

Service Manual

Operating Instructions

Mechanical Adjustment Procedures

Electrical Adjustment Procedures

Block Diagrams

Schematic Diagrams

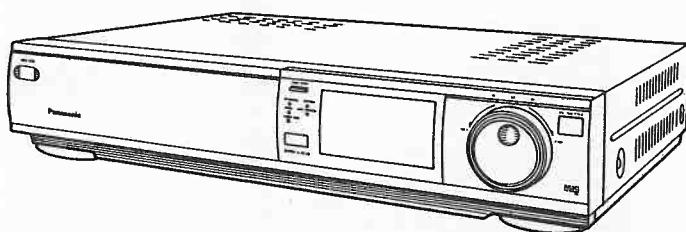
Circuit Board Diagrams

Exploded Views

Replacement Parts List

Video Cassette Recorder
Panasonic VHS Hi-Fi
 Professional/Industrial Video

AG-1730



SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
Power	Source: 120 V AC 50~60 Hz	RF Out	VHF Channel 3 or 4, 66 ⁺² / _{-2.5} dBμ (open voltage) 75Ω unbalanced
	Consumption: Approx. 32 Watts		EIA Standard (525 lines, 60 fields) NTSC Color Signal
Video	Head: 4 rotary heads, helical scanning system 48 μm(SP)×2, 33 μm (SLP)×2	Television System	TV Tuners: VHF Input: VHF CH2~CH13 A-5~FF 75Ω unbalanced
	Luminance: FM azimuth recording		UHF Input: UHF CH21~CH69 75Ω balanced
Audio	Color signal: Converted subcarrier phase shift recording	Tape Speed	SP: 33.3 mm/sec, LP: 16.7 mm/sec, SLP: 11.1 mm/sec Record/Playback Time: 480 min. with NV-T160 used in SLP mode.
	Input Level: VIDEO IN (phono) 1.0 Vp-p 75Ω unbalanced Output Level: VIDEO OUT (phono) 1.0 Vp-p 75Ω unbalanced Signal-to-Noise Ratio: VIDEO 43 dB (SP) Horizontal Resolution: Color: 230 lines (SP)		FF/REW Time: About 2.5 min. with NV-T120
	Head: Normal Audio/Control: 1 stationary head Hi-Fi AUDIO: 2 rotary heads (26 μm×2) Erase: 1 full track erase	Tape Format	Tape width 1/2" (12.7 mm) high density tape
	Track: 1 track (Normal-mono only) 2 channels (Hi-Fi sound-stereo)	Operating Condition	41°F (5°C)~104°F (40°C) (Temperature) 35%~80% (Humidity)
	Input Level: AUDIO IN (Phono): -10 dBV 47 kΩ unbalanced	Dimension	16 ¹³ / ₁₆ " (430 mm) (W)×3 ⁷ / ₁₆ " (86 mm) (H)× 14 ¹³ / ₁₆ " (376 mm) (D)
	Output Level: AUDIO OUT (phono): -8 dBV 1 kΩ unbalanced HEADPHONES: -60 dBV~-29 dBV 8Ω	Weight	13 lbs. (6.0 kg)
	Frequency Response: Hi-Fi 20 Hz~20 kHz	Accessories Supplied	Wireless Remote Controller 1 pc. Coaxial Cable 1 pc. Stereo type Phono Cable 1 pc. U/V Mixer 1 pc. U/V Splitter 1 pc. AC Power Cord 1 pc. "AA" size Batteries 2 pc. Antenna Plug Adaptor 1 pc.
	Dynamic Range: 90 dB (Hi-Fi AUIDO)		

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INTRODUCTION

This Service Manual contains all the technical information which allow service personnel to understand and service this Panasonic VHS Video cassette recorder model AG-1730.

Added to the basic VHS format, these features make the AG-1730 an ideal unit for business, education, entertainment, sales and training applications.

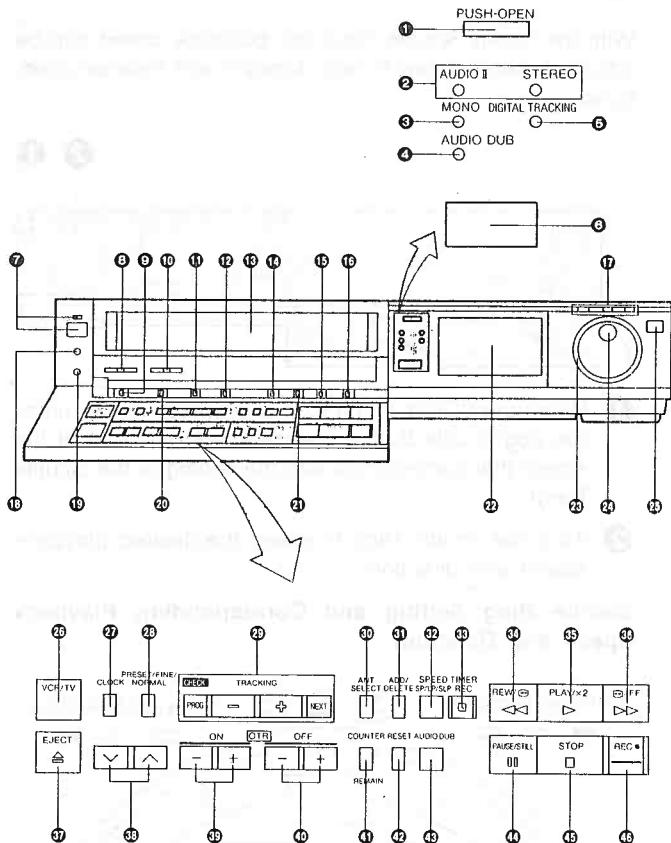
Just slightly ahead of our time...Panasonic

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Controls and Components

FRONT



- ① Control Panel Open Button
- ② Audio Indicators
- ③ MONO Indicator
- ④ Audio Dubbing Indicator
- ⑤ Digital Tracking Indicator
- ⑥ Remote Control Receiver
- ⑦ Power On/Off Switch/Indicator
- ⑧ Headphones Output Level Control
- ⑨ Edit Switch
- ⑩ Picture Sharpness Control

⑪ Forced Mono Switch

If the sound of a stereo or Audio II broadcast is impaired by noise due to weak reception, turn this Switch to On (the Mono Indicator light up) so that the sound will be recorded in mono and becomes easier to listen. To return to the stereo recording mode, turn this Switch to Off.

⑫ Digital Tracking Selector

⑬ Cassette Compartment

⑭ MTS/SAP Select Switch

When a stereo and/or Audio II program is received, the "Stereo" and/or "Audio II" Indicators light up. The operation procedure is the same as described in "Recording from a TV Broadcast Signal" on page 25. The table below shows, what sound will be recorded on which audio track.

TV Program	MTS/SAP Select Switch	Audio track		
		Normal (Mono)	Hi-Fi	
			Left	Right
Mono	All position	Mono	Mono	Mono
Stereo	All position	L+R (Mixed)	Left	Right
Mono and Audio II (SAP)	MTS	Mono	Mono	Mono
	SAP1	Mono	Mono	Audio II
	SAP2	Audio II		
Stereo and Audio II (SAP)	MTS	L+R (Mixed)	Left	Right
	SAP1	L+R (Mixed)	L+R (Mixed)	Audio II
	SAP2	Audio II		

