



SERVICE MANUAL

Sec. 1: Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA's

Sec. 2: Deck Mechanism Section

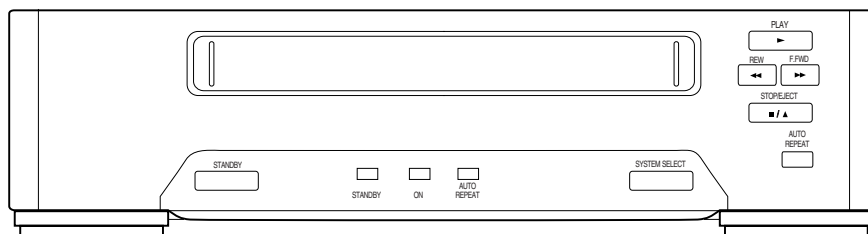
- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Alignment Procedures of Mechanism

Sec. 3: Exploded views and Parts List Section

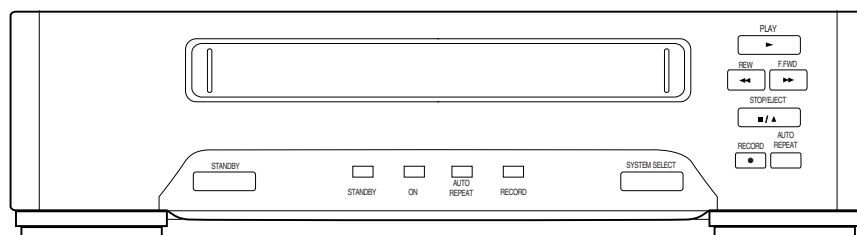
- Exploded views
- Parts List

VIDEO CASSETTE RECORDER

VIP-5000HC MK12



VIP-5000LR MK12



MAIN SECTION

VIDEO CASSETTE RECORDER

VIP-5000HC MK12/VIP-5000LR MK12

Sec. 1: Main Section

- Specifications
- Preparation for Servicing
- Adjustment Procedures
- Schematic Diagrams
- CBA' s

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SPECIFICATIONS

Description	Unit	Minimum	Nominal	Maximum	Remark
1. Video					
1-1. Video Output (PB)	Vp-p	0.8	1.0	1.2	FL6A
1-2. Video Output (R/P)	Vp-p	0.8	1.0	1.2	
1-3. Video S/N Y (R/P)	dB	40	45		HPF:100Hz
INPUT:50% WHITE					LPF:5MHz
					SC TRAP ON
1-4. Video Color S/N AM (R/P)	dB	35	41		HPF:100Hz
1-5. Video Color S/N PM (R/P)	dB	30	36		LPF:500KHz
INPUT:100% COLOR					SC TRAP ON
1-6. Resolution (PB)	Line	230	240		FL6M
2. Servo					
2-1. Jitter Low	μsec		0.07	0.12	FL6N
2-2. Wow & Flutter	%		0.3	0.6	E-30, CCIR, WTD
3. Normal Audio					
3-1. Output (PB)	dBV	-10	-6	-2	FL6A
3-2. Output (R/P)	dBV	-10	-6	-1.5	
3-3. S/N (R/P)	dB	36	40		
3-4. Distortion (R/P)	%		1.5	4.0	INPUT:-10dBV
3-5. Freq. resp (R/P) at 200Hz	dB	-6	-3		
(-20dB ref. 1kHz) at 8kHz	dB	-6	-3		

Note: Nominal specs represent the design specs. All units should be able to approximate these – some will exceed and some may drop slightly below these specs. Limit specs represent the absolute worst condition that still might be considered acceptable; In no case should a unit fail to meet limit specs.

IMPORTANT SAFETY PRECAUTIONS

Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

Precautions during Servicing

- A.** Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.
- B.** In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.

Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.
- C.** Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
- D.** Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation tape
 - 2) PVC tubing
 - 3) Spacers
 - 4) Insulators for transistors
- E.** When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.
- F.** Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
- G.** Check that replaced wires do not contact sharp edges or pointed parts.
- H.** When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.
- I.** Also check areas surrounding repaired locations.
- J.** Use care that foreign objects (screws, solder drop-lets, etc.) do not remain inside the set.
- K.** Crimp type wire connector

The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.

Replacement procedure
 - 1) Remove the old connector by cutting the wires at a point close to the connector.
Important: Do not re-use a connector. (Discard it.)
 - 2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.
 - 3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.
 - 4) Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.
- L.** When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

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 their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

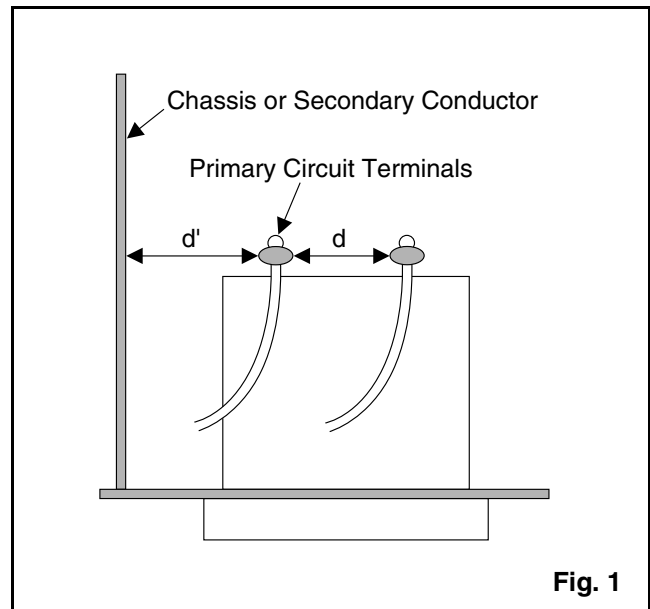
1. Clearance Distance

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

Table 1 : Ratings for selected area

AC Line Voltage	Clearance Distance (d) (d')
110 to 240 V	$\geq 3\text{mm(d)}$ $\geq 6\text{mm(d')}$

Note: This table is unofficial and for reference only.
Be sure to confirm the precise values.



2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (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.) is lower than or equal to the specified value in the table below.

Measuring Method (Power ON) :

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

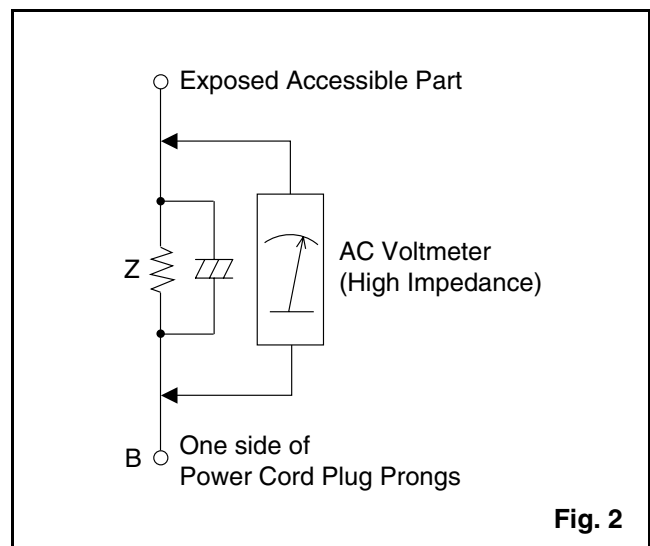


Table 2 : Leakage current ratings for selected areas

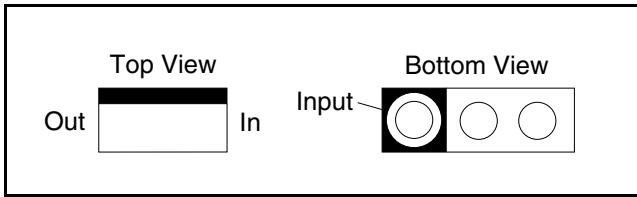
AC Line Voltage	Load Z	Leakage Current (i)	One side of power cord plug prongs (B) to:
110 to 240 V	2k Ω RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	RF or Antenna terminals
	50k Ω RES. Connected in parallel	$i \leq 0.7\text{mA AC Peak}$ $i \leq 2\text{mA DC}$	A/V Input, Output

Note: This table is unofficial and for reference only. Be sure to confirm the precise values.

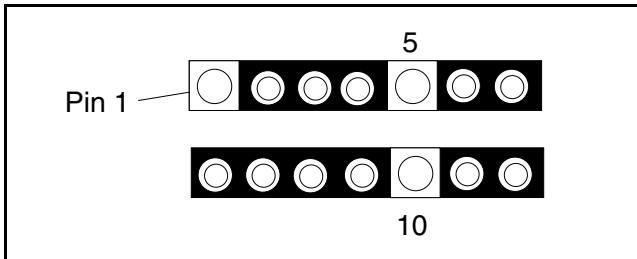
STANDARD NOTES FOR SERVICING

Circuit Board Indications

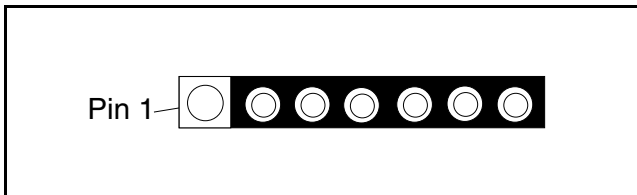
- a. The output pin of the 3 pin Regulator ICs is indicated as shown.



- b. For other ICs, pin 1 and every fifth pin are indicated as shown.

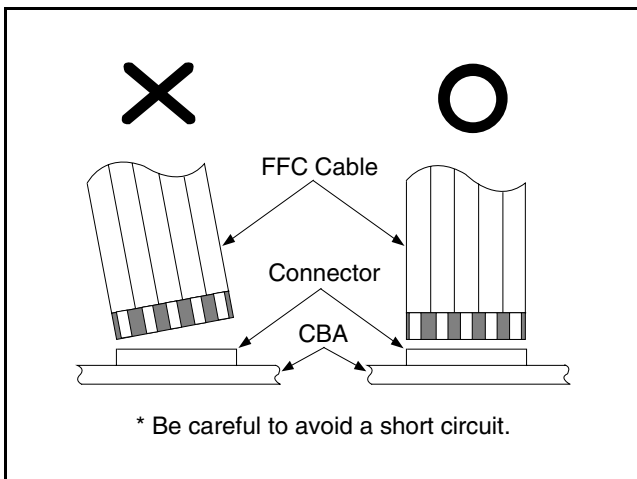


- c. The 1st pin of every male connector is indicated as shown.



Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.

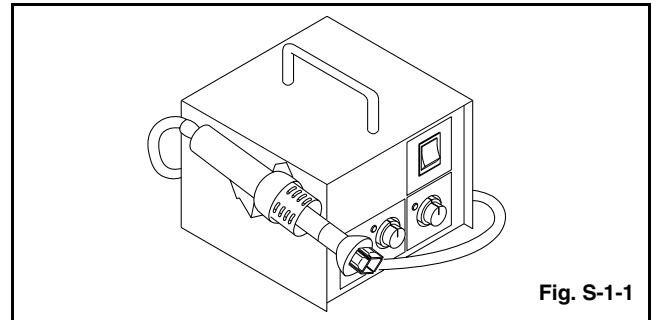


How to Remove / Install Flat Pack-IC

1. Removal

With Hot-Air Flat Pack-IC Desoldering Machine:

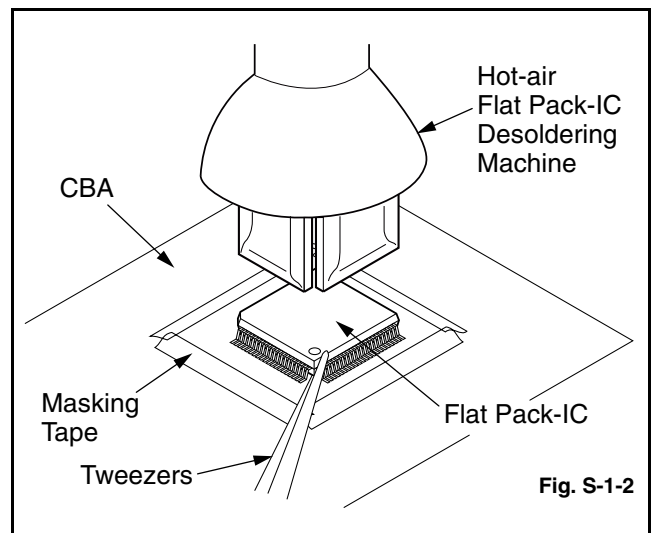
- (1) Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)



- (2) Remove the flat pack-IC with tweezers while applying the hot air.
- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

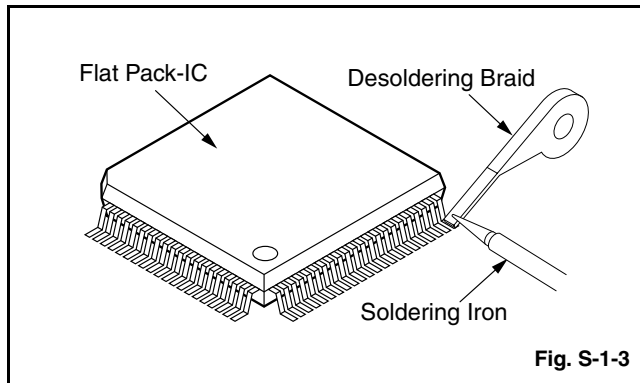
Caution:

1. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)
2. The flat pack-IC on the CBA is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

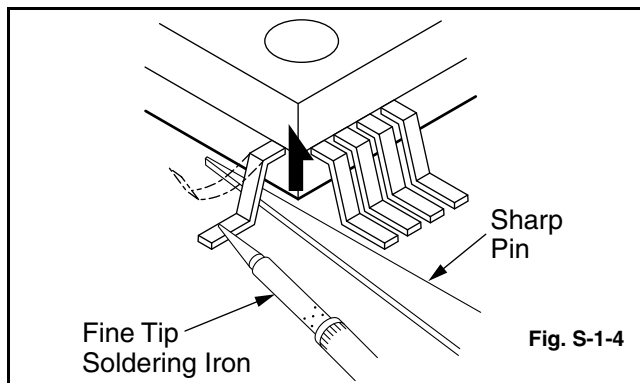


With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)



- (2) Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)



- (3) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (4) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

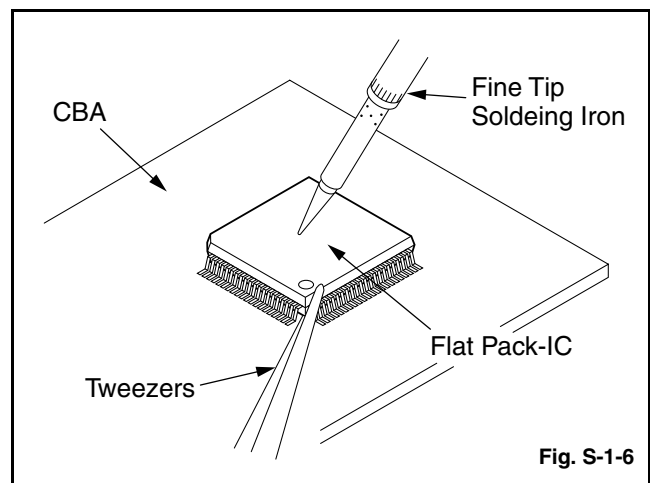
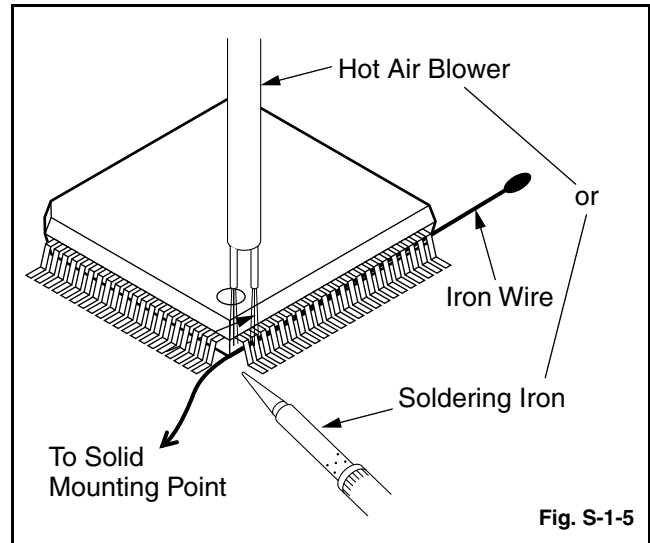
With Iron Wire:

- (1) Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the CBA contact pads as shown in Fig. S-1-5.

- (4) Bottom of the flat pack-IC is fixed with glue to the CBA; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
- (5) Release the flat pack-IC from the CBA using tweezers. (Fig. S-1-6)

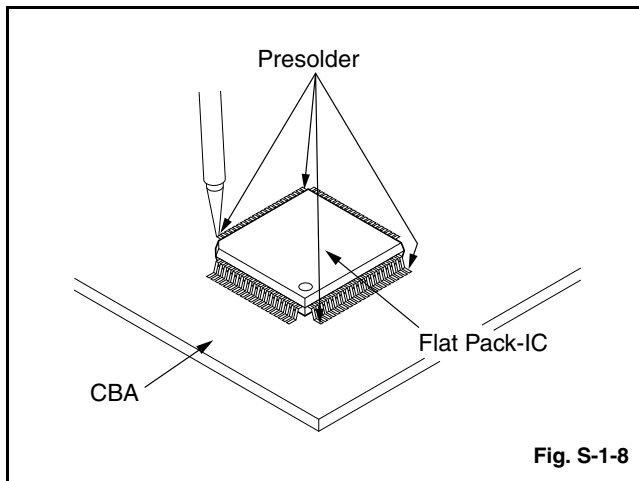
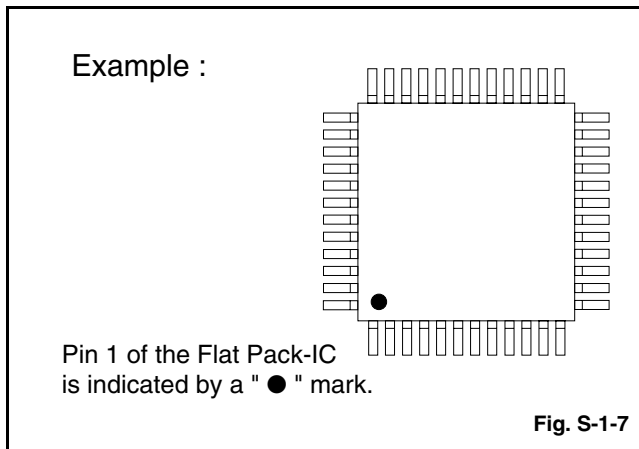
Note:

When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the CBA, handle it gently because it may be damaged if force is applied.



2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the CBA so you can install a replacement flat pack-IC more easily.
- (2) The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the PCB when positioning for installation. Then pre-solder the four corners of the flat pack-IC. (See Fig. S-1-8.)
- (3) Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.



Instructions for Handling Semiconductors

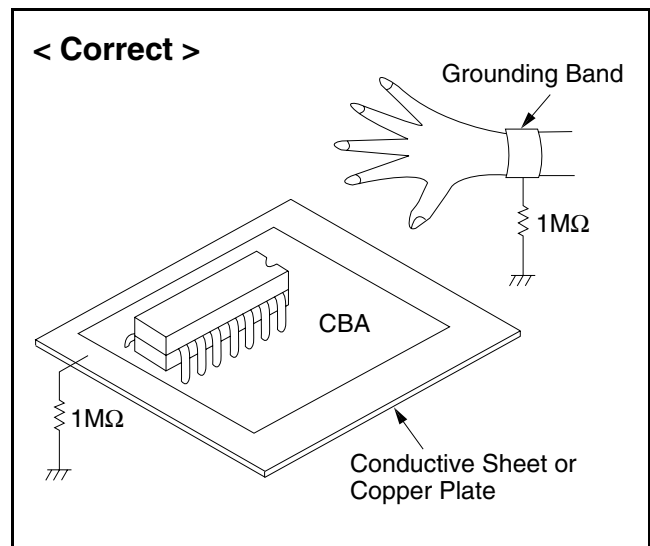
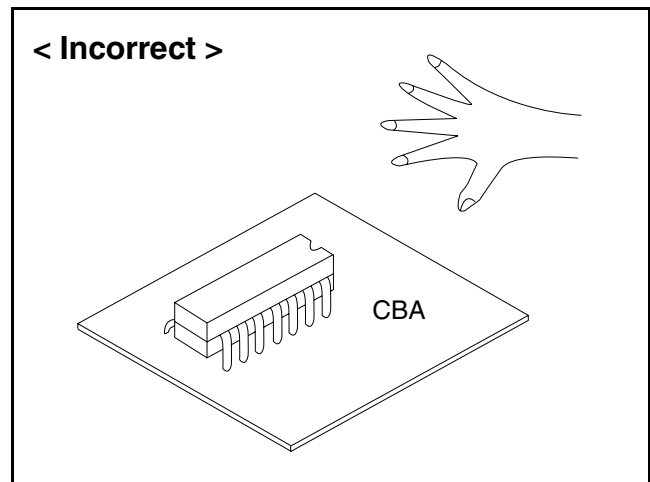
Electrostatic breakdown of the semiconductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

1. Ground for Human Body

Be sure to wear a grounding band ($1M\Omega$) that is properly grounded to remove any static electricity that may be charged on the body.

2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding ($1M\Omega$) on the workbench or other surface, where the semiconductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semiconductors with your clothing.



PREPARATION FOR SERVICING

How to Enter the Service Mode

About Optical Sensors

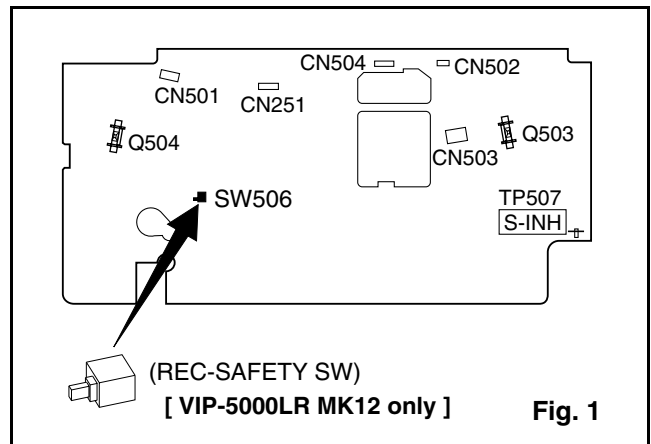
Caution:

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

What to do for preparation

Insert a tape into the Deck Mechanism Assembly and press the PLAY button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP507 (SENSOR INHIBITION) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

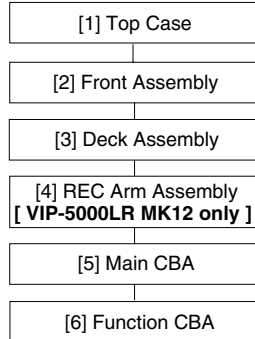
Note: Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.



CABINET DISASSEMBLY INSTRUCTIONS

1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.



Disassembly Method

ID/ LOC. No.	PART	REMOVAL		
		Fig. No.	REMOVE/ *UNHOOK/UNLOCK/ RELEASE/UNPLUG/ DESOLDER	Note
[1]	Top Case	1	3(S-1)	-
[2]	Front Assembly	2	*3(L-1), *4(L-2)	-
[3]	Deck Assembly	3	6(S-2), Spacer *(CN251, CN501 [VIP- 5000LR MK12], CN502, CN503, CN504)	1, 2
[4]	REC Arm Assembly [VIP- 5000LR MK12]	3	-----	-
[5]	Main CBA	4	*(L-3), *2(L-4)	-
[6]	Function CBA	4	Desolder	3

① ② ③ ④ ⑤

- ①: Identification (location) No. of parts in the figures
 ②: Name of the part
 ③: Figure Number for reference
 ④: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
 P=Spring, L=Locking Tab, S=Screw,
 CN=Connector
 *=Unhook, Unlock, Release, Unplug, or Desolder
 e.g. 2(S-2) = two Screws (S-2),
 2(L-2) = two Locking Tabs (L-2)
 ⑤: Refer to "Reference Notes."

Reference Notes

CAUTION: Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.

1. Remove six Screws (S-2) and the spacer. Then slowly lift the Deck Assembly up. Lifting Deck Assembly disconnects five Connectors (CN251 CN501 [VIP-5000LR MK12], CN502, CN503, CN504). (Fig. 3)
2. Before installing the Deck Assembly, be sure to place the pin of LD-SW on Main CBA as shown in Fig. 5. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. 5.
3. After removing the Main CBA, desolder from bottom of the Main CBA as shown in Fig. 4 to remove the Function CBA.

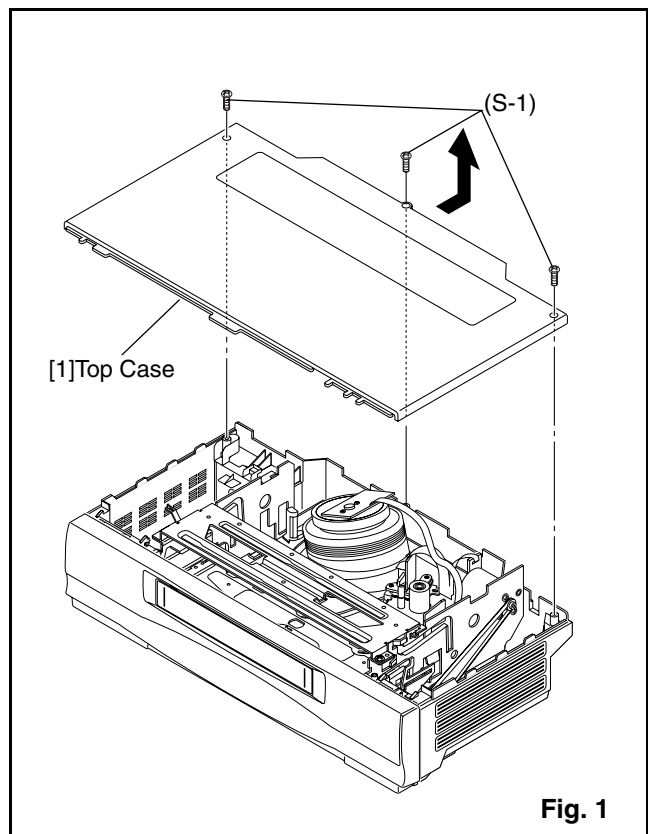
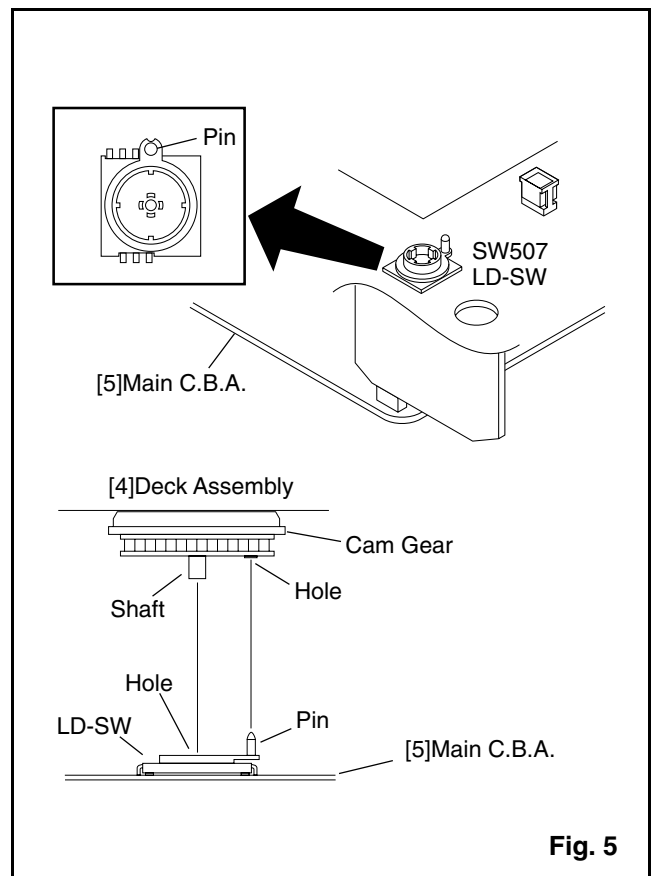
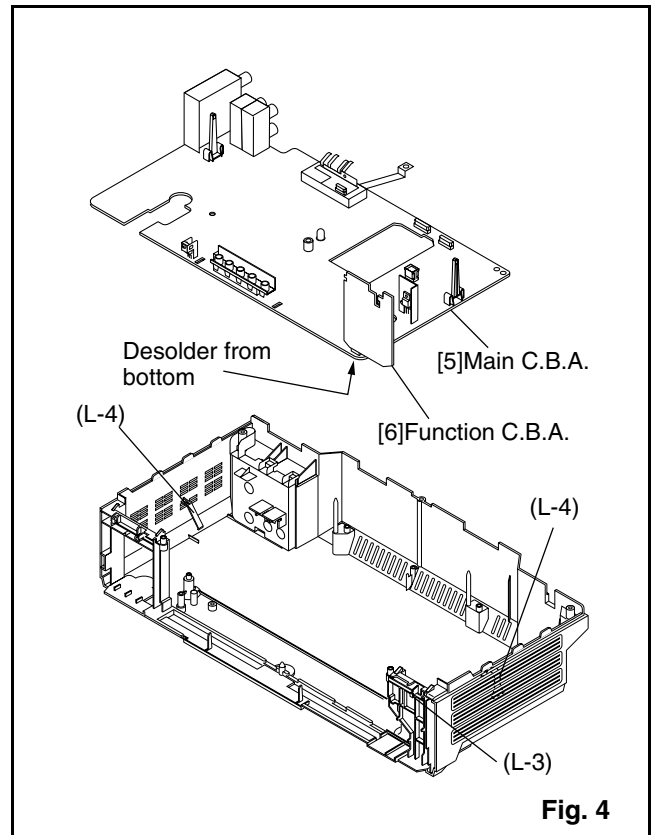
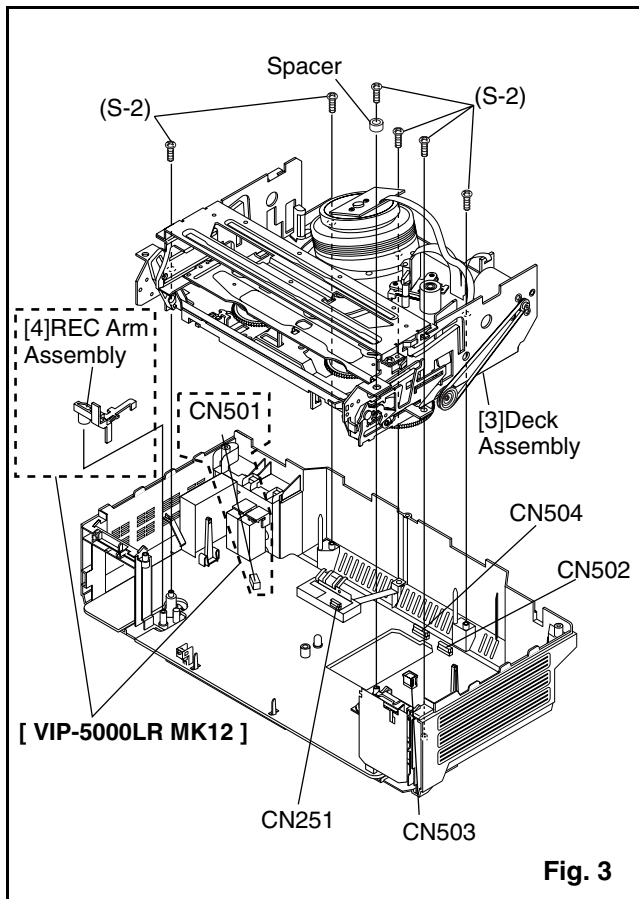
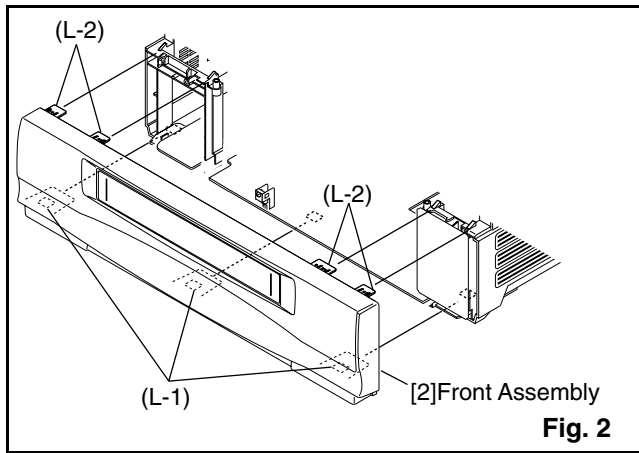


Fig. 1



ELECTRICAL ADJUSTMENT INSTRUCTIONS

General Note: "CBA" is an abbreviation for "Circuit Board Assembly".

Notes:

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either channel "▼" or "▲" button first, then the "PLAY" button (VCR's Front Panel only).

Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe, V-Range: 0.001~50V/Div., F-Frange: AC~DC-20MHz
2. Alignment Tape (FL6A)

1. Head Switching Position Adjustment

Purpose: To determine the Head Switching point during playback.

Symptom of Misadjustment: May cause Head Switching noise or vertical jitter in the picture.

