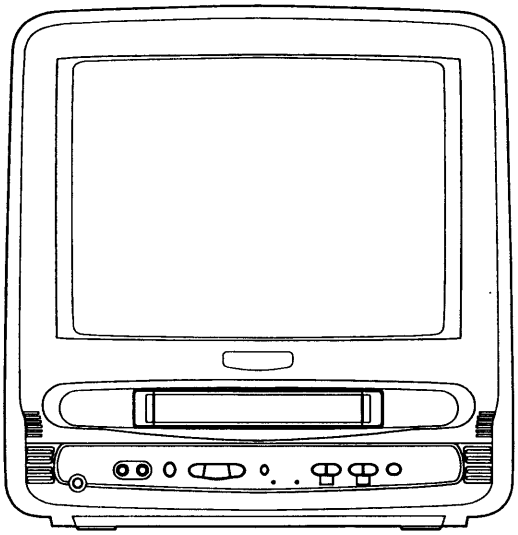
TEAC®



SERVICE MANUAL

MV-3420 / MV-4820

14" / 20" COLOUR TELEVIDEO

Sec. 1: Main Section	Sec. 2: Deck Mechanism Section	Sec. 3: Exploded Views and Parts List Section
● Specifications ● Preparation for Servicing ● Adjustment Procedures ● Schematic Diagrams ● CBA' s	● Standard Maintenance ● Alignment for Mechanism ● Disassembly/Assembly of Mechanism	● Exploded views ● Parts List

Effective: September, 1998

9834204820

MAIN SECTION

14" COLOR TV/VCR COMBINATION
20" COLOR TV/VCR COMBINATION

MV-3420
MV-4820

Sec. 1: Main Section

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

TABLE OF CONTENTS

SPECIFICATIONS (MV-3420)

✶ Mode ------SP mode unless otherwise specified

✶ Test input terminal

<Except Tuner> ----------Video input (1Vp-p)
Audio input (-10dB)

<Tuner> ----------Ant. input (80dBμV) Video: 87.5%
Audio: 25kHz dev (1kHz Sin)

<DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	—	%	90	—
2. Linearity	Horizontal	%	—	15
	Vertical	%	—	10
3. High Voltage	—	kV	22	—

<VIDEO & CHROMA>

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	m/m	—	0.3
	Corner	m/m	—	1.5
	Side	m/m	—	1.2
2. Contrast Control Range	—	dB	6	4
3. Brightness	APL 100%	ft-L	55	40
4. Color Temperature	—	K	9200	—

<VCR>

Description	Condition	Unit	Nominal	Limit
1. Horizontal Resolution	(R/P)	Line	230	200
2. Jitter (Low)	(R/P)	μS	0.05	0.2
3. S/N Chroma AM (SP)	(R/P)	dB	38	33
PM (SP)	(R/P)	dB	36	33
4. Wow & Flutter (RMS)	(R/P)	%	0.25	0.5

<TUNER>

Description	Condition	Unit	Nominal	Limit
1. Video S/N	—	dB	45	40
2. Audio S/N (W/LPF)	—	dB	43	40

<AUDIO>

All items are measured across 8Ω resistor at speaker output terminal.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power (Max.)	(R/P)	W	1.0	0.8
2. Audio S/N (W/LPF)	(R/P)	dB	40	36
3. Audio Distortion (W/LPF)	(R/P)	%	3.0	5.0
4. Audio Freq. Response (-10dB Ref. 1kHz)	200Hz (R/P) 8kHz (R/P)	dB dB	-2.0 0	-2.0 ± 5.0 0 ± 6.0

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

SPECIFICATIONS (MV-4820)

✶ Mode ------SP mode unless otherwise specified

✶ Test input terminal

<Except Tuner> ----------Video input (1Vp-p)

Audio input (-10dB)

<Tuner> ----------Ant. input (80dBμV) Video: 87.5%

Audio: 25kHz dev (1kHz Sin)

<DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	—	%	90	—
2. Linearity	Horizontal	%	—	15
	Vertical	%	—	10
3. High Voltage	—	kV	25	—

<VIDEO & CHROMA>

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	m/m	—	0.4
	Corner	m/m	—	2.1
	Side	m/m	—	1.4
2. Contrast Control Range	—	dB	6	—
3. Brightness	APL 100%	ft-L	35	24
4. Color Temperature	—	K	7600+6MPCD	—

<VCR>

Description	Condition	Unit	Nominal	Limit
1. Horizontal Resolution	(R/P)	Line	245	230
2. Jitter (Low)	(R/P)	μS	0.07	0.12
3. S/N Chroma AM (SP)	(R/P)	dB	41	37
PM (SP)	(R/P)	dB	36	30
4. Wow & Flutter (RMS)	(R/P)	%	0.3	0.5

<TUNER>

Description	Condition	Unit	Nominal	Limit
1. Video S/N	—	dB	42	39
2. Audio S/N (W/LPF)	—	dB	46	40

<AUDIO>

All items are measured across 8Ω resistor at speaker output terminal.

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power (Max.)	(R/P)	W	1.0	0.8
2. Audio S/N (W/LPF)	(R/P)	dB	40	36
3. Audio Distortion (W/LPF)	(R/P)	%	1.0	5.0
4. Audio Freq. Response (-10dB Ref. 1kHz)	200Hz (R/P) 8kHz (R/P)	dB dB	-2.0 0	-2.0 ± 5.0 0 ± 6.0

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

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, our products are strictly inspected for 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.

Safety Precautions for TV Circuit

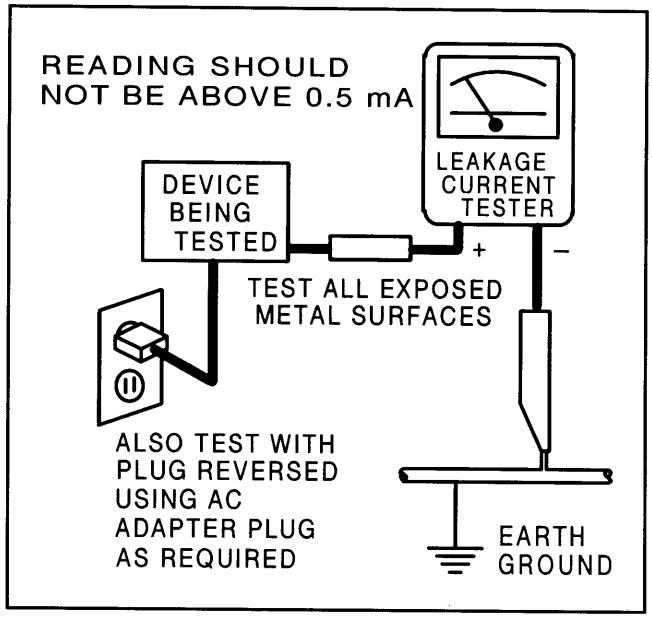
1. **Before returning an instrument to the customer,** always make a safety check of the entire instrument, including, but not limited to, the following items:

a. Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (2) When reinstalling the chassis and/or other assembly in the cabinet, be sure to put back in place all protective devices, including but not limited to, nonmetallic control knobs, insulating fishpapers, adjustment and compartment covers/shields, and isolation resistor/capacitor networks. **Do not operate this instrument or permit it to be operated without all protective devices correctly installed and functioning. Servicers who defeat safety features or fail to perform safety checks may be liable for any resulting damage.**

b. Be sure that there are no cabinet openings through which an adult or child might be able to insert their fingers and contact a hazardous voltage. Such openings include, but are not limited to, (1) spacing between the picture tube and the cabinet mask, (2) excessively wide cabinet ventilation slots, and (3) an improperly fitted and/or incorrectly secured cabinet back cover.

c. Antenna Cold Check - With the instrument AC plug removed from any AC source, connect an electrical jumper across the two AC plug prongs. Place the instrument AC switch in the on position. Connect one lead of an ohmmeter to the AC plug prongs tied together and touch the other ohmmeter lead in turn to each tuner antenna input exposed terminal screw and, if applicable, to the coaxial connector. If the measured resistance is less than 1.0 megohm or greater than 5.2 megohm, an abnormality exists that must be corrected before the instrument is returned to the customer. Repeat this test with the instrument AC switch in the off position.

d. Leakage Current Hot Check - With the instrument completely reassembled, plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with American National Standards Institute (ANSI) C101.1 Leakage Current for Appliances and Underwriters Laboratories (UL) 1410, (50.7). With the instrument AC switch first in the on position and then in the off position, measure from a known earth ground (metal water pipe, conduit, etc.) to all exposed metal parts of the instrument (antennas, handle brackets, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 milli-ampere. Reverse the instrument power cord plug in the outlet and repeat the test.



ANY MEASUREMENTS NOT WITHIN THE LIMITS SPECIFIED HEREIN INDICATE A POTENTIAL SHOCK HAZARD THAT MUST BE ELIMINATED BEFORE RETURNING THE INSTRUMENT TO THE CUSTOMER OR BEFORE CONNECTING THE ANTENNA OR ACCESSORIES.

e. X-Radiation and High Voltage Limits - Because the picture tube is the primary potential source of X-radiation in solid-state TV receivers, it is specially constructed to prohibit X-radiation emissions. For continued X-radiation protection, the replacement picture tube must be the same type as the original. Also, because the picture tube shields and mounting hardware perform an X-radiation protection function, they must be correctly in place. High voltage must be measured each time servicing

is performed that involves B+, horizontal deflection or high voltage. Correct operation of the X-radiation protection circuits also must be reconfirmed each time they are serviced. (X-radiation protection circuits also may be called "horizontal disable" or "hold down.") Read and apply the high voltage limits and, if the chassis is so equipped, the X-radiation protection circuit specifications given on instrument labels and in the Product Safety & X-Radiation Warning note on the service data chassis schematic. High voltage is maintained within specified limits by close tolerance safety-related components/adjustments in the high-voltage circuit. If high voltage exceeds specified limits, check each component specified on the chassis schematic and take corrective action.

2. Read and comply with all caution and safety-related notes on or inside the receiver cabinet, on the receiver chassis, or on the picture tube.

3. **Design Alteration Warning -** Do not alter or add to the mechanical or electrical design of this TV receiver. Design alterations and additions, including, but not limited to circuit modifications and the addition of items such as auxiliary audio and/or video output connections, might alter the safety characteristics of this receiver and create a hazard to the user. Any design alterations or additions will void the manufacturer's warranty and may make you, the servicer, responsible for personal injury or property damage resulting therefrom.

4. **Picture Tube Implosion Protection Warning** - The picture tube in this receiver employs integral implosion protection. For continued implosion protection, replace the picture tube only with one of the same type number. Do not remove, install, or otherwise handle the picture tube in any manner without first putting on shatterproof goggles equipped with side shields. People not so equipped must be kept safely away while picture tubes are handled. Keep the picture tube away from your body. Do not handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; because of potential hazard, do not try to remove such "permanently attached" yokes from the picture tube.

5. **Hot Chassis Warning -**

a. Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord and may be safety-serviced without an isolation transformer only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC power source. To confirm that the AC power plug is inserted correctly, with an AC voltmeter, measure between the chassis and a known earth ground. If a voltage reading in excess of 1.0V is obtained, remove and reinsert the AC power plug in the opposite polarity and again measure the voltage potential between the chassis and a known earth ground.

b. Some TV receiver chassis normally have 85V AC(RS) between chassis and earth ground regardless of the AC plug polarity. This chassis can be safety-serviced only with an isolation transformer inserted in the power line between the receiver and the AC power source, for both personnel and test equipment protection.

c. Some TV receiver chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not is- olated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.

6. Observe original lead dress. Take extra care to assure correct lead dress in the following areas: a. near sharp edges, b. near thermally hot parts-be sure that leads and components do not touch thermally hot parts, c. the AC supply, d. high voltage, and e. antenna wiring. Always inspect in all areas for pinched, out of place, or frayed wiring. Check AC power cord for damage.

7. Components, parts, and/or wiring that appear to have overheated or are otherwise damaged should be replaced with components, parts, or wiring that meet original specifications. Additionally, determine the cause of overheating and/or damage and, if necessary, take corrective action to remove any potential safety hazard.

8. **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 continu- ously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are strictly 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 edged or pointed parts.

H. When a power cord has been replaced, check that 10-15 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 droplets. etc.) do not remain inside the set.

K. Crimp type wire connector

When replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, in order to prevent shock hazards, perform carefully and precisely the following steps.

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 the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

L. When connecting or disconnecting the VCR connectors, first, disconnect the AC plug from AC supply socket.

Safety Check after Servicing

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

1. 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	Region	Clearance Distance (d) (d')
200 to 240 V	Europe Australia	≥ 4 mm (d) ≥ 6 mm (d')

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

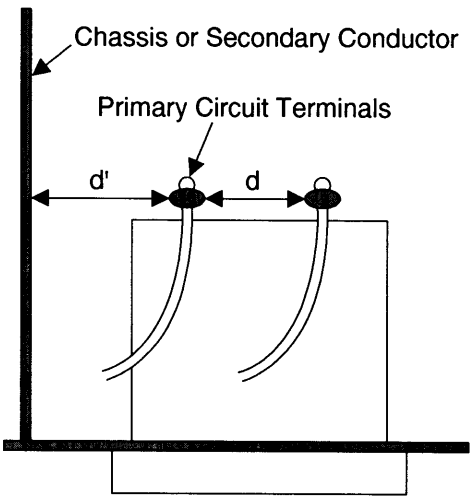


Fig. 1

2. Leakage Current Test

Confirm 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.).

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 both terminals of load Z. See Fig. 2 and following table.

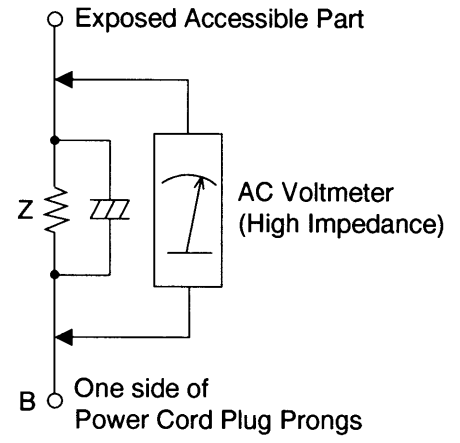


Fig. 2

Table 2 : Leakage current ratings for selected areas

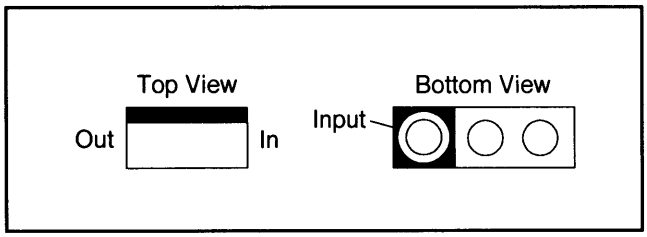
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
200 to 240V	Europe Australia	2kΩ RES. in connected	i≤0.7mA rms i≤2mA dc	Antenna terminals
		50kΩ RES. in connected	i≤0.7mA rms i≤2mA dc	Other terminals

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

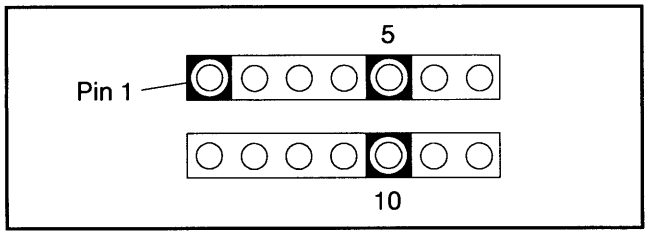
STANDARD NOTES FOR SERVICING

Circuit Board Indications

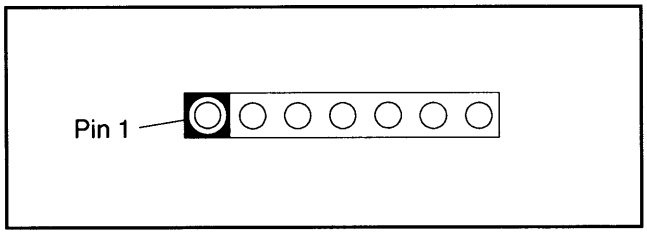
1. The output pin of the 3 pin Regulator ICs is indicated as shown:



2. For other ICs, pin 1 and every 5th pin is indicated as shown:

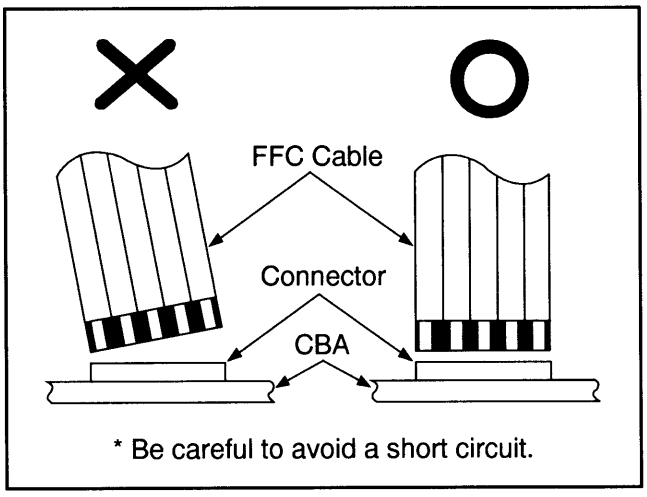


3. The 1st pin of every pin connector are indicated as shown:



Instructions for Connectors

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

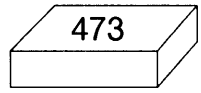


[CBA= Circuit Board Assembly]

How to Read the Values of the Rectangular Type Chip Components

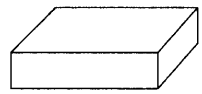
Example:

(a) Resistor



= 473 = 47 [kΩ] (Top View)

(b) Capacitor



= Not Shown (Top View)

Caution:

Once chip parts (Resistors, Capacitors, Transistors, etc.) are removed, they must not be reused. Always use a new part.

Replacement Procedures for Leadless (Chip) Components

The Following Procedures are Recommended for the Replacement of the Leadless Components Used in this Unit.

1. Preparation for replacement

a. Soldering Iron
Use a pencil-type soldering iron (less than 30 watts).

b. Solder
Eutectic solder (Tin 63%, Lead 37%) is recommended.

c. Soldering time
Do not apply heat for more than 4 seconds.

d. Preheating
Leadless capacitor must be preheated before installation. (130°C~150°C, for about two minutes.)

Notes:

a. Leadless components must not be reused after removal.

b. Excessive mechanical stress and rubbing for the component electrode must be avoided.

2. Removing the leadless component

Grasp the leadless component body with tweezers and alternately apply heat to both electrodes. When the solder on both electrodes has melted, remove leadless component with a twisting motion.

Notes:

a. Do not attempt to lift the component off the board until the component is completely disconnected from the board by the twisting action.

b. Take care not to break the copper foil on the printed board.

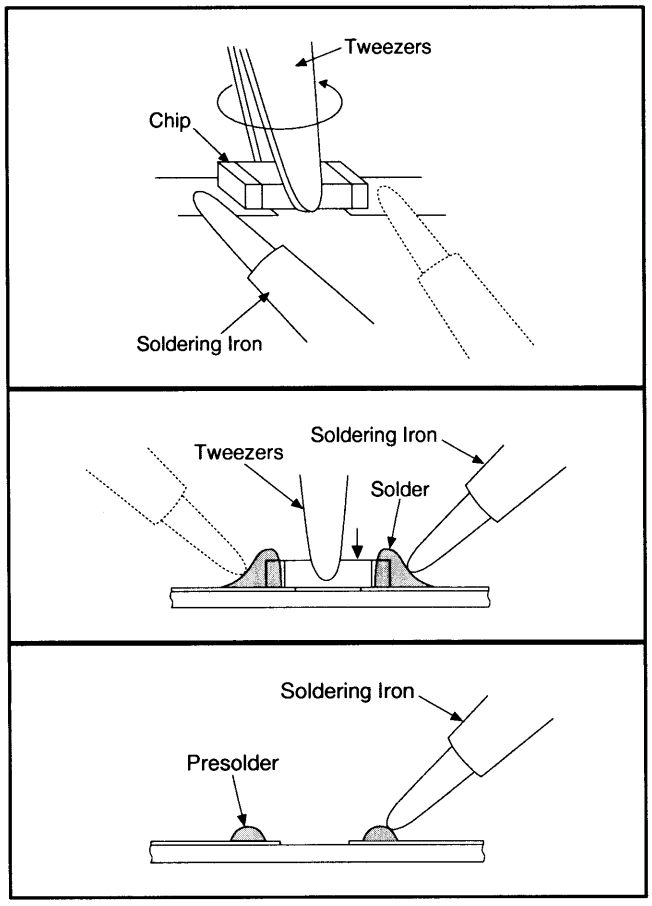
3. Installing the leadless component

a. Presolder the contact points of the circuit board.

b. Press the part downward with tweezers and solder both electrodes as shown below.

Note:

Do not glue the replacement leadless component to the circuit board.



How to Remove / Install Flat Pack IC

Caution:

1. Do not apply the hot air to the chip parts around the Flat Pack-IC for over 6 seconds as damage may occur to the chip parts. 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 solder lands under the IC when removing it.

1. Removal

With Hot - Air Flat Pack - IC Desoldering Machine:

a. Prepare the Hot - Air Flat Pack - IC Desoldering Machine, then apply hot air to Flat Pack - IC (about 5~6 seconds). (Fig. S-1-1)

b. Remove the Flat Pack- IC with tweezers while applying the hot air.

With Soldering Iron:

a. 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)

b. 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)

With Iron Wire:

a. 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)

b. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.

c. Pull up on the wire as the solder melts so as to lift the IC leads from the CBA contact pads, while heating the pins using a fine tip soldering iron or hot air blower.

Note:

When using a soldering iron, care must be taken to ensure that the Flat Pack - IC is not being held by glue, or when it is removed from the CBA, it may be damaged if force is used.

2. Installation

a. 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.

b. The "●" mark on the Flat Pack - IC indicates pin 1 (See Fig. S-1-6). Make sure this mark matches the 1 on the CBA when positioning for installation. Then pre - solder the four corners of the Flat Pack- IC (See Fig. S-1-7).

c. Solder all pins of the Flat Pack - IC. Make sure that none of the pins have solder bridges.

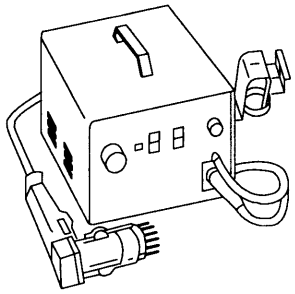


Fig. S-1-1

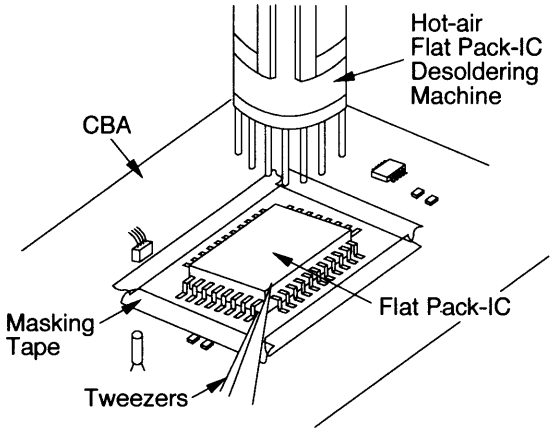


Fig. S-1-2

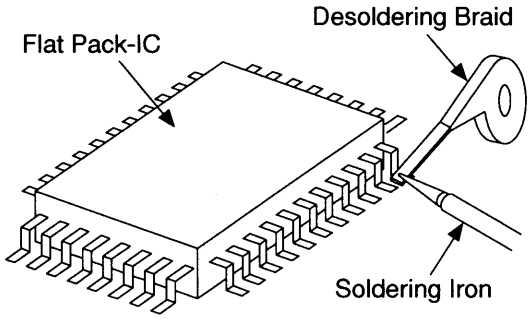


Fig. S-1-3

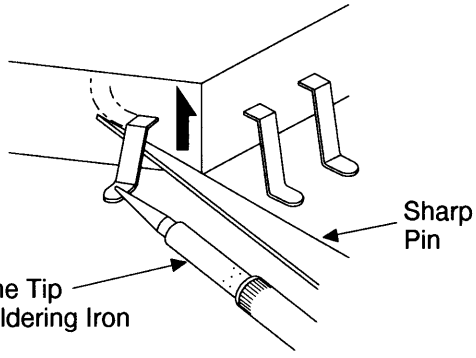


Fig. S-1-4

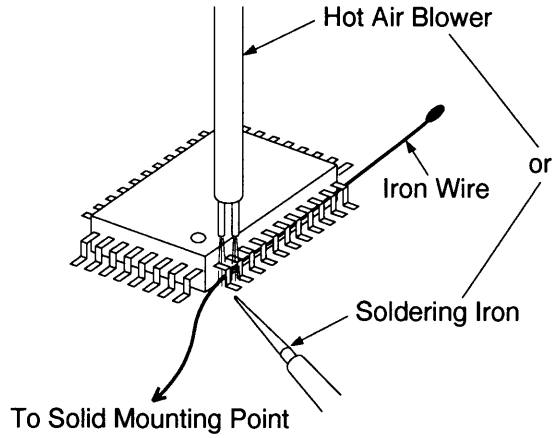
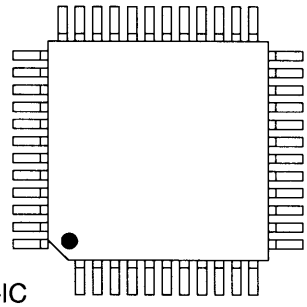


Fig. S-1-5

Example :



Pin 1 of the Flat Pack-IC
is indicated by a " ● " mark.

Fig. S-1-6

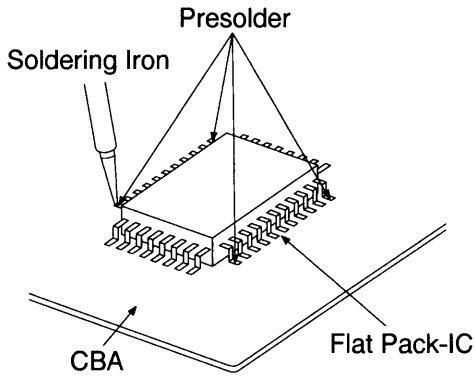


Fig. S-1-7

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.

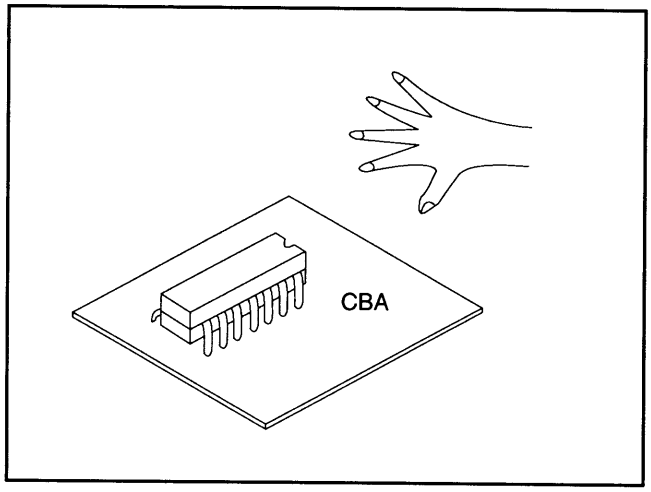
Ground for Human Body

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

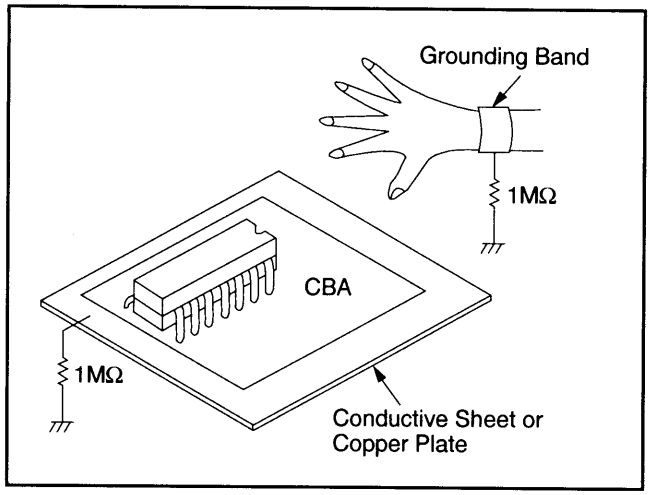
Ground for Work Bench

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

Incorrect



Correct



How to Enter the Service Mode

Caution: 1

1. Optical sensors system are used for Tape Start and End Sensor on this equipment. Read this page carefully and prepare as described on this page before starting to service; otherwise, the unit may operate unexpectedly.

Preparing: 1

1. Cover Q203 (START SENSOR) and Q202 (END SENSOR) with Insulation Tape or enter the service mode to activate Sensor Inhibition automatically.

Note: Avoid playing, rewinding or fast forwarding the tape to its beginning or end, because both Tape End Sensors are not active.

How to Enter the Service Mode

1. Turn Power On.
2. Press Remote Control keys as following order.
   MENU–>MUTE–>PAUSE–>MUTE
3. When enter the Service Mode, One of the Number (1 , 2 or 4) will display at corners of the Screen.
4. During the Service mode, Electrical Adjustment Mode can be selected by Remote Control key.
   Details are as follows.

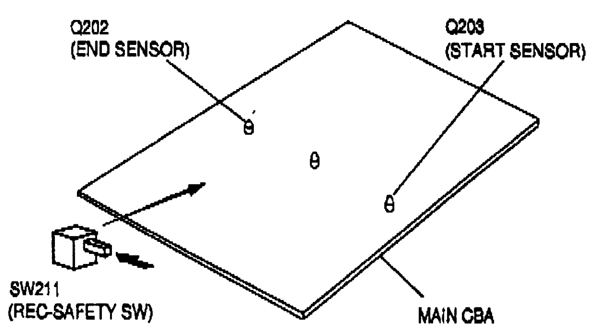
Key	Adjustment Mode
MENU	Picture Adjustment Mode : Press the MENU button to change from Bright, Contrast, Color, Tint and Sharpness. Press CH UP/DOWN key to display Initial Value, Maximun and Minimum cyclically.
0	HfoAdjustment Mode: See Adjustment Instructions Page 1-6-2 .
1	H.Shift Adjustment Mode. See Adjustment Instructions Page 1-6-3.
2	AGC Adjustment Mode: See Adjustment Instructions Page 1-6-2.
3	AFT Adjustment Mode: See Adjustment Instructions Page 1-6-1.
4	Auto Record Mode: Perform Recording (15 Sec.)–>Stop–>Rewind (Zero Return) automatically.
5	Head Switching Point Adjustment Mode: See Adjustment Instructions Page 1-6-4.
6	Static Convergence Adjustment Mode: Shows 1 dot color on the center of the screen. Press CH UP/DOWN key to change the color White and Magenta.
7	Purity Check Mode: Shows Red, Green or Blue on the screen when the CH UP/DOWN keys are pressed.
8	Cut-off Adjustment Mode: See Adjustment Instructions Page 1-6-3.
9	Drive (R) and (B) Adjustment Mode: See Adjustment Instructions Page 1-6-3~4.

Caution: 2

1. The deck mechanism assembly is mounted on the Main CBA directly, and SW211 (REC-SAFETY SW) is mounted on the Main CBA. When deck mechanism assembly is removed from the Main CBA due to servicing, this switch can not be operated automatically.

Preparing: 2

1. To eject the tape, press the STOP/EJECT button on the unit (or Remote Control).
2. When you want to record during the Service mode, press the Rec button while depressing SW211 (REC-SAFETY SW) on the Main CBA.



2-3

PREPARATION FOR SERVICING

How to Use U17 Deck Extension Cable

(1) Remove Deck Mechanism Assembly. If needed, remove the Main CBA from Tray Chassis.

Refer to " Disassembly Instructions" on page 1-6-1.

(2) Connect Main CBA and Deck with the U17 Deck Extension Cable (A) as shown in Fig. 1. And connect Main CBA and Deck with U17 Deck Extension cable (B) as shown in Fig. 1. Connect the 2 clips to the Shield plate on the Main CBA.

(U17 Deck Extension Cable : N1098XA)

Note 1: There are 3 types of U17 Deck Extension Cable. (A). They are for 2 Head, 4 Head, and HI-FI. Use a connector indicated as shown. Be careful not to let the unused connector contact other parts.

Note 2: Some noise will be present in the playback picture when the extension cable is used.

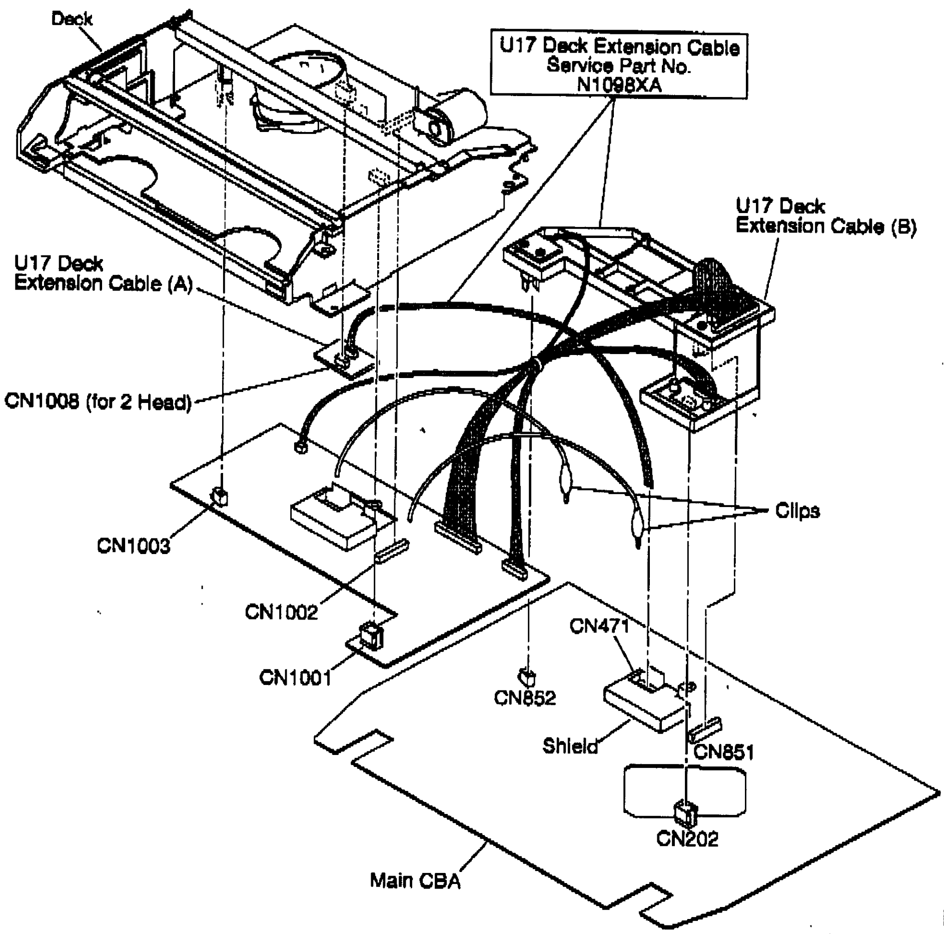


Fig. 1

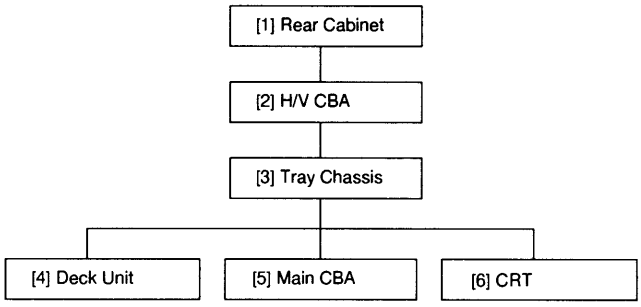
DISASSEMBLY INSTRUCTIONS (MV-3420)

1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts, and the CBA in order 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.

Caution !!

When removing the CRT, be sure to discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.



2. Disassembly Method

STEP/ LOC. NO.	PART	REMOVAL		
		FIG. NO.	REMOVE/*UNLOCK/ RELEASE/UNPLUG/ UNCLAMP/DESOLDER	NOTE
[1]	Rear Cabinet	1, 2	4(S-1), 1(S-2)	1
[2]	H/V CBA (With Holder)	3, 4, 5	Anode Cap, CRT CBA, CN503, CN572, CN574, CN575, 2(S-3),1(L1)	2
[3]	Tray Chassis	3	CN601, CN801	3
[4]	Deck Unit	3	6(S-4), 7(S-5), 1(S-6)	4
[5]	Main CBA	3,5	3(S-7)	5
[6]	CRT	4	4(S-8)	6
↓	↓	↓	↓	↓
①	②	③	④	⑤

Note :

①. Order of steps in Procedure. When reassembling, follow the steps in reverse order.
These numbers are also used as the identification (location) No. of parts in Figures.

②. Parts to be removed or installed.

③. Fig. No. showing Procedure of Part Location

④. Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

S=Screw, P=Spring, L=Locking Tab, CN=Connector, *=Unhook, Unlock, Release, Unplug, or Desolder

2(S-2) = two Screw (S-2)

⑤. Refer to the following"Reference Notes in the Table" following.

Reference Notes in the Table

1. Removal of the Rear Cabinet.

   Remove Screws 4(S-1) and 1(S-2).

Caution !!

Discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.

2. Removal of the H/V CBA. Discharge the Anode Lead of the CRT with the CRT Ground before removing the Anode Cap.

   Disconnect the following: Anode Cap., CRT CBA, CN501, CN503, CN504, CN571 and CN575.

   Remove H/V CBA with Holder.

   Remove Screws 2(S-3) and unlock 1(L-1). Pull thep the H/V CBA backward.

3. Removal of the Tray Chassis. Disconnect CN601 and CN801. Pull the Tray Chassis backward.

4. Removal of the Deck Unit. Remove Screws 4(S-4) and 3(S-5). Lift up the Deck Unit.

5. Removal of the Main CBA. Remove Screws 5(S-6) and Pull up the Main CBA.

6. Removal of the CRT. Remove Screws 4(S-8) and pull the CRT backward.

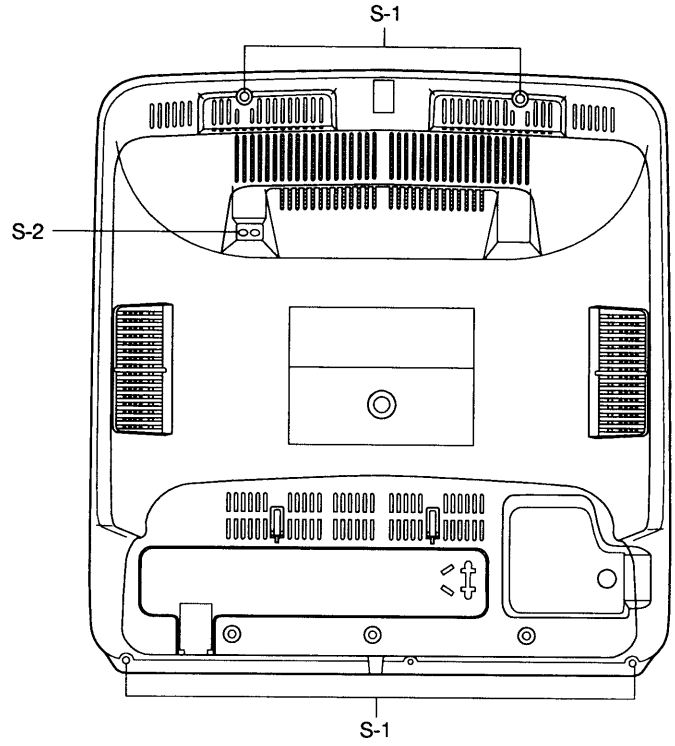
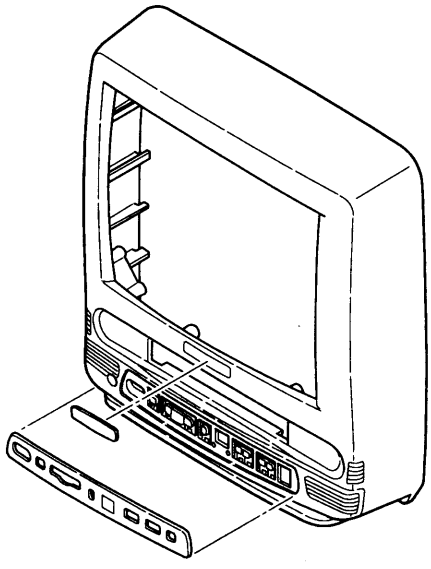
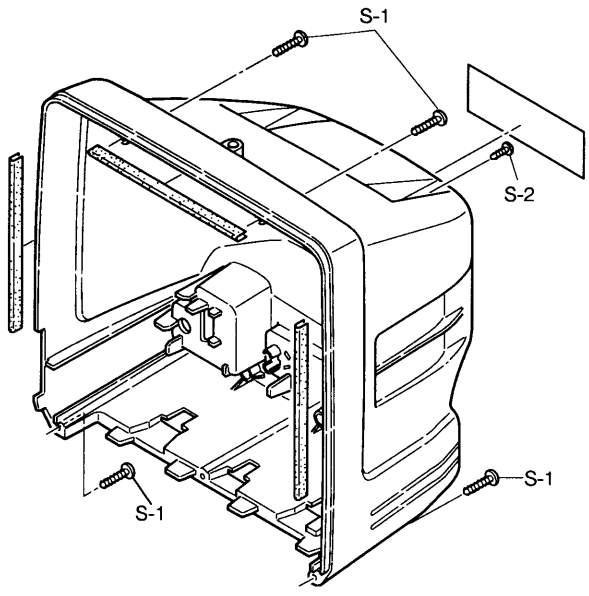


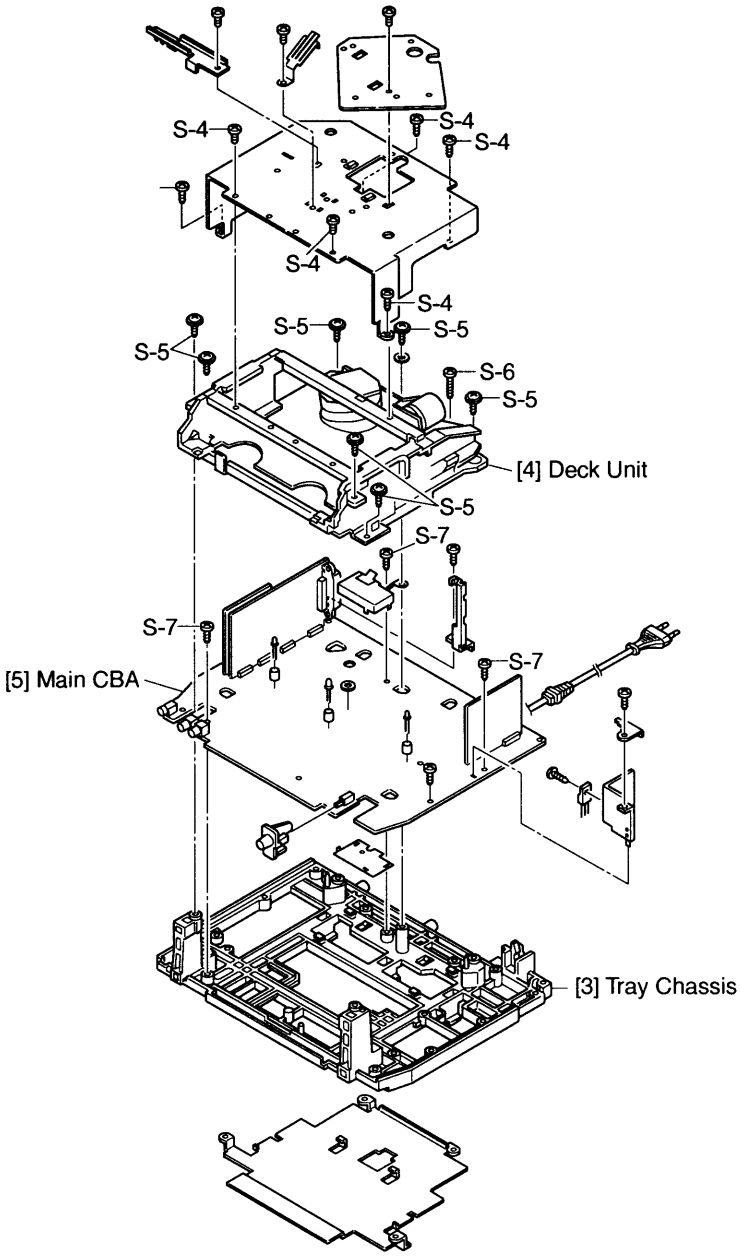
Fig. 1

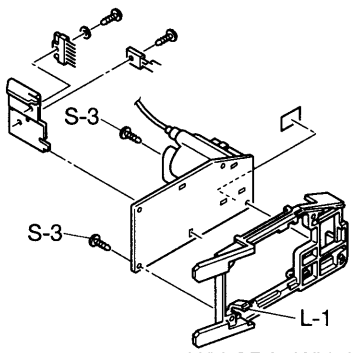




[1] REAR CABINET

Fig. 2





[2] H/V CBA (With Holder)

Fig. 3

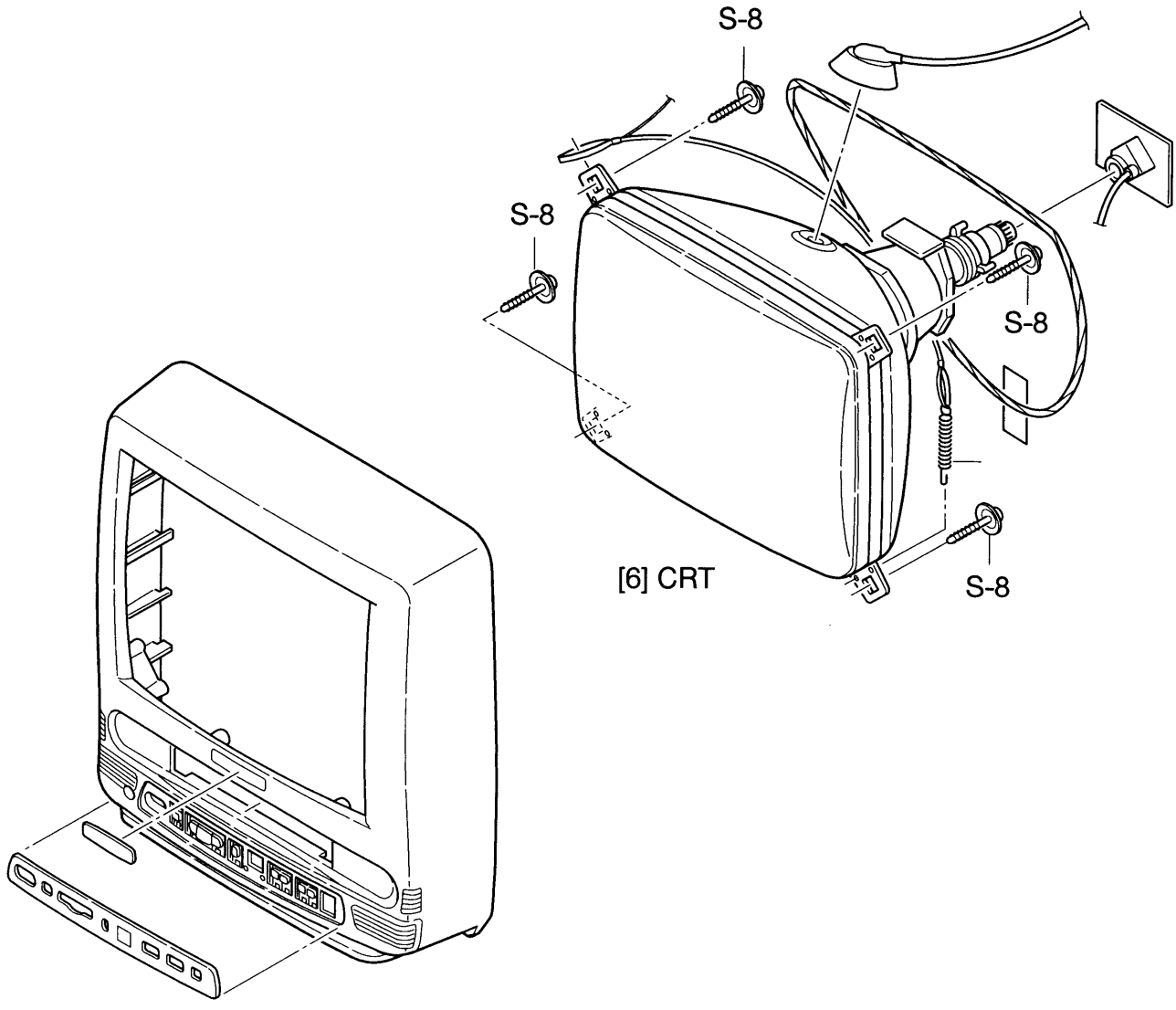


Fig. 4

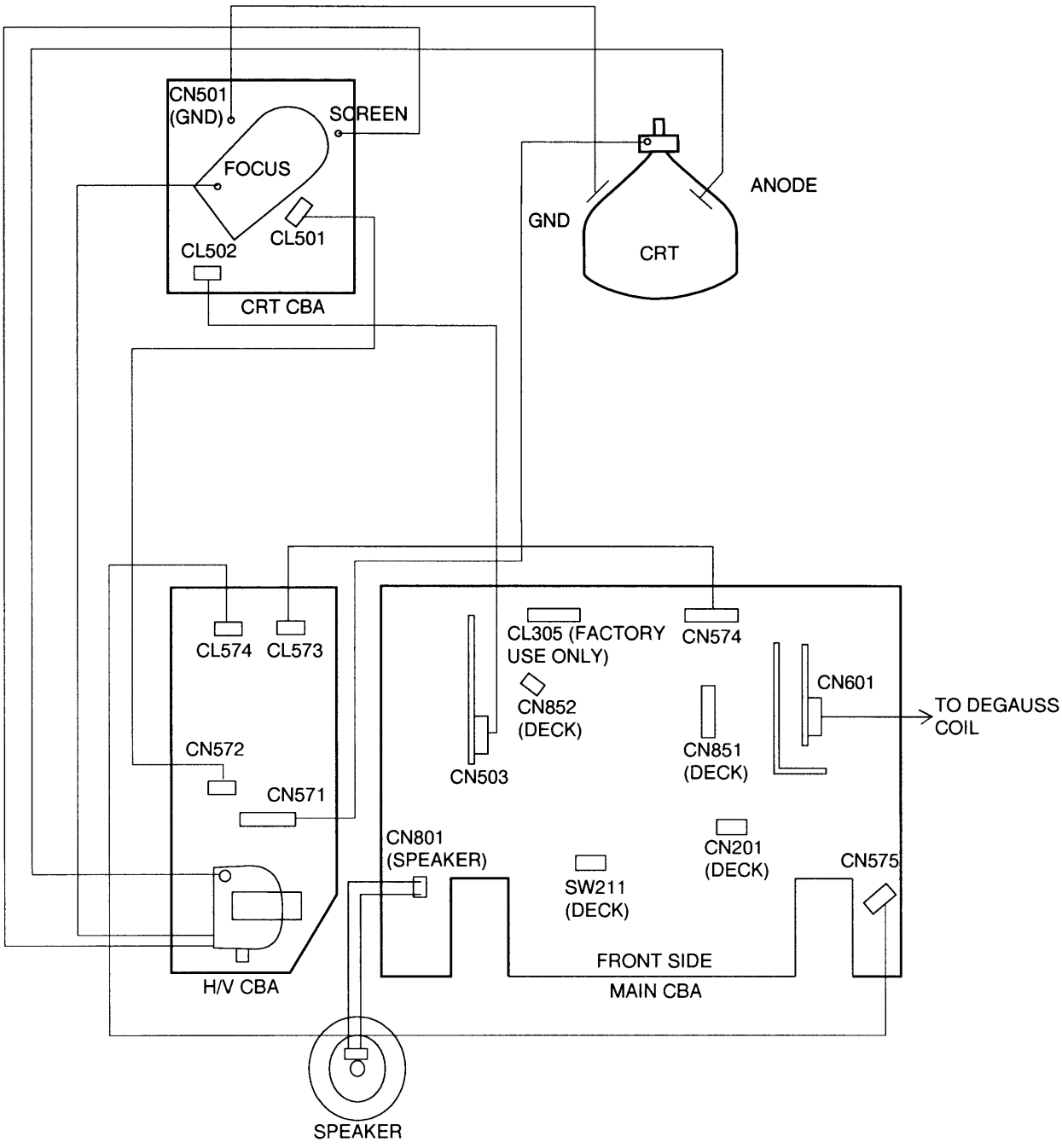

CN501
(GND)
SCREEN
FOCUS
CL502
CL501
CRT CBA
GND
CRT
ANODE
CL574
CL573
CN572
CN571
H/V CBA
CL305 (FACTORY
USE ONLY)
CN574
CN852
(DECK)
CN503
CN851
(DECK)
CN601
TO DEGAUSS
COIL
CN801
(SPEAKER)
SW211
(DECK)
CN201
(DECK)
CN575
FRONT SIDE
MAIN CBA
SPEAKER

Fig. 5

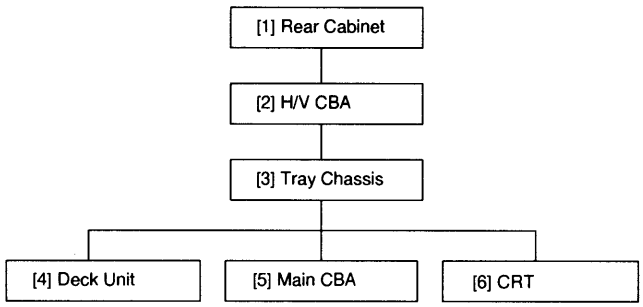
DISASSEMBLY INSTRUCTIONS (MV-4820)

1. Disassembly Flowchart

This flowchart indicates the disassembly steps for the cabinet parts, and the CBA in order 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.

