

Service Manual

General Information

Operating Instructions

Disassembly Procedures

Maintenance Chart

Electrical Adjustment

Block Diagrams

Schematic Diagram & Circuit Board Diagrams

Exploded Views & Replacement Parts List

SVHS / VHS Hi-Fi

Video Cassette Recorder

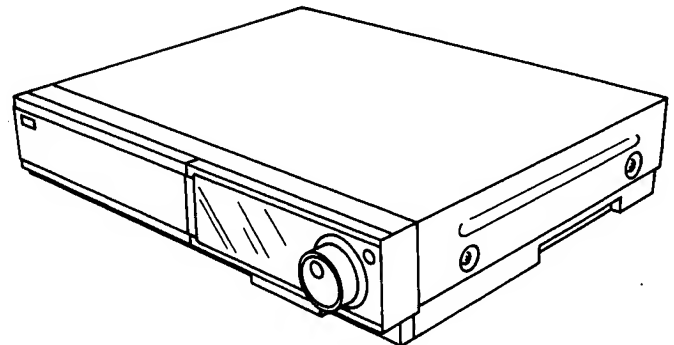
AG-1980P

K-MECHANISM

Please use this service manual together with the service manual for K-Mechanism
(Order No. VSD9401M242)

CONTENTS

SPECIFICATIONS	1-1
SAFETY PRECAUTIONS	1-2
SECTION 1. GENERAL INFORMATION	
1-1. SERVICE INFORMATION	1-3
1-2. SELF TEST INDICATION DISPLAY	1-5
1-3. SERVICE INFORMATION DISPLAY	1-6
1-4. OPERATING INSTRUCTIONS	1-10
SECTION 2. DISASSEMBLY PROCEDURE	2-1
SECTION 3. ELECTRICAL ADJUSTMENT	
PROCEDURES	3-1
SECTION 4. ABBREVIATIONS & BLOCK DIAGRAMS	
4-1. ABBREVIATIONS	BLK-1
4-2. BLOCK DIAGRAM (SYSTEM CONTROL/ AUDIO/VIDEO)	BLK-5
SECTION 5. SCHEMATIC DIAGRAMS & CIRCUIT BOARDS	
5-1. MAIN C.B.A.	SCM-1
5-2. AUDIO (MAIN) SCHEMATIC DIAGRAM	SCM-2
5-3. VIDEO (MAIN) SCHEMATIC DIAGRAM	SCM-2
5-4. RF INTERFACE SCHEMATIC DIAGRAM	SCM-5
5-5. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM	SCM-6
5-6. SUB VIDEO	SCM-8
5-8. VIDEO CONTROL	SCM-10
5-10. SUB SERVO	SCM-12
5-12. MEMORY	SCM-14
5-14. AUDIO 1	SCM-17
5-16. AUDIO 2	SCM-18
5-18. RF AMP	SCM-19
5-20. INPUT/OUTPUT	SCM-20



5-22. HEAD AMP	SCM-21
5-24. TIMER	SCM-22
5-26. VR	SCM-23
5-27. FRONT JACK SCHEMATIC DIAGRAM	SCM-23
5-28. HEAD PHONE & MIC JACK SCHEMATIC DIAGRAM	SCM-23
5-29. VR, FRONT JACK & MIC JACK C.B.A.	SCM-23
5-30. POWER	SCM-24
5-32. JOG/SHUTTLE C.B.A.	SCM-24
5-34. DOOR/PANEL SCHEMATIC DIAGRAM	SCM-24
5-35. DIGITAL Y/C SCHEMATIC DIAGRAM	SCM-25
5-36. ANALOG Y/C SCHEMATIC DIAGRAM	SCM-26
5-37. LUMINANCE & CHROMINANCE PACK C.B.A.	SCM-29
5-38. ANALOG Y/C SUB C.B.A.	SCM-29
5-39. INTERCONNECTION SCHEMATIC DIAGRAM	SCM-30
SECTION 6. EXPLODED VIEWS & PARTS LIST	
6-1. EXPLODED VIEW MECHANICAL REPLACEMENT PARTS LIST	PARTS-1
6-2. ELECTRICAL REPLACEMENT PARTS LIST	PARTS-7

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in serious injury or death.

INTRODUCTION

This Service Manual contains the technical information which service personnel to understand and service the Panasonic SVHS Video Cassette Recorder model AG-1980P. Please use this service manual together with the Service Manual for mechanical adjustment and maintenance procedures of K-Mechanism (Order No. VSD9401M242).

Specifications

AG-1980P

Information for Your Safety

Power Source:	120 V AC, 50-60 Hz
Power Consumption:	Approx. 33 watts

Video Recording System:	2 rotary heads, helical scanning system
Video Heads:	4 heads
Tape Speed:	SP; 33.3 mm/sec. SLP; 11.1 mm/sec.
Tape Format:	S-VHS/VHS tape
Record/Playback Time:	SP; 120 min. with NV-T120 SLP; 360 min. with NV-T120
FF/REW Time:	Less than 3 min. with NV-T120

VIDEO

Television System:	EIA; Standard (525 lines, 60 fields) NTSC color signal
Modulation System:	Luminance; FM azimuth recording Color signal; converted subcarrier phase shift recording
Input Level:	VIDEO IN

Front (PHONO);	1.0 Vp-p,	75 ohm	
Rear (BNC);	1.0 Vp-p,	75 ohm	
S-VIDEO IN (4P DIN);	Y: 1.0 Vp-p,	75 ohm	
	C: 0.286 Vp-p,	75 ohm	
Output Level:	VIDEO OUT (BNC);	1.0 Vp-p,	75 ohm
	S-VIDEO OUT (4P DIN);	Y: 1.0 Vp-p,	75 ohm
		C: 0.286 Vp-p,	75 ohm
RF Modulated;	VHF channel US 3 or 4,		75 ohm, terminated

AUDIO

Input Level:	AUDIO IN (PHONO);	-10 dBV,	47 kohm
	MIC IN (M3×1);	-70 dBV	4.7 kohm
Output Level:	AUDIO OUT (PHONO);	-8 dBV,	1 kohm
	HEADPHONES;	-60 - -30 dBV,	8 ohm
Audio Track:	1 track (Normal), 2 channels (Hi-Fi sound)		

Video Horizontal Resolution:	Color; more than 240 lines (VHS/SP) more than 400 lines (S-VHS/SP)
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Signal-to-Noise Ratio:	Video; 44 dB (VHS/SP) 47 dB (S-VHS/SP)
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Dynamic Range:	Audio; 90 dB (Hi-Fi audio track)
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Audio Frequency Response:	50 Hz - 10 kHz (Normal) 20 Hz - 20 kHz (Hi-Fi audio track)
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Operating Temperature:	5°C - 40°C
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Operating Humidity:	35% - 80%
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Weight:	14 ⁷ / ₁₆ lbs (6.5 kg)
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Dimensions:	16 ¹⁵ / ₁₆ " (W) × 4 ³ / ₈ " (H) × 14 ¹⁵ / ₁₆ " (D)	Weight and dimensions shown are approximate. Specifications are subject to change without notice.
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SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohm meter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M ohm and 5.2M ohm. When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

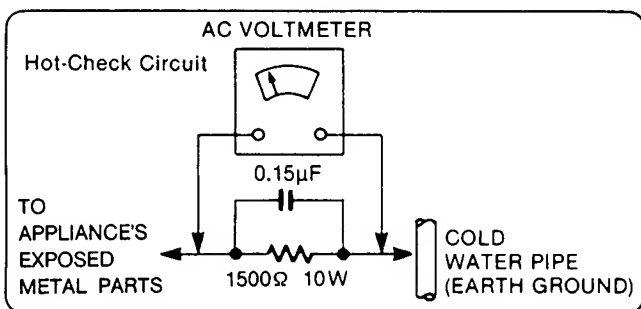


Figure 1

LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15μF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

SECTION 1. GENERAL INFORMATION

1-1. SERVICE INFORMATION

1-1-1. New GLDD Cylinder Unit

Replacement

The AG-1980 has been introduced new cylinder unit.

《NEW GLDD CYLINDER》

The construction of New GLDD Cylinder has been designed simpler than current cylinder, and the general performance has been improved.

The feature of New GLDD Cylinder.

GLDD enables less working time to replace upper cylinder unit and cylinder unit due to the following reasons.

- 1) No Soldering
- 2) No Screws

Note: GLDD stands for following.

G: GLDD has been developed and introduced from VCRs using the G-Mechanism.

LDD: Liquid Direct Drive.

This cylinder unit replacement procedure as below.

1. Unscrew the screw (A).
2. Remove the Cylinder Angle.
3. Unscrew the screw (B) for fixing the Earth Plate.
4. Remove the Earth Plate.
5. Unscrew 3 screws (C) of the New GLDD Cylinder Unit from bottom of Mechanism chassis.
6. Carefully lift the New GLDD Cylinder Unit.

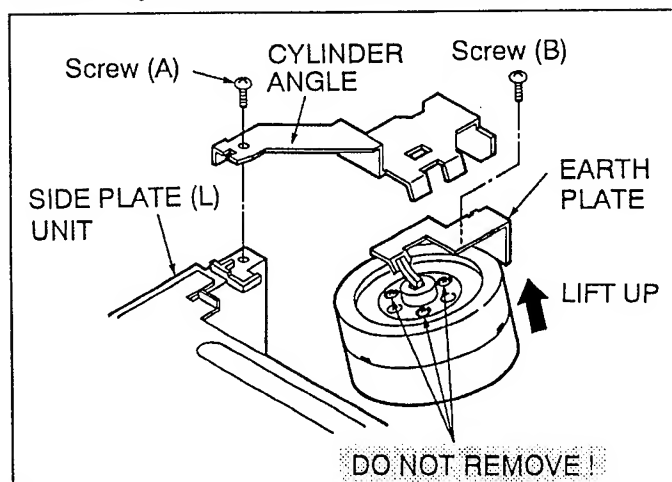


Fig. S1-1

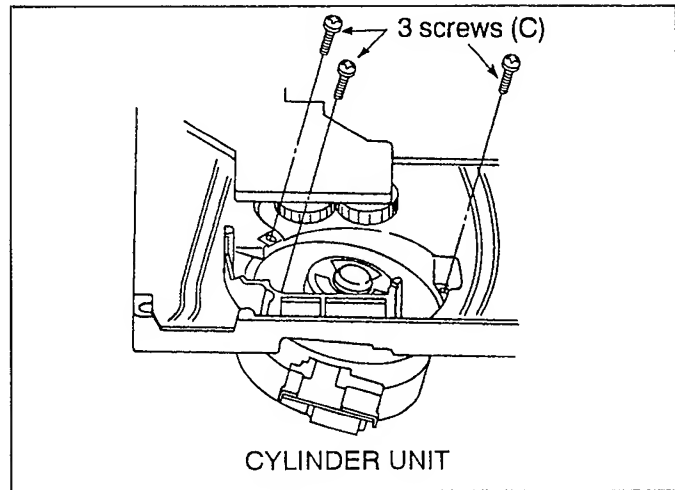


Fig. S1-2

1-1-2. Upper Cylinder Replacement

<Disassembly>

1. Unscrew the screw (A).
2. Remove the Cylinder Angle.
3. Unscrew the screw (B) for fixing the Earth Plate.
4. Remove the Earth Plate.
5. Carefully lift the Upper Cylinder Unit.

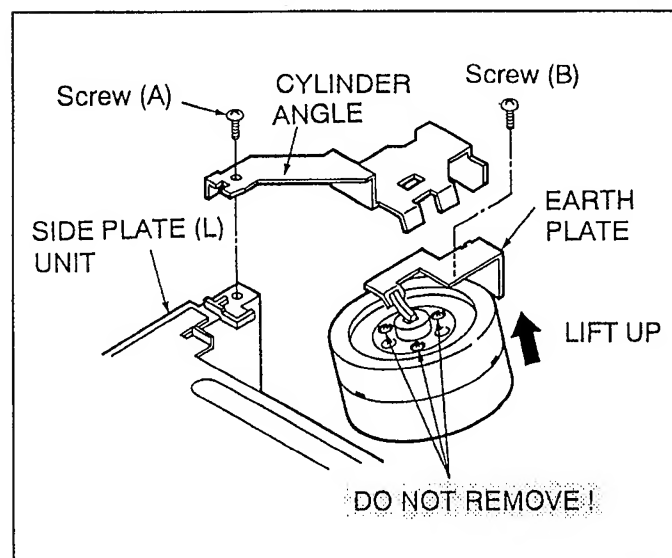


Fig. S2

Note: Do not remove 3 screws on the Upper Cylinder and the Rotor Magnet which fixed by 3 screws on the Upper Cylinder.

If it is removed, refer to following method.

1. Install the Rotor Magnet so that the hole (C) on the Rotor Magnet fits to the small projection (D) on the bottom of the Upper Cylinder.
2. Tighten 3 screws on the top of the Upper Cylinder.

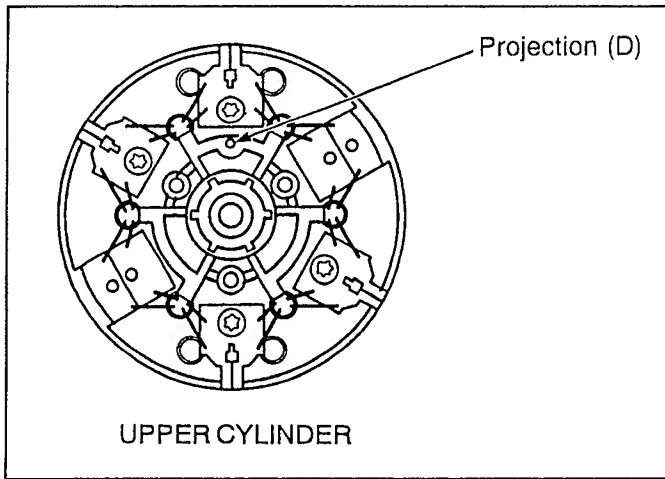


Fig. S3-1

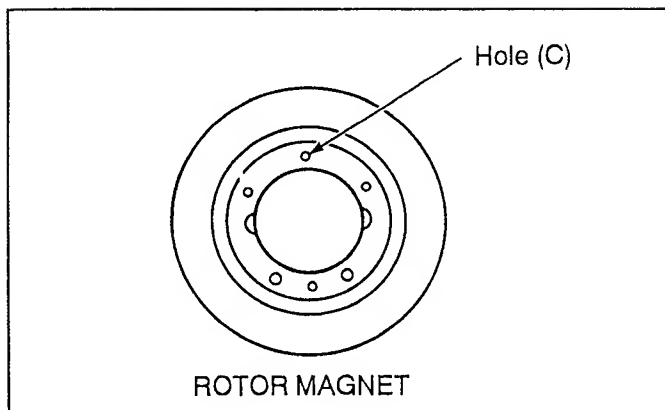


Fig. S3-2

<Assembly>

When reassembling, perform the steps in the reverse order of the disassembly method.

1-2. Cassette Tape Removal

1) Hand Operation

1. Take out the mechanism from the unit.
2. Turn the Worm Gear manually, moving the loading post to the unloading position.
3. Turn the capstan Rotor Unit clockwise to take up the tape.
4. Turn the Worm Gear again to eject the cassette.

2) Battery Operation

1. Connect the battery (Manganese type, (AA) 3 pcs. / +4.5V) to P1503 on the Mechanism Connection C.B.A..
2. After moving the Loading Post to unloaded position, disconnect the battery to stop the Loading Motor.
3. Turn the Capstan to clockwise to take up the tape.
4. Reconnect the battery to P1503 and eject the cassette.

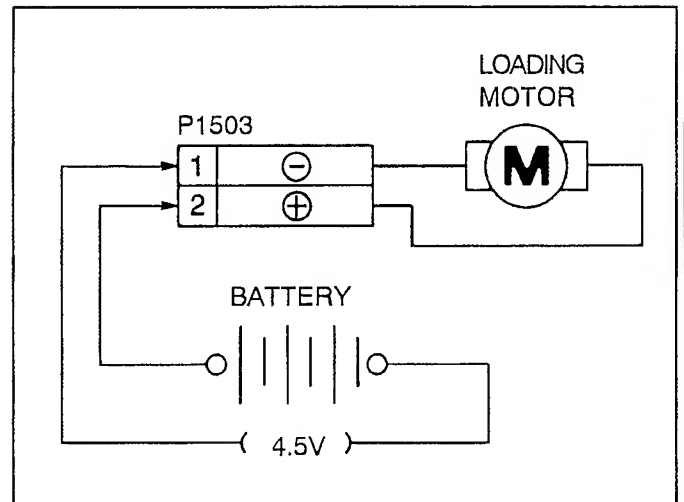


Fig. S4

If the cassette tape can not be removed by the above method, remove it by the following method.

- 1) Remove the Top Panel. (see disassembly method).
- 2) remove the Front Panel Unit.
- 3) Lift up the Pinch Arm after removing a spring.
- 4) Push the P5 Arm and remove the tape from tape transportation (P3, P2, P5 and P1 Posts).
- 5) Turn the Capstan Rotor to take up the tape.
- 6) Remove a screw from the Side Plate (R) Unit to disconnect the Rack Gear from the Carriage Connection Gear.
- 7) Take out the cassette tape from the Cassette Compartment.

1-3. Channel Memory IC Initialization

(no IC?)

When replacing the channel memory IC, its IC should be initialized.

Meaning of "Initialization" is to erase the SKIP CH, in other words the number of channel position is the same as displayed channel.

- 1) Press the CH UP or DOWN button so that channel display indicates CH2.
- 2) Connect the jumper wire twice to P6501 Pin 10 and Pin 12.
- 3) Channel indication light off then indicated CH2.

Note:

It should be performed before tuning. Do not turn off the power source during initialization or 1 second after initialized.

1-2. SELF TEST INDICATION DISPLAY

This VCR has a self-diagnosis and display function. If the VCR detects trouble during installation or during use, one of the following fault indication code will automatically appear in the VCR display. Fault indication codes are displayed in the form of single English letter following by two number, as example "H01".

Note:

1. The indication "U" is displayed on the FIP while power remains on.
2. Otherwise, the indication "H" or "F" is displayed on the FIP, and the power is automatically turned off.

When the power is turned on again, the fault indication code will disappear and the unit will return to normal display mode.

3. This fault indication code will be stored in the Timer microprocessor even with the AC plug disconnected. The two digit number portion of the stored fault indication code can be redisplayed in the FIP's "second" display position (the last 2 digits on the light) by placing the unit in service mode number 2 when turning on the service information display as for example "01" or "02" etc.

If a second error occurs, only the most recent error will be displayed and stored.

4. To erase the stored fault indication code data, press the FF, REW and EJECT buttons simultaneously for 5 seconds.

INDICATION	CAUSE	REMEDY/CHECK
U10	Detect condensation (DEW) when it is used in very humid condition.	Wait until the "d" display goes off. (DEW timer: Condensation disappear + 120 min.)
U11	Head clogging during Playback mode.	Head Cleaning.
H01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder motor drive circuit.
H02	Cassette tape is not wound up during tape unloading, except Eject mode.	Check the capstan motor drive circuit.
F03	Mechanism locks during mode transition, except Eject mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the mode SW.
F04	Mechanism locks during tape unloading.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment.
F05	Cassette tape is not wound up during tape unloading in Eject mode.	1. Check the capstan motor drive circuit. 2. Check the supply/take up reel pulse.
F06	Mechanism locks after tape unloading in Eject mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment for cassette holder unit.
F09	No serial clock transmission between IC6001 and IC6503.	Check the serial clock circuit.

Fig. S5 Self-Test Indication Display

1-3. SERVICE INFORMATION DISPLAY

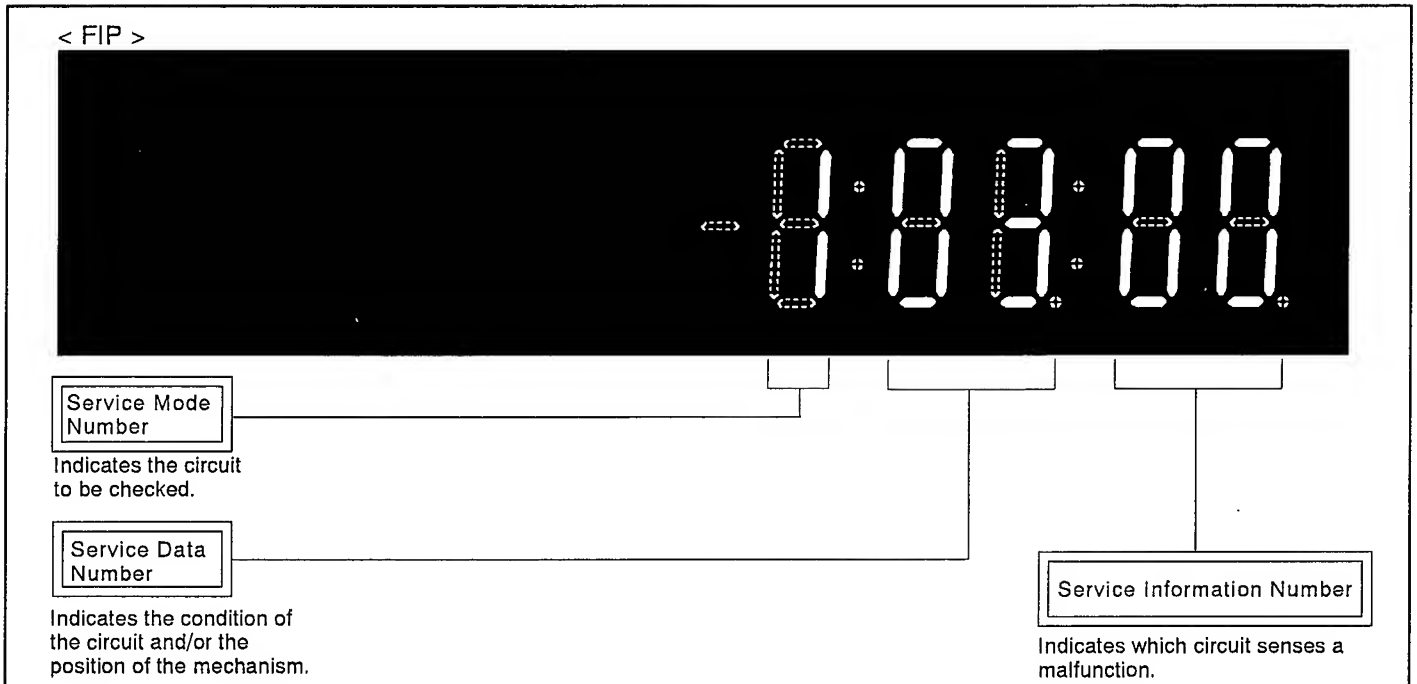


Fig. S6 Service Information Display

1-3-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number and service data number are used by the technician during repair while the service information can be used by the consumer to diagnosis malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

Service Information No.	Malfunction
00	Normal (No problem)
01	Cylinder stop
02	Reel stop
03	Stop at position other than 04 or 06. (Faulty loading motor)
04	Stop during loading
05	Faulty capstan rotation
06	Stop during cassette IN/EJECT operation
09	Main serial communication error between system control and timer IC

Fig. S7 Detail Service Information Number

1-3-2. Turning on Service Information Display

There are two ways to turn on the Service Information Display.

- 1) Press the FF, REW and EJECT buttons simultaneously.
- 2) Connect a jumper wire between TL6010 and TL6011 on the Main C.B.A. and press the FF, REW and EJECT buttons simultaneously.

In the Service Information Display, there are five digits divided into 3 functions. The first digit indicates which of the service modes. (Mode 0 and 8 are not used)

The second and third digits are service data which indicates the condition of the circuit or mechanism being checked.

The fourth digit is the service information display. It is to be used by the consumer to help determine the source of the malfunction. The service information display operates independently of the service mode and stores the fault indication in memory for as long as AC Power is supplied.

1-3-3. Use of Service Modes

MODE 1

Check that the sensor LED, supply & take-up sensor circuits, check the each sensor by blocking the light from sensor LED to either or both sensors.

MODE 2

Checks the mode switch circuit while indicating mechanism position.

MODE 3

Checks that mode switch circuit operations have been completed.

MODE 4

Checks the operation circuit. Indicates if system control microprocessor (IC6001) received the operating commands from the mode buttons of the front panel and/or remote controller.

MODE 5

Checks the capstan motor circuit. Indicates if the IC6001 has received the command to rotate the capstan motor.

MODE 6

Checks the cylinder motor circuit. Indicates if the IC6001 has received the command to rotate the cylinder motor.

MODE 7

Checks the loading/unloading operation. The loading motor rotates for loading operation while the "PLAY" button is pressing. The loading motor rotates for unloading operation while the "STOP" button is pressing. This mode reset by press the "POWER" button.

Service Data No.	Mode Button	Service Data No.	Mode Button
3n	POWER	03	FF
08	REC	02	REW
34	CH UP	06	PAUSE/STILL
35	CH DOWN	49	INDEX -
0U	PLAY	4U	INDEX +
00	STOP	-0	INPUT SELECT

Fig. S8 Service Data Display for Service MODE 4

1-3-4. Service Information Number

The service information number display is independent of the service mode display. The service information number will be stored as long as AC Power is supplied. If a second error occurs, only the most recent error will be displayed.

Service mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1	_____	00	No light detected at either sensor.	Tape not required
		01	Tape Beginning. Light to Supply Photo Sensor is blocked.	
		02	Tape End. Light to Take-up Photo Sensor is blocked.	
		03	Light detected at both sensors.	
2	_____	00	EJECT	Tape Required *1: STOP3; The Pinch Roller is on the capstan motor shaft. *2: STOP; The Pinch Roller is off the capstan motor shaft. Refer to Fig. S10 to check mechanism position and timing.
		01	Cassette-down	
		02	REV	
		03	Loading/Unloading	
		04	PLAY/REC, STILL/PAUSE, CUE, FWD SLOW, STOP3*1	
		05	STOP *2	
		06	FF/REW	
07	Intermediate position.			
3	Disregard service data displayed until mechanism operation is completed. Then the display should indicate "00".	00	Any display other than "00" indicates a fault in the mode switch circuit or system.	Tape Required
4	Display only when the operating button is pressed.	Refer to Fig. S9		Tape not required
5	Left digit only, disregard Right digit display.	Left Digit: 8, 9, u, A, -, n, L, and no display indicate that the Capstan motor "PLAY" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.	
	Right digit only, disregard Left digit display.	1, 2, 3, 4, 5, 6, 7, indicate that the Capstan motor "CUE, FF, Forward slow" commands received by IC6001.		
	Right digit only, disregard Left digit display.	8, 9, u, A, -, n, L, and no display indicate that the Capstan motor "Reverse, Rew, Reverse Slow" commands received by IC6001.		
6	Left digit only, disregard Right digit display.	1, 3, 5, 7, 9, A, n and no display indicate that the cylinder motor "ON" command received by IC6001.	Tape required. If a symbol other than those listed is displayed, a malfunction in that circuit is indicated.	

Fig. S9 Detail Data Service Numbers

1-3-5. Timing Chart from Mode SW to System control IC6001

System control IC6001 senses the mechanism position through the Mode SW.
 Fig. S17 shows the timing for Service Mode Number 2.

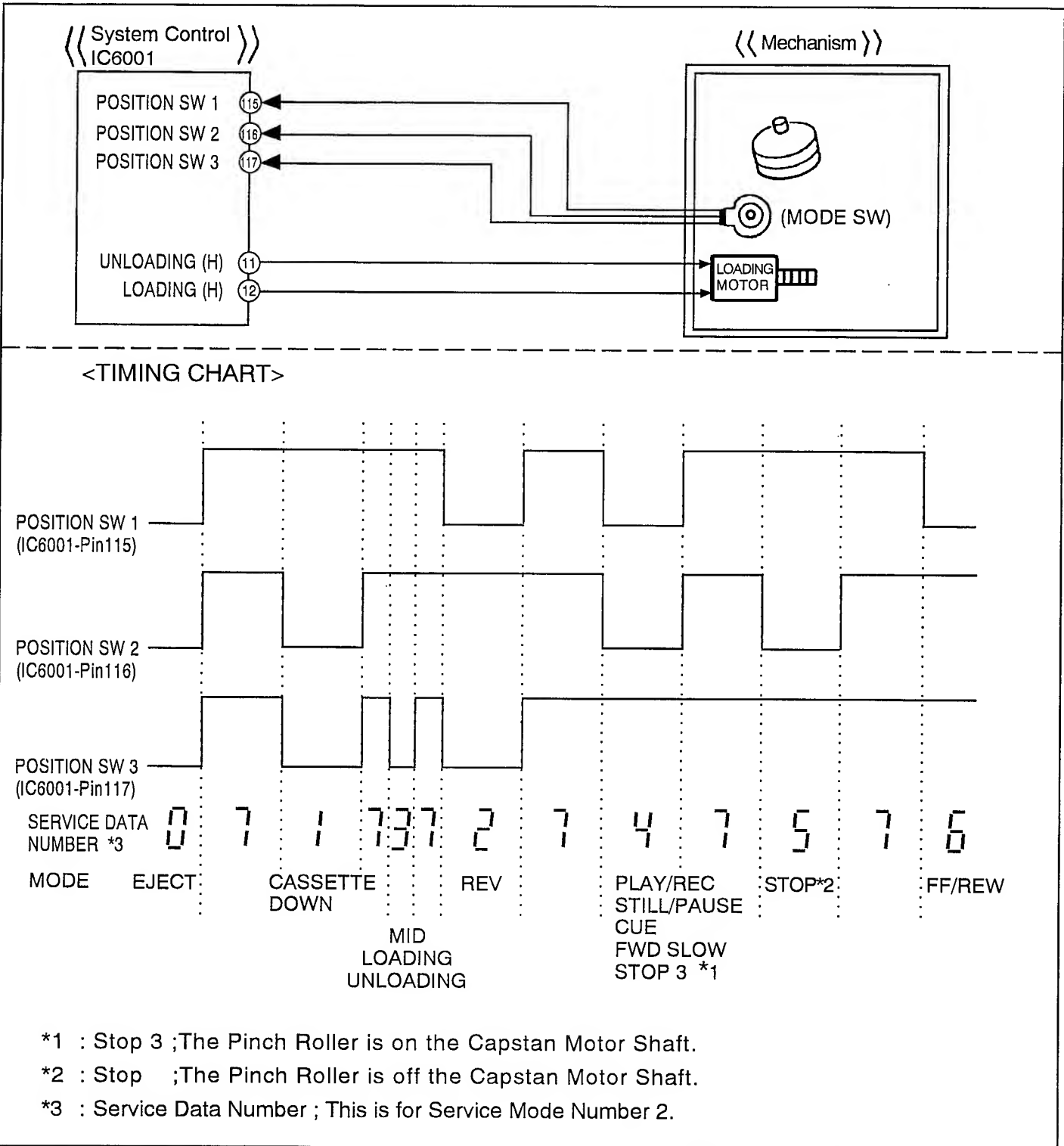


Fig. S10 Timing Chart of Mode SW

Precautions

Please read these precautions before you operate this VCR.

Cassette Compartment Door

When first unpacking the VCR, the cassette compartment door may be open partially. This is due to a safety device designed to protect the VCR from vibration during shipment; it is not a malfunction. After the AC Power Cord is connected to an AC outlet, the door returns to its original position.

Avoid Sudden Temperature Changes

If the VCR is suddenly moved from a cold to a warm place, moisture may form on the tape and inside the VCR. In such a case the Dew Indicator "D" will flash on and off and the VCR will not operate.

Humidity and Dust

Avoid places with high humidity or a lot of dust. These can damage internal parts.

Avoid Covering Ventilation Holes

The ventilation holes prevent abnormal increased temperature in the VCR. Do not block or cover these holes. Especially avoid covering the holes with soft materials such as cloth or paper.

Keep away from High Temperature

Keep the VCR away from extreme direct heat such as direct sunlight, radiators, or in closed automobiles.

Keep Magnets away

Never bring a magnet or magnetized object near the VCR because it will adversely affect the performance of the VCR.

No Fingers or Other Objects Inside

Touching internal parts of the VCR is dangerous, and may cause serious VCR damage. Do not attempt to disassemble the VCR. There are no user-serviceable parts inside.

Keep Away from Water

Keep the VCR away from flower vases, tubs, sinks, etc. CAUTION: If liquids are spilled into the VCR, serious damage may occur. If you spill any liquid into the VCR, immediately disconnect the AC Power Cord and consult qualified service personnel.

Lightning

To avoid damage by lightning, disconnect the antenna plug from the VCR.

Keep VCR Clean

Wipe the VCR with a clean, dry cloth. Never use cleaning fluid, or other chemicals. Do not use compressed air to remove dust.

Stacking

Place the VCR in a horizontal position and do not place anything heavy on it.

Video Head Clogging

The video heads place picture signals on the tape during recording, and read picture signals from the tape during playback. Therefore they are of critical importance for the picture quality. To ensure that they can always provide optimum picture quality, this VCR is equipped with an Auto Head Cleaning Feature that removes tape particles and dust from the video heads. However, if the VCR is used over extremely long periods of time, these heads may still become dirty and clogged. In such a case, the signals can no longer be recorded correctly, and the playback picture will be distorted accordingly. This is the case, for example, if during playback sound is reproduced normally, but no picture is seen, or the picture is greatly distorted. When such symptoms occur consult your dealer for further advice.

If Dew Condensation Forms in the VCR

Condensation may form in the VCR if:

- The VCR is in a room where the heater has just been turned on.
- The VCR is in a room with steam or high humidity.
- The VCR is brought from cold surroundings into a well-heated room.
- The VCR is suddenly brought from cool surroundings, such as an air-conditioned room or car, to a hot and humid place.

When dew forms in the VCR:

The Dew Indicator "D" on the VCR Display will flash on and off all the function buttons are made non-operational to protect the tape and the video heads. When the Dew Indicator flashes, wait until this indicator disappears. If dew condensation forms inside the VCR while the power is off, it will turn on automatically and the Dew Indicator will flash on and off. As soon as the dew condensation has been dissipated, the VCR will turn itself ON again.

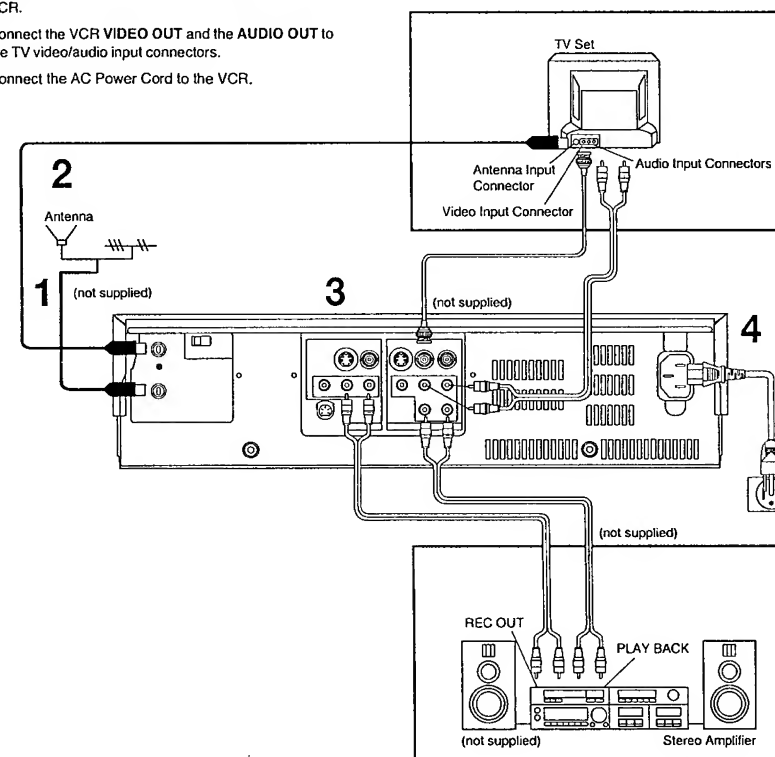
Connections

The following connections are required to operate the VCR for recording and playback through a TV set.

Connection to TV without S-Video Input

- 1 Unplug VHF/UHF antenna plug from the TV antenna input connector and plug it into the VCR VHF/UHF IN.
- 2 Connect the VCR VHF/UHF OUT to the TV antenna input connector with the Coaxial Cable supplied with the VCR.
- 3 Connect the VCR VIDEO OUT and the AUDIO OUT to the TV video/audio input connectors.
- 4 Connect the AC Power Cord to the VCR.

• Connection to a TV Set without an S-Video Input



• Connection to a Stereo Amplifier

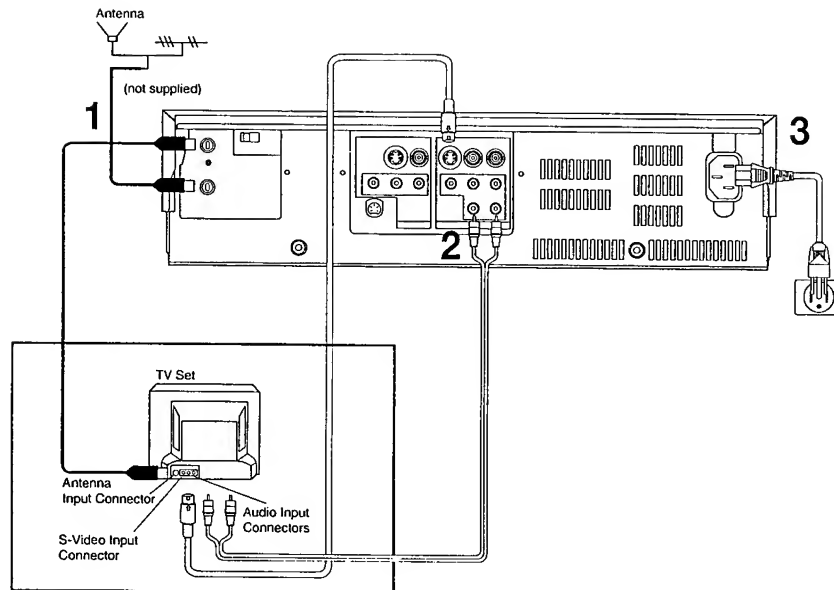
Connection to TV with a S-Video Input

- Execute steps 1 and 2 on page 5.
- Connect the VCR S-VIDEO OUT and the AUDIO OUT to the TV S-Video and audio input connectors.
- Connect the AC Power Cord to the VCR and live AC outlet.

The S-VHS format used in this VCR enables you to obtain high resolution and high picture quality when high performance S-VHS video cassette tapes are used.

The conventional VCR video connectors output and input signals which are composed of the luminance signal (Y) and color signal (C) which are then recorded on the video tape. The new S (Separate)-Video Connector allows separate transmission of signals in order to obtain clearer pictures.

The connection with the S-Video Cable can also be used for playback of a tape that was recorded in the conventional VHS system. The "S" in the "S-Video Connector" stands for "SEPARATED Y/C", not for "S-VHS".



•Connection to a TV Set with S-Video Jack

1-11

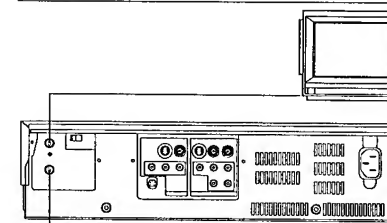
(6)

Cable Connection

Cable-VCR-TV (For CATV/PAY Channels Recording/Playback)

The VCR has an extended range, and can tune the Low-Band, Mid-Band, Super-Band, Hyper-Band, Ultra-Band and Special cable channels. (Channels A-W, AA-FFF, A-5-A-1, GGG-WWW+12, 100-125, 5A). Also, the VCR can tune to any of the 56 UHF channels (14-69). Refer to Storing TV Channels on your VCR on page 10.

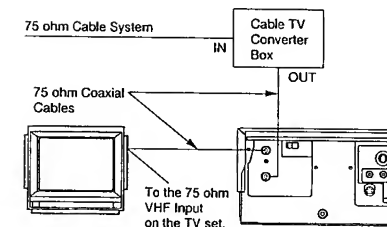
BASIC Hook-Up



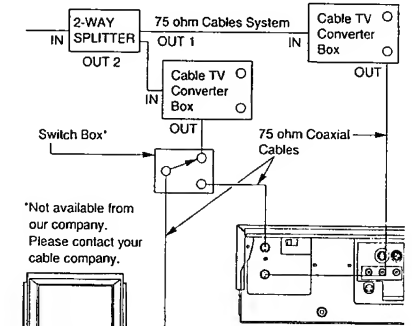
75 ohm coaxial cable
Channels 2-13 and 5A, A-5-A-1, A-W, AA-FFF,
GGG-WWW+12, 100-125

However, if you subscribe to a special channel which is scrambled—you will probably have a descrambler box for proper reception. The VCR by itself cannot properly receive a scrambled program since it does not contain a descrambler. In order for the VCR to properly receive a scrambled program, your existing descrambler must be used. There are two commonly used methods of connection in this case.

Typical Cable System Hook Ups with Cable Converter/Descrambler Boxes



The above cable hook-up allows VCR-TV functions except for viewing one channel while recording another.



*Not available from our company. Please contact your cable company.

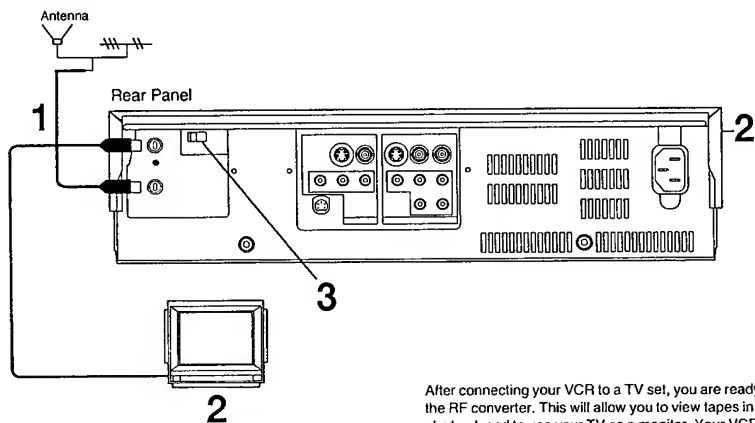
To the 75 ohm VHF input on the TV set

The above cable hook-up allows VCR functions, including viewing one channel while recording another, but it requires two cable TV Converter Boxes, one Switch Box and one 2-Way Splitter.

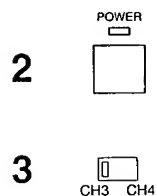
Since the VCR has an extended range of tuning, tuning-programming of non-scrambled Mid-Band and Super-Band TV programs is possible. When a cable converter or descrambler box is connected to the VCR, all timer-controlled recording functions will continue to operate with the exception of changing channels automatically. CATV Channel selection will have to be performed with the cable converter. Timer-controlled recording from CATV Channels is therefore limited to one channel at any given time.

(7)

Tuning the TV channels to your VCR



1-12



After connecting your VCR to a TV set, you are ready to set the RF converter. This will allow you to view tapes in playback and to use your TV as a monitor. Your VCR contains an RF converter which translates the video and audio signals in the VCR to a standard broadcast signal that your TV can receive. The RF converter can transmit this signal on channel 3 or 4. To prevent any interference it is advisable that you select the channel that is not normally broadcast in your area.

Tuning procedure

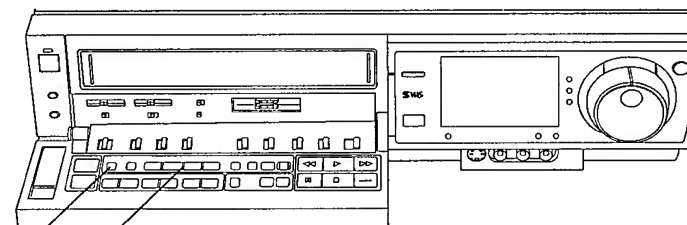
- 1 Refer to pages 5 and 6, and confirm that the VCR and TV have been connected correctly.
- 2 Turn on the VCR and TV.
- 3 Set RF Converter Channel Selector (on the rear panel) to "CH3" or "CH4"; whichever is not normally broadcast or the least viewed. This is to select a channel for video playback.

Channel Reception Check

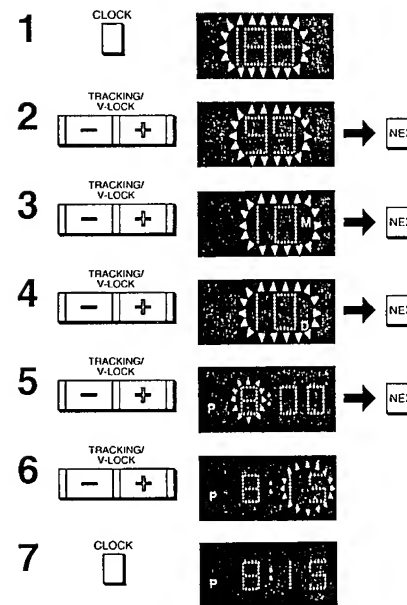
- 1 Set channel 3 or 4 on your TV (selected in step 3) in order to check a proper broadcast reception.
- 2 Press **VCR/TV** (on the front panel) to "VCR" to select the "VCR" operation mode.
 - The "VCR" indicator appears on the VCR Display.
- 3 Select channels on the VCR that you would normally receive clearly in your area to check proper reception.

Setting the Clock of the VCR

Tuning the TV channels to your VCR
Setting the Clock of the VCR



1, 7 2~6



The built-in digital clock employs the 12-hour system.

Preparation

Turn the VCR on.

Setting procedure

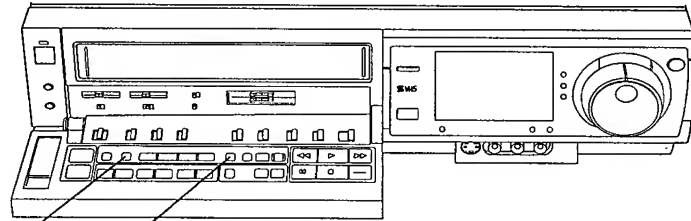
- 1 Press **CLOCK** to start Clock Setting.
- 2 Press **TRACKING/V-LOCK** "+" or "-" to set the YEAR, then press **NEXT**.
- 3 Press **TRACKING/V-LOCK** "+" or "-" to set the MONTH, then press **NEXT**.
- 4 Press **TRACKING/V-LOCK** "+" or "-" to set the DAY, then press **NEXT**.
- 5 Press **TRACKING/V-LOCK** "+" or "-" to set the HOUR, then press **NEXT**.
- 6 Press **TRACKING/V-LOCK** "+" or "-" to set the MINUTE.
- 7 Press **CLOCK** to finish the setting.

Note:

In case of a power failure, the back-up system retains the present time memory for about 60 minutes.

Storing TV Channels on your VCR

Storing TV Channels on your VCR



1-3 2

1 PRESET/FINE/NORMAL

2 ANT SELECT

TV mode



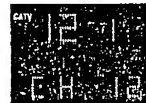
CATV NORMAL mode



CATV HRC mode



CATV IRC mode



3 PRESET/FINE/NORMAL

Introduction

The VCR is fitted with its own tuner (just like a normal TV set) and can be preset to receive up to 181 TV broadcast stations.

Preparations

- Turn the TV on.
- Select Channel 3 or 4 on the TV for video playback.
- Set the VCR/TV to "VCR".

Direct Tuning

Your VCR is preset at factory. This means that all channels can be received at the program positions shown in the chart on the next page. This is achieved by selecting the desired Tuning mode.

- Blanking unwanted channels so that they will be skipped during the channel selection will allow you to find your desired channel quickly. Refer to the next page how to blank program positions.

Selecting the Tuning Mode

This VCR can select from among 4 tuning modes: TV, CATV, CATV H, CATV I.

- 1 Press PRESET/FINE/NORMAL.
- 2 The tuning mode can be changed by pressing ANT SELECT.
- 3 Press PRESET/FINE/NORMAL twice to select the VCR normal operation mode.

Fine Tuning Procedure

- 1 Press PRESET/FINE/NORMAL twice.
- 2 Press TRACKING/V-LOCK "+" or "-" to correct tuning.
 - "A" indicator does not appear.
 - To return the tuning to its former state, press ANT SELECT.
- 3 Press PRESET/FINE/NORMAL.

Blanking of unoccupied program positions

- 1 Press PRESET/FINE/NORMAL.
- 2 Press \checkmark or \wedge (channel button) to select the program position that is to be skipped.
- 3 Press ADD/DELETE. ("—" appears on the Program Position Display.)
 - Repeat steps 2 and 3 for all program positions which are not occupied by a TV station. Afterwards, these program positions can no longer be called up.
 - To cancel the blanked program position, select the corresponding program position on VCR and then press ADD/DELETE.
- 4 Press PRESET/FINE/NORMAL twice.

CHANNEL CHART

• TV mode

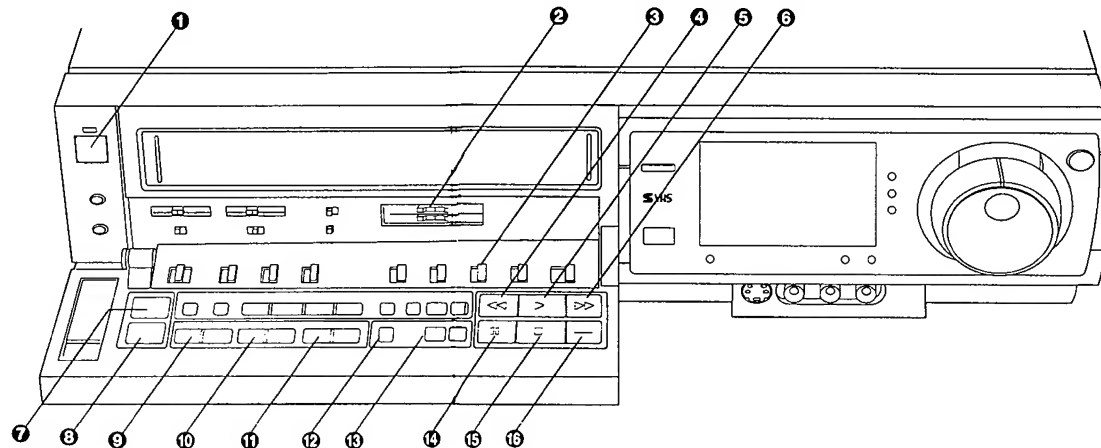
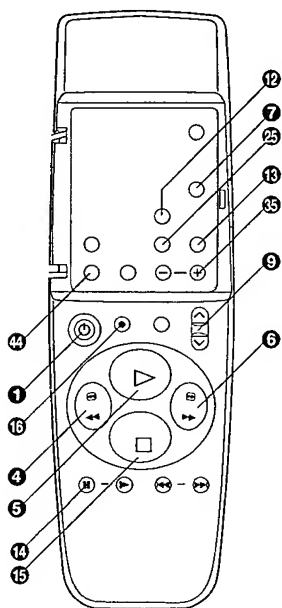
CHANNEL DESIGNATIONS	CHANNEL RECEIVED OFF THE AIR	CHANNEL SELECTION & INDICATION ON VTR
VHF	2-13	2-13
UHF	14-69	14-69

• CATV modes (NOR, HRC, IRC)

CHANNEL DESIGNATIONS	CATV CHANNEL RECEIVED FROM CABLE	CHANNEL SELECTION & INDICATION ON VTR
BROADCAST VHF	2-13	2-13
CATV LOW BAND	A-5-A-1	95-99
CATV MID/SUPER BANDS	A-W	14-36
CATV HYPER BAND	AA-FFF	37-65
ULTRA BAND	GGG-WWW WWW+1- WWW+12	66-94
	100-125	100-125
SPECIAL CATV CHANNEL	5A (HRC, IRC only)	1 (HRC, IRC only)

Controls, Indicators and Connectors

Controls, Indicators and Connectors



1-14

Basic Controls

- 1 POWER Button with Indicator**
Turns the VCR on and off.
• Auto power on
Inserting a video cassette automatically turns the VCR on.
- 2 HI-FI REC LEVEL Control**
Adjusts the Hi-Fi recording level so that the peak reaches about +4 dB on the Audio Level Meter.
- 3 S-VHS Selector**
Selects the correct tape recording mode.
ON: S-VHS cassettes are recorded in the S-VHS System.
• The S-VHS indicator is lit.
OFF: S-VHS cassettes are recorded in the VHS system.
• The S-VHS indicator is not lit.

- VHS cassettes are recorded automatically in the VHS system irrespective of the switch position.
- For playback, it is not necessary to operate this switch.
- S-VHS recording cannot be played back on a conventional VHS VCR.

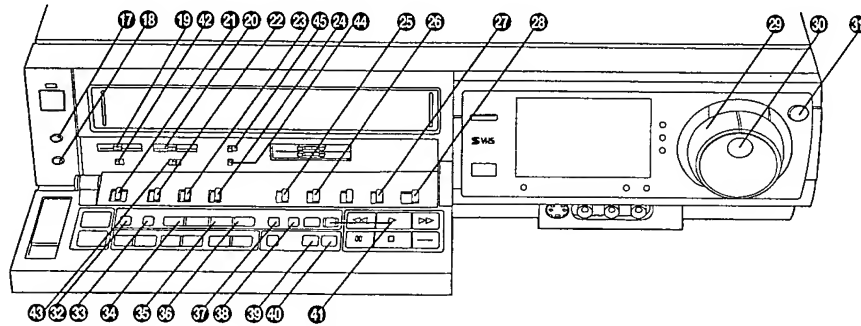
- 4 REW Button**
Use to rewind the tape rapidly. "<<" appears on the VCR Display.
When this button is held pressed during Normal playback or Rewind operation, the picture is played back at higher speed in reverse direction. (Review Playback)
If you tap this button during Normal Playback, Review Playback remains activated. Press PLAY to resume Normal Playback.
- 5 PLAY Button**
Starts normal playback. ">" is lit on the VCR Display.
- 6 FF Button**
Used to advance the tape rapidly. ">>" appears on the VCR Display.
When this button is held pressed during Normal playback or Fast Forward operation, the picture is played back at higher speed in forward direction. (Cue Playback)
If you tap this button during Normal Playback, Cue Playback remains activated. Press PLAY to resume Normal Playback.

- 7 VCR/TV Button**
Selects "VCR" or "TV" operation mode.
- 8 EJECT Button**
Eject the cassette.
• If this button is pressed to eject a cassette loaded in the VCR when the power is turned off, the VCR is turned on for automatic ejection and, afterwards, turned off.
- 9 Channel V and ^ Buttons**
Selects the program positions (channels), the VCR can memorize TV stations in 99 program positions.
- 10 OTR ON + and - Buttons**
Used to set the OTR (One-touch Timer Recording) starting time.
- 11 OTR OFF + and - Buttons**
Used to set the OTR ending time.
- 12 AUDIO OUT Button**
Selects the audio track. Each time you press this button, the audio track changes as follows:
Hi-Fi stereo (L and R) → Hi-Fi mono left (L) → Hi-Fi mono right (R) → Normal (Hi-Fi off) → Hi-Fi Stereo...

- 13 RECORDING SP/SLP Button**
Selects the recording tape speed.
"SP" for normal tape speed gives the best picture quality.
"SLP" for one-third tape speed gives the longest (3 times) normal recording time.
• The VCR selects the correct tape speed during playback.
- 14 PAUSE/STILL Button**
Used to interrupt recording temporarily (Recording Pause).
Pressing this button again resumes recording.
• Also used to view a still picture during playback "E" appears on the VCR Display. Pressing this button again resumes playback.
• The VCR automatically switches to the Stop mode to protect the tape and the video heads if Recording Pause or Still Playback continues for more than 5 minutes.
- 15 STOP Button**
Stops Recording or Playback.
- 16 REC Button**
Starts Recording. ("> REC" appears on the VCR Display.)