Test Point	Adj. Point	Mode	Input
TP751(V-OUT) TP502(RF-SW) GND	VR501 (SW-P)	PLAY (SP)	----
Tape	Measurement Equipment	Spec.	
FL6A	Oscilloscope	6.5H±1H (412.7±60μs)	

Connections of Measurement Equipment

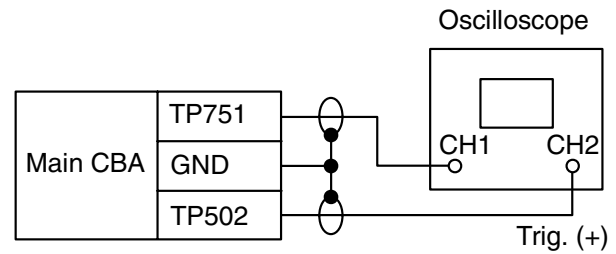
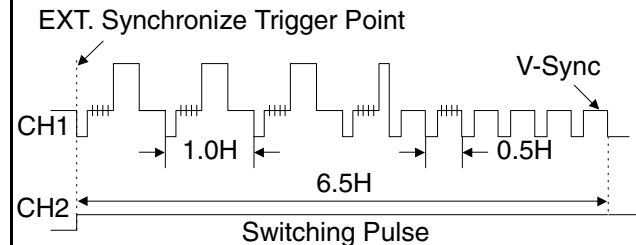


Figure 1



Reference Note:

TP502, TP751, VR501 : Main CBA

- Play back the test tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H(412.7μs) delayed position from the rising edge of the CH2 head switching pulse waveform.

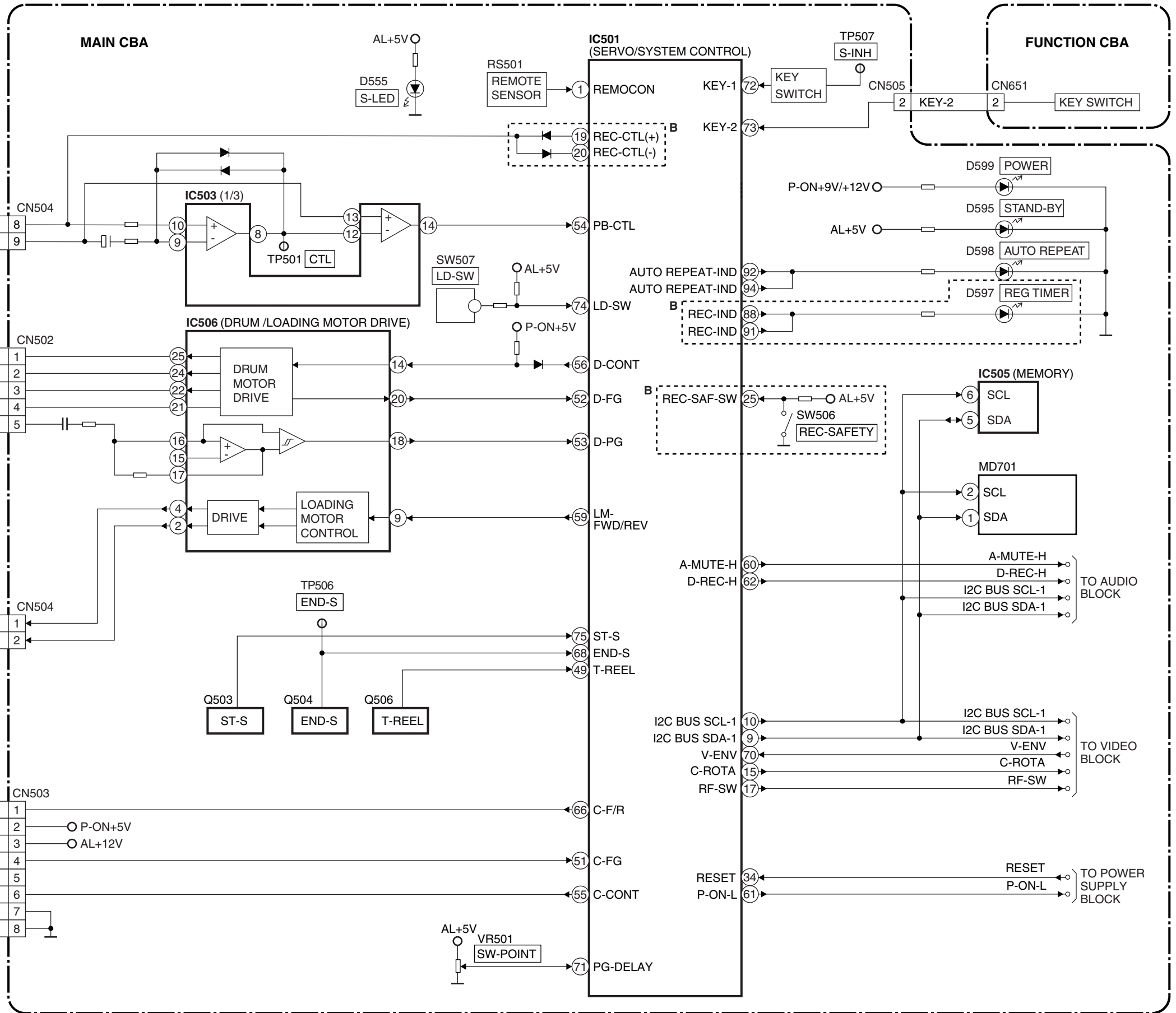
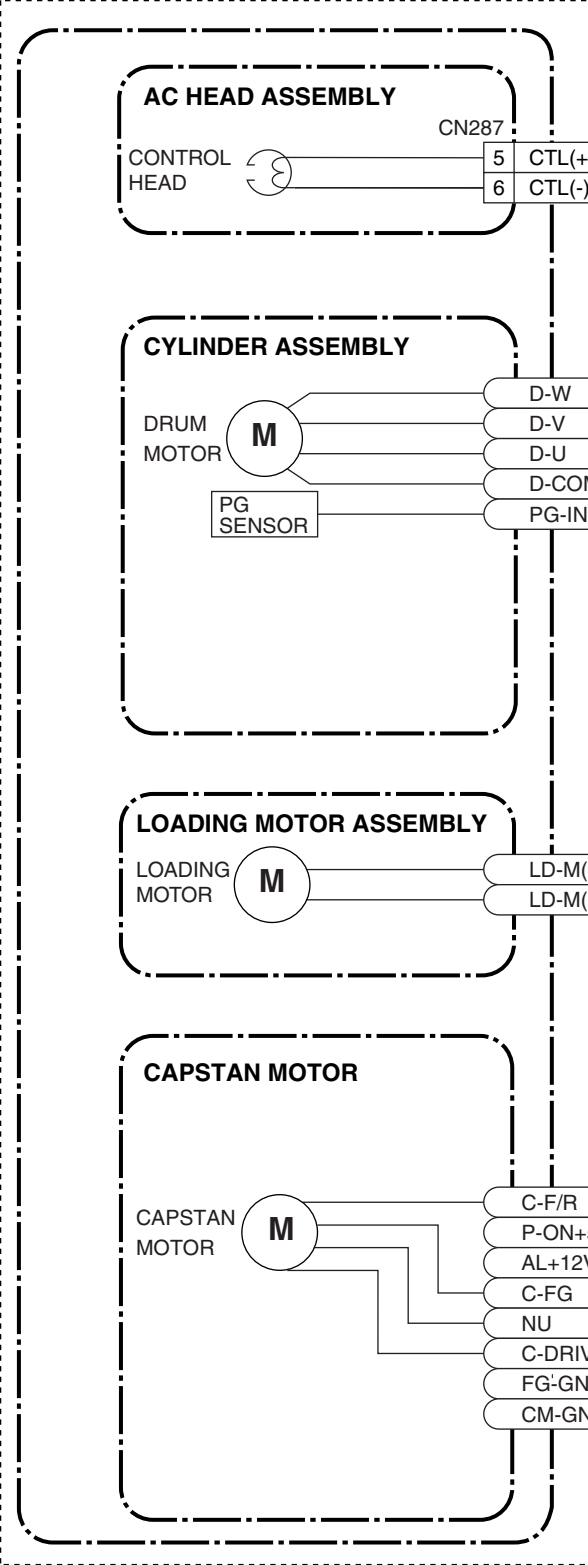
Servo/System Control Block Diagram

BLOCK DIAGRAMS

Comparison Chart of Models & Marks

Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B

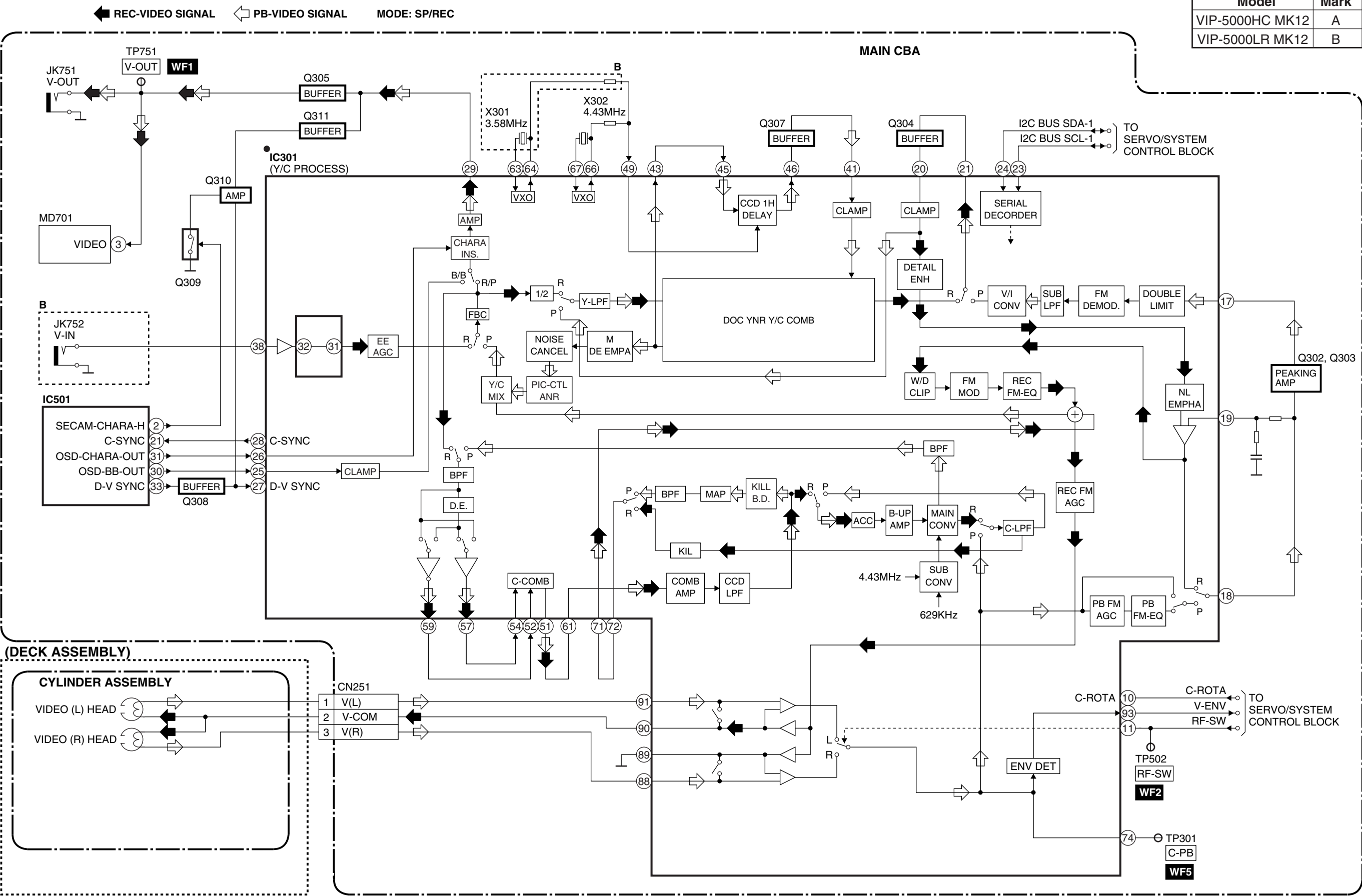
(DECK ASSEMBLY)



Video Block Diagram

Comparison Chart of Models & Marks

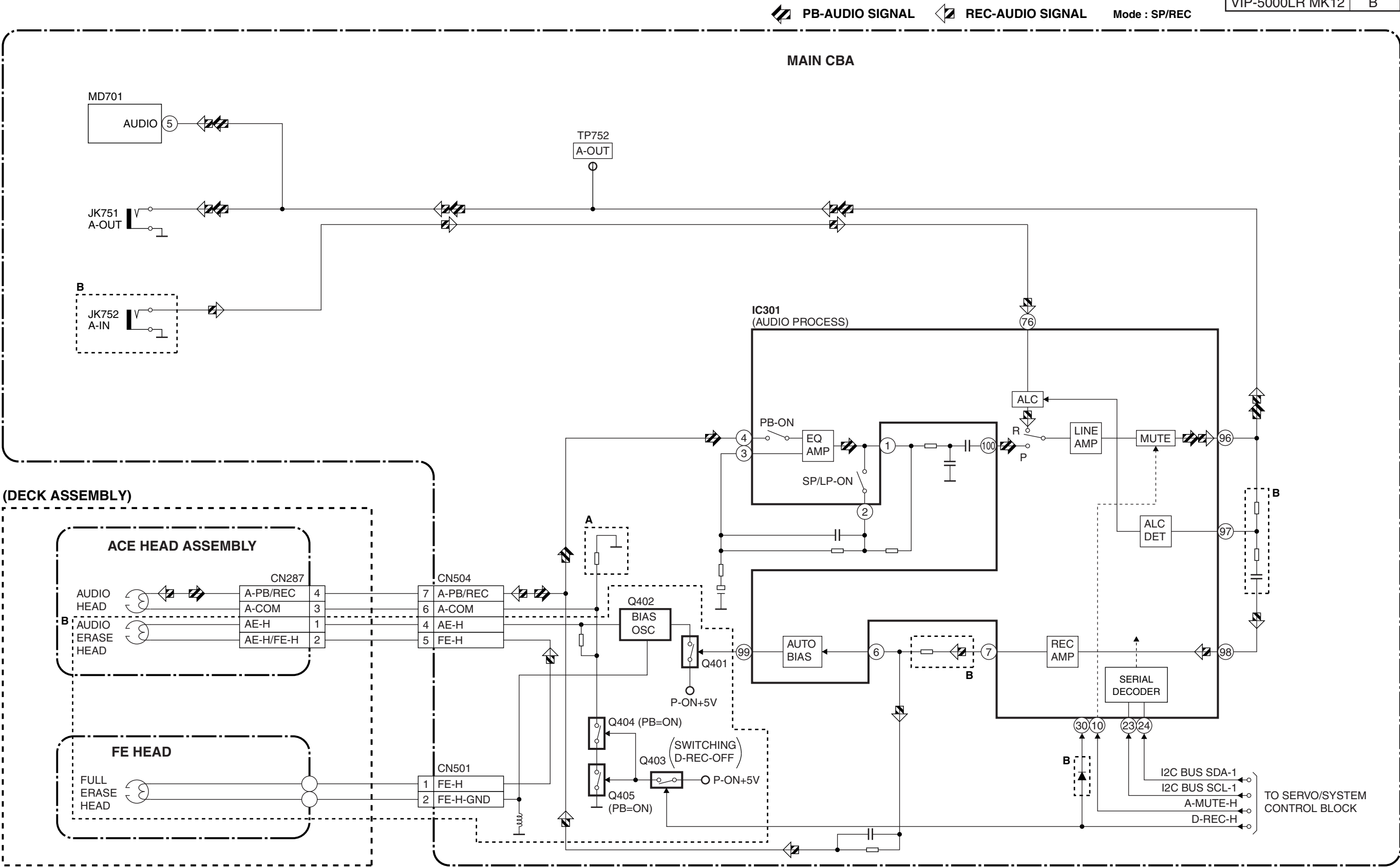
Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B



Audio Block Diagram

Comparison Chart of Models & Marks

Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B



Power Supply Block Diagram

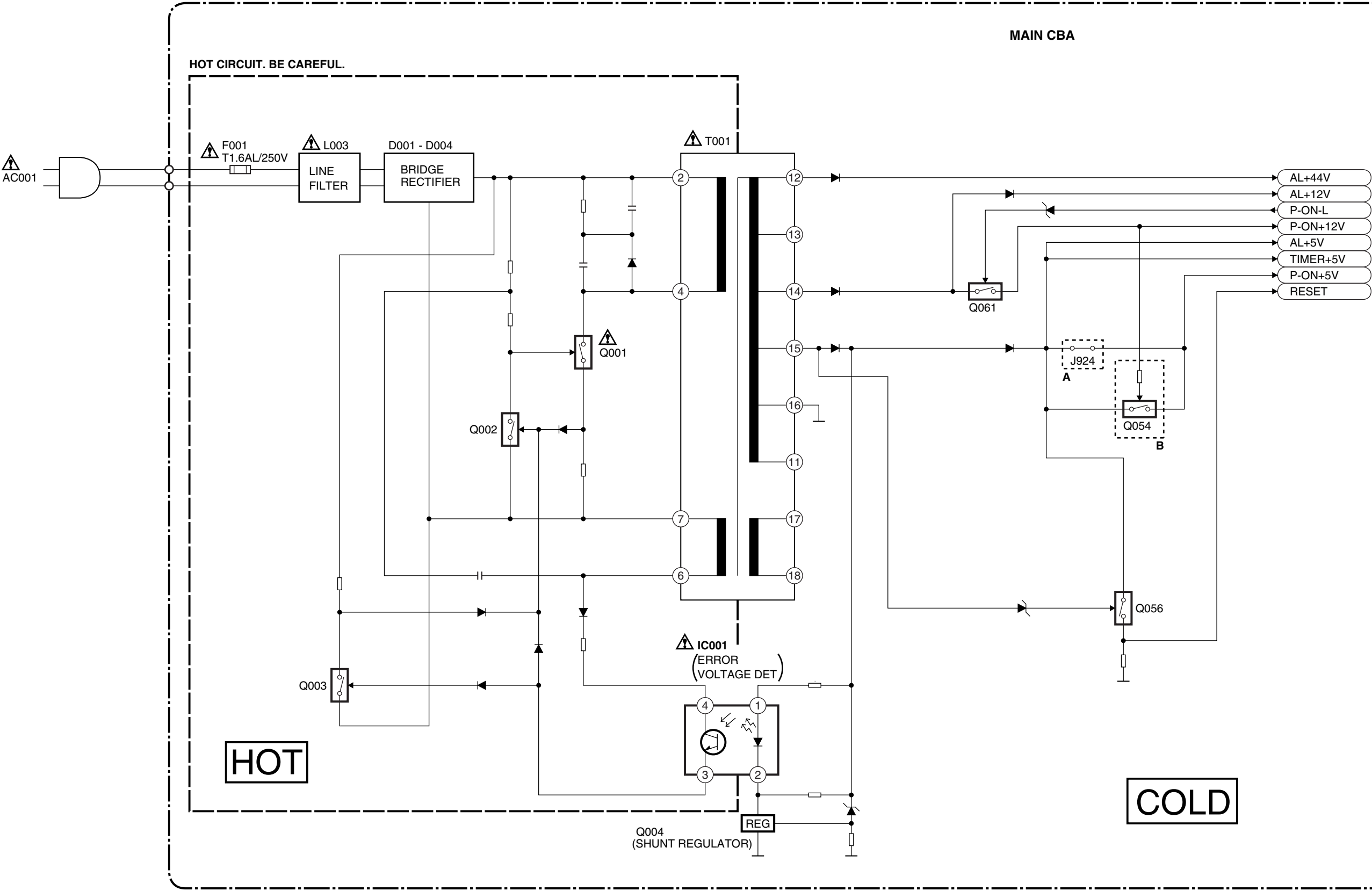
NOTE :
The voltage for parts in hot circuit is measured using
hot GND as a common terminal.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE T1.6AL/250V FUSE.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, check to see that all components in the power supply
circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

Comparison Chart of Models & Marks

Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B



MECHANICAL TROUBLE INDICATOR

Note:

The following symbols will appear on the indicator panel to indicate mechanical trouble.

Indicator		Mode
AUTO REPEAT	at 0.4Hz interval	When power safety is not functioning properly.
	at 0.8Hz interval	When capstan/reel mechanism is not functioning properly.
	at 1.6Hz interval	When tape loading mechanism is not functioning properly.
	at 3.2Hz interval	When cassette loading mechanism is not functioning properly.
	at 6.4Hz interval	When the drum is not functioning properly.

SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark "⚠" in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

Capacitor Temperature Markings

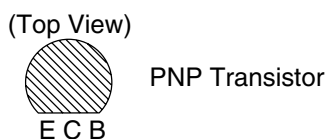
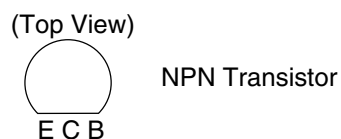
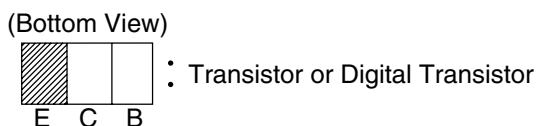
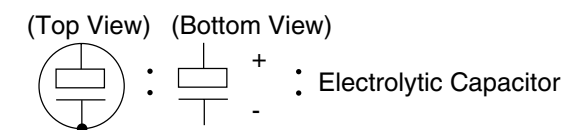
Mark	Capacity change rate	Standard temperature	Temperature range
(B)	±10%	20°C	-25~+85°C
(F)	+30 -80%	20°C	-25~+85°C
(SR)	±15%	20°C	-25~+85°C
(Z)	+30 -80%	20°C	-10~+70°C

Note:

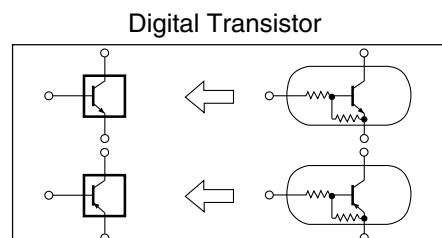
1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}\mu F$).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

Capacitors and transistors are represented by the following symbols.

CBA Symbols



Schematic Diagram Symbols



LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

2. CAUTION:

Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.

If Main Fuse (F001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

3. Note:

- (1) Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
- (2) To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

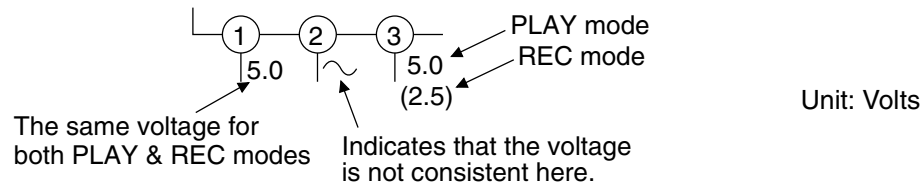
4. Wire Connectors

- (1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).
- (2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

5. Note: Mark "•" is a leadless (chip) component.

6. Mode: SP/REC

7. Voltage indications for PLAY and REC modes on the schematics are as shown below:

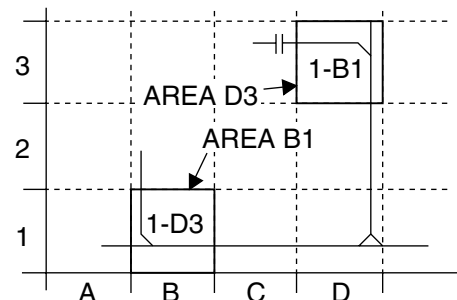


8. How to read converged lines

1-D3
 ↑ Distinction Area
 ↑ Line Number
 (1 to 3 digits)

Examples:

1. "1-D3" means that line number "1" goes to area "D3".
2. "1-B1" means that line number "1" goes to area "B1".



9. Test Point Information

- ⊙ : Indicates a test point with a jumper wire across a hole in the PCB.
- : Used to indicate a test point with a component lead on foil side.
- ⊘ : Used to indicate a test point with no test pin.
- : Used to indicate a test point with a test pin.

5

4

3

2

1

[illegible]

C

□

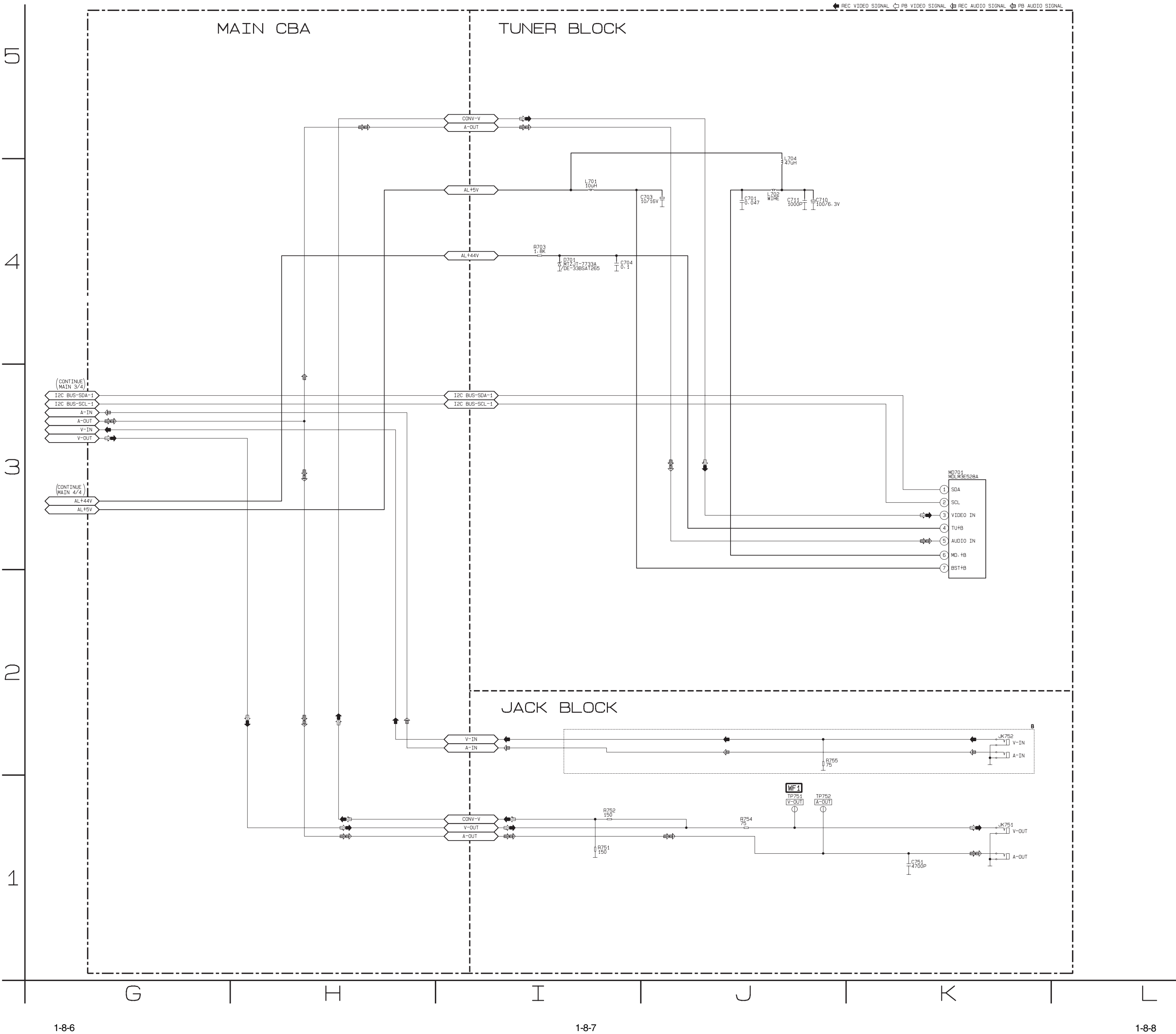
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H85G0SCM1

Main 2/4 Schematic Diagram

Comparison Chart of Models and Marks

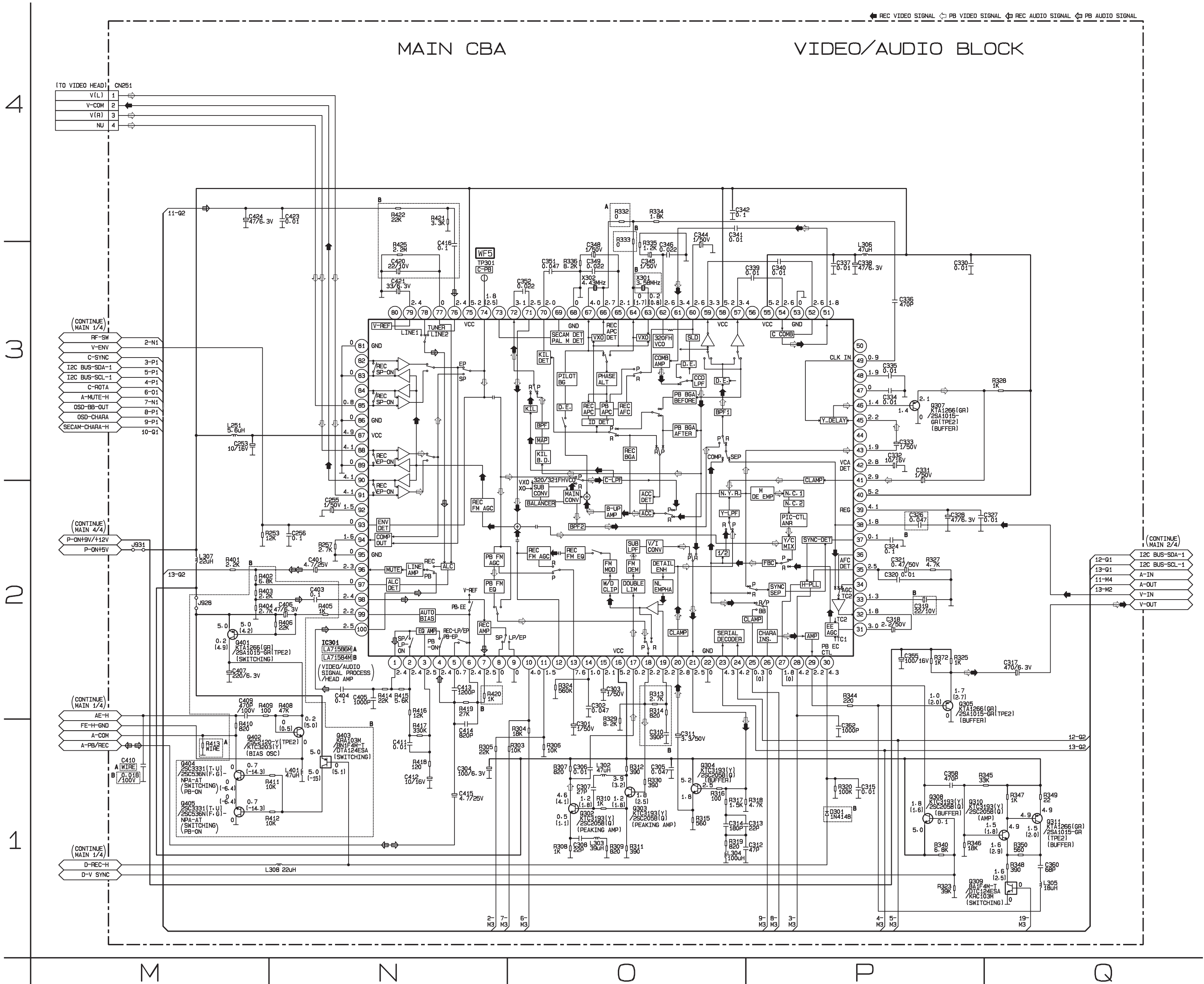
MODEL	MARK
VIP-5000HC MK12	A
VIP-5000LR MK12	B



Main 3/4 Schematic Diagram

Comparison Chart of Models and Marks

MODEL	MARK
VIP-5000HC MK12	A
VIP-5000LR MK12	B



Main 4/4 Schematic Diagram

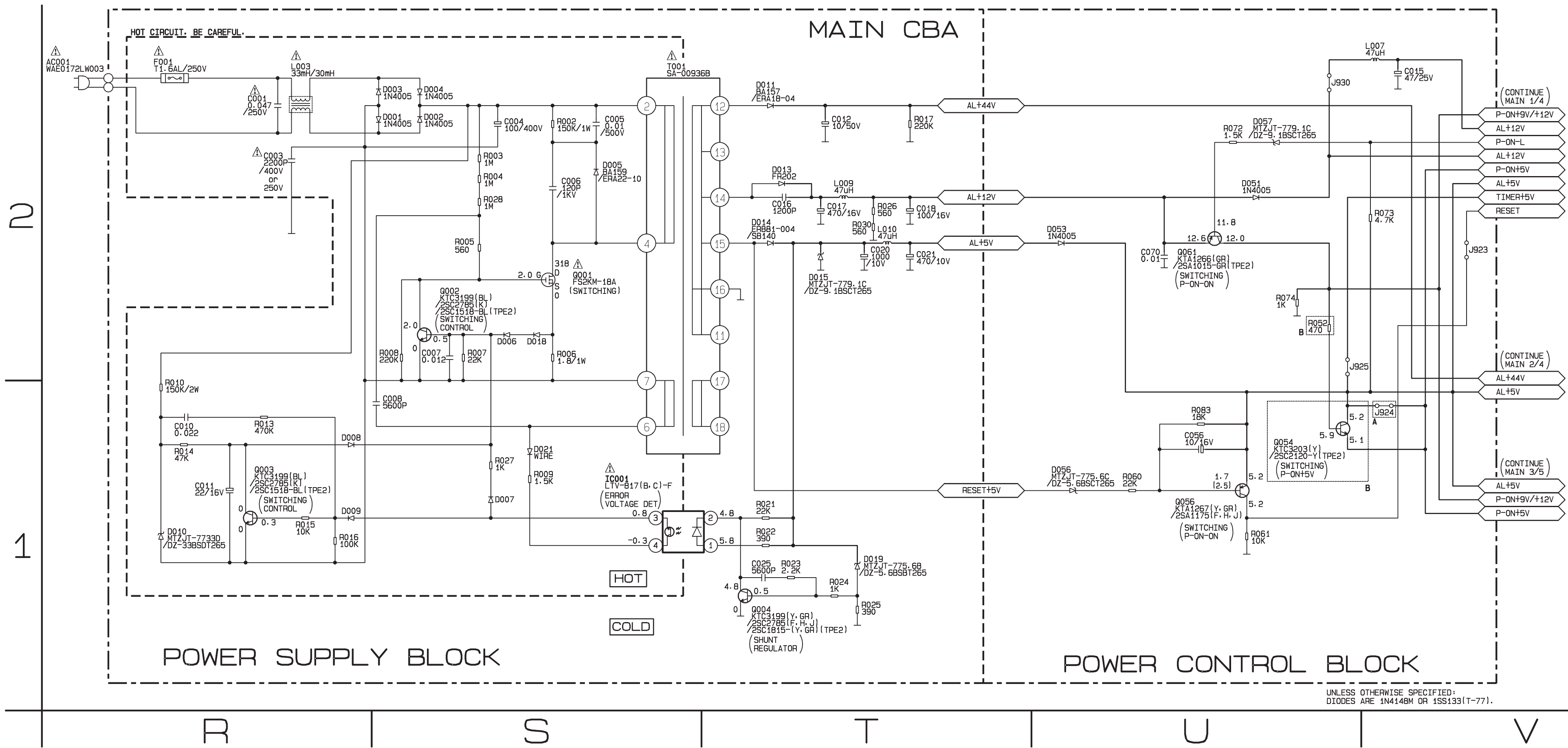
Comparison Chart of Models and Marks

MODEL	MARK
VIP-5000HC MK12	A
VIP-5000LR MK12	B

NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING
HOT GND AS A COMMON TERMINAL.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.