Caution !!

When removing the CRT, be sure to discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.



2. Disassembly Method

STEP/ LOC. NO.	PART	REMOVAL		
		FIG. NO.	REMOVE/*UNLOCK/ RELEASE/UNPLUG/ UNCLAMP/DESOLDER	NOTE
[1]	Rear Cabinet	1, 2	4(S-1), 1(S-2)	1
[2]	H/V CBA (With Holder)	3, 4, 5	Anode Cap, CRT CBA, CN503, CN572, CN574, CN575, 2(S-3),1(L1)	2
[3]	Tray Chassis	3	CN601, CN801	3
[4]	Deck Unit	3	6(S-4), 7(S-5), 1(S-6)	4
[5]	Main CBA	3,5	3(S-7)	5
[6]	CRT	4	4(S-8)	6
↓	↓	↓	↓	↓
①	②	③	④	⑤

Note :

①. Order of steps in Procedure. When reassembling, follow the steps in reverse order.
These numbers are also used as the identification (location) No. of parts in Figures.

②. Parts to be removed or installed.

③. Fig. No. showing Procedure of Part Location

④. Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.

S=Screw, P=Spring, L=Locking Tab, CN=Connector, *=Unhook, Unlock, Release, Unplug, or Desolder

2(S-2) = two Screw (S-2)

⑤. Refer to the following"Reference Notes in the Table" following.

Reference Notes in the Table

1. Removal of the Rear Cabinet.

   Remove Screws 4(S-1) and 1(S-2).

Caution !!

Discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.

2. Removal of the H/V CBA. Discharge the Anode Lead of the CRT with the CRT Ground before removing the Anode Cap.

   Disconnect the following: Anode Cap., CRT CBA, CN501, CN503, CN504, CN571 and CN575.

   Remove H/V CBA with Holder.

   Remove Screws 2(S-3) and unlock 1(L-1). Pull thep the H/V CBA backward.

3. Removal of the Tray Chassis. Disconnect CN601 and CN801. Pull the Tray Chassis backward.

4. Removal of the Deck Unit. Remove Screws 4(S-4) and 3(S-5). Lift up the Deck Unit.

5. Removal of the Main CBA. Remove Screws 5(S-6) and Pull up the Main CBA.

6. Removal of the CRT. Remove Screws 4(S-8) and pull the CRT backward.

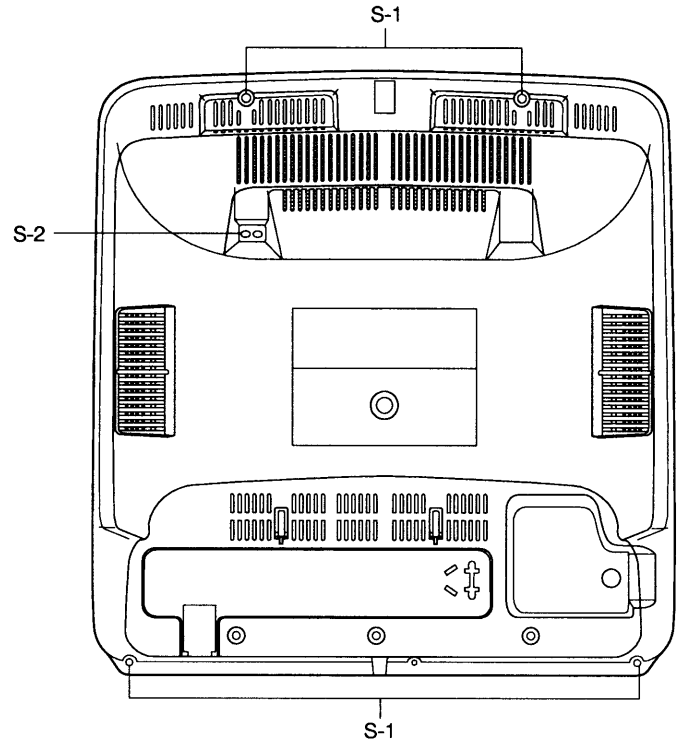
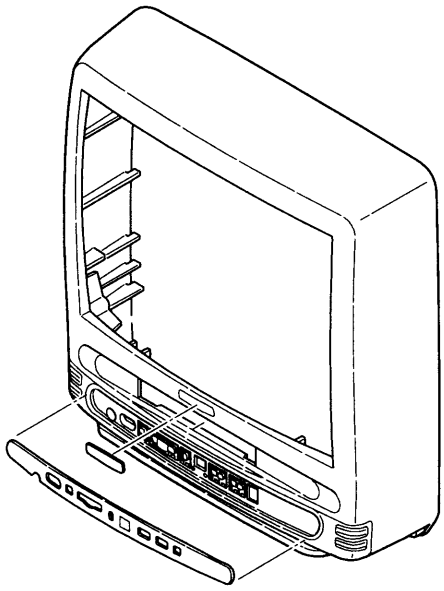
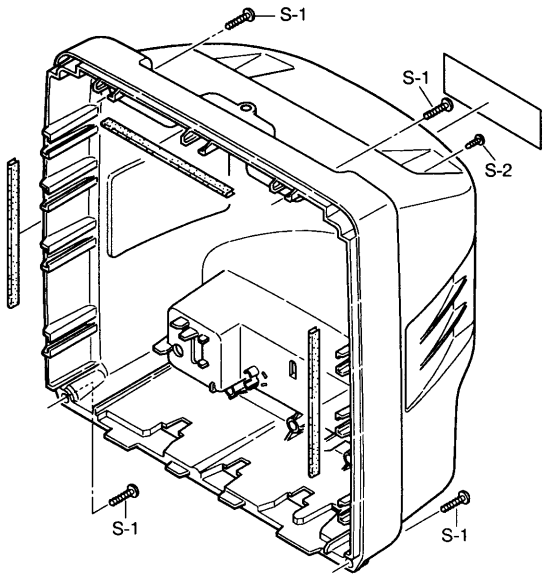


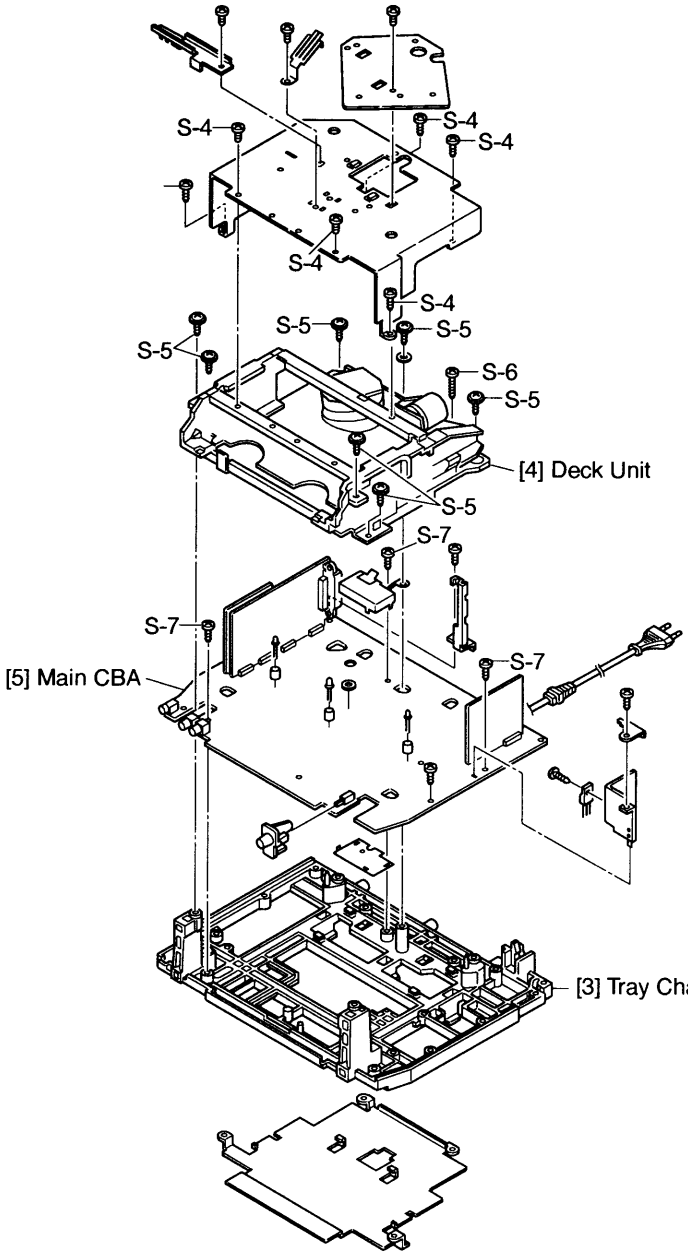
Fig. 1

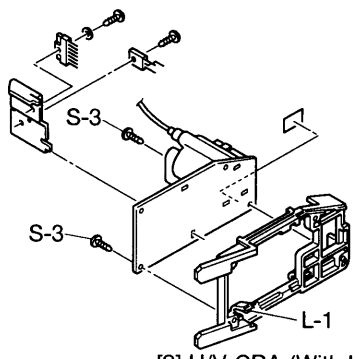




[1] REAR CABINET

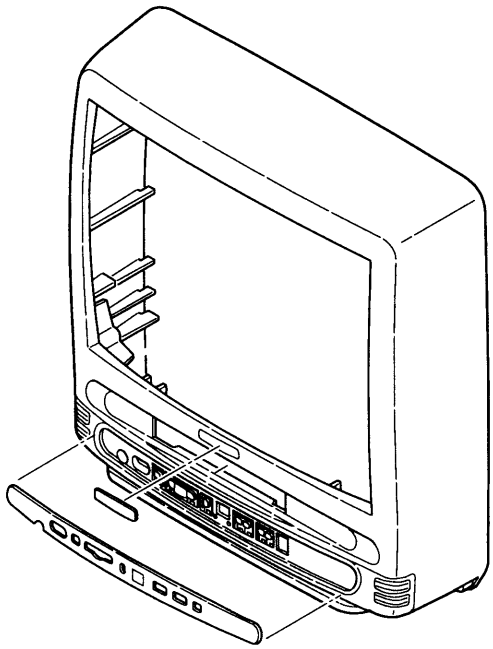
Fig. 2

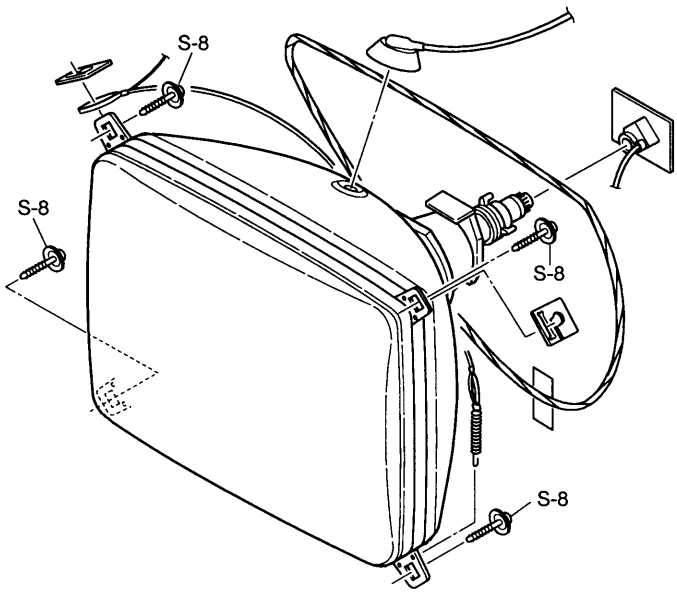




[2] H/V CBA (With Holder)

Fig. 3





[6] CRT

Fig. 4

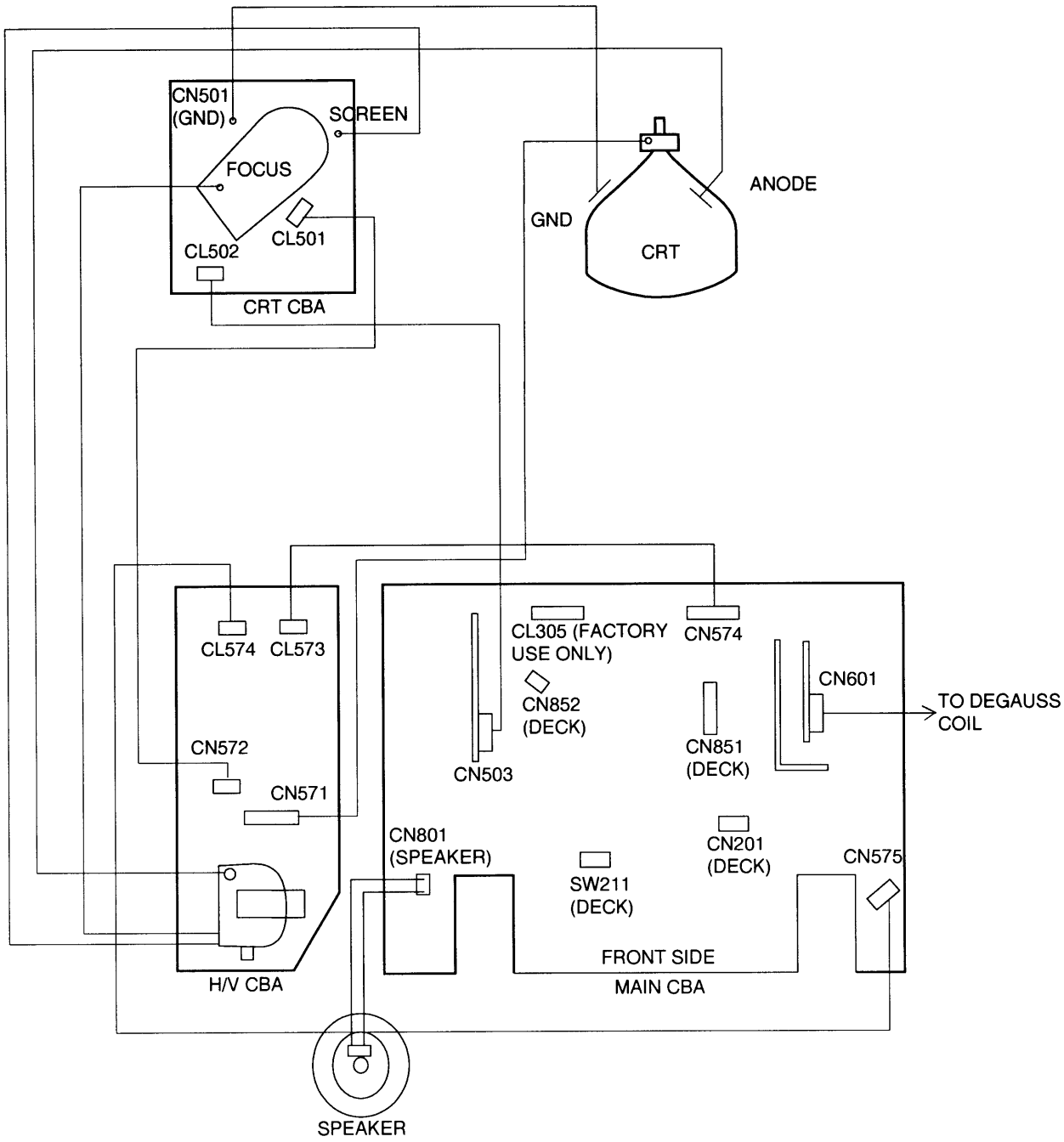

CN501
(GND)
SCREEN
FOCUS
CL501
CL502
CRT CBA
GND
CRT
ANODE
CL574
CL573
CN572
CN571
H/V CBA
CL305 (FACTORY
USE ONLY)
CN574
CN852
(DECK)
CN503
CN851
(DECK)
CN601
TO DEGAUSS
COIL
CN801
(SPEAKER)
SW211
(DECK)
CN201
(DECK)
CN575
FRONT SIDE
MAIN CBA
SPEAKER

Fig. 5

ELECTRICAL ADJUSTMENT INSTRUCTIONS

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

NOTE:

Electrical adjustments are required after replacing circuit components and certain mechanical parts.

It is important to perform these adjustments only after all repairs and replacements have been completed.

Also, do not attempt these adjustments unless the proper equipment is available.

Test Equipment Required

1. NTSC Pattern Generator (Color Bar W/White Window, Red Color, Dot Pattern, Gray Scale, Monoscope, Multi-Burst)
2. AC Milli Voltmeter (RMS)
3. Alignment Tape (FL8A, FL8N), Blank Tape
4. DC Voltmeter
5. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50V/Div,
   F-Range: DC~AC-60MHz
6. Frequency Counter
7. Plastic Tip Driver

1. DC 108V (116V) Adjustment

Purpose: To obtain correct operation.

Symptom of Misadjustment: The picture is dark and unit does not operate correctly.

Test Point	Adjustment Point	Mode	Input
J552 (+108V) J182 (GND)	VR601	---	---
Tape	M. EQ.	Spec.	
---	DC Voltmeter	+108±0.5V DC MV3420 +116±0.5V DC MV4820	

Note: J552 --- H/V CBA
J182(GND), VR601 --- Main CBA

1. Connect DC Volt Meter to J552 and J182(GND).
2. Adjust VR601 so that the voltage of J552 becomes +108±0.5V DC. (Model MV3420)
3. Adjust VR601 so that the voltage of J552 becomes +116±0.5V DC. (Model MV4820)

2. AFT Adjustment

Purpose: To operate AFT correctly.

Symptom of Misadjustment: AFT does not work correctly and/or synchronization is faulty.

Test Point	Adjustment Point	Mode	Input
J108 (AFT) J111 (GND)	T301 (VCO)	---	See Direction
Tape	M. EQ.	Spec.	
---	Oscilloscope or DC Volt Meter	+2.0±0.1V DC	

Figure

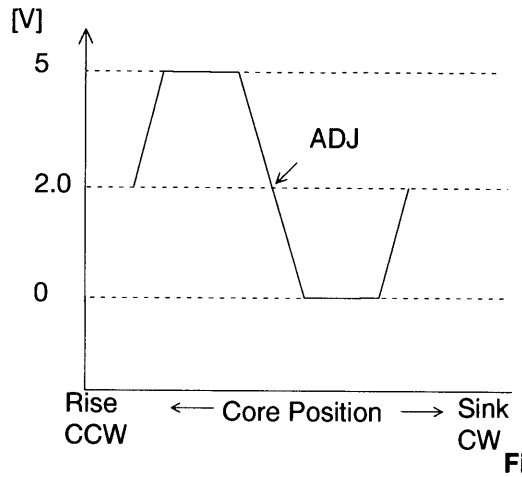


Fig. 1

Note: J108, J111 (GND), T301 --- Main CBA

1. Enter the Service mode. then Press Number 3 button on the remote control unit.
2. Receive the Color Bar signal for CH 4 (62.25MHz).
   (RF Input Level : 60dBμV)
3. Press CH ▲ / ▼ button so that the voltage of J108 becomes +2.0±0.1V DC.

3. AGC Adjustment

Purpose: Set AGC (Auto Gain Control) Level.

Symptom of Misadjustment: AGC does not synchronize correctly when RF input level is too weak and picture distortion may occur if it is too strong.

Test Point	Adjustment Point	Mode	Input
J107 (AGC) J111 (GND)	CH. Up/Down Button (Remote Control Unit)	---	Color Bar 62.25MHz 62dBμV
Tape	M. EQ.	Spec.	
---	Pattern Generator DC Volt Meter	+2.5±0.5VDC	

Notes: J107, J111 (GND) --- Main CBA

Use Remote control Unit.

1. Enter the Service mode. (See Page 1-4-2) Then press number 2 button on the remote control unit.
2. Receive the Color Bar signal for channel 4 (62.25MHz). (RF Input Level: 62dBμV)
3. Press CH. ▲ / ▼ button so that the voltage of J107 becomes +2.5±0.5V DC.
4. Turn the Power off and on again.

4-1. H f_O Adjustment

Purpose: To get correct horizontal position and size of screen image.

Symptom of Misadjustment: Horizontal position and size of screen image may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
J573	---		---
Tape	M. EQ.	Spec.	
---	Frequency Counter	15.625kHz	

Note: J573 --- H/V CBA

1. Connect Frequency Counter to J573.
2. Set the unit to the AUX mode which is lacated before CH2 and no input is necessary. Enter the Service mode. (See Page 1-4-2)
3. Operate the unit for at least 20 minutes.
4. Press " 0 " button on the Remote Control Unit and Select H-Adj Mode. (By pressing " 0 " button the display will change from C-TRAP to H-ADJ)
5. Press CH ▲ / ▼ button on the Remote control Unit so that the display will change " 0 " and " 1 ". At this moment, Choose display " 0 " or " 1 " when the Frequency Counter shows 15.625kHz or closer.
6. Turn the power off and on again.

4-2. C-Trap Adjustment

Purpose: To get correct horizontal position and size of screen image.

Symptom of Misadjustment: Horizontal position and size of screen image may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
J506	---		Color Bar
Tape	M. EQ.	Spec.	
---	Oscilloscope		

Note: J506--- CRT CBA

1. Connect Frequency Counter to J506.
2. Set the unit to the AUX mode which is located before CH2 and input a color bar signal. Enter the Service mode. (See Page 1-4-2)
3. Press " 0 " button on the Remote Control Unit and Select C-TRAP Mode. (By pressing " 0 " button the display will change from C-TRAP to H-ADJ).
4. Press CH ▲ / ▼ button on the Remote Control Unit so that the display will change " 0 ", " 1 ", " 2 " and " 3 ". Choose display " 0 ", " 1 ", " 2 " or " 3 " when B-Out (4.43MHz) value becomes minimun on the Oscilloscope reading.
5. Turn the power off and on again.

5. V. Size Adjustment

Purpose: To obtain correct vertical width of screen image.

Symptom of Misadjustment: If V. Size is incorrect, vertical height of image on the screen may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
---	VR541 (V. Size)	Play	Monoscope
Tape	M. EQ.	Spec.	
---	Monochrome	90±5%	

Note: VR541--- H/V CBA

1. Operate the unit for at least 20 minutes.
2. Input the Monoscope Pattern.
3. Adjust VR541 so that the monoscope pattern will be 90±5% of display size and the circle is round.

6. V. Shift Adjustment

Purpose: To obtain correct vertical width of screen image.

Symptom of misadjustment: If V. size is incorrect, vertical height of image on the screen may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
---	VR542 (V-POS)	---	Monoscope
Tape	M. EQ.	Spec.	
---	Monochrome	See below	

Note: VR542 --- H/V CBA

1. Operate the unit for at least 20 minutes.
2. Input Monochrome Pattern.
3. Adjust VR542 so that the top and bottom of the monochrome pattern will be equal of each other.

7. H. Shift Adjustment

Purpose: To obtain correct horizontal position and size of screen image.

Symptom of misadjustment: Horizontal position and size of screen image may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
---	CH UP/DOWN Button	---	Monoscope
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below	

Note:

1. Operate the unit for at least 20 minutes.
2. Input Monoscope Pattern.
3. Enter the Service Mode. (See page 1-4-2)
4. Press the " 1 " button on the Remote Control Unit.
5. Adjust CH ▲ / ▼ button on the Remote Control Unit so that the left and right side of the Monoscope pattern will be equal of each other.
6. Turn the power off and on again.

Note: If you don't have Monoscope, play test tape (F6-G or F6-M).

8. Cut-off Adjustment

Purpose: To adjust the beam current of R, G, B, and screen voltage.

Symptom of Misadjustment: White color may be reddish, greenish or bluish.

Test Point	Adjustment Point	Mode	Input
---	Screen-Control	Ext.	Black Raster / White Raster
Tape	M. EQ.	Spec.	
---	Pattern Generator	See Reference Notes below.	

Figure

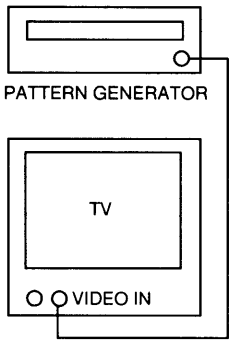


Fig. 2

Note: Screen Control FBT --- H/V CBA

F.B.T= Fly Back Transformer

Use the Remote Control Unit

1. Degauss the CRT and allow CRT to operate for 20 minutes before starting the alignment.
2. Input the Black Raster Signal from Video In.
3. Enter the Service Mode. (See page 1-4-2)
4. Press the " MENU " button. (Display changes BRIGHT, CONTRAST, COLOR, TINT and SHARPNESS cyclically when the " MENU " button is pressed). Select BRIGHT and press " CH ▲ / ▼ " button then set in initial value. (Display changes MAX, INITIAL and MIN when the " CH UP/DOWN " button is pressed).
5. Follows above procedure for CONTRAST, COLOR, TINT AND SHARPNESS.
6. Press " 8 " button then press the " 1 " button. The Display will momentarily show" CUT OFF R " (R=Red) now there should be a horizontal line accros the center of the picture. If needed gradually turn screen control on the flyback, clockwise until the horizontal line appears. If a pure white line appears then go to step 9 otherwise read on. Adjust the Red Cut off by pressing the CH ▲ / ▼ buttons. Proceed to step 7 when the Red Cut off adjustment in done.
7. Press the " 2 " button. The display will momentarily show " CUT OFF G " (G=Green). Adjust the Green

CUT OFF by pressing the CH ▲ / ▼ buttons. Proceed to step 8 when the Green CUT OFF adjustment is done.

8. Press the " 3 " button. The display will momentarily show " CUT OFF B " (B=Blue). Adjust the Blue CUT OFF by pressing the CH ▲ / ▼ buttons. When done with steps 6, 7 and 8 the horizontal line should be pure white if not, then attempt the CUT OFF adjustment again.
9. Input the White Raster Signal from Video In.
10. Press the " 9 " button then the " 1 " button. The display will momentarily show " DRIVE R " (R=Red) adjust the RED DRIVE as need with the CH ▲ / ▼ buttons.
11. Press the " 2 " button. The display will momentarily show ' DRIVE B " (B=Blue)". Adjust the BLUE DRIVE as needed with the CH ▲ / ▼ buttons.
12 Turn the power off and on again.

9. Sub-Brightness Adjustment

Purpose: To get proper brightness.

Symptom of Misadjustment: If Sub-Brightness is incorrect, proper brightness cannot be obtained by adjusting the Brightness Control.

Test Point	Adjustment Point	Mode	Input
—	CH UP/DOWN Button	EXT	Gray Scale
Tape	M. EQ.	Spec.	
—	Pattern Generator	See below	

Figure

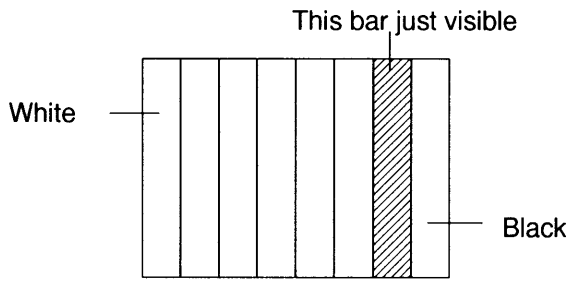


Fig. 3

Note: GRay Scale Setup level --- 10 IRE

1. Enter the Service Mode. (See page 1-4-2) Then input Gray Scale signal from Video in.
2. Press MENU button. (Display changes BRIGHT, CONTRAST, COLOR, TINT and SHARPNESS cyclically when MENU button is pressed). Select BRIGHT and press VOL UP/DOWN button so that the bar is just visible (See above figure).
3. Turn the power off and on again.

10. Focus Adjustment

Purpose: Set the optimum Focus.

Symptom of Misadjustment: If Focus Adjustment is incorrect, blurred images are shown on the display.

Test Point	Adjustment Point	Mode	Input
—	Focus Control	—	Monoscope
Tape	M. EQ.	Spec.	
—	Pattern Generator	See below.	

Note: Focus VR (FBT) — H/V CBA

FBT= Fly Back Transformer

1. Operate the unit more than 30 minutes
2. Face the unit to the East and Degauss the CRT using Degaussing Coil.
3. Input the Monoscope Pattern.
4. Adjust the Focus Control on the FBT to obtain clear picture.

11. Head Switching Position Adjustment

Purpose: Determine the Head Switching Point during Play back.

Symptom of Misadjustment: May cause Head Switching Noise or Vertical Jitter in the picture.

Note: Unit reads Head Switching Position automatically and displays it on the screen (Upper Left Corner).

1. Playback test tape (FL6A).
2. Enter the Service Mode. (See page 1-4-2) Then press the number 5 button on the remote control unit.
3. The Head Switching position will display on the screen,If adjustment is necessary Follow Step 4. 6.5H(412.7μs) is preferable.
4. Press " CH ▲ " or " CH ▼ " button on the Remote Control Unit if necessary the Value will be changed in 0.5H step up or down. Adjustable Range is up to 9.5H. If the value is beyond adjustable range, the display will change as:
   Lower out of range; 0.0H
   Upper out of range; -.-H
5. Turn the power off and on again.

White Black

12. SIF Adjustment

Purpose: To set the SIF (Sound Intermediate Frequency).

Symptom of Misadjustment: Audio may not sound correctly.

Note: This adjustment automatically done by the micro computer.

13. CCS Text Box Location

When replacing the CRT, the CCS Box does not stay in appropriate position. Then, replace micro computer.

Note: This adjustment automatically done by the micro computer.

The following 2 adjustments normally are not attempted in the field. Only when replacing the CRT then adjust as a preparation.

14. Purity Adjustment

Purpose: To obtain pure color.

Symptom of Misadjustment: If Color Purity Adjustment is incorrect, large areas of color may not be properly displayed.

Test Point	Adjustment Point	Mode	Input
---	Deflection Yoke Purity Magnet	---	Red Color
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	
Figure			

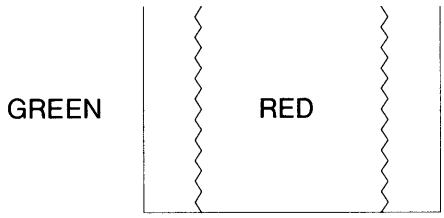


Fig. 4

1. Set the unit facing east.
2. Operate the unit for over 30 minutes before adjusting.
3. Fully degauss the unit using an external degaussing coil.
4. Set the unit to the AUX Mode which is located before CH2 then input a red raster from video in.
5. Loosen the screw on the Deflection Yoke Clamper and pull the Deflection Yoke back away from the screen. (See Fig. 5)
6. Loosen the Ring Lock and adjust the Purity Magnets so that a red field is obtained at the center of the screen. Tighten Ring Lock. (See Fig. 4,5)
7. Slowly push the Deflection Yoke toward the bell of the CRT and set it where a uniform red field is obtained.
8. Tighten the clamp screw on the Deflection Yoke.

15. Convergence Adjustment

Purpose: To obtain proper convergence of red, green and blue beams.

Symptom of Misadjustment: If Convergence Adjustment is incorrect, the edge of white letters may have color edges.

Test Point	Adjustment Point	Mode	Input
---	C.P. Magnet (RB), C.P. Magnet (RB-G), Deflection Yoke	---	Dot Pattern or Crosshatch
Tape	M. EQ.	Spec.	
---	Pattern Generator	See below.	
Figures			

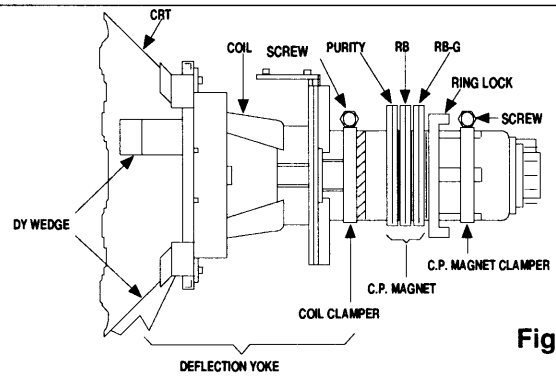


Fig. 5

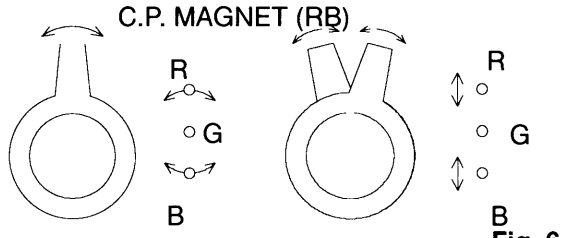


Fig. 6

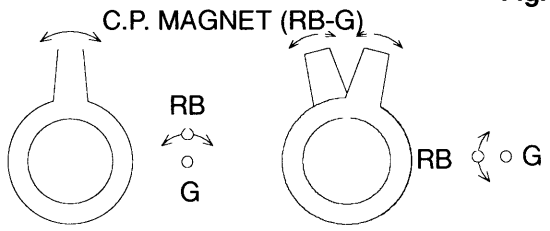
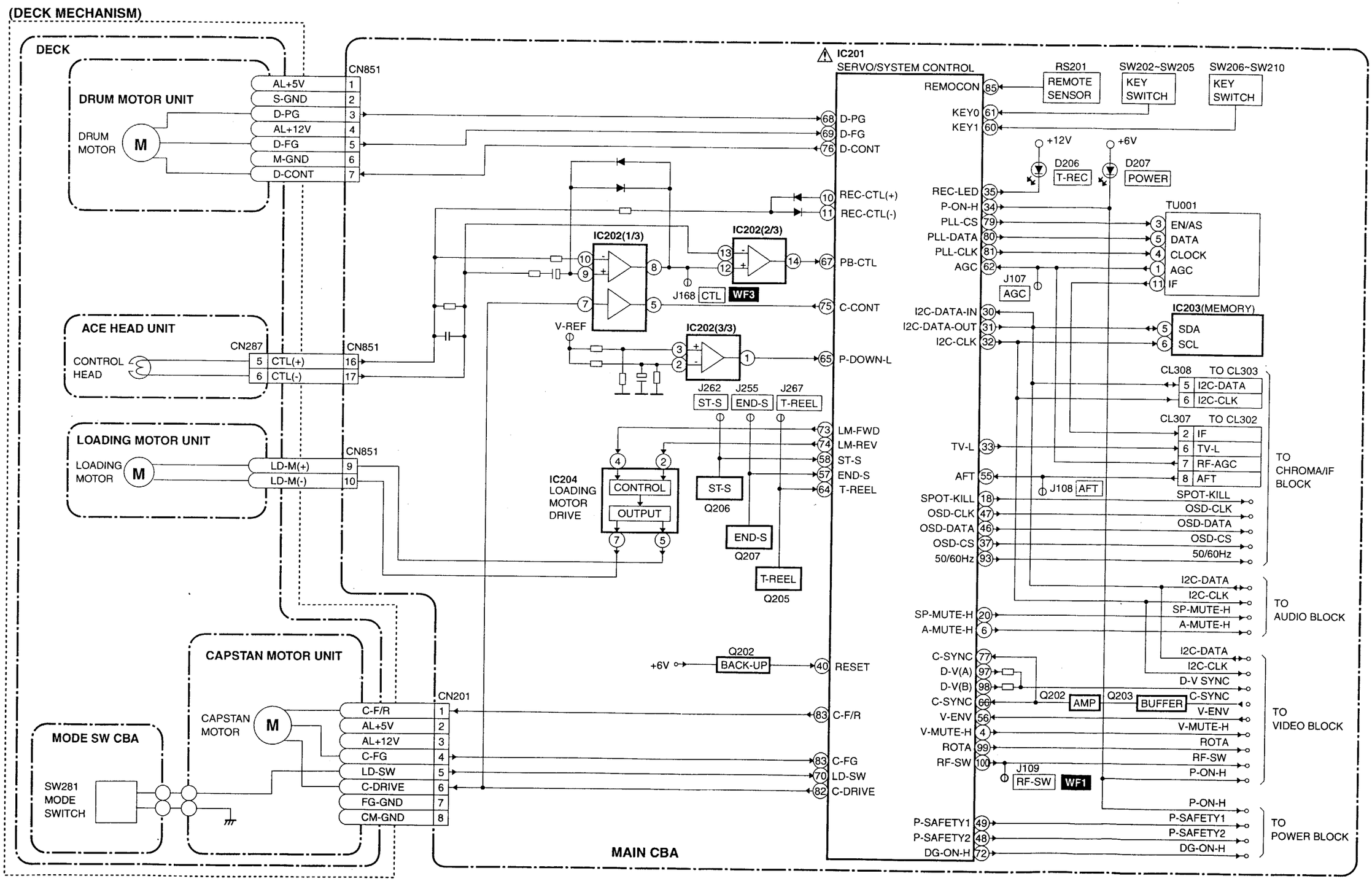


Fig. 7

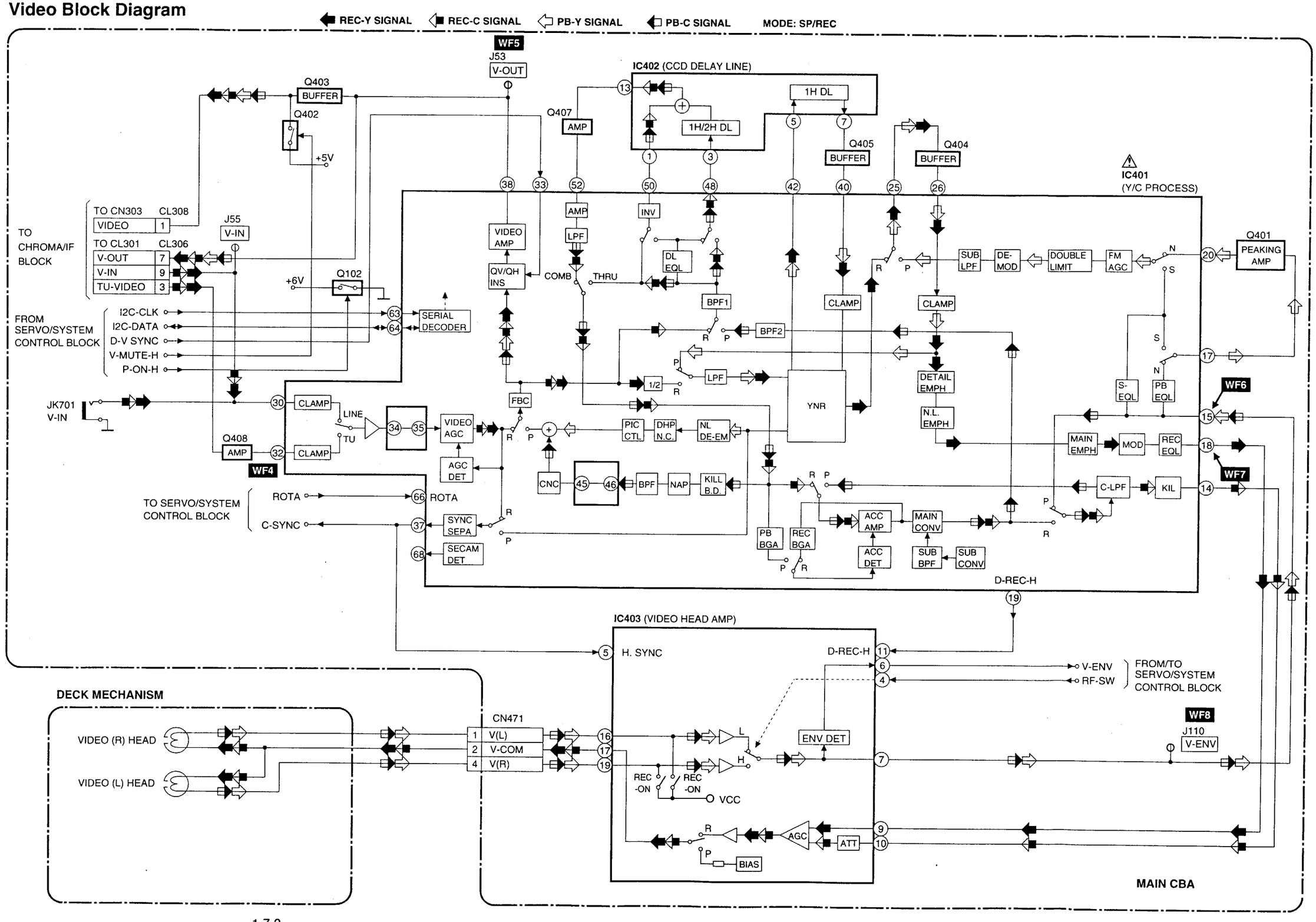
1. Set the unit to the AUX Mode which is located before CH2 then input a Dot or crosshatch pattern.
2. Loosen the Ring Lock and align red with blue dots or Crosshatch at the center of the screen by rotating (RB) C.P. Magnets. (See Fig. 6)

3. Align red / blue with green dots at the center of the screen by rotating (RB-G) C.P. Magnet. (See Fig. 7)
4. Fix the C.P. Magnets by tightening the Ring Lock.
5. Remove the DY Wedges and slightly tilt the Deflection Yoke horizontally and vertically to obtain the best overall convergence.
6. Fix the Deflection Yoke by carefully inserting the DY Wedges between CRT and Deflection Yoke.