(12)

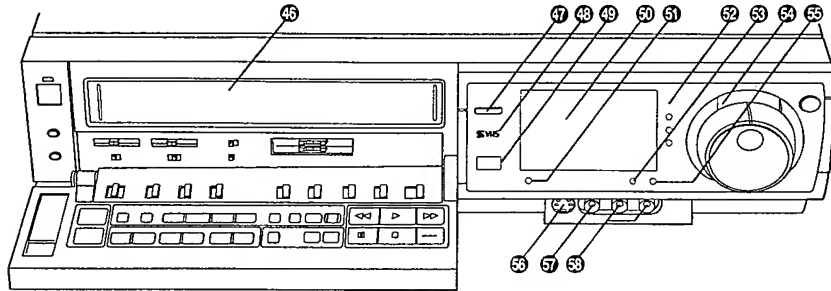
(13)



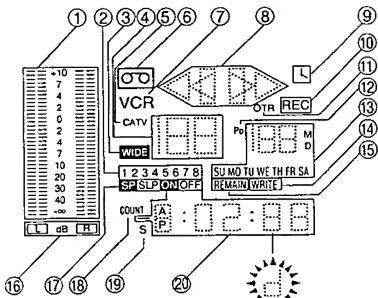
Additional Controls

- 17** MIC Jack
For connecting a microphone. If a microphone is connected, other audio inputs are automatically switched off.
- 18** PHONES Jack
For connecting stereo headphones.
- 19** PHONES LEVEL Control
Adjusts the volume of connected stereo headphones.
- 20** PICTURE Control
Adjusts the picture sharpness during playback.
- 21** DETAIL/NOR/EDIT Switch
DETAIL/NOR: For controlling the picture image.
EDIT: No effect for controlling the picture image.
- 22** TBC Switch (Time Base Corrector)
When playing back a tape which is loose or damaged, or when the tape movement is unstable during recording or playback, the playback picture may shake from side to side and be distorted. You can improve the picture quality by setting TBC Switch to "ON". Normally, this switch must be set to "OFF".
• During playback of some pre-recorded tapes, the playback picture may shake vertically. If this occurs, set TBC Switch to "OFF".
• The TBC function works only during normal playback.
- 23** SEARCH SOUND Selector
OFF: The sound is played back only during normal playback.
ON: The sound can also be heard during Cue playback and Review playback.
• No sound may be heard during playback of SLP recordings if VCR and TV have been connected each other with only coaxial cable.
- 24** HI-FI/NORMAL MIX Switch
Audio signal is recorded on both the Hi-Fi and normal audio tracks.
OFF: Normal position for Hi-Fi audio playback.
ON: Both audio tracks are played back simultaneously. (For playback of tapes edited by Insert Editing or Audio Dubbing.)
- 25** INPUT SELECT Switch
Used to select the corresponding connectors if you wish to record from the external input connectors. Select the program position "A1" or "A2" on Channel Display with INPUT SELECT on the Remote Controller.
S-VIDEO: For recording through the S-VIDEO IN and AUDIO IN.
For playback through the S-VIDEO OUT and AUDIO OUT.
LINE: For recording through the VIDEO IN and AUDIO IN.
- 26** TAPE SELECT Switch
Set according to the cassette tape length in order to obtain correct indication of the remaining tape time.
-T120: For cassettes T30, T60, T90, T120
T140-T160: For cassettes T140 and T160
- 27** MONO Switch
OFF: For normal recording.
ON: For recording normal sound during a stereo or Audio II broadcast. Select this position if the stereo sound is distorted due to poor reception.

- 28** MTS Switch
For selecting the audio track to be recorded.
- 29** SHUTTLE Ring
Used to control the playback speed step by step in both forward and reverse directions.
- 30** JOG Dial
Used to locate any desired frame precisely.
- 31** JOG/SHUTTLE Button
Switches to JOG and SHUTTLE operation.
• To resume Normal playback, press PLAY or this button again.
- 32** CLOCK Button
For setting the date and time, and memorizing the setting.
- 33** PRESET/FINE/NORMAL Button
For storing TV stations on the VCR.
- 34** PROG/CHECK Button
For selecting the program number (up to 8) for timer recording and checking the timer programming.
- 35** TRACKING/V-LOCK + and - Buttons
• Used to input data for clock setting and timer programming.
• For manual tracking adjustment:
Used to make a manual tracking adjustment to minimize color and noise bar distortions which cannot be eliminated by the automatic digital tracking control. After the manual adjustment, simultaneously press TRACKING/V-LOCK "+" and "-" Buttons to return to automatic digital tracking control.
If tapes recorded on another VCR are played back, manual tracking adjustment may be required to reproduce optimum Hi-Fi sound and picture quality.
• For slow tracking adjustment:
Used to minimize the noise bar distortions during Still, Still Advance or Slow playback. Put VCR in Slow playback to make this adjustment.
• For vertical locking adjustment:
Used to minimize vertical jitter during Still playback.
- 36** NEXT Button
Used to memorize input data and to change to the next display segment. Each time you press this button, the flashing indication on Date Display changes in the order YEAR, MONTH, DAY, HOUR, MINUTE.
- 37** ANT SELECT Button
Used to select the tuning input mode.
- 38** ADD/DELETE Button
Used to blank unoccupied program positions.
- 39** AUDIO DUB Button
Used to make an Audio Dub. (The Audio Dub indicator is lit).
- 40** INSERT Button
Used for Insert Editing. (The Insert Edit Indicator is lit.)
- 41** TIMER REC Button
Used to enter VCR Timer Recording; standby mode. When Timer Recording has been activated ("TR" appears on the VCR Display), the VCR cannot be operated manually.
Press this button again to operate the VCR. Pressing this button if no Timer Recording data is programmed or no cassette is inserted, "TR" flashes on and off to indicate that Timer Recording cannot be performed.
- 42** COLOR/BW Switch
COLOR: Forced color mode.
Burst signal is forcibly superimposed onto the output signal.
BW: Forced BW mode.
Chroma signal including the burst signal from the output signal is forcibly muted.
- 43** AUTO/WIDE/NOR Switch
AUTO: In recording mode, the unit searches for the DC component on the chroma signal of the S-VIDEO signal, and when the DC is detected, the ID is recorded onto the CTL signal as the WIDE signal.
In playback mode, the ID recorded on the CTL signal is detected and superimposed onto to chroma signal output of the S-VIDEO signal.
WIDE: In recording mode, the ID is recorded forcibly onto the CTL signal, and in the playback mode, DC is superimposed onto the chroma signal output of the S-VIDEO signal.
NOR: Fixed to normal recording and playback mode.
- 44** RESET Switch
To reset the counter to 0000.
- 45** Linear Audio REC Switch
L+R: Same signal as the mixed Hi-Fi audio is recorded and played back.
LINEAR: Linear audio Input signal of the rear panel is recorded and played back.

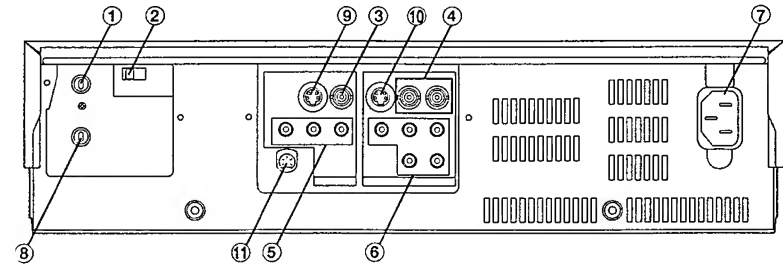


- 46 **Cassette Compartment**
- 47 **PUSH-OPEN**
Opens the control panel.
- 48 **S-VHS Indicator**
- 49 **Infrared Remote Control Receiver Window**
Receives signals from the Remote Controller.
- 50 **Multi-Function Display**
- 9 **Timer Recording Indicator**
- 10 **Recording Indicator**
- 11 **OTR Mode Indicator**
- 12 **Position Indicator**
- 13 **Date Display**
- 14 **Write Indicator**
- 15 **Remaining Tape Time Indicator**
- 16 **Audio Track Indicators**
- 17 **Tape Speed Indicator**
- 18 **Tape Counter Mode Indicator**
- 19 **Index Search Indicator**
- 20 **Clock/Tape Counter Display**



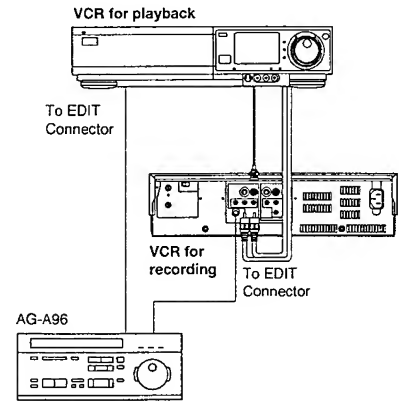
When dew forms:
Dew Indicator

- 1 **Audio Level Meter**
- 2 **Timer Program Number**
- 3 **Wide 16 x 9 Playback**
- 4 **Channel Display**
- 5 **Cable TV Indicator**
- 6 **Cassette-in Indicator**
- 7 **VCR Mode Indicator**
- 8 **Tape Running Indicator**
- 51 **TBC Indicator**
- 52 **Reception Indicators of Stereo, Audio II and Mono**
Indicates the sound system of a broadcast.
- 53 **Audio Dub Indicator**
- 54 **JOG/SHUTTLE Indicator**
Lights up if JOG/SHUTTLE Button is pressed.
- 55 **Insert Edit Indicator**
- 56 **S-VIDEO IN Connector (AV2)**
For connecting the S-video cable of a video camera or another VCR equipped with an S-VIDEO OUT connector.
- 57 **VIDEO IN Connector (AV2)**
For connecting the video cable of a video camera or another VCR.
- 58 **AUDIO IN Connectors (AV2)**
For connecting the audio cable(s) of a video camera, a Hi-Fi stereo system or another VCR.



- 1 **VHF/UHF OUT Connector**
For connecting to a TV antenna connector.
- 2 **CH3/CH4 Switch**
Used to select the RF Converter Channel (CH3 or CH4). Select channel not used in your area.
- 3 **VIDEO IN Connector (AV1)**
For connecting to another VCR or to a signal source equipped with a video output connector.
- 4 **VIDEO OUT Connector**
For connecting to another VCR or to a TV equipped with a video input connector.
- 5 **AUDIO IN Connector (AV1)**
For connecting the audio cables of a stereo audio system.
- 6 **AUDIO OUT Connectors**
For connecting the audio cables to a stereo audio system or to a TV equipped with audio input connectors.
- 7 **AC IN~**
- 8 **VHF/UHF IN Connector**
For connecting an external antenna.
- 9 **S-VIDEO IN Connector (AV1)**
For connecting to another VCR or to a signal source equipped with an S-Video output connector.
- 10 **S-VIDEO OUT Connector**
For connecting to another VCR or to a TV equipped with an S-Video input connector.
- 11 **EDIT Connector**
By connecting the optional Editing Controller AG-A96 to this connector, editing functions can be performed more quickly and efficiently between two VCRs or between a VCR and a camera recorder.

The use of the Editing Controller AG-A96 (optional) gives you control over both the playback and the recording VCRs directly from this controller, to let you perform such editing functions as Assemble Editing, Insert Editing and Audio Dubbing more quickly and efficiently.



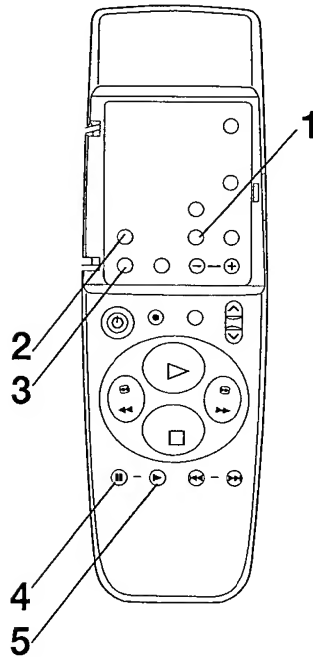
Carefully read the operating instructions for the AG-A96.

Caution:
When using the AG-A96, switch the AG-A96 to the standard speed mode. Do this by pressing the EDIT STOP button and PLAYER button simultaneously.

Be sure to set the Shuttle Ring on this unit to the PAUSE mode when using the AG-A96.

Infrared Remote Controller

Infrared Remote Controller



1 INPUT SELECT Button

Selects external recording source connected to video/audio input connectors. "A1" or "A2" appears on the VCR Display.

A1: Recording through S-VIDEO IN or VIDEO IN and AUDIO IN Connectors on Rear Panel.

A2: Recording through S-VIDEO IN or VIDEO IN and AUDIO IN Connectors on Front Panel.

2 CLOCK/COUNTER Button

Changes the indication on the VCR Display from CLOCK time to COUNTER (tape running time) and vice versa. If the character-forming segments for seconds are circulating on COUNTER Display, this indicates that there is nothing recorded on the tape being moved.

TAPE REMAIN Button

Changes the indication of the VCR Display from tape running time (COUNTER) to remaining tape time, or vice versa. "REMAIN" appears on the VCR Display during remaining tape time display mode.

3 RESET Button

Resets the Tape Counter (tape running time) to "0:00.00".

- The Tape Counter is automatically reset to "0:00.00" when a cassette is inserted.

4 STILL ADV Button

For Still Picture Advance playback. Each time you press this button during Still playback, the still picture is advanced by one field.

5 SLOW Button

For Slow Motion playback. Press SLOW Button during normal playback. The slow-motion speed can be varied with "+" or "-" Buttons.

Power source for the Remote Controller

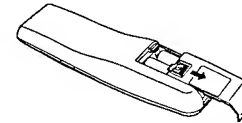
The Infrared Remote Controller is powered by 2 ANSI "AA" size batteries. Replace the batteries with new ones about every year. However, battery life depends on the frequency of use or the selected operation mode.

Precautions for battery replacement

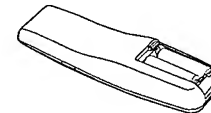
- Load new batteries with their polarities (+ and -) aligned correctly.
- Do not mix new and old batteries and never use an alkaline battery with a manganese battery.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- Remove batteries and store them in a cool and dry place when Remote Controller is not in use for long periods of time.
- Remove spent batteries immediately and dispose of them.

Loading the batteries

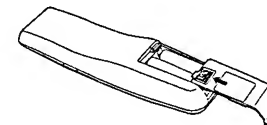
- 1 Remove Battery Compartment Lid.

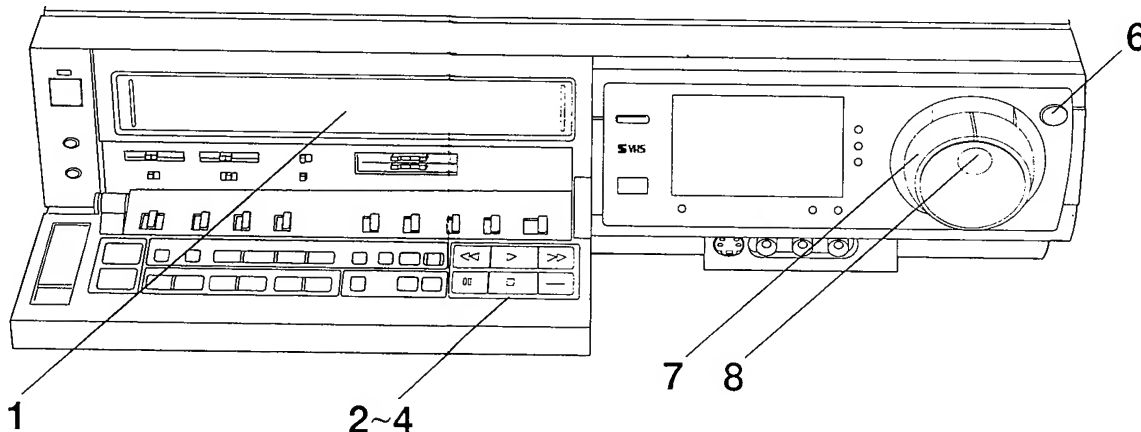
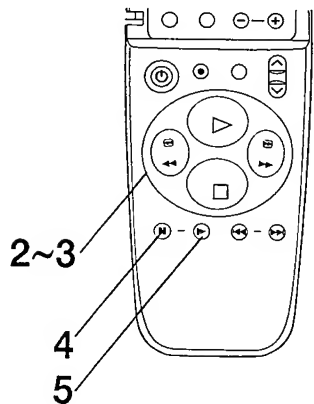


- 2 Insert the batteries, aligning their polarities as indicated inside Battery Compartment.

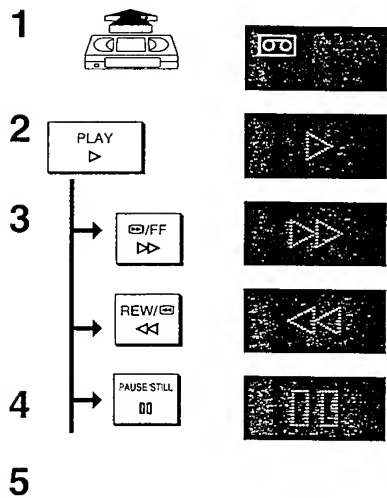


- 3 Replace the lid.





1-18



Introduction

The following functions can be performed with the Remote Controller or with the appropriate operation buttons on the VCR.

- Normal playback
- Cue/Review playback
- Still playback
- Slow playback*
- Shuttle operation to change the playback speed in small steps between Still and Cue/Review playback.
- Jog operation to locate the desired picture exactly.

*Operative only with the Remote Controller.

The playback picture appears promptly on the TV from the Stop mode because the VCR head cylinder remains rotating for about 20 minutes even in the Stop mode.

Preparation

Turn the TV on and select channel 3 or 4 for video playback on the TV.

Playback procedure

- 1 Insert a recorded cassette.
 - If a cassette has been inside the VCR, press POWER to turn VCR on.

Normal playback

- 2 Press PLAY to start Normal playback.

Cue/Review playback

- 3 Keep FF or REW pressed to perform Cue or Review playback at a higher speed in forward or backward direction.
 - This is convenient to search for a specific scene during Normal playback.
 - If you tap FF or REW, Cue or Review playback remains activated. Press PLAY to resume normal playback.

Still playback

- 4 Press PAUSE/STILL to view the still picture during Normal playback. Press PLAY or PAUSE/STILL to resume normal playback.

Slow playback

- 5 Press SLOW on the Remote Controller to view the slow-motion picture. The tape speed of Slow playback can be adjusted with "+" or "-". Press PLAY to resume normal playback.

Jog/Shuttle playback

- 6 Press JOG/SHUTTLE. Still playback starts.
- 7 Rotate Shuttle Ring to select the desired playback speed in forward and backward directions.
- 8 Rotate Jog Dial to locate the desired picture precisely.

Options

- If you press TAPE REMAIN on the Remote Controller, the approximate remaining tape time is indicated in hours and minutes. For correct Remaining Tape Time indication, set TAPE SELECT on the VCR according to the cassette type:
 - T120: For cassettes T30, T60, T90, T120
 - T140-T160: For cassettes T140 and T160
- To listen to the sound during Cue playback and Review playback, set SEARCH SOUND on the VCR to "ON".
- If the picture shakes from side to side or is distorted during playback because it was recorded on another VCR, you can improve the picture quality. Set TBC on VCR to "ON". Normally, this switch must be set to "OFF".

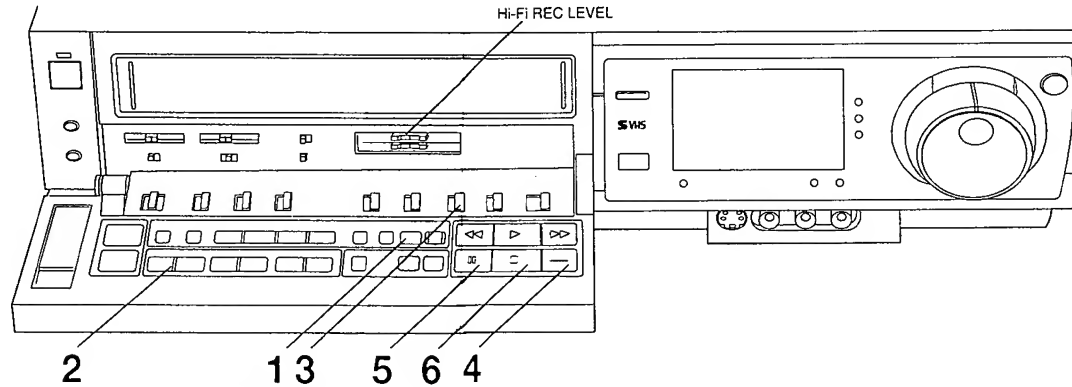
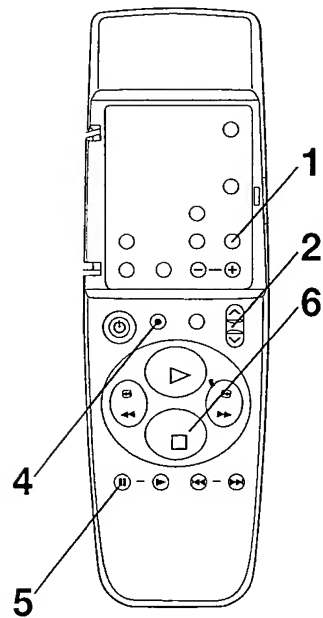
Notes:

- Cue/Review playback for more than 10 minutes switches the VCR to normal playback.
- Still or Slow playback for more than 5 minutes switches the VCR to normal playback.
- Cue or Review playback picture can contain horizontal noise bars or distortions. However this does not indicate a malfunction.
- In the playback of the LP recording:
 1. In the special playback functions except normal playback, the picture may contain horizontal noise bars, distortions, unstable colors, or can be in black-and-white.
 2. A tape recorded on another VCR may need Tracking Control adjustment; picture may still be inferior owing to format limitations.

On-the-spot Recording

On-the-spot Recording

1-19



1	 RECORDING SP/SLP	
2	 V ^	
3	S-VHS ON • OFF 	
4	 REC	
5	 PAUSE/STILL	
6	 STOP	

Hi-Fi REC LEVEL

Introduction

You can record a TV broadcast without turning on the TV by using the Infrared Remote Controller or by using the appropriate buttons on the VCR. You can also watch a TV broadcast on the TV while recording another TV broadcast.

Preparations

- Insert a cassette with an erasure prevention tab. (If a cassette has been inside VCR, press **POWER** to turn VCR on.)
- Press **VCR/TV** to display "VCR" on the VCR Display.

Recording procedure

- 1 Select the desired tape speed "SP" or "SLP" with the **RECORDING SP/SLP** button.
- 2 Select the desired channel to be recorded by pressing **V** or **^** on the VCR.
 - If you wish to confirm proper reception, turn TV on and select channel 3 or 4 (for video playback channel) on TV.
- 3 Set **S-VHS** to "ON" or "OFF".
 - ON: S-VHS tape is recorded in S-VHS format; VHS tape in VHS format.
 - OFF: for VHS format on S-VHS tape
- 4 Press **REC** to start Recording.
 - When a video cassette without an erasure prevention tab is inserted, "ca" blinks and an alarm sounds indicating that recording is not possible.
- 5 To interrupt recording temporarily, press **PAUSE/STILL**. Press this button again to continue recording.
 - A recording pause for more than 5 minutes switches the VCR to Stop mode to protect the tape and the video heads.
- 6 Press **STOP** to stop recording.

Watching any other TV broadcast while recording

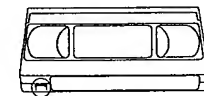
- 1 Set **VCR/TV** to "TV" during recording.
- 2 Select the desired channel on TV.

Hi-Fi Audio Recording Level Adjustment

Normally set **Hi-Fi REC LEVEL** in the middle "5" position (click stop). Recommended peaks in audio level are +4 dB. When using the VCR as a Hi-Fi Audio Recorder or when producing your own tapes, it may be desirable to adjust **Hi-Fi REC LEVEL** to some other position.

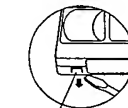
- Sound on normal track is adjusted automatically.

Erasure Prevention Tab

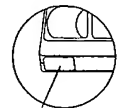


To prevent accidental erasure.

To record again.

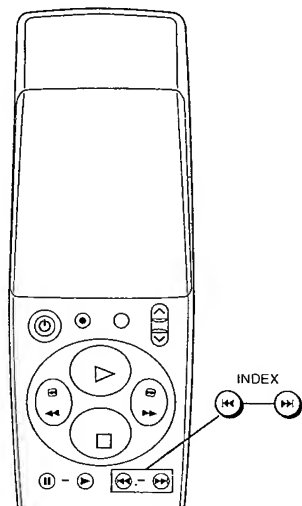


Break off the tab with a screwdriver.



Cover the hole with adhesive tape.

Automatic Features



Introduction

This VCR has the following automatic functions:

Auto power on

Inserting a cassette turns the VCR on.

Auto playback

Inserting a cassette without an erasure prevention tab starts Playback.

Auto rewind

Fully rewind the tape when the tape reaches its end during Playback and Recording (except OTR and Timer Recording).

Auto power off eject

Ejects a cassette when the VCR is OFF by pressing EJECT only (the VCR turns OFF after ejecting the cassette).

Auto head cleaning

Removes tape particles and dust from the video heads so that the heads always provide optimum picture quality. While this function is working, some mechanical noise can be heard from the VCR; this does not indicate a malfunction.

1-20

Index Search

Introduction

This function allows you to quickly locate the beginning of each recording marked with an index signal. An index signal is set automatically, and the indicator "WRITE" appears for a few seconds on the VCR Display in the following cases:

- When recording is started with the REC Button.
- At the beginning of Timer or OTR Recording.

Additionally, you can set an index signal during Recording by pressing the REC Button(s) at the desired position.

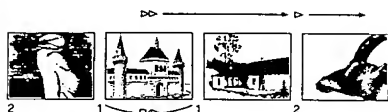
It is possible to skip up to 20 index signals in forward or backward direction to access the desired recording.

Preparation

Press PLAY or STOP Button.

For example:

Access the 2nd recorded segment ahead.



Operation

Press INDEX >▶ twice to input the number of the index signal.

When the input index signal is reached, normal playback starts.



- Press INDEX <<< to access previous recorded segment (in backward direction).

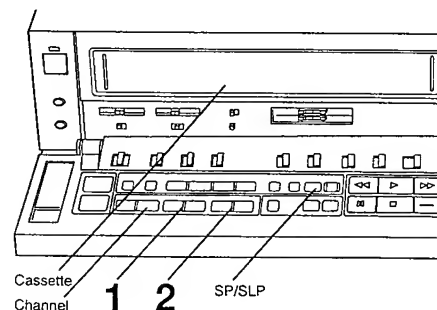
Notes:

- The interval between two index signals should be at least 3 minutes in SP recording and 5 minutes in SLP recording.
- If using cassettes that contain long blank (unrecorded) portions or which have been repeatedly recorded and re-recorded, Search may not function correctly.

(24)

One-Touch Timer Recording (OTR)

Automatic Features
One-Touch Timer Recording (OTR)



Introduction

OTR is for immediately setting the VCR to record a TV broadcast starting within the next 24 hours.

Preparation

- Insert a cassette with an erasure prevention tab. (If it has already been inserted, press POWER to turn VCR on.)
- Select the desired tape speed "SP" or "SLP" with RECORDING SP/SLP.
- Select the desired channel to be recorded by pressing < or > on VCR.

OTR procedure

Each time you tap OTR ON +/- OTR OFF +/- Button, the time indication changes in 1-minute increments. Keeping it depressed changes the time indication in 10-minute increments.

- 1 Set OTR starting time by pressing ON + or -.

If you want to start OTR recording immediately, disregard this step.

- When a cassette without an erasure prevention tab is inserted, "ERR" blinks and an alarm sounds indicating that recording is not possible.

- 2 Set OTR ending time by pressing OFF + or -.

- If the OTR starting time is set, OFF + or - Button must be pressed within 8 seconds to select the OTR ending time, otherwise the starting time will be canceled.

After 4 seconds, the display will automatically change back to the starting time indication.

The VCR will automatically switch off, when the OTR is completed. To turn the VCR on, press POWER.

Notes:

- To interrupt an OTR, press POWER.
- It is possible to change the OTR starting time or ending time before the recording starts.
- It is possible to change the OTR ending time even during the recording.
- Be sure that the OTR function does not overlap with a programmed timer recording. An OTR always takes precedence over a timer recording.

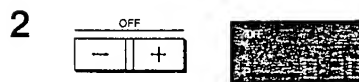
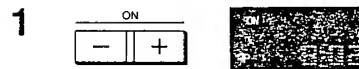
To confirm the OTR ending time before the recording starts

Press PROG/CHECK once.

If pressed twice, the present time is displayed again.

Press PROG/CHECK to confirm the present time during recording.

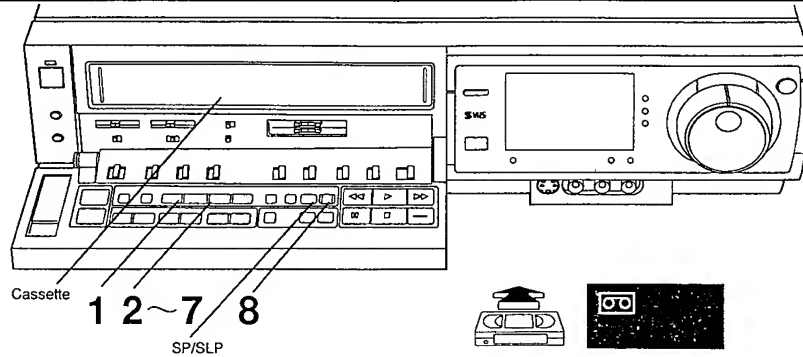
For example:
OTR recording of TV Station 1 from 8:02 pm to 8:30 pm.



(25)

Timer Recording

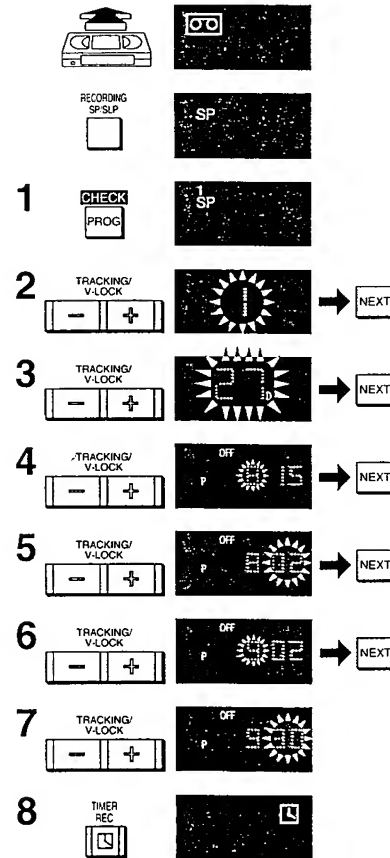
Timer Recording



Introduction

You can program the VCR so that it automatically records up to 8 TV broadcasts with the period of one month. You can also program Timer Recording of daily and weekly broadcasts at the same time. For daily recording, there are three categories to choose from. (1) from Monday to Friday, (2) from Monday to Saturday, (3) from Sunday to Saturday

For Example:
Timer programming for a TV program to be broadcast on Wednesday, October 27, from 8:02 pm to 9:30 pm, on program position (channel) 1, on timer program number 1. (Present date=October 10, 1999)



Preparations

- Insert a cassette with an erasure prevention tab. (If it has already been inserted, press POWER to turn VCR the on.)
- Select the desired tape speed "SP" or "SLP" with RECORDING SP/SLP.

Timer Recording procedure

- 1 Press PROG/CHECK to start programming.
 - Timer program number "1" appears. (Each time this button is pressed, the timer program number is changed.)
- 2 Press TRACKING/V-LOCK +/- to select the desired TV station and then NEXT to memorize input data and change to the next display segment.
- 3 Press TRACKING/V-LOCK +/- to set the starting date of timer recording and then NEXT.
 - For daily recording, press TRACKING/V-LOCK - until the desired daily recording type appears.
 - For weekly recording, press TRACKING/V-LOCK - until the desired indication for the day of the week appears.
- 4 Press TRACKING/V-LOCK +/- to set the start time (hour), then NEXT.
- 5 Press TRACKING/V-LOCK +/- to set the start time (minute), then NEXT.
- 6 Press TRACKING/V-LOCK +/- to set the end time (hour), then NEXT.
- 7 Press TRACKING/V-LOCK +/- to set the end time (minute). No need to press NEXT.
 - Repeat steps 1 to 7 to program several timer recordings successively.
- 8 Press TIMER REC to activate Timer Recording.
 - "□" appears on the VCR Display and the VCR cannot be operated manually.
 - If you want to operate the VCR, press TIMER REC to switch off "□". To reactive the timer press this button again.

Confirming timer programming

Press PROG/CHECK to select the timer program number to be checked. The channel, date, starting and ending time are displayed for about 12 seconds.

Canceling timer programming

- 1 Press TIMER REC to deactivate Timer Recording. (Be sure that "□" disappears.)
- 2 Press PROG/CHECK to select the timer program number to be canceled.
- 3 Press TRACKING/V-LOCK +/- simultaneously for more than 3 seconds.

Note:

If a timer recording is interrupted or canceled, the programmed recording data is memorized until 4:00 am two days later. However, if another timer recording or OTR is activated or performed at 4:00 am two days later, the recording data will be maintained until 4 am on the following day.

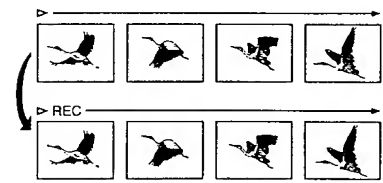
Editing

Copy Editing

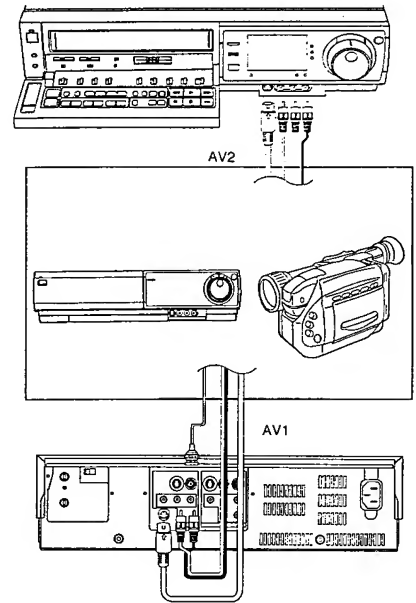
This function is used to make duplicates.

Preparations

- Connect a Movie Camera or another VCR to this VCR as shown in the diagram.
- Set **DETAIL/NOR/EDIT** to "EDIT".
- Insert a recorded cassette in the connected Movie Camera or another VCR, used as Player, and a blank cassette in this VCR, used as Recorder.
- Press **INPUT SELECT** on Remote Controller to select the program position (channel) "A1" or "A2".
 A1: Recording through S-VIDEO IN or VIDEO IN and AUDIO IN Connectors (AV1) on the rear panel.
 A2: Recording through S-VIDEO IN or VIDEO IN and AUDIO IN Connectors (AV2) on the front panel.
- Set **INPUT SELECT** on VCR to select the corresponding connectors.
 S-VIDEO: S-VIDEO IN and AUDIO IN Connectors
 LINE: VIDEO IN and AUDIO IN Connectors



- 1
- 2
- 3



- ### Operations
- 1 Play back the recorded tape on the Player VCR.
 - 2 Press **REC** on the Recording VCR.
 - 3 Press **STOP** to stop copying.
- Note:**
Be sure to set **DETAIL/NOR/EDIT** to "NOR" after copying is finished for normal use.

1-22

Assembly Editing

This function is used to make an edited tape from several other video recordings.

A new scene can be joined to the end of an existing recording without interference or distortion.

Preparations

- Insert a recorded cassette with an erasure prevention tab.
- Select the corresponding input connectors.
(Refer to "Preparations" on page 28.)
- Set **DETAIL/NOR/EDIT** to "EDIT".

- 1
- 2
- 3
- 4

- ### Operations
- 1 Press **REC** and then **PAUSE/STILL** to put the VCR in Recording Pause.
 - 2 Press **JOG/SHUTTLE**.
 - 3 Search for the end part of a scene by using the **JOG Dial**.
 • 2 seconds later, the VCR is set to Recording Pause again.
 - 4 Start Recording to join a new scene by pressing **PAUSE/STILL**.

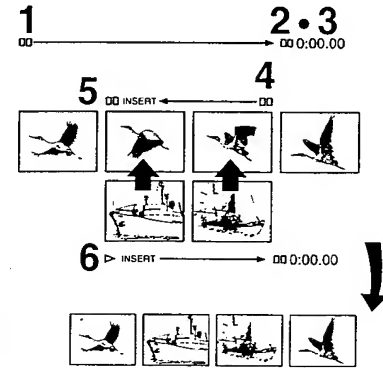
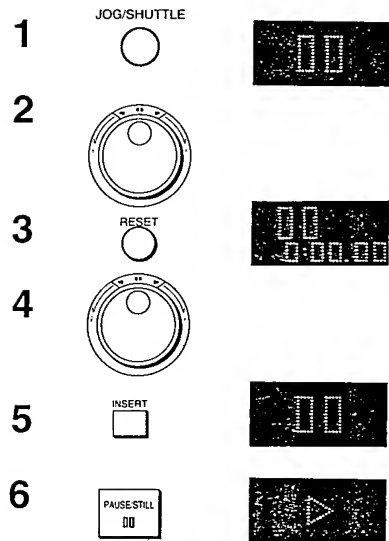
Insert Editing

This function allows you to smoothly insert new scenes between selected Editing "In" and "Out" points on an existing recording.

Insert Editing cannot be executed on blank tape segments. In such a case, it is necessary to use Assembly Editing first.

Preparations

- Connect a Movie Camera or another VCR to this VCR as shown in the diagram on page 28.
- Insert a recorded cassette with an erasure prevention tab.
- Select the corresponding input connectors. (Refer to "Preparations" on page 28.)
- Set **DETAIL/NOR/EDIT** to "EDIT".



Operations

- 1 Press **JOG/SHUTTLE**.
- 2 Search for Editing Out (ending) point with **SHUTTLE Ring** and **JOG Dial**. Put the VCR into Still playback.
- 3 Press **RESET** to reset the Tape Counter to "0:00.00".
- 4 Search for Editing In (starting) point with **SHUTTLE Ring** and **JOG Dial**. Put the VCR into Still playback.
- 5 Press **INSERT**. (**INSERT** Indicator is lit.)
 - If you want to replace the original sound-track on the normal audio track with a new sound-track, press **AUDIO DUB**. (**AUDIO DUB** Indicator is lit.)
- 6 Press **PAUSE/STILL** to start Insert Editing.
 - Insert Editing stops when the tape reaches editing out point (counter position "0:00.00"). The VCR switches to Still playback.

Notes:

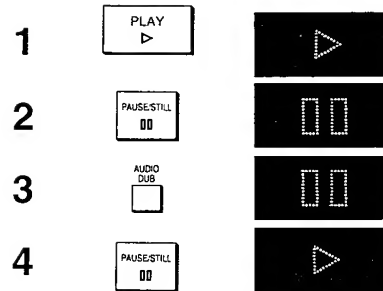
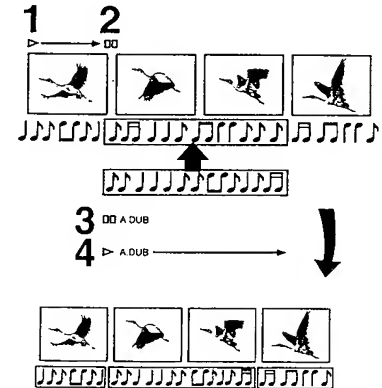
- When using the Insert Editing function, switching to the SP mode is recommended.
- Normal audio is retained in any insert video edit, while any recorded Hi-Fi audio will be lost.

Audio Dubbing

This function is used to add background music, narration, etc. on an already recorded tape.

Preparations

- Insert a recorded cassette with an erasure prevention tab.
- Select the corresponding input connectors. (Refer to "Preparations" on page 28.)



Operations

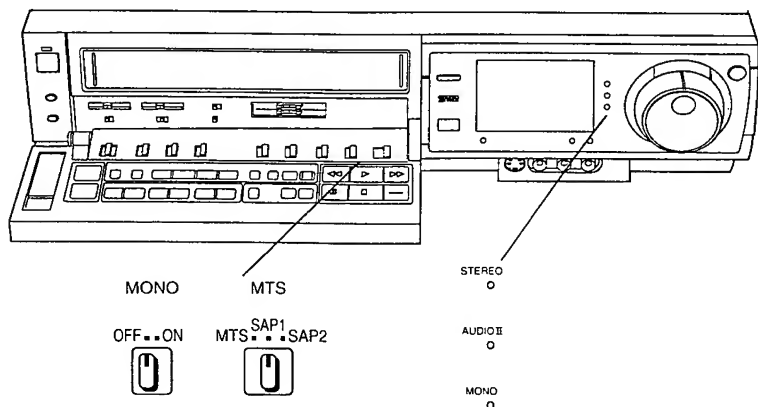
- 1 Press **PLAY** and search for the starting point where you wish to record the new sound-track.
- 2 Press **PAUSE/STILL** at the starting point of Audio Dubbing.
- 3 Press **AUDIO DUB**. (**AUDIO DUB** Indicator is lit.)
- 4 Press **PAUSE/STILL** to start Audio Dubbing.
- 5 Stop Audio Dubbing by pressing **STOP**.

Note:

A new sound is dubbed onto the normal audio track of the tape, and the original sound is erased. However, the original sound is maintained on the Hi-Fi audio tracks. This means that Audio Dubbing is made monaurally.

- Press **AUDIO OUT** to select the normal audio track to listen to the sound recorded with Audio Dubbing.
- Select the Hi-Fi audio tracks to listen to the original sound.
- Set **Hi-Fi/NORMAL MIX** to "ON" to listen to both the original sound and the sound-track added by Audio Dubbing.

Audio Channel Selection



When a stereo and/or Audio II broadcast is received, "STEREO" and/or "AUDIO II" are lit to inform you of the type of broadcast.

The table below shows the TV broadcast type, MTS switch settings, and audio recording patterns.

Be sure that MONO Switch is set to "OFF" before setting MTS Switch and follow the operation procedure described on page 23 to record on the Hi-Fi audio tracks.

TV Broadcast	MTS switch	Audio Track		
		Normal (Mono)	HI-FI	
			Left	Right
Mono	All position	Mono	Mono	Mono
Stereo	All position	L + R (Mixed)	Left	Right
Mono and Audio II (SAP)	MTS	Mono	Mono	Mono
	SAP1	Mono	Mono	Audio II
	SAP2	Mono	Audio II	
Stereo and Audio II (SAP)	MTS	L + R (Mixed)	Left	Right
	SAP1	L + R (Mixed)	L + R (Mixed)	Audio II
	SAP2	L + R (Mixed)	Audio II	

MONO Switch

If the sound of a stereo or Audio II broadcast is impaired by noise due to weak reception, set MONO Switch to "ON". ("MONO" indicator is lit.) The TV broadcast is recorded monaurally for easier listening. To resume stereophonic recording, set MONO to "OFF".

Note:

This table shows the condition when the Linear Audio REC Switch is in the "L+R" position. When this switch is in the "LINEAR" position, the linear audio input signal is recorded.

Before Requesting Service

Audio Channel Selection
Before Requesting Service

Before requesting service, check the following points once again.

No Correct VCR Operation			
SYMPTOM	CAUSE	REMEDY	CHECKED
No Indications on the VCR Display.	AC Power Cord is not connected to a live AC outlet.	Connect the AC Power Cord the VCR.	
VCR Display is on but VCR does not function.	Timer Recording is activated. (Timer Recording Indicator is lit.)	Press TIMER REC to deactivated Timer Recording mode.	
	Safety devices are operating, or Dew Light is ON.	Turn off POWER, disconnect AC Power Cord from AC outlet, About 1 minute later, reconnect AC Power Cord to AC outlet and turn on POWER.	
VCR stops operating and turns itself off a few seconds later.	Tape is jammed in VCR.	Do not try to remove jammed tape as this may damage it. Consult your dealer.	

REGULAR MAINTENANCE

The purpose of periodic maintenance is to preserve the functioning of this machine throughout its useful life. The user or service dealer should perform these maintenance regularly to ensure that maximum utility is obtained from the machine.

The VCR is a complicated piece of equipment. It contains many belts, rollers, heads etc., which become worn, and deteriorate as time goes by, causing trouble. Dust and dirt will also impede the proper functioning of the machine. In light of this, it is very important that overall maintenance be done according to the maintenance chart to maintain the functions of the VCR, and to avoid accidental problems. This maintenance should also be performed after any repairs are done on the equipment.

The VCR used for business applications requires particular attention for several reasons. The installation conditions and applications are not always the best. Long use times, or poor environmental conditions may adversely affect the lifespan and performance of the machine. Regular maintenance assures that the purchaser obtains the maximum value for his expenditure. Accordingly, the necessity of regular maintenance should be fully explained at the time of sale, as well as during after-sale repairs.

MAINTENANCE CHART

The following periodic maintenance is required to prolong the life of the machine.

Ref. No. IN P/L	Parts Name	Hour										Ref. No. IN P/L	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000			500	1000	1500	2000	2500	3000	3500	4000	4500	5000
---	Tape Transporter	●	●	●	●	●	●	●	●	●	●	63(1)	Supply Brake Arm U				⊙				⊙		
20(1)	A/C Head U	●	●	●	●	●	●	●	⊙	●	●	64(1)	Take-up Brake Arm U				⊙				⊙		
73(1)	Cylinder U	●	●	●	●	●	●	●	⊙	●	●	9(1)	Cleaner Arm U				⊙				⊙		
77(1)	Upper Cylinder	●	⊙	●	⊙	●	⊙	●	⊙	●	⊙	12(1)	FE Head	●	●	●	●	●	●	●	⊙	●	●
60(1)	Supply Reel Table U	●	●	●	●△	●	●	●	●△	●	●△	127(2)	Mode Switch								⊙		
61(1)	Take-up Reel Table U	●	●	●	●△	●	●	●	●△	●	●△	108(2)	Main Cam Gear				x				x		
105(2)	Capstan Housing U								⊙			121(2)	Loading Motor U				⊙				⊙		
106(2)	Capstan Rotor U	●	●△	●	●△	●	●△	●	●△	●	●△	40(1)	Inclined Base (S) U				▲				▲		⊙
49(1)	Pinch Arm U				⊙				⊙			42(1)	Inclined Base (T) U				▲				▲		⊙
15(1)	Impedance Roller U	●	●	●	●	●	●	●	⊙	●	●												
52(1)	Tension Band U				⊙				⊙														
113(2)	Timing Belt				⊙				⊙														

* NOTE:

Symbol	Maintenance	Requirement	Remark
●	Cleaning	Ethyl-alcohol or Cleaning Liquid (Purchase locally)	Wipe dirt from the parts using soft cloth impregnated with Ethyl-Alcohol. Note: When cleaning rubber parts, avoid using excessive alcohol since it may accelerate deterioration of these parts. After cleaning with alcohol, wipe the alcohol quickly and thoroughly.
⊙	Replacement		
△	Lubrication	High Quality Spindle Oil (Purchase locally)	Supply one or two drops of oil.
▲	Greasing	Molytone Grease (MOR265)	Wipe the old grease and apply new grease.
x	Greasing	S.C.R. Grease (VFK0680)	Wipe the old grease and apply new grease.

SECTION 2. DISASSEMBLY PROCEDURE

2-1 DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and circuit boards in order to find the necessary items for servicing.

When reassembling, perform the steps in the reverse order.

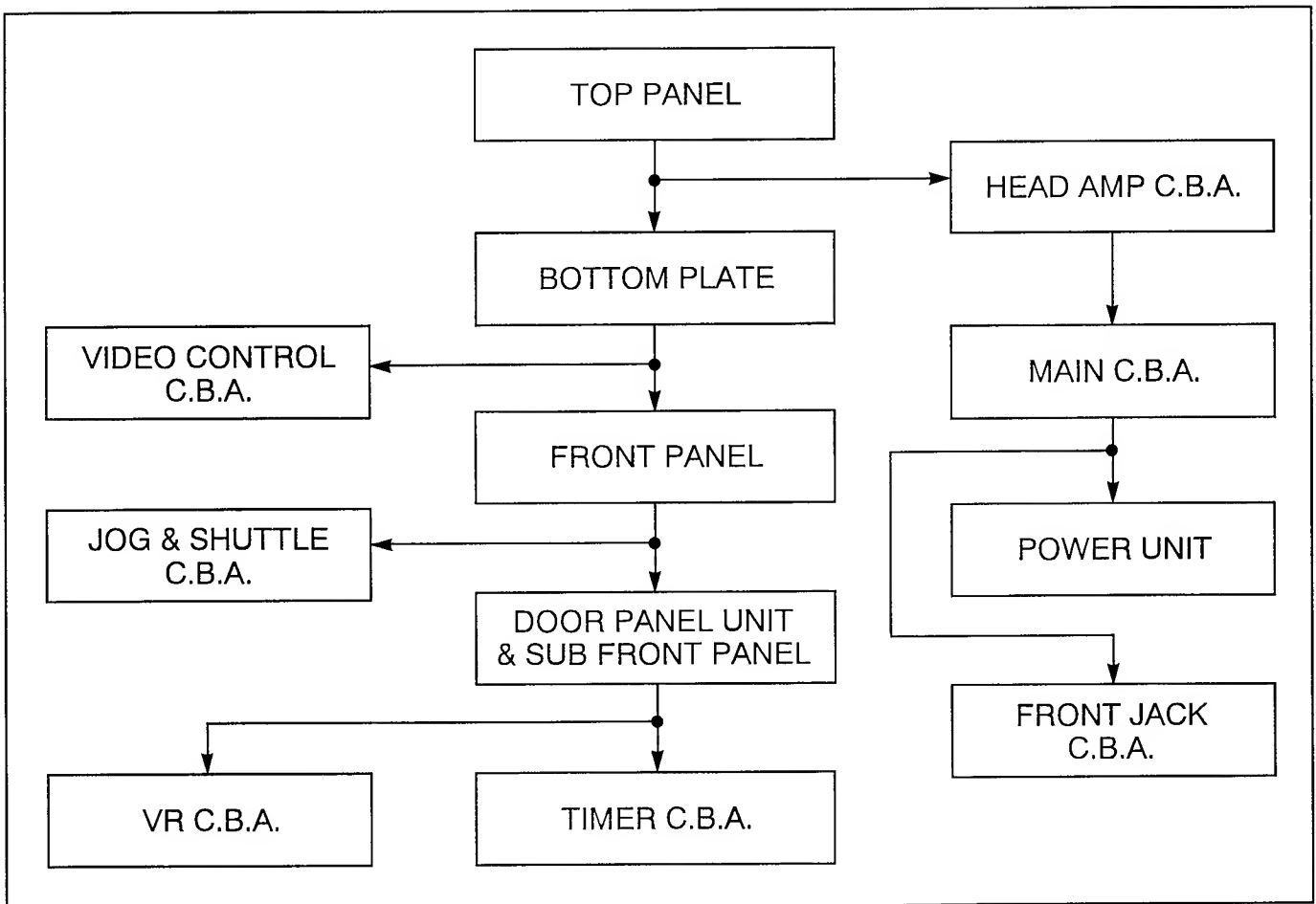


Fig. D1

2-2 DISASSEMBLY METHOD

2-2-1. Removal of the Top Panel

1. Unscrew the 4 screws (A) on the Top Panel.
2. Lift up rear portion of the Top Panel than slide it off the back of the unit.

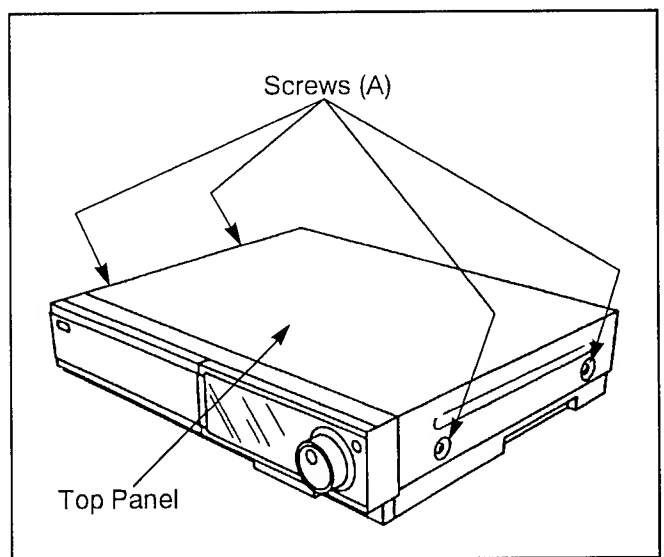


Fig. D2

2-2-2. Removal of the Bottom Plate

1. Unscrew the 7 screws (B) on the Bottom Plate.
2. Lift the Bottom Plate.

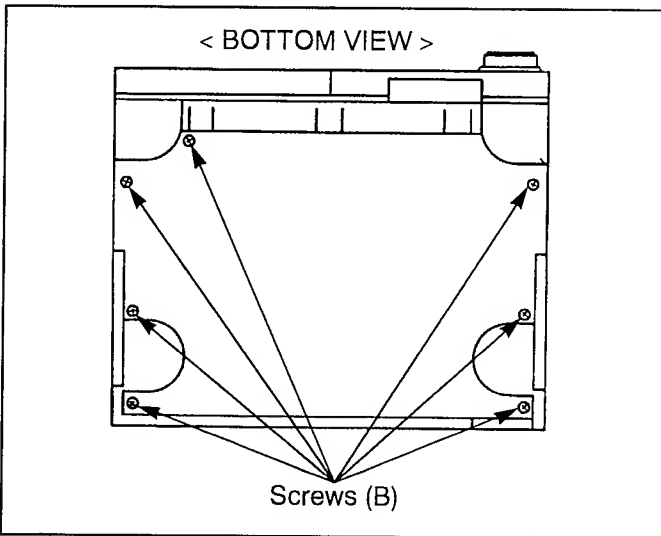


Fig. D3

2-2-3. Removal of the Bottom Plate

1. Unscrew a screw (C) on the top of the Front Panel.
2. Press the Door Panel OPEN button.
3. Unlock the 7 locking tabs (D) of the Front Panel.
4. Carefully pull out the Front Panel with disconnect P6701 connector.

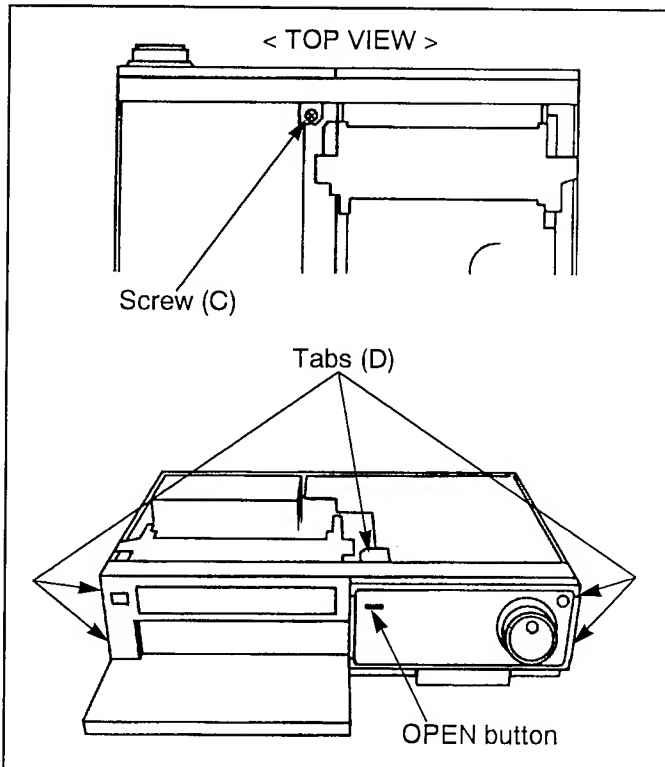


Fig. D4

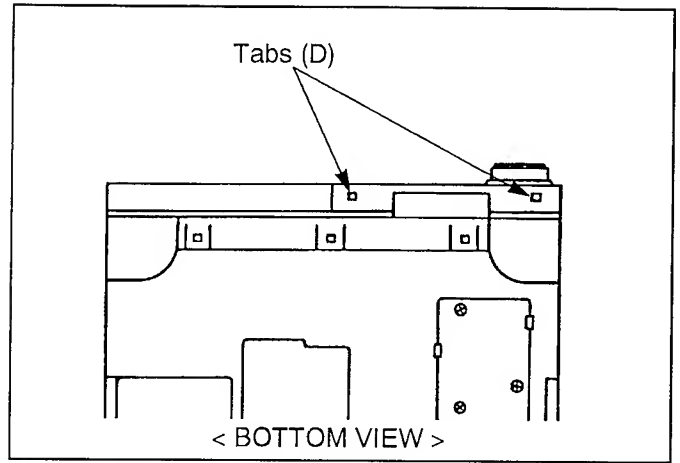


Fig. D4-1

2-2-4. Removal of the Door Panel Unit and Sub Front Panel

1. Unscrew the 4 screws (E) on the Timer C.B.A. and VR C.B.A..
2. Unlock the 3 locking tabs (F) on the frame.
3. Disconnect the 2 flexible cables from P6501 and P6853.

