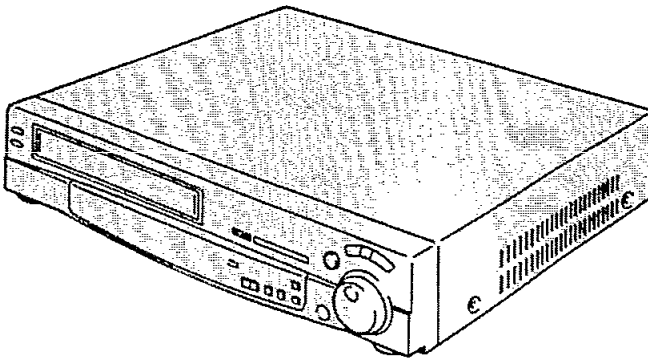


Service Manual

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

Video Cassette Recorder

Panasonic VHS
PAL
Hi-Fi HQ
NV-HD100^B_{EB}
K-MECHANISM


SPECIFICATIONS

ITEM	SPECIFICATION		ITEM	SPECIFICATION	
POWER	SOURCE: 220-240V AC 50/60 Hz		AUDIO	HEAD: 1 Stationary head (Normal Audio) 2 rotary heads (Hi-Fi 2CH)	
	CONSUMPTION: 33 watts (NV-HD100B) 32 watts (NV-HD100EB)			INPUT: EURO AV Connector (21 pin) More than -6dBV (500mV), more than 10k Ω AUDIO IN Connector (Phono type) More than -10dBV (316mV), more than 47k Ω (NV-HD100EB) MICROPHONE JACK -70dBV	
RECORDING SYSTEM	2 rotary heads, helical scanning system			OUTPUT: AUDIO OUT Connector (Phono type) -8dBV (400mV), Less than 1k Ω EURO AV Connector (21 pin) -6dBV (500mV), Less than 10k Ω	
TV TUNER SYSTEM	NV-HD100B	UHF: CH21 ~ CH69 (PAL I) 75 Ω terminated		TRACK: 1 track (Normal-mono only) 2 channels (Hi-Fi Sound-Stereo)	
	NV-HD100EB	VHF I: CHE2 ~ CHS3 VHF III: CHM1 ~ CHE12 VHF H: CHU1 ~ CHS41 (PAL/SECAM B) UHF: CH21 ~ CH69 (PAL/SECAM G) 75 Ω terminated		TAPE FORMAT	
RF OUT SYSTEM	NV-HD100B	UHF: CH36 = 4 (PAL I) 73 = 3dB μ , 75 Ω unbalanced		TAPE SPEED	VHS Cassette tape (Tape width 12.7 mm)
	NV-HD100EB	UHF: CH36 = 4 (PAL/SECAM G) 70 = 3dB μ , 75 Ω unbalanced		DIMENSIONS	SP: 23.39 mm/s (PAL), 33.35 mm/s (NTSC) LP: 11.695 mm/s (PAL), 11.12 mm/s (NTSC) Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape FF/REW Time: 2.5 min. with 180 min. type tape
VIDEO	HEADS: 4 rotary heads 1 pair for SP recording, playback and trick play (L-R heads) 1 pair for LP recording, playback and trick play (L'-R' heads)			WEIGHT	5.3 kg
	INPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75 Ω unbalanced VIDEO IN Connector (Phono type) 1.0Vp-p, 75 Ω unbalanced (NV-HD100EB)	STANDARD ACCESSORIES		1 pc. DIN-RF Cable 1 pc. Infra-red Remote Controller 1 pc. Audio Cables 1 pc. AC Mains Lead 1 pc. Programme Sheet (NV-HD100EB)	
	OUTPUT: EURO AV Connector (21 pin) 1.0Vp-p, 75 Ω unbalanced VIDEO OUT Connector (Phono type) 1.0Vp-p, 75 Ω unbalanced (NV-HD100EB)				

Weight and dimensions shown are approximate.
 Specifications are subject to change without notice.

Panasonic

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.

Section 1 presents you with technical know how for actual servicing and general information of features and controls, enabling you to become familiar with each function.

Section 2 presents to your mechanical and electrical adjustment information as well disassembly and replacement procedures.

In the case of very common information relating to other models like mechanical adjustments, please refer to the appropriate service manual.

Section 3 schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c. ...

Section 4 contains exploded views and parts list.

Please place orders using the parts list and not the drawing reference numbers.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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SECTION 1

GENERAL DESCRIPTIONS

1-1. SERVICE INFORMATION

1-1-1. K-MECHANISM INFORMATION

A. SERVICE POSITION

When servicing the K-Mechanism, the Mechanism can easily be fixed by standing the Mechanism up in the Main Frame as shown below to check easily.
In this position, the following services are possible.

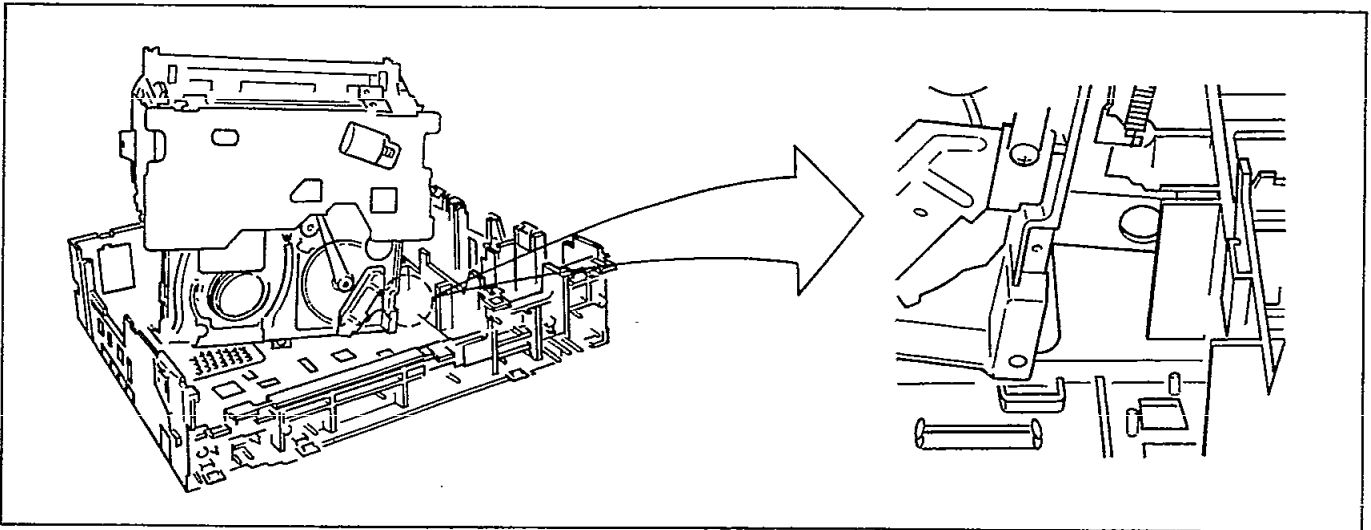


Fig. S1

A-1. CHECKING OF GEAR PHASE ALIGNMENT CONDITION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Check gear phase visually.
(Refer to the Phase Alignment Condition of Mechanism described on the left side of Frame.)

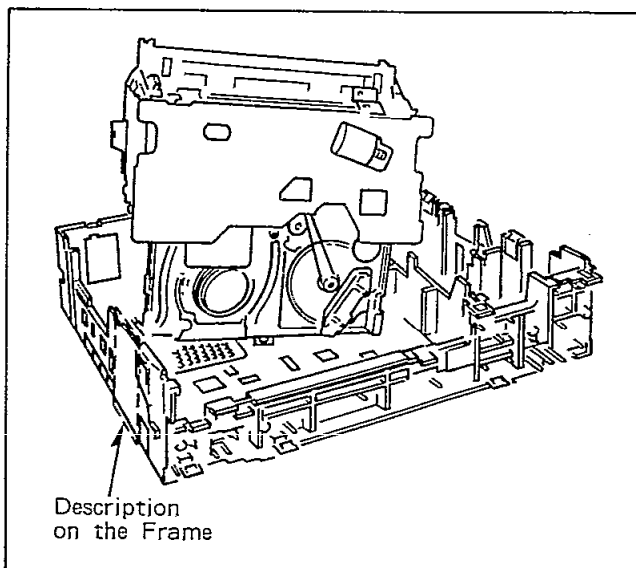


Fig. S2

A-2. Checking of Loading / Unloading Operation.

There are 3 methods for manual operation of loading/unloading operation as follows.

1. HAND OPERATION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Turn the Worm Gear or the WORM WHEEL GEAR (Remove the Loading Motor Unit) manually.

2. BATTERY OPERATION

- 1) Remove the Mechanism Connection C.B.A.
- 2) Connect the Battery or Power Supply (+6V) to the Loading Motor terminals.

3. SERVICE INFORMATION DISPLAY OPERATION

- 1) Set the Service Information Display mode.
(Press the "EJECT" button while turning the "SHUTTLE RING" clockwise.)
- 2) Momentarily make a short circuit as shown in Fig.S3.
- 3) In the above condition,
The Loading Motor rotates for Loading operation by pressing the "PLAY" button.
The Loading Motor rotates for unloading operation by pressing the "STOP" button.

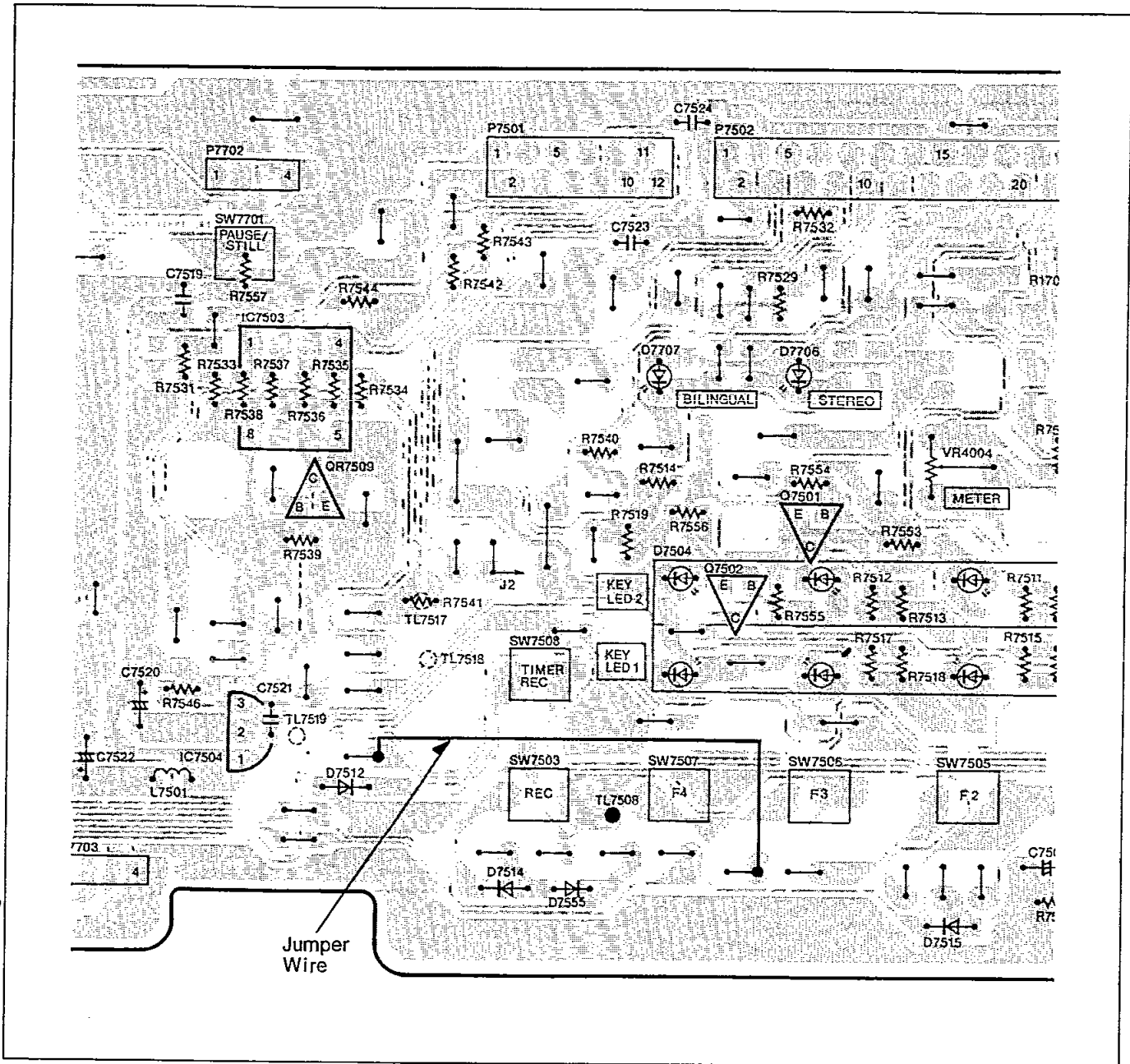


Fig. S3

Remark:

After checking, check the "SERVICE DISPLAY INFORMATION" mode for final confirmation of movement of Mechanism.

A-3. Checking of operation of Reel Gears.

- 1) Remove the Mechanism Connection C.B.A.
- 2) Set mechanism to "PLAY" position by manual operation of loading.
- 3) Turn the "Rotor Unit" to check movement of reel gears.

B. REPLACEMENT OF CYLINDER UNIT

The Cylinder Unit can be replaced easily by the following method.

- 1) Remove the Top Panel.
- 2) Remove the 3 screws of the Cylinder Unit with a magnetized screw driver through the holes on the Bottom Plate as shown in Fig.S4.

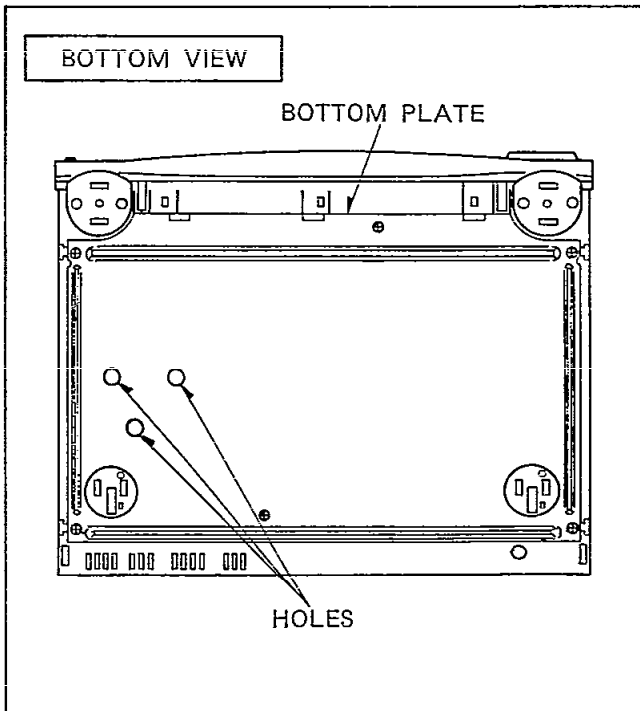


Fig. S4

C. ASSEMBLY OF CAPSTAN STATOR UNIT

When replacing the CAPSTAN STATOR UNIT, the CENTRE FIXING TOOL (VFK0851) must be used to fix the centre of CAPSTAN STATOR UNIT.

Method:

- 1) Place the CAPSTAN STATOR UNIT into position.
- 2) Loosely tighten the 3 screws.
- 3) Insert the CENTRE FIXING TOOL (VFK0851) as shown in Fig.S5.
- 4) Tighten the 3 screws.
- 5) Remove the CENTRE FIXING TOOL.

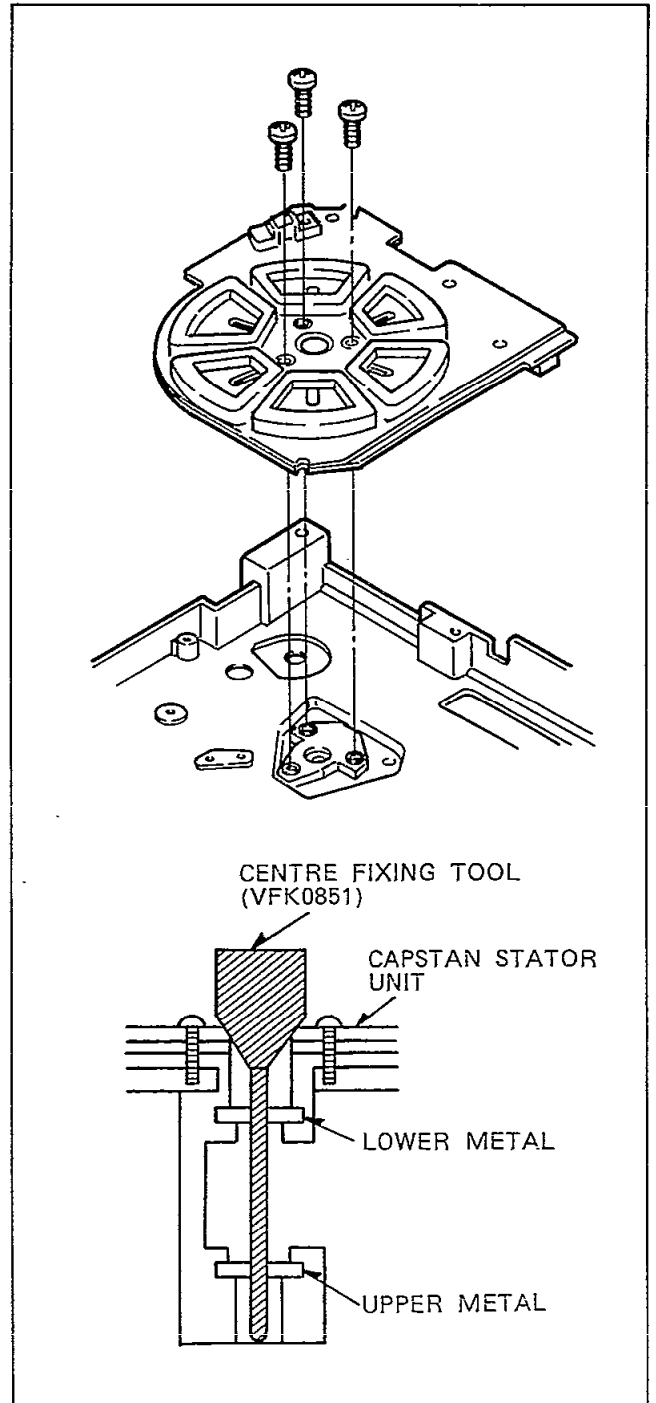


Fig. S5

D. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>

If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear and will not rotate.

For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate the carriage connection gear by hand in the direction of the arrow.

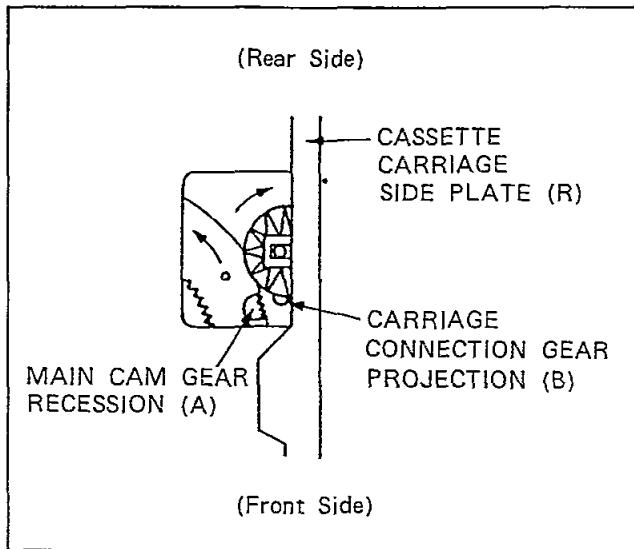


Fig. S6 Top View of Eject Operation

1-1-2. REMOVAL OF THE CASSETTE TAPE.

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

- 1) Remove the bottom plate.
- 2) Turn the WORM GEAR to "A" arrow mark direction manually as shown in Fig.S7, moving the LOADING POST to the unloaded position.
- 3) Turn the CAPSTAN clockwise to take up the tape.
- 4) Turn the WORM GEAR again to eject the cassette.

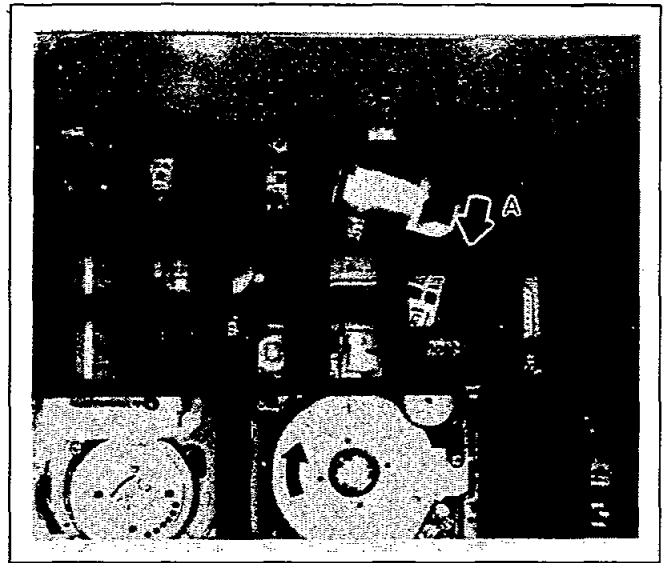


Fig. S7

E. TAKE-UP PHOTO SENSOR OPERATION

Note the following matters for Take-up Photo Sensor Operation.

- 1) While servicing of the K-Mechanism, the unit will not operate properly if a strong light (ex, Fluorescent light, Spot light) falls on the Take-up Photo Sensor.
In this case, cover the Take-up Photo Sensor to prevent the light from falling on it.
- 2) While servicing of the K-Mechanism with "Power On" and without cassette tape inserted, the Unit does not operate properly.

F. SERVICING OF POWER TR. C.B.A.

When removing the connector on the Power Tr. C.B.A., hold the P. C. Board by hand to prevent damage of the Power Tr.

2. BATTERY OPERATION

- 1) Connect the battery to P1503 as shown in Fig.S8.
- 2) After moving the LOADING POST to the unloaded position, disconnect the battery to stop the motor.
- 3) Turn the CAPSTAN to clockwise to take up the tape.
- 4) Reconnect the battery to eject the cassette.

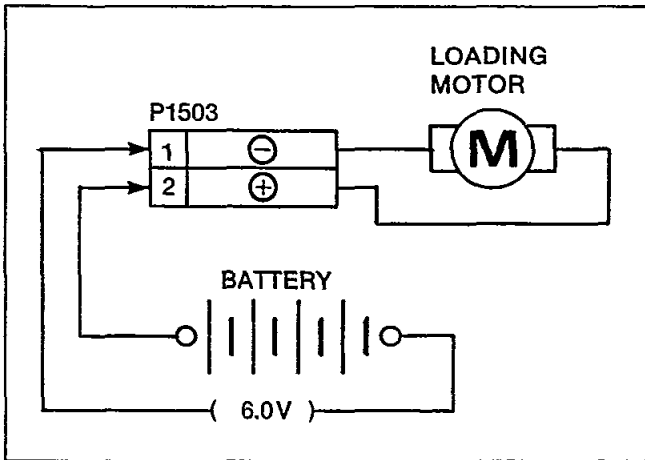


Fig. S8

1-1-3. INSTALLATION OF FLAT CARD CABLE

When installing of the Flat Card Cable to the connector, make sure the direction of the Flat Card Cable. The Insulation Sheet side is backside.

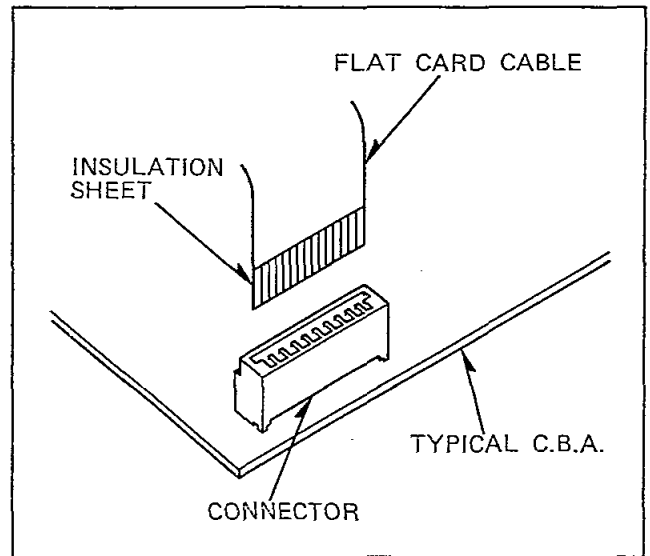


Fig. S10

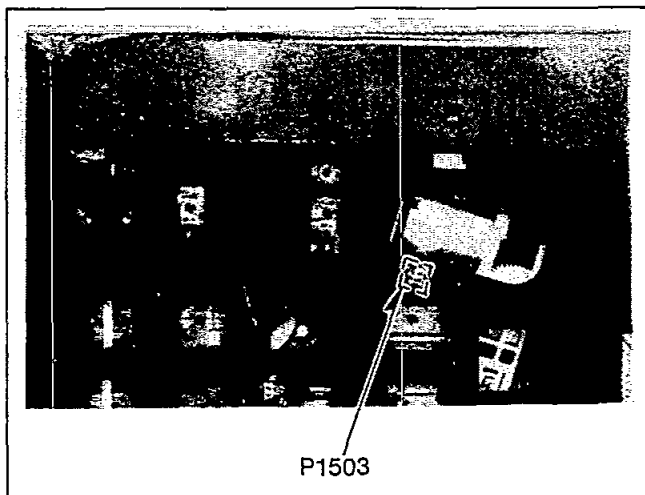


Fig. S9

1-1-4. INITIALIZATION OF CHANNEL
MEMORY IC (IC7504/M6M80021P)

When replacing the channel memory IC (IC7504/
M6M80021P), the memory IC should be initialized to
keep formal specification.)

Note:

- 1) It should be performed before tuning.
- 2) During initialization or after initialization within 1 second, do not stop the power source. (Do not disconnect AC cord.)
- 3) Meaning of "INITIALIZATION" is to erase the "SKIP CH" in other words the number of channel position is the same as displayed channel.

Method:

- 1) Press the CH UP/DOWN Button so that the Channel indicator indicates "3".
- 2) Connect a jumper wire between Pin 54 and Pin 35 of IC7501 for more than 1 second.
- 3) Channel indication changes from "3" to "1".

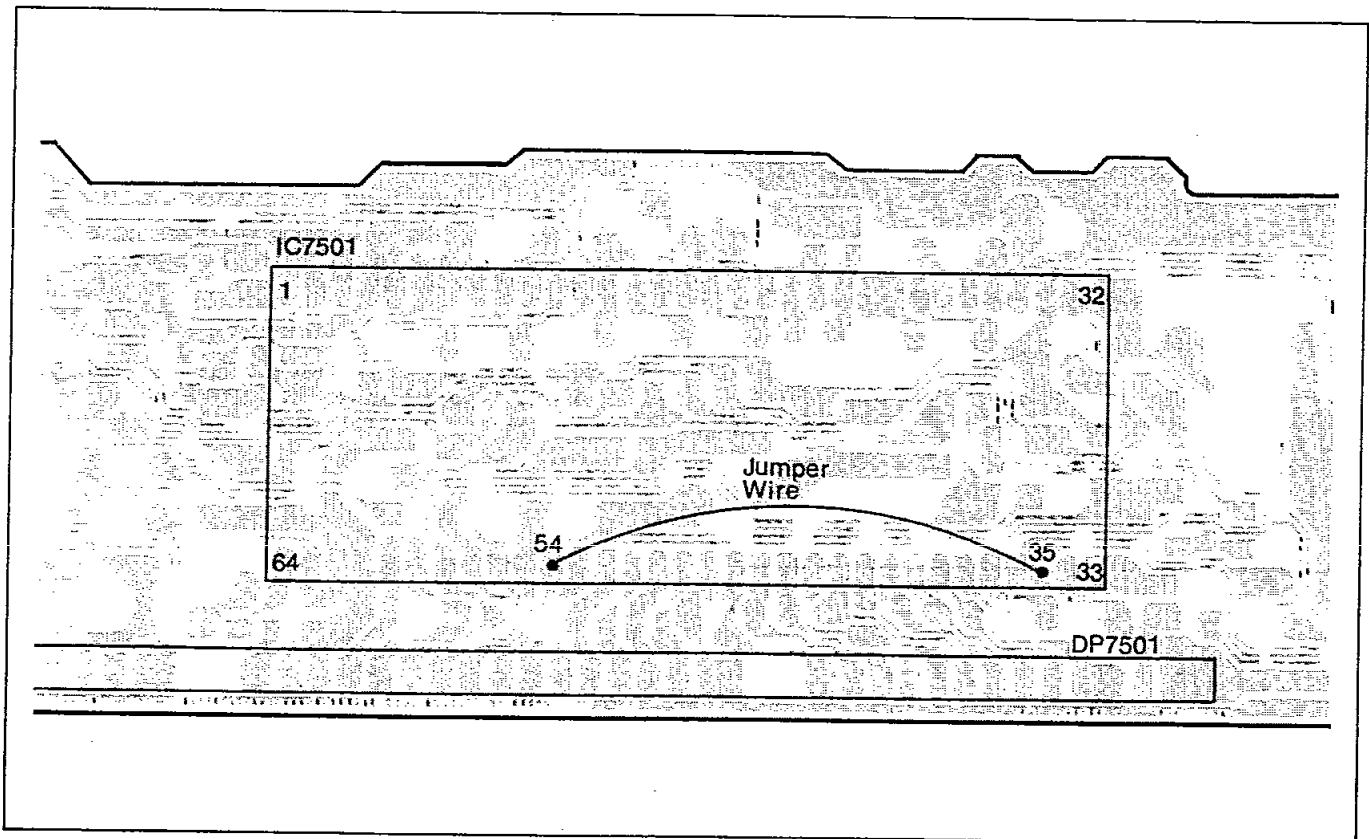


Fig. S11

1-1-5. HOW TO CHECK THE CRACKED CHIP PART

- (1) Apply heat to the soldered portions of chip part using a soldering iron for about 2-3 seconds.
- (2) If the chip part is faulty, it will fracture.

Caution:

Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

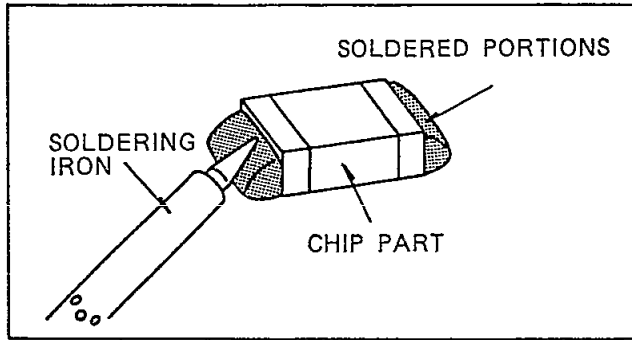


Fig. S12

Note:

Regarding intermittent faults. The main causes of these faults are poor soldering and cracked chip parts.

1-1-6. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

- (1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.
- (2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

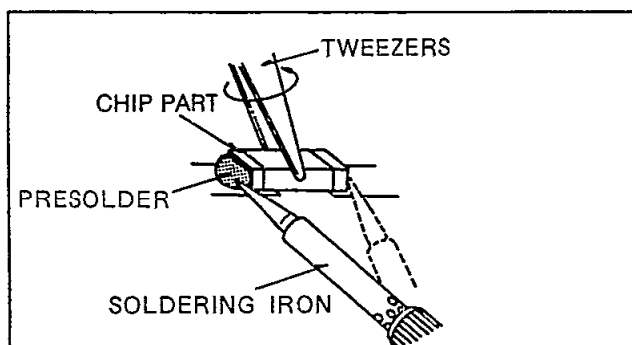


Fig. S13

2) REMOVAL (transistor, diode, etc...)

- (1) Grasp the chip part with tweezers and melt the solder of one lead.

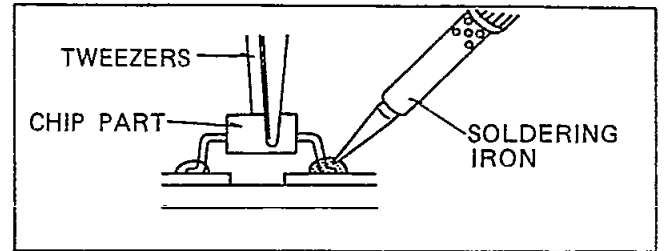


Fig. S14

- (2) Lift the side of that lead upward.

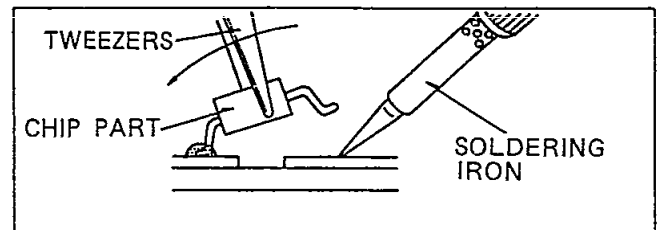


Fig. S15

Caution:

Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

- (3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

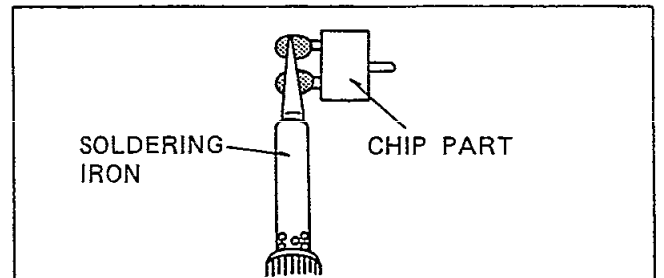


Fig. S16

3) INSTALLATION

- (1) Presolder the one side of contact point on the circuit board.

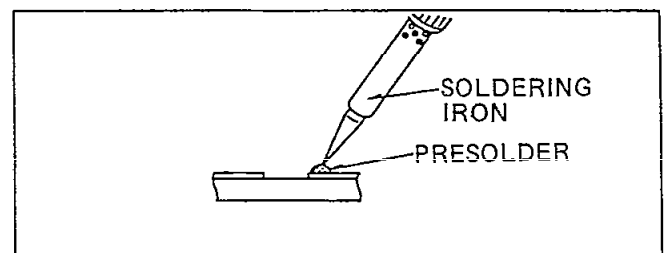


Fig. S17

- (2) To install the chip part, hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
- (3) Solder the other side of the chip part.
- (4) Check your soldering and ensure no short circuits between pins.

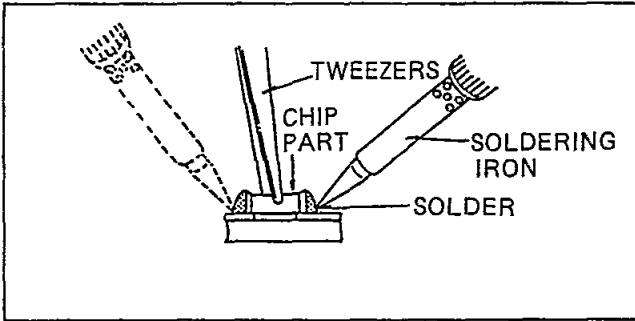


Fig. S18

1-1-7. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

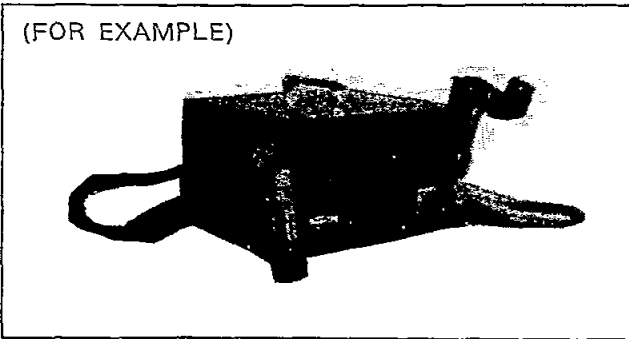


Fig. S19

- (1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5-8 seconds.
- (2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution:

Do not supply the hot air to the chip parts around the Flat-IC for long time as damage may occur to the chip parts around the Flat-IC.

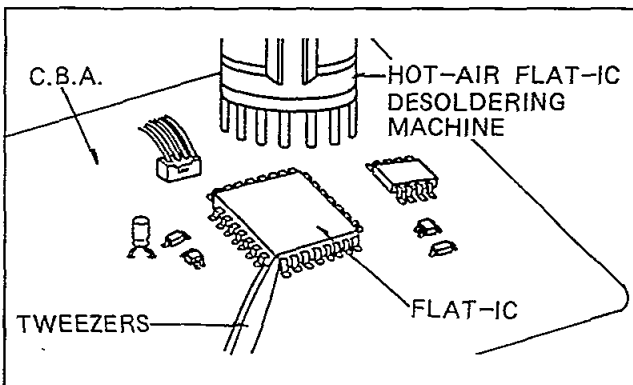


Fig. S20

(WITH SOLDERING IRON)

- (1) Using solder braid remove the solder from all pins of the Flat-IC. When you use the solder flux which is applied to all pins of the Flat-IC, you can remove it easily.

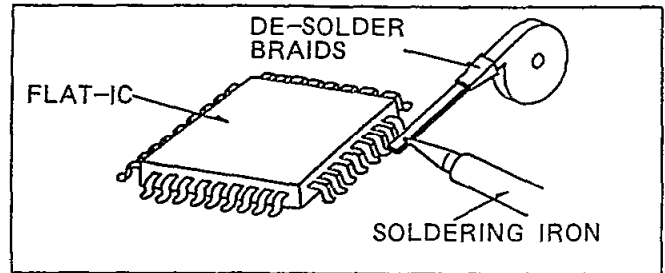


Fig. S21

- (2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire), while heating the pins using a fine tip soldering iron or a hot air blower.

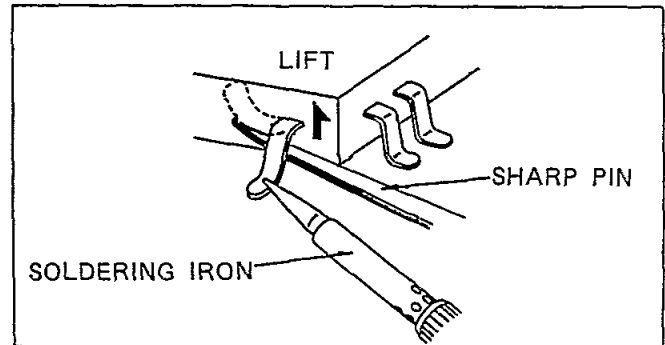


Fig. S22

(WITH IRON WIRE)

- (1) Affix the wire to workbench or solid mounting point as shown in Fig.S23.
- (2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad, while heating the pins using a fine tip soldering iron or hot air blower.

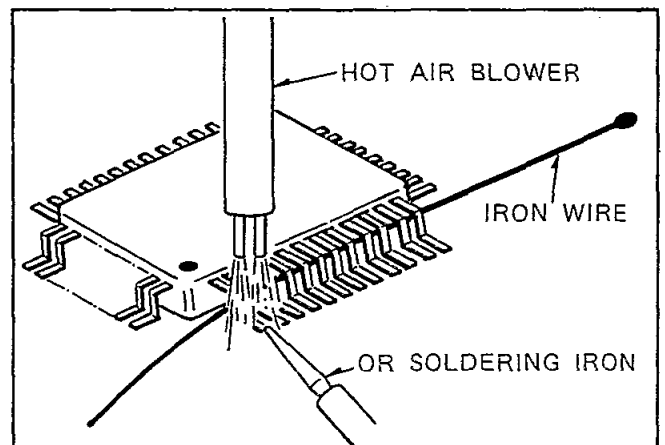


Fig. S23

Note:

When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

1-2. SERIAL CLOCK TRANSMISSION ERROR DISPLAY

If the Serial Clock is not transmitted from IC6001 to IC7501, "E9" is displayed as shown in Fig.T1. This indication will be displayed either during the Service Information Display mode or in normal mode.

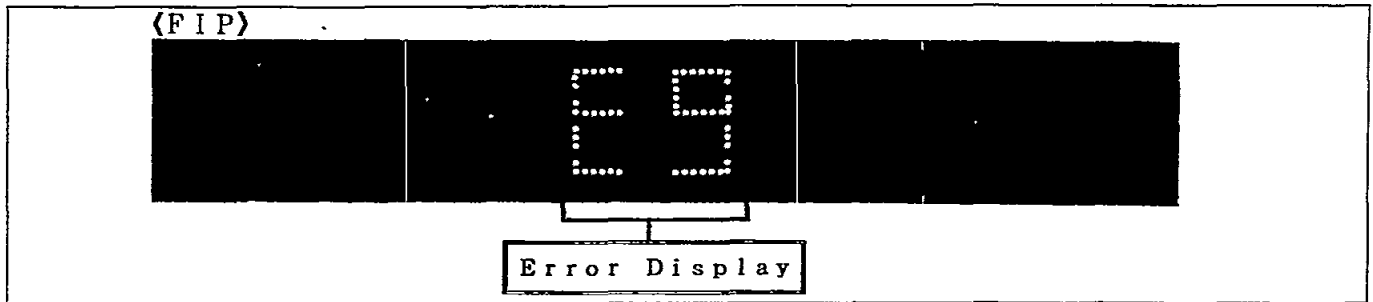


Fig. T1 Serial Data/Clock Transmission Error Display

1-3. SERVICE INFORMATION DISPLAY

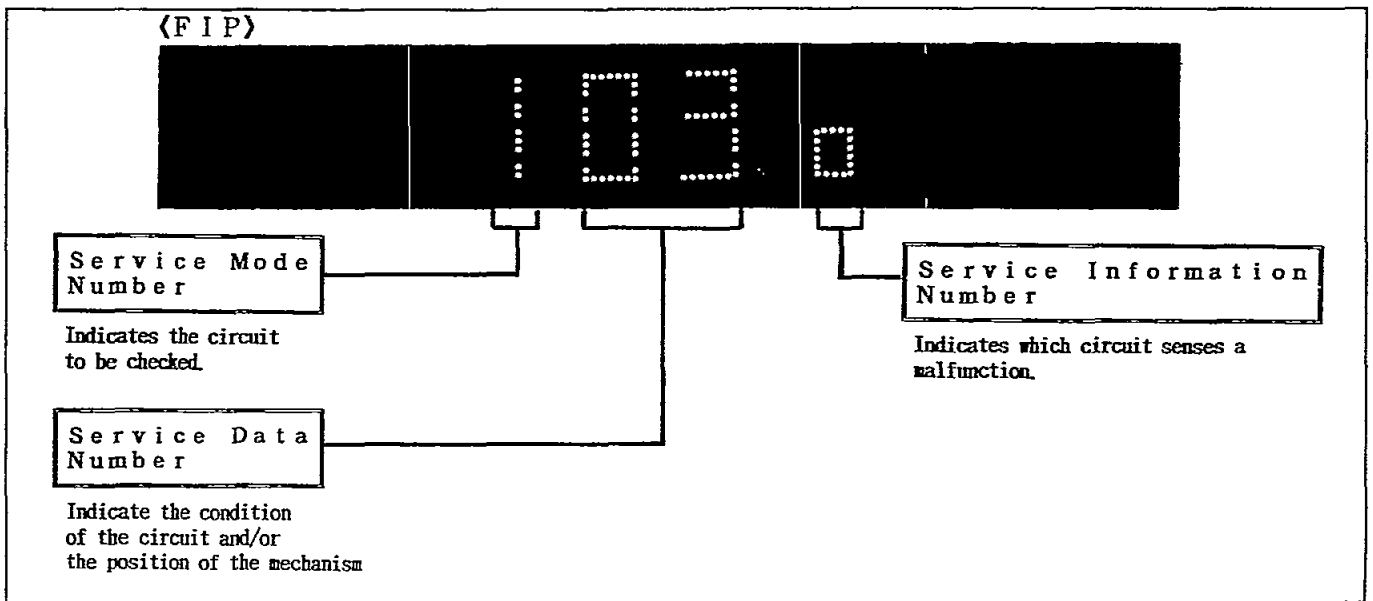


Fig. D1 Service Information Display

1-3-1. Purpose of Service Information Display

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

1-3-2. Turning on Service Information Display

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

- (1) Turn the Shuttle Ring to FF then push the Eject button. The Service Information will be displayed for 1 minute.
- (2) Connecting a jumper wire between TPSEV and TPGND will display the service information indefinitely.

In the Service Information Display, there are four digits divided into 3 functions. The first digit indicates which other 6 service modes that the unit is Currently in.

- MODE 1 : Check tape protection circuit
- MODE 2 : Check tape transport mechanism
- MODE 3 : Check mode switching operation
- MODE 4 : Check control buttons
- MODE 5 : Check capstan motor
- MODE 6 : Check cylinder motor

The second and third digits are service data which indicate 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 a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is supplied.

1-3-3. Use of Service Modes

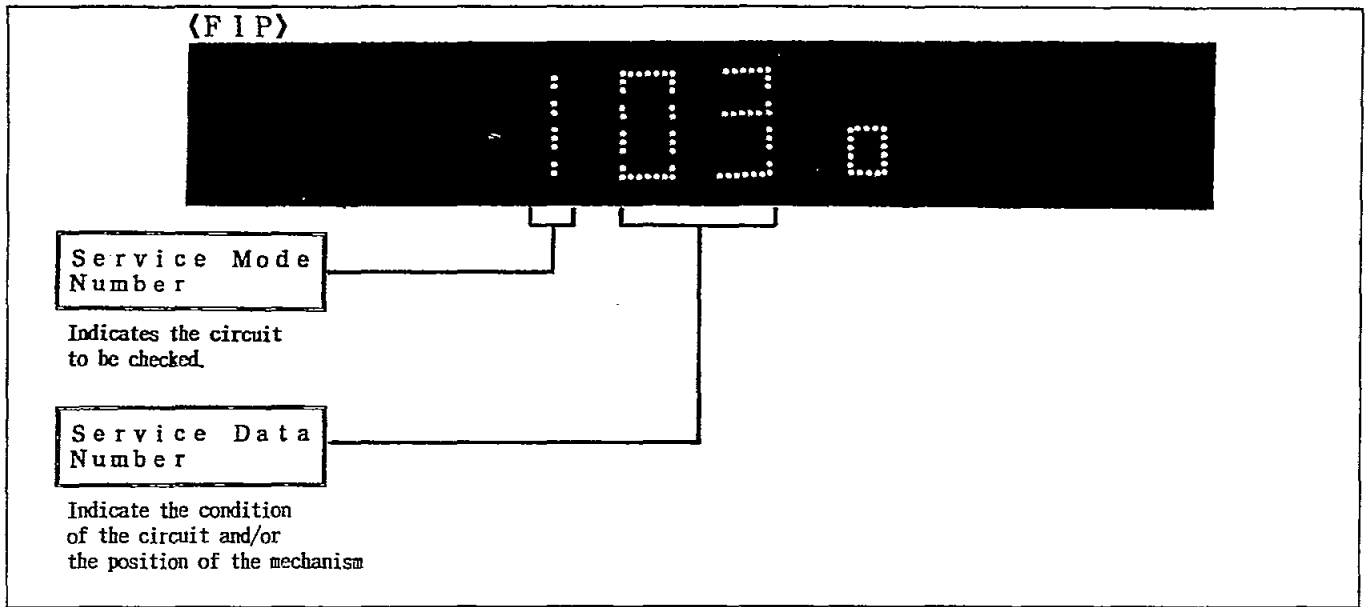


Fig. D2. Service Mode Number and Service Data Number on S.I.D.

- (1) Turn on Service Information Display.
- (2) To change Service Modes turn the shuttle ring to FF then push the Eject button.

(3) Mode 1 : Checks that the Sensor LED, Supply & Take-up Sensor circuits check the circuits by blocking the light from the Sensor LED to either or both Supply & Take-up Sensors. When the light is blocked to both sensors, "00" should be indicated on the service data number. When the light is blocked to the supply sensor, "01" should be indicated.



(4) Mode 2 : Checks the mode switch circuit while indicating mechanism position. Service Data Numbers indicate the position of the mode switch and there by the mechanism position.



(5) Mode 3 : Checks that mode switch circuit operations have been completed. Service Data Number should indicate "00" after each mechanism operation is completed.



(6) Mode 4 : Checks the operation circuit. Indicates if IC6001 receives the operating commands from the mode buttons and/or remote controller.



(7) Mode 5 : Checks the capstan motor circuit. Indicates if the IC6001 has received the command to rotate the capstan motor.



(8) Mode 6 : Checks the cylinder motor circuit. IC6001 has received the command to rotate the cylinder motor.



<NOTE>
Refer to Fig.D5 for details of Service Data Number.

1-3-4. Service Information Number

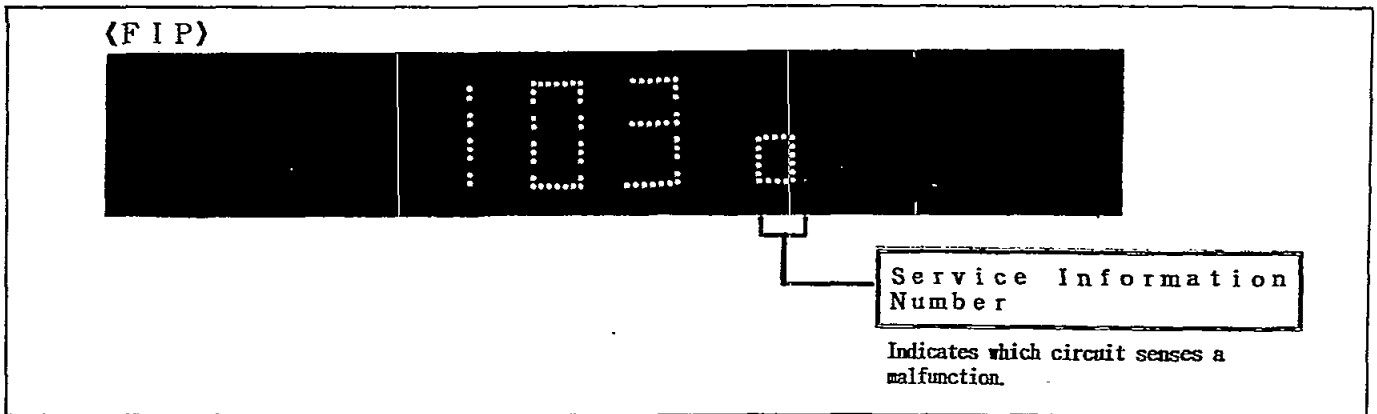


Fig. D3 Service Information Number on S.I.D.

Refer to Fig.D4 for details of Service Information Number.

Notes:

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, the most current error will be displayed.

Service Information Number	Malfunction
0	Normal (No problem)
1	Cylinder stop
2	Tape reel stop
3	Stop at position other than 4 or 6
4	Stop during unloading
5	Falty capstan rotation
6	Stop during Cassette-In/Eject operation

Fig. D4 Service Information


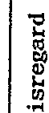
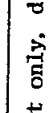
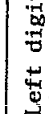
Service mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1		00 01 02 03 04 05 06 07	No light detected at either sensor Tape Beginning. Light to Supply Photo Sensor is blocked. Tape End. Light to Take-up Photo Sensor is blocked. Light detected at both sensors. EJECT Cassette-down REV. REV SLOW Loading/Unloading PLAY/REC, STILL/PAUSE, CUE, FWD SLOW, STOP3 *1 STOP*2 FF/REW Intermediate position	Tape not required 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. D7 to Check mechanism Position and timing.
2	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.
3	Display only when the operating button is pressed.	Refer to Fig. D6		Tape not required.
4	Left digit only, disregard Right digit display.		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, Rev, Reverse Slow commands received by IC6001.	
5	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. D5 Service Data Display and Indication

SERVICE DATA NUMBERS	MODE BUTTONS	SERVICE DATA NUMBERS	MODE BUTTONS
37	OPERATE	54	RESET
01	EJECT	5	ZERO STOP
09	AUDIO DUB	-0	INPUT SELECT
93	INSERT	49.40	INDEX
-9	PAL/MESECAM	A 1.92	TRACKING(+, -)/V-LOCK
—	CHECK/PROG.	9	REPEAT
34 or 35	∧ V, +-	8	SKIP
—	NEXT/SP/LP	—	TAPE SELECT
—	SLEEP/SHIFT	—	PROG.
74	TIMER REC	—	NEXT
08	REC	—	RECORDING SP/LP
—	CLOCK SET	—	CANCEL
—	TUNER PRESET	10	SU(1)
80	PAUSE/STILL	11	MO(2)
00	PLAY	12	TU(3)
00	STOP	13	WE(4)
0-.07	JOG DIAL (FRAME ADV, REVERSE ADV)	14	TH(5)
03.02	SHUTTLE RING (FF, REW)	15	FR(6)
—	TV/VTR	16	SA(7)
—	SCANNER ON/OFF	17	SU-SA(8)
—	TRANSMIT	18	MO-SA(9)
0	SEARCH	19	MO-FR(0)
8L	+ (REMOTE CONTROLLER)	39	-/-
8	- (REMOTE CONTROLLER)		
—	DISPLAY		

Fig. D6 Service Data Display for Service mode 4

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

System control IC6001 senses the mechanism position through the Mode SW. Fig.D7 shows the timing for Service Mode Number 2.

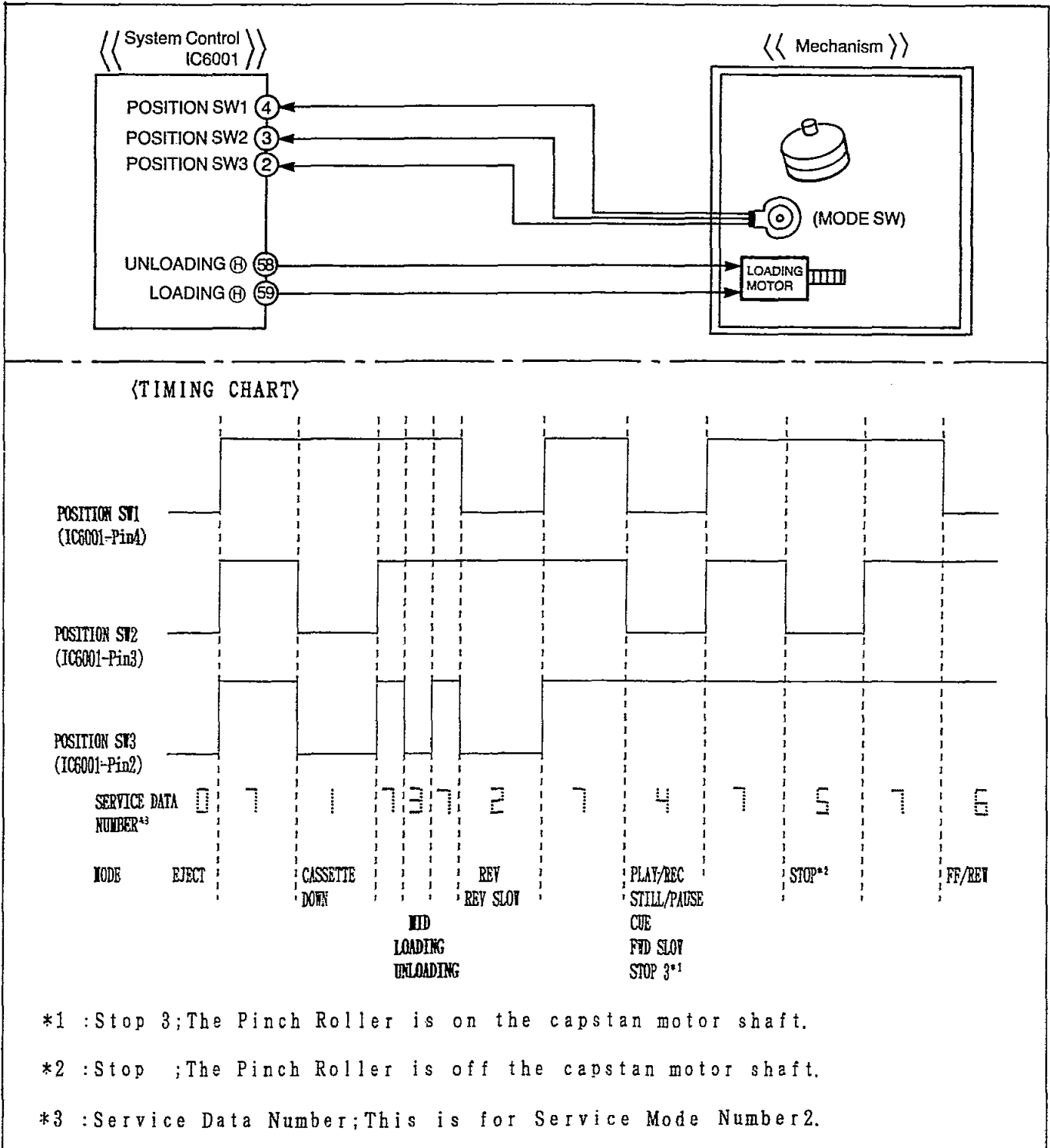
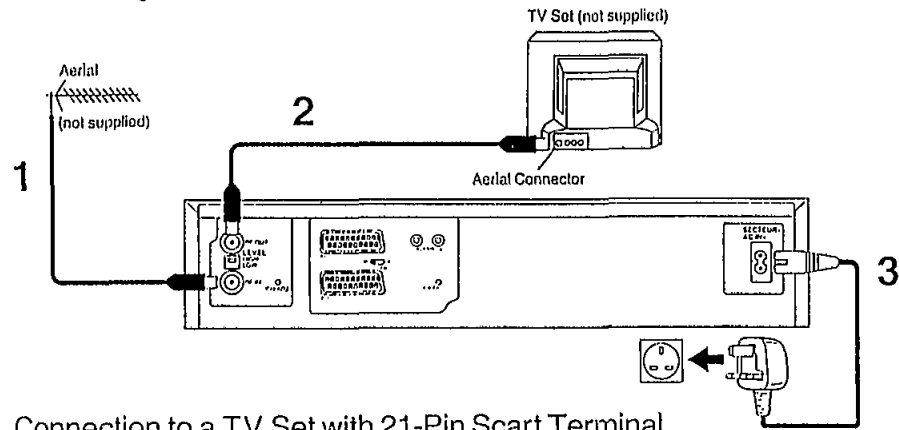


Fig. D7 Timing Chart of Mode SW

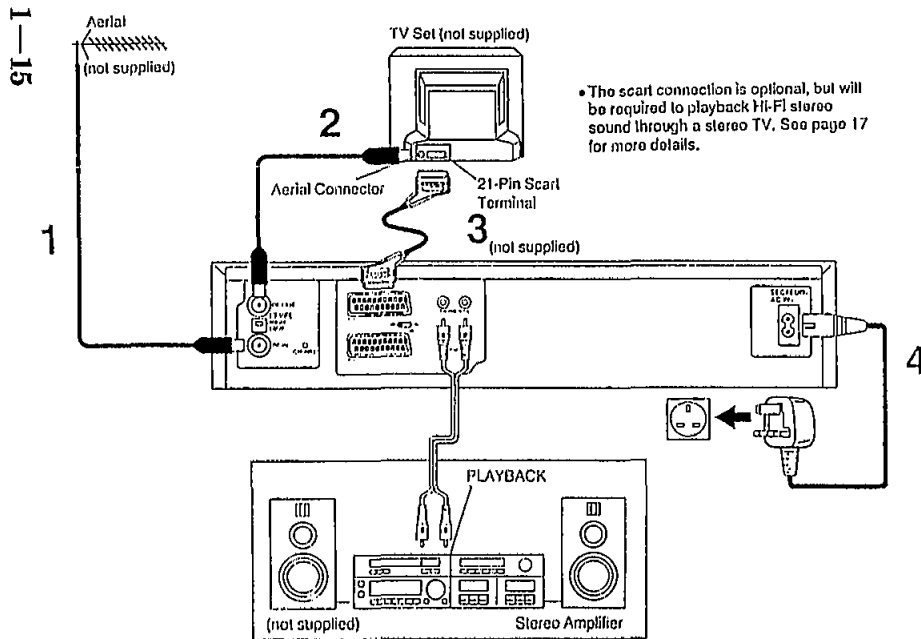
Connections

Basic Connections

The following connections are required to record and play back the VTR through a TV set:



Connection to a TV Set with 21-Pin Scart Terminal

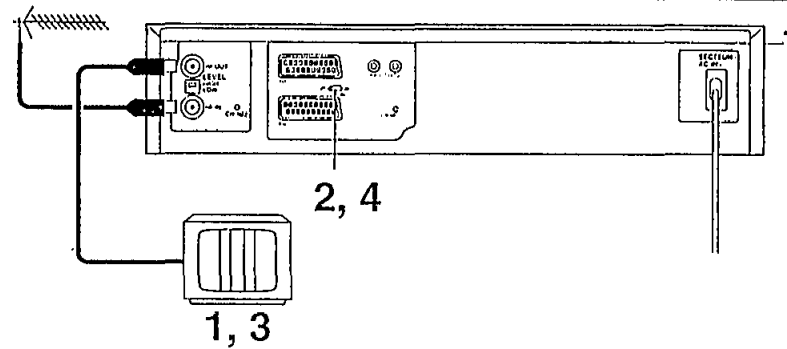


• The scart connection is optional, but will be required to playback Hi-Fi stereo sound through a stereo TV. See page 17 for more details.

• Connection to a Stereo Amplifier

Tuning the TV to your VTR

Connections
Tuning the TV to your VTR



It is possible to view the video picture on your TV in the same way that you watch TV broadcasts. If you have connected the VTR to the TV through the 21-pin scart terminal, then you do not need to follow the procedure mentioned below.

Operations

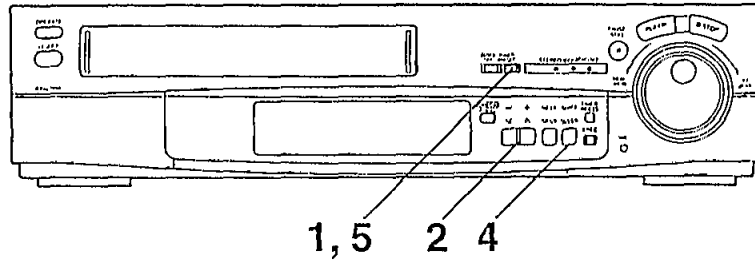
1		Turn on the TV and VTR.
2		To generate a test pattern, set TEST SIGNAL to ON.
3		Set the TV to an unused position which you wish to use for your video playback. • Tune the TV until the test pattern appears on the screen.
4		Set TEST SIGNAL to OFF.

Note:
The test signal is transmitted on channel 36 of the UK broadcasting channels. If you are encountering interference from another broadcast on the video channel, you may readjust to a free channel by using the CH ADJ. screw which is located on the rear of the VTR.

Please note that if the CH ADJ. screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

Storing TV Broadcasts into your VTR

Storing TV Broadcasts into your VTR



Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1 and A2.
- Install the batteries in the remote controller. See page 20.

Operations	Display Symbols	
1 TUNER PRESET	PO: 1	Keep TUNER PRESET pressed until a bleep sound is heard.
2 - +	PO: [dotted]	Search for the TV Station. • If the required station is not displayed, press + or - again.
3 [down] [up]	PO: 1	Select programme position.
4 SHIFT	PO: 1	Memorize the broadcast station. • To memorize the other stations, repeat steps 2 to 4.
5 TUNER PRESET		Press TUNER PRESET.

Note:

- While tuning, your video may lock onto several weak stations from distant transmitters. Should this occur press + or - again until a strong station is received.

Channel Plan

It is recommended that you set the programme positions on the VTR to match the remote controller setting, so when using the Video Plus+ programming the correct broadcast station is recorded.

The table below shows the correct setting:

Programme position	TV station
1	BBC1
2	BBC2
3	ITV
4	Channel 4
A1, A2, 5-20	*Satellite Input

*Satellite input

To receive satellite stations, the satellite receiver must be connected to the VTR and programme position must be set depending on the type of the connection made.

- A1: When the satellite receiver is connected to the AV1 socket
- A2: When the satellite receiver is connected to the Audio/Video input sockets (AV2)
- 5-20: When the satellite receiver is connected by means of the RF coaxial cable. Follow the tuning procedure on page 10.

Tuning Procedure Using the VTR Only

Stations can be tuned in by following the steps given below.

- 1 Press TUNER PRESET until a bleep sound is heard.
- 2 Search for the TV station by pressing + or -, and then press NEXT.
- 3 Select programme position by using + or -.
- 4 Press SHIFT to memorize the broadcast station.
• To memorize the other stations, press NEXT and then repeat steps 2 to 4.
- 5 Press TUNER PRESET.

Setting the Satellite Position on the Remote Controller

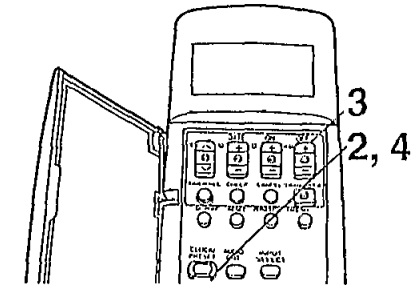
The remote controller must be set to the selected programme position for the satellite receiver, in order to record satellite stations using Video Plus+ programming.

Note:

A satellite receiver cannot be operated using this unit's remote controller.

Preparation

Set the clock of the remote controller first. See page 12.



Operations	Display Symbols
1 Open the door of the remote controller.	0 ON OFF
2 Keep CLOCK/PRESET pressed for 2 seconds or more and then press it again.	000000 SAT 12
3 Select A1, A2 or 5-20.	000000 SAT 5
4 Press CLOCK/PRESET.	0 ON OFF
5 Close the door of the remote controller.	

Setting the Clock of the VTR

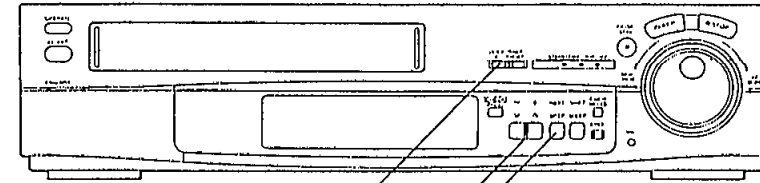
By setting the time on the remote controller's clock and then by transmitting this setting to the VTR, the clocks on both the remote controller and VTR display the same time. The built-in digital clock employs the 24-hour system.

Preparation

- Turn on the VTR.
- Install the batteries in the remote controller. See page 20.

For Example:

Date: 16th, October, 1999
Time: 20:15



In addition to setting the VTR clock from the remote controller, it can also be set directly from the VTR.

Preparation

Turn on the VTR.

For Example:

Date: 16th, October, 1999
Time: 20:15

Operations	Display Symbols	
1		Keep CLOCK SET pressed until a bleep sound is heard.
2	Set each item by pressing + or - and NEXT.	
		Set Year "99".
		Set Month "10".
		Set Date "16".
		Set Hour "20".
		Set Minute "15". • There is no need to press NEXT.
3		Press CLOCK SET . • The clock will start.

Time Reset Function

If the clock is less than two minutes slow or fast, it can easily be reset to the proper time.

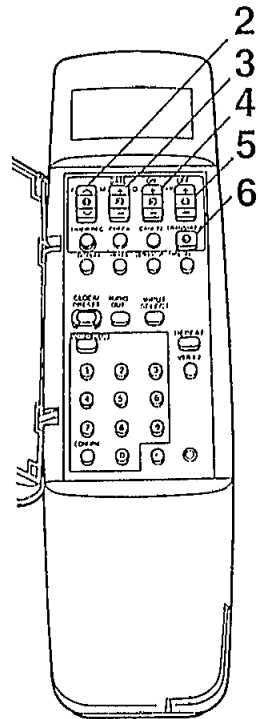
For example: Resetting the clock to 12:00.00.

- 1 Press **CLOCK SET** at any time between 11:58.00 and 12:01.59 until the bleep sound is heard.
- 2 Press **CLOCK SET** again as soon as you hear the 12:00.00 time signal.

Note:

The clock operates for at least 60 minutes by its backup system in the event of power failure.

Operations	Display Symbols	
1		Open the door of the remote controller.
2		Set Year "99".
3		Set Month "10".
4		Set Date "16".
5		Set Time "20:15". • When it is kept pressed, the indication changes in 30-minute steps.
6		Press TRANSMIT .
7		Close the door of the remote controller.



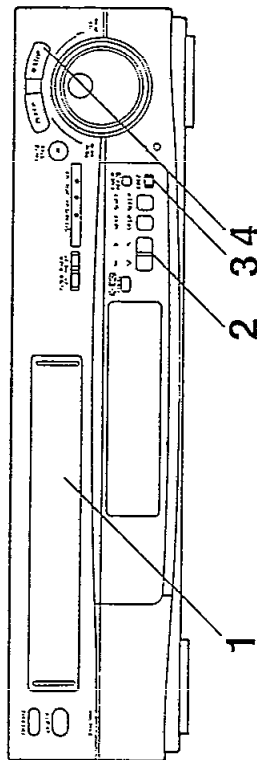
1-17

Note:

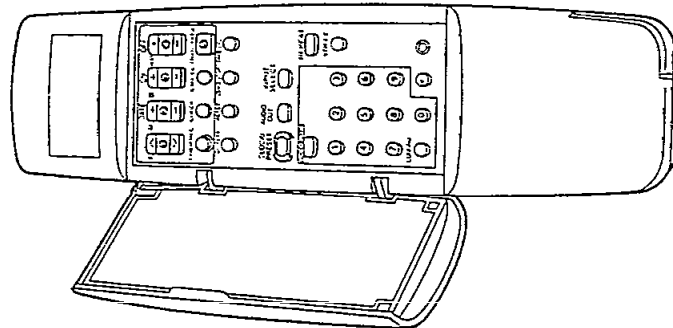
To change the previous clock setting, press **CLOCK/PRESET** for at least 2 seconds. The previous clock setting will be displayed. Then follow steps 2 to 7 above.

On-the-spot Recording

On-the-spot Recording



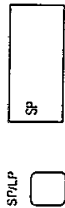
Operations	Display Symbols
1 Insert a cassette tape. • If it has already been inserted, press OPERATE to turn the VTR on.	
2 Select TV station.	
3 Start recording.	
4 Stop recording.	



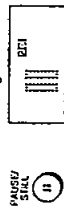
Notes:

- When a video cassette with a broken off tab is inserted, the "ECC" indication will flash to indicate that recording is not possible.
- This recording pause mode will be automatically released after 5 minutes, and be back to the stop mode.

To select the Desired Tape Speed
 Press SP/PLP before recording.



To Interrupt Recording
 Press PAUSE/STILL during recording.
 Press again to continue recording.

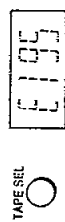


To record One TV Programme while Viewing Another Programme

- 1 Refer to the on-the-spot recording operations steps 1 to 3.
- 2 Select the TV programme on your TV set you wish to view at the present time.

To display the Approximate Remaining Tape Time

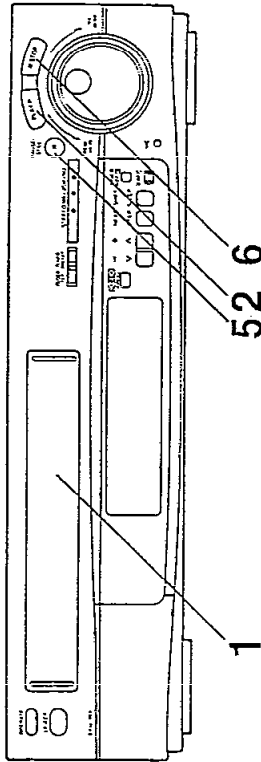
- 1 Press TAPE SEL to select the corresponding cassette tape length.



- E195: For E200, -60, -80, -120, -180 and -195 tapes.
- E240: For E240 tape.
- E200: For E200 tape.

- 2 Press DISPLAY.





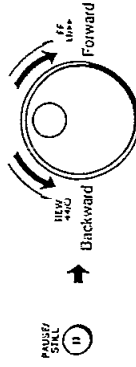
Operations Display Symbols

- 1 Insert a recorded cassette tape.
- 2 Start viewing the picture.
- 3 Search forward by tapping FF.
• To change back to normal playback, press PLAY.
- 4 Search backward by tapping REV.
• To change back to normal playback, press PLAY.
- 5 View a still picture.
• To advance one frame of the still picture, press STILL ADV.
• To continue the normal playback, press PLAY or PAUSE/STILL.
- 6 Stop viewing the picture.

Other Playback Functions

To change the Playback Speed

- Using Shuttle Ring:
- 1 Press PAUSE/STILL.
 - 2 Rotate Shuttle Ring.