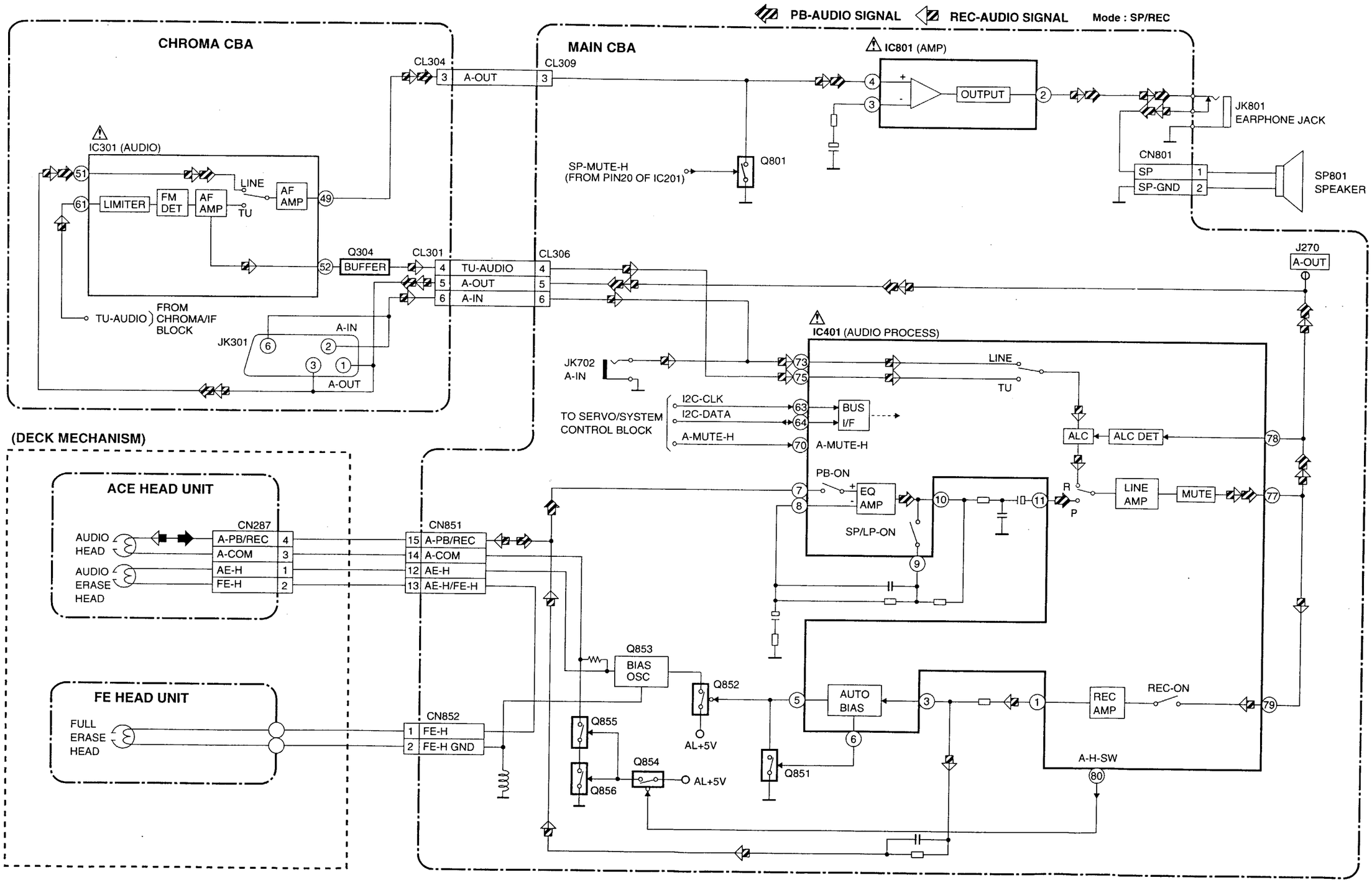
Servo/System Control Block Diagram



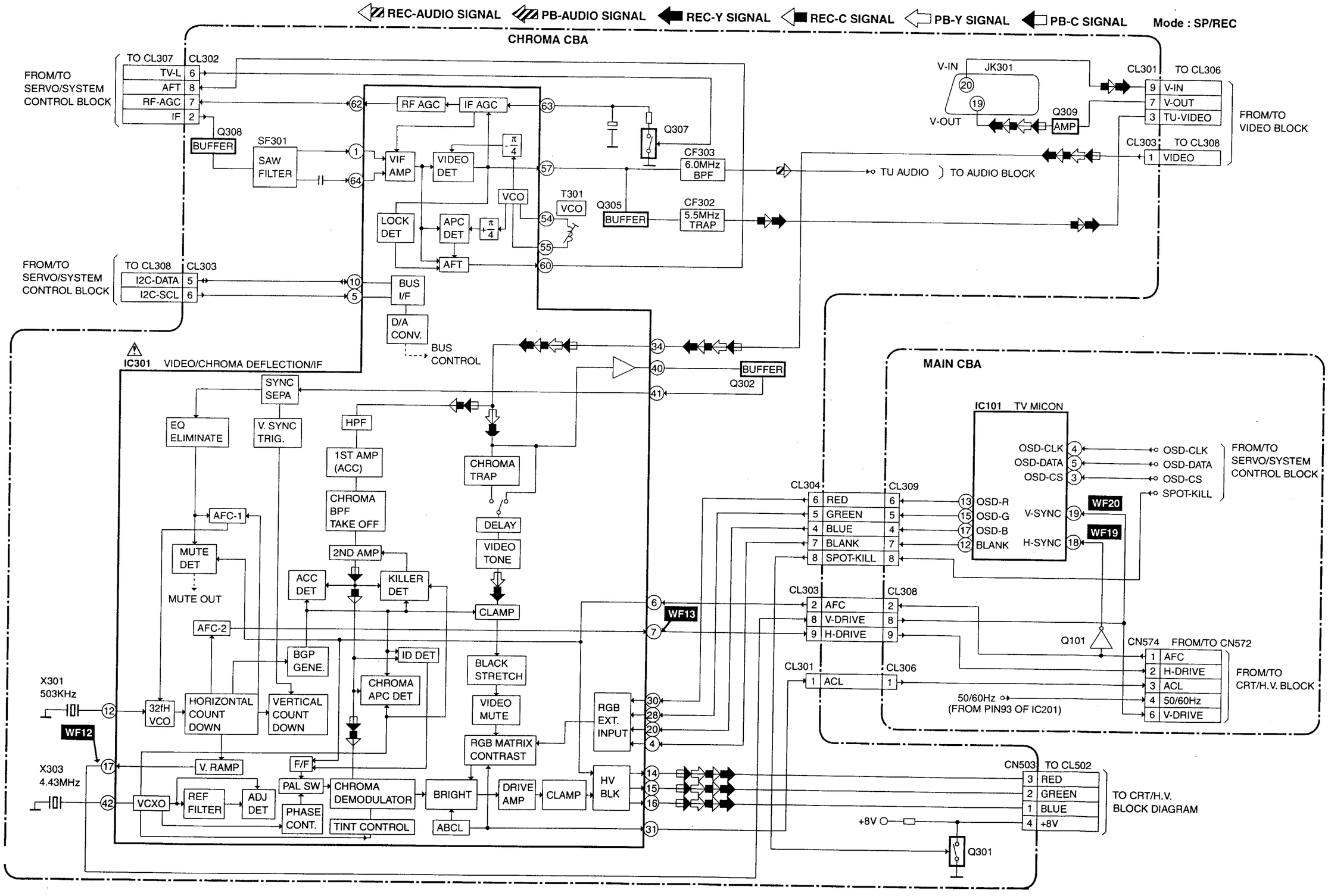
Video Block Diagram



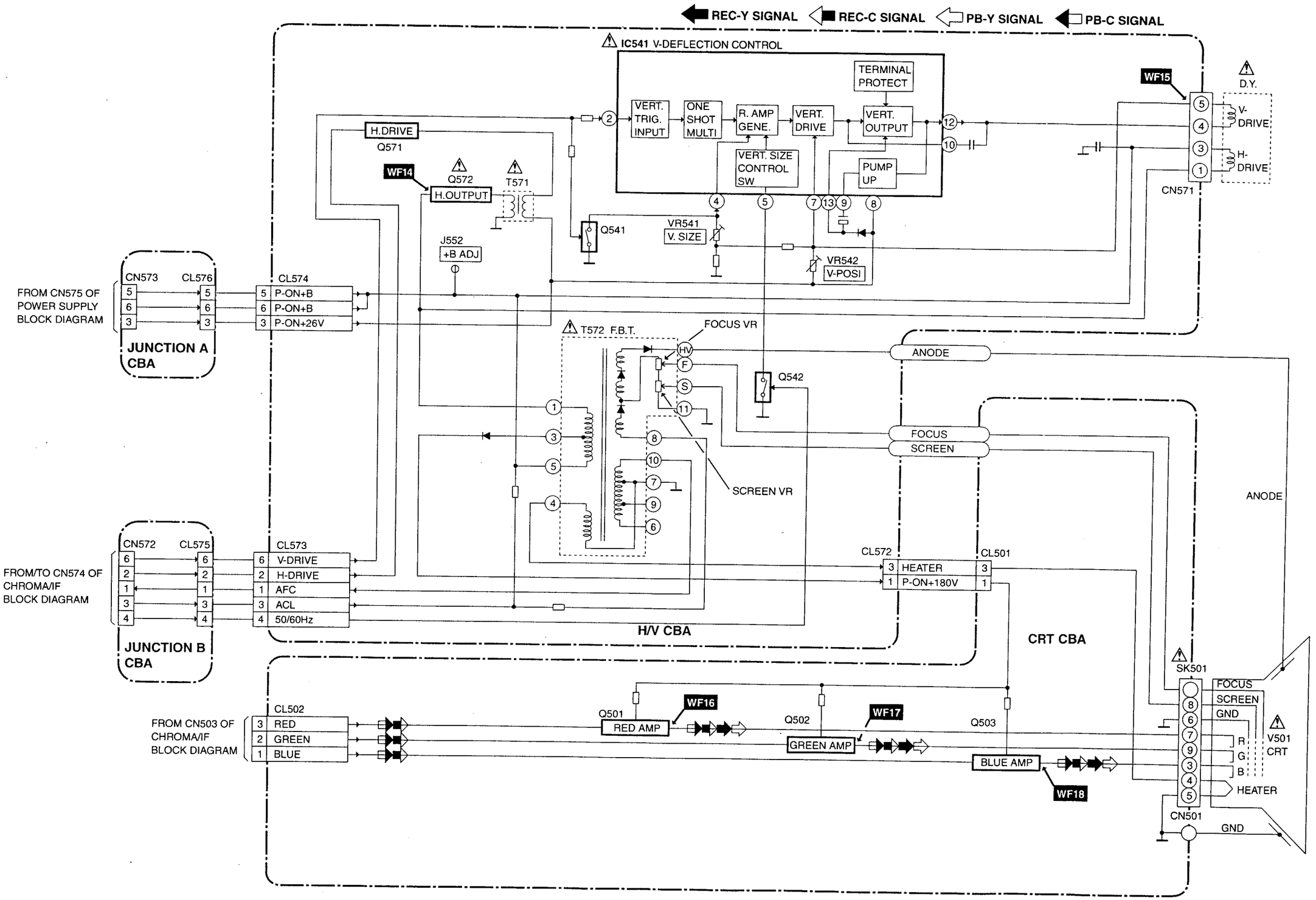
Audio Block Diagram



Chroma/IF Block Diagram

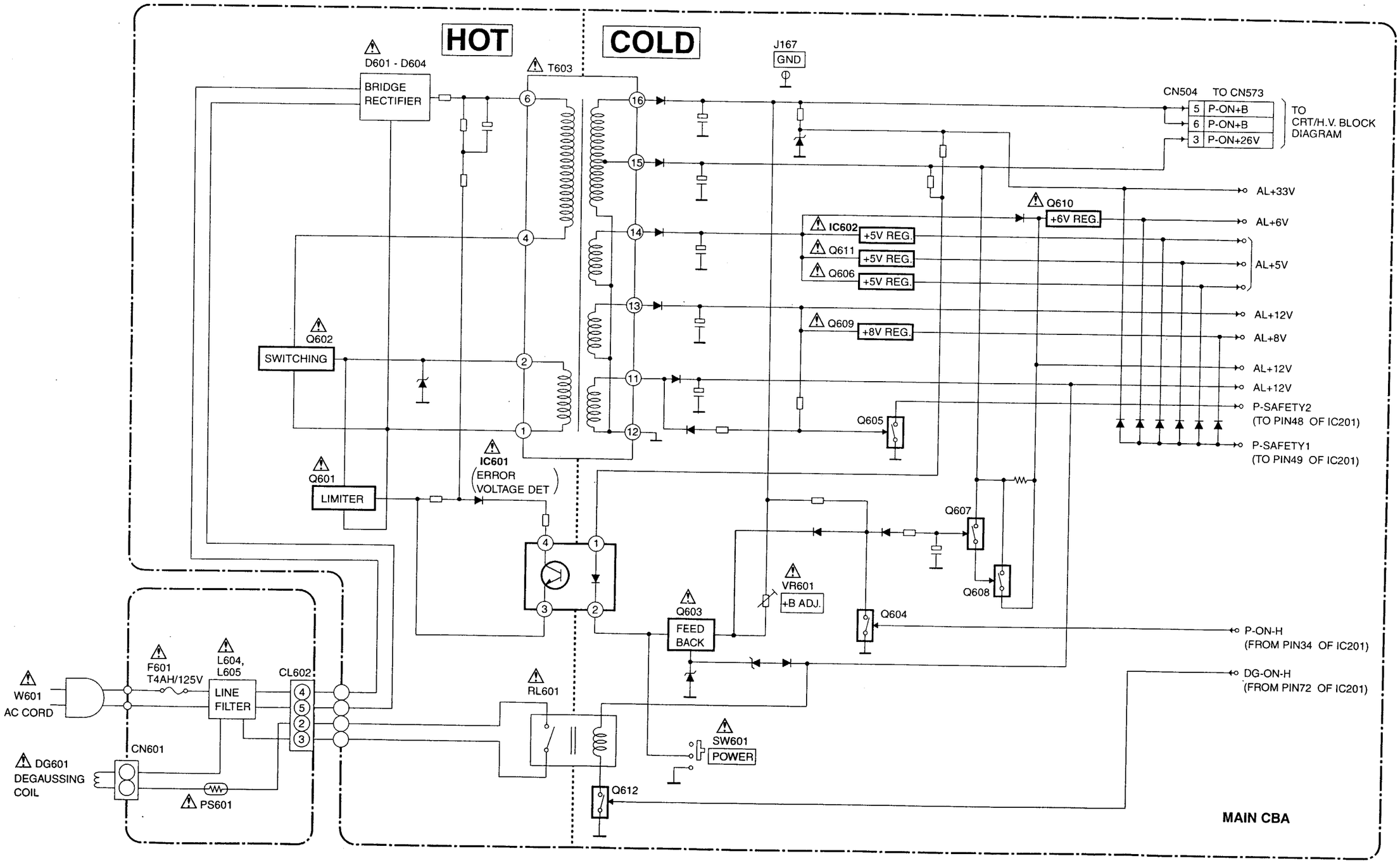


CRT/H.V. Block Diagram



Power Supply Block Diagram

CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE T4AH/250V FUSE.



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℃	-25~+85℃
(F)	+30 -80%	20℃	-25~+85℃
(SR)	±15%	20℃	-25~+85℃
(Z)	+30 -80%	20℃	-10~+70℃

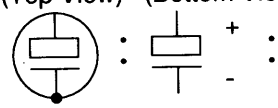
Note:

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.

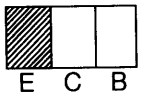
CBA Symbols

(Top View) (Bottom View)



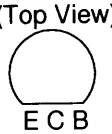
: Electrolytic Capacitor

(Bottom View)



: Transistor or Digital Transistor

(Top View)

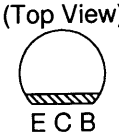


NPN Transistor

(Top View)

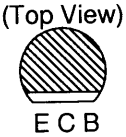
PNP Transistor

(Top View)



NPN Digital Transistor

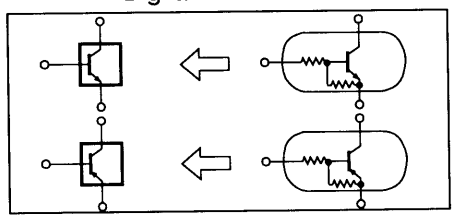
(Top View)



PNP Digital Transistor

Schematic Diagram Symbols

Digital Transistor



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

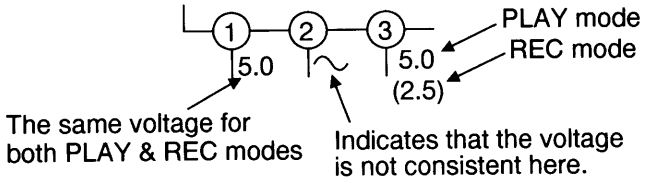
(1) Prefix symbol "CN" means "connector" (can disconnect and reconnect).

(2) Prefix symbol "CL" means "wire-solder holes of the PCB" (wire is soldered directly).

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

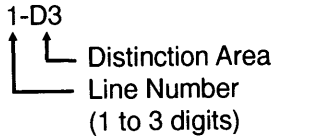
6. Mode: SP/REC

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



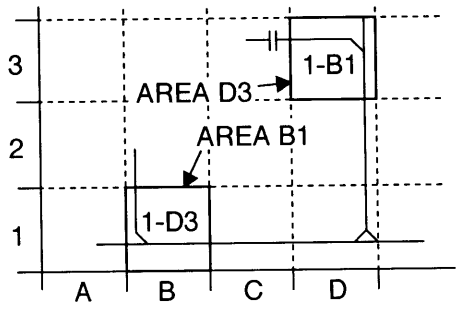
Unit: Volts

8. How to read converged lines



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".



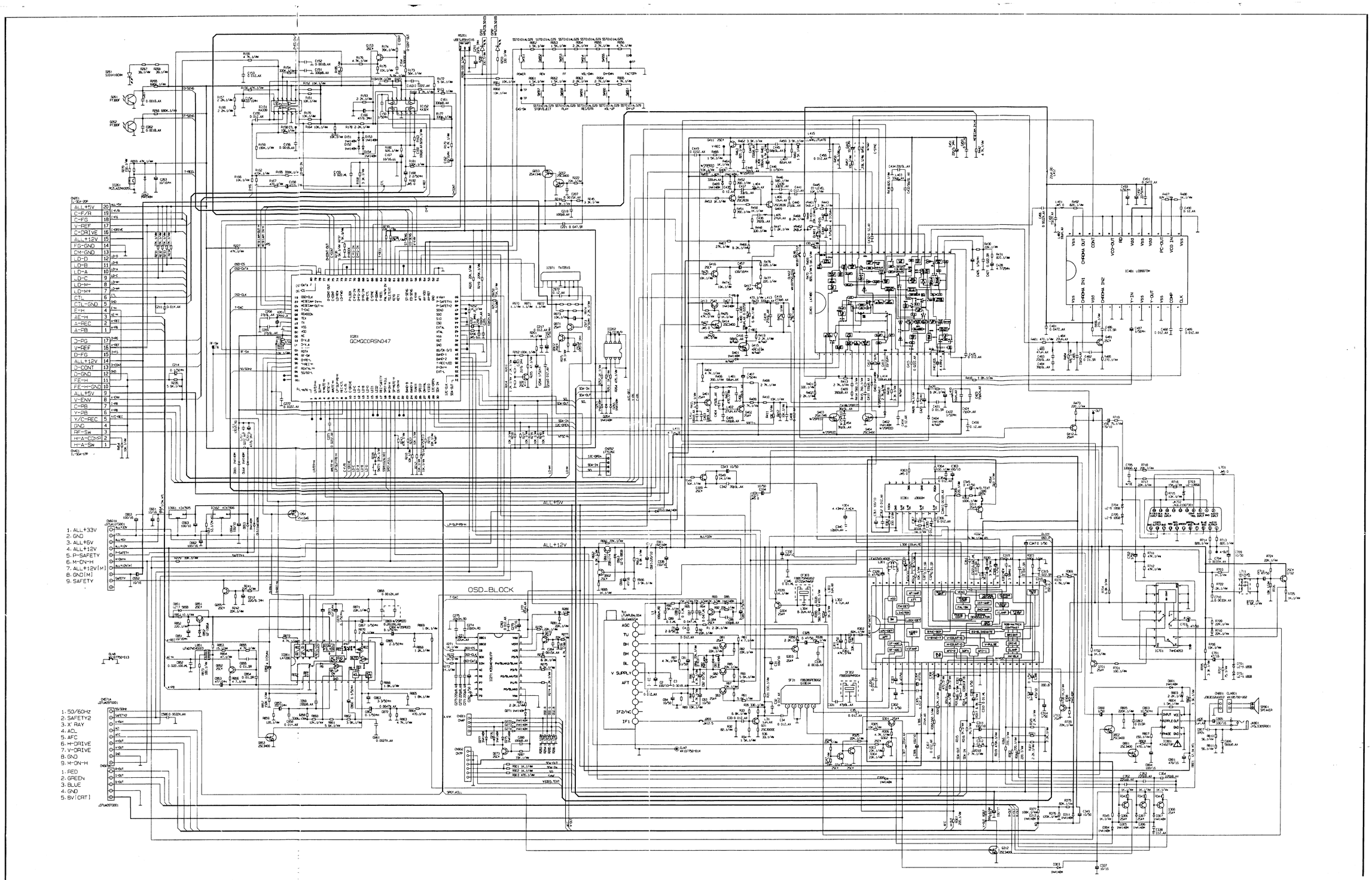
9. Test Point Information

: 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.

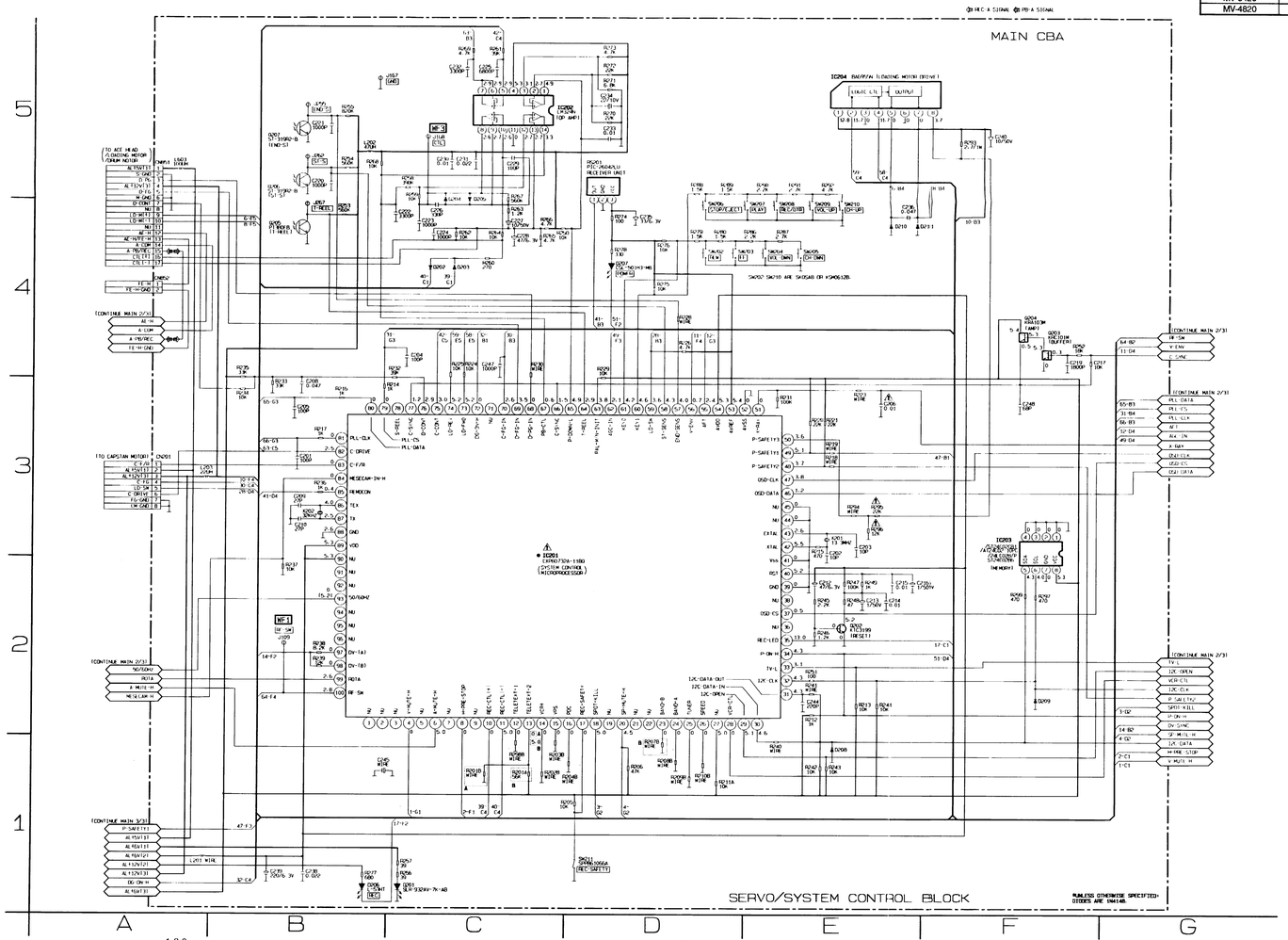


NOTES:
CHASSIS SCHEMATIC DIAGRAM NOTES.
1. ALL RESISTOR VALUES ARE IN OHMS. K=1000 M=1000K
2. ALL CAPACITANCE VALUES ARE IN uF UNLESS OTHERWISE NOTED pF=uF
3. ⚠ SAFETY RELIGNMENTS CONFORMANT IN ACCORDANCE WITH PRESENT SAFETY REGULATIONS. THESE COMPONENTS MUST ONLY BE REPLACED BY ORIGINAL PARTS.
4. [ ] WAVEFORM READINGS
5. 2SA= 2SA608SP(F)-2SA1318(F)-2SA1318(U)-2SA1015(GR)
2SC= 2SC5360SP(F)-2SC5360SP(F)-2C5331(F)-2SC5331(U)-2SC1015(GR)

Main 1/3 Schematic Diagram

Comparison Chart of Models and Marks

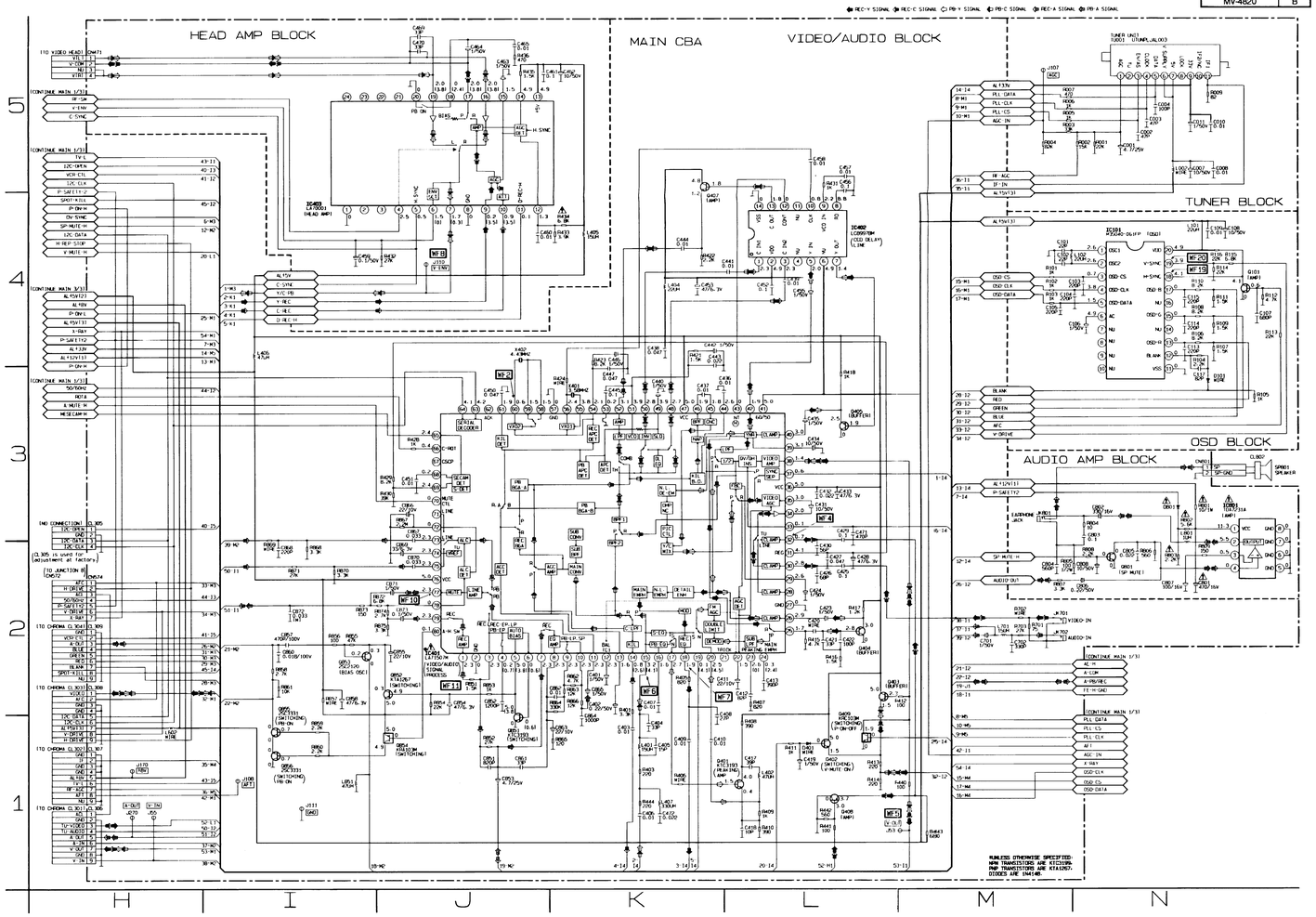
MODEL	MARK
MV-3420	A
MV-4820	B



Main 2/3 Schematic Diagram

Comparison Chart of Models and Marks

MODEL	MARK
MV-3420	A
MV-4820	B



B6902SCM2X

Main 3/3 Schematic Diagram

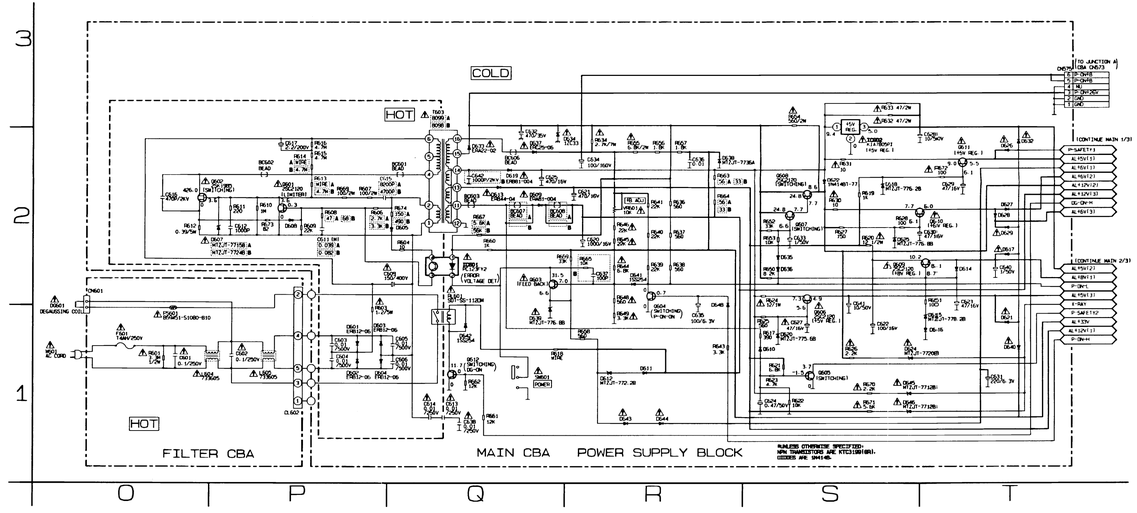
CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

CAUTION !
Fixed voltage power supply circuit is used in this unit.
If Main Fuse (F601) 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.

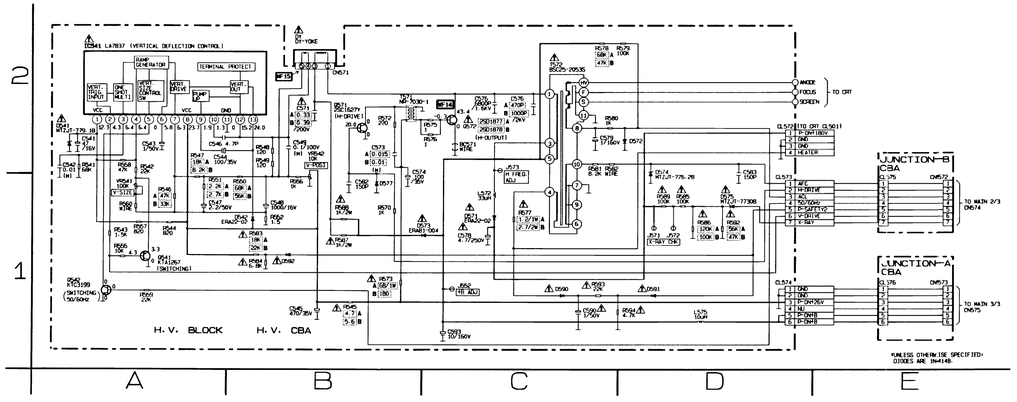
Comparison Chart of Models and Marks

MODEL	MARK
MV-3420	A
MV-4820	B



B6902SCM3X

H.V. Schematic Diagram

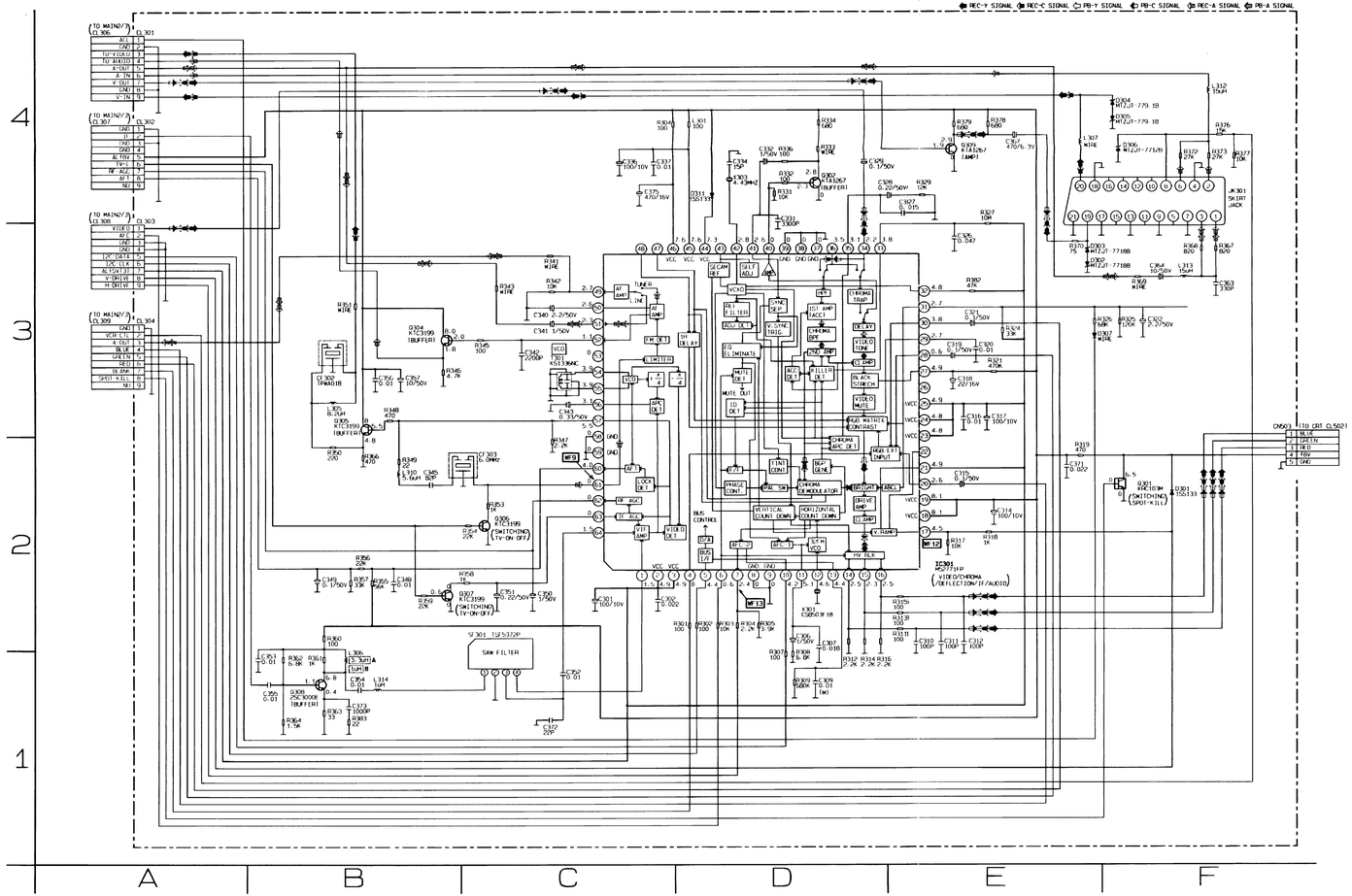


B6902SCHVX

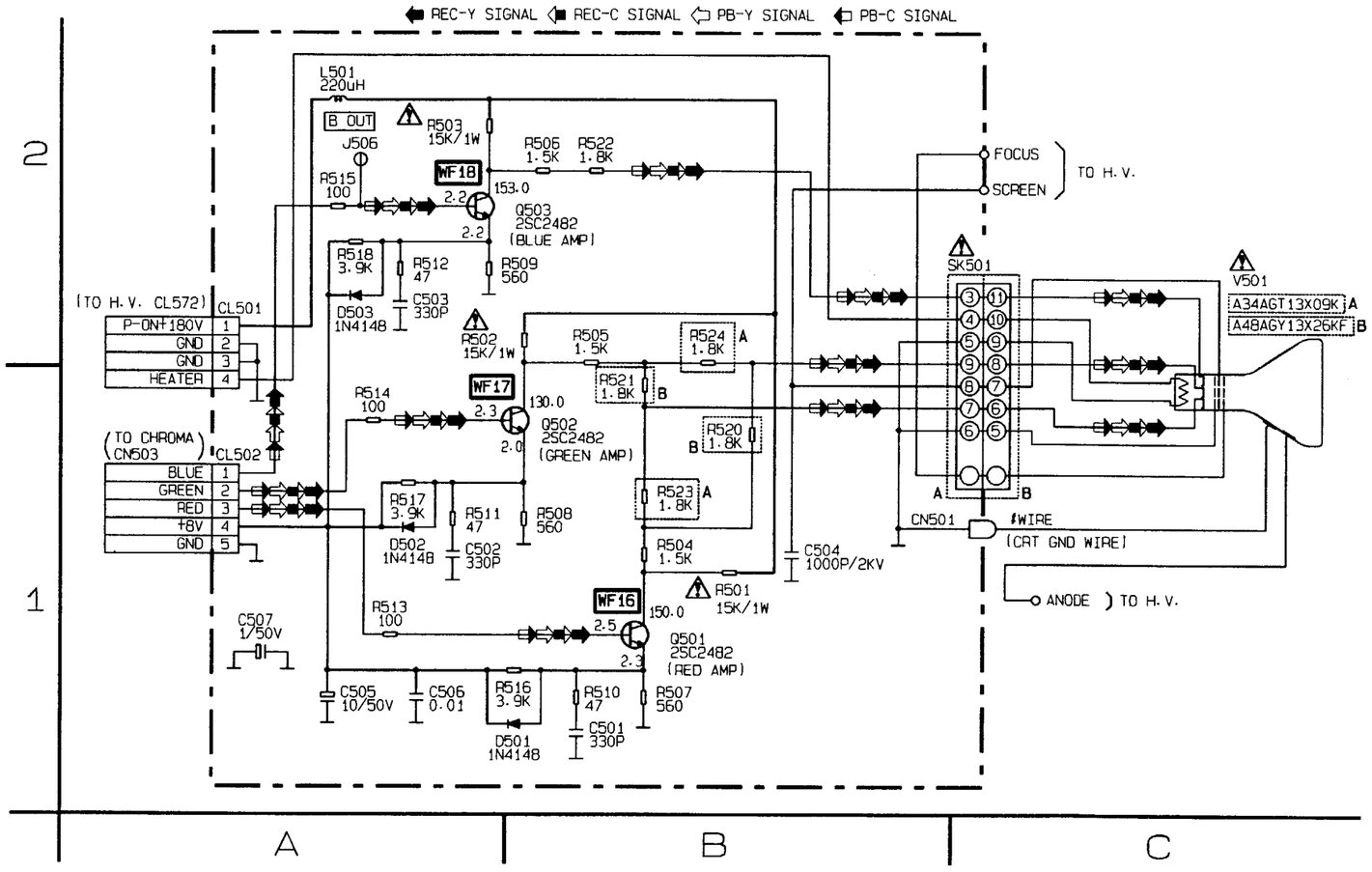
Chroma Schematic Diagram

Comparison Chart of Models and Marks

MODEL	MARK
MV-3420	A
MV-4820	B



CRT Schematic Diagram

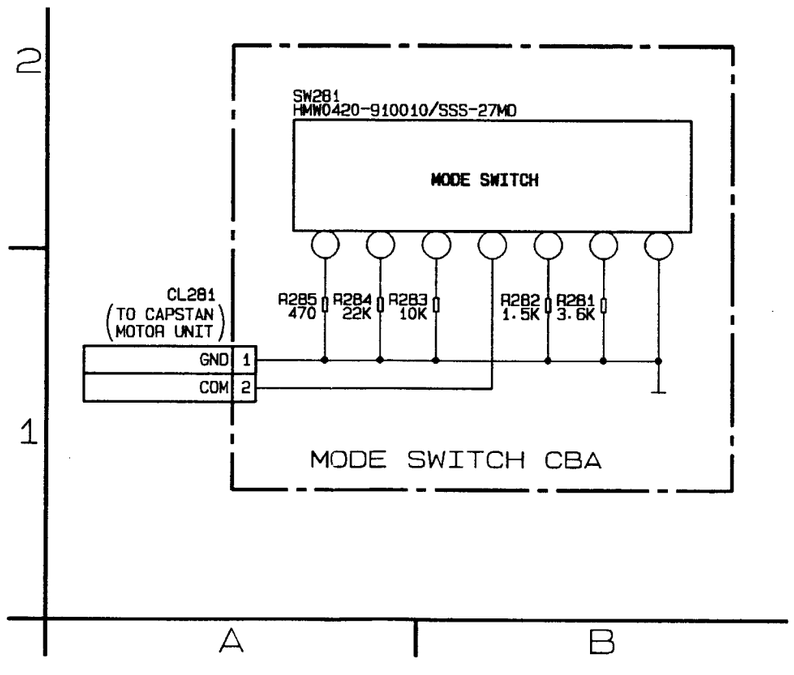


B6902SCCRTX

Mode SW Schematic Diagram

Comparison Chart of Models and Marks

MODEL	MARK
MV-3420	A
MV-4820	B



B5900SCMS

Junction A CBA Top View

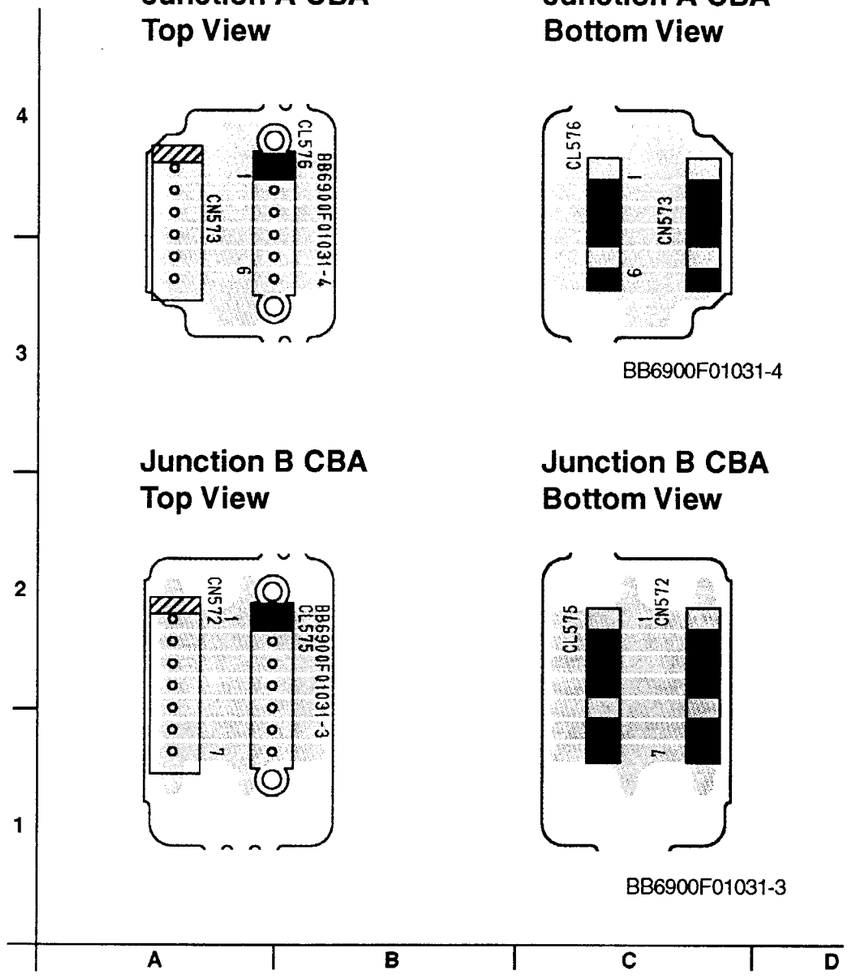
Junction A CBA Bottom View

BB6900F01031-4

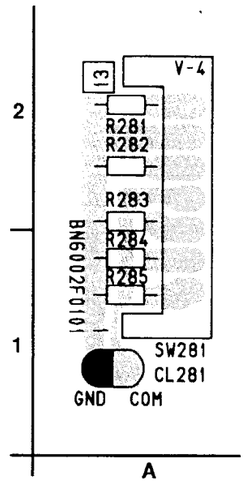
Junction B CBA Top View

Junction B CBA Bottom View

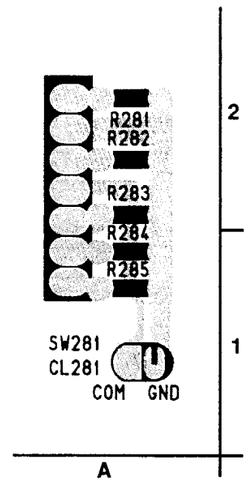
BB6900F01031-3



Mode SW CBA Top View



Mode SW CBA Bottom View

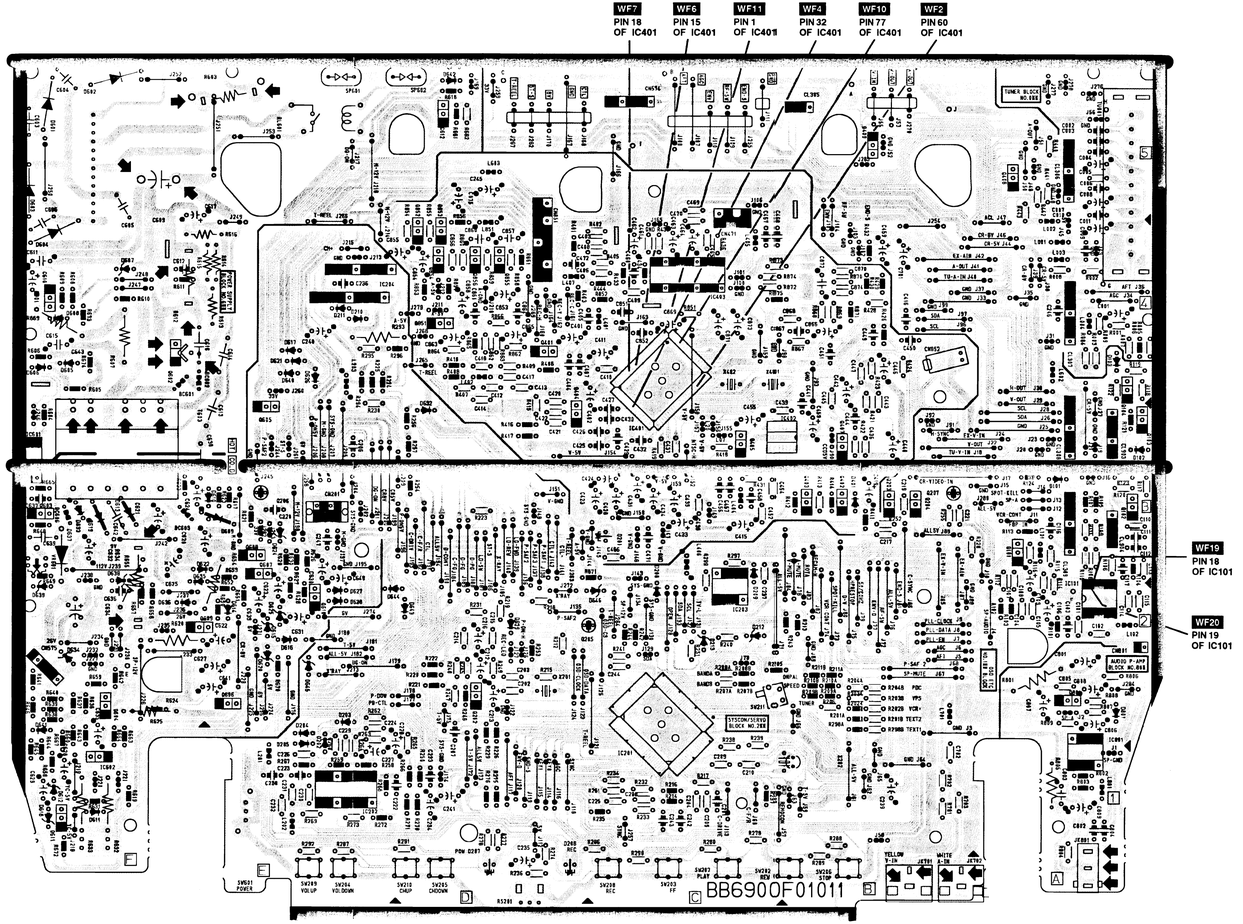


BN6002F01011

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.

