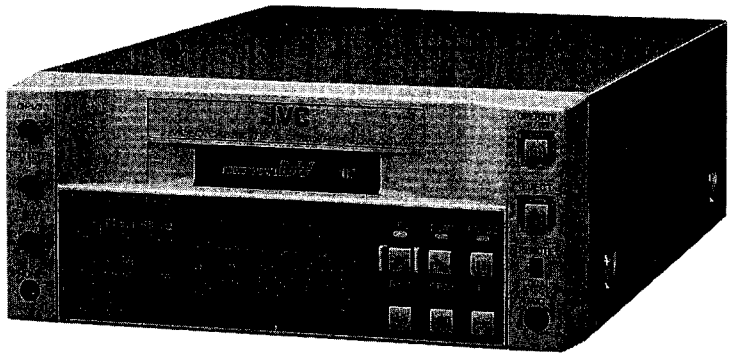
VIDE-V30201

JVC

SERVICE MANUAL

DV VIDEO CASSETTE RECORDER

BR-DV600U/BR-DV600E



Mini DV

PROFESSIONAL DV

No. 9377
March 2000

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Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded ( ) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

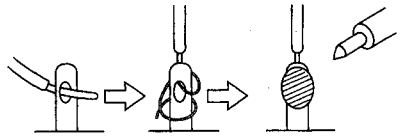


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

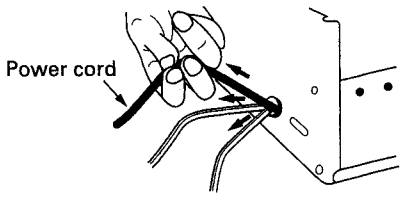


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number** : E03830-001
    2) **Required tool** : Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

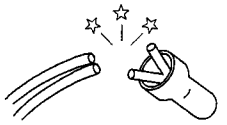


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

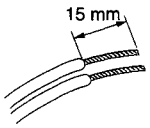


Fig.4

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

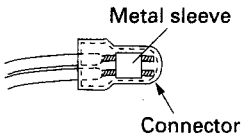


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

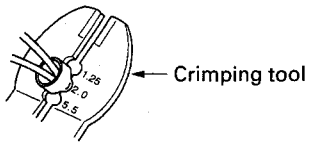


Fig.6

(5) Check the four points noted in Fig.7.

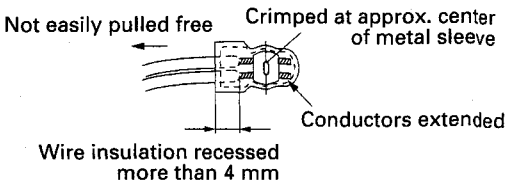


Fig.7

● Safety Check after Servicing

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

1. **Insulation resistance test**
Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

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

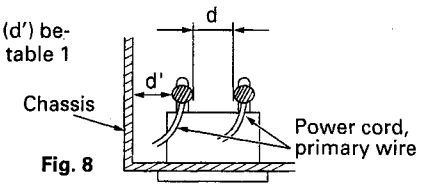


Fig. 8

4. **Leakage current test**
Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
Measuring Method : (Power ON)
Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

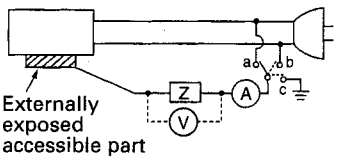


Fig. 9

5. **Grounding (Class I model only)**
Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
Measuring Method:
Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

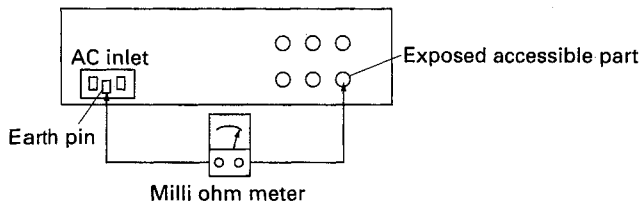


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 900 V 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 µF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

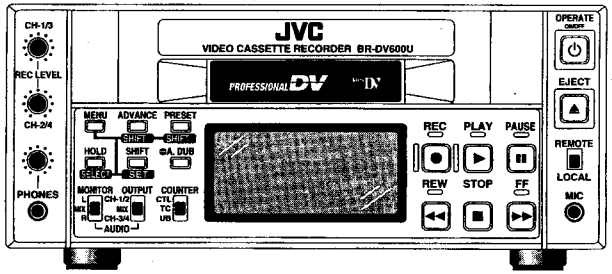
Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

JVC®

VIDEO CASSETTE RECORDER

BR-DV600U INSTRUCTIONS

Mini DV



Thank you for purchasing this JVC product.
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

This instruction book is made from 100% recycled paper.

For Customer Use:
Enter below the Serial No. which is located on the bottom of cabinet. Retain this information for future reference.

Model No. BR-DV600U

Serial No. _____

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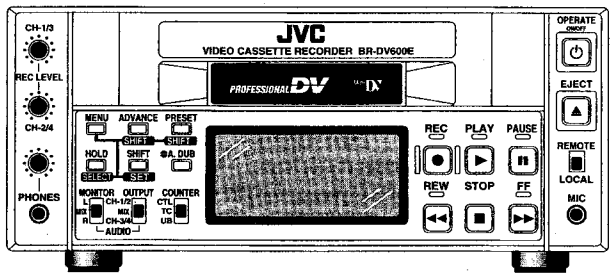
UI IE JVC®

VIDEO CASSETTE RECORDER

BR-DV600E INSTRUCTIONS

Mini DV



Thank you for purchasing this JVC product.
Before operating this unit, please read the instructions carefully to ensure the best possible performance.

This instruction book is made from 100% recycled paper.

SL96180

IMPORTANT SAFEGUARDS

1. Read all of these instructions.
2. Save these instructions for later use.
3. All warnings on the product and in the operating instructions should be adhered to.
4. Unplug this appliance system from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.
6. Do not use this appliance near water – for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
7. Do not place this appliance on an unstable cart, stand, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance.
   Use only with a cart or stand recommended by the manufacturer, or sold with the appliance. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

   PORTABLE CART WARNING
   (symbol provided by RETAC)

   S3126A
8. Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the appliance and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the appliance on a bed, sofa, rug, or other similar surface. This appliance should never be placed near or over a radiator or heat register. This appliance should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
9. This appliance should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company. For appliance designed to operate from battery power, refer to the operating instructions.
10. This appliance system is equipped with a 3-wire grounding type plug (a plug having a third (grounding) pin). This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding plug.
11. For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
12. Do not allow anything to rest on the power cord. Do not locate this appliance where the cord will be abused by persons walking on it.
13. Follow all warnings and instructions marked on the appliance.
14. Do not overload wall outlets and extension cords as this can result in fire or electric shock.
15. Never push objects of any kind into this appliance through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the appliance.
16. Do not attempt to service this appliance yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
17. Unplug this appliance from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    a. When the power cord or plug is damaged or frayed.
    b. If liquid has been spilled into the appliance.
    c. If the appliance has been exposed to rain or water.
    d. If the appliance does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to normal operation.
    e. If the appliance has been dropped or the cabinet has been damaged.
    f. When the appliance exhibits a distinct change in performance – this indicates a need for service.
18. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Upon completion of any service or repairs to this appliance, ask the service technician to perform routine safety checks to determine that the appliance is in safe operating condition.

Supplement

This equipment is in conformity with the provisions and protection requirements of the corresponding European Directives. This equipment is designed for professional video appliances and can be used in the following environments:

- residential area (in houses)
- commercial and light industry; e.g. office or theatres

This apparatus is designed for rack mounting or is used close to other apparatus.

In order to keep the best performance and furthermore for electromagnetic compatibility we recommend to use cables not exceeding the following lengths:

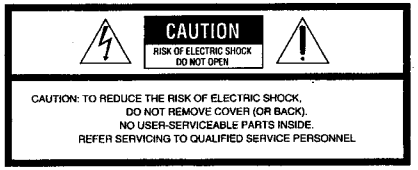
Port	Cable	Length
LINE IN	Coaxial Cable	10 meters
LINE OUT	Coaxial Cable	10 meters
VIDEO MONITOR OUT	Coaxial Cable	10 meters
COMPONENT Y IN	Coaxial Cable	10 meters
R-Y IN	Coaxial Cable	10 meters
B-Y IN	Coaxial Cable	10 meters
COMPONENT Y OUT	Coaxial Cable	10 meters
R-Y OUT	Coaxial Cable	10 meters
B-Y OUT	Coaxial Cable	10 meters
Y/C IN	Exclusive Cable	10 meters
Y/C OUT	Exclusive Cable	10 meters
SYNC IN	Coaxial Cable	10 meters
(TIMECODE IN)	Coaxial Cable	10 meters
TIMECODE OUT	Coaxial Cable	10 meters
AUDIO IN	Exclusive Cable	10 meters
AUDIO OUT	Exclusive Cable	10 meters
AUDIO MONITOR OUT	Exclusive Cable	10 meters
SERIAL REMOTE	Cable with RM-G30U	3 meters
REMOTE1(RS-422)	Exclusive Cable	10 meters
REMOTE2(JVC BUS)	Exclusive Cable	10 meters
DV IN/OUT	Exclusive Cable	5 meters
MIC	Cable with Microphone	5 meters
PHONES	Cable with Headphones	5 meters
AC IN	Exclusive Cable	5 meters
DC 12V	Exclusive Cable	5 meters

The inrush current of this apparatus is 8 amperes.

Caution:

- Where there are strong electromagnetic waves or magnetism, for example near a radio or TV transmitter, transformer, motor, etc., the picture and sound may be disturbed. In such a case, please keep the apparatus away from the sources of the disturbance.
- When the RM-G800U remote controller is used, the counter, etc. may malfunction due to interference generated by the peripheral equipment. In this case, consult your nearest JVC dealer.

SAFETY PRECAUTIONS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

This unit should be used with 120 V AC only.

CAUTION:
To prevent electric shocks and fire hazards, DO NOT use any other power source.

NOTE:
The rating plate (serial number plate) is on the bottom of the unit.

INFORMATION
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION
CHANGES OR MODIFICATIONS NOT APPROVED BY JVC COULD VOID USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Le symbole de l'éclair à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'une "tension dangereuse" non isolée dans le boîtier du produit. Cette tension est suffisante pour provoquer l'électrocution de personnes.

Le point d'exclamation à l'intérieur d'un triangle équilatéral est destiné à alerter l'utilisateur sur la présence d'opérations d'entretien importantes au sujet desquelles des renseignements se trouvent dans le manuel d'instructions.

*Ces symboles ne sont utilisés qu'aux Etats-Unis.

AVERTISSEMENT:
POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, NE PAS EXPOSER L'APPAREIL A L'HUMIDITE OU A LA PLUIE.

Ce magnétoscope ne doit être utilisé que sur du courant alternatif en 120 V.

ATTENTION:
Afin d'éviter tout resque d'incendie ou d'électrocution, ne pas utiliser d'autres sources d'alimentation électrique.

REMARQUE:
La plaque d'identification (numéro de série) se trouve sur le panneau arrière de l'appareil.

WARNING:
The battery used in the BR-DV600U must be replaced by a JVC authorized service dealer only.

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par le ministre des Communications.

U E SAFETY PRECAUTIONS

Warning Notice
FOR YOUR SAFETY (Australia)

1. Insert this plug only into effectively earthed three-pin power outlet.
2. If any doubt exists regarding the earthing, consult a qualified electrician.
3. Extension cord, if used, must be three-core correctly wired.

IMPORTANT (In the United Kingdom)
Mains Supply (AC 230 V ~)
WARNING – THIS APPARATUS MUST BE EARTHED

The wires in this mains lead are coloured in accordance with the following code;

GREEN-and-YELLOW:	EARTH
BLUE:	NEUTRAL
BROWN:	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.
The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or which is coloured BLACK. The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

POWER SYSTEM
Connection to the mains supply
This unit operates on voltage of 220 to 240 V AC, 50/60 Hz.

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
To prevent electric shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

Note:
The rating plate and the safety caution are on the bottom of the unit.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

WARNING
It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast, or cable programme and in any literary, dramatic, musical or artistic work embodied therein.

CONTENTS

This unit is designed for use as a recorder/player. Insert editing is not possible.

This unit is designed for professional use.

This video cassette recorder uses the MiniDV format. Use only video cassettes bearing the MiniDV mark.

Please note that it may be unlawful to use any material recorded from TV broadcast programs or pre-recorded programs without the consent of the owner of copyright, except in cases where this material is recorded exclusively for personal use.

JVC is not liable for compensation for loss or damage to recordings in the event this unit fails to record or play back correctly due to a malfunction of the unit itself or as a result of the use of a defective video cassette.

For servicing
See the service manual page 2-5 "2.4 MAIN TENANCE AND INSPECTION OF MAJOR PARTS".

1 INTRODUCTION

1-1 Major Features

- MiniDV format
- High-quality picture and sound thanks to digital technology
- DV in/out (IEEE 1394) connector enabling signals to be transferred to or from any device equipped with IEEE 1394 input/output
- Composite, Y/C and component inputs/outputs
- Sync lock function for audio and video signals
  There is no lip link shift even during extended recording
- JVC bus and RS-422 serial remote interfaces
- RS-232C interface (optionally available)
- 2-way power supply system (AC 120 V, DC 12 V) (U MODEL) (AC 220 – 240 V, DC 12 V) (E MODEL)
- Audio dubbing function (32 kHz sampling rate)
- Compact, lightweight design
- SMPTE time code recording and playback (U MODEL) EBU time code recording and playback (E MODEL)
- Sampling rate converter for 32 kHz, 12-bit or 48 kHz, 16-bit digital audio
- External timer-start function
- External sync signal input connectors

1-2 Maintenance

The video cassette recorder/player incorporates precision components. Continued use of the VCR without maintenance may lead to malfunctions. Regular maintenance is necessary to prevent malfunctions and maintain the performance level required for professional use.

- Maintenance: Just as regular oil changes, brake checks, and tune-ups are essential to keep your car running well over a long period, your VCR must be maintained regularly to ensure optimum long-term performance.

The information below will help you determine a maintenance schedule that will ensure optimum performance over a long period of time.

Hour meter indication

The hour meter can be displayed by selecting "HM: HOUR METER" on the menu switch setting screen. For details, refer to "Menu Switches" on page 17.

Details for maintenance

Depending on the operation time, clean, inspect or replace the following mechanism components.

Operating time	500H	1000H	1500H	2000H
Drum assembly(including the heads)	○	○	○	●
Head cleaner	☆	●	☆	●
Tape guide roller	○	☆	☆	●
Rotary encoder	–	☆	–	●
Belt and gear	☆	●	☆	●
Driving system parts	○	○	☆	●

– : Inspection
○ : Cleaning inspection, adjustment
☆ : Cleaning inspection, replacement if required
● : Replacement

This table should be used for reference only.
Actual maintenance requirements will vary according to how the unit is used.

Maintenance consultation

Consult your local JVC dealer for more information about maintenance scheduling and costs.

Head cleaning

Recording and playback with clogged heads may result in block noise or sound interruption.
In this case, clean the heads.
Use an exclusive head cleaning tape to clean the tape running system. For cleaning procedures and handling precautions, refer to the instructions provided with the cleaning tape.
After cleaning the heads, check that recording and playback function properly before using the unit for any important operations.

Cleaning

Use a soft cloth to clean the cabinet. Do not use benzene or thinner as these may melt or cloud the cabinet surface. To remove excessive dirt, clean the unit with a mild detergent diluted with water, then wipe it with a dry cloth.

1 INTRODUCTION

1-3 Precautions

Installation and storage

■ Avoid using the unit in places subject to the following conditions:
- Extreme heat or cold
- Strong magnetic field
- High humidity
- Dust and soil
- Vibrations
- Condensation

Condensation

■ Do not use this unit immediately after moving it from a cold place to a warm place or after switching on a heater in a cold room. This will cause water vapor to condense on the video head drum and tape guides and may damage the tape and the VCR.
■ When condensation occurs, the DEW indication appears on the tape counter display and the warning indication on the on-screen display. Leave the VCR in this state with the power on and wait until the warning message turns off.

Handling

■ Do not block the ventilation openings.
■ Do not place anything heavy on the unit.
■ Do not put any foreign materials into the cassette loading slot.
■ Operate the unit in a horizontal (flat) position only.
■ Avoid violent shocks to the unit.

Transportation

■ Remove the cassette tape from the unit prior to transportation.

Energy saving

■ When not using the unit, turn the power off to avoid unnecessary power consumption.

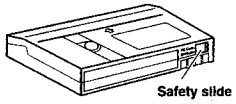
Cassette tape

■ **Type**
Only cassettes bearing the MiniDV mark can be used with this VCR.

■ **Handling**
- Cassette tapes cannot be loaded upside-down.
- Rewind the tape to the beginning before storage.
- The number of times a tape can be reused is limited. If the tape is reused more than this, increased noise (such as dropouts) may result. Do not use dirty or damaged tapes. Doing so not only results in poorer performance, but may also shorten the service life of the rotary heads.
- It is possible that some distortion may occur at the beginning and end of tapes. This can vary depending on the tape. However, for best results, do not use these sections of the tape for any important recordings.

Erasure prevention

MiniDV cassettes are provided with a safety slide on the side to prevent accidental erasure. Set it as required.



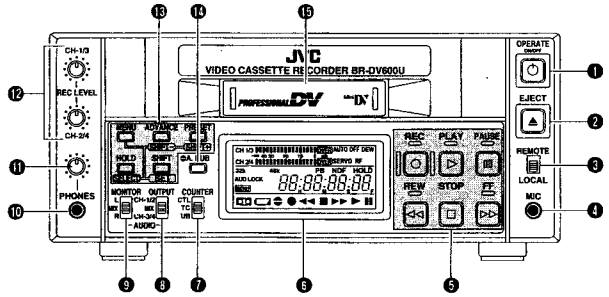
- Move the slide to SAVE to prevent erasure.
- Move the slide to REC to allow recording.

Power supply

■ This unit is provided with both AC and DC power supplies. For editing over an extended period, it is recommended that you use a stable AC power supply or DC power supply from an AC adapter. Using battery power is recommended only as a supplementary power source or for field use.
■ The AC and DC power supplies are switched automatically. When the AC power supply is switched to the DC power supply, the power turns off. When both power supplies are connected, the AC power supply has priority. Be sure to confirm which power supply is in use when plugging or unplugging the power supply.

2 CONTROLS, CONNECTORS AND DISPLAYS

2-1 Front Panel



❶ [OPERATE] switch
Press this switch to turn this unit ON. Press it again to turn this unit OFF. When the power is OFF, the "oPE-oFF" indication is shown.

> Keep in mind that a small amount of current continues to flow into the VCR even when the power is turned off. When not using this unit, disconnect the power cable from the AC outlet. Remove the battery when not in use to avoid excessive discharge.

❷ [EJECT] button
Press to eject the cassette.

❸ [REMOTE/LOCAL] switch
Use to switch between REMOTE and LOCAL.

❹ [MIC] jack
Connect a microphone (3.5 mm dia., –67 dBs, 3 kΩ).

❺ Operation buttons
Use to control tape running.
REC: Recording
PLAY: Playback
PAUSE: Temporary stop
REW: Rewinding
STOP: Stop
FF: Fast-forwarding

❻ LCD Display
Use to show various data including the tape counter and audio level meter. For details, refer to "LCD display" on page 10.

❼ [COUNTER] switch
Use to switch the type of data displayed on the tape counter. When the No. 516 <DISPLAY SELECT> menu switch is set to "CLOCK", clock is shown for TC and date is shown for UB.

❽ [AUDIO OUTPUT] switch
Use to select the audio channel to output from the rear panel's [AUDIO OUT] connectors and the headphones.

❾ [AUDIO MONITOR] switch
Use to select the audio channel to output from the rear panel's [AUDIO MONITOR OUT] connectors.

❿ [PHONES] jack
Connect a set of headphones (3.5 mm dia. mini-jack).

⓫ PHONES control
Use to adjust the volume level of the headphones connected to the PHONES jack.

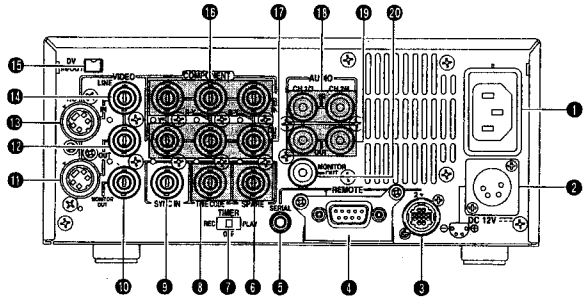
⓬ [REC LEVEL] control
Use to adjust the audio recording level.
CH-1/3: CH1 can be adjusted in normal recording. CH3 recording level can be adjusted in audio dubbing.
CH-2/4: CH2 can be adjusted in normal recording. CH4 recording level can be adjusted in audio dubbing.
Audio dubbing is possible when the No. 245 <SAMPLING RATE> menu switch is set to "32K".

⓭ Setting buttons
Use to set the menu switch, time code and user bits.
Menu switch setting
MENU: Press to set the menu switch setting mode.
SHIFT +/–: Use to select the menu switch.
SET: Use to enter the set value.
SELECT: Use to change the value.
Time code and user bits setting
HOLD: Press to set the time code, user bits or time date setting mode.
SHIFT: Use to select the digit whose value is to be changed.
ADVANCE: Use to change the value. While pressing the [SHIFT] button, press this button to reset the set data to "0".
PRESET: Use to enter the changed value and end setting. Use as a counter reset button when the [COUNTER] switch is set to "CTL".

⓮ [AUDIO DUB] button
Use to perform audio dubbing when the No. 245 <SAMPLING RATE> menu switch is set to "32K".

⓯ Cassette loading slot
Load and unload a cassette.

2-2 Rear Panel



❶ AC socket
Connect the provided power cable to supply AC 120 V (U MODEL), AC 220 – 240 V (E MODEL).
This unit can be activated automatically when power is supplied according to the setting of ❼ [TIMER] switch.
☞ See "EXTERNAL TIMER-START FUNCTION" on page 26.

❷ DC socket
Connect DC 12 V (XLR 4-pin).
This unit can be activated automatically when power is supplied according to the setting of ❼ [TIMER] switch.
☞ See "EXTERNAL TIMER-START FUNCTION" on page 26.

❸ [REMOTE] connector (JVC bus)
This unit can be controlled by the RM-G800 via this connector.

❹ [REMOTE] connector (RS-422 Serial Connector)
This unit can be controlled by an RS-422 controller. This can be changed to an RS-232C interface if required. For details, contact your local JVC service center.

❺ [REMOTE] connector (SERIAL)
Connect a wired remote control such as the RM-G30 to control this unit.

❻ [SPARE] connector
This connector is empty and has no function.

❼ [TIMER] switch
Use to select the timer operation.
REC : Timer recording
OFF : Timer function OFF
PLAY : Timer playback
☞ See "EXTERNAL TIMER-START FUNCTION" on page 26.

❽ [TIME CODE OUT] connector
Use to output time code signals.

❾ [SYNC IN] connector
Input reference sync signals.
☞ See "Reference sync signal" on page 11.

❿ [VIDEO MONITOR OUT] connector
Connect a video monitor to check the output video or on-screen display from this unit.

⓫ [Y/C OUT] connector
Outputs Y/C signals.

⓬ [LINE OUT] connector
Outputs composite signals.

⓭ [Y/C IN] connector
Receives Y/C signals.

⓮ [LINE IN] connector
Receives composite signals.

⓯ [DV IN/OUT] connector
Outputs or receives IEEE 1394 standard digital signals. In addition to digital video and audio signals, control signals can be input or output to/from a personal computer provided with the DV connector (i.LINK), etc.

⓰ [COMPONENT IN] connectors
Receive component signals.
The signal level is for Betacam specifications.

⓱ [COMPONENT OUT] connectors
Output component signals.
The signal level is for Betacam specifications.

⓲ [AUDIO IN] connectors
Receives audio signals (analog).

⓳ [AUDIO OUT] connectors
Outputs audio signals (analog).The output audio channel can be selected with the ❽ [AUDIO OUTPUT] switch on the front panel.
☞ See "Audio system connections" on page 12.

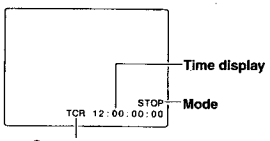
⓴ [AUDIO MONITOR OUT] connector
Connect to the audio input of a TV monitor or audio system. The audio channel to be monitored can be selected with the ❾ [AUDIO MONITOR OUT] switch.

2-3 On-Screen Display

The on-screen display can be viewed on a monitor connected to the rear panel's [VIDEO MONITOR OUT] connector when the No. 500 <ON SCREEN> menu switch is set to "ON". Pressing the [MENU] button will bring up the menu switch display regardless of this setting.

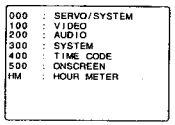
Five types of indication are available.

Tape counter

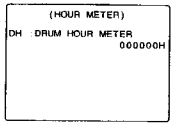


Counter mode indication	Time display contents
CTL	CTL counter data
TCR	Time code reader data
TCG	Time code generator data
UBR	User bits reader data
UBG	User bits generator data
TIME	Time
DATE	Date

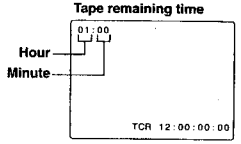
Menu switch



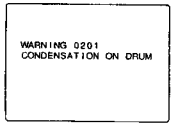
Hour meter



Tape remaining time



Warning code



(In case of condensation)

1. Tape counter
The type of data shown on the tape counter display is set with the [COUNTER] switch and menu switch.
Related settings
[COUNTER] switch (front panel)
No. 504 <INFORMATION SELECT>
No. 514 <TIME DISPLAY SELECT>

Mode: Shown when the No. 504 <INFORMATION SELECT> menu switch is set to "MODE + TIME". In this case, the unit's operation status can be checked on the monitor screen.

Time display: The indications shown in the table on the left are available with the counter mode indication.

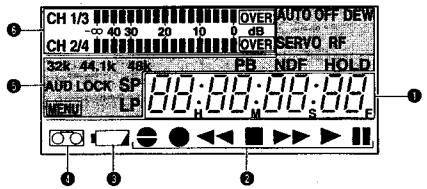
2. Menu switch
This indication is used to set the menu switch.
Shown when the [MENU] button is pressed.
Press it once again to restore the previous display.
☞ See "MENU SWITCHES" on page 17.

3. Hour meter
Shows the rotating head usage time.
Select "HM: HOUR METER" on the menu switch's group select screen.

4. Tape remaining time
Shows the tape remaining time.
Shown when the No. 505 <REMAIN ENABLE> menu switch is set to "ON".

5. Warning message
Automatically shown when an abnormality occurs.
☞ See "Warning indicators" on page 40.

2-4 LCD Display



❶ Counter display section

Three types of indications can be displayed in the counter display section.

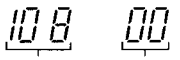
(1) Tape counter

Normally, the indication selected with the [COUNTER] switch is shown. When the No. 516 <DISPLAY SELECT> menu switch is set to "CLOCK", the time and date are shown.

☞ See "Built-in clock setting" on page 22.

(2) Menu switch

In the menu switch setting mode, menu switch items are shown one at a time.



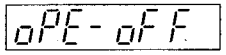
Menu switch No. Setting

(3) Warning code

When this unit malfunctions, the nature of the problem is indicated by an error code.

☞ See "Warning indicators" on page 40.

• In the Operate Off mode, "oPE-oFF" is shown.



❷ Tape running indication

Shows the tape running conditions.

- Audio dubbing mode
- ●► Recording mode
- ◄◄ Rewind mode
- ■ Stop mode
- ►► Fast-forward mode
- ► Play mode
- ❚❚ Pause mode
- ◄◄► Reverse search mode
- ►►► Fast-forward search mode

❸ Battery Indicator

When this unit is powered by a battery and the battery voltage level drops below the specified value, this indicator blinks ("off" in normal operation), to show that battery voltage is insufficient. This indicator will also blink when the Operate Off mode is engaged (since voltage output from the battery drops in this mode).

❹ Cassette mark

This mark lights to show that a cassette is loaded.

This mark is shown even in the Operate Off mode.

❺ Indicators

AUTO OFF: Lights when a problem occurs in this unit.

DEW: Lights when a condensation occurs.

RF: Lights when the heads are clogged and the signal level drops.

SERVO: Lights when the unit's servo system has stabilized.

AUD LOCK: Lights when the video and audio sampling clocks (at 48 kHz) are synchronized in the Play mode. Lights in the Recording mode and EE mode. Does not light when the sampling rate is 32 kHz or 44.1 kHz.

MENU: Lights in the menu switch setting mode.

32K/44.1K/48K: Shows the frequency of the digital audio signal sampling rate. In the Record and EE modes, the frequency set with No. 245 <SAMPLING RATE> menu switch is shown. In the Play mode, the playback audio signal mode is shown. The 44.1K indication is shown only in the Play mode.

PB: Lights when playback signals are output.

NDF: Lights when the non-drop mode is set for time code. (U MODEL)

DF: Lights when the drop mode is set for time code. (U MODEL)

HOLD: Lights in the time code or user bits setting mode and in the date and time setting mode.

SP/LP: Shows the recording or playback speed. Please note that LP mode recording and playback is not possible with this unit. If you try to play back a tape recorded in the LP mode, the "LP inh" indication is shown and the VCR enters the Stop mode.

❻ Audio channel indication

Shows the audio channel of the signal output from the rear panel's [AUDIO OUT] connectors.

Indication and output signals can be switched with the front panel's [AUDIO OUTPUT] switch only when 32 kHz sampling rate signals are played back.

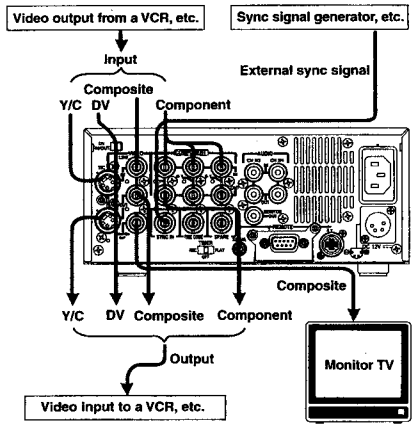
In other modes, the indication and output signals are fixed as shown in the table below.

Sampling rate	32K			48K		44.1K
Mode	PB	A.DUB	EE/REC	PB	EE/REC	PB
CH 1 CH 2	○	–	○ Fixed	○ Fixed	○ Fixed	○ Fixed
CH 3 CH 4	○	○ Fixed	–	–	–	–
CH 1/3 CH 2/4	○	–	–	–	–	–

PB: Play mode
A.DUB: Audio Dubbing mode
EE: EE mode
REC: Record mode

3 CONNECTIONS

3-1 Video system connections



Connecting a monitor

The on-screen display can be viewed on a monitor connected to the [VIDEO MONITOR OUT] connector.

Connecting video equipment

Connect the video device to the appropriate connector (4 types are available).

Outputs

■ Analog outputs

Composite signal : [LINE OUT] connector (BNC)
Component signal (Y/B-Y/R-Y) : [COMPONENT OUT] connectors (BNC x 3)
YC signal : [Y/C OUT] connector (4-pin)

■ Digital output

Digital video signal (conforming to IEEE 1394)
[DV IN/OUT] connector

Inputs

Select input video signals with the No. 108 <VIDEO INPUT SELECT> menu switch.

■ Analog inputs

Composite signal : [LINE IN] connector (BNC)
Component signal (Y/B-Y/R-Y) : [COMPONENT IN] connector (BNC x 3)
YC signal : [Y/C IN] connector (4-pin)

■ Digital input

Digital video signal (conforming to IEEE 1394) :
[DV IN/OUT] connector

Note:

- When search pictures or low-quality video signals are input, temporary distortion of picture or sound may occur. Clean up the signals with a TBC or other processing device before inputting.

Reference sync signal

This unit automatically selects the sync signal as shown in the table below, depending on the presence of external sync input (SYNC IN) and video input (VIDEO IN), the No. 003 <SYNC SELECT> menu switch setting and operation mode. When IEEE 1394 input is selected, "INT" is selected regardless of the setting. When the No. 108 <VIDEO INPUT SELECT> menu switch is set to "COMPONENT", the operation is the same as that performed with the No. 003 <SYNC SELECT> menu switch set to "AUTO" regardless of the setting.

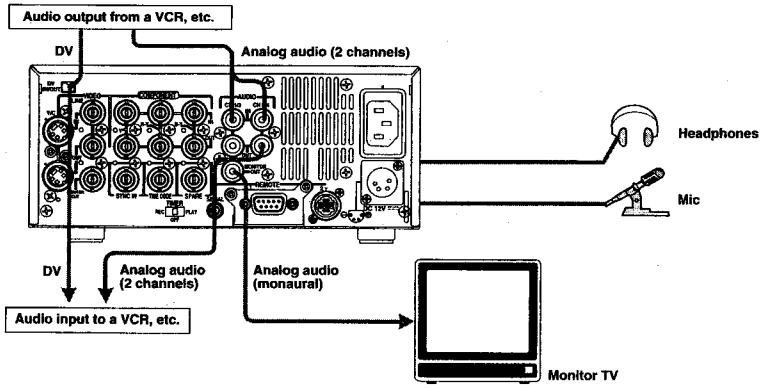
SYNC IN		No	Yes	No	Yes
VIDEO IN		No	No	Yes	Yes
EXTERNAL	Playback	INT	EXT	INT	EXT
	Recording	INT	INT	VIDEO	VIDEO
AUTO	Playback	INT	EXT	VIDEO	EXT
	Recording	INT	INT	VIDEO	VIDEO

INT: Internal sync EXT: External sync VIDEO: Video sync

Notes:

- The phase of the output signal cannot be adjusted for external sync signals. The sub carrier cannot be locked.
- Plugging and unplugging the external sync or video signal connector during operation causes distortion in the picture and sound for about 10 seconds.
- When signals input from the composite connector are output from the component connector, color may disappear in some parts of the left section of the monitor screen. This is not a malfunction.
- The set up is not applied to signals input to the [DV IN/OUT] connector and output in EE mode (component, Y/C, composite). Input signals are recorded as is.
- Use a video signal of less than 1 V(p-p) such as a black burst signal for external sync signal.
- When video signals are input to the DV IN/OUT connector, distortion may occur in the lower section of the picture in the EE mode. However, recording is performed normally.
- When the No. 003 <SYNC SELECT> menu switch is set to "EXTERNAL" and no signal is input to the [SYNC IN] connector, noise may appear in the playback picture. This is not a malfunction.

3-2 Audio system connections



Connection with a monitor TV
The audio output from the [AUDIO MONITOR OUT] connector is monaural.
Use the front panel [AUDIO MONITOR] switch to select the audio channels you want to monitor. The selected audio channel is shown in the table below. Adjust the audio volume level on the monitor.

Headphones jack
Audio can be monitored in stereo using the headphones. Use the front panel [AUDIO OUTPUT] switch to select the audio channels you want to monitor. The selected audio channel is shown in the table below. Adjust the audio volume level with the front panel [PHONES] control.

Inputs

■ Analog inputs
Audio connectors (CH1/3, CH2/4)
Analog input connectors are only provided for 2 channels. It is not possible to record 4 channels simultaneously. Audio input from each connector is normally recorded on the CH1 and CH2 channels. Recording on the CH3 and CH4 can be performed in the Audio Dubbing mode with the No. 245 <SAMPLING RATE> menu switch set to "32K". For audio dubbing, refer to "Audio dubbing" on page 24.

■ Digital inputs
Digital signals conforming to IEEE 1394 can be input to the [DV IN/OUT] connector. In this case, the audio recording level cannot be adjusted. When audio signals are input to the [DV IN/OUT] connector, some noise will occur at the point where recording ends. To reduce this noise during playback, set the No. 214 <V. FADE> menu switch to "ON".

■ Mic input jack
Connect a monaural microphone. The same audio is recorded on both channels.

Outputs

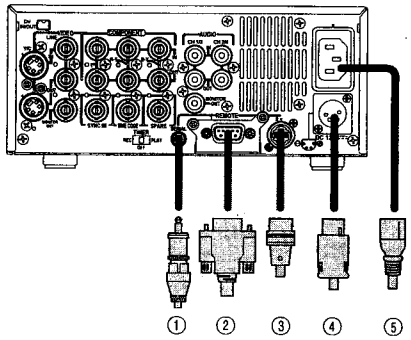
■ Analog outputs
Audio connectors (CH1/3, CH2/4)
Analog output connectors are provided for 2 channels. For MiniDV format, use the front panel [AUDIO OUTPUT] switch to select for 4-channel audio. The selected audio channel is shown in the table below.

■ Digital outputs
Digital signals conforming to IEEE 1394 are output from the [DV IN/OUT] connector.

Relationship between [AUDIO OUTPUT] / [AUDIO MONITOR] switch and audio output channel
(During playback with 32 kHz sampling, audio dubbing, and DV input with the 32 kHz sampling in the EE mode)
Regardless of setting of this switch, CH1/2 is selected for ordinary recording, record pause and analog audio input in the EE mode. CH3/4 is selected for audio dubbing in the Pause mode.

AUDIO switch		Connector		
			AUDIO OUT	
MONITOR	OUTPUT	MONITOR OUT	CH1/3	CH2/4
L	CH1/2	CH1	CH1	CH2
	MIX	CH1/3	CH1/3	CH2/4
	CH3/4	CH3	CH3	CH4
MIX	CH1/2	CH1/2	CH1	CH2
	MIX	CH1/2/3/4	CH1/3	CH2/4
	CH3/4	CH3/4	CH3	CH4
R	CH1/2	CH2	CH1	CH2
	MIX	CH2/4	CH1/3	CH2/4
	CH3/4	CH4	CH3	CH4

3-3 Other connections



Remote connector

Connect a remote controller to the appropriate connector (three types are available).

Type of connector	Connectable remote controller
① [SERIAL] connector	RM-G30
② [REMOTE1] connector	RM-G820
③ [REMOTE2] connector	RM-G800

Note:
- Before connecting the RM-G800, be sure to turn the VCR OFF. Do not connect or disconnect the remote cable with the VCR ON.

Power sockets

2 types of power supply are available (AC, DC).
DC power supply socket
④ Connect DC 12 V.
AC power supply socket
⑤ Connect AC 120 V (U MODEL), AC 220 – 240 V (E MODEL).

■ Selection of battery type
Set the menu switch according to the type of battery that will be used.

* If the setting does not correspond to the battery type, the battery remaining time and battery alarm will not be correctly displayed.

Note:
- Do not use this unit continuously when the battery indicator is displayed. The unit may not operate properly. Remove the battery to avoid over-discharge.

☞ See "396 BATTERY SELECT" on page 19.

• Used battery
The following batteries can be used with this unit.
- Flat shape type
- Anton Bauer Inc. : Trimpack 13 and 14 series, Pro Pac 13 and 14 series
- IDX Corporation : NP-L46

3-4 Editing system examples

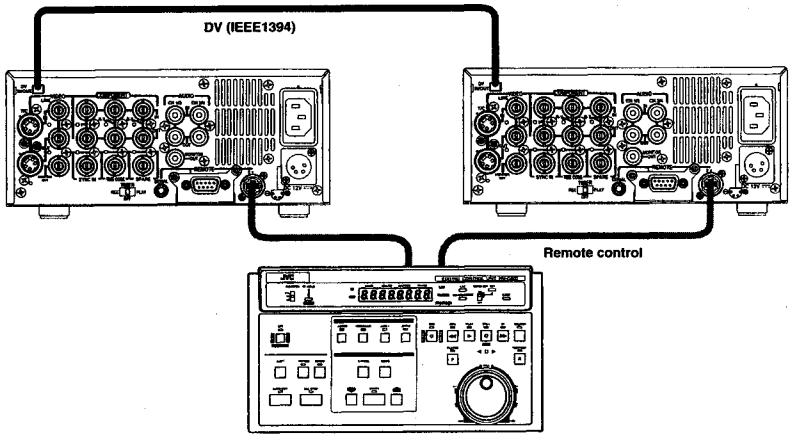
The BR-DV600U can be used as a feeder for different video formats.

■ **Simplified digital cut editing system**

Using an editing remote controller with JVC bus specifications such as the RM-G800, digital cut editing is possible with another MiniDV VCR. When the BR-DV600U is used as a recorder, the following editing operations cannot be performed.

- Preview
- Insert editing
- EE function (auto EE function)

As the phase sync function does not work, the editing accuracy is ±5 frames.



Notes:

- When used in an editing system with the RM-G800, the BR-DV600's preroll operation is comparatively slow. This is normal and is not a malfunction.
- When editing, the input signal (picture from the playback VCR) can be monitored. The playback picture of the recorder VCR just before the edit-in point cannot be checked.
- This unit cannot be used for CTL editing. Use for the time code editing.
- During remote control operation, be sure to turn the jog dial slowly. Otherwise, the VCR may not be able to keep up with the operation.
- When this unit is operated with the remote control unit, audio cannot be checked if it is played back at a speed of less than 1x.
- If editing is started in the Pause mode (still) at the preroll point, editing accuracy may be degraded.
- Use the RM-G800 with the out-point return function OFF. Otherwise, it takes longer to stop editing.
- Use the RM-G800 with the Auto EE mode OFF. Otherwise, the IEEE 1394 "EE inh" error indication is shown.

For servicing
See the service manual page 1-20 "1.11 EDITING SYSTEM USING THE BR-DV600".

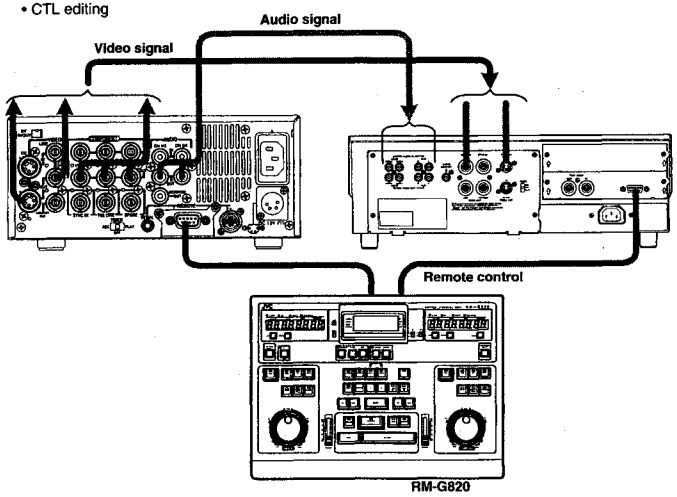
3 CONNECTIONS

3-4 Editing system examples

■ **Mixed S-VHS/VHS system**

This is an editing system which uses the BR-DV600U as a feeder/player with an RS-422A serial remote controller such as the RM-G820. In this case, **the BR-DV600U cannot be used as a recorder VCR.**
The S-VHS/VHS VCR can be replaced with a D-9/Betacam VCR.
The following editing operations are not available.

- Variable search
- Slow-motion editing
- CTL editing



Notes:

- Even during the time code editing, the editing accuracy of 0 frame cannot be obtained. Set the remote control's sync grade to ±1 frame.
- During remote control operation, be sure to turn the jog dial slowly. Otherwise, the VCR may not be able to keep up with the operation.
- When this unit is operated with the remote control unit, audio cannot be checked if it is played back at a speed of less than 1x.

■ **Edit adjust setting**

The No. 353 <EDIT ADJUST> menu switch must be adjusted according to the configuration of the editing system being used.

Setting table (when the RM-G800 is used)

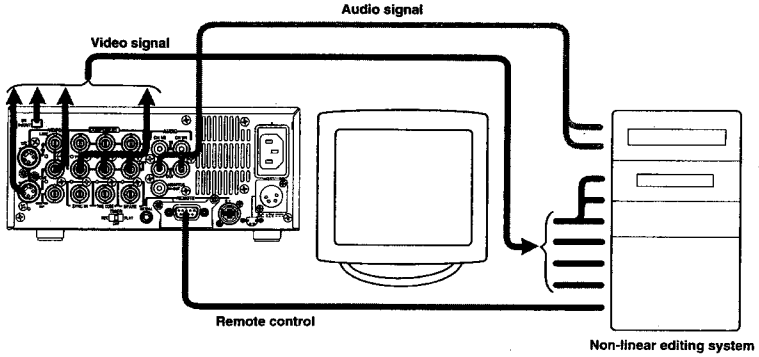
Signal connection method	Player	Setting	Recorder	Setting
Analog	BR-DV600	0 F	BR-DV600	4 F
IEEE 1394	BR-DV600	0 F	BR-DV600	2 F
Analog	BR-DV600	0 F	BR-S800	---
Analog	BR-DV600	0 F	SR-S365 (U MODEL) SR-S388 (E MODEL)	---
Analog	BR-S800/BR-S500 (+ SA-N50)*	---	BR-DV600	3 F

* To ensure the stability of input signals, install the SA-N50 in the BR-DV600.

■ **Non-linear editing system**

Material recorded on a MiniDV tape can be captured to a non-linear editing system. The following non-linear editing systems are able to utilize Super Scene Finder (SSF) data.

- Canopus Corporation: DV Rex RT
- Casablanca



■ **Control via the DV connector**

- When the DV connector is used for control, assemble editing cannot be performed.
- When the VCR is stopped via the DV connector, a command error message may be returned to the controller. This is not a malfunction.

Notes on connecting a cable to the [DV IN/OUT] connector

Set the following menu switches, turn the connected equipment ON and then connect the cable to the [DV IN/OUT] connector. (If two BR-DV600s are connected to each other, it is not necessary to turn them ON.)

Menu switch settings

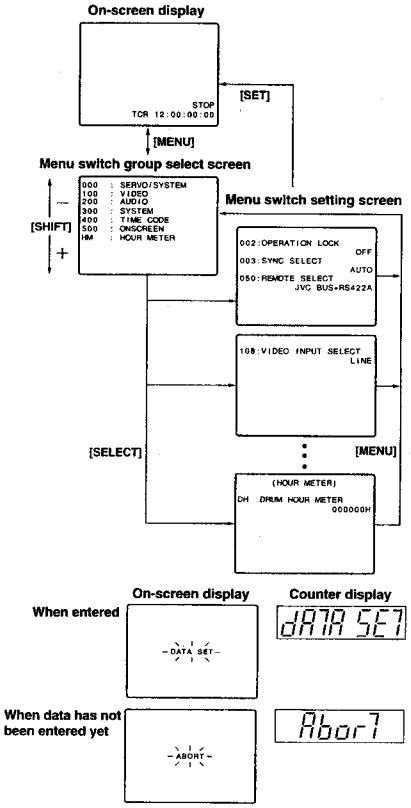
- When used as a player
  Set the No. 108 <VIDEO INPUT SELECT> menu switch to any position except "IEEE 1394".
  (If this switch is currently set to "IEEE 1394", change the setting and turn the power OFF and ON again.)
- When used as a recorder
  Set the No. 108 <VIDEO INPUT SELECT> menu switch to "IEEE 1394".
- When controlled by another device via the [DV INPUT] connector
  Set the No. 050 <REMOTE SELECT> menu switch to "IEEE 1394".

For servicing
See the service manual page 1-10 "1.6 SERVICE MENU".

4 MENU SWITCHES

You can set menu switches using either the on-screen display or the counter display. To set switches on the on-screen display, you will need to connect a monitor to the VCR's [VIDEO MONITOR OUT] connector. This section explains how to set switches using the on-screen display. The same procedures apply to switch setting on the counter display, the only difference being that each menu switch item is indicated by numeric code rather than by name.

4-1 Menu switch organization



Menu switch group select screen

Pressing the [MENU] button with the normal screen displayed brings up the menu switch group select screen.
Select the desired group with the [SHIFT +/–] button.
The selected group number blinks.
Press the [SELECT] button to go to the selected group menu switch setting screen.

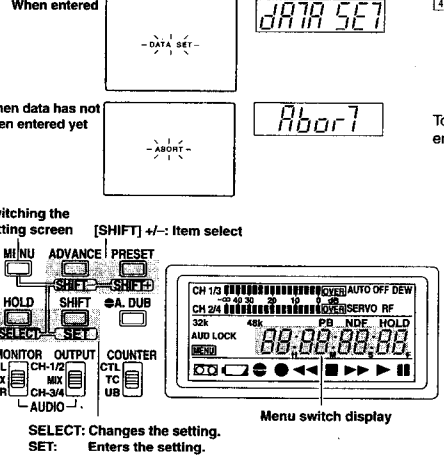
Menu switch setting screen

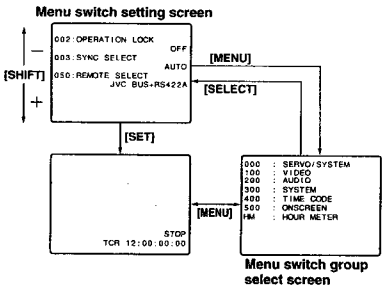
To access this screen, press the [SELECT] button on the menu switch group select screen.
Press the [MENU] button to go to the menu switch group select screen.

Menu switch setting procedure

1. **Press the [SHIFT –/+] button on the menu switch setting screen to select the menu switch you want to set.**
   → The selected menu switch number blinks.
2. **Press the [SELECT] button to change the set value.**
3. **Repeat steps 1 and 2 to change any other menu switches.**
4. **Press the [SET] button to end menu switch setting.**
   → The set value is entered and the normal screen is restored. When entering the data, the indications shown on the left are displayed. If data has not been entered and menu switch setting is ended, "Abort" indication is shown.

To access another group menu switch setting screen without ending menu switch setting, press the [MENU] button.





4-2 Menu switch details

For switch setting procedures, refer to "Menu switch setting procedure".
●: Factory setting
(00): The number in the bracket shows the set value on the counter display.

002 OPERATION LOCK
Details: Switches the operation lock ON/OFF.
Setting:
●OFF (00): The operation lock is OFF: all operations are enabled.
ON (01): The operation lock is ON: all controls are disabled except for the [MENU] button.

003 SYNC SELECT
Details: Selects the sync signal during play.
Setting:
EXTERNAL (01): Synchronizes with the signal input to the [SYNC IN] connector.
●AUTO (03): Switches the synchronization automatically depending on whether or not a signal is input to the [SYNC IN] connector. For details, refer to page 11.

050 REMOTE SELECT
Details: Selects the remote controller connected to the [REMOTE] connector on the rear panel. When the optional SA-K46 RS-232C interface board is installed at the [REMOTE 1] connector, some setting indications will change.
Setting:
IEEE 1394 (01): Allows control of this unit with the controller connected to the [DV IN/OUT] connector.
RS422A (04): Allows control of this unit with the controller connected to the [REMOTE 1] connector.
IEEE 1394 + RS422A (05): Allows control of this unit with the controllers connected to the [DV IN/OUT] and [REMOTE 1] connectors.
JVC BUS (08): Allows control of this unit with the controller connected to the [REMOTE 2] connector.
JVC BUS + IEEE 1394 (09): Allows control of this unit with the controllers connected to the [REMOTE 2] and [DV IN/OUT] connectors.
JVC BUS + RS422A (12): Allows control of this unit with the controllers connected to the [REMOTE 2] and [REMOTE 1] connectors.
●JVC BUS + RS422A + 1394 (13): Allows control of this unit with the controllers connected to the [REMOTE 2], [REMOTE 1] and [DV IN/OUT] connectors.

(When the optional SA-K46 RS-232C interface board is installed)
IEEE 1394 (01): Allows control of this unit with the controller connected to the [DV IN/OUT] connector.
RS232C (02): Allows control of this unit with the controller connected to the [REMOTE 1] connector.
IEEE 1394 + RS232C (03): Allows control of this unit with the controllers connected to the [DV IN/OUT] and [REMOTE 1] connectors.
JVC BUS (08): Allows control of this unit with the controller connected to the [REMOTE 2] connector.
JVC BUS + IEEE 1394 (09): Allows control of this unit with the controllers connected to the [REMOTE 2] and [DV IN/OUT] connectors.
JVC BUS + RS232C (10): Allows control of this unit with the controllers connected to the [REMOTE 2] and [REMOTE 1] connectors.
●JVC BUS + RS232C + 1394 (11): Allows control of this unit with the controllers connected to the [REMOTE 2], [REMOTE 1] and [DV IN/OUT] connectors.

108 VIDEO INPUT SELECT
Details: Selects the input video signal.
Setting:
●LINE (00): Selects video signals input to the [LINE IN] connector.
Y/C (01): Selects video signals input to the [Y/C IN] connector.
COMPONENT (02): Selects video signals input to the [COMPONENT IN] connector.
IEEE 1394 (03): Selects video and audio signals input to the [DV IN/OUT] connector. In this case, analog audio signals are not input.

125 SETUP (U MODEL)
Details: Sets whether or not the setup is applied to the analog video signals (composite, Y/C, component).
Setting:
OFF (00): Does not apply the setup.
●ON (01): Applies the setup. Set to this position to play back a tape recorded on the GY-DV500.

Notes:
- This setting affects recording and playback of analog video signals.
- Picture hue and brightness can be affected if dubbing is repeated without applying a setup suitable to video signals.

For servicing
See the service manual page 1-19 "1.11 SET UP SW".

4 MENU SWITCHES

4-2 Menu switch details

●: Factory setting
(00): The number in the bracket shows the set value on the counter display.

212 AUDIO OUT AT SEARCH
Details: Selects whether or not audio is output to the [AUDIO OUT] and [AUDIO MONITOR OUT] connectors and headphones jack during search at speeds above ±1x.
Setting:
OFF (00): No output.
●ON (01): Audio is output.

214 V. FADE
Details: Switches the V. fade function ON/OFF. V.fade reduces audio noise at the tag recording during playback.
Setting:
OFF (00): The V. fade function is not activated.
●ON (01): Activates the V. fade function.

245 SAMPLING RATE
Details: Selects the sampling rate frequency when recording audio digitally.
Setting:
32K (00): Records signals at a 32 kHz sampling frequency. Set to this position for audio dubbing on CH3 and CH4.
●48K (01): Records signals at a 48 kHz sampling frequency. Audio dubbing is not possible with this setting.

311 AUTO PLAY
Details: Selects whether or not playback starts automatically after the tape is rewound to the beginning.
Setting:
●SHORT FF (00): The tape stops after short FF. Auto play does not start.
PLAY (01): Auto play starts. Repeat playback is available when No. 312 <AUTO REW> menu switch is set to "ON".

312 AUTO REW
Details: Selects whether or not the tape is rewound automatically at tape end during recording or playback.
Setting:
●OFF (00): The tape is not rewound automatically.
ON (01): The tape is rewound automatically. Repeat playback is available when No. 311 <AUTO PLAY> menu switch is set to "PLAY".

353 EDIT ADJUST
Details: When this unit is used with an editing controller and the edit-in point is shifted, this corrects the play start timing. Switch setting differs depending on the configuration of the editing system. For details, refer to "Edit adjust setting" on page 16.
Setting:
●0F: No compensation.
1F: The playback start point is delayed by 1 frame.
2F: The playback start point is delayed by 2 frames.
3F: The playback start point is delayed by 3 frames to the factory set timing.
4F: The playback start point is delayed by 4 frames.
5F: The playback start point is delayed by 5 frames.
6F: The playback start point is delayed by 6 frames.
7F: The playback start point is delayed by 7 frames.

360 AUTO REW AT TIMER
Details: Selects whether or not the tape is automatically rewound when the VCR power is switched ON in the Timer Play or Recording Standby mode.
Setting:
●OFF (00): Playback or recording starts immediately. The tape is not rewound.
ON (01): Playback or recording starts after the tape is rewound to the beginning.

363 CONTROLLER SELECT
Details: Selects the setting according to the type of remote control unit connected via the RS-422A interface.
Setting:
●TYPE 1 (00): For the RM-G820.
TYPE 2 (01): For a non-linear editing system.
TYPE 3 (02): Unused.
:
TYPE 8 (07)

396 BATTERY SELECT
Details: When using DC power, set this switch according to the DC power supply and battery type.
Setting:
●12 V (00): Select this setting to use a DC power supply (AA-G10) or DC 12 V flat shape type battery.
13.2 V (01): Select this setting to use Anton Bauer Inc.'s Trimpack 13, ProPac 13.
14.4 V (02): Select this setting to use Anton Bauer Inc.'s Trimpack 14, ProPac 14 and IDX Corporation's NP-L46.

4-2 Menu switch details

●: Factory setting
(00): The number in the bracket shows the set value on the counter display.

397 FAN STOP SHUTDOWN
Details: Sets whether or not VCR operation continues if the fan motor stops.
Setting:
●ENABLE (00): The power turns off about 1 minute after the fan motor stops.
DISABLE (01): The VCR continues operation even after the fan motor stops. When the fan motor stops, press the [OPERATE] button as soon as possible to turn the VCR's power off. If not, a malfunction may occur due to overheating.

414 TCG SELECT
Details: Selects the time code generator mode.
Setting:
●PRESET (00): Engages the Preset mode.
REGEN (01): Engages the Regen mode.

415 TCG MODE
Details: Selects the time code generator Run mode.
Setting:
FREE RUN (00): Engages the Free Run mode.
●REC RUN (01): Engages the Rec Run mode.

416 NON DROP/DROP (U MODEL)
Details: Selects the time code generator Drop Frame mode.
Setting:
●DROP (00): Engages the Drop Frame mode.
NON DROP (01): Engages the Non-Drop Frame mode.

500 ON SCREEN
Details: Selects whether or not the on-screen display is shown on the monitor.
Setting:
OFF (00): The display is not shown.
●ON (01): The display is shown.

501 CHARACTER H.POSITION
Details: Moves the display position of the tape counter on screen, etc. horizontally.
Setting:
●0 (00) The display position can be moved in
: 9 steps from 0 to 8. The factory setting is
8 (08) "0" (the display position at the far right).
* The tape remaining time indication position cannot be changed.

502 CHARACTER V.POSITION
Details: Moves the display position of the tape counter on screen, etc. vertically.
Setting:
0 (00) The display position can be moved in
●1 (01) 12 steps from 0 to 11. When the No. 504
: <INFORMATION SELECT> menu switch is
11(11) set to "MODE + TIME>, setting to "0" is not possible.
* The tape remaining time indication position on screen can be changed up and down with this switch.

504 INFORMATION SELECT
Details: Selects which information is displayed on the on-screen display.
Setting:
TIME (00): Time data is displayed
●MODE+TIME (01): Time data and tape running mode are displayed.

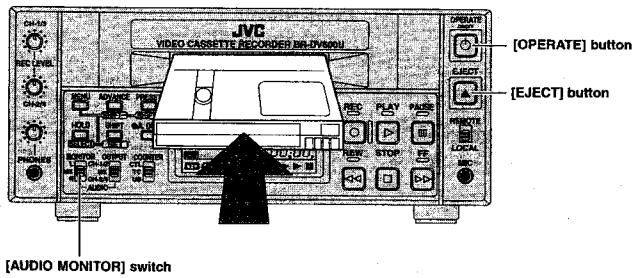
505 REMAIN ENABLE
Details: Selects whether or not the tape remaining time is shown on the on-screen display.
Setting:
●OFF (00): Remaining time is not shown.
ON (01): Remaining time is shown.

514 TIME DISPLAY SELECT
Details: Selects the type of time data displayed.
Setting:
DATE (00): Shows the date.
CLOCK (01): Shows the time.
DATE+CLOCK (02): Shows the date and time.
●TC (03): Shows the time code data.

516 DISPLAY SELECT
Details: Selects the type of data displayed on the tape counter in the LCD display.
Setting:
●TC (00): Shows the time code data.
CLOCK (01): Shows the date and time. You can switch between date and time with the [COUNTER] switch.

5 PREPARATION

Preparing this unit for recording or playback.



Turn the power ON.

Press the [OPERATE] switch. The counter display lights up.

Turn the power OFF

Press the [OPERATE] switch. "oPF-oFF" is shown in the counter display.

Loading/unloading a cassette

Insert the cassette into the cassette loading slot with the window facing up. Push the cassette in slowly until the loading mechanism starts automatic loading.
→ The VCR enters the Stop mode and the cassette indicator ( ) lights.

Press the [EJECT] button to eject the cassette.
→ The cassette tape is ejected.

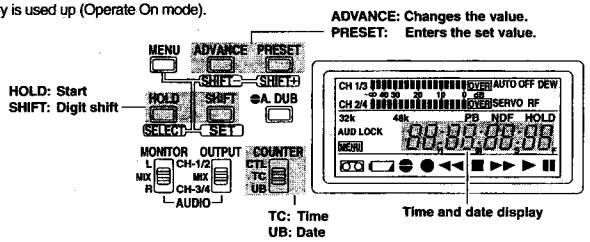
Audio monitor selection

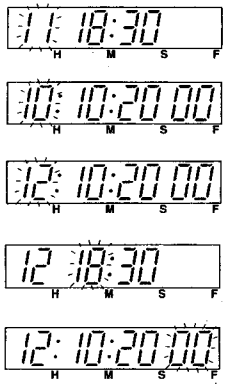
Use the [AUDIO MONITOR] switch to select the audio channel to monitor (via the [AUDIO MONITOR OUT] connectors).

Built-in clock setting

Time data is recorded in the sub code area of the tape during recording. In the Play mode, this data is read out and can be shown on the on-screen display or the counter display.

[Reference]
Clock data is retained for about 60 hours after the 6-hour power supply is used up (Operate On mode).





■ **Setting procedure**
The names of the operation buttons are shown above the buttons.

1 **Set the tape counter display to the time display.**
Set the No. 516 <DISPLAY SELECT> menu switch to "CLOCK".
☞ See No. 516 <DISPLAY SELECT> on page 20.

2 **Set the [COUNTER] switch to "TC" or "UB".**
- To set the time, set to "TC".
  The time display is shown in the tape counter.
- To set the date, set to "UB".
  The date display is shown in the tape counter.

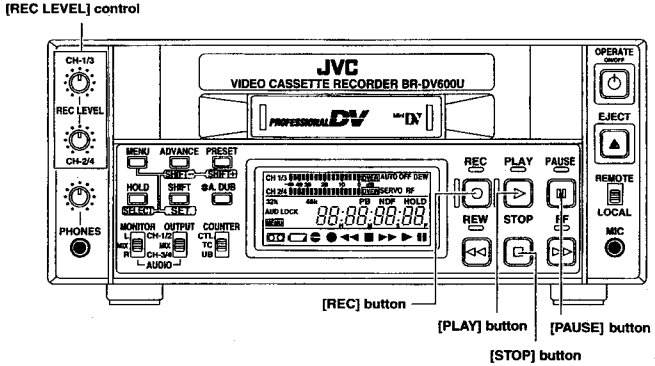
3 **Engage the setting mode.**
Press the [HOLD] button.
- Clock setting
  → The hour digit starts to blink.
- Date setting
  → The month (U MODEL), day (E MODEL) digit starts to blink.

4 **Change the value.**
Each time the [ADVANCE] button is pressed, the value of the blinking digit increases.
While holding down the [SHIFT] button, press the [ADVANCE] button to reset the value as follows.
- Clock setting: "00:00:00"
- Date setting: "01:01:2000"

5 **Shift the digit.**
Press the [SHIFT] button.
- Clock setting: Each time the [SHIFT] button is pressed, the blinking cursor moves in the order of hours → minutes → seconds.
- Date setting: Each time the [SHIFT] button is pressed, the blinking cursor moves in the order of month → day → year (U MODEL), day → month → year (E MODEL).

Repeat steps 4 to 5 to change the values for each digit.

6 **Enter the set data.**
Press the [PRESET] button to enter the set data.



Recording preparation

Loading a cassette

Check that the erasure prevention tab is set to allow recording.
Insert the cassette in the cassette loading slot.

Input video signal selection

Select the input video signal with the No. 108 <VIDEO INPUT SELECT> menu switch.
LINE: Selects the composite video signals input to the [LINE IN] connector.
Y/C: Selects the Y/C signals input to the [Y/C IN] connector.
COMPONENT: Selects the component video signals input to the [COMPONENT IN] connector.
IEEE 1394: Selects the digital video signals and the digital audio signals input to the [DV IN/OUT] connector.

Audio sampling rate setting

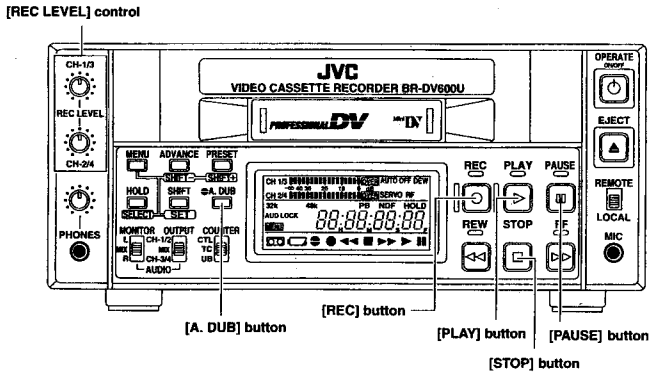
Select the audio sampling rate with the No. 245 <SAMPLING RATE> menu switch.
The number of usable audio channels is determined by the sampling frequency selected with the No. 245 <SAMPLING RATE> menu switch.
■ 32 kHz: 4 channels
In normal recording, signals are recorded on CH1 and CH2. In the audio dubbing mode, signals are recorded on CH3 and CH4.
■ 48 kHz: 2 channels
Signals are recorded on CH1 and CH2. Audio dubbing is not possible.
Adjust the audio recording level with the [REC LEVEL] control.

Recording

1 **Press the [PLAY] button while holding down the [REC] button.**
→ Recording starts.

2 **Press the [PAUSE] button to temporarily stop recording.**
To restart recording, press the [PLAY] button.
To stop recording, press the [STOP] button.

Notes:
- If the unit remains in the Pause mode for more than 5 minutes, the Stop mode is automatically engaged to prevent the tape from being damaged. If tape remaining time is less than 3 minutes or the unit is being used in a low-temperature environment, the Stop mode is engaged within about 3 minutes.
- When a tape recorded on this unit is played back on a consumer MiniDV VCR, the sound level may be low.
- During recording, the upper section of the picture may be distorted or deflect. This is not a malfunction.



Audio dubbing

Signals can only be recorded on CH3 and CH4.

1. **Set the No. 245 <SAMPLING RATE> menu switch to "32K".**
   Set the No. 108 <VIDEO INPUT SELECT> menu switch to any position except "IEEE 1394". (Audio dubbing is not possible with digital audio input.)
2. **Press the [PLAY] button to play back the tape.**
3. **Press the [PAUSE] button at the position from which you want to start recording audio.**
   While holding the [PAUSE] button, press the [A.DUB] button.
   The Audio Dubbing Pause mode cannot be engaged unless the VCR is in the Stop mode. First engage the Stop mode. Then, while holding down the [PAUSE] button, press the [A. DUB] button.
   • **Audio dubbing**
   If audio dubbing is disabled for any reason — for example, if a section of tape recorded using 48 kHz sampling is backspaced in the Pause mode — the "Aud inh" indication is shown and the VCR enters the Stop mode.
4. **Adjust the audio recording level with the [REC LEVEL] control.**
5. **Press the [PLAY] button to start audio dubbing.**
   → Audio signals are recorded on CH3 and CH4.
   To stop audio dubbing temporarily, press the [PAUSE] button.
6. **To end audio dubbing, press the [STOP] button.**

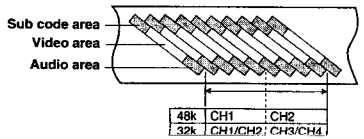
Notes:

- Audio dubbing is not possible on tapes recorded with 48 kHz sampling frequency.
- If audio dubbing is performed repeatedly on a short section of the tape, there may be some noise when this section is played back.
- For audio dubbing, use a tape recorded with this unit. If another tape is used, first dub it to a tape on this unit. When audio is dubbed on a tape recorded on another VCR (including another BR-DV600), sound and picture may be distorted.
- During audio dubbing, noise might be visible on the playback picture. But it is not a trouble of BR-DV600. Audio dubbing itself is proceeded normally.
- It is not possible to use the audio dubbing function to record the CH1/2 playback signal on CH3/4 (sound-on-sound) .

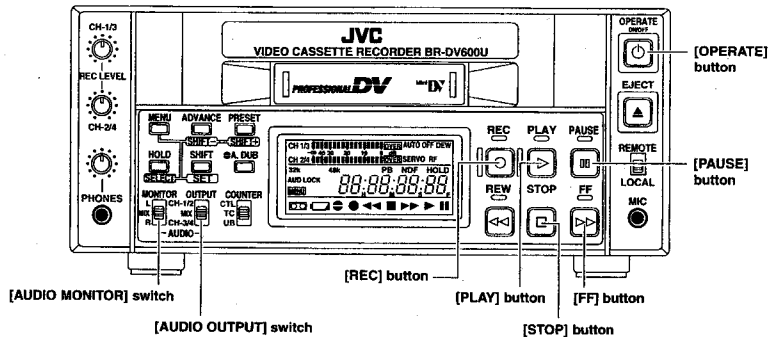
Reference

Recording section on the tape

In the MiniDV format, one video frame consists of 10 tracks. Each track includes recording sections for audio, video and sub code (time code, date, time).
As shown in the diagram, the audio recording section provides 2 channels or 4 channels depending on the sampling rate frequency selected. In the Audio Dubbing mode, audio signals are recorded in the CH3 and CH4 section which is created when the 32 kHz sampling frequency is selected.



7 PLAYBACK



Playback preparation

1. **Press the [OPERATE] button to turn the power ON.**
2. **Insert the cassette into the cassette loading slot.**
3. **Select the audio output channel.**
   Select the signals output from the [AUDIO OUT] connectors with the [AUDIO OUTPUT] switch.
   ☞ See "Audio system connections" on page 12.

Playback

1. **Press the [PLAY] button.**
   Video and audio signals are output from each output connector. Other data recorded on the tape is read out (time code, user bits, etc.)
2. **To stop playback, press the [STOP] button.**
3. **To temporarily stop playback, press the [PAUSE] button.**
   - For fast-forward playback, press the [FF] button during playback.
   - For fast reverse playback, press the [REW] button during playback.
   - You can select whether or not to play sound during fast-forward playback or fast reverse playback with the No. 212 <AUDIO OUT AT SEARCH> ON/OFF setting.

Repeat play

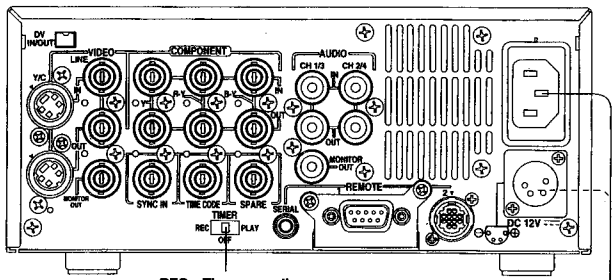
1. **Set the No. 311 <AUTO PLAY> and No. 312 <AUTO REW> menu switches to "ON".**
   ☞ See No. <311 AUTO PLAY> and No. 312 <AUTO REW> on page 19.
2. **Press the [PLAY] button to start playback.**
   At tape end, the tape is rewound automatically and playback starts again. This operation repeats each time the tape ends.
3. **To stop Repeat Play, press the [STOP] button.**

Notes:

- If audio dubbing is performed repeatedly on a short section of the tape, there may be some noise when this section is played back.
- When a tape recorded on a consumer MiniDV VCR is played back on this unit, the sound level may be low.
- When the Pause mode continues for more than 5 minutes, the Stop mode is automatically engaged to protect the tape. If tape remaining time is less than 3 minutes or the unit is being used in a low-temperature environment, the Stop mode is engaged within about 3 minutes. The Stop mode is also engaged automatically if slow playback continues for more than 1 minute with the remote controller or reverse slow playback continues for more than 20 seconds.

8 EXTERNAL TIMER-START FUNCTION

(AUTOMATIC START-UP WITH POWER SUPPLY)



REC: Timer recording
OFF: Timer function OFF
PLAY: Timer playback

Commercially available timer, etc.

When power (AC 120 V (U MODEL), AC 220 – 240 V (E MODEL) or DC 12 V) is supplied to this unit, it automatically enters the Record or Play mode. Using a commercially available timer, you can configure your VCR to start recording or playback at a specified time.

Playback

[1] Connect the power cable.
To turn this unit ON with a commercially available timer, connect the power cable plug to the timer's power output socket.
Set the front panel's [REMOTE/LOCAL] switch to "LOCAL".

[2] Insert a cassette.

[3] Set the rear panel's [TIMER] switch to "PLAY".

[4] When power is supplied, playback starts automatically.
Repeat playback can be set with menu switch setting.
☞ See No. <311 AUTO PLAY> and No. 312 <AUTO REW> on page 19.
With the menu switches set appropriately, the tape can be rewound to the beginning before starting playback.
☞ See No. 360 <AUTO REW AT TIMER> on page 19.

[5] Stop playback.
Press the [STOP] button.

Recording

[1] Connect the power cable.
To turn this unit ON with a commercially available timer, connect the power cable plug to the timer's power output socket.
Set the front panel's [REMOTE/LOCAL] switch to "LOCAL".

[2] Select the video input.

[3] Adjust the audio recording level.

[4] Insert a cassette.

[5] Set the rear panel's [TIMER] switch to "REC".

[6] When power is supplied, the VCR automatically enters the Record mode.
Using the menu switches, you can set the VCR to start recording after rewinding the tape to the beginning.
☞ See No. 360 <AUTO REW AT TIMER> on page 19.

[7] Stop recording.
Press the [STOP] button.

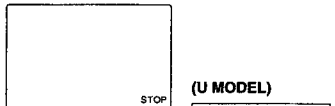
Note:

■ External timer control should only be used to start VCR operation. Do not use an external timer to turn the VCR power off while the tape is running. Doing so could damage this unit or the tape.

9 TIME CODE

The time code is recorded frame by frame together with the materials to be recorded on the tape.
With this time code, the position of the materials can be precisely specified, improving the editing accuracy and working efficiency.
(The editing accuracy of 0 frame may not be obtained even though the time code is used, depending on the performance of the VCR and editing controller and influence of editing system.)
With this system, the time code can be recorded and played back.

On-screen display

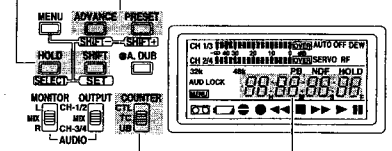


TCR: Time code reader data
TCG: Time code generator data
UBR: User bits reader data
UBG: User bits generator data

Counter display

HOLD: Start
SHIFT: Moves the cursor to the next digit.

ADVANCE: Changes the value.
PRESET: Enters the set value.



TC: Time code
UB: User bits

Time code/user bits display

Display

Time code can be shown on the counter display and on the on-screen display during playback and recording.

[1] To display time code data on the on-screen display, set the No. 514 <TIME DISPLAY SELECT> menu switch to "TC".
☞ See No. 514 <TIME DISPLAY SELECT> on page 20.

[2] To display time code data on the counter display, set the No. 516 <DISPLAY SELECT> menu switch to "TC".
☞ See No. 516 <DISPLAY SELECT> on page 20.

[3] Set the [COUNTER] switch to "TC" or "UB".
TC: Shows the time code data display.
UB: Shows the user bits display.

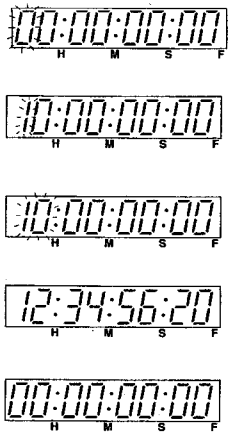
All time code data including time code generator/reader, drop/non-drop frame (U MODEL), CTL interpolation, etc. are shown on the on-screen display

Preset

To give you more control over your material in editing and recording, you can specify a preset time code value while referring to the counter display indications. Determine the required time code value beforehand.

- Set the [COUNTER] switch to "TC" so that the counter display shows the time code.
- Set the [COUNTER] switch to "UB" to show the user bits on the counter display.

Time code presetting is described below. The same procedure is used to preset the user bits, except that user bit values are hexadecimal (0 to F).



1 **Set the menu switches.** (☞ See page 20.)
- ■ Set the No. 414 <TCG SELECT> menu switch to "PRESET".
- ■ Set the No. 415 <TCG MODE> menu switch.
  Setting is not necessary for user bits.
  REC RUN: The time code is counted only during recording.
  FREE RUN: The time code is counted after the preset is complete.

■ Set the No. 416 <NON DROP/DROP> menu switch.
Setting is not necessary for user bits.
NON DROP : Engages the Non-Drop Frame mode.
DROP : Engages the Drop Frame mode.

(U MODEL)

2 **Press the [HOLD] button to engage the time code setting mode.**
→The uppermost digit blinks.

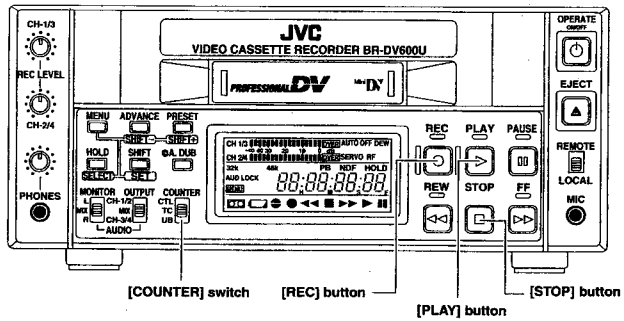
3 **Press the [ADVANCE] button to change the value.**
→The blinking number increases.
• Hold down the [SHIFT] button and press the [ADVANCE] button to reset all digits to "0".

4 **Press the [SHIFT] button to change the digit.**
→The blinking cursor on the digit moves to the right.

5 **To change the digit, repeat steps 3 to 4.**

6 **Press the [PRESET] button to enter the value.**
→The time code setting mode is released and the normal display is restored.

7 **To check the preset time code, press the [REC] button in the Stop mode.**



Recording

Time code can be recorded in the following ways.
- ■ Time code recording starts from the preset data.
- ■ Time code recording follows the time code already recorded on the tape.

■ Time code recording starts from the preset data.

Menu switch setting

No. 414 <TCG SELECT> "PRESET"
No. 415 <TCG MODE> "REC RUN" or "FREE RUN"
No. 416 <NON DROP/DROP> "NON DROP" or "DROP" (U MODEL)

Operation

1 **Check the preset value.**
Set the [COUNTER] switch to "TC" or "UB".
In the Stop mode, press the [REC] button.
→Time code data is shown on the on-screen display and counter display. On the on-screen display, the counter mode is shown as "TCG" or "UBG".
Release your finger from the [REC] button to restore the previous display.

2 **Start recording.**
While pressing the [REC] button, press the [PLAY] button.
→Time code and user bits are recorded.
To stop recording, press the [STOP] button.

■ Time code recording follows the time code already recorded on the tape.

Menu switch setting

No. 414 <TCG SELECT> "REGEN"
No. 415 <TCG MODE> "REC RUN" or "FREE RUN"
No. 416 <NON DROP/DROP> "NON DROP" or "DROP" (U MODEL)

Operation

1 **Start recording.**
While pressing the [REC] button, press the [PLAY] button.
→The time code and user bits are recorded following the data recorded on the tape.
The time code data is shown on the on-screen display and counter display. On the on-screen display, the counter mode is shown as "TCR" or "UBR".
To stop recording, press the [STOP] button.

Playback

Operation

1 **Select the time code data to be displayed.**
Set the [COUNTER] switch to "TC" or "UB".
→The counter display shows the time code or user bits.

2 **Press the [PLAY] button to play back the time code and user bits.**
LTC time code is output from the rear panel's [TIME CODE OUT] connector. VITC time code is not output.
The time code data is shown on the on-screen display and counter display. On the on-screen display, the counter mode is shown as "TCR" or "UBR".
To stop playback, press the [STOP] button.

Reference

Playback time code

Time code data is recorded in the sub code area of the tape. During playback, the data in the sub code area is processed in the LTC time code format and output to the [TIME CODE OUT] connector.

Note on time code playback without user bits
■ When you play back a tape that has no user bits recorded (for example, a tape recorded on a consumer MiniDV VCR), the user bits that were played back last will be displayed.

10 SUPER SCENE FINDER FUNCTION

The SSF data recorded on the tape with the GY-DV500U's Super Scene Finder function can be read out by installing the optional SA-K46 RS-232C interface board. Consult your JVC dealer for details on installation of the SA-K46 RS-232C interface board.

Preparation

Connect the 9-pin D-sub connector of the installed SA-K46 RS-232C interface board to a personal computer, etc. with an RS-232C cable.
Use a reverse type cable. For RS-232C interface settings, refer to "RS-232C specifications" on page 32.
Set the No. 050 <REMOTE SELECT> menu switch to "RS232C", "IEEE 1394+ RS232C", "JVC BUS + RS232C" or "JVC BUS + RS232C + 1394".

Reading out SSF data

1 **Insert the tape on which SSF data is recorded.**

2 **Transmit the RS-232C command D5h: SSF DATA SENSE from a personal computer or a non linear editing system.**
→The SSF data is returned from the VCR.

(Display example)

START
ID
REEL NO.

SCENE	MARK IN	MARK OUT	CUE
001 M	00:00:00:16	00:00:04:19	
002 M	00:00:06:03	00:00:08:08	
003 C	00:03:15:17	00:03:57:00	
004 C	00:03:56:18	00:05:37:24	00:04:00:21
004 C	00:03:56:18	00:05:37:24	00:04:07:22
004 C	00:03:56:18	00:05:37:24	00:04:18:23

END

Note:
■ When a tape is recorded from the beginning in this unit, recorded SSF data is erased.

Super Scene Finder (SSF) data

SSF data includes the following items.

SSF data

1. **Model ID data**
   Unique identification code of the recording VCR
2. **Reel No.**
   Cassette tape number
3. **Mark in point data**
   Time code data at the start point specified by pressing the [TAKE] button during shooting in the Mark mode on the GY-DV500
4. **Mark out point data**
   Time code data at the end point specified by pressing the [TAKE] button during shooting in the Mark mode on the GY-DV500
5. **Cue point data**
   Time code data at the cue points the GY-DV500 starts and ends recording and the cue point specified by pressing the [TAKE] button during shooting in the Cue mode.

Usage example

You can use SSF data to build a database that will enable you to manage your library of original recordings more efficiently.

1 By creating a table linking the model ID and reel No. to the recording's title, you can easily search and retrieve a tape.

Recordings

Model ID	Reel No.	Recording title	
0001	0222	'99 athletic meeting	
0002	0100	'99 spring excursion	←Search
0003	0150	'99 Christmas party	
:	:	:	

For example, when you retrieve "'99 spring excursion", the model ID (0002) and the reel No. (0100) are also provided. Please note that this function is not provided. The table must be developed by the user.

2 Based on the "mark in point data", "mark out point data" and "cue point data" specified with the GY-DV500's Super Scene Finder function, you can create batch capture data for a non-linear editing system (Canopus' DVRex-RT or Casablanca). This allows you to automatically acquire only specified scenes.
Batch capture data conversion software for Canopus's DVRex-RT is distributed at no charge on the Internet (as of February, 2000).

11 RS-232C INTERFACE

11-1 Command tables

This section provides information on programming VCR operations via the RS-232C interface.

Basic table

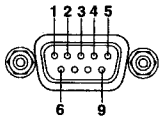
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				DATA "0"	ENTER						STANDBY ON				TC DATA PRESET	
1	COMPLE-TION			DATA "1"	CLEAR ERROR						STANDBY OFF				TC UB DATA PRESET	
2	ERROR			DATA "2"	CUE UP WITH DATA						PREROLL	CUE UP WITH DATA			COUNTER RESET	
3	CASSETTE OUT			DATA "3"							EJECT					
4				DATA "4"									FULL EE ON			
5	NOT TARGET			DATA "5"								F-SHUTTLE	FULL EE OFF	SSF DATA SENSE		
6				DATA "6"		CLEAR						R-SHUTTLE		PREROLL TIME SENSE	PREROLL TIME PRESET	JVC TABLE 1 ON
7				DATA "7"			STATUS SENSE							STATUS SENSE	TIMER MODE SELECT	JVC BASIC TABLE ON
8				DATA "8"										CURRENT TC SENSE		
9				DATA "9"										CURRENT CTL SENSE		
A	ACK			PLAY	REV X1								REC			REC/ DUB REQUEST
B	NAK			FWD X2	REV X2						FF		REC PAUSE			VTR IND
C				FWD X0.2	REV X0.2						REW		A.DUB	CURRENT TC UB SENSE		
D				F-STILL	R-STILL						F-FIELD STEP		A.DUB PAUSE	JVC STATUS SENSE	MEMORY SW PRESET	
E				FWD X10	REV X10				DATE PRESET		R-FIELD STEP	DATE SENSE				
F				STOP	STILL				TIME PRESET			TIME SENSE				

JVC table-1

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0				DATA "0"	ENTER						STANDBY ON					
1	COMPLE-TION			DATA "1"	CLEAR ERROR			ROM VERSION			STANDBY OFF			DEVICE TYPE		
2	ERROR			DATA "2"							PREROLL	CUE UP AND PLAY WITH DATA			COUNTER RESET	
3	CASSETTE OUT			DATA "3"							EJECT			MEMORY SW SENSE		
4				DATA "4"									FULL EE ON	TAPE REMAIN SENSE		
5	NOT TARGET			DATA "5"								F-SHUTTLE	FULL EE OFF			
6				DATA "6"		CLEAR						R-SHUTTLE				JVC TABLE 1 ON
7				DATA "7"			STATUS SENSE							STATUS SENSE	TIMER MODE SELECT	JVC BASIC TABLE ON
8				DATA "8"										CURRENT TC SENSE		
9				DATA "9"										CURRENT CTL SENSE		
A	ACK			PLAY									REC			REC/ DUB REQUEST
B	NAK							OPERATE ON			FF		REC PAUSE			VTR IND
C								OPERATE OFF			REW		A.DUB			
D											F-FIELD STEP		A.DUB PAUSE	JVC STATUS SENSE	MEMORY SW PRESET	
E									DATE PRESET		R-FIELD STEP	DATE SENSE				
F				STOP	STILL				TIME PRESET			TIME SENSE				

11-2 RS-232C specifications

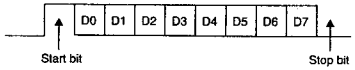
9PIN D-Sub



Pin NO.	Signals	Operations	Direction of signals
2	RXD	Receive data	VTR ← PC
3	TXD	Transmit data	VTR → PC
4	DTR	Data terminal ready	VTR → PC
5	GND	Signal ground	
6	DSR	Data set ready	VTR ← PC

Note: PC means a controller such as a personal computer.

Mode : Non-synchronous
Character length : 8 bits
Parity check : None
Start bit : 1
Stop bit : 1
Data rate : 9600 bps
Bit structure



ASCII code table

Use this table to express the values or alphabets on the RS-232C interface.

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0			SP	0		P		p								
1				1	A	Q	a	q								
2				2	B	R	b	r								
3				3	C	S	c	s								
4				4	D	T	d	t								
5				5	E	U	e	u								
6				6	F	V	f	v								
7				7	G	W	g	w								
8				8	H	X	h	x								
9				9	I	Y	i	y								
A					J	Z	j	z								
B					K		k									
C					L		l									
D					M		m									
E					N		n									
F					O		o									

11-3 RS-232C commands

An optional RS-232C interface can be installed in this unit and connected to a personal computer. Data transmitted and received via the RS-232C interface enables the PC to control the VCR and gather status and operating information.

Preparation

To control the VCR via the RS-232C interface, set the No. 050 <REMOTE SELECT> menu switch to "RS232C", "IEEE 1394 + RS232C", "JVC BUS + RS232C" or "JVC BUS + RS232C + 1394".

VCR operation commands

These commands are used to operate the VCR. When the command is received correctly, the VCR returns ACK (OAh) and enters the mode corresponding to the command.

(e.g.) Playback: TXD 3Ah / RXD 0Ah

Commands		Description
3A	PLAY	Play
3B	FWD X2	2x play
3C	FWD X0.2	0.2x play
3D	F-STILL	Pause
3E	FWD X10	10x play
3F	STOP	Stop
4A	REV X1	Reverse play
4B	REV X2	2x reverse play
4C	REV X0.2	0.2x reverse play
4D	R-STILL	Pause
4E	REV X10	10x reverse play
4F	STILL	Pause
7B	OPERATE ON	Operating mode ON
7C	OPERATE OFF	Operating mode OFF
A0	STANDBY ON	Standby ON
A1	STANDBY OFF	Standby OFF
A2	PREROLL	Preroll
A3	EJECT	Eject cassette
AB	FF	Fast-forward. When this command is transmitted during playback, playback speed changes to 10x.
AC	REW	Rewind. When this command is transmitted during playback, reverse playback starts at 10x.
AD	F-FIELD STEP	Advances one frame. This command should be transmitted in the Play-Pause mode.
AE	R-FIELD STEP	Reverses one frame. This command should be transmitted in the Play-Pause mode.
B2	CUE UP WITH DATA	Use this command to cue up a specified point on the tape. When the tape is cued, COMPLETION is returned and the Pause mode is engaged. To specify the cue point, transmit the time data (hour: minute: second: frame, a total of 8 bytes with 2 bytes for each) following this command.
B3	CUE UP AND PLAY WITH DATA	Use this command to cue up a specified point on the tape. When the tape is cued, COMPLETION is returned and the Play mode is engaged. To specify the cue point, transmit the time data (hour: minute: second: frame, a total of 8 bytes with 2 bytes for each) following this command.
B5	F-SHUTTLE	Shuttle play. The search speed is specified by sending the speed code data after this command (see the table below).

Speed code table (corresponding speed)

Speed code	Search speed
30h	Still
31h	0.1
33h	0.2
34h	0.3
35h	1
36h	2
37h	5
38h	10

Commands		Description
B6	R-SHUTTLE	Shuttle reverse play. The search speed is specified by sending the speed code data after this command (see the table above).
C4	FULL EE ON	Full EE mode ON
C5	FULL EE OFF	Full EE mode OFF
CA	REC	Record. Transmit this command after transmitting REC DUB REQUEST.
CB	REC PAUSE	Record pause. Transmit this command after transmitting REC DUB REQUEST.
CC	A. DUB	Audio dubbing. Transmit this command during playback after transmitting REC DUB REQUEST.
CD	A. DUB PAUSE	Audio dubbing pause. Transmit this command during audio dubbing after transmit ting REC DUB REQUEST.
E2	COUNTER RESET	Counter reset
FA	REC REQUEST	Recording request (use with the recording-related command).

Information gathering (sense) commands

These commands are used to check the VCR operation conditions.
When a command requesting information is received by the VCR, data is returned in 1-byte packets corresponding to the information requested. The number of bytes returned differs depending on the command.

Commands		Description
72	ROM VERSION	Use to check the RS-232C interface-related ROM version. 3-byte data is returned.
BE	DATE SENSE	Use to check the VCR's date data. The data is returned in order of month, day and year. During playback, the time data on the tape is returned.
BF	TIME SENSE	Use to check the VCR's time data. The data is returned in order of hour, minute and second. During play, the time data on the tape is returned.
D1	DEVICE TYPE	Use to check the device type. D:44h, V:55h, 6:36h, 0:30h
D4	TAPE REMAIN SENSE	Use to check the tape remaining time. 3-byte data is returned showing the hour (ones place) and minutes (tens place and ones place).
D5	SSF DATA SENSE	Use to check the Super Scene Finder data.
D6	PREROLL TIME SENSE	Use to check the preroll time. 2-byte data is returned showing the seconds (tens place and ones place).
D7	STATUS SENSE	Use to check the status. Refer to the contents of the STATUS SENSE.
D8	CURRENT TC SENSE	Use to check the time code data. The data is returned in the order of hour, minute, second and frame.
D9	CURRENT CTL SENSE	Use to check the CTL data. The uppermost digit shows plus or minus.
DC	CURRENT TC UB SENSE	Use to check the user bits data. Data A from F is expressed with ASCII code 41h to 46h.
DD	JVC STATUS SENSE	Use to check the status. Refer to JVC STATUS SENSE for details.
FB	VTR IND	Use to check the VCR connection.

Setting (preset) commands

These commands activate various settings on the VCR. When a command is sent, the corresponding setting is activated.

Commands		Description
E0	TC DATA PRESET	Use to preset the time code data. To set, transmit the time data following this command. Specify the time in order of hour, minute, second and frame, using two digits for each item. When ENTER (40h) is transmitted before all digits have been transmitted, the time code data can be specified by entering digits from the uppermost digit. Set the VCR's [REMOTE] switch to "REMOTE".
E1	TC UB DATA PRESET	Use to preset the user bits.
E6	PREROLL TIME PRESET	Use to set the preroll time. Specify this by transmitting 2-byte data following this command. First byte for ten place and second byte for one place.
E7	TIMER MODE SELECT	Use to select the counter mode. Following this command, send data (1 byte) corresponding to the counter mode.
8E	DATE PRESET	Use to set the date. Following this command, send 6-byte numeric data. Specify the month, day and year in order with two digits for each.
8F	TIME PRESET	Use to set the date. Following this command, send 6-byte numeric data. Specify the hour, minute and second in order with two digits for each.

High	Low	Counter mode
3 (fixed)	1	TC
	2	CTL
	5	UB

Contents of STATUS SENSE

When the STATUS SENSE (D7H) command is sent, the following data (5 bytes) is returned.

First byte

Bit No.	Status	When the bit is 1
7	Always 1	
6	Always 0	
5	SHORT FF/REW	During short FF or short REW
4	REC INHIBIT	Recording is inhibited.
3	CASSETTE OUT	There is no cassette loaded.
2	SERVO LOCK	Servo is locked.
1	Undefined	Always 0
0	ERROR	An error has occurred.

Second byte

Bit No.	Status	When the bit is 1
7	VIDEO EE	Video output is EE.
6	AUD 1 EE	Audio 1 output is EE.
5	VIDEO MUTE	Always 0
4	AUD 1 MUTE	Always 0
3	WARNING	There is a problem with the VCR.
2	DEW	Condensation has formed in the VCR.
1	TAPE BEGIN	Short FF at the tape beginning
0	TAPE END	Short REW at the tape end

Third byte

Bit No.	Status	When the bit is 1
7	TIMER PLAY	The [TIMER] switch is set to "PLAY".
6	TIMER REC	The [TIMER] switch is set to "REC".
5	Unused	Always 0
4	Unused	Always 0
3	Unused	Always 0
2	Unused	Always 0
1	SEARCH MODE	The VCR is in the Search mode
0	Unused	Always 0

Fourth byte

Bit No.	Status	When the bit is 1
7	PLAY MODE	The VCR is playing back a tape.
6	FF MODE	The VCR is fast-forwarding a tape.
5	REW MODE	The VCR is rewinding a tape.
4	STOP MODE	The VCR is in the Stop mode.
3	STANDBY MODE	The VCR is on standby.
2	EJECT	A cassette is being ejected.
1	REC MODE	The VCR is recording on a tape
0	Unused	Unused

Fifth byte

Bit No.	Status	When the bit is 1
7	PAUSE MODE	The VCR temporarily stops.
6	Unused	Always 0
5	SHUTTLE FWD	The VCR is shuttle-searching in the forward direction.
4	SHUTTLE REV	The VCR is shuttle-searching in the reverse direction.
3	SPEED CODE 3	Speed code 3
2	SPEED CODE 2	Speed code 2
1	SPEED CODE 1	Speed code 1
0	SPEED CODE 0	Speed code 0

Search speed table (corresponding speed only)

Search speed	Speed code (bit No.)			
	3	2	1	0
STILL	0	0	0	0
0.1	0	0	1	0
0.2	0	0	1	1
0.3	0	1	0	0
1	0	1	0	1
2	0	1	1	0
5	0	1	1	1
10	1	0	0	1

Contents of JVC STATUS SENSE

When the STATUS SENSE (DDH) command is sent, the following data (4 bytes) is returned.

First byte

Bit No.	Status	When the bit is 1
7	Always 1	
6	Always 0	
5	Unused	Always 0
4	DMF	Always 0
3	Unused	Always 0
2	JVC TABLE 2	JVC TABLE 2 is effective.
1	JVC TABLE 1	JVC TABLE 1 is effective.
0	LOCAL	The [REMOTE] switch is set to "LOCAL".

Second byte

Bit No.	Status	When the bit is 1
7	TC GENERATOR	The time code generator is in the TCG mode.
6	USERS BIT	The counter mode is set to the UB mode.
5	TIME CODE	The counter mode is set to the TC mode.
4	CTL PULSE	The counter mode is set to the CTL mode.
3	CTL interpolation	Always 0
2	DROP FRAME	The current time code is set to the Drop Frame mode (U MODEL). Always 0 (E MODEL)
1	LTC	Always 0
0	Unused	

Third byte

Bit No.	Status	When the bit is 1
7	TC REC RUN	The TCG is set to the Rec Run mode.
6	TC REGEN	The TCG is set to the REGEN mode.
5	TC EXTERNAL	Always 0
4	TC INSERT LED	Always 0
3	AUD 2 INSERT LED	Always 0
2	AUD 1 INSERT LED	Always 0
1	VIDEO INSERT LED	Always 0
0	ASSEM LED	Assemble mode

Fourth byte

Bit No.	Status	When the bit is 1
7	TBC PWB IN	Always 1
6	TC PWB IN	Always 1
5	DA3 INSERT LED	Always 0
4	DA4 INSERT LED	Always 0
3	AUTO MODE	Always 0
2	Unused	Always 0
1	Unused	Always 0
0	Unused	Always 0

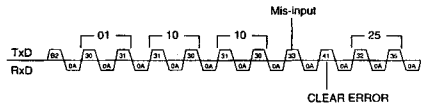
Error-related commands

This command is returned when transmitted data cannot be received normally by the VCR. A command to release the error status is also available.

Command	Description
02	ERROR: Returned when the VCR receives an invalid command after the second byte of the transmitted command. In this case, even though commands are sent continuously, no commands can be accepted except STATUS SENSE. To release this error mode, send the following commands.
41	CLEAR ERROR: Clears the last transmitted byte. Use this to release the error mode as well.
56	CLEAR: All commands are canceled. This is also used to release the error mode.
0B	NAK: Returned when the VCR receives an undefined command for the first byte or a command specifying a function not available on the VCR. Releasing the error mode with the CLEAR command is not necessary. Just send a correct command.

* Usage example of CLEAR ERROR
Specify the cue-up point at 1:10:10:25.

As this data cannot be specified for the data following the CUE UP WITH DATA, correct the data.

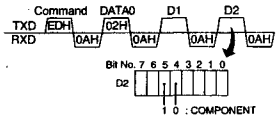


Menu switch setting command

ED MEMORY SW PRESET
Use this command to change the VCR's menu switches. Transmit the data (3 bytes) corresponding to the menu switch to be changed, following this command.

(e.g.)
Set No. 108 <VIDEO INPUT SELECT> menu switch to "COMPONENT".

As can be seen in the table on the right, the data corresponding to COMPONENT is DATA0 at 02, D2's bit No. 5 at 1 and bit No. 4 at 0.

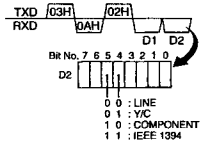


Menu switch check command

D3 MEMORY SW SENSE
Use this command to check the VCR's menu switch setting. Following this command, transmit the data (DATA0) corresponding to the menu switch to be checked. You can confirm the setting with the returned data (D1, D2).

(e.g.)
Check the No. 108 <VIDEO INPUT SELECT> menu switch setting.

As can be seen in the table on the right, the data corresponding to DATA0 of the menu switch to be checked is 02. You can confirm the setting with the values for bit No. 5 and 4 of the D2 returned data.



Menu switch No.	DATA0	D1/D2	Set value	Corresponding bit values 7	6	5	4	3	2	1	0
002	01	D1	OFF						0		
			ON						1		
003	01	D2	INTERNAL							0	0
			EXTERNAL							0	1
			VIDEO							1	0
			AUTO							1	1
050	93	D2	IEEE1394	0	0	0	1	0	0	0	0
			RC232C	0	0	1	0	0	0	0	0
			IEEE1394+RS232C	0	0	1	1	0	0	0	0
			RS422A	0	1	0	0	0	0	0	0
			IEEE1394+RS422A	0	1	0	1	0	0	0	0
			JVC BUS	1	0	0	0	0	0	0	0
			JVC BUS+IEEE1394	1	0	0	1	0	0	0	0
			JVC BUS+RS232C	1	0	1	0	0	0	0	0
			JVC BUS+RS232C+1394	1	0	1	1	0	0	0	0
			JVC BUS+RS422A	1	1	0	0	0	0	0	0
			JVC BUS+RS422A+1394	1	1	0	1	0	0	0	0
108	02	D2	LINE			0	0				
			Y/C			0	1				
			COMPONENT			1	0				
			IEEE1394			1	1				
125 (U MODEL)	02	D2	OFF		0						
			ON		1						
212	05	D1	OFF				0				
			ON				1				
214	05	D1	OFF			0					
			ON			1					
245	03	D2	32K							0	0
			48K							0	1
311	10	D2	SHORT FF			0					
			PLAY			1					
312	08	D1	OFF				0				
			ON				1				
353	89	D1	0F			0	0	0			
			1F			0	0	1			
			2F			0	1	0			
			3F			0	1	1			
			4F			1	0	0			
			5F			1	0	1			
			6F			1	1	0			
			7F			1	1	1			
360	90	D1	OFF					0			
			ON					1			
363	90	D2	TYPE 1						0	0	0
			TYPE 2						0	0	1
			TYPE 3						0	1	0
			TYPE 4						0	1	1
			TYPE 5						1	0	0
			TYPE 6						1	0	1
			TYPE 7						1	1	0
396	91	D2	12V							0	0
			13.2V							0	1
			14.4V							1	0
397	91	D2	ENABLE						0		
			DISABLE						1		
414	81	D2	PRESET					0			
			REGEN					1			
415	81	D2	FREE RUN				0				
			REC RUN				1				
416 (U MODEL)	81	D2	DROP			0					
			NON DROP			1					
500	01	D1	OFF					0			
			ON					1			
501	82	D1	0					0	0	0	0
			1					0	0	0	1
			2					0	0	1	0
			3					0	0	1	1
			4					0	1	0	0
			5					0	1	0	1
			6					0	1	1	0
			7					0	1	1	1
			8					1	0	0	0

Menu switch No.	DATA0	D1/D2	Set value	Corresponding bit values 7	6	5	4	3	2	1	0
502	82	D1	0	0	0	0	0				
			1	0	0	0	1				
			2	0	0	1	0				
			3	0	0	1	1				
			4	0	1	0	0				
			5	0	1	0	1				
			6	0	1	1	0				
			7	0	1	1	1				
			8	1	0	0	0				
			9	1	0	0	1				
			10	1	0	1	0				
			11	1	0	1	1				
504	82	D2	TIME					0	0		
			MODE+TIME					0	1		
505	82	D2	OFF				0				
			ON				1				
514	83	D2	DATE						0	0	0
			CLOCK						0	0	1
			DATE+CLOCK						0	1	0
			TC						0	1	1
516	83	D2	TC	0							
			CLOCK	1							

For servicing
See the service manual page 1-16 "1.7 WARNIGN CODES".

12 TROUBLESHOOTING

12-1 Warning indicators

If the unit malfunctions during operation, the built-in self-diagnostics system identifies the problem and displays a warning message on the monitor and/or the counter display. Also, the [AUTO OFF] indicator may be shown on the LCD. In this case, turn the power off and then on again to restore operation. If the [AUTO OFF] indicator appears again, the VCR may require repair or adjustment. Consult your local JVC dealer.
The VCR's built-in microprocessor is susceptible to interference from externally generated noise or electro-magnetism. In this case, turn the main power (AC and DC power supplies) off, turn on again and check the operation.

On-screen display Counter display	Error contents	Operation	Solution
CONDENSATION ON DRUM **The [DEW] indicator lights.**	Condensation on the drum.	• When a cassette is not loaded, the drum starts to rotate. • When a cassette is loaded, the AUTO OFF mode is engaged and the operation stops.	Wait for the drum to stop rotating, then load a cassette. Do not use the unit until the AUTO OFF mode is disengaged.
FAILURE LOADING Err 3200	Tape cannot be loaded.	Operation stops. No operations are possible.	Turn the power on again. In some cases, the tape may be damaged, so use a different tape. If the problem persists, consult your JVC dealer.
FAILURE UNLOADING Err 3300	• Tape cannot be unloaded. • Tape is jammed.		
CASSETTE EJECT FAILURE Err 4100	The eject operation is abnormal.		
HOUSING FAILURE Err 4200	The cassette housing is abnormal.		
TAPE DEFECTIVE Err 5605	The tape ends.		
TAPE DEFECTIVE Err 5607	The tape is slack.		
END LEADER DETECTION Err 5702	The tape end sensor is abnormal.		
BEGIN LEADER DETECTION Err 5802	The tape beginning sensor is abnormal.		
DRUM MOTOR FAILURE Err 7001	The drum rotation stops.		
CAP MOTOR FAILURE Err 7101	The capstan rotation stops.		

On-screen display Counter display	Error contents	Operation	Solution
SUP REEL FAILURE Err 7202~ 7203	The supply reel rotation is abnormal.	Operation stops. No operations are possible.	Turn the power on again. In some cases, the tape may be damaged, so use a different tape. If the problem persists, consult your JVC dealer.
TAKE UP REEL FAILURE Err 7302~ 7303	The takeup reel rotation is abnormal.		
SYSCON REF ERROR Err 8400	System controller reference signal failure.	Operation stops. No operations are possible.	Turn the power on again.
PC TAPE INHIBIT Pc TAPE	A data tape for personal computer is used.	Operation continues.	Use a tape on which NTSC (U MODEL), PAL (E MODEL) signals are recorded.
LP INHIBIT LP inh	A tape recorded in the LP mode is played back.	Operation stops.	Use a tape recorded in the SP mode.
REC INHIBIT rEc inh	The cassette's safety slide is set to "SAVE". Copy-guarded signals are input.	Operation stops.	Set the safety slide to "REC". Copy-guarded signals cannot be recorded.
1394 INHIBIT 1394 inh	No signal is input to the [DV IN/OUT] connector. Copy-guarded signals are input.	Operation stops.	Input signals to the [DV IN/OUT] connector. Copy-guarded signals cannot be recorded.
EE CHECK INHIBIT EE inh	When the IEEE 1394 input is selected, the EE check is performed.	Operation continues.	When the IEEE 1394 input is selected, the EE check cannot be performed.
AUDIO DUB INHIBIT Adb inh	The cassette's safety slide is set to "SAVE". The tape was recorded with the 48 kHz sampling rate. The No. 245 <SAMPLING RATE> menu switch is set to "48K". Audio dubbing was attempted on a tape recorded in the LP mode.	Operation stops.	Set the safety slide to "REC". Use a tape recorded at the 32 kHz sampling rate. Set the No. 245 <SAMPLING RATE> menu switch to "32K". Audio dubbing cannot be performed on tapes recorded in the LP mode.
SSF INHIBIT SSF inh	SSF data error occurs.	Operation continues.	Use a tape on which SSF data has been properly recorded.
FAN MOTOR FAILURE FAn StoP	The fan motor stops.	Operation stops about 60 seconds after the fan motor stops (with the No. 397 <FAN STOP SHUTDOWN> menu switch set to "ENABLE").	Consult your nearest JVC dealer.
HEAD CLOG HEAd CLoG	The video head is clogged.	The operation continues.	Clean with a dedicated head cleaning tape. Refer to the separate enclosure, "Notes on the use of a cleaning tape".

12-2 Other problems

Symptoms	Causes	Action
The VCR's controls are not functioning.	• The [REMOTE] switch is set to "REMOTE". • The No. 002 <OPERATION LOCK> menu switch is set to "ON".	• Set the [REMOTE] switch to "LOCAL". • Set the No. 002 <OPERATION LOCK> menu switch to "OFF".
On-screen display does not come up.	• The monitor is not connected to the [MONITOR OUT] connector. • The No. 500 <ON SCREEN> menu switch is set to "OFF".	• Connect the monitor to the [MONITOR OUT] connector. • Set the No. 500 <ON SCREEN> menu switch to "ON".
Noise appears on parts of the playback picture.	• The heads are dirty.	• Read the instructions on page 5 and clean the heads.
Tape counter does not run.	• The counter does not run on a non-recorded section of the tape. • The menu switch setting mode is engaged.	— • Press the [MENU] button and restore the normal mode.

13 APPENDIX

13-1 Optional equipment

SA-K46 RS-232C interface board

With this board connected to this unit and a personal computer, you can control the VCR from a personal computer. Use a reverse-type cable. For installation and uninstallation, consult your JVC dealer.

RM-G30 wired remote control

This remote control allows you to control all basic VCR operations such as PLAY, RECORD, PAUSE, FF, etc.

YC video cables

These cables are used to transmit YC video signals. The following types are available.

Types	Input	Output	Length
VC-G30U	4-pin	4-pin	3 m
VC-G50U	4-pin	4-pin	5 m
VC-G3030	4-pin	7-pin	3 m
VC-G2030	7-pin	4-pin	3 m
VC-G2050	7-pin	4-pin	5 m

VC-G8030U remote extended cable

This extended cable is for use with the RM-G800 remote controllers. The cable length is 3 m.

14 SPECIFICATIONS

General

■ **Power requirements** : AC 120 V (U MODEL), AC 220 – 240 V (E MODEL), 50/60 Hz, DC 12 V (10.5 V to 17 V)
■ **Power consumption** : 27 W (U MODEL)
: 250 mA (E MODEL)
■ **Dimensions** : (W) 212 mm x (H) 88 mm x (D) 325 mm (8-3/8" x 3-1/2" x 12-13/16")
■ **Weight** : Approx. 3.6 kg (7.9 lbs.)
■ **Temperature**
Operating : 5°C to 40°C (41°F to 104°F)
Storage : –20°C to 60°C (-4°F to 140°F)
■ **Humidity**
Operating : 30% to 80% RH
■ **Format** : MiniDV format
■ **Signal format** : NTSC
■ **Usable tape** : MiniDV tape
■ **Tape width** : 6.35 mm
■ **Tape speed** : 18.812 mm/s (SP mode) (U MODEL)
: 18.831 mm/s (SP mode) (E MODEL)
■ **Record/play time** : 60 minutes (with an M-DV60ME tape, only in the SP mode)
■ **FF/rewind time** : Within 120 s (with an M-DV60ME tape)

[Video]

■ **Video signal recording format** : 8-bit, 13.5 MHz, 4:1:1 component recording (U MODEL)
: 8-bit, 13.5 MHz, 4:2:0 component recording (E MODEL)
■ **Video inputs**
Analog composite : 1.0 V (p-p), 75 Ω
Analog Y/C : Y : 1.0 V (p-p), 75 Ω
C : 0.286 V (p-p), 75 Ω (U MODEL)
: 0.3 V (p-p), 75 Ω (E MODEL)
Analog component: Y: 1.0 V (p-p), 75 Ω
R-Y/B-Y: 0.7 V (p-p), 75 Ω
■ **External sync input** : 1.0 V (p-p), 75 Ω
■ **Video output**
Analog composite : 1.0 V (p-p) (setup can be switched ON/OFF with a menu switch), 75 Ω
Analog Y/C : Y : 1.0 V (p-p) (setup can be switched ON/OFF with a menu switch), 75 Ω
C : 0.286 V (p-p), 75 Ω (U MODEL)
: 0.3 V (p-p), 75 Ω (E MODEL)
Analog component: Y: 1.0 V (p-p) (setup can be switched ON/OFF with a menu switch), 75 Ω
R-Y/B-Y: 0.7 V (p-p), 75 Ω
■ **Horizontal resolution** : 500 lines or more

[Audio]

■ **Audio signal recording format** : 16-bit, 48 kHz for two channels or 12-bit, 32 kHz PCM for four channels
■ **Frequency response** : 20 Hz to 20 kHz (48 kHz, 16 bits)
■ **Audio input**
Line : –8 dBs, 10 kΩ, unbalanced
Mic : –67 dBs, 3 kΩ, unbalanced
■ **Audio output**
Line : –8 dBs, 1 kΩ, unbalanced
Headphone : – infinity to –17 dBs, 8 Ω, unbalanced

[Time code]

■ **Output** : 0 ± 3 dBs, low impedance, unbalanced

[DV interface]

■ **Input/output: IEEE 1394**

[Connectors]

■ **RS-422 interface** : D-sub 9-pin
■ **JVC bus connector** : DIN 12-pin

Accessory

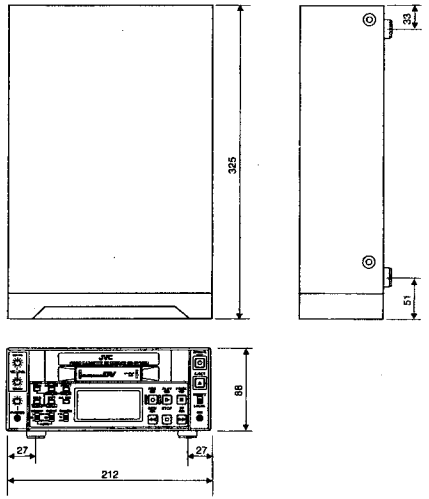
AC cable x 1

Option

SA-K46U RS-232C interface board

Design and specifications subject to change without notice.

Dimensions (unit: mm)



Note: (U MODEL)

When setting menu switch No.108 [VIDEO INPUT SELECT] to IEEE1394 even if menu switch No.125 [SET UP] is set to on position, set up signals will not be provided to DV output and analog output.
If you would like to provide set up signals when playback, set menu switch No.108[VIDEO INPUT SELECT] to LINE or Y/C or COMPONENT position (except IEEE1394).

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Precautions for Use of Head Cleaning Tape English

Adhere to the following precautions when using the head cleaning tape.

1. The tape runs for 10 seconds at a time in the PLAY mode. (The tape stops automatically.)
   Press the PLAY button after the cleaning tape is fully loaded.
2. Do not use the tape more than four times at the most for each cleaning.
3. The cleaning tape can be used four times.
   One time: One tape transport from the start of the rewound tape to the end of the tape.

■ Use the following chart as a guide for periodical head cleaning.

Operating environment	Low temperature 5°C to 10°C	Room temperature 10°C to 35°C	High temperature 35°C to 40°C
Yardstick for use of cleaning tape	1 to 2 times every 5 hours	1 to 2 times every 20 to 30 hours	1 to 2 times every 5 hours

Note 1) When used in a low humidity environment (10% RH to 30% RH), head cleaning should be conducted at intervals half of those given in the above chart.
Note 2) When an ME80 tape is used immediately after head cleaning, the VTR warning (head) indicator may remain on. In this case, let the tape run as the indicator will turn off after the tape has run for a while.
Note 3) Use the cleaning tape in the room temperature (10°C to 35°C).
Note 4) The cleaning tape case contains instructions for use of the cleaning tape. However, some of these instructions differ from the contents of this sheet. When using the cleaning tape, please follow the instructions of this sheet.

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Vorsichtshinweise für die Verwendung des Kopfreinigungsbandes Deutsch

Bitte beachten Sie bei der Verwendung des Kopfreinigungsbandes die folgenden Vorsichtshinweise.

1. Das Band läuft jeweils 10 Sekunden lang in Wiedergabemodus (PLAY). (Das Band hält automatisch an.)
   Drücken Sie die Taste PLAY, nachdem das Reinigungsband vollkommen geladen worden ist.
2. Verwenden Sie das Band nicht mehr als maximal viermal für jede Reinigung.
3. Das Reinigungsband kann viermal verwendet werden.
   Einmal: Ein Bandtransport vom Anfang des zurückgespulten Bandes zum Bandende.

■ Verwenden Sie das folgende Diagramm als Anhalt für periodische Kopfreinigung.

Betriebsumgebung	Niedrige Temperatur 5°C bis 10°C	Raumtemperatur 10°C bis 35°C	Hohe Temperatur 35°C bis 40°C
Maßstab für die Verwendung des Reinigungsbandes	Ein- bis zweimal alle 5 Stunden	Ein- bis zweimal alle 20 bis 30 Stunden	Ein- bis zweimal alle 5 Stunden

Hinweis 1) Bei Verwendung in einer Umgebung mit niedriger Luftfeuchtigkeit (10% bis 30% relativ) sollte Kopfreinigung doppelt so oft wie im obigen Diagramm angegeben durchgeführt werden.
Hinweis 2) Wenn direkt nach dem Kopfreinigen ein ME80-Band verwendet wird, so bleibt die Warnanzeige für den Videorekorder (Kopf) möglicherweise an. Lassen Sie in diesem Fall das Band laufen, da die Anzeige ausgeht, nachdem das Band einige Zeit gelaufen ist.
Hinweis 3) Verwenden Sie das Reinigungsband bei Zimmertemperatur (10°C bis 35°C).
Hinweis 4) Das Gehäuse des Reinigungsbandes enthält Anweisungen für die Verwendung des Reinigungsbandes. Einige dieser Anweisungen unterscheiden sich jedoch vom Inhalt dieses Blattes. Bitte befolgen Sie bei der Verwendung des Reinigungsbandes die Anweisungen auf diesem Blatt.

Précautions lors de l'utilisation de la cassette de nettoyage de têtes Français

Respectez les précautions suivantes lors de l'utilisation de la cassette de nettoyage de têtes.

1. La cassette défile pendant 10 secondes chaque fois en mode de lecture. (La bande s'arrête automatiquement.)
   Appuyez sur la touche de lecture (PLAY) après avoir inséré la cassette de nettoyage.
2. N'utilisez pas la cassette plus de quatre fois pour un nettoyage.
3. La bande de la cassette de nettoyage peut être utilisée quatre fois.
   Une fois correspond au défilement de la bande depuis le début de la bande rebobiné jusqu'à la fin de la bande.

■ Utilisez le tableau suivant comme un guide pour les nettoyages de têtes périodiques.

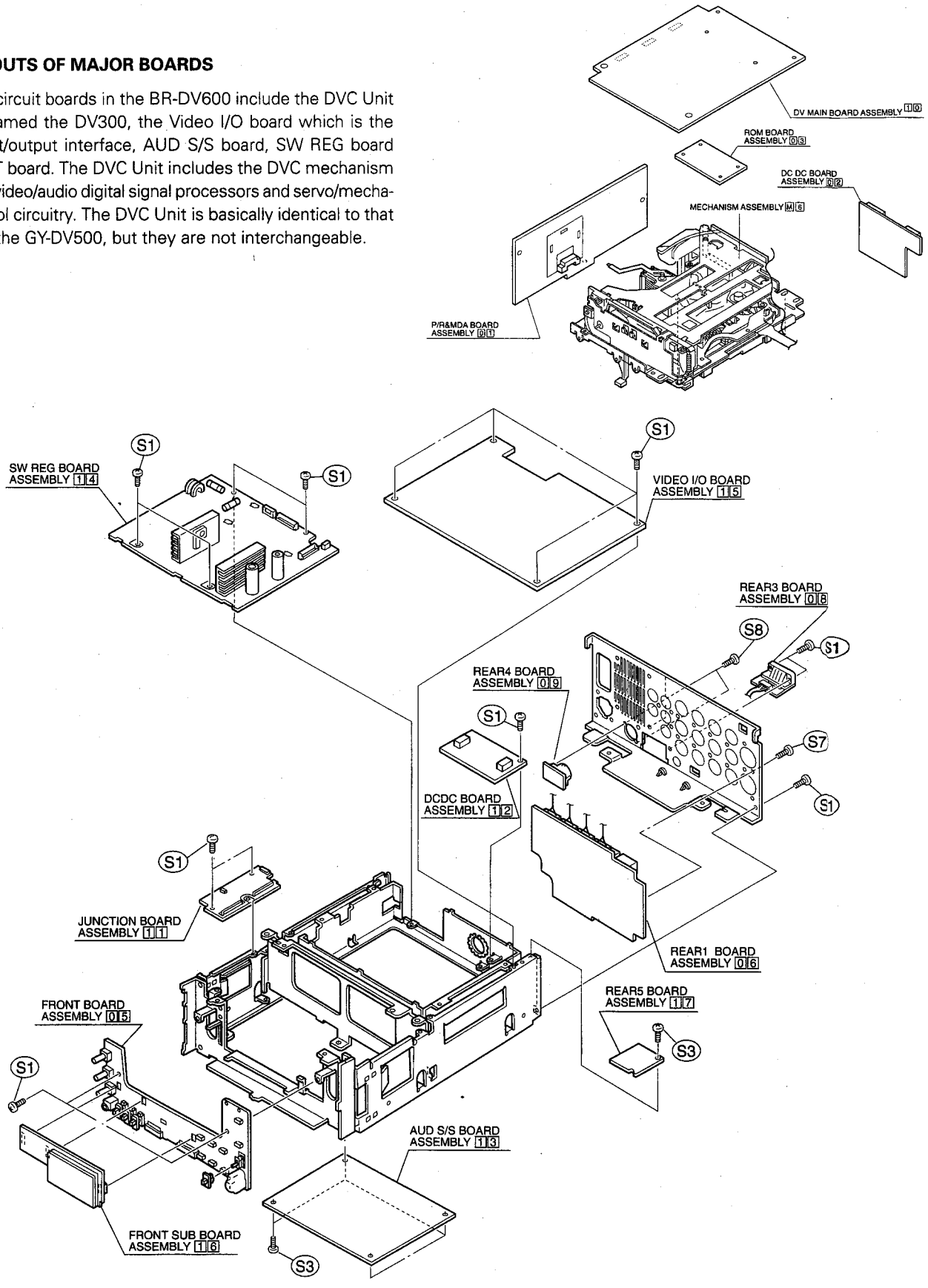
Température de fonctionnement	Basse température 5°C à 10°C	Température de la pièce 10°C à 35°C	Haute température 35°C à 40°C
Étalon pour l'utilisation de la cassette de nettoyage	1 à 2 fois toutes les 5 heures	1 à 2 fois toutes les 20-30 heures	1 à 2 fois toutes les 5 heures

Remarque 1) Lors de l'utilisation de la cassette dans un environnement humide (10% HR à 30% HR), le nettoyage des têtes doit être réalisé à des intervalles correspondant à la moitié de ceux donnés dans le tableau ci-dessus.
Remarque 2) Si une cassette ME80 est utilisée immédiatement après un nettoyage de têtes, l'indicateur d'avertissement VTR (têtes) peut rester allumé. Dans ce cas, laissez la bande défiler et l'indicateur s'éteindra après que la bande a défilé quelques instants.
Remarque 3) Utilisez la cassette de nettoyage à température ambiante (10°C à 35°C).
Remarque 4) La cassette de nettoyage comprend les instructions d'utilisation de la cassette. Toutefois, certaines de ces instructions diffèrent du contenu de la présente feuille. Lors de l'utilisation de la cassette, veuillez suivre les instructions de la présente feuille.

SECTION 1
SERVICE CAUTIONS AND DISASSEMBLY

1.1 LAYOUTS OF MAJOR BOARDS

The major circuit boards in the BR-DV600 include the DVC Unit which is named the DV300, the Video I/O board which is the signal input/output interface, AUD S/S board, SW REG board and FRONT board. The DVC Unit includes the DVC mechanism assembly, video/audio digital signal processors and servo/mechanism control circuitry. The DVC Unit is basically identical to that used with the GY-DV500, but they are not interchangeable.



1.2 REMOVING THE MAJOR PARTS

1.2.1 Disassembly Flowchart

The following flowchart shows the disassembly procedure to be used when performing a diagnosis of the board assemblies or mechanisms. Be sure to unplug the power cord before proceeding with a disassembly or assembly.

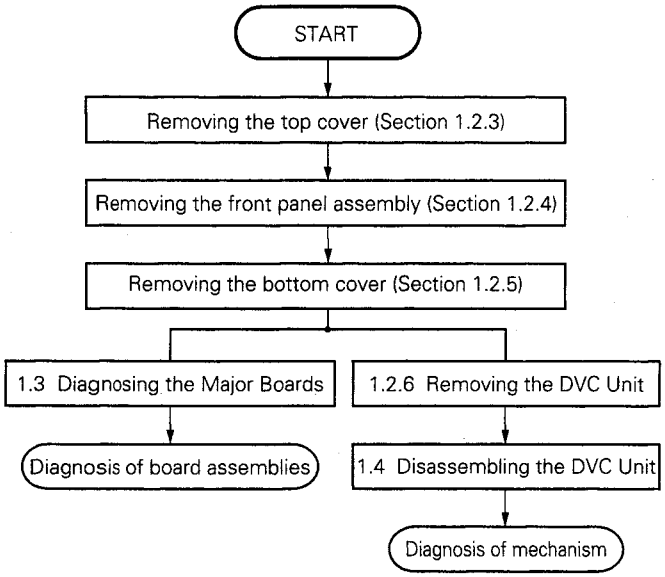


Fig. 1-2-1

1.2.2 Replacing the Fuses

CAUTION

Before replacing the fuses, be sure to investigate what caused the fuse to blow and repair it.
For the protection and safety of the equipment, always replace fuses with the specified ones.

(1) Unplug the power cord from the power outlet before proceeding to replace the fuse.
(2) Remove the top cover (Section 1.2.3).
(3) Remove the Video I/O board (Section 1.3.2).
(4) Remove the shield plate from the REG board (Section 1.3.4).
(5) Fuses F101 and F102 are located on the SW REG board.

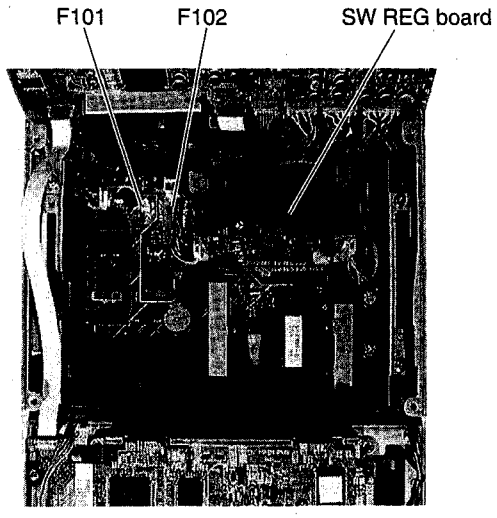


Fig. 1-2-2

1.2.3 Removing the Top Cover

(1) Remove the 4 screws (S1).
(2) Remove the top cover by sliding it in the direction of the arrow.

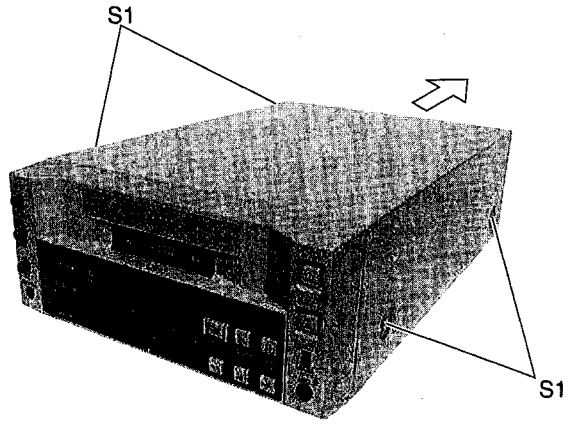


Fig. 1-2-3

1.2.4 Removing the Front Panel assembly

(1) Remove the front panel assembly by disengaging the 4 hooks (L1).

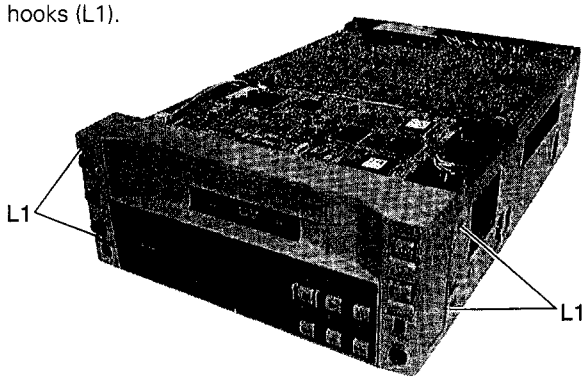


Fig. 1-2-4

1.2.5 Removing the Bottom Cover

(1) Remove the 3 screws (S2).

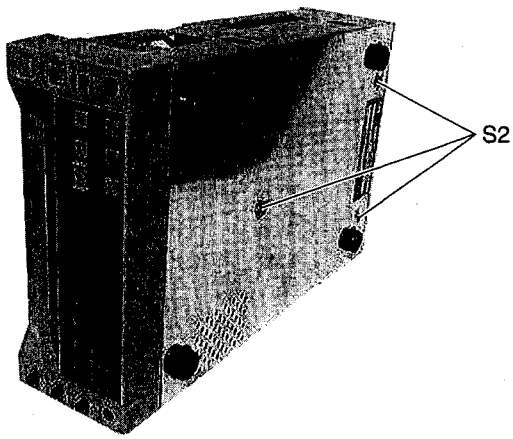


Fig. 1-2-5

1.2.6 Removing the DVC Unit

(1) Remove the 4 screws (S3).
(2) Disconnect the wire connected to CN801 of the DV MAIN board.
(3) The DV MAIN board and the junction board are connected via CN1 and CN2. Disconnect these connectors and remove the boards by lifting them upward.

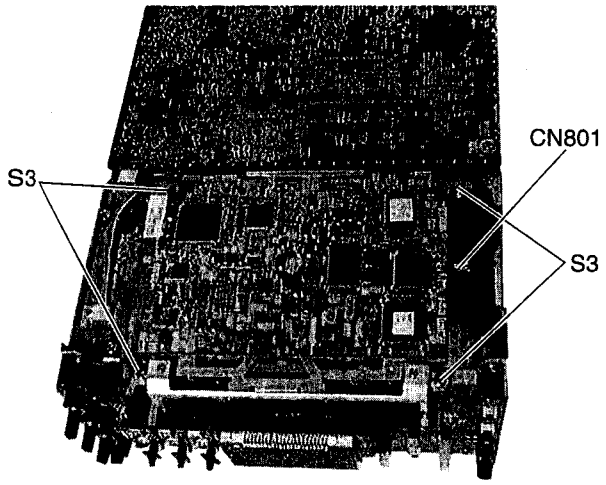


Fig. 1-2-6

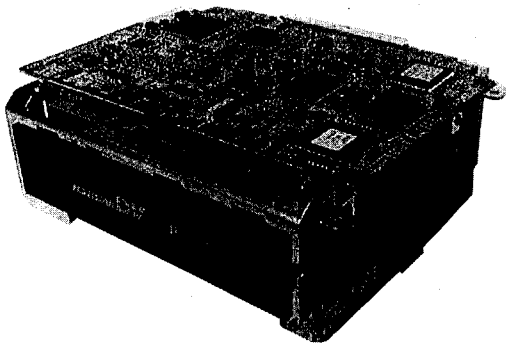


Fig. 1-2-7 DVC Unit

1.3 DIAGNOSIS OF MAJOR BOARDS

1.3.1 Adjustment & Diagnosis of the DV MAIN Board and Mechanism

(1) Remove the 4 screws (S4) (black) from the DV MAIN board.
(2) Remove the 2 screws (S2) from the Junction board.
(3) Stand both the DV MAIN and Junction boards as shown in Fig. 1-3-2 and diagnose them.

CAUTION

During diagnosis and assembly, make sure that the DV MAIN board and the Junction board are connected correctly via the connectors.

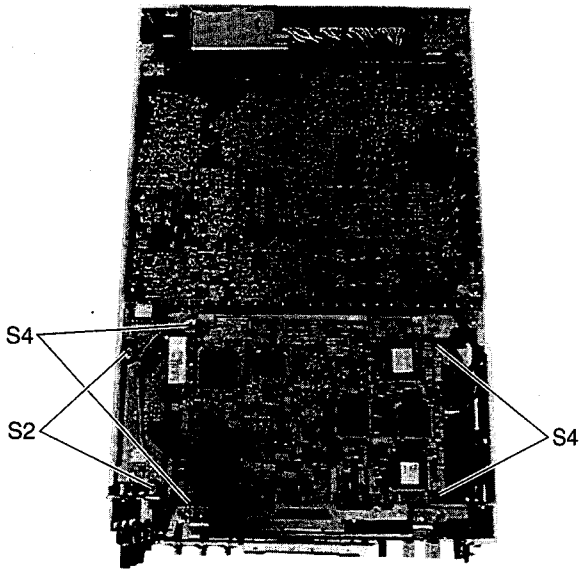


Fig. 1-3-1

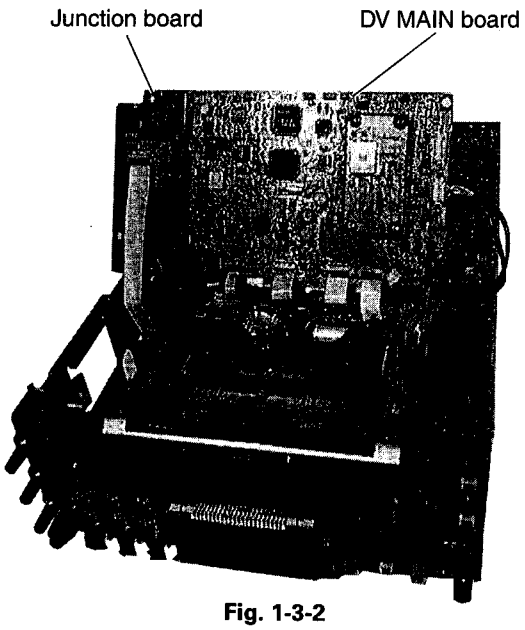


Fig. 1-3-2

1.3.2 Diagnosing the Video I/O Board

(1) Remove the 4 screws (S2).
(2) Stand the board on the chassis slit as shown in Fig. 1-3-4 during diagnosis.