⑮ Simul Switch

⑯ Input Signal Selector

⑰ Jog/Shuttle Indicator

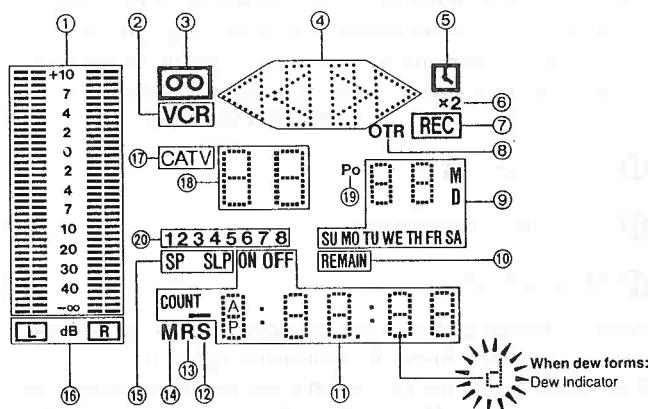
⑱ Microphone Input Socket

⑲ Headphones Socket

⑳ MPX Filter Switch

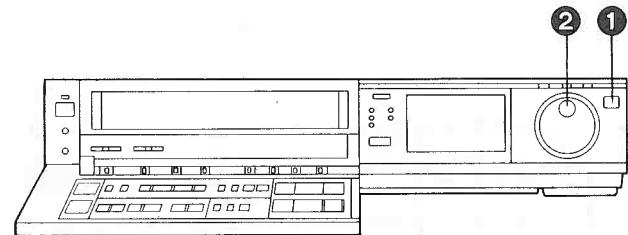
㉑ Tape Select Switch

22 Multi-Function Display



23 Shuttle Ring

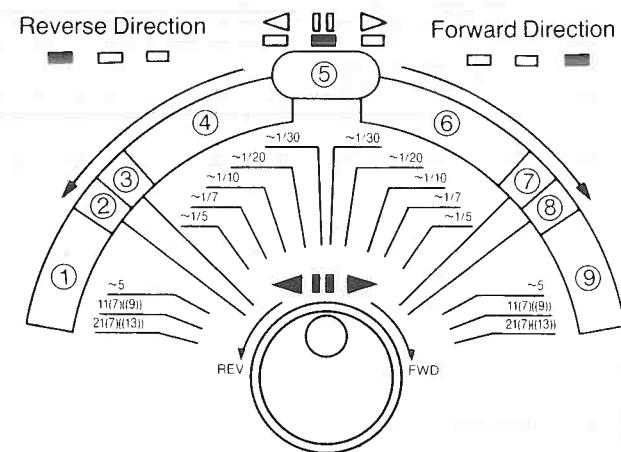
With the handy Shuttle Ring, the playback speed can be adjusted step by step in both forward and reverse directions.



1 When the VCR is in the stop or playback mode, press the Jog/Shuttle Button (the playback will start at the speed that corresponds with the setting of the Shuttle Ring).

2 Turn the Shuttle Ring to select the desired playback speed and direction.

Shuttle Ring Setting and Corresponding Playback Speed and Direction



Note:

By tuning the shuttle ring, a desired Playback mode can be selected while observing the Playback mode indicator on the Multi-Function display.

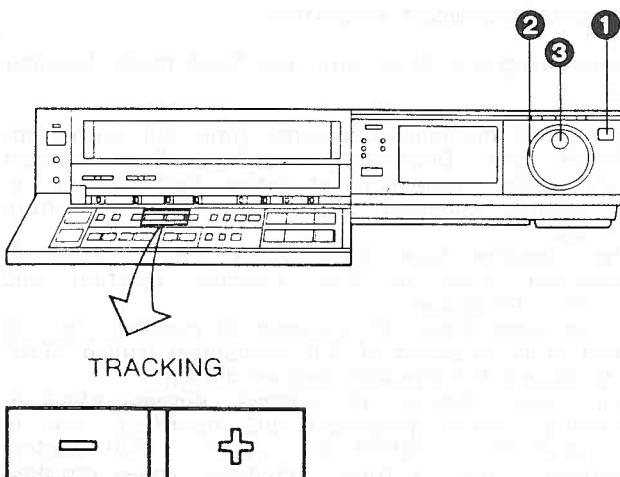
- The Figures on the Shuttle Ring Scale Indicate Multiples and Fractions of the Normal Playback Speed.

The Cue and Review playback speed will be different for recordings made in the SP, LP and SLP mode. The figures in parenthesis () indicate the speed for recordings made in the LP mode, (()) indicate the speed in the SLP mode.

- To return to normal playback, press the Play/ $\times 2$ Button (▶) or the Jog/Shuttle Button.

24 Jog Dial

The convenient Jog Dial makes it easy to locate any desired frame with utmost precision.



- ① Press the Jog/Shuttle Button while the VCR is in the stop mode or in the playback mode.
- ② Return the Shuttle Ring to the center "click" position (Still playback mode).
- ③ Turn the Jog Dial clockwise or counterclockwise.
 - The field advance speed changes according to the speed with which the dial is turned.

Turning the Jog Dial

- Every turn of approx. 30° will advance or reverse the tape by one field.
- A turning speed of the Jog Dial of more than 3 rotations per second corresponds to the normal playback speed.

Slow Tracking Control

- When noise bars appear during Still, Still Advance or Slow playback, switch over to Slow playback and adjust with the Tracking (+) or (-) Button to reduce the noise bars.
- It may not be possible to eliminate the noise bars completely.

②5 Jog/Shuttle Button

②6 VCR/TV Selector

②7 Clock Button

②8 Preset/Fine/Normal Button

②9 Timer Controls

③0 Ant Select Button

③1 Add/Delete Button

③2 Tape Speed Selector

③3 Timer Record Button

③4 Rewind $\blacktriangleleft\blacktriangleright$ /Review \square Button

③5 Play/ $\times 2$ Button (\blacktriangleright)

③6 Fast Forward $\blacktriangleright\blacktriangleright$ /Cue \square Button

③7 Eject Button (\blacktriangle)

③8 Channel Selection Up and Down Buttons

③9 OTR On Buttons

④0 OTR Off Buttons

④1 Counter/Remaining Tape Time Selector

④2 Reset Button

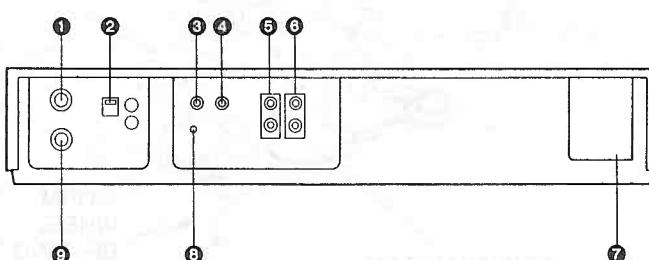
④3 Audio Dubbing Button

④4 Pause/Still Button ($\square\square$)

④5 Stop Button (\blacksquare)

④6 Record Button (\bullet)

REAR



① RF Output Connector

② RF Converter Channel Selector

You have connected your VCR to your TV set, you are ready to set the RF converter. This will allow you to view tapes in playback and to use your TV as a monitor. Your VCR contains an RF converter which translates the video and audio signals in the deck to a standard broadcast signal the TV set can accept.

The RF converter can transmit this signal on either channel 3 or 4. To prevent any interference it is advisable that you select the channel that is not normally broadcast in your area.

③ Video Input Jack

④ Video Output Jack

⑤ Audio Input Jacks

⑥ Audio Output Jacks

⑦ AC Power Cord Connector

⑧ Synchro Edit Socket

⑨ RF Input Connector

TECHNICAL DESCRIPTIONS

1. G-II Mechanism

GII mechanism has been developed to improve its performance based on conventional G-mechanism, which is featuring JOG & SHUTTLE Search, High accurate editing and Reverse fine slow.

[Quick Operation]

In order to achieve above features quickly, GII mechanism employs an additional REVIEW MOTOR which helps reverse tape transference during Reverse Playback, Review, Unloading, Reverse slow and Reverse frame advance. (Also loading)

The REVIEW MOTOR releases the Tension post and rotates the Supply reel table quickly despite that the G-mechanism can not do so fast.

And it also works just before mechanism is moved to FF/REW mode, that is to release the Sub-Lever, eventually mechanical movement to FF/REW become very quick.