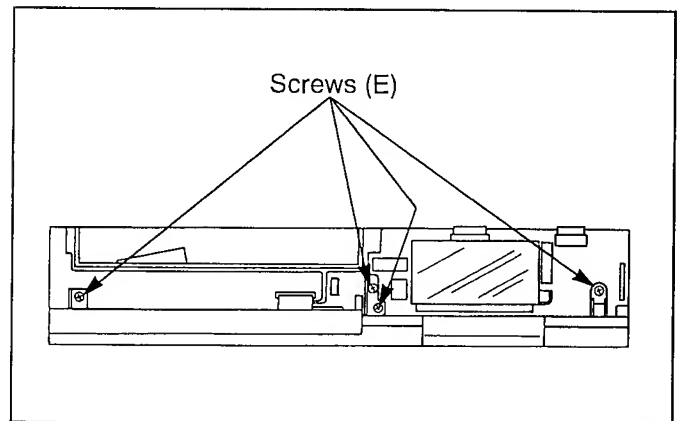


Fig. D5

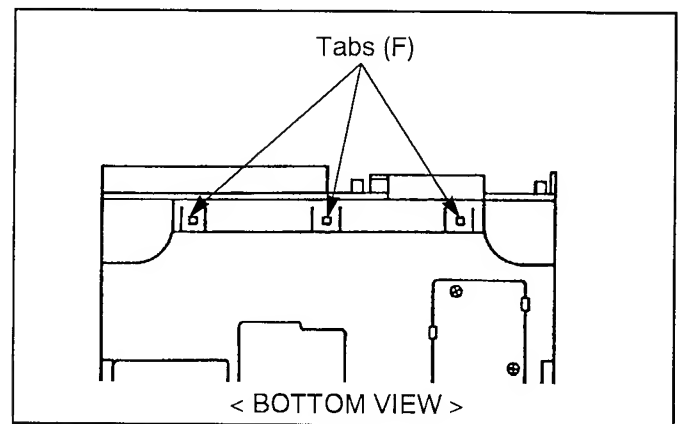


Fig. D5-1

2-2-5. Removal of the Door Panel Switch Unit

1. Unscrew the 3 screws (G) on the Door Panel.
2. Unlock the 10 locking tabs (H) on the Door Panel Frame.
3. Carefully slide the Switch C.B.A. Unit in the direction indicated by arrow.

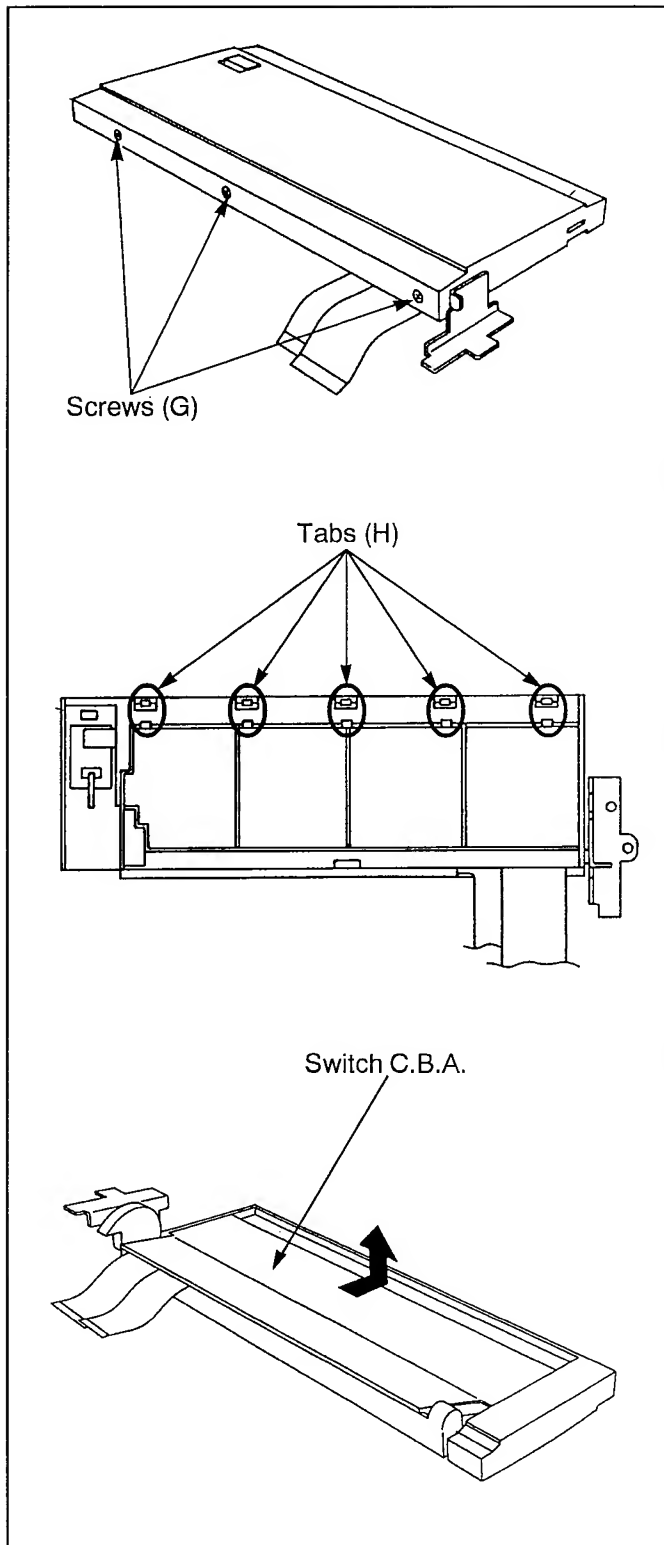


Fig. D6

2-2-6. Removal of the Timer C.B.A.

1. Unscrew a screw (I) on the Timer C.B.A..
2. Unlock a locking tab (J) on the Timer C.B.A..
3. Disconnect the 2 flexible cables (P6502 and P6503) and a connector (P6504).

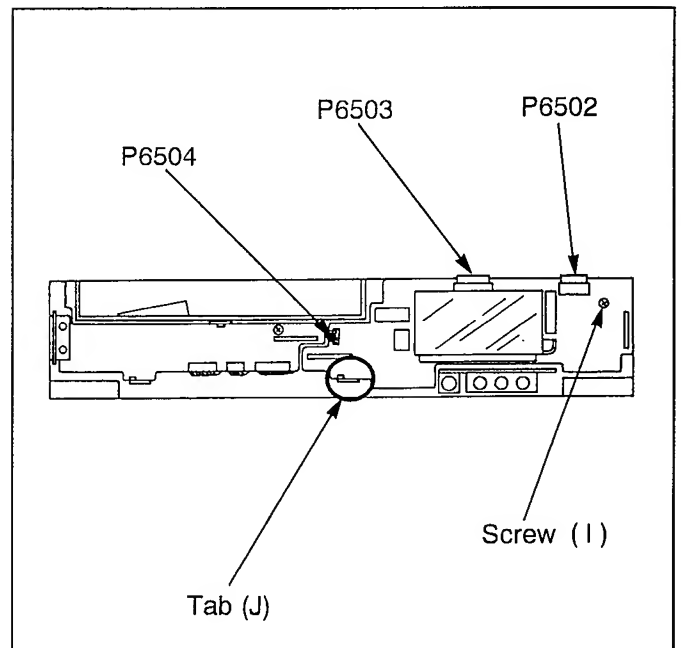


Fig. D7

2-2-7. Removal of the VR C.B.A.

1. Unscrew a screw (K) on the VR C.B.A..
2. Unlock the 2 locking tabs (L) on the VR C.B.A..
3. Disconnect the 3 connectors (P6851, P6852 and P6870).

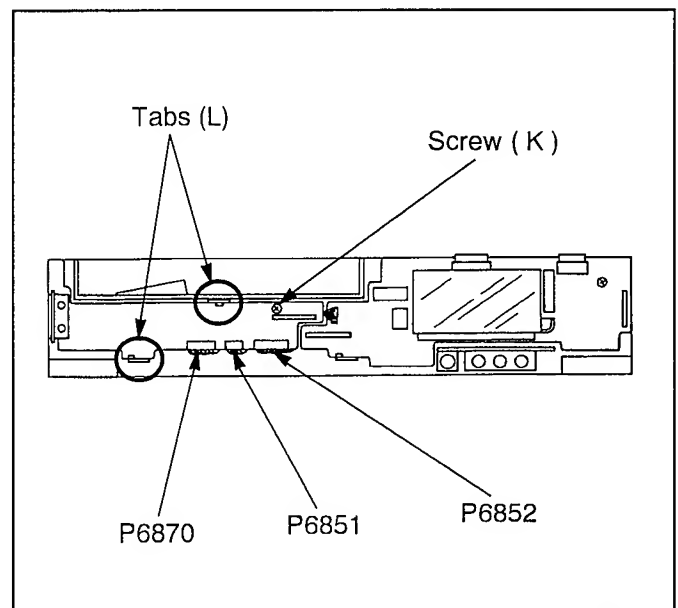


Fig. D8

2-2-8. Removal of the Head Amp C.B.A.

1. Unscrew the 2 screws (M) on the Head Amp C.B.A..
2. Disconnect the 2 flexible cables(P551,P501).
3. Carefully pull out the Head Amp C.B.A..

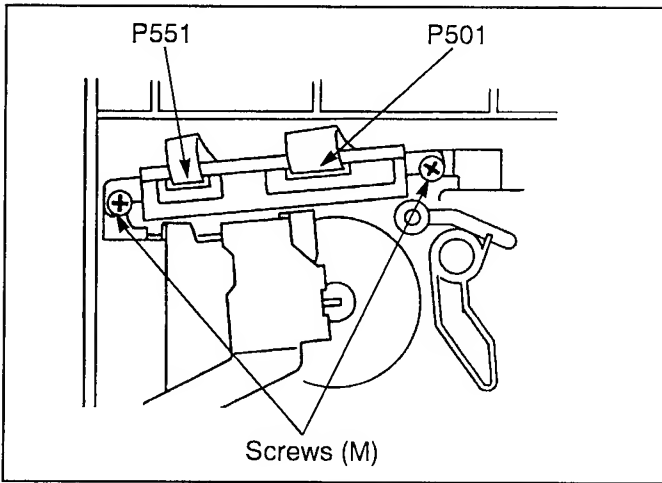


Fig. D9

2-2-9. Removal of the Main C.B.A.

1. Unscrew the 5 screws (N) on the Main C.B.A..
2. Unscrew the 4 screws (O) on rear side of the frame.
3. Unlock a locking tab (P) on the Main C.B.A..

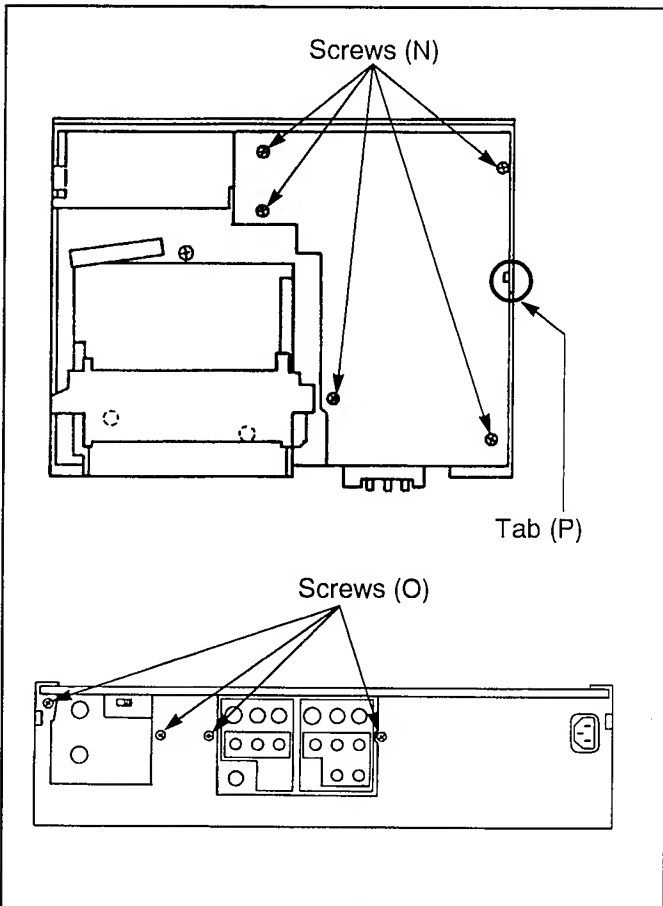


Fig. D10

2-2-10. Removal of the Power Unit

1. Unscrew the 3 screws (Q) on the Power Unit.
2. Lift up the Power Unit and pull out a connector (P1002).

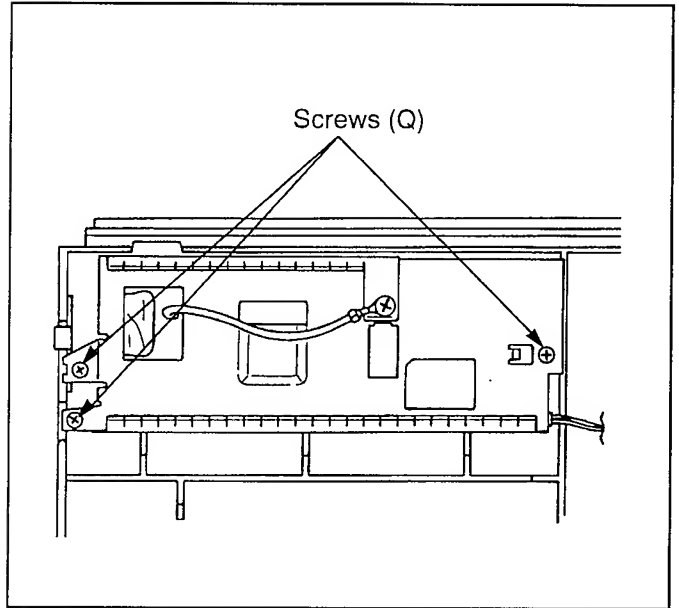


Fig. D11

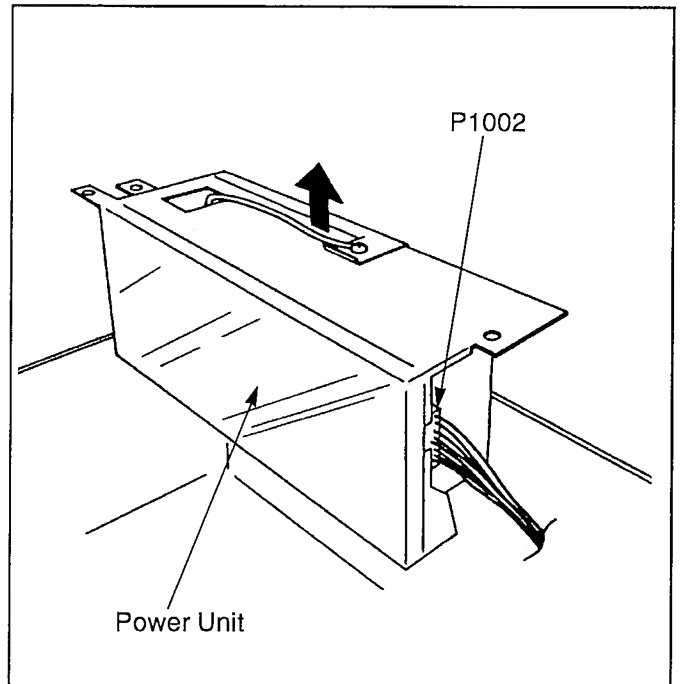


Fig. D11-1

2-2-11. Removal of the Video Control C.B.A.

1. Unscrew the 3 screws (R) on the Video Control C.B.A..
2. Unlock the 2 locking tabs (S) on the Video Control C.B.A..
3. Disconnect the 3 connectors (P6001,6002 and P6003).

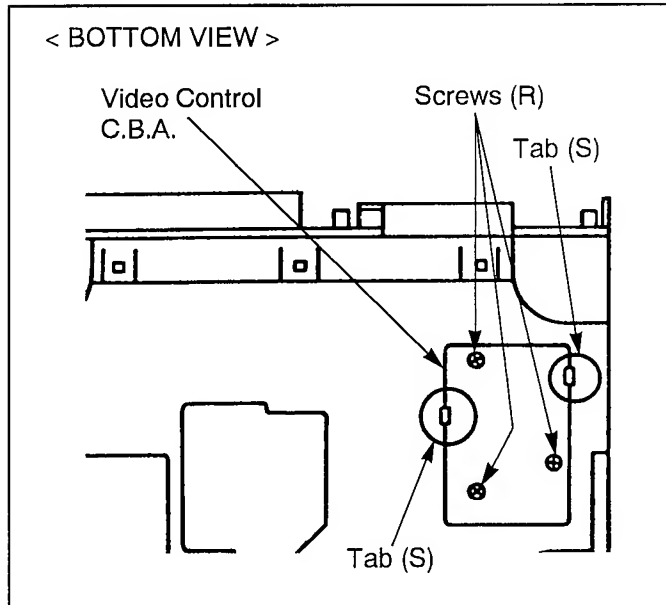


Fig. D12

2-2-12. Removal of the Mechanism Unit

1. Unscrew the 3 screws (T) on the Mechanism Unit.
2. Carefully pull out the Mechanism Unit from the frame.

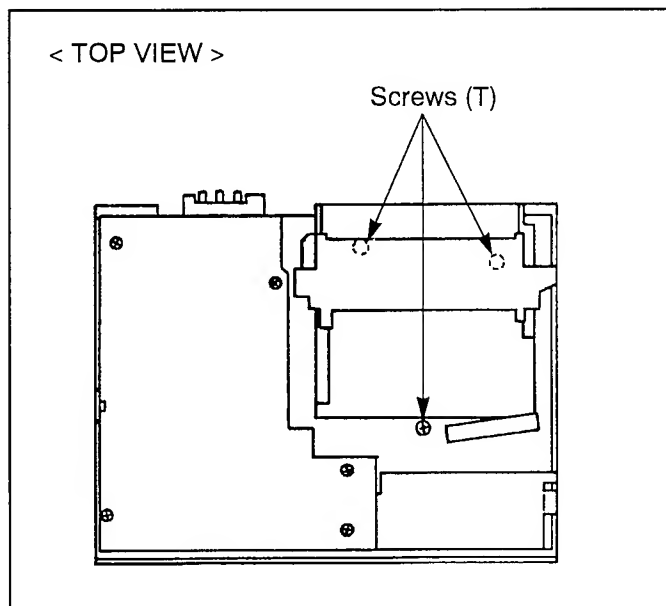


Fig. D13

2-2-13. Removal of the Jog & Shuttle C.B.A.

1. Unscrew the 3 screws (U) on the Front Panel.

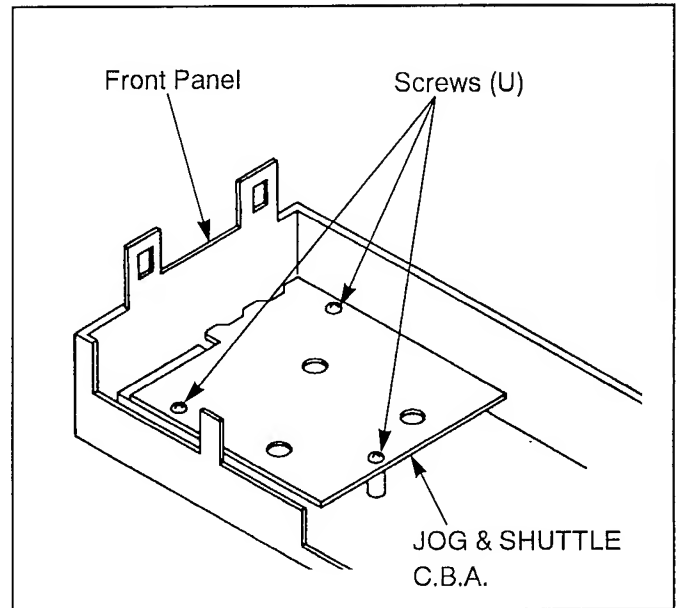


Fig. D14

2-2-14. Removal of the Front Jack C.B.A.

1. Unscrew a screw (V) on the frame.
2. Disconnect a connector (P6801).

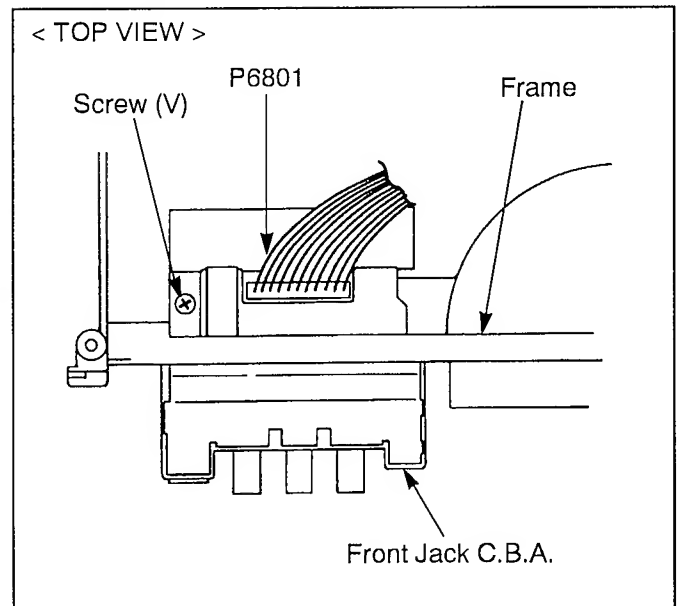


Fig. D15

SECTION 3. ELECTRICAL ADJUSTMENT PROCEDURES

3-1. TEST EQUIPMENT

To perform electrical adjustment the following equipment's are required.

1. V.T.V.M. (Vacuum Tube Volt Meter) or D.V.M. (Digital Volt Meter)
2. Dual-Trace Oscilloscope (More than 35MHz)
Range : Voltage 0.005 ~ 50 V/div.
: Frequency DC ~ 35 MHz
: Probe 10 : 1
3. Video Sweep Generator
4. Sine Wave Generator
5. Video Signal Generator
6. Monitor TV
7. Alignment Tape (VFM8080HQFP)
8. S-VHS/VHS Blank Tape

3-2. How to Read the Adjustment Procedures

(example)

TP	VIDEO OUT
ADJ.	VR30006 (Y/C PACK C.B.A. : A-8)
MODE	REC ⇒ PLAY
INPUT	COLOR BAR
TAPE	VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	1.0 ± 0.05Vp-p

- TP : Test Point
 ADJ. : Variable Resistor
 MODE : Mode of VTR when adjustment
 INPUT : Input signal for adjustment
 TAPE : Tape for adjustment
 M.EQ : Measurement equipment
 SPEC : Specification of adjustment

SERVO SECTION

3-3-1. PG SHIFTER ADJ.

TP	TP2001(MAIN C.B.A.: I-7) , VIDEO OUT
ADJ.	VR2001 (MAIN C.B.A. : D-3)
MODE	PLAY
INPUT	COLOR BAR
TAPE	VFM8080HQFP
M. EQ	OSCILLOSCOPE
SPEC	8.5 ± 1.0 H

1. Connect the oscilloscope CH 1 to video output connector and CH 2 to TP2001 (H. SW).
2. Adjust VR2001 as shown in Fig. E1.

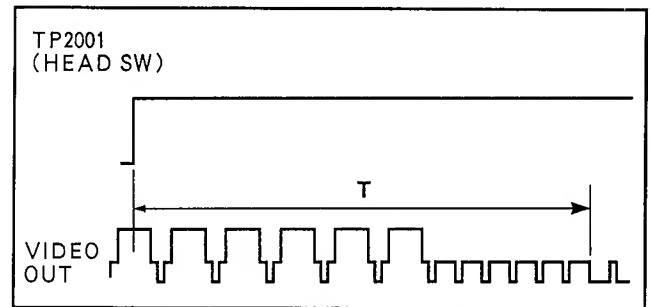


Fig. E1

3-3-2. REV SLOW TRACKING ADJ.

TP	VIDEO OUT
ADJ.	SP : VR2019 (MAIN C.B.A. : B-5) , EP : VR2018 (MAIN C.B.A. : B-5)
MODE	REC ⇒ PLAY
INPUT	COLOR BAR
TAPE	BLANK TAPE
M. EQ	MONITOR TV
SPEC	NO APPEAR NOISE BAR

1. Connect the Monitor TV to video output connector.
2. Place the unit in the still mode on the self recorded (SP mode) portion.
3. Adjust VR2019 so that no noise bar appear on the top and bottom portion of the Monitor TV.
4. Place the unit in the REV Slow mode on the self recorded (EP mode) portion.
5. Adjust VR2018 so that noise bar is minimized.

VIDEO SECTION

3-3-3. EE Y LEVEL ADJ.

TP	VIDEO OUT
ADJ.	VR3601 (RF AMP C.B.A.: F-1)
MODE	STOP
INPUT	COLOR BAR
TAPE	-----
M. EQ	OSCILLOSCOPE
SPEC	1.0 ± 0.05 Vp-p

Note :
 Must be heat up more than 10 min. before perform this adjustment.

1. Connect the oscilloscope to video output connector.
2. Adjust VR3601 so that Y level is 1.0V ± 0.05Vp-p. (Refer to Fig. E2)

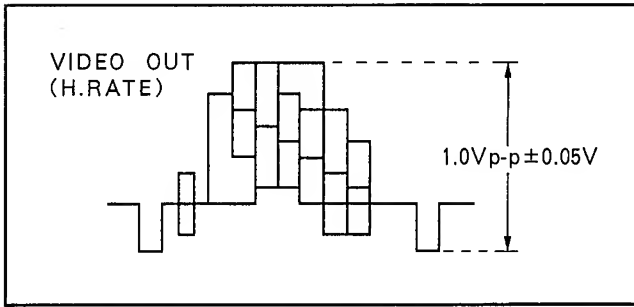


Fig. E2

3-3-4. S-VHS REC CURRENT ADJ.

TP	TP507 (HEAD AMP C.B.A. :B-2 (HOT)), TP508 (HEAD AMP C.B.A. : B-1 (GND))
ADJ.	REC Y : VR3006 (MAIN C.B.A. : F-4) , REC C : VR3003 (MAIN C.B.A. : G-4)
MODE	REC
INPUT	COLOR BAR
TAPE	S-VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	Y : $140 \pm 5\text{mVp-p}$ C : $40 \pm 2\text{mVp-p}$

1. Connect the oscilloscope CH 1 to TP507 and GND to TP508.
2. Turn VR3006 to reduce luminance component.
3. Adjust VR3003 so that the cyan level is $40\text{mV} \pm 5\text{mVp-p}$. (Refer to Fig. E3)
3. Adjust VR3006 so that the sync level is $140\text{mV} \pm 5\text{mVp-p}$. (Refer to Fig. E4)

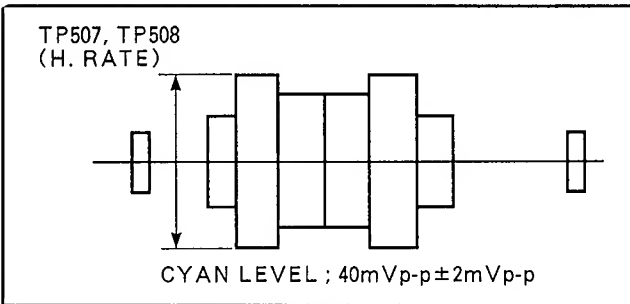


Fig. E3

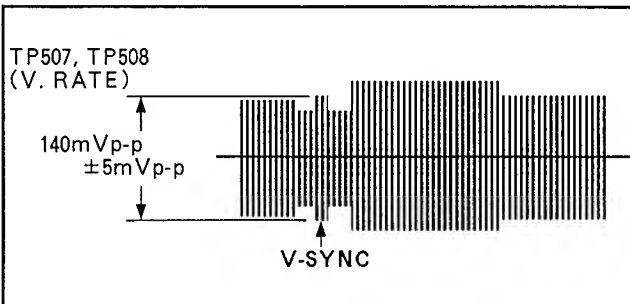


Fig. E4

3-3-5. VHS REC CURRENT ADJ.

TP	TP507 (HEAD AMP C.B.A. :B-2 (HOT)), TP508 (HEAD AMP C.B.A. : B-1 (GND))
ADJ.	VR3007 (MAIN C.B.A. : F-4)
MODE	REC
INPUT	COLOR BAR
TAPE	VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	$140 \pm 5\text{mVp-p}$

1. Connect the oscilloscope CH 1 to TP507 and CH 2 to TP508.
2. Adjust VR3007 so that the sync level is $140\text{mV} \pm 5\text{mVp-p}$. (Refer to Fig. E5)

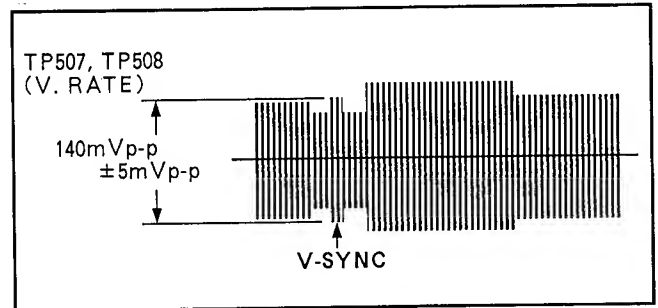


Fig. E5

3-3-6. VHS Y PB LEVEL ADJ.

TP	VIDEO OUT
ADJ.	VR30006 (Y/C PACK : A-8)
MODE	REC ⇒ PLAY
INPUT	COLOR BAR
TAPE	VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	$1.0 \pm 0.05\text{Vp-p}$

1. Connect the oscilloscope to video output connector with 75 ohm terminated.
2. Adjust VR30006 so that Y level is $1.0\text{V} \pm 0.05\text{Vp-p}$. (Refer to Fig. E6)

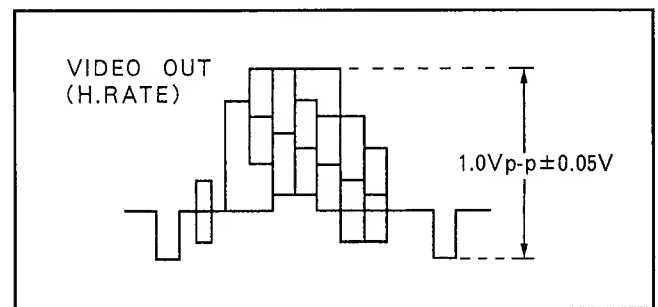


Fig. E6

3-3-7. S-VHS Y PB LEVEL ADJ.

TP	VIDEO OUT
ADJ.	VR30005 (Y/C PACK : A-7)
MODE	REC ⇒ PLAY
INPUT	COLOR BAR
TAPE	S-VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	1.0 ± 0.05Vp-p

1. Connect the oscilloscope to video output connector with 75 ohm terminated.
2. Adjust VR30005 so that Y level is 1.0V ± 0.05Vp-p. (Refer to Fig. E7)

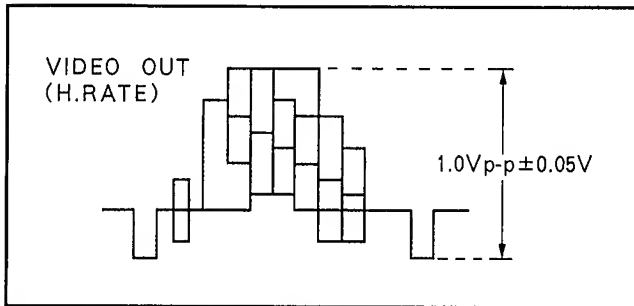


Fig. E7

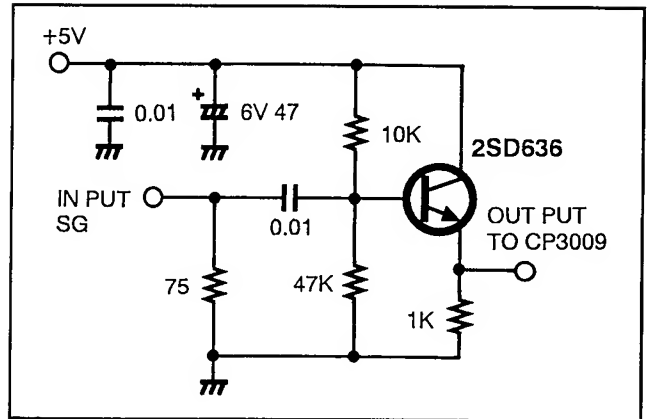


Fig. E8

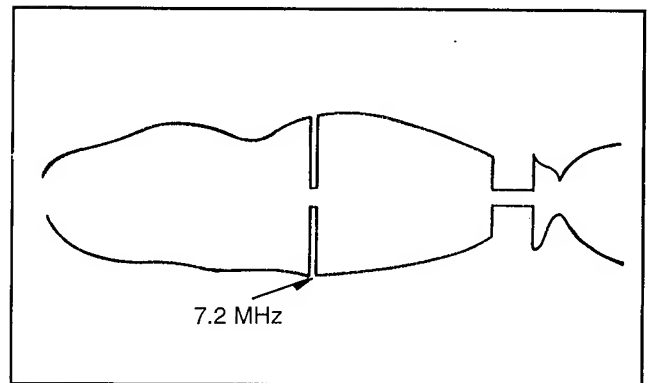


Fig. E9

3-3-8. COS EQ PEAK ADJ.

TP	CP3005 (MAIN C.B.A. : D-5)
ADJ.	VR3002 (MAIN C.B.A. : H-6)
MODE	STOP
INPUT	SWEEP SIGNAL (20mVp-p)
TAPE	S-VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	7.2 ± 0.2Vp-p

1. Connect the Service Circuit to CP3005 and supply the sweep signal.
2. Set the output of sweep generator to 20mVp-p with 7.2Hz marker.
3. Turn VR3001 to full counter-clockwise.
4. Adjust VR3002 so that 7.2Hz is maximized. (Refer to Fig. E9)

Note :
Must be perform the S-VHS Frequency Response Adjustment, after this adjustment.

3-3-9. S-VHS FREQUENCY RESPONSE ADJ.

TP	VIDEO OUT
ADJ.	VR3001 (MAIN C.B.A. : H-6)
MODE	REC ⇒ PLAY
INPUT	30% SWEEP SIGNAL
TAPE	S-VHS BLANK TAPE
M. EQ	OSCILLOSCOPE
SPEC	100KHz : 4MHz = 5 : 3.5 ⁺⁰ _{-0.5}

1. Connect the oscilloscope to video output connector.
2. Playback the just recorded portion.
3. Adjust VR3001 so that the sweep signal is 100 KHz : 4MHz = 5 : 3.5⁺⁰_{-0.5}

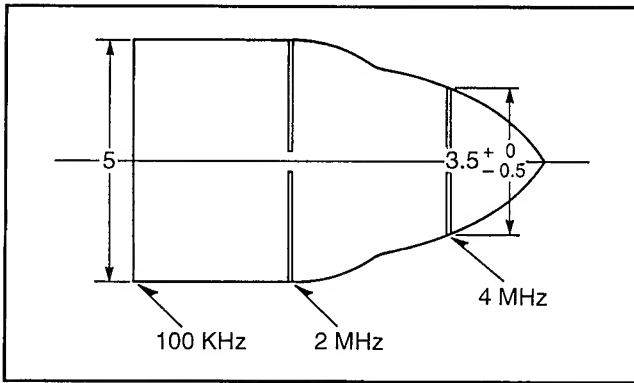


Fig. E10

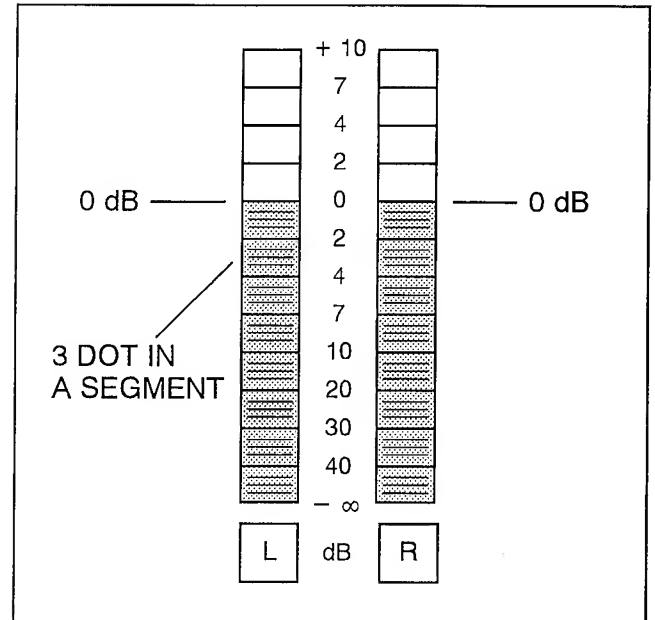


Fig. E11

AUDIO SECTION

3-3-10. EE LEVEL ADJ.

TP	AUDIO OUT
ADJ.	CH 1 : VR4804 (MAIN C.B.A. : H-4) , CH 2 : VR4803 (MAIN C.B.A. : I-3)
MODE	STOP
INPUT	1 Hz, -10dB SINE WAVE
TAPE	-----
M. EQ	V.T.V.M.
SPEC	-8.0 ± 0.5 dBV

1. Set the REC LEVEL VR is center position [5].
2. Adjust VR4804 so that CH 1 (L) EE level is -8.0 dBV ± 0.5 dBV and VR4803 so that CH 2 (R) EE level is -8.0 dBV ± 0.5 dBV.

3-3-11. LEVEL METER ADJ.

TP	AUDIO OUT
ADJ.	VR6501 (TIMER C.B.A. : C-2)
MODE	STOP
INPUT	1 KHz, -10dB
TAPE	-----
M. EQ	FRONT PANEL LEVEL METER
SPEC	0 dB INDICATOR JUST LIGHT UP

1. Set the REC LEVEL VR is center position [5].
2. Adjust VR6501 so that 0 dB indicator just light up on the front panel level meter.

3-3-12. NORMAL BIAS CURRENT ADJ.

TP	TP4801 (MAIN C.B.A. : F-3 (HOT)) , TP4802 (MAIN C.B.A. : F-3 (GND))
ADJ.	VR4802 (MAIN C.B.A. F-2)
MODE	REC
INPUT	-----
TAPE	BLANK TAPE
M. EQ	V.T.V.M.
SPEC	3.0 ± 0.1 mVrms

1. Connect the V.T.V.M. to TP4801 and TP4802.
2. Adjust VR4802 so that out put level is 3.0 ± 0.1 mVrms.

3-3-13. NORMAL PB LEVEL ADJ.

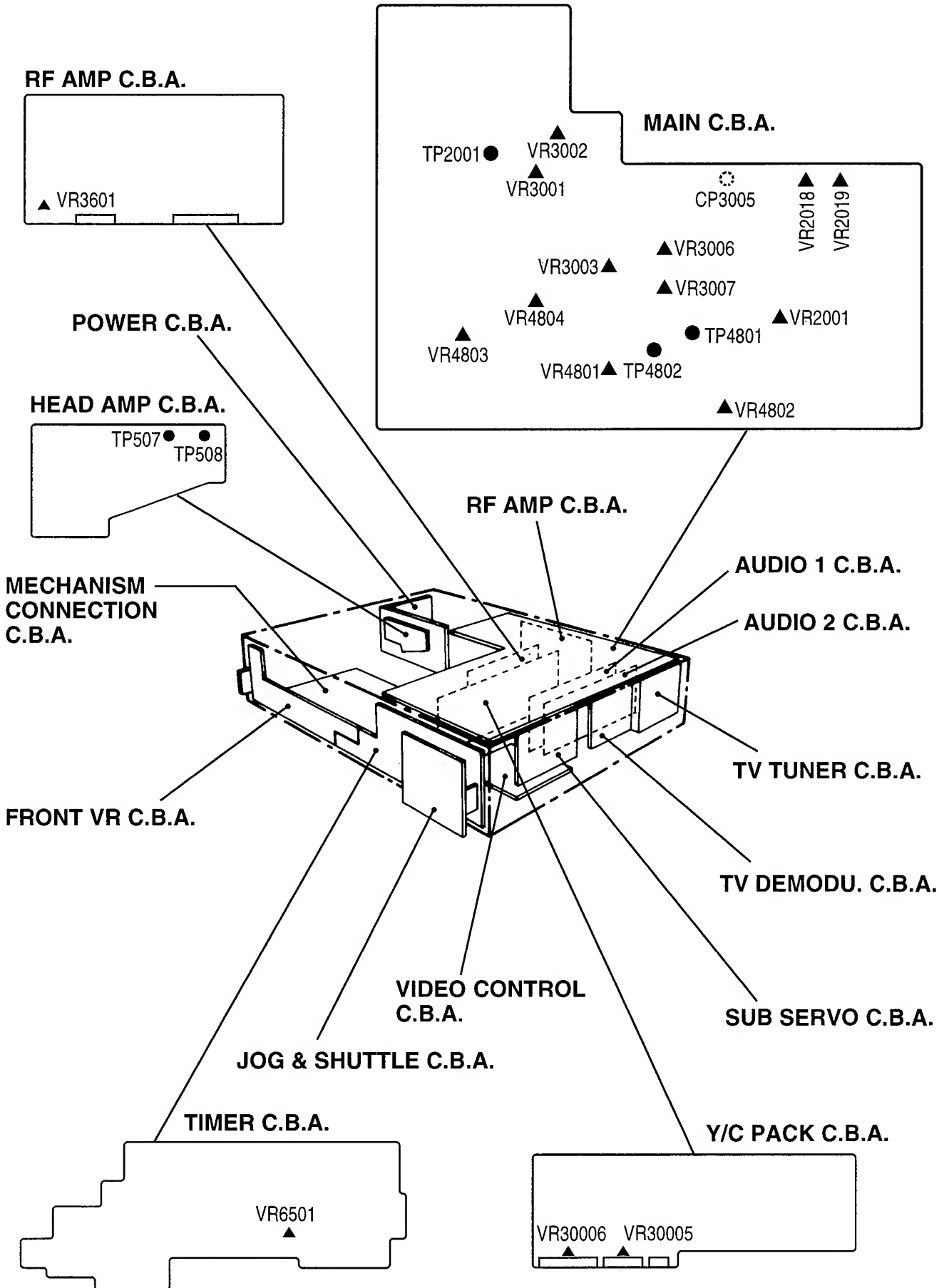
TP	AUDIO OUT
ADJ.	VR4801 (MAIN C.B.A. G-3)
MODE	REC ⇒ PLAY
INPUT	1 KHz, -10dB
TAPE	BLANK TAPE
M. EQ	V.T.V.M.
SPEC	-8.0 ± 2dB

1. Connect the V.T.V.M. to the audio output connector.
2. Playback the just recorded portion.
3. Adjust VR4801 so that output level is -8.0 ± 2dB.

CIRCUIT BOARD LAYOUT

3

ELECTRICAL ADJUSTMENT PROCEDURES



SECTION 4. ABBREVIATIONS & BLOCK DIAGRAMS

4-1. ABBREVIATIONS

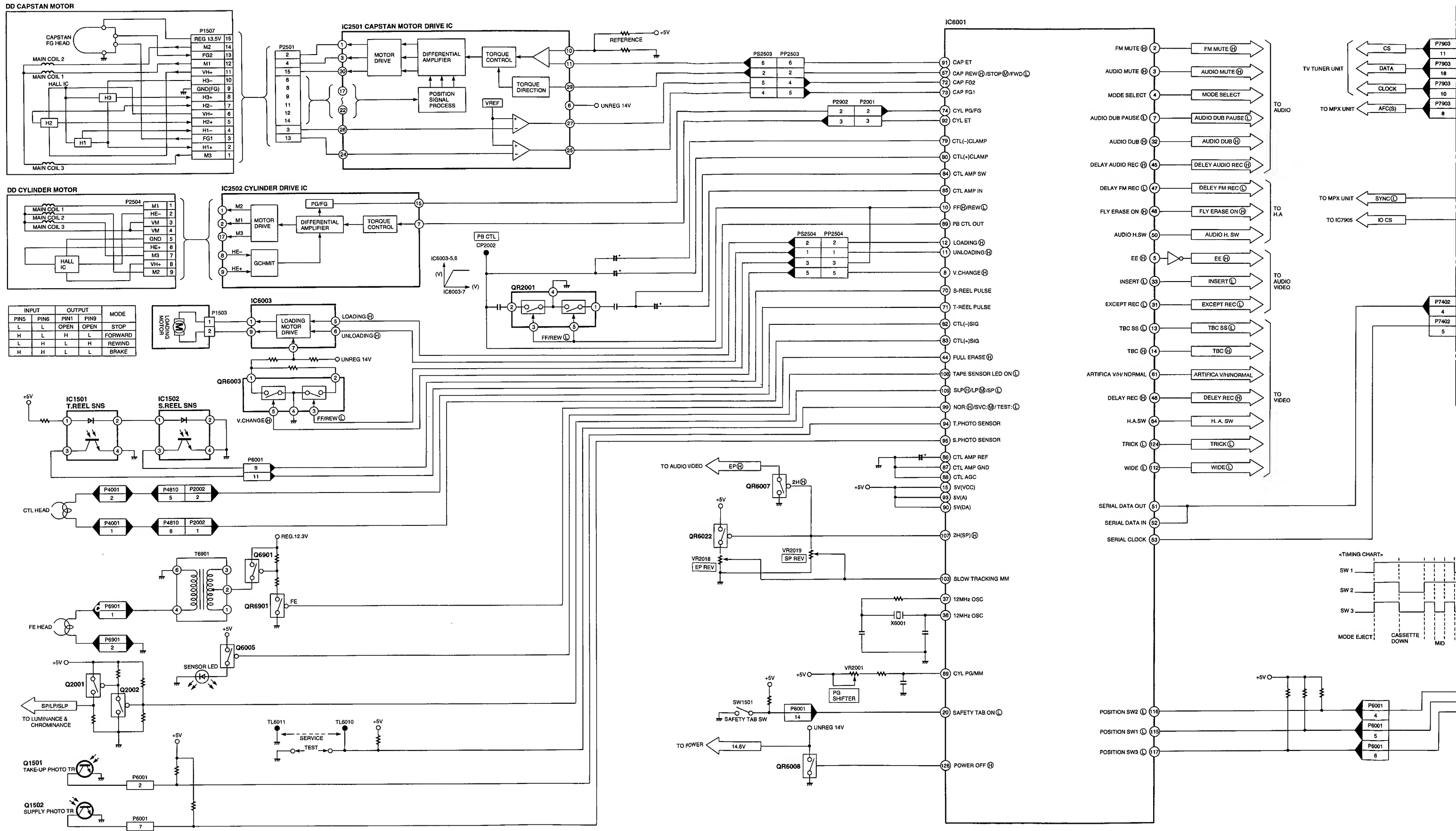
443NT [L]	4.43 NTSC ①	BIL. [H]	BILINGUAL ②
A. COMP	AUDIO COMPONENT SIGNAL	BIL/M1[L]	BILINGUAL ①
A. COMPO	AUDIO COMPONENT SIGNAL	BS CLOCK	BS CLOCK
A. D.P [L]	AUDIO DUBBING PAUSE ①	BS DATA	BS DATA
A. D/L [L]	AUDIO DUBBING PAUSE ①	BS LCH IN	BS L CHANNEL INPUT
A. DEF [S]	AUDIO DEFEAT	BS MIX [H]	BS MIX ②
A.DEF [S] [L]	AUDIO DEFEAT	BS MON [H]	BS MONITOR ②
A. DUB P [L]	AUDIO DUBBING PAUSE ①	BS MONI [H]	BS MONITOR ②
A. DUB [H]	AUDIO DUBBING ②	BS RCH IN	BS R CHANNEL INPUT
A. ERASE	AUDIO ERASE	BS VIDEO	BS VIDEO SIGNAL
A. H. SW	AUDIO HEAD SWITCHING PULSE	BS VIDEO/BS1	BS VIDEO SIGNAL
A. HEAD [R]	AUDIO HEAD (REC)	BS [H]	BS ②
A. HEAD [W]	AUDIO HEAD (PLAY)	BS. LEVEL	BS LEVEL
A. IN [L]	AUDIO INPUT (L)	BS. M [H]	BS MONITOR ②
A. IN [R]	AUDIO INPUT (R)	BS/VTR [H]	BS/VTR ②
A. MUT [H]	AUDIO MUTE ②	BUS CLK	BUS CLOCK
A. MUTE [H]	AUDIO MUTE ②	BUS LSN	BUS LISTEN
A. OUT [L]	AUDIO OUTPUT (L)	BUS TLK	BUS TALK
A. OUT [R]	AUDIO OUTPUT (R)	BUZZER	BUZZER
A. RF OUT	AUDIO RF SIGNAL OUTPUT	CAP EC	CAPSTAN TORQUE CONTROL
A/V/S. DATA	AV SW/SERIAL DATA	CAP M GND	CAPSTAN MOTOR GND
AC ONLINE	AC ONLINE	CAP. ET	CAPSTAN TORQUE CONTROL
AC. O/EE. H	AC ONLINE/EE ②	CAP. FG1	CAPSTAN FG1 PULSE
AFC S C	AFC S CURVE	CAP. FG2	CAPSTAN FG2 PULSE
AFC [S]	AFC S CURVE	CAS. SW	CASSETTE SW
AFC. DEF	AFC DEFEAT	CCN	PLAYBACK CONTROL SIGNAL (-)
ARFC OUT	AUDIO RF SIGNAL OUTPUT	CCP	PLAYBACK CONTROL SIGNAL (+)
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL	CHM	CONTROL SIGNAL (+)
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI	CHP	CONTROL SIGNAL (-)
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL ② / NORMAL	CINEM [L]	CINEMA ①
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL	CINEMA [L]	CINEMA ①
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE	CINEMA/MIX	CINEMA/MIX
AUDIO IN [L]	AUDIO INPUT (L)	CKL	RATCH LOCK
AUDIO IN [R]	AUDIO INPUT (R)	CKS	SHIFT LOCK
AUDIO OUT [L]	AUDIO OUTPUT (L)	CL	CLOCK
AUDIO OUT [R]	AUDIO OUTPUT (R)	CLK	CLOCK
AUDIO SELECT [H]	AUDIO SELECT ②	CLK (C.G)	CLOCK
AUDIO. L	AUDIO (L)	CLOCK. IN	CLOCK INPUT
AUDIO. R	AUDIO (R)	CLP	CLAMP
AV CNT	AV CONTROL	COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
AV CTL	AV CONTROL	COLOR [H]	COLOUR ②
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK	CONV	CONVERTOR
AV. C.M.	AV CONTROL MODE	CS	CHIP SELECT
AVCNT/METER. R	AV CONTROL/LEVEL METER(R)	CTL GND	CONTROL GND
AVSW/METER. L	AV SW/LEVEL METER (L)	CTL HEAD [+]	CONTROL HEAD (+)
B MODE. H	B MODE ②	CTL HEAD [-]	CONTROL HEAD (-)
B.G.P	BURST GATE PULSE	CTL[+]	CONTROL HEAD (+)
BACKUP 5V	BACK UP 5V	CTL[-]	CONTROL HEAD (-)
BAND. U.E.	BAND U	CUE BIAS	CUE BIAS
BANDVL. D	BAND VL	CURRENT LIM	CURRENT LIMMITER
BI/MI [L]	BILINGUAL/MIX ①	CYL ET	CYLINDER TORQUE CONTROL
BIL	BILINGUAL	CYL GND	CYLINDER GND
BIL [L]	BILINGUAL ①	D.F.M. REC [H]	DELAYED FM RECORDING ②
		D. FM REC [L]	DELAYED FM RECORDING ①
		D. GND	DIGITAL GND

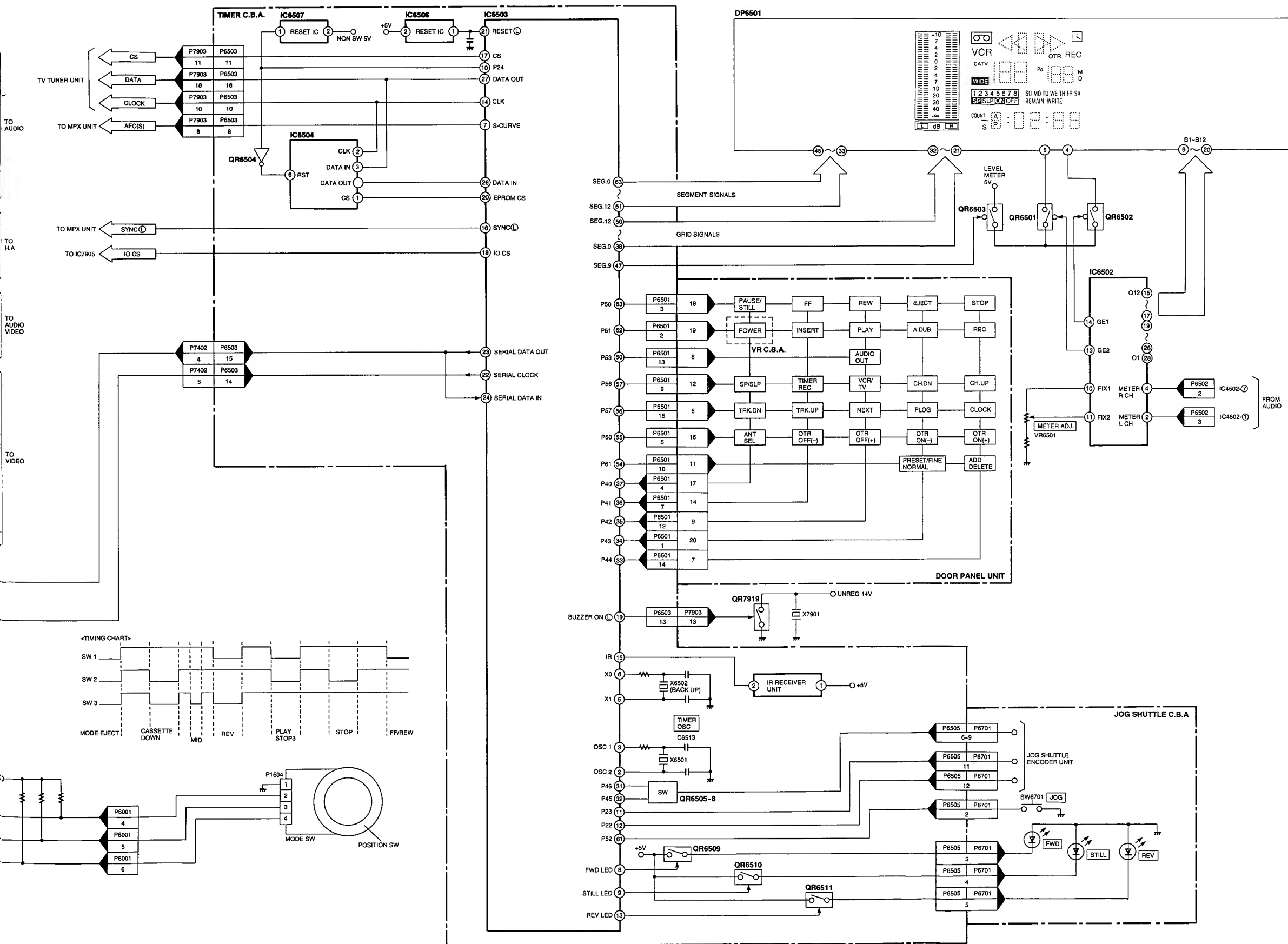
D. REC [H]	DELAYED RECORDING ⊕	H.SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING ⊕	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEDA PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING ⊕	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [-]	HEATER (-)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL	HTR [+]	HEATER (+)
	REFERENCE VOLTAGE	HTR [-]	HEATER (-)
EDT TRIG [L]	EDIT TRIGGER ⊕	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT ⊕	ICL	CONTROL AGC CIRCUIT
EE [H]	EE ⊕	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE ⊕ /INSERT ⊕	IN SELA 1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA 2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA 3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch ⊕
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT ⊕
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP ⊕	INSERT [H]	INSERT ⊕
EP/LP [H]	LP ⊕	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP ⊕	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB ⊕
FF/REW [L]	FAST FORWARD/REWIND ⊕	JST. CLOCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJ.	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON ⊕	L. CH [H]	Lch ⊕
FLY ON [H]	FLYING ERASE HEAD ON ⊕	L. CH [L]	Lch ⊕
FLY. E [H]	FLYING ERASE HEAD ON ⊕	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE ⊕	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE ⊕	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON ⊕	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON ⊕	LINE IN [L]	LINE INPUT (L)
FULL. E. 12V	FULL ERASE 12V	LINE IN [R]	LINE INPUT (R)
GND [A]	GND (ANALOGUE)	LINE OUT [L]	LINE OUTPUT (L)
GND [TU]	GND (TUNER)	LINE OUT [R]	LINE OUTPUT (R)
GND/N. SW. 12V	GND/NON SW 12V	LP [H]	LP ⊕