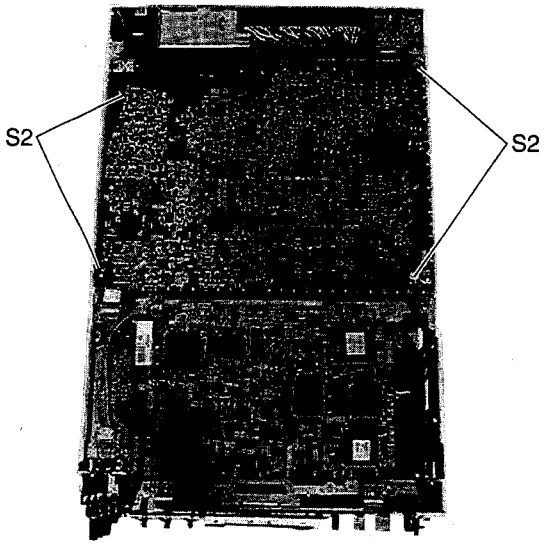


Fig. 1-3-3

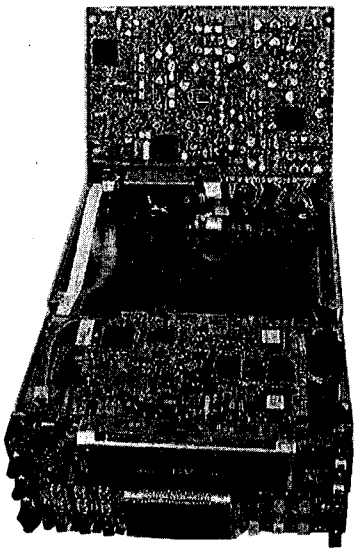


Fig. 1-3-4

1.3.3 Diagnosing the AUD S/S Board

(1) This board can be diagnosed by removing the bottom cover as described in 1.2.5.
(2) To diagnose the back of the board, remove the 4 screws (S2).

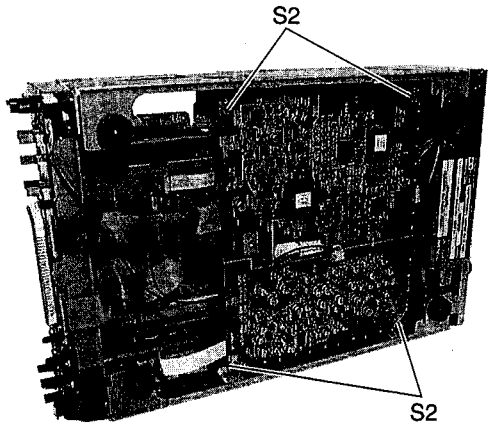


Fig. 1-3-5

1.3.4 Diagnosing the SW REG Board

(1) Remove the screw (S5) and remove the shield cover by sliding it in the direction of the arrow.
(2) Remove the screw on the DCDC board. Then, stand the DCDC board upright and it may be diagnosed.
(3) To diagnose the back of the REG board, remove the 4 screws (S5).

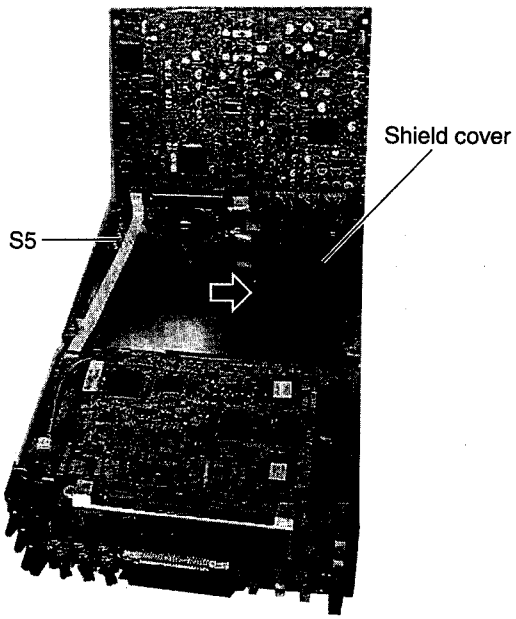


Fig. 1-3-6

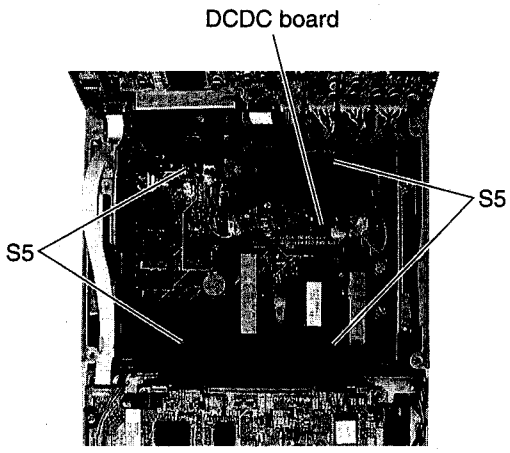


Fig. 1-3-7

1.3.5 Diagnosing the FRONT Board

(1) Remove the 2 screws (S2).

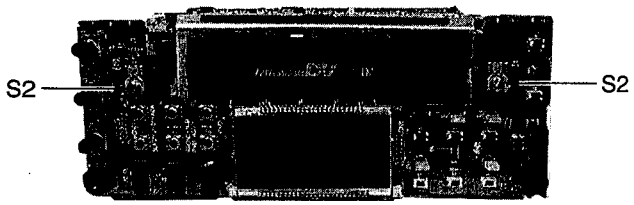


Fig. 1-3-8

1.3.6 Diagnosing the FRONT Sub-Board

(1) The FRONT sub-board is connected to the FRONT board via CN1, CN2 and CN3. Pull the sub-board toward the front to disconnect the connectors and remove the sub-board from the Front board.
(2) To supply power to the FRONT sub-board, attach an extension board as shown in Fig. 1-3-9.

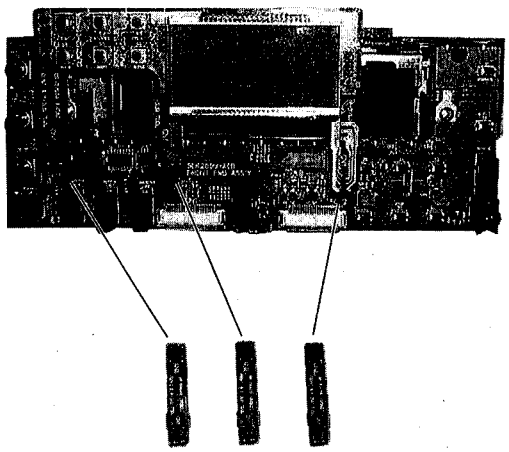


Fig. 1-3-9

Extension board: PRX47372A (3 sets)

1.3.7 Diagnosing the REAR 1 Board

(1) Remove the screw (S5) from the REAR 5 board.
(2) Remove the 2 screws (S2) and then remove the rear panel by sliding it upward.

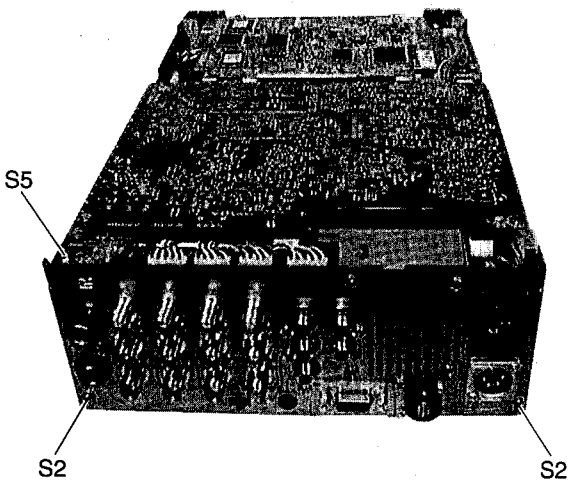


Fig. 1-3-10

1.4 DISASSEMBLY OF THE DVC UNIT

The DVC unit incorporated in the unit can be disassembled as described below. Note that the following description deals only with the method of removing the DVC unit from the VCR unit.

1.4.1 Disassembling the Front Part of the DVC Unit

(1) Remove the DVC unit from the VCR (see section 1.2.6).
(2) Remove the DV MAIN board.
(3) Remove the 2 screws ① and remove the stay on the front cover. The cover of the cassette insertion slot will come out together with it.

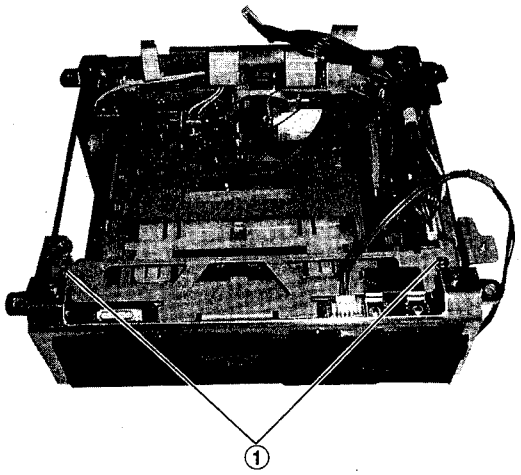


Fig. 1-4-1(1)

(4) Remove the 2 screws ② and remove the front stay.

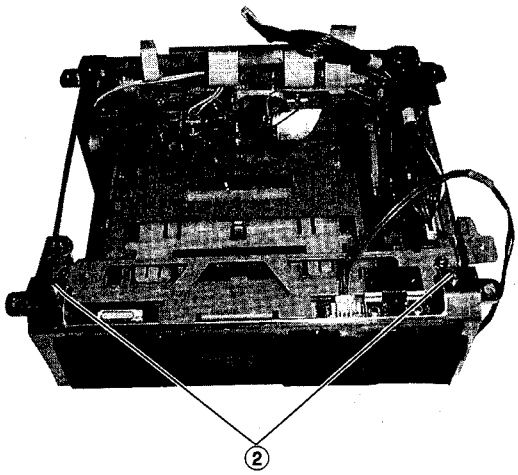


Fig. 1-4-1(2)

1.4.2 Disassembling the Rear Part of the DVC Unit

(1) Remove the 2 screws ③ and remove the rear side stay.

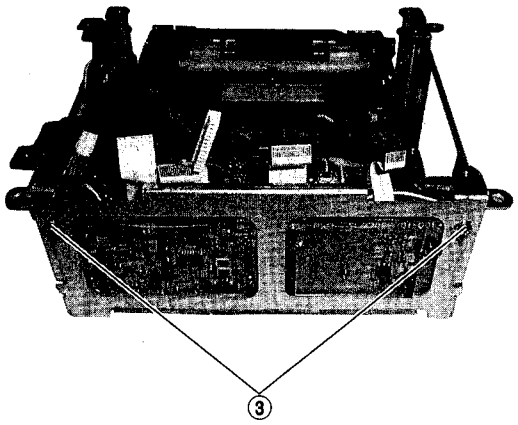


Fig. 1-4-2(1)

(2) Remove the 2 screws ④ and remove the active head cleaner. During this operation, be careful not to apply excessive force to the wire that is connected between the active head cleaner assembly and CN609 on the PR & MDA boards.

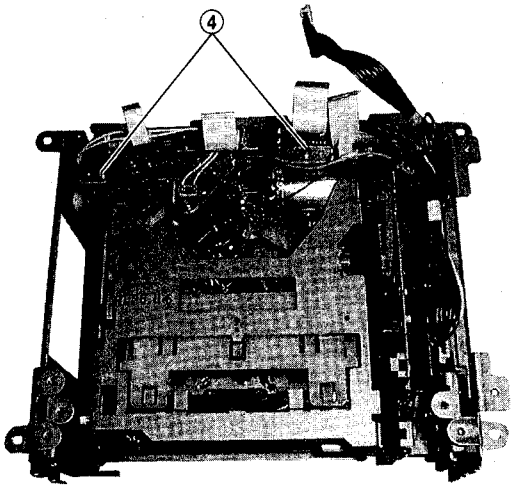


Fig. 1-4-2(2)

(3) Remove the 2 screws ⑤ and remove the side stays.

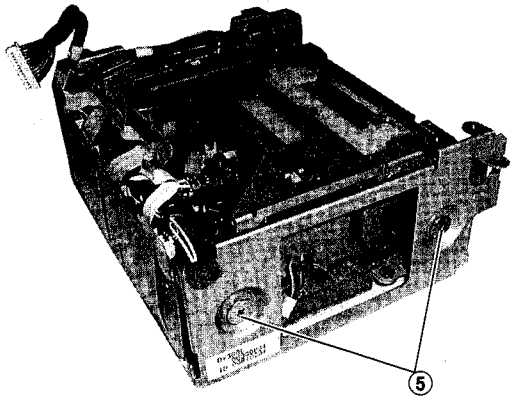


Fig. 1-4-2(3)

(4) Insulators (blue) are attached to the retaining screws. Be sure to attach the insulators when re-assembling the side stays.
(5) The side stays to both sides are attached in the same way. Remove the 2 screws ⑥ and remove the side stays.

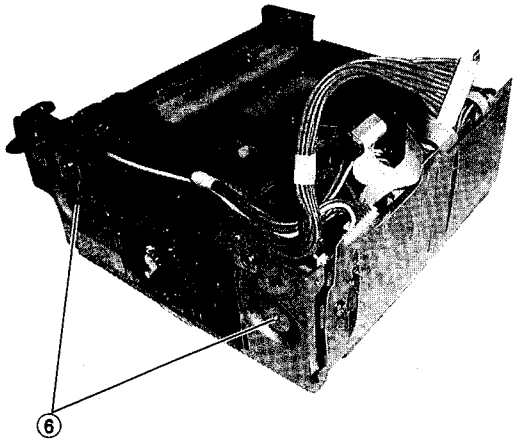


Fig. 1-4-2(4)

(6) After removing the rear stays and side stays (left and right), remove the 2 screws ⑦ then remove the PR & MDA board. When removing the PR & MDA boards, be careful not to damage the wires and FFCs connecting them to the mechanism assembly housing motor and power supply board.

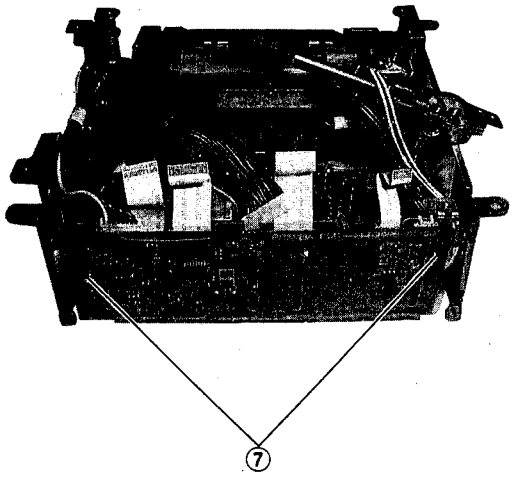


Fig. 1-4-2(5)

1.4.3 Removing the Cassette Housing Assembly

(1) Remove the 2 screws ⑥ and remove the cassette housing assembly.

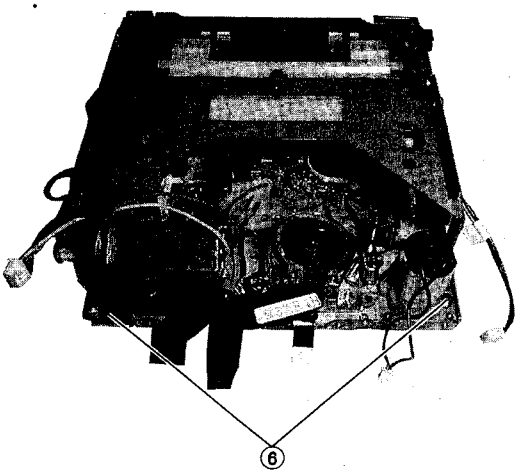


Fig. 1-4-3

1.4.4 Removing the Mechanism Assembly

(1) Remove the 3 screws ⑧. This allows the mechanism assembly to be removed from the stays When it is required to disassemble the mechanism unit itself, see SECTION 2.

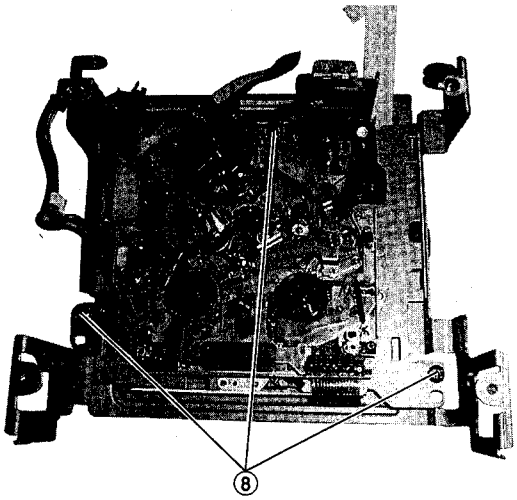


Fig. 1-4-4(1)

(2) When the remove the mechanism unit completely, also remove the connector Ⓐ from the rear.

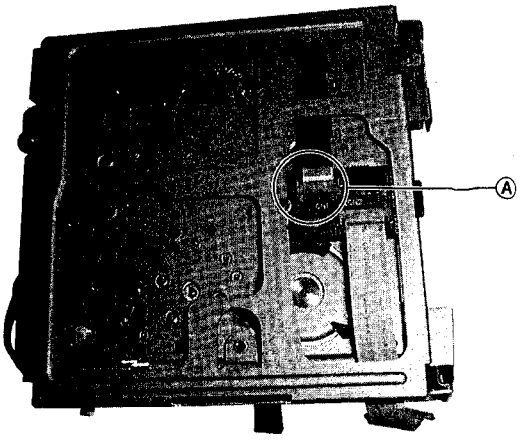


Fig. 1-4-4(2)

1.5 TAPE EJECTION IN CASE OF EMERGENCY

When the cassette tape cannot be ejected normally, take it out by the following methods.

1.5.1 Tape Ejection Using Forced Eject Mode (Short-circuiting of Internal TP)

GY-DV500 is provided with a compulsory eject mode for use in case the button operations are not accepted due to a malfunction of the mechanism control circuitry. When an attempted operation of the operation buttons is not accepted, set the compulsory eject mode as described below before removing the tape.

CAUTION

- This mode is effective only when the electrical and mechanical systems of the mechanism unit are normal and a tape ejection operation is not accepted due to a problem of the electrical system.
- If there is a problem in the mechanical system of the unit, this mode may be ineffective. If compulsory ejection is performed in such a case, the tape could be damaged or cut.

(1) Remove the Top cover (see section 1.2.3).
(2) With the power supply on, short-circuit TP107 on the DV MAIN board with the GND using a wire, etc.
(3) Forced ejection is activated to eject the tape.

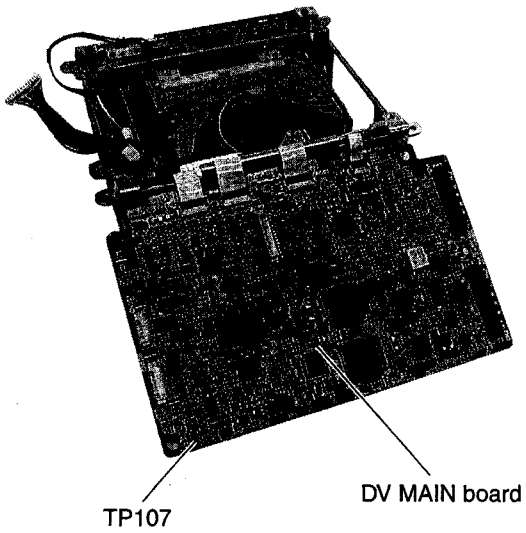


Fig. 1-5-1

1.5.2 Tape Ejection without Using the Forced Eject Mode

Activate the loading motor by applying DC voltage to its two terminals.

NOTE

When a forced ejection is not accepted because the loaded cassette tape cannot be ejected due to a fault in the electrical system or because of some problem in the mechanism unit, eject the tape by using the following procedure.
However, as this mode drives the loading motor, it assumes that the mechanical system is operating normally.

(1) Turn off the power supply to the unit.
(2) Flip open the DV MAIN board to expose the mechanism (see section 1.3.1).

(3) Apply 3 V DC to the electrodes at the top of the loading motor (red wire to + pole, brown wire to - pole) to unload the tape. Unload it little by little because it could be damaged or contaminated by grease if the pole base assemblies are returned completely beyond the position of the tape.

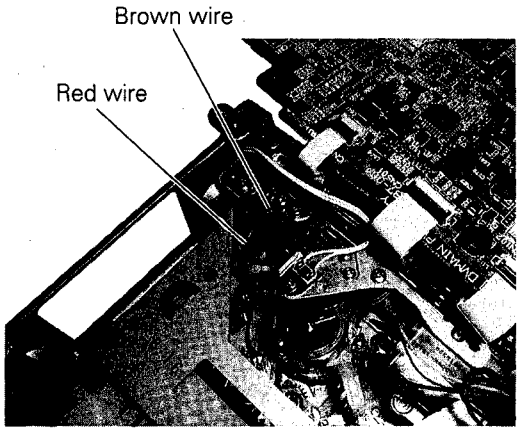


Fig. 1-5-2(1)

(4) If the tape slackens, take it up by rotating the shaft at the top of the capstan motor in the direction of the arrow using a sharp-tipped object (chip IC replacement tool, etc.).
(5) Repeat steps (3) and (4) above until the tape is taken up completely.
(6) After confirming that the tape has been taken up completely, rotate the gear of the cassette housing assembly in the direction of the arrow in order to eject the cassette tape.

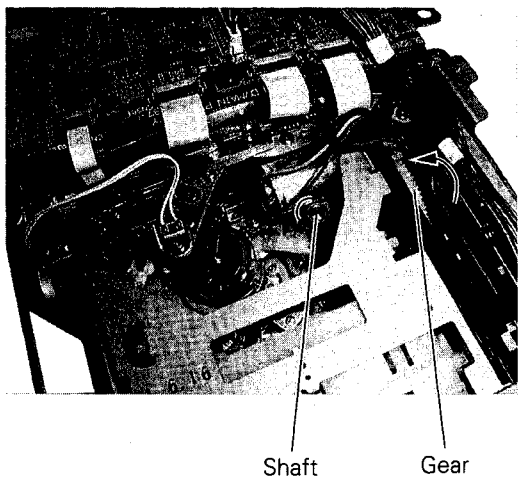


Fig. 1-5-2(2)

1.5.3 Manual Tape Ejection

If the loading motor cannot be run by the procedure outlined in section 1.8.2, the mechanism may be defective. When the loading motor is defective, remove the tape as described below.

(1) Remove the DVC unit from the main unit. See section 1.2.6 for the removal method.
(2) After removing the DVC unit, remove the DV MAIN board .
(3) Remove the 2 screws and remove the active head cleaner assembly (see section 1.4.2).
(4) Remove the side cover to easy operation (see section 1.4.2).
(5) Remove the 2 screws and remove the rear panel from the side of the PR & MDA board.
Carefully unplug the wires so as not to damage them, then remove the PR & MDA board (see section 1.4.2).

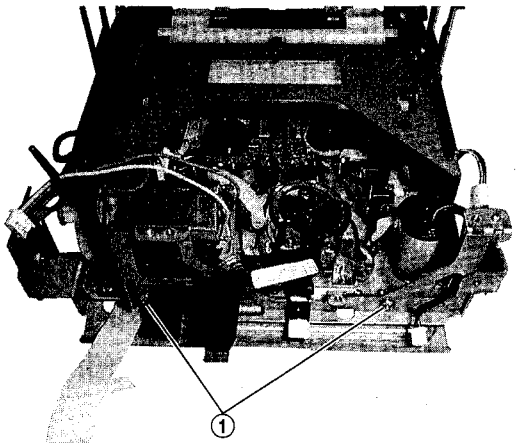


Fig. 1-5-3(1)

(6) Remove the 2 screws ① and remove the active head cleaner stay.

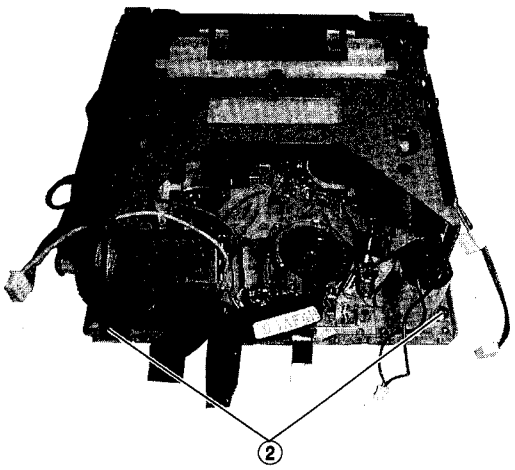


Fig. 1-5-3(2)

(7) Loosen the 2 screws ② so that the cassette housing is separated freely.
(8) Remove the 4 screws ③ and remove the loading motor.

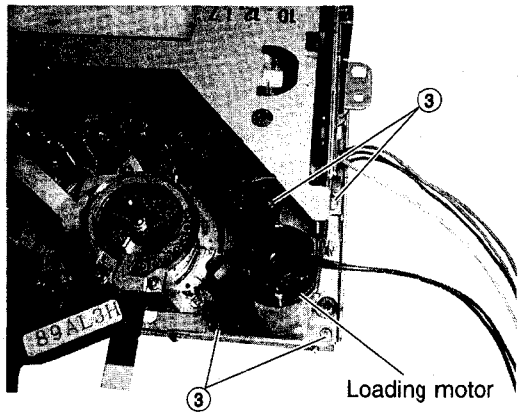


Fig. 1-5-3(3)

(9) Unload the pole base assemblies by rotating the gear shown in the figure in the direction of the arrow.

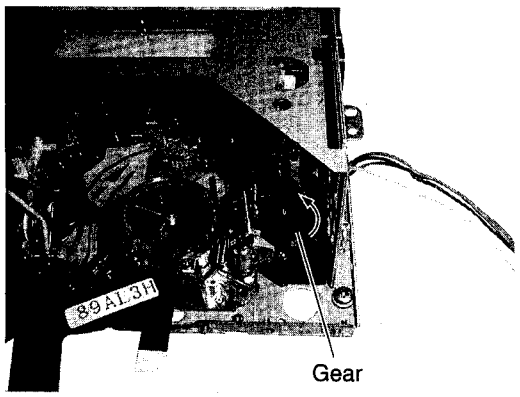


Fig. 1-5-3(4)

(10) The pole base assemblies should be unloaded little by little. If they are returned completely beyond the position of the tape, the tape may slacken and become damaged or stained by grease.
(11) If the tape slackens, take it up by rotating the shaft on the top of the capstan motor in the direction of the arrow using a sharp-tipped object (chip IC replacement tool, etc.) (see section 1.5.2-(4)).
(12) Repeat steps (9) and (10) above until the tape is taken up completely.
(13) After confirming that the tape has been taken up completely, tighten the cassette housing retaining screws which were loosened in step (6).
(14) Attach and clamp the cassette housing again, then rotate the gear of the housing assembly in the direction of the arrow to eject the cassette tape in the same way as in section 1.5.2-(6).

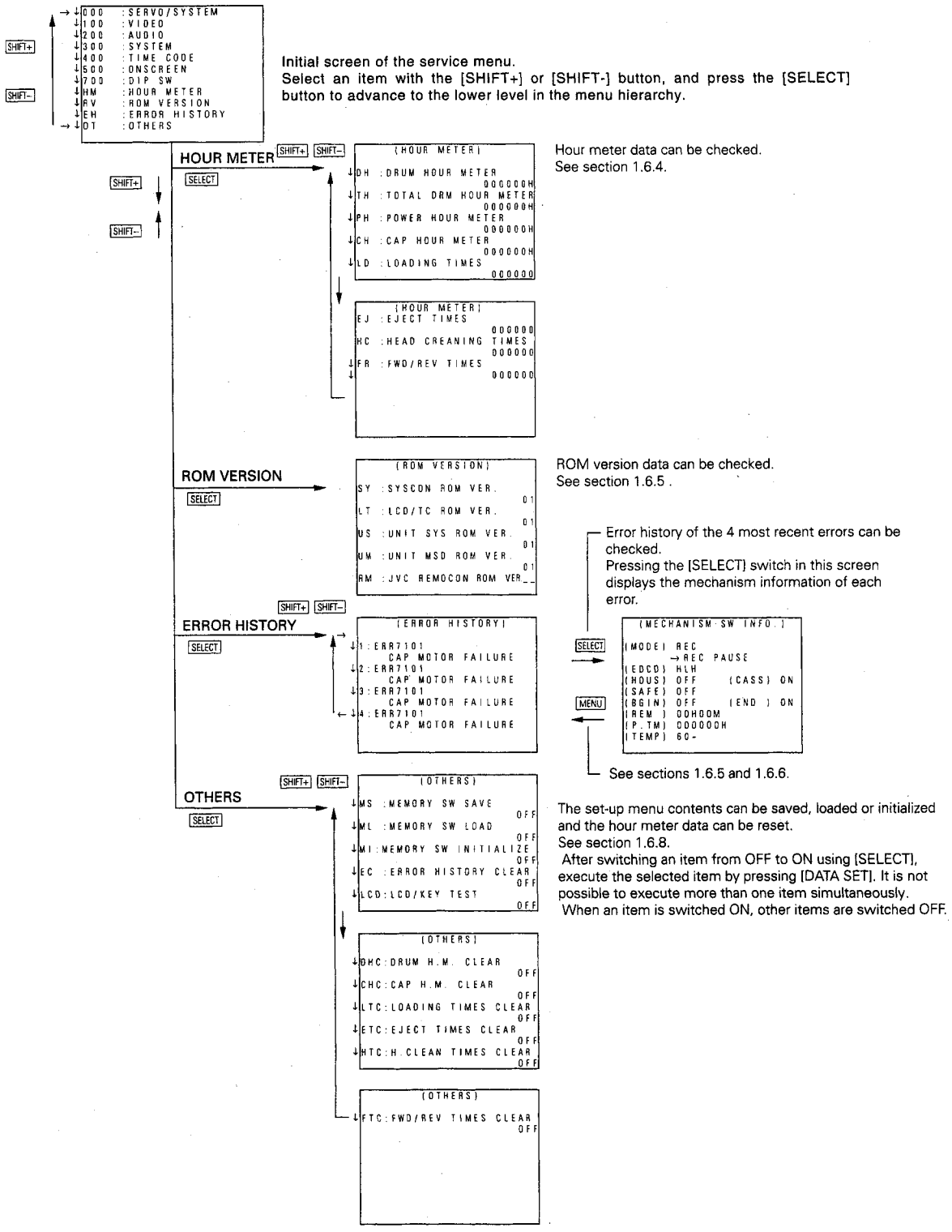
1.6 MENU SWITCHES

1.6.1 Displaying the Menu Switches

When the menu button is pressed, the menu switches which can be set by the user are output at the MONITOR OUT signal and on the counter display (for the contents of the setup menu, refer to page 18 of the instruction manual). Then, without loading a tape, press the [STOP] and [EJECT] buttons simultaneously to display the menu switches including the service menu. When a menu item has been changed and it is required to save it, press the [SET] button. "DATA SET" will blink on the counter display and the set returns to the normal mode.

To return to the normal set-up menu, set the Operate switch to OFF temporarily.

1.6.2 Configuration of Service Menu (Monitor Out Display)



1.6.3 Contents of the User and Service Menu

CAUTION

The Initial setting is that which is set during menu switch initialization.

Group	Item	Setting	Counter Display	Initial Setting	Contents
000 SERVO/ SYSTEM	002: OPERATION LOCK	ON OFF	002 -00 -01	OFF	User setup menu (See instruction manual page 18.)
	003: SYNC SELECT	EXTERNAL AUTO	003 -01 -03	AUTO	User setup menu (See instruction manual page 18.)
	050: REMOTE SELECT (When the SP-K41 is installed the display is changed from "RS422A" to "RS232C".	IEEE 1394 RS422A IEEE 1394+RS422A JVC BUS JVC BUS+IEEE1394 JVC BUS+RS422A JVC BUS+RS422A+1394	050 -01 -04 -05 -08 -09 -12 -13	JVC BUS+RS422A+1394	User setup menu (See instruction manual page 18.)
	051: ERR RATE THRESHOLD	4000 8000 12000 NOTHING	051 -00 -01 -02 -03	8000	Head clog warning threshold level selection. The value is the error rate with viterbi ON. Lowering the threshold level (increasing the value) will result in a margin decrease until block noise is appeared.
	080: BATTERY SHUTDOWN V	10.5–12.0V (0.1Vstep)	080 -00 〜 -15	10.5V	Battery shutdown voltage setting.
	081: BATTERY ALARM V	10.5–12.0V (0.1Vstep)	081 -00 〜 -15	11.0V	Battery alarm detection voltage setting.
100 VIDEO	108: VIDEO INPUT SELECT	LINE Y/C COMPONENT IEEE1394	108 -00 -01 -02 -03	LINE	User setup menu (See instruction manual page 18.)
	125: SET UP (U-Model only)	OFF ON	125 -00 -01	ON	User setup menu (See instruction manual page 18.)
200 AUDIO	212: AUDIO OUT AT SEARCH	OFF ON	212 -00 -01	ON	User setup menu (See instruction manual page 19.)
	214: V. FADE	OFF ON	214 -00 -01	ON	User setup menu (See instruction manual page 19.)
	245: SAMPLING RATE	32K 48K	245 -00 -01	48K	User setup menu (See instruction manual page 19.)
300 SYSTEM	300: DIRECT EJECT	OFF ON	300 -00 -01	ON	Direct ejection setting. ON : Direct ejection enabled. OFF : Direct ejection disabled.
	304: REC DISABLE	ENABLE DISABLE	304 -00 -01	ENABLE	REC inhibition setting ENABLE : Recording is possible on cassettes with tab. DISABLE : Recording is inhibited under any condition.
	305: REC REPEAT	OFF ON	305 -00 -01	OFF	FULL REPEAT setting during REC OFF : REC FULL REPEAT does not occur. ON : REC FULL REPEAT occurs.
	306: LONG PAUSE DISABLE	ENABLE DISABLE	306 -00 -01	ENABLE	ENABLE : Long pause is canceled in a certain period (set with Menu: 307). DISABLE : Long pause is not canceled.
	307: LONG PAUSE TIME	1 SEC 10 SEC 30 SEC 1 MIN 2 MIN 3 MIN 4 MIN 5 MIN	307 -00 -01 -02 -03 -04 -05 -06 -07	5 MIN	Long pause time setting. Limited to 3 min. when the internal temperature of the VCR is low.
	311: AUTO PLAY	SHORT FF PLAY	311 -00 -01	SHORT FF	User setup menu (See instruction manual page 19.)
	312: AUTO REW	OFF ON	312 -00 -01	OFF	User setup menu (See instruction manual page 19.)

300 SYSTEM	315: LOCAL FUNCTION	EJT/STP PLY/FF/REW/EJT/STP ALL ENABLE ALL DISABLE	315 -00 -01 -02 -03	EJT/STP	Setting of VCR buttons accepted in remote mode EJT/STP : Only EJECT and STOP are accepted. PLY/FF/REW/EJT/STP : PLAY, FF, REW, EJECT and STOP are accepted. ALL ENABLE : All buttons are accepted. ALL DISABLE : No button is accepted.
	316: LOCAL COM FUNCTION	ALL DISABLE EJT/STP	316 -00 -01	ALL DISABLE	Setting of remote control commands accepted in local mode ALL DISABLE : All commands inhibited. EJT/STP : Only EJECT and STOP are accepted.
	336: NTSC/ PAL	NTSC PAL	336 -00 -01	NTSC (U-Model) PAL (E-Model)	System setting (Switching prohibited)
	353: EDIT ADJUST	0F ≀ 7F	353 -00 ≀ -07	0F	User setup menu (See instruction manual page 19.)
	360: AUTO REW AT TIMER	OFF ON	360 -00 -01	OFF	User setup menu (See instruction manual page 19.)
	363: CONTROLLER SELECT	TYPE1 ≀ TYPE8	363 -00 ≀ 08	TYPE1	User setup menu (See instruction manual page 19.)
	396: BATTERY SELECT	12V 13.2V 14.4V	396 -00 -01 -02	12V	User setup menu (See instruction manual page 19.)
	397: FAN STOP SHUT DOWN	ENABLE DISABLE	397 -00 -01	ENABLE	User setup menu (See instruction manual page 20.)
400 TIME CODE	403: REGEN MODE	TC+UB TC UB	403 -00 -01 -02	TC+UB	The REGEN source of TCG setting TC+UB : Set the TC and UB to REGEN TC : TC only UB : UB only
	407: PHASE CORRECTION	OFF ON	407 -00 -01	ON	Phase correction bit setting
	414: TCG SELECT	PRESET REGEN	414 -00 -01	REGEN	User setup menu (See instruction manual page 20.)
	415: TCG MODE	FREE RUN REC RUN	415 -00 -01	REC RUN	User setup menu (See instruction manual page 20.)
	416: NON DROP/DROP (U-Model only)	DROP NON DROP	416 -00 -01	DROP	User setup menu (See instruction manual page 20.)
500 ON SCREEN	500: ON SCREEN	OFF ON	500 -00 -01	ON	User setup menu (See instruction manual page 20.)
	501: CHARACTER H. POSITION	0–8	501 -00 ≀ -08	0	User setup menu (See instruction manual page 20.)
	502: CHARACTER V. POSITION	0–11	502 -00 ≀ -11	0	User setup menu (See instruction manual page 20.)
	504: INFORMATION SELECT	TIME MODE+TIME	504 -00 -01	MODE+TIME	User setup menu (See instruction manual page 20.)
	505: REMAIN ENABLE	OFF ON	505 -00 -01	OFF	User setup menu (See instruction manual page 20.)
	509: WARNING MESSAGE	OFF ON	509 -00 -01	ON	Selection whether warning messages are displayed (if warning detection is executed)
	512: MUTING ALARM MESSAGE	ON OFF	512 -00 -01	OFF	Selection whether alarm messages are output ON : Alarm messages are muted. OFF : Alarm messages are output.
	514: TIME SELECT	DATE CLOCK DATE+CLOCK TC	514 -00 -01 -02 -03	TC	User setup menu (See instruction manual page 20.)
	515: CALENDAR SELECT	JAPAN USA EUROPE	515 -00 -01 -02	USA (U-Model) EUROPE (E-Model)	Calendar display format selection JAPAN : Year/Month/Day USA : Month/Day/Year EUROPE : Day/Month/Year
	516: DISPLAY SELECT	TC CLOCK	516 -00 -01	TC	User setup menu (See instruction manual page 20.)
700 DIP SW	700: DIP SWITCH-0 | 715: DIP SWITCH-15	OFF ON	700 -00 -01 | 715 -00 -01	OFF	Switching inhibited. Must always be OFF.

1.6.4 HOUR METER

This screen allows the data of hour meters to be checked.

Item	Counter Display	Description	Max. Display Hours/Count
DH : DRUM HOUR METER	dH******	Displays the drum rotation hours.	999999H
TH : TOTAL DRM HOUR METER	tH******	Displays the total drum rotation hours. This data cannot be reset.	999999H
PH : POWER HOUR METER	PH******	Displays the power ON hours. This data cannot be reset.	999999H
CH : CAP HOUR METER	cH******	Displays the capstan motor rotation hours.	999999H
LD : LOADING TIMES	Ld******	Displays the loading count.	999999TIMES
EJ : EJECT TIMES	EJ******	Display the ejection count.	999999TIMES
HC : HEAD CLEANING TIMES	Hc******	Displays the active cleaning head operation count.	999999TIMES
FR : FWD/REV TIMES	Fr******	Displays the forward or reverse operation count	999999TIMES

****** are the figures of time (or count).

1.6.5 ROM VERSION

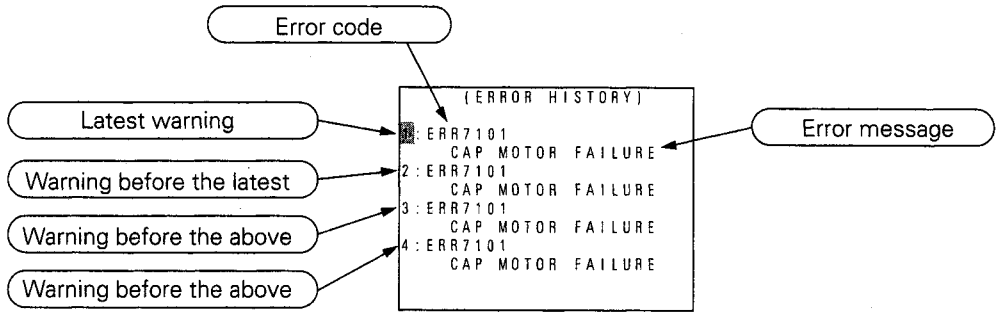
The ROM versions can be confirmed.

Item	Counter Display	Board Name Symbol No.	Remark
SY : SYSCON ROM VER.	SY **	AUD S/S board IC513	PLSL1069-V1-**
LT : LCD/TC ROM VER.	LT **	FRONT board IC13	PLSL1070-V1-**
US : UNIT SYS ROM VER.	US **	DV MAIN board IC101	MN102F1617HL-**
UM : UNIT MSD ROM VER.	UM **	DV MAIN board, IC401 ROM board, IC1 (The MSD µCOM program is written inside IC401 and in ROM board IC1.)	M31020EAVP-*** M27W102-80N6-**
RM : JVC REMOCON ROM VER	rM **	ROM version of the remote control unit connected through the JVC bus.	

** is the version display (lower 2 digits).

1.6.6 ERROR HISTORY

This screen allows the history of the 4 most recent errors to be checked.



1.6.7 MECHANISM SW INFO

This screen allows the mechanism mode at each error to be displayed.

```
(MECHANISM SW INFO.)

(MODE) REC
       →REC PAUSE
(EDCD) HLH
(HOUS) OFF      (CASS) ON
(SAFE) OFF
(BGIN) OFF      (END ) ON
(REM ) 00H00M
(P.TM) 000000H
(TEMP) HIGH
```

Display

Item	Description	Input Pin	Display
(MODE)	Mode at the moment of VCR error & mode immediately before.	—	PLAY, STILL, REC, REC PAUSE, NO CASSETTE, EJECT, STNDBY-ON, FF, REW, SHTL, STILL, SHTL X10, SHTL X-10
(ECOD)	Rotary encoder output.	DV MAIN board IC401 Pin 44 → CAM0 Pin 45 → CAM1 Pin 46 → CAM2	Shows H or L according to the mechanism position. Rotary encoder terminal (ENCD) H L H CAM0 CAM1 CAM2
(HOUS)	Cassette housing switch status.	DV MAIN board IC401 pin 27	ON : Housing inserted/ejected status OFF : Housing operating status
(CASS)	Cassette switch status.	DV MAIN board IC401 pin 32	ON : Cassette tape inserted OFF : Cassette tape not inserted or during insertion /ejection
(SAFE)	REC safety switch status.	DV MAIN board IC401 pin 47	ON : Non-recordable tape inserted, cassette tape not inserted or during insertion /ejection OFF : Recordable tape inserted
(BGIN)	Tape begin sensor status.	DV MAIN board IC401 pin 126	ON : Tape leader section detected OFF : Magnetic tape section detected
(END)	Tape end sensor status.	DV MAIN board IC401 pin 125	ON : Tape leader section detected OFF : Magnetic tape section detected
(REM)	Remaining tape at the moment of error.	—	Remaining tape time
(P.TM)	POWER HOUR METER data at the moment of error.	—	POWER HOUR METER time
(TEMP)	Set's internal temperature at the moment of error	DV MAIN board IC101 pin 75	UNDER : under 10°C NORMAL : 10 to 40°C HIGH : 40 to 60°C OVER : over 60°C

1.6.8 OTHERS

This screen allows the setup menu to be saved temporarily, loaded or initialized.
To execute an item, switch it from "OFF" (displayed as "00") to "ON" (displayed as "01") with the [SELECT] button, then press the [DATA SET] button (excluding hour meter). As switching an item "ON" switches other items automatically "OFF", it is not possible to execute more than one item simultaneously.

Item	Counter Display	Factory Default	Description
MEMORY SW SAVE	SA 00	OFF	Saves the data set with the setup menu.
MEMORY SW LOAD	LA 00	OFF	Loads the data set for the setup menu.
MEMORY SW INITIALIZE	A1 00	OFF	Initializes the setup menu data to the initial setting. The hour meters are not reset.
ERROR HISTORY CLEAR	Ec 00	OFF	Clears the error history.
LCD/KEY TEST	Lcd 00	OFF	For use in the Operation key LED lighting check. When "START" is set and the [DATA SET] button is pressed, "PERFORM" is displayed in the MONITOR OUT and LCD display and the set enters the key test mode. In this mode, pressing any operation key lights the corresponding LED and an indication on the display. Pressing a key does not cause the VCR to act. To exit from the key test mode, change the setting from "START" to "STOP" and press the [DATA SET] button. "PERFORM" is displayed in the MONITOR OUT and LCD display and the set returns to the normal mode.
DRUM H.M. CLEAR	dHc 00	OFF	Resets the drum hour meter.
CAP H.M. CLEAR	cHc 00	OFF	Resets the capstan hour meter.
LOADING TIMES CLEAR	L7c 00	OFF	Resets the loading count.
EJECT TIMES CLEAR	E7c 00	OFF	Resets the ejection count.
H. CLEAN TIMES CLEAR	H7c 00	OFF	Resets the head cleaning count.
FWD/REV TIMES CLEAR	F7c 00	OFF	Resets the forward/reverse operation count

1.7 WARNING CODES

If trouble occurs during operation, the set conducts self-diagnostics of the cause and shows the result in the on-screen display and counter display.

1.7.1 Warning Errors

Error Details Counter display On-screen display	VCR Operation	Cause	Detection Method	Error History ○: Recorded ×: Not recorded
Condensation on the drum "DEW" mark lit CONDENSATION ON DRUM	• Operation stops if cassette is loaded. • If there is no cassette loaded, the drum continues rotation. Operations are accepted when dew has evaporated.	Condensation of dew.	Voltage at pin 124 of DV MAIN board IC401 is checked. DEW ON: >2.4 V DC DEW OFF: <1.8 V DC	×
Loading failure Err 3200 FAILURE LOADING	AUTO OFF	Failure in loading motor, rotary encoder or mechanism.	Rotary encoder outputs at pins 44, 45 and 46 of DV MAIN board IC401 are checked, and error is identified when loading does not complete in 4 sec.	○
Unloading failure Err 3300 FAILURE UNLOADING	When unloading fails, cassette is loaded again then unloading is retried. If this fails again, AUTO OFF occurs.	Failure in loading motor, rotary encoder or mechanism.	Rotary encoder outputs at pins 44, 45 and 46 of DV MAIN board IC401 are checked, and error is identified when unloading does not complete in 4 sec.	○
Ejection failure Err 4100 CASSETTE EJECT FAILURE	AUTO OFF	Defect in cassette housing switch or cassette housing motor.	When ejection end (pin 27, DV MAIN board IC401) does not occur in 3 sec. after start of ejection.	○
Intake failure Err 4200 HOUSING FAILURE	AUTO OFF	Defect in cassette housing switch or cassette housing motor.	When housing switch (pin 27, DV MAIN board IC401) is not detected in 3 sec. after start of intaking.	○
Begin/End sensor simultaneous detection Err 5605 TAPE DEFECTIVE	AUTO OFF	Tension error or mechanism defect leading to tape cutting. Cassette was inserted while internal tape is slack, etc.	When both tape beginning sensor (pin 126, DV MAIN board IC401) and tape end sensor (pin 125, DV MAIN board) outputs go Low simultaneously.	×
Tape cut during loading Err 5607 TAPE DEFECTIVE	AUTO OFF	Tape is cut during loading. Mode transition error of mechanism.	When SUP or TU reel FG is not detected during loading.	×
End detected after short REW Err 5702 END LEADER DETECTION	AUTO OFF	Tape is cut after end of tape has been detected. Mode transition error of mechanism.	When tape end sensor (pin 125, DV MAIN board IC401) remains Low level after 3 sec. of tape transport by short REW after detection of tape end in PLAY mode, etc.	○
Beginning detected after short FF Err 5802 BEGIN LEADER DETECTION	AUTO OFF	Tape is cut after beginning of tape has been detected. Mode transition error of mechanism.	When tape beginning sensor (pin 126, DV MAIN board IC401) remains Low level after 3 sec. of tape transport by short FF after detection of tape beginning in SEARCH REV mode, etc.	○
Drum motor rotation error Err 7001 DRUM MOTOR FAILURE	AUTO OFF	Drum motor or MDA circuit defect. FG detector circuit defect.	When drum FG (pin 54, DV MAIN board IC401) is not detected for more than 4 sec. in drum driving mode.	○
Capstan motor rotation error Err 7101 CAP MOTOR FAILURE	AUTO OFF	Capstan motor or MDA circuit defect. FG detector circuit defect.	When drum FG (pin 55, DV MAIN board IC401) is not detected for more than 2 sec. in capstan driving mode.	○
SUP reel rotation failure Err 7202 SUPPLY REEL FAILURE	AUTO OFF	Timing belt is cut or a reel control part in mechanism is defective.	When SUP REEL FG is not detected for more than 2 sec. in a tape transport mode.	○
SUP tape slack during capstan drive Err 7203 SUPPLY REEL FAILURE	AUTO OFF	Timing belt is cut or a reel control part in mechanism is defective.	When more than 4500 capstan FG pulses are detected in a single SUP REEL FG pulse in a capstan driving mode.	○
TU reel rotation failure Err 7302 TAKE UP REEL FAILURE	AUTO OFF	Timing belt is cut or a reel control part in mechanism is defective.	When TU REEL FG is not detected for more than 2 sec. in a tape transport mode.	○
SUP tape slack during capstan drive Err 7303 TAKE UP REEL FAILURE	AUTO OFF	Timing belt is cut or a reel control part in mechanism is defective.	When more than 4500 capstan FG pulses are detected in a single TU REEL FG pulse in a capstan driving mode.	○
Tape slack after unloading Err 7305 TAKE UP REEL FAILURE	AUTO OFF	Timing belt is cut or a reel control part in mechanism is defective.	When the number of TU REEL FG pulses during unloading is less than specified (this depends on the number of windings).	○
SYSCON REF ERROR Err 8400 SYSCON REF ERROR	AUTO OFF	System controller reference signal failure	· The servo reference signal is not transmitted to the SYSCON. · Communication failure.	○

1.7.2 Invalid Errors

Error Details **Counter display** **On-screen display**	**VCR Operation**	**Cause**	**Detection Method**	**Error History** **○: Recorded** **×: Not recorded**
Pc data tape is in use Pc TAPE PC TAPE INHIBIT	STOP	A cassette for the computer is loaded.	A different cassette type (pins 117, 118 and 119, DV Main board IC401) is detected after intaking cassette .	×
NTSC/PAL reproduce inhibition PAL inh/ntSc inh PAL INHIBIT/ NTSC INHIBIT	Continues operation.	A tape that has been recorded with an incompatible TV format is played.	AUX data in the playback signal is detected.	×
LP reproduce inhibition LP inh LP INHIBIT	Continues operation.	A tape recorded in LP is played.	AUX data in the playback signal is detected.	×
Recording inhibition rEc inh REC INHIBIT	STOP	• Accidental erasure protect slider of cassette is set to SAVE. • MENU 304: REC DISABLE is set to DISABLE. • Copy-guarded signal cannot be recorded.	–	×
No DV input/Copy inhibited 1394 inh 1394 INHIBIT	STOP	• No signal is input at DV IN/OUT terminals. • Copy inhibit signal is input.	–	×
EE check error EE inh EE CHECK INVALID	Continues operation.	When an EE check performed by pressing the REC button during playback shows that the LINE signal is not input. When the signal input is IEEE1394.	With LINE input, the input signal is detected. With IEEE1394 input, EE signal cannot be output in MONITOR OUT. Therefore, an INVALID error occurs when EE check is performed.	×
AUD DUB inhibition Adb inh AUDIO DUB INHIBIT	Operation stops.	• Accidental erasure protect slider of cassette is set to SAVE. • An attempt is made to dub on a tape that was recorded with a 48K sampling rate. • MENU 304: REC DISABLE is set to DISABLE. • Copy-guarded signal cannot be recorded.	–	×
SSF data error SSF inh SSF INHIBIT	Continues operation.	SSF data error.	• The Model ID and reel No. are not recorded on the tape. • SSF data is not recorded at the beginning of tape.	×
Fan motor stopped Fan StoP FAN MOTOR FAILURE	Operation stops in 60 sec. after the fan motor stops. (When menu SW 397: FAN STOP SHUTDOWN is "ENABLE")	Fan motor is stopped.	Detection of pin 6, AUD S/S board IC515.	×
Head clogged HEad CloG HEAD CLOG	Continues operation.	Video head is clogged.	When the error rate is more than 8000 with viterbi ON. The threshold can be varied with service menu SW 051 : ERR RATE THRESHOLD.	×
Servo fails to lock "SERVO" lit (No display)	Continues operation.	Drum rotation phase error exceeds 10%. Capstan motor rotation speed is deviated by more than 20%.	MSD µCOM detects drum rotation phase based on phase error between TSR and HID signals. Capstan motor rotation speed is detected from CAP FG.	×
Battery alarm Blinking mark (No display)	Continues operation.	Battery alarm is detected	Detection of pin 62, AUD S/S board, IC501. Alarm voltage is variable using service menu SW 081 : BATTERY ALARM V.	×
Battery warning Blinking mark LOW BATTERY	AUTO OFF	Battery shutdown is detected.	Detection of pin 62, AUD S/S board, IC501. Warning voltage is variable using service menu SW 080 : BATTERY SHUTDOWN V.	×

1.8 EEPROMs

The EEPROMs are memories that can be erased or written electrically. As they hold the data required for VCR operations, adjustments and setup are required after replacing an EEPROM (also after replacing circuit boards). The following table shows the circuit boards and storage contents of the EEPROMs used in the set.

EEPROM	Stored Data	After Replacement
DC MAIN board IC103	Adjustment data for adjustment software	All data erased.
	Hour meter data	All data reset.
	Error history	All data erased.
	IEEE1394 ID data	ID data erased.
DV MAIN board IC106	Not used	–
AUD S / S board IC508	Setup menu setting data	Reset to initial setting.

1.9 CAUTION FOR REPLACING THE DV MAIN BOARD AND AUD S/S BOARD

When the DV MAIN board or AUD S/S board has been replaced for servicing, be sure to enforce the following items.

1.9.1 DV MAIN Board

[A] About the ID Management Label

Each VCR unit carries an ID label in compliance with IEEE1394 showing the unique ID assigned on the production line.
(See the following figure for the label position.)
When replacing the DV MAIN board, remove the ID management label that was provided originally with the unit from the defective board and attach it in the same position to the new board.

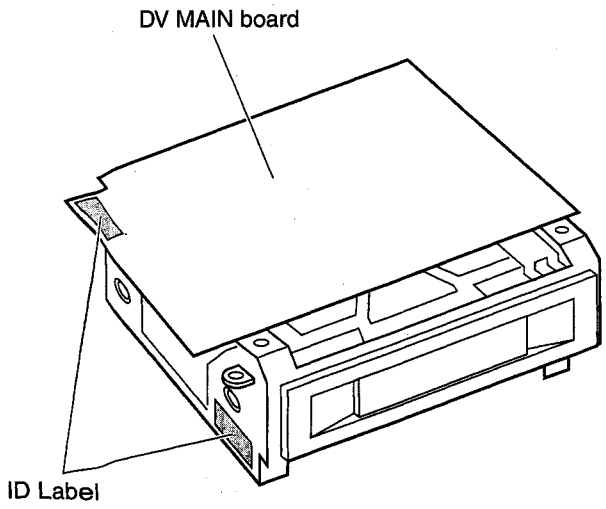


Fig. 1-9-1

[B] Load EEPROM Internal Data

The EEPROM provided with the new board for replacement contains no data, while the EEPROM originally provided with the VCR unit contains the IEEE1394 ID data as well as all adjustment data written in the assembly and adjustments written on the production line. This means that the new VCR unit will not function if the new EEPROM is used in the condition in which it is delivered.
When replacing the DV MAIN board, load the internal data of the EEPROM on the original board to the EEPROM of the new board.

(1) How to use original EEPROM to new DV MAIN board.
Remove the EEPROM from the original DV MAIN board, and attach the chip to the new board.

(2) How to write data from the original board to the new EEPROM
How to load all parameters in EEPROM on original board to new EEPROM by using the adjustment software.
(For details, see section 3.7.13)

(3) In case of original EEPROM on the original DV MAIN board was broken.
Load the default data before making adjustments with the adjustment software, write the data in the new EEPROM, then make adjustments by following the adjustment procedures. (See section 3.7.12 for details.)
And then, input the ID number on the original board to new EEPROM by using the adjustment software. (See section 3.7.13 for details.)

1.9.2 AUD S/S Board

The AUD S/S board EEPROM that stores the setup menu is IC508. While the corresponding EEPROM in the GY-DV500 stores the model ID for use in running the SSF function, the EEPROM in the BR-DV600 does not store the model ID because it does not handle the SSF function but simply reproduces SSF data.

1.10 BACKUP OF TIME DATA

The BR-DV600 uses a polyacene battery (C40) to back up the LCD microcomputer on the Front board assembly. This is the same battery as that used in the SR-9070 and a secondary battery with a capacity of more than 2 F (Farads). It is capable of backup for about 60 hours with only 6 hours of power supply (OPERATE ON), the backed up data includes the following:

(1) TC generator data (In the free run mode, the count continues even during backup.)
(2) Date and time data for sub-codes.
(3) CTL counter data.

1.10.1 Backup Circuit

The backup current to the polyacene battery is switched by IC10 on the Front board. When UNSW + 5 V drops below 4.6 V, this IC switches the microcomputer power to the LCD to the polyacene battery. At this time, IC10 sets the CS output to the Low level, the LCD microcomputer switches the clock oscillator to the power-saving X2 and functions in the sleep mode. The PRE END output is used to detect the battery voltage when a lithium battery is used. Although it provides the feedback signal to the microcomputer, the BR-DV600 does not utilize it.

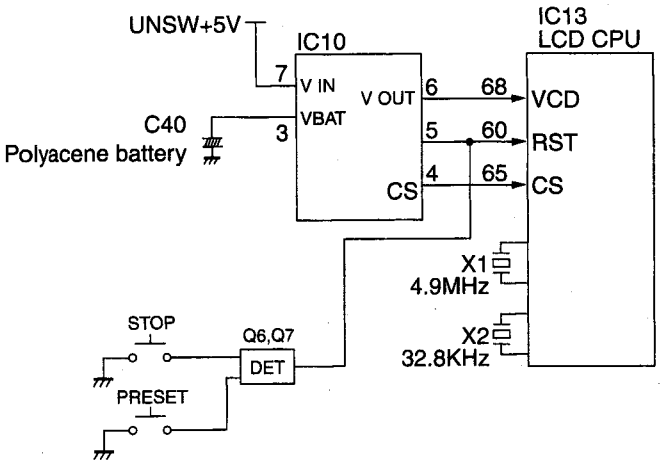


Fig. 1-10-1 Backup and Compulsory Reset Circuit

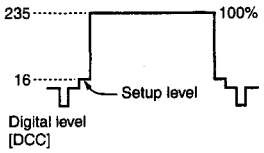
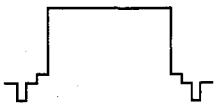
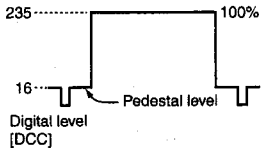
1.10.2 Compulsory resetting

Press the STOP and PRESET buttons simultaneously to compulsory reset the LCD CPU.

1.11 SET UP SW (U-MODEL ONLY)

Menu SW No. 125 is the SET UP ON/OFF switch. Its setting affects the recording and playback of analog video signals.

- Recording signals .. This switch varies the sampling level for A/D conversion of the input signal.
- Playback signals .... This switch adds the setup level to the playback signal.

SET UP SW (No. 125)	Recording Signals	Playback Signals
ON	Executes A/D conversion from the setup level. 	Adds the setup level. 
OFF	Executes A/D conversion from the pedestal level. 	Does not add the setup level. 

Set the switch correctly in accordance with the input signal. If the input signal contains the setup level while the SET UP SW is set to OFF, the input signal will be A/D converted and recorded together with the setup level component. If a tape, which has been recorded in such a way, is played on a VCR that is set to SET UP ON, a double setup will result.

Note:
When setting menu switch No.108 [VIDEO INPUT SELECT] to IEEE1394 even if menu switch No.125 [SET UP] is set to on position, set up signals will not be provided to DV output and analog output.
If you would like to provide set up signals when playback, set menu switch No.108[VIDEO INPUT SELECT] to LINE or Y/C or COMPONENT position (except IEEE1394).

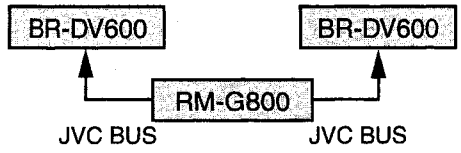
1.12 EDITING SYSTEM USING THE BR-DV600

Since the BR-DV600 is basically a feeder VCR, it should be used as the player when building an editing system. Using the JVC bus with the controller may also support its use as an editor. However, note that in this case it is only capable of assembly editing and cannot be used in insert editing.
At the time of shipment, the system configurations for which connections are guaranteed are as shown below.

1.12.1 Control with JVC bus

Applicable controller: RM-G800 only.

1. BR-DV600+BR-DV600



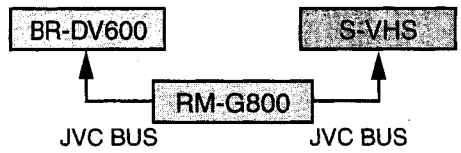
Editing function (Only the assembly editing and AUD DUB are available.)

Connection	ASSEMBLE	AV INSERT	V INSERT	A INSERT	A DUB
IEEE1394	Yes	No	No	No	No
ANALOG	Yes	No	No	No	Yes

BR-DV600 Menu Switch No.353 : EDIT ADJUST setting

Signal connection	Player	Setting	Recorder	Setting
Analog	BR-DV600	0F	BR-DV600	4F
IEEE1394	BR-DV600	0F	BR-DV600	2F

2. BR-DV600+S-VHS

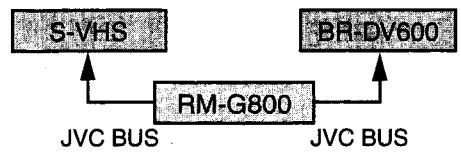


Applicable Recorders : 1. SR-S365 for NTSC, SR-S388E for PAL
2. BR-S800

BR-DV600 Menu Switch No.353 : EDIT ADJUST setting

Signal connection	Player	Setting	Recorder	Setting
Analog	BR-DV600	0F	BR-S800	—
Analog	BR-DV600	0F	SR-S365	—

3. S-VHS+BR-DV600



Applicable players:
1. BR-S800/500 + SA-N50
*As the BR-DV600 accepts only STD signals, be sure to insert a TBS board.

BR-DV600 Menu Switch No.353 : EDIT ADJUST setting

Signal connection	Player	Setting	Recorder	Setting
Analog	BR-S800 or BR-S500 with SA-N50*	—	BR-DV600	3F

Fig. 1-12-1

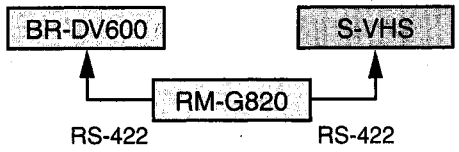
NOTES

(1) BR-DV600 does not support CTL editing. Set it to TIMECODE editing.
(2) As the RM-G800 has been optimized for connection with the SR-S365 (PAL : SR-S388E), it may take a longer time for cue up when it is used with the BR-DV600.
(3) As the RM-G800 does not have the BUMP function, BUMP does not operate even when the BR-S800 is used as the recorder.
(4) The editing accuracy of the RM-G800 is about ±5 frames.
(5) As the BR-DV600 does not have framing servo, pictures may be edited at the 2nd field.
(6) During editing using the RM-G800, preview is not available if the BR-DV600 is used as the recorder.
(7) When the RM-G800U remote controller is used, the counter, etc. may malfunction due to interference generated by the peripheral equipment. In this case, set the clamp core to the controller cable. (See fig. 1-12-3.)

1.12.2 RS-422A (9P) controller

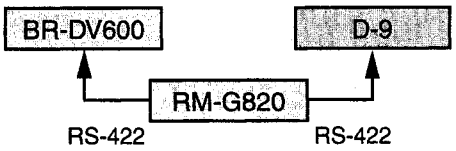
Applicable controller: RM-G820 only.

1. BR-DV600+S-VHS



Applicable VCRs :
1. BR-S800 (+ SA-K26)
2. BR-S822

2. BR-DV600+D-9



Applicable VCRs :
1. BR-D750 / D85 / D80
2. BR-D92

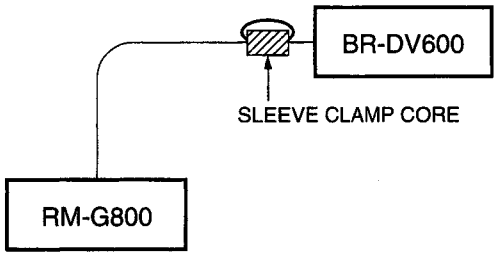
Fig. 1-12-2

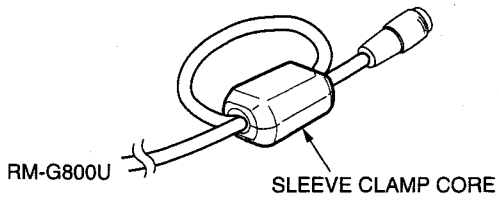
NOTES

(1) BR-DV600 does not support CTL editing. Set it to TIMECODE editing.
(2) The editing accuracy is ±1 frame with time code editing.
(3) As the BR-DV600 does not have framing servo, pictures may be spliced at the 2nd field.
(4) Setting for No. 353:EDIT ADJUST is not required. Set the initial setting to 0F.
(5) The EDIT TIMING of the controller is automatically set when the recorder reads the ID.
(6) In order to attain optimum editing precision, be sure to operate the RM-G820 LEARN function after connection.

Measures to be taken when the RM-G800 malfunction

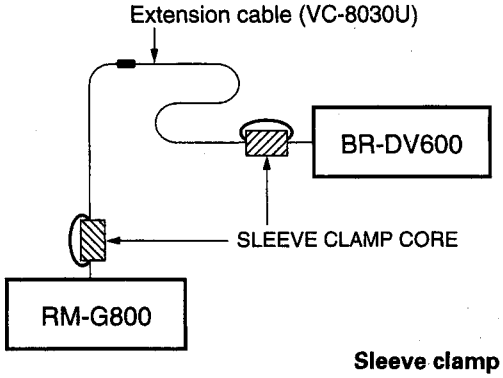
• Coil the cable (BR-DV600 side) once that is from the RM-G800U connector, then attached a sleeve clamp core.

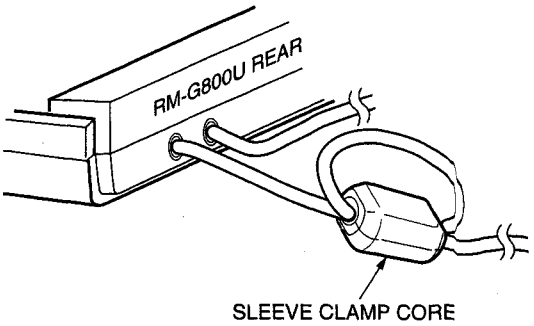




• If an extension cable (VC-8030U) is used, attached a sleeve clamp core at two locations, one on the RM-G800U side and one on the BR-DV600 side .

Additional extension cable is added.





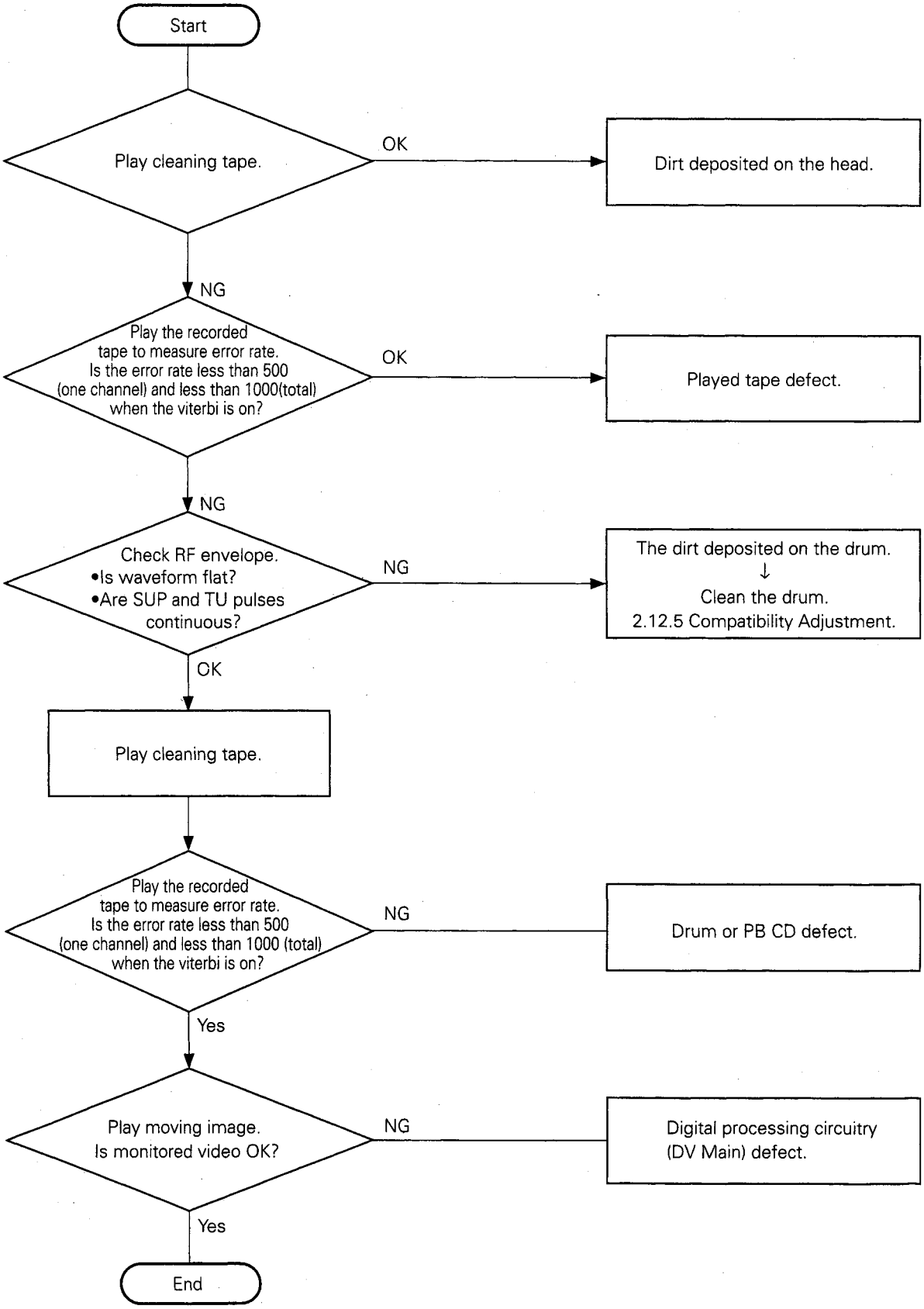
Sleeve clamp core: Parts No. QQR0914-001

Fig. 1-12-3

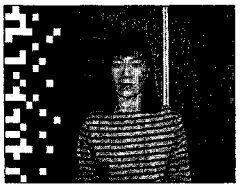
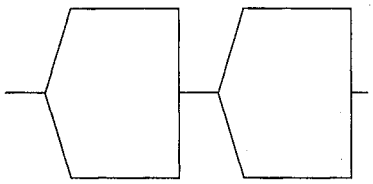
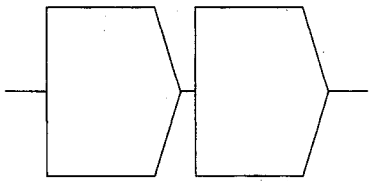
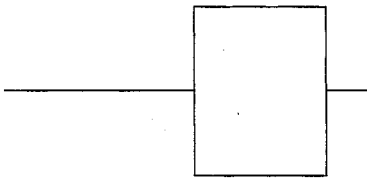
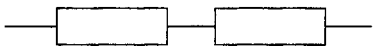
1.13 ANALYSIS OF BLOCK NOISE (SYMPTOMS: POOR VIDEO, ABSENCE OF AUDIO)

1.13.1 Analysis Flow Chart

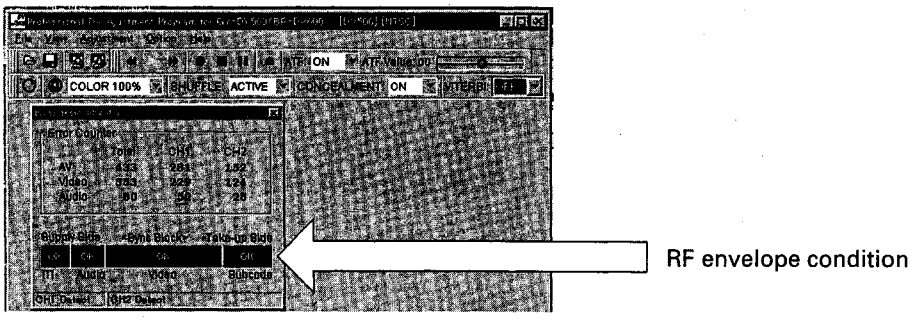
In case of trouble, perform troubleshooting using the following flow chart.



1.13.2 RF Envelope Check

Symptom Observed on Monitor Screen	RF envelope	Audio, etc.	Possible Causes
Block noise on left 	SUP dropout 	• No audio output. • Intermittent audio.	• Supply guide roller adjustment failure. • Dirt on supply side of drum.
Block noise on right 	TU dropout 	• Timecode not counted.	• Take-up guide roller adjustment failure. • Dirt on take-up side of drum.
One CH frozen 	No video output from one CH 	• Audio is output.	• Dirt attached on one CH of head. • Drum assembly defective. • PR & MDA board IC901 defective.
Frozen 	Low level 	• No audio output.	• Dirt attached on head. • Drum assembly defective.

The RF envelope condition can be confirmed to a certain degree in the Error Rate adjustment display.



SECTION 2
MECHANICAL ADJUSTMENTS

2.1 BEFORE ADJUSTMENTS

2.1.1 Precautions

1) Be sure to apply a screw securing torque when attaching a part.
   The securing torque should be 0.04 N-m (0.4 kgf-cm) unless otherwise specified.
2) Always unplug the power cord of the set before attaching, removing or soldering a part.
3) When unplugging a connector, do not pull the wire but grasp the connector body.
4) Do not make an adjustment or rotate a potentiometer blindly while the source of trouble is not identified.
5) Before adjusting electrical circuitry, be sure to wait for more than 10 minutes after turning the power on.

2.1.2 Measuring instruments required for adjustments

Instrument	Condition
Oscilloscope	Calibrated instrument with measuring bandwidth of 100 MHz or more.
Personal computer	Microsoft Windows 95/98 environment, Pentium 133 MHz or better, Memory 16 MB or more.

Table 2-1-1

2.1.3 Equipment required for adjustments

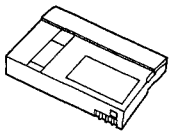
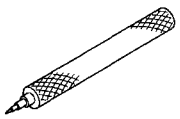
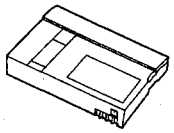
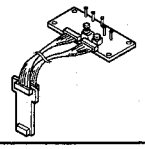
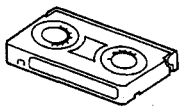
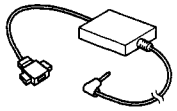
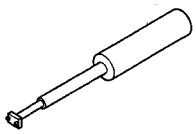
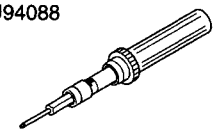
1	Alignment tape	6	Slit washer attaching tool
MC-1 (NTSC) MC-2 (PAL) 		YTU94121A 	
2	DV tape	7	Connector cable
For use in self-recording/playback. (60 ME) 		PTU94018A 	
3	Cassette torque meter	8	PC cable
YTU94150A 		QAM0099-001 	
4	Guide screwdriver	9	Adjustment software
YTU94085 		To be downloaded from the WWW site of JS-NET Pro Video Division.	
5	Torque screwdriver	10	Chip IC replacement tool
YTU94088 	YTU94088-003  Replaceable bit (long type)	PTS40844-2 	

Table 2-1-2

2.2 BASICS OF MECHANISM DISASSAMBLY/ASSEMBLY

2.2.1 Assembly mode

The disassembly and assembly of the mechanism can be done in the ASSEMBLY mode (see Table 2-2-1).
The ASSEMBLY mode is provided in the intermediate position between C-IN and S.FF. As the C-IN (Cassette IN) mode is usually set when a cassette tape is ejected, the ASSEMBLY mode should be entered after entering the C-IN mode. To set the ASSEMBLY mode, apply 3 V DC to the electrodes at the top of the loading motor shown in Fig. 2-2-1. The ASSEMBLY mode is set when the markings (red) on two gear teeth of the rotary encoder are aligned with the confirmation holes.

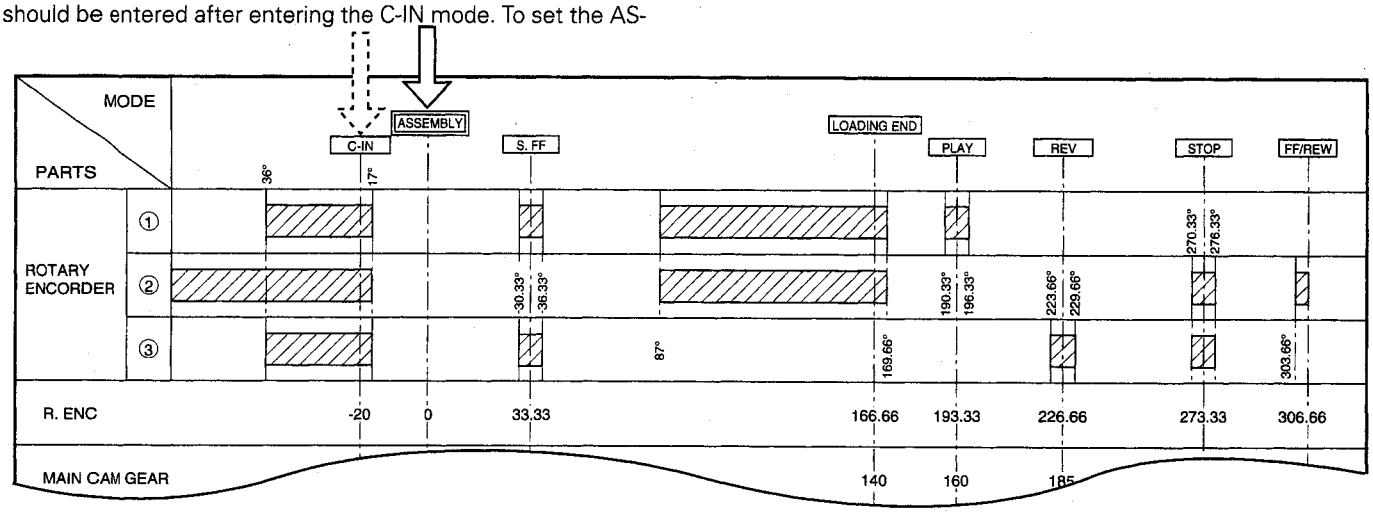


Table 2-2-1

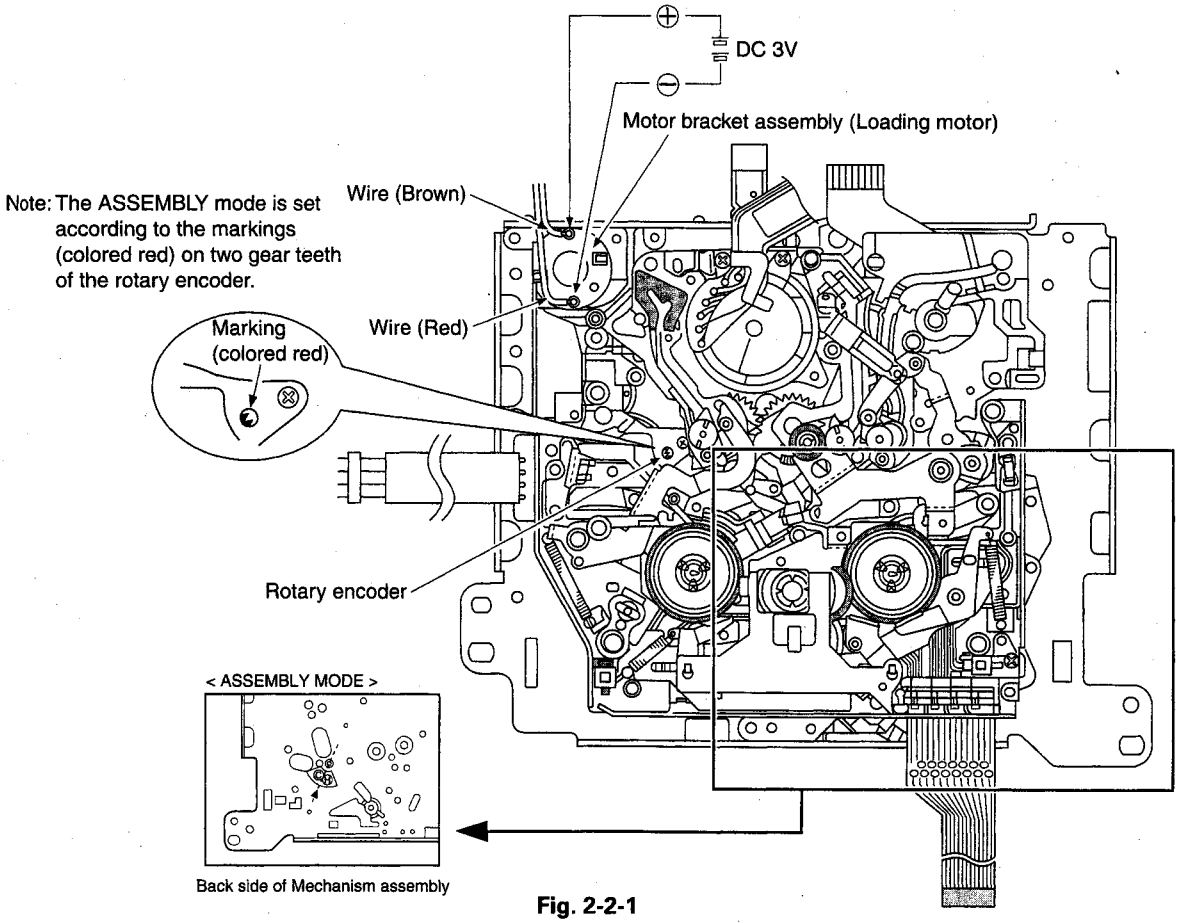


Fig. 2-2-1

2.2.2 Mechanism modes

The mechanism has 6 modes as shown in Table 2-3-1.
The current mode can be confirmed by observing the markings on the sub-cam gear and the ▲ mark on the main deck at the back side of mechanism assembly. See Figs. 2-2-2 to -7.

1. Mechanism mode confimation

<C-IN : Ⓒ>

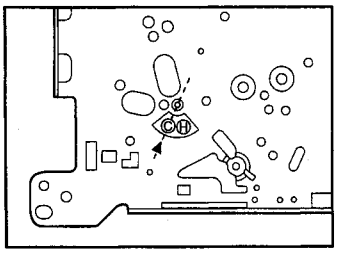


Fig. 2-2-2

<S-FF : Ⓗ>

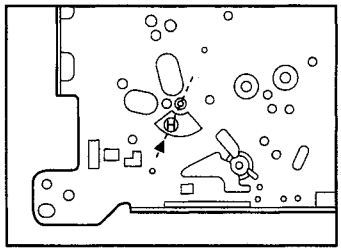


Fig. 2-2-3

<PLAY : Ⓟ>

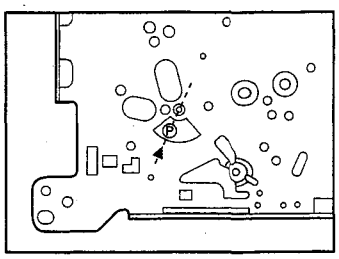


Fig. 2-2-4

<REV : Ⓡ>

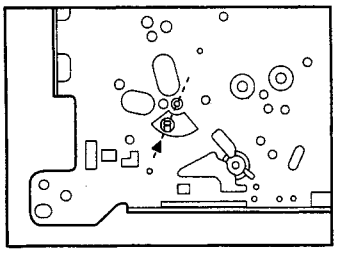


Fig. 2-2-5

<STOP : Ⓢ>

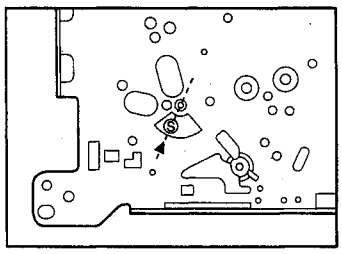


Fig. 2-2-6

<FF/REW : Ⓕ>

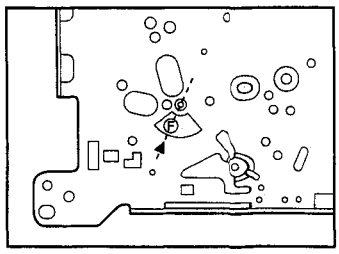


Fig. 2-2-7

2.3 MECHANISM TIMING CHART

See following table (Table 2-3-1).

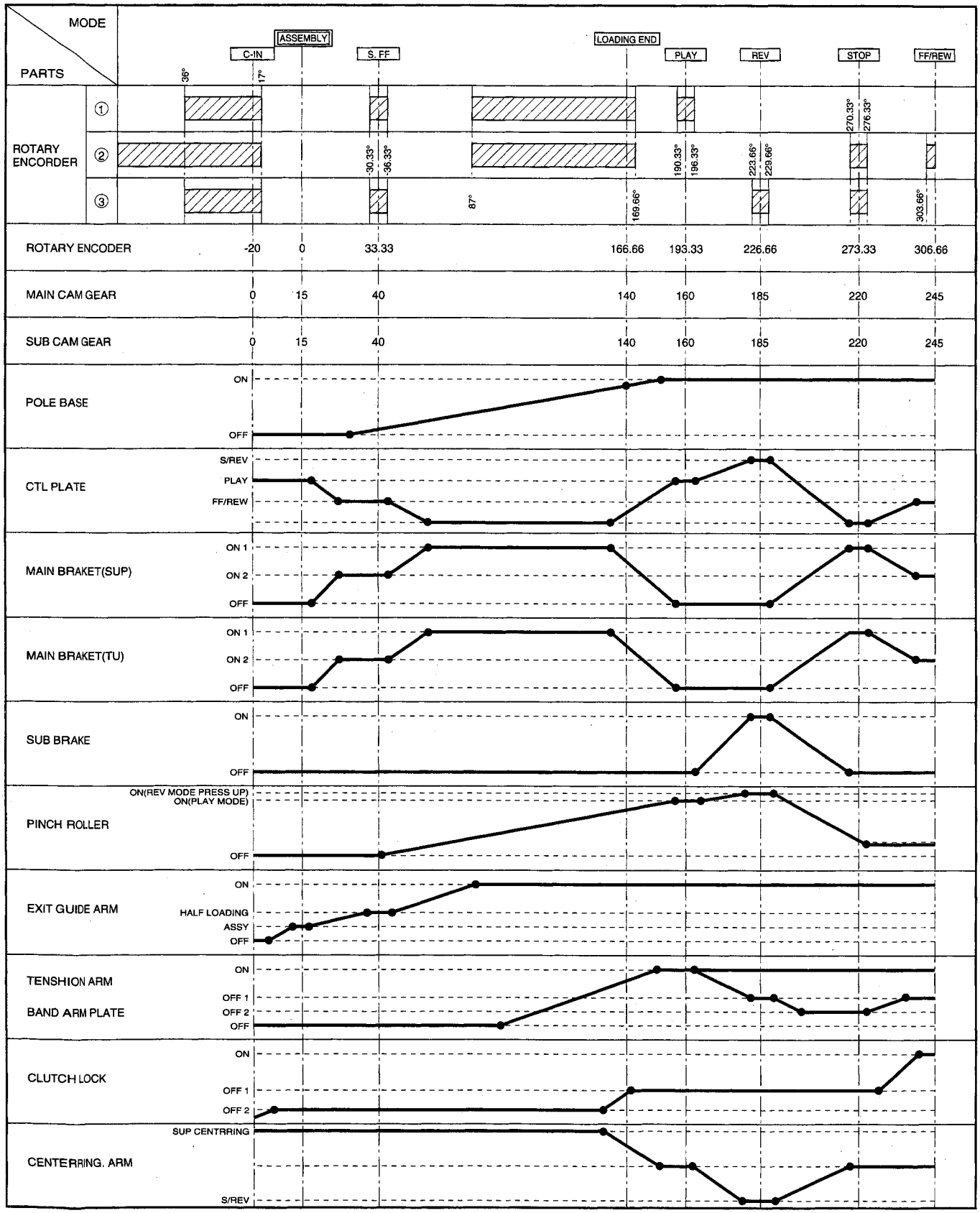


Table 2-3-1

2.4 MAINTENANCE AND INSPECTION OF MAJOR PARTS

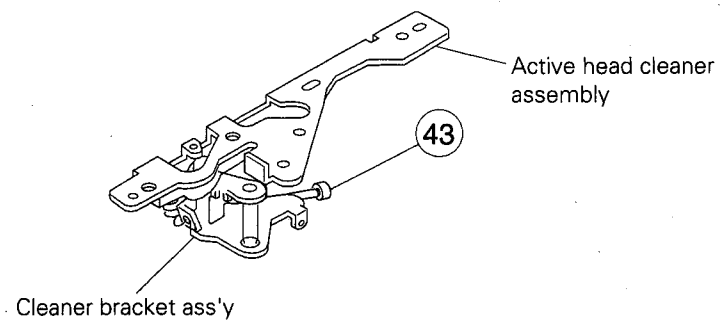
Periodical inspection and maintenance are requisite to maintain the initial performance and reliability of the product. Table 2-4-1 (Maintenance & Inspection List) has been compiled assuming standard operating conditions, and the specifications in the table are greatly variable depending on the actual operating environment and conditions. Remember that, if the maintenance and inspection are not enforced properly, the operating hours of the product will not only reduce considerably but other unfavorable influences may produce.

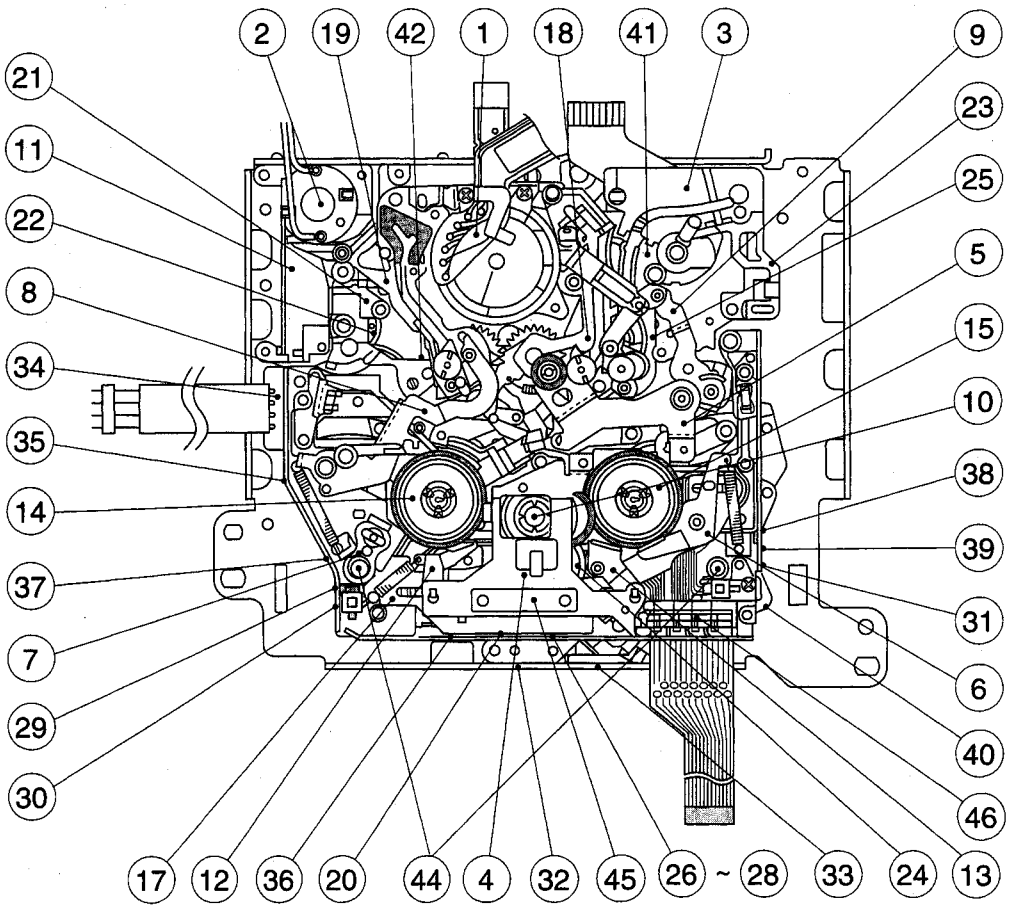
Rubber parts may deform or degrade after long period of storage even if they are not used in this period.

The service life of the drum is variable depending on the tape used and operating environment.

2.4.1 Layout of Major Parts

To attach the Active Head Cleaner Assembly, refer to "1.4.2. Disassembling the Rear Part of the Unit".





2.4.2 Maintenance and inspection list

1) The 6000 H maintenance consists of a replacement of the entire mechanism assembly.
2) When mounting the capstan motor on the main deck, control of the verticality is required. Therefore, when the capstan motor reaches the end of its service life, the entire mechanism assembly should be replaced.

	Part Name	Symbol No.	Operating Hours (DRUM Hour Meter)												Ref.
			500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	
1	Tape transport parts		★	★	★	★	★	★	★	★	★	★	★	–	
2	㉑ ENT. guide base assembly	M 4 43	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.14
3	⑧ Tension arm sub-assembly	M 4 40	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.8
4	⑲ Guide rail (S) assembly	M 4 22	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.12
5	⑮ Guide rail (T) assembly	M 4 23	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.12
6	③ Middle catcher assembly	M 4 24	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.5
7	⑦ Capstan shaft	M 4 4	★	★	★	★	★	★	★	★	★	★	★	–	
8	⑤ Pin roller arm assembly	M 4 44	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.3
9	⑨ Exit guide arm assembly	M 4 43	★	○★	★	●	★	○★	★	●	★	○★	★	–	2.7.4
10	① Drum assembly	M 4 50	★	★	★	●	★	★	★	●	★	★	★	–	2.7.2
11	㊶ Capstan motor	M 4 4	–	–	–	–	–	○	○	○	○	○	○	●	–
12	㉕ Reel drive pulley assembly	M 4 33	–	○△	–	●△	–	○△	–	●△	–	○△	–	–	2.7.15
13	㉔ Center gear assembly	M 4 34	○	●△	○	●△	○	●△	○	●△	○	●△	○	–	2.7.14
14	㉓ Timing belt	M 4 11	○	●	○	●	○	●	○	●	○	●	○	–	2.7.14
15	㉘ Clutch lock gear (1) ㉗ Clutch lock gear (2)	M 4 12 M 4 14	–	○△	–	●△	–	○△	–	●△	–	○△	–	–	2.7.15
16	⑥ Sub-brake assembly	M 4 36	–	○	–	●	–	○	–	●	–	○	–	–	2.7.10
17	⑫ Main brake (S) assembly	M 4 38	–	○	–	○	–	○	–	○	–	○	–	–	2.7.10
18	⑬ Main brake (T) assembly	M 4 37	–	○	–	●	–	○	–	●	–	○	–	–	2.7.10
19	⑭ 15Reel disk assemblies	M 4 39	–	○	–	●△	–	○	–	●△	–	○	–	–	2.7.11
20	⑦ Band arm plate assembly	M 4 41	–	○	–	●	–	○	–	●	–	○	–	–	2.7.8
21	⑩ Swing arm assembly	M 4 42	○	●	○	●	○	●	○	●	○	●	○	–	2.7.7
22	㉒ Worm wheel 2	M 4 3	–	○	–	●	–	○	–	●	–	○	–	–	2.7.14
23	② Motor bracket assembly	M 4 20	–	○	–	●	–	○	–	●	–	○	–	–	2.7.2
24	㉞ Rotary encoder assembly	M 4 21	–	○	–	●	–	○	–	●	–	○	–	–	2.7.18
25	㊲ Centering arm assembly	M 4 26	–	○	–	●	–	○	–	●	–	○	–	–	2.7.18
26	㉟ Min cam	M 4 8	–	○	–	●	–	○	–	●	–	○	–	–	2.7.18
27	㊳ Sub cam	M 4 9	–	○	–	●	–	○	–	●	–	○	–	–	2.7.19
28	㊸ Cleaner assembly	M 4 29	○	●	○	●	○	●	○	●	○	●	○	●	2.7.20
29	㊹ Cassette guide pin	M 4 35	★	★	★	★	★	★	★	★	★	★	★	–	
30	㊺ Cassette guide	M 4 35	★	★	★	★	★	★	★	★	★	★	★	–	
31	㊻ MIC contact	M 4 35	★	★	★	★	★	★	★	★	★	★	★	–	
32	Mechanism assembly (including cassette housing assembly)	M 4 1	–	–	–	–	–	–	–	–	–	–	–	●	

★: Clean with ethanol. ○: Check and replace if required. ●: Replace. △: Oil the shaft.
After replacing a part, apply lubricant to the required points.

Table 2-4-1

2.4.3 Cleaning

The mechanism incorporates a video head cleaner that is effective for the removal of magnetic dust, etc. However, tape lubricant adhering to the head surface produces a spacing loss, it is recommended to polish the heads using a head cleaning tape. When the video heads become soiled an increase in the error rate results. Eventually, when the error rate increase is too much to be corrected by the error correction circuit, block noise will be observed in the picture.

1) Cleaning the video heads
   Use the DVC cleaning cassette for cleaning the video heads. Always be sure to use the same cleaning cassette model as that provided with the product. (Part No. PGZ02641)
   The video heads should be cleaned periodically. Moreover, care should be taken about the operating environment as the tape running time standard varies accordingly. Please refer to "Precautions for Use of Head Cleaning Tape" in the attached sheet (Refer to section of instructions).

Caution

- **As the DVC cleaning tape has a much higher lapping effect than VHS cleaning tapes, frequent use of the DVC cleaning tape will reduce the head service life. Do not play the DVC cleaning tape for more than 10 seconds per run or for more than 4 times per cleaning session.**
- **The cleaning tape can be used effectively for up to about 4 passes. It cannot improve the cleaning effect even if it is run for more than 4 times.**

2) Cleaning the upper/lower drums
   Use a cleaning cloth or high-quality paper sheet to clean the upper drum. Moisten the cloth or paper sheet with a small amount of ethyl alcohol, apply it lightly against the upper drum while turning it by hand.
   After this operation, wipe it with a dry cloth or paper sheet without alcohol. Be sure to play the cleaning tape to its end.
   The lower drum tends to gather magnetic dust, etc. in its lead section, and linearity cannot be achieved if this becomes excessively dirty. The tape inlet and outlet areas are contaminated particularly easily, causing trouble such as drop-out in FM signal reproduction, block noise on one side of a monitored picture, absence of audio output or incapability of time code readout. To clean the lead section, use a toothpick and rub lightly along the lead section. Be careful not to scratch the video head when this is done.

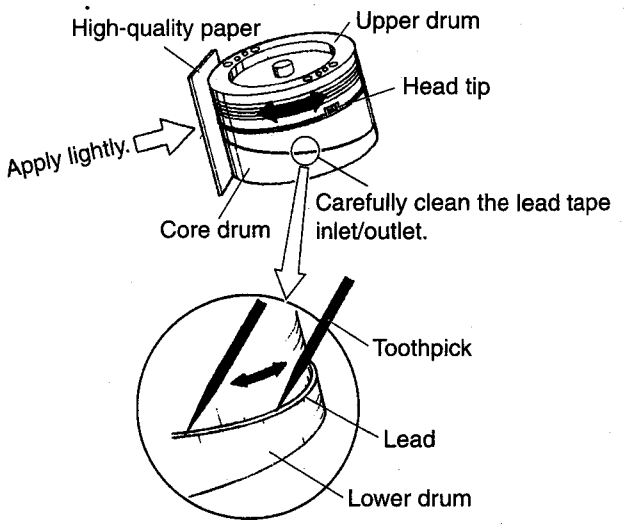


Fig. 2-4-1

3) Cleaning the tape transport system
   Moisten the tip of a cotton swab with alcohol and use it to clean the tape transport parts. Take special care of the TU/SUP guide roller flanges and the rear sides of the inclined poles, as these are the parts that most frequently collect magnetic dust.

Caution

Do not wipe the capstan shafts using alcohol. Otherwise, the oil in the bearings may be diluted by the alcohol and become attached to the tape.

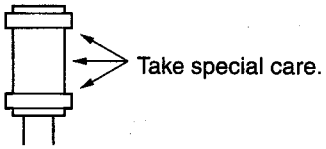


Fig. 2-4-2 Guide Roller

2.4.4 Oiling and Greasing

Table 2-4-2 shows the oil and greases used with the set.

Classification	Name	Part No.
Oil	Cosmo Hydro HV100	YTU94027
Grease	Maltemp SH-P	KYODOSH-P
	Hanal	RX-410R

Table 2-4-2

1) Oiling should be performed periodically. Oil the shafts by referring to the maintenance table.
2) After replacing a part, grease the required points. For the parts to be greased see the exploded diagram in chapter 5, "DISASSEMBLY DRAWINGS AND PARTS LIST".
3) As Hanal separates over time, be sure to mix it (shake) well before use.
4) Take care not to leave grease or oil on the tape transport parts which come into contact with the tape or on the brake pads.
5) Take care not to apply too much oil or grease. The standard oiling quantity is one drop and the standard greasing quantity is the quantity with which the grease does not overflow.

2.5 PERIODICAL MAINTENANCE

Perform maintenance at the correct times in accordance with the maintenance table.
Fig. 2-5-1 shows the flow chart of periodical maintenance procedures at different operating hours.

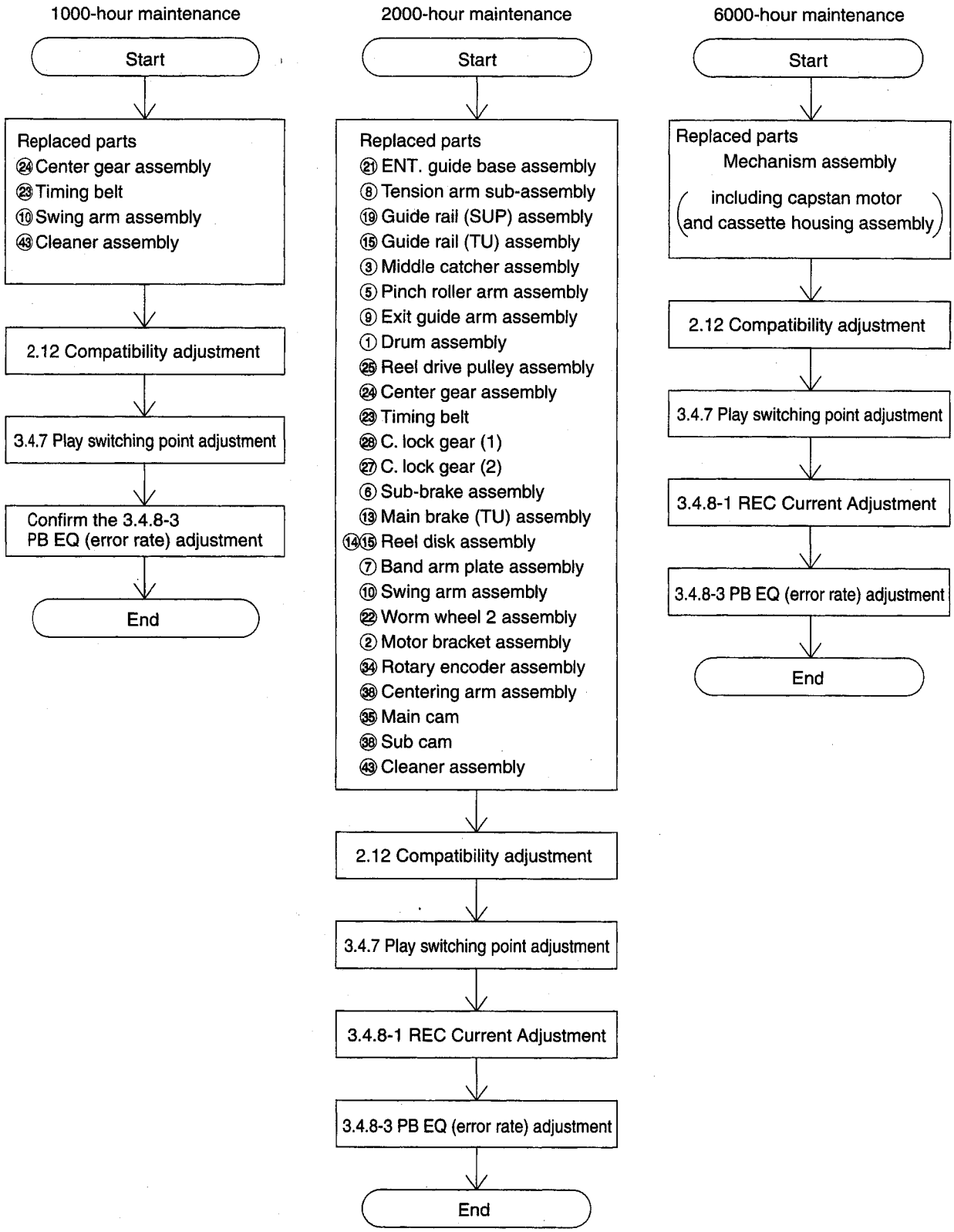


Fig. 2-5-1

2.6 DISASSEMBLY/ASSEMBLY OF MECHANISM ASSEMBLY

2.6.1 Assembly/Disassembly

The following table shows the mechanism assembly/disassembly procedures.

① : Names of the disassembled/assembled parts.
② : Items of disassembly.
③ : Parts to be removed for disassembly, such as screws, washers and springs, and points.

Symbol	Name or Point
S	Screw
W	Washer
P	Spring
*	Connector, lock (L), soldering (SD), shield, etc.

2.6.2 Screws and Washers Used in Mechanism Assembly Disassembly/Assembly

Table 2-6-1 shows the symbols, designs, part numbers and colors of the screws and washers used with the Mechanism assembly.
When disassembling or assembling the Mechanism assembly, be sure to attach the correct screws and washers by referring to the following table.

Symbol	Design	Part No.	Color
(S1)		QYSDSP2005Z	Gold
(S2)		YQ43893	Silver
(S3)		YQ43893-7	Black

Symbol	Design	Part No.	Color
W1		YQ44246	Red
W2		YQ44246-3	Black
W3		YQ43933-2	Black

Fig. 2-6-1

	Part Name	Step	Points	Remark
1	Ⓐ Cassette housing assembly, Ⓑ Main deck assembly	1	2(S1), (L1) to (L5)	
2	① Drum assembly	2	3(S2)	
3	② Motor bracket assembly	2	4(S2)	
4	③ Middle catcher assembly	3	3(S2)	

↑ ① ↑ ② ↑ ③

2.6.3 Mechanism Assembly Disassembly Procedure Table

	Part Name	Item	Points	Remark
1	Ⓐ Cassette housing assembly	1	2 (S1), (L1) to (L5)	
2	① Drum assembly	2	3 (S2)	
3	② Motor bracket assembly	2	4 (S2)	
4	③ Middle catcher assembly	5	3 (S2)	
5	④ Reel cover assembly	6	(S2), 2 (L6)	
6	⑤ Pinch roller arm assembly	3	(W1), (L7)	
7	⑥ Sub-brake assembly	10	(P1), (W1), (L8)	
8	⑦ Band arm plate assembly	8	(S3), (L9), (P2), (W2)	
9	⑧ Tension arm sub-assembly	8	(P3)	
10	⑨ Exit guide arm assembly	4	(W1)	
11	⑩ Swing arm assembly	7	–	Position alignment
12	⑪ Sub-deck assembly	9	4 (S2)	Position alignment
13	⑫ Main brake (SUP) assembly	10	(P4), (L10)	
14	⑬ Main brake (TU) assembly	10	(P5), (L11)	
15	⑭ Reel base assembly (SUP)	11	–	
16	⑮ Reel base assembly (TU)	11	–	
17	⑯ Prism	7	(S2)	
18	⑰ Control plate	11	(2 (L12)	
19	⑱ Guide rail (TU) assembly	12	4 (S2)	Position alignment
20	⑲ Guide rail (SUP) assembly	12	(S2), 2 (L13)	Position alignment
21	⑳ Base plate assembly	13	(S2), 2 (L14)	
22	㉑ ENT. guide base assembly	14	(S2)	
23	㉒ Worm wheel 2	14	–	Phase alignment
24	㉓ Timing belt	14	–	
25	㉔ Center gear assembly	14	–	
26	㉕ Reel drive pulley assembly	15	(W1)	
27	㉖ Push plate	15	(W1)	
28	㉗ Clutch lock gear (2)	15	(W3)	
29	° Clutch lock gear (1)	15	(P6)	
30	㉙ Tension control arm assembly	16	(L15)	Position alignment
31	㉚ Brake control arm assembly	16	(W1), (L16)	Position alignment
32	㉛ Charge arm assembly	16	(L17)	Position alignment
33	㉜ Connect gear 2 (SUP)	17	(S2)	(Phase alignment)
34	㉝ Connect gear 2 (TU)	17	(S2)	(Phase alignment)
35	㉞ Rotary encoder assembly	18	2 (S2)	Phase alignment
36	∞ Main cam	18	(W1)	Phase alignment
37	㊱ Arm gear 1 assembly	18	Collar	Position alignment
38	㊲ Centering arm assembly	18	(L18)	Position alignment
39	㊳ Sub cam	19	(S2)	Phase alignment
40	㊴ Arm gear 2 assembly	19	–	Position alignment
41	㊵ Clutch lock lever assembly	19	(L19)	Position alignment
42	㊶ Capstan motor			Change with mechanism assembly
43	㊷ Drum base deck		3 (S2)	

Table 2-6-2

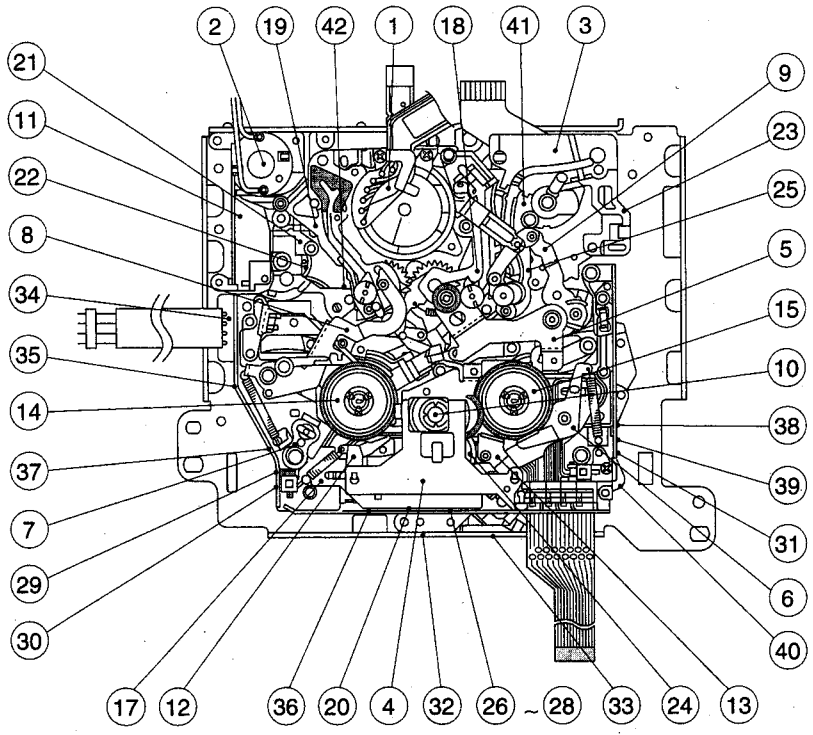


Fig. 2-6-1

2.6.4 Mechanism disassembly/assembly procedure chart

<How to read the chart>

- The following chart shows the disassembly/assembly procedures by dividing them into blocks A to I.
- To remove the tension arm sub-assembly which is located in block D; start disassembly from block A. The tension arm sub-assembly can be removed as the fourth operation after the removals of the cassette housing assembly (block A) → reel cover assembly (block B) → band arm plate assembly (block C).
- The parts enclosed in thick frames are the maintenance parts listed in the maintenance table.
- For details on the disassembly/assembly, see section 2.7, "Replacement of Major Parts".

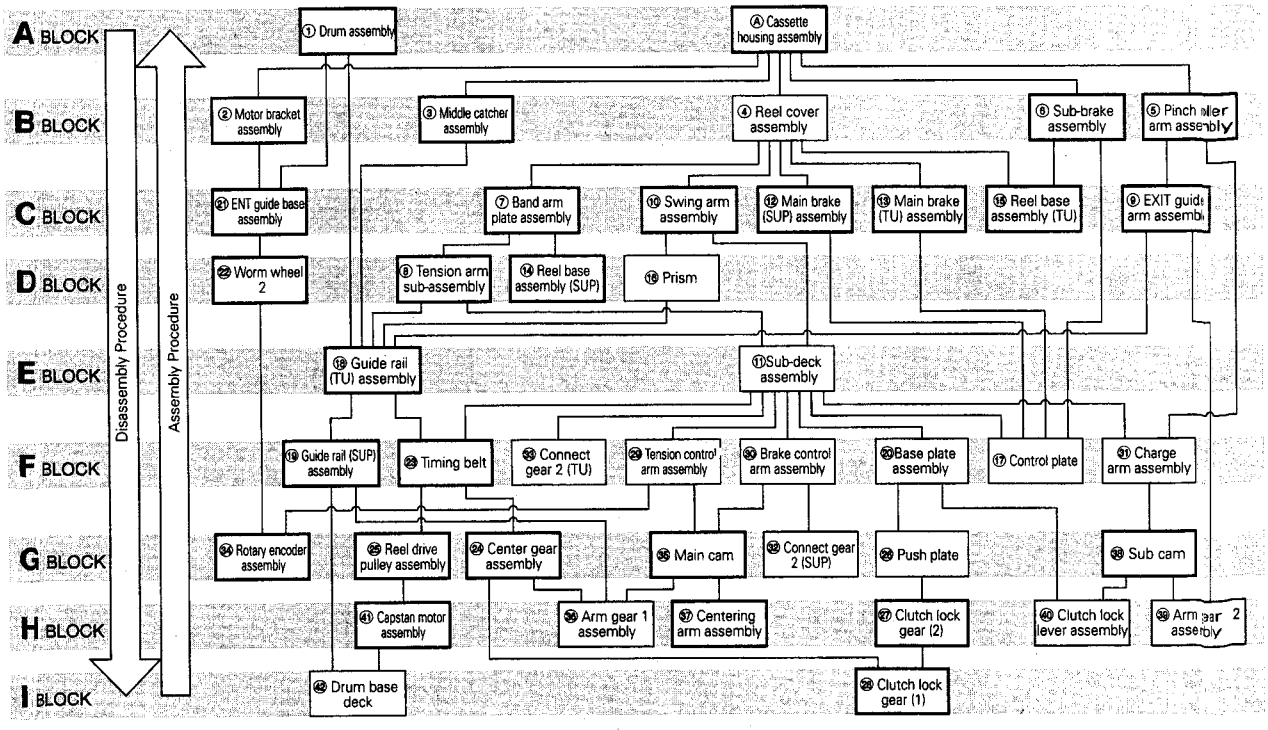


Fig. 2-6-2

No.	Item	Reference picture/drawing	Procedure

2.7 REPLACEMENT OF MAJOR PARTS

- Make sure that the mechanism is in the ASSEMBLY mode before proceeding to disassembly or assembly. (See section 2.1, "Assembly Mode".)
- Screws must always be tightened using a torque screwdriver and at the specified torque.

1	Ⓐ Cassette housing assembly	**<Removal>** 1) Remove the 2 screws (S1) then take out the cassette housing by sliding it upward and toward the front. **<Attaching>** 1) Reverse the removal procedure.
2	① Drum assembly, ② Motor bracket assembly	**<Removal>** ① Drum assembly 1) Remove the 3 screws (S2) and take out the assembly. ② Motor bracket assembly 1) Remove the 4 screws and take out the motor bracket assembly. **<Attaching>** 1) Reverse the removal procedure

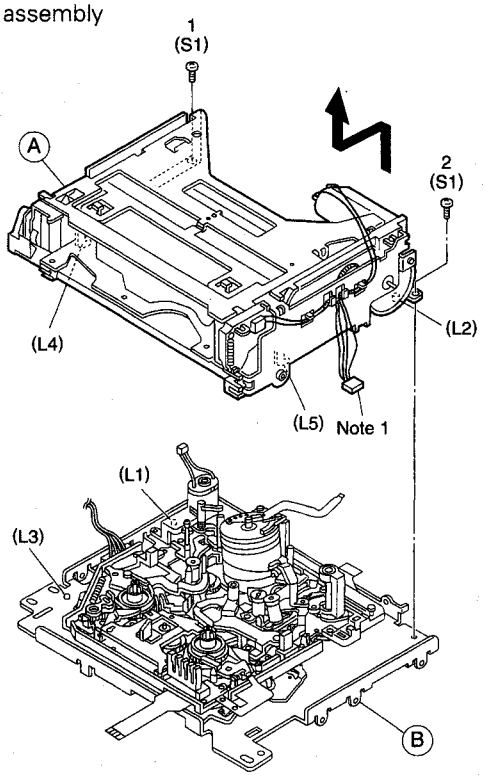


Fig. 2-7-1

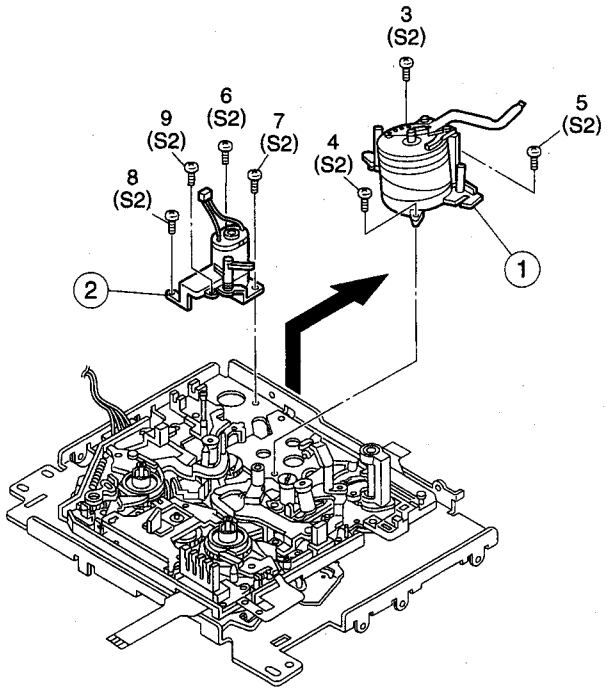
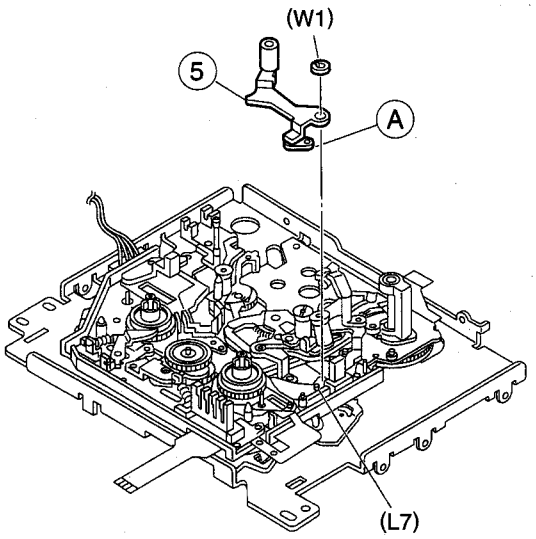
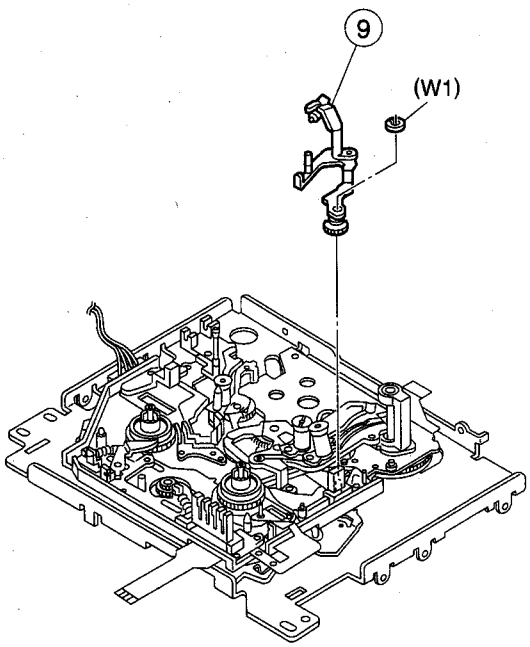
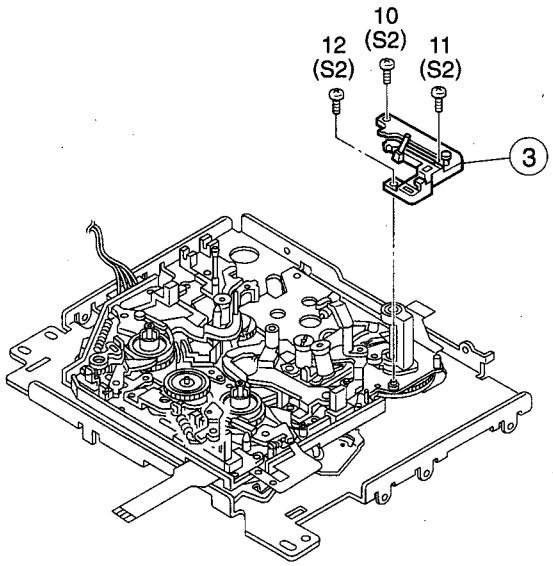
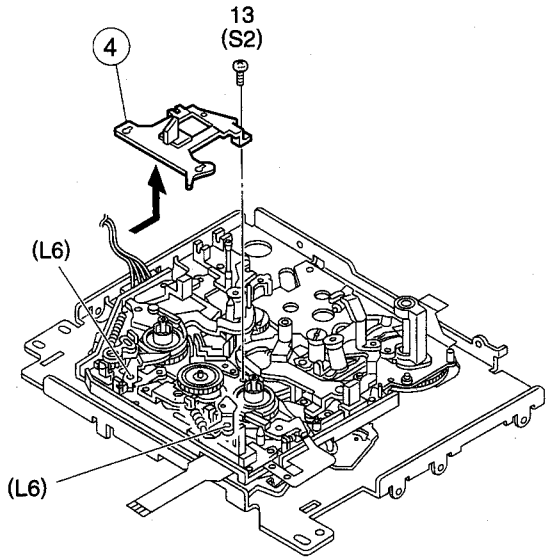
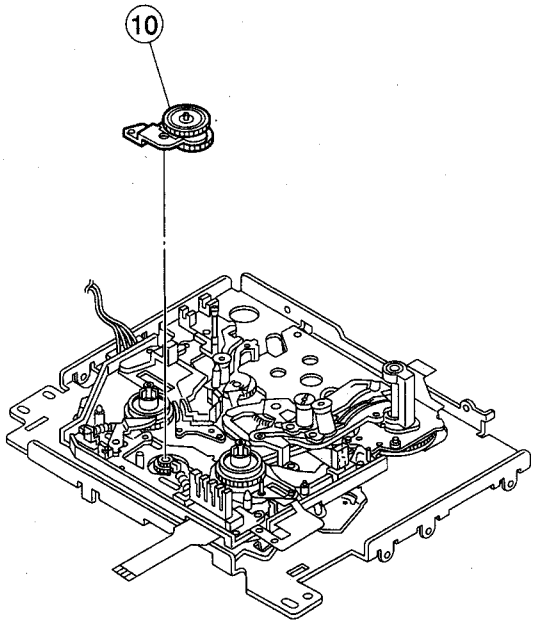


Fig. 2-7-2

No.	Item	Reference picture/drawing	Procedure
3	⑤ Pinch roller arm assembly	 Fig. 2-7-3	**<Removal>** 1) Remove the washer (W1) and pull out the assembly. **<Attaching>** 1) Fit the pinch roller arm assembly Ⓐ into the boss (L7) of the charge arm assembly. 2) Attach the washer (W1).
4	⑨ Exit guide arm assembly	 Fig. 2-7-4	**<Removal>** 1) Remove the washer (W1) and pull out the assembly. **<Attaching>** 1) Reverse the removal procedure.

No.	Item	Reference picture/drawing	Procedure
5	③ Middle catcher assembly	 Fig. 2-7-5	**<Removal>** 1) Remove the 3 screws (S2) and remove the assembly. **<Attaching>** 1) Reverse the removal procedure.
6	④ Reel cover assembly	 Fig. 2-7-6	**<Removal>** 1) Remove the screw (S2). 2) Slide the assembly toward the drum and lift the assembly up to remove it. **NOTE** · **After having removed the reel cover, take care because the parts located below the reel cover tend to slip out easily.** **<Attaching>** 1) Insert the reel cover into (L6) and attach by reversing the removal procedure.

No.	Item	Reference picture/drawing	Procedure
7	⑩ Swing arm assembly	 **Fig. 2-7-7**	**<Removal>** 1) Pull the assembly upward. **<Attaching>** 1) Reverse the removal procedure.

No.	Item	Reference picture/drawing	Procedure

8 ⑦ Band arm plate assembly, ⑧ Tension arm sub-assembly

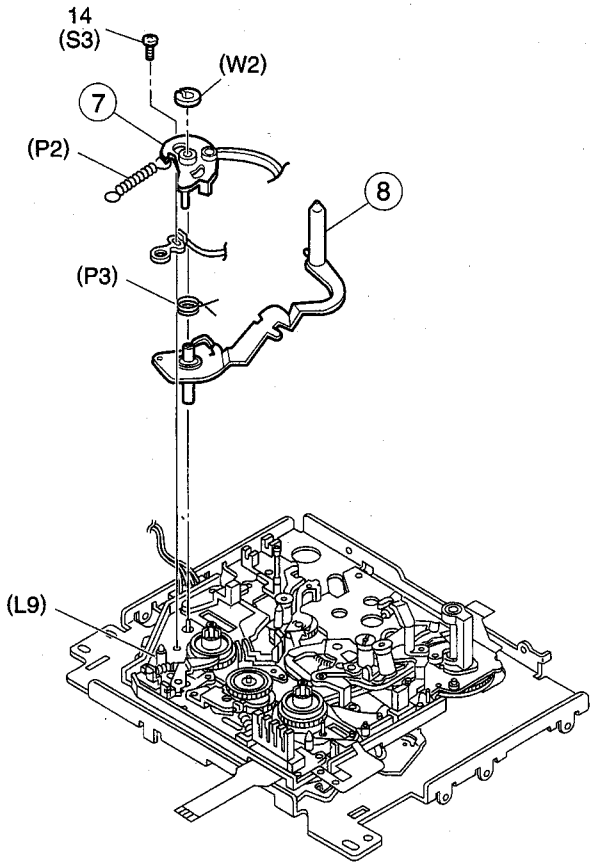
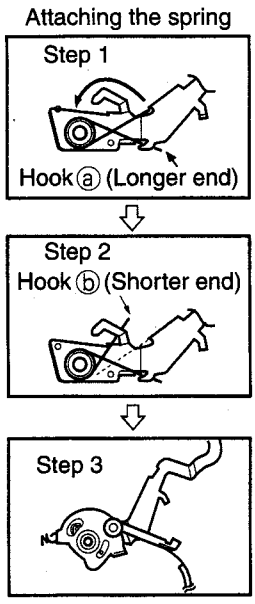


Fig. 2-7-8(a)



The spring (P3) should be attached only to the tension arm sub-assembly ⑧. It should not contact the band arm plate assembly ⑦.

Fig. 2-7-8(b)

<Removal>

1) Remove the washer (W2).
2) Remove the screw (S3).
3) Remove the spring (P2).
4) Remove the band arm plate assembly and tension arm sub-assembly.

NOTE

Be careful not to lose the spring (P3).

<Attaching>

1) Attach the spring (P3) to the tension arm sub-assembly. Engage the longer end of spring to hook ⓐ and the shorter end to hook ⓑ as shown in Fig. 2-7-8(b).
2) Attach the tension arm sub-assembly.
3) Attach the band arm plate assembly.
4) Clamp with the screw (S3) and washer (W2).
5) Attach the spring (P2) to (L9).

NOTE

After attaching, ensure that the band arm assembly can rotate in the direction of the arrow as shown in Fig. 2-7-8(c).

Attach so that the section Ⓐ comes on the outer side of the tension system sub-assembly ⑧.

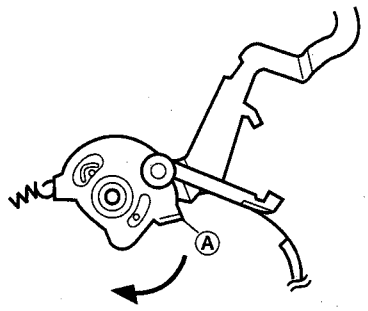


Fig. 2-7-8(c)

6) After attaching, adjust the tension.