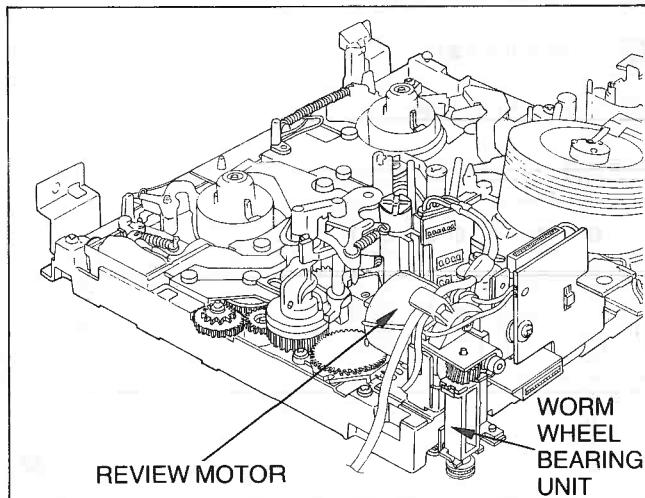


Figure 1 Location of REVIEW MOTOR

Because in the case of conventional G-mechanism, Capstan motor have to release Sub-Lever first, then rotate the Supply or Take-up reel table, however, in the case of GII mechanism, REVIEW MOTOR release Sub-Lever and Capstan motor rotate Supply or Take-up reel table respectively that gives us quick mechanical movement (operation).

[Faster response time with the Dual-mode Loading Stop]

To improve mechanical response time, GII mechanism employs the Dual-mode Loading Stop system which stops mechanism at either half loading or full loading condition depends on function before unit did.

After cassette tape with safety tab is inserted, mechanism goes to Full Loading position and stopped automatically.

At the same time DD Cylinder is rotated. This is initial stop condition of GII mechanism (called STOP 2) to obtain the playback picture quickly.

When stop button is pressed during playback (including Special playback) and recording, unit is also stopped at "STOP 2" condition (Full loading condition) for waiting playback or recording command. (In this time DD Cylinder is rotated.)

If any button is not pressed for more than 10 minutes, DD Cylinder is stopped automatically, however, Full loading condition is still remained.

This gives us high accurate editing even when unit goes to recording via stop mode. In the case of G mechanism, there is possibility to be erased the previous recorded signal if STOP and REC PAUSE is repeated.

Because, during unloading, tape may excessively be wound by Supply reel table depend on tape diameter. GII mechanism solve this problem by adopting "STOP 2" position.

If stop button is pressed during FF/REW, unit goes to Half Loading condition (called STOP 1) and stopped.

	G Mechanism	G-REV. Mechanism	GII Mechanism	
STOP MODE CONDITION			Stop 1 (Half Loading Stop System)	Stop 2 (Full Loading Stop System)
	Half Loading Stop System	Half Loading Stop System	Dual Loading Stop System	
SEARCH SPEED	x7	x7 / x9 (Decided by Microprocessor)	x9	
MOTOR	1 MOTOR (CAPSTAN MOTOR)	1 MOTOR (CAPSTAN MOTOR)	2 MOTORS (CAPSTAN MOTOR) (REVIEW MOTOR)	
FEATURES	Lap Time Counter	Lap Time Counter	Lap Time Counter Jog & Shuttle Search Reverse Fine Slow	

Figure 2 Comparison Chart of G/G-REV./GII

As described, GII mechanism is employed REVIEW MOTOR and new Capstan motor. Figure 5 shows response time of G-mechanism and GII mechanism.

New Capstan stator makes high speed mechanism. 6 coils on the Capstan stator are changed for obtain the high speed rotation even the same drive

voltage supplied than conventional one. Review Motor improve the response of mode switch time. Moreover GII mechanism employs Dual-mode loading system.(Already described) Therefore response of GII mechanism is improved.

Scenes Access Time	
CASSETTE IN→	10.0 sec (G)→5.7 sec (GII)
STOP 2 (full loading)→	5.7 sec (G)→2.0 sec (GII)
STOP 1 (half loading)→	5.7 sec (G)→3.6 sec (GII)
Mode Switch Time	
STOP 1→FF/REW	2.7 sec (G)→0.6 sec (GII)
PLAY→CUE/REV.	0.5/2.5 sec (G)→0.6 sec (GII)
High Speed Tape Time	
FF/REW	4 min, 50 sec (G)→2 min, 30 sec (GII) (TAPE: NV-E180)

Figure 3 Response Time of G and GII Mechanism

[Additional mechanism sequence]

GII mechanism is added on some new parts are driven by REVIEW MOTOR.

Additional sequence of GII mechanism as mentioned below.

