

Service Manual

Video Cassette Recorder

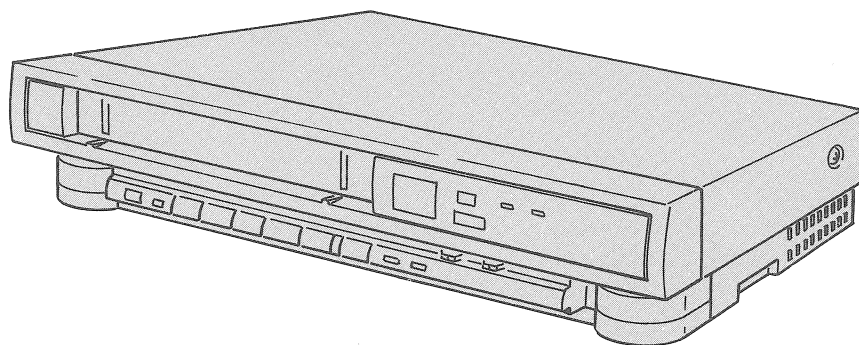
General Description  National/Panasonic **VHS** **HQ**
PAL

Adjustment Procedures

Block/Schematic Diagrams

Exploded Views/Parts List

NV-P10AM
 NV-P11EE



SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	SOURCE: 110~240V AC 50/60Hz	AUDIO	HEAD: 1 Stationary head (Normal Audio)
	CONSUMPTION: 17 W		INPUT: AUDIO IN Connector (Phono type) More than -10dBV (316mV), 50k Ω
RECORDING SYSTEM	2 rotary heads, helical scanning system		OUTPUT: AUDIO OUT Connector (Phono type) -6dBV (500mV), less than 1k Ω
	PAL		
RF OUT SYSTEM	NV-P10AM; VHF: CH3/4 (PAL B), 76 \pm 3dB μ , 75 Ω terminated	TAPE FORMAT	VHS Cassette tape (Tape width 12.7mm)
	NV-P11EE; UHF: CHE38 \pm $\frac{2}{6}$ (PAL G) 73 \pm 3dB μ , 75 Ω terminated	TAPE SPEED	23.39mm/s Record/Playback Time: 4 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
VIDEO	HEADS: 3 rotary heads 1 pair for recording and playback (L-R heads) 1 pc. for trick play (L' head)	DIMENSIONS	380(W) \times 82(H) \times 286.5(D)mm
	INPUT: VIDEO IN Connector (Phono type) 1.0Vp-p, 75 Ω terminated	WEIGHT	4.2kg
	OUTPUT: VIDEO OUT Connector (Phono type) 1.0Vp-p, 75 Ω terminated	STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Infra-red Remote Controller 1 pc. AC Mains Lead 1 pc. Separational Adaptor 1 pc. AC Plug Adaptor

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

INTRODUCTION

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

Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.

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

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

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. 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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Technical Information

Service Caution

1. Service of the Power Supply Unit, connection of the extension cable is necessary as shown below.

Part No.	Q'TY	PART NAME	CONNECTION
VFK0718	1	7 PIN EXTENSION CABLE	P1001(MAIN C.B.A.) TO P1102(POWER C.B.A.)

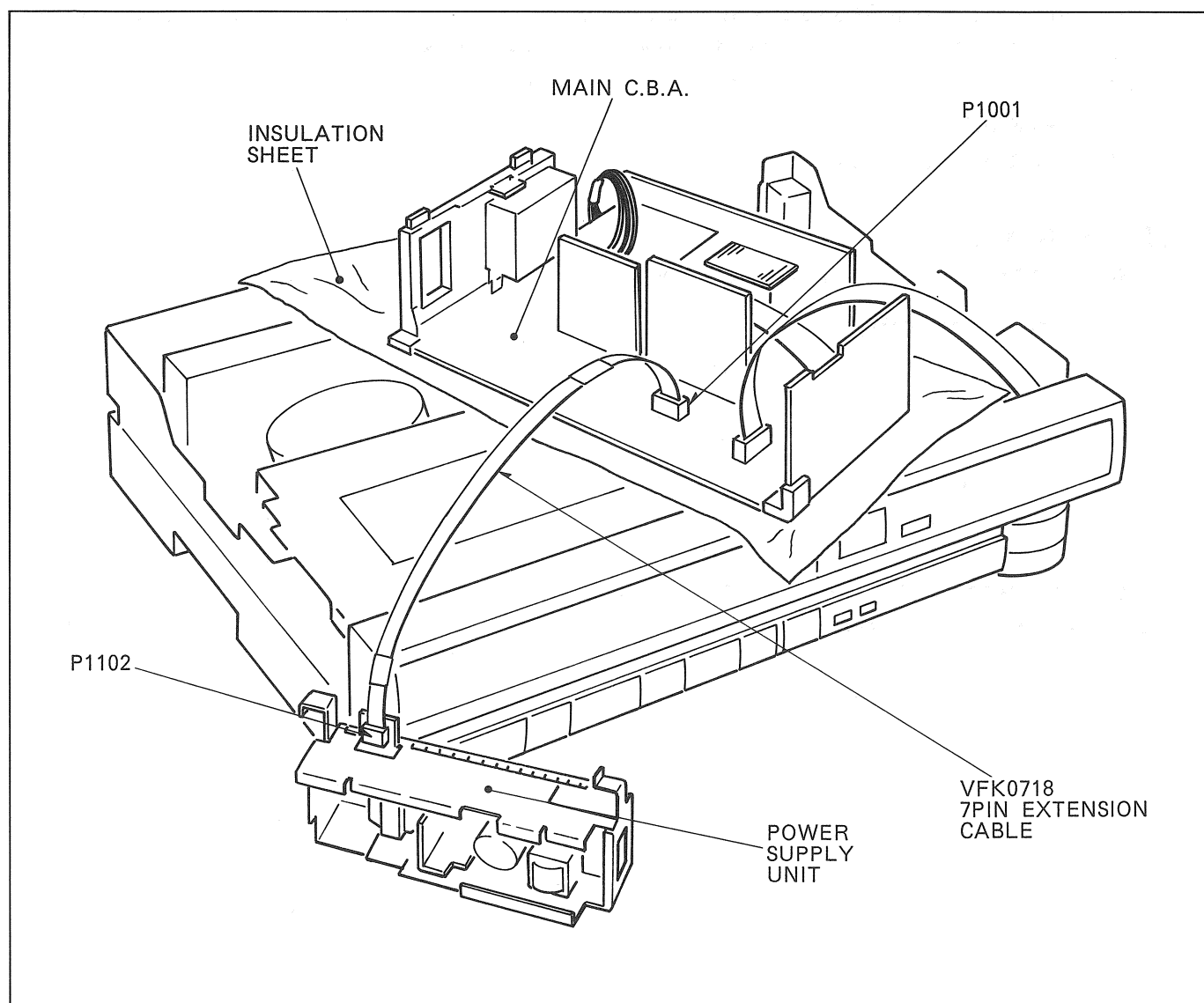


Fig. S1

SERVICE INFORMATION

1-1. 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 be broken or cracked.

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

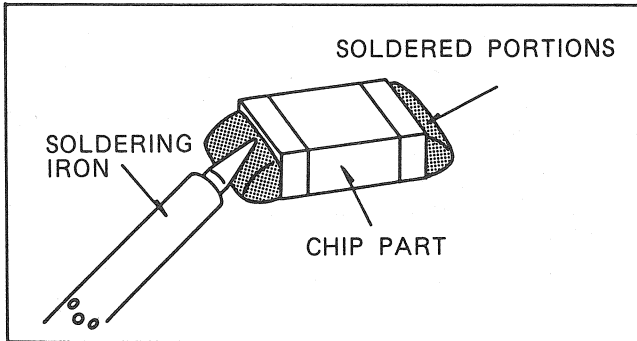


FIG. G1

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

1-2. 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.

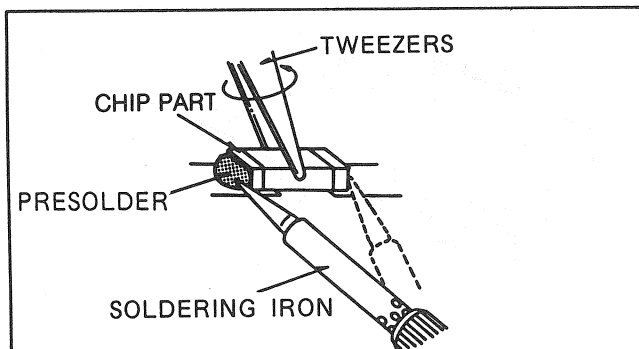


FIG. G2

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

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

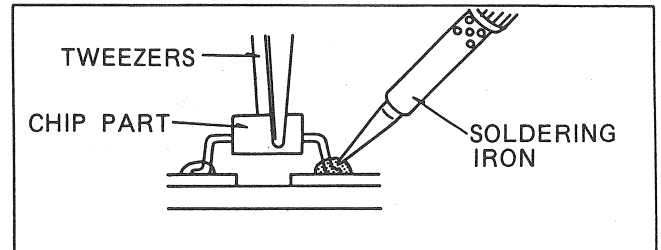


FIG. G3

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

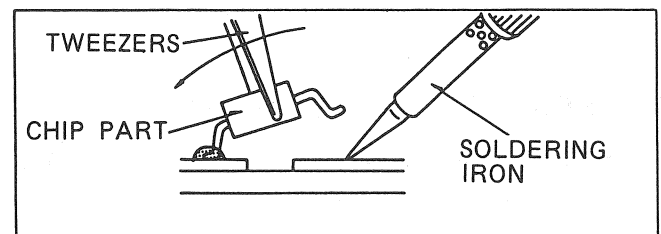


FIG. G4

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.

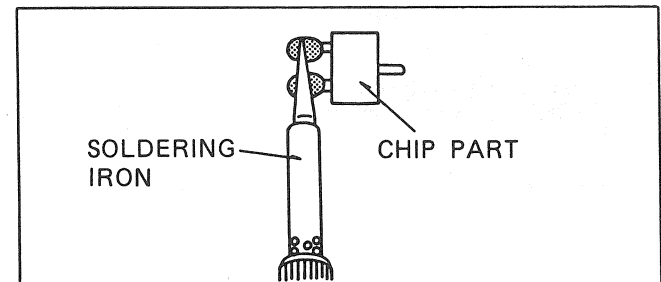


FIG. G5

3) INSTALLATION

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

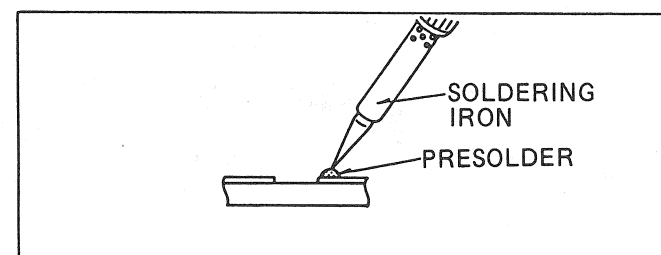


FIG. G6

- (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.

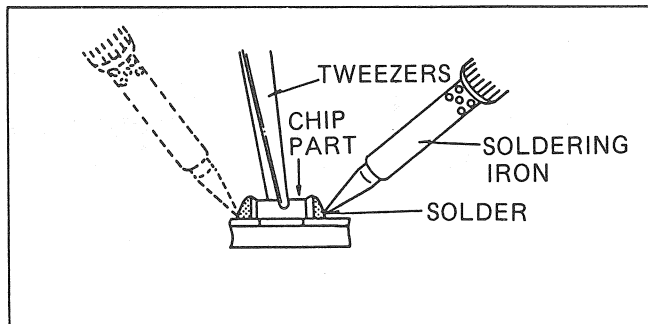


FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

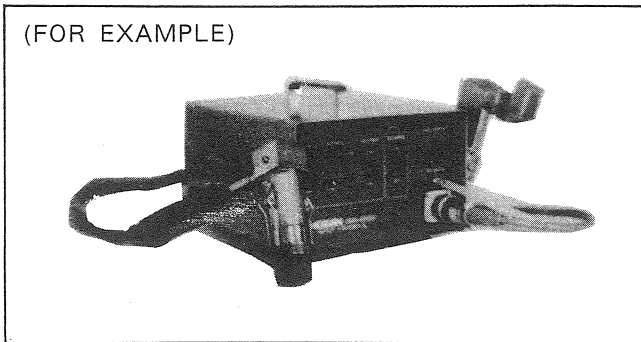


FIG. G8

- (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.

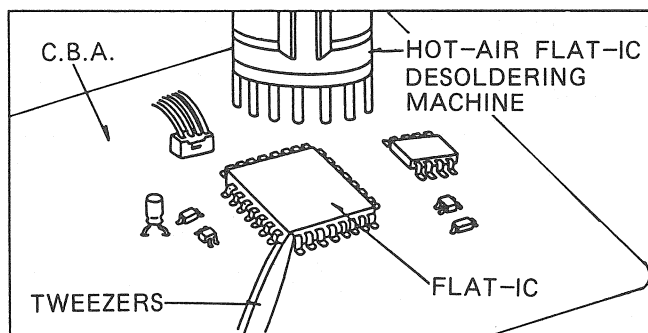


FIG. G9

(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.

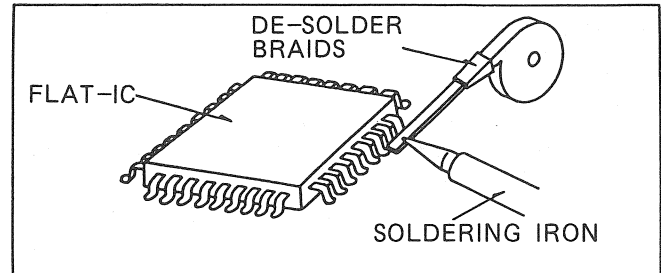


FIG. G10

- (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.

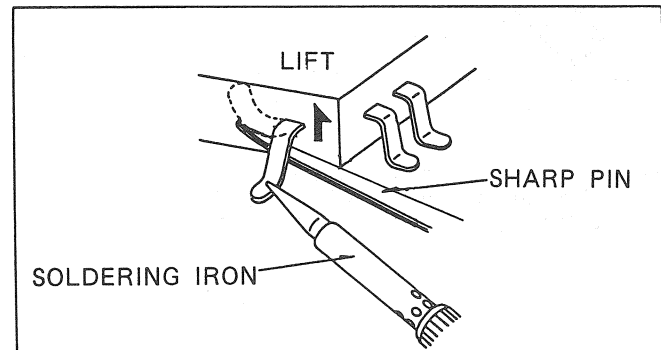


FIG. G11

(WITH IRON WIRE)

- (1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
- (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.

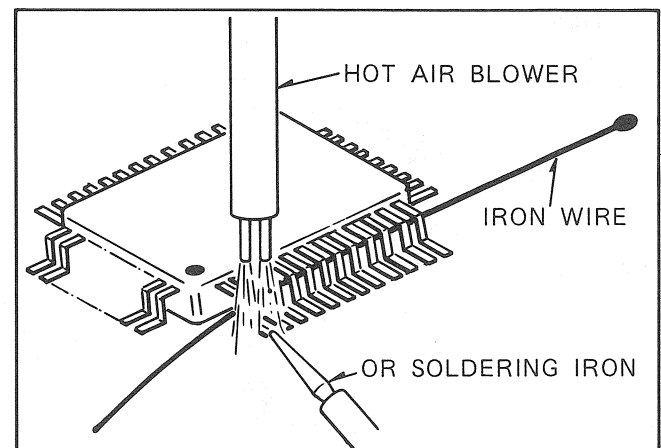


FIG. G12

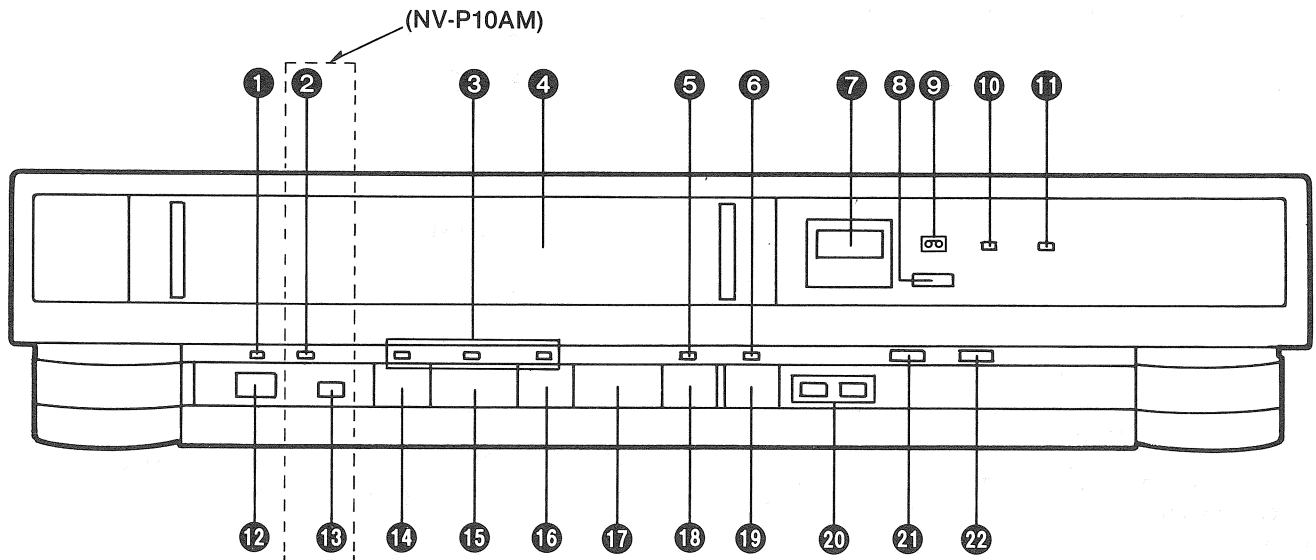
Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1

GENERAL DESCRIPTIONS

1-1. CONTROLS AND COMPONENTS

FRONT



- | | |
|-------------------------------------|---|
| ① VTR On Indicator | ⑱ Pause/Still Button (⏸) |
| ② VTR Mode Indicator (NV-P10AM) | ⑲ Record Button (⏴) |
| ③ Tape Running Indicators | ⑳ Digital Tracking /Vertical Lock Control Buttons |
| ④ Cassette Compartment | |
| ⑤ Pause/Still Indicator | |
| ⑥ Recording Indicator | |
| ⑦ Infra-red Remote Control Receiver | |
| ⑧ Eject Button (⏏) | |
| ⑨ Cassette-in Indicator | |
| ⑩ Digital Tracking Indicator | |
| ⑪ Stand By Indicator | |
| ⑫ VTR On/Off Button | |
| ⑬ VTR/TV Selector (NV-P10AM) | |
| ⑭ Rewind ◀◀/Review ◀▶ Button | |
| ⑮ Play Button (▶) | |
| ⑯ Fast Forward ▶▶/Cue ▶▶▶ Button | |
| ⑰ Stop Button (■) | |

Digital Tracking

When playback is started after inserting a cassette, and the VTR is turned on, the Digital Tracking function will be activated automatically, the Digital Tracking Indicator will flash for several seconds, and the tracking will be adjusted automatically (after the adjustment, the Digital Tracking Indicator will remain lit).

- During playback, the Digital Tracking function will be activated whenever the playback changes over from an unrecorded part to a recorded part, provided the recorded part is longer than 4 seconds.

● When the picture is distorted by noise bars, press the Tracking “+” or “-” Button to select manual tracking and adjust with these two buttons. The Digital Tracking Indicator goes out. To change back to Digital Tracking, press the Tracking “+” and “-” Buttons simultaneously.

Vertical Lock Control

If vertical jitter occurs, adjust with the Vertical Lock Control “+” or “-” Button during Still playback.

21 System Selector

Set the System Selector according to the colour TV system that is broadcast in your area.

PAL: PAL broadcast
MESECAM: SECAM broadcast

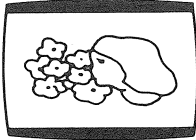
22 Noise Filter Switch

ON: For playback of tapes with inferior picture quality caused, for example, by repeated dubbing.

OFF: For ordinary use of the VTR.

NTSC Playback

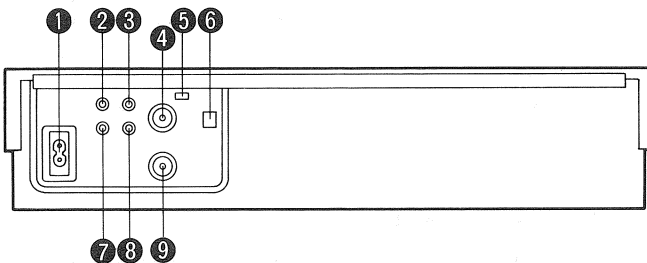
Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.



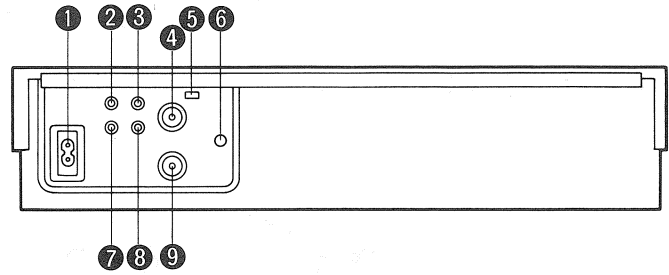
- Depending on the TV set used, the picture may shrink vertically and black bars may appear both at the top and bottom of the screen. This is not an indication of a malfunction.
- And the playback picture may roll up or down, if the TV set is equipped with a V-HOLD control, it may be possible to stop the picture movement by adjusting this control.
- Only tapes that were recorded in the standard mode (SP mode) can be played back.
- The special playback functions (except normal playback) cannot be used for NTSC playback. This is not an indication of a malfunction.
- Recording in the NTSC system is not possible with this VTR.
- Depending on the TV set used, the picture may be in black and white. However, this is not an indication of a malfunction.

REAR

(NV-P10AM)



(NV-P11EE)



① AC Mains Lead Socket

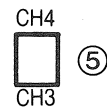
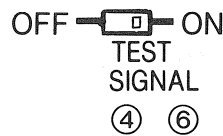
② Audio Output Socket

③ Video Output Socket

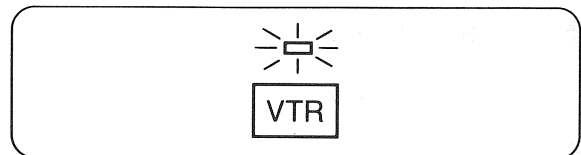
④ RF Output Socket

⑤ Test signal Switch

(NV-P10AM)

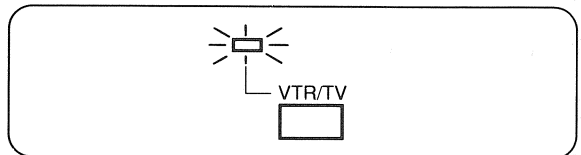


- ① Turn the TV set on and select the AV programme position or another programme position that is not occupied by any TV station.
- ② Press the VTR On/Off Button to turn the VTR On.
(FRONT SIDE)



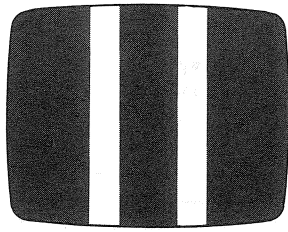
- The corresponding indicator lights up.

- ③ Set the VTR/TV Selector to "VTR".



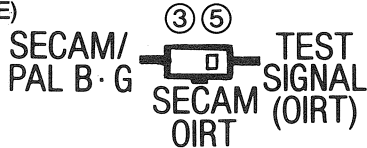
- VTR Mode Indicator will light up.

- ④ Set the Test Signal Switch to "On".
- ⑤ Tune the selected programme position (channel) of the TV set VHF channel 3 or 4. Confirm on your TV set that the received test pattern is as shown below.

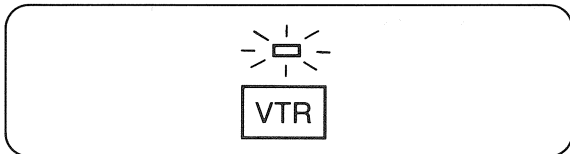


- ⑥ Set the Test Signal Switch to "Off". Your TV is now ready to receive the RF output signal from the VTR.
- ⑦ To check, play back a pre-recorded tape and readjust fine tuning of TV if necessary.

(NV-P11EE)

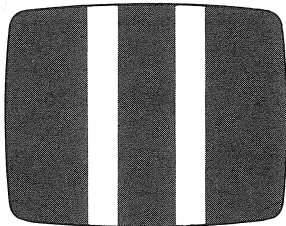


- ① Turn the TV set on and select the AV programme position or another programme position that is not occupied by any TV station.
- ② Press the VTR On/Off Button to turn the VTR On.
(FRONT SIDE)



●The corresponding indicator lights up.

- ③ Set the RF Converter/Test Signal Switch to "TEST SIGNAL (OIRT)".
- ④ Tune the selected programme position of the TV set to UHF approx. channel E38. Confirm on your TV set that the received test pattern is as shown.

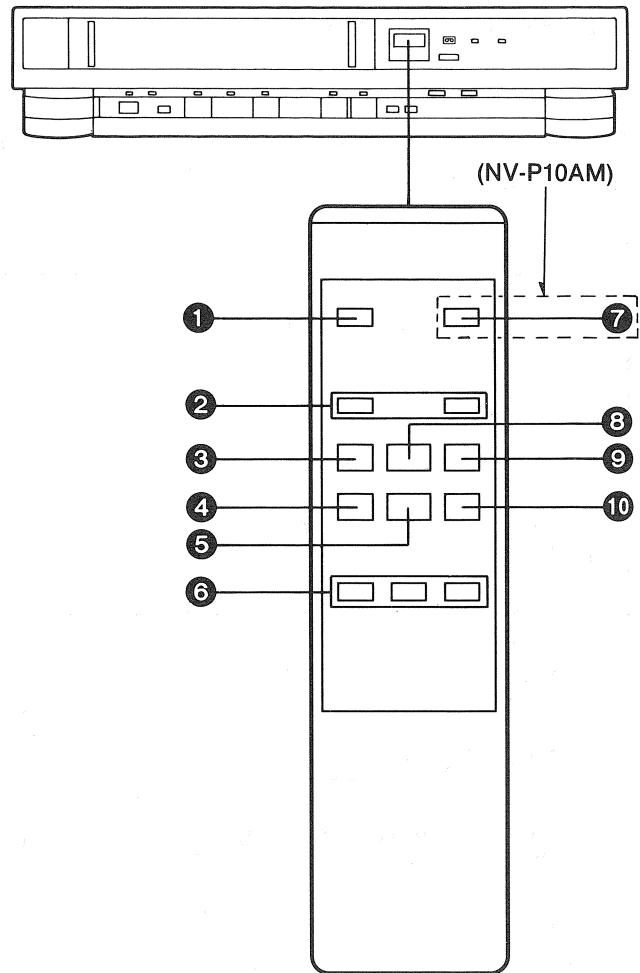


●If UHF channel E38 is already occupied by a TV station in your area, the video playback channel can be changed between channel 32 to 40 on the back of the VTR by using a small screwdriver.

- ⑤ Set the RF Converter/Test Signal Switch to the position that matches the TV system used by your TV set. Your TV is now ready to receive the RF output signal from the VTR.

- ⑥ Video Playback Channel Selector
- ⑦ Audio Input Socket
- ⑧ Video Input Socket
- ⑨ RF Input Socket

1-2. INFRA-RED REMOTE CONTROLLER



- ① VTR On/Off Button
- ② Record Buttons (●)
- ③ Pause/Still Button (|||)
- ④ Rewind ◀◀/Review ◀▶ Button
- ⑤ Play Button (▶)
- ⑥ Slow Buttons
- ⑦ VTR/TV Selector (NV-P10AM)
- ⑧ Stop Button (■)
- ⑨ Still Advance Button (||▶)
- ⑩ Fast Forward ▶▶/Cue ▶▶▶ Button

SECTION 2 ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

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

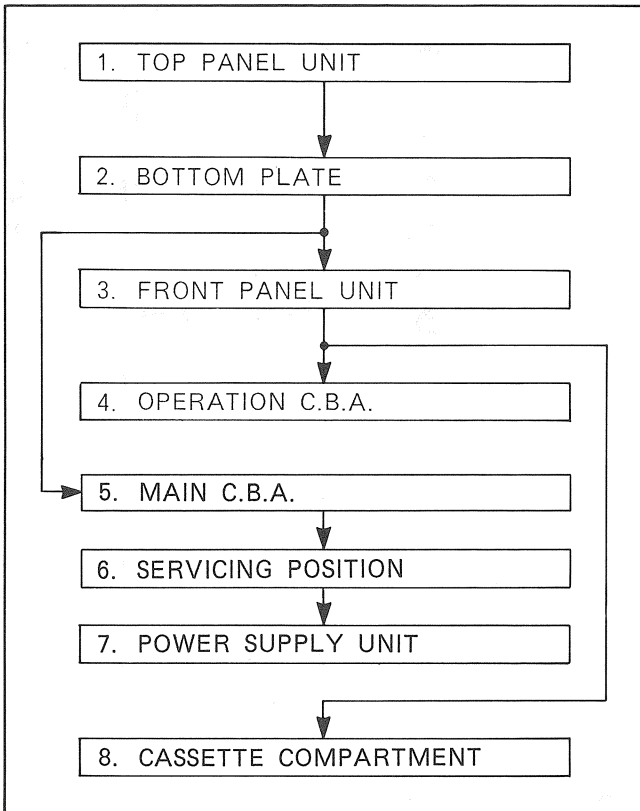


Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL UNIT

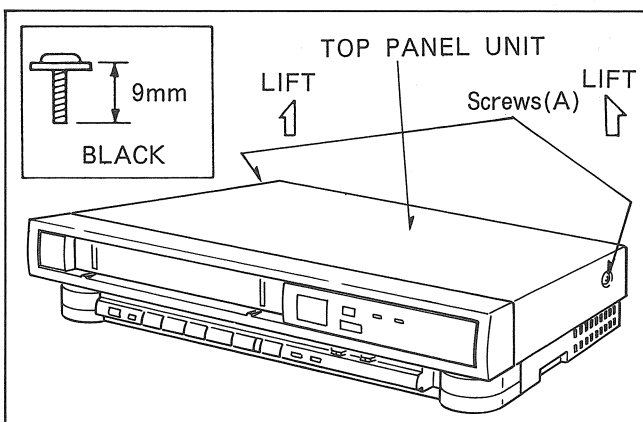


Fig. D2

Remove.....2 Screws(A)

2. REMOVAL OF THE BOTTOM PLATE

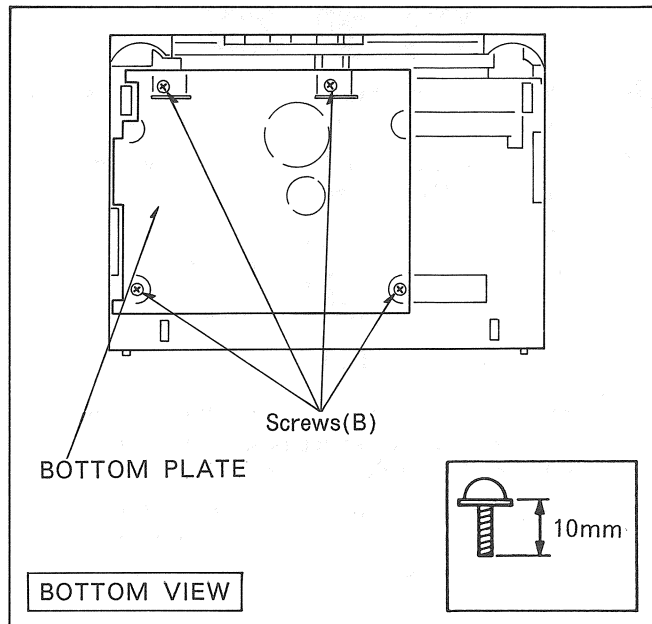


Fig.D3

Remove.....4 Screws(B)

3. REMOVAL OF THE FRONT PANEL UNIT

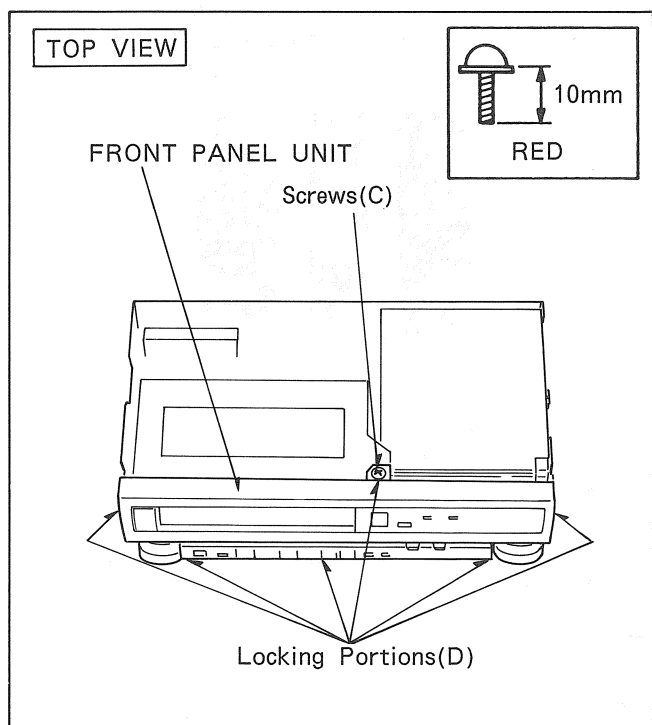


Fig.D4

Remove..... Screw(C)
Unlock..... 6 Locking Portions(D)

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

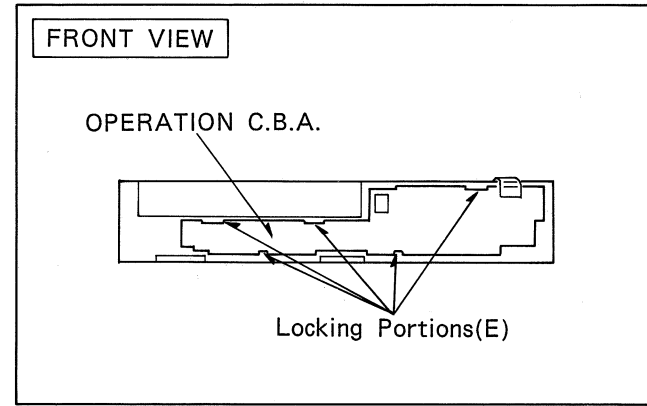


Fig.D5

Unlock.....5 Locking Portions(E)

5. REMOVAL OF THE MAIN C.B.A.

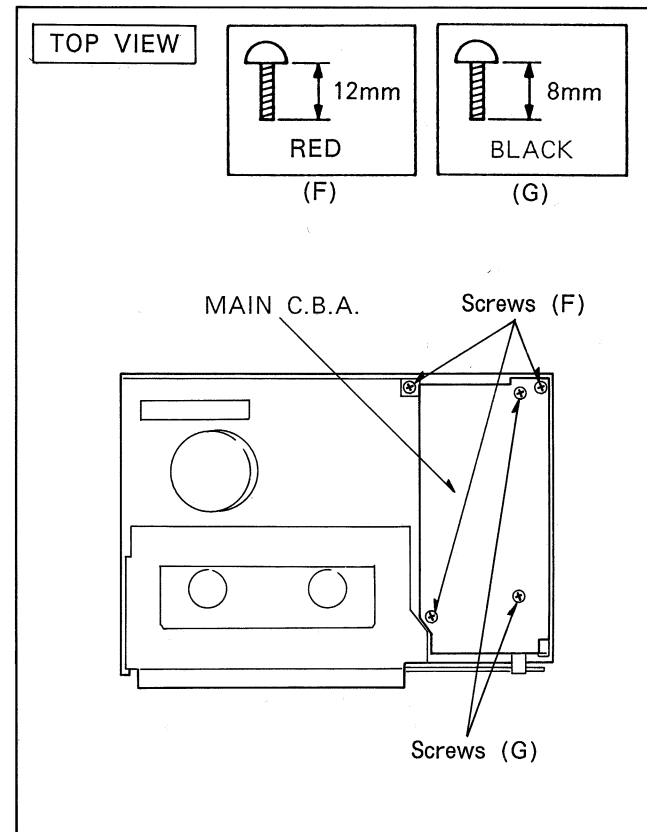


Fig.D6

Remove.....3 Screws(F)

6. SERVICING

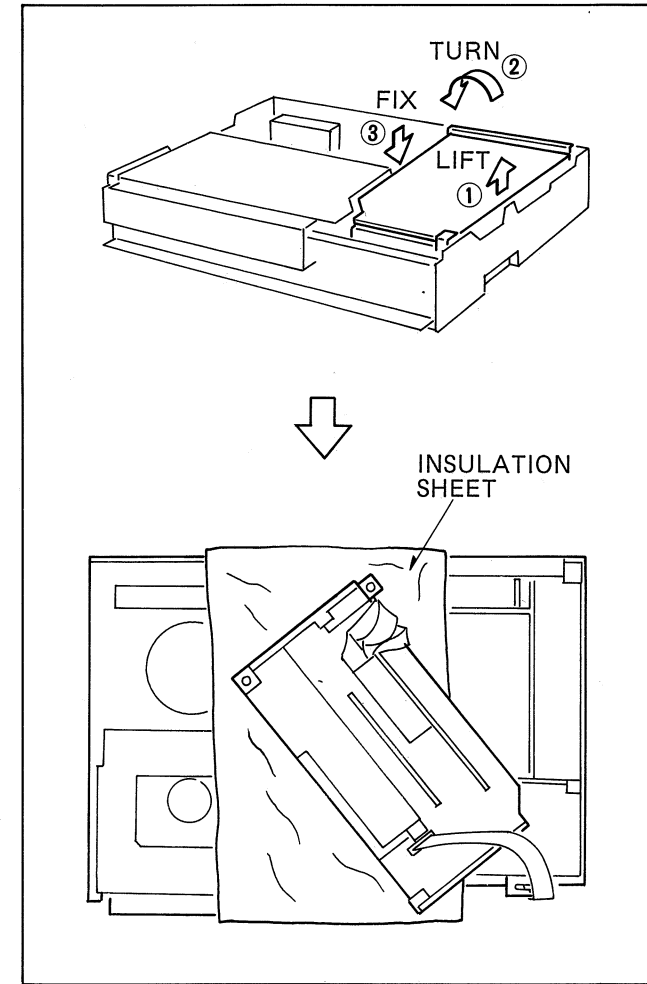


Fig. D7

NOTE:
When Servicing, lay the insulation sheet between Chassis and Main C.B.A. as shown in Fig. D7.