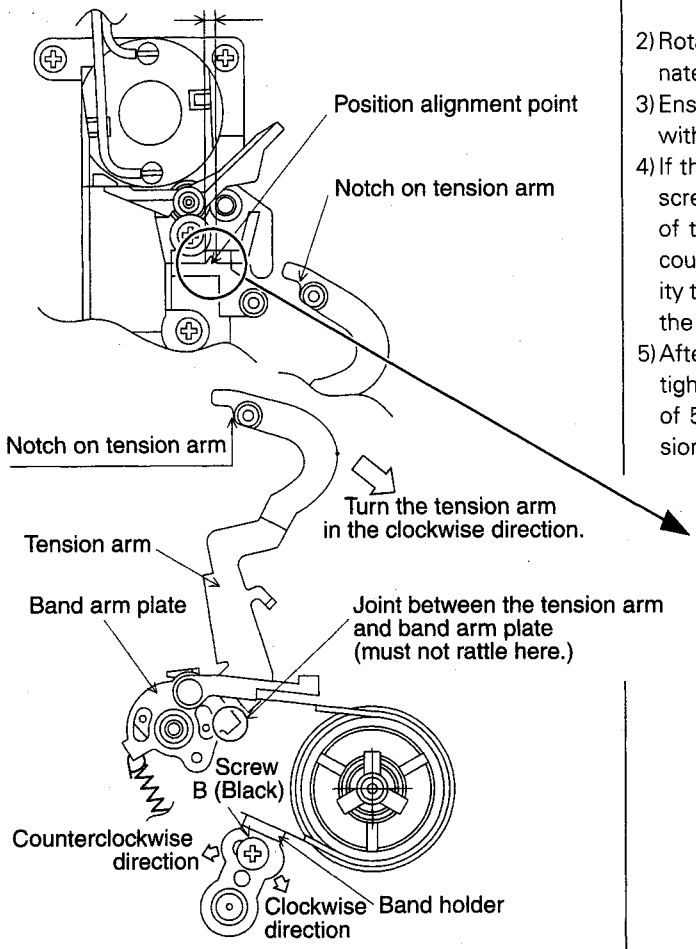
No.	Item	Reference picture/drawing	Procedure
8	<Tension arm sub-assembly position adjustment>		1) Without loading a tape, set the mechanism mode to PLAY mode. To switch the mode, rotate worm wheel 2 while the motor bracket assembly is disengaged (see 2.2, "Mechanism Modes"). 2) Rotate the tension arm slightly clockwise to eliminate production of rattle with the band arm plate. 3) Ensure that the notch on the tension arm is located within area A. (See Fig. 2-7-8(e).) 4) If the tension arm is not located in area A, loosen screw B (black) lightly and fine-adjust the position of the band arm plate assembly. Turn the screw counterclockwise to move the tension arm extremity toward the right or clockwise to move it toward the left. 5) After the adjustment, clamp the band holder by tightening screw B (black) (with a securing torque of 5.88 Nm, or 0.6 kgf-cm). Then adjust the tension arm position again.

Fig. 2-7-8(d)

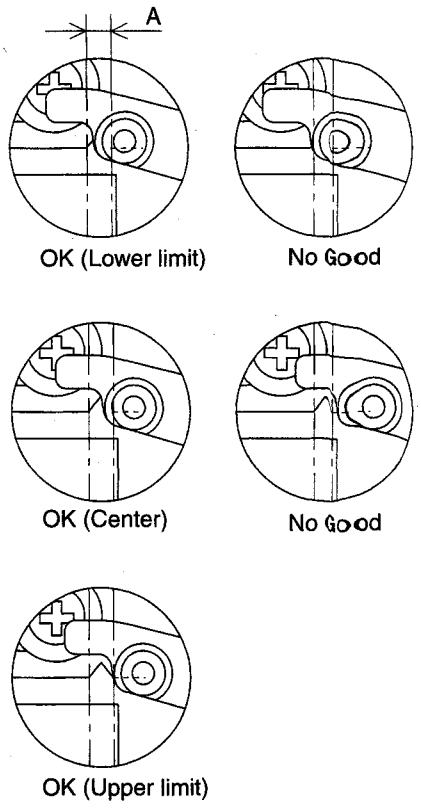
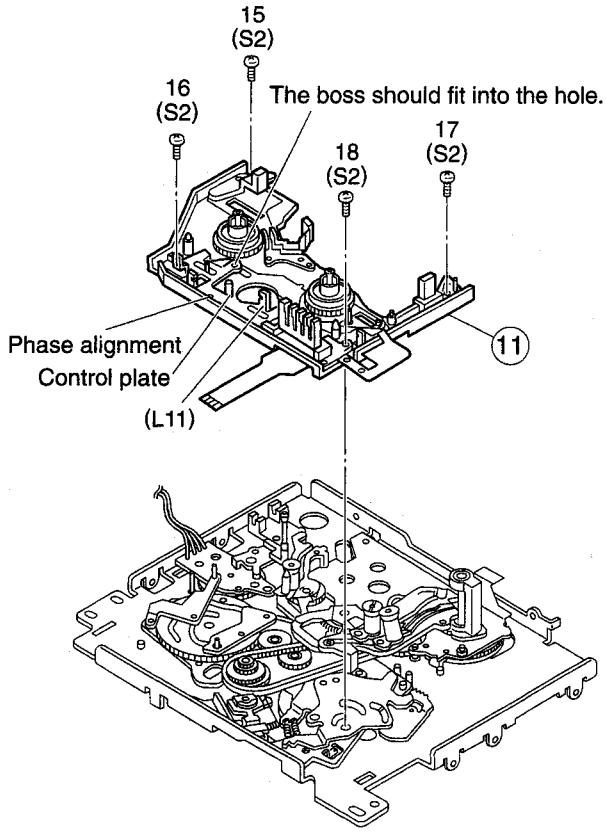
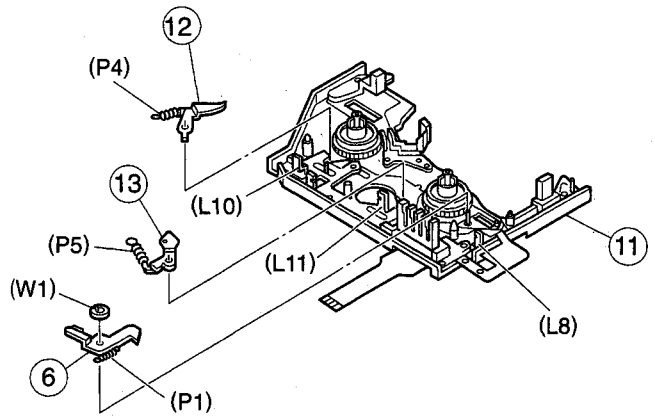
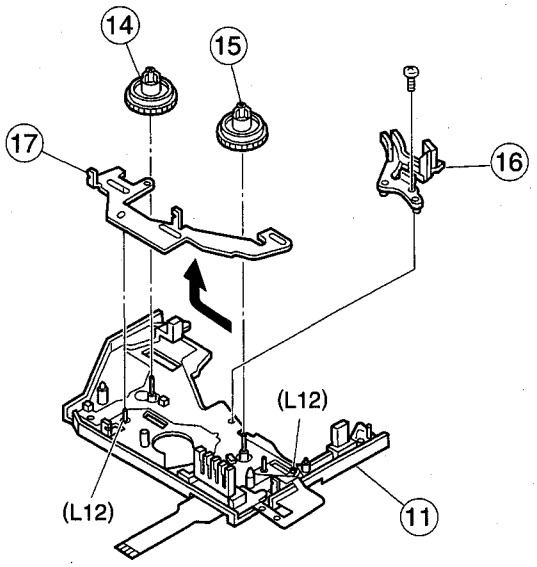
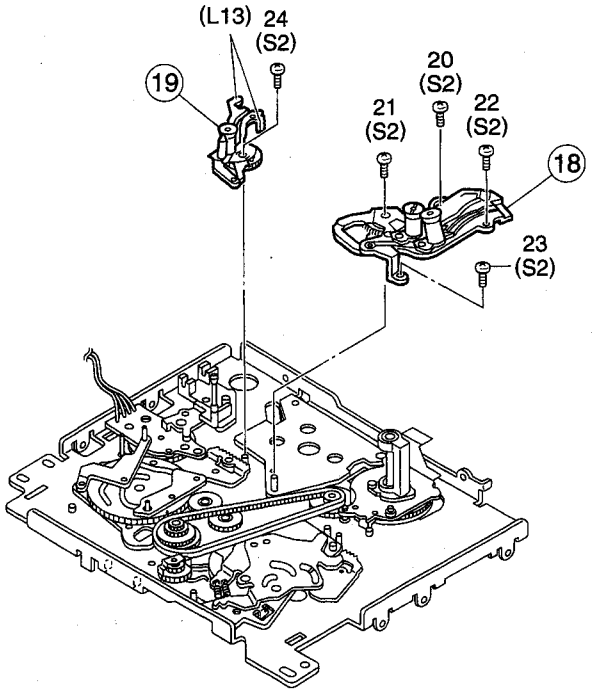
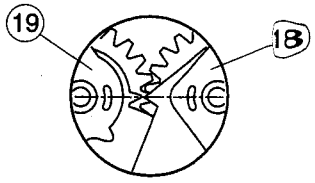
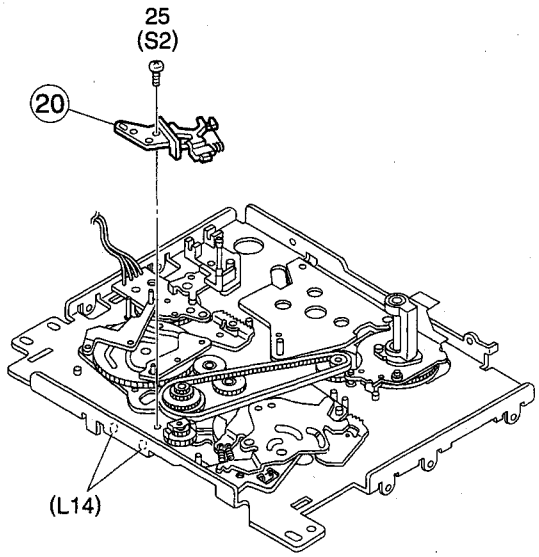
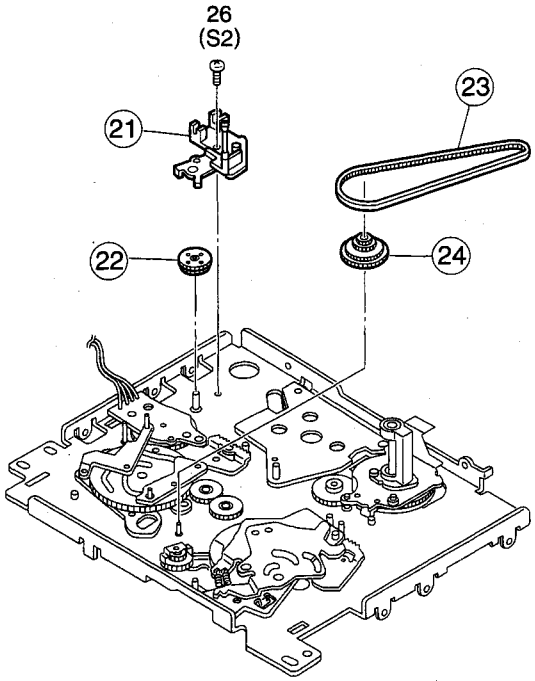
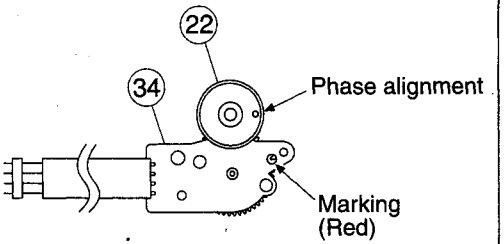
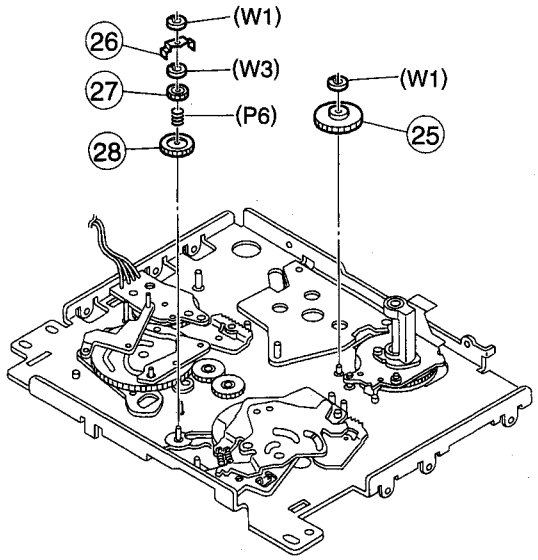


Fig. 2-7-8(e)

No.	Item	Reference picture/drawing	Procedure
9	⑪ Sub-deck assembly	 Fig. 2-7-9	**<Removal>** 1) Remove the 4 screws (S2) and pull out the assembly. **<Attaching>** 1) While sliding the control plate toward the left, attach the sub-deck assembly. **NOTE** · **Attach by aligning the phase holes of the main deck assembly and control plate.** 2) Clamp with 4 screws (S2).
10	⑫ Main brake (SUP) assembly, ⑬ Main brake (TU) assembly, ⑥ Sub-brake assembly	 Fig. 2-7-10	**<Removal>** **Main brake (SUP) (TU) assembly** 1) Remove the spring by disengaging its ends from the hooks (L10) and (L11). **Sub-brake assembly** 1) Remove the washer (W1). 2) Remove the spring by disengaging it from the hook (L8). **<Attaching>** 1) Reverse the removal procedure.

No.	Item	Reference picture/drawing	Procedure
11	⑭ Reel base (SUP) assembly, ⑮ Reel base (TU) assembly, ⑰ Control plate, ⑯ Prism	 Fig. 2-7-11	**<Removal>** 1) Pull up each assembly to remove it. The control plate can be removed by sliding it toward the left as shown by the arrow. 2) Remove the screw (S2) to remove the prism. **<Attaching>** 1) Reverse the removal procedure.
12	⑱ Guide rail (TU) assembly, ⑲ Guide rail (SUP) assembly	 Fig. 2-7-12(a)	**<Removal>** **Guide rail (TU) assembly:** 1) Remove the 4 screws (S2) and remove the assembly. **Guide rail (SUP) assembly:** 1) Remove the screw (S2) and remove the assembly. **<Attaching>** 1) Return the guide pole fully to the unloading position, and attach the assemblies by reversing the removal procedures. When attaching, place the alignment markings of the two gears so that they face each other. (See Fig. 2-7-12(b).)  Fig. 2-7-12(b)

No.	Item	Reference picture/drawing	Procedure
13	⑳ Base plate assembly	 Fig. 2-7-13	**<Removal>** 1) Remove the screw (S2) and take out the assembly. **<Attaching>** 1) Attach the assembly to the boss (L14) as if inserting, then clamp with the screw.
14	㉑ Entrance guide base assembly, ㉒ Worm wheel 2, ㉓ Timing belt, ㉔ Center gear assembly	 Fig. 2-7-14(a)	**<Removal>** 1) The entrance guide base assembly can be removed by removing the screw (S2). Other parts can be removed by simply pulling them out. **<Attaching>** 1) Reverse the removal procedure. See Fig. 2-7-14(b) for the worm wheel 2.  Align the phase of the rotary encoder assembly ㉞, then attach the main deck assembly by aligning the phase hole with the rotary encoder assembly. **Fig. 2-7-14(b) Attaching Worm Wheel 2 ㉒**

No.	Item	Reference picture/drawing	Procedure
15	㉕ Reel drive pulley assembly, ㉖ Push plate, ㉗ Clutch lock gear (1), ° Clutch lock gear (2)	 **Fig. 2-7-15**	**<Removal>** 1) Remove the washer (W1) and take out the assembly. **<Attaching>** 1) Reverse the removal procedure.

No.	Item	Reference picture/drawing	Procedure

16 ㉙ Tension control arm assembly, ㉚ Brake control arm assembly, ㉛ Charge arm assembly

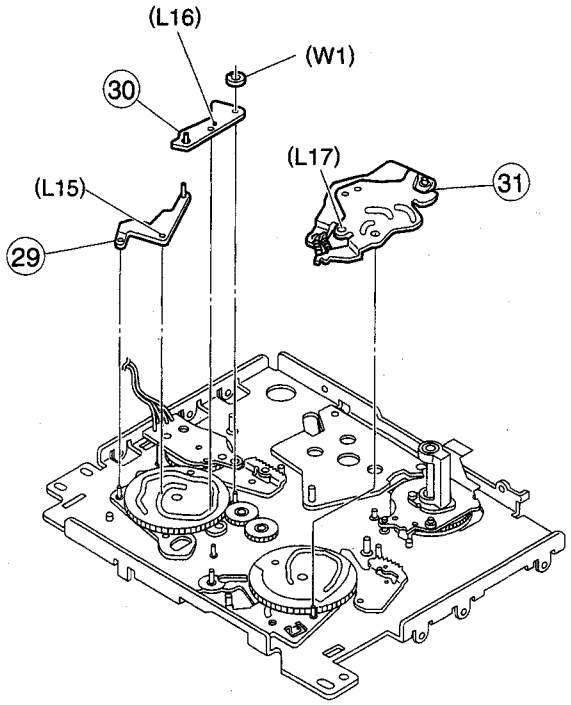
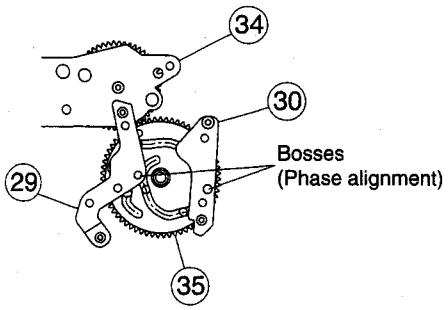


Fig. 2-7-16(a)



Align the phase of the main cam ∞ then attach by fitting the bosses in the cam groove.

Fig. 2-7-16(b)

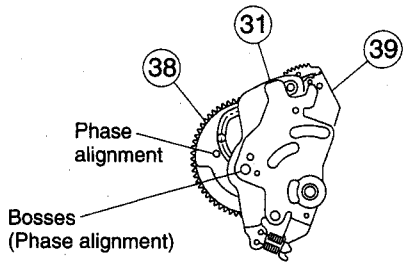
Attaching Tension Control Arm Assembly ㉙ and Brake Control Arm Assembly ㉚

<Removal>

1) The brake control assembly can be removed after removing the washer (W1).

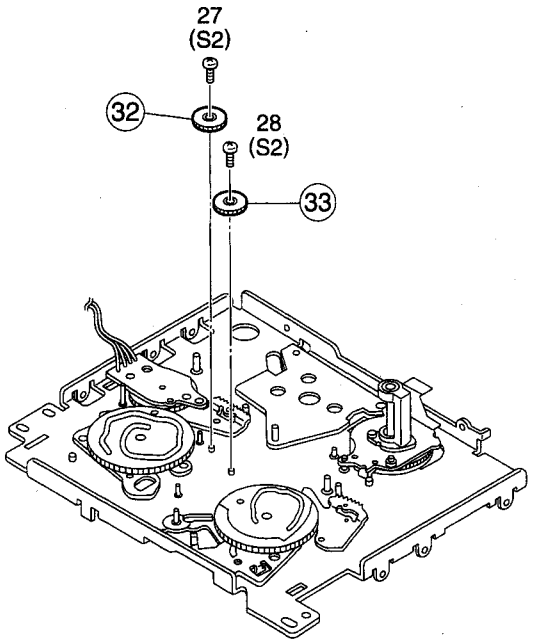
<Attaching>

1) Align the phases of the main cam and sub cam , then attach by reversing the removal procedure. Refer to Fig. 2-7-16(b) and Fig. 2-7-16(c).



Phase alignment
Boss (Phase alignment)
Align the phase of the sub cam ㊳, then attach by fitting the boss into the cam groove.

Fig. 2-7-16(c) Attaching the Charge Arm Assembly ㉛

No.	Item	Reference picture/drawing	Procedure
17	㉜ Connect gear 2 (SUP), ㉝ Connect gear 2 (TU)	 Fig. 2-7-17	**<Removal>** 1) Remove the screw (S2) and take out the gears. **<Attaching>** 1) Reverse the removal procedure. The two connect gears 2 are given the same part number. **NOTE** · **Align the phases of the main cam and sub cam when attaching.**

No.	Item	Reference picture/drawing	Procedure

18 ㉞ Rotary encoder assembly, ∞ Main cam , ㊱ Arm gear 1 assembly, ㊲ Centering arm assembly

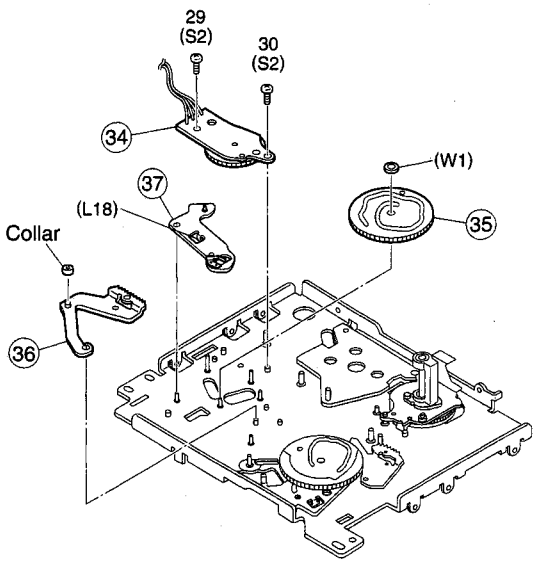
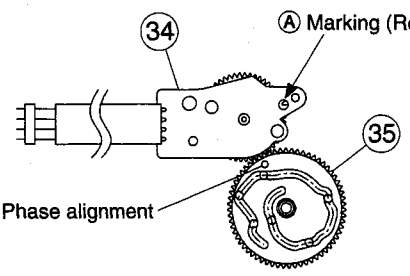


Fig. 2-7-18(a)



Align the phase of the main cam ∞, then attach by aligning the red-colored markings Ⓐ (on 2 gear teeth) inside ○.

Fig. 2-7-18(c) Attaching the Rotary Encoder Assembly ㉞

<Removal>

1) The rotary encoder can be removed by removing the 2 screws (S2).
2) The main cam can be removed by removing the washer (W1). As the cam gear is engaged at the rear of the main deck assembly while the phase is aligned, deviate the phase in the direction of the arrow before removal. (See Fig. 2-7-18(b).)

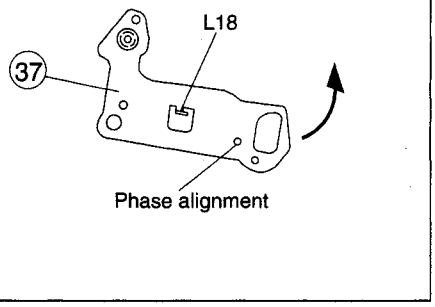
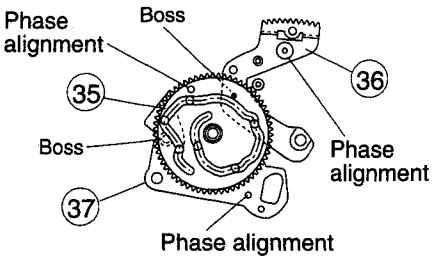


Fig. 2-7-18(b) Removing the Centering Arm Assembly ㊲

<Attaching>

1) Align the phase by referring to Figs. 2-7-18(c) and 2-7-18(d), then attach the ass'ies reverse the removal procedure.



Align the phases of the arm gear 1 assembly ㊱ and centering arm assembly ㊲, then align those of the arm gear 1 assembly ㊱ and centering arm assembly ㊲, attach the gear by fitting the bosses into the cam groove below, and fit the slit washers.

Fig. 2-7-18(d) Attaching the Main Cam ∞

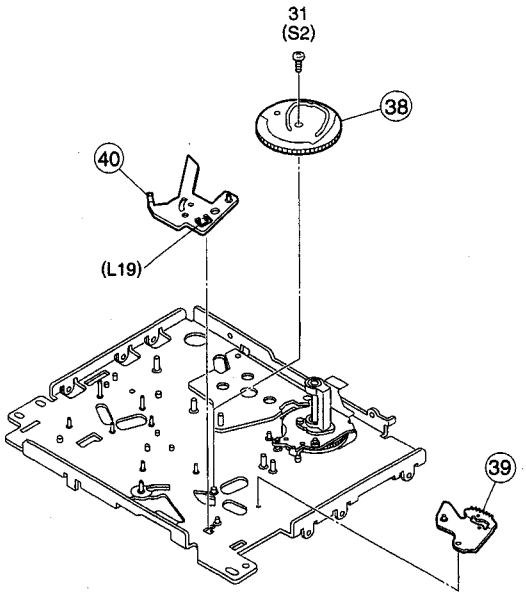
No.	Item	Reference picture/drawing	Procedure
19	㊳ Sub cam ㊴ Arm gear 2 assembly, ㊵ Clutch lock lever assembly		**<Removal>** 1) Remove the screw (S2) and take out the sub cam . As L19 is engaged at the rear of the main deck assembly while the phase is aligned, deviate the phase in the direction of the arrow before removal. 20. This checking should be done after completing the switching point adjustment.

Fig. 2-7-19(a)

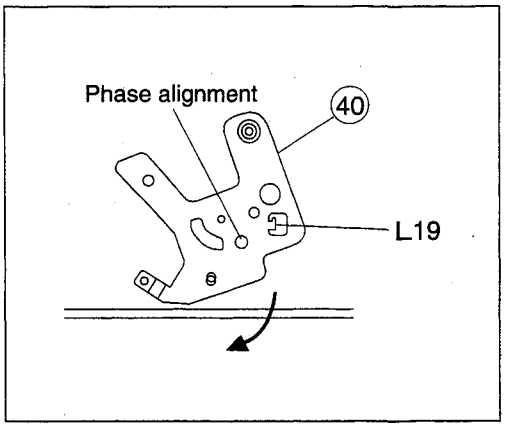
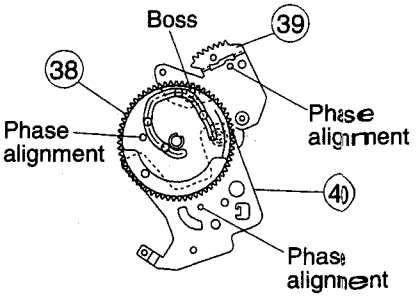


Fig. 2-7-19(b) Removing the Clutch Lock Lever Assembly ㊵

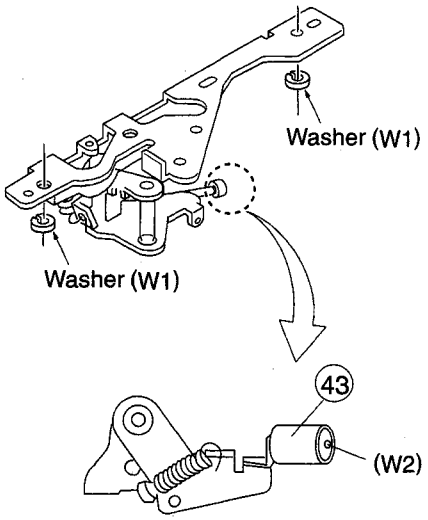
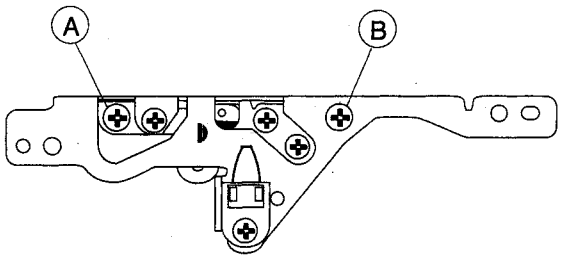
<Attaching>

1) Align the phase correctly by referring to Fig. 2-7-19(c), then attach by reversing the removal procedure.



Align the phases of the arm gear 2 assembly ㊴ and clutch lock lever assembly ㊵, attach them by fitting the boss into the cam groove below, and clamp with the screw.

Fig. 2-7-19(c) Attaching the Sub Cam ㊳

No.	Item	Reference picture/drawing	Procedure
20	㊸ Cleaner assembly	 **Fig. 2-7-20(a)**	**<Removal>** 1) Remove the washer (W2) 2) Take out the ㊸ cleaner assembly. **<Attaching>** 1) Reverse the removal procedure. 2) Activate the cleaner (loading) and ensure that the cleaner contacts the drum normally. (Make sure that the cleaner rotation sound is heard.) **<When an active head cleaner assembly is disassembled>** • **After the active head cleaner assembly has been disassembled and assembled, the following adjustment is required to restore the pressure of contact of the cleaner to the drum.** • **In order to ensure the efficient operation of the cleaner assembly, washers (W1) were added during the production run. (See fig. 2-7-20(a).) Thus, the adjustment value of the cleaner assembly is altered.** 1) Rotate screw Ⓐ fully clockwise until it is stopped, then rotate it counterclockwise by a turn. (The clamping torque is 4.9 x 10-4 N m/0.5 kgf cm or less) 2) Rotate screw Ⓑ fully clockwise until it is stopped, then rotate it counterclockwise by b turn. (The clamping torque is 4.9 x 10-4 N m/0.5 kgf cm or less) 3) Activate the cleaner (loading) and ensure that the cleaner contacts the drum normally. (Make sure that the cleaner rotation sound is heard.) 4) If the cleaner does not work normally, rotate screw Ⓑ clockwise (if a washer is attached, rotate it counterclockwise) by 1/8 turn and then check the operation again.
		 **Fig. 2-7-20(b)**	

	Without Washer	With Washer
a	3	3
b	0.5	1.5

2.8 CONFIRMATION AND ADJUSTMENT OF MECHANISM PHASES

See Fig. 2-8-1.

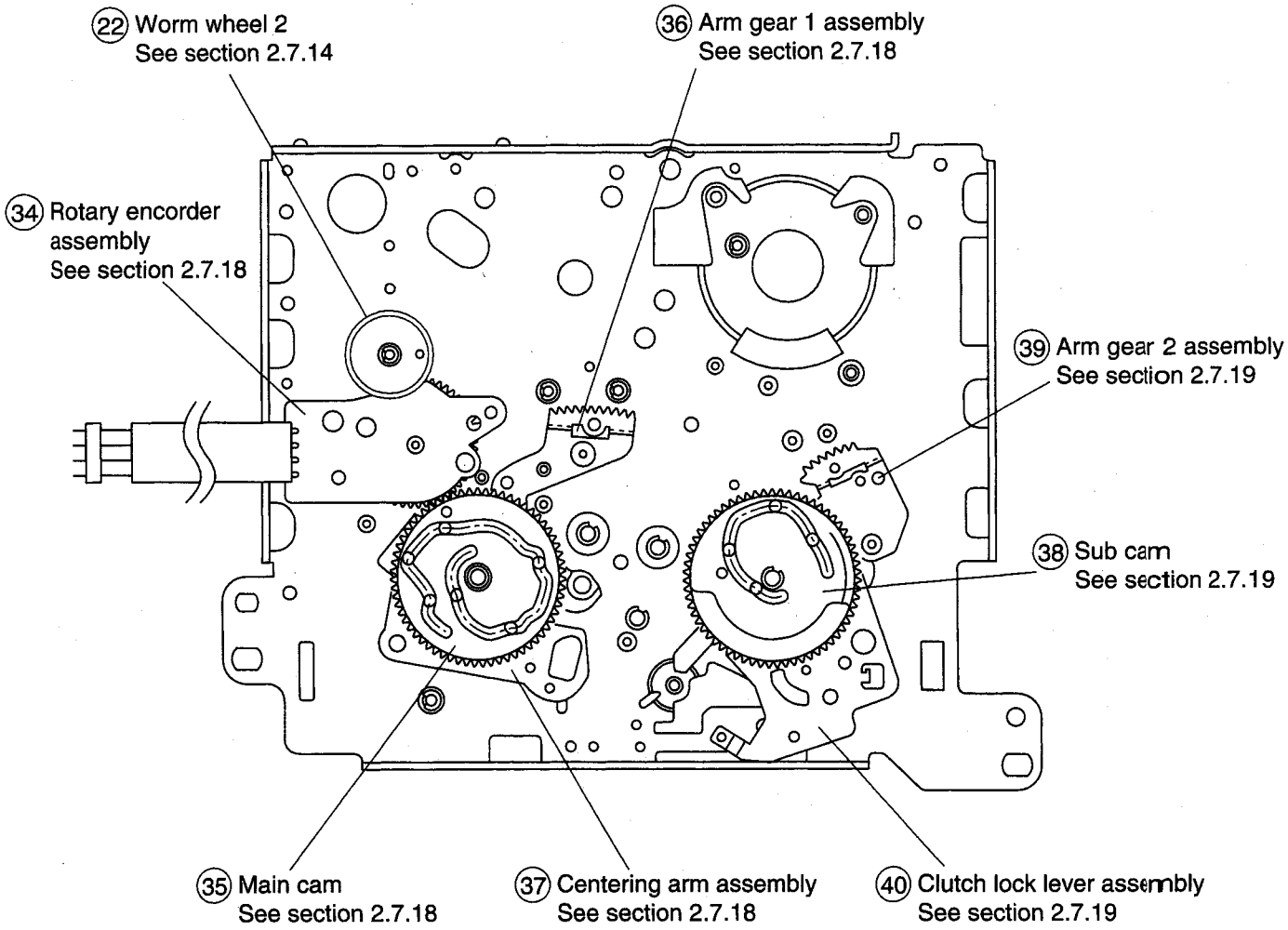
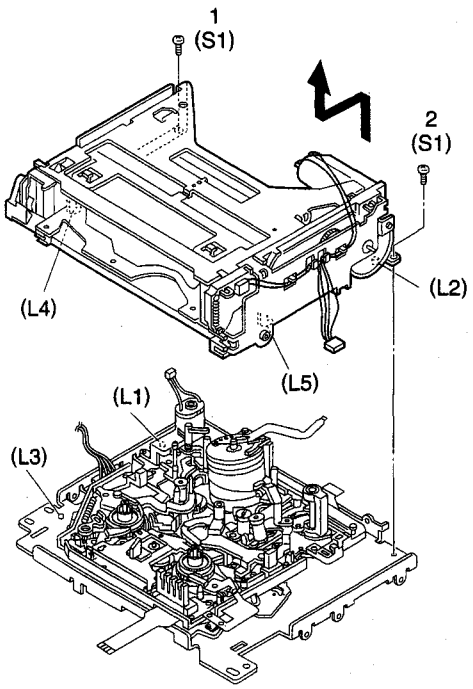


Fig. 2-8-1

2.9 MECHANISM DISASSEMBLY/ASSEMBLY SHEET

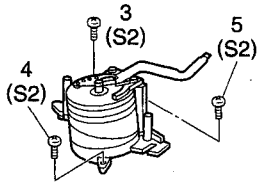
Screw Management																		
Drawing No.	Ⓐ		①			②				③			④	⑦	⑪			
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Table	S1	S1	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S3	S2	S2	S2	S2
Application																		
Ref. No.	No.1		No.2							No.5				No.8	No.9			

Ⓐ Cassette housing assembly



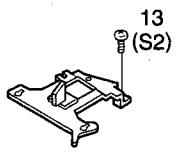
S×12,L1-L5

① Drum assembly



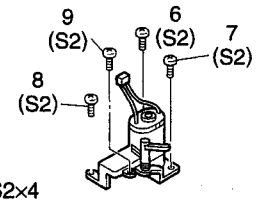
S2×3

④ Reel cover assembly



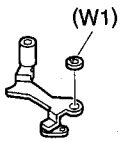
S2,L6×2

② Motor bracket assembly



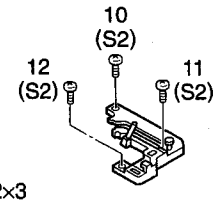
S2×4

⑤ Pinch roller arm assembly



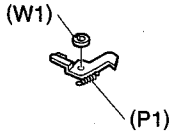
W1,7

③ Middle catcher assembly



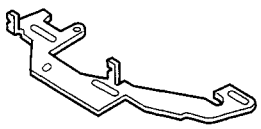
S2×3

⑥ Sub-brake assembly



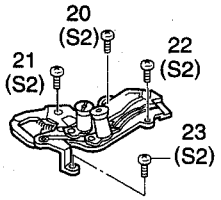
P1,W1,L8

⑰ Control plate



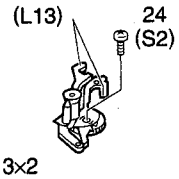
L12×2

⑱ Guide rail (TU) assembly



S2×4

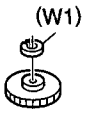
⑲ Guide rail (SUP) assembly



S2,L13×2

㉔ Center gear assembly

㉕ Reel drive pulley assembly

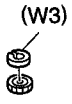


W1

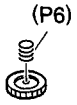
㉖ Push plate

W1

㉗ Clutch lock gear (2)

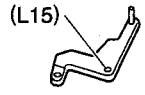


㉘ Clutch lock gear (1)

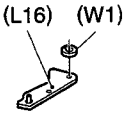


P6

㉙ Tension control arm assembly

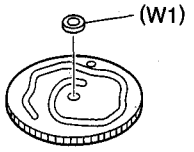


㉚ Brake control arm assembly



W1,L16

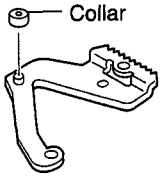
㉟ Main cam



W1

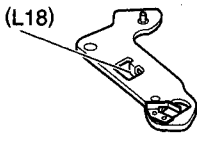
㊱ Arm gear 1 assembly

Collar



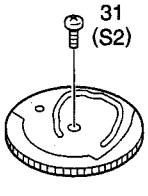
Collar

㊲ Centering arm assembly



L18

㊳ Sub cam

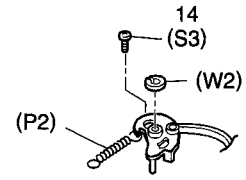


S2

Screw Management															
⑯	⑱				⑲	⑳	㉑	㉜	㉝	㉞		㊳	㊷		
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2
No.11	No.12				No.13	No.14	No.17			No.18		No.19	–		

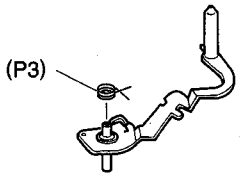
The slit washers cannot be reused once they have been removed.

⑦ Band arm plate assembly



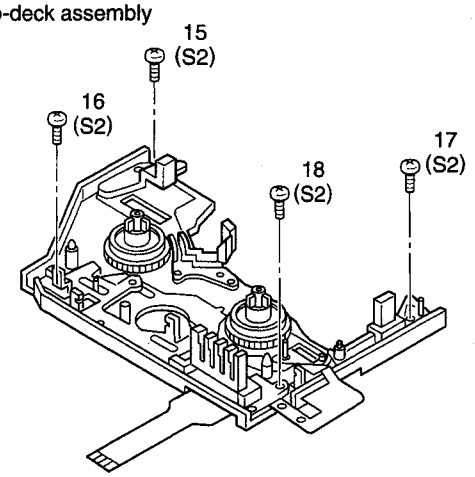
S3,P2,L9,W2

⑧ Tension arm assembly



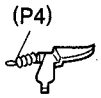
P3

⑪ Sub-deck assembly



S2×4

⑫ Main brake (SUP) assembly



P4,L10

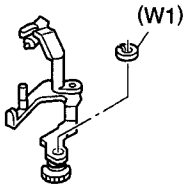
⑬ Main brake (TU) assembly

P5,L11

⑭ Reel base assembly (SUP)

⑮ Reel base assembly (TU)

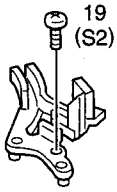
⑨ Exit guide arm assembly



W1

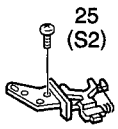
⑩ Swing arm assembly

⑯ Prism



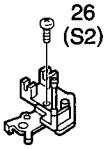
S2

⑳ Base plate (TU) assembly



S2,L14×2

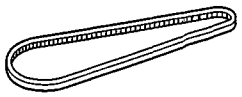
㉑ Entrance guide base assembly



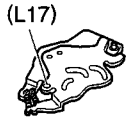
S2

㉒ Worm wheel 2

㉓ Timing belt

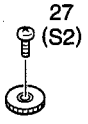


㉛ Charge arm assembly



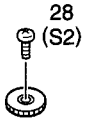
L17

㉜ Connect gear 2



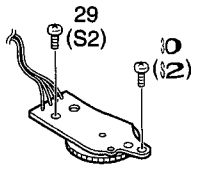
S2

㉝ Connect gear 2



S2

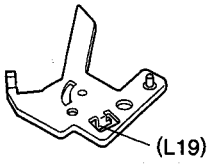
㉞ Rotary encoder assembly



S2×2

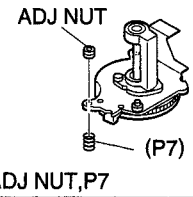
㊴ Arm gear 2 assembly

㊵ Clutch lock lever assembly



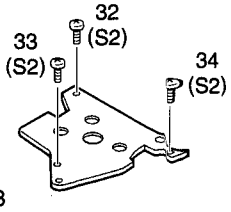
L19

㊶ Capstan motor



ADJ NUT,P7

㊷ Drum base deck



S2×3

2.10 DISASSEMBLY PROCEDURE LIST

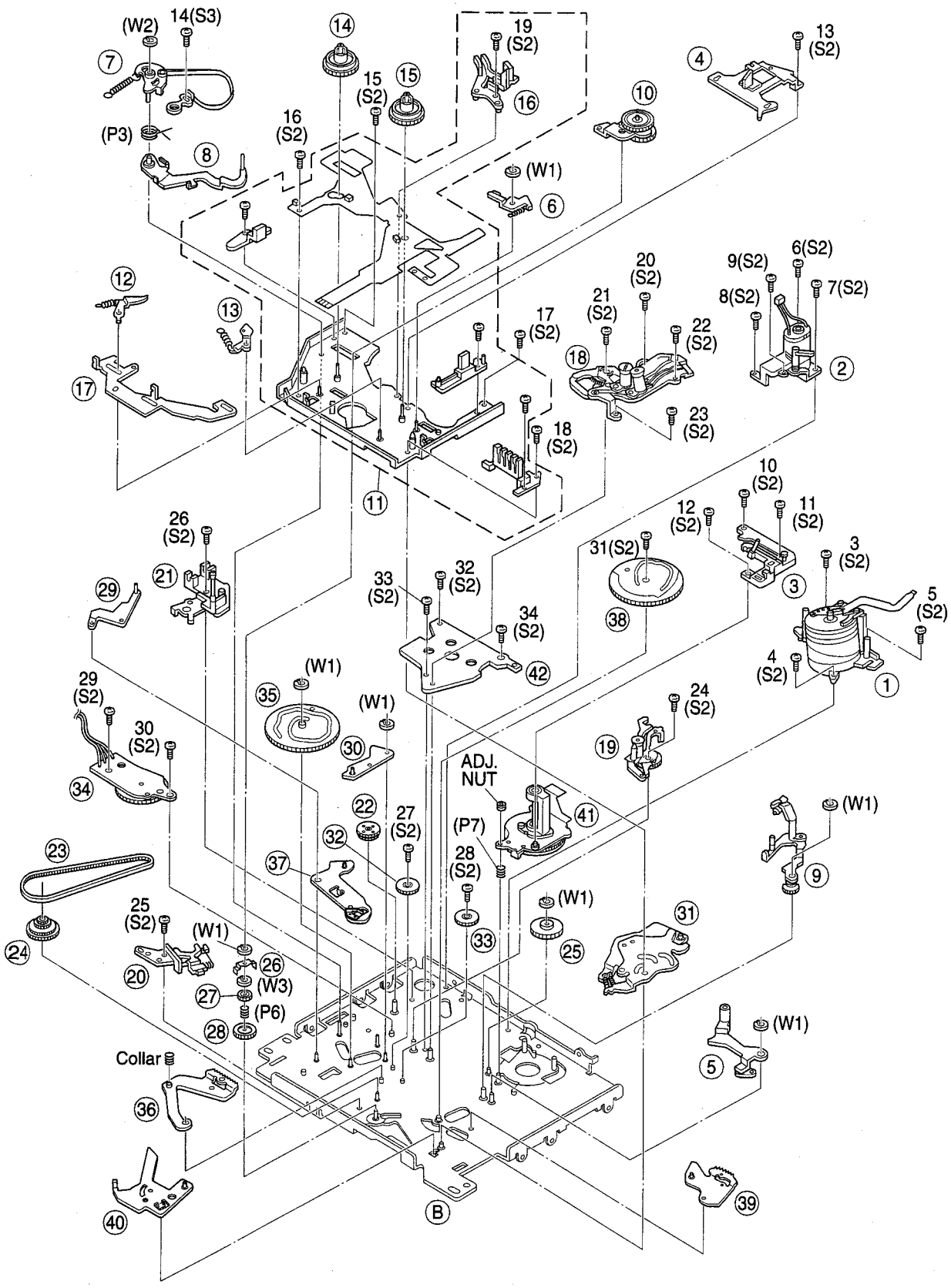
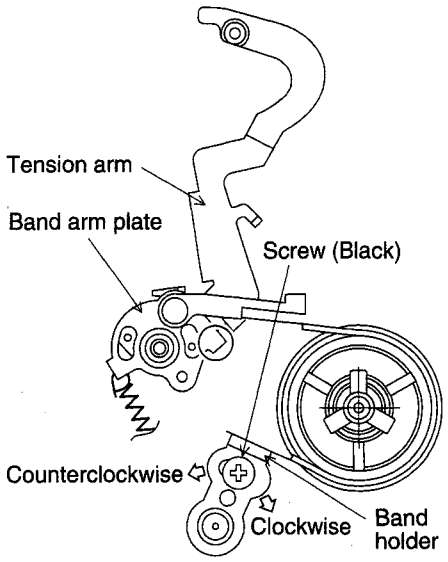


Fig. 2-9-1

Note) For the grease and oil application points, see section 5.6, "MECHANISM ASSEMBLY PARTS LIST M 4"

2.11 TORQUE ADJUSTMENTS

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓣ) Adjustment level (☆)	Adjustment procedure
1	SUP backup torque adjustment	• Cassette torque meter	Play	◎ Supply side indication of cassette torque meter ☆ $3.9^{+1.47}_{-0.39} \times 10^{-4}$N m ($4.0^{+1.5}_{-0.4}$ gf cm)	(1) nsert the cassette torque meter and enter play mode. (2) The supply backup torque should be as specified. (If it fluctuates, read the center value.) (3) If it is out of specification, eject the tape, remove the cassette housing, loosen the screw (black) slightly and fine-adjust the band holder. Slightly turn the band holder as follows. · To increase torque: Counterclockwise · To decrease torque: Clockwise. **NOTE** **The screw securing torque should be 0.0588 N-m (0.6 kgf·cm).** 4) Check the supply backup torque again and repeat the above steps until it becomes as specified.
2	TU torque check	• Cassette torque meter	Play	◎ Take-up side indication of cassette torque meter ☆ $4.9^{+3.92}_{-1.96} \times 10^{-4}$N m ($5.0^{+4.0}_{-2.0}$ gf cm)	(1) Insert the cassette torque meter and enter play mode. (2) Ensure that the take-up torque is as specified. If it is out of specification, check the assembly of the reel drive parts and the center gear assembly.



2.12 COMPATIBILITY ADJUSTMENT

2.12.1 Compatibility Adjustment Flow Chart

Fig. 2-12-1 shows the flow chart of compatibility adjustment.

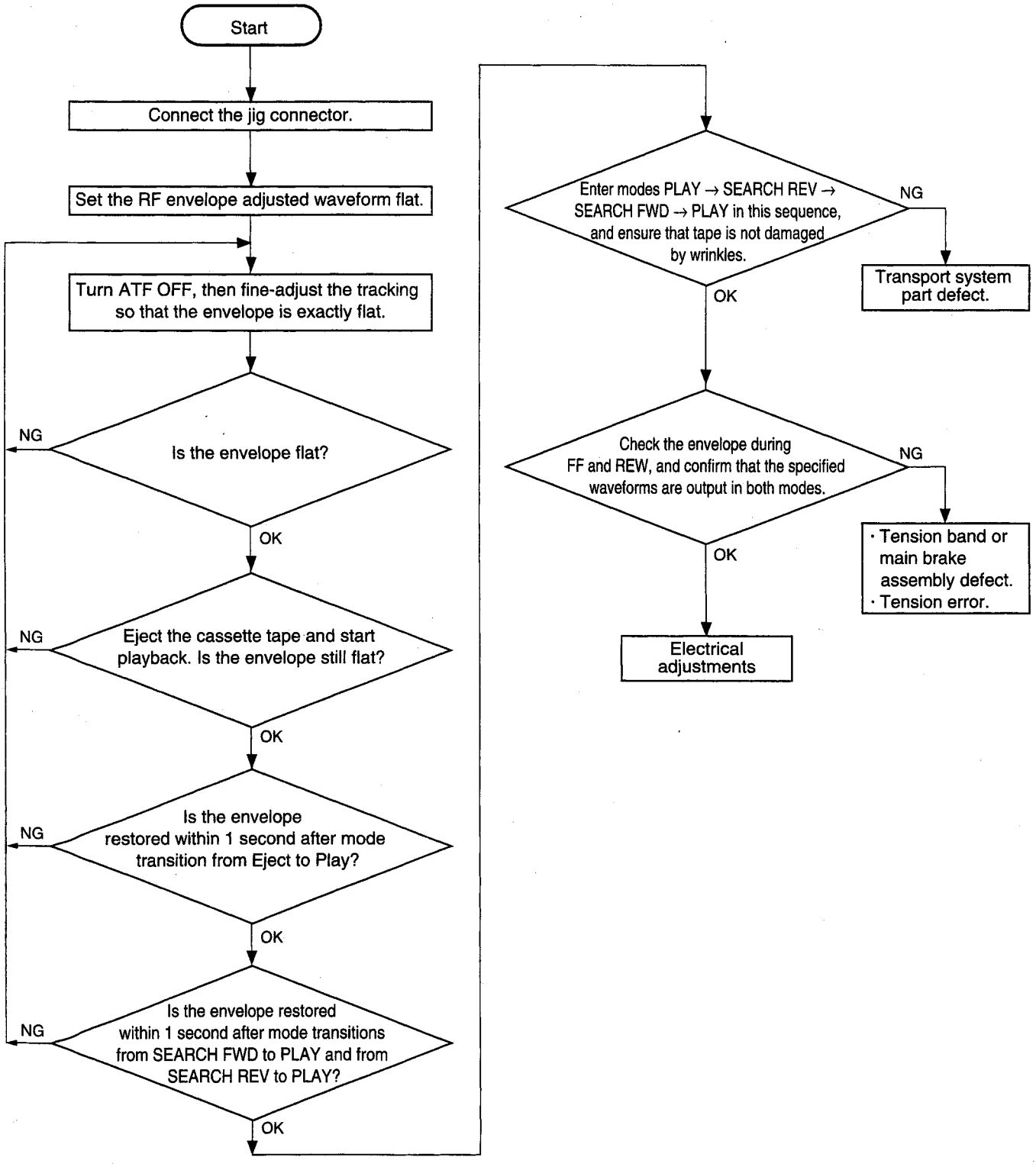


Fig. 2-12-1

2.12.2 Before Adjustments

Table 2-12-1 shows the adjustments to be enforced after servicing.

Servicing \ Adjustment Item	2.12.5 Linearity Adjustment	3.4.7 Play Switching Point Adjustment	3.4.8-3 Error Rate (PB EQ) Adjustment	3.4.8-1 REC Current Adjustment
Drum replacement	Note 1 Required	Required	Required	Required
Required	Note 1 Required	Not required	Check	Not required
IC901 replacement (PRE/REC amp on P/R & MDA board)	Not required	Not required	Check	Required
IC501 replacement (PB EQ on DV Main board)	Not required	Not required	Required	Not required
DV Main board replacement Note 2	Not required	Required	Required	Required

Table 2-12-1

Note 1 : Check is required after servicing or replacement related to the drum, TU/SUP guide rails or tension.

Note 2 : After having replaced the DV Main board, be sure to write the original data in the EEPROM (IC103) of the new board. If the original data cannot be written due to communication failure, mount the original EEPROM to the new board.
The following data are written in the EEPROM (IC103) on the DV MAIN board.

- EVR adjustment value data
- Hour meter
- Warning history
- IEEE1394 ID code

2.12.3 Adjustment Setup

As shown in Fig.2-12-2 below, connect the connector cable to CN104 on the DV MAIN board and then connect it to the PC cable.

NOTE
The switches on the connector cable do not affect the adjustments or checking so they can be set either on or off.

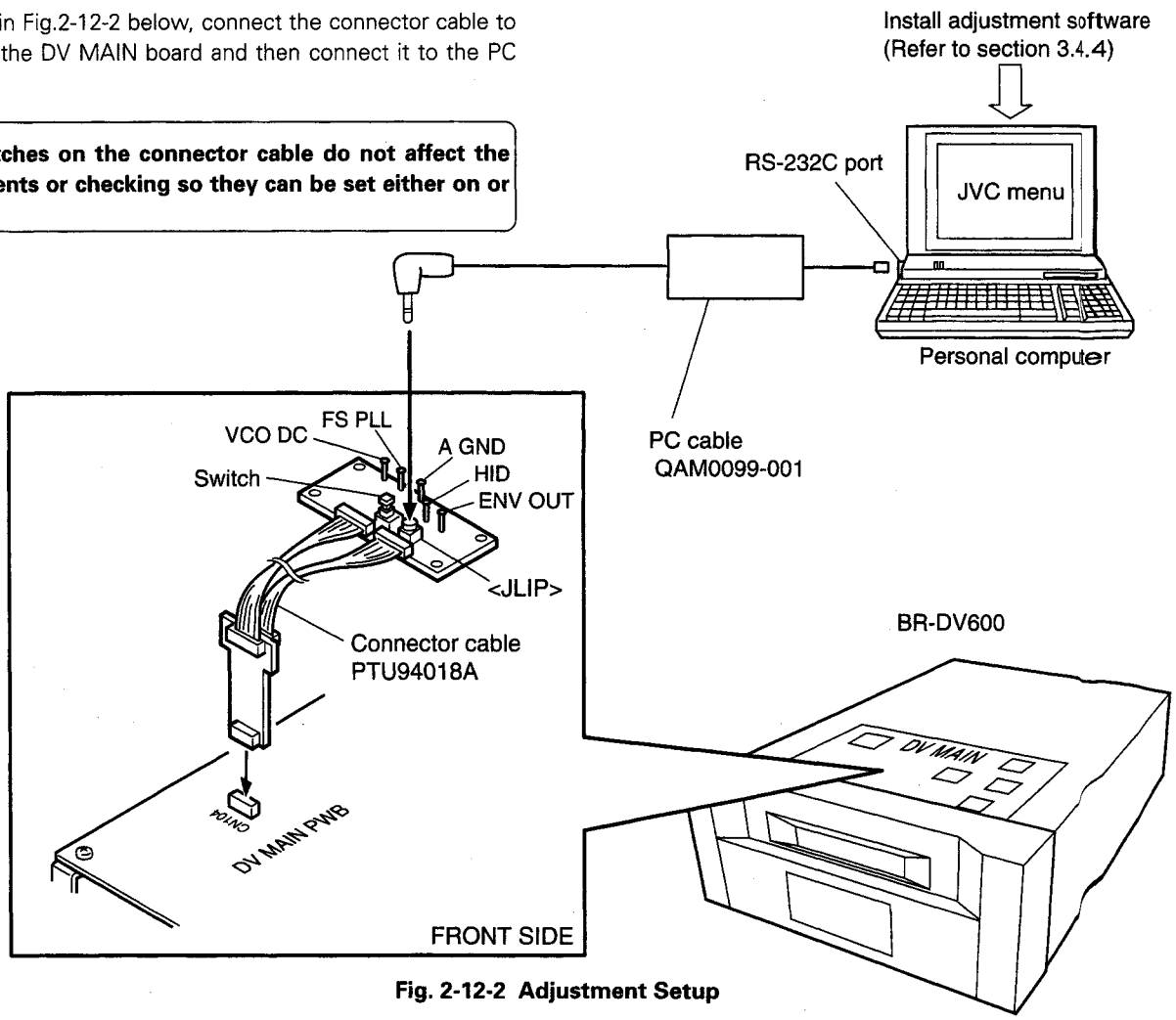


Fig. 2-12-2 Adjustment Setup

2.12.4 Tape Transport Restriction

The unit uses only the SUP guide roller and TU guide roller to restrict the tape transport. The tape is free (no restriction) from other parts.

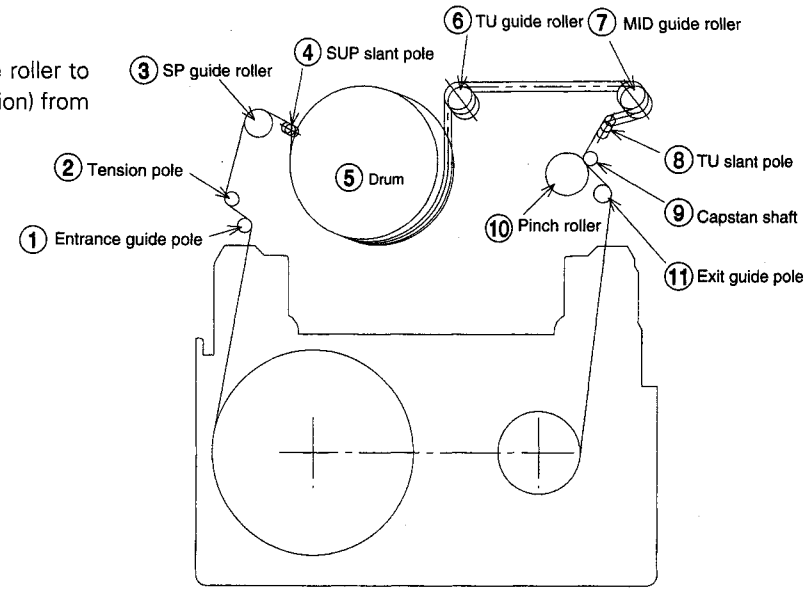


Fig. 2-12-3

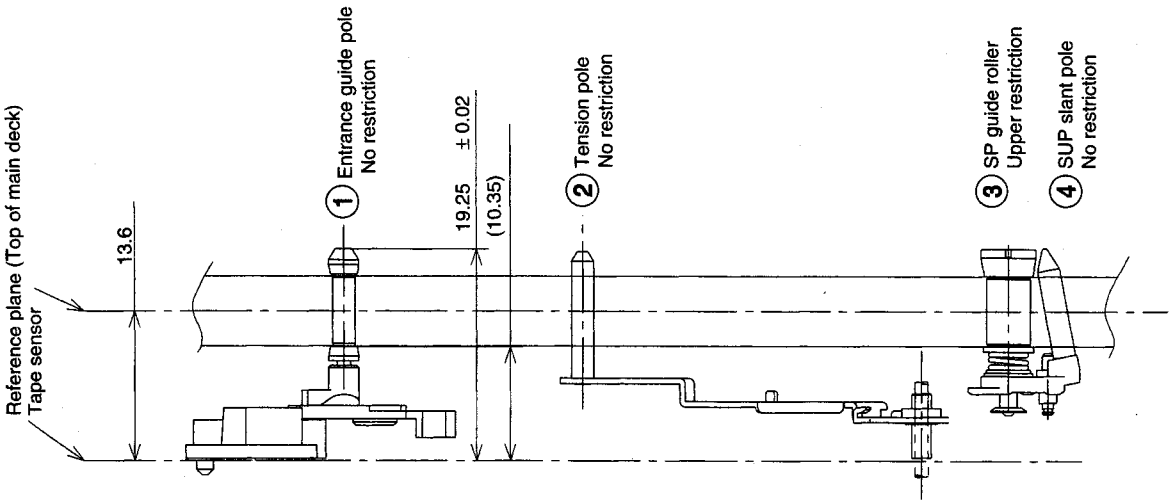


Fig. 2-12-4 Tape Restriction on Supply Side

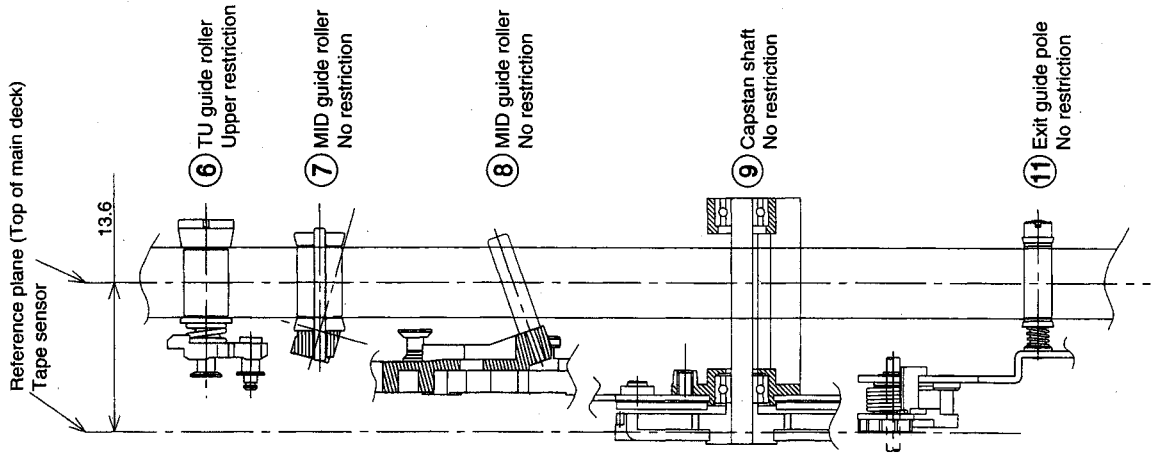


Fig. 2-12-5 Tape Restriction on Take-up Side

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure

2.12.5 Compatibility Adjustment

1	Preparation				(1) Set up the adjustment software (see section 2.12.3, "Setup") and execute the program. (2) If it is required to switch the auto tracking function, set [ATF] to "OFF". When the ATF Value appears, vary the tracking value as desired.
2	RF envelope adjustment	• Error on supply side Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion	Play	◎ ENV OUT [jig connector] ◎ HID [jig connector] ⓣ Supply guide roller ⓣ Take-up guide roller ☆ Make the waveforms flat. The drop level should be less than 3 dB with both SUP and TU levels. ☆ Flatness variation should be less than 2 dB.	(1) Play alignment tape color bar portion. (2) Observe the measuring points and adjust the supply guide roller and take-up guide roller so that the RF waveform is flat. (3) Set [ATF] to OFF and vary tracking. (4) Fine-adjust the supply and take-up guide rollers to make the waveform exactly flat. (5) Set the mode to EJECT, then set to the PLAY mode and ensure that the RF waveform is flat.

Drag here to vary the tracking.

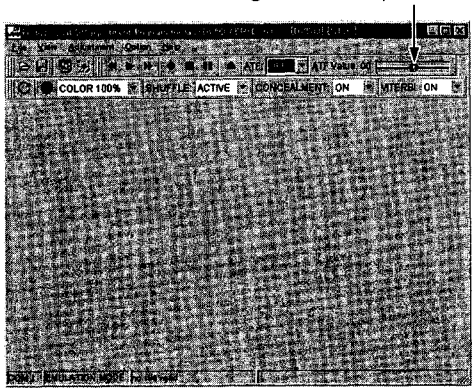


Fig. 2-12-6 PC Display of Adjustment Software

NOTE

- **Be sure to clean the tape transport parts and play a cleaning tape before proceeding to the compatibility adjustment.**

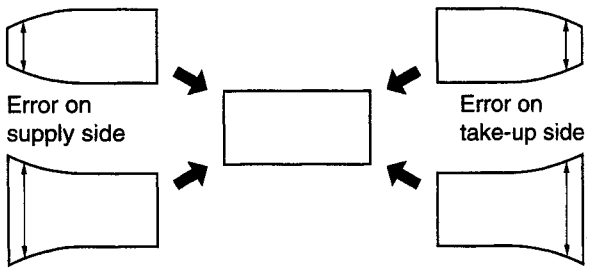


Fig. 2-12-7

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
3	Waveform rise check	• Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion	Eject →Play Search FWD →Play Search REV → Play	◎ ENV OUT [jig connector] ◎ HID [jig connector] ☆The envelope waveform should be restored within 1 sec.	(1) Switch the mode from Eject → Play and ensure that the envelope waveform is restored in less than 1 sec. (2) Switch the mode from Search FWD → Play and from Search REV → Play, and ensure that the envelope is restored in less than 1 sec. in both cases. (3) If the waveform does not restore in the specified period, fine-adjust the supply/take-up guide rollers as far as the envelope waveform specification is met, then restart checking from the above procedure 1 again.
4	Damage check	• Self-recorded/ played tape 60ME	Play ↓ Search REV ↓ Search FWD ↓ Play	◎ ENV OUT [jig connector] ◎ HID [jig connector] ☆The tape should not be damaged by wrinkle.	(1) Transport the self-recorded/played tape from the beginning by changing modes in order of Play → Search REV → Search FWD → Play, and ensure that wrinkles due to strong restriction by the guide rollers and guide pole are not produced on tape. (2) Perform the same check at the section near the end of tape.
5	Envelope check during FF/REW	• Oscilloscope, alignment tape MC-1(NTSC) MC-2(PAL) Color bar portion	FF REW	◎ ENV OUT [jig connector] ◎ HID [jig connector] ☆A > 55μsec. ☆B ≧ T/3	(1) Insert the alignment tape and enter Stop mode. (2) Enter FF mode. (3) Ensure that the envelope output is present at 55 μs before the HID switching timing. (4) Check the take-up side of the envelope to see that the MAX output duration is more than 1/3 the HID duration. **This checking should be done after completing the switching point adjustment.** (5) Enter REW mode and check the same items as (3) and (4) above. (6) If the envelope is out of specification, check the tension band and main brake assembly and replace as required. Confirm the playback switching point.

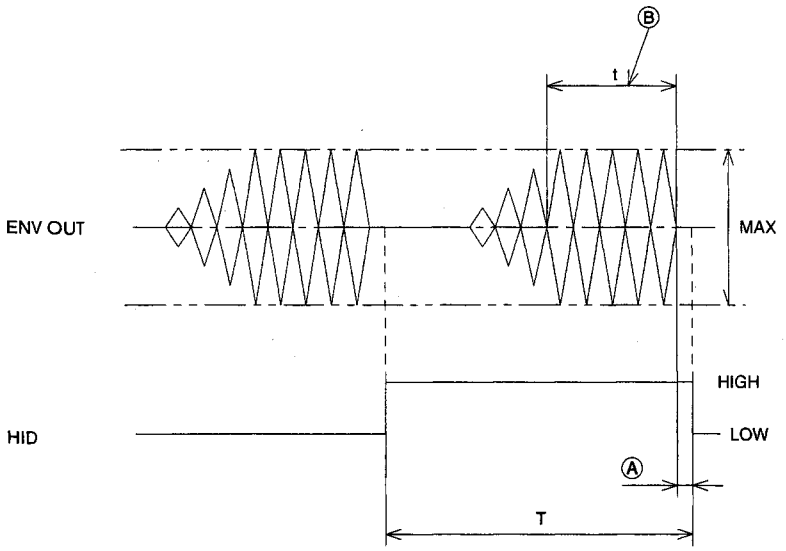


Fig. 2-12-8

SECTION 3
ELECTRICAL ADJUSTMENTS

3.1 PRECAUTIONS

Before proceeding to any electrical adjustment, it is required to confirm without fail that the objective item (function or part) is out of order. Moreover, for the item that needs exact mechanical adjustment prior to electrical adjustment, make sure that it is mechanically normal first and then proceed to electrical adjustment.
Start electrical adjustment at least 10 minutes after the VCR has been turned on.
Regarding an oscilloscope to be used for measurement, use the 10:1 probe.

3.1.1 Required tools and measuring instruments for adjustments

(1) Measuring instruments

- Oscilloscope (Dual-trace type for 100 MHz or higher frequency)
- Composite and Y/C video signal generator (LEADER 425A for NTSC or 425P for PAL, TEKTRONIX TSG-130A for NTSC or TSG-131A for PAL, or equivalent)
- Component signal generator (LEADER 425A for NTSC or 425P for PAL, TEKTRONIX TSG-130A for NTSC or TSG-131A for PAL, or equivalent)
- Vectorscope (TEKTRONIX 520A or equivalent)
- Frequency counter (Sensitivity for 10 MHz or higher and 100 mV or lower.)
- Digital voltmeter (Capable of indicating 1 mV DC at lowest.)
- Monitor TV
- Audio tester
- Personal computer
  System requirements: Microsoft Windows 95/98
  Pentium 133 MHz or faster, or equivalent (With a CPU of slower speed, some operations including the error rate check may not work properly.)

(2) Tools

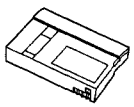
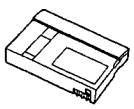
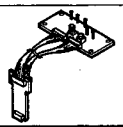
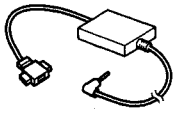
1	Alignment tapes
MC-1(NTSC) MC-2(PAL)	
2	DV tape
For use in recording/playback (60ME)	
3	Jig connector cable
PTU94018A	
4	PC cable
QAM0099-001	
5	Adjustment software
To be downloaded from the WWW site of JS-NET Pro Video Division.	

Table 3-1-1

3.1.2 Alignment tapes

MC-1/MC-2

No.	Video signal	Audio signal	Time (min.)	Application
1	Animated image	Sound of animated image	10	For check of block noise.
2	Color bars	1 kHz	10	· For adjustment of interchangeability. · For check and adjustment of playback video/audio circuit.

Table 3-1-2

3.1.3 Standard setup for adjustment

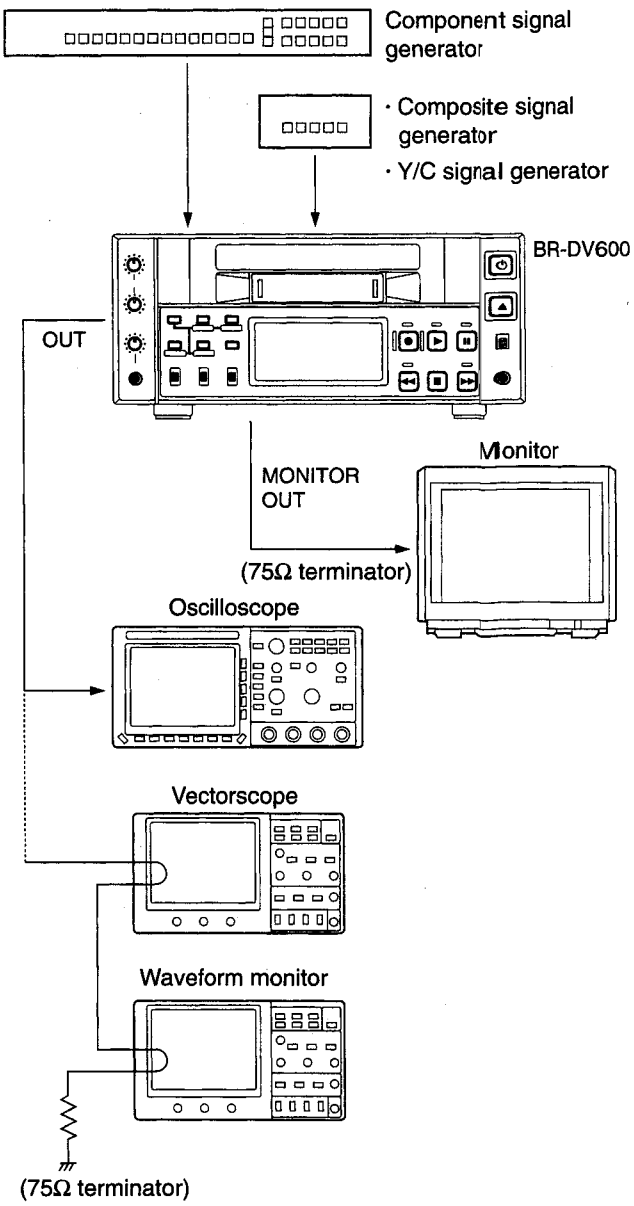


Fig. 3-1-1

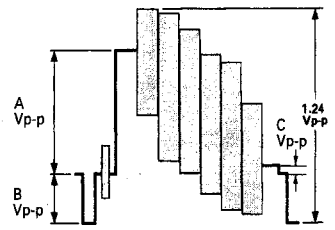
3.1.4 Signals required for adjusting video system

The BR-DV600 should be adjusted using signals with the color level at 100%, setup level at 7.5% (NTSC only) and Betacam level (component signals). Be sure to check the output level from the signal generator before adjustment. If a signal is with a color level of 75% or without a setup level (NTSC only), the adjusted value will be incorrect.

① Composite signal

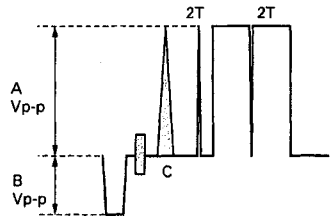
(1) Composite color-bar signal
(U: 100% Color bars with 7.5% setup)
(E: 100% Color level, 0% setup)

U : A = 0.714, B = 0.286, C = 0.0536
E : A = 0.7, B = 0.3, C = 0



(2) Composite pluse & bar signal

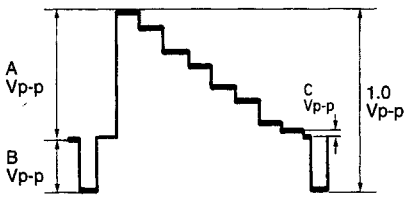
U : A = 0.714, B = 0.286, C = 12.5T
E : A = 0.7, B = 0.3, C = 20T



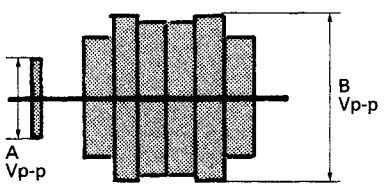
② Y/C signal

Color bars signal (100% color level, 7.5% setup level)

Y/C (Y) U : A = 0.74, B = 0.286, C = 0.0536
E : A = 0.7, B = 0.3, C=0



Y/C (C) U : A = 0.286, B = 0.84
E : A = 0.3, B = 0.885

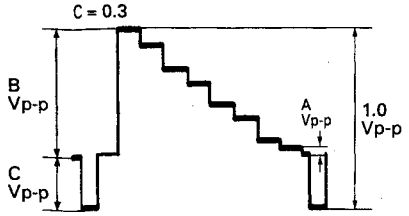


③ Component signals

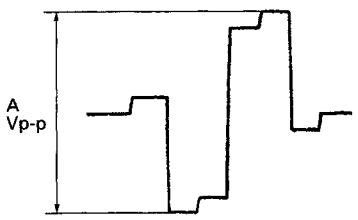
The signals required for the adjustment are 100% chroma signal and the Betacam level. (The levels of MII are shown below as reference.)

(1) Component color-bar signal (U: 100% color bars with 7.5% setup) (E: 100% Color bars with, 0% setup)

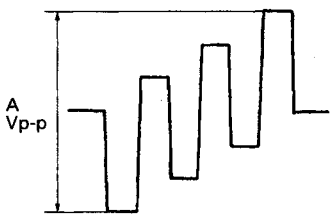
Y U : A = 0.052 (M Ⅱ)/0.054 (BETACAM)
B = 0.7 (M Ⅱ)/0.714 (BETACAM)
C = 0.3 (M Ⅱ)/0.286 (BETACAM)
E : A = 0
B = 0.7
C = 0.3



R-Y U : A = 0.65 (M Ⅱ)/0.933 (BETACAM)
E : A = 0.7



B-Y U : A = 0.65 (M Ⅱ)/0.933 (BETACAM)
E : A = 0.7



3.1.5 Adjustment Using Different Signal Types

What is simply referred to as the color bar signal actually contains signals at various levels. Therefore, section 3.1.4 specifies the levels of the color bar signal used in adjustments together with the description of the method of adjustment when each signal is applied. In order to reduce the adjustment errors, use the specified signals whenever possible. However, as the specified signal is not always available at actual sites, the adjustment method using a color bar signal at an 'other-than-specified level' will be described in the following.

① Preparatory knowledge

(1) Component color bar signal

[NTSC]

The component color bar signal is available at the Betacam level or MII level. The major differences between these specifications lie in the difference in the ratio between the white and sync levels of the Y signal and the difference in the level of the color difference signals.

	Ratio Between White level: Sync level	Color difference signal level
Betacam	10:4 (0.714 V:0.286 V)	75%. The level with 7.5% setup level is set to 0.7 Vp-p.
MII level	7:3 (0.7 V:0.3 V)	100%. The level without 0% setup to 0.7 Vp-p.

Table 3-1-3

In addition, each signal includes large variations such as signals at the 75% or 100% level, signals with or without the 7.5% setup level. The levels of the color difference signals can be calculated as follows.

[Level of color difference signal at MII level 100% with setup 7.5%]
0.7 Vp-p x (100% - 7.5%)/100% = 0.648 Vp-p

[Level of color difference signal at MII level 75%, with setup 0%]
0.7 Vp-p x 75%/100% = 0.525 Vp-p

The following table shows the lists of levels of various signal types.

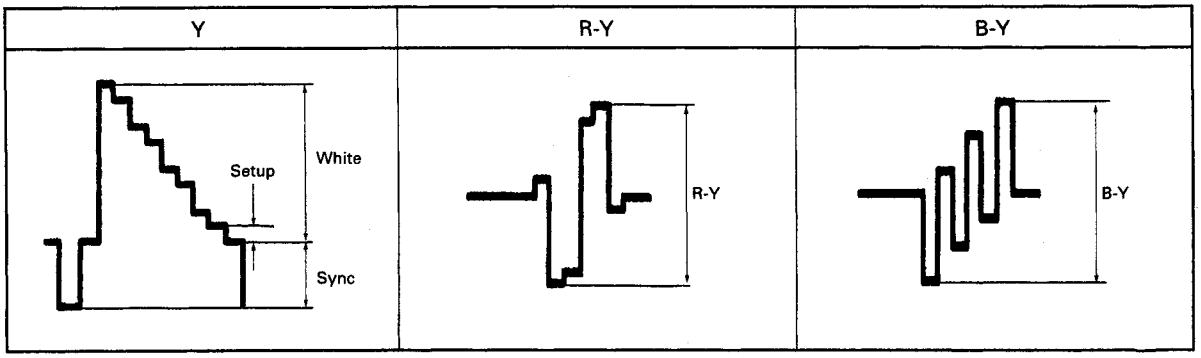


Fig. 3-1-5

Type		Y				R – Y	B – Y
		Y level [mVp-p]	White [mV]	Sync [mV]	Setup [mV]	R-Y level [mVp-p]	B-Y level [mVp-p]
MII	100/0/100/0	1000	700	300	0	700	700
	100/7.5/100/7.5	1000	700	300	52.5	648	648
	100/0/75/0	1000	700	300	0	525	525
	100/7.5/75/7.5	1000	700	300	52.5	486	486
β CAM	100/0/100/0	1000	714	286	0	1009	1009
	100/7.5/100/7.5	1000	714	286	53.6	933	933
	100/0/75/0	1000	714	286	0	757	757
	100/7.5/75/7.5	1000	714	286	53.6	700	700

Table 3-1-4(a)

[PAL]

The PAL signal does not use the setup level. Only the EBU type component signals are available.

Type		Y			R – Y	B – Y
		Y level [mVp-p]	White [mV]	Sync [mV]	R-Y level [mVp-p]	B-Y level [mVp-p]
EBU	100/0/100/0	1000	700	700	700	700
	100/0/75/0	1000	300	300	525	525

Table 3-1-4(b)

(2) Y/C and composite color bar signals

The Y/C and composite color bar signals also include a variety of signals depending on the setup levels and chroma signal levels. While the S-VHS and VHS format VCRs use a color bar signal at the 75% level with 7.5% setup level, the digital VCR uses a color bar signal at the 100% with 0% setup level. Keep in mind that the color level changes depending on the setup level.

[NTSC]

Type	Y level [mVp-p]	White [mV]	Sync [mV]	Setup [mV]	Burst [mVp-p]	YL/B [mVp-p]	CY/R [mVp-p]	G/MG [mVp-p]
100% level, setup 0%	1000	714	286	0	286	640	908	848
100% level, setup 7.5%	1000	714	286	53.5	286	592	840	785
75% level, setup 0%	1000	714	286	0	286	480	681	636
75% level, setup 7.5%	1000	714	286	53.5	286	444	630	589

[PAL]

Type	Y level [mVp-p]	White [mV]	Sync [mV]	Burst [mVp-p]	YL/B [mVp-p]	CY/R [mVp-p]	G/MG [mVp-p]
100% level	1000	700	300	300	627	885	827
75% level	1000	700	300	300	471	664	620

YL/B: Yellow and Blue level. CY/R: Cyan and Red level. G/MG: Green and Magenta level.

Table 3-1-5

② Adjustments on the BR-DV600

The BR-DV600 has been designed to input and output multi-format signals. The input/output level is at the Betacam level, 100% color level and 7.5% setup level with the U version, or the EBU 100% color level with the E version.

By adjusting the output level of the VIDEO I/O board so that it is identical to the input level, adjustments will be possible even with signals at different levels.

(1) Y level adjustment (Nos. 2, 3, 5 and 6, Service Manual 3.2.2)

When a color bar signal contains the Y100% white level, the signal can be adjusted as indicated by the service manual. The setup level does not affect the overall video level.

(2) Color level adjustment (Service Manual 3.2.2)

The level is variable depending on whether the color level is 75% or 100% and whether the setup level is used or not.

- Composite output level .(Nos. 4 and 7)

  The signals can be adjusted by setting the output signal level identical to the input signal level.

  First, apply the input signal to a vector scope and adjust the GAIN potentiometer so that the signal components are accommodated within "⊞".

  Then, apply the same signal or the Y/C signal to the BR-DV600 and adjust so that the output signal is identical to the input signal.

- Burst level adjustment (Nos. 16 and 18)

  The burst level is common for any type of signal. There will be no problem if it is adjusted to 0.286 Vp-p (NTSC, 0.3 Vp-p with PAL).

- Component (R-Y/B-Y) output level (Nos. 8 and 9)

  See Table 3-1-4 and adjust to the level of the corresponding input signal of the Betacam signal. With NTSC, if the color level is 75% and setup level is 7.5%, the level should be 0.7 Vp-p.

(3) Timing adjustment (Nos. 10, 11, 13, 14, 15 and 17, Service Manual 3.2.2)

Adjustments are basically possible with signals other than the signal at the Betacam level, 100% color, 0% setup.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓣ) Adjustment level (☆)	Adjustment procedure

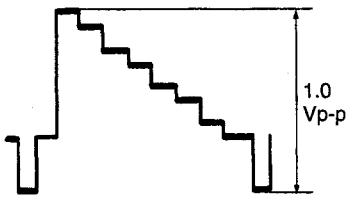
3.2 Adjustments on the VIDEO I/O Board

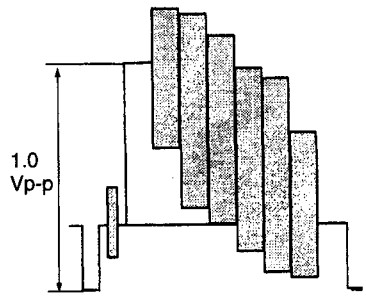
3.2.1 Audio Adjustments

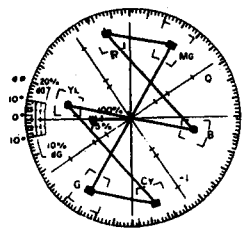
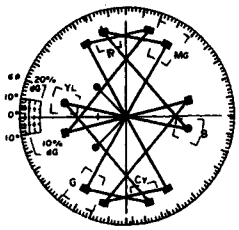
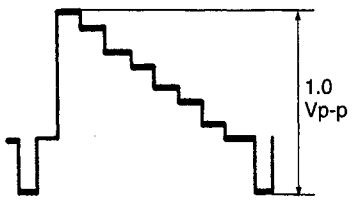
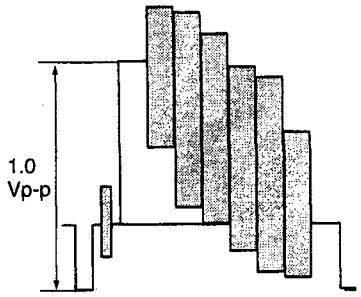
1	Audio output adjustment	• Audio tester • 1 kHz/-8 dBs	EE	◎ AUDIO OUT Ⓣ VR18 (CH-1): 8A VR17 (CH-2): 8B ☆ -8 dBs	(1) Apply 1 kHz/-8 dBs signal to AUDIO IN. (2) Set the REC LEVEL potentiometer on the front panel to the center position. (3) Adjust VR18 (CH-1) and VR17 (CH-2) so that the audio outputs are as specified. (4) Ensure that the LCD level meter indicates -20 dB.

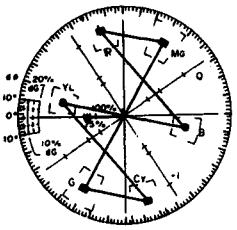
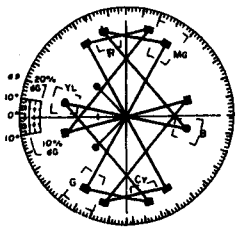
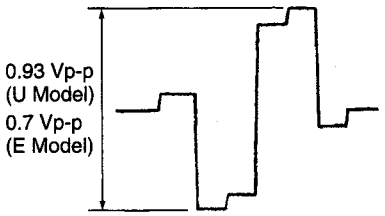
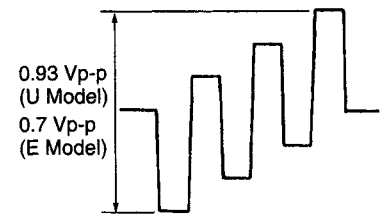
3.2.2 Video Adjustments

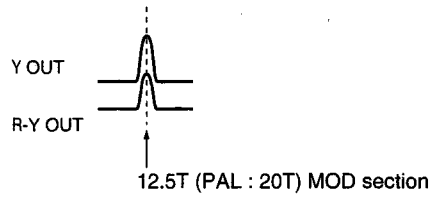
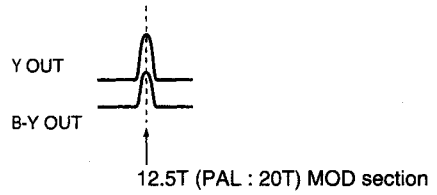
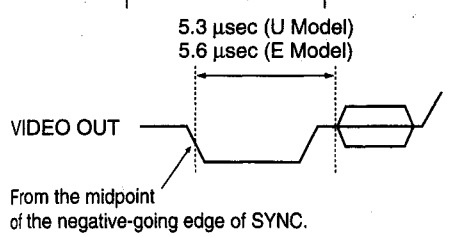
1	Preparation				Set the video circuitry switch as follows. (U version only). [Service menu] 125: SET UP ON
2	AGC level adjustment	• Oscilloscope • Y/C input • Color bar signal	EE	◎ TP13: 8D Ⓣ VR1 (AGC): 13D ☆ 1.0 Vp-p	(1) Apply color bar signal to Y/C IN. (2) Adjust VR1 so that the Y level is as specified.
3	VIDEO Y level adjustment	• Oscilloscope • Y/C input • Color bar signal	EE	◎ VIDEO OUT (75 Ω terminated) Ⓣ VR12 (VIDEO Y): 9D ☆ 1.0 Vp-p	(1) Apply color bar signal to Y/C IN. (2) Adjust VR12 so that the Y level is as specified.



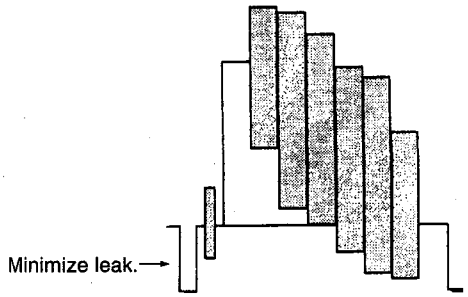


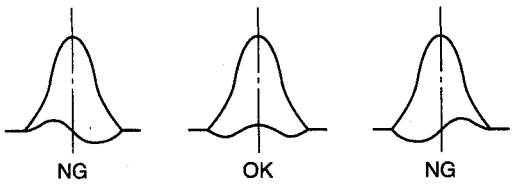
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
4	Video chroma level adjustment  [U Model]  [E Model]	• Vectorscope • Y/C input • Color bar signal	EE	◎ VIDEO OUT (75Ω terminated) ⓣ VR11 (VIDEO C): 9B ☆ Color components are located within "⊞" of the vectorscope. (Adjust to the same level as the input signal.)	(1) Apply color bar signal from the signal generator to the vectorscope and ensure that components are located within "⊞". If not, adjust the GAIN potentiometer of the vector scope to accommodate them inside "⊞". (2) Apply the Y/C color bar signal from the same signal generator to Y/C IN. (3) Adjust VR11 so that the VIDEO output level is as specified.
5	Component Y level adjustment  	• Oscilloscope • Y/C input • Color bar signal	EE	◎ Component Y OUT (75Ω terminated) ⓣ VR13 (CPN Y): 6C ☆ 1.0 Vp-p	(1) Apply color bar signal to Y/C IN. (2) Adjust VR13 so that the Y level is as specified.
6	Y/C SEP Y level adjustment  	• Oscilloscope • LINE input • Color bar signal	EE	◎ VIDEO OUT (75Ω terminated) ⓣ VR2 (Y/C Y): 13I ☆ 1.0 Vp-p	(1) Apply color bar signal to LINE IN. (2) Adjust VR2 so that the Y level is 1.0 Vp-p.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
7	Y/C SEP chroma level adjustment	• Oscilloscope • LINE input • Color bar signal	EE	◎ VIDEO OUT (75Ω terminated) ⓣ VR21 (Y/C C): 12H ☆ Color components are located within "⊞" of the vectorscope. (Adjust to the same level as the input signal.)	(1) Apply a composite color bar signal from the signal generator to the vector scope and ensure that components are located within "⊞". If not, adjust the GAIN potentiometer of the vectorscope to accommodate them inside "⊞". (2) Apply color bar signal to Y/C IN. (3) Adjust VR21 so that the components are located within "⊞".
	 [U Model]  [E Model]				
8	R-Y level adjustment	• Oscilloscope • Y/C input • Color bar signal	EE	◎ R-Y OUT (75Ω terminated) ⓣ VR20 (R-Y LEV): 3H ☆ 0.93 Vp-p (U Model) ☆ 0.7 Vp-p (E Model)	(1) Apply color bar signal to Y/C IN. (2) Adjust VR20 so that the R-Y level is as specified. **(Note)** **The adjustment levels shown are those obtained when the input Y/C color bar signal level is at 100% color, setup 7.5%. When a color bar signal with 75% color, setup 7.5% is input, the adjustment target value is 0.7 Vp-p.** **With PAL, when a 75% color signal is input, the adjustment target value is 0.525 Vp-p.**
	 0.93 Vp-p (U Model) 0.7 Vp-p (E Model)				
9	B-Y level adjustment	• Oscilloscope • Y/C input • Color bar signal	EE	◎ B-Y OUT (75Ω terminated) ⓣ VR19 (R-Y LEV): 3F ☆ 0.93 Vp-p (U Model) ☆ 0.7 Vp-p (E Model)	(1) Apply color bar signal to Y/C IN. (2) Adjust VR19 so that the B-Y level is as specified. **(Note)** **The adjustment levels shown are those obtained when the input Y/C color bar signal level is at 100% color, setup 7.5%. When a color bar signal with 75% color, setup 7.5% is input, the adjustment target value is 0.7 Vp-p.** **With PAL, when a 75% color signal is input, the adjustment target value is 0.525 Vp-p.**
	 0.93 Vp-p (U Model) 0.7 Vp-p (E Model)				

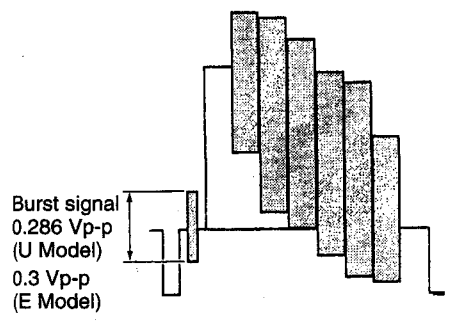
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓣ) Adjustment level (☆)	Adjustment procedure
10	R-Y delay adjustment	• Oscilloscope • LINE input • Pulse & bar signal 	EE	◎ Component Y OUT (75Ω terminated) R-Y OUT (75Ω terminated) Ⓣ VR4 (R-Y DL): 4G ☆ 0 ±40 nsec.	(1) Apply pulse & bar signal to LINE IN. (2) Observe Y OUT and B-Y OUT of the component signal using a 2-trace oscilloscope, and adjust the delay between the Y and R-Y signals at the pulse & bar signal section with 12.5T modulation.
11	B-Y delay adjustment	• Oscilloscope • LINE input • Pulse & bar signal 	EE	◎ Component Y OUT (75Ω terminated) B-Y OUT (75Ω terminated) Ⓣ VR3 (B-Y DL): 4F ☆ 0 ±40 nsec.	(1) Apply pulse & bar signal to LINE IN. (2) Observe Y OUT and B-Y OUT of the component signal using a 2-trace oscilloscope, and adjust the delay between the Y and R-Y signals at the pulse & bar signal section with 12.5T modulation.
12	NO INPUT FSC adjustment	• Frequency counter • Component input • No input signal	EE	◎ TP24: 2I Ⓣ VR15 (fsc): 2I ☆ 3.579545 MHz ±20 Hz (U Model) ☆ 4.433619 MHz ±20 Hz (E Model)	(1) Set the component input mode and apply no signal. (2) Adjust VR15 to count the specified value.
13	H phase adjustment	• Oscilloscope • Component input • Color bar signal 	EE	◎ VIDEO OUT (75Ω terminated) Ⓣ VR22 (EE H): 2B ☆ 5.3 µsec. (U Model) ☆ 5.6 µsec. (E Model)	(1) Apply color bar signal to COMPONENT IN. (2) Adjust VR22 so that the time from the negative going of SYNC to the start of burst is as specified.

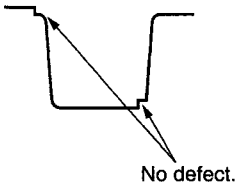
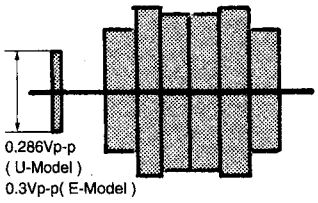
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓣ) Adjustment level (☆)	Adjustment procedure
14	Encoder leak adjustment	• Oscilloscope • Component input • Color bar signal	EE	◎ VIDEO OUT (75Ω terminated) Ⓣ VR7 (CPN LK1): 5J VR8 (CPN LK2): 5J ☆ Minimum leak	(1) Apply color bar signal to COMPONENT IN. (2) Adjust VR7 and VR8 alternately to minimize the leak of the VIDEO OUT waveform.
15	Encoder delay adjustment	• Oscilloscope • Component input • Pulse & bar signal	EE	◎ VIDEO OUT (75Ω terminated) Ⓣ VR5 (CPN DL1): 9J VR6 (CPN DL2): 9I ☆ Left-right symmetrical	(1) Apply pulse & bar signal to COMPONENT IN. (2) Adjust VR5 and VR6 so that the waveform of the Modulate section of the pulse & bar signal is symmetrical .
16	Encoder chroma level adjustment	• Vectorscope • Component input • Color bar signal	EE	◎ VIDEO OUT (75Ω terminated) Ⓣ VR10 (CPN LEV): 3I ☆ 0.286 Vp-p (U Model) ☆ 0.3 Vp-p (E Model)	(1) Apply color bar signal to COMPONENT IN. (2) Adjust VR10 so that the burst level is as specified.



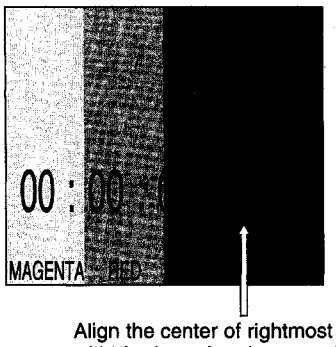


12.5T (PAL : 20T) MOD section



No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
17	PB H timing adjustment	• Oscilloscope • Component input • Color bar signal  	Self-record/ play	◎ VIDEO OUT (75Ω terminated) ⓣ VR16 (PB H): 2C ☆ There shall be no defect in SYNC.	(1) Apply color bar signal to COMPONENT IN. (2) Record and play back a signal and adjust VR16 so that there is no defect in SYNC.
18	Chroma output level adjustment	• Oscilloscope • Y/C input • Color bar signal  	EE	◎ C OUT of Y/C OUT (75Ω terminated) ⓣ VR23 (C OUT LEV): 9B ☆ 0.286 Vp-p (U Model) ☆ 0.3 Vp-p (E Model)	(1) Apply color bar signal to Y/C IN. (2) Adjust VR23 so that the burst level at the C output of Y/C OUT is as specified.

3.3 Adjustments on the AUD S/S Board

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
1	On-screen display adjustment	• Video monitor • Composite input • Color bar signal  Align the center of rightmost "00" with the boundary between Blue and Black.	EE	◎ MONITOR OUT (75Ω terminated) ⓣ C778: 2B ☆ See figure on the left.	(1) Apply color bar signal to Composite IN. (2) Adjust C778 so that the rightmost position "00" shown in the figure comes on the boundary between the blue and black bars.

3.4 DV ADJUSTMENTS (USING ADJUSTMENT SOFTWARE)

3.4.1 Precautions

(1) The adjustments of the DV circuit (DVC Unit) of this model require a PC. These adjustments are necessary after replacement of the following parts.

- EEPROM (IC103 on DV Main board)
- Mechanism parts

In case of a problem with the electrical circuit, be sure to identify the point of the trouble first by using measuring instruments. Do not proceed to repair, replacement or adjustment unless the location of the trouble has been identified.

(2) When observing a TP on a chip, avoid applying stress by using an IC clip, etc. In order to prevent the pattern from being peeled off when replacing a chip part, particularly in the case of an IC, remove the solder completely before removing the part.

(3) The connectors tend to be broken easily. Be careful when unplugging or plugging a wire.

(4) Before starting any adjustments, be sure to save the EEPROM data in a PC file for use as backup data in case of an adjustment failure (see section 3.4.12).

(5) When the adjustment software is run, a tape can be recorded even if its REC SAVE tab is set to "SAVE". Be careful not to record anything onto an alignment tape by mistake.

(6) When the adjustment software is run, there is any limitations of VCR operations (see section 3.4.15).

3.4.2 Equipment Required for Adjustments

① PC (Windows machine. Recommended CPU: Pentium 133 MHz or more)
② Color TV monitor
③ Oscilloscope (2-trace, 100 MHz or more)
* 300 MHz or more recommended.
④ Digital voltmeter
⑤ Frequency counter (with threshold level adjustment)
⑥ Tape for use in recording/playback (JVC ME60)
⑦ Cleaning tape (PGZ 02641)

3.4.3 Setup for PC Adjustment

Note: This switch is not used with the adjustments of the BR-DV600.

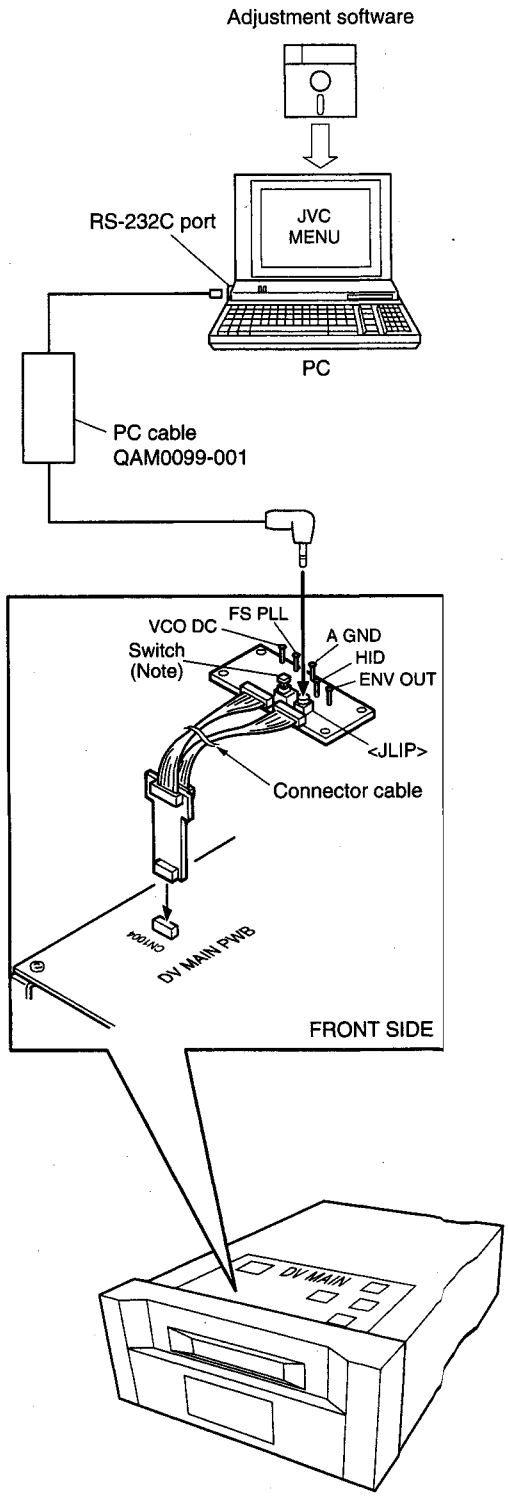


Fig. 3-4-1 Setup for PC Adjustment

3.4.4 Installing the Adjustment Software

Download the adjustment software from the professional video products division homepage of JS-NET and run "Setup.exe". "Professional DV Adjustment" will be created in "Program" under the Start menu.

3.4.5 Operating the Adjustment Software

1. Startup

Execute "Professional DV Adjustment"after operate on of BR-DV600. When the following screen appears, click <OK> because the adjustment software automatically reads the

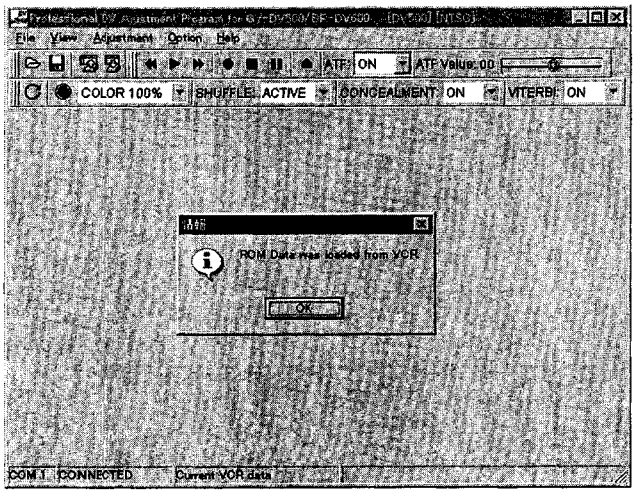


Fig. 3-4-2

The following screen appears when [System Option...] under the [Option] tab is clicked, or the first time that the software is started up. Select the "TV System" and "Model" and click <OK>. This setting is also operative during the next startup. (Select "NTSC" or "PAL" and "BR-DV600".)

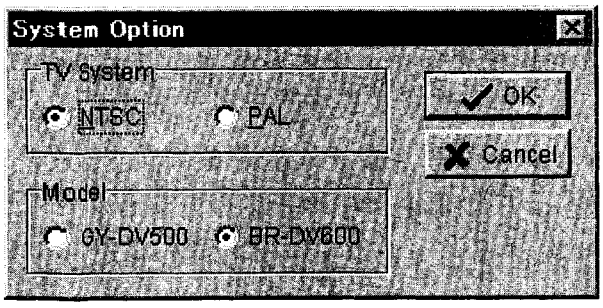


Fig. 3-4-3

If the set "TV System" differs from the setting in the adjustment software, the following warning message appears. Set "TV System" correctly. If the IEEE 1394 ID is not set, the message appears too. Set the ID correctly. (See 3.4.13)

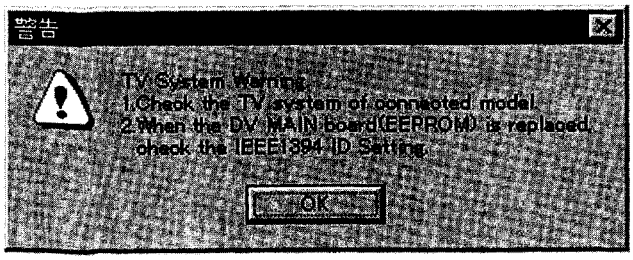


Fig. 3-4-4

2. Function description

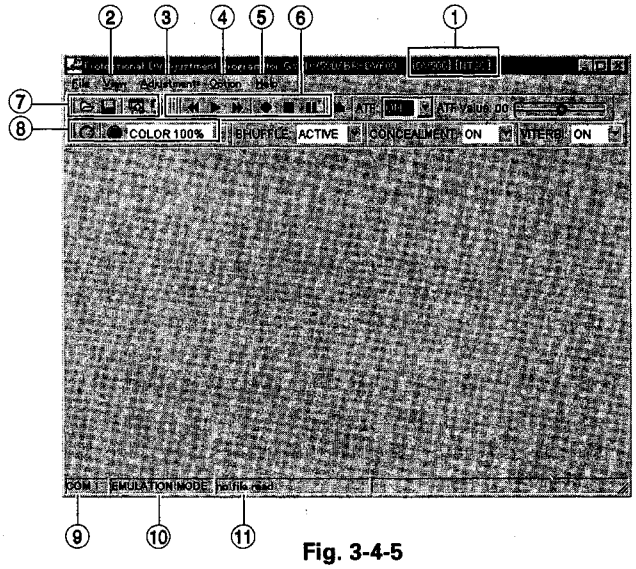


Fig. 3-4-5

① **TV System and Model window**

Shows the TV system and model selected for the software in [System Option...].

② **[View] tab**

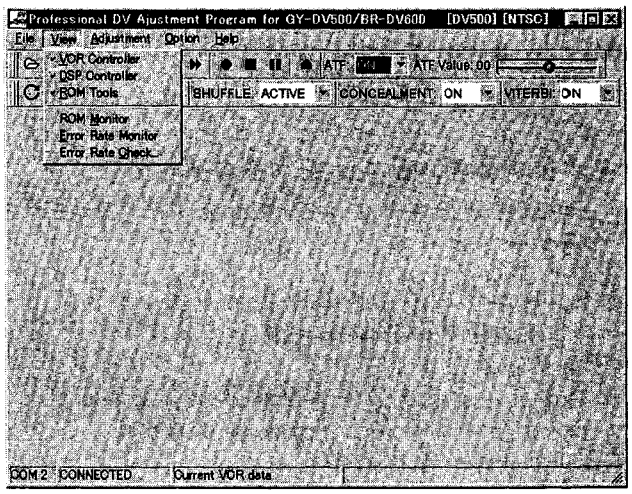


Fig. 3-4-6

- VCR Controller " ⑥ "
- DSP Controller " ⑧ "
- ROM Tools " ⑦ "
- ROM Monitor
- Error Rate Monitor
- Error Rate Check

Switch each item ON or OFF.

The details will be described later.

③ **[Adjustment] tab**

- Adjustment Explorer (Adjustment menu)
- Active Head Cleaner Adjustment

  Forced operation mode for use in adjusting the position of the active head cleaner installation. (See 3.7.14.)

Switch each item ON or OFF.

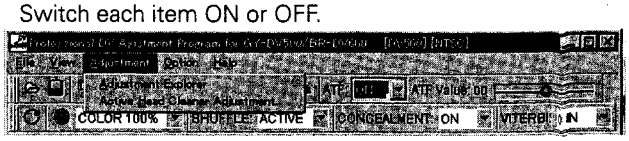


Fig. 3-4-7

④ [Option] tab

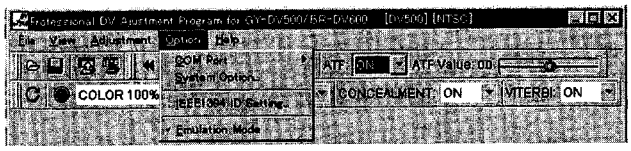


Fig. 3-4-8

- COM Port selection
  From COM1 to COM4, select the COM port to which the communication cable is connected.
- System Option...
  Select the TV signal format and the model of the connected VCR.
- IEEE1394 ID Setting
  ID setting utility of the IEEE1394 standard. (See 3.4.13.)
- Emulation Mode ON/OFF
  The emulation mode makes it possible to use the adjustment software even when communication with the VCR is not available. As the following window is displayed in case of a communication error, check "Enter the Emulation Mode".

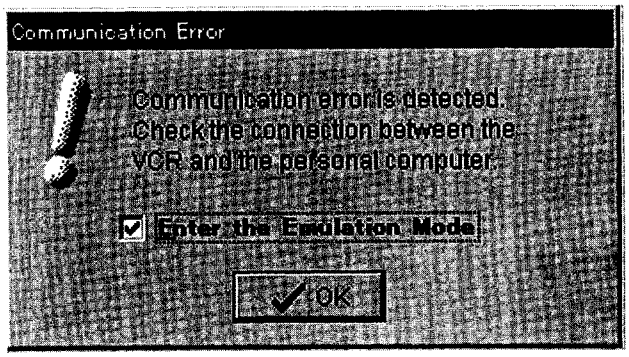


Fig. 3-4-9

⑤ [Help] tab
Displays the version information of the adjustment software.

⑥ VCR Controller
Controls the VCR operations.

⑦ ROM Tools
Used to check, save, print, modify the memory in the EEPROM (IC103 on DV Main board) or to initialize it. (See 3.4.12.)

⑧ DSP Controller
Used to control the TV signal generator in the DVC Unit, switch SHUFFLE, CONCEALMENT and VITERBI ON/OFF. Clicking "↶" resets them to the defaults.

⑨ COM port display
Shows the COM port in use.

⑩ Communication status display
Shows one of the following messages according to the communication status.
CONNECTED: Normal communication
UNKNOWN: Communication error
EMULATION MODE: In emulation mode

⑪ ROM file display
Shows the file name or "Current VCR data" (shows when the ROM data of VCR is loaded))while a ROM tool reads EEPROM data. Clicking [ROM Monitor] under the ② [View] tab displays the data contents.

3.4.6 Common Operations for Adjustments

Note: Before adjustment, be sure to save the EEPROM data in a PC file as the backup for use in case of adjustment failure. (See 3.4.12.)

(1) Under the [Adjustment] tab, check [Adjustment Explorer].

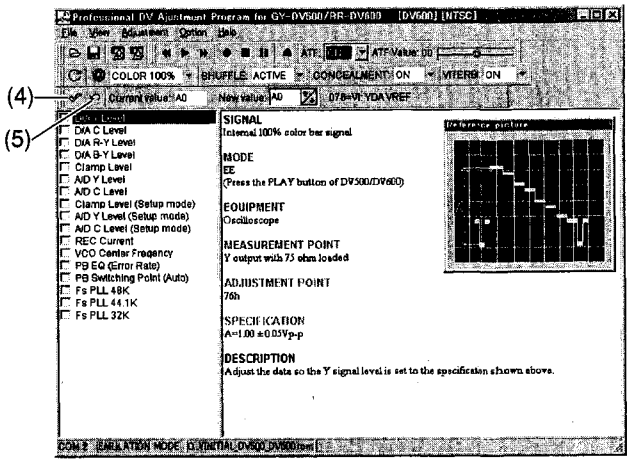


Fig. 3-4-10

(2) Click the desired adjustment items.
(3) To monitor the video output from the DVC Unit, insert the recording tape and press the PLAY button of the operation switches of the front panel. If the color bar signal has been recorded in the DVC Unit, the monitor screen becomes as shown below (no color output), but this is nota malfunction.

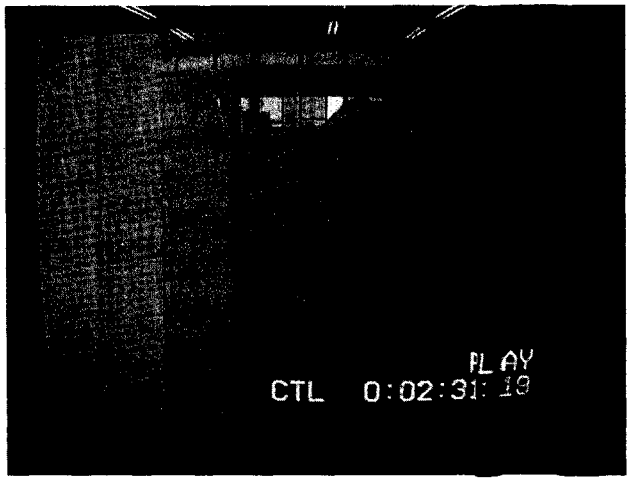


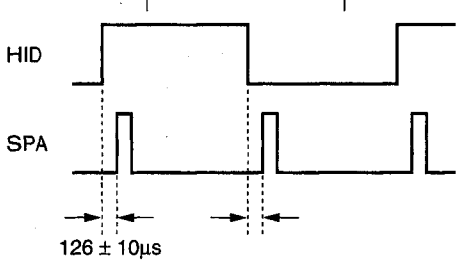
Fig. 3-4-11

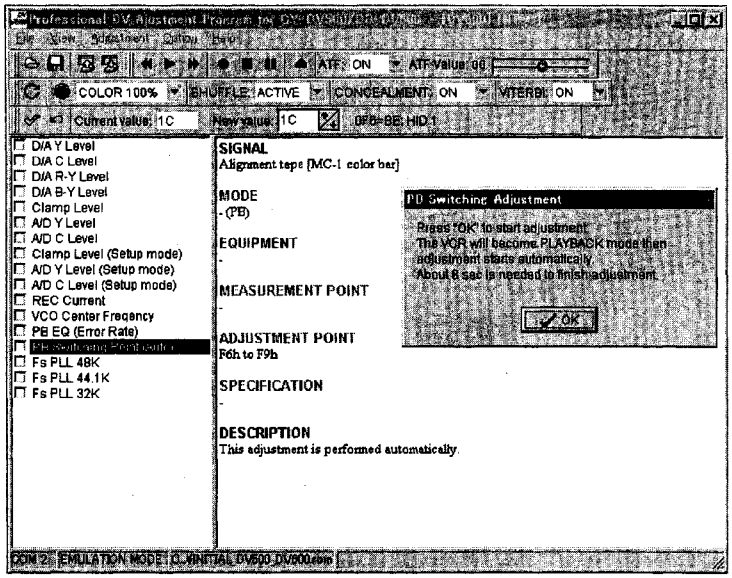
(4) After completing each adjustment item, click the "√" marking, then switch the set OFF.
(5) To cancel the adjutment, click the "↶" marking.
Note: If any adjustment item is run, another item can not be selected without the previous item is finished (cliking "√" marking) or canceled (clicking "↶" marking).

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (Ⓣ) Adjustment level (☆)	Adjustment procedure

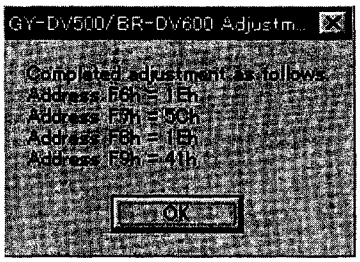
3.4.7 Servo Circuit Adjustment

1	PB switching point adjustment	• Alignment tape MC-1, color bar (U Model.) MC-2 color bar (E Model.)	•PB •ATF : ON (adjustment software)	Automatic adjustment ☆ Adjustment is performed automatically so that the timings of HID and SPA signals are as shown below.	(1) Cue up to the color bar portion of alignment tape. (2) Click [PB Switching Point (Auto)]. (3) Click [OK] to start automatic adjustment. (4) Message "Complete"① is displayed when the adjustment has completed successfully. If it is unsuccessful, the message "Adjustment failed"② is displayed; try adjustment again. (5) Eject the alignment tape.





①



"Complete" message

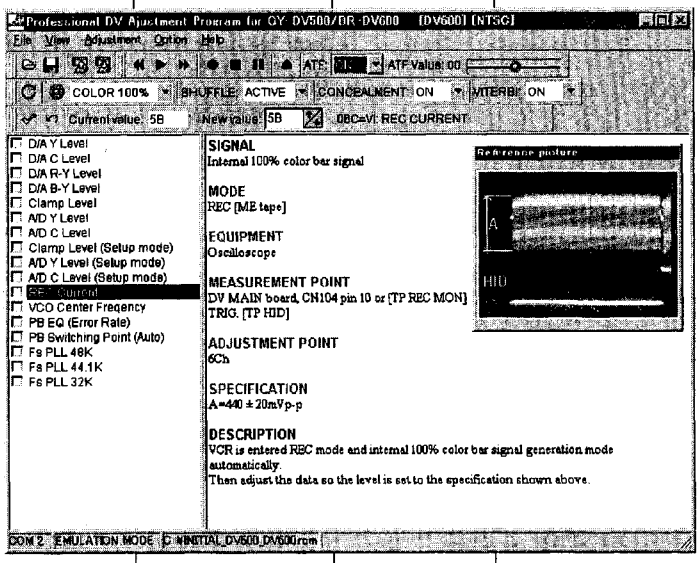
②

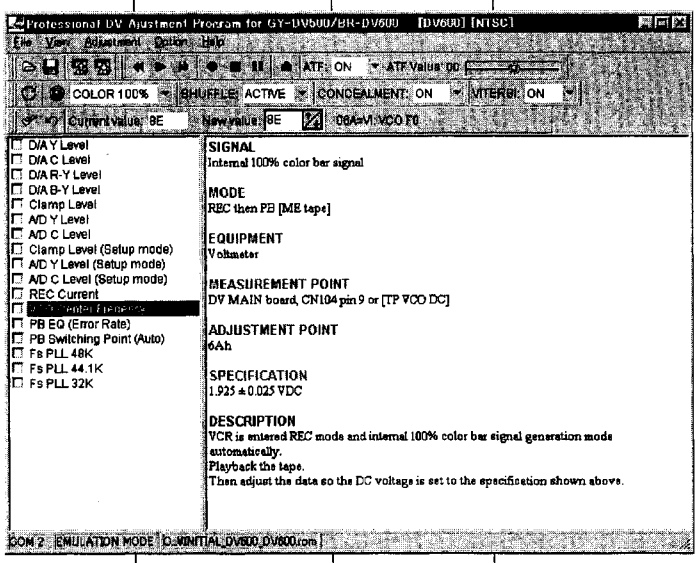
"failed" message

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure

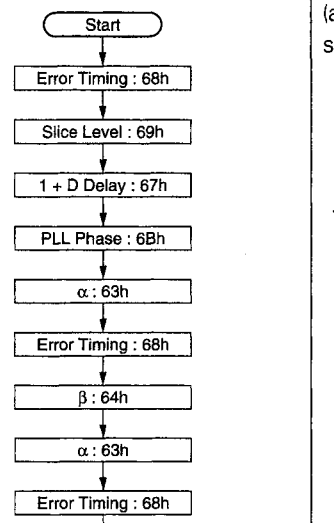
3.4.8 RF Circuit Adjustments

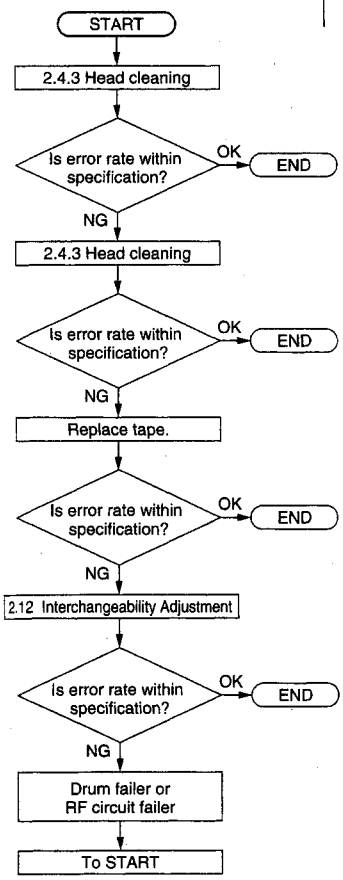
1	REC current adjustment	• Internal Color bars (100%) • Oscilloscope	REC	◎ TP REC MON (connector cable) ⓣ 6Ch ☆ 440 ± 20 mV	**Note: Connect TP to the section indicated [REC MON] on the jig connector before adjustment.** (1) Click [REC Current]. (2) Click the [OK] button. (3) It starts recording color bar signal automatically,and enters adjustment mode. (4) Adjust "New value" (address "6Ch") so that the level becomes the adjustment level. (5) After adjustment, click the "√" marking.
2	VCO center frequency adjustment	• Internal Color bars (100%) • Digital voltmeter	REC ↓ PB	◎ TP VCO DC (connector cable) ⓣ 6Ah ☆ 1.925 ± 0.025 VDC	(1) Click [VCO Center Frequency]. (2) Click the [OK] button. (3) It starts recording color bar signal automatically. (4) Play the tape section containing color bars. (5) Adjust "New value" (address "6Ah") so that the level becomes the adjustment level. (6) After adjustment, click the "√" marking.

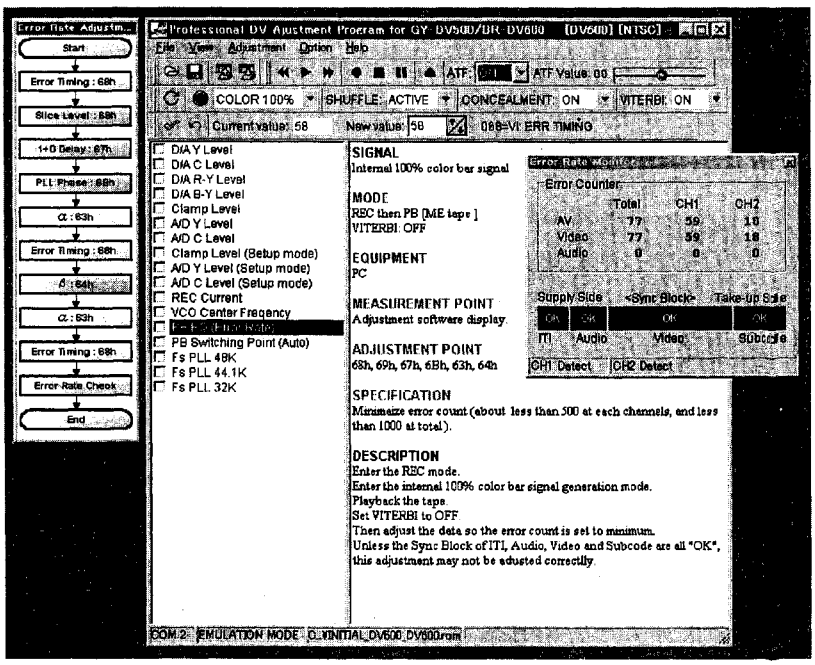




No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
3	PB'EQ (Error rate) adjustment	• Internal color bars (100%) • PC	• REC ↓ PB • VITERBI : OFF (adjustment software)	◎ PC monitor ⓣ 68 h, 69h, 67h, 6Bh, 63h, 64h ☆ Minimize error rate (Total less than 1000, and less than 500 at each channels)	**Notes:** • Use a new tape or non-used section of tape in this adjustment. • Be sure to clean the head before this adjustment. • It takes about 1 second from the data change to its reflection in the error rate. • Also measure the error rate after the "Sync Block" monitor has become perfectly OK. • If the adjustment within specification is not possible, clean the head. If the next adjustment is still out of specification, use another tape. (1) Record the color bar signal about 5 minuits,and play it back. (2) Click [PB EQ (Error rate)]. (3) Click the [OK] button. (4) Adjust "New value" of each address to minimize the error rate, by following the order shown in the flow chart. (5) After adjustment, click the "√" marking. (6) There is "PB EQ Auto ..." adjustment down the "Adjustment" tab which is automated with above steps (2)–(5).





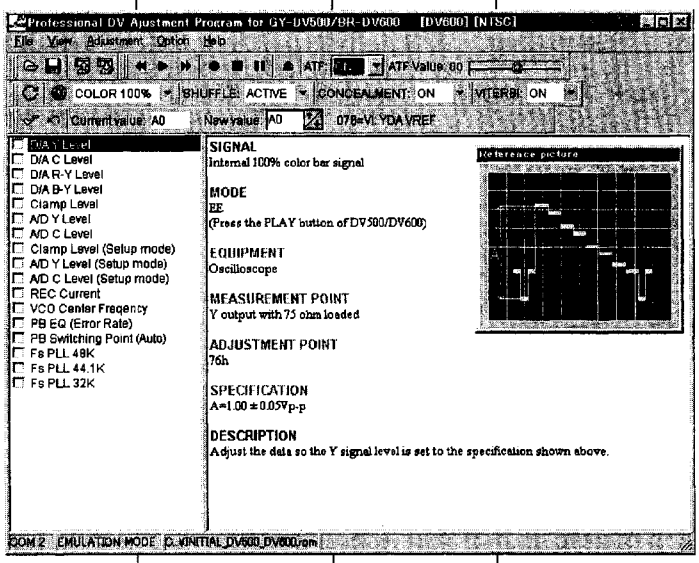


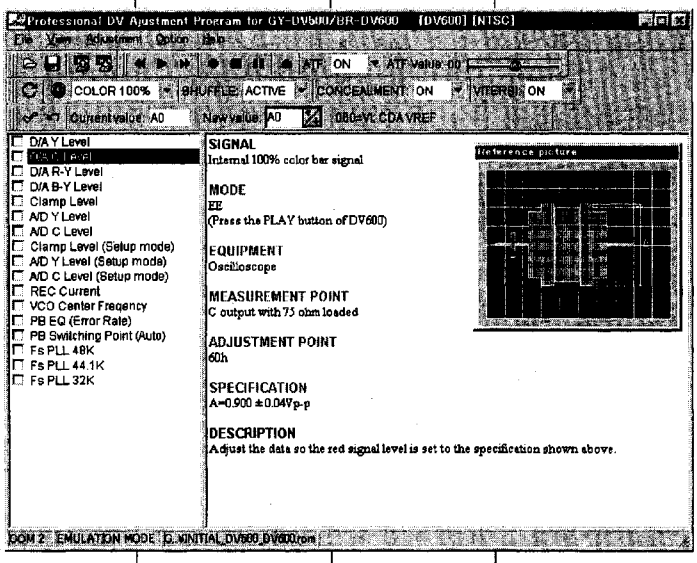
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure

3.4.9 Video Circuit Adjustments

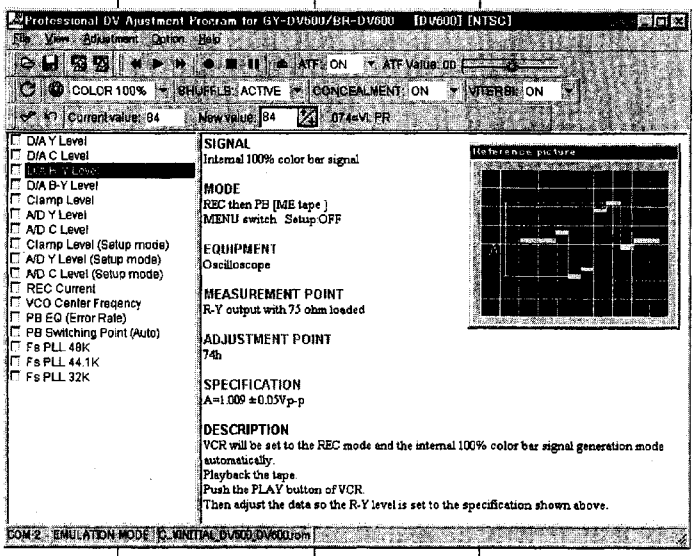
(Note) • Perform the video circuit adjustments after "3.2.2 Video adjustments" is completed.

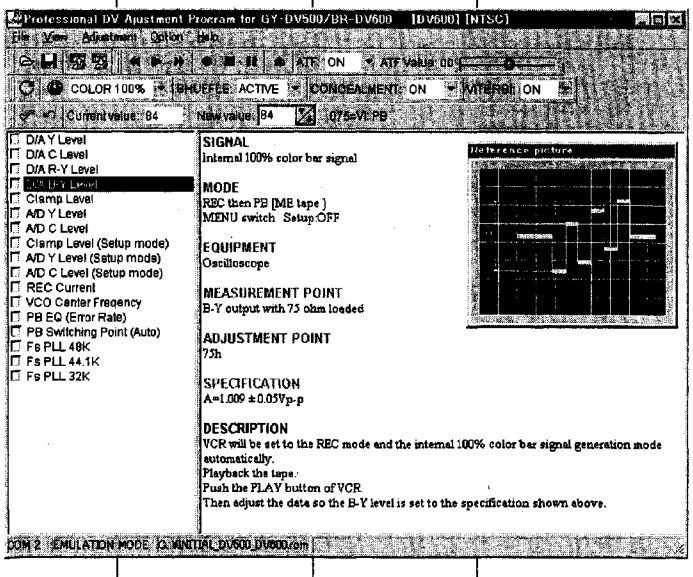
1	D/A Y level adjustment	• Internal color bars (100%) • Oscilloscope	EE (With PLAY lit on the set)	◎ Y OUT (75 Ω terminated) ⓣ 76h ☆ 1.00 ± 0.05 V	(1) Click [D/A Y Level]. (2) Click the [OK] button. (3) Insert the recording tape and press the "PLAY" button of the front panel to monitor the signal. Check that the LED lights up and internal color bars signal is output. (4) Adjust "New value" (address "76h") so that the Y level becomes the adjustment level. (5) After adjustment, click the "√" marking.
2	D/A C level adjustment	• Internal color bars (100%) • Oscilloscope	• EE (With PLAY lit on the set) • Menu No.125 SETUP : OFF	◎ C OUT (75 Ω terminated) ⓣ 60h ☆ U MODEL 0.9 ± 0.04 V E MODEL 0.885 ± 0.04 V (RED)	(1) Click [D/A C Level]. (2) Click the [OK] button. (3) Insert the recording tape and press the "PLAY" button of the front panel to monitor the signal. Check that the LED lights up and internal color bars signal is output. (4) Adjust "New value" (address "60h") so that the red level becomes the adjustment level. (5) After adjustment, click the "√" marking.





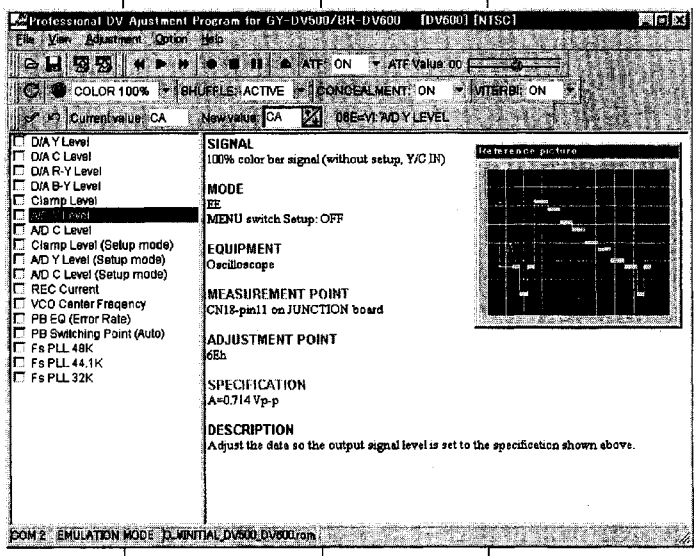
No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
3	D/A R-Y level adjustment	• Internal color bars(100%) • Oscilloscope	• REC ↓ PB (with PLAY lit on the set) • Menu No.125 SETUP : OFF (U MODEL)	◎ R-Y OUT (75Ω terminated) ⓣ 74h ☆ U MODEL 1.009±0.05V E MODEL 0.7±0.04V (RED)	(1) Click [D/A R-Y Level]. (2) Insert the recording tape. (3) Click the [OK] button, VCR starts recording the internal color bars signal automatically. (4) Playback the recorded portion by adjustment software and press the [PLAY] button of the front panel to monitor the signal. Check that the LED lights up and color bars signal is output. (5) Adjust "New value"(address 74h) so that the R-Y level becomes the adjustment level. (6) After adjustment, click the "√" marking.
4	D/A B-Y level adjustment	• Internal color bars(100%) • Oscilloscope	• REC ↓ PB (with PLAY lit on the set) • Menu No.125 SETUP : OFF (U MODEL)	◎ B-Y (75Ω terminated) ⓣ 75h ☆ U MODEL 1.009±0.05V E MODEL 0.7±0.04V	(1) Click [D/A B-Y Level]. (2) Insert the recording tape. (3) Click the [OK] button, VCR starts recording the internal color bars signal automatically. (4) Playback the recorded portion by adjustment software and press the [PLAY] button of the front panel to monitor the signal. Check that the LED lights up and color bars signal is output. (5) Adjust "New value"(address 75h) so that the B-Y level becomes the adjustment level. (6) After adjustment, click the "√" marking.

