2.3.6.5 Main brake (T), brake lever, tension arm, reel disk (S/T), Rec safety lever

#### 2.3.6.5.1 Removal

- (1) Remove the spring (a). (Detach section (b) of the spring (a).)
- (2) Release the catch (a) to detach the main brake (T).
- (3) Release the catch (b) to detach the reel disk (T) and the spacer.
- (4) Lift up and turn section (b) of the brake lever counterclockwise to remove the brake lever.
- (5) Remove the spring (b) from the hook (a).
- (6) Release the catch (c) to detach the tension arm.
- (7) Release the catch (d) to detach the reel disk (S) and the spacer.
- (8) Remove the spring (c) from the hook (b).
- (9) Turn the tension arm base in the direction shown by arrow (a) to release catch (e). Place the projections of the tension arm base to the holes (a) to detach the tension arm base.
- (10) While releasing the catch (f), turn the Rec safety lever counterclockwise to remove it.

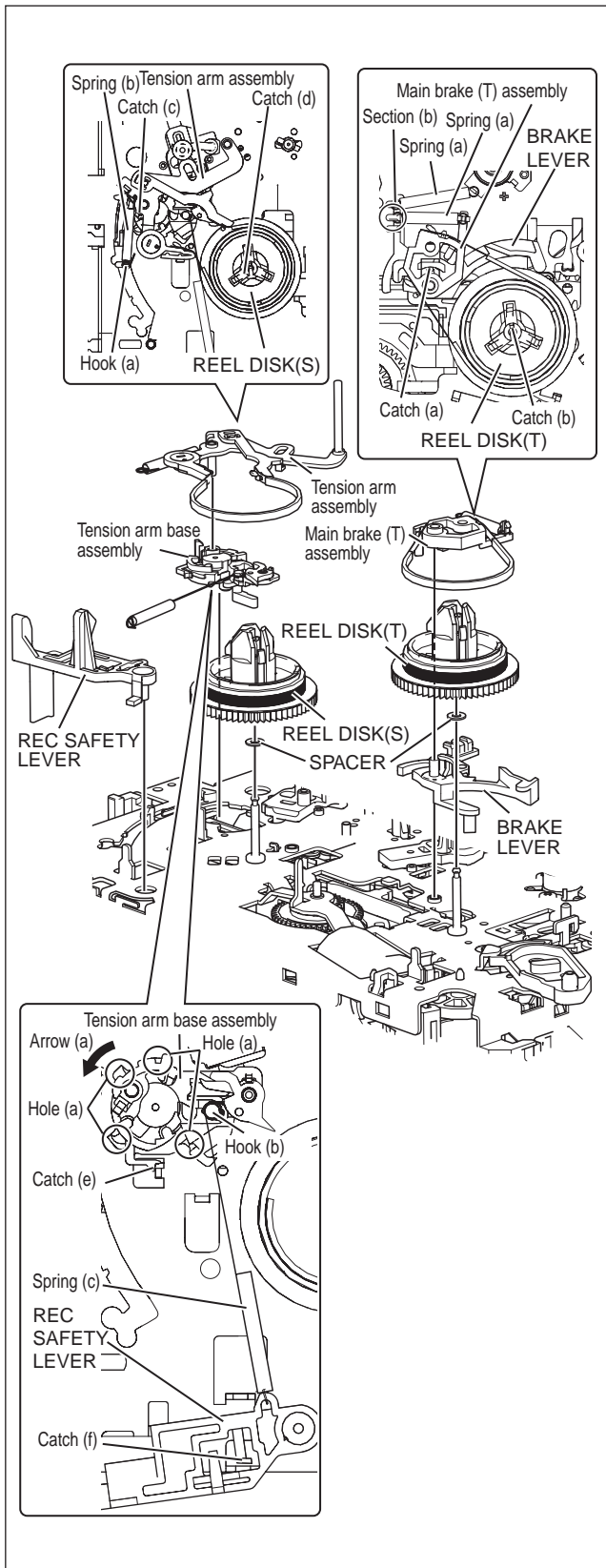


Fig.2-3-15

### 2.3.6.6 Press lever, control cam, capstan brake assembly, loading motor assembly

#### 2.3.6.6.1 Removal

- (1) Remove the slit washer (a) to detach the press lever.
- (2) Release the slit washer (b) to detach the control cam.
- (3) Release the catch (b) to detach the capstan brake assembly.
- (4) Remove the solder (a).
- (5) Remove the screw (a).
- (6) Release the catches (c) and (d) to detach the loading motor assembly.