7. REMOVAL OF THE POWER SUPPLY UNIT

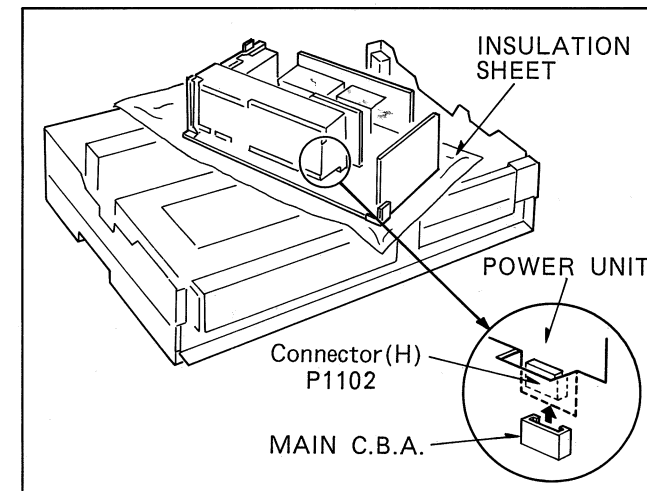


Fig. D8

Remove.....2 Screws(G) (Fig.D6)

Remove.....Connector(H) (Fig.D8)

8. REMOVAL OF THE CASSETTE COMPARTMENT

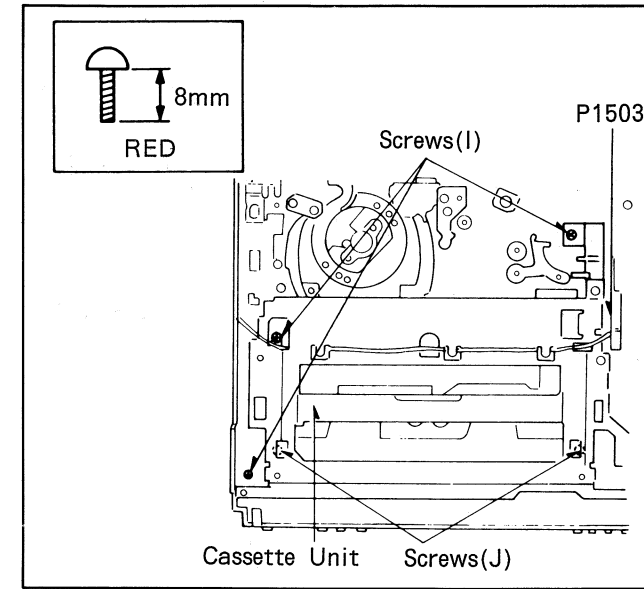


Fig. D9

Remove the 3 screws(I).
Slide the cassette holder unit separating 2 screws(J) by turning (clockwise) the Capstan Rotor Unit (located in the bottom side as shown in Fig.D10) and remove the 2 Screws(J).
Remove the wire cable from connector P1503 mounted on Take-up Photo Tr. C.B.A., then carefully pull out the Cassette Compartment.

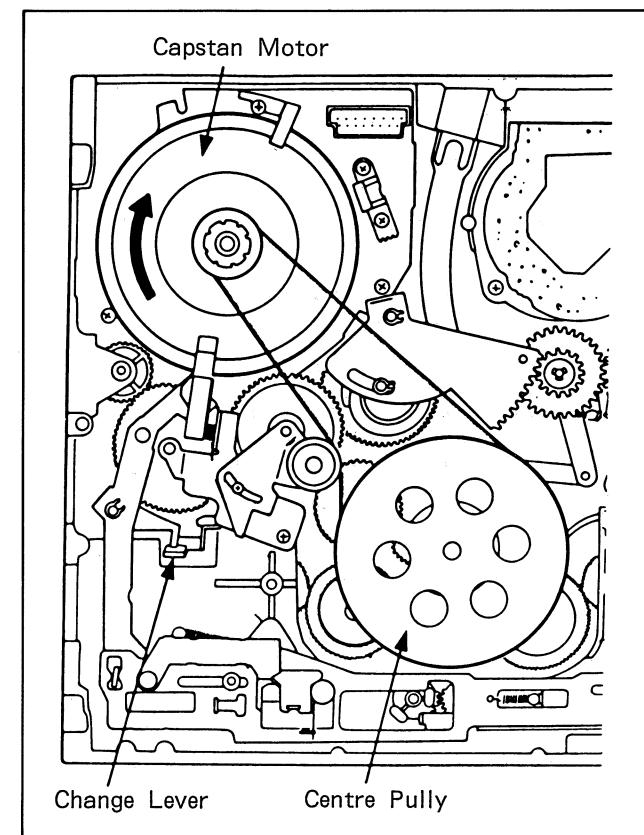


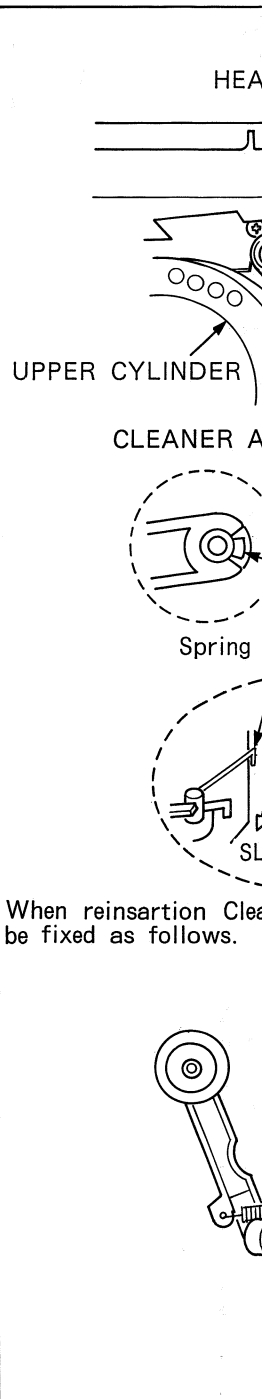
Fig. D10

NOTE:
When reinstalling the Cassette Compartment, mechanical adjustment(alignment) must be performed for correct working refer to Service Manual No.G11/G-REV. Mechanical Chassis (Order No.VRD8901M101).

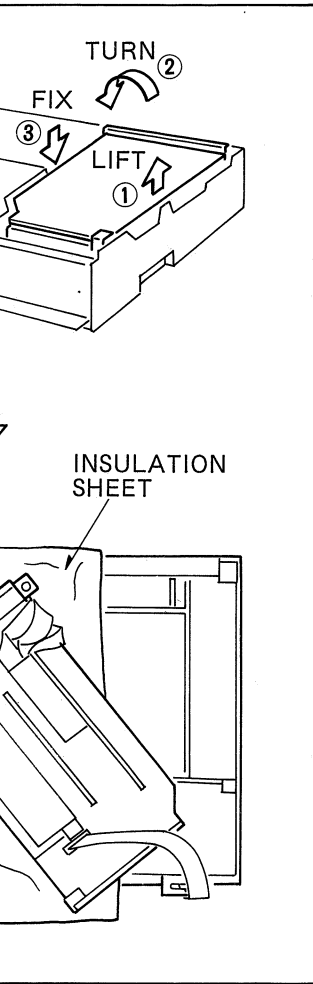
2-1-3. DISASSEMBLY CLEANER ARM

1. Hook up the Spring Hook (B).
2. Unlock the locking mechanism of the Cleaner Arm.

NOTE:
(1) Assembly procedure
(2) When replacing the Cleaner Arm at the same time.



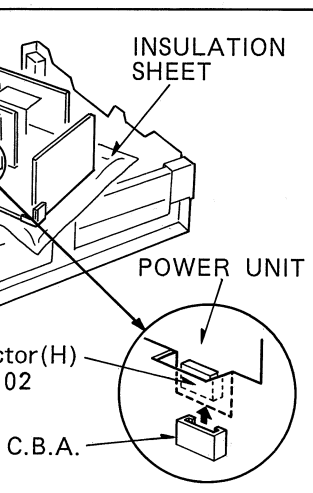
8. REMOVAL OF THE CASSETTE COMPARTMENT



D7

insulation sheet between
s shown in Fig. D7.

POWER SUPPLY UNIT



D8

g.D6)

g.D8)

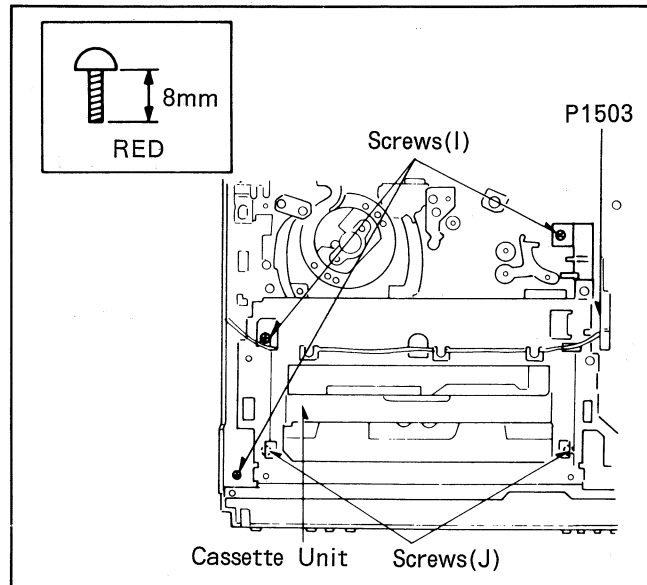


Fig. D9

Remove the 3 screws(I).
Slide the cassette holder unit appearing
2 screws(J) by turning (clockwise) the Capstan
Rotor Unit (located in the bottom side as shown in
Fig.D10) and remove the 2 Screws(J).
Remove the wire cable from connector P1503 mounted
on Take-up Photo Tr. C.B.A., then carefully pull
out the Cassette Compartment.

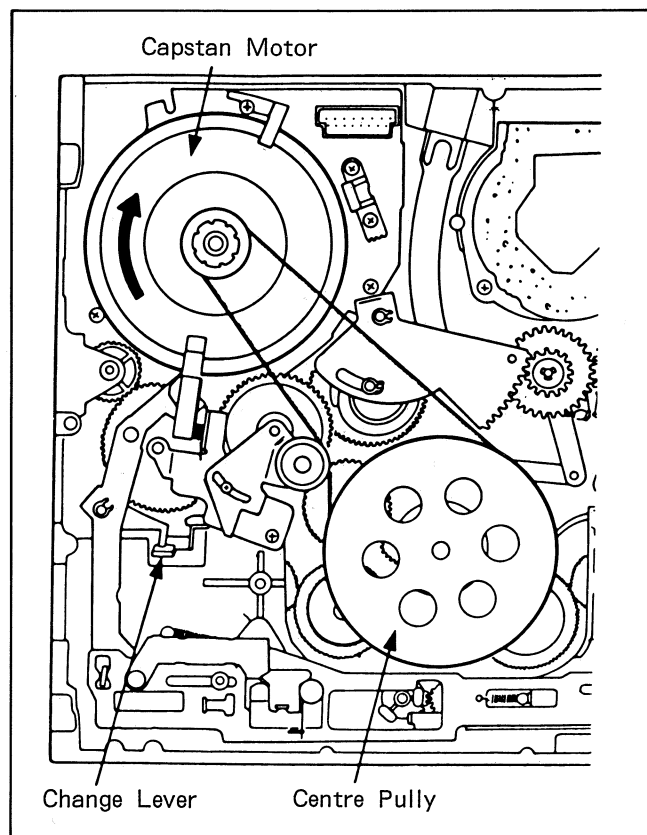


Fig. D10

NOTE:

When reinstalling the Cassette Compartment,
mechanical adjustment(alignment) must be
performed for correct working refer to Service
Manual No.G11/G-REV. Mechanical Chassis (Order
No.VRD8901M101).

2-1-3. DISASSEMBLY PROCEDURES OF CLEANER ARM UNIT

1. Hook up the Spring Lead (A) to lower side of
Hook (B) .
2. Unlock the locking portion (C) and then remove
the Cleaner Arm Unit.

NOTE :

- (1) Assembly procedure follow the reverse order.
- (2) When replacing Upper Cylinder, replace Cleaner
Arm at the same time.

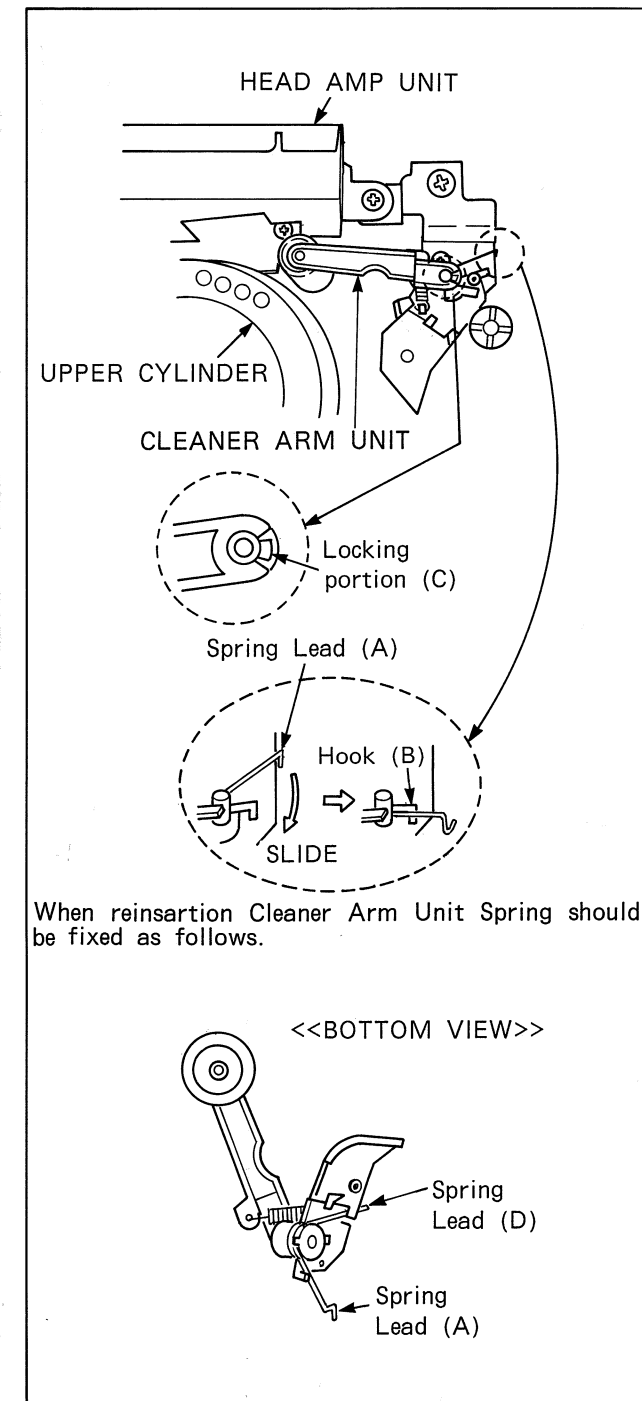
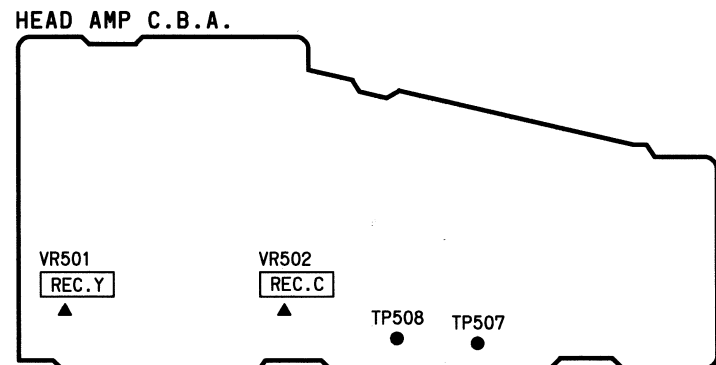
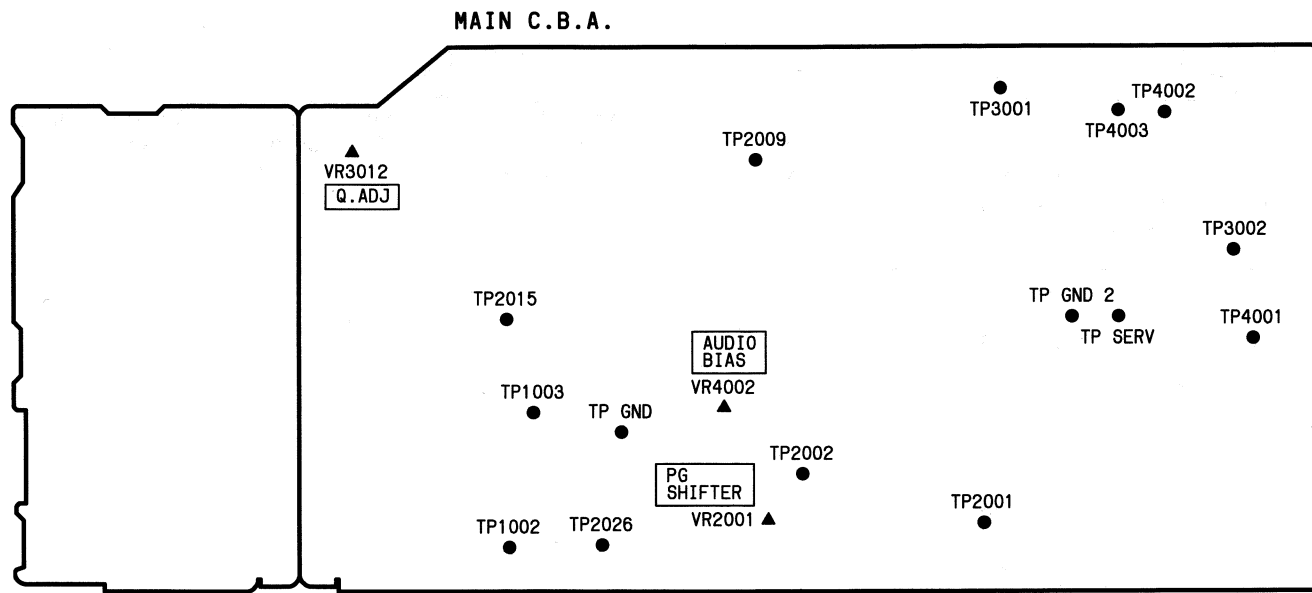


Fig.D11

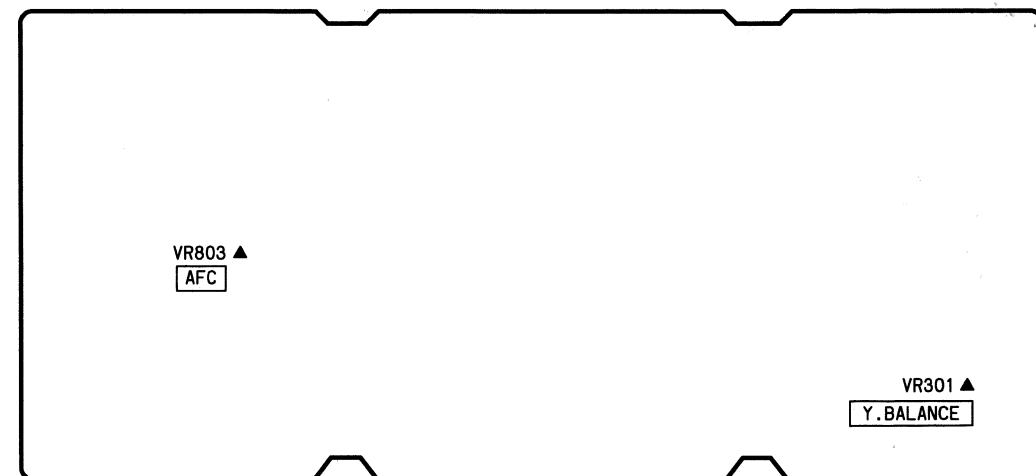
2-2. MECHANICAL ADJUSTMENT PROCEDURES

This mechanical chassis of these model NV-
P10AM/P11EE/NV-P2UAM is the same as G-REV.
Mechanical Chassis.
Therefore please refer to the Service Manual
No.G11/G-REV. Mechanical Chassis (Order
No.VRD8901M101).

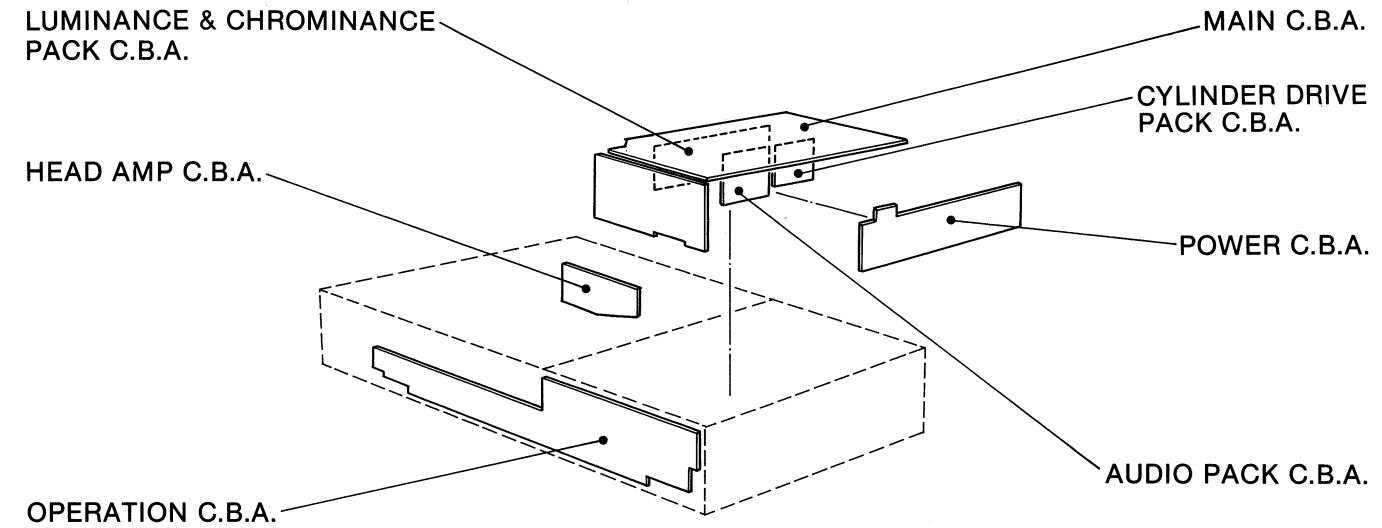
LOCATION OF TEST POINTS & CONTROLS



LUMINANCE & CHROMINANCE PACK C.B.A.



CIRCUIT BOARD LAYOUT



2-3. ELECTRICAL ADJUSTMENT PROCEDURES

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

2-3-1. TEST EQUIPMENTS

To perform the electrical adjustments completely, following equipments are required.

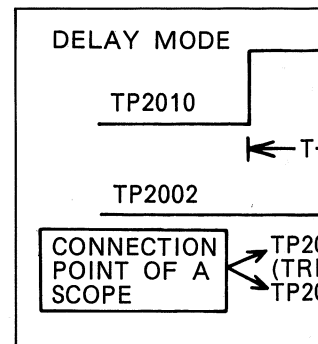
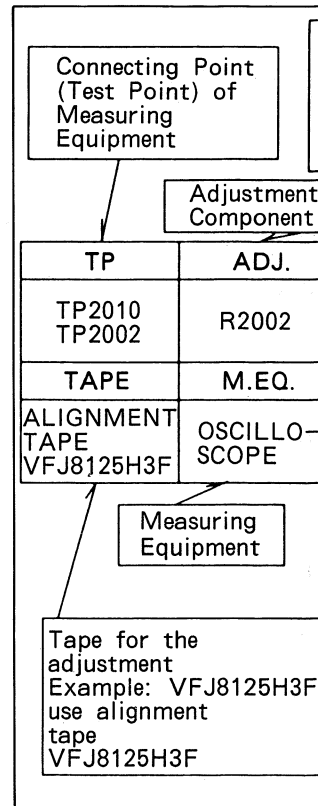
1. Dual-Trace Oscilloscope. (Mode than 35 MHz)
Voltage Range: 0.005-5V/div
Frequency Range: DC-35MHz
Probes: 10:1
2. Frequency Counter.
Frequency Range: 0-10MHz
Probes: 1:1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.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

2-3-2. PREPARATION

During adjustments, set each selector as follows when no indication on each procedures.

PICTURE VR.....Centre Fix
NOISE FILTER EDIT SW.....OFF
TAPE SELECT SW.....E195 SIDE
NTSC 4.43 SW.....OFF
TEST SIGNAL SW(REAR).....OFF

2-3-3. HOW TO READ A PROCEDURES

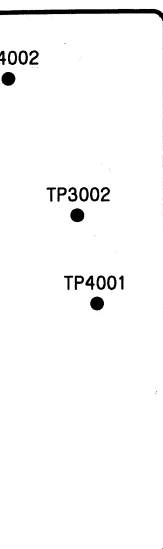
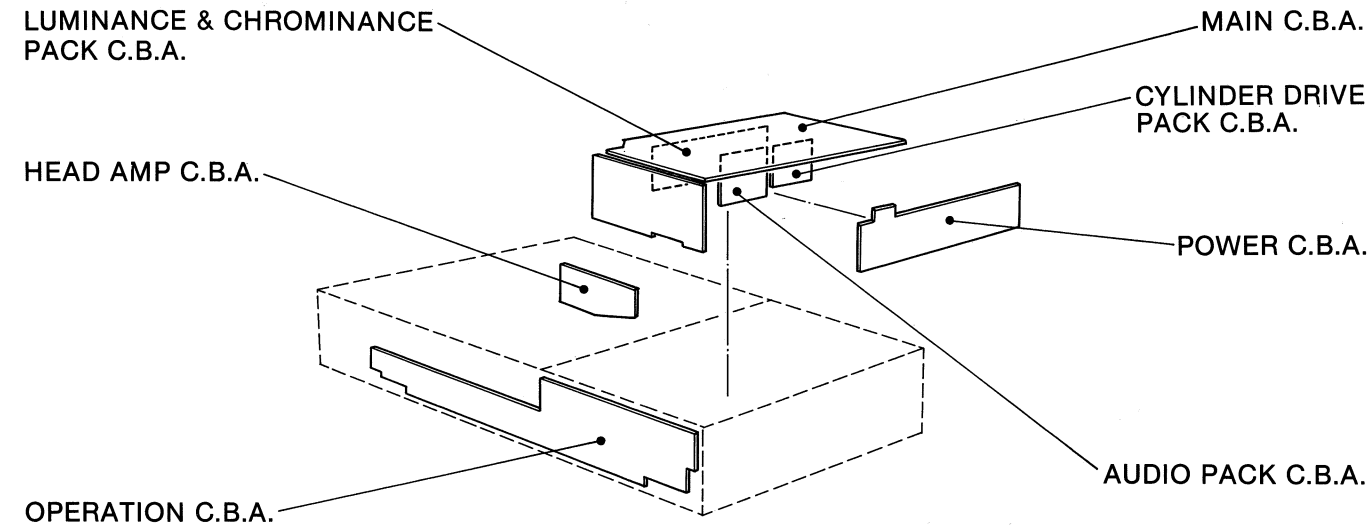


SERVO SECTION

2-3-4. PG SHIFTER ADJ.

TP	ADJ.
TP2001 TP3002	VR2001
TAPE	M. EQ.
ALIGNMENT TAPE VFJ8125H3F	OSCILLOSCOPE

CIRCUIT BOARD LAYOUT



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- Sine Wave Generator.
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NOISE FILTER EDIT SW.....OFF
TAPE SELECT SW.....E195 SIDE
NTSC 4.43 SW.....OFF
TEST SIGNAL SW(REAR).....OFF

2-3-3. HOW TO READ ADJUSTMENT PROCEDURES

Connecting Point (Test Point) of Measuring Equipment		Mode of VTR Example : SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion	
Adjustment Component		Specification for Adjustment	
TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL
TAPE	M.EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLOSCOPE	0.4+-0.4msec.	
Measuring Equipment		Supply a Video Signal to the VIDEO INPUT on the rear panel or tune in a local on-air	
Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3F			

Fig. E1

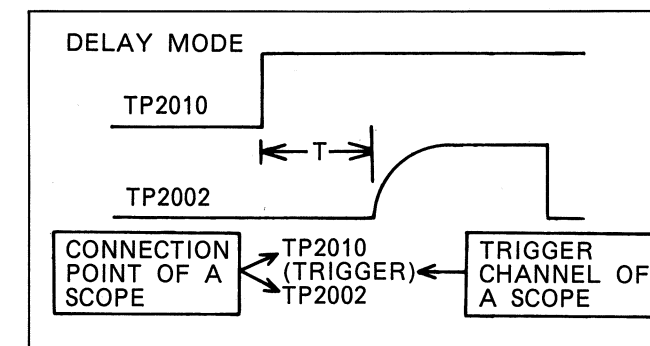


Fig. E2

SERVO SECTION

2-3-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFJ8125H3F	OSCILLOSCOPE	6.5+-0.5(H)	

- Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT).
- Playback the alignment tape.
- Adjust VR2001 so that phase difference between falling edge of Head SW pulse and V-Sync becomes $6.5+-0.5(H)$.

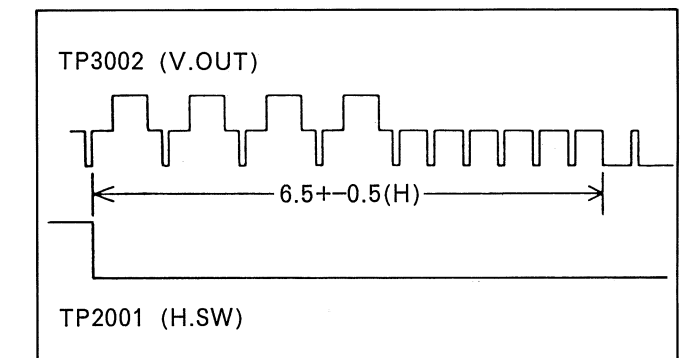


Fig. E3

LUMINANCE, CHROMINANCE & HEAD AMP SECTION

2-3-5. Y-NR BALANCE ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN (17) of IC302	VR301	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	MINIMIZED AS POSSIBLE (Less than 50mVp-p)	

Note:

Connect the capacitor 1500pF between Pin 17 of IC302 and GND.

- Record the colour bar.
- Connect the oscilloscope to Pin 17 of IC302.
- Adjust VR301 so that the amplitude at Pin 17 of IC302 becomes minimum.

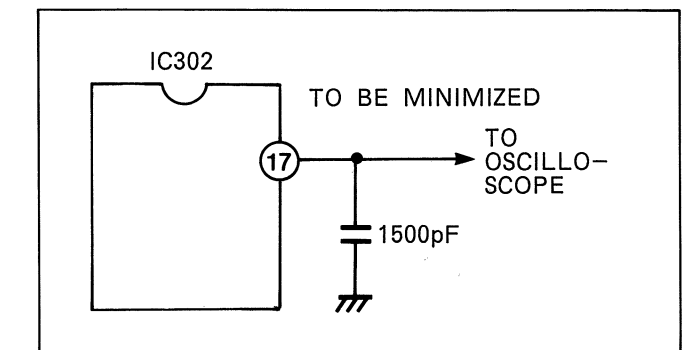


Fig. E4

2-3-6. ARTIFICIAL PAL AFC FREE
RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN (9) of IC801	VR803	STOP	SINEWAVE 8KHz -10dB (316mV)
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER SINEWAVE GENERATOR	15735+/-100(Hz)	

Note:

Supply +5V DC to Pin 15 of IC801.

1. Supply the sinewave (8KHz/-10dB) to Line In. (Video In)
2. Connect the frequency counter to Pin 9 of IC801.
3. Turn VR803 to end of direction which is maximum frequency side.
4. Adjust VR803 so that the frequency becomes 15735+/-100(Hz).