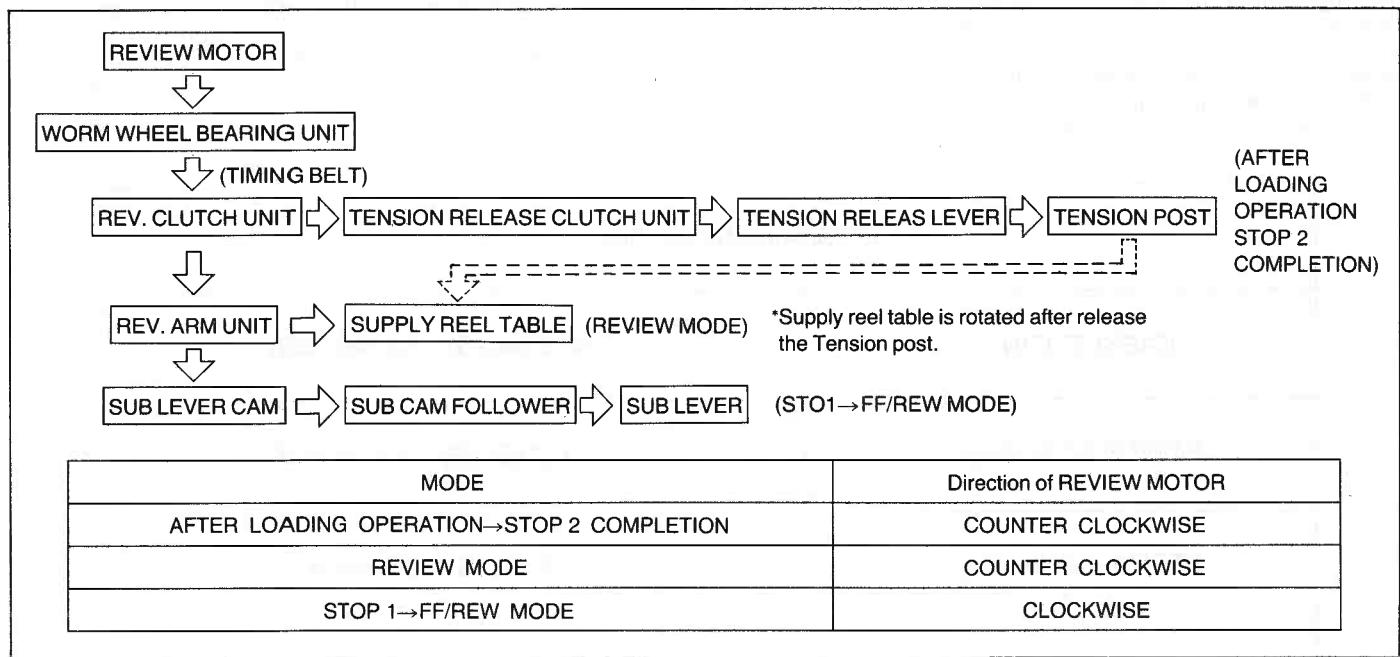


Figure 4 Flow Chart of GII Mechanism Additional Sequence

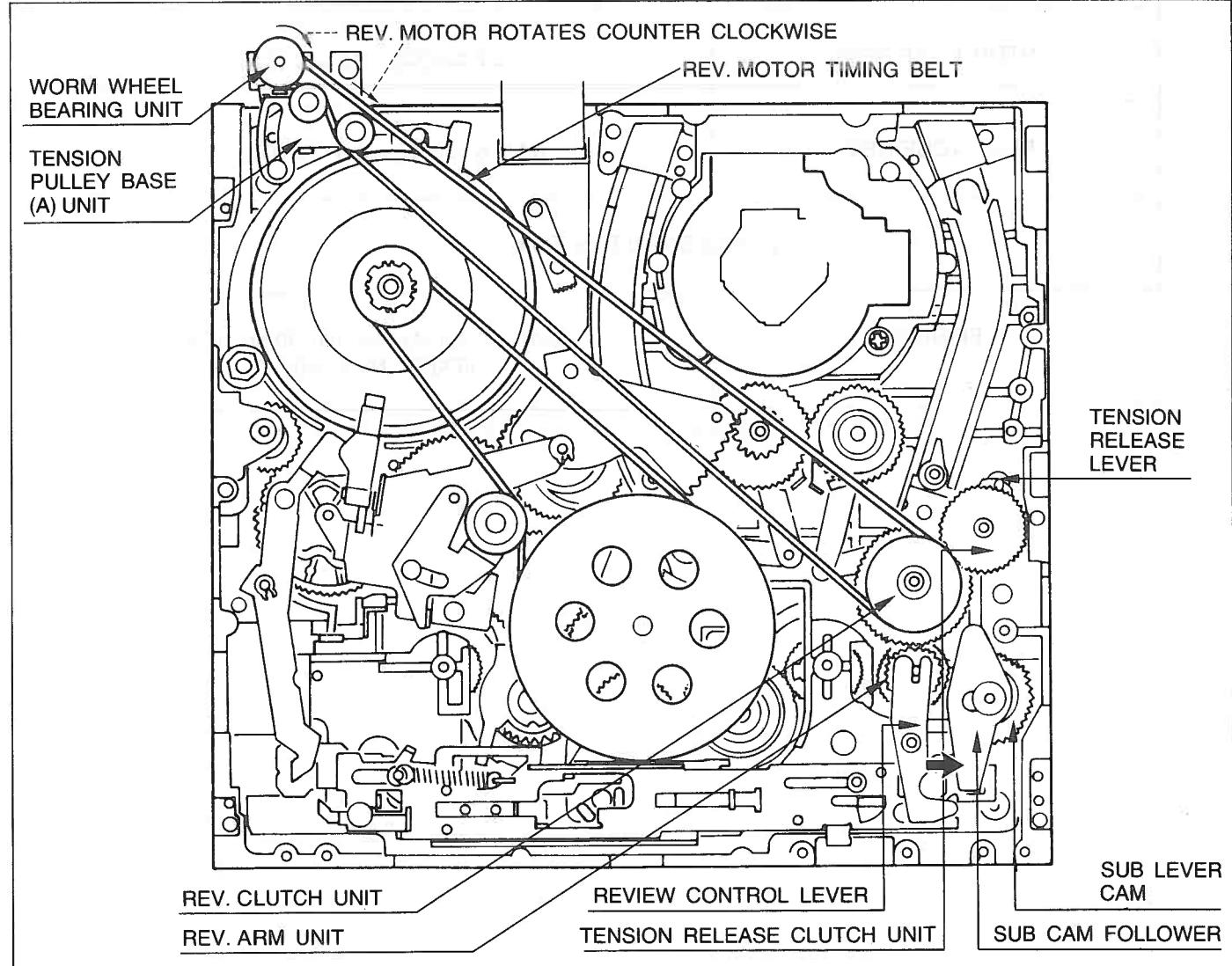


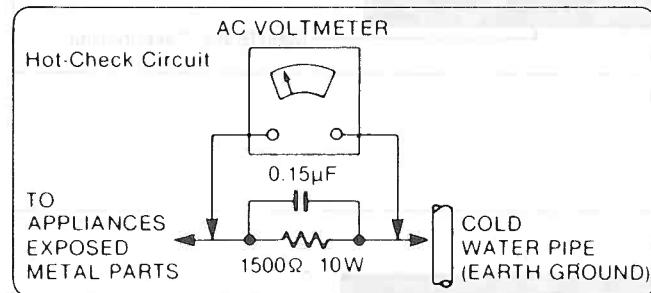
Figure 5 Bottom View of GII Mechanism

SAFETY PRECAUTIONS**GENERAL GUIDELINES**

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

LEAKAGE CURRENT COLD CHECK

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

**LEAKAGE CURRENT HOT CHECK**

(See Figure 1)

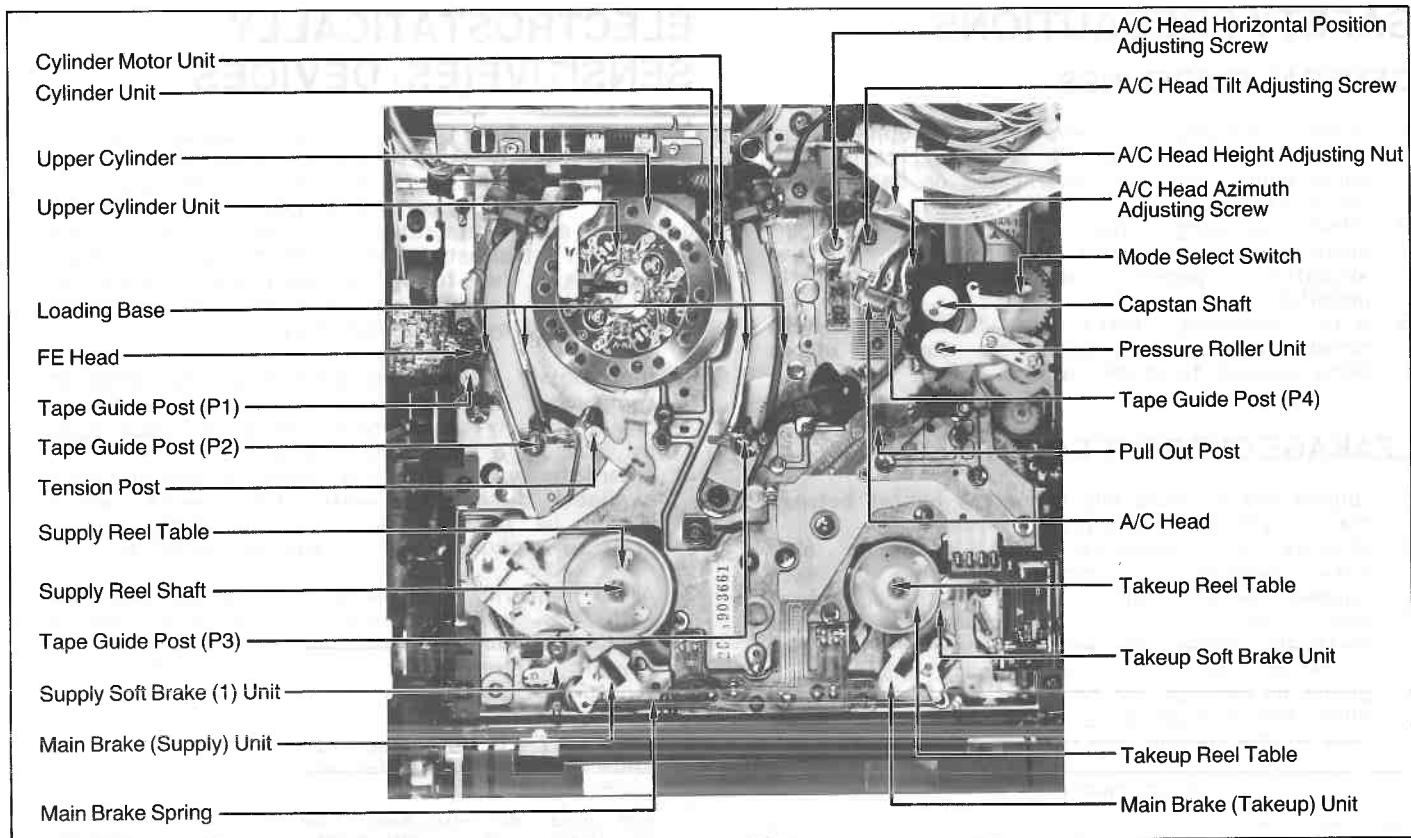
- Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
- Connect a 1.5k ohm, 10 watts resistor, in parallel with a 0.15μF capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
- Use an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

