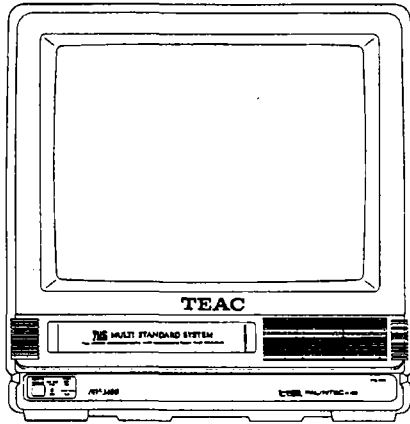


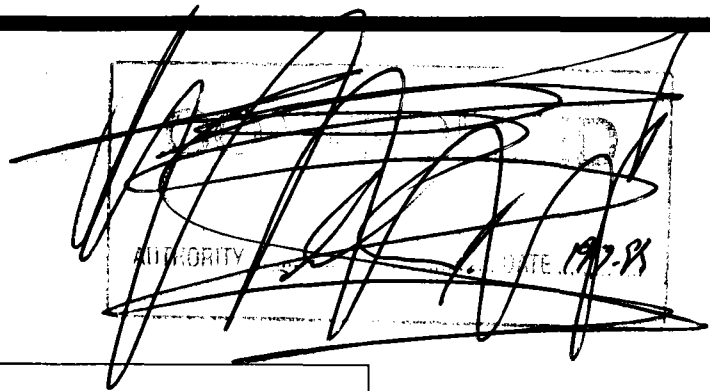
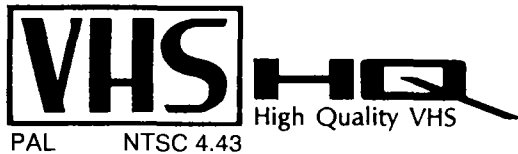
FRONT COUNTER
TEAC[®]



SERVICE MANUAL

MV-3400/MV-4800

COLOR TV / VCR COMBINATION



NOTES

- PC boards shown are viewed from parts side.
- Parts marked with * require longer delivery time.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- Δ Parts marked with this sign are safety critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.

MAIN SECTION

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

MV-3400

MV-4800

Sec. 1: Main Section

Specifications
Operating Instructions
Adjustment Procedures
Schematic Diagrams
P.C. Boards
Exploded Views
Cabinet & Electrical Parts List

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GENERAL SPECIFICATIONS * MV-3400

SPECIFICATIONS

<TV Section>

Picture Tube: 14" (Tinted)
 Color System: PAL-B/G
 NTSC 3.58/4.43 (Video in only)
 Tuning System: Voltage Synthesized
 Receiving Channels: [AIR]
 VHF L..... 0~5/1~3
 VHF H.....5A~11/4~11
 UHF21~69

Antenna Impedance: VHF/UHF 75Ω,
 Unbalanced
 Speaker: 90 x 50 mm Oval Type, 8Ω
 Audio output power: 0.9W (10% THD)
 Others: Automatic Channel Preset
 Picture Mode Selector
 (Normal, Rental and Soft View)
 Auto Shut Off

<VCR Section>

Video Signal: PAL
 NTSC 4.43 (Playback Only)
 Recording System: 2 Head Helical Scanning
 VHS HQ System
 Loading System: Front Loading
 Tracking System: Digital Auto Tracking &
 Manual Control
 Audio System: Normal 1 Audio Track
 Tape Format: Width 1/2", 1 Audio Track
 Rec./Play Speed: 1 Speed
 Program Rec.: 1 Year 8 Events (Including
 Today Timer Recording)
 Special Rec.: OTR
 (One Touch Recording)
 Today Timer Recording
 Auto Operation
 Functions: Auto Power On
 Auto Power Off
 Auto Playback
 Auto Repeat
 Auto Rewind
 Auto Eject
 Power-Off Eject

DISPLAY

OSD:
 (On Screen Display)

LED Indicators:

Channel, Volume,
 Picture Control,
 Timer Programming,
 Sleep, VCR Mode,
 Record (Red),
 Timer Rec. (Red)
 Stand-by (Red)
 Function (Red)

CONTROLS

Front:

Function, Channel
 Up/Down, Monitor
 Volume Up/Down,
 FF/Search, Rew./Search,
 Play, Record/OTR,
 Stop/Eject
 Today Timer Recording
 Function, Channel Set
 Up/Down, Monitor
 Volume Up/Down,
 10keys, Menu,
 Counter Memory,
 Sleep, Mute, Play,
 Pause/Still, FF/Search,
 Rew./Search, Rec., Stop,
 Add/Delete, Select

Remote Control:
 (29keys)

JACKS

VHF/UHF Antenna: 75Ω IEC Type
 Video In: BNC Jack 1P
 Audio In: RCA Jack 1P
 Earphone: ø3.5mm CES

GENERAL

Power Source: AC 230~240V, 50Hz AC
 Power Consumption: 80W
 Cabinet Size: 372(W)×387(H)
 ×363(D) mm
 Weight: 12kg
 Regulations: AS 3250
 Accessories: Remote Control Unit
 Battery R6(UM-3)×2
 Monopole Antenna
 Owner's Manual
 Guarantee Card

* Specifications are subject to change without notice.

GENERAL SPECIFICATIONS * MV-4800

SPECIFICATIONS

<TV Section>

Picture Tube: 20" (Tinted)
 Color System: PAL-B/G
 NTSC 3.58/4.43 (Video in only)
 Tuning System: Voltage Synthesized
 Receiving Channels: [AIR]
 VHF L..... 0~5/1~3
 VHF H.....5A~11/4~11
 UHF21~69

Antenna Impedance: VHF/UHF 75Ω,
 Unbalanced

Speaker: 90 x 50 mm Oval Type, 8Ω
 Audio output power: 0.9W (10% THD)
 Other: Automatic Channel Preset
 Picture Mode Selector
 (Normal, Rental and Soft View)
 Auto Shut Off

<VCR Section>

Video Signal: PAL
 NTSC 4.43 (Playback Only)

Recording System: 2 Head Helical Scanning
 VHS HQ System

Loading System: Front Loading

Tracking System: Digital Auto Tracking &
 Manual Control

Audio System: Normal 1 Audio Track
 Tape Format: Width 1/2", 1 Audio Track
 Rec./Play Speed: 1 Speed
 Program Rec.: 1 Year 8 Events(Including
 Today Timer Recording)

Special Rec.: OTR
 (One Touch Recording)
 Today Timer Recording

Auto Operation
 Functions: Auto Power On
 Auto Power Off
 Auto Playback
 Auto Repeat
 Auto Rewind
 Auto Eject
 Power-Off Eject

DISPLAY

OSD: Channel, Volume,
 (On Screen Display) Picture Control ,
 Timer Programming,
 Sleep, VCR Mode,
 Record (Red),
 Timer Rec. (Red)
 Stand-by (Red)
 Function (Red)

LED Indicators:

CONTROLS

Front: Function, Channel
 Up/Down, Monitor
 Volume Up/Down,
 FF/Search, Rew./Search,
 Play, Record/OTR,
 Stop/Eject
 Today Timer Recording
 Function, Channel Set
 Up/Down, Monitor
 Volume Up/Down,
 10keys, Menu,
 Counter Memory,
 Sleep, Mute, Play,
 Pause/Still, FF/Search,
 Rew./Search, Rec., Stop,
 Add/Delete, Select
 Eject

Remote Control:
 (29keys)

JACKS

VHF/UHF Antenna: 75Ω IEC Type
 Video In: BNC Jack 1P
 Audio In: RCA Jack 1P

GENERAL

Power Source: AC 230~240V, 50Hz AC
 Power Consumption: 90W
 Cabinet Size: 482(W)×477(H)
 ×455(D) mm
 Weight: 20kg
 Regulations: AS 3250
 Accessories: Remote Control Unit
 Battery R6(UM-3)×2
 Guarantee Card
 Owner's Manual

* Specifications are subject to change without notice.

PERFORMANCE SPECIFICATIONS MV-3400

* Mode ----- SP mode

* Test input terminal

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

<Tuner> ----- Ant. input (80dB μ V) Video: 87.5% MOD.
Audio: 50KHz dev (1KHz)

<DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	—	%	90	—
2. Linearity	Horizontal	%	—	10
	Vertical	%	—	7
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. Tint Control Range	—	deg	± 30	—
3. Contrast Control Range	—	dB	10	4
4. Brightness	APL 100%	ft-L	55	40
5. Color Temperature	—	K	8000-20MPCD	—

<VCR>

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

<TUNER>

Description	Condition	Unit	Nominal	Limit
1. Video S/N	—	dB	40	35
2. Audio S/N (W/LPF)	—	dB	43	40

<AUDIO>

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

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power(10%DIST.)	(R/P)	W	0.9	0.7
2. Audio S/N (W/LPF)	(R/P)	dB	42	38
3. Audio Distortion (W/LPF)	(R/P)	%	3.0	5.0
4. Audio Freq. Response (-20dB Ref. 1KHz)	200Hz (R/P)	dB	-2.0	-2.0 \pm 5.0
	6KHz (R/P)	dB	0	0 \pm 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.

PERFORMANCE SPECIFICATIONS MV-4800

* Mode ----- SP mode

* Test input terminal

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

<Tuner> ----- Ant. input (80dB μ V) Video: 87.5% MOD.
Audio: 50KHz dev (1KHz)

<DEFLECTION>

Description	Condition	Unit	Nominal	Limit
1. Over Scan	—	%	90	—
2. Linearity	Horizontal	%	—	10
	Vertical	%	—	10
3. High Voltage	—	KV	26	—

<VIDEO & CHROMA>

Description	Condition	Unit	Nominal	Limit
1. Misconvergence	Center	m/m	—	0.4
	Corner	m/m	—	2.0
	Side	m/m	—	1.5
2. Tint Control Range	—	deg	± 30	—
3. Contrast Control Range	—	dB	6	4
4. Brightness	APL 100%	ft-L	35	25
5. Color Temperature	—	K	8000-20MPCD	—

<VCR>

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

<TUNER>

Description	Condition	Unit	Nominal	Limit
1. Video S/N	—	dB	40	35
2. Audio S/N (W/LPF)	—	dB	43	40

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

Description	Condition	Unit	Nominal	Limit
1. Audio Output Power(10%DIST.)	(R/P)	W	0.9	0.7
2. Audio S/N (W/LPF)	(R/P)	dB	42	38
3. Audio Distortion (W/LPF)	(R/P)	%	3.0	5.0
4. Audio Freq. Response (-20dB Ref. 1KHz)	200Hz (R/P)	dB	-2.0	-2.0 \pm 5.0
	6KHz (R/P)	dB	0	0 \pm 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:

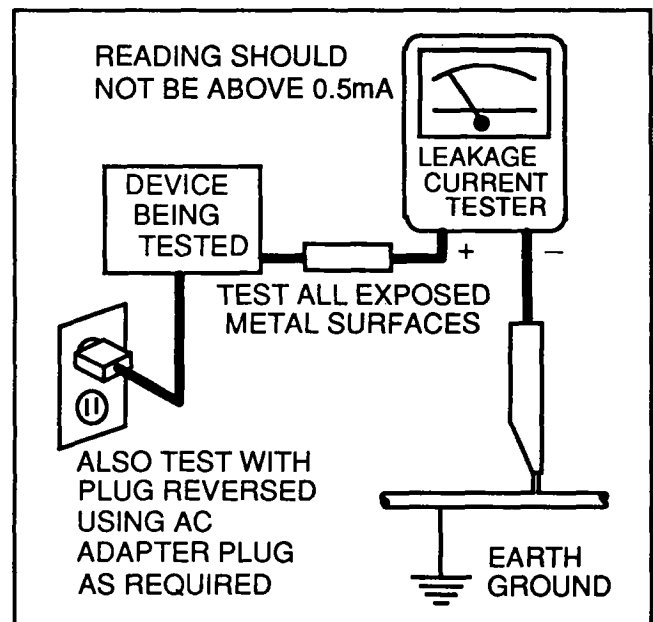
a. Be sure that no built-in protective devices are defective and have been defeated during servicing. (1) Protective shields are provided on this chassis to protect both the technician and the customer. Correctly replace all missing protective shields, including any removed for servicing convenience. (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 AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester. 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 have a circuit which obtain voltage about 70% of AC voltage 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 isolated from the AC power line. The two ground systems are electrically separated by insulation material that must not be defeated or altered.

Note: * In case unit has no polarity AC plug only.

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 (Δ) 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 (Δ) 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)

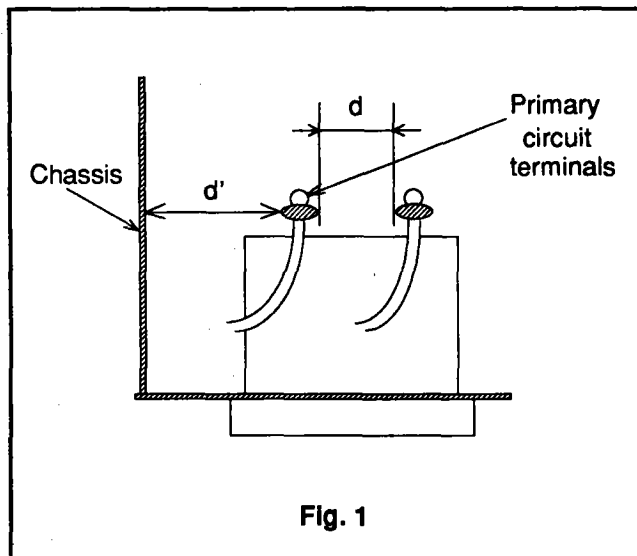


Fig. 1

Table 1 : Ratings for selected area

AC Line Voltage	Region	Clearance Distance (d) (d')
200 to 240 V	Europe	$\geq 4\text{mm}$ (d)
	Australia	$\geq 6\text{mm}$ (d')

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

2. Leakage Current Test

Confirm 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.

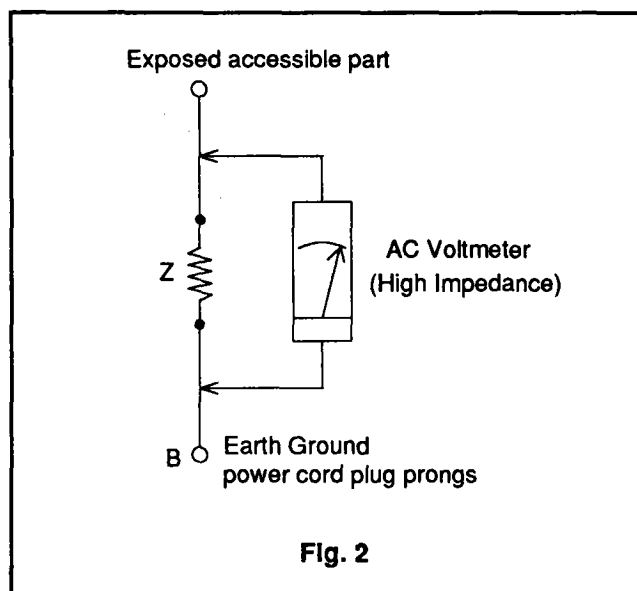


Fig. 2

Table 2 : Leakage current ratings for selected areas

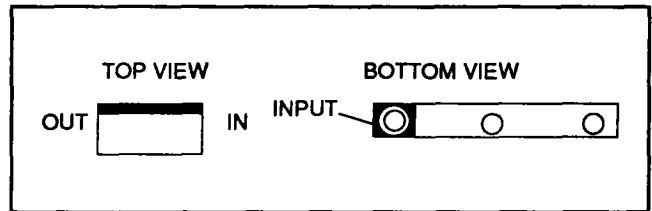
AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
200 to 240 V	Europe Australia	2k Ω RES. in connected	$i \leq 0.7\text{mA rms}$ $i \leq 2\text{mA dc}$	Antenna terminals
		50k Ω RES. in connected	$i \leq 0.7\text{mA rms}$ $i \leq 2\text{mA dc}$	Other terminals

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

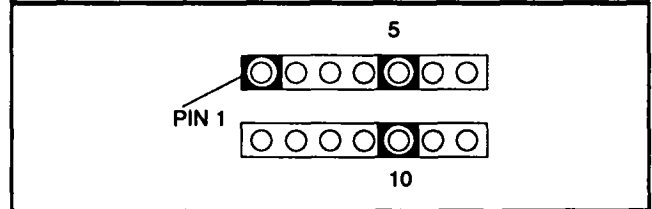
STANDARD NOTES FOR SERVICING

Circuit Board Indications

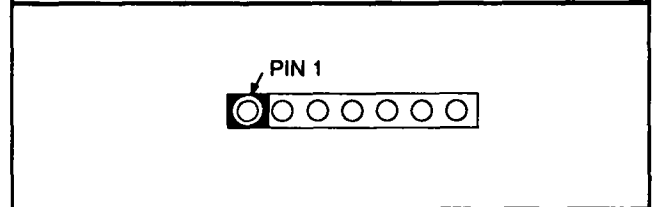
a. The output pin of the 3 pin Regulator ICs is indicated as shown:



b. For other ICs, pin 1 and every 5th pin are indicated as shown:

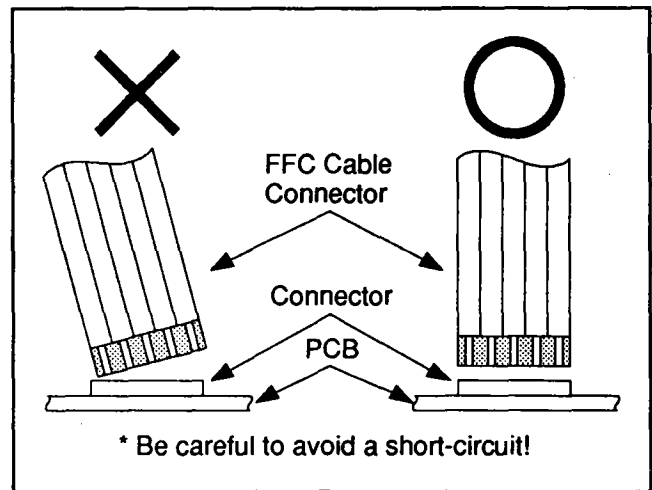


c. The 1st pin of every pin connector are indicated as follows:



Instructions for Connectors

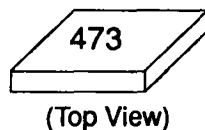
1. When you connect or disconnect FFC cable (connector), be sure to disconnect the AC cord.
2. FFC cable (connector) should be inserted parallel into the connector, not at an angle.



How to Read the Values of the Rectangular Type Chip Components

EXAMPLE:

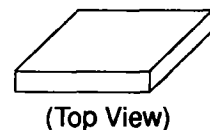
(a) Resistor



= 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.)

Note:

- Leadless components must not be reused after removal.
- 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.

Note:

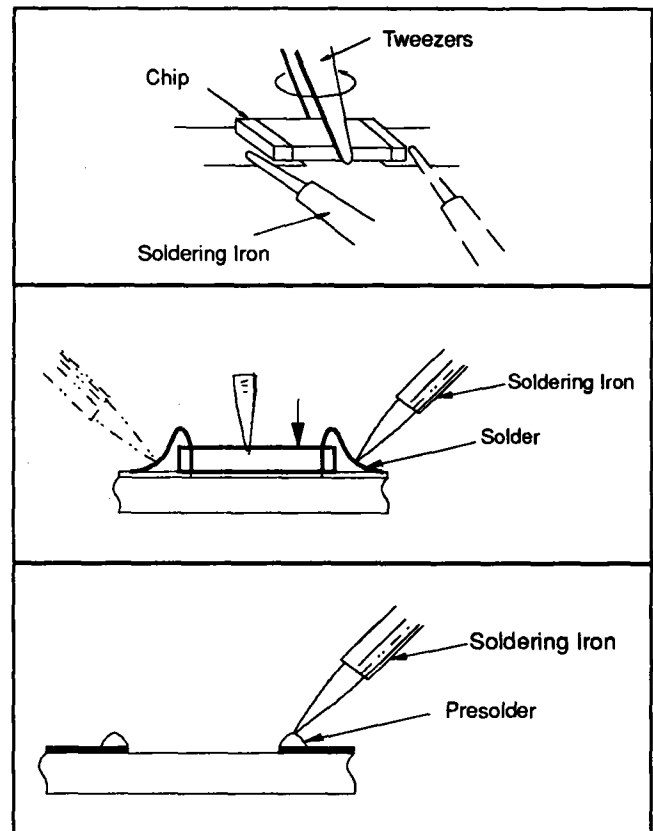
- Do not attempt to lift the component off the board until the component is completely disconnected from the board by the twisting action.
- Take care not to break the copper foil on the printed board.

3. Installing the leadless component

- Presolder the contact points of the circuit board.
- Press the part downward with tweezers and solder both electrodes as shown at right:

Note:

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



How to Remove / Install Flat Pack IC

1. Removal

With Hot - Air Flat Pack - IC Desoldering Machine:

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

Caution:

- 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)
- The Flat Pack - IC on the P.C.B. 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.

With Soldering Iron:

- (1) Using desoldering braid, remove the solder from all pins of the Flat Pack - IC. When you use solder flux which is applied to all pins of the Flat Pack - IC, you can remove it easily. (Fig. S-1-3)
- (2) Lift each lead of the Flat Pack - IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air Desoldering Machine. (Fig. S-1-4)

With Iron Wire:

- (1) Using desoldering braid, remove the solder from all pins of the Flat Pack - IC. When you use solder flux which is applied to all pins of the Flat Pack - IC, you can remove it easily. (Fig. S-1-3)
- (2) Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
- (3) Pull up on the wire as the solder melts so as to lift the IC leads from the PCB 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 PCB, it may be damaged if force is used.

2. Installation

- (1) Using desoldering braid, remove the solder from the foil of each pin of the Flat Pack - IC on the PCB, so you can install a replacement Flat Pack - IC more easily.

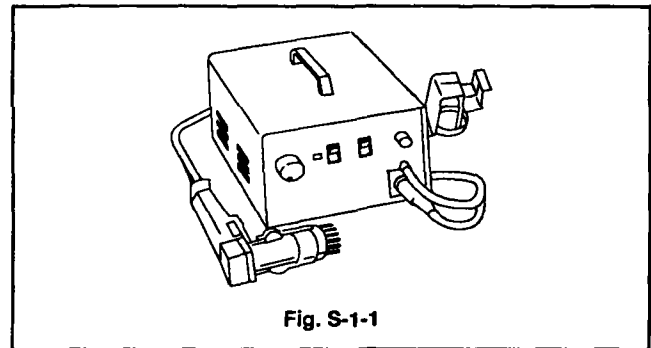


Fig. S-1-1

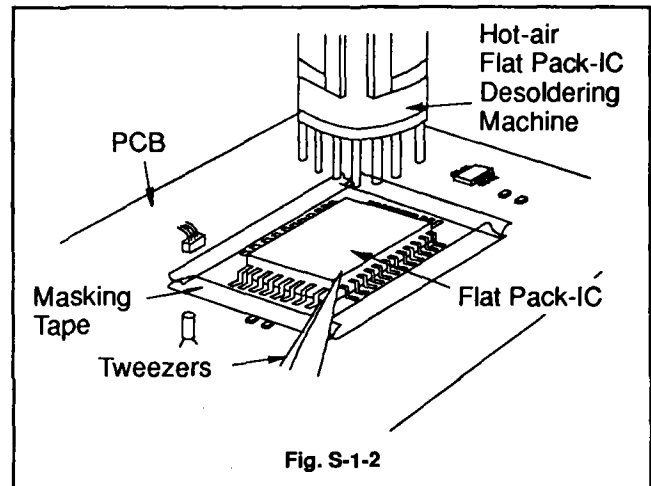


Fig. S-1-2

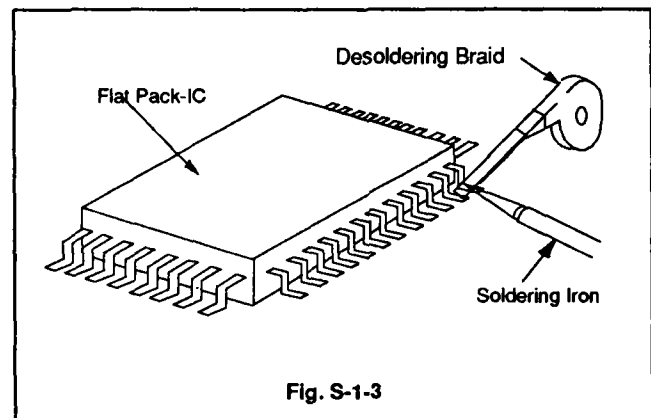


Fig. S-1-3

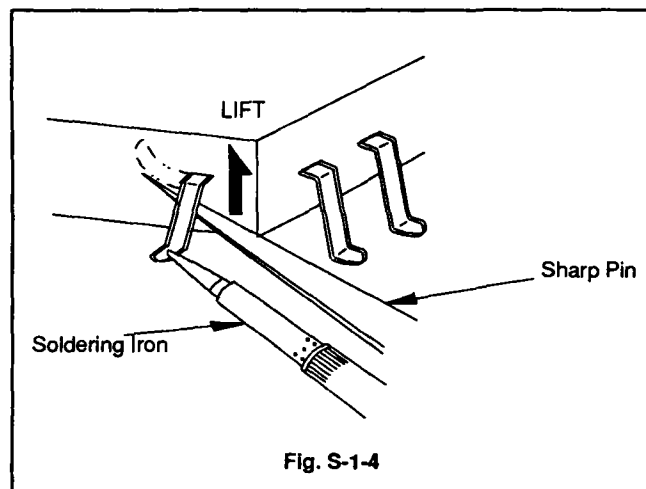


Fig. S-1-4

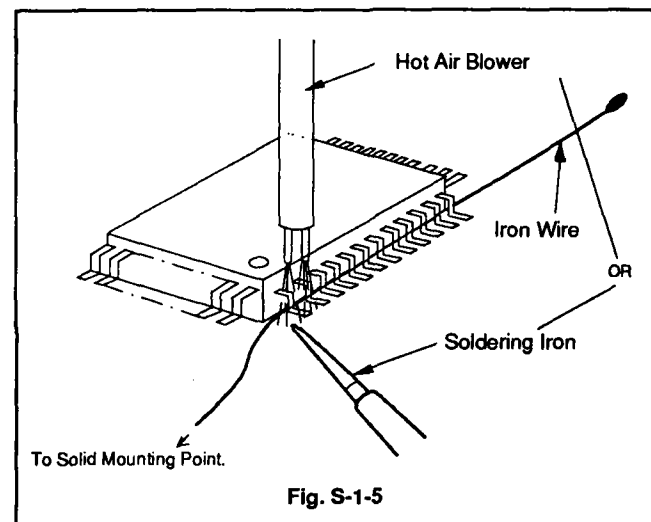
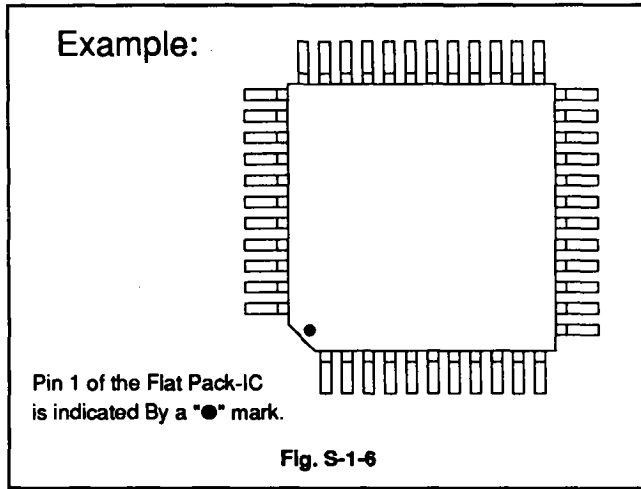


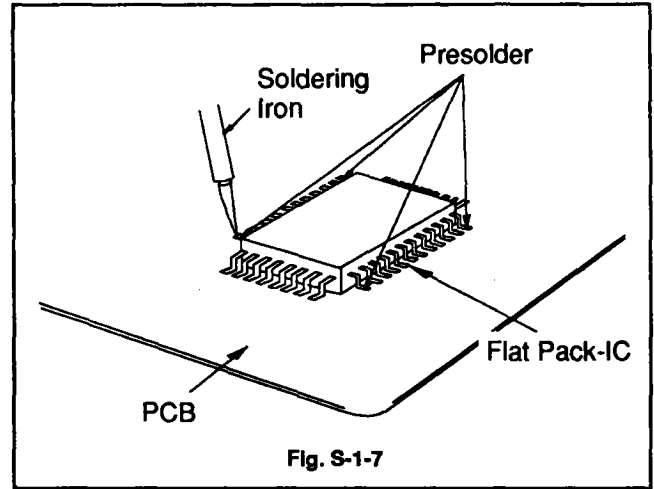
Fig. S-1-5

(2) The "●" mark on the Flat Pack - IC indicates pin 1 (See Fig. S-1-6). Make sure this mark matches the 1 on the P.C.B. when positioning for installation. Then



pre-solder the four corners of the Flat Pack-IC (See Fig. S-1-7).

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



Instructions for Handling Semiconductors

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

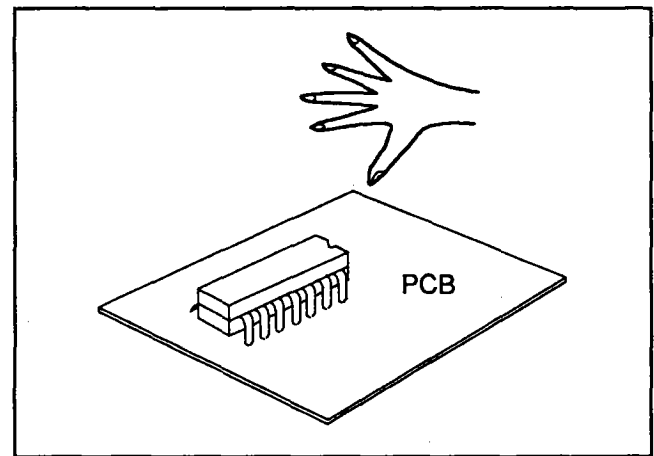
Ground for Human Body

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

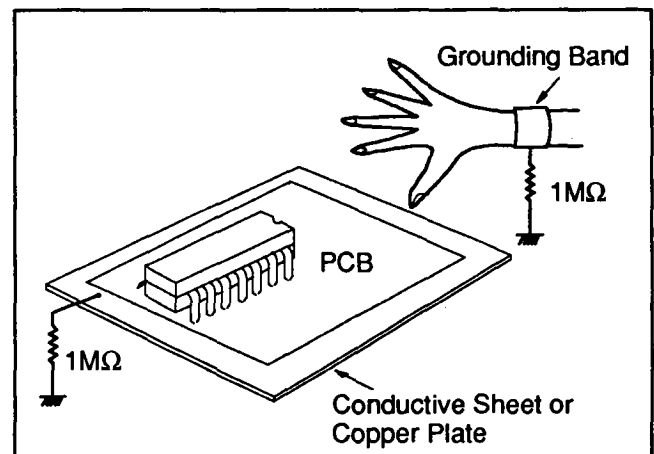
Ground for Work Bench

Be sure to place a conductive sheet or copper plate with proper grounding (1M ohm) 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



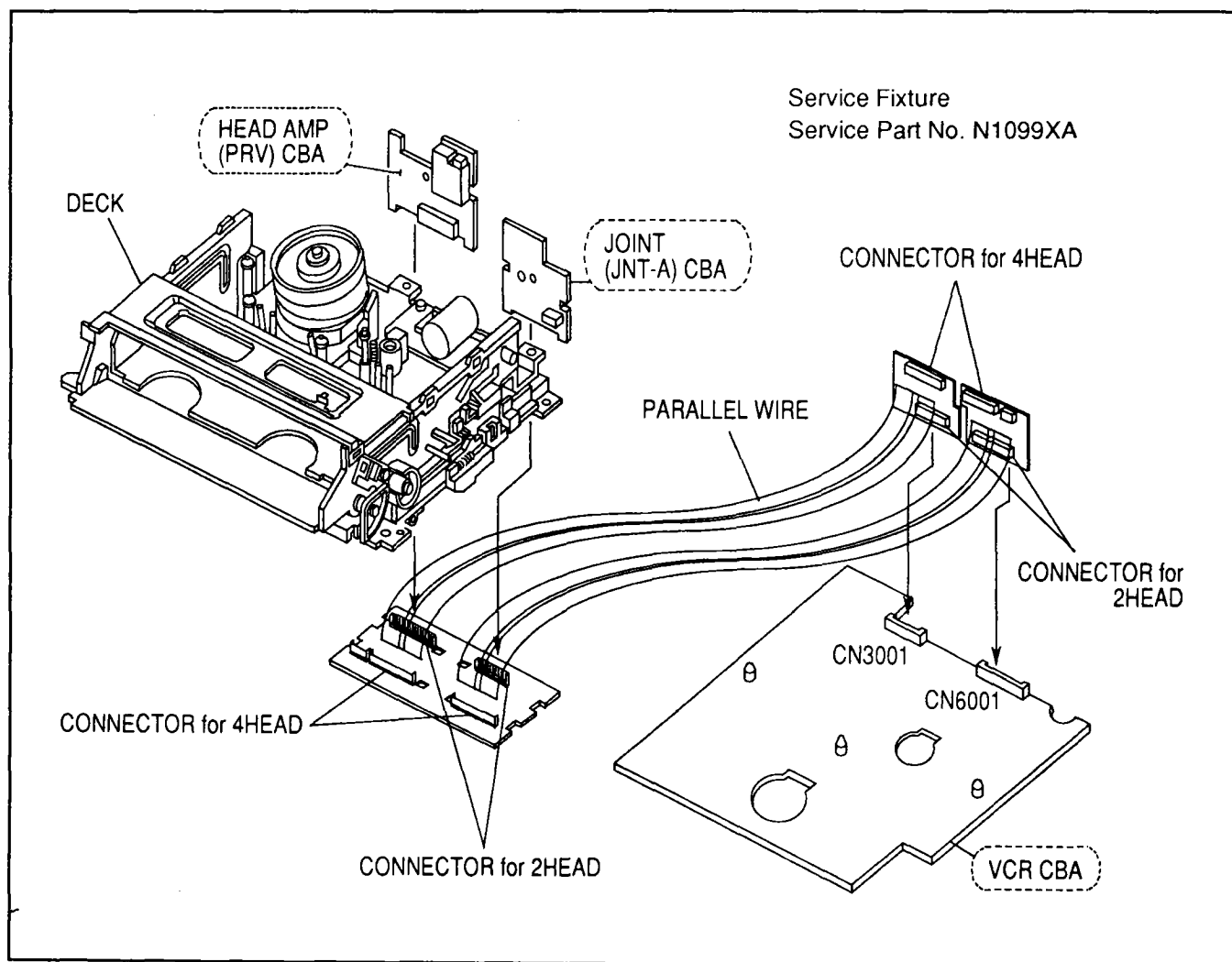
PREPARATION FOR SERVICING

How to Use Service Fixture

- (1) Remove Deck Mechanism Assembly.
If needed, remove VCR CBA from chassis.
- (2) Connect Deck Mechanism Assembly and VCR CBA by using the deck extension cable.

Note:

The service fixture can be used for both 4-head models and 2-head models.
Be sure to use correct connectors as specified.



How to Enter the Service Mode

Caution: 1

- An optical sensor system is used for the 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

- Cover Q6003 (START SENSOR) and Q6004 (END SENSOR) with Insulation Tape or enter the service mode pressing key No.6 on the Remote control unit. (Sensor Inhibition)

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

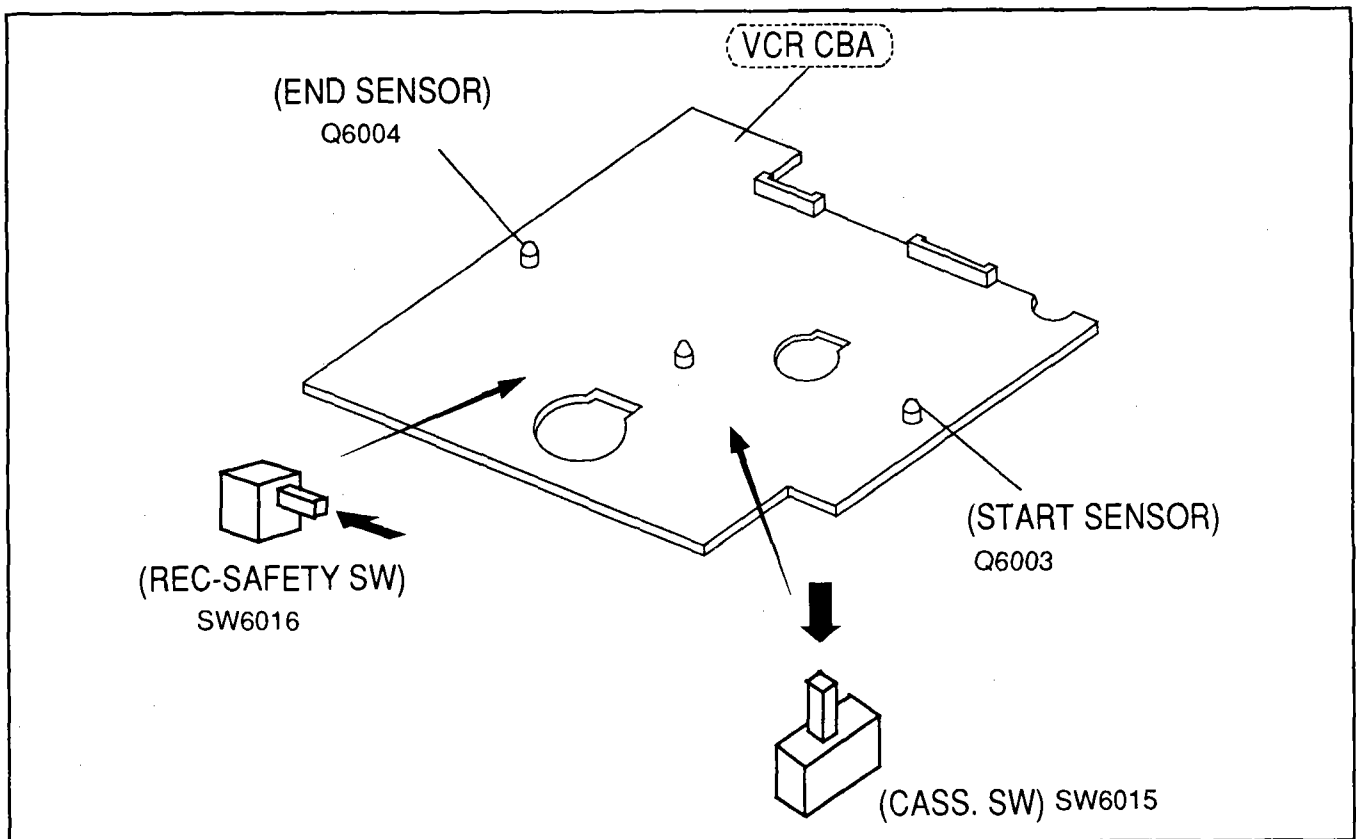
- Disconnect the AC plug from the AC power outlet.
 - Connect Pin 19 of IC6202 to ground, connect the AC plug to the AC power outlet and then power on.
 - Letter "F" appears on the screen.
 - Press key No.2 on the Remote control unit for Cut-off adjustment.
- Note:** In the Service Mode, the TV screen will show only a Horizontal line.
- Press key No.6 on the Remote control unit for Sensor Inhibition.

Caution: 2

- The deck mechanism assembly is mounted on the VCR CBA directly, and CASS. SW (SW6015) and REC-SAFETY SW (SW6016) are mounted on the VCR CBA. When deck mechanism assembly is removed from the VCR CBA during to servicing, these switches can not be operated automatically.

Preparing: 2

- To insert or eject the tape, press the CASS.SW (SW6015) manually on the VCR CBA.
- When you want to record, press the Rec Button while depressing the REC-SAFETY SW (SW6016) on the VCR CBA.



DISASSEMBLY INSTRUCTIONS MV-3400

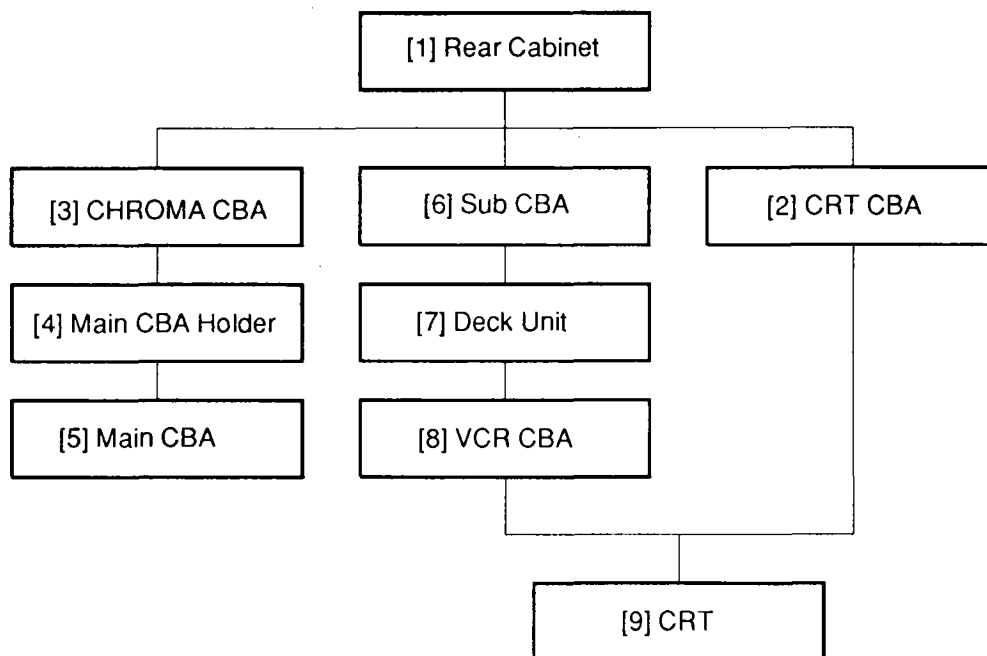
1. Disassembly Flowchart

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	5(S-1), 3(S-2), (S-3)	1
[2]	CRT CBA	4, 5	CRT Ground Wire (CN8001, CN9002)	2
[3]	CHROMA CBA	3, 5	CN8001, CBA Holder, 2(S-8)	3
[4]	Main CBA Holder	3, 5	CN7201, CN6201, CN6202), (S-4)	4
[5]	Main CBA	3, 5	3(L-1)	5
[6]	Sub CBA	3, 5	(CN6201, CN6202, CN1501, CN1002, CN1001, CN4253, CN9001)	6
[7]	Deck Unit	3, 5		7
[8]	VCR CBA	3, 5	5(S-6)	8
[9]	CRT	4	4(S-7)	9

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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. Remove 5 Screws (S-1), 3 Screws (S-2) and Screw (S-3)

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

2. If not already removed, first remove the Rear Cabinet. Remove CRT Ground Wire on the CRT CBA, then pull the CRT CBA backward.
3. If not already removed, first remove the Rear Cabinet. Remove 2(S-8) and CBA Holder. Remove CN8001 then lift up the CHROMA CBA.
4. If not already removed, first remove the Rear Cabinet. Remove (S-4) and Connectors (CN7201, CN6201, CN6202). Pull the Main CBA Holder backward.
5. If not already removed, first remove the Rear Cabinet and remove Main CBA Holder. Release 3(L-1) Locking Tabs. Lift up the Main CBA. Caution Locking Tabs (L-1) are fragile. Be careful not to break them.
6. If not already removed, first remove the Rear Cabinet. Disconnect the connectors (CN6201, CN6202, CN9001, CN4253, CN1001, CN1501). Pull the Sub CBA Backward.
7. If not already removed, first remove the Rear Cabinet and remove Main CBA Holder. Remove (S-5) and Pull up the Deck unit.
8. If not already removed, first remove the Rear Cabinet and Pull the Deck unit Backward. Remove 3 Screws (S-6), then lift up the VCR CBA.
9. If not already removed, first remove the Rear Cabinet. Remove 4 Screws (S-7), then remove the CRT.