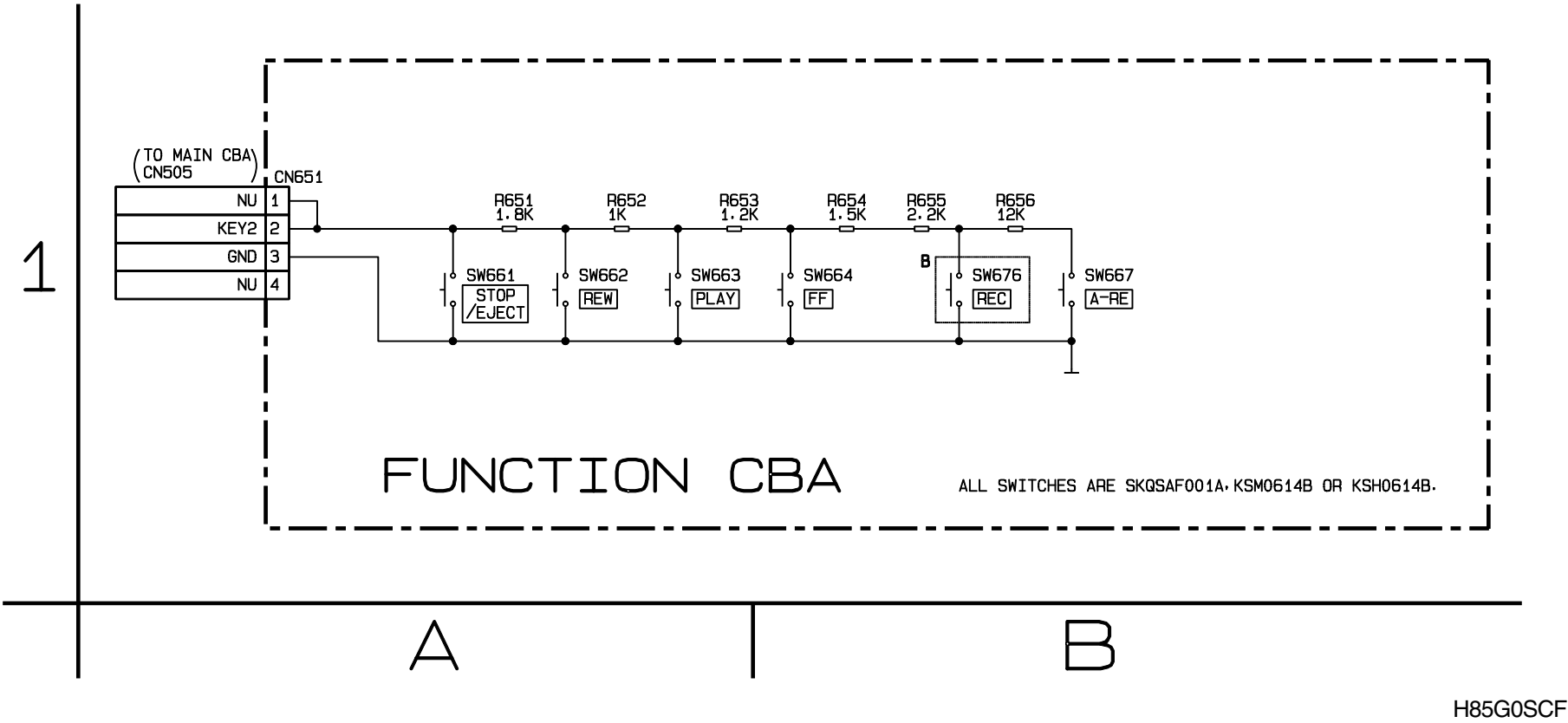
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, check to see that all components in the power supply
circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.



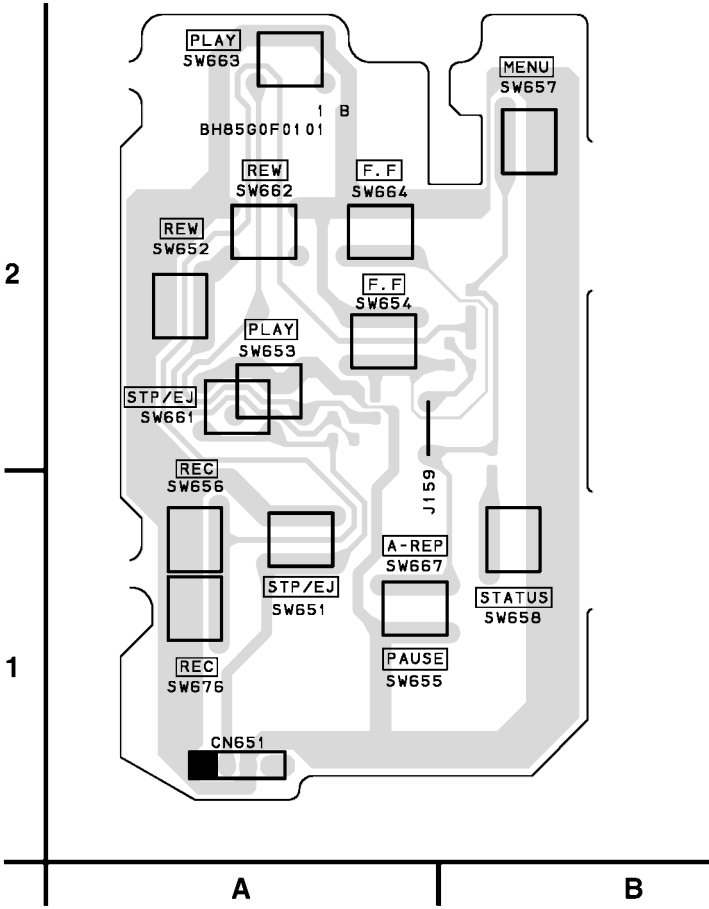
Function Schematic Diagram

Comparison Chart of Models and Marks

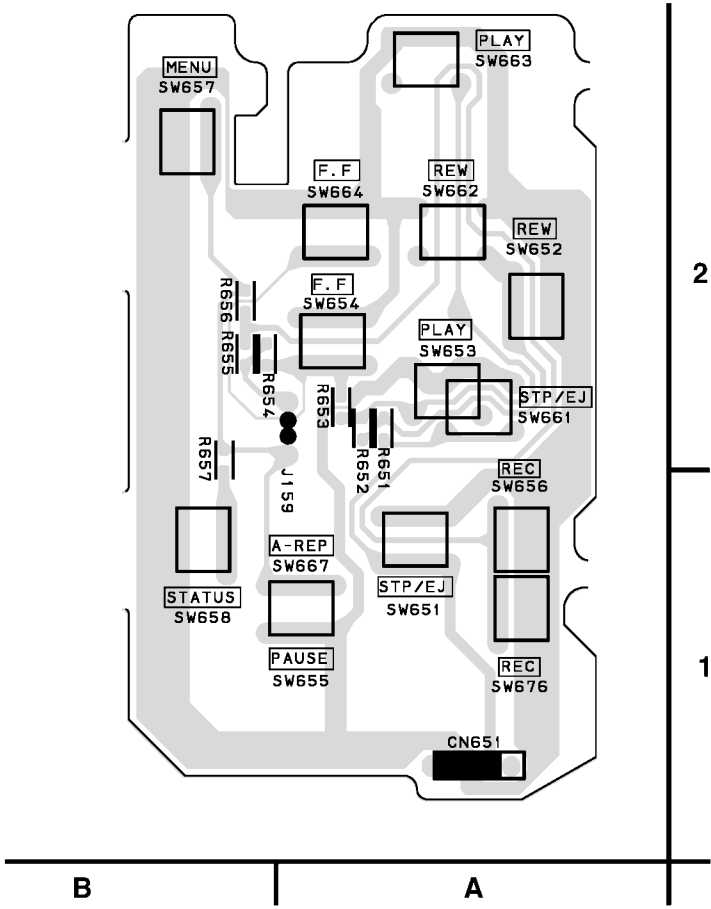
MODEL	MARK
VIP-5000HC MK12	A
VIP-5000LR MK12	B



Function CBA Top View



Function CBA Bottom View



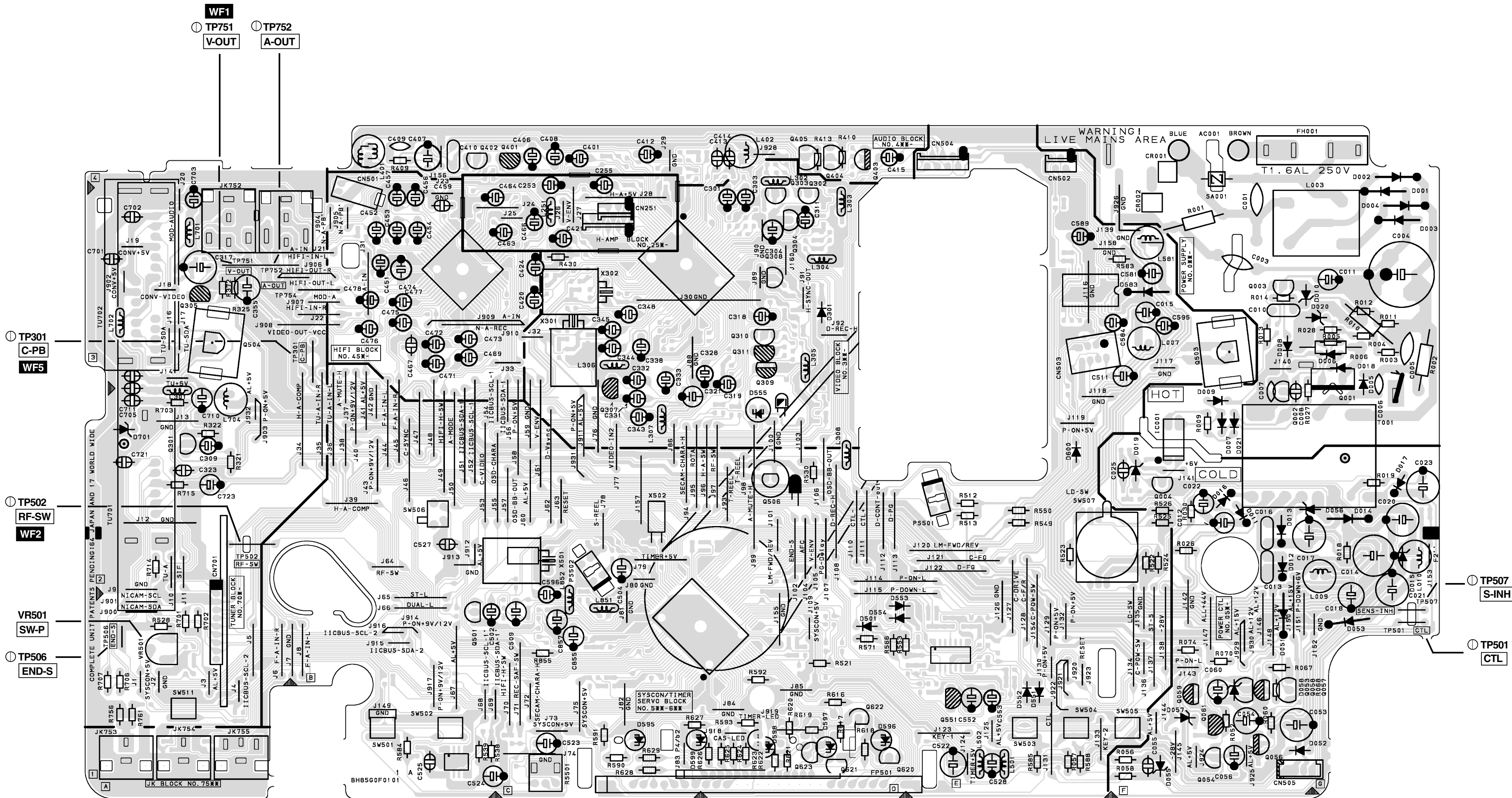
Main CBA Top View

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED. ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.

CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING
HOT GND AS A COMMON TERMINAL.



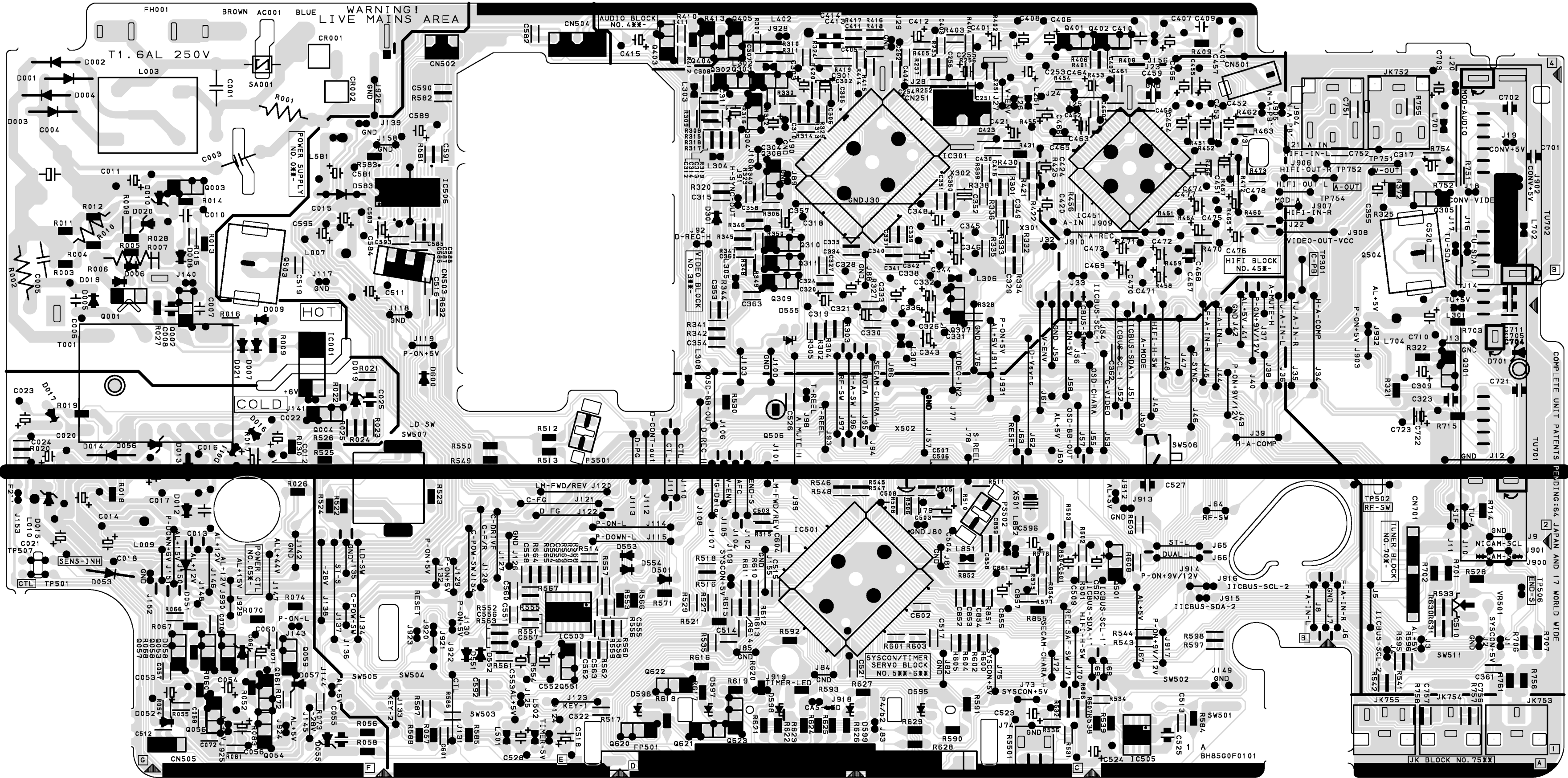
Main CBA Bottom View

BECAUSE A HOT CHASSIS GROUND IS PRESENT IN THE POWER SUPPLY CIRCUIT , AN ISOLATION TRANSFORMER MUST BE USED. ALSO , IN ORDER TO HAVE THE ABILITY TO INCREASE THE INPUT SLOWLY , WHEN TROUBLESHOOTING THIS TYPE POWER SUPPLY CIRCUIT , A VARIABLE ISOLATION TRANSFORMER IS REQUIRED.

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE.

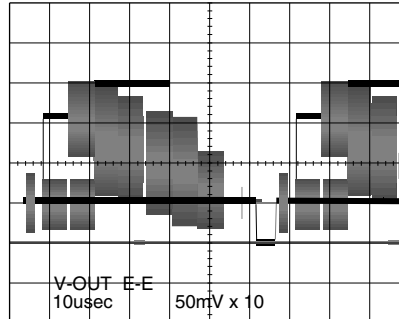
CAUTION !
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F001) is blown, check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING
HOT GND AS A COMMON TERMINAL.



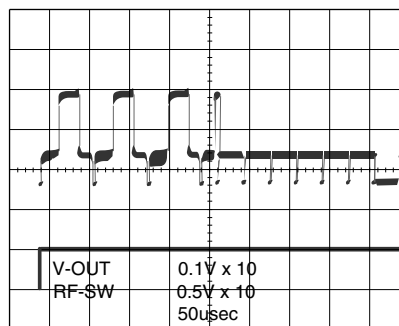
WAVEFORMS

WF1 (TP751 of Main CBA)



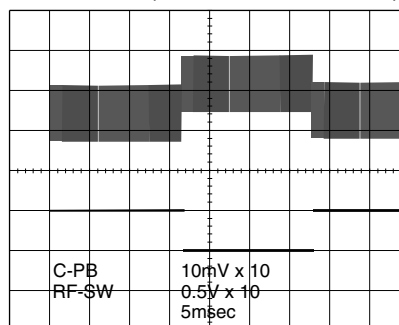
WF1 UPPER (TP751 of Main CBA)

WF2 LOWER (TP302 of Main CBA)



WF5 UPPER (TP301 of Main CBA)

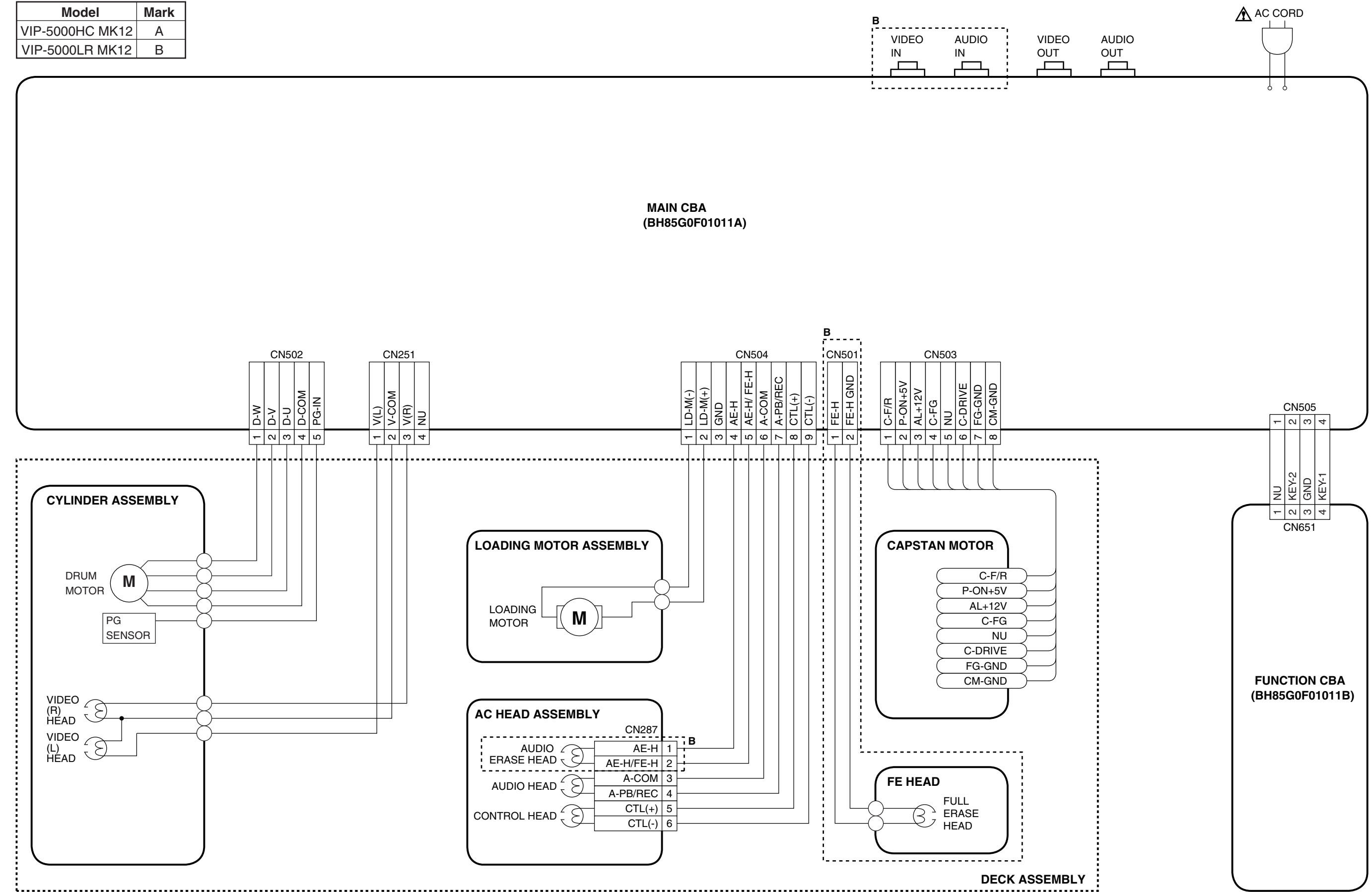
WF2 LOWER (TP302 of Main CBA)



WIRING DIAGRAM

Comparison Chart of Models & Marks

Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B



SYSTEM CONTROL TIMING CHARTS

Mode SW : LD-SW

LD-SW Position detection A/D Input voltage Limit (Calculated voltage)	Symbol
3.76V~4.50V (4.12V)	EJ
4.51V~5.00V (5.00V)	CL
0.00V~0.25V (0.00V)	SB
1.06V~1.50V (1.21V)	TL
0.66V~1.05V (0.91V)	FB
1.99V~2.60V (2.17V)	SF
1.51V~1.98V (1.80V)	AU
3.20V~3.75V (3.40V)	AL
0.26V~0.65V (0.44V)	SS
4.51V~5.00V (5.00V)	GC
2.61V~3.19V (2.97V)	RS

↑
Note:

EJ → RS : Loading FWD (LM-FWD "H", LM-REV "L")

RS → EJ : Loading REV (LM-FWD "L", LM-REV "H")

Stop (A) = Loading

Stop (B) = Unloading

Note :

Symbol	Loading Status
EJ	Eject
CL	Eject ~ REW Reel
SB	REW Reel ~ Stop(B)
TL	Stop(B) ~ Brake Cancel
FB	Brake Cancel
SF	~ Stop(A)
AU	Stop(A) ~ Play / REC
AL	Play / REC ~ Still / Slow
SS	Still / Slow ~ Capstan Reversal
GC	Capstan Reversal ~ RS (REW Search)
RS	RS (REW Search)

Model: VIP-5000HC MK12

1. EJECT (POWER OFF) -> CASSETTE IN (POWER ON) -> STOP(B) -> STOP(A) -> PLAY -> RS -> FS -> PLAY -> STILL -> PLAY -> STOP(A)

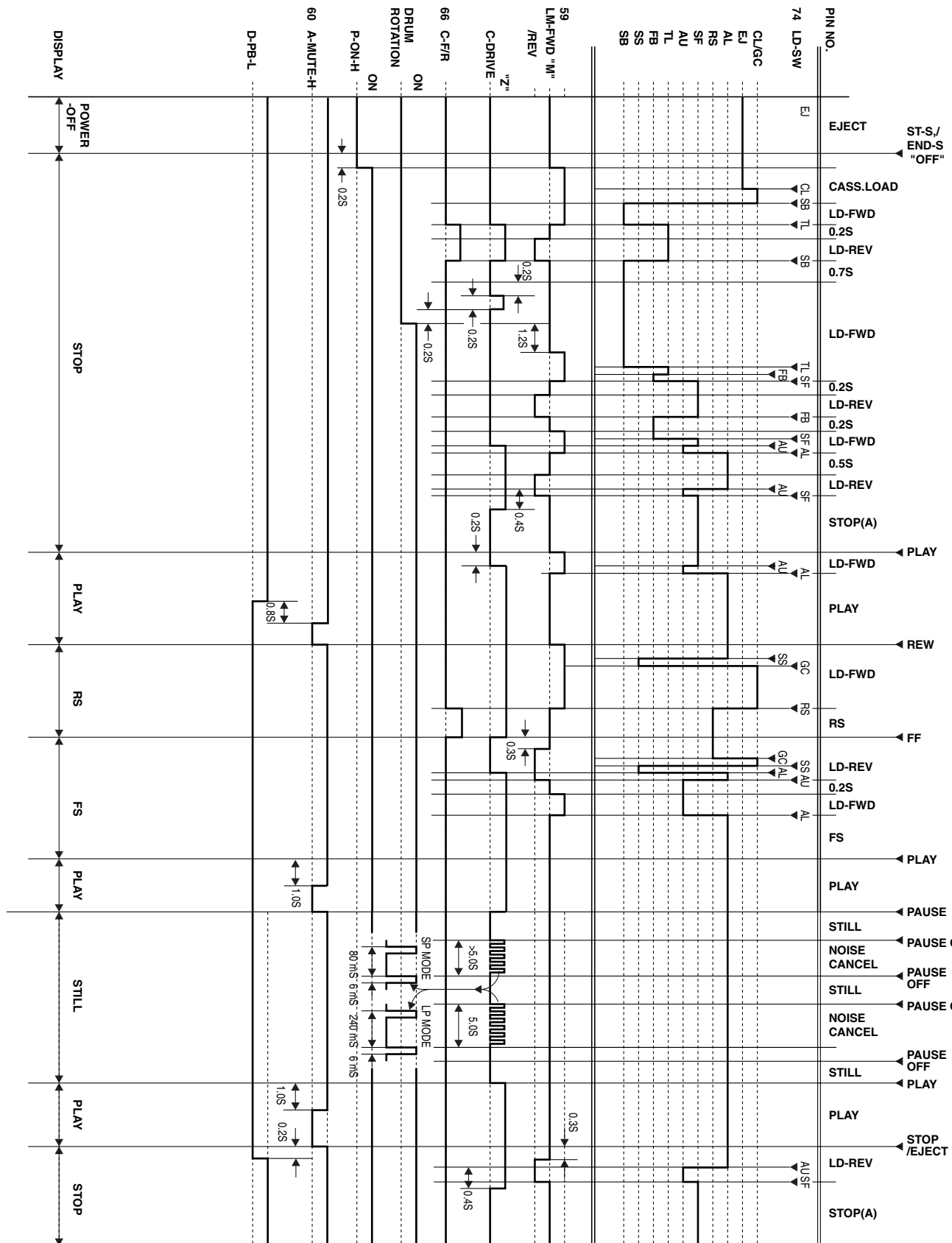


Fig.1

Model: VIP-5000HC MK12

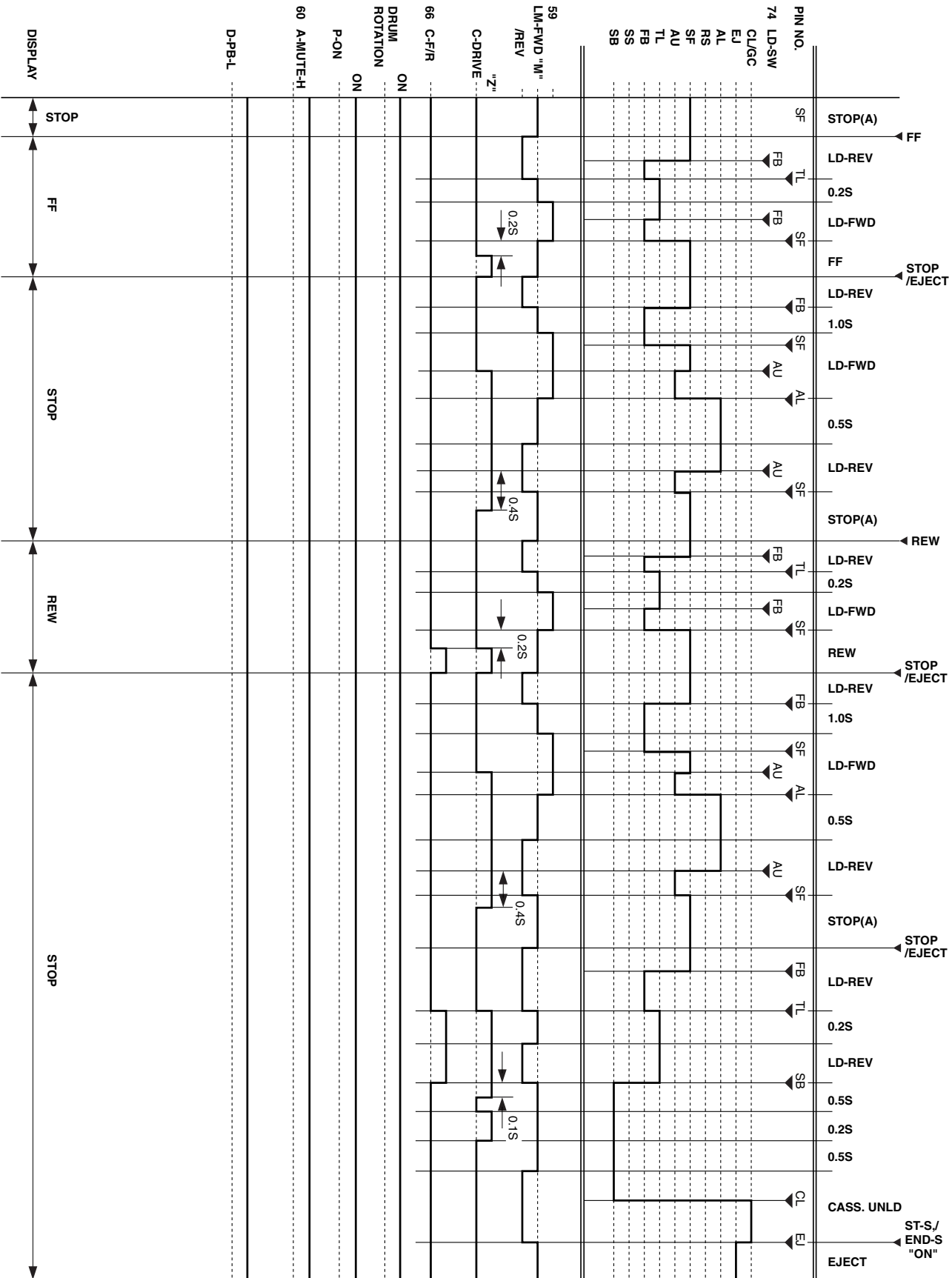


Fig.2

[illegible]