ELECTROSTATICALLY SENSITIVE(ES) DEVICES

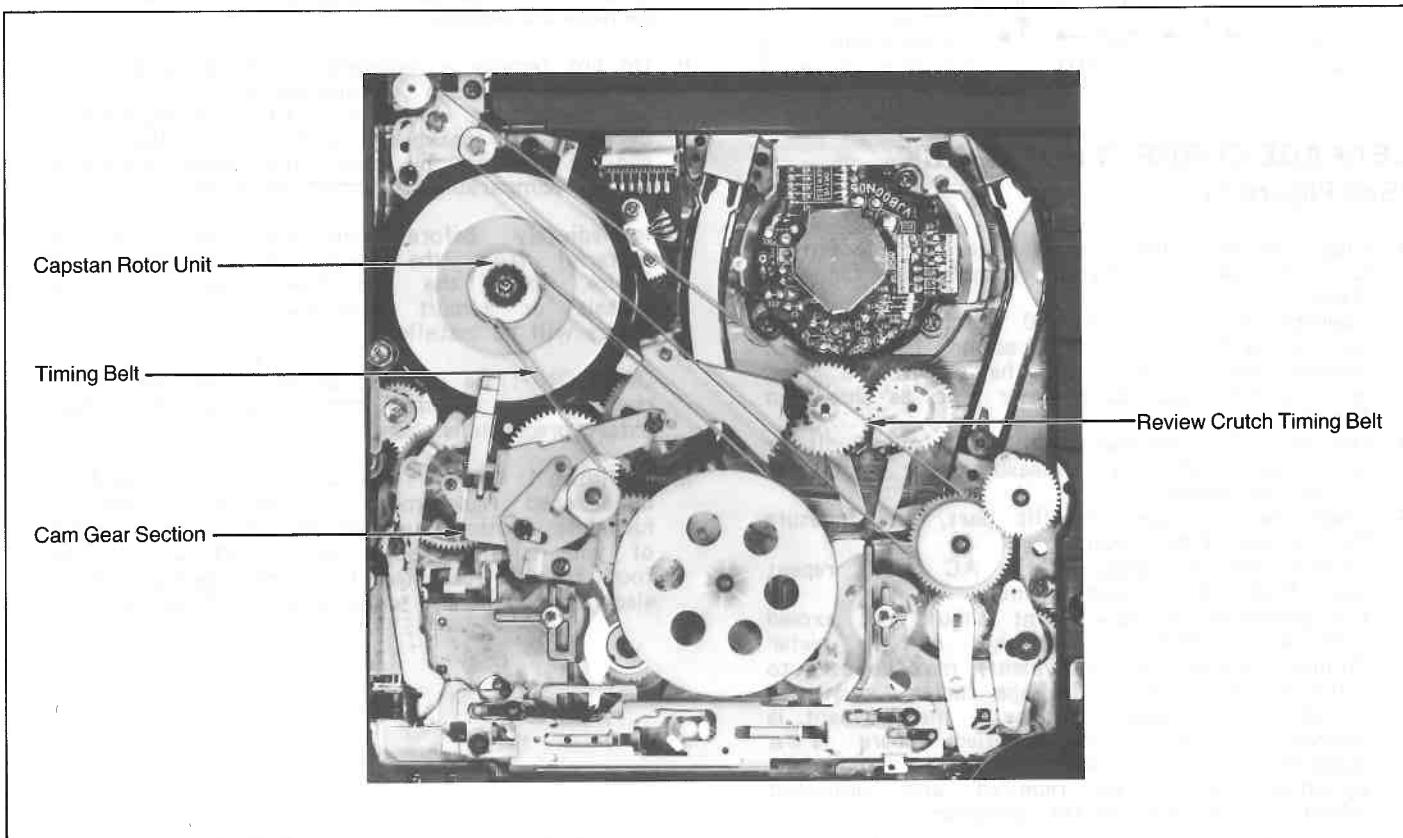
Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following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

- Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
 - After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
 - Use only a grounded-tip soldering iron to solder or unsolder ES devices.
 - Use only an anti-static solder removal device classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
 - Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
 - Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
 - Immediately before removing the protective material from the leads of replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- CAUTION :** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
- Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

PARTS LOCATION



Top View



Bottom View

REGULAR MAINTENANCE

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

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

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

MAINTENANCE CHART

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

Ref. No. IN PIL	Parts Name	Hour										Ref. No. IN PIL	Parts Name	Hour									
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000			500	1000	1500	2000	2500	3000	3500	4000	4500	5000
7(1)	Upper Cylinder Unit	●	◎	●	◎	●	◎	●	◎	●	◎	24(1)	Main Brake (Supply) Unit				◎				◎		
6(1)	Cylinder Motor Unit	●	●	●	●	●	●	●	●	●	◎	27(1)	Main Brake (Takeup) Unit			◎				◎			
34(1)	A/C Head	●	●	●	●	●	●	●	●	●	●	55(1)	Mode Select Switch								●		
17(1)	FE Head	●	●	●	●	●	●	●	●	●	●	—	Tape Transport	●	●	●	●	●	●	●	●	●	●
45(1)	Pressure Roller Unit	●	●	●	●	●	●	●	●	●	●	—	Loading Base			■				■		■	
14(1)	Supply Reel Table	●	●	●	●	●	●	●	●	●	●	—	Cam Gear Section			■			■		■		■
71(1)	Takeup Reel Table	●	●	●	●	●	●	●	●	●	●	132(2)	Timing Belt				◎				●		●
—	Supply Reel Shaft				▲					▲		25(1)	Supply Soft Brake (1) Unit				●				●		●
—	Takeup Reel Shaft				▲				▲			159(2)	REV Clutch Timing Belt				●				●		●
133(2)	Capstan Rotor Unit										◎	13(1)	Tension Band Unit				●				●		●
—	Capstan Shaft	●	●	●	●	●	●	●	●	●	●	70(1)	Main Brake Spring				●				●		●

* NOTE:

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

DISASSEMBLY PROCEDURES

1. DISASSEMBLY FLOW CHART

This flowchart 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.