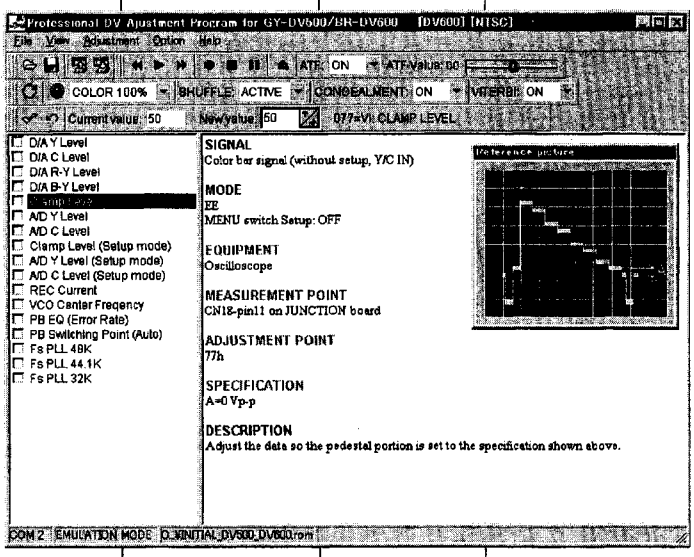




<table>
<tr><th>No.</th><th>Item</th><th>Measuring instruments & Input signals</th><th>Mode</th><th>Measuring point (◎)
Adjustment parts (ⓣ)
Adjustment level (☆)</th><th>Adjustment procedure</th></tr>
<tr><td>5</td><td>A/D Y level adjustment</td><td>• Color bars
↓
Y/C IN
• Oscilloscope</td><td>• EE
• Menu No.108
VIDEO INPUT
SELECT : Y/C
• Menu No.125
SETUP : OFF
(U model)</td><td>◎ CN18 –pin11
[JUNCTION board]
ⓣ 6Eh
☆ U MODEL 0.714 V
E MODEL 0.7V</td><td>(1) Click [A/D Y Level].
(2) Click the [OK] button.
(3) Adjust "New value"(address 6Eh) so that the Y level becomes the adjustment level.
(4) After adjustment, click the "√" marking.</td></tr>
<tr><td>6</td><td>CLAMP level adjustment</td><td>• Color bars
(Setup 0%
U MODEL)
↓
Y/C IN
• Oscilloscope</td><td>• EE
• Menu No.108
VIDEO INPUT
SELECT : Y/C
• Menu No.125
SETUP : OFF
(U model)</td><td>◎ CN18 –pin13
[JUNCTION board]
ⓣ 77h
☆ 0V</td><td>(1) Click [Clamp Level].
(2) Click the [OK] button.
(3) Adjust "New value"(address 77h) so that the black level becomes the adjustment level.
(4) After adjustment, click the "√" marking.

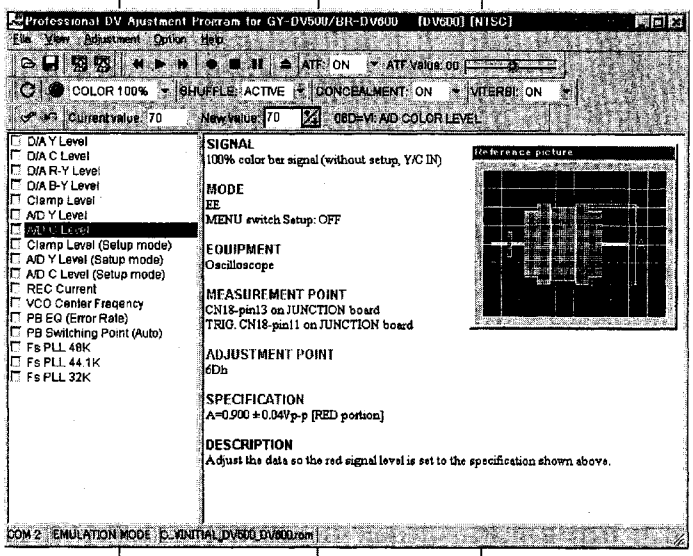
Note for U MODEL :
For the specification, it is prerequisite to input color bars signal of 0% setup level. If color bars signal of 7.5% setup level is used as input signal, adjust the level to 53.5mV.</td></tr>
</table>

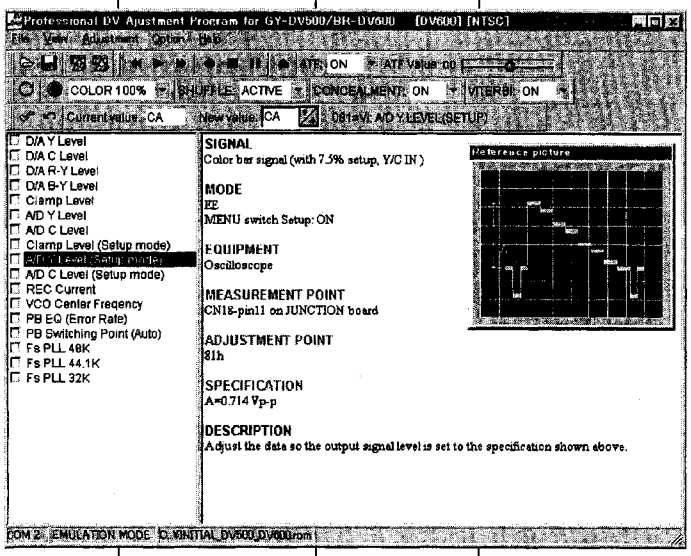




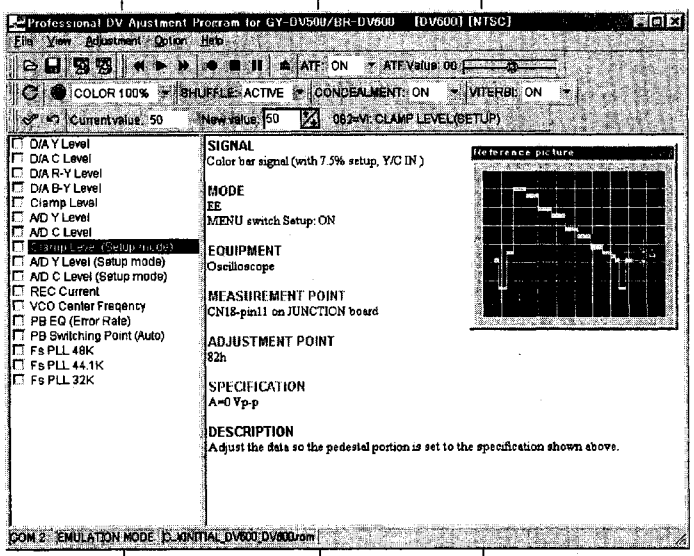
<table>
<tr><th>No.</th><th>Item</th><th>Measuring instruments & Input signals</th><th>Mode</th><th>Measuring point (◎)
Adjustment parts (ⓣ)
Adjustment level (☆)</th><th>Adjustment procedure</th></tr>
<tr><td>7</td><td>A/D C level adjustment</td><td>• Color bars (Color 100%, setup 0%)
↓
Y/C IN
• Oscilloscope</td><td>• EE
• Menu No.108 VIDEO INPUT SELECT : Y/C
• Menu No.125 SETUP : OFF (U MODEL)</td><td>◎ CN18 –pin13 [JUNCTION board]
ⓣ 6Dh
☆ U MODEL 0.9±0.04V
E MODEL 0.885±0.04V
(RED)</td><td>(1) Click [A/D C Level].
(2) Click the [OK] button.
(3) Adjust "New value"(address 6Dh) so that the red level becomes the adjustment level.
(4) After adjustment, click the "√" marking.

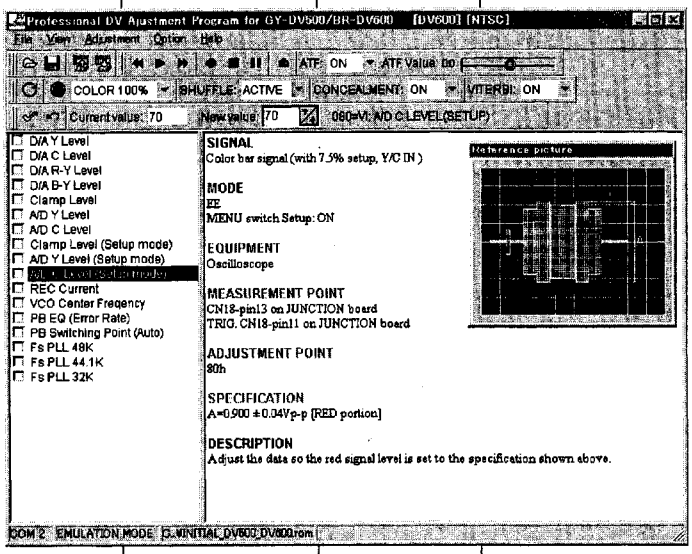
Note :
For the specification, it is prerequisite to input color bars signal of 100% color and 0% setup level.
If color bars signal of show below is used as input signal, adjust the level to show below.
<table><tr><th></th><th>Input signal</th><th>Specification</th></tr><tr><td>U MODEL</td><td>color 75%
setup 7.5%</td><td>0.63±0.04V</td></tr><tr><td>E MODEL</td><td>color 75%</td><td>0.66±0.04V</td></tr></table></td></tr>
<tr><td>8</td><td>A/D Y level adjustment (setup mode for only U MODEL)</td><td>• Color bars (Setup 7.5%)
↓
Y/C IN
• Oscilloscope</td><td>• EE
• Menu No.108 VIDEO INPUT SELECT : Y/C
• Menu No.125 SETUP : ON</td><td>◎ CN18 –pin11 [JUNCTION board]
ⓣ 81h
☆ 0.714V</td><td>(1) Click [A/D Y Leevel].
(2) Click the [OK] button.
(3) Adjust "New value"(address 81h) so that the Y level becomes the adjustment level.
(4) After adjustment, click the "√" marking.</td></tr>
</table>





No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure
9	CLAMP level adjustment (Setup mode for only U MODEL)	• Color bars (Setup 7.5%) ↓ Y/C IN • Oscilloscope	• EE • Menu No.108 VIDEO INPUT SELECT : Y/C • Menu No.125 SETUP : ON	◎ CN18 –pin11 [JUNCTION board] ⓣ 82h ☆ 0V	(1) Click [Clamp Level (Setup mode)]. (2) Click the [OK] button. (3) Adjust "New value"(address 82h) so that the black level becomes the adjustment level. (4) After adjustment, click the "√" marking.
10	A/D C level adjustment (setup mode for only U MODEL)	• Color bars (Color 100%, setup 7.5%) ↓ Y/C IN • Oscilloscope	• EE • Menu No.108 VIDEO INPUT SELECT : Y/C • Menu No.125 SETUP : ON	◎ CN18 –pin13 [JUNCTION board] ⓣ 80h ☆ 0.9±0.04V (RED)	(1) Click [A/D C Level (Setup mode)]. (2) Click the [OK] button. (3) Adjust "New value"(address 80h) so that the red level becomes the adjustment level. (4) After adjustment, click the "√" marking.





Note :

For the specification, it is prerequisite to input color bars signal of 100% color and 7.5% setup level.

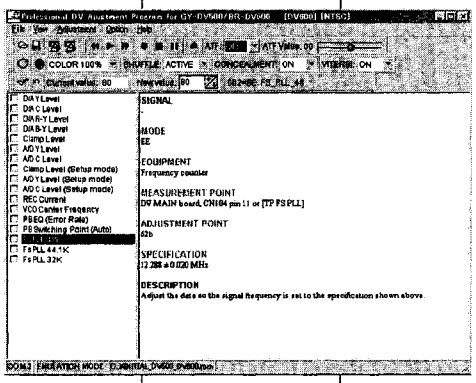
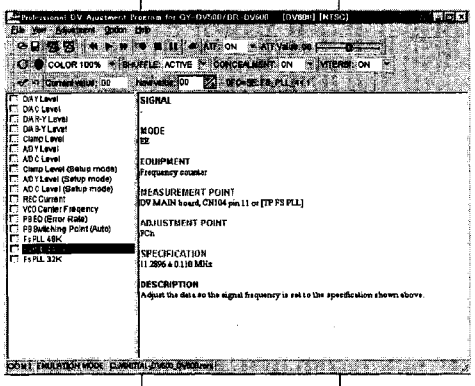
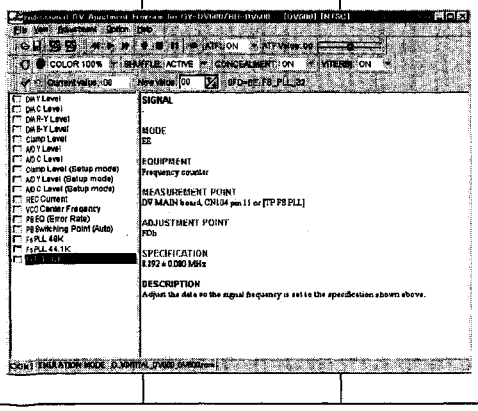
If color bars signal of 75% color and 7.5% setup level is used as input signal, adjust the level to 0.68V.

No.	Item	Measuring instruments & Input signals	Mode	Measuring point (◎) Adjustment parts (ⓣ) Adjustment level (☆)	Adjustment procedure

3.4.10 Audio Circuit Adjustments

(Note)

- **Perform the audio circuit adjustments immediately after turning the main unit ON.**

1	Fs PLL (48k) adjustment 	• No signal • Frequency counter	EE	◎ TP FS PLL (connector cable) ⓣ 62h ☆ 12.288 ± 0.02 MHz	(1) Click [Fs PLL 48k]. (2) Click the [OK] button. (3) Adjust "New value" (address "62h") so that the frequency level becomes the adjustment level. (4) After adjustment, click the "√" marking.
2	Fs PLL (44.1k) adjustment 	• No signal • Frequency counter	EE	◎ TP FS PLL (connector cable) ⓣ FCh ☆ 11.2896 ± 0.11 MHz	(1) Click [Fs PLL 44.1k]. (2) Click the [OK] button. (3) Adjust "New value" (address "FCh") so that the frequency level becomes the adjustment level. (4) After adjustment, click the "√" marking.
3	Fs PLL (38k) adjustment 	• No signal • Frequency counter	EE	◎ TP FS PLL (connector cable) ⓣ FDh ☆ 8.192 ± 0.08 MHz	(1) Click [Fs PLL 38k]. (2) Click the [OK] button. (3) Adjust "New value" (address "FDh") so that the frequency level becomes the adjustment level. (4) After adjustment, click the "√" marking.

3.4.11 Error Rate Monitoring

The error rate-monitoring screen is displayed when the PB EQ is adjusted or the error rate is measured. The screen shows the error rate every second during PB EQ adjustment. With the error rate measurement, it shows the error rate measurement result after about 20 seconds of measurement.

(1) Error Rate Monitoring

The following screen appears when [View] under the [Error Rate Monitor] tab is clicked.

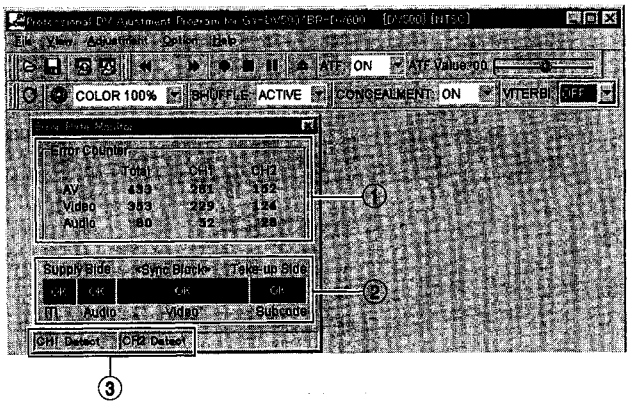


Fig. 3-4-12 (Error Rate Monitoring Screen)

① **Error rate display window**
Shows the error rate per video/audio or CH-1/CH-2 as well as the total error rate.

② **Sync block counter display window**
Shows the amount of sync blocks played by the head as a percentage. When it reaches 100%, "OK" is displayed and a graph is displayed bule. The error rates are measured when this display shows "OK".

③ **Error rate measurement status display window**
Depending on the load to the PC, "CH1 Reset" or "CH2 Reset" may be displayed frequently. In such a case, leave the PC idle (without operating the mouse, etc.). The error rates are measured when "Reset" is not displayed (when "CH1 Detect" and "CH2 Detect" is displayed).

(2) Error Rate Measurement

The following screen appears when [View] under the [Error Rate Check] tab is clcked. To start the measurement, click [Start] button. After a while the measurement result is displayed "①".

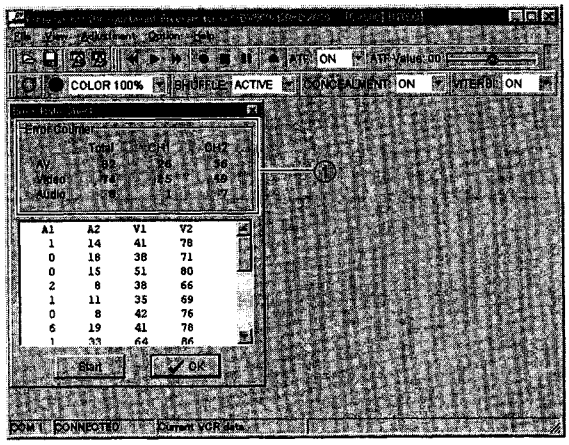


Fig. 3-4-13 (Error Rate Measurment)

3.4.12 ROM Tools

This section describes the seven functions of the ROM Tools in processing the EEPROM data.

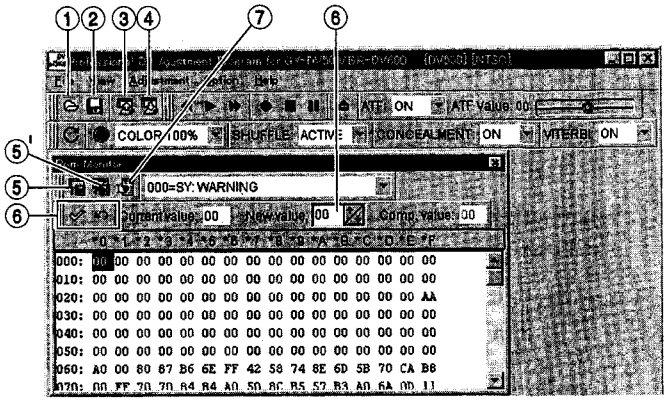


Fig. 3-4-14

① **File reading**
Read the ROM data saved in the PC files. It is provided as standard with the adjustment software, for use as initial data. When the PC files are read, the file names are displayed in the ROM file display window.

② **File saving**
The ROM data read by the ROM Tools can be saved in a PC file. This function is used for temporary backup of ROM data before adjustment. If the adjustment fails and the data becomes erroneous, use the backup to restore the original data.

③ **Data read from VCR**
The ROM data in the VCR can be read. The ROM file display window shows "Current VCR data" in this case.

④ **Data write in VCR**
The ROM data read by the ROM Tools can be written in the VCR. When the initial data is written, it is required to re-adjust the DV circuit and re-set the IEEE1394 ID (see 3.4.13).

⑤ **Data comparison**
Note: When the ROM data is written in the VCR, be sure to turn the main unit and adjustment software OFF once.

The ROM data read by the ROM Tools is compared with data contained in a PC file or with the VCR data, and any differences are displayed in red characters. 'Comp. value" shows the data used in the comparison. It shows "00" when the comparison data does not exist. To cancel comparsion, clik ⑤'.

⑥ **Data editing**
The ROM data read by the ROM Tools can be edited on a per-address basis. To edit data, click the [New value] of the required address data. To write the data in the VCR, click the "√" marking. To cancel editting, click the " ↶ " marking.

⑦ **Data output**
The ROM data read by the ROM Tools can be output at a printer or as a text file.

3.4.13 IEEE1394 ID Setting

The BR-DV600 stores the ID in the format specified by the IEEE1394 standard in the EEPROM (IC103 on DV Main board). After replacing the EEPROM or the DV Main board, it is required to re-set the ID. The setting is possible with either of the methods outlined below.

1. Setting by manual input

(1) Under the [Option] tab of the adjustment software, click the [IEEE1394 ID Setting]. The window as shown below appears.

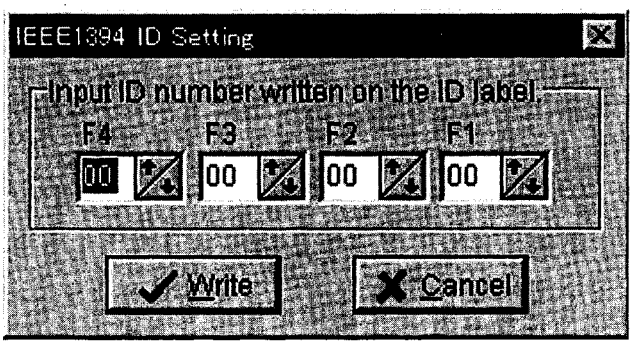


Fig. 3-4-15

(2) The ID ("ID : 0401xxxx" : NTSC, "ID : 0481xxxx" : PAL) is indicated on the ID label number attached to the DV Main board. Input characters corresponding to "0401xxxx" for NTSC or "0481xxxx" for PAL.
(3) Click "Write" to write the ID in the EEPROM.

2. Setting with ROM Tools

(1) Read the data saved in the EEPROM to be replaced. (See 3.4.12.③.)
(2) Save the read data in a PC file. (See 3.4.12.②.)
(3) After the EEPROM replacement, connect the adjustment software to the BR-DV600.
(4) Load the data saved in the PC file. (See 3.4.12.①.)
(5) Write the loaded data in the EEPROM. (See 3.4.12.④.)
(6) Now that the adjustment data in the new EEPROM has been overwritten by the data in the previous EEPROM. Re-adjust the DV circuit as required.

3.4.14 Active Head Cleaner Adjustment Mode

When adjusting the installation position of the active head cleaner, use this mode to force the active head cleaner ON for a certain period. (See subsection 2.7 No. 20 for the adjustment procedure.)

(1) Under the [Adjustment] tab, click [Active Head Cleaner Adjusting...]. The window as shown below appears.

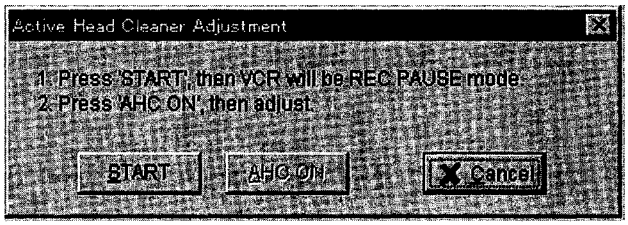


Fig. 3-4-16

(2) Click [START] to set to "REC PAUSE" mode.
(3) Click [ACH ON]. The active head cleaner will turn on in about 3 seconds.
(4) Adjust the installation position as described in the adjustment procedure.

3.4.15 The limitations when the adiustment softwave is run

No.	Item	Description
1	Startup steps.	Main unit will be malfunctioned when start the adjustment software as soon as after OPERATE on.
2	It cannot be able to operate by operation button of front panel.	Because of it cannot be able to comunicate between the SYSCON CPU and the DVC unit.
3	It is not stop automatically when use the cleaning cassette.	Because of the SYSCON CPU cannot be detected the claening cassette.
4	The TC counter is not count in recording mode.	Set the counter switch to CTL mode because the TC counter is not count. It can be count when playback a tape which recorded TC.
5	The CTL counter is not count when open the ERROR RATE MONITOR.	Because of the CPU of main unit is worked for error rate operation and not output track signal. When close it, the CTL counter will be started to count again.
6	No color signal is output at MONITOR OUT when record the internal color bars signal.	Playing circuit is not operated in this mode because of the same IC is used in the recording and playing circuit. But it can be recorded the signal correctly.

SECTION 4
CHARTS AND DIAGRAMS

■ SCHEMATIC DIAGRAM NOTES

- **Schematic safety precaution**
  ⚠ Parts are safety related parts.
  When replacing them, be sure to use the specified parts.
- **Voltage and waveform measurements**
  Voltage: Measured with digital voltmeter in DC range; in REC mode.
  Value in ( ) is indicated only in the case PB voltage is different from that in REC mode.
  Waveform: Measured by supplying the color bar signal (100/0/100/0) and 1kHz, -8dB sine wave in REC or PB mode.
  Switch setting : Menu 108 VIDEO INPUT SELECT : LINE
  Menu 125 SETUP : OFF (U MODEL)
  Others : Initial setting.
- **Unit of value**
  Unless otherwise specified
  1) Resistance is in Ω (1/6 W)
  2) Capacitance is in μF
  3) Inductance is in μH

- **Expression of wiring**

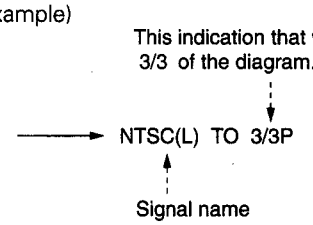
As the following circuit diagram is divided to print on some sheets, such an indication as the following is found in the case the wiring extends over two or more divided sections.

1) Circuit diagram divided into two or more sections:

Board	Board Name	Number of divided sections
1 0	DV MAIN	1/7– 7/7
1 3	AUDIO S/S	1/3– 3/3
1 5	VIDEO I/O	1/4– 4/4
—	OVERALL	1/2 –2/2

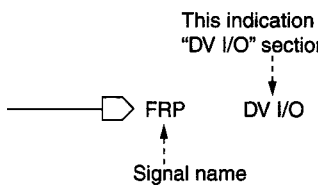
2) Indication of wiring which extends to another section:
(Example)

A)



In the above case, the end of the wiring is connected to the "NTSC(L)" on the 3nd section of the diagram.

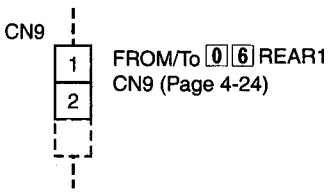
B)



In the above case, the end of the wiring is connected to the "FRP" on the "DV I/O" section of the diagram.

- **Wiring of connector**

(Example)



In the above example, CN9 is connected with CN9 on 0 6 REAR1 board.

- **Signal flow on the diagram**

The following allow marks indicate the specified signal paths respectively.

➡ : Recording or EE signal path
⇨ : Playback signal ptah
➡ : Recording and Playback signal path

- **Others**

In regard of a board assembly whose circuit is composed of multilayered board patterns such 4- or 6-layered patterns, board patterns of the power supply lines and grounding lines are omitted in this section.

Note: For detail of each electrical part, refer to Section 6 "ELECTRICAL PARTS LIST" by it symbol number.

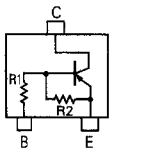
■ REPLACING SURFACE MOUNT "CHIP" COMPONENTS

- Some resistors, shorting jumpers (0 resistance), ceramic capacitors, transistors, and diodes are chip parts. These chip parts cannot be reused after they are once removed.
- Chip resistors used in some circuits are of high precision type having little error in resistance.
  To demonstrate the full capacity of this set, place an order for proper parts referring to the diagrams and parts lists in the section 5.
- Soldering cautions:
  1) Do not apply heat for more than 3 seconds.
  2) Avoid using a rubbing stroke when soldering.
  3) Discard removed chips; do not reuse them.
  4) Supplementary cementing is not required.
  5) Use care not to scratch or otherwise damage the chips.

■ CHIP PARTS PIN ARRANGEMENT

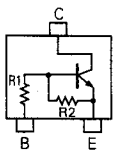
[1] Digital transistors

DTC 1 □□□□
① ②③



(Top view)

DTA 1 □□□□
DTB 1 □□□□
① ②③



(Top view)

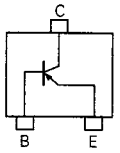
① Two digits show resistance of R1 in abbreviation.
- 43 : 4.7 kΩ
- 14 : 10 kΩ
- 24 : 22 kΩ
- 44 : 47 kΩ

② Roman letter show the resistive ratio between R1 and R2 in abbreviation.
- E : R2/R1 = 1/1
- Y : R2/R1 = 5/1
- W : R2/R1 = 2/1
- X : R2/R1 = 1/2
- T : R2 is opened.

③ Symbol the shape of resistor in abbreviation.

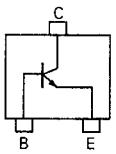
[2] Chip transistors and chip F.E.T.s

2SA □□□□
2SB □□□□



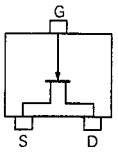
(Top view)

2SC □□□□
2SD □□□□



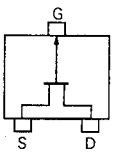
(Top view)

2SK □□□□



(Top view)

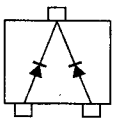
2SJ □□□□



(Top view)

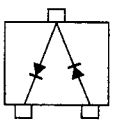
[3] Chip diodes

MA143A/MA742



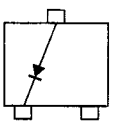
(Top view)

MA142WA



(Top view)

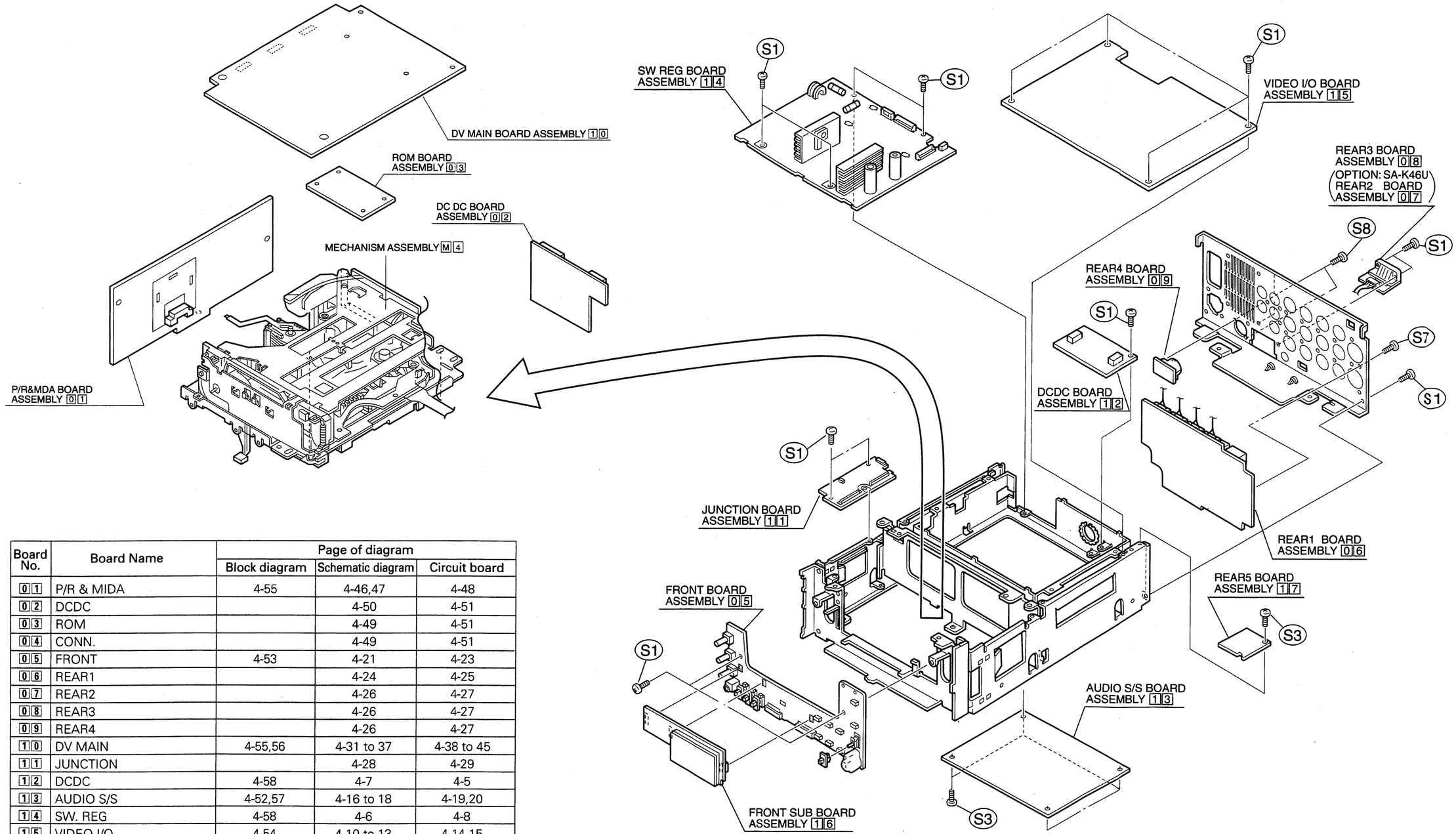
MA142A



(Top view)

4.1 INDEX TO PAGES OF MAIN BOARDS AND CIRCUIT BOARD LOCATION

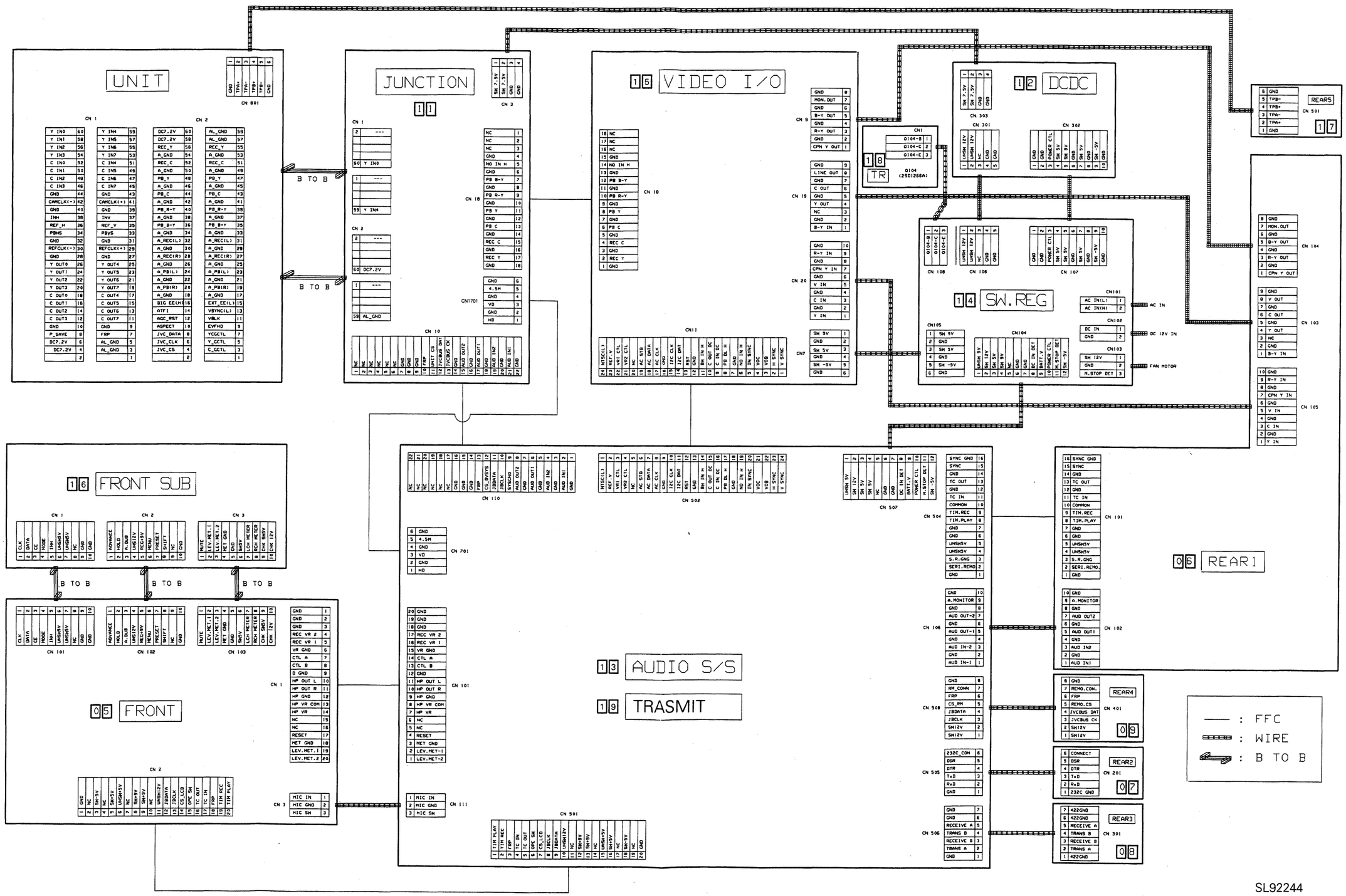
4.1.1 Circuit board location



Board No.	Board Name	Page of diagram		
		Block diagram	Schematic diagram	Circuit board
01	P/R & MIDA	4-55	4-46,47	4-48
02	DCDC		4-50	4-51
03	ROM		4-49	4-51
04	CONN.		4-49	4-51
05	FRONT	4-53	4-21	4-23
06	REAR1		4-24	4-25
07	REAR2		4-26	4-27
08	REAR3		4-26	4-27
09	REAR4		4-26	4-27
10	DV MAIN	4-55,56	4-31 to 37	4-38 to 45
11	JUNCTION		4-28	4-29
12	DCDC	4-58	4-7	4-5
13	AUDIO S/S	4-52,57	4-16 to 18	4-19,20
14	SW. REG	4-58	4-6	4-8
15	VIDEO I/O	4-54	4-10 to 13	4-14,15
16	FRONT SUB		4-22	4-23
17	REAR5		4-26	4-27
18	TR	4-58	4-4	4-29
19	TRANSMIT		4-18	4-29

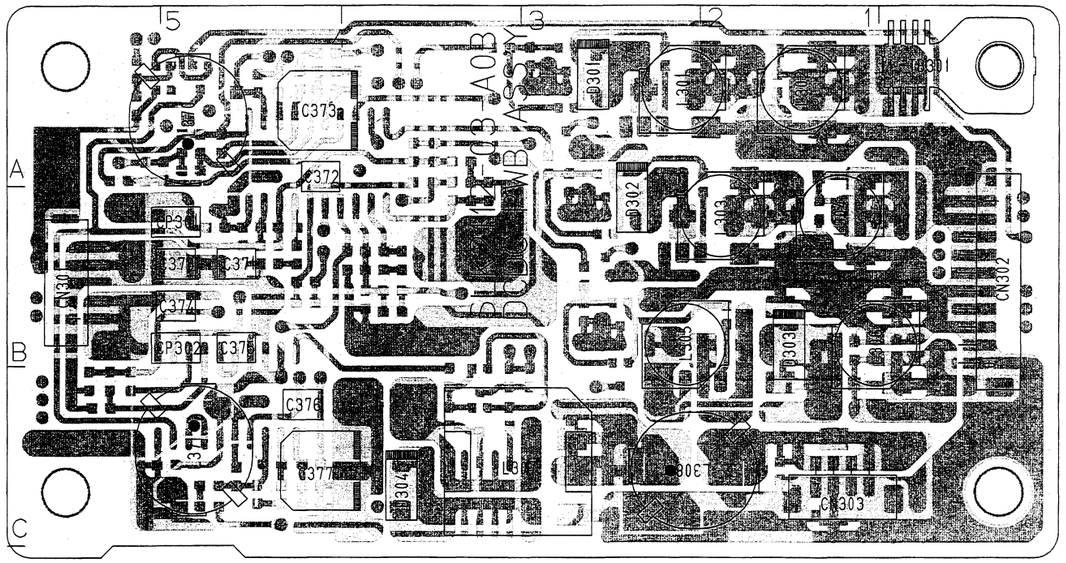
4-3

4.2 OVERALL WIRING DIAGRAM

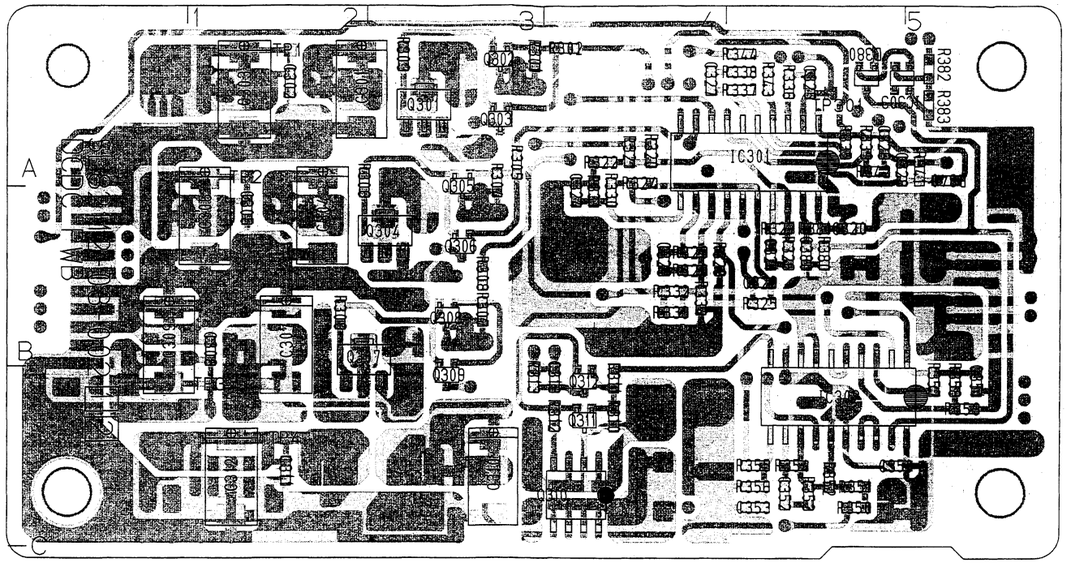


4.3 DCDC CIRCUIT BOARD

– SIDE A –



– SIDE B –

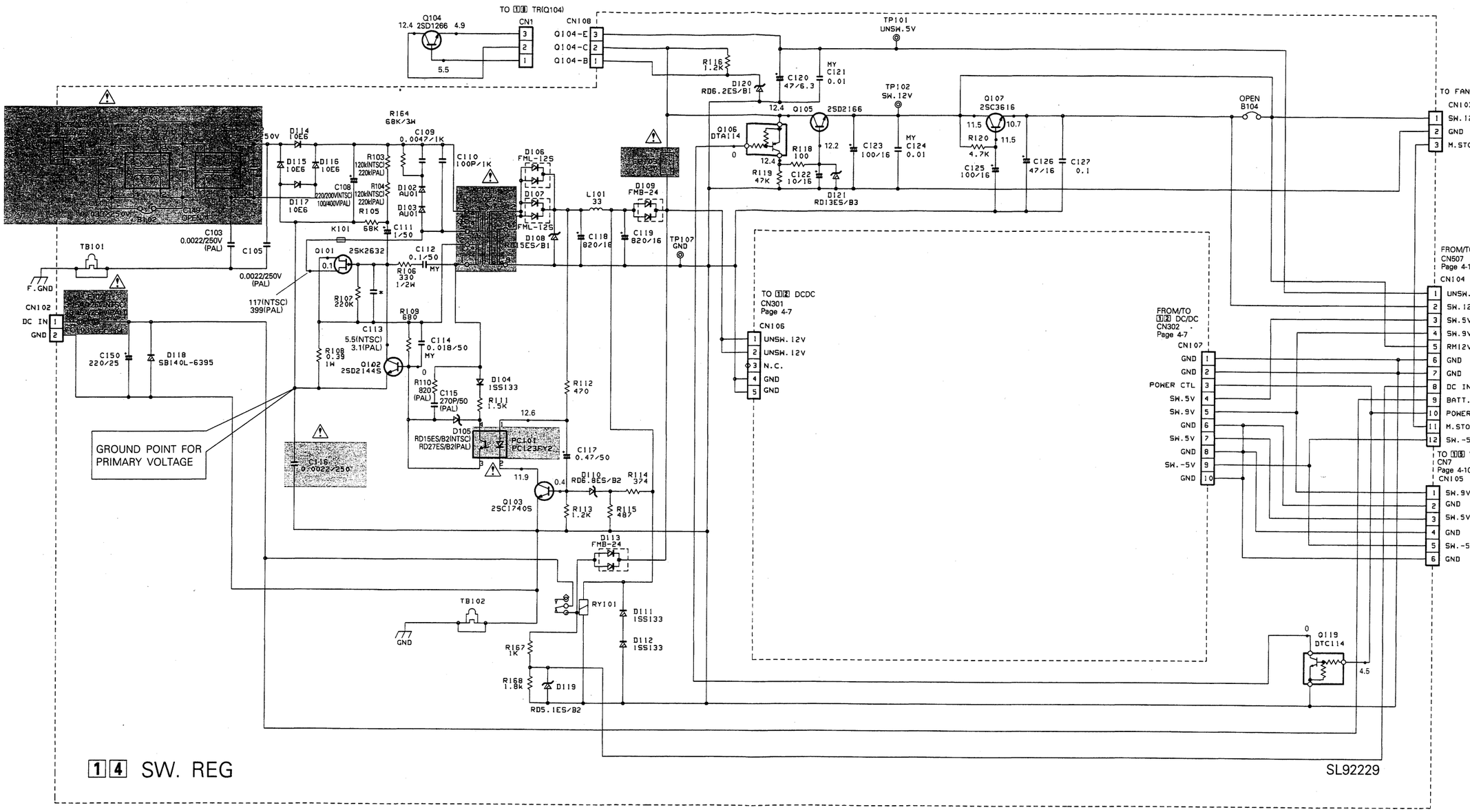


● **ADDRESS TABLE OF BOARD PARTS**
Each address may have an address error by one interval.

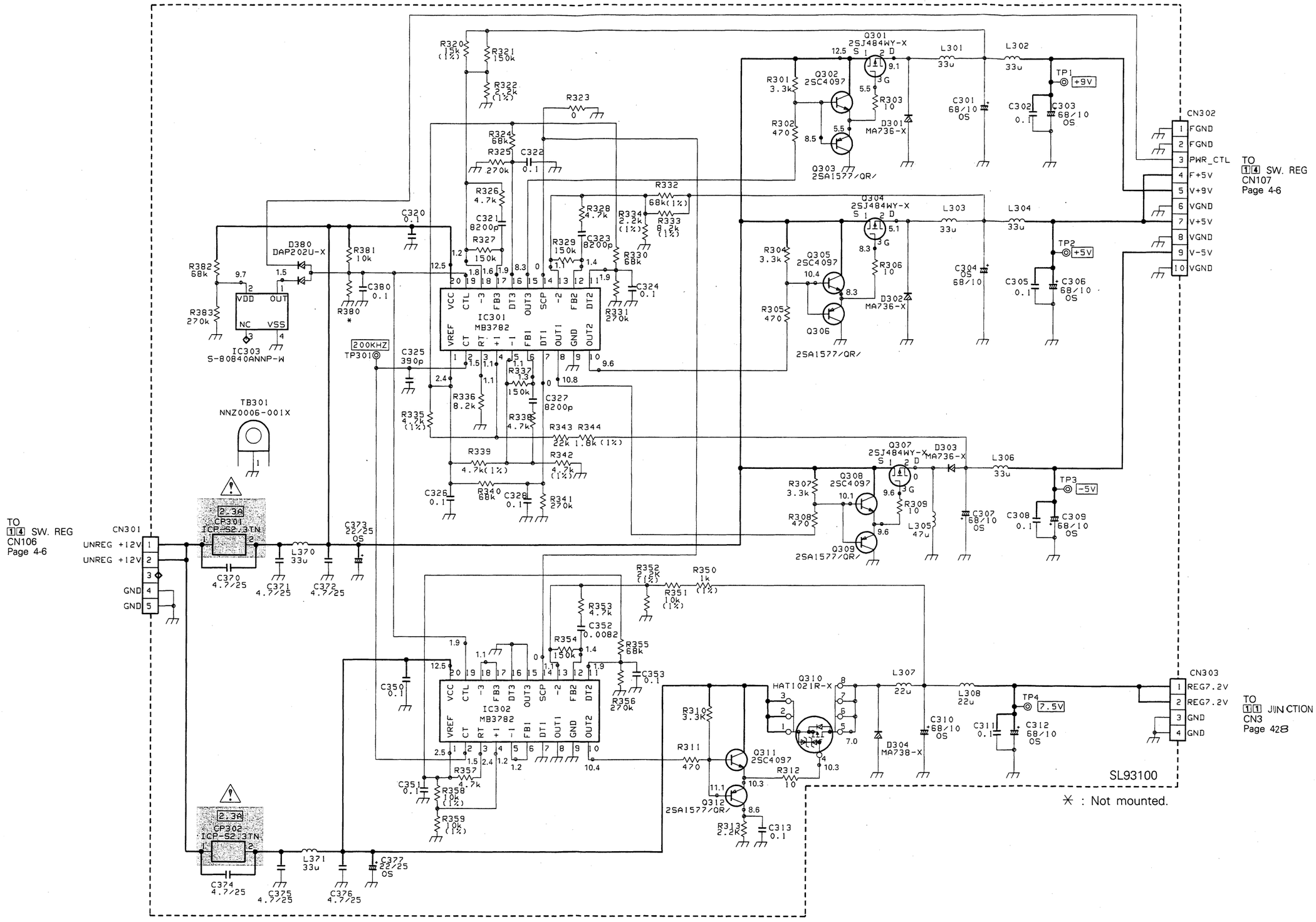
Side — A-1C (A: Y axis, 1C: X axis)

IC301	B-4A	R305	B-3A	R338	B-4A	C306	B-2B	C376	A-4C	CN302	A-1B
IC302	B-4C	R306	B-2A	R339	B-5A	C307	B-2B	C377	A-4C	CN303	A-2C
IC303	B-5A	R307	B-3B	R340	B-5A	C308	B-2B	C380	B-4B		
		R308	B-3B	R341	B-5A	C309	B-1B				
Q301	B-3A	R309	B-2B	R342	B-5A	C310	B-3C	L301	A-2A		
Q302	B-3A	R310	B-3C	R343	B-4A	C311	B-2C	L302	A-2A		
Q303	B-3A	R311	B-3C	R344	B-4A	C312	B-2C	L303	A-2B		
Q304	B-2B	R312	B-3C	R350	B-5C	C313	B-3C	L304	A-2B		
Q305	B-3A	R313	B-3C	R351	B-5C	C320	B-5B	L305	A-2B		
Q306	B-3B	R320	B-4A	R352	B-4C	C321	B-4B	L306	A-1B		
Q307	B-2B	R321	B-4A	R353	B-4C	C322	B-4B	L307	A-3C		
Q308	B-3B	R322	B-3A	R354	B-4C	C323	B-4B	L308	A-2C		
Q309	B-3C	R323	B-4B	R355	B-4C	C324	B-3B	L370	A-5A		
Q310	B-3C	R324	B-4A	R356	B-4C	C325	B-4A	L371	A-5C		
Q311	B-3C	R325	B-4B	R357	B-5C	C326	B-5A				
Q312	B-3C	R326	B-4B	R358	B-5C	C327	B-4A	TP1	B-2A		
		R327	B-4B	R359	B-5C	C328	B-5A	TP2	B-2A		
D301	A-3A	R328	B-4B	R380	B-4B	C350	B-5C	TP3	B-2C		
D302	A-3B	R329	B-4B	R381	B-4B	C351	B-5C	TP4	B-2C		
D303	A-2B	R330	B-3B	R382	B-5A	C352	B-4C	TP301	B-4A		
D304	A-4C	R331	B-3B	R383	B-5A	C353	B-4C				
D380	B-5A	R332	B-4B			C370	A-5B	TB301	A-1A		
		R333	B-4B	C301	B-2A	C371	A-4B				
R301	B-3A	R334	B-4B	C302	B-2A	C372	A-4A	CP301	A-5B		
R302	B-3A	R335	B-4A	C303	B-2A	C373	A-4A	CP302	A-5B		
R303	B-2A	R336	B-4A	C304	B-2B	C374	A-5B				
R304	B-3A	R337	B-4A	C305	B-2B	C375	A-4B	CN301	A-5B		

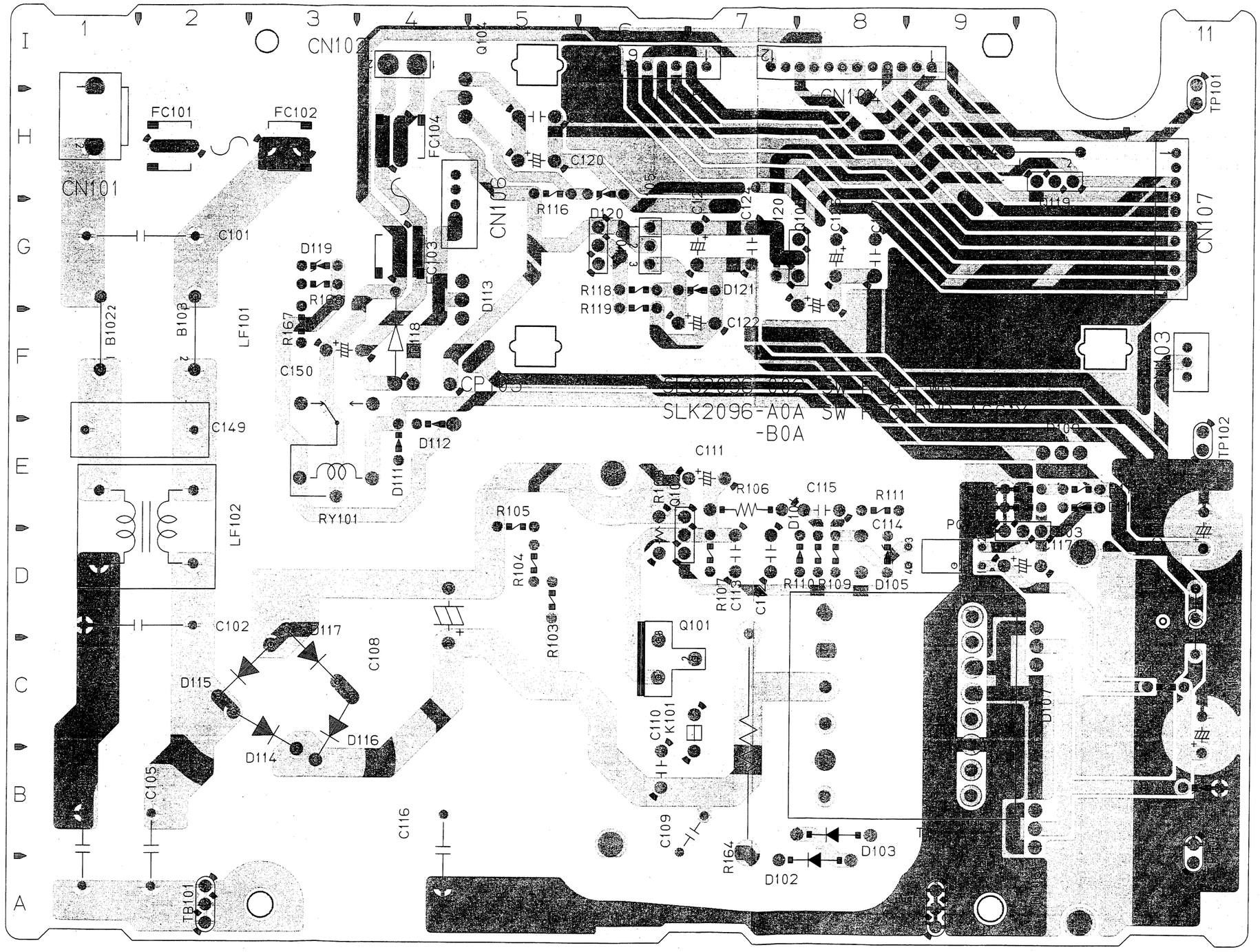
4.4 SW.REG SCHEMATIC DIAGRAM 14



4.5 DCDC SCHEMATIC DIAGRAM 1 2



– SIDE A –

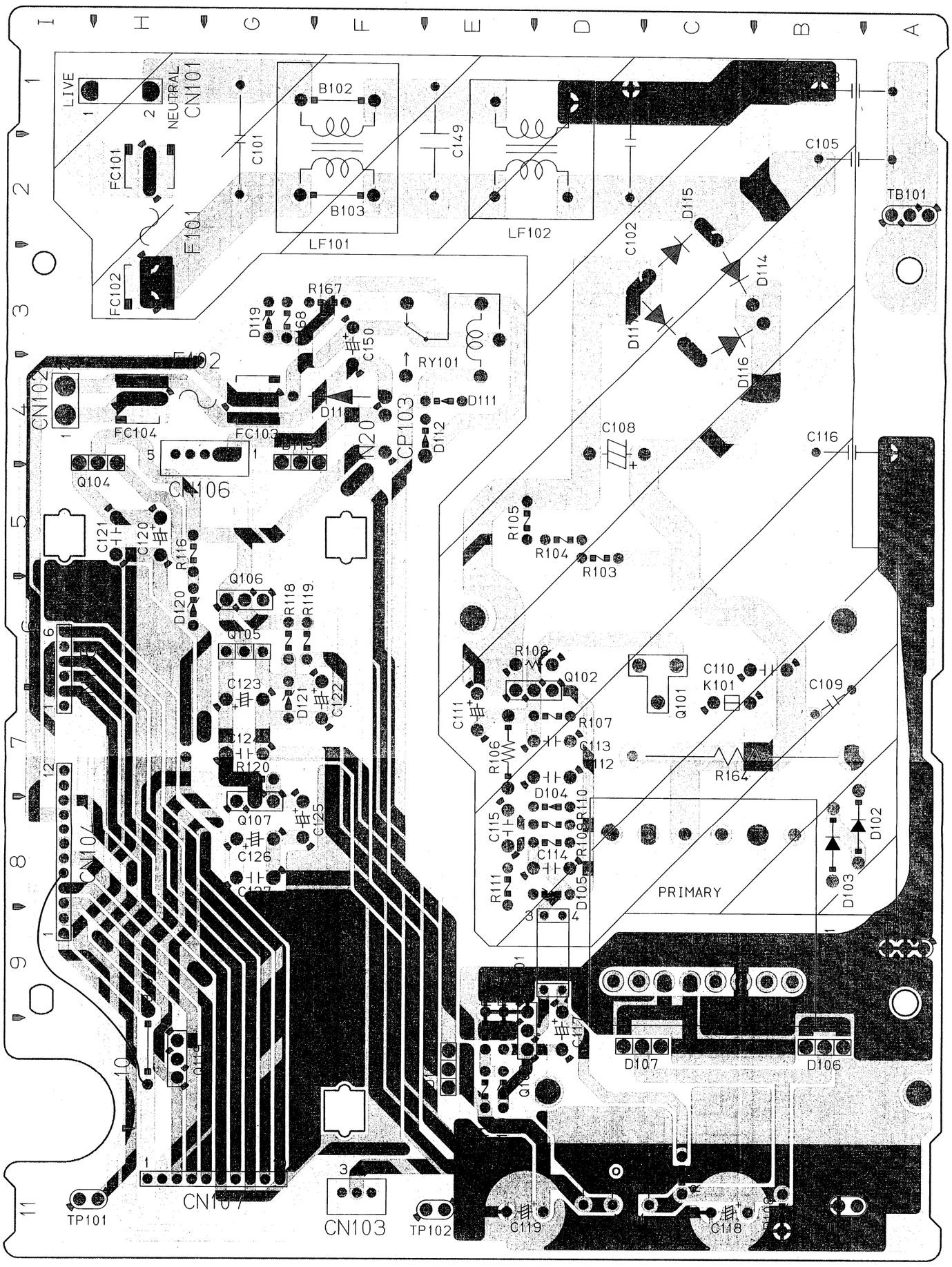


● **ADDRESS TABLE OF BOARD PARTS**
Each address may have an address error by one interval.

Side — A-1C (Y axis, X axis)

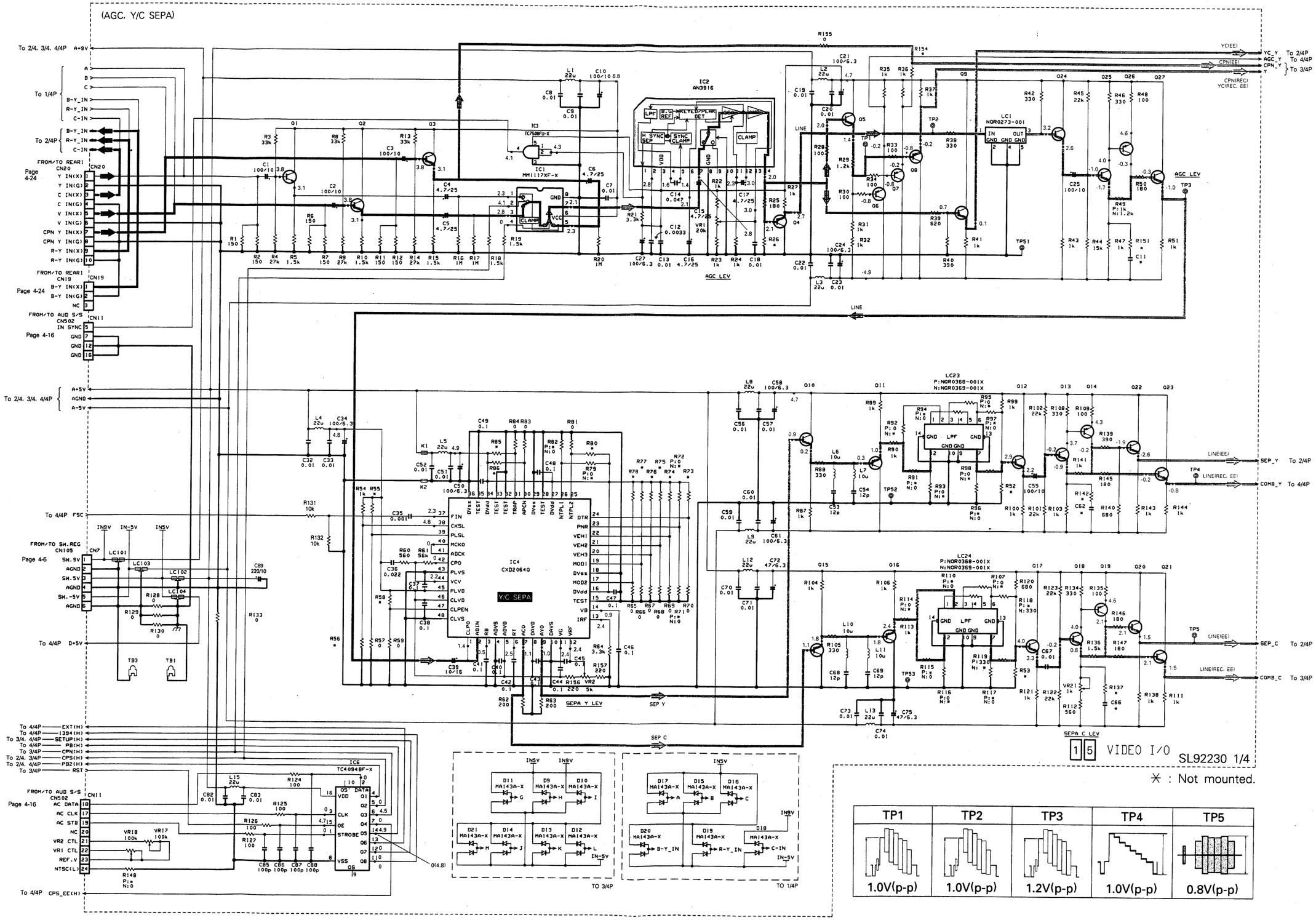
Q101	6C	C117	9D
Q102	6E	C118	11B
Q103	9D	C119	11D
Q104	5I	C120	5H
Q105	6G	C121	5H
Q106	6G	C122	6F
Q107	7G	C123	7G
Q119	10H	C124	7G
		C125	7G
D102	7A	C126	8G
D103	7B	C127	8G
D104	7D	C149	2E
D105	8D	C150	3F
D106	10B		
D107	10C	L101	11C
D108	11B		
D109	10E	TP101	11I
D110	10E	TP102	11E
D111	4E	TP107	11A
D112	4E		
D113	5G	K101	7B
D114	3B		
D115	2C	TB101	3A
D116	3B	TB102	9A
D117	3C		
D118	4G	FC101	2H
D119	3G	FC102	2H
D120	6H	FC103	4H
D121	6G	FC104	4H
R103	5D	CP103	4F
R104	5D		
R105	5E	CN101	1I
R106	7E	CN102	4I
R107	7D	CN103	11F
R108	6E	CN104	9I
R109	8D	CN105	7I
R110	8D	CN106	4G
R111	8E	CN107	11H
R112	11C		
R113	9E	PC101	9D
R114	10E		
R115	9E	LF101	1G
R116	5H	LF102	1D
R118	6G		
R119	6G	RY101	3E
R120	7G		
R164	7A	B102	1F
R167	3G	B103	2G
R168	3G	B104	9H
C101	1G	T101	8D
C102	1D		
C103	1B		
C105	2B		
C108	4C		
C109	7B		
C110	6B		
C111	7E		
C112	7D		
C113	7D		
C114	8D		
C115	8E		
C116	4B		

– SIDE B –


LIVE
NEUTRAL
CN101
FC101
F101
FC102
B102
B103
LF101
LF102
C101
C149
C105
TB101
C102
D115
D114
D117
D116
R167
D119
R168
C150
RY101
D111
D112
CN102
FC104
FC103
D113
Q104
C106
C108
C116
C121
C120
R116
R105
R104
R103
Q106
D120
R118
R119
Q105
C123
D121
C122
R108
Q102
C111
Q101
C110
K101
C109
C124
R107
R106
C113
C112
R164
R120
Q107
C125
D104
C115
C114
R110
R111
D105
PRIMARY
D103
D102
C126
C127
C117
D107
D106
CN104
CN105
CN107
TP101
CN103
TP102
C119
C118

4-9

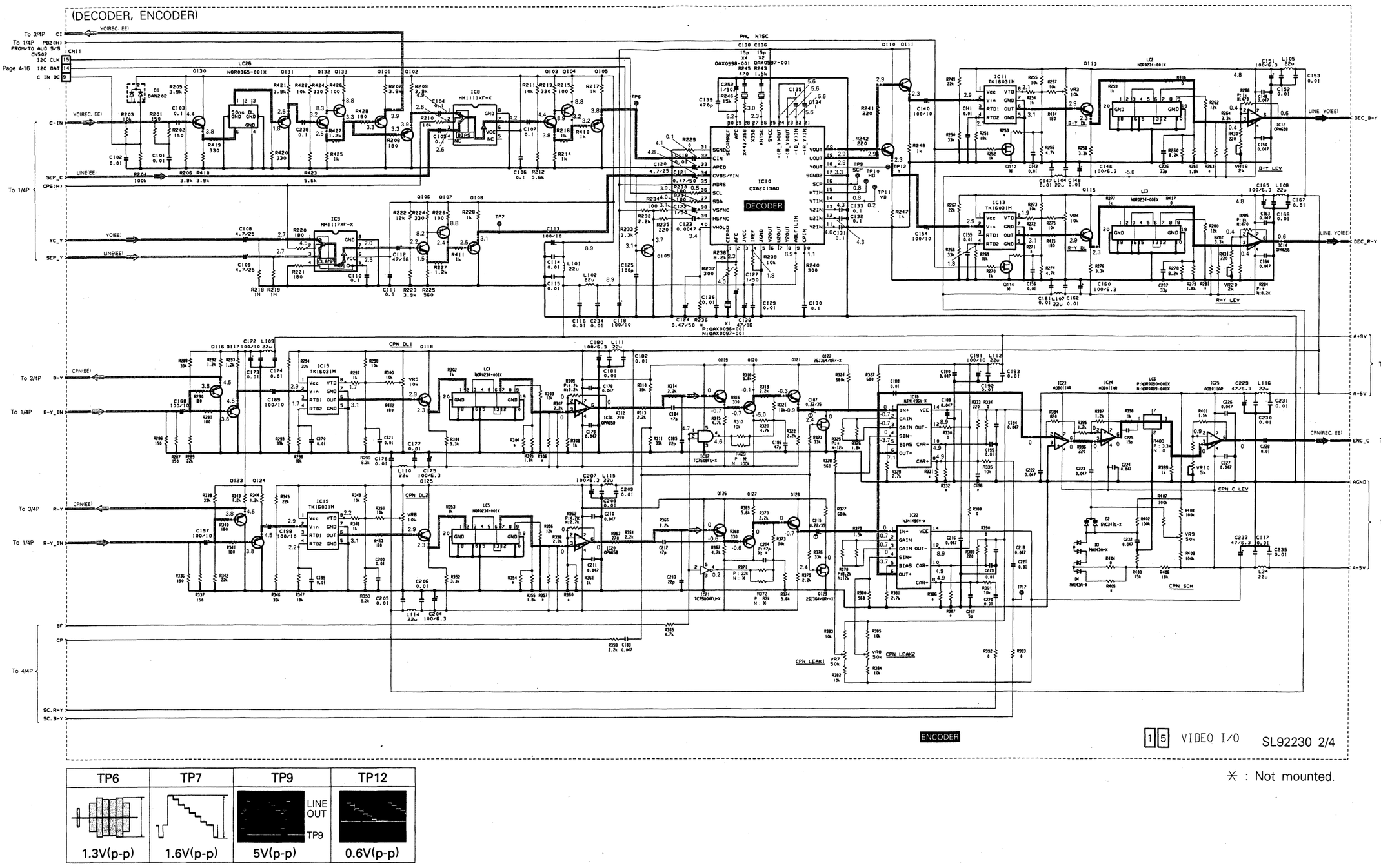
4.7 VIDEO I/O SCHEMATIC DIAGRAM 15 (1/4)



✳ : Not mounted.

TP1	TP2	TP3	TP4	TP5
1.0V(p-p)	1.0V(p-p)	1.2V(p-p)	1.0V(p-p)	0.8V(p-p)

· VIDEO I/O SCHEMATIC DIAGRAM 15 (2/4)

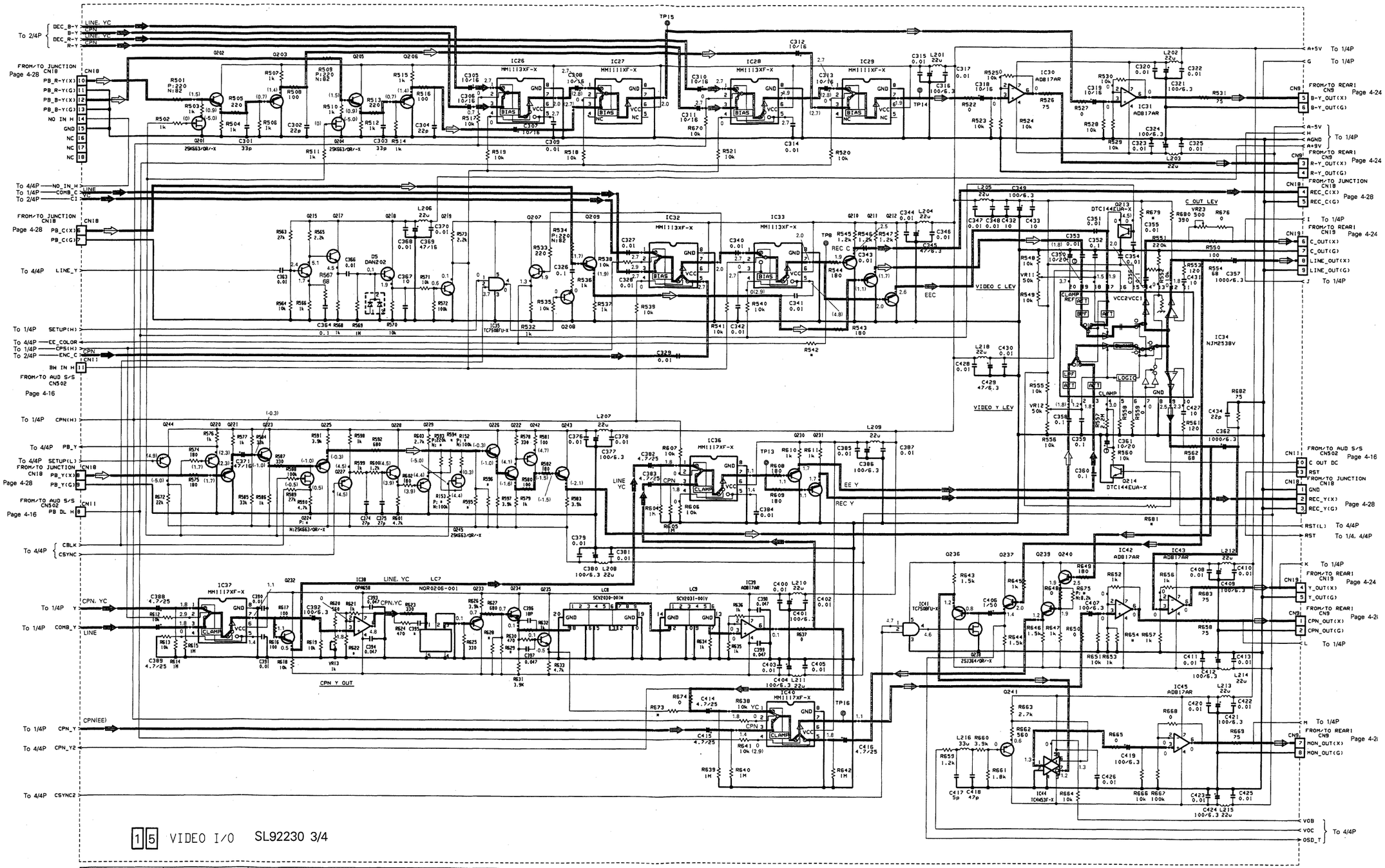


TP6	TP7	TP9	TP12
1.3V(p-p)	1.6V(p-p)	5V(p-p)	0.6V(p-p)

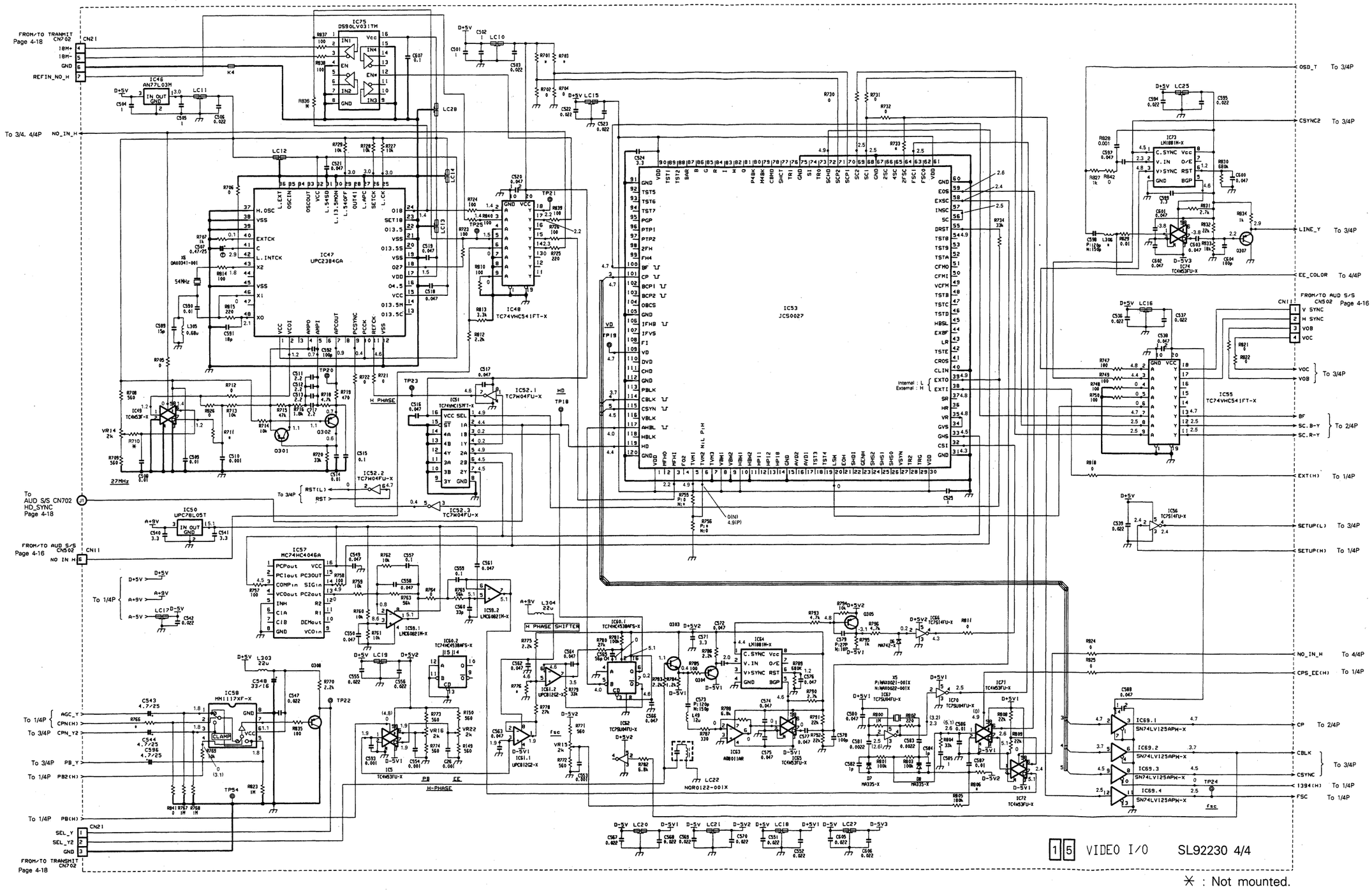
TP9: LINE OUT

✳ : Not mounted.

• VIDEO I/O SCHEMATIC DIAGRAM 15 (3/4)

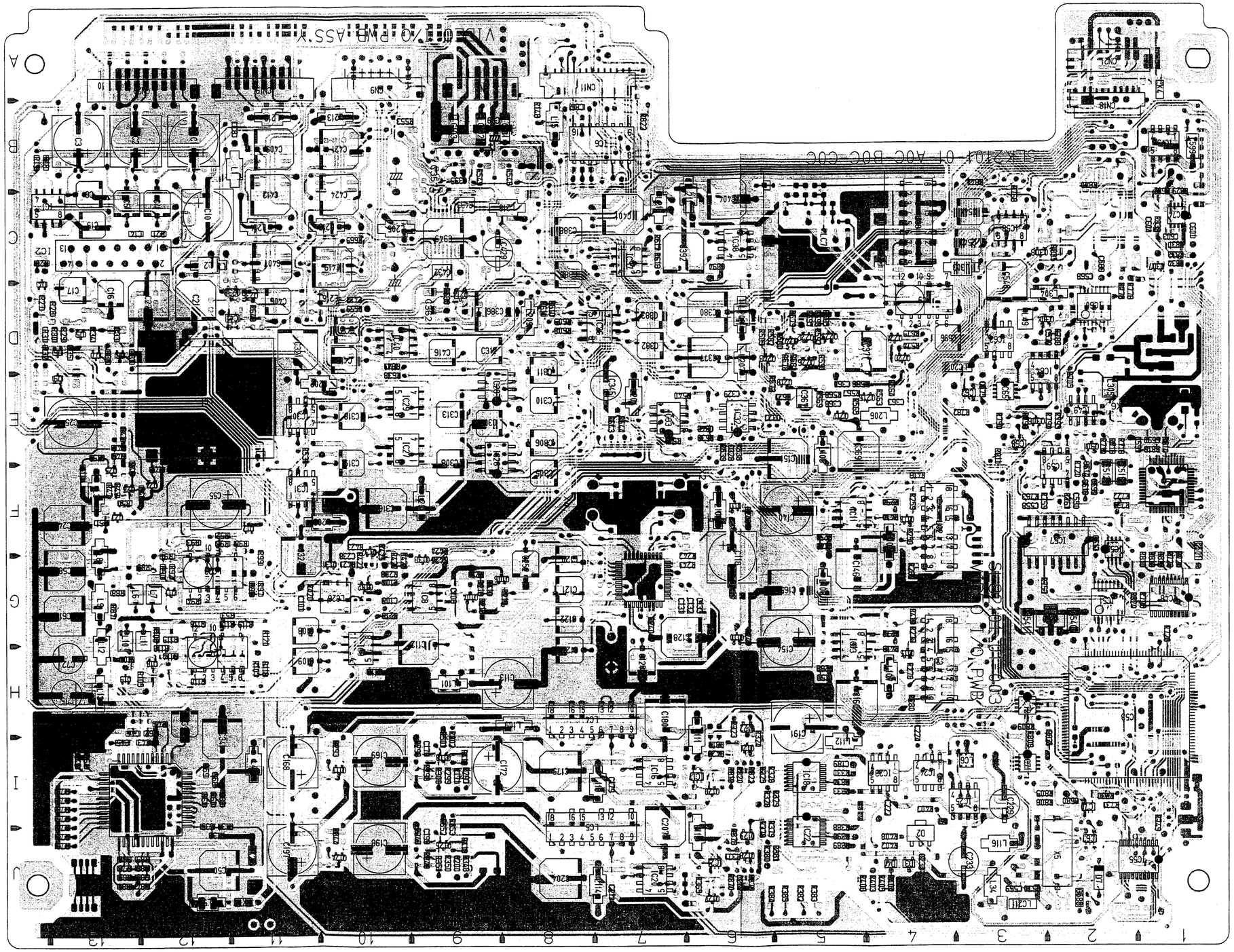


• VIDEO I/O SCHEMATIC DIAGRAM 15 (4/4)



4.8 VIDEO I/O CIRCUIT BOARD

— SIDE A —



● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

IC1	A-13C	Q128	A-6J	R47	A-12F	R217	A-8G	R348	A-9J	R544	A-7E
IC2	A-12C	Q129	A-6I	R48	A-12F	R218	B-10G	R349	A-9J	R545	B-7E
IC3	B-12C	Q130	B-10G	R49	A-12F	R219	B-10G	R350	A-9J	R546	B-7E
IC4	A-12I	Q131	A-10F	R50	A-12F	R220	B-10G	R351	A-9J	R547	B-7E
IC5	B-2B	Q132	A-10F	R51	A-12F	R221	B-10H	R352	A-9I	R548	A-8B
IC6	A-7B	Q133	A-9F	R52	A-11F	R222	B-9G	R353	A-9I	R549	A-8B
IC8	A-9G	Q201	B-8D	R53	A-11G	R223	B-9G	R354	B-7I	R550	B-9B
IC9	A-10G	Q202	B-8D	R54	B-12I	R224	B-9G	R355	B-7I	R551	B-9B
IC10	A-7G	Q203	B-8D	R55	B-12I	R225	B-9G	R356	B-7I	R552	B-9B
IC11	A-4F	Q204	B-8E	R56	B-12I	R226	B-8G	R357	B-7J	R553	A-9B
IC12	B-3F	Q205	B-8E	R57	B-12I	R227	B-8G	R358	B-7J	R554	B-9A
IC13	A-4G	Q206	B-8E	R58	A-11I	R228	B-8G	R359	B-6H	R555	B-8D
IC14	B-3H	Q207	B-6E	R59	A-11I	R229	B-7F	R360	B-7J	R556	B-8D
IC15	B-9I	Q208	B-6E	R60	A-11I	R230	B-7G	R361	B-7J	R557	B-9D
IC16	A-7I	Q209	B-6E	R61	A-11I	R231	B-7G	R362	B-7J	R558	B-10D
IC17	A-6I	Q210	B-7E	R62	A-12H	R232	B-7G	R363	B-6J	R559	B-10D
IC18	A-5I	Q211	B-7E	R63	B-12H	R233	B-8G	R364	B-6J	R560	A-9D
IC19	B-9J	Q212	B-7E	R64	A-13I	R234	B-7G	R365	A-6J	R561	B-10D
IC20	A-7J	Q213	B-9B	R65	B-13I	R235	B-7G	R366	B-6J	R562	B-9C
IC21	A-6J	Q214	A-9D	R66	B-13I	R236	B-7G	R367	B-6J	R563	A-4E
IC22	A-5I	Q215	A-4E	R67	B-13I	R237	B-7G	R368	B-6J	R564	A-4E
IC23	A-4I	Q217	A-5E	R68	B-13I	R238	B-7G	R369	B-6J	R565	A-4E
IC24	A-4I	Q218	B-5E	R69	B-13I	R239	B-7G	R370	A-6J	R566	A-4E
IC25	A-3I	Q219	A-5D	R70	B-13I	R240	A-7G	R371	A-6J	R567	A-4E
IC26	A-8E	Q220	A-4D	R71	B-13I	R241	A-6F	R372	B-6I	R568	A-5E
IC27	A-9E	Q221	A-4D	R72	A-13I	R242	A-6F	R373	B-6J	R569	A-5E
IC28	A-8E	Q222	A-5D	R73	A-13I	R243	B-7F	R374	B-6I	R570	B-5E
IC29	A-9E	Q223	B-4D	R74	A-13I	R244	B-7F	R375	A-6J	R571	A-5E
IC30	A-10E	Q224	B-5D	R75	A-13I	R246	B-8F	R376	A-6I	R572	B-5E
IC31	A-10F	Q225	A-5D	R76	A-13I	R247	A-6G	R377	B-5I	R573	A-5E
IC32	A-6E	Q226	A-5D	R77	A-13I	R248	A-6F	R378	A-5I	R574	A-4D
IC33	A-6E	Q227	B-4D	R78	A-13I	R249	B-5F	R379	A-5I	R575	A-4D
IC34	B-9C	Q228	B-5D	R79	A-12J	R250	B-5F	R380	A-5I	R576	B-4D
IC35	B-5E	Q229	B-5D	R80	A-12J	R251	A-5F	R381	A-5I	R577	B-4D
IC36	A-7D	Q230	B-8D	R81	A-12J	R252	B-4F	R382	A-5J	R578	A-5D
IC37	A-7C	Q231	B-8D	R82	A-12J	R253	B-4F	R383	A-5J	R579	A-5D
IC38	A-6C	Q232	B-6C	R83	A-12J	R254	A-4F	R384	A-5J	R580	A-5D
IC39	B-4C	Q233	B-6C	R84	A-12J	R255	B-4F	R385	B-5J	R581	A-5D
IC40	A-9D	Q234	B-5C	R85	A-12J	R256	B-4F	R386	B-5J	R582	A-5D
IC41	A-11D	Q235	B-5C	R86	A-12J	R257	B-4F	R387	B-5J	R583	A-5D
IC42	B-11C	Q236	A-11D	R87	A-12G	R258	A-4F	R388	A-5I	R584	B-4D
IC43	B-11B	Q237	B-11D	R88	A-12G	R259	A-4F	R389	A-5I	R585	B-4D
IC44	B-10C	Q238	A-11C	R89	A-12F	R260	B-4F	R390	A-5I	R586	B-4D
IC45	B-10B	Q239	B-11D	R90	A-12F	R261	B-4F	R391	B-5J	R587	B-5D
IC46	B-1D	Q240	B-11D	R91	A-12F	R262	A-4G	R392	B-4J	R588	B-5D
IC47	A-1F	Q241	B-10C	R92	A-12F	R263	B-4F	R393	B-4I	R589	B-5D
IC48	A-1G	Q242	A-5D	R93	A-12F	R264	B-4F	R394	B-4I	R590	B-5D
IC49	A-2E	Q243	A-5D	R94	A-12G	R266	B-3F	R395	B-4I	R591	A-5D
IC50	A-2G	Q244	B-6D	R95	A-11G	R267	B-5G	R396	B-4I	R592	B-5D
IC51	A-2G	Q245	B-5D	R96	A-11F	R268	B-5G	R397	B-4I	R593	B-5D
IC52	A-2F	Q301	A-2E	R97	A-11G	R269	A-5H	R398	B-4I	R594	B-5D
IC53	A-2H	Q302	B-2E	R98	A-11F	R270	B-4G	R399	B-3H	R595	A-5D
IC55	A-1J	Q303	B-2D	R99	A-11F	R271	B-4G	R400	B-3I	R596	A-5D
IC56	B-2J	Q304	A-2D	R100	B-11F	R272	A-4G	R401	B-3I	R597	A-5D
IC57	A-2F	Q305	A-2E	R101	B-11F	R273	B-4G	R402	A-4I	R598	B-4D
IC58	A-3C	Q306	B-1B	R102	B-11F	R274	B-4G	R403	A-4J	R599	B-4D
IC59	A-2E	Q307	A-1C	R103	B-11G	R275	B-4G	R404	A-4J	R600	B-5D
IC60	A-2D	Q308	A-2C	R104	A-12G	R276	A-4H	R405	A-4J	R601	B-5D
IC61	B-2D			R105	A-12H	R277	A-4G	R406	A-4J	R602	B-5D
IC62	A-3E	D1	B-10F	R106	A-12G	R278	B-4H	R407	A-4I	R603	B-5D
IC63	A-3D	D2	A-4I	R107	A-11H	R279	B-4H	R408	A-4I	R604	B-7D
IC64	A-2D	D3	A-4J	R108	B-11F	R280	A-4H	R409	B-3J	R605	B-7D
IC65	A-3E	D4	A-4J	R109	B-12F	R281	B-4H	R410	A-8G	R606	B-7D
IC66	A-3E	D5	B-5E	R110	A-11H	R282	B-4H	R411	B-8G	R607	B-7D
IC67	A-2I	D6	B-3E	R111	B-12H	R284	B-3G	R412	A-9H	R608	A-8D
IC69	B-1I	D7	A-2J	R112	B-12H	R285	B-3G	R413	A-9I	R609	A-8D
IC70	A-2I	D8	B-2J	R113	A-12G	R286	B-10H	R414	A-4F	R610	A-8D
IC71	A-3I	D9	B-9A	R114	A-12G	R287	B-10H	R415	A-4G	R611	A-8D
IC72	A-3H	D10	B-11A	R115	A-12G	R288	B-10H	R416	A-4E	R612	B-7C
IC73	A-1B	D11	B-10A	R116	A-11G	R289	B-10I	R417	A-4G	R613	B-7C
IC74	A-1C	D12	B-9A	R117	A-11G	R290	B-10I	R418	B-10G	R614	B-7C
IC75	B-2A	D13	B-11A	R118	A-11H	R291	B-10I	R419	B-10G	R615	B-7C
		D14	B-11A	R119	A-11G	R292	B-10H	R420	A-10G	R616	A-7C
Q1	B-12B	D15	B-12A	R120	A-11G	R293	A-10H	R421	A-10F	R617	A-7C
Q2	B-12B	D16	B-12A	R121	B-11G	R294	B-9I	R422	A-10F	R618	B-6C
Q3	B-13B	D17	B-12A	R122	B-11G	R295	B-9H	R423	A-10F	R619	B-6C
Q4	A-13C	D18	B-12A	R123	B-11G	R296	A-9H	R424	A-9F	R620	B-6C
Q5	A-13D	D19	B-12A	R124	B-7B	R297	A-9I	R425	A-9F	R621	B-6C
Q6	A-13D	D20	B-10A	R125	B-7B	R298	A-9I	R426	A-9F	R622	B-6C
Q7	A-13D	D21	B-10A	R126	B-7B	R299	A-9I	R427	A-9F	R623	B-6C
Q8	A-12D			R127	B-7B	R300	A-9I	R428	A-9F	R624	B-5C
Q9	A-13D	R1	B-12B	R128	B-8B	R301	A-9H	R429	A-6H	R625	B-5B
Q10	B-12G	R2	B-12B	R129	B-8B	R302	A-9H	R430	B-3F	R626	B-5B
Q11	A-12G	R3	B-11B	R130	B-8B	R303	B-7H	R431	B-3G	R627	B-5B
Q12	A-11F	R4	B-12B	R131	A-11I	R304	B-7H	R501	B-7D	R628	B-5C
Q13	B-11F	R5	B-12B	R132	A-11I	R305	B-7H	R502	B-7D	R629	B-5C
Q14	B-12F	R6	B-12B	R133	B-7B	R306	B-7H	R503	B-7D	R630	B-5C
Q15	A-12H	R7	B-12B	R134	B-11G	R307	B-7H	R504	B-8D	R631	B-5C
Q16	A-12G	R8	B-12B	R135	B-11G	R308	B-7I	R505	B-8D	R632	B-5B
Q17	B-11G	R9	B-12B	R136	B-11G	R309	B-7I	R506	B-8D	R633	B-4C
Q18	B-11G	R10	B-12B	R137	B-12H	R310	B-6H	R507	B-8D	R634	B-3C
Q19	B-11G	R11	B-13B	R138	B-12H	R311	B-6H	R508	B-8D	R635	B-4D
Q20	B-12G	R12	B-13B	R139	B-12F	R312	B-6I	R509	B-7E	R636	B-4D
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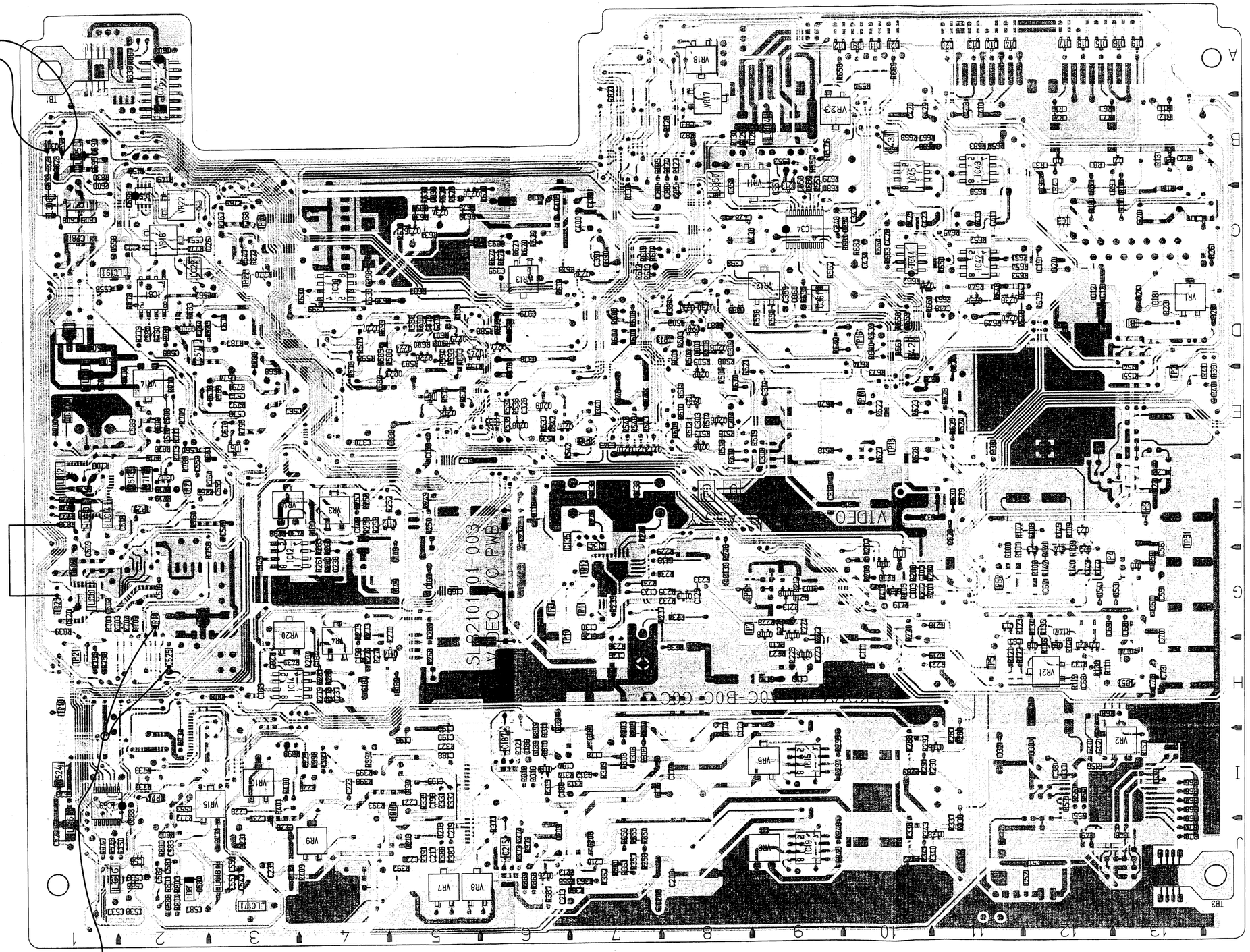
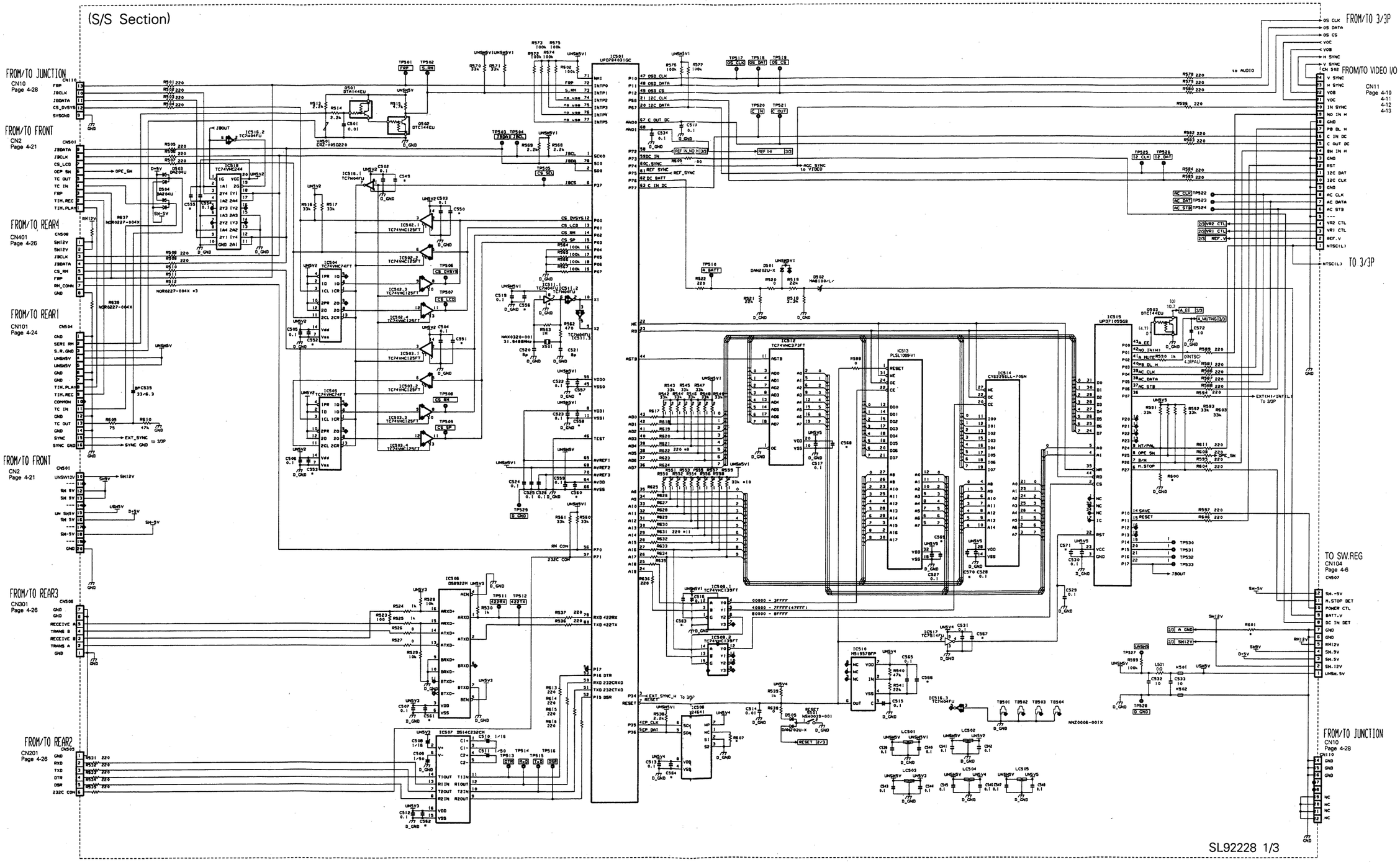
Q25	A-12E	R17	B-12C	R144	B-12G	R317	A-6H	R514	B-8E	R641	A-9D
Q26	A-12F	R18	A-13B	R145	B-12F	R318	B-6I	R515	B-8E	R642	B-9D
Q27	A-12F	R19	A-13B	R146	B-12G	R319	A-6I	R516	B-8E	R643	A-11D
Q101	B-10F	R20	B-12C	R147	B-12G	R320	A-6I	R517	B-8E	R644	B-11C
Q102	A-10G	R21	A-12C	R148	A-8B	R321	B-6H	R518	B-9E	R645	B-10C
Q103	B-9G	R22	B-13D	R149	B-2B	R322	A-6I	R519	B-8E	R646	B-11D
Q104	A-9G	R23	B-13D	R150	B-2B	R323	A-6H	R520	B-9E	R647	B-11D
Q105	A-8G	R24	B-12D	R151	A-13E	R324	A-5H	R521	B-8D	R648	B-11D
Q106	B-9G	R25	A-13C	R152	B-5D	R325	A-5I	R522	B-10E	R649	B-11D
Q107	B-9G	R26	B-13C	R153	B-5D	R326	A-5I	R523	B-10E	R650	B-10C
Q108	B-8G	R27	A-13D	R154	B-12D	R327	B-5H	R524	B-10E	R651	B-11C
Q109	B-8G	R28	A-13D	R155	B-12D	R328	A-5I	R525	B-10E	R652	B-11C
Q110	B-8G	R29	A-13D	R156	B-12I	R329	A-5I	R526	B-10E	R653	B-11C
Q111	A-6F	R30	A-13D	R157	B-12H	R330	A-5I	R527	B-10E	R654	B-11C
Q112	B-4F	R31	A-13D	R201	B-10G	R331	B-5I	R528	B-10E	R656	B-11B
Q113	A-4F	R32	A-13D	R202	B-10G	R332	B-5I	R529	B-10F	R657	B-11B
Q114	B-4G	R33	A-12D	R203	B-10G	R333	A-5I	R530	B-10F	R658	B-9A
Q115	A-4G	R34	A-13D	R204	B-10G	R334	A-5I	R531	A-10E	R659	B-10D
Q116	B-10H	R35	A-13D	R205	B-10G	R335	B-5I	R532	B-6E	R660	B-10D
Q117	A-10I	R36	A-12D	R206	B-10G	R336	B-10I	R533	A-6E	R661	B-10D
Q118	A-9H	R37	A-12D	R207	B-9F	R337	B-10I	R534	B-6E	R662	B-10C
Q119	B-6I	R38	B-11E	R208	A-9G	R338	B-10I	R535	B-6E	R663	B-10C
Q120	A-6I	R39	B-13D	R209	B-9G	R340	B-10J	R536	B-6E	R664	B-10C
Q121	A-6H	R40	B-13E	R210	A-9G	R341	B-10J	R537	B-6E	R665	A-10C
Q122	A-6H	R41	B-13D	R211	B-9G	R342	B-10J	R538	A-6E	R666	B-10B
Q123	B-10I	R42	A-12E	R212	B-9G	R343	B-10I	R539	A-6E	R667	B-10B
Q124	A-10J	R43	A-12E	R213	B-9G	R344	A-10I	R540	A-6E	R668	B-10B
Q125	A-9I	R44	A-12E	R214	A-9G	R345	B-9J	R541	A-6E	R669	B-10A
Q126	B-6J	R45	A-12E	R215	A-8G	R346	B-9I	R542	B-6E	R670	B-8E
Q127	A-6J	R46	A-12E	R216	A-8G	R347	A-9I	R543	A-7E	R672	B-6D



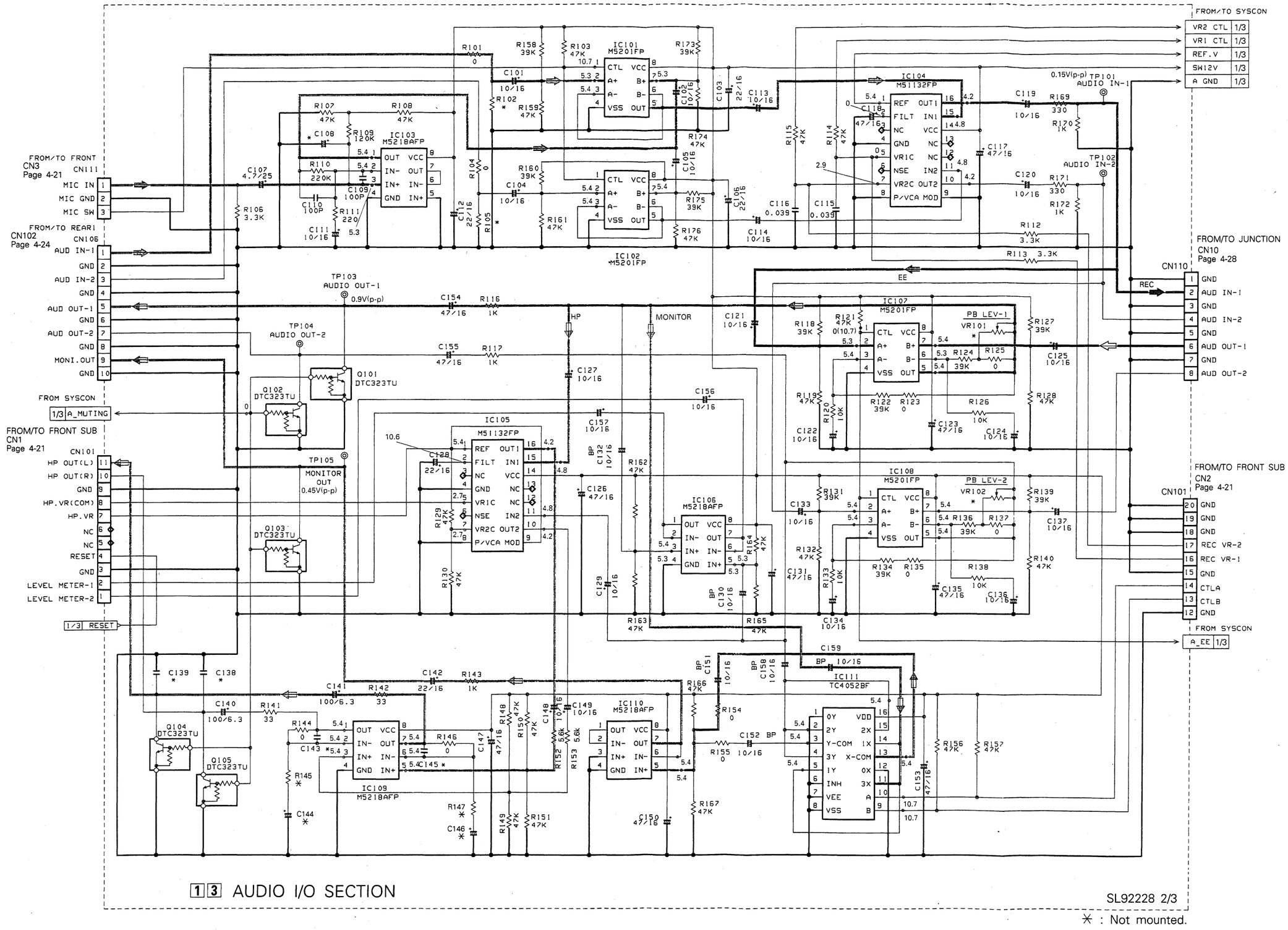
R673	B-10D	VR3	B-4F	C132	A-6G	C340	A-6E	C548	A-3C	TP15	B-10E
R674	B-9D	VR4	B-4G	C133	A-6G	C341	B-7E	C549	B-3F	TP16	B-9D
R675	B-11D	VR5	B-8I	C134	B-7F	C342	B-6E	C550	A-2F	TP17	B-4I
R676	B-9B	VR6	B-8I	C135	B-6F	C343	B-7E	C551	B-3J	TP18	B-2G
R679	B-9B	VR7	B-5J	C136	B-7F	C344	B-7E	C552	B-3J	TP19	B-1H
R680	B-9B	VR8	B-5J	C138	B-7F	C345	A-7E	C553	B-2I	TP20	B-2F
R681	B-9C	VR9	B-4I	C139	B-8G	C346	B-7E	C554	B-2C	TP21	B-1G
R682	B-9C	VR10	B-3I	C140	A-5F	C347	B-9C	C555	B-1C	TP22	B-3C
R683	B-11B	VR11	B-8B	C141	A-5F	C348	B-9C	C556	B-1C	TP23	B-2F
R701	B-1G	VR12	B-8C	C142	B-4F	C349	A-9C	C557	B-3F	TP24	B-2I
R702	B-2G	VR13	B-6C	C146	A-4F	C350	B-8B	C558	A-3F	TP25	B-1G
R703	B-1G	VR14	B-2D	C147	B-4G	C351	B-8B	C559	B-2E	TP51	B-13F
R704	B-2G	VR15	B-2I	C148	B-4F	C352	B-9B	C560	B-2E	TP52	B-11G
R705	A-2D	VR16	B-2C	C149	B-3F	C353	B-8B	C561	B-2E	TP53	B-12H
R706	B-1E	VR17	B-8A	C150	B-4F	C354	B-9C	C562	B-2C	TP54	B-3C
R707	B-1E	VR18	B-8A	C151	A-5E	C355	A-9B	C563	A-2C		
R708	B-2D	VR19	B-3F	C152	B-5E	C358	B-9B	C564	B-2D	CN7	A-8A
R709	B-2E	VR20	B-3G	C153	B-5E	C357	A-9B	C565	B-2D	CN9	A-10A
R710	B-2D	VR21	B-11H	C154	A-5G	C358	B-8C	C566	A-2C	CN11	A-7A
R711	B-2E	VR22	B-2C	C155	A-5H	C359	B-9C	C567	B-3E	CN18	A-2A
R712	B-2E	VR23	B-9B	C156	B-4G	C360	B-9D	C568	B-3D	CN19	A-11A
R713	B-2E			C160	A-4H	C361	B-9D	C569	A-3J	CN20	A-12A
R714	A-2E	C1	A-12B	C161	B-4H	C362	A-9D	C570	A-3J	CN21	A-2A
R715	A-2E	C2	A-12B	C162	B-4H	C363	A-4E	C571	B-2D		
R716	A-2E	C3	A-13B	C163	B-3H	C364	A-5E	C572	A-2D	TB1	B-1A
R718	B-2F	C4	A-12C	C164	B-4G	C366	A-5E	C573	B-3D	TB3	B-13J
R719	B-2F	C5	A-12C	C165	A-5G	C367	A-5E	C574	B-3D		
R720	A-2E	C6	A-13B	C166	B-5G	C368	B-4E	C575	A-3E	LC1	A-11E
R721	A-2F	C7	B-13C	C167	B-5G	C369	A-4E	C576	B-2E	LC2	A-4F
R722	A-2F	C8	A-11B	C168	A-10I	C370	B-4E	C577	B-3E	LC3	A-4G
R723	A-1F	C9	B-11B	C169	A-10I	C371	A-4D	C578	B-3E	LC4	A-7H
R724	A-1F	C10	A-11C	C170	A-9H	C374	B-5D	C579	B-3E	LC5	A-7I
R725	A-1G	C11	A-13E	C171	A-9I	C375	B-5D	C580	A-2I	LC6	A-3I
R726	A-1G	C12	B-12D	C172	A-8I	C376	B-6D	C581	B-2J	LC7	A-5C
R727	B-1F	C13	B-12D	C173	B-8H	C377	A-6D	C582	B-2J	LC8	A-4C
R728	B-1F	C14	A-12C	C174	B-8H	C378	B-6D	C583	B-2I	LC9	A-4D
R729	B-1F	C15	A-13C	C175	A-8I	C379	B-6D	C584	B-2J	LC10	B-1G
R730	A-2I	C16	A-12C	C176	B-7I	C380	A-6D	C585	A-2J	LC11	B-1D
R731	A-2I	C17	A-13C	C177	B-7I	C381	B-6D	C586	B-2J	LC12	B-1E
R732	B-2I	C18	B-13D	C178	B-7H	C382	A-7D	C587	B-2J	LC13	B-1F
R733	B-2I	C19	B-11C	C179	A-7I	C383	A-7D	C588	B-2I	LC14	B-1F
R734	B-2H	C20	B-11C	C180	A-6H	C384	B-7D	C589	B-2E	LC15	B-1I
R747	B-1I	C21	A-11D	C181	B-6H	C385	B-8D	C590	A-1E	LC16	B-1J
R748	B-1I	C22	B-13E	C182	B-6H	C386	A-8D	C591	A-1E	LC17	B-3J
R749	A-1I	C23	B-13F	C183	B-6H	C387	B-8D	C592	A-2F	LC18	B-2J
R750	B-1I	C24	A-13F	C184	B-6I	C388	A-8C	C593	B-2B	LC19	B-1C
R755	B-1G	C25	A-13E	C185	B-6I	C389	A-8C	C594	B-1B	LC20	A-3D
R756	B-1G	C26	B-2C	C186	B-6H	C390	B-7C	C595	B-1B	LC21	A-3J
R757	A-2G	C27	A-12D	C187	B-6H	C391	B-7C	C596	A-3D	LC22	B-2C
R758	B-2F	C32	B-11H	C188	B-5H	C392	A-6C	C597	B-1B	LC23	A-11G
R759	A-2F	C33	B-11H	C189	A-5I	C393	B-6C	C598	B-1B	LC24	A-11G
R760	B-2F	C34	A-11H	C190	B-5H	C394	A-6C	C599	A-1B	LC25	B-1B
R761	A-2F	C35	A-11I	C191	A-5H	C395	B-6C	C600	B-1B	LC26	A-10G
R762	B-2F	C36	A-11I	C192	B-5H	C396	B-5B	C601	A-1C	LC27	B-1C
R763	A-3F	C37	B-12I	C193	B-4H	C397	B-5C	C602	A-1B	LC28	B-1C
R764	B-2E	C38	B-11I	C194	B-5I	C398	B-4C	C603	A-1C	LC101	A-8B
R765	B-2E	C39	A-12H	C195	B-5I	C399	B-4D	C604	A-1C	LC102	A-8B
R766	A-3C	C40	B-12H	C196	B-5I	C400	B-6C	C605	B-1C	LC103	A-9B
R767	B-3C	C41	A-12H	C197	A-10I	C401	A-7C	C606	B-1C	LC104	B-8B
R768	B-3C	C42	B-12H	C198	A-10I	C402	B-7C	C607	B-2A		
R769	B-3C	C43	A-12H	C199	A-9I	C403	B-6C	C717	B-2E	K1	A-11J
R770	B-3C	C44	A-12H	C200	A-9J	C404	A-6C			K2	A-11I
R771	B-2I	C45	A-12H	C204	A-8J	C405	B-6C	L1	A-11B	K4	A-1A
R772	B-2I	C46	A-13I	C205	B-7J	C406	A-11D	L2	A-11C		
R773	B-2C	C47	B-13I	C206	B-7J	C407	A-11C	L3	A-13F	X1	A-7G
R774	B-2C	C48	B-12I	C207	A-6I	C408	B-11B	L4	A-11I	X2	A-6F
R775	A-2D	C49	B-12I	C208	B-6I	C409	A-11B	L5	A-11J	X4	A-7F
R776	A-2D	C50	A-11J	C209	B-6I	C410	B-11B	L6	A-12G	X5	A-2I
R778	B-2D	C51	B-11J	C210	B-7J	C411	B-11C	L7	A-12G	X6	A-1E
R779	B-2D	C52	B-11J	C211	A-7J	C412	A-11B	L8	A-12F		
R780	B-2D	C53	B-12G	C212	B-6J	C413	B-11C	L9	A-12G		
R781	B-2D	C54	B-12G	C213	B-6J	C414	A-10D	L10	A-12G		
R782	A-3E	C55	A-11F	C214	A-6J	C415	A-10D	L11	A-12G		
R783	B-2D	C56	B-13F	C215	B-6I	C416	A-9D	L12	A-12G		
R784	B-2D	C57	B-12F	C216	B-5I	C417	A-10D	L13	A-12H		
R785	B-2D	C58	A-13F	C217	B-5J	C418	B-10D	L15	A-8B		
R786	A-2D	C59	B-13G	C218	B-5I	C419	A-10C	L34	A-3J		
R787	B-3D	C60	B-12G	C219	B-5I	C420	B-10B	L49	A-3D		
R788	B-3D	C61	A-13G	C220	B-5J	C421	A-10B	L101	A-9H		
R789	B-3E	C62	B-11G	C221	B-5I	C422	B-10B	L102	A-6F		
R790	A-3E	C66	B-12H	C222	A-4I	C423	B-10C	L104	A-4F		
R791	B-3D	C67	B-11G	C223	B-4I	C424	A-10B	L105	A-5E		
R792	B-3E	C68	B-12G	C224	A-4H	C425	B-10C	L107	A-4H		
R793	A-2E	C69	B-12G	C225	B-3I	C426	B-10C	L108	A-5G		
R794	A-2E	C70	B-13G	C226	B-3I	C427	B-10D	L109	A-8H		
R795	B-3E	C71	B-12G	C227	B-3I	C428	B-8C	L110	A-7I		
R796	A-3E	C72	A-13G	C228	B-3I	C429	A-8C	L111	A-6H		
R800	B-2I	C73	B-13H	C229	A-3I	C430	B-8C	L112	A-5H		
R801	B-2J	C74	B-12H	C230	B-3I	C431	B-10B	L114	A-7J		
R802	B-2I	C75	A-13H	C231	B-3I	C432	A-9C	L115	A-6I		
R803	B-2J	C82	B-8B	C232	A-4J	C433	A-9C	L116	A-3I		
R804	B-2J	C83	B-8B	C233	A-3J	C434	B-9C	L201	A-9F		
R805	A-2I	C85	B-7B	C234	B-6F	C501	A-1F	L202	A-10D		
R806	A-2I	C86	A-7B	C235	B-3J	C502	B-1F	L203	A-10F		
R808	A-3H	C87	B-7B	C236	B-4F	C503	B-1G	L204	A-7E		
R809	A-3H	C88	B-7B	C237	B-4H	C504	B-1D	L205	A-9C		
R810	A-1F	C101	A-10G	C238	A-10F	C505	B-1D	L206	A-4E		
R811	A-3E	C102	B-10G	C252	A-8F	C506	B-1D	L207	A-6D		
R812	A-1F	C103	B-10G	C301	B-8D	C507	B-1E	L208	A-6D		
R813	A-1F	C104	A-9G	C302	B-8D	C508	B-2E	L209	A-8D		
R814	A-1E	C105	A-9G	C303	B-8E	C509	B-2E	L210	A-7C		
R815	A-1E	C106	A-9G	C304	B-8E	C510	B-2E	L211	A-6B		
R818	B-2H	C107	B-9G	C305	A-8E	C511	A-2E	L212	A-11B		
R821	B-7A	C108	A-10G	C306	A-8E	C512	A-2E	L213	A-10B		
R822	A-7B	C109	A-10G	C307	A-8E	C513	B-2E	L214	A-11C		
R823	B-3C	C110	A-10H	C308	A-9E	C514	A-2E	L215	A-10C		
R824	A-1G	C111	B-9G	C309	B-8E	C515	A-2F	L216	A-10D		
R825	A-2H	C112	A-9G	C310	A-8E	C516	B-2G	L218	A-8C		
R826	B-2E	C113	A-8H	C311	A-8D	C517	A-2F	L303	A-3C		
R827	B-1B	C114	B-8H	C312	A-8D	C518	B-2F	L304	A-2D		
R828	B-1B	C115	B-9H	C313	A-9E	C519	B-1F	L305	A-2E		
R829	A-1B	C116	B-6F	C314	B-8E	C520	B-1G	L306	B-1C		
R830	B-1B	C117	B-3J	C315	B-9F	C521	B-1F				
R831	A-1C	C118	A-6F	C316	A-9F	C522	B-1I	TP1	B-12D		
R832	A-1C	C119	B-7F	C317	B-9F	C523	B-1I	TP2	B-13D		
R833	A-1C	C120	A-8F	C318	A-10E	C524	B-1I	TP3	B-12F		
R834	A-1C	C121	A-8G	C319	A-10E	C525	B-2G	TP4	B-12F		
R835	A-2C	C122	A-8G	C320	B-10D	C536	B-2J	TP5	B-11H		
R836	B-1F	C123	B-7G	C321	A-10D	C537	B-1J	TP6	B-8G		
R837	B-2A	C124	A-8G	C322	B-10D	C538	B-2J	TP7	B-8G		
R838	B-2A	C125	B-8G	C323	B-10F	C539	B-2J	TP8	B-6E		
R839	B-1G	C126	B-7G	C324	A-10F	C540	A-2G	TP9	B-6G		
R840	A-2B	C127	A-7G	C325	B-10F	C541	A-3G	TP10	B-6G		
R841	A-3B	C128	A-6G	C326	B-6E	C542	B-3J	TP11	B-6G		
		C129	B-6G	C327	A-5E	C543	A-3C	TP12	B-6F		
VR1	B-13D	C130	B-6G	C328	A-6E	C544	A-3C	TP13	B-7D		
VR2	B-12H	C131	A-6G	C329	A-6E	C547	B-3C	TP14	B-9E		

4.9 AUDIO S/S SCHEMATIC DIAGRAM 1 3 (1/3)

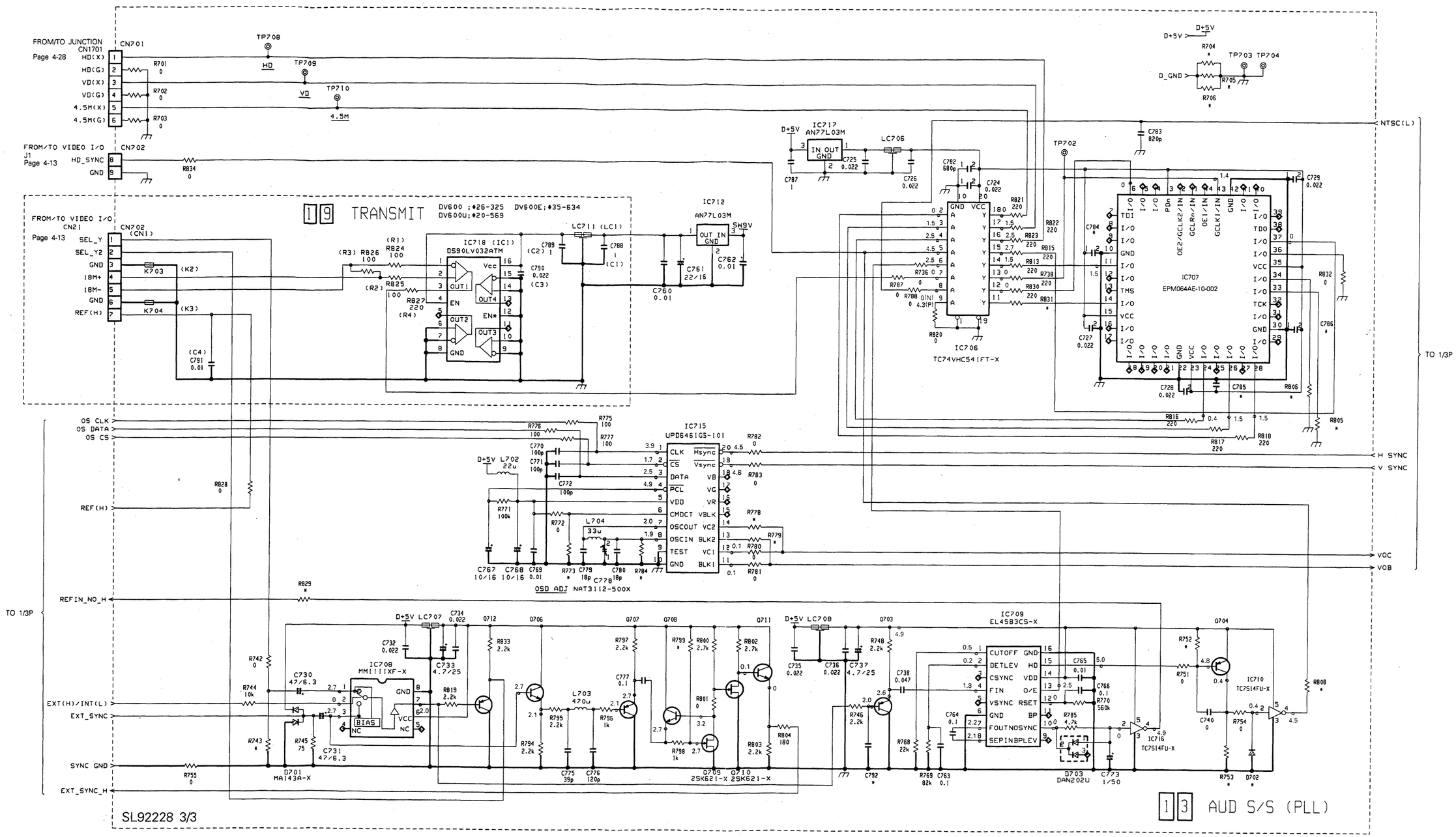


✳ : Not mounted.

· AUDIO S/S SCHEMATIC DIAGRAM 1 3 (2/3)

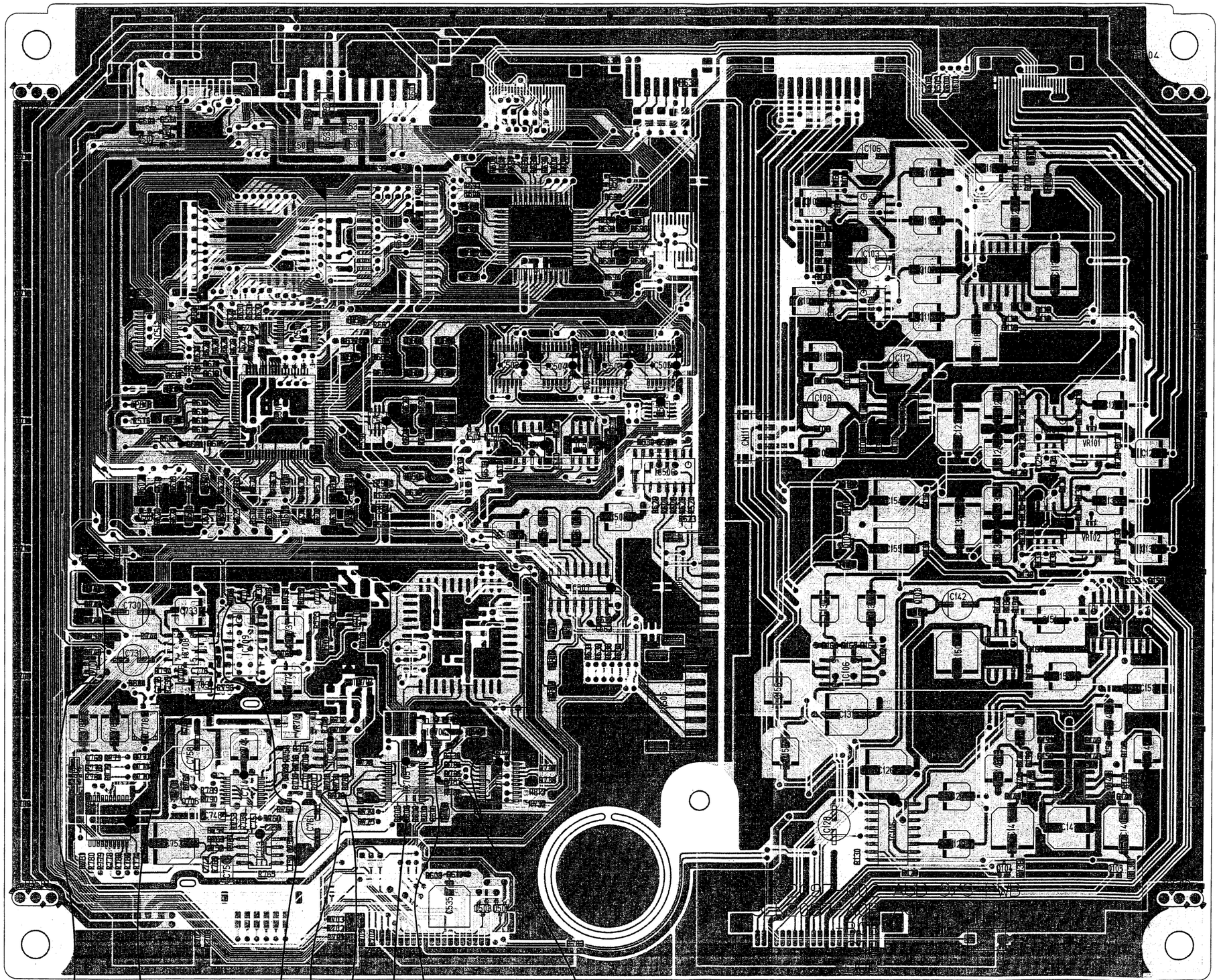


· AUDIO S/S SCHEMATIC DIAGRAM 13 (3/3)



✳ : Not mounted.

– SIDE A –



● **ADDRESS TABLE OF BOARD PARTS**
Each address may have an address error by one interval.