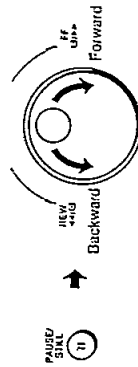


Using Remote Controller:

- 1 Press SE/ATCH.
 - 2 Press FWD or REV repeatedly.
- FWD: To increase the playback speed forward
REV: To increase the playback speed backward
- SEARCH REV FWD
-

To locate the Desired Picture exactly

- 1 Press PAUSE/STILL.
- 2 Turn Jog Dial.

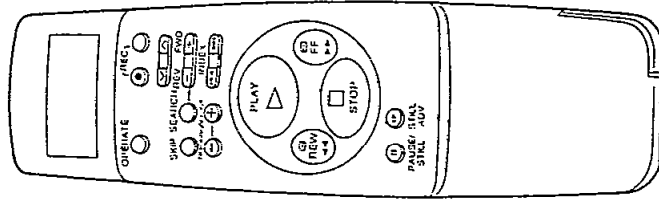


To obtain High Speed Picture during Fast Forward or Rewind

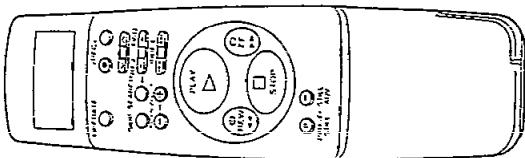
Keep FF pressed during fast forward.
Keep REV pressed during rewind.



• The same operation can also be performed by turning the Shuttle Ring.



Note:
Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.



To Skip Scene

Press SKIP during playback.



- The following 30 seconds will be skipped.
- Each press gives a 30 second's time span up to 4 minutes.

To find the Beginning of Each Recording

For example:
Searching for the 2nd recorded segment in the forward direction.
Press INDEX ►►1 twice.



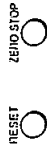
- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press INDEX ◄◄.
- Up to 20 programmes can be searched for in both directions.
- When the incorrect numerical data has been entered, press STOP and enter the correct data.

Recording Index Signals

- Index signals are recorded in following cases.
WRITE indicator appears on the Display.
- When a recording is started by pressing REC.
 - When REC is pressed during recording.
 - When timer recording is activated.

To return to a Specified Scene

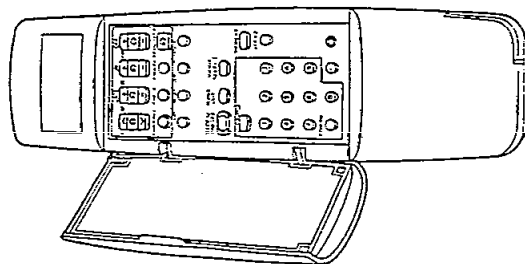
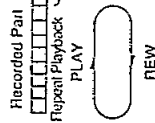
- 1 Press RESET to set the counter to 0:00.00.
- 2 After playback, press ZERO STOP in the stop mode.

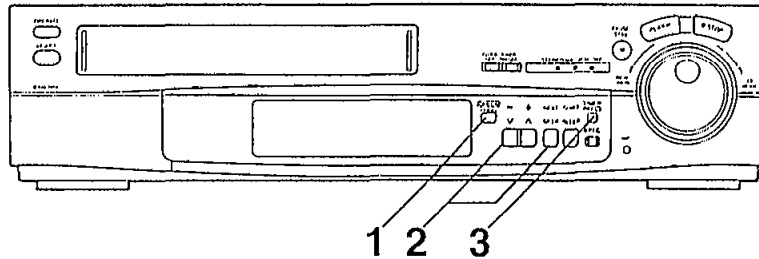


- The tape will be rewound or fast forwarded to 0:00.00.

To playback a Recorded Part repeatedly

Press REPEAT in the stop mode.





Introduction


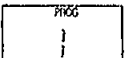









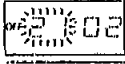

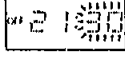


Up to 8 timer programmes can be recorded up to one month in advance by setting the timer, including daily and weekly programmes.

Preparation

Insert a cassette tape with an intact erasure prevention tab.


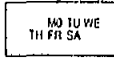
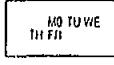
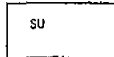
For Example:

Timer programme number; 1
 Programme position (channel); 2
 Date; 27th, October
 Starting time; 20:02
 Ending time; 21:30
 (present date; 16th October)

Operations	Display Symbols	
1	 	Select Timer programme number "1".
2	 	Set Programme position (channel) "2".
	 	Set Date "27". • For daily and weekly recording, see next page.
	 	Set Starting time (hour) "20".
	 	Set Starting time (minute) "02".
	 	Set Ending time (hour) "21".
	 	Set Ending time (minute) "30". • There is no need to press NEXT.
3	 	To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press - repeatedly until the desired day(days) is displayed.

Daily recording From Sunday to Saturday	
From Monday to Saturday	
From Monday to Friday	
Weekly recording For example, Sunday	

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket or the Audio/Video input sockets, select the A1 or A2 indicator for the programme position.

- A1: Through the AV1 socket
- A2: Through the Audio/Video input sockets (AV2)

Selecting the Desired Tape Speed

After step 2, press NEXT and select SP or LP by pressing + or -.

Setting other Programmes In Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

Cancelling a Timer Programme

- Release from the standby mode by pressing TIMER REC.
 - Select the timer programme number to be cancelled by pressing CHECK/PROG.
 - Press + and - simultaneously for more than 3 seconds.
- Note:
 If a timer recording is not performed to the end (due to insufficient tape or cancellation by the user), the programmed timer recording data will be cancelled from the memory by 4 a.m. two days later.
 However, if the Timer Record Function is activated at that time, the programmed timer recording data will be cancelled at 4 a.m. the next day.

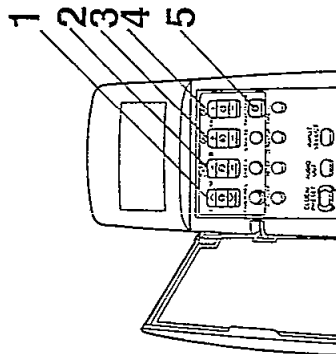
Optional Function

PDC (Programme Delivery Control)

The Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news are inserted, the recording will also be interrupted automatically and resumed when the programme continues.

- This model is not equipped with PDC function. The PDC function becomes operative when the VTR is equipped with the optional PDC decoder. Consult your authorized video dealer.
- If the VTR is equipped with the PDC decoder, the PDC indicator lights when the correct PDC signals are transmitted from the broadcasting station.
- When the unit is set for programmed recording, the PDC indicator lights whether or not PDC signals are transmitted. This indicates that the recording has been programmed with PDC. To programme a recording without PDC, press SHIFT; this cancels the PDC function and turns off the PDC indicator.
- Since PDC signals are received when a recording is programmed using PDC, the power of the unit's tuner section is turned on and the programmed broadcasting is received. When a multiple number of programmes have been programmed for timer recording, all of the broadcasts concerned will be received in sequence. These broadcast pictures can be seen on the video playback channel and AV out (no sound).
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are PDC-controlled), the recording that starts first has always priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the PDC signal drops out because the broadcast signal is weak, or when a broadcasting station does not transmit a regular PDC signal, the timer recording will be performed in the normal mode (without PDC) even if it was programmed for PDC. In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.

Using the Remote Controller



For Example:

Programme position (channel): 2
 Date: 27th, October
 Starting time: 20:02
 Ending time: 21:30

Preparation

- Insert a cassette tape with an intact erasure prevention tab.
- Open the door of the remote controller.

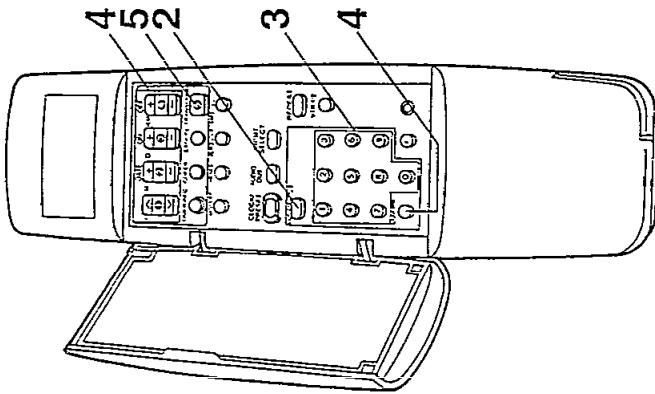
Operations

Display Symbols

- 1 Set Programme position (channel) "2".
- 2 Set Date "27".
- 3 Set Starting time "20:02".
 - When it is kept pressed, the indication changes in 30-minute steps.
- 4 Set Ending time "21:30".
- 5 Press TRANSMIT.
- 6 Close the door of the remote controller.

Programming the Video Plus+ PlusCode

Programming is now easier than ever: simply enter the PlusCode provided in the programme schedule column carried by newspapers and magazines. PlusCodes are numbers which are assigned to each programme listed in the TV programme schedule carried in newspapers and TV guides. When these codes are entered and TRANSMIT is pressed, the codes are converted into the actual programming and sent to the VTR.



Daily Timer Recording

For this timer function, several groups of days can be selected.

- Daily recording from Sunday to Saturday
- Daily recording from Monday to Saturday
- Daily recording from Monday to Friday

In step 3, select the desired days by pressing DATE. For Example, ②

Weekly Timer Recording

In step 3, select the desired day by pressing DATE. For example, SU (Sunday)

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the AV1 socket or the Audio/Video Input sockets, select the A1 or A2 indicator in step 1 for the programme position. A1: Through the AV1 socket. A2: Through the Audio/Video Input sockets (AV2)

Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "G" is lit.
- Press CHECK repeatedly until the desired timer programme number is displayed.
-

Cancelling a Timer Programme

- 1 Press CHECK repeatedly until the desired timer programme number is displayed.
- 2 Press CANCEL.

Note:

The tape speed (SP/LP) cannot be set with the remote controller. Before programming, select SP or LP on the VTR.

Preparation

- Insert a cassette tape with an intact erasure prevention tab.
- Set the programme positions on both the VTR and remote controller as shown on page 11.

Operations

- 1 Open the door of the remote controller.
- 2 Press VIDEO PLUS.
- 3 Enter a PlusCode. Example: 920216
- 4 Press CONFIRM to check that the code corresponds to the right programme.
 - To make any corrections, use buttons 1-4.
- 5 Press TRANSMIT.
- 6 Close the door of the remote controller.

Notes:

- When the PlusCode is used for programming, the recording time may be slightly longer than the actual programme time.
- Repeat steps 2 to 4 if "Err" appears on the remote controller.
- When programming two or more programmes, repeat steps 2 to 5 after pressing TRANSMIT.
- The procedures for checking and canceling whatever has been programmed are the same as for remote control programming.
- The tape speed (SP/LP) cannot be set with the remote controller. Before programming, select SP or LP on the VTR.

Note:
 A satellite receiver cannot be operated using this unit's remote controller.

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.

Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1 or A2.
A1: Through AV1 socket
A2: Through AV2 socket
- Set EDIT to ON.

Operations

- 1 Press PAUSE/STILL.



- 2 Search for the end of the previous recording.



- 3 Set for the new recording by pressing REC.

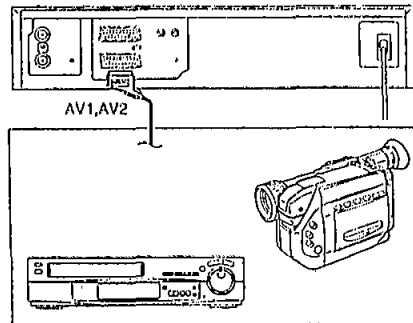


- 4 Start the new recording by pressing PAUSE/STILL again.



Notes:

- The new sound will be recorded on both the normal and Hi-Fi sound tracks, only monaural sound recording is possible on the normal sound track.
- Set EDIT to OFF for ordinary use of the VTR.



Synchronized Editing

It is possible to synchronize the playback start and stop of the Movie Camera with the recording start and stop of this VTR.

- Connect a Movie Camera to this VTR with Synchro Connection Cord (optional). (Type VW-K1E)

- 1 Put the VTR in the recording pause mode by pressing REC and PAUSE/STILL.
- 2 Put the Movie Camera in the still playback mode at the point where you want to start editing.
- 3 Press PAUSE/STILL on the VTR.
• The Movie Camera changes over to the playback mode and the dubbing will start automatically.

Synchronized Editing between the VTRs
When editing from another VTR equipped with Synchro Edit Socket, synchronized start and stop of both VTRs can be activated from this VTR.

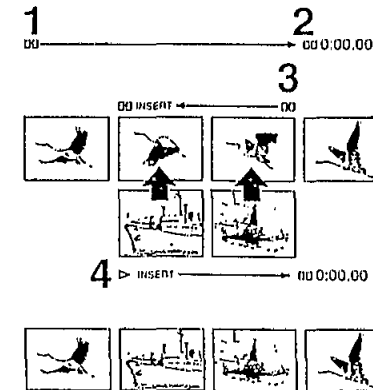
The operation is the same as described for synchronized editing from a Movie Camera.

Insert Editing

This editing method allows a new recorded segment to be inserted into an existing recording to replace an existing segment of the same length.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1 or A2.
- Set EDIT to ON.

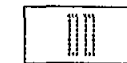


Operations

1



Display Symbols



Press PAUSE/STILL.

2



RESET



Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing RESET.

3

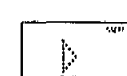


INSERT



Search for the Edit in (starting) point, and press INSERT.
• If you want to replace the sound too, press AUDIO DUB as well.

4



Start insert editing by pressing PAUSE/STILL.
• The insert editing will finish when the counter reaches 0:00.00.

Note:

Insert Editing cannot be used on blank sections of a tape. In this case, use Assembly Editing first.

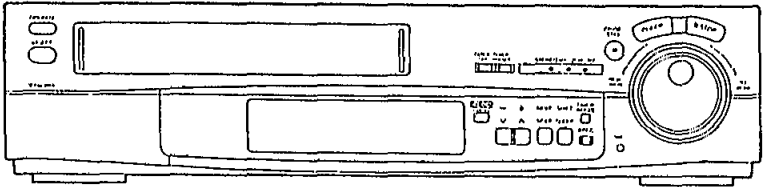
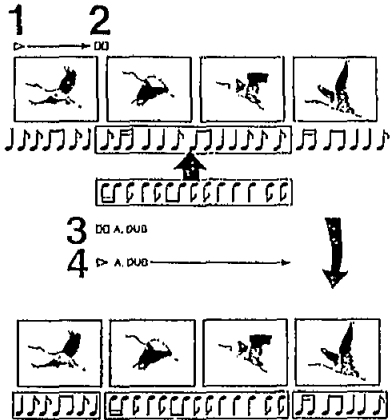
The new sound will be recorded on the Hi-Fi sound track. If AUDIO DUB selected, the new sound will also be recorded on the normal sound track. Only monaural sound recording is possible on the normal sound tracks.

Audio Dubbing


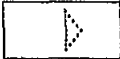



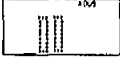

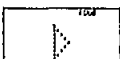
Note that the original sound on the "normal" (mono) sound track will be completely erased during audio dubbing.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1 or A2.



1-24

Operations	Display Symbols	
1	 	Search for the starting point for audio dubbing.
2	 	Press PAUSE/STILL at the starting point.
3	 	Set for audio dubbing by pressing AUDIO DUB.
4	 	Start recording the new sound by pressing PAUSE/STILL. • Stop recording by pressing STOP.

Note:
The new sound will be recorded on the normal sound track of the tape, and the original sound will remain on the HI-FI sound track. Only monaural sound recording is possible on the normal sound track.

To hear the new sound, select the normal sound track by pressing AUDIO OUT.
To hear the new sound and original sound mixed together, set HI-FI/NORMAL MIX to ON.

Playback of NTSC Tape

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

- NTSC is the TV broadcasting system used in U.S.A., Japan, and some other countries.
- PAL is another TV broadcasting system used in U.K., Germany and many other parts of the world.
- This VTR will not replay or record tapes on the SECAM broadcasting system.
- NTSC 4.43 is a modified version of the PAL broadcasting system to allow most UK TV's to reproduce a colour picture when an NTSC tape is replayed on this VTR. However due to the system change, the picture may shrink, roll or not reproduce colour on some televisions.

Note:
Because the NTSC 4.43 is not a true PAL signal, NTSC recordings cannot be dubbed onto another VTR.

Automatic VTR Functions

Automatic Playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off Playback

When the VTR is off, an inserted cassette can be played back by pressing PLAY.

Automatic Rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic Switching Off and Ejection

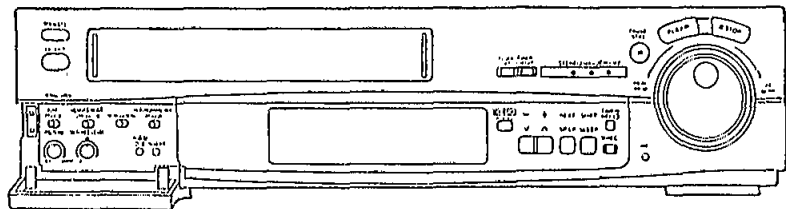
When the VTR is switched off, an inserted cassette can be ejected simply by pressing EJECT. The VTR will eject the cassette and automatically turn itself off again.

Automatic VTR Off Time Setting

Press SLEEP for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press SLEEP repeatedly to set 0:00.



The NICAM Broadcast System

NICAM is a 2 Channel sound broadcast system to provide either a high quality stereo sound track or 2 independent MONO sound tracks, M1 and M2.

NICAM programmes are always accompanied by standard sound broadcasts and you can select the desired sound with NICAM/MONO (when recording) or with AUDIO OUT (when playback).

The NICAM digital stereo sound can only be recorded on the Hi-Fi audio track.

When a stereo, dual-sound track or mono NICAM programme is being received, the indicators are lit to inform you of the type of broadcast.

Reception of a NICAM Stereo Broadcast

When the STEREO indicator is lit, set NICAM/MONO to NICAM to be able to record on the Hi-Fi sound track in stereo.

The Audio cable must also be connected to a stereo TV in order to hear the NICAM sound in stereo.

Reception of a NICAM Dual-Sound Broadcast

When the M1 and M2 indicators are lit, set NICAM/MONO to NICAM if you want to record both channels on the Hi-Fi sound track. M1 is the left-hand channel and M2 is the right-hand channel.

Reception of a NICAM Monaural Broadcast

When a NICAM monaural broadcast is being received, only the M1 indicator is lit. To hear such a signal on both channels and to record it on both channels of the Hi-Fi track, set NICAM/MONO to NICAM.

- To record the regular sound (ordinary normal sound) on the FM audio tracks when a NICAM programme is received, set NICAM/MONO to MONO.

Important Note for the NICAM System:

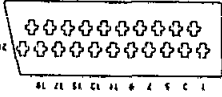
When this VTR tuner is switched on, it will automatically switch to a NICAM broadcast, if NICAM is being transmitted. During test transmissions, it is possible that the sound received doesn't correspond to the picture being viewed. In order to receive a synchronized sound and picture, select monaural sound with either AUDIO OUT or with NICAM/MONO. This will only apply until NICAM transmissions are fully operational.

At this time the NICAM signal is transmitted on stereo channels only, since the M1 and M2 formats are not yet available. Even if the soundtrack is in MONO the stereo indicator will remain illuminated.

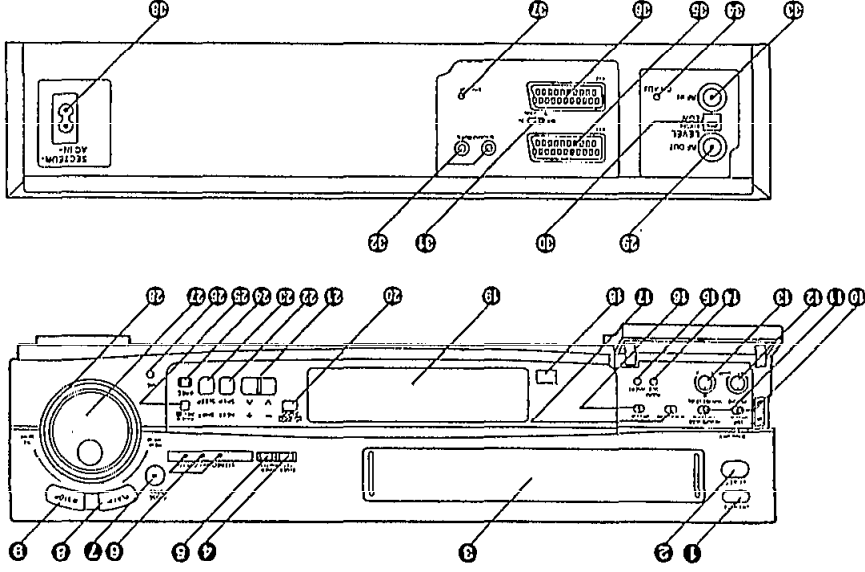
Controls and Connection Sockets

Controls and Connection Sockets

- ① HI-FI/NORMAL MIX
OFF: Normally set at this position to reproduce the better sound available from the Hi-Fi track.
ON: Both sound tracks are played back mixed together. Use this setting when playing back a cassette tape which has been insert edited or audio dubbed.
- ② SHUTTLE RING
In the stop mode: To rewind or fast forward the tape.
In the playback mode: To search picture backward or forward.
In the still playback mode: To adjust playback speed backward or forward.
In the rewind or last forward mode: To obtain high speed picture.
- ③ RF OUT
To connect to the aerial terminal on a TV set.
- ④ LEVEL
Used to adjust the UHF aerial signal strength.
HIGH: For normal position.
LOW: If a diagonal pattern or stripes appear on the picture.
- ⑤ TEST SIGNAL
The test signal is transmitted on channel 36.
- ⑥ AUDIO OUT
To connect the audio cable to a TV or another video recorder.
- ⑦ RF IN
To connect to the external aerial.
- ⑧ CH ADJ.
To adjust the RF transmitting channel 30-42.
- ⑨ AV1/AV2
This 2-pin scart terminal carries input and output signals for both picture and sound. TV sets equipped with a similar socket can be connected here.
This is also called Scart Euro Connector.
- ⑩ AUDIO OUTPUT 8 SWITCHING VOLTAGE
1 AUDIO INPUT 17 VIDEO GROUND
2 AUDIO INPUT 19 VIDEO OUTPUT
3 AUDIO OUTPUT 21 GROUND
4 AUDIO GROUND VIDEO INPUT
5 AUDIO INPUT 21 GROUND
- ⑪ SYNC. EDIT
Connecting to Movie Camera equipped with Synchro Edit Function.
- ⑫ AC IN~
To connect to the main power supply.



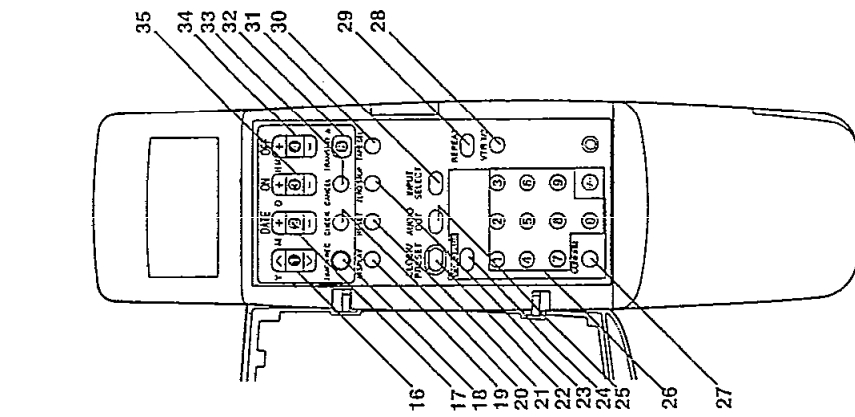
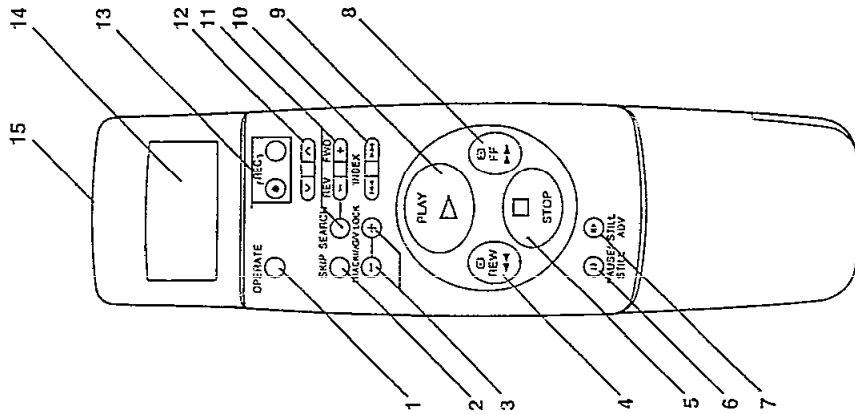
- ⑬ HI-FI/NORMAL MIX
OFF: Normally set at this position to reproduce the better sound available from the Hi-Fi track.
ON: Both sound tracks are played back mixed together. Use this setting when playing back a cassette tape which has been insert edited or audio dubbed.
- ⑭ NICA/MONO
Normally set at this position to record the normal sound during a NICA/M broadcast or if the stereo sound is distorted due to inferior reception conditions.
- ⑮ Infra-red Remote Control Receiver Window
Display
- ⑯ CHECK/PROG
To select a timer programme number, "1, 2, 3..." or "A" is lit.
- ⑰ -H/V
To set the clock and timer recording.
To select the required programme position (TV station).
- ⑱ NEXT/SPLP
To proceed to the next item during selling procedure.
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.
- ⑲ SHIFTSLEEP
To blank unoccupied programme position.
To set the time to turn off the VTR automatically.
- ⑳ REC
To start a recording.
- ㉑ TIMER REC
To turn the timer recording function on and off.
If it is lit or not lit.
Once operating timer recording function, the normal VTR operation is not possible unless this button is set to off.
- ㉒ MIC
To connect a microphone for recording.
Then, this socket has priority.
- ㉓ Jog Dial
To locate any desired frame with utmost precision.
- ㉔ AUDIO DUB
To set up the VTR for audio dubbing.
A.DUB indicator lights up.
- ㉕ INSERT
To set up the VTR for insert editing.
INSERT indicator lights up.
- ㉖ STOP
To stop any playback or recording.
- ㉗ PLAY
To start playback, "<" is lit.
- ㉘ PAUSE/STILL
During playback: Still picture.
During recording: To interrupt recording.
In the stop mode: Still picture.
- ㉙ Indicator Lamps for M1, M2 and Stereo Reception
When receiving a TV programme, automatically indicates when a TV programme is broadcast with the NICA/M sound system.
- ㉚ OPERATE
To turn the VTR on and off.
- ㉛ EJECT
To eject a video cassette.
- ㉜ Cassette Compartment
Insert a video cassette here.
- ㉝ CLOCK SET
To set the time.
- ㉞ TIMER PRESET
To initiate TV station settings for the tuner.
- ㉟ PICTURE
To make picture sharper (SHARP) or softer (SOFT).
- ㊱ HI-FI REC LEVEL
To adjust the recording level to peak at 1-1 uB on the recording level indicator.
- ㊲ AUDIO DUB
To set up the VTR for audio dubbing.
A.DUB indicator lights up.
- ㊳ INSERT
To set up the VTR for insert editing.
INSERT indicator lights up.
- ㊴ STOP
To stop any playback or recording.



This gives a detailed explanation of the function of each button, switch and connection socket.

Infra-red Remote Controller

Infra-red Remote Controller



- 1 OPERATE To turn the VTR on and off.
- 2 SKIP To start cue playback in 30 seconds intervals during playback.
 - Each press gives a 30 seconds time span up to 4 minutes.
- 3 TRACKING-V-LOCK For manual tracking adjustment The + and - buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.
- 4 REW (REWIND) In the stop mode: To rewind the tape. In the playback mode: To search backward. In the rewind mode: To obtain high speed picture. "◀◀" is lit.
- 5 STOP To stop any playback or recording.
- 6 PAUSE/STILL During playback: Still picture. During recording: To interrupt recording.
- 7 STILL ADV To advance a still picture during still playback. In the stop mode: To fast forward the tape. In the playback mode: To search forward. In the last forward mode: To obtain high speed picture. "▶▶" is lit.
- 8 FF (FAST FORWARD) To start playback. "▶▶" is lit.
- 9 PLAY To start playback. "▶" is lit.
- 10 INDEX For the index search function.
- 11 SEARCH To adjust the playback speed backward or forward.
- 12 ◀ ▶ To select the required programme position (TV station).
- 13 REC To start a recording.
- 14 Display Infra-red Transmitter The programming data are transmitted from here to the VTR.
- 15 16 ◀ ▶ (V) To programme a timer recording. To set the clock.
- 17 DATE (M) To programme a timer recording. To set the clock.
- 18 TIMER REC To turn the timer recording function on and off. [] is lit or not lit.
- 19 DISPLAY To change the indication on the VTR Display. Clock-Counter-Remaining Tape Time
- 20 CHECK To check timer programmes.
- 21 RESET To reset the tape counter (elapsed time) to "0:00:00". The tape counter is automatically reset to "0:00:00" when a video cassette is inserted.
- 22 CLOCK/PRESET To set the clock. To set the satellite position.
- 23 ZERO STOP For the zero stop function.
- 24 VIDEO PLUS To programme a Video Plus+ PlusCode.
- 25 AUDIO OUT To select the desired sound mode. At the very push of this button, the audio output mode changes as follows. Stereo-Left-Right-Normal audio track and the Left and Right indicators show which sound mode is selected in the following way. Stereo: Both the Left and Right indicators are lit. Left: The Left indicator is lit. Right: The Right indicator is lit. Normal: Both the Left and Right indicators are not lit.
- 26 Programme Position Selector Buttons To select the programme positions. 9: 9 19: 19 1-1 1-1 To enter a PlusCode.
- 27 CONFIRM To convert the data of a PlusCode.
- 28 VTR1/2 VTR 1: Set to this position on both the VTR and remote controller for normal use with one VTR. VTR 2: Set to this position when using two Panasonic VTRs. This allows the remote controller to be set for operating VTR 1 or VTR 2.
- 29 REPEAT For the repeat playback function
- 30 INPUT SELECT To select the "A1" or "A2" external recording source.
- 31 TAPE SEL To set the cassette tape length in order to obtain correct indication of the remaining tape time. E195: For E30, -60, -90, -120, -180 and -195 tapes. E240: For E240 tape. E260: For E260 tape.
- 32 TRANSMIT To transmit the data that has been set on the remote controller to the VTR.
- 33 CANCEL To cancel the settings made for a timer recording.
- 34 OFF (H:M) To programme a timer recording. To set the clock. To set the satellite position
- 35 ON (D) To programme a timer recording. To set the clock.

- For slow tracking adjustment When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "-" button to reduce the noise bars.
- For vertical locking adjustment Use the + and - buttons to minimize any vertical jitter during still-picture playback.

Caution for AC Mains Lead

Power Source for the Remote Controller

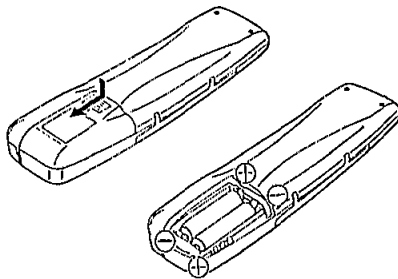
The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

- When whatever appears on the display becomes faint, please replace the batteries with new ones.

Precautions for Battery Replacement

- Load the new batteries with their polarity (+ and -) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

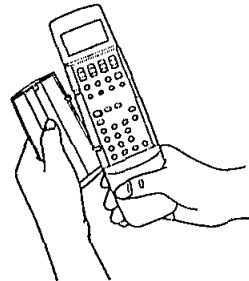
Installing the Batteries



How to refit the Remote Controller Door

If the door of the remote controller is forced to open too much, it may come off. In this case, please follow the steps below.



- 1 Refit the lower part of the door.



- 2 Insert the upper part of the door until it locks with a click.



For your safety please read the following text carefully

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS 1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

IMPORTANT


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

- Blue: Neutral
- Brown: Live



As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

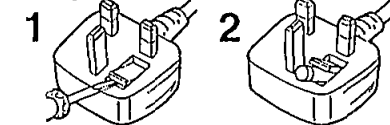
Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol .

How to replace the Fuse

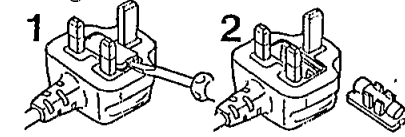
• There are two types of the supplied AC Mains Lead:  and  as shown below.

- 1 Open the fuse compartment with a screwdriver.
- 2 Replace the fuse and fuse cover.

TYPE 



TYPE 



Memo

SECTION 2 ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

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

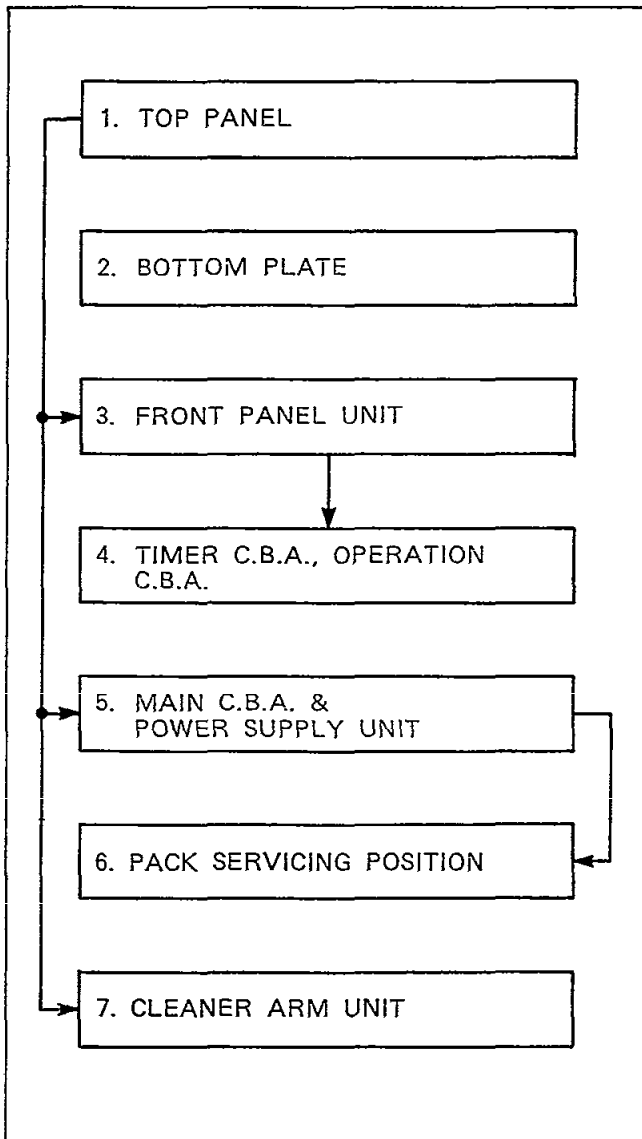


Fig. D1

1. REMOVAL OF THE TOP PANEL

Remove.....4 Screws(A)

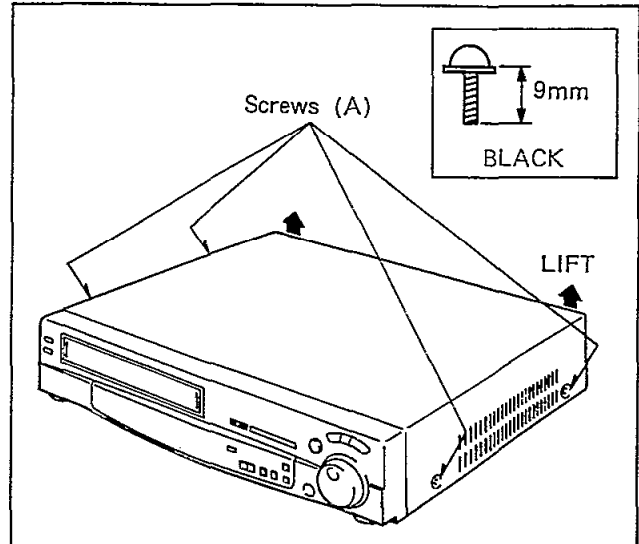


Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove.....6 Screws(B)

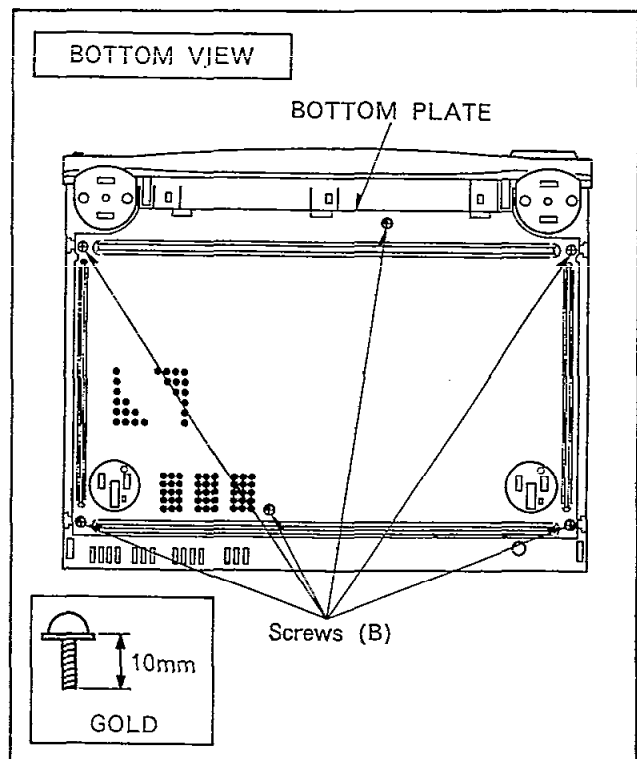


Fig. D3

SECTION 2

3. REMOVAL OF THE FRONT PANEL UNIT

Pull out...Jog&Shuttle knob
 Remove.....Screw(C)
 Unlock.....8 Tabs(D)

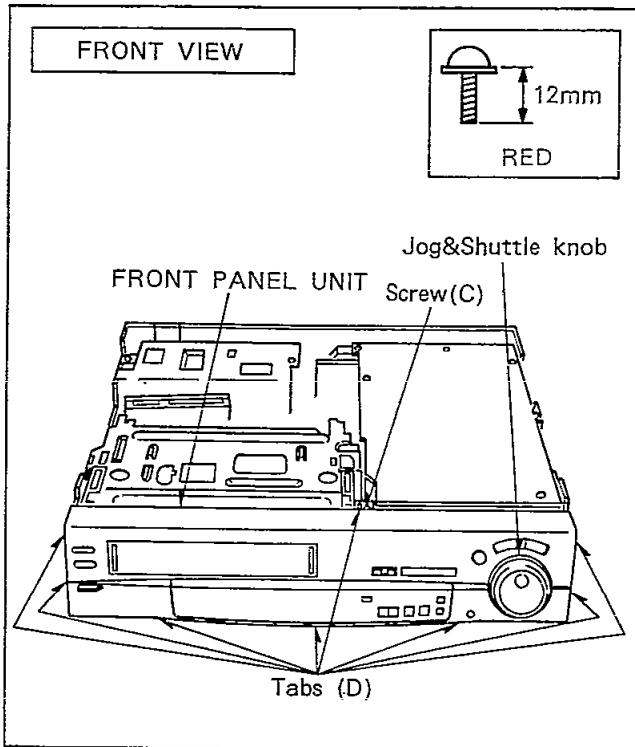


Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & THE OPERATION C.B.A..

Unlock.....8 Tabs(E)

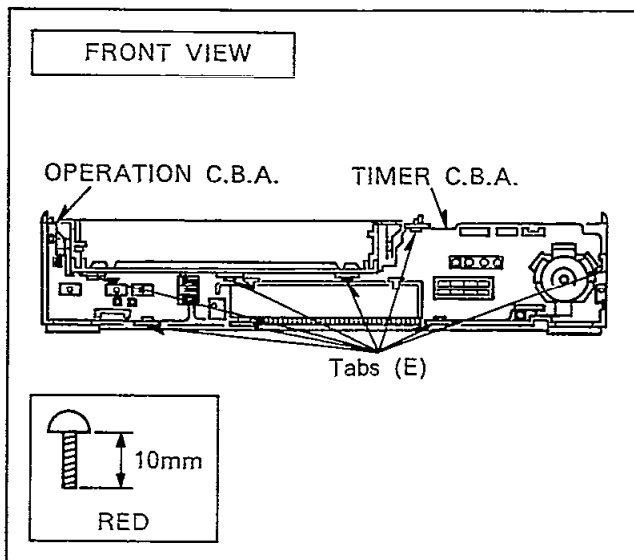


Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & THE POWER SUPPLY UNIT

REMOVAL OF THE MAIN C.B.A.

Remove.....3 Screws(F)
 Remove.....2 Screws(G)
 Unlock.....Tab(H)

REMOVAL OF THE POWER SUPPLY UNIT

Remove.....2 Screws(I)
 Remove.....Screw(J)

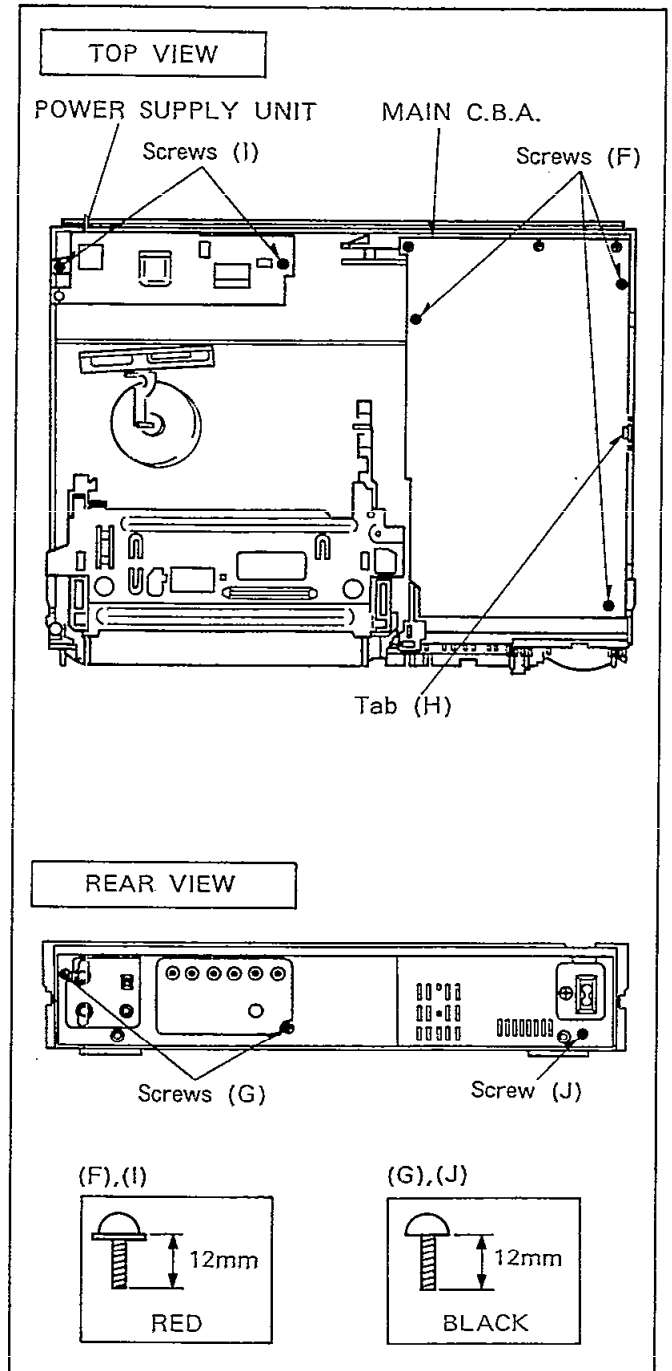


Fig. D6

6. PACK SERVICING POSITION

CAUTION:

Confirm the isolation between Mechanical Chassis and Main C.B.A. before connecting Main AC.

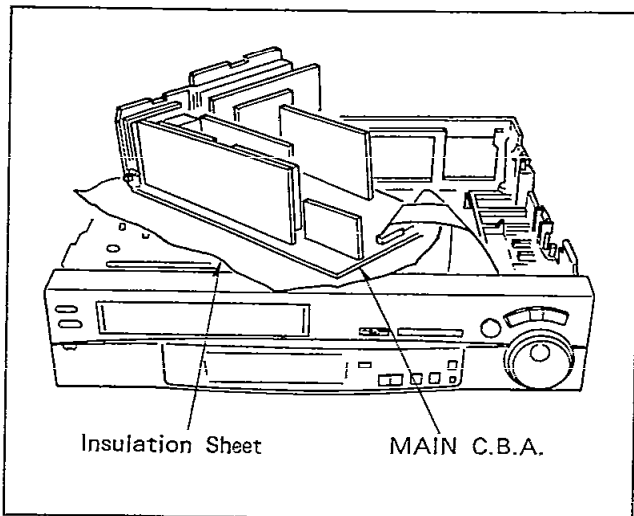


Fig. D7

7. REMOVAL OF THE CLEANER ARM UNIT

1. Unlock the locking portion(K).
2. Pull up the Cleaner Arm Unit.

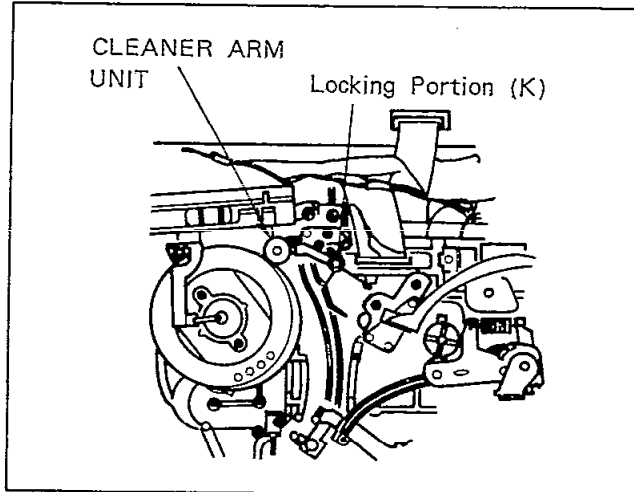


Fig. D8

2-2. MECHANICAL ADJUSTMENT PROCEDURES

2-2-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

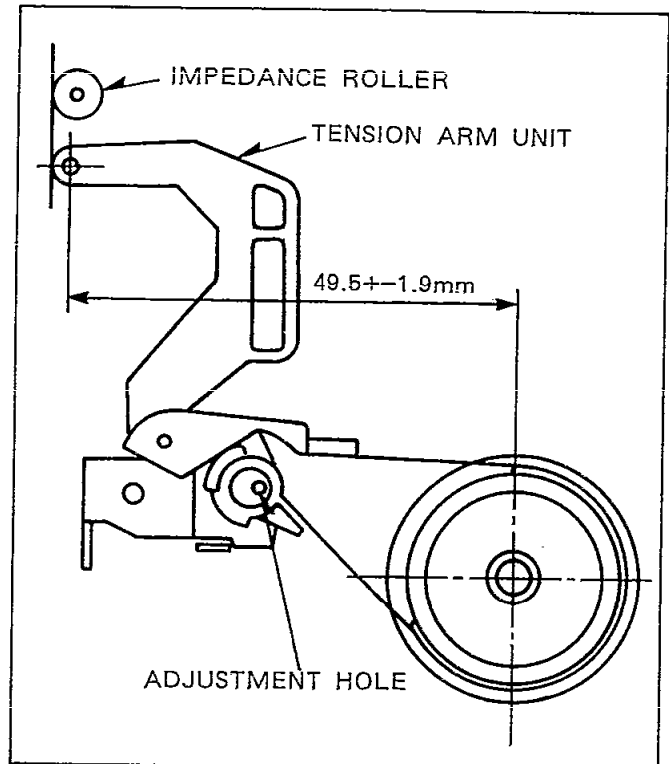


Fig. M1

2-2-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape:PAL)
(120 minutes tape:NTSC)

(Specification)
22.5-27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
(for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2.

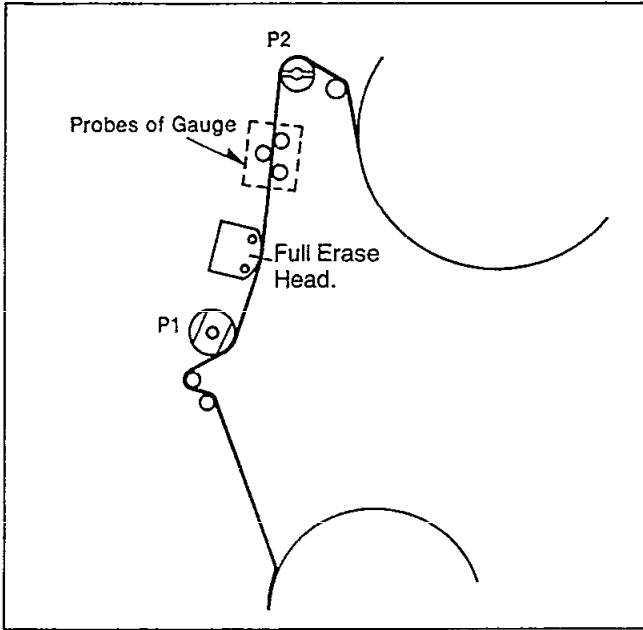


Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

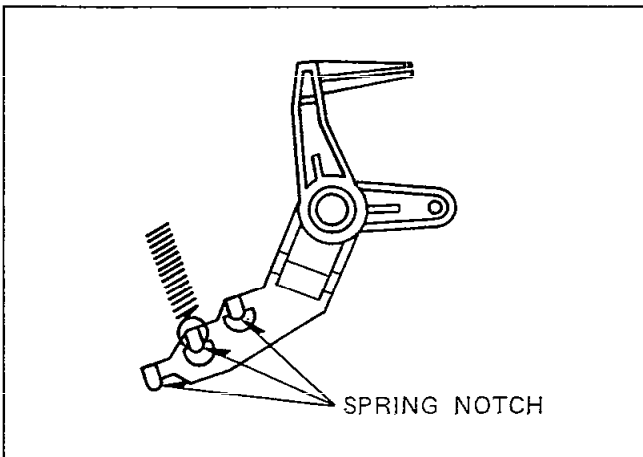


Fig. M3

2-2-3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

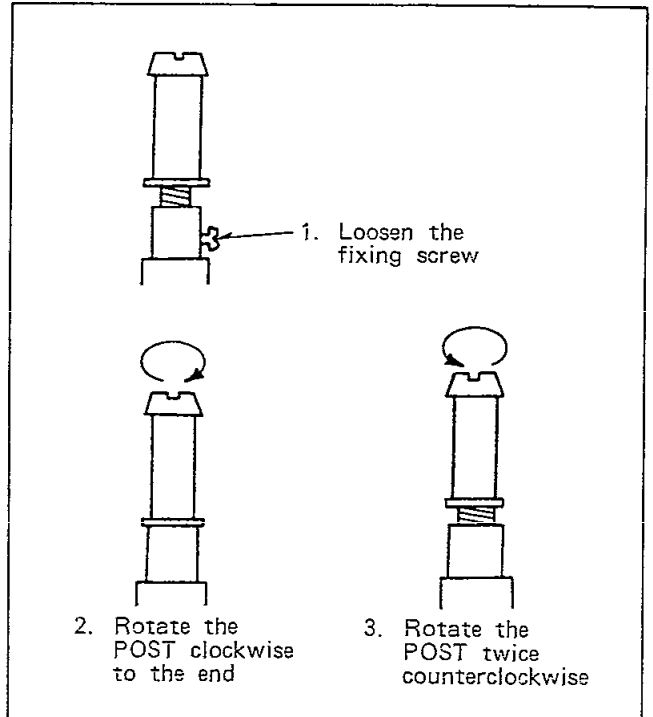


Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

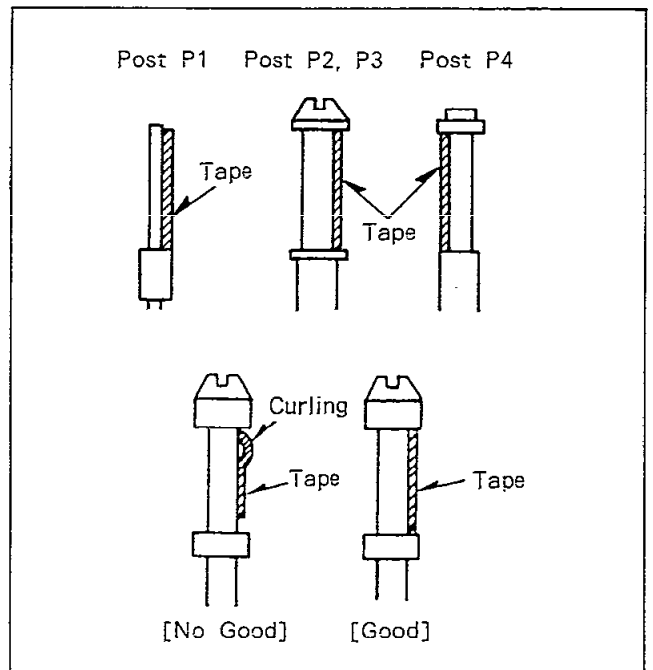


Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-2-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Carry out the following procedures for Tape interchangeability Adjustment to do it correctly and smoothly.

- (1) Adjustment of P2 and P3 Posts.
- (2) Height Adjustment of A/C Head (1).
- (3) Height Adjustment of A/C Head (2).
- (4) Fine-Adjustment of A/C Head
- (5) Horizontal Position Adjustment of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:

To mark a Adjustment Mode for Tape Interchangeability, connect a Cut Jumper Wire as shown in Fig.M6.
(Auto Tracking is turned off.)
After finishing the adjustment, disconnect the Cut Jumper Wire.

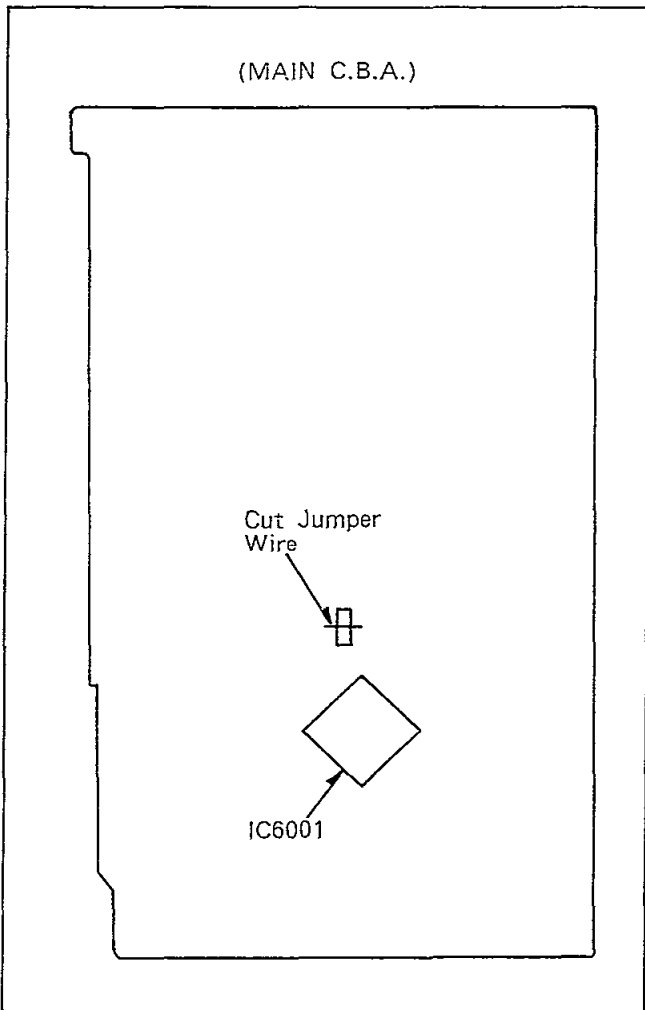


Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape(PAL/SECAM:VFJ8125H3F,
NTSC:VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

- 1. Set the tracking control into the fix position. (by pressing the tracking (+) and (-) button simultaneously on the Remote Controller)
And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:

To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

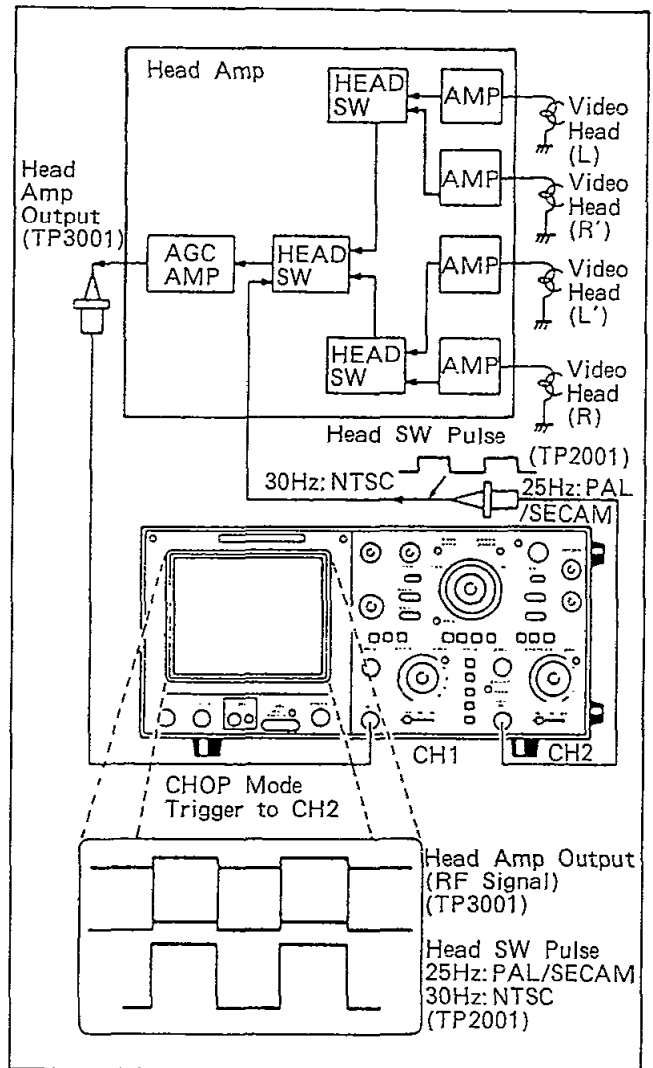


Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2:Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8--"C".

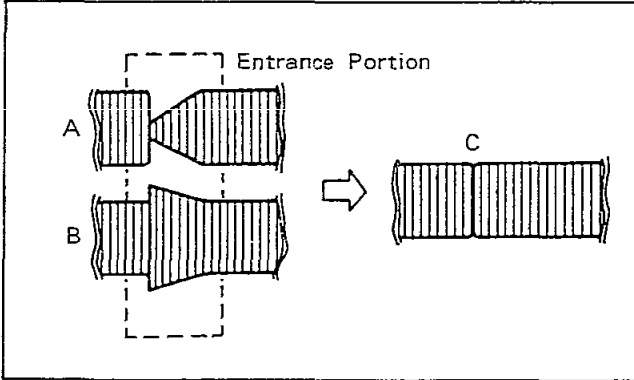


Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3:Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9--"F".

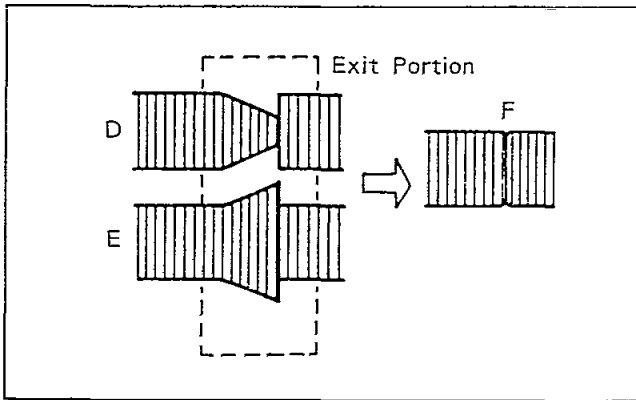


Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or - button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope, whilst being as flat as possible.

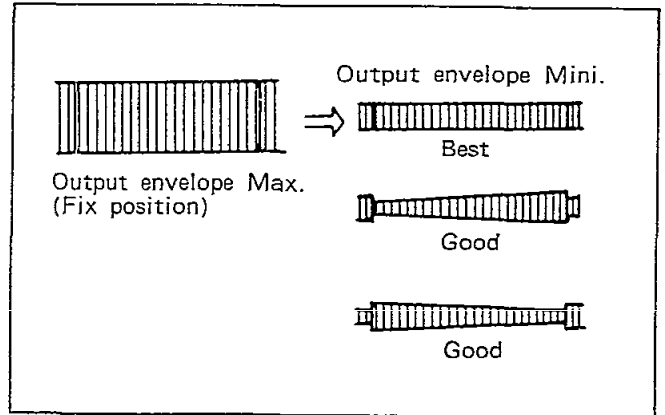


Fig. M10

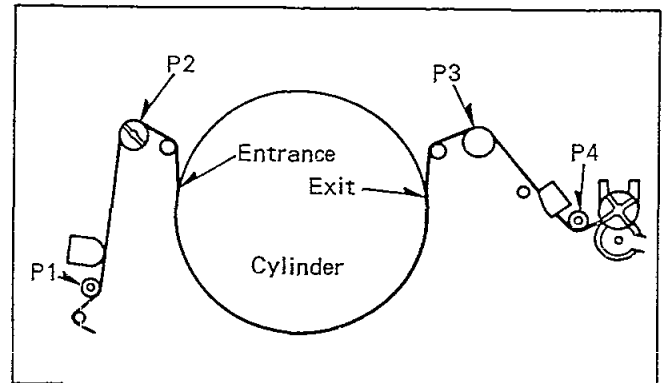


Fig. M11 Loading of Posts

(2) Height Adjustment of A/C Head (1)

- 1) Install the A/C HEAD on the A/C HEAD BASE(E) by 3 screws (A),(B) and (C) with springs.
- 2) Tighten the screw (A) until it touches chassis and then rotate the SCREW (A) counterclockwise for approx. 1.5 times.
- 3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE(D) and (E) is separate.

CAUTION:

When adjusting the Screws (B) and (C) on the A/C HEAD BASE(E), do not touch the Screw Driver to the face of the A/C HEAD.

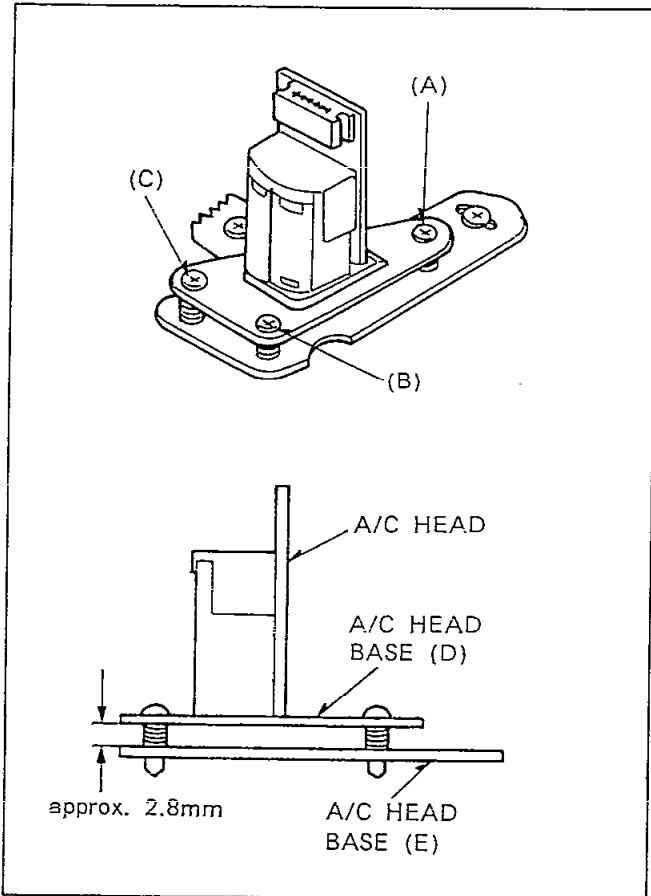


Fig. M12

(3) Height Adjustment of A/C Head (2)

- 1) Playback the alignment tape.
- 2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
- 3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
- 4) Connect the oscilloscope to audio output terminal.
- 5) Rotate the screw (C) until audio signal is maximized.

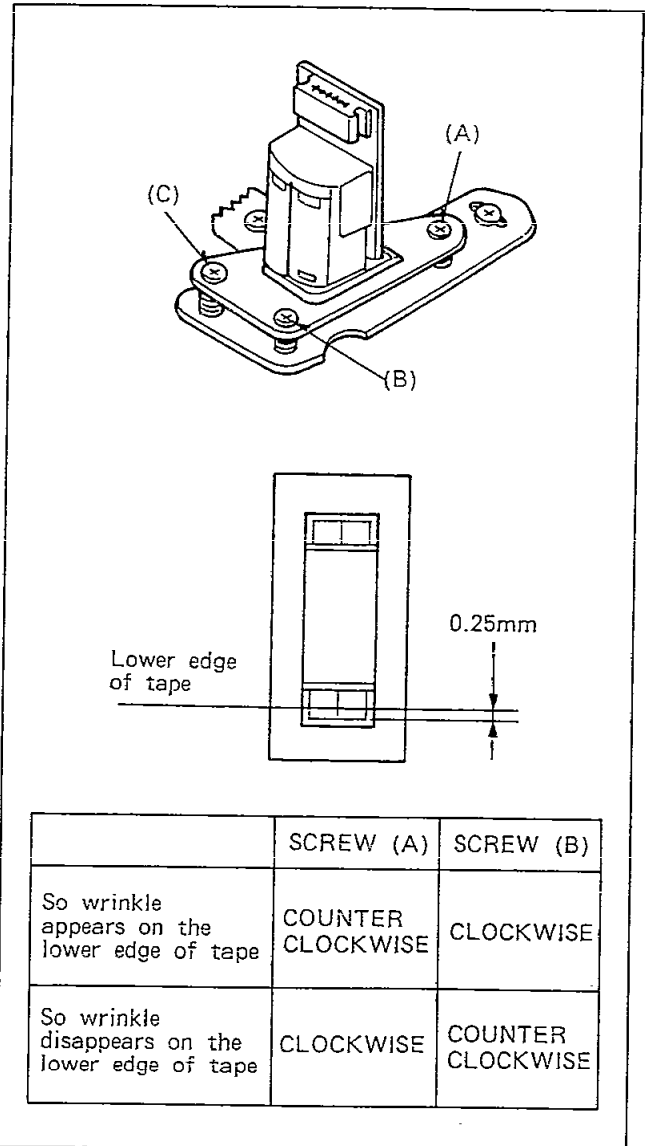


Fig. M13

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

- 1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
- 2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
- 3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

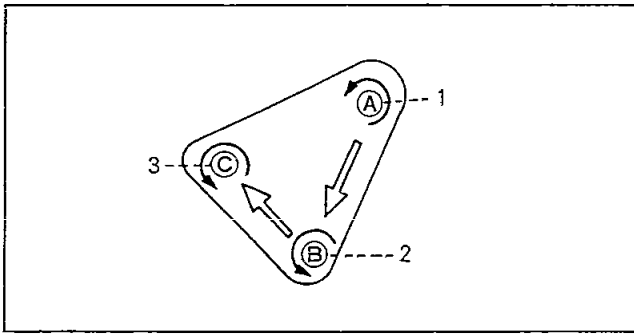


Fig. M14

<When moving the A/C HEAD down>

- 1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 post.
- 2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
- 3) Rotate the screw (C) clockwise until the audio signal is maximized.

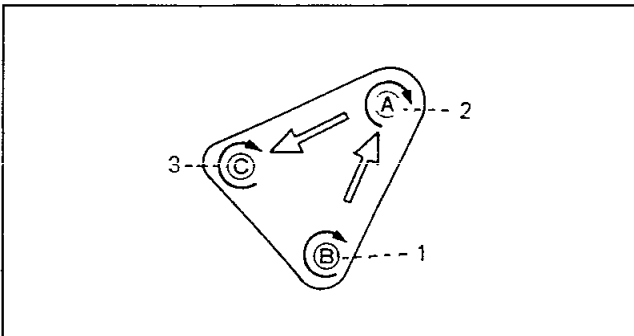


Fig. M15

(5) Horizontal Position Adjustment of A/C HEAD

- 1) Set the tracking control into the centre fix position. (by pressing the tracking (+) and (-) button simultaneously on the Remote Controller)
- 2) Connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.
- 3) Playback the alignment tape.
- 4) Loosen the 2 screws (F) and (G).
- 5) Adjust the A/C HEAD BASE (E) until the RF envelope waveform is maximized.