LPTRI [L]	LP TRICK PLAY ①	P. OFF [L]	POWER OFF ①
Lch/A. DUB	Lch/AUDIO DUBBING	PAL [H]	PAL ②
M GND	MOTOR GND	PAL [L]/NTSC [H]	PAL ① /NTSC ②
M REG	MOTOR REGULATOR	PB ADJ. OUT	PLAYBACK ADJUST OUTPUT
MAIN OUT	MAIN OUTPUT	PB OUT	PLAYBACK OUTPUT
MAIN [L]	MAIN ①	PB. H	PLAYBACK ②
MAIN/MONO	MAIN/MONAUROAL	PFG	PG/FG
MAX IN	MAXIMUM INPUT	PHOTSN + B	PHOTO SENSOR + B
MES [H]	MESECAM ②	PICT. CNT	PICTURE CONTROL
MESE [H]	MESECAM ②	PLAY LED/RVS LED	PLAY LED/REVERSE LED
MESE [L]	MESECAM ①	PLAY. PO	PLAY POSITION
METER 5V	LEVEL METER 5V	PLAY/R.LED	PLAY LED/REVERSE LED
METER [L]	LEVEL METER (L)	PLY/DEW	PLAY/DEW ②
METER [R]	LEVEL METER (R)	POWER OFF [L]	POWER OFF ①
METER. L/AVS	LEVEL METER (L)	PREROLL [H]	PREROLL ②
METER. R/AVC	LEVEL METER (R)	PWRFAIL	POWER FAILURE DETECT
MI/BI [L]	MIX ② /BILINGUAL	R. CH [H]	Rch ②
MIC GND	MIC GND	R. CH [L]	Rch ①
MIC IN	MIC INPUT	R. ST	RESET
MIC IN [L]	MIC INPUT (L)	R/S/F	REVERSE ② /STOP ③ /FORWARD ①
MIC IN [R]	MIC INPUT (R)	RCH [H]	Rch ②
MIC [H]	MIC ②	REC 12V	RECORDING 12V
MIX [H]	MIX ②	REC CHROMA	RECORDING CHROMINANCE SIGNAL
MIX [H]/CINEMA [L]	MIX ② /CINEMA SOUND ①	REC H	RECORDING ②
MIX/ CINE	MIX ② /CINEMA SOUND ①	REC IN	RECORDING INPUT
MIX/CINEMA [L]	MIX ② /CINEMA SOUND ①	REC OUT [L]	RECORDING OUTPUT ①
MN. H/M. L	MONAUROAL ② /MAIN ①	REC START	RECORDING START
MN. H/MAI. L	MONAUROAL ② /MAIN ①	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAUROAL 2/MESECAM ①	REC VR [L]	RECORDING VOLUME (L)
MODE SEL	AUDIO MODE SELECT	REC VR [R]	RECORDING VOLUME (R)
MODE SW	AUDIO MODE SW	REC Y	RECORDING LUMINANCE SIGNAL
MODE. S. IN	AUDIO MODE SELECT INPUT	REC [H]	RECORDING ②
MODE. S. OUT	AUDIO MODE SELECT OUTPUT	REC. C	RECORDING CHROMINANCE SIGNAL
MONO [H]	MONAUROAL ②	REC. Y	RECORDING LUMINANCE SIGNAL
MONO [H]/MAIN [L]	MONAUROAL ② /MAIN ①	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAUROAL 2 ①	REEL-T	REEL PULSE(TAKE-UP)
MONO2/MESE[FM(L)]	MONAUROAL 2/MESECAM(FM ①)	REEL-S	REEL PULSE (SUPPLY)
MOTOR GND	MOTOR GND	REGULATOR FILTER	REGULATOR FILTER
MUTE	MUTE	RESET	RESET
N. A. REC [L]	NORMAL AUDIO RECORDING ①	REV M F/R	REVIEW MOTOR
N. SW 12V	NON SW 12V	REV M V1	FORWARD/REVERSE
N. SW. 5. DET	NON SW 5V DETECT	REV M V2	REVIEW MOTOR V1
NICAM	NICAM	REV MOTOR F/R	REVIEW MOTOR V2
NICAM [L]	NICAM ①	REV MOTOR V1	REVIEW MOTOR
NOL [H]	PAL ② /4.43 NTSC ③ /3.58 NTSC ①	REV MOTOR V2	FORWARD/REVERSE
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY ②	REV MOTOR [+]	REVIEW MOTOR V1
NORMAL [H]	NORMAL ②	REV MOTOR [-]	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV. M. GND	REVIEW MOTOR (+)
NTSC [L]	NTSC ①	RF.CHROMA	REVIEW MOTOR (-)
OCH	CONTROL AGC CIRCUIT	RF OUT	REVIEW MOTOR GND
OUT	OUTPUT	RF Y	RF CHROMINANCE SIGNAL
P-OFF [H]	POWER OFF ②	RF Y. IN	RF OUTPUT
P-OFF [L]	POWER OFF ①	RF. Y. IN	RF LUMINANCE SIGNAL
P. FAIL	POWER FAILURE DETECT	RF. Y. OUT	RF LUMINANCE SIGNAL INPUT
P. OFF [H]	POWER OFF ②		RF LUMINANCE SIGNAL OUTPUT

ROTAR. SW	ROTARY SW	T. BUSCLK	TIMER BUS CLOCK
ROTARY	ROTARY SW	T. BUSLSN	TIMER BUS LISTEN
RST	RESET	T. BUSTLK	TIMER BUS TALK
RST [L]	RESET Ⓛ	T. END [L]	TAPE END Ⓛ
Rch/INST	Rch/INSERT	T. PHOTO	TAKE-UP PHOTO TRANSISTOR
S IN	SERIAL DATA INPUT	TAPE END [L]	TAPE END Ⓛ
S OUT	SERIAL DATA OUTPUT	TAPE END [L]/CAM	TAPE END Ⓛ /CAMERA PAUSE
S-PHOTO	SUPPLY PHOTO TRANSISTOR	TEST	TEST MODE
S-RL. PLS	SUPPLY REEL PULSE	TPZ	TRAPEZOIDAL WAVE CIRCUIT
S. CLK	SERIAL CLOCK	TRIC [L]	TRICK PLAY Ⓛ
S. CLK/AV	SERIAL CLOCK/AV	TRICK [L]	TRICK PLAY Ⓛ
S. DATA	SERIAL DATA	TRK. ENV	AUDIO TRACKING ENVELOPE DETECT
S. DATA/A	SERIAL DATA / AUDIO	TU. AUDIO	TUNER AUDIO
S. PHOTO	SUPPLY PHOTO TRANSISTOR	TU. GND	TUNER GND
S.TAB [L]	SAFETY TAB SW ON Ⓛ	TU. V. IN	TUNER VIDEO SIGNAL INPUT
S/P/N	SECAM/PAL/NTSC	TU. VIDEO	TUNER VIDEO
SC IN	SERIAL CLOCK INPUT	TUN NOR IN	TUNER NORMAL INPUT
SC OUT	SERIAL CLOCK OUTPUT	TUN R	TUNER AUDIO (R)
SCK SELECT	SERIAL CLOCK SELECT	TUN. AUDIO IN	TUNER AUDIO INPUT
SEL OUT [L]	SELECT OUTPUT (L)	TUNER 12V	TUNER 12V
SEL OUT [R]	SELECT OUTPUT (R)	TUNER L	TUNER AUDIO (L)
SHUTTLE 1	SHUTTLE 1	TUNER V IN	TUNER VIDEO SIGNAL INPUT
SIF	SOUND INTERMEDIATE FREQUENCY	TUNER [L]	TUNER AUDIO (L)
SLMUT [H]	INPUT SELECT MUTE ⊕	TUNER [N]	TUNER AUDIO (NORMAL)
SLNID [+]	SOLENOID (+)	TUNER [R]	TUNER AUDIO (R)
SLNID [-]	SOLENOID (-)	TUNER. 12	TUNER 12V
SLW TR. MM	SLOW TRACKING MONO MULTI	TUOFF [H]	TUNER OFF ⊕
SLW TR. REF	SLOW TRACKING REFERENCE	TV. AUDIO	TV AUDIO
	VOLTAGE	TV/VTR	TV/VTR
SNS. GND	SENSOR GND	TXTON [L]	TEXT ON Ⓛ
SOFT [H]	SOFT TAPE PLAY ⊕	U. REG45V	UNREGULATOR 45V
SOFT [H]/NORMAL	SOFT TAPE PLAY ⊕ /NORMAL ⊕	UNREG	UNREGULATOR
SOLENOID ON [L]	SOLENOID ON Ⓛ	UNREG 19V	UNREGULATOR 19V
SP [H]	SP ⊕	V. REF	REFERENCE VOLTAGE
SP/L/SLP	SP/LP	V. EE [H]	VIDEO EE ⊕
SSS [L]	SLOW/STILL/STOP Ⓛ	V. EE [L]	VIDEO EE Ⓛ
STEREO LED	STEREO LED	VCO REF	REFERENCE OSCILLATOR
STEREO [H]	STEREO ⊕	VD. IN	VIDEO SIGNAL INPUT
STEREO [L]	STEREO Ⓛ	VD. OUT	VIDEO SIGNAL OUTPUT
STOP. PO	STOP POSITION	VIDEO EE [L]	VIDEO EE Ⓛ
STOP/5V	STOP POSITION/5V	VIDEO IN	VIDEO SIGNAL INPUT
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT	VIDEO OUT	VIDEO SIGNAL OUTPUT
STOP1/PAL : ST	STOP 1 POSITION/PAL	VM	MOTOR VOLTAGE
STOP2. PO	STOP 2 POSITION	VM DOWN [L]	MOTOR VOLTAGE DOWN Ⓛ
STOP2 / S-TAB	STOP POSITION/SAFETY TAB SW	VSS	VERTICAL SYNC SIGNAL
STREO [H]	STEREO ⊕	VTR [H]	VTR ⊕
SUB BIAS	SUB BIAS	VTR. 12V	VTR 12V
SUB. SW	SUB SW	X IN	OSCILLATOR INPUT
SVHS CAS [L]	S-VHS CASSETTE Ⓛ	X OUT	OSCILLATOR OUTPUT
SW. 5. DET	SW 5V DETECT		
SYNC [L]	SYNC Ⓛ		
SYSCON 5V	SYSTEM CONTROL 5V		
SYSTEM	SYSTEM SW		
T-PHOTO	TAKE-UP PHOTO TRANSISTOR		
T-RL. PLS	TAKE-UP REEL PULSE		

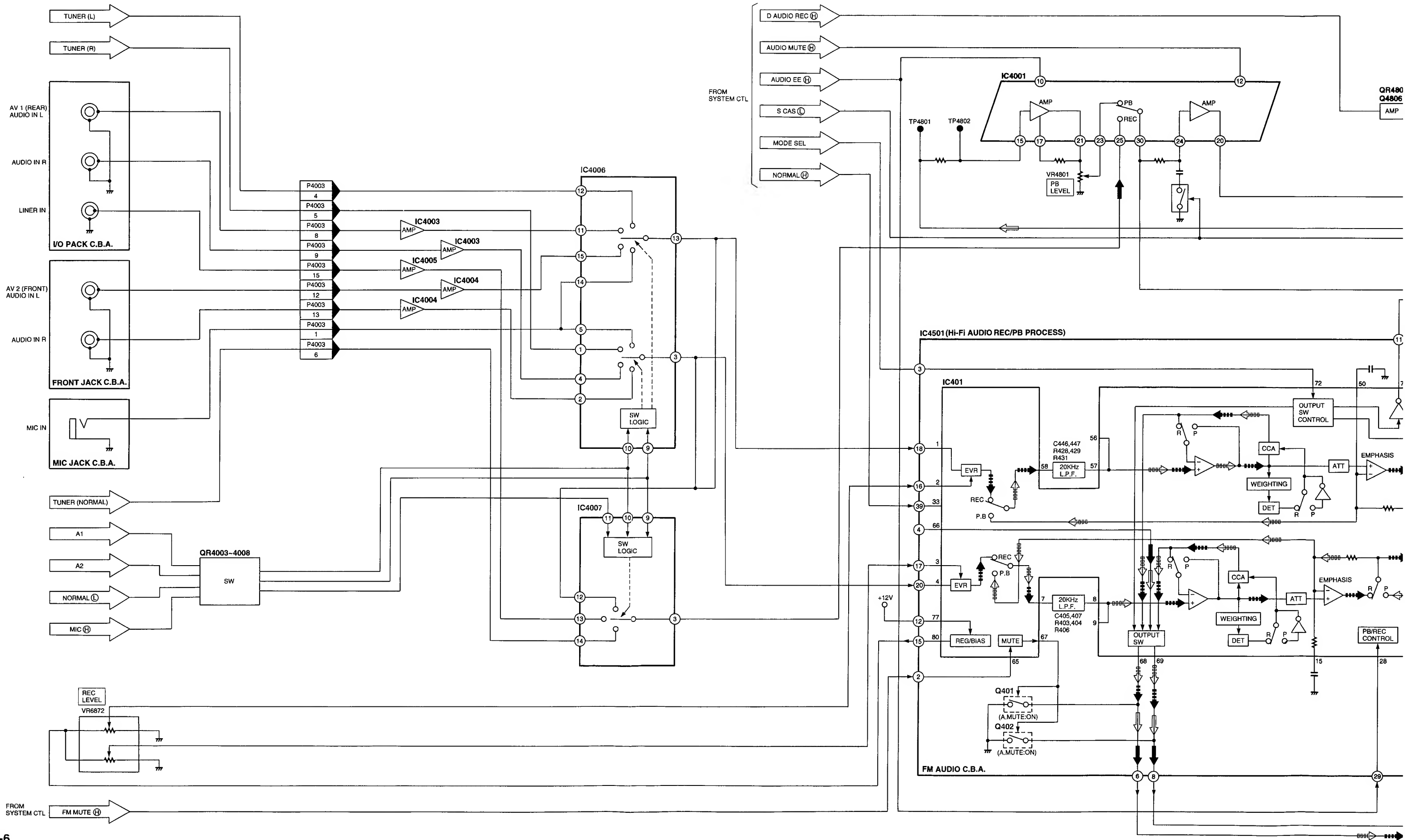
4-2. SYSTEM CONTROL & SERVO SECTION BLOCK DIAGRAM

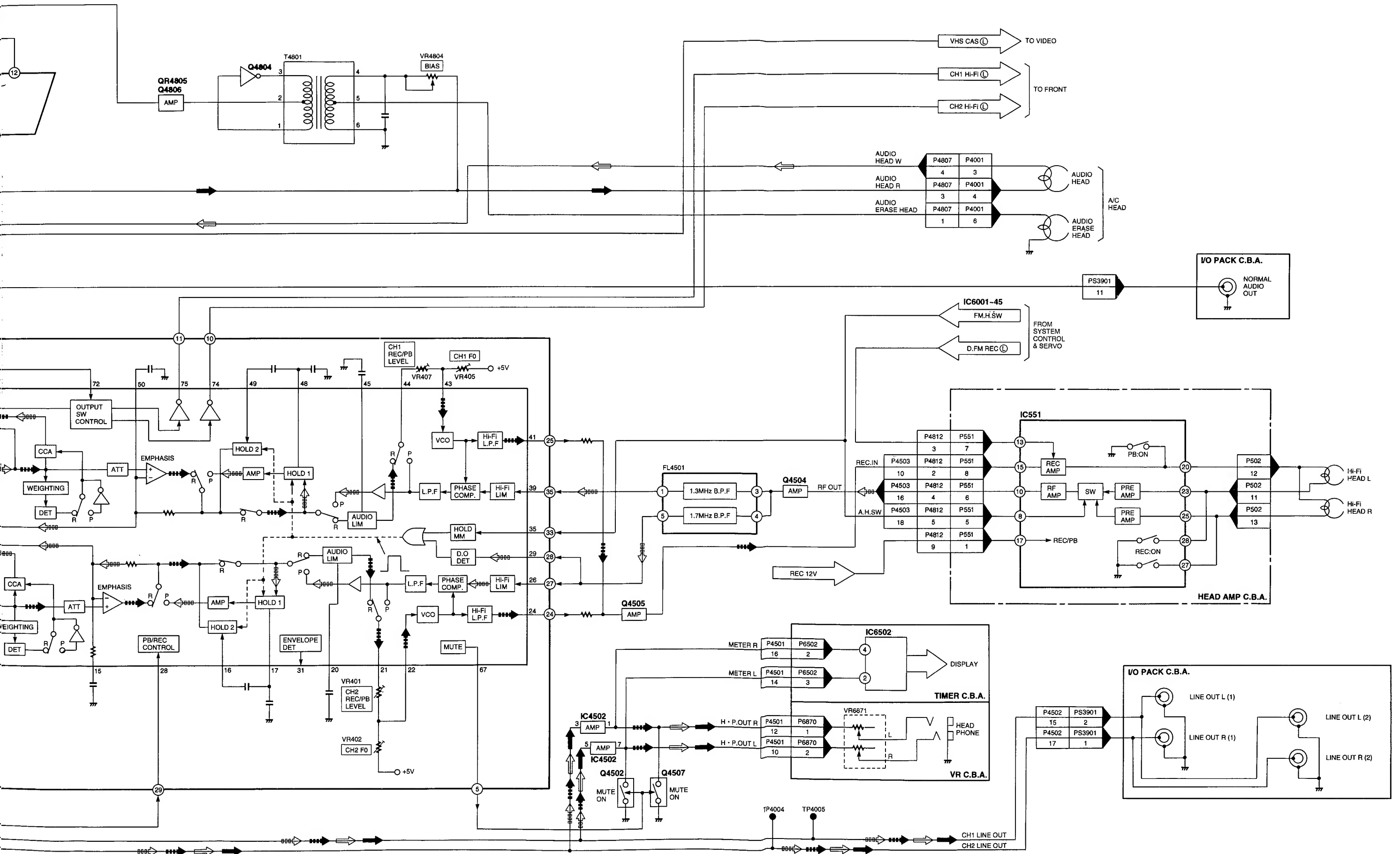




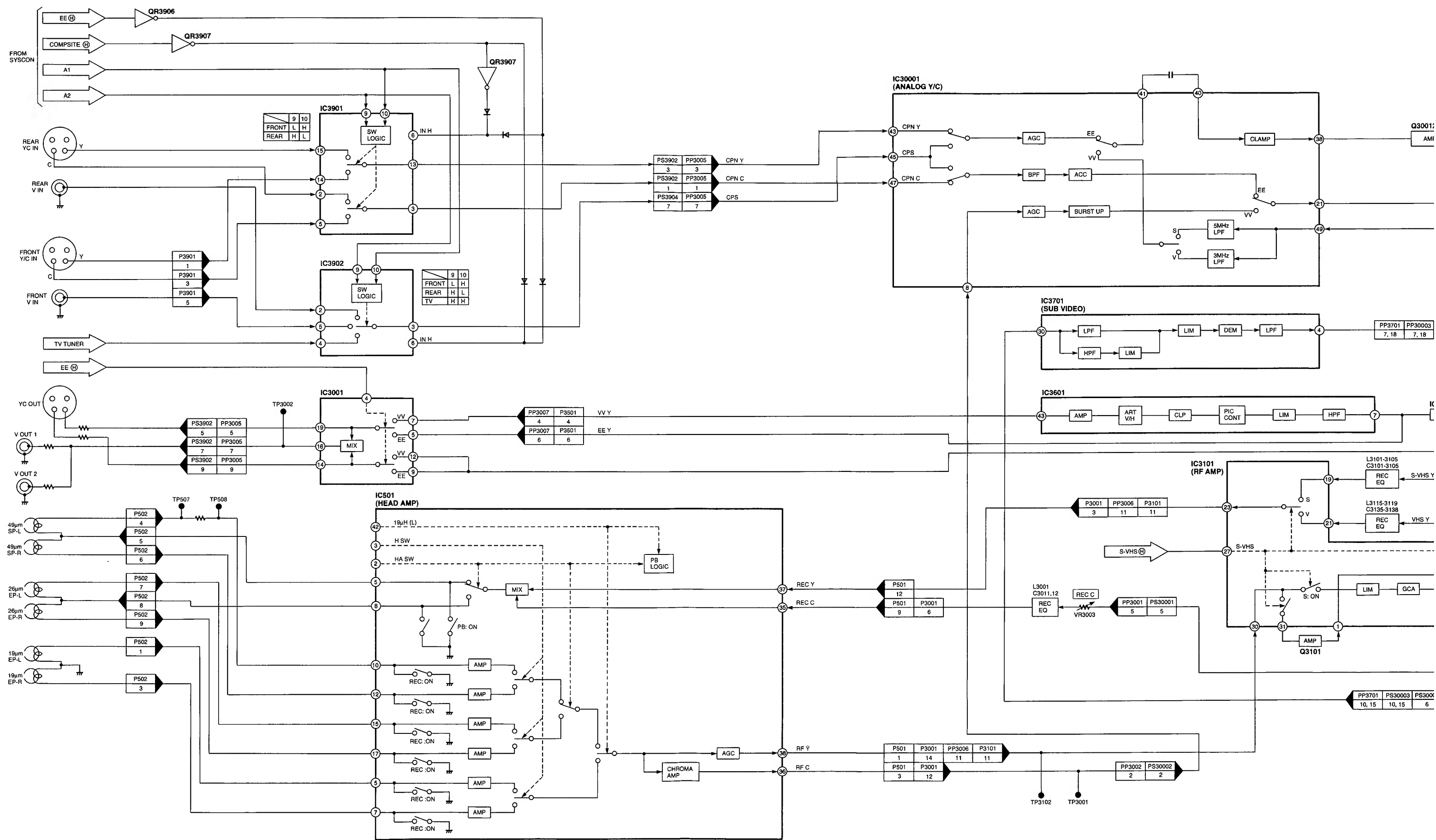
SYMBOL	TRUTH VALUE TABLE																		
INVERTER (a) (b)	<table border="1"> <tr> <td>IN</td> <td>(a)</td> <td>H</td> <td>L</td> </tr> <tr> <td>OUT</td> <td>(b)</td> <td>L</td> <td>H</td> </tr> </table>	IN	(a)	H	L	OUT	(b)	L	H										
IN	(a)	H	L																
OUT	(b)	L	H																
COMPARATOR (a) (b) (c)	<table border="1"> <tr> <td>IN</td> <td>(a)</td> <td>(a)>(b)</td> <td>(a)<(b)</td> </tr> <tr> <td>OUT</td> <td>(c)</td> <td>H</td> <td>L</td> </tr> </table>	IN	(a)	(a)>(b)	(a)<(b)	OUT	(c)	H	L										
IN	(a)	(a)>(b)	(a)<(b)																
OUT	(c)	H	L																
AND CIRCUIT (a) (b) (c)	<table border="1"> <tr> <td rowspan="2">IN</td> <td>(a)</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> </tr> <tr> <td>(b)</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>OUT</td> <td>(c)</td> <td>L</td> <td>L</td> <td>L</td> <td>H</td> </tr> </table>	IN	(a)	L	L	H	H	(b)	L	H	L	H	OUT	(c)	L	L	L	H	
IN	(a)		L	L	H	H													
	(b)	L	H	L	H														
OUT	(c)	L	L	L	H														
OR CIRCUIT (a) (b) (c)	<table border="1"> <tr> <td rowspan="2">IN</td> <td>(a)</td> <td>L</td> <td>L</td> <td>H</td> <td>H</td> </tr> <tr> <td>(b)</td> <td>L</td> <td>H</td> <td>L</td> <td>H</td> </tr> <tr> <td>OUT</td> <td>(c)</td> <td>L</td> <td>H</td> <td>H</td> <td>H</td> </tr> </table>	IN	(a)	L	L	H	H	(b)	L	H	L	H	OUT	(c)	L	H	H	H	
IN	(a)		L	L	H	H													
	(b)	L	H	L	H														
OUT	(c)	L	H	H	H														
THREE STATES BUFFER (a) (b) (c)	<table border="1"> <tr> <td rowspan="2">IN</td> <td>(a)</td> <td>H</td> <td>L</td> <td>H or L</td> </tr> <tr> <td>(b)</td> <td>L</td> <td>L</td> <td>H</td> </tr> <tr> <td>OUT</td> <td>(c)</td> <td>H</td> <td>L</td> <td>※</td> </tr> </table> <p>※ High impedance</p>	IN	(a)	H	L	H or L	(b)	L	L	H	OUT	(c)	H	L	※				
IN	(a)		H	L	H or L														
	(b)	L	L	H															
OUT	(c)	H	L	※															
TR. SW (NPN TYPE) (C) (B) (E)	<table border="1"> <tr> <td>BASE</td> <td>H</td> <td>L</td> </tr> <tr> <td>TR. SW</td> <td>ON</td> <td>OFF</td> </tr> </table>	BASE	H	L	TR. SW	ON	OFF												
BASE	H	L																	
TR. SW	ON	OFF																	
TR. SW (PNP TYPE) (E) (B) (C)	<table border="1"> <tr> <td>BASE</td> <td>H</td> <td>L</td> </tr> <tr> <td>TR. SW</td> <td>OFF</td> <td>ON</td> </tr> </table>	BASE	H	L	TR. SW	OFF	ON												
BASE	H	L																	
TR. SW	OFF	ON																	
R-S TYPE FLIP-FLOP (a) (c) (b) (d)	<table border="1"> <tr> <td rowspan="2">IN</td> <td>(a)</td> <td>L</td> <td>L</td> <td></td> </tr> <tr> <td>(b)</td> <td>L</td> <td></td> <td>L</td> </tr> <tr> <td rowspan="2">OUT</td> <td>(c)</td> <td>※</td> <td>L</td> <td>H</td> </tr> <tr> <td>(d)</td> <td>◆</td> <td>H</td> <td>L</td> </tr> </table> <p>※ Initial condition is maintained. ◆ Initial condition is reversed.</p>	IN	(a)	L	L		(b)	L		L	OUT	(c)	※	L	H	(d)	◆	H	L
IN	(a)		L	L															
	(b)	L		L															
OUT	(c)	※	L	H															
	(d)	◆	H	L															

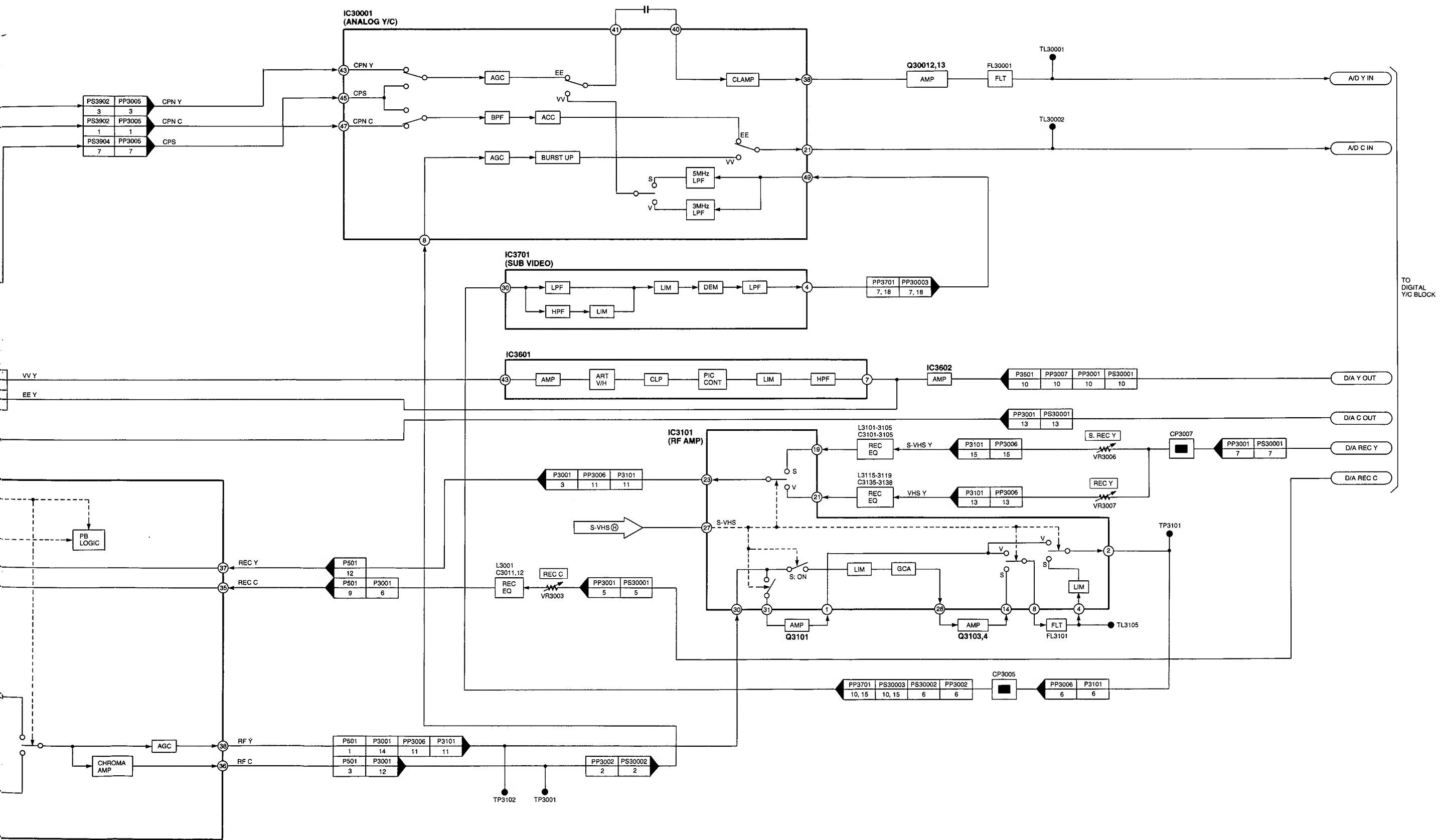
4-3. AUDIO SECTION BLOCK DIAGRAM



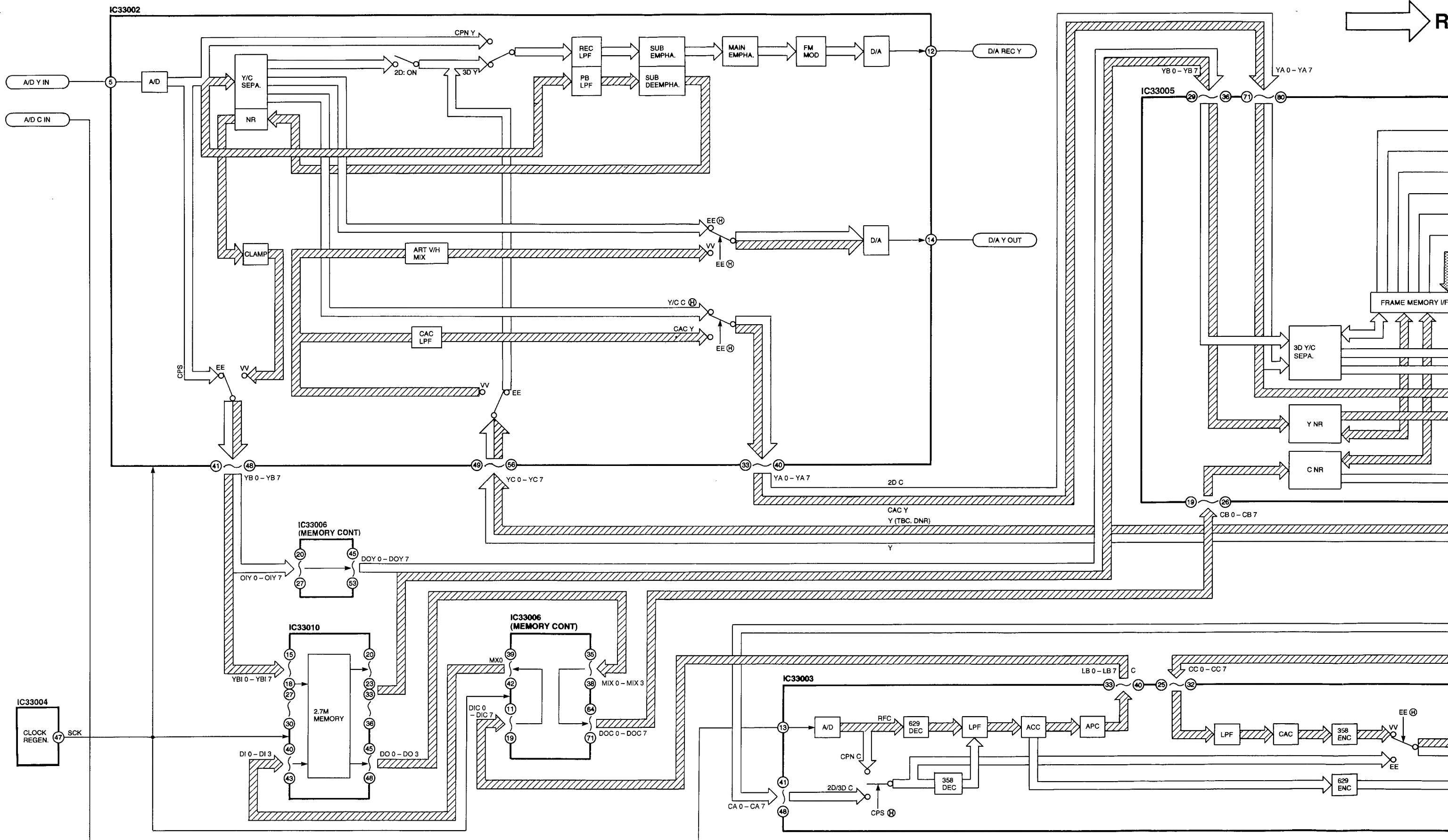


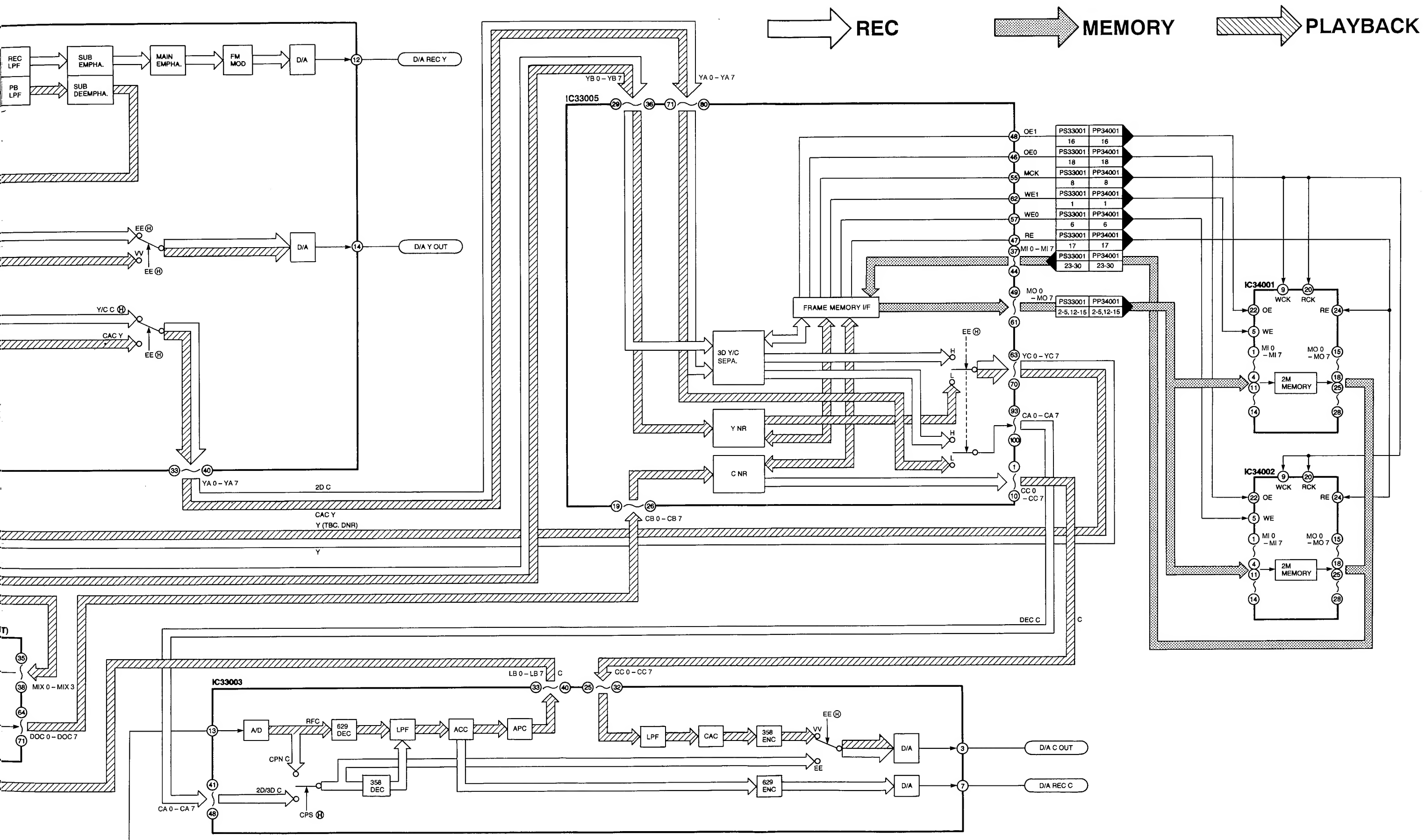
4-4. VIDEO (ANALOG) SECTION BLOCK DIAGRAM





4-5. VIDEO (DIGITAL) SECTION BLOCK DIAGRAM

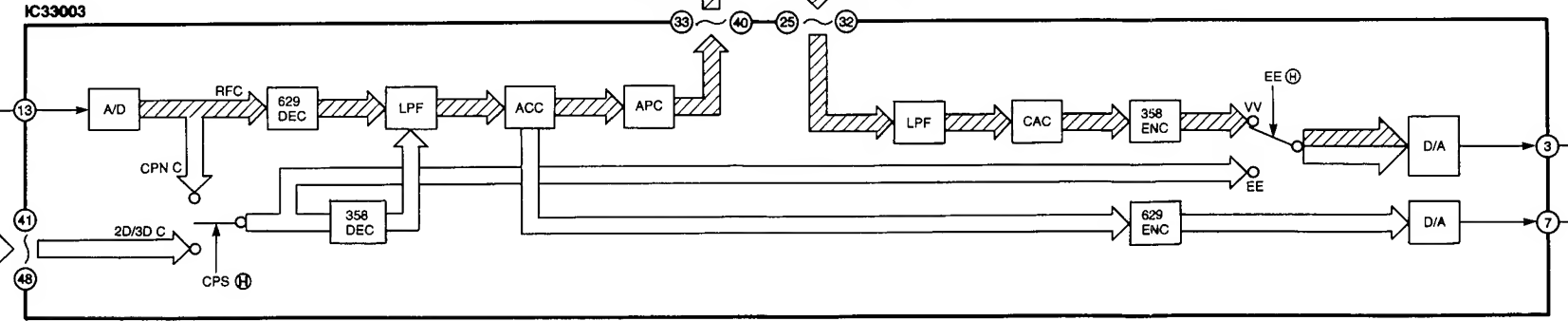




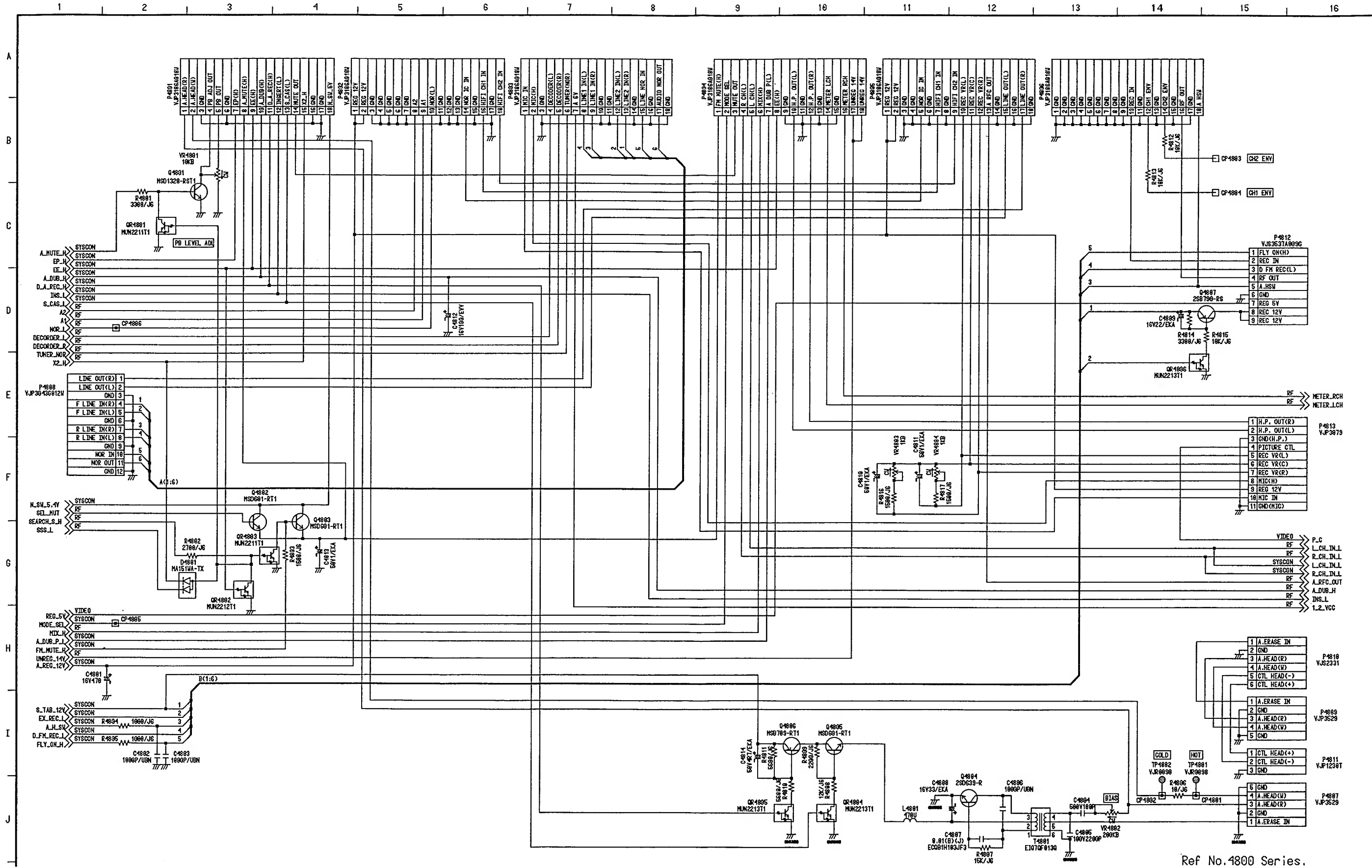
OE1	PS33001	PP34001
OE0	PS33001	PP34001
MCK	PS33001	PP34001
WE1	PS33001	PP34001
WE0	PS33001	PP34001
RE	PS33001	PP34001
MI 0 - MI 7	PS33001	PP34001
MO 0 - MO 7	PS33001	PP34001

OE	9	20	24
WE	5	15	28
MI 0 - MI 7	1	18	25
MO 0 - MO 7	4	11	22

OE	9	20	24
WE	5	15	28
MI 0 - MI 7	1	18	25
MO 0 - MO 7	4	11	22

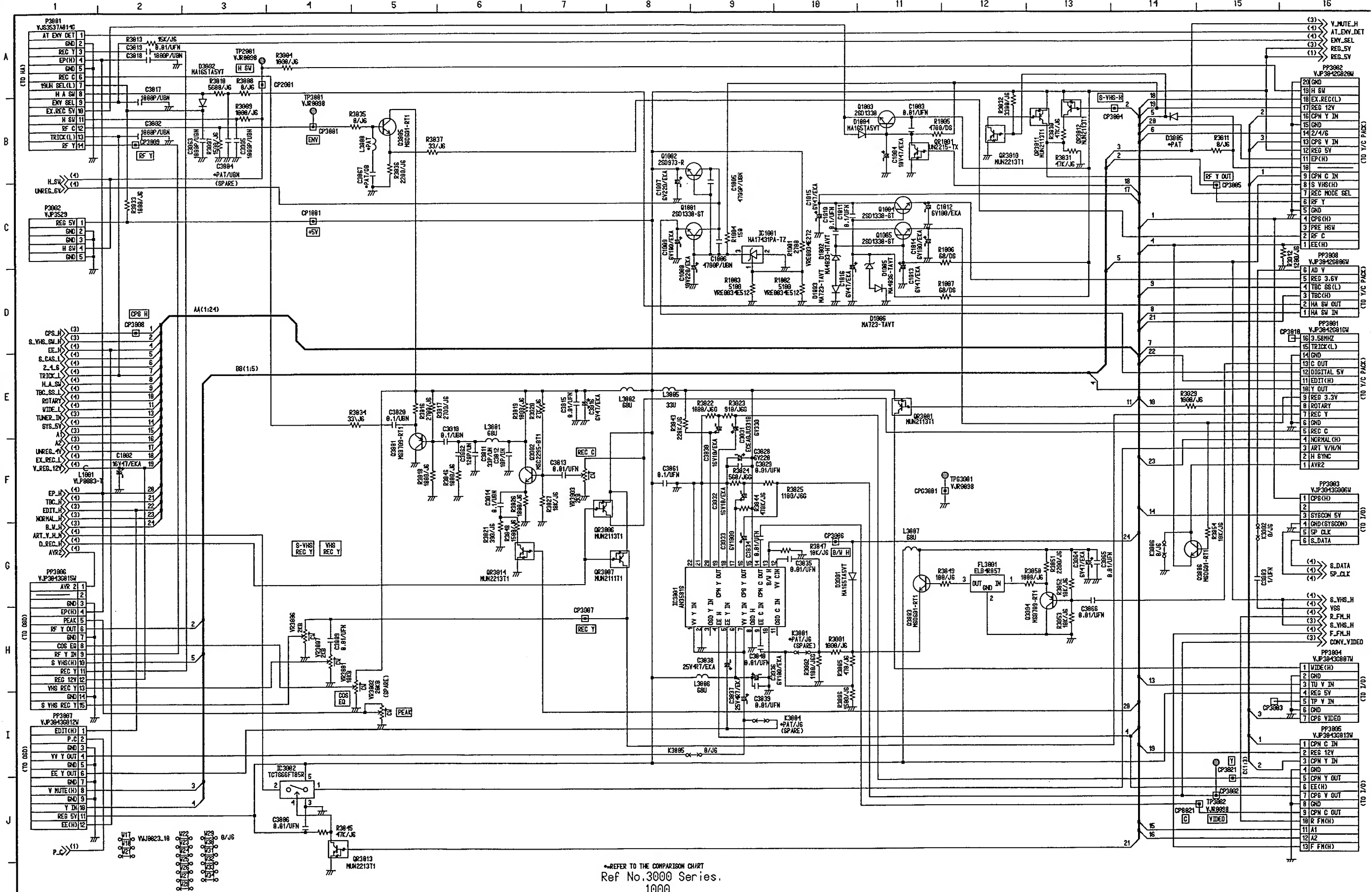


5-2. AUDIO (MAIN) SCHEMATIC DIAGRAM



Ref No. 4800 Series.

5-3. VIDEO (MAIN) SCHEMATIC DIAGRAM



REFER TO THE COMPARISON CHART
 Ref No.3000 Series.
 1000

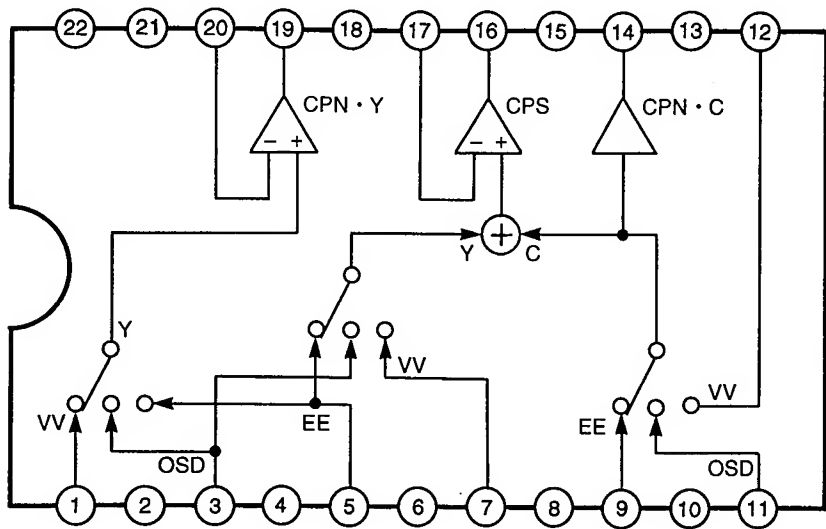
AUDIO (MAIN) C.B.A.

REF. NO.	Q4801			Q4802			Q4803			Q4804			Q4805			Q4806			
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
PLAY	0	0	0	0	5.3	0	0	5.3	0	0	0.2	0.2	0.2	0	0	0.5	0	0.5	
REC	0	0	0	0	5.3	0	0	5.3	0	0	0	8.8	0.9	9.3	12.0	10.0	12.1	12.0	11.3
REF. NO.	Q4807																		
MODE	E	C	B																
PLAY	0.6	0	0.3																
REC	12.1	12.0	11.3																
REF. NO.	QR4801			QR4802			QR4803			QR4804			QR4805			QR4806			
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	
PLAY	0	0	0	0	0	0	0	0	0	0	0	4.2	0	0.9	0	0	0.3	0	
REC	0	0	0	0	0	4.8	0	0	0	0	0	4.2	0	0	4.8	0	0	3.8	

VIDEO MAIN C.B.A.

REF. NO.	IC1001																			
MODE	R	A	K																	
PLAY	2.4	0	5.9																	
REC	2.5	0	5.9																	
REF. NO.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	2.5	0	2.0	0	2.5	5.1	2.5	0	1.9	0	1.9	1.9	0	2.3	5.1	2.4	1.6	0	2.4	1.8
REC	2.5	0	2.0	4.8	2.5	5.1	2.5	0	1.9	0	1.9	1.9	0	2.3	5.1	2.3	1.6	0	2.2	1.8
REF. NO.	IC3001			IC3002			Q1001			Q1002			Q1003			Q1004				
MODE	21	22	1	2	3	4	5	E	C	B	E	C	B	E	C	B	E	C	B	
PLAY	0	0	0.4	0.3	0	5.1	5.1	5.2	6.0	5.9	5.2	6.0	5.9	5.1	5.1	5.8	3.7	4.3	4.3	
REC	0	0	0.4	0.3	0	5.1	5.1	5.2	6.0	5.9	5.2	6.0	5.9	0.3	5.2	0	3.7	4.3	4.3	
REF. NO.	Q1005			Q3001			Q3002			Q3003			Q3004			Q3005				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	3.3	4.3	4.0	2.6	0.2	2.0	1.1	3.9	1.9	2.5	5.1	3.1	3.1	0	2.5	1.3	5.1	1.9		
REC	3.3	4.3	4.0	2.6	0	2.0	1.2	3.9	1.9	2.5	5.1	3.1	3.1	0	2.5	0	5.2	0		
REF. NO.	Q3006			QR1001			QR3001			QR3006			QR3007			QR3010				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	0	0	0.5	0	5.8	0	5.1	0	5.0	5.1	5.0	0.4	5.1	5.0	0.1	0	0	4.2		
REC	4.8	0	0.5	0	0	3.8	5.1	0	5.0	5.1	2.0	5.0	0.2	3.3	5.0	0	0	4.2		
REF. NO.	QR3011			QR3012			QR3013			QR3014										
MODE	E	C	B	E	C	B	E	C	B	E	C	B								
PLAY	5.1	5.1	0	5.1	5.1	0	0	5.1	0	0	0	0								
REC	5.2	5.1	0	5.2	5.2	0	0	5.1	0	0	0	0								

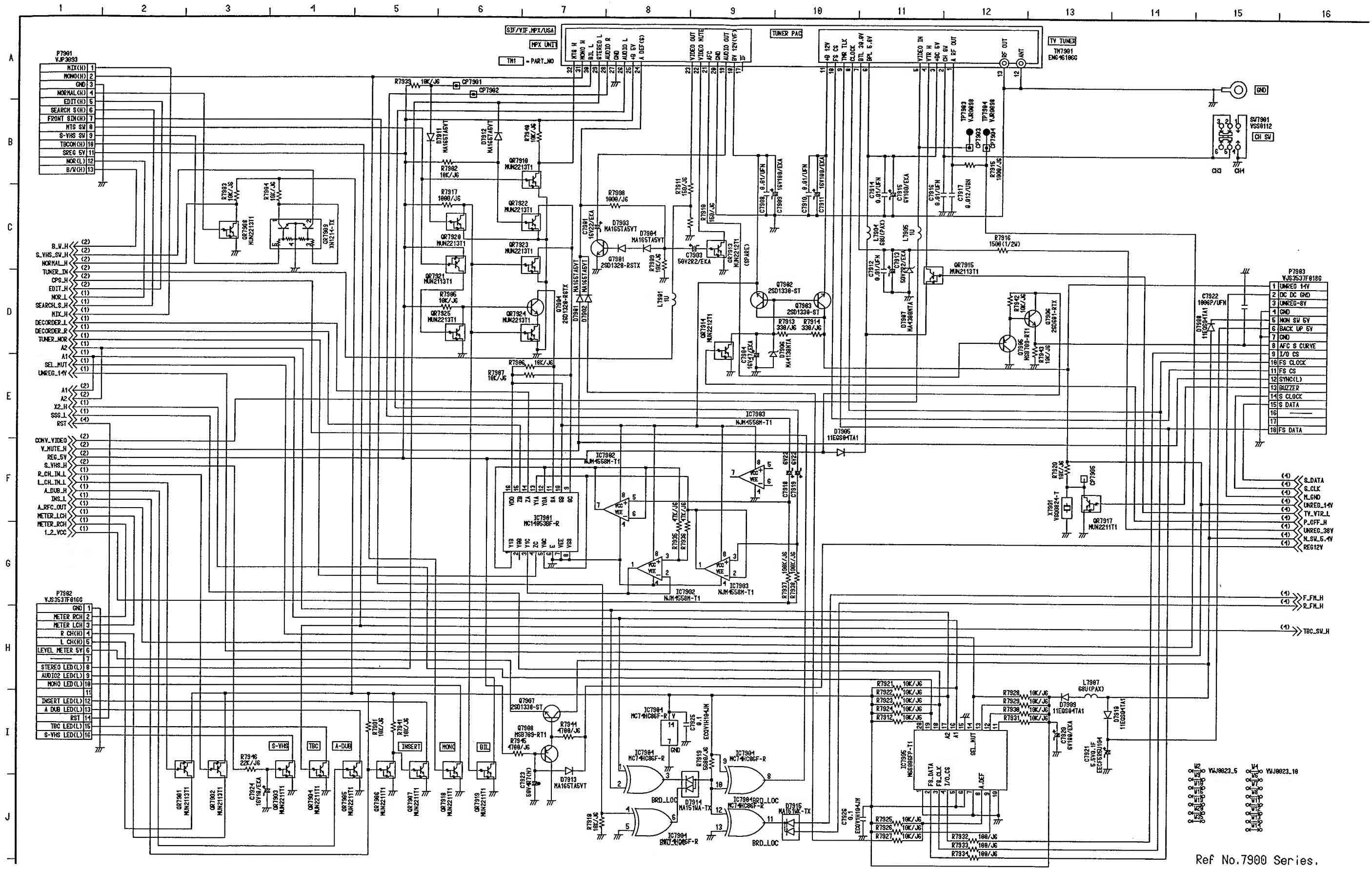
IC3001 (AN3581S)



RF INTERFACE C.B.A.