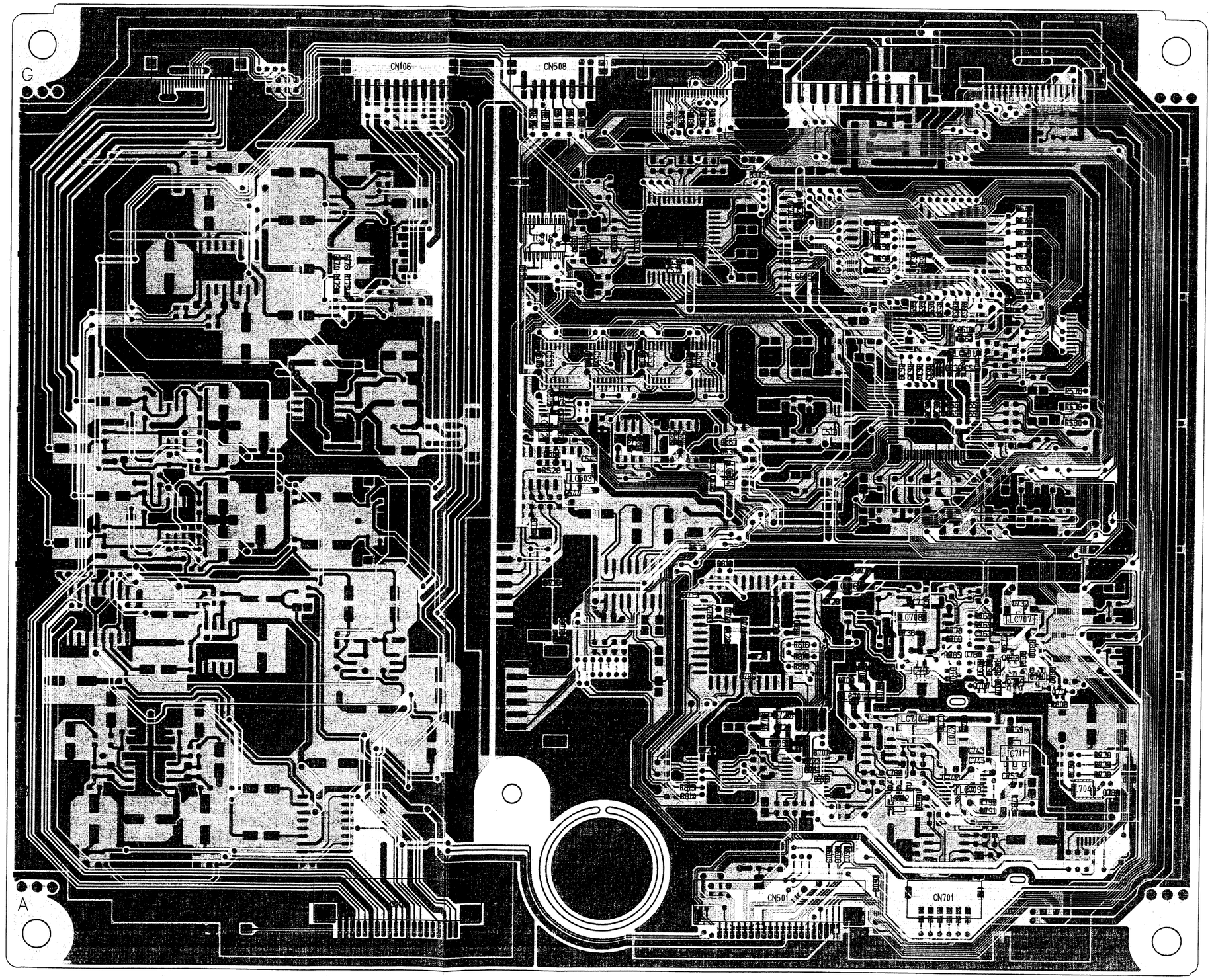
A-1C
Side — Y axis
X axis

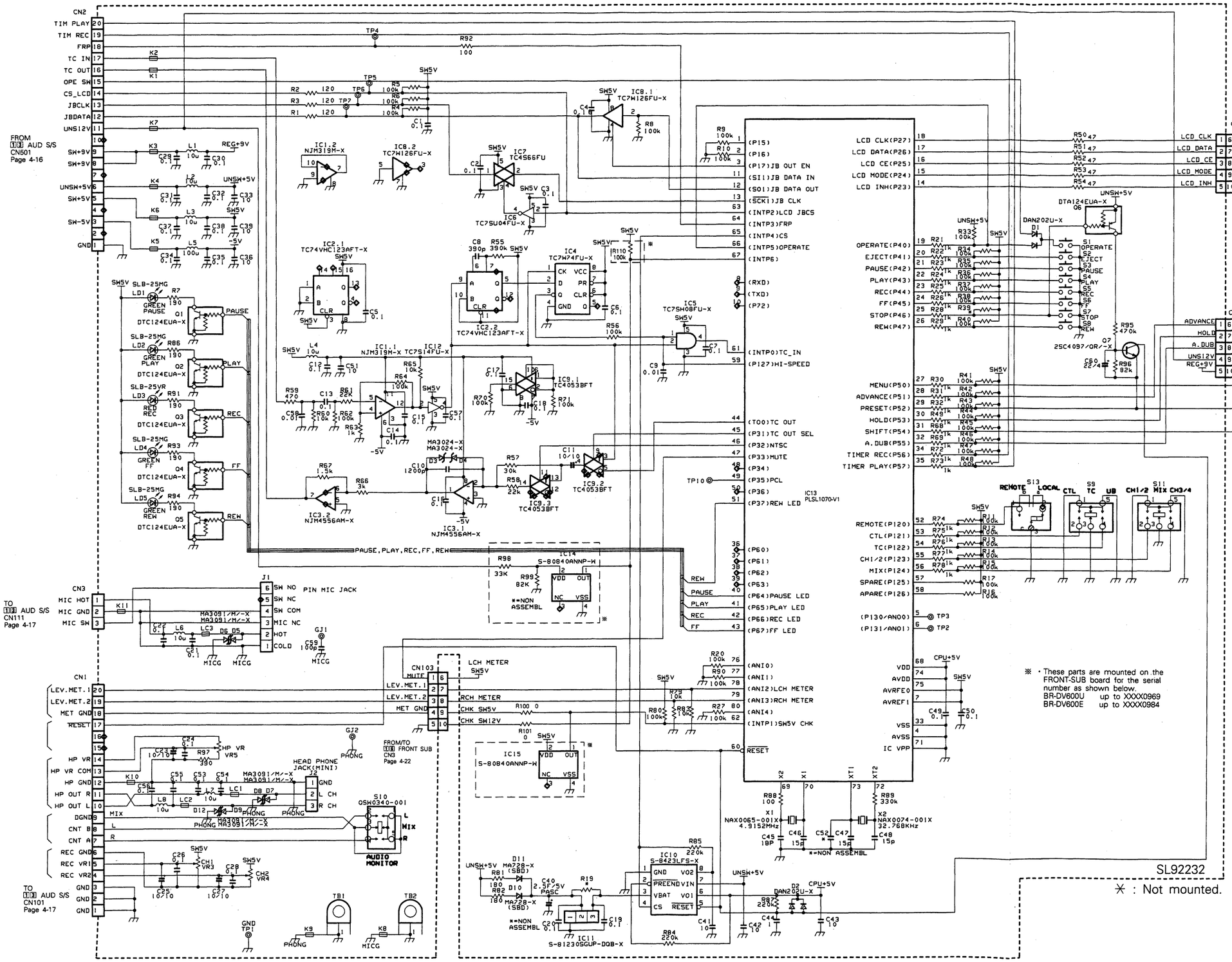
IC101	A-7E	R112	A-8E	R519	A-2D	R601	A-4G	R764	A-3A
IC102	A-7F	R113	A-7E	R520	A-2D	R602	A-3D	R765	A-3A
IC103	A-7E	R114	A-7E	R521	A-2D	R603	A-5F	R766	A-2B
IC104	A-7F	R115	A-8E	R522	A-2D	R604	A-5F	R767	A-2B
IC105	A-7B	R116	A-7D	R523	A-5D	R605	A-3D	R768	B-3C
IC106	A-6C	R117	A-7D	R524	A-5D	R606	A-4F	R769	B-3C
IC107	A-8D	R118	A-8E	R525	A-5D	R607	A-5D	R770	B-3C
IC108	A-8D	R119	A-8E	R526	A-5D	R608	B-3A	R771	A-2B
IC109	A-8B	R120	A-7E	R527	A-5D	R609	A-4A	R772	A-2B
IC110	A-7C	R121	A-8D	R528	B-5D	R610	A-4A	R773	A-2B
IC111	A-8C	R122	A-7E	R529	A-5D	R611	A-4F	R774	A-2A
IC501	A-3E	R123	A-7D	R530	A-5D	R613	A-2D	R775	B-2B
IC502	A-4E	R124	A-8D	R531	A-5C	R614	A-2E	R776	B-2B
IC503	A-5E	R125	A-8D	R532	A-5C	R615	A-2E	R777	B-2B
IC504	A-5E	R126	A-7D	R533	A-5C	R616	A-2D	R778	A-2A
IC505	A-5E	R127	A-8D	R534	A-5C	R617	A-2E	R779	A-2A
IC506	A-5D	R128	A-8D	R535	B-4D	R618	A-3E	R780	A-2A
IC507	A-5C	R129	A-7A	R536	A-3D	R619	A-2E	R781	A-2A
IC508	A-5D	R130	A-6A	R537	A-3D	R620	A-3E	R782	A-2A
IC509	A-3E	R131	A-8D	R538	A-4D	R621	A-2E	R783	A-2A
IC510	A-4D	R132	A-8D	R539	A-4D	R622	A-3E	R784	A-2B
IC511	A-4D	R133	A-7D	R540	A-5D	R623	A-3E	R785	B-3C
IC512	A-2E	R134	A-7D	R541	A-5D	R624	A-3E	R786	A-3B
IC513	A-3F	R135	A-7D	R542	B-2F	R625	A-3E	R787	A-4B
IC514	A-4F	R136	A-8C	R543	B-2F	R626	A-3E	R788	A-4B
IC515	A-5F	R137	A-8C	R544	B-2F	R627	A-3E	R789	A-3B
IC516	A-5E	R138	A-8C	R545	B-2F	R628	A-3E	R790	A-3B
IC517	A-4D	R139	A-8D	R546	B-2F	R629	A-3E	R791	B-3B
IC518	B-5F	R140	A-8D	R547	B-2F	R630	A-3E	R792	B-3B
IC703	A-3B	R141	A-8B	R548	B-2F	R631	A-3E	R793	B-2B
IC704	A-4B	R142	A-7B	R549	B-2E	R632	A-3E	R794	A-2C
IC705	A-4B	R143	A-7C	R550	B-3E	R633	B-3E	R795	A-2C
IC706	A-4B	R144	A-8B	R551	B-3E	R634	B-3E	R796	A-3C
IC707	A-4C	R145	A-8B	R552	B-3E	R635	B-3E	R797	B-3C
IC708	A-2C	R146	A-7B	R553	B-3E	R636	B-3E	R798	B-3C
IC709	A-3C	R147	A-7B	R554	B-3F	R637	A-5G	R799	B-3C
IC710	A-3C	R148	A-8B	R555	B-3E	R638	A-5G	R800	B-2C
IC711	B-2B	R149	A-8B	R556	B-3E	R701	A-3A	R801	B-2C
IC712	B-3B	R150	A-8B	R557	B-3F	R702	A-3A	R802	B-2C
IC713	A-3A	R151	A-8B	R558	B-3F	R703	A-3A	R803	B-2B
IC714	A-3B	R152	A-8B	R559	B-3F	R704	A-2D	R804	A-2C
IC715	A-2B	R153	A-8B	R560	A-2D	R705	A-2D	R805	A-4B
IC716	B-3C	R154	A-7C	R561	A-2D	R706	A-2D	R806	A-4B
		R155	A-8C	R562	A-4D	R711	A-3B	R807	A-3B
Q101	A-6D	R156	A-8C	R563	A-4E	R712	A-3B	R808	A-3C
Q102	A-6D	R157	A-8C	R564	A-4E	R713	A-3B	R809	A-4B
Q103	A-7C	R158	A-6E	R565	A-4E	R714	A-3B	R810	A-4B
Q104	A-7A	R159	A-6E	R566	A-4E	R715	A-3B	R811	A-4B
Q105	A-8A	R160	A-6F	R567	A-4E	R716	A-3B	R812	B-4C
Q501	A-2G	R161	A-6F	R568	A-4D	R717	A-3B	R813	A-5B
Q502	A-2G	R162	A-7C	R569	A-4D	R724	A-3B	R814	B-4B
Q503	A-5F	R163	A-7C	R570	A-3D	R725	A-3B	R815	B-4B
Q504	A-4D	R164	A-6C	R571	A-3D	R726	A-3B	R816	B-4C
Q703	A-3C	R165	A-6C	R572	A-3D	R728	A-3B	R817	B-4C
Q704	A-3C	R166	A-7C	R573	A-3D	R732	A-5B	R818	B-4C
Q705	A-2B	R167	A-8C	R574	A-3D	R733	A-4B		
Q706	A-2C	R169	A-7F	R575	A-3D	R734	A-4B	VR101	A-8D
Q707	B-3C	R170	A-7F	R576	A-2D	R735	A-3B	VR102	A-8D
Q708	B-2C	R171	A-7F	R577	A-3E	R736	A-4B	VR701	A-3B
Q709	B-2C	R172	A-8F	R578	B-2E	R737	A-5B		
Q710	B-2C	R173	B-7E	R579	B-2E	R738	A-5B	C101	A-6E
Q711	B-2C	R174	B-7F	R580	B-2D	R740	B-4C	C102	A-7F
		R175	B-7E	R581	A-5F	R741	B-4C	C103	A-7F
D501	A-2D	R176	B-7F	R582	B-5G	R742	A-2C	C104	A-6F
D502	A-2D	R501	A-7G	R583	B-4G	R743	A-2C	C105	A-7F
D503	A-4A	R502	A-7G	R584	B-4G	R744	A-2C	C106	A-7F
D504	A-4A	R503	A-7G	R585	B-4G	R745	A-2C	C107	A-6D
D701	A-2C	R504	A-7G	R586	A-5F	R746	A-3C	C108	A-6E
D702	A-3C	R505	B-4A	R587	A-5F	R748	A-3C	C109	A-7E
D703	B-3C	R506	B-4A	R588	A-5F	R751	A-3C	C110	A-7E
		R507	B-3A	R589	A-5F	R752	A-3C	C111	A-6E
R101	A-6F	R508	B-5G	R590	A-5F	R753	A-3C	C112	A-7E
R102	A-6F	R509	B-5G	R591	A-4F	R754	A-3C	C113	A-7E
R103	A-6F	R510	B-5G	R592	A-4F	R755	A-2C	C114	A-7F
R104	A-6F	R511	B-5G	R593	A-5F	R756	A-3B	C115	A-7E
R105	A-6F	R512	B-5G	R594	A-5F	R757	A-3B	C116	A-7E
R106	A-6D	R513	A-2G	R595	A-5F	R758	A-3B	C117	A-8F
R107	A-7D	R514	A-2G	R596	B-5G	R759	A-3B	C118	A-7E
R108	A-7D	R515	A-2F	R597	A-4F	R760	A-3B	C119	A-7F
R109	A-7D	R516	A-5E	R598	B-3F	R761	A-3B	C120	A-7F
R110	A-6E	R517	A-5E	R599	A-4F	R762	A-3A	C121	A-8E
R111	A-6E	R518	A-2D	R600	A-4F	R763	A-3A	C122	A-7E

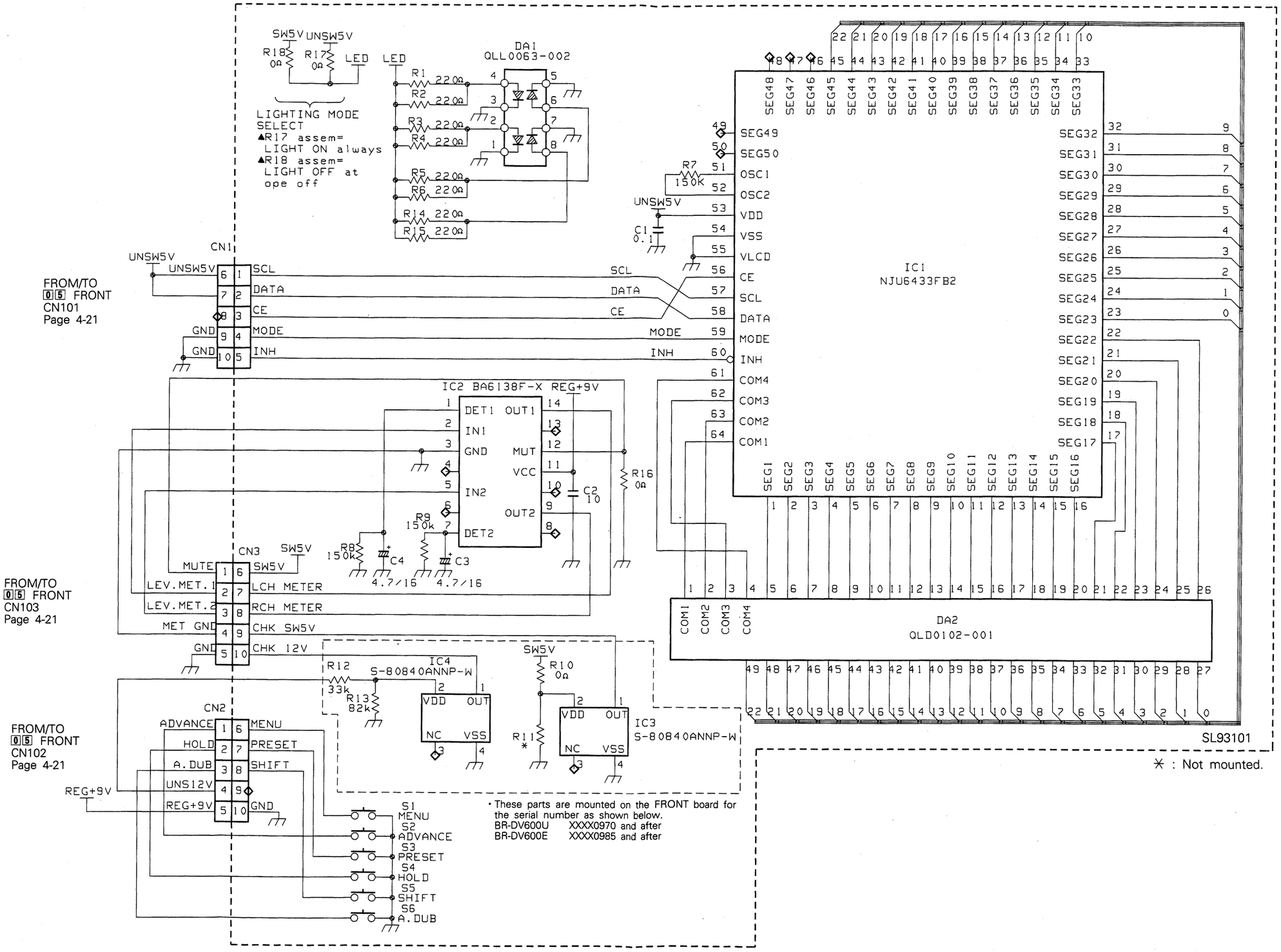
4-19

— SIDE B —

C123	A-7D	C551	B-5E	C777	B-3C	B701	B-4B
C124	A-7D	C552	B-5E	C778	A-2B	B702	B-4B
C125	A-8D	C553	B-5E	C779	B-2B	B703	A-5A
C126	A-7B	C554	B-5F	C780	B-2B	B704	A-4A
C127	A-7B	C555	B-6F	C781	B-4B	B705	A-3A
C128	A-6B	C556	A-3D	C782	A-4B	B706	A-3A
C129	A-7A	C557	B-3E	C783	B-4C	B707	A-2A
C130	A-6C	C558	B-3E	C784	B-4C	B708	A-1B
C131	A-6B	C559	B-3E	C785	B-4C	B709	A-1C
C132	A-7C	C560	B-3E	C786	B-4C	B710	A-1D
C133	A-8D	C561	B-5D			B711	A-1D
C134	A-7D	C562	A-5C	L501	A-3F	B712	A-1E
C135	A-7D	C563	B-3E	L702	A-2B	B713	A-1F
C136	A-7D	C564	B-5D	L703	A-2C	B714	B-5D
C137	A-8D	C565	B-5D	L704	B-2B	B715	B-5C
C138	A-8A	C566	B-5D			B716	B-5C
C139	A-7A	C567	B-4D	TP101	A-8F	B717	B-4C
C140	A-8B	C568	A-2E	TP102	A-8F	B718	B-6F
C141	A-7B	C569	B-3F	TP103	A-6D	B719	B-4F
C142	A-7C	C570	B-4F	TP104	A-6C		
C143	A-8B	C571	B-5F	TP105	A-7C	VA501	A-2G
C144	A-8B	C701	B-3C	TP501	A-3D		
C145	A-8B	C702	B-3C	TP502	A-3D	TB501	A-1A
C146	A-7B	C703	B-3C	TP503	A-4D	TB502	A-1G
C147	A-8B	C708	A-3B	TP504	A-4D	TB503	A-8A
C148	A-7B	C709	A-3B	TP505	A-4D	TB504	A-8G
C149	A-8B	C710	A-3B	TP506	A-4E		
C150	A-7C	C720	B-4B	TP507	A-4E	LC501	B-3E
C151	A-8C	C721	B-4B	TP508	A-4E	LC502	B-5D
C152	A-8C	C722	B-4B	TP509	A-4E	LC503	B-5D
C153	A-8C	C723	B-4B	TP510	A-2D	LC504	B-4D
C154	A-7D	C724	B-4B	TP511	A-3D	LC505	B-4F
C155	A-7D	C725	B-3C	TP512	A-3D	LC701	B-3B
C156	A-6C	C726	B-4C	TP513	A-5C	LC705	B-4B
C157	A-6B	C727	B-4C	TP514	A-5C	LC706	B-3C
C501	A-2G	C728	B-4C	TP515	A-5C	LC707	B-2C
C502	B-5E	C729	B-4C	TP516	A-5C	LC708	B-3C
C503	B-4E	C730	A-2C	TP517	A-2E	LC709	B-3B
C504	B-5E	C731	A-2C	TP518	A-2E	LC710	B-3B
C505	B-5E	C732	B-2C	TP519	A-2E		
C506	B-5E	C733	A-2C	TP520	A-3D	X501	A-4D
C507	A-5D	C734	B-3C	TP521	A-3D		
C508	A-5D	C735	B-3C	TP522	A-5F	S501	A-7A
C509	A-4D	C736	B-3C	TP523	A-5F		
C510	A-5D	C737	A-3C	TP524	A-5F		
C511	A-5D	C738	A-3C	TP525	A-3E		
C512	A-5C	C740	A-3C	TP526	A-3E		
C513	B-5D	C742	B-3B	TP527	A-4F		
C514	A-4D	C743	B-3B	TP528	A-3G		
C515	A-4D	C744	A-3B	TP529	A-2E		
C516	B-3E	C745	B-3B	TP530	A-4F		
C517	B-3E	C746	B-3B	TP531	A-4F		
C518	A-3D	C747	A-3A	TP532	A-4F		
C519	B-4D	C748	A-3B	TP533	A-4F		
C520	A-4E	C749	A-3B	TP702	A-4B		
C521	A-4D	C750	A-3A	TP703	A-2C		
C522	B-3E	C751	A-3B	TP704	A-3C		
C523	B-3E	C752	A-3A	TP705	A-2B		
C524	A-3D	C753	A-2A	TP708	A-4B		
C525	A-3D	C754	A-3A				
C526	A-3D	C755	A-3B	K501	A-3F		
C527	B-3F	C756	A-3A	K502	A-3G		
C528	B-4F	C757	B-2B	K701	B-3B		
C529	A-5E	C758	A-2B				
C530	B-5F	C759	B-2B	CN101	B-6A		
C531	B-4D	C760	B-3B	CN106	B-6G		
C532	A-3G	C761	A-3B	CN110	B-8G		
C533	A-3G	C762	B-3B	CN111	A-6D		
C534	A-3D	C763	B-3C	CN501	B-4A		
C535	A-4A	C764	B-3C	CN502	B-4G		
C539	B-3E	C765	A-3C	CN504	B-2G		
C540	B-3E	C766	B-3C	CN505	A-5B		
C541	B-5D	C767	A-2B	CN506	A-5C		
C542	B-5E	C768	A-2B	CN507	B-3G		
C543	B-5D	C769	A-2B	CN508	B-5G		
C544	B-5D	C770	A-2B	CN701	B-3A		
C545	B-4D	C771	A-2B				
C546	B-4D	C772	A-2B	B501	B-4F		
C547	B-4E	C773	A-3C	B502	B-5F		
C548	B-4F	C774	B-3B	B503	B-5F		
C549	B-5E	C775	A-2C	B504	B-5F		
C550	B-4E	C776	A-2C	B505	B-5F		



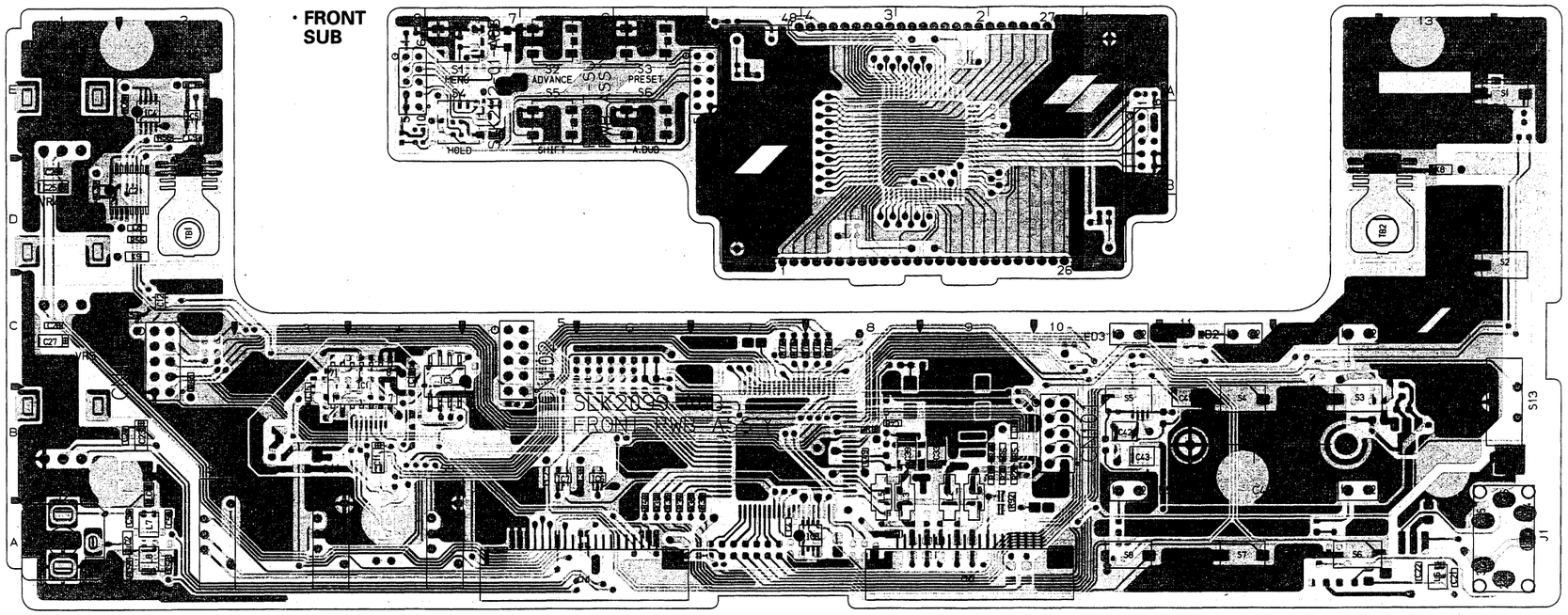

CN2
TIM PLAY
TIM REC
FRP
TC IN
TC OUT
OPE SW
CS_LCD
JBCLK
JBDATA
UNS12V
SW+9V
SW+9V
UNSW+5V
SW+5V
SW-5V
GND
FROM 13 AUD S/S CN501 Page 4-16
REG+9V
UNSW+5V
-5V
SW5V
TP4
TP5
TP6
TP7
R92 100
R2 120
R3 120
R1 120
R5 100k
R6 100k
R4 100k
C1 0.1
IC8.1 TC7W126FU-X
IC8.2 TC7W126FU-X
IC1.2 NJM319M-X
IC7 TC4S66FU
IC6 TC7SU04FU-X
IC2.1 TC74VHC123AFT-X
IC2.2 TC74VHC123AFT-X
IC4 TC7W74FU-X
IC5 TC7SH08FU-X
IC1.1 NJM319M-X
IC12 TC7S14FU-X
IC9.1 TC4053BFT
IC9.2 TC4053BFT
IC9.3 TC4053BFT
IC3.2 NJM4556AM-X
IC3.1 NJM4556AM-X
MA3024-X
IC13 PLSL1070-V1
TP10
R9 100k
R10 100k
R110 100k
(P15)
(P16)
(P17)JB OUT EN
(SI1)JB DATA IN
(SO1)JB DATA OUT
(SCK1)JB CLK
(INTP2)LCD JBCS
(INTP3)FRP
(INTP4)CS
(INTP5)OPERATE
(INTP6)
(RXD)
(TXD)
(P72)
(INTP0)TC_IN
(P127)HI-SPEED
(T00)TC OUT
(P31)TC OUT SEL
(P32)NTSC
(P33)MUTE
(P34)
(P35)PCL
(P36)
(P37)REW LED
(P60)
(P61)
(P62)
(P63)
(P64)PAUSE LED
(P65)PLAY LED
(P66)REC LED
(P67)FF LED
REW
PAUSE
PLAY
REC
FF
PAUSE,PLAY,REC,FF,REW
IC14 S-80840ANNP-W
R98 33K
R99 82K
*=NON ASSEMBL
LCD CLK(P27)
LCD DATA(P26)
LCD CE(P25)
LCD MODE(P24)
LCD INH(P23)
R50 47
R51 47
R52 47
R53 47
R54 47
CN101
LCD CLK
LCD DATA
LCD CE
LCD MODE
LCD INH
TO 16 FRONT SUB CN1 Page 4-22
DTA124EUA-X Q6
DAN202U-X D1
S1 OPERATE
S2 EJECT
S3 PAUSE
S4 PLAY
S5 REC
S6 FF
S7 STOP
S8 REW
OPERATE(P40)
EJECT(P41)
PAUSE(P42)
PLAY(P43)
REC(P44)
FF(P45)
STOP(P46)
REW(P47)
R95 470k
Q7 2SC4097/QR/-X
R96 82k
C60 22
CN102
ADVANCE
HOLD
A.DUB
UNS12V
REG+9V
MENU
PRESET
SHIFT
TO 16 FRONT SUB CN2 Page 4-22
MENU(P50)
ADVANCE(P51)
PRESET(P52)
HOLD(P53)
SHIFT(P54)
A.DUB(P55)
TIMER REC(P56)
TIMER PLAY(P57)
S13 REMOTE LOCAL
S9 CTL TC UB
S11 CH1/2 MIX CH3/4
REMOTE(P120)
CTL(P121)
TC(P122)
CH1/2(P123)
MIX(P124)
SPARE(P125)
APARE(P126)
(P130/AN00)
(P131/AN01)
TP3
TP2
VDD
AVDD
AVREF0
AVREF1
VSS
AVSS
IC VPP
CPU+5V
RESET
(ANI0)
(ANI1)
(ANI2)LCH METER
(ANI3)RCH METER
(ANI4)
(INTP1)SW5V CHK
X1 NAX0065-001X 4.9152MHz
X2 NAX0074-001X 32.768KHz
C45 18P
C46 15p
C52 * 15p
C47 15p
C48 15p
*=NON ASSEMBL
SLB-25MG LD1 GREEN PAUSE Q1 DTC124EUA-X PAUSE
LD2 GREEN PLAY Q2 PLAY
SLB-25VR LD3 RED REC Q3 REC
LD4 GREEN FF Q4 FF
LD5 GREEN REW Q5 REW
R7 190
R86 190
R91 190
R93 190
R94 190
CN3
MIC HOT
MIC GND
MIC SW
TO 13 AUD S/S CN111 Page 4-17
J1 PIN MIC JACK
SW NO
SW NC
SW COM
MIC NC
HOT
COLD
MA3091/MZ-X
MICG
GJ1
CN1
LEV.MET.1
LEV.MET.2
MET GND
RESET
HP VR
HP VR COM
HP GND
HP OUT R
HP OUT L
DGND
CNT B
CNT A
REC GND
REC VR1
REC VR2
GND
TO 13 AUD S/S CN101 Page 4-17
CN103
MUTE
LEV.MET.1
LEV.MET.2
MET GND
CHK SW5V
CHK SW12V
LCH METER
RCH METER
FROM/TO 18 FRONT SUB CN3 Page 4-22
GJ2 PHONG
HEAD PHONE JACK(MINI) J2
GND
L CH
R CH
S10 QSW0340-001
AUDIO MONITOR
MIX
L
R
CH1 VR3
CH2 VR4
TB1
TB2
K9
K8
GND TP1
IC15 S-80840ANNP-W
IC10 S-8423LFS-X
IC11 S-81230SGUP-DOB-X
D11 MA728-X (SBD)
D10 MA728-X (SBD)
D2 DAN202U-X
R88 100
R89 330k
R85 220k
R84 220k
SL92232
※ : Not mounted.
※ • These parts are mounted on the FRONT-SUB board for the serial number as shown below.
BR-DV600U up to XXXX0969
BR-DV600E up to XXXX0984


SW5V UNSW5V
R18 0Ω
R17 0Ω
LED
LED
LIGHTING MODE SELECT
▲R17 assem= LIGHT ON always
▲R18 assem= LIGHT OFF at ope off
DA1 QLL0063-002
R1 220Ω
R2 220Ω
R3 220Ω
R4 220Ω
R5 220Ω
R6 220Ω
R14 220Ω
R15 220Ω
IC1 NJU6433FB2
SEG48 SEG47 SEG46 SEG45 SEG44 SEG43 SEG42 SEG41 SEG40 SEG39 SEG38 SEG37 SEG36 SEG35 SEG34 SEG33
SEG49 SEG50 OSC1 OSC2 VDD VSS VLCD CE SCL DATA MODE INH COM4 COM3 COM2 COM1
SEG32 SEG31 SEG30 SEG29 SEG28 SEG27 SEG26 SEG25 SEG24 SEG23 SEG22 SEG21 SEG20 SEG19 SEG18 SEG17
SEG1 SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16
R7 150k
C1 0.1
UNSW5V
DA2 QLD0102-001
COM1 COM2 COM3 COM4
CN1
UNSW5V SCL DATA CE MODE INH GND GND
FROM/TO 05 FRONT CN101 Page 4-21
SCL DATA CE MODE INH
IC2 BA6138F-X REG+9V
DET1 OUT1 IN1 GND MUT VCC IN2 OUT2 DET2
R16 0Ω
C2 10
R9 150k
R8 150k
C4 4.7/16
C3 4.7/16
CN3 SW5V
MUTE SW5V
LEV.MET.1 LCH METER
LEV.MET.2 RCH METER
MET GND CHK SW5V
GND CHK 12V
FROM/TO 05 FRONT CN103 Page 4-21
IC4 S-80840ANNP-W
R12 33k
R13 82k
SW5V
R10 0Ω
R11 *
IC3 S-80840ANNP-W
VDD OUT NC VSS
CN2
ADVANCE MENU HOLD PRESET A.DUB SHIFT UNS12V REG+9V REG+9V GND
FROM/TO 05 FRONT CN102 Page 4-21
S1 MENU
S2 ADVANCE
S3 PRESET
S4 HOLD
S5 SHIFT
S6 A.DUB
• These parts are mounted on the FRONT board for the serial number as shown below.
BR-DV600U XXXX0970 and after
BR-DV600E XXXX0985 and after
SL93101
✳ : Not mounted.

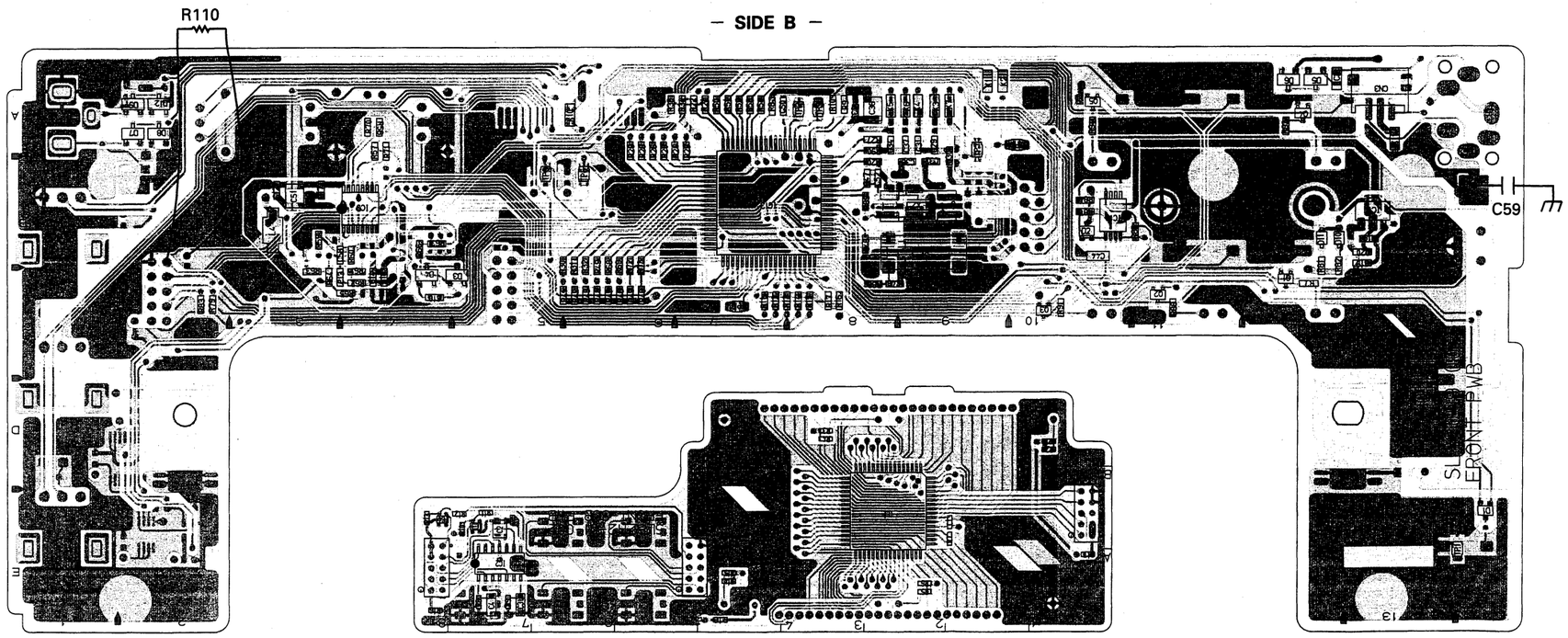
4.13 FRONT, FRONT SUB CIRCUIT BOARD

• **FRONT**

— SIDE A —



— SIDE B —

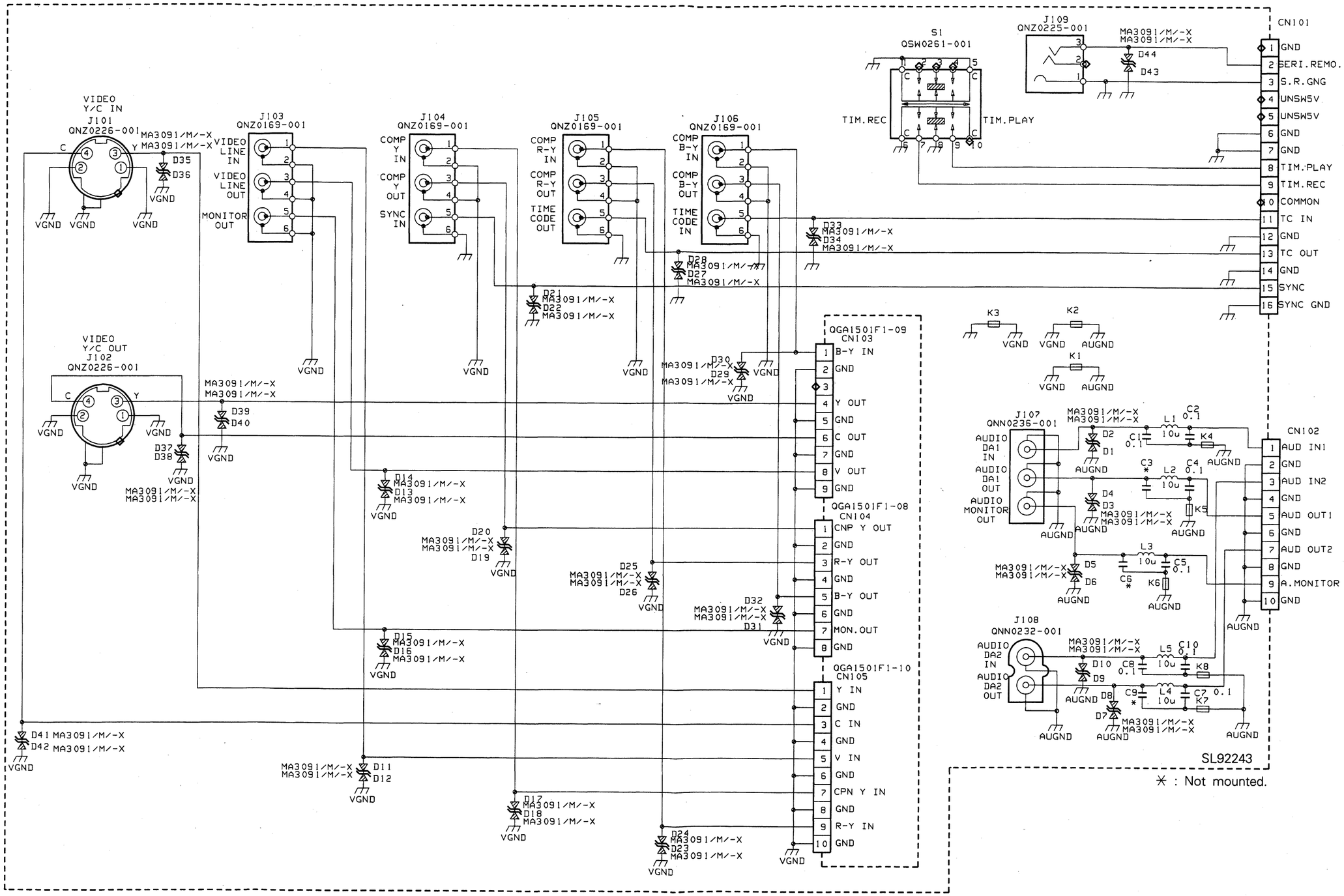


● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

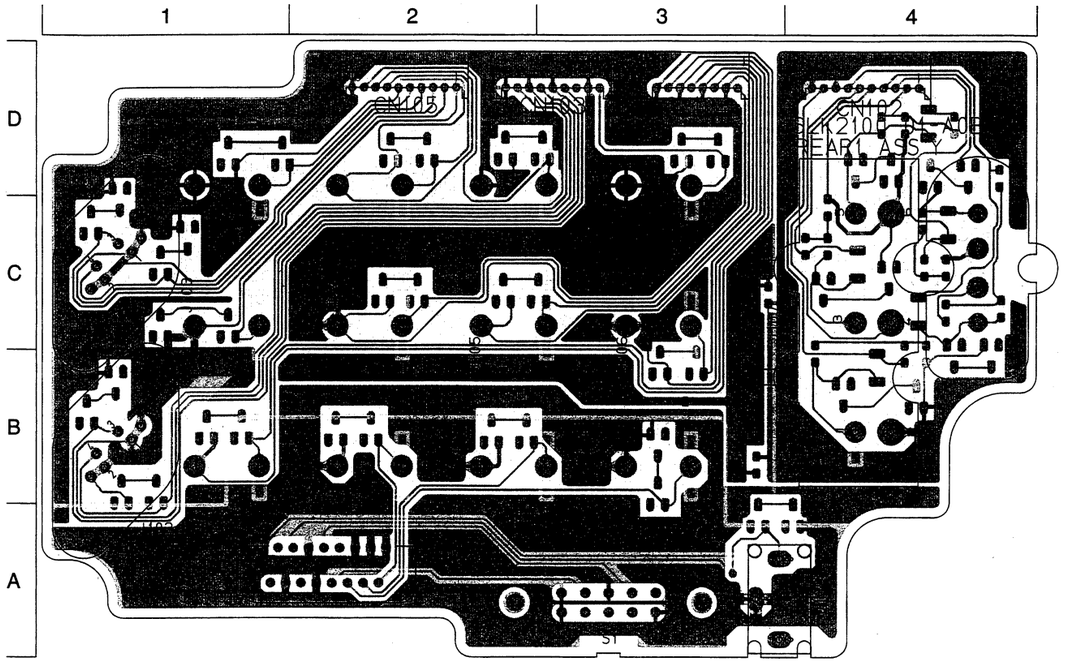
Side — A-1C — Y axis / X axis

IC1	A-3B	R43	B-6C	C19	B-13B	K3	B-9A
IC2	A-2D	R44	B-6C	C20	B-13B	K4	B-9A
IC3	A-4B	R45	B-6C	C21	A-13A	K5	B-9A
IC4	A-2E	R46	B-6C	C22	A-13A	K6	B-9A
IC5	A-2E	R47	B-6C	C23	A-2B	K7	B-9A
IC6	A-6B	R48	B-6C	C24	A-2B	K8	A-13D
IC7	A-5B	R49	B-6B	C25	A-1D	K9	A-2C
IC8	A-8A	R50	B-7A	C26	A-1D	K10	B-6A
IC9	B-4B	R51	B-7A	C27	A-1C	K11	B-13A
IC10	B-11B	R52	B-7A	C28	A-1C		
IC11	B-13B	R53	B-7A	C29	B-9A	X1	B-9B
IC12	A-2C	R54	B-7A	C30	B-9A	X2	B-9B
IC13	B-7B	R55	A-2D	C31	B-9A		
		R56	A-2D	C32	B-9A	S1	A-14E
Q1	B-12B	R57	B-4A	C33	A-9B	S2	A-14C
Q2	B-11C	R58	B-4A	C34	B-9A	S3	A-13B
Q3	B-10C	R59	B-3B	C35	B-8A	S4	A-12B
Q4	B-12A	R60	B-4B	C36	B-8A	S5	A-11B
Q5	B-10A	R61	B-4B	C37	B-9A	S6	A-13A
		R62	B-4B	C38	B-9A	S7	A-12A
D1	B-14D	R63	B-3B	C39	A-9B	S8	A-11A
D2	B-10B	R64	B-3B	C40	A-13B	S9	A-4A
D3	B-5B	R65	B-4C	C41	A-11B	S10	A-2A
D4	B-4B	R66	B-4B	C42	A-11B	S11	A-3A
D5	B-13A	R67	B-4B	C43	A-11B	S13	A-14B
D6	B-12A	R68	B-6B	C44	B-11B		
D7	B-2A	R69	B-6B	C45	B-9C	J1	A-14A
D8	B-2A	R70	B-4A	C46	B-8B	J2	A-1A
D9	B-2A	R71	B-4A	C47	B-8B		
D10	B-13B	R72	B-6B	C48	A-8B	LD1	A-13C
D11	B-13B	R73	B-6B	C49	A-8B	LD2	A-11C
D12	B-2A	R74	A-7C	C50	B-8A	LD3	A-10C
		R75	A-8C	C51	B-3B	LD4	A-13A
R1	A-9B	R76	A-8C	C52	B-8B	LD5	A-10A
R2	A-10B	R77	A-8C	C53	A-2A		
R3	A-9B	R78	A-8C	C54	A-2A	GJ1	B-14B
R4	A-9B	R79	B-2C	C55	A-2A	GJ2	B-2B
R5	A-10B	R80	A-2B	C56	A-2A		
R6	A-9B	R81	B-13B	C57	A-2C		
R7	B-12C	R82	B-13B	C58	B-4B		
R8	B-8A	R83	B-2C				
R9	B-8A	R84	B-10B	L1	A-9A		
R10	B-8A	R85	B-11B	L2	A-9A		
R11	B-7C	R86	B-11C	L3	A-9A		
R12	B-8C	R87	B-10B	L4	B-3B		
R13	B-8C	R88	B-8C	L5	A-8A		
R14	B-8C	R89	B-8B	L6	A-13A		
R15	B-8C	R90	B-8A	L7	A-2A		
R16	B-8C	R91	B-10C	L8	A-2A		
R17	B-8C	R92	A-10A				
R18	A-8B	R93	B-12A	TP1	B-14E		
R19	B-13B	R94	B-10A	TP2	B-8A		
R20	B-8A			TP3	B-8A		
R21	B-7A	VR3	A-1E	TP4	B-10A		
R22	B-7A	VR4	A-1C	TP5	B-6B		
R23	B-7A	VR5	A-1B	TP6	B-5B		
R24	B-7A			TP7	B-9A		
R25	B-7A	C1	A-10B	TP10	B-7C		
R26	B-6A	C2	A-5B				
R27	B-8A	C3	A-6B	LC1	A-2A		
R28	B-6A	C4	A-7A	LC2	A-2A		
R29	B-6A	C5	A-1D	LC3	B-13A		
R30	B-6B	C6	A-2E				
R31	B-6B	C7	A-2E	TB1	A-2D		
R32	B-6B	C8	A-2D	TB2	A-13D		
R33	B-7A	C9	A-2D				
R34	B-7A	C10	B-4C	CN1	A-6A		
R35	A-7A	C11	A-4B	CN2	A-9A		
R36	A-7A	C12	B-3B	CN3	B-13A		
R37	A-7A	C13	B-4B	CN101	A-10B		
R38	A-6A	C14	B-4B	CN102	A-5C		
R39	A-6A	C15	A-3B	CN103	A-2C		
R40	A-6A	C16	A-4B				
R41	B-6C	C17	B-3B	K1	B-10A		
R42	B-6C	C18	B-4B	K2	B-10A		

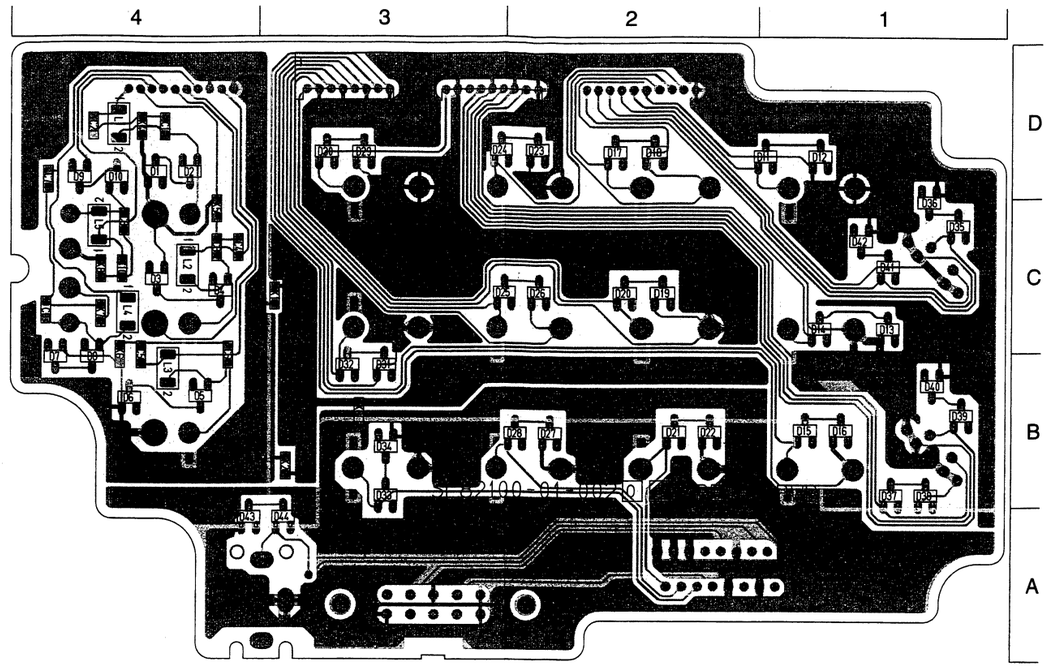

VIDEO Y/C IN
J101 QNZ0226-001
J103 QNZ0169-001
J104 QNZ0169-001
J105 QNZ0169-001
J106 QNZ0169-001
S1 QSW0261-001
TIM.REC
TIM.PLAY
J109 QNZ0225-001
CN101
FROM/TO 13 AUD S/S CN504 Page 4-16
VIDEO Y/C OUT
J102 QNZ0226-001
QGA1501F1-09 CN103
QGA1501F1-08 CN104
QGA1501F1-10 CN105
J107 QNN0236-001
J108 QNN0232-001
CN102
FROM/TO 13 AUD S/S CN106 Page 4-17
SL92243
* : Not mounted.

4.15 REAR1 CIRCUIT BOARD

— SIDE A —



— SIDE B —



● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

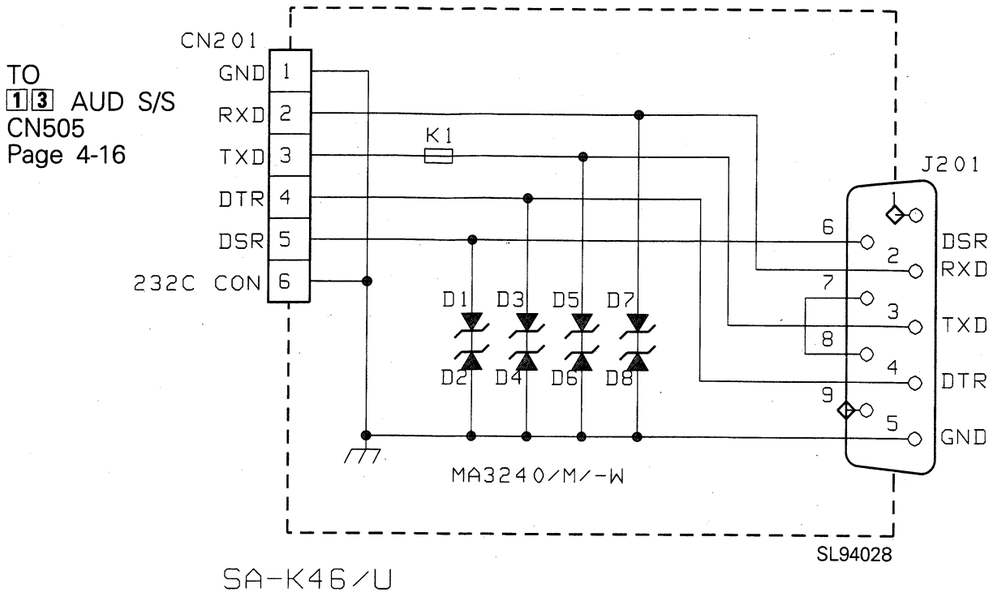
Side — A-1C (Y axis, X axis)

D1	B-4D	D28	B-2B	C10	B-4C	CN101	A-1A
D2	B-4D	D29	B-3D			CN102	A-4D
D3	B-4C	D30	B-3D	L1	B-4D	CN103	A-3D
D4	B-4C	D31	B-3B	L2	B-4C	CN104	A-3D
D5	B-4B	D32	B-3B	L3	B-4B	CN105	A-2D
D6	B-4B	D33	B-3B	L4	B-4C		
D7	B-4B	D34	B-3B	L5	B-4C	S1	A-3A
D8	B-4B	D35	B-1C				
D9	B-4D	D36	B-1C	J101	A-1C		
D10	B-4D	D37	B-1B	J102	A-1B		
D11	B-1D	D38	B-1B	J103	A-1C		
D12	B-1D	D39	B-1B	J104	A-2C		
D13	B-1C	D40	B-1B	J105	A-3C		
D14	B-1C	D41	B-1C	J106	A-3C		
D15	B-1B	D42	B-1C	J107	A-4C		
D16	B-1B	D43	B-3A	J108	A-4C		
D17	B-2D	D44	B-3A	J109	A-3A		
D18	B-2D						
D19	B-2C	C1	B-4D	K1	B-3C		
D20	B-2C	C2	B-4D	K2	B-3B		
D21	B-2B	C3	B-4C	K3	B-3B		
D22	B-2B	C4	B-4C	K4	B-4D		
D23	B-2D	C5	B-4B	K5	B-4C		
D24	B-2D	C6	B-4B	K6	B-4B		
D25	B-2C	C7	B-4D	K7	B-4C		
D26	B-2C	C8	B-4C	K8	B-4C		
D27	B-2B	C9	B-4C				

4-25

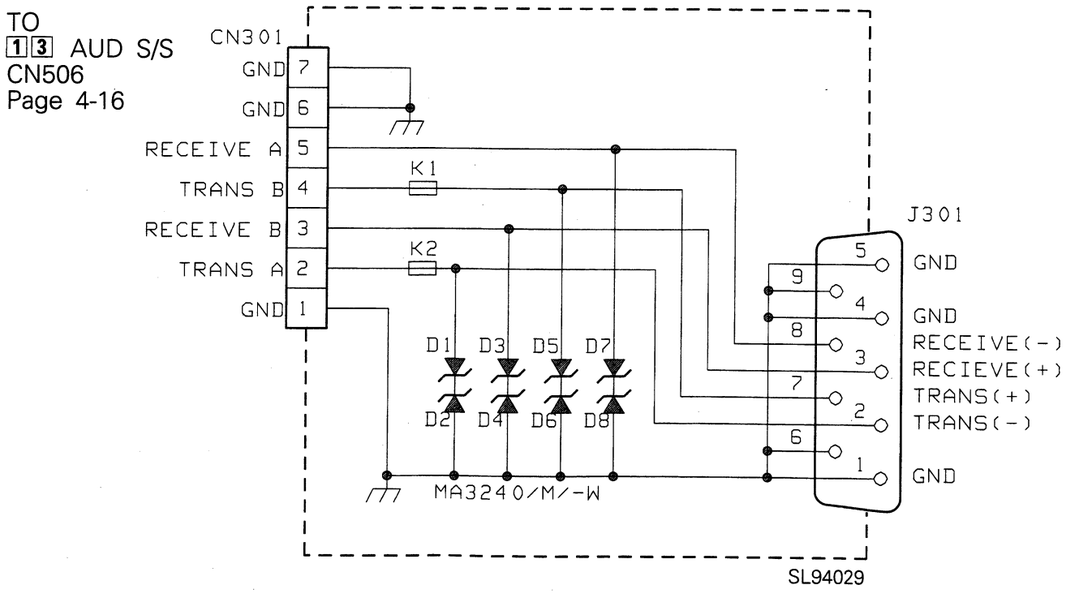
4.16 REAR2 07 (OPTION:SA-K46), REAR3 08, REAR4 09, REAR5 17 SCHEMATIC DIAGRAM

• REAR2

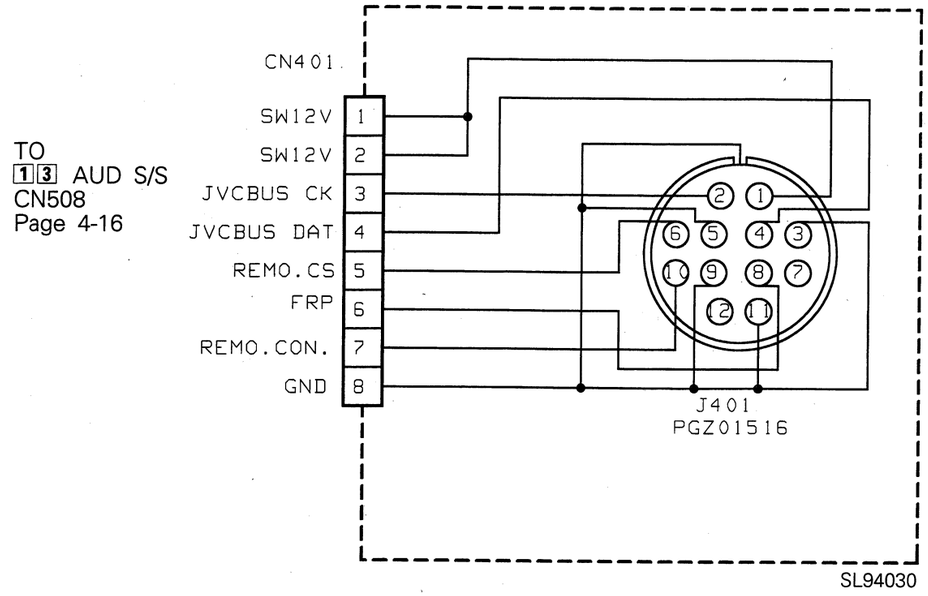


SA-K46/U

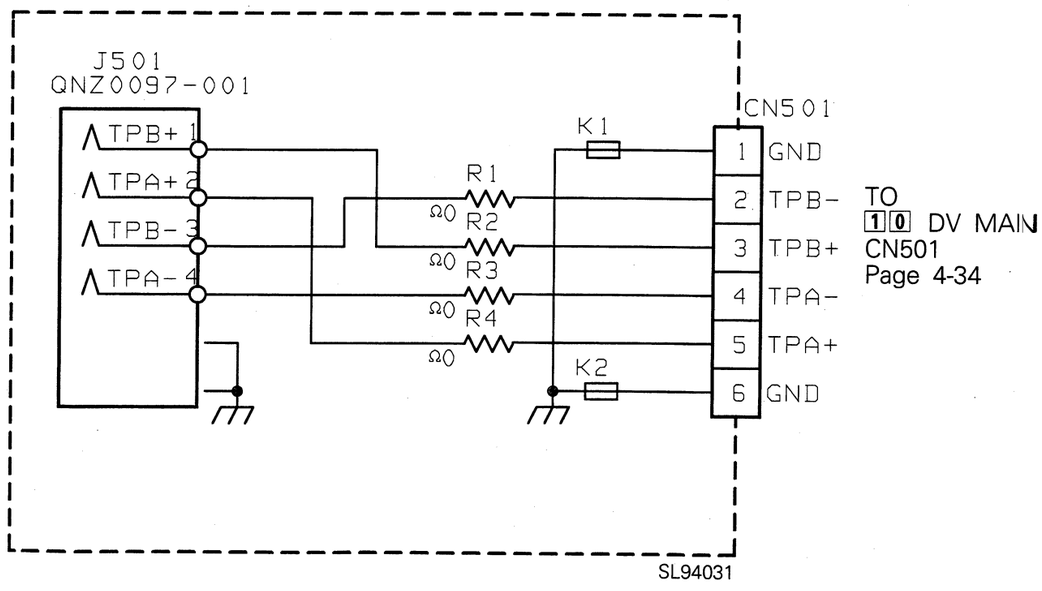
• REAR3



• REAR4



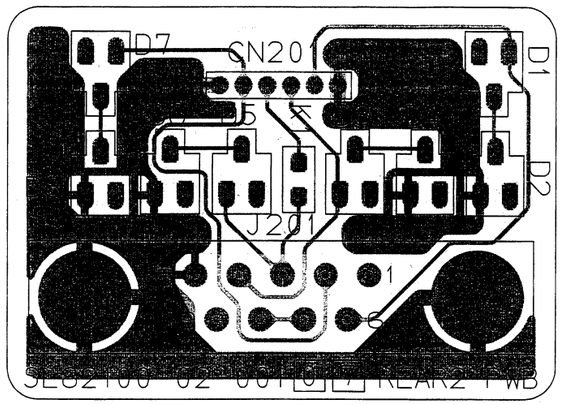
• REAR5



4.17 REAR2(OPTION:SA-K46), REAR3, REAR4, REAR5 CIRCUIT BOARD

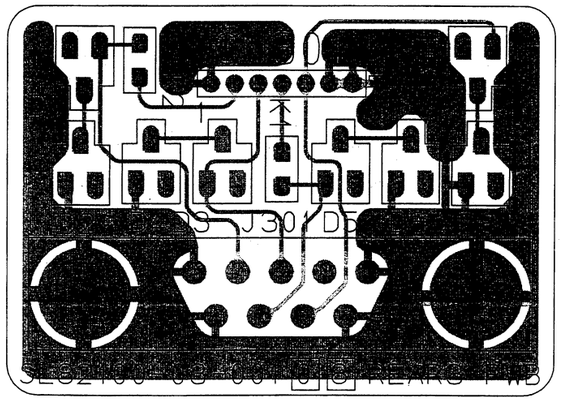
• REAR2

– SIDE B –



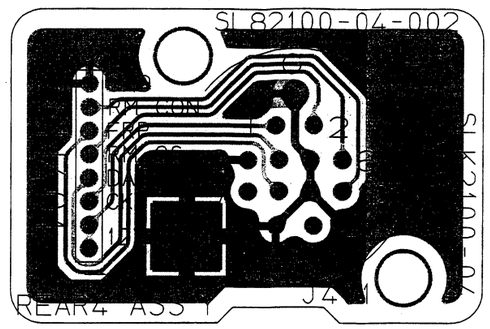
• REAR3

– SIDE B –



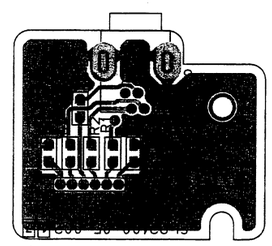
• REAR4

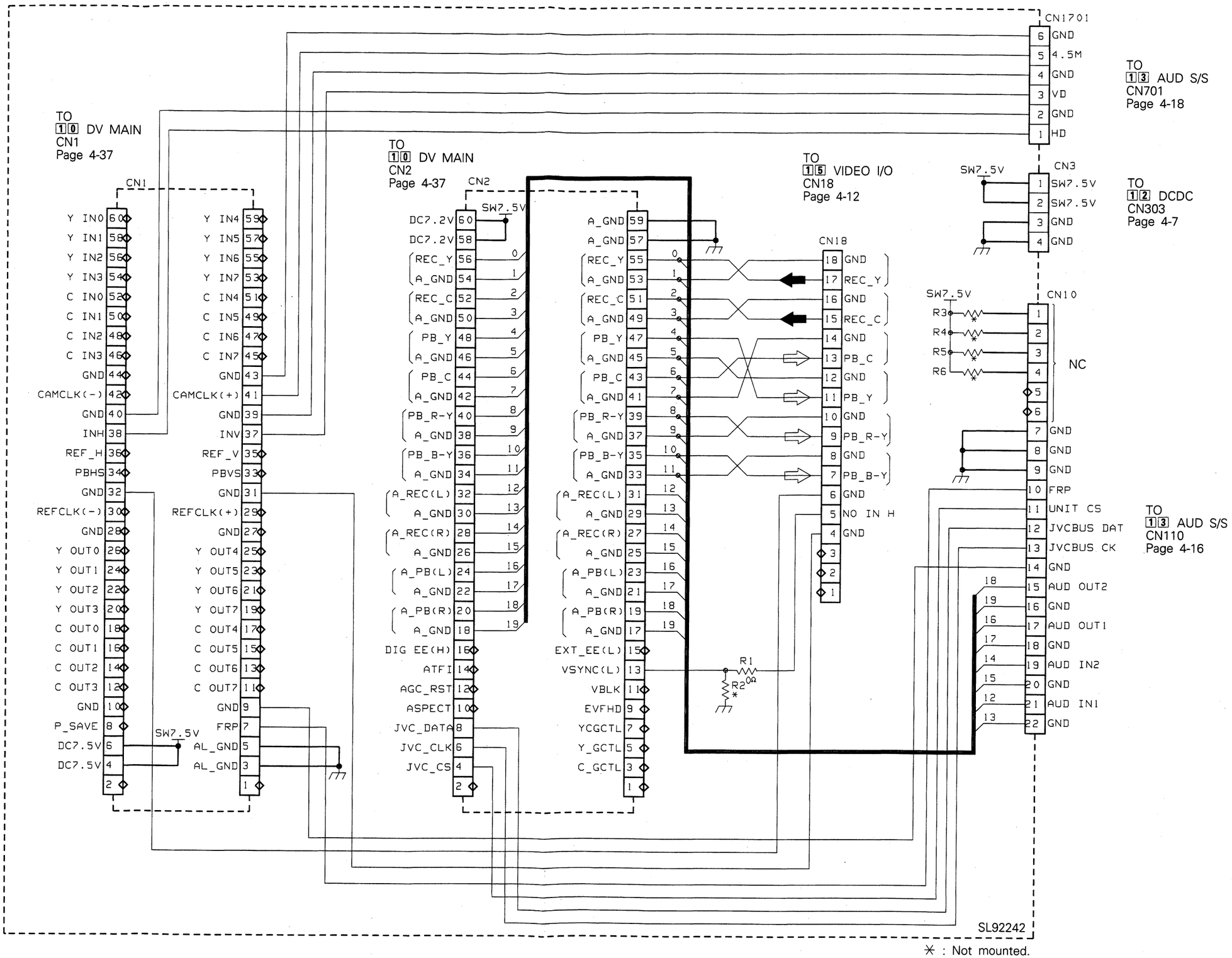
– SIDE B –



• REAR5

– SIDE B –

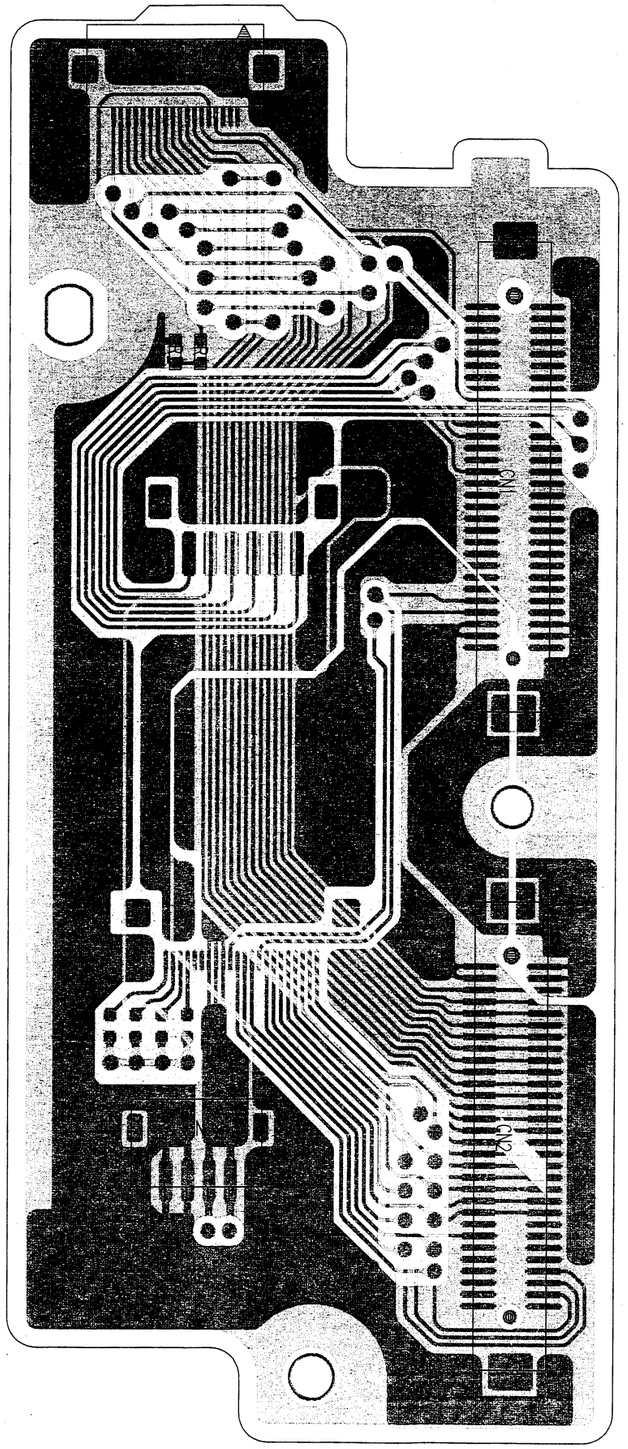



TO 10 DV MAIN CN1 Page 4-37
TO 10 DV MAIN CN2 Page 4-37
TO 15 VIDEO I/O CN18 Page 4-12
TO 13 AUD S/S CN701 Page 4-18
TO 12 DCDC CN303 Page 4-7
TO 13 AUD S/S CN110 Page 4-16
CN1
CN2
CN18
CN1701
CN3
CN10
Y IN0 60
Y IN1 58
Y IN2 56
Y IN3 54
C IN0 52
C IN1 50
C IN2 48
C IN3 46
GND 44
CAMCLK(-) 42
GND 40
INH 38
REF_H 36
PBHS 34
GND 32
REFCLK(-) 30
GND 28
Y OUT0 26
Y OUT1 24
Y OUT2 22
Y OUT3 20
C OUT0 18
C OUT1 16
C OUT2 14
C OUT3 12
GND 10
P_SAVE 8
DC7.5V 6
DC7.5V 4
2
Y IN4 59
Y IN5 57
Y IN6 55
Y IN7 53
C IN4 51
C IN5 49
C IN6 47
C IN7 45
GND 43
CAMCLK(+) 41
GND 39
INV 37
REF_V 35
PBVS 33
GND 31
REFCLK(+) 29
GND 27
Y OUT4 25
Y OUT5 23
Y OUT6 21
Y OUT7 19
C OUT4 17
C OUT5 15
C OUT6 13
C OUT7 11
GND 9
FRP 7
AL_GND 5
AL_GND 3
1
SW7.5V
DC7.2V 60
DC7.2V 58
REC_Y 56
A_GND 54
REC_C 52
A_GND 50
PB_Y 48
A_GND 46
PB_C 44
A_GND 42
PB_R-Y 40
A_GND 38
PB_B-Y 36
A_GND 34
A_REC(L) 32
A_GND 30
A_REC(R) 28
A_GND 26
A_PB(L) 24
A_GND 22
A_PB(R) 20
A_GND 18
DIG EE(H) 16
ATFI 14
AGC_RST 12
ASPECT 10
JVC_DATA 8
JVC_CLK 6
JVC_CS 4
2
A_GND 59
A_GND 57
REC_Y 55
A_GND 53
REC_C 51
A_GND 49
PB_Y 47
A_GND 45
PB_C 43
A_GND 41
PB_R-Y 39
A_GND 37
PB_B-Y 35
A_GND 33
A_REC(L) 31
A_GND 29
A_REC(R) 27
A_GND 25
A_PB(L) 23
A_GND 21
A_PB(R) 19
A_GND 17
EXT_EE(L) 15
VSYNC(L) 13
VBLK 11
EVFHD 9
YCGCTL 7
Y_GCTL 5
C_GCTL 3
1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
R1
R2 0Ω
18 GND
17 REC_Y
16 GND
15 REC_C
14 GND
13 PB_C
12 GND
11 PB_Y
10 GND
9 PB_R-Y
8 GND
7 PB_B-Y
6 GND
5 NO IN H
4 GND
3
2
1
1 SW7.5V
2 SW7.5V
3 GND
4 GND
SW7.5V
R3
R4
R5
R6
NC
1
2
3
4
5
6
7 GND
8 GND
9 GND
10 FRP
11 UNIT CS
12 JVCBUS DAT
13 JVCBUS CK
14 GND
15 AUD OUT2
16 GND
17 AUD OUT1
18 GND
19 AUD IN2
20 GND
21 AUD IN1
22 GND
18
19
16
17
14
15
12
13
SL92242
✳ : Not mounted.

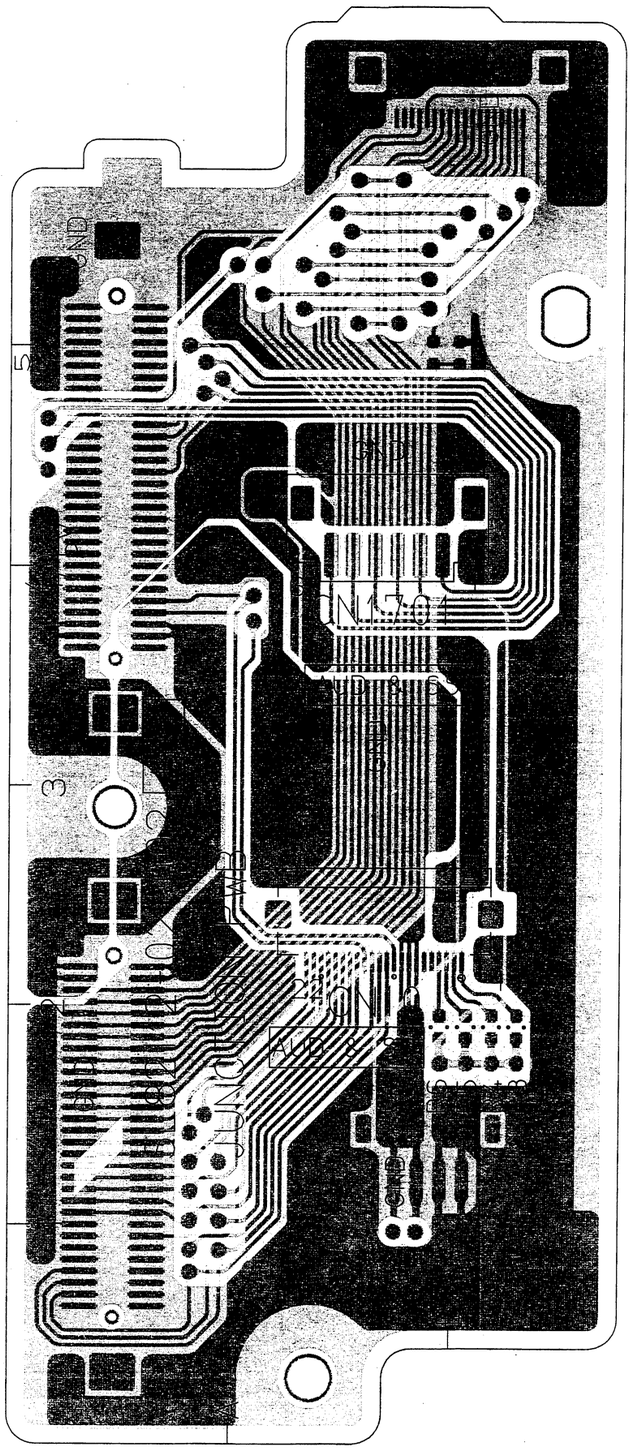
4.19 JUNCTION, TR, TRANSMIT CIRCUIT BOARD

• JUNCTION

– SIDE A –

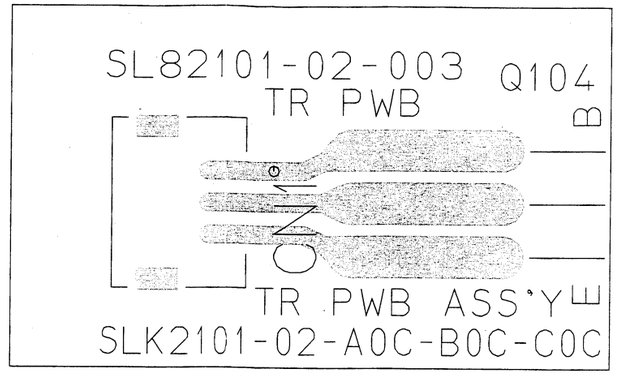


– SIDE B –



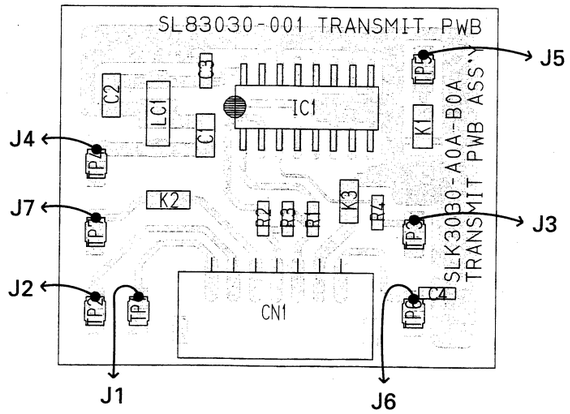
• TR

– SIDE A –



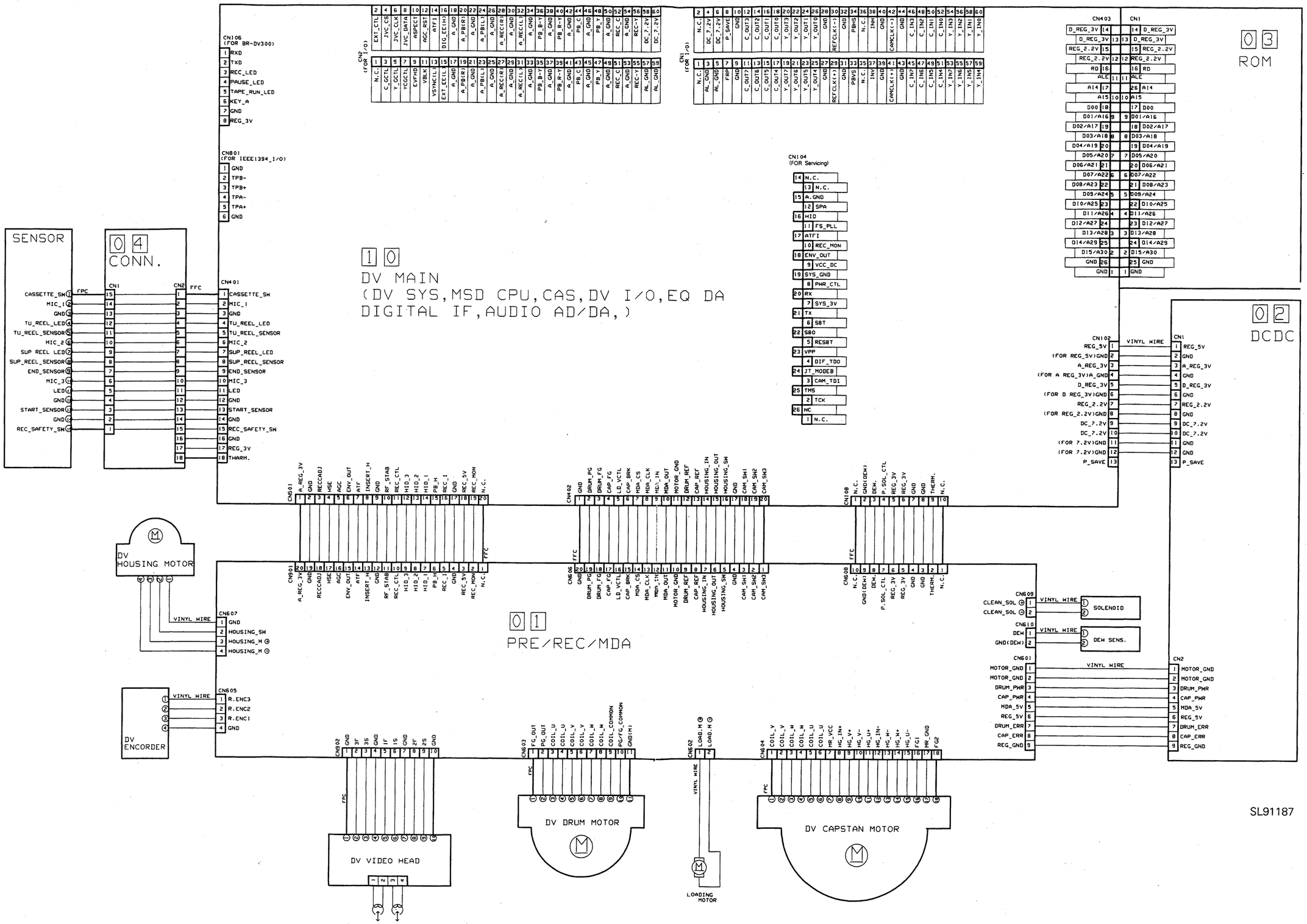
• TRANSMIT

– SIDE A –



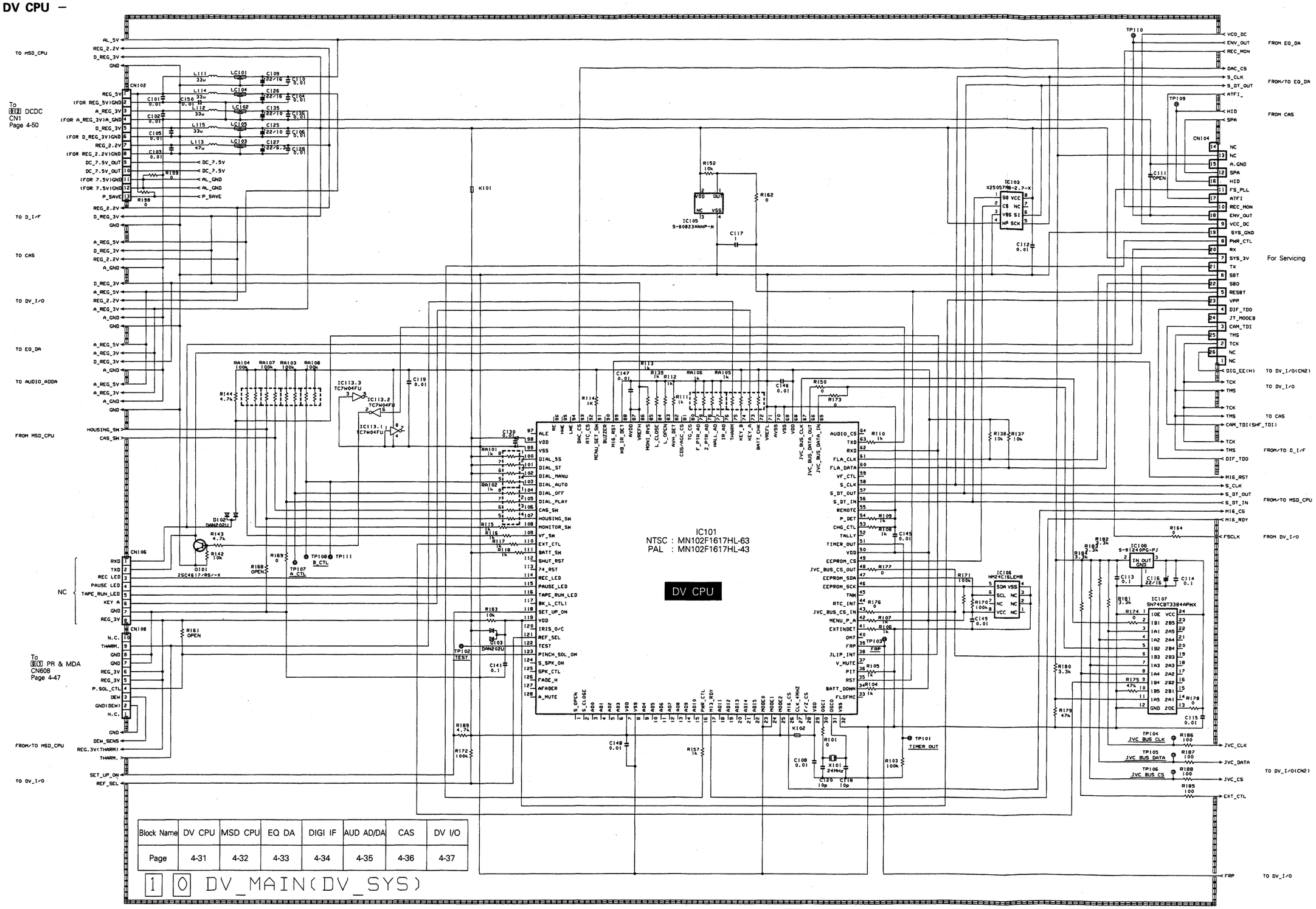
J1-7
FROM/TO
AUD S/S
Page 4-19

4.20 DVC UNIT OVERALL WIRING DIAGRAM



4.21 DV MAIN SCHEMATIC DIAGRAM 10 (1/7)

– DV CPU –



Block Name	DV CPU	MSD CPU	EQ DA	DIGI IF	AUD AD/DA	CAS	DV I/O
Page	4-31	4-32	4-33	4-34	4-35	4-36	4-37

10 DV_MAIN(DV_SYS)

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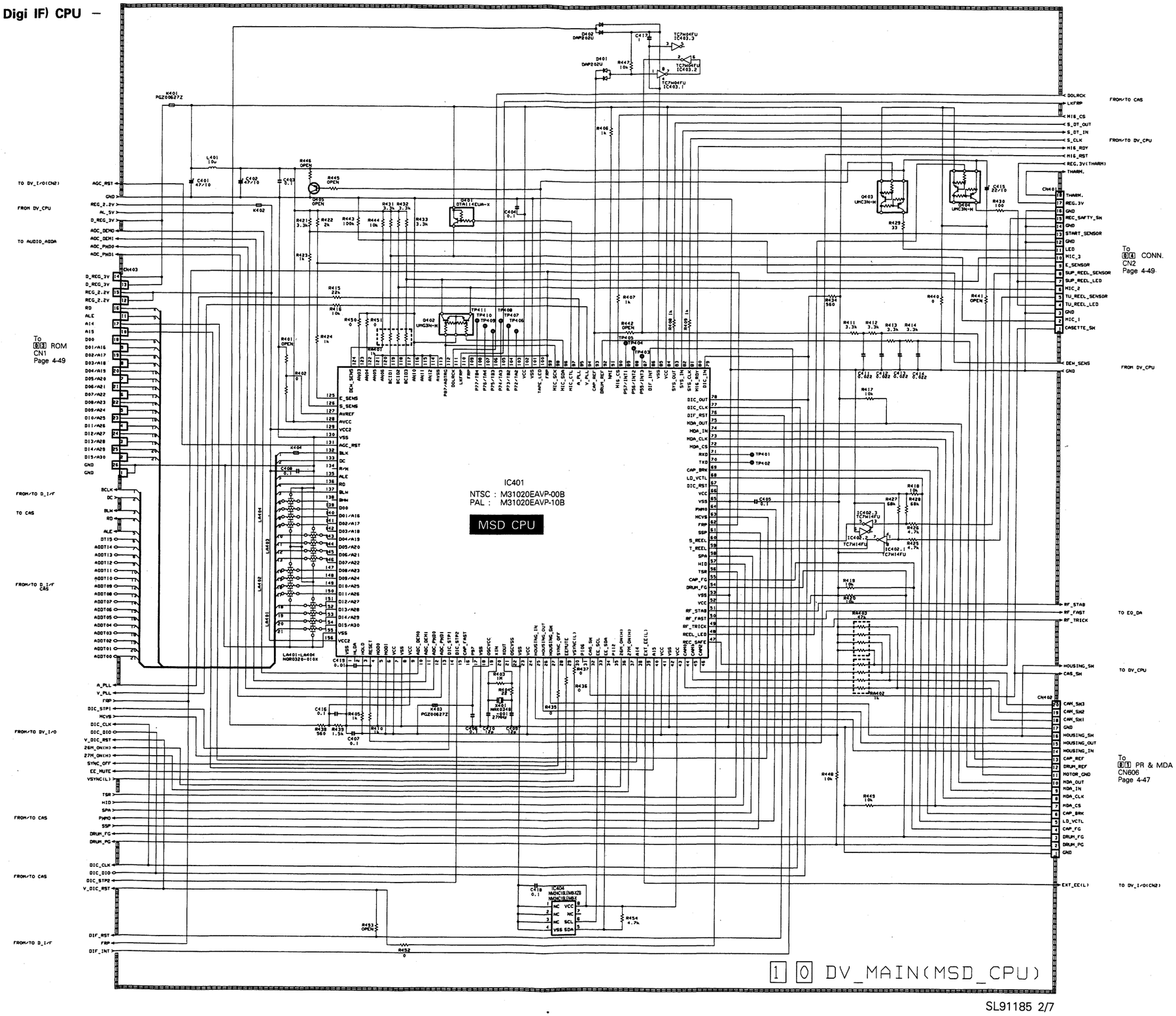
• DV MAIN SCHEMATIC DIAGRAM 10 (2/7)

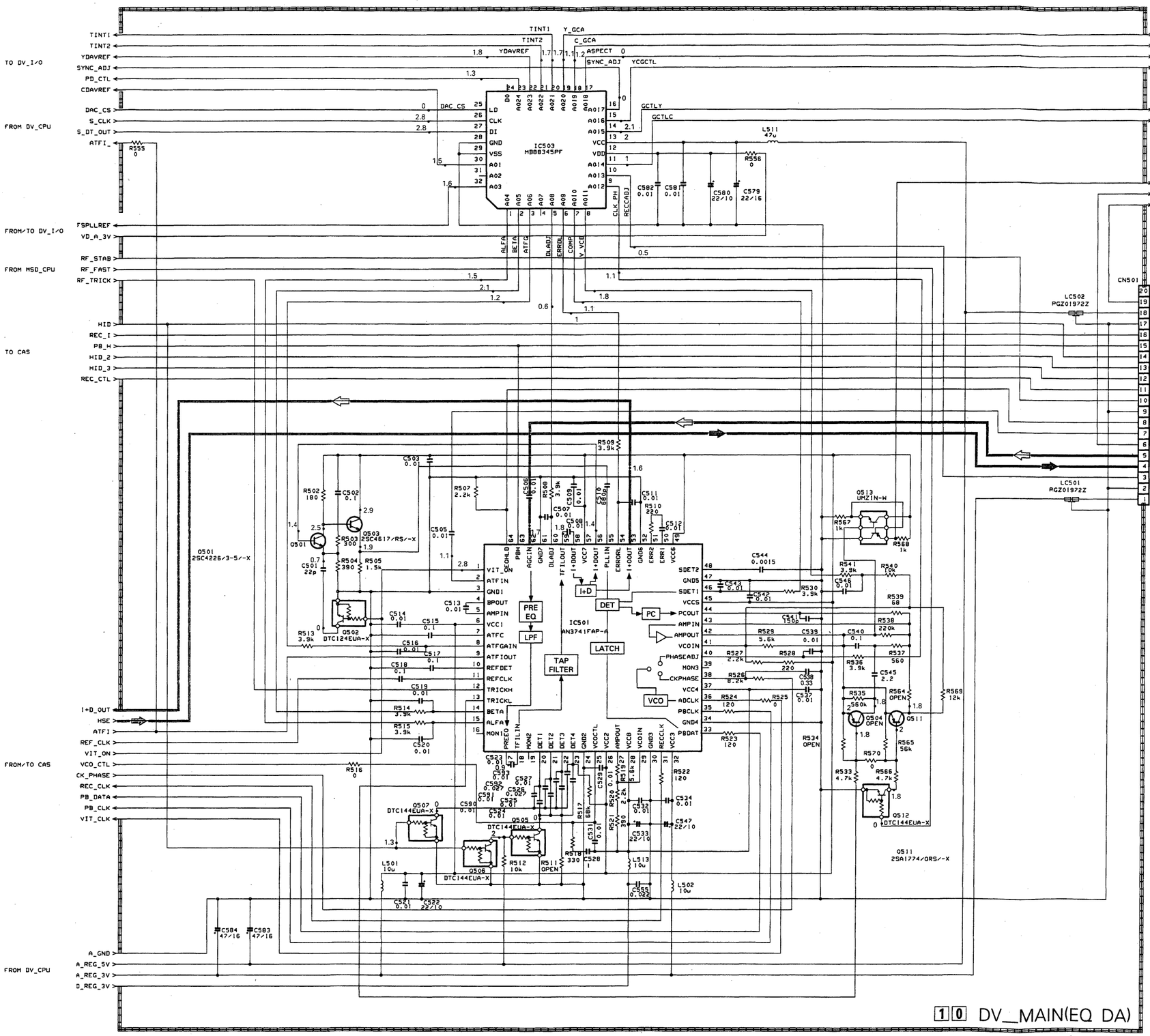
– MSD(Mechacon Servo Digi IF) CPU –

Block Name	Page
DV CPU	4-31
MSD CPU	4-32
EQ DA	4-33
DIGI IF	4-34
AUD AD/DA	4-35
CAS	4-36
DV I/O	4-37



· DV MAIN SCHEMATIC DIAGRAM 10 (3/7)

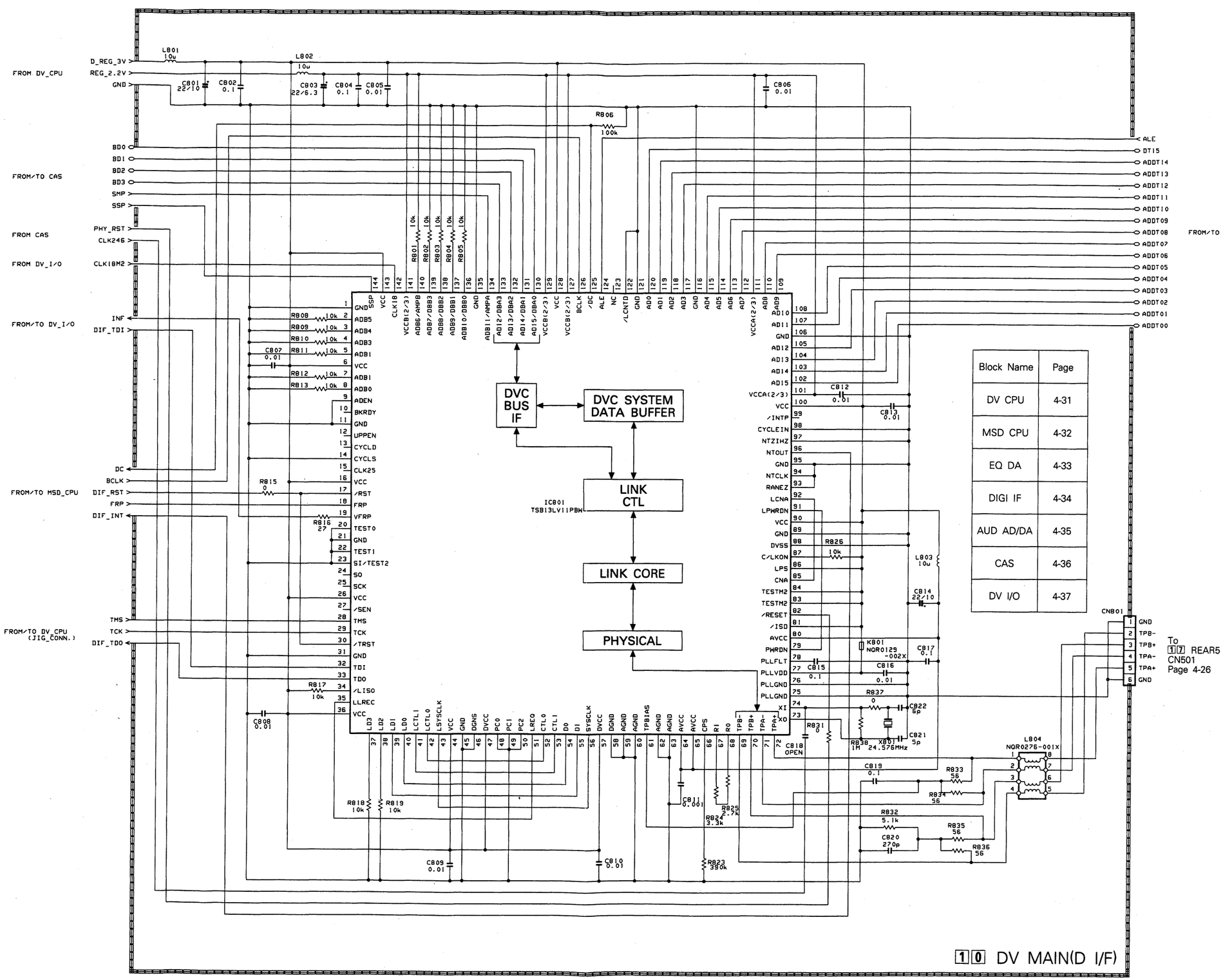
– EQ DA –



Block Name	Page
DV CPU	4-31
MSD CPU	4-32
EQ DA	4-33
DIGI IF	4-34
AUD AD/DA	4-35
CAS	4-36
DV I/O	4-37

· DV MAIN SCHEMATIC DIAGRAM 10 (4/7)

– DIGI IF –



Block Name	Page
DV CPU	4-31
MSD CPU	4-32
EQ DA	4-33
DIGI IF	4-34
AUD AD/DA	4-35
CAS	4-36
DV I/O	4-37

10 DV MAIN(D I/F)

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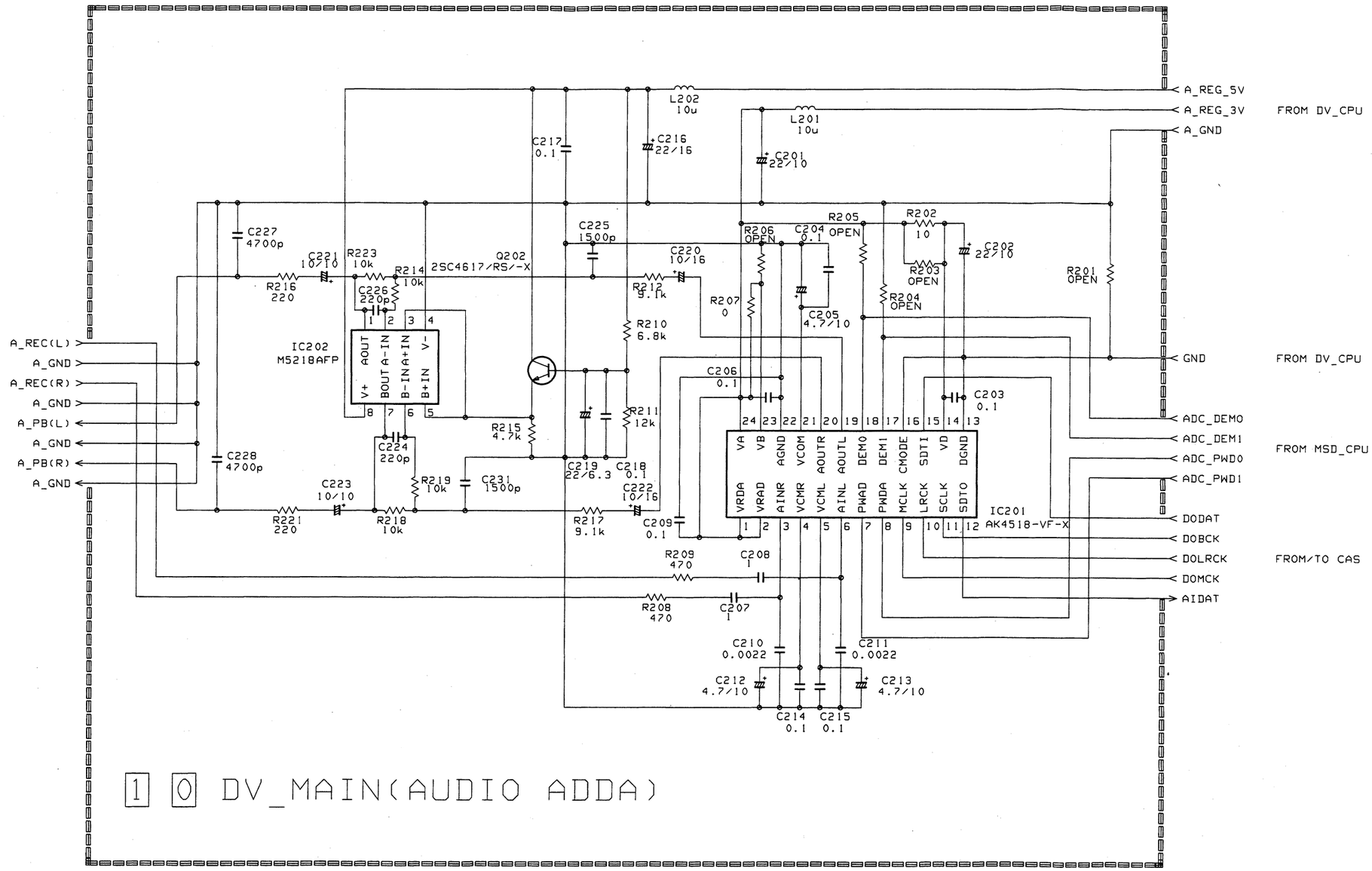
• DV MAIN SCHEMATIC DIAGRAM 10 (5/7)

– AUD AD/DA –

Block Name	Page
DV CPU	4-31
MSD CPU	4-32
EQ DA	4-33
DIGI IF	4-34
AUD AD/DA	4-35
CAS	4-36
DV I/O	4-37

FROM/TO DV I/O



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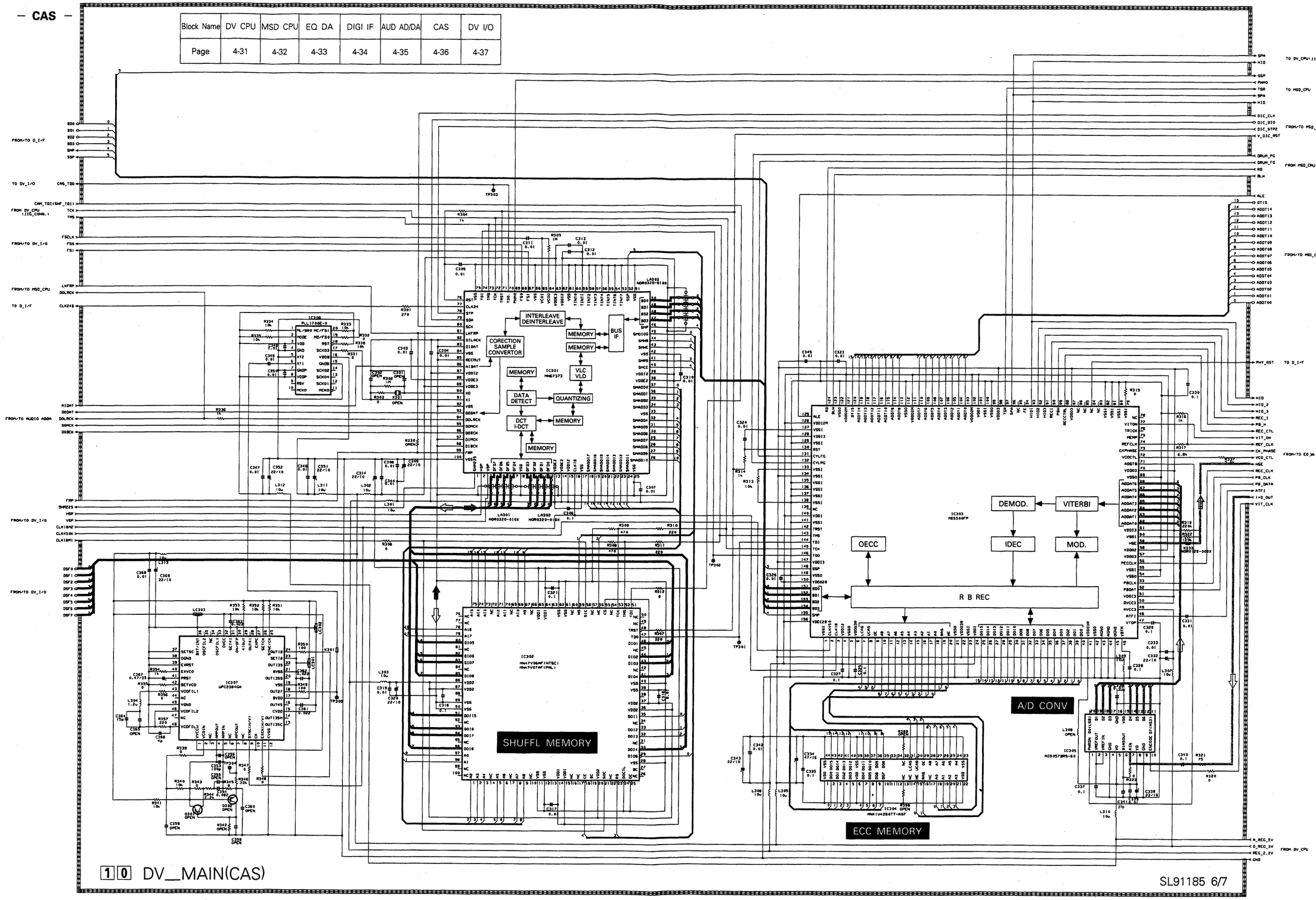
• DV MAIN SCHEMATIC DIAGRAM 10 (6/7)

– CAS –

Block Name	DV CPU	MSD CPU	EQ DA	DIGI IF	AUD AD/DA	CAS	DV I/O
Page	4-31	4-32	4-33	4-34	4-35	4-36	4-37



10 DV_MAIN(CAS)

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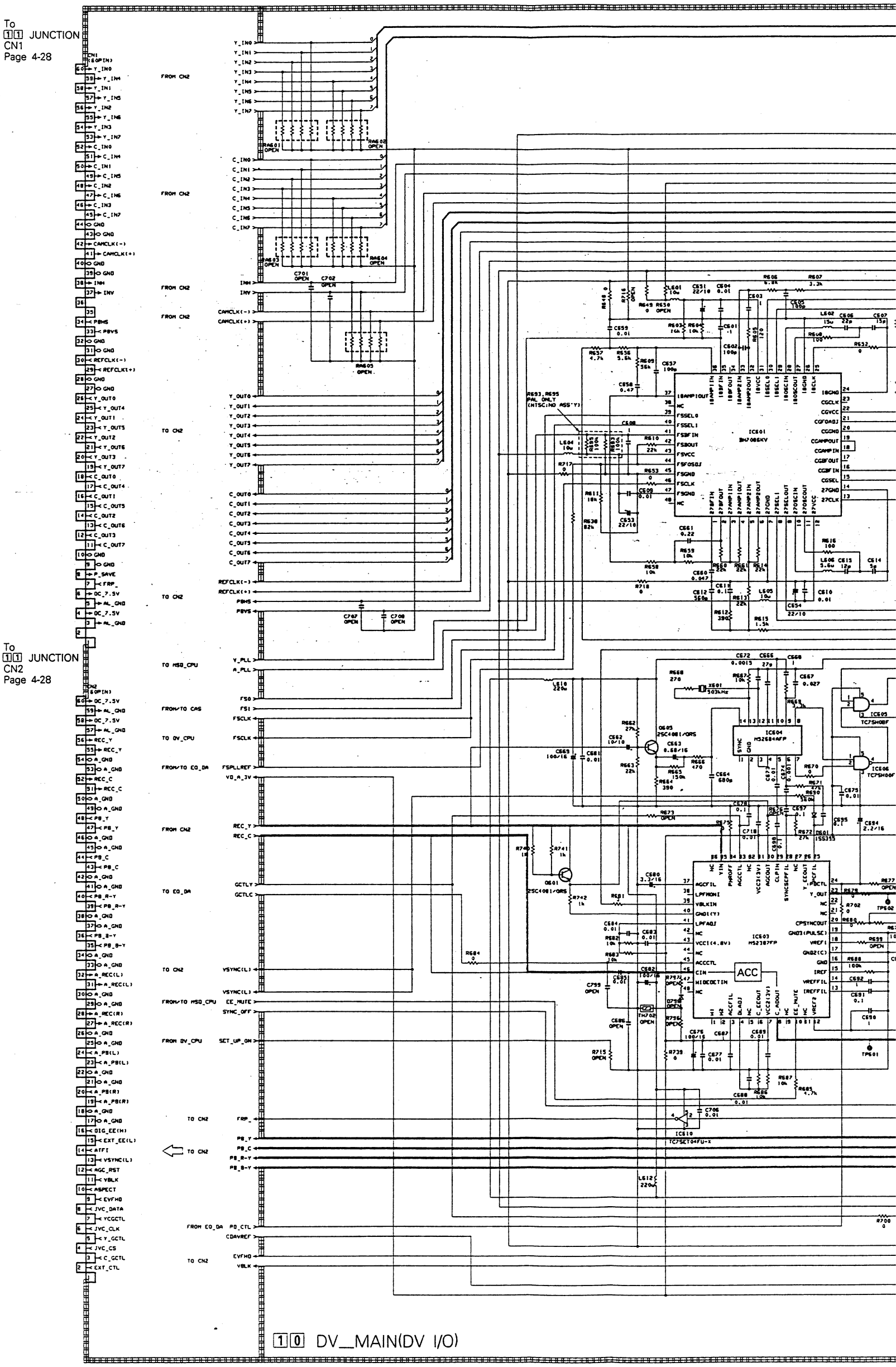
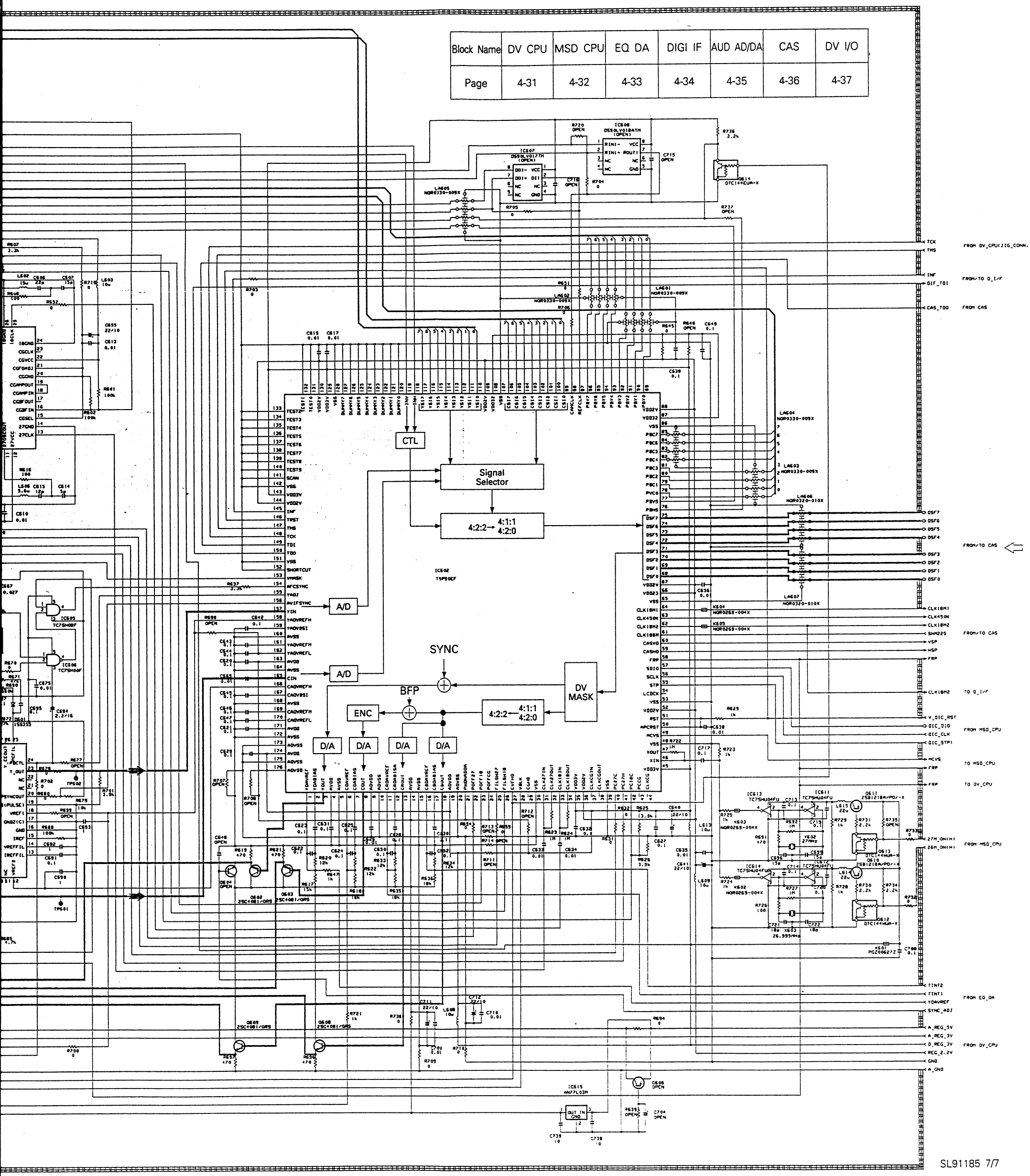
· DV MAIN SCHEMATIC DIAGRAM 10 (7/7)

– DV I/O –



Block Name	DV CPU	MSD CPU	EQ DA	DIGI IF	AUD AD/DA	CAS	DV I/O
Page	4-31	4-32	4-33	4-34	4-35	4-36	4-37



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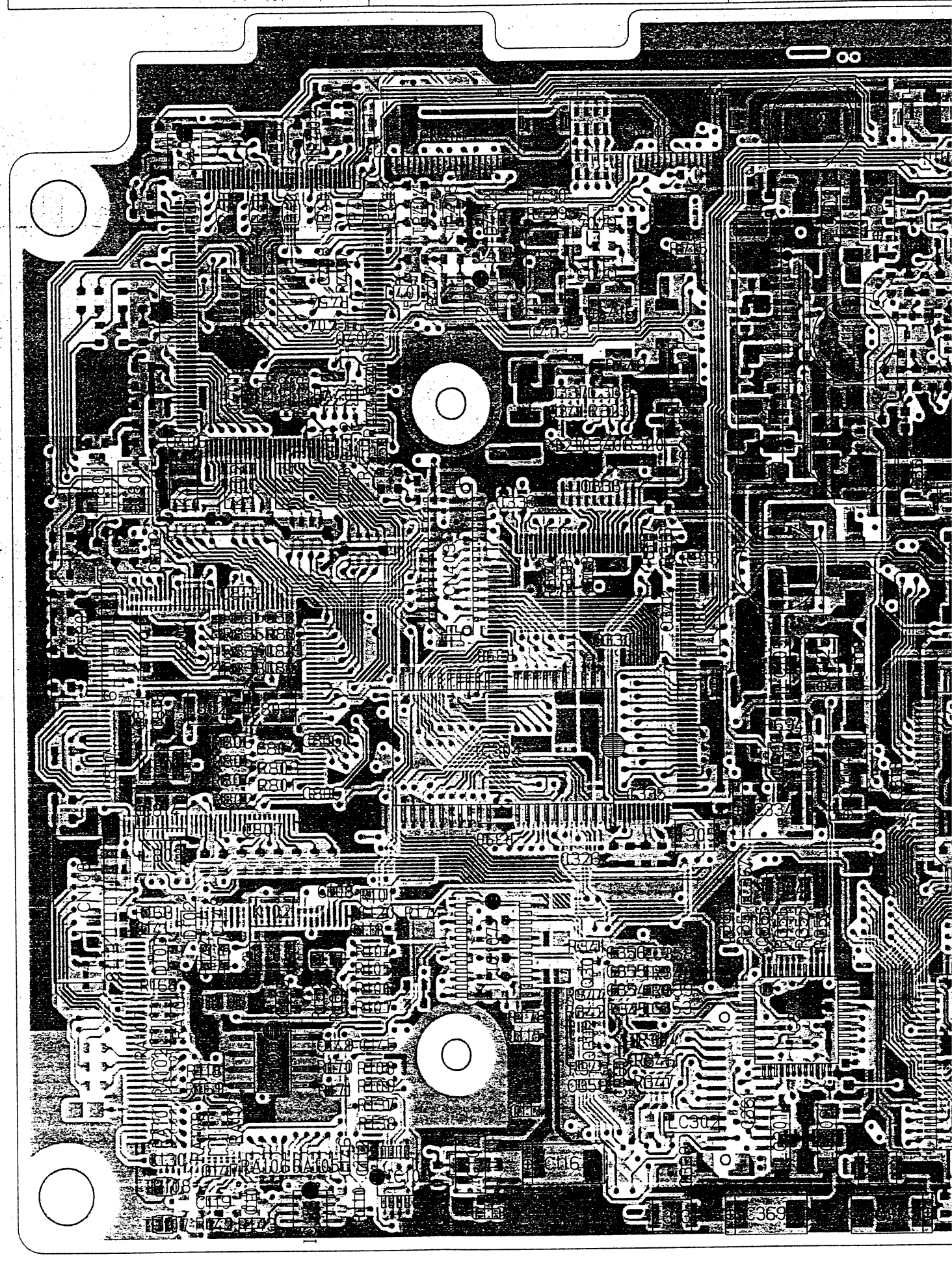
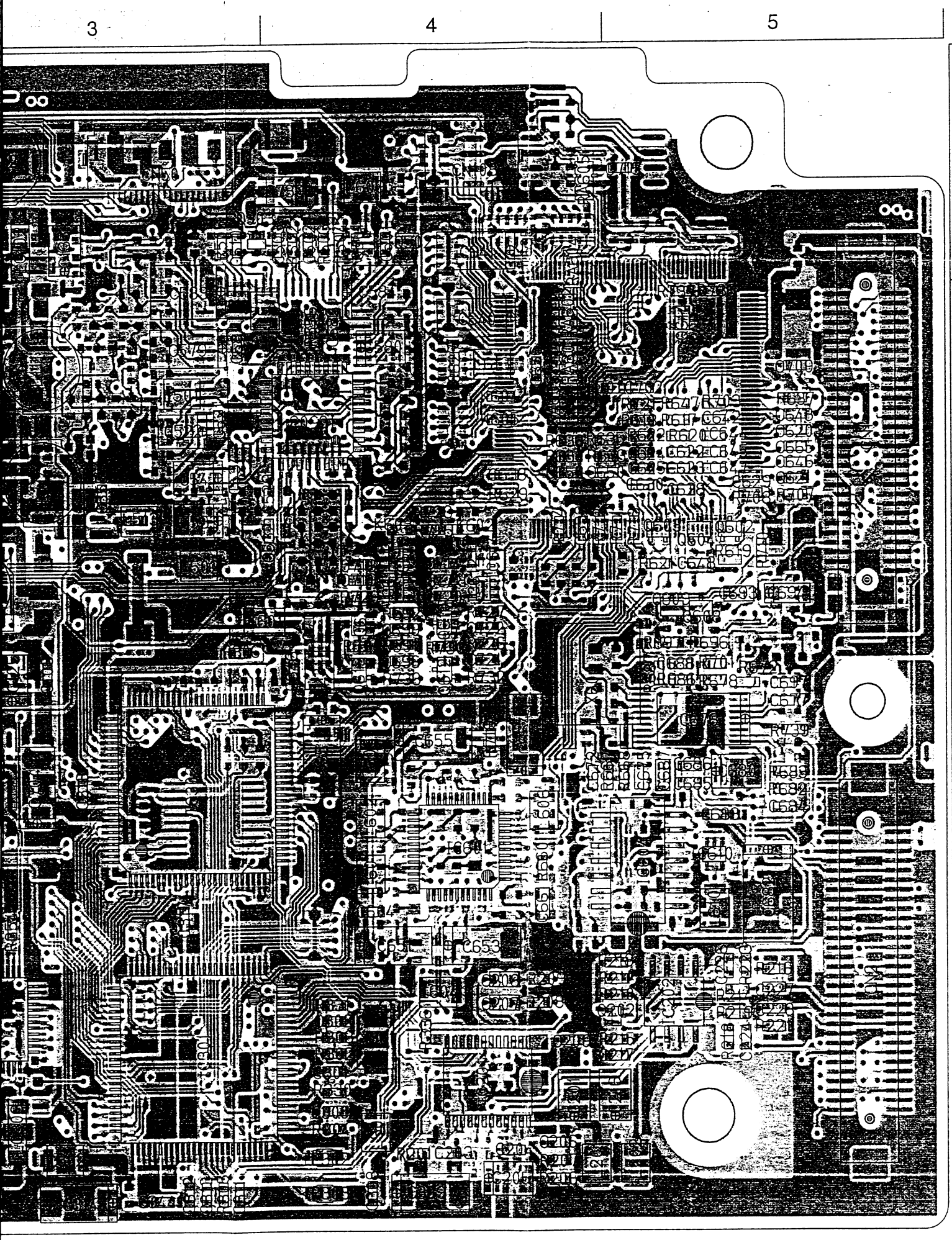
4.22 DV MAIN CIRCUIT BOARD

4.22.1 FOR SERIAL UP TO No.XXXX 0969(U MODEL), XXXX 0984(E MODEL)

— SIDE A



— SIDE A —



● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

A-1C
Side — Y axis
X axis

IC101	B-1B	R161	B-1C	R405	B-1D	R609	B-4C	R726	A-4D
IC103	A-2B	R162	A-1B	R406	B-2E	R610	B-4C	R727	A-4D
IC105	A-1B	R163	A-1C	R407	A-1E	R611	B-4C	R728	A-4D
IC106	A-1B	R164	B-3B	R408	B-2E	R612	B-4C	R729	A-4D
IC107	A-2C	R168	A-1B	R409	B-2E	R613	B-4C	R730	A-4D
IC108	A-2B	R169	A-1B	R410	B-1D	R614	B-4C	R731	A-4D
IC113	A-1B	R170	A-1B	R411	B-2E	R615	B-4C	R732	A-4C
IC201	A-4B	R171	A-1B	R412	B-2E	R616	B-4C	R733	A-4C
IC202	A-5B	R172	B-1C	R413	B-2E	R617	A-5D	R734	B-4C
IC301	A-3B	R173	B-1B	R414	B-2E	R618	A-4D	R735	B-4C
IC302	A-3C	R174	A-2C	R415	B-2E	R619	A-5D	R736	A-5E
IC303	B-2C	R175	B-2B	R416	B-2E	R620	A-5D	R737	A-5E
IC304	A-2C	R176	B-2B	R417	B-1E	R621	A-5D	R738	B-5E
IC305	B-2D	R177	B-2B	R418	B-1E	R622	A-4D	R739	A-5C
IC306	B-3C	R178	A-2B	R419	B-1E	R623	B-4D	R801	A-1C
IC307	A-3B	R179	B-2B	R420	B-1E	R624	B-4D	R802	A-1C
IC401	B-1E	R180	B-2B	R421	B-2D	R625	B-4D	R803	A-1C
IC402	A-1E	R181	B-2C	R422	B-2D	R626	B-4D	R804	A-1C
IC403	A-2E	R182	B-2C	R423	B-2D	R629	A-4D	R805	A-1C
IC404	A-1E	R183	B-2B	R424	B-2D	R631	B-4D	R806	A-1C
IC501	B-3E	R184	B-2C	R425	B-1E	R632	B-4D	R808	B-1C
IC503	A-4D	R185	B-2C	R426	B-1E	R633	A-4D	R809	B-1C
IC601	A-4C	R186	B-2C	R427	B-1E	R634	A-4D	R810	B-1C
IC602	B-4D	R187	B-2C	R428	B-1E	R635	A-4D	R811	B-1C
IC603	B-5C	R188	B-2C	R429	A-2E	R636	A-4D	R812	B-1C
IC604	A-4C	R189	B-1B	R430	A-2E	R637	A-5D	R813	B-1C
IC605	B-4C	R201	A-4B	R431	A-1D	R638	B-4C	R815	B-1C
IC606	B-4C	R202	B-4B	R432	A-1D	R639	A-3C	R816	B-1C
IC607	B-4E	R203	B-4B	R433	A-1D	R645	B-5E	R817	B-1C
IC608	B-4E	R204	B-4B	R434	B-2E	R646	B-4E	R818	B-1C
IC610	A-5C	R205	B-4B	R435	B-1E	R647	A-5D	R819	B-1C
IC611	A-4D	R206	A-4B	R436	B-1E	R651	B-4E	R823	B-1D
IC612	A-4D	R207	A-4B	R437	B-1E	R652	B-4C	R824	B-1D
IC613	A-4D	R208	A-4B	R438	B-1D	R653	B-4C	R825	B-1D
IC614	A-4D	R209	A-4B	R439	B-1D	R654	B-4D	R826	B-1D
IC615	B-4E	R210	A-4B	R440	B-2E	R655	B-4D	R831	B-1D
IC801	B-1C	R211	A-4B	R441	B-2E	R656	B-4C	R832	A-1D
		R212	B-5B	R442	B-2E	R657	B-4C	R833	A-1C
Q101	A-1B	R214	A-5B	R443	A-1D	R658	B-4C	R834	A-1D
Q202	A-4B	R215	A-4B	R444	A-1D	R659	B-4C	R835	A-1D
Q301	A-2C	R216	A-5B	R445	B-2E	R660	A-4C	R836	A-1D
Q302	A-2B	R217	B-5B	R446	B-2E	R661	B-4C	R837	B-1D
Q401	A-1D	R218	A-5B	R447	A-2E	R662	B-4C	R838	B-1D
Q402	A-1E	R219	A-5B	R448	A-2D	R663	B-4C		
Q403	A-2E	R221	A-5B	R449	B-2E	R664	B-4C	C101	B-3E
Q404	A-2E	R223	A-5C	R450	A-1D	R665	B-4C	C102	B-2E
Q405	B-2E	R301	B-3B	R451	A-2D	R666	B-4C	C103	B-2D
Q501	A-4E	R302	A-4B	R452	B-1E	R667	A-4C	C104	B-3D
Q502	A-4E	R303	A-4B	R453	B-1E	R668	A-4C	C105	B-3D
Q503	A-3E	R304	A-4B	R454	A-1E	R669	B-4C	C106	A-3C
Q504	B-3D	R305	A-3B	R502	A-4E	R670	B-4C	C108	A-1C
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Q507	B-4D	R308	B-3C	R505	A-3E	R673	B-5C	C111	B-2B
Q511	B-3D	R309	B-3C	R507	B-4E	R674	B-5C	C112	A-1B
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Q602	A-5D	R312	B-3C	R510	B-3E	R677	B-5D	C115	A-2B
Q603	A-5D	R313	B-2C	R511	B-4D	R678	A-5C	C116	A-2B
Q604	A-5D	R314	B-2C	R512	B-4D	R679	B-5D	C117	A-1C
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Q606	A-3C	R316	A-2D	R514	B-4D	R681	B-5C	C119	A-1B
Q608	A-5D	R317	A-2D	R515	B-4D	R682	A-5C	C120	A-1C
Q609	A-5D	R319	A-2D	R516	B-3D	R683	A-5C	C125	A-3C
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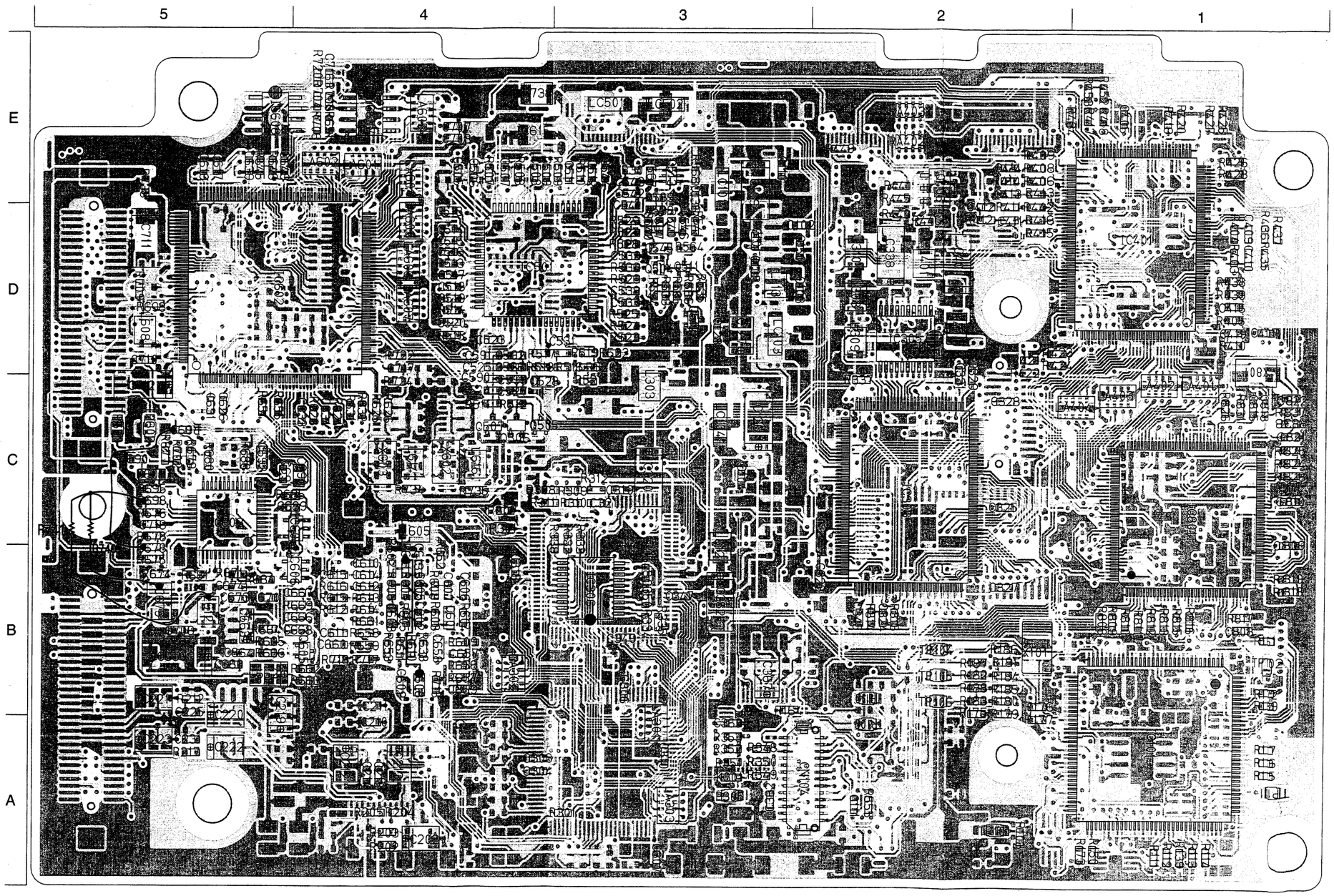
Q613	A-4C	R323	A-2D	R520	B-3D	R687	A-5C	C130	A-1B
Q614	A-5E	R330	A-4B	R521	B-3D	R688	B-5D	C135	A-3E
		R331	A-4B	R522	B-3D	R690	B-5D	C136	B-3E
D102	A-1C	R332	B-3C	R523	B-3D	R691	A-4D	C141	A-1C
D103	A-1C	R333	B-3C	R524	B-3D	R692	A-4D	C145	A-1B
D401	A-2E	R334	B-3C	R525	B-3D	R694	A-3C	C146	A-1B
D402	A-2E	R335	B-3C	R526	B-3D	R696	A-5D	C147	A-1B
D601	B-5D	R336	A-4B	R527	B-3E	R697	A-5D	C148	A-1C
		R337	B-2D	R528	B-3E	R698	B-5D	C149	A-1B
R101	A-1C	R338	B-3C	R529	B-3E	R699	B-5D	C150	B-2E
R103	B-2B	R339	A-2B	R530	B-3E	R701	A-5D	C201	A-4B
R104	A-1C	R340	A-2C	R533	B-3D	R702	B-5D	C202	B-4B
R105	A-1C	R341	A-2C	R534	B-3D	R703	A-5D	C203	A-4B
R106	A-1B	R342	A-2B	R535	B-3D	R704	B-4E	C204	A-4B
R107	A-1B	R343	A-2B	R536	B-3D	R705	B-4E	C205	A-4B
R108	A-1B	R344	A-2B	R537	B-3E	R706	B-4E	C206	A-4B
R109	A-1B	R345	A-2B	R538	B-3E	R707	A-5D	C207	A-4B
R110	A-1B	R346	A-2B	R539	B-3E	R708	A-5D	C208	A-4B
R111	B-1B	R347	A-2B	R540	B-3E	R709	B-5D	C209	A-4B
R112	B-1B	R348	B-3B	R541	B-3E	R710	A-5D	C210	B-4B
R113	B-1B	R349	B-3B	R555	B-2B	R711	A-4D	C211	B-4B
R114	B-1B	R350	B-3B	R556	A-4E	R712	A-4D	C212	B-4B
R115	B-1B	R351	B-3B	R564	B-3E	R713	A-4D	C213	B-4B
R116	B-1B	R352	B-3B	R565	B-3D	R714	A-4D	C214	B-4B
R117	B-1B	R353	B-3B	R566	B-3D	R715	A-2E	C215	B-4B
R118	A-1B	R354	A-3C	R567	B-3E	R716	B-4C	C216	A-4B
R137	A-1B	R355	A-3C	R568	B-3E	R717	B-4C	C217	A-4B
R138	A-1B	R356	A-3C	R601	B-4C	R718	B-4C	C218	A-4C
R139	B-1B	R357	A-2C	R602	B-4C	R719	A-4C	C219	B-4B
R142	A-1B	R398	A-2D	R603	B-4C	R720	B-4E	C220	B-5B
R143	A-1B	R399	A-2C	R604	B-4C	R721	A-4D	C221	B-5B
R144	A-1C	R401	A-1D	R605	B-4C	R722	B-4D	C222	B-5B
R150	B-1B	R402	A-1D	R606	B-4C	R723	A-4D	C223	B-5B
R152	A-1B	R403	B-1E	R607	B-4C	R724	B-4D	C224	A-5B
R157	A-1C	R404	B-1E	R608	B-4C	R725	A-4D	C225	B-5B