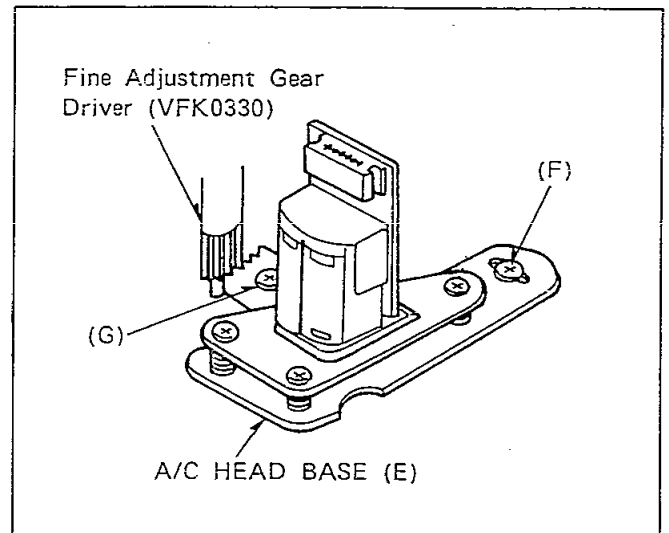


Fig. M16

Head Amp Output (RF Signal)

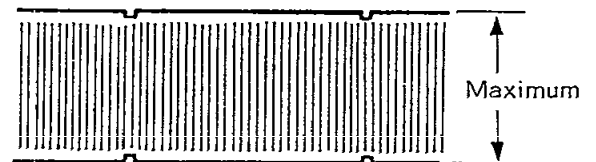
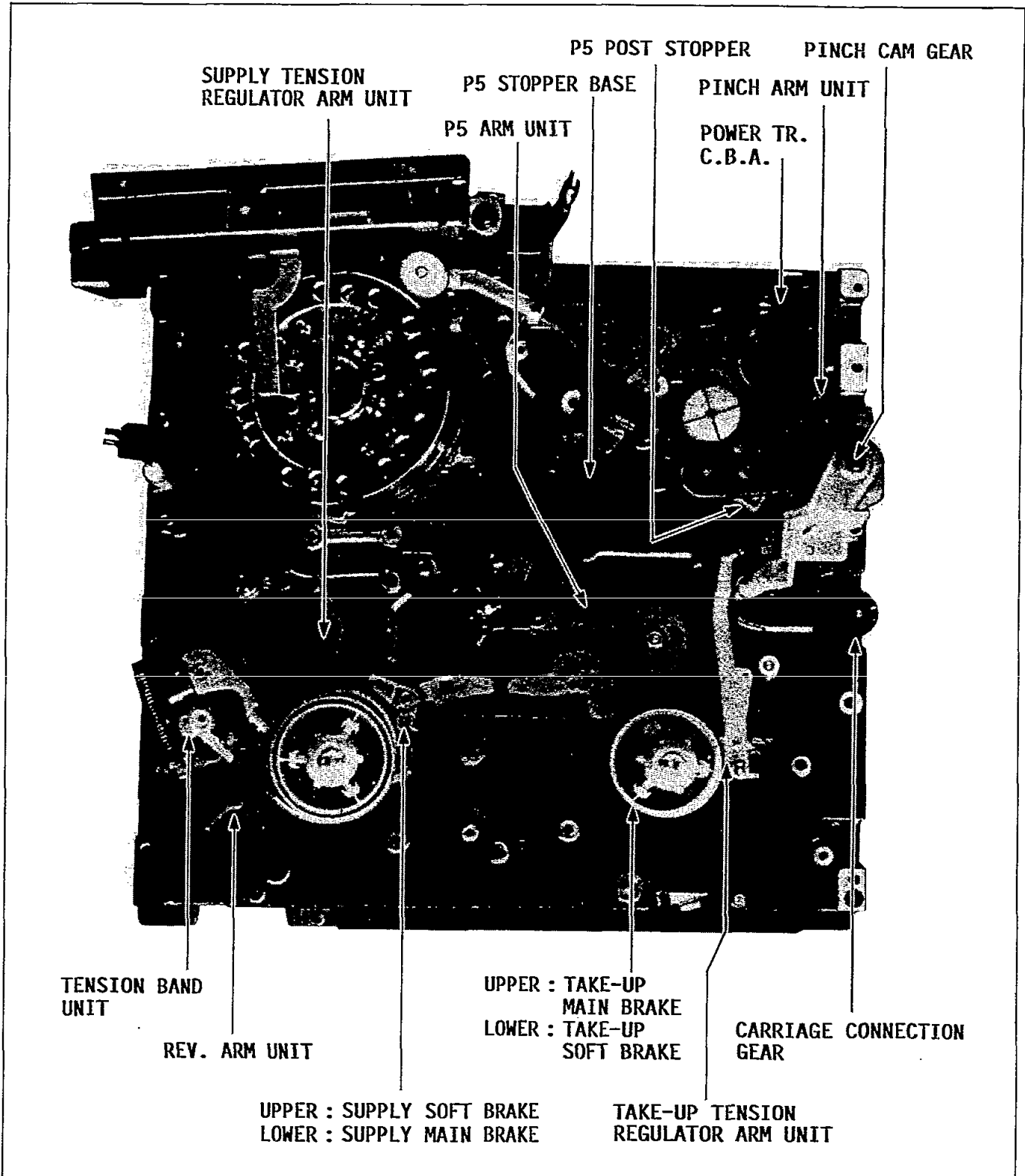


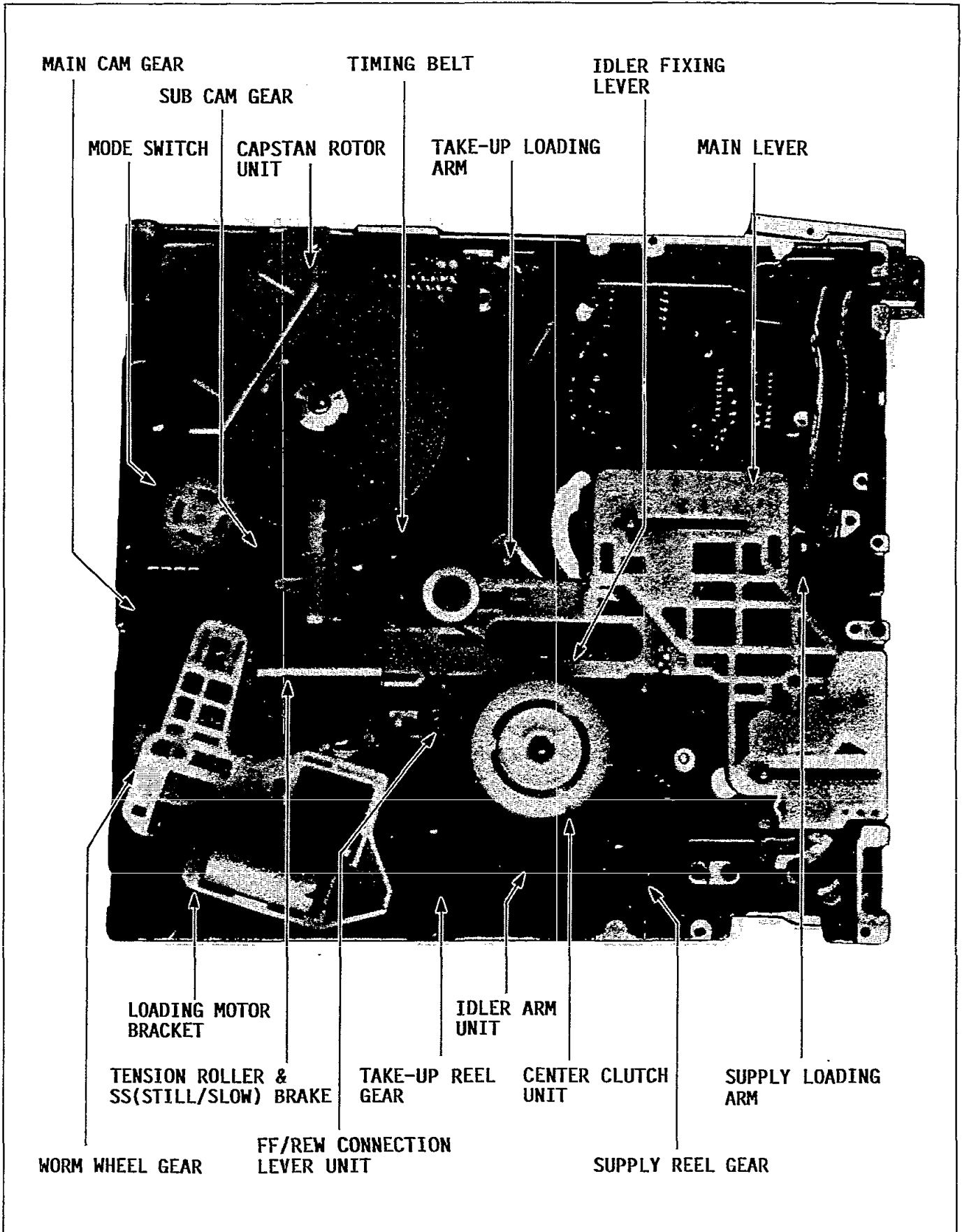
Fig. M17

2-3. DISASSEMBLY PROCEDURES OF MECHANISM

In order to remove the mechanism components it is first necessary to remove the mechanism chassis.



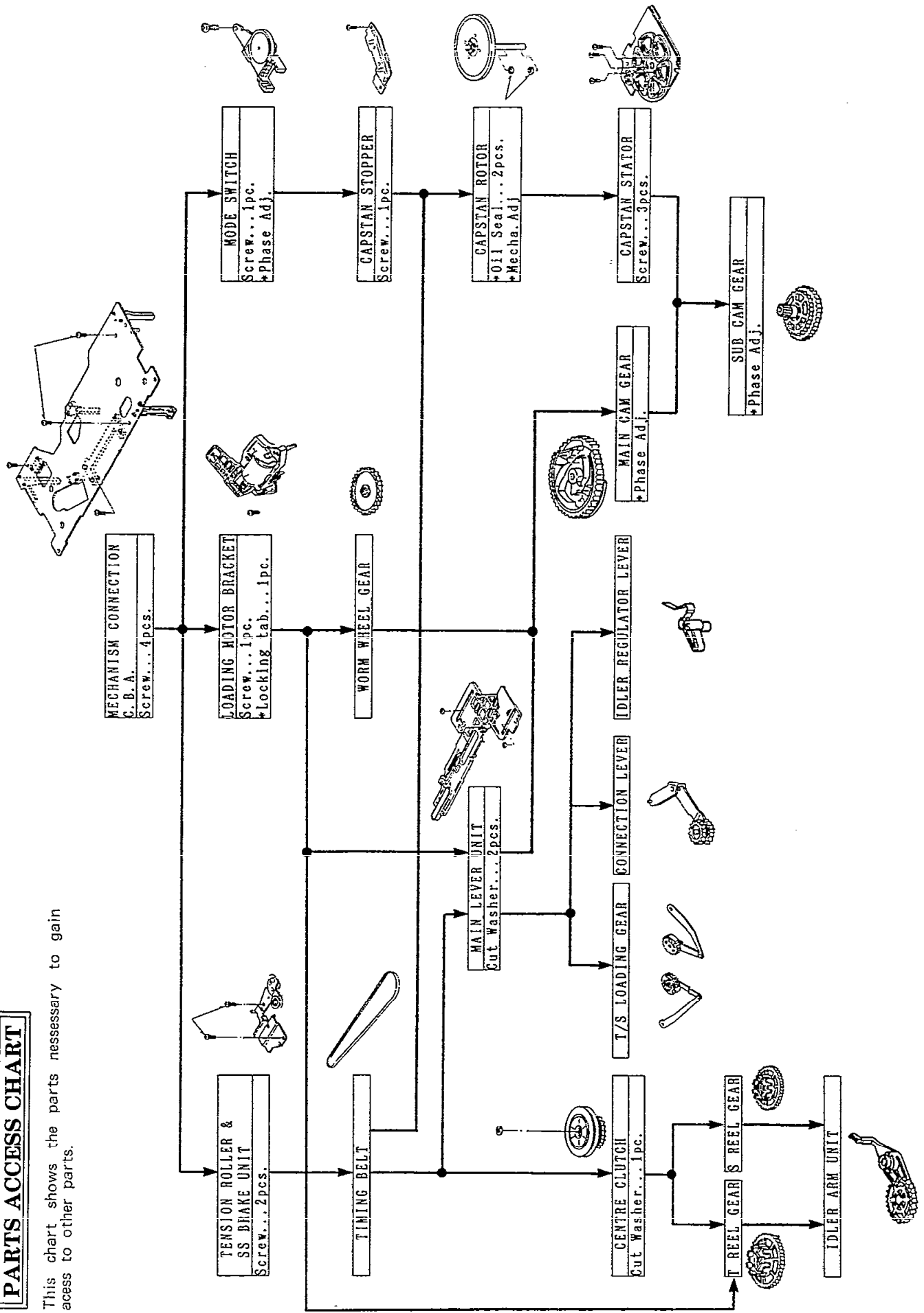
Top View of K Mechanism



Bottom View of K Mechanism

PARTS ACCESS CHART

This chart shows the parts necessary to gain access to other parts.



2-3-1. REMOVAL OF THE MECHANISM CHASSIS

- 1) Remove the 2 screws(A) push the HOLDER PLATE slightly to the rear of mechanism.
- 2) Remove the screw(B).
- 3) Disconnect all cables and connectors on the mechanism chassis and connector P6003 on the MAIN C.B.A.(connecting to DEW SENSOR). (Use extreme care when disconnecting the P1508)
- 4) Lift the mechanism chassis out of the unit.

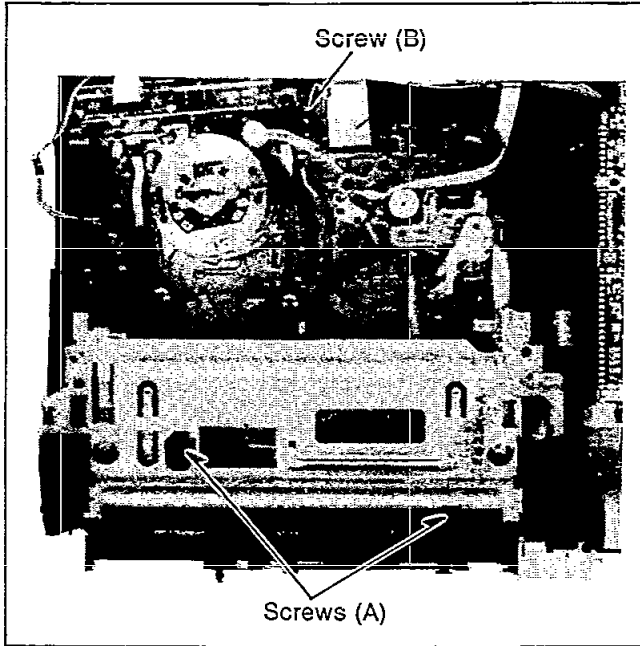


Fig. A1

2-3-2. REMOVAL OF THE MECHANISM CONNECTION C.B.A.

- 1) Remove the 4 screws(C).
- 2) Lift up on the C.B.A.

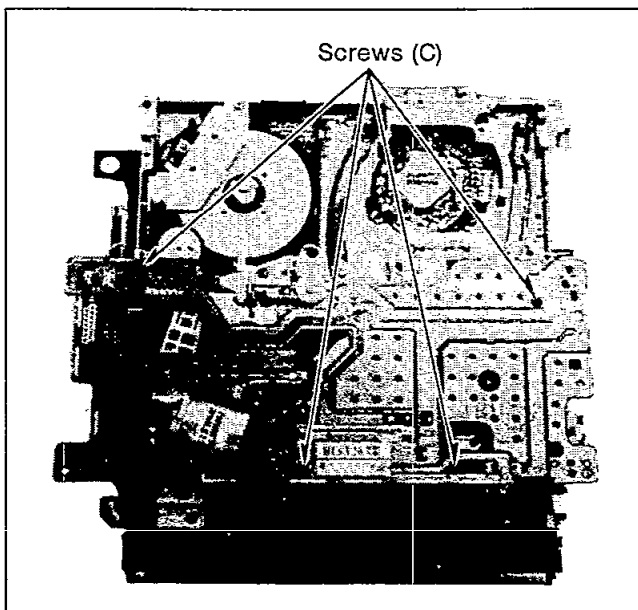


Fig. A2

2-3-3. REMOVAL OF THE TENSION ROLLER AND SS BRAKE

- 1) Remove the 2 screws(D).
- 2) Remove the TENSION ROLLER and the SS BRAKE.

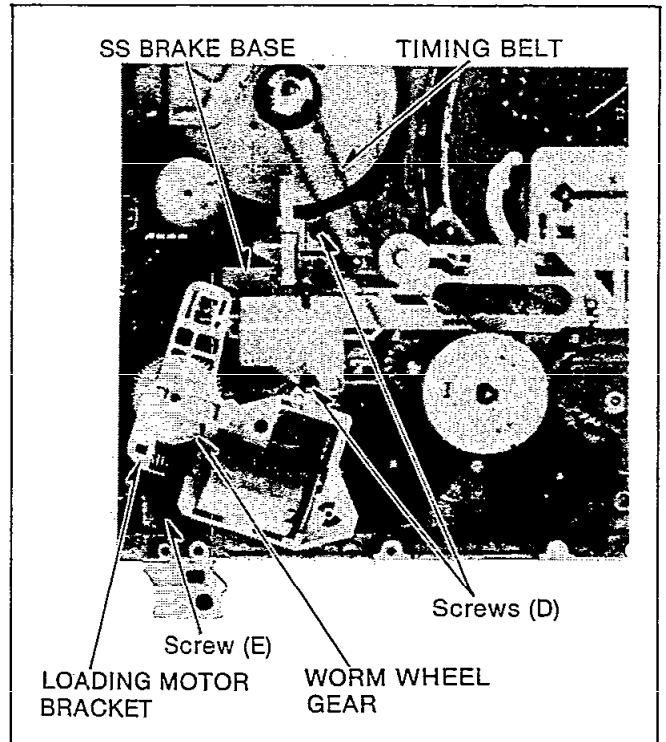


Fig. A3

2-3-4. REMOVAL OF THE TIMING BELT

- 1) Remove the TIMING BELT.

2-3-5. REMOVAL OF THE LOADING MOTOR BRACKET

- 1) Remove the screw(E) as shown in Fig.A3.
- 2) Disconnect the locking tab on the right by pushing the locking tab in as shown in Fig.A4.
- 3) Lift up on the LOADING MOTOR BRACKET and push the BRACKET towards the MAIN CAM GEAR as shown in Fig.A3.
- 4) Lift the WORM WHEEL GEAR off the shaft.

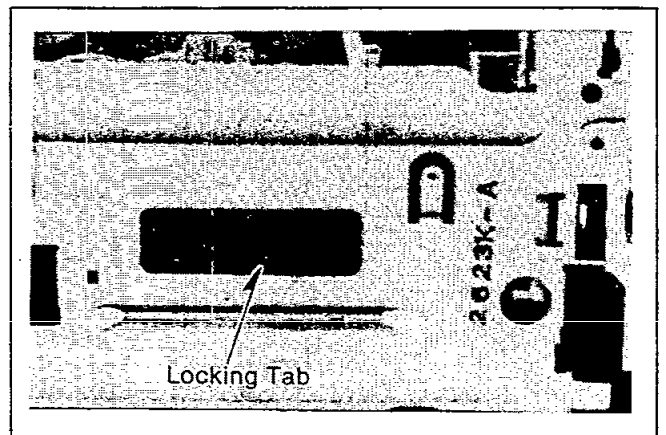


Fig. A4

2-3-6. REMOVAL OF THE MAIN LEVER UNIT

- 1) Remove the 2 cut washers.
- 2) Remove the MAIN LEVER UNIT.

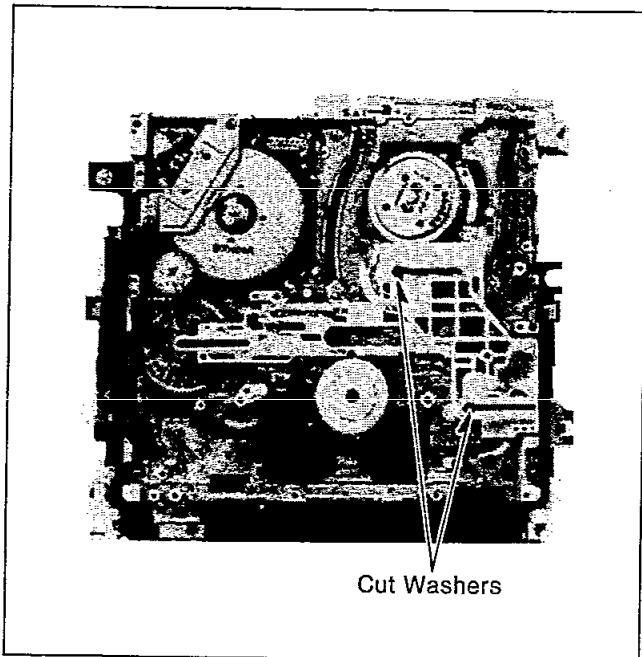


Fig. A5

2-3-8. REMOVAL OF THE MODE SWITCH

- 1) Remove screw (F).
- 2) Remove the MODE SWITCH.

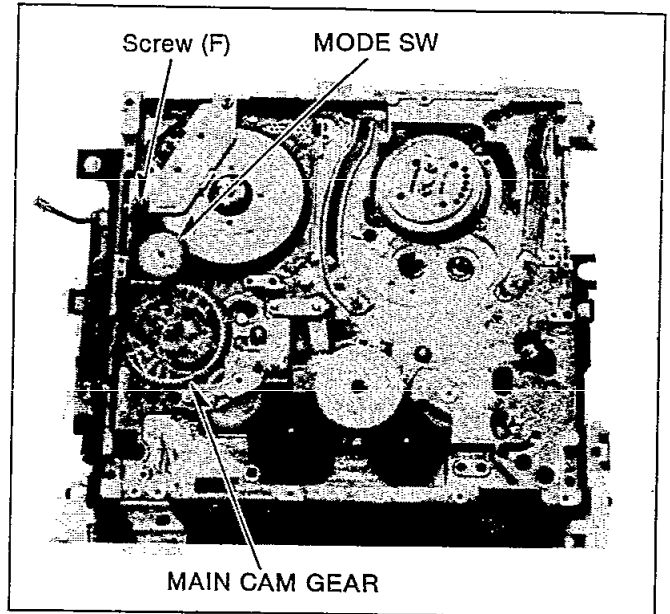


Fig. A7

2-3-7. REMOVAL OF THE TAKE-UP AND SUPPLY LOADING ARMS

- 1) Remove the TAKE-UP and SUPPLY LOADING GEARS by lifting them up off the post.

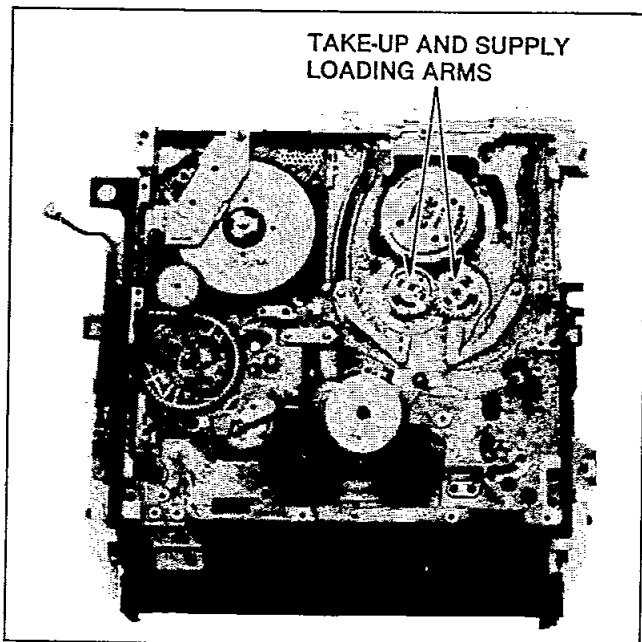


Fig. A6

2-3-9. REMOVAL OF THE MAIN CAM GEAR

- 1) Lift the MAIN CAM GEAR off the shaft.

2-3-10. REMOVAL OF THE CAPSTAN ROTOR UNIT

- 1) Remove the screw (G) and remove the CAPSTAN STOPPER as shown in Fig. A8.

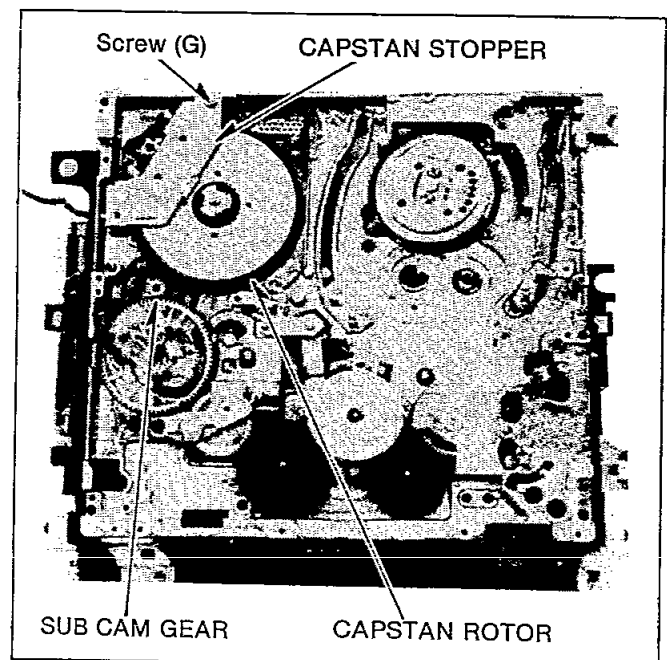


Fig. A8

- 2) Pull out the CAPSTAN ROTOR.
(When the CAPSTAN ROTOR is removed, 2 OIL SEALS are left in the CAPSTAN ROTOR HOUSING Fig.A9.. To avoid losing the OIL SEALS, place them back on the CAPSTAN SHAFT.)

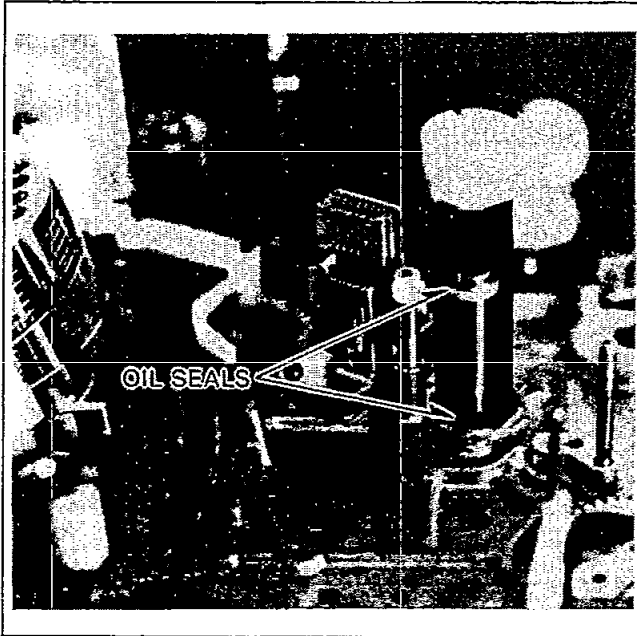


Fig. A9

- 3) Remove the 3 screws(H) and remove the CAPSTAN STATOR as shown in Fig.A10.

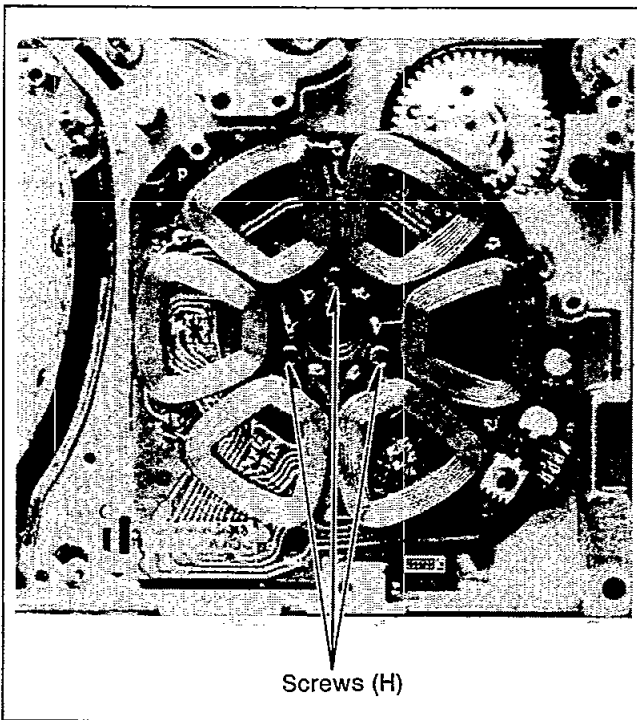


Fig. A10

2-3-11. REMOVAL OF THE SUB CAM GEAR

- 1) Lift the SUB CAM GEAR off the shaft.

2-3-12. REMOVAL OF THE CENTRE CLUTCH

- 1) Remove the cut washer.
- 2) Remove the CENTRE CLUTCH.

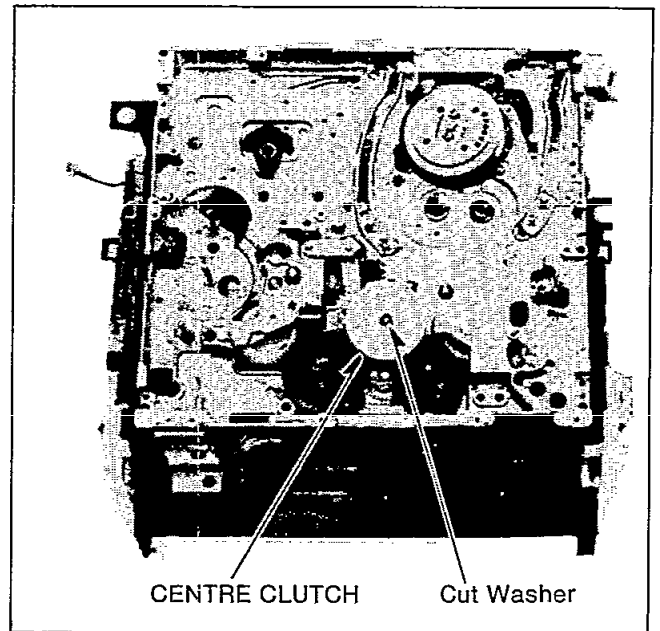


Fig. A11

2-3-13. REMOVAL OF THE TAKE-UP AND SUPPLY REEL GEARS

- 1) Unlock the locking tab and lift up on the reel.

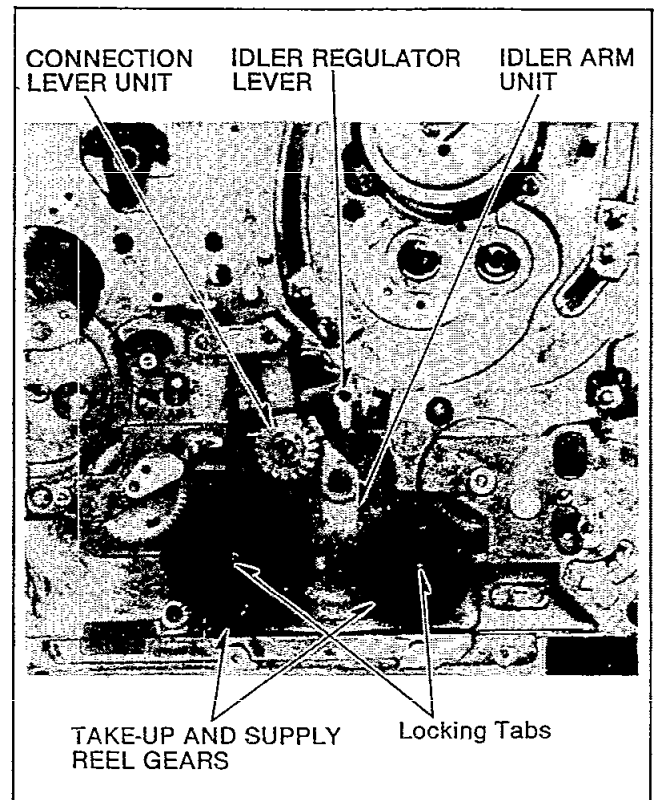


Fig. A12

2-3-14. REMOVAL OF THE IDLER ARM UNIT, CONNECTION LEVER UNIT AND IDLER REGULATOR LEVER

- 1) Lift the IDLER ARM UNIT and CONNECTION LEVER UNIT off the shaft.
- 2) Remove the IDLER REGULATOR LEVER.

2-3-15. REMOVAL OF THE TOP PLATE

- 1) Push the locking tabs from the outer side to inside as shown in Fig.A13.
- 2) Lift up on the TOP PLATE.

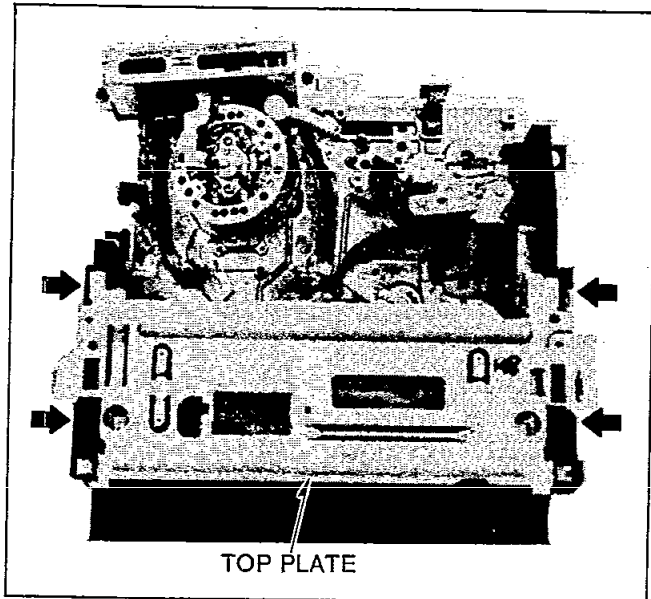


Fig. A13

NOTE:

If locking tab is broken, TOP PLATE can be installed by screws(XTB26+8G) as shown in Fig.A14.

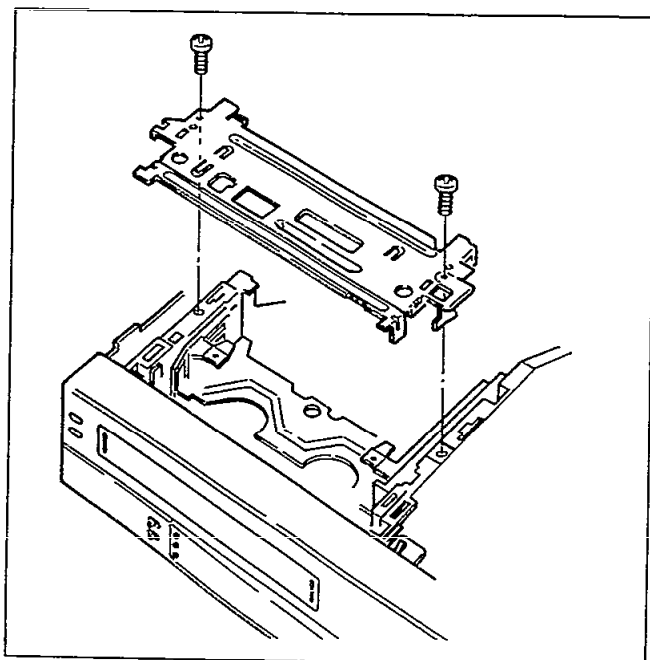


Fig. A14

2-3-16. REMOVAL OF THE CASSETTE HOLDER

- 1) Slide the HOLDER PLATE in the rear and lift up.
- 2) Remove the 4 screws(I).
- 3) Remove the CASSETTE HOLDER.

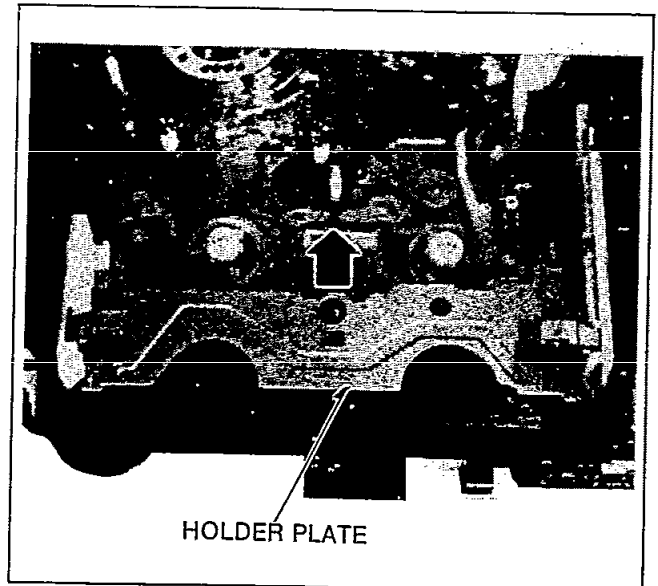


Fig. A15

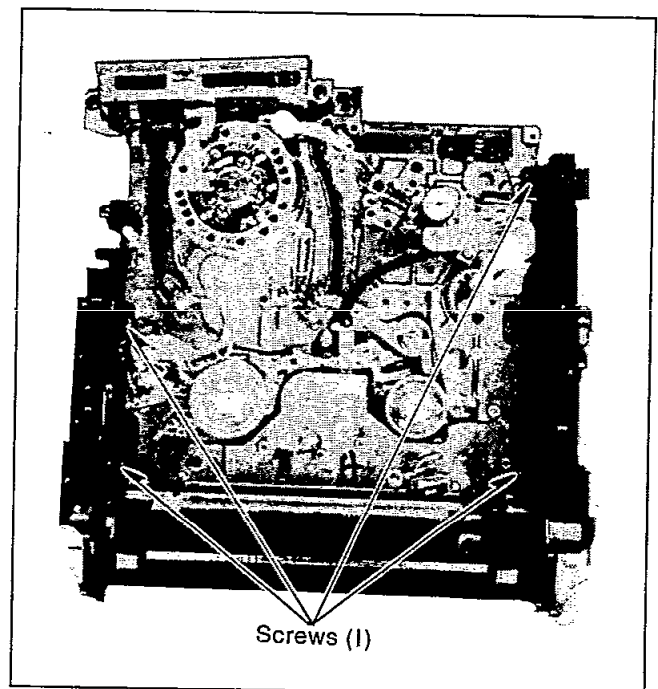


Fig. A16

2-3-17. REMOVAL OF THE PINCH ARM UNIT

- 1) Unlock the locking tab on the OPENER PIECE and remove it from the shaft.
- 2) Remove the PINCH ARM UNIT from the shaft.

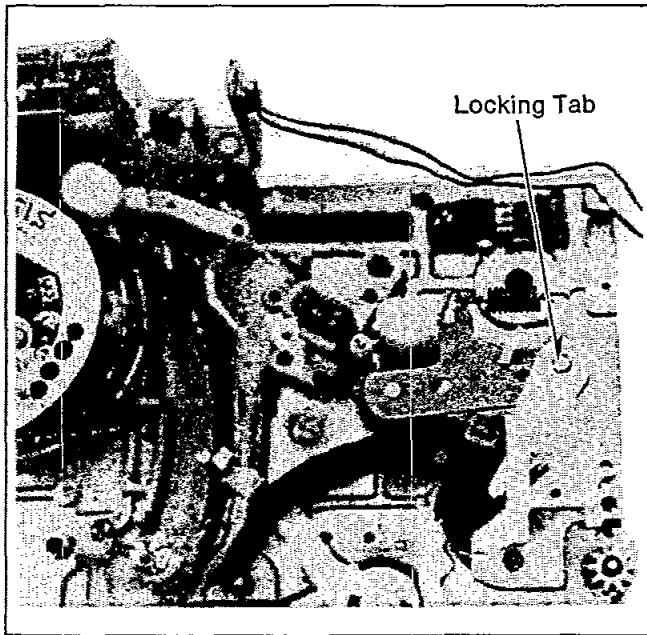


Fig. A17

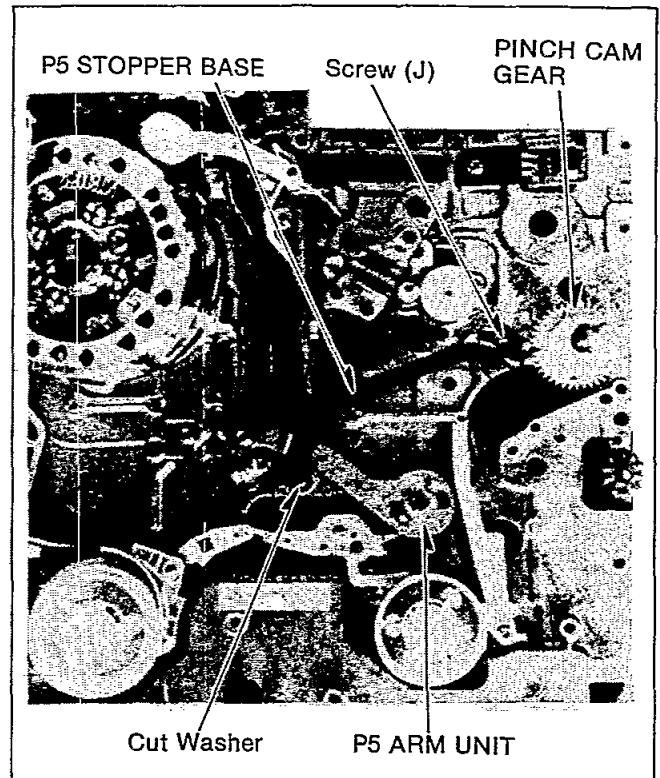


Fig. A19

2-3-18. REMOVAL OF THE PINCH CAM GEAR AND P5 ARM UNIT

- 1) Unlock the locking tab of the P5 STOPPER and remove the P5 STOPPER.
- 2) Remove the screw(J) and the cut washer.
- 3) Remove the P5 STOPPER BASE.
- 4) Remove the PINCH CAM GEAR and P5 ARM UNIT.

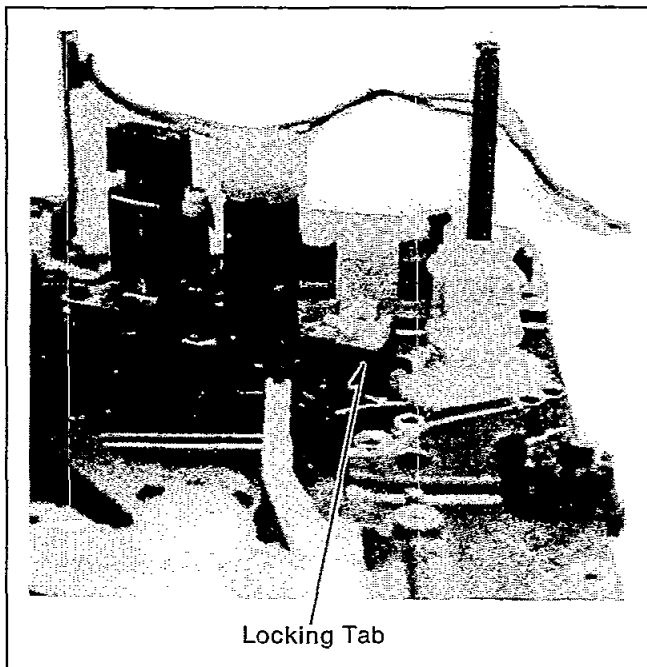


Fig. A18

2-3-19. REMOVAL OF THE TAKE-UP TENSION REGULATOR ARM UNIT

- 1) Disconnect the spring from the bottom of the chassis.
- 2) Unlock the locking tab and lift the TAKE-UP TENSION REGULATOR ARM UNIT off the shaft.

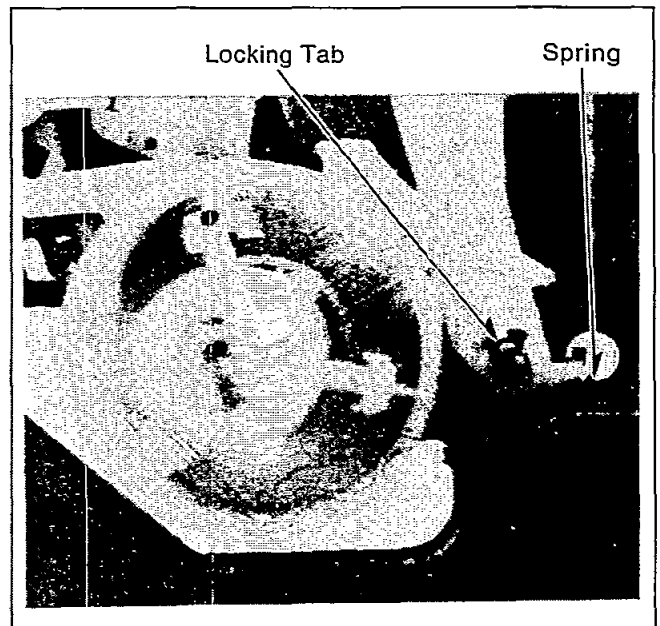


Fig. A20

2-3-20. REMOVAL OF THE CARRIAGE CONNECTION GEAR

- 1) Remove the cut washer.
- 2) Lift the CARRIAGE CONNECTION GEAR off the shaft.

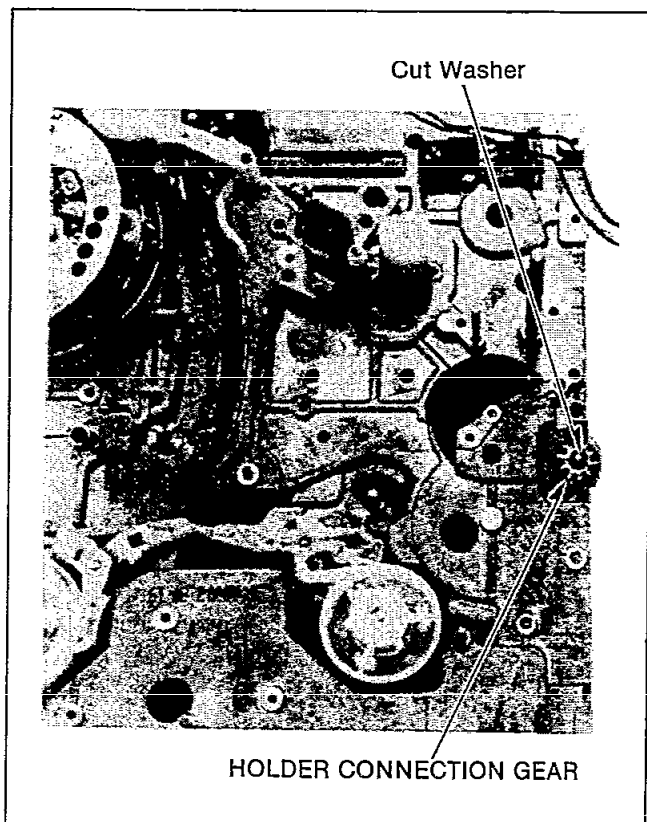


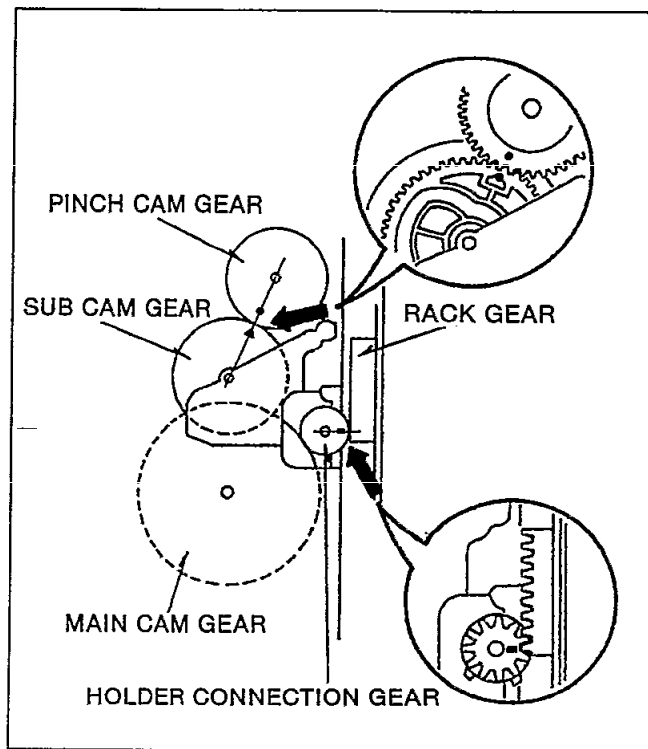
Fig. A21

2-4. ASSEMBLY PROCEDURES OF MECHANISM

2-4-1. VIEW OF PHASE ALIGNMENT

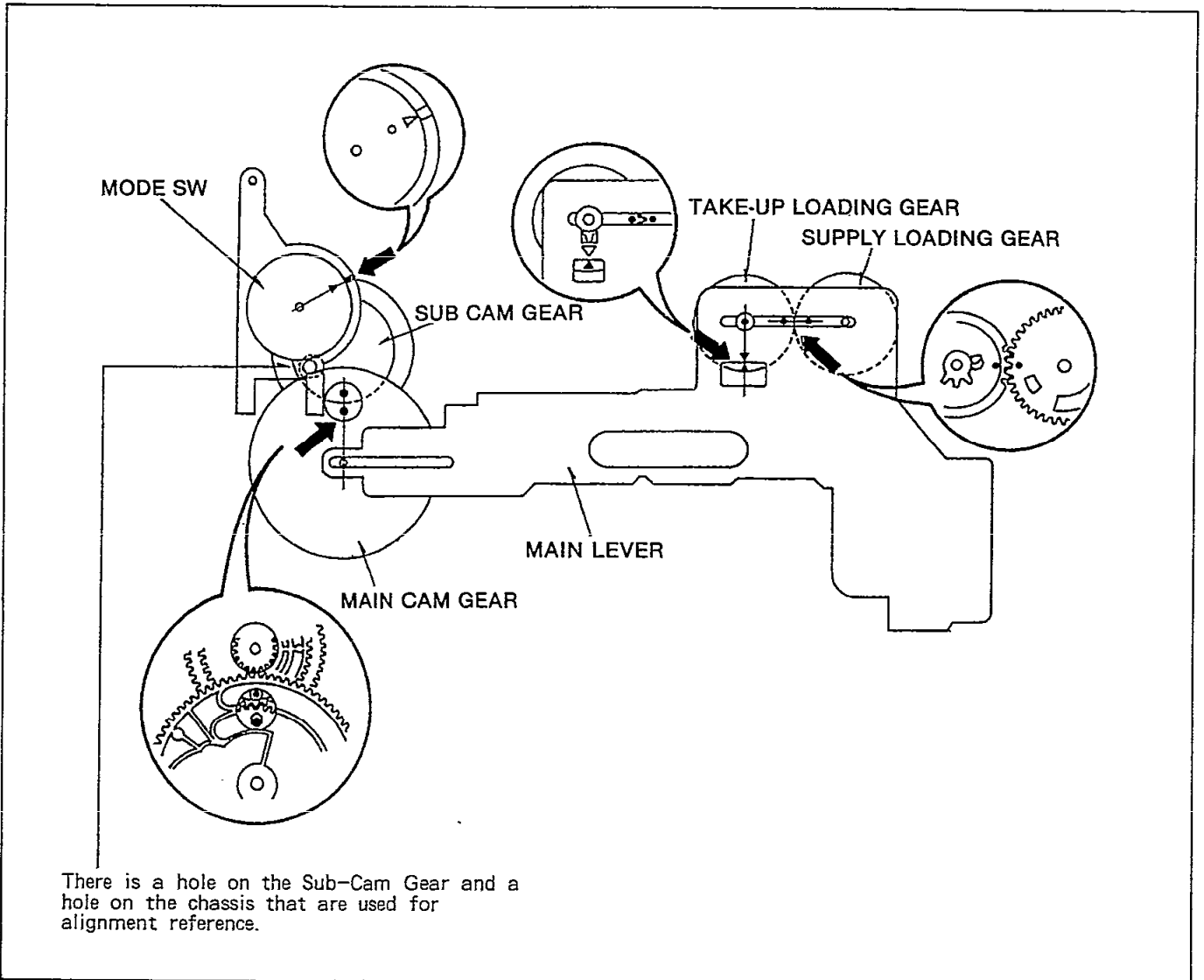
The gear phase alignment is performed in the cassette down position and is crucial for the K-Mechanism to operate correctly.

- 1) Top View of Gear Phase Alignment Marks. There are alignment marks on the Pinch Cam Gear and Sub Cam Gear. There is one alignment mark on the carriage connection gear.



Top View of Gear Phase Alignment

- 2) Bottom View of Gear Phase Alignment Marks.
 There are alignment marks on Take-up Loading Gear and Supply Loading Gear.
 There is an additional mark on the Take-up Loading Gear that aligns with the mark on the main lever. There are alignment marks on the Main Cam Gear and the Sub Cam Gear. The mode switch gear mark aligns with a notch in the mode switch frame.



Bottom View of Gear Phase Alignment

2-4-2. ASSEMBLY OF THE CARRIAGE CONNECTION GEAR

- 1) Install the CARRIAGE CONNECTION GEAR as shown in Fig.A21.
- 2) Install the cut washer.

2-4-3. ASSEMBLY OF THE TAKE-UP TENSION REGULATOR ARM UNIT, P5 ARM UNIT PINCH CAM GEAR, P5 STOPPER BASE, P5 STOPPER, PINCH CAM UNIT AND OPENER PIECE

- 1) Install the TAKE-UP TENSION REGULATOR ARM UNIT.
- 2) Hook the spring to hole on the chassis.
- 3) Install the P5 ARM UNIT and PINCH CAM GEAR.
- 4) Install the P5 STOPPER BASE with cut washer and screw(J).
- 5) Install the P5 STOPPER, PINCH ARM UNIT and OPENER PIECE.

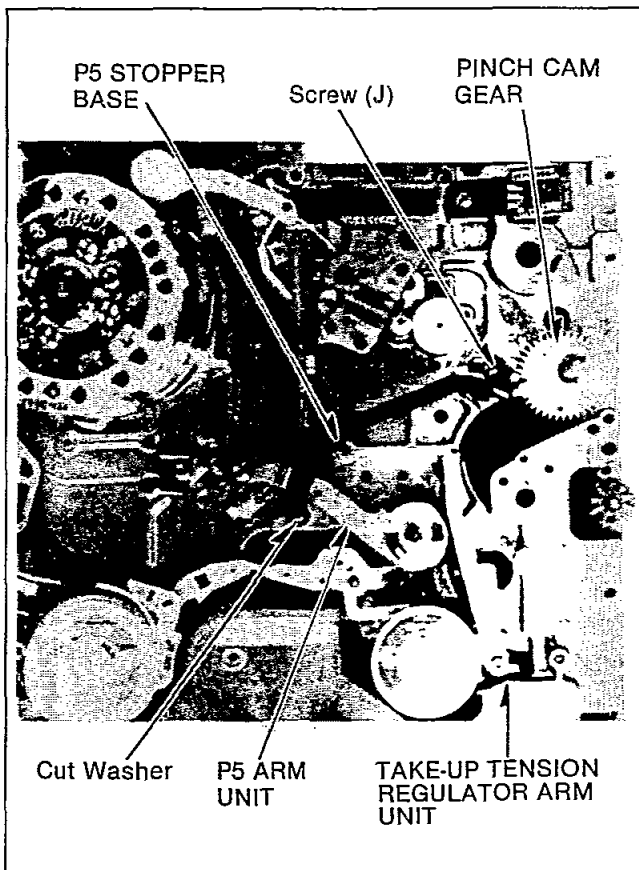


Fig. K1

2-4-4. ASSEMBLY OF THE IDLER ARM UNIT, TAKE-UP AND SUPPLY REEL GEARS, IDLER REGULATOR LEVER, CONNECTION LEVER UNIT AND CENTRE CLUTCH

- 1) Install the IDLER UNIT, TAKE-UP and SUPPLY REEL GEARS, IDLER REGULATOR LEVER and CONNECTION LEVER UNIT.
- 2) Install the CENTRE CLUTCH with cut washer.

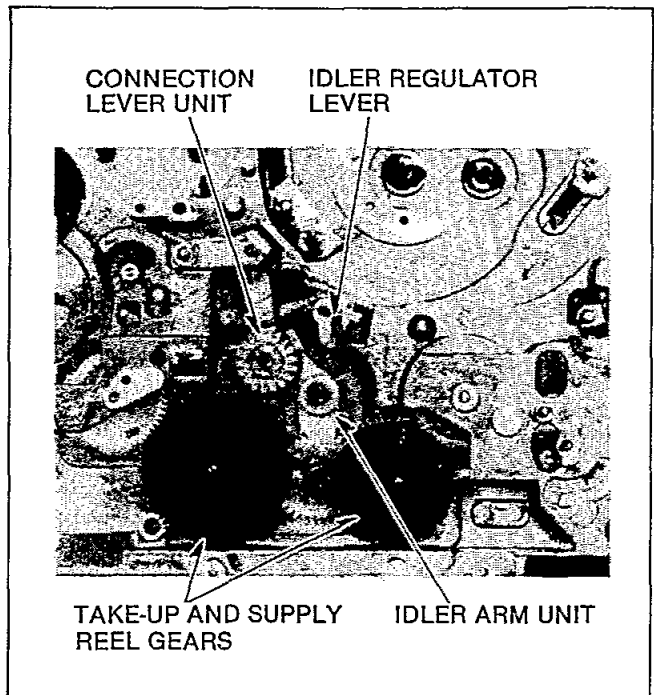


Fig. K2

2-4-5. ASSEMBLY OF THE SUB CAM GEAR

The SUB CAM GEAR is used for the reference of the phase.

- 1) Install the SUB CAM GEAR so that the chassis hole aligns with hole in the SUB CAM GEAR. Also, the hole in the outer gear of the SUB CAM GEAR must align with the hole in the PINCH CAM GEAR. The boss on the PINCH ARM must be installed in the cam groove of the SUB-CAM GEAR. This is used for the reference of the phase. To aid installation of the SUB-CAM GEAR insert a fixing pin into the holes of the SUB-CAM GEAR and the chassis.

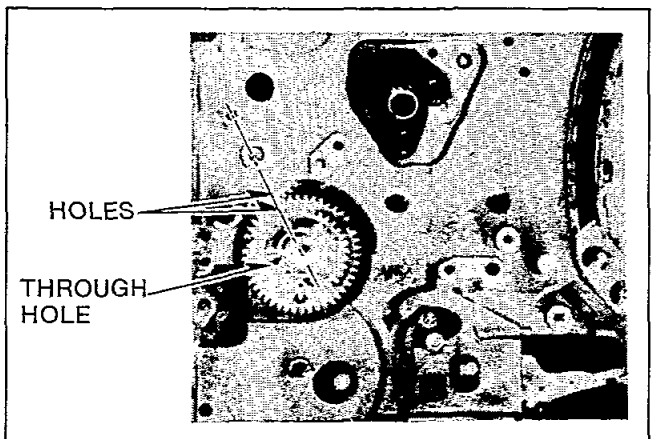


Fig. K3

2-4-6. ASSEMBLY OF THE STATOR UNIT

- 1) Place the STATOR UNIT into position. Loosely reinstall the 3 screws that secure the STATOR and HOUSING UNIT. Next insert the CENTERING PIN then tighten the 3 screws as shown in Fig.K4.

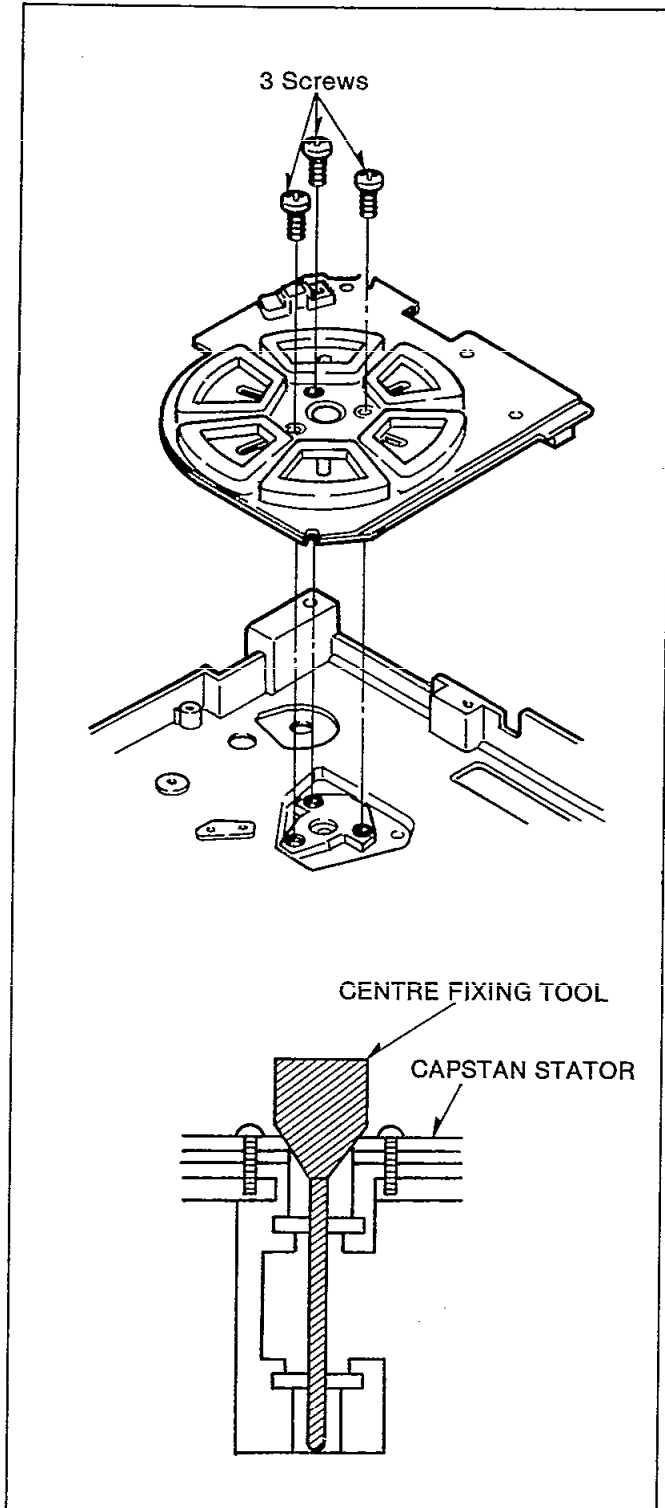


Fig. K4

- 2) Remove the oil seal from the ROTOR SHAFT. Partially install the ROTOR SHAFT into the lower position and install the oil seal. Insert the ROTOR SHAFT further into the housing and install the second OIL SEAL in the upper position. Push the lower OIL SEAL down the ROTOR SHAFT into the housing.

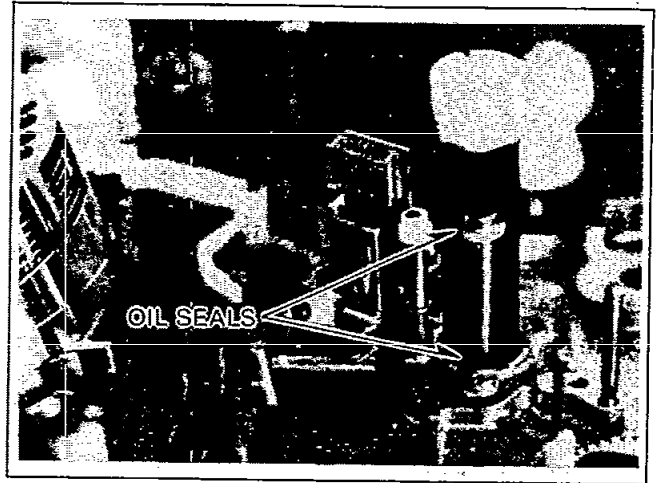


Fig. K5

- 3) Clean the ROTOR SHAFT after replacement. Reinstall the ROTOR STOPPER and the screw on the top side.

2-4-7. ASSEMBLY OF THE MAIN CAM GEAR

NOTE:

Before installing the MAIN CAM GEAR, set the CONNECTION GEAR so that the side of the gear with no teeth is towards the MAIN CAM GEAR.

- 1) Install the MAIN CAM GEAR so that the hole marker aligns with the SUB-CAM GEAR and insert the boss of the TAKE-UP TENSION REGULATOR ARM into the slot on the bottom of the MAIN CAM GEAR.

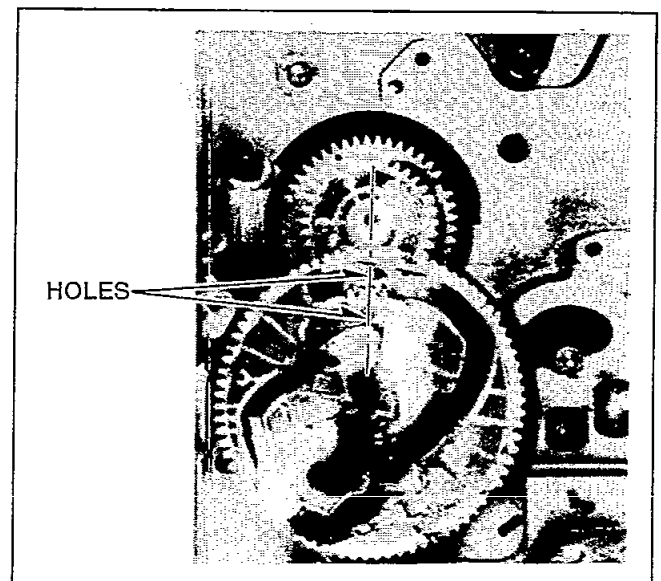


Fig. K6

2-4-9. ASSEMBLY OF THE T & S LOADING ARMS

- 1) Set the shaft holders to the unloaded position. Take care that the P5 POST does not interfere with the P3 Post or prevent it from going to the unloaded position. The TENSION ARM must be set to the position that will allow the P2 POST to move back to the unloaded position.
- 2) Install the TAKE-UP LOADING ARM and SUPPLY LOADING ARM, aligning the marks on the both GEARS.

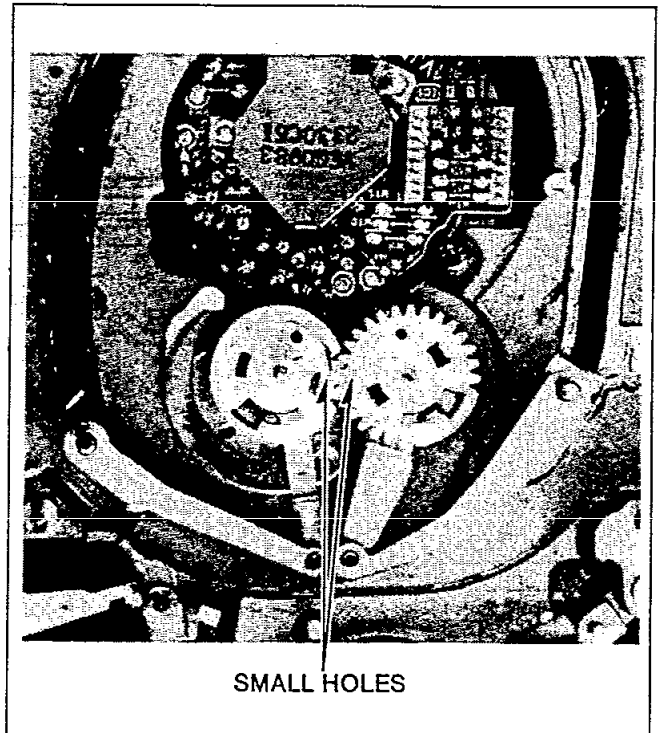


Fig. K9

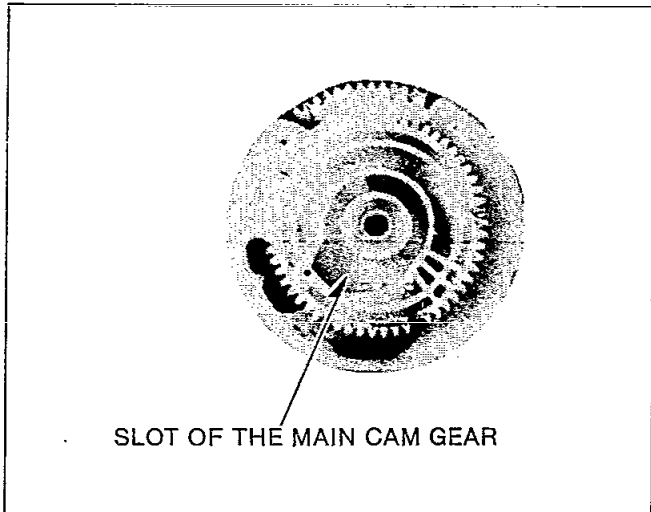


Fig. K7

2-4-8. ASSEMBLY OF THE MODE SW

- 1) Align the mark on the MODE SWITCH GEAR with the notch on the MODE SWITCH FRAME.
- 2) Install the MODE SWITCH taking care that all the phase alignments are correct. Check the CAM GEAR timing by rotating the MAIN CAM GEAR.
- 3) Install the screw(K) the retains the MODE SWITCH and ROTOR STOPPER.

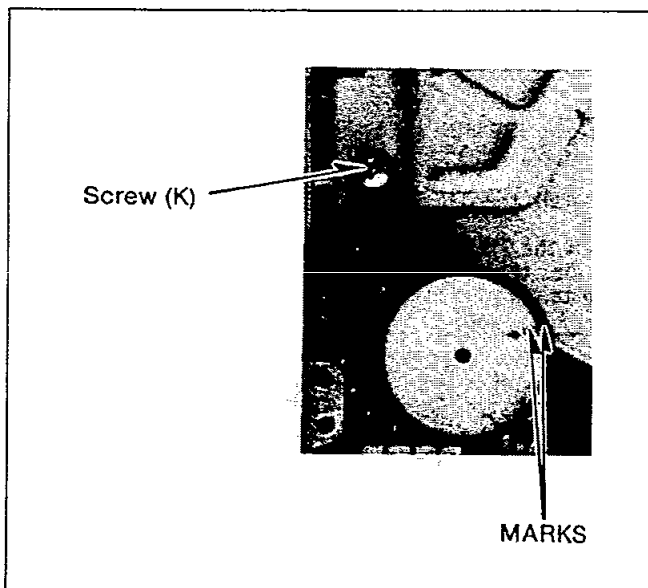


Fig. K8

2-4-10. ASSEMBLY OF THE MAIN LEVER

- 1) Install the MAIN LEVER ARM checking that the boss arms and shafts are in the correct position and the mark on the MAIN LEVER ARM is aligned with mark on the TAKE-UP LOADING GEAR.
- 2) Install the 2 cut washers.

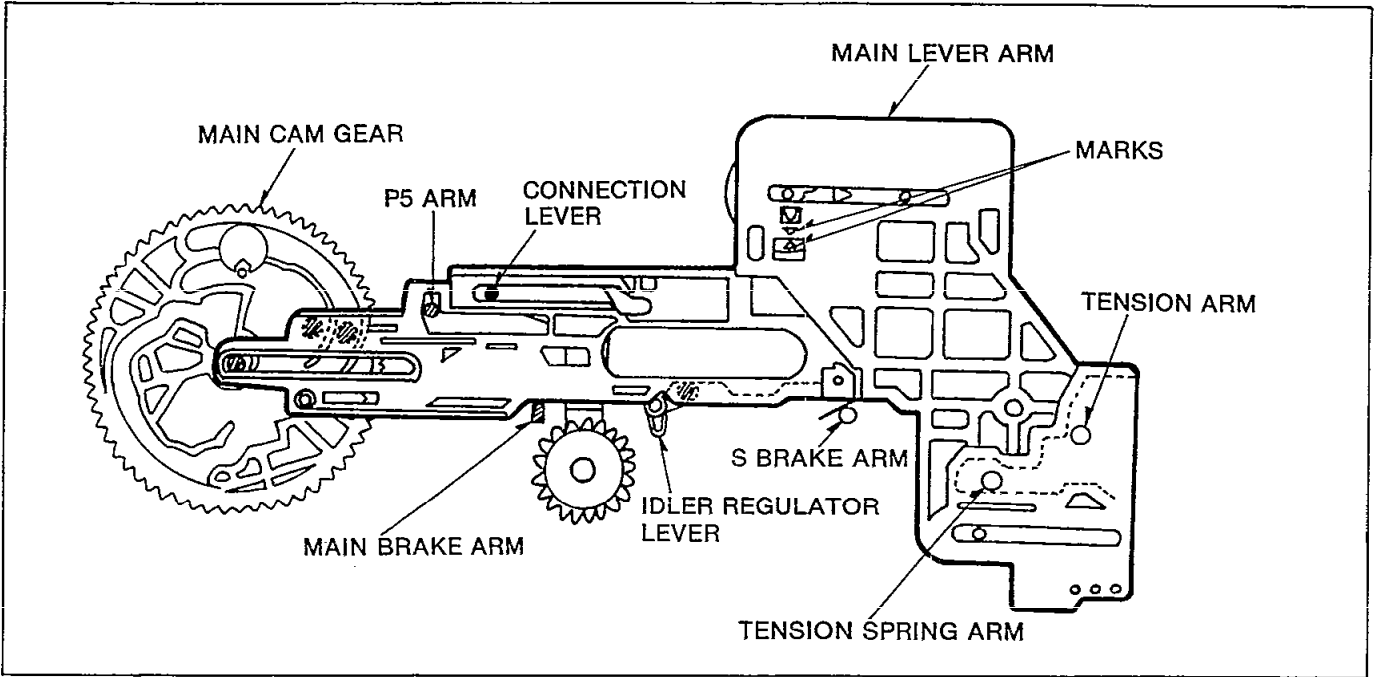


Fig. K10

2-4-11. ASSEMBLY OF THE WORM WHEEL GEAR & LOADING MOTOR BRACKET

- 1) Reinstall the WORM WHEEL GEAR.
- 2) Install the LOADING MOTOR BRACKET. First set the BRACKET over the MAIN CAM GEAR shaft and slide until it locks. Then push down on the BRACKET until the locking tab is connected to the chassis. Reinstall the screw(L).

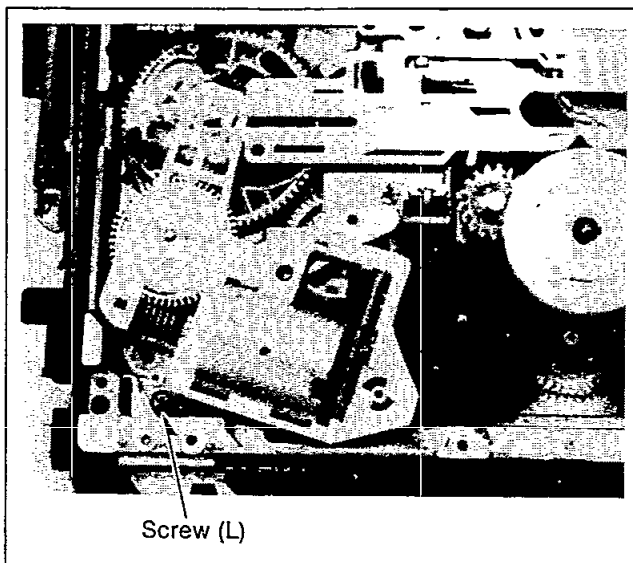


Fig. K11

2-4-12. ASSEMBLY OF THE TIMING BELT & SS BRAKE BASE

- 1) Install the TIMING BELT.
- 2) Put the TIMING BELT onto the TENSION ROLLER, slide the SS BRAKE BASE into position and install 2 screws(M).

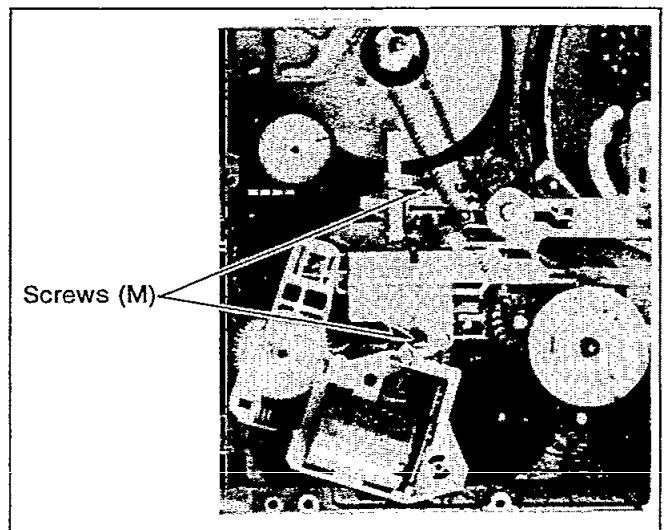


Fig. K12

2-4-13. ASSEMBLY OF THE PINCH ARM UNIT

- 1) Install the OPENER PIECE by inserting the boss into the PINCH ARM UNIT. Push down until the lock engages the shaft.