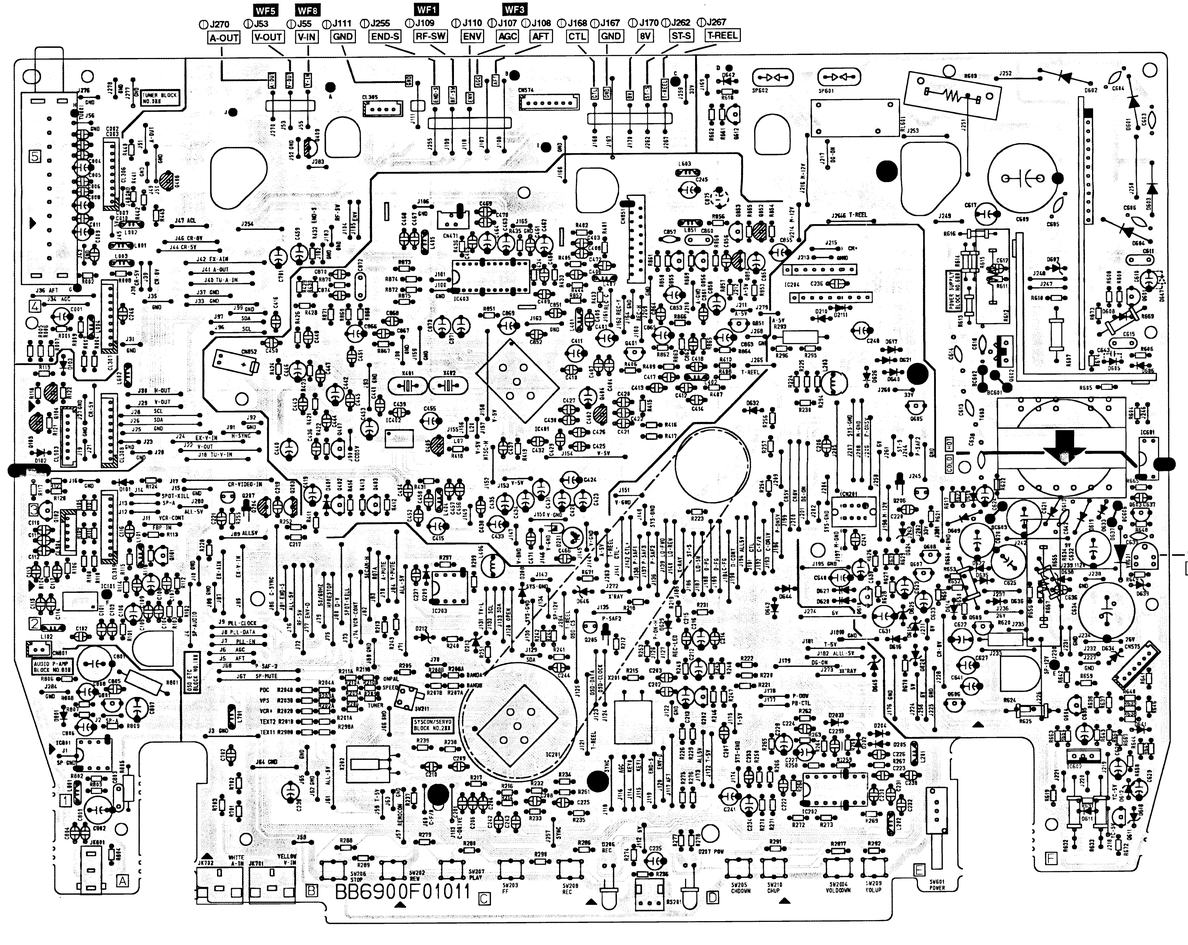
NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING HOT GND AS A COMMON TERMINAL.



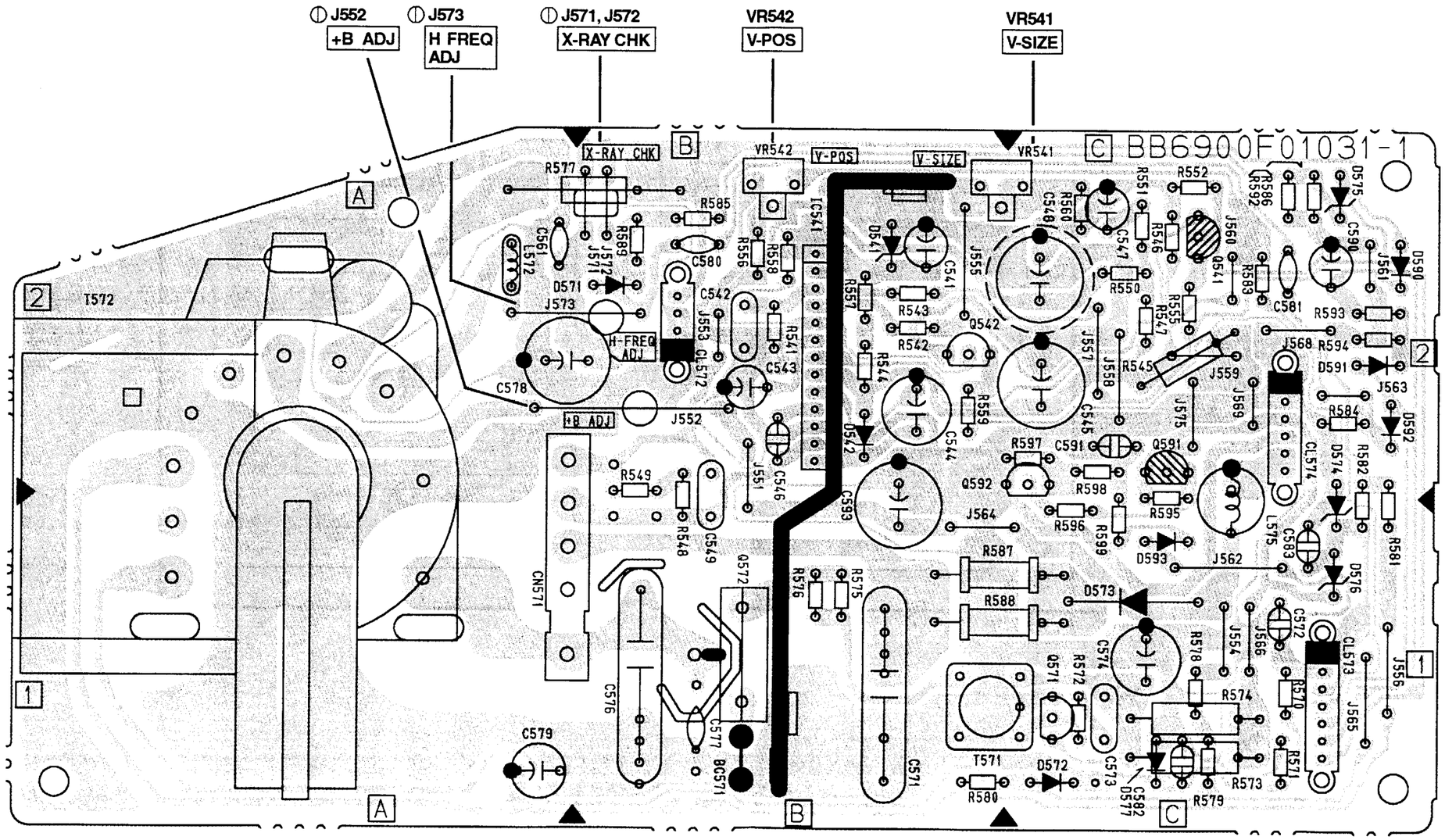
Main CBA Top View

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.

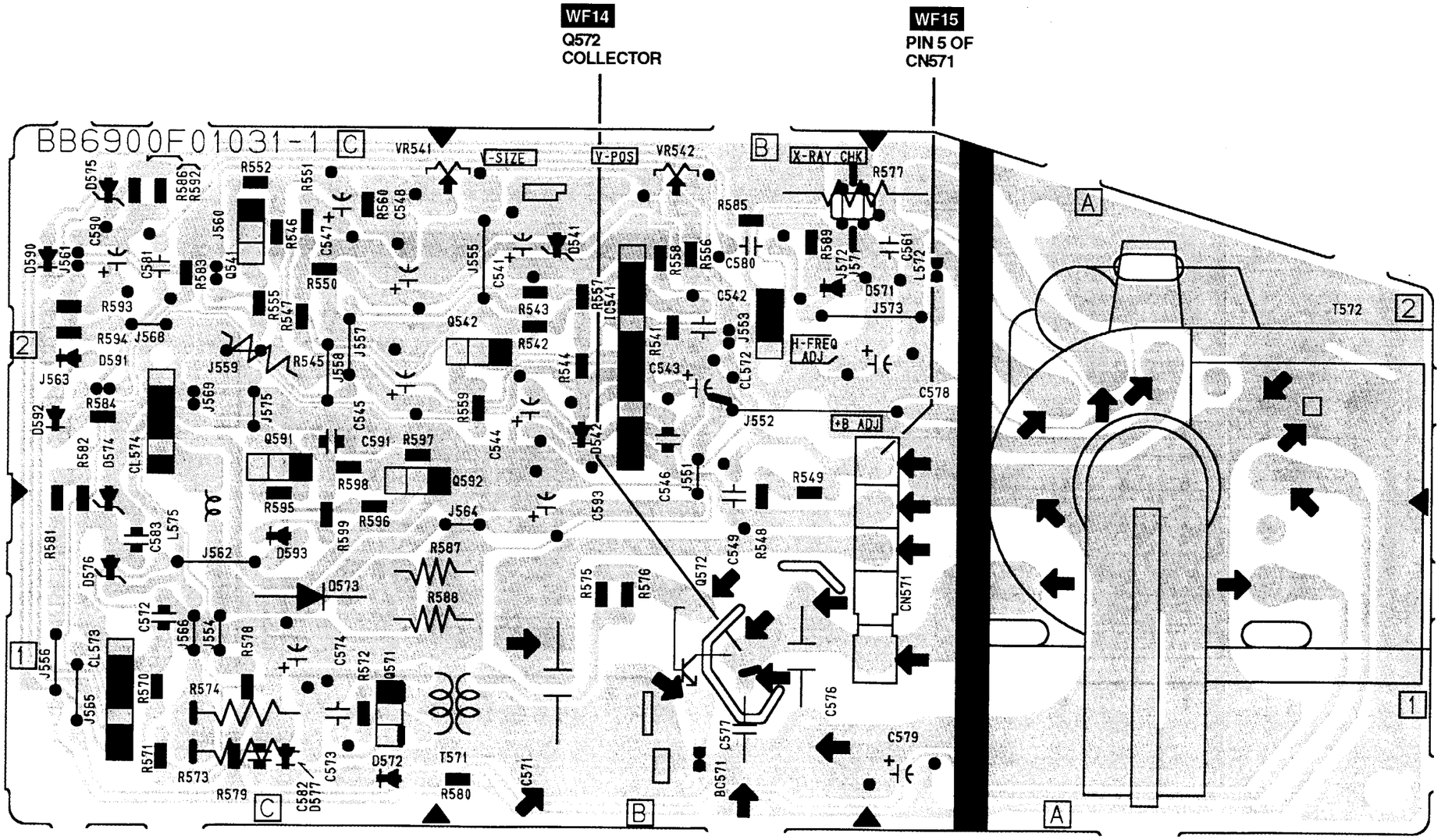
NOTE :
THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING HOT GND AS A COMMON TERMINAL.



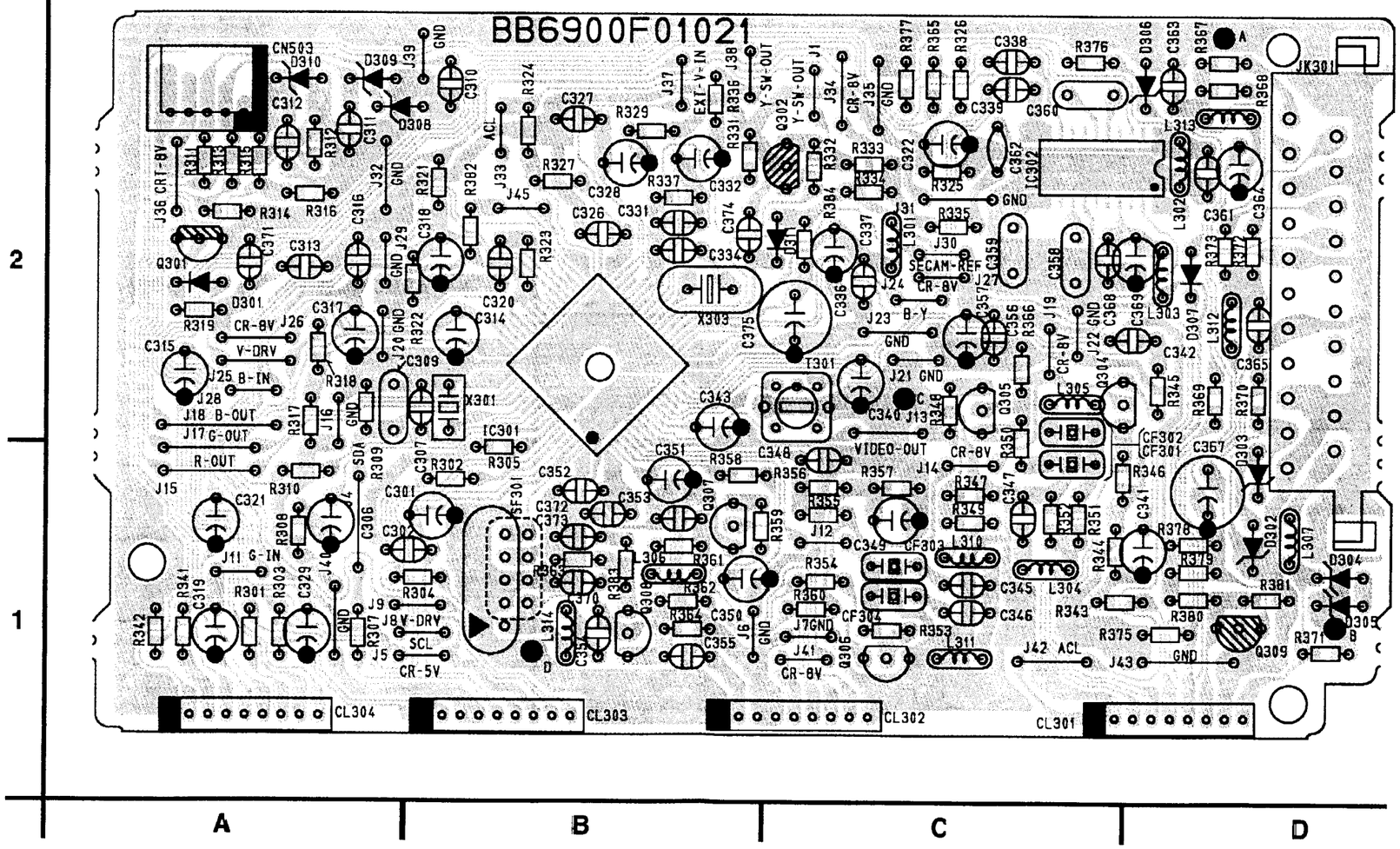
H.V. CBA Top View



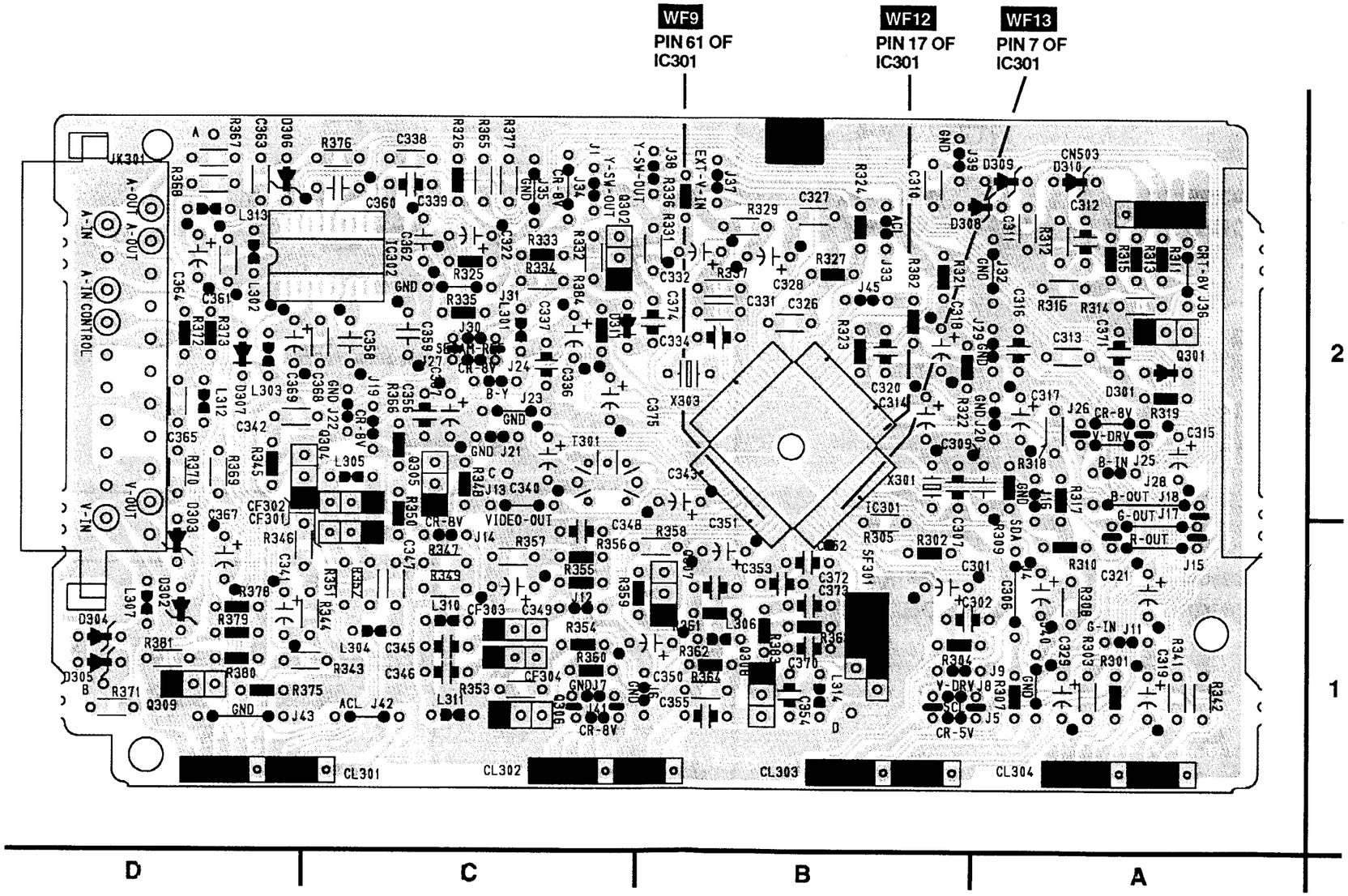
H.V. CBA Bottom View



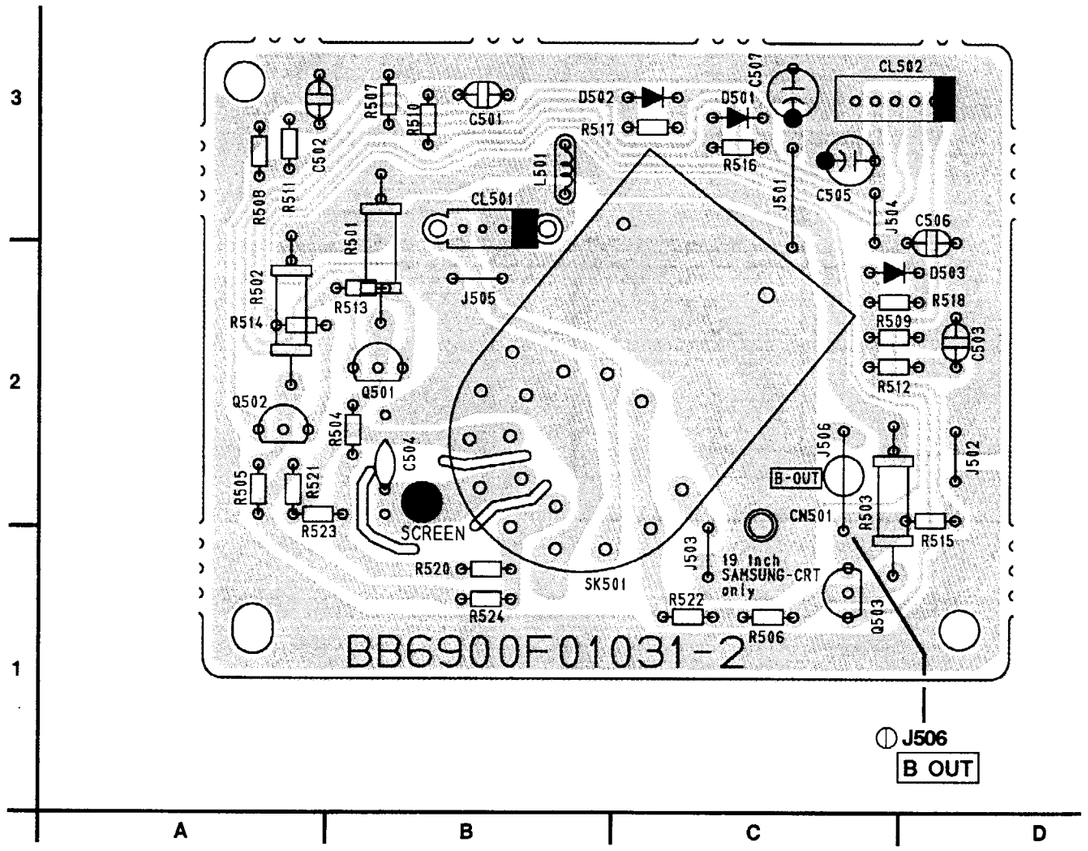
Chroma CBA Top View



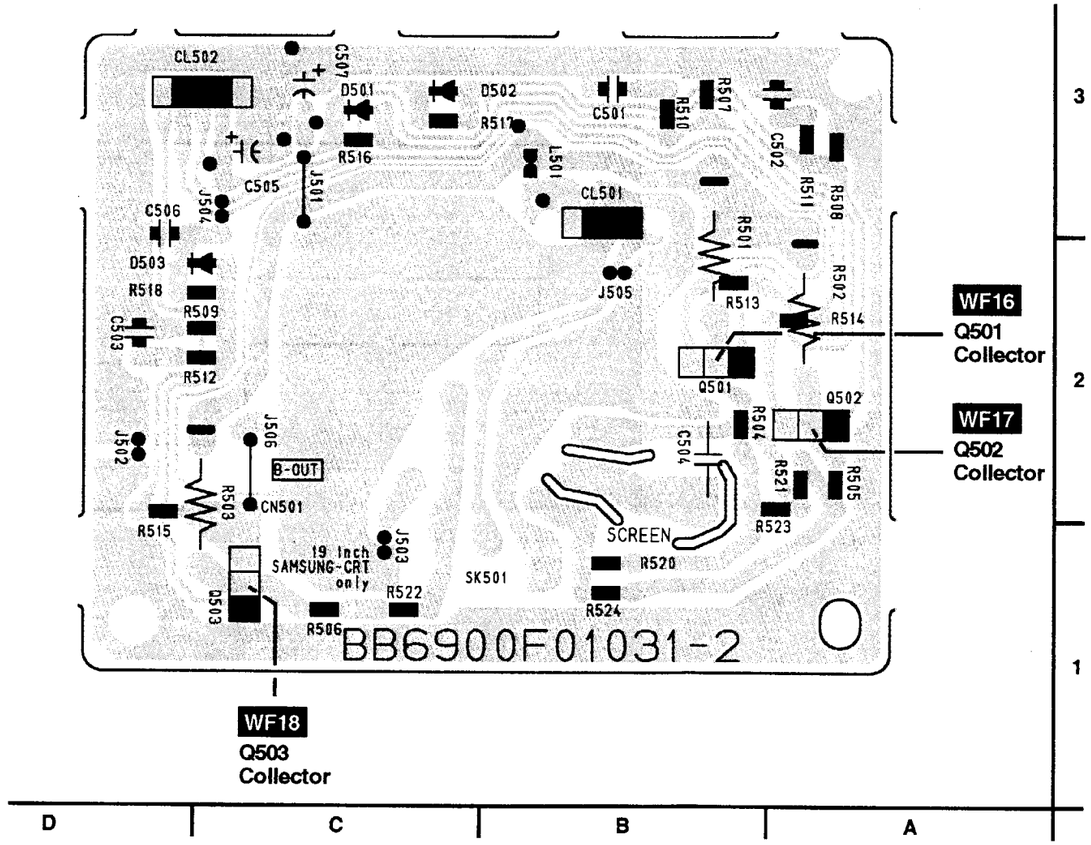
Chroma CBA Bottom View



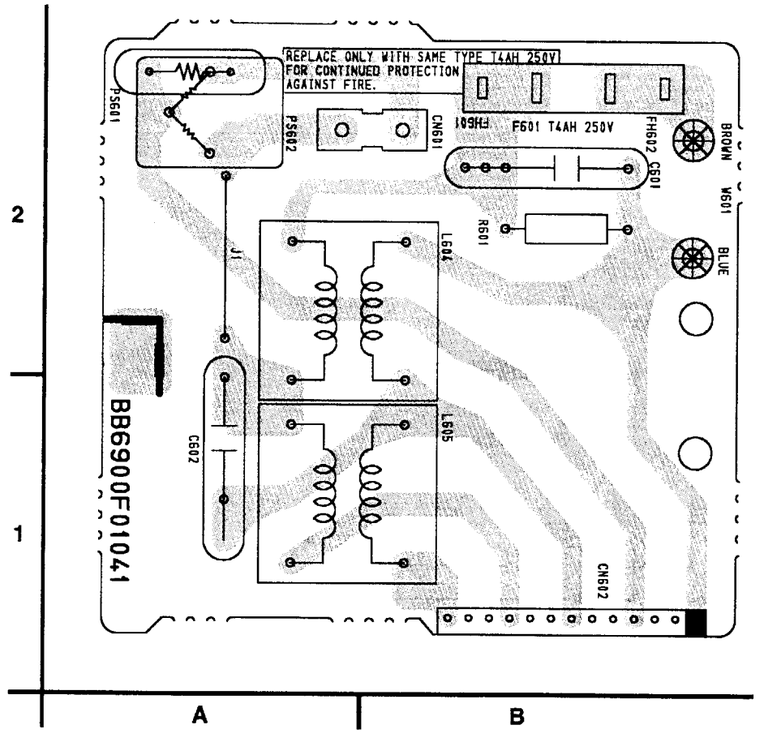
CRT CBA Top View



CRT CBA Bottom View



Filter CBA Top View



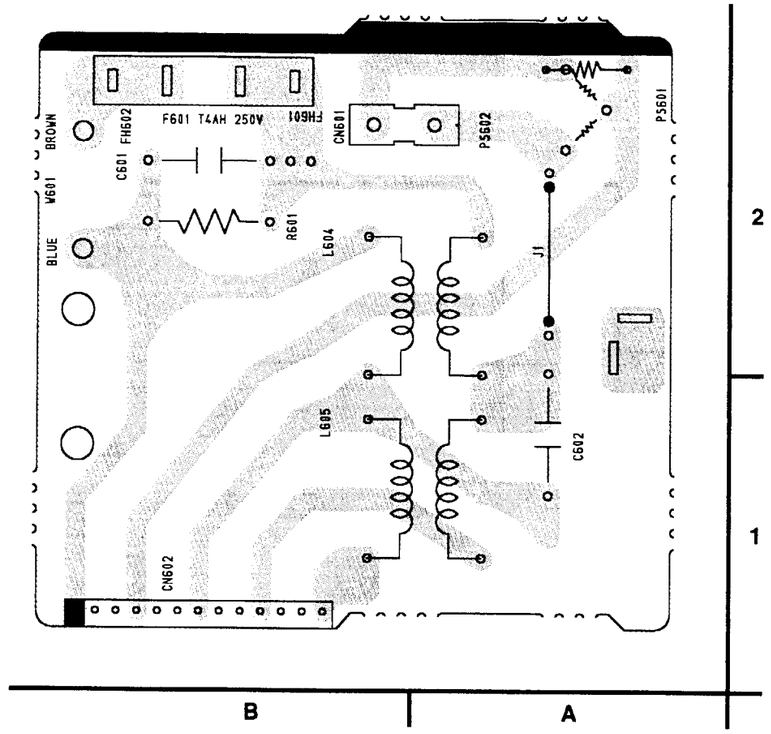
CAUTION !

Fixed voltage power supply circuit is used in this unit.
If Main Fuse (F601) 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.

CAUTION

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

Filter CBA Bottom View



BB6900F01041

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.

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

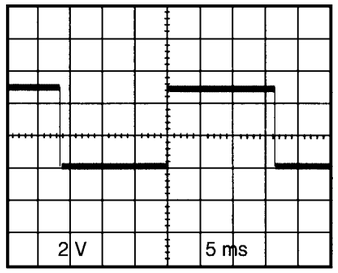
WAVEFORMS

WAVEFORM NOTES

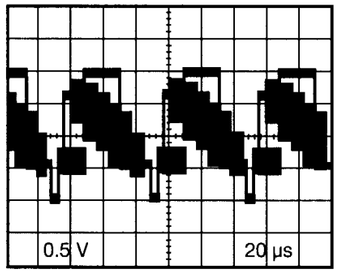
INPUT: NTSC COLOR BAR SIGNAL

OTHER CONTROLS : CENTER POSITION

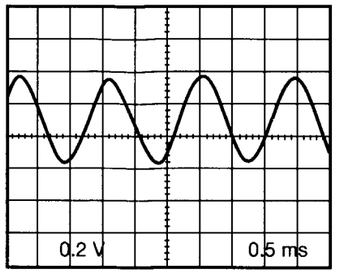
VOLTAGES SHOWN ARE RANGE OF OSCILLOSCOPE SETTING



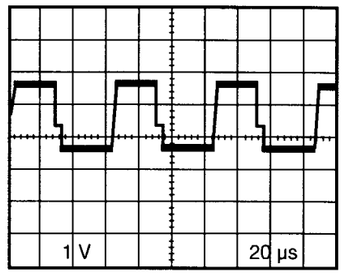
WF1 MAIN 1/4 SCHEMATIC DIAGRAM
J109 RF SW



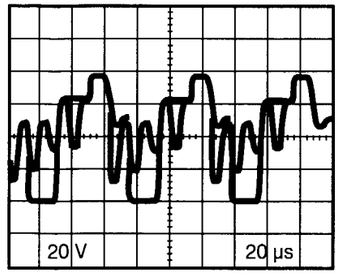
WF5 MAIN 3/4 SCHEMATIC DIAGRAM
J53 V-OUT



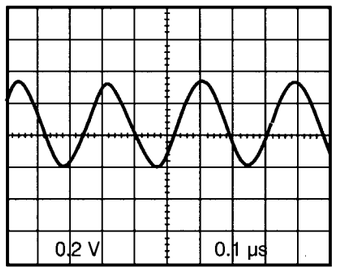
WF9 MAIN 3/4 SCHEMATIC DIAGRAM
IC301 PIN 61



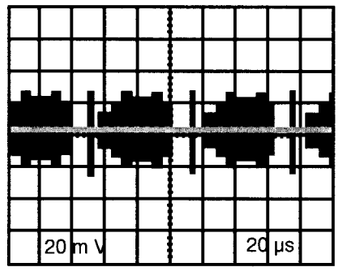
WF13 MAIN 3/4 SCHEMATIC DIAGRAM
IC301 PIN 7



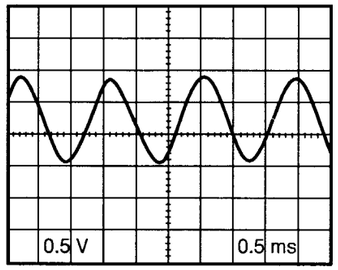
WF17 CRT SCHEMATIC DIAGRAM
Q502 COLLECTOR



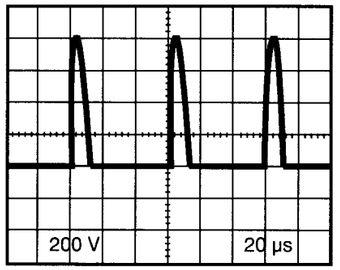
WF2 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 60



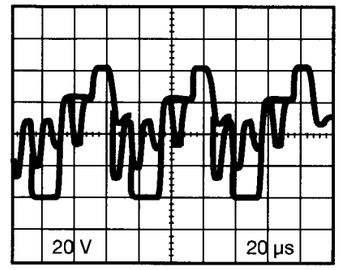
WF6 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 15



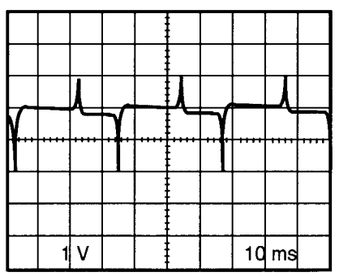
WF10 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 77



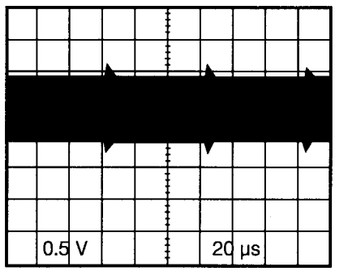
WF14 H/V SCHEMATIC DIAGRAM
Q572 COLLECTOR



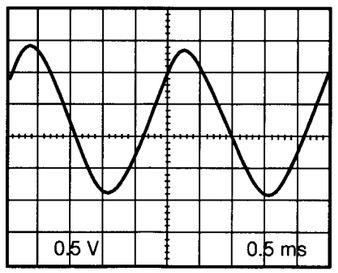
WF18 CRT SCHEMATIC DIAGRAM
Q503 COLLECTOR



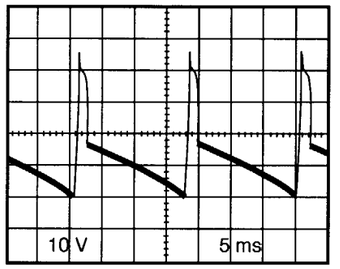
WF3 MAIN 1/4 SCHEMATIC DIAGRAM
J168 CTL



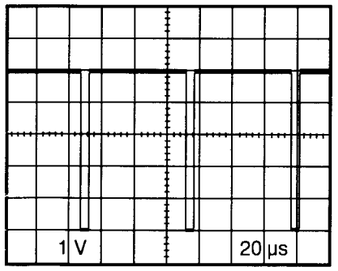
WF7 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 18 Y REC



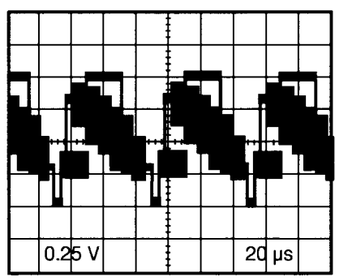
WF11 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 1



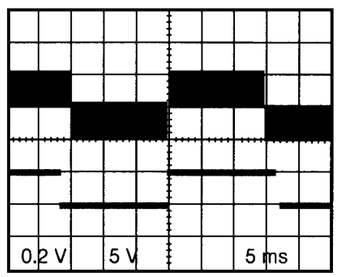
WF15 H/V SCHEMATIC DIAGRAM
CN571 PIN 5



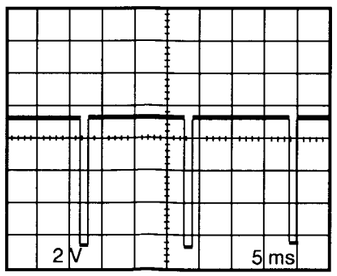
WF19 MAIN 3/4 SCHEMATIC DIAGRAM
IC101 PIN 18



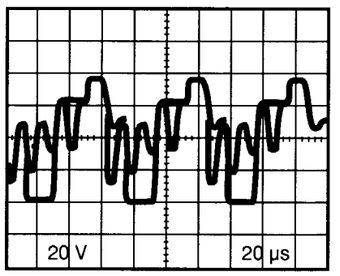
WF4 MAIN 2/4 SCHEMATIC DIAGRAM
IC401 PIN 32



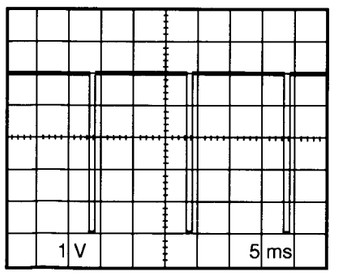
Upper: WF8 Lower: WF1
MAIN 2/4 SCHEMATIC DIAGRAM J110 V-ENV



WF12 MAIN 3/4 SCHEMATIC DIAGRAM
IC301 PIN 17

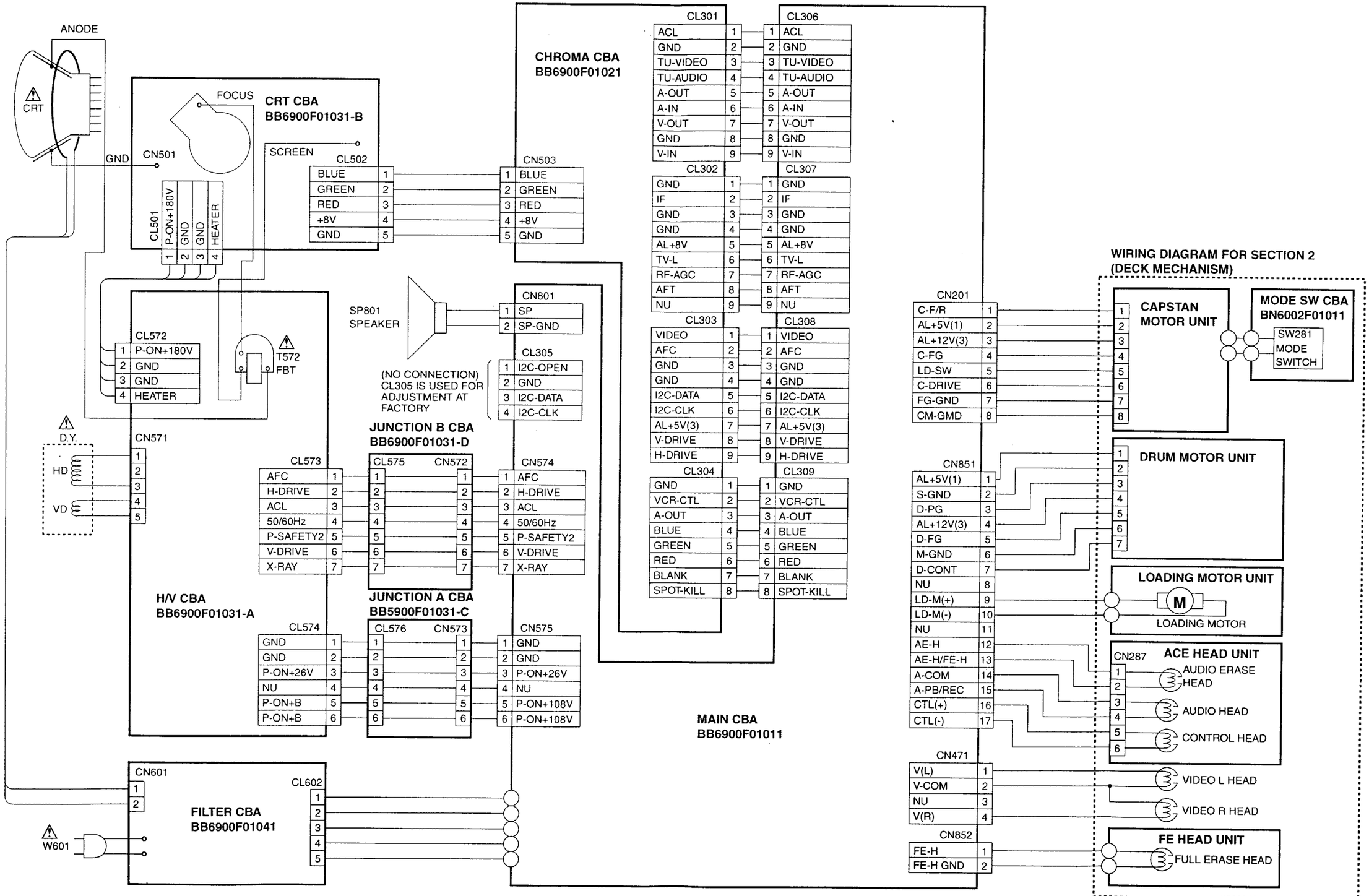


WF16 CRT SCHEMATIC DIAGRAM
Q501 COLLECTOR



WF20 MAIN 3/4 SCHEMATIC DIAGRAM
IC101 PIN 19

WIRING DIAGRAM



SYSTEM CONTROL TIMING CHARTS

Chart 1

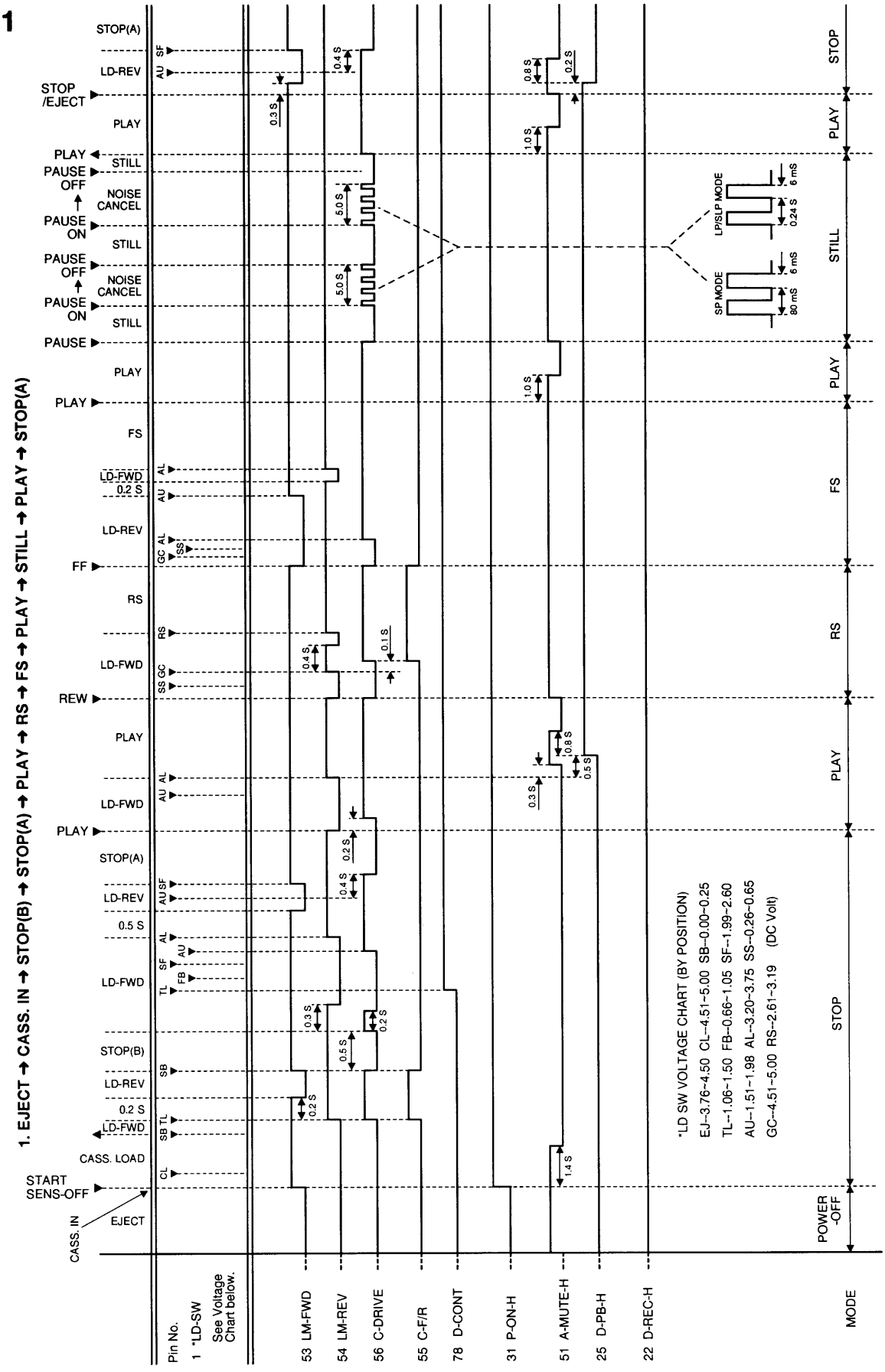
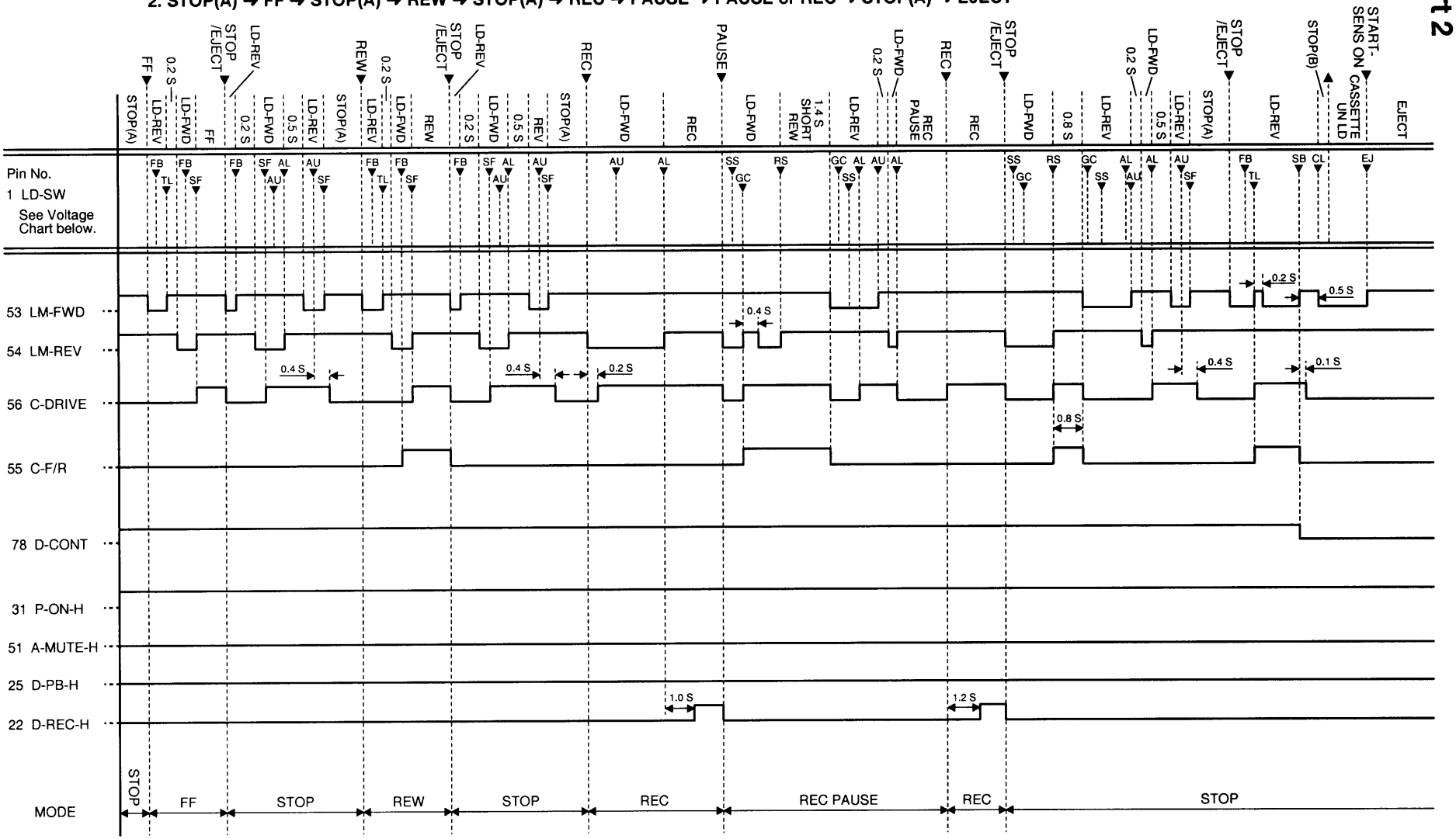


Chart 2

2. STOP(A) → FF → STOP(A) → REW → STOP(A) → REC → PAUSE → PAUSE or REC → STOP(A) → EJECT



*LD SW VOLTAGE CHART (BY POSITION)

EJ--3.76~4.50 CL--4.51~5.00 SB--0.00~0.25

TL--1.06~1.50 FB--0.66~1.05 SF--1.99~2.60

AU--1.51~1.98 AL--3.20~3.75 SS--0.26~0.65

GC--4.51~5.00 RS--2.61~3.19 (DC Volt))

IC PIN FUNCTIONS

IC201 (VCR-Micro Computer)