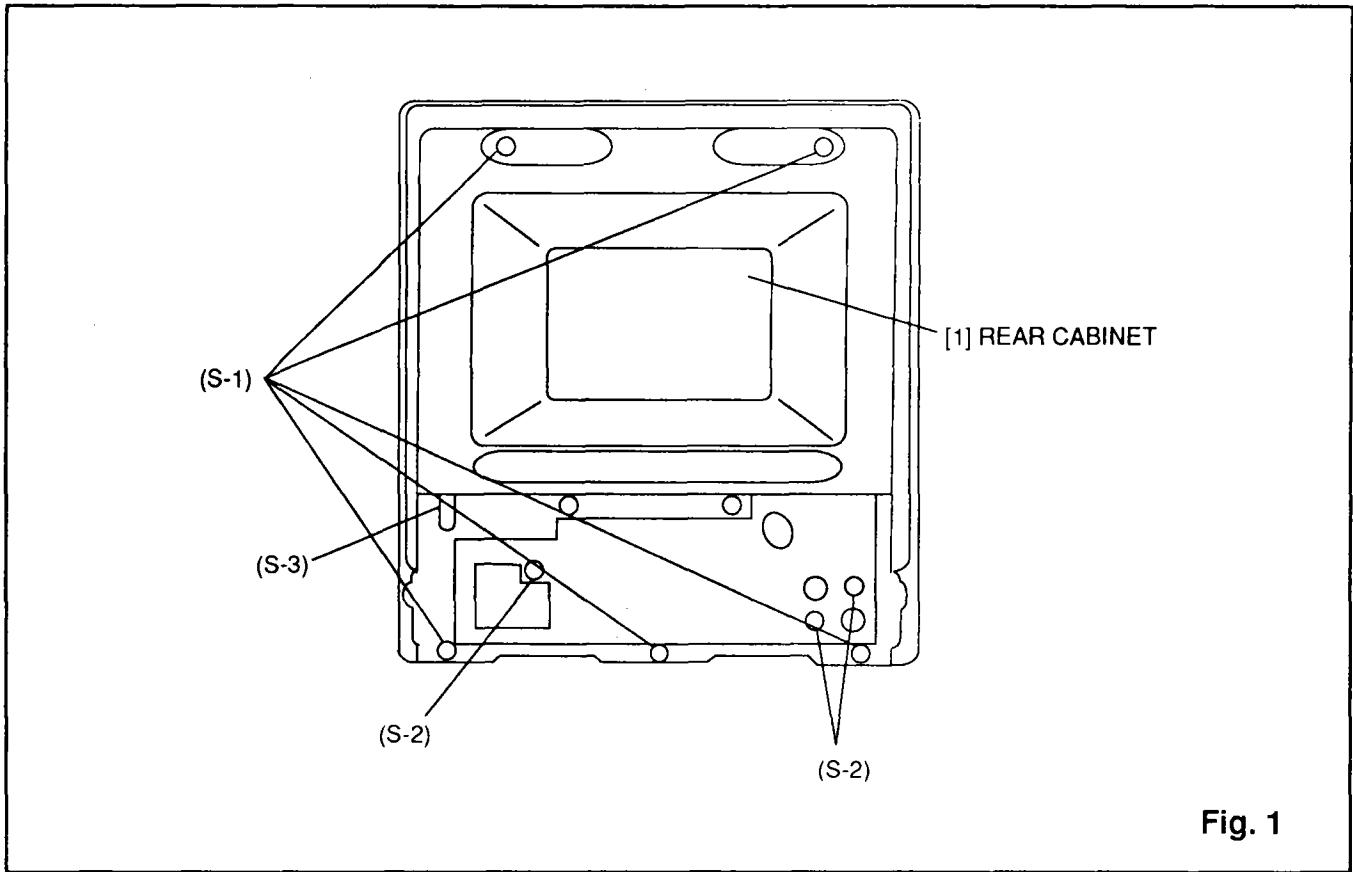


Fig. 1

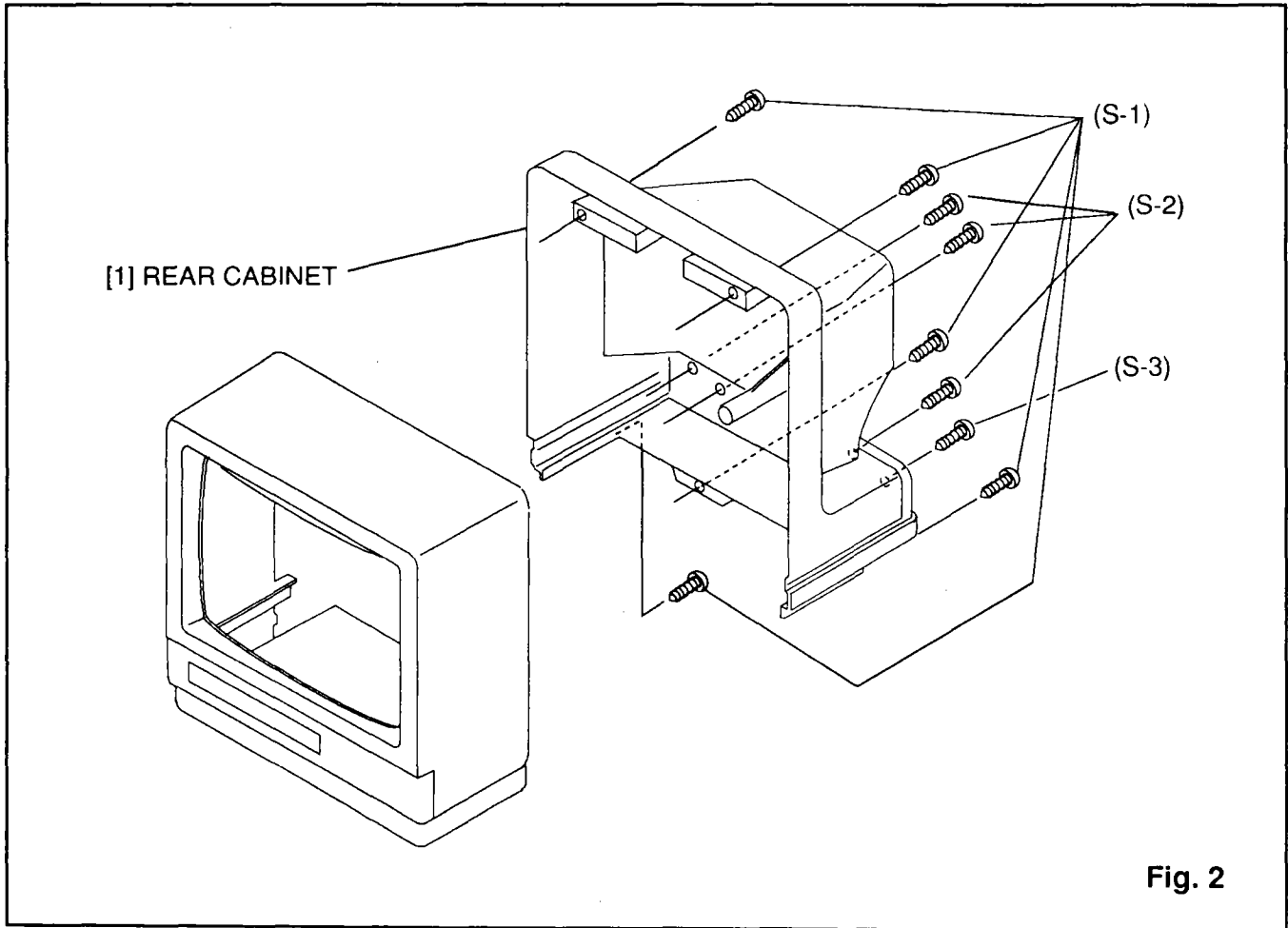


Fig. 2

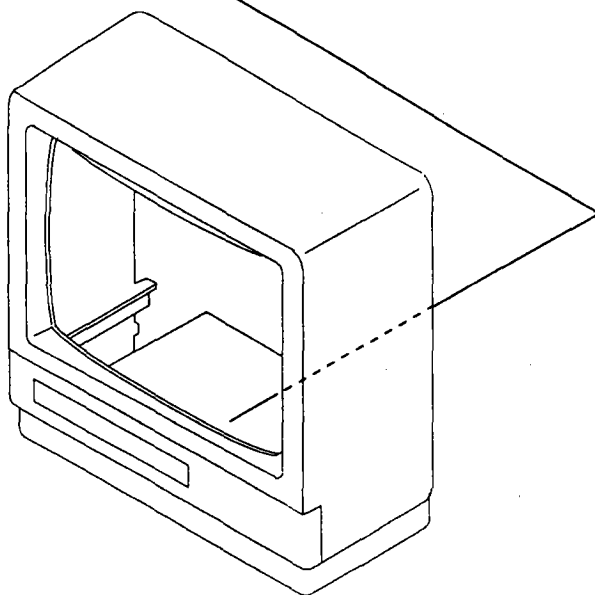
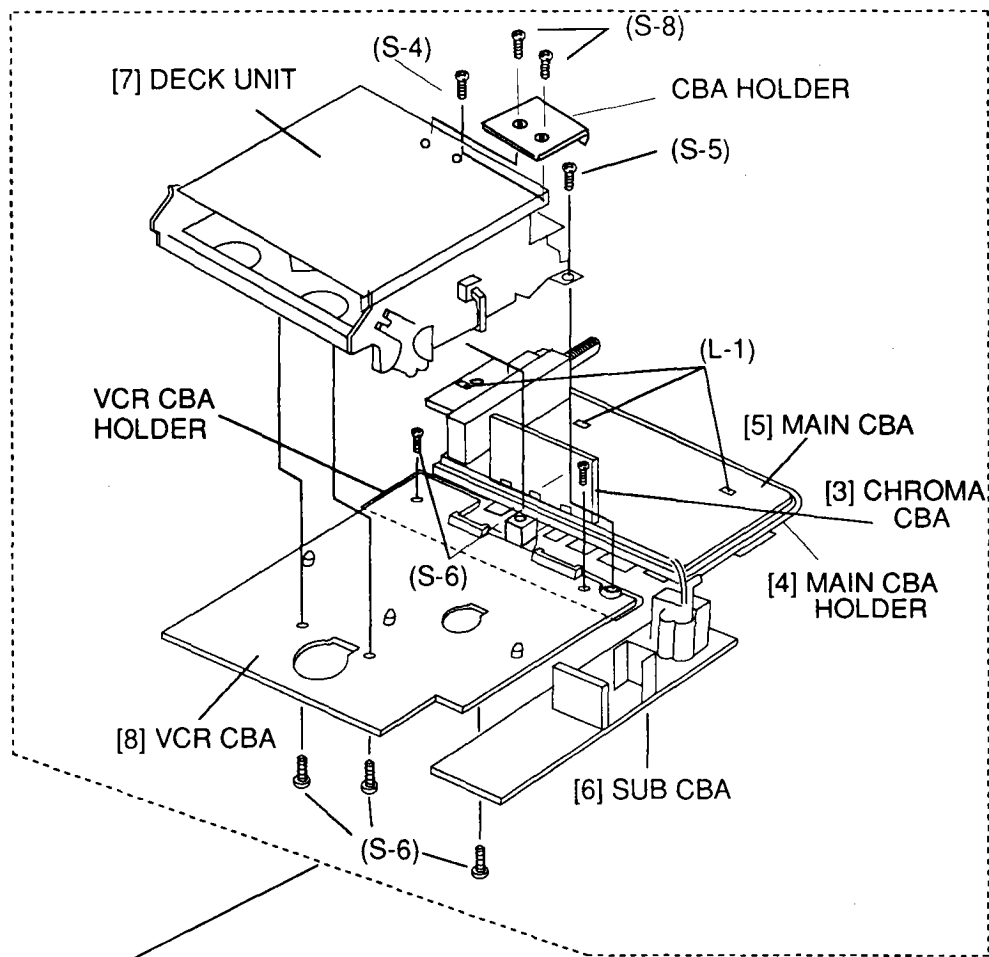


Fig. 3

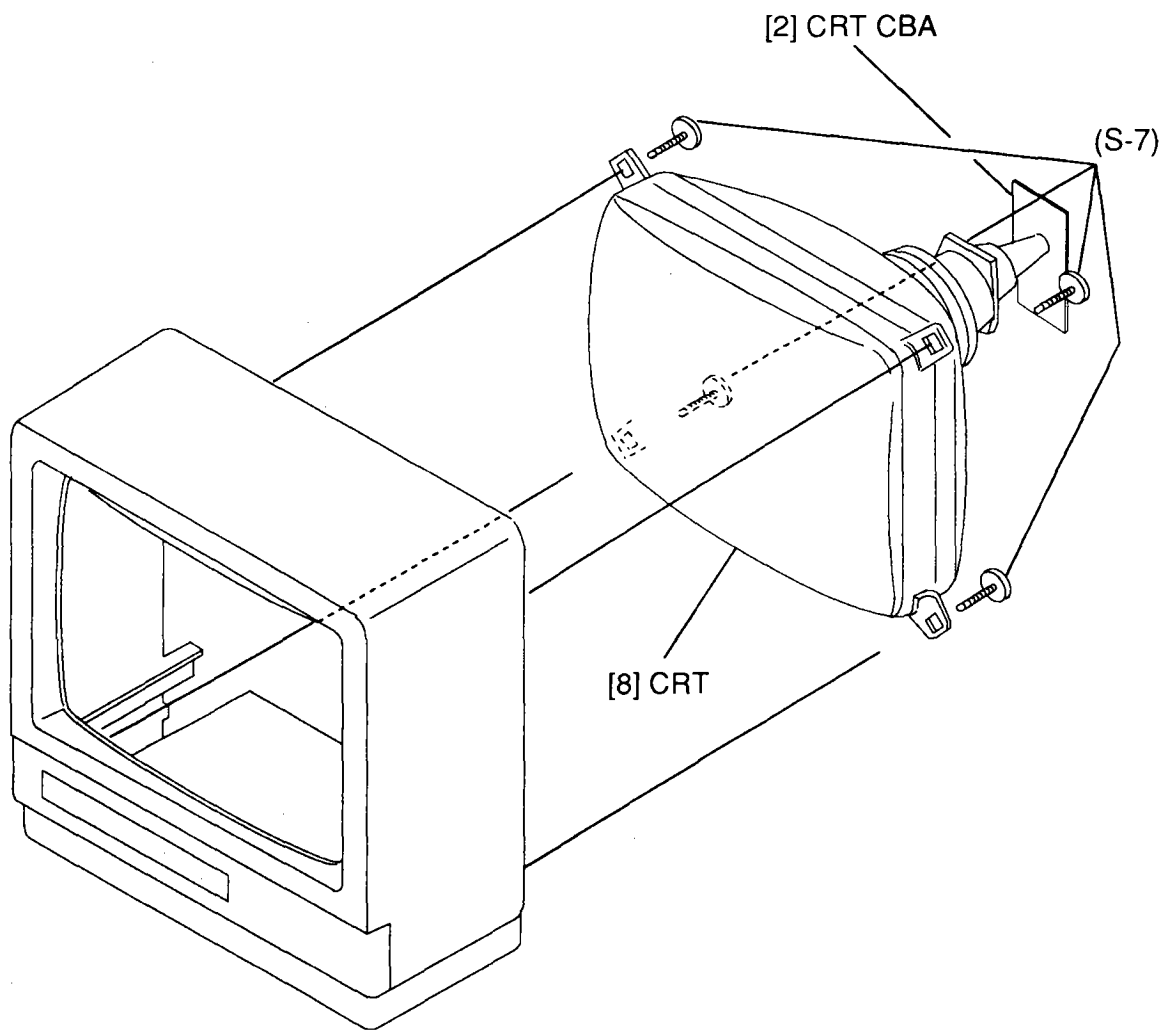


Fig. 4

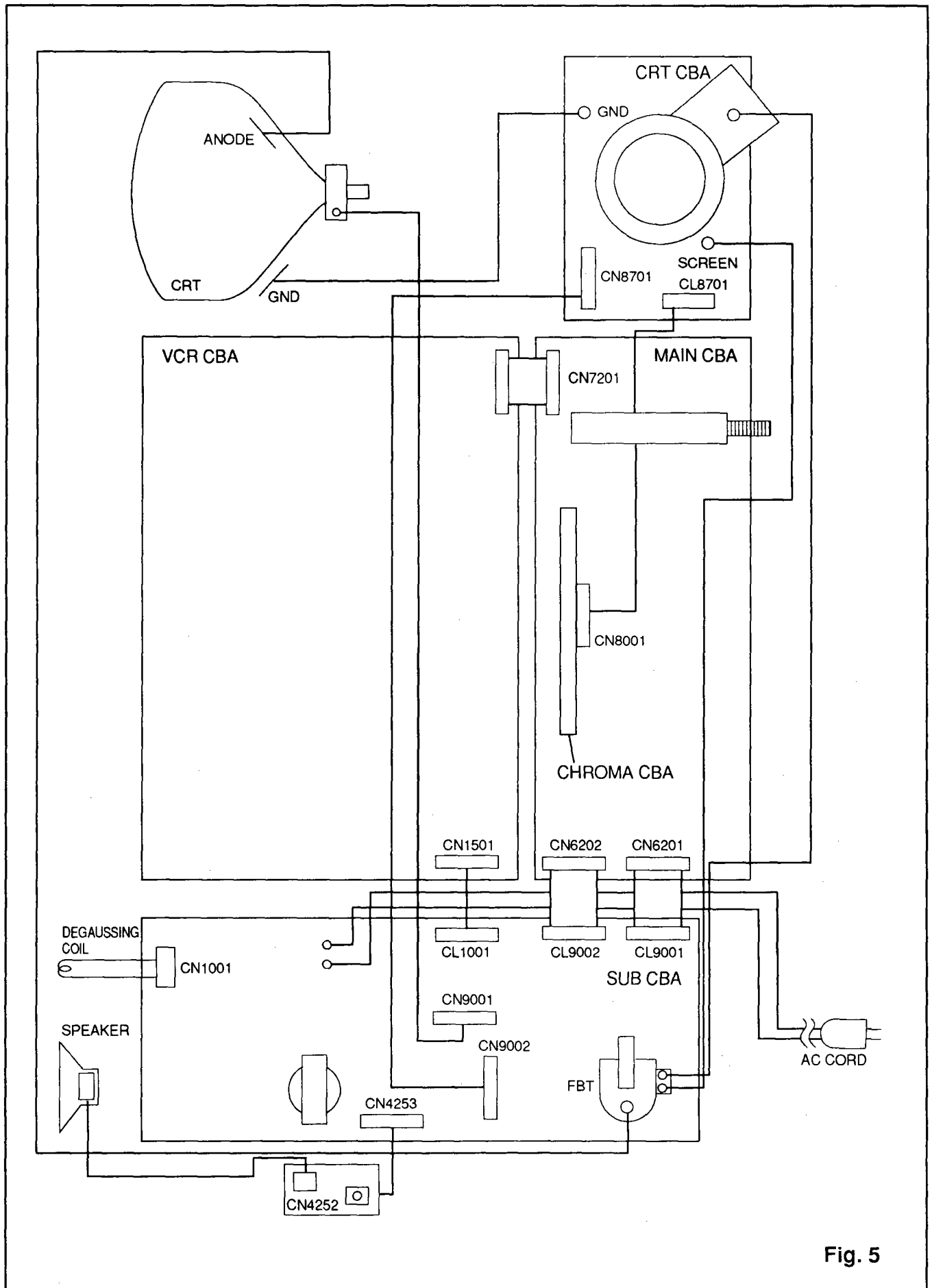


Fig. 5

DISASSEMBLY INSTRUCTIONS MV-4800

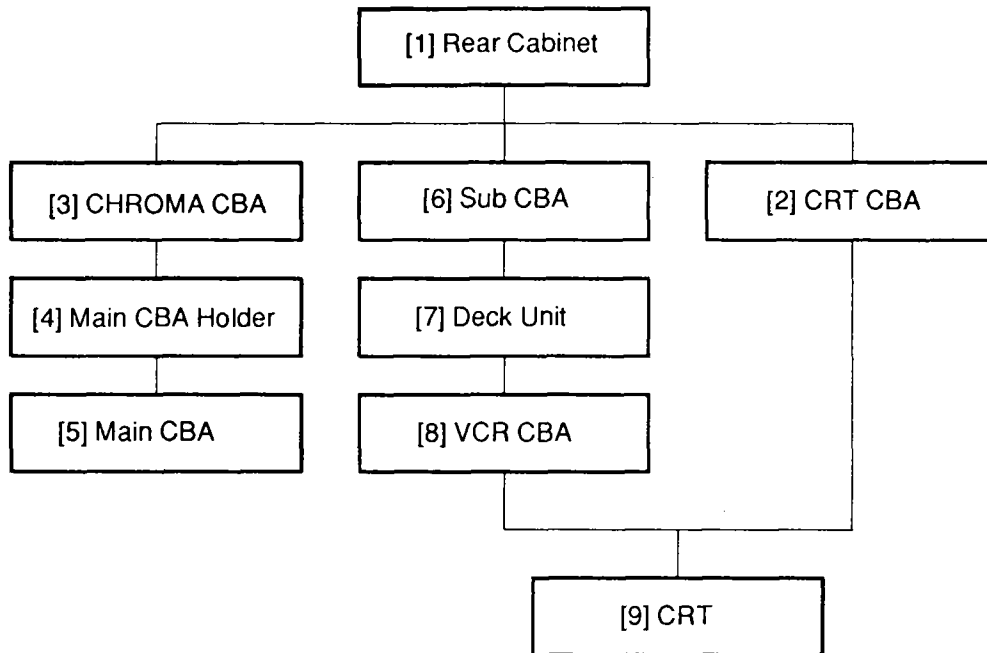
1. Disassembly Flowchart

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	7(S-1), 2(S-2), (S-3)	1
[2]	CRT CBA	4, 5	CRT Ground Wire (CN8001, CN9002)	2
[3]	CHROMA CBA	3, 5	CN8001, CBA Holder, 2(S-8)	3
[4]	Main CBA Holder	3, 5	CN7201, CN6201, CN6202), (S-4)	4
[5]	Main CBA	3, 5	3(L-1)	5
[6]	Sub CBA	3, 5	(CN6201, CN6202, CN1501, CN1002, CN1001, CN4253, CN9001)	6
[7]	Deck Unit	3, 5		7
[8]	VCR CBA	3, 5	5(S-6)	8
[9]	CRT	4	4(S-7)	9

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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. Remove 7 Screws (S-1), 2 Screws (S-2) and Screw (S-3)
Caution !!: Discharge the Anode Lead of the CRT with the CRT Ground Wire before removing the Anode Cap.
2. If not already removed, first remove the Rear Cabinet. Remove CRT Ground Wire on the CRT CBA, then pull the CRT CBA backward.
- 3..If not already removed, first remove the Rear Cabinet. Remove 2(S-8) and CBA Holder. Remove CN8001 then lift up the CHROMA CBA.
- 4..If not already removed, first remove the Rear Cabinet. Remove (S-4) and Connectors (CN7201, CN6201, CN6202). Pull the Main CBA Holder backward.
5. If not already removed, first remove the Rear Cabinet and remove Main CBA Holder. Release 3(L-1) Locking Tabs. Lift up the Main CBA. Caution Locking Tabs (L-1) are fragile. Be careful not to break them.
6. If not already removed, first remove the Rear Cabinet. Disconnect the connectors (CN6201, CN6202, CN9001, CN4253, CN1001, CN1501). Pull the Sub CBA Backward.
7. If not already removed, first remove the Rear Cabinet and remove Main CBA Holder. Remove (S-5) and Pull up the Deck unit.
8. If not already removed, first remove the Rear Cabinet and Pull the Deck unit Backward. Remove 3 Screws (S-6), then lift up the VCR CBA.
9. If not already removed, first remove the Rear Cabinet. Remove 4 Screws (S-7), then remove the CRT.

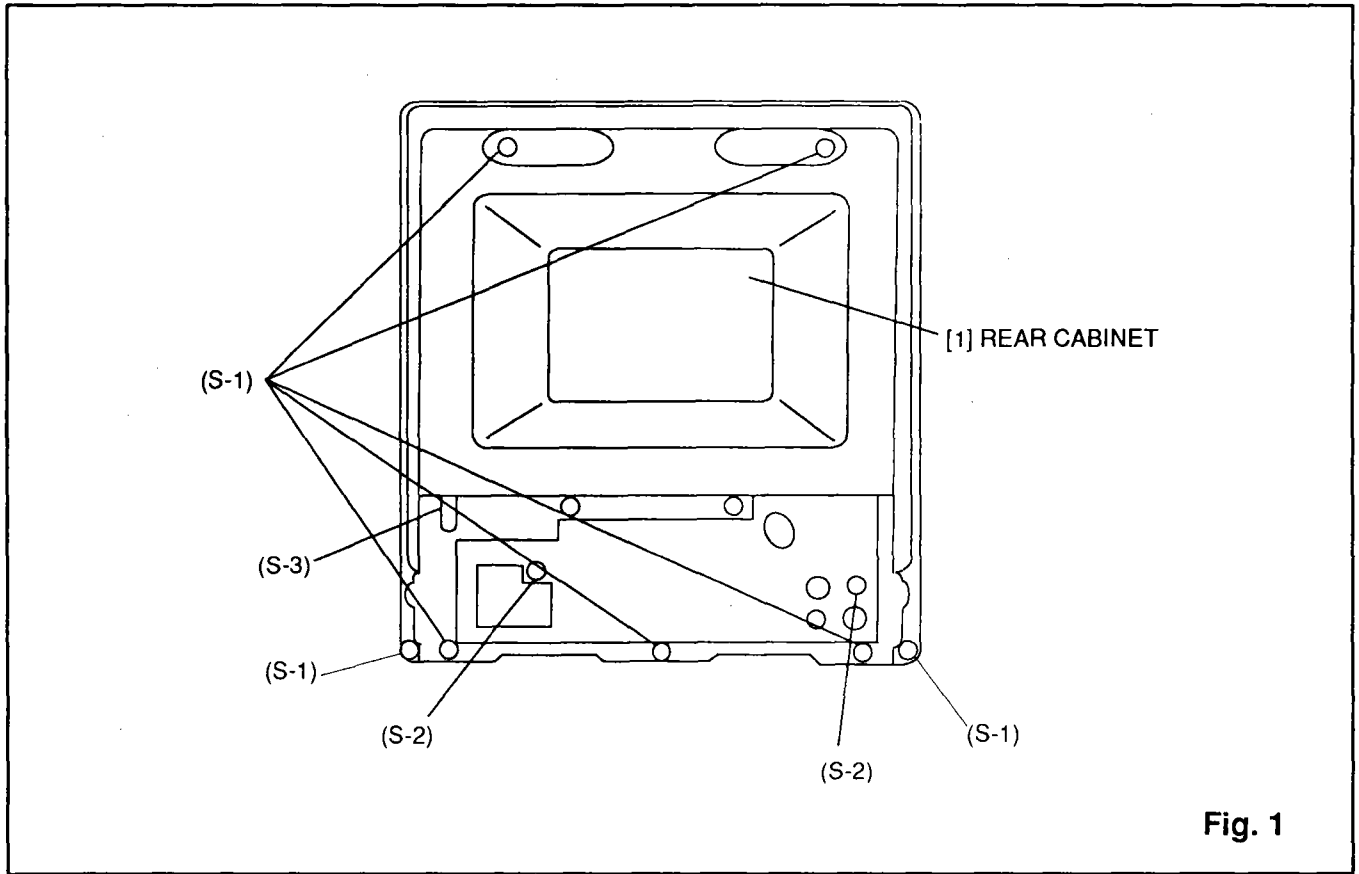


Fig. 1

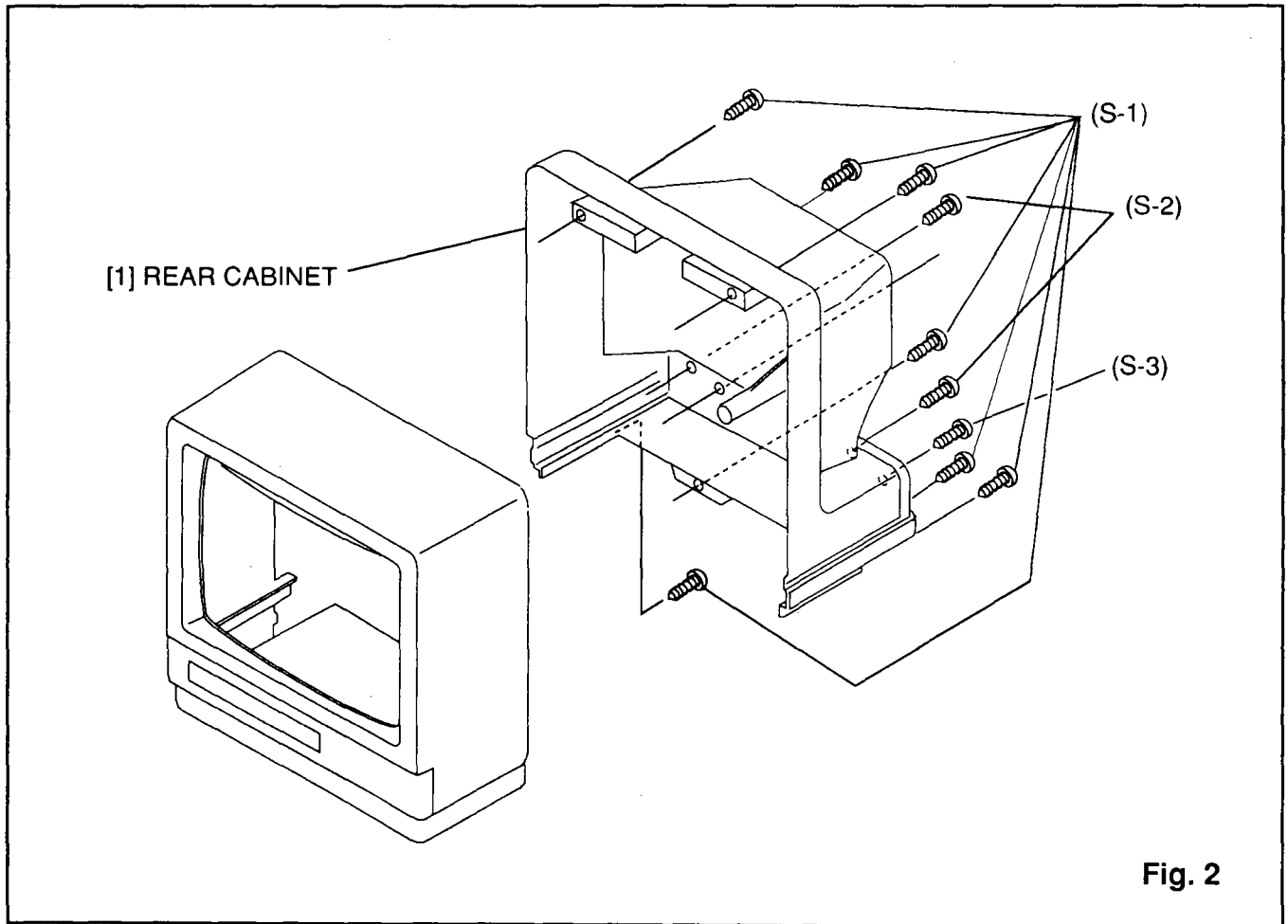


Fig. 2

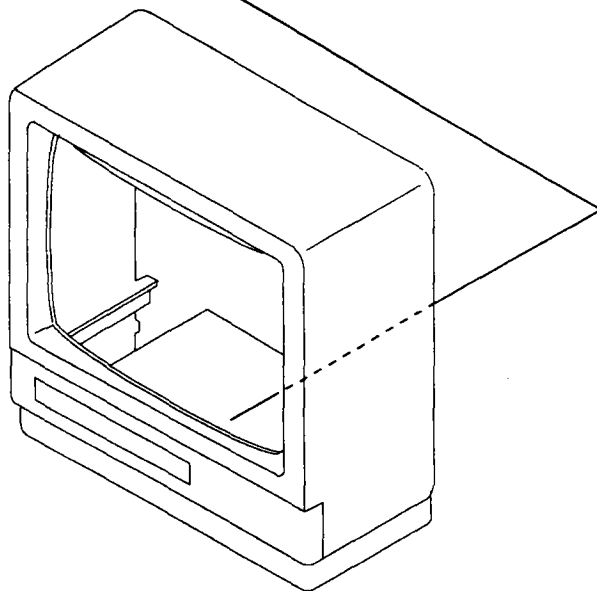
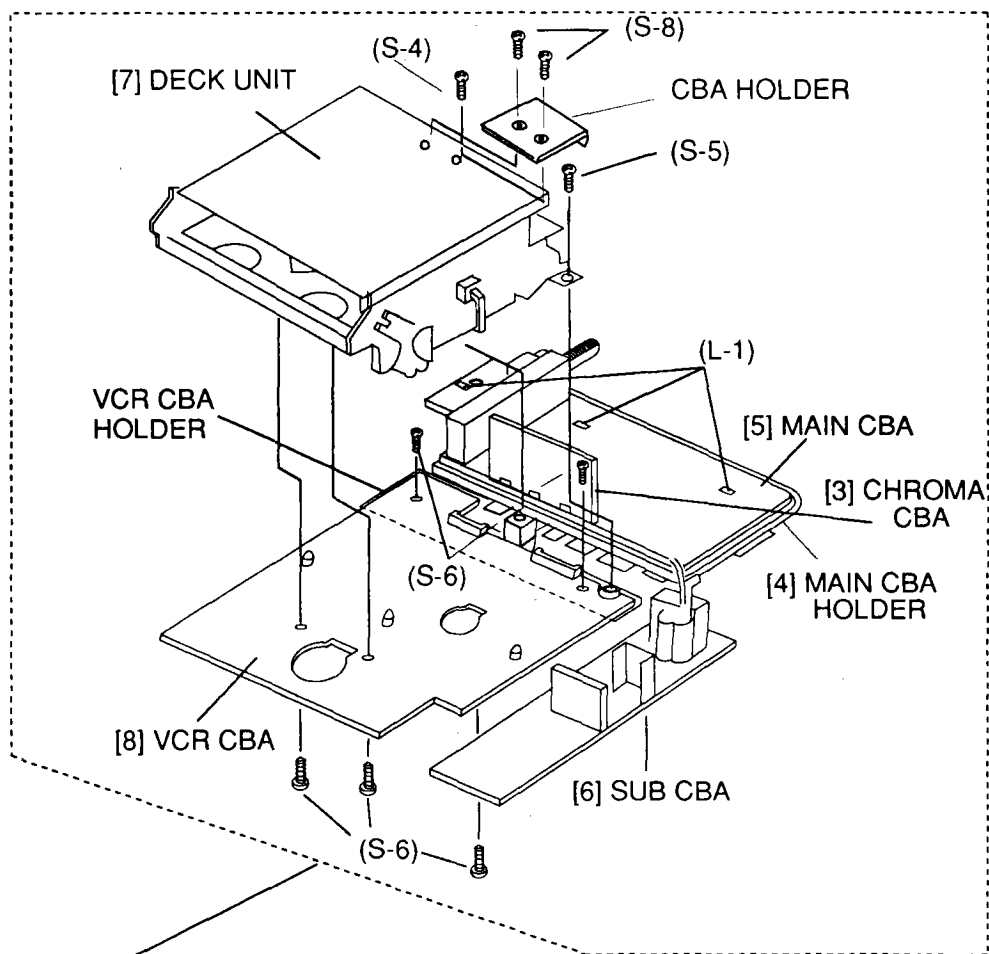


Fig. 3

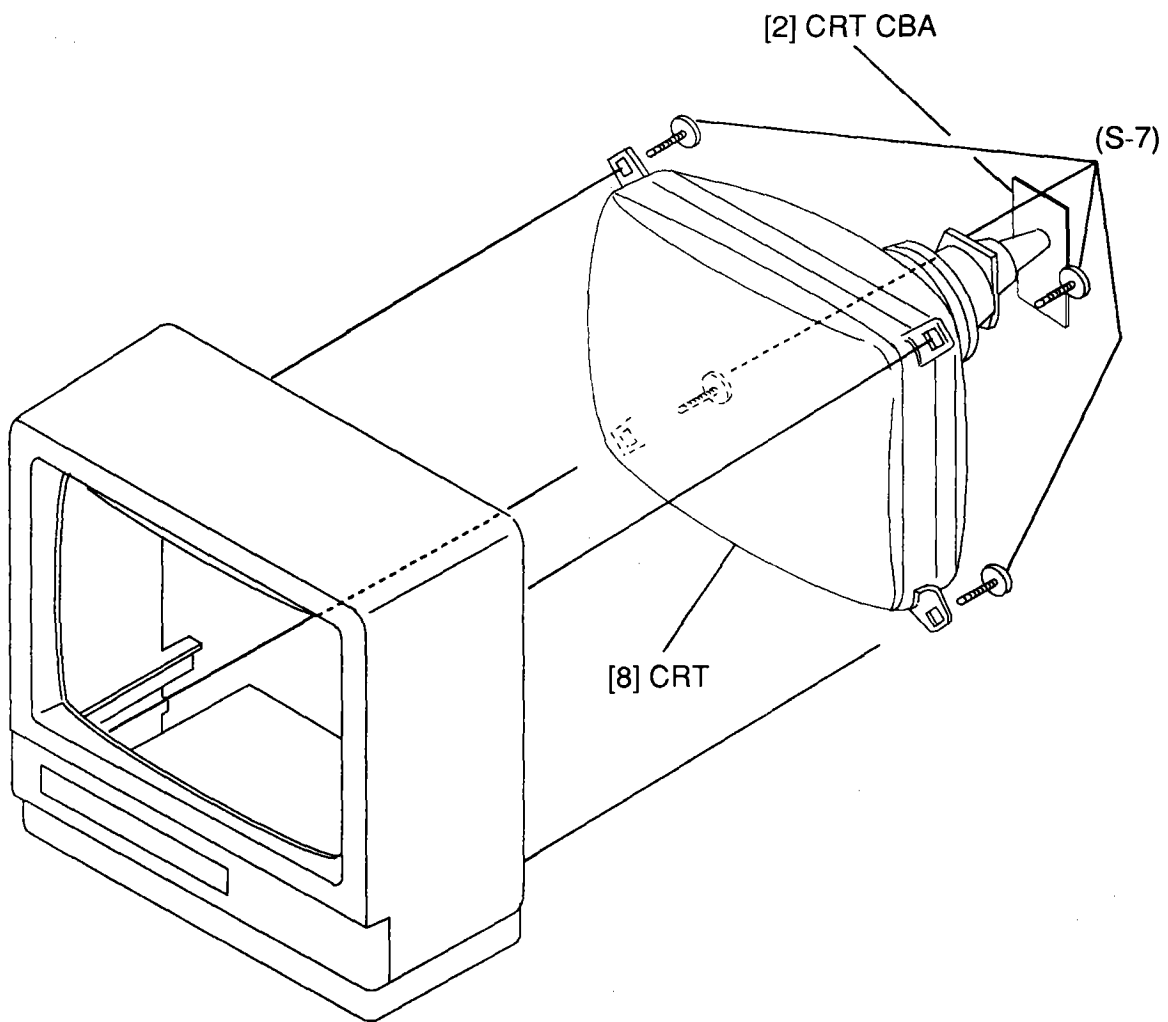


Fig. 4

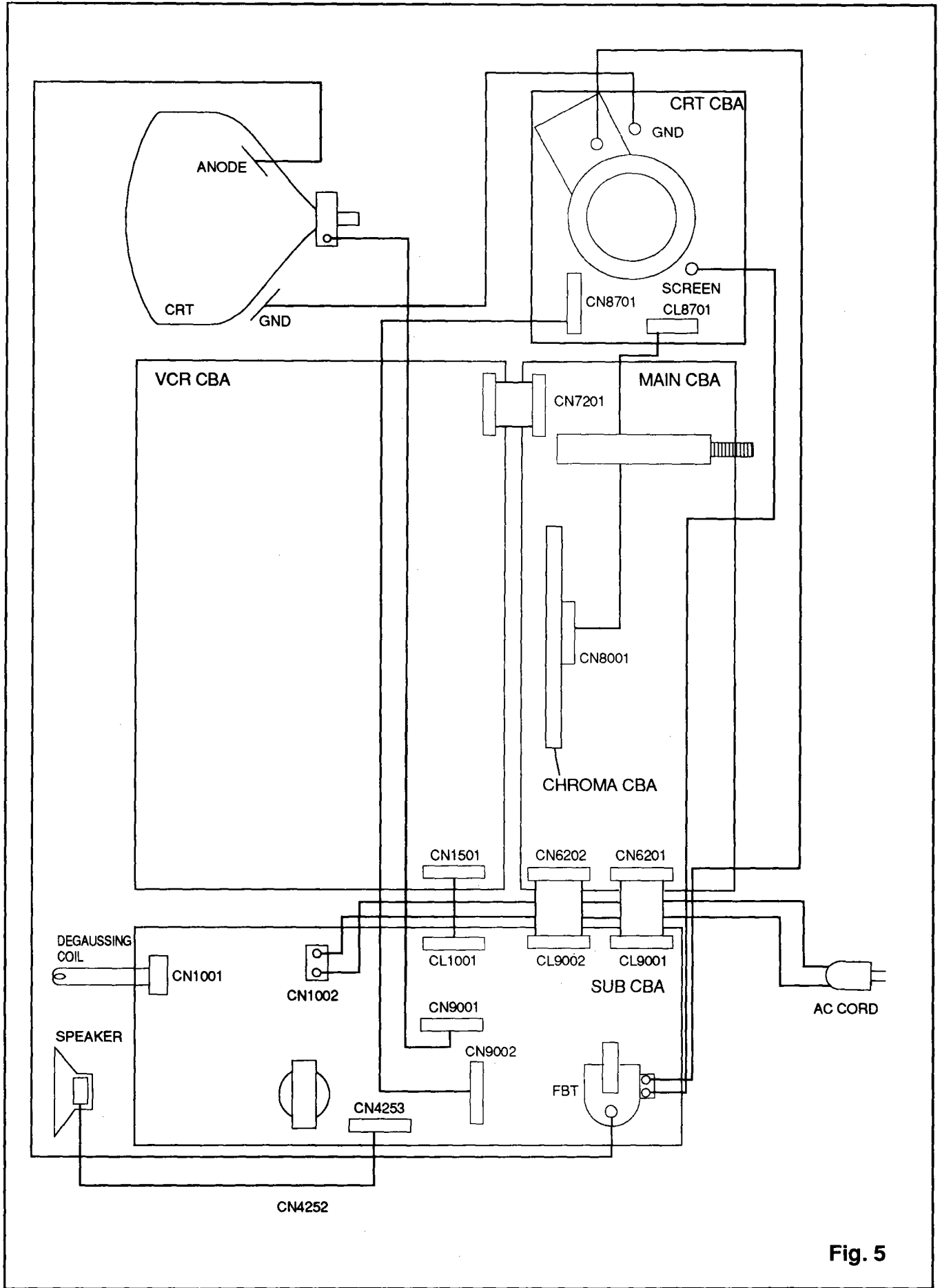


Fig. 5

ELECTRICAL ADJUSTMENT INSTRUCTIONS

NOTE:

Electrical adjustments are required after replacing circuit components. 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. IF Sweeper
2. DC Volt Meter
3. Oscilloscope: Dual Trace with 10:1 probe
4. PAL, SECAM and NTSC Pattern Generator
5. Monoscope
6. Color Analyzer

HOW TO SET UP THE ADJUSTMENT MODE:

Preset Mode: Press picture select button on the remote control unit, then press the number "1" button.

Brightness ----- Center
 Color ----- Center
 Contrast ----- Center

All adjustment procedures must be performed in order of numbering.

1. POWER SUPPLY DC VOLTAGE ADJUSTMENT

Purpose: To get correct voltage.

Symptom of Misadjustment: If voltage is incorrect, picture is dark.

Test Point	Adjustment Point	Input
C1021	VR1001	---
Equipment		Spec.
DC Volt Meter		DC +112±0.5V
Connections of Equipment		

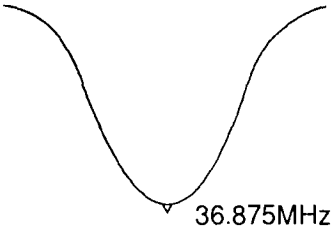
Reference Notes: C1021, VR1001 --- Sub CBA

1. To inactivate FBT, ground the base of Q9002.
2. Connect both terminal of C1021 by 1KΩ (60W~80W).
3. Connect the equipment as shown in the above table.
4. Adjust VR1001 for reading +112±0.5V on the DC Volt Meter.

2. 36.875MHz PEAK ADJUSTMENT (for TUNER)

Purpose: To adjust PIF (Picture Intermediate Frequency).

Symptom of Misadjustment: Beat may appear on the picture and buzz may sound.

Test Point	Adjustment Point	Input
TP7204, TP7205, TP7206 TP7201 (GND)	L7202	---
Equipment		Spec.
IF Sweeper, Oscilloscope		See below
Figure		
 <p style="text-align: center;">36.875MHz</p>		

Reference Notes: TP7201, TP7204, TP7205, TP7206, L7202 --- Main CBA

1. Connect Output of sweeper to TP7205.

Frequency set of sweeper are below:

(1) 31.5MHz (2) 32.4MHz (3) 33.57MHz (4) 35.8MHz (5) 36.875MHz (6) 39.45MHz

2. Connect the oscilloscope to TP7204.

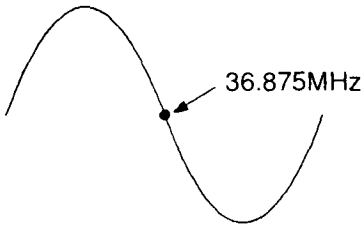
3. Connect resistor (27K Ω 1/6W) between TP7206 and TP7201 (as the wave of oscilloscope not to clip.)

4. Adjust L7202 as the marker for 36.875MHz to be peak.

3. AFT CURVE ADJUSTMENT (for TUNER)

Purpose: To operate AFT correctly.

Symptom of Misadjustment: AFT does not work correctly and/or synchronism will be faulty.

Test Point	Adjustment Point	Input
TP7202, TP7205, TP7206 TP7201 (GND)	L7201	---
Equipment		Spec.
IF Sweeper, Oscilloscope		See below
Figure		
 <p style="text-align: center;">36.875MHz</p>		

Reference Notes: TP7201, TP7202, TP7205, TP7206, L7201--- Main CBA

1. Connect output of sweeper to TP7205.

Frequency set is the same as for 36.875MHz Peak Adjustment.

2. Connect the oscilloscope to TP7202.

3. Connect resistor (27K Ω 1/6W) between TP7206 and TP7201 (as the wave of oscilloscope not to clip.)

4. Adjust L7201 as the marker for 36.875MHz to the center of AFT curve.

4. RF AGC ADJUSTMENT (for TUNER)

Purpose: Set AGC (Auto Gain Control) Level.

Symptom of Misadjustment: AGC does not synchronize correctly when RF Input Level is weak and distortion may cause on the picture when it is strong.

Test Point	Adjustment Point	Input
TP7203 TP7201 (GND)	VR7201	PAL Color Bar
Equipment		Spec.
PAL Pattern Generator, DC Volt Meter		DC +4.1±0.1V
Connections of Equipment		

Reference Notes: TP7201, TP7203, VR7201 --- Main CBA

1. Receive the PAL Color Bar signal for 2ch (48.25MHz). (RF input level 80dBμV at the best synchronized point)
2. Connect the equipment as shown in the above table.
3. Adjust VR7201 for reading +4.1±0.1V on the DC Volt Meter.

5. V. SIZE ADJUSTMENT

Purpose: To get correct vertical size of screen image.

Symptom of Misadjustment: Vertical size of screen image may not be properly displayed.

Test Point	Adjustment Point	Input
Screen	VR8002	Monoscopic Pattern
Equipment		Spec.
Monoscope		90±5%

Reference Note: VR8002 --- Chroma CBA

1. Operate the unit more than 20 minutes.
2. Input the Monoscopic Pattern.
3. Adjust VR8002 so that the vertical size will be 90±5% of Monoscopic Pattern and the circle is round.

6. H. POSITION ADJUSTMENT

Purpose: To get correct horizontal position of screen image.

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

Test Point	Adjustment Point	Input
Screen	VR8001	Monoscopic Pattern
Equipment		Spec.
Monoscope		---

Reference Note: VR8001 --- Chroma CBA

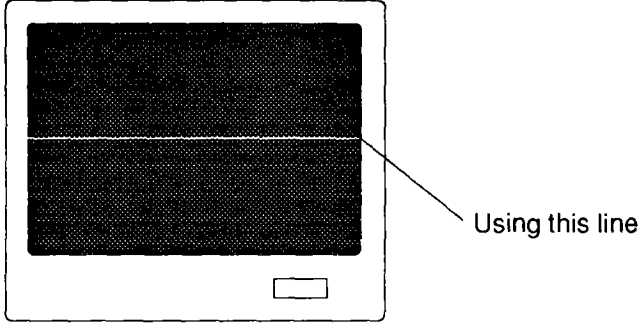
1. Operate the unit more than 20 minutes.
2. Input the Monoscopic Pattern.
3. Adjust VR8001 so that the right and left of Monoscopic Pattern will be equal.

7. 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.

When the screen voltage is too high, the scanning line is appeared on the screen.

Test Point	Adjustment Point	Input
Screen	VR8704, VR8705, VR8706 Screen-VR (FBT)	Black Raster
Equipment		Spec.
Pattern Generator		See below
Figure		
		

Reference Notes: VR8701, VR8702, VR8703, VR8704, VR8705, VR8706 --- CRT CBA
Screen-VR --- Sub CBA (FBT)

1. Operate the unit more than 20 minutes.
2. Degauss the CRT using Degaussing Coil.
3. Input the Black Raster.
4. Turn the Screen-VR (FBT) fully counterclockwise.
5. Set VR8702 (B. Drive), VR8703 (R. Drive), VR8704 (B. Cut Off), VR8705 (G. Cut Off), VR8706 (R. Cut Off) and VR8701 (Sub Bright) to center.
6. Enter the Service Mode. (See Page 1-5-2 " How to Enter the Service Mode ").
7. Slowly turn the Screen-VR (FBT) to the point where horizontal line just visible.
8. Adjust VR8704 (Blue), VR8705 (Green) and VR8706 (Red) so that horizontal line becomes pure white.
9. Power unit off and on again to return back to Normal mode.

Note: Confirm that White Balance Adj. is correct after this adjustment, and attempt White Balance Adj. if needed.

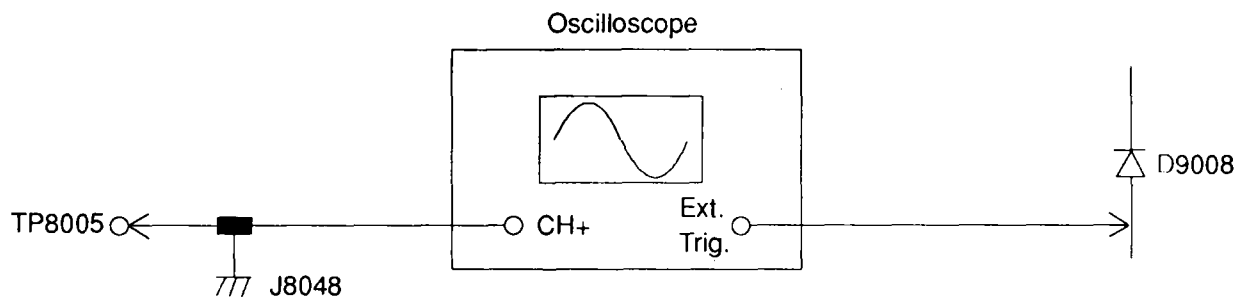
8. 1H DELAY LINE ADJUSTMENT (for PAL)

Purpose: To get correct 1H delay line when the PAL signal is entered.