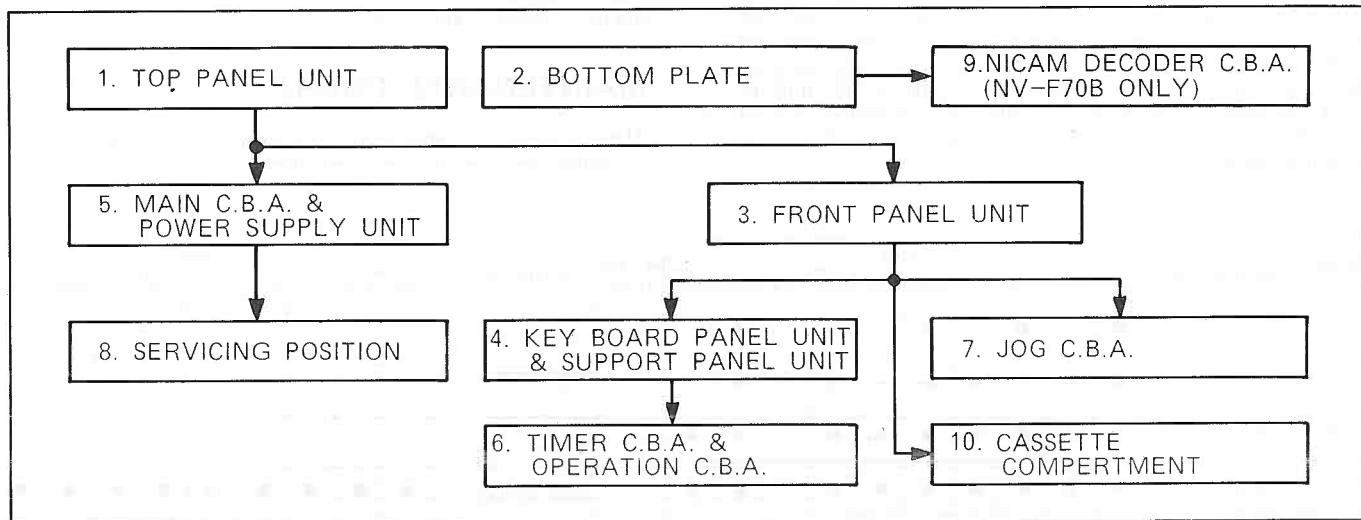


Fig. D1

2. DETAIL OF DISASSEMBLE METHOD

2-1. REMOVAL OF THE TOP PANEL UNIT

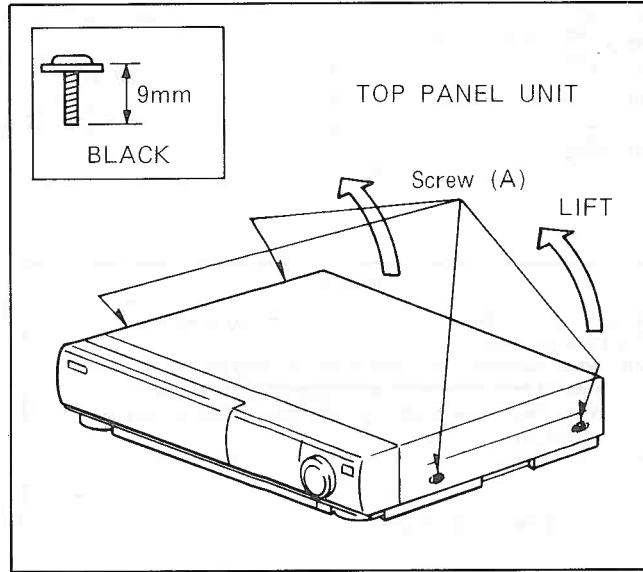


Fig. D2

Remove...4 Screws (A)

2-2. REMOVAL OF THE BOTTOM PLATE

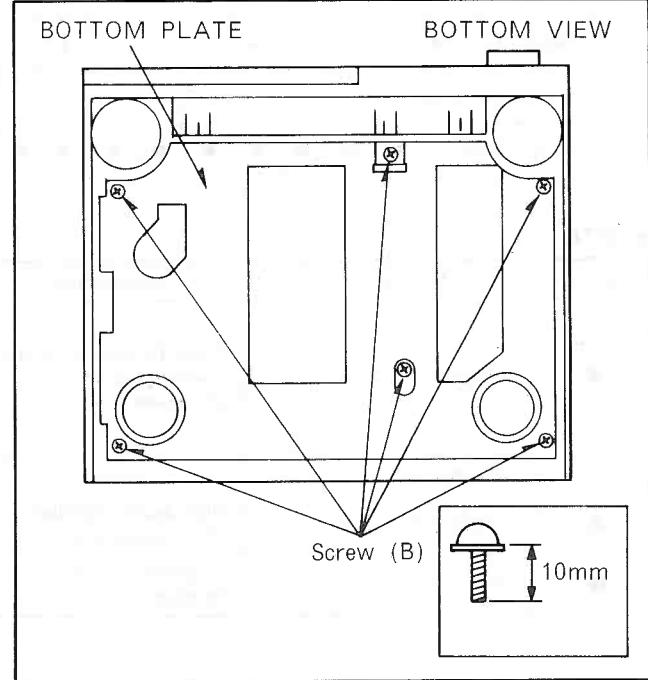


Fig. D3

Remove...6 Screws (B)

2-3. REMOVAL OF THE FRONT PANEL UNIT

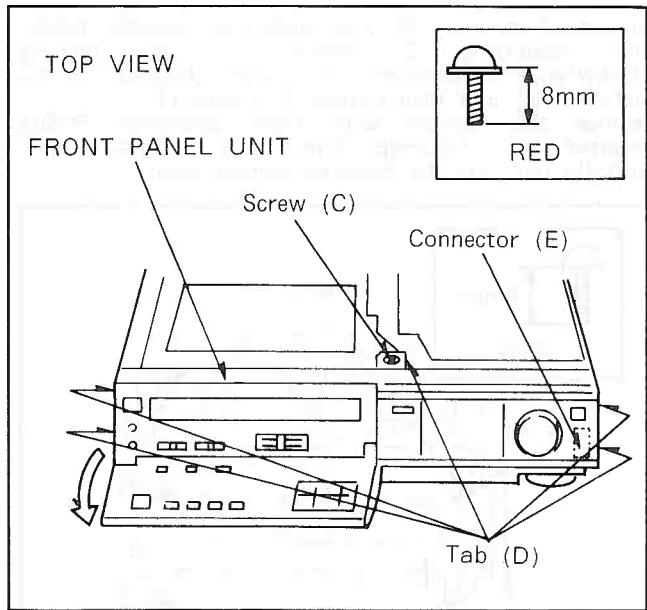


Fig. D4

Remove...Screw (C)
Unlock...5 Tabs (D)
Disconnect...Connector (E)

2-4. REMOVAL OF THE KEY BOARD PANEL UNIT AND SUPPORT PANEL UNIT

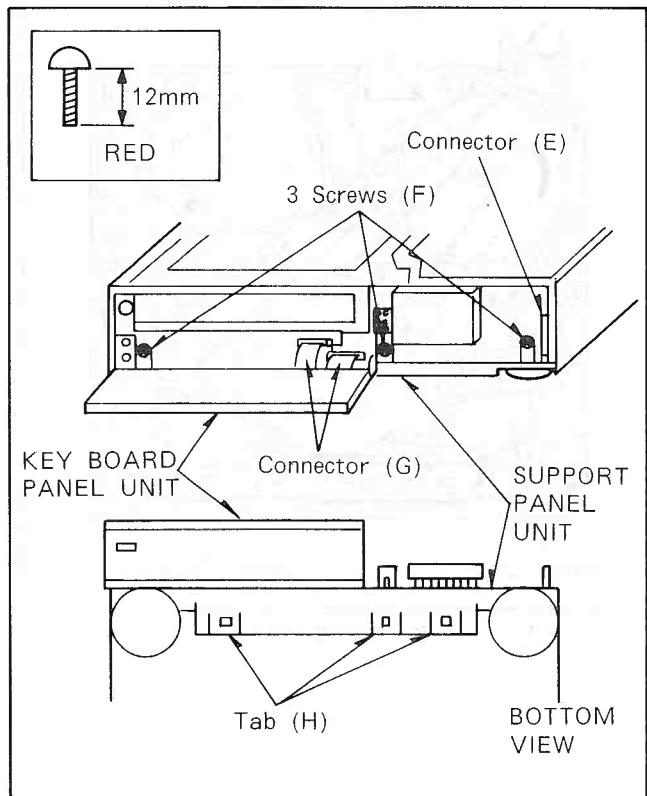


Fig. D5

Remove...3 Screws (F)
Disconnect...2 Connectors (G)
Unlock...3 Tabs (H)

2-5. REMOVAL OF THE MAIN C.B.A. AND POWER SUPPLY UNIT

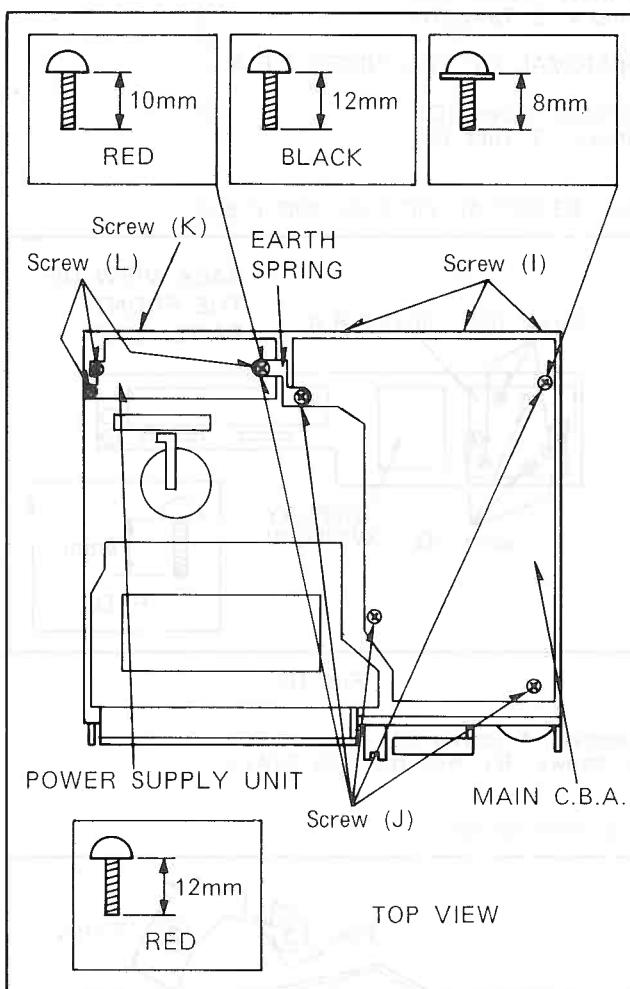


Fig. D6

REMOVAL OF THE MAIN C.B.A.