— SIDE B —



SL8208 7-003

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C228	A-5B	C517	B-4D	C668	B-4C	L602	A-4C	RA603	A-4D
C231	B-5B	C518	B-4D	C669	B-5C	L603	A-4C	RA604	A-4E
C301	A-4B	C519	B-4D	C672	A-4C	L604	A-4B	RA605	A-4E
C302	A-4B	C520	B-4D	C673	B-5C	L605	B-4C		
C303	B-3B	C521	A-3D	C674	B-5C	L606	A-4C	X101	B-2C
C304	B-3B	C522	A-3D	C675	A-4C	L608	B-5D	X301	A-4B
C305	A-4B	C523	B-4D	C676	A-5C	L609	A-4E	X401	A-1E
C306	B-3C	C524	B-4D	C677	A-5C	L610	A-5C	X601	A-4C
C307	B-3B	C525	B-4D	C678	B-5C	L612	B-5C	X602	B-4D
C308	A-4B	C526	B-4D	C679	B-5C	L613	A-4E	X603	B-4D
C309	A-4B	C527	B-4D	C680	A-5C	L614	B-4D	X801	B-1D
C310	B-3B	C528	B-3D	C681	B-5C	L615	B-4D		
C311	A-3B	C529	A-3D	C682	A-5C	L801	A-1D	LC101	B-3E
C312	A-3B	C531	B-3D	C683	A-5C	L802	A-1C	LC102	A-3E
C313	A-3B	C532	A-3D	C684	A-5C	L803	A-1C	LC103	B-3D
C314	A-3B	C533	A-3D	C685	A-5C	L804	A-1D	LC104	B-3D
C316	A-3C	C534	A-3D	C686	A-5C			LC105	A-3C
C317	A-3C	C537	B-3D	C687	A-5C	TP101	B-2B	LC301	A-3B
C318	B-4C	C538	B-3D	C688	A-5D	TP102	B-1C	LC302	A-2B
C319	B-3C	C539	B-3E	C689	B-4C	TP103	A-1B	LC303	A-3B
C320	B-3D	C540	B-3E	C690	B-4D	TP104	B-2C	LC501	B-3E
C321	B-3C	C541	B-3E	C691	B-4D	TP105	B-2C	LC502	B-3E
C323	B-2C	C542	B-3E	C692	B-4D	TP106	B-2B		
C324	B-2C	C543	B-3E	C693	A-5D	TP107	A-1B		
C325	B-2C	C544	B-3E	C694	A-5D	TP108	A-1B		
C326	A-2C	C545	B-3E	C695	B-5C	TP109	B-2B		
C327	B-2C	C546	B-3E	C696	A-4D	TP110	B-2B		
C328	B-2D	C547	A-3D	C697	A-5C	TP111	B-1B		
C329	B-2D	C555	A-3D	C698	B-5C	TP301	B-4C		
C330	A-2D	C579	A-3E	C699	A-4D	TP302	A-4B		
C331	B-2D	C580	A-4E	C700	A-4D	TP303	A-4B		
C332	A-2D	C581	A-3E	C701	A-4D	TP304	A-2B		
C333	A-2D	C582	A-4E	C702	A-4D	TP305	B-3B		
C334	A-3C	C583	A-3E	C704	A-3C	TP401	A-1E		
C335	A-2C	C584	A-4E	C706	B-5C	TP402	A-1E		
C336	A-2D	C590	B-4D	C707	B-4E	TP403	A-2E		
C337	A-2D	C591	B-4D	C708	B-4E	TP404	A-2E		
C338	B-2E	C592	B-4D	C709	A-5E	TP405	A-2E		
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C340	A-2D	C601	B-4C	C711	B-5E	TP407	A-1E		
C341	A-2D	C602	B-4C	C712	B-5D	TP408	A-1E		
C342	A-2D	C603	B-4C	C713	A-4D	TP409	A-1E		
C343	A-2D	C604	A-4C	C714	A-4D	TP410	A-1E		
C344	A-3B	C605	B-4C	C715	A-4E	TP411	A-1E		
C345	B-2C	C606	B-4C	C716	B-4E	TP601	B-5D		
C346	A-4C	C607	B-4C	C717	B-4D	TP602	B-5D		
C347	B-3C	C608	B-4C	C718	B-5C				
C348	B-3C	C609	B-4C	C719	A-4D	K101	A-1C		
C349	B-3C	C610	B-4C	C720	A-4D	K102	A-1C		
C350	B-3C	C611	B-4C	C721	A-4D	K301	B-3B		
C351	A-4C	C612	B-4C	C722	A-4D	K303	A-2D		
C352	B-3C	C613	B-4C	C738	B-3E	K401	B-2D		
C353	A-2B	C614	B-4C	C739	A-3E	K402	A-1D		
C354	A-2B	C615	B-4C	C801	A-1D	K403	A-1D		
C355	A-2C	C617	B-5E	C802	A-1D	K404	A-1D		
C356	A-2C	C619	B-5E	C803	A-1C	K601	A-3D		
C358	A-2C	C620	A-5D	C804	A-1C	K602	A-4D		
C359	A-2B	C621	A-5D	C805	A-1C	K603	A-4D		
C360	A-2B	C622	A-5D	C806	A-1C	K604	A-4D		
C361	A-2B	C623	A-5D	C807	A-1C	K605	A-4D		
C362	B-3B	C624	A-4D	C808	B-1C	K801	A-1C		
C363	B-3B	C625	A-4D	C809	B-1C				
C364	A-2C	C626	B-5D	C810	B-1C	CN1	A-5D		
C365	A-3C	C627	A-4E	C811	A-1C	CN2	A-5B		
C366	A-2C	C628	A-5D	C812	A-1C	CN102	A-3D		
C367	B-3C	C629	A-5D	C813	A-1D	CN104	B-2B		
C368	A-2B	C630	A-4D	C814	A-1C	CN106	A-1C		
C369	A-3B	C631	B-5D	C815	B-1D	CN108	A-4E		
C401	B-2E	C632	A-4D	C816	A-1C	CN401	A-2E		
C402	A-2E	C633	B-4D	C817	A-1C	CN402	A-2E		
C403	A-2E	C634	B-4D	C818	B-1D	CN403	A-2D		
C404	A-1E	C635	A-4E	C819	A-1D	CN501	A-3E		
C405	B-1E	C638	A-4D	C820	A-1D	CN801	A-1D		
C406	A-1D	C639	B-5E	C821	B-1D				
C407	B-1D	C640	A-4E	C822	B-1D	LA301	B-3B		
C408	A-1D	C641	A-4E			LA302	B-4C		
C409	B-1E	C642	A-5D	L111	A-3E	LA303	B-3B		
C410	B-1E	C643	A-5D	L112	A-3E	LA401	B-1D		
C411	B-2E	C644	A-5D	L113	B-3D	LA402	B-1D		
C412	B-2E	C645	A-5D	L114	A-3D	LA403	B-1D		
C413	B-2E	C646	A-5D	L115	A-3D	LA404	B-1D		
C414	B-2E	C647	A-5D	L201	A-4B	LA601	B-4E		
C415	A-2E	C648	A-5D	L202	A-4B	LA602	B-4E		
C416	B-1D	C649	B-4E	L301	A-4B	LA603	B-4E		
C417	A-2E	C650	A-4D	L302	A-3B	LA604	B-4E		
C418	A-1E	C651	A-4C	L303	B-3D	LA605	B-4E		
C419	B-1D	C652	A-4D	L304	A-3C	LA606	B-4E		
C501	A-4E	C653	A-4C	L305	A-2C	LA607	B-4D		
C502	A-4E	C654	A-4C	L306	A-2C				
C503	A-3E	C655	A-4C	L307	A-2D	RA101	A-1B		
C505	B-4E	C656	A-4E	L308	B-2D	RA102	A-1B		
C506	B-4E	C657	B-4C	L309	B-2D	RA103	A-1B		
C507	B-4E	C658	B-4C	L310	B-2E	RA104	A-1B		
C508	B-3E	C659	B-4C	L311	A-4C	RA105	A-1B		
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C510	A-3E	C661	A-4C	L313	A-2B	RA107	A-1B		
C511	B-3E	C662	B-4C	L401	B-2E	RA108	A-1B		
C512	B-3E	C663	B-5C	L501	A-3D	RA401	A-1D		
C513	B-4E	C664	B-5C	L502	A-3D	RA402	B-2E		
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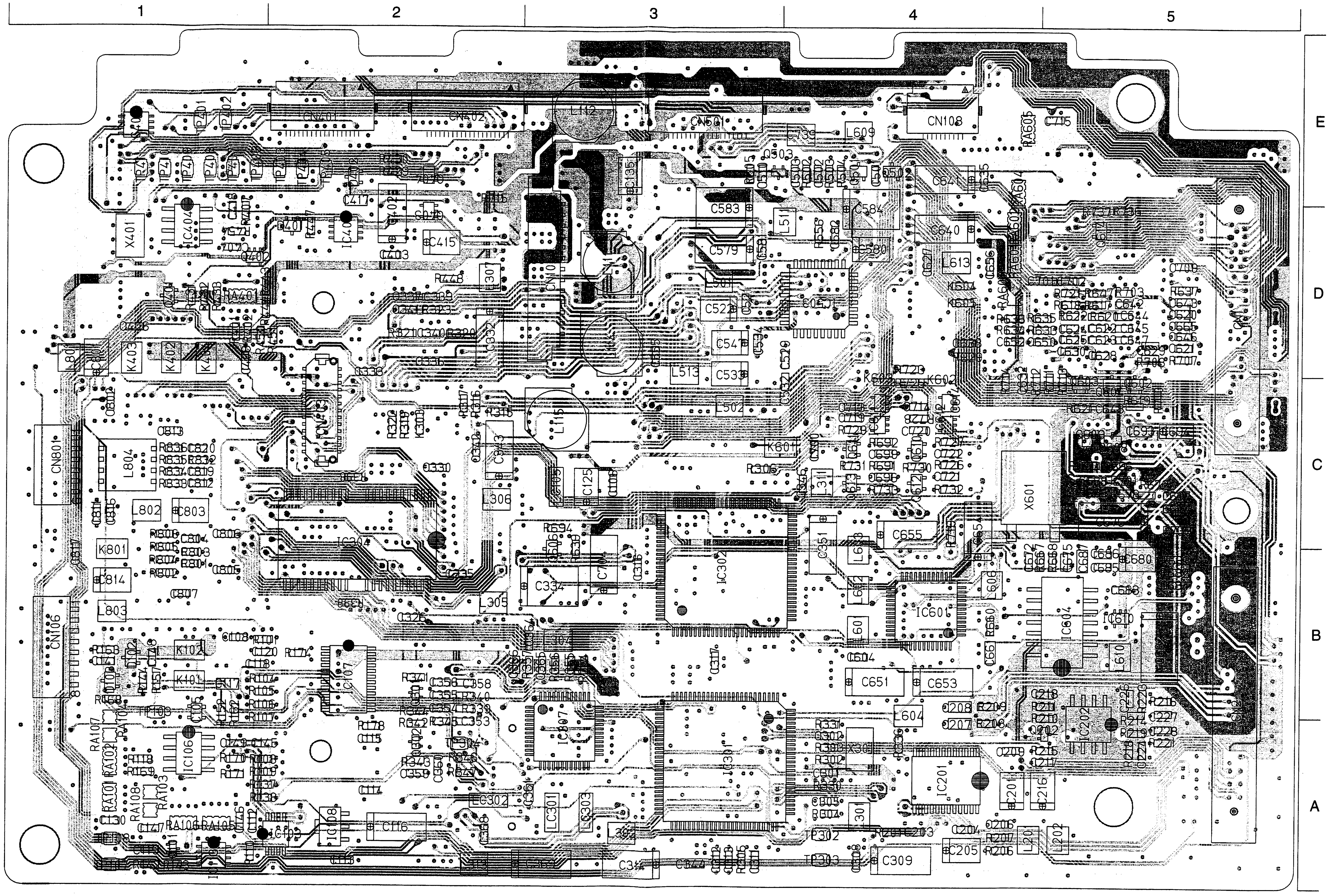

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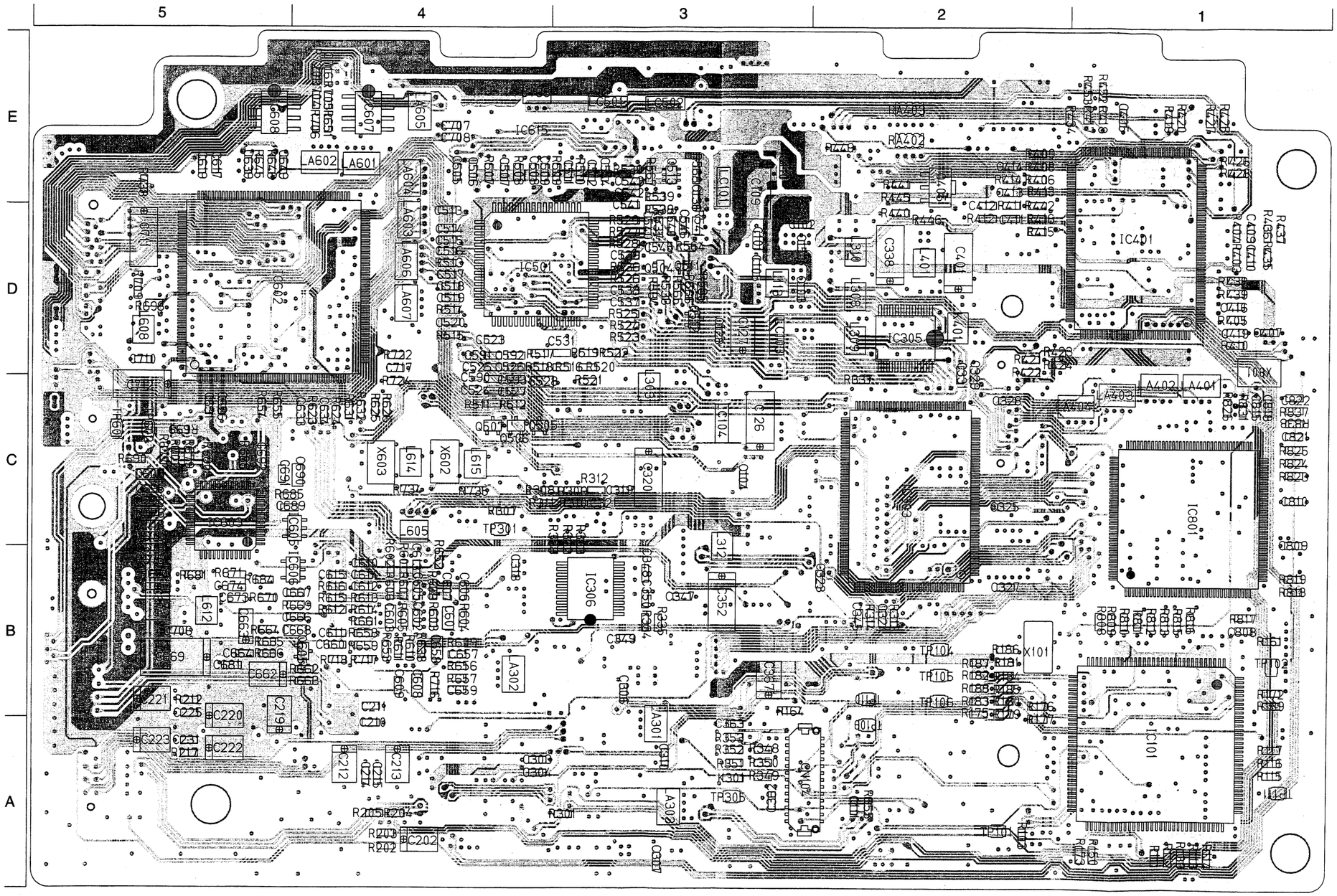

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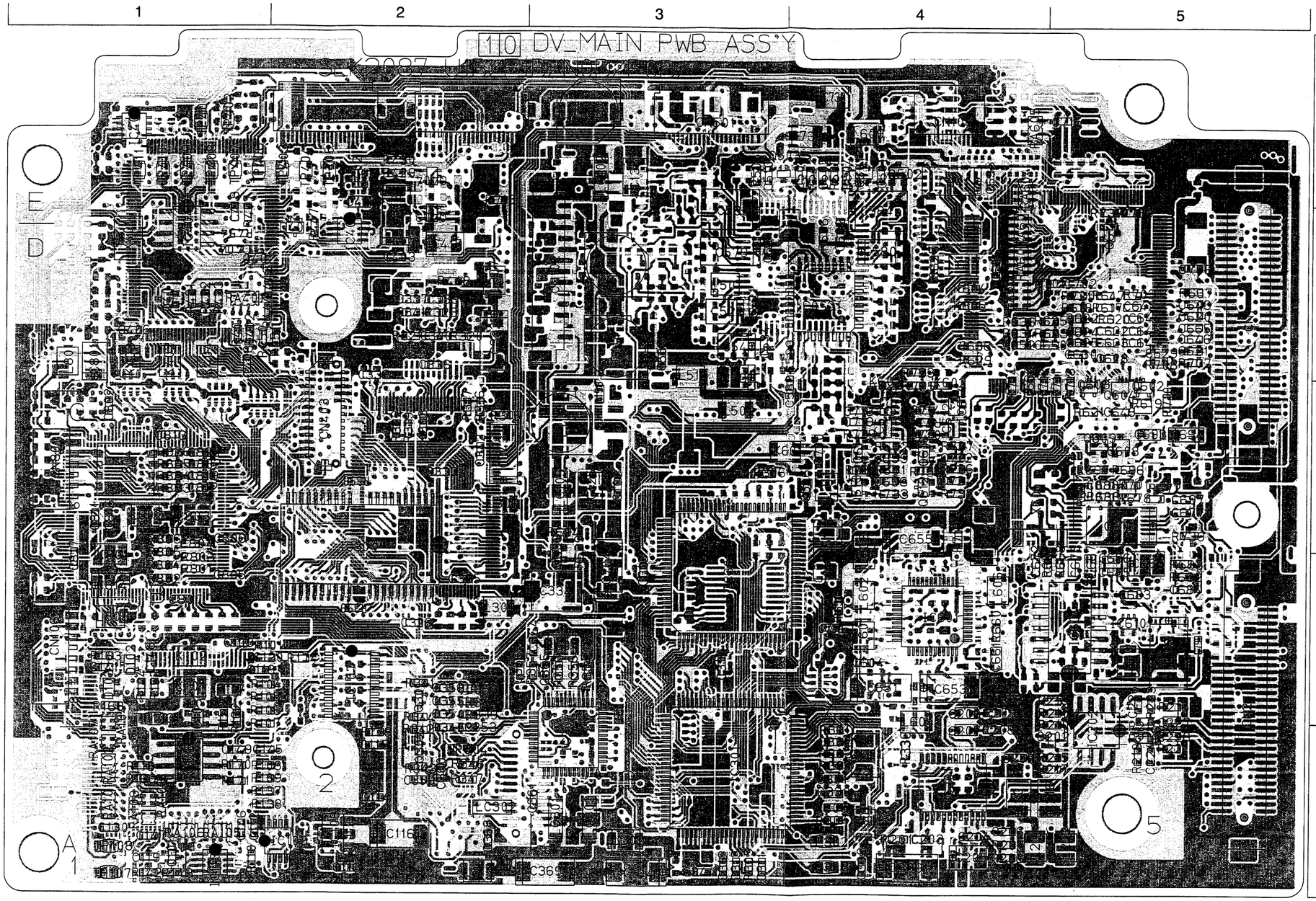
– SIDE A –



● **ADDRESS TABLE OF BOARD PARTS**

Each address may have an address error by one interval.

Side — A-1C (Y axis / X axis)

IC101	B-1B	R144	A-1C	R356	A-3C	R567	B-3E	R707	A-5D
IC103	A-2B	R150	B-1B	R357	A-2C	R568	B-3E	R708	A-5D
IC105	A-1B	R152	A-1B	R398	A-2D	R569	B-3E	R709	B-5D
IC106	A-1B	R157	A-1C	R399	A-2C	R570	B-3D	R710	A-5D
IC107	A-2C	R161	B-1C	R401	A-1D	R601	B-4C	R711	A-4D
IC108	A-2B	R162	A-1B	R402	A-1D	R602	B-4C	R712	A-4D
IC113	A-1B	R163	A-1C	R403	B-1E	R603	B-4C	R713	A-4D
IC201	A-4B	R164	B-3B	R404	B-1E	R604	B-4C	R714	A-4D
IC202	A-5B	R168	A-1B	R405	B-1D	R605	B-4C	R715	A-2E
IC301	A-3B	R169	A-1B	R406	B-2E	R606	B-4C	R716	B-4C
IC302	A-3C	R170	A-1B	R407	A-1E	R607	B-4C	R717	B-4C
IC303	B-2C	R171	A-1B	R408	B-2E	R608	B-4C	R718	B-4C
IC304	A-2C	R172	B-1C	R409	B-2E	R609	B-4C	R719	A-4C
IC305	B-2D	R173	B-1B	R410	B-1D	R610	B-4C	R720	B-4E
IC306	B-3C	R174	A-2C	R411	B-2E	R611	B-4C	R721	A-4D
IC307	A-3B	R175	B-2B	R412	B-2E	R612	B-4C	R722	B-4D
IC401	B-1E	R176	B-2B	R413	B-2E	R613	B-4C	R723	A-4D
IC402	A-1E	R177	B-2B	R414	B-2E	R614	B-4C	R724	B-4D
IC403	A-2E	R178	A-2B	R415	B-2E	R615	B-4C	R725	A-4D
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IC501	B-3E	R180	B-2B	R417	B-1E	R617	A-5D	R727	A-4D
IC503	A-4D	R181	B-2C	R418	B-1E	R618	A-4D	R728	A-4D
IC601	A-4C	R182	B-2C	R419	B-1E	R619	A-5D	R729	A-4D
IC602	B-4D	R183	B-2B	R420	B-1E	R620	A-5D	R730	A-4D
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IC605	B-4C	R186	B-2C	R423	B-2D	R623	B-4D	R733	A-4C
IC606	B-4C	R187	B-2C	R424	B-2D	R624	B-4D	R734	B-4C
IC607	B-4E	R188	B-2C	R425	B-1E	R625	B-4D	R735	B-4C
IC608	B-4E	R189	B-1B	R426	B-1E	R626	B-4D	R736	A-5E
IC610	A-5C	R198	A-3D	R427	B-1E	R629	A-4D	R737	A-5E
IC611	A-4D	R199	B-2D	R428	B-1E	R631	B-4D	R738	B-5E
IC612	A-4D	R201	A-4B	R429	A-2E	R632	B-4D	R739	A-5C
IC613	A-4D	R202	B-4B	R430	A-2E	R633	A-4D	R740	B-5C
IC614	A-4D	R203	B-4B	R431	A-1D	R634	A-4D	R741	B-5C
IC615	B-4E	R204	B-4B	R432	A-1D	R635	A-4D	R742	B-5C
IC801	B-1C	R205	B-4B	R433	A-1D	R636	A-4D	R796	B-5C
		R206	A-4B	R434	B-2E	R637	A-5D	R797	B-5C
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		R320	A-2D	R515	B-4D	R676	B-5C	C103	B-2D
D102	A-1C	R321	A-2D	R516	B-3D	R677	B-5D	C104	B-3D
D103	A-1C	R322	A-2D	R517	B-3D	R678	A-5C	C105	B-3D
D401	A-2E	R323	A-2D	R518	B-3D	R679	B-5D	C106	A-3C
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D798	B-5C	R332	B-3C	R521	B-3D	R682	A-5C	C110	B-3E
		R333	B-3C	R522	B-3D	R683	A-5C	C111	B-2B
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R117	B-1B	R349	B-3B	R540	B-3E	R700	B-5C	C136	B-3E
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R142	A-1B	R354	A-3C	R565	B-3D	R705	B-4E	C148	A-1C
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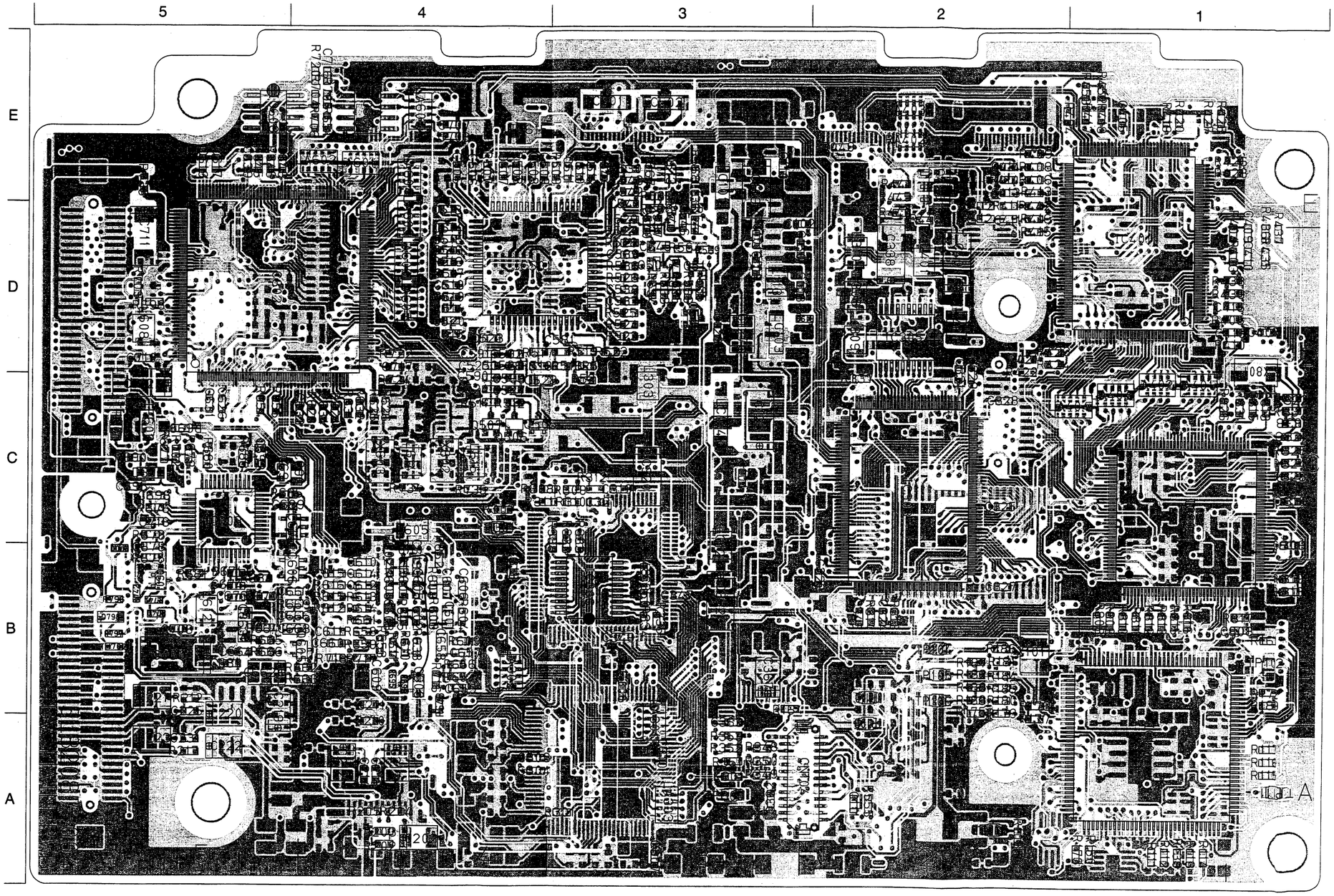
— SIDE B —



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C209	A-4B	C414	B-2E	C645	A-5D	L112	A-3E	LA302	B-4C
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C222	B-5B	C509	B-3E	C658	B-4C	L308	B-2D		
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C305	A-4B	C521	A-3D	C672	A-4C	L602	A-4C	RA402	B-2E
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C369	A-3B	C629	A-5D	C811	A-1C				
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C402	A-2E	C631	B-5D	C813	A-1D	CN2	A-5B		
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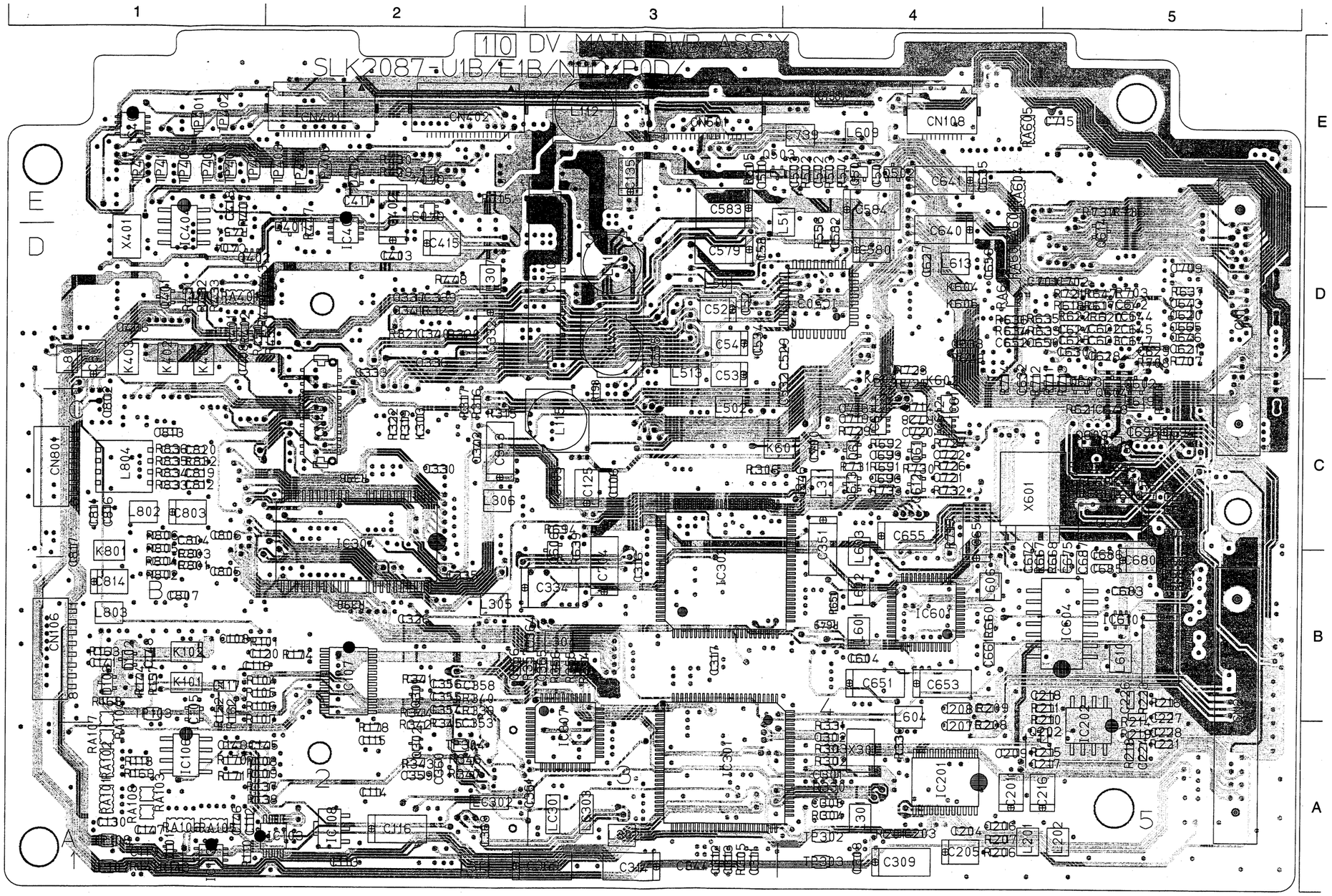

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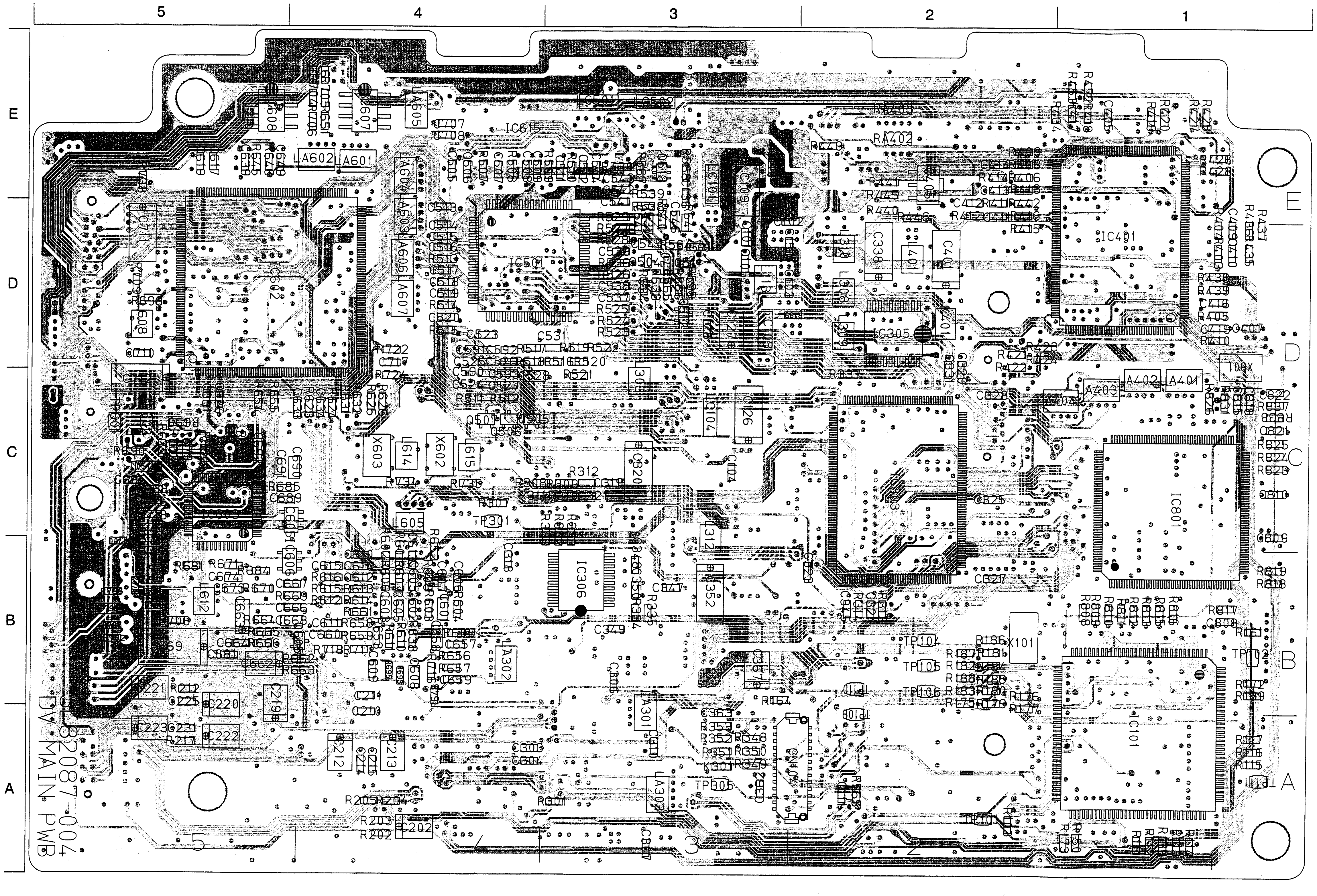

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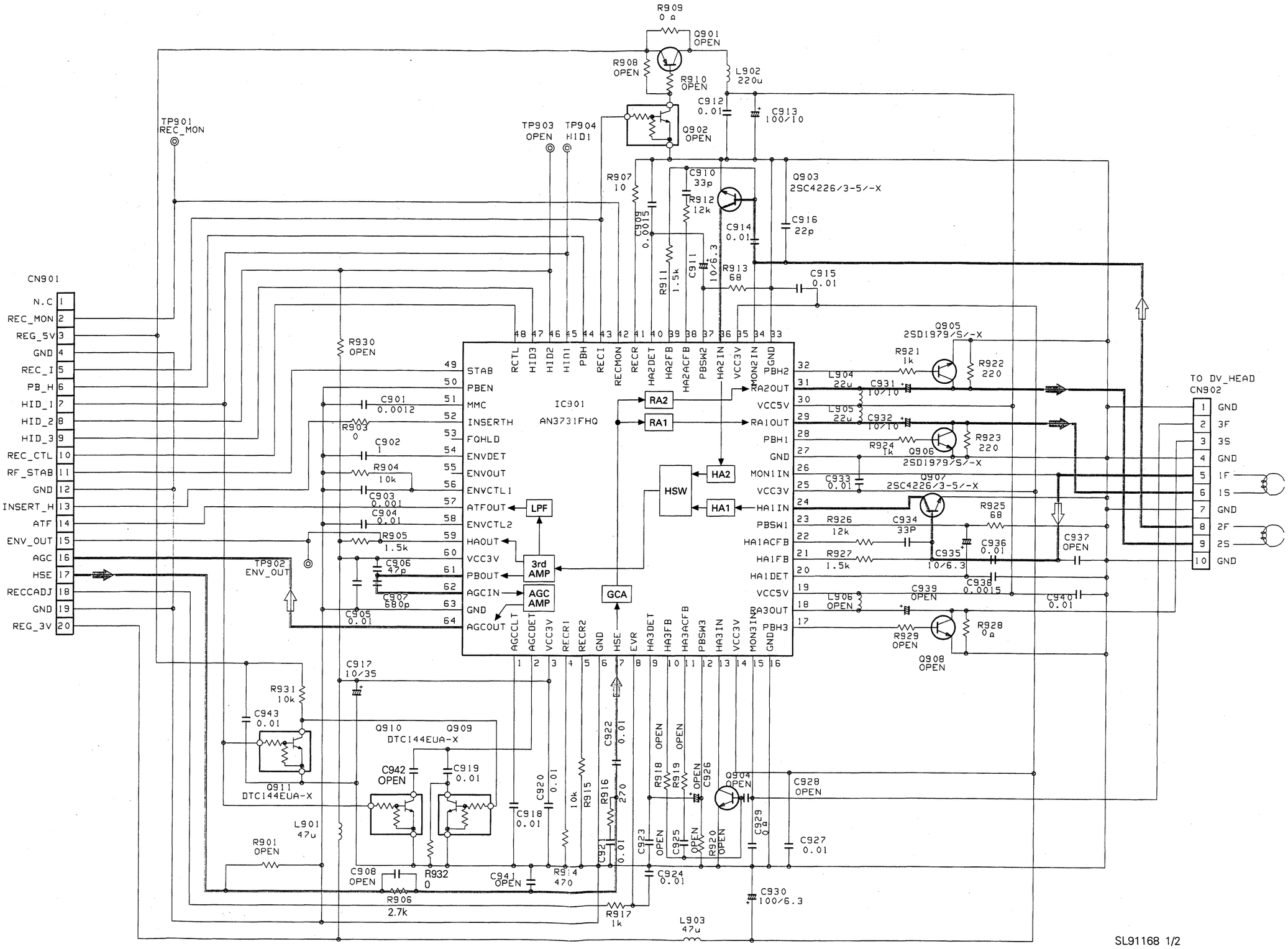
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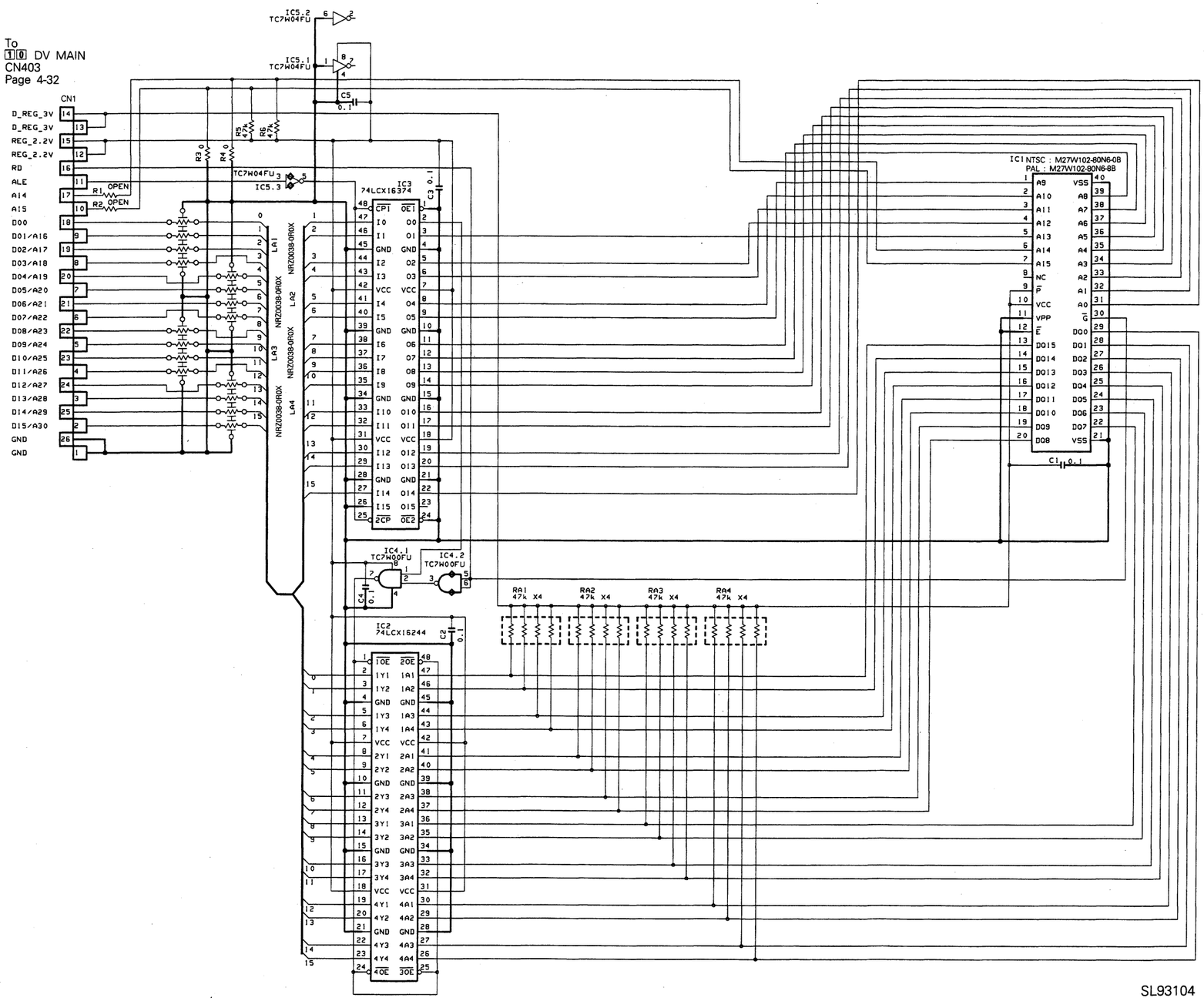
GND 12
INSERT_H 13
ATF 14
ENV_OUT 15
AGC 16
HSE 17
RECCADJ 18
GND 19
REG_3V 20
TP901 REC_MON
TP902 ENV_OUT
TP903 OPEN
TP904 HID1
R909 0 Ω
Q901 OPEN
R908 OPEN
R910 OPEN
L902 220u
C912 0.01
C913 100/10
Q902 OPEN
R907 10
C910 33p
R912 12k
Q903 2SC4226/3-5/-X
C909 0.0015
C914 0.01
C916 22p
R911 1.5k
C911 10/6.3
R913 68
C915 0.01
R930 OPEN
C901 0.0012
R903 0
C902 1
R904 10k
C903 0.001
C904 0.01
R905 1.5k
C906 47p
C907 680p
C905 0.01
IC901 AN3731FHQ
STAB 49
PBEN 50
MMC 51
INSERTH 52
FQHLD 53
ENVDET 54
ENVOUT 55
ENVCTL1 56
ATFOUT 57
ENVCTL2 58
HAOUT 59
VCC3V 60
PBOUT 61
AGCIN 62
GND 63
AGCOUT 64
RCTL HID3 HID2 HID1 PBH REC1 RECMON RECR HA2DET HA2FB HA2ACFB PBSW2 HA2IN VCC3V MON2IN GND
AGCCLT AGCDET VCC3V RECR1 RECR2 GND HSE EVR HA3DET HA3FB HA3ACFB PBSW3 HA3IN VCC3V MON3IN GND
RA2
RA1
LPF
3rd AMP
AGC AMP
GCA
HSW
HA2
HA1
PBH2 32
RA2OUT 31
VCC5V 30
RA1OUT 29
PBH1 28
GND 27
MON1IN 26
VCC3V 25
HA1IN 24
PBSW1 23
HA1ACFB 22
HA1FB 21
HA1DET 20
VCC5V 19
RA3OUT 18
PBH3 17
L904 22u
L905 22u
L906 OPEN
C931 10/10
C932 10/10
C933 0.01
C934 33P
C935 10/6.3
C936 0.01
C937 OPEN
C938 0.0015
C939 OPEN
C940 0.01
Q905 2SD1979/S/-X
R921 1k
R922 220
R924 1k
Q906 2SD1979/S/-X
R923 220
Q907 2SC4226/3-5/-X
R925 68
R926 12k
R927 1.5k
R929 OPEN
R928 0 Ω
Q908 OPEN
TO DV_HEAD CN902
1 GND
2 3F
3 3S
4 GND
5 1F
6 1S
7 GND
8 2F
9 2S
10 GND
C917 10/35
R931 10k
C943 0.01
Q910 Q909 DTC144EUA-X
Q911 DTC144EUA-X
C942 OPEN
C919 0.01
C920 0.01
C918 0.01
R915 10k
R916 270
C922 0.01
C921 0.01
R918 OPEN
R919 OPEN
C926 OPEN
Q904 OPEN
C928 OPEN
C923 OPEN
C925 OPEN
R920 OPEN
C929 0 Ω
C927 0.01
L901 47u
R901 OPEN
C908 OPEN
R932 0
R905 2.7k
C941 OPEN
R914 470
C924 0.01
C930 100/6.3
R917 1k
L903 47u
To 10 DV MAIN CN501 Page 4-33
SL91168 1/2

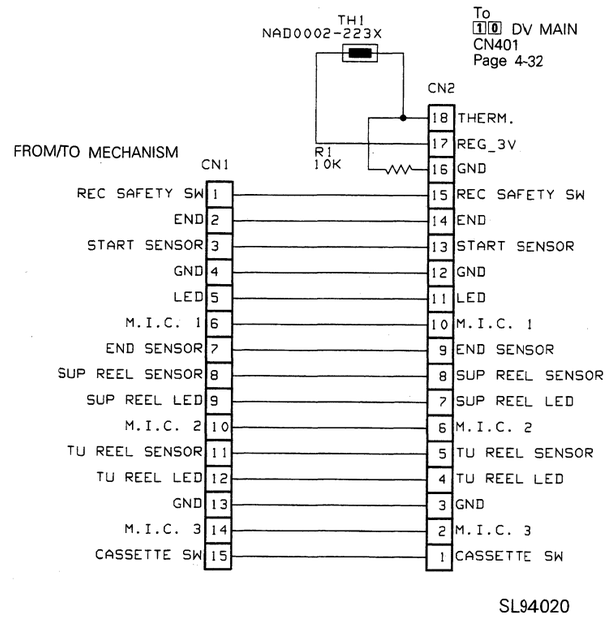
4.25 ROM 03, CONN.04 SCHEMATIC DIAGRAM

• ROM 03



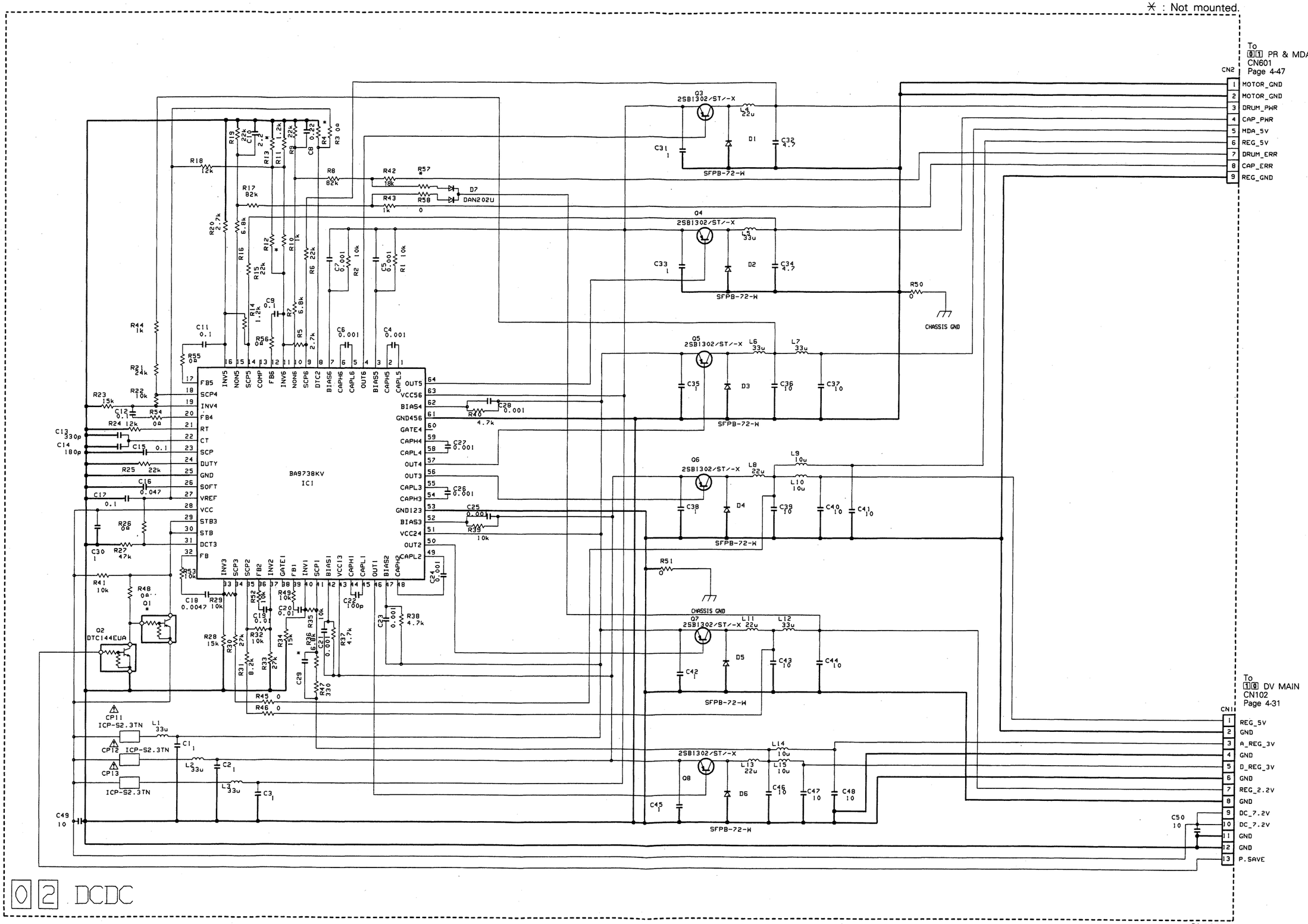
SL93104

• CONN. 04



SL94020

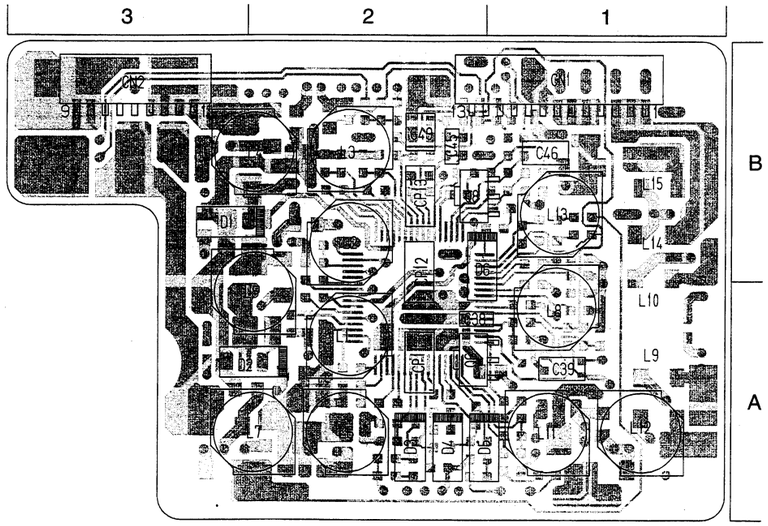
✳ : Not mounted.


To 01 PR & MDA CN601 Page 4-47
CN2
1 MOTOR_GND
2 MOTOR_GND
3 DRUM_PWR
4 CAP_PWR
5 MDA_5V
6 REG_5V
7 DRUM_ERR
8 CAP_ERR
9 REG_GND
Q3 2SB1302/ST/-X
Q4 2SB1302/ST/-X
Q5 2SB1302/ST/-X
Q6 2SB1302/ST/-X
Q7 2SB1302/ST/-X
Q8 2SB1302/ST/-X
SFPB-72-W
D1
D2
D3
D4
D5
D6
D7 DAN202U
CHASSIS GND
BA9738KV
IC1
Q1
Q2 DTC144EUA
CP11 ICP-S2.3TN
CP12 ICP-S2.3TN
CP13 ICP-S2.3TN
To 10 DV MAIN CN102 Page 4-31
CN1
1 REG_5V
2 GND
3 A_REG_3V
4 GND
5 D_REG_3V
6 GND
7 REG_2.2V
8 GND
9 DC_7.2V
10 DC_7.2V
11 GND
12 GND
13 P.SAVE
02 DCDC
SL92236

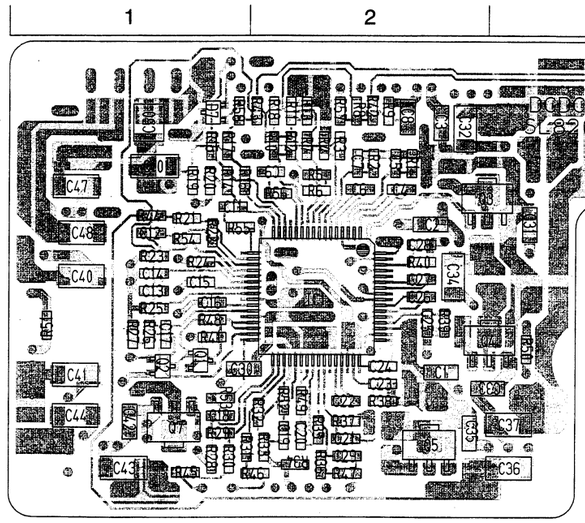
4.27 DCDC, ROM, CONN. CIRCUIT BOARD

· DCDC

— SIDE A —



— SIDE B —



● **ADDRESS TABLE OF BOARD PARTS**

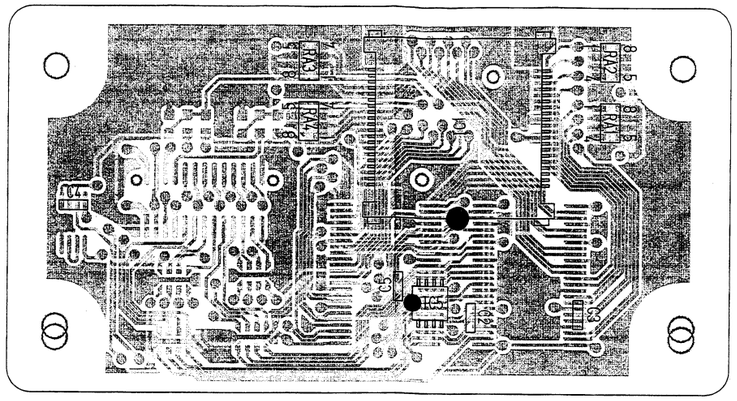
Each address may have an address error by one interval.

Side — A-1C — Y axis / X axis

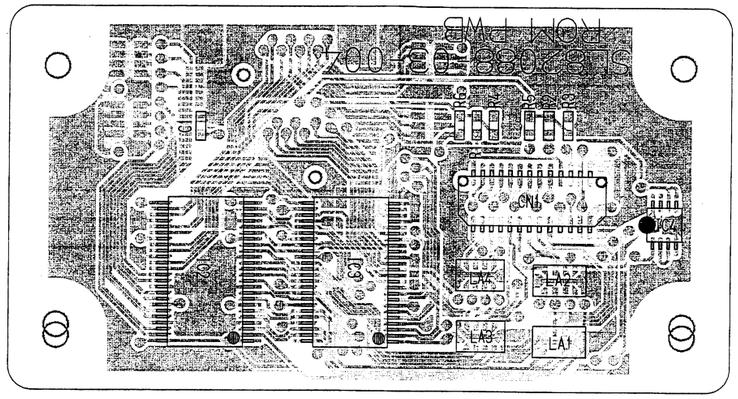
IC1	B-2A	R36	B-2A	C31	B-3B
		R37	B-2A	C32	B-3B
Q1	B-2A	R38	B-3A	C33	B-3A
Q2	B-1A	R39	B-3A	C34	B-3B
Q3	B-3B	R40	B-3B	C35	B-3A
Q4	B-3A	R41	B-2A	C36	B-3A
Q5	B-3A	R42	B-3B	C37	B-3A
Q6	A-2A	R43	B-2B	C38	A-2A
Q7	B-1A	R44	B-1B	C39	A-1A
Q8	A-2B	R45	B-1A	C40	B-1B
		R46	B-2A	C41	B-1A
D1	A-3B	R47	B-2A	C42	B-1A
D2	A-3A	R48	B-2A	C43	B-1A
D3	A-2A	R49	B-2A	C44	B-1A
D4	A-2A	R50	B-3A	C45	A-2B
D5	A-2A	R51	B-1A	C46	A-1B
D6	A-2B	R52	B-2A	C47	B-1B
D7	B-2B	R53	B-2A	C48	B-1B
		R54	B-1B	C49	A-2B
R1	B-3B	R55	B-2B	C50	B-1B
R2	B-3B	R56	B-2B		
R3	B-2B	R57	B-2B	L1	A-3A
R4	B-2B	R58	B-2B	L2	A-3B
R5	B-2B			L3	A-3B
R6	B-2B	C1	B-3A	L4	A-3B
R7	B-2B	C2	B-3B	L5	A-3A
R8	B-2B	C3	B-3B	L6	A-3A
R9	B-3B	C4	B-3B	L7	A-3A
R10	B-2B	C5	B-3B	L8	A-1A
R11	B-2B	C6	B-2B	L9	A-1A
R12	B-2B	C7	B-2B	L10	A-1A
R13	B-2B	C8	B-3B	L11	A-1A
R14	B-2B	C9	B-2B	L12	A-1A
R15	B-2B	C10	B-1B	L13	A-1B
R16	B-2B	C11	B-2B	L14	A-1B
R17	B-2B	C12	B-1B	L15	A-1B
R18	B-2B	C13	B-1A		
R19	B-1B	C14	B-1B	CP11	A-2A
R20	B-2B	C15	B-2B	CP12	A-2B
R21	B-1B	C16	B-2A	CP13	A-2B
R22	B-2B	C17	B-1A		
R23	B-1B	C18	B-2A	CN1	A-1B
R24	B-2B	C19	B-2A	CN2	A-4B
R25	B-1A	C20	B-2A		
R26	B-1A	C21	B-2A		
R27	B-1A	C22	B-2A		
R28	B-2A	C23	B-3A		
R29	B-2A	C24	B-3A		
R30	B-2A	C25	B-3A		
R31	B-2A	C26	B-3A		
R32	B-2A	C27	B-3B		
R33	B-2A	C28	B-3B		
R34	B-2A	C29	B-2A		
R35	B-2A	C30	B-2A		

· ROM

— SIDE A —

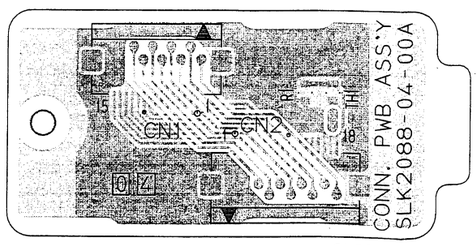


— SIDE B —



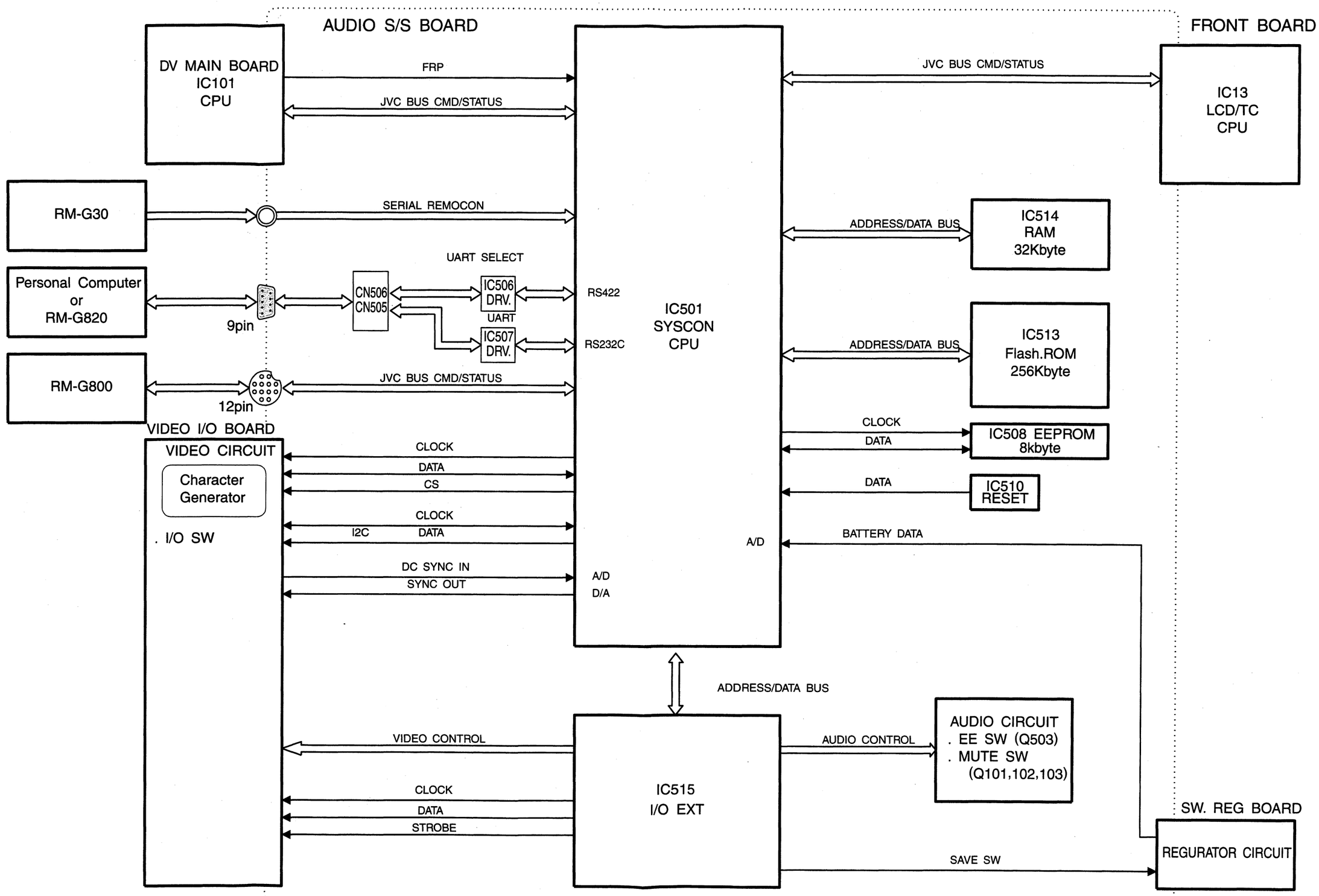
· CONN.

— SIDE A —

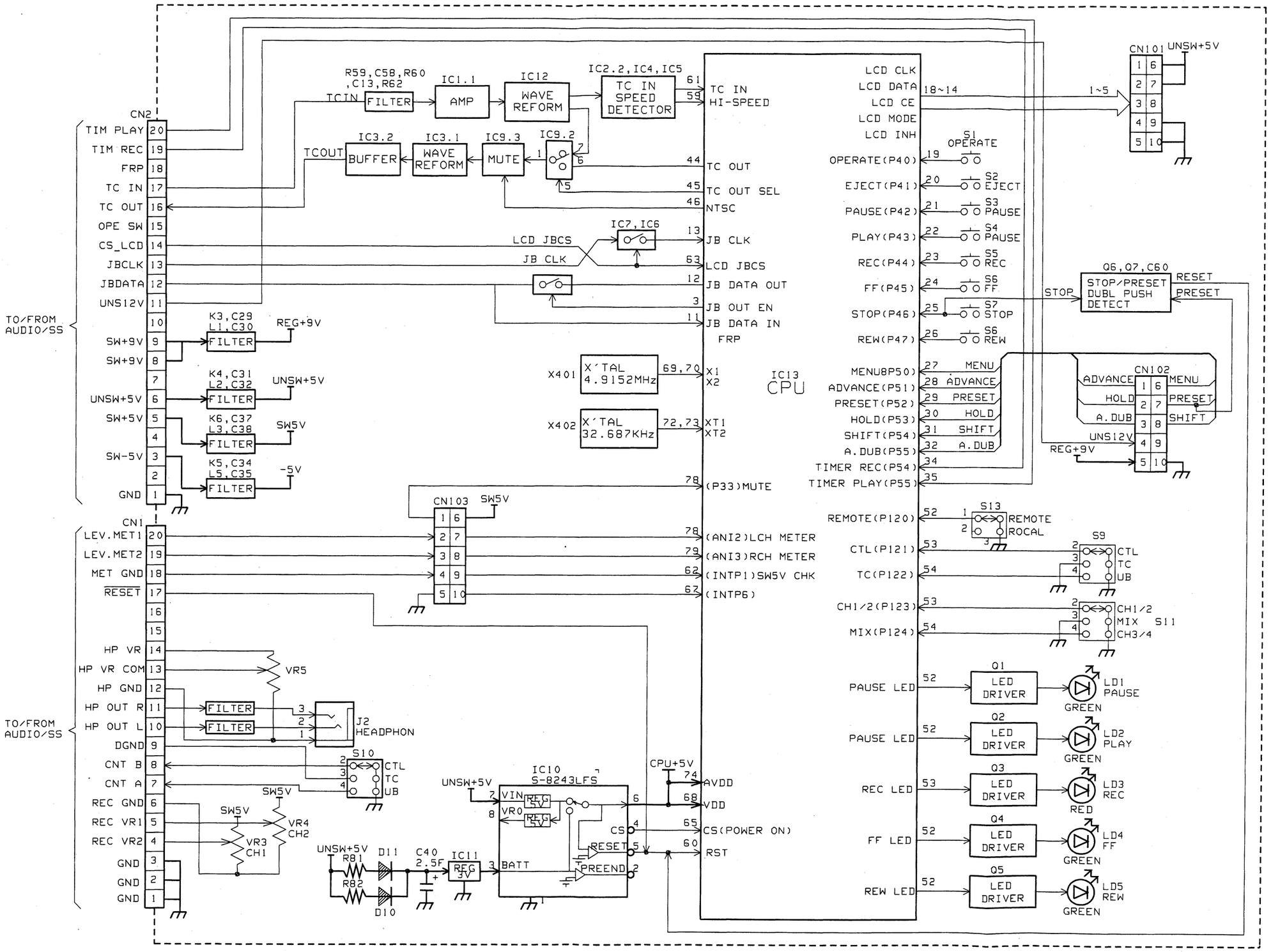


SL82088-04-001

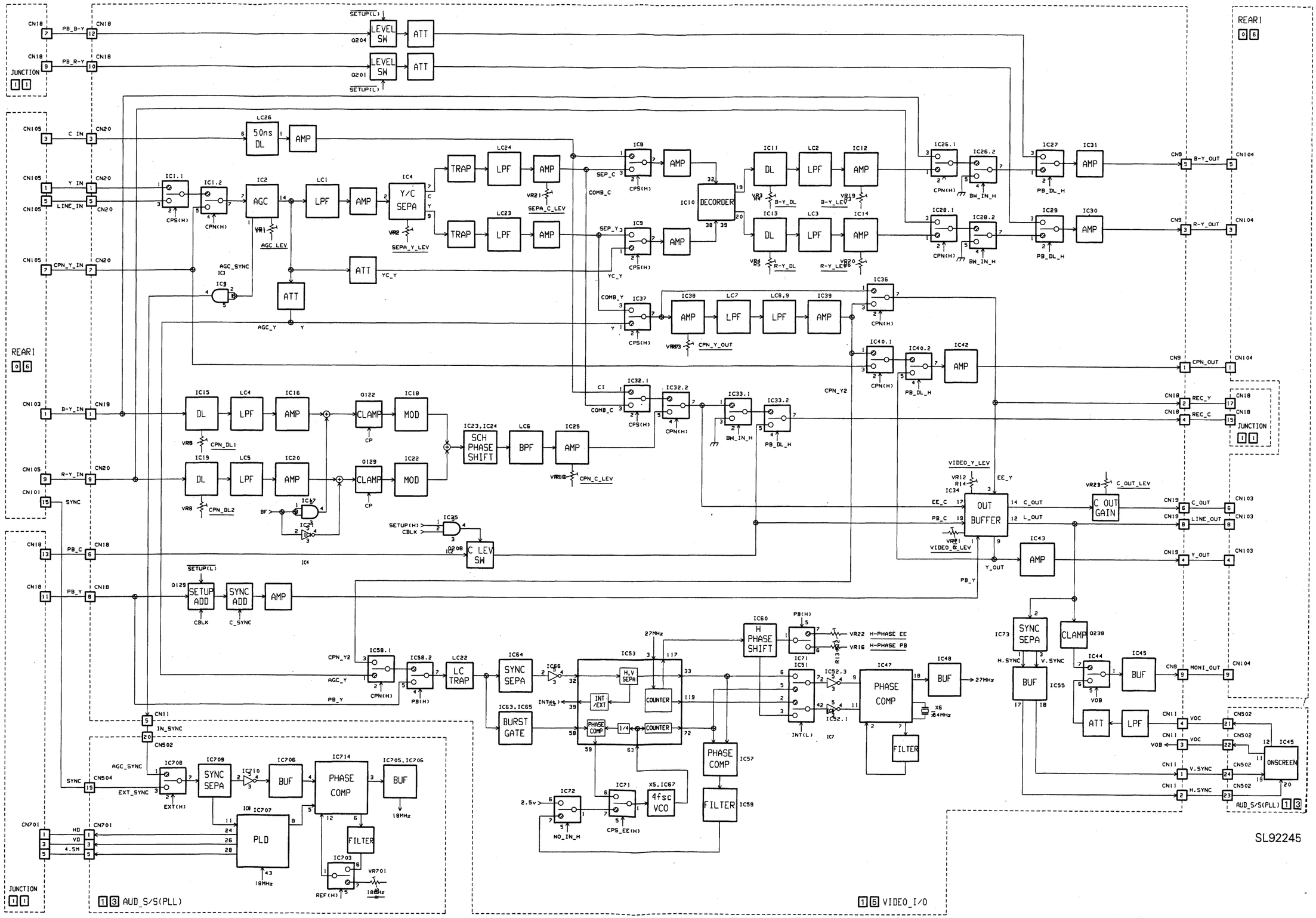
4-51


AUDIO S/S BOARD
FRONT BOARD
DV MAIN BOARD
IC101
CPU
FRP
JVC BUS CMD/STATUS
JVC BUS CMD/STATUS
IC13
LCD/TC
CPU
RM-G30
SERIAL REMOCON
ADDRESS/DATA BUS
IC514
RAM
32Kbyte
UART SELECT
Personal Computer
or
RM-G820
9pin
CN506
CN505
IC506
DRV.
UART
IC507
DRV.
RS422
RS232C
IC501
SYSCON
CPU
ADDRESS/DATA BUS
IC513
Flash.ROM
256Kbyte
RM-G800
12pin
JVC BUS CMD/STATUS
CLOCK
DATA
IC508 EEPROM
8kbyte
VIDEO I/O BOARD
VIDEO CIRCUIT
Character
Generator
CLOCK
DATA
CS
DATA
IC510
RESET
CLOCK
I2C
DATA
BATTERY DATA
. I/O SW
A/D
DC SYNC IN
SYNC OUT
A/D
D/A
ADDRESS/DATA BUS
VIDEO CONTROL
AUDIO CONTROL
AUDIO CIRCUIT
. EE SW (Q503)
. MUTE SW
(Q101,102,103)
CLOCK
DATA
STROBE
IC515
I/O EXT
SW. REG BOARD
SAVE SW
REGURATOR CIRCUIT

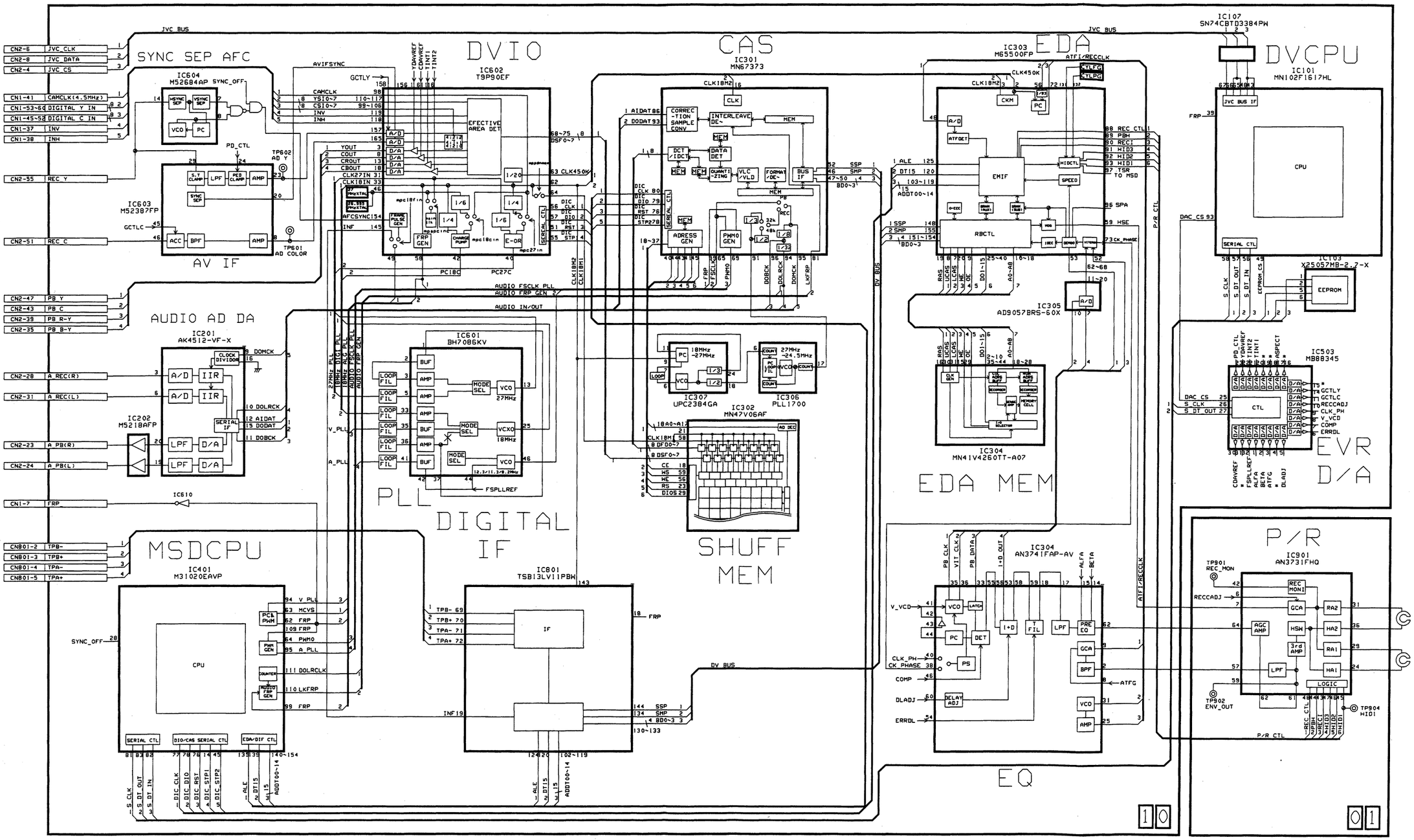
4.29 FRONT BLOCK DIAGRAM



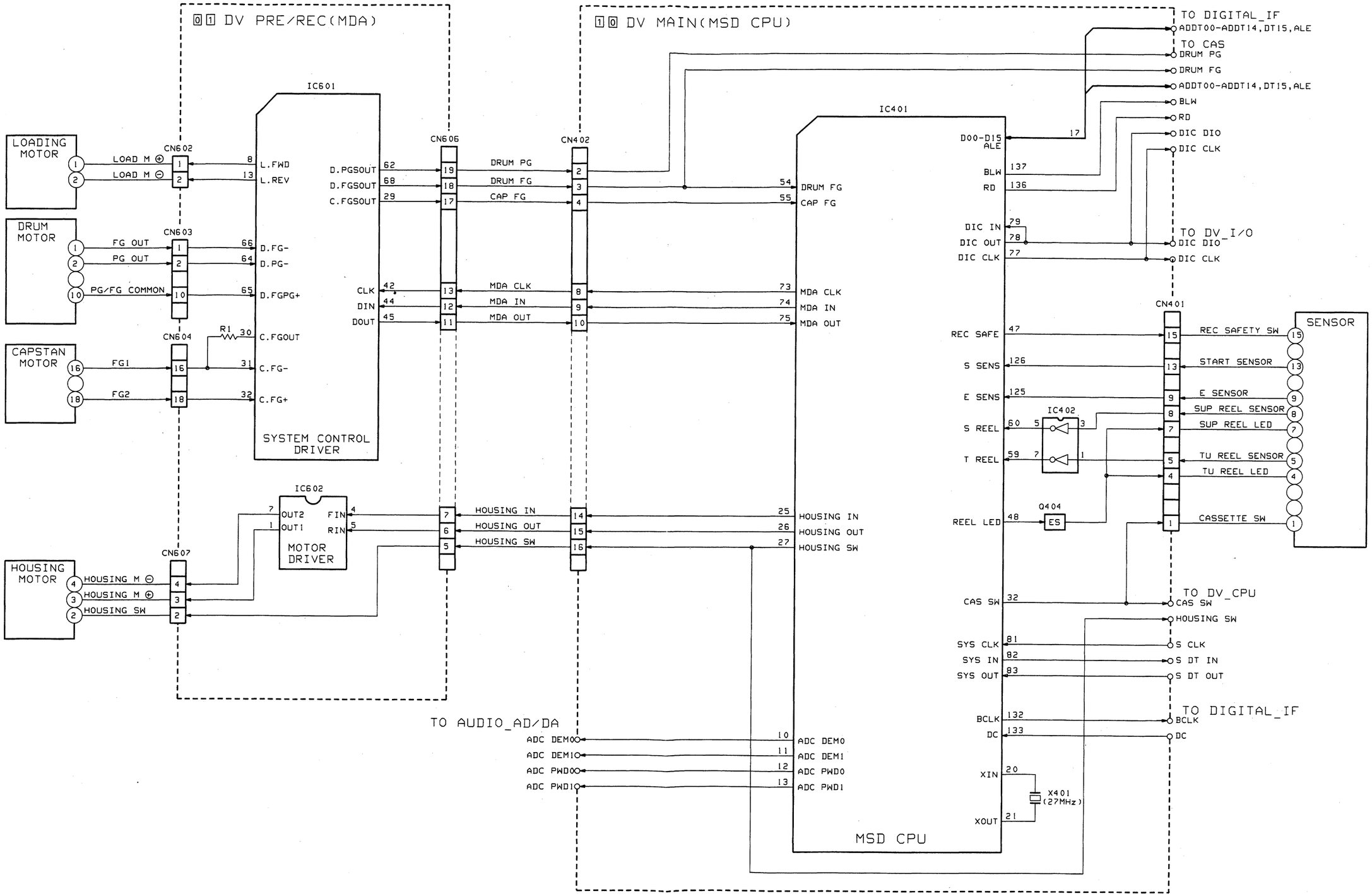
4.30 VIDEO I/O BLOCK DIAGRAM



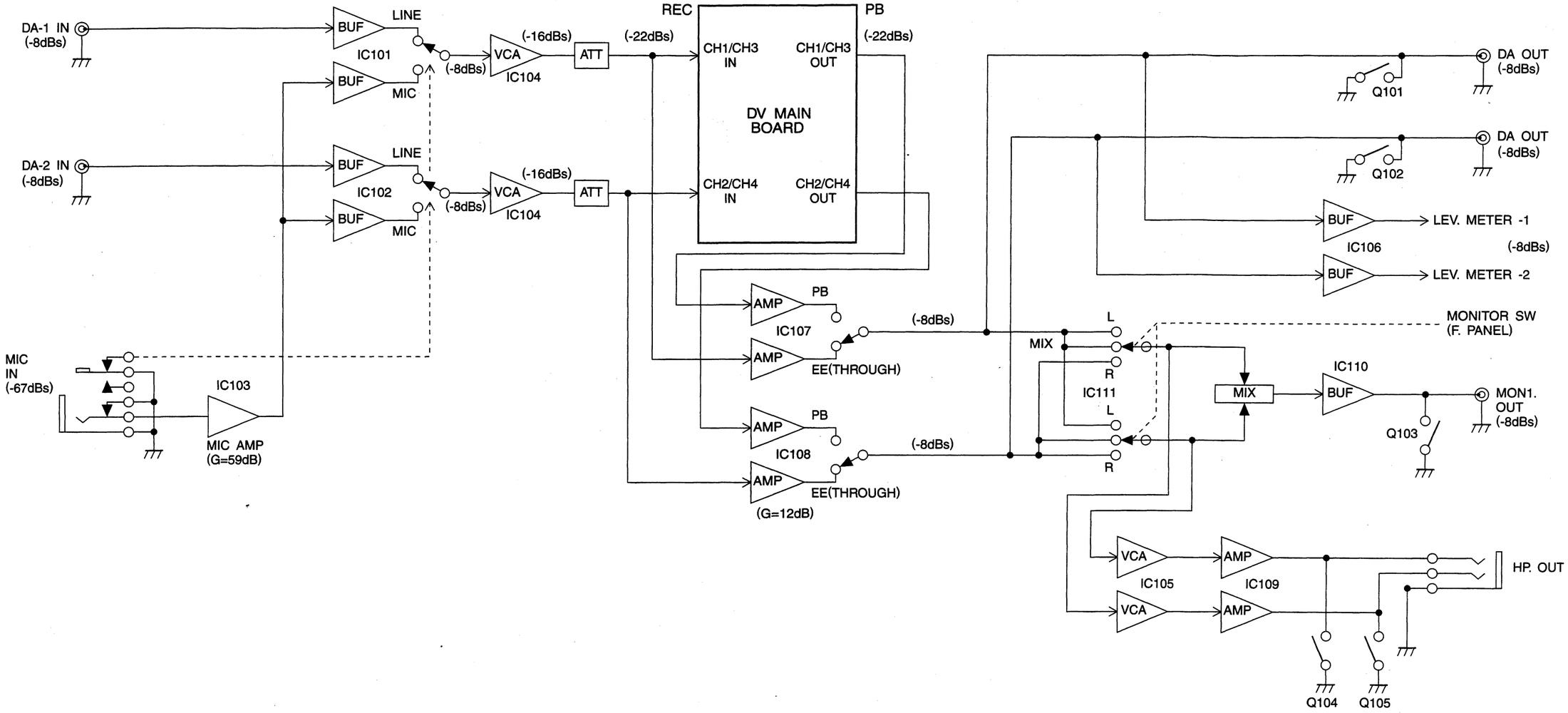
4.31 DV BLOCK DIAGRAM (1/2)

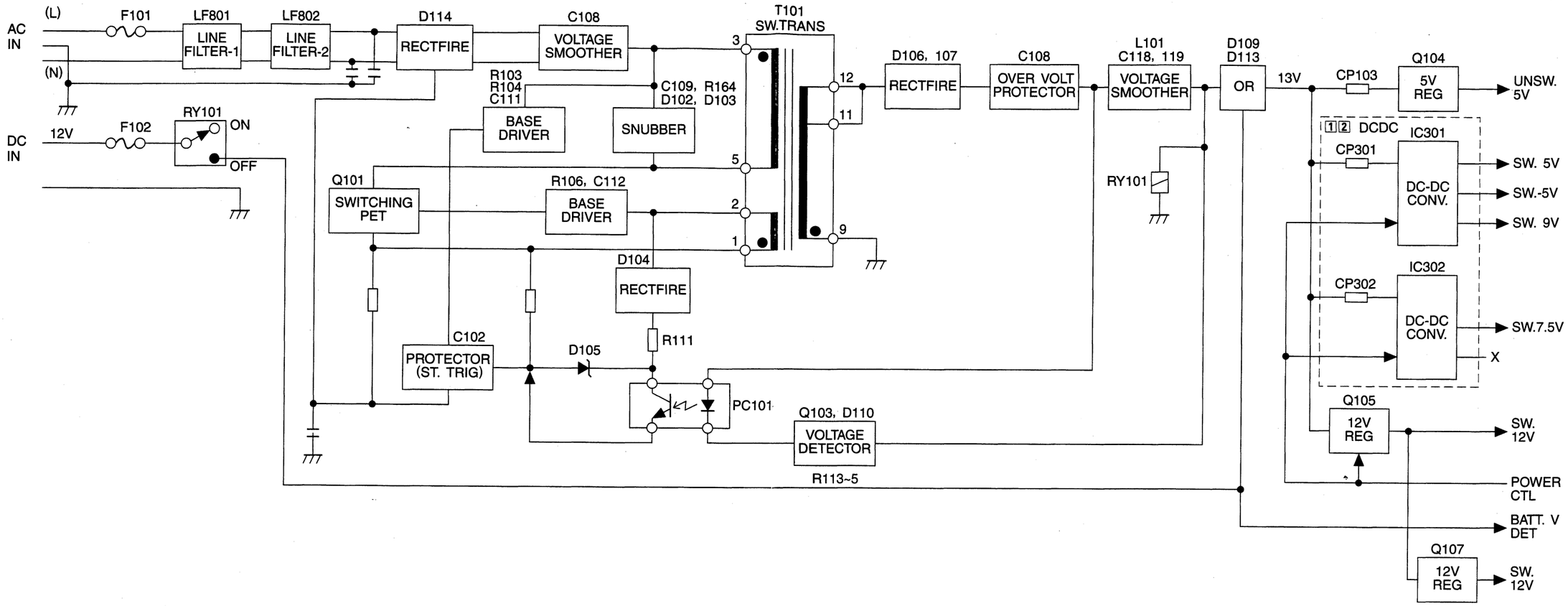


· DV BLOCK DIAGRAM (2/2)



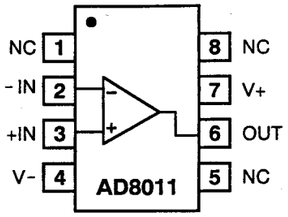
SL93113


DA-1 IN
(-8dBs)
DA-2 IN
(-8dBs)
MIC
IN
(-67dBs)
BUF
LINE
IC101
MIC
IC102
IC103
MIC AMP
(G=59dB)
(-8dBs)
VCA
IC104
(-16dBs)
ATT
(-22dBs)
REC
PB
(-22dBs)
CH1/CH3
IN
CH1/CH3
OUT
DV MAIN
BOARD
CH2/CH4
IN
CH2/CH4
OUT
AMP
IC107
IC108
EE(THROUGH)
(G=12dB)
DA OUT
(-8dBs)
Q101
Q102
IC106
LEV. METER -1
LEV. METER -2
MONITOR SW
(F. PANEL)
MIX
L
R
IC111
IC110
Q103
MON1.
OUT
VCA
IC105
IC109
HP. OUT
Q104
Q105

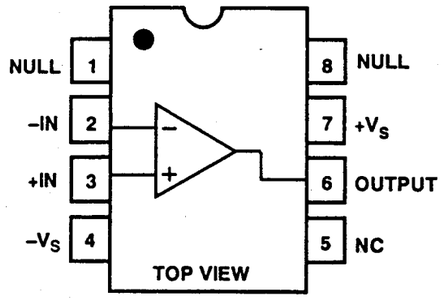

AC IN
(L)
(N)
F101
LF801
LINE FILTER-1
LF802
LINE FILTER-2
D114
RECTFIRE
C108
VOLTAGE SMOOTHER
T101
SW.TRANS
3
12
11
5
2
1
9
D106, 107
RECTFIRE
C108
OVER VOLT PROTECTOR
L101
C118, 119
VOLTAGE SMOOTHER
D109
D113
OR
13V
CP103
Q104
5V REG
UNSW. 5V
R103
R104
C111
BASE DRIVER
C109, R164
D102, D103
SNUBBER
RY101
ON
OFF
DC IN
12V
F102
Q101
SWITCHING PET
R106, C112
BASE DRIVER
RY101
1 2 DCDC
IC301
CP301
DC-DC CONV.
SW. 5V
SW.-5V
SW. 9V
D104
RECTFIRE
IC302
CP302
DC-DC CONV.
SW.7.5V
X
C102
PROTECTOR (ST. TRIG)
D105
R111
PC101
Q105
12V REG
SW. 12V
Q103, D110
VOLTAGE DETECTOR
R113~5
POWER CTL
BATT. V DET
Q107
12V REG
SW. 12V

4.34 IC BLOCK DIAGRAMS

■ **AD8011AR-X [ANALOG DEVICES]**
(Current Feedback Amplifier)

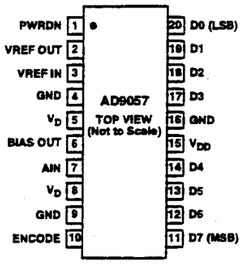


■ **AD817AR-X [ANALOG DEVICES]**
(Hi-Speed Low Power Op.Amp.)

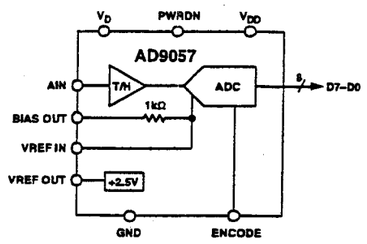


NC = NOT CONNECTED

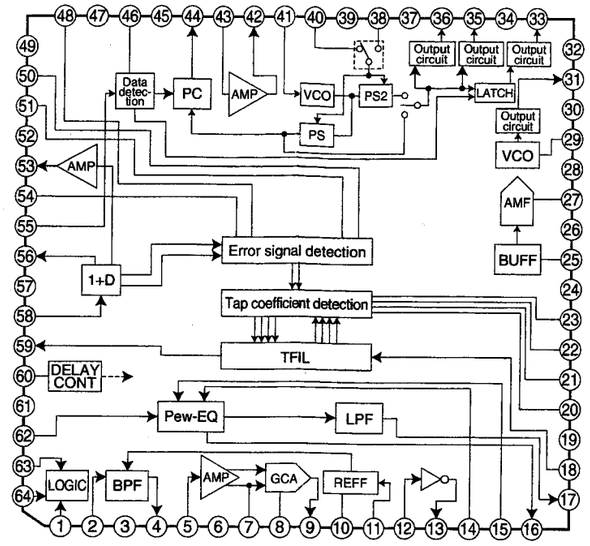
■ **AD9057BRS-60-X [ANALOG DEVICES]**
(8bit A/D Converter)



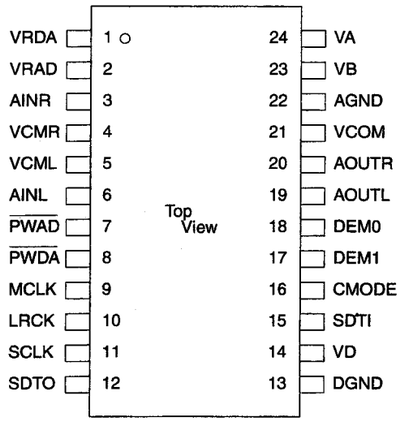
(Top View)

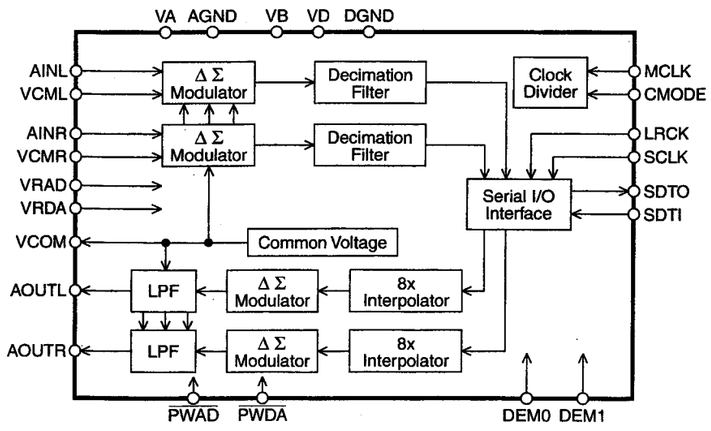


■ **AN3741FAP-A [MATSUSHITA]**
(Playback Equalizer)

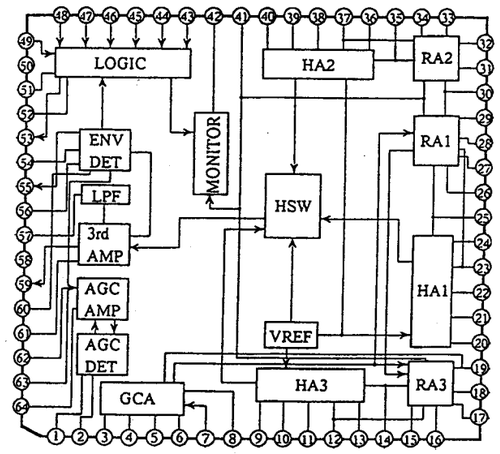


■ **AK4518-VF-X [ASAHIKAEI]**
(16 bit A/D, D/A Convertor for Audio Signal)

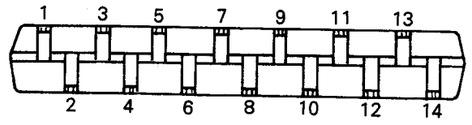


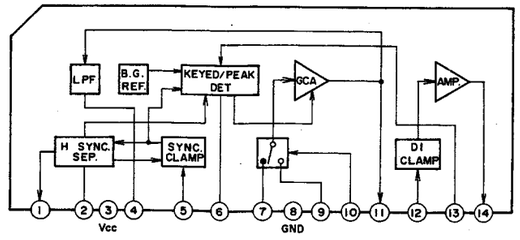


■ **AN3731FHQ [MATSUSHITA]**
(Pre/Rec Amp.)

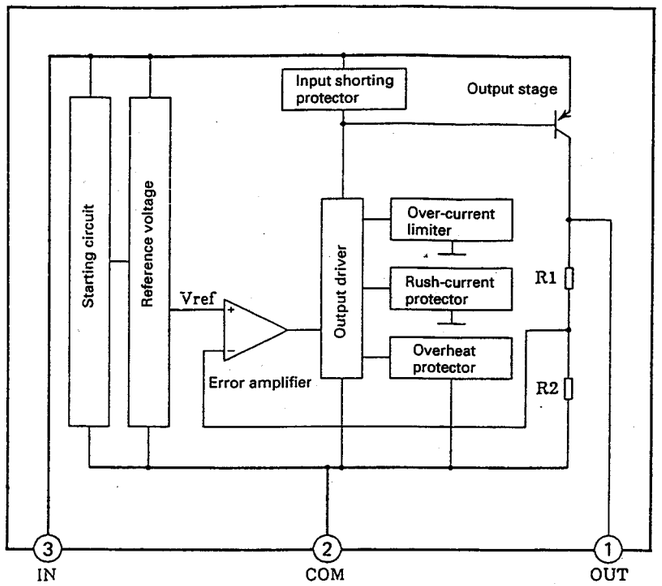


■ **AN3916-/LF/ [MATSUSHITA]**
(Video AGC)

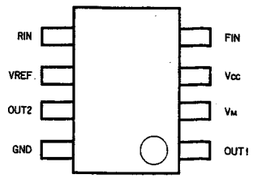




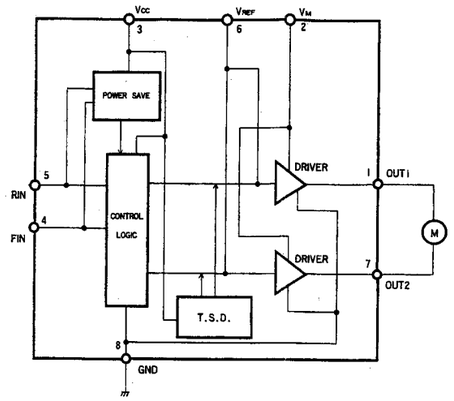
■ AN77L03M-X [MATSUSHITA]
(Voltage Regulator)



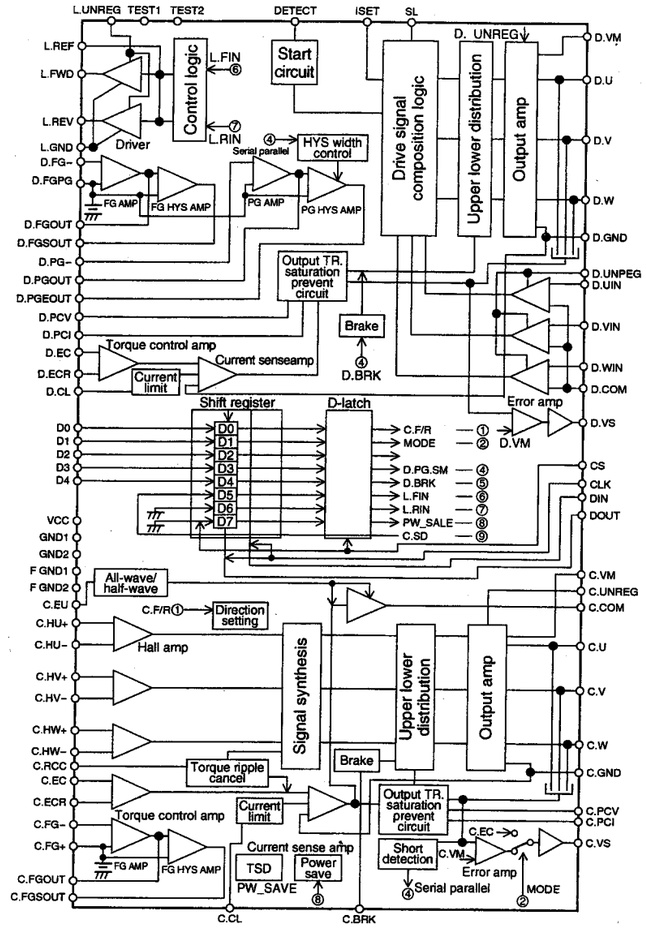
■ BA6417F-X [ROHM]
(Reversible Motor Driver)



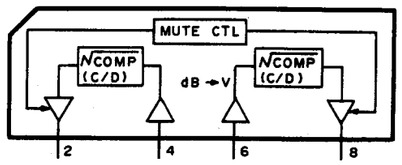
Top view



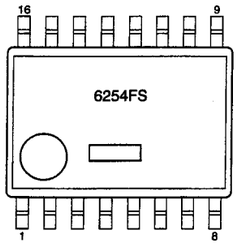
■ BA6865KV [ROHM]
(Motor Driver Controller)



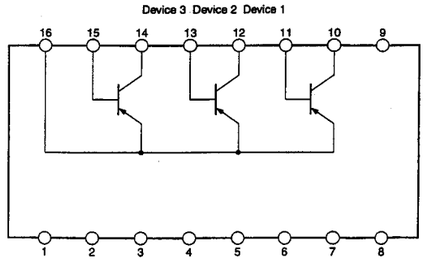
■ BA6138F-X [ROHM]
(Audio Level Detector)



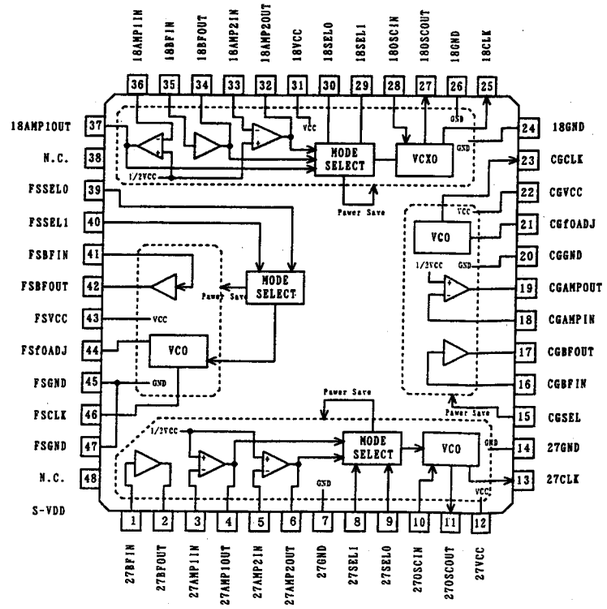
■ BA6254FS-X [ROHM]
(Motor Driver)



(Top View)

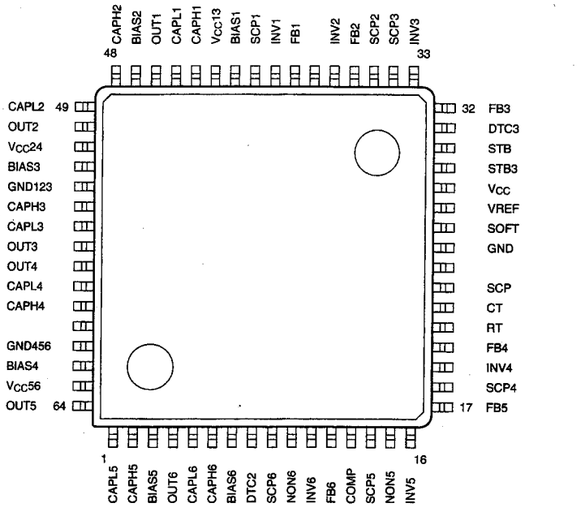


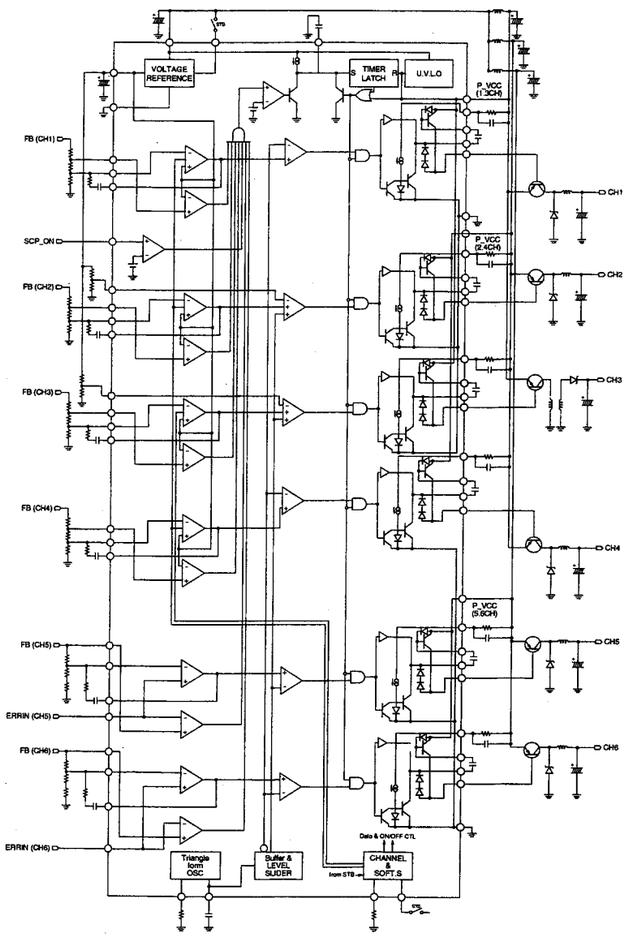
■ BH7086KV [ROHM]
(4 Channel VCO for DVC format)



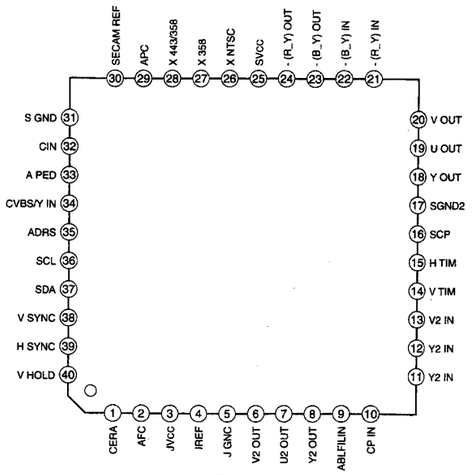
■ BA9738KV [ROHM]
(6 Channel Switching Regurator Controller)

(Top View)

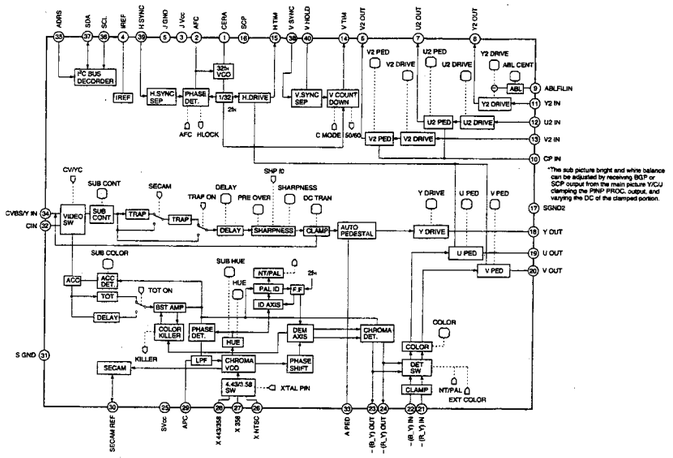




■ CXA2019AQ [SONY]
(CHROMA DECODER for NTSC/PAL)

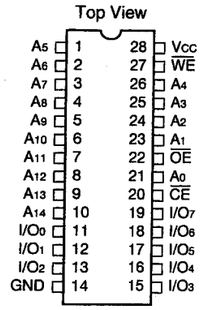


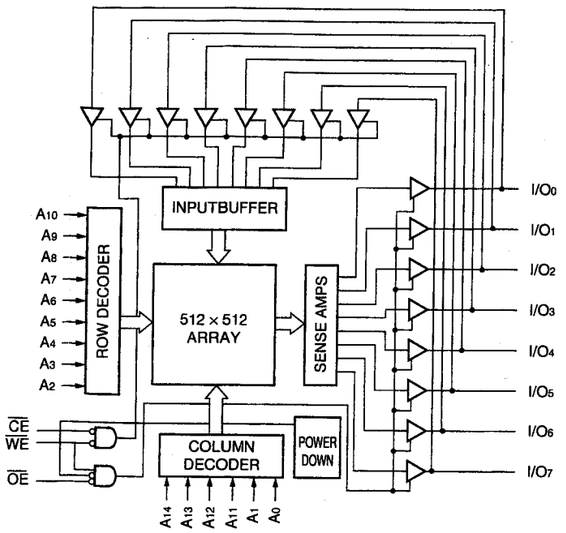
(Top View)



■ CY62256LL70SN-X [CYPRESS]
(32k x 8 Static RAM)

Top View





■ DS14C232CM-X [NATIONAL SEMICONDUCTOR]
(Dual Low-Power RS-232 Driver/Transceivers)

Top View

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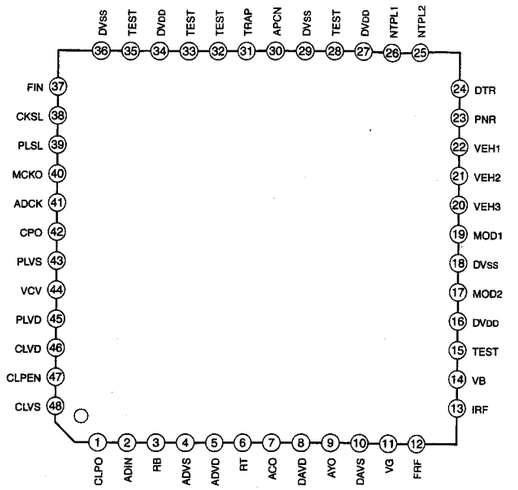
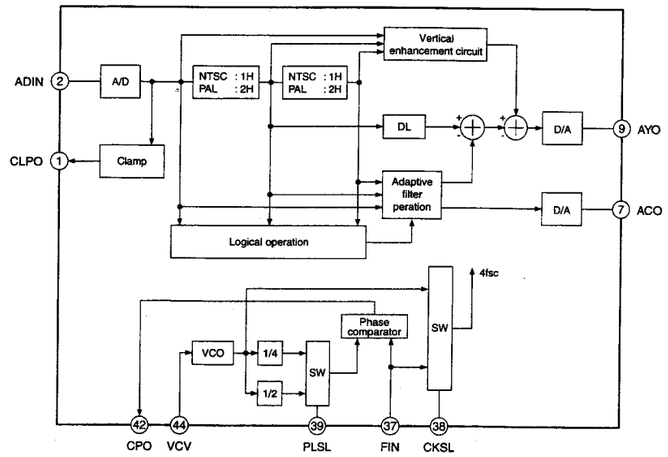
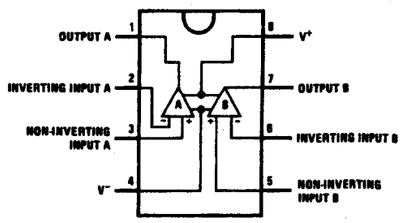
■ CXD2064Q [SONY]
(DIGITAL COM FILTER (NTSC/PAL))



(Top View)



■ LMC6082IM-X [National Semiconductor]
(Precision CMOS Dual Op.Amp.)



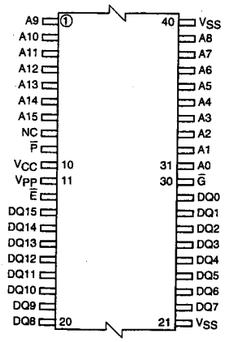
Top View

Pin Description

Pin No.	Symbol	I/O	Description
1	CLPO	O	Internal clamp circuit current output. Connect to ADIN when using the internal clamp. Leave this pin open when not in use.
2	ADIN	I	Comb filter analog input (A/D converter input).
3	RB	O	Reference bottom voltage for the A/D converter (0.52V typ.).
4	ADVS	—	A/D converter analog ground.
5	ADVD	—	A/D converter analog power supply. (5.0V)
6	RT	O	Reference top voltage for the A/D converter (2.60V typ.).
7	ACO	O	Analog chroma signal output. Output can be obtained by connecting a resistor between this pin and the analog ground.
8	DAVD	—	D/A converter analog power supply. (5.0V)
9	AYO	O	Analog luminance signal output. Output can be obtained by connecting a resistor between this pin and the analog ground.
10	DAVS	—	D/A converter analog ground.
11	VG	O	D/A converter related pin. Connect a capacitor of approximately 0.1µF between this pin and the analog power supply (DAVD).
12	VRF	I	Sets the full-scale value of the Y and C-channel D/A converter output signal.
13	IRF	O	Connect a resistor of "16R" (16 times the output resistor "R" of the D/A converter).
14	VB	O	D/A converter related pin. Connect to the analog ground (DAVS) via a capacitor of approximately 0.1µF.
15	TEST	I	Test pin. Normally fix to "Low".
16	DVDD	—	Digital power supply. (5.0V)
18	DVSS	—	Digital ground.
17	MOD2	I	Y/C separation mode setting. MOD2 MOD1: L L Adaptive processing mode; H L BPF separation mode; H H Through mode
19	MOD1	I	
20	VEH3	I	Vertical enhancement setting. Can be set in 8 stages from VEH3 VEH2 VEH1: LLL (off) to HHH (max.)
21	VEH2	I	
22	VEH1	I	
23	PNR	I	L: NTSC/H: PAL, M-PAL, N-PAL
24	DTR	I	Normally fix to "Low".
25	NTPL2	I	NTSC/PAL/M-PAL/N-PAL mode setting. NTPL2 NTPL1: L L NTSC; L H PAL; H L M-PAL; H H N-PAL
26	NTPL1	I	
27	DVDD	—	Digital power supply. (5.0V)
28	TEST	I	Test pin. Normally fix to "Low".
29	DVSS	—	Digital ground.
30	APCN	I	Horizontal aperture correction circuit setting. Low: Off, High: On.
31	TRAP	I	Trap filter setting. Low: Off, High: On.
32	TEST	I	Test pin. Normally open or fix to "Low".
33	TEST	I	Test pin. Normally open or fix to "Low".
34	DVDD	—	Digital power supply. (5.0V)
35	TEST	I	Test pin. Normally open or fix to "Low".
36	DVSS	—	Digital ground.
37	FIN	I	Clock input. Input the burst-locked fsc (2fsc) when using the internal PLL. Input the burst-locked 4fsc when not using the internal PLL.
38	CKSL	I	PLL control. Low: The internal PLL is not used. The clock (4fsc) which is input to FIN is supplied internally. High: The internal PLL is used. VCO oscillation output 4fsc clock is supplied internally.
39	PLSL	I	Selects the clock input to FIN. Low: fsc, High: 2fsc. When inputting 4fsc to FIN (when not using the internal PLL), this pin may be set to either "Low" or "High".
40	MCKO	O	Clock (4fsc) output.
41	ADCK	I	Clock input for A/D converter. Normally connect to MCKO.
42	CPO	O	PLL phase comparator output. Leave open when not using the PLL.
43	PLVS	—	PLL analog ground.
44	VCV	I	VCO control voltage input. Connect to PLVS when not using the PLL.
45	PLVD	—	PLL analog power supply. (5.0V)
46	CLVD	—	Clamp D/A converter analog power supply. (5.0V)
47	CLPEN	I	Clamp circuit enable pin. Low: Clamp on, High: Clamp off.
48	CLVS	—	Clamp D/A converter analog ground.

■ M27W102-80N6-** [ST MICRO ELECTRONICS]
(1M Bit (64kb x 16) EPROM)

(Top View)



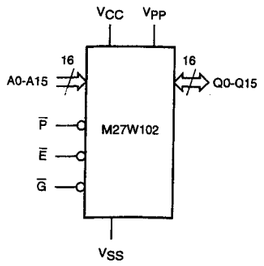
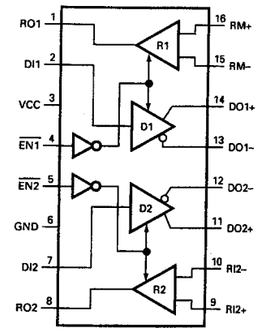


Table 1. Signal Names

A0-A15	Address Inputs
Q0-Q15	Data Outputs
$\overline{E}$	Chip Enable
$\overline{G}$	Output Enable
$\overline{P}$	Program
V_{PP}	Program Supply
V_{CC}	Supply Voltage
V_{SS}	Ground

■ DS8922M-X [NATIONAL SEMICONDUCTOR]
(RS-422 Dual Differential Line Driver and Receiver Pairs)

DS8922A Dual-In-Line



Top View

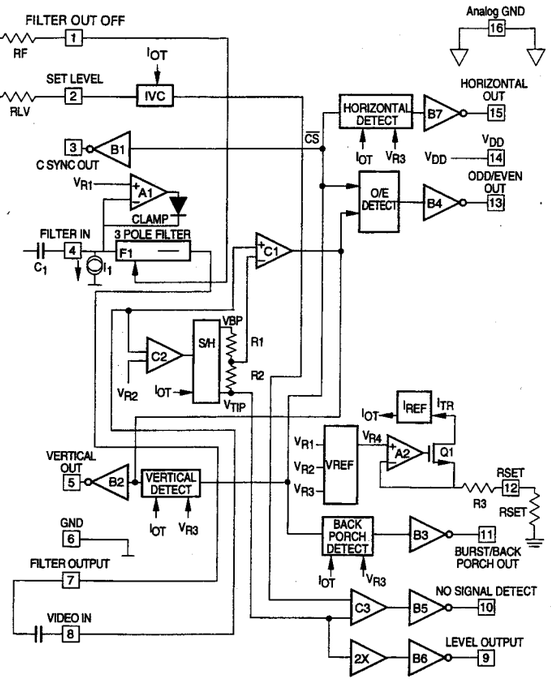
EN1	EN2	RO1	RO2	DO1	DO2
0	0	ACTIVE	ACTIVE	ACTIVE	ACTIVE
1	0	HI-Z	ACTIVE	HI-Z	ACTIVE
0	1	ACTIVE	HI-Z	ACTIVE	HI-Z
1	1	HI-Z	HI-Z	HI-Z	HI-Z

■ EL4583CS-X [ELANTEC]
(Video Sync Separator)

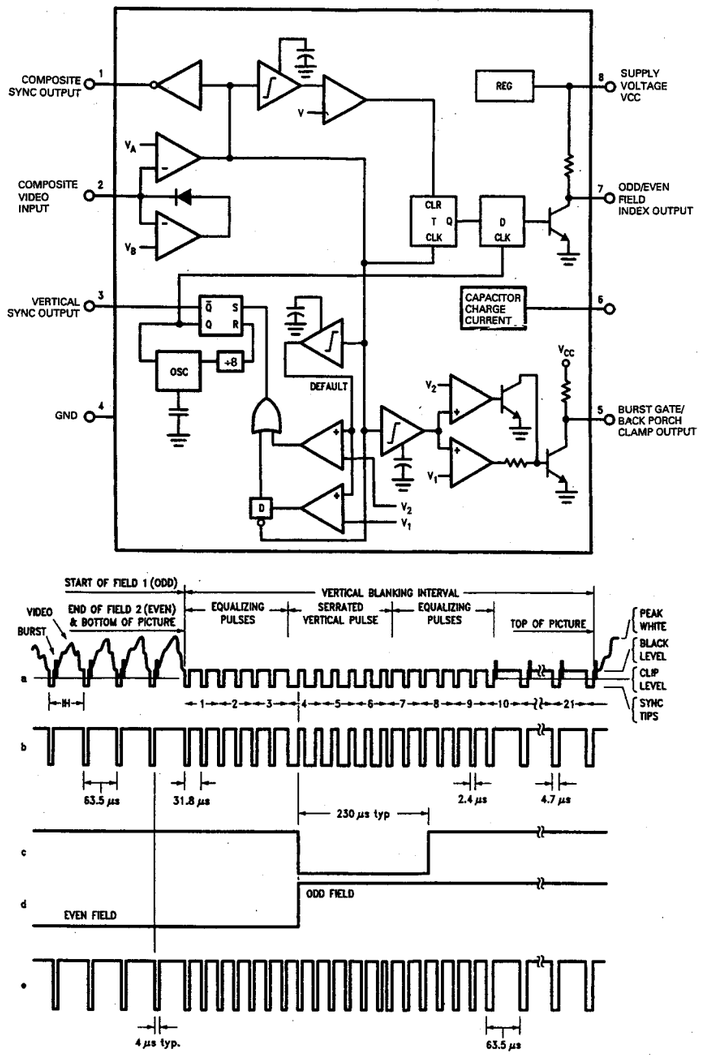
FILTER CUT OFF	1	16	ANALOG GND
SET DETECT LEVEL	2	15	HORIZONTAL SYNC. OUTPUT
COMPOSITE SYNC. OUTPUT	3	14	VDD
FILTER INPUT	4	13	ODD/EVEN OUTPUT
VERTICAL SYNC. OUTPUT	5	12	RSET
GND	6	11	BACK PORCH CLAMP
FILTER OUTPUT	7	10	NO. SIGNAL DETECT. OUTPUT
VIDEO INPUT	8	9	LEVEL OUTPUT

Note: R SET must be a 1% resistor.