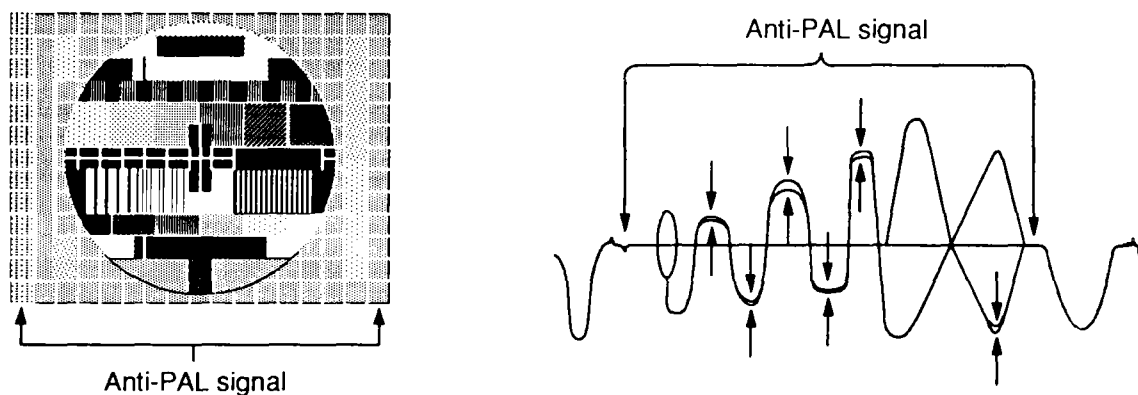
Symptom of Misadjustment: The Anti-PAL signal part is colored when the Philips Pattern is entered.
Each scanning line is colored on the color bar.

Test Point	Adjustment Point	Input
TP8005 J8048 (GND)	L8007, VR8003	Philips Pattern
Equipment		Spec.
Pattern Generator, Oscilloscope		See below

Connections of Equipment



Figure



Reference Notes: TP8005, J8048, L8007, VR8003 --- Chroma CBA
D9008 --- Sub CBA

1. Input the Philips Pattern.
2. Connect the equipment as shown in the above table.
3. Adjust VR8003 and L8007 so that the amplitude at Anti-PAL signal part becomes minimum (no color) and the waveform at the color bar part is not seen in double ("Venetian Blind" does not appear at the color bar signal part).

9. SUB BRIGHT ADJUSTMENT

Purpose: To get proper brightness.

Symptom of Misadjustment: Proper brightness cannot be obtained by adjusting the Bright Control.

Test Point	Adjustment Point	Input
Screen	VR8701	Gray Scale pattern
Equipment		Spec.
Pattern Generator		See below
Figure		

Reference Notes: VR8701 --- CRT CBA

1. Operate the unit more than 20 minutes.
2. Input the 8-step Gray Scale pattern.
3. Adjust VR8701 so that the bar is just visible. (See above figure)

10. FOCUS ADJUSTMENT

Purpose: To get correct focus.

Symptom of Misadjustment: Blurred image is shown on the display.

Test Point	Adjustment Point	Input
Screen	Focus-VR (FBT)	Monoscopic Pattern
Equipment		Spec.
Monoscope		See below

Reference Note: Focus-VR (FBT) --- Sub CBA

1. Operate the unit more than 20 minutes.
2. Input the Monoscopic Pattern.
3. Adjust Focus-VR (FBT) to be obtained clear picture.

11. WHITE BALANCE ADJUSTMENT

Purpose: To mix red, green and blue beams correctly for pure white.

Symptom of Misadjustment: White becomes bluish or reddish.

Test Point	Adjustment Point	Input
Screen	VR8702, VR8703	White Raster (APL 100%)
Equipment		Spec.
Pattern Generator, Color Analyzer		See below
Connections of Equipment		

Reference Notes: VR8702, VR8703 --- CRT CBA

1. Operate the unit more than 20 minutes.
2. Face the unit to east. Degauss the CRT using Degaussing Coil.
3. Input the White Raster (APL 100%).
4. Set the color analyzer to the CHROMA mode and after zero point calibration, bring the optical receptor to the center on the tube surface (CRT).
5. Adjust VR8703 (R. DRIVE) and VR8702 (B. DRIVE) so that the respective chroma temperatures become 8000K-20MPCD (x : 0.300 / y : 0.290) ±4%.

Note: Confirm that Cut Off Adj. is correct after this adjustment, and attempt Cut Off Adj. if needed.

12-1. PAL HEAD SWITCHING POSITION ADJUSTMENT

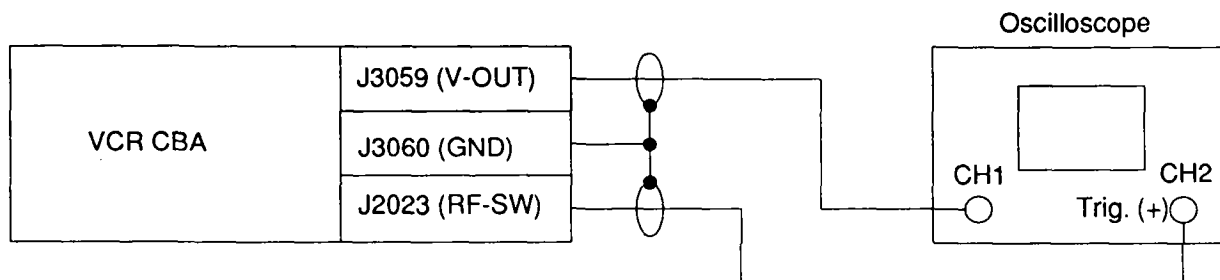
Note: Before attempting the mechanical adjustment, this adjustment must first be completed.

Purpose: To determine the Head Switching point during playback.

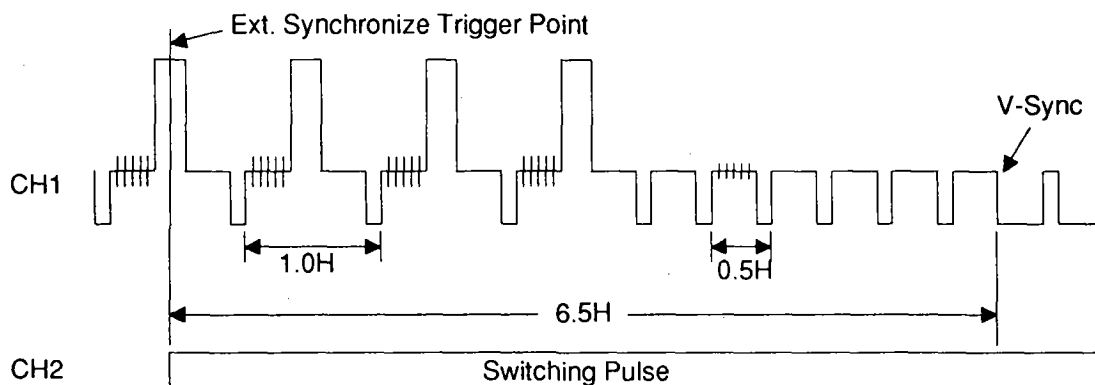
Symptom of Misadjustment: May cause Head Switching noise or Vertical Jitter in the picture.

Test Point	Adjustment Point	Mode	Input
J3059 (V-OUT) J2023 (RF-SW) J3060 (GND)	VR2002 (SW-PAL)	PLAY (SP)	---
Tape	Equipment	Spec.	
F6-A	Oscilloscope	6.5±1H (416±60µs)	

Connections of Equipment



Figure



Reference Notes: J3059, J2023, J3060, VR2002 : VCR CBA

1. Connect equipment as shown in the above table.
2. Playback test tape and adjust VR2002 so that the V-sync front edge of CH1 video output waveform is delayed 6.5H (416µs) from the rising of CH2 Head Switching pulse waveform.

12-2. NTSC HEAD SWITCHING POSITION ADJUSTMENT

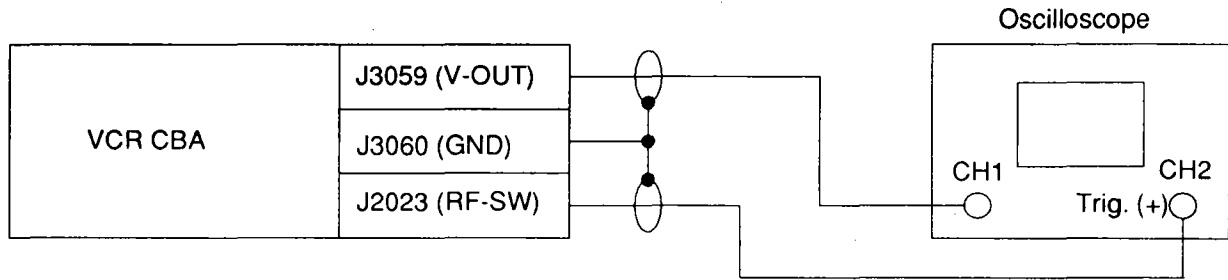
Note: Before attempting the mechanical adjustment, this adjustment must first be completed.

Purpose: To determine the Head Switching point during playback.

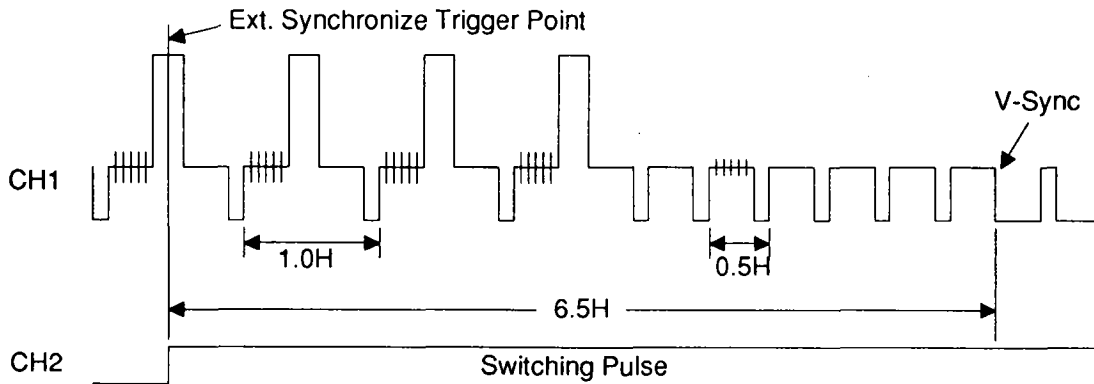
Symptom of Misadjustment: May cause Head Switching noise or Vertical Jitter in the picture.

Test Point	Adjustment Point	Mode	Input
J3059 (V-OUT) J2023 (RF-SW) J3060 (GND)	VR2001 (SW-NTSC)	PLAY (SP)	---
Tape	Equipment	Spec.	
F8-A	Oscilloscope	6.5±1H (412.7±60 μs)	

Connections of Equipment



Figure



Reference Notes: J3059, J2023, J3060, VR2001 : VCR CBA

1. Connect equipment as shown in the above table.
2. Playback test tape and adjust VR2001 so that the V-sync front edge of CH1 video output waveform is delayed 6.5H (412.7 μs) from the rising of CH2 Head Switching pulse waveform.

13. AUDIO REC. BIAS CURRENT ADJUSTMENT

Purpose: To set the optimum Record Audio Bias level.

Symptom of Misadjustment: If Audio Bias level is too high, the frequency response deteriorates. If the level is too low, sound distortion may occur.

Test Point	Adjustment Point	Mode	Input
J4002 (BIAS+) J4001 (BIAS-)	VR4001 (BIAS)	REC (SP)	---
Tape	Equipment	Spec.	
Blank Tape	AC Voltmeter (RMS)	25.0mV RMS	
Connections of Equipment			

* Do not enter Input Signal.

Reference Notes: J4001, J4002, VR4001 --- VCR CBA

1. Connect equipment as shown in the above table.
2. Insert a blank tape and set the VCR to REC mode.
(Do not set to PAUSE. In PAUSE mode, the bias oscillation is stopped.)
3. Adjust VR4001 so that the voltage becomes 25.0mV.

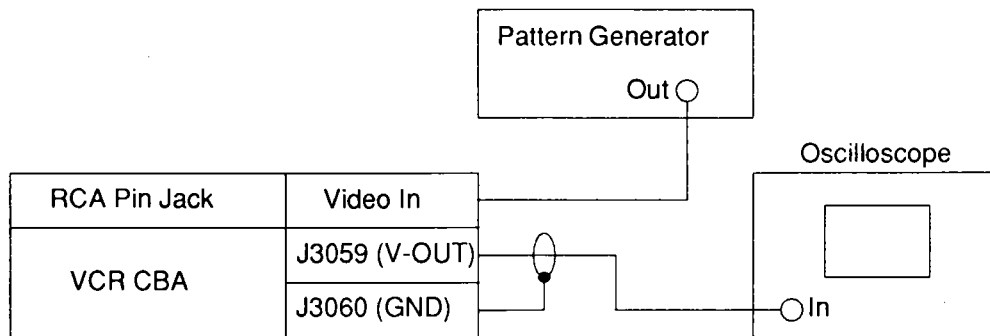
14. V-OUT LEVEL ADJUSTMENT

Purpose: To set the optimum luminance V-out level.

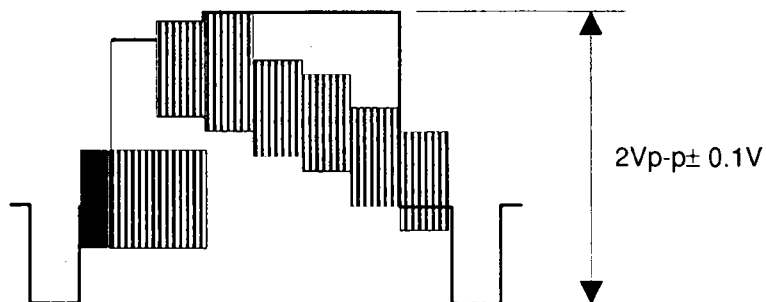
Symptom of Misadjustment: If the V-out level is too high, TV may overload. If the Level is too low, the S/N ratio deteriorates.

Test Point	Adjustment Point	Mode	Input
J3059 (V-OUT) J3060 (GND)	VR3003 (E-E LEVEL)	E-E	Color Bar signal with 100% White Level
Tape	Equipment	Spec.	
---	Pattern Generator Oscilloscope	2Vp-p±0.1V	

Connections of Equipment



Figure



Reference Notes: J3059, J3060, VR3003 --- VCR CBA

1. Connect equipment as shown in the above table.
2. Input Color Bar signal with 100% White to Video Input.
3. Adjust VR3001 so that the video level becomes $2V_{p-p} \pm 0.1V$. (Connected to TV)

15. FM CARRIER DEVIATION ADJUSTMENT

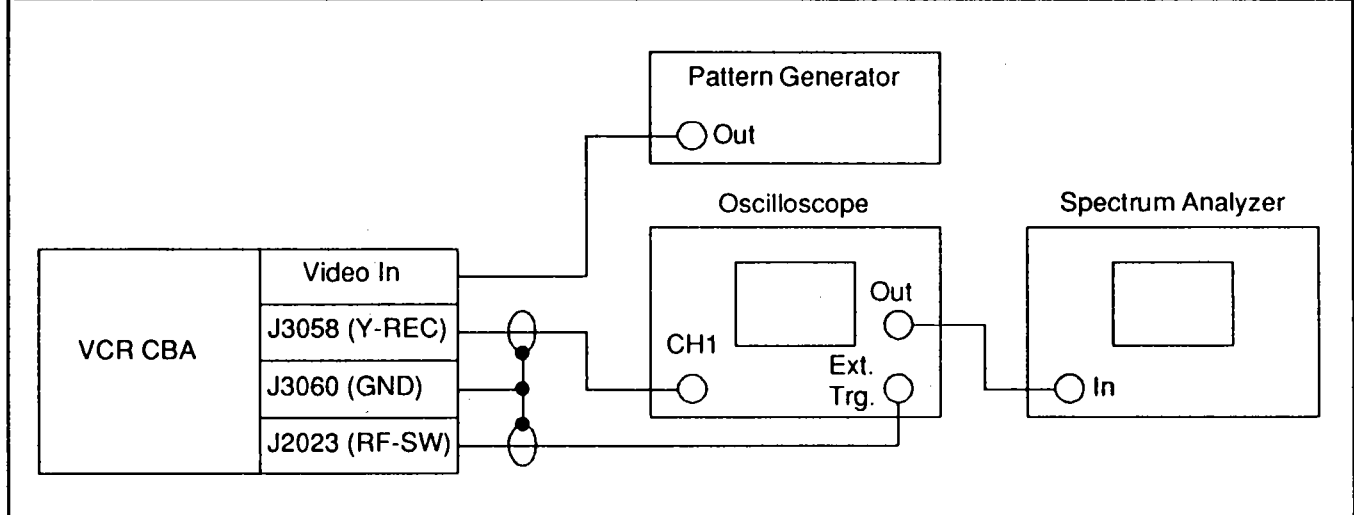
Purpose: To align FM carrier deviation.

Symptom of Misadjustment: If the deviation is not correct, abnormal contrast of light and dark may be seen on the picture.

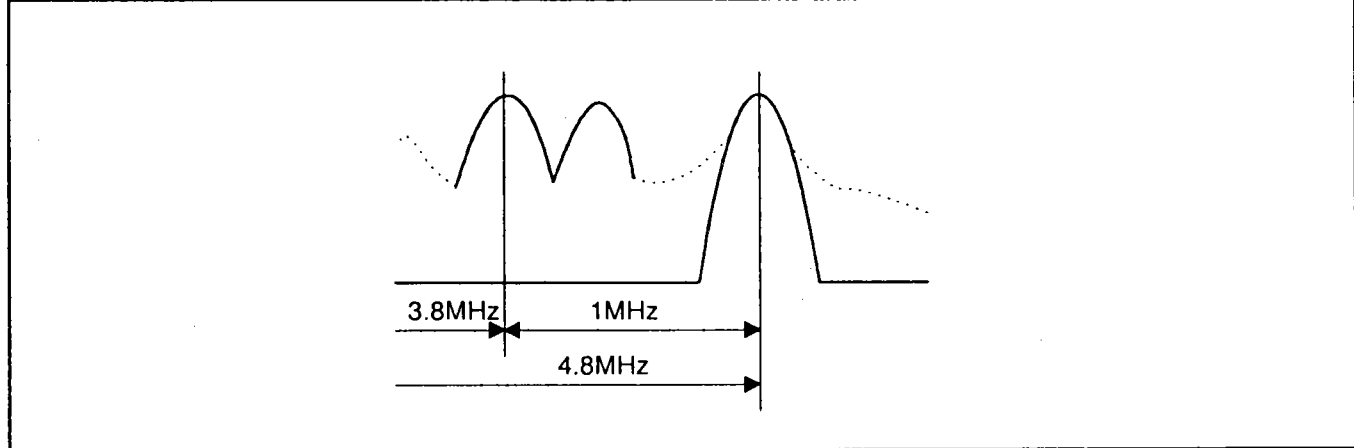
If the carrier deviation is not correct, beats will appear on the picture.

Test Point	Adjustment Point	Mode	Input
J3058 (Y-REC) J2023 (RF-SW) J3060 (GND)	VR3002 (DEVI) VR3001 (CAR)	REC. (SP)	Color Bar signal with 100% white
Tape	Equipment	Spec.	
Blank Tape	Pattern Generator Spectrum Analyzer Oscilloscope	Sync-tip $3.8\text{MHz} \pm 0.1\text{MHz}$ 100% white peak $4.8\text{MHz} \pm 0.1\text{MHz}$	

Connections of Equipment



Figure



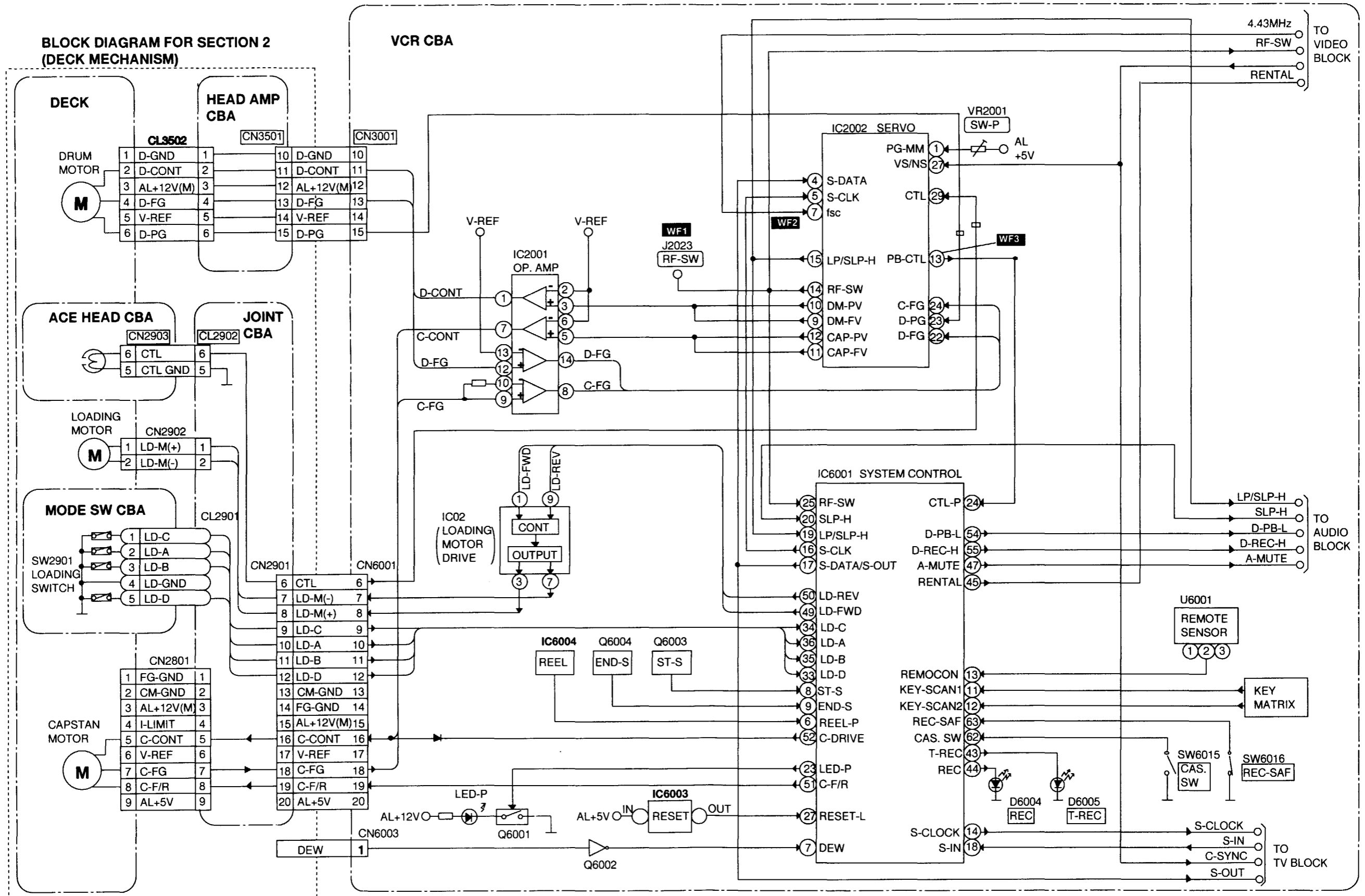
Reference Notes: J3058, J2023, J3060, VR3001, VR3002 --- VCR CBA

1. Connect the equipment as shown in the above table.
2. Input color bar signal with 100% white to video input.
3. Adjust Sync-tip to $3.8\text{MHz} \pm 0.1\text{MHz}$ by VR3001, White-peak for $4.8\text{MHz} \pm 0.1\text{MHz}$ by VR3002.

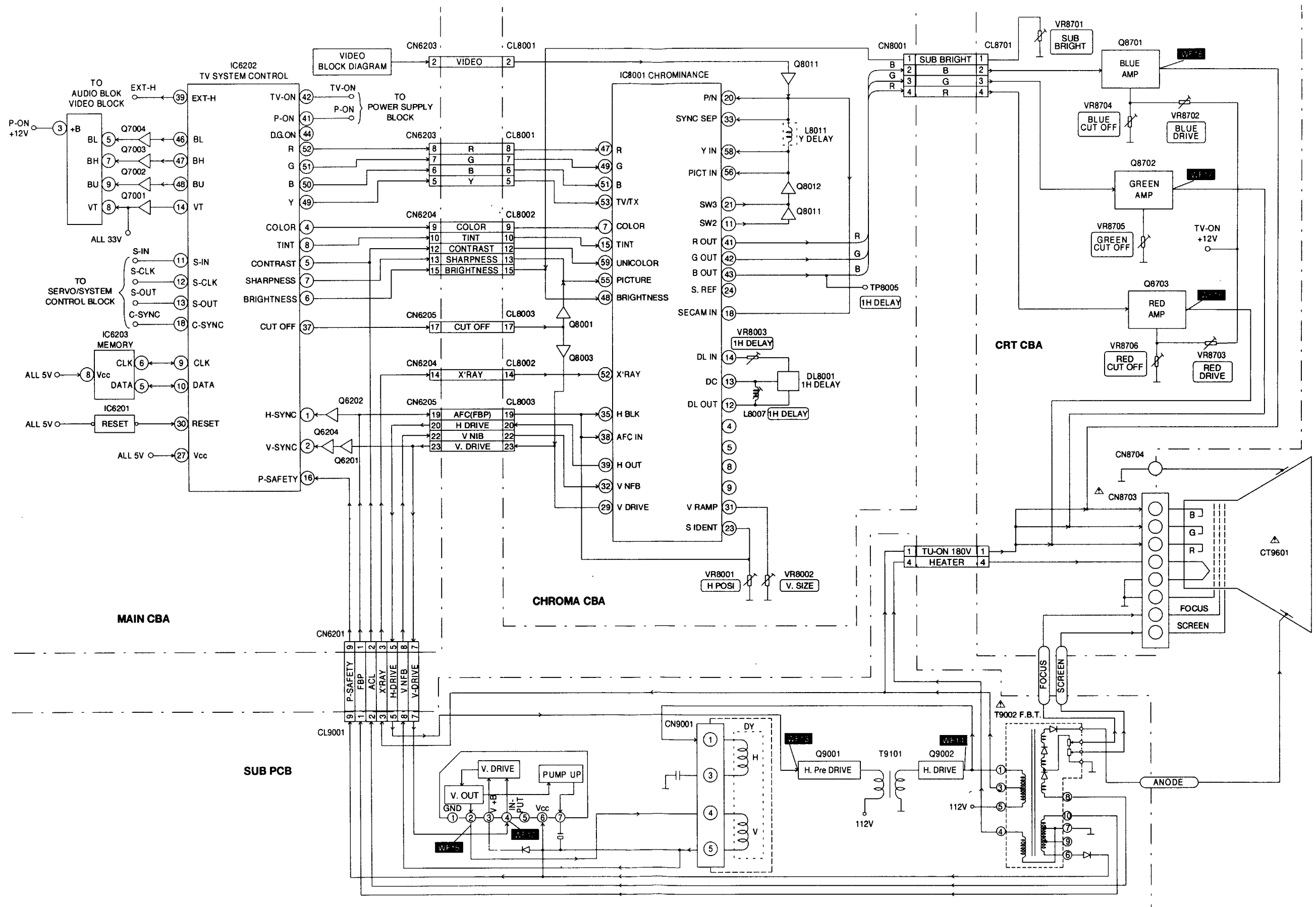
BLOCK DIAGRAMS

Servo/System Control Block Diagram

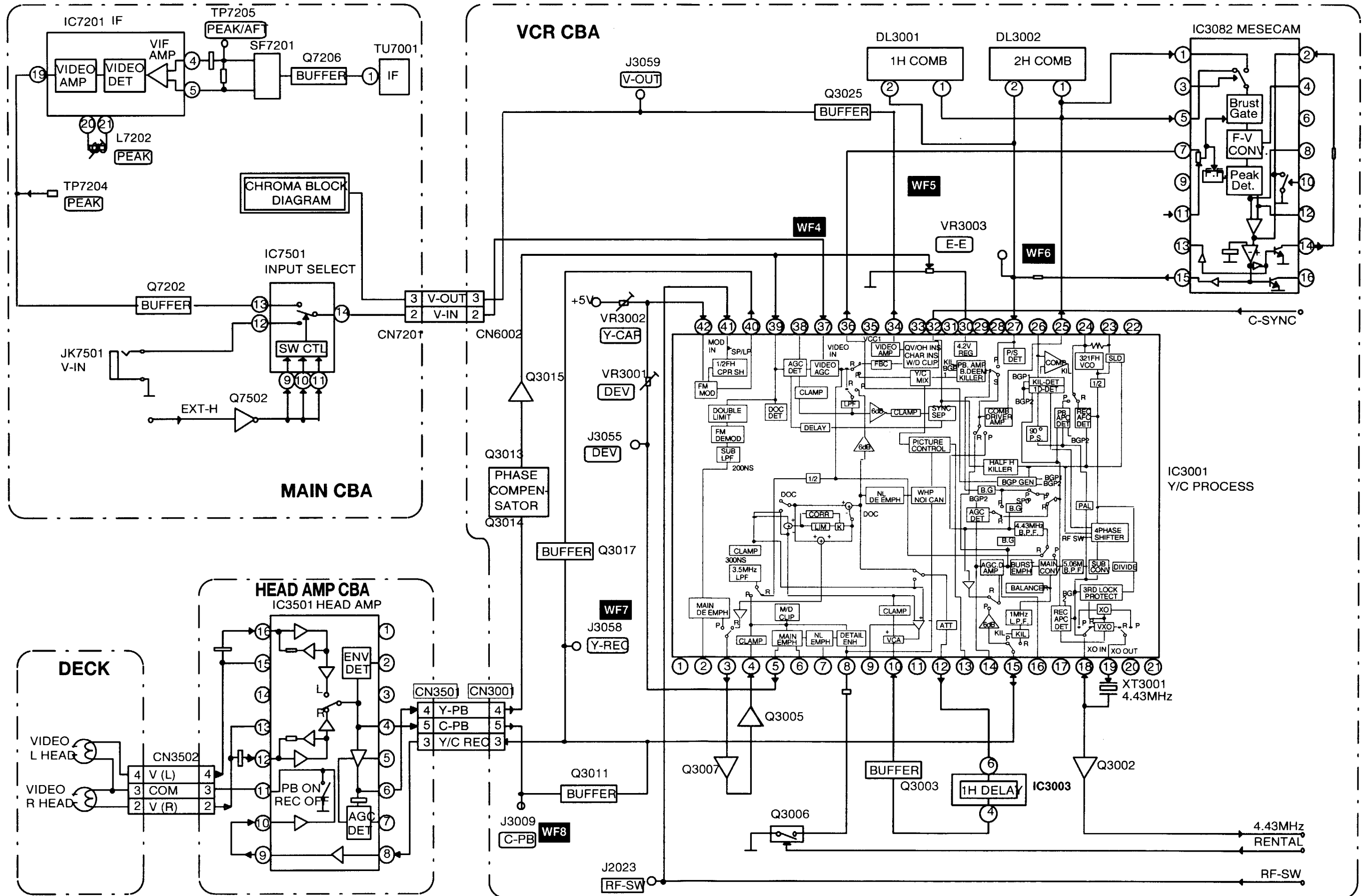
Mode : SP/REC



TV/CRT Block Diagram

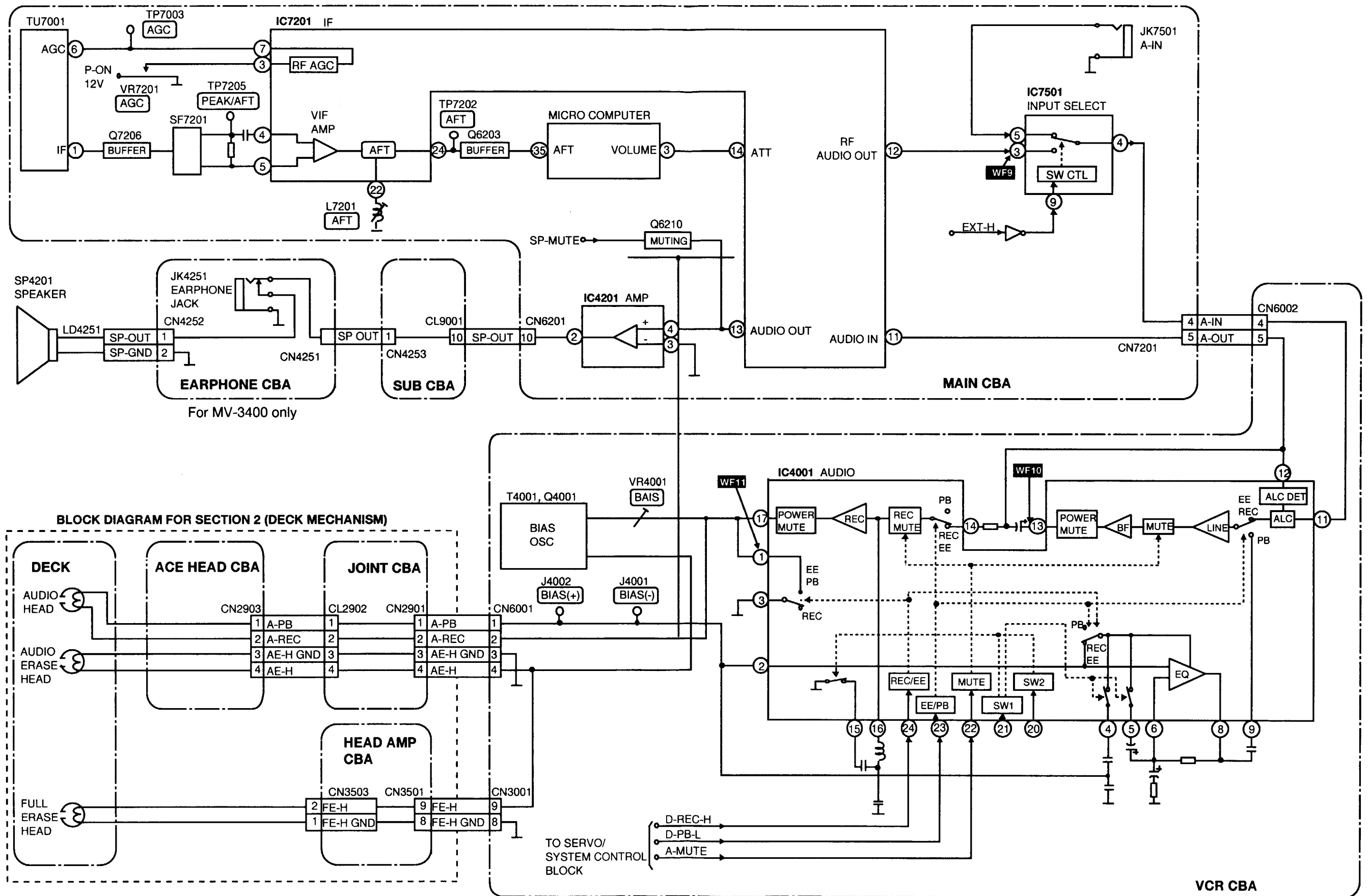


Video Block Diagram

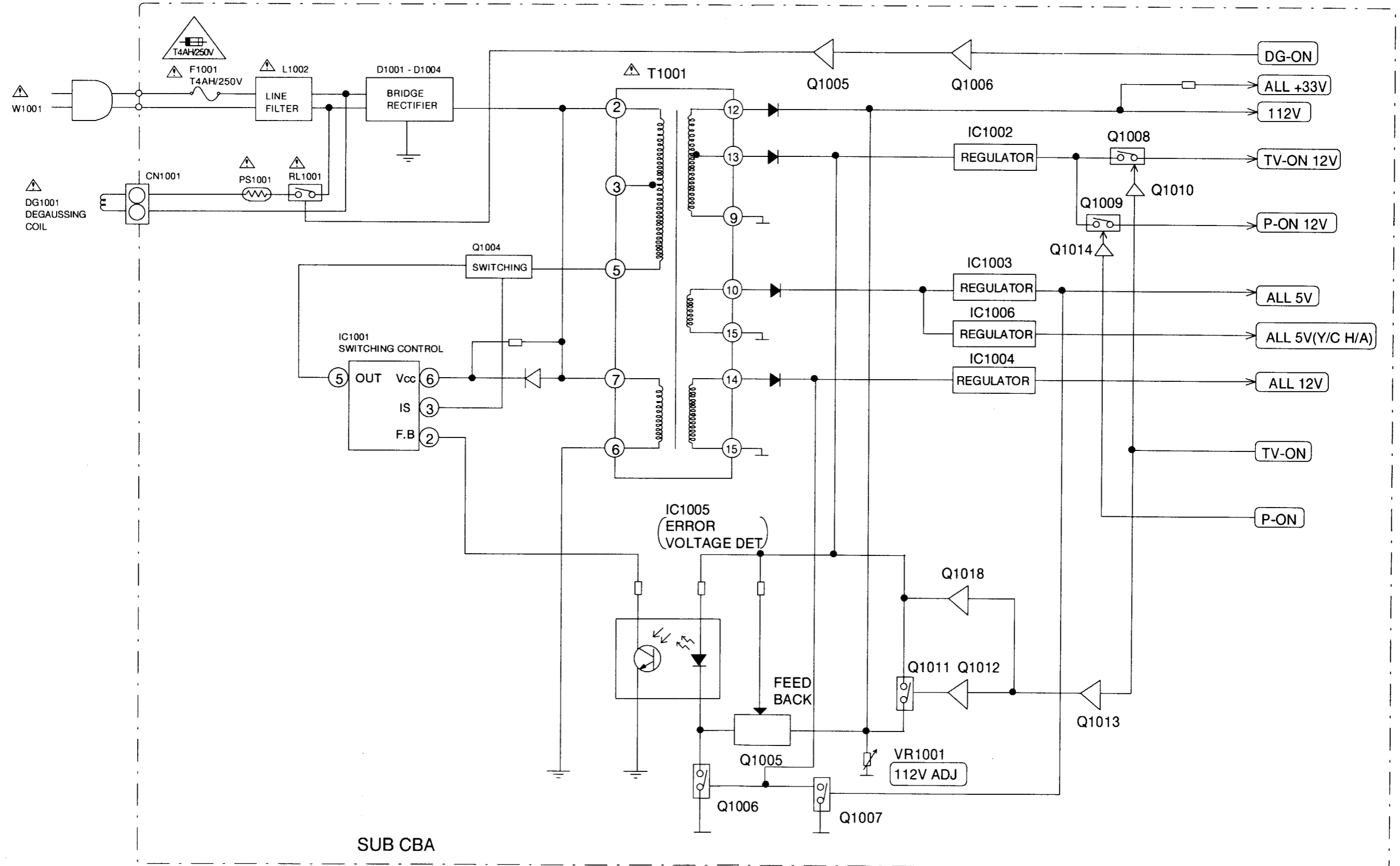


Audio Block Diagram

Mode : SP/REC



Power Supply Block Diagram



SCHEMATIC DIAGRAMS / CBA'S AND TEST POINTS

Standard Notes

WARNING

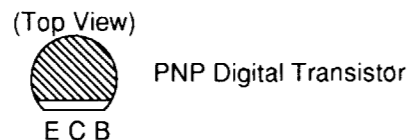
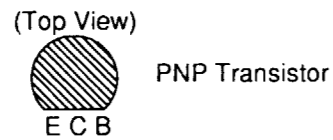
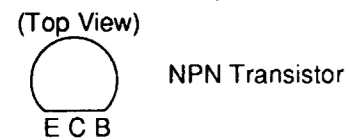
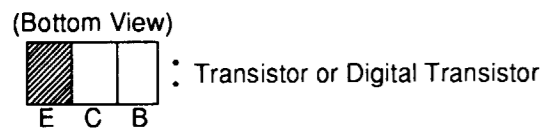
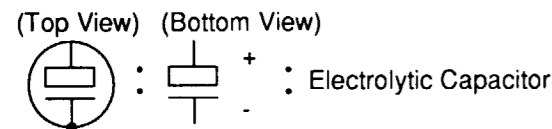
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special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

Capacitor Temperature Markings

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

Capacitors and transistors are represented by the following symbols.

CBA Symbols



Note:

- 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.
- All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
- Resistor wattages are 1/5W or 1/6W unless otherwise specified.
- All capacitance values are indicated in μF ($P=10^{-6}\mu F$).
- All voltages are DC voltages unless otherwise specified.
- 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.

TUNER BLOCK SYMBOL NO. 70**

Example: "C08" in this "TUNER BLOCK" is C7008.

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 T1.6A 250V FUSE.

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCELE N'UTILISER QUE DES FUSIBLE DE MEMO TYPE T1.6A 250V.

RISK OF FIRE-REPLACE FUSE AS MARKED.

2. CAUTION:

Voltage selectable power supply circuit is used in this unit.

If Main Fuse (F01) 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. Parts Information

Diode: Diode which is not specified a type number in the schematic diagrams, can be used following part as substitutional parts.

1SS176, 1N4148M, GMB01B, 1SS254, 1SS133.

Transistor (PNP): Transistor which is not specified a type number in the schematic diagrams, can be used following part as substitutional parts.

2SC1740, 2SC536SP, 2SC3331, KTC3199, KTC3198, 2SC1815.

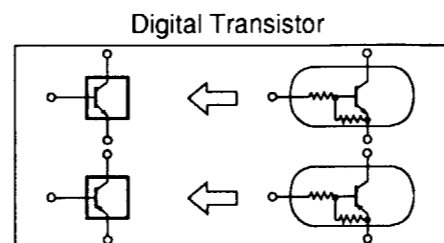
Transistor (NPN): Transistor which is not specified a type number in the schematic diagrams, can be used following part as substitutional parts.

2SA933, 2SA608SP, 2SA1318, KTA1267, KTA1266, 2SA1015

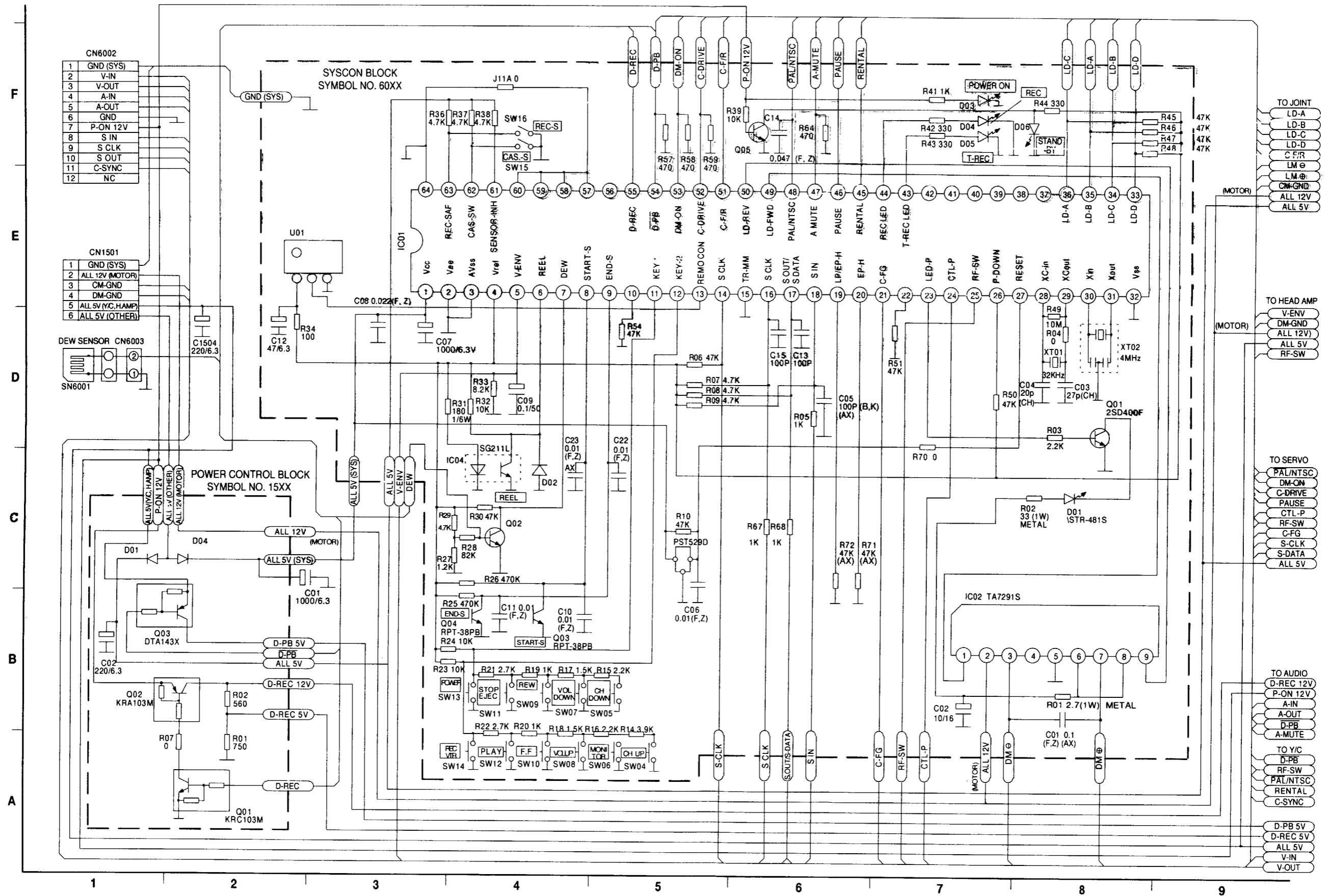
Capacitor: Capacitor which is not specified a type number in the schematic diagram, is chip capacitor (SL).

Resistor: Resistor which is not specified a type number in the schematic diagram, is chip resistor 1/10W.