Remove... 3 Screws (I), 5 Screws (J) and EARTH SPRING

REMOVAL OF THE POWER SUPPLY UNIT

Remove... Screw (K), 3 Screws (L) and EARTH SPRING

2-6. REMOVAL OF THE OPERATION C.B.A. and TIMER C.B.A.

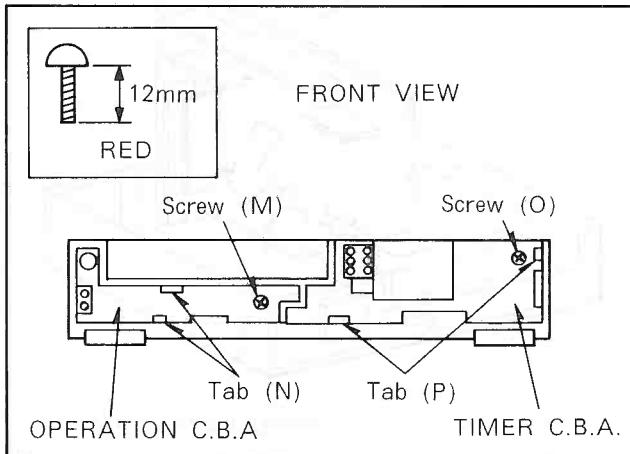


Fig. D7

REMOVAL OF THE OPERATION C.B.A.

Remove...Screw (M)
Unlock...2 Tabs (N)

REMOVAL OF THE TIMER C.B.A.

Remove...Screw (O)
Unlock...2 Tabs (P)

2-7. REMOVAL OF THE JOG C.B.A.

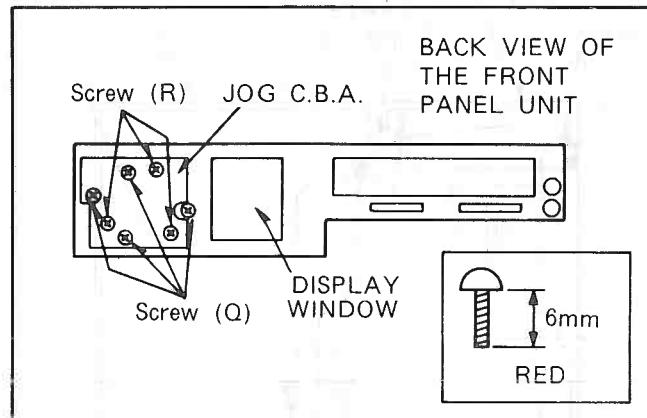


Fig. D8

Remove...4 Screws (Q)
(3 screws (R)...For the JOG DIAL)

2-8. SERVICING

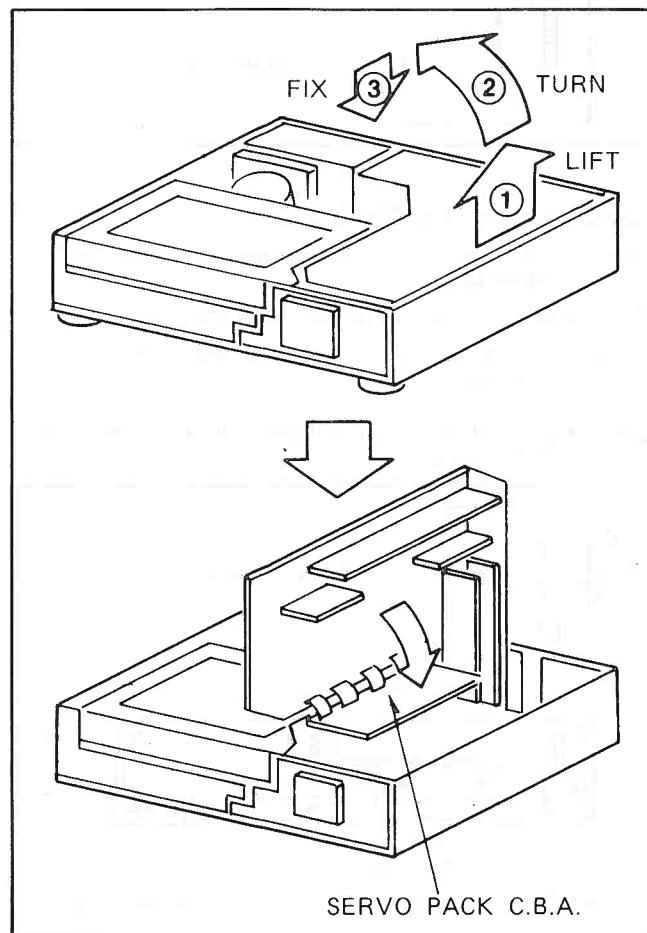


Fig. D9

2-9. REMOVAL OF THE CASSETTE COMPARTMENT

Remove 2 screws (S) and slide the cassette holder until appearing 2 screws (T) by turning (clockwise) the capstan rotor unit (located in the bottom side) and then remove 2 screws (T). Remove the flexible wire from connector P1503 mounted on Take-up photo Tr. C.B.A., then carefully pull out the cassette compartment.