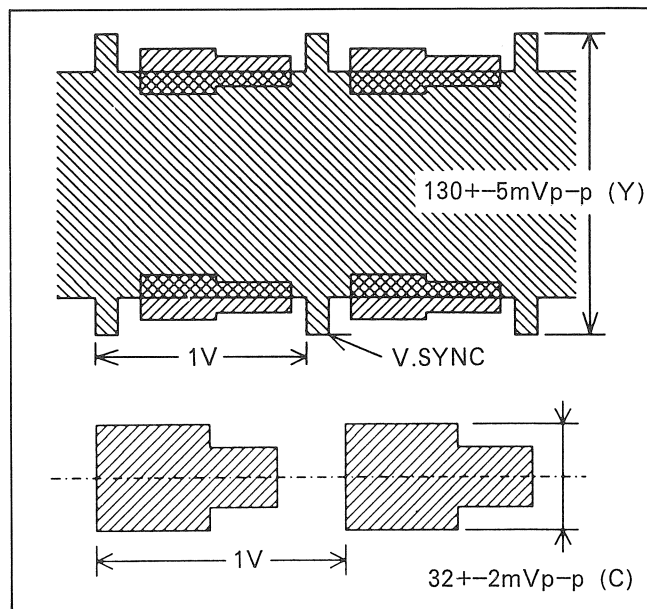


Fig. E5

2-3-7. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO- SCOPE	Y: 130+/-5(mVp-p) C: 32+/-2(mVp-p)	

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so that the amplitude of sync tip portion becomes 130+/-5mVp-p.
4. Supply +5V DC to Pin 6 of Luminance & Chrominance Pack C.B.A. to reduce luminance component.
5. Adjust VR502 so that the amplitude of Cyan becomes 32+/-2mVp-p.

2-3-8. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012	(SELF RECORDED) PLAYBACK	VIDEO SWEEP SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE VIDEO SWEEP GENERATOR	0+-1(dB) (90~100%)	

Note: Set the Video Sweep Signal as shown in Fig.E6.

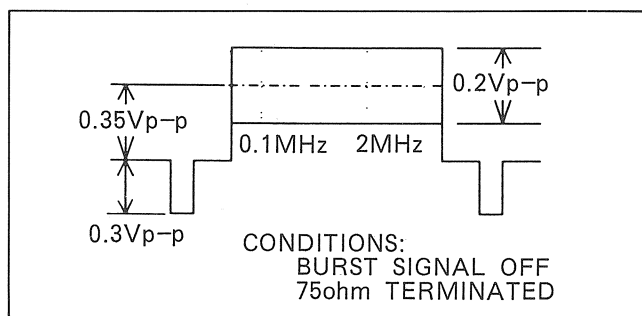


Fig. E6

1. Record the Video Sweep Signal for few time and playback the just recorded portion.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012 so that the frequency response becomes 0+-1dB on 2MHz portion compare with 0.1MHz portion.

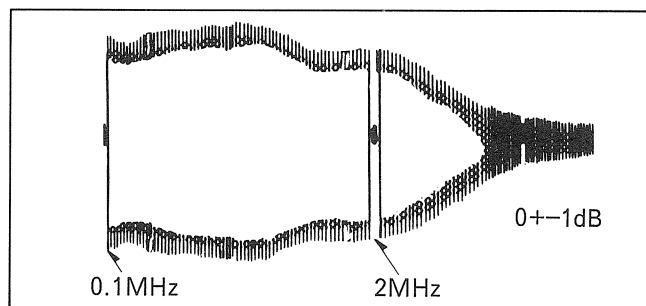


Fig. E7

AUDIO SECTION

2-3-9. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	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 recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 so that reading of V.T.V.M. becomes 3.0+-0.1mVrms.

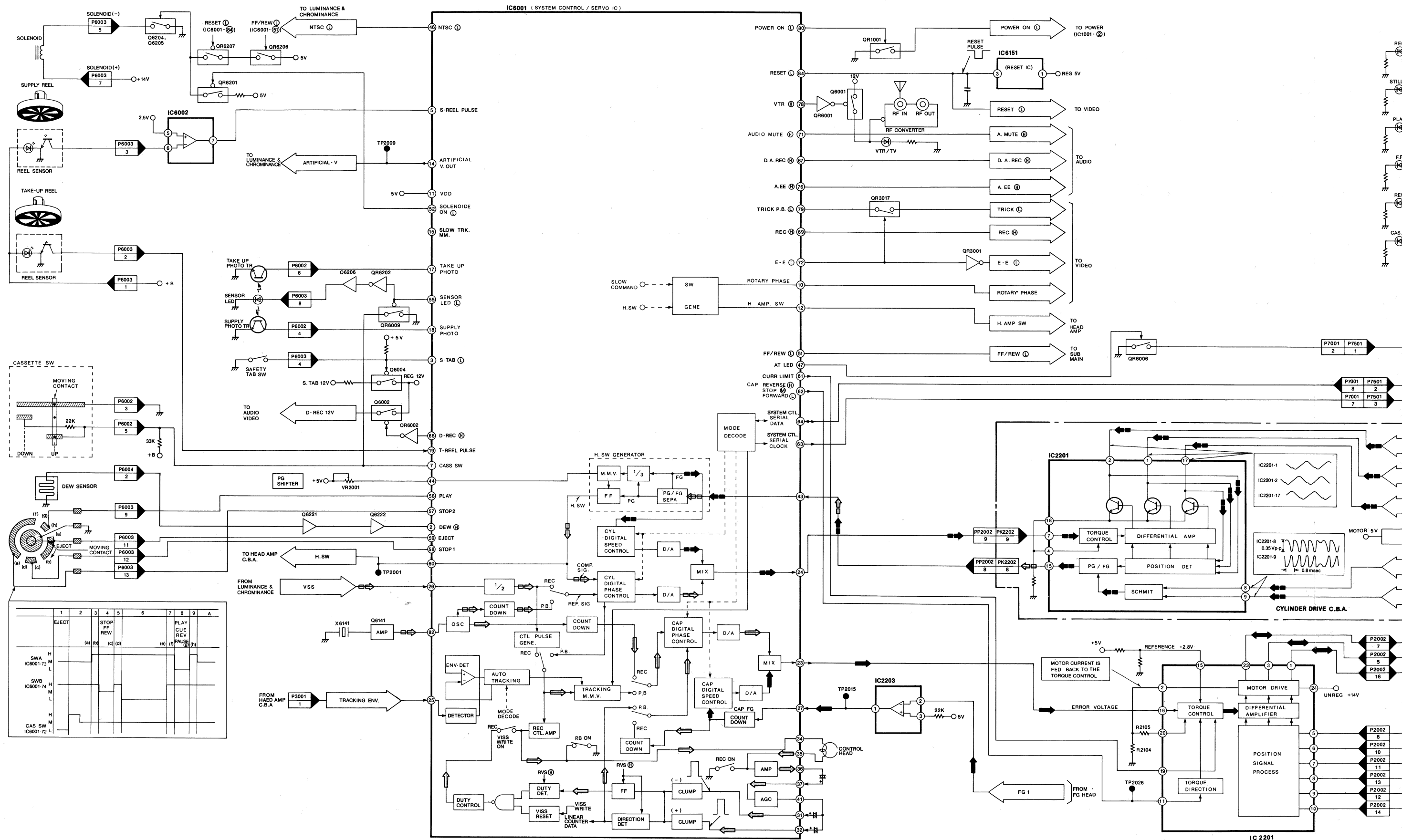
SECTION 3

BLOCK DIAGAMS & SCHEMATIC DIAGRAMS

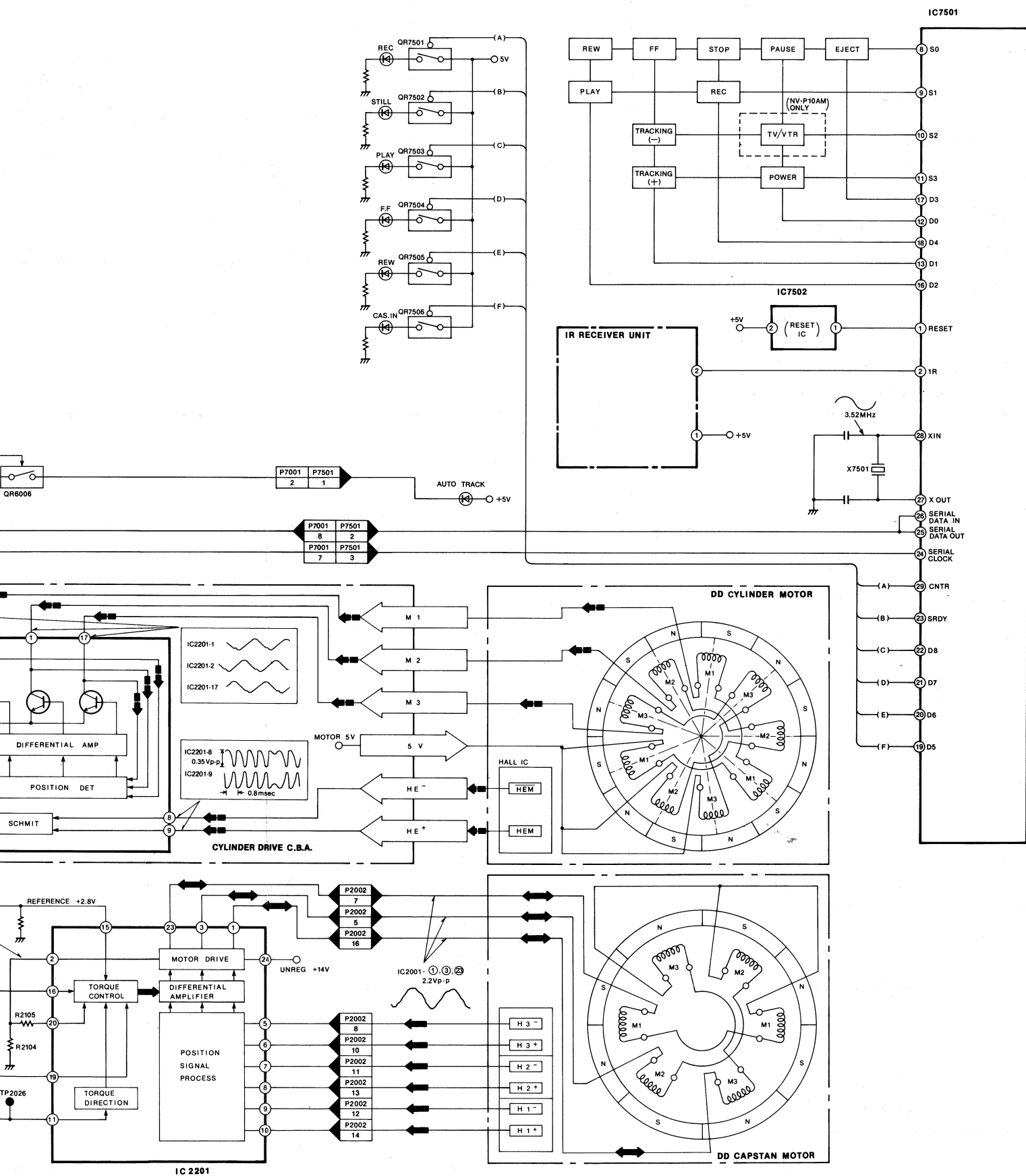
3-1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

CAPSTAN SERVO SPEED LOOP
 CAPSTAN SERVO PHASE LOOP

CYLINDER SERVO SPEED LOOP
 CYLINDER SERVO PHASE LOOP



ED LOOP
SE LOOP



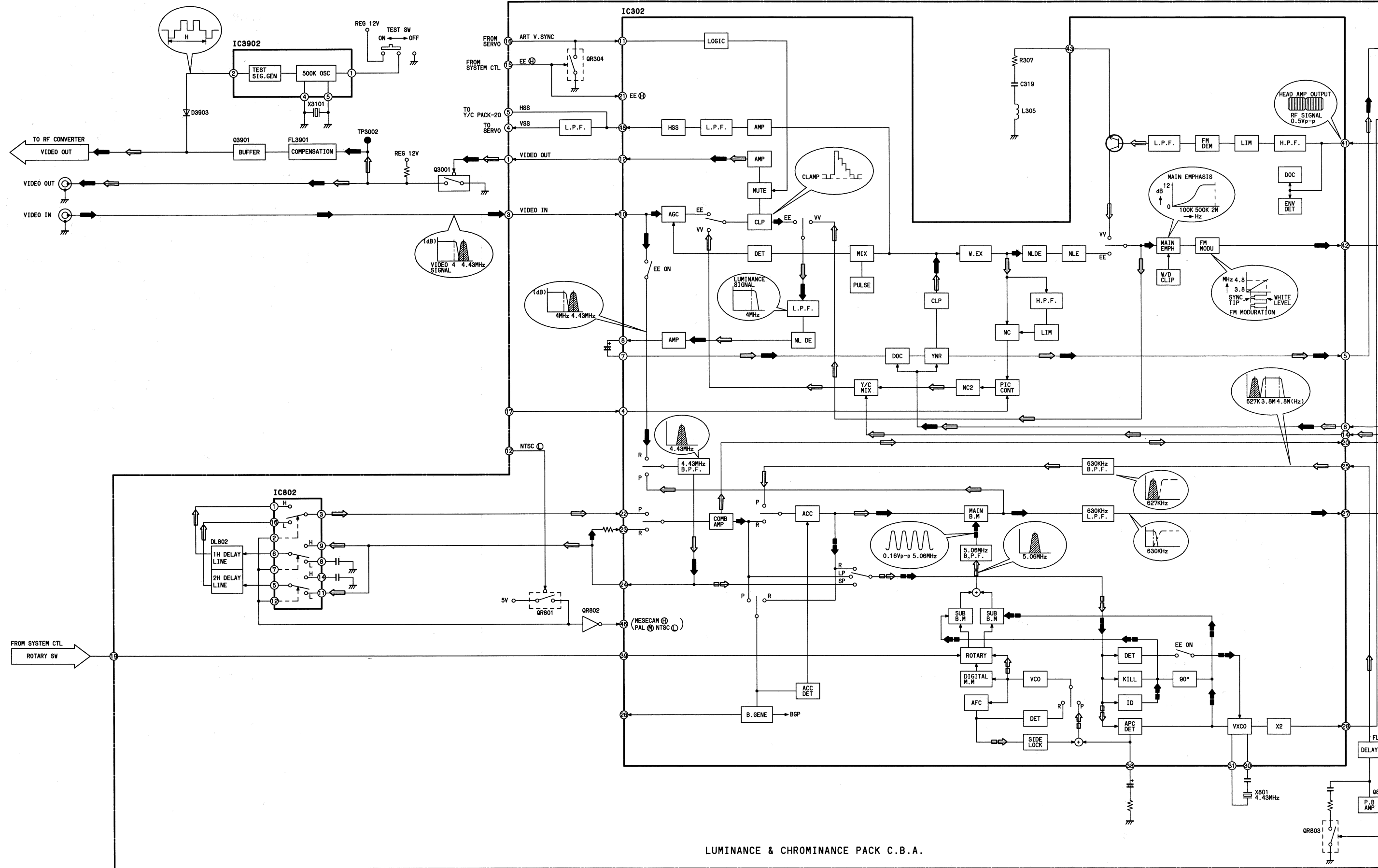
SYMBOL	TRUTH VALUE TABLE																				
INVERTER 	<table border="1"> <tr> <td>IN</td> <td>(a)</td> <td>H</td> <td>L</td> </tr> <tr> <td>OUT</td> <td>(b)</td> <td>L</td> <td>H</td> </tr> </table>	IN	(a)	H	L	OUT	(b)	L	H												
IN	(a)	H	L																		
OUT	(b)	L	H																		
COMPARTOR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

3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

← MAIN SIGNAL PATH IN REC MODE

← MAIN SIGNAL PATH IN PLAYBACK MODE

← 5.06MHz

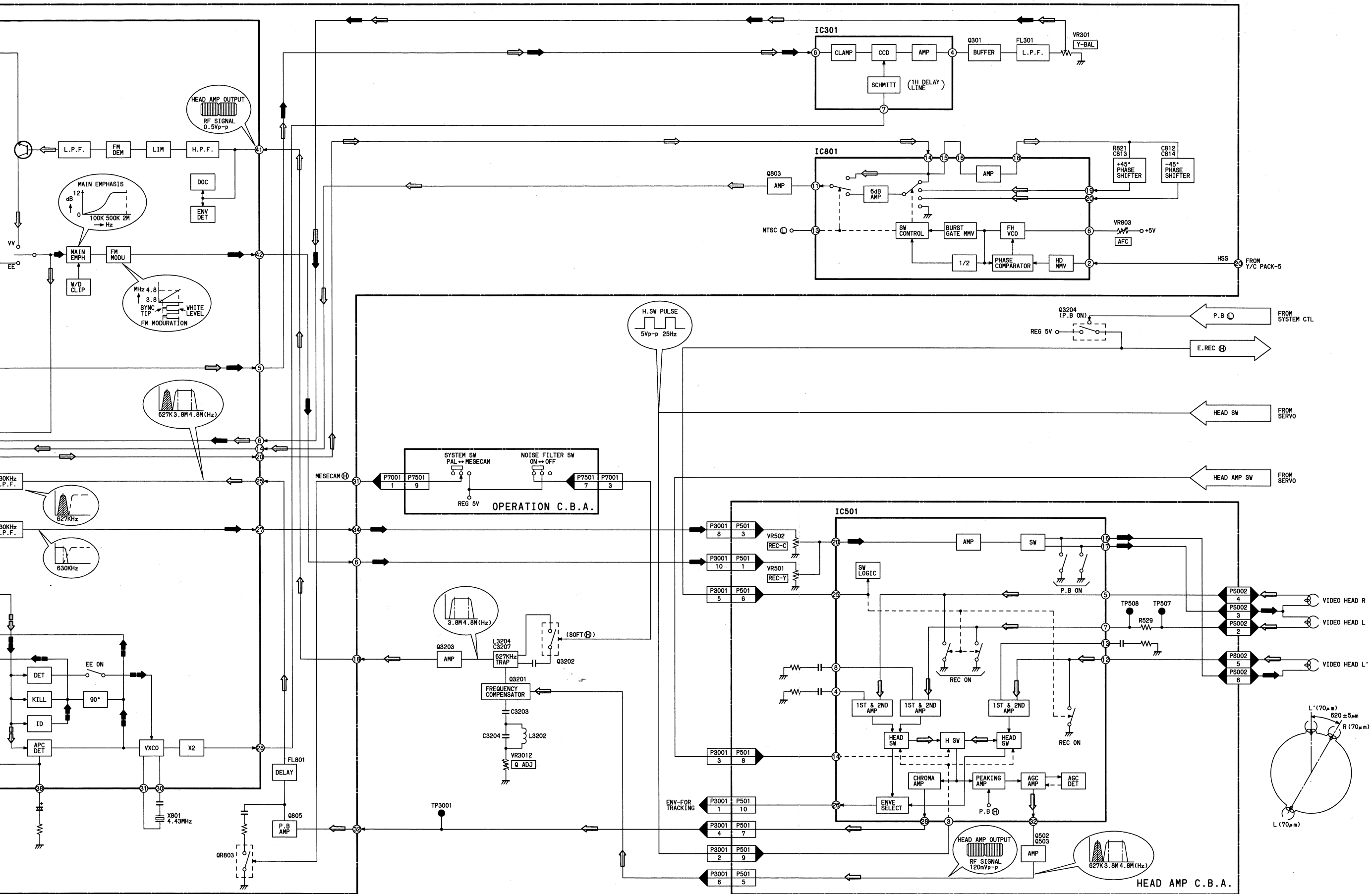


LUMINANCE & CHROMINANCE PACK C.B.A.

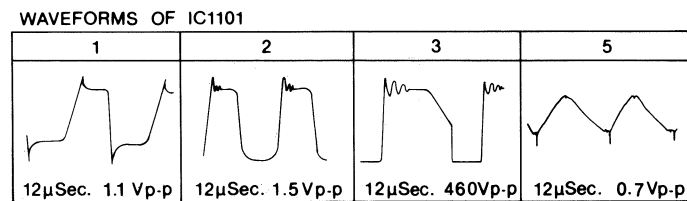
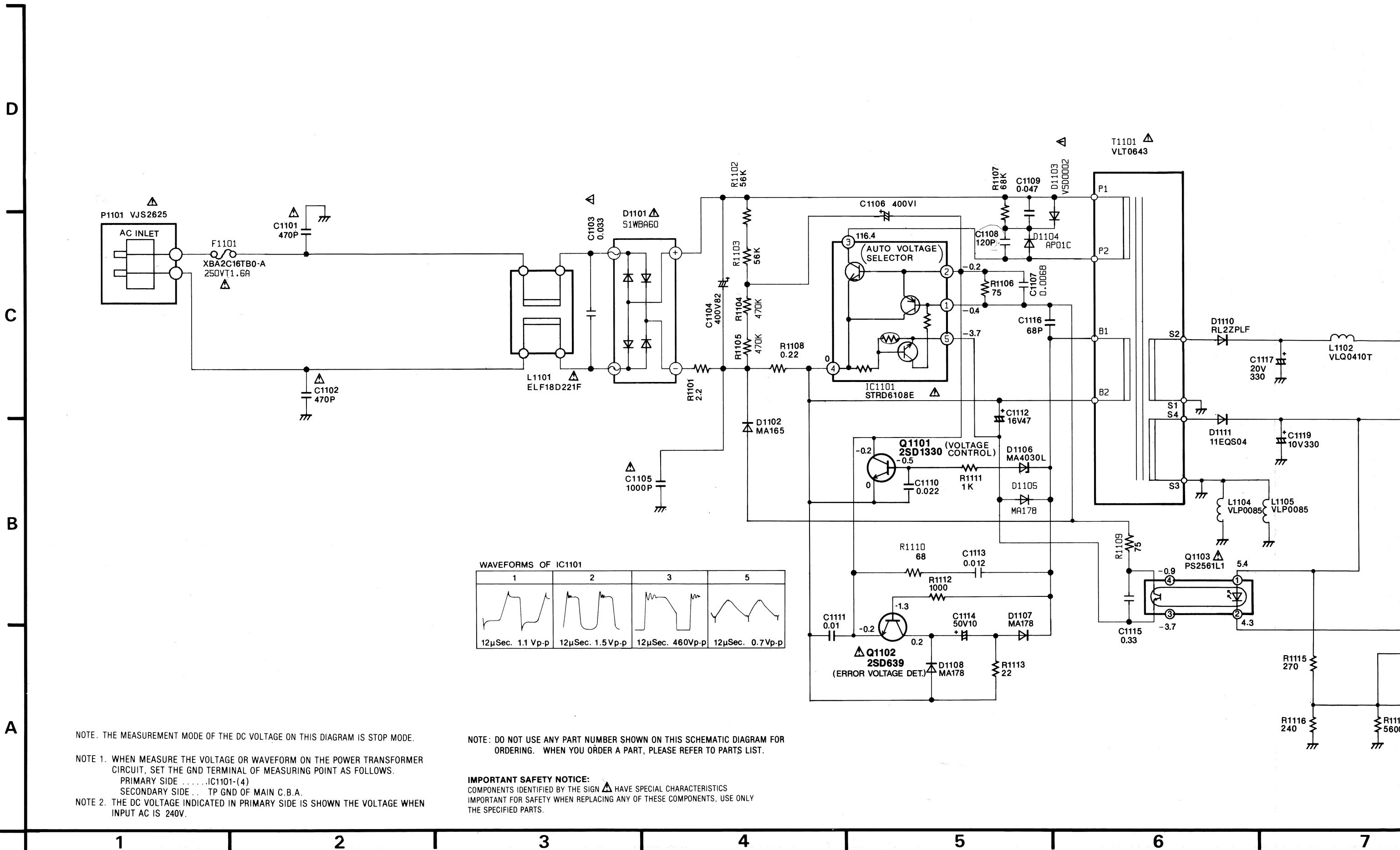
IN PLAYBACK MODE

5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE

5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE



3-3. POWER SCHEMATIC DIAGRAM



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

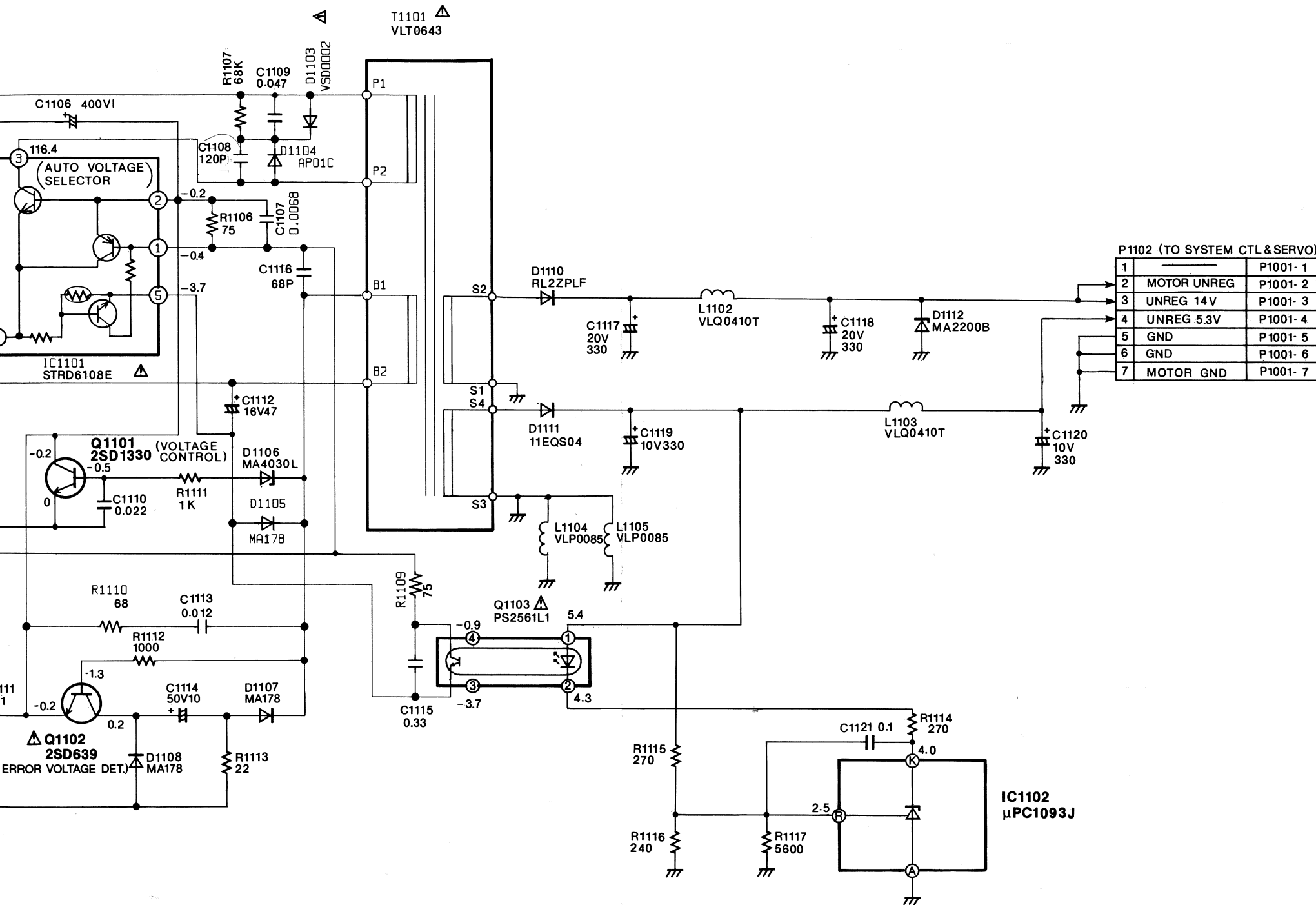
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
 PRIMARY SIDEIC1101-(4)
 SECONDARY SIDE . . . TP GND OF MAIN C.B.A.

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.

IMPORTANT SAFETY NOTICE:
 COMPONENTS IDENTIFIED BY THE SIGN Δ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

3-4. POWER C.B.A. (VEP01483A)



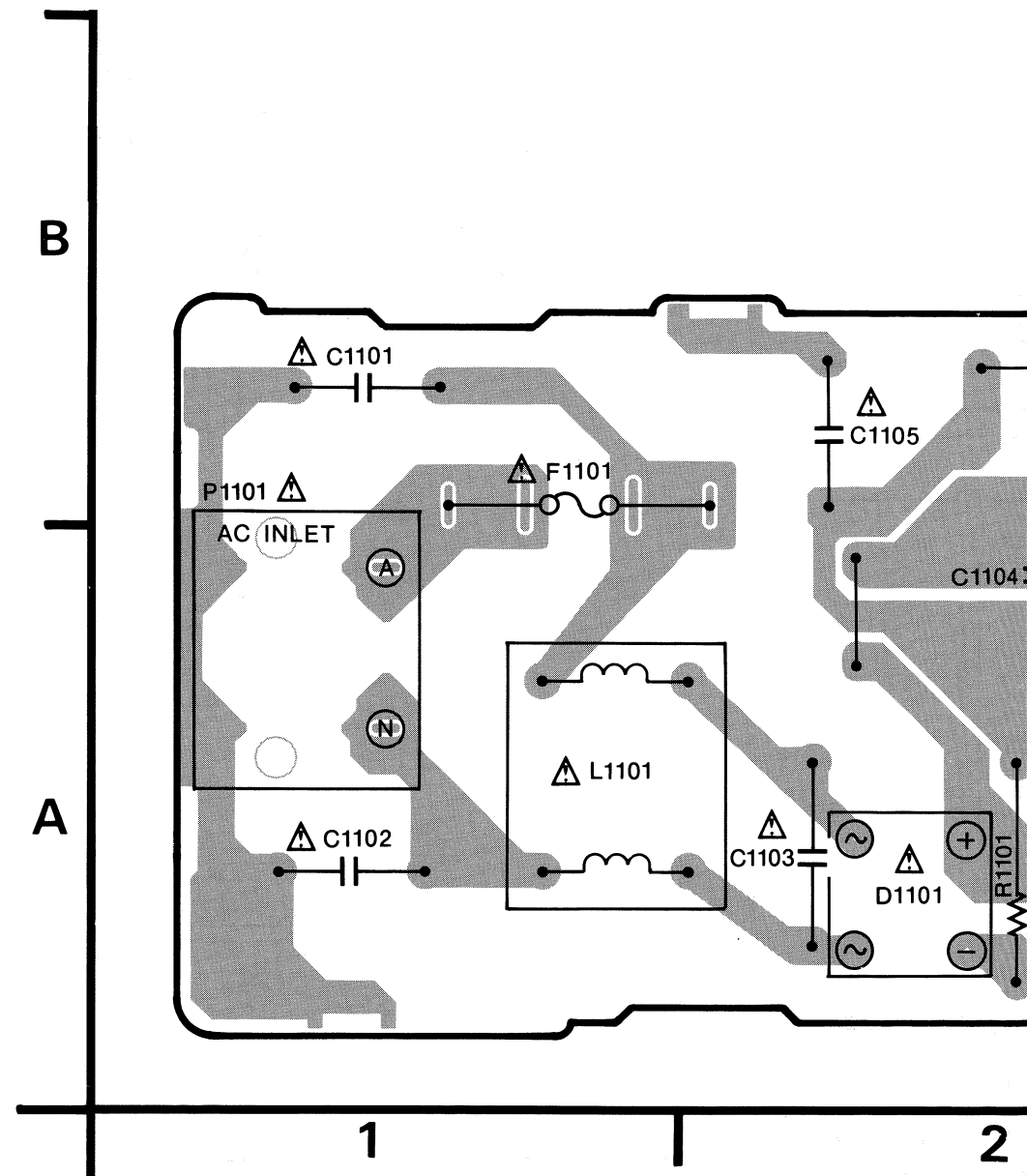
5

6

7

8

9



1

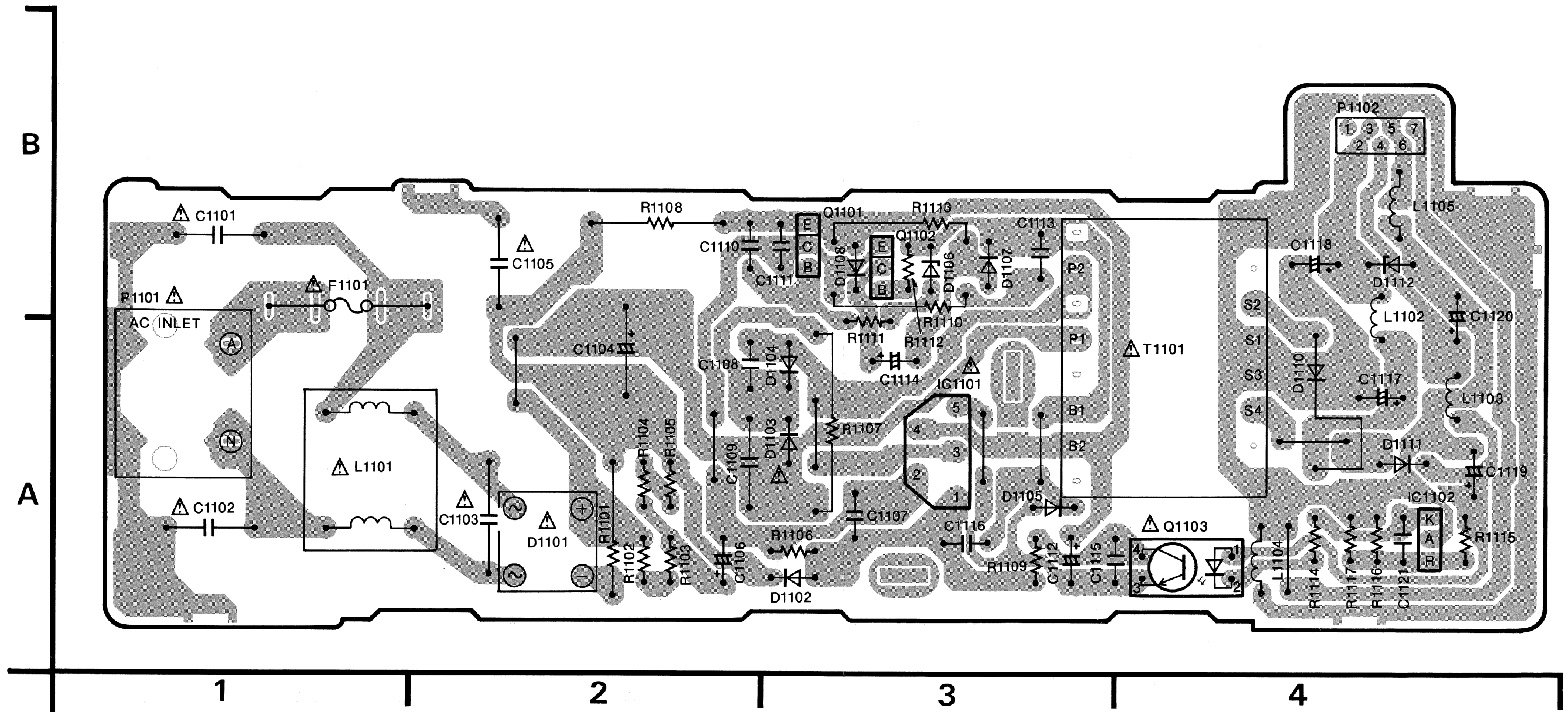
2

POWER C.B.A.	
Transistor	
Q1101	B-3
Q1102	B-3
Q1103	A-4
Integrated Circuit	
IC1101	A-3
IC1102	A-4
Connector	
P1101	B-1
P1102	B-4