H85G0TI

PIN NO.	Signal	Timing / Action
74	LD-SW	STOP(A)
74	LD-SW	LD-REV 0.2S
74	LD-SW	LD-FWD
74	LD-SW	FF
74	LD-SW	LD-REV 2.0S
74	LD-SW	LD-FWD
74	LD-SW	0.5S
74	LD-SW	LD-REV
74	LD-SW	STOP(A)
74	LD-SW	LD-REV 0.2S
74	LD-SW	LD-FWD
74	LD-SW	REW
74	LD-SW	LD-REV 2.0S
74	LD-SW	LD-FWD
74	LD-SW	0.5S
74	LD-SW	LD-REV
74	LD-SW	STOP(A)
74	LD-SW	LD-FWD
74	LD-SW	REC
74	LD-SW	REC
74	LD-SW	PAUSE
74	LD-SW	LD-FWD
74	LD-SW	0.2S
74	LD-SW	2.0S Short REV
74	LD-SW	LD-REV
74	LD-SW	0.2S
74	LD-SW	LD-FWD
74	LD-SW	REC PAUSE
74	LD-SW	REC
74	LD-SW	LD-FWD
74	LD-SW	0.2S
74	LD-SW	1.3S
74	LD-SW	LD-REV
74	LD-SW	0.2S
74	LD-SW	LD-FWD
74	LD-SW	0.5S
74	LD-SW	LD-REV
74	LD-SW	STOP(A)
74	LD-SW	LD-REV
74	LD-SW	0.2S
74	LD-SW	LD-REV
74	LD-SW	0.5S
74	LD-SW	0.5S
74	LD-SW	0.5S
74	LD-SW	CASS. UNLD
74	LD-SW	EJECT

1-11-5

IC PIN FUNCTION

Comparison Chart of Models and Marks

Model	Mark
VIP-5000HC MK12	A
VIP-5000LR MK12	B

IC501 (SERVO / SYSTEM CONTROL IC)

"H" $\geq 4.5V$, "L" $\leq 1.0V$

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
1		IN	REMO CON-IN	Remote Control Sensor	L
2		OUT	SECAM-CHARA-H	Charactor Output Signal at Super Inpose MESECAM = "H"	H
3		IN	2HEAD/ 4HEAD	2 Head/ 4Head Changing Switch 2 HEAD = "L" 4 HEAD = "H"	L
4		IN	BLUE/ GRAY	Blue Back / Gray Back Input Selector Switch, Blue Back = "L", Gray Back = "H"	L
5		IN	RC-SW	Remote Control Format Input Selector Switch, Funai Format = "L", RC-5 Format = "H"	L
6		—	N.U.	Not Used	—
7		—	N.U.	Not Used	—
8		—	N.U.	Not Used	—
9		IN/ OUT	I ² C BUS- DATA	I ² C BUS Control Data	H/L
10		IN	I ² C BUS- CLK	I ² C BUS Control Clock	H/L
11		—	N.U.	Not Used	—
12		—	N.U.	Not Used	—
13		—	N.U.	Not Used	—
14		—	N.U.	Not Used	—

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
15		OUT	C-ROTA	Color Phase Rotary Changeover Signal	H/L
16		OUT	H-A-SW	Video Head Amp Switching Pulse	H/L
17		OUT	RF-SW	Video Head Switching Pulse	H/L
18		—	N.U.	Not Used	—
19	A	—	N.U.	Not Used	—
	B	OUT	REC-CTL(+)	Record Control Signal (+)	H/L
20	A	—	N.U.	Not Used	—
	B	OUT	REC-CTL(-)	Record Control Signal (-)	H/L
21		IN	C-SYNC	Composite Synchronized Pulse	PULSE
22		—	GND	GND	—
23		—	N.U.	Not Used	—
24		—	OSDVss	OSDVss	—
25	A	—	N.U.	Not Used	—
	B	IN	REC-SAF-SW	Recording Safety SW Detect (With Record tab="L"/ With out Record tab="H")	H/L
26		—	N.U.	Not Used	—
27		IN	VHOLD	Condenser Connected Terminal (Slicer)	—
28		—	HLF	LPF Connected Terminal (Slicer)	—
29		—	GND	GND	—
30		OUT	OSD-BB-OUT	Composite Video Signal Output (Blue Back)	—

Pin No.	Mark	IN/OUT	Signal Name	Function	Active Level
31		OUT	OSD-CHARA-OUT	Character Output (Superimposed)	—
32		—	OSDVcc	OSDVcc	—
33		OUT	D-V SYNC OUT	Dummy V-sync Output	H/Hi-z
34		IN	RESET	System Reset Signal (Reset= "L")	L
35		—	OSCIN	Clock Input for letter size	—
36		—	OSCOU	Clock Output for letter size	—
37		—	Vcc	Vcc	—
38		—	MAIN CLOCK 17.7 MHz	Main Clock Input 17.734476 Hz	—
39		—	MAIN CLOCK 17.7 MHz	Main Clock Output	—
40		—	Vss	Vss(GND)	—
41		—	N.U.	Not Used	—
42		—	N.U.	Not Used	—
43		—	CLKSEL	Clock Select (GND)	—
44		—	N.U.	Not Used	—
45		—	N.U.	Not Used	—
46		—	N.U.	Not Used	—
47		—	N.U.	Not Used	—
48		—	N.U.	Not Used	—
49		IN	T-REEL	Take Up Reel Rotation Signal	PULSE
50		—	N.U.	Not Used	—
51		IN	C-FG	Capstan Motor Rotation Detection Pulse	PULSE
52		IN	D-FG	Drum Motor Rotation Detection Pulse	PULSE
53		IN	D-PG	Drum Motor Pulse Generator	PULSE
54		IN	PB-CTL	Playback Control Signal	PULSE

Pin No.	Mark	IN/OUT	Signal Name	Function	Active Level
55		OUT	C-CONT	Capstan Motor Control Signal	PWM
56		OUT	D-CONT	Drum Motor Control Signal	PWM
57		—	N.U.	Not Used	—
58		—	N.U.	Not Used	—
59		OUT	LM-FWD /REV	Loading Motor FWD/REV Output	H/Z/L
60		OUT	A-MUTE -H	Audio Mute Control Signal	H
61		OUT	P-ON-L	Power On Signal at Low	L
62	A	—	N.U.	Not Used	—
	B	OUT	D-REC-H	Delayed Record Signal	—
63		—	N.U.	Not Used	—
64		—	N.U.	Not Used	—
65		—	N.U.	Not Used	—
66		OUT	C-F/R	Capstan Motor FWD/REV Control Signal (FF/REW="L")	L
67		IN	POWER SAFETY	Power Safety Detecting Input Signal	A/D
68		IN	END-S	Tape End Position Detect Signal	A/D
69		IN	KEY-3	A/D Key Data Signal	A/D
70		IN	V-ENV	Video Envelope Comparator Signal	A/D
71		IN	PG-DELAY	Video Head Switching Pulse Signal Adjusted Voltage	A/D
72		IN	KEY-1	A/D Key Data Signal	A/D
73		IN	KEY-2	A/D Key Data Signal	A/D
74		IN	LD-SW	Deck Mode Position Detect Signal	A/D
75		IN	ST-S	Tape Start Position Detect Signal	A/D

Pin No.	Mark	IN/ OUT	Signal Name	Function	Active Level
76		–	AVcc	A/D Converter Power Input/ Standard Voltage Input	–
77		–	FLDVcc	Vcc	–
78		–	FLDVp	GND	–
79		–	N.U.	Not Used	–
80		–	N.U.	Not Used	–
81		–	N.U.	Not Used	–
82		–	N.U.	Not Used	–
83		–	N.U.	Not Used	–
84		–	N.U.	Not Used	–
85		–	N.U.	Not Used	–
86		–	N.U.	Not Used	–
87		–	N.U.	Not Used	–
88	A	–	N.U.	Not Used	–
	B	OUT	REC-IND	REC Mode LED Indicator	H/L
89		–	N.U.	Not Used	–
90		–	N.U.	Not Used	–
91	A	–	N.U.	Not Used	–
	B	OUT	REC-IND	REC Mode LED Indicator	H/L
92		OUT	AUTO REPEAT -IND	Auto Repeat LED Display Signal, Repeat Mode = "H"	H
93		–	N.U.	Not Used	–
94		OUT	AUTO REPEAT -IND	Auto Repeat LED Display Signal, Repeat Mode = "H"	H
95		–	N.U.	Not Used	–
96		–	N.U.	Not Used	–
97		–	N.U.	Not Used	–
98		–	N.U.	Not Used	–
99		–	N.U.	Not Used	–
100		–	N.U.	Not Used	–

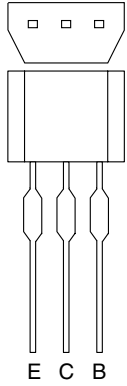
Notes:

Abbreviation for Active Level:

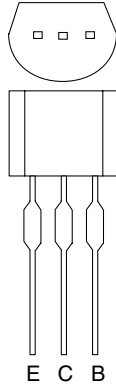
PWM ----- Pulse Wide Modulation

A/D ----- Analog - Digital Converter

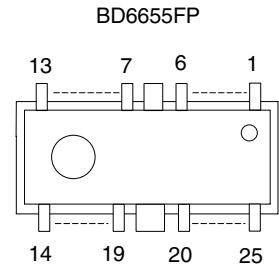
LEAD IDENTIFICATIONS



BN1F4M-T
DTA124ESA
KRA103M
BA1F4M-T
KTA1266(GR)
KTC3193(Y)
KTC3199(Y,GR,BL)
2SC2785(J.H.F.K)
2SC2058(Q)
KRC103M
DTC124ESA
2SA1175(J.H.F)

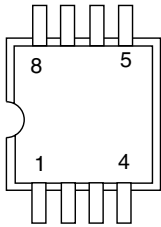


2SC1815-BL (TPE2)
2SC1815-Y(TPE2)
2SC1815-GR(TPE2)
2SC2120-Y(TPE2)
KTC3203(Y)
2SA1015-GR(TPE2)

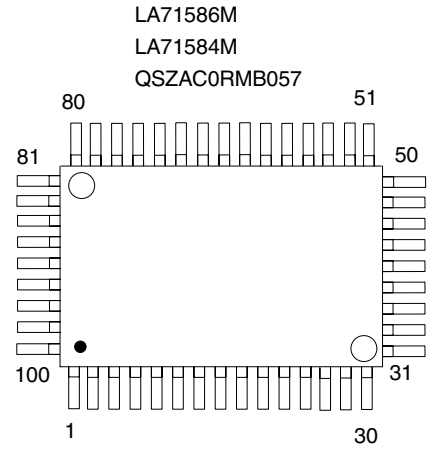


BD6655FP

BR24C01AF-W
AT24C01A-10SC
M24C01-MN6

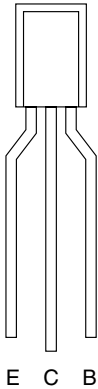


LTV-817(B.C)-F

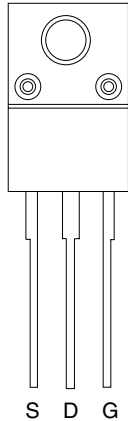


LA71586M
LA71584M
QSZAC0RMB057

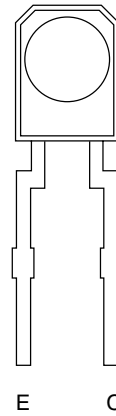
2SC536NF(NG)-NPA-AT
2SC3331(T.U)



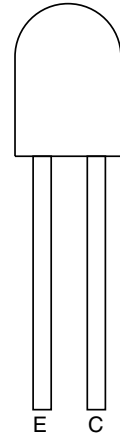
FS2KM-18A



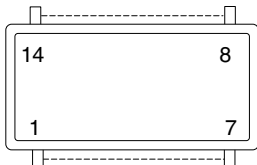
ST-304L-(A,B,C,D)



PT204-6B-12



LM324D



Note:

A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

DECK MECHANISM SECTION

VIDEO CASSETTE RECORDER

VIP-5000HC MK12/VIP-5000LR MK12

Sec. 2: Deck Mechanism Section

- Standard Maintenance
- Alignment for Mechanism
- Disassembly/Assembly of Mechanism
- Alignment Procedures of Mechanism

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Mechanical Alignment Procedures	2-3-1
Disassembly / Assembly Procedures of Deck Mechanism	2-4-1
Alignment Procedures of Mechanism	2-4-9

STANDARD MAINTENANCE

Service Schedule of Components

H: Hours ○: Check ●: Change

Deck		Periodic Service Schedule			
Ref. No.	Part Name	1,000 H	2,000 H	3,000 H	4,000 H
B2	Cylinder Assembly	○	●	○	●
B3	Loading Motor Assembly			●	
B8	Pulley Assembly		●		●
B27	Tension Lever Sub Assembly		●		●
B31	AC Head Assembly			●	
B573, B574	Reel (S), Reel (T)			●	
B37	Capstan Motor		●		●
B52	Cap Belt		●		●
*B73	FE Head			●	
B133	Idler Assembly		●		●
B410	Pinch Arm (A) Assembly		●		●
B414	M Brake S Assembly		●		●
B416	M Brake T Assembly		●		●
B525	LDG Belt		●		●

Notes:

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / Audio Control Head / Full Erase Head) using 90% Isopropyl Alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.

* B73 ----- VCR Model only

Cleaning

Cleaning of Video Head

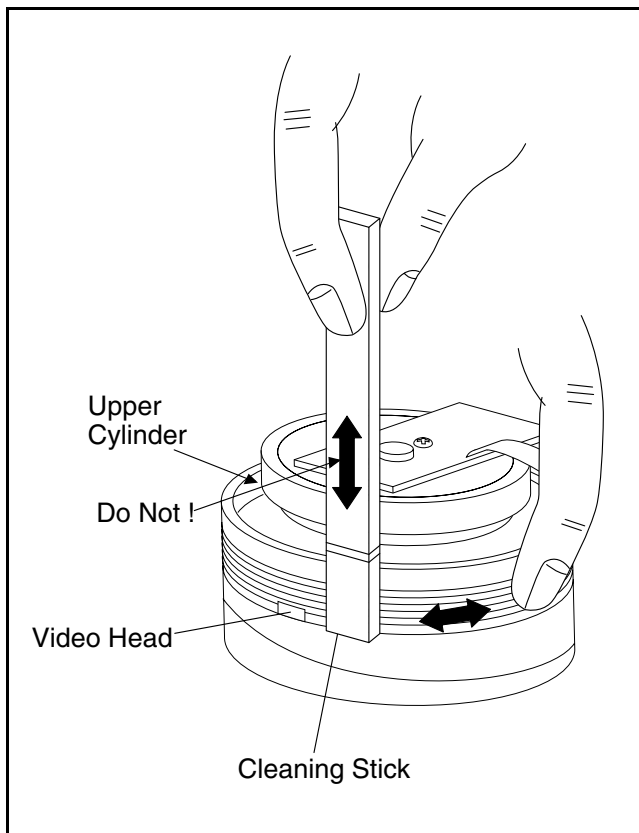
Clean the head with a head cleaning stick or chamois cloth.

Procedure

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% Isopropyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

Notes:

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois cloth.



Cleaning of Audio Control Head

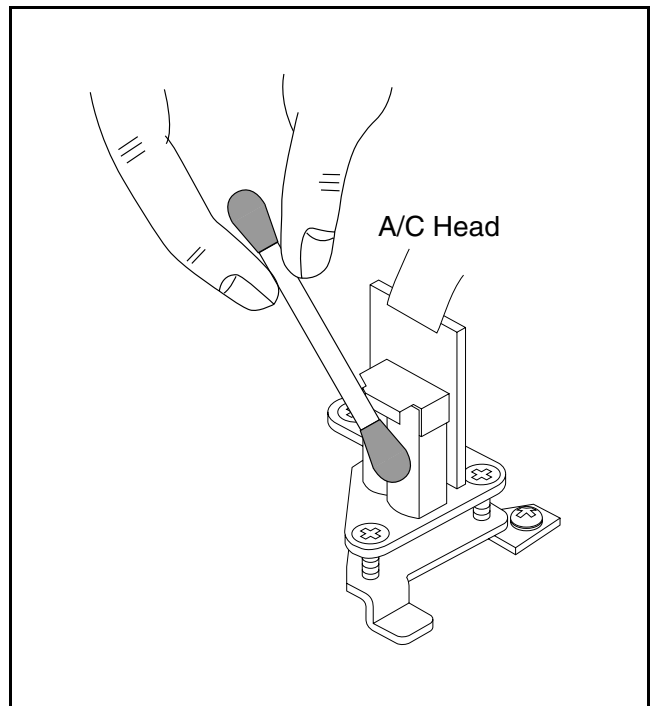
Clean the head with a cotton swab.

Procedure

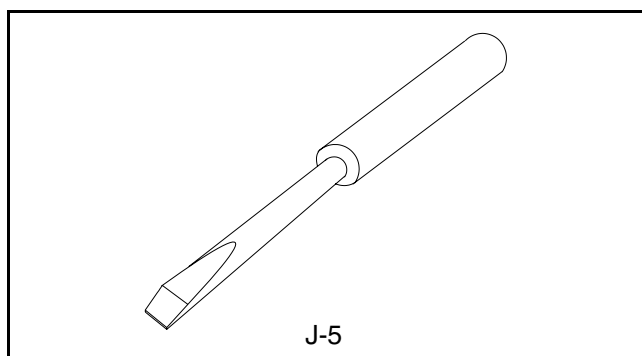
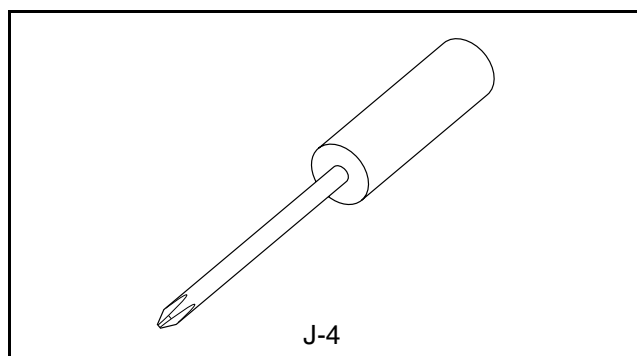
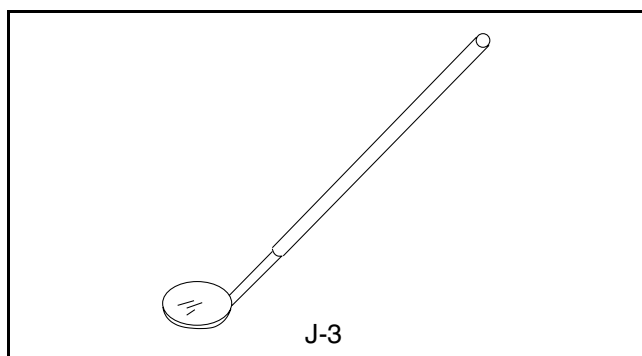
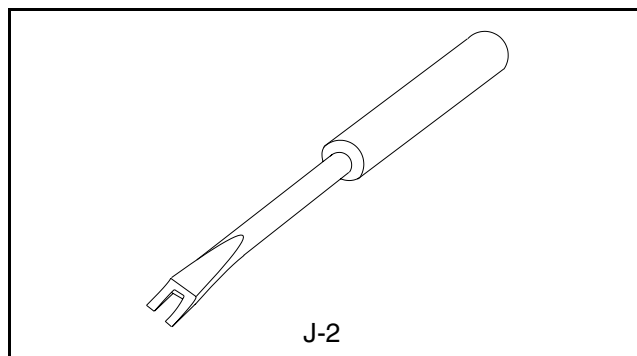
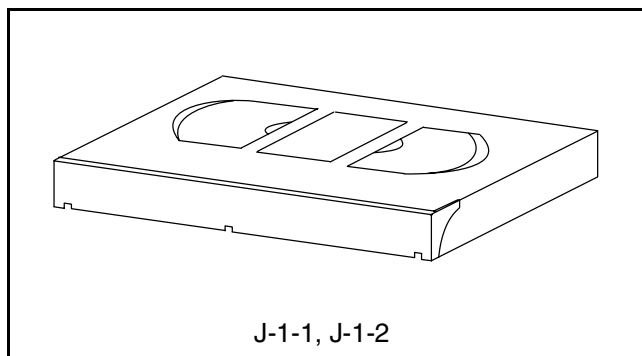
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



SERVICE FIXTURE AND TOOLS



Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	FL6A	Head Adjustment of Audio Control Head
J-1-2	Alignment Tape	FL6N8 (1speed only) FL6NS8 (2speed only)	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2	Guide Roller Adj.Screwdriver	FSJ-0006	Guide Roller
J-3	Mirror	FSJ-0004	Tape Transportation Check
J-4	Azimuth Adj.Screwdriver +	Available Locally	A/C Head Height
J-5	X Value Adj.Screwdriver -	Available Locally	X Value

MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

Service Information

A. Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

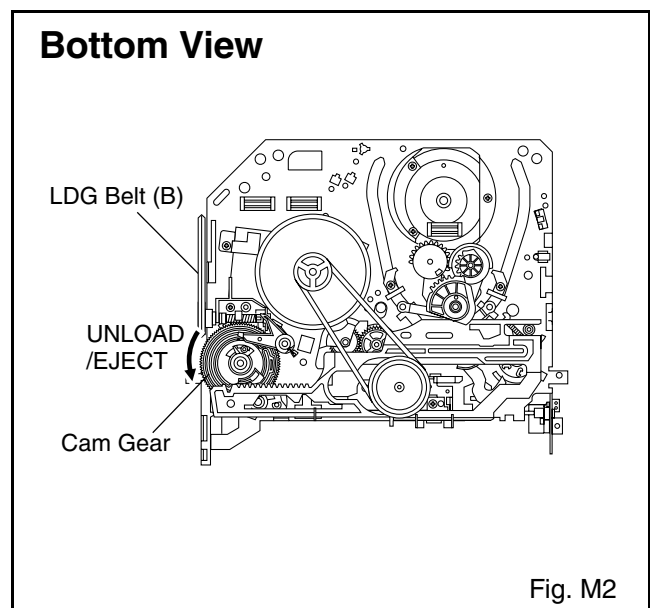
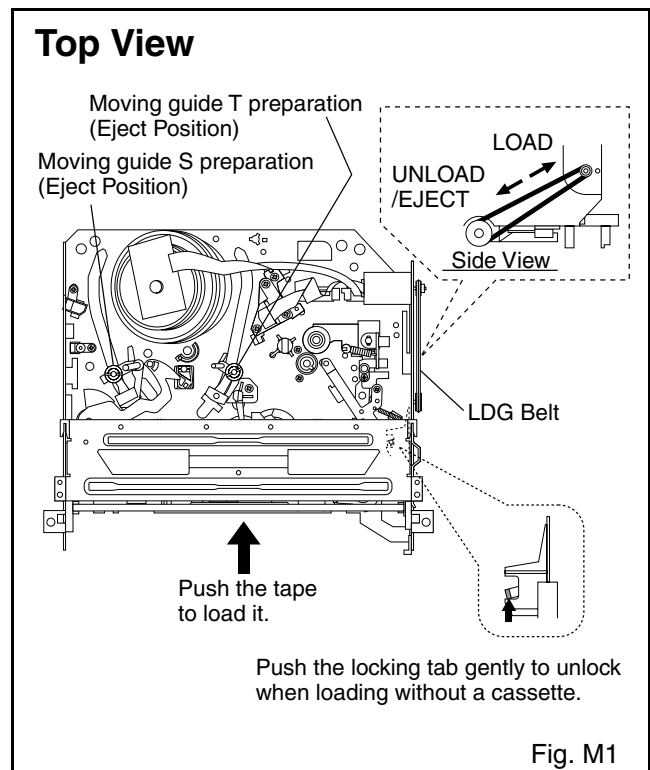
1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

B. Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.



1. Tape Interchangeability Alignment

Note:

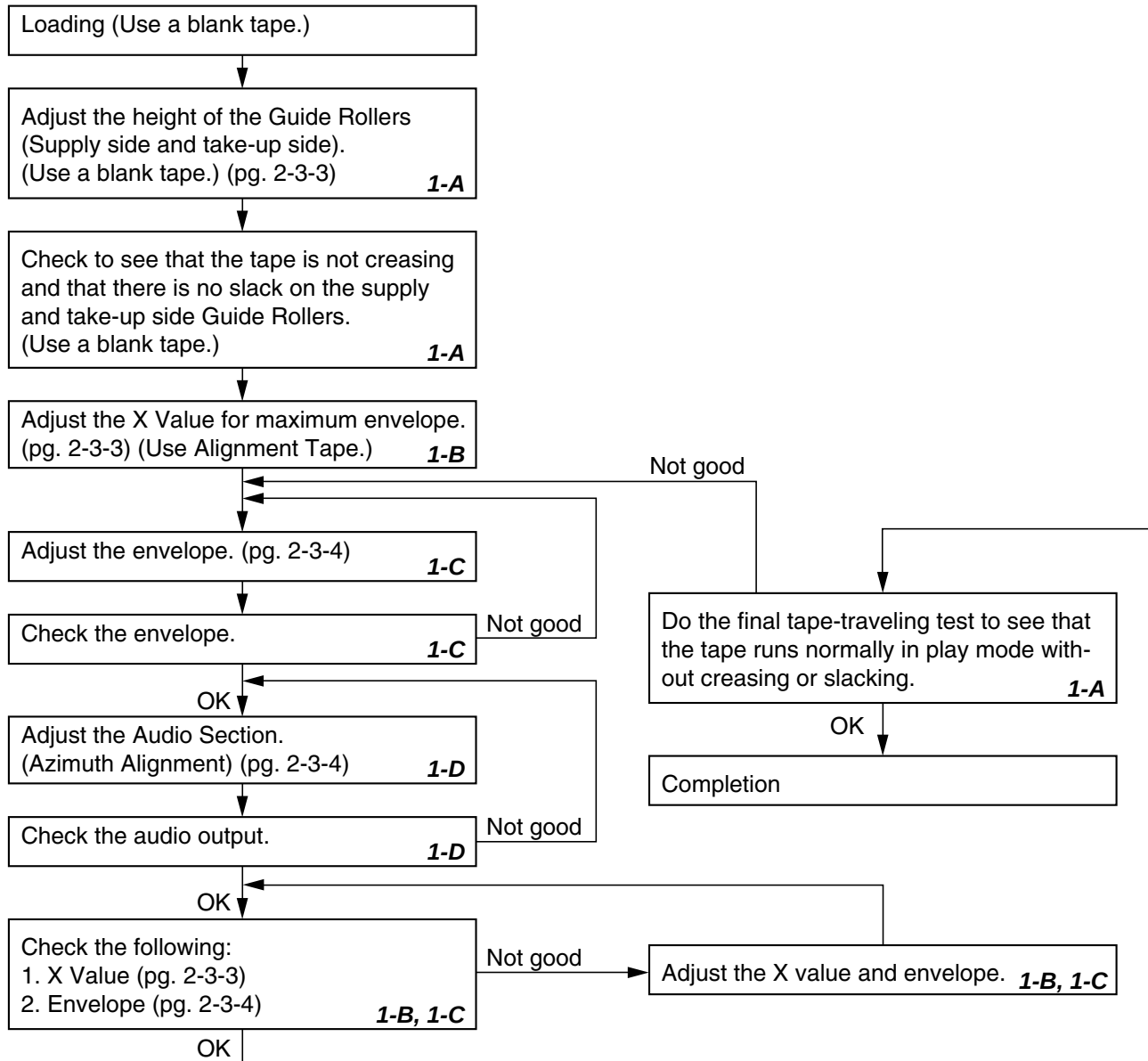
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL6N8)
Guide Roller Adj. Screwdriver
X-Value Adj. Screwdriver

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

Flowchart of Alignment for tape traveling



1-A. Preliminary/Final Checking and Alignment of Tape Path

Purpose:

To make sure that the tape path is well stabilized.

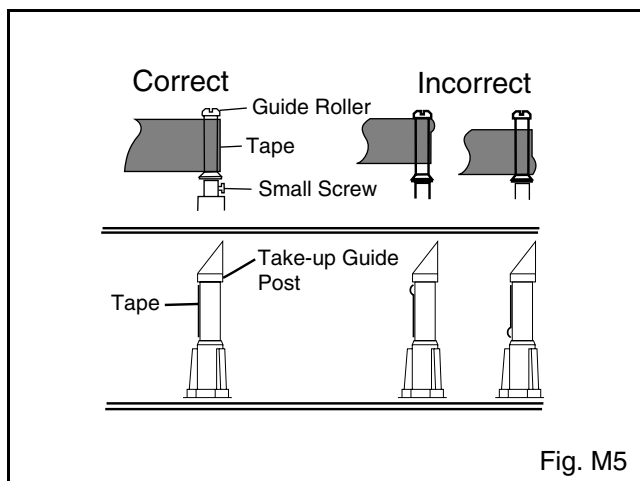
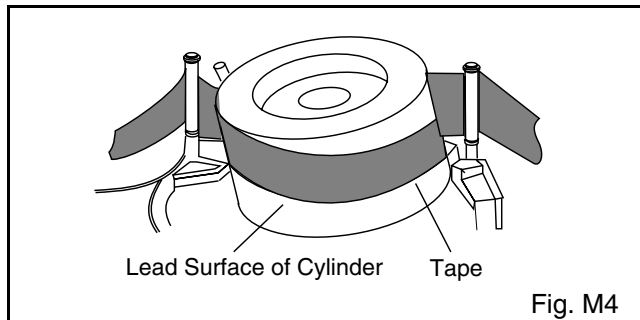
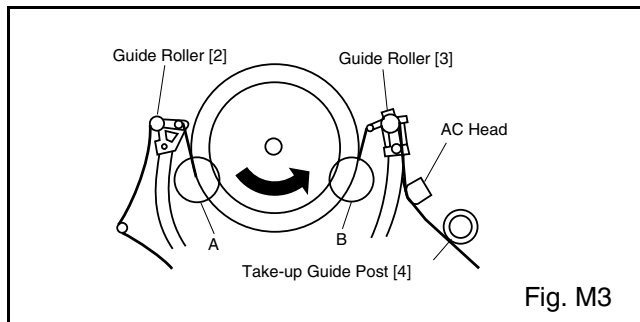
Symptom of Misalignment:

If the tape path is unstable, the tape will be damaged.

Note: Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

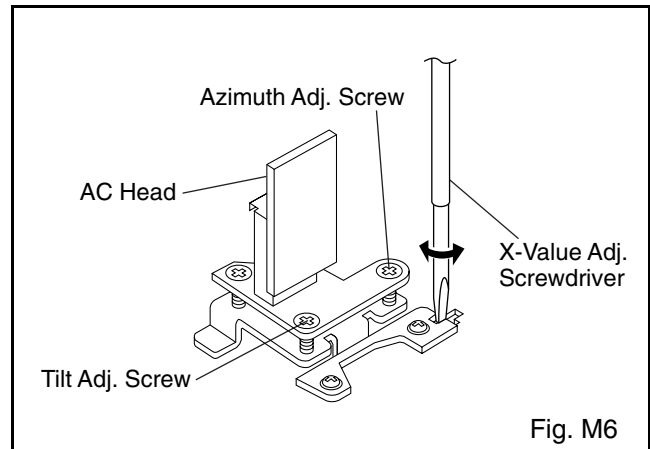
1. Play back a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)

Note: Beneath each Guide Roller, there is a small screw. (Refer to Fig. M5.) This screw works



to apply adequate torque to the shaft of each Guide Roller so that the Guide Roller turns properly. Even when adjusting the height of the Guide Roller(s), do not touch these two small screws.

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and AC Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the AC Head. (Fig. M6)



1-B. X Value Alignment

Purpose:

To align the Horizontal Position of the Audio/Control/Erase Head.

Symptom of Misalignment:

If the Horizontal Position of the Audio/Control/Erase Head is not properly aligned, maximum envelope cannot be obtained at the Neutral position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP501 (CTL) on the Main CBA. Use TP502 (RF-SW) as a trigger.
2. Play back the Gray Scale of the Alignment Tape (FL6N8) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the center position by pressing the CH UP button then the PLAY button on the VCR. (Refer to note on bottom of page 2-3-4.)
4. Use the X-Value Adj. Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)
5. Press CH UP button on the VCR until the CTL waveform has shifted by approx. +2msec. Make sure that the envelope is simply attenuated (shrinks in height) during this process so that you will know the envelope has been at its peak.

6. Press CH DOWN button on the VCR until the CTL waveform has shifted from its original position (not the position achieved in step 5, but the position of CTL waveform in step 4) by approximately -2msec. Make sure that the envelope is simply attenuated (shrinks in height) once CTL waveform passes its original position and is further brought in the minus direction.
7. Set the Tracking Control Circuit to the center position by pressing the CH UP button and then the PLAY button on the VCR.

1-C. Checking/Adjustment of Envelope Waveform

Purpose:

To achieve a satisfactory picture and precise tracking.

Symptom of Misalignment:

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP502 (RF-SW) as a trigger.
2. Play back the Gray Scale on the Alignment Tape (FL6N8). Set the Tracking Control Circuit to the center position by pressing the CH UP and then the PLAY button on the VCR. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M7, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
4. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M9.
5. When Guide Rollers [2] and [3] (Refer to Fig. M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M9.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons alternately, to check the symmetry of the envelope. Check the number of pushes to ensure center position. The number of pushes UP to achieve 1/2 level of envelope should match the number of pushes DOWN from center. If required, redo the "X Value Alignment."

1-D. Azimuth Alignment of Audio/Control/Erase Head

Purpose:

To correct the Azimuth alignment so that the Audio/Control/Erase Head meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Play back the alignment tape (FL6N8) and confirm that the audio signal output level is 8 kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

Dropping envelope level at the beginning of track.

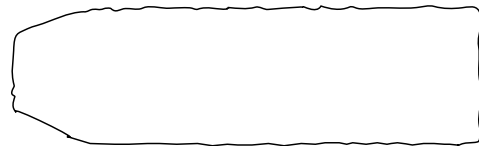


Fig. M7

Dropping envelope level at the end of track.