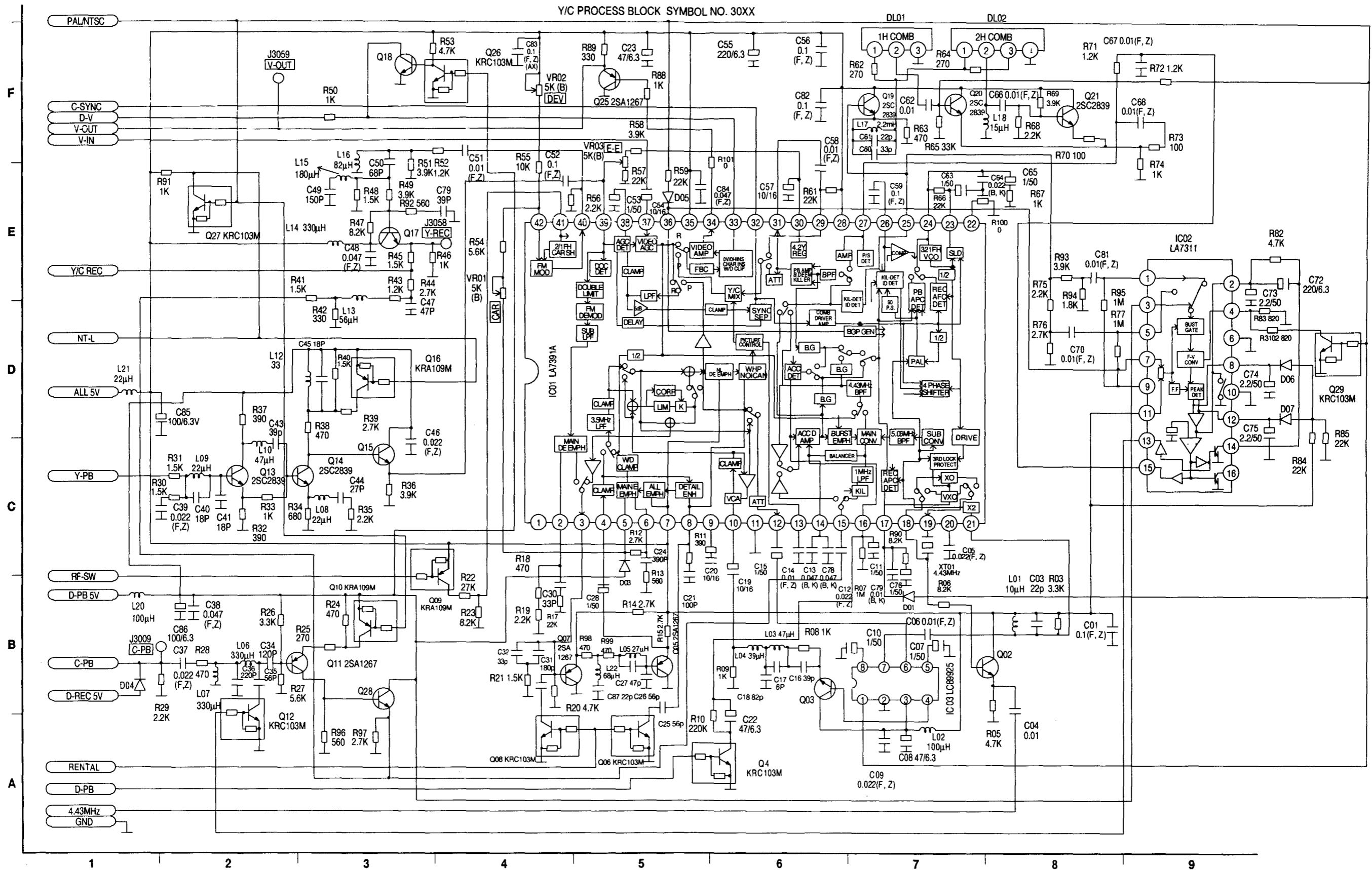
Schematic Diagram Symbols



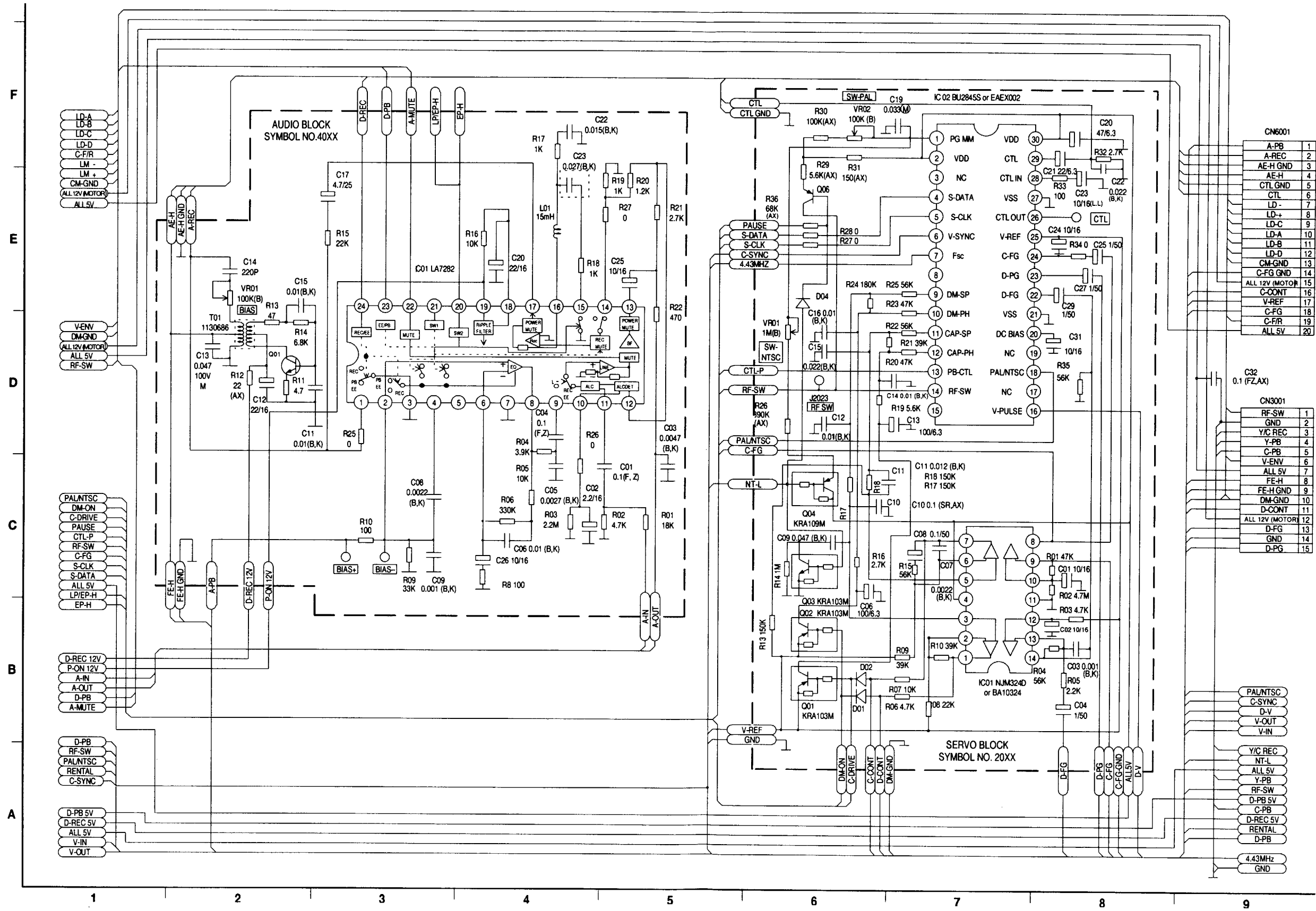
VCR 1/3 Schematic Diagram



VCR 2/3 Schematic Diagram



VCR 3/3 Schematic Diagram



CN6001

1	A-PB
2	A-REC
3	AE-H GND
4	AE-H
5	CTL GND
6	CTL
7	LD -
8	LD +
9	LD-C
10	LD-A
11	LD-B
12	LD-D
13	CM-GND
14	C-FG GND
15	ALL 12V (MOTOR)
16	C-CONT
17	V-REF
18	C-FG
19	C-F/R
20	ALL 5V

CN3001

1	RF-SW
2	GND
3	Y/C REC
4	Y-PB
5	C-PB
6	V-ENV
7	ALL 5V
8	FE-H
9	FE-H GND
10	DM-GND
11	D-CONT
12	ALL 12V (MOTOR)
13	D-FG
14	GND
15	D-PG

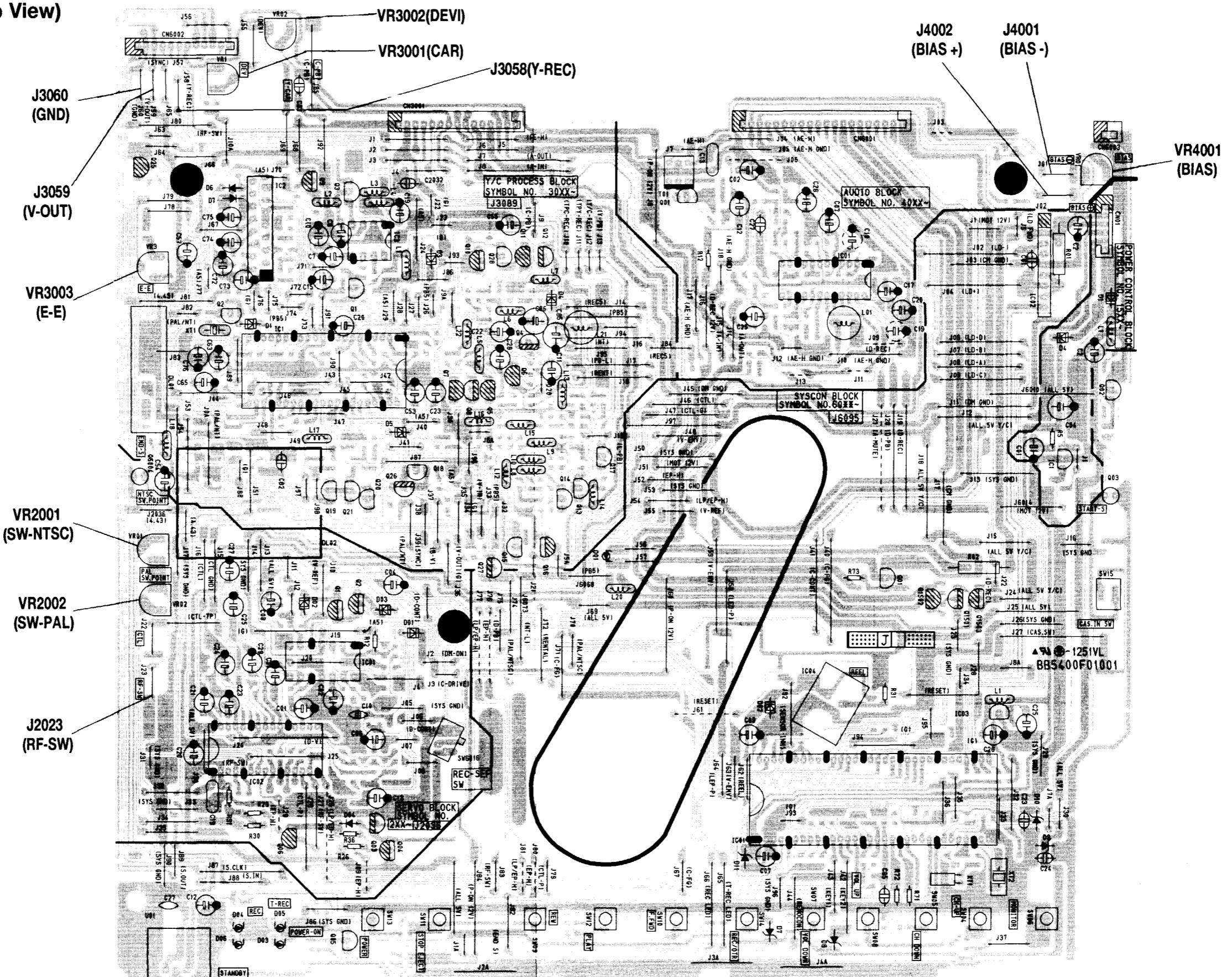
PAL/NTSC
C-SYNC
D-V
V-OUT
V-IN
Y/C REC
NT-L
ALL 5V
Y-PB
RF-SW
D-PB 5V
C-PB
D-REC 5V
RENTAL
D-PB

4.43MHz
GND

VCR CBA (Top View)

F
E
D
C
B
A

1 2 3 4 5 6 7 8 9



VCR CBA (Bottom View)

F

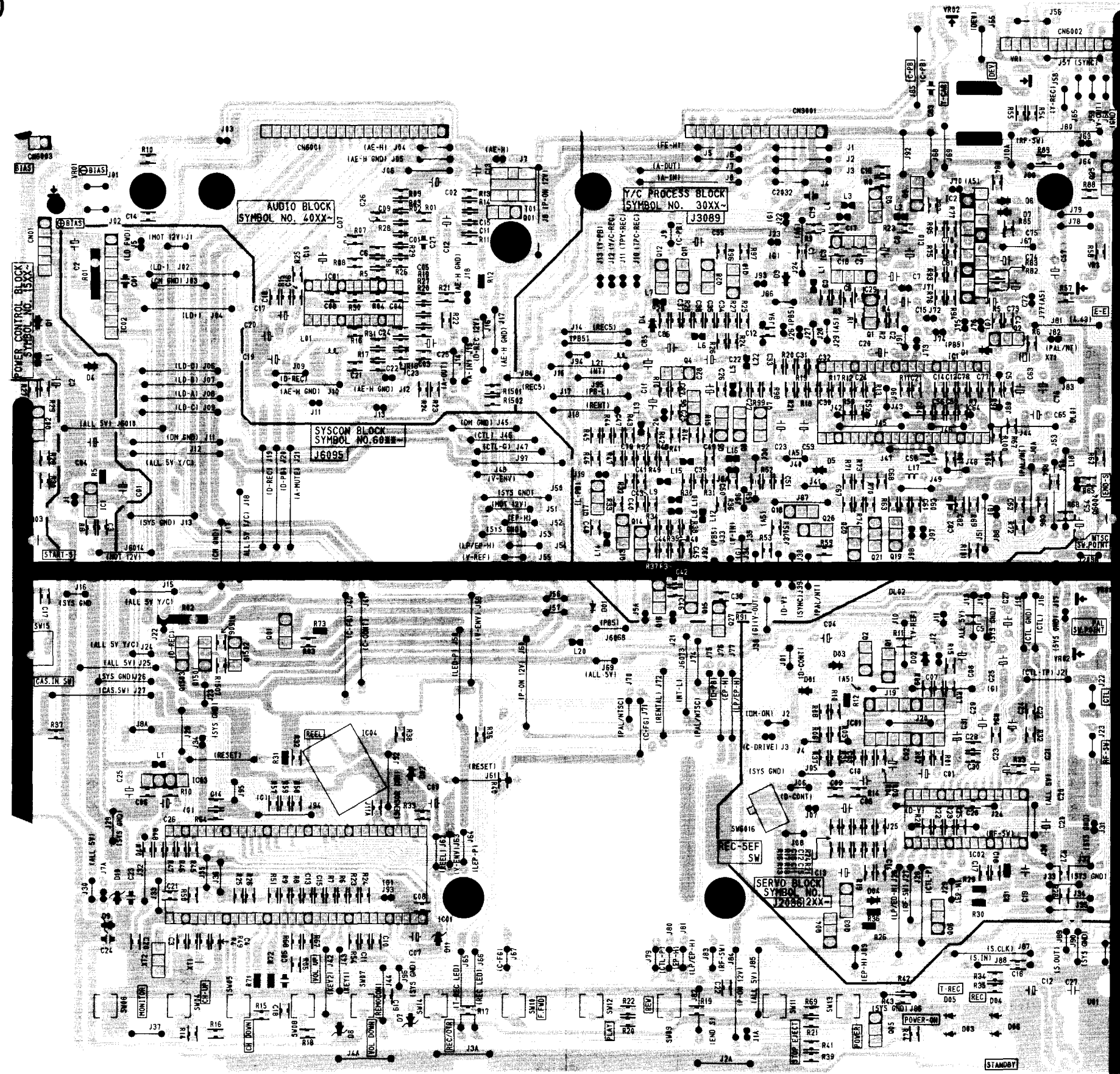
E

D

C

B

A



1

2

3

4

5

6

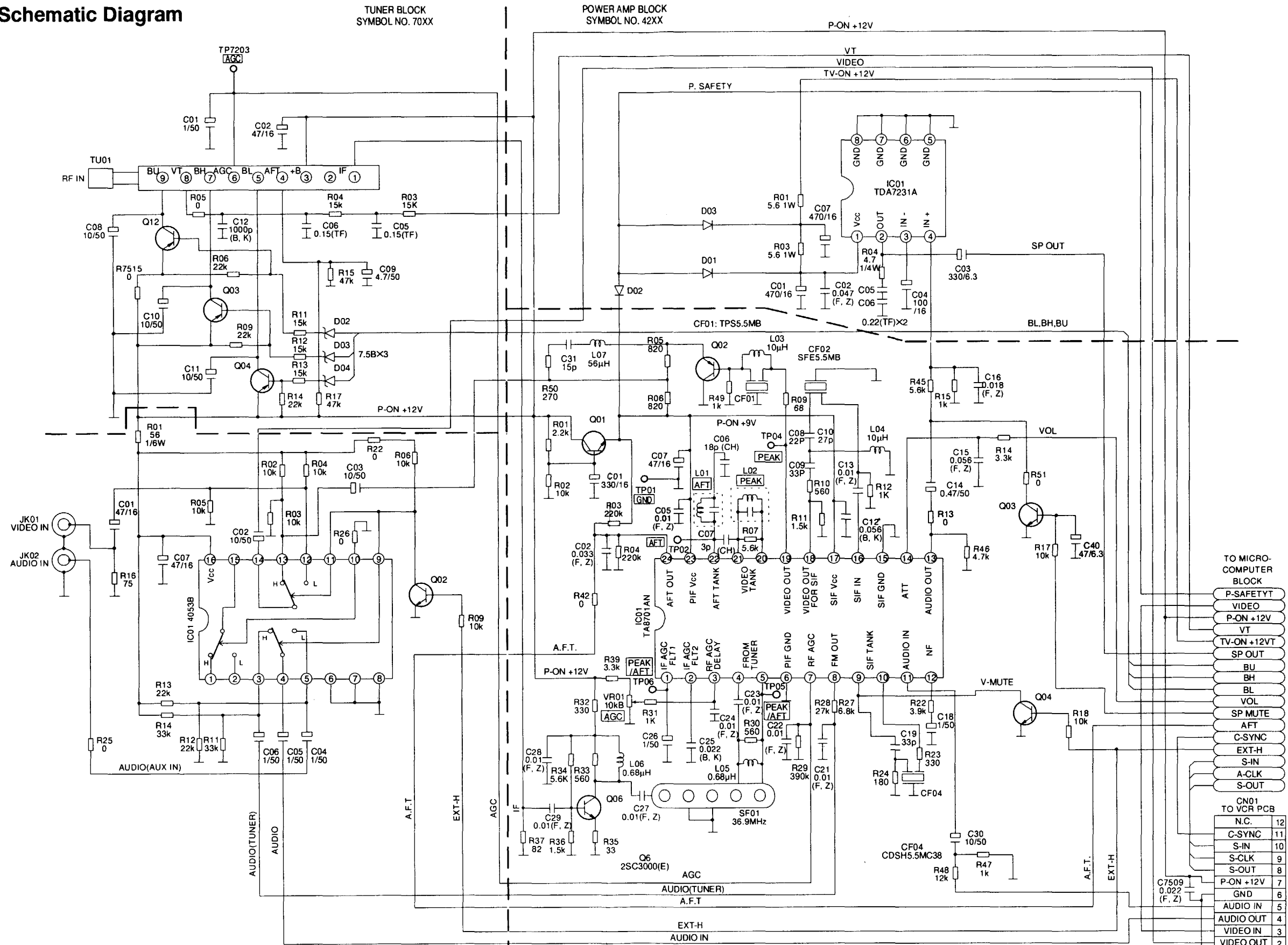
7

8

9

MAIN 1/2 Schematic Diagram

F
E
D
C
B
A



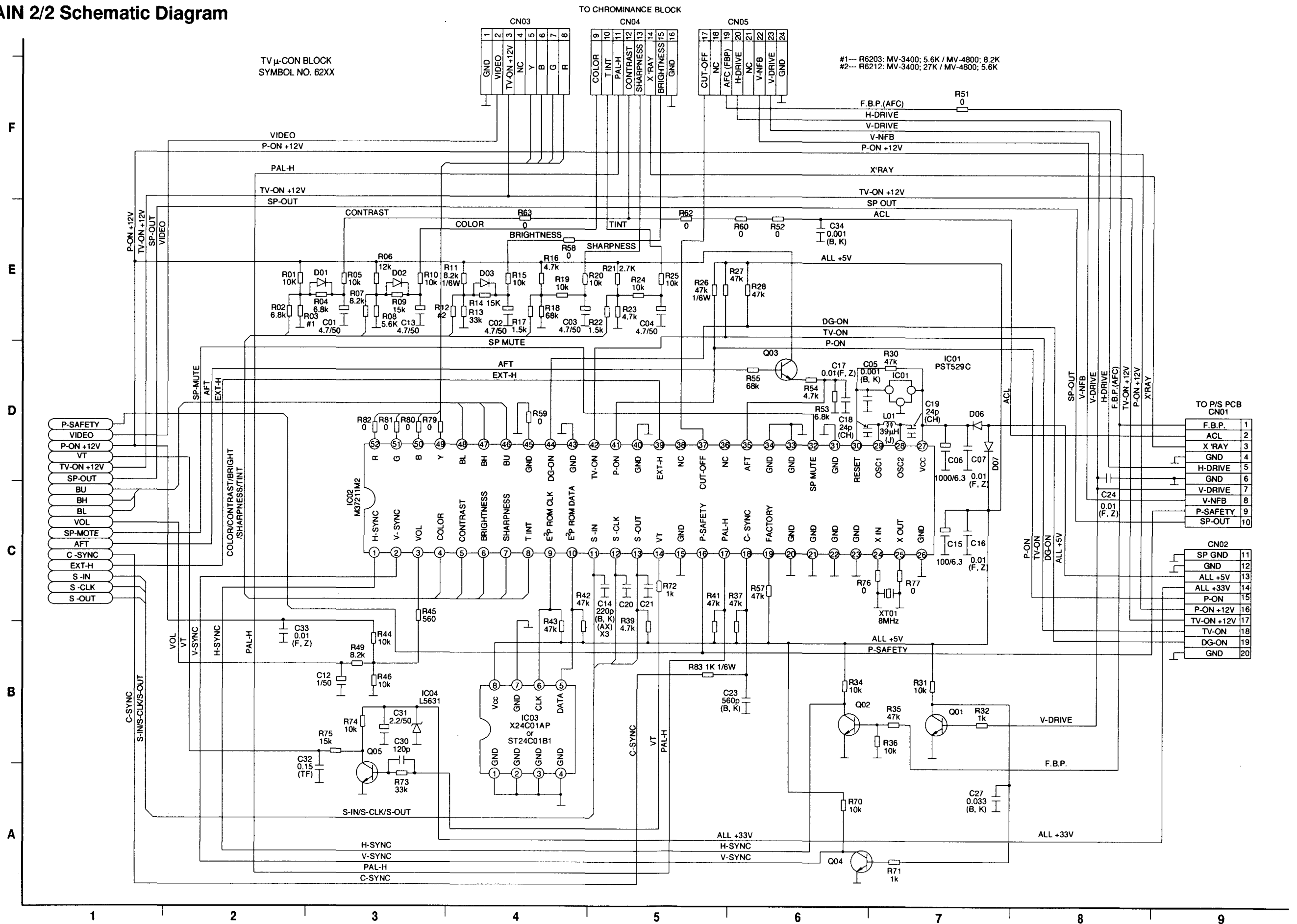
TO MICRO-COMPUTER BLOCK

P-SAFETY	YT
VIDEO	VT
P-ON +12V	VT
TV-ON +12V	VT
SP OUT	SP OUT
BU	BU
BH	BH
BL	BL
VOL	VOL
SP MUTE	SP MUTE
AFT	AFT
C-SYNC	C-SYNC
EXT-H	EXT-H
S-IN	S-IN
A-CLK	A-CLK
S-OUT	S-OUT

TO VCR PCB

CN01	12
N.C.	11
C-SYNC	10
S-IN	9
S-CLK	8
S-OUT	7
P-ON +12V	6
GND	5
AUDIO IN	4
AUDIO OUT	3
VIDEO IN	2
VIDEO OUT	1

MAIN 2/2 Schematic Diagram

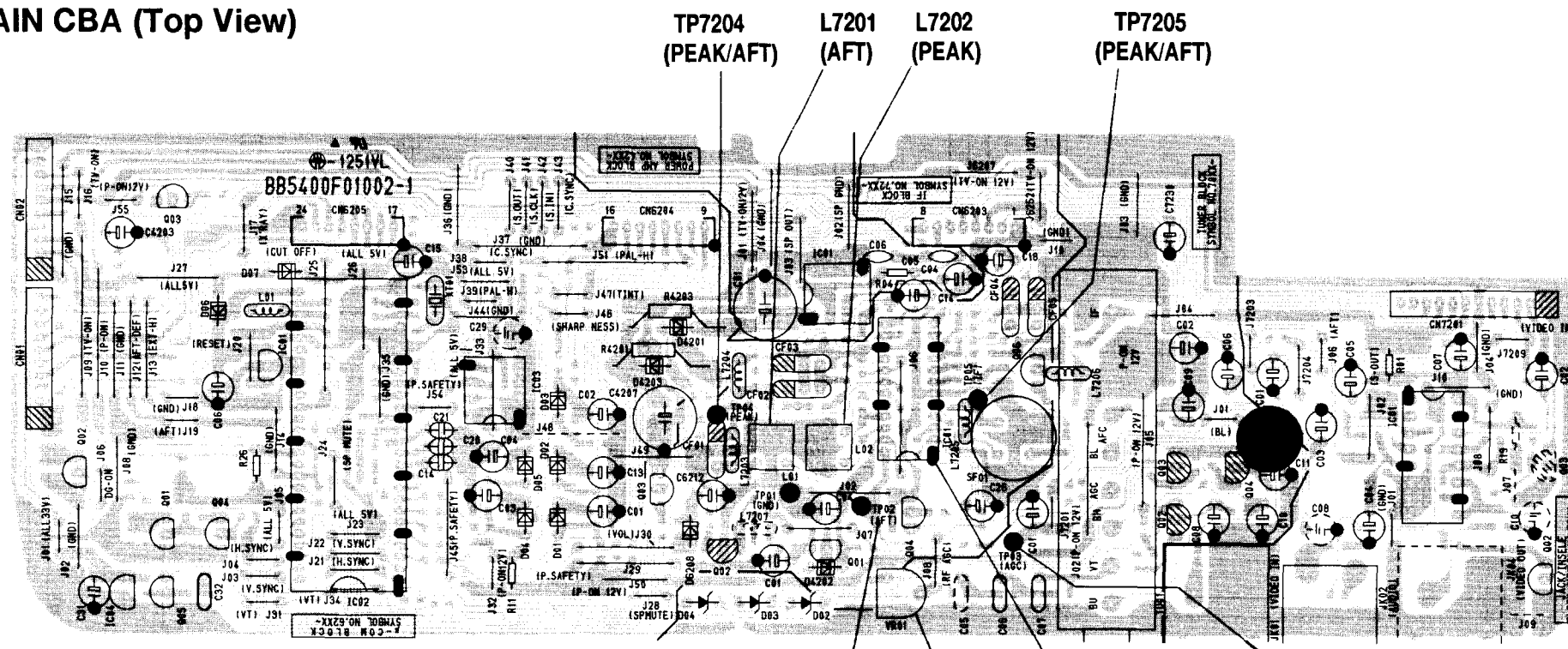


#1--- R6203: MV-3400; 5.6K / MV-4800; 8.2K
 #2--- R6212: MV-3400; 27K / MV-4800; 5.6K

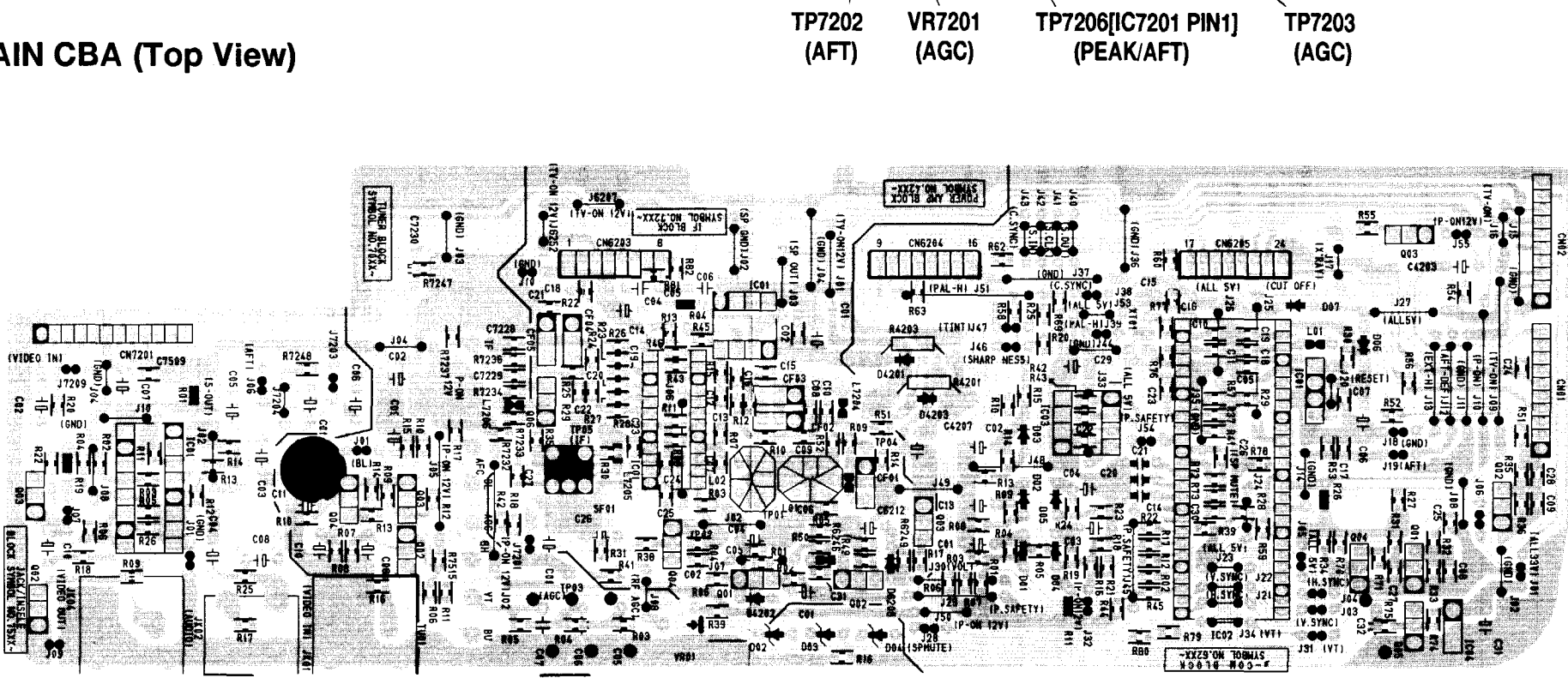
F.B.P.	1
ACL	2
X'RAY	3
GND	4
H-DRIVE	5
GND	6
V-DRIVE	7
V-NFB	8
P-SAFETY	9
SP-OUT	10

SP GND	11
GND	12
ALL +5V	13
ALL +33V	14
P-ON	15
P-ON +12V	16
TV-ON +12V	17
TV-ON	18
DG-ON	19
GND	20

MAIN CBA (Top View)



MAIN CBA (Top View)



TP7204 (PEAK/AFT)
L7201 (AFT)
L7202 (PEAK)
TP7205 (PEAK/AFT)

TP7202 (AFT)
VR7201 (AGC)
TP7206 [IC7201 PIN1] (PEAK/AFT)
TP7203 (AGC)

F

E

D

C

B

A

1

2

3

4

5

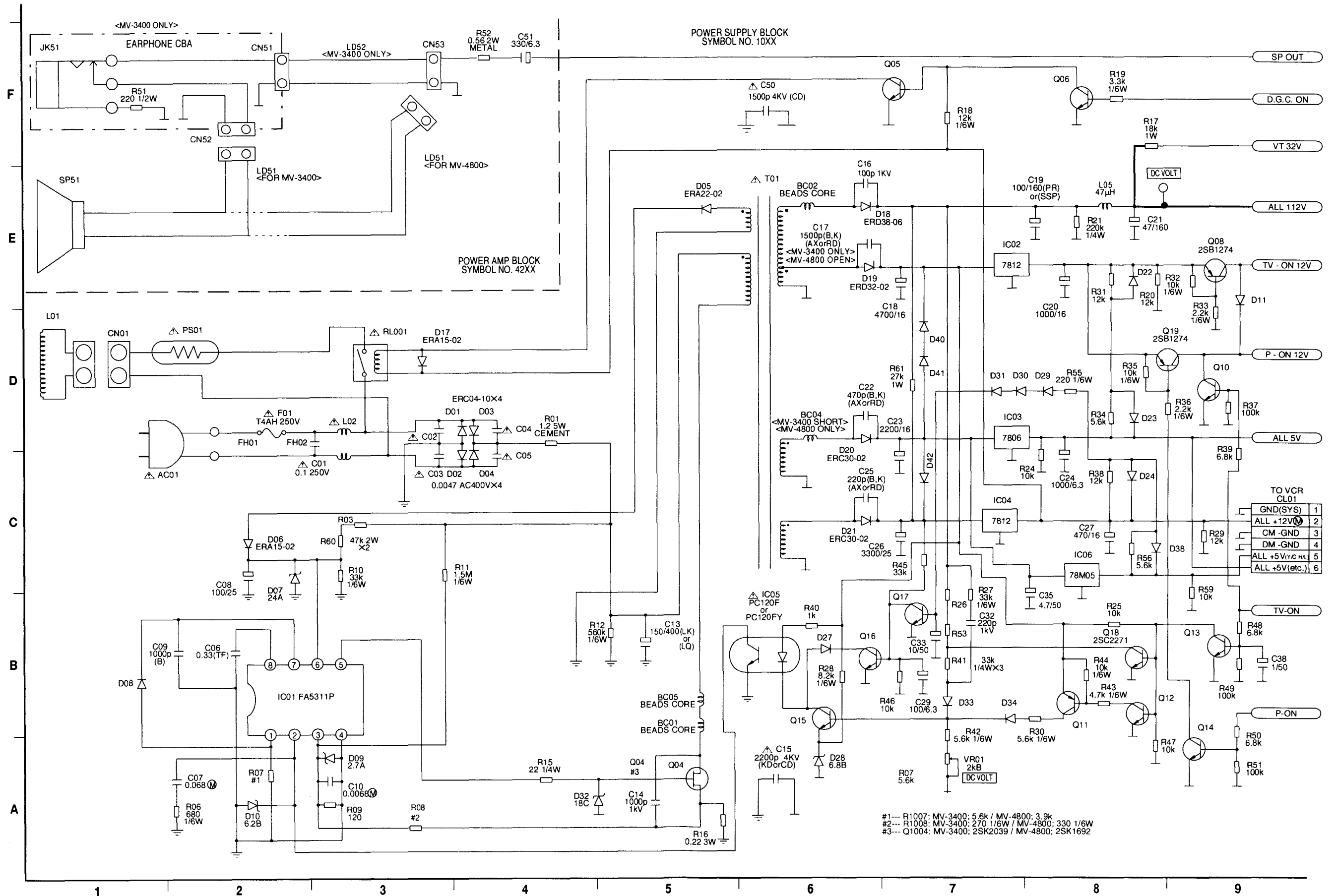
6

7

8

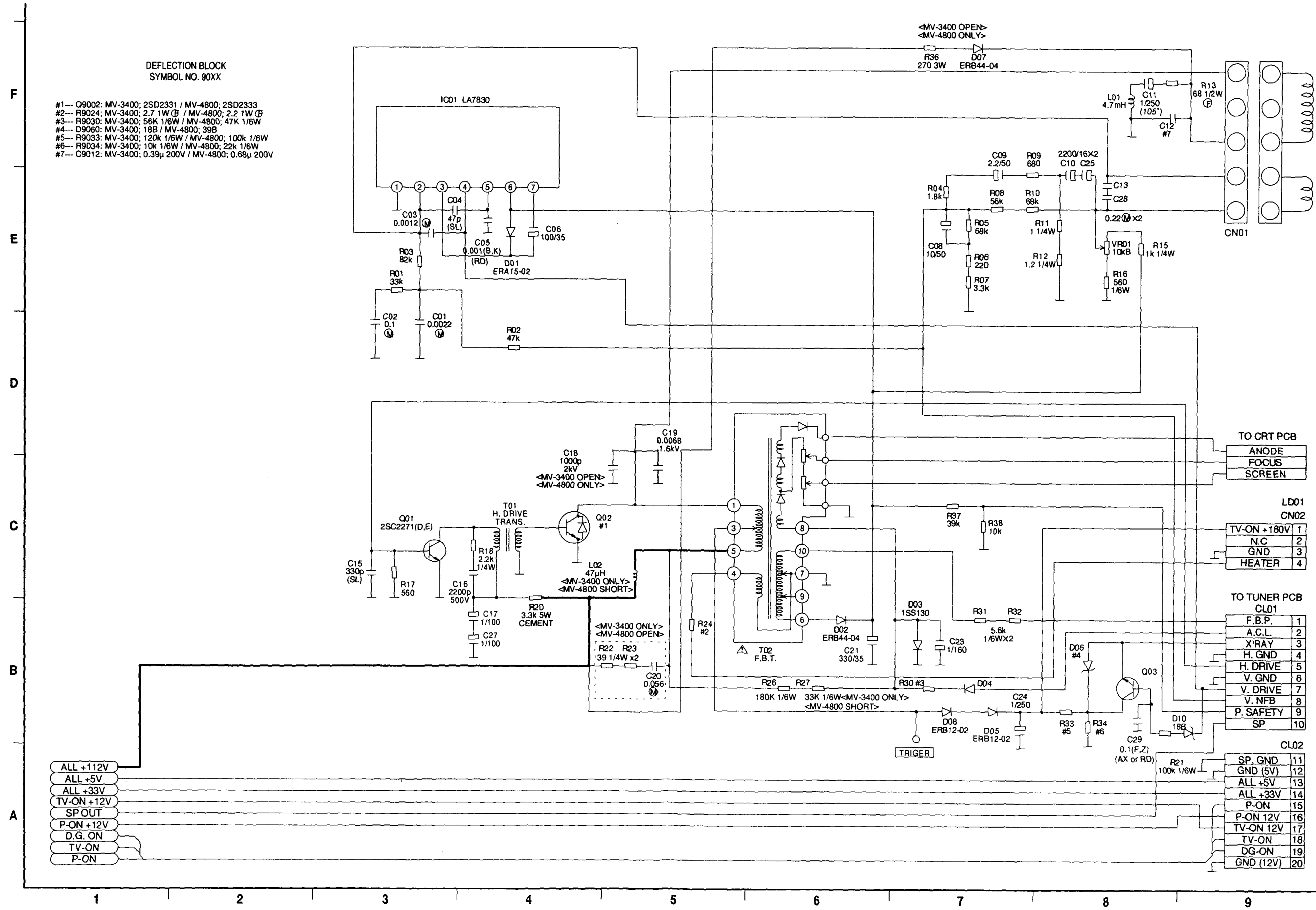
9

SUB 1/2 Schematic Diagram

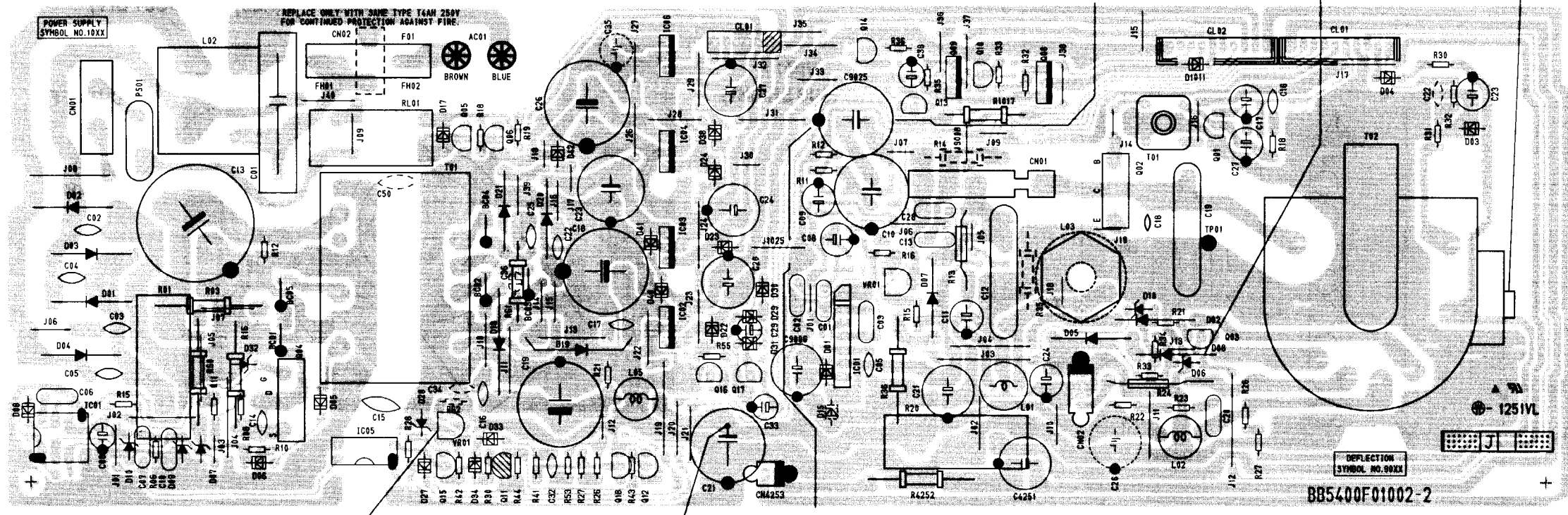


#1--- R1007: MV-3400: 5.6k / MV-4800: 3.9k
 #2--- R1008: MV-3400: 270 1/6W / MV-4800: 330 1/6W
 #3--- Q1004: MV-3400: 2SK2039 / MV-4800: 2SK1692

SUB 2/2 Schematic Diagram

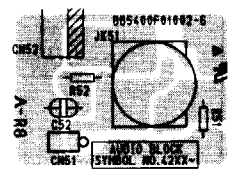


SUB CBA (Top View)

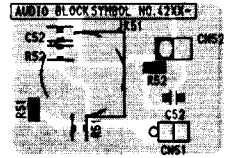


EARPHONE CBA for MV-3400 only

(Top View)

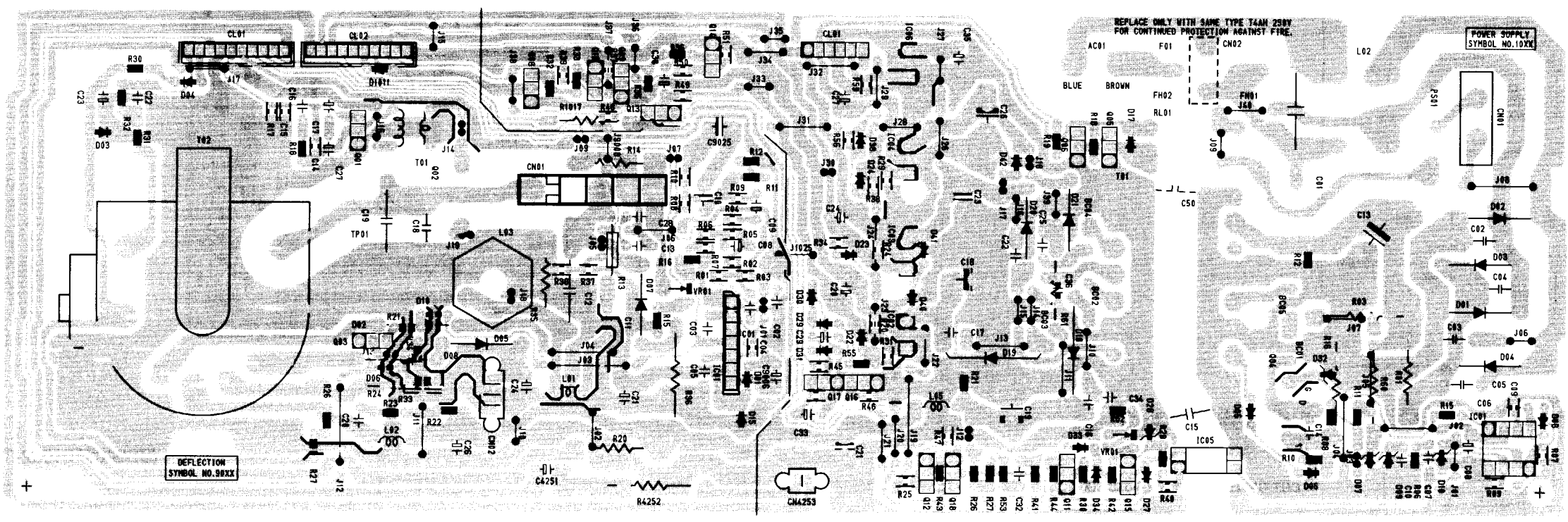


(Bottom View)

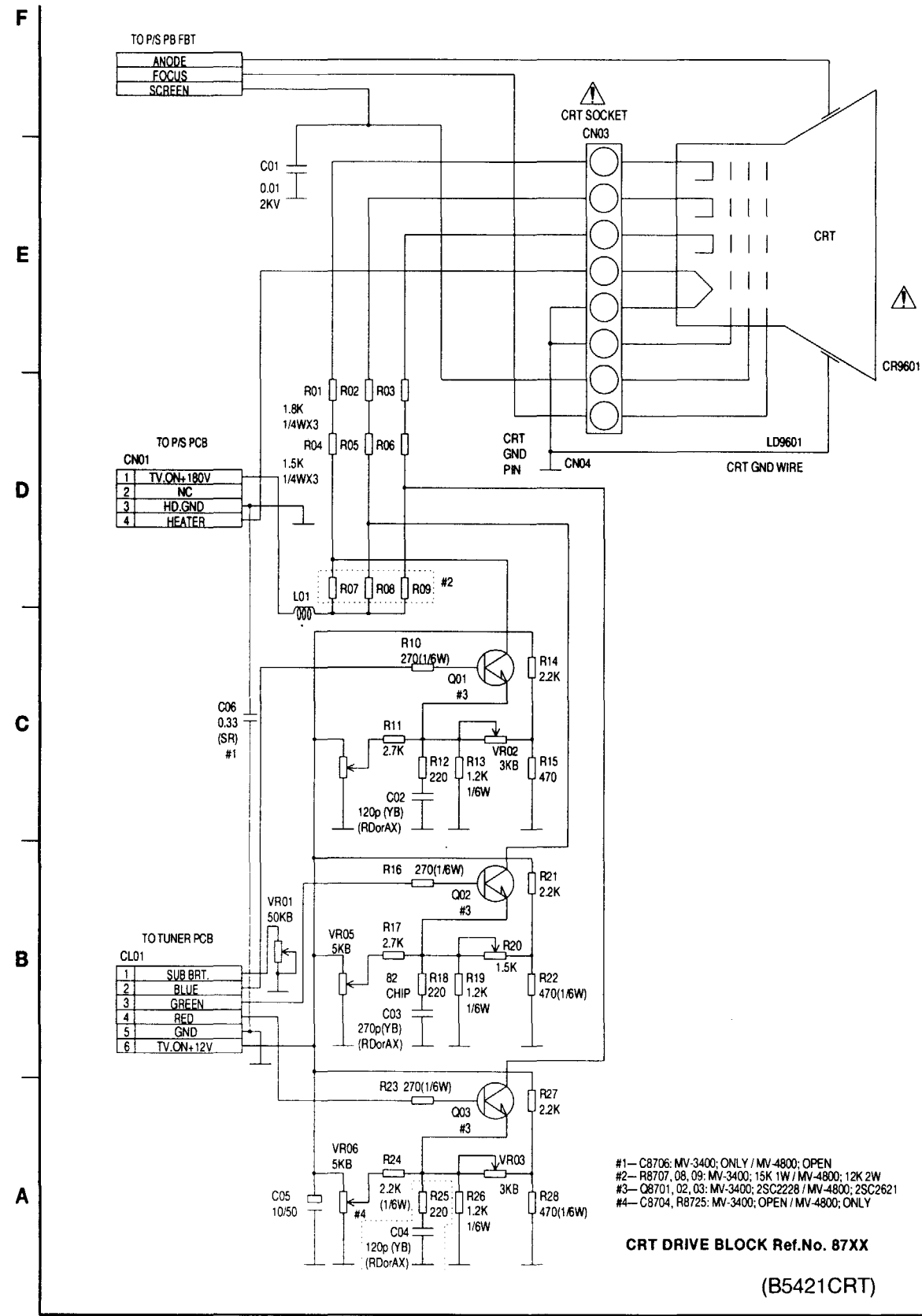


(BB5400F01002-6)

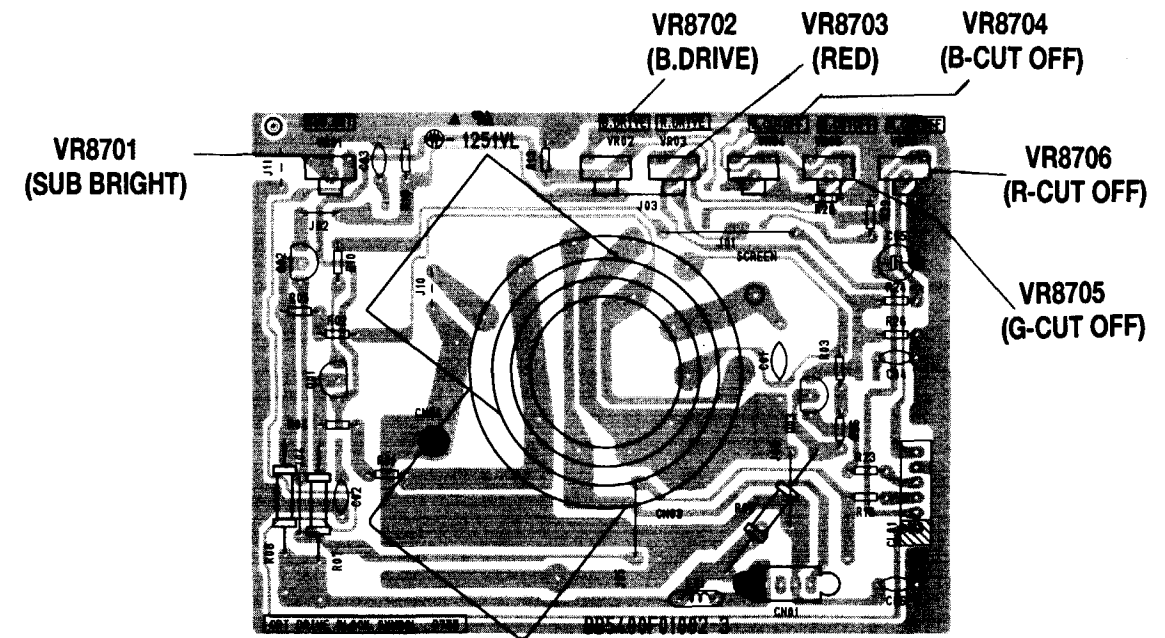
SUB CBA (Bottom View)