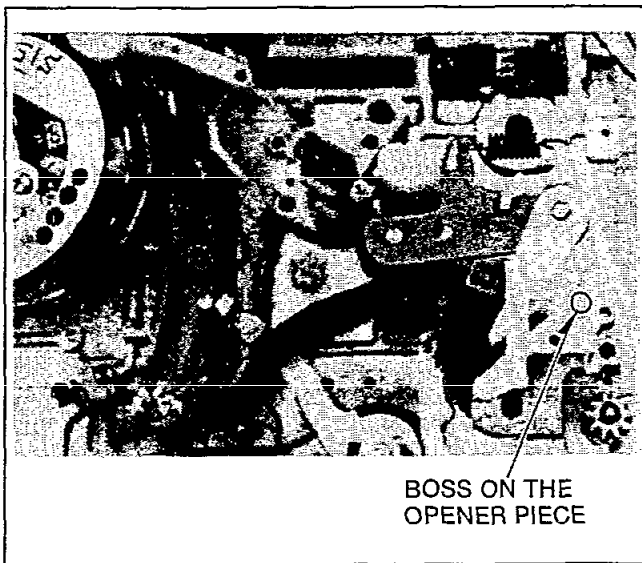


Fig. K13

2-4-14. CHECKING THE MECHANISM MOVEMENT

- 1) Check by moving the mechanism by hand then re-check using a battery to power the motor.
- 2) Rotate the LOADING MOTOR by hand in the loading direction while checking the movement of each gear. If the mechanism operates correctly when moved by hand, connect a battery to the LOADING MOTOR and re-check the movement of each gear as shown in Fig.S1/S2/S3.
- 3) Connect the battery to check the loading operation and then reverse the battery connection to check the unloading operation.
- 4) Reverse the battery to move the mechanism to the cassette down position.

2-4-15. ASSEMBLY OF THE CASSETTE HOLDER

1. ASSEMBLE A CASSETTE HOLDER AS A UNIT COMPLETE UNIT

- 1) Put the CASSETTE HOLDER into the cassette up condition by moving the WIPER ARM.
- 2) Turn the LOADING MOTOR by hand in the unloading direction until the CARRIAGE CONNECTION GEAR and the MODE SW is eject position as shown in Fig.K14/K15

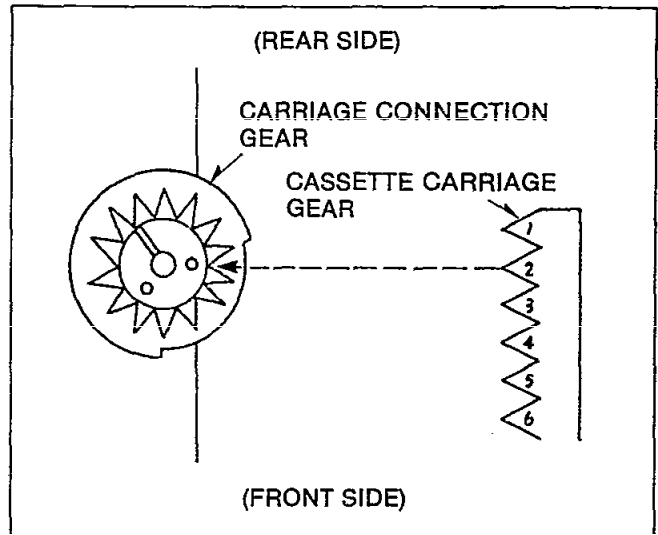


Fig. K14

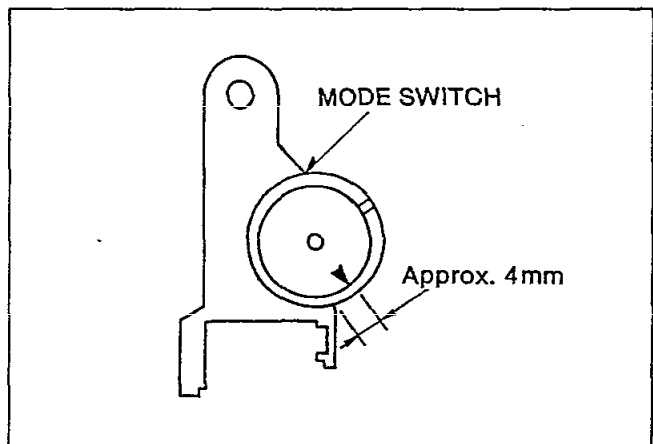


Fig. K15

- 3) Install the CASSETTE HOLDER UNIT as shown in Fig.K14.
- 4) Install 4 screws to attach the CASSETTE HOLDER UNIT.

<Eject Operation>

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>

If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate. For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

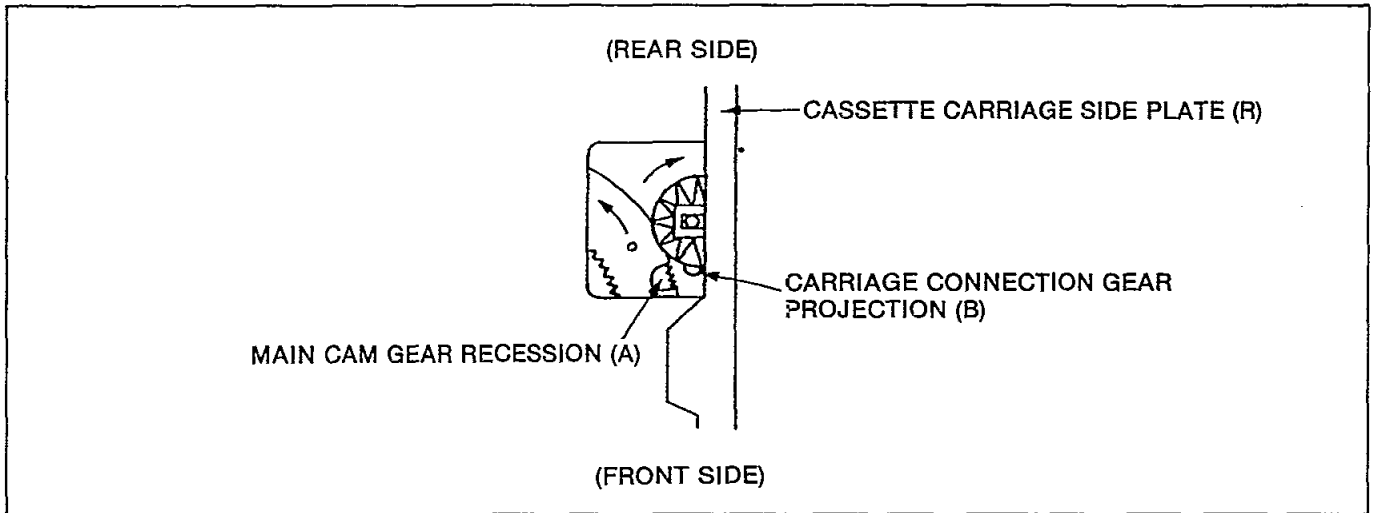


Fig. K16 Top View of Eject Operation

2. ASSEMBLE A CASSETTE HOLDER SEPARATELY

- 1) Put the CASSETTE HOLDER into the cassette down position by moving the WIPER ARM. Check the position of the WIPER ARM and RACK A. The mark of RACK A aligns with the mark on the WIPER ARM.

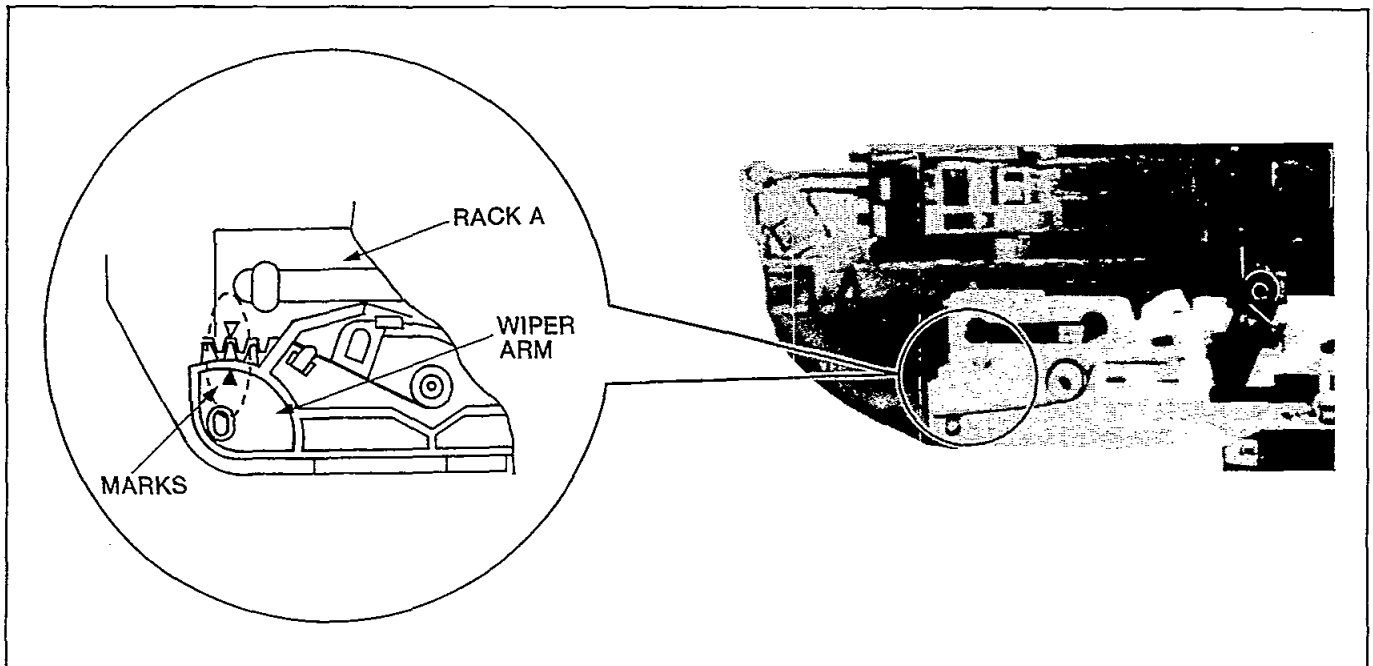


Fig. K17

- 2) Install the SIDE PLATE ASSEMBLY so that the first gear of RACK B aligns with the mark on the CARRIAGE CONNECTION GEAR.

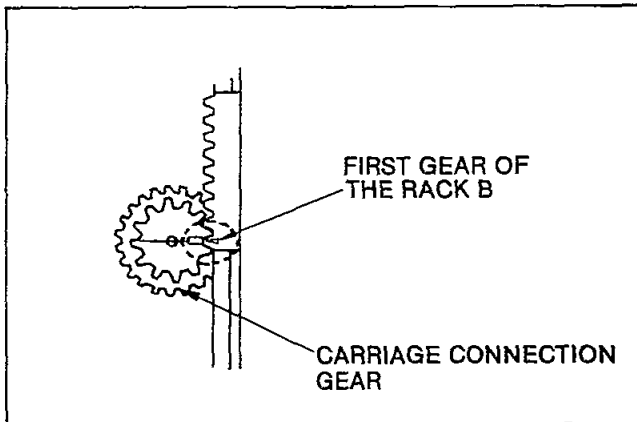



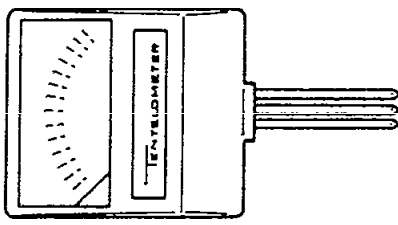
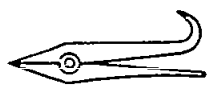
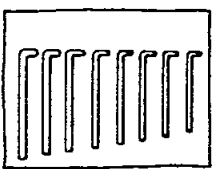
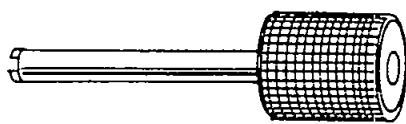
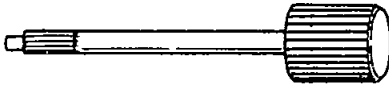
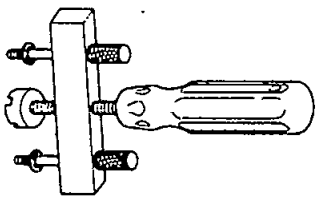

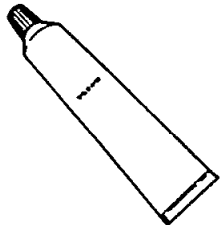
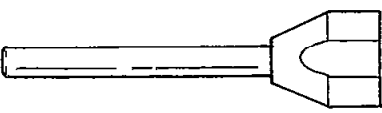
Fig. K18

- 3) Install 4 screws to attach the SIDE PLATE ASSEMBLY.
- 4) Turn the LOADING MOTOR by hand to the cassette up position while pushing the WIPER ARM to the cassette up position.
- 5) Insert the 5 posts on the CASSETTE HOLDER into the Side Plate.
- 6) Set the TOP PLATE on the Side Plate then push it down until it locks.

2-4-16. ASSEMBLY OF THE MECHANISM CHASSIS

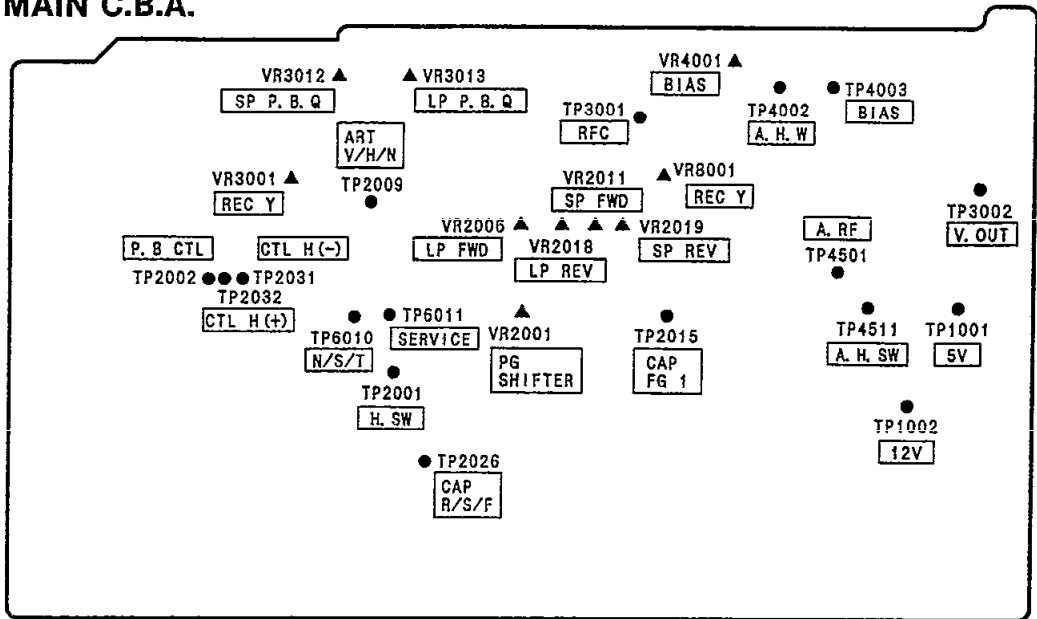
- 1) Install the MECHANISM CONNECTION C.B.A. onto the chassis. Then install the chassis into the frame and connect all the cables and connectors.
- 2) Clean the DD CYLINDER after reinstallation.
- 3) Insert a cassette and adjust the tape travel and check all the operation modes.

Servicing Fixtures & Tools

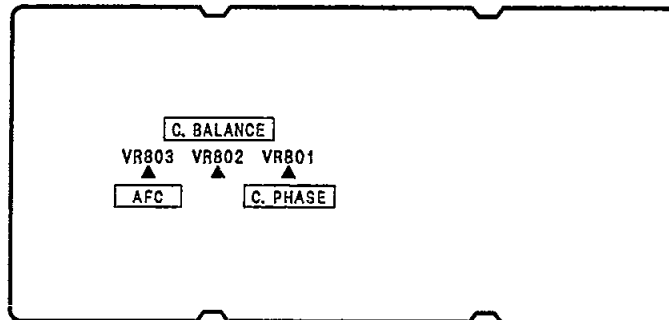
<p>VFJ8125H3F PAL VHS Alignment Tape</p> <p>VFM8080HQFP NTSC VHS Alignment Tape</p> 	<p>VFK0132 Back Tension Meter (Tentelometer, Made in U.S.A.)</p> 	<p>VFK0335 Retaining Ring Remover (3mm/4mm)</p> 
<p>VFK0326 Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm)</p> 	<p>VFK0329 Post Adjustment Screw Driver</p> 	<p>VFK0330 Fine Adjustment Gear Driver</p> 
<p>VFK0341 Upper Cylinder Remover</p> 	<p>VFK27 Hand Cleaning Stick</p> 	<p>MOR265 Morlytone Grease</p> 
<p>VFK0851 CENTRE FIXING TOOL</p> 		

LOCATION OF TEST POINTS & CONTROLS

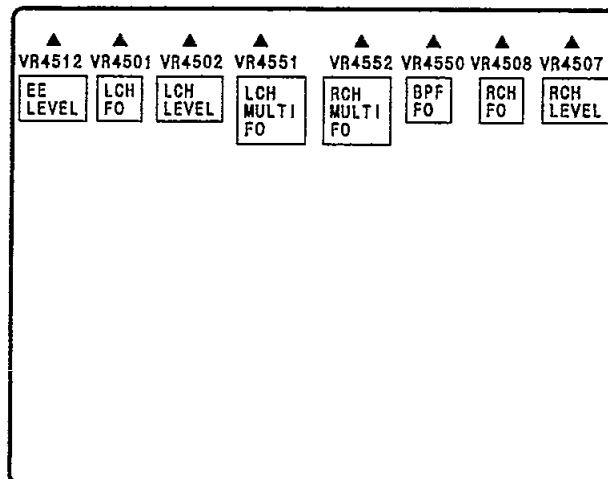
MAIN C.B.A.



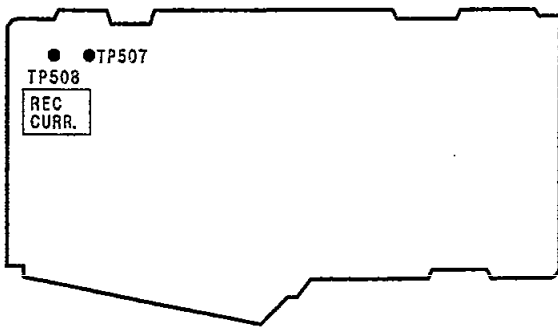
LUMINANCE & CHROMINANCE PACK C.B.A.



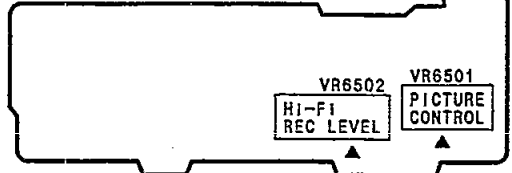
Hi-Fi AUDIO PACK C.B.A.



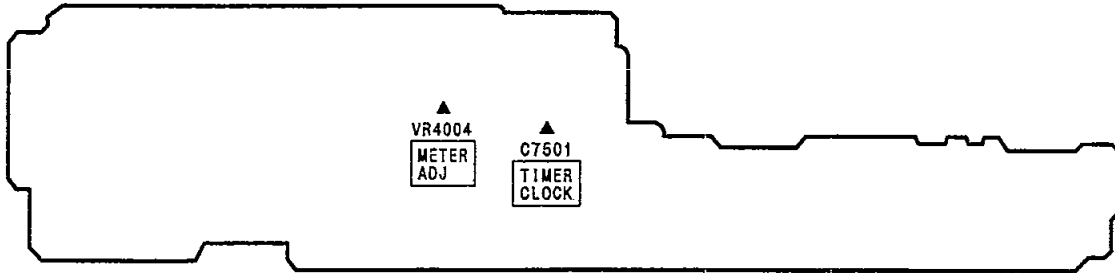
HEAD AMP C.B.A.



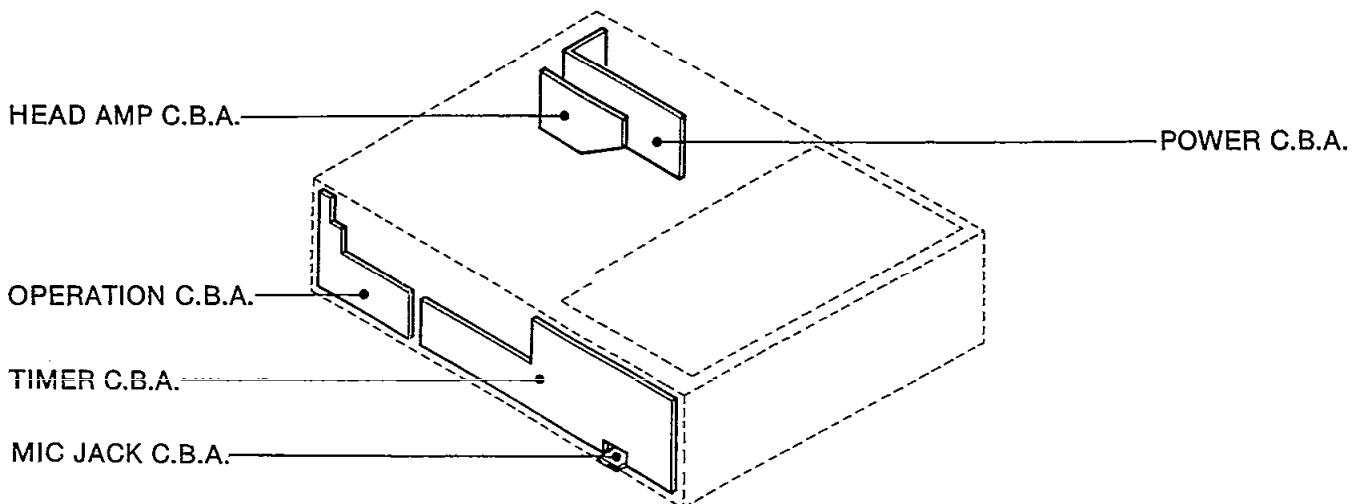
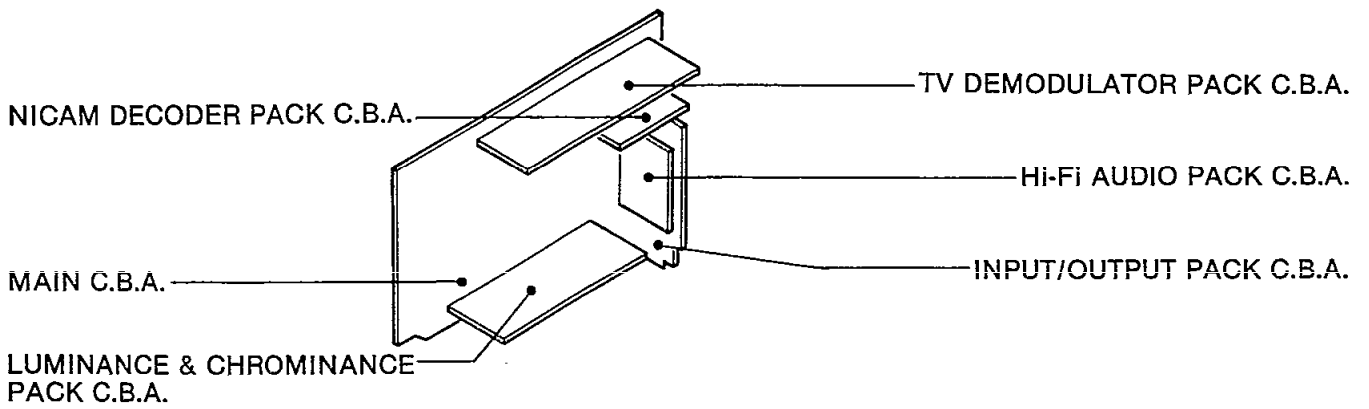
OPERATION C.B.A.



TIMER C.B.A.



CIRCUIT BOARD LAYOUT



2-5. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete adjustment procedures required for electric circuits of VHS Video Cassette Recorders.

2-5-1. TEST EQUIPMENT

To perform electrical adjustments following equipment is required.

1. Dual-Trace Oscilloscope. (More than 35 MHz)
Voltage Range: 0.005-5V/div
Frequency Range: DC-35MHz
Probes: 10:1
2. Frequency Counter.
Frequency Range: 0-10MHz
Probes: 1:1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.

2-5-2. PREPARATION

During adjustment, set each selector as follows: when no indication in the procedure.

HIFI/NORMAL MIX SW.....OFF
TAPE SPEED.....SP
TEST SIG SW (REAR).....OFF
PICTURE VR.....FIX

2-5-3. HOW TO READ ADJUSTMENT PROCEDURES

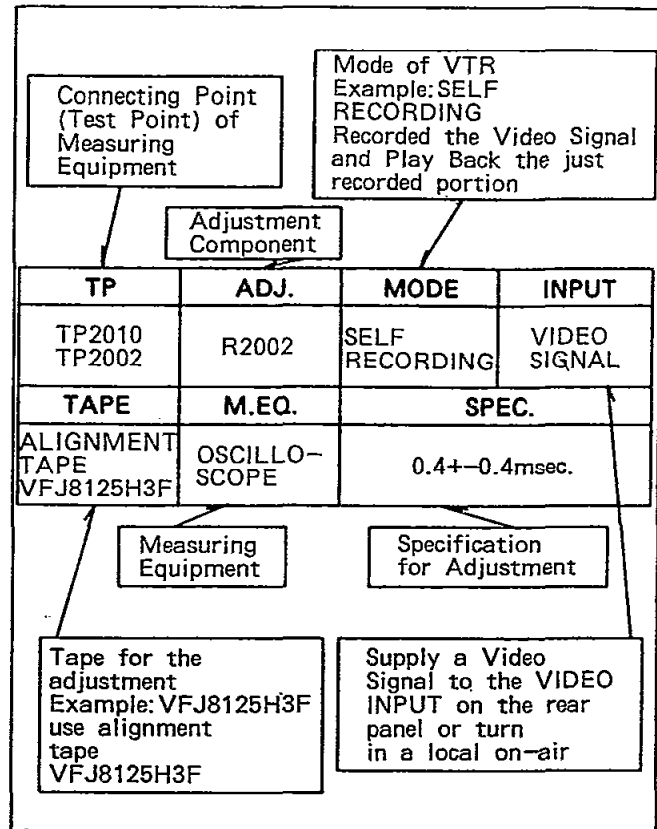


Fig. E1

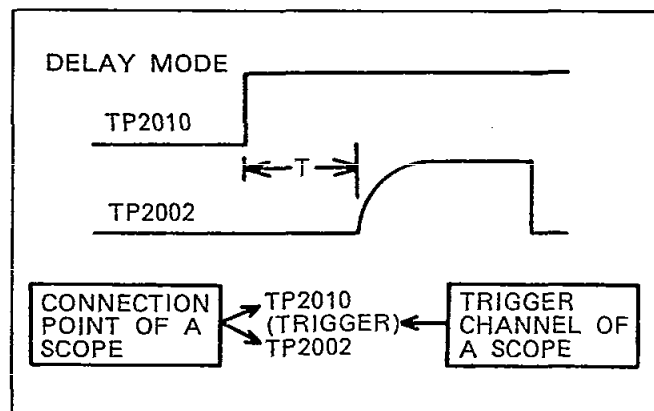


Fig. E2

SERVO SECTION

2-5-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO- SCOPE	7.0+-.0.5(H)	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT)
2. Playback the alignment tape.
3. Adjust VR2001 until the phase difference between falling edge of Head SW pulse and V-Sync is $7.0 \pm 0.5(H)$

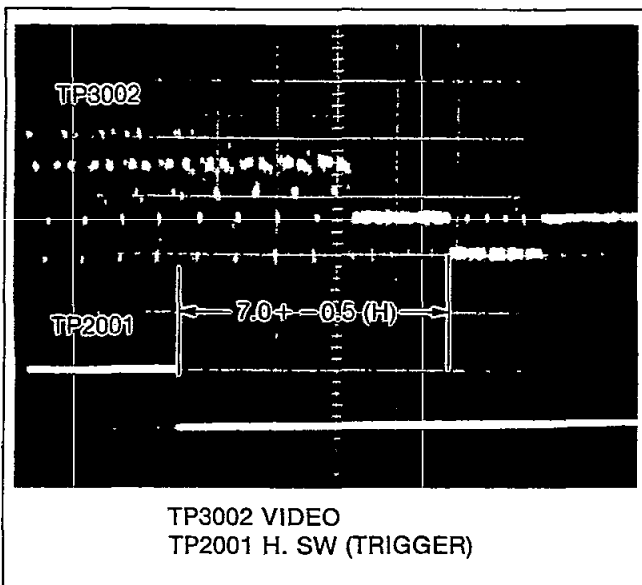


Fig. E3

2-5-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011(SP) VR2006(LP)	SP (SELF RECORDED) STILL	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR TV	A=B (A+B)/V < 1/6	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by operating the Remote Controller Unit.

4. Adjust VR2011(SP)(VR2006(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect a jumper wire.

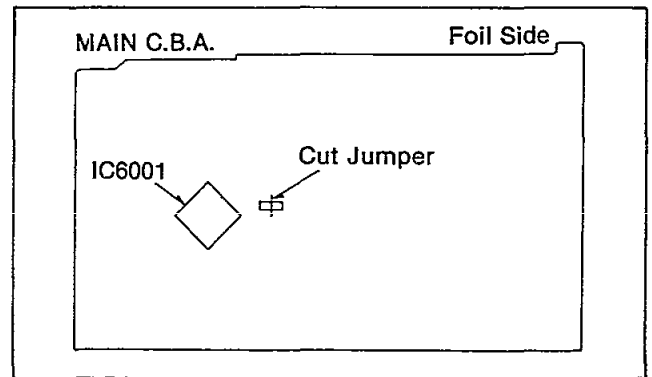


Fig. E4

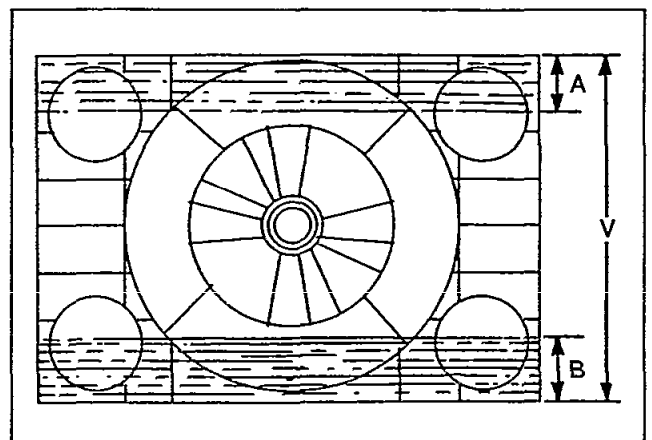


Fig. E5

2-5-6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019(SP) VR2018(LP)	REVERSE SLOW	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR	SP: A=B (A+B)/V < 1/6 LP: B=0 A/V < 1/12	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by operating the Remote Controller Unit.
4. Adjust VR2019(SP)(VR2018(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect the jumper wire.

LUMINANCE & CHROMINANCE SECTION

2-5-7. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN (9) of IC802	VR803	STOP	SINEWAVE 8KHz -10dB (316mV)
TAPE	M. EQ.	SPEC.	
X	FREQUENCY COUNTER SINEWAVE GENERATOR	15735 \pm 100(Hz)	

Note: Supply +5V DC to Pin 27 of IC802.

1. Supply a sinewave (8KHz/-10dB) to Line In. (Video In)
2. Connect the frequency counter to Pin 9 of IC802.
3. Turn VR803 to maximum frequency:
4. Adjust VR803 until frequency is 15735 \pm 100(Hz).

2-5-8. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR3001(Y) VR8001(C)	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	Y: 130 \pm 5(mVp-p) C: 32 \pm 2(mVp-p)	

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR3001 so the amplitude of sync tip portion is 130 \pm 5mVp-p.
4. Supply +5V DC to PP3001-6 to reduce luminance component.
5. Adjust VR8001 until the amplitude of Cyan is 32 \pm 2mVp-p.

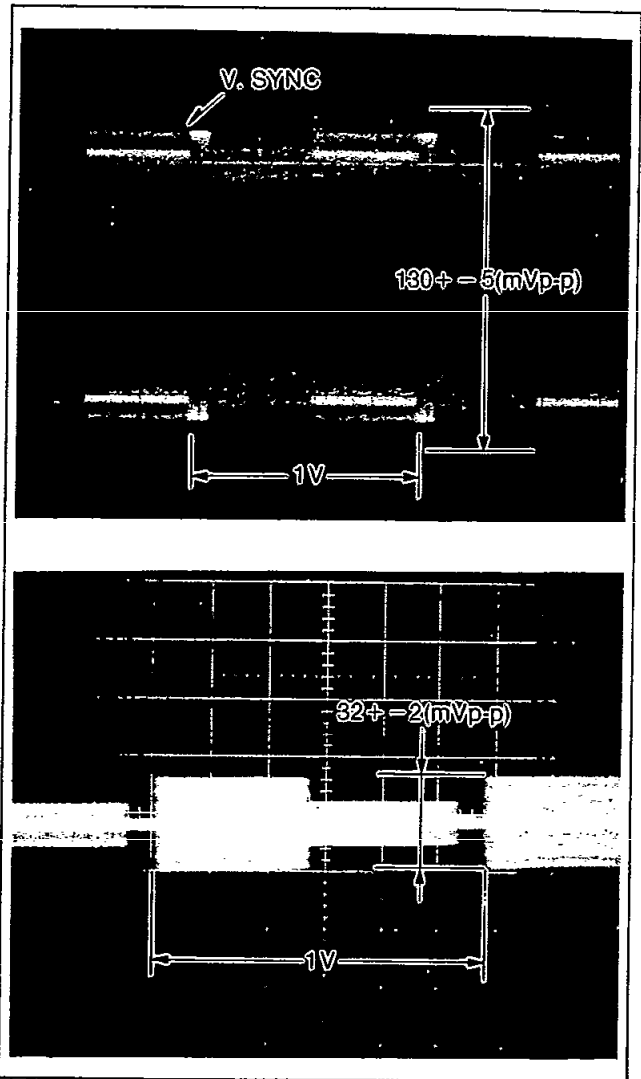


Fig. E6

2-5-9. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE VIDEO SWEEP GENERATOR	SP: 0 \pm 1(dB) (90 - 110%) LP: 0 \pm 1(dB) (90 - 110%)	

Note:

- (1) Set the Video Sweep Signal as shown in Fig.E7.

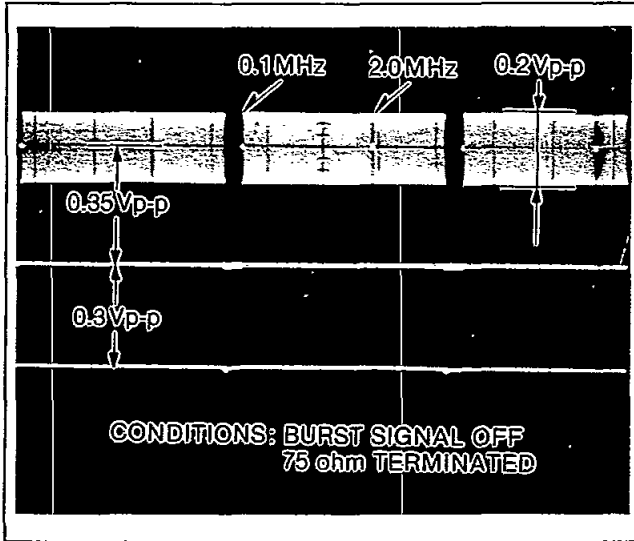


Fig. E7

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0 ± 1 dB at 2MHz portion by comparing with 0.1MHz portion.

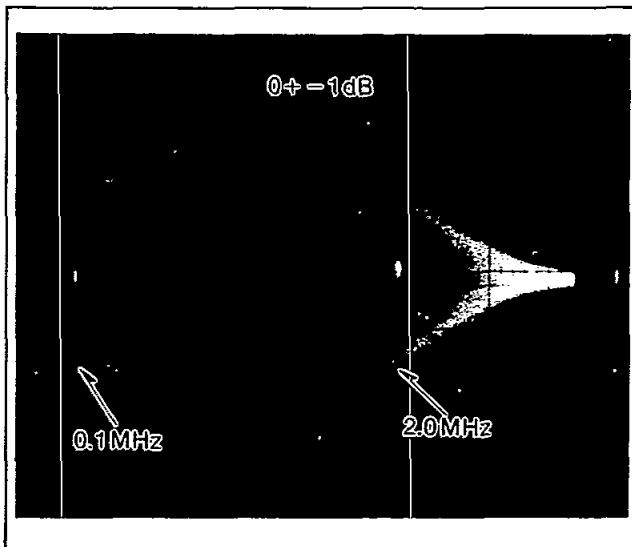


Fig. E8

2-5-10. CHROMINANCE RECURSIVE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC301-17	VR801 VR802	SELF REC&PB	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	MINIMIZE AMPLITUDE	

1. Record the color bar and playback the just recorded portion.
2. Adjust VR801 and VR802 until the amplitude of the signal at the Pin 17 of IC301 is minimum.

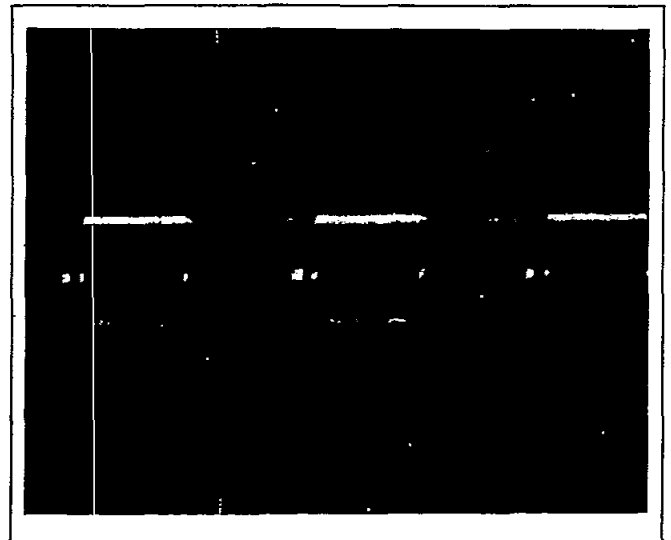


Fig. E9 Before adjustment.

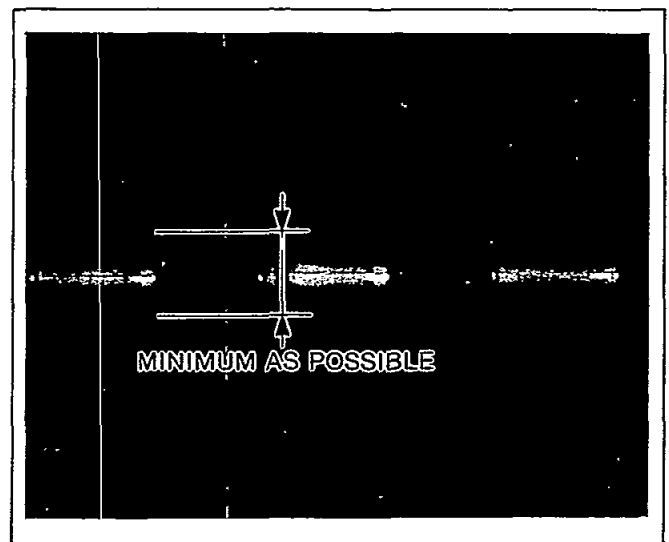


Fig. E10 After adjustment.

AUDIO SECTION

2-5-11. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4001	RECORDING	X
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	3.0±0.1(mVrms)	

Note:

Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4001 so reading of V.T.V.M. is 3.0±0.1mVrms.

2-5-12. Hi-Fi E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4512	STOP	1kHz, -10dB AUDIO SIG.
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SINEWAVE GENERATOR / V.T.V.M.	380-420(mVrms)	

1. Select the STEREO mode by Remote Controller. (Both Left and Right indicators on the FIP are lit)
2. Supply the sinewave (1kHz/-10dB) to Audio Input (L) terminal.
3. Connect the V.T.V.M. to Audio Output (L) terminal.
4. Adjust VR4512 so that the level becomes 380 - 420 mVrms.

2-5-13. CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-34 (L) IC4501-47 (R)	VR4551 VR4552	SP RECORDING	X
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	PAL-L: 1.4±0.003 (MHz) PAL-R: 1.8±0.003 (MHz)	

1. Place the unit in SP recording mode.
2. Connect the frequency counter to IC4501-34.
3. Adjust VR4551 until the frequency is 1.4±0.003MHz.
4. Connect the frequency counter to IC4501-47.
5. Adjust VR4552 until the frequency is 1.8±0.003MHz.

2-5-14. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
BETWEEN VR4502 and R4511 (L) BETWEEN VR4507 and R4561 (R)	VR4502 (L) VR4507 (R)	SP RECORDING	1kHz, -10dB AUDIO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VTVM/ SINEWAVE GENERATOR	120 (mVrms)	

1. Set the output level of the Signal Generator to 1kHz/-10dB and supply it to both audio input terminals (L) and (R).
2. Adjust the recording level (Line output) with Hi-Fi Rec Level VR on the front panel until both audio outputs (L) and (R) are 400mVrms (VTVM).
3. Connect the VTVM between VR4502 and R4511.
4. Adjust VR4502 until the level is 120mVrms.
5. Connect the VTVM between VR4507 until the level is 120mVrms.

AUDIO SECTION

2-5-11. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4001	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	3.0±0.1(mVrms)	

Note:

Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4001 so reading of V.T.V.M. is 3.0±0.1mVrms.

2-5-12. Hi-Fi E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4512	STOP	1kHz, -10dB AUDIO SIG.
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SINEWAVE GENERATOR / V.T.V.M.	380-420(mVrms)	

1. Select the STEREO mode by Remote Controller. (Both Left and Right indicators on the FIP are lit)
2. Supply the sinewave (1kHz/-10dB) to Audio Input (L) terminal.
3. Connect the V.T.V.M. to Audio Output (L) terminal.
4. Adjust VR4512 so that the level becomes 380 - 420 mVrms.

2-5-13. CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4501-34 (L) IC4501-47 (R)	VR4551 VR4552	SP RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	PAL-L: 1.4±0.003 (MHz) PAL-R: 1.8±0.003 (MHz)	

1. Place the unit in SP recording mode.
2. Connect the frequency counter to IC4501-34.
3. Adjust VR4551 until the frequency is 1.4±0.003MHz.
4. Connect the frequency counter to IC4501-47.
5. Adjust VR4552 until the frequency is 1.8±0.003MHz.

2-5-14. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
BETWEEN VR4502 and R4511 (L) BETWEEN VR4507 and R4561 (R)	VR4502 (L) VR4507 (R)	SP RECORDING	1kHz, -10dB AUDIO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VTVM/ SINEWAVE GENERATOR	120 (mVrms)	

1. Set the output level of the Signal Generator to 1kHz/-10dB and supply it to both audio input terminals (L) and (R).
2. Adjust the recording level (Line output) with Hi-Fi Rec Level VR on the front panel until both audio outputs (L) and (R) are 400mVrms (VTVM).
3. Connect the VTVM between VR4502 and R4511.
4. Adjust VR4502 until the level is 120mVrms.
5. Connect the VTVM between VR4507 until the level is 120mVrms.

SECTION 3 SCHEMATIC DIAGRAMS

3-1. ABBREVIATIONS

443NT [L]	4.43 NTSC ①	BIL. [H]	BILINGUAL ⑥
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 ⑥
A. DEF [S] [L]	AUDIO DEFEAT	BS MON [H]	BS MONITOR ⑥
A. DUB P [L]	AUDIO DUBBING PAUSE ①	BS MONI [H]	BS MONITOR ⑥
A. DUB [H]	AUDIO DUBBING ⑥	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 ⑥
A. HEAD [W]	AUDIO HEAD (PLAY)	BS. LEVEL	BS LEVEL
A. IN [L]	AUDIO INPUT (L)	BS. M [H]	BS MONITOR ⑥
A. IN [R]	AUDIO INPUT (R)	BS/VTR [H]	BS/VTR ⑥
A. MUT [H]	AUDIO MUTE ⑥	BUS CLK	BUS CLOCK
A. MUTE [H]	AUDIO MUTE ⑥	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/VS/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 ⑥	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 ⑥/NORMAL	CINEM [L]	CINEMA ①
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL TEST/NORMAL/SERVICE	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 ⑥	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 ⑥
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 ⑥	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]	DELAIED FM RECORDING ⑥
		D. FM REC [L]	DELAIED FM RECORDING ①
		D. GND	DIGITAL GND

ABBREVIATIONS

D. REC [H]	DELAYED RECORDING ⑥	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 ⑥	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)	HEAD 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 ⑥	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 ①	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT ⑥	ICL	CONTROL AGC CIRCUIT
EE [H]	EE ⑥	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE ⑥/INSERT ⑥	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch ①
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT ⑥
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 ⑥	INSERT [H]	INSERT ⑥
EP/LP [H]	LP ⑥	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP ⑥	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 ⑥
FF/REW [L]	FIRST FORWARD/REWIND ①	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMEN	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON ⑥	L. CH [H]	Lch ⑥
FLY ON [H]	FLYING ERASE E HEAD ON ⑥	L. CH [L]	Lch ①
FLY. E [H]	FLYING ERASE HEAD ON ⑥	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE ⑥	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE ⑥	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 ⑥	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON ⑥	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 ⑥

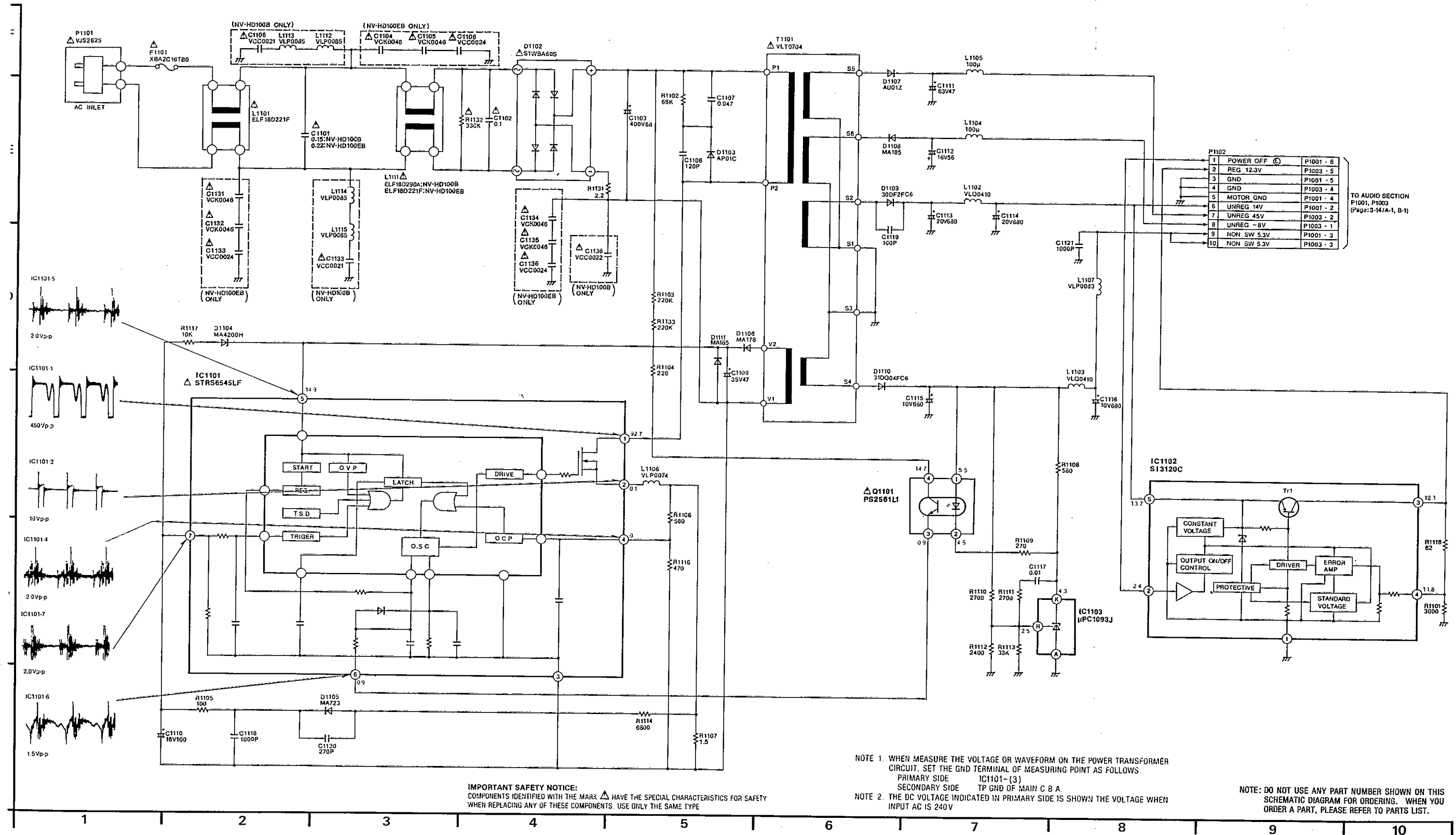
ABBREVIATIONS

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/MONAUURAL	PFG	PG/FG
MAX IN	MAXIMAM 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/BILIGUAL	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 ④
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	MONAURAL ②/MAIN ①	REC START	RECORDING START
MN. H/MAI. L	MONAURAL ②/MAIN ①	REC VR [C]	RECORDING VOLUME (COMMON)
MN2/MES. L	MONAURAL 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]	MONAURAL ②	REC. Y	RECORDING LUMINANCE SIGNAL
MONO [H]/MAIN [L]	MONAURAL ②/MAIN ①	REC/EE CTL	RECORDING/EE CONTROL
MONO2 [L]	MONAURAL 2	REEL-T	REEL PULSE (TAKE-UP)
MONO2/MESE [FM(L)]	MONAURAL 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	REV M F/R	REVIEW MOTOR
N. SW 12V	NON SW 12V		FORWARD/REVERSE
N. SW. 5. DET	NON SW 5V DETECT	REV M V1	REVIEW MOTOR V1
NICAM	NICAM	REV M V2	REVIEW MOTOR V2
NICAM [L]	NICAM ①	REV MOTOR F/R	REVIEW MOTOR
NOL [H]	PAL ②/4.43 NTSC ③/3.58 NTSC ④		FORWARD/REVERSE
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY ②	REV MOTOR V1	REVIEW MOROR V1
NORMAL [H]	NORMAL ②	REV MOTOR V2	REVIEW MOTOR V2
NR BIAS	NR BIAS	REV MOTOR [+]	REVIEW MOTOR (+)
NTSC [L]	NTSC ①	REV MOTOR [-]	REVIEW MOTOR (-)
OCH	CONTROL AGC CIRCUIT	REV. M. GND	REVIEW MOTOR GND
OUT	OUTPUT	RF. CHROMA	RF CHROMINANCE SIGNAL
P-OFF [H]	POWER OFF ②	RF OUT	RF OUTPUT
P-OFF [L]	POWER OFF ①	RF Y	RF LUMINANCE SIGNAL
P. FAIL	POWER FAILURE DETECT	RF. Y. IN	RF LUMINANCE SIGNAL INPUT
P. OFF [H]	POWER OFF ②	RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT

ABBREVIATIONS

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 ①	T. END [L]	TAPE END ①
Rch/INST	Rch/INSERT	T. PHOTO	TAKE-UP PHOTO TRANSISTOR
S IN	SERIAL DATA INPUT	TAPE END [L]	TAPE END ①
S OUT	SERIAL DATA OUTPUT	TAPE END [L]/CAM	TAPE END ①/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]	TRIC PLAY ①
S. CLK/AV	SERIAL CLOCK/AV	TRICK [L]	TRIC PLAY ①
S. DATA	SERIAL DATA	TRK. ENV	AUTO TRACKING ENVELOPE DETECT
S. DATA/A	SERIAL DATA	TU. AUDIO	TUNER AUDIO
S. PHOTO	SUPPLY PHOTO TRANSISTOR	TU. GND	TUNER GND
S. TAB [L]	SAFETY TAB SW ON ①	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 ②	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 ②
SLW TR. REF	SLOW TRACKING REFERENCE	TV. AUDIO	TV AUDIO
	VOLTAGE	TV/VTR	TV/VTR
SNS. GND	SENSOR GND	TXTON [L]	TEXT ON ①
SOFT [H]	SOFT TAPE PLAY ②	U. REG45V	UNREGULATOR 45V
SOFT [H]/NORMAL	SOFT TAPE PLAY ②/NORMAL ②	UNREG	UNREGULATOR
SOLENOID ON [L]	SOLENOID ON ①	UNREG19V	UNREGULATOR 19V
SP [H]	SP ②	V. REF	REFERENCE VOLTAGE
SP/L/SLP	SP/LP	V. EE [H]	VIDEO EE ②
SSS [L]	SLOW/STILL/STOP	V. EE [L]	VIDEO EE ①
STEREO LED	STEREO LED	VCO REF	REFERENCE OSCILLATER
STEREO [H]	STEREO ②	VD. IN	VIDEO SIGNAL INPUT
STEREO [L]	STEREO ①	VD. OUT	VIDEO SIGNAL OUTPUT
STOP. PO	STOP POSITION	VIDEO EE [L]	VIDEO EE ①
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	STOP1 POSITION/PAL	VM	MOTOR VOLTAGE
STOP2. PO	STOP 2 POSITION	VM DOWN [L]	MOTOR VOLTAGE DOWN ①
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW	VSS	VERTICAL SYNC SIGNAL
STREO [H]	STEREO ②	VTR [H]	VTR ②
SUB BIAS	SUB BIAS	VTR. 12V	VTR 12V
SUB. SW	SUB SW	X IN	OSCILLATOR INPUT
SVHS CAS [L]	S-VHS CASSETTE ①	X OUT	OSCILLATOR OUTPUT
SW. 5. DET	SW 5V DETECT		
SYNC [L]	SYNC ①		
SYSCON 5V	SYSTEM CONTROL 5V		
SYSTEM	SYSTEM SW		
T-PHOTO	TAKE-UP PHOTO TRANSISTOR		
T-RL. PLS	TAKE-UP REEL PULSE		

2. POWER SCHEMATIC DIAGRAM (VEP01487H: NV-HD100B) (VEP01487K: NV-HD100EB) [Page: 3-53]



TO AUDIO SECTION
P1001, P1003
(Page: 3-14/A-1, B-1)

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

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER
CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE IC1101-(3)
SECONDARY SIDE TP GND OF MAIN C B A.
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN
INPUT AC IS 240V

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS
SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU
ORDER A PART, PLEASE REFER TO PARTS LIST.

SYSTEM CONTROL & SERVO ICs VOLTAGE CHART (SP MODE)

REF. NO.	IC2001										IC2002									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8		
STOP	0	0.7	0	7.1	0	0	14.6	14.6	0.1	0.7	3.6	2.6	0	0	0	5.1	5.1	5.1		
PLAY	0	0.7	0.1	7.0	0	0	14.5	14.5	0	0.7	2.7	5.1	0	0	0	5.1	0	5.1		
REC	0	0.7	0	7.0	0	0	14.4	14.4	0.1	0.7	0	5.1	0	0	0	5.1	0	5.1		
F.F	0	0.8	0.1	14.3	0	0.1	14.4	14.3	0.1	0.7	2.7	5.1	0	0	0	5.1	0	0		
REW	0	0.8	0.1	14.5	0	0	14.5	14.5	0.1	0.7	5.1	0	0	0	0	5.1	5.1	5.1		

REF. NO.	IC2003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	1.1	0	1.1	1.5	2.3	2.3	2.3	2.3	2.3	2.3	2.1	0	2.7	0.5	2.9	0.5	0.4	0	5.1	14.6
PLAY	-	0	-	1.4	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.6	0.4	0.1	5.1	14.5
REC	-	0	-	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.6	0.4	0.1	5.1	14.5
F.F	5.2	0.2	7.3	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.8	0.8	2.9	2.3	0.5	0.2	5.1	14.4
REW	6.8	0.1	7.5	1.5	2.3	2.3	2.3	2.3	2.3	2.3	5.1	0	0.8	0.7	2.9	2.4	0.5	0.1	5.1	14.5

REF. NO.	IC2003			
MODE	21	22	23	24
STOP	0.5	14.0	1.0	4.5
PLAY	2.4	13.0	-	4.7
REC	2.4	13.0	-	4.7
F.F	12.3	3.6	6.1	14.7
REW	12.2	5.1	7.9	14.3

REF. NO.	IC2005							
MODE	1	2	3	4	5	6	7	8
STOP	2.6	2.6	2.6	0	2.6	2.6	2.6	5.1
PLAY	2.6	2.6	2.6	0	2.6	2.6	2.6	5.1
REC	2.6	2.6	2.6	0	2.6	2.6	2.6	5.1
F.F	2.6	2.6	2.6	0	2.6	2.6	2.6	5.1
REW	2.6	2.6	2.6	0	2.6	2.6	2.6	5.1

REF. NO.	IC2901																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
STOP	14.4	14.6	0.1	1.1	0	2.6	2.5	2.6	2.6	2.7	5.1	3.7	3.8	3.7	1.5	14.6	14.4	0.1
PLAY	14.4	14.6	0.1	1.0	0	2.6	2.6	2.6	2.8	5.1	3.8	3.8	3.8	1.5	1.2	14.5	14.2	0.2
REC	14.4	14.6	0.1	1.0	0	2.6	2.6	2.6	2.7	5.1	3.8	3.8	3.8	3.6	1.5	14.2	14.6	0.1
F.F	14.4	14.6	0.1	1.0	0	2.6	2.6	2.6	2.5	2.7	5.1	3.8	3.8	3.8	1.5	14.2	14.6	0.1
REW	14.4	14.6	0	1.0	0	2.6	2.6	2.6	2.5	2.7	5.1	3.8	3.8	3.8	1.5	14.2	14.6	0.1

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	5.1	0	0	0.1	5.1	0.1	0	2.5	3.8	0	0	0	0	0	2.6	5.1	5.1	0.1	0
PLAY	0	5.1	0	0	4.9	5.1	0	0	0	0	5.1	0	0	0	0	2.6	4.9	5.1	0	0
REC	0	5.1	0	0	4.9	5.1	0.1	0	4.6	0	0	0	0	0	0	2.6	4.9	5.1	-	0
F.F	0	5.1	5.1	0	3.0	0	0.1	0	2.7	0	0	0	0	0	0	2.6	4.9	5.1	0	0
REW	0	5.1	0	0	0	5.1	0	0	2.8	5.1	5.1	0	0	0	0	0	0	5.1	0	0

REF. NO.	IC6001																																							
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																				
STOP	0	5.1	0.5	2.5	2.2	2.5	0	2.5	0	2.6	2.4	0	5.1	0	0	0	0	2.6	0	2.5																				
PLAY	0	5.1	2.6	2.5	3.9	2.5	0	0	2.6	2.7	2.5	5.0	0	0	0	0	2.6	2.6	0	2.8																				
REC	5.1	5.1	2.6	2.5	0.3	0	2.5	2.5	0	2.6	2.4	2.7	5.0	0	0	0	2.6	2.5	0	2.4																				
F.F	5.1	5.1	2.3	2.5	2.7	2.5	2.5	2.5	0	2.6	2.5	2.7	5.0	0	0	0	2.6	2.6	0	2.9																				
REW	5.1	0	2.6	2.5	3.4	2.5	2.5	2.5	0	2.6	2.5	2.7	5.0	0	0	0	2.6	2.6	0	0																				

REF. NO.	IC6001																																							
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60																				
STOP	2.5	5.1	1.2	3.7	0	4.0	5.1	5.1	0	0	0	1.4	5.1	5.1	5.1	5.1	0	0	0	4.9																				
PLAY	2.6	5.1	0	0	0	4.2	5.1	0	0	0	0	0	0	0	0.1	5.1	0	0	0	0																				
REC	2.6	5.1	1.4	3.0	0	4.0	5.1	0	0	0	0	0	0	5.1	0	0	5.1	0	0	0																				
F.F	2.5	5.1	1.1	3.6	0	4.0	5.1	5.1	0	0	0	1.4	5.1	0.1	0	5.1	0	0	0	4.1																				
REW	2.5	5.1	1.1	3.6	0	4.3	5.1	5.1	0	0	0	0	0	5.1	0.1	0	5.1	0	0	5.1																				

REF. NO.	IC6001																																							
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																				
STOP	5.1	2.1	4.6	4.2	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	5.0	0	0	5.1	0																				
PLAY	5.1	0	4.6	4.5	0	0.1	0	0	0.3	5.1	0	0	0	0	0	5.0	0	4.8	0	0																				
REC	0	0	4.5	0	5.1	0	0	5.1	5.0	5.1	0	0	5.1	0	0.1	0	0	0	0	0																				
F.F	0	0	4.5	4.6	0	0	0	0	0.3	5.1	0	0	5.1	0	0.1	0	0	0	5.1	0																				
REW	5.1	5.1	4.6	4.6	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	0	0	0	5.1	0																				

REF. NO.	IC6001			
MODE	81	82	83	84
STOP	0	2.7	2.1	4.8
PLAY	0	2.6	2.6	4.8
REC	0	2.6	0	4.8
F.F	0	2.6	2.6	4.8
REW	0	2.6	2.6	4.8

REF. NO.	IC6009							
MODE	1	2	3	4	5	6	7	8
STOP	2.6	2.6	2.6	0	4.9	0.7	13.4	14.6
PLAY	2.6	2.6	2.6	0	4.9	0	13.3	14.5
REC	2.6	2.6	2.6	0	4.9	0.7	13.3	14.5
F.F	2.6	2.6	2.6	0	4.9	0	13.9	14.4
REW	2.6	2.6	2.6	0	4.9	0.7	13.9	14.5

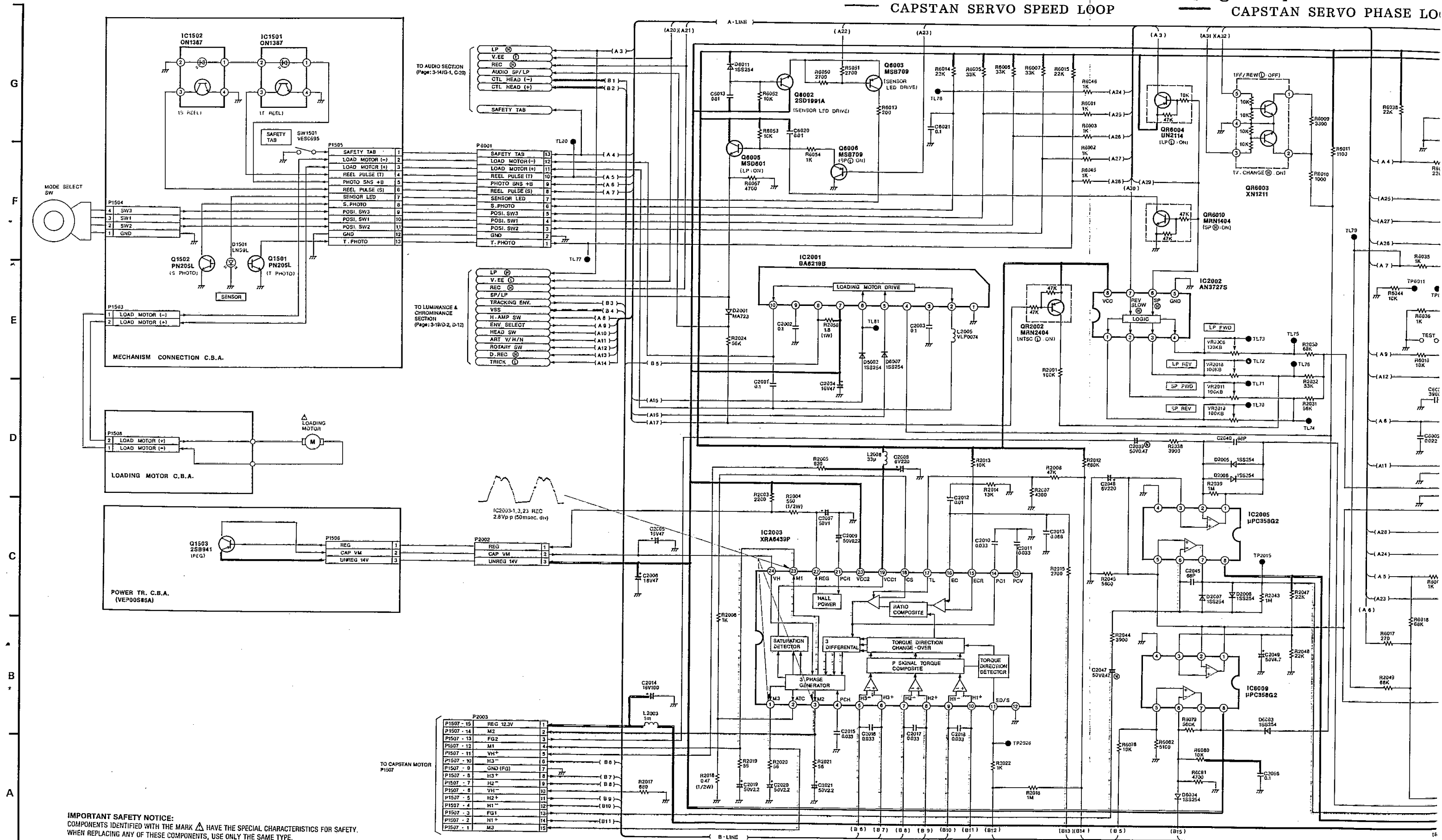
SYSTEM CONTROL & SERVO TRANSISTORS DC VOLTAGE CHART (SP MODE)

REF. NO.	Q1503			Q2001			Q6001			Q6002			Q6003			Q6004		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	14.7	4.5	14.1	5.1	4.6	5.1	5.0	5.1	5.6	5.2	14.6	5.7	5.2	-1.3	5.1	5.1	10.4	5.7
PLAY	14.3	4.7	13.8	5.1	4.8	5.1	5.0	5.1	5.6	5.0	14.5	5.7	5.0	5.0	4.3	5.1	10.2	5.7
REC	14.4	4.7	13.8	5.1	4.8	5.1	5.0	5.1	5.6	5.0	14.4	5.7	5.0	5.0	4.3	5.1	10.2	5.7
F.F	14.4	14.4	13.7	5.1	4.8	5.1	5.0	5.1	5.7	5.1	14.5	5.7	5.1	5.0	4.3	5.1	10.2	5.7
REW	14.4	14.4	13.7	5.1	4.9	5.1	5.0	5.1	5.7	5.0	14.5	5.7	5.1	5.0	4.3	5.1	10.0	5.7

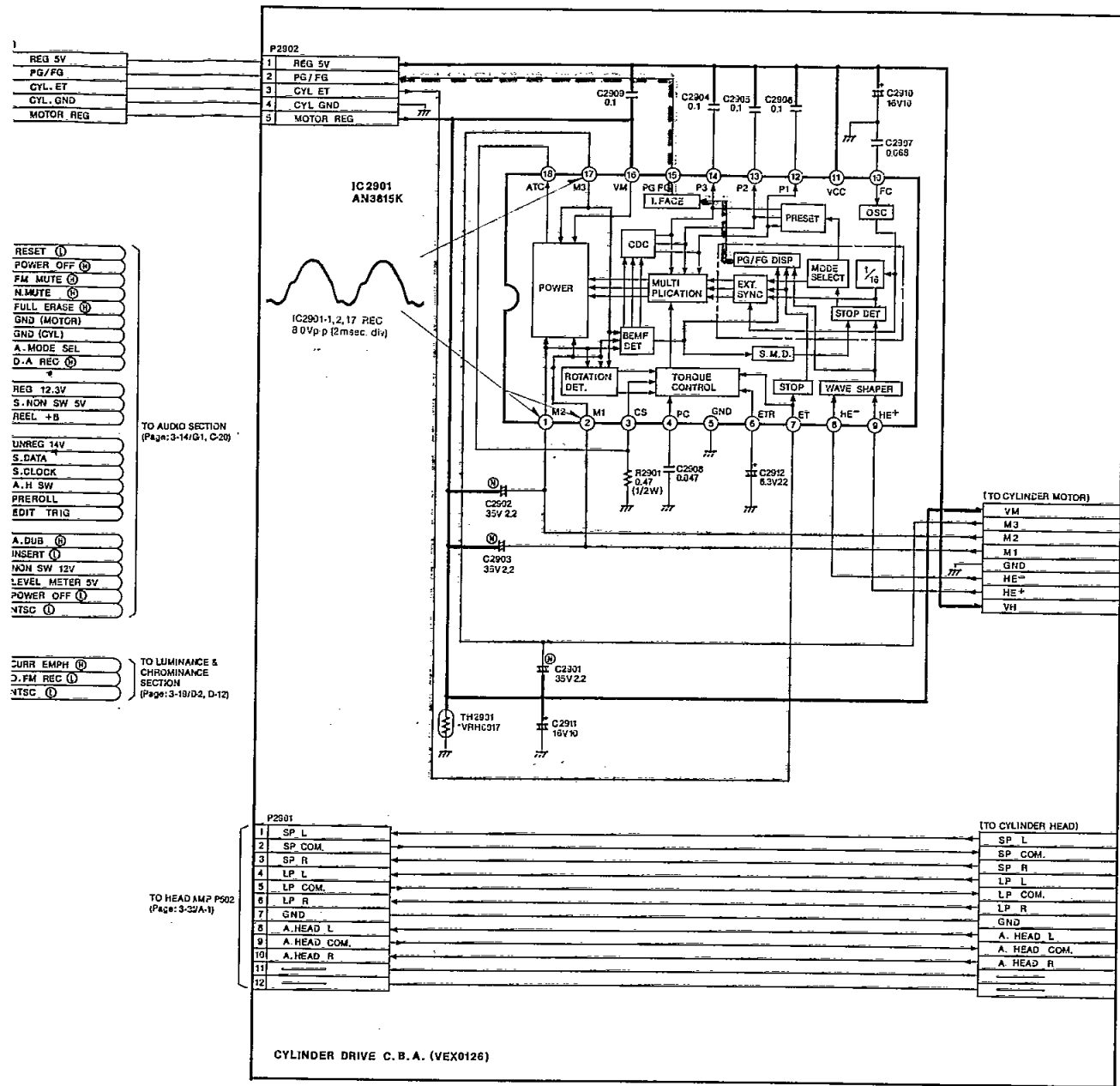
REF. NO.	Q6005			Q6006		
MODE	E	C	B	E	C	B
STOP	0.3	5.1	0	0	0	0
PLAY	0.3	5.1	0	0	0	0
REC	0.3	5.1	0	0	0	0
F.F	0.3	5.1	0	0	0	0
REW	0.3	5.1	0	0	0	0

REF. NO.	QR2001			QR2002			QR6003			QR6004								
MODE	1	2	3	4	5		E	C	B	1	2	3	4	5		E	C	B
STOP	0	0	5.0	0	5.0		5.1	0	5.1	0	0	5.1	0	5.0		5.1	0.1	5.1
PLAY	0	0	5.0	0	0		5.1	0	5.1	0	0.1	5.1	0	5.0		5.1	0.1	5.1
REC	0	0	5.0	0	5.0		5.1	0	5.1	0	0	5.1	0	5.0		5.1	0	5.1
F.F	0	0.9	0	0	0		5.1	0	5.1	14.4	14.4	0	0	0		5.1	0.1	5.1
REW	0	0.8	0	0	0		5.1	0	5.1	14.4	14.4	0	0	0		5.1	0.1	5.1

REF. NO.	QR6005			QR6007			QR6010			QR6011					
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B
STOP	0	1.5	4.2	5.1	0	0	0	0		0	0	5.1	0	4.9	0
PLAY	0	1.5	4.1	5.1	0	0	0	0		0	0	5.1	0	4.9	0
REC	0	1.3	4.1	5.1	0	0	0	0		0	0	0.1	0	0	5.1
F.F	0	1.4	4.2	5.1	0	0	0	0		0	0	5.1	0	4.9	0
REW	0	1.3	4.0	5.1	0	0	0	0		0	0	5.1	0	4.9	0



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



- REG 5V
- PG/FG
- CYL ET
- CYL GND
- MOTOR REG

- RESET (1)
- POWER OFF (2)
- FM MUTE (3)
- N.MUTE (4)
- FULL ERASE (5)
- GND (MOTOR)
- GND (CYL)
- A. MODE SEL
- D. A. REC (6)
- REG 12.3V
- S. NON SW 5V
- REEL +B
- UNREG 14V
- S. DATA
- S. CLOCK
- A. H. SW
- PREROLL
- EDIT TRIQ
- A. DUB (7)
- INSERT (8)
- NON SW 12V
- LEVEL METER 5V
- POWER OFF (9)
- NTSC (10)