ADDRESS INFORMATION

P1102 (TO SYSTEM CTL & SERVO)

1		P1001- 1
2	MOTOR UNREG	P1001- 2
3	UNREG 14V	P1001- 3
4	UNREG 5.3V	P1001- 4
5	GND	P1001- 5
6	GND	P1001- 6
7	MOTOR GND	P1001- 7

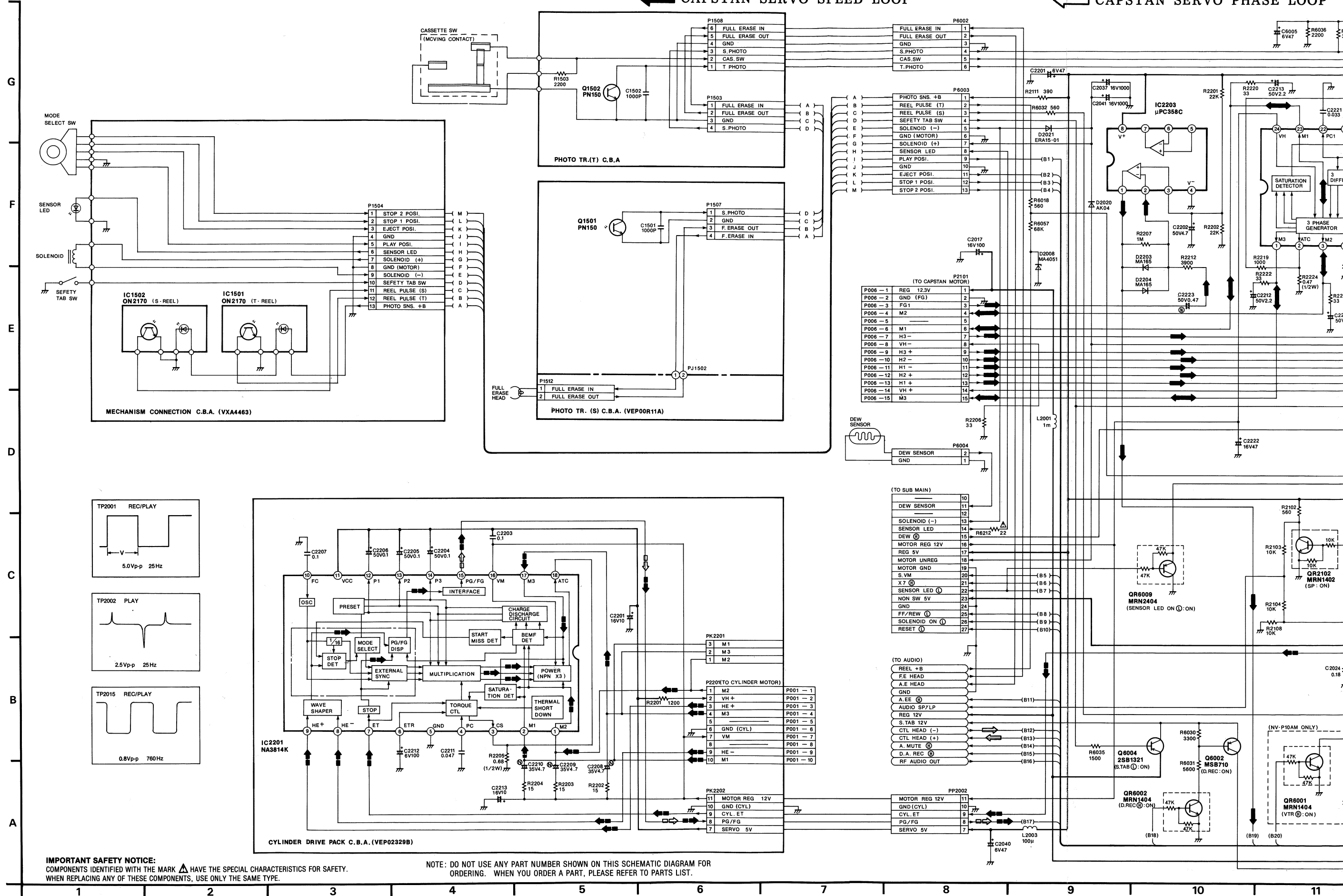


Next Page:
SYSTEM CONTROL & SERVO Section

3-5. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM

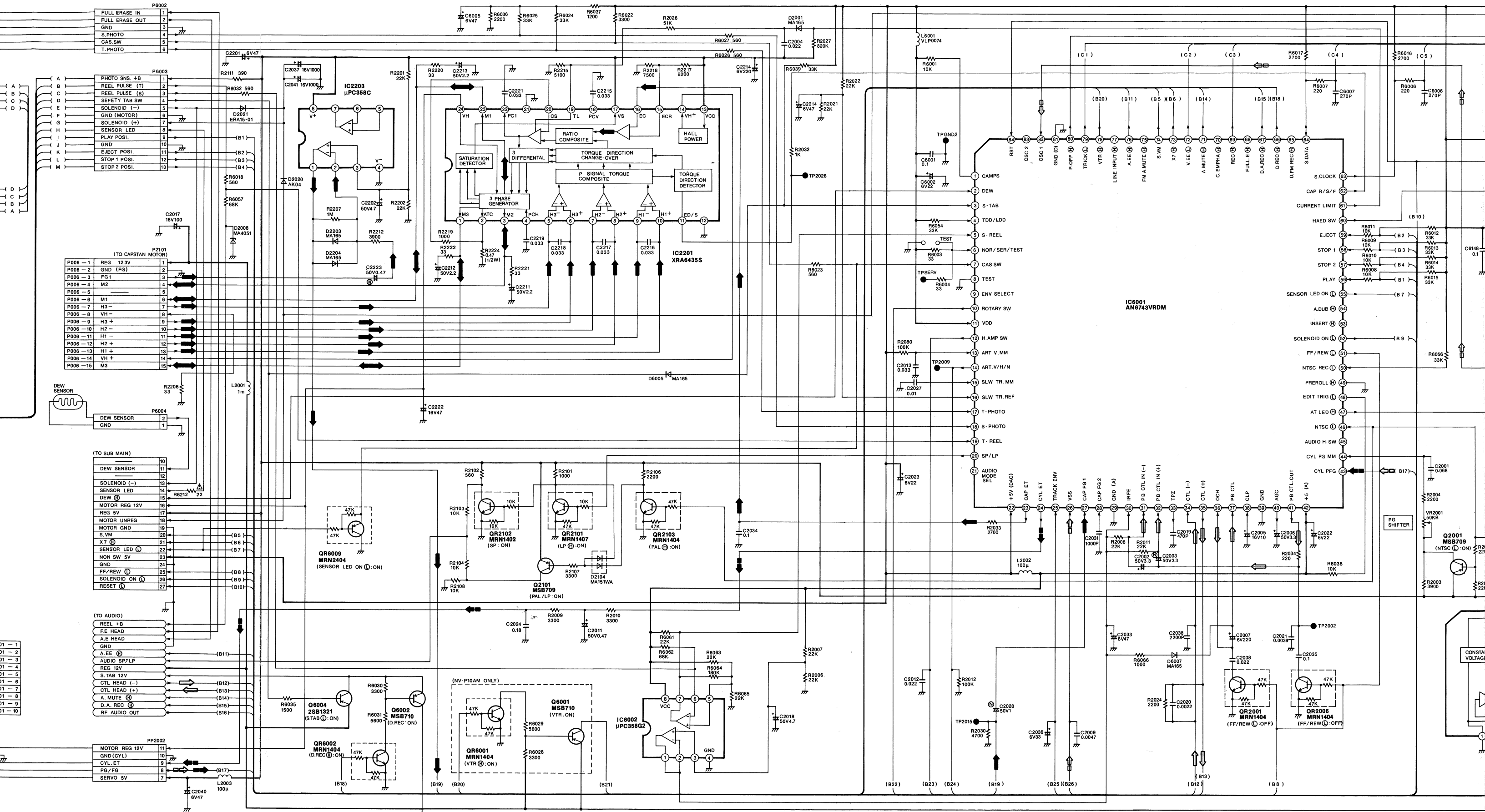
← CAPSTAN SERVO SPEED LOOP

← CAPSTAN SERVO PHASE LOOP



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



P6002

1	FULL ERASE IN
2	FULL ERASE OUT
3	GND
4	S.PHOTO
5	CAS SW
6	T.PHOTO

P6003

1	PHOTO SNS +B
2	REEL PULSE (T)
3	REEL PULSE (S)
4	SEFETY TAB SW
5	SOLENOID (-)
6	GND (MOTOR)
7	SOLENOID (+)
8	SENSOR LED
9	PLAY POSI.
10	GND
11	EJECT POSI.
12	STOP 1 POSI.
13	STOP 2 POSI.

P2101 (TO CAPSTAN MOTOR)

1	REG 12.3V
2	GND (FG)
3	FG 1
4	M2
5	
6	M1
7	H3-
8	VH-
9	H3+
10	H2-
11	H1-
12	H2+
13	H1+
14	VH+
15	M3

P6004

1	DEW SENSOR
2	GND

(TO SUB MAIN)

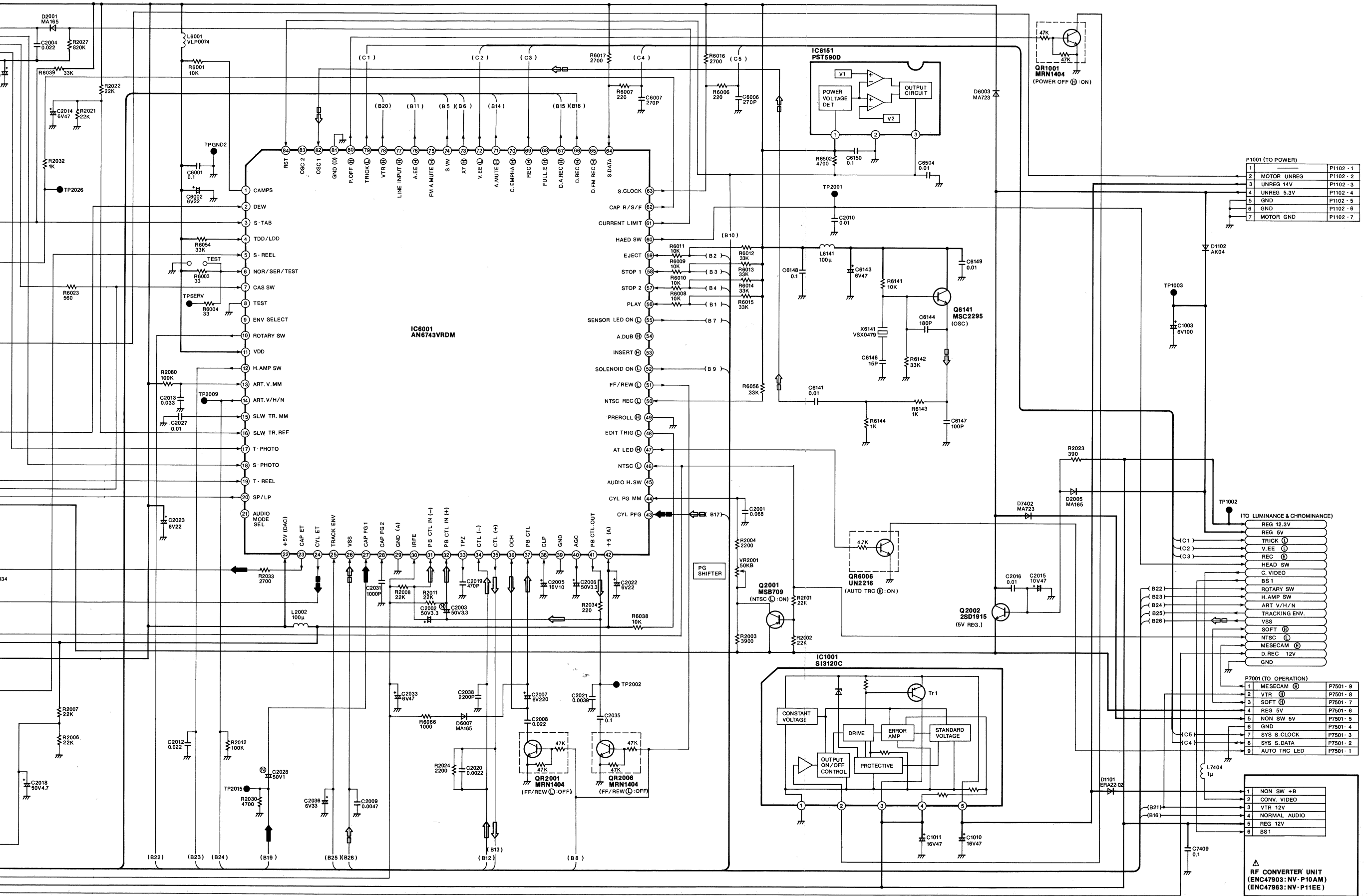
10	DEW SENSOR
11	SOLENOID (-)
12	SENSOR LED
13	DEW
14	MOTOR REG 12V
15	REG 5V
16	MOTOR UNREG
17	MOTOR GND
18	S.VM
19	X7
20	SENSOR LED
21	NON SW 5V
22	GND
23	FF/REW
24	SOLENOID ON
25	RESET

(TO AUDIO)

1	REEL +B
2	F.E HEAD
3	A.E HEAD
4	GND
5	A.EE
6	AUDIO SP/LP
7	REG 12V
8	S.TAB 12V
9	CTL HEAD (-)
10	CTL HEAD (+)
11	A.MUTE
12	D.A.REC
13	RF AUDIO OUT

PP2002

11	MOTOR REG 12V
10	GND (CYL)
9	CYL. ET
8	PG/FG
7	SERVO 5V



P1001 (TO POWER)

1		P1102 - 1
2	MOTOR UNREG	P1102 - 2
3	UNREG 14V	P1102 - 3
4	UNREG 5.3V	P1102 - 4
5	GND	P1102 - 5
6	GND	P1102 - 6
7	MOTOR GND	P1102 - 7

(TO LUMINANCE & CHROMINANCE)

REG 12.3V
REG 5V
TRICK (C1)
V.EE (C2)
REC (C3)
HEAD SW
C. VIDEO
BS 1
ROTARY SW
H. AMP SW
ART V/H/N
TRACKING ENV.
VSS
SOFT (B22)
NTSC (B23)
MESECAM (B24)
D.REC 12V (B25)
GND (B26)

P7001 (TO OPERATION)

1	MESECAM (B1)	P7501 - 9
2	VTR (B2)	P7501 - 8
3	SOFT (B3)	P7501 - 7
4	REG 5V (B4)	P7501 - 6
5	NON SW 5V (B5)	P7501 - 5
6	GND (B6)	P7501 - 4
7	SYS S.CLOCK (C5)	P7501 - 3
8	SYS S.DATA (C4)	P7501 - 2
9	AUTO TRC LED	P7501 - 1

RF CONVERTER UNIT
(ENC47903:NV-P10AM)
(ENC47963:NV-P11EE)

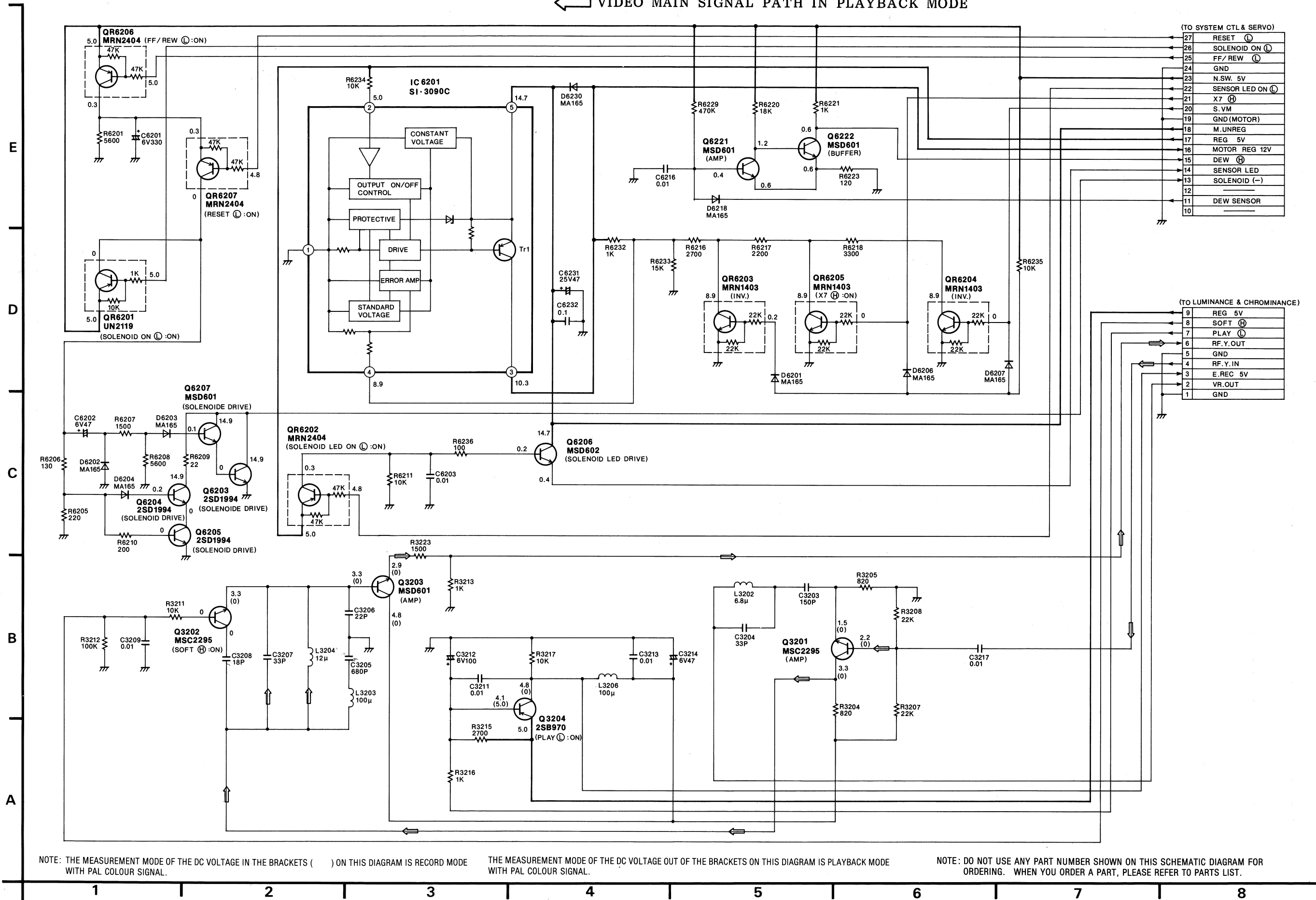
1	NON SW + B
2	CONV. VIDEO
3	VTR 12V
4	NORMAL AUDIO
5	REG 12V
6	BS 1

3-6. SUB MAIN SCHEMATIC DIAGRAM

← VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

Q6004			
B	E	C	B
12.3	12.3	12.3	11.5
12.3	12.3	12.3	11.5
12.3	12.3	12.3	11.5

QR2103			
B	E	C	B
4.5	0	0.1	5.0
4.5	0	0.1	5.0
4.5	0	0.1	5.0



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

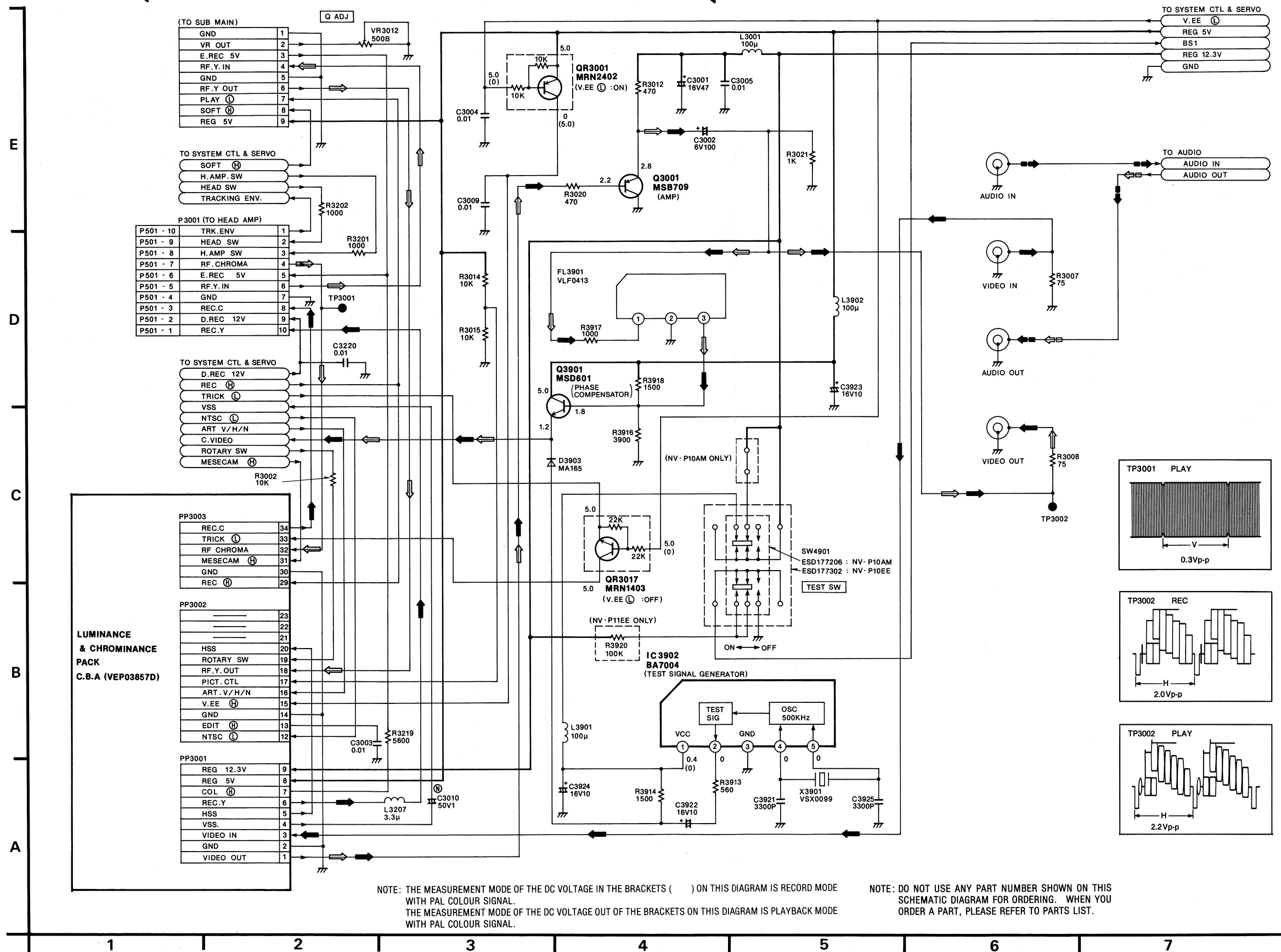
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

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

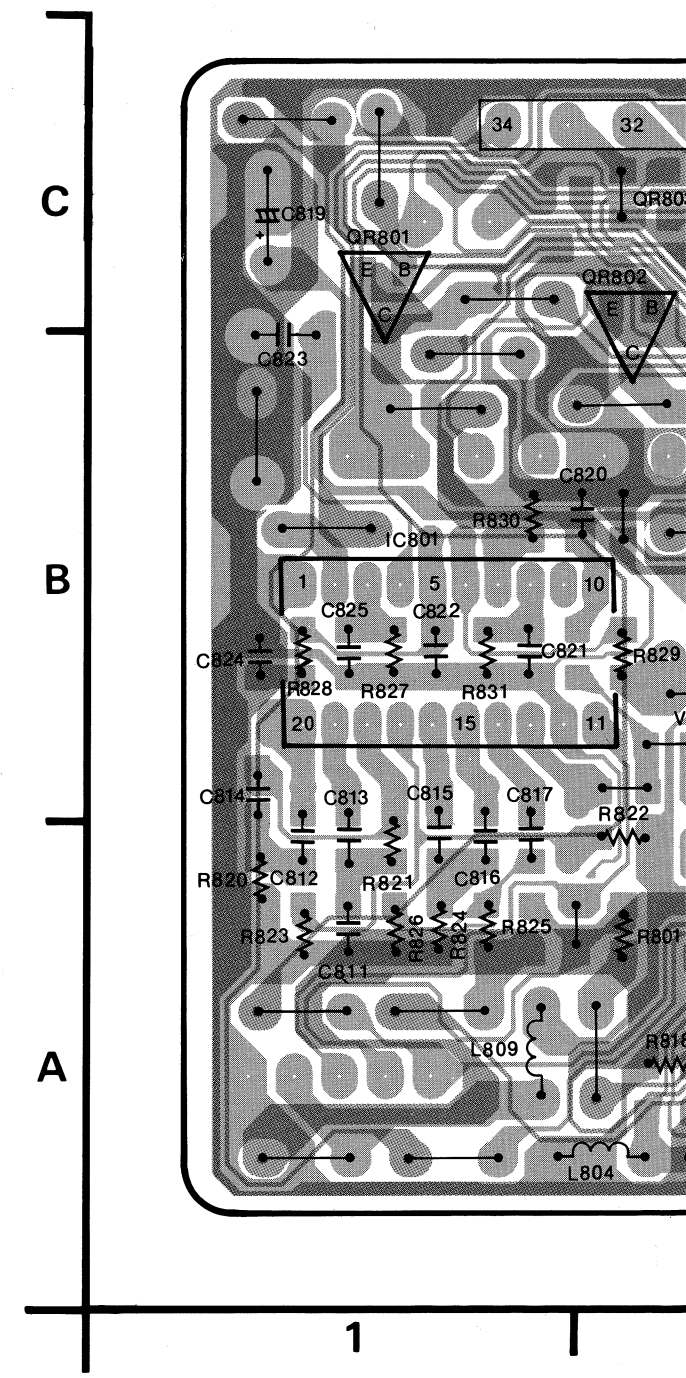
3-7. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

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



3-8. LUMINANCE & CHROMINANCE

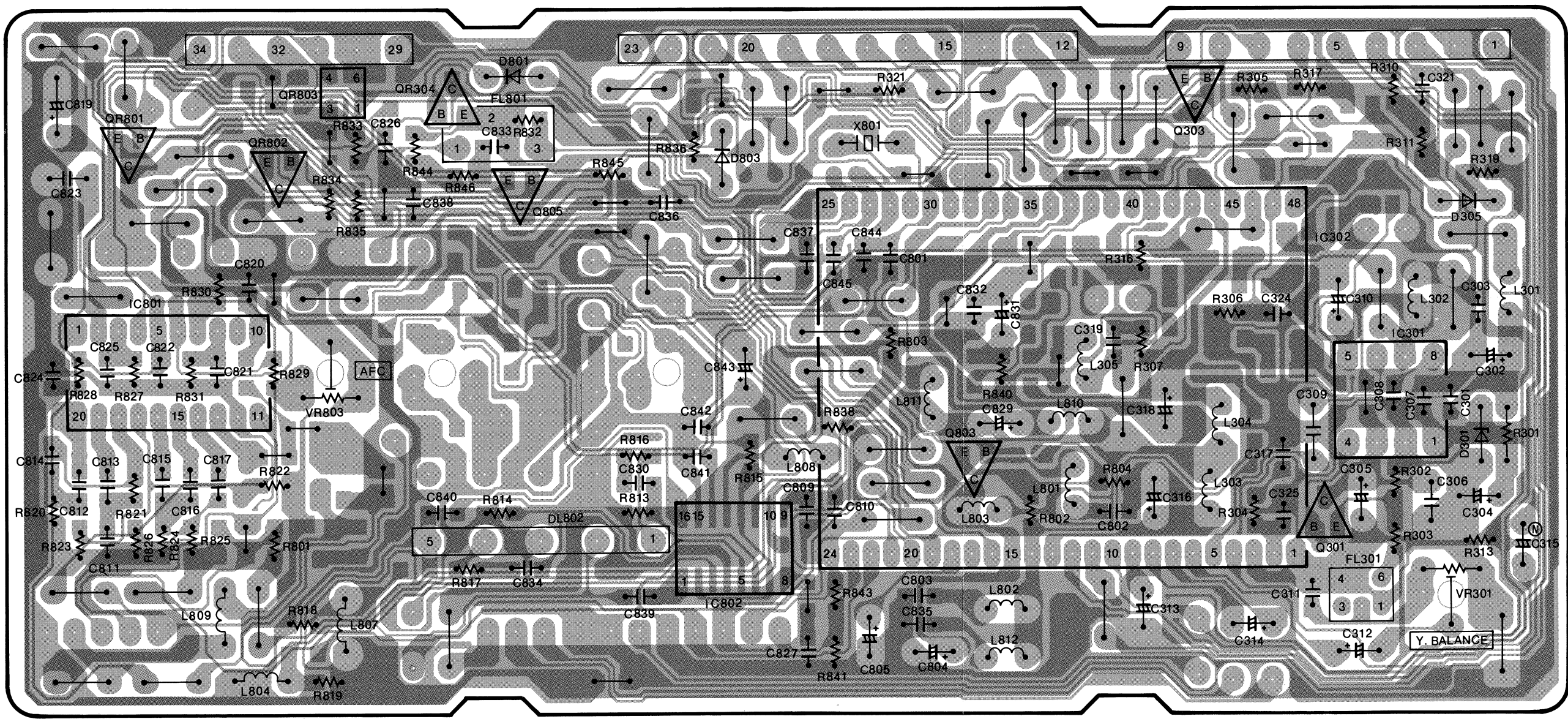


LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor		Integrated Circuit	
Q301	A-5	IC301	B-5
Q303	C-5	IC302	B-5
Q803	B-4	IC801	B-1
Q805	B-2	IC802	A-3
Transistor & Resistor		Adjustment	
QR304	C-2	VR301	A-6
QR801	C-1	VR803	B-2
QR802	C-2		
QR803	C-2		

ADDRESS INFORMATION

IC302 (VEFH14D)

PIN NO.	WAVEFORM	PIN NO.	WAVEFORM
2	0.3Vp-p (P.B.)	27	0.7Vp-p (REC)
5	0.4Vp-p (REC/P.B.)	28	0.7Vp-p (REC/P.B.)
6		29	
7	1.0Vp-p (REC/P.B.)	30	0.2Vp-p (REC/P.B.)
8		31	
10	2.2Vp-p (REC/P.B.)	39	5.0Vp-p (REC/P.B.)
12		40	
14	0.8Vp-p (P.B.)	41	0.4Vp-p (P.B.)
20		42	
22	0.4Vp-p (REC) 0.44Vp-p (P.B.)	43	0.9Vp-p (REC)
23		44	
24	1.0Vp-p (REC/P.B.)	48	5.0Vp-p (REC/P.B.)
26		49	



1 | 2 | 3 | 4 | 5 | 6

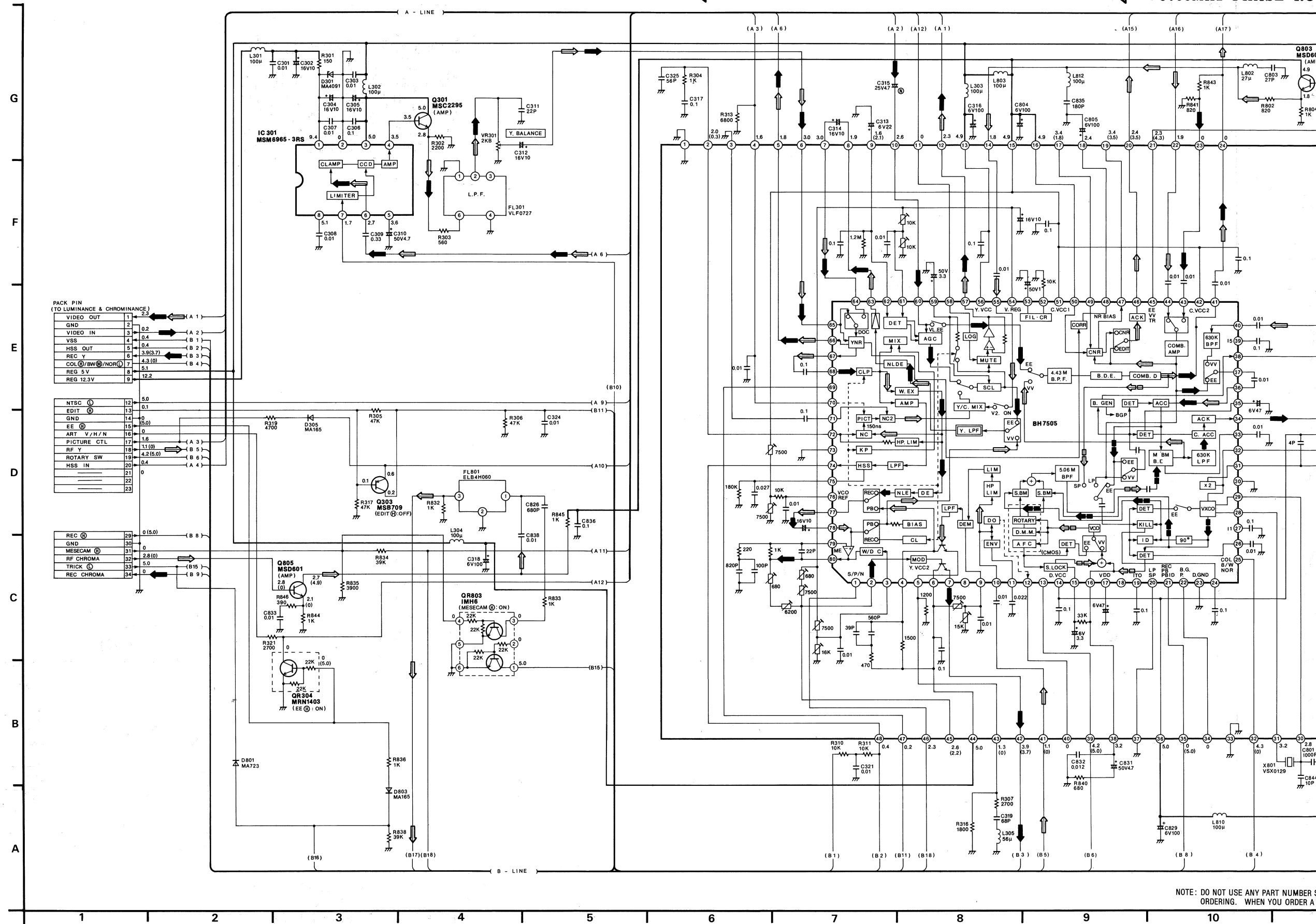
3-9. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM

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

5.06MHz PHASE RO
 5.06MHz PHASE RO

LUMINANCE & CHROMINANCE PACK PIN

PIN NO.	WAVEFORM
1	2.2Vp-p (REC/P.B)
3	1.0Vp-p (REC/P.B)
4	2.0Vp-p (REC/P.B)
5	5.0Vp-p (REC/P.B)
6	0.9Vp-p (REC)
18	0.4Vp-p (P.B)
19	5.0Vp-p (REC/P.B)
20	4.8Vp-p (REC/P.B)
32	0.25Vp-p (P.B)
34	0.7Vp-p (REC)