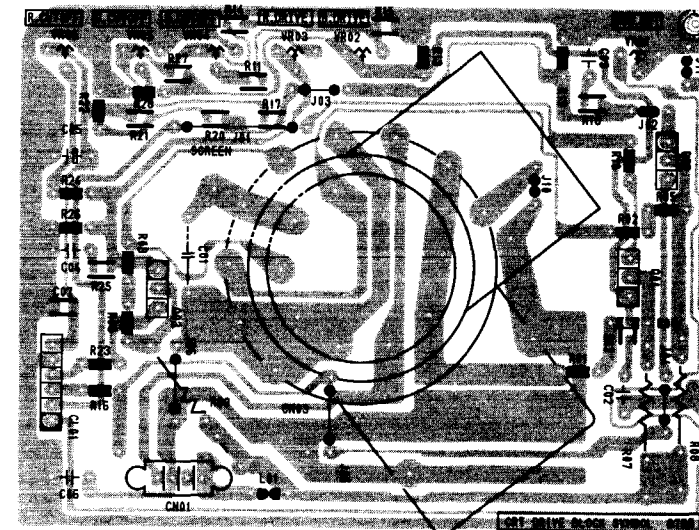
CRT Schematic Diagram



CRT CBA (Top View)

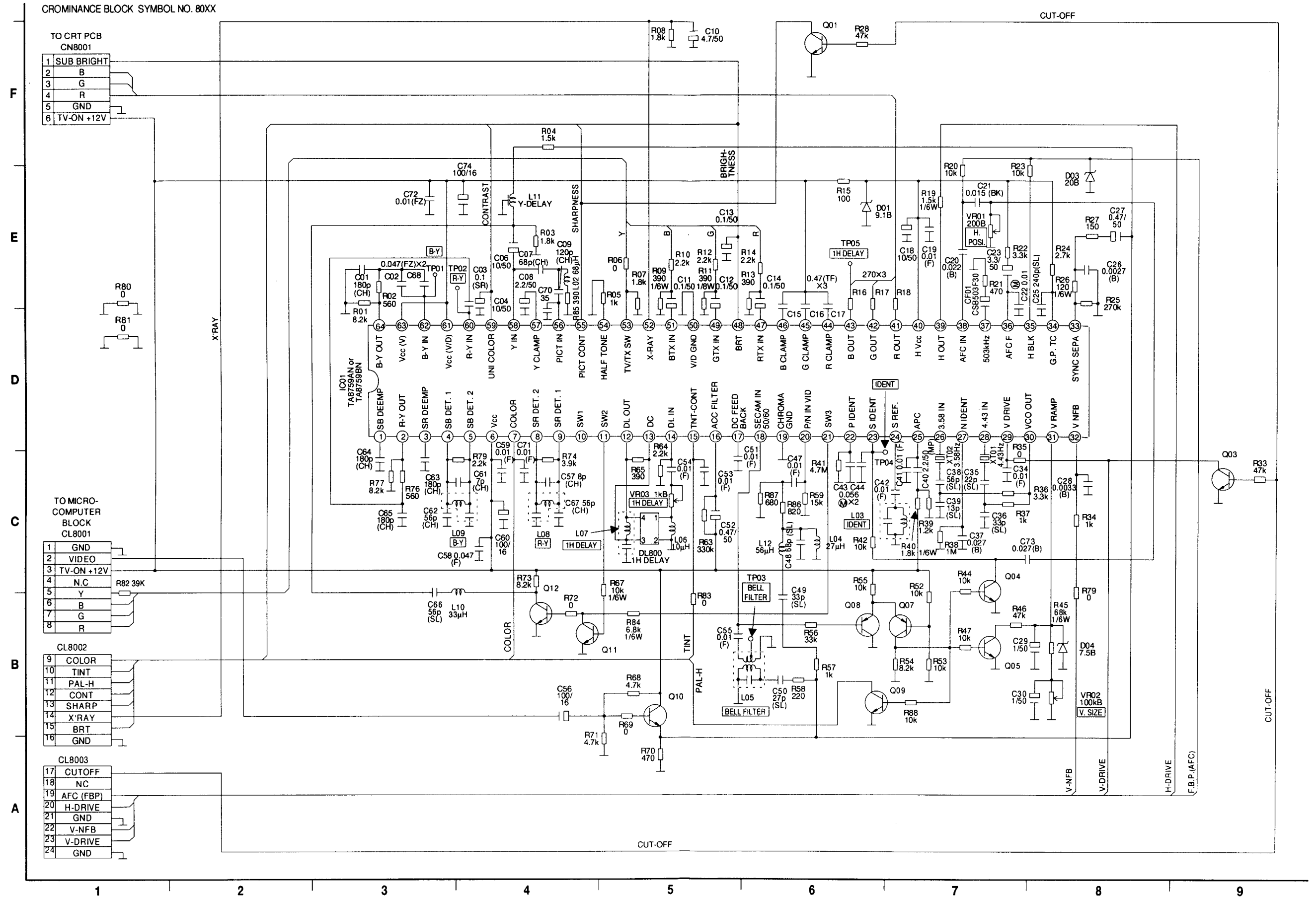


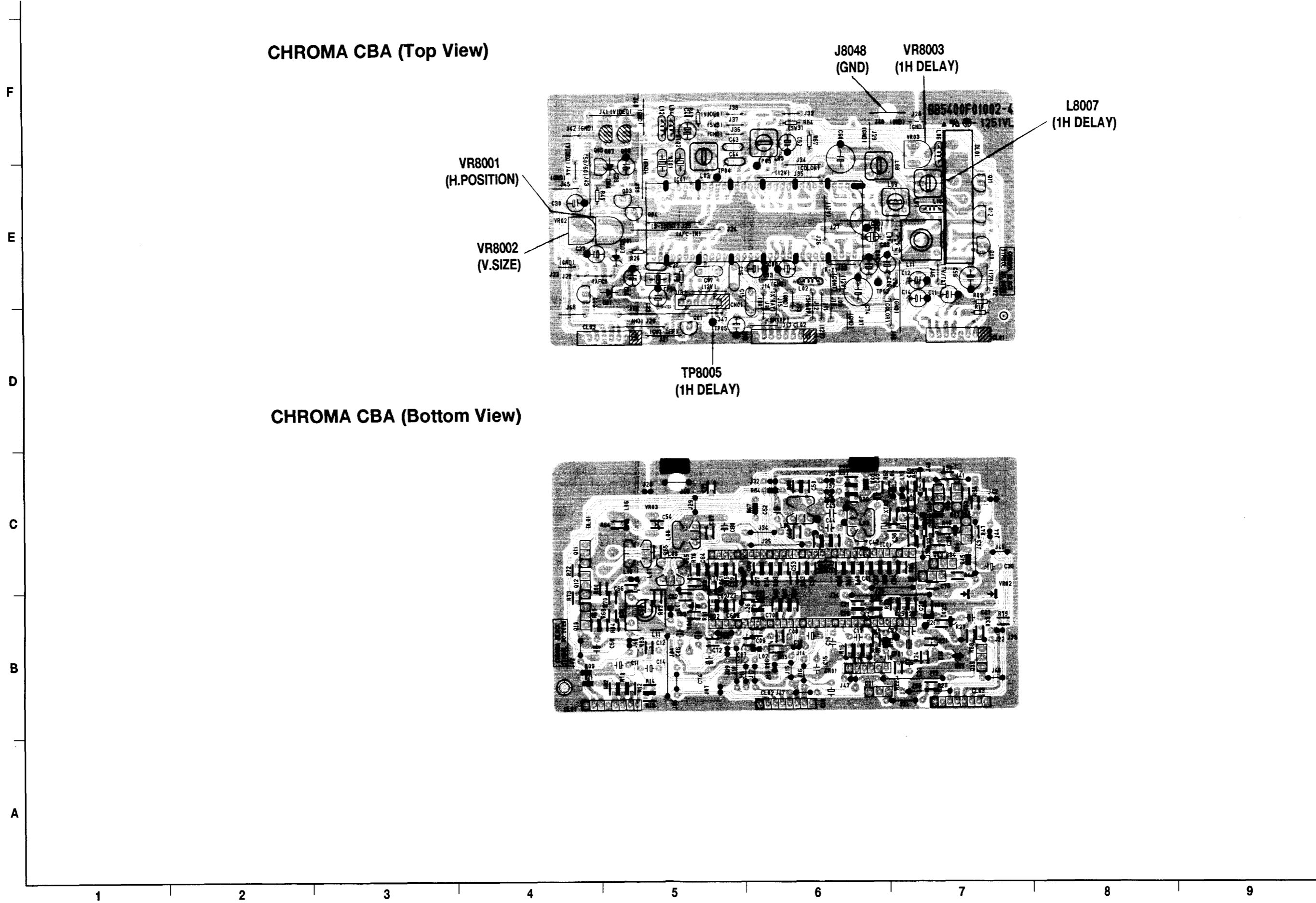
CRT CAB (Bottom View)



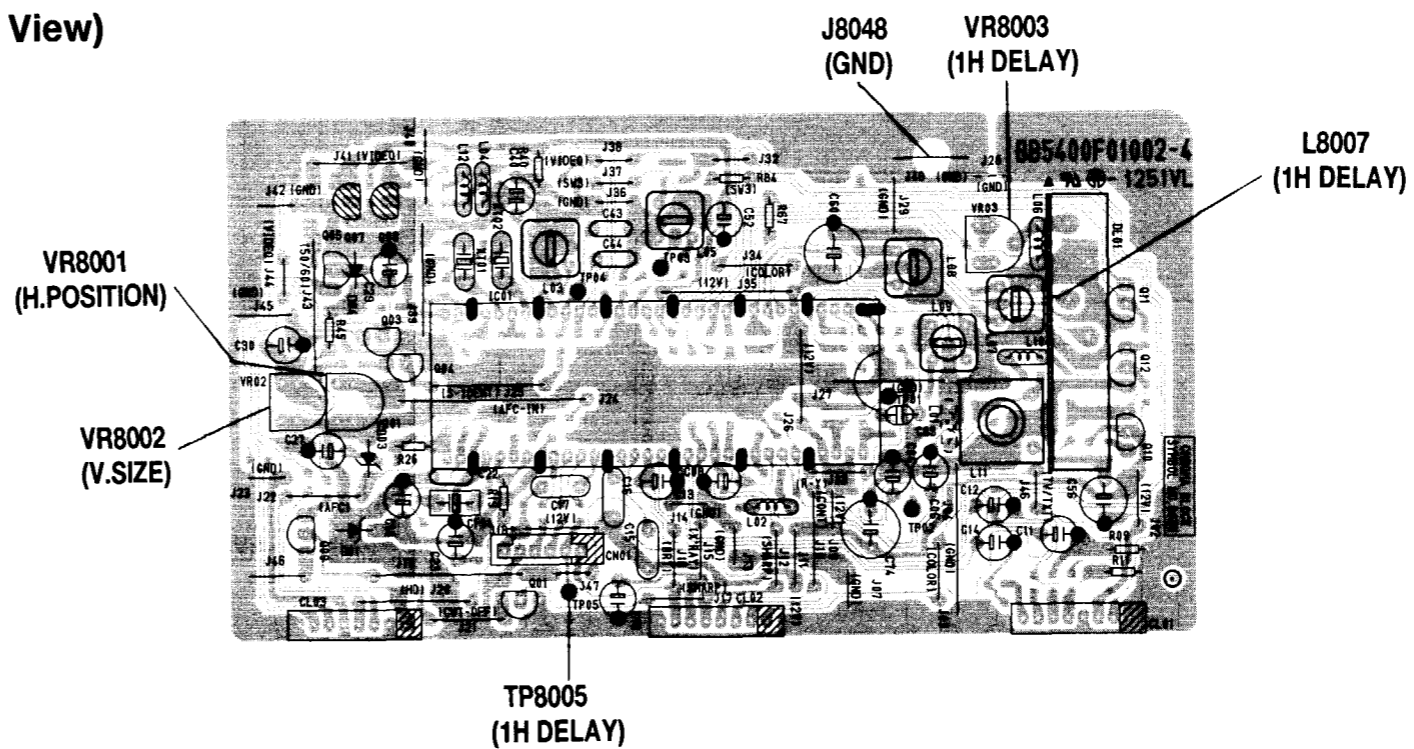
(BB5400F01002-3)

Chroma Schematic Diagram

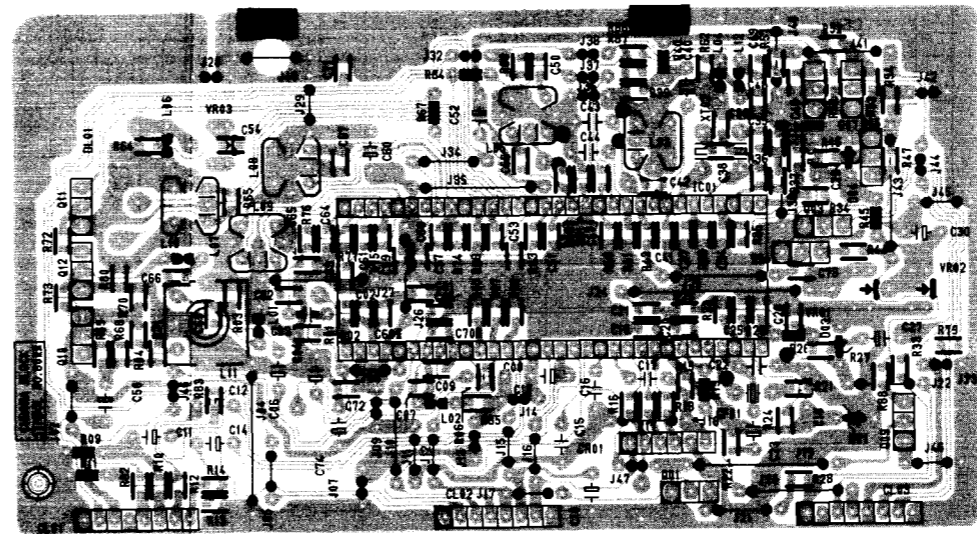




CHROMA CBA (Top View)



CHROMA CBA (Bottom View)



VOLTAGE CHART

Measurement Condition: Input; 80dBμ Color Bar Signal from Antenna

Ref. No.	Emitter	Collector	Base
Q1005	0	12.0	0
Q1006	0	0	0.6
Q1008	12.1	12.0	11.4
Q1009	12.1	12.0	11.4
Q1010	0	0	0.7
Q1011	14.1	0	14.1
Q1012	0	14.1	0
Q1013	0	0	0.6
Q1014	0	0	0.7
Q1015	6.7	12.2	7.2
Q1016	0	0	0.7
Q1017	0	0	0.7
Q1018	0	42.4	0
Q1501	0	11.8 (0)	0 (5.0)
Q1502	11.9	0 (10.1)	11.9 (0)
Q1503	5.0	4.9 (0.5)	0.4 (4.8)
Q2001	2.5	2.5	4.9
Q2002	2.5	2.0	4.9
Q2003	0	0	4.7
Q2004	5.0	0.6	4.7
Q2006	5.0	2.4	5.1
Q3002	3.0	4.9	3.6
Q3003	1.0	4.8	1.6
Q3004	0	2.2(0)	0.4 (4.8)
Q3005	3.3 (3.6)	0	2.7 (3.0)
Q3006	0	0.6	0
Q3007	2.7 (3.0)	0	2.0 (2.4)
Q3008	0	0.7	0
Q3009	4.9	2.5	2.4
Q3010	4.8 (0.5)	4.7 (0.5)	0.9 (0.1)
Q3011	3.7 (0.5)	2.1	3.0 (0.3)
Q3012	0	0	4.2
Q3013	1.6 (0.5)	3.2 (0.5)	2.3 (1.3)
Q3014	0.9	4.2	1.6
Q3015	3.6	4.8	4.2
Q3016	4.8	4.8	4.7
Q3017	1.3	4.9	1.9
Q3018	0	0	0
Q3019	1.5	4.9	2.3
Q3020	1.0	4.9	0.9
Q3021	1.1	4.9	1.8

Ref. No.	Emitter	Collector	Base
Q3025	2.7	0	2.1
Q3026	0	0	4.8
Q3027	0	4.7	.0.9
Q3028	1.4	4.8	.2.1
Q4001	0 (0.2)	0 (9.2)	0
Q6001	0	9.0	0.2
Q6002	0	4.8	0
Q6003	0	4.3	-
Q6004	0	4.7	-
Q6005	0	0	0.7
Q6201	0	0	0.6
Q6202	0	4.3	0
Q6203	3.9	12.0	4.4
Q6204	0	5.1	0
Q6205	0	0.6	0.6
Q7002	11.9	0.6	0
Q7003	11.9	0	0
Q7004	11.9	11.8	0
Q7201	8.7	11.9	9.4
Q7202	3.3	0	0
Q7203	0	0	0
Q7204	0	2.6	0
Q7206	0	6.7	0
Q7502	0	11.8	0
Q8001	0	6.0	0
Q8003	0	0.8	0
Q8004	0	5.4	0
Q8005	0	6.4	0
Q8007	5.1	0	5.9
Q8008	5.1	0	4.5
Q8009	0	5.2	0
Q8010	5.2	11.9	5.9
Q8011	0	0	0.6
Q8012	0	11.9	0
Q8701	2.6	147.7	3.1
Q8702	2.8	171.4	3.2
Q8703	2.9	113.5	3.2
Q9001	0	34.2	0.3
Q9002	0	-0.2	120.4
Q9003	0	14.7	-0.6

Voltage showing in () are measured on the RECORD Mode.

Pin No.	IC8001	IC6001	IC6202
1	8.5	5.1	4.3
2	7.9	0	5.1
3	8.4	0	5.2
4	6.5	5.0	1.9
5	6.5	1.4 (0)	2.8
6	11.9	-	3.2
7	3.3	5.0	5.0
8	6.5	4.2	3.8
9	6.5	4.7	5.2
10	6.0	0	5.2
11	5.9	5.0	4.7
12	5.2	5.0	4.7
13	5.2	4.7	0.3
14	7.7	0	4.9
15	5.8	0	0
16	10.6	4.7	4.6
17	3.4	4.7	5.2
18	4.4	1.7	0.6
19	0	0	5.2
20	4.9	0	0
21	2.0	2.1	0
22	11.3	0	0
23	5.4	1.0	0
24	5.8	-	2.3
25	4.7	-	2.5
26	3.3	5.0	0
27	10.4	5.1	5.2
28	3.3	1.9	4.7
29	0.8	2.4	4.7
30	8.2	2.1	5.2
31	6.7	2.4	0
32	6.6	0	0
33	6.7	0	0
34	3.7	4.9	0
35	0.9	4.9	3.3
36	7.8	4.9	0
37	6.2	0	0
38	7.1	0	0
39	2.2	0	0
40	9.2	0	0
41	3.1	0	1.2
42	3.2	0	0.9
43	3.2	0	0
44	5.1	0 (4.8)	0.9

Pin No.	IC8001	IC6001	IC6202
45	5.0	0	0
46	5.0	5.1	0
47	7.1	0	5.2
48	2.6	0.9 (0)	0
49	7.0	0	0
50	0	0	0
51	7.3	0	0
52	0	4.8	0
53	0	4.8	
54	0	0.4 (4.8)	
55	6.0	0 (5.0)	
56	3.2	0	
57	5.8	0	
58	4.8	0	
59	3.3	0	
60	6.0	0	
61	11.9	5.0	
62	6.0	5.0	
63	11.9	0	
64	8.0	0	

Voltage showing in () are measured on the RECORD Mode.

Pin No.	IC7501	IC2001
1	0	2.3
2	0	2.1
3	5.9	2.4
4	5.9	5.0
5	5.9	2.5
6	0	2.5
7	0	2.6
8	0	2.0
9	11.8	3.0
10	0	3.0
11	11.8	0
12	5.9	2.5
13	5.9	2.5
14	5.9	2.5
15	1.2	
16	11.8	

Pin No.	IC3001	IC2002
1	-(0)	0.6
2	2.1 (0)	5.0
3	2.0 (2.4)	0
4	2.5	4.7
5	4.3 (2.6)	0
6	4.3 (2.6)	0.6
7	4.9	2.4
8	2.4	0
9	3.1 (4.9)	2.5
10	2.1	1.9
11	0	2.6
12	2.0	2.5
13	2.5	4.4 (2.8)
14	1.7	2.5
15	2.9	0
16	2.3	0
17	2.2	0
18	3.6	0.9
19	2.4 (3.2)	5.0
20	1.5	2.5
21	4.9	0
22	0	2.5
23	3.4	3.0
24	3.4	2.5
25	2.3	2.5
26	2.0	2.5
27	2.0	0
28	4.9	2.5 (2.7)
29	3.1	2.5 (2.9)
30	4.2	5.0
31	2.6	
32	0.6	
33	0	
34	2.0	
35	4.9	
36	0.7	
37	3.2	
38	1.4	
39	3.2	
40	3.6 (3.0)	
41	0.7	
42	2.3	

Pin No.	IC7201	IC4001
1	5.2	0
2	5.2	0
3	2.1	0
4	3.9	0
5	3.9	0
6	0	0.5
7	4.7	0
8	3.9	3.9
9	2.6	3.9
10	3.6	0 (0.6)
11	3.8	3.9
12	5.9	0
13	4.5	3.9
14	1.6	0
15	0	0
16	2.9	1.5
17	8.7	5.4
18	3.0	11.0
19	3.0	11.9
20	6.0	0
21	6.0	0
22	2.8	0
23	8.7	0
24	4.8	0 (5.0)

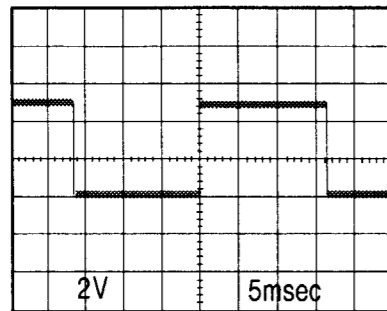
Voltage showing in () are measured on the RECORD Mode.

Pin No.	IC6002	IC9001	IC1005	IC6201
1	0	0	13.2	.5.2
2	11.8	12.5	12.2	0
3	0.4	23.5	0	5.2
4	0	0.9	1.0	
5	0	0.7		
6	11.8	23.3		
7	0.4	1.2		
8	11.8			
9	0			

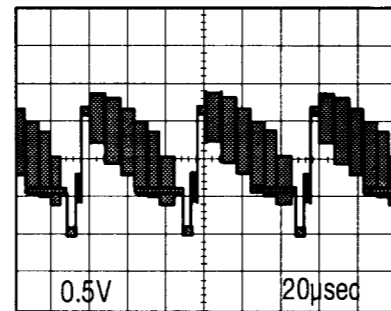
Pin No.	IC6203	IC4201	IC3002	IC3003	IC1001
1	0	10.1	4.0	0.9 (0)	1.1
2	0	0	0	0	1.0
3	0	0.5	4.8 (0.5)	4.8	0
4	0	0	1.6	1.6	0
5	5.2	0	0.2	0.2	1.9
6	5.2	0	2.4	2.4	17.5
7	0	0	1.1	1.1	2.0
8	5.2	0	9.0	9.0	3.5

Voltage showing in () are measured on the RECORD Mode.

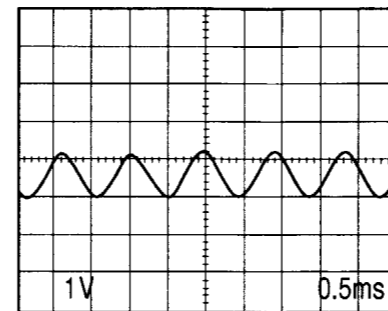
WAVEFORMS



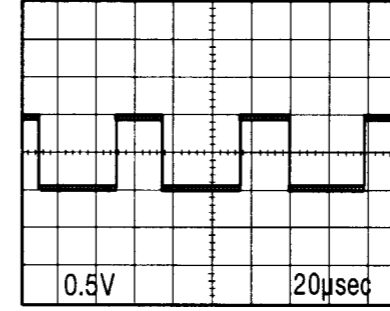
WF1



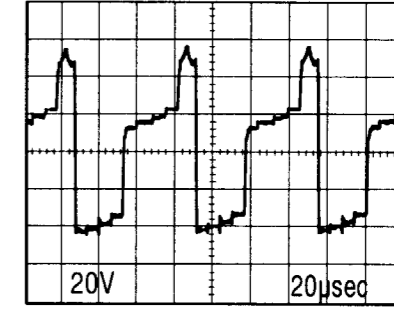
WF5



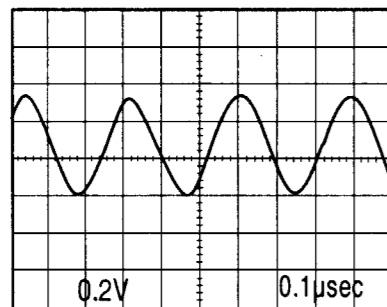
WF9



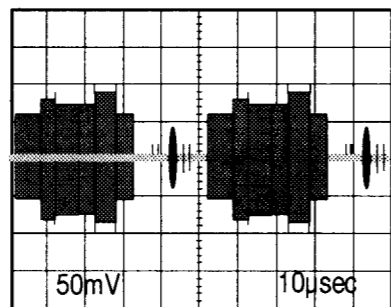
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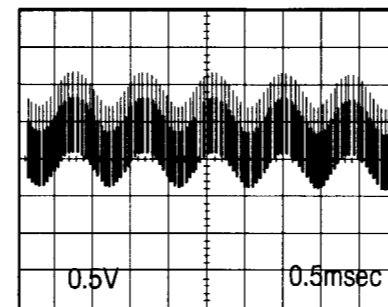
WF17



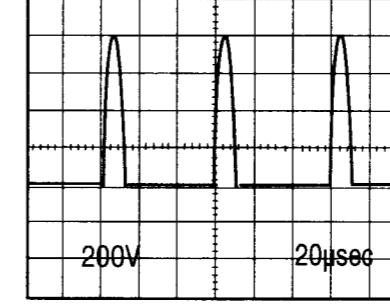
WF2



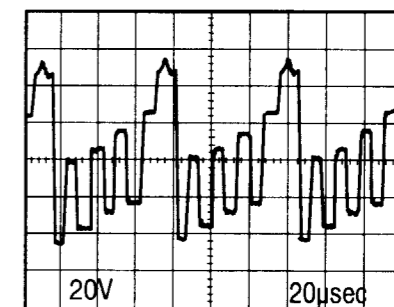
WF6



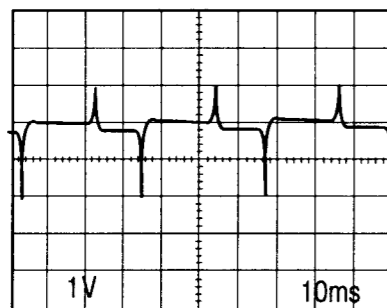
WF10



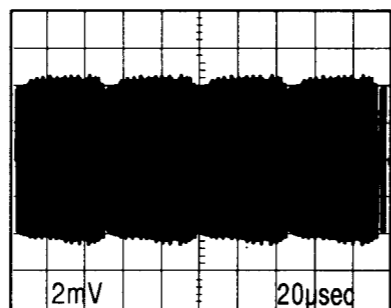
WF14



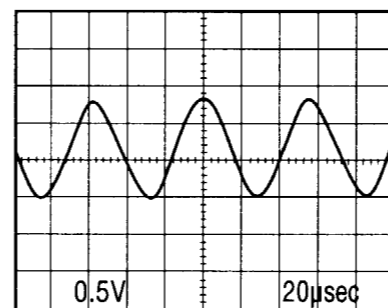
WF18



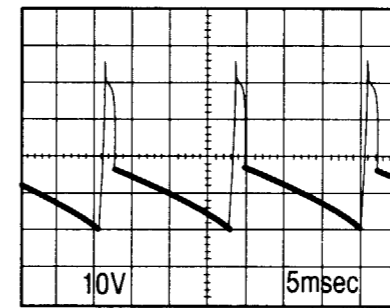
WF3



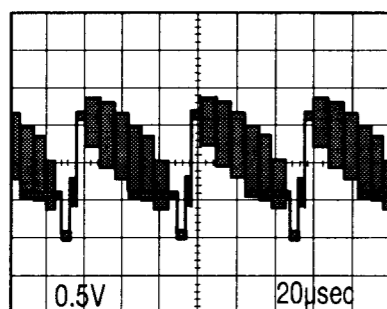
WF7



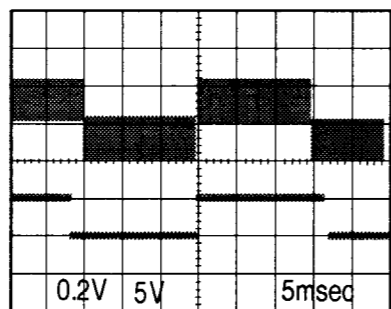
WF11



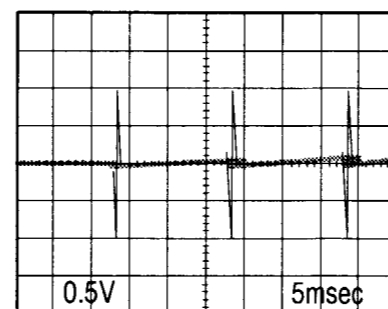
WF15



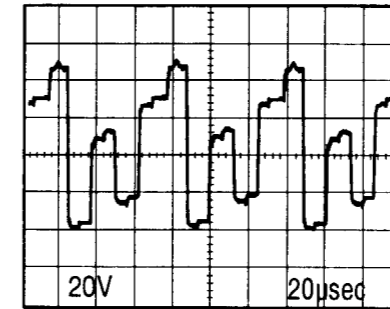
WF4



Upper:WF8 Lower:WF1



WF12

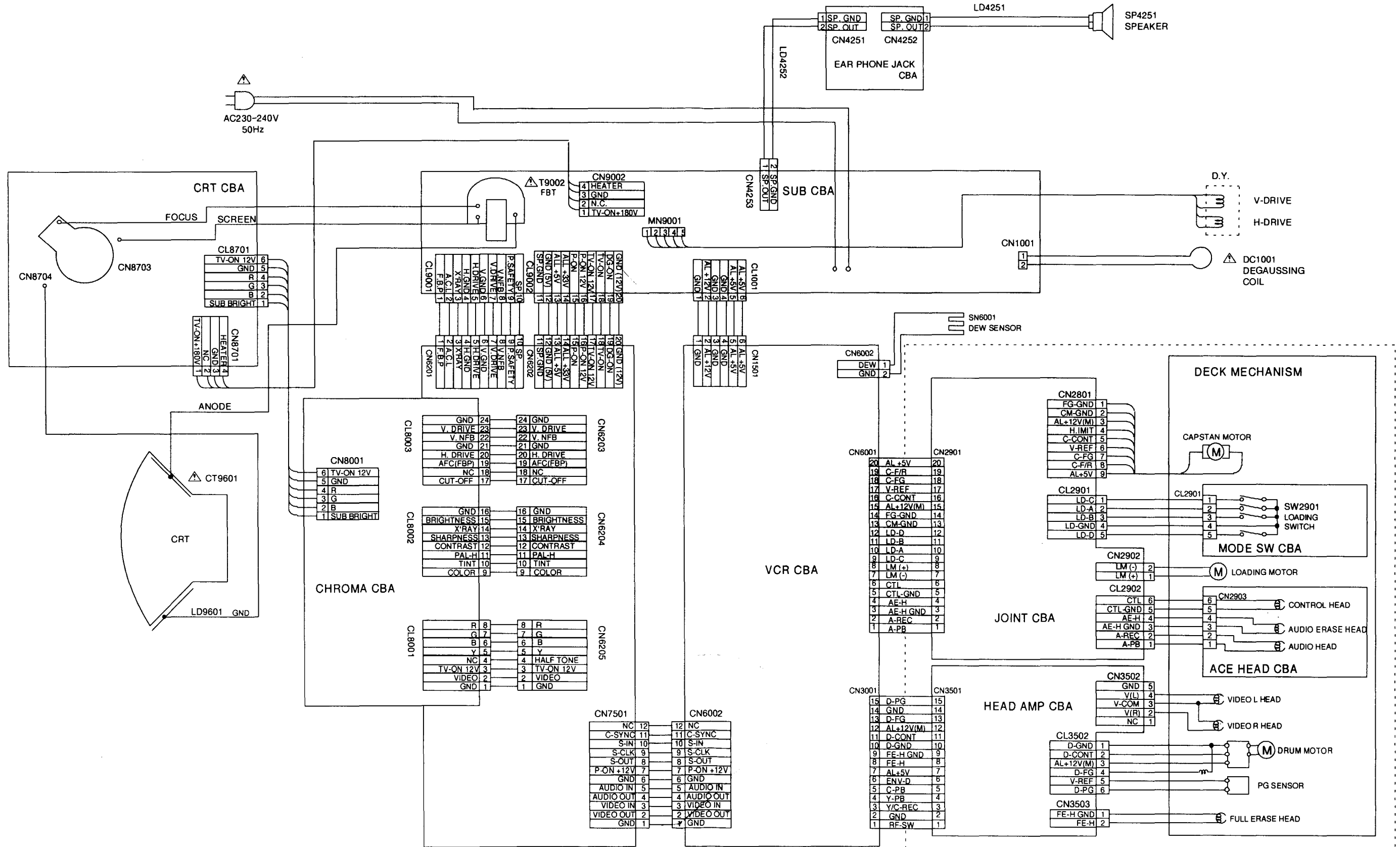


WF16

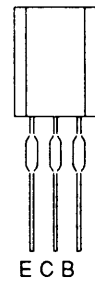
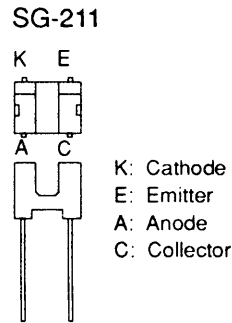
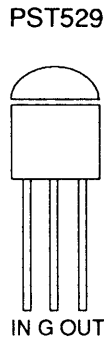
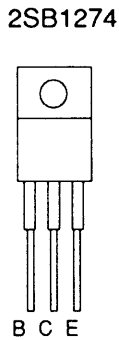
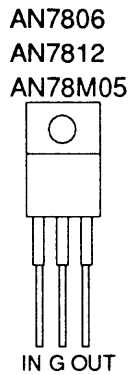
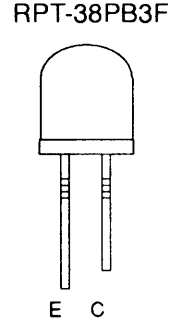
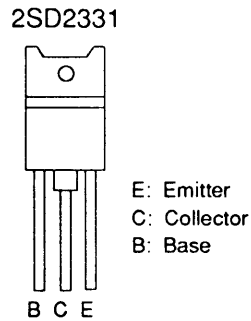
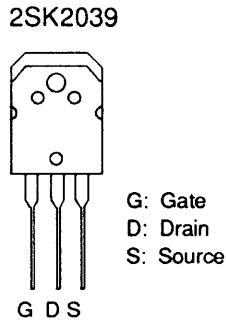
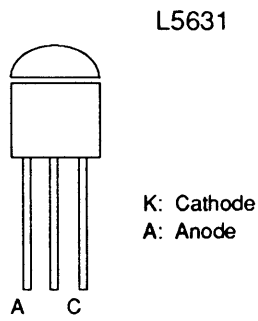
WAVEFORM NOTES:

- ★ Operation : Input PAL Color bar signal
- Brightness : Center
- Contrast : Center
- Color : Center
- Tint : Center

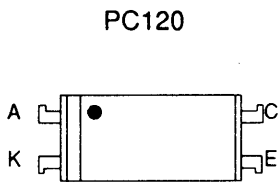
WIRING DIAGRAM MV-3400



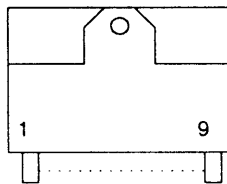
IC AND TRANSISTOR LEAD IDENTIFICATIONS



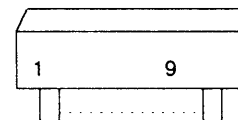
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- 2SC2271
- 2SA608
- 2SA1346
- 2SC536
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- 2SC3400
- 2SD400
- 2SA1654
- 2SC3000
- KTA1267
- KTC3199
- KRA109



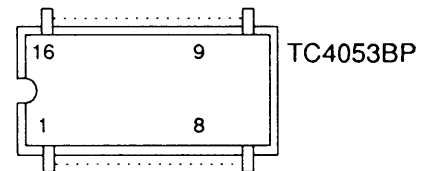
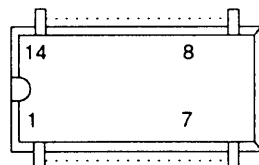
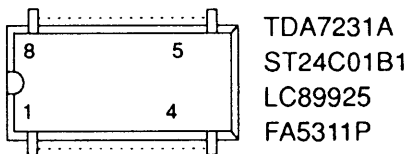
LA7830



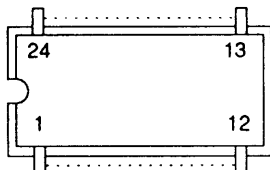
TA7291



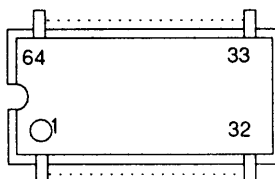
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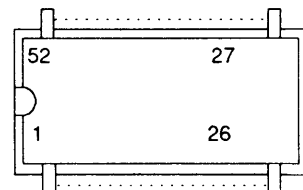
TA8701AN



M38123M4-053SP
TA8759AN



M37211M2-500SP



IC PIN FUNCTIONS

BU2845S

Pin. No.	In / Out	Signal Name	Function
1	I/O	PGMM	PC Mono Multi Terminal
2	I	VDD	Power Supply
3	O	SPBOUT1	Tape Speed Output
4	I	SDATA	Data Signal Input for transfer
5	I	SCLOCK	Clock Signal Input for Transfer
6	I	VSYNCIN	Vertical Synchronising Signal Input
7	I	FSCIN	Standard Clock Input
8	O	SPBOUT2	Tape Speed Output
9	O	DRUMFV	Drum Speed PWM Output
10	O	DRUMPV	Drum Phase PWM Output
11	O	CAPFV	Capstan Speed PWM Output
12	O	CAPPV	Capstan Phase PWM Output
13	O	PBCTOUT	Playback Control Signal Output
14	O	VHSW	Head Switching Output for Video
15	O	MODE OUT	Serial D11 Bit Output
16	O	VPULSE	VPULSE Output
17	-	N.C.	No Connection
18	I	NTSC	NTSC/PAL Switching Input
19	-	N.C.	No Connection
20	O	DCBIAS	Middle Level Output for Amp Lifier
21	I	VSS	GROUND
22	I	DFGIN	Drum FG Input
23	I	DPGIN	Drum PG Input
24	I	CFGIN	Capstan FG Input
25	I/O	BIAS / PONR	CTL Amp Bias Output / Power ON Reset
26	I/O	CTLAMP OUT	CTL Amp Output / CTL Comparator
27	I	VSSA	Ground for Analog
28	I	CTLAMPIN	CTL Amp Lifier AC Ground Input
29	I/O	RECCTL	CTL Head Terminal
30	I	VDDA	Power for Analog

LC89925

Pin. No.	In / Out	Signal Name	Function
1		P/N	Delaided Time Switching
2		VSS	Ground
3		VDD	Power Supply
4		OUT	Delaided Time Signal Output
5		NC	
6		IN	Signal Input
7		CLK	Clock Input
8		RD	Stepup Circuit Output

TA8701AN

Pin. No.	In / Out	Signal Name	Function
1		AGC FILTER	AGF Filter
2		AGC FILTER	AGF Filter
3		AGC DISPLAY	RF.AGC Delay Point Adjustment
4		PIF INPUT	PIF Signal Input
5		PIF INPUT	PIF Signal Input
6		PIF GND	PIF Ground
7		RF AGC OUTPUT	AGC Output Terminal
8		DEEMPHA SYS	FM Discrimination Circuit Output
9		SIF COIL	Connection for Audio Discrimination Coil
10		SIF COIL	Connection for Audio Discrimination Coil
11		AUDIO INPUT	Input Terminal for Audio Amplifier
12		NF	Feedback Terminal for Audio Amplifier
13		AUDIO OUTPUT	Output Terminal for Audio
14		ATT	Gain Control for Audio Amplifier
15		SIF GND	GROUND

Pin. No.	In / Out	Signal Name	Function
16		SIF INPUT	SIF Input
17		SIF V _{CC}	Power Supply
18		VIDEO OUTPUT 1	SIF Output Picture Signal
19		VIDEO OUTPUT 2	Picture Output
20		VIDEO COIL	Connect for Video Discrimination Coil
21		VIDEO COIL	Connect for Video Discrimination Coil
22		AFT COIL	Connect for AFT Coil
23		PIF V _{CC}	Power Supply
24		AFT OUTPUT	AFT Output Terminal

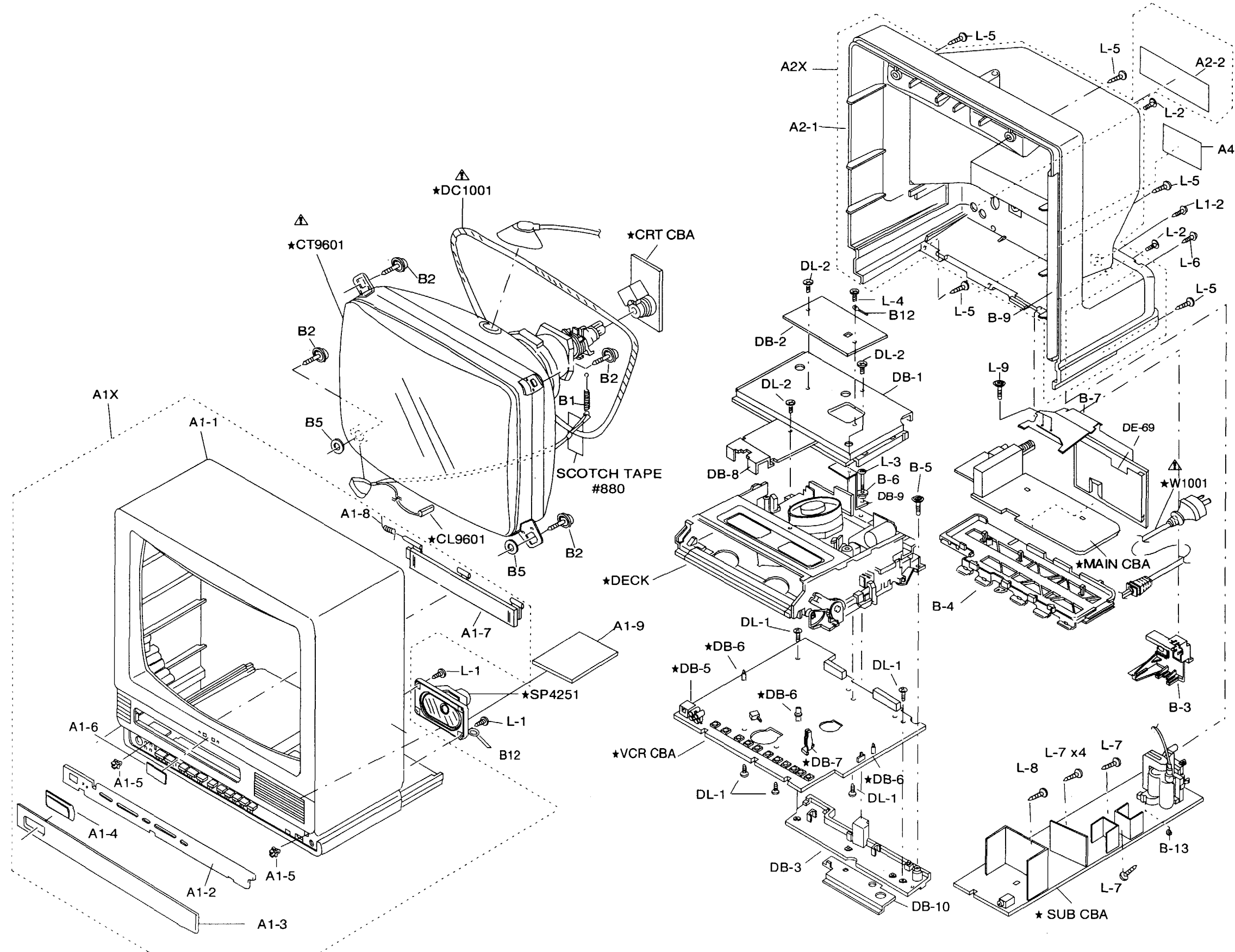
TA8759AN

Pin. No.	In / Out	Signal Name	Function
1		SB DEEMPHASIS	Connect for Secam De emphasis Filter
2		R-Y OUT	Color Difference Signal Output
3		SR DET. 1	Connect for Secam De emphasis Filter
4		SB DET. 1	Connect for Secam Discrimination Tank Coil
5		SB DET. 2	Connect for Secam Discrimination Tank Coil
6		V _{CC}	Power Supply
7		COLOR	Color Control Terminal
8		SR DET.2	Connect for Secam Discrimination Tank Coil
9		SR DET. 1	Connect for Secam Discrimination Tank Coil
10		SW1	Auto Mode / Manual Mode Control
11		SW2	Auto Mode / Manual Mode Control
12		DL OUT	Input Terminal for PAL / Secam color signal (1H Delay)
13		DC	DC Bias for PAL, NTSC Matrix Circuit

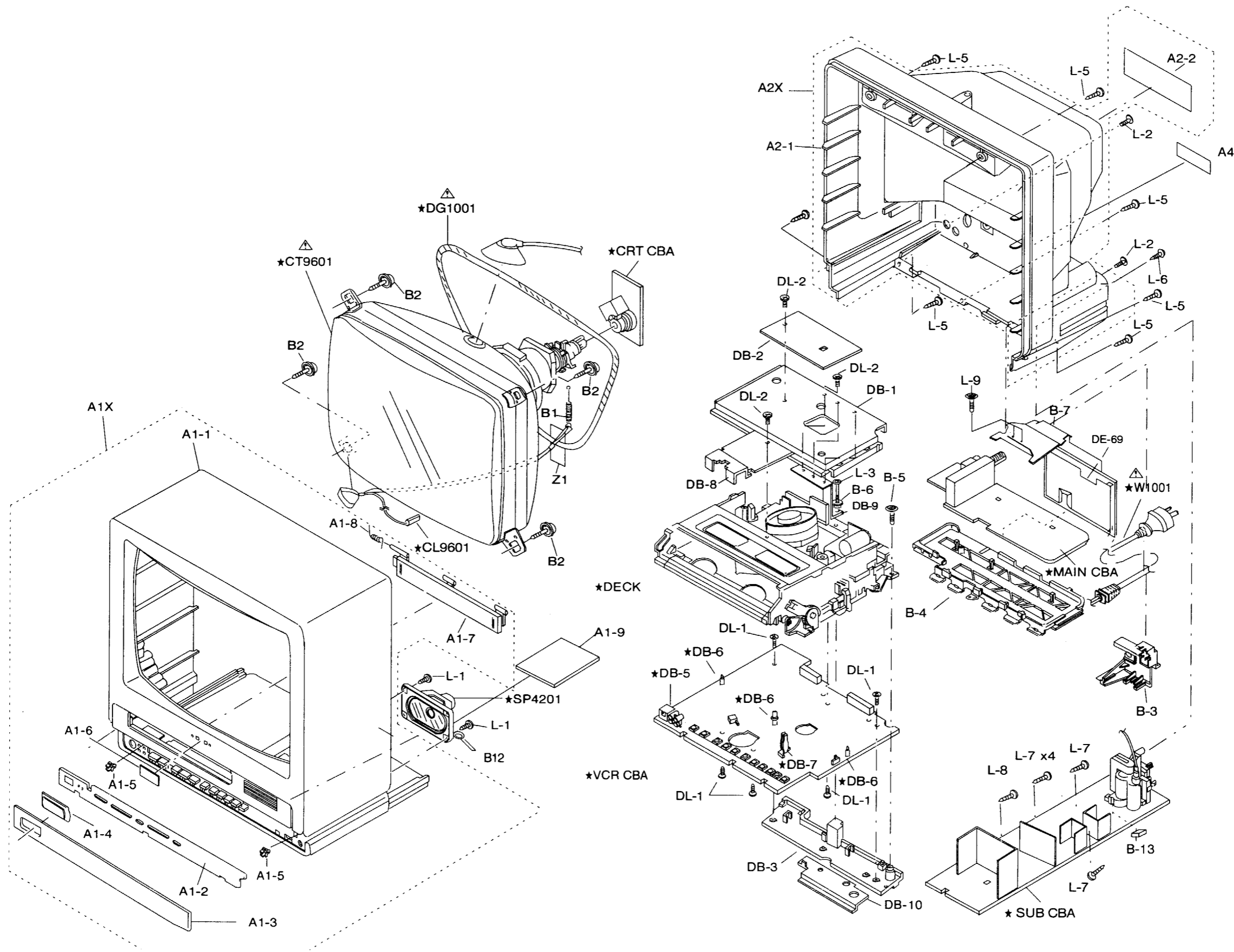
Pin. No.	In / Out	Signal Name	Function
14		DL IN	Output Terminal for 1H Delay PAL, Secam color Signal
15		TINT CONT.	Control Terminal for Color
16		ACC FILTER	Connector for ACC Filter
17		DC FEED BACK	Connect for Feedback Filter
18		SECAM IN	Connect for Bell Filter
19		GND	GROUND
20		P/N IN VID	Input Terminal for PAL, NTSC Color Signal
21		SW3	Auto Mode / Manual Mode Control
22		P IDENT	Connect for Ident Filter
23		S IDENT	Connect for Ident Filter
24		S REF.	Connect for 4.328MHz Coil
25		APC	Connect for APC Filter
26		3.85 IN	Input for Crystal Oscillation
27		N IDENT	Connect for Ident Filter
28		4.43 IN	Input for Crystal Oscillation
29		V. DRIVE	Vertical Drive Output Terminal
30		VCO OUT	Crystal Oscillation Drive
31		V RAMP	Ramp Wave Output
32		V NFB	Vertical Output AC, DC Feedback
33		SYNC SEPA	Input for Horizontal / Vertical Separation Signal
34		G.P.TC	Gate Pulse Output
35		H BLK	Input for Blanking Pulse
36		AFC F	Connect for Horizontal AFC Filter
37		503KHz	32fH (503KHz) Oscillation Output
38		AFC IN	Horizontal AFC Circuit
39		H OUT	Horizontal Output Terminal
40		H V _{CC}	Power Supply for Horizontal Deflection
41		R OUT	RED Output
42		G OUT	Green Output
43		B OUT	Blue Output
44		R Clamp	Connect for Cramp Capacitor
45		G Clamp	Connect for Cramp Capacitor
46		B Clamp	Connect for Cramp Capacitor