Top View



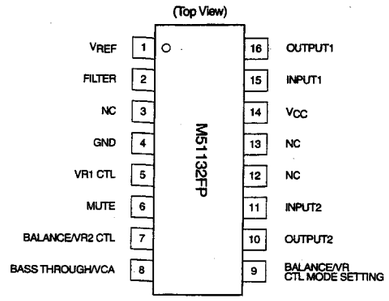
■ LM1881M-X [National Semiconductor]
(Video Sync Separator)

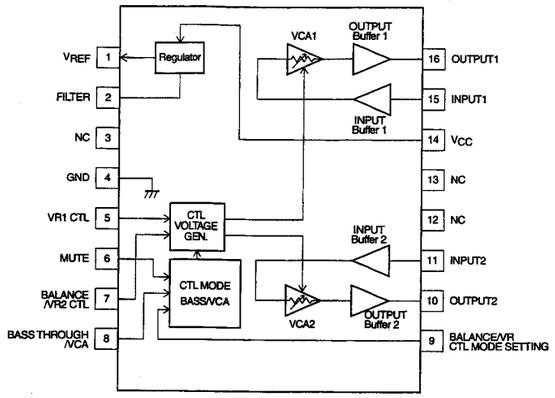


(a) Composite Video; (b) Composite Sync; (c) Vertical Output Pulse; (d) Odd/Even Field Index; (e) Burst Gate/Back Porch Clamp

■ M51132FP-X [MITSUBISHI]
(2 Channel Electrical VR/Balance for Audio Level)

(Top View)





NC : NOT CONNECT

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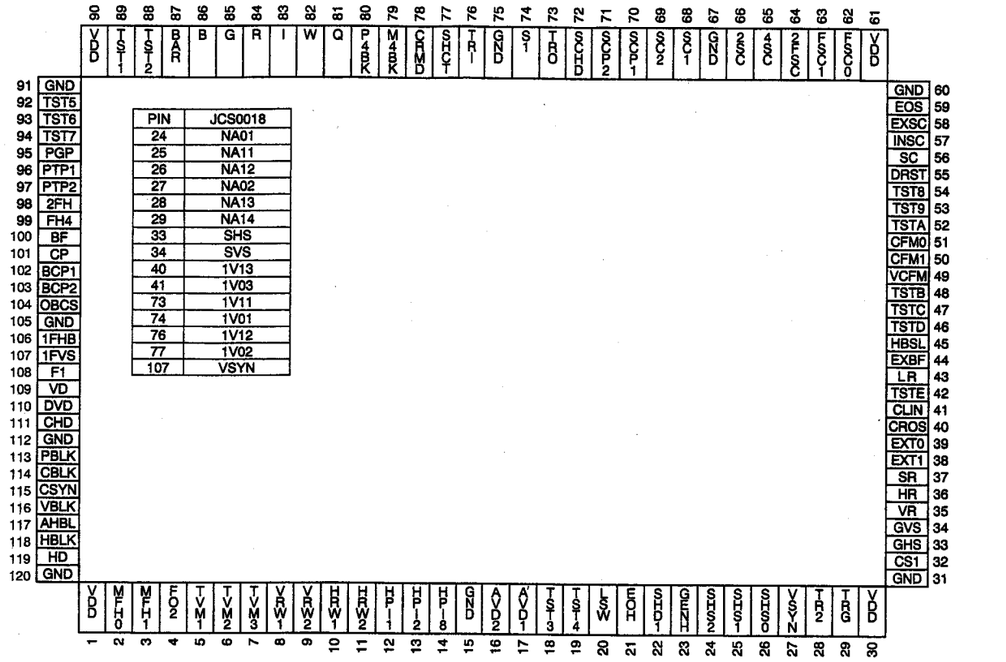
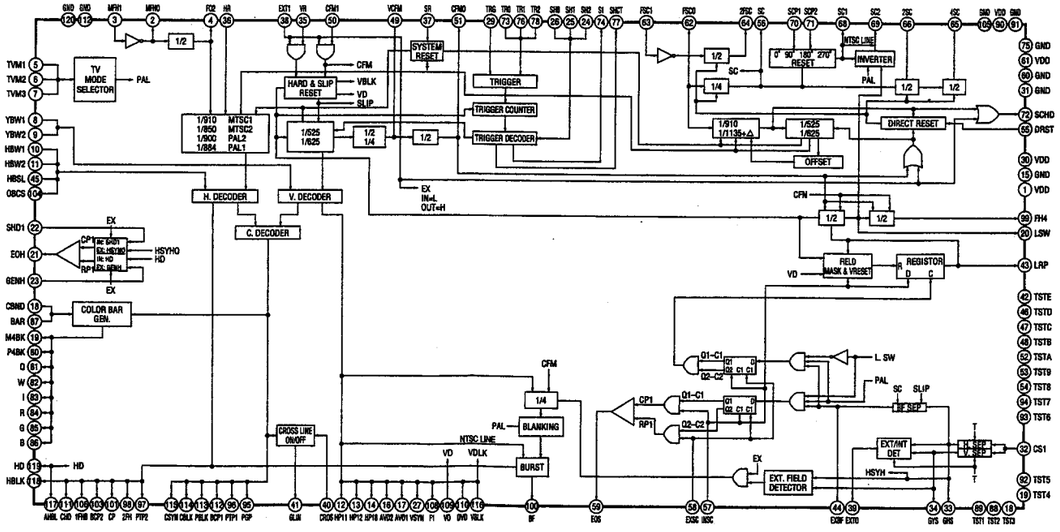
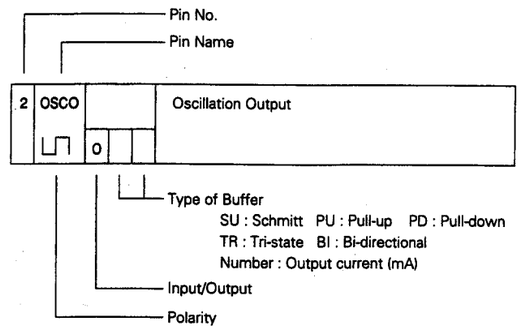
■ JCS0027 [JVC]
(SSG)





Terminal Specifications of JCS0027 (4th Revision)



Pin No.	Pin Name	Function
1	VDD	+5 Power supply
2	MFHO	Synchronizing oscillation output Output terminal for built-in oscillator O
3	MFHI	Synchronizing oscillation input Input terminal for built-in oscillator I
4	F02	1/2 divided output 1/2 divided output of synchronizing oscillator O 9
5	TVM1	TV mode 1 I PU
6	TVM2	TV mode 2 I PU
7	TVM3	TV mode 3 I PU
8	VBW1	V. blanking control 1 I PU
9	VBW2	V. blanking control 2 I PU
10	HBW1	H. blanking control 1 I PU
11	HBW2	H. blanking control 2 I PU

	NTSC1 1820FH	NTSC2 1716FH	PAL2 1816FH	PAL1 1728FH	PALM 1716FH	SECAM 1716FH
TVM1	L	H	L	H	L	H
TVM2	L	L	H	H	L	L
TVM3	L	L	L	L	H	H

VBW1	L	H	L	H
VBW2	L	L	H	H
NTSC1	21H	20H	19H	18H
NTSC 2	21H	20H	19H	18H
PAL1	26H	25H	24H	23H
PAL2	26H	25H	24H	23H
PALM	21H	20H	19H	18H
SECAM	26H	25H	24H	23H

HBW1	L	H	L	H
HBW2	L	L	H	H
NTSC1	157T	156T	154T	152T
NTSC2	143T	147T	146T	152T
PAL1	162T	159T	156T	153T
PAL2	170T	167T	164T	161T
PALM	148T	147T	146T	144T
SECAM	162T	159T	156T	153T

Pin No.	Pin Name	Function
12	HP11	H. pulse 11 H. pulse to be active at 11H, 13H, 15H and 17H. O 9
13	HP12	H. pulse 12 H. pulse to be active at 12H and 14H. O 9
14	HP18	H. pulse 18 H. pulse to be active at 18H. O 9
15	GND	Ground
16	AVD2	Pre-vertical drive pulse 2 Vertical drive pulse whose phase is 8H ahead of VD pulse. Functions as subcarrier blanking for SECAM system. O 9
17	AVD1	Pre-vertical drive pulse 1 Vertical drive pulse whose phase is 1H ahead of VD pulse. O 9
18	TST3	Test terminal 3 Set this terminal open in general. I PU
19	TST4	Test terminal 4 Set this terminal open in general. I PU
20	LSW	Line switch Half-divided FH output. Switches color difference signal of neighboring lines by 180° in phase for PAL system. O 9
21	EOH	H. synchronizing digital phase comparison output As compared with leading edge of SHDI; when internal HD has advanced phase: Low level, when internal HD has lagged phase: High level, when internal HD is in-phase: High impedance. O TR 13
22	SHDI	H. synchronizing digital phase comparison input (trailing detection) Input of horizontal drive signal originating from subcarrier. Active when EXTI is low level. When this is inactive, GHS (No. 33) is internally connected. I SH PU
23	GENH	H. synchronizing digital phase comparison input (trailing detection) Input for external synchronization, horizontal synchronization and phase adjustment. Active when EXTI is high level. When this is inactive, HD (No. 119) is internally connected. I SH PU

Pin No.	Pin Name	Function
24	SHS2	Shutter speed setting 2 Random shutter setting function (Refer to the specifications.) I PU
25	SHS1	Shutter speed setting 1 Random shutter setting function (Refer to the specifications.) I PU
26	SHS0	Shutter speed setting 0 Random shutter setting function (Refer to the specifications.) I PU

SHS2	SHS1	SHS0	Shutter speed NTSC	Shutter speed PAL
L	L	L	1/60	1/50
L	L	H	1/100	1/120
L	H	L	1/250	
L	H	H	1/500	
H	L	L	1/1000	
H	L	H	1/2000	
H	H	L	1/4000	
H	H	H	1/10000	

Pin No.	Pin Name	Function
27	VSYN	V. sync. output Vertical synchronizing signal of V. EQ pulse width. O 9
28	TR2	Sync. reset mode setting For sync. reset mode setting when random shutter setting functions is activated. I PU
29	TRG	Trigger input Trigger input to activate random shutter setting function. (Refer to the random shutter specifications.) I PU
30	VDD	+5V power supply
31	GND	Ground
32	CSI	Ext. composite sync. signal input To input external composite synchronizing signal for horizontal and vertical separation and ext. sync. signal input detection. I SH PU
33	GHS	Horizontal separate sync. Horizontal separate signal of external composite synchronizing signal. 1/2 equivalent pulse is not included. O 9
34	GVS	Vertical separate sync. Vertical separate signal of external composite synchronizing signal. 1/2 equivalent pulse is not included. O 9

Pin No.	Pin Name	Function
35	VR	Vertical reset External synchronizing input by slip system. If this system is input in vertical sync. period, hard reset is activated. Input in other period stops internal counter for a period of pulse width. I PU
36	HR	Horizontal reset Presets horizontal component 1T before rise of HD. Jitters in a period shorter than 140 ns are absorbed. However, operation is not secured for continuous input. I PU
37	SR	System reset Inside of IC is forcibly initialized regardless of internal or external synchronization. VR and HR inputs are ineffective. Jitters in a period shorter than 140 ns are absorbed. I PU
38	EXTI	Internal/External synchronization setting input L : Internal synchronization H : External synchronization I PD
39	EXTO	Internal/External synchronization setting output L: Without CSI input After detection of no SHS, another SHS is not detected for a period of 8 fields. H: With CSI input After detection of SHS, 200 or more SHS's are detected in 1 vertical period. O 9
40	CROS	Cross ON/OFF input L: To stop cross output H: To activate cross output operation For detail, refer to supplementary specifications of respective terminals. I PD
41	CLIN	Cross output To output a cross in the center of screen. For detail, refer to supplementary specifications of respective terminals. O 9
42	TSTE	Test terminal E Set this terminal open in general. I PU
43	LR	Line reset When EXTI is external synchronization (High level), setting signal is supplied to LSW. When internal burst is ahead of external burst in phase, High level is output. When internal burst is behind external burst in phase, Low level is output (for 6 clocks of SC). Phase comparison is not operated for one field after output. For detail, refer to supplementary specifications of respective terminals. O 9

Pin No.	Pin Name	Function
44	EXBF	Brust flag separate output With detection of one or more H. sync pulse from CSI input, pulse whose width is for 6 cycles of subcarrier is output. For details, refer to supplementary specifications of respective terminals. O 9
45	HBSL	H. blanking reset To switch output position of IFHB (106). L: System delay 900 ns approx. H: System delay 450 ns approx. I PU
46	TSTD	Test terminal D Set this terminal open in general. BI PU 9
47	TSTC	Test terminal C Set this terminal open in general. BI PU 9
48	TSTB	Test terminal B Set this terminal open in general. I PU
49	VCFM	VTR color frame Color frame for VTR exclusively. 2-field period for NTSC1, NTSC2 and PAL. 4-field period for PAL1, PAL2 and SECAM. O 9
50	CFMI	Color frame input Effective with EXTI being low level. Used for color frame control in external synchronization. Reset to synchronizing circuit by the slip system. I SH PU
51	CFMO	Color frame output Pulse output at the beginning of every color frame. 4-field period for NTSC1 and NTSC2. 8-field period for PAL1, PAL2, PALM and SECAM. O 9
52	TSTA	Test terminal A Set this terminal open in general. I PU
53	TST9	Test terminal 9 Set this terminal open in general. I PU

Pin No.	Pin Name	Function
54	TST8	Test terminal 8 Set this terminal open in general. I PU
55	DRST	Direct reset terminal When EXTI is low level, the following operations are realized. To switch reset operation of horizontal counter for subcarrier. To reset color frame synchronizing with horizontal counter with High level; To reset color frame with Low level. I PU
56	SC	Subcarrier output To monitor subcarrier signal connected internally with digital phase comparator. When phase of SC1 (68) is 0°, this output is inphase. O 9
57	INSC	Internal subcarrier input Shall be connected with SC (56). Effective when EXBF is low level. Pulse rise is detected. I
58	EXSC	External subcarrier input Effective when EXBF is low level. Pulse rise is detected. I
59	EOS	Digital phase comparison output for subcarrier As compared with leading edge of EXSC; when internal SC has advanced phase : Low level, when internal SC has lagged phase : High level, when internal SC is in phase : High impedance. O TR 13
60	GND	Ground
61	VDD	+5V power supply
62	FSCO	Oscillator output for subcarrier O
63	FSCI	Oscillator input for subcarrier I
64	2FSC	Double subcarrier output Half-divided oscillator output for subcarrier O 13

Pin No.	Pin Name	Function
65	4SC	1/4 subcarrier output 1/4-divided output of subcarrier frequency O 9
66	2SC	1/2 subcarrier output 1/2-divided output of subcarrier frequency O 9
67	GND	Ground
68	SC1	Subcarrier 1 Subcarrier frequency output. Phase is changed by SCP1 and SCP2. In PAL mode, phase is not changed every H. O 9
69	SC2	Subcarrier 2 Subcarrier frequency output whose phase is 90° ahead of SC1. Phase is changed by SCP1 and SCP2. In PAL mode, phase is inverted by 180° every H. O 9
70	SCP1	Subcarrier select 1 Note: SC2 is expressed based on SC1. I PD
71	SCP1	Subcarrier select 2 I PD
72	SCHD	Subcarrier horizontal driver Horizontal drive pulse originating from subcarrier frequency. O 13
73	TR0	Random shutter control system setting input To set random shutter control system. L: 8-stage default control, H: Pulse width continuous control (Refer to the specifications of random shutter setting function.) I PD
74	SI	Stroboscope index output In normal operation, this output is for stroboscopic lamp emitting time. In random shutter operation, this output is for video output time. (Refer to the specifications of random shutter setting function.) O 9

SCP2	SCP1	SC1	SC2
L	L	0°	90° ahead (270°)
L	H	90°	90° ahead (0°)
H	L	180°	90° ahead (90°)
H	H	270°	90° ahead (180°)

Pin No.	Pin Name	Function
75	GND	Ground
76	TR1	Random reset system setting input To determine reset system setting system. L: SYNC reset system, H: SYNC non-reset system. (Refer to the specifications of random shutter setting function.) I PD
77	SHCT	Shutter control output Electronic shutter control signal. Shall be connected to SHCT (19) of TG (μPD9438GK). (Refer to the specifications of random shutter setting function.) O 9
78	CBMD	SMPTE/FULL To switch color bar signal to SMPTE or FULL. L: Full Field mode H: SMPTE mode Effective only with BAR signal of low level. I PU
79	M4BK	Color bar signal o 9
80	P4BK	Color bar signal o 9
81	Q	Color bar signal o 9
82	W	Color bar signal o 9
83	I	Color bar signal o 9

	BAR	CBMD	I	W
NTSC1 NTSC2	H L L	X H L	L Effective L	L Effective (75%W) L
PAL1 PAL2	H L L	X H L	L Effective L	L Effective (75%W) Effective (100W)
PALM	H L L	X H L	L Effective L	L Effective (75%W) Effective (100W)
SECAM	H L L	X H L	L Effective L	L Effective (75%W) L

	Q	P4BK	M4BK
NTSC1 NTSC2	L Effective L	L Effective L	L Effective L
PAL1 PAL2	L Effective L	L Effective L	L Effective L
PALM	L Effective L	L Effective L	L Effective L
SECAM	L Effective L	L Effective L	L Effective L

Pin No.	Pin Name	Function
84	R	Color bar signal O 9
85	G	Color bar signal O 9
86	B	Color bar signal O 9
87	BAR	Color bar control (ON/OFF) I PU
88	TST2	Test terminal 2 Set this terminal open in general. I PU
89	TST1	Test terminal 1 Set this terminal open in general. I PU
90	VDD	+5V power supply
91	GND	Ground
92	TST5	Test terminal 5 Set this terminal open in general. I PU
93	TST6	Test terminal 6 Set this terminal open in general. I PU
94	TST7	Test terminal 7 Set this terminal open in general. O 9

	BAR	C3MD	B	G	R
NTSC1 NTSC2	H L	X X	L Effective	L Effective	L Effective
PAL1 PAL2	H L	X X	L Effective	L Effective	L Effective
PALM	H L	X X	L Effective	L Effective	L Effective
SECAM	H L	X X	L Effective	L Effective	L Effective

BAR	R, G, B, I, Q, W, P4BK, M4BK
L	Effective
H	Fixed at Low level

Pin No.	Pin Name	Function
95	PGP	Pilot gate pulse Uniform voltage level of two signals, one passes the 1FH delay line and the other does not pass the 1H line, with each other in order to compensate attenuation caused by the delay line. O 9
96	PTP1	Pilot pulse 1 Uniform voltage level of two signals, one passes the 1H delay line and the other does not pass the 1H line, with each other in order to compensate attenuation caused by the delay line. O 9
97	PTP2	Pilot pulse 2 Used to control video level. O 9
98	2FH	Double FH O 9
99	FH4	1/4FH Half-divided output of LSW. Equivalent to 25 Hz in PAL mode. O 9
100	BF	Burst flag Regulates period to insert subcarrier into back porch of horizontal sync. signal. Functions to switch chromaticity signal for every line in SECAM mode. O 9
101	CP	Clamp pulse Signal to clamp reference voltage of black level. O 9
102	BCP1	Black clamp pulse 1 Fixes black level of CCD output signal. O 9
103	BCP2	Black clamp pulse 2 Fixes black level of CCD output signal (at every H output). O 9
104	OBCS	Optical black pulse select Switching of output position of horizontal BCP1 and BCP2. L: Frontward output H: Backward output I PU

NTSC1	NTSC2	PAL1	PAL2	PALM	SECAM
31.468	31.468	31.25	31.25	31,468	31.25

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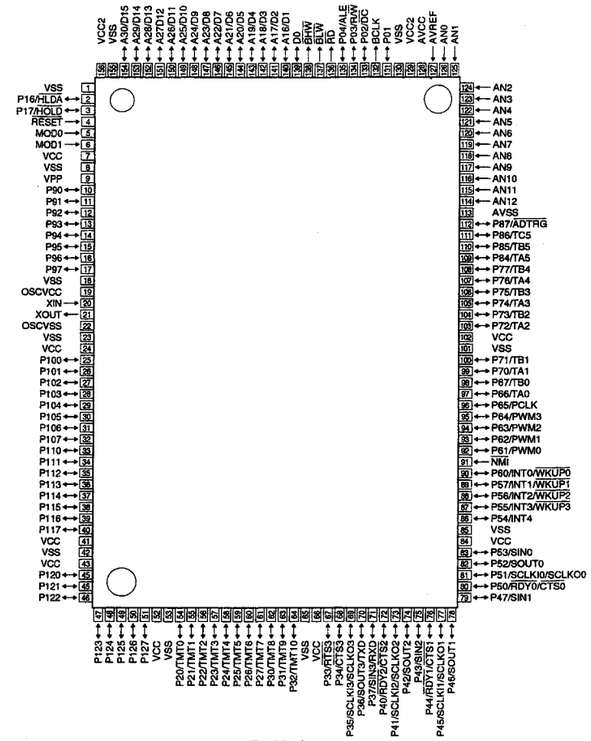
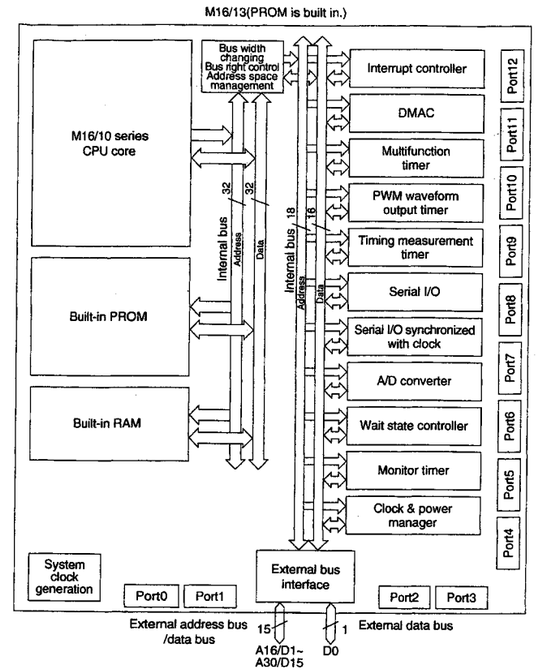
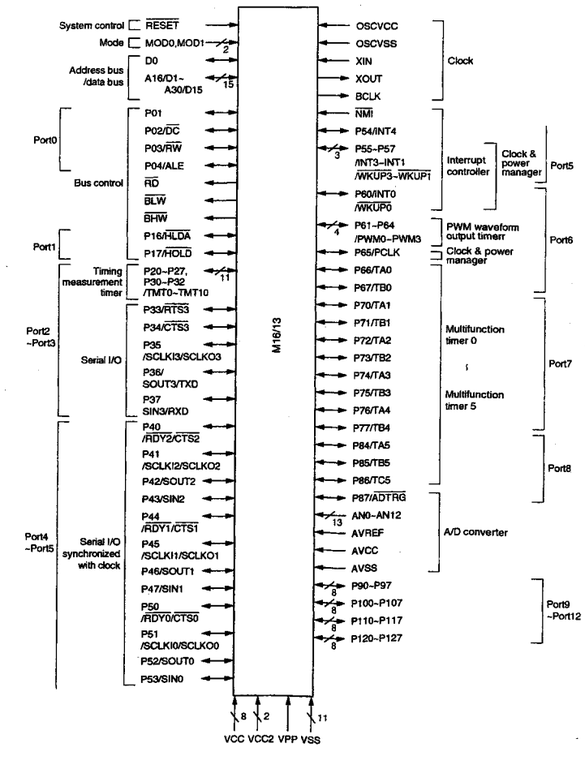
Pin No.	Pin Name	Function
105	GND	Ground
106	IFHB	Interface horizontal blanking Output pulse that is narrower than HBLK both in leading edge and trailing edge. 0 9
107	IFVS	Interface vertical synchronization Normal function: To output vertical synchronization signal having the same pulse width of V. EQ pulse. Random shutter setting function: To output the same signal as V. sync. signal in the fall time. 0 9
108	FI	Field index Field discrimination signal. L: Field that HD and VD fall at the same time. H: Field that there is a time lag of 0.5H in falling between HD and VD. 0 9
109	VD	Vertical drive pulse Pulse output at the beginning of every field. Used as the vertical timing standard for the set. 0 9
110	DVD	Delayed vertical drive pulse Vertical drive signal that lags behind VD pulse. Controls camera's scanning timing and regulates activation time of sawtooth waveform of vertical deflection circuit. 0 9
111	CHD	Delayed horizontal drive pulse Controls camera's scanning timing. Regulates activation time of sawtooth waveform of horizontal deflection circuit. 0 9
112	GND	Ground
113	PBLK	Pre-blanking Composite blanking signal used for video processing. As compared with CBLK signal, this signal is narrower in the leading edge. 0 9
114	CBLK	Composite blanking Horizontal and vertical composite blanking signal. 0 9
115	CSYN	Composite sync. Composite synchronizing signal comprising of four signals of HSYN, VSYN, EQ and SAW. 0 9
116	VBLK	V. blanking Vertical blanking signal whose pulse width can be changed with VBW1 and VBW2. 0 9
117	AHBL	Pre-horizontal blanking Pulse that HBLK is advanced in breaking of leading edge. 0 9
118	HBLK	H. blanking Horizontal blanking pulse whose pulse width can be changed with HBW1 and HBW2. 0 9
119	HD	H. drive Pulse synchronized with beginning of respective lines. Used as horizontal timing standard of the set. 0 13
120	GND	Ground

■ M31020EAVP-*** [MITSUBISHI]
(32bit Single Chip Micro Computer)



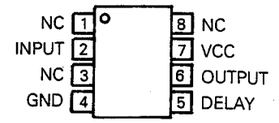


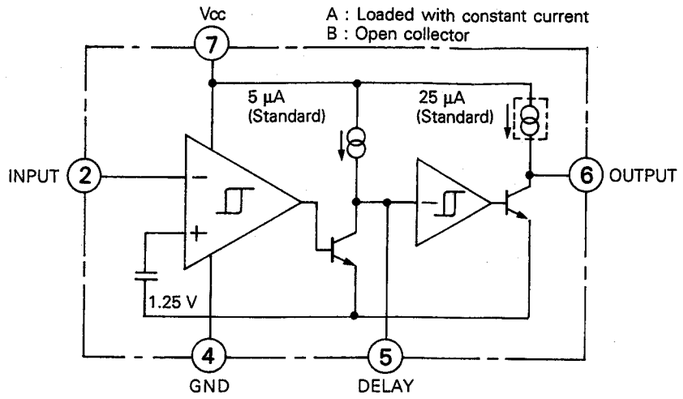
(Top View)



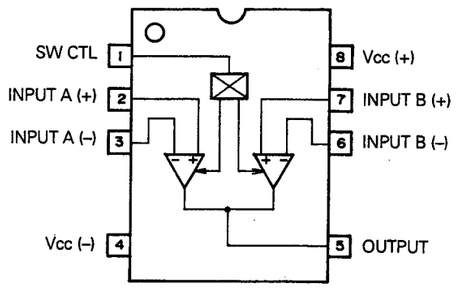
4-67

■ M51957BFP-X [MITSUBISHI]
(Voltage Detector/System Reset)



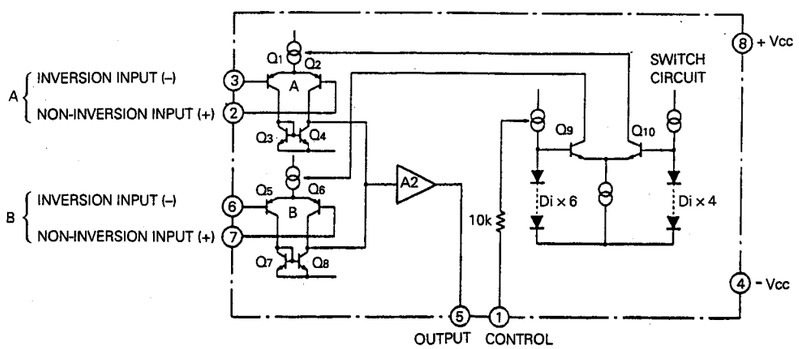


■ M5201FP-X [MITSUBISHI]
(Switch Op.Amp.)

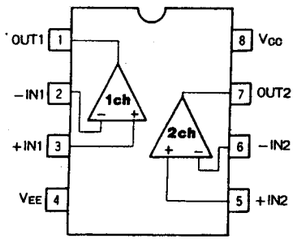


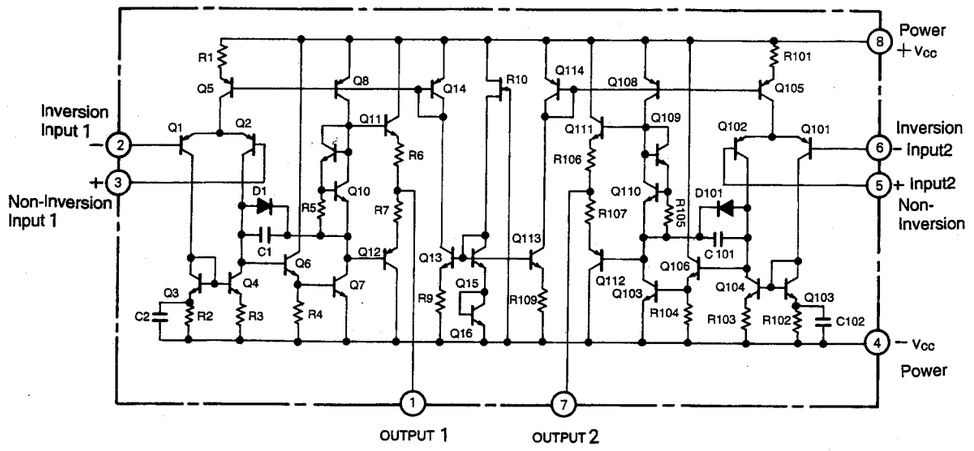
TRUE TABLE

SW CTL	OUTPUT
H	A
L	B

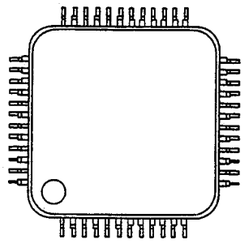


■ M5218AFP-X [MITSUBISHI]
(Dual Op.Amp.)



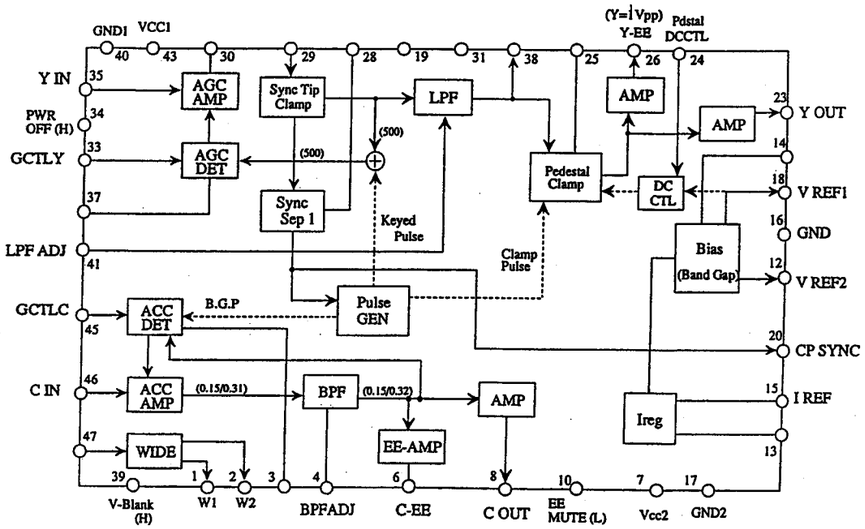


■ M52387FP [MITSUBISHI]
(Digital Signal Interface)



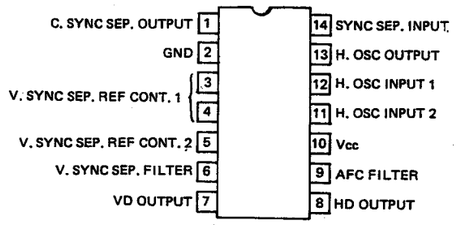
(Top View)

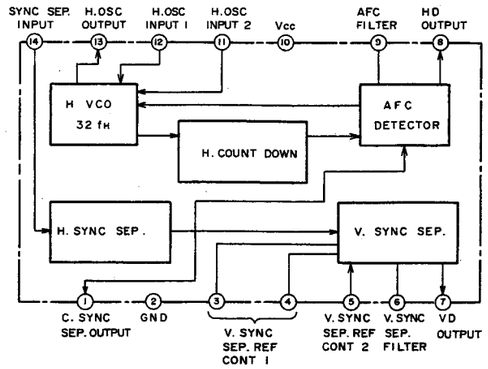
1. WIDE DET OUT1
2. WIDE DET OUT2
3. ACC FIL
4. BPF ADJ
5. NC
6. C-EE OUT
7. VCC2 (3V)
8. C-AD OUT
9. NC
10. EE MUTE
11. NC
12. VREF2
13. IREF FIL
14. VREF FIL
15. IREF
16. GND
17. GND2(C)
18. VREF1
19. GND3(PULSE)
20. CP SYNC OUT
21. NC
22. NC
23. Y-AD OUT
24. PED DC CTL
25. PED CLP FIL
26. Y-EE OUT
27. NC
28. SYNC SEP FIL
29. CLP IN
30. AGC OUT
31. VCC3(3V)
32. NC
33. AGC CTL
34. PWR OFF
35. Y IN
36. NC
37. AGC FIL
38. LPF MONI
39. VBLK IN
40. GND1(Y)
41. LPF ADJ
42. NC
43. VCC1(4.8V)
44. NC
45. ACC CTL
46. C IN
47. WIDE DET IN
48. NC



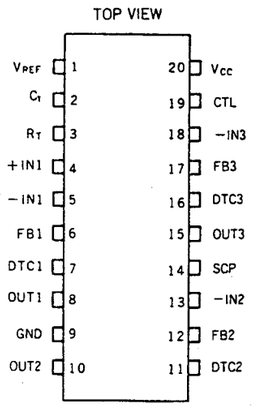
4-68

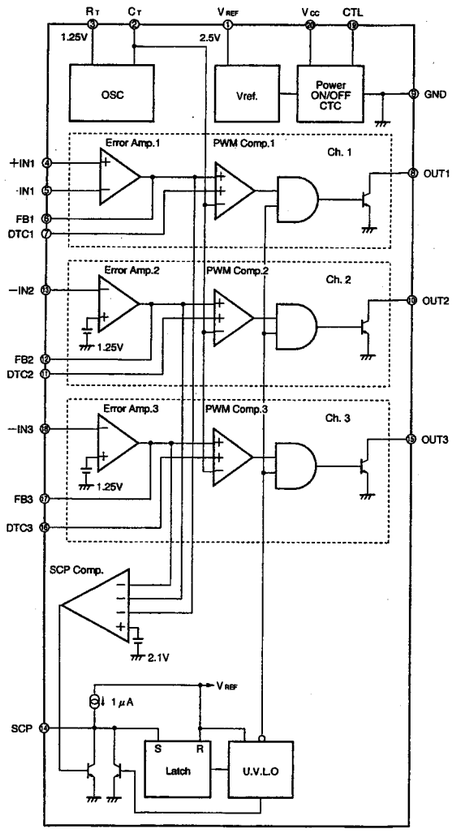
■ M52684AFP-XE [MITSUBISHI]
(SYNC Separator and AFC)



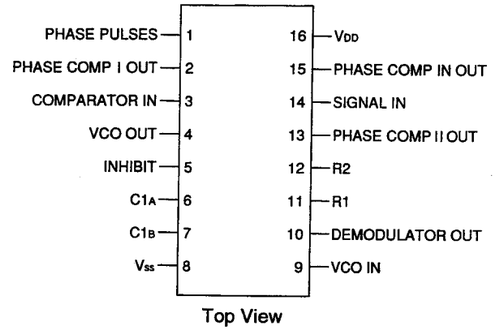


■ MB3782PF-X [FUJITSU]
(Switching Regulator Controller)

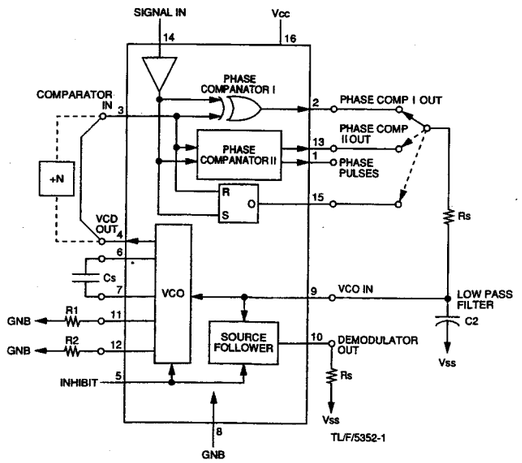




■ MC74HC4046AF-X [MOTOROLA]
(CMOS Phase Lock Loop)

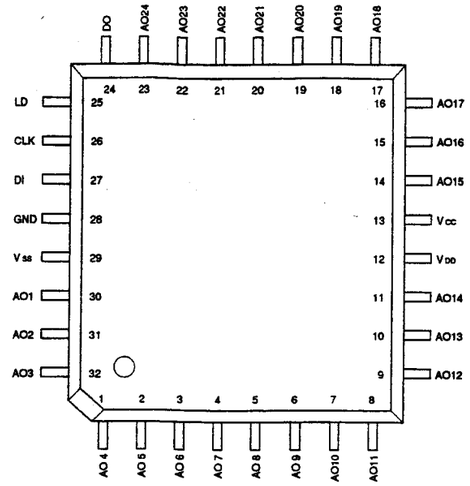


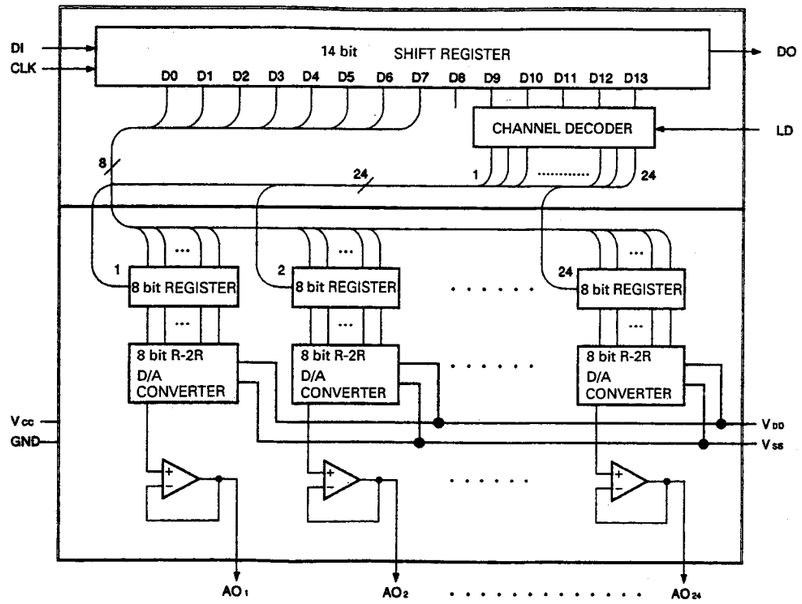
Top View



■ MB88345PF [FUJITSU]
(D/A Converter)

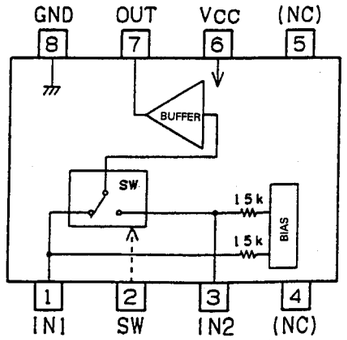
(TOP VIEW)





4-69

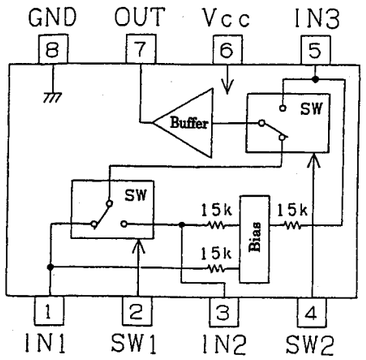
■ MM1111XF-X [MITSUMI]
(2 Input 1 Output Video Switch)



TRUTH TABLE

SW	OUT
L	IN1
H	IN2

■ MM1113XF-X [MITSUMI]
(2 Input 1 Output Video Switch)

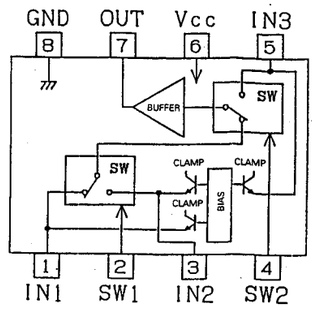


(Top View)

Truth value table for control IN

SW1	SW2	OUT
L	L	IN1
H	L	IN2
—	H	IN3

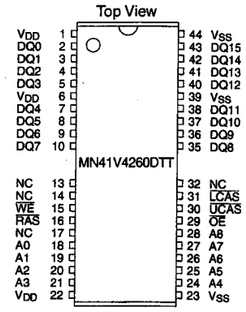
■ MM1117XF-X [MITSUMI]
(3 Input-1 Output Video Switch)



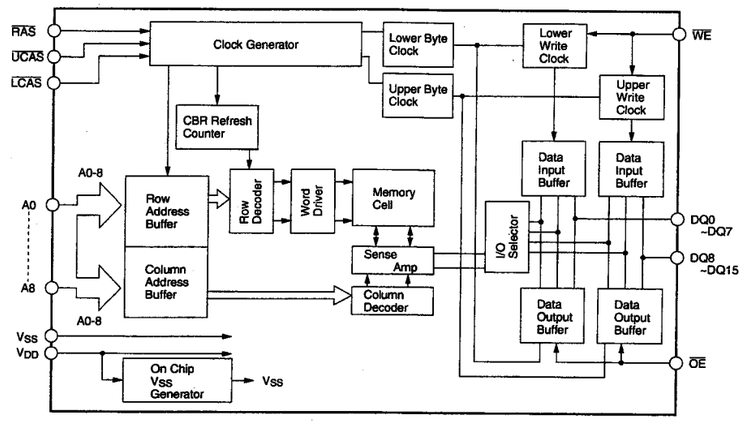
TRUTH TABLE

SW1	SW2	OUT
L	L	IN1
H	L	IN2
—	H	IN3

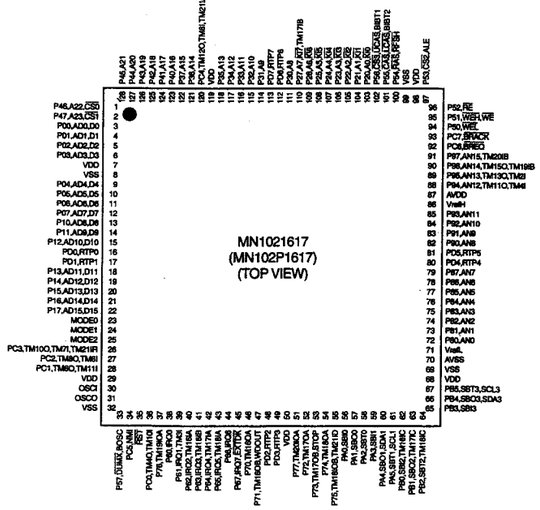
■ MN41V4260TT-A07 [MATSUSHITA]
(4M(256k-word x 16bit)Dynamic RAM)

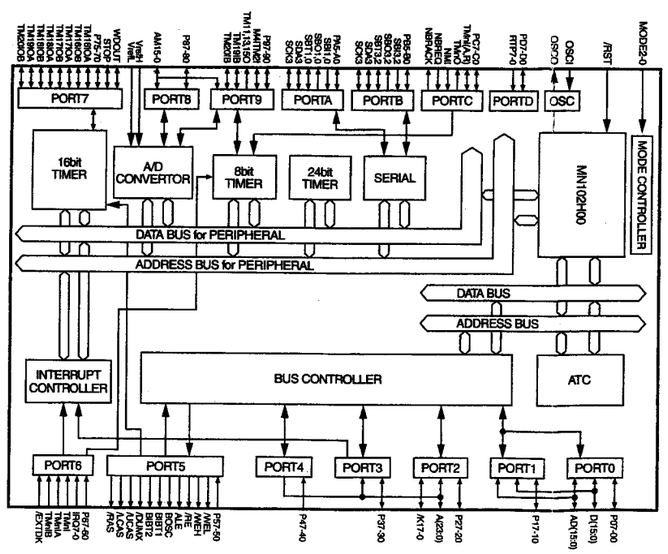


BLOCK DIAGRAM

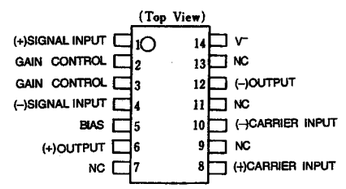


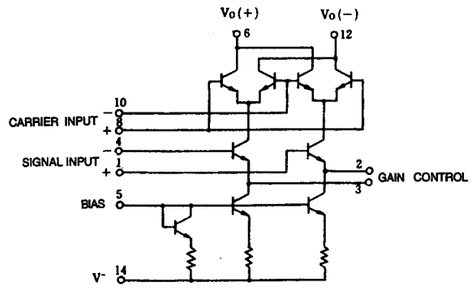
■ MN102F1617HL-** [MATSUSHITA]
(16 Bit Micro Controller)





■ NJM1496V-X [JRC]
(Balanced Modulator)





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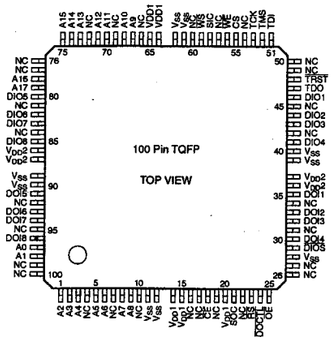
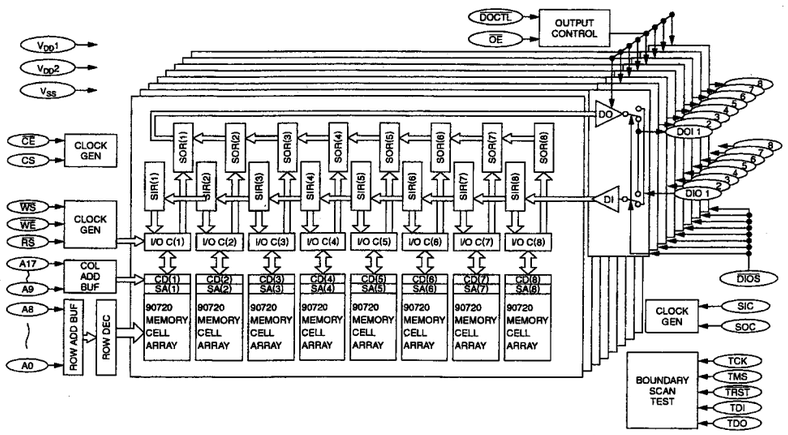
■ MN47V06AF [MATSUSHITA]
(4.75Mbit (622080 word x 8bit) CMOS DRAM)



■ Pin Names

Symbol	Pin names	Symbol	Pin names
A0~A17	Address Inputs	$\overline{DIOS}$	Data Input/Output Select
$\overline{CE}$	Chip Enable	$\overline{DOCTL}$	Data Output Control
$\overline{OE}$	Output Enable	TCK	Boundary Scan Test Clock
$\overline{WE}$	Write Enable	TMS	Boundary Scan Test Mode Select
$\overline{WS}$	Write Strobe	$\overline{TRST}$	Boundary Scan Test Reset
$\overline{RS}$	Read Strobe	TDI	Boundary Scan Test Data Input
CS	Chip Select	TDO	Boundary Scan Test Data Output
SIC	Shift-in Clock	$V_{DD}1$	Internal Power Supply (2.7V~3.3V)
SOC	Shift-out Clock	$V_{DD}2$	I/F Power Supply (2.0V~$V_{DD}1$V)
DIO1~8	Data Input/Output	V_{SS}	Power Supply (GND)
DOI1~8	Data Input/Output	NC	No Connection

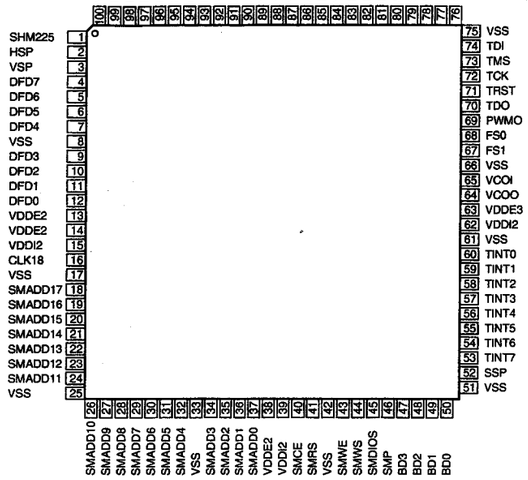


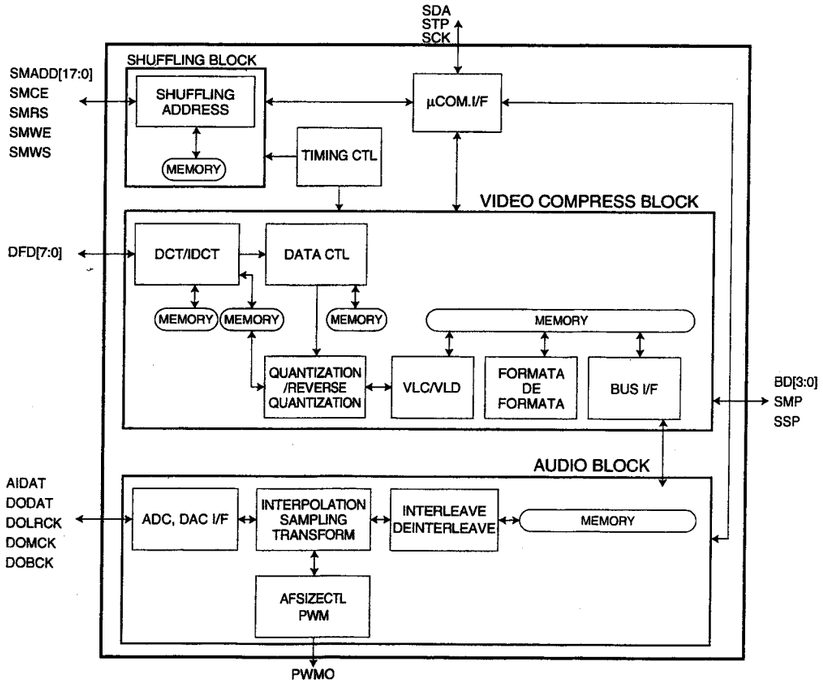
SIR : SHIFT IN REGISTER　SOR : SHIFT OUT REGISTER　I/O C : I/O CONTROLLER
CD : COLUMN DECODER　SA : SENSE AMPLIFIER　DI : DATA IN BUFFER
DO : DATA OUT BUFFER
CLOCK GEN : CLOCK GENERATOR　COL ADD BUF : COLUMN ADDRESS BUFFER
ROW ADD BUF : ROW ADDRESS BUFFER　ROW DEC : ROW DECODER

■ MN47V07AF [MATSUSHITA]
(Refer to MN47V06AF.)

■ MN67373 [MATSUSHITA]
(Video Compress and Audio DSP at DV Format)

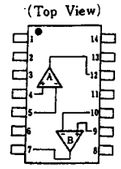
(Top View)



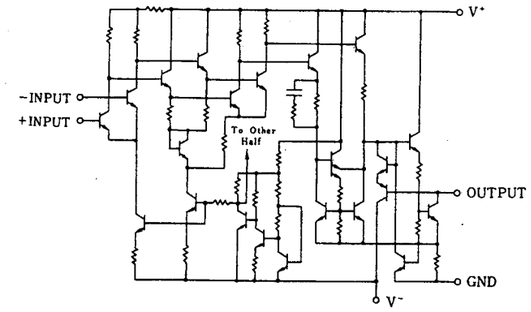


■ NJM319M-X [JRC]
(Voltage Comparator)

(Top View)

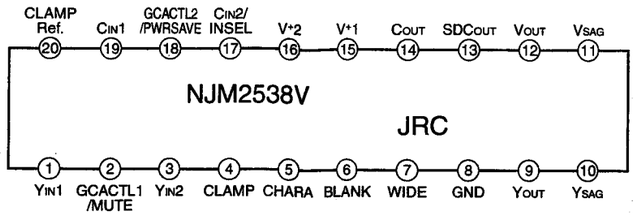


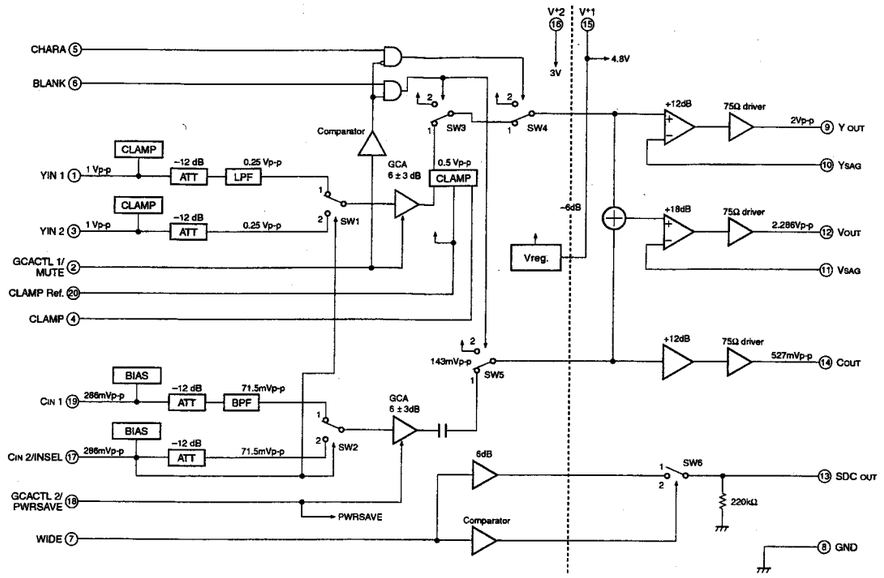
1. NC
2. NC
3. A GND
4. A+INPUT
5. A−INPUT
6. V⁻
7. B OUTPUT
8. B GND
9. B+INPUT
10. B−INPUT
11. V⁺
12. A OUTPUT
13. NC
14. NC



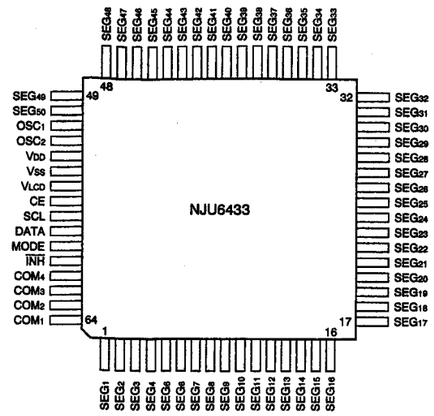
■ NJM2538V-X [JRC]
(Video Amp.)

(Top View)



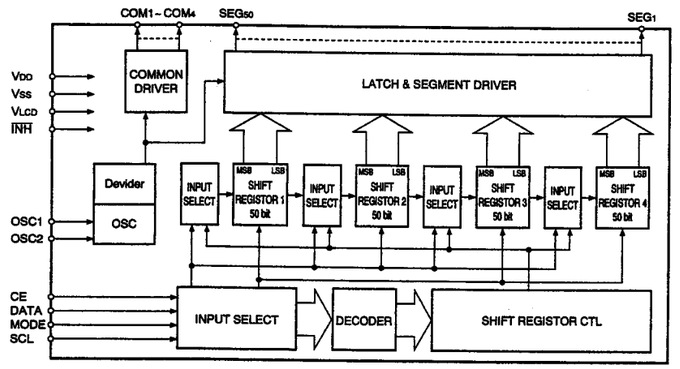


■ NJU6433FB2 [JRC]
(1/4 Duty LCD Driver)

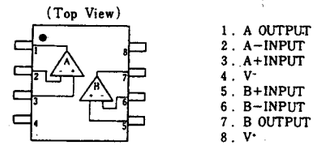


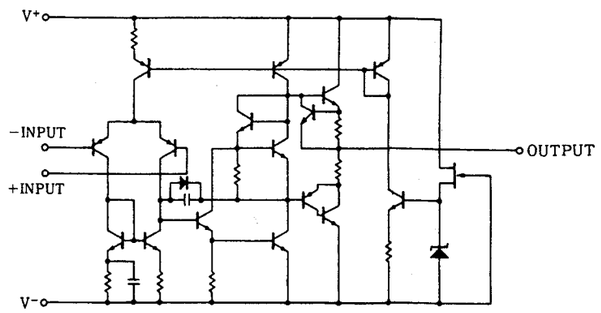
(TOP VIEW)

No.	Symbol	Function
1~50	SEG1~SEG50	Segment output for LCD driver
51 52	OSC1 OSC2	OSC terminal
53	VDD	
54	VSS	GND
55	VLCD	Power source for LCD drive
56	CE	H level : Data input Drop-down edge : Data latch L level : Disable
57	SCL	Clock input for serial data trancefar.
58	DATA	Serial data input.
59	MODE	H level : Mode seting L level : Data input for LCD display
60	$\overline{INH}$	L level : LCD is not display H level : LCD is display
61~64	COM4~COM1	Common output for LCD drive.

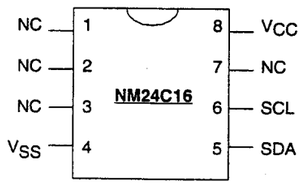


■ NJM4556AM-X [JRC]
(Dual High Current Op.Amp.)

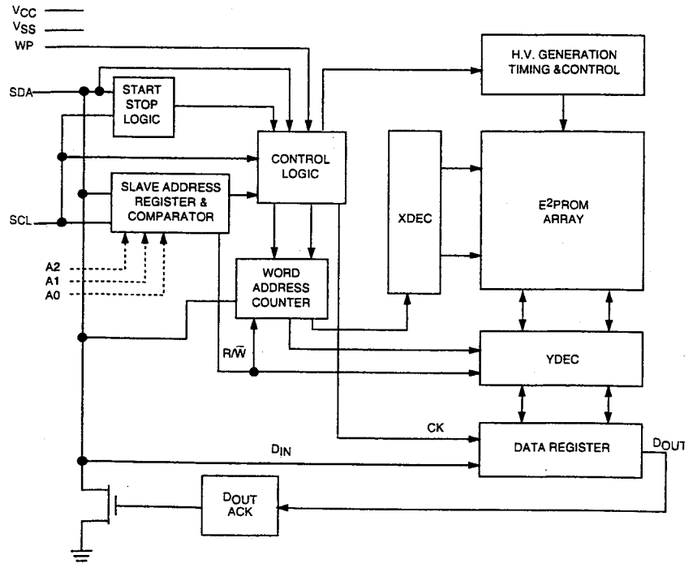




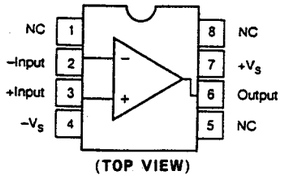
■ NM24C16LEM8-X [FAIRCHILD]
(16,384bit Standard 2-Wire Bus Interface Serial EEPROM)



Top View



■ OPA658U-XE [BBJ]
(Op.Amplifier)

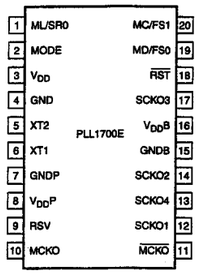


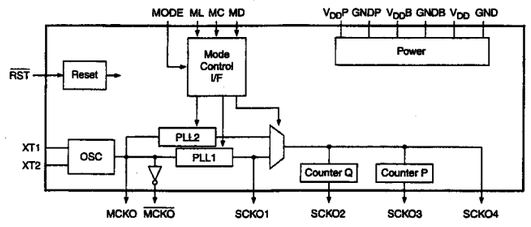
(TOP VIEW)

4-72

■ PLL1700E-X [BURR-BROWN]
(Programmable Dual PLL Clock Generator)

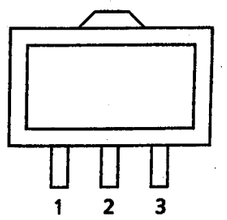
(Top View)

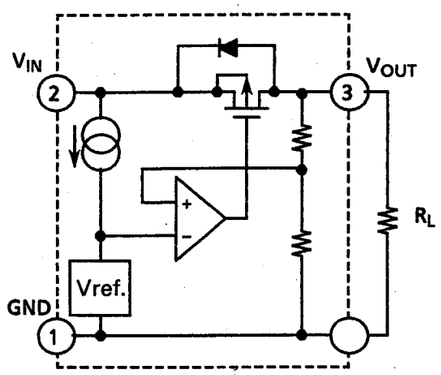




■ S-81233SGUP-X [SEIKO]
(Voltage Regulator(3.3V))

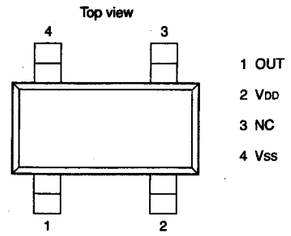
Top view

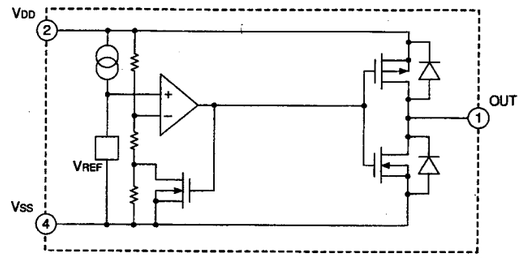




■ S-81240PG-PJ-X [SEIKO]
(Refer to S-81233SGUP-X.)

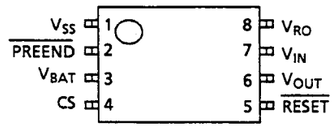
■ S-80840ANNP-W [SEIKO]
(Precision Voltage Detector)



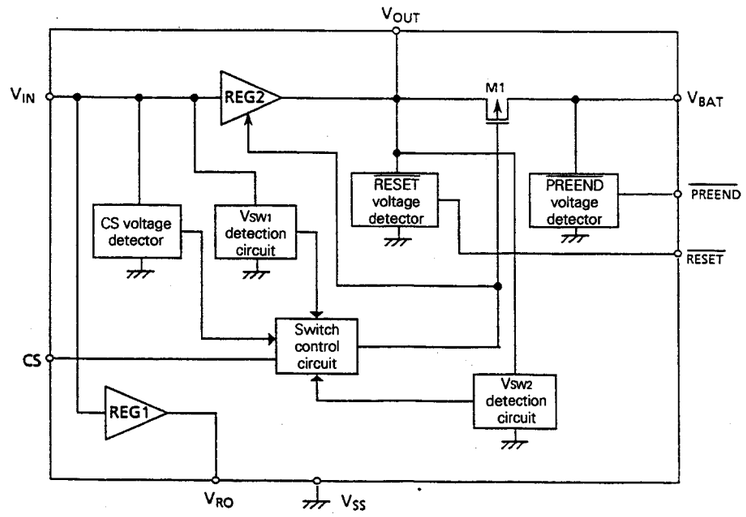


■ S-8423LFS-X [SEIKO]
(Battery Back-up Selector)

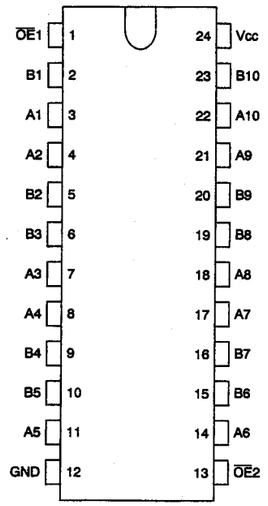
8 pin SSOP
Top view



Pin name	Description
CS	Output terminal for CS voltage detector
$\overline{\text{RESET}}$	Output terminal for RESET voltage detector
$\overline{\text{PREEND}}$	Output terminal for PREEND voltage detector
VIN*	Input terminal for main power supply
VBAT*	Power input terminal for backup
VOUT*	Output terminal for voltage regulator 2
VRO*	Output terminal for voltage regulator 1
VSS	GND



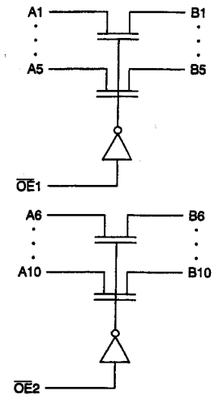
■ SN74CBT3384APWX [TEXAS]
(10 Bit Cross Bar Switch)



Top View

$\overline{OE1}$	$\overline{OE2}$	B1 – B5	B6 – B10
L	L	A1 – A5	A6 – A10
L	H	A1 – A5	Z
H	L	Z	A6 – A10
H	H	Z	Z

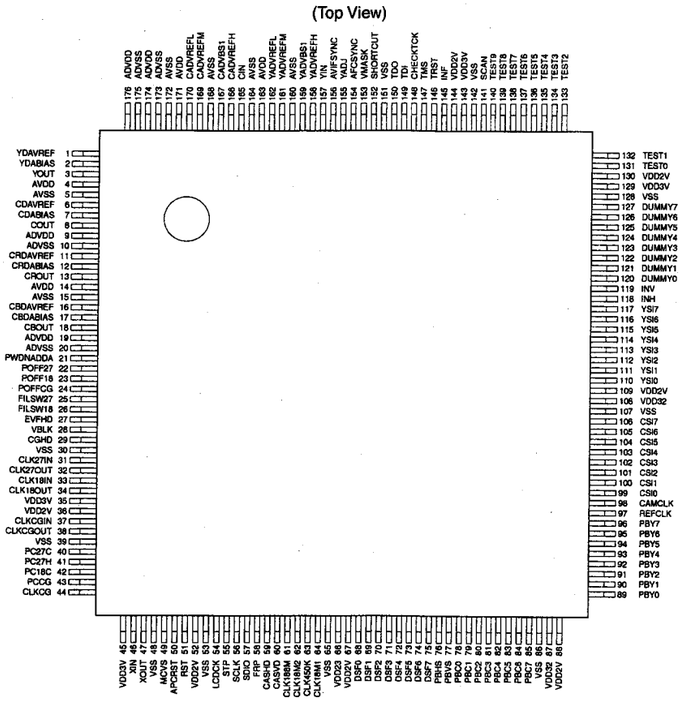
H : High Level
L : Low Level
X : Don't Care
Z : High Impedance



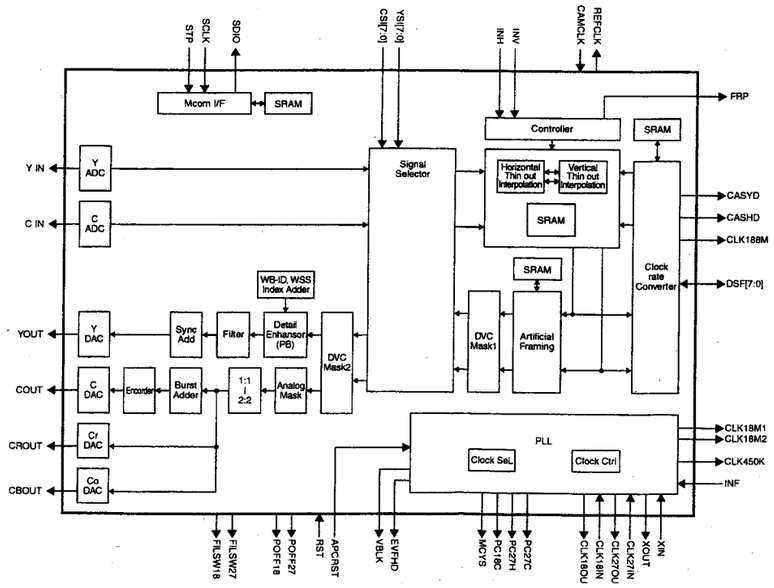
4-73

■ T9P90EF [TOSHIBA]
(A/D and D/A Converter for Video Signal)

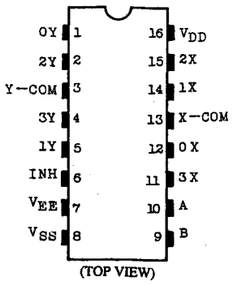
(Top View)



BLOCK DIAGRAM



■ TC4052BF-X [TOSHIBA]
(Dual 4 Channel Analog Multiplexers/Demultiplexers)

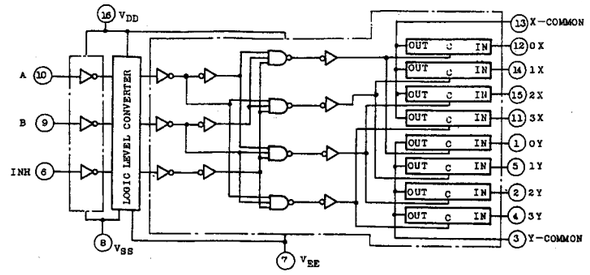


TRUTH TABLE

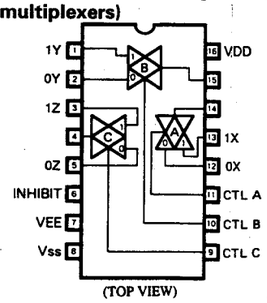
CONTROL INPUTS			"ON" CHANNEL
INHIBIT	B	A	TC4052BP TC4052BF
L	L	L	0X, 0Y
L	L	H	1X, 1Y
L	H	L	2X, 2Y
L	H	H	3X, 3Y
L	L	L	—
L	L	H	—
L	H	L	—
L	H	H	—
H	※	※	NONE

※ Don't Care

LOGIC DIAGRAM



■ TC4053BFT-X [TOSHIBA]
(Dual 2 Channel Analog Multiplexers/ Demultiplexers)

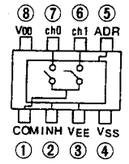


TRUTH TABLE

CONTROL INPUTS				"ON" CHANNEL
INHIBIT	C	B	A	4053BP 4053BF
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	*	*	*	NOTE

* Don't Care,

■ TC4W53F-X [TOSHIBA]
(2-Channel Multiplexer)



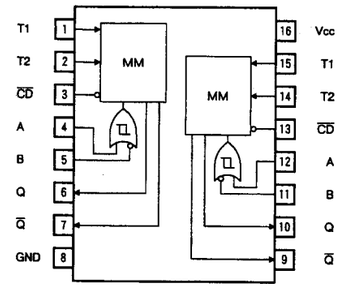
TRUE TABLE

CONTROL INPUT		ON CHANNEL
INH	ADR	
L	L	ch0
L	H	ch1
H	*	NONE

*Don't care

■ TC4W53FU-X [TOSHIBA]
(Refer to TC4W53F-X)

■ TC74HC4538AFS-X [TOSHIBA]
(Dual Retriggerable Monostable Multivibrator)

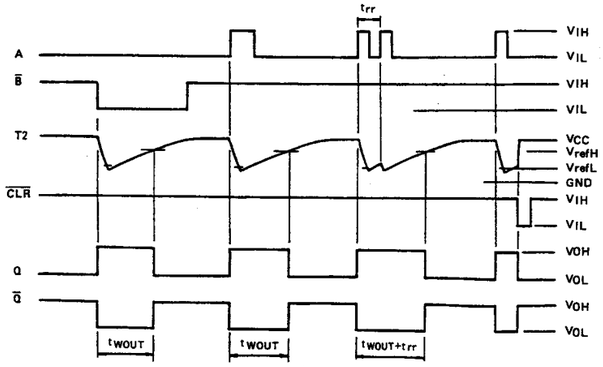


TOP VIEW

TRUE Table

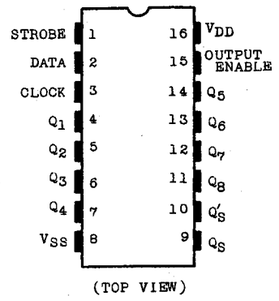
INPUT			OUTPUT		NOTE
A	B	CD	Q	Q	
↑	H	H	⌐	¬	OUTPUT ENABLE
X	L	H	L	H	INHIBIT
H	X	H	L	H	INHIBIT
L	↓	H	⌐	¬	OUTPUT ENABLE
X	X	L	L	H	INHIBIT

X:Don't Care



■ TC74VHC125FT-X [TOSHIBA]
(Refer to SN74LV125APW-X.)

■ TC4094BF-X [TOSHIBA]
(8 Stage Bus Compatible Shift/Store Register)



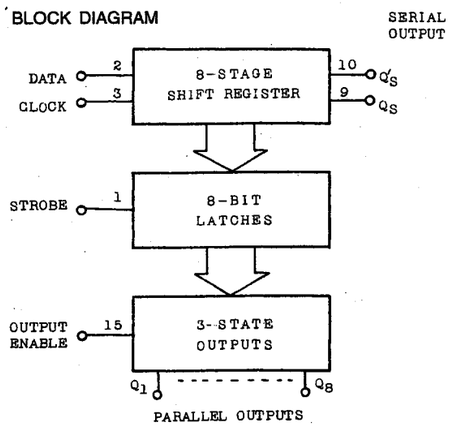
(TOP VIEW)

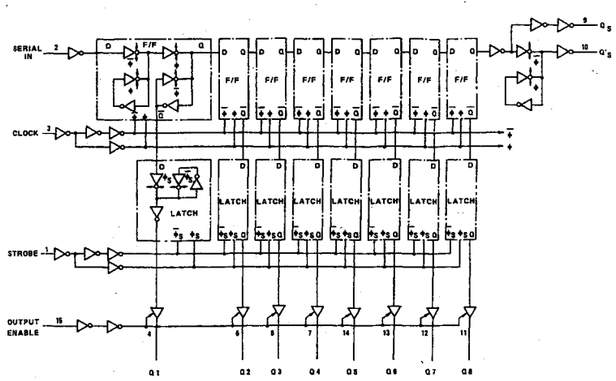
TRUTH TABLE

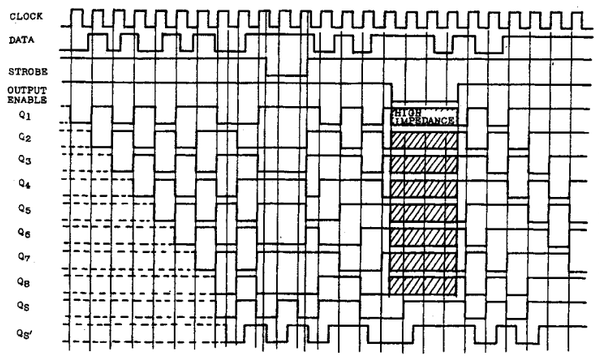
CL	OE	ST	D	PO		SO	
				Q_1	Q_n	Q_S	Q'_S
↑	H	H	L	L	Q_n-1	Q_7	NC
↑	H	H	H	H	Q_n-1	Q_7	NC
↑	H	L	*	NC	NC	Q_7	NC
↑	L	*	*	HZ	HZ	Q_7	NC
↓	H	*	*	NC	NC	NC	Q_S
↓	L	*	*	HZ	HZ	NC	Q_S

CL = Clock
OE = Output Enable
ST = Strobe
D = Data
PO = Parallel Outputs
SO = Serial Output
* = Don't care
NC = No Change
HZ = High Impedance

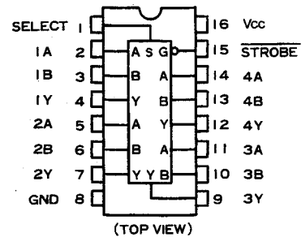
BLOCK DIAGRAM







■ TC74VHC157FT-X [TOSHIBA]
(Quad 2-Line to 1-Line Data Selectors/Multiplexers,NON-Inverted Data Outputs)



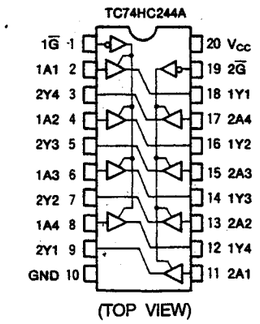
(TOP VIEW)

TRUE Table

INPUTS				OUTPUT
STROBE	SELECT	A	B	Y
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

X:DON'T CARE

■ TC74VHC244FT-X [TOSHIBA]
(Octal Buffers AND Line Drivers With NON-Inverted 3-State Outputs)



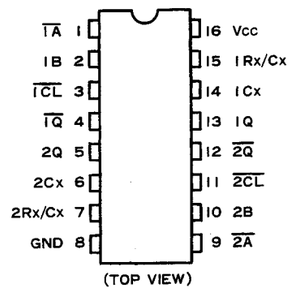
(TOP VIEW)

TRUE Table

INPUTS		OUTPUTS
$\overline{G}$	A_n	$\overline{Y}_n$
L	L	L
L	H	H
H	X	Z

X : Don't Care
Z : High Impedance

■ TC74VHC123AFT-X [TOSHIBA]
(Dual Retriggerable Monostable Multivibrators)



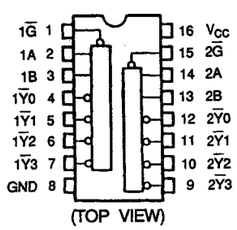
(TOP VIEW)

TRUE Table

INPUTS			OUTPUTS		NOTE
$\overline{A}$	B	$\overline{OL}$	Q	$\overline{Q}$	
↓	H	H	↑	↓	OUTPUT ENABLE
X	L	H	L	H	INHIBIT
H	X	H	L	H	INHIBIT
L	↑	H	↑	↓	OUTPUT ENABLE
L	H	↑	↑	↓	OUTPUT ENABLE
X	X	L	L	H	INHIBIT

X:DON'T CARE

■ TC74VHC139FT-X [TOSHIBA]
(Dual 2-Line to 4-Lile Decoders/Demultiplexers)



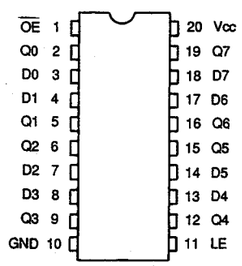
(TOP VIEW)

TRUE Table

INPUTS			OUTPUTS				SELECTED OUTPUT
ENABLE $\overline{G}$	SELECT B	SELECT A	$\overline{Y0}$	$\overline{Y1}$	$\overline{Y2}$	$\overline{Y3}$	
H	X	X	H	H	H	H	NONE
L	L	L	L	H	H	H	$\overline{Y0}$
L	L	H	H	L	H	H	$\overline{Y1}$
L	H	L	H	H	L	H	$\overline{Y2}$
L	H	H	H	H	H	L	$\overline{Y3}$

X : Don't care

■ TC74VHC373FT-X [TOSHIBA]
(Octal D-Type Latch With NON-Inverted 3-State Output)

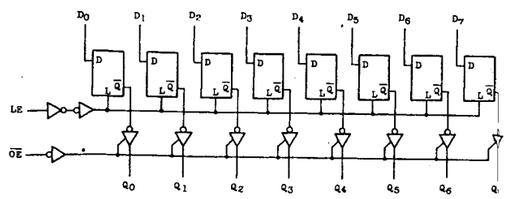


(Top View)

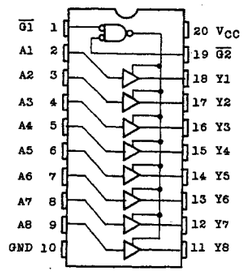
TRUE Table

INPUTS			OUTPUTS
$\overline{OE}$	LE	D	
H	X	X	Z
L	L	X	Q_n
L	H	L	L
L	H	H	H

X : Don't Care
Z : Hi impedance
Qn : Q output level before the LE become "L".



■ TC74VHCT541AFTX [TOSHIBA]
(Octal Bus Buffer With Inverted 3-State Outputs)

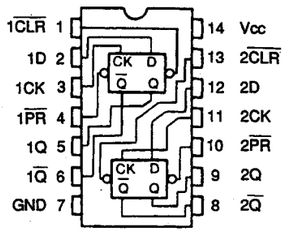


(TOP VIEW)

TRUE Table

INPUT			OUTPUT
$\overline{G1}$	$\overline{G2}$	A	Y
L	L	H	H
L	L	L	L
H	X	X	Z
X	H	X	Z

■ TC74VHC74FT-X [TOSHIBA]
(Dual D-Type Positive-EDGE-Triggered Flip-Flops With Preset AND Clear)



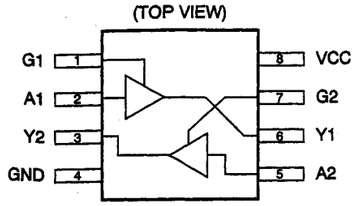
(Top View)

TRUE Table

INPUTS				OUTPUTS		FUNCTION
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	X	X	L	H	CLEAR
H	L	X	X	H	L	PRESET
L	L	X	X	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	X	↓	Q_n	$\overline{Q}_n$	NO CHANGE

X : Don't care

■ TC7W126FU-X [TOSHIBA]
(Dual Bus Buffer)

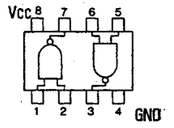


Truth Table

INPUTS		OUTPUTS
G	A	Y
L	X	Z
H	L	L
H	H	H

X : Don't Cate
Z : High Impedance

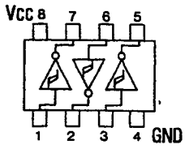
■ TC7W00FU-X [TOSHIBA]
(2 Input Dual NAND Gate)



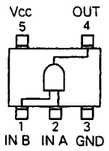
TRUE Table

A	B	X
L	L	H
L	H	H
H	L	H
H	H	L

■ TC7W14FU-X [TOSHIBA]
(Schmitt Trigger Triple Inverte Gate)



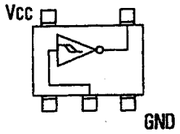
■ TC7S08FU-X [TOSHIBA]
(2 Input Single AND Gate)



TRUE Table

A	B	X
L	L	L
L	H	L
H	L	L
H	H	H

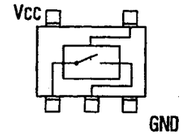
■ TC7S14FU-X [TOSHIBA]
(Schmitt trigger)



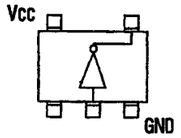
■ TC7SH08F-X [TOSHIBA]
(Refer to TC7S08FU-X.)

■ TC7SH08FU-X [TOSHIBA]
(Refer to TC7S08FU-X.)

■ TC7S66FU-X [TOSHIBA]
(Analog SW)

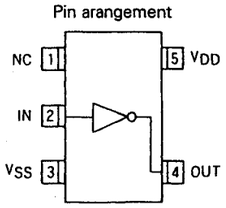


■ TC7SET04FU-X [TOSHIBA]
(Single Inverter Gate)



■ TC7SHU04FU-X [TOSHIBA]
(Inverter)

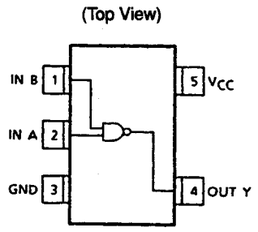
Pin arangement



■ TC7SH04FU-X [TOSHIBA]
(Refer to TC7SHU04FU-X.)

■ TC7SH00F-X [TOSHIBA]
(2 Input NAND Gate)

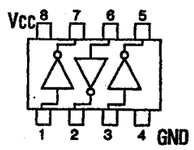
(Top View)



TRUE Table

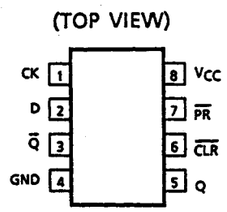
A	B	Y
L	L	H
L	H	H
H	L	H
H	H	L

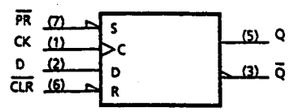
■ TC7W04FU-X [TOSHIBA]
(Triple Inverter Gate)



■ TC7W74FU-X [TOSHIBA]
(D-Q Flip-Flop)

(TOP VIEW)



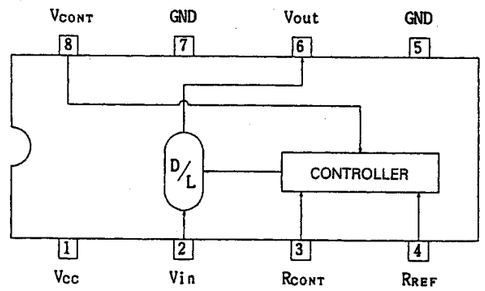


TRUE Table

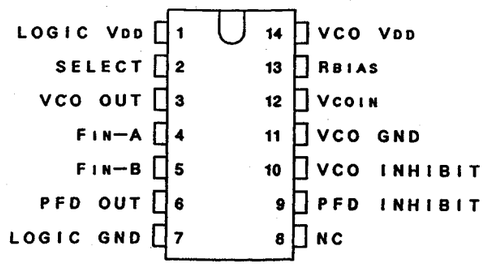
INPUTS				OUTPUTS		FUNCTION
$\overline{CLR}$	$\overline{PR}$	D	CK	Q	$\overline{Q}$	
L	H	×	×	L	H	CLEAR
H	L	×	×	H	L	PRESET
L	L	×	×	H	H	—
H	H	L	↑	L	H	—
H	H	H	↑	H	L	—
H	H	×	↓	Q_n	$\overline{Q}_n$	NO CHANGE

× : Don't care

■ TK16031AMTL [TOKO]
(Analog Delay line)

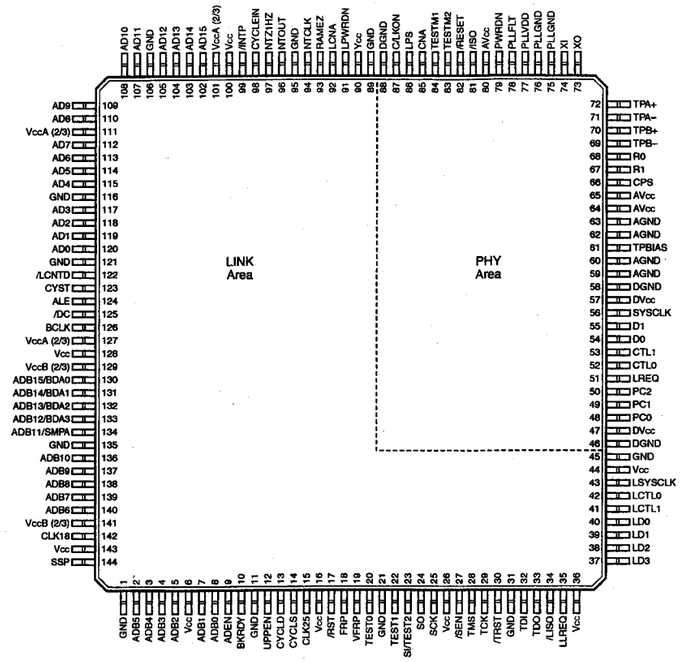


■ TLC2932IPW-X [TEXAS]
(PLL)

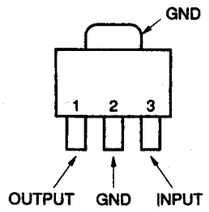


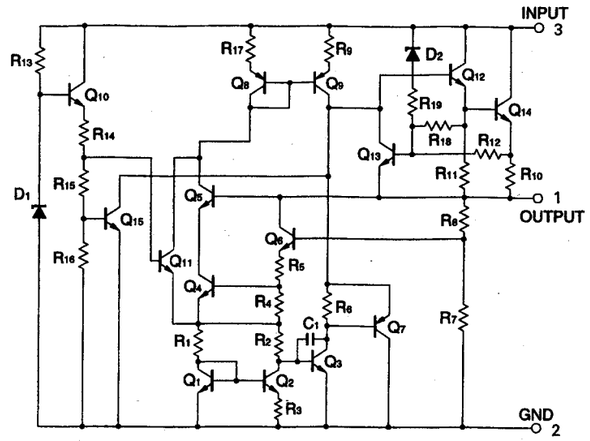
■ TSB13LV11PBW [TEXAS] (IEEE1394 LINK/PHY)

(TOP VIEW)

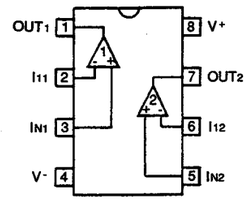


■ UPC78L05T-X [NEC] (Regulator)

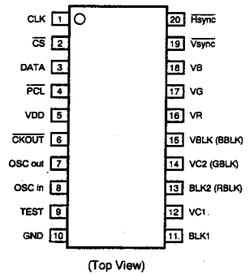




■ UPC812G2-X [NEC] (Op.Amp.)

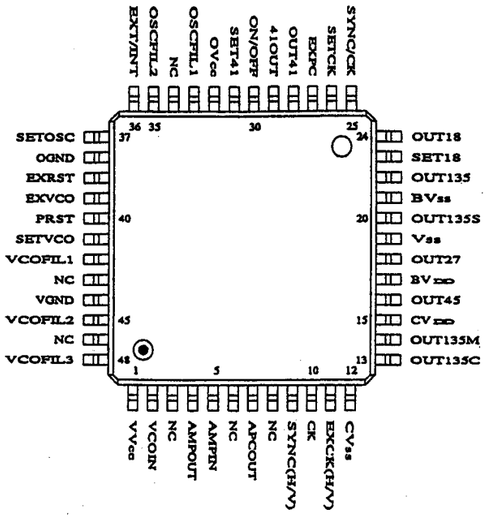


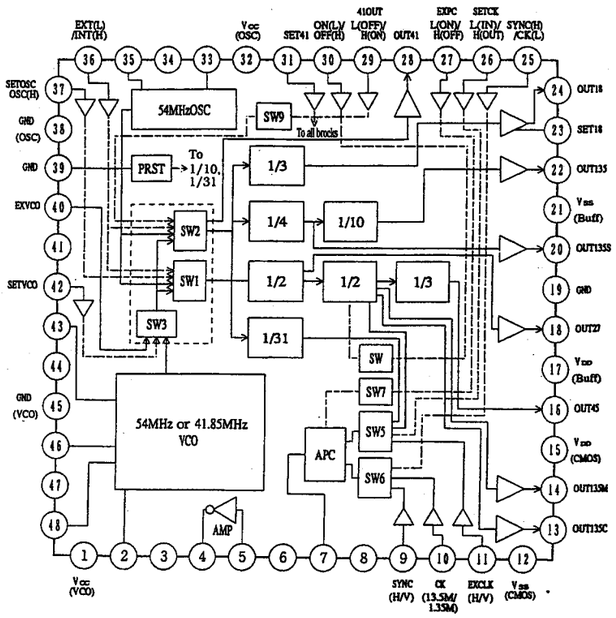
■ UPD6461GS-101 [NEC] (On Screen Charactor Display)

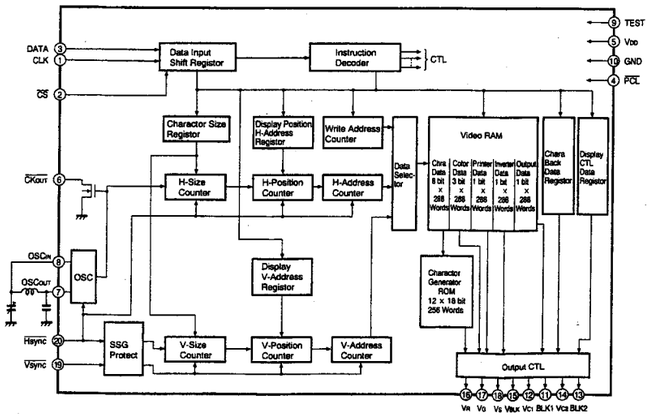


(Top View)

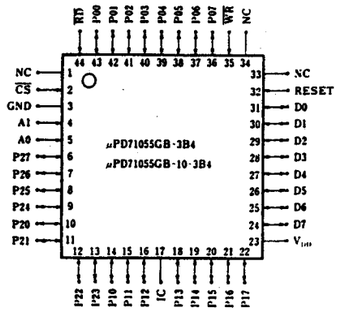
■ UPC2384GA [NEC] (Digital VTR PLL)

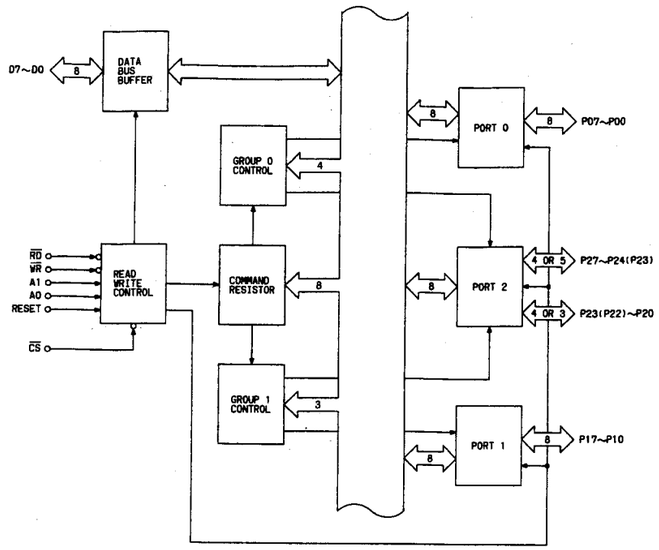




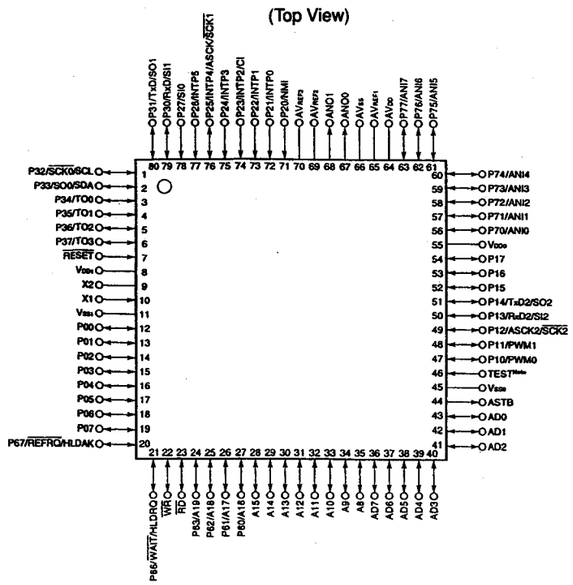


■ UPD71055GB-10 [NEC]
(Parallel Input/Output Port)

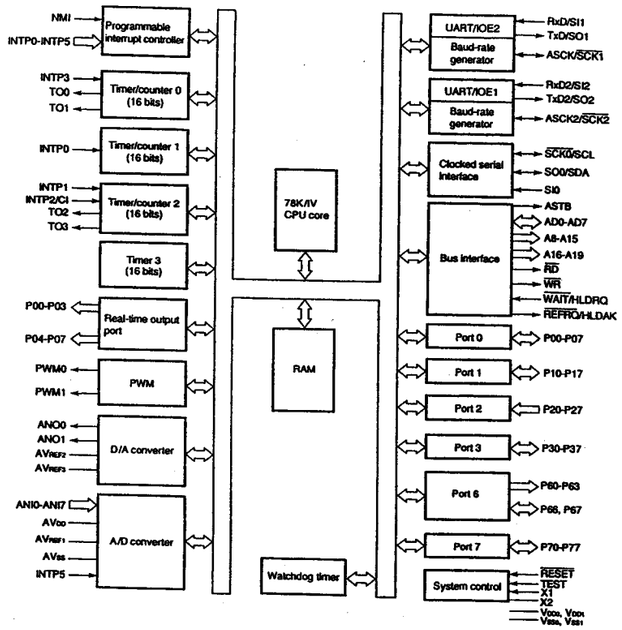




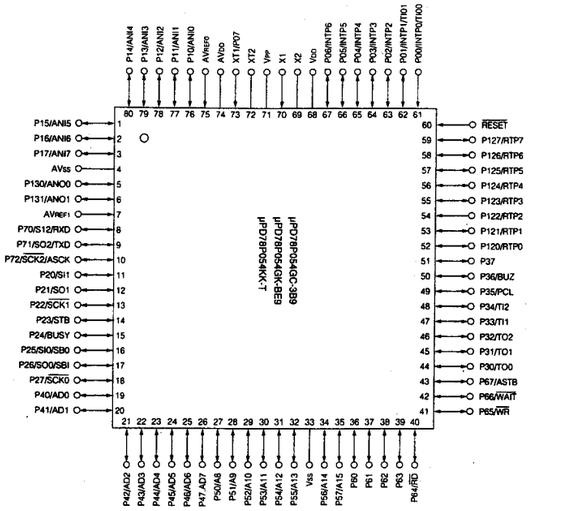
■ UPD784031GK-BE9 [NEC]
(16bit Single Chip Micro Computer)



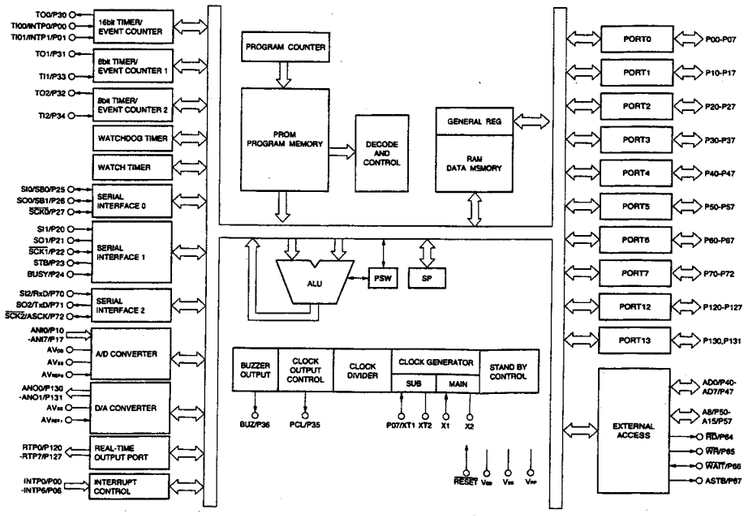
Note Connect the TEST pin to Vsse directly.



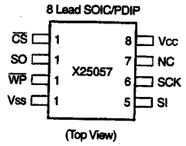
■ UPD71055GB-10 [NEC]
(Parallel Input/Output Port)

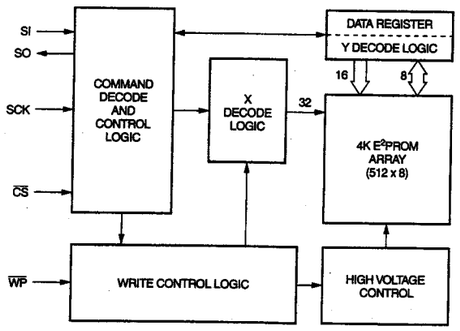


P00-P07	: Port0	SB0, SB1	: Serial Bus	WAIT	: Wait
P10-P17	: Port1	SI0-SI2	: Serial Input	ASTB	: Address Strobe
P20-P27	: Port2	SO0-SO2	: Serial Output	X1, X2	: Crystal (Main System Clock)
P30-P37	: Port3	SCK0-SCK2	: Serial Clock	XT1, XT2	: Crystal (Subsystem Clock)
P40-P47	: Port4	RxD	: Receive Data	RESET	: Reset
P50-P57	: Port5	TxD	: Transmit Data	ANI0-ANI7	: Analog Input
P60-P67	: Port6	ASCK	: Asynchronous Serial Clock	ANO0, ANO1	: Analog Output
P70-P72	: Port7	PCL	: Programmable Clock	AVDD	: Analog Power Supply
P120-P127	: Port12	BUZ	: Buzzer Clock	AVSS	: Analog Ground
P130, P131	: Port13	STB	: Strobe	AVREF0, 1	: Analog Reference Voltage
RTP0-RTP7	: Real-Time Output Port	BUSY	: Busy	VDD	: Power Supply
INTP0-INTP6	: Interrupt From Peripherals	AD0-AD7	: Address/Data Bus	VPP	: Programming Power Supply
TI00, TI01	: Timer Input	A8-A15	: Address Bus	VSS	: Ground
TI1, TI2	: Timer Input	RD	: Read Strobe		
TO0-TO2	: Timer Output	WR	: Write Strobe		

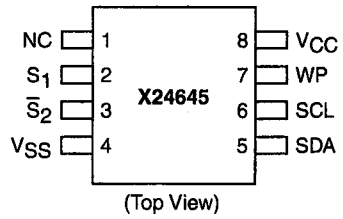


■ X25057M8-2.7-X [XICOR]
(SPI Serial EEPROM)





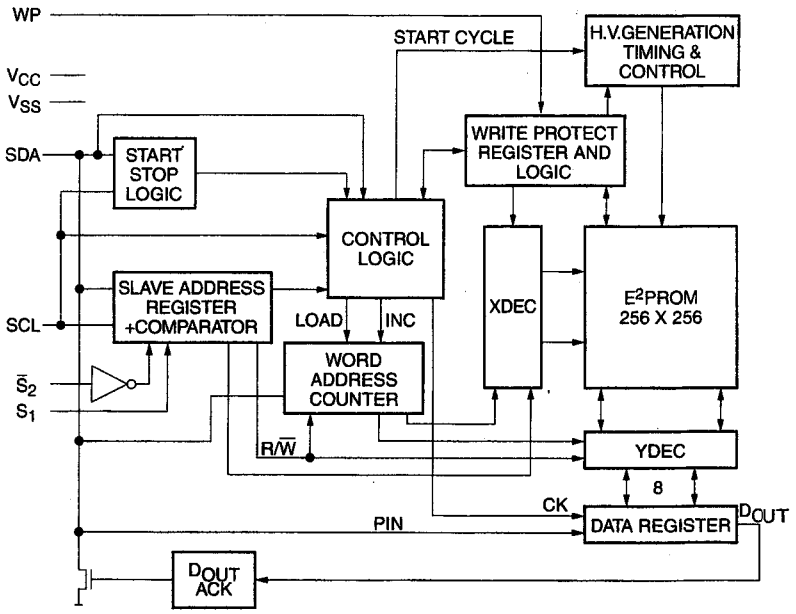
■ X24645S8-2.7-X [XICOR]
(8K x 8bit CMOS Serial EEPROM)



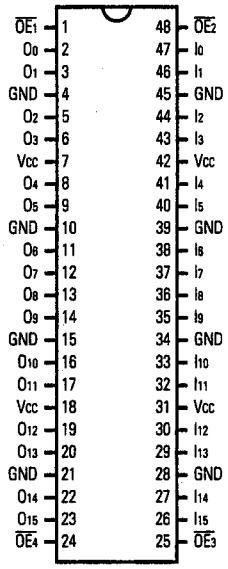
(Top View)

PIN NAMES

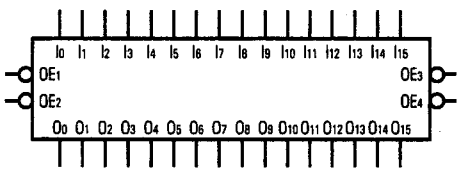
Symbol	Description
$S_1, \overline{S}_2$	Device Select Inputs
SDA	Serial Data
SCL	Serial Clock
WP	Write Protect
V_{SS}	Ground
V_{CC}	Supply Voltage
NC	No Connect



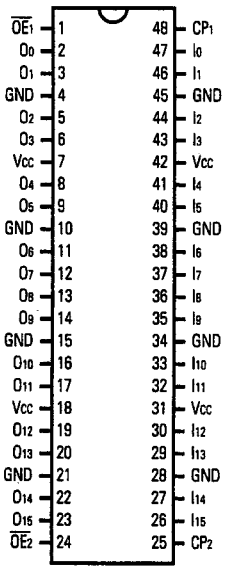
■ 74LCX16244MTD-X [NATIONAL SEMI CONDUCTOR]
(16 bit Buffer/Line Driver)



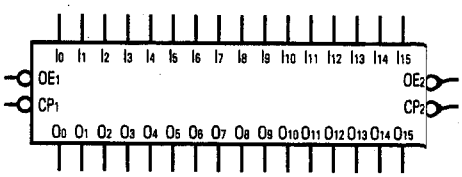
(Top View)



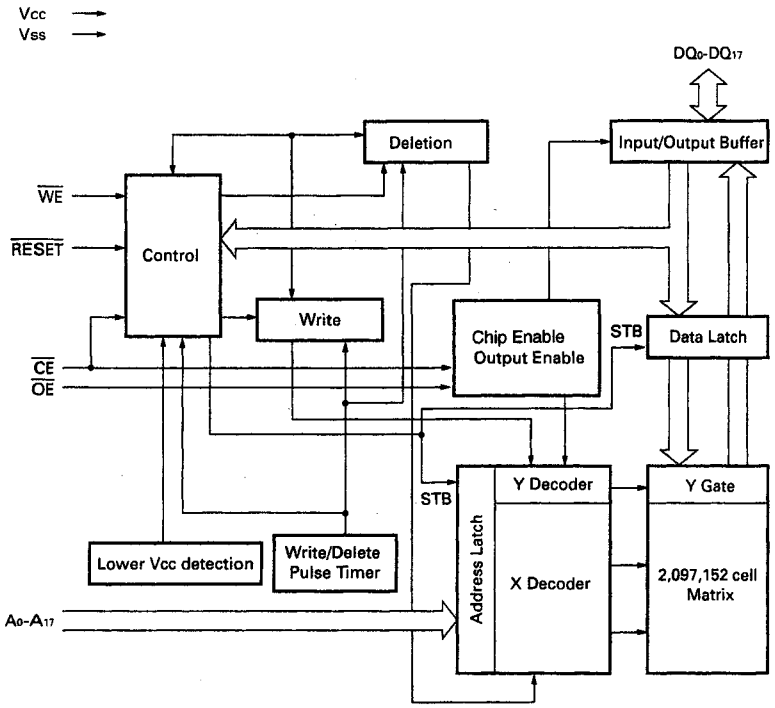
■ 74LCX16374MTD-X [NATIONAL SEMI CONDUCTOR]
(16 bit D-Type Flip-Flop)



(Top View)



■ PLSL1069-V1-** [FUJITSU]
(2M Bit Flash Memory)



SECTION 5
EXPLODED VIEW AND PARTS LIST

● **SAFETY PRECATION**

Parts identified by the ⚠ symbol are critical for safety.
Replace only with specified parts numbers.

● **NOTE**

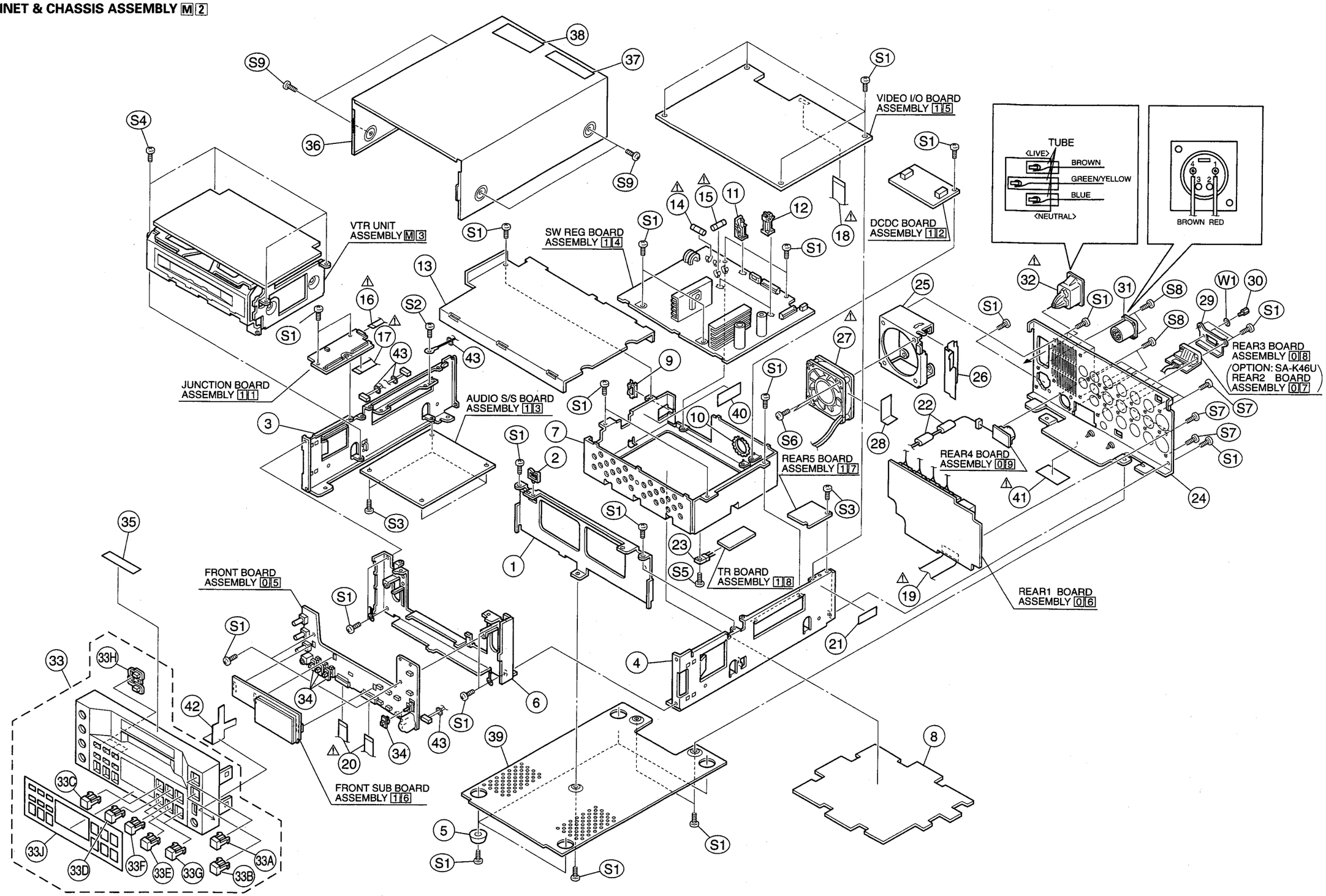
Parts not denoted by parts numbers are not supplied by JVC.

■ CABINET & CHASSIS ASSEMBLY PARTS LIST M2

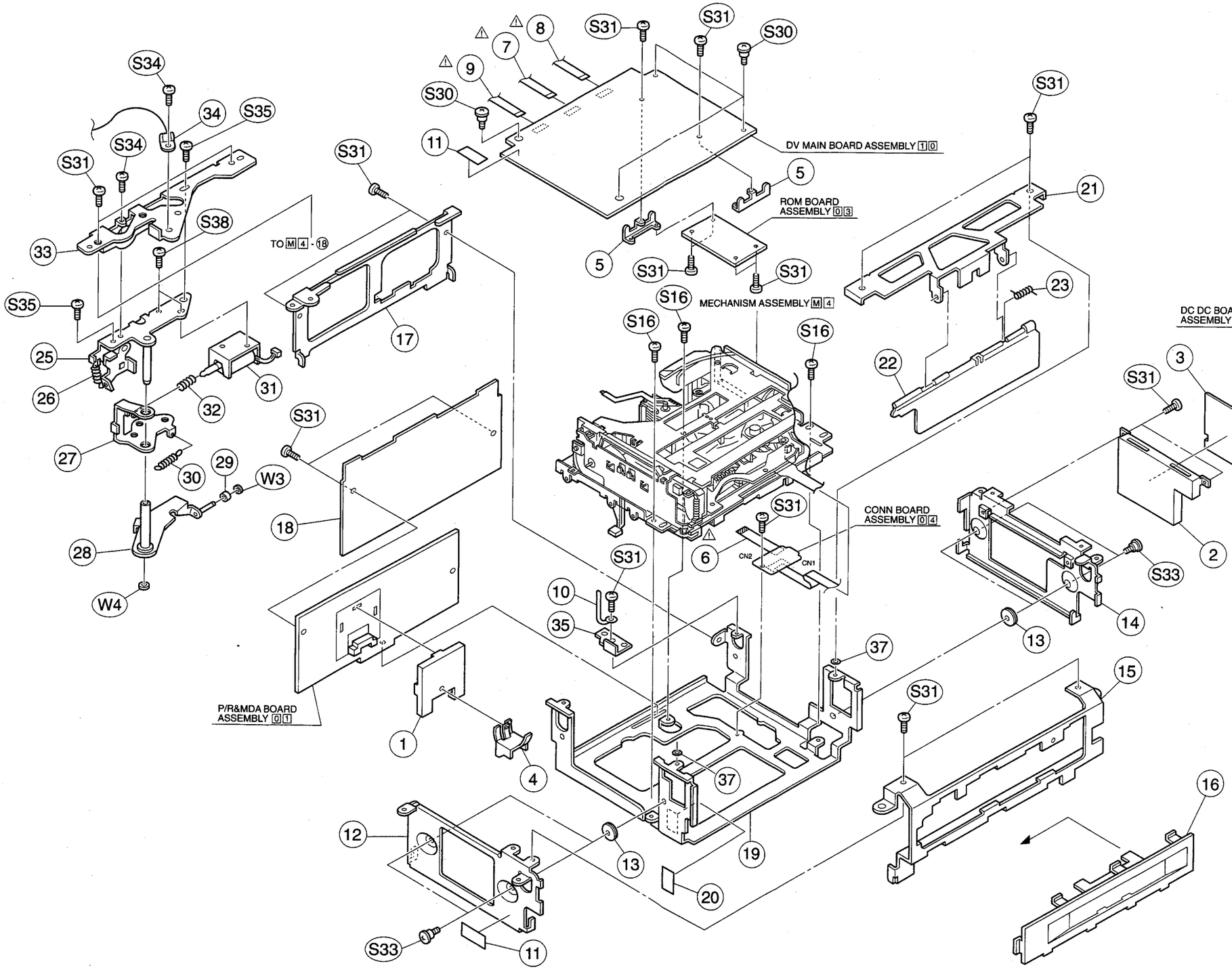
M2MM□□□□

Symbol No.	Part No.	Part Name	Description
1	PRD20686	CENTER FRAME	
2	PEME0784	WIRE HOLDER	
3	PRD20687	SIDE COVER(L)	
4	PRD20688	SIDE COVER(R)	
5	QZF2008-002	FOOT	
6	PRD20684-01-02	FRONT FRAME	
7	PRD20685	SHIELD CASE(REG)	
8	PRD31441	INSULATOR	
9	SS49841-001	E.SADDLE	
10	PU43172-9-055	NYLON GROMMET	
11	PGZ00605-08	BOARD SPACER	
12	PGZ00606-08	BOARD HOLDER	
13	PRD20704	S.COVER(REG)	
⚠ 14	QMF51U1-1R25-S	FUSE	1.25A/125V (U)
	QMF51E2-1R25-S	FUSE	1.25A/250V (E)
⚠ 15	QMF51U1-3R15-S	FUSE	3.15A/125V (U)
	QMF51E2-3R15-S	FUSE	T3.15A/250V (E)
⚠ 16	SCV2803-1818B	FFC WIRE	JUNC18-VID18
⚠ 17	SCV2803-2234B	FFC WIRE	JUNC10-ASS110
⚠ 18	SCV2803-2411B	FFC WIRE	VID11-ASS502
⚠ 19	PGW0206-090160	FFC WIRE	R1 13-ASS504
⚠ 20	PGZ02640-2034B	SHIELD FFC	FRONT1-ASS101
21	PRD44925	LABEL	
22	QQR0490-001	FILTER	
23	2SD1266A/QP/	SI.TRANSISTOR	MATSUSHITA
24	PRD20692-05	REAR COVER	(U)
	PRD20692-04	REAR COVER	(E)
25	PRD31420	BRACKET(FAN)	
26	PRD45265	DUCT(FAN)	
⚠ 27	PGZ02636-01-01	FAN MOTOR	
28	PRD45290	SPACER	
29	PRD45260	BRACKET(CONN)	
30	PGZ01821	SCREW	(E)
	PGZ01821-02	SCREW	(U)
31	QNZ0218-001	CONNECTOR	
⚠ 32	QNC0055-001	AC INLET	
33	PRD10422-01-03	FRONT PANEL ASSY	(U)
	PRD10422-01-03	FRONT PANEL ASSY	(E)
33A	PRD31415	BUTTON	OPERATE
33B	PRD31415-02	BUTTON	EJECT
33C	PRD31416	BUTTON	REC
33D	PRD31416-02	BUTTON	PLAY
33E	PRD31416-03	BUTTON	STOP
33F	PRD31416-04	BUTTON	PAUSE
33G	PRD31416-05	BUTTON	FF/REW
33H	PRD31417	BUTTON	
33J	PRD31407	PLATE(OPE)	
34	PRD45264	KNOB(OPE)	
35	PRD45306-02	LABEL(CAUTION)	
36	PRD20690	TOP COVER	
37	PRD43663-02-03	FCC S.LABEL	(U)
38	PRD44987-04	LABEL	(U)
39	PRD20689	BOTTOM COVER	
40	PRD44823	CAUTION LABEL	(U)
⚠ 41	-	RATING LABEL	
42	PRD45305	SHIELD PLATE	
43	PU58903	FERRITE CORE	
S1	QYSDST3006Z	SCREW	M3 x 6
S2	QYSPSPD4006N	SCREW	M4 x 6
S3	PRD45286	SCREW	
S4	QYSDST2608Z	SCREW	M2.6 x 8
S5	QYSDST3008Z	SCREW	M3 x 8
S6	QYSBST3020Z	SCREW	M3 x 20
S7	QYSDSF3006Z	SCREW	M3 x 6
S8	QYSPSP2605N	SCREW	M2.6 x 5
S9	QYSDSTY3008X	SCREW	M3 x 8
W1	QYWLS275306Z	L.WASHER	

5.1 CABINET & CHASSIS ASSEMBLY M 2



5.2 DVC UNIT ASSEMBLY M 3



■ DVC UNIT ASSEMBLY PARTS LIST M3

M3MM□□□□

Symbol No.	Part No.	Part Name	Description
1	PRD31397	SHIELD CASE(P/R)	
2	PRD31398	SHIELD CASE(DC)	
3	PRD45263	INSULATOR	
4	PRD45247	EARTH PLATE	
5	PRD45259	P.W.B.BRACKET	
⚠ 6	SCV2803-1810B	FFC WIRE	MAIN401-JUNC
⚠ 7	SCV2803-2003B	FFC WIRE	MAIN 402-PR606
⚠ 8	SCV2803-2003B	FFC WIRE	MAIN 501-PR901
⚠ 9	SCV2803-1003B	FFC WIRE	MAIN 108-PR608
10	PU49485-3	WIRE CLAMP	
11	–	LABEL	IEEE1394 ID
12	PRD31393	SIDE COVER(L)	
13	PGZ02634	DAMPER	
14	PRD31394	SIDE COVER(R)	
15	PRD31395	FRONT COVER	
16	PRD31409	CASSETTE SLOT	
17	PRD31396	REAR COVER	
18	PRD45262	INSULATOR	
19	PRD20680	BASE FRAME	
20	PRD30030-127	PAD	
21	PRD31390-01-01	FRONT FRAME	
22	PRD31391	C.H.DOOR	
23	LP40360-001A	TORSION SPRING	
25	PRD31399A	CLEANER BKT.ASSEMBLY	
26	PRD30024-107	TENSION SPRING	
27	PRD31401	DRIVE ARM	
28	PRD31402A-01	CLEANER ARM ASSEMBLY	
29	LY41249-001A	CLEANER ASSEMBLY	
30	PRD30024-107	TENSION SPRING	
31	PGZ02629	DC-SOLENOID	
32	PRD30023-65	COMPRESS SPRING	
33	PRD31392	REAR FRAME	
34	QSD0002-001	DEW SENSOR	
35	PRD45284	BRACKET(C.H.)	
37	PRD30029-05	WASHER	
S16	QYSDSP2604Z	SCREW	M2.6 x 4
S30	PRD44099	SCREW	
S31	QYSDSP2003Z	SCREW	M2 x 3
S33	PRD45246	SCREW	
S34	QYSPSP2003Z	SCREW	M2 x 3
S35	QYSDSP2006Z	SCREW	M2 x 6
S38	QYSDSP2002N	SCREW	M2 x 2
S41	QYSDSF2005Z	SCREW	M2 x 5
W3	YQ44246-3	SLIT WASHER	
W4	PQM30017-27	SLIT WASHER	

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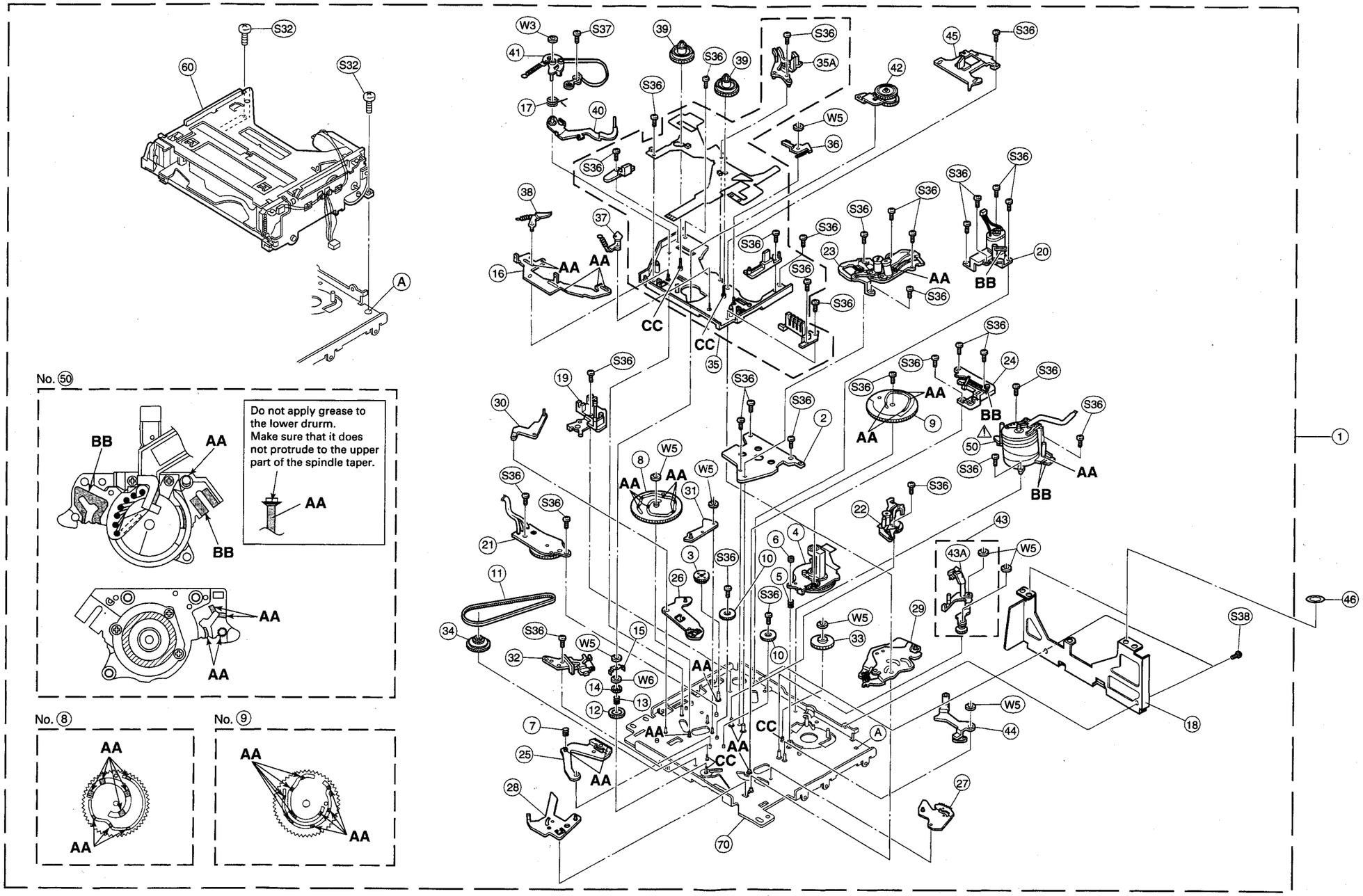
5.3 MECHANISM ASSEMBLY M4



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Grease	RX-410R	BB
Oil	YTU94027	CC

NOTES:
- This section indicates that the grease and oil are to be applied on locations marked with **AA**, **BB** and **CC**.
  During checking and servicing, check if grease has been applied on the locations marked with **AA**, **BB** and oil on the locations marked with **CC**.
- Apply also grease and oil on some locations in the main cam gear and the cam groove at the rear side of the sub cam gear.

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■ MECHANISM ASSEMBLY PARTS LIST M4

M4MM□□□□

Symbol No.	Part No.	Part Name	Description
1	PGS30534B-01	MECHA ASSEMBLY	
2	LY30358-001A	DRUM BASE DECK	
3	LY30343-001A	WORM WHEEL 2	
4	QAR0012-002	CAPSTAN MOTOR	
5	LY30002-003A	COMPRES.SPRING	
6	LY41390-001A	ADJUST NUT	
7	LY40224-001A	COLLAR	
8	LY10060-003A	MAIN CAM	
9	LY20102-001A	SUB CAM	
10	YQ44560-1-2	CONNECT GEAR 2	
11	LY40241-001A	TIMING BELT	
12	LY40246-001A	C.LOCK GEAR(1)	
13	LY30002-009A	COMPRES.SPRING	
14	LY40247-001A	C.LOCK GEAR(2)	
15	LY40248-001A	PUSH PLATE	
16	LY20109-001B	CONTROL PLATE	
17	LY41243-001A	TOR.SPRING	
18	PRD31418-01-03	A.H.C.FRAME	
19	LY40237-001C	ENT.G.BASE ASSEMBLY	
20	LY30340-003B	MOTOR BKT.ASSEMBLY	
21	LY41190-002A	ROTARY EN.ASSEMBLY	
22	YQ31873C	G.RAIL(S) ASSEMBLY	
23	LY20097-001B	G.RAIL(T) ASSEMBLY	
24	LY30345-001A	M.CATCHER ASSEMBLY	
25	LY40223-001A	ARM GEAR 1 ASSEMBLY	
26	LY40235-002B	CENT.ARM ASSEMBLY	
27	LY40279-001A	ARM GEAR 2 ASSEMBLY	
28	LY40228-001A	C.LOCK LEVER ASSEMBLY	
29	LY30347-001A	CHARGE ARM ASSEMBLY	
30	LY40236-001A	T.CTL.ARM ASSEMBLY	
31	LY40233-001A	B.CTL.ARM ASSEMBLY	
32	LY40242-001C	BASE PLATE ASSEMBLY	
33	YQ43931A	R.D.PULLEY ASSEMBLY	
34	LY40239-003A	CENT.GEAR ASSEMBLY	
35	LYH30012-001A	S.DECK ASSEMBLY(G)	
35A	LY20108-001B	LED PRISM	
36	LY40257-001A	SUB BRAKE ASSEMBLY	
37	LY40259-001A	M.BRAKE(T) ASSEMBLY	
38	LY40260-003A	M.BRAKE(S) ASSEMBLY	
39	LY40255-001A	REEL DISK ASSEMBLY	
40	LY41245-001B	TENSION ARM SA.	
41	LY41246-003B	B.ARM PLATE SA.	
42	LY30370-002A	SWING ARM ASSEMBLY	
43	LY30380-001D	EXIT G.ARM ASSEMBLY	
43A	LY41250-001A	CLEAN.ARM ASSEMBLY	
44	LY30374-001B	P.R.ARM ASSEMBLY	
45	LY40280-003A	REEL COVER ASSEMBLY	
46	PRD45341	SPACER	
⚠ 50	YDV2093B	DRUM ASSEMBLY	
60	PGS30576A	C.HOUSING ASSEMBLY	
70	LY10062-001B	MAIN DECK ASSEMBLY	
S32	QYSDSP2005Z	SCREW	M2 x 5
S36	YQ43893	SCREW	M1.4 x 2
S37	YQ43893-7	SCREW	M1.4 x 2
S38	QYSDSP2002N	SCREW	M2 x 2
W3	YQ44246-3	SLIT WASHER	
W5	YQ44246	SLIT WASHER	
W6	YQ43933-2	WASHER	

SECTION 6
ELECTRICAL PARTS LIST

SAFETY PRECAUTION:
Parts identified by the ⚠ symbol are critical for safety. Replace only with specified parts numbers.
For maximum reliability and performance, all other replacement parts should be identical to those specified.

NOTE:
- Parts not denoted by parts numbers are not supplied by JVC.
- Abbreviations in this list are as follows:

RESISTORS
In the "Description" column:
All resistance values are in ohms (Ω).
k expresses kilo-ohm (1 000 ohms, kΩ).
M expresses mega-ohm (10^6 ohms, MΩ).

In the "Parts Name"column:
CAR.RESISTOR : Carbon Resistor
C.M.F.RESISTOR : Constant Metalized Film Resistor
COMP.RESISTOR: Composition Resistor
FUSI.RESISTOR : Fusible Resistor
M.F.RESISTOR : Metal Film Resistor
M.G.RESISTOR : Metal Graze Resistor
M.P.RESISTOR : Metal Plate Resistor
O.M.F.RESISTOR : Oxide Metalized Film Resistor
TRIM.RESISTOR : Trimerer Resistor
U.F.RESISTOR : Non-inflammable Resistor
VAL.RESISTOR : Valiable Resistor
W.W.RESISTOR : Wire Wound Resistor

CAPACITORS
In the "Description" column:
All capacitance values are in microfarad (μF) unless otherwise indicated.
p expresses picofarad (10^{-12} farad,pF).

In the "Parts Name" column:
CER.CAPACITOR : Ceramic Capacitor
E.CAPACITOR : Electrolytic Capacitor
FILM CAPACITOR : Film Capacitor
M.F.CAPACITOR : Metalized Film Capacitor
MICA CAPACITOR : Mica Capacitor
MPP CAPACITOR : Metalized PolyPropylene Capacitor
MPPS CAPACITOR : Metalized PolyPhenylene Sulfied film Capacitor
M.M.CAPACITOR : Metalized Mylar Capacitor
MYLAR CAPACITOR : Mylar Capacitor
N.P.CAPACITOR : Non-Poler electrolytic Capacitor
P.P.CAPACITOR : PolyPropylene Capacitor
PPS CAPACITOR : PolyPhenylene Sulfied film Capacitor
P.S.CAPACITOR : PolyStyrene Capacitor
TAN.CAPACITOR : Tantal Capacitor
TRIM.CAPACITOR : Trimer Capacitor
VAL.CAPACITOR : Valiable Capacitor

Note: In the "Description" column of the parts list, (U) means the parts for the U MODEL while (E) is for the E MODEL.