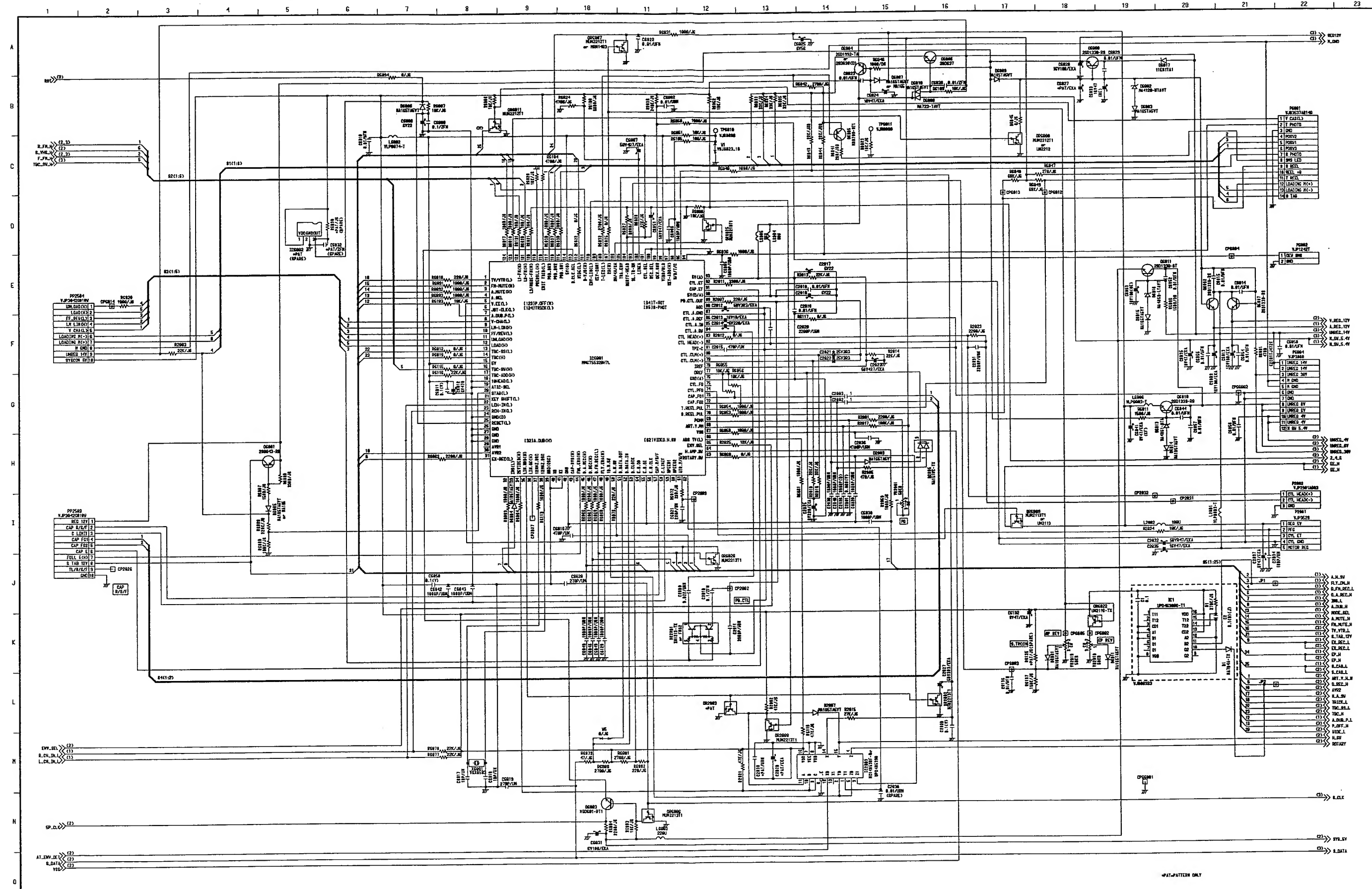
REF. NO.	IC1																									
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14												
PLAY	0	0	0	3.7	0	5.0	0	0	0	0.5	5.0	0.5	5.0	5.0												
REC	0	0	0	3.7	0	5.0	0	0	0	0.5	5.0	0.5	5.0	5.0												
REF. NO.	IC7901																									
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16										
PLAY	6.0	0.9	6.0	6.0	6.0	0	0	0	0	12.5	12.5	6.0	6.0	6.0	6.0	12.5										
REC	6.1	2.6	6.0	6.1	6.1	0	0	0	0	12.6	12.5	6.1	6.1	6.1	6.1	12.6										
REF. NO.	IC7902								IC7903																	
MODE	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8										
PLAY	6.0	6.0	6.0	0	0	6.0	6.0	0	6.0	6.0	6.0	0	2.1	2.1	12.1	12.5										
REC	6.0	6.0	6.0	0	6.0	6.0	6.0	0	6.0	6.0	6.0	0	2.2	2.0	12.1	12.5										
REF. NO.	IC7905																									
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20						
PLAY	0	4.1	4.7	4.9	5.0	5.0	0	3.5	5.0	0	0	0	0	0	0	3.7	0	5.0	0	5.0						
REC	0	4.1	4.8	4.9	5.0	5.0	0	3.5	5.0	0	0	0	0	0	0	3.7	0	5.0	0	5.0						
REF. NO.	Q7901			Q7902			Q7903			Q7904			Q7905			Q7906										
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B								
PLAY	0	0	0.4	12.6	14.6	13.2	12.6	14.6	13.2	0.9	12.5	0	4.6	0	3.8	4.1	5.1	4.6								
REC	0	0	0.4	0	0	0	0	0	0	0	12.6	0	4.3	0	3.4	3.7	5.2	4.3								
REF. NO.	Q7907			Q7908																						
MODE	E	C	B	E	C	B																				
PLAY	5.2	5.3	5.8	5.8	0	5.1																				
REC	5.2	5.3	5.8	5.8	0	5.2																				
REF. NO.	QR7901			QR7902			QR7903			QR7904			QR7905			QR7906										
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B								
PLAY	5.0	5.0	0.4	5.0	5.0	0.4	0	2.8	0	0	4.1	0	0	0	3.7	0	0	0	3.4							
REC	5.0	5.0	0.4	5.0	5.0	0.4	0	3.6	0	0	4.4	0	0	0	4.1	0	0	0	3.4							
REF. NO.	QR7907			QR7908			QR7909			QR7910			QR7913			QR7914										
MODE	E	C	B	E	C	B	1	2	3	4	5	E	C	B	E	C	B	E	C	B						
PLAY	0	3.7	0	0	4.2	0	2.8	0	2.8	0	0	0	5.1	0	0	12.2	0	0	13.2	0						
REC	0	0	0	0	4.2	0	0	0	0	0	0	0	5.2	0	0	12.2	0	0	0	0						
REF. NO.	QR7915			QR7917			QR7918			QR7919			QR7920			QR7921										
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B								
PLAY	4.8	4.8	0	0	0	4.9	0	4.0	0	0	3.9	0	0	0	0	5.1	5.1	0								
REC	0	0	0	0	0	0	0	0	0	0	4.1	0	0	0	3.9	5.2	5.2	0								
REF. NO.	QR7922			QR7923			QR7924			QR7925																
MODE	E	C	B	E	C	B	E	C	B	E	C	B														
PLAY	0	0	4.2	0	0	0	0	1.4	0	0	0	5.1														
REC	0	0	0	0	0	0	0	1.5	0	0	0	5.2														

5-4. RF INTERFACE SCHEMATIC DIAGRAM



Ref No.7900 Series.

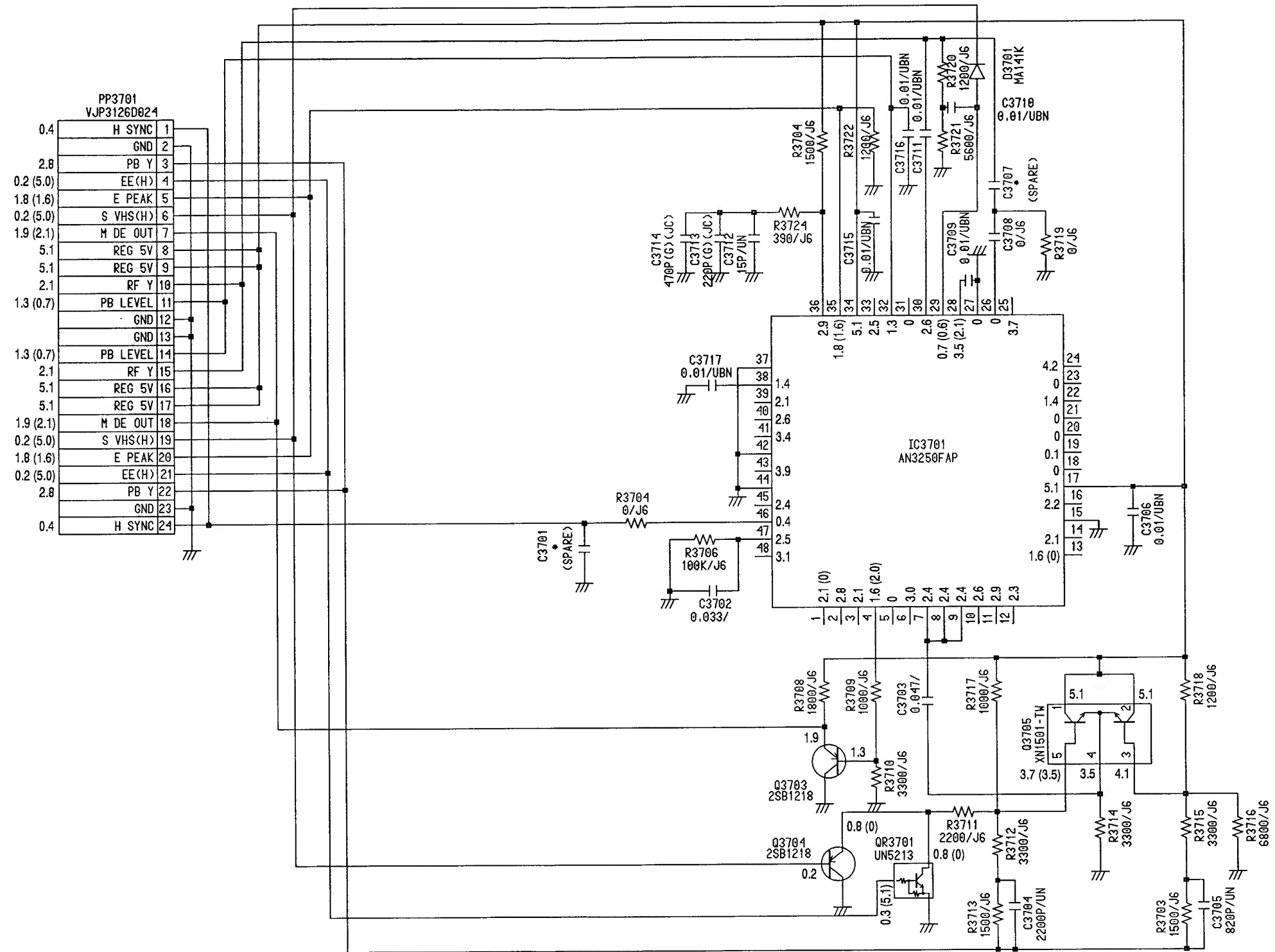
5-5. SYSTEM CONTROL & SERVO SECTION SCHEMATIC DIAGRAM



5-6. SUB VIDEO SCHEMATIC DIAGRAM

1 2 3 4 5 6 7 8 9 10 11

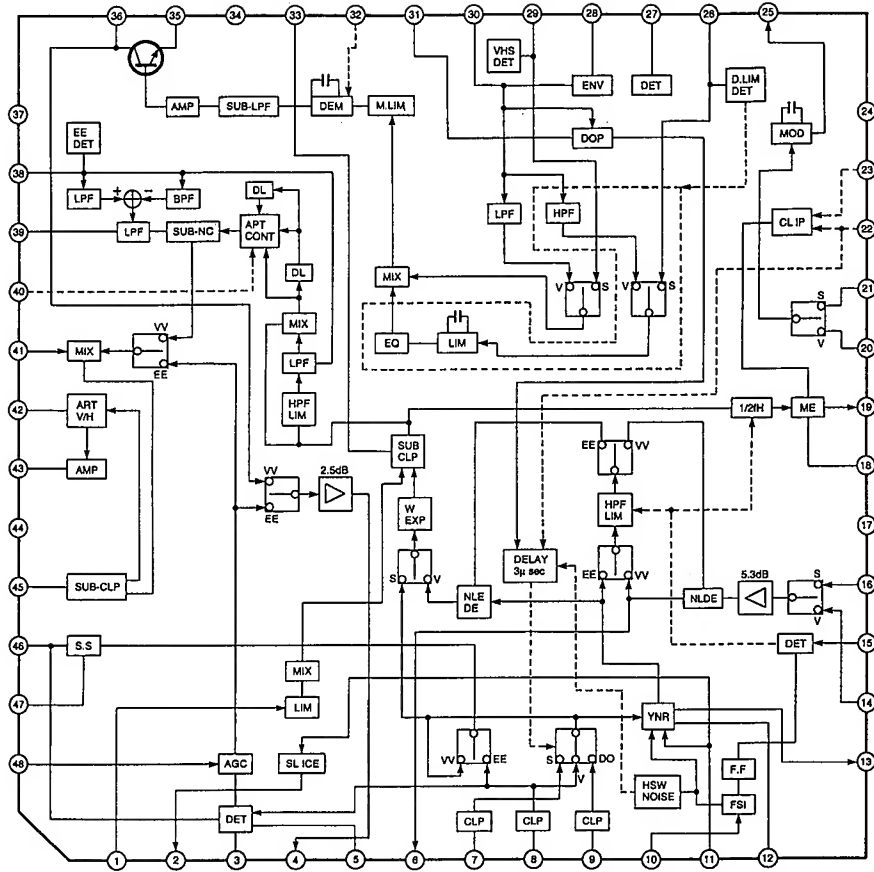
A
B
C
D
E
F
G



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH NTSC COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH NTSC COLOUR SIGNAL. (SP MODE)

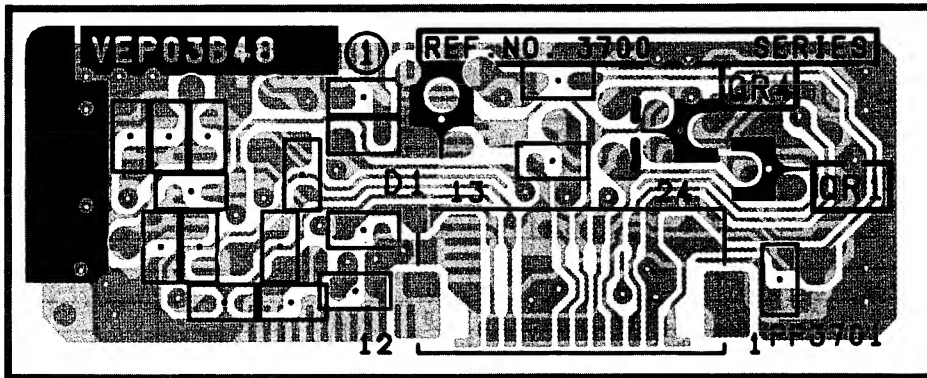
*=REFER TO THE COMPARISON CHART
Ref No.3700 Series.

■ IC3701 (AN3250FAP)

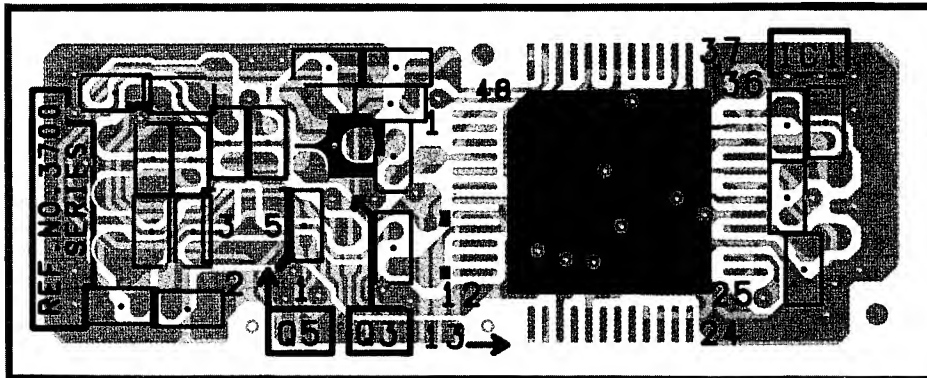


5-7. SUB VIDEO C.B.A.

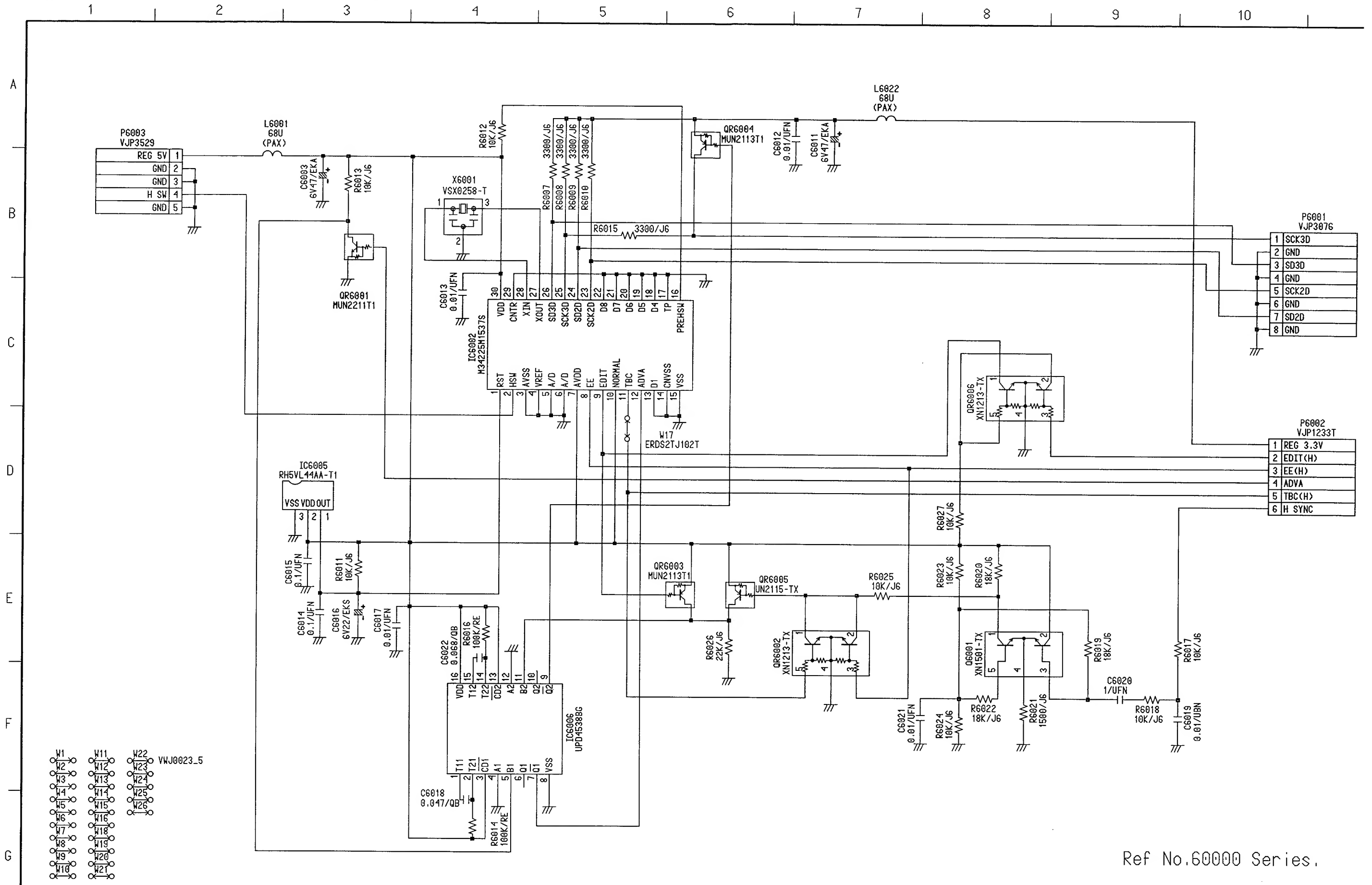
(COMPONENT SIDE)



(FOIL SIDE)

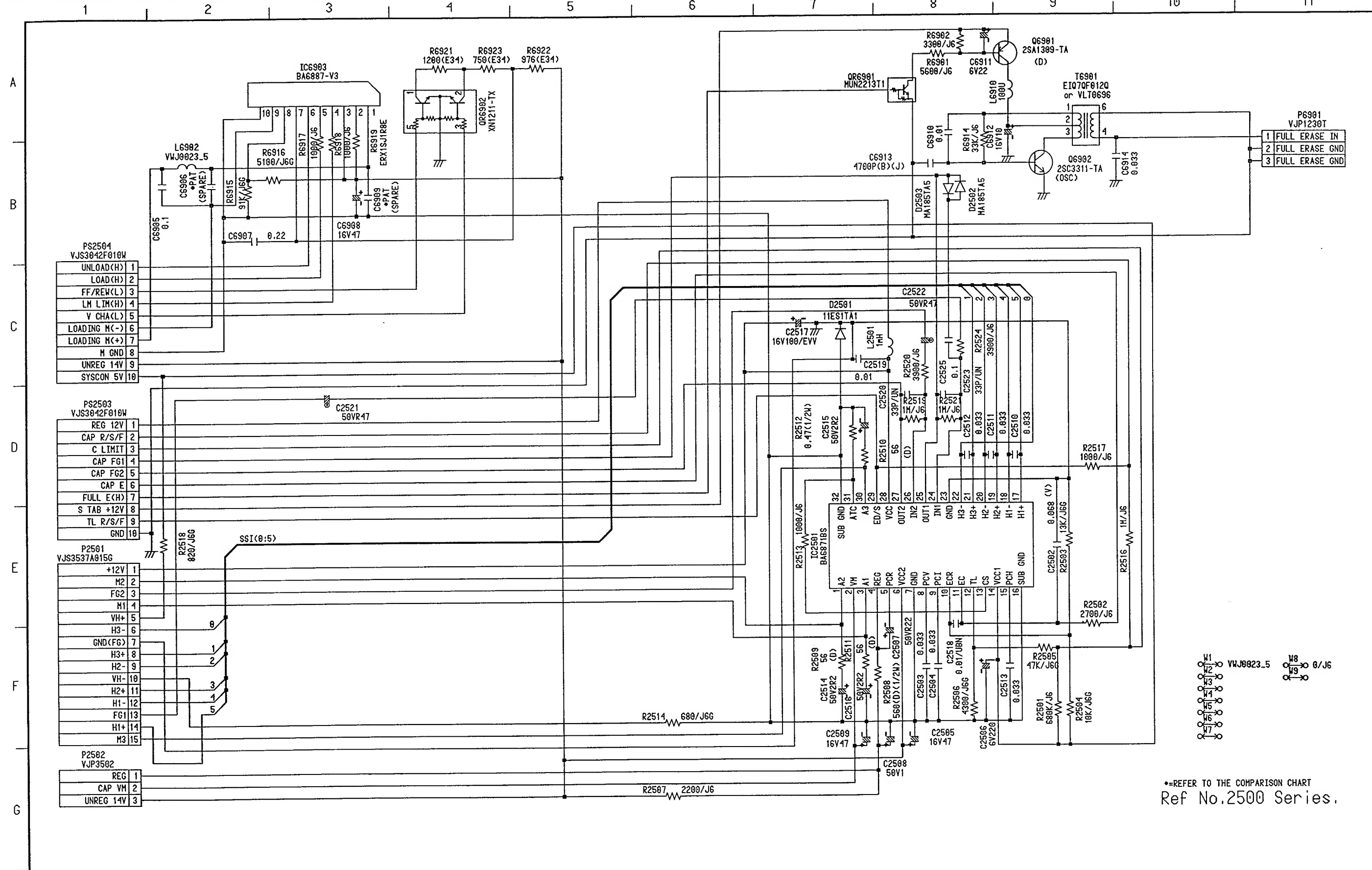


5-9. VIDEO CONTROL SCHEMATIC DIAGRAM



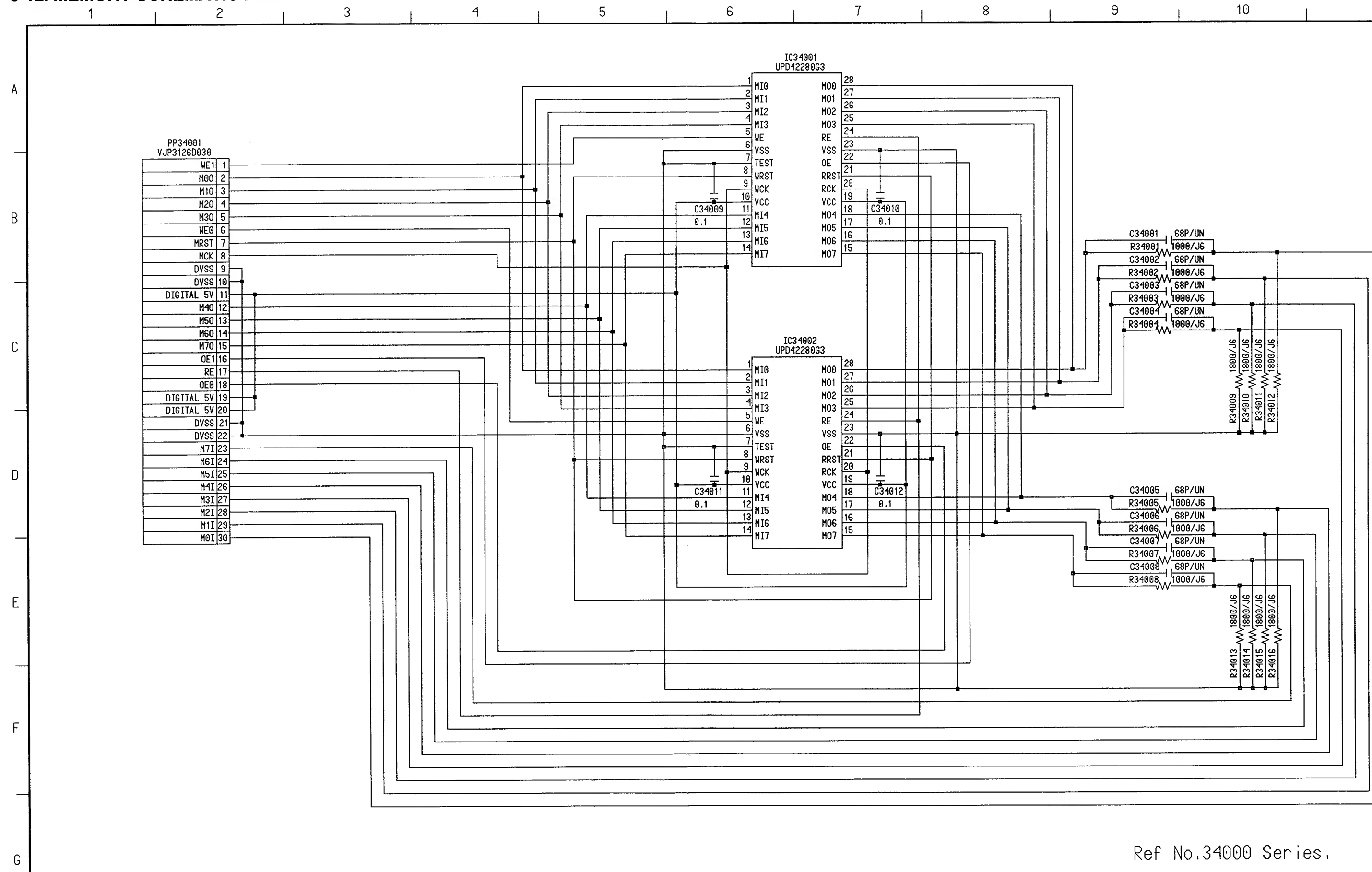
Ref No.60000 Series.

5-10. SUB SERVO SCHEMATIC DIAGRAM



*REFER TO THE COMPARISON CHART
Ref No.2500 Series.

5-12. MEMORY SCHEMATIC DIAGRAM

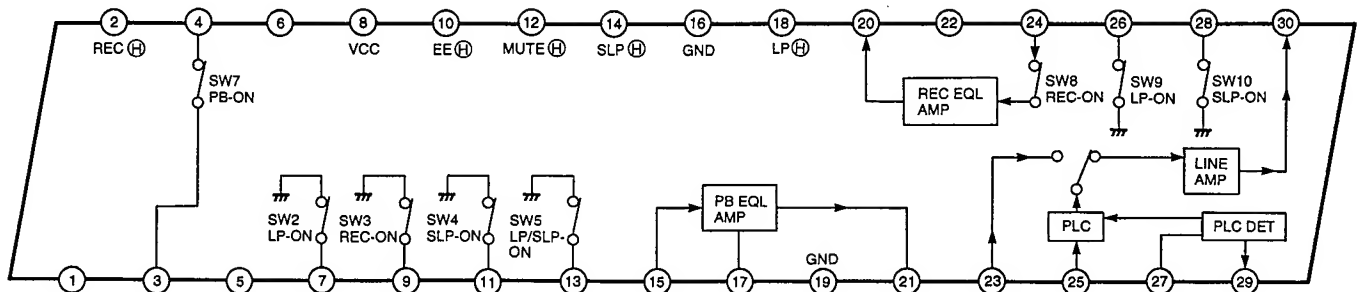


Ref No.34000 Series.

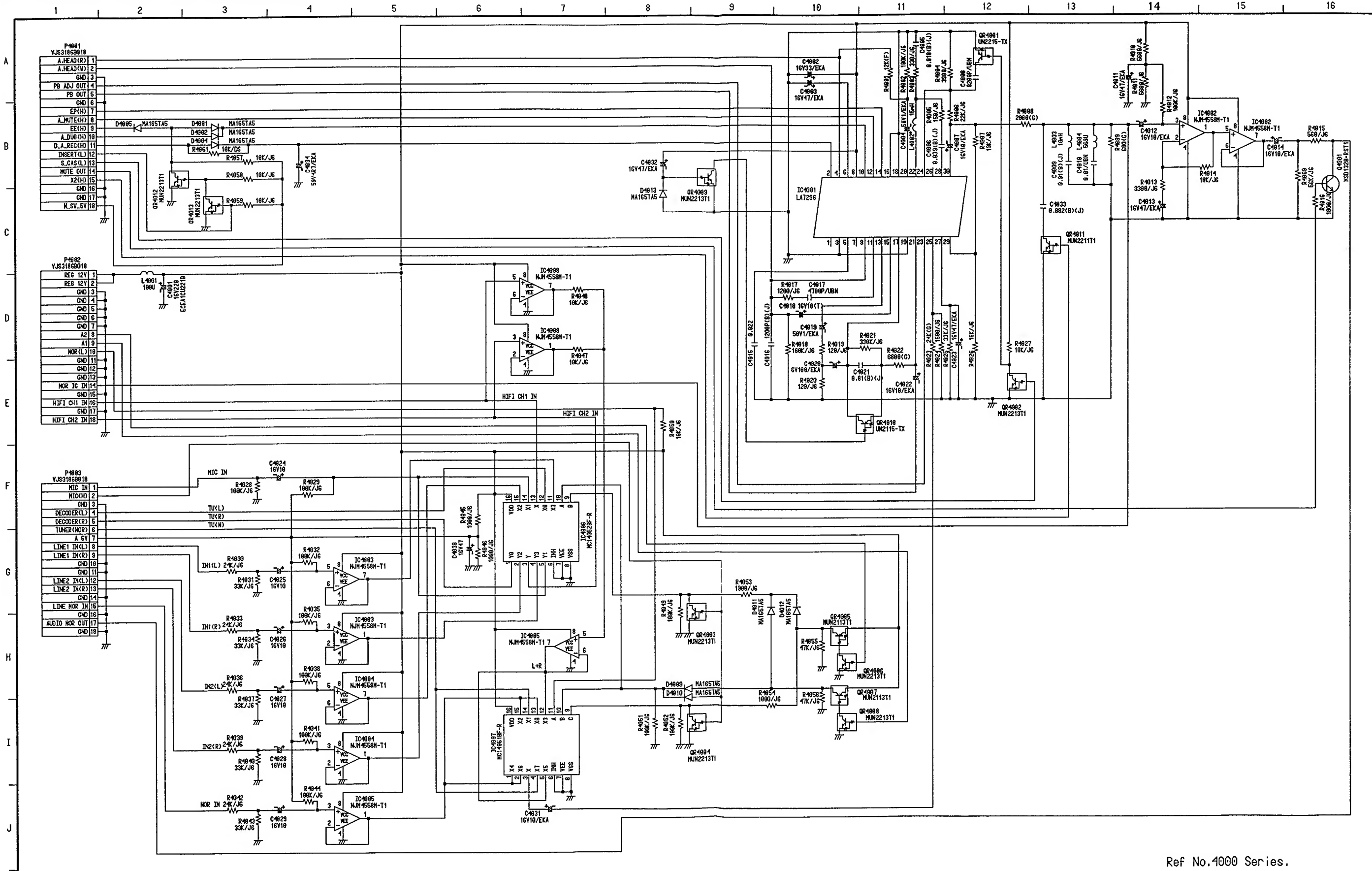
AUDIO 1 (NORMAL) C.B.A.

REF. NO.	IC4001																												
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20									
PLAY	1.3	0	0	0	8.1	9.2	0	12.2	0	0.3	0.6	0	0	0	2.0	0	0	0	0	4.1									
REC	11.8	4.4	0	0	8.2	9.3	0	12.3	0	4.6	0	0	0	0	0.9	0	0.6	0	0	4.1									
REF. NO.	IC4001																												
MODE	21	22	23	24	25	26	27	28	29	30																			
PLAY	4.1	1.1	0	0	0	0	0.3	0	0	3.7																			
REC	0.2	1.0	0	0	0	0	0	0	0	3.6																			
REF. NO.	IC4002					IC4003																							
MODE	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8													
PLAY	6.1	6.1	6.0	0	6.1	6.1	6.1	12.3	6.1	6.1	6.1	0	6.0	6.1	6.1	12.2													
REC	6.1	6.1	6.0	0	6.1	6.1	6.1	12.3	6.1	6.1	6.0	0	6.0	6.1	6.1	12.3													
REF. NO.	IC4004								IC4005																				
MODE	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8													
PLAY	6.1	6.1	6.0	0	6.0	6.0	6.0	12.2	6.1	6.1	6.0	0	6.1	6.1	6.1	12.2													
REC	6.1	6.1	6.0	0	6.0	6.1	6.1	12.3	6.1	6.1	6.0	0	6.1	6.1	6.1	12.3													
REF. NO.	IC4006																												
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16													
PLAY	6.1	6.1	6.1	6.1	6.0	0	0	0	11.6	11.7	6.1	6.1	6.1	6.0	6.1	12.2													
REC	6.1	6.1	6.1	6.1	6.0	0	0	0	11.7	11.8	6.1	6.1	6.1	6.0	6.1	12.3													
REF. NO.	IC4007																												
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16													
PLAY	6.1	6.1	6.1	6.1	6.1	0	0	0	0	11.7	0	6.1	6.1	6.1	6.1	12.2													
REC	6.1	6.1	6.1	6.1	6.1	0	0	0	0	0	0	0	0	0	0	0													
REF. NO.	IC4008								Q4001																				
MODE	1	2	3	4	5	6	7	8	E	C	B																		
PLAY	6.1	6.1	6.1	0	6.1	6.1	6.1	12.2	0	0	-1.0																		
REC	6.1	6.1	6.1	0	6.1	6.1	6.1	12.3	0	0	-0.3																		
REF. NO.	QR4001			QR4002			QR4003			QR4004			QR4005			QR4006													
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B											
PLAY	0	0	0	0	0	4.1	0	11.6	0	0	0	0	12.2	0	12.1	0	12.1	0											
REC	0	2.3	0	0	0	4.0	0	11.6	0	0	0	0	12.2	0	12.1	0	11.0	0											
REF. NO.	QR4007			QR4008			QR4009			QR4010			QR4011			QR4012													
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B											
PLAY	12.2	12.2	0	0	0	3.7	0	2.1	0	2.3	2.2	2.1	0	0.1	0	0	0.4	0											
REC	12.2	12.2	0	0	0	3.7	0	1.5	0	0.2	0.6	0.9	0	1.2	0	0	4.9	0											
REF. NO.	QR4013																												
MODE	E	C	B																										
PLAY	0	0	3.4																										
REC	0	0	3.4																										

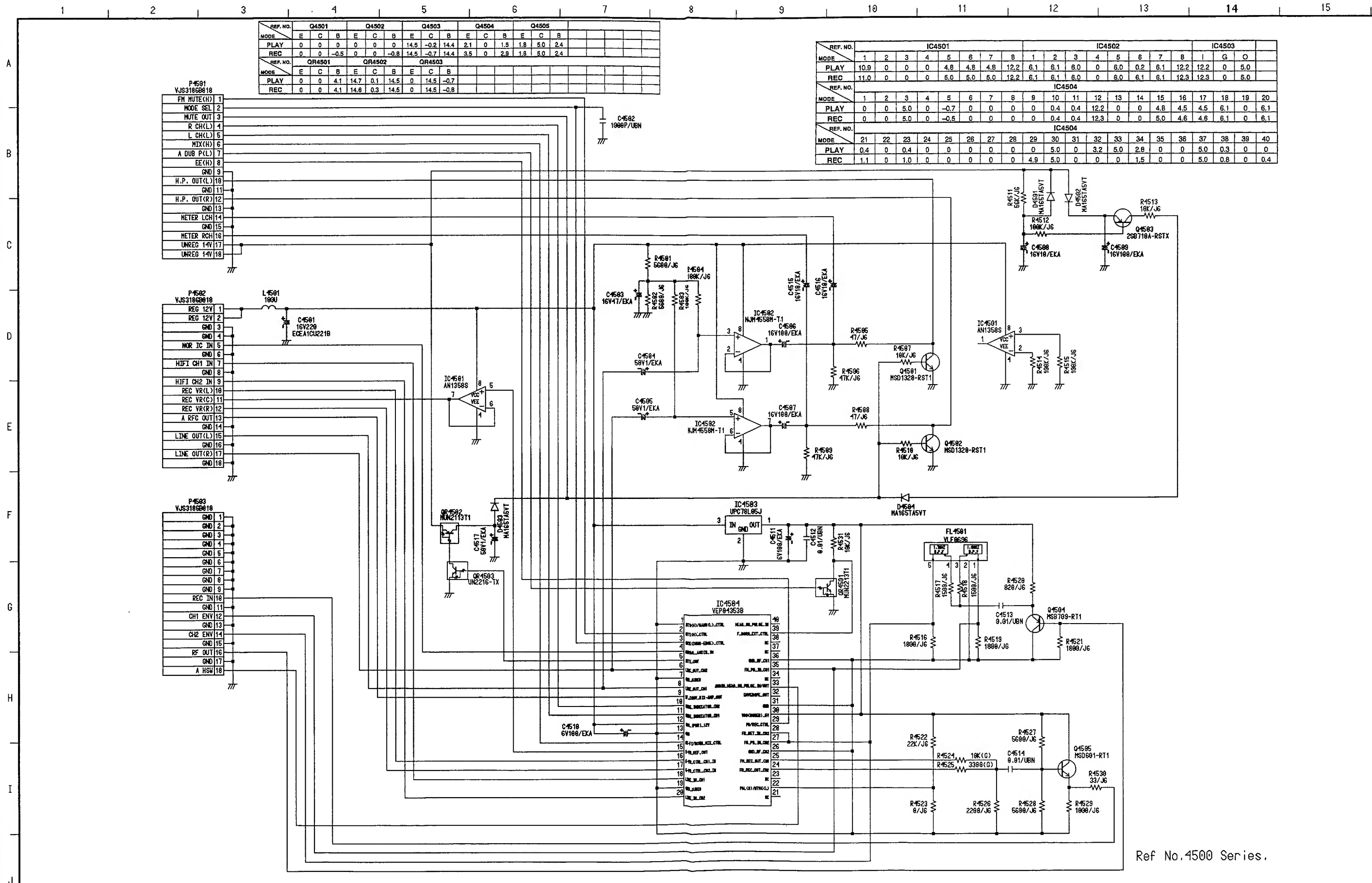
■ IC4001 (LA7296)



5-14. AUDIO 1 SCHEMATIC DIAGRAM



5-17. AUDIO 2 SCHEMATIC DIAGRAM



REF. NO.	Q4501				Q4502				Q4503				Q4504				Q4505			
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	0	0	0	0	0	0	14.5	-0.2	14.4	2.1	0	1.5	1.8	5.0	2.4					
REC	0	0	-0.5	0	0	-0.8	14.5	-0.7	14.4	3.5	0	2.8	1.8	5.0	2.4					

REF. NO.	QR4501				QR4502				QR4503				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	
PLAY	0	0	4.1	14.7	0.1	14.5	0	14.5	-0.7				
REC	0	0	4.1	14.8	0.3	14.5	0	14.5	-0.8				

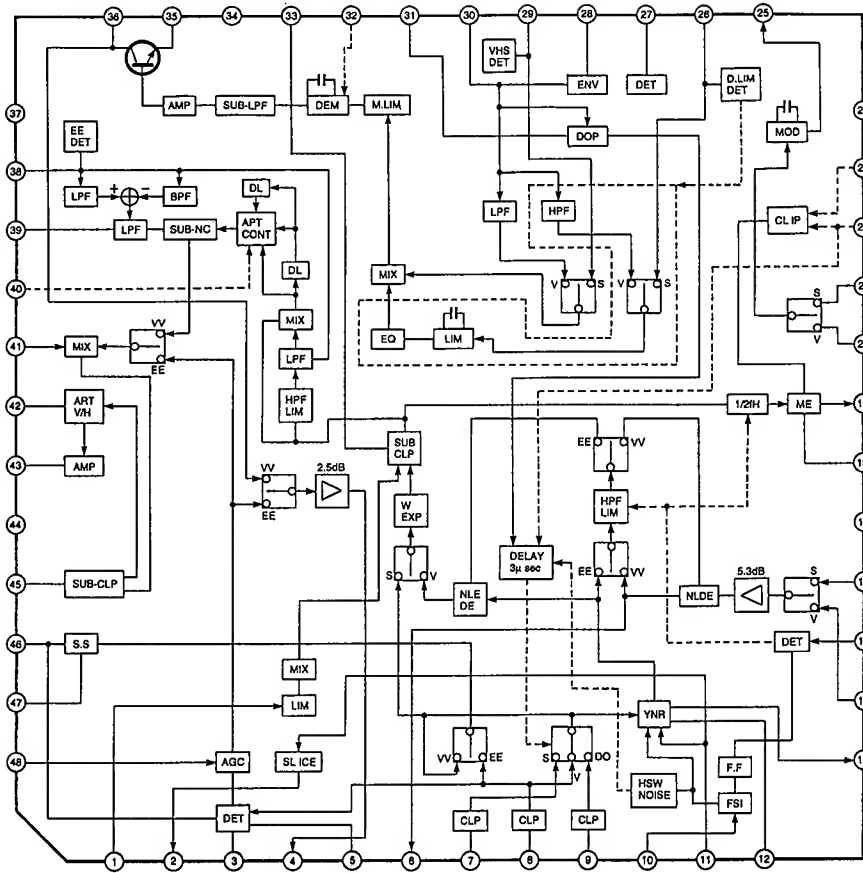
REF. NO.	IC4501										IC4502										IC4503										
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	
PLAY	10.9	0	0	0	4.8	4.8	4.8	12.2	6.1	6.1	6.0	0	6.0	0.2	6.1	12.2	12.2	0	5.0			12.2	0	5.0							
REC	11.0	0	0	0	5.0	5.0	5.0	12.2	6.1	6.1	6.0	0	6.0	6.1	6.1	12.3	12.3	0	5.0			12.3	0	5.0							

REF. NO.	IC4504																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	0	0	5.0	0	-0.7	0	0	0	0	0.4	0.4	12.2	0	0	4.8	4.5	4.5	6.1	0	6.1
REC	0	0	5.0	0	-0.5	0	0	0	0	0.4	0.4	12.3	0	0	5.0	4.6	4.6	6.1	0	6.1

REF. NO.	IC4504																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	0.4	0	0.4	0	0	0	0	0	0	5.0	0	3.2	5.0	2.8	0	0	5.0	0.3	0	0
REC	1.1	0	1.0	0	0	0	0	0	0	4.9	5.0	0	0	1.5	0	0	5.0	0.8	0	0.4

Ref No.4500 Series.

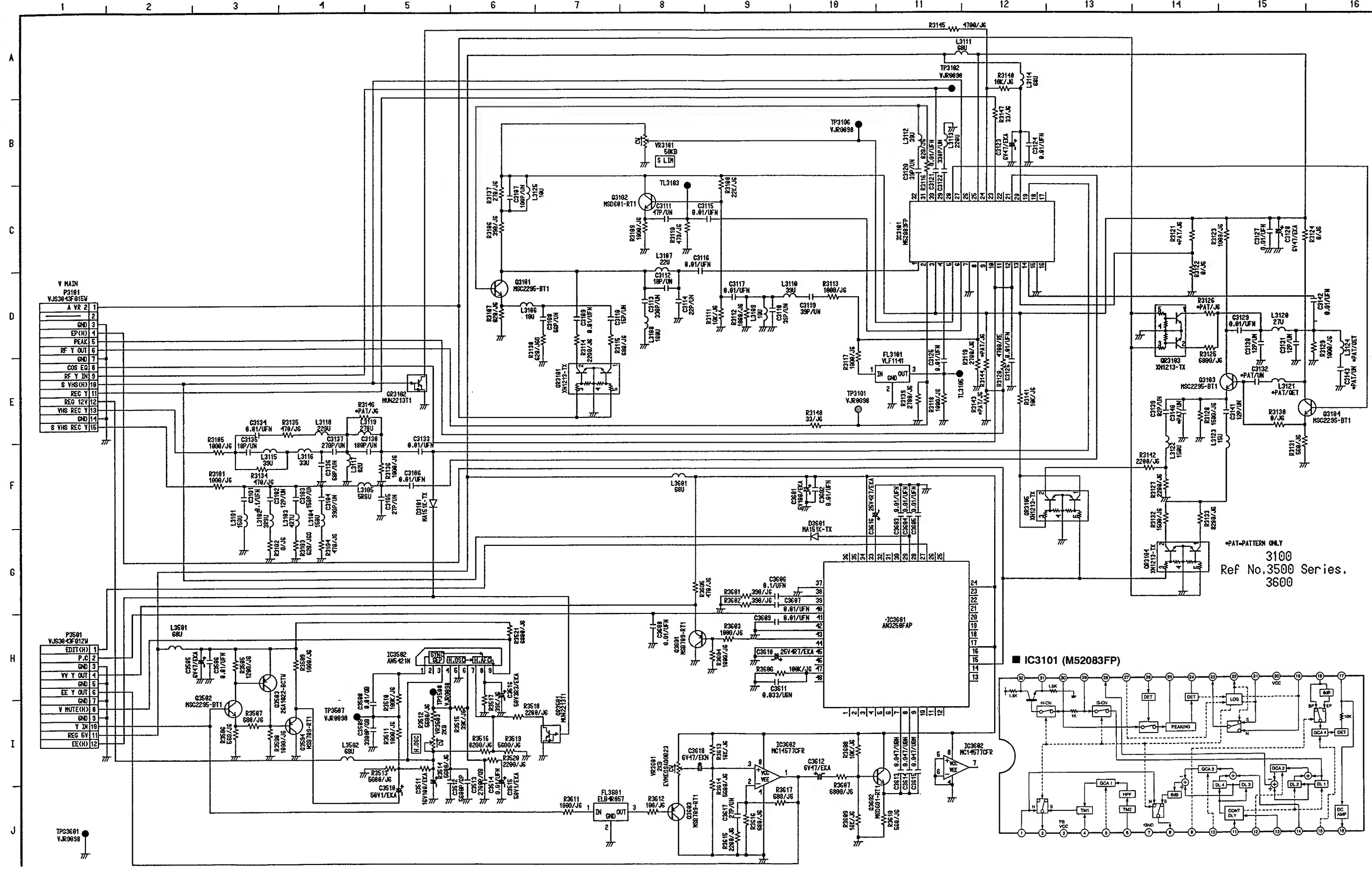
IC3601 (AN3250FAP)



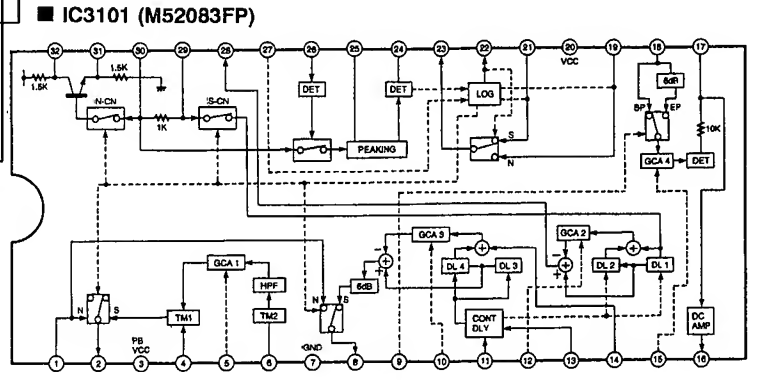
RF AMP C.B.A.

REF. NO.	IC3101																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	3.6	2.0	4.8	2.9	0.9	2.6	0	2.0	1.3	1.2	2.7	1.2	0	3.6	0	0.3	2.9	2.8	0.4	4.9	
REC	3.6	2.0	4.8	2.9	0.9	2.6	0	2.0	1.4	1.2	2.7	1.2	0	3.6	0	0.3	2.9	2.8	2.4	4.9	
REF. NO.	IC3101																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32									
PLAY	2.4	0	0.1	4.9	4.8	1.0	0.1	2.5	2.6	3.4	1.4	3.2									
REC	2.4	0	1.7	4.9	4.8	1.0	0.1	2.5	2.7	3.4	1.4	3.2									
REF. NO.	IC3502																				
MODE	1	2	3	4	5	6	7	8	9												
PLAY	7.5	6.9	12.2	7.7	0	8.4	4.9	0.3	0												
REC	7.5	6.9	12.2	7.7	0	8.4	1.9	0.3	0												
REF. NO.	IC3601																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
PLAY	1.8	2.4	2.1	0.7	0.3	2.7	2.1	2.1	2.1	2.2	2.6	1.9	1.4	1.9	0	1.8	4.6	0.8	0.8	0.7	
REC	1.8	2.4	2.1	0.6	0.2	2.7	2.1	2.1	2.1	2.2	2.6	1.9	1.4	1.9	0	1.8	4.6	0.8	0.9	0.9	
REF. NO.	IC3601																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
PLAY	0.8	1.3	0.6	4.6	4.3	2.5	0	1.7	0.6	2.7	0	2.9	2.6	4.6	1.2	1.2	0	1.2	1.9	2.7	
REC	0.8	1.3	0.6	4.6	4.3	2.5	0	1.7	0.6	2.7	0	3.1	2.6	4.6	1.3	1.2	0	1.2	1.9	2.7	
REF. NO.	IC3601								IC3602												
MODE	41	42	43	44	45	46	47	48	1	2	3	4	5	6	7	8					
PLAY	3.0	0	2.4	0	2.4	0.2	2.3	3.0	3.2	1.6	1.6	0	0	0	2.6	4.6					
REC	3.0	0	2.5	0	2.3	0.2	2.3	3.0	3.2	1.6	1.6	0	0	0	2.6	4.6					
REF. NO.	Q3101			Q3102			Q3103			Q3104			Q3502			Q3503					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
PLAY	0.7	4.4	1.4	0.8	4.8	1.4	1.0	4.0	1.8	1.8	4.8	2.5	1.3	4.2	2.0	4.9	2.5	4.2			
REC	0.7	4.4	1.4	0.8	4.8	1.4	1.1	4.0	1.8	1.8	4.8	2.5	1.3	4.2	2.0	4.9	2.5	4.2			
REF. NO.	Q3504			Q3601			Q3602			Q3603			QR3101			QR3102					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	1	2	3	4	5	E	C	B	
PLAY	3.2	0	2.5	1.8	0	1.2	1.6	4.6	2.2	2.6	0	2.0	0.1	0	0	0	0	0	0	4.9	0.1
REC	3.2	0	2.5	1.9	0	1.2	1.6	4.6	2.2	2.6	0	2.0	0.4	0	0	0	0	0	0	4.9	0.1
REF. NO.	QR3103					QR3104					QR3105					QR3501					
MODE	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	E	C	B			
PLAY	0.6	0	0	0	0	0.1	0.1	0	0.2	0	0.2	0	4.1	0	0	0	4.9	0			
REC	0.4	0	0	0	0	0.4	0.5	0	0	0	4.1	0	4.1	0	0	0	0	4.8			

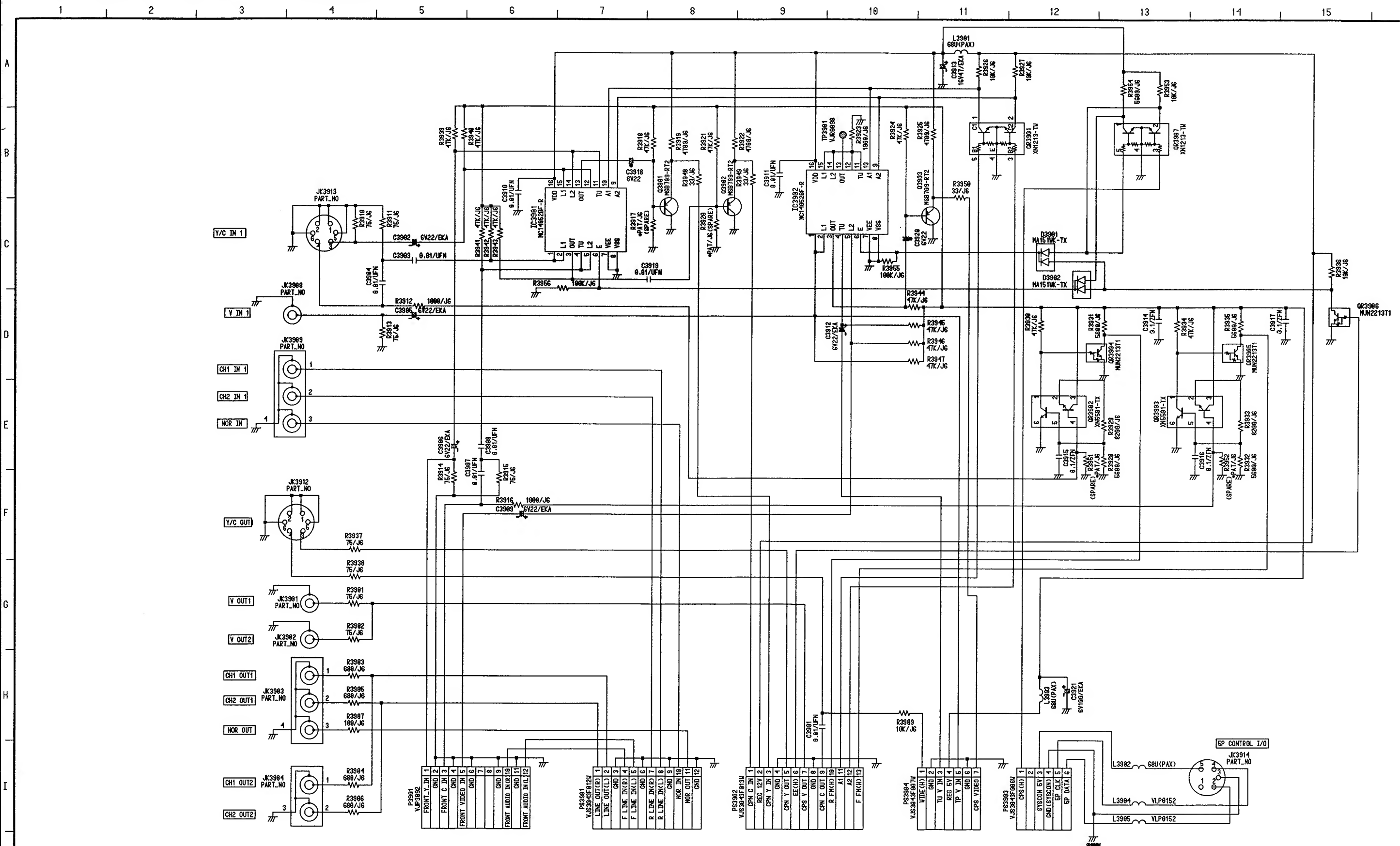
5-18. RF AMP SCHEMATIC DIAGRAM



*PAT-PATTERN ONLY
3100
Ref No.3500 Series.
3600



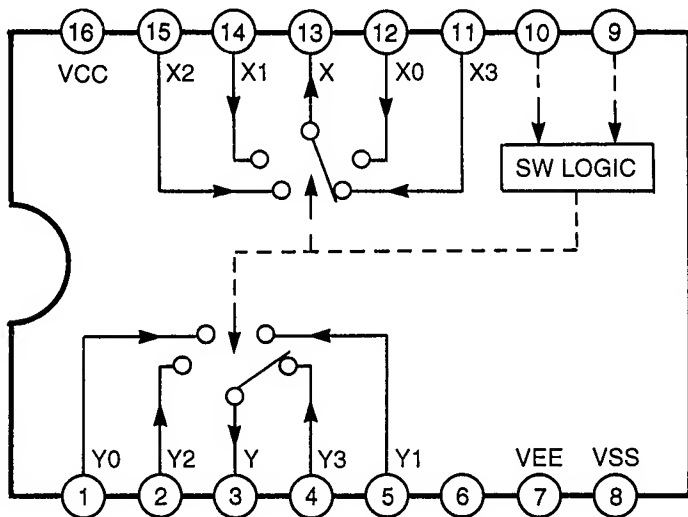
5-21. INPUT/OUTPUT SCHEMATIC DIAGRAM



I/O PACK C.B.A.