Pin. No.	In / Out	Signal Name	Function
47		RTX IN	ExternalRGB Signal Input Terminal
48		BRT	Brightness Control Terminal
49		GTX IN	ExternalRGB Signal Input Terminal
50		GND	GROUND
51		BTX IN	ExternalRGB Signal Input Terminal
52		X-ray	Protection Circuit for Over Voltage
53		TV/TX SW	TV Signal/RGB Signal Switching
54		HARF TONE	Harf Tone Switching
55		PICT CONT	Picture Control Terminal
56		PICT IN	
57		Y CLAMP	Connect for Clamp Capacitor
58		Y IN	Picture Signal Input
59		UNI COLOR	Uni-Color Control
60		R-YIN	Color Difference Signal Input Terminal
61		Vcc	Power Supply
62		B-YIN	Color Difference Signal Input Terminal
63		Vcc	Power Supply
64		B-Y OUT	Color Difference Signal Output

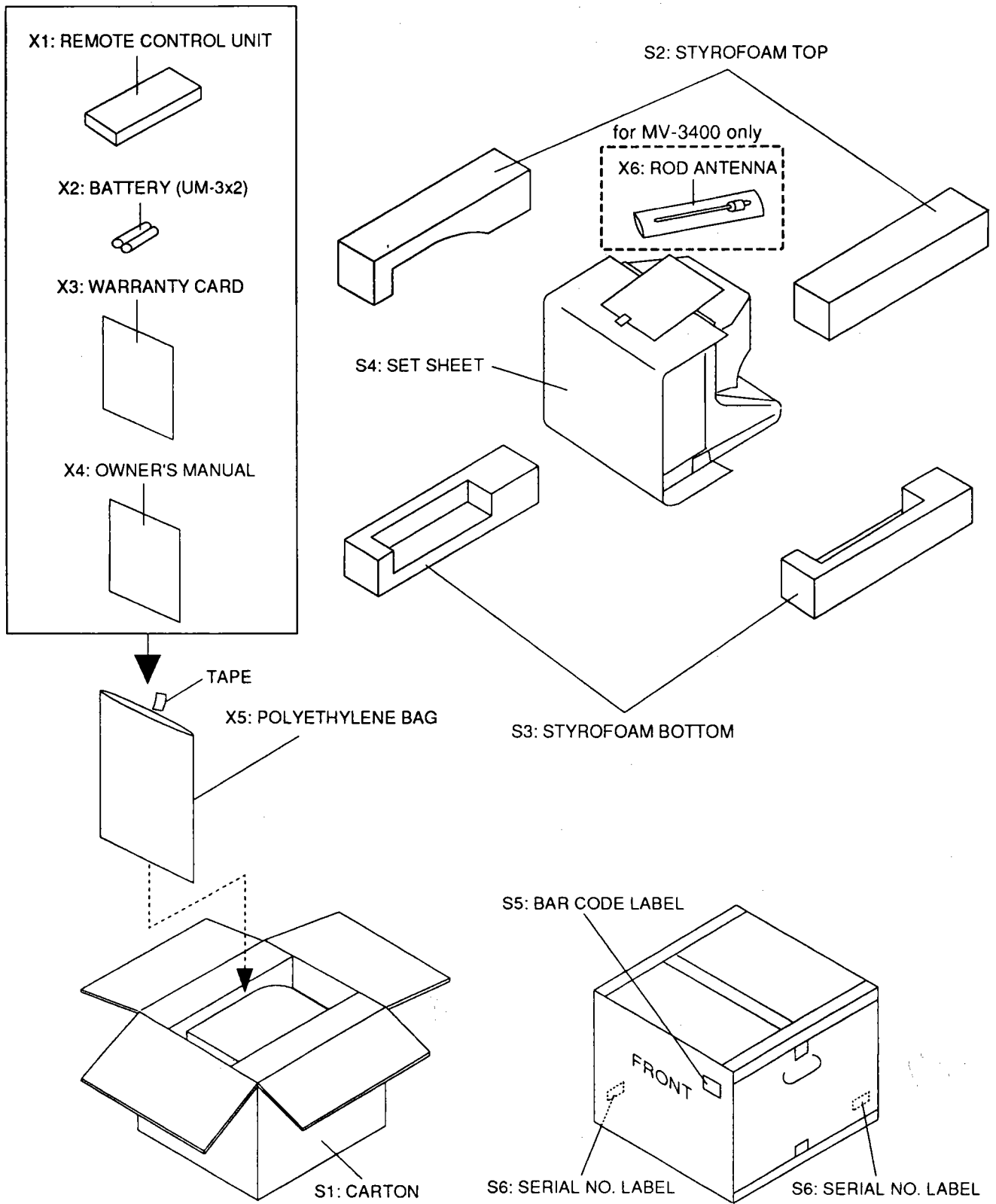
EXPLODED VIEW MV-3400



EXPLODED VIEW MV-4800



PACKING EXPLODED VIEW



CABINET PARTS LIST [TV/VCR]

EXPLODED VIEW CABINET PARTS LIST...[MV-3400 TV/VCR]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
AIX	*9A04698000	FRONT CABI ASSY	
A1-1	*9A04729600	FRONT CABINET	
A1-2	*9A04729700	CONTROL PLATE	
A1-3	*9A04729800	CONTROL DOOR	
A1-4	*9A04729900	DOOR WINDOW	
A1-5	*9A01106200	LATCH	
A1-6	*9A03805500	BRAND BADGE	
A1-7	*9A04730000	CASSETTE DOOR	
A1-8	*9A04730100	DOOR SPRING	
A1-9	*9A04700000	FR CAB INSULATION SHEET	
A2X	*9A04730200	REAR CABINET ASSY	
A2-1	*9A04697900	REAR CABINET	
A2-2	*9A04730300	RATING LABEL	
A4	*9A03805600	SERVICE CONTACT LABEL	
B1	*9A01805800	TENSION SPRING	
B2	*9A01443100	CRT MOUNTING SCREW	
B3	*9A04698400	AC CORD HOLDER	
B4	*9A04698300	PCB HOLDER	
B5	*9A04698900	ASSEMBLED SCREW	
B6	*9A04699500	INSULATION BUSH	
B7	*9A04700100	PCB HOLDER CRM	
B9	*9A04702100	CLOTH(L)	
B12	*9A04704400	COATING CLIP	
B13	*9A04700200	SPACER	
CL9601	*9A04696500	WIRE ASSY, (A)	
CT9601	△ *9A01454900	CRT	
DB1	*9A04698200	TOP COVER	
DB2	*9A04698800	SHIELD PLATE	
DB3	*9A04698100	VCR HOLDER	
DB5	*9A04701900	HOLDER, L.E.D.	
DB6	*9A03881200	BUSH, LED VD6574	
DB7	*9A04701800	HOLDER, REEL SENSOR	
DB8	*9A04699200	DECK HOLDER	
DB9	*9A04698700	TOP COVER STAND (P)	
DB10	*9A04699400	SHIELD COVER	
DC1001	△ *9A04116200	COIL,DEGAUSSING	
DE-69	*9A04698600	CRM PCB SHIELD PLATE	
DECK	*9A04683000	DECK ASSY,CPD001/VM2102	
DL1	9A02646400	SCREW,P-TITE BIND 3*8	
DL2	9A04689000	SCREW,S-TITE BIND 3*4	
L1	9A04687500	SCREW,P-TITE 3*10 CUP+	
L2	9A03807100	SCREW,P-TITE BIND+ 3*12	
L3	9A04687300	SCREW,P-TITE BIND 3*48	
L4	9A04689000	SCREW,S-TITE BIND 3*4	
L5	9A03265600	SCREW,TAP TITE 4X18	
L6	9A04687100	SCREW,TAPPING BIND+ 4*14	
L7	9A02791400	SCREW,B-TITE BIND 3*8	
L8	9A03806800	SCREW,B-TITE BIND 3*10	
L9	9A03894500	SCREW,S-TITE BIND 3*6	
SP4251	*9A02398200	SPEAKER	
W1001	△ 9A04695900	AC CORD	
	*9A04700300	MCV-2 (VCR) PCB ASSY.....	...See Electrical List (VCR)
	- - - - -	MAIN PCB ASSY...(TV).....	...See Electrical List (TV)
	- - - - -	CRT PCB ASSY...(TV).....	...See Electrical List (TV)
	- - - - -	SUB PCB ASSY...(TV).....	...See Electrical List (TV)
	- - - - -	CHROMA PCB ASSY...(TV).....	...See Electrical List (TV)
	- - - - -	EARPHONE PCB ASY...(TV).....	...See Electrical List (TV)

EXPLODED VIEW CABINET PARTS LIST...[MV-4800 TV/VCR]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
AIX	*9A04707100	FRONT CABI ASSY	
A1-1	*9A04730600	FRONT CABINET	
A1-2	*9A04730700	CONTROL PLATE	
A1-3	*9A04730800	CONTROL DOOR	
A1-4	*9A04730900	DOOR WINDOW	
A1-5	*9A01106200	LATCH	
A1-6	*9A03805500	BRAND BADGE	
A1-7	*9A04731000	CASSETTE DOOR	
A1-8	*9A04730100	DOOR SPRING	
A1-9	*9A04707800	FRONT CABINET INSULATION	
A2X	*9A04730400	REAR CABINET ASSY	
A2-1	*9A04683100	REAR CABINET	
A2-2	*9A04730500	RATING LABEL	
A4	*9A03805600	SERVICE CONTACT LABEL	
B1	*9A01805800	TENSION SPRING	
B2	*9A03806200	SCREW,M6 CRT	
B3	*9A04707200	AC CORD HOLDER	
B4	*9A04698300	PCB HOLDER	
B5	*9A04698900	ASSEMBLED SCREW	
B6	*9A04699500	INSULATION BUSH	
B7	*9A04700100	PCB HOLDER CRM	
B12	*9A04704400	COATING CLIP	
B13	*9A04707400	SPACER(B)	
CL9601	*9A04706600	WIRE ASSY, WX1L7500-004A	
CT9601	△ 9A04142100	CRT, A48KMX12XX44(S)	
DB1	*9A04698200	TOP COVER	
DB10	*9A04699400	SHIELD COVER	
DB2	*9A04698800	SHIELD PLATE	
DB3	*9A04698100	VCR HOLDER	
DB5	*9A04701900	HOLDER, L.E.D.	
DB6	*9A03881200	BUSH, LED VD6574	
DB7	*9A04701800	HOLDER, REEL SENSOR	
DB8	*9A04699200	DECK HOLDER	
DB9	*9A04698700	TOP COVER STAND (P)	
DE69	*9A04698600	CRM PCB SHIELD PLATE	
DECK	*9A04683000	DECK ASSY, CPD001/VM2102	
DG1001	△ 9A04705600	DEGAUSSING COIL	
DL1	9A02646400	SCREW,P-TITE BIND 3*8	
DL2	9A04689000	SCREW,S-TITE BIND 3*4	
L1	9A04687500	SCREW,P-TITE 3*10 CUP+	
L2	9A03807100	SCREW,P-TIGHT BIND+ 3*12	
L3	9A04687300	SCREW,P-TITE BIND 3*48	
L5	9A03265600	SCREW,TAP TITE 4X18	
L6	9A04687100	SCREW,TAPPING BIND+ 4*14	
L7	9A02791400	SCREW,B-TITE BIND 3*8	
L8	9A03806800	SCREW,B-TITE BIND 3*10	
L9	9A03894500	SCREW,S-TITE BIND 3*6	
SP4201	*9A02398200	SPEAKER	
WI001	△ 9A04695900	AC CORD	
	*9A04700300	MCV-2 (VCR) PCB ASSY	See Electrical List (VCR)
	- - - - -	MAIN PCB ASSY...(TV).....	See Electrical List (TV)
	- - - - -	CRT PCB ASSY...(TV).....	See Electrical List (TV)
	- - - - -	SUB PCB ASSY...(TV).....	See Electrical List (TV)
	- - - - -	CHROMA PCB ASSY...(TV).....	See Electrical List (TV)
	- - - - -	EARPHONE PCB ASY...(TV).....	See Electrical List (TV)

ACCESSORIES & PACKIG PARTS LIST

INCLUDED ACCESSORIES & PACKING PARTS LIST...[MV-3400]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
X1	*9A04695700	REMOCON UNIT,RC-513	
X2	*9A02533800	DRY BATTERY	
X3	*9A04701500	WARANTEE CARD	
X4	*9A04697800	OWNER'S MANUAL,E	
X5	*9A01446000	POLY BAG	
X6	*9A04139600	ROD ANTENNA,..(MV-3400 Only)	
S1	*9A04699800	CARTON	
S2	*9A04701600	STYROFOAM TOP	
S3	*9A04701700	STYROFOAM BOTTOM	
S4	*9A04141700	SET SHEET	
S5	*9A04699700	BAR CODE LABEL	
S6	*9A02533300	SERIAL NO. LABEL V5279	

INCLUDED ACCESSORIES & PACKING PARTS LIST...[MV-4800]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
X1	*9A04695700	REMOCON UNIT,RC-513	
X2	*9A02533800	DRY BATTERY	
X3	*9A04701500	WARANTEE CARD	
X4	*9A04706900	OWNER'S MANUAL,E	
X5	*9A01446000	POLY BAG	
X6	- - - - -	- - - - -	
S1	*9A04707600	CARTON	
S2	*9A04708100	STYROFOAM TOP	
S3	*9A04708200	STYROFOAM BOTTOM	
S4	*9A04141700	SET SHEET	
S5	*9A04707500	BAR CODE LABEL	
S6	*9A02533300	SERIAL NO. LABEL V5279	

ELECTRICAL PARTS LIST [TV]

NOTE:

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB assy drawings contained in this manual.

MMA-80B (GATHER) PCB ASSY...[MV-3400 TV]

MMA-80B (GATHER) PCB ASSY...[MV-3400 TV]

REF. NO.	PARTS NO.	DESCRIPTION
	*9A04700500	MMA-80B PCB ASSY..(TV) (Consists of MAIN,SUB,CRT,CHROMA,...EARPHONE PCB ASSY)
	*9A04683800	P.C.B.,MAIN (Consists of MAIN,SUB,CRT,CHROMA,...EARPHONE PCB)
BC1001	9A03838900	BEADS CORE
BC1002	9A03838900	BEADS CORE
BC1003	9A03838900	BEADS CORE
BC1005	9A03838900	BEADS CORE
C1001	△ 9A04687000	C,MTLZ 0.1UF/250V K
C1001	△ 9A02411200	C,MTLZ 0.1UF/250V M
C1001	△ 9A02771800	C.,LINE ACROSS 0.1UF/250V
C1002	△ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1003	△ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1004	△ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1005	△ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1013	9A04122000	C,ELEC 150UF/400V
C1014	9A03816800	C,CERAMIC 0.001UF/1KV
C1015	△ 9A01809000	C,CERAMIC 0.0022UF/T4KV
C1016	9A04684000	C,CERAMIC 100PF/1KV
C1019	9A04144800	C,ELEC 100UF/160V
C1021	9A04684700	C,ELEC 47UF/160V M W/F
C1032	9A04684100	C,CERAMIC 220PF/1KV
C1050	9A04684300	C,CERAMIC 1500PF/T4KV
C8701	9A04684200	C,CERAMIC 0.01UF/2KV
C9011	9A04683900	C,ELEC 1UF/250V M (105°C)
C9012	9A01467400	C,METAL P.P 0.39UF/200V
C9016	9A04119500	C,CERAMIC 0.0022UF/500V
C9017,27	9A04684600	C,ELEC 1UF/160V M
C9019	9A02772400	C,FILM 6800PF/1.6KV
C9023	9A04143900	C,ELEC 1UF/160V M W/F
C9024	9A04143500	C,ELEC 1UF/250V
CF7201	9A01848500	CERAMIC TRAP, TPS5.5MB
CF7202	9A01848400	CERAMIC FILTER, SFE5.5MBF
CF7204	9A04687200	CERAMIC DSCRM, CDSH5.5MC38
CF8001	9A02403300	CERA RESONATER, CSB503F30
CL1001	9A04696000	WIRE ASSY,6P
CL8001-03	9A04689200	CONNECTOR,8P
CL8701	9A04696300	WIRE ASSY,6P
CL9001,02	9A04689300	FJL CONNECTOR,10PL-FJ
CN1001	9A01809200	CONNECTOR BASE, 2P
CN4251	9A04697200	WIRE HOLDER,2P 51039-0200
CN4252	9A02811000	ANGLE PIN HEADER, 2P
CN4253	9A02781100	CONNECTOR BASE, 2P
CN6201	9A04703000	CONNECTOR BASE,10R-FJ
CN6202	9A04703000	CONNECTOR BASE,10R-FJ
CN6203,04	9A04689100	CONNECTOR BASE, 8P
CN6205	9A04689100	CONNECTOR BASE, 8P
CN7201	9A04702900	FJ CONNECTOR BASE,12R-FJ

REF. NO.	PARTS NO.	DESCRIPTION
CN8001	9A01719100	CONNECTOR BASE 6P
CN8701	9A04697300	WIRE HOLDER,2P 51048-0410
CN8703	△ 9A01459600	CRT SOCKET
CN8704	9A02408200	CONNECTOR PIN, 1P
CN9001	9A01815500	CONNECTOR BASE, 5P
CN9002	9A04697300	WIRE HOLDER,2P 51048-0410
D1001-04	9A03831500	DIODE,ERC04-10L3
D1005	9A04692300	DIODE,ERA22-02KFRB
D1006	9A03831300	DIODE,ERA15-02KFRB
D1007	9A04691500	ZENER DIODE,UZ-24BSA
D1008	9A04691300	DIODE,1N4148M
D1008	9A01849900	DIODE,1SS133T
D1009	9A04691400	ZENER DIODE,UZ-2.78BSA
D1010	9A04691600	ZENER DIODE,UZ-6.2BSB
D1011	9A04691300	DIODE,1N4148M
D1011	9A01849900	DIODE,1SS133T
D1017	9A03831300	DIODE,ERA15-02KFRB
D1018	9A03831700	DIODE,ERD38-06L
D1019	9A03831800	DIODE,ERD32-02L
D1020,21	9A04123500	DIODE,ERC30-02
D1022-24	9A04691300	DIODE,1N4148M
D1022-24	9A01849900	DIODE,1SS133T
D1027	9A04691300	DIODE,1N4148M
D1027	9A01849900	DIODE,1SS133T
D1028	9A04691700	ZENER DIODE,UZ-6.8BSB
D1029-31	9A04691300	DIODE,1N4148M
D1029-31	9A01849900	DIODE,1SS133T
D1032	9A04692200	ZENER DIODE,UZ-18BSC
D1033,34	9A04691300	DIODE,1N4148M
D1033,34	9A01849900	DIODE,1SS133T
D1038	9A04691300	DIODE,1N4148M
D1038	9A01849900	DIODE,1SS133T
D1040,42	9A04691300	DIODE,1N4148M
D1040-42	9A01849900	DIODE,1SS133T
D4201-03	9A04691300	DIODE,1N4148M
D4201-03	9A01849900	DIODE,1SS133T
D6201-03	9A04691300	DIODE,1N4148M
D6201-03	9A01849900	DIODE,1SS133T
D6206,07	9A04691300	DIODE,1N4148M
D6206,07	9A01849900	DIODE,1SS133T
D7002,04	9A04691800	ZENER DIODE,UZ-7.5BSB
D8001	9A04691900	ZENER DIODE,UZ-9.1BSB
D8003	9A04692100	ZENER DIODE,UZ-20BSB
D8004	9A04691800	ZENER DIODE,UZ-7.5BSB
D9001	9A03831300	DIODE,ERA15-02KFRB
D9002	9A04123400	DIODE,ERB44-04L3
D9004	9A04691300	DIODE,1N4148M
D9004	9A01849900	DIODE,1SS133T
D9005,08	9A03269200	DIODE,ERB12-02L3
D9006	9A04692000	ZENER DIODE,UZ-18BSB
D9010	9A04692000	ZENER DIODE,UZ-18BSB
DE-69	9A04698600	CRM PCB SHIELD PLATE
DL8001	9A01455000	GLASS DELAY
F1001	△ 9A03839400	FUSE,T4.0AH 250V
FH1001	△ 9A04697000	FUSE HOLDER,EYF 52BC
FH1002	△ 9A04697000	FUSE HOLDER,EYF 52BC

MMA-80B (GATHER) PCB ASSY...[MV-3400 TV]

REF. NO.	PARTS NO.	DESCRIPTION
IC1001	9A04693000	IC,FA5331P
IC1002,04	9A00746500	IC,AN7812F
IC1003	9A04683600	IC,AN7806F
IC1005	△ 9A04692600	PHOTO COUPLER,PC120FY
IC1006	9A00741500	IC,AN78M05F
IC4201	9A04690900	IC,TDA7231A
IC6202	9A04693300	IC,M37211M2-500SP
IC6203	9A04691100	IC,ST24C01BI
IC6204	9A00742300	IC,L5631
IC7201	9A04692900	IC,TA8701AN
IC7501	9A04124100	IC,TC4053BP
IC8001	9A04687600	IC,TA8759AN
IC9001	9A01817800	IC,LA7830
JK4251	9A02780900	JACK, PHONE
JK7501	9A03944500	BNC JACK,HXC0328-01-010
JK7502	9A04687700	RCA JACK, YKC21-3515
L1002	△ 9A04690100	LINE FILTER
L1005	9A04124700	POT TYPE COIL, 47UH
L6201	9A04145900	MICRO INDUCTOR, 39UH J
L7201,02	9A04689800	CASING COIL,SA-3066
L7203,04	9A02775300	COIL, MICRO 10UH
L7205	9A04703700	INDUCTOR,0.68UH-K
L7206	9A04703800	INDUCTOR,0.68UH
L7207	9A04703500	INDUCTOR,56UH
L8002	9A04703600	INDUCTOR,68UH
L8003	9A04689500	CASING COIL,R12-M336
L8004	9A04703400	INDUCTOR,27UH-K-AXT
L8005	9A04689700	CASING COIL,R12-M339
L8006	9A02775300	COIL, MICRO 10UH
L8007	9A04124300	CASING COIL,R12-M338
L8008,09	9A04689600	CASING COIL,R12-M337
L8010	9A02775500	INDUCTOR,33UH
L8011	9A02404400	DELAY LINE
L8012	9A04703500	INDUCTOR,56UH
L8701	9A04703300	INDUCTOR,180UH-K-AXT
L9001	9A02402200	POT TYPE COIL, 4.7MH
L9002	9A04124700	POT TYPE COIL, 47UH
LD4252	9A04696400	RIBBON WIRE,2P
LD9001	9A04696200	RIBBON WIRE,4P
PS1001	△ 9A02410400	POSTER, ZPB53BL200C
Q1004	9A04692500	FET,2SK2039
Q1005,06	9A04125500	TR,KTC3199
Q1008	9A04126400	TR,2SB1274(R)
Q1009	9A04126400	TR,2SB1274(R)
Q1010	9A04125500	TR,KTC3199
Q1011	9A04126000	TR,KTA1267(GR)
Q1012-17	9A04125500	TR,KTC3199
Q1018	9A02774400	TR,2SC2271(E)-AE-MP
Q6201-05	9A04125500	TR,KTC3199
Q7002-04	9A04126000	TR,KTA1267(GR)
Q7201-04	9A04125500	TR,KTC3199
Q7202	9A04126000	TR,KTA1267(GR)
Q7206	9A04703200	TR,2SC3000E
Q7502	9A04125500	TR,KTC3199
Q8001	9A04125500	TR,KTC3199

MMA-80B (GATHER) PCB ASSY...[MV-3400 TV]

REF. NO.	PARTS NO.	DESCRIPTION
Q8003-05	9A04125500	TR,KTC3199
Q8007,08	9A04126000	TR,KTA1267(GR)
Q8009-12	9A04125500	TR,KTC3199
Q8701-03	9A02775200	TR,2SC2228(E)-AE-MP
Q9001	9A02774400	TR,2SC2271(E)-AE-MP
Q9002	9A04126300	TR,2SD2331
Q9003	9A04125500	TR,KTC3199
R1001	9A04695600	R,CEMENT 5W 1.2 J
R1003	9A04695100	R,METAL 2W 47K J
R1003	9A04694900	R,METAL 2W 47K J
R1016	9A04695200	R,METAL 3W 0.22 J
R1017	9A04694500	R,METAL 1W 18K J
R1017	9A04694000	R,METAL 1W 18K J
R1060	9A04695100	R,METAL 2W 47K J
R1060	9A04694900	R,METAL 2W 47K J
R1061	9A04694600	R,METAL 1W 27K J
R1061	9A04694100	R,METAL 1W 27K J
R4201	9A04694700	R,METAL 1W 5.6 J
R4201	9A04694400	R,METAL 1W 5.6 J
R4203	9A04694700	R,METAL 1W 5.6 J
R4203	9A04694400	R,METAL 1W 5.6 J
R4251	9A04702500	R,CARBON 1/2W 220 J
R4252	9A04695000	R,METAL 2W 0.56 J
R4252	9A04694800	R,METAL 2W 0.56 J
R870709	9A04131900	R,METAL 1W 15K J
R9013	△ 9A04129700	R,FUSE 1/2W 68
R9020	9A03937600	R,CEMENT 5W 3.3K K
R9024	△ 9A04693900	R,FUSE 1W 2.7 J
RL1001	9A04690700	POWER RELAY,OST-S-112DM
SF7201	9A04139200	SAW FILTER
T1001	△ 9A04690200	POWER TRANS
T9001	9A01457400	H. DRIVE TRANS
T9002	△ 9A04134800	F.B.T.
TU7001	9A04135800	TUNER
VR1001	9A01738700	VR,SEMI-FIXED 2KB
VR7201	9A00757500	VR,SEMI-FIXED 10K (B)
VR8001	9A04704100	VR,SEMI-FIXED 220 B
VR8002	9A00523000	VR,SEMI-FIXED 100KB
VR8003	9A00522800	VR,SEMI-FIXED 1KB
VR8701	9A04702700	R,SEMI-FIXED 50K B
VR8702,03	9A04702600	VR,SEMI-FIXED 3.3K B
VR8704-06	9A02645600	VR,SEMI-FIXED 5KB
VR9001	9A00757500	VR,SEMI-FIXED 10K (B)
XT6201	9A03882200	RESONATOR CERAMIC, 8MHZ
XT8001	9A02417500	X'TAL, 4.43MHZ
XT8002	9A03840700	X'TAL, 3.58MHZ
	9A04697100	HEAT SINK SHEET
	9A04698500	HEAT SINK(PAO)ASSY
	9A04699000	HEAT SINK(PAL)
	9A04699100	HEAT SINK(PAM)
	9A04699300	HEAT SINK(PAN)ASSY

NOTE:

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB assy drawings contained in this manual.

MMA-80B (GATHER) PCB ASSY:::[MV-4800 TV]

REF: NO:	PARTS NO:	DESCRIPTION
	*9A04707900	MMA-80B PCB ASSY..(TV) (Consists of MAIN,SUB,CRT,CHROMA,..EARPHONE PCB ASSY)
	*9A04683800	P.C.B.,MAIN (Consists of MAIN,SUB,CRT,CHROMA,..EARPHONE PCB)
BC1001-05	9A03838900	BEADS CORE
C1001	Δ 9A04687000	C,MTLZ 0.1UF/250V K
C1001	Δ 9A02411200	C,MTLZ 0.1UF/250V M
C1001	Δ 9A02771800	C,LINE ACROSS 0.1UF/250V
C1002	Δ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1003	Δ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1004	Δ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1005	Δ 9A04704500	C,CERAMIC 0.0047UF AC125V
C1013	9A04122000	C,ELEC 150UF/400V
C1014	9A03816800	C,CERAMIC 0.001UF/1KV
C1015	Δ 9A01809000	C,CERAMIC 0.0022UF/T4KV
C1016	9A04684000	C,CERAMIC 100PF/1KV
C1019	9A04144800	C,ELEC 100UF/160V
C1021	9A03830700	C,ELEC 47UF/160V M
C1021	9A04705400	C,ELEC 47UF/160V M
C1021	9A04684700	C,ELEC 47UF/160V M W/F
C1032	9A04684100	C,CERAMIC 220PF/1KV
C1050	9A04684300	C,CERAMIC 1500PF/T4KV
C8701	9A04684200	C,CERAMIC 0.01UF/2KV
C9011	9A04683900	C,ELEC 1UF/250V M (105°C)
C9012	9A04708300	C,MTLZ 0.68UF/200V J
C9016	9A04119500	C,CERAMIC 0.0022UF/500V
C9017,27	9A04684600	C,ELEC 1UF/160V M
C9018	9A04147600	C,CERAMIC 1000PF/2KV
C9019	9A02772400	C,FILM 6800PF/1.6KV
C9023	9A04143900	C,ELEC 1UF/160V M W/F
C9024	9A04143500	C,ELEC 1UF/250V
CF7201	9A01848500	CERAMIC TRAP, TPS5.5MB
CF7202	9A01848400	CERAMIC FILTER, SFE5.5MBF
CF7204	9A04687200	CERAMIC DSCRM, CDSH5.5MC38
CF8001	9A02403300	CERA RESONATER, CSB503F30
CL1001	9A04696000	WIRE ASSY,6P
CL8001-03	9A04689200	CONNECTOR 8P
CL8701	9A04706500	WIRE ASSY,6P
CL9001,02	9A04705500	FJ CONNECTOR,10PK-FJ
CN1001	9A01809200	CONNECTOR BASE, 2P
CN1010,11	9A02408200	CONNECTOR PIN, 1P
CN4253	9A02781100	CONNECTOR BASE, 2P
CN6201,02	9A04703000	CONNECTOR BASE,10R-FJ
CN6203-04	9A04689100	CONNECTOR BASE, 8P
CN7201	9A04702900	FJ CONNECTOR BASE,12R-FJ
CN8001	9A01719100	CONNECTOR BASE 6P
CN8701	9A04697300	WIRE HOLDER,2P 51048-0410
CN8703	Δ 9A03842400	CRT SOCKET

MMA-80B (GATHER) PCB ASSY:::[MV-4800 TV]

REF: NO:	PARTS NO:	DESCRIPTION
CN8704	9A02408200	CONNECTOR PIN, 1P
CN9001	9A01815500	CONNECTOR BASE, 5P
CN9002	9A04697300	WIRE HOLDER,2P 51048-0410
D1001-04	9A03831500	DIODE,ERC04-10L3
D1005	9A04692300	DIODE,ERA22-02KFRB
D1006,17	9A03831300	DIODE,ERA15-02KFRB
D1007	9A04691500	ZENER DIODE,UZ-24BSA
D1008,11	9A04691300	DIODE,IN4148M
D1008,11	9A01849900	DIODE,ISS133T
D1009	9A04691400	ZENER DIODE,UZ-2.78BSA
D1010	9A04691600	ZENER DIODE,UZ-6.2BSB
D1018	9A03831700	DIODE,ERD38-06L
D1019	9A03831800	DIODE,ERD32-02L
D1020,21	9A04123500	DIODE,ERC30-02
D1022-24	9A04691300	DIODE,IN4148M
D1022-24	9A01849900	DIODE,ISS133T
D1027	9A04691300	DIODE,IN4148M
D1027,29	9A01849900	DIODE,ISS133T
D1028	9A04691700	ZENER DIODE,UZ-6.8BSB
D1029-31	9A04691300	DIODE,IN4148M
D1030,31	9A01849900	DIODE,ISS133T
D1032	9A04692200	ZENER DIODE,UZ-18BSC
D1033,34	9A04691300	DIODE,IN4148M
D1033,34	9A01849900	DIODE,ISS133T
D1038	9A04691300	DIODE,IN4148M
D1038,40	9A01849900	DIODE,ISS133T
D1040-42	9A04691300	DIODE,IN4148M
D1041,42	9A01849900	DIODE,ISS133T
D4201-03	9A04691300	DIODE,IN4148M
D4201-03	9A01849900	DIODE,ISS133T
D6201-03	9A04691300	DIODE,IN4148M
D6201-03	9A01849900	DIODE,ISS133T
D6206,07	9A04691300	DIODE,IN4148M
D6206,07	9A01849900	DIODE,ISS133T
D7002-03	9A04691800	ZENER DIODE,UZ-7.5BSB
D8001	9A04691900	ZENER DIODE,UZ-9.1BSB
D8003	9A04692100	ZENER DIODE,UZ-20BSB
D8004	9A04691800	ZENER DIODE,UZ-7.5BSB
D9001	9A03831300	DIODE,ERA15-02KFRB
D9002,07	9A04123400	DIODE,ERB44-04L3
D9003	9A02773700	DIODE,ISS130T
D9004	9A04691300	DIODE,IN4148M
D9004	9A01849900	DIODE,ISS133T
D9005,08	9A03269200	DIODE,ERB12-02L3
D9006	9A04705800	ZENER DIODE,UZ-39BSB
D9007	9A04123400	DIODE,ERB44-04L3
D9010	9A04692000	ZENER DIODE,UZ-18BSB
DE69	9A04698600	CRM PCB SHIELD PLATE
DL8001	9A01455000	GLASS DELAY
F1001	Δ 9A03839400	FUSE,T4.0AH 250V
FH1001	Δ 9A04697000	FUSE HOLDER,EYF 52BC
FH1002	Δ 9A04697000	FUSE HOLDER,EYF 52BC
IC1001	9A04693000	IC,FA5331P
IC1002,04	9A00746500	IC,AN7812F
IC1003	9A04683600	IC,AN7806F

MMA-80B (GATHER) PCB ASSY [MV-4800 TV1]

REF NO:	PARTS NO:	DESCRIPTION
IC1005	△ 9A04692600	PHOTO COUPLER, PC120FY
IC1006	9A00741500	IC, AN78M05F
IC4201	9A04690900	IC, TDA7231A
IC6201	9A03801200	IC, PST-529C-2
IC6202	9A04693300	IC, M37211M2-500SP
IC6203	9A04691100	IC, ST24C01B1
IC6204	9A00742300	IC, L5631
IC7201	9A04692900	IC, TA8701AN
IC7501	9A04124100	IC, TC4053BP
IC8001	9A04687600	IC, TA8759AN
IC9001	9A01817800	IC, LA7830
JK7501	9A03944500	BNC JACK, HXC0328-01-010
JK7502	9A04687700	RCA JACK, YKC21-3515
L1002	△ 9A04690100	LINE FILTER
L1005	9A04124700	POT TYPE COIL, 47UH
L6201	9A04145900	MICRO INDUCTOR, 39UH J
L7201,02	9A04689800	CASING COIL, SA-3066
L7203,04	9A02775300	COIL, MICRO 10UH
L7205	9A04703700	INDUCTOR, 0.68UH-K
L7206	9A04703800	INDUCTOR, 0.68UH
L7207	9A04703500	INDUCTOR, 56UH
L8002	9A04703600	INDUCTOR, 68UH
L8003	9A04689500	CASING COIL, R12-M336
L8004	9A04703400	INDUCTOR, 27UH-K-AXT
L8005	9A04689700	CASING COIL, R12-M339
L8006	9A02775300	COIL, MICRO 10UH
L8007	9A04124300	CASING COIL, R12-M338
L8008,09	9A04689600	CASING COIL, R12-M337
L8010	9A02775500	INDUCTOR, 33UH
L8011	9A02404400	DELAY LINE
L8012	9A04703500	INDUCTOR, 56UH
L8701	9A04703300	INDUCTOR, 180UH-K-AXT
L9001	9A02402200	POT TYPE COIL, 4.7MH
LD9001	9A04706400	RIBBON WIRE, 4P
PS1001	△ 9A02410400	POSTER, ZPB53BL200C
Q1004	9A04705900	FET, 2SK1692
Q1005,06	9A04125500	TR, KTC3199
Q1008,09	9A04126400	TR, 2SB1274(R)
Q1010	9A04125500	TR, KTC3199
Q1011	9A04126000	TR, KTA1267(GR)
Q1012-17	9A04125500	TR, KTC3199
Q1018	9A02774400	TR, 2SC2271(E)-AE-MP
Q6201-05	9A04125500	TR, KTC3199
Q7002-04	9A04126000	TR, KTA1267(GR)
Q7201	9A04125500	TR, KTC3199
Q7202	9A04126000	TR, KTA1267(GR)
Q7203,04	9A04125500	TR, KTC3199
Q7204	9A04125500	TR, KTC3199
Q7206	9A04703200	TR, 2SC3000E
Q7502	9A04125500	TR, KTC3199
Q8001	9A04125500	TR, KTC3199
Q8003-05	9A04125500	TR, KTC3199
Q8007,08	9A04126000	TR, KTA1267(GR)
Q8009-12	9A04125500	TR, KTC3199
Q8701	9A04708400	TR, 2SC2621(D)
Q8702	9A04708400	TR, 2SC2621(D)

MMA-80B (GATHER) PCB ASSY [MV-4800 TV1]

REF NO:	PARTS NO:	DESCRIPTION
Q8703	9A04708400	TR, 2SC2621(D)
Q9001	9A02774400	TR, 2SC2271(E)-AE-MP
Q9002	9A03834100	TR, 2SD333LS(LS FORMING)
Q9003	9A04125500	TR, KTC3199
R1001	9A04695600	R, CEMENT 5W 1.2 J
R1003	9A04695100	R, METAL 2W 47K J
R1003	9A04694900	R, METAL 2W 47K J
R1016	9A04695200	R, METAL 3W 0.22 J
R1017	9A04694500	R, METAL 1W 18K J
R1017	9A04694000	R, METAL 1W 18K J
R1060	9A04695100	R, METAL 2W 47K J
R1060	9A04694900	R, METAL 2W 47K J
R1061	9A04694600	R, METAL 1W 27K J
R4201	9A04694700	R, METAL 1W 5.6 J
R4201	9A04694400	R, METAL 1W 5.6 J
R4203	9A04694700	R, METAL 1W 5.6 J
R4203	9A04694400	R, METAL 1W 5.6 J
R4252	9A04695000	R, METAL 2W 0.56 J
R4252	9A04694800	R, METAL 2W 0.56 J
R8707	9A04706100	R, METAL 2W 12K J
R8707	9A04706000	R, METAL 2W 12K J
R8708	9A04706100	R, METAL 2W 12K J
R8708	9A04706000	R, METAL 2W 12K J
R8709	9A04706100	R, METAL 2W 12K J
R8709	9A04706000	R, METAL 2W 12K J
R9013	△ 9A04129700	R, FUSE 1/2W 68
R9020	9A03937600	R, CEMENT 5W 3.3K J
R9024	△ 9A04130200	R, FUSE 1W 2.2
R9036	9A04706200	R, METAL 3W 270 J
RL1001	△ 9A04690700	POWER RELAY, OST-S-112DM
SF7201	9A04139200	SAW FILTER
T1001	△ 9A04690200	POWER TRANS
T9001	9A01457400	H. DRIVE TRANS
T9002	△ 9A04705700	FLYBACK TRANS
TU7001	9A04135800	TUNER
VR1001	9A01738700	VR, SEMI-FIXED 2KB
VR7201	9A00757500	VR, SEMI-FIXED 10K (B)
VR8001	9A04704100	VR, SEMI-FIXED 220 B
VR8002	9A00523000	VR, SEMI-FIXED 100KB
VR8003	9A00522800	VR, SEMI-FIXED 1KB
VR8701	9A04702700	VR, SEMI-FIXED 50K B
VR8702	9A04702600	R, SEMIFIXED 3.3K B
VR8703	9A04702600	R, SEMIFIXED 3.3K B
VR8704-06	9A02645600	VR, SEMI-FIXED 5KB
VR8705	9A02645600	VR, SEMI-FIXED 5KB
VR8706	9A02645600	VR, SEMI-FIXED 5KB
VR9001	9A00757500	VR, SEMI-FIXED 10K (B)
XT6201	9A03882200	RESONATOR CERAMIC, 8MHZ
XT8001	9A02417500	X'TAL, 4.43MHZ
XT8002	9A03840700	X'TAL, 3.58MHZ
	9A04697100	HEAT SINK SHEET
	9A04707300	HEAT SINK(PAQ)ASSY
	9A04699000	HEAT SINK(PAL)
	9A04699100	HEAT SINK(PAM)
	9A04699300	HEAT SINK(PAN)ASSY

ELECTRIAL PARTS LIST [VCR]

MCV PCB ASSY...(VCR)

MCV PCB ASSY...(VCR)

REF. NO.	PARTS NO.	DESCRIPTION
	*9A04700300	MCV-2 (VCR) PCB ASSY
	*9A04683700	VCR PCB
CN1501	9A01719100	CONNECTOR BASE 6P
CN3001	9A01756600	CONNECTOR, 15P
CN6001	9A01739200	CONN, 20P 1L-SDA-20P-S2T2
CN6002	9A04689400	FJ CONNECTOR, 12P
CN6003	9A00490100	CONNECTOR BASE, 2P
D1501,04	9A04692400	DIODE, IN4148M
D2001,02	9A04692400	DIODE, IN4148M
D2004	9A04692400	DIODE, IN4148M
D3001	9A04692400	DIODE, IN4148M
D3003-07	9A04692400	DIODE, IN4148M
D6001	9A04692700	LED, SIDI K10CXM
D6002	9A04692400	DIODE, IN4148M
D6003-06	9A02400000	LED, SLR-55VC 3F
DL3001	9A03801600	COMB FILTER, ADL-FN1344F
DL3002	9A04688900	DELAY LINE, 2H
IC2001	9A03286500	IC, BA10324
IC2002	9A04691000	IC: SERVO EAEX002
IC3001	9A04692800	IC, LA7391A
IC3002	9A04702800	IC, LA7311
IC3003	9A04693100	IC, LC98825
IC4001	9A03790900	IC, LA7282
IC6001	9A04693200	IC, M38123M-053SP
IC6002	9A02041000	IC, TA7191S
IC6003	9A02561200	IC, PST529-2 SYSTEM RESET
IC6004	9A03867400	REEL SENSOR, SG-211L
L3001	9A02775400	COIL, MICRO 10UH-K-AXT
L3002, 20	9A02387800	INDUCTOR, 100UH-K-AXT
L3003, 10	9A02389700	INDUCTOR, 47UH-K-AXT
L3004	9A02389500	INDUCTOR, 39UH K
L3005	9A02388900	INDUCTOR, 27UH
L3006, 07	9A02389300	INDUCTOR, LF5R0 330UH-AXT
L3008, 09	9A02388500	INDUCTOR, 22UH K
L3012	9A02389100	INDUCTOR, 33UH K
L3013	9A02645900	INDUCTOR, LF5R0 56UH-AXT
L3014	9A02389300	INDUCTOR, LF5R0 330UH-AXT
L3015	9A02388300	INDUCTOR, 180UH K
L3016	9A02390100	INDUCTOR, 82UH-AXT
L3017	9A02388800	INDUCTOR, LF5R0 2R2UH-AXT
L3018	9A02521100	INDUCTOR, 15UH K
L3021	9A04690000	INDUCTOR, 22UH-K
L3022	9A02389900	INDUCTOR, 68UH K
L4001	9A04689900	INDUCTOR, 15MH-J
Q1501	9A02359400	R. BUILT-IN TR, 2SC3400
Q1502	9A02418000	R. BUILT-IN TR, 2SA1346

REF. NO.	PARTS NO.	DESCRIPTION
Q1503	9A04703100	TR, 2SA1654
Q2001	9A02418000	R. BUILT-IN TR, 2SA1346
Q2002	9A02418000	R. BUILT-IN TR, 2SA1346
Q2003	9A02359400	R. BUILT-IN TR, 2SC3400
Q2004	9A04690800	R. BUILT-IN TR, KRA109M
Q2006	9A02352500	TRANSISTOR 2SA608SP(E)
Q3002, 02	9A02356700	TRANSISTOR 2SC536SP(E)
Q3004, 06	9A02359400	R. BUILT-IN TR, 2SC3400
Q3005, 07	9A02352500	TRANSISTOR 2SA608SP(E)
Q3008, 12	9A02359400	R. BUILT-IN TR, 2SC3400
Q3009, 10	9A04690800	R. BUILT-IN TR, KRA109M
Q3011, 25	9A02352500	TRANSISTOR 2SA608SP(E)
Q3013, 14	9A02360400	TRANSISTOR 2SC2839(E)
Q3015, 17	9A02356700	TRANSISTOR 2SC536SP(E)
Q3016	9A04690800	R. BUILT-IN TR, KRA109M
Q3018, 28	9A02356700	TRANSISTOR 2SC536SP(E)
Q3019-21	9A02360400	TRANSISTOR 2SC2839(E)
Q3026, 27	9A02359400	R. BUILT-IN TR, 2SC3400
Q3029	9A00744900	D. TRANSISTOR, 2SC3400
Q4001	9A02356700	TRANSISTOR 2SC536SP(E)
Q6001	9A02360600	TRANSISTOR 2SD400(F)
Q6002, 05	9A02356700	TRANSISTOR 2SC536SP(E)
Q6003	9A03869700	PHOTO TR, RPT-38PB3F
Q6004	9A03869700	PHOTO TR, RPT-38PB3F
R6001	9A04694200	R, METAL 1W 2.7 J
R6002	9A04694300	R, METAL 1W 33 J
SN6001	9A04691200	DEW SENSOR, EYHS-10R4
SW6004-14	9A02522800	SW, PUSH SKHVE020B KHV-902
SW6015	9A03874900	SW. PUSH, SW-112-3
SW6016	9A03875000	SW. PUSH, SPPB61
T4001	9A01897100	COIL, OSC AUDIO
U6001	9A04695800	REMOCON UNIT, GPIU582Y
VR2001	9A04704000	R, CARBON VARIABLE 1M
VR2002	9A02558300	R, CARBON VARIABLE 100K
VR3001-03	9A02570000	R, CARBON VARIABLE 4.7K
VR4001	9A02558300	R, CARBON VARIABLE 100K
XT3001	9A02315300	X'TAL, 4.433619MHZ
XT6001	9A01895200	X'TAL, 32KHZ 10PPM
XT6002	9A03864600	RESONATOR CERAMIC, 4MHZ

DECK MECHANISM SECTION

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

MV-3400

MV-4800

Sec. 2: Deck Mechanism Section

Standard Maintenance
Alignment for Mechanism
Disassembly / Assembly of Mechanism
Deck Schematic Diagram
Deck P.C. Boards
Deck Exploded Views
Deck Parts List

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STANDARD MAINTENANCE

Service Schedule of Components

H: Hours O: 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			●	
B6	Pinch Roller Arm Assembly		●		●
B8	Pulley Assembly		●		●
B21	Loading Belt		●		●
B27	Band Brake Assembly		●		●
B28	Main Brake S Assembly		●		●
B29	Main Brake T Assembly		●		●
B30	T Brake Arm Assembly		●		●
B31	ACE Head Assembly			●	
B32	Reel Assembly			●	
B37	Capstan Motor		●		●
B52	Capstan Belt		●		●
B54	Ground Brush Assembly			●	
B73	Full Erase Head			●	
B132	Clutch Assembly		●		●
B133	Arm Idler Assembly		●		●

Note:

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.