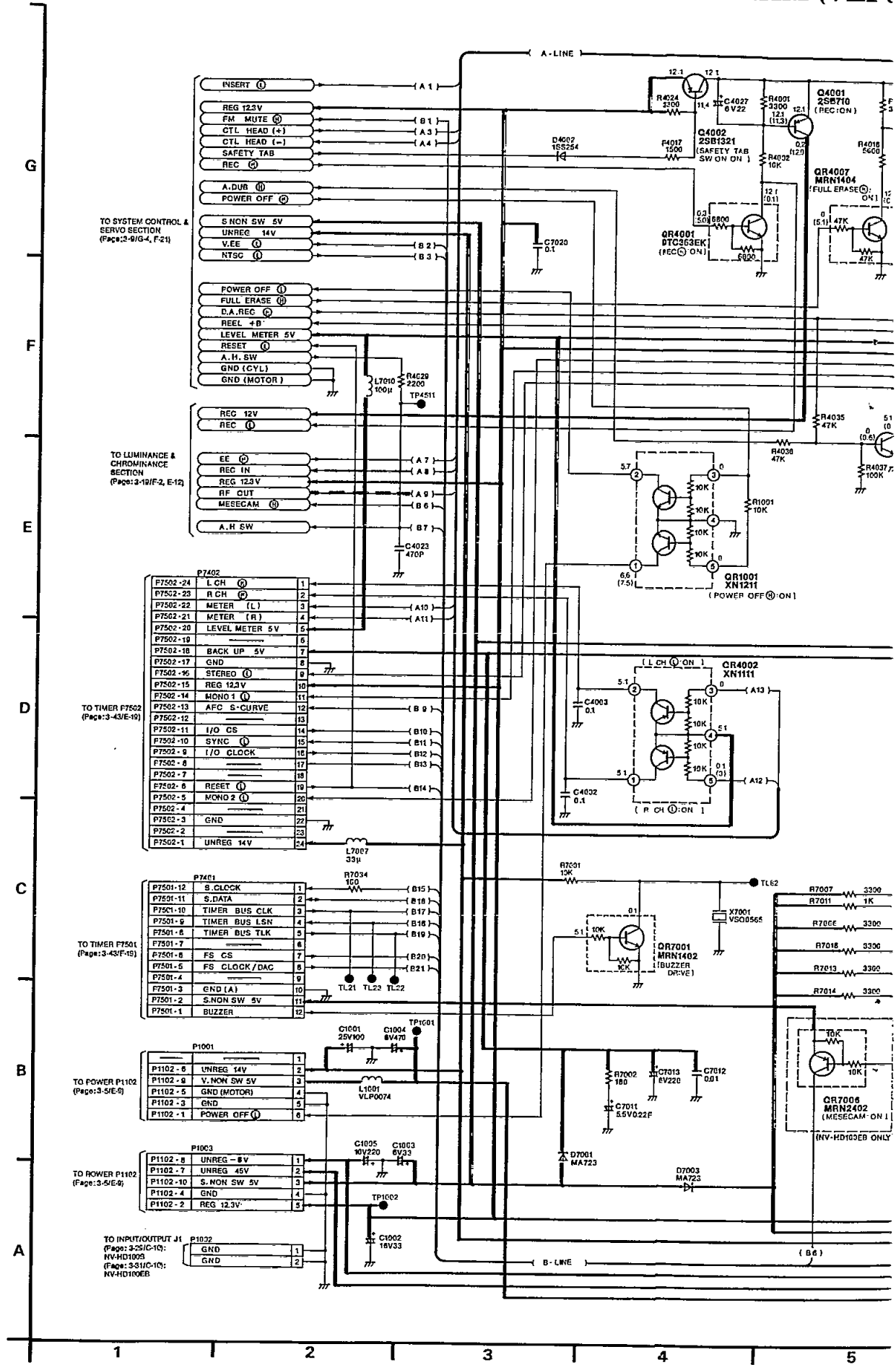
- CURR EMPH (11)
- J. FM REC (12)
- NTSC (13)

- 1 SP L
- 2 SP COM
- 3 SP R
- 4 LP L
- 5 LP COM
- 6 LP R
- 7 GND
- 8 A. HEAD L
- 9 A. HEAD COM
- 10 A. HEAD R
- 11
- 12

- SP L
- SP COM
- SP R
- LP L
- LP COM
- LP R
- GND
- A. HEAD L
- A. HEAD COM
- A. HEAD R

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-4. AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM (VEP)

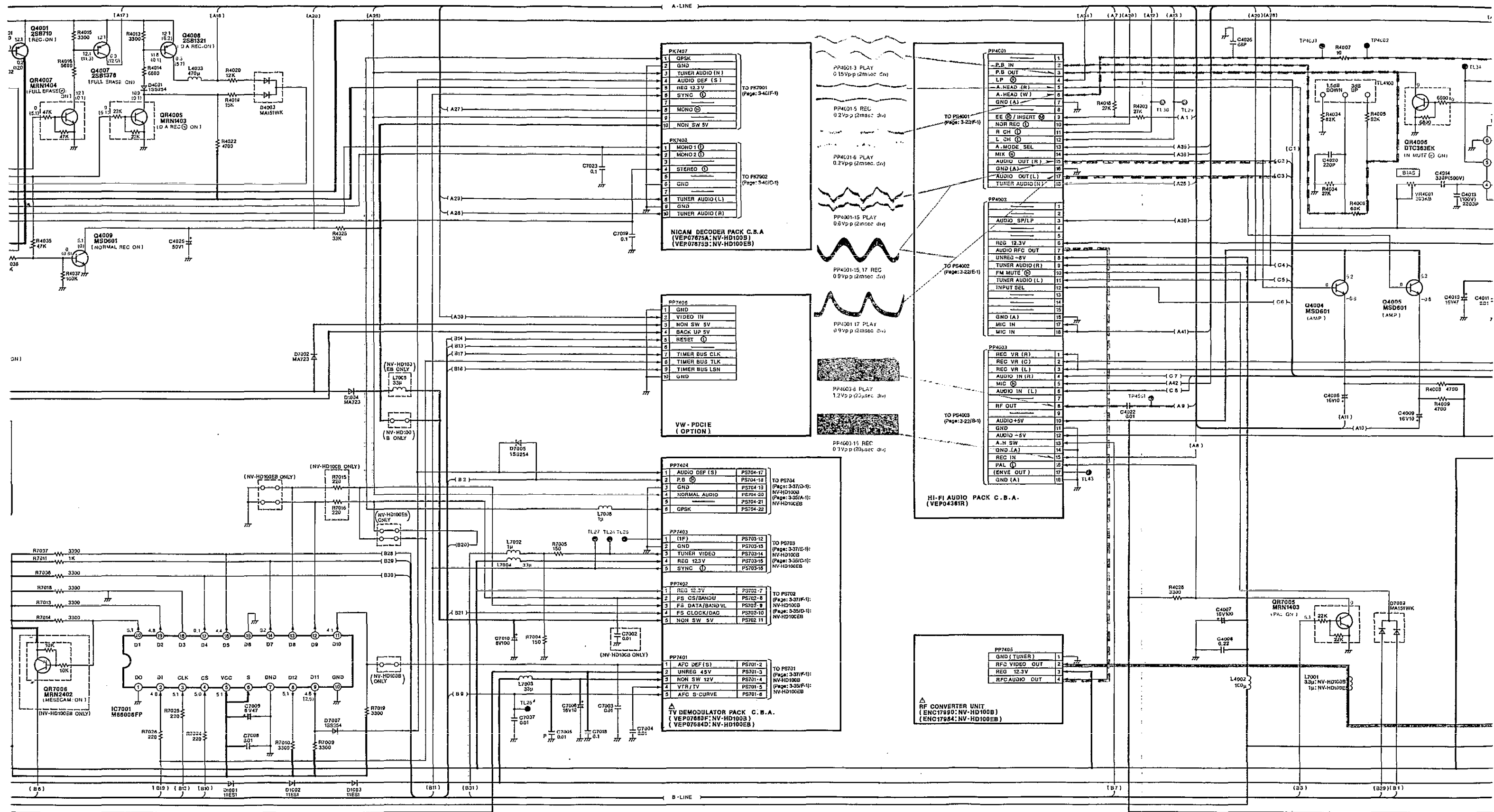


VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN REC MODE

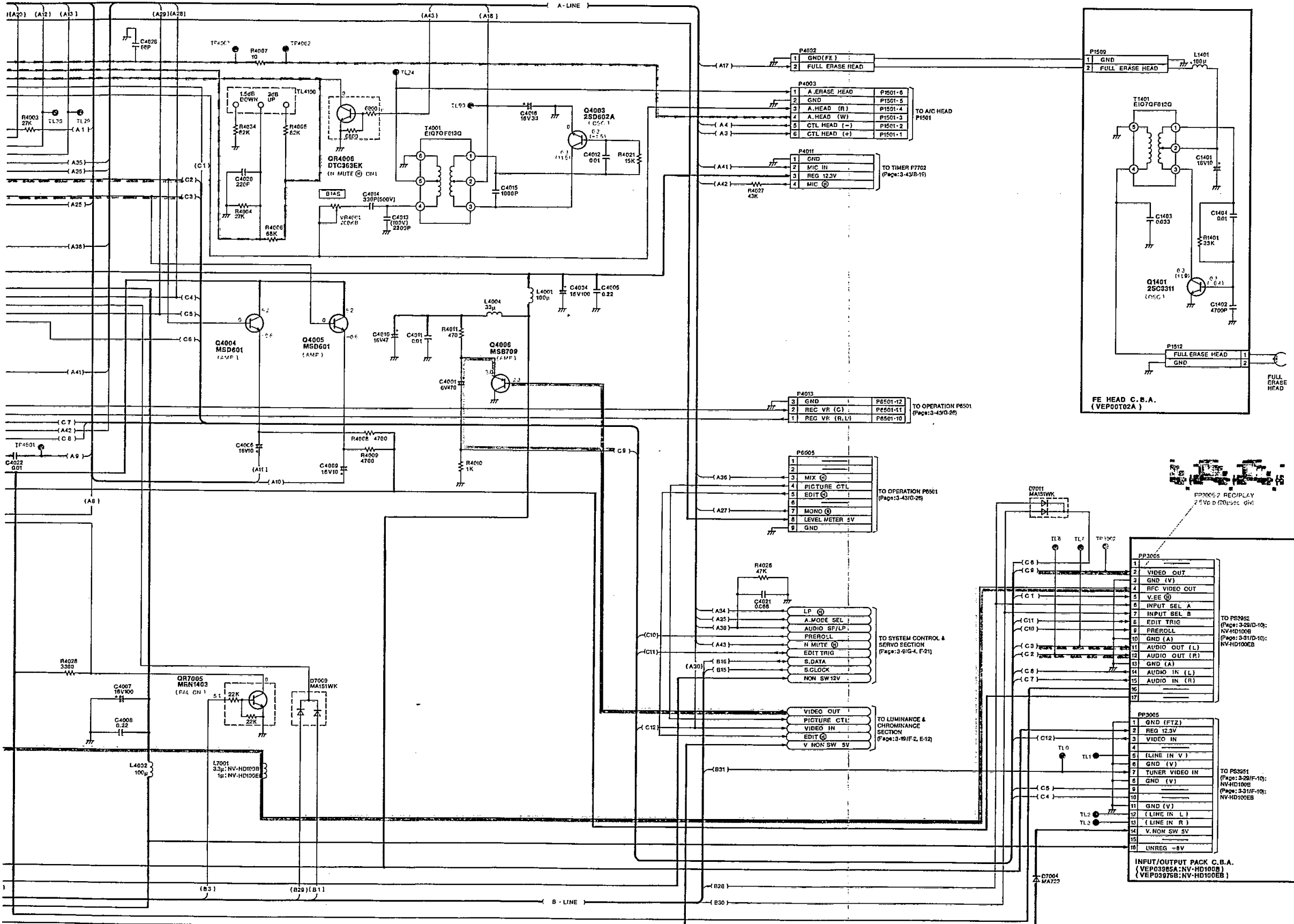
AUDIO MAIN



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

NOTE: THE MEASUREMENT MODE OF THE WITH PAL COLOUR SIGNAL. (SP M)

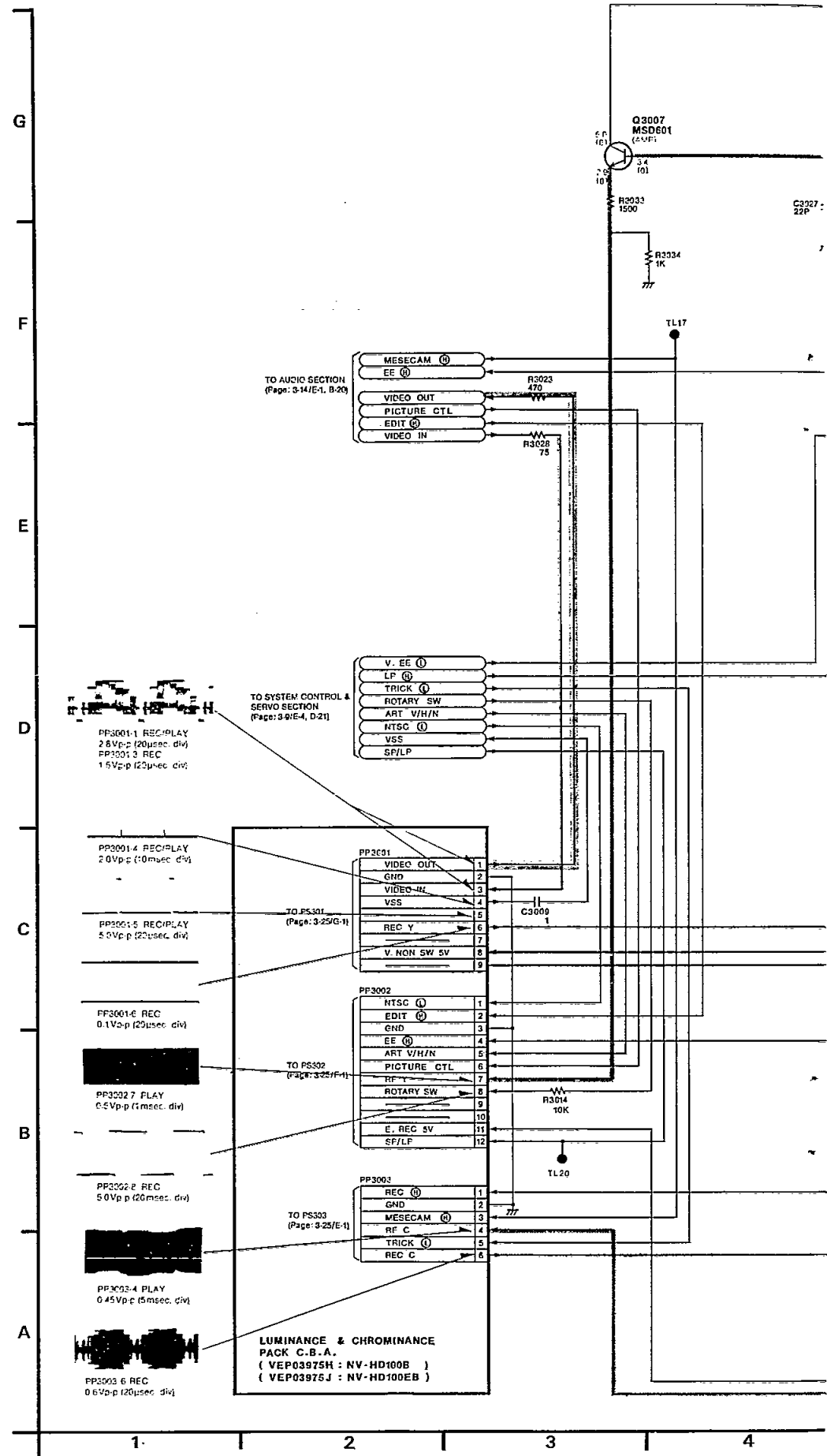
SIGNAL PATH IN REC MODE --- AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

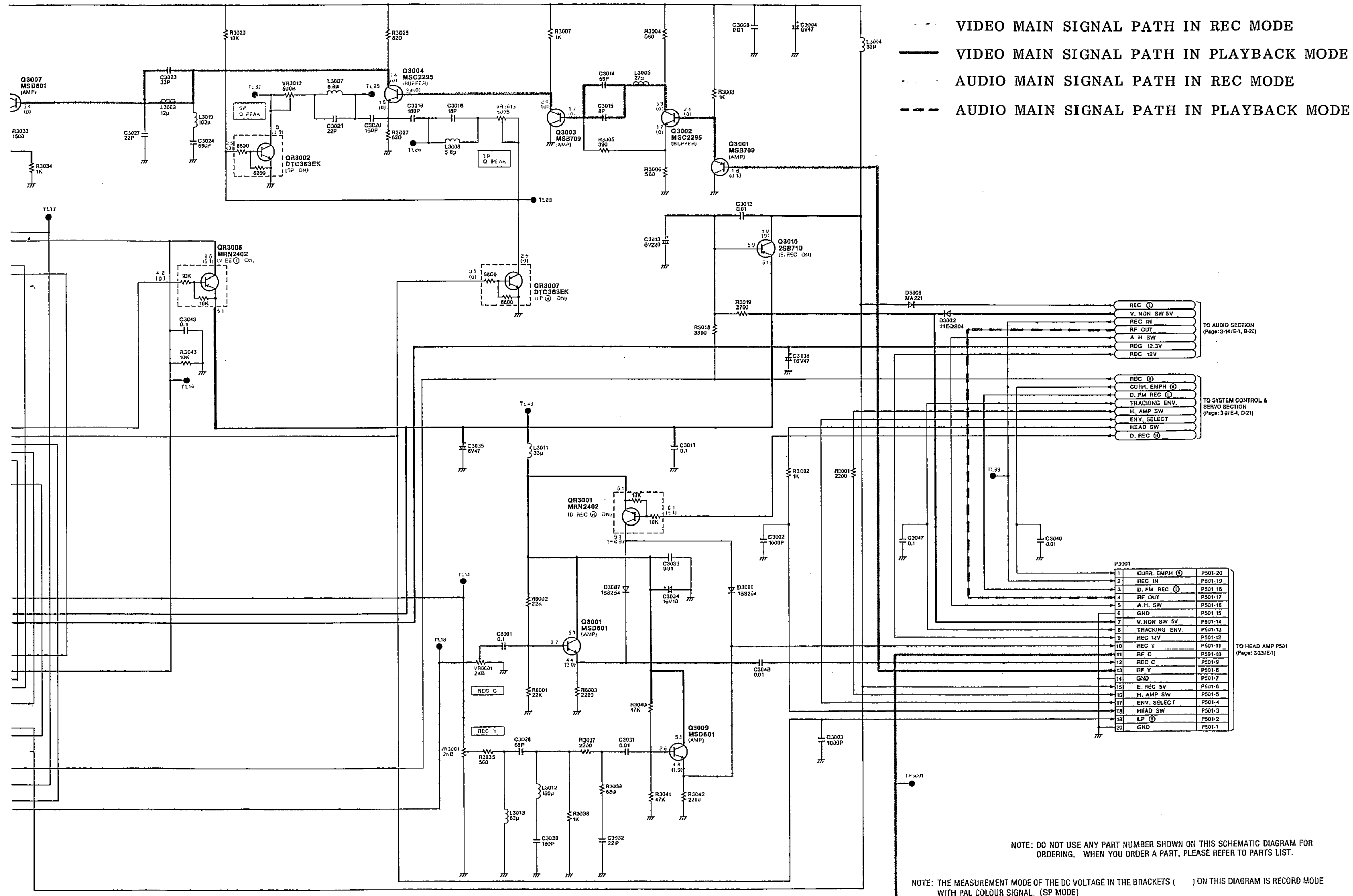


CHARACTERISTICS FOR SAFETY. ME TYPE. NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE) THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-5. LUMINANCE & CHROMINANCE SECTION IN M/





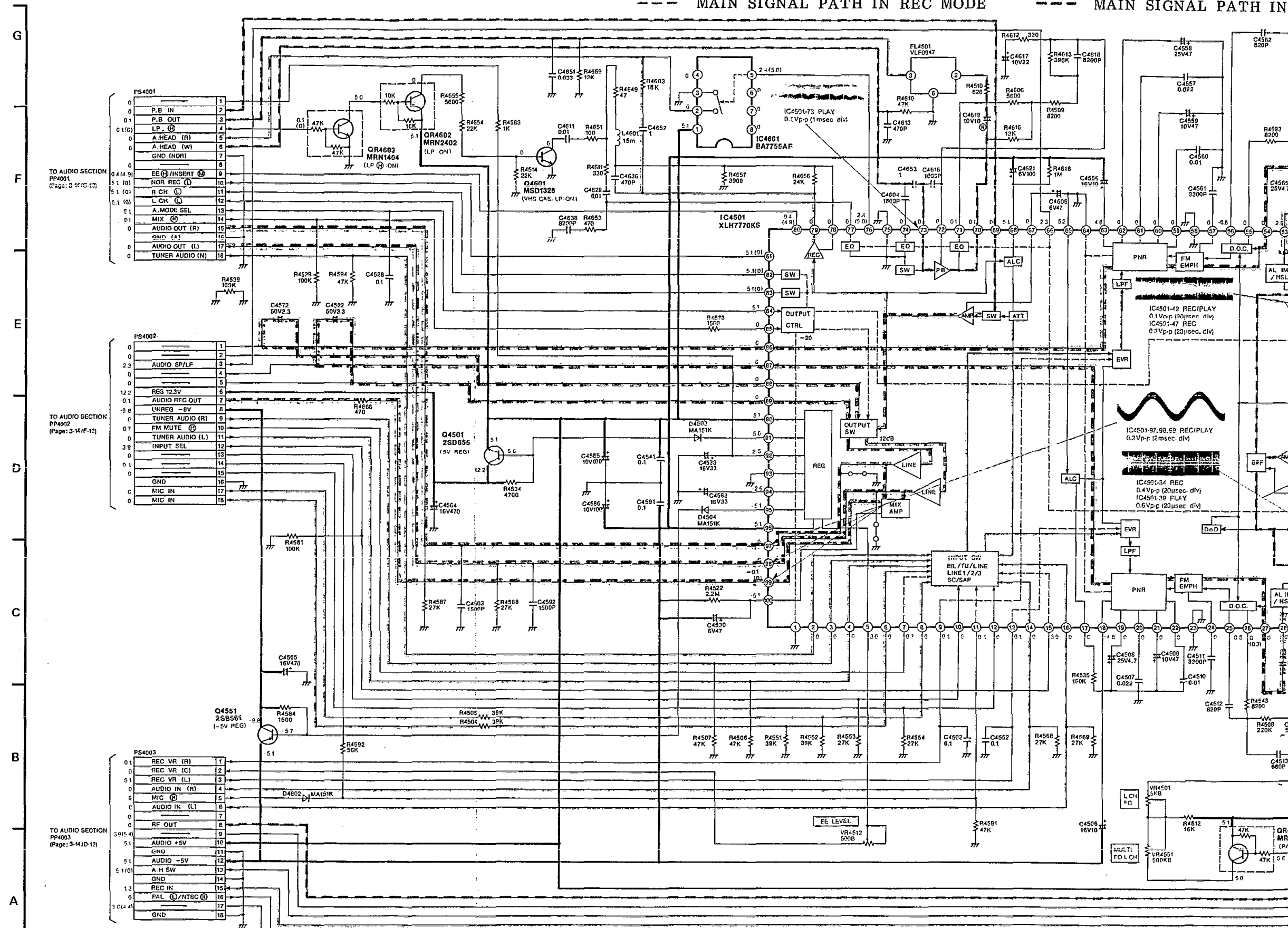
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

3-6. HI-FI AUDIO PACK SCHEMATIC DIAGRAM (VEP04361R) [Page: 3-61]

--- MAIN SIGNAL PATH IN REC MODE

--- MAIN SIGNAL PATH IN



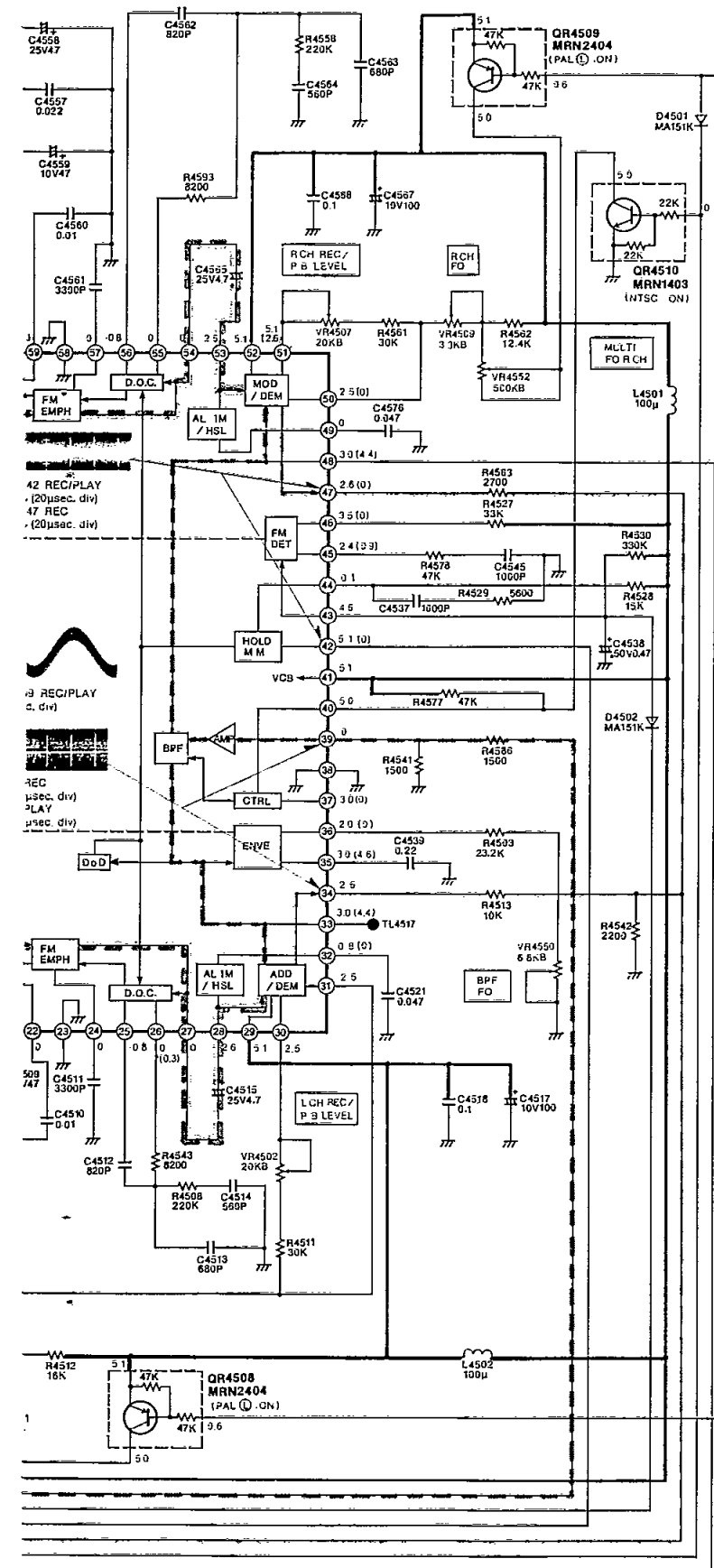
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

• LINE IN SIGNAL LEVEL... -10dB 1kHz

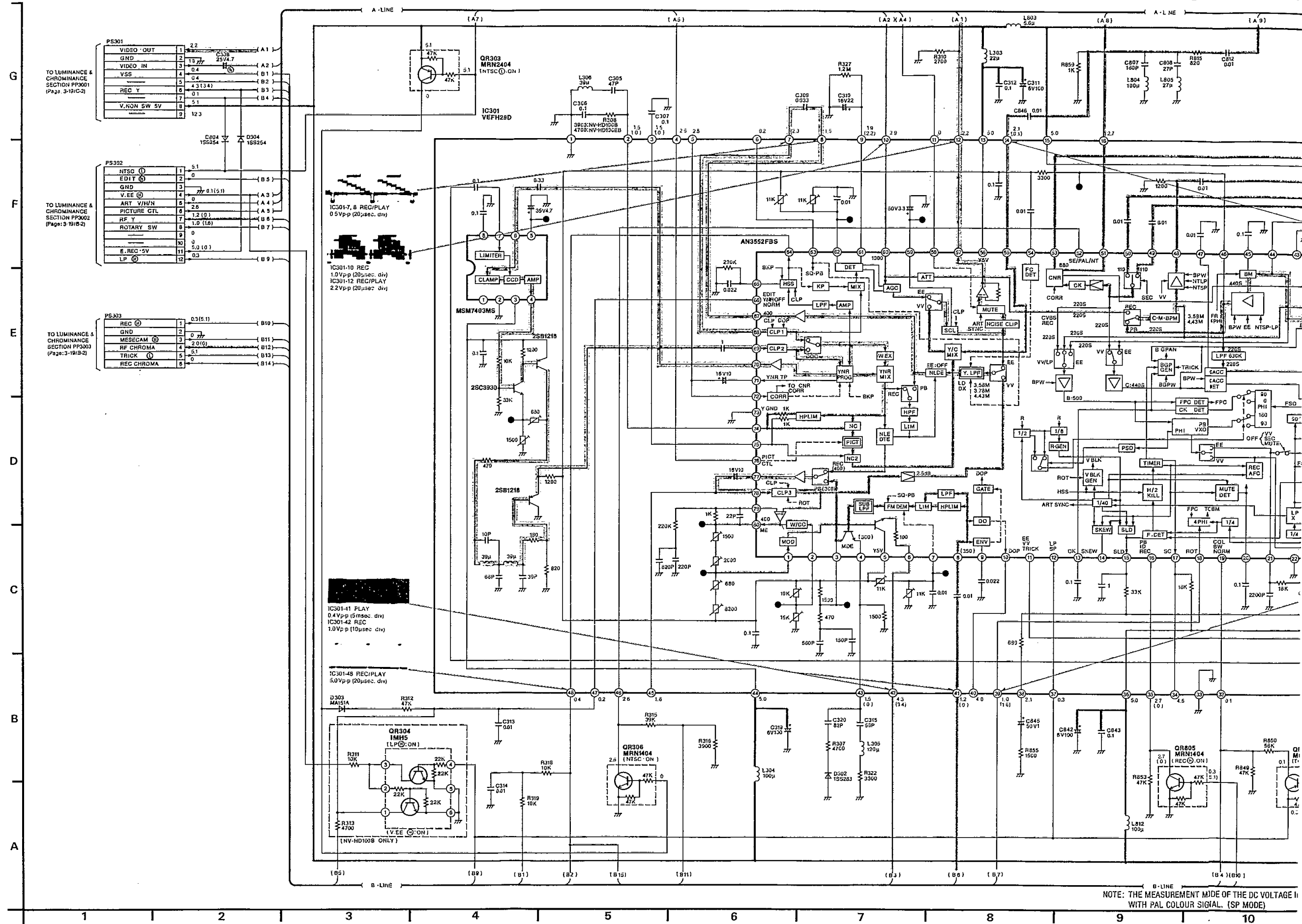
NOTE: DI 01

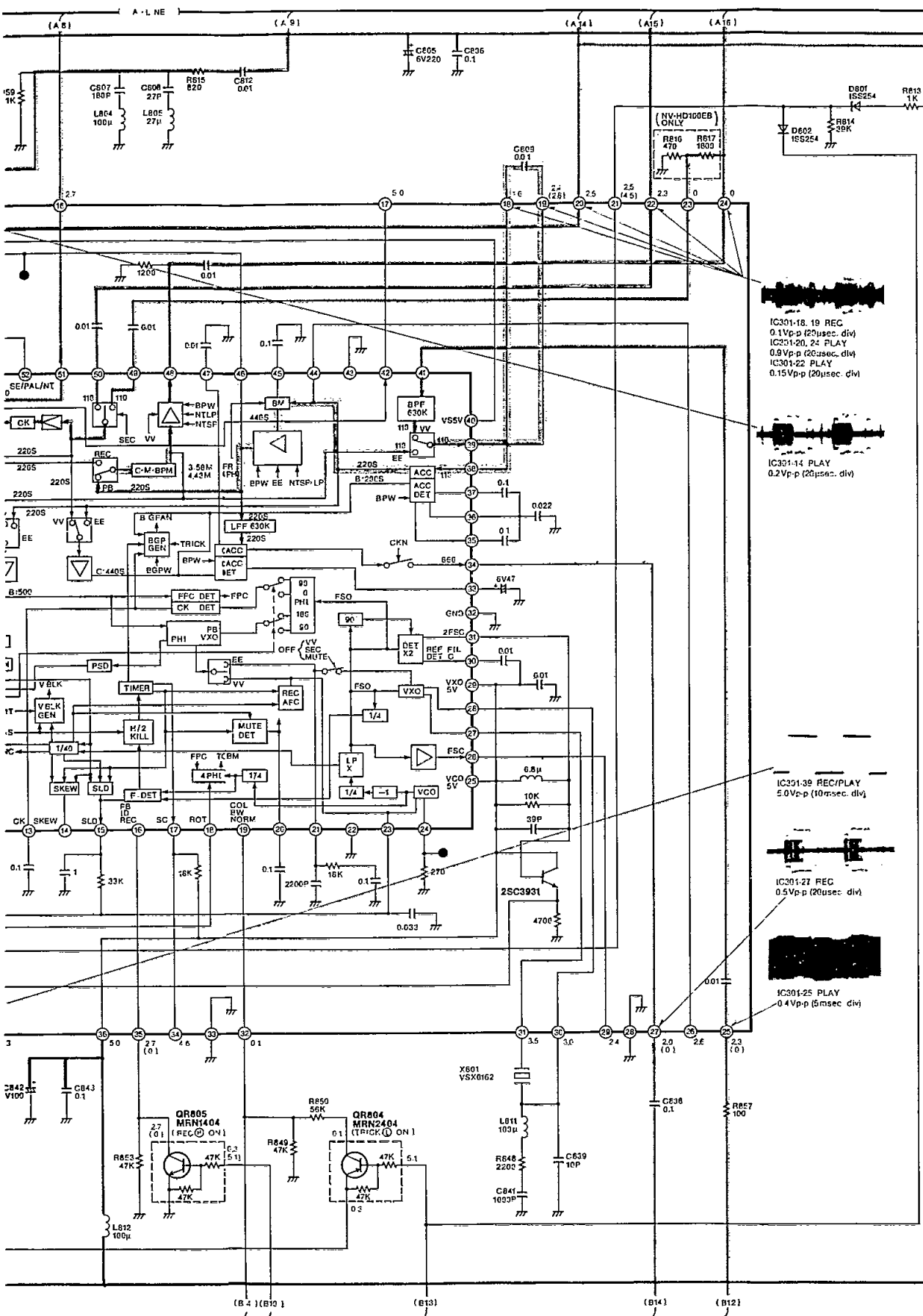
FINAL PATH IN PLAYBACK MODE



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-7. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (VEP03975H: NV-HD100B) (VEP03975J: NV-HD100EB) [Page: 3-55]





IC301-18, 19 REC
0.1Vp-p (20µsec. div)
IC301-20, 24 PLAY
0.9Vp-p (20µsec. div)
IC301-22 PLAY
0.15Vp-p (20µsec. div)

IC301-14 PLAY
0.2Vp-p (20µsec. div)

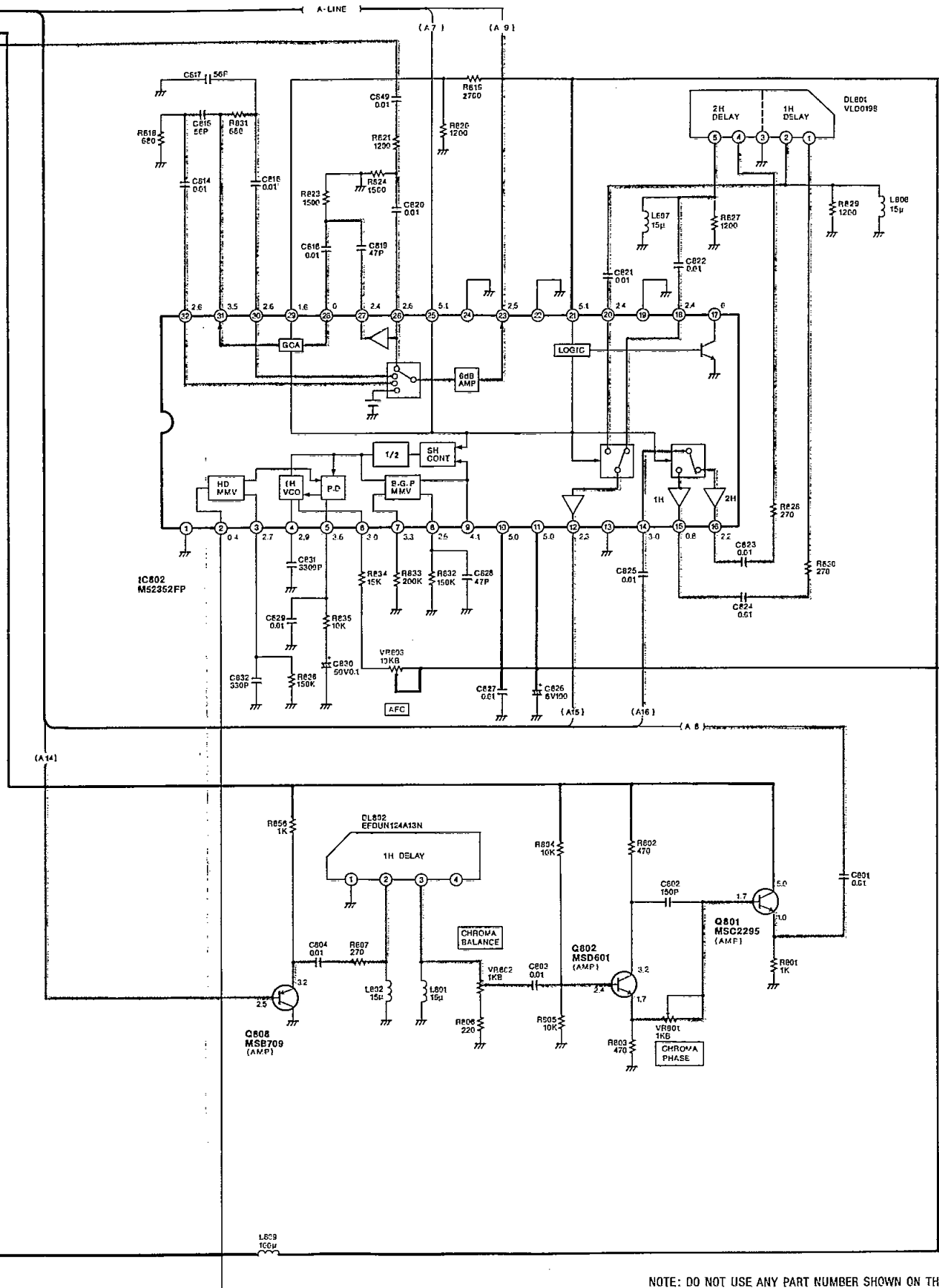
IC301-39 REC/PLAY
5.0Vp-p (10msec. div)

IC301-27 REC
0.5Vp-p (20µsec. div)

IC301-25 PLAY
0.4Vp-p (5msec. div)

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

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-8. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM (VEP03985A: NV-HD100B) [Page: 3-57]

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

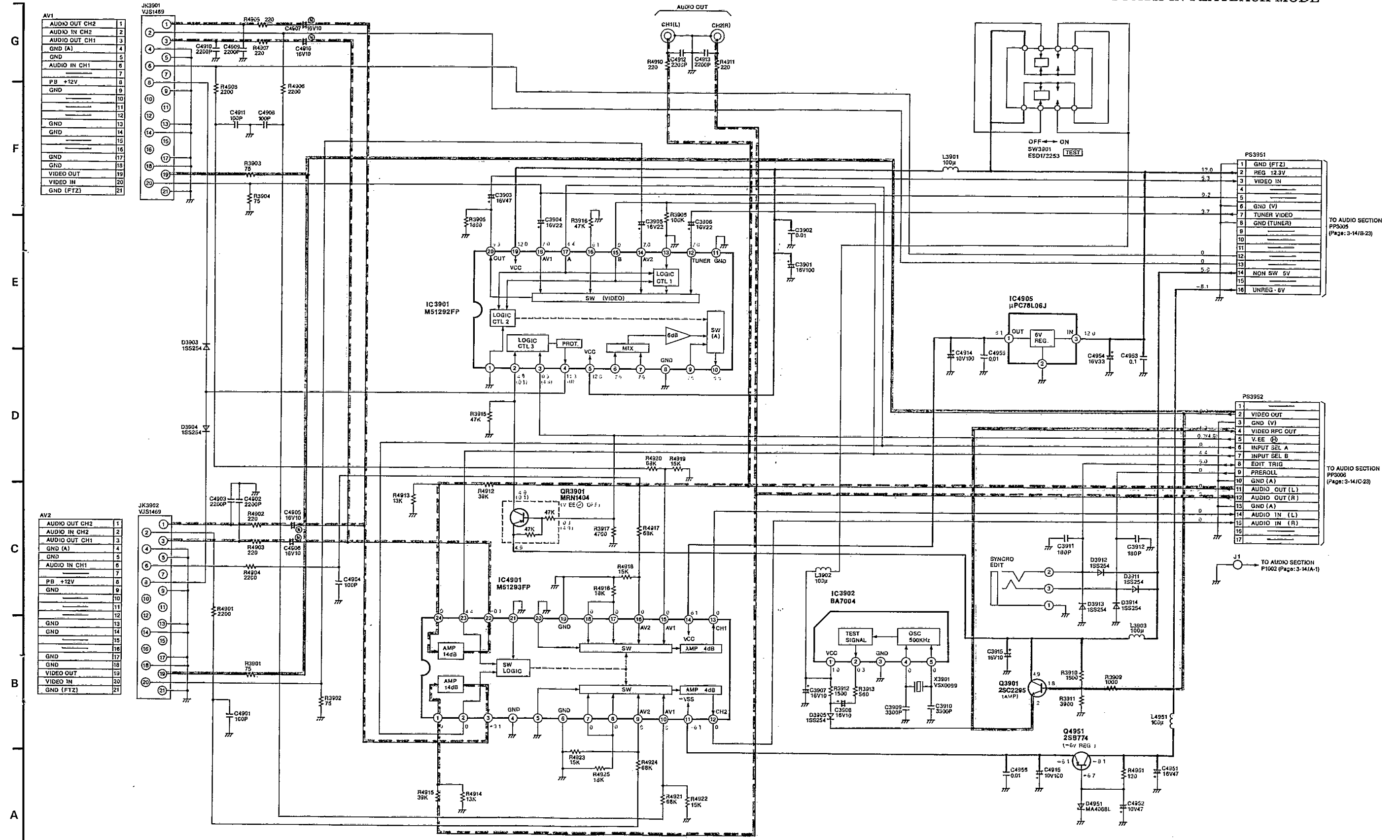


Table with 21 rows and 2 columns: AV1 connections including AUDIO OUT CH2, AUDIO IN CH2, AUDIO OUT CH1, GND (A), AUDIO IN CH1, PB +12V, GND, VIDEO OUT, VIDEO IN, and GND (FTZ).

Table with 21 rows and 2 columns: AV2 connections including AUDIO OUT CH2, AUDIO IN CH2, AUDIO OUT CH1, GND (A), AUDIO IN CH1, PB +12V, GND, VIDEO OUT, VIDEO IN, and GND (FTZ).

3-9. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM (VEP03985A: NV-HD100B) [Page: 3-58]

Table with 16 rows and 2 columns: AV21PIN connections including AUDIO OUT CH2, AUDIO IN CH2, AUDIO OUT CH1, GND (A), AUDIO IN CH1, PB +12V, GND, VIDEO OUT, VIDEO IN, and GND (FTZ).

Table with 16 rows and 2 columns: PS3951 connections including GND (FTZ), REG 12.3V, VIDEO IN, GND (V), TUNER VIDEO, GND (TUNER), NON SW 5V, and UNREG -8V.

Table with 16 rows and 2 columns: PS3952 connections including VIDEO OUT, GND (V), VIDEO HFC OUT, V.EE QB, INPUT SEL A, INPUT SEL B, EDIT TRIG, PREROLL, GND (A), AUDIO OUT (L), AUDIO OUT (R), GND (A), AUDIO IN (L), and AUDIO IN (R).

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

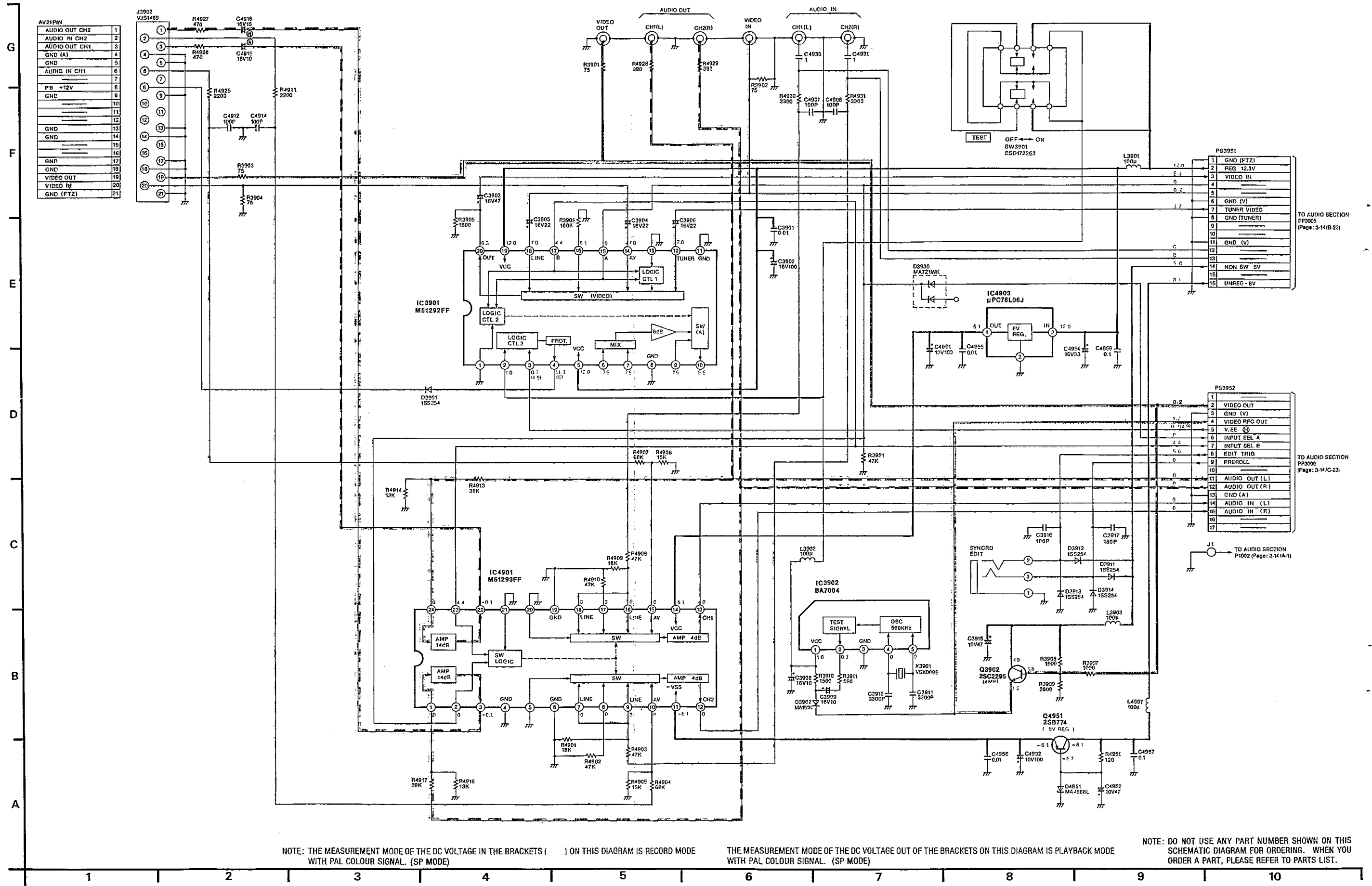
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-9. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM (VEP03979B: NV-HD100EB) [Page: 3-59]

— VIDEO MAIN SIGNAL PATH IN REC MODE
 — VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

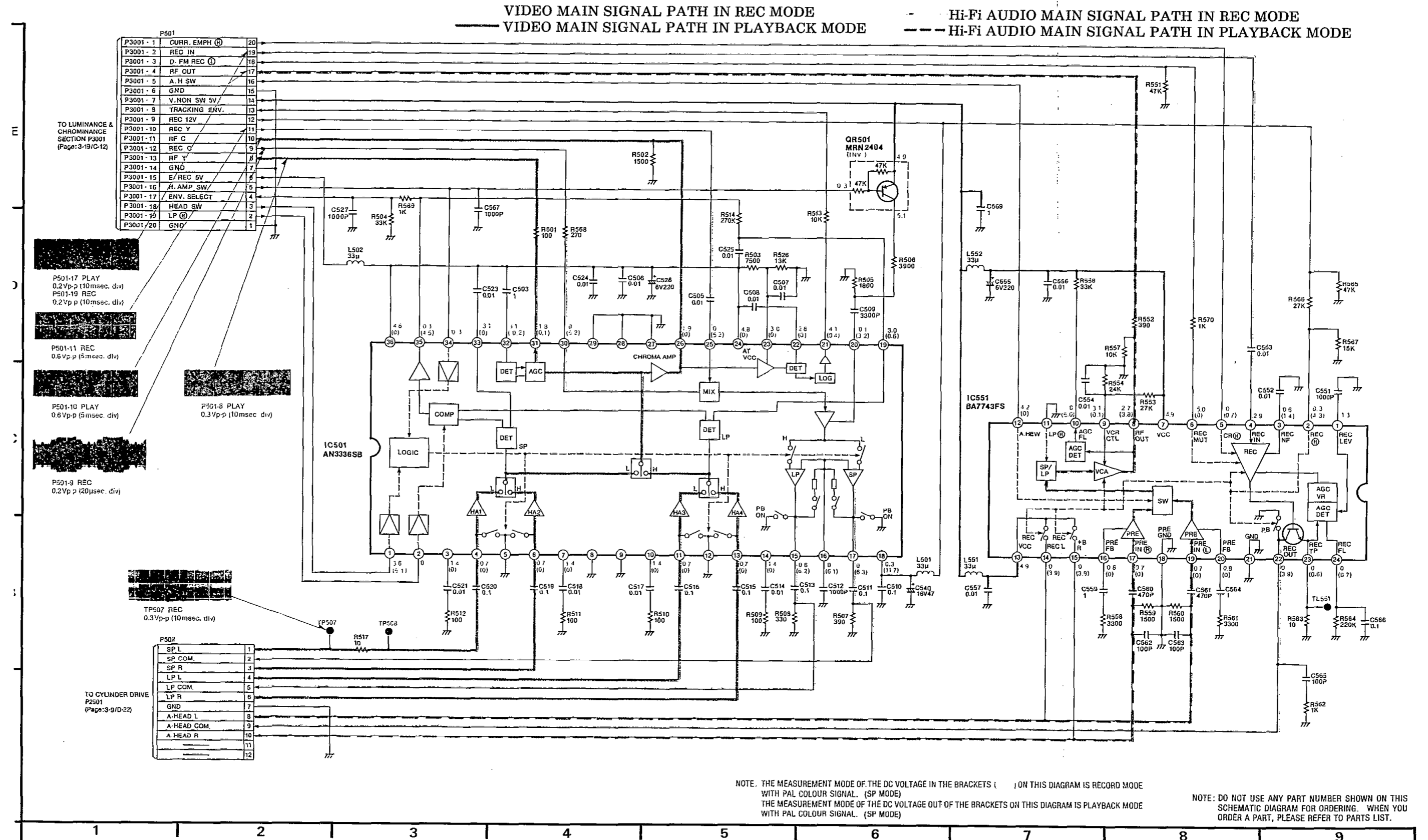
--- AUDIO MAIN SIGNAL PATH IN REC MODE
 --- AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



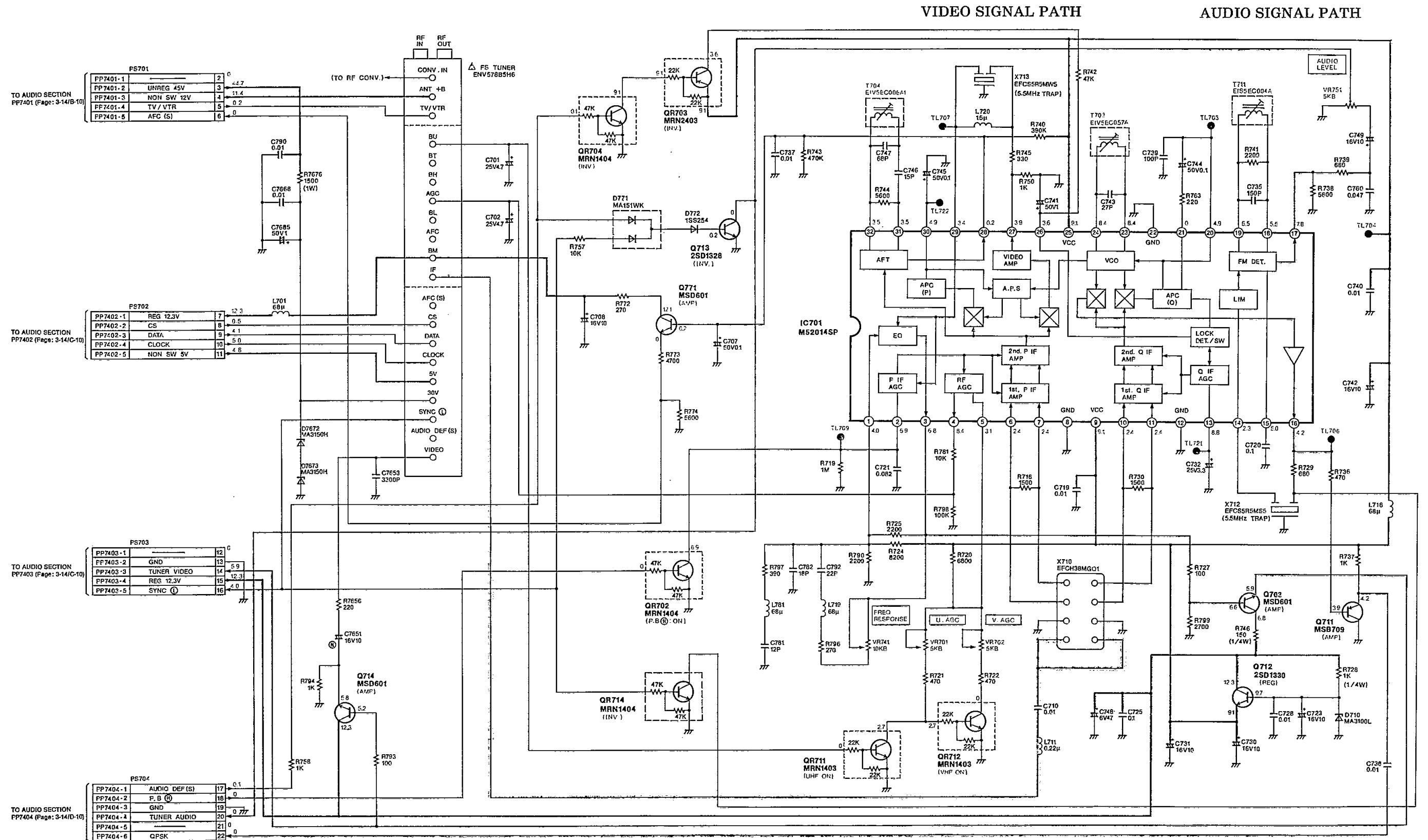
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.



1. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (VEP07684D: HV-HD100EB) [Page: 3-73]

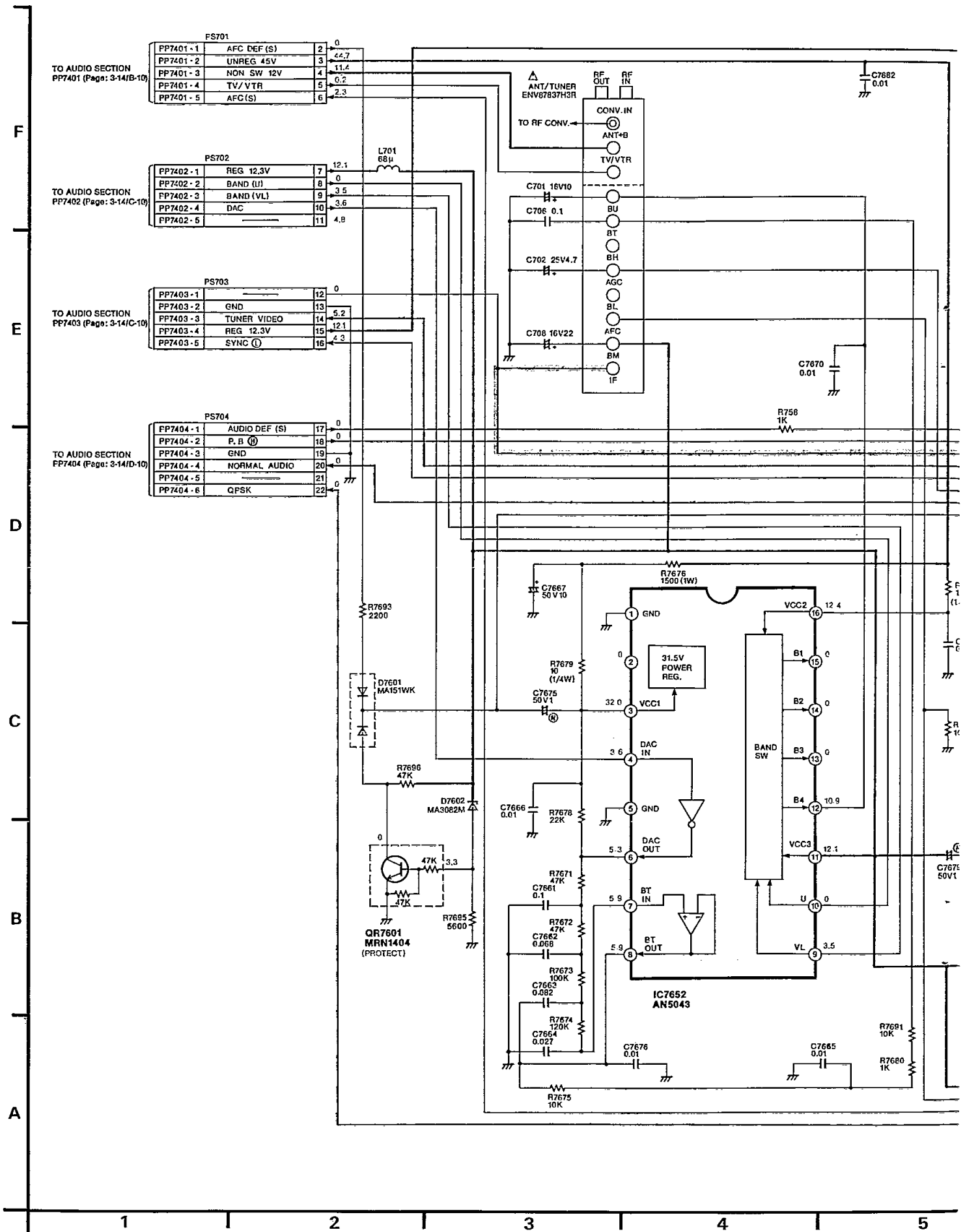


IMPORTANT SAFETY NOTICE:
 COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
 WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

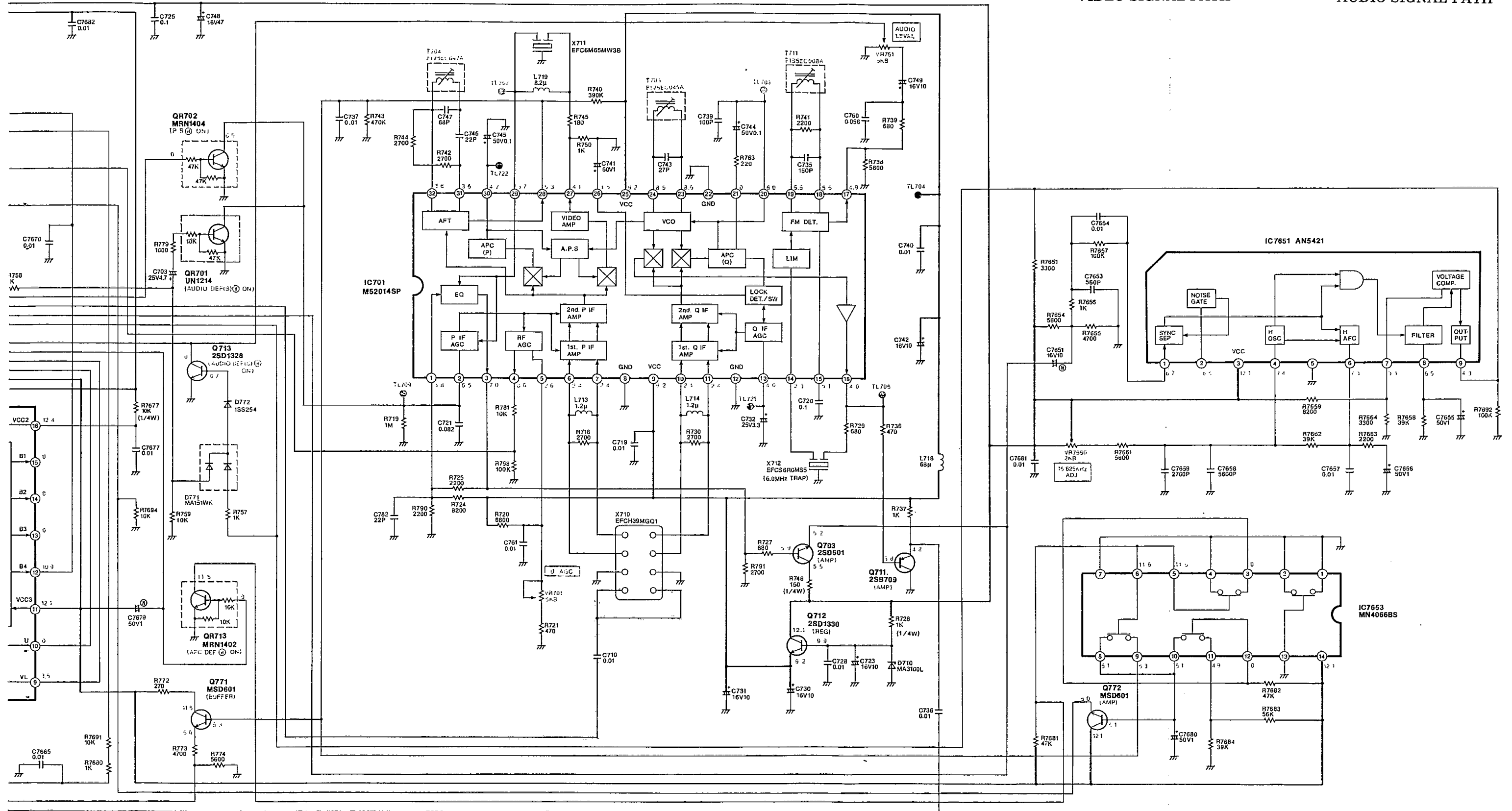
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-12. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (VEP07680F: NV-I)



VIDEO SIGNAL PATH

AUDIO SIGNAL PATH



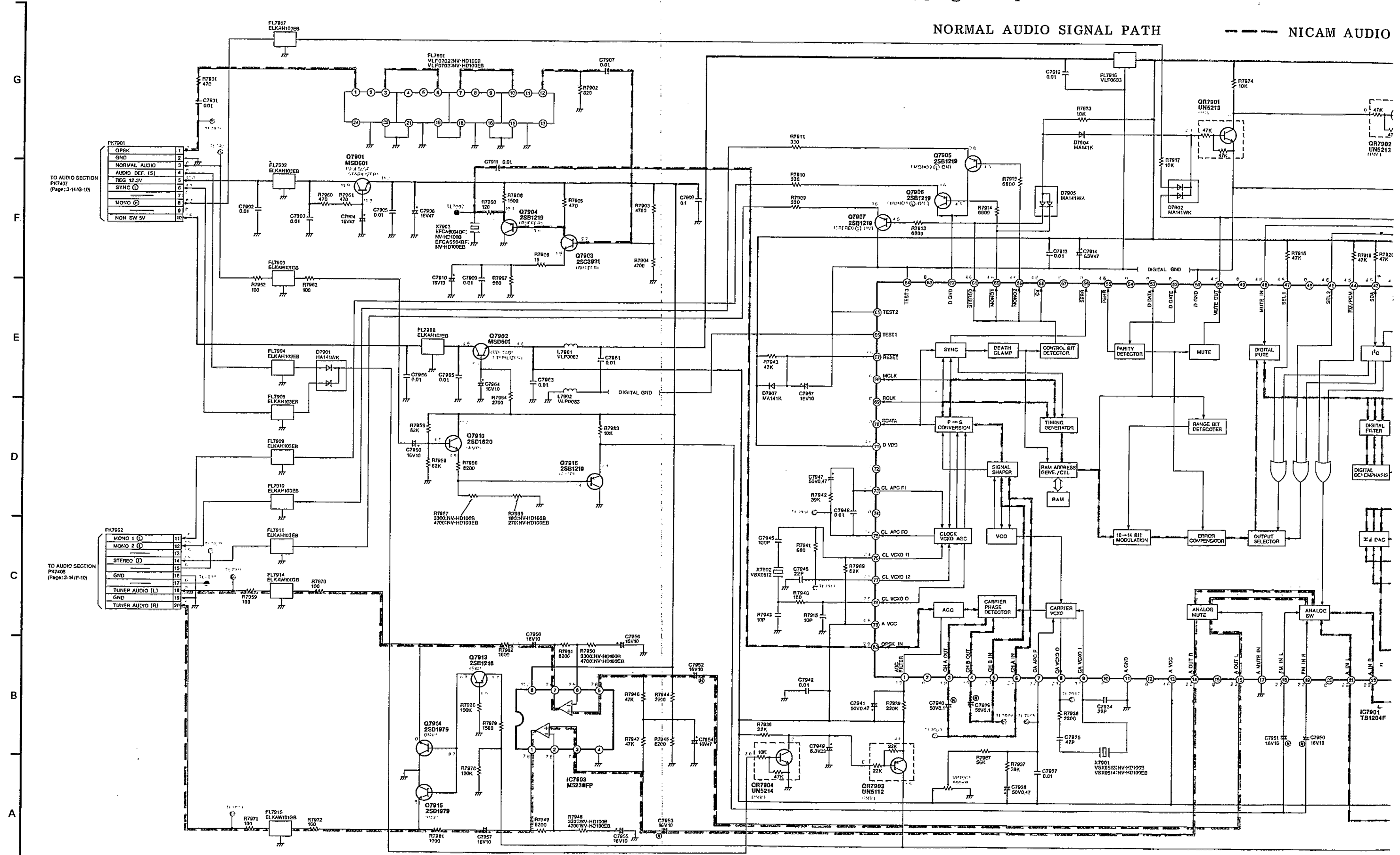
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

ASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

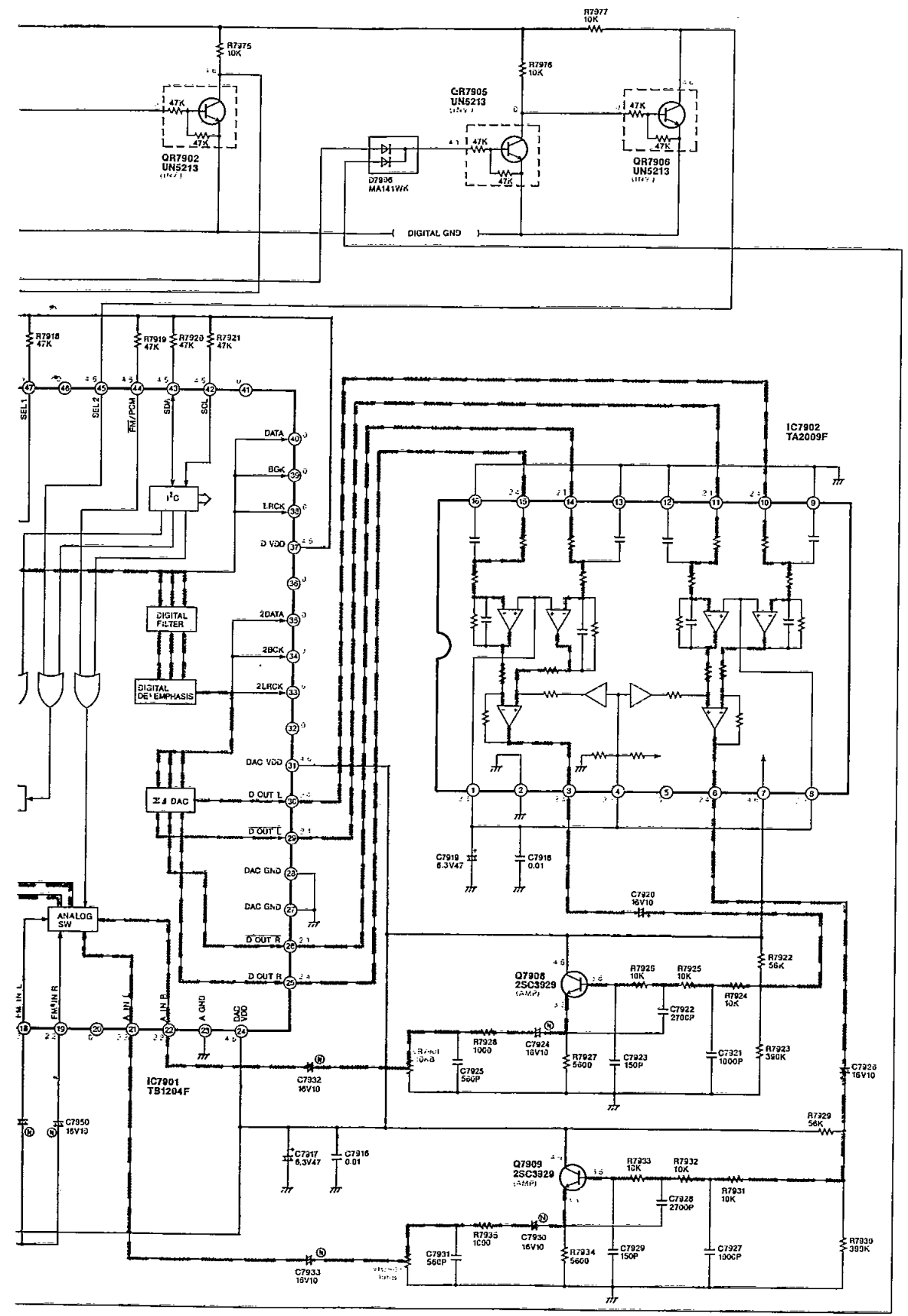
3-13. NICAM DECODER PACK SCHEMATIC DIAGRAM (VEP07675A: NV-HD100B) (VEP07675B: NV-HD100EB) [Page: 3-75]