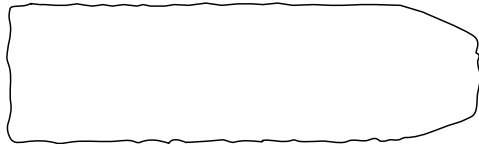


Fig. M8

Envelope is adjusted properly. (No envelope drop)

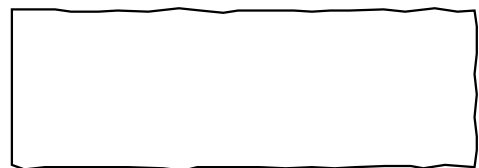


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS on page 1-5-1.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [44] and [45] in Fig. DM1 on page 2-4-3. When reassembling, follow the steps in reverse order.

STEP /LOC. No.	START- ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[1]	[1]	Top Plate	T	DM3	2(S-1), *2(L-1)	
[2]	[1]	Cassette Holder Assembly	T	DM4	(S-19)	
[3]	[2]	Slider L	T	DM5	(S-2)	
[4]	[2]	Slider R	T	DM5	(S-3)	
[5]	[4]	Lock Lever	T	DM5	(S-4), *(P-1)	
[6]	[2]	Cassette Plate	T	DM5		
[7]	[7]	Cylinder Assembly	T	DM1, DM6	3(S-5), Connector A, Connector B	
[8]	[8]	Loading Motor Assembly	T	DM1, DM7	2(S-6), (S-7), LDG Belt, ACH Connector AN(9P) and 9B	
[9]	[1]	Tape Guide Assembly	T	DM1, DM8	*(P-2), (C-8)	
[10]	[1]	Door Opener B	T	DM1, DM8	(S-8), *(L-2)	
[11]	[10]	Pinch Arm (B) Assembly	T	DM1, DM8	*(P-3)	
[12]	[11]	Pinch Arm (A) Assembly	T	DM1, DM8		
[13]	[13]	FE Head [VIP-5000LR MK12]	T	DM1, DM9	(S-9)	
[14]	[14]	First Post Assembly	T	DM1, DM9	(S-10)	
[15]	[15]	Prism	T	DM1, DM9	(S-11)	
[16]	[16]	Standard Post	T	DM1, DM9	*(L-4)	
[17]	[1]	Slider Shaft	T	DM10	(S-12), *(L-7)	
[18]	[17]	C Drive Lever L	T	DM10		
[19]	[17]	C Drive Lever R	T	DM10		
[20]	[12]	Capstan Motor	B	DM2, DM11	3(S-14), Cap Belt	
[21]	[21]	FF Arm Holder	B	DM2, DM12	(S-15)	
[22]	[21]	Clutch Assembly	B	DM2, DM12	(C-1)	
[23]	[21]	FF Arm	B	DM2, DM12		
[24]	[24]	Cam Holder	B	DM2, DM13	(C-2)	
[26]	[26]	Cam Gear (B)	B	DM2, DM13	(C-3), *(P-4)	
[27]	[27]	Mode Gear	B	DM2, DM14	(C-4)	
[28]	[27]	Mode Lever	B	DM2, DM14	(C-5)	
[29]	[28]	Cam Gear (A)	B	DM2, DM14		
[30]	[29]	Pully Assembly	B	DM2, DM14		
[31]	[30]	Worm Holder	B	DM2, DM14	(S-16)	
[32]	[28]	Sensor Gear	B	DM1, DM15	(C-6)	
[33]	[28]	Idler Assembly	B	DM1, DM15		
[34]	[28]	BT Arm	B	DM2, DM15	*(P-5)	

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[35]	[28]	Loading Arm S Assembly	B	DM2, DM15		(+) Refer to Alignment Sec. Pg. 2-4-9
[36]	[35]	Loading Arm T Assembly	B	DM2, DM15		(+) Refer to Alignment Sec. Pg. 2-4-9
[37]	[28]	M Brake T Assembly	T	DM1, DM16	*(P-6)	
[38]	[38]	M Brake S Assembly	T	DM1, DM16	*(P-7)	
[39]	[38]	Tension Lever Sub Assembly	T	DM1, DM16	*(P-8), (C-9)	
[40]	[39]	T Lever Holder	T	DM1, DM16	*(L-5)	
[41]	[2]	M Gear	T	DM1, DM16	(C-7)	
[42]	[37]	Reel T	T	DM1, DM16		
[43]	[39]	Reel S	T	DM1, DM16		
[44]	[43]	Moving Guide S Preparation	T	DM1, DM17	(S-17), Slide Holder S	
[45]	[36]	Moving Guide T Preparation	T	DM1, DM17	(S-18), Slide Holder T	
[46]	[20]	TG Post Assembly	T	DM1, DM17	*(L-3)	
[47]	[29]	Rack Assembly	R	DM18		(+) Refer to Alignment Sec. Pg. 2-4-10
[48]	[47]	F Door Opener A	R	DM18	*(P-9)	
[49]	[49]	Cleaner Lever Assembly	T	DM1,DM6		
[50]	[49]	CL Post	T	DM1,DM6	*(L-6)	

↓
①

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②

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③

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④

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⑤

↓
⑥

↓
⑦

- ①: Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as Identification (location) No. of parts in the figures.
- ②: Indicates the part to start disassembling with in order to disassemble the part in column (1).
- ③: Name of the part
- ④: Location of the part: T=Top B=Bottom R=Right L=Left
- ⑤: Figure Number
- ⑥: Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook, Unlock, Release, Unplug, or Desolder
e.g., 2(L-2) = two Locking Tabs (L-2).
- ⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication.

Top View

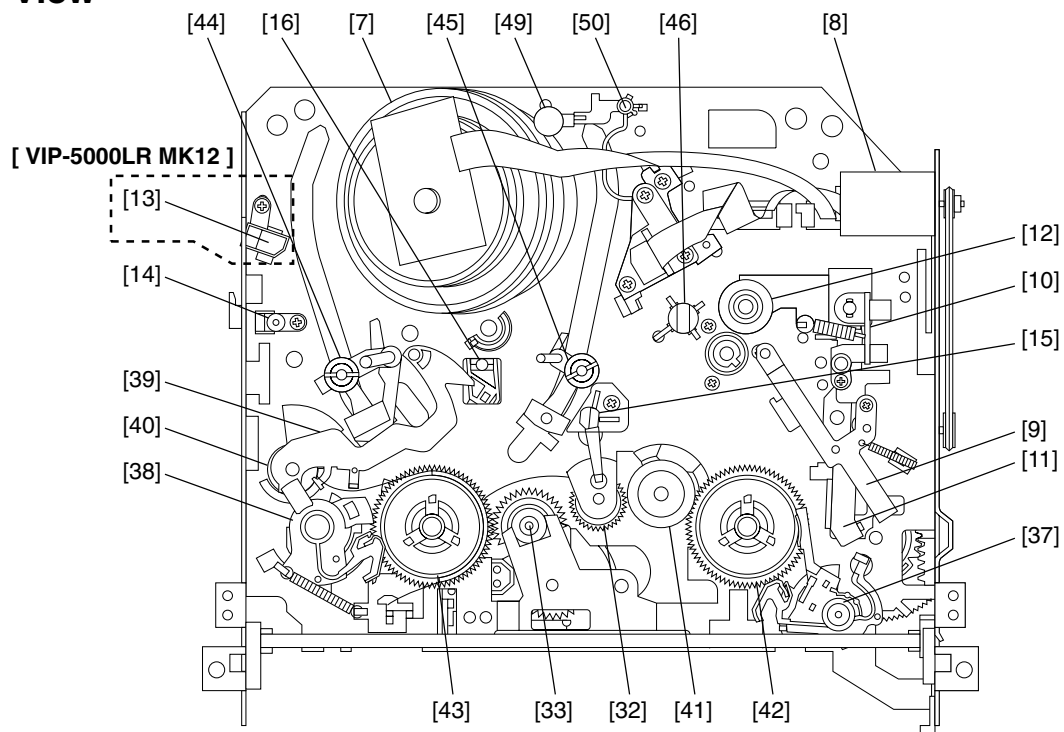


Fig. DM1

Bottom View

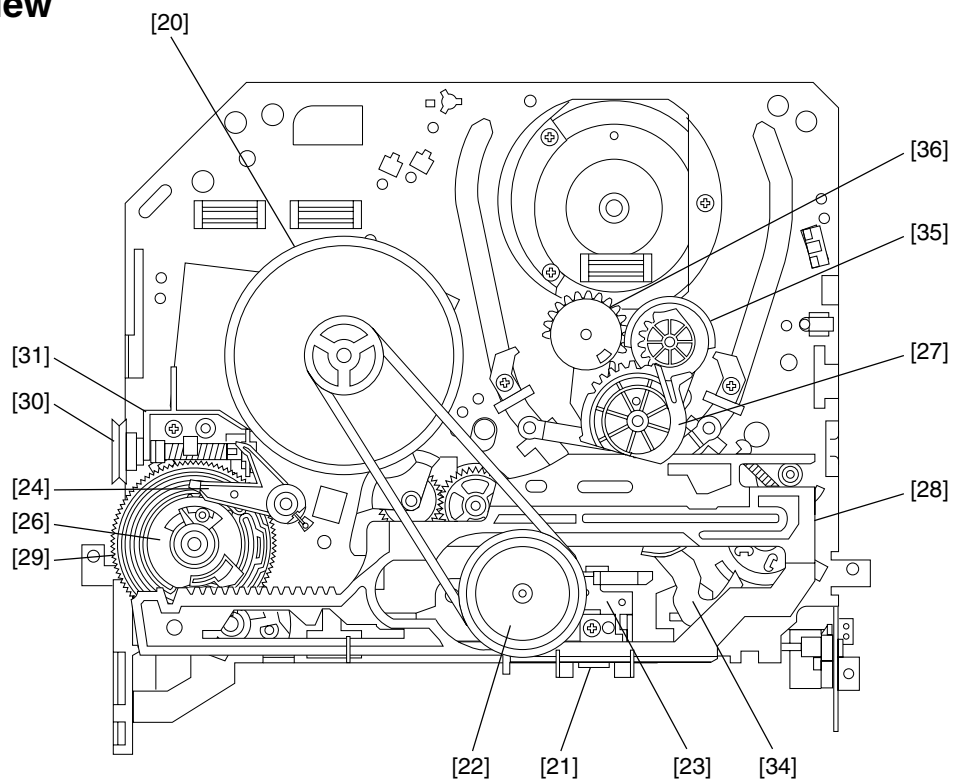
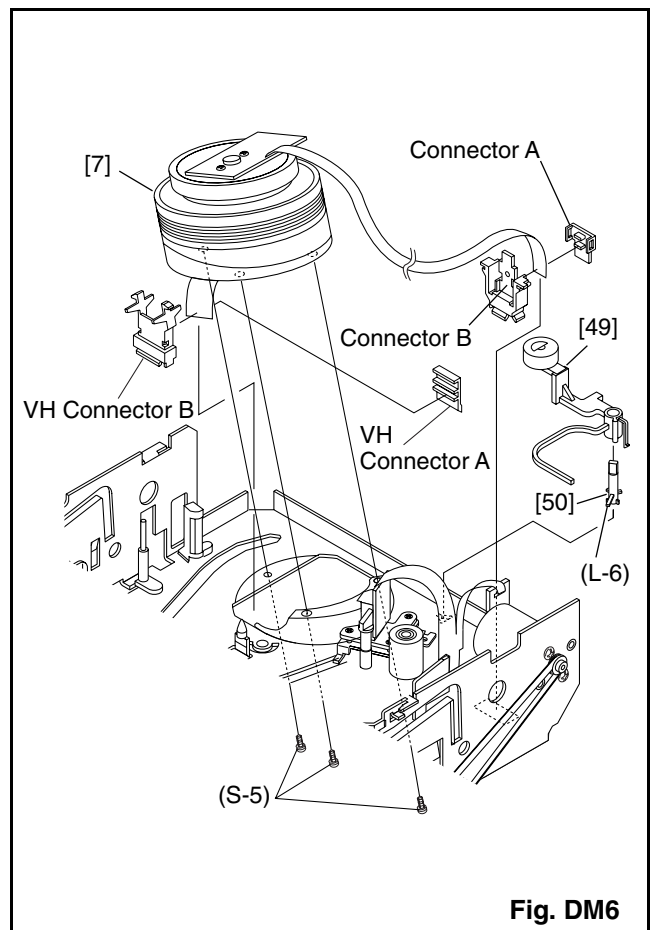
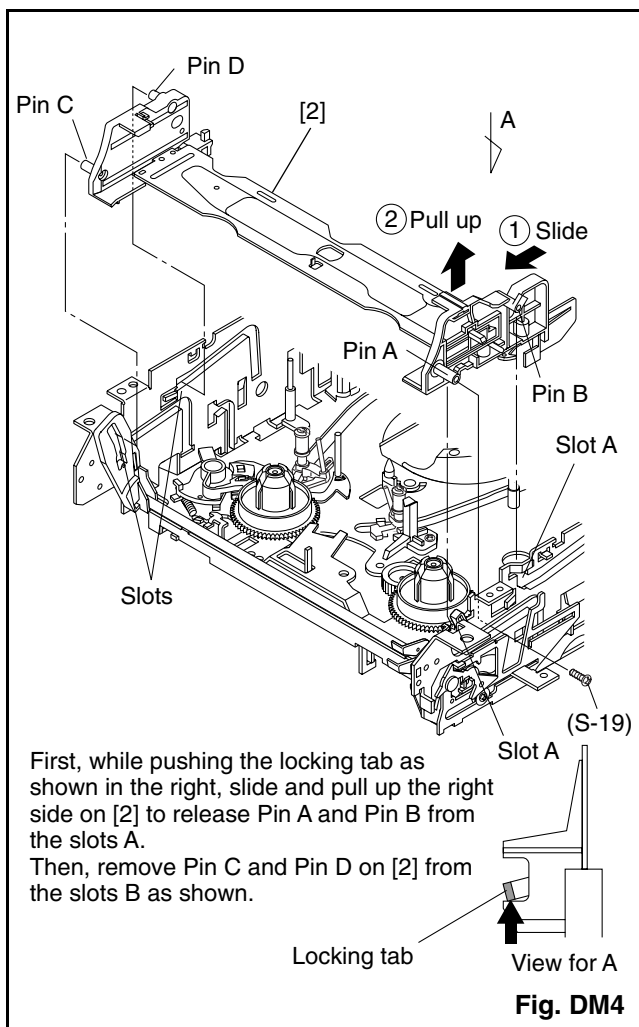
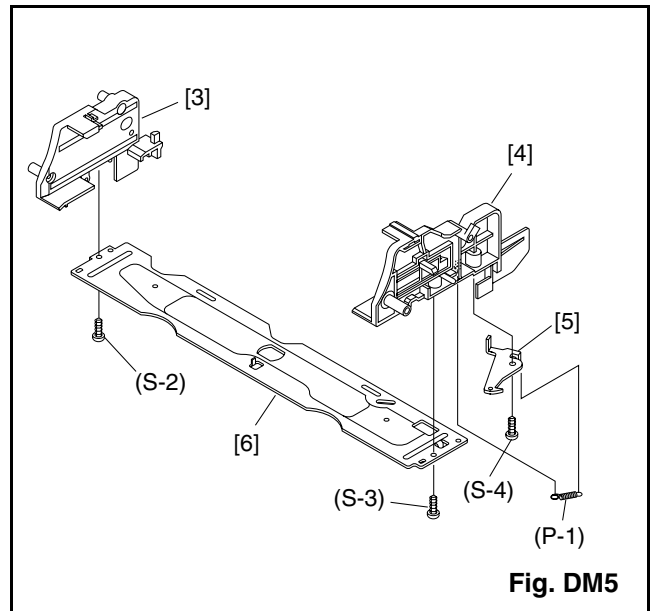
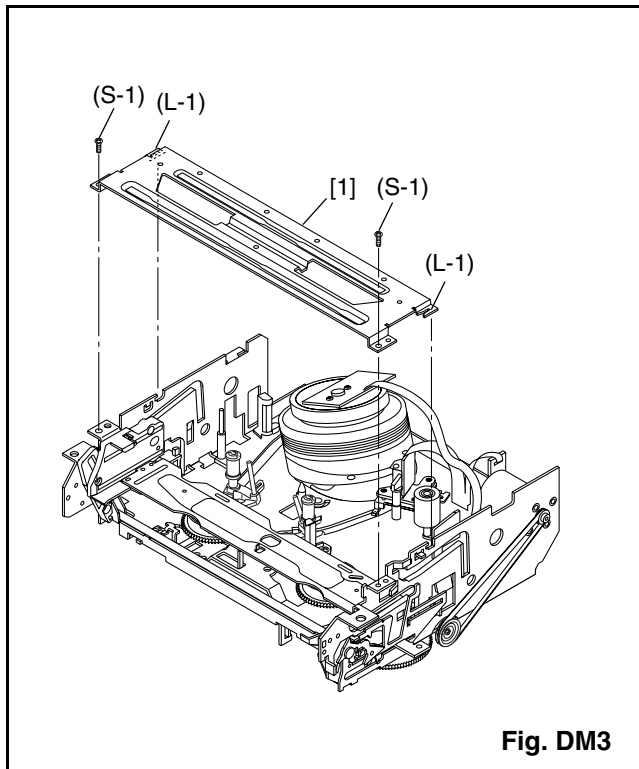
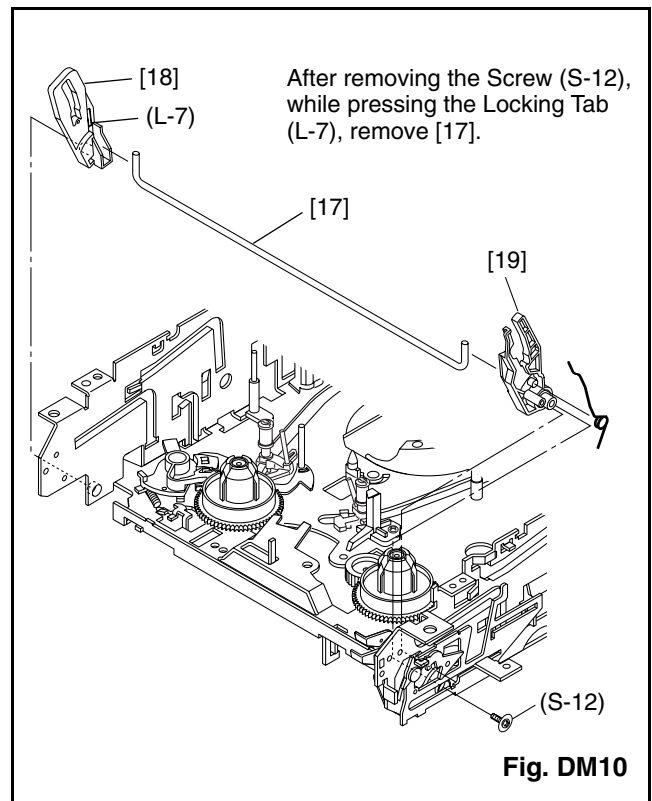
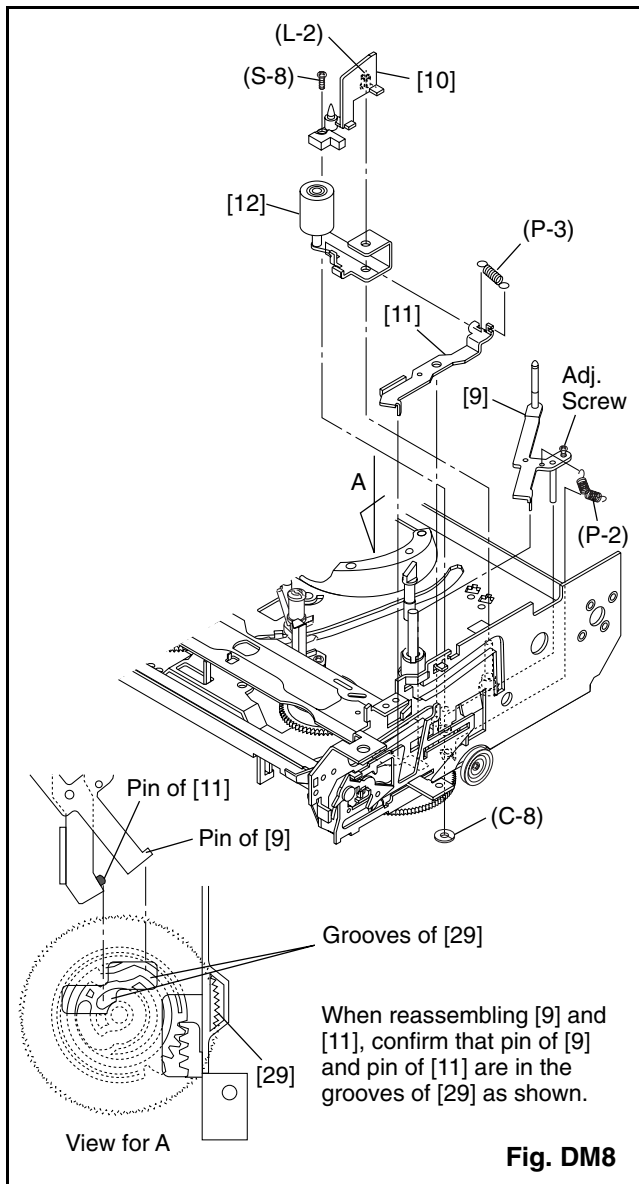
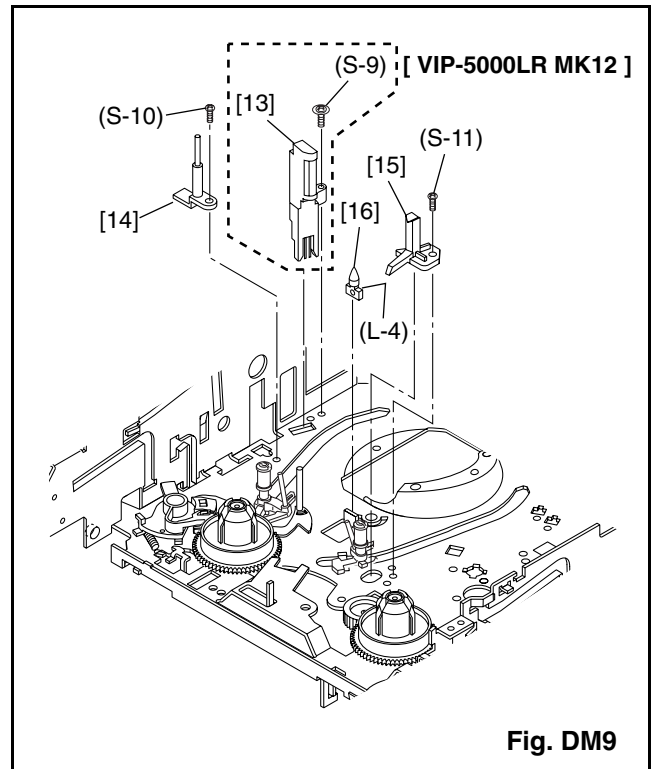
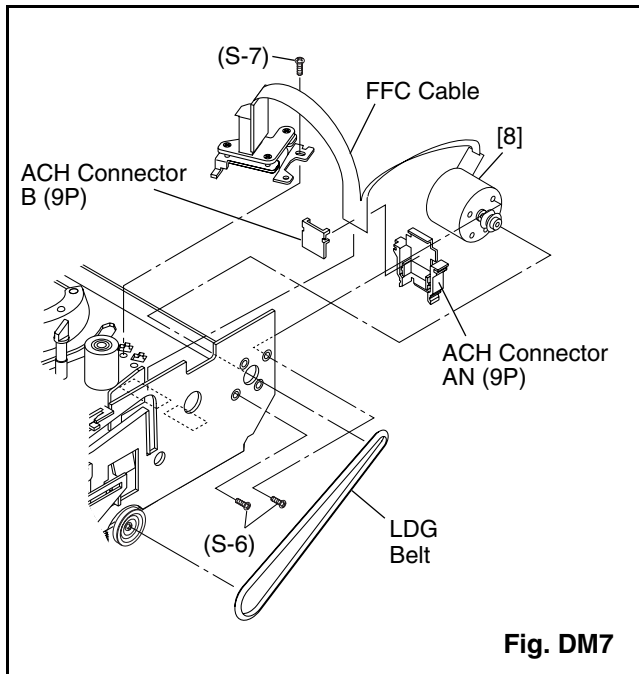
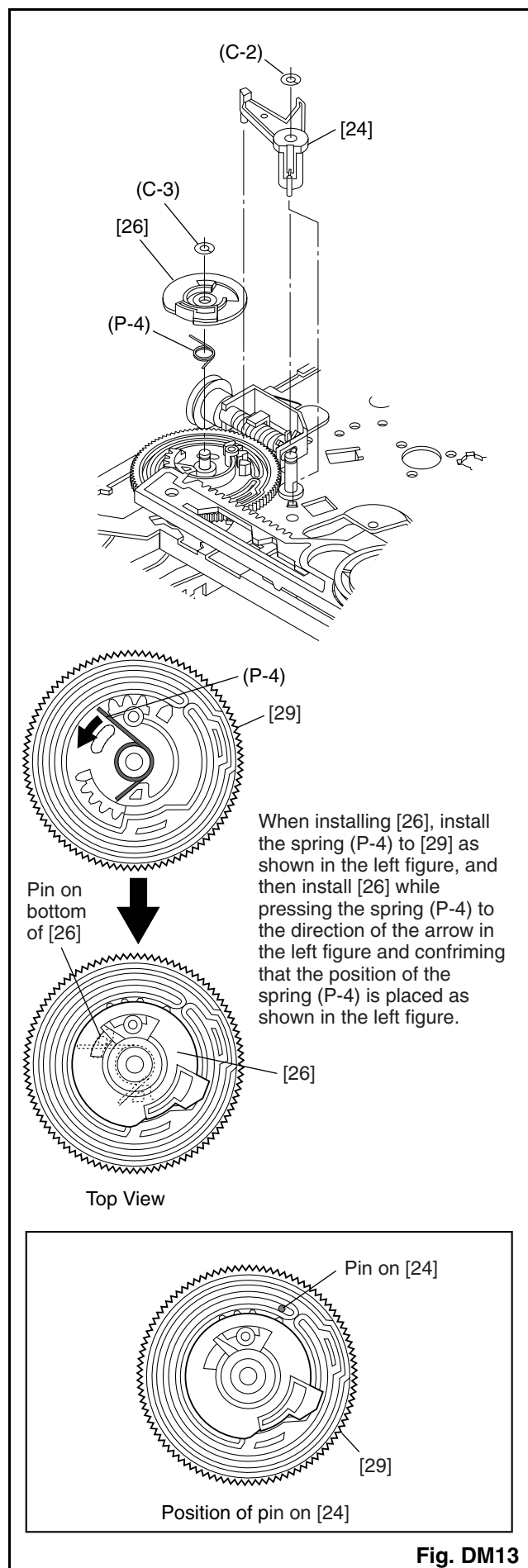
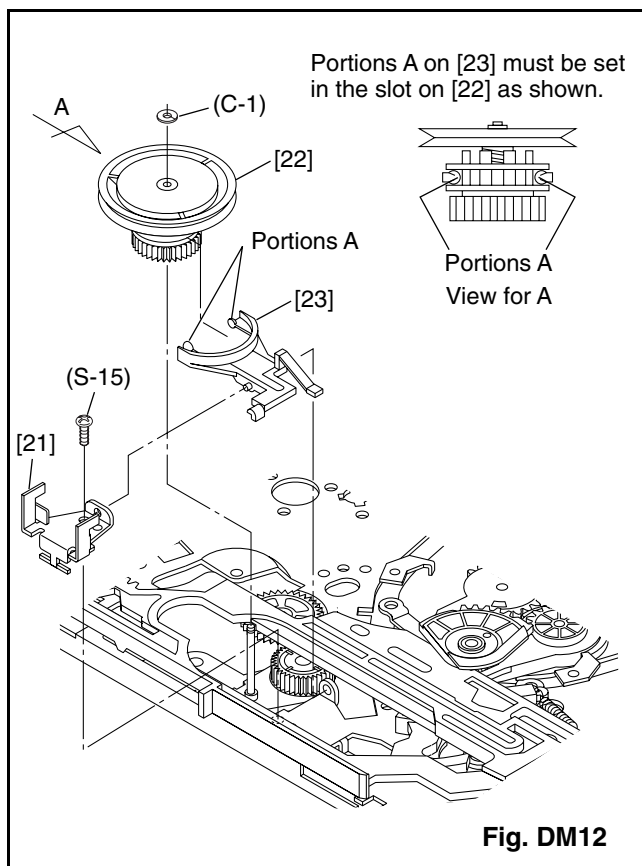
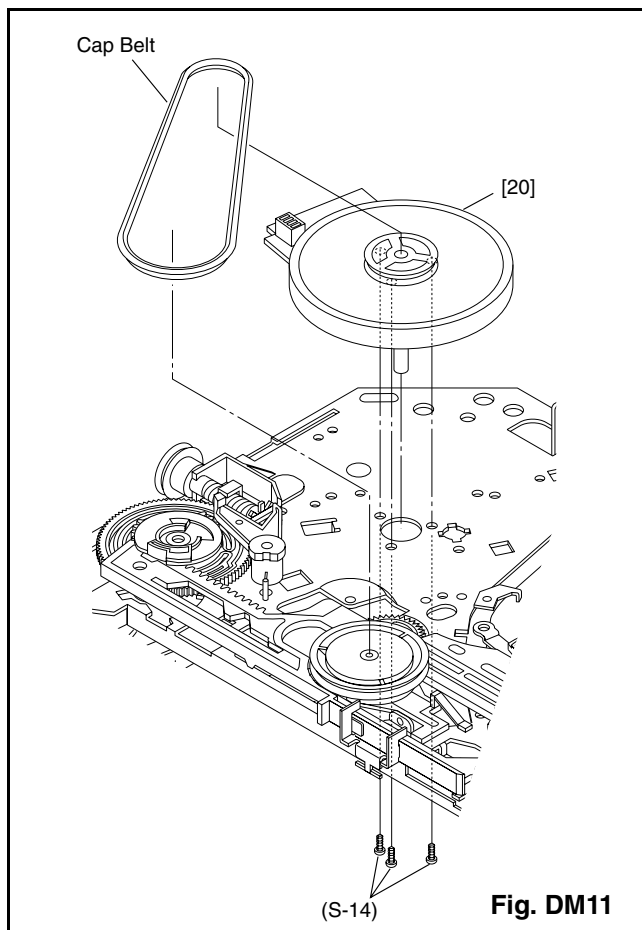


Fig. DM2







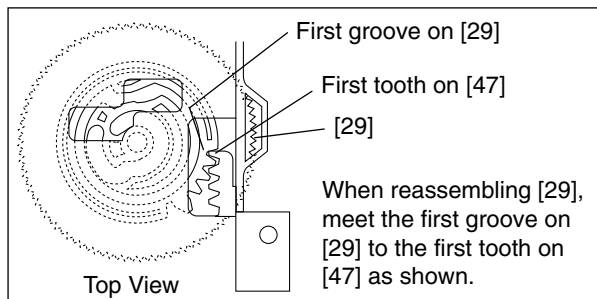
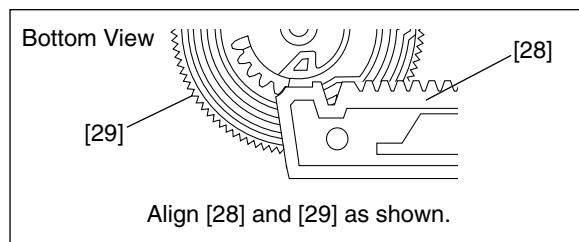
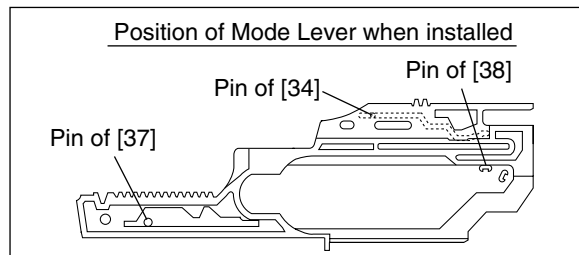
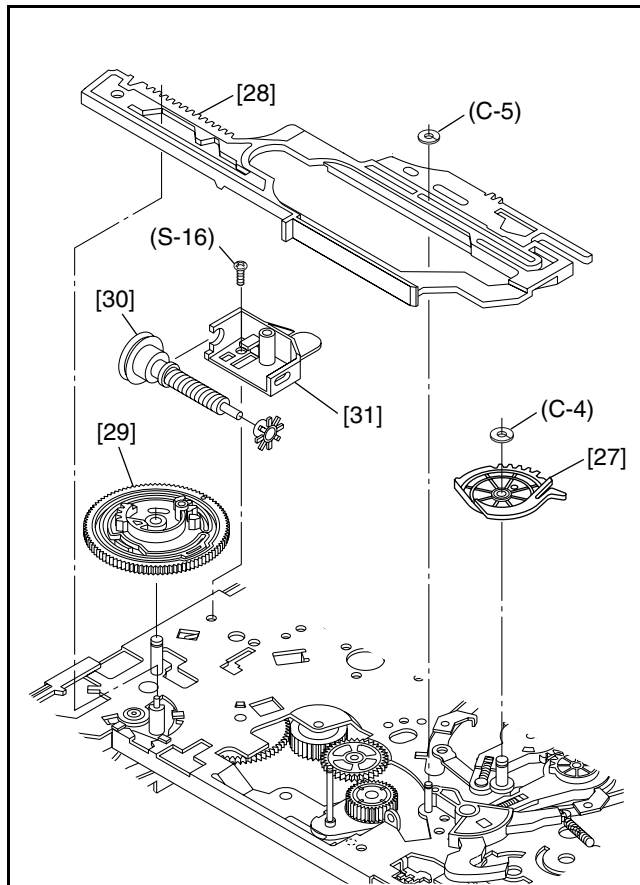