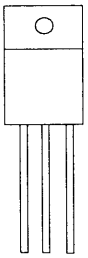
Pin No.	In/ Out	Signal Name	Function	Active Level
1	O	PAL M,/N	M/N Judgement	
2	O	LP/EP-H	Tape Speed Out	
3	O	EP-H	Tape Speed Out	
4	O	V-MUTE-H	Video Mute Out	
5	O	NTSC-H	NTSC Judgement	
6	O	A-MUTE-H	Audio Mute Out	
7	O	LP-SPL -PB-H	LP Special Play Out	
8	I/O	H-PRE-STOP		
9				
10		REC-CTL (+)	CTL Recording Signal Out	
11		REC-CTL (-)	CTL Recording Signal Out	
12		TELETEXT -1	TELETEXT Function Setting 1	
13		TELETEXT -2	TELETEXT Function Setting 2	
14	I	VCR +	VCR + Function Setting	
15		VPS	VPS Function Setting	
16		PDC	PDC Function Setting	
17		REC-SAFETY	Recording Tab Detection	
18		SPOT-KILL	Spot Kill	
19		M-ON-H	Monitor Output	
20	O	SP-MUTE-H	Speaker Mute Out	
21			Not Used	
22			Not Used	
23		BAND B	Selectable Band	
24		BAND A	For Setting	
25		TUNER	For Tuner Setting	
26		SPEED	For Speed Setting	
27			Not Used	
28		VIDEO	Video signal Input Confirmation	
29		I2C-OPEN	I2C-BUS Open Setting	
30		I2C-DATA	I2C-BUS Data (Input Only)	
31		I2C-DATA	I2C-BUS Data (Output Only)	
32		I2C-CLK	I2C-BUS Clock Output	
33	I	TV-L	Input Selection	
34		P-ON-Hiz	Power-On Output	
35		REC-LED	LED For Recording Indicator	
36		TV-H	Input Selection	
37		OSD-CS	CS for OSD-IC Communication	
38	I	BG/DK, D/I	Tuner Mode Switching	
39			GND	
40		RST	Reset Terminal	
41			GND	
42		XTAL	System Clock Oscillator Output	
43		EXTAL	System Clock Oscillator Input	
44			Not Used	
45			Not Used	
46		OSD-DATA	Data for OSD-IC Communication	
47		OSD-CLK	Clock for OSD-IC Communication	
48		PSAFETY2	Power Supply Protection 2	
49		PSAFETY1	Power Supply Protection 1	
50		PSAFETY3	Power Supply Protection 3	
51		X-RAY	X-RAY Protection	
52		AVSS	GND for A/D Converter	
53		AVREF	Standard Voltage for A/D Converter	
54		AVDD	Power Supply for A/D Converter	
55		AFT	AFT Input	
56		V-ENV	V-ENV Input	
57		END-SENS	Tape End Sensor	
58		ST-SENS	Tape Start Sensor	
59		LD-SW	Loading Switch Input	

Pin No.	In/ Out	Signal Name	Function	Active Level
60		KEY1	Key1 Input	
61		KEY0	Key0 Input	
62		AGC-IN	Input for AGC Adjustment	
63		PAL M/N Initialized	Input for PAL M/N Initialization	
64		T-REEL	Input for Take-Up Reel Pulse	
65		P-DOWN-L	Power Failure Detection/Recovery	
66		C-SYNC	C-SYNC Input	
67		PB-CTL	CTL Signal Input	
68		D-PG IN	Drum-PG Input	
69		D-FG-IN	Drum-FG Input	
70		C-FG-IN	Capstan -FG Input	
71			Not Used	
72		DG ON	Degauss Output	
73		LD-FWD	Loading Motor Forwarding Signal	
74		LD-REW	Loading Motor Reversing Signal	
75		C-CONT	Capstan Control Output	
76		D-CONT	Drum Control Output	
77		C-SYNC	C-SYNC Input	
78		S-REEL	Supply Reel Input	
79		PLL-CS	CS for Tuner Communication	
80	I	PLL-DATA	DATA for Tuner Communication	
81		PLL-CLK	Clock for Tuner Communication	
82		C-DRIVE	Capstan Drive Output	
83		C-F/R	Capstan Direction Output	
84		MESECAM -IN-H	PAL/MESECAM Selection	
85		REMOCON	Remote Control Input	
86		TEX	Oscillation Input for Timer Clock	
87		TX	Oscillation Output for Timer Clock	
88			GND	
89		VDD	Power Supply Terminal	
90			Not Used	

Pin No.	In/ Out	Signal Name	Function	Active Level
91		MESECAM -OUT-H	PAL/MESECAM Output	
92			Not Used	
93		50/60Hz	50/60Hz Judgement Output	
94		RENTAL-L	Rental Position Output	
95		D-PB-L	Play Output	
96		D-REC-H	Record Output	
97		D-V(A)	Artificial V-Sync Output (A)	
98		D-V(B)	Artificial V-Sync Output (B)	
99		ROTA	Color Phase Change Output	
100		RF-SW	RF ENV. CH1. 2 Change	

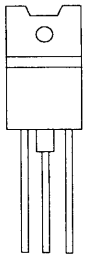
LEAD IDENTIFICATIONS

2SC4508



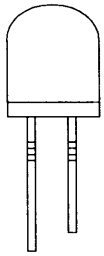
E: Emitter
C: Collector
B: Base

2SD1877

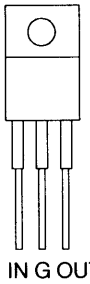


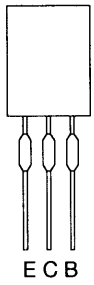
E: Emitter
C: Collector
B: Base

PT380FB
ST319R2-B

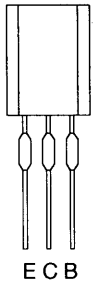


KIA7805





KRA103M
KRC103M
2SC2839



2SA1317
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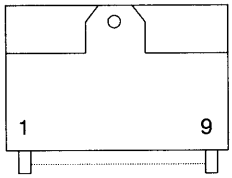
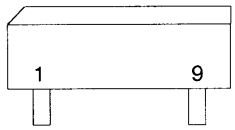
2SC2120
2SC3331
2SD734
2SA3468
KTA1267
KTC3199

PC817X6

LA7837



TA7291S



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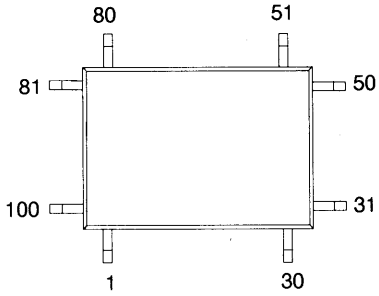

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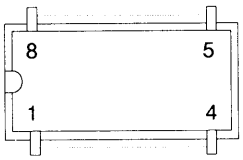

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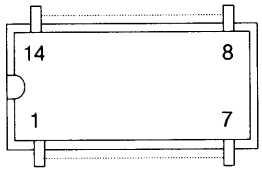

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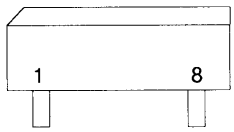

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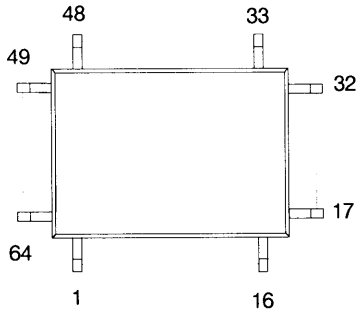

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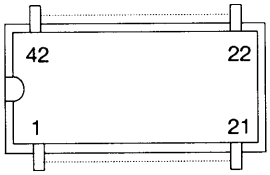

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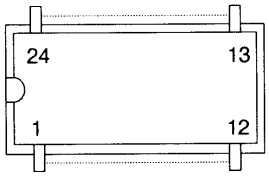


DECK MECHANISM SECTION

14" COLOR TV/VCR COMBINATION
20" COLOR TV/VCR COMBINATION

MV-3420
MV-4820

Sec. 2: Deck Mechanism Section

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

TABLE OF CONTENTS

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		●		●
B21	Loading Belt		●		●
B27	Tension Lever Assembly		●		●
B31	AC Head Assembly			●	
B32, B339	Reel Base Assembly			●	
B37	Capstan Motor		●		●
B52	Capstan Belt		●		●
*B73	FE Head CBA			●	
B132	Clutch Assembly		●		●
B133	Idler Assembly		●		●
B410	Pinch Roller Assembly		●		●
B413	Main Brake T Assembly		●		●
B414	Main Brake S Assembly		●		●

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

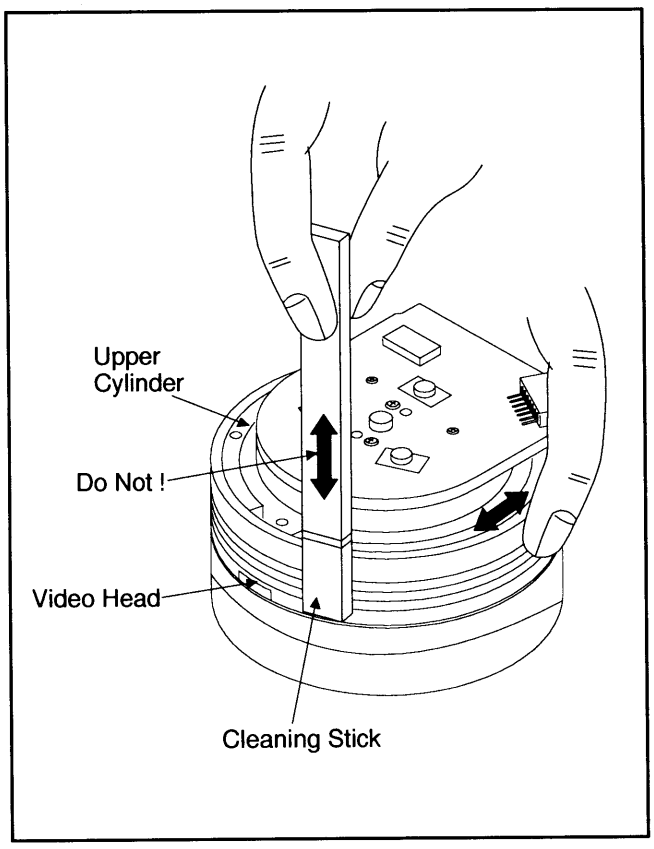
Clean the head with a head cleaning stick or chamois cloth.

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

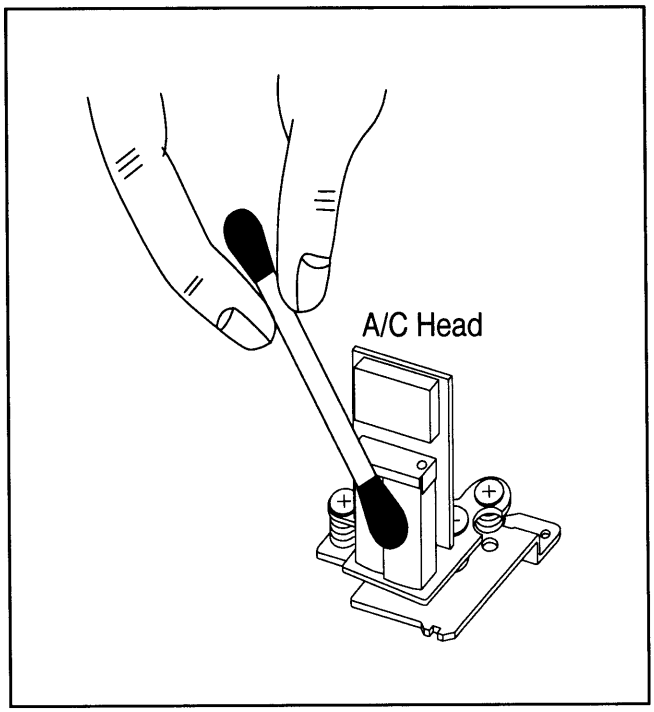
Clean the head with a cotton swab.

Procedure

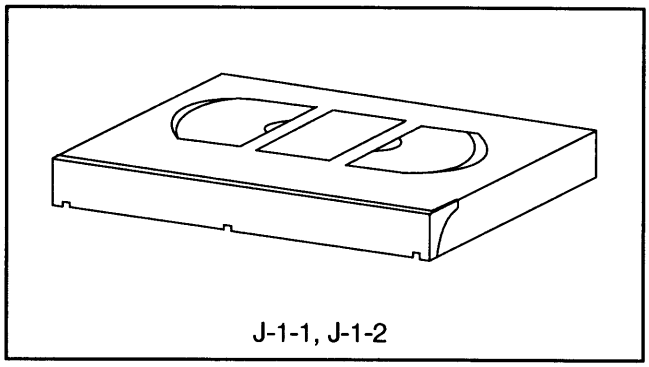
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

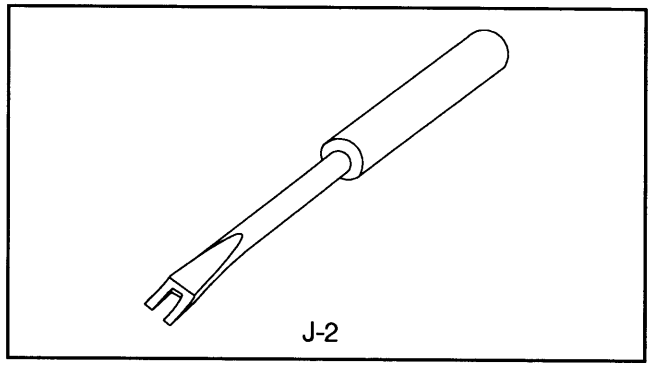
1. Avoid cleaning the audio control head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



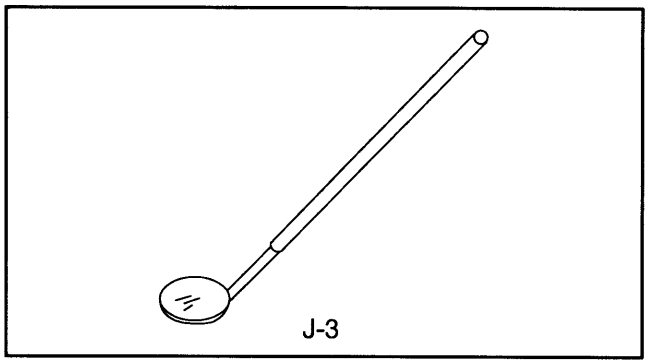
SERVICE FIXTURE AND TOOLS



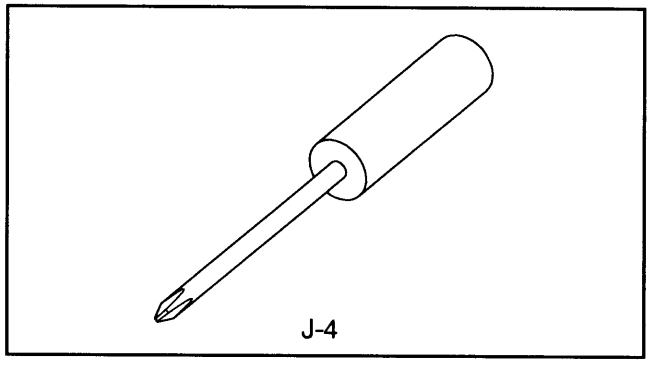
J-1-1, J-1-2



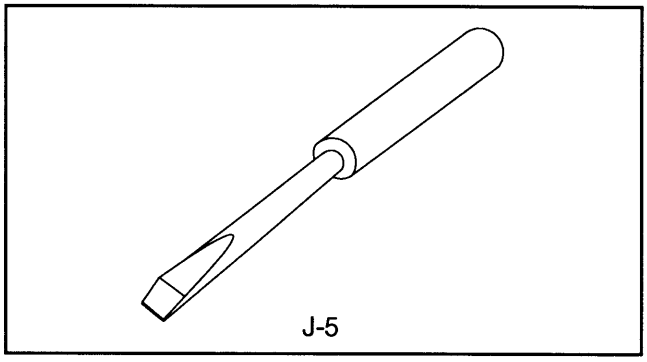
J-2



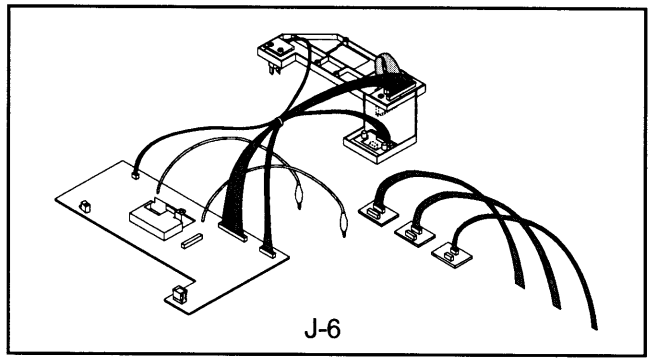
J-3



J-4



J-5



J-6

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
J-6	U17 Deck Extension Cable	N1098XA	All Mechanical and Electrical Adjustments

Note:
Before starting any adjustment, take the Deck Assembly out of the cabinet and use J-6 to connect the Deck Assembly with the Main CBA.

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 Cover.
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 Pulley Assembly in the appropriate direction shown in Fig. M1 until the cassette tape is fully loaded. By turning the Pulley Assembly, you are turning the cam indicated in this figure. However, movement of the cam will be very slow. Allow a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1 to unload the cassette tape. When turning the Pulley Assembly, please be aware that this is a long process and the cassette will not start getting unloaded instantaneously. Within this long process, before the cassette actually starts getting unloaded, there is a time period during which the moving guide assemblies slide back to their original positions shown in Fig. M1. However, the tape will be left wound around the cylinder. To put the tape back into the cassette, gently turn the Capstan Motor in the direction shown in Fig. M2. Make sure that the tape is completely placed back in the cassette before the cassette starts getting unloaded. Otherwise the tape hanging out will be caught and damaged by the lid of the cassette when it closes.
   By turning the Pulley Assembly, you are turning the cam indicated in Fig. M1. As stated, movement of the cam will be very slow. 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 Cover.
3. Turn the Pulley Assembly in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the Pulley Assembly until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

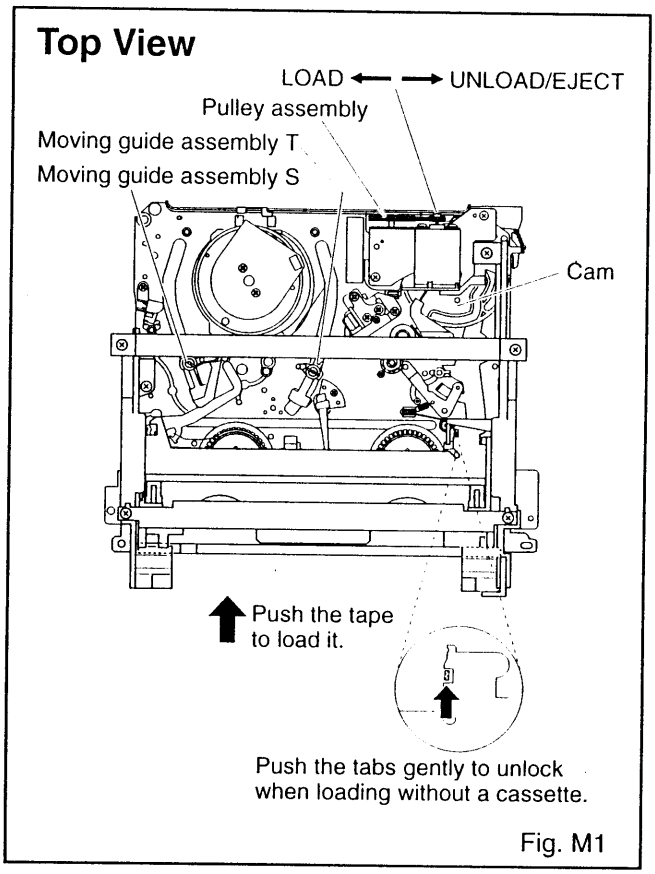


Fig. M1

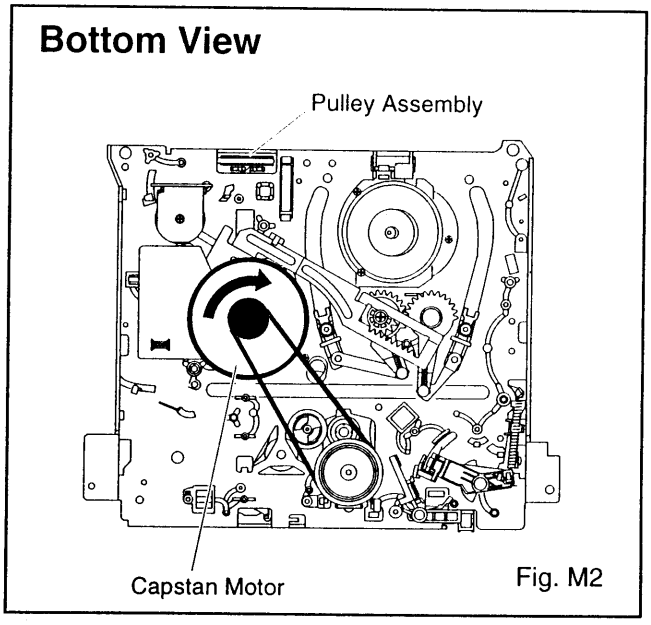


Fig. M2

1. Tape Interchangeability Alignment

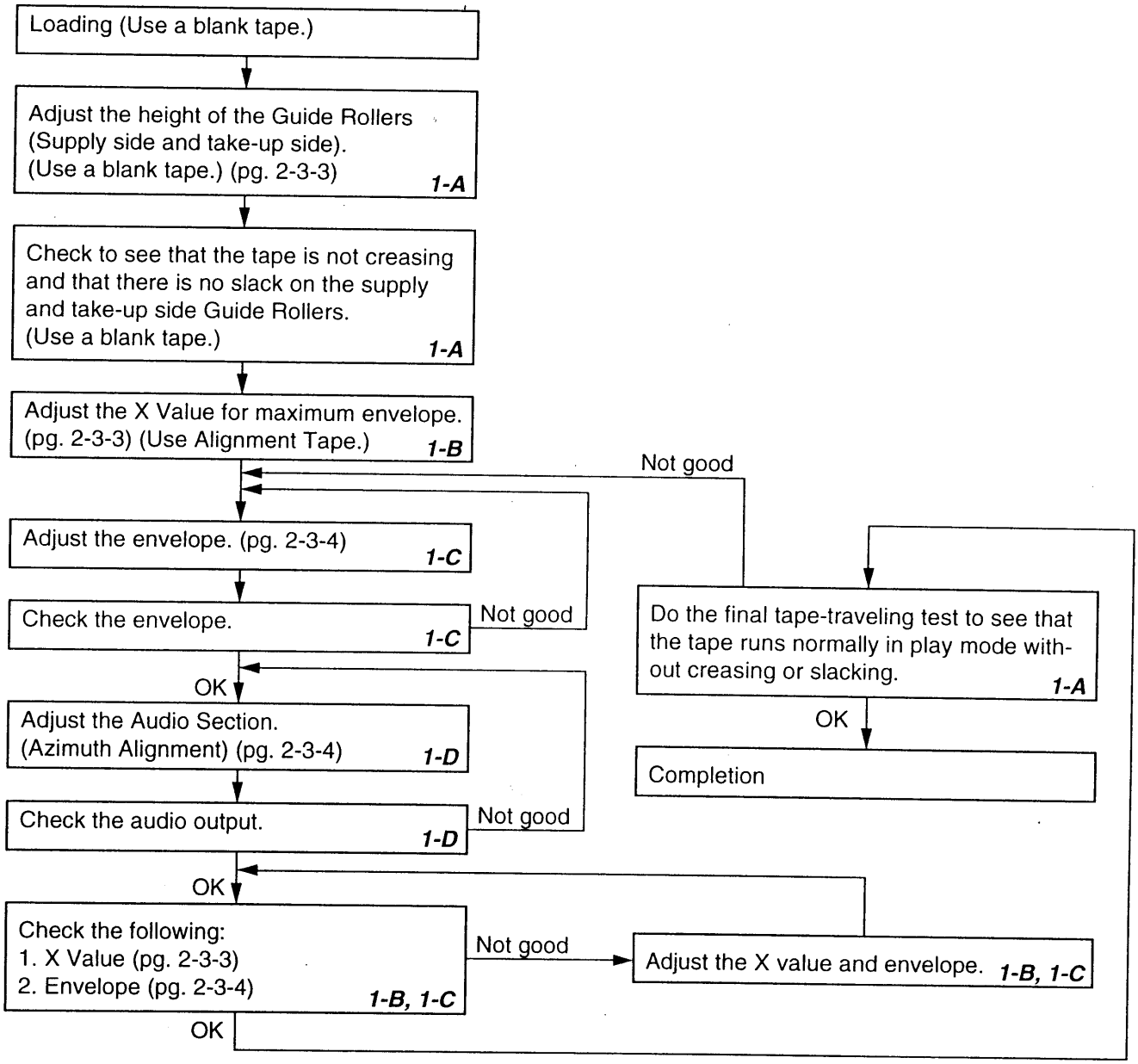
Note: To do these alignment procedures, make sure that the Tracking Control Circuit is set to the center position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

Equipment required:

Dual Trace Oscilloscope
VHS Alignment Tape (FL8N)
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 ACE Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the ACE Head. (Fig. M6)

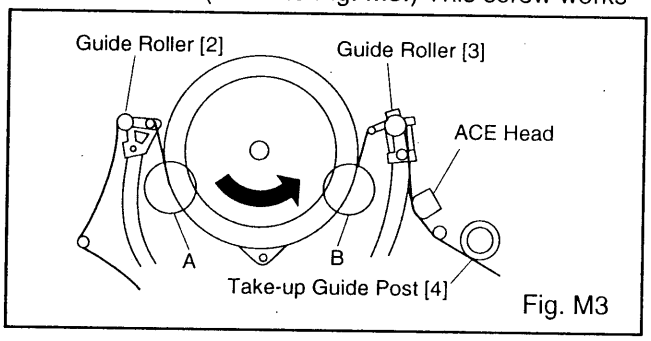


Fig. M3

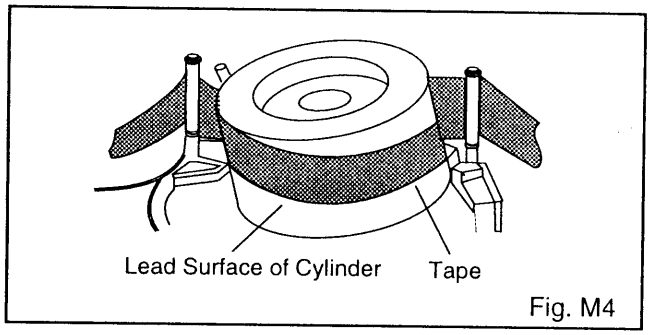


Fig. M4

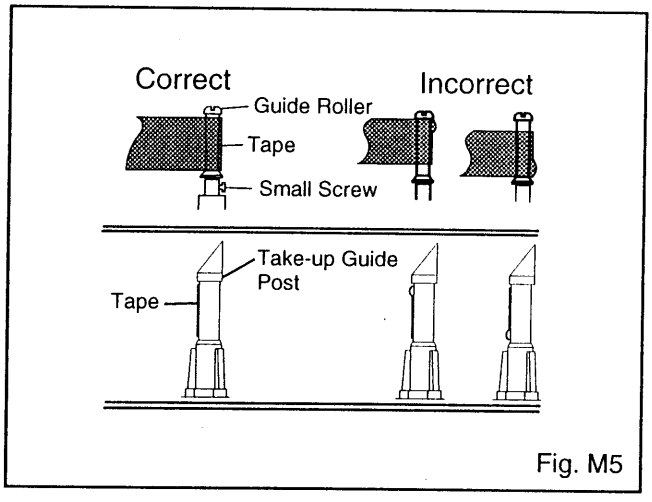


Fig. M5

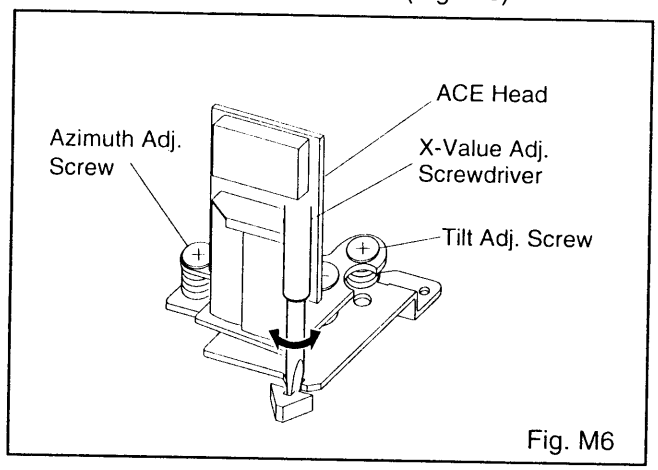


Fig. M6

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 J110 (V-ENV) and J168 (CTL) on the Main CBA. Use J109 (RF-SW) as a trigger.
2. Play back the Gray Scale of the Alignment Tape (FL8N) 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 J110 (V-ENV) is maximum. (Fig. M6)
5. Press CH UP button on 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 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 J110 (V-ENV) on the Main CBA. Use J109 (RF-SW) as a trigger.
2. Play back the Gray Scale on the Alignment Tape (FL8N). 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 (FL8N) 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.

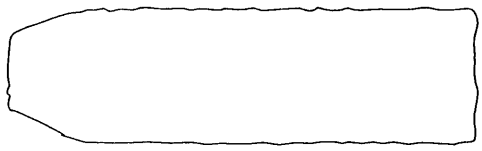


Fig. M7

Dropping envelope level at the end of track.

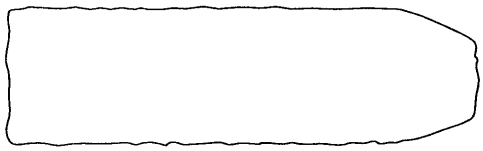


Fig. M8

Envelope is adjusted properly. (No envelope drop)

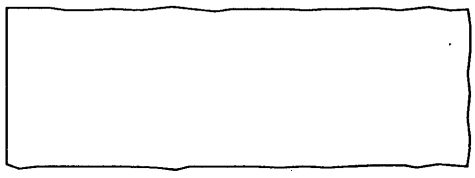


Fig. M9

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Main Mechanism

Before following the procedures described below, be sure to:

1. Remove the deck assembly from the cabinet.
   (Refer to CABINET DISASSEMBLY INSTRUCTIONS on page 1-6-1.)
2. Remove Front Loading Assembly from the main mechanism of the deck assembly. (See Fig. DM1.)
3. First remove Step/Loc. No. [39], and start to remove other parts. (See Fig. DM1.)
4. Before Step/Loc. No. [2] and [9] first remove ACH Connector A, ACH Connector B, VH Connector A, and VH Connector B. (See Fig. DM2.)

All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [37] and [38] in Fig. DM3 on page 2-4-4. 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]	Cylinder Shield	T	DM1	2(S-2)	
[2]	[2]	Loading Motor Assembly	T	DM2 DM3 DM5 DM6	2(S-3), Loading Belt ACH Connectors A and B, FFC Cable	
[3]	[2]	Motor Holder	T	DM1 DM3 DM5	2(S-4)	
[4]	[2]	Cassette Drive Lever Sub Assembly	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-10
[5]	[2]	Pinch Roller Assembly	T	DM3 DM5	(C-1)	Refer to Alignment Sec. Pg. 2-4-10
[6]	[6]	Mode SW CBA	B	DM4 DM5	(S-5), Desolder	
[7]	[2]	Cam	T	DM3 DM5		(+) Refer to Alignment Sec. Pg. 2-4-10
[8]	[2]	Pulley Assembly	T	DM3 DM6	(W-1), Loading Belt	(+)
[9]	[9]	Cylinder Assembly	T B	DM2 DM3 DM7	3(S-6), *VH Connectors A and B, FFC Cable	
[10]	[10]	FE Head	T	DM3 DM7	(S-7)	
[11]	[11]	ACE Head Assembly	T	DM2 DM3 DM8	2(S-8), FFC Cable	
[12]	[12]	Tape Guide Assembly	T	DM3 DM8	*(P-0), *(L-1)	
[13]	[12]	Capstan Motor	B T	DM4 DM5 DM9 DM16	4(S-9), Capstan Belt, Radiator Plate, Desolder	
[14]	[14]	Tension Lever Assembly	T	DM3 DM10	*(L-2), *(L-3), *(P-1), *(P-2)	
[15]	[15]	M Brake S Assembly	T	DM3 DM10	*(L-4)	
[16]	[16]	Rec Arm	B	DM4 DM11	*(L-5)	
[17]	[17]	BT Arm	B	DM4 DM10 DM11	*(L-6), *(P-2)	
[18]	[17]	Holder Kick Arm	B	DM4 DM11	*(P-3)	
[19]	[17]	Tension Plate	B	DM4 DM11		

STEP /LOC. No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[20]	[17]	Motor Lever	T	DM3 DM12	*4(L-7), *(L-8), *Locking Tab	
[21]	[17]	Idler Assembly	T	DM3 DM13	*(L-9)	
[22]	[14]	S Brake Lever Assembly	T	DM3 DM14	*(P-4),*(L-10)	
[23]	[17]	M Brake T Assembly	T	DM3 DM13	*(P-5),*(L-11)	
[24]	[14]	Reel S	T	DM3 DM14	Poly Slider Washer	(+) Base has slots.
[25]	[17]	Reel Base Assembly T	T	DM3 DM14	Poly Slider Washer	(+)
[26]	[26]	M Gear	T	DM3 DM14	(W-2)	
[27]	[2]	Main Lever Assembly	T	DM3 DM15		
[28]	[2]	M Lever Holder	T	DM3 DM15	*2(L-12)	
[29]	[29]	Clutch Assembly	B	DM4 DM16	(C-2),Capstan Belt, Poly Slider Washer	(+)
[30]	[29]	FF Arm	B	DM4 DM16	*2(L-13)	
[31]	[31]	Sensor Gear	B	DM4 DM17	(C-3)	
[32]	[32]	Spring	T	DM3 DM8		
[33]	[33]	Prism	T	DM3 DM13	(S-10)	
[34]	[12]	Loading Lever Assembly	B	DM4 DM18	(S-11)	(+) Refer to Alignment Sec. Pg. 2-4-10
[35]	[34]	Loading Arm T Assembly	B	DM4 DM18		(+) Refer to Alignment Sec. Pg. 2-4-10
[36]	[34]	Loading Arm S Assembly	B	DM4 DM18	(S-15)	(+) Refer to Alignment Sec. Pg. 2-4-10
[37]	[2]	Moving Guide S Preparation	T	DM3 DM19		
[38]	[2]	Moving Guide T Preparation	T	DM3 DM19		
[39]	[39]	Deck Earth Plate	T	DM1 DM3	(S-12)	
[40]	[40]	Cleaning Head	T	DM3 DM7	*(L-14)	
[41]	[41]	Insulation Cover	T	DM3 DM13	*2(L-15)	
↓ ①	↓ ②	↓ ③	↓ ④	↓ 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).

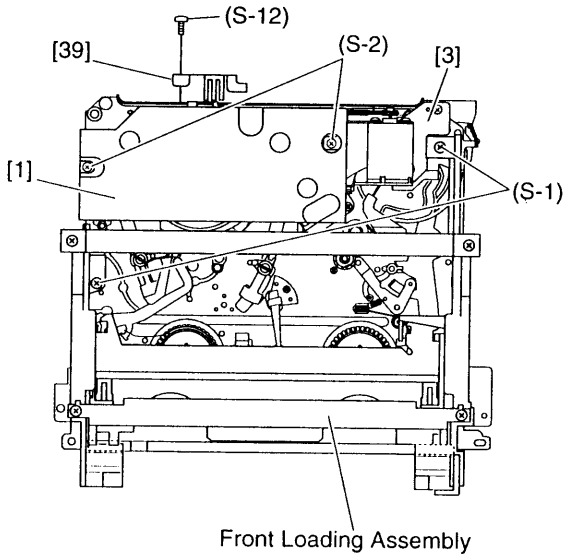
③: Name of the part

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.



Note: Remove the Front Loading Assembly before removing [3] Motor Holder.

To remove Front Loading Assembly:
1. Remove 2 Screws; 2(S-1).
2. Lift Assembly up carefully.

Fig. DM1

Top View

Bottom View

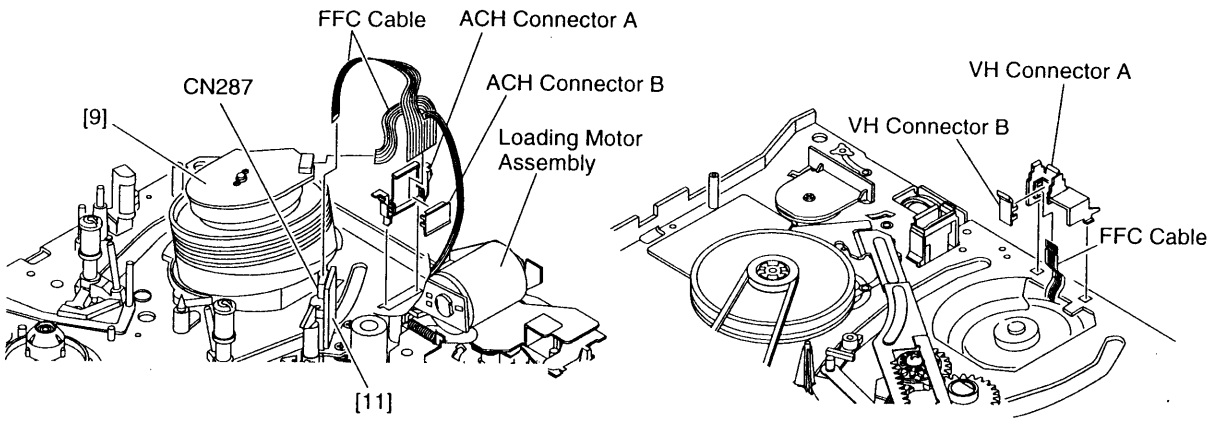


Fig. DM2

Top View

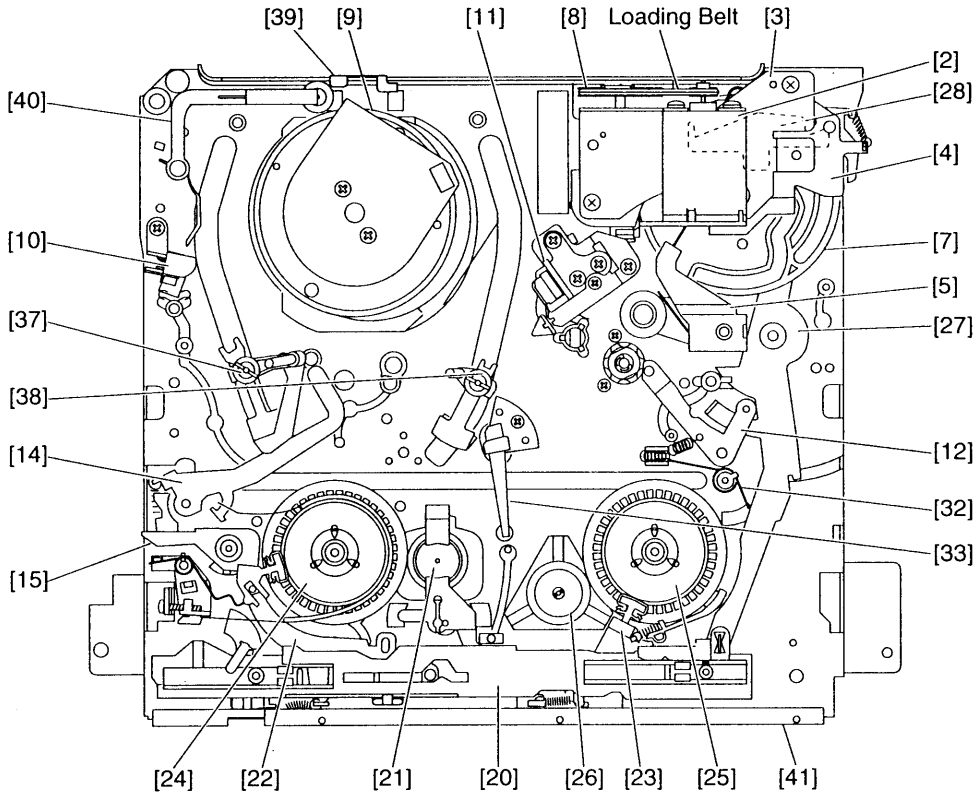


Fig. DM3

Bottom View

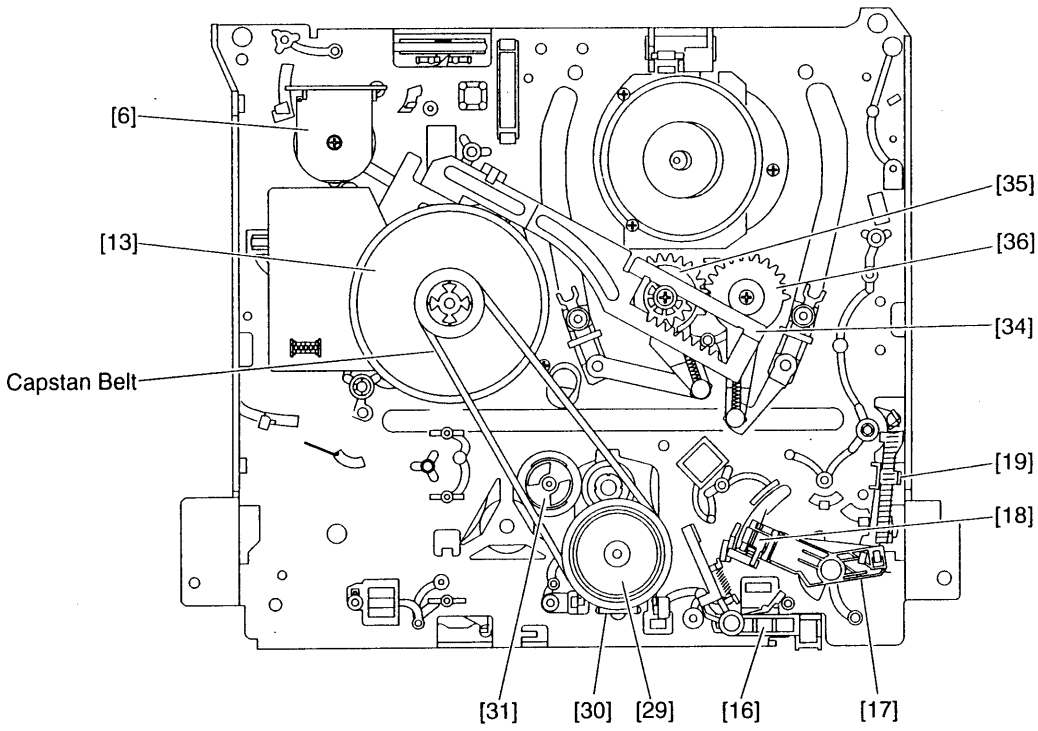
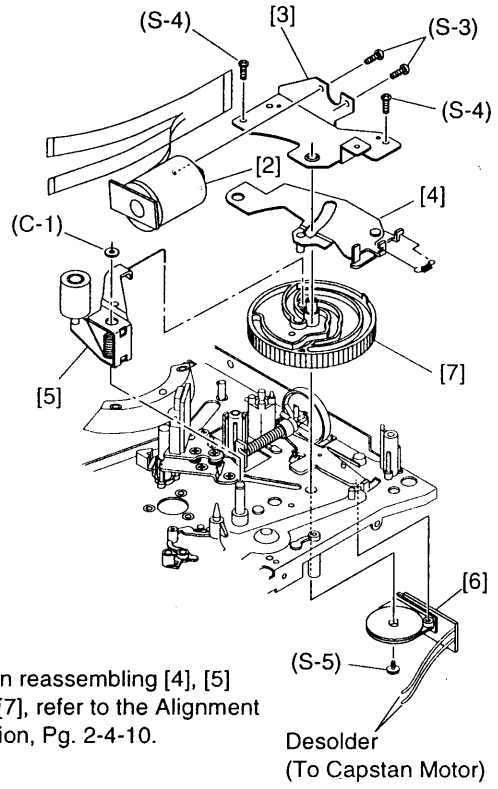


Fig. DM4



When reassembling [4], [5] and [7], refer to the Alignment Section, Pg. 2-4-10.

Fig. DM5

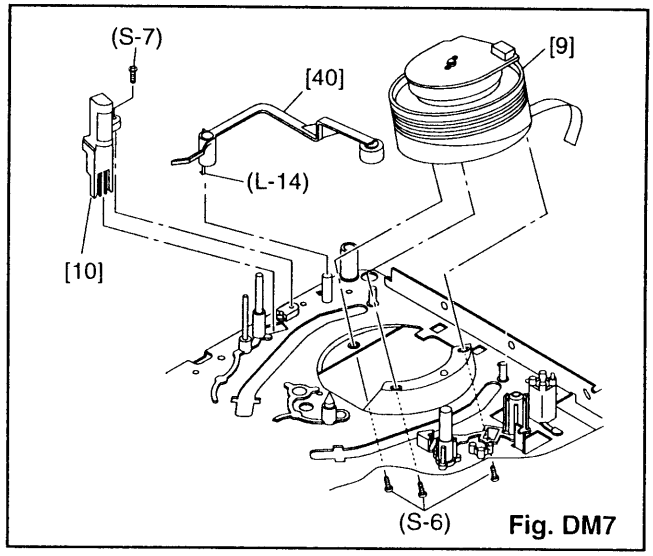


Fig. DM7

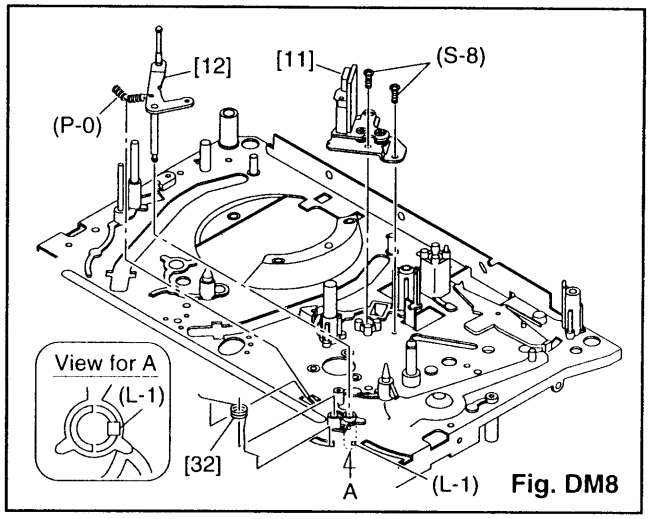
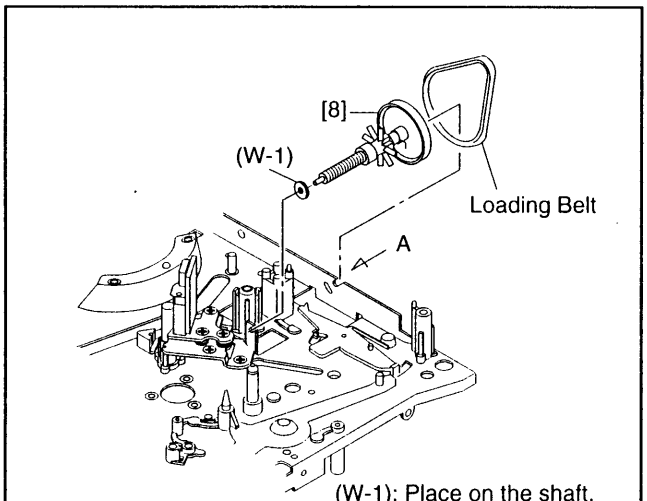


Fig. DM8



(W-1): Place on the shaft, and then install.

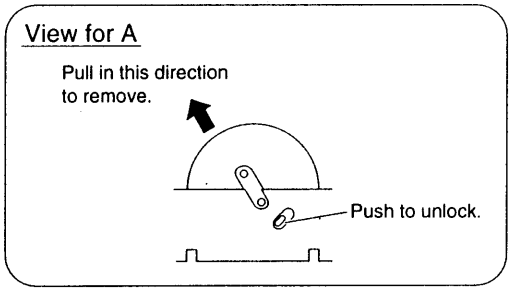


Fig. DM6

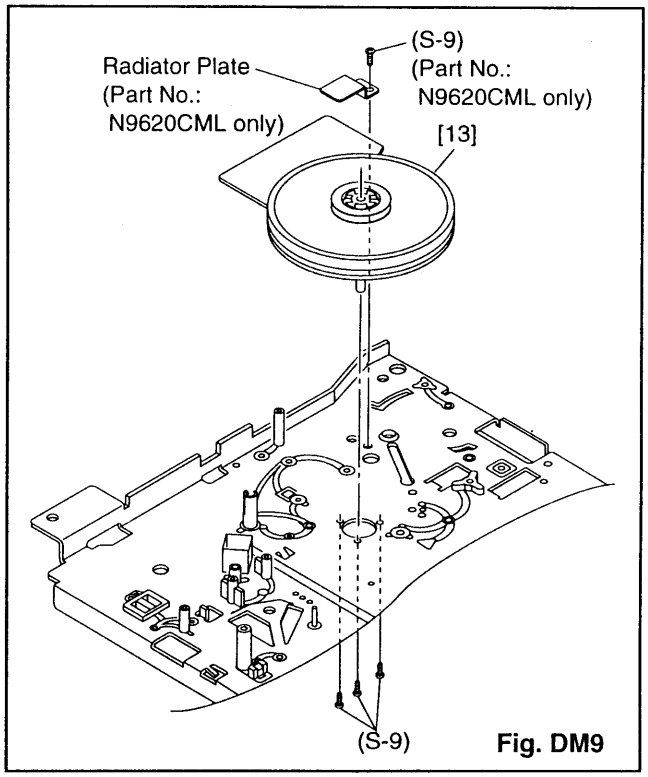


Fig. DM9

When reassembling, refer to the Alignment Section, Pg. 2-4-12.