NORMAL AUDIO SIGNAL PATH --- NICAM AUDIO



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAC

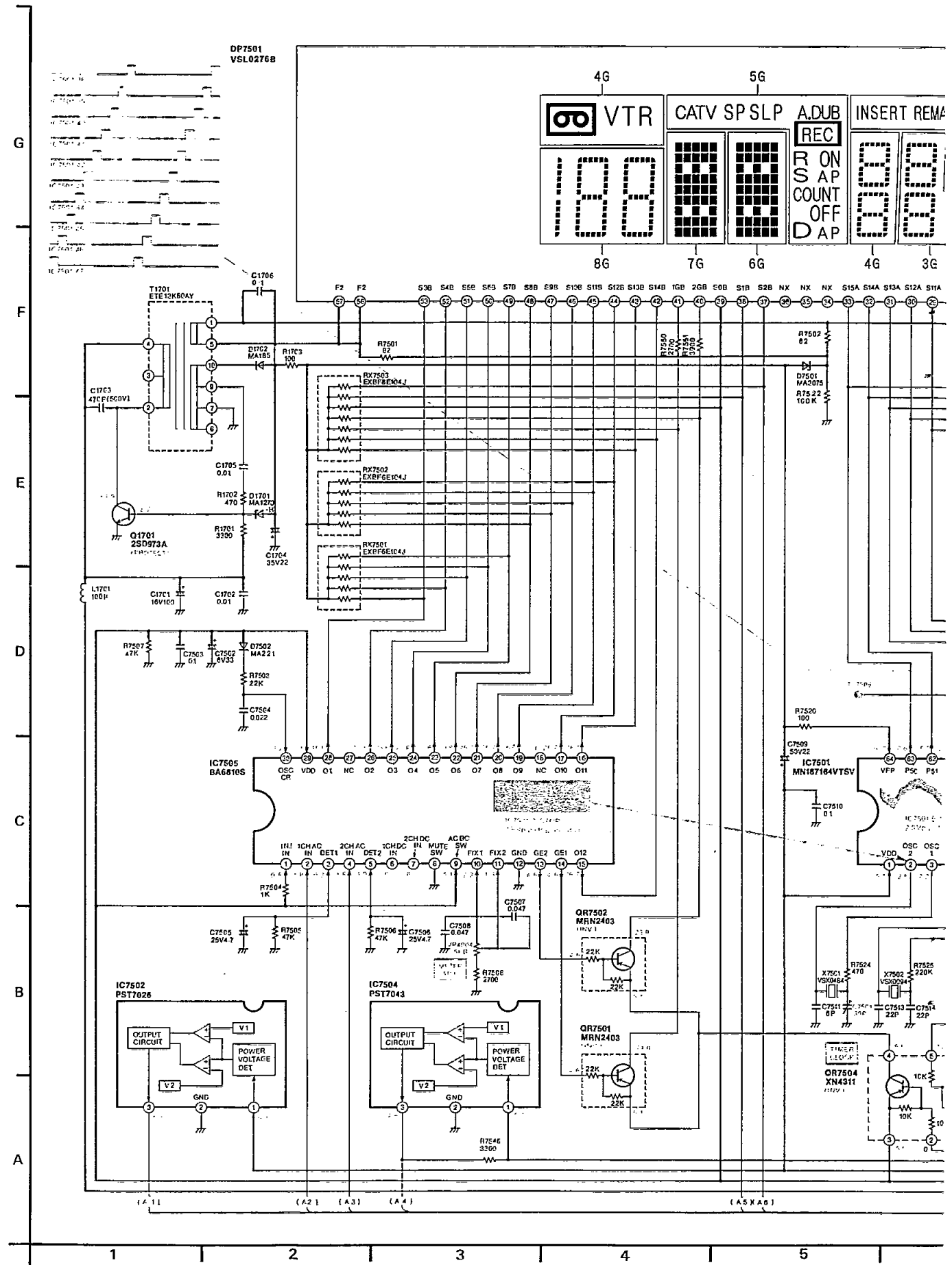
NICAM AUDIO SIGNAL PATH

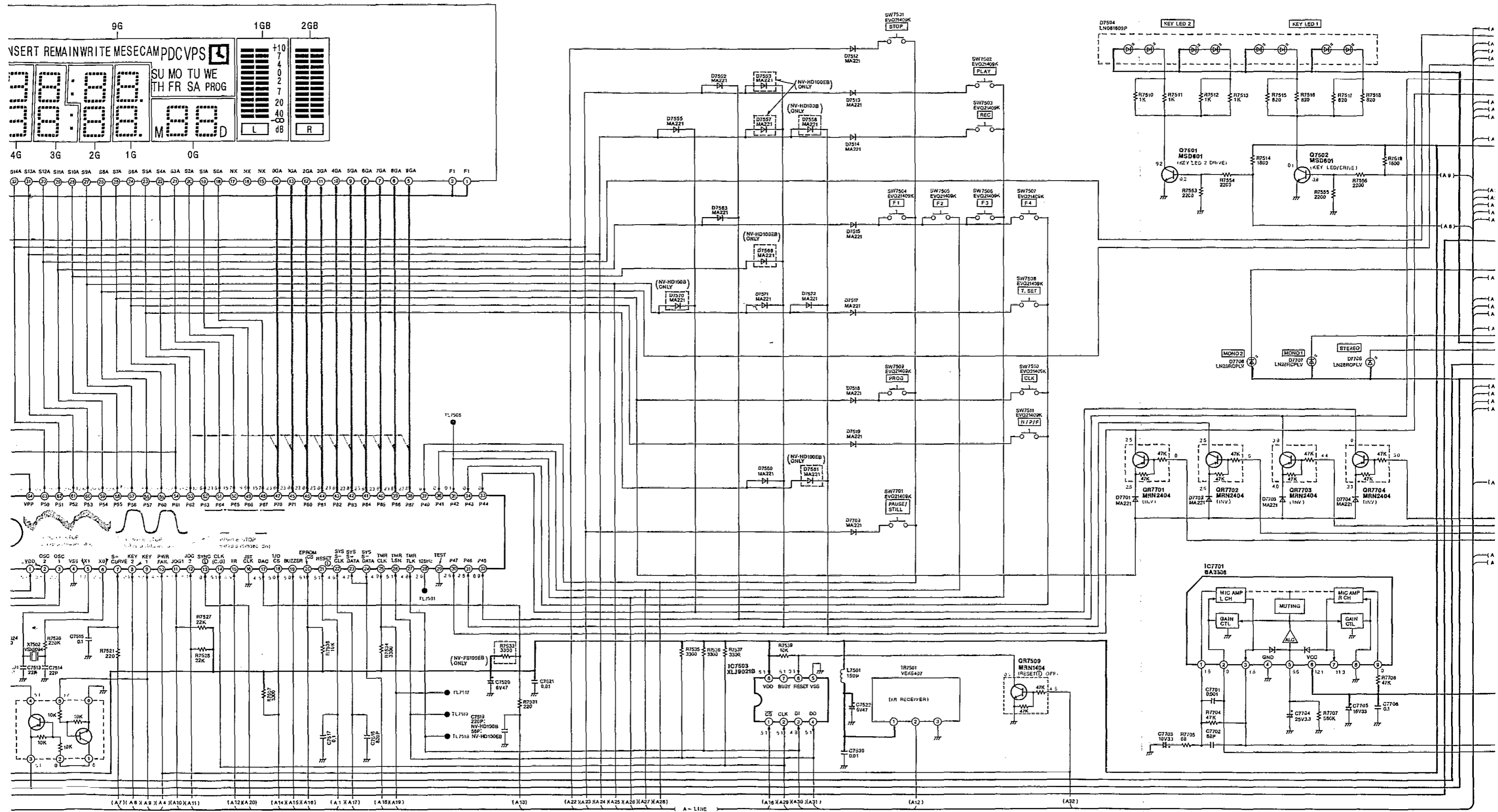


REMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-14. TIMER (VEP07703E: NV-HD100B) (VEP07703F: NV-HD100EB) & OPT

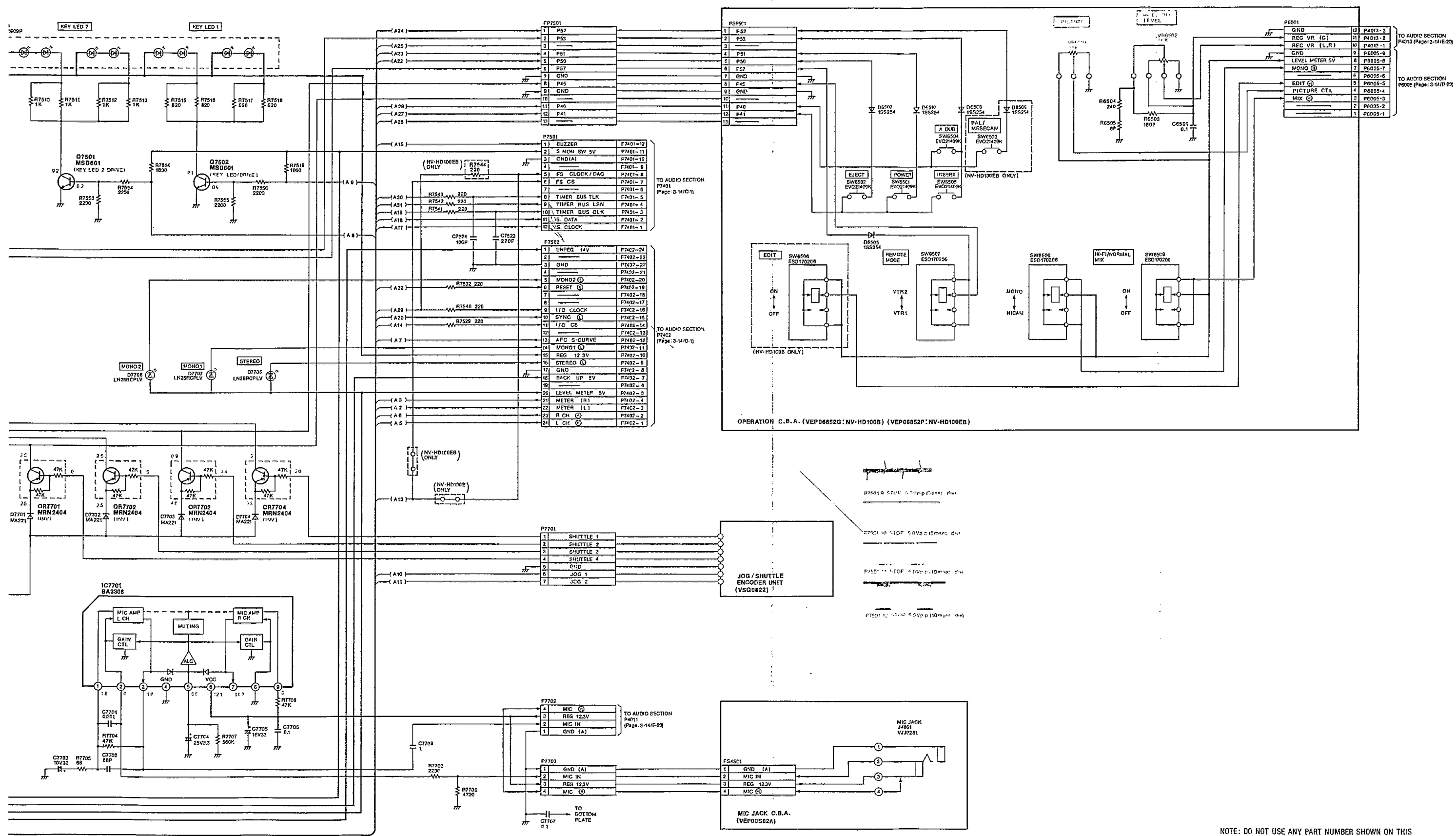




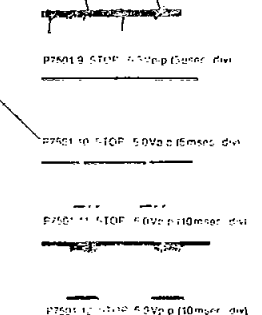
SEGMENT CONTROL SIGNAL

GRID CONTROL SIGNAL

TUNE CONTROL SIGNAL



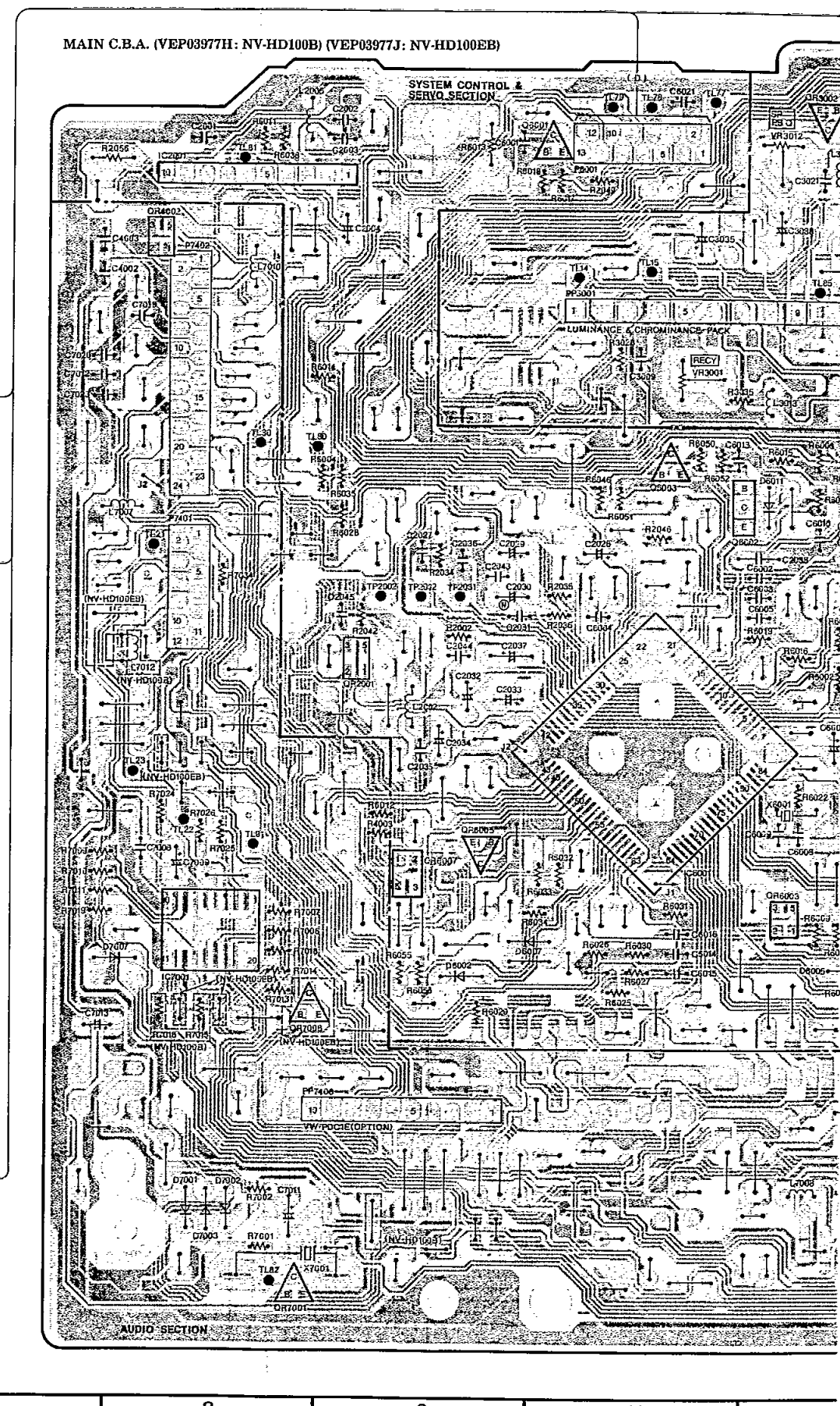
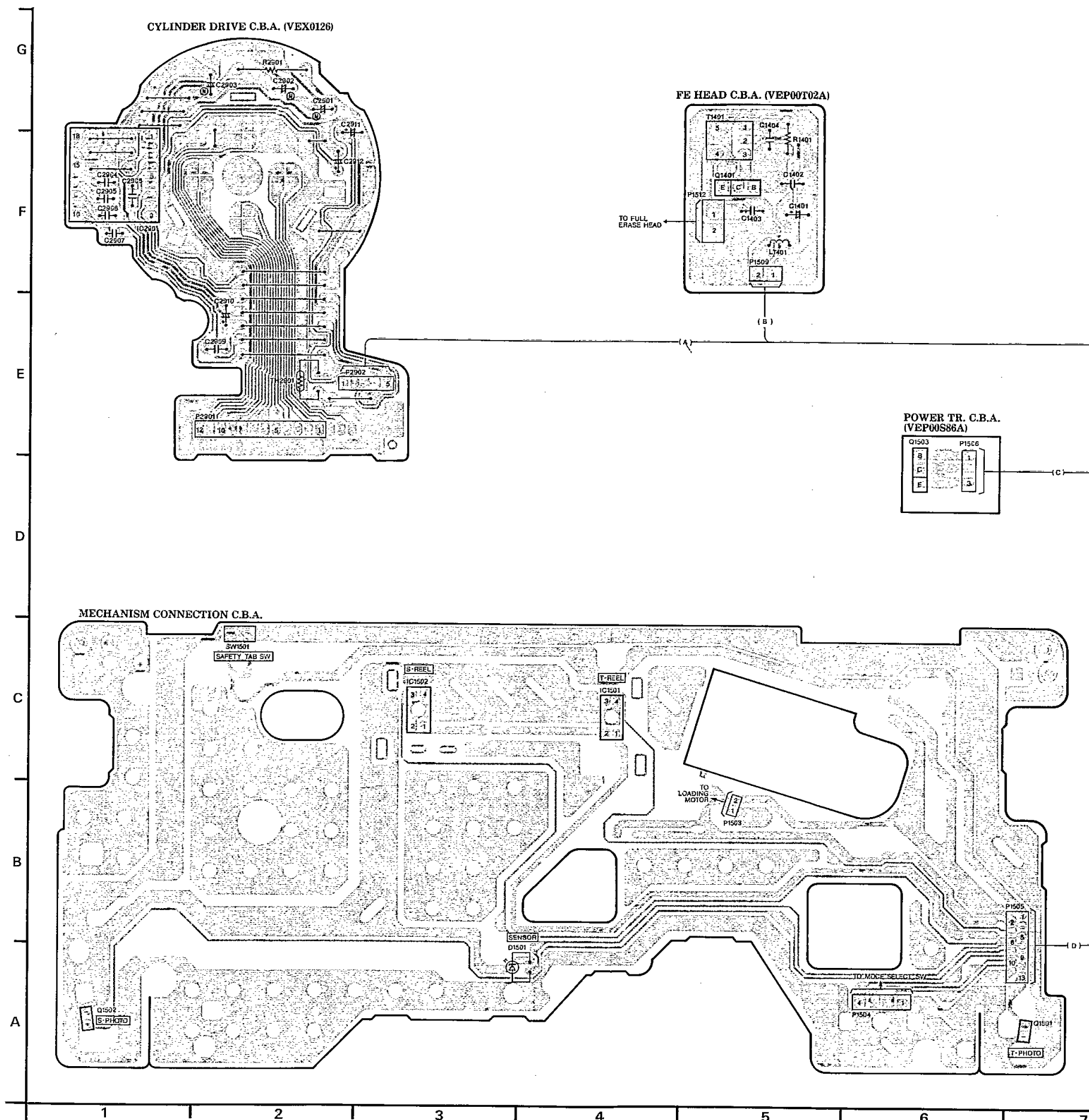
OPERATION C.B.A. (VEP06852G; NV-HD100B) (VEP06852P; NV-HD100EB)



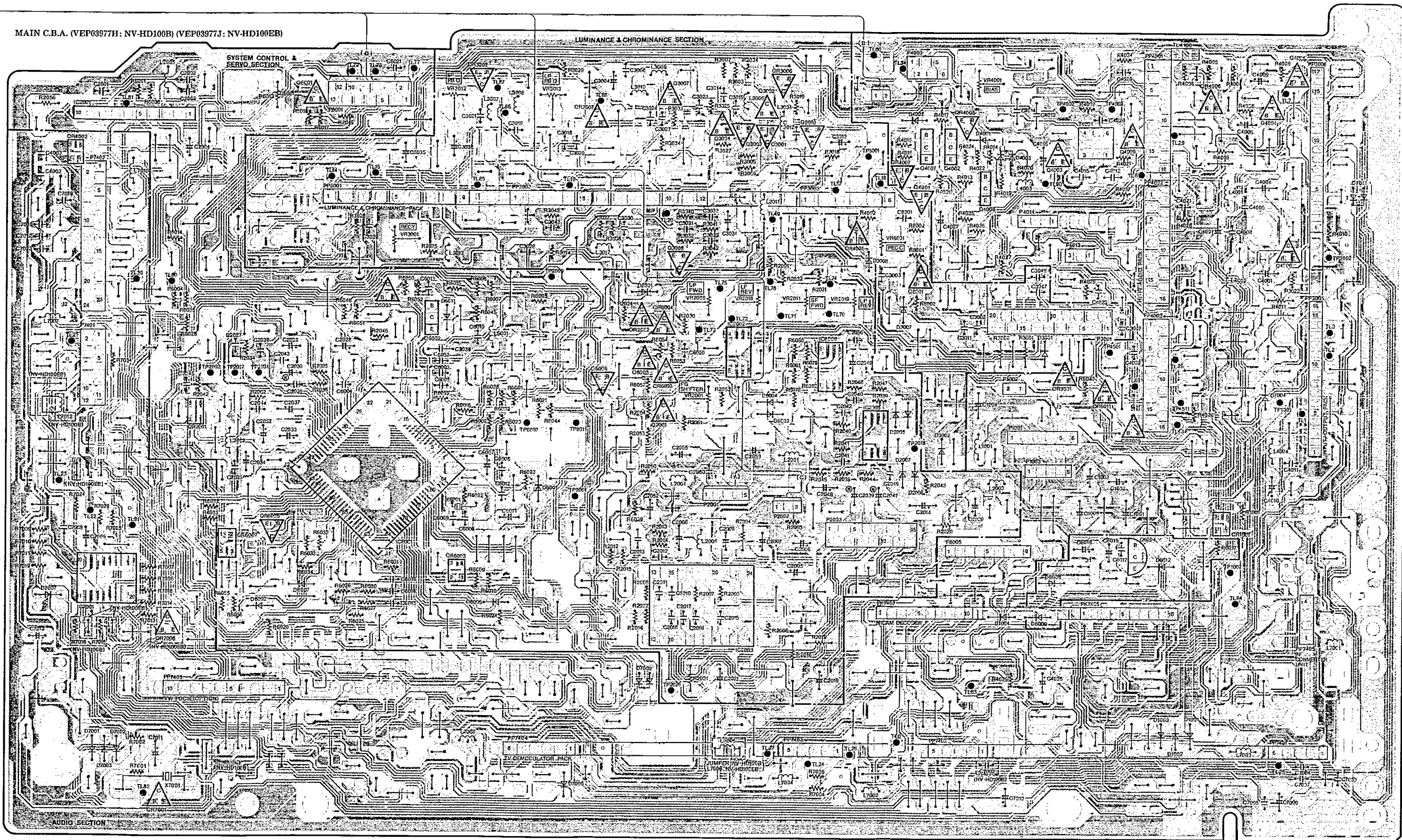
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-15. MAIN C.B.A. (VEP03977H: NV-HD100B) (VEP03977J: NV-HD100EB)



MAIN C.B.A. (VEP03977H: NV-HD100B) (VEP03977J: NV-HD100EB)



MAIN C.B.A. ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q1501	A-7
Q1502	A-1
Q1503	E-6
Q2001	D-12
Q6001	F-10
Q6002	E-11
Q6003	E-10
Q6004	C-16
Q6005	D-12
Q6006	D-12
Transistor & Resistor	
QR2001	D-9
QR2002	E-12
QR6004	C-11
QR6005	E-12
QR6007	C-9
QR6010	C-9
QR6011	D-12
QR6011	D-16
Integrated Circuit	
IC1501	C-4
IC1502	C-3
IC2001	F-8
IC2002	E-13
IC2003	B-13
IC2005	D-14
IC2901	F-1
IC6001	C-10
IC6009	D-14
Test Point	
TP2001	C-12
TP2002	D-9
TP2009	E-11
TP2015	D-14
TP2026	B-12
TP2031	D-9
TP2032	D-9
TP6010	D-11
TP6011	D-12
Adjustment	
VR2001	D-13
VR2006	E-13
VR2011	E-13
VR2018	E-13
VR2019	E-14
Connector	
P1503	B-5
P1504	A-6
P1505	B-7
P1506	E-6
P2001	C-13
P2002	C-13
P2003	C-14
P2901	E-2
P2902	E-2
P6001	F-10

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q3001	F-13
Q3002	F-13
Q3003	F-13
Q3004	F-13
Q3007	F-12
Q3009	E-12
Q3010	F-13
Q8001	E-14
Transistor & Resistor	
QR3001	D-15
QR3002	G-11
QR3006	G-13
QR3007	F-12
Test Point	
TP3001	F-14
TP3082	E-17
Adjustment	
VR3001	E-10
VR3012	F-11
VR3013	F-11
VR6001	E-14
Connector	
P3001	E-16
PP3001	F-10
PP3002	F-11
PP3003	F-14

ADDRESS INFORMATION

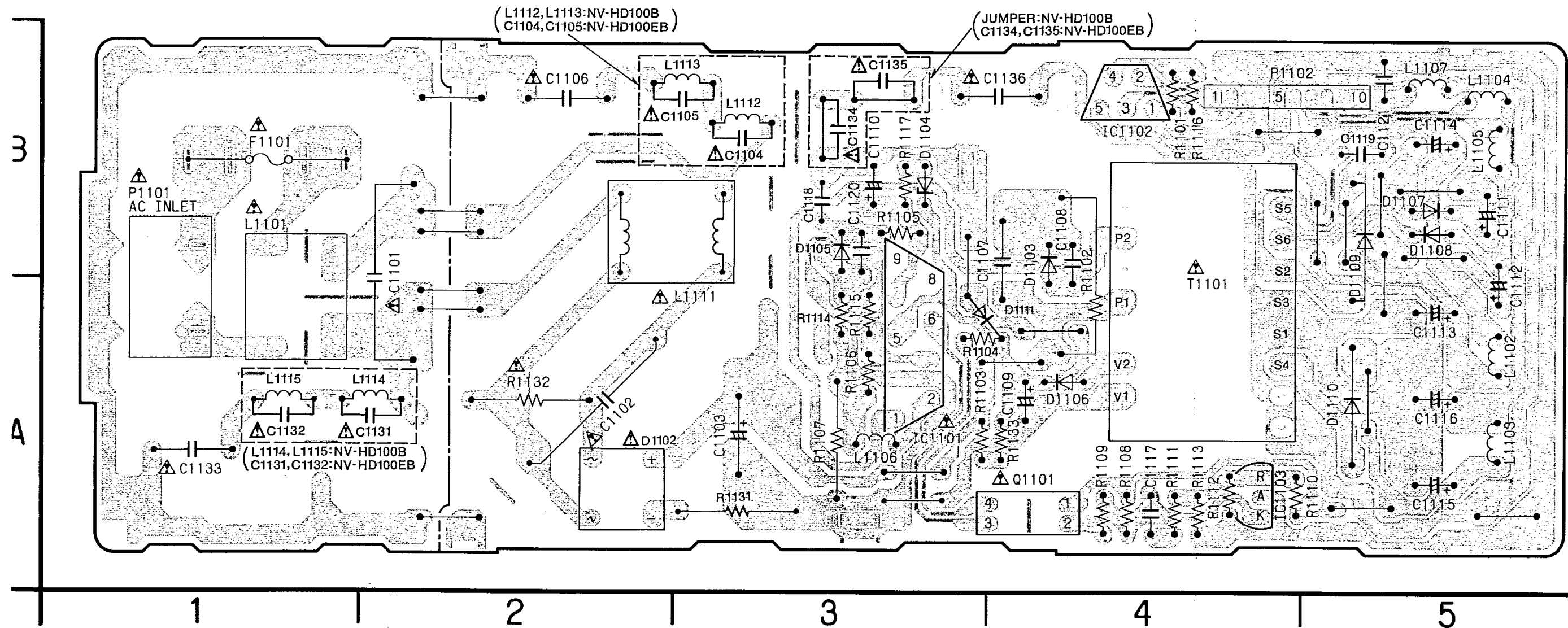
AUDIO Section	
Transistor	
Q1401	F-5
Q4001	F-14
Q4002	F-15
Q4003	F-15
Q4004	F-17
Q4005	G-17
Q4006	E-17
Q4007	F-14
Q4008	F-16
Q4009	F-16
Transistor & Resistor	
QR1001	C-17
QR4001	E-14
QR4002	F-8
QR4005	F-15
QR4006	F-17
QR4007	F-14
QR7001	A-8
QR7005	D-16
QR7006	B-8
Integrated Circuit	
IC7001	C-8
Test Point	
TP1001	D-17
TP1002	C-17
TP4002	F-15
TP4003	F-16
TP4501	E-16
TP4511	D-16
Adjustment	
VR4001	G-15
Connector	
P1001	D-15
P1002	D-15
P1003	D-15
P1509	F-5
P1512	F-5
P4002	F-14
P4003	G-14
P4011	F-15
P4013	E-16
P6005	C-15
P7401	E-8
P7402	F-8
PK7407	C-14
PK7408	C-16
PP3005	E-17
PP3006	G-17
PP4001	G-16
PP4002	F-16
PP4003	E-16
PP7401	A-17
PP7402	A-14
PP7403	A-13
PP7404	A-11
PP7405	B-17
PP7406	B-9

ADDRESS INFORMATION

3-16. POWER C.B.A. (VEP01487H: NV-HD100B) (VEP01487K: NV-HD100EB)

POWER C.B.A.	
Transistor	
Q1101	A-4
Integrated Circuit	
IC1101	A-3
IC1102	B-4
IC1103	A-4
Connector	
P1101	B-1
P1102	B-4

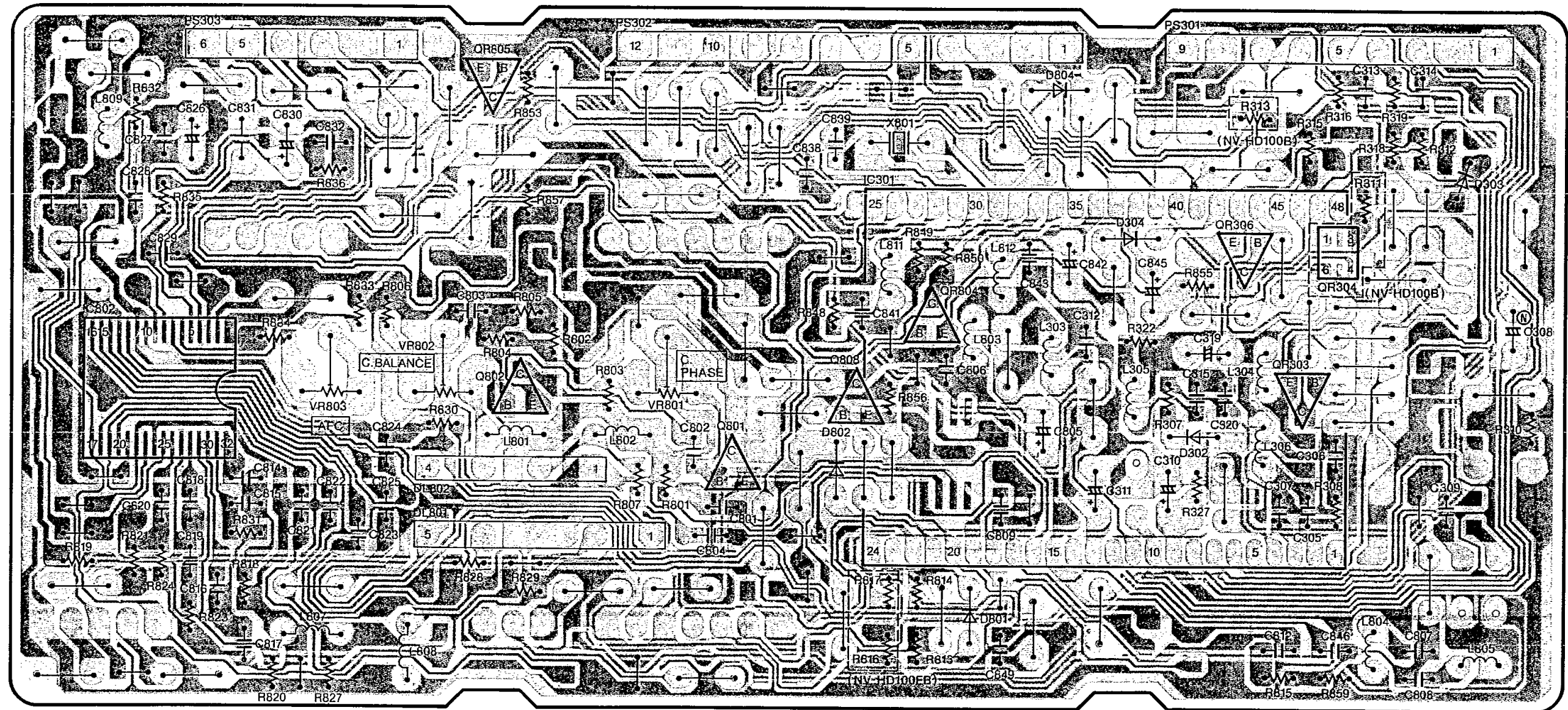
ADDRESS INFORMATION



17. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975H: NV-HD100B) (VEP03975J: NV-HD100EB)

LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		Adjustment	
Q801	B-3	VR801	B-3
Q802	B-2	VR802	B-2
Q808	B-4	VR803	B-2
Transistor & Resistor		Connector	
QR303	B-5	PS301	C-5
QR304	B-5	PS302	C-3
QR306	B-5	PS303	C-1
QR804	B-4		
QR805	C-2		
Integrated Circuit			
IC301	B-4		
IC802	B-1		

ADDRESS INFORMATION



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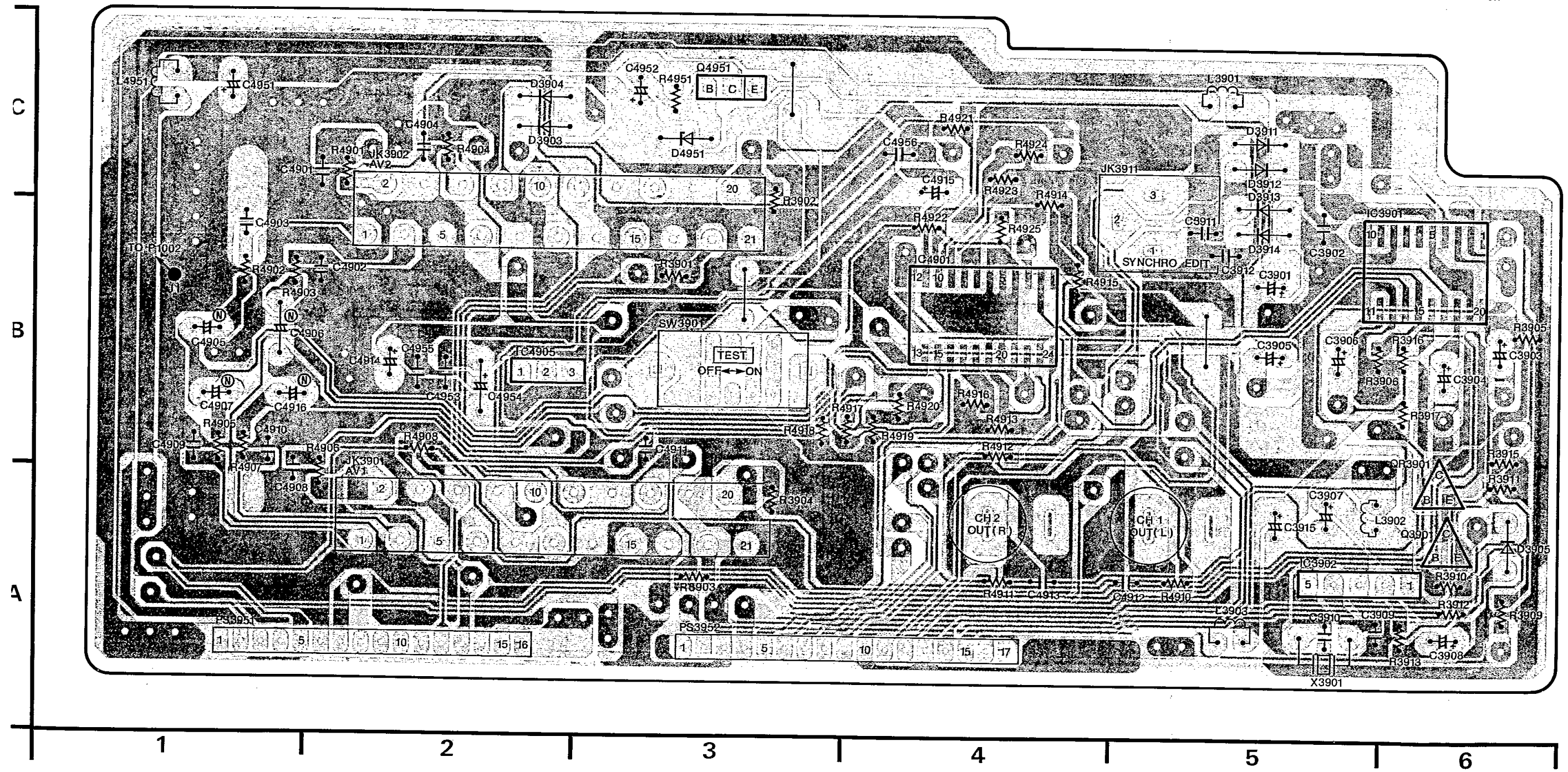
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3-18. INPUT/OUTPUT PACK C.B.A. (VEP03985A: NV-HD100B)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3901	A-6
Q4951	C-3
Transistor & Resistor	
QR3901	B-6
Integrated Circuit	
IC3901	B-6
IC3902	A-5
IC4901	B-4
IC4905	B-2
Connector	
PS3951	A-1
PS3952	A-3

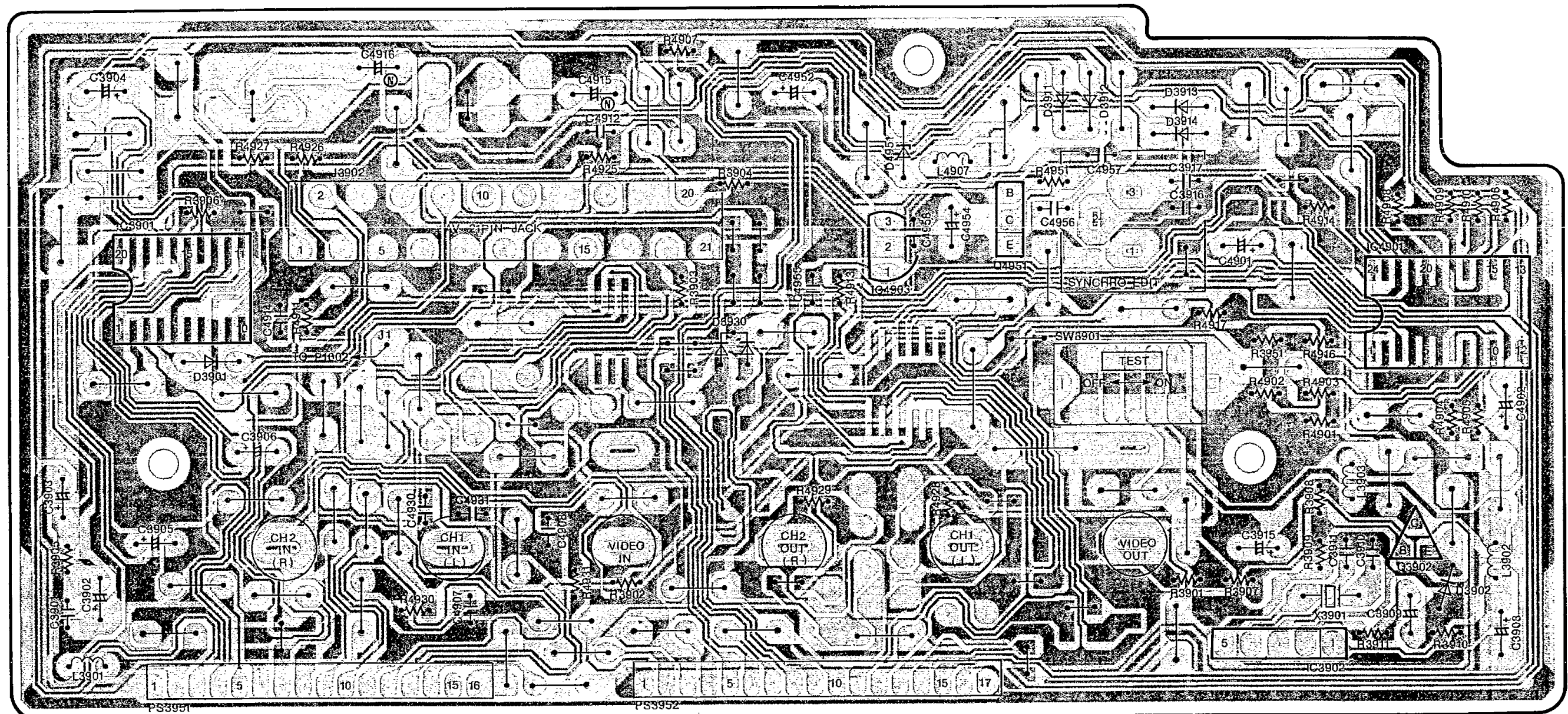
ADDRESS INFORMATION



19. INPUT/OUTPUT PACK C.B.A. (VEP03979B: NV-HD100EB)

INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3902	A-6
Q4951	B-4
Integrated Circuit	
IC3901	B-1
IC3902	A-5
IC4901	B-6
IC4903	B-4
Connector	
PS3951	A-1
PS3952	A-3

ADDRESS INFORMATION



1 2 3 4 5 6

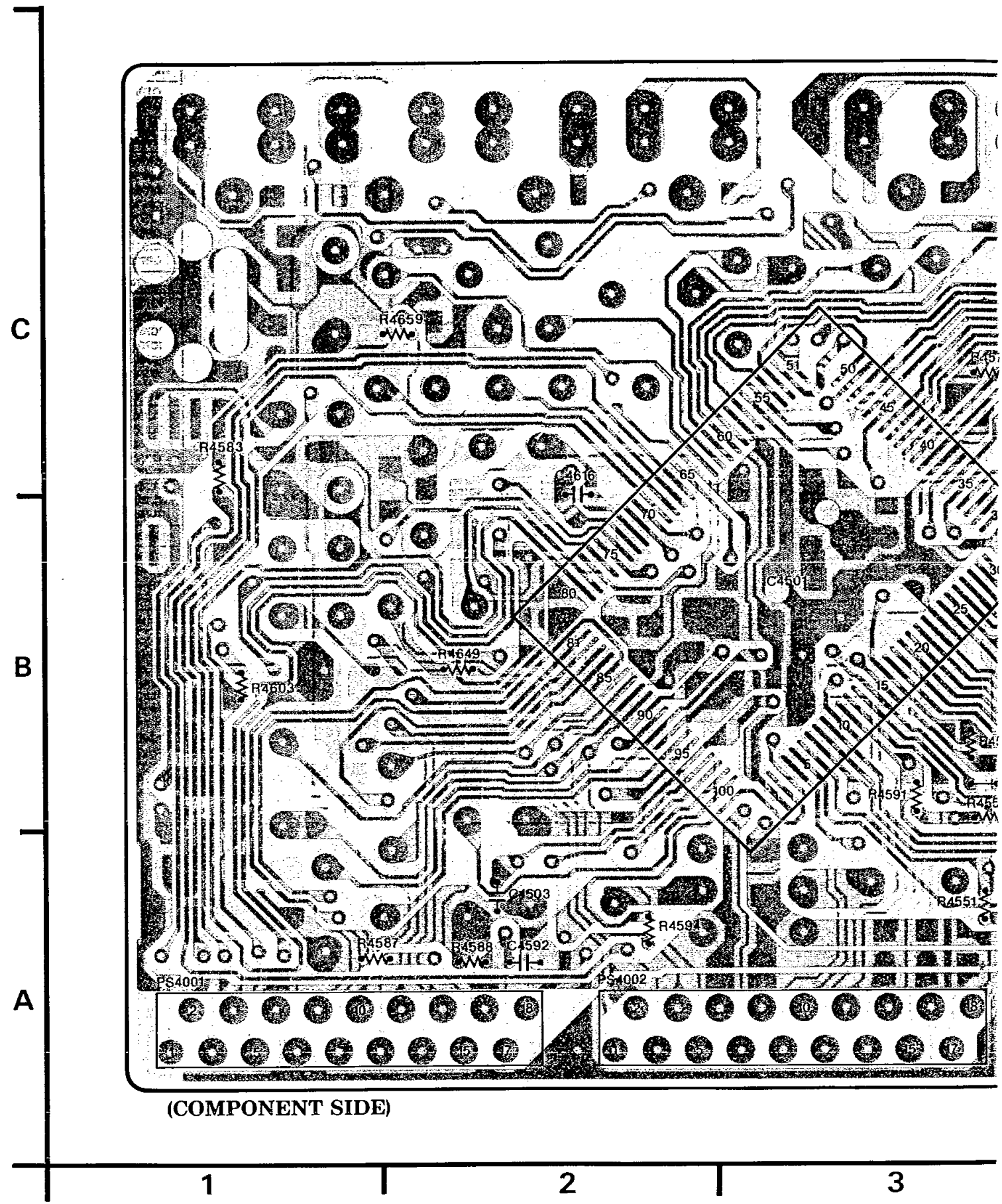
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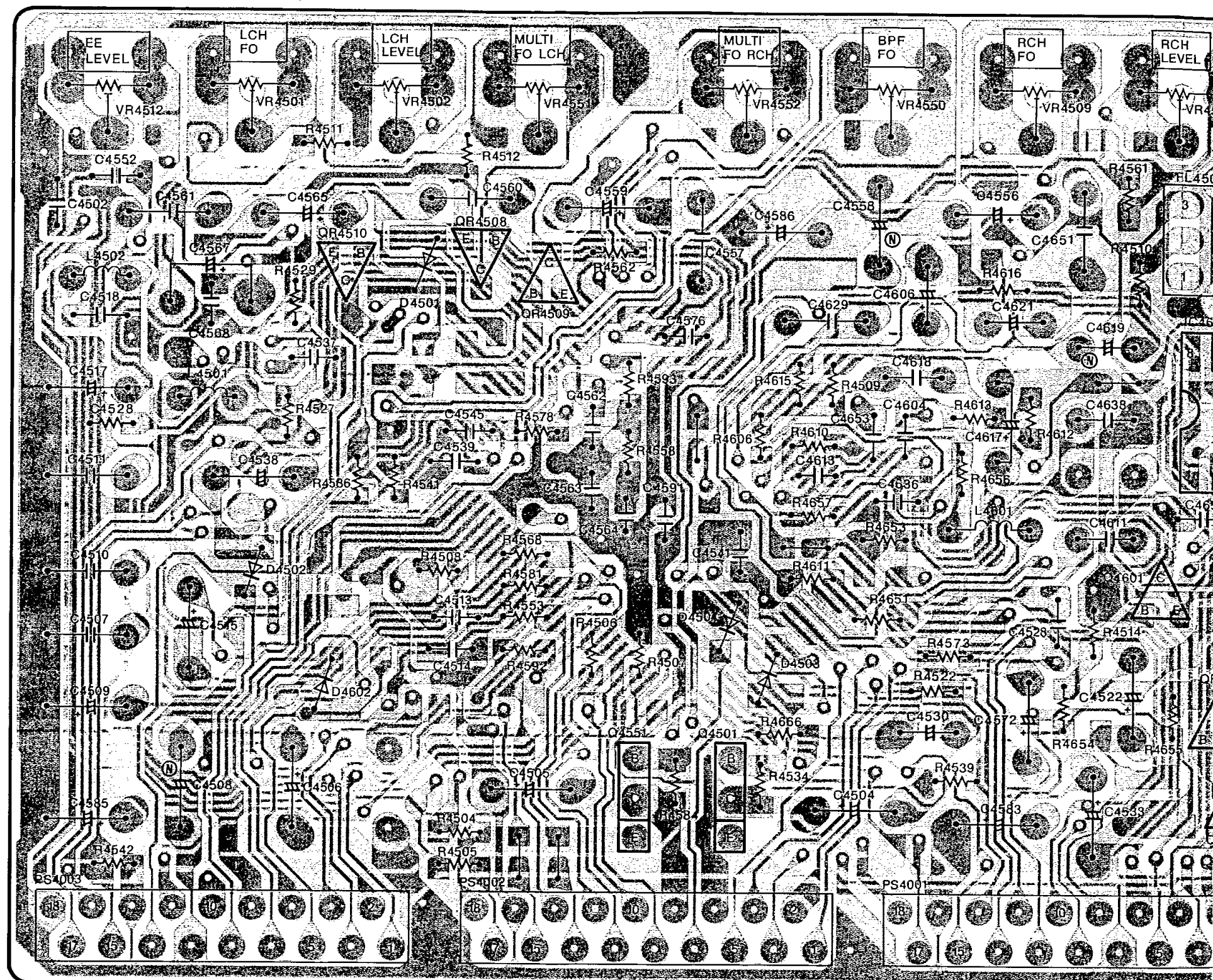
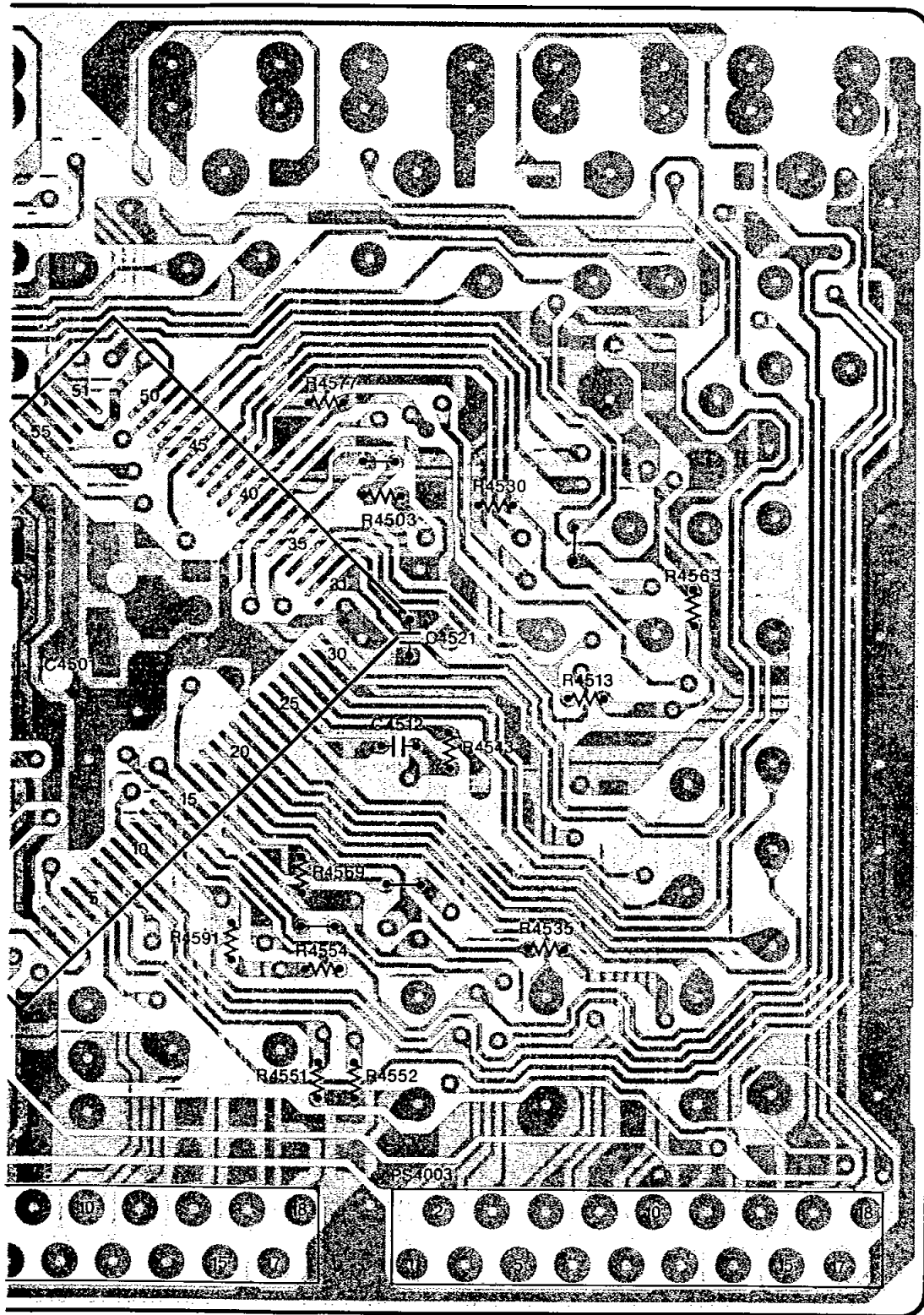
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3-20. Hi-Fi AUDIO PACK C.B.A. (VEP04361R)



(COMPONENT SIDE)



(FOIL SIDE)

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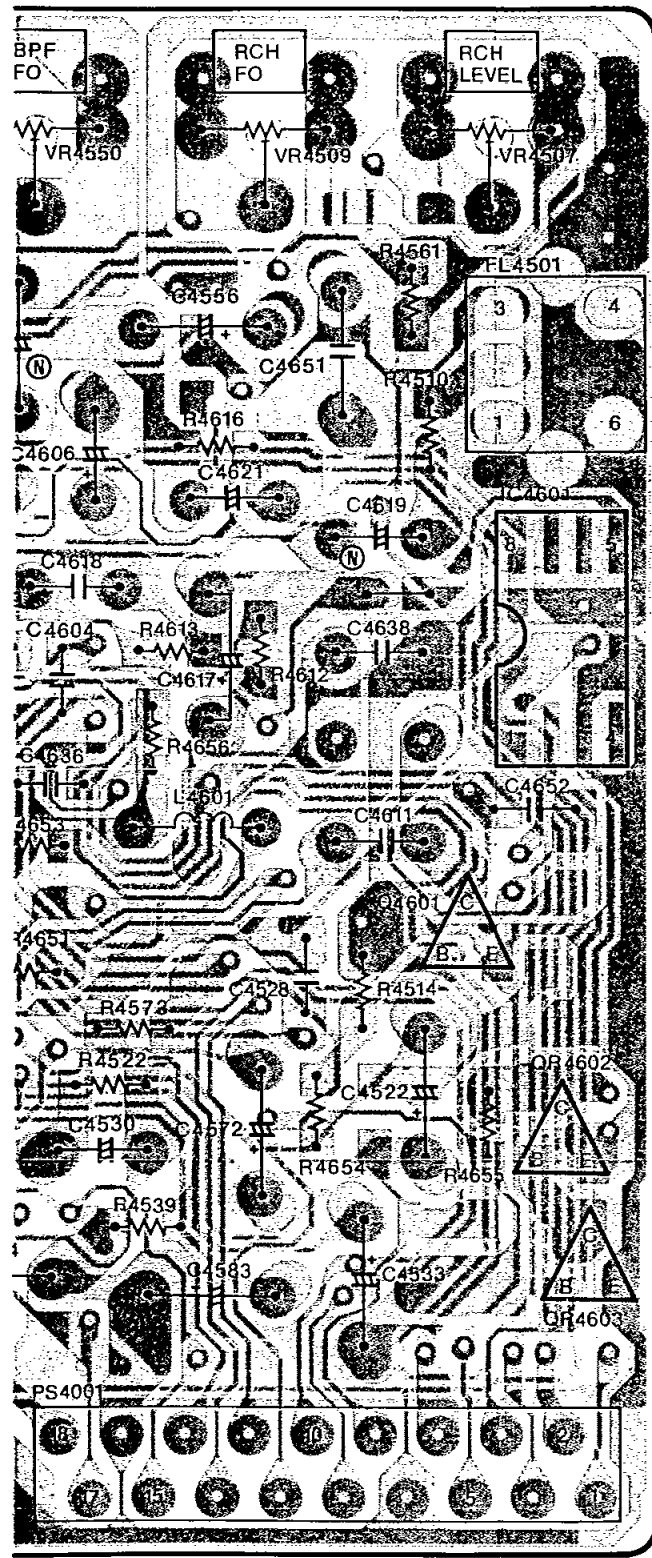
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3-21. HEAD AMP C.B.A. (VEP05176C)

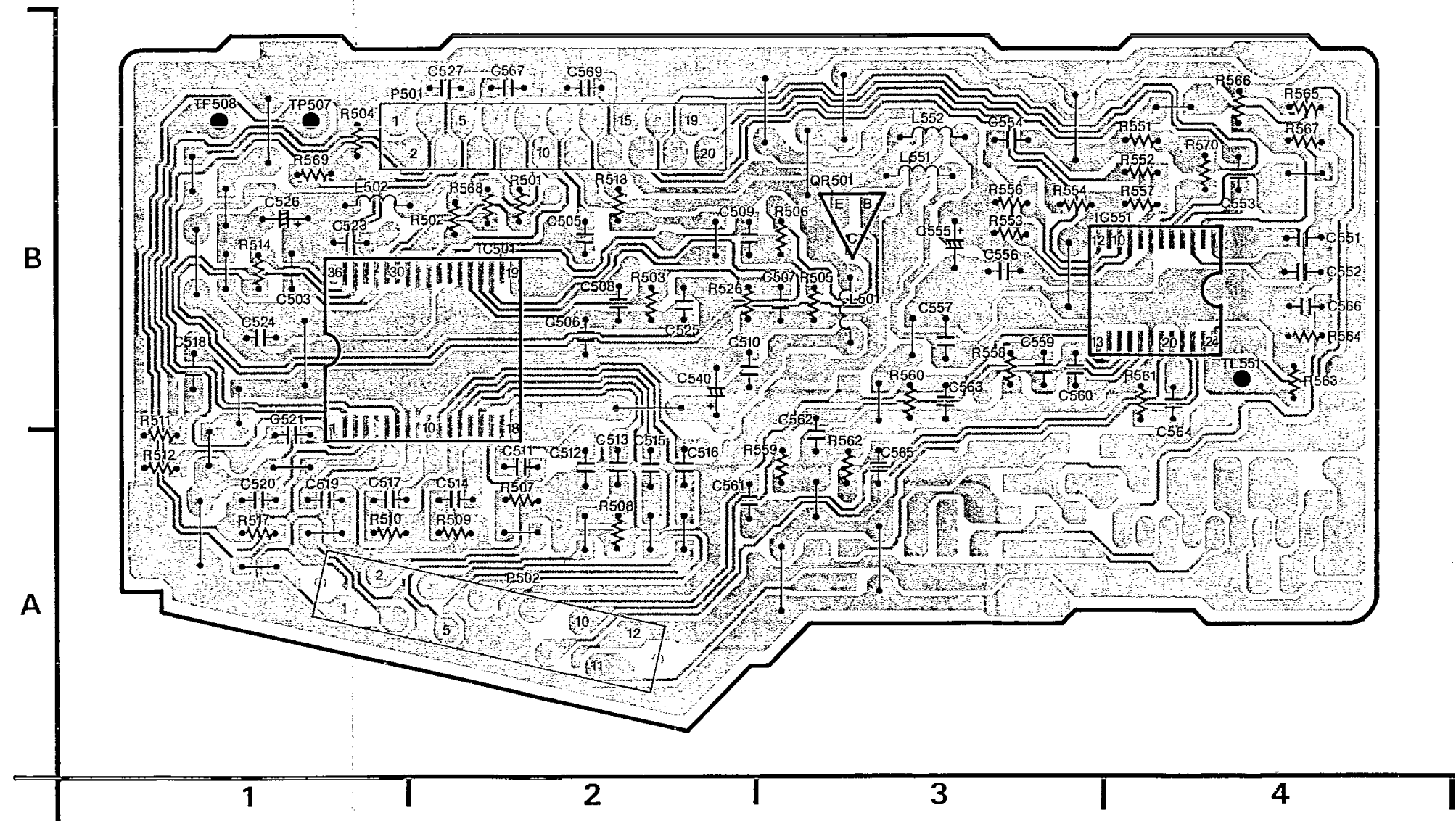


HI-FI AUDIO PACK C.B.A.	
Transistor	
Q4501	A-7
Q4551	A-7
Q4601	B-8
Transistor & Resistor	
QR4508	C-6
QR4509	C-7
QR4510	C-6
QR4602	B-6
QR4603	A-8
Integrated Circuit	
IC4501	B-3
IC4601	C-8
Adjustment	
VR4501	C-6
VR4502	C-6
VR4507	C-8
VR4509	C-8
VR4512	C-6
VR4550	C-8
VR4551	C-7
VR4552	C-7
Connector	
PS4001	A-1
PS4001	A-8
PS4002	A-2
PS4002	A-7
PS4003	A-4
PS4003	A-5

ADDRESS INFORMATION

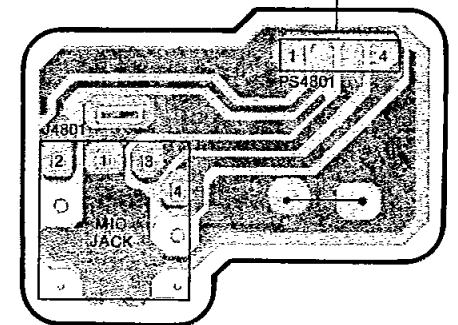
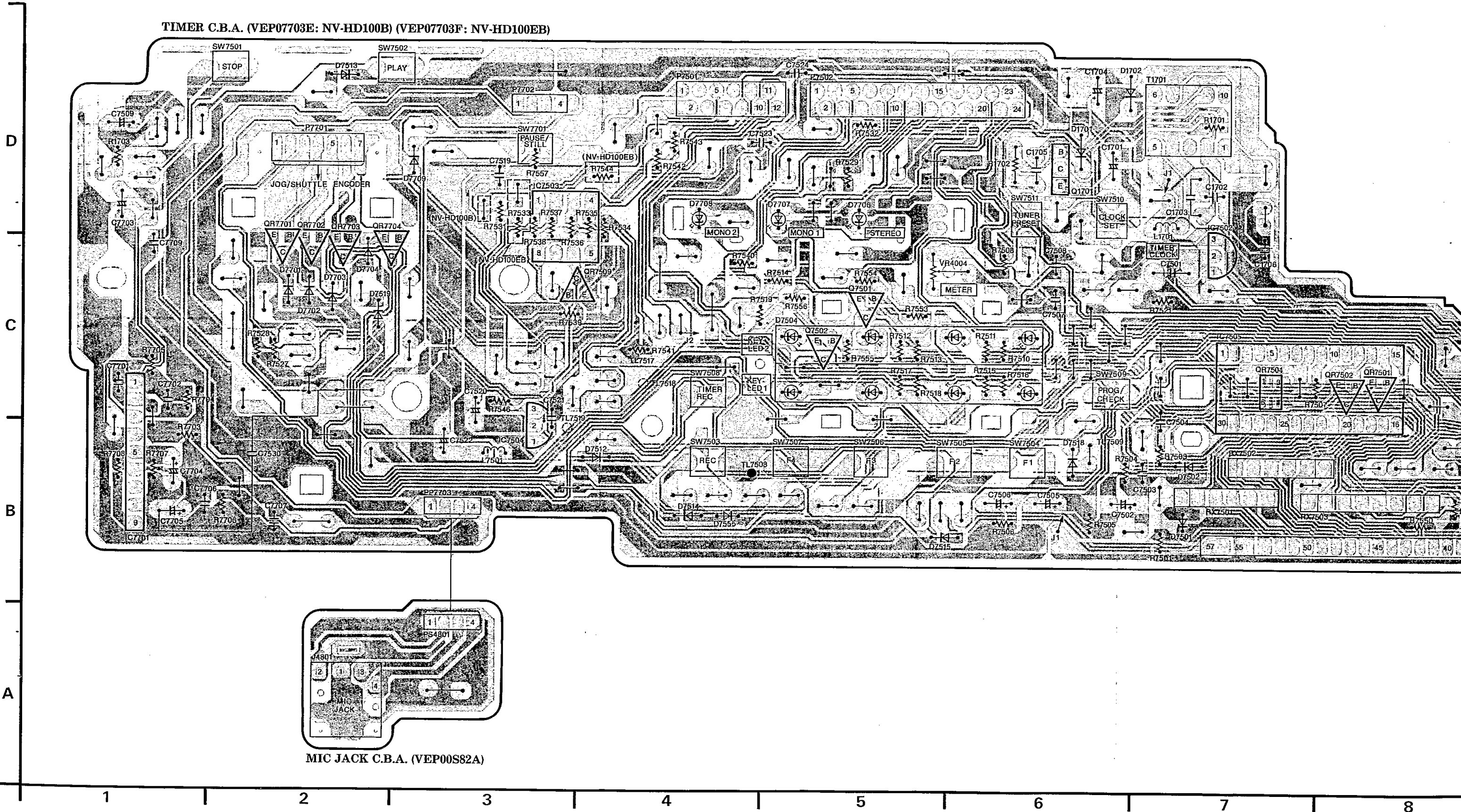
HEAD AMP C.B.A.	
Transistor & Resistor	
QR501	B-3
Integrated Circuit	
IC501	B-1
IC551	B-4
Test Point	
TL551	B-4
TP507	B-1
TP508	B-1
Connector	
P501	B-2
P502	A-1

ADDRESS INFORMATION

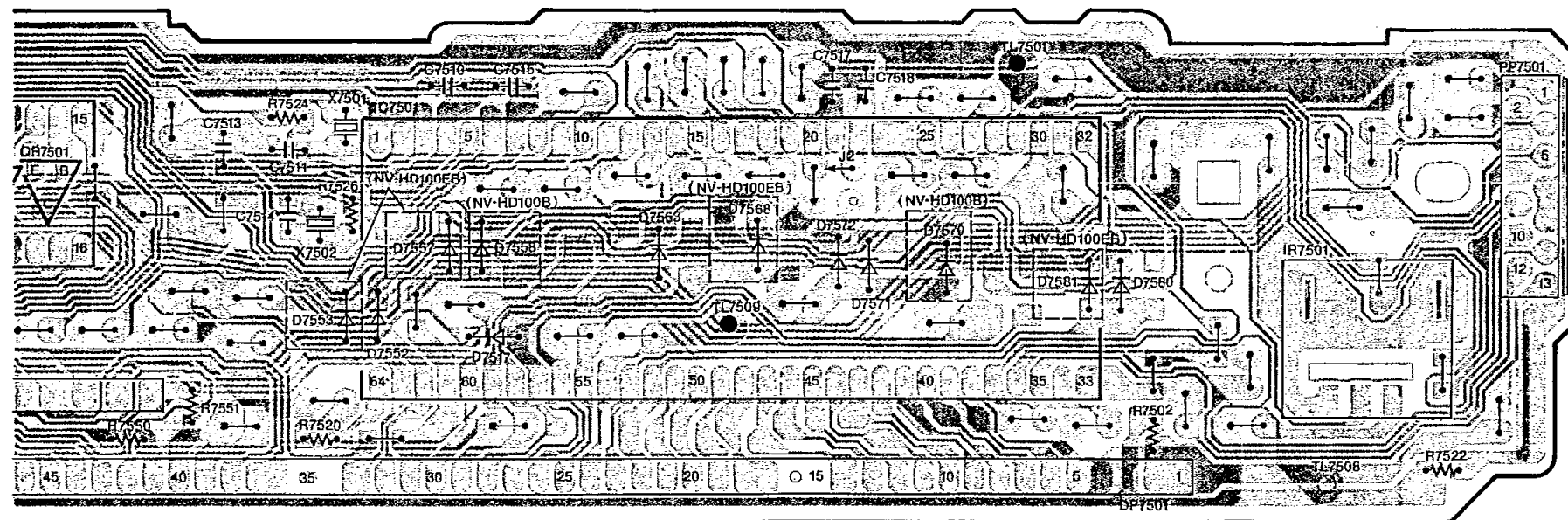


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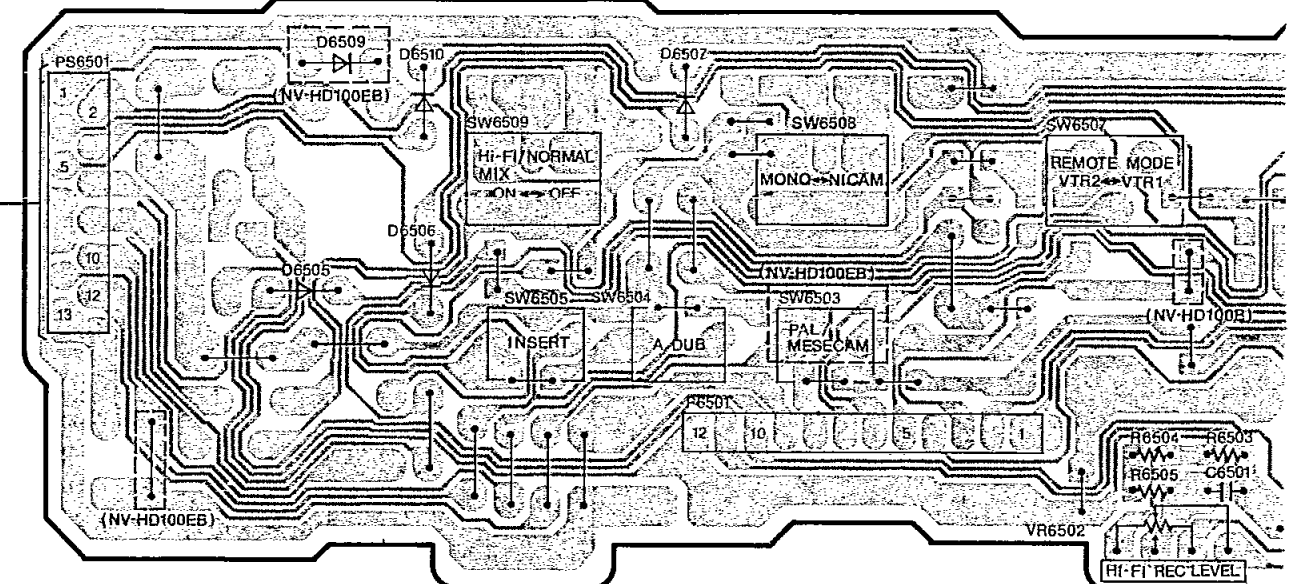
TIMER C.B.A. (VEP07703E: NV-HD100B) (VEP07703F: NV-HD100EB)



MIC JACK C.B.A. (VEP00S82A)

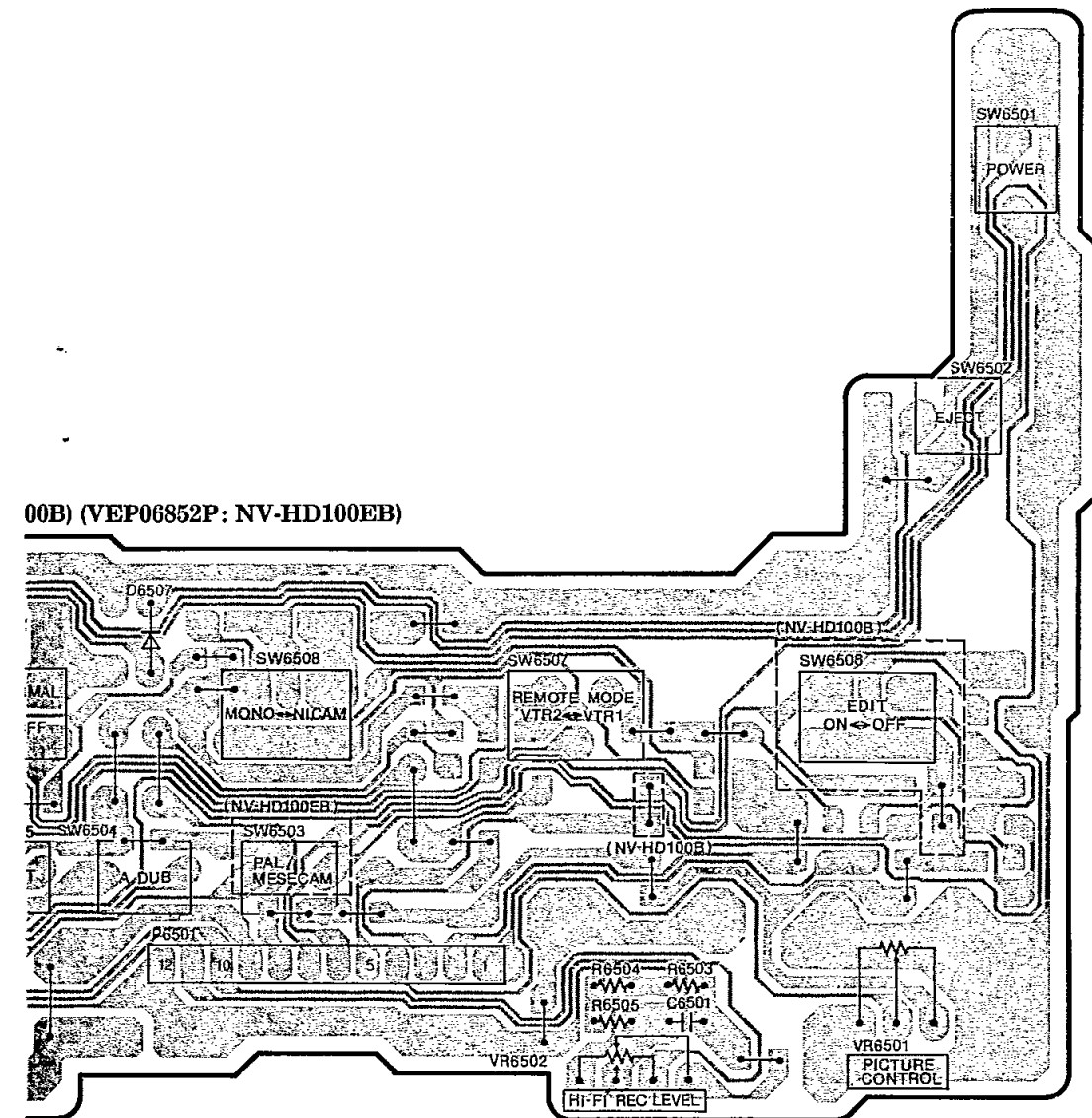


OPERATION C.B.A. (VEP06852G: NV-HD100B) (VEP06852P: NV-HD100EB)



8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

00B) (VEP06852P: NV-HD100EB)