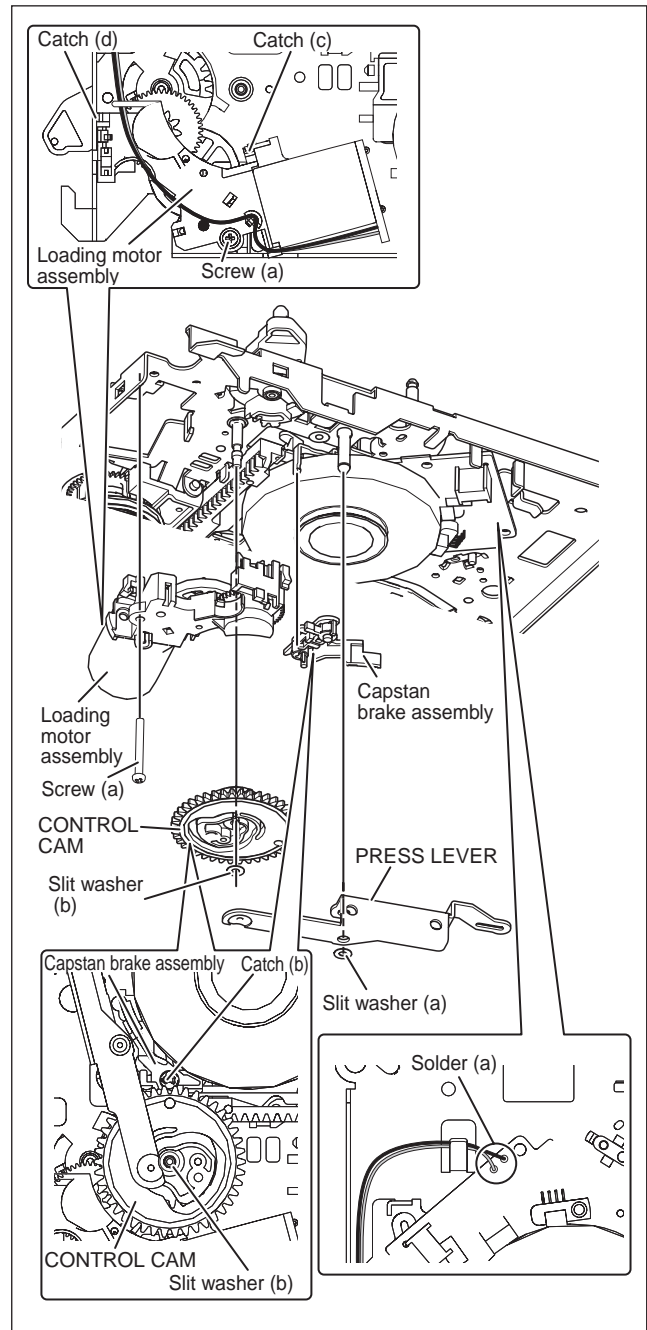


Fig.2-3-16

### 2.3.6.6.2 Installation (phase adjustment)

- (1) Attach the loading motor assembly to the main deck.
- (2) Secure the screw (a).
- (3) Solder the wire to section (a).
- (4) Arrange the wire along with the position guide (b).
- (5) Attach the capstan brake assembly to the main deck.
- (6) Place the main deck on the guide hole (a) of the control plate.
- (7) Place the main deck on the guide hole (b) of the drive lever.
- (8) Place the main deck on the guide hole (c) of the control cam to install the control cam.
- (9) Move the capstan brake in the direction shown by the arrow (a) to attach the press lever to the shaft (a). Make sure that the boss of the press lever fits in the control cam, and that the shaft (b) of the pinch roller arm assembly connects with the hole of the press lever.
- (10) Attach slit washer (a) to shaft (a).