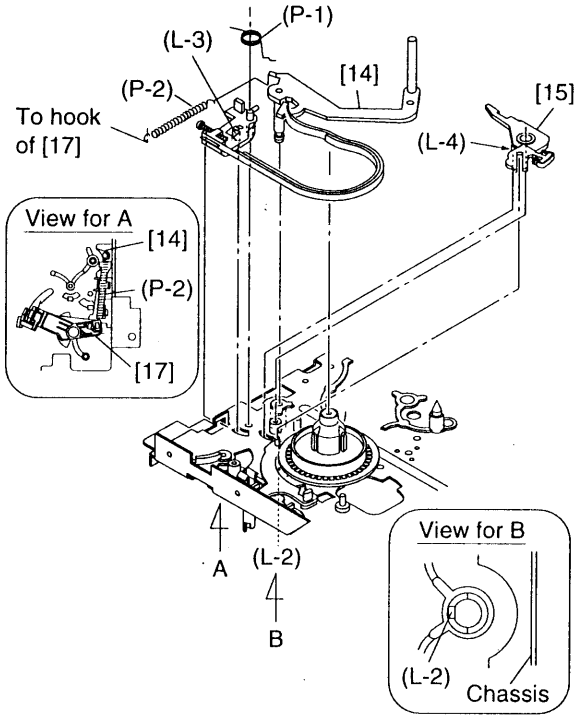


Fig. DM10

Turn [8] counterclockwise to move [20] to the right.
Align the indent of [20] with Locking Tab.

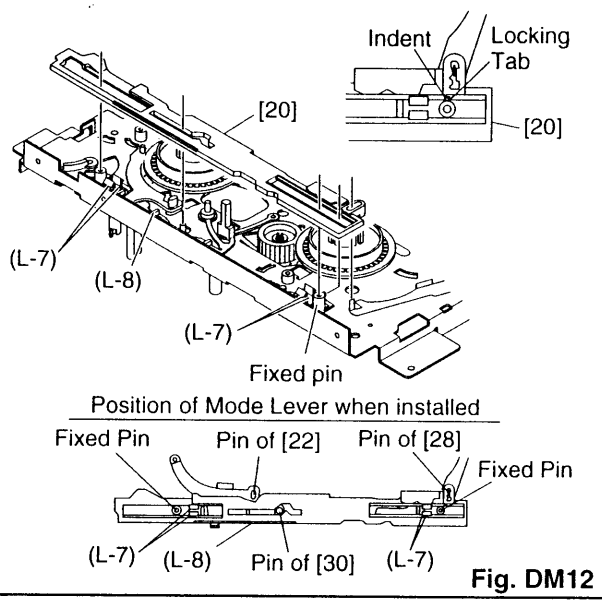


Fig. DM12

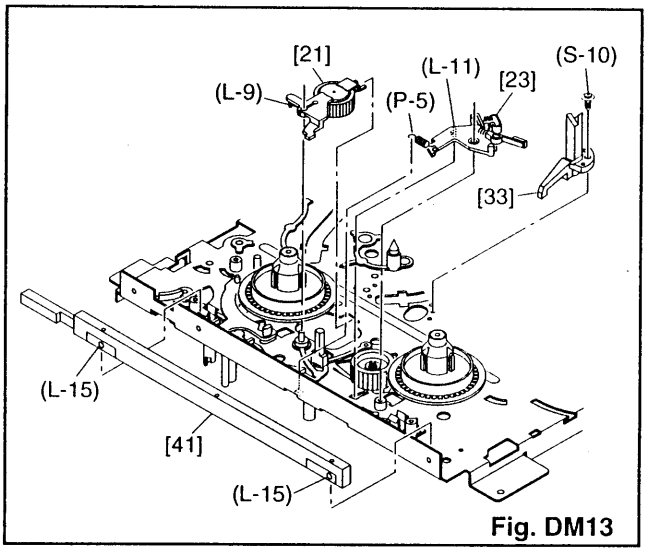


Fig. DM13

View for A

Reassembly [17], [18] and (P-3).

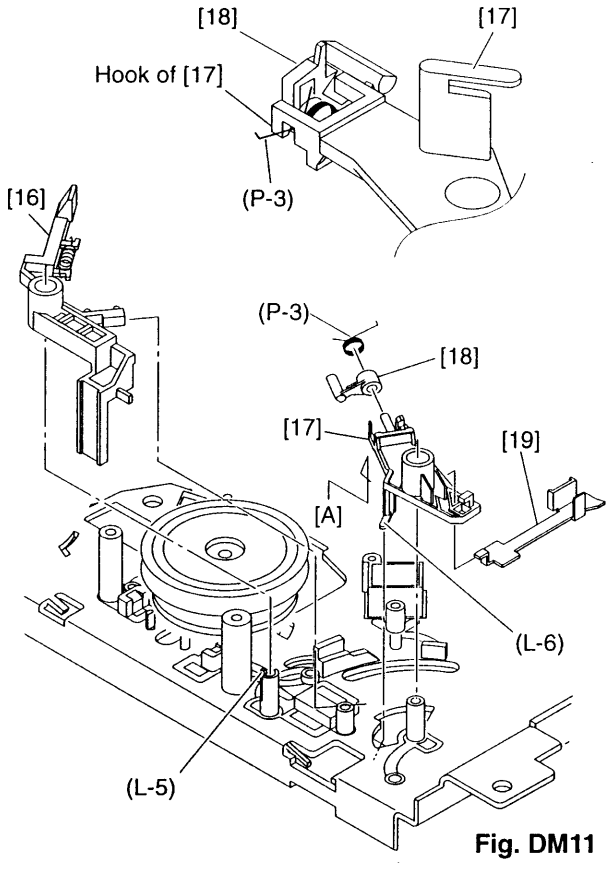


Fig. DM11

If the alignment height is not correct, it is acceptable to use one more Poly Slider Washer to raise the height. (Poly Slider Washer is 0.1 mm /0.004 inch in thickness.)

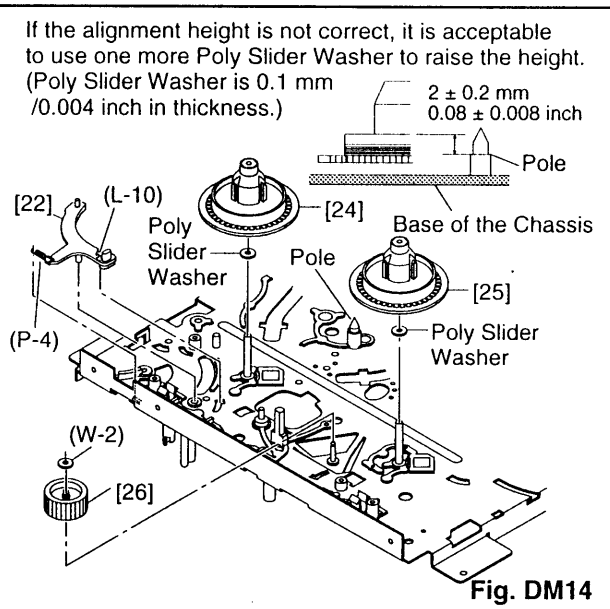


Fig. DM14

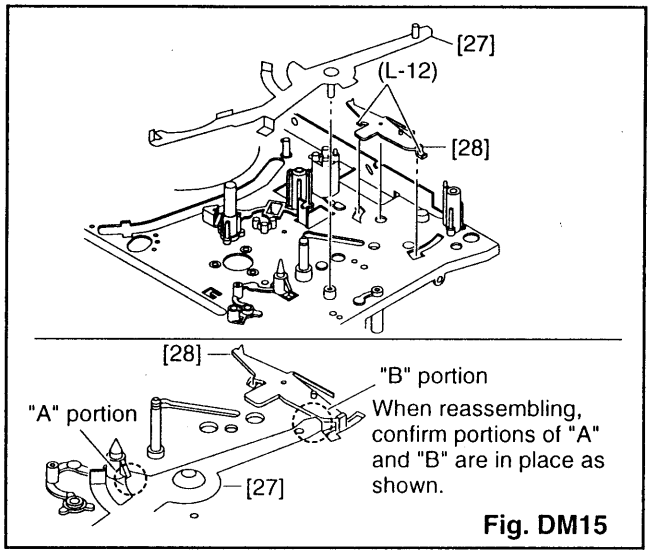


Fig. DM15

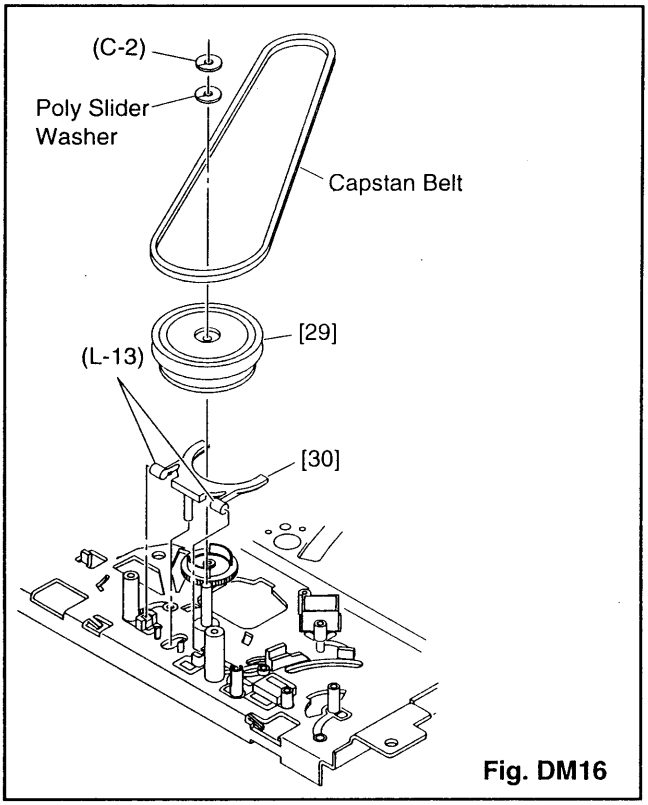


Fig. DM16

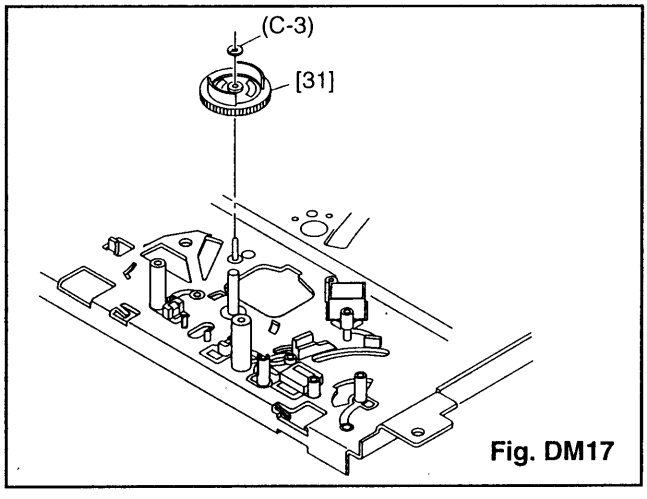


Fig. DM17

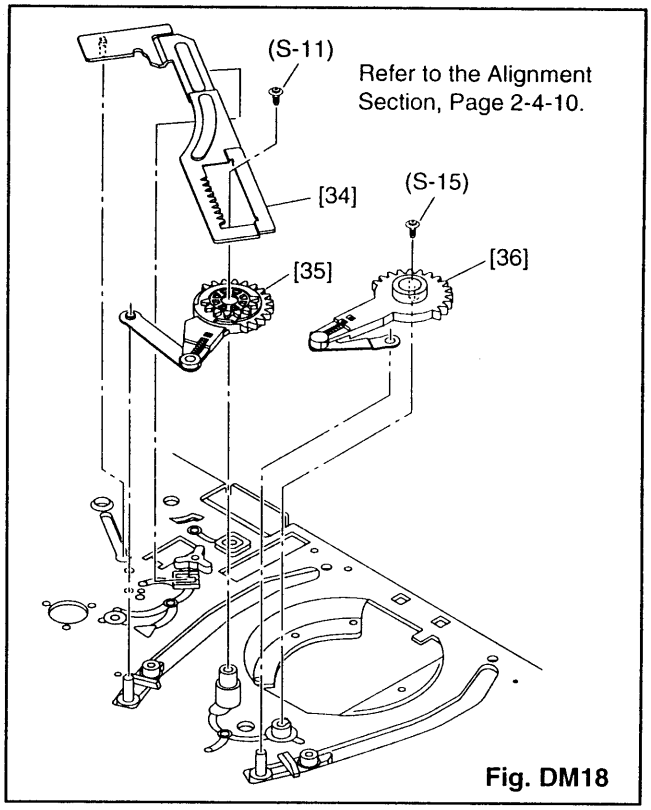


Fig. DM18

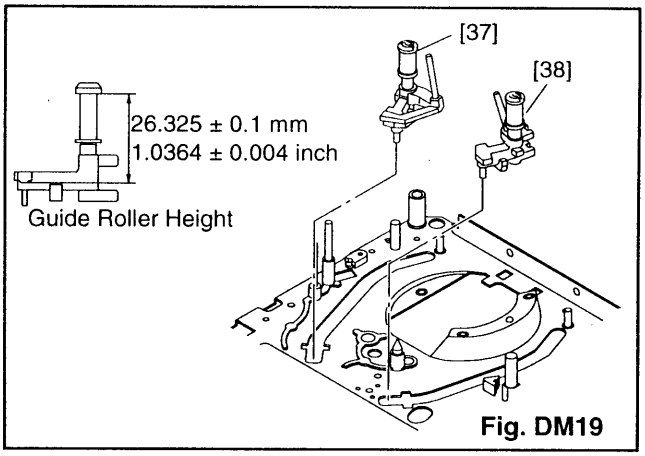


Fig. DM19

Front Loading Assembly

Before following the procedures described below, be sure to remove Front Loading Assembly from the main mechanism of the deck assembly. (See Fig. DM1.) When reassembling, start with the unit in Cassette-in mode and 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]	Guide Holder B	T	DM22	2(S-1)	
[2]	[1]	Guide Holder F	T	DM22	2(S-2)	
*[3]	[3]	Slider Gear	R	DM22 DM23	2(L-1)	Eject Position
*[4]	[3]	Slider Gear	L	DM22 DM23	2(L-2)	Eject Position
		Slider Shaft	T	DM22 DM23		Eject Position
[5]	[1]	Cassette Holder Assembly	T	DM20 DM21 DM22	(S-3)	
[6]	[1]	Cassette Guide R	R	DM20 DM21 DM22		
[7]	[1]	Cassette Guide L	L	DM22		
[8]	[8]	Front Door Opener	R	DM22 DM23	(L-3)	Eject Position
[9]	[9]	Rack	R	DM20 DM21 DM22	(L-4)	Cassette in Position
[10]	[9]	Cassette Drive Gear	R	DM20 DM21 DM22	(L-5),Cassette Drive Gear Spring	Cassette in Position
↓ ①	↓ ②	↓ ③	↓ ④	↓ 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.

*[3], *[4]: Slider Gear in Step [3] and that in Step [4] are identical. However, they are divided into two steps because, before reassembling Slider Shaft, one Slider Gear must be preinstalled at either end of Slider Shaft.

Before removing Parts [6], [9], or [10], shift [5] to Cassette-in position.

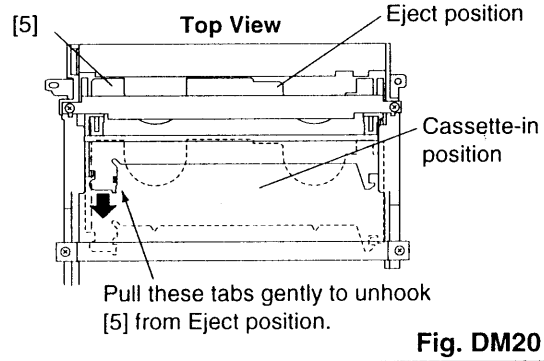


Fig. DM20

Install/remove in Cassette-in position to ensure that [5] is in locked position.

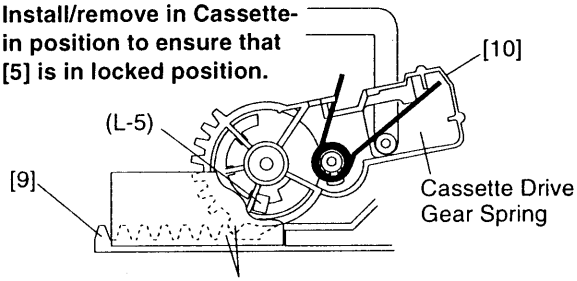
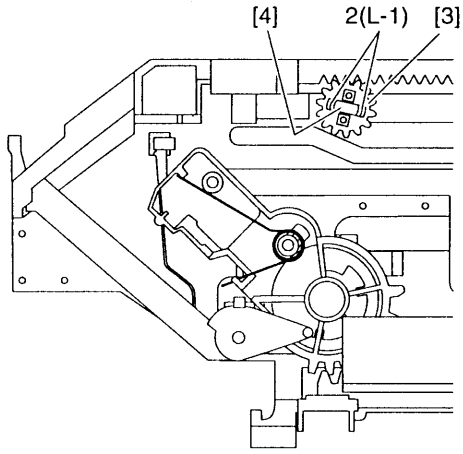


Fig. DM21

View before disassembling [3] and [4] (Installation of Slider Shaft and Slider Gear)



Install [3] and [4] in Eject position.
(When disassembling, [3] and [4] can be removed either in Eject position or Cassette-in position.)

- This figure shows where [3], [4] and other parts are in Eject position.

Fig. DM23

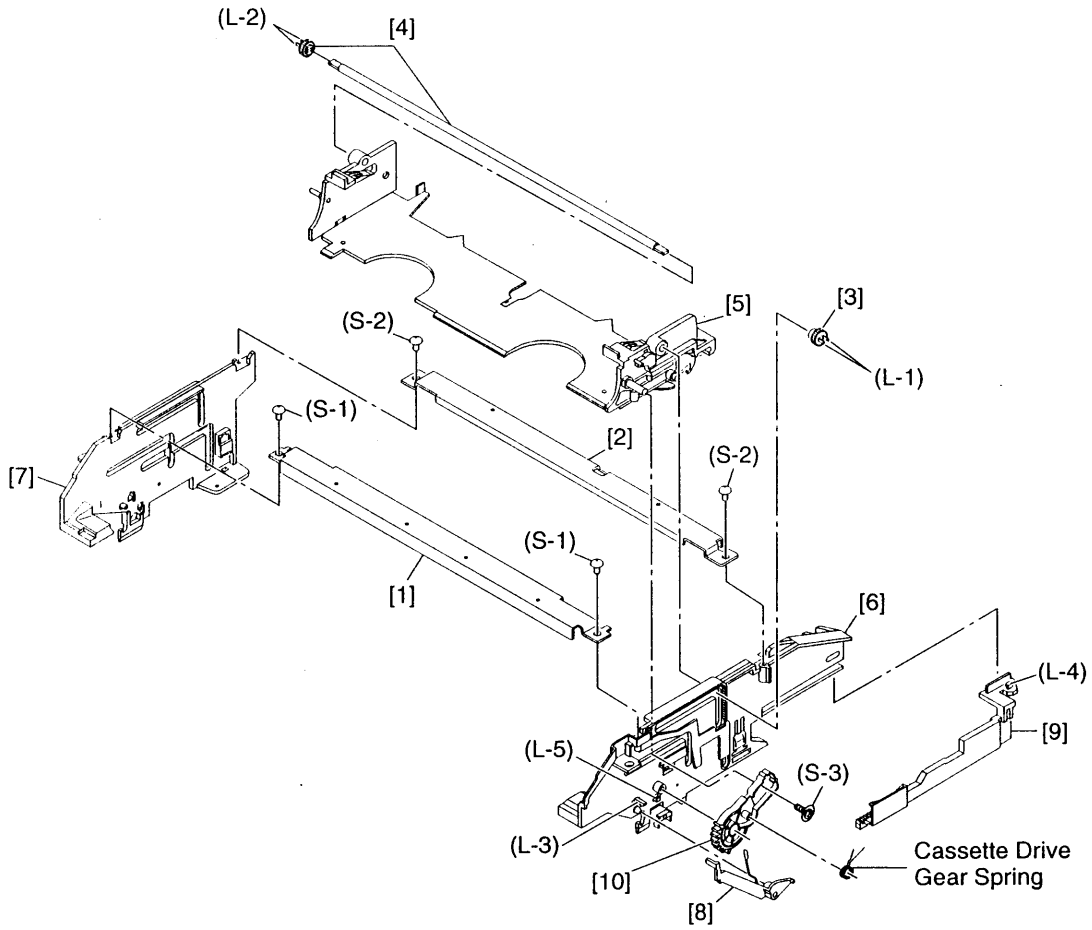


Fig. DM22

ALIGNMENT PROCEDURES OF MECHANISM

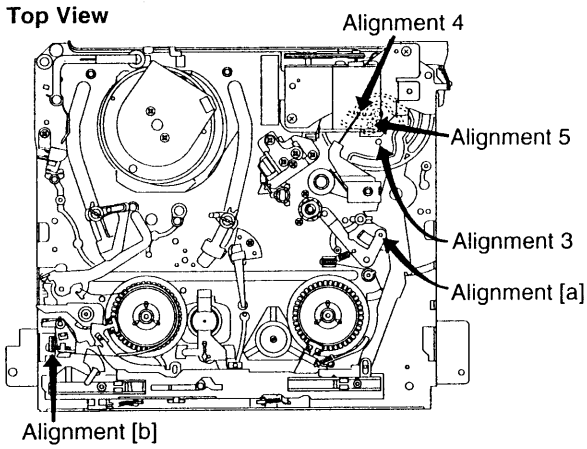
The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between 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 [a] and [b] can be done independently of any other alignment

Fig. AL1

Alignment 1

Loading Arm, S and T Assembly

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

Alignment 2

Loading Lever Assembly

1. 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 Loading Lever Assembly. See Fig. AL2.

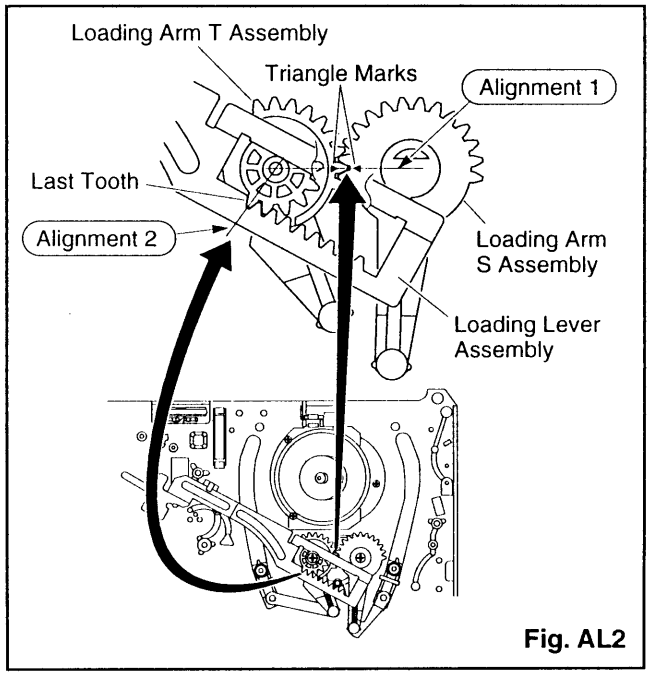


Fig. AL2

Alignment [a]

Tape Guide Assembly

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

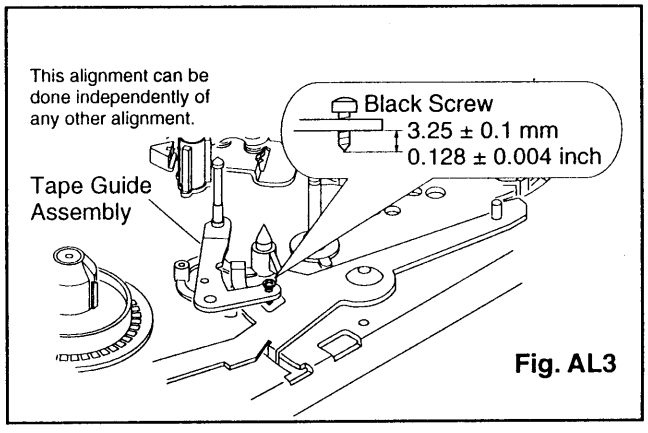


Fig. AL3

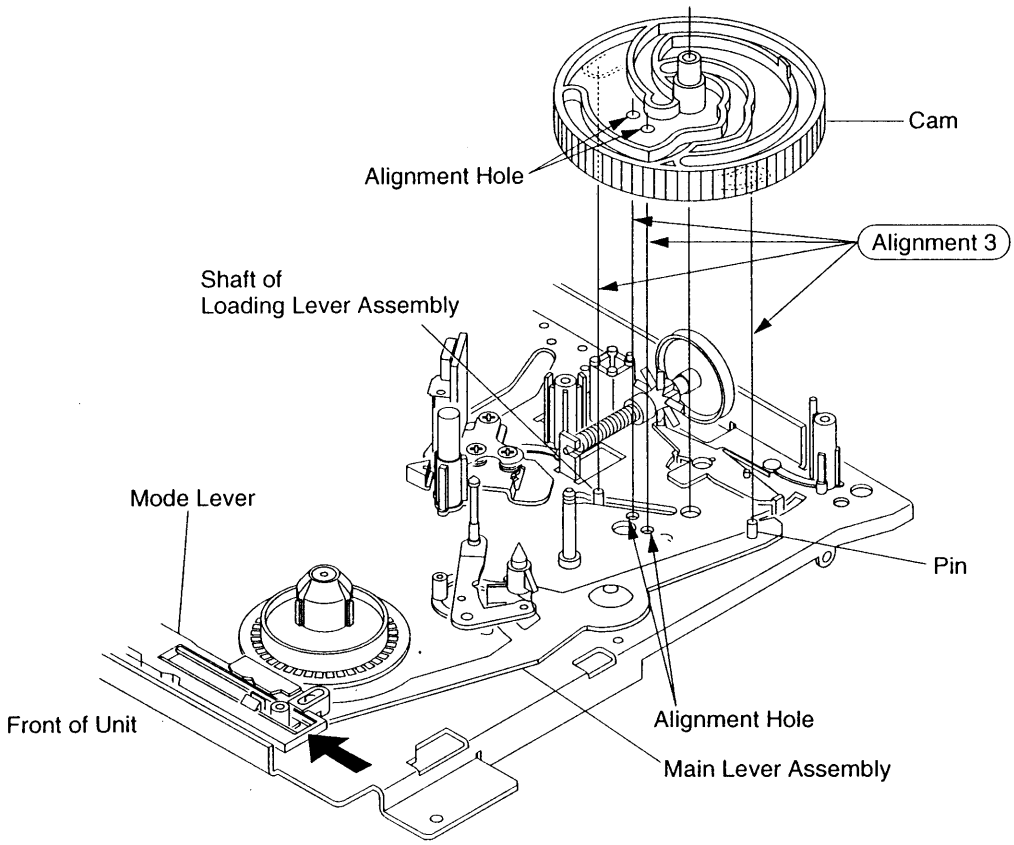


Fig. AL4

Alignment 3

Cam

1. Make sure that the mechanism is in Eject mode so that the shaft of Loading Lever Assembly is in the position shown in Fig. AL4.
2. Align the alignment hole of the Cam with the alignment hole of the base, holding the Cam just above the base.
3. Carefully keeping these two holes aligned, push Mode Lever in the direction of the arrow to install the Cam. The Mode Lever must be pushed to make the pin on the Main Lever Assembly fit in the proper groove in the lower Cam.
4. After installing the Cam, make sure that the alignment hole of the Cam is still aligned with the base hole and that the pin on the Main Lever Assembly and the shaft of the Loading Lever Assembly are inserted into the proper grooves of the lower Cam as specified in Fig. AL4.

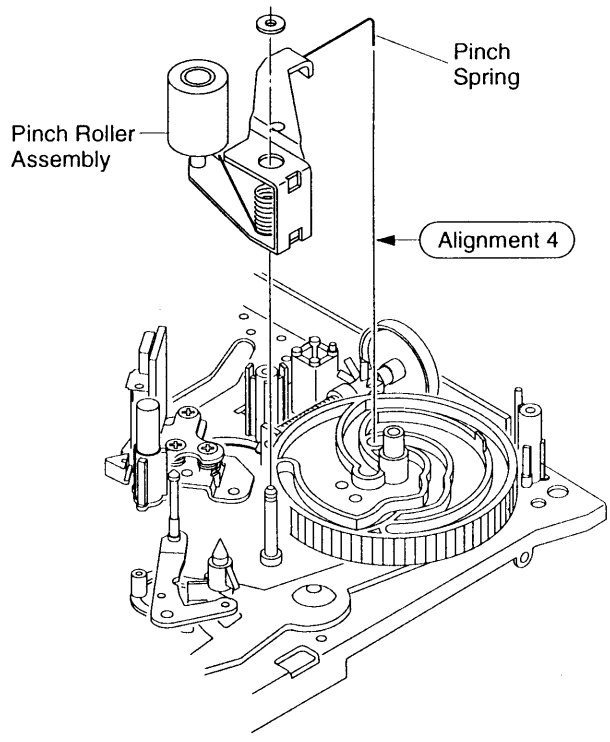


Fig. AL5

Alignment 4

Pinch Roller Assembly

1. Ensure that the Spring of the Pinch Roller Arm Assembly is positioned in the end of the groove of the upper Cam as shown in Fig. AL5.

Alignment 5

Cassette Drive Lever Sub Assembly

1. Ensure that the pin of the Cassette Drive Lever Sub Assembly is positioned in the groove of the upper Cam and that the hole is positioned as shown in Fig. AL6. Then, make sure that the tab of the Cassette Drive Lever Sub Assembly is in front of the tab of the Cam.

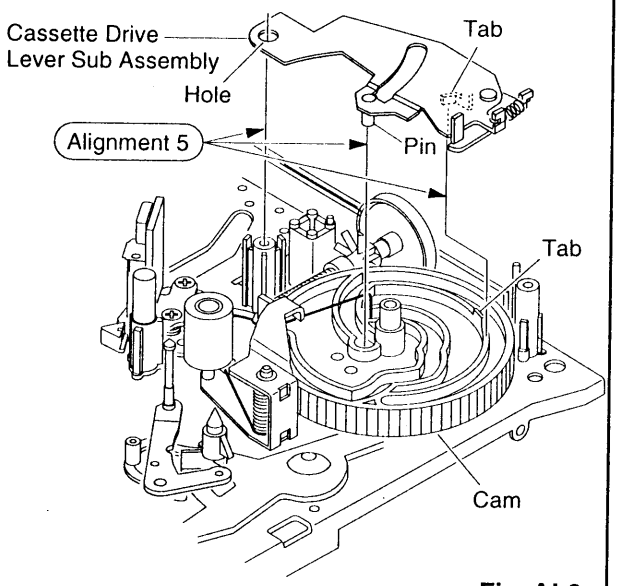


Fig. AL6

Alignment [b]

This alignment can be performed independently of any other alignment.

Band Brake Assembly

1. Ensure that Band Brake Assembly is positioned parallel to the chassis' notch as shown in Fig. AL7. This measurement can be made by eye.

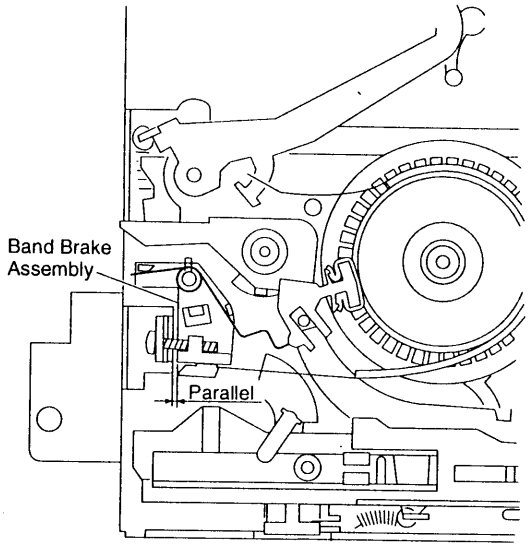


Fig. AL7

EXPLODED VIEWS AND PARTS LIST SECTION

14" COLOR TV/VCR COMBINATION
20" COLOR TV/VCR COMBINATION

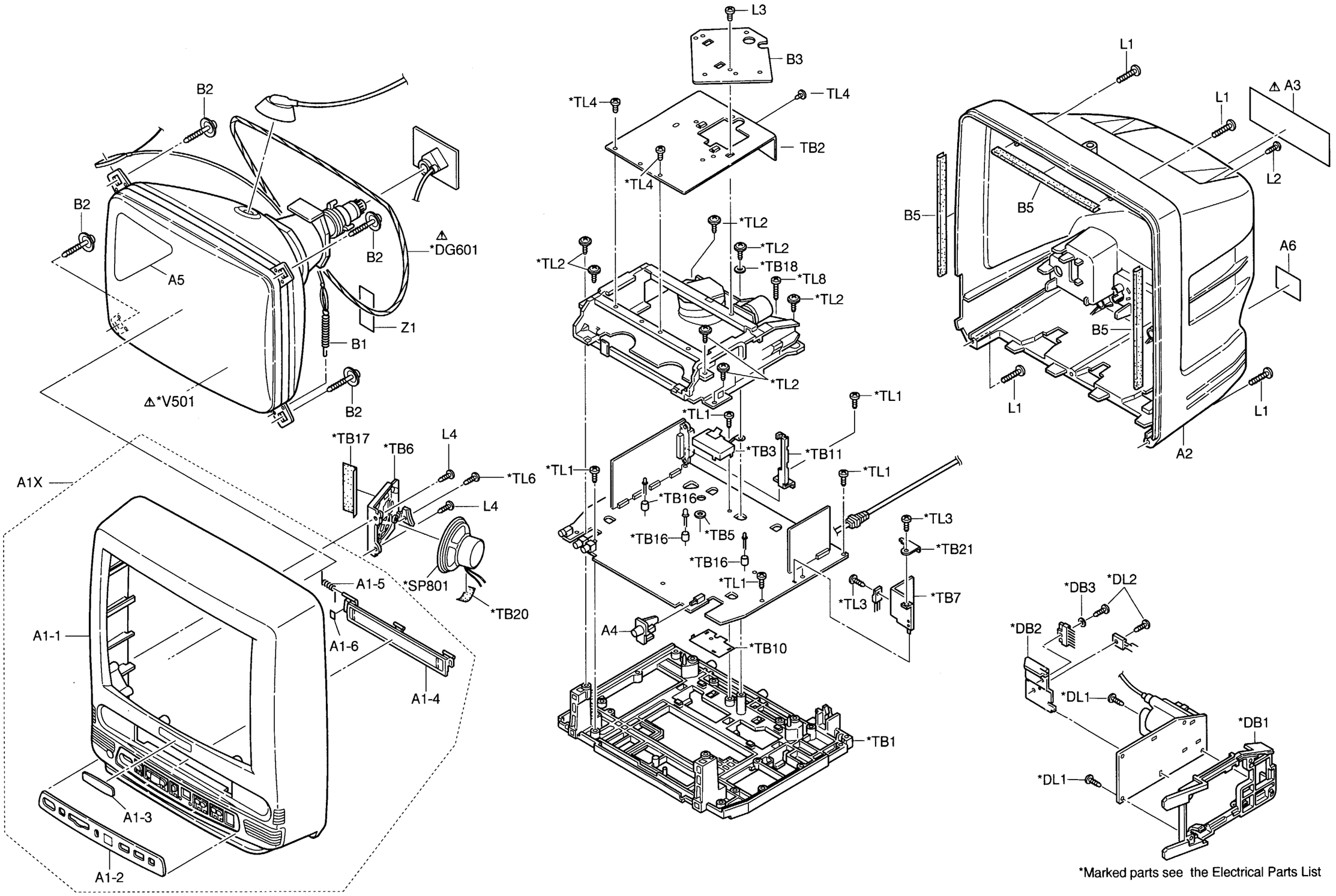
MV-3420
MV-4820

Sec. 3: Exploded Views and Parts List Section

- **Exploded views**
- **Parts List**

TABLE OF CONTENTS

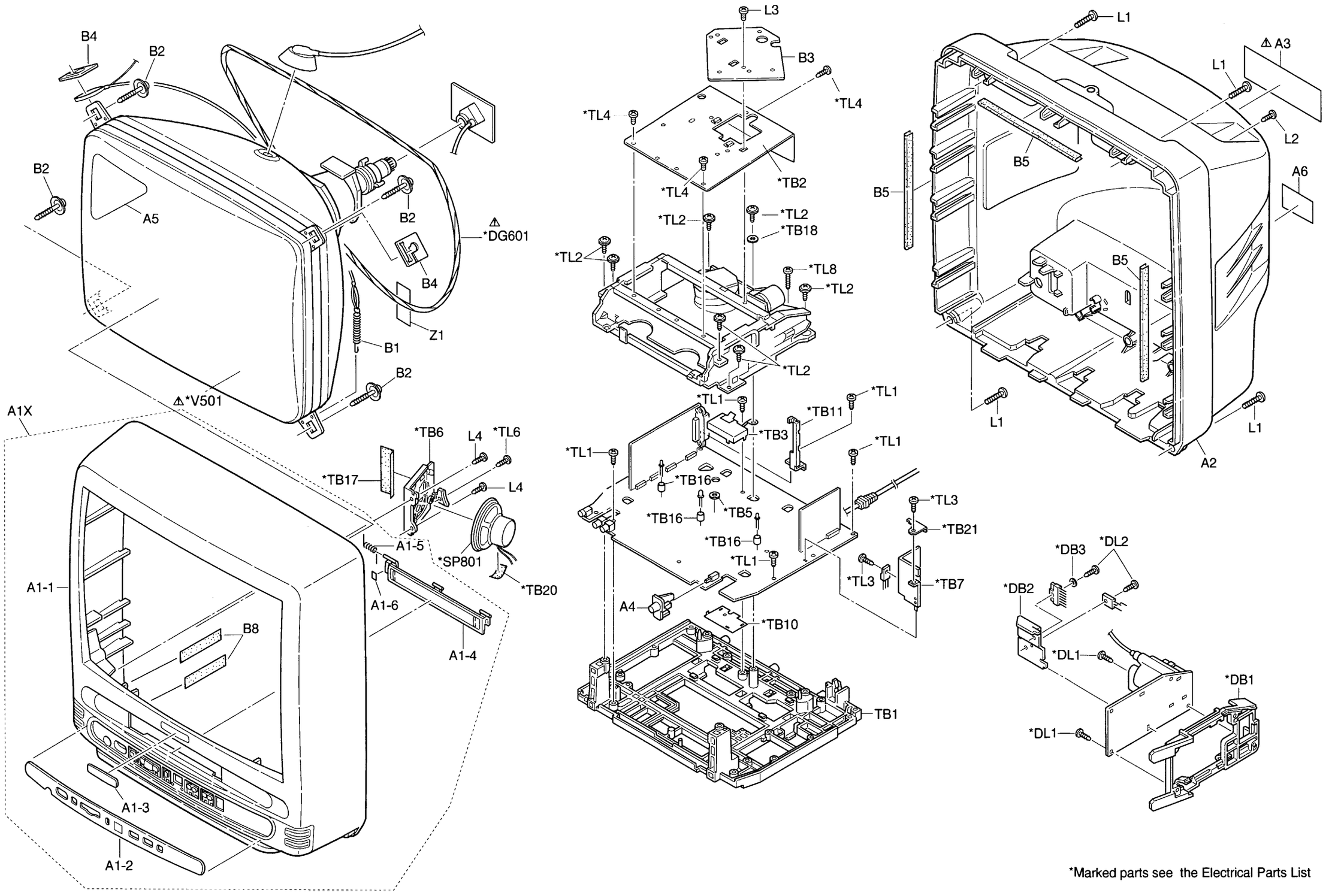
CABINET EXPLODED VIEW (MV-3420)



*Marked parts see the Electrical Parts List

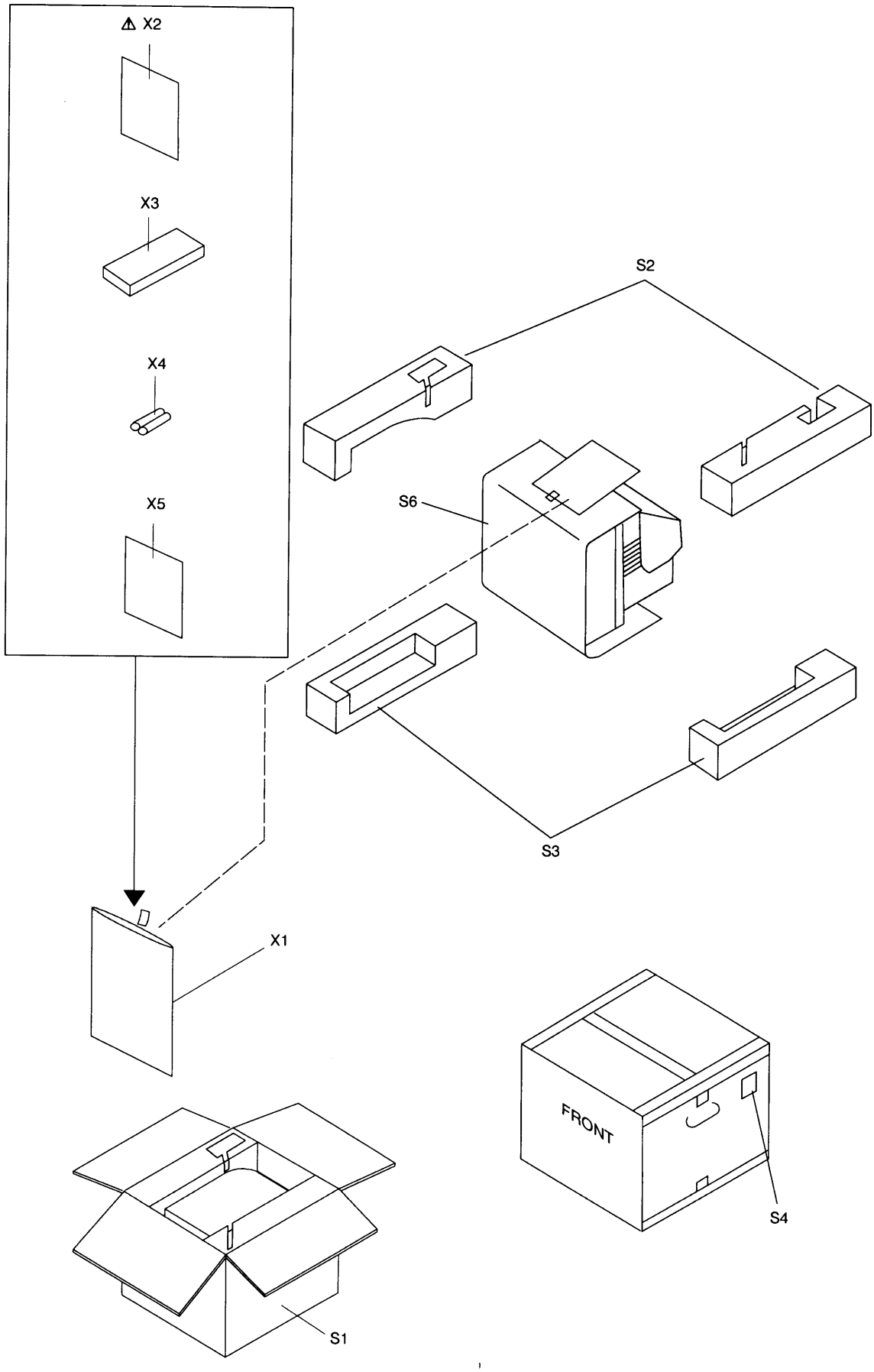
B6902EX

CABINET EXPLODED VIEW (MV-4820)



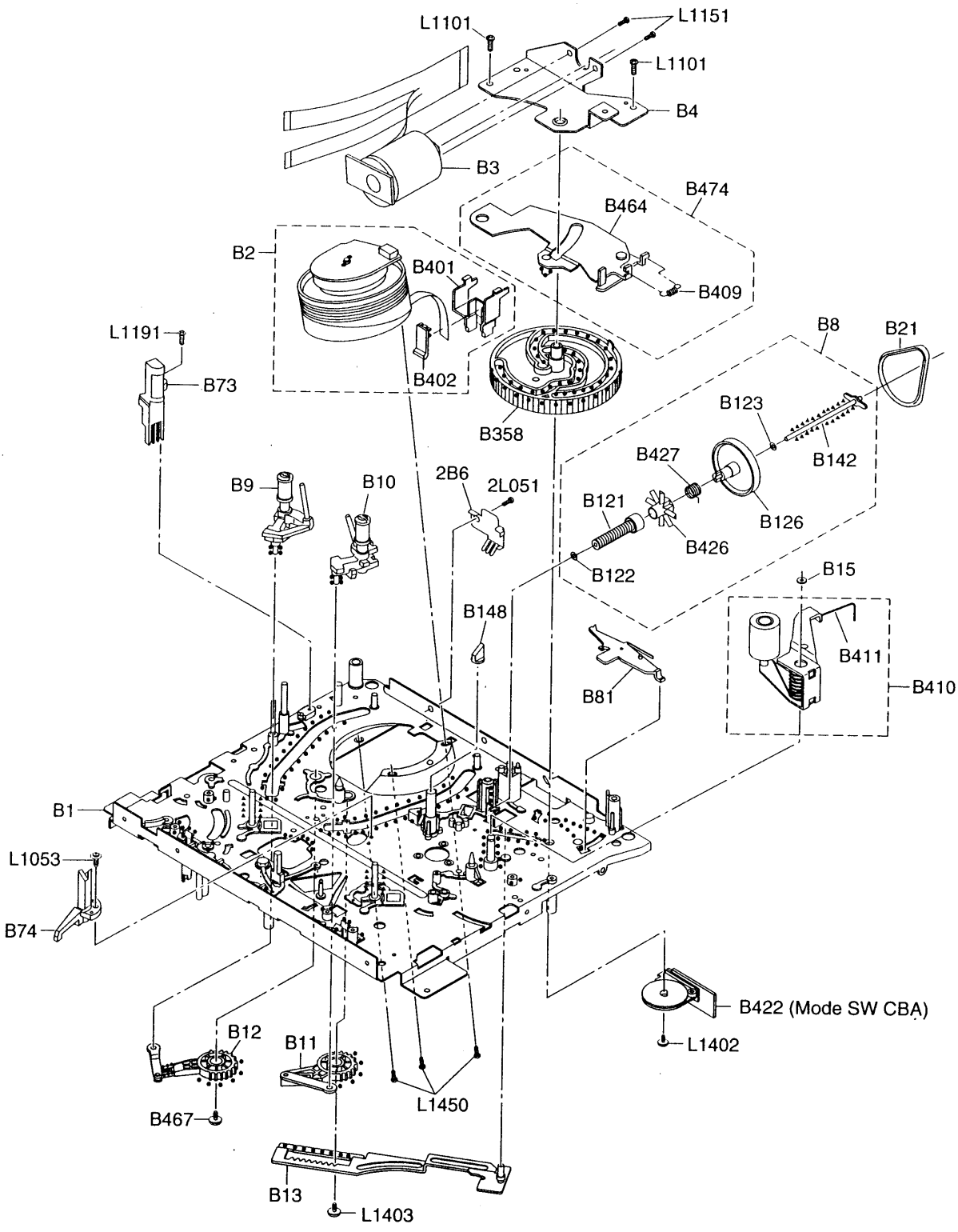
*Marked parts see the Electrical Parts List

PACKING EXPLODED VIEW (MV-3420/MV-4820)



Deck Mechanism View 1

Mark	Description	Part No.
●●●●●	Floil G-374G (Blue grease)	0VZZ00109
▲▲▲▲▲	Hydro-Fluid EP56 (Spindle oil)	0VZZ00068



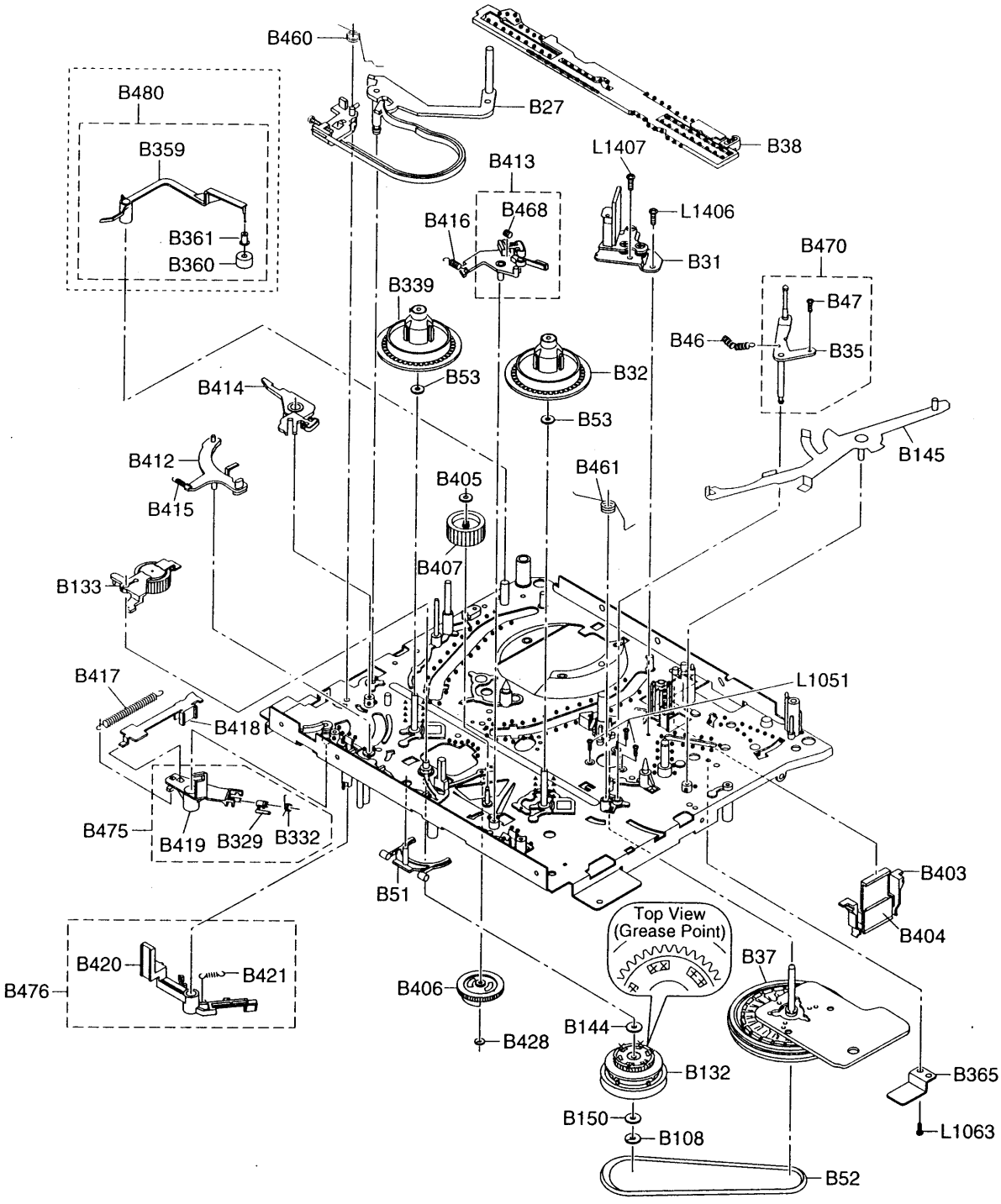
Some Ref. Numbers are not in sequence.