REF. NO.	IC3901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	4.9	4.9	4.9	4.9	4.9	11.1	0	0	0	0	4.9	4.9	5.7	4.9	4.9	12.2				
REC	4.9	4.9	4.9	4.9	4.9	11.1	0	0	12.2	0	4.9	4.9	5.6	4.9	4.9	12.2				
REF. NO.	IC3902																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	4.9	4.9	4.9	4.9	4.9	10.7	0	0	12.2	0	0	0	0.5	0	0	12.2				
REC	5.0	5.0	4.9	4.9	4.9	0	0	0	12.2	0	0	0	0	0	0	12.2				
REF. NO.	Q3901			Q3902			Q3903			QR3901					QR3902					
MODE	E	C	B	E	C	B	E	C	B	1	2	3	4	5	1	2	3	4	5	6
PLAY	5.8	0	5.2	5.8	0	5.2	5.8	0	5.2	0	12.2	0	0	3.7	2.6	0	5.0	0	0	0
REC	5.8	0	5.2	5.8	0	5.2	5.8	0	5.2	0	12.2	0	0	3.7	2.6	0	5.0	0	0	0
REF. NO.	QR3903					QR3904			QR3905			QR3906			QR3907					
MODE	1	2	3	4	5	6	E	C	B	E	C	B	E	C	B	1	2	3	4	5
PLAY	2.6	0	5.0	0	0	0	0	0	2.6	0	0	2.6	0	11.1	0	11.6	0	5.0	0	0
REC	2.6	0	5.0	0	0	0	0	0	2.6	0	0	2.6	0	0	4.9	11.6	0	5.0	0	0

■ IC3901,3902 (MC14052BF-R)



SW LOGIC		⑬ ③ OUTPUT	
A	B	X	Y
L	L	X0	Y0
H	L	X1	Y1
L	H	X2	Y2
H	H	X3	Y3

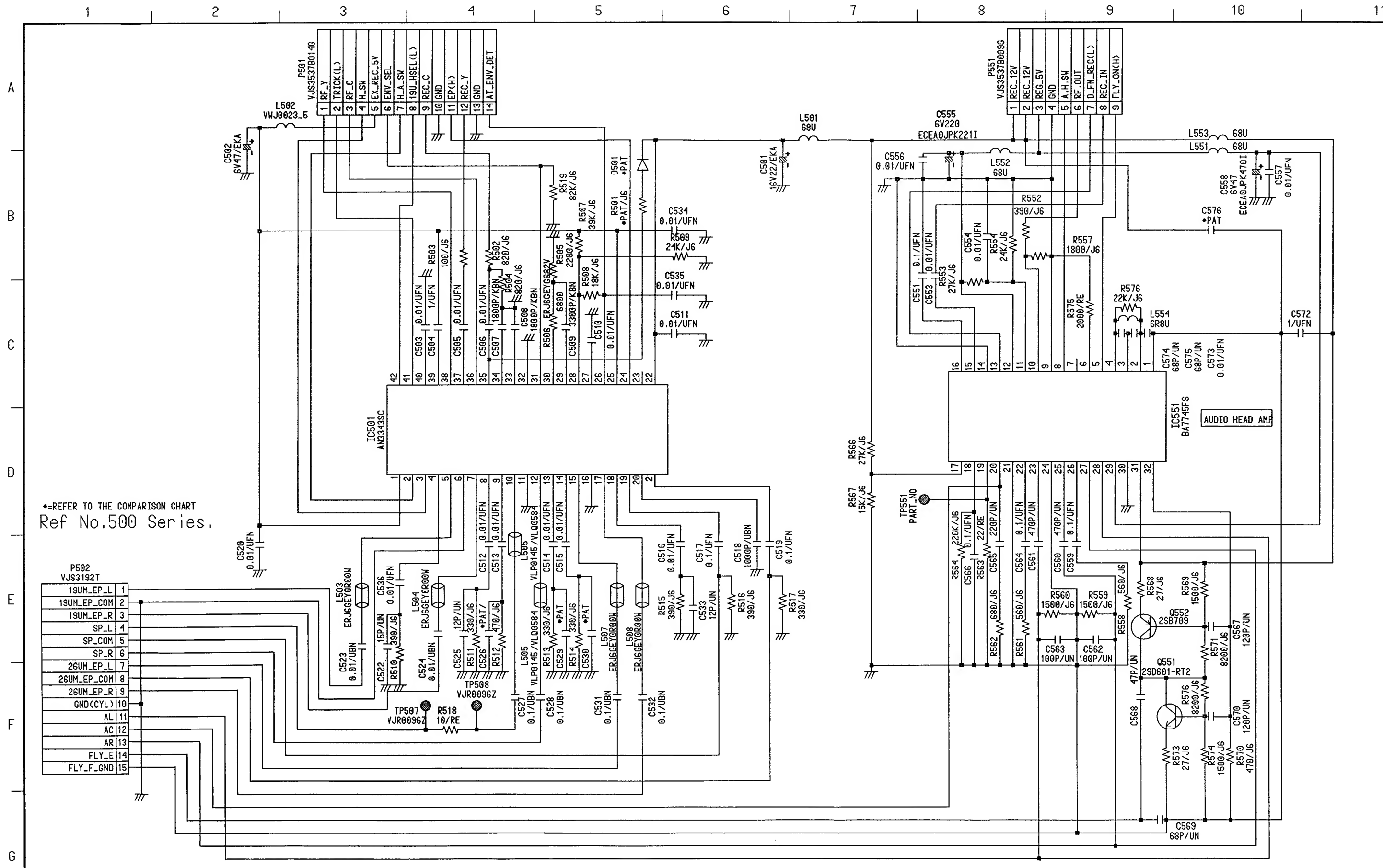
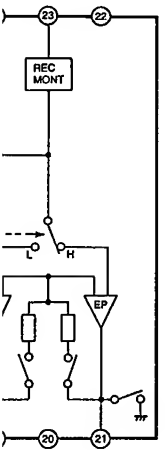
5-22. HEAD AMP SCHEMATIC DIAGRAM

18	19	20
2.0	0	0
0.1	6.2	6.0

38	39	40
2.5	3.3	4.2
0.6	0.4	0.4

18	19	20
0	0	0
0.5	0.5	4.1

B		
0		
11.0		



*REFER TO THE COMPARISON CHART
Ref No.500 Series.

P502
VJS3192T

1SUM_EP_L	1
1SUM_EP_COM	2
1SUM_EP_R	3
SP_L	4
SP_COM	5
SP_R	6
2SUM_EP_L	7
2SUM_EP_COM	8
2SUM_EP_R	9
GND(CYL)	10
AL	11
AC	12
AR	13
FLY_E	14
FLY_F_GND	15

A
B
C
D
E
F
G

1 2 3 4 5 6 7 8 9 10 11

P501
VJS3537B014G

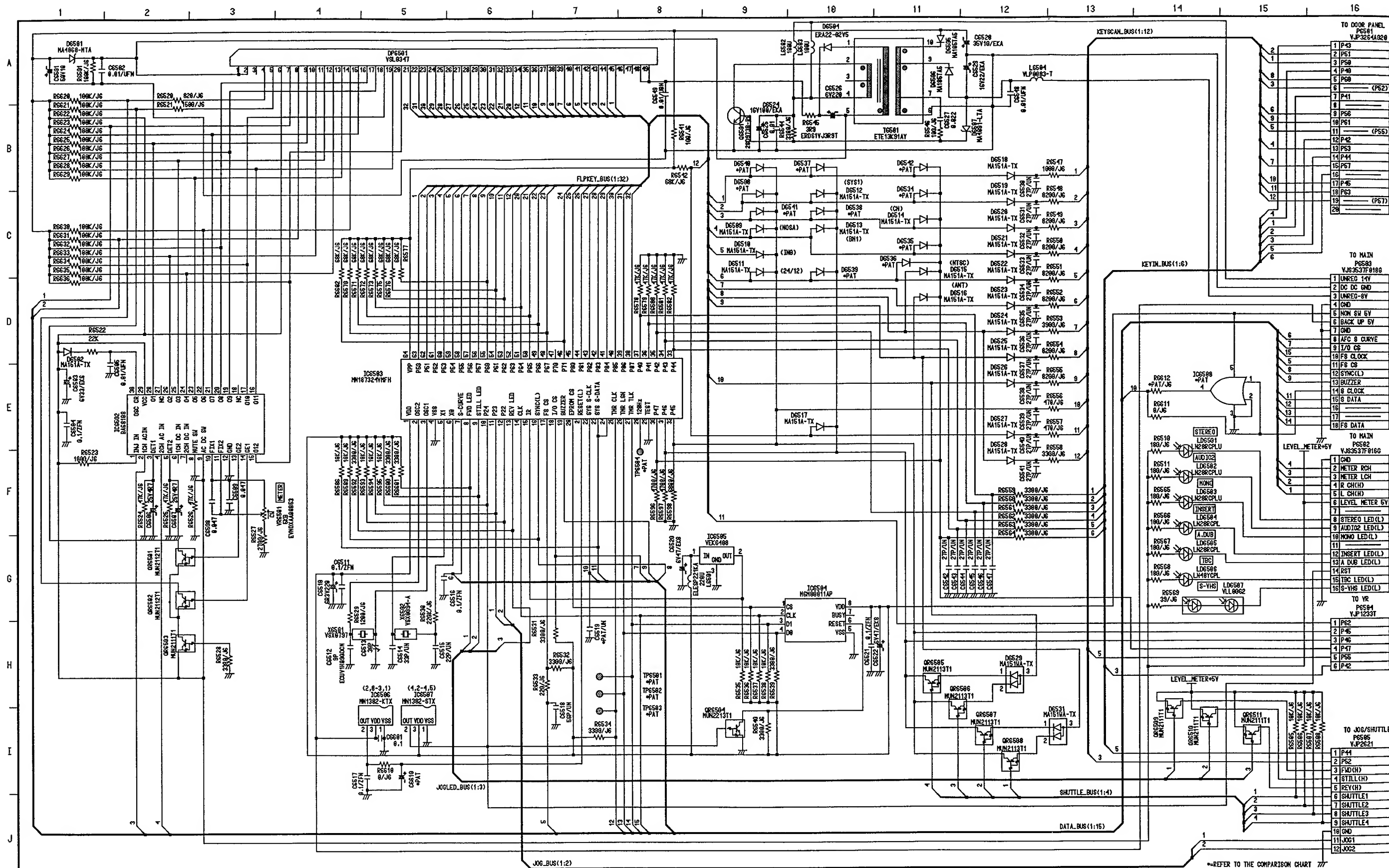
1	RF_Y
2	TRICK(L)
3	RF_C
4	H_SN
5	EX_REC_5V
6	ENV_SEL
7	H.A_SN
8	19U_HSEL(L)
9	REC_C
10	GND
11	EP(H)
12	REC_Y
13	GND
14	AT_ENV_DET

P551
VJS3537B009G

1	REC_12V
2	REC_12V
3	REG_5V
4	GND
5	A.H_SN
6	RF_OUT
7	D.FM_REC(L)
8	REC_IN
9	FLY_ON(CH)

IC551
BAT746FS
AUDIO HEAD AMP

5-24. TIMER SCHEMATIC DIAGRAM



REFER TO THE COMPARISON CHART
Ref No.6500 Series.

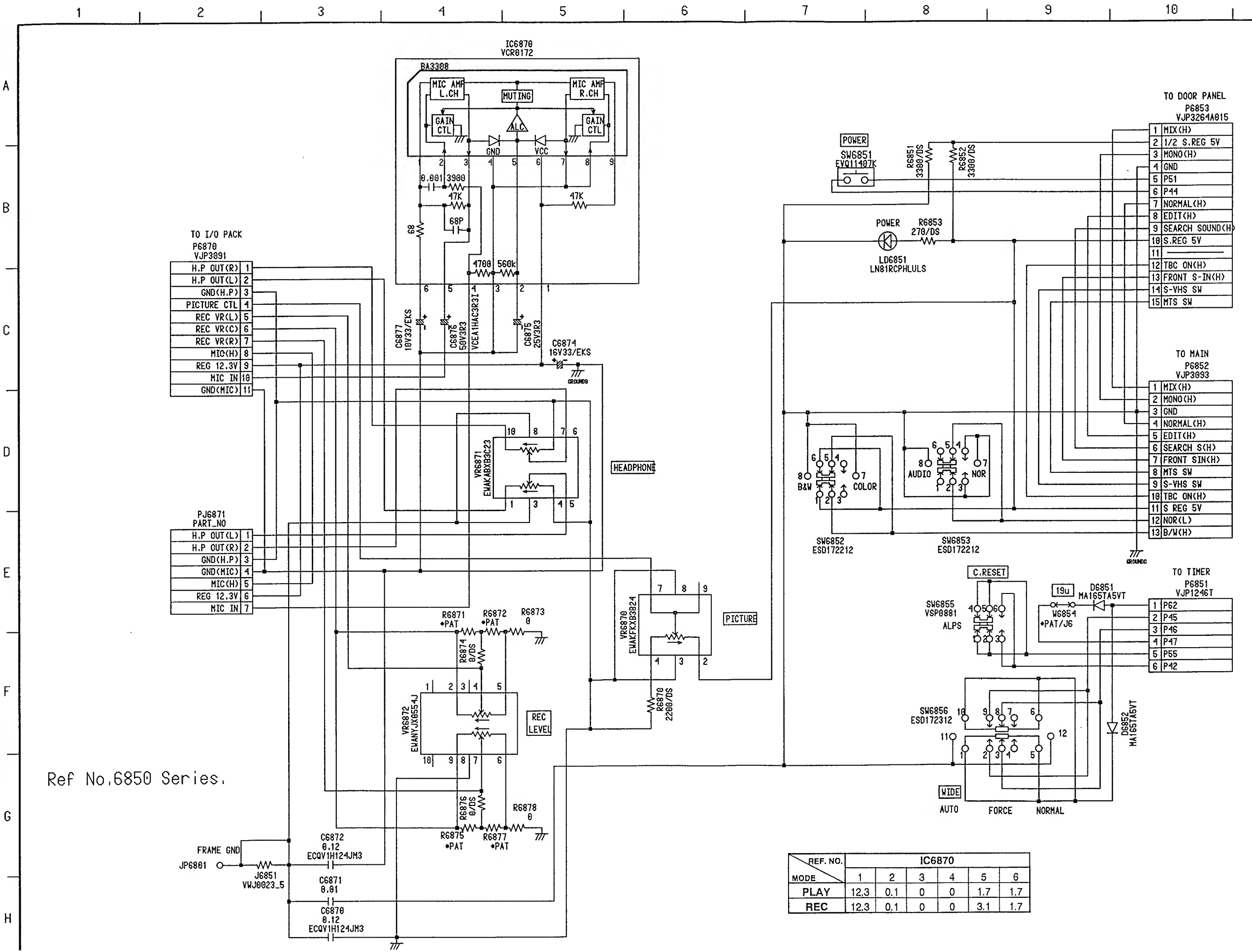
TIMER C.B.A.

REF. NO.	IC6502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.7	1.7	0	1.7	0	0	0	0	5.0	2.2	1.3	0	4.3	4.2	-26.5	-26.5	-26.5	1.8	-26.5	-26.5
REF. NO.	IC6502																			
MODE	21	22	23	24	25	26	27	28	29	30										
STOP	-26.5	-26.5	-26.5	-26.5	-26.5	-26.5	2.0	-26.5	5.0	3.1										
REF. NO.	IC6503																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	5.1	1.9	1.9	0	2.1	2.5	4.2	5.1	5.1	5.1	5.1	5.1	5.1	4.8	5.1	0	0.3	5.0	4.9	5.0
REF. NO.	IC6503																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.1	4.2	4.6	4.6	4.9	5.1	4.1	2.6	0	2.7	2.4	2.3	0	0	0	0	0	-23.5	-23.5	-23.5
REF. NO.	IC6503																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	-23.5	-23.5	-23.5	-23.5	-23.5	-23.7	1.2	-23.1	-14.0	-13.5	-14.0	-20.2	-14.6	-14.6	-14.4	-22.8	-17.6	-14.1	-22.9	-17.7
REF. NO.	IC6503				IC6504								IC6505				IC6506			
MODE	61	62	63	64	1	2	3	4	5	6	7	8	1	2	3	O	G	V		
STOP	-16.0	-14.8	-14.7	-26.5	5.0	4.8	4.1	5.1	0	0	5.1	5.1	5.1	5.1	0	5.1	0	5.1		
REF. NO.	IC6507				Q6501															
MODE	O	G	V	E	C	B														
STOP	5.1	0	5.1	0	14.2	-0.9														
REF. NO.	QR6501			QR6502			QR6503			QR6504			QR6505			QR6506				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
STOP	5.0	-24.0	4.4	4.9	-24.0	4.2	5.0	4.9	1.2	0	0	5.1	5.0	2.4	5.0	5.0	2.3	5.0		
REF. NO.	QR6507			QR6508			QR6509			QR6510			QR6511							
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B					
STOP	5.0	2.2	5.0	5.0	2.3	5.0	5.0	2.2	5.1	5.0	2.2	5.1	5.0	2.2	5.1					

TIMER C.B.A.					
Transistor		Integrated Circuit		Adjustment	
Q6501	B-1 (F),(C)	IC6502	F-1 (F),(C)	VR6501	C-2 (F),(C)
Transistor & Resistor		IC6503	D-3 (F),(C)	Connector	
		IC6504	B-3 (F),(C)		
QR6501	E-2 (F)	IC6505	F-2 (F),(C)	P6501	G-1 (F),(C)
QR6502	F-2 (F)	IC6506	E-3 (F)	P6502	B-3 (F),(C)
QR6503	E-2 (F)	IC6507	B-3 (F)	P6503	D-3 (F),(C)
QR6504	B-3 (F)	IC6508	E-3 (F)	P6504	G-2 (F),(C)
QR6505	A-1 (F)	Test Point		P6505	A-2 (F),(C)
QR6506	A-1 (F)				
QR6507	A-2 (F)	TP6501	F-3 (F),(C)		
QR6508	A-2 (F)	TP6502	F-3 (F),(C)		
QR6509	A-2 (F)	TP6503	F-3 (F),(C)		
QR6510	A-3 (F)	TP6504	F-3 (F),(C)		
QR6511	A-3 (F)				

ADDRESS INFORMATION
 (F) FOIL SIDE
 (C) COMPONENT SIDE

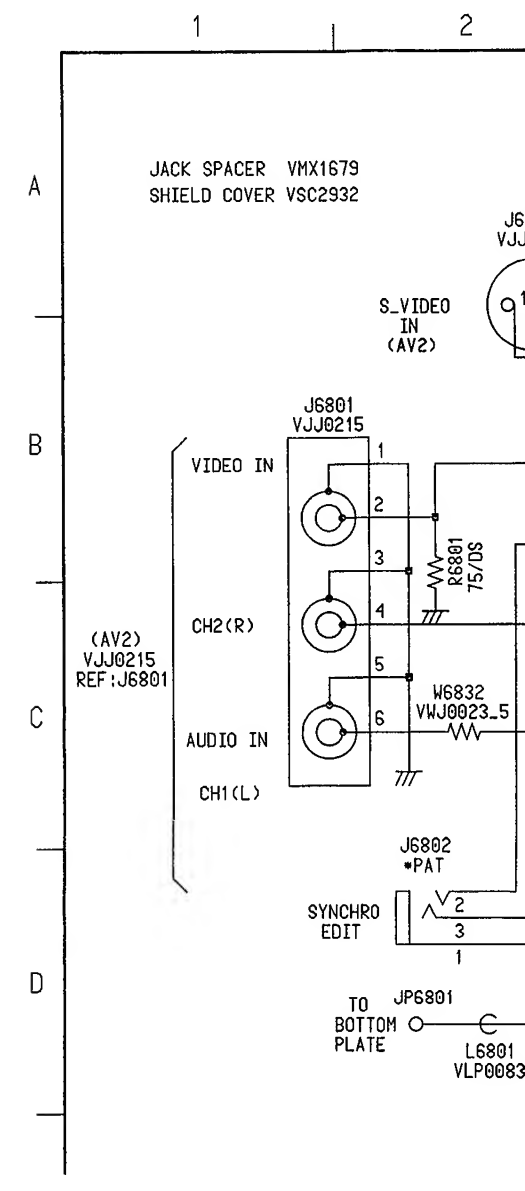
5-26. VR SCHEMATIC DIAGRAM



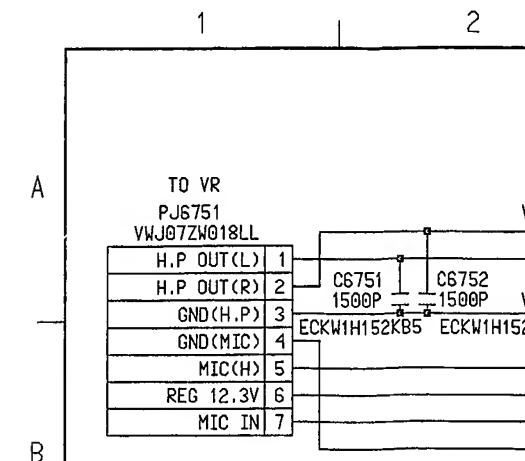
Ref No.6850 Series.

REF. NO.	IC6870					
MODE	1	2	3	4	5	6
PLAY	12.3	0.1	0	0	1.7	1.7
REC	12.3	0.1	0	0	3.1	1.7

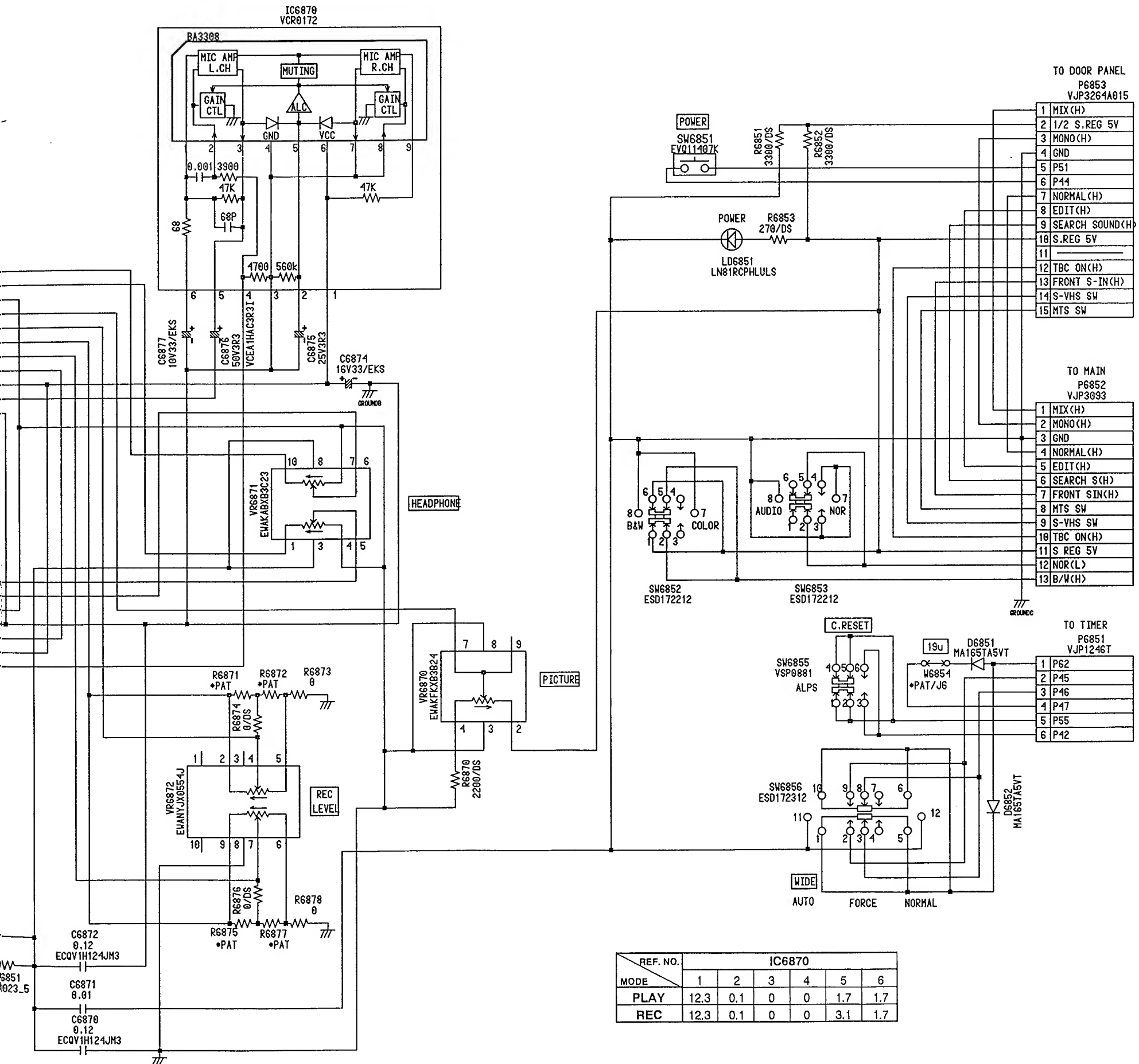
5-27. FRONT JACK SCHEMATIC



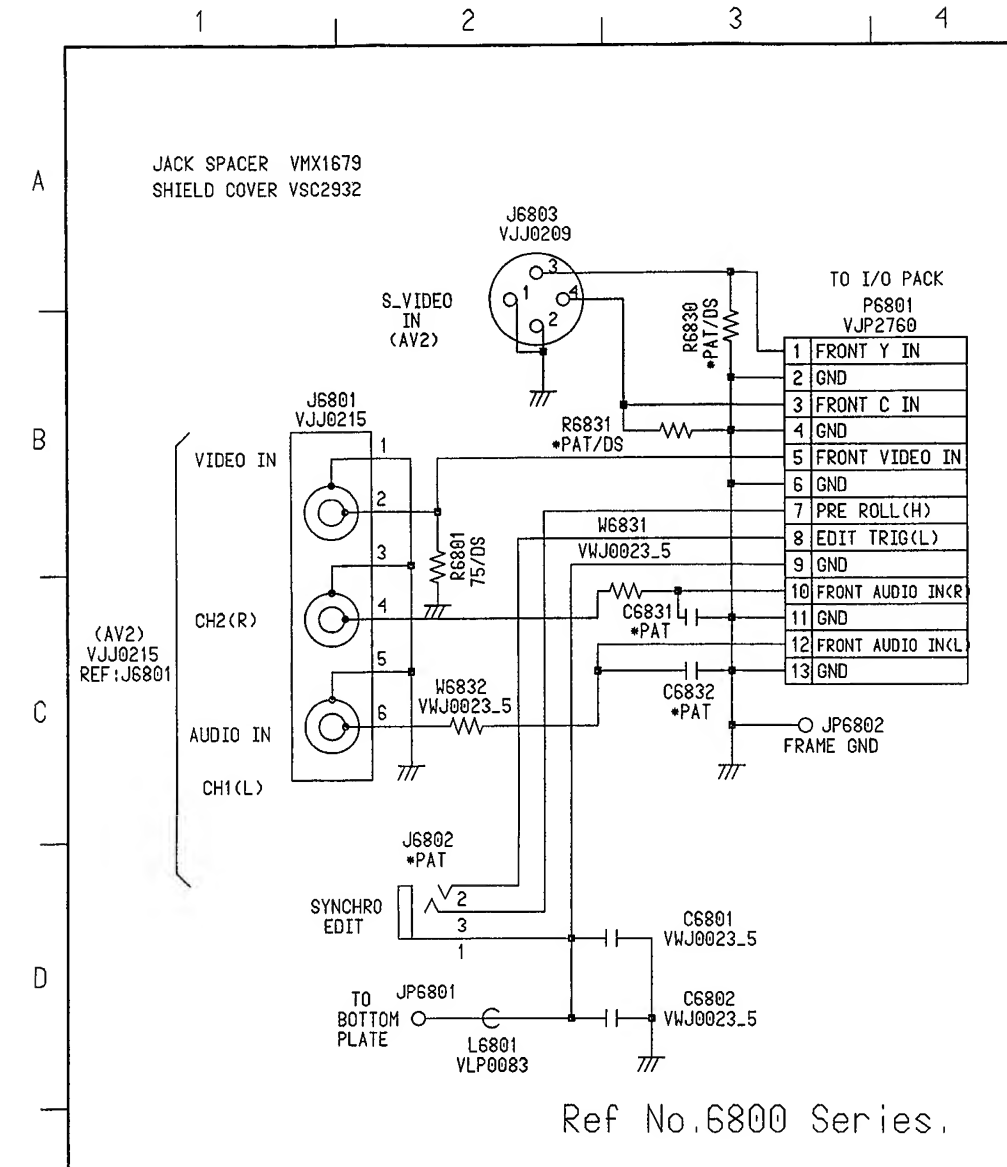
5-28. HEAD PHONE & MIC JACK



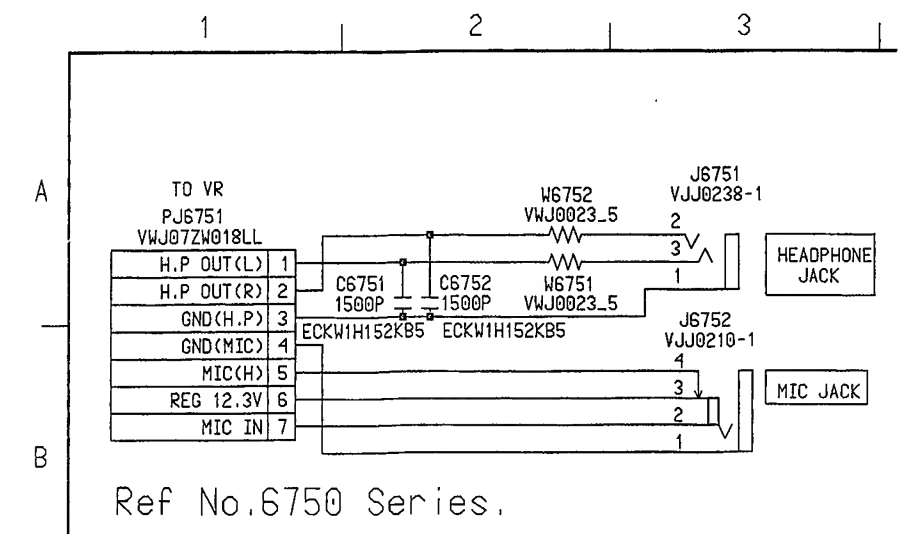
Ref No.6750 Series.



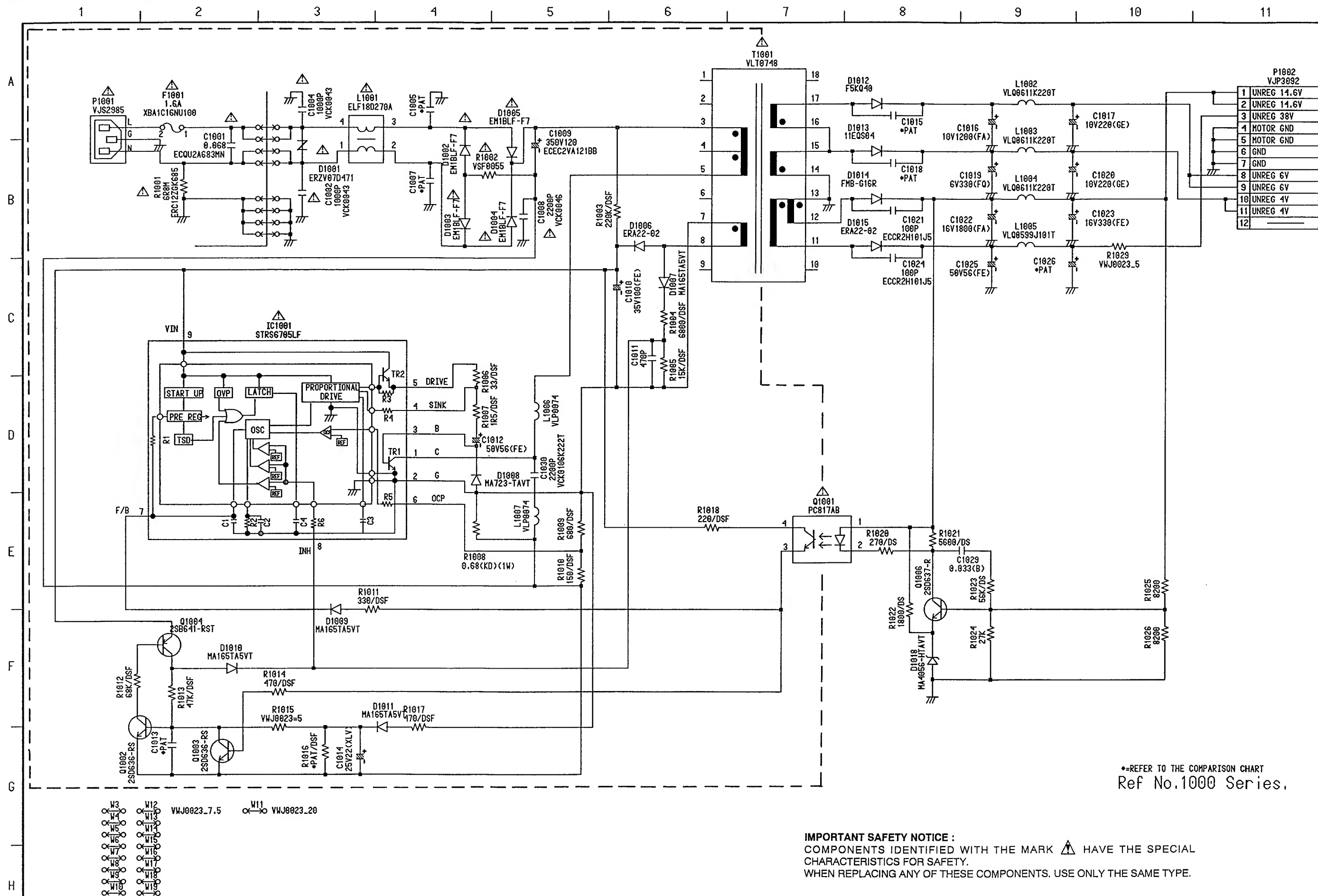
5-27. FRONT JACK SCHEMATIC DIAGRAM




5-28. HEAD PHONE & MIC JACK SCHEMATIC DIAGRAM



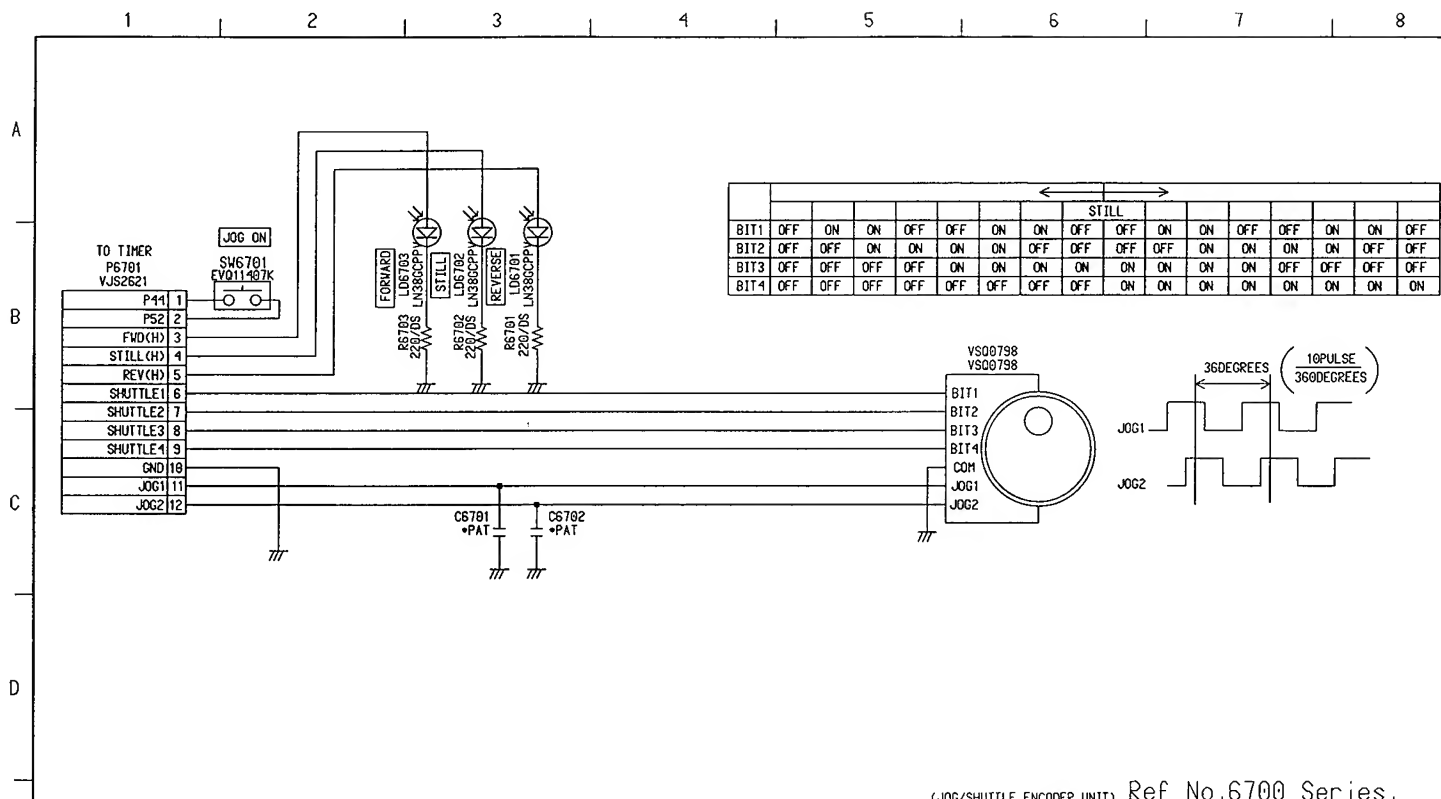
5-30. POWER SCHEMATIC DIAGRAM



•REFER TO THE COMPARISON CHART
Ref No.1000 Series.

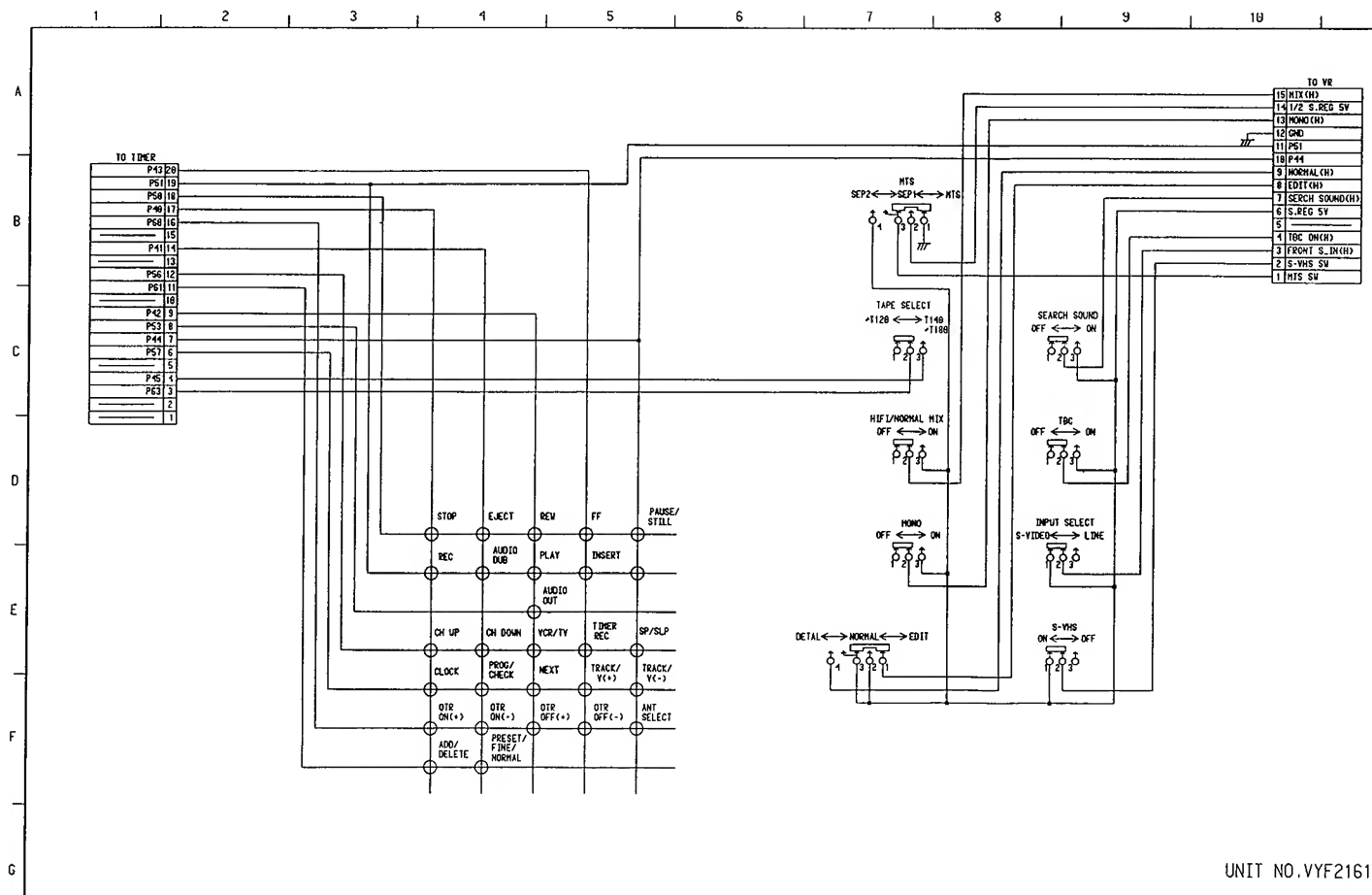
IMPORTANT SAFETY NOTICE :
COMPONENTS IDENTIFIED WITH THE MARK  HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

5-33. JOG/SHUTTLE SCHEMATIC DIAGRAM

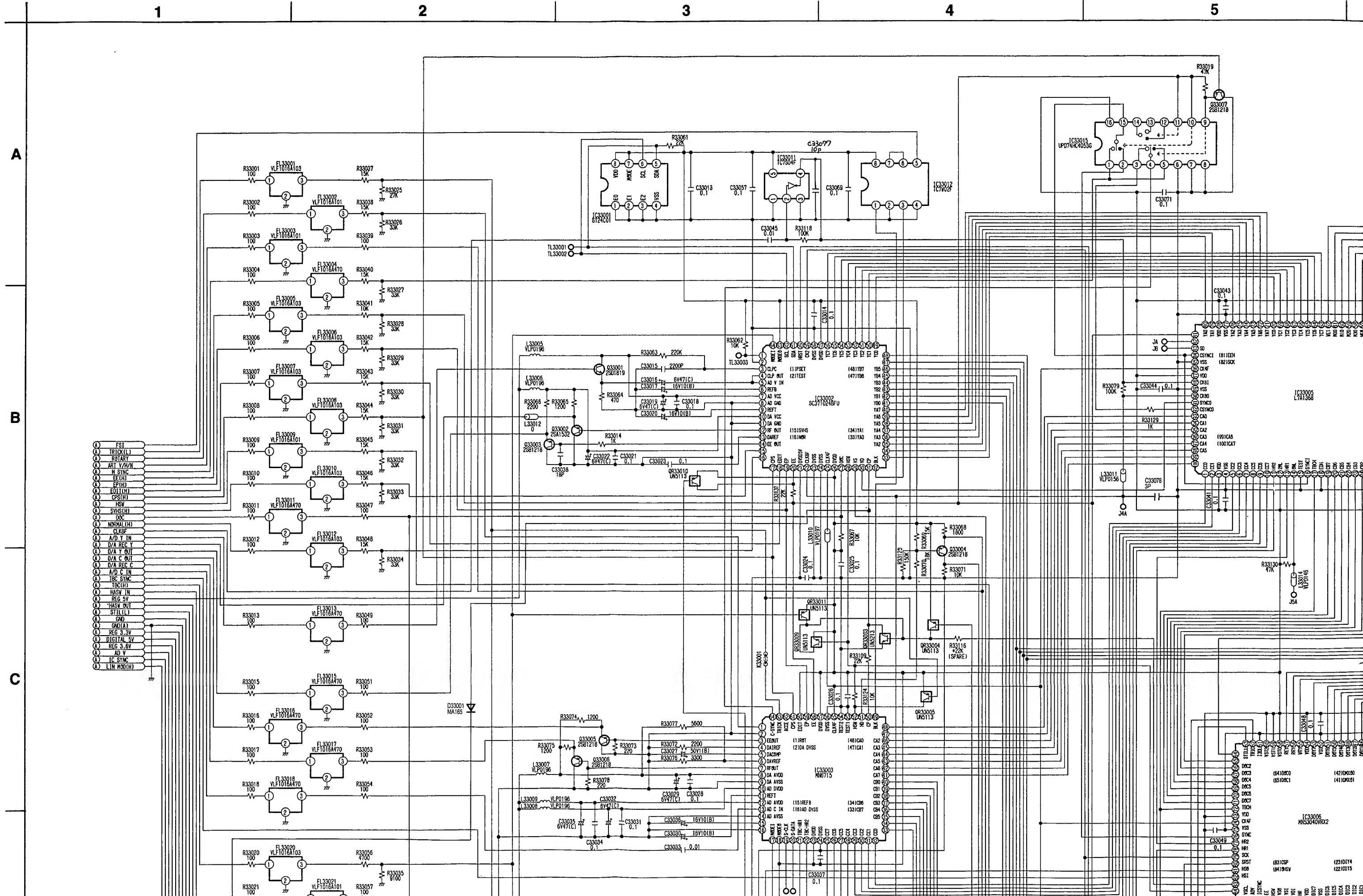


(JOG/SHUTTLE ENCODER UNIT) Ref No.6700 Series.

5-34. DOOR PANEL SCHEMATIC DIAGRAM



5-35. DIGITAL Y/C SCHEMATIC DIAGRAM



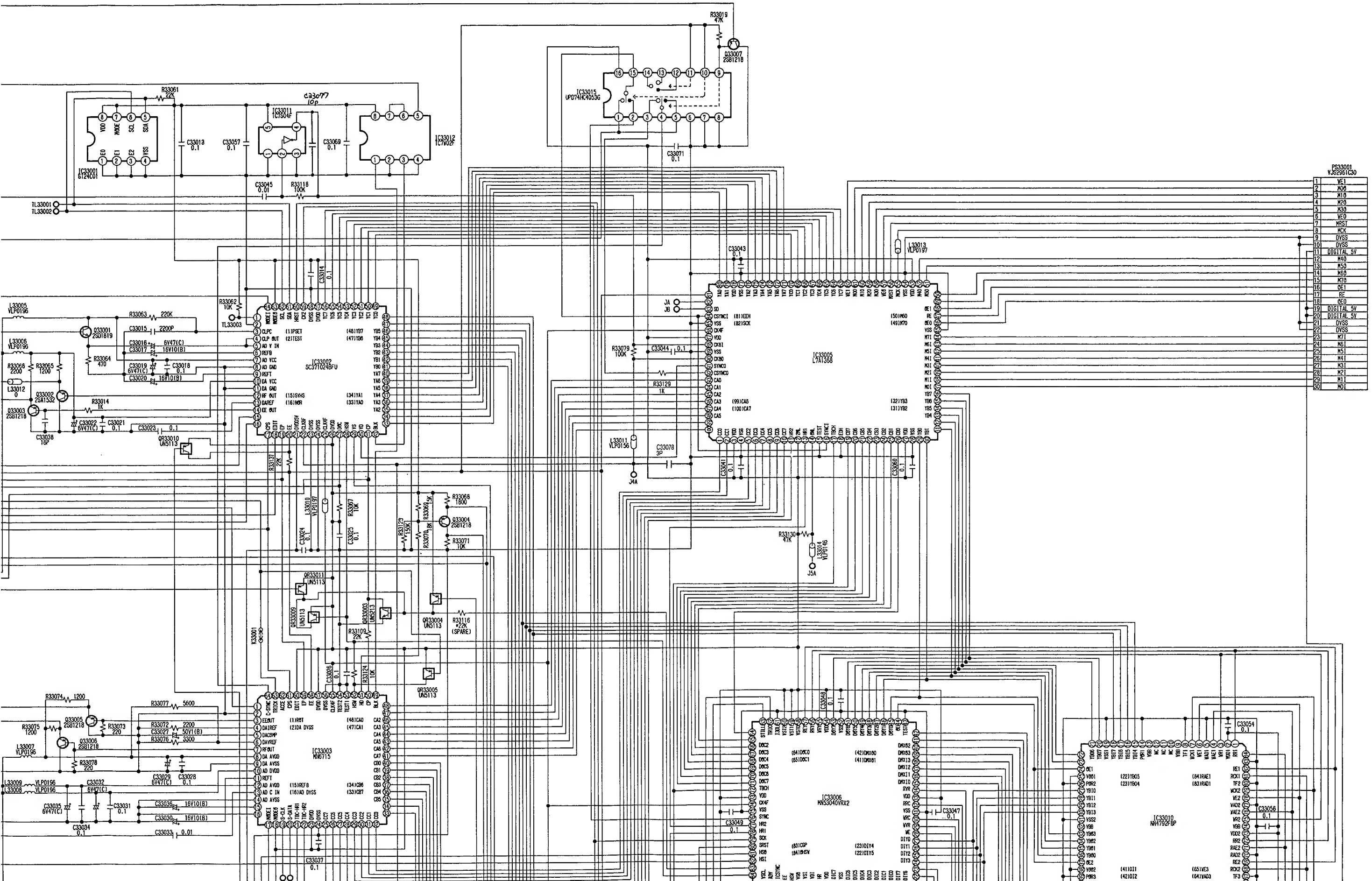
3

4

5

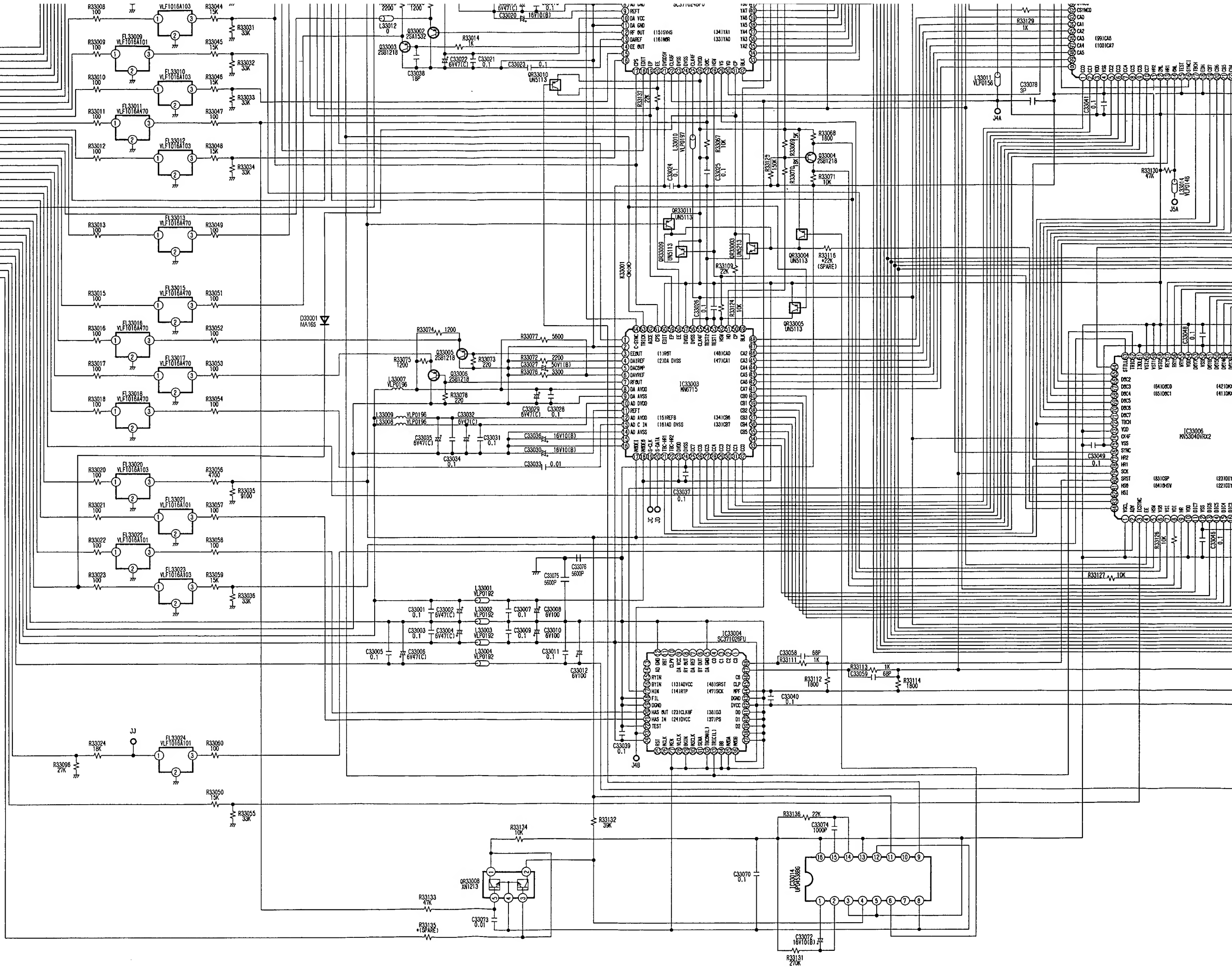
6

7



1	VE1
2	M06
3	M10
4	M20
5	M30
6	VE0
7	M81
8	M8
9	DVSS
10	DVSS
11	DIGITAL 5V
12	M40
13	M50
14	M60
15	M70
16	OE1
17	OE0
18	DIGITAL 5V
19	DIGITAL 5V
20	DIGITAL 5V
21	DVSS
22	DVSS
23	M71
24	M61
25	M51
26	M41
27	M31
28	M21
29	M11
30	M01

- (A) FSI
- (A) TRICK(L)
- (A) ROTARY
- (A) ART V/A/N
- (A) H SYNC
- (A) EE(H)
- (A) EPI(H)
- (A) RDI(H)
- (A) CPS(H)
- (A) HSV
- (A) SYNS(H)
- (A) DDC
- (A) NORMAL(H)
- (A) CLKRF
- (A) A/D Y IN
- (A) D/A REC Y
- (A) D/A Y OUT
- (A) D/A C OUT
- (A) D/A REC C
- (A) A/D C IN
- (A) TBC SYNC
- (A) TBC(H)
- (A) HASV IN
- (A) REG SV
- (A) ST(L)
- (A) GND
- (A) EN(L)
- (A) REG 3.3V
- (A) DIGITAL 5V
- (A) REG 3.6V
- (A) AD V
- (A) IC SYNC
- (A) LIN MOOD(H)