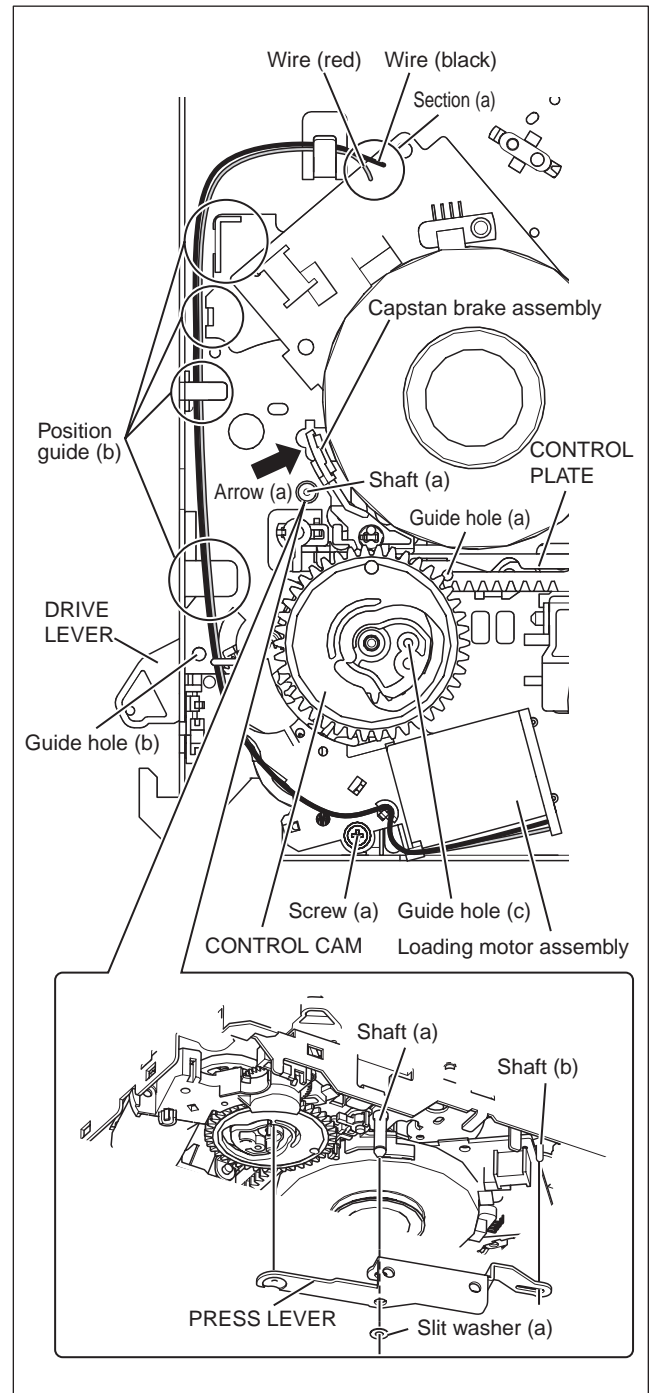


Fig.2-3-17



**Note:**

- When replacing the worm bearing of the loading motor assembly, attach it according to the following specification.  
If worm bearing is not attached correctly, a mechanism noise may occur. (See Fig. 2-3-18)

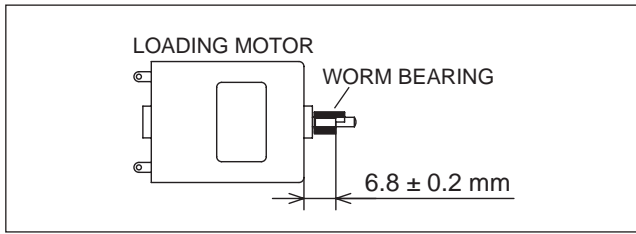


Fig.2-3-18

**2.3.6.7 Capstan motor, load gear, control plate**

**2.3.6.7.1 Removal**

- (1) Detach the belt.
- (2) Check that the FFC connector on the drum is disconnected.
- (3) Release the catch (a) to remove the FFC wire.
- (4) Remove the screws (a) to detach the capstan motor.
- (5) Remove the screws (b) to detach the fixing plate.
- (6) Release the catch (b) to detach the load gear.
- (7) Turn the load gear (S/T) in the loading direction to detach it.
- (8) Remove the control plate.