Deck Mechanism View 2

Mark	Description	Part No.
×××××	Sankol FG-84M (White grease)	0VZZ00062
•••••	Floil G-374G (Blue grease)	0VZZ00109
▲▲▲▲▲	Hydro-Fluid EP56 (Spindle oil)	0VZZ00068

Note: Two different, but interchangeable, types of Capstan Motor (B37) may be installed in these models. Based on the type of capstan motor, items B365 and L1063 will be used/not used as shown in the table below.

Type	Part No.	B365	L1063
A	MMDZB12SJ006	Not used	Not used
B	N9620CML	Used	Used

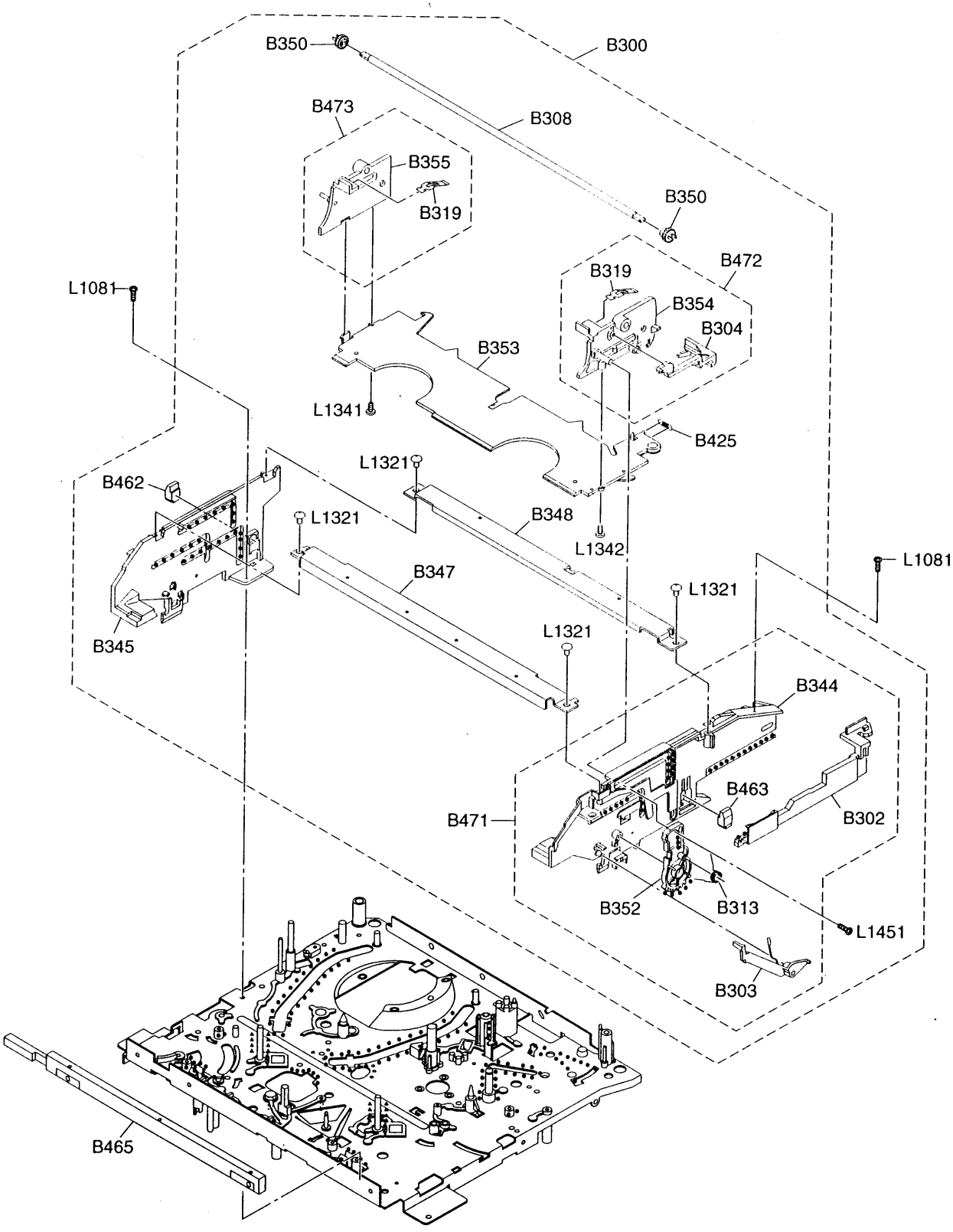


See the Mechanical Parts List.

Some Ref. Numbers are not in sequence.

Deck Mechanism View 3

Mark	Description		Part No.
●●●●●	Floil G-374G	(Blue grease)	0VZZ00109
▲▲▲▲▲	Hydro-Fluid EP56	(Spindle oil)	0VZZ00068



Some Ref. Numbers are not in sequence.

MECHANICAL PARTS LIST (MV-3420/MV-4820)

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.

Ref. No.	Description	Part No.
A1X	FRONT CABINET ASSEMBLY (A1-1~A1-6 are included) (Model MV-3420)	0EM100950
A1X	FRONT CABINET ASSEMBLY (A1-1~A1-6 are included) (Model MV4820)	0EM100952
A1-1	FRONT CABINET (Model MV-3420)	0EM100945
A1-1	FRONT CABINET (Model MV-4820)	0EM100953
A1-2	CONTROL PLATE (Model MV-3420)	0EM200974
A1-2	CONTROL PLATE (Model MV-4820)	0EM200978
A1-3	BRAND PLATE	0EM404672
A1-4	CASSETTE DOOR	0EM404678
A1-5	DOOR SPRING	0VM403773
A1-6	CLOTH(4X4)	0EM402404
A2	REAR CABINET (Model MV-3420)	0EM000342
A2	REAR CABINET (Model MV-4820)	0EM100934
A3 ⚠	RATING LABEL (Model MV-3420)	0EM404679
A3 ⚠	RATING LABEL (Model MV-4820)	0EM404673
A4	POWER KNOB	0EM301219
A5	POP LABEL	0EM404695
A6	TOTAL CARE LABEL	0EM403646
B1	TENSION SPRING B0080B0:EM40808	26WH006
B2	CRT MOUNTING SCREW	8A00083
B3	SHILDE PLATE	0EM404187
B4	DEGAUSS HOLDER (Model MV-4820)	0EM402001
B5	CLOTH 190X15XT0.5	TS7623
B8	CLOTH(A) (Model MV-4820)	0EM401807
L1	SCREW P-TIGHT 4X18 BIND HEAD +	GBMP4180
L2	SCREW TAPPING M4X14 BIND HEAD+	DBM14140
L3	SCREW C-TIGHT M3X4 BIND HEAD+	GBMC3040
L4	SCREW P-TIGHT 3X10 BIND HEAD (Model MV-3420)	GBUP3100
L4	SCREW ASSEMBLED 12:M3X14 (Model MV-4820)	0EM404416
S1	CARTON (Model MV-3420)	0EM404680
S1	CARTON (Model MV-4820)	0EM404674
S2	STYROFOAM TOP ASSY (Model MV-3420)	0EM404189
S2	STYROFOAM TOP ASSY (Model MV-4820)	0EM404266
S3	STYROFOAM BOTTOM ASSY (Model MV-3420)	0EM404190
S3	STYROFOAM BOTTOM ASSY (Model MV-4820)	0EM404267
S4	SERIAL NO. LABEL	0EM401639
S6	SET SHEET :800X1500 (Model MV-3420)	0EM402369
S6	SET SHEET :1000X1700 (Model MV-4820)	0EM402178
X1	POLYETHYLENE BAG	Z223380
X2 ⚠	OWNER'S MANUAL (Model MV-3420)	0EMN01423
X2 ⚠	OWNER'S MANUAL (Model MV-4820)	0EMN01425
X3	REMOTE CONTROL UNIT 512/ERC001/N0253RD	N0253RD
X4	DRY BATTERY R6P UM3	XB0M451GH001
X4	DRY BATTERY UM3/RS6 2PCS PACK	579W099
X4	DRY BATTERY R6P(AR)2PX	XB0M451HU002
X5	WARANTY CARD	0EMN00912
	CLEANER ASSY MK7	0VSA09032
	CLEANER LEVER MK7	0VM303350
	CLEAN ROLLER MK4	0VM406123
	CLEAN BEARING MK4	0VM406124

ELECTRICAL PARTS LIST (MV3420/MV4820)

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: 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%

Main (MMA) CBA

Ref. No.	Description	Part No.
	Main (MMA) CBA (MV-3420)	0ESA02797
	Main (MMA) CBA (MV4820)	0ESA02809
	Consists of the following	
	CAPACITORS	
C 001	ELECTROLYTIC CAP. 4.7μF/25V M	CE1EMASDL4R7
C 002	CERAMIC CAP.(AX) SL J 47pF/50V	CCA1JJTSL470
C 003	CERAMIC CAP.(AX) SL J 47pF/50V	CCA1JJTSL470
C 004	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 007	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C 008	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 010	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 011	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 101	CERAMIC CAP. CH J 22pF/50V	CCD1JJSCH220
C 102	CERAMIC CAP. CH J 22pF/50V	CCD1JJSCH220
C 103	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 104	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 105	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 106	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 107	CERAMIC CAP.(AX) B K 680pF/50V	CDA1JKT0B681
C 108	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 109	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 113	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 114	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 115	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 117	CERAMIC CAP.(AX) B K 82pF/50V	CCA1JKT0B820
C 201	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 202	CERAMIC CAP.(AX) CH J 10pF/50V	CCA1JJTCH100
C 203	CERAMIC CAP.(AX) CH J 10pF/50V	CCA1JJTCH100
C 204	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 205	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 206 ⚠	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 208	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 209	CERAMIC CAP.(AX) SL J 27pF/50V	CCA1JJTSL270
C 210	CERAMIC CAP.(AX) SL J 27pF/50V	CCA1JJTSL270
C 212	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 213	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 214	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 215	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 216	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 217	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
C 219	CERAMIC CAP.(AX) X M 1800pF/16V	CDA1CMT0X182
C 220	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 221	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 222	CERAMIC CAP.(AX) X M 3300pF/16V	CDA1CMT0X332
C 223	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 224	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 225	CERAMIC CAP.(AX) X M 6800pF/16V	CDA1CMT0X682
C 226	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 227	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 228	ELECTROLYTIC CAP. 47μF/6.3V M	CE0KMASDL470
C 229	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 230	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 231	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 232	CERAMIC CAP.(AX) X M 3300pF/16V	CDA1CMT0X332
C 233	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 234	ELECTROLYTIC CAP. 22μF/10V M	CE1AMASDL220
C 235	ELECTROLYTIC CAP. 33μF/6.3V M	CE0KMASDL330
C 236	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 238	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 239	ELECTROLYTIC CAP. 220μF/6.3V M H7	CE0KMASSL221
C 240	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 244	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 245	PCB JUMPER D0.6-P5.0	JW5.0T
C 247	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 248	CERAMIC CAP.(AX) SL J 68pF/50V	CCA1JJTSL680
C 401	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 402	ELECTROLYTIC CAP. 0.22μF/50V M H7	CE1JMASSLR22
C 403	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 404	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330
C 405	CERAMIC CAP.(AX) SL J 15pF/50V	CCA1JJTSL150
C 406	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 407	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 408	CERAMIC CAP.(AX) SL J 27pF/50V	CCA1JJTSL270
C 409	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 410	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 411	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMASSL220
C 412	CERAMIC CAP.(AX) B K 82pF/50V	CCA1JKT0B820
C 413	CERAMIC CAP.(AX) B J 390pF/50V	CCA1JJT0B391
C 417	CERAMIC CAP.(AX) SL J 39pF/50V	CCA1JJTSL390
C 418	CERAMIC CAP.(AX) SL J 10pF/50V	CCA1JJTSL100
C 419	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 420	PCB JUMPER D0.6-P5.0	JW5.0T
C 421	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330
C 422	CERAMIC CAP.(AX) B J 180pF/50V	CCA1JJT0B181
C 423	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 424	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 425	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 426	CERAMIC CAP.(AX) SL J 68pF/50V	CCA1JJTSL680
C 427	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 428	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 429	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 430	CERAMIC CAP.(AX) SL J 56pF/50V	CCA1JJTSL560
C 431	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C 432	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 433	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 434	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C 435	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0

Ref. No.	Description	Part No.
C 436	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 437	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 438	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 439	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 440	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 441	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 442	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 443	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 444	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 445	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 446	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 447	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 450	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 451	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 452	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 453	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 455	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 456	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 457	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 458	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 459	ELECTROLYTIC CAP. 0.1μF/50V M H7 or	CE1JMASSL0R1
	ELECTROLYTIC CAP. 0.1μF/50V M H7	CE1JMASSLR10
C 460	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 461	CERAMIC CAP.(AX) F Z 0.1μF/50V	CCA1JZT0F104
C 462	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C 463	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 464	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 465	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 469	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330
C 470	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330
C 471	CERAMIC CAP.(AX) B K 470pF/50V	CCA1JKT0B471
C 472	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 603	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C 604	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C 605	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C 606	CERAMIC CAP. F Z 0.01μF/500V or	CCD2JZD0F103
	CERAMIC CAP. 0.01μF/AC250V	CCD2EZA0F103
C 609 ⚠	ELECTROLYTIC CAP. 150μF/400V M W/F or	CA2H151EA028
	ELECTROLYTIC CAP. 150μF/400V	CA2H151NC066
C 611	*MYLAR CAP. 0.039μF/50V J or	CMA1JJS00393
	MYLAR CAP. 0.039μF/50V K or	2250393S
	FILM CAP.(P) 0.039μF/50V J TV (Model MV-3420)	CMB1JJS00393
C 611	*MYLAR CAP. 0.082μF/50V J or	CMA1JJS00823
	MYLAR CAP. 0.082μF/50V K or	2250823S
	FILM CAP.(P) 0.082μF/50V J TV (Model MV-4820)	CMB1JJS00823
C 612	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 613 ⚠	CERAMIC CAP. 0.01μF F CS or	CCG2HMN0F103
	SAFETY CAP. F M 0.01μF/250V	CCG2EMP0F103
C 614 ⚠	CERAMIC CAP. 0.01μF F CS or	CCG2HMN0F103
	SAFETY CAP. F M 0.01μF/250V	CCG2EMP0F103
C 615	MYLAR CAP. 0.0082μF/50V K or	CMA1JJS00822
	MYLAR CAP. 0.0082μF/50V K or	2250822S

Ref. No.	Description	Part No.
	FILM CAP.(P) 0.0082μF/50V J TV (Model MV-3420)	CMB1JJS00822
C 615	MYLAR CAP. 0.0047μF/50V K or	CMA1JJS00472
	MYLAR CAP. 0.0047μF/50V K or	2250472S
	FILM CAP.(P) 0.0047μF/50V J TV (Model MV-4820)	CMB1JJS00472
C 616	CERAMIC CAP. 680pF/2kV (Model MV-3420)	CA3D681KG004
C 616	CERAMIC CAP. 470pF/2kV (Model MV-4820)	CA3D471KG004
C 617	ELECTROLYTIC CAP. 2.2μF/200V M or	CE2DMASDL2R2
	ELECTROLYTIC CAP. 2.2μF/200V M	CA2D2R2NC006
C 620	ELECTROLYTIC CAP. 1000μF/16V M	CE1CMZPDL102
C 621	ELECTROLYTIC CAP. 470μF/16V M	CE1CMZPDL471
C 622	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C 623	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C 624	ELECTROLYTIC CAP. 0.47μF/50V M	CE1JMASDLR47
C 625	ELECTROLYTIC CAP. 470μF/16V M	CE1CMZPDL471
C 627	ELECTROLYTIC CAP. 47μF/16V M H7	CE1CMASSL470
C 628	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 629	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C 630	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C 631	ELECTROLYTIC CAP. 220μF/6.3V M	CE0KMASDL221
C 632	ELECTROLYTIC CAP. 470μF/35V M	CE1GMZPDL471
C 633	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 634	ELECTROLYTIC CAP. 100μF/160V M or	CE2CMZPDL101
	ELECTROLYTIC CAP. 100μF/160V M or	CE2CMZPTL101
	ELECTROLYTIC CAP. 100μF/160V M W/F	CE2CMZNTL101
C 635	ELECTROLYTIC CAP. 100μF/6.3V M	CE0KMASDL101
C 636	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 637	CERAMIC CAP.(AX) B K 100pF/50V (Model MV-4820)	CCA1JKT0B101
C 638 ⚠	CERAMIC CAP. 0.01μF F CS or	CCG2HMN0F103
	SAFETY CAP. F M 0.01μF/250V	CCG2EMP0F103
C 640	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 641	ELECTROLYTIC CAP. 10μF/50V M H7	CE1JMASSL100
C 642	CERAMIC CAP. 0.001μF/2kV (Model MV-4820)	CCD3DKP0B102
C 701	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 702	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 801 ⚠	ELECTROLYTIC CAP. 470μF/16V M	CE1CMZPDL471
C 802	ELECTROLYTIC CAP. 330μF/16V M	CE1CMASDL331
C 803	MYLAR CAP. 0.1μF/50V J or	CMA1JJS00104
	MYLAR CAP. 0.1μF/50V K or	2250104S
	MYLAR CAP. 0.1μF/50V J TV	CMB1JJS00104
C 804	CERAMIC CAP.(AX) B K 560pF/50V (Model MV-3420)	CCA1JKT0B561
C 805	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 806	ELECTROLYTIC CAP. 0.22μF/50V M	CE1JMASDLR22
C 807	ELECTROLYTIC CAP. 100μF/16V M	CE1CMASDL101
C 808	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 851	CERAMIC CAP.(AX) B K 820pF/50V	CDA1JKT0B821
C 852	CERAMIC CAP. (AX) X M 1200pF/16V	CDA1CMT0X122
C 853	ELECTROLYTIC CAP. 4.7μF/25V M	CE1EMASDL4R7
C 854	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 855	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMASSL220
C 857	CERAMIC CAP. B K 470pF/100V or	CCD2AKP0B471
	CERAMIC CAP. B K 470pF/500V	CCD2JKP0B471
C 858	ELECTROLYTIC CAP. 47μF/6.3V M H7	CE0KMASSL470
C 860	FILM CAP.(P) 0.018μF/100V J or	CMA2AJS00183
	TF CAP. 0.018μF/100V J or	CT2A183MS022
	MYLAR CAP. 0.018μF/100V K or	1251183S
	MYLAR CAP. 0.018μF/100V J TV	CMB2AJS00183
C 861	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330

*Mylar is a registered trademark of E. I. Du Pont de Nemours and Company.

Ref. No.	Description	Part No.
C 862	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 863	ELECTROLYTIC CAP. 22μF/10V M H7	CE1AMASSL220
C 864	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
C 865	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 866	ELECTROLYTIC CAP. 22μF/10V M	CE1AMASDL220
C 867	CERAMIC CAP.(AX) F Z 0.033μF/16V	CDA1CZT0F333
C 868	CERAMIC CAP.(AX) B K 220pF/50V	CCA1JKT0B221
C 869	ELECTROLYTIC CAP. 33μF/6.3V M	CE0KMASDL330
C 870	CERAMIC CAP.(AX) F Z 0.033μF/16V	CDA1CZT0F333
C 871	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 872	MYLAR CAP. 0.033μF/50V J or	CMA1JJS00333
	MYLAR CAP. 0.033μF/50V K or	2250333S
	FILM CAP.(P) 0.033μF/50V J TV	CMB1JJS00333
C 873	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
	CONNECTORS	
CN 201	CONNECTOR 8P TMC-J08P-A1	J3TMA08TG002
CN 471	FFC CONNECTOR BASE TOP 4P 9604S-04C	JC04J04ER002
CN 574	CONNECTOR BASE 7P TUC-P07P-B1	J3TUA07TG001
CN 575	CONNECTOR BASE 6P TUC-P06P-B1	J3TUA06TG001
CN 801	STRAIGHT CONNECTOR BASE 00 8283 0212 00 000 or	J383C02UG002
	STRAIGHT PIN HEADER 2P 173981-2	1770258
CN 851	FFC CONNECTOR BASE TOP 17P 9604S-17C	JC04J17ER002
CN 852	CABLE CONNECTOR 2P TMC-E02X-A1	JCTMC02TG001
	DIODES	
D 101	PCB JUMPER D0.6-P5.0	JW5.0T
D 201	LED SLR-932AV-7K-AB	QPQ8SLR932AV
D 202	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 203	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 204	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 205	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 206	LED(RED)L-FORMING LT1814G-81-FL or	NP4Z0LT1814G
	LED(RED)L-FORMING CSL-501H3-MB or	NP6ZCSL501H3
	LED L-53HT	NP4Z000L53HT
D 207	LED(RED)L-FORMING LT1814G-81-FL or	NP4Z0LT1814G
	LED(RED)L-FORMING CSL-501H3-MB or	NP6ZCSL501H3
	LED L-53HT	NP4Z000L53HT
D 208	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 209	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 210	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148

Ref. No.	Description	Part No.
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 211	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 401	PCB JUMPER D0.6-P5.0	JW5.0T
D 601	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D 602	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D 603	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D 604	RECTIFIER DIODE ERB12-06	QDQZ0ERB1206
D 605	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 607 ⚠	ZENER DIODE MTZJT-7715B (Model MV-3420)	QDTB00MTZJ15
D 607 ⚠	ZENER DIODE MTZJT-7724B (Model MV-4820)	QDTB00MTZJ24
D 608	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 609 ⚠	SCHOTTKY BARRIER DIODE ERA81-004	QDPZERA81004
D 610	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 611	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 612	ZENER DIODE MTZJT-772.2B	QDTB0MTZJ2R2
D 613 ⚠	FAST RECOVERY DIODE ERB44-04	QDPZ0ERB4404
D 614	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 615	ZENER DIODE MTZJT-778.2B	QDTB0MTZJ8R2
D 616	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 617 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 618	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D 619 ⚠	SCHOTTKY BARRIER DIODE ERB81-004	AERB81004***
D 620	ZENER DIODE MTZJT-775.6B	QDTB0MTZJ5R6
D 621 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 622	SWITCHING DIODE 1N4148 T-77	QDTZ001N4148
D 624 ⚠	ZENER DIODE MTZJT-7720B	QDTB00MTZJ20
D 625	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8

Ref. No.	Description	Part No.
D 626 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 627	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 628	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 629 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 632 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 633 ⚠	RECTIFIER DIODE ERA22-02	QDPZ0ERA2202
D 634 ⚠	DIODE 1ZC33	QDQZ0001ZC33
D 635	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 636	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 637 ⚠	FAST RECOVERY DIODE ERC25-06	QDQZ0ERC2506
D 638	ZENER DIODE MTZJT-7736A	QDTA00MTZJ36
D 639 ⚠	ZENER DIODE MTZJT-776.8B	QDTB0MTZJ6R8
D 640 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 641	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 642	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 643 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 644 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 645 ⚠	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D 646 ⚠	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D 648	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 801 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
ICS		
IC 101	IC:OSD CONTROLLER M35040-061FP	QSMQA0SMB082
IC 201 ⚠	MICROCONTROLLER 8BIT CXP80732A-118Q	QSMQA0RSN079
IC 202	IC:OP-AMP. LM324N	NSBLA0SSS007
IC 203	IC:MEMORY 24LC02B/P or	NSMMA0SMH003
	IC:EEPROM 2K AT24C02-10PC or	NSMMA0SAZ004
	IC:MEMORY ST24C02B6 or	NSMMA0ZSS005
	IC:MEMORY ST24C02CB1	NSMMA0ZSS003
IC 204	IC BA6955N	QSBLA0SRM024
IC 401 ⚠	IC:Y/C/A LA71507M	QSBLA0RSY073
IC 402	IC CCD LC89978M	QSMLA0SSY024
IC 403	IC:HEAD AMP LA70001	QSBLA0SSY062
IC 601 ⚠	PHOTOCOUPLER PC123FY2	QPE20PC123FY
IC 602 ⚠	IC:VOLTAGE REGULATOR 5V KIA7805PI	NSBLA0ZJY020
IC 801 ⚠	IC TDA7231A	NSBLA0SSS001
COILS		
L 002	PCB JUMPER D0.6-P5.0	JW5.0T
L 101	INDUCTOR 22μH-J-26T or	LLAXJATTU220
	INDUCTOR 22μH-K-26T	LLAXKDTKA220
L 102	INDUCTOR 22μH-J-26T or	LLAXJATTU220
	INDUCTOR 22μH-K-26T	LLAXKDTKA220
L 201	PCB JUMPER D0.6-P5.0	JW5.0T
L 202	INDUCTOR 47μH-J-26T or	LLAXJATTU470
	INDUCTOR 47μH-K-26T	LLAXKDTKA470
L 203	LEAD INDUCTOR 22μH-K	LLARKMUTU220
L 401	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
L 402	INDUCTOR 47μH-J-26T or	LLAXJATTU470
	INDUCTOR 47μH-K-26T	LLAXKDTKA470
L 404	INDUCTOR 22μH-J-26T or	LLAXJATTU220
	INDUCTOR 22μH-K-26T	LLAXKDTKA220
L 405	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
L 406	CHOKE COIL 47μH-K	LLBD00PKV004
L 407	INDUCTOR 330μH-J-26T or	LLAXJATTU331
	INDUCTOR 330μH-K-26T	LLAXKDTKA331
L 602	PCB JUMPER D0.6-P5.0	JW5.0T
L 603	INDUCTOR 100μH-J-26T or	LLAXJATTU101
	INDUCTOR 100μH-K-26T	LLAXKDTKA101
L 701	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
L 801	INDUCTOR 1.0μH-J-26T or	LLAXJATTU010
	INDUCTOR 1.0μH-K-26T	LLAXKDTKA1R0
L 851	INDUCTOR 47μH-K	LLARKDQKA470
TRANSISTORS		
Q 101	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 202	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 203	RES. BUILT-IN TRANSISTOR KRC101M	NQSZ0KRC101M
Q 204	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR 2SA1346	2SA1346Z
Q 205	PHOTO TRANSISTOR PT380FB or	QP4B00PT380F

Ref. No.	Description	Part No.
	PHOTO TRANSISTOR ST-319R2-B	QP4B0ST319R2
Q 206	PHOTO TRANSISTOR ST-319R2-B	QP4B0ST319R2
Q 207	PHOTO TRANSISTOR ST-319R2-B	QP4B0ST319R2
Q 401	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 402	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 403	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 404	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 405	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 407	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 408	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 409	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR 2SC3400	2SC3400Z
Q 601 ⚠	TRANSISTOR 2SC2120-O(TPE2) or	QQS002SC2120
	TRANSISTOR 2SC2120(Y)	QQSY02SC2120
Q 602 ⚠	FET 2SK1985-01MR	QFQZ02SK1985
Q 603 ⚠	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 604	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 605	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 606 ⚠	TRANSISTOR 2SC2120-O(TPE2) or	QQS002SC2120
	TRANSISTOR 2SC2120(Y)	QQSY02SC2120
Q 607	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 608	TRANSISTOR 2SC2120-O(TPE2) or	QQS002SC2120
	TRANSISTOR 2SC2120(Y)	QQSY02SC2120
Q 609 ⚠	TRANSISTOR 2SC2120-O(TPE2) or	QQS002SC2120
	TRANSISTOR 2SC2120(Y)	QQSY02SC2120
Q 610 ⚠	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 611 ⚠	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 612	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 801	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 851	TRANSISTOR KTC3193(Y) or	NQSY0KTC3193

Ref. No.	Description	Part No.
	TRANSISTOR 2SC2839(E) or	C2839EZ
	TRANSISTOR 2SC2839(F)	C2839FZ
Q 852	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 853	TRANSISTOR 2SC2120-O(TPE2) or	QQS002SC2120
	TRANSISTOR 2SC2120(Y)	QQSY02SC2120
Q 854	RES. BUILT-IN TRANSISTOR KRA103M or	NQSZ0KRA103M
	RES. BUILT-IN TRANSISTOR 2SA1346	2SA1346Z
Q 855	TRANSISTOR 2SC3331(T) or	QSC3331TNPAA
	TRANSISTOR 2SC1815GR-TPE2	2SC1815GRTPE
Q 856	TRANSISTOR 2SC3331(T) or	QSC3331TNPAA
	TRANSISTOR 2SC1815GR-TPE2	2SC1815GRTPE
	RESISTORS	
R 001	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 002	CARBON RES. 1/6W J 15k Ω or	RCX6JATZ0153
	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R 003	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 004	CARBON RES. 1/6W J 82k Ω or	RCX6JATZ0823
	CARBON RES. 1/4W J 82k Ω	RCX4JATZ0823
R 005	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 006	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 007	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 009	CARBON RES. 1/6W J 82 Ω or	RCX6JATZ0820
	CARBON RES. 1/4W J 82 Ω	RCX4JATZ0820
R 101	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 102	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 103	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 104	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 105	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 106	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 107	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 108	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 109	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 110	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 111	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 112	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 113	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 114	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 115	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 116	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R201B	PCB JUMPER D0.6-P5.0	JW5.0T
R202B	PCB JUMPER D0.6-P5.0	JW5.0T

Ref. No.	Description	Part No.
R203B	PCB JUMPER D0.6-P5.0	JW5.0T
R204B	PCB JUMPER D0.6-P5.0	JW5.0T
R 205	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 206	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R207A	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R208B	PCB JUMPER D0.6-P5.0	JW5.0T
R209B	PCB JUMPER D0.6-P5.0	JW5.0T
R210B	PCB JUMPER D0.6-P5.0	JW5.0T
R211A	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 212	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 213	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 214	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 215	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 216	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 217	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 218	PCB JUMPER D0.6-P5.0	JW5.0T
R 219	PCB JUMPER D0.6-P5.0	JW5.0T
R 220	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 221	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 223 ⚠	PCB JUMPER D0.6-P5.0	JW5.0T
R 224	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 225	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 226	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 228	PCB JUMPER D0.6-P5.0	JW5.0T
R 229	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 230	PCB JUMPER D0.6-P5.0	JW5.0T
R 231	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R 232	CARBON RES. 1/6W J 39k Ω or	RCX6JATZ0393
	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R 233	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 234	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 235	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 236	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 237	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 238	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 239	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 240	PCB JUMPER D0.6-P5.0	JW5.0T
R 241	PCB JUMPER D0.6-P5.0	JW5.0T
R 242	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 243	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103

Ref. No.	Description	Part No.
R 244	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 245	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 246	CARBON RES. 1/6W J 1.2k Ω or	RCX6JATZ0122
	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R 247	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R 248	CARBON RES. 1/6W J 47 Ω or	RCX6JATZ0470
	CARBON RES. 1/4W J 47 Ω	RCX4JATZ0470
R 249	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 250	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 251	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 252	CARBON RES. 1/6W J 18k Ω or	RCX6JATZ0183
	CARBON RES. 1/4W J 18k Ω	RCX4JATZ0183
R 253	CARBON RES. 1/6W J 560k Ω or	RCX6JATZ0564
	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R 254	CARBON RES. 1/6W J 560k Ω or	RCX6JATZ0564
	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R 255	CARBON RES. 1/6W J 820k Ω or	RCX6JATZ0824
	CARBON RES. 1/4W J 820k Ω	RCX4JATZ0824
R 256	CARBON RES. 1/6W J 39 Ω or	RCX6JATZ0390
	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 257	CARBON RES. 1/6W J 39 Ω or	RCX6JATZ0390
	CARBON RES. 1/4W J 39 Ω	RCX4JATZ0390
R 258	CARBON RES. 1/6W J 390k Ω or	RCX6JATZ0394
	CARBON RES. 1/4W J 390k Ω	RCX4JATZ0394
R 259	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 260	CARBON RES. 1/6W J 270 Ω or	RCX6JATZ0271
	CARBON RES. 1/4W J 270 Ω	RCX4JATZ0271
R 261	CARBON RES. 1/6W J 39k Ω or	RCX6JATZ0393
	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R 262	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 263	CARBON RES. 1/6W J 1.2k Ω or	RCX6JATZ0122
	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R 264	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 265	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 266	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 267	CARBON RES. 1/6W J 560k Ω or	RCX6JATZ0564
	CARBON RES. 1/4W J 560k Ω	RCX4JATZ0564
R 268	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 269	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 270	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 271	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 272	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 273	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 274	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 275	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 276	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103

Ref. No.	Description	Part No.
R 277	CARBON RES. 1/6W J 680 Ω or	RCX6JATZ0681
	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 278	CARBON RES. 1/6W J 330 Ω or	RCX6JATZ0331
	CARBON RES. 1/4W J 330 Ω	RCX4JATZ0331
R 279	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 280	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 286	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 287	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R 288	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 289	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 290	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 291	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R 292	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 293	METAL RESISTOR 1W J 2.7 Ω or	RN012R7ZU001
	FIXED METAL OXIDE FILM RES. 1W J 2.7 Ω or	RN012R7KE009
	METAL RESISTOR 1W J 2.7 Ω	RN012R7UB001
R 294 ⚠	PCB JUMPER D0.6-P5.0	JW5.0T
R 295 ⚠	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 296 ⚠	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 297	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R298B	PCB JUMPER D0.6-P5.0	JW5.0T
R 299	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 401	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 403	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W+w 220 Ω	RCX4JATZ0221
R 405	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 406	PCB JUMPER D0.6-P5.0	JW5.0T
R 407	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 408	CARBON RES. 1/6W J 390 Ω or	RCX6JATZ0391
	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R 409	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 410	CARBON RES. 1/6W J 390 Ω or	RCX6JATZ0391
	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R 411	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 412	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 413	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 414	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 415	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 416	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 417	CARBON RES. 1/6W J 1.2k Ω or	RCX6JATZ0122
	CARBON RES. 1/4W J 1.2k Ω	RCX4JATZ0122
R 418	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102

Ref. No.	Description	Part No.
R 421	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 422	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 423	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 424	PCB JUMPER D0.6-P5.0	JW5.0T
R 428	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 429	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 430	CARBON RES. 1/6W J 39k Ω or	RCX6JATZ0393
	CARBON RES. 1/4W J 39k Ω	RCX4JATZ0393
R 431	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 432	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 433	CARBON RES. 1/6W J 3.9k Ω or	RCX6JATZ0392
	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R 434 ⚠	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 435	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 436	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 440	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 441	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 442	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 443	CARBON RES. 1/6W J 680 Ω or	RCX6JATZ0681
	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 444	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 603 ⚠	CEMENT RESISTOR 5W K 1.2 Ω or	RW051R2UB001
	CEMENT RESISTOR 5W K 1.2 Ω	RW051R2PG001
R 604	CARBON RES. 1/6W J 10 Ω or	RCX6JATZ0100
	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R 606	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω (Model MV-3420)	RCX4JATZ0272
R 606	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω (Model MV-4820)	RCX4JATZ0332
R 607	METAL RESISTOR 2W J 100 Ω or	RN02101ZU001
	FIXED METAL OXIDE FILM RES. 2W J 100 Ω or	RN02101KE007
	METAL RES. 2W J 100 Ω RSS-SMF P=15	RN02101UB001
R 608	CARBON RES. 1/6W J 47 Ω or	RCX6JATZ0470
	CARBON RES. 1/4W J 47 Ω (Model MV-3420)	RCX4JATZ0470
R 608	CARBON RES. 1/6W J 68 Ω or	RCX6JATZ0680
	CARBON RES. 1/4W J 68 Ω (Model MV-4820)	RCX4JATZ0680
R 609	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 610	CARBON RES. 1/6W J 1M Ω or	RCX6JATZ0105
	CARBON RES. 1/4W J 1M Ω	RCX4JATZ0105
R 611	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 612	CEMENT RESISTOR 5W J 0.39 Ω H=10MM or	RW05R39UB001
	CEMENT RESISTOR 5W J 0.39 Ω	RW05R39PG001
R 613	PCB JUMPER D0.6-P10.0 (Model MV-3420)	JW10.0T
R 613	CARBON RES. RD 1/4W J 4.7M Ω (Model MV-4820)	RCX4JZLZ0475
R 614	PCB JUMPER D0.6-P10.0 (Model MV-3420)	JW10.0T

Ref. No.	Description	Part No.
R 614	CARBON RES. RD 1/4W J 4.7M Ω (Model MV-4820)	RCX4JZLZ0475
R 615	CARBON RES. RD 1/4W J 4.7M Ω	RCX4JZLZ0475
R 616	CARBON RES. RD 1/4W J 4.7M Ω	RCX4JZLZ0475
R 617	CARBON RES. 1/6W J 390 Ω or	RCX6JATZ0391
	CARBON RES. 1/4W J 390 Ω	RCX4JATZ0391
R 618	PCB JUMPER D0.6-P5.0	JW5.0T
R 619	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 620 ⚠	CARBON RES. 1/2W J 12 Ω or	RCX2JZPZ0120
	CARBON RES. 1/2W J 12 Ω or	RCX2120KA013
	CARBON RES. 1/2W J 12 Ω	RCX2JZQZ0120
R 621	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 622	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 623	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 624 ⚠	METAL RESISTOR 1W J 12 Ω or	RN01120ZU001
	FIXED METAL OXIDE FILM RES. 1W J 12 Ω or	RN01120KE009
	METAL RESISTOR 1W J 12 Ω	RN01120UB001
R 625	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 626 ⚠	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 627	CARBON RES. 1/6W J 150 Ω or	RCX6JATZ0151
	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 628	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 630 ⚠	CARBON RES. 1/6W J 10 Ω or	RCX6JATZ0100
	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R 631 ⚠	CARBON RES. 1/6W J 10 Ω or	RCX6JATZ0100
	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R 632 ⚠	METAL RESISTOR 2W J 47 Ω or	RN02470ZU001
	FIXED METAL OXIDE FILM RES. 2W J 47 Ω or	RN02470KE007
	METAL OXIDE RESISTOR 2W J 47 Ω H1=11	RN02470UB001
R 633 ⚠	METAL RESISTOR 2W J 47 Ω or	RN02470ZU001
	FIXED METAL OXIDE FILM RES. 2W J 47 Ω or	RN02470KE007
	METAL OXIDE RESISTOR 2W J 47 Ω H1=11	RN02470UB001
R 634 ⚠	CEMENT RES. 7W K 2.7k Ω or	RW07272UB004
	CEMENT RESISTOR 7W K 2.7k Ω	RW07272PG004
R 636	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 637	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 638	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 639	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 640	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 641	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 643	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 644 ⚠	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 645 ⚠	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 646 ⚠	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 648 ⚠	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 649 ⚠	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 650	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822

Ref. No.	Description	Part No.
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 651	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 652	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 653	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 654 ⚠	METAL RESISTOR 2W J 560 Ω or	RN02561ZU001
	FIXED METAL OXIDE FILM RES. 2W J 560 Ω or	RN02561KE007
	METAL RES. 2W J 560 Ω	RN02561UB001
R 655 ⚠	METAL RESISTOR 2W J 6.8k Ω or	RN02682ZU001
	METAL RES. 2W J 6.8k Ω or	RN02682KE007
	METAL RESISTOR 2W J 6.8k Ω	RN02682UB001
R 656	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R 657	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R 658	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 659	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 660	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 661	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 662	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 663	CARBON RES. 1/6W J 56 Ω or	RCX6JATZ0560
	CARBON RES. 1/4W J 56 Ω (Model MV-3420)	RCX4JATZ0560
R 663	CARBON RES. 1/6W J 33 Ω or	RCX6JATZ0330
	CARBON RES. 1/4W J 33 Ω (Model MV-4820)	RCX4JATZ0330
R 664	CARBON RES. 1/6W J 56 Ω or	RCX6JATZ0560
	CARBON RES. 1/4W J 56 Ω (Model MV-3420)	RCX4JATZ0560
R 664	CARBON RES. 1/6W J 33 Ω or	RCX6JATZ0330
	CARBON RES. 1/4W J 33 Ω (Model MV-4820)	RCX4JATZ0330
R 665	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω (Model MV-4820)	RCX4JATZ0103
R 667	CARBON RES. 1/6W J 5.6k Ω or	RCX6JATZ0562
	CARBON RES. 1/4W J 5.6k Ω (Model MV-3420)	RCX4JATZ0562
R 667	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω (Model MV-4820)	RCX4JATZ0103
R 669	METAL RESISTOR 2W J 100 Ω or	RN02101ZU001
	FIXED METAL OXIDE FILM RES. 2W J 100 Ω or	RN02101KE007
	METAL RES. 2W J 100 Ω RSS-SMF P=15	RN02101UB001
R 670 ⚠	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 671 ⚠	CARBON RES. 1/6W J 5.6k Ω or	RCX6JATZ0562
	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R 672 ⚠	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 673	CARBON RES. 1/6W J 82 Ω or	RCX6JATZ0820
	CARBON RES. 1/4W J 82 Ω	RCX4JATZ0820
R 674	CARBON RES. 1/6W J 150 Ω or	RCX6JATZ0151
	CARBON RES. 1/4W J 150 Ω (Model MV-3420)	RCX4JATZ0151
R 674	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω (Model MV-4820)	RCX4JATZ0471
R 701	CARBON RES. 1/6W J 75 Ω or	RCX6JATZ0750
	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R 702	PCB JUMPER D0.6-P5.0	JW5.0T

Ref. No.	Description	Part No.
R 703	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 801 ⚠	METAL RESISTOR 1W J 10 Ω or	RN01100ZU001
	FIXED METAL OXIDE FILM RES. 1W J 10 Ω or	RN01100KE009
	METAL RES. 1W J 10 Ω	RN01100UB001
R 802 ⚠	CARBON RES. 1/6W J 5.6k Ω or	RCX6JATZ0562
	CARBON RES. 1/4W J 5.6k Ω	RCX4JATZ0562
R 803 ⚠	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 804	CARBON RES. 1/6W J 10 Ω or	RCX6JATZ0100
	CARBON RES. 1/4W J 10 Ω	RCX4JATZ0100
R 805	CARBON RES. 1/2W J 100 Ω or	RCX2JZPZ0101
	CARBON RES. 1/2W J 100 Ω or	RCX2101KA013
	CARBON RES. 1/2W J 100 Ω	RCX2JZQZ0101
R 806	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 807	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 808	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 809	CARBON RES. 1/6W J 150 Ω or	RCX6JATZ0151
	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151
R 851	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 852	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 853	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 854	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 855	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R 856	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 857	PCB JUMPER D0.6-P5.0	JW5.0T
R 858	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R 859	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 860	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 861	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 862	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 863	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 864	CARBON RES. 1/6W J 330k Ω or	RCX6JATZ0334
	CARBON RES. 1/4W J 330k Ω	RCX4JATZ0334
R 865	CARBON RES. 1/6W J 120 Ω or	RCX6JATZ0121
	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R 866	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 867	CARBON RES. 1/6W J 2.2M Ω or	RCX6JATZ0225
	CARBON RES. 1/4W J 2.2M Ω	RCX4JATZ0225
R 868	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 869	PCB JUMPER D0.6-P5.0	JW5.0T
R 870	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
R 871	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 872	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 873	CARBON RES. 1/6W J 150 Ω or	RCX6JATZ0151
	CARBON RES. 1/4W J 150 Ω	RCX4JATZ0151