Cleaning

Cleaning of Video Head

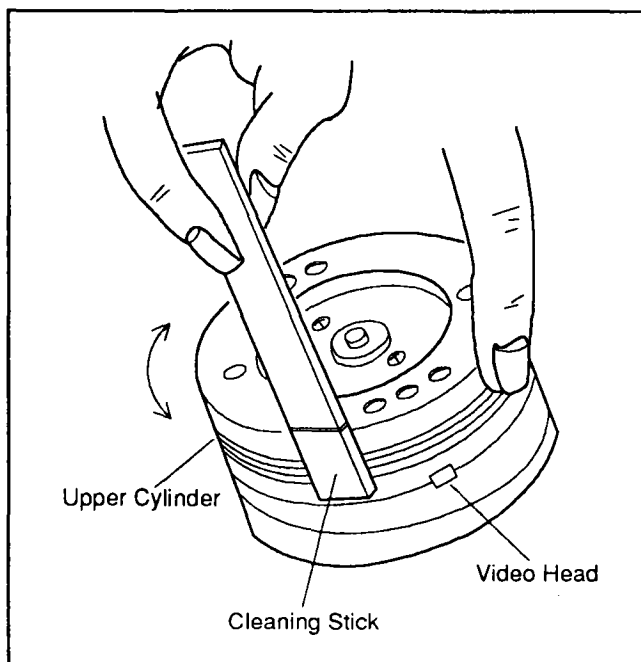
Clean the head with a head cleaning stick or chamois skin.

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 skin 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 skin.



Cleaning of Audio Control Head

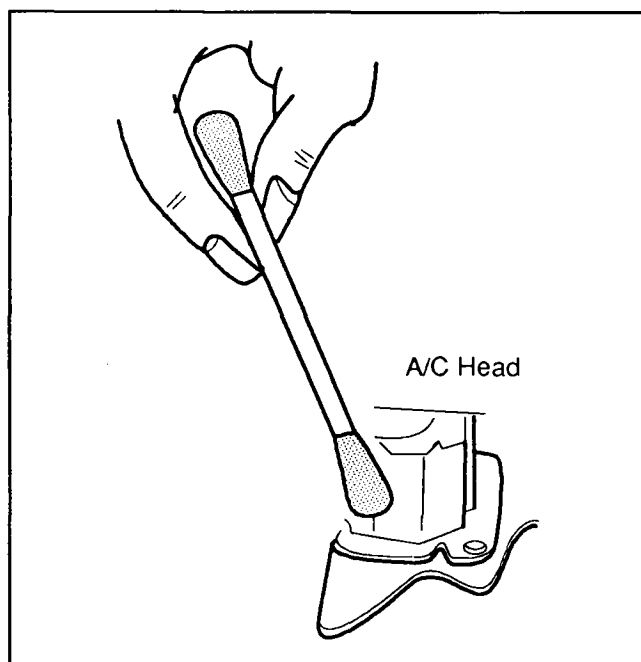
Clean the head with a cotton swab.

Procedure

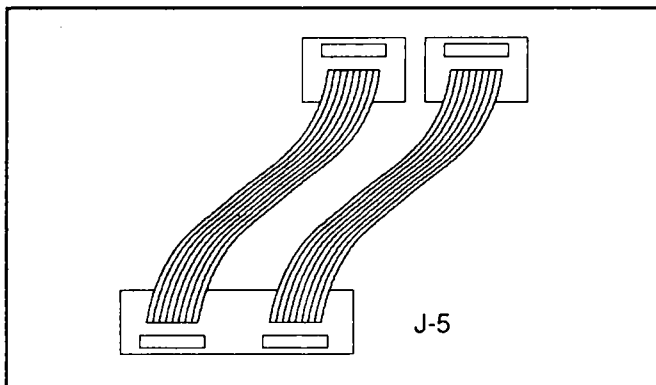
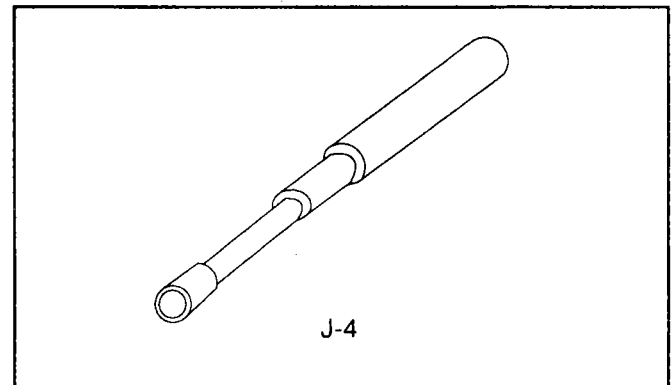
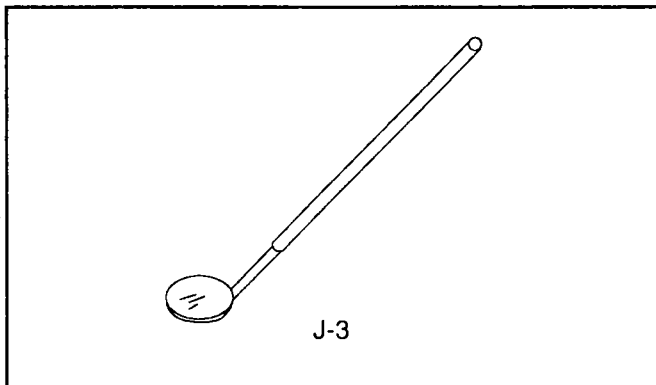
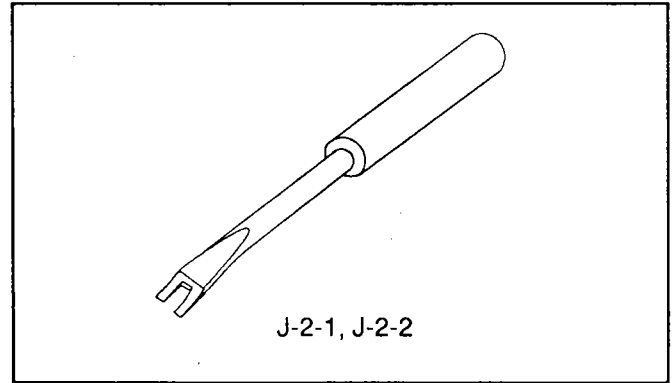
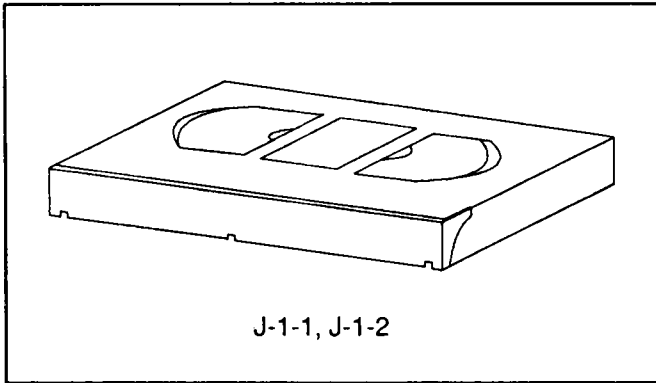
1. Remove the top cabinet.
2. Dip the cotton swab in 90% isopropyl alcohol and clean the audio control head. Be careful not to damage the upper drum and other tape running parts.

Notes:

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



SERVICE FIXTURE AND TOOLS



Ref. No.	Name	Part No.	Adjustment
J-1-1	Alignment Tape	F6-A	Head Adjustment of Audio Control Head
J-1-2	Alignment Tape	F6-N	Azimuth and X Value Adjustment of Audio Control Head / Adjustment of Envelope Waveform
J-2-1	Special Driver, Large	FSJ-0001	X Value
J-2-2	Special Driver, Small	FSJ-0006	Guide Roller
J-3	Mirror	FSJ-0004	Tape Transportation Check
J-4	Box Driver, Mx3	FSJ-0005	A/C Head Height
J-5	Deck Extension Cable	N1099XA	All Mechanical and Electrical Adjustments

Note: Before starting any adjustment, take the Deck Assembly out of the cabinet and use J-5 to connect the Deck Assembly with the Main CBA.

MECHANICAL ALIGNMENT PROCEDURES

Service Information

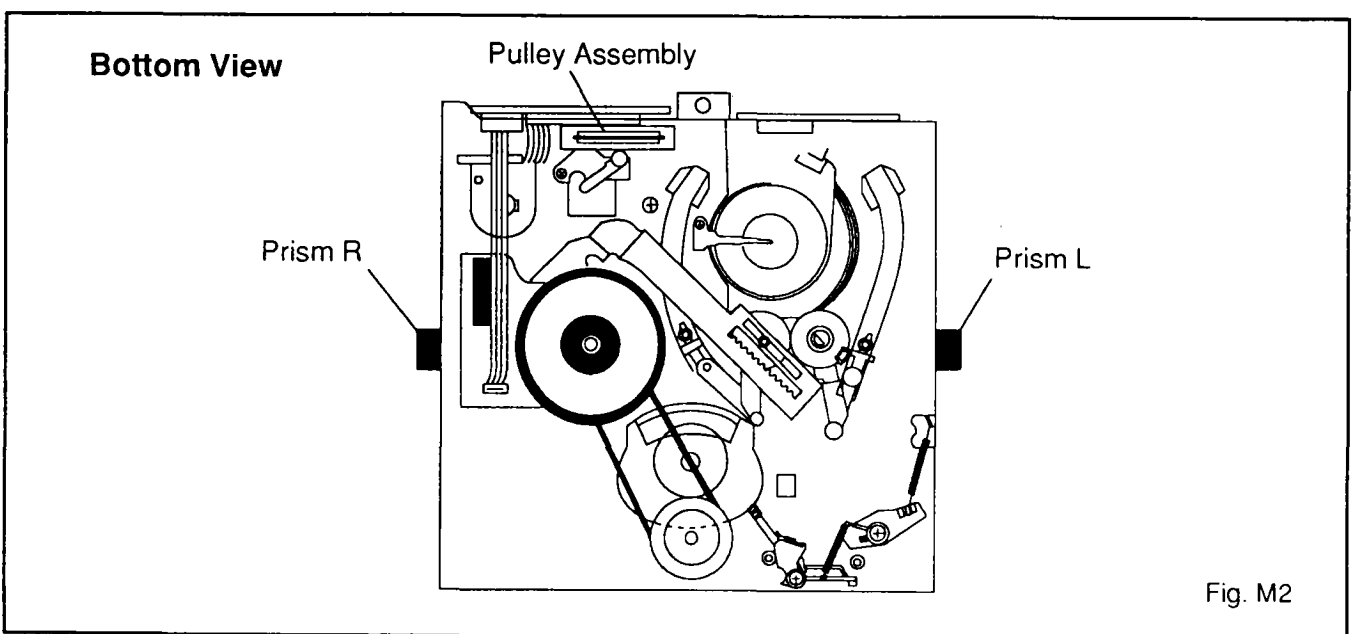
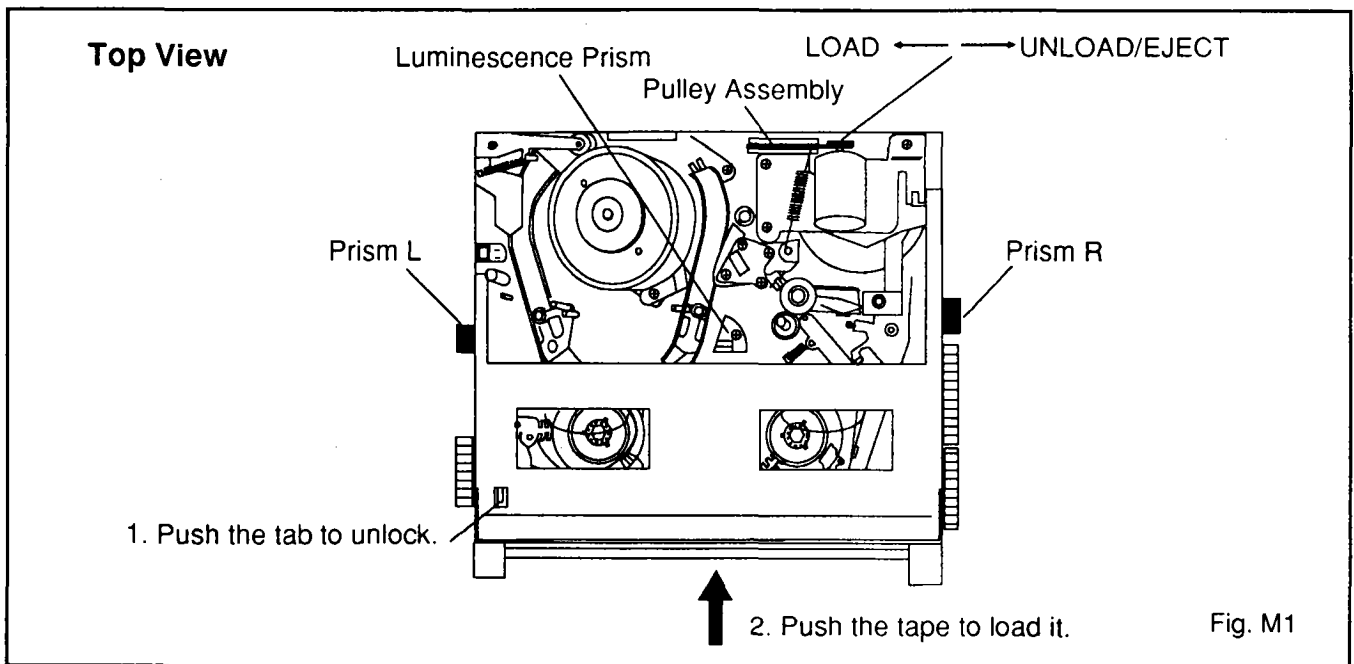
- A.** Method for Manual Tape Loading/Unloading of VCR.
To place the Cassette Holder in the down position, turn the Pulley Assembly clockwise as viewed from the back of Deck. To place the Cassette Holder in the up position, turn the Pulley Assembly counterclockwise as viewed from the back of the Deck.
- B.** How to place the Cassette Holder in the down position without a cassette tape.

METHOD

1. Disconnect the AC Plug and remove the Top Cover.
2. Cover the LED Sensors located below Prism L and Prism R.

Note: The tape sensor is extremely susceptible to damage from static electricity. When handling the tape sensor use a conductive mat, a grounded soldering iron, and so on, to protect the tape sensor from static damage.

3. Turn the Pulley Assembly clockwise as viewed from the back of the Deck.



1. Tape Interchangeability Alignment (Final Alignment)

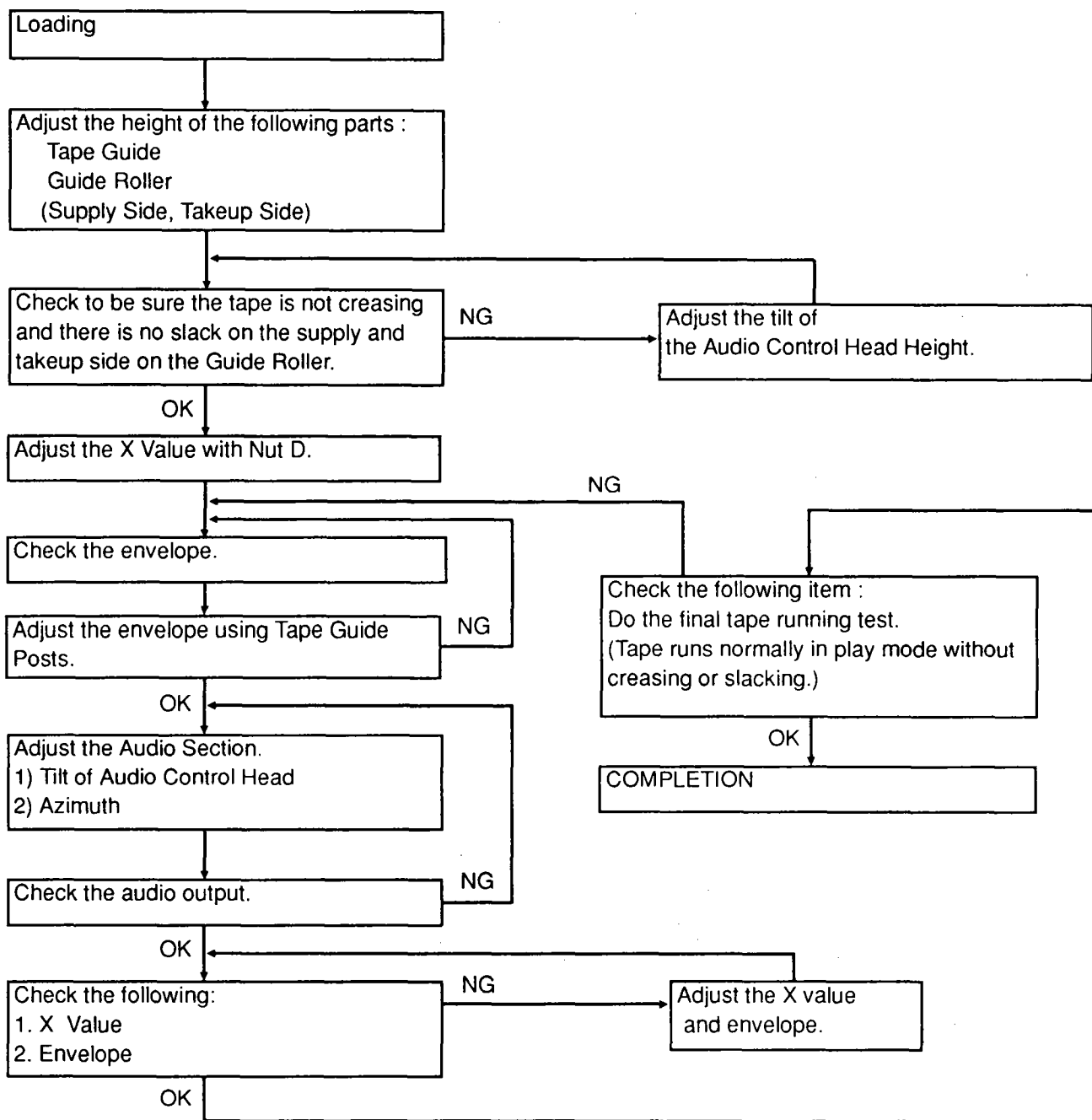
Note: To do these alignment procedures, be sure that the Tracking Control Circuit is set to the Neutral mode.

Note: After this Mechanical Alignment is completed, secure screw [C] shown in Fig.M6 with lock paint and do all the procedures in the Electrical Adjustment.

Equipment required :

- Dual Trace Oscilloscope
- VHS Alignment Tape (F6-A, F6-N)
- Post Alignment Screwdriver
- X-Position Alignment Fixture
- Screwdriver (For the Tape Guide Rollers)
- Box Driver M3

Tape Running Alignment Flowchart



1-A. Preliminary Checking and Alignment of Tape Running

Purpose:

To make sure that the tape running is well stabilized.

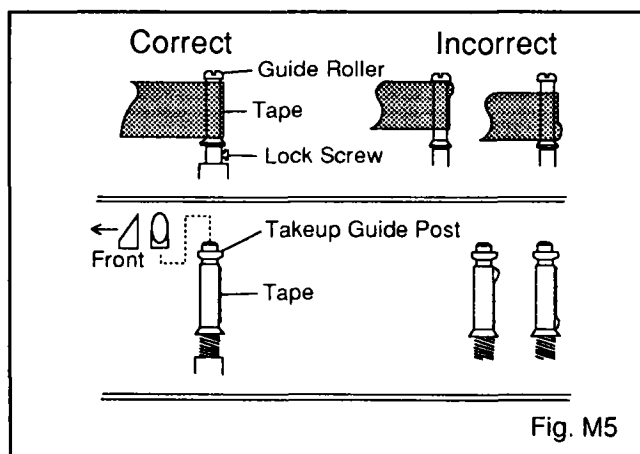
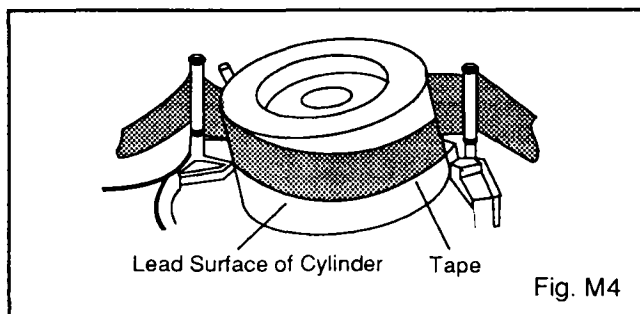
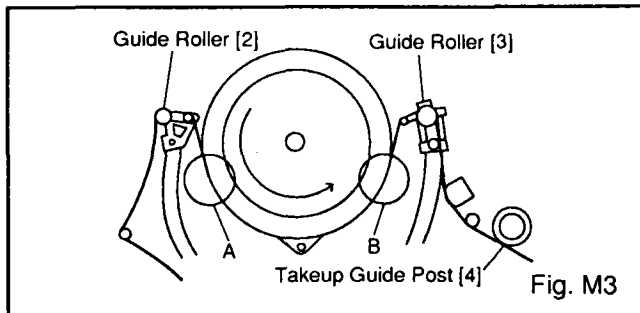
Symptom of Misalignment:

If the tape runs with unstability, the tape will be damaged.

1. Play back a cassette tape and check 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 Post Adjustment Screwdriver. (Refer to Fig. M3 and M5)

Note: Before turning the Guide Rollers, loosen the Lock Screw using a lock screwdriver.

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



1-B. Preliminary Checking of Audio/Control Head Height

Purpose :

To make sure that the tape runs properly along the Control Head.

Symptom of Misalignment:

If the control signal is not properly picked up, proper Servo Operation cannot be achieved.

The head height adjustment is required when the Audio/Control Head is replaced.

For final alignment, do the adjustments described in 1-C and 1-D.

Note: Play back a cassette tape. Looking at the lower edge of the Control Head with the tape in motion, make sure that the lower edge of the tape runs 0.15~0.25mm above the lower edge of the Control Head. If it does not run properly, turn Height Adjustment Nut [A] slightly in either direction as necessary to correct it. Turn clockwise, as viewed from the top, to lower the head and counterclockwise to raise it. (Refer to Fig. M6 and M7.)

1-C. Preliminary Checking of Tilt of Audio/Control Head

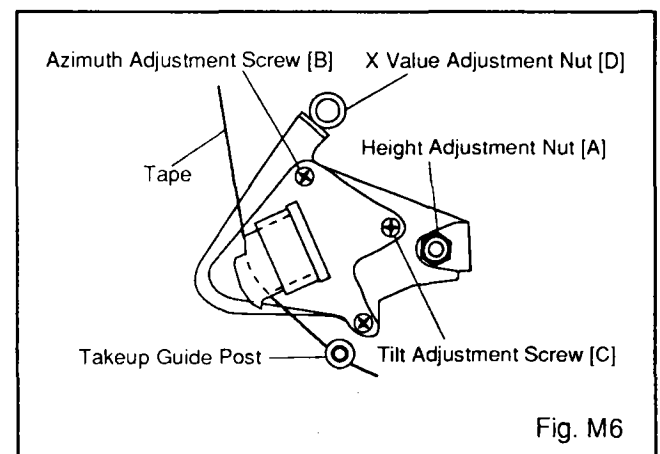
Purpose:

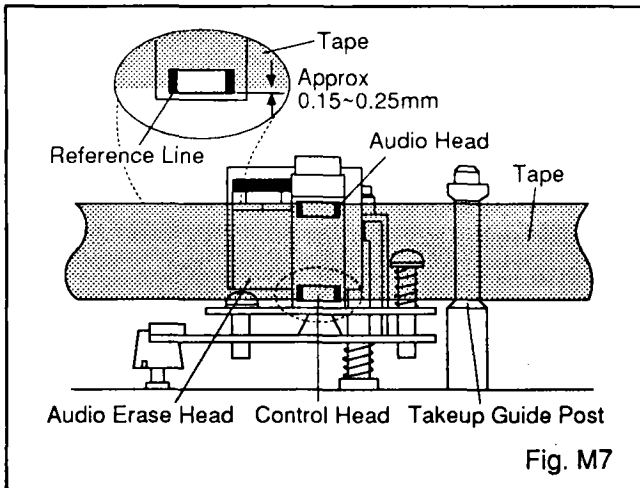
To check that the tape running is well stabilized. In particular, check that the signals on the tape are properly picked up by the Audio Head at the upper part and by the Control Head at the lower part.

Symptom of Misalignment:

If the tilt of the Audio/Control Head is poorly aligned, the tape will eventually be damaged.

Play back a cassette tape and check that there is no tape slack between Takeup Guide Post [4] in Fig. M3 and the Audio/Control Head. If there is any slack, align the Audio/Control Head by turning tilt adjustment screw [C] in Fig. M6 so that the tape has no slack.





1-D. Final Alignment of Audio/Control Head Height

Purpose:

To align the position and height of the Audio/Control Head so that it meets the tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control 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. Check that there is no tape slack between the Takeup Guide Roller and the Audio/Control Head. If there is any tape slack, remove it by turning Tilt Adjustment screw [C]. Then realign the height of the Guide Rollers (Refer to 1-A).
3. Play back the Color Bar (1kHz, Audio) on the alignment tape (F6-A) and check that the audio signal output level is 1kHz. Finally, adjust Height Adjustment Nut [A] so that the output level is at maximum. (Fig. M6, Fig. M8[b])
4. Adjust Azimuth Adjustment Nut [B] so that the output level on the AC Voltmeter is at maximum. (Fig. M6)

Note: Secure screw [C] with lock paint after realignment.

Azimuth Alignment of Audio/Control Head

Purpose:

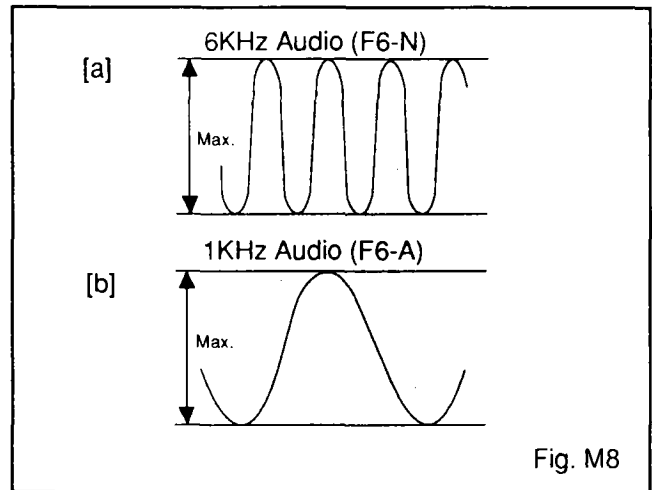
To correct the Azimuth alignment so that the Audio/Control Head angle meets tape tracks properly.

Symptom of Misalignment:

If the position of the Audio/Control 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 Gray Scale (6kHz, audio) on the alignment tape (F6-N), and adjust Height Adjustment Nut [A] so that the output level on the AC Voltmeter or the waveform of the oscilloscope is at maximum. (Fig. M6, Fig. M8[a])



1-E. X Value Alignment

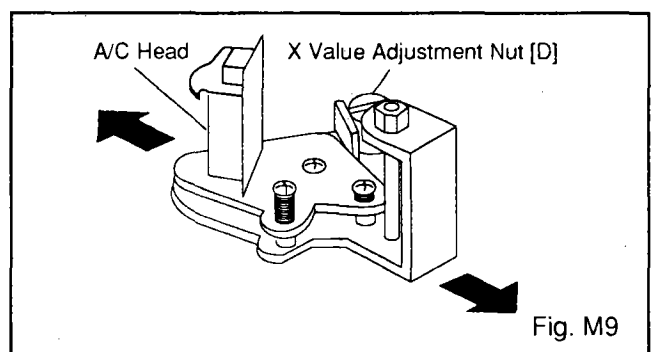
Purpose:

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

Symptom of Misalignment:

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

1. Set the Tracking Control Circuit to the Neutral mode by pressing CH UP and DOWN buttons on VCR simultaneously.
2. Connect the oscilloscope to TP of C-PB on the Main CBA. Use TP of RF-SW as a trigger.
3. Play back the Gray Scale of the Alignment Tape (F6-N) and confirm that the PB FM signal is present.
4. Adjust X Value adjustment Nut [D] with the X Position Adj-Fixture so that the PB FM signal at the TP of C-PB or at the TP of A-OUT is maximum. (Fig. M9)



1-F. Final 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.

1. Set the Tracking Control Circuit to the Neutral mode by pressing both CH UP and DOWN buttons on VCR simultaneously.
2. Connect the oscilloscope to TP of C-PB on the Main CBA. Use TP of RF-SW as a trigger.
3. Play back the Gray Scale on the Alignment Tape (F6-N). Adjust the height of Guide Rollers [2] and [3] (Fig.M3) watching the oscilloscope display so that the envelope becomes as flat as possible. If adjustment is required, turn the top of the Guide Roller with the Post Adjustment Screwdriver.
4. When the envelope is as shown in Fig. M10, adjust the height of Guide Roller [2] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M12.
5. When the envelope is as shown in Fig. M11, adjust the height of Guide Roller [3] (Refer to Fig.M3) so that the waveform looks like the one shown in Fig. M12.
6. 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. M12.

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig.M3), tighten the Lock Screws on these Guide Rollers [2] and [3], using a lock screw wrench. Then check the X VALUE by pushing the Tracking Control Up or Down buttons alternately, to check the symmetry of the envelope. If required, redo the "X VALUE ALIGNMENT." Secure screw [C] shown in Fig.M6 with lock paint.

Dropping envelope level at the beginning of track.

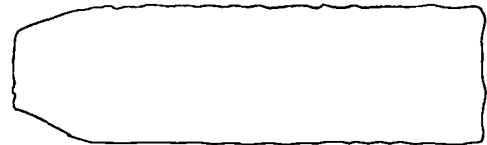


Fig. M10

Dropping envelope level at the end of track.



Fig. M11

Envelope is adjusted properly. (No envelope drop)



Fig. M12

DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Main Mechanism

This procedure starts with the condition that the Cabinet Parts and Front Loading Assembly have been removed. (Refer to the Cabinet Disassembly Instructions of Section 1.) Also, all the following procedures for adjustment and parts replacement should be done in Stop mode. 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]	Motor Holder Assembly	T	DM1 DM4 DM5	3(S-1), (P-7) Loading Belt	(+)
[2]	[1]	Loading Motor Assembly	T	DM1 MD3 DM4	2(S-2), CN2902	
[3]	[1]	Cassette Drive Lever Assembly	T	DM1 DM4		(+)
[4]	[1]	Pinch Roller Arm Assembly	T	DM1 DM4	(C-1) Pinch Roller Spring	
[5]	[1]	Pinch Arm Assembly	T	DM1 DM4		
[6]	[1]	Cam	T	DM1 DM4		(+) See Fig. DM4
[7]	[1]	Pulley Assembly	T	DM1 DM5	Loading Belt (W-1)	(+)
[8]	[8]	Joint CBA	T/B	DM1 DM2 DM3 DM6 DM7	(S-3), CN2801, CN2902, CL2902, CL2901	For Connecting, Refer to Connectors' Points
[9]	[9]	Head Amp CBA	T/B	DM1 DM2 DM3 DM7	(S-4), (S-14) CN02, CN03, CL02	For Connecting, Refer to Connectors' Points.
[10]	[8]	Mode SW CBA	B	DM2 DM7	*(L-1)	
[11]	[11]	Arm Idler Assembly	T	DM1 DM8	Clutch Bushing	
[12]	[12]	Clutch Assembly	B	DM2 DM8	(C-2), (W-2) Capstan Belt	
[13]	[9]	Capstan Motor Unit	B	DM2 DM9	3(S-5)	
[14]	[1]	M Lever Holder	T	DM1 DM10	(S-6)	
[15]	[1]	Kick Arm Holder	B	DM2 DM10		
[16]	[15]	Kick Arm	B	DM2 DM10	Bushing	
[17]	[17]	Mode Change Lever	T	DM1 DM11	*2(L-2)	(+)
[18]	[1]	Main Lever Assembly	T	DM1 DM12	*(L-3)	
[19]	[19]	Tape Guide Assembly	T	DM1 DM12	*(P-1), *(L-4)	See Fig. DM12
[20]	[20]	A/C Head Assembly	T	DM1 DM13	Nylon Nut, Head Height Adjustment Spring	See Fig. DM13
[21]	[21]	Tension Lever Sub Assembly	T	DM1 DM14	*(L-5)	
[22]	[21]	Band Brake Sub Assembly	T	DM1 DM14	(S-7), *(L-6)	
[23]	[17]	M Brake (S)	T	DM1 DM15	*(P-2), *(L-7)	When reassembling, hook the Spring after installation of Mode Change Lever.

STEP /LOC. NO.	START -ING NO.	PART		REMOVAL		INSTALLATION
				FIG. NO.	REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER	ADJUSTMENT CONDITION
[24]	[17]	M Brake (S) Lever	T	DM1 DM15		
[25]	[17]	S Brake Arm	T	DM1 DM15	*(P-3)	When reassembling, hook the Spring after installation of Mode Change Lever.
[26]	[9]	M Brake (T) Assembly	T	DM1 DM15		
[27]	[17]	T Brake Arm Assembly	T	DM1 DM15	*(P-4)	When reassembling, hook the Spring after installation of Mode Change Lever
[28]	[17]	Reel Base Assemblies (S+T)	T	DM1 DM16	2 Poly Slider Washers	
[29]	[29]	Earth Brush Assembly	B	DM2 DM17 DM18	(S-8)	When reassembling, check that the brush is within 1 mm of center of shaft.
[30]	[9]	Cylinder Drum Assembly	T	DM1 DM17	3(S-9)	
[31]	[1]	Moving Guide Assembly	T	DM1 DM19		(+)
[32]	[1]	Moving Guide T Assembly	T	DM1 DM19		(+)
[33]	[33]	FE Head	T	DM1 DM19	(S-10)	
[34]	[34]	Main Prism	T	DM1 DM19	(S-11)	
[35]	[1]	Loading Arm M Assembly	B	DM2 DM20	(C-3)	(+)When installing, match the marks.
[36]	[1]	Loading Gear A	B	DM2 DM20		(+)
[37]	[1]	Loading Gear B	B	DM2 DM20		(+)
[38]	[38]	Rec Arm	B	DM2 DM21	(S-12),*(P-5)	
[39]	[38]	BT Drive Arm	B	DM2 DM21	(S-13), (P-6)	
*[40]	[40]	Cleaning Head	T	DM1	(C-4)	

①

②

③

④

⑤

⑥

⑦

- 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: The start No. followed by corresponding part to be removed at this stage. For example, Arm Idler Assembly [11] can be removed without removing any other parts. But BT Drive Arm [39] can be removed only after removing Rec Arm [38].
- ③: Parts to be removed or installed.
- ④: Location of part; T=Top, B=Bottom, R=Right, L=Left
- ⑤: Fig. No. shows Procedure or Part Location
- ⑥: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or desoldered. S=Screw, W=Washer, C=Cut Washer, P=Spring, *=Unhook/Unlock/Release/Unplug/Desolder
2(C-2) = two Cut Washers(C-2), 2(L-2) = two Locking Tabs(L-2)
- ⑦: Adjustment Information for Installation
(+): Refer to Deck Exploded Views for lubrication information.

*[40] ----- For Head Cleaner models only

Top View

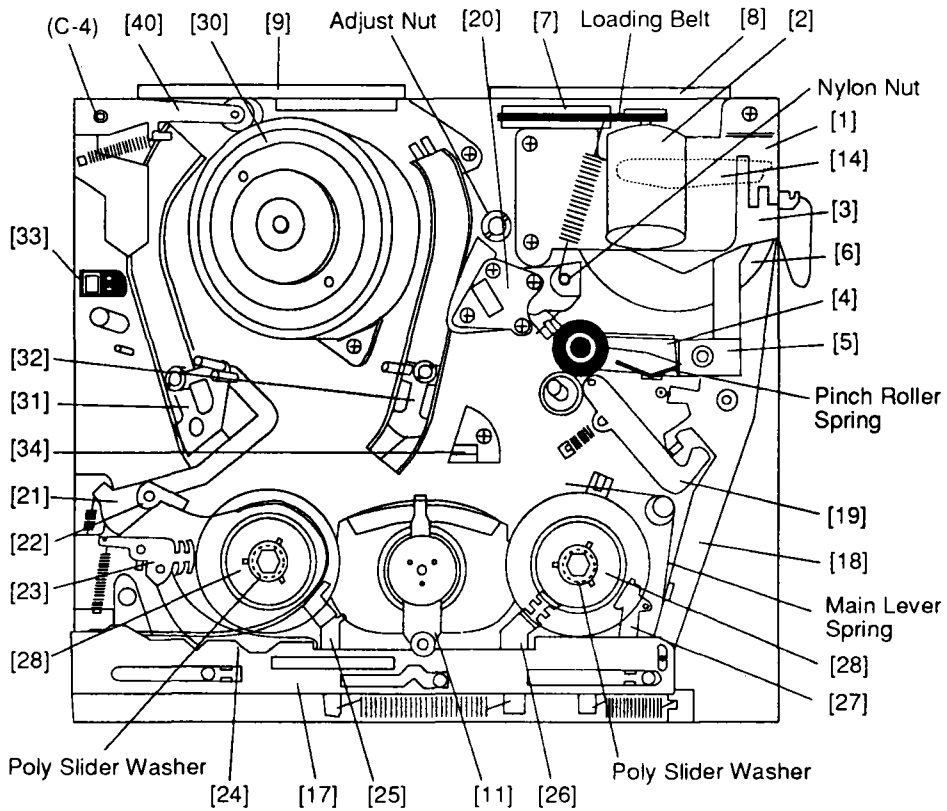


Fig. DM1

Bottom View

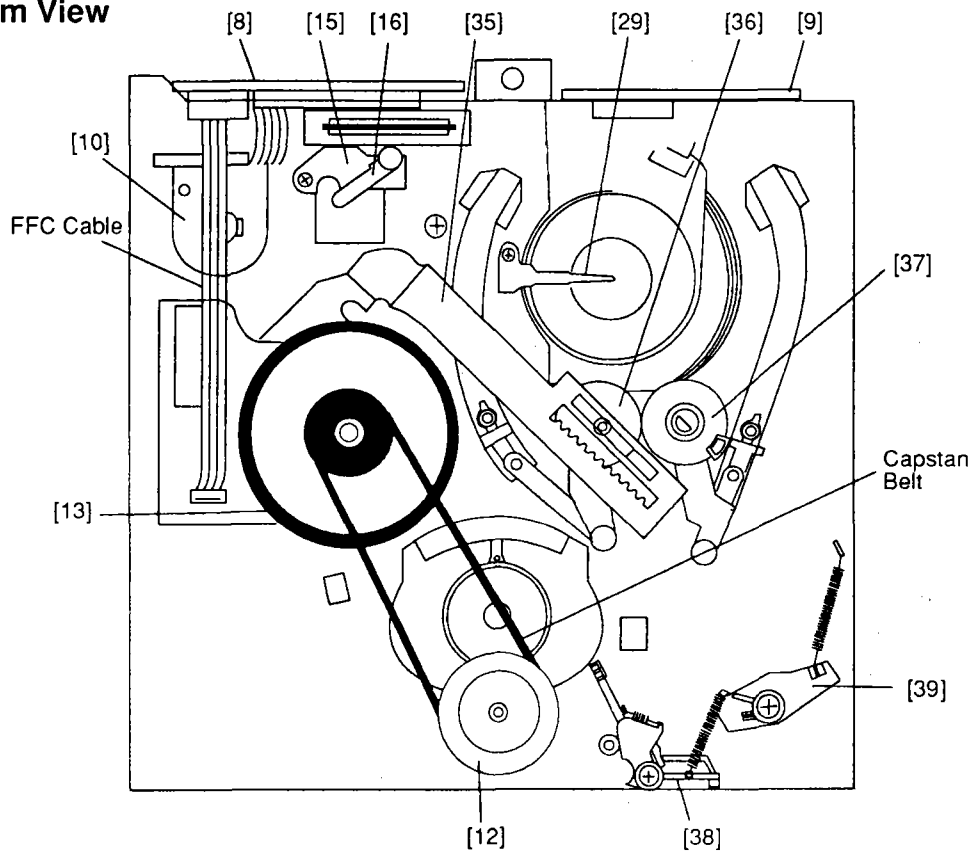
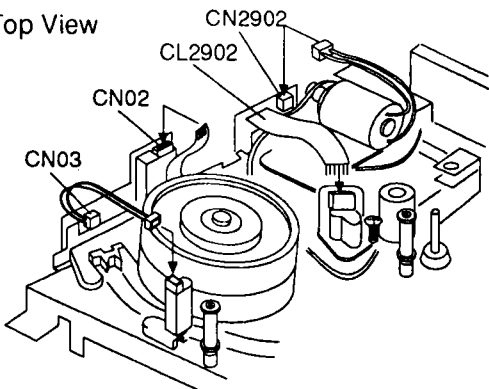


Fig. DM2

Deck Connectors

Note: Disconnect Connectors shown below before disassembling the Deck.