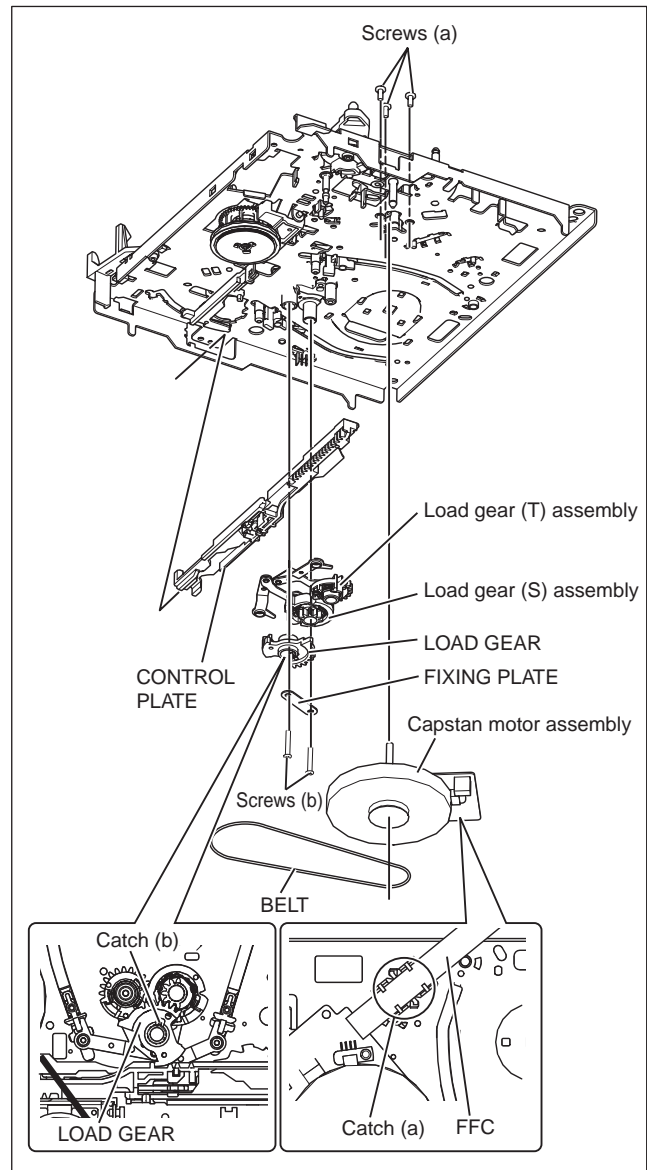


Fig.2-3-19

### 2.3.6.7.2 Installation (phase adjustment)

- (1) Place the main deck on the guide hole (a) of the tension arm lever.
- (2) Place the main deck on the guide hole (b) of the brake lever.
- (3) Attach the control plate to align with the position guide (a).
- (4) Place the hole (c) of the load arm (T) on the pole base (T) and the load gear (T) on the load gear base.
- (5) Place the hole (d) of the load arm (S) on the pole base (S) and the load gear (S) on the load gear base. Be sure to align the guide mark (e) of the load gear (T) to that of the load gear (S).
- (6) Turn the load gear (S/T) in the unloading direction to place the main deck on the guide hole (f) of the load gear (T).
- (7) Place the main deck on the guide hole (g) of the control plate.
- (8) Attach the load gear on the load gear base so that the control plate is placed on the edge (h) of the load gear.
- (9) Place the fixing plate on the shaft of the load gear base and secure the screws (b).