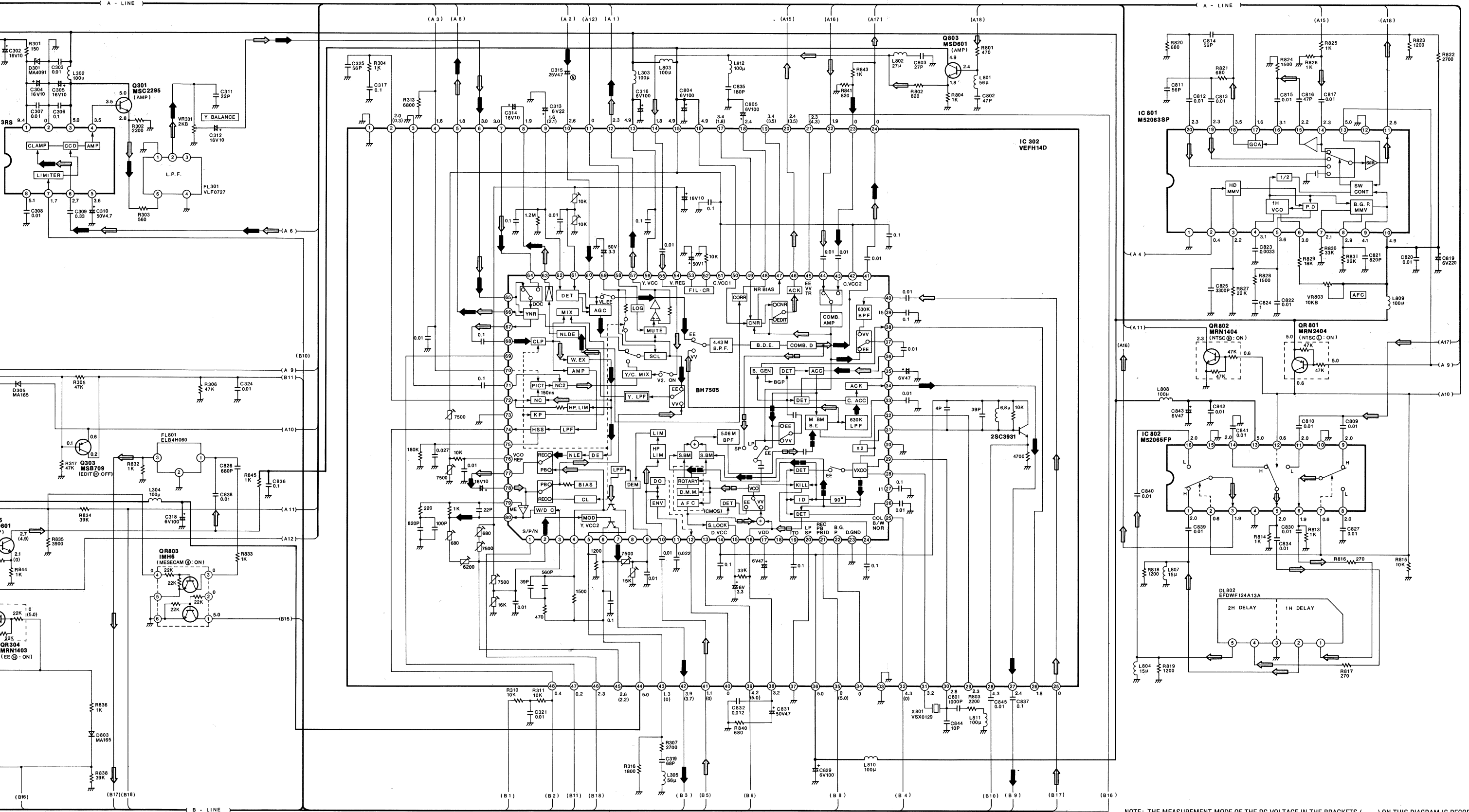
NOTE: DO NOT USE ANY PART NUMBER ORDERING. WHEN YOU ORDER A

FINANCE PACK SCHEMATIC DIAGRAM

LUMINANCE & CHROMINANCE Section

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

5.06MHz PHASE ROTATIONAL SIGNAL IN REC MODE
 5.06MHz PHASE ROTATIONAL SIGNAL IN PLAYBACK MODE



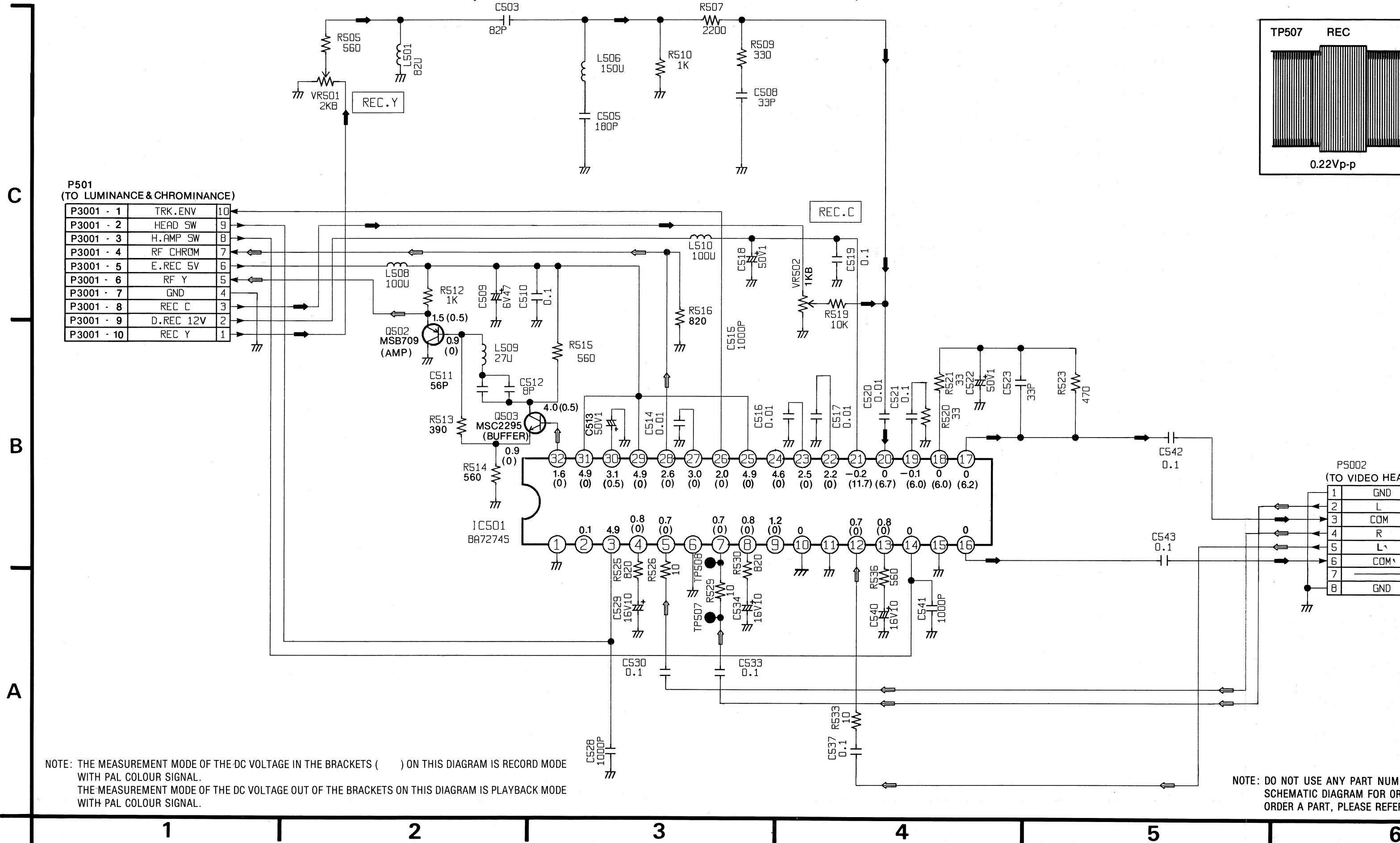
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
 THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

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

3-10. HEAD AMP SCHEMATIC DIAGRAM

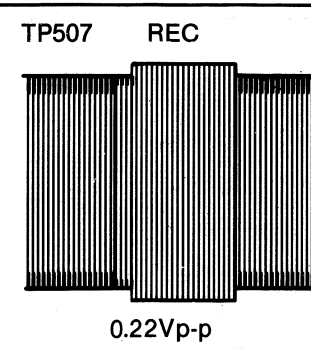
← MAIN SIGNAL PATH IN REC MODE

← MAIN SIGNAL PATH IN PLAYBACK MODE



P501
(TO LUMINANCE & CHROMINANCE)

P3001 - 1	TRK. ENV	10
P3001 - 2	HEAD SW	9
P3001 - 3	H. AMP SW	8
P3001 - 4	RF CHROM	7
P3001 - 5	E. REC 5V	6
P3001 - 6	RF Y	5
P3001 - 7	GND	4
P3001 - 8	REC C	3
P3001 - 9	D. REC 12V	2
P3001 - 10	REC Y	1



P5002
(TO VIDEO HEAD)

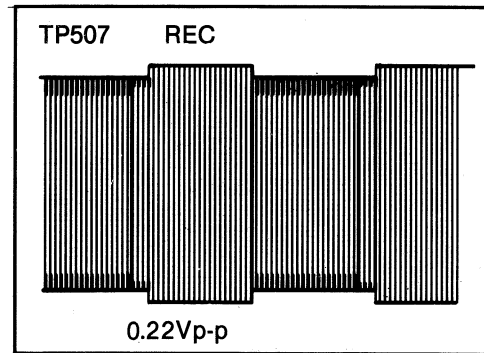
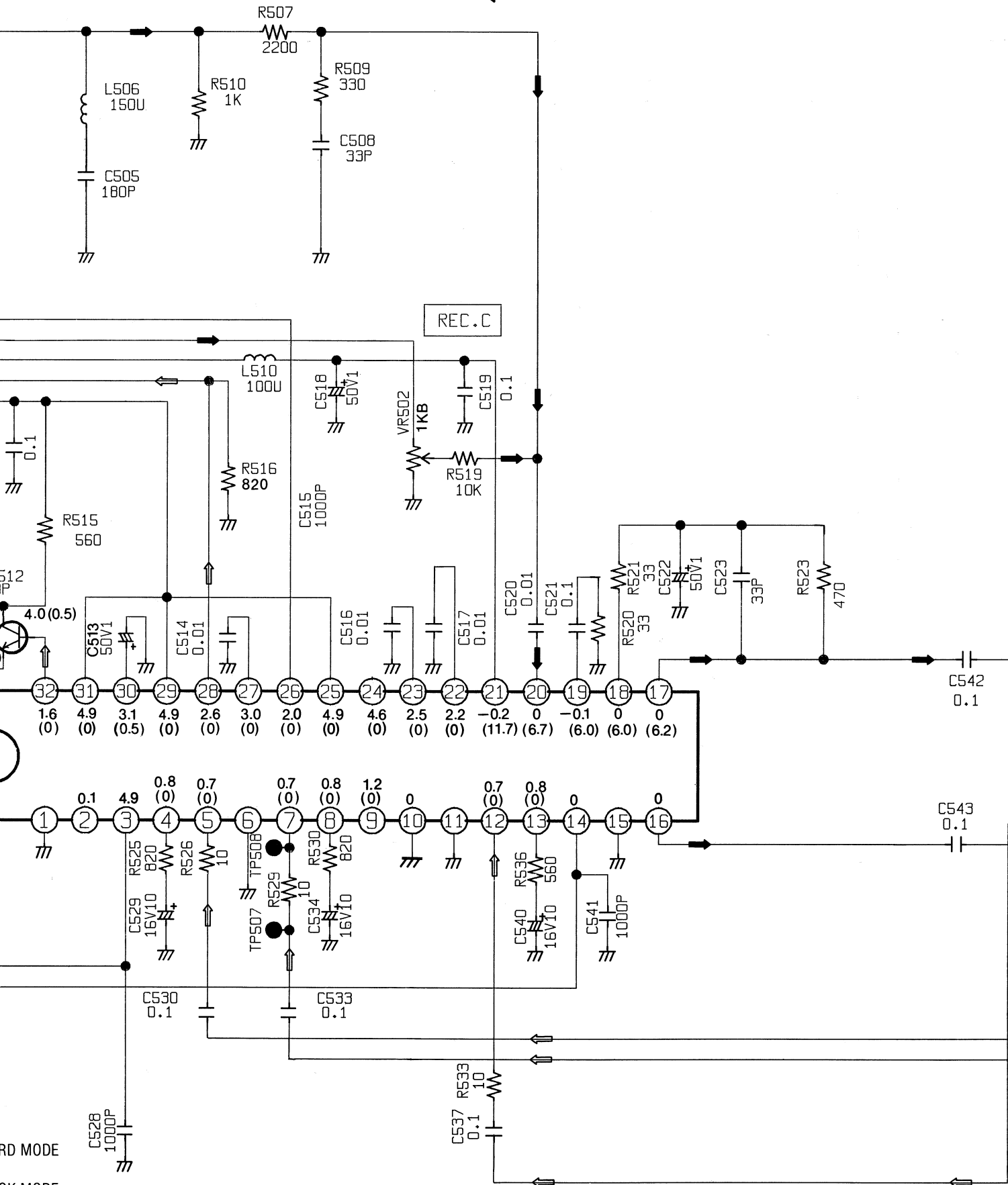
1	GND
2	L
3	COM
4	R
5	L'
6	COM'
7	
8	GND

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

NOTE: DO NOT USE ANY PART NUMBER FROM THIS SCHEMATIC DIAGRAM FOR ORDERING A PART, PLEASE REFER TO THE PART LIST.

MAIN SIGNAL PATH IN REC MODE

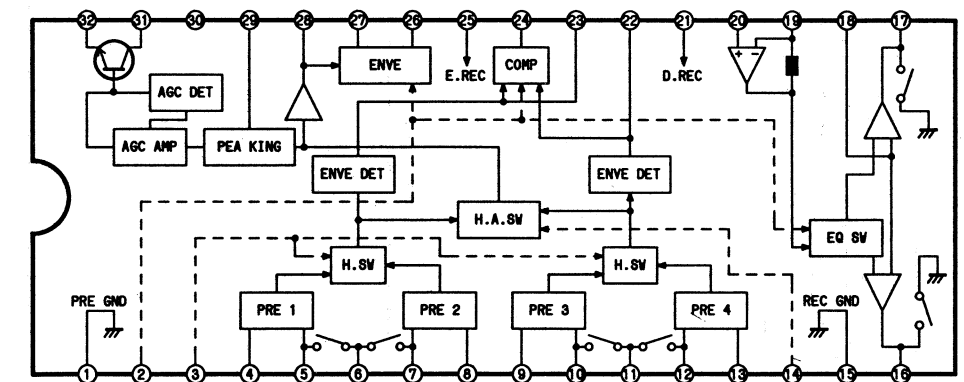
← MAIN SIGNAL PATH IN PLAYBACK MODE



PS002
(TO VIDEO HEAD)

1	GND
2	L
3	COM
4	R
5	L
6	COM
7	
8	GND

**IC BLOCK
IC501 (BA7274S)**



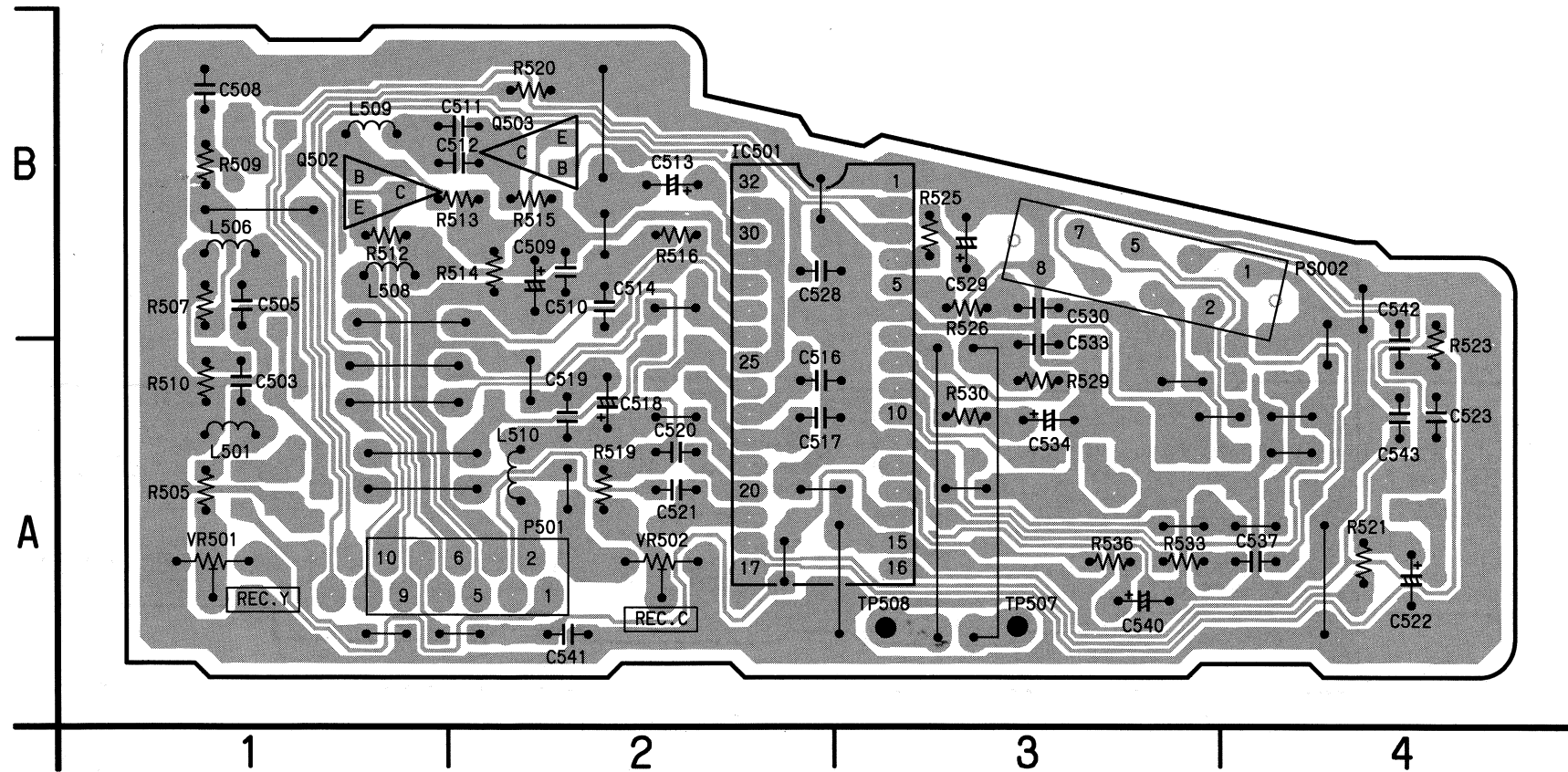
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3 | 4 | 5 | 6

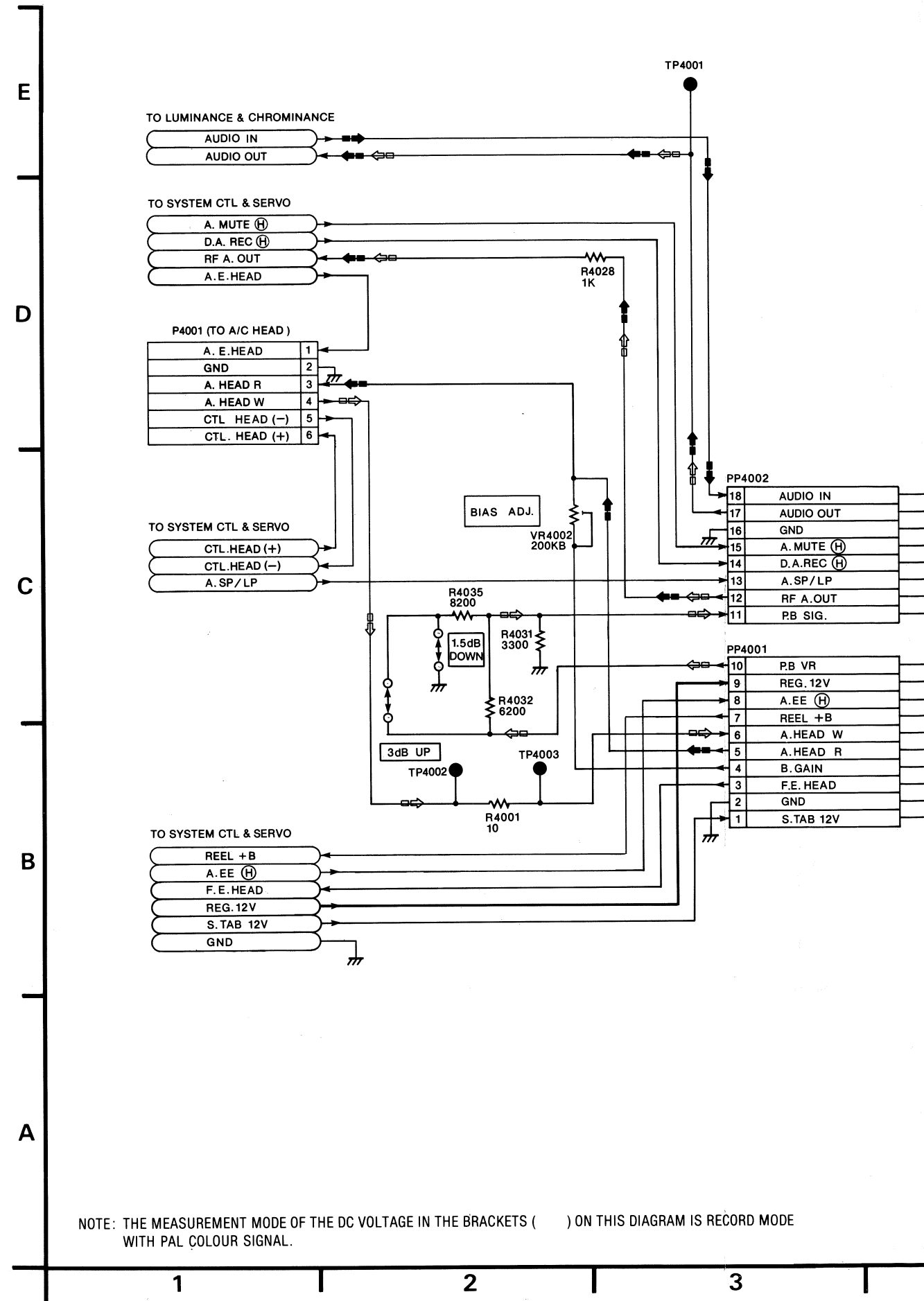
3-11. HEAD AMP C.B.A. (VEP05167D)

HEAD AMP C.B.A.			
Transistor		Adjustment	
Q502	B-1	VR501	A-1
Q503	B-2	VR502	A-2
Integrated Circuit		Connector	
IC501	B-2	P501	A-2
Test point		PS002	B-4
TP507	A-3		
TP508	A-3		

ADDRESS INFORMATION



3-12. AUDIO & AUDIO PACK SCHEMATIC DIAGRAM

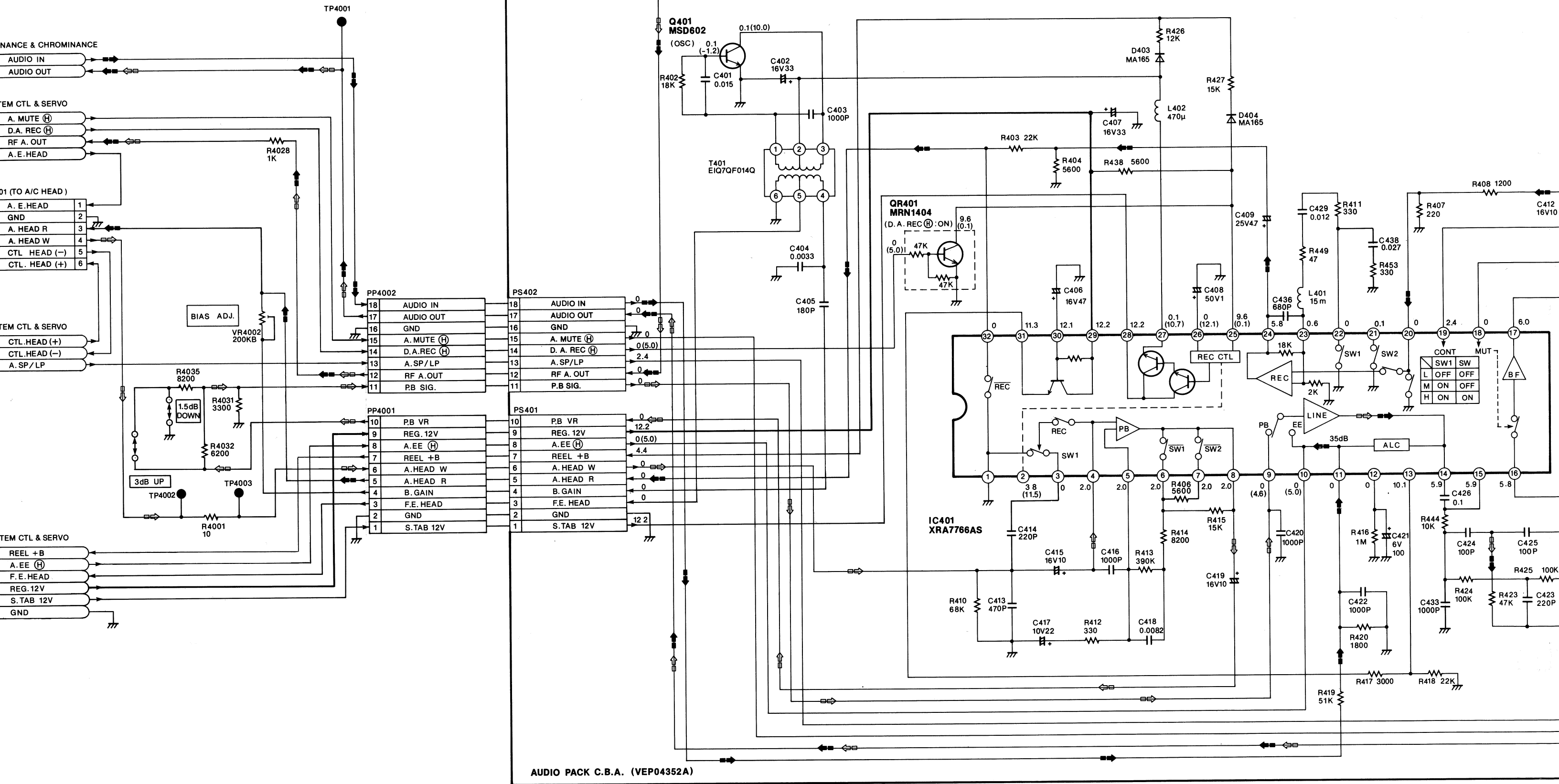


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.

AUDIO PACK SCHEMATIC DIAGRAM

← MAIN SIGNAL PATH IN REC MODE

← MAIN SIGNAL PATH IN PLAYBACK MODE



AUDIO PACK C.B.A. (VEP04352A)

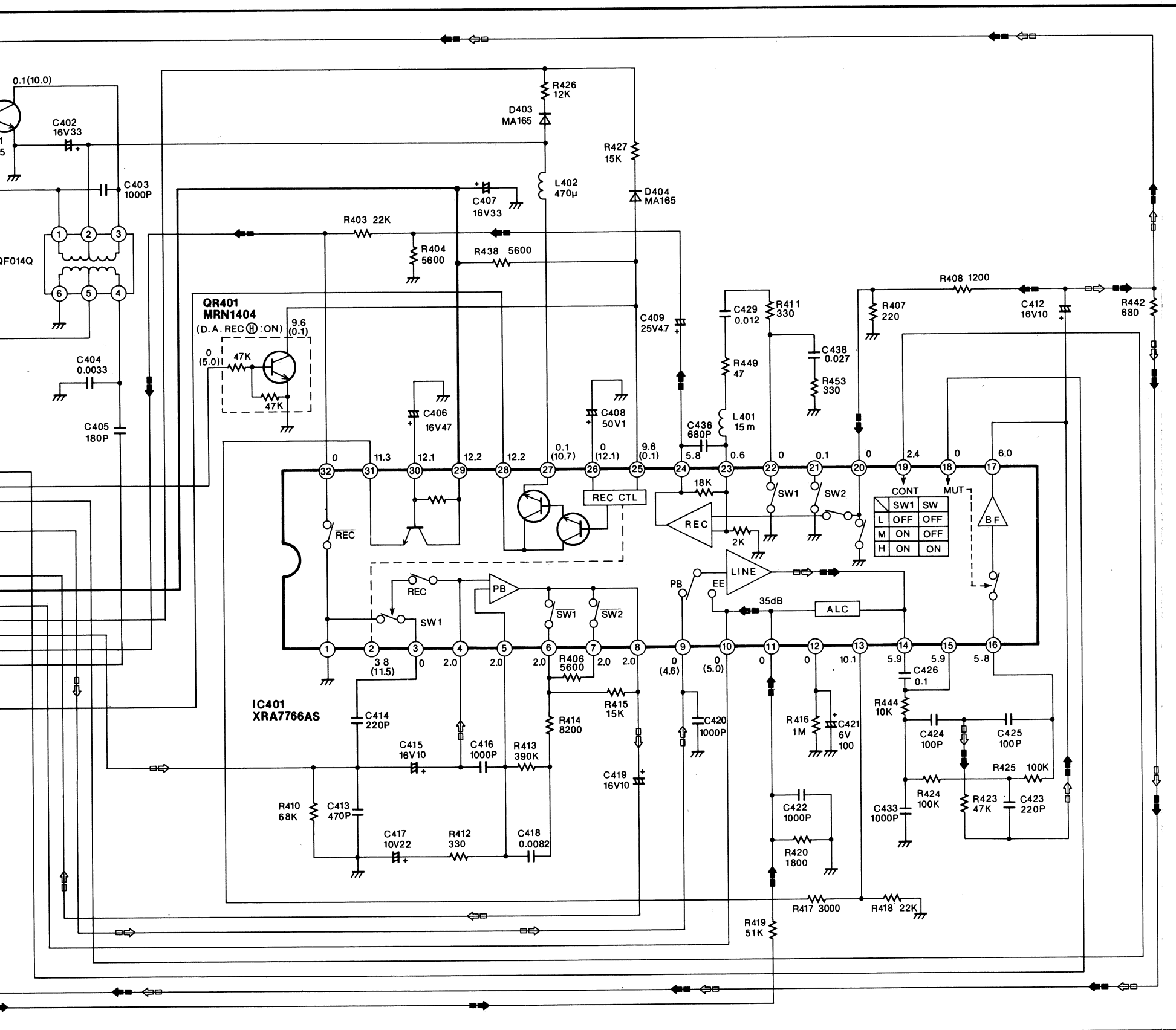
MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.

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

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGES ARE FOLLOWING CONDITION.
• LINE IN SIGNAL LEVEL... -10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER FROM ANOTHER SCHEMATIC DIAGRAM FOR ORDER A PART, PLEASE REFERENCE TO THIS SCHEMATIC.