TIMER C.B.A. & OPERATION C.B.A.	
Transistor	
Q1701	D-6
Q7501	C-5
Q7502	C-5
Transistor & Resistor	
QR7501	C-8
QR7502	C-8
QR7504	C-7
QR7509	C-4
QR7701	C-2
QR7702	C-2
QR7703	C-2
QR7704	C-2
Integrated Circuit	
IC7501	C-9
IC7502	C-7
IC7503	D-3
IC7504	B-3
IC7505	C-7
IC7701	B-1
Test Point	
TL7501	C-11
TL7508	B-4
TL7508	B-12
TL7509	B-6
TL7509	B-10
TL7517	C-4
TL7518	C-4
TL7519	B-3
Adjustment	
C7501	C-7
VR4004	C-5
VR6501	B-16
VR6502	B-15
Connector	
P6501	B-14
P7501	D-4
P7502	D-5
P7701	D-2
P7702	D-3
PP7501	C-12
PP7703	B-3
PS4801	A-3
PS6501	C-13

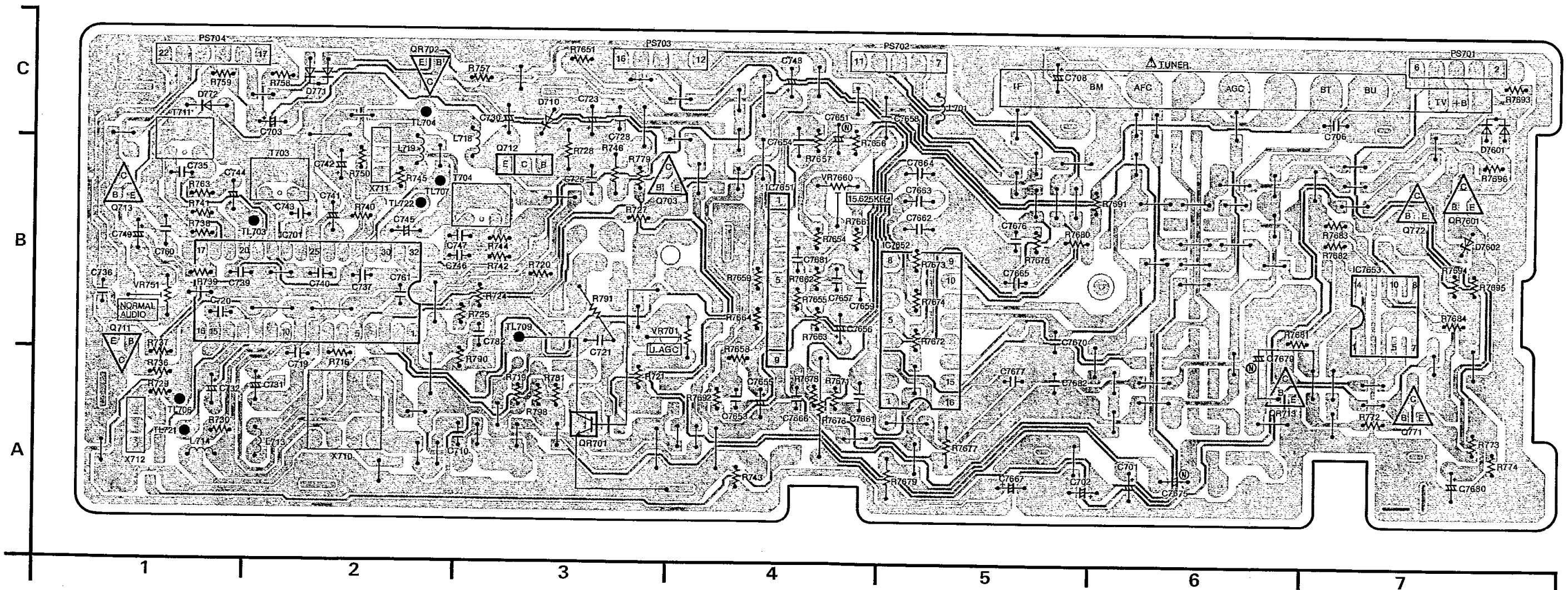
ADDRESS INFORMATION



3-23. TV DEMODULATOR PACK C.B.A. (VEP07680F: NV-HD100B)

TV DEMODULATOR PACK C.B.A.			
Transistor		TL706	A-1
Q703	B-3	TL707	B-2
Q711	B-1	TL709	B-3
Q712	B-3	TL721	A-1
Q713	B-1	TL722	B-2
Q771	A-7	Adjustment	
Q772	B-7	T703	B-2
Transistor & Resistor		T704	B-3
QR701	A-3	T711	C-1
QR702	C-2	VR701	B-4
QR713	A-6	VR751	B-1
QR7601	B-7	VR7660	B-4
Integrated Circuit		Connector	
IC701	B-2	PS701	C-7
IC7651	B-4	PS702	C-5
IC7652	B-5	PS703	C-3
IC7653	B-7	PS704	C-1
Test Point			
TL703	B-2		
TL704	C-2		

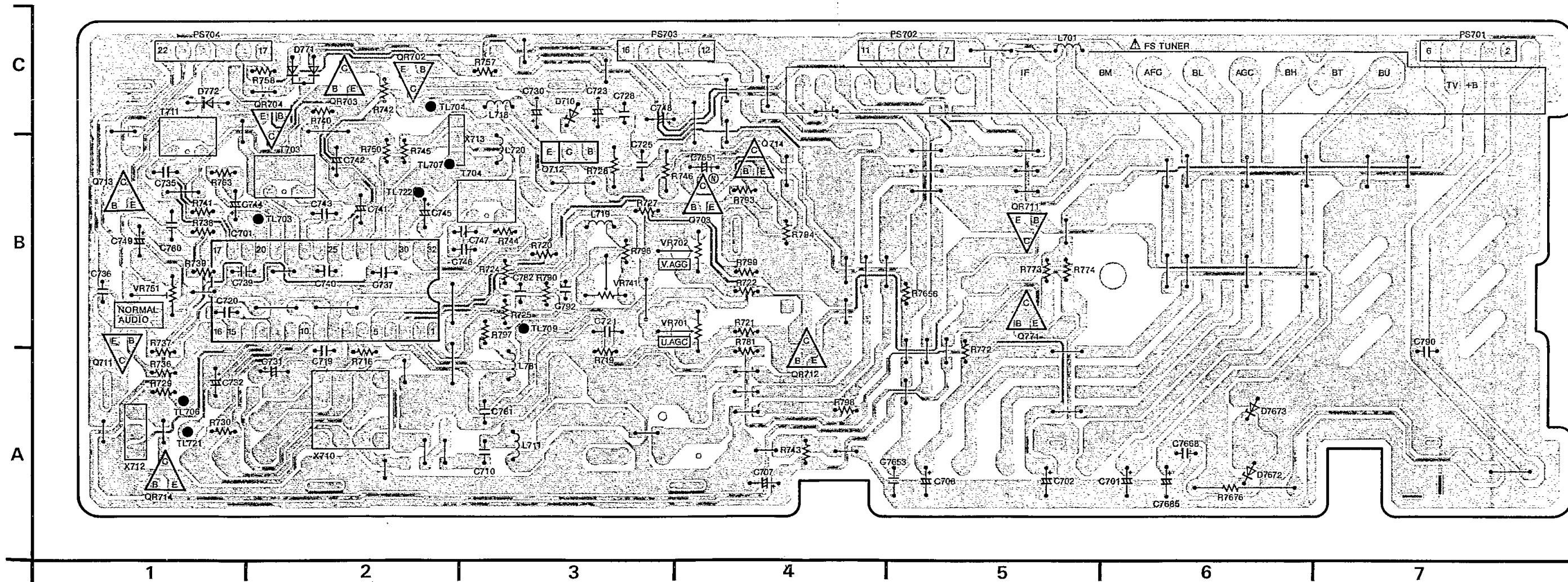
ADDRESS INFORMATION



3-24. TV DEMODULATOR PACK C.B.A. (VEP07684D: NV-HD100EB)

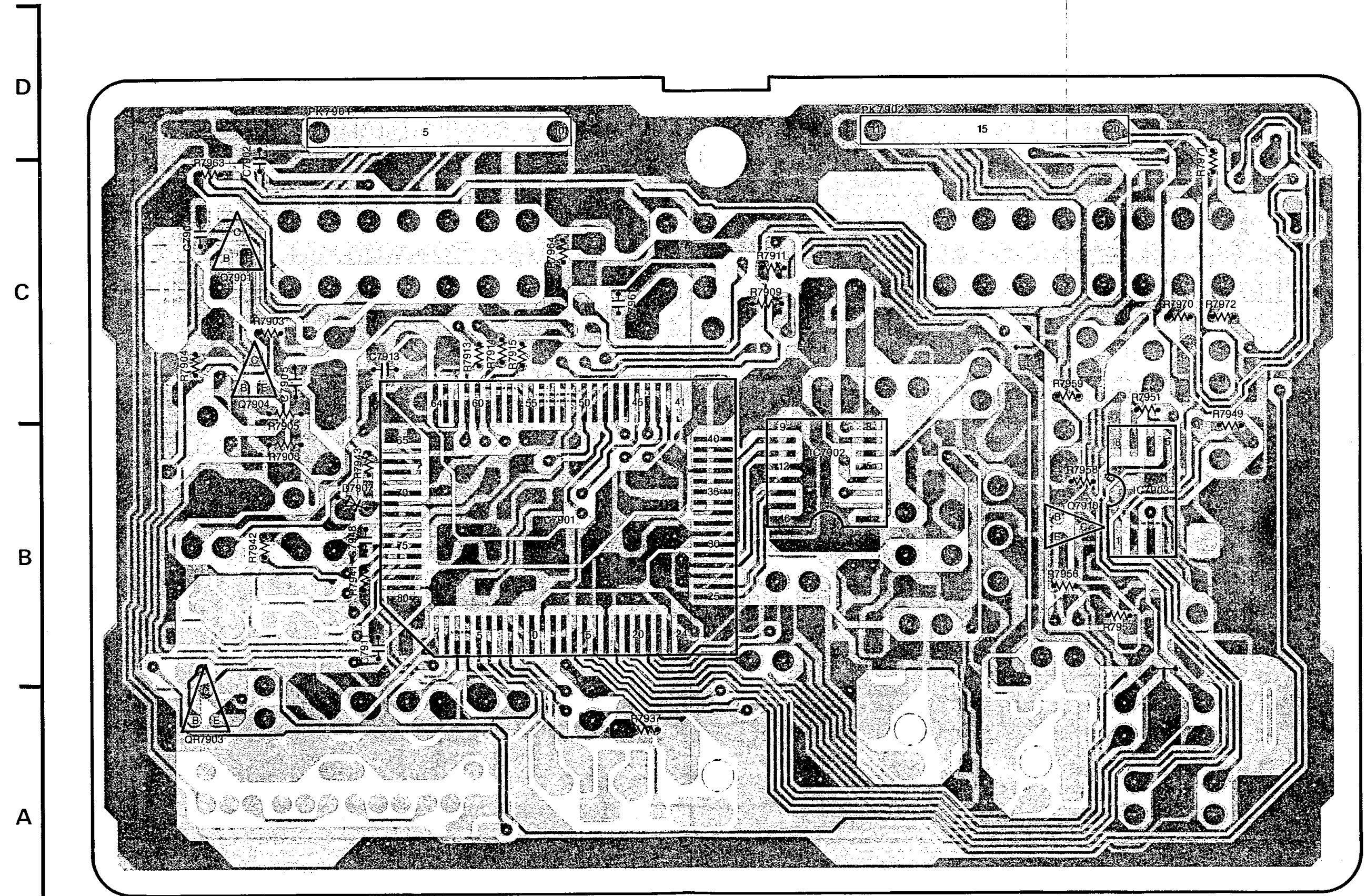
TV DEMODULATOR PACK C.B.A.			
Transistor		TL706	A-1
Q703	B-4	TL707	B-2
Q711	A-1	TL709	B-3
Q712	B-3	TL721	A-1
Q713	B-1	TL722	B-2
Q714	B-4	Adjustment	
Q771	B-5	T703	B-2
Transistor & Resistor		T704	B-3
QR702	C-2	T711	C-1
QR703	C-2	VR701	B-4
QR704	C-2	VR702	B-4
QR711	B-5	VR741	B-3
QR712	A-4	VR751	B-1
QR714	A-1	Connector	
Integrated Circuit		PS701	C-7
IC701	B-2	PS702	C-5
Test Point		PS703	C-3
TL703	B-2	PS704	C-1
TL704	C-2		

ADDRESS INFORMATION



3-

3-25. NICAM DECODER PACK C.B.A. (VEP07675A: NV-HD100B) (VEP07675B: NV-HD100EB)



(COMPONENT SIDE)

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**NICAM DECODER PACK
C.B.A.**

Transistor

Q7901	C-1
Q7902	C-9
Q7903	C-10
Q7904	C-1
Q7905	C-9
Q7906	C-9
Q7907	C-9
Q7908	B-8
Q7909	B-7
Q7910	B-4
Q7913	C-6
Q7914	C-6
Q7915	C-6
Q7916	B-7

Transistor & Resistor

QR7901	B-9
QR7902	B-9
QR7903	A-1
QR7904	A-10
QR7905	B-9
QR7906	B-9

Integrated Circuit

IC7901	B-2
IC7902	B-3
IC7903	B-5

Test Point

TL7901	D-10
TL7902	B-10
TL7903	A-9
TL7904	A-9
TL7905	A-9
TL7906	B-10
TL7907	C-10
TL7908	D-7
TL7909	D-7
TL7910	D-6
TL7911	D-7
TL7912	A-9
TL7913	B-10

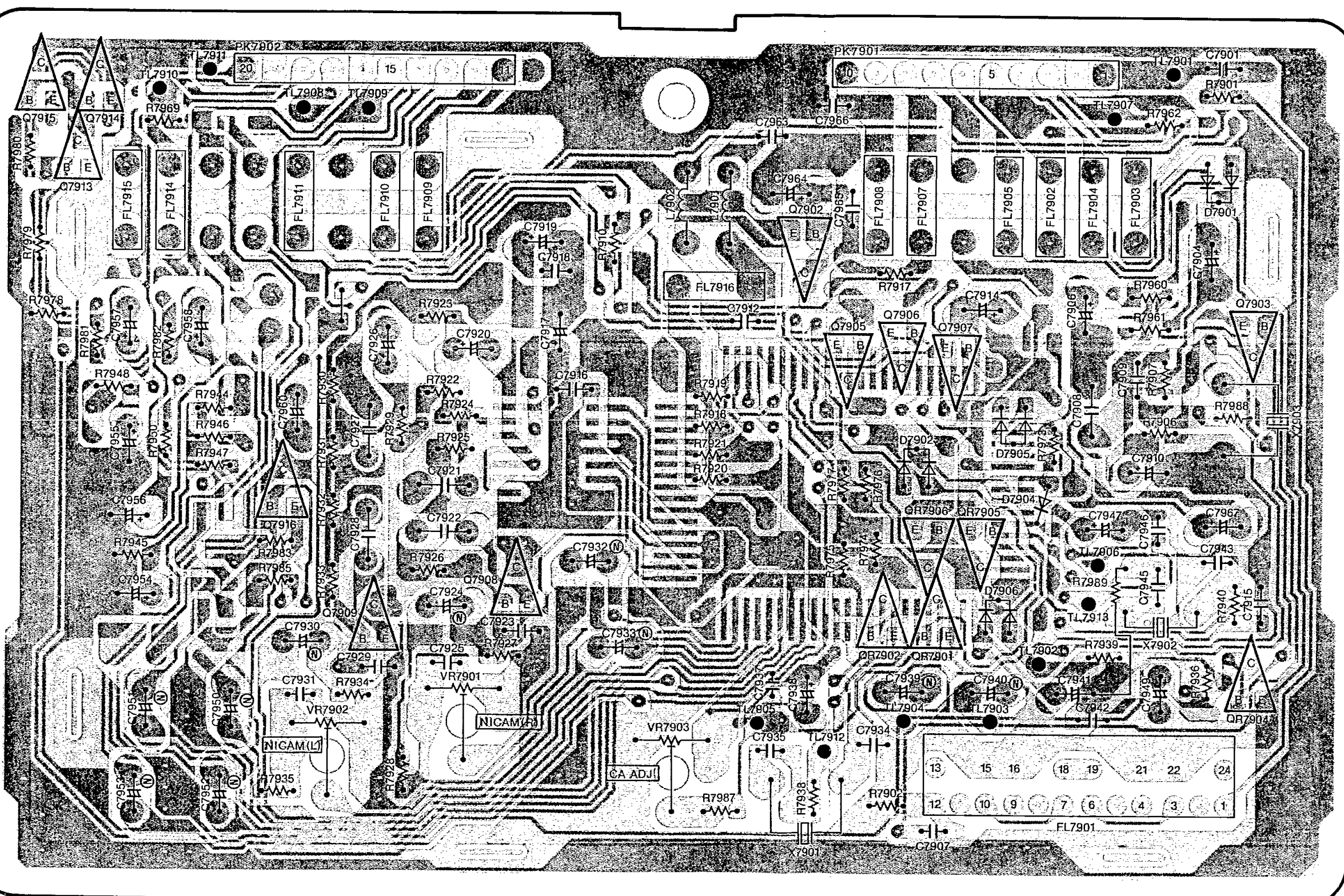
Adjustment

VR7901	A-8
VR7902	A-7
VR7903	A-8

Connector

PK7901	D-2
PK7902	D-4
PK7903	D-7

ADDRESS INFORMATION



(FOIL SIDE)

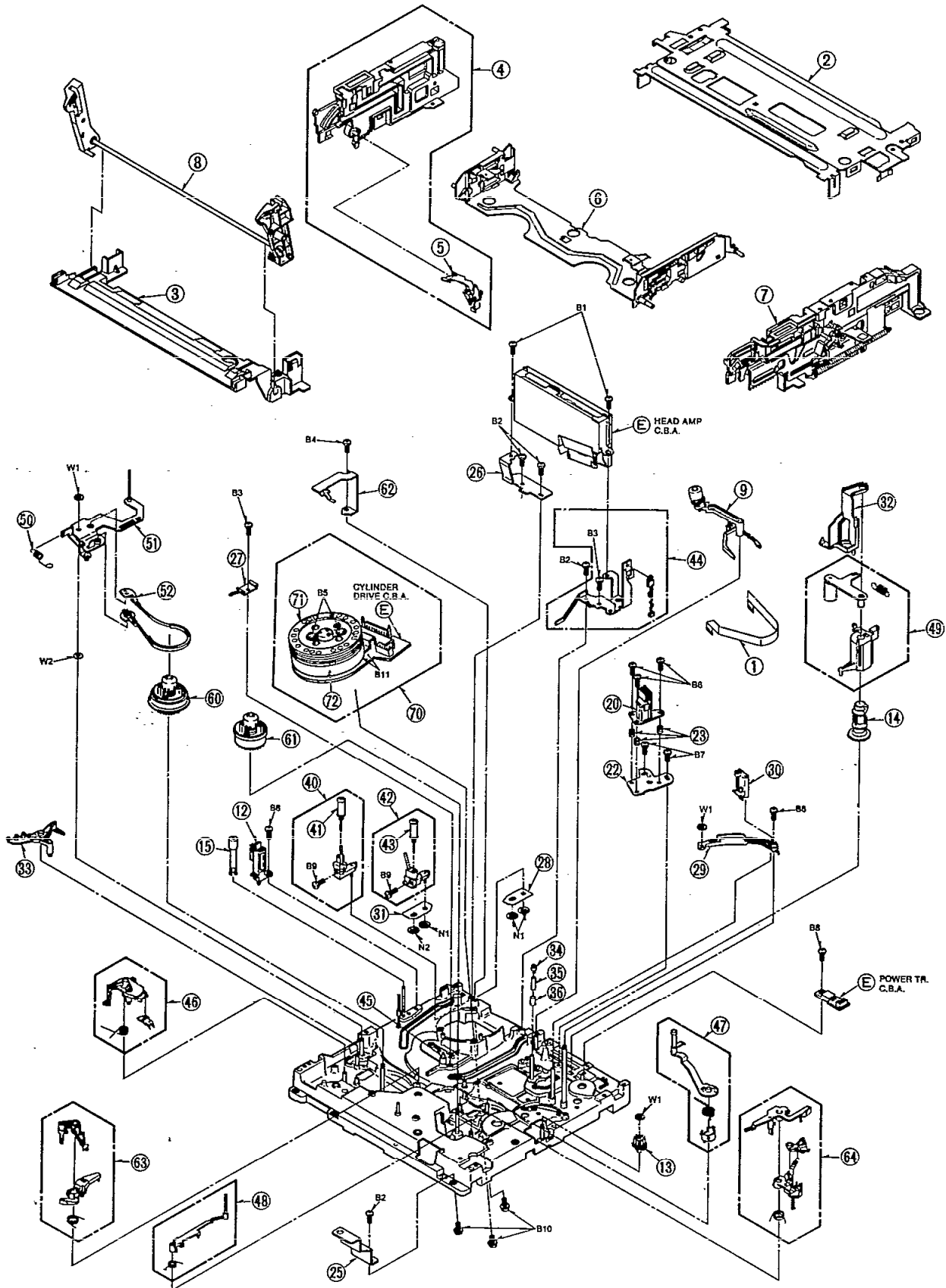


SECTION 4

EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST

① CHASSIS PARTS SECTION (1)



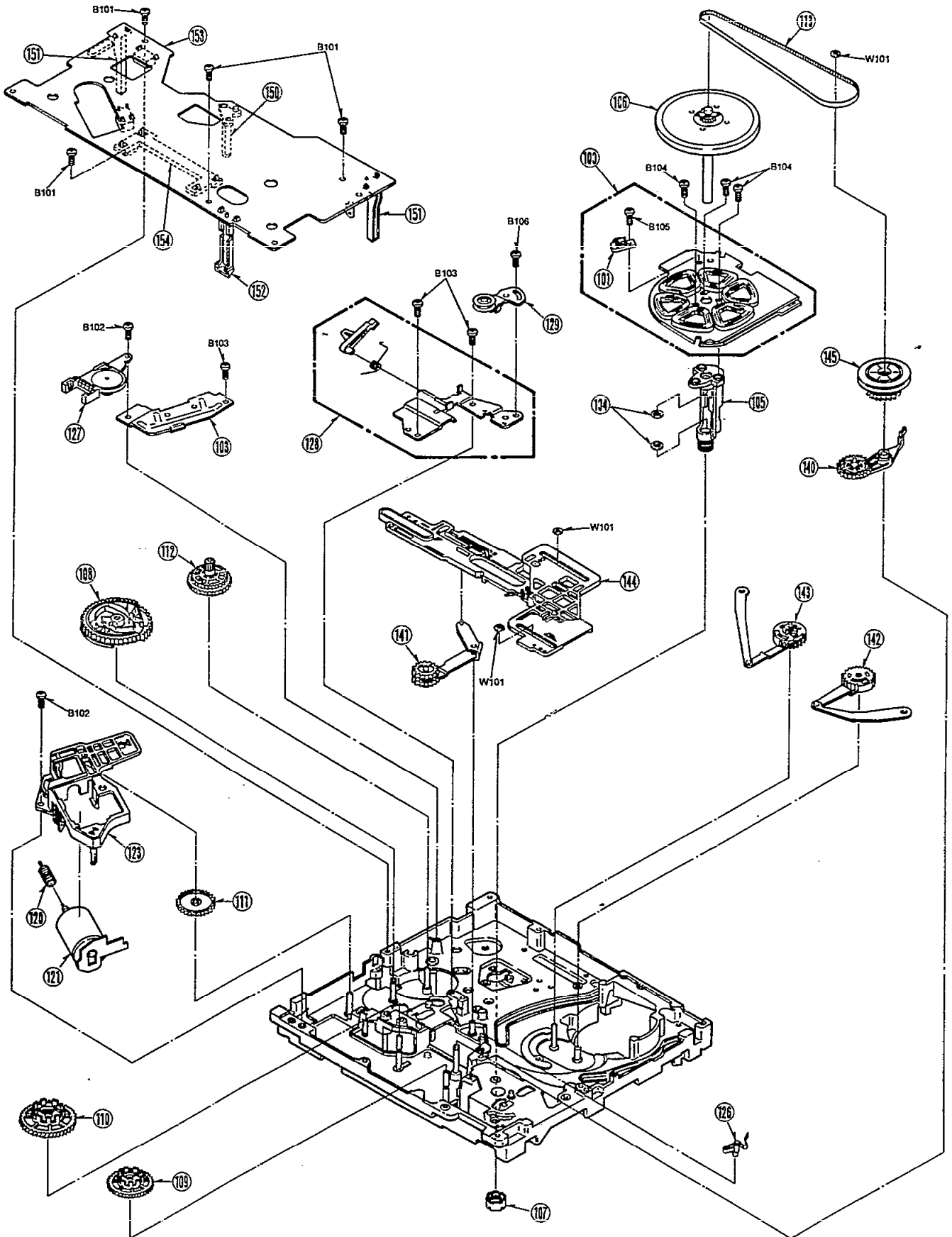
Note:1.* Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Note:1.* Be sure to make your orders of replacement parts according to this list.
 2. 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.

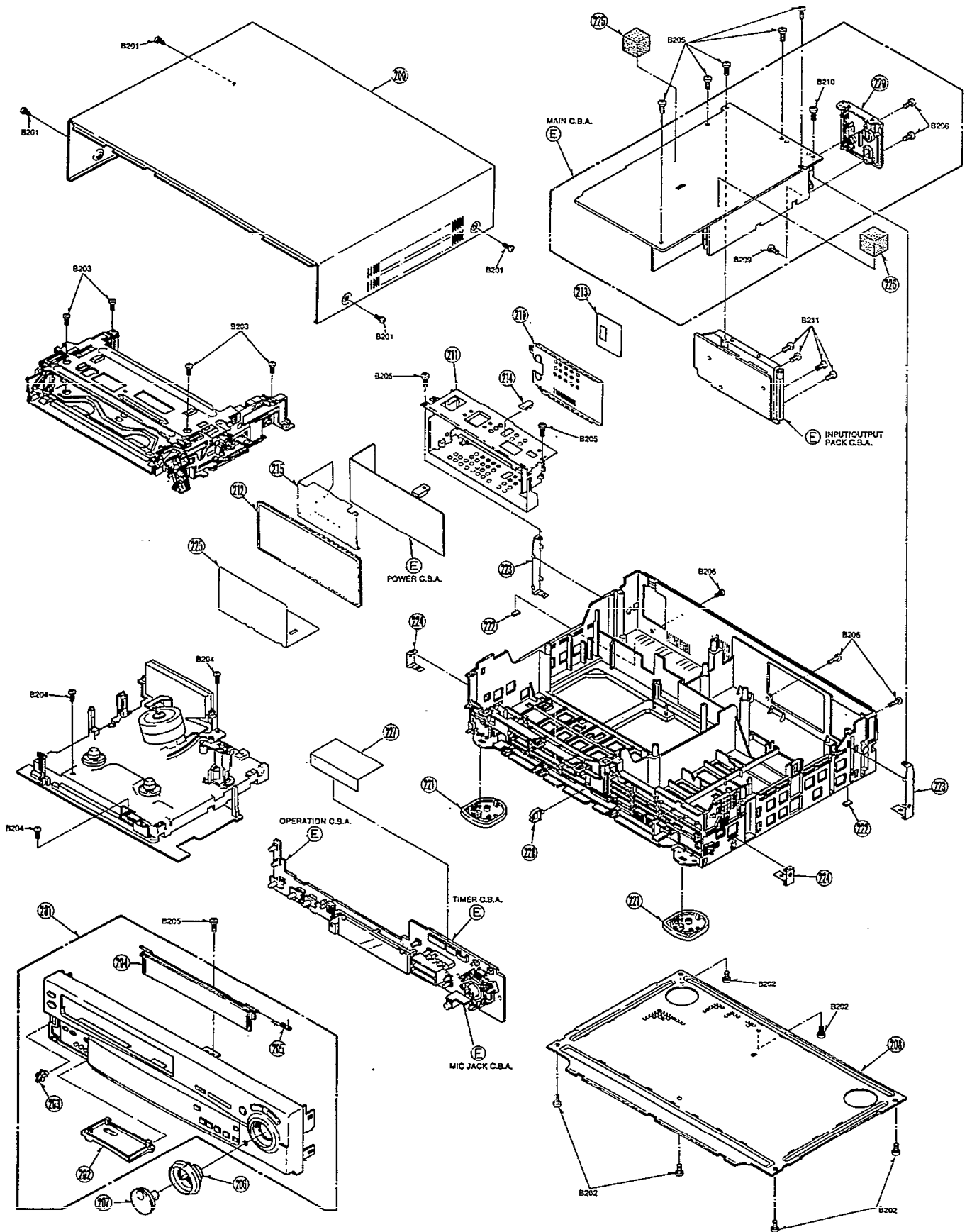
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VWJ0653	FLEXIBLE CABLE (6P)	1	P4003-P1501
2(1)	VMA8644	TOP PLATE	1	
3(1)	VMA8787	CASSETTE GUIDE	1	
4(1)	VXA4660	SIDE PLATE (L) UNIT	1	
5(1)	VXL2250	OPENER LEVER UNIT	1	
6(1)	VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)	VXA4806	SIDE PLATE (R) UNIT	1	
8(1)	VXP1339	MAIN SHAFT UNIT	1	
9(1)	VXL2251	CLEANER ARM UNIT	1	
12(1)	VBS0050	FE HEAD	1	
13(1)	VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)	VDG0886	PINCH CAM GEAR	1	
15(1)	VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)	VED0205	A/C HEAD (1) UNIT	1	
22(1)	VMA8624	A/C HEAD BASE	1	
23(1)	VMB2515	A/C HEAD SPRING	3	
25(1)	VMA8761	MOUNT ANGLE	1	
26(1)	VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)	VMD0917	EARTH SPRING	1	
28(1)	VMA8874	INCLINE BASE HOLDER (S)	1	
29(1)	VMD2078	P5 STOPPER BASE	1	
30(1)	VXA4927	P5 POST STOPPER	1	
31(1)	VMA8873	INCLINE BASE HOLDER (T)	1	
32(1)	VMD2101	OPENER PIECE	1	
33(1)	VML2776	TENSION SPRING ARM	1	
34(1)	VXK1544	P4 UPPER LIMITER	1	
35(1)	VWZ2175	P4 SLEEVE	1	
36(1)	VXK2176	P4 LOWER LIMITER	1	
40(1)	VXA4982KIT	INCLINED BASE (S) UNIT	1	
41(1)	VXP1415	ROLLER POST	2	
42(1)	VXA4984KIT	INCLINED BASE (T) UNIT	1	
44(1)	VXA4974	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)	VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)	VXL2310	REVIEW ARM UNIT	1	
47(1)	VXL2306	P5 ARM UNIT	1	
48(1)	VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
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)	VXRO221	SUPPLY REEL TABLE UNIT	1	
61(1)	VXRO222	TAKE UP REEL TABLE UNIT	1	
62(1)	VXS0113	EARTH PLATE	1	
63(1)	VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)	VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)	VEG1027	CYLINDER UNIT	1	
71(1)	VEHO601	UPPER CYLINDER UNIT	1	
72(1)	VSC2188	CYLINDER SHIELD PLATE	1	
B1(1)	VHD0773	SCREW	2	
B2(1)	XIV26+6F	SCREW	4	
B3(1)	XIV26+4F	SCREW	2	
B4(1)	XIN3+6FFZ	SCREW	1	
B5(1)	VHD0553	SCREW	2	
B6(1)	VHD0762	SCREW	3	
B7(1)	XIV26+6FZ	SCREW	2	
B8(1)	XIV26+8F	SCREW	3	
B9(1)	VHD0760	SCREW	2	
B10(1)	VHD0342	SCREW	3	
B11(1)	XYNM0029	SCREW	2	
N1(1)	VHD0192	NUT	3	
N2(1)	VHD0193	NUT	1	
W1(1)	VWX2208	WASHER	3	
W2(1)	XWGV26D5G	WASHER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
100(2)	VXK5927	STATOR UNIT	1	
101(2)	VBK0061	FG HEAD	1	
103(2)	VMA8765	ROTOR STOPPER	1	
104(2)	VXK1927	OIL SEAL	2	
105(2)	VXD0140	HOUSING UNIT	1	
106(2)	VXP1350	ROTOR UNIT	1	
107(2)	VXQ0297	THRUST SCREW UNIT	1	
108(2)	VDG0913	MAIN CAM GEAR	1	
109(2)	VDG0861	SUPPLY REEL GEAR	1	
110(2)	VDG0862	TAKE UP REEL GEAR	1	
111(2)	VDG0868	WORM WHEEL GEAR	1	
112(2)	VDG0885	SUB CAM GEAR	1	
113(2)	VXD0235	TIMING BELT	1	
120(2)	VDG0866	WORM GEAR	1	
121(2)	VEFD427	LOADING MOTOR (1) UNIT	1	
123(2)	VMD1942	MOTOR BRACKET	1	
126(2)	VML2725	IDLER CONTROL LEVER	1	
127(2)	VSS0365	MODE SW	1	
128(2)	VXA4797	SS BRAKE BASE UNIT	1	
129(2)	VXA4799	TENSION ROLLER UNIT	1	
140(2)	VXL2229	IDLER ARM UNIT	1	
141(2)	VXL2230	DIRECT LEVER UNIT	1	
142(2)	VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)	VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)	VXL2307	MAIN LEVER UNIT	1	
145(2)	VXP1409	CENTRE CLUTCH	1	
150(2)	VMD1926	LED HOLDER	1	
151(2)	VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)	VES0655	SAFETY TAB SW	1	
153(2)	VJRO0563	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A. IS LISTED ON ELECTRICAL PARTS LIST.
154(2)	VMD2029	REEL SHAFT GUIDE	1	
B101(2)	VHD0772	SCREW	4	
B102(2)	XIV26+8F	SCREW	2	
B103(2)	XIV26+6F	SCREW	3	
B104(2)	VHD0753	SCREW	3	
B105(2)	VHD0754	SCREW	1	
B106(2)	XSB26+4FZ	SCREW	1	
W101(2)	VWX2208	WASHER	3	

② CHASSIS PARTS SECTION (2)



③ CASING PARTS SECTION



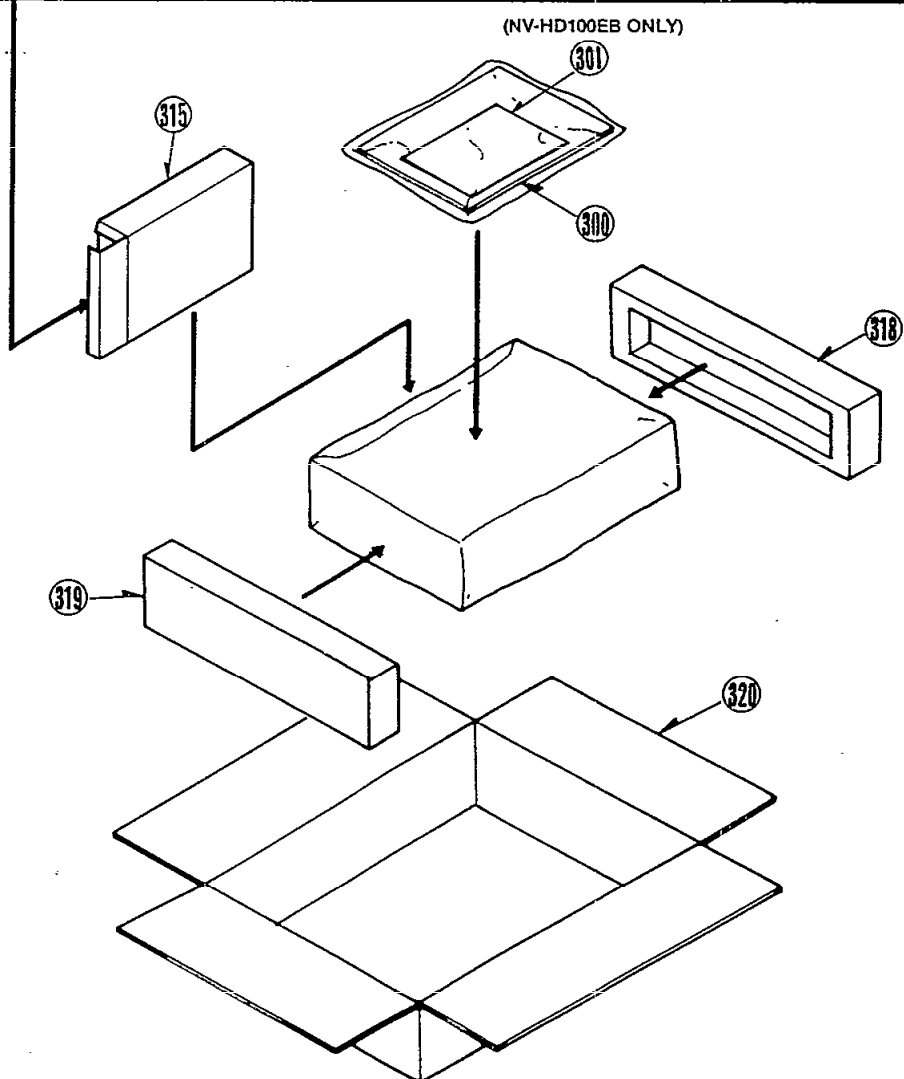
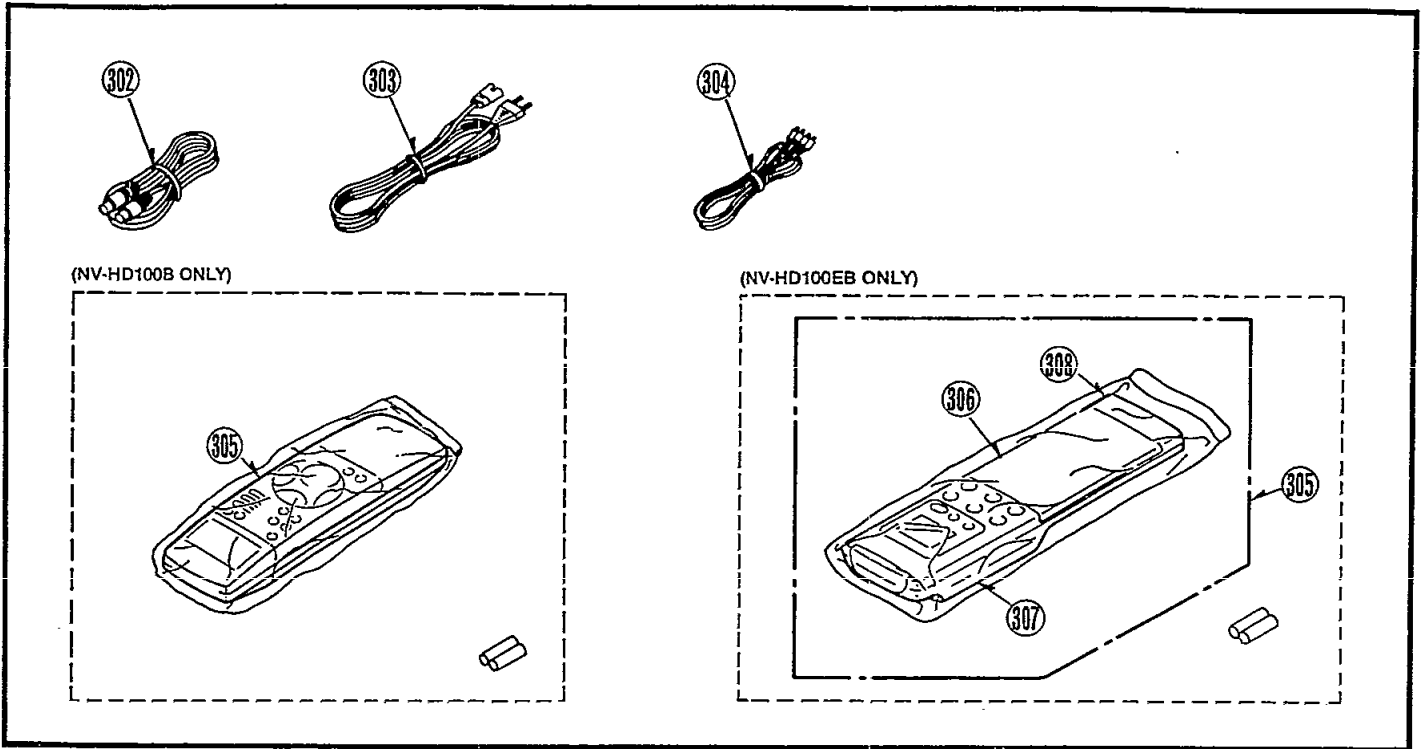
Note:1.* Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
200(3)	VGMD980	TOP PANEL	1	
201(3)	VYPS211	FRONT PANEL UNIT	1	NV-HD100B SUPPLIED FROM M.B.V.
201(3)	VYPS212	FRONT PANEL UNIT	1	NV-HD100B
202(3)	VYF1965	DOOR PANEL UNIT	1	NV-HD100B SUPPLIED FROM M.B.V.
202(3)	VYF1950	DOOR PANEL UNIT	1	NV-HD100B
203(3)	VGQ0550	DOOR LOCK PIECE	1	
204(3)	VKFI978	BLINDER PANEL	1	
205(3)	VMB2521	BLINDER SPRING	1	
206(3)	VG06124	SHUTTLE KNOB	1	
207(3)	VXU1139	YOG KNOB UNIT	1	
208(3)	VXU0374	BOTTOM PLATE	1	
210(3)	VSC3110	POWER SHIELD COVER (TOP)	1	
211(3)	VXA3571	POWER SHIELD COVER (MAIN)	1	
212(3)	VSC2237	POWER SHIELD COVER (BOTTOM)	1	
213(3)	VGH2721	NAME PLATE	1	
214(3)	VMO3357	IC HOLDER SPRING	1	
215(3)	VWZ1950	POWER BARRIER	1	(!)
220(3)	VJH0684	RF ANT TERMINAL PLATE	1	NV-HD100B SUPPLIED FROM M.B.V.
220(3)	VJH0683	RF ANT TERMINAL PLATE	1	NV-HD100B
221(3)	VGA0154	LEG	2	
222(3)	VGA0122	FOOT	2	
223(3)	VMP3820	SIDE ANGLE (REAR)	2	
224(3)	VMP3821	SIDE ANGLE (FRONT)	2	
225(3)	VMZ1621	SHIELD BARRIER	1	
226(3)	VMT0506	MAIN C.B.A. SPACER	2	
227(3)	VMZ2146	TIMER BARRIER	1	
228(3)	VJFO442	WIRE SADDLE	1	
B201(3)	KIV3+10FZ	SCREW	4	
B202(3)	VHD0059	SCREW	6	
B203(3)	KIV26+8ER	SCREW	4	
B204(3)	VHD0168	SCREW	3	
B205(3)	VHD0773	SCREW	7	
B206(3)	KIV3+12JFZ	SCREW	5	
B209(3)	KIV3+6F	SCREW	1	
B210(3)	KIV3+8J	SCREW	1	
B211(3)	KIV3+8GFZ	SCREW	4	NV-HD100B
B211(3)	KIV3+8GFZ	SCREW	2	NV-HD100EB

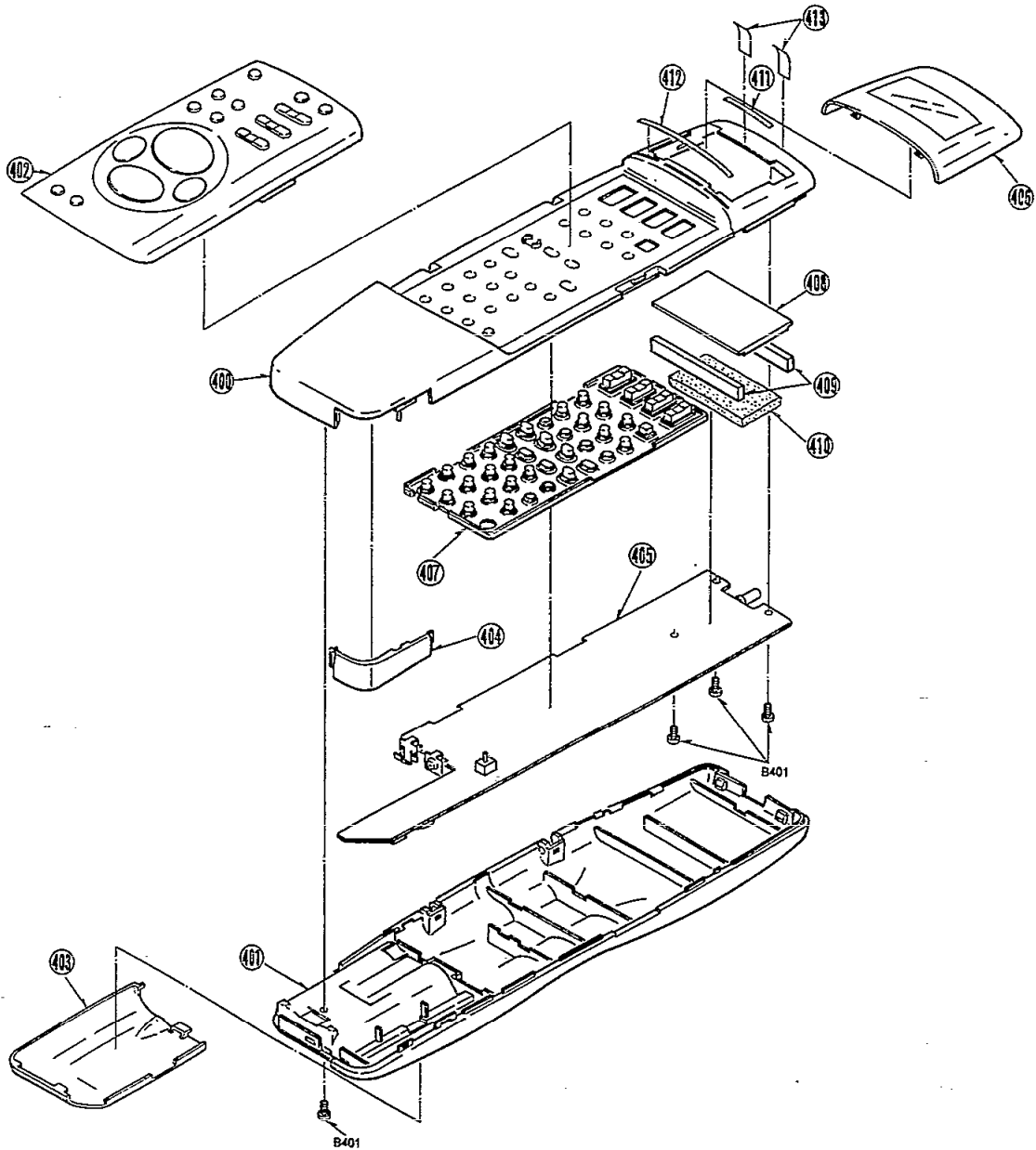
Note:1.* Be sure to make your orders of replacement parts according to this list.
 2. IMPORTANT SAFETY NOTICE
 Components identified with the mark (!) have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
300(4)	VQTS171	OPERATING INSTRUCTIONS	1	(!) NV-HD100B SUPPLIED FROM M.B.V.
300(4)	VQTS170	OPERATING INSTRUCTIONS	1	(!) NV-HD100EB (FINNISH/PORTUGUESE)
300(4)	VQTS172	OPERATING INSTRUCTIONS	1	(!) NV-HD100EB (SWEDISH/DANISH)
301(4)	VQC2119	PROGRAMME SHEET	1	NV-HD100EB
302(4)	VJA0376	DIN RF CABLE	1	
303(4)	VJA0733	AC CORD	1	(!) NV-HD100B
303(4)	VJA0664	AC CORD	1	(!) NV-HD100EB
304(4)	VJA0231	AUDIO CABLE	1	
305(4)	VEQ1484	REMOTE CONTROLLER	1	NV-HD100B SUPPLIED FROM M.B.V.
305(4)	VEQ1482	REMOTE CONTROLLER	1	NV-HD100EB
306(4)	VGP3344	DOOR PANEL	1	NV-HD100EB
307(4)	VKFI977	BATTERY COVER	1	NV-HD100EB
308(4)	VGQ3046	CAP	1	NV-HD100EB
315(4)	VPK0634	ACCESSORIES PACKING	1	
318(4)	VFN3524	CUSHION (R)	1	NV-HD100B SUPPLIED FROM M.B.V.
318(4)	VFN3555	CUSHION (R)	1	NV-HD100EB
319(4)	VFN3630	CUSHION (L)	1	NV-HD100B SUPPLIED FROM M.B.V.
319(4)	VFN3556	CUSHION (L)	1	NV-HD100EB
320(4)	VPG7076	PACKING	1	NV-HD100B SUPPLIED FROM M.B.V.
320(4)	VPG6764	PACKING	1	NV-HD100EB

4 PACKING PARTS SECTION



⑤ REMOTE CONTROLLER UNIT (NV-HD100B)



Note: 1.* Be sure to make your orders of replacement parts according to this list.
 2. 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.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
400(5)	VYK5056	TOP COVER UNIT	1	NV-HD100B
				SUPPLIED FROM M.B.V.
401(5)	VYK4517	BOTTOM COVER UNIT	1	NV-HD100B
402(5)	VYK4842	DOOR PANEL UNIT	1	NV-HD100B
				SUPPLIED FROM M.B.V.
403(5)	VYK4844	BATTERY COVER UNIT	1	NV-HD100B
				SUPPLIED FROM M.B.V.
404(5)	VGQ3040	CAP	1	NV-HD100B
405(5)		REMOTE CONTROLLER C.B.A.	1	The C.B.A. is not supplied as spare part.
406(5)	VKW1668	IR WINDOW	1	NV-HD100B
407(5)	VSP0734	RUBBER CONTACT	1	NV-HD100B
				SUPPLIED FROM M.B.V.
408(5)	VSL0287	LCD	1	NV-HD100B
				SUPPLIED FROM M.B.V.
409(5)	VSQ0809	CONDUCTIVE RUBBER	2	NV-HD100B

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
410(5)	VGQ3027	LCD SPACER	1	NV-HD100B
411(5)	VGQ3028	AGGLUTINATED TAPE (A)	1	NV-HD100B
412(5)	VGQ3029	AGGLUTINATED TAPE (B)	1	NV-HD100B
413(5)	VGQ3077	AGGLUTINATED FILM	2	NV-HD100B
B401(5)	KTB2+6GEZ	SCREW	4	NV-HD100B
		SERVICE FIXTURES & TOOLS		
	VFJ8125HSF	VHS ALIGNMENT TAPE(PAL)	1	
	VFR0335	RETAINING RING REMOVER (3mm/4mm)	1	
	VFR0329	POST ADJUSTMENT SCREWDRIVER	1	
	VFR0326	HEX WRENCH SET	1	
	VFR0132	BACK TENSION METER	1	
	VFR0343	CHECK LIGHT	1	
	VFR27	HEAD CLEANING STICK	1	
	VFR265	FORLYTONE GREASE	1	
	VFR0341	UPPER CYLINDER REMOVER	1	
	VFR0680	WHITE GREASE	1	
	VFR0851	CENTRE FIXING TOOL	1	
	VFR0330	FINE ADJUSTMENT GEAR DRIVER	1	

4-2. ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
 2. 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.
 3. Unless otherwise specified, All resistors are in OHMS, K-1,000 OHMS. All capacitors are in MICRO-FARADS (uf), P-uuf.
 4. The P.C. Board units marked with "■" show below the main assembled parts.
 5. The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEPO3977H	MAIN C.B.A. (Page:4-8)	1	(RTL)NV-HD100B SUPPLIED FROM M.B.V. INCLUDING THE TV DEMODULATOR PACK C.B.A. (VEPO7680F), LUMINANCE & CHROMINANCE PACK C.B.A. (VEPO3975H), HI-FI AUDIO PACK C.B.A. (VEPO4361R), NICAM DECODER PACK C.B.A. (VEPO7675A).
	VEPO7680F	TV DEMODULATOR PACK C.B.A.	1	(RTL)NV-HD100B INCLUDED IN MAIN C.B.A. (VEPO3977H).
	VEPO3975H	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-HD100B INCLUDED IN MAIN C.B.A. (VEPO3977H).
	VEPO4361R	HI-FI AUDIO PACK C.B.A.	1	(RTL) INCLUDED IN MAIN C.B.A. (VEPO3977H).
	VEPO7675A	NICAM DECODER C.B.A.	1	(RTL)NV-HD100B INCLUDED IN MAIN C.B.A. (VEPO3977H).
	VEPO3977J	MAIN C.B.A. (Page:4-15)	1	(RTL)NV-HD100EB INCLUDING THE TV DEMODULATOR PACK C.B.A. (VEPO7684D), LUMINANCE & CHROMINANCE PACK C.B.A. (VEPO3975J), HI-FI AUDIO PACK C.B.A. (VEPO4361R), NICAM DECODER PACK C.B.A. (VEPO7675B).
	VEPO7684D	TV DEMODULATOR PACK C.B.A.	1	(RTL)NV-HD100EB INCLUDED IN MAIN C.B.A. (VEPO3977J).
	VEPO3975J	LUMINANCE & CHROMINANCE PACK C.B.A.	1	(RTL)NV-HD100EB INCLUDED IN MAIN C.B.A. (VEPO3977J).
	VEPO4361R	HI-FI AUDIO PACK C.B.A.	1	(RTL) INCLUDED IN MAIN C.B.A. (VEPO3977J).
	VEPO7675B	NICAM DECODER PACK C.B.A.	1	(RTL)NV-HD100EB INCLUDED IN MAIN C.B.A. (VEPO3977J).
	VEPO3985A	INPUT/OUTPUT PACK C.B.A. (Page:4-22)	1	(RTL)NV-HD100B SUPPLIED FROM M.B.V.
	VEPO3979B	INPUT/OUTPUT PACK C.B.A. (Page:4-23)	1	(RTL)NV-HD100EB
	VEPO126	CYLINDER DRIVE C.B.A.	1	(RTL)