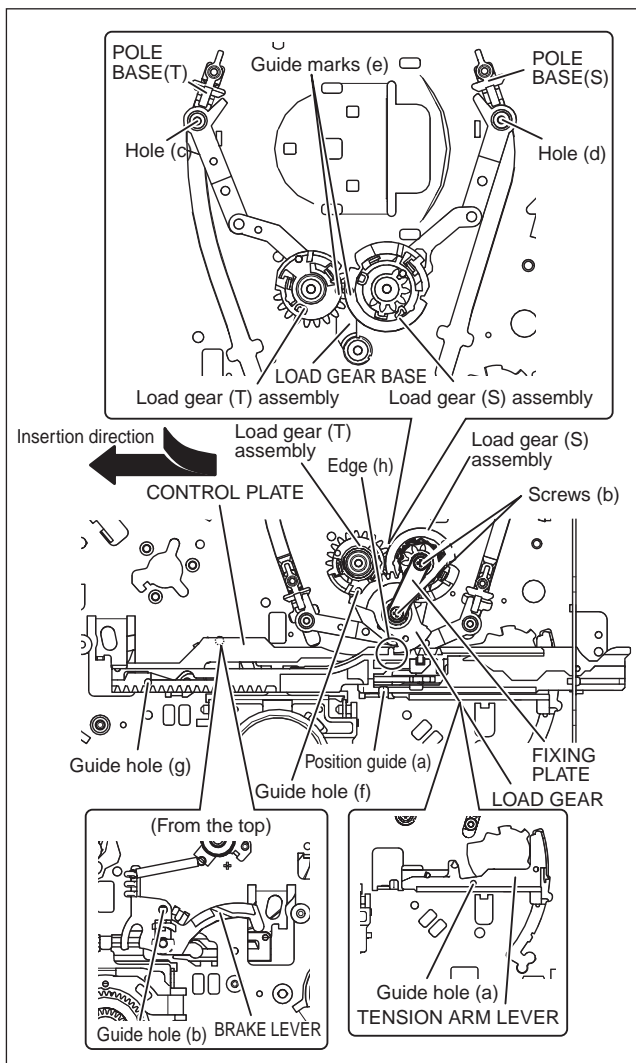


Fig.2-3-20

### 2.3.6.8 Clutch unit assembly, direct gear

#### 2.3.6.8.1 Removal

- (1) Remove the slit washer (a) to detach the clutch unit assembly.
- (2) Remove the spring (a) and the direct gear.