3-13. AUDIO PACK C.B.A.
(VEP04352A)



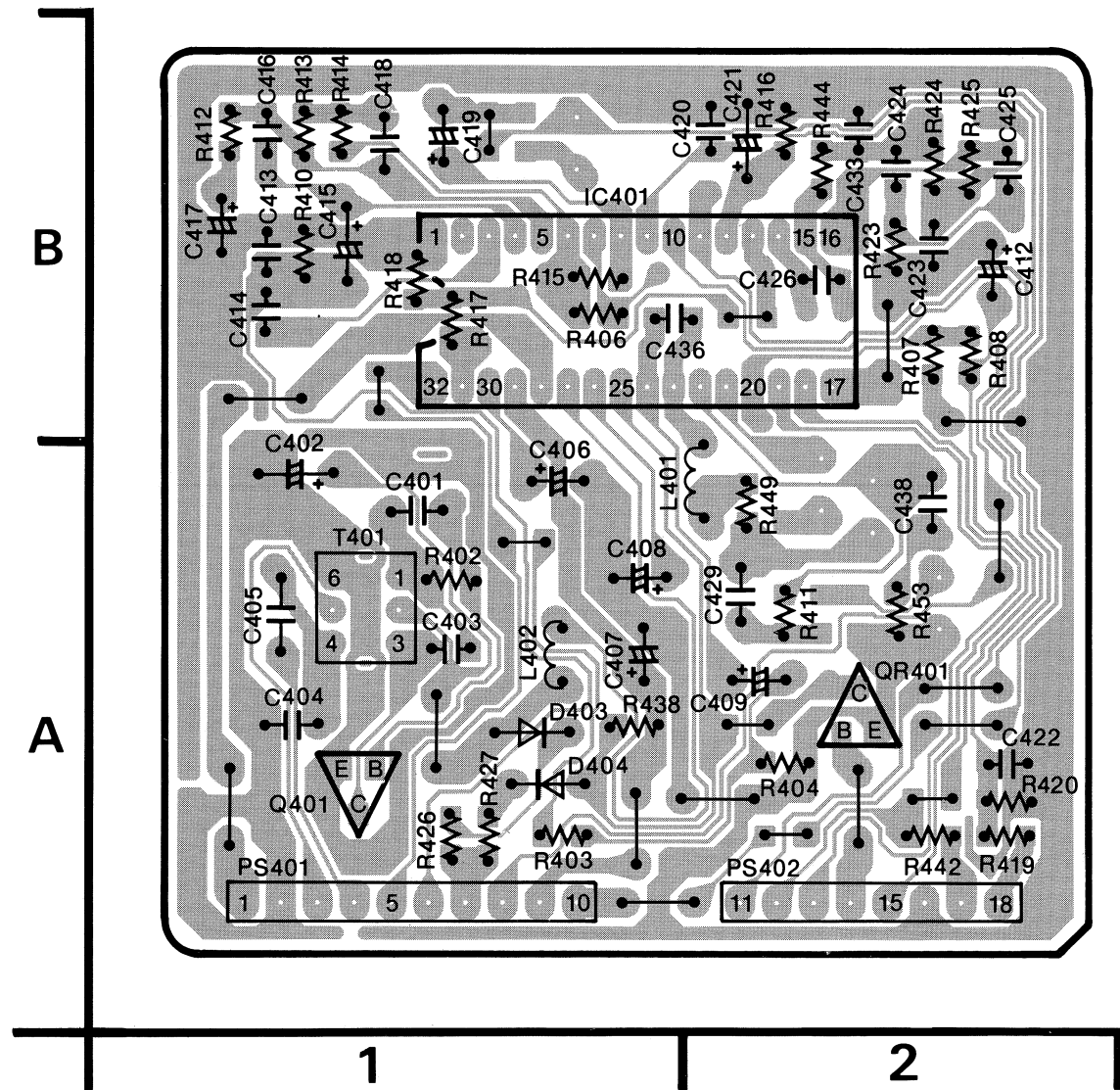
THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGES ARE FOLLOWING CONDITION.
• LINE IN SIGNAL LEVEL... - 10dB 1kHz

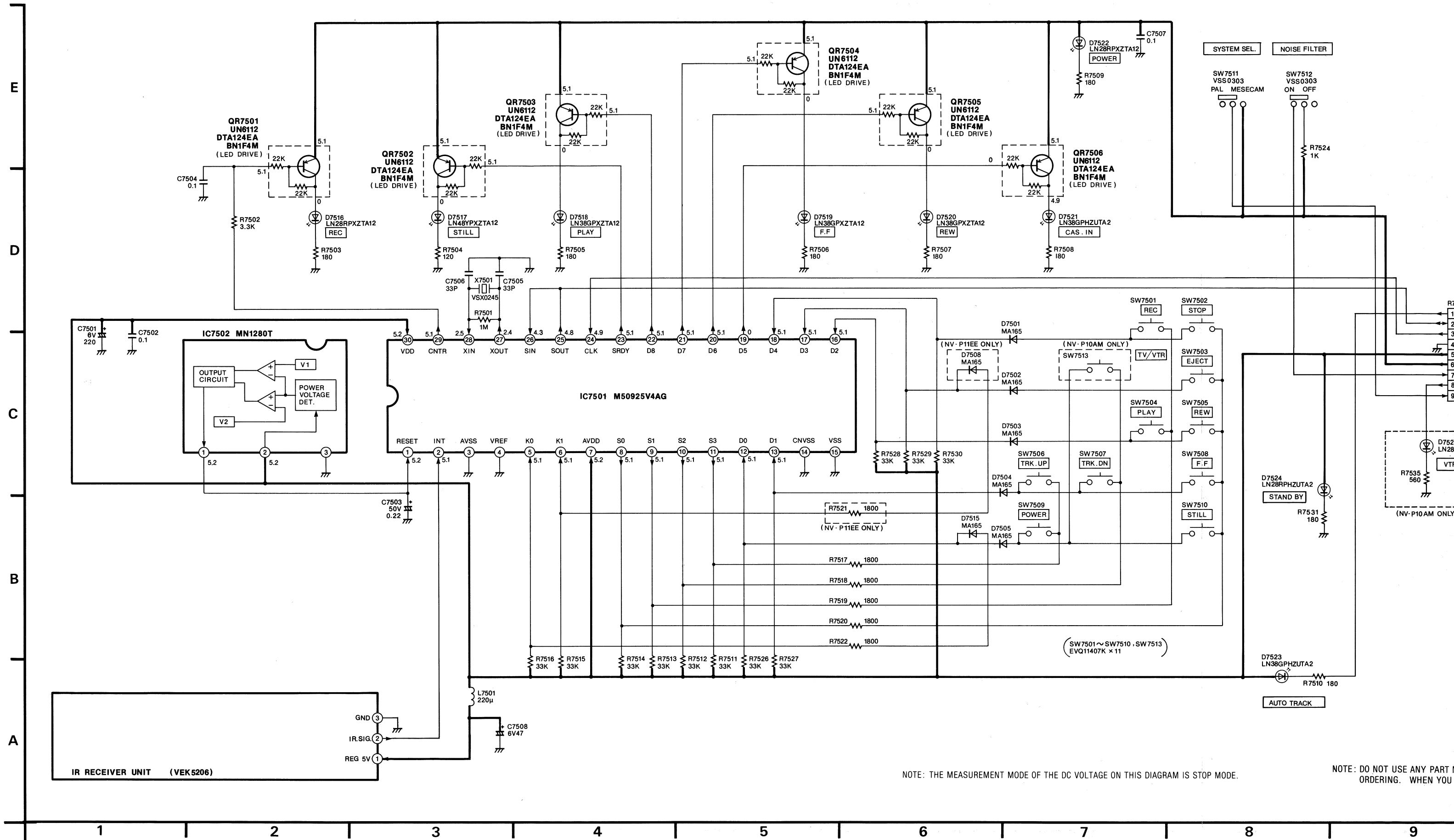
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

AUDIO PACK C.B.A.	
Transistor	
Q401	A-1
Transistor & Resistor	
QR401	A-2
Integrated Circuit	
IC401	B-1
Connector	
PS401	A-1
PS402	A-2

ADDRESS INFORMATION



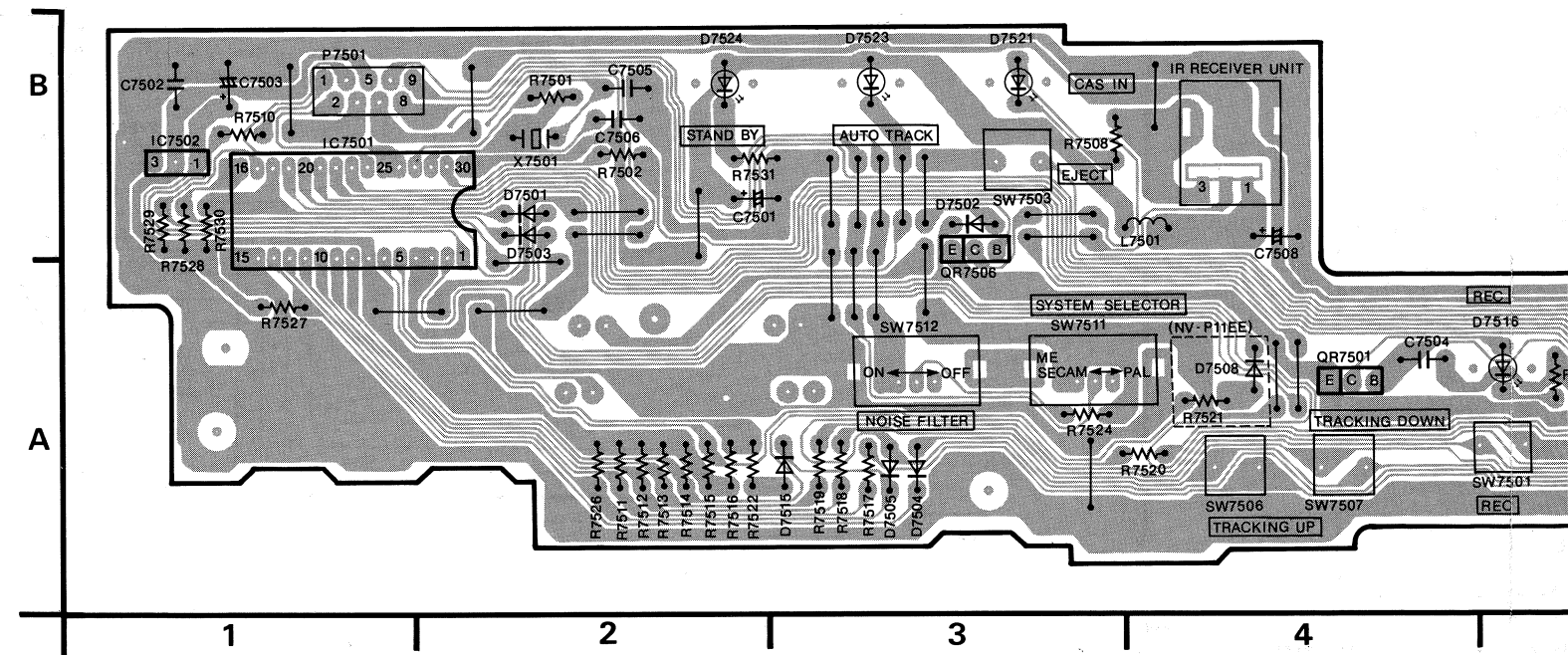
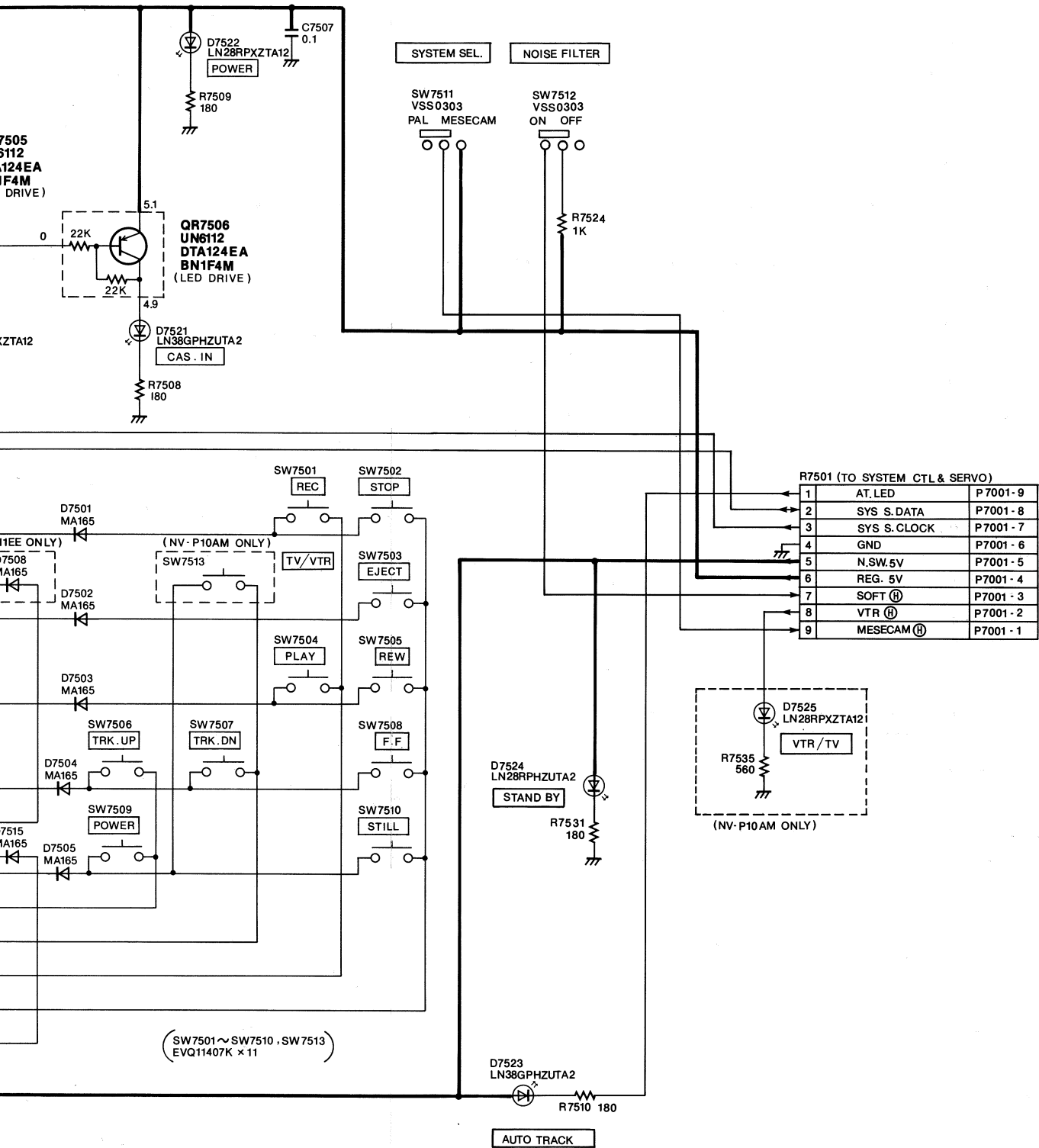
3-14. OPERATION SCHEMATIC DIAGRAM



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

NOTE: DO NOT USE ANY PART NUMBER ORDERING. WHEN YOU ORDER...

3-15. OPERATION C.B.A. (VEP06756A: NV-P10AM) (VEP06756B: NV-P11EE)

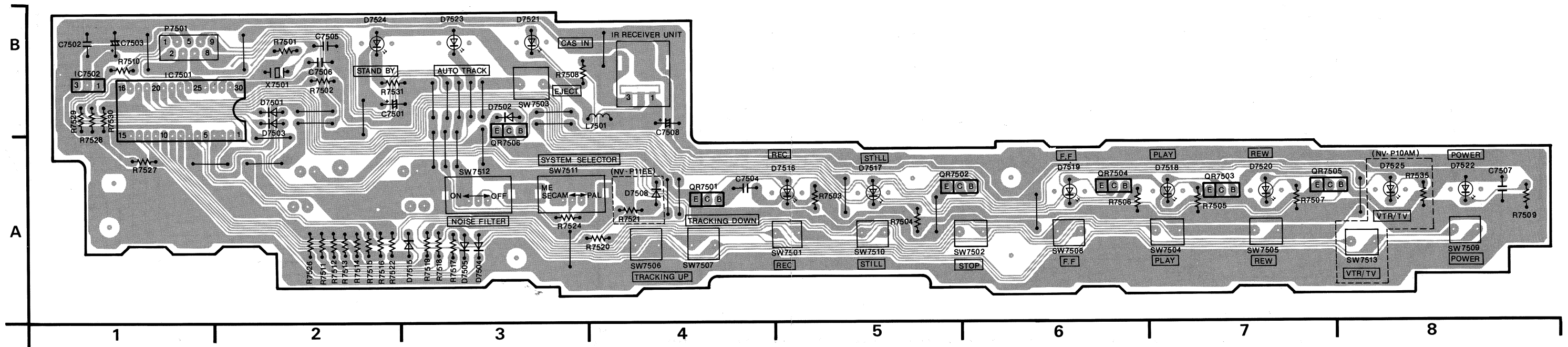


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

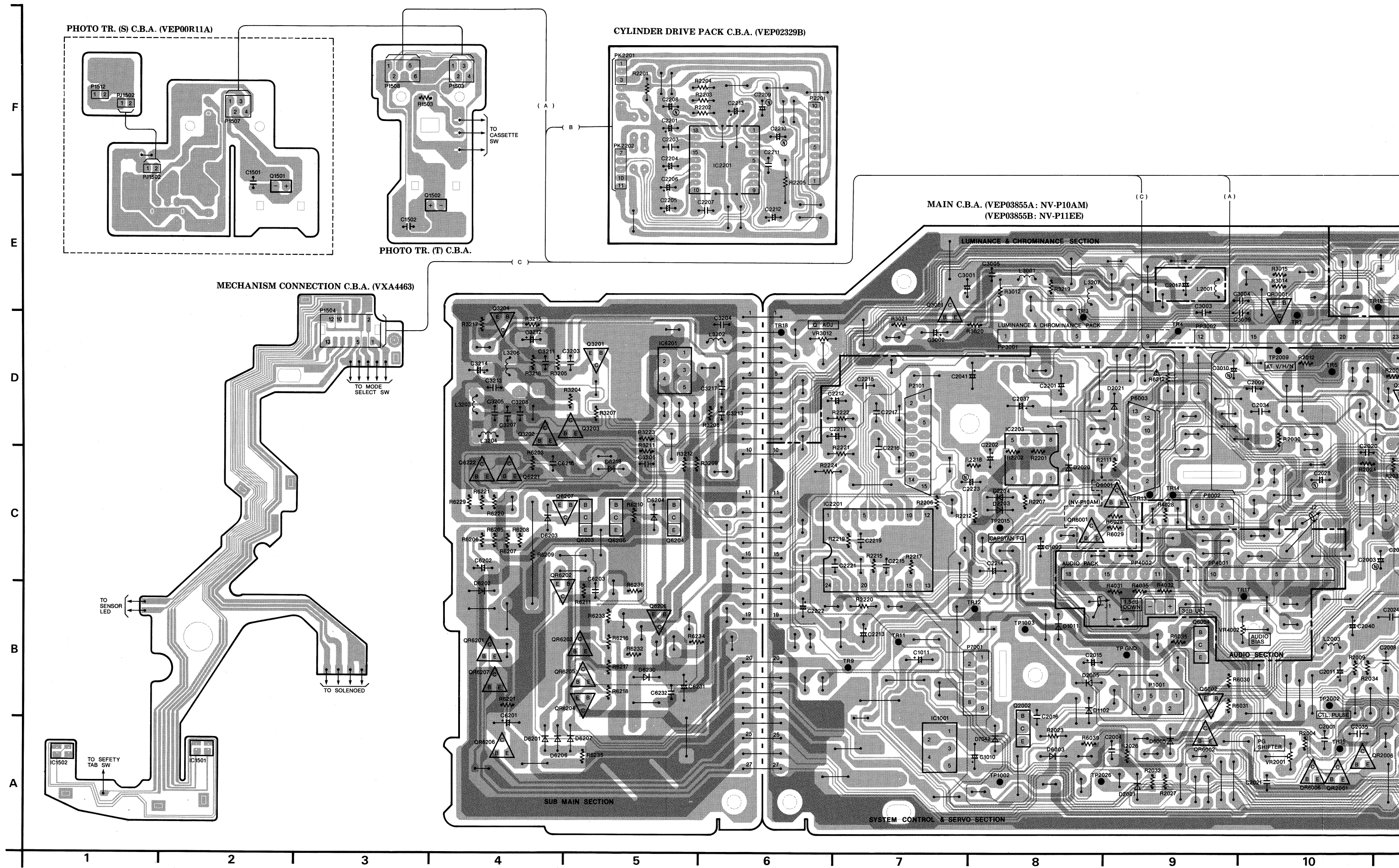
3-15. OPERATION C.B.A. (VEP06756A: NV-P10AM) (VEP06756B: NV-P11EE)

OPERATION C.B.A.			
Transistor & Resistor		Integrated Circuit	
QR7501	A-4	IC7501	B-1
QR7502	A-5	IC7502	B-1
QR7503	A-7	Connector	
QR7504	A-6		
QR7505	A-7	P7501	B-1
QR7506	A-3		

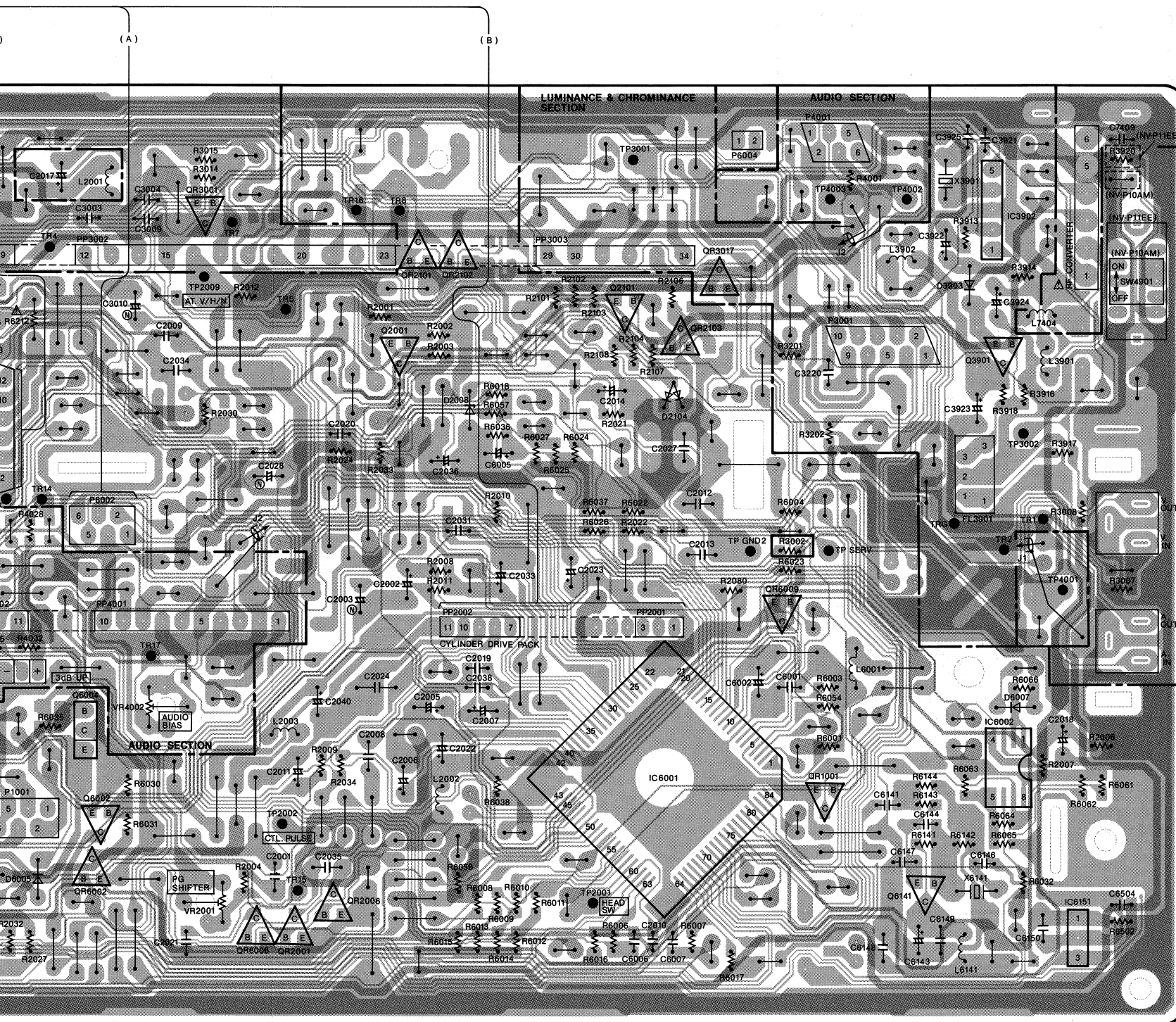
ADDRESS INFORMATION



3-16. MAIN C.B.A. (VEP03855A: NV-P10AM) (VEP03855B: NV-P11EE)



MAIN C.B.A. ADDRESS INFORMATION



SYSTEM CONTROL & SERVO Section	
Transistor	
Q1501	E-2
Q1502	E-4
Q2001	D-11
Q2002	B-8
Q2101	D-12
Q6001	C-9
Q6002	B-9
Q6004	B-9
Q6141	A-13
Transistor & Resistor	
QR1001	B-13
QR2001	A-10
QR2006	A-10
QR2101	D-11
QR2102	D-11
QR2103	D-12
QR6001	C-8
QR6002	A-9
QR6006	A-10
QR6009	C-13
Integrated Circuit	
IC1001	A-7
IC1501	A-2
IC1502	A-1
IC2201	F-6
IC2201	C-6
IC2203	D-8
IC6001	B-12
IC6002	B-14
IC6151	A-14
Test Point	
TP1002	A-8
TP1003	B-8
TP2001	A-12
TP2002	B-10
TP2009	D-10
TP2015	C-8
TP2026	A-8
TPSERV	C-13
TPGND	B-9
TPGND2	C-12
Adjustment	
VR2001	A-10
Connector	
P1001	B-9
P1503	F-4
P1504	D-3
P1507	F-2
P1508	F-3
P1512	F-1
P2101	D-7
P2201	F-6
P6002	C-9
P6003	D-9
P6004	E-12
PJ1502	F-1
PK2201	F-5
PK2202	F-5
PP2001	C-12
PP2002	C-11

ADDRESS INFORMATION

SUB MAIN Section	
Transistor	
Q3201	D-5
Q3202	D-4
Q3203	D-5
Q3204	D-4
Q6203	C-5
Q6204	C-5
Q6205	C-5
Q6206	B-5
Q6207	C-5
Q6221	C-4
Q6222	C-4
Transistor & Resistor	
QR6201	B-4
QR6202	C-5
QR6203	B-5
QR6204	B-5
QR6205	B-5
QR6206	A-4
QR6207	B-4
Integrated Circuit	
IC6201	D-5

ADDRESS INFORMATION

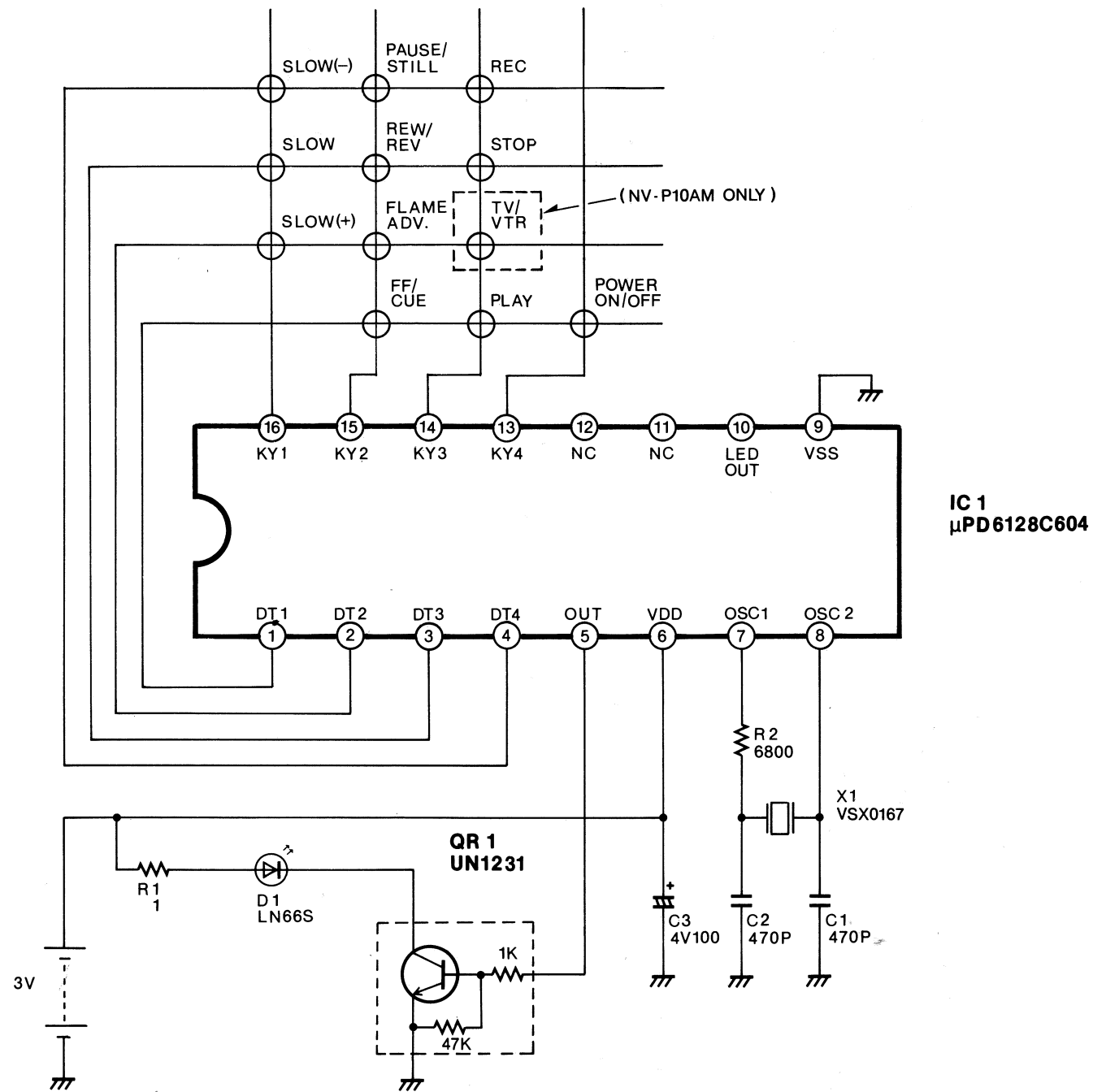
AUDIO Section	
Test Point	
TP4001	C-14
TP4002	E-13
TP4003	E-13
Adjustment	
VR4002	B-9
Connector	
P4001	E-13
PP4001	C-9
PP4002	C-9

ADDRESS INFORMATION

LUMINANCE & CHROMINANCE Section	
Transistor	
Q3001	E-7
Q3901	D-14
Transistor & Resistor	
QR3001	E-10
QR3017	D-12
Integrated Circuit	
IC3902	D-14
Test Point	
TP3001	E-12
TP3002	C-14
Adjustment	
VR3012	D-6
Connector	
P3001	D-13
PP3001	E-8
PP3002	E-9
PP3003	D-12

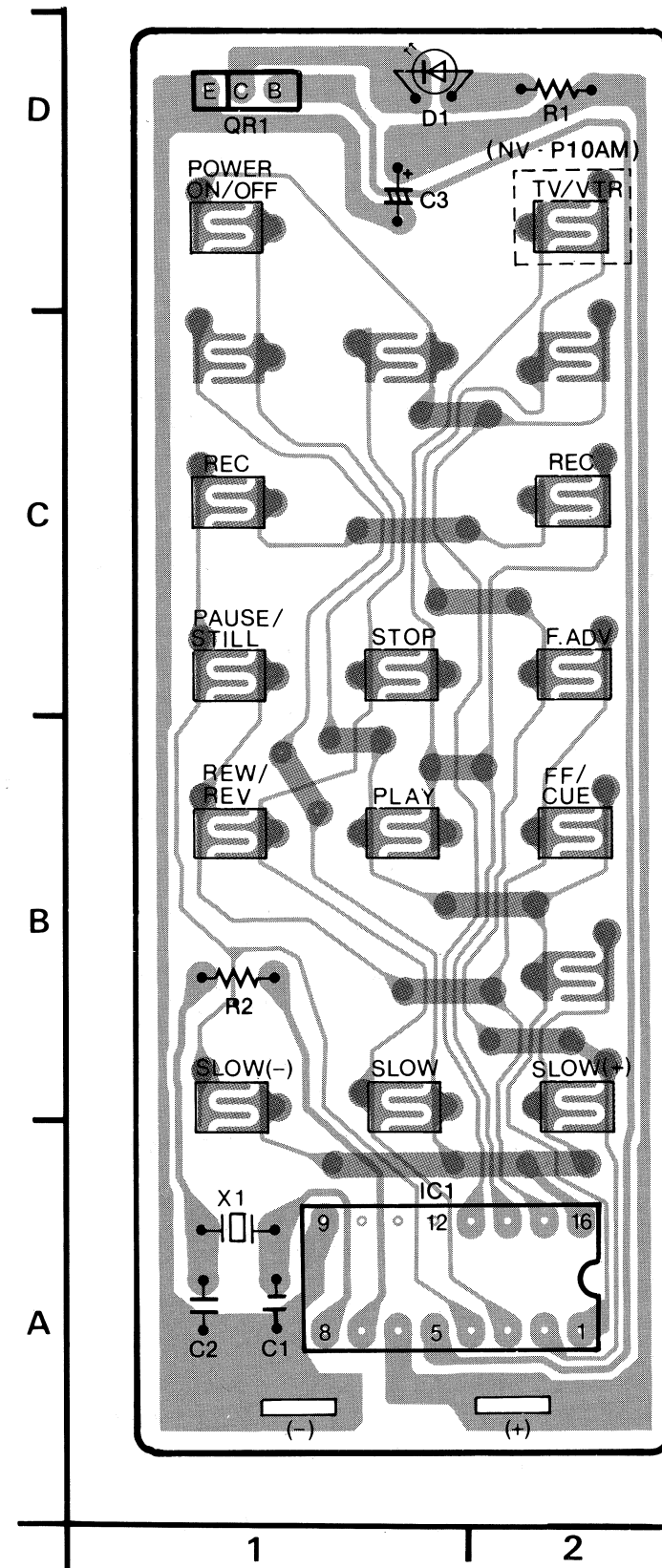
ADDRESS INFORMATION

3-17. REMOTE CONTROLLER SCHEMATIC DIAGRAM
 — UNIT NO.: VEQ1277 (NV-P10AM), VEQ1294 (NV-P11EE) —

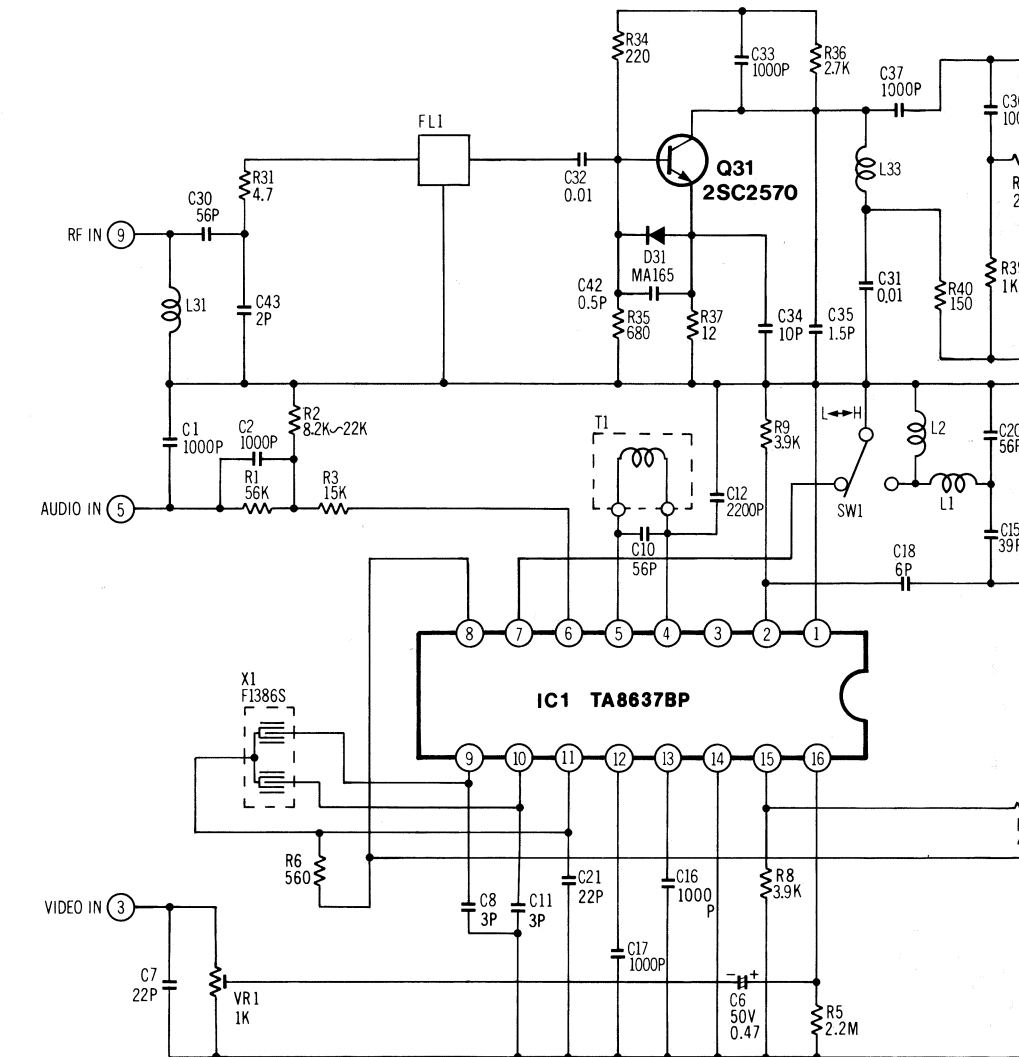


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

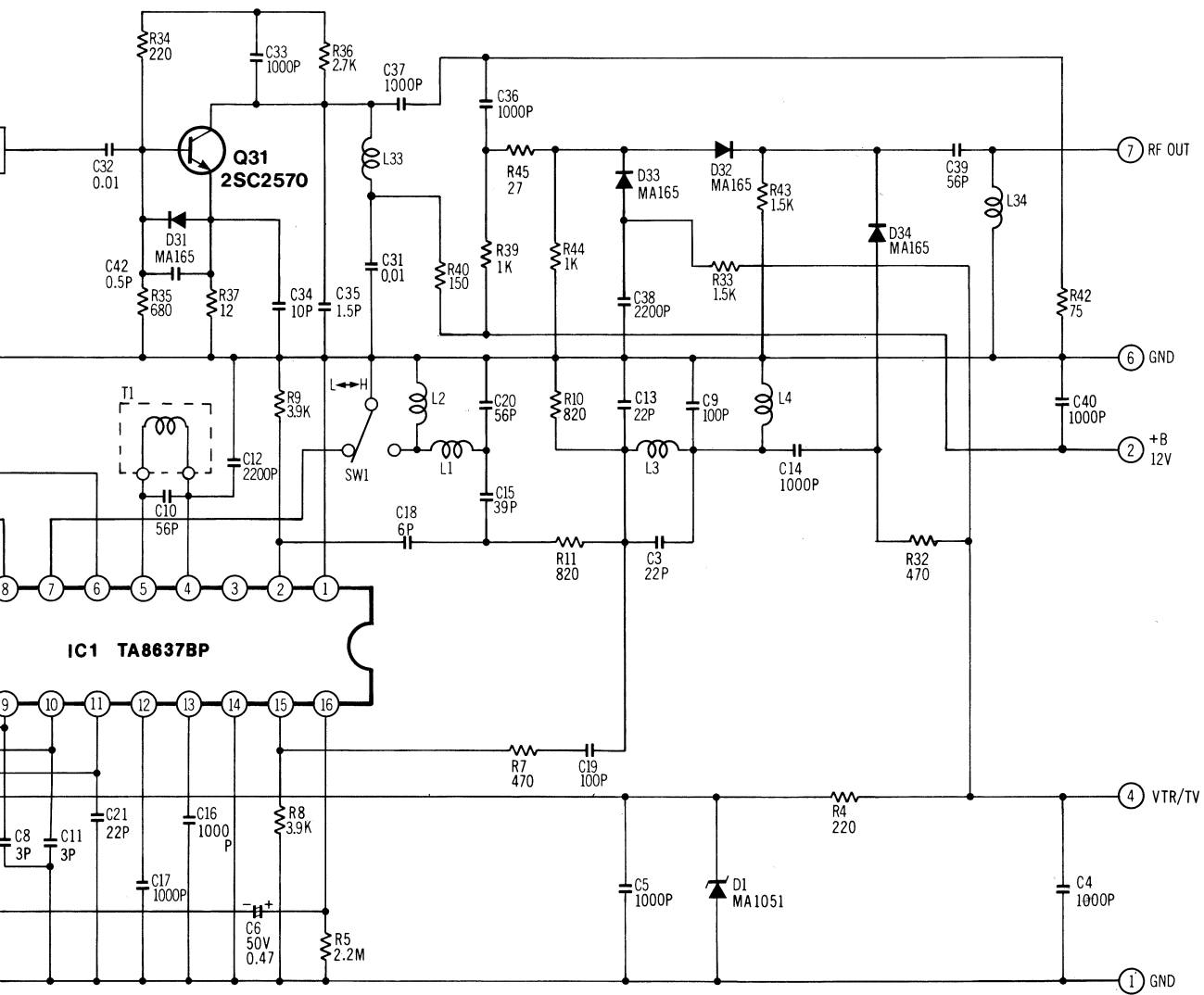
3-18. REMOTE CONTROLLER C.B.A. (VEP66042C)