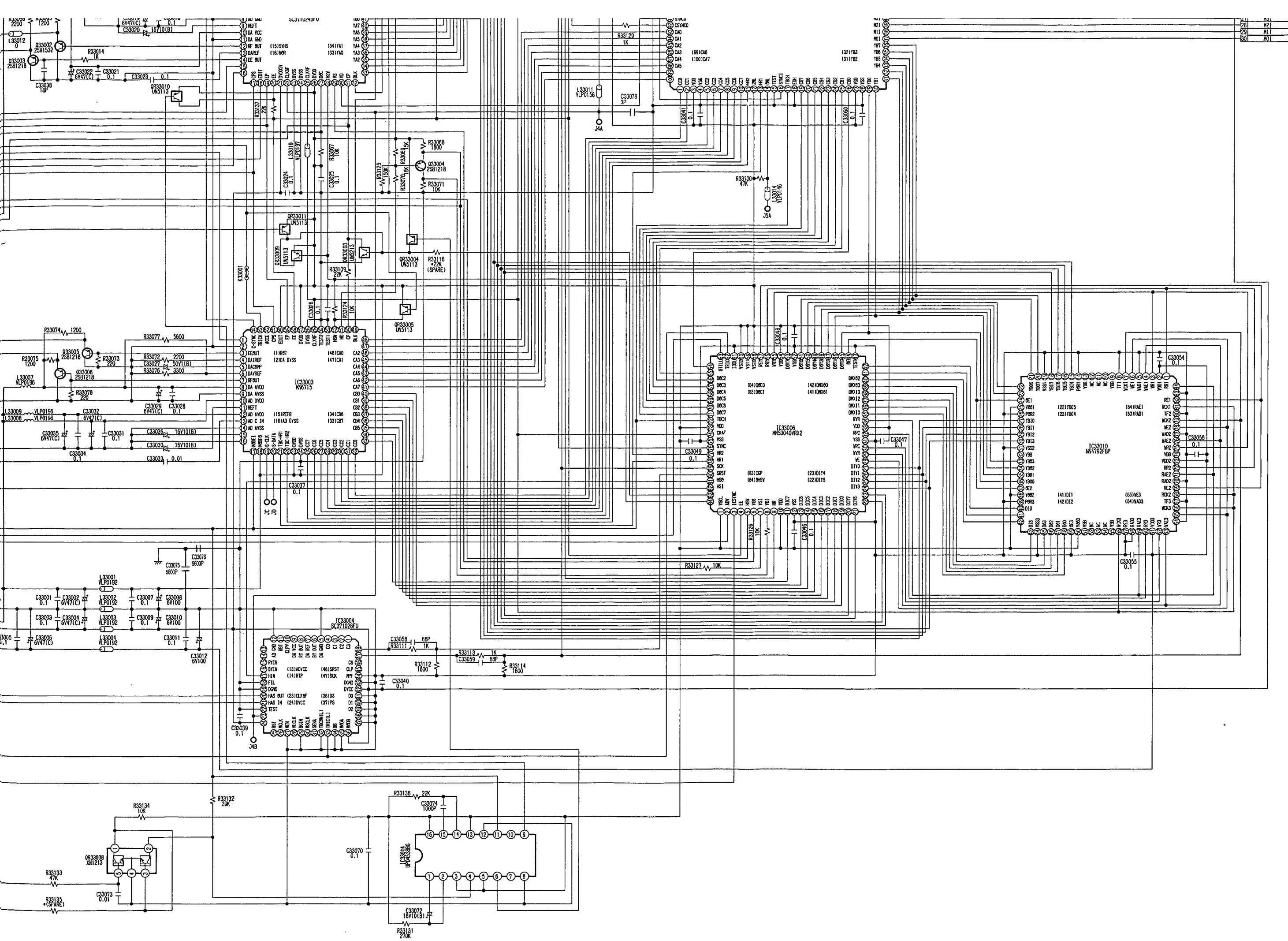


B

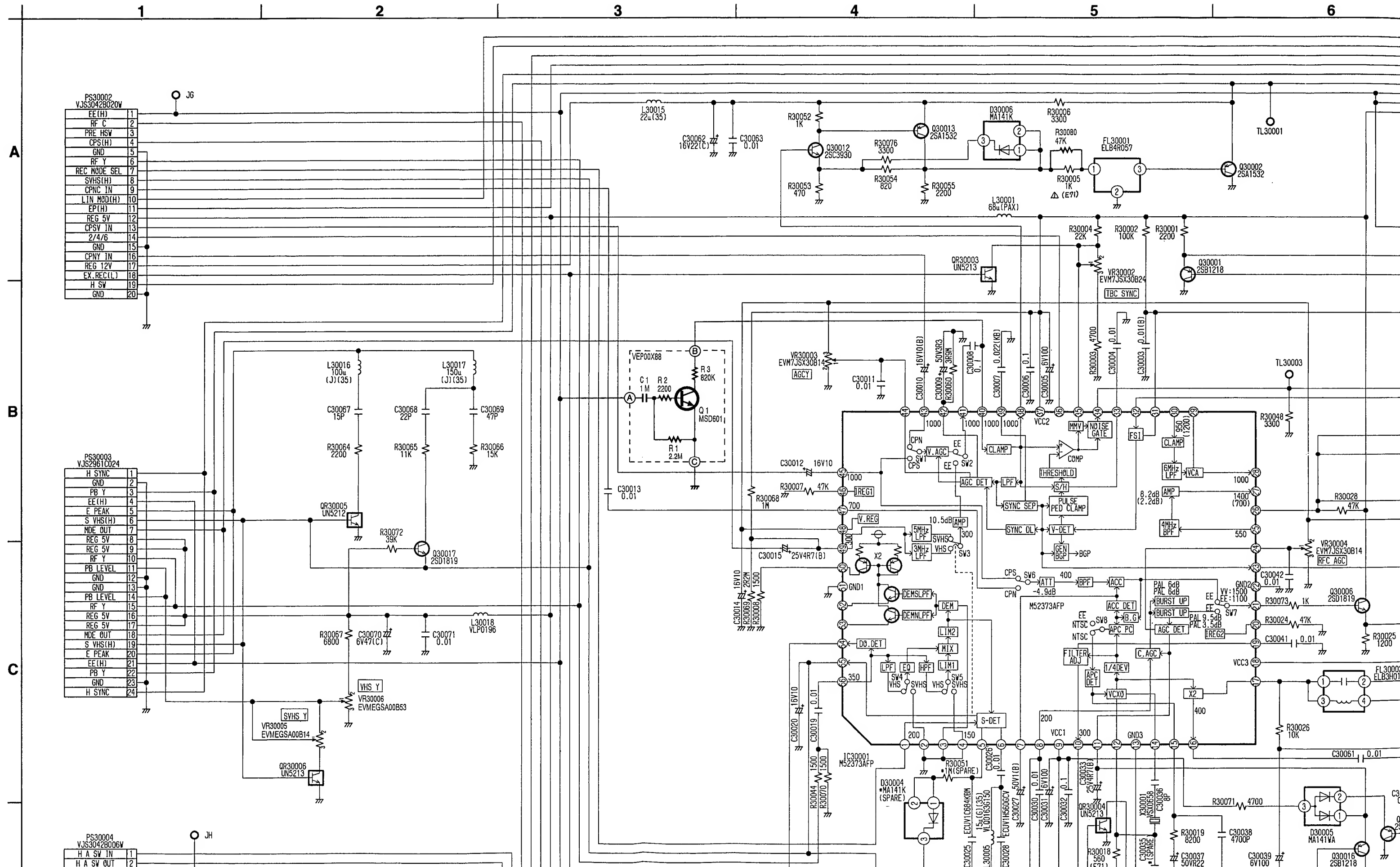
C

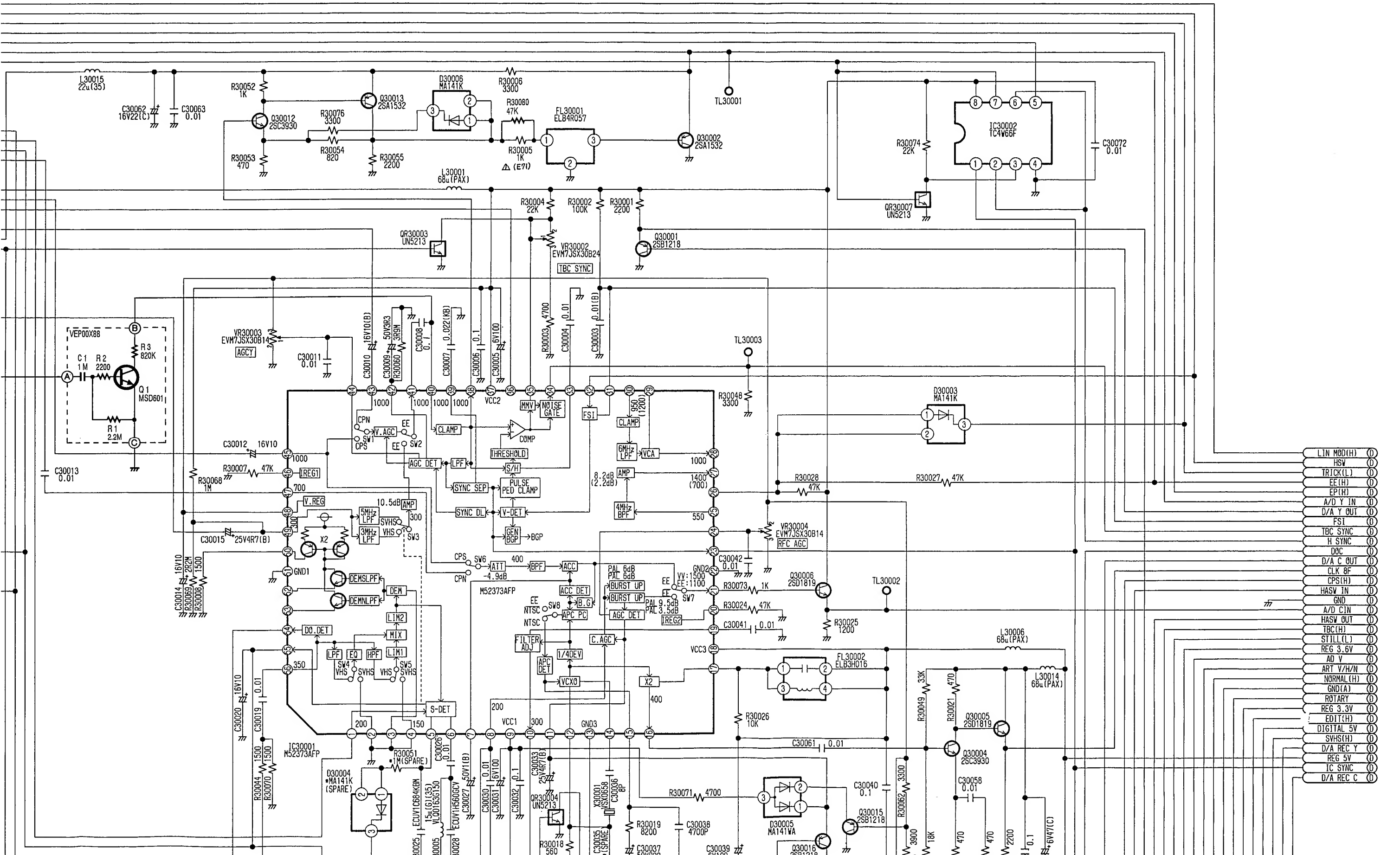
D

E



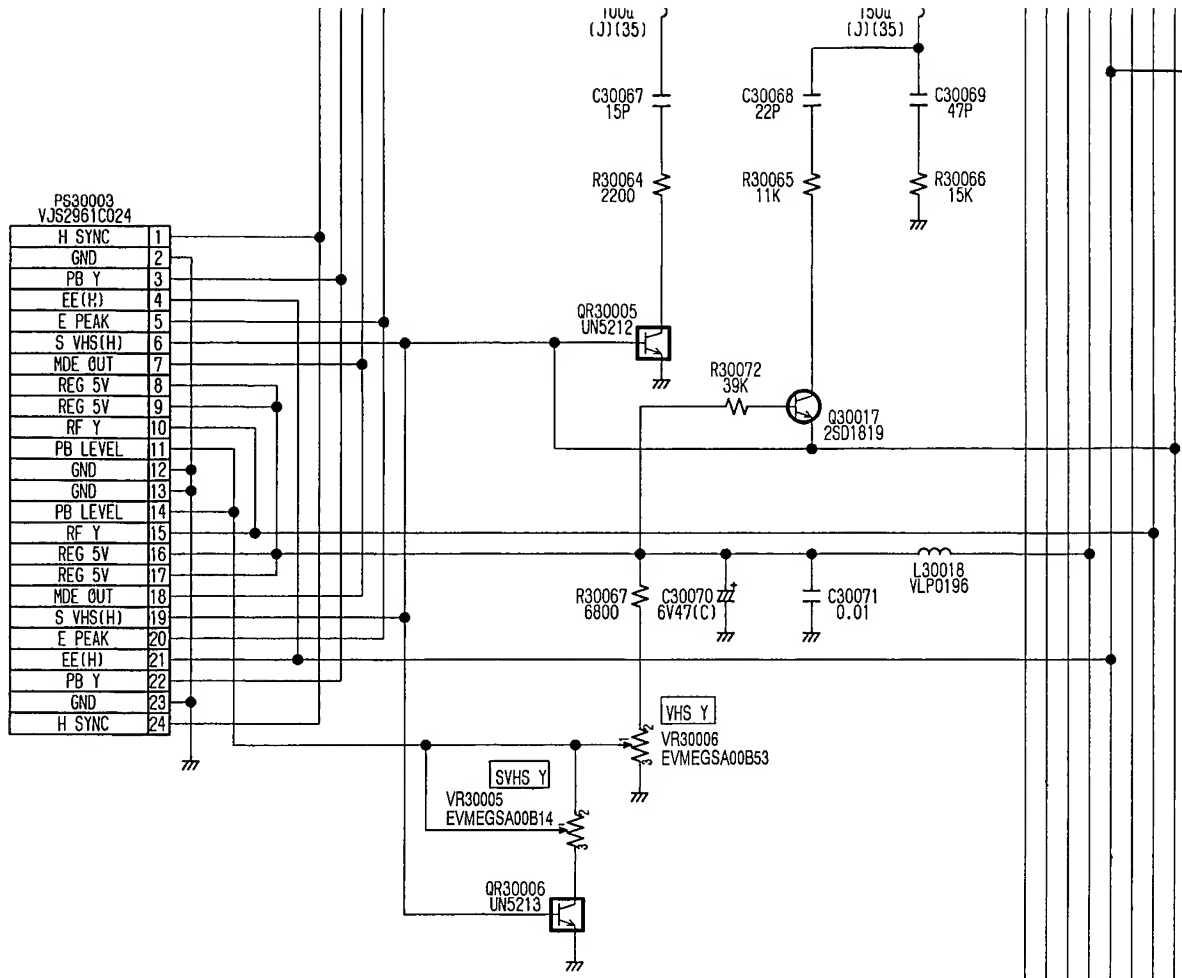
5-36. ANALOG Y/C SCHEMATIC DIAGRAM





- LIN MOD(H) ()
- HSW ()
- TRICK(L) ()
- EE(H) ()
- EP(H) ()
- A/D Y IN ()
- D/A Y OUT ()
- FSI ()
- TBC SYNC ()
- H SYNC ()
- DOC ()
- D/A C OUT ()
- CLK 8F ()
- CPS(H) ()
- HASW IN ()
- GND ()
- A/D CIN ()
- HASW OUT ()
- TBC(H) ()
- STILL(L) ()
- REG 3.6V ()
- AD V ()
- ART V/H/W ()
- NORMAL(H) ()
- GND(A) ()
- ROTARY ()
- REG 3.3V ()
- EDIT(H) ()
- DIGITAL 5V ()
- SVHS(H) ()
- D/A REC Y ()
- REG 5V ()
- IC SYNC ()
- D/A REC C ()

B



C

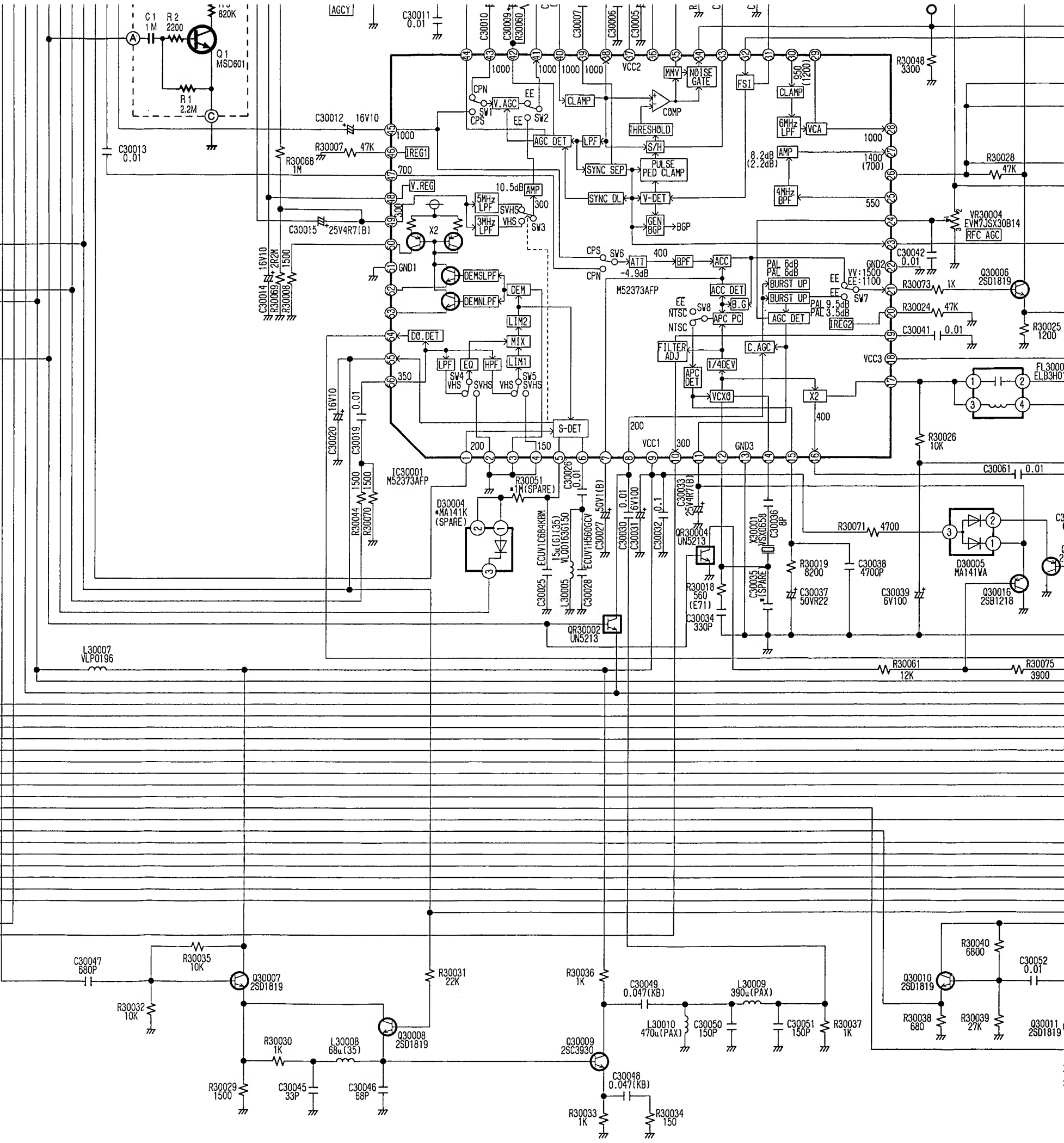
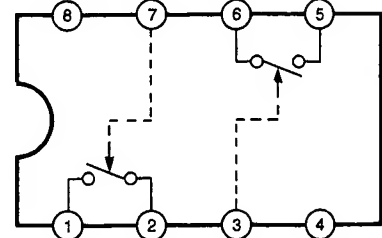
PS30004 VJS3042B006V	
H A SW IN	1
H A SW OUT	2
TBC(H)	3
TBC SS(L)	4
REG 3.6V	5
AD V	6

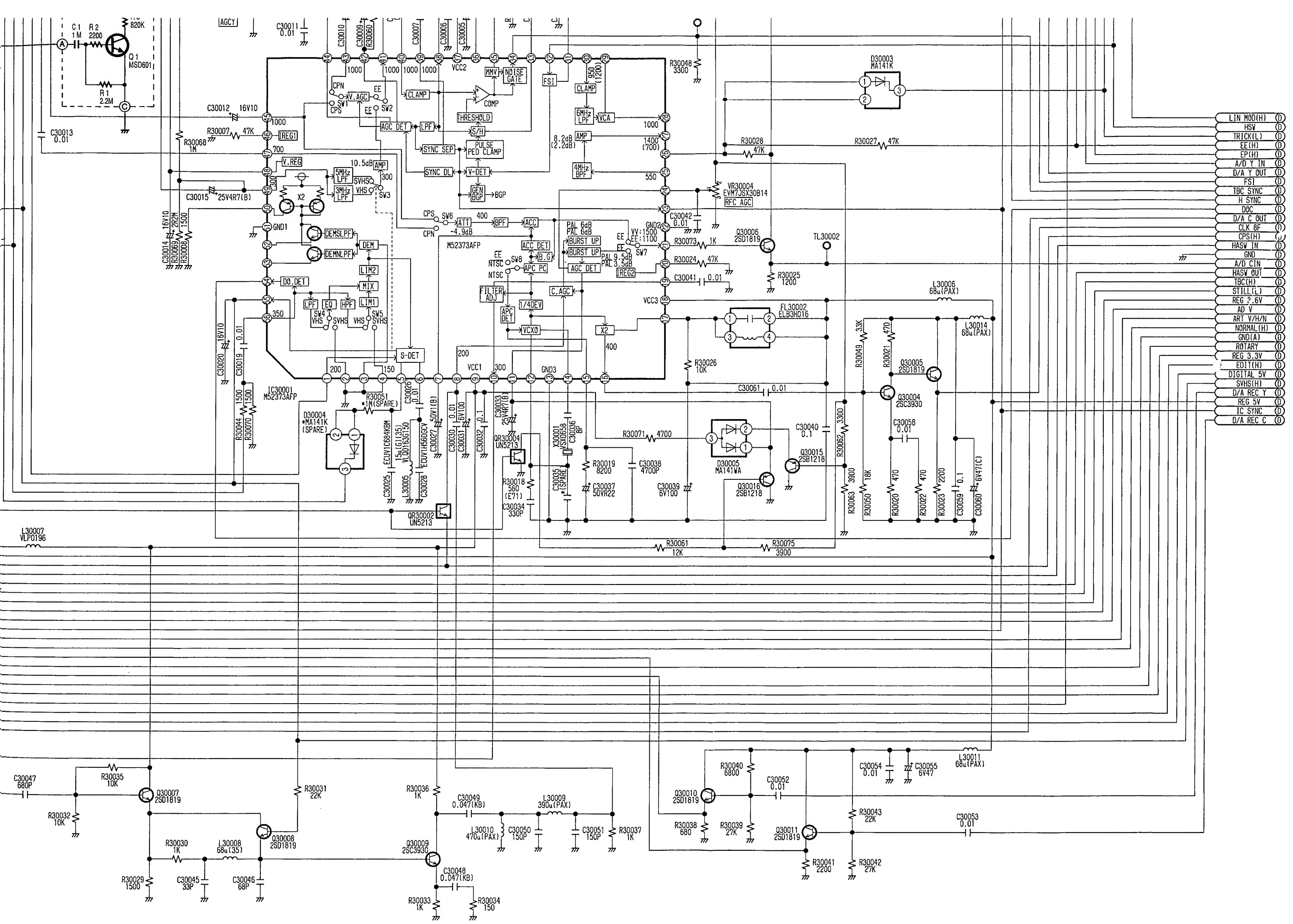
D

PS30001 VJS3042B016V	
H SYNC	1
ART V/H/N	2
NORMAL(H)	3
REC C	4
GND(A)	5
REC Y	6
ROTARY	7
REG 3.3V	8
Y OUT	9
EDIT(H)	10
DIGITAL 5V	11
C OUT	12
GND(A)	13
TRICK(L)	14
3.58MHz	15
	16

E

IC30002 (TC4W66F)





- LIN MOD(H) ()
- HSV ()
- TRICK(L) ()
- EE(H) ()
- EP(H) ()
- A/D Y IN ()
- D/A Y OUT ()
- FSI ()
- TBC SYNC ()
- H SYNC ()
- DOC ()
- D/A C OUT ()
- CLK 8F ()
- CPS(H) ()
- HASV IN ()
- GND ()
- A/D CIN ()
- HASV OUT ()
- TBC(H) ()
- STILL(L) ()
- REG 2.6V ()
- AD V ()
- ART V/H/N ()
- NORMAL(H) ()
- GND(A) ()
- ROTARY ()
- REG 3.3V ()
- EDIT(H) ()
- DIGITAL 5V ()
- SVHS(H) ()
- D/A REC Y ()
- REG 5V ()
- IC SYNC ()
- D/A REC C ()

DIGITAL Y/C C.B.A.

REF. NO.	IC33001																					
MODE	1	2	3	4	5	6	7	8														
PLAY	0	0	0	0	1.8	1.6	3.3	3.3														
REF. NO.	IC33002																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	3.3	0	2.6	1.7	1.7	0.4	5.1	0	3.5	5.1	0	1.2	1.5	0.8	0.1	2.8	3.4	0	0	0		
REF. NO.	IC33002																					
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
PLAY	5.2	1.9	0	0	1.6	3.3	3.0	3.3	0	0	0	2.8	1.6	1.6	1.6	1.4	0.9	1.2	1.7	1.2		
REF. NO.	IC33002																					
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		
PLAY	1.6	1.6	1.6	1.3	0.8	1.1	1.8	1.2	1.7	1.8	1.7	1.4	0.9	1.1	0	1.2	3.3	0	0	0		
REF. NO.	IC33002																					
MODE	61	62	63	64																		
PLAY	1.8	0	3.3	0.1																		
REF. NO.	IC33003																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	3.3	0	0.4	1.1	2.4	1.1	0.4	3.3	0	3.3	2.4	3.3	1.6	0	0.6	0	0.1	3.3	0	0		
REF. NO.	IC33003																					
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
PLAY	3.2	3.2	3.3	0	2.2	1.2	1.1	1.3	1.3	1.2	1.3	1.3	2.0	0.8	1.0	1.1	1.2	1.1	1.1	1.3		
REF. NO.	IC33003																					
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		
PLAY	1.2	1.7	1.1	0.9	1.4	1.6	1.7	1.6	2.9	0	3.0	3.2	0	0	—	0	—	0	0	3.3		
REF. NO.	IC33003																					
MODE	61	62	63	64																		
PLAY	3.4	3.3	3.1	3.1																		
REF. NO.	IC33004																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	0	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0.2	0	0.2	0.3	3.2	0	0	0		
REF. NO.	IC33004																					
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
PLAY	0	0	1.7	5.1	3.9	2.0	0	2.0	0	0	0.1	0	3.1	0	0	5.2	0	0	0	0		
REF. NO.	IC33004																					
MODE	41	42	43	44	45	46	47	48														
PLAY	0	5.1	0	0	0	0.7	1.8	3.3														
REF. NO.	IC33005																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	1.3	1.0	3.2	0	1.2	1.2	1.2	1.1	1.1	2.1	2.5	3.2	3.2	0	0	0	0	0	2.1	1.0		
REF. NO.	IC33005																					
MODE	21	22	23 ~ 44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60			
PLAY	1.0	1.2	—	0	1.8	1.5	1.4	1.4	0	1.2	0.8	3.2	0	2.0	3.3	3.8	1.2	1.4	1.3			
REF. NO.	IC33005																					
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		
PLAY	1.5	3.8	1.2	1.7	1.2	0.8	1.4	1.7	1.7	1.6	1.1	1.7	1.1	0.9	1.4	1.7	0	3.2	1.5	1.6		
REF. NO.	IC33005																					
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100		
PLAY	0	0	0	0	0	1.6	3.2	1.7	0	1.9	0	0	1.6	1.5	1.6	1.4	0.8	1.1	1.7	1.2		
REF. NO.	IC33006																					
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
PLAY	3.2	0	0	0	3.3	0	0.4	0	0	3.2	2.0	0	1.0	0.9	0.1	1.1	1.1	0.1	1.6	1.2		
REF. NO.	IC33006																					
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
PLAY	1.9	1.0	0.1	1.3	0	1.6	1.5	0	3.3	3.2	0	3.2	3.3	3.3	1.6	1.5	1.4	1.8	1.7	1.2		
REF. NO.	IC33006																					
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60		
PLAY	1.1	1.3	0	3.2	1.6	1.6	1.6	1.3	0.7	1.0	1.8	0	1.2	3.2	3.2	3.3	0.4	3.3	3.2	3.3		
REF. NO.	IC33006																					
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		
PLAY	0	3.1	3.3	1.3	1.1	1.2	1.2	1.2	1.1	1.1	2.1	0.1	3.3	1.6	0	0	3.2	3.2	1.4	2.1		

VOLTAGE CHARTS

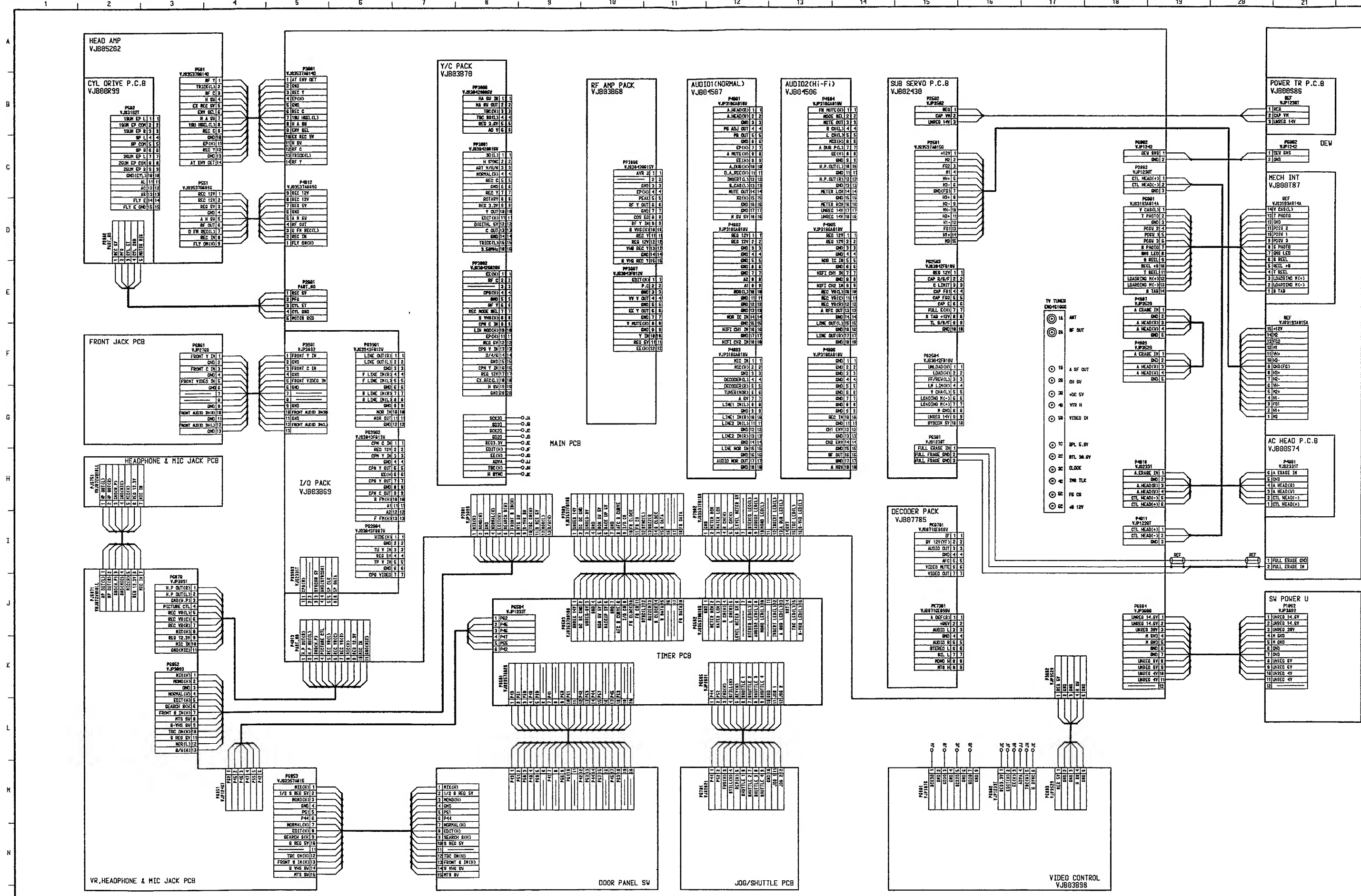
DIGITAL Y/C C.B.A.

REF. NO.	IC33006																			
MODE	81	82	83	84																
PLAY	3.2	3.1	3.2	3.3																
REF. NO.	IC33010																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	3.2	3.7	3.2	3.2	0	0	0.1	0	0	0.4	0.4	0.4	0	0	0.8	1.0	1.8	1.2	0	1.2
REF. NO.	IC33010																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	1.8	1.0	0.8	3.2	3.2	0	1.5	1.5	1.6	1.3	0	0	1.4	1.6	1.6	1.6	3.2	3.3	0	1.3
REF. NO.	IC33010																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
PLAY	1.2	1.2	1.7	0	1.8	1.5	1.5	1.6	0	0.4	-0.8	0.5	0.6	0.6	-0.8	1.6	0	0	3.3	3.2
REF. NO.	IC33010																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
PLAY	3.7	3.3	3.3	0	0	1.7	0	1.7	0.4	0	3.2	3.2	3.7	-0.8	3.2	-0.8	0	0	1.4	0
REF. NO.	IC33010				IC33011				IC33012											
MODE	81	82	83	84	1	2	3	4	5	1	2	3	4	5	6	7	8			
PLAY	1.6	0	0	3.2	0	1.5	0	1.8	3.3	2.9	0	2.8	0	0.1	0.3	0.3	0			
REF. NO.	IC33014																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
PLAY	0	3.2	3.2	0.1	3.2	0	3.2	0	3.3	0	0.1	0	3.2	3.2	0	3.3				
REF. NO.	IC33015																Q33001			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	E	C	B	
PLAY	0.2	0	0	0.2	0.2	0	0	0	0	0	0	0	-0.2	-0.2	0	3.3	2.1	5.1	2.7	
REF. NO.	Q33002			Q33003			Q33004			Q33005			Q33006			Q33007				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	1.9	0	1.2	1.4	0	0.8	0.7	0	3.0	1.0	0	0.4	1.0	0	0.4	0	0	3.4		
REF. NO.	QR33003			QR33004			QR33005			QR33008			QR33009			QR33010				
MODE	E	C	B	E	C	B	E	C	B	1	2	3	4	5	E	C	B	E	C	B
PLAY	0	0	3.2	3.3	3.2	0	3.2	3.2	3.1	0	0.1	0	0	1.8	3.2	3.2	3.2	0.5	0	3.2
REF. NO.	QR33011																			
MODE	E	C	B																	
PLAY	3.2	3.2	0.1																	

ANALOG Y/C C.B.A.

REF. NO.	IC30001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PLAY	5.1	0	0.2	0	0.4	3.3	0.2	3.0	5.1	2.0	2.9	3.6	0	2.3	1.4	3.7	5.1	5.1	2.7	0.8
REC	5.1	0	0.2	0	3.0	3.3	2.9	4.1	5.1	2.0	2.5	3.6	0	2.3	1.4	3.7	5.1	5.1	2.7	0.9
REF. NO.	IC30001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
PLAY	2.7	0	0.3	0.7	3.3	2.4	2.1	2.3	0.1	3.1	2.8	4.8	3.3	3.1	2.0	0	4.9	1.6	2.7	2.9
REC	2.7	0	0.4	0.7	3.3	4.9	2.1	2.3	0.3	3.2	2.8	4.6	3.3	2.9	0	0	4.9	1.7	2.7	3.0
REF. NO.	IC30001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56				
PLAY	1.5	1.5	3.0	2.3	3.0	0.9	3.0	3.0	3.4	0	0	0.8	2.6	3.0	0.1	3.0				
REC	1.8	2.1	3.0	2.3	3.0	0.9	3.0	3.0	3.0	0	0	0.6	0.7	2.2	0.1	3.2				
REF. NO.	IC30002				Q30001				Q30002				Q30004				Q30005			
MODE	1	2	3	4	5	6	7	8	E	C	B	E	C	B	E	C	B	E	C	B
PLAY	0.3	0.3	0	0	0.3	0.3	0	4.9	2.1	0	1.4	2.7	0	2.0	0.8	4.1	1.6	3.5	5.1	4.1
REC	0.4	0.4	0	0	0.3	0.4	4.9	4.9	2.0	0	1.4	2.8	0	2.0	0.9	4.2	1.6	3.6	5.1	4.1
REF. NO.	Q30006			Q30007			Q30008			Q30009			Q30010			Q30011				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	2.0	4.9	2.6	1.9	5.1	2.5	1.9	1.9	0.1	1.2	3.9	1.8	5.0	5.1	4.1	5.0	5.1	2.8		
REC	2.0	4.9	2.6	1.9	5.1	2.5	1.9	1.9	0.1	1.2	3.9	1.9	3.3	5.1	3.9	5.0	5.1	2.8		
REF. NO.	Q30012			Q30013			Q30015			Q30016			Q30017							
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B					
PLAY	0.9	11.6	1.6	12.2	2.0	11.5	2.2	0	1.6	2.9	0	3.0	0.1	0.1	0.7					
REC	0.9	11.6	1.6	12.3	1.9	11.6	2.2	0	1.6	2.4	0	2.2	0.1	0.1	0.7					
REF. NO.	QR30002			QR30003			QR30004			QR30005			QR30006			QR30007				
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B		
PLAY	5.0	3.0	0	0	2.0	0	0	3.0	0	0	0.4	0.1	0	1.2	0.1	0	4.9	0		
REC	5.0	4.1	4.9	0	0	3.9	0	0	4.9	0	0.4	0.1	0	1.2	0.1	0	0	4.9		

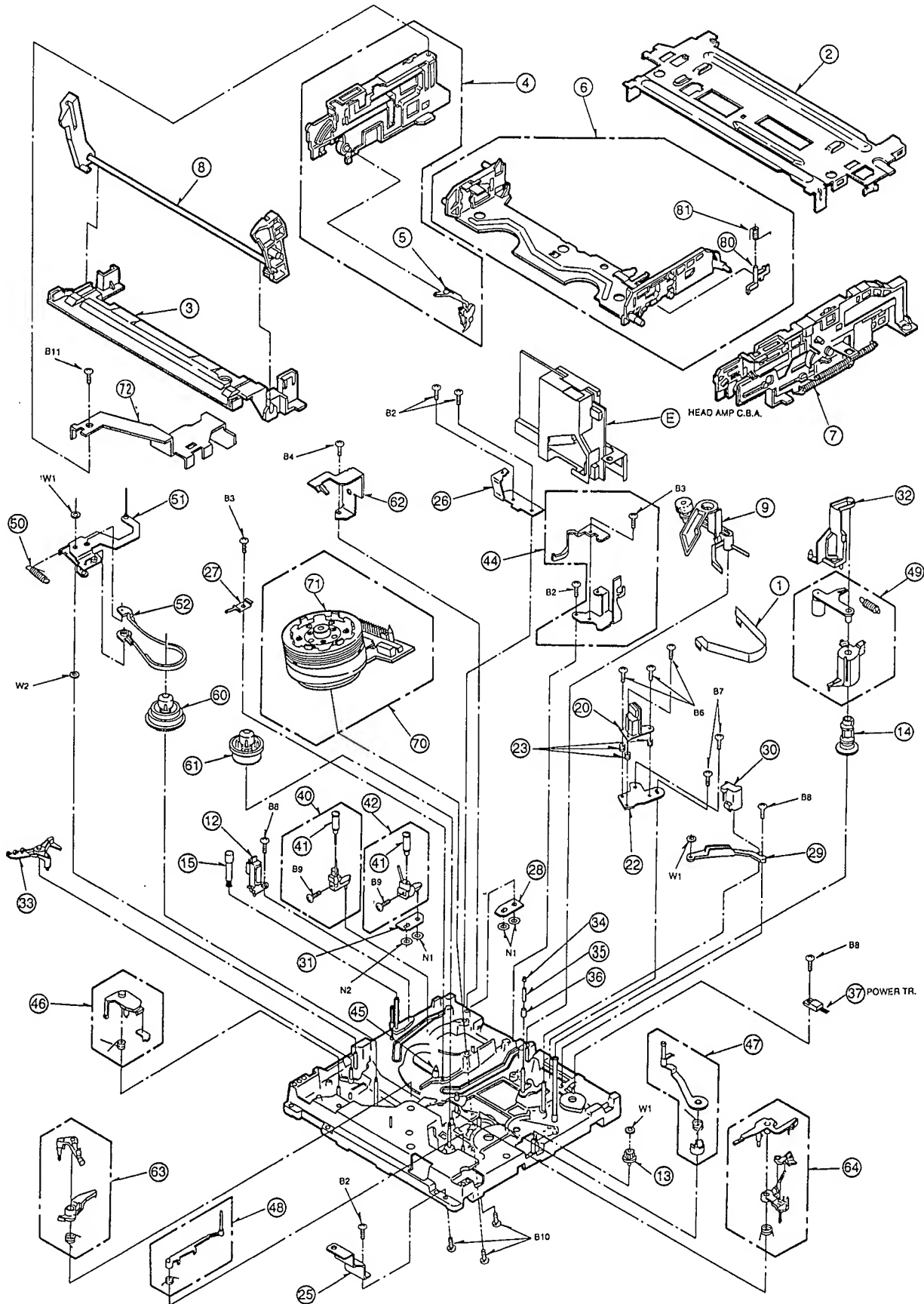
5-39. INTERCONNECTION SCHEMATIC DIAGRAM



SECTION 6. EXPLODED VIEWS & PARTS LIST

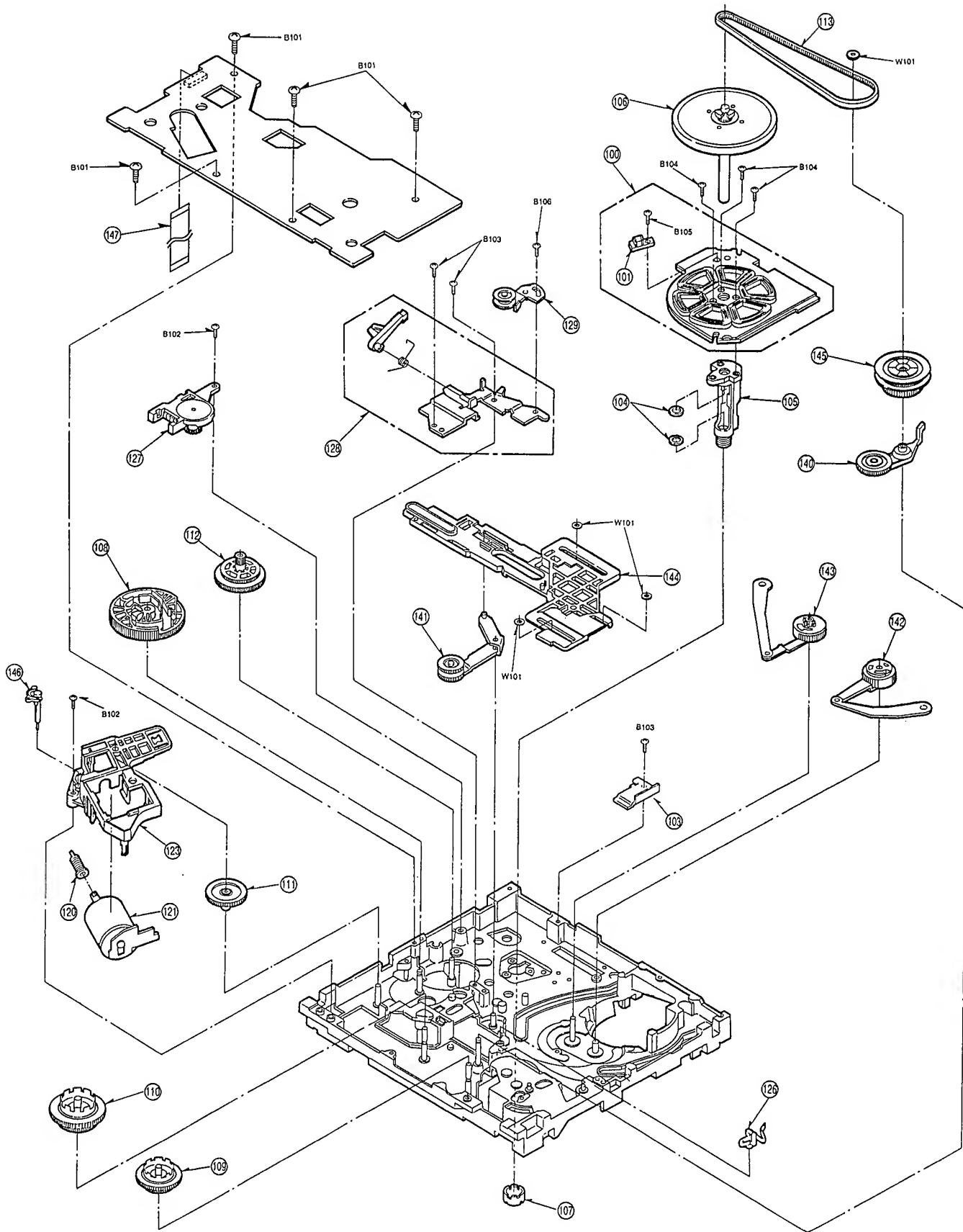
6-1. EXPLODED VIEW MECHANICAL REPLACEMENT PARTS LIST

1. CHASSIS PARTS SECTION (1)



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VMJ0758	FLEXIBLE CABLE (6P)	1	P4001-P1501	100(2)	VEK5927	STATOR UNIT	1	
2(1)	VMA8644	TOP PLATE	1		101(2)	VBK0061	FG HEAD	1	
3(1)	VMA8787	CASSETTE GUIDE	1		103(2)	VMA8930	ROTOR STOPPER	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1		104(2)	VMX1927	OIL SEAL	2	
5(1)	VML2902	OPENER LEVER UNIT	1		105(2)	VXD0140	HOUSING UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1		106(2)	VXP1528	ROTOR UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1		107(2)	VXQ0297	THRUST SCREW UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1		108(2)	VDG0913	MAIN CAM GEAR	1	
9(1)	VML2440	CLEANER ARM BASE	1		109(2)	VDG0956	SUPPLY REEL GEAR	1	
12(1)	VBS0052	FE HEAD	1		110(2)	VDG0957	TAKE UP REEL GEAR	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1		111(2)	VDG0868	WORM WHEEL GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1		112(2)	VDG0885	SUB CAM GEAR	1	
15(1)	VXP1517	IMPEDANCE ROLLER UNIT	1		113(2)	VDV0235	TIMING BELT	1	
20(1)	VED0217	A/C HEAD (1) UNIT	1		120(2)	VDG0866	WORM GEAR	1	
22(1)	VMA8624	A/C HEAD BASE	1		121(2)	VEM0427	LOADING MOTOR (1) UNIT	1	
23(1)	VMB2515	A/C HEAD SPRING	3		123(2)	VMD1942	MOTOR BRACKET	1	
25(1)	VMA8761	MOUNT ANGLE	1		126(2)	VML2725	IDLER CONTROL LEVER	1	
26(1)	VMA8810	HEAD AMP MOUNT ANGLE (L)	1		127(2)	VSS0365	MODE SW	1	
27(1)	VMC0917	EARTH SPRING	1		128(2)	VXA5138	SS BRAKE BASE UNIT	1	
28(1)	VMA8874	INCLIND BASE HOLDER (S)	1		129(2)	VXA4799	TENSION ROLLER UNIT	1	
29(1)	VMD2078	P5 STOPPER BASE	1		140(2)	VXL2378	IDLER ARM UNIT	1	
30(1)	VXA4927	P5 POST STOPPER	1		141(2)	VXL2372	DIRECT LEVER UNIT	1	
31(1)	VMA8873	INCLIND BASE HOLDER (T)	1		142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
32(1)	VMD2101	OPENER PIECE	1		143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
33(1)	VML2776	TENSION SPRING ARM	1		144(2)	VXL2307	MAIN LEVER UNIT	1	
34(1)	VMX1544	P4 UPPER LIMITER	1		145(2)	VXP1409	CENTRE CLUTCH	1	
35(1)	VMX2175	P4 SLEEVE	1		146(2)	VMD2153	S-VHS SW ACTUATOR	1	
36(1)	VMX2176	P4 LOWER LIMITER	1		147(2)	VMJ14AW230MO	FLEXIBLE CABLE	1	
37(1)	2SB941PSW	POWER TRANSISTOR	1		B101(2)	XTV26+6FR	SCREW	1	
40(1)	VXA5245KIT	INCLINED BASE (S) UNIT	1		B102(2)	XTV26+8F	SCREW	2	
41(1)	VXP1415	ROLLER POST	2		B103(2)	XTV26+6F	SCREW	3	
42(1)	VXA5247KIT	INCLINED BASE (T) UNIT	1		B104(2)	VHD0753	SCREW	3	
44(1)	VXA5170	HEAD AMP MOUNT ANGLE (R) U.	1		B105(2)	VHD0754	SCREW	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1		B106(2)	XSB26+4FZ	SCREW	1	
46(1)	VXL2310	REVIEW ARM UNIT	1		W101(2)	VMX2208	WASHER	4	
47(1)	VXL2306	P5 ARM UNIT	1						
48(1)	VXL2394	TAKE UP TENSION REGULATOR	1						
		ARM UNIT							
49(1)	VXL2246	PINCH ARM UNIT	1						
50(1)	VMB2434	TENSION SPRING	1						
51(1)	VXL2309	TENSION ARM (1) UNIT	1						
52(1)	VXZ0310	TENSION BAND UNIT	1						
60(1)	VXR0236	SUPPLY REEL TABLE UNIT	1						
61(1)	VXR0237	TAKE UP REEL TABLE UNIT	1						
62(1)	VXS0131	EARTH PLATE UNIT	1						
63(1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1						
64(1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1						
70(1)	VEG1207	CYLINDER UNIT	1						
71(1)	VXP1537	UPPER CYLINDER UNIT	1						
72(1)	VMA9201	CYLINDER ANGLE	1						
80(1)	VML2680	RELEASE LEVER	1						
81(1)	VMB2013	RELEASE SPRING	1						
B2(1)	XTV26+6F	SCREW	4						
B3(1)	XTV26+4F	SCREW	2						
B4(1)	XTN3+6FFZ	SCREW	1						
B6(1)	VHD0762	SCREW	3						
B7(1)	XTV26+6FZ	SCREW	2						
B8(1)	XTV26+8F	SCREW	3						
B9(1)	XQN2+AJ4	SCREW	2						
B10(1)	VHD0342	SCREW	3						
B11(1)	XTS26+8G	SCREW	1						
N1(1)	VHN0192	NUT	3						
N2(1)	VHN0193	NUT	1						
W1(1)	VMX2208	WASHER	3						
W2(1)	XWGV26D5G	WASHER	1						

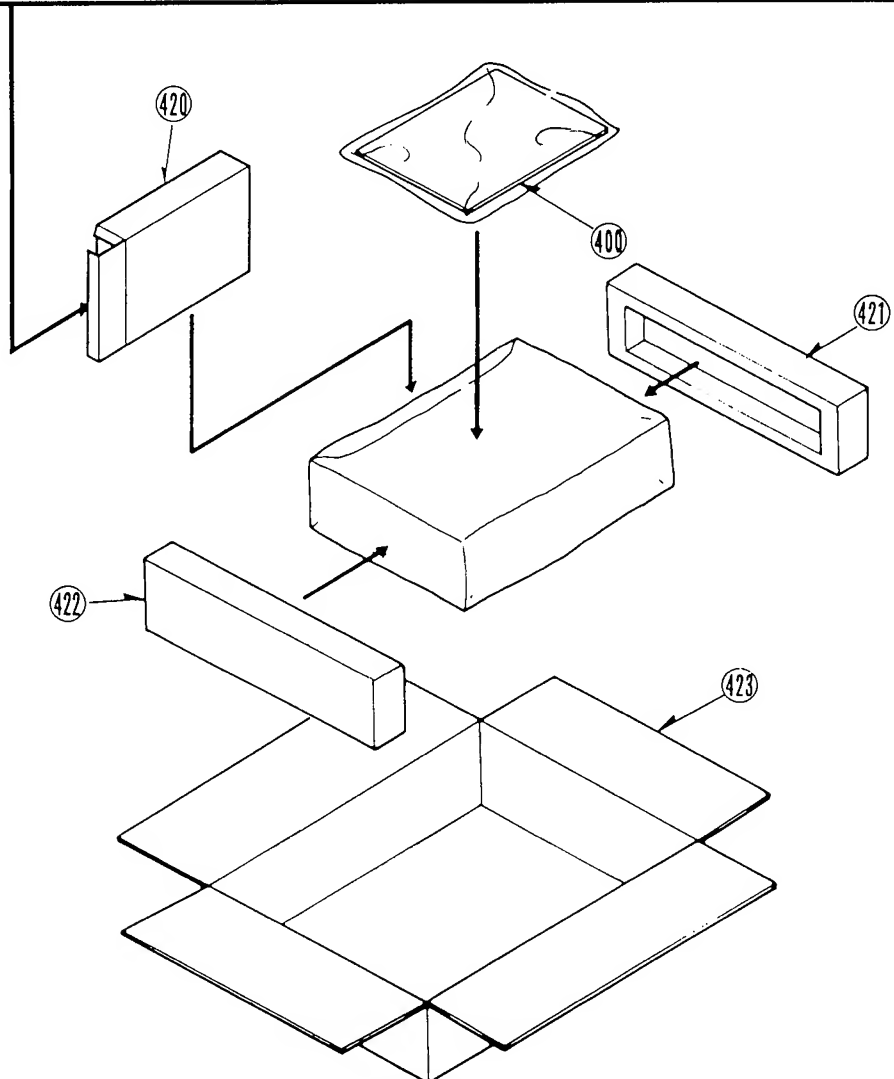
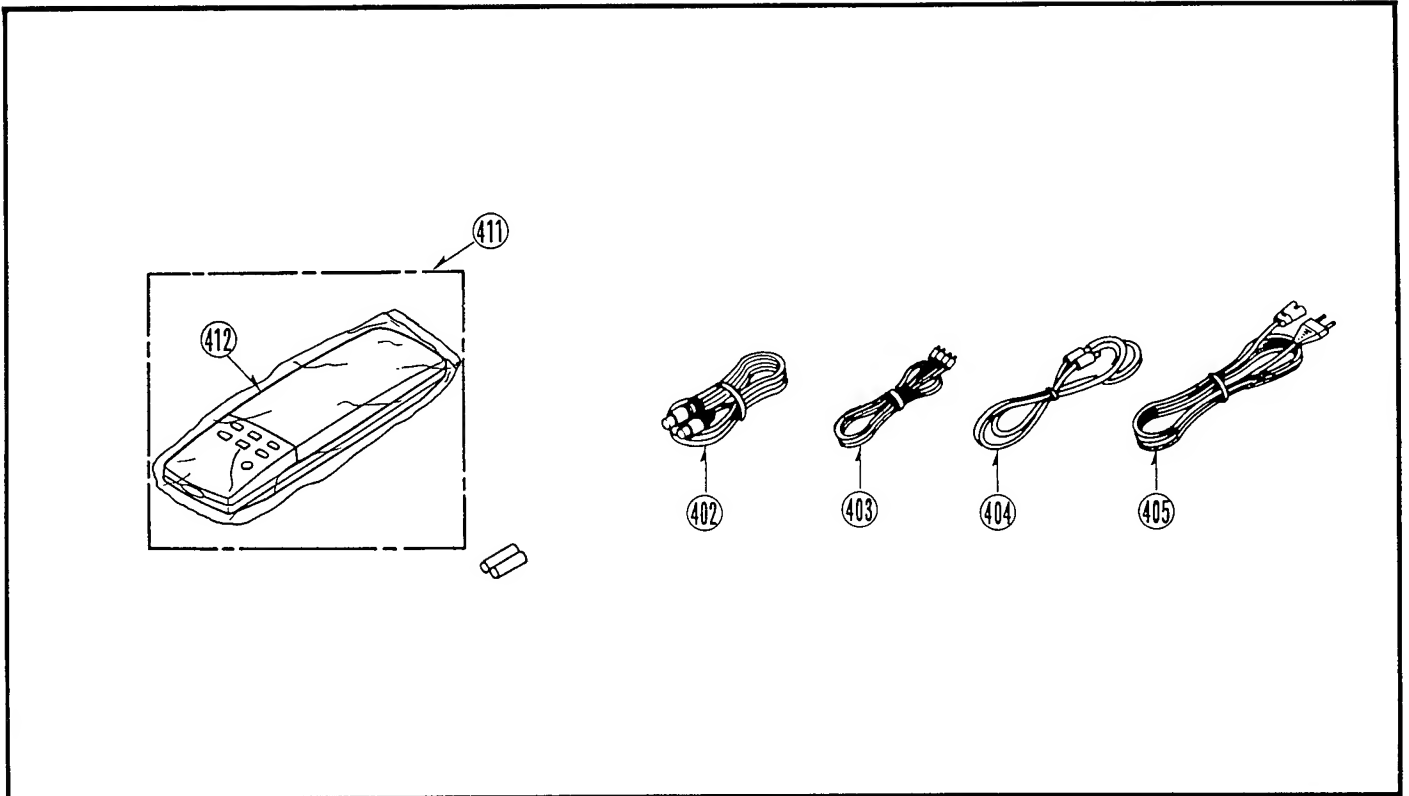
2. CHASSIS PARTS SECTION (2)



Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
303(4)	VGM1155	TOP PANEL	1	
304(4)	VHD0165	TOP PANEL SCREW	4	
305(4)	VYP5850	FRONT PANEL (1) UNIT	1	
306(4)	VGU5246	DOOR OPEN BUTTON	1	
307(4)	VGU4498	DOOR LOCK LEVER	1	
308(4)	VGU4829	LOCK LEVER HOLDER	1	
309(4)	VMB1963	LOCK LEVER SPRING	1	
310(4)	VGU5846	SHUTTLE KNOB	1	
311(4)	VXU1088	JOG KNOB UNIT	1	
315(4)	VYF2160	SUPPORT PANEL UNIT	1	
316(4)	VES0712	DOOR PANEL SW	1	
317(4)	VGU0466	PANEL LIGHT	1	
318(4)	VKF1852	DOOR SUPPORT PANEL	1	
319(4)	VHG0657	DOOR CUSHION RUBBER	2	
320(4)	VXU1101	DOOR GEAR UNIT	1	
321(4)	VYC0654	DOOR ALUMINUM UNIT	1	
322(4)	VYP4016	DOOR PANEL UNIT	1	
323(4)	VMC0522	DOOR EARTH SPRING	1	
324(4)	VMP2314	DOOR PANEL ANGLE	1	
327(4)	VKU0357	BOTTOM PLATE	1	
328(4)	VHD0059	BOTTOM PLATE SCREW	1	
330(4)	VGQ1421	EDIT 5P CAP	1	
331(4)	VKF1314	FRONT JACK COVER	1	
336(4)	VKA0193	FOOT	2	
339(4)	VJS2985	AC INLET	1	
340(4)	VXA3571	POWER SHIELD PLATE(MAIN) U.	1	
341(4)	VSC4224	POWER SHIELD PLATE (TOP)	1	
342(4)	VSC2237	POWER SHIELD PLATE (BOTTOM)	1	
344(4)	VSC2960	HEAT SINK (P)	1	
346(4)	VGQ1615	IC HOLDER	1	
347(4)	VMZ1455	INSULATION SHEET	1	
348(4)	VMC0357	TR. HOLDER SPRING	2	
349(4)	VMZ2381	BARRIER	1	
350(4)	VMZ0429	FUSE COVER	1	
351(4)	VMP2334	TOP HOLDER ANGLE (FRONT-R)	1	
352(4)	VMP2335	TOP HOLDER ANGLE (REAR-R)	1	
353(4)	VMP4683	TOP HOLDER ANGLE (REAR-L)	1	
354(4)	VMP4682	TOP HOLDER ANGLE (FRONT-L)	1	
360(4)	VHD0168	CHASSIS SCREW	3	
361(4)	VHD0418	MAIN SCREW	1	
362(4)	VJF0102	WIRE SADDLE	1	
364(4)	VMC0523	FRONT JACK EARTH PLATE	1	
365(4)	VJH0820	RF ANT TERMINAL PLATE	1	
367(4)	VJF0974	FLEXIBLE CARD CLIP	1	
368(4)	VKF2127	BLINDER PANEL	1	
369(4)	VMB2521	SPRING	1	
370(4)	VMZ1708	FRONT BARRIER	1	
372(4)	VGU6899	RESET BUTTON	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
400(5)	VQT6096	OPERATING INSTRUCTIONS	1	<1>
402(5)	VJA0147	ANT CABLE	1	
403(5)	VJA0231	AUDIO CABLE	1	
404(5)	VJA0658	S-VIDEO 4P CABLE	1	
405(5)	VJA0488	AC CORD	1	<1>
411(5)	VEQ1711	REMOTE CONTROLLER	1	
412(5)	VKF2115	SLIDE DOOR PANEL	1	
420(5)	VPK0825	ACCESSORIES PACKING	1	
421(5)	VPN3400	CUSHION (R)	1	
422(5)	VPN3401	CUSHION (L)	1	
423(5)	VPG7986	PACKING	1	

4. PACKING PARTS SECTION



6-2. ELECTRICAL REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP06A07A	P.C. BOARD W/COMPONENT JOG ENCODER	1	(RTL)-R>		VEP06A07A	P.C. BOARD W/COMPONENT JOG ENCODER		
	VEP01617A	P.C. BOARD W/COMPONENT POWER	1	(RTL)-I>-R>					
	VEP00T87A	P.C. BOARD W/COMPONENT MECHA CONNECTION	1	(RTL)-R>	LD6701-03	LN38GCPPV	LED	3	
	VEP03B70A	P.C. BOARD W/COMPONENT Y/C PACK	1	(RTL)-R>	P6701	VJS2621	CONNECTOR (FEMALE)	1	
	VEP03B48C	P.C. BOARD W/COMPONENT SUB VIDEO	1	(RTL)-R>					
	VEP03B60A	P.C. BOARD W/COMPONENT MEMORY PACK	1	(RTL)-R>	R6701-03	ERDS2TJ221	C.RESISTOR 1/4W 220	3	
	VEP03B98A	P.C. BOARD W/COMPONENT VIDEO CONTROL	1	(RTL)-R>					
	VEP04508A	P.C. BOARD W/COMPONENT FRONT JACK	1	(RTL)-R>	SW6701	EVQ11407K	SWITCH	1	R>
	VEP05202H	P.C. BOARD W/COMPONENT HEAD AMP	1	(RTL)-R>	VSQ0798	VSQ0798	JOG ENCODER	1	
	VEP06A05A	P.C. BOARD W/COMPONENT MAIN	1	(RTL)-R>			MISCELLANEOUS		
	VEP00X63A	P.C. BOARD W/COMPONENT M. M	1	(RTL)-R>		VMX1652	LED SACER		
	VEP02439A	P.C. BOARD W/COMPONENT SUB SERVO	1	(RTL)-R>					
	VEP03B68A	P.C. BOARD W/COMPONENT RF AMP	1	(RTL)-R>		VEP01617A	P.C. BOARD W/COMPONENT POWER		
	VEP03B69A	P.C. BOARD W/COMPONENT I/O	1	(RTL)-R>					
	VEP04506A	P.C. BOARD W/COMPONENT AUDIO 2	1	(RTL)-R>					
	VEP04353B	P.C. BOARD W/COMPONENT FM AUDIO PACK	1	(RTL)-R>	C1001	ECQU2A683MH	P.CAPACITOR 100V 0.068U	1	<I>
	VEP04507A	P.C. BOARD W/COMPONENT AUDIO 1	1	(RTL)-R>	C1002	VCK0043	FILTER	1	<I>
	VEP06A06A	P.C. BOARD W/COMPONENT FRONT VR	1	(RTL)-R>	C1004	VCK0043	FILTER	1	<I>
	VEP00V50A	P.C. BOARD W/COMPONENT HP/MIC	1	(RTL)-R>	C1008	VCK0046	C.CAPACITOR	1	<I>
	VEP07800A	P.C. BOARD W/COMPONENT TIMER	1	(RTL)-R>	C1009	ECEC2VA121	E.CAPACITOR 350V 120U	1	
		<i>sub</i> VEP00711A : Y/C board 1	1		C1010	ECEA1VFE101	E.CAPACITOR 35V 100U	1	
					C1011	ECKF1H471KB	C.CAPACITOR 50V 470P	1	
					C1012	ECEA1HFE560	E.CAPACITOR 50V 56U	1	
					C1014	ECA1EXLV220	E.CAPACITOR 25V 22U	1	
					C1017	ECEA1AGE221	E.CAPACITOR 10V 220U	1	
					C1019	ECA0JFQ331	E.CAPACITOR 6.3V 330U	1	
					C1020	ECEA1AGE221	E.CAPACITOR 10V 220U	1	
					C1021	ECCD2H101J	C.CAPACITOR 500V 100P	1	
					C1023	ECEA1CFE331	E.CAPACITOR 16V 330U	1	
					C1024	ECCD2H101J	C.CAPACITOR 500V 100P	1	
					C1025	ECEA1HFE560	E.CAPACITOR 50V 56U	1	
					C1029	ECQB1H333JF	P.CAPACITOR 50V 0.033U	1	
					C1030	VCK0106K222	C.CAPACITOR	1	
					D1001	ERZV07D471	DIODE	1	<I>-R>
					D1002-05	EM1B	DIODE	4	<I>-R>
					D1006	ERA22-02	DIODE	1	R>
					D1007	MA165VT	DIODE	1	R>
					D1008	MA723VT	DIODE	1	R>
					D1009-11	MA165VT	DIODE	3	R>
					D1012	F5KQ40	DIODE	1	R>
					D1013	11EQS04	DIODE	1	R>
					D1014	FMB-616R	DIODE	1	R>
					D1015	ERA22-02	DIODE	1	R>
					D1018	MA4056H	DIODE	1	R>
					F1001	XBA1C16NU100	FUSE	1	<I>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1001	STRS6705	IC	1	
L1001	ELF18D270A	COIL 27UH	1	<I>
L1002-04	VLQ0611K220	COIL 22UH	3	
L1005	VLQ0599J101	COIL 100UH	1	
L1006,07	VLP0074	COIL	2	
P1001	VJS2985	CONNECTOR	1	<I>
P1002	VJP3092	CONNECTOR (MALE)	1	
Q1001	PC817AB	TRANSISTOR	1	<R>
Q1002,03	2SD636-R	TRANSISTOR	2	<R>
Q1004	2SB641-R	TRANSISTOR	1	<R>
Q1006	2SD637-R	TRANSISTOR	1	<R>
R1001	ERC12ZGK685	S.RESISTOR 1/2W 6.8M	1	<I>
R1002	VSF0055	FUSE	1	<I>
R1003	ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
R1004	ERDS2FJ682	C.RESISTOR 1/4W 6.8K	1	
R1005	ERDS2FJ153	C.RESISTOR 1/4W 15K	1	
R1006	ERDS2FJ330	C.RESISTOR 1/4W 33	1	
R1007	ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R1008	ERX1SJR68	M.RESISTOR 1W 0.68	1	
R1009	ERDS2FJ681	C.RESISTOR 1/4W 680	1	
R1010	ERDS2FJ151	C.RESISTOR 1/4W 150	1	
R1011	ERDS2FJ331	C.RESISTOR 1/4W 330	1	
R1012	ERDS2FJ683	C.RESISTOR 1/4W 68K	1	
R1013	ERDS2FJ473	C.RESISTOR 1/4W 47K	1	
R1014	ERDS2FJ471	C.RESISTOR 1/4W 470	1	
R1017	ERDS2FJ471	C.RESISTOR 1/4W 470	1	
R1018	ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1020	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1021	ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1022	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R1023	ERDS2TJ563	C.RESISTOR 1/4W 56K	1	
R1024	EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1025,26	EROS2CKG8201	M.RESISTOR 1/4W 8.2K	2	
T1001	VLT0748	TRANSFORMER	1	<I>
		MISCELLANEOUS		
	VJF0318	FUSE HOLDER	2	<I>
	VMC0811	SPRING	1	
	VMZ0965	CAPACITOR COVER	3	<I>
	VMZ1356	CAPACITOR COVER	1	<I>
	VMZ1686	CAPACITOR COVER	1	<I>
	VSC4096	HEAT SINK	1	
	VMZ1835	SHIELD COVER	1	<I>
	VMZ0429	COVER	1	<I>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP03B70A	P.C.BOARD W/COMPONENT		
	VEP03B48C	P.C.BOARD W/COMPONENT SUB VIDEO		ON VEP03B70A
	VEP03B60A	P.C.BOARD W/COMPONENT MEMORY PACK		ON VEP03B70A
C3702	ECUX1C333KBV	C.CAPACITOR CH 16V 0.033U	1	
C3703	ECUX1C473ZV	C.CAPACITOR CH 16V 0.047U	1	
C3704	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C3705	ECUX1H821JCV	C.CAPACITOR CH 50V 820P	1	
C3706	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C3708	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
C3709-11	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	3	
C3712	ECUX1H150JCV	C.CAPACITOR CH 25V 1U	1	
C3713	ECUX1H221GCV	C.CAPACITOR CH 50V 220P	1	
C3714	ECUX1H471GCV	C.CAPACITOR CH 50V 470P	1	
C3715-17	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	3	
C30003	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C30004	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30005	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C30006	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C30007	ECUX1E223KBV	C.CAPACITOR CH 25V 0.023U	1	
C30008	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C30009	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C30010	ECEV1CA100	E.CAPACITOR CH 16V 10U	1	
C30011	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30012	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C30013	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30014	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C30015	ECEV1EA4R7	E.CAPACITOR CH 25V 4.7U	1	
C30019	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30020	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C30025	ECUM1C684KBM	C.CAPACITOR CH 16V 0.68U	1	
C30026	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30027	ECEV1HA010	E.CAPACITOR 50V 1U	1	
C30028	ECUX1H560GCV	C.CAPACITOR CH 50V 56P	1	
C30030	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30031	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C30032	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C30033	ECEV1EA4R7	E.CAPACITOR CH 25V 4.7U	1	
C30034	ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C30036	ECUX1H080DCV	C.CAPACITOR CH 50V 8P	1	
C30037	ECEA1HKAR22	E.CAPACITOR 50V 0.22U	1	
C30038	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C30039	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C30040	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C30041,42	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	2	
C30045	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C30046	ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C30047	ECUX1H681KBV	C.CAPACITOR CH 50V 680P	1	
C30048,49	ECUX1C473KBV	C.CAPACITOR CH 16V 0.047U	2	
C30050,51	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	2	
C30052-54	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	3	
C30055	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C30058	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30059	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C30060	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C30061	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30062	ECEV1CA220	E.CAPACITOR CH 16V 22U	1	
C30063	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	1	
C30067	ECUX1H150JCV	C.CAPACITOR CH 25V 1U	1	
C30068	ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C30069	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C30070	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C30071,72	ECUX1H103ZV	C.CAPACITOR CH 50V 0.01U	2	
C33001	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C33002	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C33003	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C33004	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C33005	ECUX1C104ZV	C.CAPACITOR CH 16V 0.1U	1	
C33006	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C33007	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		FL33021,22	VLF1016A101	FILTER	2	
C33008	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1		FL33023	VLF1016A103	FILTER	1	
C33009	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		FL33024	VLF1016A101	FILTER	1	
C33010	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1						
C33011	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1						
C33012	ECEAOJKA101	E. CAPACITOR 6.3V 100U	1		IC3701	AN3250FAP	IC	1	↔
C33013,14	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2		IC30001	M52373AFP	IC	1	↔
C33015	ECUX1H222KBV	C. CAPACITOR CH 50V 2200P	1		IC30002	TC4W66F	IC	1	↔
C33016	ECEVOJA470	E. CAPACITOR 6.3V 47U	1		IC33001	ST24C01CM1	IC	1	↔
C33017	ECEV1CA100	E. CAPACITOR CH 16V 10U	1		IC33002	SC371024BFU	IC	1	↔
C33018	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		IC33003	MN6715	IC	1	↔
C33019	ECEVOJA470	E. CAPACITOR 6.3V 47U	1		IC33004	SC371026FU	IC	1	↔
C33020	ECEV1CA100	E. CAPACITOR CH 16V 10U	1		IC33005	L7A1368	IC	1	↔
C33021	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		IC33006	MN53040VRX2	IC	1	↔
C33022	ECEVOJA470	E. CAPACITOR 6.3V 47U	1		IC33010	NN4792FBP	IC	1	↔
C33023-26	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4		IC33011	TC7S04F	IC	1	↔
C33027	ECEV1HA010	E. CAPACITOR 50V 1U	1		IC33012	TC7W02F	IC	1	↔
C33028	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		IC33014	UPD4538BG	IC	1	↔
C33029	ECEVOJA470	E. CAPACITOR 6.3V 47U	1		IC33015	D74HC4053G	IC	1	↔
C33030	ECEV1CA100	E. CAPACITOR CH 16V 10U	1		IC34001	UPD42280G3E2	IC	1	↔
C33031	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		IC34002	UPD42280G3E2	IC	1	↔
C33032	ECEVOJA470	E. CAPACITOR 6.3V 47U	1						
C33033	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1						
C33034	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1						
C33035	ECEVOJA470	E. CAPACITOR 6.3V 47U	1		K33001	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
C33036	ECEV1CA100	E. CAPACITOR CH 16V 10U	1						
C33037	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1						
C33039-41	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3						
C33043,44	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	2						
C33045	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1		L30001	VLQ0599J680	COIL 68UH	1	
C33046-49	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4		L30005	VLQ0163G150	COIL	1	
C33054-57	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	4		L30006	VLQ0599J680	COIL 68UH	1	
C33058,59	ECUX1H680JCV	C. CAPACITOR CH 50V 68P	2		L30007	VLQ0196	COIL	1	
C33060	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1		L30008	VLQ0163J680	COIL 68UH	1	
C33069-71	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	3		L30009	VLQ0599J391	COIL 390UH	1	
C33072	ECEV1CA100	E. CAPACITOR CH 16V 10U	1		L30010	VLQ0599J471	COIL 470UH	1	
C33073	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1		L30011	VLQ0599J680	COIL 68UH	1	
C33074	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1		L30014	VLQ0599J680	COIL 68UH	1	
C33075,76	ECKF1H562KB	C. CAPACITOR 50V 5600P	2		L30015	ELJFA220KB	COIL	1	
C33077	ECCF1H100DC	C. CAPACITOR 50V 10P	1		L30016	VLQ0163J101	COIL 100UH	1	
C34001	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L30017	VLQ0163J151	COIL 150UH	1	
C34002	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L30018	VLQ0196	COIL	1	
C34003	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33001-04	VLQ0192	COIL	4	
C34004	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33005-09	VLQ0196	COIL	5	
C34005	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33010	VLQ0197	COIL	1	
C34006	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33011	VLQ0156	COIL	1	
C34007	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33012	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
C34008	ECUX1H680JCV	C. CAPACITOR 50V 68P	1		L33013	VLQ0197	COIL	1	
C34009	ECUX1C104ZFV	C. CAPACITOR 16V 100U	1		L33014	VLQ0146	COIL	1	
C34010	ECUX1C104ZFV	C. CAPACITOR 16V 100U	1						
C34011	ECUX1C104ZFV	C. CAPACITOR 16V 100U	1						
C34012	ECUX1C104ZFV	C. CAPACITOR 16V 100U	1						
D3701	MA141K	DIODE	1	<R>	PP3701	VJP3126B024	CONNECTOR (MALE) 24P	1	
D30003	MA141K	DIODE	1	<R>	PP34001	VJP3126D030	CONNECTOR	1	
D30005	MA141WA	DIODE	1	<R>					
D30006	MA141K	DIODE	1	<R>					
FL30001	ELB4R057	FILTER	1		PS30001	VJS3042F016W	CONNECTOR (FEMALE) 16P	1	
FL30002	ELB3H016	FILTER	1		PS30002	VJS3042F020W	CONNECTOR	1	
FL33001	VLF1016A103	FILTER	1		PS30003	VJS2961A024	CONNECTOR (FEMALE) 24P	1	
FL33002,03	VLF1016A101	FILTER	2		PS30004	VJS3042B006W	CONNECTOR (FEMALE) 6P	1	
FL33004	VLF1016A470	FILTER	1		PS33001	VJS2961A030	CONNECTOR (FEMALE) 30P	1	
FL33005-08	VLF1016A103	FILTER	4						
FL33009	VLF1016A101	FILTER	1						
FL33010	VLF1016A103	FILTER	1		Q3703,04	2SB1218	TRANSISTOR	2	<R>
FL33011	VLF1016A470	FILTER	1		Q3705	XN1501	TRANSISTOR	1	<R>
FL33012	VLF1016A103	FILTER	1		Q30001	2SB1218	TRANSISTOR	1	<R>
FL33013	VLF1016A470	FILTER	1		Q30002	2SA1532	TRANSISTOR	1	<R>
FL33015-18	VLF1016A470	FILTER	4		Q30004	2SC3930	TRANSISTOR	1	<R>
FL33020	VLF1016A103	FILTER	1		Q30005-08	2SD1819	TRANSISTOR	4	<R>
					Q30009	2SC3930	TRANSISTOR	1	<R>
					Q30010,11	2SD1819	TRANSISTOR	2	<R>
					Q30012	2SC3930	TRANSISTOR	1	<R>
					Q30013	2SA1532	TRANSISTOR	1	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
Q30015,16	2SB1218	TRANSISTOR	2	<R>
Q30017	2SD1819	TRANSISTOR	1	<R>
Q33001	2SD1819	TRANSISTOR	1	<R>
Q33002	2SA1532	TRANSISTOR	1	<R>
Q33003-07	2SB1218	TRANSISTOR	5	<R>
QR3701	UN5213	TRANSISTOR-RESISTOR	1	<R>
QR30002-04	UN5213	TRANSISTOR-RESISTOR	3	<R>
QR30005	UN5212	TRANSISTOR-RESISTOR	1	<R>
QR30006,07	UN5213	TRANSISTOR-RESISTOR	2	<R>
QR33003	UN5213	TRANSISTOR-RESISTOR	1	<R>
QR33004,05	UN5113	TRANSISTOR-RESISTOR	2	<R>
QR33008	XN1213	TRANSISTOR-RESISTOR	1	<R>
QR33009-11	UN5113	TRANSISTOR-RESISTOR	3	<R>
R3703	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3704	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3706	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3708	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3709	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3710	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R3711	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3712	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R3713	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3714,15	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	2	
R3716	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R3717	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3718	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3719	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R3720	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3721	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3722	VRE0071E122	M.RESISTOR CH 1/10W 1.2K	1	
R3723	VRE0071E152	M.RESISTOR CH 1/10W 1.5K	1	
R3724	VRE0071E391	M.RESISTOR CH 1/10W 390	1	
R30001	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R30002	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R30003	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R30004	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30005	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R30006	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R30007	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R30008	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R30018	VRE0071E561	M.RESISTOR CH 1/10W 560	1	
R30019	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R30020-22	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	3	
R30023	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R30024	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R30025	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R30026	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30027,28	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R30029	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R30030	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R30031	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30032	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30033	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R30034	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R30035	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R30036,37	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R30038	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R30039	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R30040	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R30041	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R30042	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R30043	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30044	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R30048	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R30049	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R30050	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R30052	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R30053	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R30054	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R30055	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R30056	ERJ3GEYJ824	M.RESISTOR CH 1/16W 820K	1	
R30060	ERJ3GEYK395	M.RESISTOR CH 1/16W 39M	1	
R30061	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R30062	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R30063	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R30064	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R30065	ERJ3GEYJ113	M.RESISTOR CH 1/16W 11K	1	
R30066	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R30067	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R30068	ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R30069	ERJ3GEYK225	M.RESISTOR CH 1/16W 22M	1	
R30070	ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R30071	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R30072	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R30073	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R30074	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R30075	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R30076	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R33001-13	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	13	
R33014	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1	
R33015-18	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R33019	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R33020-23	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R33024	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R33025	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R33026-34	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	9	
R33035	ERJ3GEYJ912	M.RESISTOR CH 1/16W 9.1K	1	
R33036	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R33037,38	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	2	
R33039	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R33040	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R33041	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33042-46	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	5	
R33047	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R33048	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R33049	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R33050	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R33051-54	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R33055	ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R33056	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R33057,58	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R33059	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R33060	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R33061	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R33062	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33063	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R33064	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R33065	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R33066	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R33067	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33068	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R33069	ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R33070	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R33071	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33072	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R33073	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R33074,75	ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R33076	ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R33077	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R33078	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R33079	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R33096	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R33109	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R33111	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R33112	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R33113	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R33114	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R33118	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R33124	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33125	ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R33126,27	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R33129	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R33130	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R33131	ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R33132	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R33133	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R33134	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R33136,37	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R34001	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34002	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34003	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34004	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34005	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34006	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34007	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34008	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R34009	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34010	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34011	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34012	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34013	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34014	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34015	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R34016	ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
VR30002	EVM7JGA00B24	V.RESISTOR 20K	1	
VR30003,04	EVM7JGA00B14	V.RESISTOR 10K	2	
VR30005	EVMEGSA00B14	V.RESISTOR 10K	1	
VR30006	EVMEGSA00B53	V.RESISTOR 5K	1	
X30001	VSX0658	CRYSTAL OSCILLATOR	1	<R>
		MISCELLANEOUS		
	VXA5305	Y/C SHIELD CASE U	1	
	XTV3+6F	SCREW	3	
	VSC4097	Y/C SHIELD CASE (A)	1	
	VMZ2366	Y/C SHIELD BARRIER	1	
	VMX2372	SPACER	1	
	VLPO107	FERRITE BEADS	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP03B98A	P.C. BOARD W/COMPONENT VIDEO CONTROL		
C6003	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6011	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C6012,13	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C6014,15	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6016	ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C6017	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6018	ECQB1H473JF	P.CAPACITOR 50V 0.047U	1	
C6019	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6020	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6021	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6022	ECQB1H683JF	P.CAPACITOR 50V 0.068U	1	
IC6002	M34225M15375	IC	1	<R>
IC6005	RH5VL44AA	IC	1	<R>
IC6006	UPD4538BG	IC	1	<R>
L6001	VLQ0599J680	COIL 68UH	1	
L6022	VLQ0599J680	COIL 68UH	1	
P6001	VJP3076	CONNECTOR	1	
P6002	VJP1233T	CONNECTOR (MALE) 6P	1	
P6003	VJP3529	CONNECTOR	1	
Q6001	XN1501	TRANSISTOR	1	<R>
QR6001	MUN2211	TRANSISTOR	1	<R>
QR6002	XN1213	TRANSISTOR-RESISTOR	1	<R>
QR6003,04	MUN2113	TRANSISTOR	2	<R>
QR6005	UN2115	TRANSISTOR-RESISTOR	1	<R>
QR6006	XN1213	TRANSISTOR-RESISTOR	1	<R>
R6007-10	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	4	
R6011-13	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R6014	VRE0034E104	M.RESISTOR CH 1/10W 100K	1	
R6015	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6016	VRE0034E104	M.RESISTOR CH 1/10W 100K	1	
R6017,18	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R6019,20	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	2	
R6021	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6022	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R6023-25	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R6026	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6027	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
X6001	VSX0258	CRYSTAL OSCILLATOR	1	<R>
		MISCELLANEOUS		
	VSC2911	SHIELD CASE (UPPER)	1	
	VSC3917	SHIELD CASE (MAIN)	1	
	VMP4950	EARTH ANGLE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP04508A	P. C. BOARD W/COMPONENT FRONT JACK		
J6801	VJJ0215	RCA PIN JACK	1	
J6803	VJJ0209	S INPUT TERMINAL	1	
L6801	VLP0083	COIL	1	
P6801	VJP2760	CONNECTOR (MALE)	1	
R6801	ERDS2TJ750	C.RESISTOR 1/4W 75	1	
	VSC2932	MISCELLANEOUS SHIELD COVER	1	
	VEP05202H	P. C. BOARD W/COMPONENT HEAD AMP		
C501	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C502	ECEAOJK4470	E.CAPACITOR 6.3V 47U	1	
C503	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C504	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C505,06	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C507,08	ECUM1H182KBN	C.CAPACITOR CH 50V 1800P	2	
C509	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C510-16	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	7	
C517	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C518	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C519	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C520	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C522	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C523,24	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	2	
C525	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C527,28	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C531,32	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C533	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C534-36	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C551	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C553,54	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C555	ECEAOJPK221	E.CAPACITOR 6.3V 220U	1	
C556,57	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C558	ECEAOJPK470	E.CAPACITOR 6.3V 47U	1	
C559	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C560,61	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	2	
C562,63	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C564	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C565	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C566	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C567	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C568	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C569	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C570	ECUM1H121JCN	C.CAPACITOR CH 50V 120P	1	
C572	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C573	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C574,75	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC501	AN3343SC	IC	1	<R>
IC551	BA7745FS	IC	1	<R>
L501	VLQ0599J680	COIL 68UH	1	
L503,04	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L505,06	VLP0145	COIL	2	
L507,08	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L551-53	VLQ0599J680	COIL 68UH	3	
L554	VLQ0599J6R8	COIL	1	
P501	VJS3537B014G	CONNECTOR	1	
P502	VJS3192T	CONNECTOR (FEMALE)	1	
P551	VJS3537B009G	CONNECTOR	1	
Q551	MSD601-R	TRANSISTOR	1	<R>
Q552	MSB709-R	TRANSISTOR	1	<R>
R502	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R503	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R504	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R505	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R506	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R507	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R508	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R509	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R510	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R511	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R512	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R513,14	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R515,16	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	2	
R517	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R518	VRE0034E100	M.RESISTOR CH 1/10W 10	1	
R519	ERJ6GEYJ823	M.RESISTOR CH 1/10W 82K	1	
R552	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R553	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R554	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R557	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R558	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R559,60	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R561	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R562	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R563	VRE0034E220	M.RESISTOR CH 1/10W 22	1	
R564	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R566	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R567	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R568	ERJ6GEYJ270	M.RESISTOR CH 1/10W 27	1	
R569	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R570	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R571,72	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	2	
R573	ERJ6GEYJ270	M.RESISTOR CH 1/10W 27	1	
R574	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R575	VRE0034E202	M.RESISTOR CH 1/10W 2K	1	
R576	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
		MISCELLANEOUS		
	VSC3714	SHIELD COVER (UPPER)	1	
	VSC3478	SHIELD CASE (MAIN)	1	
	VSC3715	SHIELD COVER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3063	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C4006	ECQB1H393JF	P.CAPACITOR 50V 0.039U	1	
C3064	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		C4007	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3065,66	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C4008	ECUM1H822KBN	C.CAPACITOR CH 50V 8200P	1	
C3101	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1		C4009	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C3102	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1		C4010	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3103	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1		C4011	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3104	ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1		C4012	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3105	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1		C4013	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3106	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4014	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3107	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1		C4015	ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1	
C3108	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1		C4016	ECQB1H122JF	P.CAPACITOR 50V 1200P	1	
C3109	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4017	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C3110	ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1		C4018	ECSF1CE106	T.CAPACITOR 16V 10U	1	
C3111	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1		C4019	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3112	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		C4020	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1	
C3113	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1		C4021	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C3114	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1		C4022	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3115-17	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		C4023	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3118-20	ECUM1H390JCN	C.CAPACITOR CH 50V 39P	3		C4024-29	ECEA1CKA100	E.CAPACITOR 16V 10U	6	
C3121	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4030	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3122	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1		C4031	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3123	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		C4032	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3124-27	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4		C4033	ECQB1H823JF	P.CAPACITOR 50V 0.082U	1	
C3128	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		C4034	ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C3129	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4501	ECEA1CU221	E.CAPACITOR 16V 220U	1	
C3130,31	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	2		C4502	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3133,34	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C4503	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3135	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		C4504,05	ECEA1HKA010	E.CAPACITOR 50V 1U	2	
C3136	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1		C4506,07	ECEA1CKA101	E.CAPACITOR 16V 100U	2	
C3137	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1		C4508	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3138	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1		C4509,10	ECEA1CKA101	E.CAPACITOR 16V 100U	2	
C3139	ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1		C4511	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1	
C3141	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1		C4512-14	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	3	
C3142	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4515,16	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C3505	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		C4517	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3506	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4801	ECEA1CU471	E.CAPACITOR 16V 470U	1	
C3508	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1		C4802,03	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C3509	ECQB1H332JF	P.CAPACITOR 50V 3300P	1		C4804	ECCD2H181J	C.CAPACITOR 500V 180P	1	
C3510	ECEA1HKA010	E.CAPACITOR 50V 1U	1		C4805	ECOP1222JZ	P.CAPACITOR 100V 2200P	1	
C3511	ECEA1CKA101	E.CAPACITOR 16V 100U	1		C4806	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3512	ECQB1H562GZ	P.CAPACITOR 50V 5600P	1		C4807	ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C3513	ECQB1H272JF	P.CAPACITOR 50V 0.22U	1		C4808	ECEA1CKA330	E.CAPACITOR 16V 33U	1	
C3514	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4809	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C3515	ECEA1HKA010	E.CAPACITOR 50V 1U	1		C4810,11	ECEA1HKA010	E.CAPACITOR 50V 1U	2	
C3516	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1		C4812	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C3601	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1		C4813	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3602-05	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	4		C4814	ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C3606	ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1		C6002	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3607-09	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		C6003	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C3610	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1		C6005,06	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C3611	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1		C6007	ECEA1HKA4R7	E.CAPACITOR 50V 4.7U	1	
C3612	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1		C6008	ECEAOJKA220	E.CAPACITOR 6.3V 220U	1	
C3613-15	ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	3		C6009	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3616	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1		C6010	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3617	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1		C6011	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3618	ECEAOJKN470	E.CAPACITOR 6.3V 47U	1		C6012	ECAOJM471	E.CAPACITOR 6.3V 470U	1	
C3901	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C6013	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C3902	ECEAOJKA220	E.CAPACITOR 6.3V 220U	1		C6014,15	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3903,04	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C6016	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C3905,06	ECEAOJKA220	E.CAPACITOR 6.3V 220U	2		C6017,18	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	2	
C3907,08	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C6019,20	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	2	
C3909	ECEAOJKA220	E.CAPACITOR 6.3V 220U	1		C6021	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3910,11	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C6022,23	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C3912	ECEAOJKA220	E.CAPACITOR 6.3V 220U	1		C6024	ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C3913	ECEA1CKA470	E.CAPACITOR 16V 47U	1		C6025	ECAOJF560	E.CAPACITOR 6.3V 56U	1	
C3914-17	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	4		C6026	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C3918	ECEAOJKN220	E.CAPACITOR 6.3V 22U	1		C6028	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3919	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C6029	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3920	ECEAOJKN220	E.CAPACITOR 6.3V 22U	1		C6030	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C3921	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1		C6031	ECEAOJKA101	E.CAPACITOR 6.3V 100U	1	
C4001	ECEA1CU221	E.CAPACITOR 16V 220U	1		C6033	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C4002	ECEA1CKA330	E.CAPACITOR 16V 33U	1		C6035	ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C4003	ECEA1CKA470	E.CAPACITOR 16V 47U	1		C6039	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4004	ECEA1HKA010	E.CAPACITOR 50V 1U	1		C6041	ECEAOJKA470	E.CAPACITOR 6.3V 47U	1	
C4005	ECQB1H183JF	P.CAPACITOR 50V 0.018U	1		C6042,43	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6044	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6046	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6048,49	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C6050	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C6051	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C6052	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6053	ECEA1AGE101	E.CAPACITOR 10V 100U	1	
C6054-58	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	5	
C6129	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6132	ECEA0.KA470	E.CAPACITOR 6.3V 47U	1	
C6136	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6905	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6907	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C6908	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C6910	ECKF1H103ZF	C.CAPACITOR 50V 0.01U	1	
C6911	ECEA0.KA220	E.CAPACITOR 6.3V 220U	1	
C6912	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6913	ECWM1H472JZ	P.CAPACITOR 50V 4700P	1	
C6914	ECWM1H333JZ	P.CAPACITOR 50V 0.033U	1	
C7901	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7903	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C7904	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C7908	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7909	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7910	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7911	ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C7912	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7913	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C7914	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7915	ECEA0.KA101	E.CAPACITOR 6.3V 100U	1	
C7916	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7917	ECUM1H123KBN	C.CAPACITOR CH 50V 0.012U	1	
C7918,19	ECEA0.KA220	E.CAPACITOR 6.3V 220U	2	
C7920	ECEA0.KA101	E.CAPACITOR 6.3V 100U	1	
C7921	EECF5R5U104	E.CAPACITOR 5.5V 0.1F	1	
C7922	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C7923	ECEA1HKN4R7	E.CAPACITOR 50V 4.7U	1	
C7924	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C7925,26	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2	
D1	MA704A	DIODE	1	
D401	MA720	DIODE	1	<R>
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D1003	MA723VT	DIODE	1	<R>
D1004	MA165VT	DIODE	1	<R>
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D2003	MA165VT	DIODE	1	<R>
D2005	MA151WK	DIODE	1	<R>
D2007	MA165VT	DIODE	1	<R>
D2501	11ES1	DIODE	1	<R>
D2502,03	MA185	DIODE	2	<R>
D3001,02	MA165VT	DIODE	2	<R>
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D3601	MA151K	DIODE	1	<R>
D3901,02	MA151WK	DIODE	2	<R>
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D6003-07	MA165VT	DIODE	5	<R>
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D6009-11	MA165VT	DIODE	3	<R>
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D6014,15	MA165VT	DIODE	2	<R>
D6016	MA4056-L	DIODE	1	
D6017	11ES1	DIODE	1	<R>
D7901-04	MA165VT	DIODE	4	<R>
D7905	11EQS04	DIODE	1	<R>
D7906	MA4130M	DIODE	1	<R>

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D7907	MA4300M	DIODE	1	<R>
D7908-10	11EQS04	DIODE	3	<R>
D7911-13	MA165VT	DIODE	3	<R>
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FL3001	ELB4R057	FILTER	1	
FL3101	VL F1141	FILTER	1	
FL3601	ELB4R057	FILTER	1	
FL4501	VL F0696	FILTER	1	
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IC401	BA7705K1	IC	1	<R>
IC1001	HA17431PA	IC	1	<R>
IC2003	MC14053BF	IC	1	<R>
IC2501	BA6871BS	IC	1	<R>
IC3001	AN3581S	IC	1	<R>
IC3002	TC7S66F	IC	1	<R>
IC3101	M52083FP	IC	1	<R>
IC3502	AN5421N	IC	1	<R>
IC3601	AN3250FAP	IC	1	<R>
IC3602	MC14577CF	IC	1	
IC3901,02	MC14052BF	IC	2	<R>
IC4001	LA7296	IC	1	<R>
IC4002-05	NJM4558M	IC	4	<R>
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IC4503	UPC78L05J	IC	1	<R>
IC6001	MN6755320H7L	IC	1	<R>
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IC7902,03	NJM4558M	IC	2	<R>
IC7904	MC74HC86F	IC	1	<R>
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K3005,06	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
L401	VLQ0163J101	COIL 100UH	1	
L403	VLQ0163J101	COIL 100UH	1	
L1001	VL P0083	COIL	1	
L2001	VL P0083	COIL	1	
L2002	VLQEL05F101K	COIL 100UH	1	
L2501	ELESE102KA	COIL 1000UH	1	
L3001,02	VLQ0599J680	COIL 68UH	2	
L3005	VLQ0599J330	COIL 33UH	1	
L3006,07	VLQ0599J680	COIL 68UH	2	
L3101	VLQ0599J151	COIL 150UH	1	
L3102	VLQ0599J3R9	COIL 3.9UH	1	
L3103	VLQ0599J4R7	COIL 4.7UH	1	
L3104	VLQ0599J151	COIL 150UH	1	
L3105	VLQ0599J5R6	COIL 5.6UH	1	
L3106	VLQ0599J180	COIL 18UH	1	
L3107	VLQ0599J220	COIL 22UH	1	
L3108	VLQ0599J181	COIL 180UH	1	
L3109	VLQ0599J100	COIL 10UH	1	
L3110	VLQ0599J390	COIL 39UH	1	
L3111	VLQ0599J680	COIL 68UH	1	
L3112	VLQ0599J390	COIL 39UH	1	
L3113	VLQ0599J221	COIL 220UH	1	
L3114	VLQ0599J680	COIL 68UH	1	
L3115	VLQ0599J390	COIL 39UH	1	
L3116	VLQ0599J330	COIL 33UH	1	
L3117	VLQ0599J820	COIL 82UH	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
QR4001	UN2215	TRANSISTOR-RESISTOR	1	<R>
QR4002	MUN2213	TRANSISTOR	1	<R>
QR4003,04	MUN2211	TRANSISTOR	2	<R>
QR4005	MUN2213	TRANSISTOR	1	<R>
QR4006	MUN2213	TRANSISTOR	1	<R>
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QR4010	UN2115	TRANSISTOR-RESISTOR	1	<R>
QR4011	MUN2211	TRANSISTOR	1	<R>
QR4012,13	MUN2213	TRANSISTOR	2	<R>
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QR4503	UN2216	TRANSISTOR-RESISTOR	1	<R>
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R403,04	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	2	
R406	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R407	ERJ6GEYJ112	M.RESISTOR CH 1/10W 1.1K	1	
R408	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R409	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R410	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R411	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R412	ERJ6GEYJ303	M.RESISTOR CH 1/16W 30K	1	
R413	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R414	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R415	ERJ6GEYG163	M.RESISTOR CH 1/10W 16K	1	
R416	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R417	ERJ6GEYJ113	M.RESISTOR CH 1/10W 11K	1	
R418	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R420	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R421	ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R422	ERJ6GEYJ303	M.RESISTOR CH 1/16W 30K	1	
R423	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R424	ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R425	ERJ6GEYG183	M.RESISTOR CH 1/10W 18K	1	
R426	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R427	ERJ6GEYJ112	M.RESISTOR CH 1/10W 1.1K	1	
R428	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R429	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R431	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R433	ERJ6GEYG333	M.RESISTOR CH 1/10W 33K	1	
R434	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R435	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R436	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R437	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R438	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R439	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R440	ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	1	
R441	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R442,43	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	2	
R1001	VRE0034E272	M.RESISTOR CH 1/10W 2.7K	1	
R1002,03	VRE0034E512	M.RESISTOR CH 1/10W 5.1K	2	
R1004	ERDS1TJ151	C.RESISTOR 1/2W 150	1	
R1005	ERDS2TJ472	C.RESISTOR 1/4W 4.7K	1	
R1006,07	ERDS2TJ680	C.RESISTOR 1/4W 68	2	
R2001	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2002	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R2003	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R2005	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R2007	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R2011	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2012	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R2013,14	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R2015	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R2017	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R2018,19	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R2023	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2024	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R2025	ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R2026	ERJ6GEYJ244	M.RESISTOR CH 1/10W 240K	1	
R2501	ERJ6GEYJ684	M.RESISTOR CH 1/10W 680K	1	
R2502	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2503	ERJ6GEYG133	M.RESISTOR CH 1/10W 13K	1	
R2504	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R2505	ERJ6GEYG473	M.RESISTOR CH 1/10W 47K	1	
R2506	ERJ6GEYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2507	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2508	ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2509-11	ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2512	ERX125JR47	M.RESISTOR 1/2W 0.47	1	
R2513	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514	ERJ6GEYG681	M.RESISTOR CH 1/10W 680	1	
R2516	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R2517	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R2518	ERJ6GEYG821	M.RESISTOR CH 1/10W 820	1	
R2519	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R2520	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2521	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3001	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3002	ERJ6GEYG112	M.RESISTOR CH 1/10W 1.1K	1	
R3004	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3005	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R3006,07	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3008	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3009	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3010	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3011	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3012	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3013	ERJ6GEYG153	M.RESISTOR CH 1/10W 15K	1	
R3016,17	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R3018	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R3019	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3020	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R3021	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R3022	ERJ6GEYG102	M.RESISTOR CH 1/10W 1K	1	
R3023	ERJ6GEYG911	M.RESISTOR CH 1/10W 910	1	
R3024	ERJ6GEYG561	M.RESISTOR CH 1/10W 560	1	
R3025	ERJ6GEYG112	M.RESISTOR CH 1/10W 1.1K	1	
R3026	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R3029	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3030,31	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R3032	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3033,34	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R3035	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R3036	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3037	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R3043	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R3044	ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R3045	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3046	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R3047	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3048	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R3910,11	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	2	
R3049	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R3912	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3050	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3913-15	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	3	
R3051	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R3916	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3052-54	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3		R3918	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3101	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3919	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3102	ERJ6GEYR000	M.RESISTOR CH 1/10W 0	1		R3921	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3103	ERJ6GEYJ621	M.RESISTOR CH 1/10W 620	1		R3922	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3104	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R3923	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3105	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3924	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3106	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1		R3925	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3107	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1		R3926,27	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R3108	ERJ6GEYJ223	M.RESISTOR CH 1/10W 2.2K	1		R3928	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3109	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3929	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R3110	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R3930	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3111	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		R3931,32	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R3112	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1		R3933	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R3113	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3934	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3114	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R3935	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3115	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		R3936	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3116	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1		R3937,38	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	2	
R3117,18	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2		R3939-47	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	9	
R3119	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1		R3948-50	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	3	
R3120	VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1		R3953	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3122	ERJ6GEYR000	M.RESISTOR CH 1/10W 0	1		R3954	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3123	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R3955,56	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R3124	ERJ6GEYR000	M.RESISTOR CH 1/10W 0	1		R4001	VRE0034E123	M.RESISTOR CH 1/10W 12K	1	
R3125	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4002	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3127	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4003	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R3128	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R4004	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R3129	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R4005	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R3130	ERJ6GEYR000	M.RESISTOR CH 1/10W 0	1		R4006	ERJ6GEYJ223	M.RESISTOR CH 1/10W 2.2K	1	
R3131	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1		R4007	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3132	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R4008	ERJ6GEYJ202	M.RESISTOR CH 1/10W 2K	1	
R3133	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1		R4009	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R3134,35	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2		R4010,11	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R3136	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R4012	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3137	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1		R4013	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3138	ERJ6GEYJ621	M.RESISTOR CH 1/10W 620	1		R4014	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3139	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1		R4015	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3140,41	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2		R4016	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3142	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4017	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R3145	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R4018	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3147,48	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	2		R4019,20	ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	2	
R3505	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1		R4021	ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R3506	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1		R4022	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3507	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1		R4023	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3508,09	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2		R4024	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3510	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R4025	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3511	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R4026	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R3512-14	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	3		R4027	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3515	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1		R4028,29	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R3516	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1		R4030	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3517	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1		R4031	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3518	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4032	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3519	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R4033	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3520	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4034	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3521	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4035	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3601,02	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	2		R4036	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3603,04	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2		R4037	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3605	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R4038	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3606	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R4039	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3607	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1		R4040	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3608,09	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2		R4041	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3610	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1		R4042	ERJ6GEYJ243	M.RESISTOR CH 1/10W 24K	1	
R3611	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R4043	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R3612	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R4044	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3613	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		R4045,46	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R3614	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R4047,48	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R3615	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R4049	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R3616,17	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	2		R4050	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3901,02	ERJ6GEYJ750	M.RESISTOR CH 1/10W 75	2		R4051,52	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R3903-06	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	4		R4053,54	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R3907	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R4055,56	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R3909	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		R4057-59	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4060	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4061	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R4501,02	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4503,04	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R4505	ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R4506	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4507	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4508	ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R4509	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R4510	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4511	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4512	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4513	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4514,15	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R4516	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4517,18	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R4519	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4520	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
R4521	ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4522	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4523	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R4524	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4525	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4526	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4527,28	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4529	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4530	ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	1	
R4531	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4801	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4802	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4803	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4804,05	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R4806	ERJ6GEYJ100	M.RESISTOR CH 1/10W 10	1	
R4807	ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4808	ERJ6GEYJ123	M.RESISTOR CH 1/10W 12K	1	
R4809	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4810,11	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4812,13	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R4814	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4815	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4816,17	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R6001	ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R6006-08	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
R6011	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6012	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6016,17	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6018	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6019	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6020,21	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R6022	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6023	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6024	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6025	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6026	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R6027	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R6028	ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R6031	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6032	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6033-35	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	3	
R6036-40	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	5	
R6041	ERJ6GEYJ201	M.RESISTOR CH 1/10W 200	1	
R6042	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6043,44	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R6045	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6046	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R6047	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R6048,49	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	2	
R6050	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6051,52	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R6053,54	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6055,56	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R6058,59	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6060	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6061	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6062	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6063,64	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6066	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6067	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R6068,69	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6072	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6076	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6077,78	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R6079	ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
R6080,81	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6082	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R6083	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6084	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6086	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6087	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R6088	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R6089	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6091-93	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R6094	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6096	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R6103	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6104	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6105	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R6108	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R6109	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R6110	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R6113	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6115	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6116	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R6117	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R6131	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R6137	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R6901	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R6902	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6914	ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R6915	ERJ6GEYJ913	M.RESISTOR CH 1/10W 91K	1	
R6916	ERJ6GEYJ512	M.RESISTOR CH 1/10W 5.1K	1	
R6917,18	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R6919	ERX1SJR8	M.RESISTOR 1W 1.8	1	
R6920	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R6921	VRE0034E122	M.RESISTOR CH 1/10W 1.2K	1	
R6922	VRE0034E96A	M.RESISTOR CH 1/10W 0.96	1	
R6923	VRE0034E751	M.RESISTOR CH 1/10W 750	1	
R7901-07	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	7	
R7908	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7909	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7910,11	ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	2	
R7912	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7913,14	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2	
R7915	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7916	ERDS1TJ152	C.RESISTOR 1/2W 1.5K	1	
R7917	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7918	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7919	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7920-31	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	12	
R7932-34	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	3	
R7935,36	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7937,38	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	2	
R7939-43	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	5	
R7944,45	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7946	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
SW7901	VSS0112	SWITCH	1	<R>
T4801	EIQ7QF013Q	TRANSFORMER	1	
T6901	EIQ7QF012Q	TRANSFORMER	1	
VR401	EVM7JGA30B24	V.RESISTOR 20K	1	
VR402	EVM7JGA00B14	V.RESISTOR 10K	1	
VR403	EVM7JGA30B54	V.RESISTOR 50K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP07800A	P.C.BOARD W/COMPONENT TIMER			P6504	VJP1233T	CONNECTOR (MALE) 6P	1	
					P6505	VJP2621	CONNECTOR (MALE)	1	
C6501	ECEA1HKA100	E.CAPACITOR 50V 10U	1		Q6501	2SD973B-R	TRANSISTOR	1	<R>
C6502	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1						
C6503	ECEAOJKS330	E.CAPACITOR 6.3V 33U	1						
C6504	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		QR6501_02	MUN2112	TRANSISTOR	2	<R>
C6505	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		QR6503	MUN2111	TRANSISTOR	1	<R>
C6506,07	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	2		QR6504	MUN2213	TRANSISTOR	1	<R>
C6508,09	ECQB1H473JF	P.CAPACITOR 50V 0.047U	2		QR6505-08	MUN2113	TRANSISTOR	4	<R>
C6510	ECEAOJK221	E.CAPACITOR 6.3V 220U	1		QR6509-11	MUN2111	TRANSISTOR	3	<R>
C6511	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1						
C6512	ECUM1H090DCN	C.CAPACITOR CH 50V 90P	1						
C6513	ECRHA030E41	TRIMMER 3P	1						
C6514	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1		R6501	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
C6515	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1		R6505-08	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
C6516,17	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2		R6510,11	ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	2	
C6518	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1		R6520	ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	
C6520	ECEAOJKS470	E.CAPACITOR 6.3V 47U	1		R6521	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
C6521	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1		R6522	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
C6522	ECEAOJKS470	E.CAPACITOR 6.3V 47U	1		R6523	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
C6524	ECEA1CKA101	E.CAPACITOR 16V 100U	1		R6524-26	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	3	
C6525	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		R6527	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
C6526	ECAOJM221	E.CAPACITOR 6.3V 220U	1		R6528	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
C6527	ECUM1H223ZFN	C.CAPACITOR CH 50V 0.022U	1		R6529	ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
C6528	ECEA1VKA100	E.CAPACITOR 35V 10U	1		R6530	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
C6529	ECEA1CKA220	E.CAPACITOR 16V 22U	1		R6531,32	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
C6530-47	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	18		R6533	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
C6548	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		R6534	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
C6549	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		R6535-38	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	4	
					R6539,40	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
					R6541	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
D6501	MA4068M	DIODE	1	<R>	R6542	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
D6502	MA151A	DIODE	1	<R>	R6544	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
D6504	ERA22-02V5	DIODE	1		R6545	ERDS1TJ3R9	C.RESISTOR 1/2W 3.9	1	
D6505,06	MA185	DIODE	2	<R>	R6546	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
D6507	MA4091L	DIODE	1	<R>	R6547	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
D6509-28	MA151A	DIODE	20	<R>	R6548-52	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	5	
D6529	MA151WA	DIODE	1	<R>	R6553	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
D6531	MA151WA	DIODE	1	<R>	R6554,55	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	2	
					R6556,57	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
					R6558-64	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	7	
					R6565-68	ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	4	
					R6569	ERJ6GEYJ390	M.RESISTOR CH 1/10W 39	1	
DP6501	VSL0347	DISPLAY	1		R6570-73	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	4	
					R6575-77	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	3	
					R6578-82	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	5	
IC6502	BA6810S	IC	1	<R>	R6586	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
IC6503	MN187324VMFH	IC	1		R6589	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
IC6504	M6M80011AP	IC	1	<R>	R6592	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
IC6505	VEK6408	IC	1		R6593-95	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	3	
IC6506	MN1382K	IC	1	<R>	R6596,97	ERJ6GEYG472	M.RESISTOR CH 1/10W 4.7K	2	
IC6507	MN1382-S	IC	1	<R>	R6598	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
					R6600,01	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
					R6602	ERJ6GEYJ683	M.RESISTOR CH 1/10W 68K	1	
L6501	ELESQ221KA	COIL 220UH	1		R6610,11	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	2	
L6502,03	VLQ0599J101	COIL 100UH	2		R6620-36	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	17	
L6504	VLP0083	COIL	1						
LD6501-05	LN28RCPL	DIODE	5		T6501	ETE13K91AY	TRANSFORMER	1	
LD6506	LN48YCPL	DIODE	1						
LD6507	VLL0062	LED	1						
P6501	VJS2357A020	CONNECTOR (FEMALE) 20P	1						
P6502	VJS3537F016G	CONNECTOR	1		X6501	VSX0797	CRYSTAL OSCILLATOR	1	<R>
P6503	VJS3537F018G	CONNECTOR	1		X6502	VSX0094	CRYSTAL OSCILLATOR	1	<R>

EXPLODED VIEWS AND REPLACEMENT PARTS LIST

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS							
	VJF0693	FIP HOLDER	1						
	VJF0740	LED SPACER	1						
	VMD1342	SPACER	1						
	VEP00T87A	P. C. BOARD W/COMPONENT MECHA CONNECTION							
D1501	LN59L.VT	DIODE	1	<R>					
IC1501,02	0N1387	PHOTO INTERRUPTER	2	<R>					
P1503	VJS3316A002	CONNECTOR (FEMALE) 2P	1						
P1504	VJS3820	CONNECTOR	1						
P1505	VJS3537B014G	CONNECTOR	1						
Q1501	PT493F1MN	TRANSISTOR	1	<R>					
Q1502	PN205L-NC.VT	TRANSISTOR	1	<R>					
SW1501	VES0695	SAFETY SWITCH	1	<R>					
SW1502	VST0176	SWITCH	1	<R>					
		MISCELLANEOUS							
	VJB00T87	MECHA CONNECTION C.B.A.	1						
	VMD2029	GUIDE PIECE	1						