Symbol No.	Part No.	Part Name	Description	
IC1	SCV1585-064	I.C.(M)	JVC (U)	← for U MODEL
	SCV1585-067	I.C.(M)	JVC (E)	← for E MODEL

6.1 P/R & MDA BOARD ASSEMBLY PARTS LIST [0][1]

SLK2088-01-01A [0][1]□□□□□□□

Symbol No.	Part No.	Part Name	Description	
IC601	BA6865KV	I.C.(M)	ROHM	
IC602	BA6417F-X	I.C.(M)	ROHM	
IC603	BA6254FS-X	I.C.(M)	ROHM	
IC901	AN3731FHQ	I.C.(M)	MATSUSHITA	
Q601	DTC144EUA-X	TRANSISTOR	ROHM	
Q602	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q603	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q604	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q607	DTC144EUA-X	TRANSISTOR	ROHM	
Q608	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q903	2SC4226/3-5/-X	TRANSISTOR	NEC	
Q905	2SD1979/S/-X	TRANSISTOR	MATSUSHITA	
Q906	2SD1979/S/-X	TRANSISTOR	MATSUSHITA	
Q907	2SC4226/3-5/-X	TRANSISTOR	NEC	
D602	DAP202U-X	DIODE	ROHM	
D603	DAP202U-X	DIODE	ROHM	
D605	MA736-X	DIODE	MATSUSHITA	
R601	NRSA63J-681X	M.G.RESISTOR	680	1/16W
R602	NRSA63J-124X	M.G.RESISTOR	120k	1/16W
R603	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R604	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R605	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R606	NRV142F-R22X	C.M.F.RESISTOR	0.22	1/4W
R608	NRS12BJ-1R0W	M.G.RESISTOR	1	1/2W
R609	NRS12BJ-1R0W	M.G.RESISTOR	1	1/2W
R610	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R611	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R612	NRSA63J-274X	M.G.RESISTOR	270k	1/16W
R613	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R614	NRSA63J-154X	M.G.RESISTOR	150k	1/16W
R615	NRSA63J-474X	M.G.RESISTOR	470k	1/16W
R616	NRVA63D-202X	C.M.F.RESISTOR	2k	1/16W
R617	NRSA63J-563X	M.G.RESISTOR	56k	1/16W
R618	NRSA63J-203X	M.G.RESISTOR	20k	1/16W
R619	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R625	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R626	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R627	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R628	NRSA63J-511X	M.G.RESISTOR	510	1/16W
R629	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R630	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R631	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R634	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R635	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R636	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R642	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R643	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R646	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R649	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R650	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R652	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R657	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R658	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R661	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R662	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R663	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R903	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R904	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R905	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R906	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R907	NRSA63J-100X	M.G.RESISTOR	10	1/16W
R909	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R911	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R912	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R913	NRSA63J-680X	M.G.RESISTOR	68	1/16W
R914	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R915	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R916	NRSA63J-271X	M.G.RESISTOR	270	1/16W
R917	NRSA63J-102X	M.G.RESISTOR	1k	1/16W

Symbol No.	Part No.	Part Name	Description	
R921	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R922	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R923	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R924	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R925	NRSA63J-680X	M.G.RESISTOR	68	1/16W
R926	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R927	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R928	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R932	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
C601	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C602	NCB41CM-106X	CER.CAPACITOR	10	16V
C603	NBE21AM-106X	TAN.CAPACITOR	10	10V
C605	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C606	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C607	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C608	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C609	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C610	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C611	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C612	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C613	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C614	NBE71VM-106X	TAN.CAPACITOR	10	35V
C615	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C616	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C617	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C618	NCB31EK-223X	CER.CAPACITOR	0.022	25V
C619	NCB31EK-223X	CER.CAPACITOR	0.022	25V
C620	NCB31EK-223X	CER.CAPACITOR	0.022	25V
C621	NCB21AK-105X	CER.CAPACITOR	1	10V
C622	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C623	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C625	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C626	NCB31EK-223X	CER.CAPACITOR	0.022	25V
C627	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C628	NCB21EK-104X	CER.CAPACITOR	0.1	25V
C631	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C632	NBE51CM-226X	TAN.CAPACITOR	22	16V
C635	NBE71VM-106X	TAN.CAPACITOR	10	35V
C636	NCB41CM-106X	CER.CAPACITOR	10	16V
C637	NCB41CM-106X	CER.CAPACITOR	10	16V
C639	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C640	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C641	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C644	NCB21EK-104X	CER.CAPACITOR	0.1	25V
C646	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C647	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C648	NCB21CK-224X	CER.CAPACITOR	0.22	16V
C649	NCB21CK-224X	CER.CAPACITOR	0.22	16V
C650	NCB21CK-224X	CER.CAPACITOR	0.22	16V
C651	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C652	NBE71VM-106X	TAN.CAPACITOR	10	35V
C653	NCF31CZ-334X	CER.CAPACITOR	0.33	16V
C654	NCF31CZ-334X	CER.CAPACITOR	0.33	16V
C901	NCB31HK-122X	CER.CAPACITOR	1200p	50V
C902	NCB21AK-105X	CER.CAPACITOR	1	10V
C903	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C904	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C905	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C906	NDC31HJ-470X	CER.CAPACITOR	47p	50V
C907	NCB31HK-681X	CER.CAPACITOR	680p	50V
C909	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C910	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C911	NBE20JM-106X	TAN.CAPACITOR	10	6.3V
C912	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C913	NBE61AM-107X	TAN.CAPACITOR	100	10V
C914	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C915	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C916	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C917	NBE71VM-106X	TAN.CAPACITOR	10	35V
C918	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C919	NCB31HK-103X	CER.CAPACITOR	0.01	50V

[P/R & MDA]

Symbol No.	Part No.	Part Name	Description	
C920	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C921	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C922	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C924	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C927	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C929	NRSA63J-0R0X	M.G.RESISTOR	0	1/10W
C930	NBE50JM-107X	TAN.CAPACITOR	100	6.3V
C931	NBE21AM-106X	TAN.CAPACITOR	10	10V
C932	NBE21AM-106X	TAN.CAPACITOR	10	10V
C933	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C934	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C935	NBE20JM-106X	TAN.CAPACITOR	10	6.3V
C936	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C938	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C940	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C943	NCB31HK-103X	CER.CAPACITOR	0.01	50V
L901	NQL044K-470X	COIL	47uH	
L902	NQL044K-221X	COIL	220uH	
L903	NQL044K-470X	COIL	47uH	
L904	NQL085J-220X	COIL	22uH	
L905	NQL085J-220X	COIL	22uH	
LC601	PGZ01972Z	LC FILTER		
LC602	PGZ01972Z	LC FILTER		
LC603	PGZ01972Z	LC FILTER		
LC605	PGZ01972Z	LC FILTER		
CN601	QGA1201F2-09X	CONNECTOR	9PIN	
CN602	QGA1201C2-02X	CONNECTOR	2PIN	
CN603	QGF0508F1-11X	CONNECTOR	11PIN	
CN604	QGF0504C1-18X	CONNECTOR	18PIN	
CN605	QGA1201F2-04X	CONNECTOR	4PIN	
CN606	QGF0508F1-20X	CONNECTOR	20PIN	
CN607	QGA1201C2-04X	CONNECTOR	4PIN	
CN608	QGF0508F1-10X	CONNECTOR	11PIN	
CN609	QGA1201F2-02X	CONNECTOR	2PIN	
CN610	QGA2001F2-02X	CONNECTOR	2PIN	
CN901	QGF0508F1-20X	CONNECTOR	20PIN	
CN902	QGF0504C1-10X	CONNECTOR	10PIN	
TP601	NNZ0009-001X	TEST POINT	TP601-904	

6.2 DCDC BOARD ASSEMBLY PARTS LIST [0][2] (DVC unit)

SLK2088-02-01A [0][2]□□□□□□□

Symbol No.	Part No.	Part Name	Description	
IC1	BA9738KV	I.C.(M)	ROHM	
Q2	DTC144EUA-X	TRANSISTOR	ROHM	
Q3	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q4	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q5	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q6	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q7	2SB1302/ST/-X	TRANSISTOR	SANYO	
Q8	2SB1302/ST/-X	TRANSISTOR	SANYO	
D1	SFPB-72-W	SB DIODE	SANKEN	
D2	SFPB-72-W	SB DIODE	SANKEN	
D3	SFPB-72-W	SB DIODE	SANKEN	
D4	SFPB-72-W	SB DIODE	SANKEN	
D5	SFPB-72-W	SB DIODE	SANKEN	
D6	SFPB-72-W	SB DIODE	SANKEN	
D7	DAN202U-X	DIODE	ROHM	
R1	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R2	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R3	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R5	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R6	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R7	NRSA63J-682X	M.G.RESISTOR	6.8k	1/16W
R8	NRSA63J-823X	M.G.RESISTOR	82k	1/16W
R9	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R10	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R11	NRSA63J-122X	M.G.RESISTOR	1.2k	1/16W
R14	NRSA63J-122X	M.G.RESISTOR	1.2k	1/16W
R15	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R16	NRSA63J-682X	M.G.RESISTOR	6.8k	1/16W
R17	NRSA63J-823X	M.G.RESISTOR	82k	1/16W
R18	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R19	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R20	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R21	NRSA63D-243X	M.G.RESISTOR	24k	1/16W
R22	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R23	NRSA63D-153X	M.G.RESISTOR	15k	1/16W
R24	NRSA63D-123X	M.G.RESISTOR	12k	1/16W
R25	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R26	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R27	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R28	NRSA63D-153X	M.G.RESISTOR	15k	1/16W
R29	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R30	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R31	NRSA63D-822X	M.G.RESISTOR	8.2k	1/16W
R32	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R33	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R34	NRSA63D-153X	M.G.RESISTOR	15k	1/16W
R35	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R36	NRSA63D-682X	M.G.RESISTOR	6.8k	1/16W
R37	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R38	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R39	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R40	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R41	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R42	NRSA63D-183X	M.G.RESISTOR	18k	1/16W
R43	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R44	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R45	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R46	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R47	NRSA63J-331X	M.G.RESISTOR	330	1/16W
R49	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R50	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R51	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R52	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R53	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R54	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R55	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R56	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R58	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
C1	NCB21AK-105X	CER.CAPACITOR	1	10V
C2	NCB21AK-105X	CER.CAPACITOR	1	10V
C3	NCB21AK-105X	CER.CAPACITOR	1	10V
C4	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C5	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C6	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C7	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C8	NCB21CK-224X	CER.CAPACITOR	0.22	16V
C9	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C10	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C11	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C12	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C13	NCB31HK-331X	CER.CAPACITOR	330p	50V
C14	NDC31HJ-181X	CER.CAPACITOR	180p	50V
C15	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C16	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C17	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C18	NCB31HK-472X	CER.CAPACITOR	4700p	50V
C19	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C20	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C21	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C22	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C23	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C24	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C25	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C26	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C27	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C28	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C30	NCB21AK-105X	CER.CAPACITOR	1	10V
C31	NCB21AK-105X	CER.CAPACITOR	1	10V
C32	NCB11AK-475X	CER.CAPACITOR	4.7	10V
C33	NCB21AK-105X	CER.CAPACITOR	1	10V
C34	NCB11AK-475X	CER.CAPACITOR	4.7	10V
C35	NCB21AK-105X	CER.CAPACITOR	1	10V
C36	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C37	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C38	NCB21AK-105X	CER.CAPACITOR	1	10V
C39	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C40	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C41	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C42	NCB21AK-105X	CER.CAPACITOR	1	10V
C43	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C44	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C45	NCB21AK-105X	CER.CAPACITOR	1	10V
C46	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C47	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C48	NCB10JK-106X	CER.CAPACITOR	10	6.3V
C49	NCB41CM-106X	CER.CAPACITOR	10	16V
C50	NCB41CM-106X	CER.CAPACITOR	10	16V
L1	NQL23CM-330X	COIL	33uH	
L2	NQL23CM-330X	COIL	33uH	
L3	NQL23CM-330X	COIL	33uH	
L4	NQL24CN-220X	COIL	22uH	
L5	NQL25CM-330X	COIL	33uH	
L6	NQL25CM-330X	COIL	33uH	
L7	NQL23CM-330X	COIL	33uH	
L8	NQL24CN-220X	COIL	22uH	
L9	NQL35BK-100X	COIL	10uH	
L10	NQL35BK-100X	COIL	10uH	
L11	NQL24CN-220X	COIL	22uH	
L12	NQL23CM-330X	COIL	33uH	
L13	NQL24CN-220X	COIL	22uH	
L14	NQL35BK-100X	COIL	10uH	
L15	NQL35BK-100X	COIL	10uH	
CN1	QGA1201F2-13X	CONNECTOR	13PIN	
CN2	QGA1201F2-09X	CONNECTOR	9PIN	
⚠CP11	ICP-S2.3TN	ICP		
⚠CP12	ICP-S2.3TN	ICP		
⚠CP13	ICP-S2.3TN	ICP		

6.3 ROM BOARD ASSEMBLY PARTS LIST 03

SLK2088-03-N0D(U)

SLK2088-03-P0D(E) 03

Symbol No.	Part No.	Part Name	Description	
IC1	M27W102-80N6-0B	I.C.(M)	MITSUBISHI	(U)
	M27W102-80N6-8B	I.C.(M)	MITSUBISHI	(E)
SK1	NNV0012-040	IC SOCKET	FOR IC1	
IC2	74LCX16244MTD-X	I.C.(M)	NATIONAL SEMICO	
IC3	74LCX16374MTD-X	I.C.(M)	NATIONAL SEMICO	
IC4	TC7W00FU-X	I.C.(M)	TOSHIBA	
IC5	TC7W04FU-X	I.C.(M)	TOSHIBA	
R3	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R4	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R5	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R6	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
RA1	NRZ0015-473X	M.G.RESISTOR	47k	
RA2	NRZ0015-473X	M.G.RESISTOR	47k	
RA3	NRZ0015-473X	M.G.RESISTOR	47k	
RA4	NRZ0015-473X	M.G.RESISTOR	47k	
C1	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C2	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C3	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C4	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C5	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
CN1	QGB0801M2-26X	CONNECTOR	26PIN	
LA1	NRZ0038-0R0X	RESISTOR ARRAY		
LA2	NRZ0038-0R0X	RESISTOR ARRAY		
LA3	NRZ0038-0R0X	RESISTOR ARRAY		
LA4	NRZ0038-0R0X	RESISTOR ARRAY		

6.4 CONN. BOARD ASSEMBLY PARTS LIST 04

SLK2088-04-00A 04

Symbol No.	Part No.	Part Name	Description	
R1	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
TH1	NAD0002-103X	THERMISTOR	10k	
CN1	QGF0508F2-15X	CONNECTOR	15PIN	
CN2	QGF0508F2-18X	CONNECTOR	18PIN	

6.5 FRONT BOARD ASSEMBLY PARTS LIST [0][5]

SLK2099-A0C [0][5]□□□□□□

Symbol No.	Part No.	Part Name	Description
IC1	NJM319M-X	I.C.(M)	JRC
IC2	TC74VHC123AFT-X	I.C.(M)	TOSHIBA
IC3	NJM4556AM-X	I.C.(M)	JRC
IC4	TC7W74FU-X	I.C.(M)	TOSHIBA
IC5	TC7SH08FU-X	I.C.(M)	TOSHIBA
IC6	TC7SU04FU-X	I.C.(M)	TOSHIBA
IC7	TC7S66FU-X	I.C.(M)	TOSHIBA
IC8	TC7W126FU-X	I.C.(M)	TOSHIBA
IC9	TC4053BFT-X	I.C.(M)	TOSHIBA
IC10	S-8423LFS-X	I.C.(M)	SEIKO
IC11	S-81233SGUP-X	I.C.(M)	SEIKO
IC12	TC7S14FU-X	I.C.(M)	TOSHIBA
IC13	PLSL1070-V1	I.C.(M)	UPD78P054GC-3B9
IC14	S-80840ANNP-W	I.C.(M)	SEIKO
IC15	S-80840ANNP-W	I.C.(M)	SEIKO
Q1	DTC124EUA-X	TRANSISTOR	ROHM
Q2	DTC124EUA-X	TRANSISTOR	ROHM
Q3	DTC124EUA-X	TRANSISTOR	ROHM
Q4	DTC124EUA-X	TRANSISTOR	ROHM
Q5	DTC124EUA-X	TRANSISTOR	ROHM
Q6	DTA124EUA-X	TRANSISTOR	ROHM
Q7	2SC4097/QR/-X	TRANSISTOR	ROHM
D1	DAN202U-X	DIODE	ROHM
D2	DAN202U-X	DIODE	ROHM
D3	MA3024-X	ZENER DIODE	MATSUSHITA
D4	MA3024-X	ZENER DIODE	MATSUSHITA
D5	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D6	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D7	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D8	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D9	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D10	MA728-X	DIODE	MATSUSHITA
D11	MA728-X	DIODE	MATSUSHITA
D12	MA3091/M/-X	ZENER DIODE	MATSUSHITA
LD1	SLB-25MG3F	L.E.D.	PAUSE
LD2	SLB-25MG3F	L.E.D.	PLAY
LD3	SLB-25VR3F	L.E.D.	REC
LD4	SLB-25MG3F	L.E.D.	FF
LD5	SLB-25MG3F	L.E.D.	REW
R1	NRSA63D-121X	M.G.RESISTOR	120 1/16W
R2	NRSA63D-121X	M.G.RESISTOR	120 1/16W
R3	NRSA63D-121X	M.G.RESISTOR	120 1/16W
R4	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R5	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R6	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R7	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R8	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R9	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R10	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R11	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R12	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R13	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R14	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R15	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R16	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R17	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R18	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R20	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R21	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R22	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R23	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R24	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R25	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R26	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R27	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R28	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R29	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R30	NRSA63D-102X	M.G.RESISTOR	1k 1/16W

Symbol No.	Part No.	Part Name	Description
R31	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R32	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R33	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R34	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R35	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R36	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R37	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R38	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R40	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R41	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R42	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R43	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R44	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R45	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R46	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R47	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R48	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R49	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R50	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R51	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R52	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R53	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R54	NRSA63D-470X	M.G.RESISTOR	47 1/16W
R55	NRSA63D-394X	M.G.RESISTOR	390k 1/16W
R56	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R57	NRSA63D-303X	M.G.RESISTOR	30k 1/16W
R58	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R59	NRSA63D-471X	M.G.RESISTOR	470 1/16W
R60	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R61	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R62	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R63	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R64	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R65	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R66	NRSA63D-302X	M.G.RESISTOR	3k 1/16W
R67	NRSA63D-152X	M.G.RESISTOR	1.5k 1/16W
R68	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R69	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R70	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R71	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R72	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R73	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R74	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R75	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R76	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R77	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R78	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R79	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R80	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R81	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R82	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R83	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R84	NRSA63D-224X	M.G.RESISTOR	220k 1/16W
R85	NRSA63D-224X	M.G.RESISTOR	220k 1/16W
R86	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R87	NRSA63D-224X	M.G.RESISTOR	220k 1/16W
R88	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R89	NRSA63D-334X	M.G.RESISTOR	330k 1/16W
R90	NRSA63D-104X	M.G.RESISTOR	100k 1/16W
R91	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R92	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R93	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R94	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R95	NRSA63D-474X	M.G.RESISTOR	470k 1/16W
R96	NRSA63D-823X	M.G.RESISTOR	82k 1/16W
R97	NRSA63D-391X	M.G.RESISTOR	390 1/16W
R98	NRSA63J-333X	M.G.RESISTOR	33k 1/16W
R99	NRSA63D-823X	M.G.RESISTOR	82k 1/16W
R110	QRE141J-104Y	CAR.RESISTOR	100k 1/4W
VR3	QVQ0264-B23	VAL.RESISTOR	CH1 REC LEVEL
VR4	QVQ0264-B23	VAL.RESISTOR	CH2 REC LEVEL

Symbol No.	Part No.	Part Name	Description
VR5	QVQ0264-B23	VAL.RESISTOR	PHONES
C1	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C2	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C3	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C4	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C5	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C6	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C7	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C8	NCB31HK-331X	CER.CAPACITOR	330p 50V
C9	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C10	NCB31HK-122X	CER.CAPACITOR	1200p 50V
C11	NBE21AM-106X	TAN.CAPACITOR	10 10V
C12	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C13	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C14	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C15	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C16	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C17	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C18	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C19	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C20	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C21	NDC31HJ-221X	CER.CAPACITOR	220p 50V
C22	NDC31HJ-221X	CER.CAPACITOR	220p 50V
C23	NBE21AM-106X	TAN.CAPACITOR	10 10V
C24	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C25	NBE21AM-106X	TAN.CAPACITOR	10 10V
C26	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C27	NBE21AM-106X	TAN.CAPACITOR	10 10V
C28	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C29	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C30	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C31	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C32	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C33	NCB41CM-106X	CER.CAPACITOR	10 16V
C34	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C35	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C36	NCB41CM-106X	CER.CAPACITOR	10 16V
C37	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C38	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C39	NCB41CM-106X	CER.CAPACITOR	10 16V
C40	PGZ02341	P.BATTERY	FOR BACKUP
C41	NCB41CM-106X	CER.CAPACITOR	10 16V
C42	NCB41CM-106X	CER.CAPACITOR	10 16V
C43	NCB41CM-106X	CER.CAPACITOR	10 16V
C44	NCF21CZ-105X	CER.CAPACITOR	1 16V
C45	NDC31HJ-180X	CER.CAPACITOR	18p 50V
C46	NDC31HJ-150X	CER.CAPACITOR	15p 50V
C47	NDC31HJ-150X	CER.CAPACITOR	15p 50V
C48	NDC31HJ-150X	CER.CAPACITOR	15p 50V
C49	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C50	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C51	NCB41CM-106X	CER.CAPACITOR	10 16V
C53	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C54	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C55	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C56	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C57	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C58	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C59	NDC21HJ-101X	CER.CAPACITOR	100p 50V
C60	NBE20GM-226X	TAN.CAPACITOR	22
L1	NQL114K-100X	COIL	10uH
L2	NQL114K-100X	COIL	10uH
L3	NQL114K-100X	COIL	10uH
L4	NQL114K-100X	COIL	10uH
L5	NQL114K-101X	COIL	100uH
L6	NQL024J-100X	COIL	10uH
L7	NQL024J-100X	COIL	10uH
L8	NQL024J-100X	COIL	10uH
LC1	NQR0155-004X	LC FILTER	

Symbol No.	Part No.	Part Name	Description
LC2	NQR0155-004X	LC FILTER	
LC3	NQR0155-004X	LC FILTER	
X1	NAX0065-001X	CRYSTAL	4.9152MHz
X2	NAX0074-001X	CRYSTAL	32.768kHz
S1	NSW0039-001X	TACT SWITCH	OPERATE
S2	NSW0039-001X	TACT SWITCH	EJECT
S3	NSW0039-001X	TACT SWITCH	PAUSE
S4	NSW0039-001X	TACT SWITCH	PLAY
S5	NSW0039-001X	TACT SWITCH	REC
S6	NSW0039-001X	TACT SWITCH	FF
S7	NSW0039-001X	TACT SWITCH	STOP
S8	NSW0039-001X	TACT SWITCH	REW
S9	QSW0340-001	SLIDE SWITCH	COUNTER
S10	QSW0340-001	SLIDE SWITCH	MONITOR
S11	QSW0340-001	SLIDE SWITCH	OUTPUT
S13	QSW0334-001	SLIDE SWITCH	REMOTE/LOCAL
J1	QNZ0224-001	MINI JACK	MIC
J2	QNS0108-001	MINI JACK	PHONES
CN1	QGF1012F1-20X	CONNECTOR	20PIN
CN2	QGF1012F1-20X	CONNECTOR	20PIN
CN3	QGA1501F2-03W	CONNECTOR	3PIN
CN101	QGG2007M1-10	CONNECTOR	10PIN
CN102	QGG2007M1-10	CONNECTOR	10PIN
CN103	QGG2007M1-10	CONNECTOR	10PIN
TP1	NNZ0009-001X	TEST POINT	TP1-10
K1	NQR0292-001X	FERRITE BEAD	K1-11
K8	NDC21HJ-101X	CER.CAPACITOR	100p 50V
TB1	NNZ0006-001X	EARTH TERMINAL	
TB2	NNZ0006-001X	EARTH TERMINAL	
HD1	PQ40795-2-2	LED HOLDER	FOR LD1-5

6.6 REAR1 BOARD ASSEMBLY PARTS LIST [0][6]

SLK2100-01-A0B [0][6]□□□□□□□

Symbol No.	Part No.	Part Name	Description
D1	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D2	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D3	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D4	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D5	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D6	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D7	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D8	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D9	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D10	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D11	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D12	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D13	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D14	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D15	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D16	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D17	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D18	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D19	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D20	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D21	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D22	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D23	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D24	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D25	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D26	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D27	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D28	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D29	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D30	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D31	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D32	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D33	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D34	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D35	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D36	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D37	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D38	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D39	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D40	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D41	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D42	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D43	MA3091/M/-X	ZENER DIODE	MATSUSHITA
D44	MA3091/M/-X	ZENER DIODE	MATSUSHITA
C1	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C2	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C4	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C5	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C7	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C8	NDC21HJ-221X	CER.CAPACITOR	220p 50V
C10	NDC21HJ-221X	CER.CAPACITOR	220p 50V
L1	NQLO24J-100X	COIL	10uH
L2	NQLO24J-100X	COIL	10uH
L3	NQLO24J-100X	COIL	10uH
L4	NQLO24J-100X	COIL	10uH
L5	NQLO24J-100X	COIL	10uH
S1	QSWV0261-001	SLIDE SWITCH	TIMER REC/PLAY
J101	QNZO226-001	Y/C CONNECTOR	Y/C IN
J102	QNZO226-001	Y/C CONNECTOR	Y/C OUT
J103	QNZO169-001	BNC CONNECTOR	LINE IN/OUT,MON
J104	QNZO169-001	BNC CONNECTOR	CPN IN/OUT,SYNC
J105	QNZO169-001	BNC CONNECTOR	R-Y IN/OUT,TC O
J106	QNZO169-001	BNC CONNECTOR	B-Y IN/OUT,TC I
J107	QNNO236-001	RCA CONNECTOR	CH1 IN/OUT,MONI
J108	QNNO232-001	RCA CONNECTOR	CH2 IN/OUT,MONI
J109	QNZO225-001	MINI JACK	SERIAL IN

Symbol No.	Part No.	Part Name	Description
CN101	QGF1009F2-16	CONNECTOR	16PIN
CN102	QGA1501F1-10	CONNECTOR	10PIN
CN103	QGA1501F1-09	CONNECTOR	9PIN
CN104	QGA1501F1-08	CONNECTOR	8PIN
CN105	QGA1501F1-10	CONNECTOR	10PIN
K1	PGZ01693-009Z	FERRITE BEADS	K1-8

6.7 REAR3 BOARD ASSEMBLY PARTS LIST [0][8]

SLK2100-03-A0B [0][8]□□□□□□□

Symbol No.	Part No.	Part Name	Description
D1	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D2	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D3	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D4	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D5	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D6	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D7	MA3240/M/-W	ZENER DIODE	MATSUSHITA
D8	MA3240/M/-W	ZENER DIODE	MATSUSHITA
J301	QNZ0327-001	CONNECTOR (9P)	RS-422A
CN301	QGA1501F1-07	CONNECTOR	7PIN
K1	PGZ01693-009Z	FERRITE BEADS	K1-2

6.8 REAR4 BOARD ASSEMBLY PARTS LIST [0][9]

SLK2100-04-A0B [0][9]□□□□□□□

Symbol No.	Part No.	Part Name	Description
J401	PGZ01516	12PIN CONNECTOR	REMOTE 12PIN
CN401	QGA1501F1-08	CONNECTOR	8PIN

6.9 DV MAIN BOARD ASSEMBLY PARTS LIST [1][0]

SLK2087-N0D(U)

SLK2087-P0D(E) [1][0]□□□□□□□

Symbol No.	Part No.	Part Name	Description
IC101	MN102F1617HL-63	I.C.(M)	MATSUSHITA (U)
	MN102F1617HL-43	I.C.(M)	MATSUSHITA (E)
IC103	X25057M8-2.7-X	I.C.(M)	XICOR
IC105	S-80823ANNP-W	I.C.(M)	SEIKO
IC106	NM24C16LEM8-X	I.C.(M)	MATSUSHITA
IC107	SN74CBT3384APWX	I.C.(M)	TEXAS
IC108	S-81240PG-PJ-X	I.C.(M)	SEIKO
IC113	TC7W04FU-X	I.C.(M)	TOSHIBA
IC201	AK4518-VF-X	I.C.(M)	ASAHI KASEI
IC202	M5218AFP-X	I.C.(M)	MITSUBISHI
IC301	MN67373	I.C.(M)	MATSUSHITA
IC302	MN47V06AF	I.C.(M)	MATSUSHITA (U)
	MN47V07AF	I.C.(M)	MATSUSHITA (E)
IC303	M65500FP	I.C.(M)	MITSUBISHI
IC304	MN41V4260TT-A07	I.C.(M)	MATSUSHITA
IC305	AD9057BRS-60-X	I.C.(M)	FUJI ELECTRO
IC306	PLL1700E-X	I.C.(M)	BURR BROWN
IC307	UPC2384GA	I.C.(M)	NEC
IC401	M31020EAVP-00B	I.C.(M)	MITSUBISHI (U)
	M31020EAVP-10B	I.C.(M)	MITSUBISHI (E)
IC402	TC7W14FU-X	I.C.(M)	TOSHIBA
IC403	TC7W04FU-X	I.C.(M)	TOSHIBA
IC404	NM24C16LEM8-X	I.C.(M)	MATSUSHITA
IC501	AN3741FAP-A	I.C.(M)	MATSUSHITA
IC503	MB88345PF	I.C.(M)	FUJITSU
IC601	BH7086KV	I.C.(M)	ROHM
IC602	T9P90EF	I.C.(M)	TOSHIBA
IC603	M52387FP	I.C.(M)	MITSUBISHI
IC604	M52684AFP-XE	I.C.(M)	MITSUBISHI
IC605	TC7SH08F-X	I.C.(M)	TOSHIBA
IC606	TC7SH00F-X	I.C.(M)	TOSHIBA
IC610	TC7SET04FU-X	I.C.(M)	TOSHIBA
IC611	TC7SHU04FU-X	I.C.(M)	TOSHIBA
IC612	TC7SHU04FU-X	I.C.(M)	TOSHIBA
IC613	TC7SHU04FU-X	I.C.(M)	TOSHIBA
IC614	TC7SHU04FU-X	I.C.(M)	TOSHIBA
IC615	AN77L03M-X	I.C.(M)	MATSUSHITA
IC801	TSB13LV11PBW	I.C.(M)	TEXAS
Q101	2SC4617/RS/-X	TRANSISTOR	ROHM
Q202	2SC4617/RS/-X	TRANSISTOR	ROHM
Q401	DTA114EUA-X	TRANSISTOR	ROHM
Q402	UMG3N-W	TRANSISTOR	ROHM
Q403	UMC3N-W	TRANSISTOR	ROHM
Q404	UMC3N-W	TRANSISTOR	ROHM
Q501	2SC4226/3-5/-X	TRANSISTOR	NEC
Q502	DTC124EUA-X	TRANSISTOR	ROHM
Q503	2SC4617/RS/-X	TRANSISTOR	ROHM
Q505	DTC144EUA-X	TRANSISTOR	ROHM
Q506	DTC144EUA-X	TRANSISTOR	ROHM
Q507	DTC144EUA-X	TRANSISTOR	ROHM
Q511	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q512	DTC144EUA-X	TRANSISTOR	ROHM
Q513	UMZ1N-W	TRANSISTOR	ROHM
Q601	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q602	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q603	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q605	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q608	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q609	2SC4081/QRS/-X	TRANSISTOR	ROHM
Q610	2SB1218A/RS/-X	TRANSISTOR	MATSUSHITA
Q611	2SB1218A/RS/-X	TRANSISTOR	MATSUSHITA
Q612	DTC144WUA-X	TRANSISTOR	ROHM
Q613	DTC144WUA-X	TRANSISTOR	ROHM
Q614	DTC144EUA-X	TRANSISTOR	ROHM
D102	DAN202U-X	DIODE	ROHM
D103	DAN202U-X	DIODE	ROHM
D401	DAP202U-X	DIODE	ROHM
D402	DAP202U-X	DIODE	ROHM
D601	1SS355-X	DIODE	ROHM

Symbol No.	Part No.	Part Name	Description
R101	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R103	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R104	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R105	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R106	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R107	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R108	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R109	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R110	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R111	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R112	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R113	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R114	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R115	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R116	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R117	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R118	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R137	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R138	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R139	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R142	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R143	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R144	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R150	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R152	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R157	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R162	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R163	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R164	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R169	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R170	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R171	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R172	NRSA63J-104X	M.G.RESISTOR	100k 1/16W
R173	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R174	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R175	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R176	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R177	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R178	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R179	NRSA63J-473X	M.G.RESISTOR	47k 1/16W
R180	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R181	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R182	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R183	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R184	NRSA63J-332X	M.G.RESISTOR	3.3k 1/16W
R185	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R186	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R187	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R188	NRSA63J-101X	M.G.RESISTOR	100 1/16W
R189	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R198	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R199	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R202	NRSA63J-100X	M.G.RESISTOR	10 1/16W
R207	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R208	NRSA63J-471X	M.G.RESISTOR	470 1/16W
R209	NRSA63J-471X	M.G.RESISTOR	470 1/16W
R210	NRSA63J-682X	M.G.RESISTOR	6.8k 1/16W
R211	NRSA63J-123X	M.G.RESISTOR	12k 1/16W
R212	NRSA63J-912X	M.G.RESISTOR	9.1k 1/16W
R214	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R215	NRSA63J-472X	M.G.RESISTOR	4.7k 1/16W
R216	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R217	NRSA63J-912X	M.G.RESISTOR	9.1k 1/16W
R218	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R219	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R221	NRSA63J-221X	M.G.RESISTOR	220 1/16W
R223	NRSA63J-103X	M.G.RESISTOR	10k 1/16W
R301	NRSA63J-271X	M.G.RESISTOR	270 1/16W
R302	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R303	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R304	NRSA63J-102X	M.G.RESISTOR	1k 1/16W
R305	NRSA63J-105X	M.G.RESISTOR	1M 1/16W
R306	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W

[DV MAIN]

Symbol No.	Part No.	Part Name	Description	
R307	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R308	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R309	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R310	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R311	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R312	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R313	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R314	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R315	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R316	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R317	NRSA63J-682X	M.G.RESISTOR	6.8k	1/16W
R319	NRSA63J-224X	M.G.RESISTOR	220k	1/16W
R320	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R321	NRSA63J-750X	M.G.RESISTOR	75	1/16W
R322	NRSA63J-124X	M.G.RESISTOR	120k	1/16W
R323	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R331	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R332	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R333	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R334	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R335	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R336	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R337	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R338	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R339	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R340	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R341	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R343	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R344	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R345	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R346	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R347	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R348	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R349	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R350	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R351	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R352	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R353	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R354	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R355	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R356	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R357	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R402	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R403	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R404	NRSA63J-220X	M.G.RESISTOR	22	1/16W
R405	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R406	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R407	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R408	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R409	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R410	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R411	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R412	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R413	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R414	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R415	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R416	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R417	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R418	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R419	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R420	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R421	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R422	NRSA63J-202X	M.G.RESISTOR	2k	1/16W
R423	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R424	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R425	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R426	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R427	NRSA63J-683X	M.G.RESISTOR	68k	1/16W
R428	NRSA63J-683X	M.G.RESISTOR	68k	1/16W
R429	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R430	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R431	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R432	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W

Symbol No.	Part No.	Part Name	Description	
R433	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R434	NRSA63J-561X	M.G.RESISTOR	560	1/16W
R435	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R436	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R437	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R438	NRSA63J-561X	M.G.RESISTOR	560	1/16W
R439	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R440	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R443	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R444	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R447	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R448	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R449	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R450	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R451	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R452	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R454	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R502	NRSA63J-181X	M.G.RESISTOR	180	1/16W
R503	NRSA63J-301X	M.G.RESISTOR	300	1/16W
R504	NRSA63J-391X	M.G.RESISTOR	390	1/16W
R505	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R507	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R508	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R509	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R510	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R512	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R513	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R514	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R515	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R516	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R517	NRSA63J-683X	M.G.RESISTOR	68k	1/16W
R518	NRSA63J-331X	M.G.RESISTOR	330	1/16W
R519	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R520	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R521	NRSA63J-391X	M.G.RESISTOR	390	1/16W
R522	NRSA63J-121X	M.G.RESISTOR	120	1/16W
R523	NRSA63J-121X	M.G.RESISTOR	120	1/16W
R524	NRSA63J-121X	M.G.RESISTOR	120	1/16W
R525	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R526	NRSA63J-822X	M.G.RESISTOR	8.2k	1/16W
R527	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R528	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R529	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R530	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R533	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R535	NRSA63J-564X	M.G.RESISTOR	560k	1/16W
R536	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R537	NRSA63J-561X	M.G.RESISTOR	560	1/16W
R538	NRSA63J-224X	M.G.RESISTOR	220k	1/16W
R539	NRSA63J-680X	M.G.RESISTOR	68	1/16W
R540	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R541	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R555	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R556	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R565	NRSA63J-563X	M.G.RESISTOR	56k	1/16W
R566	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R567	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R568	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R569	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R570	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R601	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R602	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R603	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R604	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R605	NRSA63J-121X	M.G.RESISTOR	120	1/16W
R606	NRSA63J-682X	M.G.RESISTOR	6.8k	1/16W
R607	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R608	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R609	NRSA63J-563X	M.G.RESISTOR	56k	1/16W
R610	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R611	NRSA63J-183X	M.G.RESISTOR	18k	1/16W
R612	NRSA63J-391X	M.G.RESISTOR	390	1/16W
R613	NRSA63J-223X	M.G.RESISTOR	22k	1/16W

Symbol No.	Part No.	Part Name	Description	
R614	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R615	NRSA63J-152X	M.G.RESISTOR	1.5k	1/16W
R616	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R617	NRSA63J-153X	M.G.RESISTOR	15k	1/16W
R618	NRSA63J-183X	M.G.RESISTOR	18k	1/16W
R619	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R620	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R621	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R622	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R623	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R624	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R625	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R626	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R629	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R631	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R632	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R633	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R634	NRSA63J-123X	M.G.RESISTOR	12k	1/16W
R635	NRSA63J-183X	M.G.RESISTOR	18k	1/16W
R636	NRSA63J-183X	M.G.RESISTOR	18k	1/16W
R637	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R638	NRSA63J-823X	M.G.RESISTOR	82k	1/16W
R645	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R647	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R648	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R649	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R651	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R652	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R653	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R654	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R655	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R656	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R657	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R658	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R659	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R660	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R661	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R662	NRSA63J-273X	M.G.RESISTOR	27k	1/16W
R663	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R664	NRSA63J-391X	M.G.RESISTOR	390	1/16W
R665	NRSA63J-154X	M.G.RESISTOR	150k	1/16W
R666	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R667	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R668	NRSA63J-271X	M.G.RESISTOR	270	1/16W
R669	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R670	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R671	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R672	NRSA63J-273X	M.G.RESISTOR	27k	1/16W
R675	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R678	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R679	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R680	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R681	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R682	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R683	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R684	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R685	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R686	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R687	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R688	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R690	NRSA63J-564X	M.G.RESISTOR	560k	1/16W
R691	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R692	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R693	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R694	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R695	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R696	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R697	NRSA63J-471X	M.G.RESISTOR	470	1/16W
R700	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R701	NRSA63J-392X	M.G.RESISTOR	3.9k	1/16W
R702	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R703	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
R704	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R705	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R706	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R709	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R710	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R717	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R718	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R719	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R721	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R722	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R723	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R724	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R725	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R726	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R727	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R728	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R729	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R730	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R731	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R732	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R733	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R734	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R736	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R738	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R739	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R740	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R741	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R742	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R801	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R802	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R803	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R804	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R805	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R806	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R808	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R809	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R810	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R811	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R812	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R813	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R815	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R816	NRSA63J-270X	M.G.RESISTOR	27	1/16W
R817	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R818	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R819	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R823	NRSA63J-394X	M.G.RESISTOR	390k	1/16W
R824	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R825	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R826	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R831	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R832	NRSA63J-512X	M.G.RESISTOR	5.1k	1/16W
R833	NRVA63D-560X	C.M.F.RESISTOR	56	1/16W
R834	NRVA63D-560X	C.M.F.RESISTOR	56	1/16W
R835	NRVA63D-560X	C.M.F.RESISTOR	56	1/16W
R836	NRVA63D-560X	C.M.F.RESISTOR	56	1/16W
R837	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R838	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
RA101	NRZ0015-102X	RESISTOR ARRAY	1k	
RA102	NRZ0015-102X	RESISTOR ARRAY	1k	
RA103	NRZ0012-104X	CHIP R ARRAY	100k	
RA104	NRZ0012-104X	CHIP R ARRAY	100k	
RA105	NRZ0015-102X	RESISTOR ARRAY	1k	
RA106	NRZ0015-102X	RESISTOR ARRAY	1k	
RA107	NRZ0012-104X	CHIP R ARRAY	100k	
RA108	NRZ0012-104X	CHIP R ARRAY	100k	
RA401	NRZ0015-102X	RESISTOR ARRAY	1k	
RA402	NRZ0015-102X	RESISTOR ARRAY	1k	
RA403	NRZ0015-473X	M.G.RESISTOR	47k	
C101	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C102	NCB31HK-103X	CER.CAPACITOR	0.01	50V

[DV MAIN]

Symbol No.	Part No.	Part Name	Description	
C103	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C104	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C105	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C106	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C108	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C109	NBE51CM-226X	TAN.CAPACITOR	22	16V
C110	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C112	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C113	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C114	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C115	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C116	NBE51CM-226X	TAN.CAPACITOR	22	16V
C117	NCF21CZ-105X	CER.CAPACITOR	1	16V
C118	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C119	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C120	NDC31HJ-100X	CER.CAPACITOR	10p	50V
C125	NBE41AM-226X	TAN.CAPACITOR	22	10V
C126	NBE51CM-226X	TAN.CAPACITOR	22	16V
C127	NBE40JM-226X	TAN.CAPACITOR	22	6.3V
C128	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C130	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C135	NBE41AM-226X	TAN.CAPACITOR	22	10V
C136	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C141	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C145	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C146	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C147	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C148	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C149	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C150	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C201	NBE41AM-226X	TAN.CAPACITOR	22	10V
C202	NBE41AM-226X	TAN.CAPACITOR	22	10V
C203	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C204	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C205	NBE41AM-475X	TAN.CAPACITOR	4.7	10V
C206	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C207	NCF21CZ-105X	CER.CAPACITOR	1	16V
C208	NCF21CZ-105X	CER.CAPACITOR	1	16V
C209	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C210	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C211	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C212	NBE41AM-475X	TAN.CAPACITOR	4.7	10V
C213	NBE41AM-475X	TAN.CAPACITOR	4.7	10V
C214	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C215	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C216	NBE41CM-226X	TAN.CAPACITOR	22	16V
C217	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C218	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C219	NBE41AM-226X	TAN.CAPACITOR	22	10V
C220	NBE41CM-106X	TAN.CAPACITOR	10	16V
C221	NBE41AM-106X	TAN.CAPACITOR	10	10V
C222	NBE41CM-106X	TAN.CAPACITOR	10	16V
C223	NBE41AM-106X	TAN.CAPACITOR	10	10V
C224	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C225	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C226	NDC31HJ-221X	CER.CAPACITOR	220p	50V
C227	NCB31HK-472X	CER.CAPACITOR	4700p	50V
C228	NCB31HK-472X	CER.CAPACITOR	4700p	50V
C231	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C303	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C304	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C305	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C306	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C307	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C308	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C309	NBE51AM-226X	TAN.CAPACITOR	22	10V
C310	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C311	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C312	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C313	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C314	NBE51AM-226X	TAN.CAPACITOR	22	10V
C316	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C317	NCB31HK-103X	CER.CAPACITOR	0.01	50V

Symbol No.	Part No.	Part Name	Description	
C318	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C319	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C320	NBE51AM-226X	TAN.CAPACITOR	22	10V
C321	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C323	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C324	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C325	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C326	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C327	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C328	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C329	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C330	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C331	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C332	NBE51AM-226X	TAN.CAPACITOR	22	10V
C333	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C334	NBE71CM-476X	TAN.CAPACITOR	47	16V
C335	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C336	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C337	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C338	NBE51CM-226X	TAN.CAPACITOR	22	16V
C339	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C340	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C341	NDC31HJ-270X	CER.CAPACITOR	27p	50V
C342	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C343	NBE51AM-226X	TAN.CAPACITOR	22	10V
C344	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C345	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C346	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C347	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C348	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C349	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C350	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C351	NBE51AM-226X	TAN.CAPACITOR	22	10V
C352	NBE51CM-226X	TAN.CAPACITOR	22	16V
C353	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C354	NCB31CK-823X	CER.CAPACITOR	0.082	16V
C361	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C362	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C363	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C364	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C366	NDC31HJ-4R0X	CER.CAPACITOR	4p	50V
C367	NBE41VM-474X	TAN.CAPACITOR	0.47	35V
C368	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C369	NBE51AM-226X	TAN.CAPACITOR	22	10V
C401	NBE51AM-476X	TAN.CAPACITOR	47	10V
C402	NBE51AM-476X	TAN.CAPACITOR	47	10V
C403	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C404	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C405	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C406	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C407	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C408	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C409	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C410	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C411	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C412	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C413	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C414	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C415	NBE41AM-226X	TAN.CAPACITOR	22	10V
C416	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C417	NCF21CZ-105X	CER.CAPACITOR	1	16V
C418	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C419	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C501	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C502	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C503	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C505	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C506	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C507	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C508	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C509	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C510	NCB31HK-681X	CER.CAPACITOR	680p	50V
C511	NCB31HK-103X	CER.CAPACITOR	0.01	50V

Symbol No.	Part No.	Part Name	Description	
C512	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C513	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C514	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C515	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C516	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C517	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C518	NCF31CZ-104X	CER.CAPACITOR	0.1	16V
C519	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C520	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C521	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C522	NBE41AM-226X	TAN.CAPACITOR	22	10V
C523	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C524	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C525	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C526	NCB31CK-273X	CER.CAPACITOR	0.027	16V
C527	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C528	NCB21AK-105X	CER.CAPACITOR	1	10V
C529	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C531	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C532	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C533	NBE41AM-226X	TAN.CAPACITOR	22	10V
C534	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C537	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C538	NCF31CZ-334X	CER.CAPACITOR	0.33	16V
C539	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C540	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C541	NDC31HJ-151X	CER.CAPACITOR	150p	50V
C542	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C543	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C544	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C545	NCF21CZ-225X	CER.CAPACITOR	2.2	16V
C546	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C547	NBE41AM-226X	TAN.CAPACITOR	22	10V
C555	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C579	NBE51CM-226X	TAN.CAPACITOR	22	16V
C580	NBE41AM-226X	TAN.CAPACITOR	22	10V
C581	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C582	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C583	NBE71CM-476X	TAN.CAPACITOR	47	16V
C584	NBE71CM-476X	TAN.CAPACITOR	47	16V
C590	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C591	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C592	NCB31CK-273X	CER.CAPACITOR	0.027	16V
C593	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C601	NCF21CZ-105X	CER.CAPACITOR	1	16V
C602	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C603	NCF21CZ-105X	CER.CAPACITOR	1	16V
C604	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C605	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C606	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C607	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C608	NCF21CZ-105X	CER.CAPACITOR	1	16V
C609	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C610	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C611	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C612	NCB31HK-561X	CER.CAPACITOR	560p	50V
C613	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C614	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C615	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C617	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C619	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C620	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C621	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C622	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C623	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C624	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C625	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C626	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C627	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C628	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C629	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C630	NCB31CK-104X	CER.CAPACITOR	0.1	16V

Symbol No.	Part No.	Part Name	Description	
C631	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C632	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C633	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C634	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C635	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C638	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C639	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C640	NBE51AM-226X	TAN.CAPACITOR	22	10V
C641	NBE51AM-226X	TAN.CAPACITOR	22	10V
C642	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C643	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C644	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C645	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C646	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C647	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C649	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C650	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C651	NBE51AM-226X	TAN.CAPACITOR	22	10V
C652	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C653	NBE51AM-226X	TAN.CAPACITOR	22	10V
C654	NBE51AM-226X	TAN.CAPACITOR	22	10V
C655	NBE51AM-226X	TAN.CAPACITOR	22	10V
C656	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C657	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C658	NCB21CK-474X	CER.CAPACITOR	0.47	16V
C659	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C660	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C661	NCB21CK-224X	CER.CAPACITOR	0.22	16V
C662	NBE41AM-106X	TAN.CAPACITOR	10	10V
C663	NBE21CM-684X	TAN.CAPACITOR	0.68	16V
C664	NCB31HK-681X	CER.CAPACITOR	680p	50V
C665	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C666	NDC31HJ-270X	CER.CAPACITOR	27p	50V
C667	NCB31CK-273X	CER.CAPACITOR	0.027	16V
C668	NCF21CZ-105X	CER.CAPACITOR	1	16V
C669	NBE61CM-107X	TAN.CAPACITOR	100	16V
C672	NCB31HK-152X	CER.CAPACITOR	1500p	50V
C673	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C674	NCB31HK-102X	CER.CAPACITOR	1000p	50V
C675	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C676	NBE61CM-107X	TAN.CAPACITOR	100	16V
C677	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C678	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C680	NBE41CM-335X	TAN.CAPACITOR	3.3	16V
C681	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C682	NBE61CM-107X	TAN.CAPACITOR	100	16V
C683	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C684	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C685	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C687	NCF21CZ-105X	CER.CAPACITOR	1	16V
C688	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C689	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C690	NCF21CZ-105X	CER.CAPACITOR	1	16V
C691	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C692	NCF21CZ-105X	CER.CAPACITOR	1	16V
C693	NCF21CZ-105X	CER.CAPACITOR	1	16V
C694	NBE21CM-225X	TAN.CAPACITOR	2.2	16V
C695	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C696	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C697	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C698	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C699	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C700	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C706	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C709	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C710	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C711	NBE51AM-226X	TAN.CAPACITOR	22	10V
C712	NBE51AM-226X	TAN.CAPACITOR	22	10V
C713	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C714	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C717	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C718	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C719	NCB31CK-104X	CER.CAPACITOR	0.1	16V

[DV MAIN]

Symbol No.	Part No.	Part Name	Description
C720	NCB31CK-104X	CER.CAPACITOR	0.1 16V
C721	NDC31HJ-180X	CER.CAPACITOR	18p 50V
C722	NDC31HJ-180X	CER.CAPACITOR	18p 50V
C738	NCB41CM-106X	CER.CAPACITOR	10 16V
C739	NCB41CM-106X	CER.CAPACITOR	10 16V
C801	NBE41AM-226X	TAN.CAPACITOR	22 10V
C802	NCF31CZ-104X	CER.CAPACITOR	0.1 16V
C803	NBE40JM-226X	TAN.CAPACITOR	22 6.3V
C804	NCF31CZ-104X	CER.CAPACITOR	0.1 16V
C805	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C806	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C807	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C808	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C809	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C810	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C811	NCB31HK-102X	CER.CAPACITOR	1000p 50V
C812	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C813	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C814	NBE41AM-226X	TAN.CAPACITOR	22 10V
C815	NCF31CZ-104X	CER.CAPACITOR	0.1 16V
C816	NCB31HK-103X	CER.CAPACITOR	0.01 50V
C817	NCF31CZ-104X	CER.CAPACITOR	0.1 16V
C819	NCF31CZ-104X	CER.CAPACITOR	0.1 16V
C820	NDC31HJ-271X	CER.CAPACITOR	270p 50V
C821	NDC31HJ-5R0X	CER.CAPACITOR	5p 50V
C822	NDC31HJ-6R0X	CER.CAPACITOR	6p 50V
L111	NQL23CM-330X	COIL	33uH
L112	NQL23CM-330X	COIL	33uH
L113	NQL044K-470X	COIL	47uH
L114	NQL23CM-330X	COIL	33uH
L115	NQL23CM-330X	COIL	33uH
L201	NQL114K-100X	COIL	10uH
L202	NQL114K-100X	COIL	10uH
L301	NQL044K-100X	COIL	10uH
L302	NQL044K-100X	COIL	10uH
L303	NQL044K-100X	COIL	10uH
L304	NQL024J-1R2X	COIL	1.2uH
L305	NQL044K-100X	COIL	10uH
L306	NQL044K-100X	COIL	10uH
L307	NQL044K-100X	COIL	10uH
L309	NQL044K-100X	COIL	10uH
L310	NQL044K-100X	COIL	10uH
L311	NQL044K-100X	COIL	10uH
L312	NQL044K-100X	COIL	10uH
L313	NQL044K-100X	COIL	10uH
L401	NQL044K-100X	COIL	10uH
L501	NQL044K-100X	COIL	10uH
L502	NQL044K-100X	COIL	10uH
L511	NQL114K-470X	COIL	47uH
L513	NQL044K-100X	COIL	10uH
L601	NQL044K-100X	COIL	10uH
L602	NQL024J-150X	COIL	15uH
L603	NQL044K-100X	COIL	10uH
L604	NQL044K-100X	COIL	10uH
L605	NQL044K-100X	COIL	10uH
L606	NQL024J-5R6X	COIL	5.6uH
L608	NQL044K-100X	COIL	10uH
L609	NQL044K-100X	COIL	10uH
L610	NQL044K-221X	COIL	220uH
L612	NQL044K-221X	COIL	220uH
L613	NQL044K-100X	COIL	10uH
L614	NQL044K-220X	COIL	22uH
L615	NQL044K-220X	COIL	22uH
L801	NQL044K-100X	COIL	10uH
L802	NQL044K-100X	COIL	10uH
L803	NQL044K-100X	COIL	10uH
L804	NQR0276-001X	COIL	
LC101	PGZ01972Z	LC FILTER	
LC102	PGZ01972Z	LC FILTER	
LC103	PGZ01972Z	LC FILTER	

Symbol No.	Part No.	Part Name	Description
LC104	PGZ01972Z	LC FILTER	
LC105	PGZ01972Z	LC FILTER	
LC301	PGZ01972Z	LC FILTER	
LC302	PGZ01972Z	LC FILTER	
LC303	PGZ01972Z	LC FILTER	
LC501	PGZ01972Z	LC FILTER	
LC502	PGZ01972Z	LC FILTER	
X101	NAX0349-001X	CRYSTAL	27MHz
X401	NAX0348-001X	CRYSTAL	27MHz
X601	NAX0227-001X	CRYSTAL	503kHZ
X602	NAX0348-001X	CRYSTAL	27MHz
X603	NAX0280-001X	CRYSTAL	26.995MHz
X801	NAX0241-001X	CRYSTAL	24.576MHz
CN1	QGB0805L2-60X	CONNECTOR	60PIN
CN2	QGB0805L2-60X	CONNECTOR	60PIN
CN102	QGA1201C2-13X	CONNECTOR	13PIN
CN104	QGB0801L1-26X	CONNECTOR	26PIN
CN106	QGA1201F2-08X	CONNECTOR	8PIN
CN108	QGF0508F1-10X	CONNECTOR	10PIN
CN401	QGF0508F1-18X	CONNECTOR	18PIN
CN402	QGF0508F1-20X	CONNECTOR	20PIN
CN403	QGB0801L1-26X	CONNECTOR	26PIN
CN501	QGF0508F1-20X	CONNECTOR	20PIN
CN801	QGA1201F2-06X	CONNECTOR	6PIN
TP101	NNZ0009-001X	TEST POINT	TP101-602
K101	PGZ00627Z	FERRATE BEADS	
K102	PGZ00627Z	FERRATE BEADS	
K301	NQR0269-004X	FERRITE BEADS	
K303	NQR0129-003X	FERRITE BEADS	
K401	PGZ00627Z	FERRATE BEADS	
K402	PGZ00627Z	FERRATE BEADS	
K403	PGZ00627Z	FERRATE BEADS	
K404	PGZ00627Z	FERRATE BEADS	
K601	PGZ00627Z	FERRATE BEADS	
K602	NQR0269-004X	FERRITE BEADS	
K603	NQR0269-004X	FERRITE BEADS	
K604	NQR0269-004X	FERRITE BEADS	
K605	NQR0269-004X	FERRITE BEADS	
K801	PGZ00627Z	FERRATE BEADS	
LA301	NQR0320-010X	F.B.ARRAY	
LA302	NQR0320-010X	F.B.ARRAY	
LA303	NQR0320-010X	F.B.ARRAY	
LA401	NQR0330-009X	EMI FILTER ARY	
LA402	NQR0330-009X	EMI FILTER ARY	
LA403	NQR0330-009X	EMI FILTER ARY	
LA404	NQR0330-009X	EMI FILTER ARY	
LA601	NQR0330-009X	EMI FILTER ARY	
LA602	NQR0330-009X	EMI FILTER ARY	
LA603	NQR0330-009X	EMI FILTER ARY	
LA604	NQR0330-009X	EMI FILTER ARY	
LA605	NQR0330-009X	EMI FILTER ARY	
LA606	NQR0320-010X	F.B.ARRAY	
LA607	NQR0320-010X	F.B.ARRAY	

6.10 JUNCTION BOARD ASSEMBLY PARTS LIST [1][1]

SLK2112-02-A0B [1][1]□□□□□□□

Symbol No.	Part No.	Part Name	Description
R1	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
CN1	QGB0805M1-60X	CONNECTOR	60PIN
CN2	QGB0805M1-60X	CONNECTOR	60PIN
CN3	QGA1501F2-04W	CONNECTOR	4PIN
CN10	QGF0508F1-22X	CONNECTOR	22PIN
CN18	QGF0508F1-18X	CONNECTOR	19PIN
CN1701	QGA1501F2-06W	CONNECTOR	6PIN

6.11 DCDC BOARD ASSEMBLY PARTS LIST [1][2] (MAIN unit)

SLK2112-03-A0B [1][2]□□□□□□□

Symbol No.	Part No.	Part Name	Description
IC301	MB3782PF-X	I.C.(M)	FUJITSU
IC302	MB3782PF-X	I.C.(M)	FUJITSU
IC303	S-80840ANNP-W	I.C.(M)	SEIKO
Q301	2SJ484WY-X	FET	HITACHI
Q302	2SC4097/QR/-X	TRANSISTOR	ROHM
Q303	2SA1577/QR/-X	TRANSISTOR	ROHM
Q304	2SJ484WY-X	FET	HITACHI
Q305	2SC4097/QR/-X	TRANSISTOR	ROHM
Q306	2SA1577/QR/-X	TRANSISTOR	ROHM
Q307	2SJ484WY-X	FET	HITACHI
Q308	2SC4097/QR/-X	TRANSISTOR	ROHM
Q309	2SA1577/QR/-X	TRANSISTOR	ROHM
Q310	HAT1021R-X	TRANSISTOR	HITACHI
Q311	2SC4097/QR/-X	TRANSISTOR	ROHM
Q312	2SA1577/QR/-X	TRANSISTOR	ROHM
D301	MA736-X	DIODE	MATSUSHITA
D302	MA736-X	DIODE	MATSUSHITA
D303	MA736-X	DIODE	MATSUSHITA
D304	MA738-X	DIODE	MATSUSHITA
D380	DAP202U-X	DIODE	ROHM
R301	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R302	NRSA63D-471X	M.G.RESISTOR	470 1/16W
R303	NRSA63D-100X	M.G.RESISTOR	10 1/16W
R304	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R305	NRSA63D-471X	M.G.RESISTOR	470 1/16W
R306	NRSA63D-100X	M.G.RESISTOR	10 1/16W
R307	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R308	NRSA63D-471X	M.G.RESISTOR	470 1/16W
R309	NRSA63D-100X	M.G.RESISTOR	10 1/16W
R310	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R311	NRSA63D-471X	M.G.RESISTOR	470 1/16W
R312	NRSA63D-100X	M.G.RESISTOR	10 1/16W
R313	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R320	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R321	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R322	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R323	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R324	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R325	NRSA63D-274X	M.G.RESISTOR	270k 1/16W
R326	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R327	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R328	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R329	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R330	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R331	NRSA63D-274X	M.G.RESISTOR	270k 1/16W
R332	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R333	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R334	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R335	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R336	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R337	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R338	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R339	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R340	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R341	NRSA63D-274X	M.G.RESISTOR	270k 1/16W
R342	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R343	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R344	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R350	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R351	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R352	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R353	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R354	NRSA63D-154X	M.G.RESISTOR	150k 1/16W
R355	NRSA63D-683X	M.G.RESISTOR	68k 1/16W
R356	NRSA63D-274X	M.G.RESISTOR	270k 1/16W
R357	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R358	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R359	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R381	NRSA63D-103X	M.G.RESISTOR	10k 1/16W

[DCDC]

Symbol No.	Part No.	Part Name	Description	
R382	NRSA63D-683X	M.G.RESISTOR	68k	1/16W
R383	NRSA63D-274X	M.G.RESISTOR	270k	1/16W
C101	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C301	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C302	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C303	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C304	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C305	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C306	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C307	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C308	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C309	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C310	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C311	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C312	NBQD1AM-686X	TAN.CAPACITOR	68	10V
C313	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C320	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C321	NCB31EK-822X	CER.CAPACITOR	8200p	25V
C322	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C323	NCB31EK-822X	CER.CAPACITOR	8200p	25V
C324	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C325	NCS31HJ-391X	CER.CAPACITOR	390p	50V
C326	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C327	NCB31EK-822X	CER.CAPACITOR	8200p	25V
C328	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C350	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C351	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C352	NCB31EK-822X	CER.CAPACITOR	8200p	25V
C353	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C370	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C371	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C372	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C373	NEX41DM-226X	E.CAPACITOR	22	20V
C374	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C375	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C376	NCB41EM-475X	CER.CAPACITOR	4.7	25V
C377	NEX41DM-226X	E.CAPACITOR	22	20V
C380	NCB31CK-104X	CER.CAPACITOR	0.1	16V
L301	NQL24CN-470X	COIL	47uH	
L302	SSV2810-330V	COIL	33uH	
L303	NQL25CM-330X	COIL	33uH	
L304	SSV2810-330V	COIL	33uH	
L305	NQL25CM-470X	COIL	47uH	
L306	SSV2810-330V	COIL	33uH	
L307	NQL42EM-220X	COIL	22uH	
L308	NQL26CM-220X	COIL	22uH	
L370	NQL26CM-330X	COIL	33uH	
L371	NQL26CM-220X	COIL	22uH	
CN301	QGA1501C2-05W	CONNECTOR	5PIN	
CN302	QGA1501C2-10W	CONNECTOR	10PIN	
CN303	QGA1501C2-04W	CONNECTOR	4PIN	
⚠CP301	ICP-S2.3TN	ICP		
⚠CP302	ICP-S2.3TN	ICP		
TB301	NNZO006-001X	EARTH TERMINAL		

6.12 AUDIO S/S BOARD ASSEMBLY PARTS LIST [1][3]

SLK2097-A1C [1][3]☐☐☐☐☐☐☐

Symbol No.	Part No.	Part Name	Description
IC101	M5201FP-X	I.C.(M)	MITSUBISHI
IC102	M5201FP-X	I.C.(M)	MITSUBISHI
IC103	M5218AFP-X	I.C.(M)	MITSUBISHI
IC104	M51132FP-X	I.C.(M)	MITSUBISHI
IC105	M51132FP-X	I.C.(M)	MITSUBISHI
IC106	M5218AFP-X	I.C.(M)	MITSUBISHI
IC107	M5201FP-X	I.C.(M)	MITSUBISHI
IC108	M5201FP-X	I.C.(M)	MITSUBISHI
IC109	M5218AFP-X	I.C.(M)	MITSUBISHI
IC110	M5218AFP-X	I.C.(M)	MITSUBISHI
IC111	TC4052BF-X	I.C.(M)	TOSHIBA
IC112	M5218AFP-X	I.C.(M)	MITSUBISHI
IC501	UPD784031GK-BE9	I.C.(M)	NEC
IC502	TC74VHC125FT-X	I.C.(M)	TOSHIBA
IC503	TC74VHC125FT-X	I.C.(M)	TOSHIBA
IC504	TC74VHC74FT-X	I.C.(M)	TOSHIBA
IC505	TC74VHC74FT-X	I.C.(M)	TOSHIBA
IC506	DS8922M-X	I.C.(M)	NATIONAL SEMICO
IC507	DS14C232CM-X	I.C.(M)	NATIONAL SEMICO
IC508	X24645S8-2.7-X	I.C.(M)	XICOR
IC509	TC74VHC139FT-X	I.C.(M)	TOSHIBA
IC510	M51957BFP-X	I.C.(M)	MITSUBISHI
IC511	TC7W04FU-X	I.C.(M)	TOSHIBA
IC512	TC74VHC373FT-X	I.C.(M)	TOSHIBA
IC513	PLSL1069-V1	I.C.(M)	MBM29F002B-70PD
SK513	SCV2768-001X	IC SOCKET	FOR IC513
IC514	CY62256LL70SN-X	I.C.(M)	CYPRESS
IC515	UPD71055GB-10	I.C.(M)	NEC
IC516	TC7W04FU-X	I.C.(M)	TOSHIBA
IC517	TC7S14FU-X	I.C.(M)	TOSHIBA
IC518	TC74VHC244FT-X	I.C.(M)	TOSHIBA
IC704	AN77L03M-X	I.C.(M)	MATSUSHITA
IC705	TC74VHC541FT-X	I.C.(M)	TOSHIBA
IC706	TC74VHC541FT-X	I.C.(M)	TOSHIBA
IC707	EPM064AE-10-002	I.C.(M)	ALTERA
SK707	NNV0002-044	IC SOCKET	FOR IC707
IC708	MM1111XF-X	I.C.(M)	MITSUMI
IC709	EL4583CS-X	I.C.(M)	ELANTEC
IC710	TC7S14FU-X	I.C.(M)	TOSHIBA
IC712	AN77L03M-X	I.C.(M)	MATSUSHITA
IC715	UPD6461GS-101	I.C.(M)	NEC
IC716	TC7S14FU-X	I.C.(M)	TOSHIBA
Q101	DTC323TU-X	TRANSISTOR	ROHM
Q102	DTC323TU-X	TRANSISTOR	ROHM
Q103	DTC323TU-X	TRANSISTOR	ROHM
Q104	DTC323TU-X	TRANSISTOR	ROHM
Q105	DTC323TU-X	TRANSISTOR	ROHM
Q501	DTA144EUA-X	TRANSISTOR	ROHM
Q502	DTC144EUA-X	TRANSISTOR	ROHM
Q503	DTC144EUA-X	TRANSISTOR	ROHM
Q703	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q706	2SC4617/RS/-X	TRANSISTOR	ROHM
Q707	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q708	2SC4617/RS/-X	TRANSISTOR	ROHM
Q709	2SK621-X	FET	MATSUSHITA
Q710	2SK621-X	FET	MATSUSHITA
Q711	2SC4617/RS/-X	TRANSISTOR	ROHM
D501	DAN202U-X	DIODE	ROHM
D502	MA8100/L/-X	ZENER DIODE	MATSUSHITA
D503	DA204U-X	DIODE	ROHM
D504	DA204U-X	DIODE	ROHM
D701	MA143A-X	DIODE	MATSUSHITA
D703	DAN202U-X	DIODE	ROHM

Symbol No.	Part No.	Part Name	Description	
R101	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R103	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R104	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R106	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R107	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R108	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R109	NRSA63J-124X	M.G.RESISTOR	120k	1/16W
R110	NRSA63J-224X	M.G.RESISTOR	220k	1/16W
R111	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R112	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R113	NRSA63J-332X	M.G.RESISTOR	3.3k	1/16W
R114	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R115	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R116	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R117	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R118	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R119	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R120	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R121	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R122	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R123	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R124	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R125	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R126	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R127	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R128	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R129	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R130	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R131	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R132	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R133	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R134	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R135	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R136	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R137	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R138	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R139	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R140	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R141	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R142	NRSA63J-330X	M.G.RESISTOR	33	1/16W
R143	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R144	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R146	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R148	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R149	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R150	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R151	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R152	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R153	NRSA63J-562X	M.G.RESISTOR	5.6k	1/16W
R154	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R155	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R156	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R157	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R158	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R159	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R160	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R161	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R162	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R163	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R164	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R165	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R166	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R167	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R169	NRSA63J-331X	M.G.RESISTOR	330	1/16W
R170	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R171	NRSA63J-331X	M.G.RESISTOR	330	1/16W
R172	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R173	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R174	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R175	NRSA63J-393X	M.G.RESISTOR	39k	1/16W
R176	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R501	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R502	NRSA63J-221X	M.G.RESISTOR	220	1/16W

Symbol No.	Part No.	Part Name	Description	
R503	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R504	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R505	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R506	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R507	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R508	NRSA02J-221X	M.G.RESISTOR	220	1/10W
R509	NRSA02J-221X	M.G.RESISTOR	220	1/10W
R510	NQR0227-004X	CHIP EMI FILTER	000k	2W
R511	NQR0227-004X	CHIP EMI FILTER	000k	2W
R512	NQR0227-004X	CHIP EMI FILTER	000k	2W
R513	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R514	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R515	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R516	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R517	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R519	NRSA63J-681X	M.G.RESISTOR	680	1/16W
R520	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R521	NRSA63J-822X	M.G.RESISTOR	8.2k	1/16W
R522	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R523	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R524	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R525	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R526	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R527	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R528	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R529	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R530	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R531	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R532	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R533	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R534	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R535	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R536	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R537	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R538	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R539	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R540	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R541	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R542	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R543	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R544	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R545	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R546	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R547	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R548	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R549	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R550	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R551	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R552	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R553	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R554	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R555	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R556	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R557	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R558	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R559	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R560	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R561	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R562	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R563	NRSA63J-105X	M.G.RESISTOR	1M	1/16W
R564	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R565	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R566	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R567	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R568	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R569	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R570	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R571	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R572	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R573	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R574	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R575	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R576	NRSA63J-104X	M.G.RESISTOR	100k	1/16W

[AUDIO S/S]

Symbol No.	Part No.	Part Name	Description	
R577	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R578	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R579	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R580	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R581	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R582	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R583	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R584	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R585	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R586	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R587	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R588	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R589	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R590	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R591	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R592	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R593	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R594	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R595	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R596	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R597	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R598	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R599	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R602	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R603	NRSA63J-333X	M.G.RESISTOR	33k	1/16W
R604	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R605	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R606	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R608	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R609	NRSA63J-4R7X	M.G.RESISTOR	4.7	1/16W
R610	NRSA63J-473X	M.G.RESISTOR	47k	1/16W
R611	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R613	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R614	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R615	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R616	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R617	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R618	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R619	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R620	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R621	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R622	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R623	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R624	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R625	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R626	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R627	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R628	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R629	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R630	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R631	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R632	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R633	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R634	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R635	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R636	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R637	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
R638	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
R701	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R702	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R703	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R724	NRSA63J-821X	M.G.RESISTOR	820	1/16W
R725	NRSA63J-821X	M.G.RESISTOR	820	1/16W
R726	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R728	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R733	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R734	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R735	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R736	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R737	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R738	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R744	NRSA63J-103X	M.G.RESISTOR	10k	1/16W
R745	NRSA63J-750X	M.G.RESISTOR	75	1/16W

Symbol No.	Part No.	Part Name	Description	
R746	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R748	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R751	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R754	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R755	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R768	NRSA63J-223X	M.G.RESISTOR	22k	1/16W
R769	NRSA63J-823X	M.G.RESISTOR	82k	1/16W
R770	NRSA63J-564X	M.G.RESISTOR	560k	1/16W
R771	NRSA63J-104X	M.G.RESISTOR	100k	1/16W
R772	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R775	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R776	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R777	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R780	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R781	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R782	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R783	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R785	NRSA63J-472X	M.G.RESISTOR	4.7k	1/16W
R788	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R791	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R793	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R794	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R795	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R796	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R797	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R798	NRSA63J-102X	M.G.RESISTOR	1k	1/16W
R800	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R801	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R802	NRSA63J-272X	M.G.RESISTOR	2.7k	1/16W
R803	NRSA63J-222X	M.G.RESISTOR	2.2k	1/16W
R804	NRSA63J-181X	M.G.RESISTOR	180	1/16W
R809	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R810	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R811	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R812	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R813	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R814	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R815	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R816	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R817	NRSA63J-221X	M.G.RESISTOR	220	1/16W
R818	NRSA63J-221X	M.G.RESISTOR	220	1/16W
C101	NEH91CM-106X	E.CAPACITOR	10	16V
C102	NEH91CM-106X	E.CAPACITOR	10	16V
C103	NEH91CM-226X	E.CAPACITOR	22	16V
C104	NEH91CM-106X	E.CAPACITOR	10	16V
C105	NEH91CM-106X	E.CAPACITOR	10	16V
C106	NEH91CM-226X	E.CAPACITOR	22	16V
C107	NEH91EM-475X	E.CAPACITOR	4.7	25V
C109	NDC21HJ-101X	CER.CAPACITOR	100p	50V
C110	NDC21HJ-101X	CER.CAPACITOR	100p	50V
C111	NEH91CM-106X	E.CAPACITOR	10	16V
C112	NEH91CM-226X	E.CAPACITOR	22	16V
C113	NEH91CM-106X	E.CAPACITOR	10	16V
C114	NEH91CM-106X	E.CAPACITOR	10	16V
C115	NCB21HK-393X	CER.CAPACITOR	0.039	50V
C116	NCB21HK-393X	CER.CAPACITOR	0.039	50V
C117	NEH91CM-476X	E.CAPACITOR	47	16V
C118	NEH91CM-476X	E.CAPACITOR	47	16V
C119	NEH91CM-106X	E.CAPACITOR	10	16V
C120	NEH91CM-106X	E.CAPACITOR	10	16V
C121	NEH91CM-106X	E.CAPACITOR	10	16V
C122	NEH91CM-106X	E.CAPACITOR	10	16V
C123	NEH91CM-476X	E.CAPACITOR	47	16V
C124	NEH91CM-106X	E.CAPACITOR	10	16V
C125	NEH91CM-106X	E.CAPACITOR	10	16V
C126	NEH91CM-476X	E.CAPACITOR	47	16V
C127	NEH91CM-106X	E.CAPACITOR	10	16V
C128	NEH91CM-226X	E.CAPACITOR	22	16V
C129	NEH91CM-106X	E.CAPACITOR	10	16V
C130	NEN21CM-106X	N.P.CAPACITOR	10	16V
C131	NEH91CM-476X	E.CAPACITOR	47	16V

Symbol No.	Part No.	Part Name	Description	
C132	NEN21CM-106X	N.P.CAPACITOR	10	16V
C133	NEH91CM-106X	E.CAPACITOR	10	16V
C134	NEH91CM-106X	E.CAPACITOR	10	16V
C135	NEH91CM-476X	E.CAPACITOR	47	16V
C136	NEH91CM-106X	E.CAPACITOR	10	16V
C137	NEH91CM-106X	E.CAPACITOR	10	16V
C140	NEH90JM-107X	E.CAPACITOR	100	6.3V
C141	NEH90JM-107X	E.CAPACITOR	100	6.3V
C142	NEH91CM-226X	E.CAPACITOR	22	16V
C147	NEH91CM-476X	E.CAPACITOR	47	16V
C148	NEH91CM-106X	E.CAPACITOR	10	16V
C149	NEH91CM-106X	E.CAPACITOR	10	16V
C150	NEH91CM-476X	E.CAPACITOR	47	16V
C151	NEN21CM-106X	N.P.CAPACITOR	10	16V
C152	NEN21CM-106X	N.P.CAPACITOR	10	16V
C153	NEH91CM-476X	E.CAPACITOR	47	16V
C154	NEH91CM-476X	E.CAPACITOR	47	16V
C155	NEH91CM-476X	E.CAPACITOR	47	16V
C156	NEH91CM-106X	E.CAPACITOR	10	16V
C157	NEH91CM-106X	E.CAPACITOR	10	16V
C158	NEH91CM-106X	E.CAPACITOR	10	16V
C159	NEH91CM-106X	E.CAPACITOR	10	16V
C501	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C502	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C503	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C504	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C505	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C506	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C507	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C508	NEH91HM-105X	E.CAPACITOR	1	50V
C509	NEH91HM-105X	E.CAPACITOR	1	50V
C510	NEH91HM-105X	E.CAPACITOR	1	50V
C511	NEH91HM-105X	E.CAPACITOR	1	50V
C512	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C513	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C514	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C515	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C516	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C517	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C518	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C519	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C520	NCS31HJ-8R0X	CER.CAPACITOR	8p	50V
C521	NCS31HJ-8R0X	CER.CAPACITOR	8p	50V
C522	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C523	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C524	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C525	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C526	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C527	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C528	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C529	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C530	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C531	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C532	NCB41CM-106X	CER.CAPACITOR	10	16V
C533	NCB41CM-106X	CER.CAPACITOR	10	16V
C534	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C535	NEN71AM-336X	N.P.CAPACITOR	33	10V
C539	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C540	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C541	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C542	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C543	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C544	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C545	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C546	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C547	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C548	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C549	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C550	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C551	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C552	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C553	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C554	NCB31CK-104X	CER.CAPACITOR	0.1	16V

Symbol No.	Part No.	Part Name	Description	
C555	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C556	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C557	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C558	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C559	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C560	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C561	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C562	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C563	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C564	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C565	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C566	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C567	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C568	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C569	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C570	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C571	NDC31HJ-331X	CER.CAPACITOR	330p	50V
C701	NCB21AK-105X	CER.CAPACITOR	1	10V
C702	NCB21AK-105X	CER.CAPACITOR	1	10V
C703	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C720	NCB21AK-105X	CER.CAPACITOR	1	10V
C721	NCB21AK-105X	CER.CAPACITOR	1	10V
C722	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C723	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C724	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C725	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C726	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C727	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C728	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C729	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C730	NEH90JM-476X	E.CAPACITOR	47	6.3V
C731	NEH90JM-476X	E.CAPACITOR	47	6.3V
C732	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C733	NEH91EM-475X	E.CAPACITOR	4.7	25V
C734	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C735	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C736	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C737	NEH91EM-475X	E.CAPACITOR	4.7	25V
C738	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C740	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
C742	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C743	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C745	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C746	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C757	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C759	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C760	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C762	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C763	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C764	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C765	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C766	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C767	NEH71CM-106X	E.CAPACITOR	10	16V
C768	NEH71CM-106X	E.CAPACITOR	10	16V
C769	NCB31EK-103X	CER.CAPACITOR	0.01	25V
C770	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C771	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C772	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C773	NEH91HM-105X	E.CAPACITOR	1	50V
C774	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C775	NDC31HJ-390X	CER.CAPACITOR	39p	50V
C776	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C777	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C778	NAT3112-500X	TRIM.CAPACITOR	50p	ONSCREEN
C779	NDC31HJ-180X	CER.CAPACITOR	18p	50V
C780	NDC31HJ-180X	CER.CAPACITOR	18p	50V
C781	NDC31HJ-681X	CER.CAPACITOR	680p	50V
C782	NDC31HJ-681X	CER.CAPACITOR	680p	50V
C783	NDC31HJ-821X	CER.CAPACITOR	820p	50V
L501	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
L702	NQL114K-220X	COIL	22uH	

[AUDIO S/S]

Symbol No.	Part No.	Part Name	Description
L703	NQL024J-471X	COIL	470uH
L704	NQL024J-330X	COIL	33uH
LC501	PGZ01972Z	LC FILTER	
LC502	PGZ01972Z	LC FILTER	
LC503	PGZ01972Z	LC FILTER	
LC504	PGZ01972Z	LC FILTER	
LC505	PGZ01972Z	LC FILTER	
LC701	PGZ01972Z	LC FILTER	
LC705	PGZ01972Z	LC FILTER	
LC707	PGZ01972Z	LC FILTER	
LC708	PGZ01972Z	LC FILTER	
LC709	PGZ01972Z	LC FILTER	
LC710	PGZ01972Z	LC FILTER	
X501	NAX0320-001X	CRYSTAL	31.9488MHz
CN101	QGF1012F1-20X	CONNECTOR	20PIN
CN106	QGA1501F2-10W	CONNECTOR	10PIN
CN110	QGF0508F1-22X	CONNECTOR	22PIN
CN111	QGA1501F2-03W	CONNECTOR	3PIN
CN501	QGF1012F1-20X	CONNECTOR	20PIN
CN502	QGF0508F1-24X	CONNECTOR	24PIN
CN504	QGF1012F1-16X	CONNECTOR	16PIN
CN505	QGA2001F2-06X	CONNECTOR	6PIN
CN506	QGA2001F2-07X	CONNECTOR	7PIN
CN507	QGA2001F2-12X	CONNECTOR	12PIN
CN508	QGA1501F2-08W	CONNECTOR	8PIN
CN701	QGA1501F2-06W	CONNECTOR	6PIN
TP101	NNZ0009-001X	TEST POINT	TP101-708
K501	PGZ00627Z	FERRITE BEADS	
K502	PGZ00627Z	FERRITE BEADS	
K701	SCV2662-027	FERRITE BEADS	
VA501	PGZ00753	CER.VARISTOR	

6.13 SW.REG BOARD ASSEMBLY PARTS LIST [1][4]

SLK2096-B0A(U)

SLK2096-A0A(E) [1][4]□□□□□□□

Symbol No.	Part No.	Part Name	Description	
Q101	2SK2632-CB14	FET		
Q102	2SD2144S/UVW/-T	TRANSISTOR	ROHM	
Q103	2SC1740S/QRS/-T	TRANSISTOR	ROHM	
Q104	PU43351-3	TRANSISTOR	MATSUSHITA	
Q105	2SD2166/QRS/	TRANSISTOR	ROHM	
Q106	DTA114ESA-T	TRANSISTOR	ROHM	
Q107	2SC3616/MLK/-T	TRANSISTOR	NEC	
Q119	DTC114ESA-T	TRANSISTOR	ROHM	
D102	AU01-T2	DIODE	SANKEN	
D103	AU01-T2	DIODE	SANKEN	
D104	1SS133K-T2	DIODE	ROHM	
D105	RD15ES/B2/-T2	ZENER DIODE	NEC	(U)
	RD27ES/B2/-T2	ZENER DIODE	NEC	(E)
D106	FML-12S	DIODE	SANKEN	
D107	FML-12S	DIODE	SANKEN	
D108	RD15ES/B1/-T2	ZENER DIODE	NEC	
D109	FMB-24	DIODE	SANKEN	
D110	RD6.8ES/B2/-T2	ZENER DIODE	NEC	
D111	1SS133K-T2	DIODE	ROHM	
D112	1SS133K-T2	DIODE	ROHM	
D113	FMB-24	DIODE	SANKEN	
D114	10E6-FA8	DIODE	INTER	
D115	10E6-FA8	DIODE	INTER	
D116	10E6-FA8	DIODE	INTER	
D117	10E6-FA8	DIODE	INTER	
D118	SB140L-6395	DIODE	SANYO	
D119	RD5.1ES/B2/-T2	ZENER DIODE	NEC	
D120	RD6.2ES/B1/-T2	ZENER DIODE	NEC	
D121	RD13ES/B3/-T2	ZENER DIODE	NEC	
⚠PC101	PC123FY2	I.C(PH COUPLER)		
R103	QRE141J-124Y	CAR.RESISTOR	120k	1/4W (U)
	QRE141J-224Y	CAR.RESISTOR	220k	1/4W (E)
R104	QRE141J-124Y	CAR.RESISTOR	120k	1/4W (U)
	QRE141J-224Y	CAR.RESISTOR	220k	1/4W (E)
R105	QRE141J-683Y	CAR.RESISTOR	68k	1/4W
R106	QRE121J-331Y	CAR.RESISTOR	330	1/2W
R107	QRE141J-224Y	CAR.RESISTOR	220k	1/4W
R108	QRT01DJ-R39X	M.F.RESISTOR	0.39	1W
R109	QRE141J-681Y	CAR.RESISTOR	680	1/4W
R110	QRE141J-821Y	CAR.RESISTOR	820	1/4W (E)
R111	QRE141J-152Y	CAR.RESISTOR	1.5k	1/4W
R112	QRE141J-471Y	CAR.RESISTOR	470	1/4W
R113	QRE141J-122Y	CAR.RESISTOR	1.2k	1/4W
R114	QRA14CF-3740Y	C.M.F.RESISTOR	374	1/4W
R115	QRA14CF-4870Y	C.M.F.RESISTOR	487	1/4W
R116	QRE141J-122Y	CAR.RESISTOR	1.2k	1/4W
R118	QRE141J-101Y	CAR.RESISTOR	100	1/4W
R119	QRE141J-473Y	CAR.RESISTOR	47k	1/4W
R120	QRE141J-472Y	CAR.RESISTOR	4.7k	1/4W
R164	QRG03GJ-683	O.M.F.RESISTOR	68k	3W
R167	QRE141J-102Y	CAR.RESISTOR	1k	1/4W
R168	QRE141J-182Y	CAR.RESISTOR	1.8k	1/4W
⚠C101	QFZ9037-333	FILM CAPACITOR	0.033	250V
⚠C102	QFZ9037-333	FILM CAPACITOR	0.033	250V
C103	QCZ9079-222	CER.CAPACITOR	2200p	250V (E)
C105	QCZ9079-222	CER.CAPACITOR	2200p	250V (E)
C108	QEZ0501-227	E.CAPACITOR	220	200V (U)
	QEZ0379-107	E.CAPACITOR	100	400V (E)
C109	QCZ0212-472	CER.CAPACITOR	4700p	125V
C110	QCZ0302-101Z	CER.CAPACITOR	100p	1000V
C111	QEHC1HM-105Z	E.CAPACITOR	1	50V
C112	QFV11HJ-104Z	FILM CAPACITOR	0.1	50V
C114	QFLC1HJ-183Z	MYLAR CAPACITOR	0.018	50V
C115	QCS31HJ-271Z	CER.CAPACITOR	270p	50V (E)
⚠C116	QCZ9079-222	CER.CAPACITOR	2200p	250V
C117	QETC1HM-474Z	E.CAPACITOR	0.47	50V
C118	QEMT1CM-827	E.CAPACITOR	820	16V
C119	QEMT1CM-827	E.CAPACITOR	820	16V
C120	QETC0JM-476Z	E.CAPACITOR	47	6.3V

6.14 VIDEO I/O BOARD ASSEMBLY PARTS LIST [1][5]

SLK2101-01-B0C(U)

SLK2101-01-A0C(E) [1][5]□□□□□□□

Symbol No.	Part No.	Part Name	Description	
C121	QFN31HJ-103Z	M.F.CAPACITOR	0.01	50V
C122	QETC1CM-106Z	E.CAPACITOR	10	16V
C123	QETC1CM-107Z	E.CAPACITOR	100	16V
C124	QFN31HJ-103Z	M.F.CAPACITOR	0.01	50V
C125	QETC1CM-107Z	E.CAPACITOR	100	16V
C126	QETC1CM-476Z	E.CAPACITOR	47	16V
C127	QFN31HJ-104Z	M.F.CAPACITOR	0.1	50V
C150	QETC1EM-227Z	E.CAPACITOR	220	25V
L101	QQL45AK-330	COIL	33uH	
RY101	QSK0107-001	RELAY		
CN101	QGA7901C1-02	CONNECTOR	2PIN	
CN102	QGA3901C1-02	CONNECTOR	2PIN	
CN103	QGA2001C1-03	CONNECTOR	3PIN	
CN104	QGA2001C1-12	CONNECTOR	12PIN	
CN105	QGA2001C1-06	CONNECTOR	6PIN	
CN106	QGA2001C1-05	CONNECTOR	5PIN	
CN107	QGA2001C1-10	CONNECTOR	10PIN	
TP101	QNZ0352-001Z	TEST POINT	TP101-107	
⚠CP103	ICP-N20-T	ICP		
⚠FC101	QNG0037-001Z	FUSE HOLDER		
⚠FC102	QNG0037-001Z	FUSE HOLDER		
⚠FC103	QNG0037-001Z	FUSE HOLDER		
⚠FC104	QNG0037-001Z	FUSE HOLDER		
HS101	PGZ02442	HEAT SINK	Q101,D106,D107	
K101	QQR0678-001Z	FERRITE BEADS		
⚠LF101	QQR0532-001	LINE FILTER		(U)
⚠	QQR0609-001	LINE FILTER		(E)
⚠LF102	QQR0881-001	LINE FILTER		
⚠T101	QQT0275-001	POWER TRANSF.		
TB101	SQMX002-001Z	EARTH TERMINAL		
TB102	SQMX002-001Z	EARTH TERMINAL		
SC1	QYSDSF3008Z	SCREW	Q101,D106,D107	
SC2	PRD30072-99	STICKER	FOR F102	(U)
	PRD30072-100	STICKER	FOR F102	(E)

Symbol No.	Part No.	Part Name	Description
IC1	MM1117XF-X	I.C.(M)	MITSUMI
IC2	AN3916-/LF/	I.C.(M)	MATSUSHITA
IC3	TC7S08FU-X	I.C.(M)	TOSHIBA
IC4	CXD2064Q	I.C.(M)	SONY
IC5	TC4W53FU-X	I.C.(M)	TOSHIBA
IC6	TC4094BF-X	I.C.(M)	TOSHIBA
IC8	MM1111XF-X	I.C.(M)	MITSUMI
IC9	MM1117XF-X	I.C.(M)	MITSUMI
IC10	CXA2019AQ	I.C.(M)	SONY
IC11	TK16031AMTL	I.C.(M)	TOKO DENSHI
IC12	OPA658U-XE	I.C.(M)	BURR BROWN
IC13	TK16031AMTL	I.C.(M)	TOKO DENSHI
IC14	OPA658U-XE	I.C.(M)	BURR BROWN
IC15	TK16031AMTL	I.C.(M)	TOKO DENSHI
IC16	OPA658U-XE	I.C.(M)	BURR BROWN
IC17	TC7S08FU-X	I.C.(M)	TOSHIBA
IC18	NJM1496V-X	I.C.(M)	JRC
IC19	TK16031AMTL	I.C.(M)	TOKO DENSHI
IC20	OPA658U-XE	I.C.(M)	BURR BROWN
IC21	TC7SU04FU-X	I.C.(M)	TOSHIBA
IC22	NJM1496V-X	I.C.(M)	JRC
IC23	AD8011AR-X	I.C.(M)	ANALOG DEVICES
IC24	AD8011AR-X	I.C.(M)	ANALOG DEVICES
IC25	AD8011AR-X	I.C.(M)	ANALOG DEVICES
IC26	MM1113XF-X	I.C.(M)	MITSUMI
IC27	MM1111XF-X	I.C.(M)	MITSUMI
IC28	MM1113XF-X	I.C.(M)	MITSUMI
IC29	MM1111XF-X	I.C.(M)	MITSUMI
IC30	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC31	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC32	MM1113XF-X	I.C.(M)	MITSUMI
IC33	MM1113XF-X	I.C.(M)	MITSUMI
IC34	NJM2538V-X	I.C.(M)	JRC
IC35	TC7S08FU-X	I.C.(M)	TOSHIBA
IC36	MM1117XF-X	I.C.(M)	MITSUMI
IC37	MM1117XF-X	I.C.(M)	MITSUMI
IC38	OPA658U-XE	I.C.(M)	BURR BROWN
IC39	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC40	MM1117XF-X	I.C.(M)	MITSUMI
IC41	TC7S08FU-X	I.C.(M)	TOSHIBA
IC42	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC43	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC44	TC4W53F-X	I.C.(M)	TOSHIBA
IC45	AD817AR-X	I.C.(M)	ANALOG DEVICES
IC46	AN77L03M-X	I.C.(M)	MATSUSHITA
IC47	UPC2384GA	I.C.(M)	NEC
IC48	TC74VHC541FT-X	I.C.(M)	TOSHIBA
IC49	TC4W53F-X	I.C.(M)	TOSHIBA
IC50	UPC78L05T-X	I.C.(M)	NEC
IC51	TC74VHC157FT-X	I.C.(M)	TOSHIBA
IC52	TC7W04FU-X	I.C.(M)	TOSHIBA
IC53	JCS0027	I.C.(M)	JVC
IC55	TC74VHC541FT-X	I.C.(M)	TOSHIBA
IC56	TC7S14FU-X	I.C.(M)	TOSHIBA
IC57	MC74HC4046AF-X	I.C.(M)	MOTOROLA
IC58	MM1117XF-X	I.C.(M)	MITSUMI
IC59	LMC6082IM-X	I.C.(M)	NATIONAL SEMICO
IC60	TC74HC4538AFS-X	I.C.(M)	TOSHIBA
IC61	UPC812G2-X	I.C.(M)	NEC
IC62	TC7SU04FU-X	I.C.(M)	TOSHIBA
IC63	AD8011AR-X	I.C.(M)	ANALOG DEVICES
IC64	LM1881M-X	I.C.(M)	NATIONAL SEMICO
IC65	TC4W53FU-X	I.C.(M)	TOSHIBA
IC66	TC7S14FU-X	I.C.(M)	TOSHIBA
IC67	TC7SU04FU-X	I.C.(M)	TOSHIBA
IC69	SN74LV125APW-X	I.C.(M)	TEXAS
IC70	TC7SU04FU-X	I.C.(M)	TOSHIBA
IC71	TC4W53FU-X	I.C.(M)	TOSHIBA
IC72	TC4W53FU-X	I.C.(M)	TOSHIBA
IC73	LM1881M-X	I.C.(M)	NATIONAL SEMICO
IC74	TC4W53FU-X	I.C.(M)	TOSHIBA
IC75	DS90LV031ATM-X	I.C.(M)	NATIONAL SEMICO

[VIDEO I/O]

Symbol No.	Part No.	Part Name	Description
Q1	2SC4617/RS/-X	TRANSISTOR	ROHM
Q2	2SC4617/RS/-X	TRANSISTOR	ROHM
Q3	2SC4617/RS/-X	TRANSISTOR	ROHM
Q4	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q5	2SC4617/RS/-X	TRANSISTOR	ROHM
Q6	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q7	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q8	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q9	2SC4617/RS/-X	TRANSISTOR	ROHM
Q10	2SC4617/RS/-X	TRANSISTOR	ROHM
Q11	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q12	2SC4617/RS/-X	TRANSISTOR	ROHM
Q13	2SC4617/RS/-X	TRANSISTOR	ROHM
Q14	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q15	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q16	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q17	2SC4617/RS/-X	TRANSISTOR	ROHM
Q18	2SC4617/RS/-X	TRANSISTOR	ROHM
Q19	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q20	2SC4617/RS/-X	TRANSISTOR	ROHM
Q21	2SC4617/RS/-X	TRANSISTOR	ROHM
Q22	2SC4617/RS/-X	TRANSISTOR	ROHM
Q23	2SC4617/RS/-X	TRANSISTOR	ROHM
Q24	2SC4617/RS/-X	TRANSISTOR	ROHM
Q25	2SC4617/RS/-X	TRANSISTOR	ROHM
Q26	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q27	2SC4617/RS/-X	TRANSISTOR	ROHM
Q101	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q102	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q103	2SC4617/RS/-X	TRANSISTOR	ROHM
Q104	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q105	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q106	2SC4617/RS/-X	TRANSISTOR	ROHM
Q107	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q108	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q109	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q110	2SC4617/RS/-X	TRANSISTOR	ROHM
Q111	2SC4617/RS/-X	TRANSISTOR	ROHM
Q113	2SC4617/RS/-X	TRANSISTOR	ROHM
Q115	2SC4617/RS/-X	TRANSISTOR	ROHM
Q116	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q117	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q118	2SC4617/RS/-X	TRANSISTOR	ROHM
Q119	2SC4617/RS/-X	TRANSISTOR	ROHM
Q120	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q121	2SC4617/RS/-X	TRANSISTOR	ROHM
Q122	2SJ364/QR/-X	FET	MATSUSHITA
Q123	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q124	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q125	2SC4617/RS/-X	TRANSISTOR	ROHM
Q126	2SC4617/RS/-X	TRANSISTOR	ROHM
Q127	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q128	2SC4617/RS/-X	TRANSISTOR	ROHM
Q129	2SJ364/QR/-X	FET	MATSUSHITA
Q130	2SC4617/RS/-X	TRANSISTOR	ROHM
Q131	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q132	2SC4617/RS/-X	TRANSISTOR	ROHM
Q133	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q201	2SK663/QR/-X	FET	MATSUSHITA
Q202	2SC4617/RS/-X	TRANSISTOR	ROHM
Q203	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q204	2SK663/QR/-X	FET	MATSUSHITA
Q205	2SC4617/RS/-X	TRANSISTOR	ROHM
Q206	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q207	2SC4617/RS/-X	TRANSISTOR	ROHM
Q208	2SC4617/RS/-X	TRANSISTOR	ROHM
Q209	2SC4617/RS/-X	TRANSISTOR	ROHM
Q210	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q211	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q212	2SA1774/QRS/-X	TRANSISTOR	ROHM
Q213	DTC144EUA-X	TRANSISTOR	ROHM
Q214	DTC144EUA-X	TRANSISTOR	ROHM
Q215	2SC4617/RS/-X	TRANSISTOR	ROHM

Symbol No.	Part No.	Part Name	Description	
Q217	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q218	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q219	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q220	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q221	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q222	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q223	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q224	2SK663/QR/-X	FET	MATSUSHITA	(U)
Q225	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q226	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q227	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q228	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q229	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q230	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q231	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q232	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q233	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q234	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q235	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q236	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q237	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q238	2SJ364/QR/-X	FET	MATSUSHITA	
Q239	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q240	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q241	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q242	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q243	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q244	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q245	2SK663/QR/-X	FET	MATSUSHITA	
Q301	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q302	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q303	2SC4617/RS/-X	TRANSISTOR	ROHM	
Q304	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q305	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q307	2SA1774/QRS/-X	TRANSISTOR	ROHM	
Q308	2SA1774/QRS/-X	TRANSISTOR	ROHM	
D1	DAN202U-X	DIODE	ROHM	
D2	SVC341/L/-X	VARI CAPA DIODE	SANYO	
D3	MA143A-X	DIODE	MATSUSHITA	
D4	MA143A-X	DIODE	MATSUSHITA	
D5	DAN202U-X	DIODE	ROHM	
D6	MA742-X	DIODE	MATSUSHITA	
D7	MA335-X	DIODE	MATSUSHITA	
D8	MA335-X	DIODE	MATSUSHITA	
D9	MA143A-X	DIODE	MATSUSHITA	
D10	MA143A-X	DIODE	MATSUSHITA	
D11	MA143A-X	DIODE	MATSUSHITA	
D12	MA143A-X	DIODE	MATSUSHITA	
D13	MA143A-X	DIODE	MATSUSHITA	
D14	MA143A-X	DIODE	MATSUSHITA	
D15	MA143A-X	DIODE	MATSUSHITA	
D16	MA143A-X	DIODE	MATSUSHITA	
D17	MA143A-X	DIODE	MATSUSHITA	
D18	MA143A-X	DIODE	MATSUSHITA	
D19	MA143A-X	DIODE	MATSUSHITA	
D20	MA143A-X	DIODE	MATSUSHITA	
D21	MA143A-X	DIODE	MATSUSHITA	
R1	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R2	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R3	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R4	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R5	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R6	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R7	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R8	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R9	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R10	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R11	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R12	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R13	NRSA63D-333X	M.G.RESISTOR	33k	1/16W

Symbol No.	Part No.	Part Name	Description	
R14	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R15	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R16	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R17	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R18	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R19	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R20	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R21	NRSA63D-332X	M.G.RESISTOR	3.3k	1/16W
R22	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R23	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R24	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R25	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R27	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R28	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R29	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R30	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R31	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R32	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R33	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R34	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R35	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R36	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R37	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R38	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R39	NRSA63J-621X	M.G.RESISTOR	620	1/16W
R40	NRSA63D-391X	M.G.RESISTOR	390	1/16W
R41	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R42	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R43	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R44	NRSA63D-153X	M.G.RESISTOR	15k	1/16W
R45	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R46	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R47	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R48	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R49	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W (U)
	NRSA63D-102X	M.G.RESISTOR	1k	1/16W (E)
R50	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R51	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R54	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R57	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R59	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R60	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R61	NRSA63D-563X	M.G.RESISTOR	56k	1/16W
R62	NRSA63D-201X	M.G.RESISTOR	200	1/16W
R63	NRSA63D-201X	M.G.RESISTOR	200	1/16W
R64	NRSA63D-332X	M.G.RESISTOR	3.3k	1/16W
R65	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R66	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R67	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R68	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R69	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R70	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R71	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R72	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R79	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R81	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R82	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R83	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R84	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R87	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R88	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R89	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R90	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R91	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R92	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R93	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R94	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R95	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R96	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R97	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R98	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R99	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R100	NRSA63D-102X	M.G.RESISTOR	1k	1/16W

Symbol No.	Part No.	Part Name	Description	
R101	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R102	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R103	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R104	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R105	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R106	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R107	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R108	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R109	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R110	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R111	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R112	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R113	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R114	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R115	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R116	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R117	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R118	NRSA63D-331X	M.G.RESISTOR	330	1/16W (U)
R119	NRSA63D-331X	M.G.RESISTOR	330	1/16W (E)
R120	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R121	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R122	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R123	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R124	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R125	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R126	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R127	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R128	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R129	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R130	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R131	NRSA63D-103X	M.G.RESISTOR	10k	1/16W (U)
	NRSA63D-101X	M.G.RESISTOR	100	1/16W (E)
R132	NRSA63D-103X	M.G.RESISTOR	10k	1/16W (U)
	NRSA63D-683X	M.G.RESISTOR	68k	1/16W (E)
R133	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R134	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R135	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R136	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R138	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R139	NRSA63D-391X	M.G.RESISTOR	390	1/16W
R140	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R141	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R143	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R144	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R145	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R146	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R147	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R148	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R149	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R150	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R152	NRSA63D-104X	M.G.RESISTOR	100k	1/16W (U)
R153	NRSA63D-104X	M.G.RESISTOR	100k	1/16W (U)
R155	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R156	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R157	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R201	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R202	NRSA63D-151X	M.G.RESISTOR	150	1/16W
R203	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R204	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R205	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R206	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R207	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R208	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R209	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R210	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R211	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R212	NRSA63D-562X	M.G.RESISTOR	5.6k	1/16W
R213	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R214	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R215	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R216	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R217	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R218	NRSA63D-105X	M.G.RESISTOR	1M	1/16W

[VIDEO I/O]

Symbol No.	Part No.	Part Name	Description
R219	NRSA63D-105X	M.G.RESISTOR	1M 1/16W
R220	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R221	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R222	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R223	NRSA63D-392X	M.G.RESISTOR	3.9k 1/16W
R224	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R225	NRSA63D-561X	M.G.RESISTOR	560 1/16W
R226	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R227	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R228	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R229	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R230	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R231	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R232	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R233	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R234	NRSA63D-101X	M.G.RESISTOR	100 1/16W
R235	NRSA63D-221X	M.G.RESISTOR	220 1/16W
R237	NRSA63D-301X	M.G.RESISTOR	300 1/16W
R238	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R239	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R240	NRSA63D-301X	M.G.RESISTOR	300 1/16W
R241	NRSA63D-221X	M.G.RESISTOR	220 1/16W
R242	NRSA63D-221X	M.G.RESISTOR	220 1/16W
R243	NRSA63D-152X	M.G.RESISTOR	1.5k 1/16W (U)
R245	NRSA63D-471X	M.G.RESISTOR	470 1/16W (E)
R246	NRSA63D-153X	M.G.RESISTOR	15k 1/16W
R247	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R248	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R249	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R250	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R251	NRSA63D-183X	M.G.RESISTOR	18k 1/16W
R252	NRSA63D-102X	M.G.RESISTOR	1k 1/16W (U)
R254	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R255	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R256	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R257	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R258	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R259	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R260	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R261	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R262	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R264	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R266	NRSA63D-471X	M.G.RESISTOR	470 1/16W (U)
	NRSA63D-102X	M.G.RESISTOR	1k 1/16W (E)
R267	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R268	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R269	NRSA63D-183X	M.G.RESISTOR	18k 1/16W
R270	NRSA63D-102X	M.G.RESISTOR	1k 1/16W (U)
R272	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R273	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R274	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R275	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R276	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R277	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R278	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R279	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R280	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R282	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R284	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W (U)
R285	NRSA63D-471X	M.G.RESISTOR	470 1/16W (U)
	NRSA63D-102X	M.G.RESISTOR	1k 1/16W (E)
R286	NRSA63D-151X	M.G.RESISTOR	150 1/16W
R287	NRSA63D-151X	M.G.RESISTOR	150 1/16W
R288	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R289	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R290	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R291	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R292	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R293	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R294	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R295	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R296	NRSA63D-183X	M.G.RESISTOR	18k 1/16W
R297	NRSA63D-102X	M.G.RESISTOR	1k 1/16W

Symbol No.	Part No.	Part Name	Description
R298	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R299	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R300	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R301	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R302	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R303	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R305	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R307	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R308	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R309	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W (U)
	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W (E)
R310	NRSA63D-393X	M.G.RESISTOR	39k 1/16W
R311	NRSA63D-393X	M.G.RESISTOR	39k 1/16W
R312	NRSA63D-271X	M.G.RESISTOR	270 1/16W
R313	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R314	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R315	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R316	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R317	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R318	NRSA63D-562X	M.G.RESISTOR	5.6k 1/16W
R319	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R320	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R321	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R322	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R323	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R324	NRSA63D-684X	M.G.RESISTOR	680k 1/16W
R325	NRSA63D-123X	M.G.RESISTOR	12k 1/16W (U)
R326	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R327	NRSA63D-681X	M.G.RESISTOR	680 1/16W
R328	NRSA63D-561X	M.G.RESISTOR	560 1/16W
R329	NRSA63D-272X	M.G.RESISTOR	2.7k 1/16W
R330	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R333	NRSA63D-221X	M.G.RESISTOR	220 1/16W
R334	NRSA63J-0R0X	M.G.RESISTOR	0 1/16W
R335	NRSA63D-103X	M.G.RESISTOR	10k 1/16W (U)
	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W (E)
R336	NRSA63D-151X	M.G.RESISTOR	150 1/16W
R337	NRSA63D-151X	M.G.RESISTOR	150 1/16W
R338	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R340	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R341	NRSA63D-181X	M.G.RESISTOR	180 1/16W
R342	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R343	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R344	NRSA63D-122X	M.G.RESISTOR	1.2k 1/16W
R345	NRSA63D-223X	M.G.RESISTOR	22k 1/16W
R346	NRSA63D-333X	M.G.RESISTOR	33k 1/16W
R347	NRSA63D-183X	M.G.RESISTOR	18k 1/16W
R348	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R349	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R350	NRSA63D-822X	M.G.RESISTOR	8.2k 1/16W
R351	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R352	NRSA63D-332X	M.G.RESISTOR	3.3k 1/16W
R353	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R355	NRSA63D-182X	M.G.RESISTOR	1.8k 1/16W
R356	NRSA63D-123X	M.G.RESISTOR	12k 1/16W
R358	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R359	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R361	NRSA63D-102X	M.G.RESISTOR	1k 1/16W
R362	NRSA63D-272X	M.G.RESISTOR	2.7k 1/16W (U)
	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W (E)
R363	NRSA63D-271X	M.G.RESISTOR	270 1/16W
R364	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R365	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R366	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R367	NRSA63D-472X	M.G.RESISTOR	4.7k 1/16W
R368	NRSA63D-331X	M.G.RESISTOR	330 1/16W
R369	NRSA63D-562X	M.G.RESISTOR	5.6k 1/16W
R370	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W
R371	NRSA63D-223X	M.G.RESISTOR	22k 1/16W (E)
R372	NRSA63D-823X	M.G.RESISTOR	82k 1/16W (E)
R373	NRSA63D-103X	M.G.RESISTOR	10k 1/16W
R374	NRSA63D-562X	M.G.RESISTOR	5.6k 1/16W
R375	NRSA63D-222X	M.G.RESISTOR	2.2k 1/16W

Symbol No.	Part No.	Part Name	Description	
R376	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R377	NRSA63D-684X	M.G.RESISTOR	680k	1/16W
R378	NRSA63D-123X	M.G.RESISTOR	12k	1/16W (U)
	NRSA63D-822X	M.G.RESISTOR	8.2k	1/16W (E)
R379	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R380	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R381	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R382	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R383	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R384	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R385	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R388	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R389	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R390	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R391	NRSA63D-103X	M.G.RESISTOR	10k	1/16W (U)
	NRSA63D-182X	M.G.RESISTOR	1.8k	1/16W (E)
R392	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R393	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R394	NRSA63D-821X	M.G.RESISTOR	820	1/16W
R395	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R396	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R397	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R398	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R399	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R400	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
	NRSA63D-332X	M.G.RESISTOR	3.3k	1/16W (E)
R401	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R402	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R403	NRSA63D-153X	M.G.RESISTOR	15k	1/16W
R404	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R406	NRSA63D-183X	M.G.RESISTOR	18k	1/16W
R407	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R408	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R409	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R410	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R411	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R412	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R413	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R414	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R415	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R416	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R417	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R418	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R419	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R420	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R421	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R422	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R423	NRSA63D-562X	M.G.RESISTOR	5.6k	1/16W
R424	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R425	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R426	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R427	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R428	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R429	NRSA63D-104X	M.G.RESISTOR	100k	1/16W (U)
R430	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R431	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R501	NRSA63D-820X	M.G.RESISTOR	82	1/16W (U)
	NRSA63D-221X	M.G.RESISTOR	220	1/16W (E)
R502	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R503	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R504	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R505	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R506	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R507	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R508	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R509	NRSA63D-820X	M.G.RESISTOR	82	1/16W (U)
	NRSA63D-221X	M.G.RESISTOR	220	1/16W (E)
R510	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R511	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R512	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R513	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R514	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R515	NRSA63D-102X	M.G.RESISTOR	1k	1/16W

Symbol No.	Part No.	Part Name	Description	
R516	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R517	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R518	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R519	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R520	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R521	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R522	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R523	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R524	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R525	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R526	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R527	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R528	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R529	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R530	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R531	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R532	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R533	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R534	NRSA63D-820X	M.G.RESISTOR	82	1/16W (U)
	NRSA63D-221X	M.G.RESISTOR	220	1/16W (E)
R535	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R536	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R537	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R538	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R539	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R540	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R541	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R543	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R544	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R545	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R546	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R547	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R548	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R549	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R550	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R551	NRSA63D-224X	M.G.RESISTOR	220k	1/16W
R552	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R553	NRSA63D-121X	M.G.RESISTOR	120	1/16W
R554	NRSA63D-680X	M.G.RESISTOR	68	1/16W
R555	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R556	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R557	NRSA63J-225X	M.G.RESISTOR	2.2M	1/16W
R558	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R559	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R560	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R561	NRSA63D-121X	M.G.RESISTOR	120	1/16W
R562	NRSA63D-680X	M.G.RESISTOR	68	1/16W
R563	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R564	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R565	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R566	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R567	NRSA63D-680X	M.G.RESISTOR	68	1/16W
R568	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R569	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R570	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R571	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R572	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R573	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R574	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R575	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R576	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R577	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R578	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R579	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R580	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R581	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R582	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R583	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R584	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R585	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R586	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R587	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R588	NRSA63D-104X	M.G.RESISTOR	100k	1/16W

[VIDEO I/O]

Symbol No.	Part No.	Part Name	Description	
R589	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R590	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R591	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R592	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R593	NRSA63D-224X	M.G.RESISTOR	220k	1/16W (E)
R597	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R598	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R599	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R600	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R601	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R602	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R603	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R604	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R605	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R606	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R607	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R608	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R609	NRSA63D-181X	M.G.RESISTOR	180	1/16W
R610	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R611	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R612	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R613	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R614	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R615	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R616	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R617	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R618	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R619	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R620	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R621	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R623	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R624	NRSA63D-471X	M.G.RESISTOR	470	1/16W
R625	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R626	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R627	NRSA63D-681X	M.G.RESISTOR	680	1/16W
R630	NRSA63D-471X	M.G.RESISTOR	470	1/16W
R631	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R632	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R633	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R634	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R635	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R636	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R637	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R638	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R639	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R640	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R641	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R642	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R643	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R644	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R645	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R646	NRSA63D-152X	M.G.RESISTOR	1.5k	1/16W
R647	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R648	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R649	NRSA63D-181X	M.G.RESISTOR	180	1/16W (U)
	NRSA63D-102X	M.G.RESISTOR	1k	1/16W (E)
R650	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R651	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R652	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R653	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R656	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R657	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R658	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R659	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R660	NRSA63D-392X	M.G.RESISTOR	3.9k	1/16W
R661	NRSA63D-182X	M.G.RESISTOR	1.8k	1/16W
R662	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R663	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R664	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R665	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R666	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R667	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R668	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W

Symbol No.	Part No.	Part Name	Description	
R669	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R670	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R672	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R674	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R675	NRSA63D-822X	M.G.RESISTOR	8.2k	1/16W (U)
R676	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R680	NRSA63D-391X	M.G.RESISTOR	390	1/16W
R682	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R683	NRSA63D-750X	M.G.RESISTOR	75	1/16W
R702	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R704	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R705	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R706	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R707	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R708	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R709	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R712	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R713	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R714	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R715	NRSA63D-473X	M.G.RESISTOR	47k	1/16W
R716	NRSA63D-182X	M.G.RESISTOR	1.8k	1/16W
R718	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R719	NRSA63D-471X	M.G.RESISTOR	470	1/16W
R720	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R721	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R722	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R723	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R725	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R727	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R728	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R729	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R730	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R731	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R732	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R734	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R747	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R748	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R749	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R750	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R755	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R756	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
R757	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R758	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R759	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R760	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R761	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R762	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R763	NRSA63D-563X	M.G.RESISTOR	56k	1/16W
R764	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R765	NRSA63D-563X	M.G.RESISTOR	56k	1/16W
R767	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R768	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R769	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R770	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R771	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R772	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R773	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R774	NRSA63D-561X	M.G.RESISTOR	560	1/16W
R775	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R778	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R779	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R780	NRSA63D-273X	M.G.RESISTOR	27k	1/16W
R781	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R782	NRSA63D-682X	M.G.RESISTOR	6.8k	1/16W
R783	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R784	NRSA63D-122X	M.G.RESISTOR	1.2k	1/16W
R785	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R786	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R787	NRSA63D-331X	M.G.RESISTOR	330	1/16W
R788	NRSA63D-682X	M.G.RESISTOR	6.8k	1/16W
R789	NRSA63D-684X	M.G.RESISTOR	680k	1/16W
R790	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W

Symbol No.	Part No.	Part Name	Description	
R791	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R792	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R793	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R794	NRSA63D-103X	M.G.RESISTOR	10k	1/16W
R795	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R796	NRSA63D-472X	M.G.RESISTOR	4.7k	1/16W
R800	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R801	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R802	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R803	NRSA63D-104X	M.G.RESISTOR	100k	1/16W
R804	NRSA63D-333X	M.G.RESISTOR	33k	1/16W
R805	NRSA63D-184X	M.G.RESISTOR	180k	1/16W
R808	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R809	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R810	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R811	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R812	NRSA63D-222X	M.G.RESISTOR	2.2k	1/16W
R813	NRSA63D-332X	M.G.RESISTOR	3.3k	1/16W
R814	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R815	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R818	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R821	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R822	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R823	NRSA63D-105X	M.G.RESISTOR	1M	1/16W
R824	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R825	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R826	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R827	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R828	NDC31HJ-102X	CER.CAPACITOR	1000	50V
R829	NCB31HK-103X	CER.CAPACITOR	0.01	50V
R830	NRSA63D-684X	M.G.RESISTOR	680k	1/16W
R831	NRSA63D-272X	M.G.RESISTOR	2.7k	1/16W
R832	NRSA63D-223X	M.G.RESISTOR	22k	1/16W
R833	NRSA63D-183X	M.G.RESISTOR	18k	1/16W
R834	NRSA63D-102X	M.G.RESISTOR	1k	1/16W
R835	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R836	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R837	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R838	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R839	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R840	NRSA63D-101X	M.G.RESISTOR	100	1/16W
R841	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R842	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
VR1	NVP1415-203X	TRIM.RESISTOR	20k	AGC
VR2	NVP1415-502X	TRIM.RESISTOR	5k	Y/C Y
VR3	NVP1415-103X	TRIM.RESISTOR	10k	B-Y DL
VR4	NVP1415-103X	TRIM.RESISTOR	10k	R-Y DL
VR5	NVP1415-103X	TRIM.RESISTOR	10k	CPN DL1
VR6	NVP1415-103X	TRIM.RESISTOR	10k	CPN DL2
VR7	NVP1415-503X	TRIM.RESISTOR	50k	CPN LK1
VR8	NVP1415-503X	TRIM.RESISTOR	50k	CPN LK2
VR9	NVP1415-503X	TRIM.RESISTOR	50k	NOT USED
VR10	NVP1415-502X	TRIM.RESISTOR	5k	CPN LEV
VR11	NVP1415-503X	TRIM.RESISTOR	50k	VIDEO C
VR12	NVP1415-503X	TRIM.RESISTOR	50k	VIDEO Y
VR13	NVP1415-102X	TRIM.RESISTOR	1k	CPN Y
VR14	NVP1415-202X	TRIM.RESISTOR	2k	NOT USED
VR15	NVP1415-202X	TRIM.RESISTOR	2k	fsc
VR16	NVP1415-202X	TRIM.RESISTOR	2k	PB H
VR17	NVP1415-104X	TRIM.RESISTOR	100k	CH-2
VR18	NVP1415-104X	TRIM.RESISTOR	100k	CH-1
VR19	NVP1415-202X	TRIM.RESISTOR	2k	B-Y LEV
VR20	NVP1415-202X	TRIM.RESISTOR	2k	R-Y LEV
VR21	NVP1415-102X	TRIM.RESISTOR	1k	Y/C C
VR22	NVP1415-202X	TRIM.RESISTOR	2k	EE H
VR23	NVP1415-501X	TRIM.RESISTOR	500	C OUT LEV
C1	NEH71AM-107X	E.CAPACITOR	100	10V
C2	NEH71AM-107X	E.CAPACITOR	100	10V
C3	NEH71AM-107X	E.CAPACITOR	100	10V
C4	NEH91EM-475X	E.CAPACITOR	4.7	25V

Symbol No.	Part No.	Part Name	Description	
C5	NEH91EM-475X	E.CAPACITOR	4.7	25V
C6	NEH91EM-475X	E.CAPACITOR	4.7	25V
C7	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C8	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C9	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C10	NEH71AM-107X	E.CAPACITOR	100	10V
C12	NCB31HK-332X	CER.CAPACITOR	3300p	50V
C13	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C14	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C15	NEH91EM-475X	E.CAPACITOR	4.7	25V
C16	NEH91EM-475X	E.CAPACITOR	4.7	25V
C17	NEH91EM-475X	E.CAPACITOR	4.7	25V
C18	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C19	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C20	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C21	NEH90JM-107X	E.CAPACITOR	100	6.3V
C22	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C23	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C24	NEH90JM-107X	E.CAPACITOR	100	6.3V
C25	NEH71AM-107X	E.CAPACITOR	100	10V
C26	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C27	NEH90JM-107X	E.CAPACITOR	100	6.3V
C32	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C33	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C34	NEH90JM-107X	E.CAPACITOR	100	6.3V
C35	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C36	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C37	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C38	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C39	NEH71CM-106X	E.CAPACITOR	10	16V
C40	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C41	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C42	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C43	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C44	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C45	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C46	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C47	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C48	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C49	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C50	NEH90JM-107X	E.CAPACITOR	100	6.3V
C51	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C52	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C53	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C54	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C55	NEH71AM-107X	E.CAPACITOR	100	10V
C56	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C57	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C58	NEH90JM-107X	E.CAPACITOR	100	6.3V
C59	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C60	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C61	NEH90JM-107X	E.CAPACITOR	100	6.3V
C67	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C68	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C69	NDC31HJ-120X	CER.CAPACITOR	12p	50V
C70	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C71	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C72	NEH90JM-476X	E.CAPACITOR	47	6.3V
C73	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C74	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C75	NEH90JM-476X	E.CAPACITOR	47	6.3V
C82	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C83	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C85	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C86	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C87	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C88	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C89	QETC1AM-227Z	E.CAPACITOR	220	10V
C101	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C102	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C103	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C104	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C105	NCB31CK-104X	CER.CAPACITOR	0.1	16V

[VIDEO I/O]

Symbol No.	Part No.	Part Name	Description	
C106	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C107	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C108	NEH91EM-475X	E.CAPACITOR	4.7	25V
C109	NEH91EM-475X	E.CAPACITOR	4.7	25V
C110	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C111	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C112	NEH91CM-476X	E.CAPACITOR	47	16V
C113	NEH71AM-107X	E.CAPACITOR	100	10V
C114	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C115	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C116	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C117	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C118	NEH71AM-107X	E.CAPACITOR	100	10V
C119	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C120	NEH91EM-475X	E.CAPACITOR	4.7	25V
C121	NEH91HM-474X	E.CAPACITOR	0.47	50V
C122	NEH91HM-105X	E.CAPACITOR	1	50V
C123	NCB31EK-472X	CER.CAPACITOR	4700p	25V
C124	NEH91HM-474X	E.CAPACITOR	0.47	50V
C125	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C126	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C127	NEH91HM-105X	E.CAPACITOR	1	50V
C128	NEH91CM-476X	E.CAPACITOR	47	16V
C129	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C130	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C131	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C132	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C133	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C134	NCB21AK-105X	CER.CAPACITOR	1	10V
C135	NCB21AK-105X	CER.CAPACITOR	1	10V
C136	NDC31HJ-150X	CER.CAPACITOR	15p	50V (U)
C138	NDC31HJ-150X	CER.CAPACITOR	15p	50V (E)
C139	NDC31HJ-471X	CER.CAPACITOR	470p	50V
C140	NEH71AM-107X	E.CAPACITOR	100	10V
C141	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C142	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C146	NEH90JM-107X	E.CAPACITOR	100	6.3V
C147	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C148	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C149	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C150	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C151	NEH90JM-107X	E.CAPACITOR	100	6.3V
C152	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C153	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C154	NEH71AM-107X	E.CAPACITOR	100	10V
C155	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C156	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C160	NEH90JM-107X	E.CAPACITOR	100	6.3V
C161	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C162	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C163	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C164	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C165	NEH90JM-107X	E.CAPACITOR	100	6.3V
C166	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C167	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C168	NEH71AM-107X	E.CAPACITOR	100	10V
C169	NEH71AM-107X	E.CAPACITOR	100	10V
C170	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C171	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C172	NEH71AM-107X	E.CAPACITOR	100	10V
C173	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C174	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C175	NEH90JM-107X	E.CAPACITOR	100	6.3V
C176	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C177	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C178	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C179	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C180	NEH90JM-107X	E.CAPACITOR	100	6.3V
C181	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C182	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C183	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C184	NDC31HJ-470X	CER.CAPACITOR	47p	50V
C185	NDC31HJ-220X	CER.CAPACITOR	22p	50V

Symbol No.	Part No.	Part Name	Description	
C186	NDC31HJ-470X	CER.CAPACITOR	47p	50V
C187	NBE21VM-224X	TAN.CAPACITOR	0.22	35V
C188	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C189	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C190	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C191	NEH71AM-107X	E.CAPACITOR	100	10V
C192	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C193	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C194	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C195	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C197	NEH71AM-107X	E.CAPACITOR	100	10V
C198	NEH71AM-107X	E.CAPACITOR	100	10V
C199	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C200	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C204	NEH90JM-107X	E.CAPACITOR	100	6.3V
C205	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C206	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C207	NEH90JM-107X	E.CAPACITOR	100	6.3V
C208	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C209	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C210	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C211	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C212	NDC31HJ-470X	CER.CAPACITOR	47p	50V
C213	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C214	NDC31HJ-470X	CER.CAPACITOR	47p	50V (E)
C215	NBE21VM-224X	TAN.CAPACITOR	0.22	35V
C216	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C217	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C218	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C219	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C220	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C221	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C222	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C223	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C224	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C225	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C226	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C227	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C228	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C229	NEH90JM-476X	E.CAPACITOR	47	6.3V
C230	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C231	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C232	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C233	NEH90JM-476X	E.CAPACITOR	47	6.3V
C234	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C235	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C236	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C237	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C238	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C252	NEH91HM-105X	E.CAPACITOR	1	50V
C301	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C302	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C303	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C304	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C305	NEH71CM-106X	E.CAPACITOR	10	16V
C306	NEH71CM-106X	E.CAPACITOR	10	16V
C307	NEH71CM-106X	E.CAPACITOR	10	16V
C308	NEH71CM-106X	E.CAPACITOR	10	16V
C309	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C310	NEH71CM-106X	E.CAPACITOR	10	16V
C311	NEH71CM-106X	E.CAPACITOR	10	16V
C312	NEH71CM-106X	E.CAPACITOR	10	16V
C313	NEH71CM-106X	E.CAPACITOR	10	16V
C314	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C315	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C316	NEH90JM-107X	E.CAPACITOR	100	6.3V
C317	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C318	NEH71CM-106X	E.CAPACITOR	10	16V
C319	NEH71CM-106X	E.CAPACITOR	10	16V
C320	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C321	NEH90JM-107X	E.CAPACITOR	100	6.3V
C322	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C323	NCB31HK-103X	CER.CAPACITOR	0.01	50V

Symbol No.	Part No.	Part Name	Description	
C324	NEH90JM-107X	E.CAPACITOR	100	6.3V
C325	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C326	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C327	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C328	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C329	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C340	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C341	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C342	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C343	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C344	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C345	NEH90JM-476X	E.CAPACITOR	47	6.3V
C346	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C347	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C348	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C349	NEH90JM-107X	E.CAPACITOR	100	6.3V
C350	NBE41DM-106X	TAN.CAPACITOR	10	20V
C351	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C352	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C353	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C354	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C355	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C356	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C357	QEDS0JM-108	E.CAPACITOR	1000	6.3V
C358	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C359	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C360	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C361	NBE41DM-106X	TAN.CAPACITOR	10	20V
C362	QEDS0JM-108	E.CAPACITOR	1000	6.3V
C363	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C364	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C366	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C367	NCB41CM-106X	CER.CAPACITOR	10	16V
C368	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C369	NEH91CM-476X	E.CAPACITOR	47	16V
C370	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C371	NEH91CM-476X	E.CAPACITOR	47	16V
C374	NDC31HJ-270X	CER.CAPACITOR	27p	50V
C375	NDC31HJ-270X	CER.CAPACITOR	27p	50V
C376	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C377	NEH90JM-107X	E.CAPACITOR	100	6.3V
C378	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C379	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C380	NEH90JM-107X	E.CAPACITOR	100	6.3V
C381	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C382	NEH91EM-475X	E.CAPACITOR	4.7	25V
C383	NEH91EM-475X	E.CAPACITOR	4.7	25V
C384	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C385	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C386	NEH90JM-107X	E.CAPACITOR	100	6.3V
C387	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C388	NEH91EM-475X	E.CAPACITOR	4.7	25V
C389	NEH91EM-475X	E.CAPACITOR	4.7	25V
C390	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C391	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C392	NEH90JM-107X	E.CAPACITOR	100	6.3V
C393	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C394	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C396	NDC31HJ-180X	CER.CAPACITOR	18p	50V
C397	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C398	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C399	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C400	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C401	NEH90JM-107X	E.CAPACITOR	100	6.3V
C402	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C403	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C404	NEH90JM-107X	E.CAPACITOR	100	6.3V
C405	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C406	NEH91HM-105X	E.CAPACITOR	1	50V
C407	NEH90JM-107X	E.CAPACITOR	100	6.3V
C408	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C409	NEH90JM-107X	E.CAPACITOR	100	6.3V
C410	NCB31HK-103X	CER.CAPACITOR	0.01	50V

Symbol No.	Part No.	Part Name	Description	
C411	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C412	NEH90JM-107X	E.CAPACITOR	100	6.3V
C413	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C414	NEH91EM-475X	E.CAPACITOR	4.7	25V
C415	NEH91EM-475X	E.CAPACITOR	4.7	25V
C416	NEH91EM-475X	E.CAPACITOR	4.7	25V
C417	NDC31HJ-5R0X	CER.CAPACITOR	5p	50V
C418	NDC31HJ-470X	CER.CAPACITOR	47p	50V
C419	NEH90JM-107X	E.CAPACITOR	100	6.3V
C420	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C421	NEH90JM-107X	E.CAPACITOR	100	6.3V
C422	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C423	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C424	NEH90JM-107X	E.CAPACITOR	100	6.3V
C425	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C426	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C427	NCB41CM-106X	CER.CAPACITOR	10	16V
C428	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C429	NEH90JM-476X	E.CAPACITOR	47	6.3V
C430	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C431	NCB41CM-106X	CER.CAPACITOR	10	16V
C432	NCB41CM-106X	CER.CAPACITOR	10	16V
C433	NCB41CM-106X	CER.CAPACITOR	10	16V
C434	NDC31HJ-220X	CER.CAPACITOR	22p	50V
C501	NCB21AK-105X	CER.CAPACITOR	1	10V
C502	NCB21AK-105X	CER.CAPACITOR	1	10V
C503	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C504	NCB21AK-105X	CER.CAPACITOR	1	10V
C505	NCB21AK-105X	CER.CAPACITOR	1	10V
C506	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C507	NBE21EM-474X	TAN.CAPACITOR	0.47	25V
C508	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C509	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C510	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C511	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C512	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C513	NCB11AK-225X	CER.CAPACITOR	2.2	10V
C514	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C515	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C516	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C517	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C518	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C519	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C520	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C521	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C522	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C523	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C524	NCB10JM-335X	CER.CAPACITOR	3.3	6.3V
C525	NCB21AK-105X	CER.CAPACITOR	1	10V
C536	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C537	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C538	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C539	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C540	NCB10JM-335X	CER.CAPACITOR	3.3	6.3V
C541	NCB10JM-335X	CER.CAPACITOR	3.3	6.3V
C542	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C543	NEH91EM-475X	E.CAPACITOR	4.7	25V
C544	NEH91EM-475X	E.CAPACITOR	4.7	25V
C547	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C548	NEH91CM-336X	E.CAPACITOR	33	16V
C549	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C550	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C551	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C552	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C553	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C554	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C555	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C556	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C557	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C558	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C559	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C560	NDC31HJ-330X	CER.CAPACITOR	33p	50V
C561	NCB31CK-473X	CER.CAPACITOR	0.047	16V

[VIDEO I/O]

Symbol No.	Part No.	Part Name	Description	
C562	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C563	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C564	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C565	NDC31HJ-560X	CER.CAPACITOR	56p	50V
C566	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C567	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C568	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C569	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C570	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C571	NCB10JM-335X	CER.CAPACITOR	3.3	6.3V
C572	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C573	NDC31HJ-151X	CER.CAPACITOR	150p	50V (U)
	NDC31HJ-121X	CER.CAPACITOR	120p	50V (E)
C574	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C575	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C576	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C577	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C578	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C579	NDC31HJ-180X	CER.CAPACITOR	18p	50V (U)
	NDC31HJ-270X	CER.CAPACITOR	27p	50V (E)
C580	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C581	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C582	NDC31HJ-1R0X	CER.CAPACITOR	1p	50V
C583	NCB31HK-222X	CER.CAPACITOR	2200p	50V
C584	NDC31HJ-1R0X	CER.CAPACITOR	1p	50V
C585	NCB21AK-105X	CER.CAPACITOR	1	10V
C586	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C587	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C588	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C589	NDC31HJ-150X	CER.CAPACITOR	15p	50V
C590	NCB31HK-103X	CER.CAPACITOR	0.01	50V
C591	NDC31HJ-180X	CER.CAPACITOR	18p	50V
C592	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C593	NDC31HJ-102X	CER.CAPACITOR	1000p	50V
C594	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C595	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C596	NEH91EM-475X	E.CAPACITOR	4.7	25V
C597	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C598	NDC31HJ-151X	CER.CAPACITOR	150p	50V (U)
	NDC31HJ-121X	CER.CAPACITOR	120p	50V (E)
C599	NCB10JM-335X	CER.CAPACITOR	3.3	6.3V
C600	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C601	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C602	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C603	NCB31CK-473X	CER.CAPACITOR	0.047	16V
C604	NDC31HJ-101X	CER.CAPACITOR	100p	50V
C605	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C606	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C607	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C608	QDC31HJ-221	CER.CAPACITOR	220p	50V
C609	QDX11EJ-103	CER.CAPACITOR	0.01	25V
C717	NCB11AK-225X	CER.CAPACITOR	2.2	10V
L1	NQL114K-220X	COIL	22uH	
L2	NQL114K-220X	COIL	22uH	
L3	NQL114K-220X	COIL	22uH	
L4	NQL114K-220X	COIL	22uH	
L5	NQL114K-220X	COIL	22uH	
L6	NQL024J-100X	COIL	10uH	
L7	NQL024J-100X	COIL	10uH	
L8	NQL114K-220X	COIL	22uH	
L9	NQL114K-220X	COIL	22uH	
L10	NQL024J-100X	COIL	10uH	
L11	NQL024J-100X	COIL	10uH	
L12	NQL114K-220X	COIL	22uH	
L13	NQL114K-220X	COIL	22uH	
L15	NQL114K-220X	COIL	22uH	
L34	NQL114K-220X	COIL	22uH	
L49	NQL024J-120X	COIL	12uH	
L101	NQL114K-220X	COIL	22uH	
L102	NQL114K-220X	COIL	22uH	
L104	NQL114K-220X	COIL	22uH	
L105	NQL114K-220X	COIL	22uH	

Symbol No.	Part No.	Part Name	Description	
L107	NQL114K-220X	COIL	22uH	
L108	NQL114K-220X	COIL	22uH	
L109	NQL114K-220X	COIL	22uH	
L110	NQL114K-220X	COIL	22uH	
L111	NQL114K-220X	COIL	22uH	
L112	NQL114K-220X	COIL	22uH	
L114	NQL114K-220X	COIL	22uH	
L115	NQL114K-220X	COIL	22uH	
L116	NQL114K-220X	COIL	22uH	
L201	NQL114K-220X	COIL	22uH	
L202	NQL114K-220X	COIL	22uH	
L203	NQL114K-220X	COIL	22uH	
L204	NQL114K-220X	COIL	22uH	
L205	NQL114K-220X	COIL	22uH	
L206	NQL114K-220X	COIL	22uH	
L207	NQL114K-220X	COIL	22uH	
L208	NQL114K-220X	COIL	22uH	
L209	NQL114K-220X	COIL	22uH	
L210	NQL114K-220X	COIL	22uH	
L211	NQL114K-220X	COIL	22uH	
L212	NQL114K-220X	COIL	22uH	
L213	NQL114K-220X	COIL	22uH	
L214	NQL114K-220X	COIL	22uH	
L215	NQL114K-220X	COIL	22uH	
L216	NQL024J-330X	COIL	33uH	
L218	NQL114K-220X	COIL	22uH	
L303	NQL114K-220X	COIL	22uH	
L304	NQL114K-220X	COIL	22uH	
L305	NQL024J-R68X	COIL	0.68uH	
LC1	NQR0273-001	LC FILTER		
LC2	NQR0234-001X	LC FILTER		
LC3	NQR0234-001X	LC FILTER		
LC4	NQR0234-001X	LC FILTER		
LC5	NQR0234-001X	LC FILTER		
LC6	NQR0089-001X	LC FILTER		(U)
	NQR0090-001X	LC FILTER		(E)
LC7	NQR0206-001	LC FILTER		
LC8	SCV2030-001W	LC FILTER		
LC9	SCV2031-001V	LC FILTER		
LC10	PGZ01972Z	LC FILTER		
LC11	PGZ01972Z	LC FILTER		
LC12	PGZ01972Z	LC FILTER		
LC13	PGZ01972Z	LC FILTER		
LC14	PGZ01972Z	LC FILTER		
LC15	PGZ01972Z	LC FILTER		
LC16	PGZ01972Z	LC FILTER		
LC17	PGZ01972Z	LC FILTER		
LC18	PGZ01972Z	LC FILTER		
LC19	PGZ01972Z	LC FILTER		
LC20	PGZ01972Z	LC FILTER		
LC21	PGZ01972Z	LC FILTER		
LC22	NQR0122-001X	LC FILTER		
LC23	NQR0369-001X	LC FILTER		(U)
	NQR0368-001X	LC FILTER		(E)
LC24	NQR0369-001X	LC FILTER		(U)
	NQR0368-001X	LC FILTER		(E)
LC25	PGZ01972Z	LC FILTER		
LC26	NQR0365-001X	LC FILTER		
LC27	PGZ01972Z	LC FILTER		
LC28	PGZ01972Z	LC FILTER		
LC101	PGZ01972Z	LC FILTER		
LC102	PGZ01972Z	LC FILTER		
LC103	PGZ01972Z	LC FILTER		
LC104	PGZ01972Z	LC FILTER		
X1	QAX0097-001	CRYSTAL	503.5kHz	(U)
	QAX0096-001	CRYSTAL	500kHz	(E)
X2	QAX0597-001	CRYSTAL	3.579545MHz	(U)
X4	QAX0598-001	CRYSTAL	4.433619MHz	(E)
X5	NAX0022-001X	CRYSTAL	14.31818MHz	(U)
	NAX0021-001X	CRYSTAL	17.734475MHz	(E)
X6	QAX0341-001	CRYSTAL	54MHz	

Symbol No.	Part No.	Part Name	Description
CN7	QGA1501C2-06W	CONNECTOR	6PIN
CN9	QGA1501C2-08W	CONNECTOR	8PIN
CN11	QGF0508C1-24W	CONNECTOR	24PIN
CN18	QGF0508C1-18W	CONNECTOR	18PIN
CN19	QGA1501C2-09W	CONNECTOR	9PIN
CN20	QGA1501C2-10W	CONNECTOR	10PIN
CN21	QGA1501C2-07W	CONNECTOR	7PIN
TP1	NNZ0009-001X	TEST POINT	TP1-54
K1	SCV2662-027	FERRITE BEADS	K1-4

6.15 FRONT-SUB BOARD ASSEMBLY PARTS LIST [16]

SLK2112-01-B0A(U)

SLK2112-01-A0B(E) [16]

Symbol No.	Part No.	Part Name	Description	
IC1	NJU6433FB2	I.C.(M)	JRC	
IC2	BA6138F-X	I.C.(M)	ROHM	
R1	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R2	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R3	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R4	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R5	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R6	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R7	NRSA63D-154X	M.G.RESISTOR	150k	1/16W
R8	NRSA63D-154X	M.G.RESISTOR	150k	1/16W
R9	NRSA63D-154X	M.G.RESISTOR	150k	1/16W
R14	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R15	NRSA63D-221X	M.G.RESISTOR	220	1/16W
R16	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W
R17	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (E)
R18	NRSA63J-0R0X	M.G.RESISTOR	0	1/16W (U)
C1	NCB31CK-104X	CER.CAPACITOR	0.1	16V
C2	NCB41CM-106X	CER.CAPACITOR	10	16V
C3	NBE21CM-475X	TAN.CAPACITOR	4.7	16V
C4	NBE21CM-475X	TAN.CAPACITOR	4.7	16V
S1	NSW0005-001X	TACT SWITCH	MENU	
S2	NSW0005-001X	TACT SWITCH	ADVANCE	
S3	NSW0005-001X	TACT SWITCH	PRESET	
S4	NSW0005-001X	TACT SWITCH	HOLD	
S5	NSW0005-001X	TACT SWITCH	SHIFT	
S6	NSW0005-001X	TACT SWITCH	A.DUB	
CN1	QGB2028L2-10	CONNECTOR	10PIN	
CN2	QGB2028L2-10	CONNECTOR	10PIN	
CN3	QGB2028L2-10	CONNECTOR	10PIN	
DA1	QLL0063-002	BACK LIGHT ASSY		
DA2	QLD0102-001	L.C.D. PANEL		

6.16 REAR5 BOARD ASSEMBLY PARTS LIST [17]

SLK2100-05-A0B [17]

Symbol No.	Part No.	Part Name	Description	
R1	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
R2	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
R3	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
R4	NRSA02J-0R0X	M.G.RESISTOR	0	1/10W
J1	QNZ0097-001	DV CONNECTOR	DV IN/OUT	
CN1	QGA1501F1-06	CONNECTOR	6PIN	
K1	PGZ01693-009Z	FERRITE BEADS	K1-2	

6.17 TR BOARD ASSEMBLY PARTS LIST [18]

SLK2101-02-A0C [18]

Symbol No.	Part No.	Part Name	Description
CN1	QGA1501F2-03W	CONNECTOR	3PIN

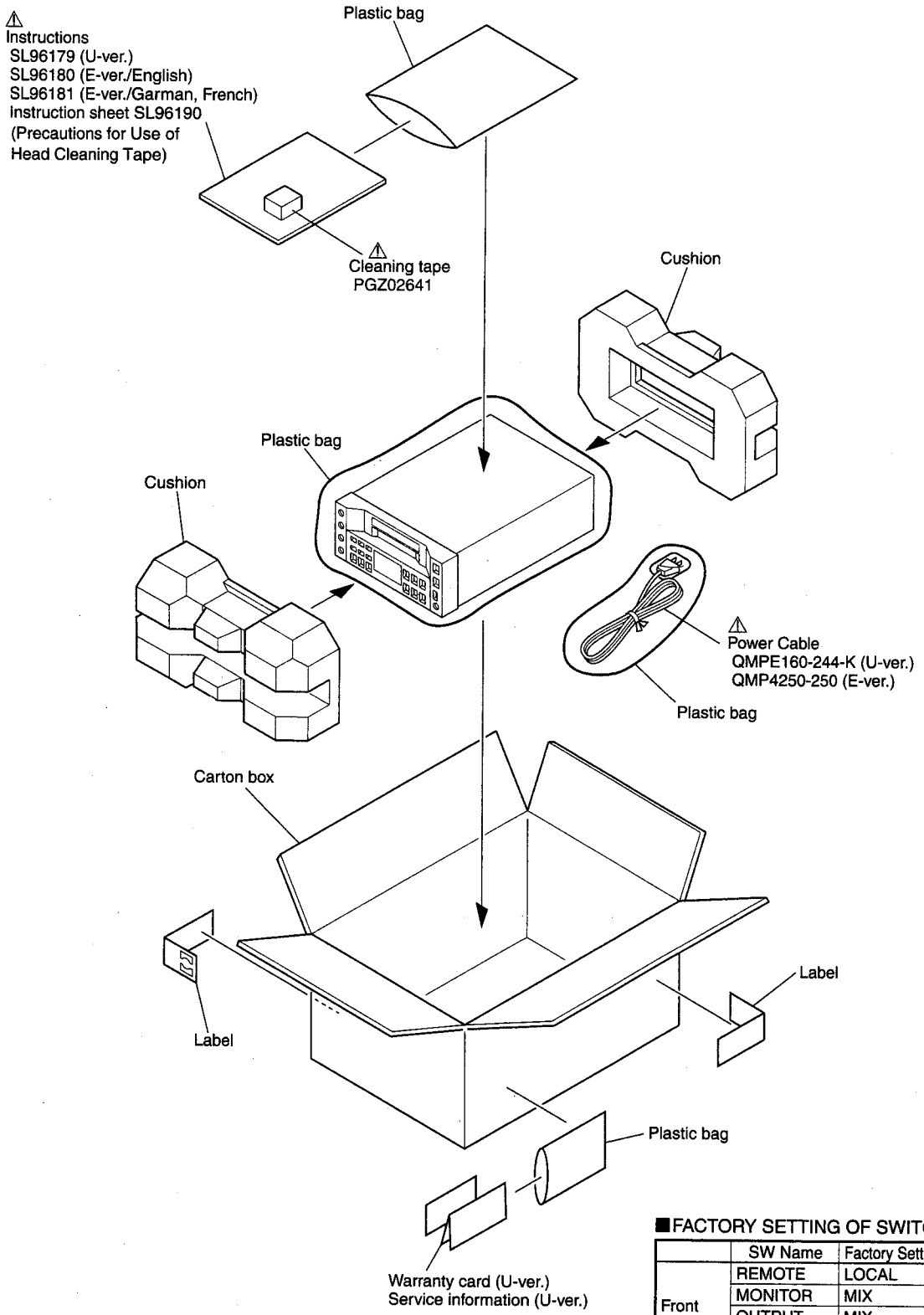
6.18 TRANSMIT BOARD ASSEMBLY PARTS LIST [19]

SLK3030-A0A [19]

Symbol No.	Part No.	Part Name	Description	
IC1	DS90LV032ATM-X	I.C.(M)	NATIONAL SEMICO	
R1	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R2	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R3	NRSA63J-101X	M.G.RESISTOR	100	1/16W
R4	NRSA63J-221X	M.G.RESISTOR	220	1/16W
C1	NCB21AK-105X	CER.CAPACITOR	1	10V
C2	NCB21AK-105X	CER.CAPACITOR	1	10V
C3	NCB31CK-223X	CER.CAPACITOR	0.022	16V
C4	NCB31EK-103X	CER.CAPACITOR	0.01	25V
LC1	PGZ01972Z	LC FILTER		
CN1	QGA1501F2-07W	CONNECTOR	7PIN	
K1	SCV2662-027	FERRITE BEADS	K1-3	

SECTION 7
PACKING

7.1 PACKING ASSEMBLY



■FACTORY SETTING OF SWITCH

	SW Name	Factory Setting
Front	REMOTE	LOCAL
	MONITOR	MIX
	OUTPUT	MIX
	COUNTER	TC
Rear	TIMER	OFF