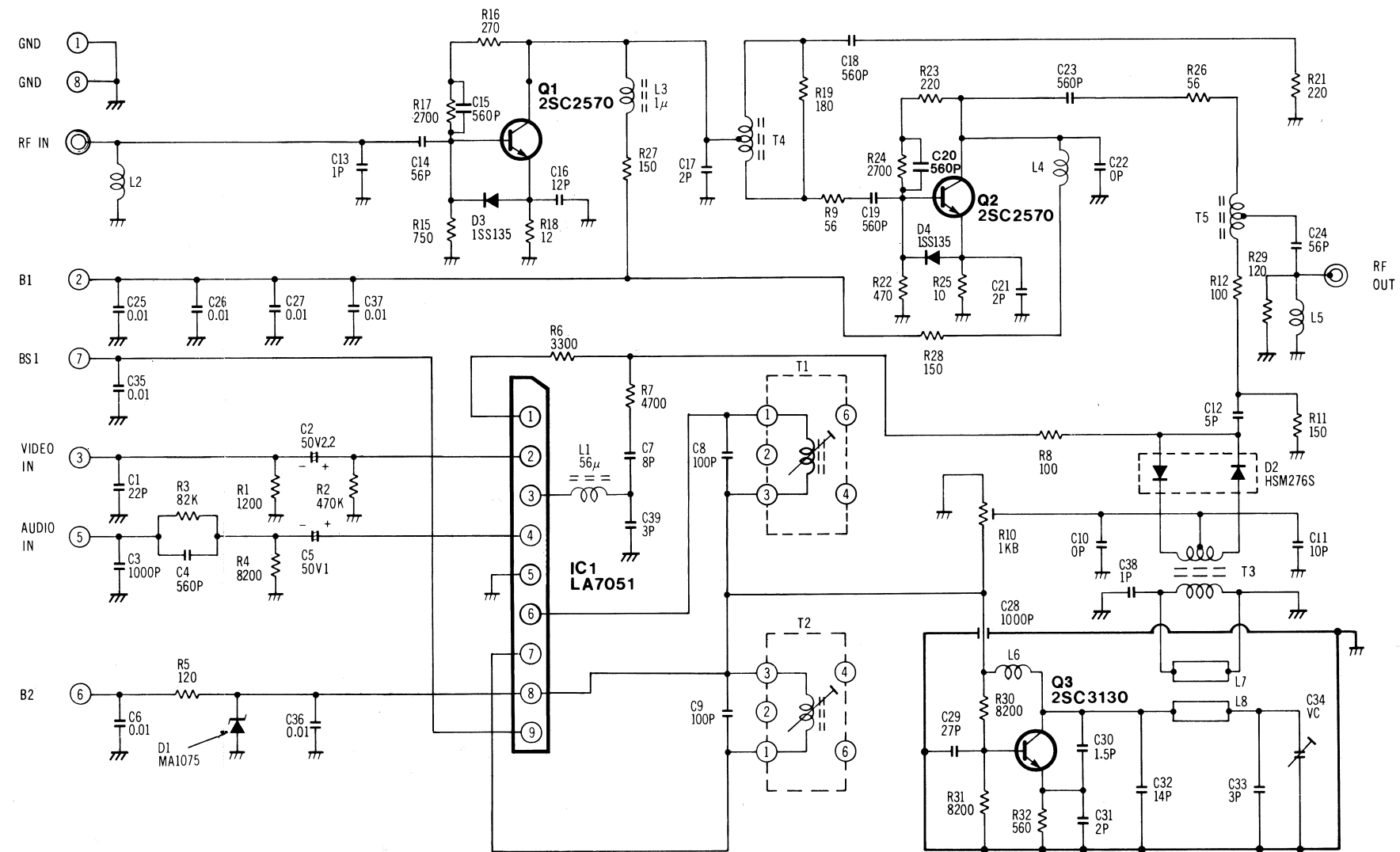
3-19. RF CONVERTER SCHEMATIC DIAGRAM (EN...)



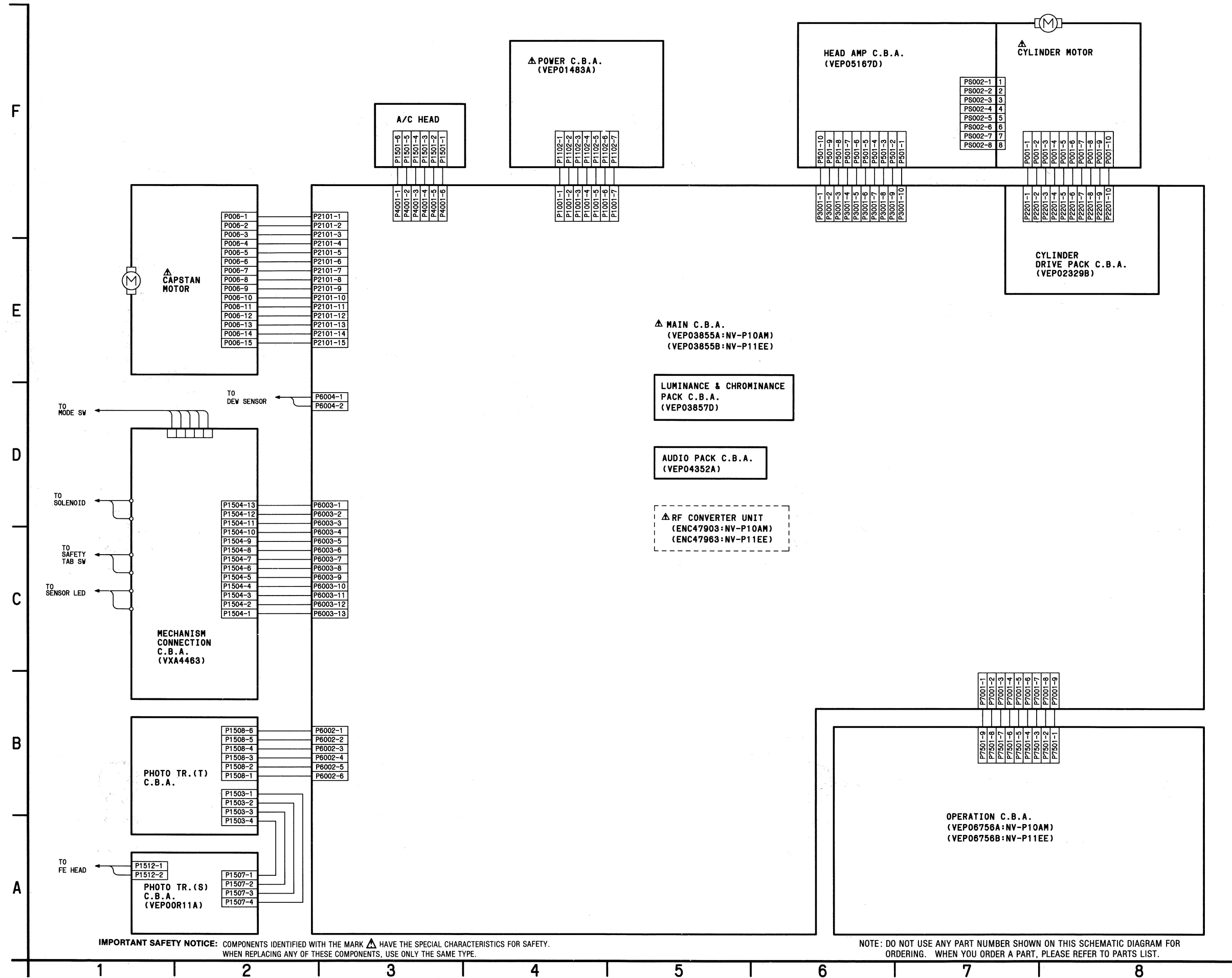
SCHEMATIC DIAGRAM (ENC47903: NV-P10AM)



3-20. RF CONVERTER SCHEMATIC DIAGRAM (ENC47963: NV-P11EE)



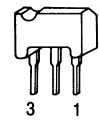
3-21. INTERCONNECTION SCHEMATIC DIAGRAM



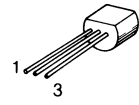
IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

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

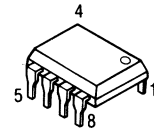
3-22. ICs & RTs INFORMATION



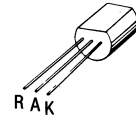
MN1280T



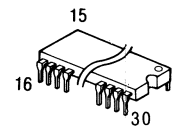
PST590D



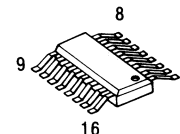
μPC358C
MSM6965-3RS



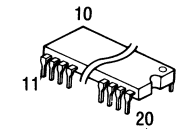
μPC1093J



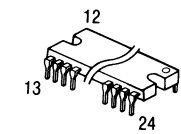
M50925V4AG



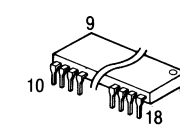
M52065FP



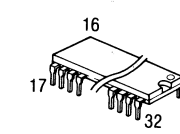
M52063SP



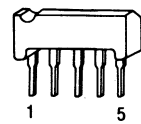
XRA6435S



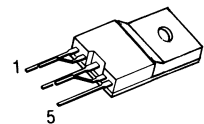
NA3814K



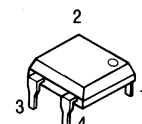
BA7274S
XRA7766AS



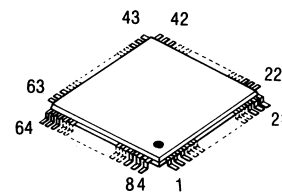
BA7004



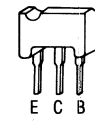
STRD6108E
SI3090C
SI3120C



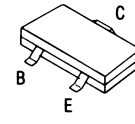
PS2561L1



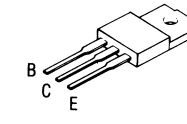
MN6743VRDM



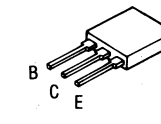
2SB1321
2SD1992A
2SD1996



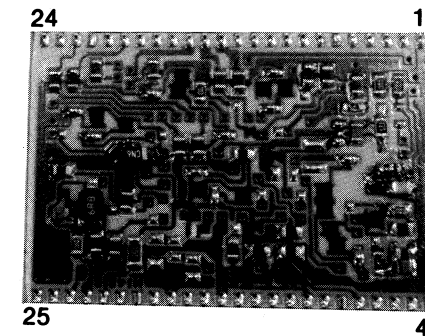
MSB709
MSB710
MSC2295
MSD601
MSD602



2SD1994



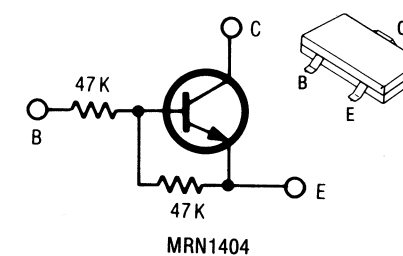
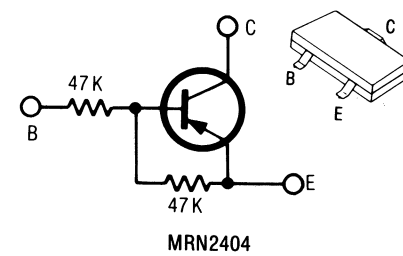
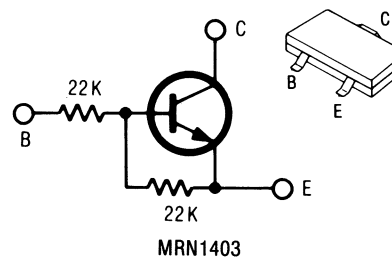
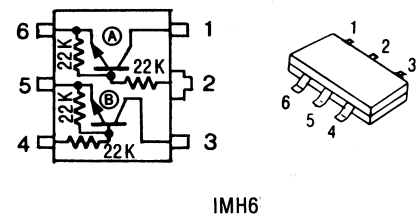
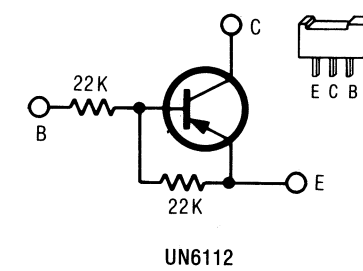
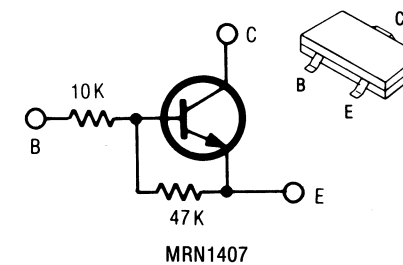
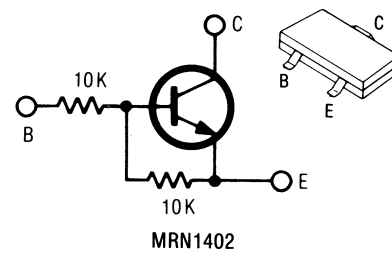
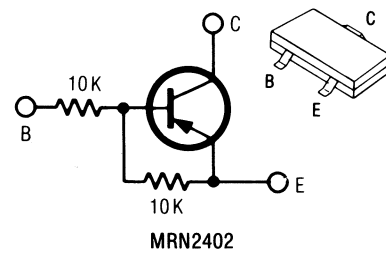
2SD1915



24

1

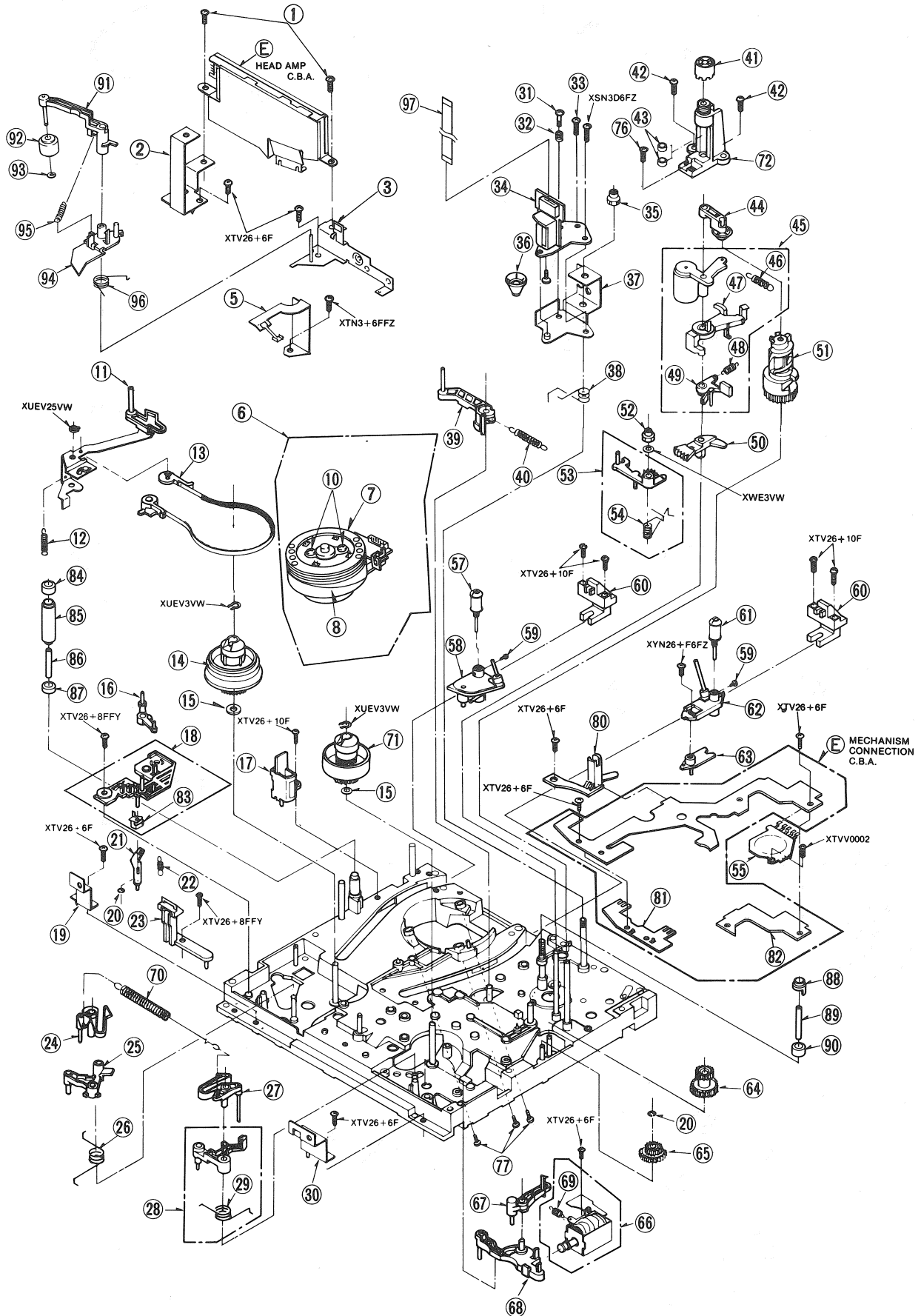
VEFH14D



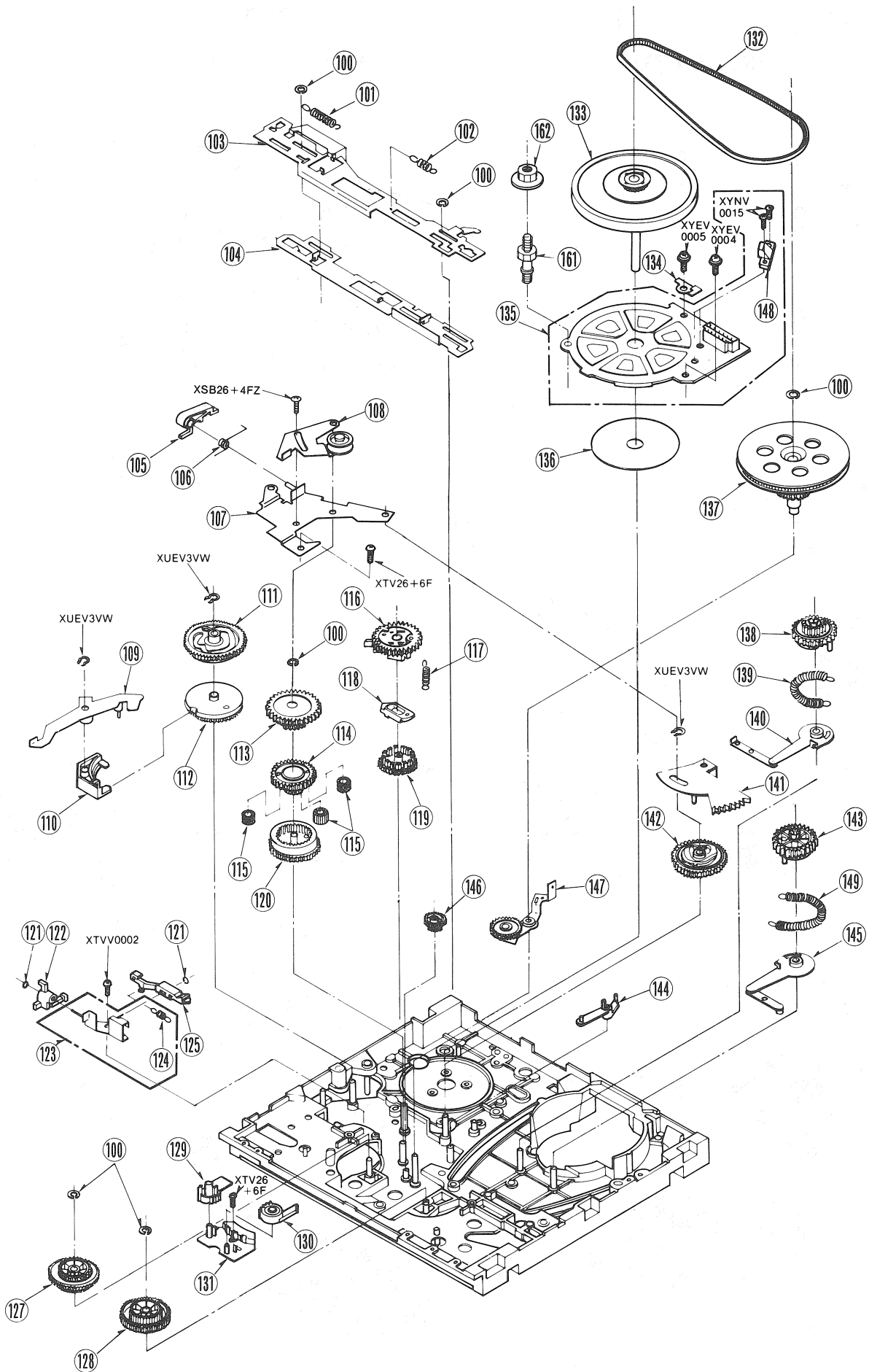
SECTION 4 EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEW

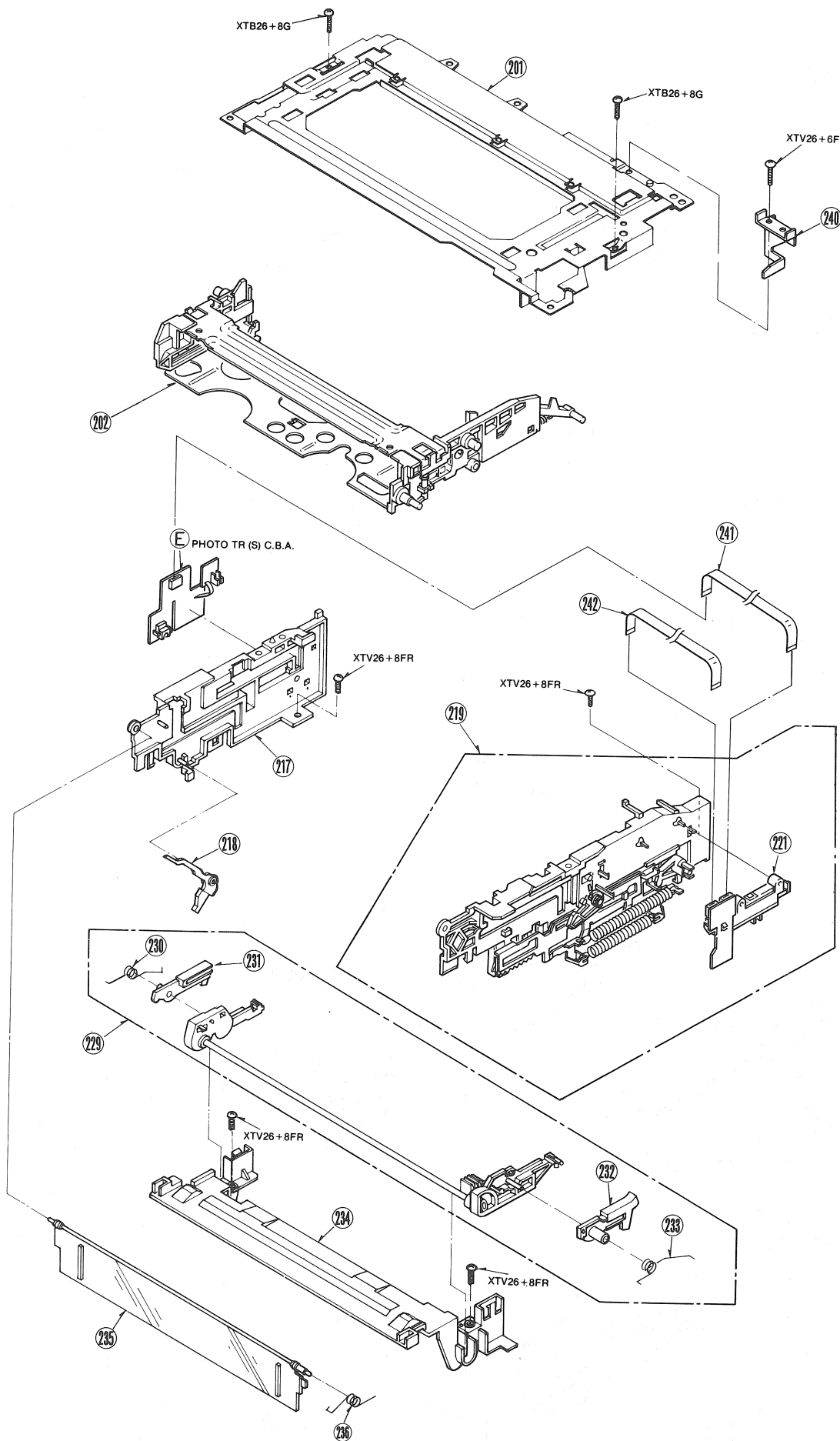
① CHASSIS PARTS SECTION (1)



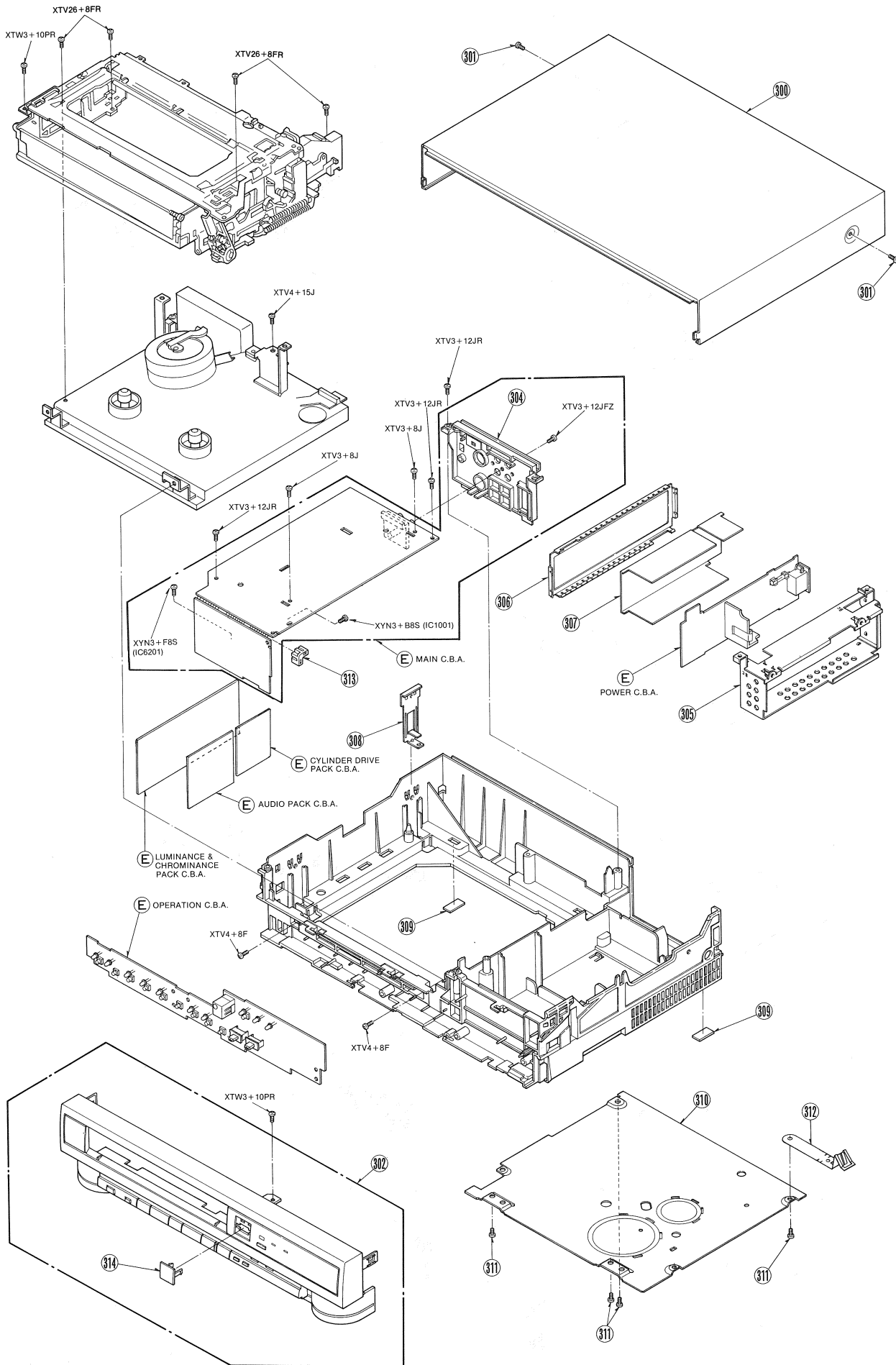
② CHASSIS PARTS SECTION (2)



③ CASSETTE UP MECHANISM SECTION



4 CASING PARTS SECTION



4-2. MECHANICAL 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.