Fig. DM14

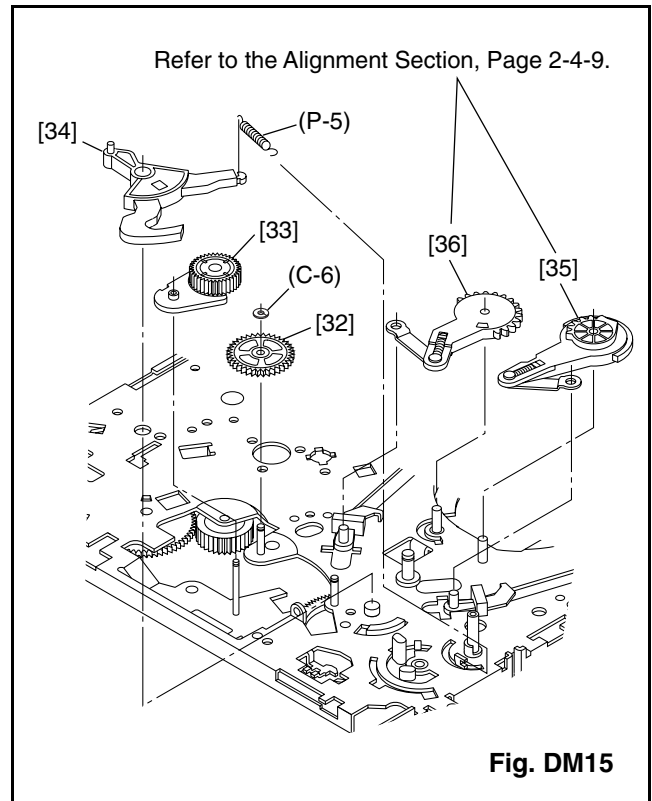


Fig. DM15

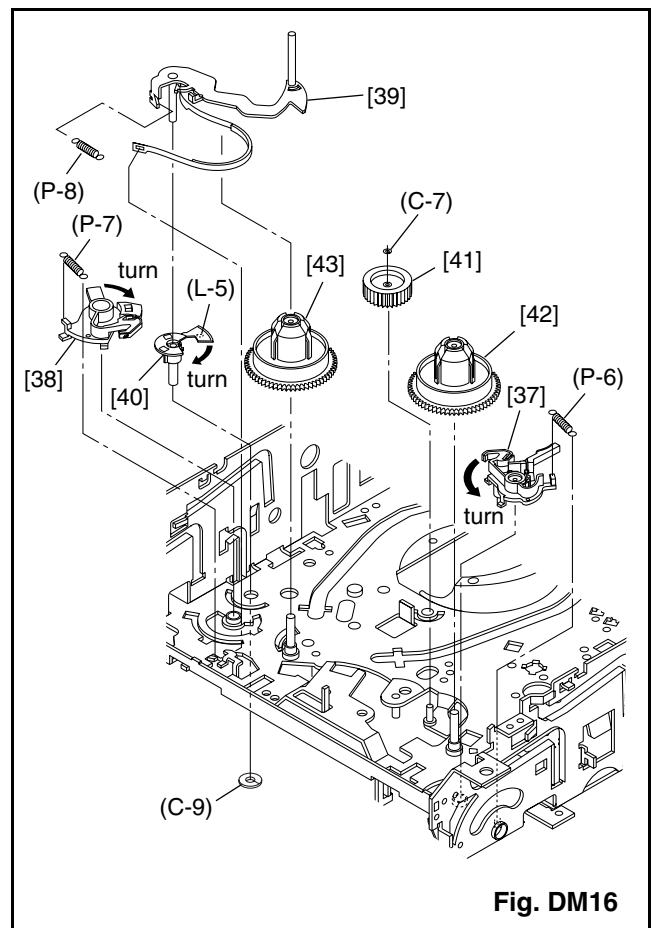


Fig. DM16

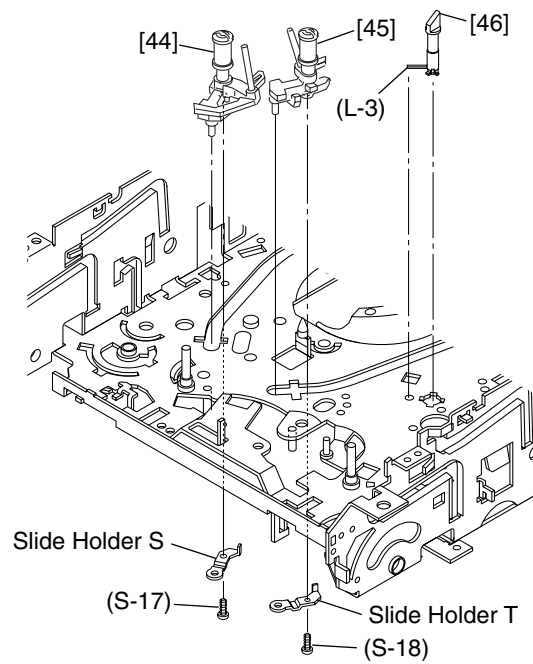


Fig. DM17

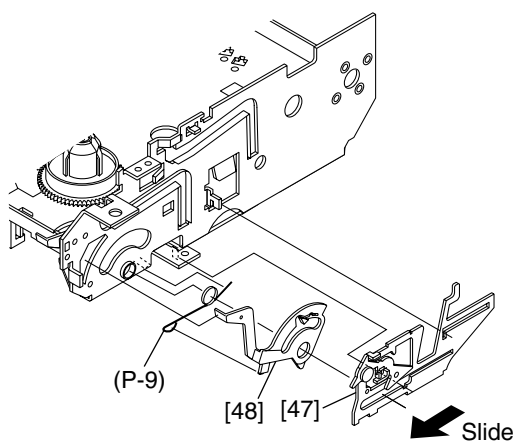


Fig. DM18

ALIGNMENT PROCEDURES OF MECHANISM

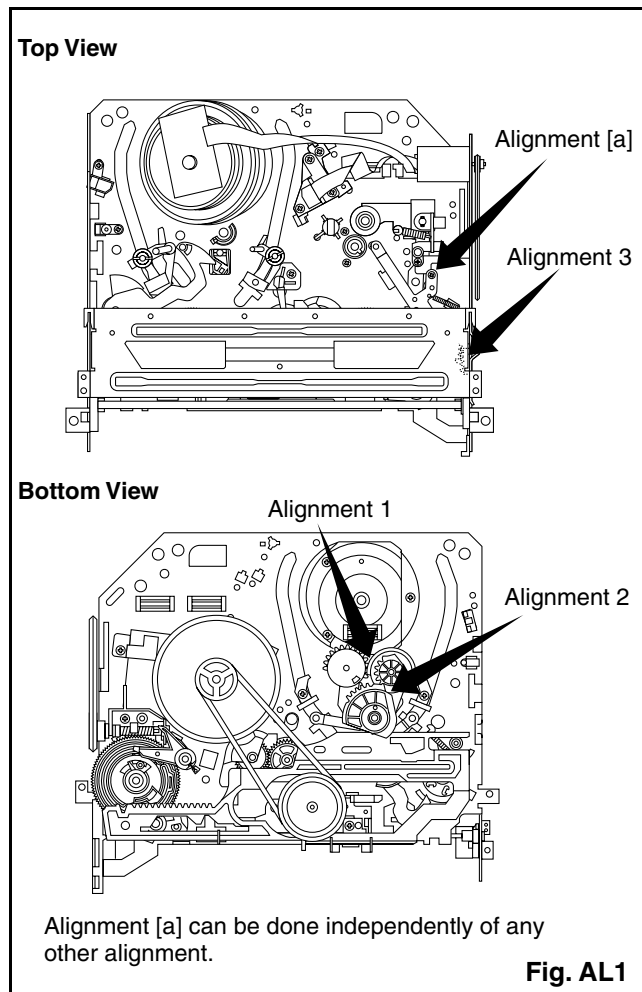
The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

All alignments are to be performed with the mechanism in Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

IMPORTANT:

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

Alignment points in Eject Position



Alignment 1

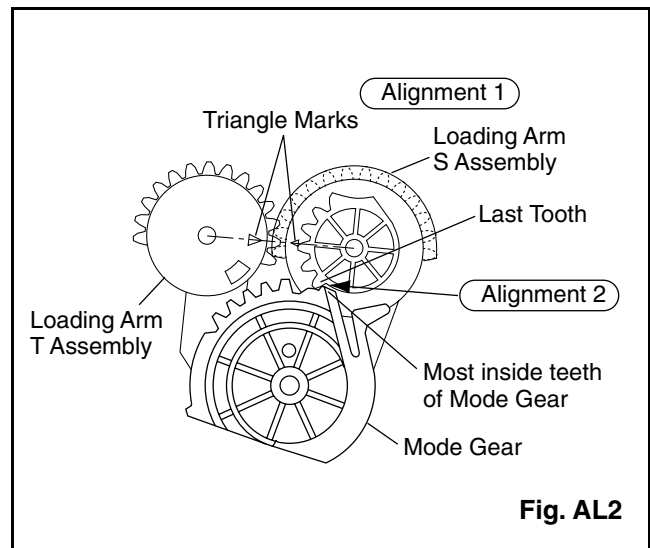
Loading Arm, S and T Assembly

Install Loading Arm S and T Assembly so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

Mode Gear

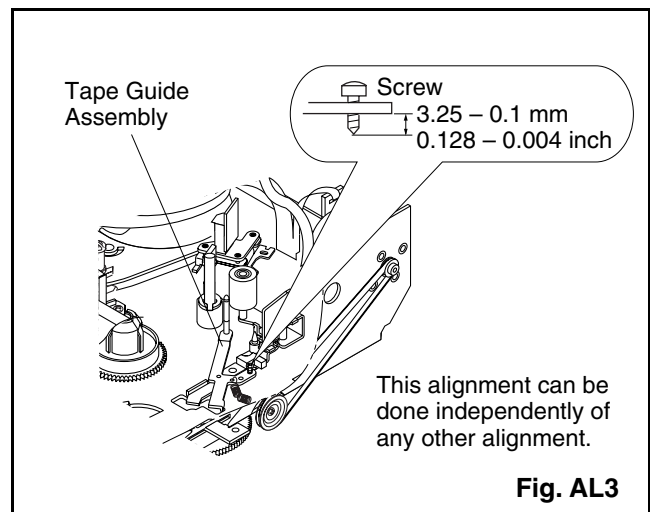
Keeping the two triangles pointing at each other, install the Loading Arm T Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.



Alignment [a]

Tape Guide Assembly

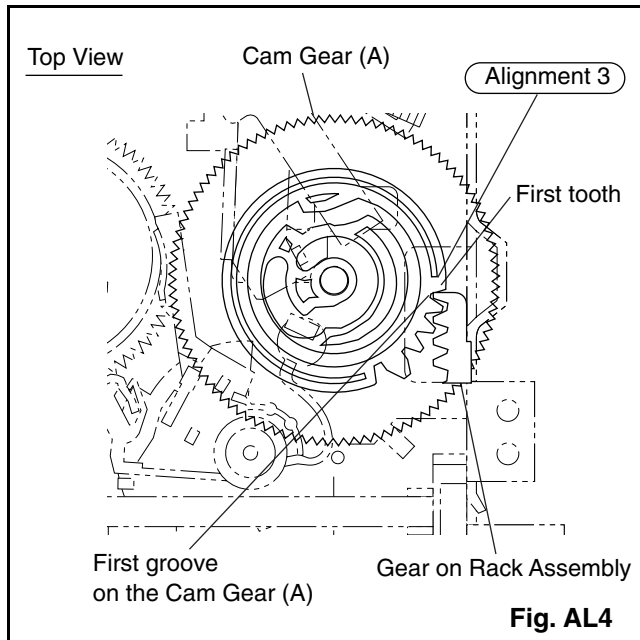
Measurement of the screw must be as specified in Fig. AL3.



Alignment 3

Cam Gear (A), Rack Assembly

Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) as shown in Fig. AL4.



EXPLODED VIEWS AND PARTS LIST SECTION

VIDEO CASSETTE RECORDER

VIP-5000HC MK12/VIP-5000LR MK12

**Sec. 3: Exploded views
and Parts List Section**

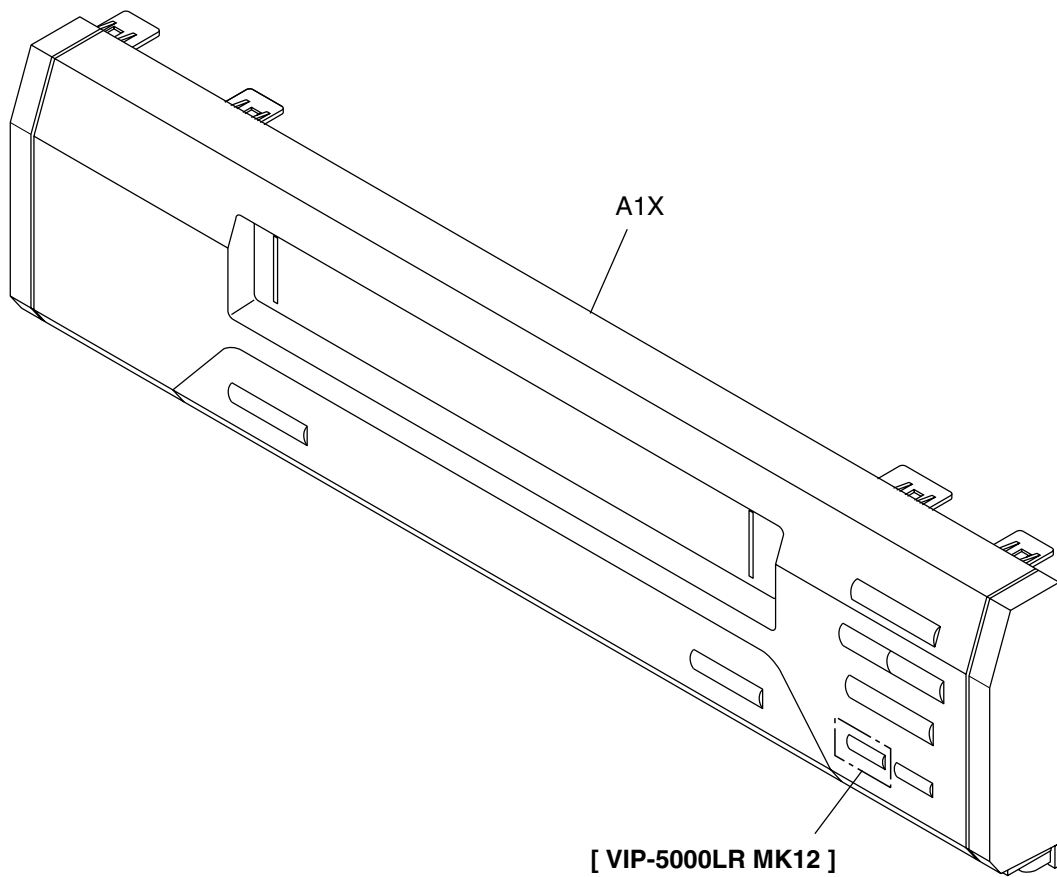
- Exploded views
- Parts List

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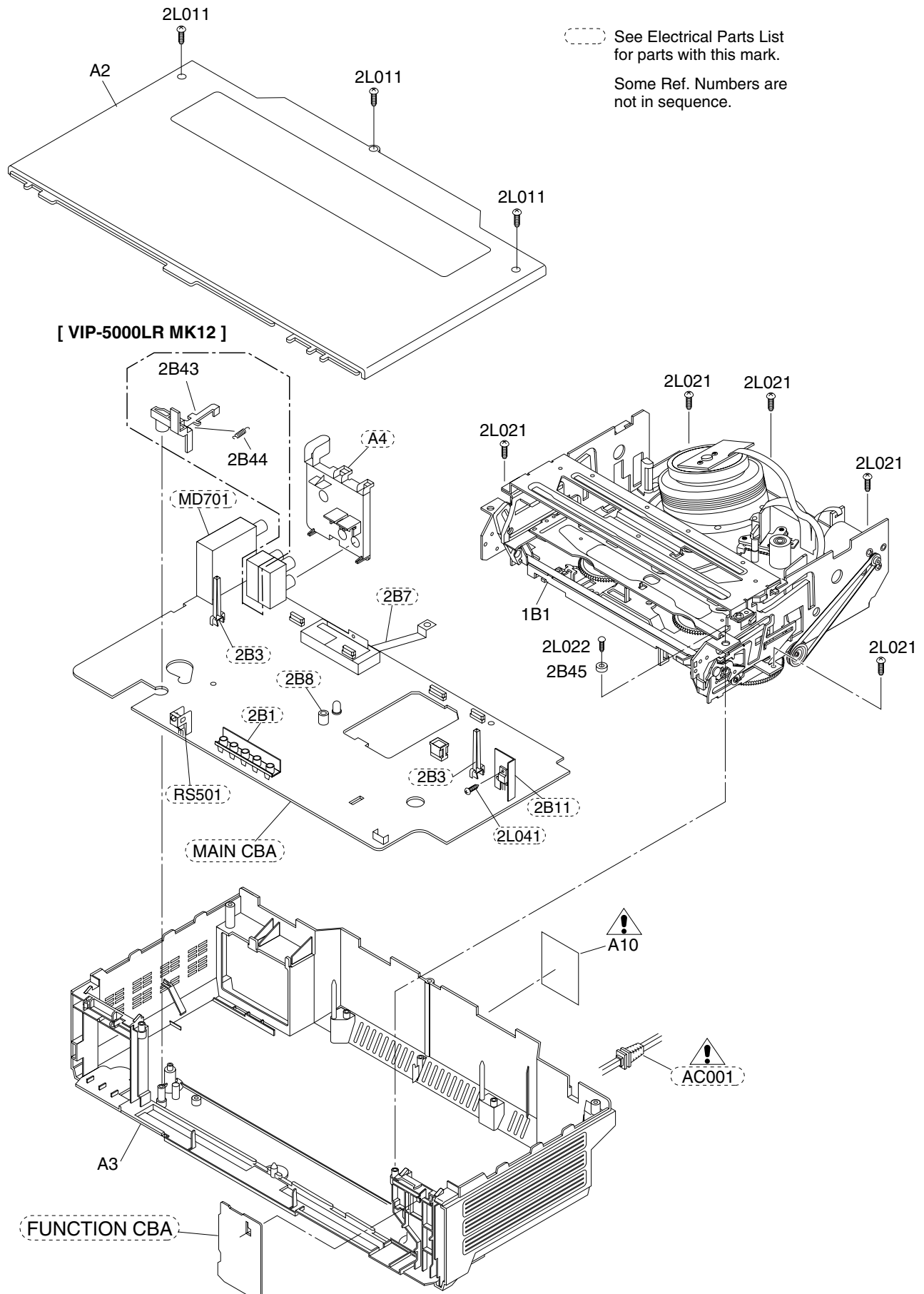
Exploded Views	3-1-1
Mechanical Parts List	3-2-1
Electrical Parts List	3-3-1
Deck Parts List	3-4-1

EXPLODED VIEWS

Front Panel

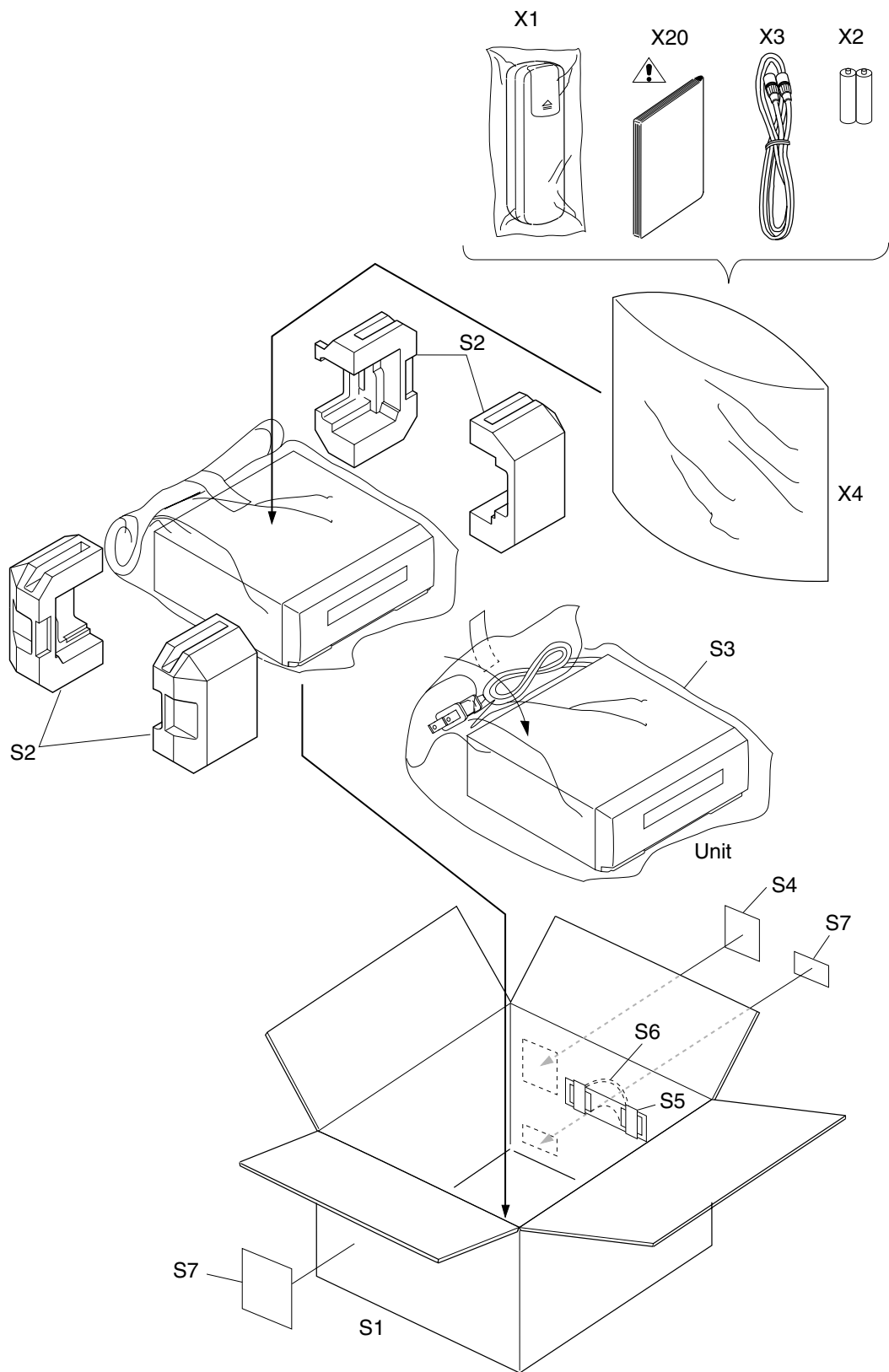


Cabinet



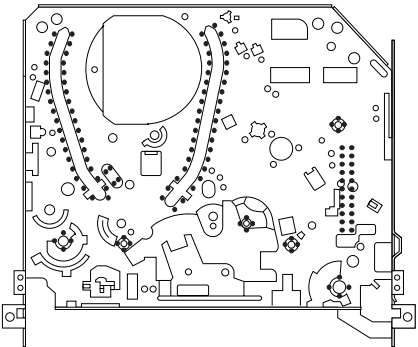
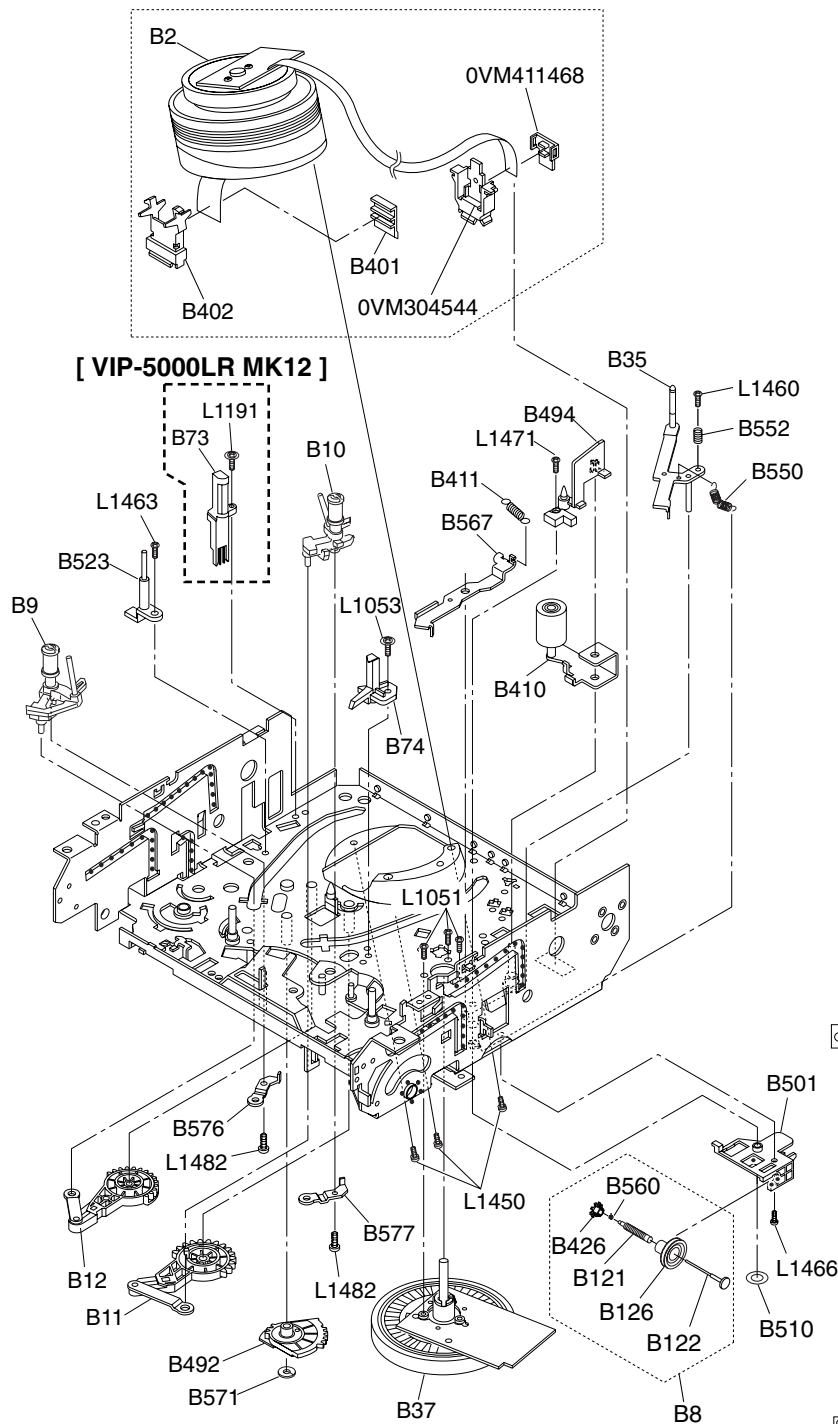
Packing

Some Ref. Numbers are not in sequence.

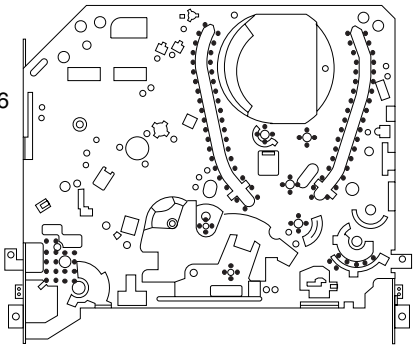


Deck Mechanism View 1

Mark	Description
.....	Floil G-374G (Blue grease)



Chassis Assembly
Top View (Grease Point)

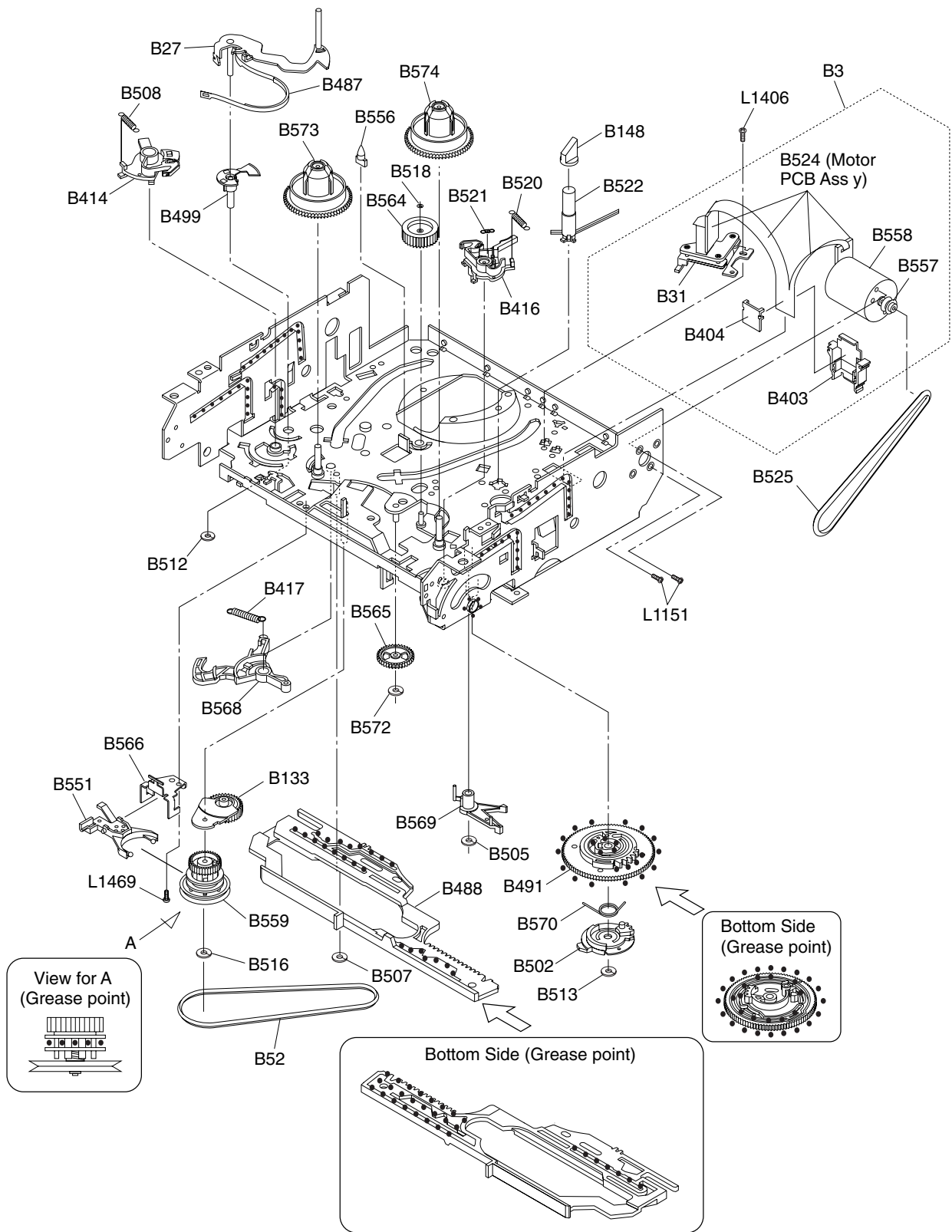


Chassis Assembly
Bottom View (Grease Point)

Some Ref. Numbers are not in sequence.