Top View



Bottom View

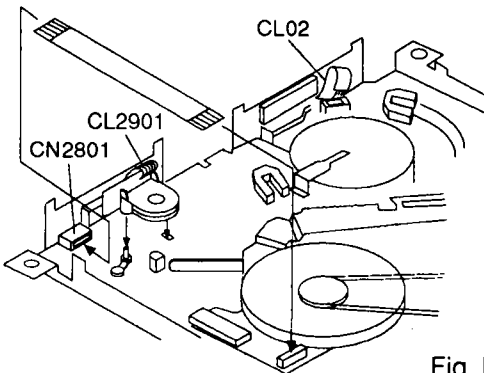


Fig. DM3

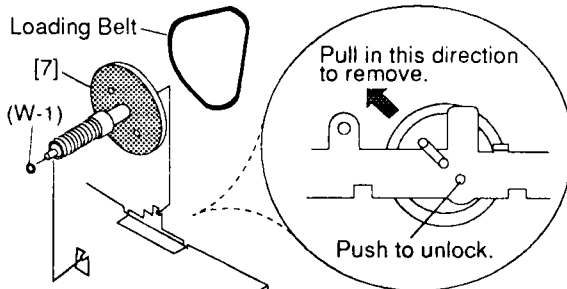


Fig. DM5

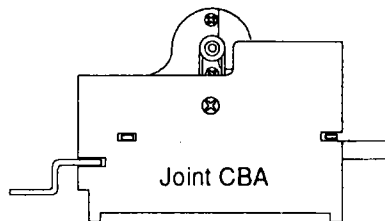


Fig. DM6

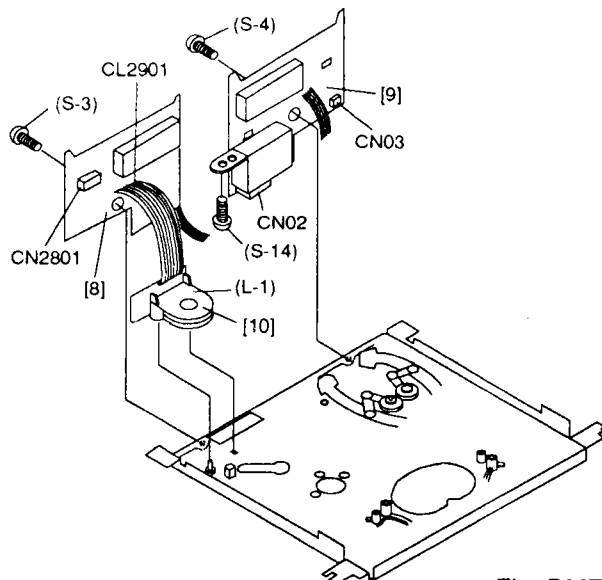


Fig. DM7

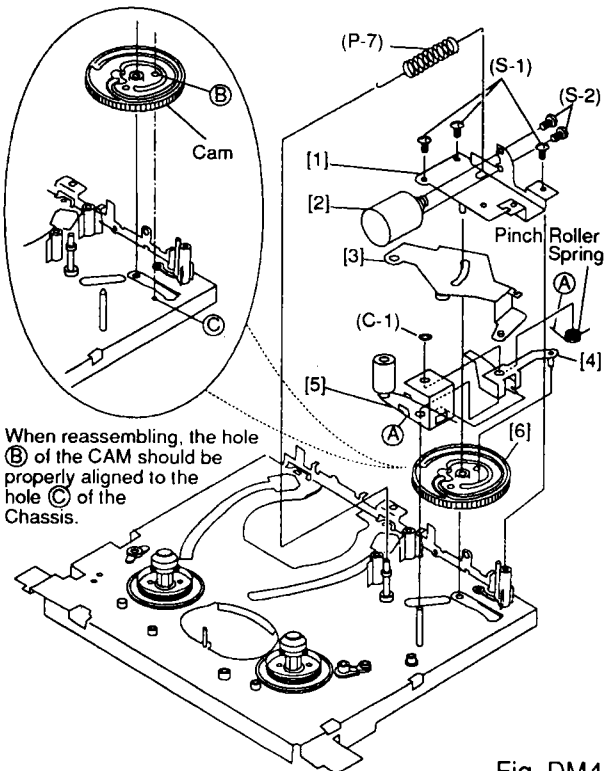


Fig. DM4

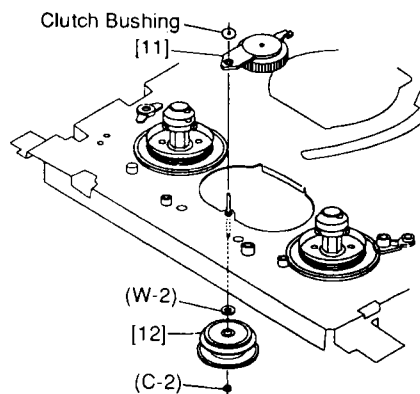


Fig. DM8

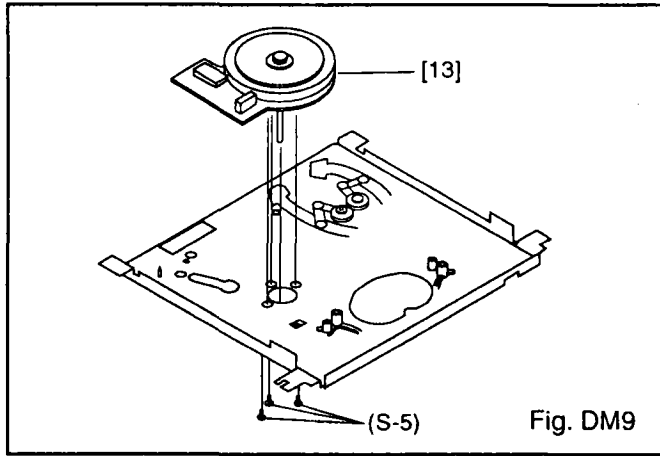


Fig. DM9

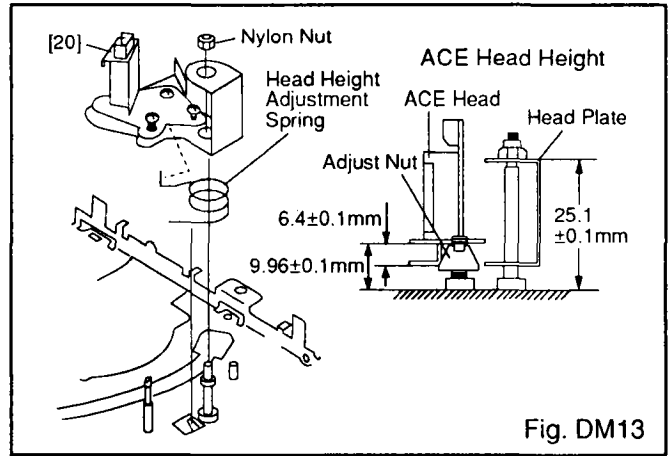


Fig. DM13

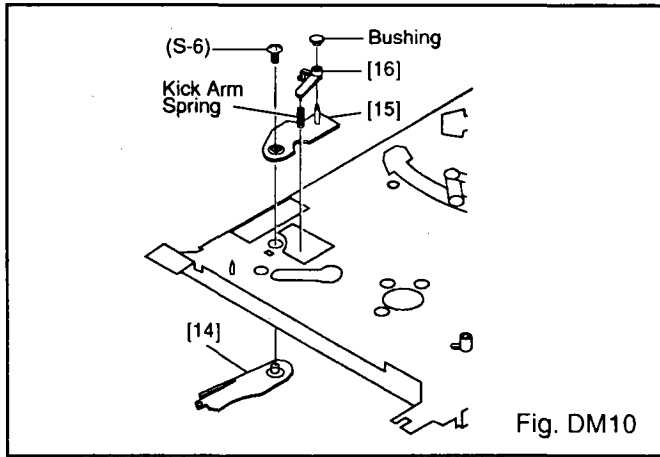


Fig. DM10

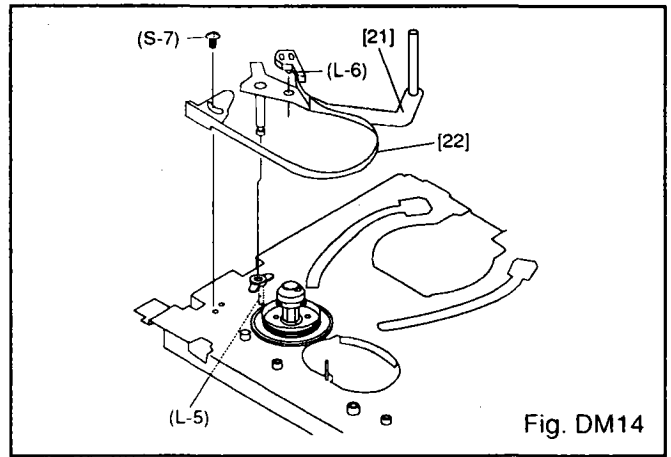


Fig. DM14

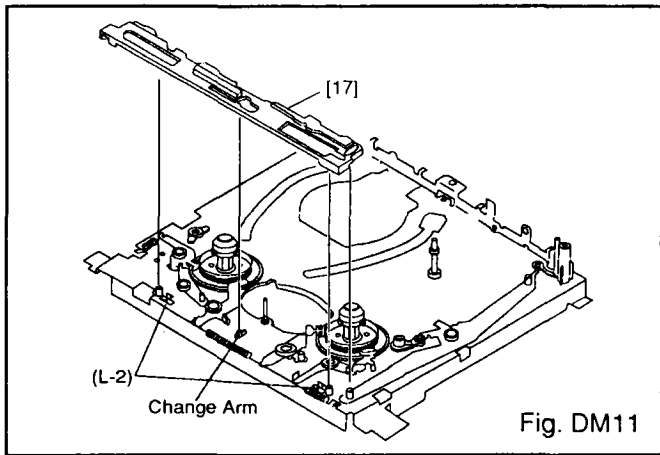


Fig. DM11

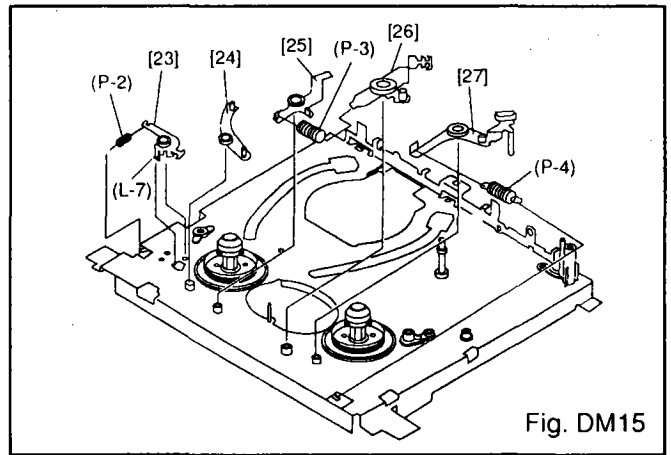


Fig. DM15

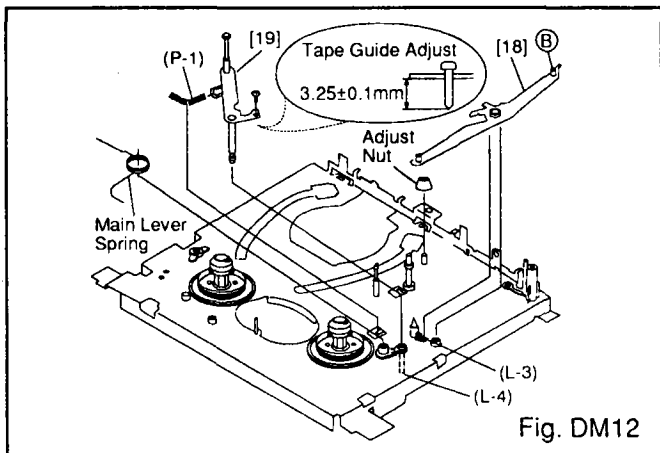


Fig. DM12

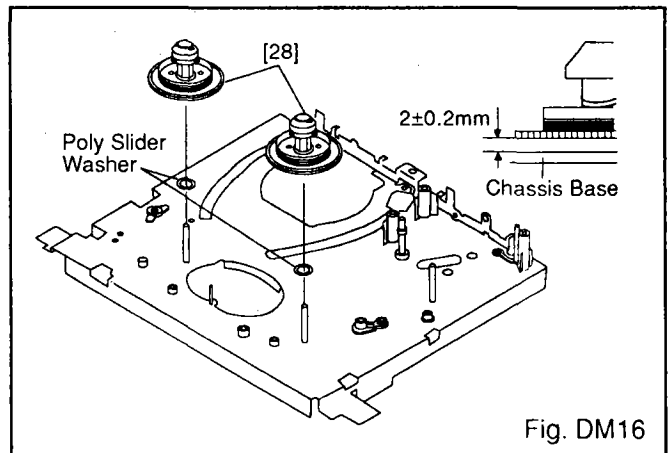


Fig. DM16

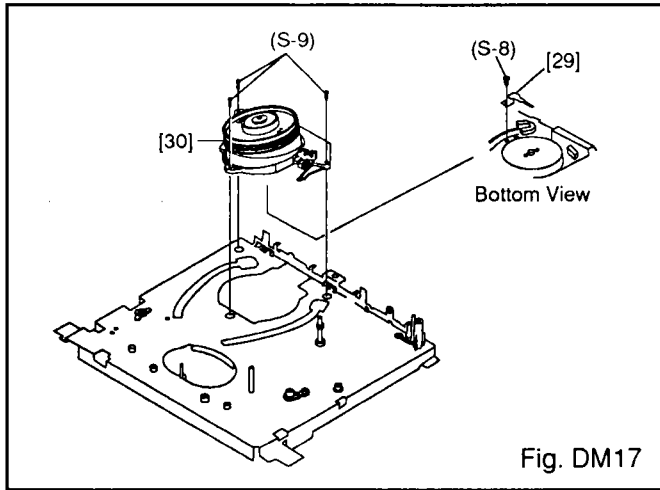


Fig. DM17

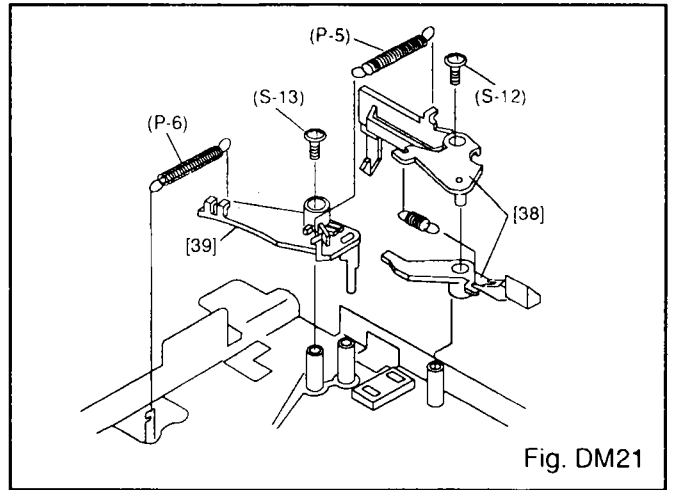


Fig. DM21

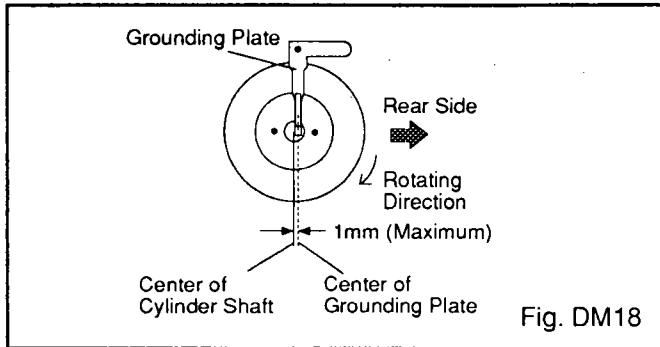


Fig. DM18

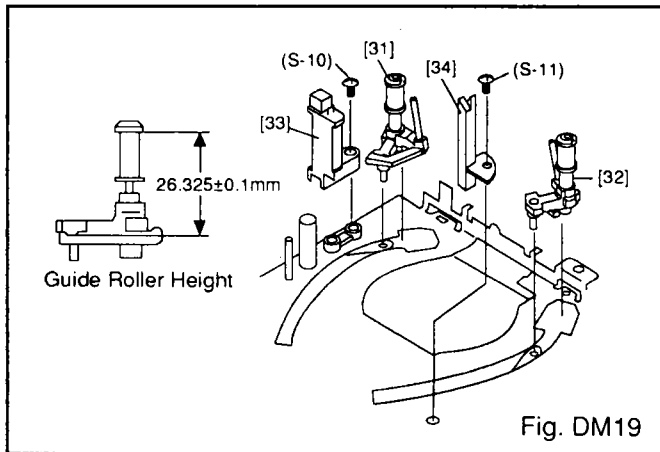


Fig. DM19

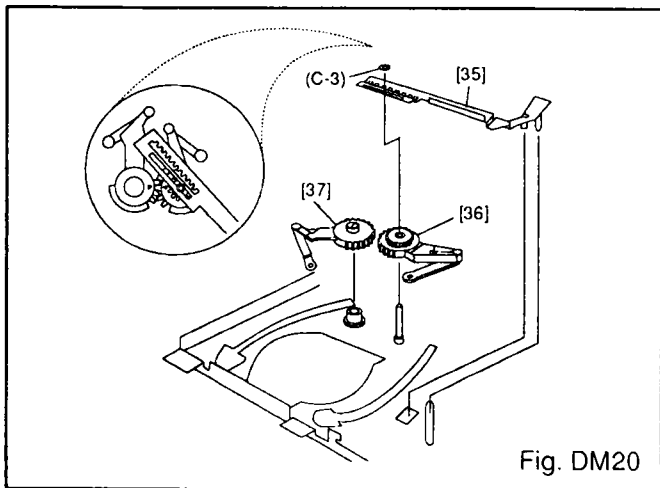


Fig. DM20

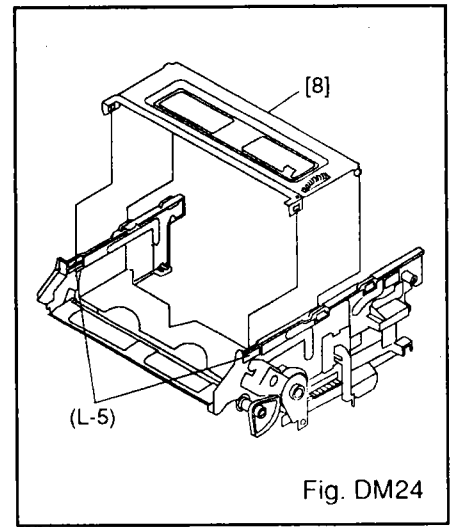
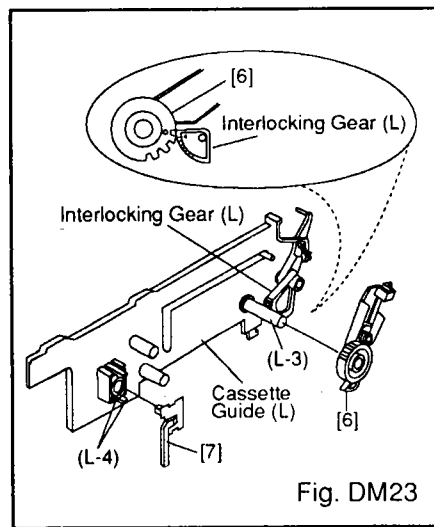
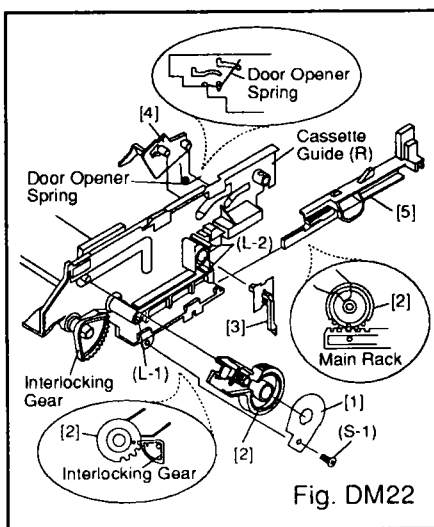
Front Loading Assembly

This procedure starts with the condition that the Front Loading Assembly has been removed from the chassis. 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]	Drive Gear Reinforcement	R	DM22	(S-1)	
[2]	[1]	Cassette Drive Gear (R)	R	DM22	*(L-1)	Refer to the setting condition in Fig. DM22.
[3]	[3]	Prism (R)	R	DM22	*2(L-2)	
[4]	[4]	Door Opener	R	DM22	Door Opener Spring	When installing the Door Opener Spring, refer to the setting condition in Fig. DM22.
[5]	[1]	Rack Assembly	R	DM22		
[6]	[6]	Cassette Drive Gear (L)	L	DM23	*(L-3)	When installing, refer to the setting condition in Fig. DM23.
[7]	[7]	Prism (L)	L	DM23	*2(L-4)	
[8]	[8]	Cassette Holder Plate	T	DM24	*2(L-5)	

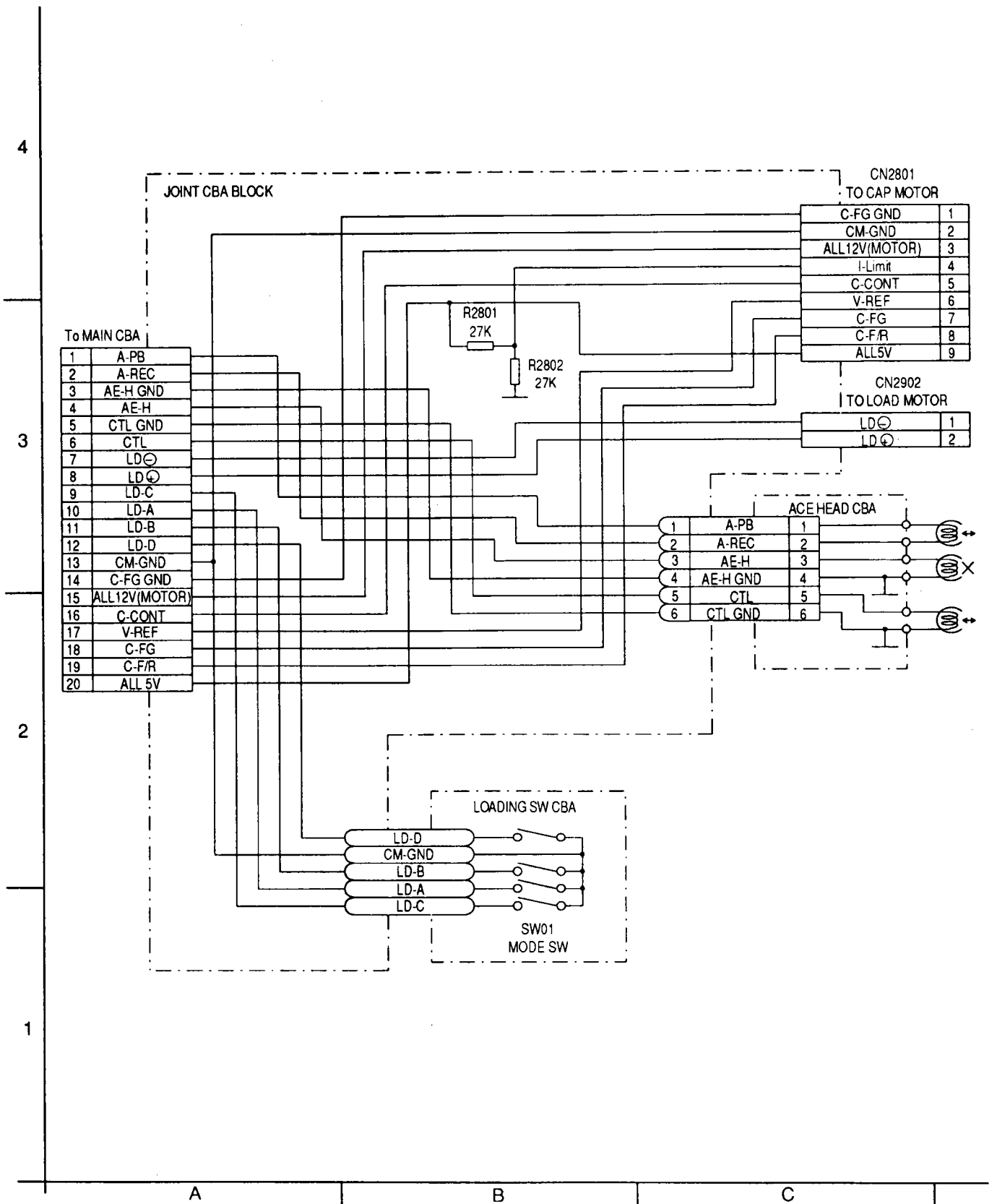


- ①: Order of steps in Procedure. When reassembling, follow the steps in reverse order. These numbers are also used as the identification (Location) No. of parts in Figures.
- ②: The start No. followed by corresponding part to be removed at this stage. For example, Prism (R) [3] can be removed without removing any other parts. But Cassette Drive Gear (R) [2] can be removed only after removing Drive Gear Reinforcement [1].
- ③: Parts to be removed or installed.
- ④: Location of part; T=Top, B=Bottom, R=Right, L=Left
- ⑤: Fig. No. shows Procedure or Part Location
- ⑥: Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered. P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook/Unlock/Release/Unplug/Desolder
2(C-2) = 2 Cut Washer(C-2), 2(L-2) = 2 Locking Clips(L-2), (N-1) = 1 Locking Pin(N-1)
- ⑦: Adjustment Information for Installation (+): Refer to Deck Exploded Views for lubrication information.



SCHEMATIC DIAGRAMS AND CBA'S

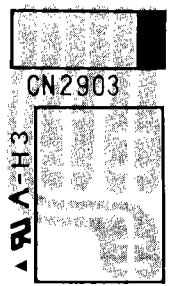
JOINT/MODE SW/ACE HEAD



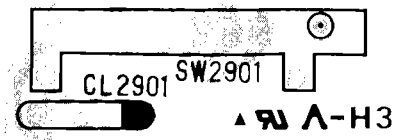
ACE HEAD (Top View)

MODE SW (Top View)

4



BK7010F01002C

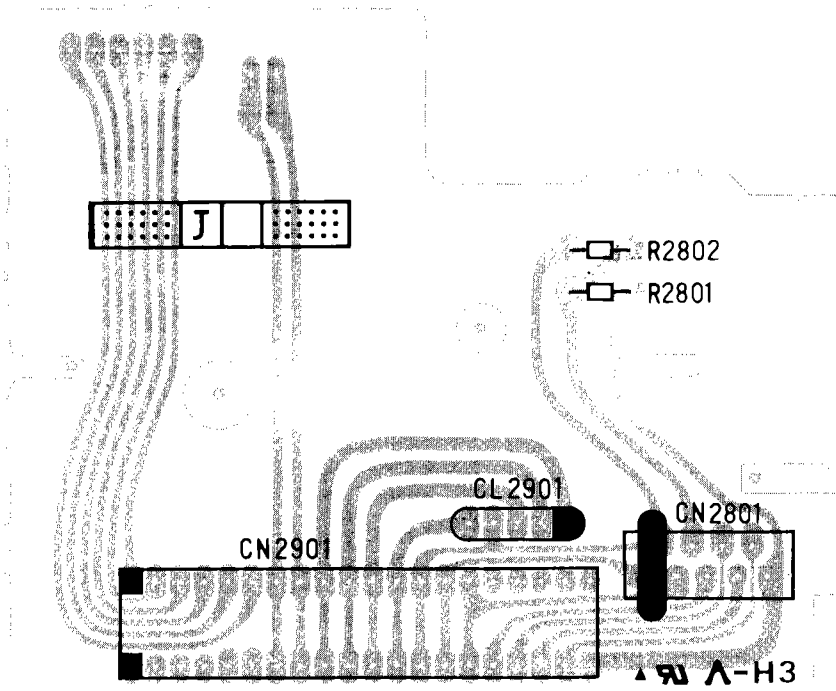


BK7010F01002B

3

JOINT (Top View)

2



1

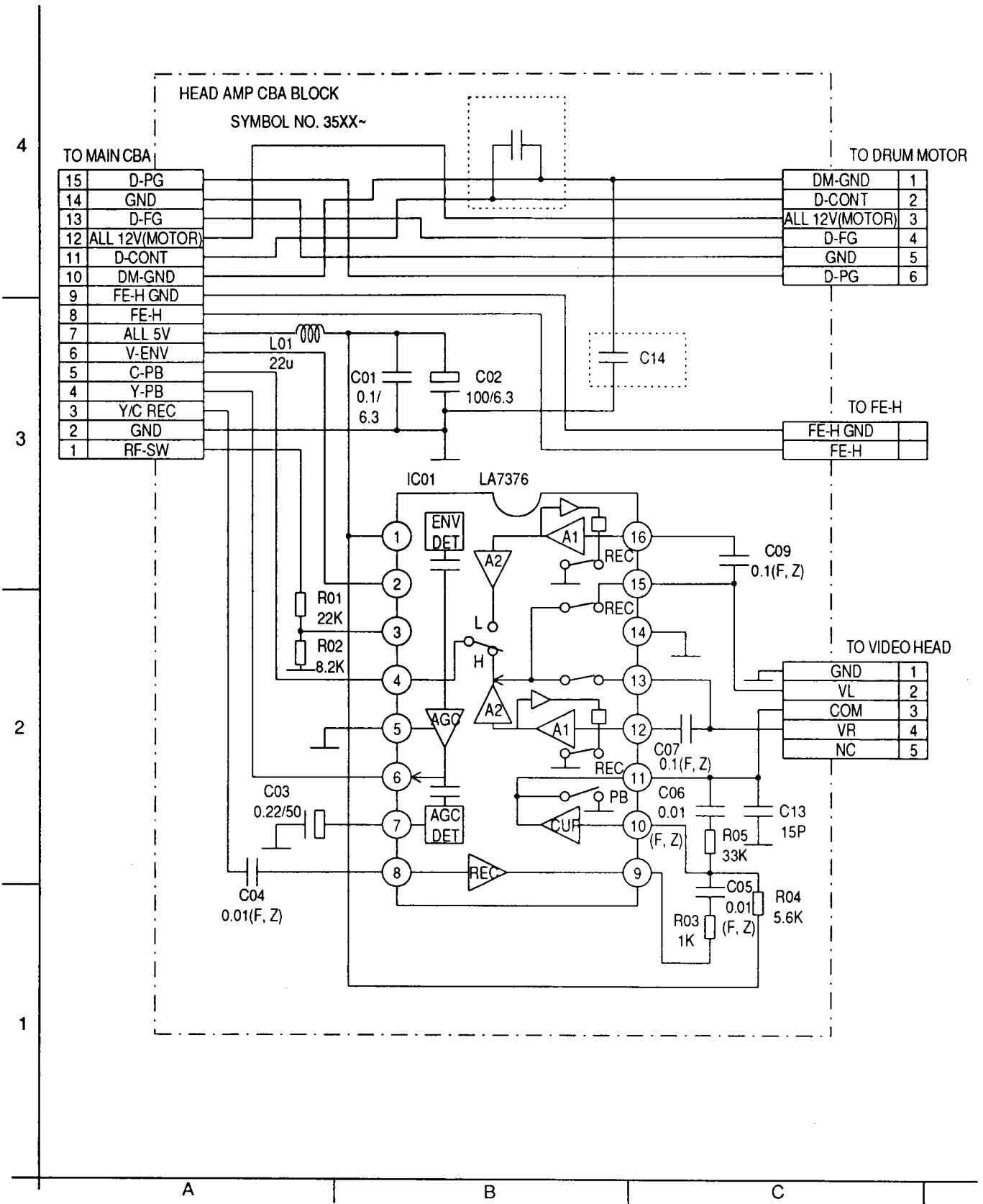
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A

B

C

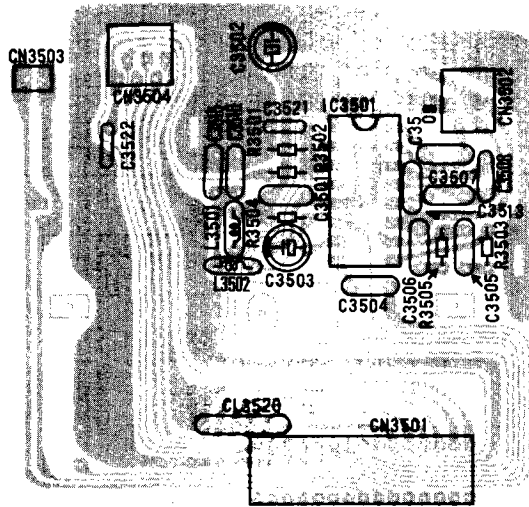
HEAD AMP



4

HEAD AMP (Top View)

3



BK7010F01004-3

2

BK7010F01004-3

1

A

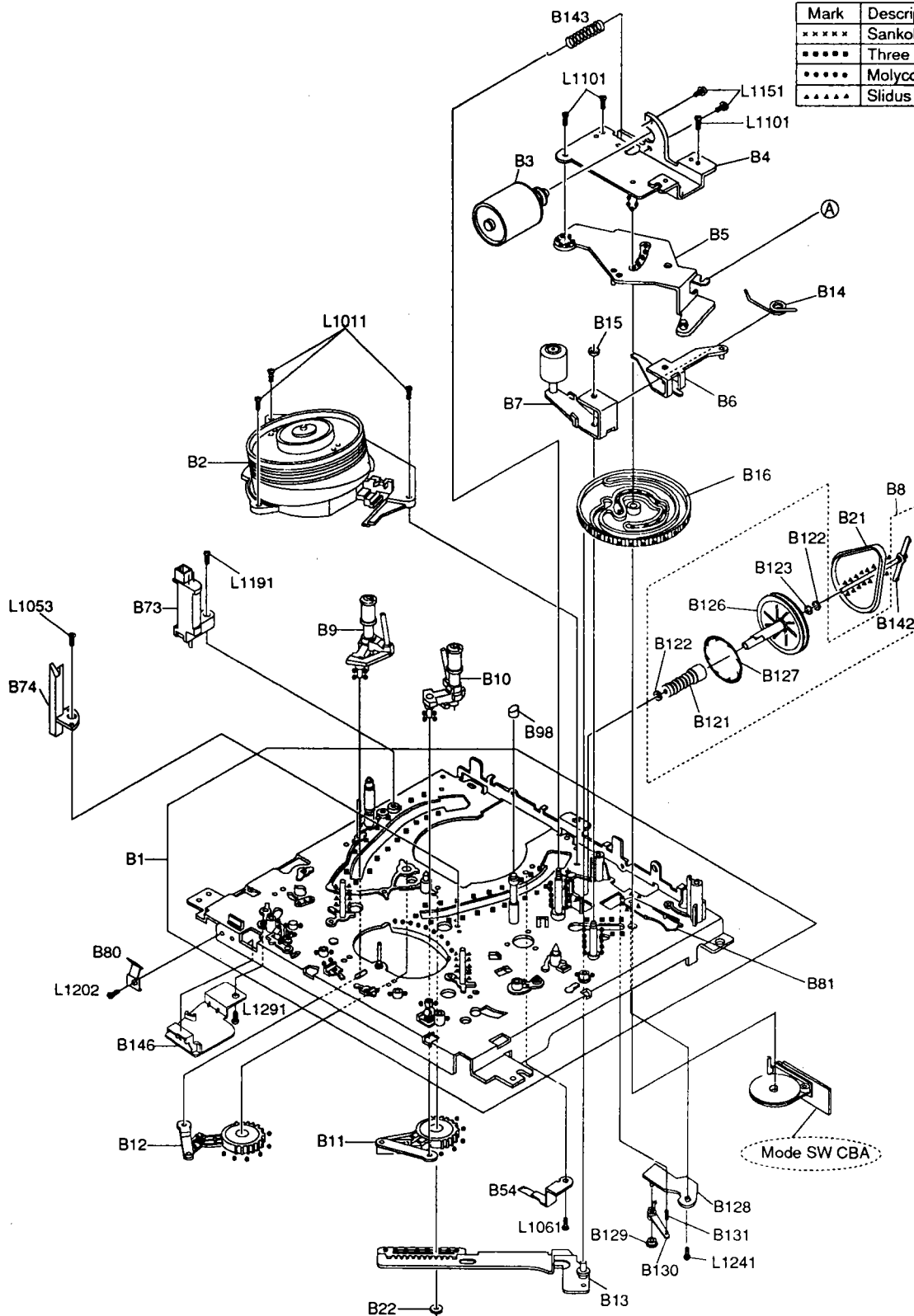
B

C

DECK EXPLODED VIEWS

View 1

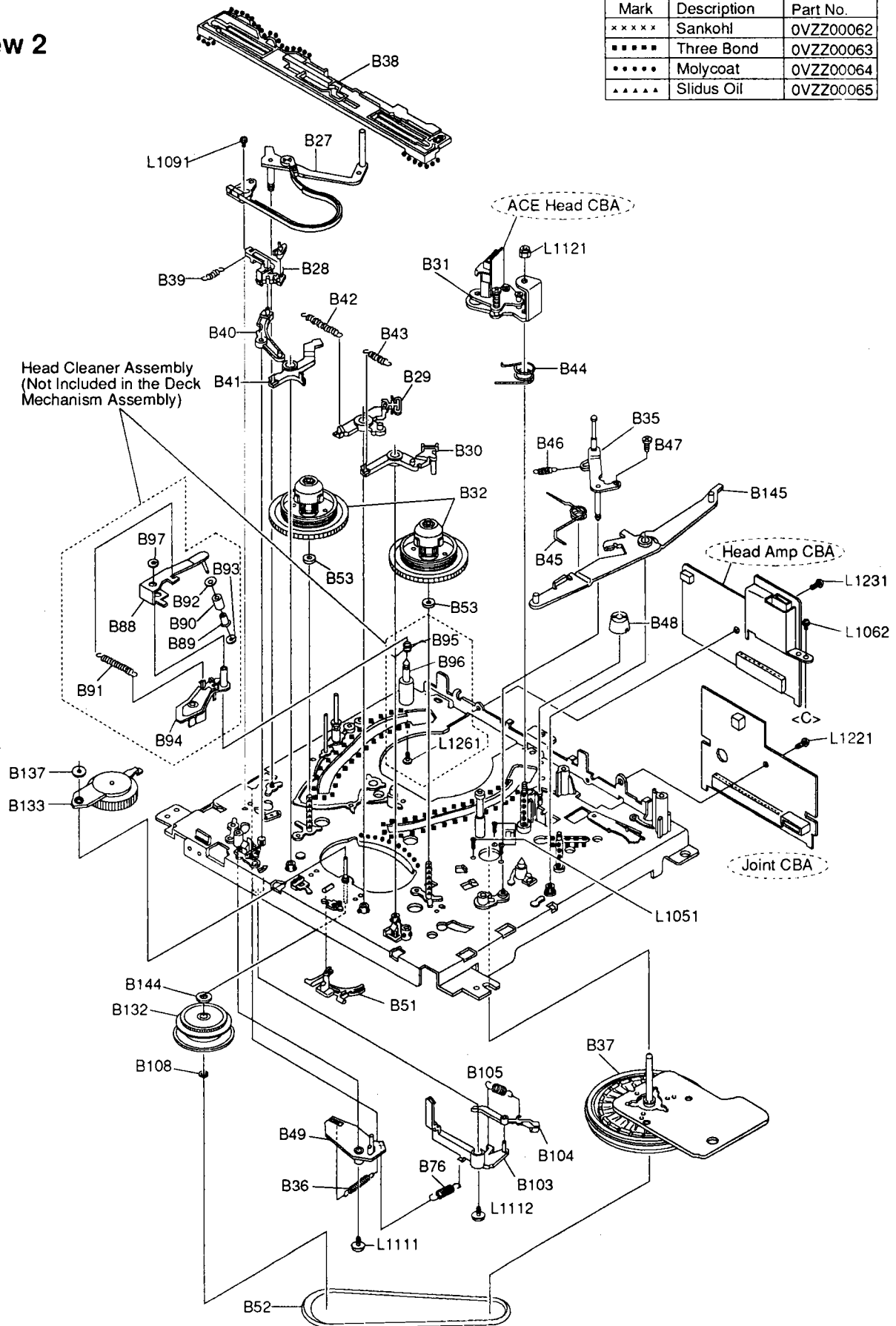
Mark	Description	Part No.
*****	Sankohl	0VZZ00062
*****	Three Bond	0VZZ00063
*****	Malycoat	0VZZ00064
*****	Slidus Oil	0VZZ00065



See the Deck Electrical Parts List.

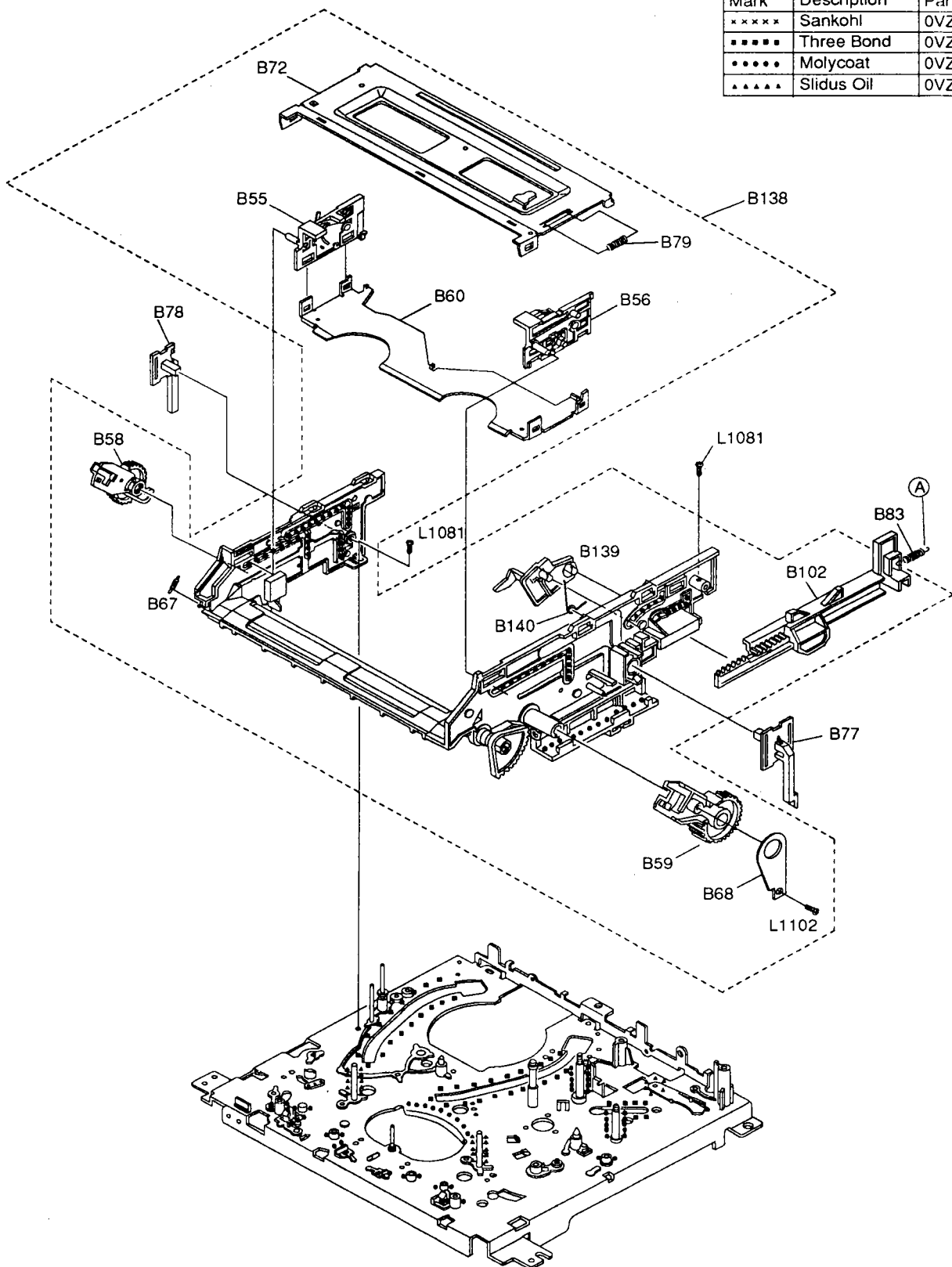
View 2

Mark	Description	Part No.
*****	SankohI	0VZZ00062
*****	Three Bond	0VZZ00063
*****	Molycoat	0VZZ00064
*****	Slidus Oil	0VZZ00065



View 3

Mark	Description	Part No.
*****	Sankohl	0VZZ00062
■■■■■	Three Bond	0VZZ00063
●●●●●	Molycoat	0VZZ00064
▲▲▲▲▲	Slidus Oil	0VZZ00065



DECK MECHANICAL PARTS LIST

EXPLODED VIEW (1) DECK PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
DECK	*9A04683000	DECK ASSY,CPD001/VM2102...(VIEW 1-3)	
B1	*9A04728200	CHASSIS ASSY	
B2	*9A04714700	SYLINDER ASSY,(U6)	
B2	*9A04711400	SYLINDER ASSY,(SAM)	
B3	*9A03920400	LDG MOTOR PREPARATION	
B4	*9A03914400	MOTOR HOLDER CALKING ASSY	
B5	*9A04719100	CASSETTE DRIVE LEVER ASSY	
B6	*9A04728900	PINCH ROLLER ARM ASSY	
B7	*9A03902800	PINCH ARM ASSY	
B7	*9A04729000	PINCH ARM ASSY	
B8	*9A04727500	PULLEY ASSY	
B9	*9A04728300	MOVING GUIDE S ASSY	
B10	*9A04728400	MOVING GUIDE T ASSY	
B11	*9A04727400	LOADING ARM T ASSY	
B12	*9A03917900	LOADING ARM (B) ASSY	
B13	*9A04723500	LOADING ARM M ASSY	
B14	*9A03917100	PINCH ROLLER SP,(U5)	
B15	*9A03913900	WASHER,LUMIRROR	
B16	*9A04710200	CAM	
B21	*9A03914600	LDG BELT	
B21	*9A04719400	BELT LDG	
B22	*9A04723300	P.S.W,(CUT)	
B54	*9A04721900	GROUND BRUSH ASSY	
B54	*9A04722700	GROUND BRUSH ASSY	
B54	*9A04724600	GROUND BRUSH ASSY	
B73	*9A03894200	FE HEAD,HVHFH0002A	
B73	*9A04709000	FE HEAD,VTR-1X2ERS11-109	
B74	*9A04714600	LUMINESCENCE PRISM(B)	
B74	*9A04763700	LUMINESCENCE PRISM(B)	
B80	*9A03915400	SPRING,FOR PRE.PACK	
B81	*9A04713600	M LEVER HOLDER	
B98	*9A04725400	T,G CAP (2)	
B121	*9A03903500	WORM	
B122	*9A03911300	P.S.W, (C)	
B123	*9A03914100	P.S.W,(WORM THRUST)	
B126	*9A04713700	PULLEY	
B127	*9A04725500	PULLEY FELT	
B128	*9A04713500	KICK ARM HOLDER	
B129	*9A03915300	PRESS FIT BUSH	
B130	*9A04720500	KICK ARM	
B131	*9A04721100	KICK ARM SPRING	
B142	*9A03919400	SHAFT LOCK ASSY	
B143	*9A04725000	GROUND SPRING(U7)	
B146	*9A04763500	SPRING SUPPORTER	
L1011	9A03894900	SCREW,C-TITE PAN+ 3*9	
L1053	9A03895100	SCREW,S-TITE PAN 2.6*6	
L1061	9A03925000	SCREW,S-TITE PAN+ 2.6*4	
L1101	9A02646400	SCREW,P-TITE BIND 3*8	
L1151	9A03894100	SCREW,SEMS PAN+ 3*4	
L1191	9A03895000	SCREW,P-TITE PAN 2.6*10	
L1202	9A03894800	SCREW,B-TITE PAN+ 3*6	
L1241	9A02791900	SCREW,P-TITE BIND 2*6	
L1291	9A04763600	SCREW,P-TITE BIND 2.6*6	
- - - - -		JOINT-B (MODE SW) PCB ASSYSee Electrical List (DECK)

EXPLODED VIEW (2) DECK PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
B27	*9A03919600	BAND BRAKE ASSY	
B28	*9A03917600	MAIN BRAKE (S) ASSY	
B29	*9A03917700	MAIN BRAKE (T) ASSY	
B30	*9A03919300	T BRAKE ARM ASSY	
B31	*9A03919700	AC HEAD ASSY	
B32	*9A03920000	REEL BASE ASSY	
B34	*9A03909100	MAIN LEVER ASSY	
B35	*9A03909300	TAPE GUIDE ASSY	
B36	*9A03918900	TENS.LEVER SP ASSY	
B37	*9A03895700	CAPSTAN MOTOR,F2QKB92	
B38	*9A04711200	MODE CHANGE LEVER	
B39	*9A03910400	M BRAKE (S) SPRING	
B40	*9A03898700	M BRAKE (S) LEVER	
B41	*9A04714500	S BRAKE ARM	
B42	*9A03910700	M BRAKE(T) ARM SPRING	
B43	*9A03910500	T BRAKE SPRING	
B44	*9A03909700	HEAD ADJUST SPRING	
B45	*9A03910000	M LEVER SPRING	
B46	*9A03910600	TAPE GUIDE ARM SPRING	
B47	*9A03913700	SCREW,T./GUIDE ARM ADJUST	
B48	*9A04723200	ADJUST NUT (B)	
B49	*9A04711600	BT DRIVE ARM	
B51	*9A04716700	CHANGE ARM	
B52	*9A03903400	BELT,FWD	
B52	*9A04719300	BELT,FWD	
B53	*9A04717800	P.S.W B	
B76	*9A03910300	REC ARM SPRING	
B103	*9A04712700	REC ARM A	
B104	*9A04712800	REC ARM B	
B105	*9A03955000	LEC SPRING	
B108	*9A03911500	P.S.W, (F)	
B132	*9A04727700	CLUTCH ASSY	
B133	*9A04728000	ARM IDLER ASS	
B137	*9A04721700	BUSH CLUTCH	
B144	*9A04721400	CLUTCH WASHER	
L1051	9A03895100	SCREW,S-TITE PAN 2.6*6	
L1062	9A03925000	SCREW,S-TITE PAN+ 2.6*4	
L1091	9A03894700	SCREW,S-TITE CUP+ 3*6	
L1111	9A04709200	SCREW,P-TITE WASHER 3*8	
L1112	9A04709200	SCREW,P-TITE WASHER 3*8	
L1121	9A03896100	NUT,HEXAGON M3	
L1221	*9A03915600	SCREW,SPECIAL	
L1231	*9A03916100	SCREW,SPACER ASSY	
	*9A04728500	PRV (HEAD AMP) PCB ASSYSee Electrical List (DECK)
	- - - - -	JOINT PCB ASSYSee Electrical List (DECK)
	- - - - -	JOINT-C (ACE HEAD) PCB ASSYSee Electrical List (DECK)

EXPLODED VIEW (3) DECK PARTS LIST

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
B55	*9A03918300	C.SLIDER (L) ASSY	
B56	*9A03918400	C.SLIDER (R) ASSY	
B58	*9A03918700	C.D. GEAR (L) ASSY	
B59	*9A03918800	C.D. GEAR (R) ASSY	
B60	*9A04716600	CASSETTE PLATE,A	
B67	*9A03917200	FRT.DOOR OPENER SPRING	
B68	*9A03913100	D.GEAR REINFORCEMEN	
B72	*9A03898300	UPPER PLATE	
B77	*9A03901700	PRISM,(R)	
B78	*9A03901800	PRISM,(L)	
B79	*9A04719200	EARTH SPRING	
B83	*9A03916800	RACK SPRING	
B102	*9A03898200	FL RACK	
B138	*9A03897400	FL ASSY	
B139	*9A04711900	DOOR OPENER	
B140	*9A03908600	DOOR OPENER SPRING	
L1081	*9A03894500	SCREW,S-TITE BIND 3*6	
L1102	*9A02646400	SCREW,P-TITE BIND 3*8	

DECK ELECTRICAL PARTS LIST

NOTE:

As regards the resistors and capacitors, refer to the circuit diagrams and the PCB assy drawings contained in this manual.

JOINT PCB ASSY...[DECK]

REF. NO.	PARTS NO.	DESCRIPTION
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*9A04728700	JOINT PCB ASSY	(Consists of JOINT-A/B/C,PCB ASSY)
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*9A03893900	PCB,ECK JOINT	(Consists of JOINT-A/B/C,PCB)
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JOINT-A PCB ASSY

CL2901	9A03897000	FFC CABLE,9PFFC/Pl.25/120
CL2902	9A03896600	JUMPER WIRE, 5P
CN2801	9A03896500	JUMPER WIRE, 6P
CN2801	9A03895200	CONN,TOP 9P 9602S09C
CN2801	9A03922800	CONN,TOP 9P 1L-FPC-9S-S1
CN2801	9A03922400	CONN,TOP 9P 8370 091 000
CN2801	9A03922700	CONN,TOP 9P 09FE-BT-M
CN2801	9A03922900	CONN,TOP 9P CFF1109-0101
CN2901	9A01744500	CONN,ANGLE SOCKET20P
CN2902	9A01896600	CONN,SIDE 2P

JOINT-B (MODE SW) PCB ASSY

SW2901	9A04709500	MODE SW,HMW0420-710010
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JOINT-C (ACE HEAD) PCB ASSY

CN2903	9A03895500	CONN,CABLE 6P HBRK-06-RI
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HEAD AMP PCB ASSY...[DECK]

REF. NO.	PARTS NO.	DESCRIPTION
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	*9A04728500	PRV (HEAD AMP) PCB ASSY
	*9A03894000	PCB,PRV
2B2	9A04716300	SHIELD, TOP U7 2H
2B3	9A04716400	SHIELD, BOTTOM U7 2H
CL3502	9A03888400	JUMPER WIRE, 6P
CN3501	9A01764000	ANGLE SOCKET,15P
CN3502	9A03895300	CONN,SIDE 5P 9602S-05F
CN3502	9A03922500	CONN,SIDE 5P 00 8370 057
CN3503	9A03896700	CONNECTOR ASSY, 2P
IC3501	9A04709400	IC,LA7376
L3501	9A02627400	INDUCTOR,22UH-K-AXT
L3501	9A02627300	INDUCTOR,22UH-K-AXT

MV-3400/MV-4800

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