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VHDO141	HEAD AMP SET SCREW	2	
2(1)	VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)	VXA4545	HEAD AMP MOUNT ANGLE (R)	1	
		UNIT		
5(1)	VXSOO82	EARTH PLATE UNIT	1	
6(1)	VEGO890	CYLINDER UNIT	1 (!)	
7(1)	VEHO532	UPPER CYLINDER UNIT	1 (!)	
8(1)	VJROO82	RT TERMINAL	1	
10(1)	VHDO425	UPPER CYLINDER SET SCREW	2	
11(1)	VXL1495	TENSION ARM (1) UNIT	1	
12(1)	VMB1563	TENSION SPRING	1	
13(1)	VXZ0267	TENSION BAND UNIT	1	
14(1)	VXRO185	SUPPLY REEL TABLE UNIT	1	
15(1)	VMX1171	REEL WASHER (0.5mm)	2	
15(1)	VMX1239	REEL WASHER (0.3mm)	2	
15(1)	VMX1238	REEL WASHER (0.2mm)	2	
16(1)	VXL1496	TENSION RELEASE ARM(A)UNIT	1	
17(1)	VBSOO38	FE HEAD	1	
18(1)	VXA2705	TENSION ARM BASE (1) UNIT	1	
19(1)	VMA6895	MOUNT ANGLE (L)	1	
20(1)	VMX1079	CUT WASHER	2	
21(1)	VXL1497	TENSION RELEASE ARM(B)UNIT	1	
22(1)	VMB1582	TENSION RELEASE SPRING	1	
23(1)	VESO489	SAFETY SW	1	
24(1)	VXZ0259	SUPPLY MAIN BRAKE UNIT	1	
25(1)	VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	
26(1)	VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)	VXZ0262	TAKE UP MAIN BRAKE UNIT	1	
28(1)	VXZ0221	TAKE UP SOFT BRAKE UNIT	1	
29(1)	VMB1561	TAKE UP SOFT BRAKE SPRING	1	
30(1)	VMA6896	MOUNT ANGLE (R)	1	
31(1)	VHDO322	ADJUST SCREW	1	
32(1)	VMB1251	ADJUST SPRING	1	
33(1)	VHDO089B	AZIMUTH ADJUST SCREW	1	
34(1)	VEDO160	A/C HEAD (1) UNIT	1	
35(1)	VHNO063	M4 NYLON NUT	1	
36(1)	VHNO110	ADJUST NUT	1	
37(1)	VMA7831	HEAD BASE	1	
38(1)	VMB1567	A/C HEAD SPRING	1	
39(1)	VXL1857	SUB LOADING ARM (1) UNIT	1	
40(1)	VMB1566	SUB POST SPRING	1	
41(1)	VXQ0006	THRUST SCREW UNIT	1	
42(1)	VHDO317	HOUSING SCREW	2	
43(1)	VMX1033	OIL SEAL	2	
44(1)	VMX1353	PINCH CAM CAP	1	
45(1)	VXL1858	PRESSURE ROLLER UNIT	1	
46(1)	VMB1941	PIN PRESSURE SPRING	1	
47(1)	VML2232	PINCH PRESSURE ARM	1	
48(1)	VMB1569	PINCH PRESSURE ARM RELEASE SPRING	1	
49(1)	VML1874	PINCH LIFT ARM	1	
50(1)	VDGO597	P5 PULL OUT SECTOR GEAR	1	
51(1)	VDGO421	PINCH CAM	1	
52(1)	VHDO045	M3 NYLON NUT	1	
53(1)	VXL2027	P5 UNIT	1	
54(1)	VMB2718	P5 SPRING	1	
55(1)	VSS0175	MODE SW	1	
57(1)	VXPO863	ROLLER POST (S) UNIT	1	
58(1)	VXA4106	INCLINED BASE (S)(1)UNIT	1	
59(1)	VHDO133	ROLLER POST SCREW	2	
60(1)	VMD0910	POST STOPPER	2	
61(1)	VXPO764	ROLLER POST (T) UNIT	1	
62(1)	VXA3876	INCLINED BASE(T)(1)UNIT	1	
63(1)	VXA2687	INCLINED ADJUST PLATE UNIT	1	
64(1)	VDGO483	PINCH SPEED DOWN GEAR	1	
65(1)	VDGO664	CONNECTION GEAR	1	
66(1)	VXA3735	SOLENOID UNIT	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
67(1)	VXA2692	KICK ROD UNIT	1	
68(1)	VML1849	SOLENOID LEVER	1	
69(1)	VMB1553	KICK ROD SPRING	1	
70(1)	VMB2012	MAIN BRAKE SPRING	1	
71(1)	VXRO188	TAKE UP REEL TABLE UNIT	1	
72(1)	VXDO101	HOUSING UNIT	1	
76(1)	VHDO374	HOUSING SCREW	1	
77(1)	VHDO342	CYLINDER SCREW	3	
80(1)	VXA3520	LED HOLDER UNIT	1	
81(1)	VMA7829	REINFORCEMENT PLATE (F)	1	
82(1)	VMA8468	REINFORCEMENT PLATE (R)	1	
83(1)	VMB1733	LEAF SPRING	1	
84(1)	VMX1088	SUPPLY UPPER LIMITER	1	
85(1)	VDP1072	SUPPLY ROLLER	1	
86(1)	VMX1581	P1 COLLAR	1	
87(1)	VMX1533	SUPPLY ROLLER LIMITER	1	
88(1)	VMX1544	P4 UPPER LIMITER	1	
89(1)	VMX1568	P4 SLEEVE	1	
90(1)	VMX1534	P4 LOWER LIMITER	1	
91(1)	VXL2086	CLEANER ARM (2) UNIT	1	
92(1)	VXP1269	CLEANER ROLLER UNIT	1	
93(1)	VMX1061	SNAP WASHER A	1	
94(1)	VML2510	CLEANER ARM B	1	
95(1)	VMB2263	CLEANER ARM SPRING A	1	
96(1)	VMB2264	CLEANER ARM SPRING B	1	
97(1)	VWJ0506	FLEXIBLE CADE (6P)	1	P4001-P1501
100(2)	VMX1079	CUT WASHER	6	
101(2)	VMB1583	TAKE UP SOFT BRAKE RELEASE ARM SPRING	1	
102(2)	VMB1560	MAIN LEVER SPRING	1	
103(2)	VXA3509	MAIN LEVER (1) UNIT	1	
104(2)	VMMO215	SUB LEVER	1	
105(2)	VXL2088	SS BRAKE ARM UNIT	1	
106(2)	VMB1588	SS BRAKE SPRING	1	
107(2)	VXA3512	SS BRAKE BASE (1) UNIT	1	
108(2)	VXA3516	TENSION ROLLER UNIT	1	
109(2)	VXL1632	CAM FOLLOWER ARM UNIT	1	
110(2)	VML1861	DETENT ARM	1	
111(2)	VDGO574	MAIN CAM GEAR	1	
112(2)	VDGO343	SUB CAM GEAR	1	
113(2)	VDGO348	CENTRE GEAR	1	
114(2)	VDGO422	RETAINER GEAR	1	
115(2)	VDGO345	PLANET GEAR	3	
116(2)	VDGO547	CLUTCH DISK	1	
117(2)	VMB1558	CLUTCH SPRING	1	
118(2)	VDGO350	LOCK SLIDE GEAR	1	
119(2)	VDGO335	DRIVE DISK	1	
120(2)	VDGO342	RING GEAR	1	
121(2)	VMX0967	CUT WASHER	2	
122(2)	VML1859	CHANGE LEVER	1	
123(2)	VXA4440	RELEASE LEVER (2) UNIT	1	
124(2)	VMB1557	RELEASE SPRING	1	
125(2)	VML1860	RELEASE LEVER	1	
127(2)	VXP1002	TAKE UP REEL GEAR UNIT	1	
128(2)	VXPO981	SUPPLY REEL GEAR UNIT	1	
129(2)	VML1858	RETURN LEVER (R)	1	
130(2)	VML1857	RETURN LEVER (L)	1	
131(2)	VMD0913	STOPPER BASE	1	
132(2)	VDVO169	TIMING BELT	1	
133(2)	VXP1113	ROTOR UNIT	1	
134(2)	VMA7941	ROTOR STOPPER	1	
135(2)	VEK4097	STATOR UNIT	1 (!)	
136(2)	VMA6847	SUB PLATE	1	
137(2)	VXPO917	CENTRE PULLEY UNIT	1	
138(2)	VDGO564	LOADING GEAR (T)	1	
139(2)	VMB1555	LOADING SPRING (T)	1	
140(2)	VXL1489	LOADING ARM (T)(1) UNIT	1	
141(2)	VXA3515	SECTOR GEAR UNIT	1	
142(2)	VDGO448	LOADING CAM GEAR	1	
143(2)	VDGO419	LOADING GEAR (S)	1	
144(2)	VML1855	PLAY CONTROL ARM	1	
145(2)	VXL1487	LOADING ARM (S)(1) UNIT	1	
146(2)	VDGO546	INTERMEDIATE GEAR	1	
147(2)	VXL1861	PLAY ARM UNIT	1	
148(2)	VBK0048	FG HEAD	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks	Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
149(2)	VMB1746	LOADING SPRING(S)	1				SCREWDRIIVER		
161(2)	VHD0431	STATOR SPACER SCREW	1			VFK0329	POST ADJUSTMENT SCREWDRIIVER	1	
162(2)	VHN0102	STATOR NUT	1			VFK62	FAN TYPE TENSION GAUGE	1	
201(3)	VMA7223	TOP PLATE	1			VFK0326	HEX WRENCH SET	1	
202(3)	VKA4325	CASSETTE HOLDER UNIT	1			VFK0132	BACK TENSION METER	1	
217(3)	VMD1787	SIDE PLATE (L)	1			VFK0343	CHECK LIGHT	1	
218(3)	VML1880	OPENER LEVER	1			VFK0344	HEIGHT ADJUSTMENT JIG	1	
219(3)	VXA4468	SIDE PLATE (R) UNIT	1			VFK27	HEAD CLEANING STICK	1	
221(3)	VXA4469	SLIDE SW UNIT	1			MOR265	MORLYTONE GREASE	1	
229(3)	VXP0987	MAIN SHAFT UNIT	1			VFK0283	SERVICE ALIGNMENT TOOL KIT	1	
230(3)	VMB1836	SUB WIPER SPRING (L)	1			VFK0341	UPPER CYLINDER REMOVER	1	
231(3)	VML1878	SUB WIPER ARM (L)	1						
232(3)	VML1879	SUB WIPER ARM (R)	1						
233(3)	VMB1837	SUB WIPER SPRING (R)	1						
234(3)	VMA6900	CASSETTE GUIDE	1						
235(3)	VKF1424	BLINDER PANEL	1						
236(3)	VMB1258	BLINDER SPRING	1						
240(3)	VMA7224	CASSETTE HOLDER ANGLE	1						
241(3)	VWJ040W270MM	FLEXIBLE CARD (4P)	1	P1503-P1507					
242(3)	VWJ061W095MM	FLEXIBLE CARD (6P)	1	P6002-P1508					
300(4)	VGM0783	TOP PANEL	1						
301(4)	VHD0304	TOP PANEL SCREW	2						
302(4)	VYP3633	FRONT PANEL UNIT	1	NV-P10AM					
302(4)	VYP3634	FRONT PANEL UNIT	1	NV-P11EE					
304(4)	VJH0628	ANT TERMINAL PLATE	1	NV-P10AM					
304(4)	VJH0629	ANT TERMINAL PLATE	1	NV-P11EE					
305(4)	VKA4457	POWER SHIELD COVER(MAIN) UNIT	1						
306(4)	VSC3385	POWER SHIELD COVER (BOTTOM)	1						
307(4)	VM21826	POWER BARRIER	1						
308(4)	VMP1110	TOP HOLDER ANGLE (R)	1						
309(4)	VKA0122	FOOT	2						
310(4)	VKU0245	BOTTOM COVER	1						
311(4)	VHD0059	BOTTOM COVER SCREW	4						
312(4)	VMC0756	EARTH SPRING	1						
313(4)	VJF0374	MAIN C.B.A. HOLDER	1						
314(4)	VKW1487	IR WINDOW	1						
400(5)	VQT4069	OPERATING INSTRUCTIONS (ENGLISH/CHINESE/ARABIC)	1	<(!)>NV-P10AM					
400(5)	VQT4226	OPERATING INSTRUCTIONS (ENGLISH/GERMAN/POLISH/ ARABIC)	1	<(!)>NV-P11EE					
401(5)	VPK0825	ACCESSORIES BOX	1						
402(5)	VEQ1277	REMOTE CONTROLLER UNIT	1	NV-P10AM					
402(5)	VEQ1294	REMOTE CONTROLLER UNIT	1	NV-P11EE					
403(5)	VJA0449	AC POWER CORD	1	<(!)>					
404(5)	VJA0376	DIN RF CABLE	1						
406(5)	VPN3112	CUSHION (R)	1						
407(5)	VPN3113	CUSHION (L)	1						
408(5)	VPG5878	PACKING	1	NV-P10AM					
408(5)	VPG6039	PACKING	1	NV-P11EE					
409(5)	VSQ0662	SEPARATION ADAPTOR	1						
410(5)	VPQ0001	HANDLE	1						
411(5)	VJP2974	AC PLUG ADAPTOR	1						
450(6)	VYK3662	TOP COVER UNIT	1	NV-P10AM					
450(6)	VYK3876	TOP COVER UNIT	1	NV-P11EE					
451(6)	VKM1313	BOTTOM COVER	1						
452(6)	VKF0958	BATTERY COVER	1						
453(6)	VKW0878	IR WINDOW	1						
454(6)	VSP0490	RUBBER CONTACT	1	NV-P10AM					
454(6)	VSP0491	RUBBER CONTACT	1	NV-P11EE					
455(6)	VJR0185	ELECTRODE(COM.)	1						
		SERVICING FIXTURES & TOOLS							
	VFJ8125H3F	VHS-ALIGNMENT TAPE (PAL)	1						
	VFK0718	EXTENSION CABLE (7PIN)	1						
	VFK0335	RETAINING RING REMOVER (3mm/4mm)	1						
	VFK0387	TENSION POST ADJUSTMENT PLATE	1						
	VFK0191	POST ADJUSTMENT PLATE	1						
	VFK0190	REEL TABLE HEIGHT GAUGE	1						
	VFK0328	H-POSITION ADJ.	1						

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6504	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C7409	ECUM1H1042FN	CAPACITOR 50V 0.1U	1	
		DIODES		
D1101	SV03YS	DIODE	1	
D1102	AK04	DIODE	1	
D2001	1SS254	DIODE	1	
D2005	1SS254	DIODE	1	
D2008	MA4051	DIODE	1	
D2020	AK04	DIODE	1	
D2021	ERA15-01	DIODE	1	
D2104	MA151WA	DIODE	1	
D2203, 04	1SS254	DIODE	2	
D3903	1SS254	DIODE	1	
D6003	MA723VT	DIODE	1 (VT)	
D6005	1SS254	DIODE	1	
D6007	1SS254	DIODE	1	
D6201-04	1SS254	DIODE	4	
D6206, 07	1SS254	DIODE	2	
D6218	1SS254	DIODE	1	
D6230	1SS254	DIODE	1	
D7402	MA723VT	DIODE	1 (VT)	
		FILTERS		
FL3901	VLF0413	FILTER	1	
		INTEGRATED CIRCUITS		
IC1001	SI3120C	IC	1	
IC2201	XRA6435S	IC	1	
IC2203	UPC358C	IC	1	
IC3902	BA7004	IC	1	
IC6001	MN6743VRDM	IC	1	
IC6002	UPC358G2	IC	1	
IC6151	PST590D	IC	1	
IC6201	SI-3090C	IC	1	
		RESISTORS		
K3901	ERJ6GMZOR00	M. RESISTOR CH 1/10W 0	1	
		COILS		
L2001	ELESP102KA	COIL	1	
L2002, 03	ELESQ101KA	COIL	2	
L3001	ELESQ101KA	COIL	1	
L3202	ELESP6R8KA	COIL	1	
L3203	ELESQ101KA	COIL	1	
L3204	ELESQ120KA	COIL	1	
L3206	ELESQ101KA	COIL	1	
L3207	ELESP3R3KA	COIL	1	
L3901, 02	ELESQ101KA	COIL	2	
L6001	VLPO074	COIL	1	
L6141	ELESQ101KA	COIL	1	
L7404	ELESP1ROKA	COIL	1	
		CONNECTORS		
P1001	VJP3164	CONNECTOR (MALE)	1	
P2101	VJS1663	CONNECTOR (FEMALE)	1	
P3001	VJS1658	CONNECTOR (FEMALE)	1	
P4001	VJS2331	CONNECTOR (FEMALE)	1	
P6002	VJS3147	CONNECTOR (FEMALE)	1	
P6003	VJS1661	CONNECTOR (FEMALE)	1	
P6004	VJP1242T	CONNECTOR (MALE) 2P	1	
P7001	VJS1657	CONNECTOR (FEMALE)	1	
PP2001	VJP3042G003W	CONNECTOR (MALE)	1	
PP2002	VJP3042G005W	CONNECTOR (MALE)	1	
PP3001	VJP3044G009W	CONNECTOR (MALE)	1	
PP3002	VJP3044G012W	CONNECTOR (MALE)	1	
PP3003	VJP3044G006W	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
PP4001	VJP3043G010W	CONNECTOR (MALE)	1	
PP4002	VJP3043G008W	CONNECTOR (MALE)	1	
		TRANSISTORS		
Q2001	MSB709	TRANSISTOR	1	
Q2002	2SD1915	TRANSISTOR	1	
Q2101	MSB709	TRANSISTOR	1	
Q3001	MSB709	TRANSISTOR	1	
Q3201, 02	MSC2295	TRANSISTOR	2	
Q3203	MSD601	TRANSISTOR	1	
Q3204	2SB970	TRANSISTOR CHIP	1	
Q3901	MSD601	TRANSISTOR	1	
Q6001	MSB710-R	TRANSISTOR	1	
Q6002	MSB710-R	TRANSISTOR	1	
Q6004	2SB1321	TRANSISTOR	1	
Q6141	MSC2295	TRANSISTOR	1	
Q6203	2SD1994	TRANSISTOR	1	
Q6204, 05	2SD1994-S	TRANSISTOR	2 (S)	
Q6206	MSD602	TRANSISTOR	1	
Q6207	MSD601	TRANSISTOR	1	
Q6221, 22	MSD601	TRANSISTOR	2	
		COMBINATION PARTS		
QR1001	MRN1404	TRANSISTOR	1	
QR2001	MRN1404	TRANSISTOR	1	
QR2006	MRN1404	TRANSISTOR	1	
QR2101	MRN1407	TRANSISTOR	1	
QR2102	MRN1402	TRANSISTOR	1	
QR2103	MRN1404	TRANSISTOR	1	
QR3001	MRN2402	TRANSISTOR	1	
QR3017	MRN1403	TRANSISTOR	1	
QR6001, 02	MRN1404	TRANSISTOR	2	
QR6006	DTC143TK	TRANSISTOR-RESISTOR	1	
QR6009	MRN2404	TRANSISTOR	1	
QR6201	UN2119	TRANSISTOR-RESISTOR	1	
QR6202	MRN2404	TRANSISTOR	1	
QR6203-05	MRN1403	TRANSISTOR	3	
QR6206, 07	MRN2404	TRANSISTOR	2	
		RESISTORS		
R2001, 02	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R2003	ERJ6GMYG392	M. RESISTOR CH 1/10W 3.9K	1	
R2004	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2006-08	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	3	
R2009, 10	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	2	
R2011	ERJ6GMYJ223	M. RESISTOR CH 1/10W 2.2K	1	
R2012	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R2021, 22	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R2023	ERDS2TJ391	C. RESISTOR 1/4W 390	1	
R2024	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2026	ERJ6GMYG513	M. RESISTOR CH 1/10W 51K	1	
R2027	ERJ6GMYJ824	M. RESISTOR CH 1/10W 820K	1	
R2030	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R2032	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R2033	ERJ6GMYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R2034	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R2080	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R2101	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R2102	ERJ6GMYJ561	M. RESISTOR CH 1/10W 560	1	
R2103, 04	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	2	
R2106	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R2107	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R2108	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R2111	ERJ6GMYJ391	M. RESISTOR CH 1/10W 390	1	
R2201, 02	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R2206	ERJ6GMYJ330	M. RESISTOR CH 1/10W 33	1	
R2207	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	1	
R2212	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R2215	ERJ6GMYG512	M. RESISTOR CH 1/10W 5.1K	1	
R2217	ERJ6GMYG622	M. RESISTOR CH 1/10W 6.2K	1	
R2218	ERJ6GMYG752	M. RESISTOR CH 1/10W 7.5K	1	
R2219	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C2034, 35	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	2	
C2036	ECEAOJK330	E. CAPACITOR 6.3V 33U	1	
C2037	ECA1CM102	CAPACITOR	1	
C2038	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C2040	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C2041	ECA1CM102	CAPACITOR	1	
C2201	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C2202	ECEA1HK4R7	E. CAPACITOR 50V 4.7U	1	
C2211-13	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	3	
C2214	ECEAOJU221	E. CAPACITOR 6.3V 220U	1	
C2215	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C2216-18	ECQB1H333JH	P. CAPACITOR 50V 0.033U	3	
C2219	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C2221	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C2222	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C2223	ECEA1HKNR47	E. CAPACITOR 50V 0.47U	1	
C3001	ECEA1CK470	E. CAPACITOR 16V 47U	1	
C3002	ECEAOJU102	E. CAPACITOR 6.3V 1000U	1	
C3003-05	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	3	
C3009	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3010	ECEA1HKN010	E. CAPACITOR 50V 1U	1	
C3203	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C3204	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C3205	ECUM1H681KBN	C. CAPACITOR CH 50V 680P	1	
C3206	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3207	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C3208	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C3209	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3211	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3212	ECEAOJK101	E. CAPACITOR 6.3V 100U	1	
C3213	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3214	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C3217	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3220	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C3921	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1	
C3922-24	ECEA1CK100	E. CAPACITOR 16V 10U	3	
C3925	ECUM1H332KBN	C. CAPACITOR CH 50V 3300P	1	
C6001	ECUM1H1042FN	C. CAPACITOR 50V 0.1U	1	
C6002	ECEAOJK220	E. CAPACITOR 6.3V 22U	1	
C6005	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C6006, 07	ECUM1H271KBN	C. CAPACITOR CH 50V 270P	2	
C6141	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6143	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C6144	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1	
C6146	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1	
C6147	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6148	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C6149	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6150	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C6201	ECEAOJU331	E. CAPACITOR 6.3V 330U	1	
C6202	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
C6203	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6216	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C6231	ECEA1EU470	E. CAPACITOR 25V 47U	1	
C6232	ECUM1H1042FN	C. CAPACITOR 50V 0.1U	1	
C6504	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
C7409	ECUM1H1042FN	C. CAPACITOR 50V 0.1U	1	
		DIODES		
D1101	SV03YS	DIODE	1	
D1102	AK04	DIODE	1	
D2001	1SS254	DIODE	1	
D2005	1SS254	DIODE	1	
D2008	MA4051	DIODE	1	
D2020	AK04	DIODE	1	
D2021	ERA15-01	DIODE	1	
D2104	MA151WA	DIODE	1	
D2203, 04	1SS254	DIODE	2	
D3903	1SS254	DIODE	1	
D6003	MA723VT	DIODE	1	(VT)
D6005	1SS254	DIODE	1	
D6007	1SS254	DIODE	1	
D6201-04	1SS254	DIODE	4	
D6206, 07	1SS254	DIODE	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D6218	1SS254	DIODE	1	
D6230	1SS254	DIODE	1	
D7402	MA723VT	DIODE	1	(VT)
		FILTERS		
FL3901	VLF0413	FILTER	1	
		INTEGRATED CIRCUITS		
IC1001	SI3120C	IC	1	
IC2201	XRA6435S	IC	1	
IC2203	UPC358C	IC	1	
IC3902	BA7004	IC	1	
IC6001	MN6743VRDM	IC	1	
IC6002	UPC358G2	IC	1	
IC6151	PST590D	IC	1	
IC6201	SI-3090C	IC	1	
		COLIS		
L2001	ELESP102KA	COIL	1	
L2002, 03	ELESQ101KA	COIL	2	
L3001	ELESQ101KA	COIL	1	
L3202	ELESP6R8KA	COIL	1	
L3203	ELESQ101KA	COIL	1	
L3204	ELESP120KA	COIL	1	
L3206	ELESQ101KA	COIL	1	
L3207	ELESP3R3KA	COIL	1	
L3901, 02	ELESQ101KA	COIL	2	
L6001	VLP0074	COIL	1	
L6141	ELESQ101KA	COIL	1	
L7404	ELESP1R0KA	COIL	1	
		CONNECTORS		
P1001	VJP3164	CONNECTOR (MALE)	1	
P2101	VJS1663	CONNECTOR (FEMALE)	1	
P3001	VJS1658	CONNECTOR (FEMALE)	1	
P4001	VJS2331	CONNECTOR (FEMALE)	1	
P6002	VJS3147	CONNECTOR (FEMALE)	1	
P6003	VJS1661	CONNECTOR (FEMALE)	1	
P6004	VJP1242T	CONNECTOR (MALE) 2P	1	
P7001	VJS1657	CONNECTOR (FEMALE)	1	
		CONNECTORS		
PP2001	VJP3042G003W	CONNECTOR (MALE)	1	
PP2002	VJP3042G005W	CONNECTOR (MALE)	1	
PP3001	VJP3044G009W	CONNECTOR (MALE)	1	
PP3002	VJP3044G012W	CONNECTOR (MALE)	1	
PP3003	VJP3044G006W	CONNECTOR (MALE)	1	
PP4001	VJP3043G010W	CONNECTOR (MALE)	1	
PP4002	VJP3043G008W	CONNECTOR (MALE)	1	
		TRANSISTORS		
Q2001	MSB709	TRANSISTOR	1	
Q2002	2SD1915	TRANSISTOR	1	
Q2101	MSB709	TRANSISTOR	1	
Q3001	MSB709	TRANSISTOR	1	
Q3201, 02	MSC2295	TRANSISTOR	2	
Q3203	MSD601	TRANSISTOR	1	
Q3204	2SB970	TRANSISTOR CHIP	1	
Q3901	MSD601	TRANSISTOR	1	
Q6002	MSB710-R	TRANSISTOR	1	
Q6004	2SB1321	TRANSISTOR	1	
Q6141	MSC2295	TRANSISTOR	1	
Q6203	2SD1994	TRANSISTOR	1	
Q6204, 05	2SD1994-S	TRANSISTOR	2	(S)
Q6206	MSD602	TRANSISTOR	1	
Q6207	MSD601	TRANSISTOR	1	
Q6221, 22	MSD601	TRANSISTOR	2	
		COMBINATION PARTS		

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR1001	MRN1404	TRANSISTOR	1		R3920	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
QR2001	MRN1404	TRANSISTOR	1		R4001	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
QR2006	MRN1404	TRANSISTOR	1		R4028	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
QR2101	MRN1407	TRANSISTOR	1		R4031	ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
QR2102	MRN1402	TRANSISTOR	1		R4032	ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
QR2103	MRN1404	TRANSISTOR	1		R4035	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
QR3001	MRN2402	TRANSISTOR	1		R6001	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
QR3017	MRN1403	TRANSISTOR	1		R6003,04	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
QR6002	MRN1404	TRANSISTOR	1		R6006,07	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
QR6006	DTC143TK	TRANSISTOR-RESISTOR	1		R6008-11	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	4	
QR6009	MRN2404	TRANSISTOR	1		R6012-15	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	4	
QR6201	UN2119	TRANSISTOR-RESISTOR	1		R6016,17	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
QR6202	MRN2404	TRANSISTOR	1		R6018	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
QR6203-05	MRN1403	TRANSISTOR	3		R6022	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
QR6206,07	MRN2404	TRANSISTOR	2		R6023	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
					R6024,25	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
					R6026,27	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
					R6030	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
					R6031	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
					R6032	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
					R6035	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
					R6036	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
					R6037	ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
					R6038	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R6039	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
					R6054	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
					R6056	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
					R6057	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
					R6061	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
					R6062	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
					R6063	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
					R6064	ERJ6GMYJ184	M.RESISTOR CH 1/10W 180K	1	
					R6065	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
					R6066	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
					R6141	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R6142	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
					R6143,44	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
					R6201	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
					R6205	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
					R6206	ERJ6GMYG131	M.RESISTOR CH 1/10W 130	1	
					R6207	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
					R6208	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
					R6209	ERG3SJ220	M.RESISTOR 3W 22	1	
					R6210	ERJ6GMYG201	M.RESISTOR CH 1/10W 200	1	
					R6211	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
					R6212	ERD2FCVG220	C.RESISTOR 2W 22	1	
					R6216	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
					R6217	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
					R6218	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
					R6220	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
					R6221	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
					R6223	ERJ6GMYJ121	M.RESISTOR CH 1/10W 120	1	
					R6229	ERJ6GMYJ474	M.RESISTOR CH 1/10W 470K	1	
					R6232	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
					R6233	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
					R6234,35	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
					R6236	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
					R6502	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
							SWITCHES		
					SW4901	ESD177302	SWITCH	1	
							VARIABLE RESISTORS		
					VR2001	EVNDXAA00B54	V.RESISTOR 50K	1	
					VR3012	EVNDXAA00B52	V.RESISTOR 500	1	
					VR4002	EVNDXAA00B25	V.RESISTOR 200K	1	
							OSCILLATORS		
					X3901	VSK0099	CRYSTAL OSCILLATOR	1	
					X6141	VSK0479	CRYSTAL OSCILLATOR	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C511	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C512	ECUM1H080DCN	C.CAPACITOR CH 50V 8P	1	
C513	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C514	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C516,17	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	2	
C518	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C519	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C520	ECUM1H1032FN	C.CAPACITOR CH 50V 0.01U	1	
C521	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C522	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C523	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C528	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C529	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C530	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C533	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C534	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C536	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
C537	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C540	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C541	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C542,43	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	2	
		INTEGRATED CIRCUITS		
IC501	BA7274S	IC	1	
		RESISTORS		
K503,04	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	2	
K506	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
		COILS		
L501	ELESP820KA	COIL	1	
L506	ELESP151KA	COIL	1	
L508	ELESP101KA	COIL	1	
L509	ELESP270KA	COIL	1	
L510	ELESP101KA	COIL	1	
		CONNECTORS		
P501	VJS1680	CONNECTOR	1	
PS002	VJS3069T	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q502	MSB709-R	TRANSISTOR	1 (Q,R,S)	
Q503	MSC2295	TRANSISTOR	1	
		RESISTORS		
R505	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R507	ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R509	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R510	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R512	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R513	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R514,15	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R516	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R519	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R520,21	ERJ6GMYJ330	M.RESISTOR CH 1/10W 33	2	
R523	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R525	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R526	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R529	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R530	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R532	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R533	ERJ6GMYJ100	M.RESISTOR CH 1/10W 10	1	
R534	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R536	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R537	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
		VARIABLE RESISTORS		
VR501	EVND6AA00B23	V.RESISTOR	1	
VR502	EVND6AA00B13	V.RESISTOR	1	
		MISCELLANEOUS		
	VSC2355	SHIELD CASE (BOTTOM)	1	
	VSC3303	SHIELD CASE (TOP)	1	
	VSC3304	SHIELD CASE (MAIN)	1	
	VEPO6756A	OPERATION C.B.A.		(NLA) NV-P10AM
		CAPACITORS		
C6701	ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C6702	ECUM1H1042FN	C.CAPACITOR 50V 0.1U	1	
C6703	ECEAOJK470	E.CAPACITOR 6.3V 47U	1	
C7501	ECEAOJK221	E.CAPACITOR 6.3V 220U	1	
C7502	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7503	ECEA1HKR22	E.CAPACITOR 50V 0.22U	1	
C7504	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7505,06	ECCF1H330JC	C.CAPACITOR 50V 33P	2	
C7507	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7508	ECEAOJK470	E.CAPACITOR 6.3V 47U	1	
		DIODES		
D6701	PN323B	DIODE	1	
D7501-05	1SS254	DIODE	5	
D7515	1SS254	DIODE	1	
D7516	LN28RPX2TA12	DIODE	1	
D7517	LN48YPX2TA12	DIODE	1	
D7518-20	LN38GPX2TA12	DIODE	3	
D7521	LN38GPHZUTA2	DIODE	1	
D7522	LN28RPX2TA12	DIODE	1	
D7523	LN38GPHZUTA2	DIODE	1	
D7524	LN28RPX2TA12	DIODE	1	
D7525	LN28RPX2TA12	DIODE	1	
		INTEGRATED CIRCUITS		
IC6701	UPC2800GR	IC	1	
IC7501	M50925V4AG	IC	1	
IC7502	MN1280T	IC	1	
L7501	ELESE221K		1	
		CONNECTORS		
P7501	VJS1679	CONNECTOR (FEMALE)	1	
		COMBINATION PARTS		
QR7501-06	UN6112-TA	TRANSISTOR-RESISTOR	6	
		RESISTORS		
R6701	ERJ6ENF1363		1	
R7501	ERDS2TJ105	C.RESISTOR 1/4W 1000K	1	
R7502	ERDS2TJ332	C.RESISTOR 1/4W 3.3K	1	
R7503	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R7504	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R7505-10	ERDS2TJ181	C.RESISTOR 1/4W 180	6	
R7511-16	ERDS2TJ333	C.RESISTOR 1/4W 33K	6	
R7517-20	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	4	
R7522	ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC1101	STRD6108E	IC	1	
IC1102	UPC1093J	IC	1	
		COILS		
L1101	ELF18D221F	COIL	1	
L1102,03	VLQ0410	COIL	2	
		FILTERS		
L1104,05	VLPO085	FILTER	2	
		CONNECTORS		
P1101	VJS2625	CONNECTOR (FEMALE)	1	
P1102	VJS3164	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q1101	2SD1996	TRANSISTOR	1	
Q1102	2SD1992A	TRANSISTOR	1	
Q1103	PS2561L1-1	TRANSISTOR	1	
		RESISTORS		
R1101	ERW1PK2R2T	RESISTOR	1	
R1102,03	ERDS1TJ563	C. RESISTOR 1/2W 56K	2	
R1104,05	ERDS2TJ474	C. RESISTOR 1/4W 470K	2	
R1106	ERDS2TJ750	C. RESISTOR 1/4W 75	1	
R1107	ERG3SJ683	M. RESISTOR 3W 68K	1	
R1108	ERW1PKR22	W. RESISTOR 1W 0.22	1	
R1109	ERDS2TJ750	C. RESISTOR 1/4W 75	1	
R1110	ERG2SJ680	M. RESISTOR 2W 68	1	
R1111,12	ERDS2TJ102	C. RESISTOR 1/4W 1K	2	
R1113	ERG2SJ220	M. RESISTOR 2W 22	1	
R1114	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
R1115	EROS2CKG2700	M. RESISTOR 1/4W 270	1	
R1116	EROS2CKG2400	M. RESISTOR 1/4W 240	1	
R1117	EROS2CKG5601	M. RESISTOR 1/4W 5.6K	1	
		TRANSFORMERS		
T1101	VLTO643	TRANSFORMER	1	
		MISCELLANEOUS		
	VJFO318	FUSE HOLDER	2	
	■ VEPO2329B	CYLINDER DRIVE PACK C. B. A.	(NLA)	
		CAPACITORS		
C2201	ECEA1CK100	E. CAPACITOR 16V 10U	1	
C2203	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2204-06	ECEA1HKOR1	E. CAPACITOR 50V 0.1U	3	
C2207	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
C2208-10	ECEA1VQ4R7	E. CAPACITOR 35V 4.7U	3	
C2211	ECQB1H473JH	P. CAPACITOR 50V 0.047U	1	
C2212	ECEAOJK101	E. CAPACITOR 6.3V 100U	1	
C2213	ECEA1CK100	E. CAPACITOR 16V 10U	1	
		INTEGRATED CIRCUITS		
IC2201	NA3814K	IC	1	
		CONNECTORS		
P2201	VJP3078	CONNECTOR (MALE)	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
PK2201	VJS3042FO03W	CONNECTOR (FEMALE)	1	
PK2202	VJS3042FO05W	CONNECTOR (FEMALE)	1	
		RESISTORS		
R2201	ERDS2TJ122	C. RESISTOR 1/4W 1.2K	1	
R2202-04	ERDS2TJ150	C. RESISTOR 1/4W 15	3	
R2205	ERX12SJR68	M. RESISTOR 1/2W 0.68	1	
		CONNECTORS		
	■ VEPOOR11A	PHOTO Tr. (S) C. B. A.	(NLA)	
		CAPACITORS		
C1501	ECKF1H102KB	C. CAPACITOR 50V 0.1U	1	
		RESISTORS		
K1401	ERDS2E0	RESISTOR	1	
		CONNECTORS		
P1507	VJS3049FO04T	CONNECTOR	1	
P1512	VJS3070T	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q1501	PN15QNV5	TRANSISTOR	1	
		MISCELLANEOUS		
	VMD0645	PHOTO Tr. HOLDER	1	
	■ -----	PHOTO Tr. (T) C. B. A.	(NLA)	
		CAPACITORS		
C1502	ECKF1H102KB	C. CAPACITOR 50V 0.1U	1	
		CONNECTORS		
P1503	VJS3049FO04T	CONNECTOR (FEMALE)	1	
P1508	VJS2331	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q1502	PN15QNV5	TRANSISTOR	1	
		RESISTORS		
R1503	ERDS2TJ222	C. RESISTOR 1/4W 2.2K	1	
		MISCELLANEOUS		
	VMD0645	PHOTO Tr. HOLDER	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
	■ VXA4463	MECHANISM CONNECTION C.B.A.		(NLA)
		MISCELLANEOUS		
	VJS3071T	CONNECTOR (FEMALE)	1	
	ON2170	PHOTO COUPLER	2	
	VMZ1366	SHEET	1	
	■ VEP66042C	REMOTE CONTROLLER C.B.A.		(NLA)
		CAPACITORS		
C1, C2	ECKF1H471KB	C. CAPACITOR 50V 470P	2	
C3	ECEA0GKS101	E. CAPACITOR 4V 100U	1	
		LED		
D1	LN66S	LED	1	
		INTEGRATED CIRCUIT		
IC1	UPD6128C604	IC	1	
		COMBINATION PART		
QR1	UN8231	TRANSISTOR-RESISTOR	1	
		RESISTORS		
R1	ERDS2TJ1R0	C. RESISTOR 1/4W 1.0	1	
R2	ERDS2TJ682	C. RESISTOR 1/4W 6.8K	1	
		OSCILLATOR		
X1	VSX0167	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VJRO183	ELECTRODE	2	

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