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		(Page:4-24)		
	VEPO1487H	POWER C.B.A. (Page:4-24)	1	(RTL)NV-HD100B
	VEPO1487K	POWER C.B.A. (Page:4-25)	1	(RTL)NV-HD100EB
	VEPO5176C	HEAD AMP C.B.A. (Page:4-25)	1	(RTL)
	VEPO7703E	TIMER C.B.A. (Page:4-26)	1	(RTL)NV-HD100B SUPPLIED FROM M.B.V. INCLUDING THE MIC C.B.A. (VEPO0S82A).
	VEPO7703F	TIMER C.B.A. (Page:4-27)	1	(RTL)NV-HD100EB INCLUDING THE MIC C.B.A. (VEPO0S82A).
	VEPO0S82A	MIC C.B.A.	1	(RTL) INCLUDED IN TIMER C.B.A. (VEPO7703E, F).
	VEPO6852G	OPERATION C.B.A. (Page:4-28)	1	(RTL)NV-HD100B
	VEPO6852P	OPERATION C.B.A. (Page:4-29)	1	(RTL)NV-HD100EB
		MECHANISM CONNECTION C.B.A. (Page:4-29)	1	(RTL) NOT SUPPLIED AS C.B.A. (C.B. IS LISTED ON MECHANICAL PARTS LIST)
	VEPO0T02A	FE HEAD C.B.A. (Page 4-29)	1	(RTL)
		MOTOR C.B.A. (Page 4-29)	1	(RTL) C.B.A. IS INCLUDED IN LOADING MOTOR (1) UNIT(VEPO427)
	VEPO0S86A	POWER TRANSISTOR C.B.A. (Page 4-30)	1	(RTL)
	ENC17990	RF CONVERTER	1	(!)NV-HD100B
	ENC17984	RF CONVERTER	1	(!)NV-HD100EB
	ENB7837HR	TUNER	1	(!)NV-HD100B
	ENB5785SH6	TUNER	1	(!)NV-HD100EB
F1101	VSPD107C16	FUSE	1	(!)
	VEPO3977H	MAIN C.B.A.		(RTL)NV-HD100B SUPPLIED FROM M.B.V.
		CAPACITORS		
C305	ECMLH470JCN	C. CAPACITOR CH 50V 47P	1	
C306, 07	ECRHHH042FN	C. CAPACITOR CH 50V 0.1U	2	
C308	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C309	ECUMH333KBN	C. CAPACITOR CH 50V 0.033U	1		C2008	ECAQJ221	E. CAPACITOR 6.3V 220U	1	
C310	ECEA1CK220	E. CAPACITOR 16V 22U	1		C2009	ECEA1HKR22	E. CAPACITOR 50V 0.22U	1	
C311	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C2010,11	ECUMH333KBN	C. CAPACITOR 50V 0.033U	2	
C312	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1		C2012	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C313,14	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	2		C2013	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C315	ECUMH560JCN	C. CAPACITOR CH 50V 56P	1		C2014	ECA1CM101	E. CAPACITOR 16V 100U	1	
C319	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C2015-18	ECUMH333KBN	C. CAPACITOR 50V 0.033U	4	
C320	ECUMH820JCN	C. CAPACITOR CH 50V 82P	1		C2019-21	ECEA1HKR22	E. CAPACITOR 50V 0.22U	3	
C701	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2027	ECUMH222KBN	C. CAPACITOR CH 50V 2200P	1	
C702	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1		C2028	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C705	ECUMH1042FG	CAPACITOR CH 50V 0.1U	1		C2029	ECEA1HKR3	E. CAPACITOR 50V 3.3U	1	
C708	ECEA1CK220	E. CAPACITOR 16V 22U	1		C2030	ECEA1HKR3R3	E. CAPACITOR 50V 3.3U	1	
C710	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C2031	ECUMH471JCN	C. CAPACITOR 50V 470P	1	
C719,20	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	2		C2032	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C721	ECQV1H823JZ	P. CAPACITOR 50V 0.082U	1		C2033	ECEA1HKR3	E. CAPACITOR 50V 3.3U	1	
C723	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2034	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C725	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1		C2035	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C728	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C2036	ECUMH222KBN	C. CAPACITOR CH 50V 2200P	1	
C730	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2037	ECAQJ221	E. CAPACITOR 6.3V 220U	1	
C731	ECEA1CKA100	E. CAPACITOR 16V 10U	1		C2038	ECQV1H334JZ	P. CAPACITOR 50V 0.33U	1	
C732	ECEA1EK3R3	E. CAPACITOR 25V 3.3U	1		C2039	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C735	ECUMH151JCN	C. CAPACITOR CH 50V 150P	1		C2040	ECUMH680JCN	C. CAPACITOR CH 50V 68P	1	
C736,37	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	2		C2041,42	ECUM1C1052FN	C. CAPACITOR 16V 1U	2	
C739	ECUMH101JCN	C. CAPACITOR CH 50V 100P	1		C2043	ECUMH392KBN	C. CAPACITOR CH 50V 3900P	1	
C740	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C2044	ECUMH223KBN	C. CAPACITOR CH 50V 0.022U	1	
C741	ECEA1HK010	E. CAPACITOR 50V 1U	1		C2045	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1	
C742	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2046	ECUMH680JCN	C. CAPACITOR CH 50V 68P	1	
C743	ECUMH270JCN	C. CAPACITOR CH 50V 27P	1		C2047	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C744,45	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	2		C2048	ECAQJ221	E. CAPACITOR 6.3V 220U	1	
C746	ECUMH220JCN	C. CAPACITOR CH 50V 22P	1		C2049	ECEA1HKR7	E. CAPACITOR 50V 4.7U	1	
C747	ECUMH680JCN	C. CAPACITOR CH 50V 68P	1		C2050	ECUMH101JCN	C. CAPACITOR CH 50V 100P	1	
C748	ECEA1CK470	E. CAPACITOR 16V 47U	1		C2051	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C749	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2052	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C750	ECQV1H563JZ	P. CAPACITOR 50V 0.056U	1		C2053	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C751	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C2055	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C782	ECUMH220JCN	C. CAPACITOR CH 50V 22P	1		C2056	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1	
C801	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3002,03	ECUMH102KBN	C. CAPACITOR CH 50V 1000P	2	
C802	ECUMH151JCN	C. CAPACITOR CH 50V 150P	1		C3004	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C803,04	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	2		C3008	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C805	ECEA0JK221	E. CAPACITOR 6.3V 220U	1		C3009	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
C806	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1		C3011	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1	
C807	ECUMH181JCN	C. CAPACITOR CH 50V 180P	1		C3012	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C808	ECUMH270JCN	C. CAPACITOR CH 50V 27P	1		C3013	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C809	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3014	ECUMH560JCN	C. CAPACITOR CH 50V 56P	1	
C812	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3015	ECUMH080JCN	C. CAPACITOR CH 50V 8P	1	
C814	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3016	ECUMH180JCN	C. CAPACITOR CH 50V 18P	1	
C815	ECUMH560JCN	C. CAPACITOR CH 50V 56P	1		C3018	ECUMH181JCN	C. CAPACITOR CH 50V 180P	1	
C816	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3020	ECUMH151JCN	C. CAPACITOR CH 50V 150P	1	
C817	ECUMH560JCN	C. CAPACITOR CH 50V 56P	1		C3021	ECUMH220JCN	C. CAPACITOR CH 50V 22P	1	
C818	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3023	ECUMH330JCN	C. CAPACITOR CH 50V 33P	1	
C819	ECUMH470JCN	C. CAPACITOR CH 50V 47P	1		C3024	ECUMH681JCN	C. CAPACITOR CH 50V 680P	1	
C820-25	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	6		C3027	ECUMH220JCN	C. CAPACITOR CH 50V 22P	1	
C826	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C3028	ECUMH680JCN	C. CAPACITOR CH 50V 68P	1	
C827	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3030	ECUMH181JCN	C. CAPACITOR CH 50V 180P	1	
C828	ECUMH470JCN	C. CAPACITOR CH 50V 47P	1		C3031	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C829	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C3032	ECUMH220JCN	C. CAPACITOR CH 50V 22P	1	
C830	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	1		C3033	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C831	ECQV1H332JH	P. CAPACITOR 50V 0.27U	1		C3034	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C832	ECUMH331JCN	C. CAPACITOR CH 50V 330P	1		C3035	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C838	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1		C3038	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C839	ECUMH100JCN	C. CAPACITOR CH 50V 10P	1		C3040	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C841	ECUMH102KBN	C. CAPACITOR CH 50V 1000P	1		C3043	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1	
C842	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C3047	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1	
C843	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	1		C3048	ECUMH103KBN	C. CAPACITOR CH 50V 0.01U	1	
C845	ECEA1HK010	E. CAPACITOR 50V 1U	1		C4001	ECAQJ471	E. CAPACITOR 6.3V 470U	1	
C846	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C4002,03	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	2	
C849	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1		C4004	ECEA1CF2101	E. CAPACITOR 16V 100U	1	
C1001	ECA1EM101	E. CAPACITOR 25V 100U	1		C4005	ECUM1C2242FN	C. CAPACITOR CH 16V 0.22U	1	
C1002	ECEA1CK330	E. CAPACITOR 16V 33U	1		C4006	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C1003	ECEA0JK330	E. CAPACITOR 6.3V 33U	1		C4007	ECEA1CF2101	E. CAPACITOR 16V 100U	1	
C1004	ECAQJ471	E. CAPACITOR 6.3V 470U	1		C4008	ECUM1C2242FN	C. CAPACITOR CH 16V 0.22U	1	
C1005	ECEA1AP2221	E. CAPACITOR 10V 220U	1		C4009	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2001-03	ECUMH1042FN	C. CAPACITOR CH 50V 0.1U	3		C4010	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C2004-06	ECEA1CK470	E. CAPACITOR 16V 47U	3		C4011	ECUMH1032FN	C. CAPACITOR CH 50V 0.01U	1	
C2007	ECEA1HK010	E. CAPACITOR 50V 1U	1		C4012	ECQV1H103KZ	P. CAPACITOR 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4013	ECOP1222JZ	P. CAPACITOR 0.0022U	1		C6007	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C4014	ECND2H331KB	C. CAPACITOR 500V 330P	1		C6008	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C4015	ECQB1H10ZKZ	P. CAPACITOR 50V 1000P	1		C6009	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C4016	ECEA16M33	E. CAPACITOR 16V 33U	1		C6010	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4020	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1		C6011	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C4021	ECUM1H683ZFN	C. CAPACITOR CH 50V 0.068U	1		C6012	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4022	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C6013	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4023	ECUM1H471JCN	C. CAPACITOR 50V 470P	1		C6014.15	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	2	
C4025	ECEA1HK010	E. CAPACITOR 50V 1U	1		C6016.17	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4026	ECUM1H580JCN	C. CAPACITOR CH 50V 68P	1		C6018	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4027	ECEA0JK220	E. CAPACITOR 6.3V 22U	1		C6019	ECEA0JK330	E. CAPACITOR 6.3V 33U	1	
C4502	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		C6020	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4503	ECUM1H52KBV	C. CAPACITOR CH 50V 1500P	1		C6021	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4504.05	ECEA1CF2470	E. CAPACITOR 16V 47U	2		C7002-05	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	4	
C4506	VCEA1CAH100	E. CAPACITOR 16V 10U	1		C7006	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4507	ECQB1H223JA	P. CAPACITOR 50V 0.022U	1		C7007.08	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4508	ECEA1EB24R7	E. CAPACITOR 25V 4.7U	1		C7009	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4509	ECEA1AP2470	E. CAPACITOR 10V 47U	1		C7010	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C4510	ECQB1H103JA	P. CAPACITOR 50V 0.01U	1		C7011	ECCSSR5T224N	E. CAPACITOR 5.5V 0.22U	1	
C4511	ECQB1H332JA	P. CAPACITOR 50V 3300P	1		C7012	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4512	ECUM1H561JV	C. CAPACITOR CH 50V 560P	1		C7013	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C4513	ECUM1H581JN	C. CAPACITOR CH 50V 680P	1		C7018-20	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	3	
C4514	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7023	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4515	VCEA1EAB4R7	E. CAPACITOR 25V 4.7U	1		C7651	ECEA1CKN100	E. CAPACITOR 16V 16U	1	
C4517	ECEA1AP2101	E. CAPACITOR 10V 100U	1		C7653	ECUM1H561JCN	C. CAPACITOR CH 50V 560P	1	
C4518	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7654	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	
C4521	ECUM1C473KBV	C. CAPACITOR CH 16V 0.047U	1		C7655.56	ECEA1HK010	E. CAPACITOR 50V 1U	2	
C4522	VCEA1FAHR3	E. CAPACITOR 50V 3.3U	1		C7657	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4528	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7658	ECQP1H562JZ	P. CAPACITOR 50V 5600P	1	
C4530	ECEA0JPK470	E. CAPACITOR 6.3V 47U	1		C7659	ECQB1H272JH	P. CAPACITOR 50V 2700P	1	
C4533	ECEA1CF2330	E. CAPACITOR 16V 33U	1		C7661	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C4537	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1		C7662	ECQV1H683JZ	P. CAPACITOR 50V 0.068U	1	
C4538	ECEA1BUR47 ...	E. CAPACITOR 50V 0.47U	1		C7663	ECQV1H823JZ	P. CAPACITOR 50V 0.082U	1	
C4539	ECUM1C224ZFN	C. CAPACITOR CH 16V 0.22U	1		C7664	ECQB1H273JH	P. CAPACITOR 50V 0.027U	1	
C4541	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7665.66	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4545	ECUM1H102KFN	C. CAPACITOR CH 50V 1000P	1		C7667	ECEA1HK100	E. CAPACITOR 50V 10U	1	
C4552	ECUM1C104ZFN	C. CAPACITOR CH 16V 0.1U	1		C7670	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4556	VCEA1CAH100	E. CAPACITOR 16V 10U	1		C7675	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C4557	ECQB1H223JA	P. CAPACITOR 50V 0.022U	1		C7676.77	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4558	ECEA1EB24R7	E. CAPACITOR 25V 4.7U	1		C7679	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C4559	ECEA1AP2470	E. CAPACITOR 10V 47U	1		C7680	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C4560	ECQB1H103JA	P. CAPACITOR 50V 0.01U	1		C7681.82	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C4561	ECQB1H332JA	P. CAPACITOR 50V 3300P	1		C7901-03	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	3	
C4562	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7904	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C4563	ECUM1H581JN	C. CAPACITOR CH 50V 680P	1		C7905	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4564	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7906	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C4565	VCEA1EAB4R7	E. CAPACITOR 25V 4.7U	1		C7907	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4567	ECEA1AP2101	E. CAPACITOR 10V 100U	1		C7908	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C4568	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7909	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4572	VCEA1FAHR3	E. CAPACITOR 50V 3.3U	1		C7910	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4576	ECUM1B473KBV	C. CAPACITOR CH 25V 0.047U	1		C7911-13	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	3	
C4583	ECEA1CF2330	E. CAPACITOR 16V 33U	1		C7914	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4585.86	ECEA1AP2101	E. CAPACITOR 10V 100U	2		C7915	ECUM1H100DCV	C. CAPACITOR 50V 10P	1	
C4591	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1		C7916	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4592	ECUM1H152KBV	C. CAPACITOR CH 50V 1500P	1		C7917	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4604	ECUM1H182JN	C. CAPACITOR CH 50V 1800P	1		C7918	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C4606	VCEA0JAC470	E. CAPACITOR 6.3V 47U	1		C7919	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4611	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1		C7920	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4613	ECUM1B471JCN	C. CAPACITOR 50V 470P	1		C7921	ECQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4616	ECUM1H102ZFN	C. CAPACITOR CH 50V 1000P	1		C7922	ECQB1H272JH	P. CAPACITOR 50V 2700P	1	
C4617	ECEA1OM22	E. CAPACITOR 10V 22U	1		C7923	ECUM1H151JCV	C. CAPACITOR CH 50V 150P	1	
C4618	ECQB1H222JH	P. CAPACITOR 50V 8200P	1		C7924	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C4619	ECEA1APB100	E. CAPACITOR 10V 10U	1		C7925	ECUM1H561JCV	C. CAPACITOR 50V 560P	1	
C4621	ECEA0JPK101	E. CAPACITOR 6.3V 100U	1		C7926	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4629	ECQB1H103JZ	P. CAPACITOR 50V 0.01U	1		C7927	ECQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4636	ECUM1B471JN	C. CAPACITOR CH 50V 470P	1		C7928	ECQB1H272JH	P. CAPACITOR 50V 2700P	1	
C4638	ECQB1H222JH	P. CAPACITOR 50V 8200P	1		C7929	ECUM1H151JCV	C. CAPACITOR CH 50V 150P	1	
C4651	ECQB1H333JA	P. CAPACITOR 50V 0.033U	1		C7930	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C4652.53	ECUM1C105ZFN	C. CAPACITOR 16V 1U	2		C7931	ECUM1H561JCV	C. CAPACITOR 50V 560P	1	
C6001	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		C7932.33	ECEA1CKN100	E. CAPACITOR 16V 10U	2	
C6002	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1		C7934	ECUM1H220JCV	C. CAPACITOR CH 50V 22P	1	
C6003	ECUM1H223KFN	C. CAPACITOR CH 50V 0.022U	1		C7935	ECUM1H470JCV	C. CAPACITOR 50V 47P	1	
C6004	ECUM1B472KFN	C. CAPACITOR CH 50V 4700P	1		C7937	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C6005	ECUM1H392KFN	C. CAPACITOR CH 50V 3900P	1		C7938	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
C6006	ECUM1H332KFN	C. CAPACITOR CH 50V 3300P	1		C7939.40	ECEA1HKR01	E. CAPACITOR 50V 0.1U	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R719	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R720	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R721	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R724	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R725	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R727	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R728	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R729	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R730	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R736	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R737	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R738	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R739	ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R740	ERJ6GEYJ394	M.RESISTOR CH 1/10W 390K	1	
R741	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R742	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R743	ERJ6GEYJ474	M.RESISTOR CH 1/10W 470K	1	
R744	ERJ6GEYJ271	M.RESISTOR CH 1/10W 2.7K	1	
R745	ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
R746	ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R750	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R757,58	ERJ6GEYJ272	M.RESISTOR CH 1/10W 1K	2	
R759	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R763	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R772	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R781	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R790	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R791	ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R798	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R801	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R802,03	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	2	
R804,05	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2	
R806	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R807	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1	
R813	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R814	ERJ6GMJ393	M.RESISTOR CH 1/10W 39K	1	
R815	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R818	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1	
R819	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	2	
R823,24	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	2	
R825	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R827	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1	
R829	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1	
R831	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1	
R832	ERJ6GMJ154	M.RESISTOR CH 1/10W 150K	1	
R833	ERJ6GMJ204	M.RESISTOR CH 1/10W 200K	1	
R834	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1	
R835	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R836	ERJ6GMJ154	M.RESISTOR CH 1/10W 150K	1	
R848	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
R850	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1	
R853	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
R855	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1	
R856	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R857	ERJ6GMJ101	M.RESISTOR CH 1/10W 100	1	
R859	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R1001	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R2001	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R2002	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2003	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2004	ERL12SJ561	M.RESISTOR 1/2W 560	1	
R2005	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R2006	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R2007	ERJ6GMJ432	M.RESISTOR CH 1/10W 4.3K	1	
R2008	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
R2012	ERJ6GMJ684	M.RESISTOR CH 1/10W 680K	1	
R2013	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R2014	ERJ6GMJ133	M.RESISTOR CH 1/10W 13K	1	
R2015	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R2016	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1	
R2017	EROS2CRG6800	M.RESISTOR 1/4W 680	1	
R2018	ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2019-21	ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2022	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R2023	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2024	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1	
R2030	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R2031	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1	
R2032	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1	
R2034	ERJ6GMJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2035,36	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R2038	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2039	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1	
R2040,41	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2042	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R2043	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1	
R2044	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2045	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2046	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R2047,48	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R2049	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R2050	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2051	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2052	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2053,54	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R2055	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R2056	ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R2058	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3001	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R3002	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R3003	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R3004	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R3005	ERJ6GMJ391	M.RESISTOR CH 1/10W 390	1	
R3006	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R3007	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R3014	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R3018	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3019	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3021	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3023	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	1	
R3024	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3025	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R3027	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R3028	ERJ6GMJ750	M.RESISTOR CH 1/10W 75	1	
R3029	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R3033	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3034	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R3035	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R3037	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3038	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R3039	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1	
R3040,41	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	2	
R3042	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3043	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R3048,49	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R4001	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4002	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4003	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1	
R4004	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1	
R4005	ERJ6GMJ823	M.RESISTOR CH 1/10W 82K	1	
R4006	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R4007	ERJ6GMJ100	M.RESISTOR CH 1/10W 10	1	
R4008,09	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	2	
R4010	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4011	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R4013	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4014	ERJ6GMJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4015	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4016	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4018	ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R4019	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1	
R4020	ERJ6GMJ123	M.RESISTOR CH 1/10W 12K	1	
R4021	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4022	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1		R6005-07	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	3	
R4024	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		R6009	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4025	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1		R6010	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4026	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		R6011	ERJ6GMJ112	M.RESISTOR CH 1/10W 1.1K	1	
R4027	ERJ6GMJ433	M.RESISTOR CH 1/10W 43K	1		R6012	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	1	
R4028	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		R6013	ERJ6GMJ2000	M.RESISTOR 1/4W 200	1	
R4029	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		R6014,15	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R4032	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1		R6016	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4034	ERJ6GMJ823	M.RESISTOR CH 1/10W 82K	1		R6017	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1	
R4035,36	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	2		R6018	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R4037	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1		R6019	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R4501,02	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2		R6020	ERJ6GMJ101	M.RESISTOR 1/10W 100	1	
R4503	VRE0071E36C	M.RESISTOR 1/10W	1		R6021	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4504,05	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	2		R6022	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4506,07	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2		R6023,24	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2	
R4508	ERJ6GEY224	M.RESISTOR CH 1/10W 220K	1		R6025,26	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	2	
R4509	ERJ6GEY822	M.RESISTOR CH 1/10W 8.2K	1		R6027	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R4510	ERJ6GEYJ621	M.RESISTOR CH 1/10W 620	1		R6028	ERJ6GMJ224	M.RESISTOR CH 1/10W 220K	1	
R4511	ERJ6GEY303	M.RESISTOR CH 1/10W 30K	1		R6029	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R4512	VRE0034E163	M.RESISTOR CH 1/10W 16K	1		R6030	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R4513	ERJ3GEY103	M.RESISTOR CH 1/10W 10K	1		R6031	ERJ6GMJ183	M.RESISTOR CH 1/10W 18K	1	
R4514	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1		R6032,33	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	2	
R4518,19	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	2		R6034	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4522	ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2K	1		R6035,36	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	2	
R4527	VRE0034E333	M.RESISTOR CH 1/10W 33K	1		R6037	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4528	VRE0034E153	M.RESISTOR CH 1/10W 15K	1		R6038	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	1	
R4529	ERJ6GEY562	M.RESISTOR CH 1/10W 5.6K	1		R6039	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4530	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1		R6043	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R4534	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R6044	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4535	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R6045,46	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	2	
R4539	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R6050,51	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	2	
R4540	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R6052,53	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2	
R4541	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6054	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4542	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R6055,56	ERJ6GMJ101	M.RESISTOR 1/10W 100	2	
R4543	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R6057	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4551,52	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	2		R6078	VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R4553	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1		R6079	ERJ6GMJ564	M.RESISTOR CH 1/10W 56K	1	
R4554	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R6080	VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R4558	ERJ6GEY224	M.RESISTOR CH 1/10W 220K	1		R6081	VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R4561	ERJ6GEY303	M.RESISTOR CH 1/10W 30K	1		R6082	VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R4562	VRE0034E10C	M.RESISTOR 1/10W	1		R7001	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4563	ERJ3GEY272	M.RESISTOR CH 1/16W 2.7K	1		R7002	ERJ6GMJ181	M.RESISTOR CH 1/10W 180	1	
R4568	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1		R7004,05	ERJ6GMJ151	M.RESISTOR CH 1/10W 150	2	
R4569	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R7006,07	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4573	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7009,10	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4577	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7011	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4578	VRE0034E473	M.RESISTOR CH 1/10W 47K	1		R7013,14	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4581	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R7015,16	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	2	
R4583	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		R7018,19	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4584	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7024-26	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	3	
R4585	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1		R7034	ERJ6GMJ101	M.RESISTOR 1/10W 100	1	
R4586	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7035	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R4587,88	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2		R7651	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4591	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7654	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4592	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1		R7655	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4593	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R7656	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4594	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7657	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4603	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R7658	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R4606	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R7659	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4610	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1		R7661	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4611,12	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2		R7662	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R4613	ERJ6GEYJ394	M.RESISTOR CH 1/10W 39K	1		R7663	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4615	ERJ6GEYJ133	M.RESISTOR CH 1/10W 13K	1		R7664	ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4616	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1		R7671,72	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R4638	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1		R7673	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4649	ERJ3GEY470	M.RESISTOR CH 1/16W 47	1		R7674	ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R4651	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R7675	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4653	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R7676	ERJ6GEYJ152	M.RESISTOR 1W 1.5K	1	
R4654	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1		R7677	ERJ6GEYJ103	C.RESISTOR 1/4W 10K	1	
R4655	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R7678	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R4656	ERJ6GEY243	M.RESISTOR CH 1/10W 24K	1		R7679	ERJ6GEYJ100	C.RESISTOR 1/4W 10	1	
R4657	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1		R7680	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R4659	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R7681,82	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R4666	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R7683	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R6001-04	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	4		R7684	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C320	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1		C2014	ECA1CM101	E. CAPACITOR 16V 100U	1	
C701,02	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	2		C2015-18	ECUM1H333KEN	C. CAPACITOR 50V 0.033U	4	
C707	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	1		C2019-21	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	3	
C708	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2027	ECUM1H222KEN	C. CAPACITOR CH 50V 2200P	1	
C710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C2028	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C719	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C2029	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C720	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C2030	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C721	ECQV1H823J2	P. CAPACITOR 50V 0.082U	1		C2031	SCUM1H471JCN	C. CAPACITOR 50V 470P	1	
C723	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2032	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C725	ECQV1H104J2	P. CAPACITOR 50V 0.1U	1		C2033	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1	
C728	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C2034	ECEA0JK220	E. CAPACITOR 6.3V 22U	1	
C730	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2035	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C731	UCEA1CA100	E. CAPACITOR 16V 10U	1		C2036	ECUM1H222KEN	C. CAPACITOR CH 50V 2200P	1	
C732	ECEA1EK2R3	E. CAPACITOR 25V 3.3U	1		C2037	ECA0JM221	E. CAPACITOR 6.3V 220U	1	
C735	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1		C2038	ECQV1H334J2	P. CAPACITOR 50V 0.33U	1	
C736,37	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2		C2039	ECEA1HK4R7	E. CAPACITOR 50V 0.47U	1	
C739	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1		C2040	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C740	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C2041,42	ECUM1C1052FN	C. CAPACITOR 16V 1U	2	
C741	ECEA1HK010	E. CAPACITOR 50V 1U	1		C2043	ECUM1H392KEN	C. CAPACITOR CH 50V 3900P	1	
C742	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2044	ECUM1H222KEN	C. CAPACITOR CH 50V 0.022U	1	
C743	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		C2045	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C744,45	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	2		C2046	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C746	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1		C2047	ECEA1HK4R7	E. CAPACITOR 50V 0.47U	1	
C747	ECUM1H690JCN	C. CAPACITOR CH 50V 69P	1		C2048	ECA0JM221	E. CAPACITOR 6.3V 220U	1	
C748	ECEA1CK470	E. CAPACITOR 16V 47U	1		C2049	ECEA1HK4R7	E. CAPACITOR 50V 4.7U	1	
C749	ECEA1CK100	E. CAPACITOR 16V 10U	1		C2050	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C760	ECQV1H473J2	P. CAPACITOR 50V 0.047U	1		C2051	ECQV1H683J2	P. CAPACITOR 50V 0.068U	1	
C781	ECUM1H120JCN	C. CAPACITOR CH 50V 12P	1		C2052	ECEA1HK4R7	E. CAPACITOR 50V 0.47U	1	
C782	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1		C2053	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C790	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C2055	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C792	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1		C2056	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C801	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3002,03	ECUM1H102KEN	C. CAPACITOR CH 50V 1000P	2	
C802	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1		C3004	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C803,04	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2		C3008	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C805	ECEA0JK221	E. CAPACITOR 6.3V 220U	1		C3009	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
C806	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C3011	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C807	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1		C3012	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C808	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	1		C3013	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C809	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3014	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C812	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3015	ECUM1H090JCN	C. CAPACITOR CH 50V 8P	1	
C814	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3016	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C815	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1		C3018	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1	
C816	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3020	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C817	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1		C3021	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C818	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3023	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C819	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		C3024	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C820-25	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	6		C3027	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C826	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C3028	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C827	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3030	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1	
C828	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1		C3031	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C829	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C3032	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C830	ECEA1HK0R1	E. CAPACITOR 50V 0.1U	1		C3033	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C831	ECQV1H333J2	P. CAPACITOR 50V 0.27U	1		C3034	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C832	ECUM1H331JCN	C. CAPACITOR CH 50V 330P	1		C3035	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C836	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C3038	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C839	ECUM1H100JCN	C. CAPACITOR CH 50V 10P	1		C3040	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C841	ECUM1H102KEN	C. CAPACITOR CH 50V 1000P	1		C3043	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C842	ECEA0JK101	E. CAPACITOR 6.3V 100U	1		C3047	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C843	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C3048	ECUM1H103KEN	C. CAPACITOR CH 50V 0.01U	1	
C845	ECEA1HK010	E. CAPACITOR 50V 1U	1		C4001	ECA0JM471	E. CAPACITOR 6.3V 470U	1	
C846	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C4002,03	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C849	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C4004	ECEA1CP2101	E. CAPACITOR 16V 100U	1	
C1001	ECA1EM101	E. CAPACITOR 25V 100U	1		C4005	ECUM1C2242FN	C. CAPACITOR CH 16V 0.22U	1	
C1002	ECEA1CK330	E. CAPACITOR 16V 33U	1		C4006	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C1003	ECEA0JK330	E. CAPACITOR 6.3V 33U	1		C4007	ECEA1CP2101	E. CAPACITOR 16V 100U	1	
C1004	ECA0JM471	E. CAPACITOR 6.3V 470U	1		C4008	ECUM1C2242FN	C. CAPACITOR CH 16V 0.22U	1	
C1005	ECEA1AF2221	E. CAPACITOR 10V 220U	1		C4009	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2001-03	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	3		C4010	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C2004-06	ECEA1CK470	E. CAPACITOR 16V 47U	3		C4011	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C2007	ECEA1HK010	E. CAPACITOR 50V 1U	1		C4012	ECQV1H103KZ	P. CAPACITOR 50V 0.01U	1	
C2008	ECA0JM221	E. CAPACITOR 6.3V 220U	1		C4013	ECQV1222J2	P. CAPACITOR 0.0022U	1	
C2009	ECEA1HKR22	E. CAPACITOR 50V 0.22U	1		C4014	ECQV2H331KB	C. CAPACITOR 500V 330P	1	
C2010,11	ECUM1H333KEN	C. CAPACITOR 50V 0.033U	2		C4015	ECQV1H102KZ	P. CAPACITOR 50V 1000P	1	
C2012	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C4016	ECEA16M33	E. CAPACITOR 16V 33U	1	
C2013	ECQV1H683J2	P. CAPACITOR 50V 0.068U	1		C4020	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C4021	ECUM1H5832FN	C. CAPACITOR CH 50V 0.068U	1		C6012	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C4022	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C6013	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C4023	ECUM1H471JCN	C. CAPACITOR 50V 470P	1		C6014,15	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	2	
C4025	ECEA1HK010	E. CAPACITOR 50V 1U	1		C6016,17	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
C4026	ECUM1H580JCN	C. CAPACITOR CH 50V 68P	1		C6018	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C4027	ECEA0JK220	E. CAPACITOR 6.3V 22U	1		C6019	ECEA0JK330	E. CAPACITOR 6.3V 33U	1	
C4502	ECUM1C1042FN	C. CAPACITOR CH 16V 0.1U	1		C6020	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C4503	ECUM1H152K8V	C. CAPACITOR CH 50V 1500P	1		C6021	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C4504,05	ECEA1CP2470	E. CAPACITOR 16V 47U	2		C7003-05	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	3	
C4506	VCEA1CAH100	E. CAPACITOR 16V 10U	1		C7006	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4507	EQQB1H223JA	P. CAPACITOR 50V 0.022U	1		C7007,08	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
C4508	ECEA1EB24R7	E. CAPACITOR 25V 4.7U	1		C7009	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4509	ECEA1AP2470	E. CAPACITOR 10V 47U	1		C7010	ECEA0JK101	E. CAPACITOR 6.3V 100U	1	
C4510	EQQB1H103JA	P. CAPACITOR 50V 0.01U	1		C7011	EBCS5R5T224N	E. CAPACITOR 5.5V 0.22U	1	
C4511	EQQB1H32JA	P. CAPACITOR 50V 3300P	1		C7012	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C4512	ECUM1H561JV	C. CAPACITOR CH 50V 560P	1		C7013	ECEA0JK221	E. CAPACITOR 6.3V 220U	1	
C4513	ECUM1H561JN	C. CAPACITOR CH 50V 680P	1		C7018-20	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	3	
C4514	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7023	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C4515	VCEA1EAB4R7	E. CAPACITOR 25V 4.7U	1		C7651	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C4517	ECEA1AP2101	E. CAPACITOR 10V 100U	1		C7653	EQQB1H332JH	P. CAPACITOR 50V 0.27U	1	
C4518	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C7668	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C4521	ECUM1C473K8V	C. CAPACITOR CH 16V 0.047U	1		C7685	ECEA1HK010	E. CAPACITOR 50V 1U	1	
C4522	VCEA1FAH3R3	E. CAPACITOR 50V 3.3U	1		C7901-03	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	3	
C4528	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C7904	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C4530	ECEA0JPK470	E. CAPACITOR 6.3V 47U	1		C7905	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4533	ECEA1CP2330	E. CAPACITOR 16V 33U	1		C7906	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C4537	ECUM1H102JCN	C. CAPACITOR CH 50V 1000P	1		C7907	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4538	ECEA1HR47	E. CAPACITOR 50V 0.47U	1		C7908	EQQB1H104JZ	P. CAPACITOR 50V 0.1U	1	
C4539	ECUM1C2242FN	C. CAPACITOR CH 16V 0.22U	1		C7909	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4541	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C7910	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4545	ECUM1H102K8V	C. CAPACITOR CH 50V 1000P	1		C7911-13	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	3	
C4552	ECUM1C1042FN	C. CAPACITOR CH 16V 0.1U	1		C7914	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4556	VCEA1CAH100	E. CAPACITOR 16V 10U	1		C7915	ECUM1H100DCV	C. CAPACITOR 50V 10P	1	
C4557	EQQB1H223JA	P. CAPACITOR 50V 0.022U	1		C7916	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4558	ECEA1EB24R7	E. CAPACITOR 25V 4.7U	1		C7917	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4559	ECEA1AP2470	E. CAPACITOR 10V 47U	1		C7918	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4560	EQQB1H103JA	P. CAPACITOR 50V 0.01U	1		C7919	ECEA0JK470	E. CAPACITOR 6.3V 47U	1	
C4561	EQQB1H332JA	P. CAPACITOR 50V 3300P	1		C7920	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4562	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7921	EQQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4563	ECUM1H561JN	C. CAPACITOR CH 50V 680P	1		C7922	EQQB1H272JH	P. CAPACITOR 50V 2700P	1	
C4564	ECUM1H561JN	C. CAPACITOR CH 50V 560P	1		C7923	ECUM1H151JCV	C. CAPACITOR CH 50V 150P	1	
C4565	VCEA1EAB4R7	E. CAPACITOR 25V 4.7U	1		C7924	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C4567	ECEA1AP2101	E. CAPACITOR 10V 100U	1		C7925	ECUM1H561JCV	C. CAPACITOR 50V 560P	1	
C4568	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C7926	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C4572	VCEA1FAH3R3	E. CAPACITOR 50V 3.3U	1		C7927	EQQB1H102JH	P. CAPACITOR 50V 1000P	1	
C4576	ECUM1E473K8V	C. CAPACITOR CH 25V 0.047U	1		C7928	EQQB1H272JH	P. CAPACITOR 50V 2700P	1	
C4583	ECEA1CP2330	E. CAPACITOR 16V 33U	1		C7929	ECUM1H151JCV	C. CAPACITOR CH 50V 150P	1	
C4585,86	ECEA1AP2101	E. CAPACITOR 10V 100U	2		C7930	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C4591	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1		C7931	ECUM1H561JCV	C. CAPACITOR 50V 560P	1	
C4592	ECUM1H152K8V	C. CAPACITOR CH 50V 1500P	1		C7932,33	ECEA1CKN100	E. CAPACITOR 16V 10U	2	
C4604	ECUM1H182JN	C. CAPACITOR CH 50V 1800P	1		C7934	ECUM1H220JCV	C. CAPACITOR CH 50V 22P	1	
C4606	VCEA0JA0470	E. CAPACITOR 6.3V 47U	1		C7935	ECUM1H470JCV	C. CAPACITOR 50V 47P	1	
C4611	EQQB1H103JH	P. CAPACITOR 50V 0.01U	1		C7937	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4613	ECUM1H471JCN	C. CAPACITOR 50V 470P	1		C7938	ECEA1HR47	E. CAPACITOR 50V 0.47U	1	
C4616	ECUM1H1022FV	C. CAPACITOR CH 50V 1000P	1		C7939,40	ECEA1HRN0R1	E. CAPACITOR 50V 0.1U	2	
C4617	ECEA10M22	E. CAPACITOR 10V 22U	1		C7941	ECEA1HR47	E. CAPACITOR 50V 0.47U	1	
C4618	EQQB1H822JH	P. CAPACITOR 50V 8200P	1		C7942	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4619	ECEA1APB100	E. CAPACITOR 10V 10U	1		C7943	ECUM1H100DCV	C. CAPACITOR 50V 10P	1	
C4621	ECEA0JPK101	E. CAPACITOR 6.3V 100U	1		C7945	ECUM1H101JCV	C. CAPACITOR CH 50V 100P	1	
C4629	EQQB1H103J2	P. CAPACITOR 50V 0.01U	1		C7946	ECUM1H220JCV	C. CAPACITOR CH 50V 22P	1	
C4636	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1		C7947	ECEA1HR47	E. CAPACITOR 50V 0.47U	1	
C4638	EQQB1H822JH	P. CAPACITOR 50V 8200P	1		C7948	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C4651	EQQB1H333JA	P. CAPACITOR 50V 0.033U	1		C7949	ECEA0JK330	E. CAPACITOR 6.3V 33U	1	
C4652,53	ECUM1C1052FN	C. CAPACITOR 16V 1U	2		C7950-53	ECEA1CKN100	E. CAPACITOR 16V 10U	4	
C6001	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1		C7954	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C6002	ECUM1H21JCN	C. CAPACITOR CH 50V 220P	1		C7955-58	ECEA1CK100	E. CAPACITOR 16V 10U	4	
C6003	ECUM1H223K8V	C. CAPACITOR CH 50V 0.022U	1		C7960	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C6004	ECUM1H472K8V	C. CAPACITOR CH 50V 4700P	1		C7961	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C6005	ECUM1H392K8V	C. CAPACITOR CH 50V 3900P	1		C7963	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	1	
C6006	ECUM1H332K8V	C. CAPACITOR CH 50V 3300P	1		C7964	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C6007	ECEA0JK220	E. CAPACITOR 6.3V 22U	1		C7965,66	ECUM1H1032FV	C. CAPACITOR CH 50V 0.01U	2	
C6008	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1		C7967	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C6009	ECUM1H220JCV	C. CAPACITOR CH 50V 22P	1		C8001	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C6010	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1						
C6011	ECEA0JK220	E. CAPACITOR 6.3V 22U	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		DIODES					COILS		
D302	1SS283	DIODE	1		L303	ELESQ220KA	COIL 22UH	1	
D303	MA151A	DIODE	1		L304	ELESQ101KA	COIL 100UH	1	
D304	1SS254	DIODE	1		L305	ELESQ121JA	COIL 120UH	1	
D710	MA3100L	DIODE	1		L306	ELESQ390KA	COIL 39UH	1	
D771	MA151WK	DIODE	1		L701	ELESQ680KA	COIL 68UH	1	
D772	1SS254	DIODE	1		L711	ELQTR222B	COIL 0.22UH	1	
D801,02	1SS254	DIODE	2		L718,19	ELESQ680KA	COIL 68UH	2	
D804	1SS254	DIODE	1		L720	ELESQ150KA	COIL 15UH	1	
D1001-03	11ES1	DIODE	3		L781	VLQ0213R680	COIL 68UH	1	
D1004	MA723VT	DIODE	1 (VT)		L801,02	VLQ0540J150	COIL 15UH	2	
D2001	MA723VT	DIODE	1 (VT)		L803	ELESQ220KA	COIL 22UH	1	
D2005-08	1SS254	DIODE	4		L804	ELESQ101KA	COIL 100UH	1	
D3001	1SS254	DIODE	1		L805	ELESQ270KA	COIL 27UH	1	
D3002	11BQ504	DIODE	1		L807,08	VLQ0540J150	COIL 15UH	2	
D3007	1SS254	DIODE	1		L809	ELESQ101KA	COIL 100UH	1	
D3008	MA221	DIODE	1		L811,12	ELESQ101KA	COIL 100UH	2	
D4001,02	1SS254	DIODE	2		L1001	VLP0074	COIL	1	
D4003	MA151WK	DIODE	1		L2001	VLP0083	FILTER	1	
D4501,02	MA151H	DIODE	2		L2002	VLQ0188J330	COIL 33UH	1	
D4503	MA151K	DIODE	1		L2003	ELESQ102KA	COIL 100UH	1	
D4504	MA151H	DIODE	1		L2004	ELESQ101KA	COIL 100UH	1	
D4602	MA151K	DIODE	1		L2005	VLP0074	COIL	1	
D6001-05	1SS254	DIODE	5		L2006	VLQ0188J330	COIL 33UH	1	
D6007	1SS254	DIODE	1		L3004	VLQ0188J330	COIL 33UH	1	
D6008,09	MA723VT	DIODE	2 (VT)		L3005	ELESQ270JA	COIL 27UH	1	
D6011	1SS254	DIODE	1		L3007	ELESQ688JA	COIL 6.8UH	1	
D6012	SV03YS	DIODE	1		L3008	ELESQ586JA	COIL 5.6UH	1	
D7001-04	MA723VT	DIODE	4 (VT)		L3009	ELESQ120JA	COIL 12UH	1	
D7005	1SS254	DIODE	1		L3010	ELESQ101JA	COIL 100UH	1	
D7007	1SS254	DIODE	1		L3011	VLQ0188J330	COIL 33UH	1	
D7009	MA151WK	DIODE	1		L3012	ELESQ151KA	COIL 150UH	1	
D7011	MA151WK	DIODE	1		L3013	ELESQ820JA	COIL 82UH	1	
D7672,73	MA3150-H	DIODE	2		L4001,02	VLQEL06F101K	COIL 100UH	2	
D7901,02	MA141WK	DIODE	2		L4003	ELESQ471KA	COIL 470UH	1	
D7904	MA141K	DIODE	1		L4004	VLQ0188J330	COIL 33UH	1	
D7905	MA141WK	DIODE	1		L4501,02	ELESQ101KA	COIL 100UH	2	
D7906	MA141WK	DIODE	1		L4601	VLQEL07F153J	COIL 15UH	1	
D7907	MA141K	DIODE	1		L6001	VLP0074	COIL	1	
					L7001,02	ELESQ101KA	COIL 1UH	2	
					L7003,04	VLQ0540J330	COIL 33UH	2	
		DELAYS			L7006	VLQ0188K330	COIL 33UH	1	
DL801	VLD0198	DELAY	1		L7007	VLQ0540J330	COIL 33UH	1	
DL802	EFXN124A13W	DELAY	1		L7008	ELESQ101KA	COIL 1UH	1	
					L7010	VLQEL06F101K	COIL 100UH	1	
					L7012	ERJ6GE20R00	M.RESISTOR CH 1/10W	0	1
					L7901,02	VLP0083	FILTER	2	
		FILTERS							
FL4501	VLF0947M	FILTER	1				CONNECTORS		
FL7901	VLF0703	FILTER	1		P1001	VJPI144	CONNECTOR (MALE) 5P	1	
FL7902	ELQW103EB	FILTER	1		P1001	VJS1144	CONNECTOR (FEMALE) 6P	1	
FL7903	ELQW101GB	COIL 100UH	1		P1002	VJPI141	CONNECTOR (MALE) 2P	1	
FL7904,05	ELQW103EB	FILTER	2		P1003	VJPI232T	CONNECTOR (MALE) 5P	1	
FL7907-11	ELQW103EB	FILTER	5		P1003	VJS1232	CONNECTOR (FEMALE) 5P	1	
FL7914,15	ELQW101GB	COIL 100UH	2		P1102	VJS1237T	CONNECTOR (FEMALE)	1	
FL7916	VLF0633	FILTER	1		P1506	VJS1736	CONNECTOR (FEMALE) 3P	1	
					P1509	VJS1141	CONNECTOR (FEMALE)	1	
		INTEGRATED CIRCUITS			P2001	VJPI232T	CONNECTOR (MALE) 5P	1	
IC301	VEH29D	IC	1		P2001	VJS1738	CONNECTOR (FEMALE)	1	
IC701	MS20145P	IC	1		P2002	VJPI230T	CONNECTOR (MALE) 3P	1	
IC802	MS2352FP	IC	1		P2002	VJS1736	CONNECTOR (FEMALE) 3P	1	
IC2001	BA6219B	IC	1		P2003	VJS3193A015A	CONNECTOR (FEMALE)	1	
IC2002	AN3727S	IC	1		P2902	VJS1738	CONNECTOR (FEMALE)	1	
IC2003	DA6439P	IC	1		P3001	VJS3193A020A	CONNECTOR (FEMALE)	1	
IC2005	UPC358G2	IC	1		P4002	VJPI230T	CONNECTOR (MALE) 3P	1	
IC4501	XLH770KS	IC	1		P4002	VJS1230	CONNECTOR (FEMALE) 3P	1	
IC4601	BA7755AF	IC	1		P4003	VJS2331	CONNECTOR (FEMALE)	1	
IC5001	AN67434VRS	IC	1		P4011	VJPI231T	CONNECTOR (MALE) 4P	1	
IC6009	UPC358G2	IC	1		P4011	VJS1737	CONNECTOR (FEMALE)	1	
IC7001	MS6006FP	IC	1		P4013	VJPI230T	CONNECTOR (MALE) 3P	1	
IC7901	TB1204F	IC	1		P6001	VJS3193A013A	CONNECTOR (FEMALE)	1	
IC7902	TA2009F	IC	1		P6005	VJPI236T	CONNECTOR (MALE) 9P	1	
IC7903	MS238FP	IC	1		P6005	VJS1239	CONNECTOR (FEMALE) 12P	1	
					P6501	VJS1239	CONNECTOR (FEMALE) 12P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R772	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1		R2045	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R773	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R2046	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R774	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R2047, 48	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R781	ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1		R2049	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R790	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R2050	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R793	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R2051	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R794	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1		R2052	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R796	ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1		R2053, 54	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R797	ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1		R2055	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R798	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R2056	EPX1G1R8	M.RESISTOR 1W 1.8	1	
R799	ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1		R2058	EPJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R801	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R3001	EPDS2TJ22	C.RESISTOR 1/4W 2.2K	1	
R802, 03	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	2		R3002	EPDS2TJ102	C.RESISTOR 1/4W 1K	1	
R804, 05	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2		R3003	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R806	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1		R3004	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R807	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1		R3005	ERJ6GMJ391	M.RESISTOR CH 1/10W 390	1	
R813	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R3006	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R814	ERJ6GMJ393	M.RESISTOR CH 1/10W 39K	1		R3007	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R815	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1		R3014	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R816	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	1		R3018	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R817	ERJ6GMJ182	M.RESISTOR CH 1/10W 1.8K	1		R3019	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	
R818	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1		R3021	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R819	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1		R3023	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	1	
R820, 21	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	2		R3024	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R823, 24	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	2		R3025	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R825	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1		R3027	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1	
R827	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	1		R3028	ERJ6GMJ750	M.RESISTOR CH 1/10W 75	1	
R828	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1		R3029	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R829	ERJ6GMJ122	M.RESISTOR CH 1/10W 1.2K	1		R3033	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1	
R830	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1		R3034	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R831	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1		R3035	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1	
R832	ERJ6GMJ154	M.RESISTOR CH 1/10W 150K	1		R3037	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R833	ERJ6GMJ204	M.RESISTOR CH 1/10W 200K	1		R3038	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R834	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1		R3039	ERJ6GMJ681	M.RESISTOR CH 1/10W 680	1	
R835	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		R3040, 41	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	2	
R836	ERJ6GMJ154	M.RESISTOR CH 1/10W 150K	1		R3042	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R848	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		R3043	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R849	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		R3048, 49	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	2	
R850	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1		R4001	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R853	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		R4002	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R855	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1		R4003	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1	
R856	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R4004	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1	
R857	ERJ6GMJ101	M.RESISTOR CH 1/10W 100	1		R4005	ERJ6GMJ823	M.RESISTOR CH 1/10W 82K	1	
R859	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R4006	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R1001	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		R4007	ERJ6GMJ100	M.RESISTOR CH 1/10W 10	1	
R2001	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1		R4008, 09	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2002	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		R4010	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R2003	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		R4011	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R2004	ERGL2SJ561	M.RESISTOR 1/2W 560	1		R4013	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2005	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	1		R4014	ERJ6GMJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2006	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R4015	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2007	ERJ6GMJ432	M.RESISTOR CH 1/10W 4.3K	1		R4016	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R2008	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		R4017	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2012	ERJ6GMJ684	M.RESISTOR CH 1/10W 68K	1		R4018	ERDS2TJ273	C.RESISTOR 1/4W 27K	1	
R2013	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		R4019	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1	
R2014	ERJ6GMJ133	M.RESISTOR CH 1/10W 13K	1		R4020	ERJ6GMJ123	M.RESISTOR CH 1/10W 12K	1	
R2015	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1		R4021	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1	
R2016	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1		R4022	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2017	EROS2CK6800	M.RESISTOR 1/4W 680	1		R4024	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2018	EPX125JR47	M.RESISTOR CH 1/2W 0.47	1		R4025	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1	
R2019-21	ERDS2TJ560	C.RESISTOR 1/4W 56	3		R4026	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
R2022	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R4027	ERJ6GMJ433	M.RESISTOR CH 1/10W 43K	1	
R2023	ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1		R4028	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2024	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1		R4029	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2030	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1		R4032	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2031	ERJ6GMJ563	M.RESISTOR CH 1/10W 56K	1		R4034	ERJ6GMJ823	M.RESISTOR CH 1/10W 82K	1	
R2032	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1		R4035, 36	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	2	
R2034	ERJ6GMJ682	M.RESISTOR CH 1/10W 6.8K	1		R4037	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R2035, 36	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2		R4501, 02	ERJ3GEYR00	M.RESISTOR CH 1/16W 0	2	
R2038	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1		R4503	VRD0071E35C	M.RESISTOR 1/10W	1	
R2039	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1		R4504, 05	ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	2	
R2040, 41	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	2		R4506, 07	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R2042	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1		R4508	ERJ6GEY224	M.RESISTOR CH 1/10W 220K	1	
R2043	ERJ6GMJ105	M.RESISTOR CH 1/10W 1M	1		R4509	ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2044	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1		R4510	ERJ6GEYJ621	M.RESISTOR CH 1/10W 620	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4511	ERJ6GEY303	M.RESISTOR CH 1/10W 30K	1		R6029	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R4512	VRE0034E163	M.RESISTOR CH 1/10W 16K	1		R6030	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R4513	ERJ3GEY103	M.RESISTOR CH 1/16W 10K	1		R6031	ERJ6GMJ183	M.RESISTOR CH 1/10W 18K	1	
R4514	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1		R6032,33	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	2	
R4518,19	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	2		R6034	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4522	ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2K	1		R6035,36	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	2	
R4527	VRE0034E333	M.RESISTOR CH 1/10W 33K	1		R6037	ERJ6GMJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4528	VRE0034E153	M.RESISTOR CH 1/10W 15K	1		R6038	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	1	
R4529	ERJ6GEY562	M.RESISTOR CH 1/10W 5.6K	1		R6039	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4530	ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1		R6043	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1	
R4534	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R6044	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4535	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1		R6045,46	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	2	
R4539	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R6050,51	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	2	
R4540	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R6052,53	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2	
R4541	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R6054	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4542	ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1		R6055,56	ERJ6GMJ101	M.RESISTOR 1/10W 100	2	
R4543	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1		R6057	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4551,52	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	2		R6078	VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R4553	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1		R6079	ERJ6GMJ564	M.RESISTOR CH 1/10W 560K	1	
R4554	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R6080	VRE0034E103	M.RESISTOR CH 1/10W 10K	1	
R4558	ERJ6GEY224	M.RESISTOR CH 1/10W 220K	1		R6081	VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R4561	ERJ6GEY303	M.RESISTOR CH 1/10W 30K	1		R6082	VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R4562	VRE0034E10C	M.RESISTOR 1/10W	1		R7001	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1	
R4563	ERJ3GEY272	M.RESISTOR CH 1/16W 2.7K	1		R7002	ERJ6GMJ181	M.RESISTOR CH 1/10W 180	1	
R4568	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1		R7004,05	ERJ6GMJ151	M.RESISTOR CH 1/10W 150	2	
R4569	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1		R7006,07	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4573	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7009,10	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4577	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7011	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R4578	VRE0034E473	M.RESISTOR CH 1/10W 47K	1		R7013,14	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4581	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1		R7018,19	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4583	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1		R7024-26	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	3	
R4584	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7034	ERJ6GMJ101	M.RESISTOR 1/10W 100	1	
R4585	ERJ3GEYOR00	M.RESISTOR CH 1/16W 0	1		R7035	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R4586	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		R7656	ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R4587,88	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	2		R7676	ERGLSJ152	M.RESISTOR 1W 1.5K	1	
R4591	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7901	ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4592	ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1		R7902	ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R4593	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1		R7903	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4594	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1		R7904	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4603	ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1		R7905	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R4606	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R7906	ERJ6GEYJ150	M.RESISTOR CH 1/10W 15	1	
R4610	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1		R7907	ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R4611,12	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	2		R7908	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R4613	ERJ6GEYJ394	M.RESISTOR CH 1/10W 390K	1		R7909-11	ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	3	
R4615	ERJ6GEYJ133	M.RESISTOR CH 1/10W 13K	1		R7913-15	ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	3	
R4616	ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1		R7917	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4638	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1		R7918-21	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	4	
R4649	ERJ3GEY470	M.RESISTOR CH 1/16W 47	1		R7922	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4651	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1		R7923	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R4653	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R7924-26	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R4654	ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1		R7927	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4655	ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1		R7928	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4656	ERJ6GEY243	M.RESISTOR CH 1/10W 24K	1		R7929	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4657	ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1		R7930	ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R4659	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1		R7931-33	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R4665	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1		R7934	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R6001-04	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	4		R7935	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6005-07	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	3		R7936	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6009	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		R7937	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6010	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		R7938	ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6011	ERJ6GMJ112	M.RESISTOR CH 1/10W 1.1K	1		R7939	ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R6012	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	1		R7940	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R6013	EROS2CKG2000	M.RESISTOR 1/4W 200	1		R7941	ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R6014,15	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2		R7942	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6016	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		R7943	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6017	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1		R7944	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6018	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1		R7945	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R6019	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1		R7946,47	ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R6020	ERJ6GMJ101	M.RESISTOR 1/10W 100	1		R7948	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6021	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		R7949	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R6022	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		R7950	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6023,24	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2		R7951	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R6025,26	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	2		R7956	ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R6027	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1		R7957	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6028	ERJ6GMJ224	M.RESISTOR CH 1/10W 220K	1		R7958,59	ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7960,61	ERJ3GEYJ471	M.RESISTOR CH 1/10W 470	2			VJF0004	WIRE SADDLE	1	
R7962,63	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2			EN578B5H6	TUNER	1	<I> FOR TV DEMODU.
R7964	ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1			VSC3242	SHIELD COVER (MAIN)	1	FOR TV DEMODULATOR
R7969-72	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4			VSC3241	SHIELD COVER (TOP)	1	FOR TV DEMODULATOR
R7973-77	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	5			VSC3553	SHIELD COVER (MAIN)	1	FOR NICAM DECODER
R7978	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1			VSC3554	SHIELD COVER (TOP)	1	FOR NICAM DECODER
R7979	ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1			VSC3555	SHIELD COVER (BOTTOM)	1	FOR NICAM DECODER
R7980	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1						
R7981,82	ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2						
R7983	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1						
R7985	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1						
R7987	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1						
R7988	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1						
R7989	ERDS2TJ823	C.RESISTOR 1/4W 82K	1						
R8001,02	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2						
R8003	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1			VEP03985A	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-HD100B SUPPLIED FROM M.B.V.
		TRANSFORMERS							
T703	EIV5ECC057A	TRANSFORMER	1						
T704	EIV5ECC006A1	TRANSFORMER	1						
T711	EI55ECC004A	TRANSFORMER	1						
T4001	EIQ7QF013Q	TRANSFORMER	1						
		VARIABLE RESISTORS							
VR701,02	EVTEASA00B53	V.RESISTOR	2						
VR741	EVNCBAA00B14	V.RESISTOR	1						
VR751	EVNCBAA00B53	V.RESISTOR	1						
VR801,02	EVTEASA00B13	V.RESISTOR	2						
VR803	EVNCBAA00B14	V.RESISTOR	1						
VR2001	EVNDXAA00B54	V.RESISTOR 50K	1						
VR2006	EVNDXAA00B15	V.RESISTOR 100K	1						
VR2011	EVNDXAA00B15	V.RESISTOR 100K	1						
VR2018,19	EVNDXAA00B15	V.RESISTOR 100K	2						
VR3001	EVNDXAA00B23	V.RESISTOR 2K	1						
VR3012,13	EVNDXAA00B52	V.RESISTOR 500	2						
VR4001	EVNDXAA00B25	V.RESISTOR 200K	1						
VR4501	EVMECSA00B53	V.RESISTOR	1						
VR4502	EVMEASA00B24	V.RESISTOR	1						
VR4507	EVMEASA00B24	V.RESISTOR	1						
VR4509	EVMECSA00B3	V.RESISTOR	1						
VR4512	EVNCBAA00B52	V.RESISTOR	1						
VR4550	EVMECSA00B53	V.RESISTOR	1						
VR4551,52	EVMEASA00B55	V.RESISTOR	2						
VR7901,02	EVNCBAA00B14	V.RESISTOR	2						
VR7903	EVTEASA00B55	V.RESISTOR	1						
VR8001	EVNDXAA00B23	V.RESISTOR 2K	1						
		CRYSTAL OSCILLATORS							
X710	EFCH38M0Q1	CRYSTAL OSCILLATOR	1						
X712	EFCSRS5M55	FILTER	1						
X713	EFCSRS5M45	FILTER	1						
X801	VSX0162	CRYSTAL OSCILLATOR	1						
X8001	VSX0409	CRYSTAL OSCILLATOR	1						
X7001	VSX0565	CRYSTAL OSCILLATOR	1						
X7901	VSX0514	CRYSTAL OSCILLATOR	1						
X7902	VSX0512	CRYSTAL OSCILLATOR	1						
X7903	EFCA5504BF	CRYSTAL OSCILLATOR	1						
		MISCELLANEOUS							
	VEE8276	WIRE CABLE	1	(P4011-P7702)					
	VEE8356	WIRE CABLE	1	(P6005-P6501,P4013)					
	VEE8278	WIRE CABLE	1	(P2002-P1506)					
	VEE8279	WIRE CABLE	1	(P2001-P2902)					
	VEE8280	WIRE CABLE	1	(P4002-P1509)					
	VEE8451	WIRE CABLE	1	(P1001,3-P1102)					
	VWJ0682	FLAT CARD CABLE	1	(P3001-P501)					
	VWJ0683A	FLAT CARD CABLE	1	(P2003-P1507)					
	VWJ00B7A	FLAT CARD CABLE	1	(P6001-P1505)					
	VWJ121W200B9	FLAT CARD CABLE	1	(P7401-P7501)					
	VWJ240W160EB	FLAT CARD CABLE	1	(P7402-P7502)					
	VJF1056	HARNESS LIFTER	1						
		CAPACITORS							
C3901	ECEA1CK101	E.CAPACITOR 16V 100U	1						
C3902	ECUMIH032FN	C.CAPACITOR CH 50V 0.01U	1						
C3903	ECEA1CK470	E.CAPACITOR 16V 47U	1						
C3904-06	ECEA1CK220	E.CAPACITOR 16V 22U	3						
C3907,08	ECEA1CK100	E.CAPACITOR 16V 10U	2						
C3909,10	ECUMIH332KN	C.CAPACITOR CH 50V 3300P	2						
C3911,12	ECUMIH181JCN	C.CAPACITOR CH 50V 180P	2						
C3915	ECEA1CK100	E.CAPACITOR 16V 10U	1						
C4901	ECUMIH101JCN	C.CAPACITOR CH 50V 100P	1						
C4902,03	ECUMIH222JN	C.CAPACITOR CH 50V 2200P	2						
C4904	ECUMIH101JCN	C.CAPACITOR CH 50V 100P	1						
C4905-07	VCEA1CAD100	E.CAPACITOR 16V 10U	3						
C4908	ECUMIH101JCN	C.CAPACITOR CH 50V 100P	1						
C4909,10	ECUMIH222JN	C.CAPACITOR CH 50V 2200P	2						
C4911	ECUMIH101JCN	C.CAPACITOR CH 50V 100P	1						
C4912,13	ECUMIH222JN	C.CAPACITOR CH 50V 2200P	2						
C4914,15	VCEA1AAC101	E.CAPACITOR 10V 100U	2						
C4916	VCEA1CAM100	E.CAPACITOR 16V 10U	1						
C4951	VCEA1CAC470	E.CAPACITOR 16V 47U	1						
C4952	VCEA1AAC470	E.CAPACITOR 10V 47U	1						
C4953	ECUMIH042FN	C.CAPACITOR CH 50V 0.1U	1						
C4954	VCEA1CAC330	E.CAPACITOR 16V 33U	1						
C4955,56	ECUMIH1032FN	C.CAPACITOR CH 50V 0.01U	2						
		DIODES							
D3903-05	1SS254	DIODE	3						
D3911-14	1SS254	DIODE	4						
D4951	WA4068L	DIODE	1						
		INTEGRATED CIRCUITS							
IC3901	MS1292FP	IC	1						
IC3902	BA7004	IC	1						
IC4901	MS1293FP	IC	1						
IC4905	UPC78L06J	IC	1						
		COILS							
L3901-03	ELESQ101KA	COIL 100UH	3						
L4951	ELESQ101KA	COIL 100UH	1						
		CONNECTORS							
P1002	VJS1141	CONNECTOR (FEMALE) 2P	1						
		CONNECTOR (FEMALE)							
PS3951	VJS3042F016P	CONNECTOR (FEMALE)	1						
PS3952	VJS3042B017W	CONNECTOR (FEMALE)	1						
		TRANSISTORS							
Q3901	2SC2295	TRANSISTOR	1						
Q4951	2SB774	TRANSISTOR	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		COMBINATION PARTS							
QR3901	MRN2404	TRANSISTOR-RESISTOR	1		C4957,58	ECUMH1042FN	C.CAPACITOR CH 50V 0.1U	2	
		RESISTORS					DIODES		
R3901-04	ERJ6GMJ750	M.RESISTOR CH 1/10W 75	4		D3901	1SS254	DIODE	1	
R3905	ERJ6GMJ182	M.RESISTOR CH 1/10W 1.8K	1		D3902	MA151K	DIODE	1	
R3906	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1		D3911-14	1SS254	DIODE	4	
R3909	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		D3930	MA151WK	DIODE	1	
R3910	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1		D4951	MA4068L	DIODE	1	
R3911	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1				INTEGRATED CIRCUITS		
R3912	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	1		IC3901	MS1292FP	IC	1	
R3913	ERJ6GMJ561	M.RESISTOR CH 1/10W 560	1		IC3902	BA7004	IC	1	
R3915,16	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	2		IC4901	MS1293FP	IC	1	
R3917	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1		IC4903	UPC78L06J	IC	1	
R4901	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1				CONNECTORS		
R4902,03	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	2		J3902	VJS1469	CONNECTOR (FEMALE)	1	
R4904	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1				COILS		
R4905	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1		L3901-03	ELESQ101KA	COIL 100UH	3	
R4906	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		L4907	ELESQ101KA	COIL 100UH	1	
R4907	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1				CONNECTORS		
R4908	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1		P1002	VJS1141	CONNECTOR (FEMALE) 2P	1	
R4910,11	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	2				CONNECTORS		
R4912	ERJ6GMJ393	M.RESISTOR CH 1/10W 39K	1		PS3951	VJS3042B016W	CONNECTOR (FEMALE)	1	
R4913,14	ERJ6GMJ133	M.RESISTOR CH 1/10W 13K	2		PS3952	VJS3042B017W	CONNECTOR (FEMALE)	1	
R4915	ERJ6GMJ393	M.RESISTOR CH 1/10W 39K	1				TRANSISTORS		
R4916	ERJ6GMJ183	M.RESISTOR CH 1/10W 18K	1		Q3902	2SC2295	TRANSISTOR	1	
R4917	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1		Q4951	2SB774	TRANSISTOR	1	
R4918,19	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	2				RESISTORS		
R4920,21	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	2		R3901-04	ERJ6GEJ750	M.RESISTOR CH 1/10W 75	4	
R4922,23	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	2		R3905	ERJ6GEJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4924	ERJ6GMJ683	M.RESISTOR CH 1/10W 68K	1		R3906	ERJ6GEJ104	M.RESISTOR CH 1/10W 100K	1	
R4925	ERJ6GMJ183	M.RESISTOR CH 1/10W 18K	1		R3907	ERJ6GEJ102	M.RESISTOR CH 1/10W 1K	1	
R4951	ERJ6GMJ121	M.RESISTOR CH 1/10W 120	1		R3908	ERJ6GEJ152	M.RESISTOR CH 1/10W 1.5K	1	
		SWITCHES			R3909	ERJ6GEJ392	M.RESISTOR CH 1/10W 3.9K	1	
SW3901	ESD172253	SWITCH	1		R3910	ERJ6GEJ152	M.RESISTOR CH 1/10W 1.5K	1	
		CRYSTAL OSCILLATORS			R3911	ERJ6GEJ561	M.RESISTOR CH 1/10W 560	1	
X3901	VSR0099	CRYSTAL OSCILLATOR	1		R3912	ERJ6GN2000	M.RESISTOR CH 1/10W 0	1	
		MISCELLANEOUS			R3951	ERJ6GEJ473	M.RESISTOR CH 1/10W 47K	1	
	VEJ1382	JACK PANEL	1		R4901	ERJ6GEJ183	M.RESISTOR CH 1/10W 18K	1	
					R4902,03	ERJ6GEJ473	M.RESISTOR CH 1/10W 47K	2	
	VEP03979B	INPUT/OUTPUT PACK C.B.A.		(RIL)NV-BD100EB	R4904	ERJ6GEJ683	M.RESISTOR CH 1/10W 68K	1	
		CAPACITORS			R4905,06	ERJ6GEJ153	M.RESISTOR CH 1/10W 15K	2	
C3901	ECUMH1032FN	C.CAPACITOR CH 50V 0.01U	1		R4907	ERJ6GEJ683	M.RESISTOR CH 1/10W 68K	1	
C3902	ECEA1CK101	E.CAPACITOR 16V 100U	1		R4908	ERJ6GEJ473	M.RESISTOR CH 1/10W 47K	1	
C3903	ECEA1CK470	E.CAPACITOR 16V 47U	1		R4909	ERJ6GEJ183	M.RESISTOR CH 1/10W 18K	1	
C3904-06	ECEA1CK220	E.CAPACITOR 16V 22U	3		R4910	ERJ6GEJ473	M.RESISTOR CH 1/10W 47K	1	
C3908,09	ECEA1CK100	E.CAPACITOR 16V 10U	2		R4911	ERJ6GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
C3910,11	ECUMH332KBN	C.CAPACITOR CH 50V 3300P	2		R4913	ERJ6GEJ393	M.RESISTOR CH 1/10W 39K	1	
C3915	ECEALAK470	E.CAPACITOR 10V 47U	1		R4914	ERJ6GEJ133	M.RESISTOR CH 1/10W 13K	1	
C3916,17	ECUMH181JCN	C.CAPACITOR CH 50V 180P	2		R4917	ERJ6GEJ393	M.RESISTOR CH 1/10W 39K	1	
C3952	ECUMH1032FN	C.CAPACITOR CH 50V 0.01U	1		R4925	ERJ6GEJ222	M.RESISTOR CH 1/10W 2.2K	1	
C4901,02	VCEA1AC101	E.CAPACITOR 10V 100U	2		R4926,27	ERJ6GEJ471	M.RESISTOR CH 1/10W 470	2	
C4907,08	ECUMH101JCN	C.CAPACITOR CH 50V 100P	2		R4928,29	ERJ6GEJ391	M.RESISTOR CH 1/10W 390	2	
C4912	ECUMH101JCN	C.CAPACITOR CH 50V 100P	1		R4930,31	ERJ6GEJ332	M.RESISTOR CH 1/10W 3.3K	2	
C4914	ECUMH101JCN	C.CAPACITOR CH 50V 100P	1		R4951	ERJ6GEJ121	M.RESISTOR CH 1/10W 120	1	
C4915,16	VCEA1CAD100	E.CAPACITOR 16V 10U	2				SWITCHES		
C4952	VCEA1AC470	E.CAPACITOR 10V 47U	1		SW3901	ESD172253	SWITCH	1	
C4954	VCEA1AC330	E.CAPACITOR 16V 33U	1						
C4955,56	ECUMH1032FN	C.CAPACITOR CH 50V 0.01U	2						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	VEP01487K	POWER C.B.A.		(RTL)NV-HB100EB
		CAPACITORS		
C1101	ECQU2A224N	P. CAPACITOR 250V 0.22U	1	<1>
C1102	ECQU2A104N	P. CAPACITOR 250V 0.01U	1	<1>
C1103	ECCE2G6680B	CAPACITOR	1	
C1104,05	VCK0046	CAPACITOR	2	<1>
C1106	VCC0024	C. CAPACITOR 2200P	1	<1>
C1107	ECQ65473KF	P. CAPACITOR 50V	1	
C1108	VCK0106K121	CAPACITOR	1	
C1109	ECA1VXLV470	E. CAPACITOR 35V 47U	1	
C1110	ECA1CKLV101	E. CAPACITOR 16V 100U	1	
C1111	ECEA1JFE470	E. CAPACITOR 63V 47U	1	
C1112	ECEA1CFE560	E. CAPACITOR 16V 56U	1	
C1113,14	ECEA1DFZ681	E. CAPACITOR 20V 680U	2	
C1115,16	ECEA1AFZ681X	E. CAPACITOR 10V 680U	2	
C1117	ECQ81H103JF	P. CAPACITOR 50V 0.01U	1	
C1118	ECXFLH102KB	C. CAPACITOR 50V 1000P	1	
C1119	VCFZAAC101J	P. CAPACITOR 100V 100P	1	
C1120	ECXFLH391KB	C. CAPACITOR 50V 390P	1	
C1121	ECXFLH102KB	C. CAPACITOR 50V 1000P	1	
C1131,32	VCK0046	CAPACITOR	2	<1>
C1133	VCC0024	C. CAPACITOR 2200P	1	<1>
C1134,35	VCK0046	CAPACITOR	2	<1>
C1136	VCC0024	C. CAPACITOR 2200P	1	<1>
		DIODES		
D1102	1N4148	DIODE	1	<1>
D1103	1N4001	DIODE	1	
D1104	1N4004	DIODE	1	
D1105	1N4148	DIODE	1	(VT)
D1106	1N4148	DIODE	1	
D1107	1N4001	DIODE	1	
D1108	1N4148	DIODE	1	
D1109	1N4001	DIODE	1	
D1110	1N4004	DIODE	1	
D1111	1N4148	DIODE	1	
		INTEGRATED CIRCUITS		
IC1101	STRS6545LF	IC	1	<1>
IC1102	SI3120C	IC	1	
IC1103	UPC1093J	IC	1	
		COILS		
L1101	ELF18D221F	COIL 220UH	1	<1>
L1102,03	VLQ0410	COIL	2	
L1104,05	ELSE101KA	COIL 100UH	2	
L1106	VLP0074	COIL	1	
L1107	VLP0083	FILTER	1	
L1111	ELF18D221F	COIL 220UH	1	<1>
		CONNECTORS		
P1101	VJS2625	CONNECTOR (FEMALE)	1	<1>
P1102	VJF1250T	CONNECTOR (MALE) 10P	1	
		TRANSISTORS		
Q1101	PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<1>
		RESISTORS		
R1101	EROS2CRG3001	M. RESISTOR 1/4W 3K	1	
R1102	ERG3SJ683	M. RESISTOR 3W 68K	1	
R1103	ERDS2TJ224	C. RESISTOR 1/4W 220K	1	
R1104	ERDS2TJ221	C. RESISTOR 1/4W 220	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1105	ERDS2TJ101	C. RESISTOR 1/4W 100	1	
R1106	ERDS2TJ561	C. RESISTOR 1/4W 560	1	
R1107	ERW1FK1R5	W. RESISTOR 1W 1.5	1	
R1108	ERDS2TJ561	C. RESISTOR 1/4W 560	1	
R1109	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R1110	EROS2CRG2701	M. RESISTOR 1/4W 2.7K	1	
R1111	ERDS2TJ272	C. RESISTOR 1/4W 2.7K	1	
R1112	EROS2CRG2401	M. RESISTOR 1/4W 2.4K	1	
R1113	EROS2CRG3302	M. RESISTOR 1/4W 33K	1	
R1114	ERDS2TJ682	C. RESISTOR 1/4W 6.8K	1	
R1115	ERDS2TJ471	C. RESISTOR 1/4W 470	1	
R1116	EROS2CRG52R0	M. RESISTOR 62	1	
R1117	ERDS2TJ103	C. RESISTOR 1/4W 10K	1	
R1131	ERW1FK2R2	W. RESISTOR 1W 2.2	1	
R1132	ERCL2AGM334	S. RESISTOR 1/2W 330K	1	<1>
R1133	ERDS2TJ224	C. RESISTOR 1/4W 220K	1	
		TRANSFORMERS		
T1101	VLTO704	TRANSFORMER	1	<1>
		MISCELLANEOUS		
	WJF0318	FUSE HOLDER	2	<1>
		HEAD AMP C.B.A.		(RTL)
		CAPACITORS		
C503	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
C505-08	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	4	
C509	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1	
C510,11	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C512	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C513	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C514	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C515,16	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C517,18	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
C519,20	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	2	
C521	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C523-25	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	3	
C526	VCEAQJAC221	E. CAPACITOR 6.3V 220U	1	
C527	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C540	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C551	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C552-54	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	3	
C555	ECEAQJFK221	E. CAPACITOR 6.3V 220U	1	
C556,57	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
C559	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
C560,61	ECUM1H471JCN	C. CAPACITOR 50V 470P	2	
C562,63	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C564	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
C565	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C566	ECUM1H1042FN	C. CAPACITOR CH 50V 0.1U	1	
C567	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C569	ECUM1C1052FN	C. CAPACITOR 16V 1U	1	
		INTEGRATED CIRCUITS		
IC501	AN3336SB	IC	1	
IC551	BA7743FS	IC	1	
		COILS		
L501,02	VLQ0540K330	COIL 33UH	2	
L551,52	VLQ0540K330	COIL 33UH	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		CONNECTORS							
P501	VJS3193B020A	CONNECTOR (FEMALE)	1		C7515	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1	
P502	VJS2603	CONNECTOR (FEMALE)	1		C7517	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1	
					C7518	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
					C7519	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
					C7520	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
		COMBINATION PARTS			C7521	ECUM1H103ZEN	C.CAPACITOR CH 50V 0.01U	1	
Q8501	FRN2404	TRANSISTOR-RESISTOR	1		C7522	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
					C7523	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
					C7524	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
		RESISTORS			C7530	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
R501	ERJ6GMJ101	M.RESISTOR 1/10W 100	1		C7701	ECUM1H102KEN	C.CAPACITOR CH 50V 1000P	1	
R502	ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1		C7702	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
R503	ERJ6GMJ752	M.RESISTOR CH 1/10W 7.5K	1		C7703	ECEA1APK330	E.CAPACITOR 10V 33U	1	
R504	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1		C7704	ECEA1EPK3R3	E.CAPACITOR 25V 3.3U	1	
R505	ERJ6GMJ182	M.RESISTOR CH 1/10W 1.8K	1		C7705	ECEA1CPK330	E.CAPACITOR 16V 33U	1	
R506	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1		C7706,07	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	2	
R507	ERJ6GMJ391	M.RESISTOR CH 1/10W 390	1		C7709	ECUM1C105ZEN	C.CAPACITOR 16V 1U	1	
R508	ERJ6GMJ331	M.RESISTOR CH 1/10W 330	1						
R509-12	ERJ6GMJ101	M.RESISTOR 1/10W 100	4						
R513	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1				DIODES		
R514	ERJ6GMJ274	M.RESISTOR CH 1/10W 270K	1		D1701	MA1270-H	DIODE	1	
R517	ERJ6GMJ100	M.RESISTOR 1/10W 10	1		D1702	MA185	DIODE	1	
R526	ERJ6GMJ133	M.RESISTOR CH 1/10W 13K	1		D7501	MA3075	DIODE	1	
R551	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		D7502	MA221	DIODE	1	
R552	ERJ6GMJ391	M.RESISTOR CH 1/10W 390	1		D7504	LX081609P	LED	1	
R553	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1		D7512-15	MA221	DIODE	4	
R554	ERJ6GMJ243	M.RESISTOR CH 1/10W 24K	1		D7517-19	MA221	DIODE	3	
R556	ERJ6GMJ333	M.RESISTOR CH 1/10W 33K	1		D7552	MA221	DIODE	1	
R557	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	1		D7555	MA221	DIODE	1	
R558	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		D7558	MA221	DIODE	1	
R559,60	ERJ6GMJ152	M.RESISTOR CH 1/10W 1.5K	2		D7563	MA221	DIODE	1	
R561	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1		D7570-72	MA221	DIODE	3	
R562	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1		D7580	MA221	DIODE	1	
R563	VRD034E100	M.RESISTOR CH 1/10W 10	1		D7701-04	MA221	DIODE	4	
R564	ERJ6GMJ224	M.RESISTOR CH 1/10W 220K	1		D7706-08	LN28RCPPV	DIODE	3	
R565	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1		D7709	MA221	DIODE	1	
R566	ERJ6GMJ273	M.RESISTOR CH 1/10W 27K	1						
R567	ERJ6GMJ153	M.RESISTOR CH 1/10W 15K	1				DISPLAY TUBES		
R568	ERJ6GMJ271	M.RESISTOR CH 1/10W 270	1		DP7501	VSLO276	DISPLAY TUBE	1	
R569	ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1						
R570	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1				INTEGRATED CIRCUITS		
					IC7501	FN187164VTSV	IC	1	
		MISCELLANEOUS			IC7502	PS17026	IC	1	
	VSC3714	SHIELD COVER (TOP)	1		IC7503	XLJ9021B	IC	1	
	VSC3476	SHIELD COVER (FRONT)	1		IC7504	PS17043	IC	1	
	VSC3715	SHIELD COVER (BOTTOM)	1		IC7505	BA5810S	IC	1	
					IC7701	BA3308	IC	1	
					IR7501	VEK6407	IR RECEIVER UNIT	1	
							JACKS		
	VEP07703E	TIMER C.B.A.		(RTL)NV-HD100B SUPPLIED FROM M.B.V.	J4801	VJ10281	MIC JACK	1	
							COILS		
C1701	ECEA1CKQ101	E.CAPACITOR 16V 100U	1		L1701	VLQEL05F101K	COIL 100UH	1	
C1702	ECUM1H103ZEN	C.CAPACITOR CH 50V 0.01U	1		L7501	VLQEL05F151K	COIL 150UH	1	
C1703	ECND2B471KB	C.CAPACITOR 500V 470P	1				CONNECTORS		
C1704	ECEA1VK220	E.CAPACITOR 35V 22U	1		P7501	VJS3193B012A	CONNECTOR (FEMALE)	1	
C1705	ECRF1H103ZF	C.CAPACITOR 50V 0.01U	1		P7502	VJS3193B024A	CONNECTOR (FEMALE)	1	
C1706	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1		P7701	VJS3301	CONNECTOR (FEMALE)	1	
C7501	ECRHA030ES4R	CAPACITOR	1		P7702	VJPM1244T	CONNECTOR (MALE) 4P	1	
C7502	ECEA0JKS330	E.CAPACITOR 6.3V 33U	1				CONNECTORS		
C7503	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1		PP7501	VJP3405A013W	CONNECTOR (MALE)	1	
C7504	ECUM1H223KEN	C.CAPACITOR CH 50V 0.022U	1		PP7703	VJP3042A004W	CONNECTOR (MALE)	1	
C7505,06	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	2						
C7507,08	ECUM1H4732FN	C.CAPACITOR CH 50V 0.047U	2						
C7509	ECEA1HK220	E.CAPACITOR 50V 22U	1						
C7510	ECUM1H104ZEN	C.CAPACITOR CH 50V 0.1U	1						
C7511	ECUM1H600CN	C.CAPACITOR CH 50V 6P	1						
C7513,14	ECUM1R220JCN	C.CAPACITOR CH 50V 22P	2						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
PS4801	VJS3042B004W	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q1701	2SD973A-R.VT	TRANSISTOR	1	
Q7501,02	MSD601	TRANSISTOR-RESISTOR	2	
		COMBINATION PARTS		
QR7501,02	MRN2403	TRANSISTOR-RESISTOR	2	
QR7504	KN4311	TRANSISTOR-RESISTOR	1	
QR7509	MRN1404	TRANSISTOR-RESISTOR	1	
QR7701-04	MRN2404	TRANSISTOR-RESISTOR	4	
		RESISTORS		
R1701	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R1702	ERDS2J471	C.RESISTOR 1/4W 470	1	
R1703	ERJ6GMJ3101	M.RESISTOR 1/10W 100	1	
R7501,02	ERJ6GMJ820	M.RESISTOR CH 1/10W 82	2	
R7503	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	1	
R7504	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	1	
R7505-07	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	3	
R7508	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7510-13	ERJ6GMJ102	M.RESISTOR CH 1/10W 1K	4	
R7514	ERJ6GMJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7515-18	ERJ6GMJ821	M.RESISTOR CH 1/10W 820	4	
R7519	ERJ6GMJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7520	ERJ6GMJ101	M.RESISTOR 1/10W 100	1	
R7521	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R7522	ERJ6GMJ104	M.RESISTOR CH 1/10W 100K	1	
R7524	ERJ6GMJ471	M.RESISTOR CH 1/10W 470	1	
R7526	ERJ6GMJ224	M.RESISTOR CH 1/10W 220K	1	
R7527,28	ERJ6GMJ223	M.RESISTOR CH 1/10W 22K	2	
R7529	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	1	
R7531,32	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	2	
R7534-37	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	4	
R7538,39	ERJ6GMJ103	M.RESISTOR CH 1/10W 10K	2	
R7540-43	ERJ6GMJ221	M.RESISTOR CH 1/10W 220	4	
R7546	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7550	ERJ6GMJ272	M.RESISTOR CH 1/10W 2.7K	1	
R7551	ERJ6GMJ392	M.RESISTOR CH 1/10W 3.9K	1	
R7553-56	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	4	
R7557	ERJ6GMJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7703	ERJ6GMJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7704	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
R7705	ERJ6GMJ680	M.RESISTOR CH 1/10W 68	1	
R7706	ERJ6GMJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7707	ERJ6GMJ564	M.RESISTOR CH 1/10W 560K	1	
R7708	ERJ6GMJ473	M.RESISTOR CH 1/10W 47K	1	
		COMBINATION PARTS		
RX7501,02	EXBF5E104J	RESISTOR-RESISTOR	2	
RX7503	EXBF5E104J	COMBL.R-R	1	
		SWITCHES		
SW7501-11	EVQ11409K	SWITCH	11	
SW7701	EVQ11409K	SWITCH	1	
		TRANSFORMERS		
T1701	ETE13K80AY	TRANSFORMER	1	
		VARIABLE RESISTORS		
VR4004	EVXCRAA00B53	V.RESISTOR	1	
		CRYSTAL OSCILLATORS		
X7501	VSN0484	CRYSTAL OSCILLATOR	1	
X7502	VSN0094	CRYSTAL OSCILLATOR	1	

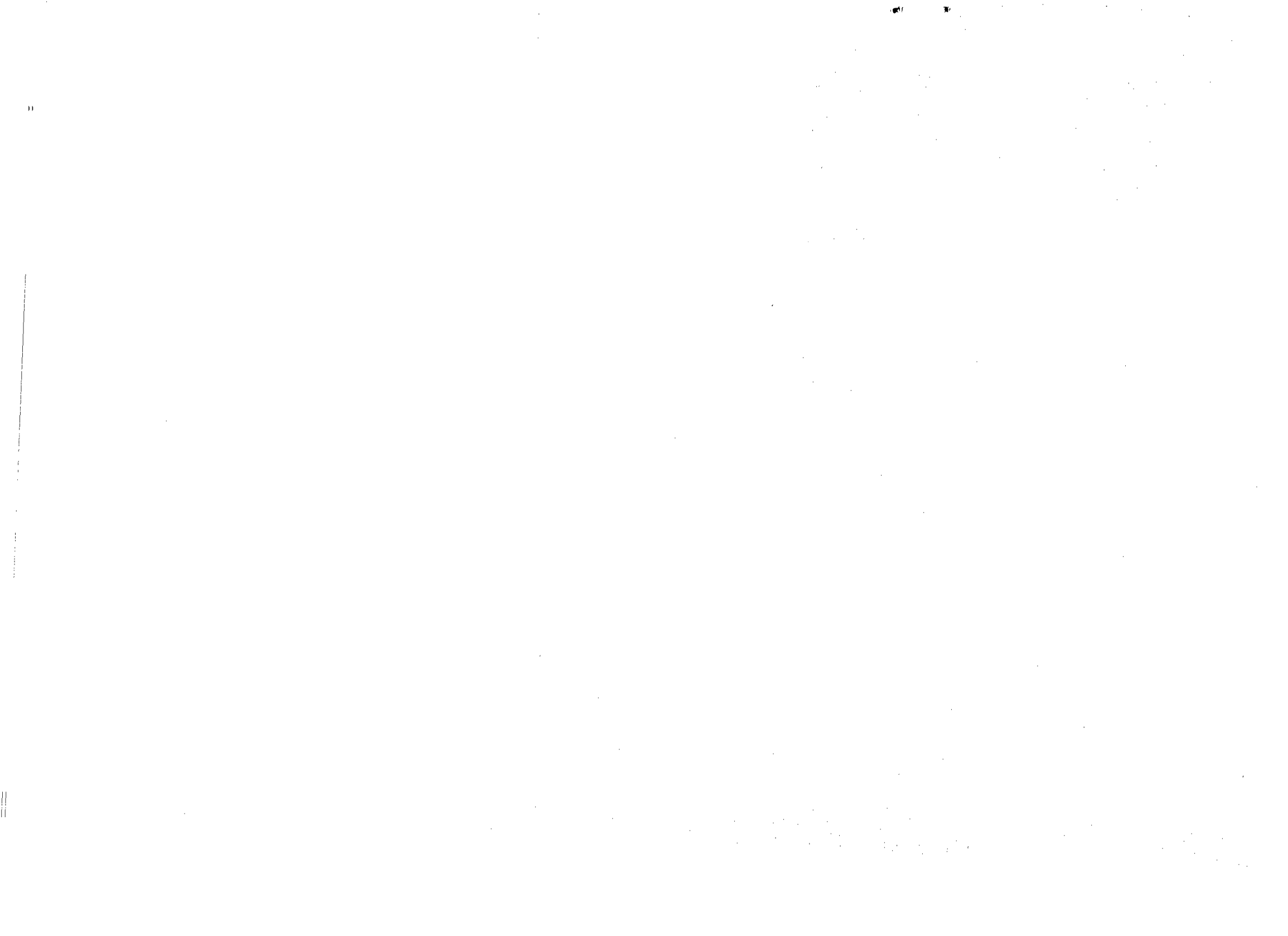
Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		MISCELLANEOUS		
	VJF1043	FIP HOLDER	1	
	VMD2074	LED HOLDER	1	
	VMD2035	JOG HOLDER	1	
	VSQ0822	JOG SHUTTLE ENCODER	1	
	VSC3883	SHIELD COVER	1	FOR MIC C.B.A.
	VEPO7703F	TIMER C.B.A.		(RTL)NV-HD100EB
		CAPACITORS		
C1701	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1702	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C1703	ECKD2H471K3	C.CAPACITOR 500V 470P	1	
C1704	ECEA1VK220	E.CAPACITOR 25V 22U	1	
C1705	ECKFIH1032F	C.CAPACITOR 50V 0.01U	1	
C1706	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7501	ECHRHA030E54R	CAPACITOR	1	
C7502	ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C7503	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7504	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C7505,06	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	2	
C7507,08	ECUM1H4732FN	C.CAPACITOR CH 50V 0.047U	2	
C7509	ECEA1HK220	E.CAPACITOR 50V 22U	1	
C7510	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7511	ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7513,14	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	2	
C7515	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7517	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7518	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C7519	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C7520	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7521	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C7522	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7523	ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C7524	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C7530	EQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C7701	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C7702	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C7703	ECEA1EPK330	E.CAPACITOR 10V 33U	1	
C7704	ECEA1EPK3R3	E.CAPACITOR 25V 3.3U	1	
C7705	ECEA1CPK330	E.CAPACITOR 16V 33U	1	
C7706,07	ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	2	
C7709	ECUM1C1052FN	C.CAPACITOR 16V 1U	1	
		DIODES		
D1701	MA1270-H	DIODE	1	
D1702	MA185	DIODE	1	
D7501	MA3075	DIODE	1	
D7502	MA221	DIODE	1	
D7504	LNO61609P	LED	1	
D7512-15	MA221	DIODE	4	
D7517-19	MA221	DIODE	3	
D7552,53	MA221	DIODE	2	
D7555	MA221	DIODE	1	
D7557	MA221	DIODE	1	
D7563	MA221	DIODE	1	
D7568	MA221	DIODE	1	
D7571,72	MA221	DIODE	2	
D7580,81	MA221	DIODE	2	
D7701-04	MA221	DIODE	4	
D7706-08	LN28RCPFU	DIODE	3	
D7709	MA221	DIODE	1	
		DISPLAY TUBES		

INTERNAL REFERENCE CODES

NOTE: This chart is only for internal reference.
Do not order any parts according to these codes.

P. C. B.	FILM CODE
MAIN	HOTM01-03977
TIMER	HOTM02-07703
LUMINANCE & CHROMINANCE	HOTM00-03975
POWER	HOTM02-01487
INPUT & OUTPUT	HOTM01-03985
TV DEMODULATOR (NV-HD100B)	HOTM00-07680
TV DEMODULATOR (NV-HD100EB)	HOTM00-07684
HEAD AMP	HOTM04-05176
HI-FI AUDIO	HOTM06-04361
OPERATION	HOTM00-06852
MIC JACK	HOTM01-00S82
NICAM DECODER	HOTM00-07675
FE HEAD	HOTM00-00T02
POWER TRANSISTER	HOTM00-00S86
CYLINDER DRIVE	HOTM00-00R99
MECHANISM CONNECTION	HOTM01-00S63
LOADING MOTOR	HOTM00-00S75

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