Ref. No.	Description	Part No.
R 874	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω	RCX4JATZ0272
R 875	CARBON RES. 1/6W J 3.3k Ω or	RCX6JATZ0332
	CARBON RES. 1/4W J 3.3k Ω	RCX4JATZ0332
	SWITCHES	
SW 202	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 203	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 204	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 205	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 206	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 207	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 208	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 209	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 210	TACT SWITCH SKQSAB or	SST0101AL038
	PUSH SWITCH KSM0612B	SST0101HH003
SW 211	PUSH SWITCH SPPB61066A or	SSP0102AL001
	PUSH SWITCH JPS1120-0601H	SSP0102SR001
SW 601 ⚠	PUSH SWITCH NS	SSP0102AL003
	TRANSFORMER	
T 603 ⚠	SWITCHING TRANS 8099 (Model MV-3420)	LTT00EPKT023
T 603 ⚠	SWITCHING TRANS 8098 (Model MV-4820)	LTT00EPKT024
	VARIABLE RESISTOR	
VR 601 ⚠	CARBON P.O.T. 10k Ω B or	VRCB103KA011
	CARBON P.O.T. 10k Ω B(H)	VRCB103HH009
	CRYSTAL OSCILLATORS	
X 201	CRYSTAL OSCILLATOR 13.300857MHz or	FXE136LGM001
	CRYSTAL OSCILLATOR 13.300857MHz	FXE136LDS001
X 202	CRYSTAL OSCILLATOR 32.768kHz or	FXB323LDS002
	CRYSTAL OSCILLATOR 32kHz(10PPM) or	1811350
	CRYSTAL OSCILLATOR 32kHz(10PPM)	1811351
X 401	CRYSTAL OSCILLATOR 3.579545MHz	FXC355LLN001
X 402	CRYSTAL OSCILLATOR 4.433619MHz or	FXC445LGM001
	CRYSTAL OSCILLATOR 4.433619MHz	1811388
	MISCELLANEOUS	
BC 601	BEAD INDUCTORS RH3.5X10X1.3B or	LLBF00ZY2001
	BEAD INDUCTORS 1-03-BAR-510X or	LLBF00ZF8001
	BEAD INDUCTORS B16RH3.5X10X1.3X2 or	LLBF00ZXM001
	BEAD INDUCTORS FBR07HA121NB-00	LLBF00ZTU024
BC 602	BEAD INDUCTORS RH3.5X10X1.3B or	LLBF00ZY2001
	BEAD INDUCTORS 1-03-BAR-510X or	LLBF00ZF8001
	BEAD INDUCTORS B16RH3.5X10X1.3X2 or	LLBF00ZXM001
	BEAD INDUCTORS FBR07HA121NB-00	LLBF00ZTU024
BC 603	BEAD INDUCTORS RH3.5X10X1.3B or	LLBF00ZY2001
	BEAD INDUCTORS 1-03-BAR-510X or	LLBF00ZF8001
	BEAD INDUCTORS B16RH3.5X10X1.3X2 or	LLBF00ZXM001
	BEAD INDUCTORS FBR07HA121NB-00	LLBF00ZTU024
BC 606	BEAD INDUCTORS RH3.5X10X1.3B or	LLBF00ZY2001
	BEAD INDUCTORS 1-03-BAR-510X or	LLBF00ZF8001
	BEAD INDUCTORS B16RH3.5X10X1.3X2 or	LLBF00ZXM001
	BEAD INDUCTORS FBR07HA121NB-00	LLBF00ZTU024
BC 607	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
BC 608	BEAD CORE B16 RH 3.5X10X1.3	XL03010XM001
CL 305	CONNECTOR BASE 4P	J3TUA04TG001
JK 701	RCA JACK(YELLOW) RJ-1066-04-1030 or	JXRL010JD015
	RCA JACK(YELLOW) JPJ2023-01-040 or	JXRL010HD014
	RCA JACK(YELLOW) AV1-15-3	JXRL010RP013
JK 702	RCA JACK(WHITE) RJ-1066-03-1030 or	JXRL010JD014
	RCA JACK(WHITE) JPJ2023-01-030 or	JXRL010HD013

Ref. No.	Description	Part No.
	RCA JACK(WHITE) AV1-15-4	JXRL010RP014
JK 801	EARPHONE JACK HSJ1403-01-010 or	JYSL030HD002
	EARPHONE JACK LGY6501-0600	JYSL030SR001
RL 601 ⚠	POWER RELAY SDT-SS-112DM or	MRNDC12QN008
	POWER RELAY RPEF-12-901	MRNDC12KB002
RS 201	REMOTE RECEIVER PIC-26042LU or	USESJRSKK022
	REMOTE RECEIVER NJL65V367S	USESJRSJR012
TB 1	TRAY CHASSIS	0EM000340
TB 2	TOP SHIELD(2)	0EM200846
TB 3	HEAD SHIELD	0EM301233
TB 5	BUSH LED(E)	0VM408832
TB 6	SPEAKER HOLDER(2)	0EM200851A
TB 7	14POW HEAT SINK PDF ASSY (Model MV-3420)	0EM404602
TB 7	20POW HEAT SINK PDG ASSY (Model MV-4820)	0EM404606
TB 10	HEAD SHIELD(BTM)	0EM404618
TB 11	21 PIN HOLDER	0EM404667
TB 16	BUSH LED(D)	0VM408655
TB 17	CLOTH(16X55XT:0.5)	0EM404363
TB 18	WASHER(D8)	0VM408931
TB 20	CLOTH(10X30XT0.5)	0EM404486
TB 21	FILTER PCB HOLDER	0EM404664
TL 1	SCREW P-TIGHT 3X12 BIND HEAD+	GBMP3120
TL 2	SCREW P-TIGHT 3X12 WASHER HEAD+	GCMP3120
TL 3	SCREW B-TIGHT 3X8 BIND HEAD+ or	GBMB3080
	SCREW B-TIGHT 3X8 BIND HEAD+	GBMB3080
TL 4	SCREW S-TIGHT 3X4 BIND HEAD+	GBMS3040
TL 6	SCREW P-TIGHT 3X10 BIND HEAD	GBUP3100
TL 7	SCREW P-TIGHT 3X10 BIND HEAD	GBUP3100
TL 8	SCREW P-TIGHT 3X25 BIND HEAD+	GBMP3250
TU 001	TUNER UNIT TEDE9X001A	UTUNPLBAL007

MUT CBA

Ref. No.	Description	Part No.
	MUT CBA (MV-3420)	0ESA02805
	MUT CBA (MV4820)	0ESA02814
	Consists of the following	
	H/V CBA	----------
	CRT CBA	----------

H/V CBA

Ref. No.	Description	Part No.
	H/V CBA	----------
	Consists of the following	
	CAPACITORS	
C 541	ELECTROLYTIC CAP. 47μF/16V M	CE1CMASDL470
C 542	MYLAR CAP. 0.01μF/50V J or	CMA1JJS00103
	MYLAR CAP. 0.01μF/50V K or	2250103S
	MYLAR CAP. 0.01μF/50V J TV	CMB1JJS00103
C 543	ELECTOLYTIC CAP. 1.0μF/50V (105C)	CE1JMASDH1R0
C 544	ELECTROLYTIC CAP. 100μF/35V M	CE1GMZPDL101
C 545	ELECTROLYTIC CAP. 470μF/35V M	CE1GMZPDL471
C 546	CERAMIC CAP.(AX) SL J 4.7pF/50V	CCA1JJTSL4R7
C 547	ELECTROLYTIC CAP. 2.2μF/50V M LL H7	CA1J2R2SP018
C 548	ELECTROLYTIC CAP. 1000μF/16V M or	CE1CMZPDL102
	ELECTROLYTIC CAP. 1000μF/16V M(VR/HC) (Model MV-3420)	CE1CMZNTL102
C 548	ELECTROLYTIC CAP. 1000μF/25V M (Model MV-4820)	CE1EMZPDL102
C 549	FILM CAP.(P) 0.1μF/100V J or	CMA2AJS00104
	TF CAP. 0.1μF/100V J or	CT2A104MS022
	MYLAR CAP. 0.1μF/100V K or	1251104S
	MYLAR CAP. 0.1μF/100V J TV	CMB2AJS00104
C 571 ⚠	METALLIZED FILM CAP. 0.33μF/200V J or	CT2D334F7001
	METALLIZED FILM CAP. 0.33μF/200V J or	1220509
	METALLIZED FILM CAP. 0.33μF/250V J (Model MV-3420)	CT2E334EB001
C 571 ⚠	METALLIZED FILM CAP. 0.39μF/200V J or	CT2D394F7001
	METALLIZED FILM CAP. 0.39μF/200V J (Model MV-4820)	1220510
C 573	MYLAR CAP. 0.015μF/50V J or	CMA1JJS00153
	MYLAR CAP. 0.015μF/50V K or	2250153S
	MYLAR CAP. 0.015μF/50V J TV (Model MV-3420)	CMB1JJS00153
C 573	MYLAR CAP. 0.01μF/50V J or	CMA1JJS00103
	MYLAR CAP. 0.01μF/50V K or	2250103S
	MYLAR CAP. 0.01μF/50V J TV (Model MV-4820)	CMB1JJS00103
C 574	ELECTROLYTIC CAP. 100μF/35V M	CE1GMZPDL101
C 576	METALLIZED FILM CAP. 0.0068μF/1.6kV J or	1220498
	METALLIZED FILM CAP. 0.0068μF/1.6kV J or	CT3C682F7002
	METALLIZED FILM CAP. 0.0068μF/1.6kV J (Model MV-3420)	CT3C682EB001
C 576	METALLIZED FILM CAP. 0.0082μF/1.6kV J or	1220499
	METALLIZED FILM CAP. 0.0082μF/1.6kV J or	CT3C822F7002
	METALLIZED FILM CAP. 0.0082μF/1.6kV J (Model MV-4820)	CT3C822EB001
C 577	CERAMIC CAP. LB 470pF/2kV (Model MV-3420)	CA3D471KG004
C 577	CERAMIC CAP. LB 1000pF/2kV (Model MV-4820)	CA3D102KG004
C 578 ⚠	ELECTROLYTIC CAP. 4.7μF/250V or	CE2EMZPDL4R7
	ELECTROLYTIC CAP. 4.7μF/250V M FA	CE2EMZATL4R7
C 579	ELECTROLYTIC CAP. 1μF/160V or	CE2CMASDL010
	ELECTROLYTIC CAP. 1μF/160V M or	CE2CMASTL1R0
	ELECTROLYTIC CAP. 1μF/160V M	CE2CMASTL010
C 582	CERAMIC CAP.(AX) B K 150pF/50V	CCA1JKT0B151
C 583	CERAMIC CAP.(AX) B K 150pF/50V	CCA1JKT0B151
C 590 ⚠	ELECTROLYTIC CAP. 1μF/50V M H7 or	CE1JMASSL010
	ELECTROLYTIC CAP. 1.0μF/50V M H7	CE1JMASSL1R0
C 593	ELECTROLYTIC CAP. 10μF/160V M or	CE2CMZPDL100
	ELECTROLYTIC CAP. 10μF/160V M FA	CE2CMZATL100
	CONNECTORS	
CN 571	CONNECTOR BASE 5P or	1730813
	CONNECTOR BASE 5P RTB-1.5-5P	J3RTC05JG001
CN 572	CONNECTOR 7P TUC-P07X-B1	JCTUS07TG001
CN 573	CONNECTOR 6P TUC-P06X-B1	JCTUS06TG001
	DIODES	
D 541 ⚠	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D 542	RECTIFIER DIODE ERA22-02	QDPZ0ERA2202
D 571 ⚠	RECTIFIER DIODE ERA22-02	QDPZ0ERA2202
D 572	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 573 ⚠	SCHOTTKY BARRIER DIODE ERA81-004	QDPZERA81004
D 574	ZENER DIODE MTZJT-776.2B	QDTB0MTZJ6R2
D 575 ⚠	ZENER DIODE MTZJT-7730B	QDTB00MTZJ30
D 577	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 590 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 591 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148

Ref. No.	Description	Part No.
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 592 ⚠	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
	IC	
IC 541 ⚠	IC:VERTICAL OUT LA7837	QSBLA0ZSY003
	COILS	
L 501	INDUCTOR 220µH-J or	LLARJCQTU221
	INDUCTOR 220µH-K	LLARKDQKA221
L 572	INDUCTOR 33µH-J-26T or	LLAXJATTU330
	INDUCTOR 33µH-K-26T	LLAXKDTKA330
L 575	POT COIL 100µH K	LLARKLAMM101
	TRANSISTORS	
Q 541	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 542	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 571	TRANSISTOR 2SC1627Y-TPE2	QQSY02SC1627
Q 572 ⚠	TRANSISTOR 2SD1877 (Model MV-3420)	Q2SD1877CA00
Q 572 ⚠	TRANSISTOR 2SD1878 (Model MV-4820)	QQ5Z02SD1878
	RESISTORS	
R 520	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω (Model MV-4820)	RCX4JATZ0182
R 521	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω (Model MV-4820)	RCX4JATZ0182
R 522	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω	RCX4JATZ0182
R 523	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω (Model MV-3420)	RCX4JATZ0182
R 524	CARBON RES. 1/6W J 1.8k Ω or	RCX6JATZ0182
	CARBON RES. 1/4W J 1.8k Ω (Model MV-3420)	RCX4JATZ0182
R 541	CARBON RES. 1/6W J 68k Ω or	RCX6JATZ0683
	CARBON RES. 1/4W J 68k Ω	RCX4JATZ0683
R 542	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 543	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 544	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 545 ⚠	FUSE RES. 1/4W J 4.7 Ω or	RFX44R7KA007
	FUSE RES. 1/4W J 4.7 Ω (Model MV-3420)	RFX44R7UB002
R 545 ⚠	FUSE RES. 1/4W J 5.6 Ω or	RFX45R6KA007
	FUSE RES. 1/4W J 5.6 Ω (Model MV-4820)	RFX44R6UB002
R 546	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω (Model MV-3420)	RCX4JATZ0473
R 546	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω (Model MV-4820)	RCX4JATZ0333
R 547	CARBON RES. 1/6W J 18k Ω or	RCX6JATZ0183
	CARBON RES. 1/4W J 18k Ω (Model MV-3420)	RCX4JATZ0183
R 547	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω (Model MV-4820)	RCX4JATZ0822
R 548	CARBON RES. 1/6W J 120 Ω or	RCX6JATZ0121
	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R 549	CARBON RES. 1/6W J 120 Ω or	RCX6JATZ0121

Ref. No.	Description	Part No.
	CARBON RES. 1/4W J 120 Ω	RCX4JATZ0121
R 550	CARBON RES. 1/6W J 68k Ω or	RCX6JATZ0683
	CARBON RES. 1/4W J 68k Ω (Model MV-3420)	RCX4JATZ0683
R 550	CARBON RES. 1/6W J 56k Ω or	RCX6JATZ0563
	CARBON RES. 1/4W J 56k Ω (Model MV-4820)	RCX4JATZ0563
R 551	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω (Model MV-3420)	RCX4JATZ0222
R 551	CARBON RES. 1/6W J 2.7k Ω or	RCX6JATZ0272
	CARBON RES. 1/4W J 2.7k Ω (Model MV-4820)	RCX4JATZ0272
R 552	CARBON RES. 1/4W J 1.5 Ω	RCX4JATZ01R5
R 555	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 556	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 557	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 558	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R 559	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 560	PCB JUMPER D0.6-P5.0	JW5.0T
R 568	CARBON RES. 1/6W J 15k Ω or	RCX6JATZ0153
	CARBON RES. 1/4W J 15k Ω (Model MV-4820)	RCX4JATZ0153
R 570	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 572	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 573 ⚠	METAL RESISTOR 1W J 68 Ω or	RN01680ZU001
	FIXED METAL OXIDE FILM RES. 1W J 68 Ω or	RN01680KE007
	METAL RESISTOR 1W J 68 Ω RSS-SMF P=15 (Model MV-3420)	RN01680UB001
R 573 ⚠	METAL RESISTOR 1W J 180 Ω or	RN01181ZU001
	FIXED METAL OXIDE FILM RES. 1W J 180 Ω or	RN01181KE007
	METAL RESISTOR 1W J 180 Ω RSS-SMF P=15 (Model MV-4820)	RN01181UB001
R 575	CARBON RES. 1/4W J 1 Ω	RCX4JATZ01R0
R 576	CARBON RES. 1/4W J 1 Ω	RCX4JATZ01R0
R 577 ⚠	METAL RESISTOR 1W J 1.2 Ω or	RN011R2ZU001
	FIXED METAL OXIDE FILM RES. 1W J 1.2 Ω or	RN011R2KE009
	METAL RESISTOR 1W J 1.2 Ω (Model MV-3420)	RN011R2UB001
R 577 ⚠	METAL RESISTOR 2W J 2.7 Ω or	RN022R7ZU001
	FIXED METAL OXIDE FILM RES. 2W J 2.7 Ω or	RN022R7KE009
	METAL RESISTOR 2W J 2.7 Ω (Model MV-4820)	RN022R7UB001
R 578	CARBON RES. 1/6W J 68k Ω or	RCX6JATZ0683
	CARBON RES. 1/4W J 68k Ω (Model MV-3420)	RCX4JATZ0683
R 578	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω (Model MV-4820)	RCX4JATZ0473
R 579	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω	RCX4JATZ0104
R 580	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 581	CARBON RES. 1/6W J 8.2k Ω or	RCX6JATZ0822
	CARBON RES. 1/4W J 8.2k Ω	RCX4JATZ0822
R 582	PCB JUMPER D0.6-P5.0	JW5.0T
R 583 ⚠	CARBON RES. 1/6W J 18k Ω or	RCX6JATZ0183
	CARBON RES. 1/4W J 18k Ω (Model MV-3420)	RCX4JATZ0183
R 583 ⚠	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω (Model MV-4820)	RCX4JATZ0223

Ref. No.	Description	Part No.
R 584 ⚠	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 585 ⚠	CARBON RES. 1/4W G 100k Ω	RCX4GATZ0104
R 586 ⚠	CARBON RES. 1/6W J 120k Ω or	RCX6JATZ0124
	CARBON RES. 1/4W J 120k Ω (Model MV-3420)	RCX4JATZ0124
R 586 ⚠	CARBON RES. 1/6W J 100k Ω or	RCX6JATZ0104
	CARBON RES. 1/4W J 100k Ω (Model MV-4820)	RCX4JATZ0104
R 587	METAL RESISTOR 2W J 1k Ω or	RN02102ZU001
	FIXED METAL OXIDE FILM RES. 2W J 1k Ω or	RN02102KE007
	METAL RESISTOR 2W J 1k Ω	RN02102UB001
R 588 ⚠	METAL RESISTOR 2W J 1k Ω or	RN02102ZU001
	FIXED METAL OXIDE FILM RES. 2W J 1k Ω or	RN02102KE007
	METAL RESISTOR 2W J 1k Ω	RN02102UB001
R 589 ⚠	CARBON RES. 1/4W G 100k Ω	RCX4GATZ0104
R 592 ⚠	CARBON RES. 1/6W J 56k Ω or	RCX6JATZ0563
	CARBON RES. 1/4W J 56k Ω (Model MV-3420)	RCX4JATZ0563
R 592 ⚠	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω (Model MV-4820)	RCX4JATZ0473
R 593 ⚠	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 594 ⚠	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
TRANSFORMERS		
T 571	H. DRIVE TRANS NR-7030-1 or	LTH00CPA5002
	H. DRIVE TRANS HT02	LTH00CPY2002
T 572 ⚠	FLYBACK TRANS BSC25-2053S (Model MV-3420)	LTF00CPS2011
T 572 ⚠	FLYBACK TRANS BSC25-2054S (Model MV-4820)	LTF00CPS2012
VARIABLE RESISTORS		
VR 541	CARBON P.O.T. 100k Ω B or	VRCB104KA012
	CARBON P.O.T. 100k Ω B(V)	VRCB104HH008
VR 542	CARBON P.O.T. 10k Ω B or	VRCB103KA012
	CARBON P.O.T. 10k Ω B(V)	VRCB103HH008
MISCELLANEOUS		
BC 571	PCB JUMPER D0.6-P5.0	JW5.0T
CL 573	LEAD WIRE 7P 500/BLA/AWG26#2468 (Model MV-3420)	WX3007J65550
CL 573	LEAD WIRE 7P 580/BLA/AWG26#2468 (Model MV-4820)	WX3007J65558
CL 574	LEAD WIRE 6P 310/BLA/AWG26#2468 (Model MV-3420)	WX3006J65531
CL 574	LEAD WIRE 6P 460/BLA/AWG26#2468 (Model MV-4820)	WX3006J65546
DB 1	PCB HOLDER B6900SA	0EM301220
DB 2	13V H/V HEAT SINK(PCR)	0EM404161
DB 3	WASHER 12X3.2XT1	WPM3121
DL 1	SCREW P-TIGHT 3X10 BIND HEAD	GBUP3100
DL 2	SCREW B-TIGHT 3X8 BIND HEAD+	GBMB3080
WH 572	WIRE HOLDER 4P HWT0200-04 or	XW0HT04C7001
	WIRE HOLDER 4P 51048-0400	XW01D04NF001
WH 573	WIRE HOLDER 7P HWT0200-07 or	XW0HT07C7001
	WIRE HOLDER 7P 51048-0700	XW01D07NF001
WH 574	WIRE HOLDER 6P HWT0200-06 or	XW0HT06C7001
	WIRE HOLDER 6P 51048-0600	XW01D06NF001
WH 575	WIRE HOLDER 7P HWT0200-07 or	XW0HT07C7001
	WIRE HOLDER 7P 51048-0700	XW01D07NF001
WH 576	WIRE HOLDER 6P HWT0200-06 or	XW0HT06C7001
	WIRE HOLDER 6P 51048-0600	XW01D06NF001

CRT CBA

Ref. No.	Description	Part No.
	Consists of the following CRT CBA	————
	CAPACITORS	
C 501	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 502	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 503	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 504	CERAMIC CAP. 0.001μF/2kV	CCD3DKP0B102
C 505	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 506	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 507	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
	CONNECTORS	
CN 501	CONNECTOR PIN 1P LV or	1700576
	CONNECTOR PIN 1P RT-01N-2.3A	1730688
	DIODES	
D 501	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 502	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 503	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
	TRANSISTORS	
Q 501	TRANSISTOR 2SC2482 TPE6 or	QQSZ02SC2482
	TRANSISTOR 2SC3468(E)-AE or	QQSE02SC3468
	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468
Q 502	TRANSISTOR 2SC2482 TPE6 or	QQSZ02SC2482
	TRANSISTOR 2SC3468(E)-AE or	QQSE02SC3468
	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468
Q 503	TRANSISTOR 2SC2482 TPE6 or	QQSZ02SC2482
	TRANSISTOR 2SC3468(E)-AE or	QQSE02SC3468
	TRANSISTOR 2SC3468(D)-AE	QQSD02SC3468
	RESISTORS	
R 501 ⚠	METAL RESISTOR 1W J 15k Ω or	RN01153ZU001
	FIXED METAL OXIDE FILM RES. 1W J 15k Ω or	RN01153KE007
	METAL RESISTOR 1W J 15k Ω	RN01153UB001
R 502 ⚠	METAL RESISTOR 1W J 15k Ω or	RN01153ZU001
	FIXED METAL OXIDE FILM RES. 1W J 15k Ω or	RN01153KE007
	METAL RESISTOR 1W J 15k Ω	RN01153UB001
R 503 ⚠	METAL RESISTOR 1W J 15k Ω or	RN01153ZU001
	FIXED METAL OXIDE FILM RES. 1W J 15k Ω or	RN01153KE007
	METAL RESISTOR 1W J 15k Ω	RN01153UB001
R 504	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 505	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 506	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 507	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 508	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 509	CARBON RES. 1/6W J 560 Ω or	RCX6JATZ0561
	CARBON RES. 1/4W J 560 Ω	RCX4JATZ0561
R 510	CARBON RES. 1/6W J 47 Ω or	RCX6JATZ0470
	CARBON RES. 1/4W J 47 Ω	RCX4JATZ0470
R 511	CARBON RES. 1/6W J 47 Ω or	RCX6JATZ0470
	CARBON RES. 1/4W J 47 Ω	RCX4JATZ0470
R 512	CARBON RES. 1/6W J 47 Ω or	RCX6JATZ0470
	CARBON RES. 1/4W J 47 Ω	RCX4JATZ0470
R 513	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 514	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 515	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 516	CARBON RES. 1/6W J 3.9k Ω or	RCX6JATZ0392
	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R 517	CARBON RES. 1/6W J 3.9k Ω or	RCX6JATZ0392
	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R 518	CARBON RES. 1/6W J 3.9k Ω or	RCX6JATZ0392
	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
	MISCELLANEOUS	
CL 501	LEAD WIRE 4P 320/BLA/AWG26#2468 (Model MV-3420)	WX3004J65532
CL 501	LEAD WIRE 4P 400/BLA/AWG26#2468 (Model MV-4820)	WX3004J65540
CL 502	WIRE ASSY 5P/280 (Model MV-3420)	WX1B6904-007
CL 502	WIRE ASSY 5P/380 (Model MV-4820)	WX1B8904-007
SK 501	CRT SOCKET ISMS02S (Model MV-3420)	JSCC220PK003
SK 501	CRT SOCKET ISHS40S (Model MV-4820)	JSCC290PK004
WH 501	WIRE HOLDER 4P HWT0200-04 or	XW0HT04C7001
	WIRE HOLDER 4P 51048-0400	XW01D04NF001

CHROMA CBA

Ref. No.	Description	Part No.
	CHROMA CBA Consists of the following	0ESA02802
	CAPACITORS	
C 301	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C 302	CERAMIC CAP.(AX) Y N 0.022μF/6V	CDA0KNT0Y223
C 306	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 307	CERAMIC CAP.(AX) Y M 0.018μF/6V	CDA0KMT0Y183
C 309	MYLAR CAP. 0.01μF/50V J or	CMA1JJS00103
	MYLAR CAP. 0.01μF/50V K or	2250103S
	MYLAR CAP. 0.01μF/50V J TV	CMB1JJS00103
C 310	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 311	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 312	CERAMIC CAP.(AX) B K 100pF/50V	CCA1JKT0B101
C 314	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C 315	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 316	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 317	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C 318	ELECTROLYTIC CAP. 22μF/16V M	CE1CMASDL220
C 319	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 320	CERAMIC CAP.(AX) Y M 0.01μF/16V	CDA1CMT0Y103
C 321	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 322	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C 326	CERAMIC CAP.(AX) F Z 0.047μF/16V	CDA1CZT0F473
C 327	CERAMIC CAP.(AX) Y M 0.015μF/6V	CDA0KMT0Y153
C 328	ELECTROLYTIC CAP. 0.22μF/50V M	CE1JMASDLR22
C 329	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 331	CERAMIC CAP.(AX) X M 3300pF/16V	CDA1CMT0X332
C 332	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 334	CERAMIC CAP. CH J 15pF/50V	CCD1JJSCH150
C 336	ELECTROLYTIC CAP. 100μF/10V M	CE1AMASDL101
C 337	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 340	ELECTROLYTIC CAP. 2.2μF/50V M	CE1JMASDL2R2
C 341	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 342	CERAMIC CAP.(AX) X M 2200pF/16V	CDA1CMT0X222
C 343	ELECTROLYTIC CAP. 0.33μF/50V M	CE1JMASDLR33
C 345	CERAMIC CAP.(AX) SL J 33pF/50V	CCA1JJTSL330
C 348	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103

Ref. No.	Description	Part No.
C 349	ELECTROLYTIC CAP. 0.1μF/50V M	CE1JMASDL0R1
C 350	ELECTROLYTIC CAP. 1μF/50V M	CE1JMASDL010
C 351	ELECTROLYTIC CAP. 0.22μF/50V M	CE1JMASDLR22
C 352	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 353	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 354	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 355	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 356	CERAMIC CAP.(AX) F Z 0.01μF/25V	CDA1EZT0F103
C 357	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 363	CERAMIC CAP.(AX) B K 330pF/50V	CCA1JKT0B331
C 364	ELECTROLYTIC CAP. 10μF/50V M	CE1JMASDL100
C 367	ELECTROLYTIC CAP. 470μF/6.3V M	CE0KMZPDL471
C 371	CERAMIC CAP.(AX) F Z 0.022μF/25V	CDA1EZT0F223
C 372	CERAMIC CAP.(AX) SL J 22pF/50V	CCA1JJTSL220
C 373	CERAMIC CAP.(AX) B K 1000pF/50V	CDA1JKT0B102
	CONNECTOR	
CN 503	ANGLE PIN HEADER 5P 173979-5	1770250
	DIODES	
D 301	SWITCHING DIODE 1SS133(T-77) or	QDTZ001SS133
	SWITCHING DIODE 1SS254 T-77 or	A1SS254T77**
	SWITCHING DIODE 1N4148 or	NDTZ001N4148
	SWITCHING DIODE GMB01-BT or	GMB01BT
	DIODE 1SS176TPA7	1SS176T
D 302	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D 303	ZENER DIODE MTZJT-7718B	QDTB00MTZJ18
D 304	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D 305	ZENER DIODE MTZJT-779.1B	QDTB0MTZJ9R1
D 306	ZENER DIODE MTZJT-7712B	QDTB00MTZJ12
D 307	PCB JUMPER D0.6-P5.0	JW5.0T
D 311	PCB JUMPER D0.6-P5.0	JW5.0T
	IC	
IC 301	IC:CHROMA/IF 1 CHIP M52771FP	QSBLA0RMB023
	COILS	
L 305	INDUCTOR 8.2μH-J-26T or	LLAXJATTU8R2
	INDUCTOR 8.2μH-K-26T	LLAXKDTKA8R2
L 306	INDUCTOR 3.3μH-J-26T or	LLAXJATTU3R3
	INDUCTOR 3.3μH-K-26T	LLAXKDTKA3R3
L 307	PCB JUMPER D0.6-P5.0	JW5.0T
L 310	INDUCTOR 5.6μH-J-26T or	LLAXJATTU5R6
	INDUCTOR 5.6μH-K-26T	LLAXKDTKA5R6
L 312	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
L 313	INDUCTOR 15μH-J-26T or	LLAXJATTU150
	INDUCTOR 15μH-K-26T	LLAXKDTKA150
L 314	INDUCTOR 1.0μH-J-26T or	LLAXJATTU010
	INDUCTOR 1.0μH-K-26T	LLAXKDTKA1R0
	TRANSISTORS	
Q 301	RES. BUILT-IN TRANSISTOR KRC103M or	NQSZ0KRC103M
	RES. BUILT-IN TRANSISTOR 2SC3400	2SC3400Z
Q 302	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
Q 304	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 305	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 306	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ
Q 307	TRANSISTOR KTC3199(GR) or	NQS10KTC3199
	TRANSISTOR 2SC536SP(E) or	2SC536SEZ
	TRANSISTOR 2SC536SP(F)	2SC536SFZ

Ref. No.	Description	Part No.
Q 308	TRANSISTOR 2SC3000E	2SC3000EZ
Q 309	TRANSISTOR KTA1267(GR) or	NQS10KTA1267
	TRANSISTOR KTA1266(GR) or	NQS40KTA1266
	TRANSISTOR 2SA1318(T)-AANP or	2SA1318TZ
	TRANSISTOR 2SA1318(U)-AANP or	2SA1318UZ
	TRANSISTOR 2SA1015-GR-TPE2	QQS102SA1015
	RESISTORS	
R 301	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 302	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 303	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 304	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 305	CARBON RES. 1/6W J 3.9k Ω or	RCX6JATZ0392
	CARBON RES. 1/4W J 3.9k Ω	RCX4JATZ0392
R 307	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 308	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 309	CARBON RES. 1/6W J 680k Ω or	RCX6JATZ0684
	CARBON RES. 1/4W J 680k Ω	RCX4JATZ0684
R 311	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 312	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 313	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 314	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 315	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 316	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 317	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 318	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 319	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 321	CARBON RES. 1/6W J 470k Ω or	RCX6JATZ0474
	CARBON RES. 1/4W J 470k Ω	RCX4JATZ0474
R 324	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 325	CARBON RES. 1/6W J 120k Ω or	RCX6JATZ0124
	CARBON RES. 1/4W J 120k Ω	RCX4JATZ0124
R 326	CARBON RES. 1/6W J 68k Ω or	RCX6JATZ0683
	CARBON RES. 1/4W J 68k Ω	RCX4JATZ0683
R 327	CARBON RES. 1/4W J 10M Ω	RCX4JATZ0106
R 329	CARBON RES. 1/6W J 12k Ω or	RCX6JATZ0123
	CARBON RES. 1/4W J 12k Ω	RCX4JATZ0123
R 331	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 332	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 333	PCB JUMPER D0.6-P5.0	JW5.0T
R 334	CARBON RES. 1/6W J 680 Ω or	RCX6JATZ0681
	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 336	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 341	PCB JUMPER D0.6-P5.0	JW5.0T
R 342	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 343	PCB JUMPER D0.6-P5.0	JW5.0T
R 345	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101

Ref. No.	Description	Part No.
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 346	CARBON RES. 1/6W J 4.7k Ω or	RCX6JATZ0472
	CARBON RES. 1/4W J 4.7k Ω	RCX4JATZ0472
R 347	CARBON RES. 1/6W J 2.2k Ω or	RCX6JATZ0222
	CARBON RES. 1/4W J 2.2k Ω	RCX4JATZ0222
R 348	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 349	CARBON RES. 1/6W J 22 Ω or	RCX6JATZ0220
	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R 350	CARBON RES. 1/6W J 220 Ω or	RCX6JATZ0221
	CARBON RES. 1/4W J 220 Ω	RCX4JATZ0221
R 351	PCB JUMPER D0.6-P5.0	JW5.0T
R 353	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 354	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 355	CARBON RES. 1/6W J 56k Ω or	RCX6JATZ0563
	CARBON RES. 1/4W J 56k Ω	RCX4JATZ0563
R 356	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 357	CARBON RES. 1/6W J 33k Ω or	RCX6JATZ0333
	CARBON RES. 1/4W J 33k Ω	RCX4JATZ0333
R 358	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 359	CARBON RES. 1/6W J 22k Ω or	RCX6JATZ0223
	CARBON RES. 1/4W J 22k Ω	RCX4JATZ0223
R 360	CARBON RES. 1/6W J 100 Ω or	RCX6JATZ0101
	CARBON RES. 1/4W J 100 Ω	RCX4JATZ0101
R 361	CARBON RES. 1/6W J 1k Ω or	RCX6JATZ0102
	CARBON RES. 1/4W J 1k Ω	RCX4JATZ0102
R 362	CARBON RES. 1/6W J 6.8k Ω or	RCX6JATZ0682
	CARBON RES. 1/4W J 6.8k Ω	RCX4JATZ0682
R 363	CARBON RES. 1/6W J 33 Ω or	RCX6JATZ0330
	CARBON RES. 1/4W J 33 Ω	RCX4JATZ0330
R 364	CARBON RES. 1/6W J 1.5k Ω or	RCX6JATZ0152
	CARBON RES. 1/4W J 1.5k Ω	RCX4JATZ0152
R 366	CARBON RES. 1/6W J 470 Ω or	RCX6JATZ0471
	CARBON RES. 1/4W J 470 Ω	RCX4JATZ0471
R 367	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 368	CARBON RES. 1/6W J 820 Ω or	RCX6JATZ0821
	CARBON RES. 1/4W J 820 Ω	RCX4JATZ0821
R 369	PCB JUMPER D0.6-P5.0	JW5.0T
R 370	CARBON RES. 1/6W J 75 Ω or	RCX6JATZ0750
	CARBON RES. 1/4W J 75 Ω	RCX4JATZ0750
R 372	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 373	CARBON RES. 1/6W J 27k Ω or	RCX6JATZ0273
	CARBON RES. 1/4W J 27k Ω	RCX4JATZ0273
R 376	CARBON RES. 1/6W J 15k Ω or	RCX6JATZ0153
	CARBON RES. 1/4W J 15k Ω	RCX4JATZ0153
R 377	CARBON RES. 1/6W J 10k Ω or	RCX6JATZ0103
	CARBON RES. 1/4W J 10k Ω	RCX4JATZ0103
R 378	CARBON RES. 1/6W J 680 Ω or	RCX6JATZ0681
	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 379	CARBON RES. 1/6W J 680 Ω or	RCX6JATZ0681
	CARBON RES. 1/4W J 680 Ω	RCX4JATZ0681
R 382	CARBON RES. 1/6W J 47k Ω or	RCX6JATZ0473
	CARBON RES. 1/4W J 47k Ω	RCX4JATZ0473
R 383	CARBON RES. 1/6W J 22 Ω or	RCX6JATZ0220
	CARBON RES. 1/4W J 22 Ω	RCX4JATZ0220
R 384	PCB JUMPER D0.6-P5.0	JW5.0T
	TRANSFORMER	
T 301	CASING COIL KS1336NC or	LFA07V0LH008
	VCO COIL R12-P423	LFA07V0MM042

Ref. No.	Description	Part No.
	CRYSTAL OSCILLATORS	
X 301	CERAMIC RESONATOR XZT503F18 or	FY0514PS0001
	CERAMIC RESONATOR CSB503F18	FY0504PMR001
X 303	CRYSTAL OSCILLATOR 4.433619 MHz or	FXD445LLN001
	CRYSTAL OSCILLATOR 4.43MHz	1811387
	MISCELLANEOUS	
CF 302	CERAMIC TRAP TPWA04B	FBE575PMR001
CF 303	CERAMIC FILTER 5.5MHz or	FBB555PMR004
	CERAMIC FILTER LT5.5MB	FBB555PS0001
CL 301	ANGLE PIN HEADER 9P 6029B-1-09Z003-T	5700069
CL 302	ANGLE PIN HEADER 9P 6029B-1-09Z003-T	5700069
CL 303	ANGLE PIN HEADER 9P 6029B-1-09Z003-T	5700069
CL 304	ANGLE PIN HEADER 9P 6029B-1-09Z003-T	5700069
JK 301	SKIRT JACK 21P HRC-21V-02P or	JXGL210RP001
	SKIRT JACK 21P CSS5021-1001 or	1780260
	SKIRT JACK 21P HXC1536-010011	JSZZ000HD001
SF 301	SAW FILTER TSF5355T	FBB386PSY008

Filter CBA

Ref. No.	Description	Part No.
	Filter CBA (Model MV-3420)	0ESA02807
	Filter CBA (Model MV-4820)	0ESA02812
	Consists of the following	
	CAPACITORS	
C 601 ⚠	FILM CAP.(MP) 0.1μF/250V M	CT2E104DC009
C 602 ⚠	FILM CAP.(MP) 0.1μF/250V M	CT2E104DC009
	CONNECTOR	
CN 601	CONNECTOR BASE 2P TV-50P-02-L1	J3TVC02TG003
	COILS	
L 604 ⚠	LINE FILTER 733605	LLBG00ZTZ010
L 605 ⚠	LINE FILTER 733605	LLBG00ZTZ010
	RESISTOR	
R 601 ⚠	CARBON RES. 1/2W J 3.3M Ω or	RCX2335KA014
	CARBON RES. 1/2W J 3.3M Ω	RCX2335A4001
	MISCELLANEOUS	
CL 602	ANGLE PIN HEADER 13P 9205B-1-13Z002-T	J392C13ER003
F 601 ⚠	FUSE T4.0AH/250V	PAGC20BAG402
FH 601	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER FH-V-03078 or	XH01Z00DK001
	HOLDER FUSE CNT41-0014	1790424
FH 602	FUSE HOLDER MSF-015 or	XH01Z00LY001
	FUSE HOLDER FH-V-03078 or	XH01Z00DK001
	HOLDER FUSE CNT41-0014	1790424
PS 601 ⚠	POSISTOR B59451-S1080-B10 (Model MV-3420)	NN4Z0B59451S
PS 601 ⚠	POSISTOR B59108-T80-B10-B10 (Model MV-4820)	NN4Z0B59108T
W 601 ⚠	AC CORD LA-1843	WAA0212LW002

Chassis Electrical Parts

Ref. No.	Description	Part No.
CL 802	WIRE ASSY 2P/150	WX1B5900-001
DG 601 ⚠	DEGAUSSING COIL (Model MV-3420)	LLBH00ZTZ011
DG 601 ⚠	DEGAUSSING COIL (Model MV-4820)	LLBH00ZWR014
SP 801	SPEAKER S08F02	DSD0808XQ006
V 501 ⚠	CRT A34AGT13X09RK (Model MV-3420)	TCRT190CP033
V 501 ⚠	CRT A48AGY13X26RKF (Model MV-4820)	TCRT190CP034
	CRT GND WIRE CRT GND (Model MV-3420)	WX1L7720-001
	CRT GND WIRE CRT GND (Model MV-4820)	WX1L7820-003
	LEAD CLAMPER 100MM or	1790356
	LEAD CLAMPER	1790256

DECK PARTS LIST

Note:

Two different, but interchangeable, types of Capstan Motor (B37) may be installed in these models. Based on the type of capstan motor, items B365 and L1063 will be used/not used as shown in the table below.

Type	Part No.	B365	L1063
A	MMDZB12SJ006	Not used	Not used
B	N9620CML	Used	Used

Ref. No.	Description	Part No.
2B 6	DECK EARTH PLATE U17	0VM408662
2L 051	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
B 1	CHASSIS ASSEMBLY MK7	0VSA08799
B 2	CYLINDER ASSEMBLY(MK7) PAL 2HD 2SP	N7108CYL
B 3	LOADING MOTOR ASSEMBLY MK7 or	0VSA08840
B 4	MOTOR HOLDER MK6	0VM407676D
B 8	PULLEY ASSEMBLY MK6	0VSA08132
B 9	MOVING GUIDE S PREPARATION MK7 or	0VSA08823
	MOVING GUIDE S PREPARATION MK7	0VSA09220
B 10	MOVING GUIDE T PREPARATION MK7 or	0VSA08824
	MOVING GUIDE T PREPARATION MK7	0VSA09221
B 11	LOADING ARM T ASSEMBLY MK7	0VSA08858
B 12	LOADING ARM S ASSEMBLY MK7	0VSA08818
B 13	LOADING LEVER ASSEMBLY MK7	0VSA08821
B 15	LUMIRROR WASHER 3.1X6X0.35	0VM403269
B 21	LOADING BELT MK6	0VM407712
B 27	TENSION LEVER ASSEMBLY MK7	0VSA08816
B 31	AC HEAD ASSEMBLY MK7 or	0VSA08825
B 32	REEL BASE ASSEMBLY MK6 T	0VSA08236
B 35	TAPE GUIDE ASSEMBLY MK6	0VSA08127
B 37	CAPSTAN MOTOR F2QTB35 or	MMDZB12SJ006
	CAPSTAN MOTOR 288/CCM001	N9620CML
B 38	MODE LEVER MK7	0VM202236
B 46	TAPE GUIDE ARM SPRING MK6	0VM407704C
B 47	TAPE GUIDE ARM ADJUST SCREW	0VM403242
B 51	FF ARM MK7	0VM303181
B 52	CAPSTAN BELT(2) MK6	0VM408223
B 53	P.S.W B	0VM402625
B 73	FE HEAD(MK7) HVFHP0019A or	DHVEC01AL004
	FE HEAD(MK7) MH-131SF7	DHVEC01Z0001
B 74	PRISM MK7	0VM202238
B 81	M LEVER HOLDER MK7	0VM303171
B 108	P.S.W F	0VM402629
B 121	WORM MK6	0VM407662
B 122	P.S.W C	0VM402626
B 123	P.S.W (WORM THRUST)	0VM403348
B 126	PULLEY MK6	0VM407661
B 132	CLUTCH ASSEMBLY MK7	0VSA08859
B 133	IDLER ASSEMBLY MK7	0VSA08820
B 142	SHAFT LOCK ASSEMBLY	0VSA04642
B 144	CLUTCH WASHER MK2	0VM404428
B 145	MAIN LEVER ASSEMBLY MK7	0VSA08822
B 148	TG CAP MK6	0VM407664C
B 150	P.S.W 3.1X6X0.3T	0VM403737
B 300	FL ASSEMBLY MK7	0VSA08798
B 302	RACK MK7	0VM202239
B 303	FRONT DOOR OPENER MK7	0VM303185
B 304	DOOR OPENER MK7	0VM303148
B 308	SLIDER SHAFT MK7	0VM408577
B 313	DRIVE GEAR SPRING MK7	0VM408557A
B 319	CASSETTE SPRING MK6 or	0VM407984E
B 329	HOLDER KICK ARM N MK6	0VM302956B
B 332	HOLDER ARM SPRING MK6	0VM408062B
B 339	REEL S ASSEMBLY MK7 or	0VSA08971
	REEL BASE ASSEMBLY MK6 S	0VSA08235
B 344	CASSETTE GUIDE R MK7	0VM100725
B 345	CASSETTE GUIDE L MK7	0VM100726
B 347	GUIDE HOLDER F MK7	0VM303180
B 348	GUIDE HOLDER R MK6 or	0VM302737D
	GUIDE HOLDER R(2) MK7	0VM303035A
B 350	SLIDER GEAR MK6	0VM407673
B 352	CASSETTE DRIVE GEAR(N) MK6	0VM302969A
B 353	CASSETTE PLATE SUB ASSEMBLY MK7	0VSA08807
B 354	SLIDER R MK7	0VM202237
B 355	SLIDER L MK7	0VM202240
B 358	CAM MK7	0VM100724
B 359	CLEANER LEVER MK7	0VM303350
B 360	CLEAN ROLLER MK4	0VM406123
B 361	CLEAN BEARING MK4	0VM406124
B 365	RADIATOR PLATE MK7	0VM408563
B 403	ACH CONNECTOR A MK7	0VM303177
B 404	ACH CONNECTOR B MK7	0VM408582
B 405	P.S.W CUT 1.7X3.8X0.5T	0VM408485
B 406	SENSOR GEAR MK7	0VM408575
B 407	M GEAR MK6	0VM407666A
B 409	EJECT SPRING MK7	0VM408716
B 410	PINCH ROLLER ASSEMBLY MK7	0VSA08809
B 411	PINCH SPRING MK7	0VM408550
B 412	S BRAKE LEVER MK7	0VM303150
B 413	M BRAKE T SUB ASSEMBLY MK7	0VSA09222
B 414	M BRAKE S ASSEMBLY MK7	0VSA08814
B 415	S BRAKE L SPRING MK7	0VM408556
B 416	M BRAKE T SPRING MK7	0VM408588
B 417	T LEVER SPRING MK7	0VM408918
B 418	TENSION PLATE MK6	0VM407809B
B 419	BT ARM MK7	0VM303182
B 420	REC ARM MK7	0VM303188
B 421	REC ARM SPRING MK6	0VM407708D
B 423	SHIELD, CYLINDER U17 FTZ	0VM202352
B 425	LOCK LEVER SPRING MK7	0VM408555
B 426	KICK PULLEY MK6	0VM407663B
B 427	KICK SPRING MK6	0VM407701
B 428	P.S.W CUT 1.7X3.8X0.5T	0VM408485
B 460	BT SPRING MK7	0VM408551
B 461	MAIN LEVER SPRING MK7	0VM408554D
B 462	PRISM L MK7	0VM408540
B 463	PRISM R MK7	0VM408541
B 464	CASSETTE DRIVE LEVER SUB ASSEMBLY MK7	0VSA08827A
B 465	INSULATION COVER MK7	0VM408576
B 467	SCREW:LD ARM S MK7	0VM408767
B 468	SOFT SPRING A MK7	0VM409214
B 470	TAPE GUIDE ARM ASSEMBLY MK6	0VSA08126
B 471	CASSETTE GUIDE R ASSEMBLY MK7	0VSA08802
B 472	SLIDER R ASSEMBLY MK7	0VSA08804
B 473	SLIDER L ASSEMBLY MK7	0VSA08805
B 474	CASSETTE DRIVE LEVER ASSEMBLY MK7	0VSA08813A
B 475	BT ARM ASSEMBLY MK7	0VSA08815
B 476	REC ARM ASSEMBLY MK7	0VSA08819
B 480	CLEANER ASSEMBLY MK7	0VSA09032
L 1051	SCREW, S-TIGHT M2.6X6 PAN HEAD +	GPMS9060
L 1053	SCREW PRISM MK7	0VM409038
L 1063	SCREW, S-TIGHT M2.6X4 PAN HEAD +	GPMS9040
L 1081	SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060

Ref. No.	Description	Part No.
L 1101	SCREW, P-TIGHT 3X10 BIND HEAD+	GBMP3100
L 1151	SCREW, SEMS M3X4 PAN HEAD +	CPM33040
L 1191	SCREW, P-TIGHT M2.6X12 WASHER HEAD+	GCMP9120
L 1321	SCREW, P-TIGHT 3X8 BIND HEAD+	GBMP3080
L 1341	SCREW, P-TIGHT M2.6X8 BIND HEAD+	GBMP9080
L 1342	SCREW, P-TIGHT M2.6X6 BIND HEAD+	GBMP9060
L 1402	SCREW, P-TIGHT M2X6 WASHER HEAD+	GCMP2060
L 1403	SCREW, P-TIGHT M3X10 WASHER HEAD+	GCMP3100
L 1406	SCREW, S-TIGHT M2.6X4 CUP HEAD+	GCMS9040
L 1407	SCREW, S-TIGHT M2.6X8 PAN HEAD +	GPMS9080
L 1410	SCREW, P-TIGHT 3X25 BIND HEAD+	GBMP3250
L 1411	SCREW, S-TIGHT M3X6 BIND HEAD+	GBMS3060
L 1412	SCREW, S-TIGHT M3X5 BIND HEAD+	GBMS3050
L 1450	SCREW, SEMS M2.6X5 PAN HEAD+	CPM39050
L 1451	SCREW:SLIDER R MK7	0VM408853

Mode SW CBA (SWV)

Ref. No.	Description	Part No.
B 422	MODE SW CBA (SWV)	0VSA08841
CL 281	PARALLEL WIRE 2P AWG26/GREY/UL2651	WX1N7002-003
R 281	CARBON RES. 1/4W G 3.6k Ω	RCX4GATZ0362
R 282	CARBON RES. 1/4W G 1.5k Ω	RCX4GATZ0152
R 283	CARBON RES. 1/4W G 10k Ω	RCX4GATZ0103
R 284	CARBON RES. 1/4W G 22k Ω	RCX4GATZ0223
R 285	CARBON RES. 1/4W G 470 Ω	RCX4GATZ0471
SW 281	MODE SWITCH HMW0420-910010 or	SSR0104HD004
	MODE SWITCH SSS-27MD	SSR0104KB002

MV-3420/MV-4820

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Printed in Japan
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