Deck Mechanism View 2

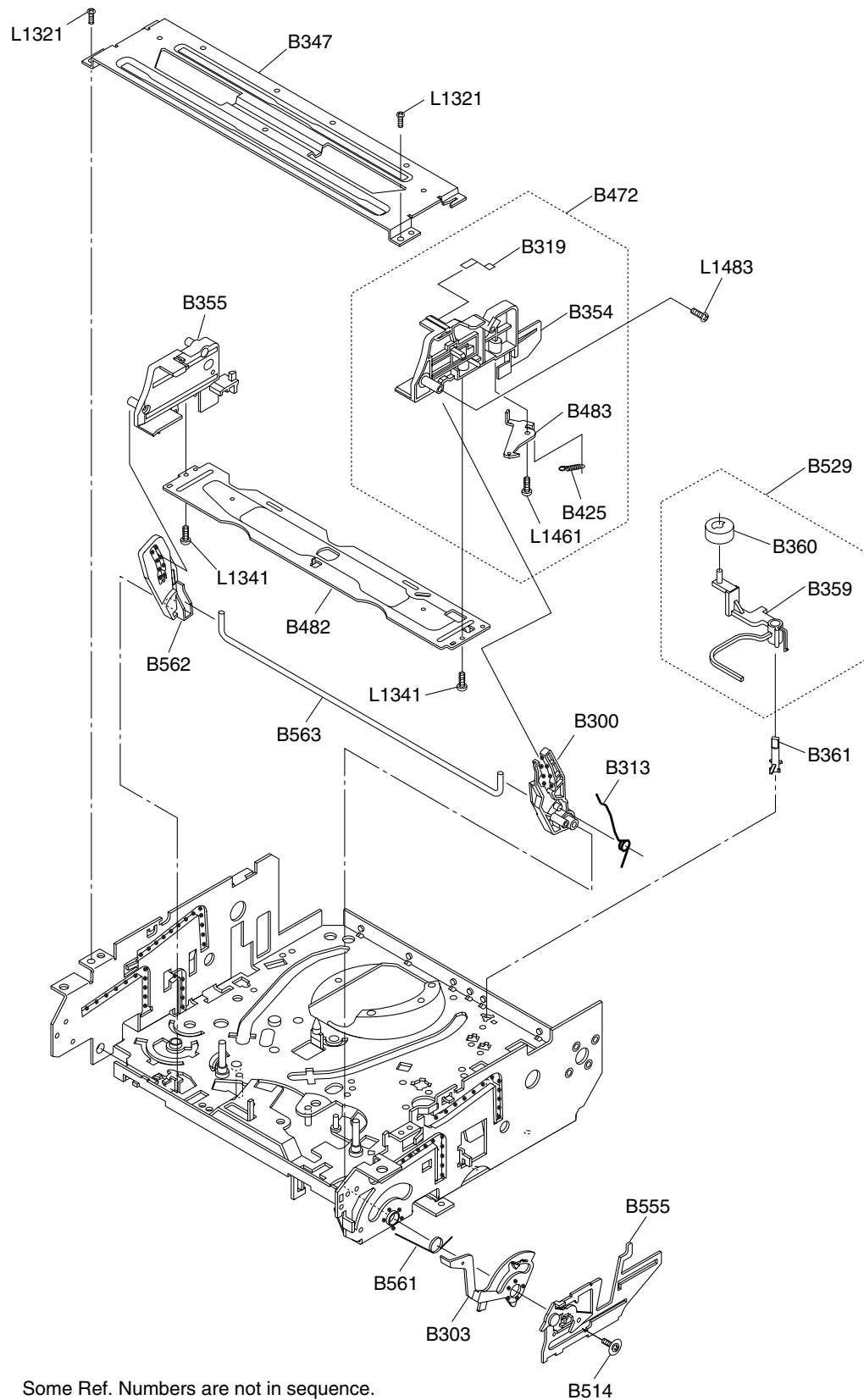
Mark	Description
.....	Floil G-374G (Blue grease)



Some Ref. Numbers are not in sequence.

Deck Mechanism View 3

Mark	Description	Part No.
.....	Floil G-374G (Blue grease)	0VZZ00109



MECHANICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTE:

1. B359, B360, B361 and B529:
See Deck Exploded View 3. (Refer to page 3-1-6)

Comparison chart of Models and Marks

Mark	Model No.
A	VIP-5000HC MK12
B	VIP-5000LR MK12

Ref. No.	Mark	Description	Part No.
A1X	A	FRONT ASSEMBLY H85G0PD	0VM203187
A1X	B	FRONT ASSEMBLY H85G5PD	0VM203188
A2		CASE, TOP H87G0PD	0VM304847
A3		CHASSIS H87G0PD	0VM203193
A4	A	JACK BOARD H85G0PD (See Electrical Parts List)	
A4	B	JACK BOARD H85F1PD (See Electrical Parts List)	
A10 	A	LABEL, RATING H85G0PD	0VM412048
A10 	B	LABEL, RATING H85G5PD	0VM412049
AC001 		AC CORD PE8B2CB1H0A-057 (See Electrical Parts List)	
1B1	A	DECK ASSEMBLY CZD006/VM1331	N1331FL
1B1	B	DECK ASSEMBLY CZD006/VM1322	N1322FL
2B1		HOLDER, L.E.D. (U19) H3700UD (See Electrical Parts List)	
2B3		HOLDER, SENSOR(2) H5700UD (See Electrical Parts List)	
2B7		SHIELD, HEAD(TOP) H8700EP (See Electrical Parts List)	
2B8		BUSH, LED(F) H3700UD (See Electrical Parts List)	
2B43	B	REC ARM H7700UD	0VM202907
2B44	B	REC ARM SPRING MK6	0VM407708C
2B11		HEATSINK V2600PZ (See Electrical Parts List)	
2B45		SPACER H7700UD	0VM411667
B359		CLEANER LEVER MK10	0VM304413
B360		CLEANER ROLLER MK9	0VM410032C
B361		CL POST MK10	0VM411114
B529		CLEANER ASSEMBLY MK10	0VSA11161
2L011		SCREW, P-TIGHT 3X10 BIND HEAD+	GBEP3100
2L021		SCREW, P-TIGHT M3X10 WASHER HEAD+	GCMP3100
2L022		SCREW, P-TIGHT 3X12 WASHER HEAD+	GCMP3120
2L041		S-TIGHT SCREW 3X8 BIND + CHROME (See Electrical Parts List)	
MD701		RF MODULATOR(PAL-G/K) MDLM3E528A (See Electrical Parts List)	
RS501		REMOTE RECEIVER PIC-37042LU (See Electrical Parts List)	
PACKING			
S1	A	GIFT BOX CARTON H85G0PD	0VM304850

Ref. No.	Mark	Description	Part No.
S1	B	GIFT BOX CARTON H85G5PD	0VM304851
S2		STYROFOAM(U23F-CORP) H7700UD	0VM202936
S3		UNIT, BAG V4010PA	0VM406453B
S4		LABEL, SERIAL NO. V5279	7E00050
S5		PLATE, HANDLE V2000PA	0VM406195
S6		HANDLE S4021PD	0VM405251
S7	A	CHINA LABEL H85G0PD	0VM412051
S7	B	CHINA LABEL H85G5PD	0VM412072
ACCESSORIES			
X1	A	REMOTE CONTROL UNIT 364/CRC005	N9474PD
X1	B	REMOTE CONTROL UNIT 364/CRC005	N9479PD
X2		DRY BATTERY(SUNRISE) R6SSE/2S or	XB0M451MS002
		DRY BATTERY R6P/2S	XB0M451T0001
X3		RF CABLE LP-PAL-960601 or	WPZ0102LG007
		RF CORD PAL 1.0M	WPZ0102TM010
X4		ACCESSORY BAG H3600UD T=0.03	0VM409454
X20 	A	OWNER'S MANUAL H85G0PD	0VMN02705
X20 	B	OWNER'S MANUAL H85G5PD	0VMN02706

ELECTRICAL PARTS LIST

PRODUCT SAFETY NOTE: Products marked with a  have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

NOTES:

- Parts that not assigned part numbers (-----) are not available.
- Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%
 G.....±2% J.....±5% K.....±10%
 M.....±20% N.....±30% Z.....+80/-20%

Comparison chart of Models and Marks

Mark	Model No.
A	VIP-5000HC MK12
B	VIP-5000LR MK12

MCV CBA

Ref. No.	Mark	Description	Part No.
	A	MCV CBA	0VSA11626
	B	MCV CBA Consists of the following	0VSA11629
		Main CBA	-----
		Function CBA	-----

MAIN CBA

Ref. No.	Mark	Description	Part No.
		Main CBA Consists of the following	-----
CAPACITORS			
C001 		METALLIZED FILM CAP. 0.047µF/250V K or	CT2E473DC011
		METALLIZED FILM CAP. 0.047µF/250V M	CT2E473MS037
C003 		SAFETY CAP. 2200pF/250V or	CCN2EMP0E222
		SAFETY CAP. 2200pF/400V M	CCN2HMP0E222
C004		ELECTROLYTIC CAP. 100µF/400V M or	CA2H101NC084
		ELECTROLYTIC CAP. 100µF/400V M or	CE2HMZATL101
		ELECTROLYTIC CAP. 100µF/400V M	CE2HMZPDL101
C005		CERAMIC CAP. B K 0.01µF/500V	CCD2JKP0B103
C006		CERAMIC CAP. SL J 120pF/1kV or	CCD3AJPSL121
		CERAMIC CAP. SL K 120pF/1kV	CCD3AKPSL121
C007		SEMICONDUCTOR CAP. SR K 0.012µF/25V or	12Y2123S
		SEMICONDUCTOR CAP. SR K 0.012µF/25V	CDA1EKS0X123
C008		CERAMIC CAP.(AX) X K 5600pF/16V	CCA1CKT0X562
C010		FILM CAP.(P) 0.022µF/50V J or	CA1J223MS029
		FILM CAP.(P) 0.022µF/50V J	CMA1JJS00223
C011		ELECTROLYTIC CAP. 22µF/16V M or	CE1CMASDL220
		ELECTROLYTIC CAP. 22µF/16V M	CE1CMASTL220

Ref. No.	Mark	Description	Part No.
C012		ELECTROLYTIC CAP. 10µF/50V M H7	CE1JMASSL100
C015		ELECTROLYTIC CAP. 47µF/25V M H7	CE1EMASSL470
C016		FILM CAP.(P) 0.0012µF/50V J or	CA1J122MS029
		FILM CAP.(P) 0.0012µF/50V J	CMA1JJS00122
C017		ELECTROLYTIC CAP. 470µF/16V M or	CE1CMASDL471
		ELECTROLYTIC CAP. 470µF/16V M	CE1CMASTL471
C018		ELECTROLYTIC CAP. 100µF/16V M or	CE1CMASDL101
		ELECTROLYTIC CAP. 100µF/16V M	CE1CMASTL101
C020		ELECTROLYTIC CAP. 1000µF/10V M or	CE1AMZPDL102
		ELECTROLYTIC CAP. 1000µF/10V M	CE1AMZPTL102
C021		ELECTROLYTIC CAP. 470µF/10V M or	CE1AMASDL471
		ELECTROLYTIC CAP. 470µF/10V M	CE1AMASTL471
C025		CERAMIC CAP.(AX) X K 5600pF/16V	CCA1CKT0X562
C056		ELECTROLYTIC CAP. 10µF/16V M or	CE1CMASDL100
		ELECTROLYTIC CAP. 10µF/16V M	CE1CMASTL100
C070		CHIP CERAMIC CAP. B K 0.01µF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01µF/50V	CHD1JKB0B103
C253		ELECTROLYTIC CAP. 10µF/16V M H7	CE1CMASSL100
C255		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMASSL010
C256		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1µF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1µF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1µF/50V	CHD1JZBFZ104
C301		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMASSL010
C302		CHIP CERAMIC CAP. B K 0.047µF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047µF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047µF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047µF/50V	CHD1JKB0B473
C303		ELECTROLYTIC CAP. 1µF/50V M H7	CE1JMASSL010
C304		ELECTROLYTIC CAP. 100µF/6.3V M H7	CE0KMASSL101
C305		CHIP CERAMIC CAP. B K 0.047µF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047µF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047µF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047µF/50V	CHD1JKB0B473
C306		CHIP CERAMIC CAP. B K 0.01µF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01µF/50V	CHD1JKB0B103
C307		CHIP CERAMIC CAP. CG J 27pF/50V or	CHD1JJ3CG270
		CHIP CERAMIC CAP. CH J 27pF/50V or	CHD1JJ3CH270
		CHIP CERAMIC CAP. CG J 27pF/50V or	CHD1JJBCG270
		CHIP CERAMIC CAP. CH J 27pF/50V	CHD1JJBCH270
C308		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJ3CG220
		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJBCG220
		CHIP CERAMIC CAP. CH J 22pF/50V	CHD1JJBCH220
C310	B	CHIP CERAMIC CAP. CG J 390pF/50V or	CHD1JJ3CG391
	B	CHIP CERAMIC CAP. CH J 390pF/50V or	CHD1JJ3CH391
	B	CHIP CERAMIC CAP. CG J 390pF/50V or	CHD1JJBCG391
	B	CHIP CERAMIC CAP. CH J 390pF/50V	CHD1JJBCH391
C311		ELECTROLYTIC CAP. 3.3µF/50V M H7	CE1JMASSL3R3
C312		CHIP CERAMIC CAP. CG J 47pF/50V or	CHD1JJ3CG470
		CHIP CERAMIC CAP. CH J 47pF/50V or	CHD1JJ3CH470
		CHIP CERAMIC CAP. CG J 47pF/50V or	CHD1JJBCG470
		CHIP CERAMIC CAP. CH J 47pF/50V	CHD1JJBCH470
C313		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJ3CG220
		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JBCG220
		CHIP CERAMIC CAP. CH J 22pF/50V	CHD1JJBCH220
C314		CHIP CERAMIC CAP. CG J 180pF/50V or	CHD1JJ3CG181
		CHIP CERAMIC CAP. CH J 180pF/50V or	CHD1JJ3CH181
		CHIP CERAMIC CAP. CG J 180pF/50V or	CHD1JJBCH181
		CHIP CERAMIC CAP. CH J 180pF/50V	CHD1JJBCH181
C315		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C317		ELECTROLYTIC CAP. 470μF/6.3V M or	CE0KMASSL471
		ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMASTL471
C318		ELECTROLYTIC CAP. 2.2μF/50V M H7	CE1JMASSL2R2
C319	B	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMASSL220
C320		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C321		ELECTROLYTIC CAP. 0.47μF/50V M H7	CE1JMASSL47
C324		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C326	B	CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
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	B	CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
	B	CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C327		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C328		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C330		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C331		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL010
C332		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C333		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL010
C334		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C335		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C336		CHIP CERAMIC CAP. CG J 470pF/50V or	CHD1JJ3CG471
		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V or	CHD1JJBCH471
C337		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C338		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C339		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C340		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C341		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C342		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C344		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL010
C345		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL010
C346		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223

Ref. No.	Mark	Description	Part No.
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C348		ELECTROLYTIC CAP. 1μF/50V M H7	CE1JMASSL010
C349		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C351		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C352		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C355		ELECTROLYTIC CAP. 100μF/16V M or	CE1CMASSL101
		ELECTROLYTIC CAP. 100μF/16V M	CE1CMASTL101
C358		CHIP CERAMIC CAP. CG J 470pF/50V or	CHD1JJ3CG471
		CHIP CERAMIC CAP. CH J 470pF/50V or	CHD1JJ3CH471
		CHIP CERAMIC CAP. CG J 470pF/50V or	CHD1JJBCH471
		CHIP CERAMIC CAP. CH J 470pF/50V	CHD1JJBCH471
C360		CHIP CERAMIC CAP. CG J 68pF/50V or	CHD1JJ3CG680
		CHIP CERAMIC CAP. CH J 68pF/50V or	CHD1JJ3CH680
		CHIP CERAMIC CAP. CG J 68pF/50V or	CHD1JJBCH680
		CHIP CERAMIC CAP. CH J 68pF/50V	CHD1JJBCH680
C362		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C401		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMASSL47
C403	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C404		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C405		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C406	B	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C407	B	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C409	B	CERAMIC CAP. B K 470pF/100V or	CCD2AKPOB471
	B	CERAMIC CAP. B K 470pF/500V	CCD2JKS0B471
C410	A	PCB JUMPER D0.6-P5.0	JW5.0T
C410	B	FILM CAP.(P) 0.018μF/50V J or	CA1J183MS029
	B	FILM CAP.(P) 0.018μF/100V J	CMA2AJS00183
C411		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C412		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C413		CERAMIC CAP.(AX) X K 1200pF/16V	CCA1CKT0X122
C414		CERAMIC CAP.(AX) B J 820pF/50V or	CCA1JKT0B821
		CERAMIC CAP.(AX) B K 820pF/50V	CCA1JKT0B821
C415		ELECTROLYTIC CAP. 4.7μF/25V M H7	CE1EMASSL47
C416	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
	B	CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
	B	CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104

Ref. No.	Mark	Description	Part No.
C420	B	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMASSL220
C421		ELECTROLYTIC CAP. 33μF/6.3V M H7	CE0KMASSL330
C423		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C424		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C501		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C503		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C504		ELECTROLYTIC CAP. 100μF/6.3V M H7	CE0KMASSL101
C505		CHIP CERAMIC CAP. CG D 10pF/50V or	CHD1JD3CG100
		CHIP CERAMIC CAP. CH D 10pF/50V or	CHD1JD3CH100
		CHIP CERAMIC CAP. CG D 10pF/50V or	CHD1JDBC100
		CHIP CERAMIC CAP. CH D 10pF/50V	CHD1JDBCH100
C506		CHIP CERAMIC CAP. CG D 10pF/50V or	CHD1JD3CG100
		CHIP CERAMIC CAP. CH D 10pF/50V or	CHD1JD3CH100
		CHIP CERAMIC CAP. CG D 10pF/50V or	CHD1JDBC100
		CHIP CERAMIC CAP. CH D 10pF/50V	CHD1JDBCH100
C507		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
C514		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C515		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C516		CHIP CERAMIC CAP. CG J 100pF/50V or	CHD1JJ3CG101
		CHIP CERAMIC CAP. CH J 100pF/50V or	CHD1JJ3CH101
		CHIP CERAMIC CAP. CG J 100pF/50V or	CHD1JJB0CG101
		CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJB0CH101
C518		CHIP CERAMIC CAP. B K 2200pF/50V or	CHD1JK30B222
		CHIP CERAMIC CAP. B K 2200pF/50V	CHD1JKB0B222
C519		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C520		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C522		ELECTROLYTIC CAP. 220μF/6.3V M or	CE0KMASDL221
		ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASTL221
C526		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C527	A	PCB JUMPER D0.6-P5.0	JW5.0T
C551		CHIP CERAMIC CAP. CG J 100pF/50V or	CHD1JJ3CG101
		CHIP CERAMIC CAP. CH J 100pF/50V or	CHD1JJ3CH101
		CHIP CERAMIC CAP. CG J 100pF/50V or	CHD1JJB0CG101
		CHIP CERAMIC CAP. CH J 100pF/50V	CHD1JJB0CH101
C552		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470

Ref. No.	Mark	Description	Part No.
C553		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C554		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C555		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C557		CHIP CERAMIC CAP. CG J 330pF/50V or	CHD1JJ3CG331
		CHIP CERAMIC CAP. CH J 330pF/50V or	CHD1JJ3CH331
		CHIP CERAMIC CAP. CG J 330pF/50V or	CHD1JJB0CG331
		CHIP CERAMIC CAP. CH J 330pF/50V	CHD1JJB0CH331
C558		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EK30B223
		CHIP CERAMIC CAP. B K 0.022μF/25V or	CHD1EKB0B223
		CHIP CERAMIC CAP. B K 0.022μF/50V or	CHD1JK30B223
		CHIP CERAMIC CAP. B K 0.022μF/50V	CHD1JKB0B223
C559		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EK30B473
		CHIP CERAMIC CAP. B K 0.047μF/25V or	CHD1EKB0B473
		CHIP CERAMIC CAP. B K 0.047μF/50V or	CHD1JK30B473
		CHIP CERAMIC CAP. B K 0.047μF/50V	CHD1JKB0B473
C581		ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMASSL470
C583		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C584		ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMASSL470
C585		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C586		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C587		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C588		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C589		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C590		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZ30F104
		CHIP CERAMIC CAP. F Z 0.1μF/25V or	CHD1EZB0F104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZ30F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V or	CHD1JZ3FZ104
		CHIP CERAMIC CAP. F Z 0.1μF/50V or	CHD1JZB0F104
		CHIP CERAMIC CAP. FZ Z 0.1μF/50V	CHD1JZBFZ104
C591		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C602		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C603		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C604		CHIP CERAMIC CAP. B K 0.01μF/50V or	CHD1JK30B103
		CHIP CERAMIC CAP. B K 0.01μF/50V	CHD1JKB0B103
C701		CERAMIC CAP.(AX) F Z 0.047μF/16V	CCA1CZTFZ473
C703		ELECTROLYTIC CAP. 10μF/16V M H7	CE1CMASSL100
C704		CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZTFZ104
C710		ELECTROLYTIC CAP. 100μF/6.3V M or	CE0KMASDL101
		ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASTL101

Ref. No.	Mark	Description	Part No.
C711		CERAMIC CAP.(AX) B J 1000pF/50V or	CCA1J1T0B102
		CERAMIC CAP.(AX) B K 1000pF/50V	CCA1JKT0B102
C751		CHIP CERAMIC CAP. B K 4700pF/50V or	CHD1JK30B472
		CHIP CERAMIC CAP. B K 4700pF/50V	CHD1JKB0B472
C852		CHIP CERAMIC CAP. B K 1000pF/50V or	CHD1JK30B102
		CHIP CERAMIC CAP. B K 1000pF/50V	CHD1JKB0B102
C853		CHIP CERAMIC CAP. CG J 180pF/50V or	CHD1JJ3CG181
		CHIP CERAMIC CAP. CH J 180pF/50V or	CHD1JJ3CH181
		CHIP CERAMIC CAP. CG J 180pF/50V or	CHD1JJB0G181
		CHIP CERAMIC CAP. CH J 180pF/50V	CHD1JJBCH181
C855		ELECTROLYTIC CAP. 0.1μF/50V M H7	CE1JMASSL0R1
C857		ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C858		CHIP CERAMIC CAP. CG J 18pF/50V or	CHD1JJ3CG180
		CHIP CERAMIC CAP. CH J 18pF/50V or	CHD1JJ3CH180
		CHIP CERAMIC CAP. CG J 18pF/50V or	CHD1JJB0G180
		CHIP CERAMIC CAP. CH J 18pF/50V	CHD1JJBCH180
C859		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJ3CG220
		CHIP CERAMIC CAP. CH J 22pF/50V or	CHD1JJ3CH220
		CHIP CERAMIC CAP. CG J 22pF/50V or	CHD1JJB0G220
		CHIP CERAMIC CAP. CH J 22pF/50V	CHD1JJBCH220
CONNECTORS			
CN251		FE CONNECTOR, TOP 4P 04FE-BT-VK-N	JCFEJ04JG001
CN501	B	CABLE CONNECTOR, 2P TMC-E02X-A1	JCTMC02TG001
CN502		FE CONNECTOR, TOP 5P 05FE-BT-VK-N	JCFEJ05JG001
CN503		CONNECTOR, 8P TMC-J08P-A2	J3TMA08TG004
CN504		FE CONNECTOR, TOP 9P 09FE-BT-VK-N	JCFEJ09JG001
CN505		CONNECTOR BASE 4P TUC-P04P-B1	J3TUA04TG001
DIODES			
D001		RECTIFIER DIODE 1N4005	NDQZ001N4005
D002		RECTIFIER DIODE 1N4005	NDQZ001N4005
D003		RECTIFIER DIODE 1N4005	NDQZ001N4005
D004		RECTIFIER DIODE 1N4005	NDQZ001N4005
D005		RECTIFIER DIODE BA159 or	NDQZ000BA159
		RECTIFIER DIODE ERA22-10	QDPZ0ERA2210
D006		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D007		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D008		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D009		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D010		ZENER DIODE DZ-33BSDT265 or	NDTD00DZ33BS
		ZENER DIODE MTZJT-7733D	QDTD00MTZJ33
D011		RECTIFIER DIODE BA157 or	NDQZ000BA157
		FAST RECOVERY DIODE ERA18-04	QDPZ0ERA1804
D013		RECTIFIER DIODE FR202	NDQZ000FR202
D014		SCHOTTKY BARRIER DIODE ERB81-004 or	AERB81004***
		SCHOTTKY BARRIER DIODE SB140	NDQZ000SB140
D015		ZENER DIODE DZ-9.1BSCT265 or	NDTC0DZ9R1BS
		ZENER DIODE MTZJT-779.1C	QDTC0MTZJ9R1
D018		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D019		ZENER DIODE DZ-5.6BSBT265 or	NDTB0DZ5R6BS
		ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D021		PCB JUMPER D0.6-P5.0	JW5.0T
D051		RECTIFIER DIODE 1N4005	NDQZ001N4005
D053		RECTIFIER DIODE 1N4005	NDQZ001N4005
D056		ZENER DIODE DZ-5.6BSCT265 or	NDTC0DZ5R6BS
		ZENER DIODE MTZJT-775.6C	QDTC0MTZJ5R6

Ref. No.	Mark	Description	Part No.
D057		ZENER DIODE DZ-9.1BSCT265 or	NDTC0DZ9R1BS
		ZENER DIODE MTZJT-779.1C	QDTC0MTZJ9R1
D301	B	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	B	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D501		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D551		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D552		SWITCHING DIODE 1N4148M or	NDTZ01N4148M
		SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D553	B	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	B	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D554	B	SWITCHING DIODE 1N4148M or	NDTZ01N4148M
	B	SWITCHING DIODE 1SS133(T-77)	QDTZ001SS133
D555		LED SIR-563ST3F P or	QPQPS1R563ST
		LED SIR-563ST3F Q	QPQPS1R563ST
D583		PCB JUMPER D0.6-P10.0	JW10.0T
D595		LED(RED) 204HD/E or	NPQZ00204HDE
		LED(RED) LT6311G-41 or	NPQZ0LT6311G
		LED(RED) LTL-4211N	NPQZLTL4211N
D597	B	LED(RED) 204HD/E or	NPQZ00204HDE
	B	LED(RED) LT6311G-41 or	NPQZ0LT6311G
	B	LED(RED) LTL-4211N	NPQZLTL4211N
D598		LED(RED) 204HD/E or	NPQZ00204HDE
		LED(RED) LT6311G-41 or	NPQZ0LT6311G
		LED(RED) LTL-4211N	NPQZLTL4211N
D599		LED(RED) 204HD/E or	NPQZ00204HDE
		LED(RED) LT6311G-41 or	NPQZ0LT6311G
		LED(RED) LTL-4211N	NPQZLTL4211N
D701		ZENER DIODE DZ-33BSAT265 or	NDTA00DZ33BS
		ZENER DIODE MTZJT-7733A	QDTA00MTZJ33
ICS			
IC001	△	PHOTOCOUPLER LTV-817B-F or	NPEB0LTV817F
△		PHOTOCOUPLER LTV-817C-F	NPEC0LTV817F
IC301	A	IC:Y/C/A LA71586M	QSZBA0SSY016
IC301	B	IC:Y/C/A LA71584M	QSZBA0SSY015
IC501		MICROCONTROLLER 16BIT M37765MAA1L2GP	QSZAC0RMB057
IC503		IC:OP-AMP. LM324D	NSZBA0SSS086
IC505		IC:MEMORY AT24C01A-10SC or	NSMMA0SAZ011
		IC(EEPROM) M24C01-MN6 or	NSMMA0SSS027
		IC:MEMORY BR24C01AF-W	QSMB00SRM002
IC506		IC BD6655FP	QSZAA0SRM001
COILS			
L003	△	LINE FILTER 33MH 110-TXH-030X or	LLBG00ZF8002
△		LINE FILTER 33MH LF002 or	LLBG00ZLH002
△		LINE FILTER 33MH SA-01021 or	LLBG00ZSA004
△		LINE FILTER 30MH TLF12UA303W0R4	LLBG00ZTU010
L007		CHOKE COIL 47μH-K	LLBD00PKV007
L009		CHOKE COIL 47μH-K	LLBD00PKV007
L010		CHOKE COIL 47μH-K	LLBD00PKV007
L251		INDUCTOR 5.6μH-K-26T	LLAXKATTU5R6
L302		INDUCTOR 47μH-K-26T	LLAXKATTU470
L303		INDUCTOR 39μH-K-26T	LLAXKATTU390
L304		INDUCTOR 100μH-K-26T	LLAXKATTU101
L305		INDUCTOR 18μH-K-26T	LLAXKATTU180
L306		INDUCTOR 47μH-K-5FT	LLARKBSTU470
L307		INDUCTOR 22μH-K-5FT	LLARKBSTU220
L308		INDUCTOR 22μH-K-26T	LLAXKATTU220
L401	B	INDUCTOR 47μH-K-5FT	LLARKBSTU470
L501		INDUCTOR 100μH-K-26T	LLAXKATTU101

Ref. No.	Mark	Description	Part No.
L502		INDUCTOR 100 μ H-K-26T	LLAXKATTU101
L581		CHOKE COIL 47 μ H-K	LLBD00PKV007
L701		INDUCTOR 10 μ H-K-26T	LLAXKATTU100
L702		PCB JUMPER D0.6-P5.0	JW5.0T
L704		CHOKE COIL 47 μ H-K	LLBD00PKV007
L851		INDUCTOR 1.8 μ H-K-26T	LLAXKATTU1R8
L852		INDUCTOR 100 μ H-K-26T	LLAXKATTU101
TRANSISTORS			
Q001		FET FS2KM-18A	QFZZFS2KM18A
Q002		TRANSISTOR KTC3199(BL) or TRANSISTOR 2SC1815-BL(TPE2) or TRANSISTOR 2SC2785(K)	NQS50KTC3199 QQS202SC1815 QQSK02SC2785
Q003		TRANSISTOR KTC3199(BL) or TRANSISTOR 2SC1815-BL(TPE2) or TRANSISTOR 2SC2785(K)	NQS50KTC3199 QQS202SC1815 QQSK02SC2785
Q004		TRANSISTOR KTC3199(GR) or TRANSISTOR KTC3199(Y) or TRANSISTOR 2SC1815-GR(TPE2) or TRANSISTOR 2SC2785(F) or TRANSISTOR 2SC2785(H) or TRANSISTOR 2SC2785(J) or TRANSISTOR 2SC1815-Y(TPE2)	NQS10KTC3199 NQSY0KTC3199 QQS102SC1815 QQSF02SC2785 QQSH02SC2785 QQSJ02SC2785 QQSY02SC1815
Q054	B	TRANSISTOR KTC3203(Y) or TRANSISTOR 2SC2120-Y(TPE2)	NQSY0KTC3203 QQSY02SC2120
Q056		TRANSISTOR KTA1267(GR) or TRANSISTOR KTA1267(Y) or TRANSISTOR 2SA1175(F) or TRANSISTOR 2SA1175(H) or TRANSISTOR 2SA1175(J)	NQS10KTA1267 NQSY0KTA1267 QQSF02SA1175 QQSH02SA1175 QQSJ02SA1175
Q061		TRANSISTOR KTA1266(GR) or TRANSISTOR 2SA1015-GR(TPE2)	NQS40KTA1266 QQS102SA1015
Q302		TRANSISTOR KTC3193(Y) or TRANSISTOR 2SC2058(Q)	NQSY0KTC3193 QQSQ02SC2058
Q303		TRANSISTOR KTC3193(Y) or TRANSISTOR 2SC2058(Q)	NQSY0KTC3193 QQSQ02SC2058
Q304		TRANSISTOR KTC3193(Y) or TRANSISTOR 2SC2058(Q)	NQSY0KTC3193 QQSQ02SC2058
Q305		TRANSISTOR KTA1266(GR) or TRANSISTOR 2SA1015-GR(TPE2)	NQS40KTA1266 QQS102SA1015
Q307		TRANSISTOR KTA1266(GR) or TRANSISTOR 2SA1015-GR(TPE2)	NQS40KTA1266 QQS102SA1015
Q308		TRANSISTOR KTC3193(Y) or TRANSISTOR 2SC2058(Q)	NQSY0KTC3193 QQSQ02SC2058
Q309		RES. BUILT-IN TRANSISTOR KRC103M or RES. BUILT-IN TRANSISTOR BA1F4M-T or RES. BUILT-IN TRANSISTOR DTC124ESA	NQSZ0KRC103M QQSZ00BA1F4M QQSZDTC124ES
Q310		TRANSISTOR KTC3193(Y) or TRANSISTOR 2SC2058(Q)	NQSY0KTC3193 QQSQ02SC2058
Q311		TRANSISTOR KTA1266(GR) or TRANSISTOR 2SA1015-GR(TPE2)	NQS40KTA1266 QQS102SA1015
Q401	B	TRANSISTOR KTA1266(GR) or TRANSISTOR 2SA1015-GR(TPE2)	NQS40KTA1266 QQS102SA1015
Q402	B	TRANSISTOR KTC3203(Y) or TRANSISTOR 2SC2120-Y(TPE2)	NQSY0KTC3203 QQSY02SC2120
Q403	B	RES. BUILT-IN TRANSISTOR KRA103M or RES. BUILT-IN TRANSISTOR BN1F4M-T or RES. BUILT-IN TRANSISTOR DTA124ESA	NQSZ0KRA103M QQSZ00BN1F4M QQSZDTA124ES