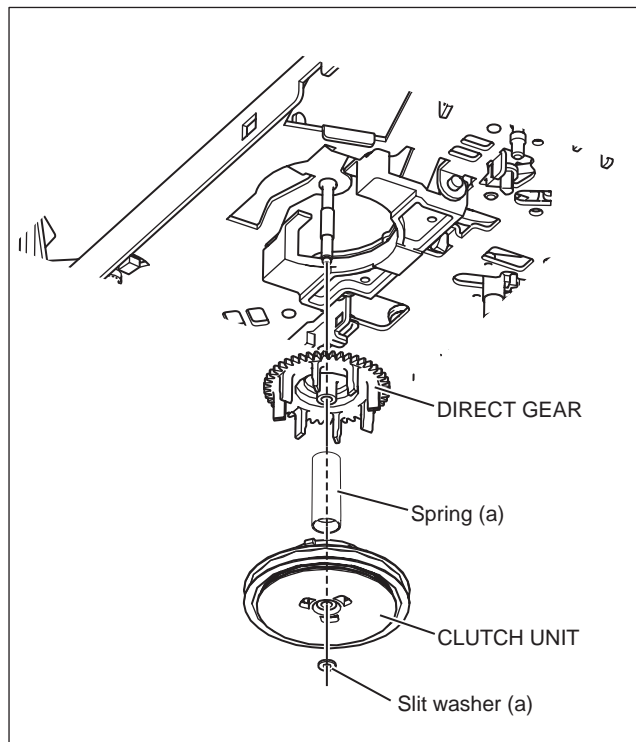
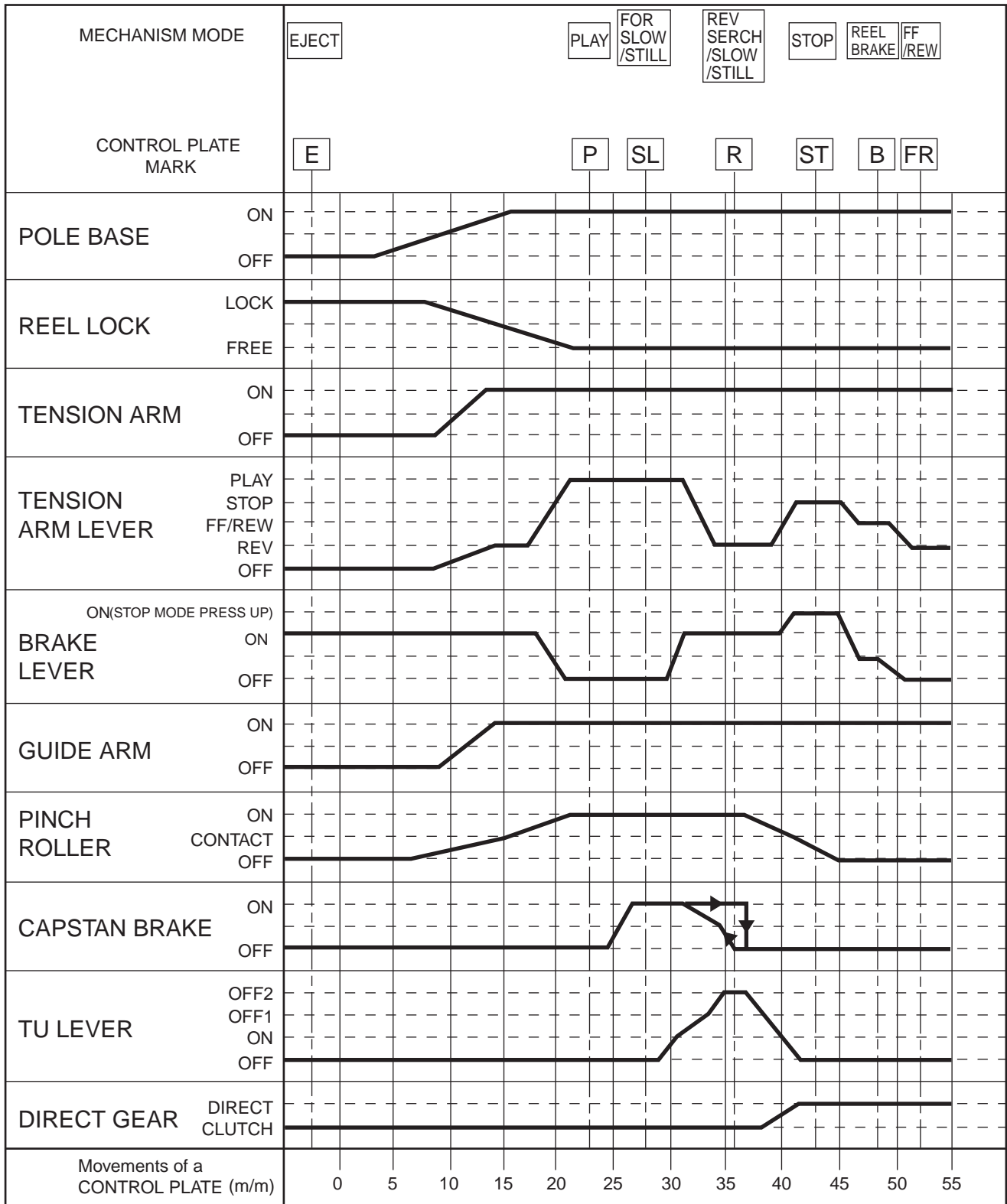


Fig.2-3-21

2.3.7 MECHANISM TIMING CHART



## 2.3.8 REMARKS

### 2.3.8.1 Cleaning

- (1) For cleaning of the upper drum (particularly video heads), use fine-woven cotton cloth with alcohol soaks through. Do not move the cloth but turn the upper drum counterclockwise.

**NOTE:**

Make sure not to move the cloth in the vertical direction to the video head, since it may cause damage of the video heads.

- (2) For cleaning of parts of the tape transport system except the upper drum, use fine-woven cotton cloth or cotton swab soaked alcohol.
- (3) After cleaning, confirm that the cleaned parts are completely dry before loading the deck with cassette tape.

### 2.3.8.2 Applying oil and grease

- (1) Periodical oiling and greasing are not required but should be done to new parts when replacing. If oil and grease on the other parts of the other party are old and dirty, wipe them clean and apply new oil or grease.
- (2) For parts and points to apply oil and grease, refer to the exploded view of the 3.3 VHS MECHANISM ASSEMBLY. Fig.2-3-22 specifies oil and grease to be used.
- (3) When oiling, clean the objective parts with alcohol first and apply one or two drop(s) of oil. Too much oiling causes rotary parts to slip because of oil leakage.

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

specifies oil and grease to be used

Fig.2-3-22

**JVC**

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