Ref. No.	Mark	Description	Part No.
Q404	B	TRANSISTOR 2SC536NF-NPA-AT or TRANSISTOR 2SC536NG-NPA-AT or TRANSISTOR 2SC3331(T) or TRANSISTOR 2SC3331(U)	QQSFC536NNPA QQSGC536NNPA QSC3331TNPAA QSC3331UNPAA
Q405	B	TRANSISTOR 2SC536NF-NPA-AT or TRANSISTOR 2SC536NG-NPA-AT or TRANSISTOR 2SC3331(T) or TRANSISTOR 2SC3331(U)	QQSFC536NNPA QQSGC536NNPA QSC3331TNPAA QSC3331UNPAA
Q503		PHOTO TRANSISTOR ST-304L-A or PHOTO TRANSISTOR ST-304L-B or PHOTO TRANSISTOR ST-304L-C or PHOTO TRANSISTOR ST-304L-D	QPZA00ST304L QPZB00ST304L QPZC00ST304L QPZD00ST304L
Q504		PHOTO TRANSISTOR ST-304L-A or PHOTO TRANSISTOR ST-304L-B or PHOTO TRANSISTOR ST-304L-C or PHOTO TRANSISTOR ST-304L-D	QPZA00ST304L QPZB00ST304L QPZC00ST304L QPZD00ST304L
Q506		PHOTO TRANSISTOR PT204-6B-12	NPWZT2046B12
RESISTORS			
R002		METAL OXIDE FILM RES. 1W J 150k Ω or METAL OXIDE FILM RES. 1W J 150k Ω or METAL OXIDE FILM RES. 1W J 150k Ω	RN01154KE009 RN01154ZU001 RN01154ZU002
R003		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R004		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R005		CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R006		METAL OXIDE FILM RES. 1W J 1.8 Ω or METAL OXIDE FILM RES. 1W J 1.8 Ω	RN011R8KE009 RN011R8ZU001
R007		CHIP RES.(1608) 1/10W J 22k Ω or CHIP RES.(1608) 1/10W J 22k Ω or CHIP RES.(1608) 1/16W J 22k Ω	RRXAJB5Z0223 RRXAJR5Z0223 RRXGJR5Z0223
R008		CHIP RES.(1608) 1/10W J 220k Ω or CHIP RES.(1608) 1/10W J 220k Ω or CHIP RES.(1608) 1/16W J 220k Ω	RRXAJB5Z0224 RRXAJR5Z0224 RRXGJR5Z0224
R009		CARBON RES. 1/4W J 1.5k Ω or CARBON RES. 1/6W J 1.5k Ω	RCX4JATZ0152 RCX6JATZ0152
R010		METAL OXIDE FILM RES. 2W J 150k Ω or METAL OXIDE FILM RES. 2W J 150k Ω	RN02154KE010 RN02154ZU001
R013		CARBON RES. 1/4W J 470k Ω or CARBON RES. 1/6W J 470k Ω	RCX4JATZ0474 RCX6JATZ0474
R014		CARBON RES. 1/4W J 47k Ω or CARBON RES. 1/6W J 47k Ω	RCX4JATZ0473 RCX6JATZ0473
R015		CHIP RES.(1608) 1/10W J 10k Ω or CHIP RES.(1608) 1/10W J 10k Ω or CHIP RES.(1608) 1/16W J 10k Ω	RRXAJB5Z0103 RRXAJR5Z0103 RRXGJR5Z0103
R016		CHIP RES.(1608) 1/10W J 100k Ω or CHIP RES.(1608) 1/10W J 100k Ω or CHIP RES.(1608) 1/16W J 100k Ω	RRXAJB5Z0104 RRXAJR5Z0104 RRXGJR5Z0104
R017		CHIP RES.(1608) 1/10W J 220k Ω or CHIP RES.(1608) 1/10W J 220k Ω or CHIP RES.(1608) 1/16W J 220k Ω	RRXAJB5Z0224 RRXAJR5Z0224 RRXGJR5Z0224
R021		CHIP RES.(1608) 1/10W J 22k Ω or CHIP RES.(1608) 1/10W J 22k Ω or CHIP RES.(1608) 1/16W J 22k Ω	RRXAJB5Z0223 RRXAJR5Z0223 RRXGJR5Z0223
R022		CHIP RES.(1608) 1/10W J 390 Ω or CHIP RES.(1608) 1/10W J 390 Ω or CHIP RES.(1608) 1/16W J 390 Ω	RRXAJB5Z0391 RRXAJR5Z0391 RRXGJR5Z0391
R023		CHIP RES.(1608) 1/10W J 2.2k Ω or CHIP RES.(1608) 1/10W J 2.2k Ω or CHIP RES.(1608) 1/16W J 2.2k Ω	RRXAJB5Z0222 RRXAJR5Z0222 RRXGJR5Z0222
R024		CHIP RES.(1608) 1/10W J 1k Ω or CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102 RRXAJR5Z0102

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R025		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/16W J 390 Ω	RRXGJR5Z0391
R026		CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R027		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R028		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R030		CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R052	B	CARBON RES. 1/4W J 470 Ω or	RCX4JATZ0471
	B	CARBON RES. 1/6W J 470 Ω	RCX6JATZ0471
R060		CARBON RES. 1/4W J 22k Ω or	RCX4JATZ0223
		CARBON RES. 1/6W J 22k Ω	RCX6JATZ0223
R061		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R072		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/16W J 1.5k Ω	RRXGJR5Z0152
R073		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/16W J 4.7k Ω	RRXGJR5Z0472
R074		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R083		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJR5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJR5Z0183
		CHIP RES.(1608) 1/16W J 18k Ω	RRXGJR5Z0183
R253		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJR5Z0123
		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJR5Z0123
		CHIP RES.(1608) 1/16W J 12k Ω	RRXGJR5Z0123
R257		CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
		CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
		CHIP RES.(1608) 1/16W J 2.7k Ω	RRXGJR5Z0272
R303		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R304		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJR5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJR5Z0183
		CHIP RES.(1608) 1/16W J 18k Ω	RRXGJR5Z0183
R305		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJR5Z0223
		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJR5Z0223
		CHIP RES.(1608) 1/16W J 22k Ω	RRXGJR5Z0223
R306		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R307		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/16W J 820 Ω	RRXGJR5Z0821
R308		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R309		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/16W J 820 Ω	RRXGJR5Z0821
R310		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R311		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/16W J 390 Ω	RRXGJR5Z0391
R312		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/16W J 390 Ω	RRXGJR5Z0391

Ref. No.	Mark	Description	Part No.
R313	B	CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
	B	CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
	B	CHIP RES.(1608) 1/16W J 2.7k Ω	RRXGJR5Z0272
R314	B	CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
	B	CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
	B	CHIP RES.(1608) 1/16W J 820 Ω	RRXGJR5Z0821
R315		CHIP RES.(1608) 1/10W J 560 Ω or	RRXAJR5Z0561
		CHIP RES.(1608) 1/10W J 560 Ω or	RRXAJR5Z0561
		CHIP RES.(1608) 1/16W J 560 Ω	RRXGJR5Z0561
R316		CHIP RES.(1608) 1/10W J 100 Ω or	RRXAJR5Z0101
		CHIP RES.(1608) 1/10W J 100 Ω or	RRXAJR5Z0101
		CHIP RES.(1608) 1/16W J 100 Ω	RRXGJR5Z0101
R317		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/16W J 1.5k Ω	RRXGJR5Z0152
R318		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/16W J 4.7k Ω	RRXGJR5Z0472
R319		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/10W J 820 Ω or	RRXAJR5Z0821
		CHIP RES.(1608) 1/16W J 820 Ω	RRXGJR5Z0821
R320		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJR5Z0104
		CHIP RES.(1608) 1/10W J 100k Ω or	RRXAJR5Z0104
		CHIP RES.(1608) 1/16W J 100k Ω	RRXGJR5Z0104
R323		CHIP RES.(1608) 1/10W J 39k Ω or	RRXAJR5Z0393
		CHIP RES.(1608) 1/10W J 39k Ω or	RRXAJR5Z0393
		CHIP RES.(1608) 1/16W J 39k Ω	RRXGJR5Z0393
R324		CHIP RES.(1608) 1/10W J 560k Ω or	RRXAJR5Z0564
		CHIP RES.(1608) 1/10W J 560k Ω or	RRXAJR5Z0564
		CHIP RES.(1608) 1/16W J 560k Ω	RRXGJR5Z0564
R325		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R327		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/16W J 4.7k Ω	RRXGJR5Z0472
R328		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R329		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJR5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJR5Z0822
		CHIP RES.(1608) 1/16W J 8.2k Ω	RRXGJR5Z0822
R330		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/16W J 390 Ω	RRXGJR5Z0391
R332	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	A	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	A	CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R333	B	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	B	CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
	B	CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R334		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJR5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJR5Z0182
		CHIP RES.(1608) 1/16W J 1.8k Ω	RRXGJR5Z0182
R335		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/16W J 1.2k Ω	RRXGJR5Z0122
R336		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJR5Z0822
		CHIP RES.(1608) 1/10W J 8.2k Ω or	RRXAJR5Z0822
		CHIP RES.(1608) 1/16W J 8.2k Ω	RRXGJR5Z0822
R340		CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJR5Z0682
		CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJR5Z0682
		CHIP RES.(1608) 1/16W J 6.8k Ω	RRXGJR5Z0682

Ref. No.	Mark	Description	Part No.
R344		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJB5Z0221
		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJR5Z0221
		CHIP RES.(1608) 1/16W J 220 Ω	RRXGJR5Z0221
R345		CHIP RES.(1608) 1/10W J 33k Ω or	RRXAJB5Z0333
		CHIP RES.(1608) 1/10W J 33k Ω or	RRXAJR5Z0333
		CHIP RES.(1608) 1/16W J 33k Ω	RRXGJR5Z0333
R346		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJB5Z0183
		CHIP RES.(1608) 1/10W J 18k Ω or	RRXAJR5Z0183
		CHIP RES.(1608) 1/16W J 18k Ω	RRXGJR5Z0183
R347		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R348		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJB5Z0391
		CHIP RES.(1608) 1/10W J 390 Ω or	RRXAJR5Z0391
		CHIP RES.(1608) 1/16W J 390 Ω	RRXGJR5Z0391
R349		CHIP RES.(1608) 1/10W J 22 Ω or	RRXAJB5Z0220
		CHIP RES.(1608) 1/10W J 22 Ω or	RRXAJR5Z0220
		CHIP RES.(1608) 1/16W J 22 Ω	RRXGJR5Z0220
R350		CHIP RES.(1608) 1/10W J 560 Ω or	RRXAJB5Z0561
		CHIP RES.(1608) 1/10W J 560 Ω or	RRXAJR5Z0561
		CHIP RES.(1608) 1/16W J 560 Ω	RRXGJR5Z0561
R372		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R401		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJR5Z0222
		CHIP RES.(1608) 1/16W J 2.2k Ω	RRXGJR5Z0222
R402	B	CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJB5Z0682
	B	CHIP RES.(1608) 1/10W J 6.8k Ω or	RRXAJR5Z0682
	B	CHIP RES.(1608) 1/16W J 6.8k Ω	RRXGJR5Z0682
R403	B	CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
	B	CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJR5Z0222
	B	CHIP RES.(1608) 1/16W J 2.2k Ω	RRXGJR5Z0222
R404	B	CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJB5Z0272
	B	CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
	B	CHIP RES.(1608) 1/16W J 2.7k Ω	RRXGJR5Z0272
R405	B	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
	B	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
	B	CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R406	B	CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
	B	CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJR5Z0223
	B	CHIP RES.(1608) 1/16W J 22k Ω	RRXGJR5Z0223
R408	B	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJB5Z0473
	B	CHIP RES.(1608) 1/10W J 47k Ω or	RRXAJR5Z0473
	B	CHIP RES.(1608) 1/16W J 47k Ω	RRXGJR5Z0473
R409	B	CARBON RES. 1/4W J 100 Ω or	RCX4JATZ0101
	B	CARBON RES. 1/6W J 100 Ω	RCX6JATZ0101
R410	B	CARBON RES. 1/4W J 820 Ω or	RCX4JATZ0821
	B	CARBON RES. 1/6W J 820 Ω	RCX6JATZ0821
R411	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
	B	CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R412	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
	B	CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R413	A	PCB JUMPER D0.6-P5.0	JW5.0T
R414		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
		CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJR5Z0223
		CHIP RES.(1608) 1/16W J 22k Ω	RRXGJR5Z0223
R415		CHIP RES.(1608) 1/10W J 5.6k Ω or	RRXAJB5Z0562
		CHIP RES.(1608) 1/10W J 5.6k Ω or	RRXAJR5Z0562
		CHIP RES.(1608) 1/16W J 5.6k Ω	RRXGJR5Z0562
R416		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJB5Z0123

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJR5Z0123
		CHIP RES.(1608) 1/16W J 12k Ω	RRXGJR5Z0123
R417		CHIP RES.(1608) 1/10W J 330k Ω or	RRXAJB5Z0334
		CHIP RES.(1608) 1/10W J 330k Ω or	RRXAJR5Z0334
		CHIP RES.(1608) 1/16W J 330k Ω	RRXGJR5Z0334
R418		CHIP RES.(1608) 1/10W J 120 Ω or	RRXAJB5Z0121
		CHIP RES.(1608) 1/10W J 120 Ω or	RRXAJR5Z0121
		CHIP RES.(1608) 1/16W J 120 Ω	RRXGJR5Z0121
R419		CHIP RES.(1608) 1/10W J 27k Ω or	RRXAJB5Z0273
		CHIP RES.(1608) 1/10W J 27k Ω or	RRXAJR5Z0273
		CHIP RES.(1608) 1/16W J 27k Ω	RRXGJR5Z0273
R420	B	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
	B	CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
	B	CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R421	B	CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJB5Z0332
	B	CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJR5Z0332
	B	CHIP RES.(1608) 1/16W J 3.3k Ω	RRXGJR5Z0332
R422	B	CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJB5Z0223
	B	CHIP RES.(1608) 1/10W J 22k Ω or	RRXAJR5Z0223
	B	CHIP RES.(1608) 1/16W J 22k Ω	RRXGJR5Z0223
R425	B	CHIP RES.(1608) 1/10W J 2.2M Ω or	RRXAJB5Z0225
	B	CHIP RES.(1608) 1/10W J 2.2M Ω or	RRXAJR5Z0225
	B	CHIP RES.(1608) 1/16W J 2.2M Ω	RRXGJR5Z0225
R506		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJB5Z0221
		CHIP RES.(1608) 1/10W J 220 Ω or	RRXAJR5Z0221
		CHIP RES.(1608) 1/16W J 220 Ω	RRXGJR5Z0221
R513		CARBON RES. 1/4W J 33k Ω or	RCX4JATZ0333
		CARBON RES. 1/6W J 33k Ω	RCX6JATZ0333
R514		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R515		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R516		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R517		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R518		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R521		CARBON RES. 1/4W G 4.7k Ω	RCX4GATZ0472
R522		CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R523		CARBON RES. 1/4W G 22k Ω	RCX4GATZ0223
R524		CARBON RES. 1/4W G 470 Ω	RCX4GATZ0471
R525		CARBON RES. 1/4W G 10k Ω	RCX4GATZ0103
R526		CARBON RES. 1/4W G 3.6k Ω	RCX4GATZ0362
R527		CHIP RES.(1608) 1/10W J 470k Ω or	RRXAJB5Z0474
		CHIP RES.(1608) 1/10W J 470k Ω or	RRXAJR5Z0474
		CHIP RES.(1608) 1/16W J 470k Ω	RRXGJR5Z0474
R528		CARBON RES. 1/4W J 470k Ω or	RCX4JATZ0474
		CARBON RES. 1/6W J 470k Ω	RCX6JATZ0474
R529		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R530		CARBON RES. 1/4W J 180 Ω	RCX4JATZ0181
R531		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000

Ref. No.	Mark	Description	Part No.
R532	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
	B	CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
	B	CHIP RES.(1608) 1/16W J 4.7k Ω	RRXGJR5Z0472
R533		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R534		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJB5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/16W J 1.5k Ω	RRXGJR5Z0152
R535		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R536		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R538		CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
		CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R539		CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
		CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R543		CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJB5Z0471
		CHIP RES.(1608) 1/10W J 470 Ω or	RRXAJR5Z0471
		CHIP RES.(1608) 1/16W J 470 Ω	RRXGJR5Z0471
R544		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJR5Z0182
		CHIP RES.(1608) 1/16W J 1.8k Ω	RRXGJR5Z0182
R549		CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
		CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R550		CARBON RES. 1/4W J 47k Ω or	RCX4JATZ0473
		CARBON RES. 1/6W J 47k Ω	RCX6JATZ0473
R551		CHIP RES.(1608) 1/10W J 560k Ω or	RRXAJB5Z0564
		CHIP RES.(1608) 1/10W J 560k Ω or	RRXAJR5Z0564
		CHIP RES.(1608) 1/16W J 560k Ω	RRXGJR5Z0564
R552		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/16W J 1.2k Ω	RRXGJR5Z0122
R553		CARBON RES. 1/4W J 4.7k Ω or	RCX4JATZ0472
		CARBON RES. 1/6W J 4.7k Ω	RCX6JATZ0472
R554		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJB5Z0472
		CHIP RES.(1608) 1/10W J 4.7k Ω or	RRXAJR5Z0472
		CHIP RES.(1608) 1/16W J 4.7k Ω	RRXGJR5Z0472
R555		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R556		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R557	B	CHIP RES.(1608) 1/10W J 270 Ω or	RRXAJB5Z0271
	B	CHIP RES.(1608) 1/10W J 270 Ω or	RRXAJR5Z0271
	B	CHIP RES.(1608) 1/16W J 270 Ω	RRXGJR5Z0271
R558		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R559		CHIP RES.(1608) 1/10W J 390k Ω or	RRXAJB5Z0394
		CHIP RES.(1608) 1/10W J 390k Ω or	RRXAJR5Z0394
		CHIP RES.(1608) 1/16W J 390k Ω	RRXGJR5Z0394
R561		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R566		CARBON RES. 1/4W J 10k Ω or	RCX4JATZ0103
		CARBON RES. 1/6W J 10k Ω	RCX6JATZ0103
R567		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000

Ref. No.	Mark	Description	Part No.
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R568		CHIP RES.(1608) 1/10W J 220k Ω or	RRXAJB5Z0224
		CHIP RES.(1608) 1/10W J 220k Ω or	RRXAJR5Z0224
		CHIP RES.(1608) 1/16W J 220k Ω	RRXGJR5Z0224
R571		CARBON RES. 1/4W J 68k Ω or	RCX4JATZ0683
		CARBON RES. 1/6W J 68k Ω	RCX6JATZ0683
R575		CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJB5Z0332
		CHIP RES.(1608) 1/10W J 3.3k Ω or	RRXAJR5Z0332
		CHIP RES.(1608) 1/16W J 3.3k Ω	RRXGJR5Z0332
R576		CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJB5Z0272
		CHIP RES.(1608) 1/10W J 2.7k Ω or	RRXAJR5Z0272
		CHIP RES.(1608) 1/16W J 2.7k Ω	RRXGJR5Z0272
R577		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/16W J 1.2k Ω	RRXGJR5Z0122
R581		CHIP RES.(1608) 1/10W J 68k Ω or	RRXAJB5Z0683
		CHIP RES.(1608) 1/10W J 68k Ω or	RRXAJR5Z0683
		CHIP RES.(1608) 1/16W J 68k Ω	RRXGJR5Z0683
R582		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R583		CARBON RES. 1/4W J 0.47 Ω	RCX4JATZ0R47
R584		CARBON RES. 1/4W J 1.8k Ω or	RCX4JATZ0182
		CARBON RES. 1/6W J 1.8k Ω	RCX6JATZ0182
R585		CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R586		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZB5Z0000
		CHIP RES.(1608) 1/10W 0 Ω or	RRXAZR5Z0000
		CHIP RES.(1608) 1/16W 0 Ω	RRXGZR5Z0000
R587		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/16W J 1.2k Ω	RRXGJR5Z0122
R588		CARBON RES. 1/4W J 1.5k Ω or	RCX4JATZ0152
		CARBON RES. 1/6W J 1.5k Ω	RCX6JATZ0152
R590		CARBON RES. 1/4W J 330 Ω or	RCX4JATZ0331
		CARBON RES. 1/6W J 330 Ω	RCX6JATZ0331
R591		CARBON RES. 1/4W J 910 Ω or	RCX4JATZ0911
		CARBON RES. 1/6W J 910 Ω	RCX6JATZ0911
R592	B	CARBON RES. 1/4W J 330 Ω or	RCX4JATZ0331
	B	CARBON RES. 1/6W J 330 Ω	RCX6JATZ0331
R593		CARBON RES. 1/4W J 330 Ω or	RCX4JATZ0331
		CARBON RES. 1/6W J 330 Ω	RCX6JATZ0331
R595		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R596		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R598		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
		CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
		CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R630	A	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	A	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
	A	CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R631	A	CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
	A	CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJR5Z0182
	A	CHIP RES.(1608) 1/16W J 1.8k Ω	RRXGJR5Z0182
R631	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJB5Z0103
	B	CHIP RES.(1608) 1/10W J 10k Ω or	RRXAJR5Z0103
	B	CHIP RES.(1608) 1/16W J 10k Ω	RRXGJR5Z0103
R703		CARBON RES. 1/4W J 1.8k Ω or	RCX4JATZ0182

Ref. No.	Mark	Description	Part No.
		CARBON RES. 1/6W J 1.8k Ω	RCX6JATZ0182
R751		CHIP RES.(1608) 1/10W J 150 Ω or	RRXAJB5Z0151
		CHIP RES.(1608) 1/10W J 150 Ω or	RRXAJR5Z0151
		CHIP RES.(1608) 1/16W J 150 Ω	RRXGJR5Z0151
R752		CHIP RES.(1608) 1/10W J 150 Ω or	RRXAJB5Z0151
		CHIP RES.(1608) 1/10W J 150 Ω or	RRXAJR5Z0151
		CHIP RES.(1608) 1/16W J 150 Ω	RRXGJR5Z0151
R754		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
		CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJR5Z0750
		CHIP RES.(1608) 1/16W J 75 Ω	RRXGJR5Z0750
R755	B	CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJB5Z0750
	B	CHIP RES.(1608) 1/10W J 75 Ω or	RRXAJR5Z0750
	B	CHIP RES.(1608) 1/16W J 75 Ω	RRXGJR5Z0750
R851		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R852		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJB5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/16W J 1.5k Ω	RRXGJR5Z0152
R854		CHIP RES.(1608) 1/10W J 330 Ω or	RRXAJB5Z0331
		CHIP RES.(1608) 1/10W J 330 Ω or	RRXAJR5Z0331
		CHIP RES.(1608) 1/16W J 330 Ω	RRXGJR5Z0331
R855		CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
SWITCHES			
SW501		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW505		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW506	B	PUSH SWITCH SPPB610301	SSP0102AL001
SW507		ROTARY MODE SWITCH SSS-43MD or	SSR0106KB001
		ROTARY MODE SWITCH R8100212	SSR0106U3001
MISCELLANEOUS			
A4	A	JACK BOARD H85G0PD	0VM304828
A4	B	JACK BOARD H85F1PD	0VM304691
AC001 		AC CORD PE8B2CB1H0A-057	WAE0172LW003
2B1		HOLDER, L.E.D.(U19) H3700UD	0VM303546
2B3		HOLDER, SENSOR(2) H5700UD	0VM304011
2B7		SHIELD, HEAD(TOP) H8700EP	0VM304608
2B8		BUSH, LED(F) H3700UD	0VM409508
2B11		HEATSINK V2600PZ	0VM409007A
2L041		S-TIGHT SCREW 3X8 BIND + CHROME	GBMS3080
F001 		FUSE T1.6AL/250V or	1790994
		FUSE T1.6AL/250V	PAGC20BW3162
FH001		FUSE HOLDER MSF-015	XH01Z00LY001
FH002		FUSE HOLDER MSF-015	XH01Z00LY001
JK751		RCA JACK JPJ8011-01-430 or	JXRL030HD001
		RCA JACK MSP-282V-14	JXRL030LY001
JK752	B	RCA JACK JPJ8011-01-430 or	JXRL030HD001
	B	RCA JACK MSP-282V-14	JXRL030LY001
MD701		RF MODULATOR(PAL-G/K) MDLM3E528A	URFCPLSAL007
RS501		REMOTE RECEIVER PIC-37042LU	USESJR5SKK033
T001 		PULSE TRANS SA-00936B	LTT00ZPSA103
TP301		PCB JUMPER D0.6-P10.0	JW10.0T
TP501		PCB JUMPER D0.6-P6.5	JW6.5T
TP502		PCB JUMPER D0.6-P11.0	JW11.0T
TP506		PCB JUMPER D0.6-P5.0	JW5.0T
TP507		PCB JUMPER D0.6-P6.5	JW6.5T
TP751		PCB JUMPER D0.6-P18.5	JW18.5T

Ref. No.	Mark	Description	Part No.
TP752		PCB JUMPER D0.6-P7.5	JW7.5T
VR501		CARBON P.O.T. 100k Ω B	VRCB104HH014
X301	B	X'TAL 3.579545MHz or	1811389
	B	X'TAL 3.579545MHz(20PPM) or	FXC355LDS001
	B	X'TAL 3.579545MHz(20PPM) or	FXC355LJNY01
	B	X'TAL 3.579545MHz or	FXC355LLN001
	B	X'TAL 3.579545MHz(20PPM)	FXC355LLN003
X302		X'TAL 4.433619MHz or	1811388
		X'TAL 4.433619MHz	FXC445LLN001
X501		X'TAL 17.734475MHz	FXD176LDS002

FUNCTION CBA

Ref. No.	Mark	Description	Part No.
		Function CBA Consists of the following	-----
CONNECTOR			
CN651		CONNECTOR 4P TUC-P04X-B1	JCTUS04TG001
RESISTORS			
R651		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJB5Z0182
		CHIP RES.(1608) 1/10W J 1.8k Ω or	RRXAJR5Z0182
		CHIP RES.(1608) 1/16W J 1.8k Ω	RRXGJR5Z0182
R652		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJB5Z0102
		CHIP RES.(1608) 1/10W J 1k Ω or	RRXAJR5Z0102
		CHIP RES.(1608) 1/16W J 1k Ω	RRXGJR5Z0102
R653		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJB5Z0122
		CHIP RES.(1608) 1/10W J 1.2k Ω or	RRXAJR5Z0122
		CHIP RES.(1608) 1/16W J 1.2k Ω	RRXGJR5Z0122
R654		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJB5Z0152
		CHIP RES.(1608) 1/10W J 1.5k Ω or	RRXAJR5Z0152
		CHIP RES.(1608) 1/16W J 1.5k Ω	RRXGJR5Z0152
R655		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJB5Z0222
		CHIP RES.(1608) 1/10W J 2.2k Ω or	RRXAJR5Z0222
		CHIP RES.(1608) 1/16W J 2.2k Ω	RRXGJR5Z0222
R656		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJB5Z0123
		CHIP RES.(1608) 1/10W J 12k Ω or	RRXAJR5Z0123
		CHIP RES.(1608) 1/16W J 12k Ω	RRXGJR5Z0123
SWITCHES			
SW661		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW662		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW663		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW664		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW667		TACT SWITCH SKQSAF001A or	SST0101AL041
		TACT SWITCH KSM0614B or	SST0101HH013
		TACT SWITCH KSH0614B	SST0101HH024
SW676	B	TACT SWITCH SKQSAF001A or	SST0101AL041
	B	TACT SWITCH KSM0614B or	SST0101HH013
	B	TACT SWITCH KSH0614B	SST0101HH024

DECK PARTS LIST

Comparison chart of Models and Marks

Mark	Model No.
A	VIP-5000HC MK12
B	VIP-5000LR MK12

Ref.No.	Mark	Description	Part No.
B2	A	CYLINDER ASSEMBLY MK10 PAL 2HD 1SP	N1327CYL
B2	B	CYLINDER ASSEMBLY MK10 PAL 2HD 2SP	N1328CYL
B3		LOADING MOTOR ASSEMBLY MK10	0VSA11013
B8		PULLEY ASSEMBLY MK10	0VSA11021
B9		MOVING GUIDE S PREPARATION MK10	0VSA11002
B10		MOVING GUIDE T PREPARATION MK10	0VSA11004
B11		LOADING ARM T ASSEMBLY MK10	0VSA11001
B12		LOADING ARM S ASSEMBLY MK10	0VSA11019
B27		TENSION LEVER SUB ASSEMBLY MK10	0VSA11016
B31	A	AC HEAD ASSEMBLY MK10 VCP	0VSA11315
B31	B	AC HEAD ASSEMBLY MK10	0VSA11014
B35		TAPE GUIDE ASSEMBLY MK10	0VSA11007
B37		CAPSTAN MOTOR 288/CCM002	N9650CML
B52		CAP BELT MK10	0VM411138
B73	B	FE HEAD(MK10) HVFHP0044A or	DHVEC01AL006
	B	FE HEAD(MK9) MH-131SF9 or	DHVEC01Z0002
	B	FE HEAD(MK10) MH-131SF10	DHVEC01Z0004
B74		PRISM MK10	0VM202870
B121		WORM MK10	0VM411094
B122		WORM SHAFT MK10 or	0VM411650
		WORM SHAFT(C) MK10	0VM411651
B126		PULLEY MK10	0VM411093
B133		IDLER ASSEMBLY MK10	0VSA11017
B148		TG CAP MK6	0VM407664C
B300		C DRIVE LEVER R MK10	0VM304409
B303		F DOOR OPENER A MK10	0VM304553
B313		C.DRIVE SPRING MK10	0VM411111
B319		CASSETTE SPRING MK9	0VM410571
B347		GUIDE HOLDER MK10	0VM304407
B354		SLIDER R MK10	0VM100913
B355		SLIDER L MK10	0VM202867
B359		CLEANER LEVER MK10 (See Mechanical Parts List)	
B360		CLEANER ROLLER MK9 (See Mechanical Parts List)	
B361		CL POST MK10 (See Mechanical Parts List)	
B401		VH CONNECTOR 4AJ MK10 JST	0VM304541
B402		VH CONNECTOR 4BJ MK10 JST	0VM411464
B403		ACH CONNECTOR AN(9P) MK9	0VM303991
B404		ACH CONNECTOR 9B MK10	0VM411471
B410		PINCH ARM(A) ASSEMBLY MK10	0VSA10995
B411		PINCH SPRING MK10	0VM411092
B414		M BRAKE S ASSEMBLY MK10	0VSA10999
B416		M BRAKE T ASSEMBLY MK10	0VSA11000
B417		TENSION SPG B MK10	0VM411819
B425		LOCK LEVER SPRING MK10	0VM411110
B426		KICK PULLEY MK10	0VM411095
B472		SLIDER R ASSEMBLY MK10	0VSA11288
B482		CASSETTE PLATE MK10	0VM202869
B483		LOCK LEVER MK10	0VM411109D

Ref.No.	Mark	Description	Part No.
B487		BAND BRAKE MK10	0VM304416B
B488		MODE LEVER MK10	0VM100918H
B491		CAM GEAR(A) MK10	0VM100914
B492		MODE GEAR MK10	0VM304402J
B494		DOOR OPENER B MK10	0VM304398
B499		T LEVER HOLDER MK10	0VM304419
B501		WORM HOLDER MK10	0VM304397
B502		CAM GEAR(B) MK10	0VM304403
B505		P.S.W F 6*2.55*0.5	0VM402629A
B507		REEL WASHER MK9 5*2.1*0.5	0VM410058
B508		S BRAKE SPRING MK10	0VM411121
B510		P.S.W F 6*2.55*0.5	0VM402629A
B512		REEL WASHER MK9 5*2.1*0.5	0VM410058
B513		PSCW(752605) MK10	0VM411516
B514		SCREW RACK MK10	0VM411535
B516		REEL WASHER MK9 5*2.1*0.5	0VM410058
B518		P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B520		T BRAKE SPRING MK10	0VM411123
B521		SOFT SPRING MK10	0VM411122
B522		TG POST ASSEMBLY MK10	0VSA11012
B523		FIRST POST ASSEMBLY MK9	0VSA10062
B524		MOTOR PCB ASSEMBLY(M) MK10	0VSA11194
B525		LDG BELT MK10	0VM411097
B529		CLEANER ASSEMBLY MK10 (See Mechanical Parts List)	
B550		TAPE GUIDE ARM SPRING MK6	0VM407704E
B551		FF ARM MK10	0VM304424
B552		ADJUST SPRING MK10	0VM411697
B555		RACK ASSEMBLY MK10	0VSA11009
B556		STANDARD POST MK9	0VM410055C
B557		MOTOR PULLEY U5	0VM403205A
B558		LOADING MOTOR M31E-1 R14 7215	MMDZB12MM001
B559		CLUTCH ASSEMBLY MK10	0VSA11018
B560		KICK SPRING MK10	0VM411475A
B561		F DOOR SPRING MK10	0VM411430
B562		C DRIVE LEVER L MK10	0VM304408
B563		SLIDER SHAFT MK10	0VM411112
B564		M GEAR MK10	0VM411136
B565		SENSOR GEAR MK10	0VM411134
B566		FF ARM HOLDER MK10	0VM304448
B567		PINCH ARM(B) MK10	0VM304396
B568		BT ARM MK10	0VM304417H
B569		CAM HOLDER MK10	0VM304404G
B570		CAM RACK SPG MK10	0VM411102
B571		P.S.W F 6*2.55*0.5	0VM402629A
B572		P.S.W CUT 1.6X4.0X0.5T	0VM408485A
B573		REEL S MK10	0VM202871
B574		REEL T MK10	0VM202872
B576		SLIDE HOLDER(S) MK10	0VM411728
B577		SLIDE HOLDER(T) MK10	0VM411729
L1051		SCREW, B-TIGHT M2.6X6 PAN HEAD+	GPMB9060
L1053		SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1151		SCREW, SEMS M2.6X4 PAN +	CPM39040
L1191	B	SCREW, S-TIGHT M2.6X8 WASHER HEAD+	GCMS9080
L1321		SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
L1341		SCREW, P-TIGHT M2.6X6 BIND HEAD+	GBMP9060

Ref.No.	Mark	Description	Part No.
L1406		AC HEAD SCREW MK9	0VM410964
L1450		SCREW, SEMS M2.6X5 PAN HEAD+	CPM39050
L1460		SCREW M2.6X6 PAN HEAD +	SPM39060
L1461		SCREW, P-TIGHT M2.6X6 WASHER HEAD+	GCMP9060
L1463		SCREW, S-TIGHT M2.6X4 BIND HEAD+	GBMS9040
L1466		SCREW, S-TIGHT M2.6X6 BIND HEAD+	GBMS9060
L1469		SCREW, S-TIGHT M2.6X6 PAN HEAD +	GPMS9060
L1471		SCREW, S-TIGHT M2.6X6 BIND HEAD+	GBMS9060
L1482		SCREW, B-TIGHT M2.3X4 BIND HEAD+	GBMBY040
L1483		SCREW, P-TIGHT M2.6X8 BIND HEAD+ or	GBMP9080
		SCREW PRISM MK7	0VM409038

VIP-5000HC MK12/VIP-5000LR MK12

H85G0/G5PD