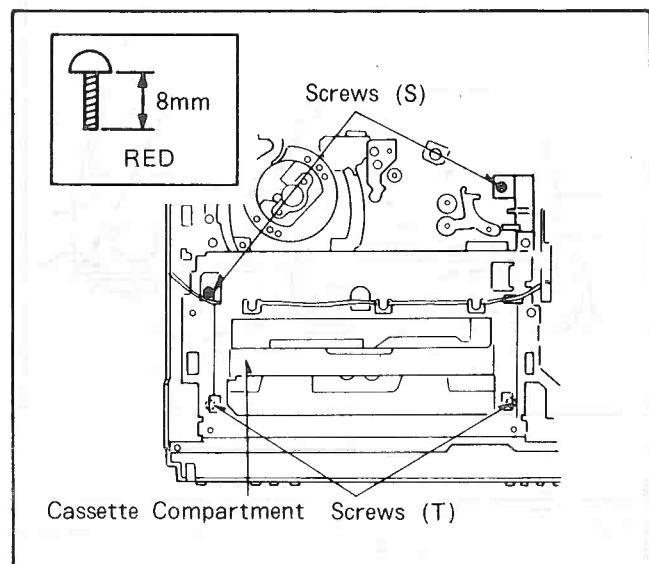


Fig. D10

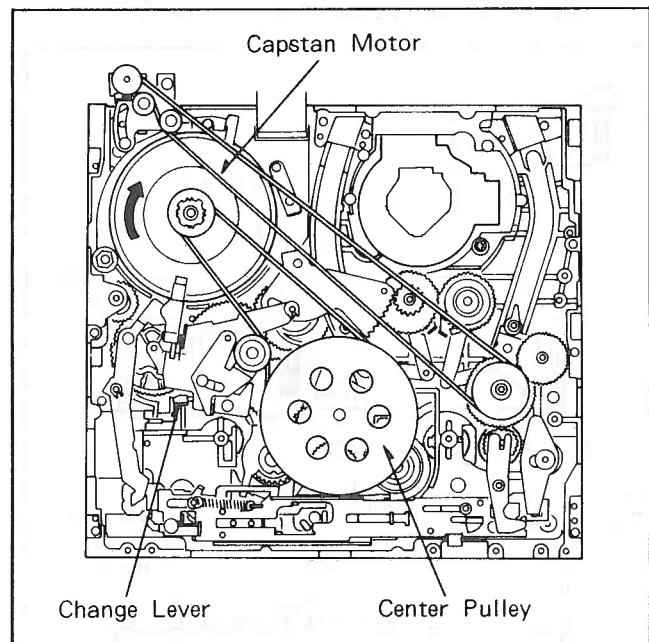


Fig. D11

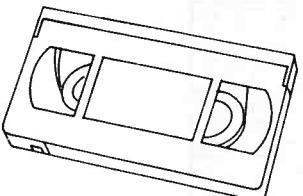
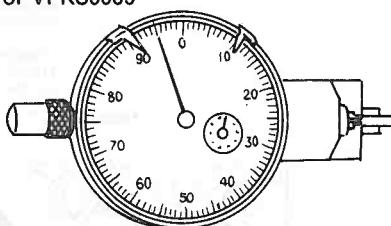
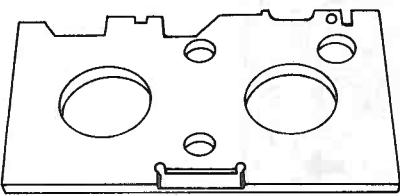
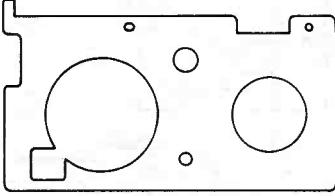
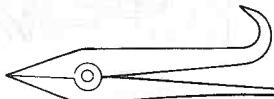
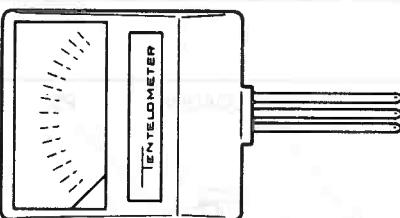
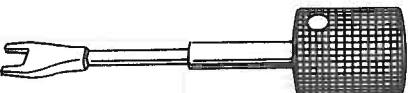
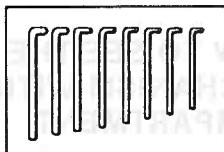
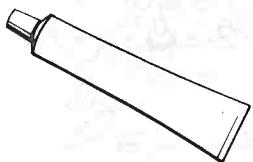
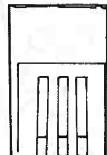
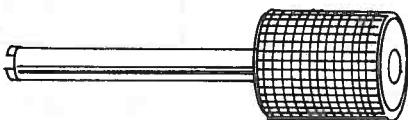
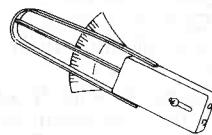
MECHANICAL ADJUSTMENT PROCEDURES

The regular maintenance is important to maintain the initial specification of the deck and to prevent tape damage.

The specified servicing fixtures must be used to conduct adjustments.

The following fixtures, tools and measuring equipments are required to conduct complete Mechanical Adjustments.

1. SERVICING FIXTURES & TOOLS

VFM8080HQFP VHS Alignment Tape	VFK0343 Check Light	VFK0190 Reel Table Height Fixture or VFKS0009
		
VFK0191 Post Adjustment Plate or VFKS0010	VFK0387 Tension Post Adj. Fixture	VFK0335 Retaining Ring Remover (3mm/4mm)
		
VFK0132 Back Tension Meter (Tentelometer, Made in U.S.A.)	VFK0328 H-Position Adj. Screwdriver or VFKS0003	VFK0326 Hex. Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3mm)
		
MOR265 Morlytone Grease	VFK27 Head Cleaning Stick	Height Quality Machine Oil <Purchase Locally> (Reel Shaft, Capstan Shaft etc.)
		Cleaning Liquid (Freon TF., Alchol) <Purchase Locally> (Tape Transport Rubber Parts etc.)
VFK0269 L Type Screwdriver	VFK0329 Post Adj. Screwdriver	VFK66 Fan Type Tension Gauge
		

2. SERVICE INFORMATION

2-1. HOW TO EJECT MANUALLY

If the electric circuit is defective and the action of unloading and front unloading don't work properly, it is possible to eject manually as follows.

1. Take out the Main AC.

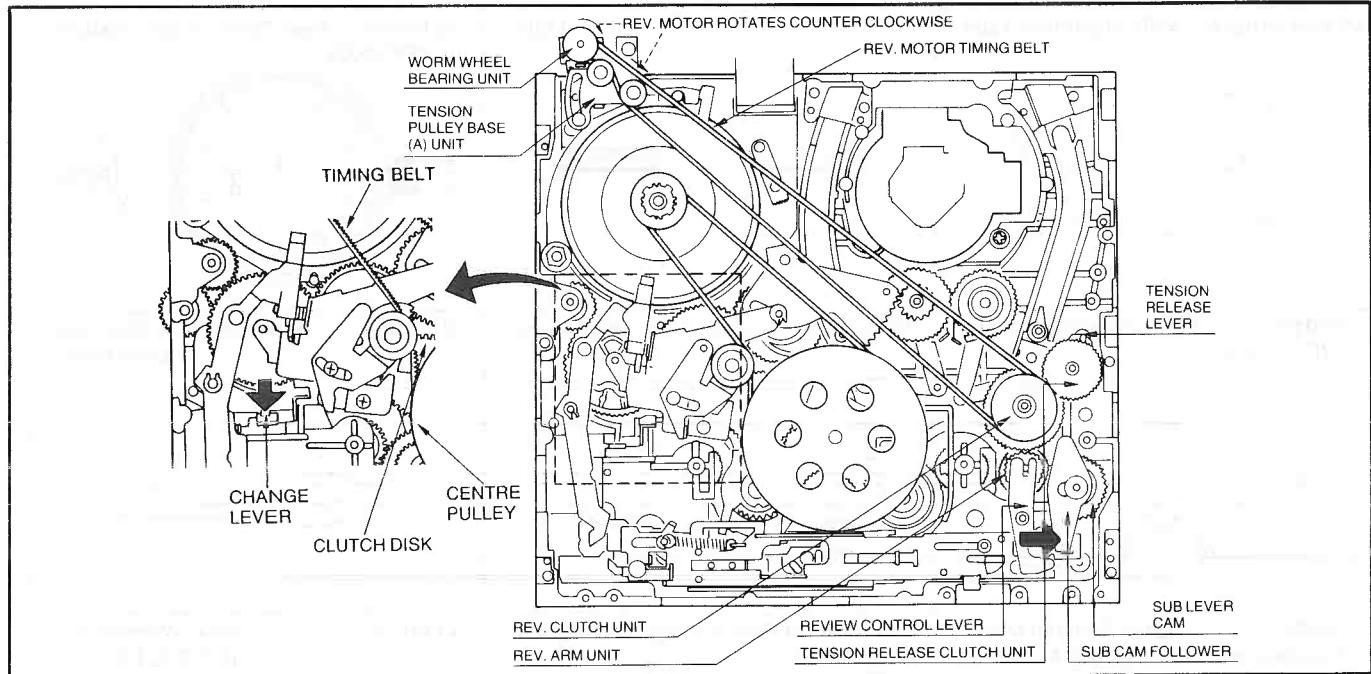


Figure M1

2-2. HOW TO SEE THE MOVEMENT OF MECHANISM WITHOUT CASSETTE COMPARTMENT

Since capstan motor works as loading motor and front loading motor, phase relationship between cassette compartment and mechanism is important, so Playback and FF/REW can not be performed even just only taking out the cassette compartment, however, if you want to see the mechanical movement without cassette compartment, it is possible as follows.

1. Take out the Main AC.
2. Take out the flexible cable from connector on the cassette compartment and remove the cassette compartment from chassis.
Set the Mechanism to STOP(STOP1) mode as following items 3.,4.,5.,6.
3. Release the change lever by pushing it to arrow mark direction as shown in Figure M1.
4. Turn the capstan motor clockwise until the Clutch Disk is locked.
(Clutch Disk is locked once in one rotation)
5. Release the change lever again when Clutch Disk is locked.
6. Repeat item 4 and 5 until mechanism come to SYOP(STOP1) position as shown in Figure M2.
* To confirm the STOP1 mode
Press the Sub Cam Follower to arrow mark direction as indicated in Figure 7 and turn the capstan motor to both of forward and reverse direction. If takeup reel table is rotated when capstan is rotated forward and if supply reel table is rotated when capstan is rotated reverse, that is STOP1 position.
7. Turn the power on.

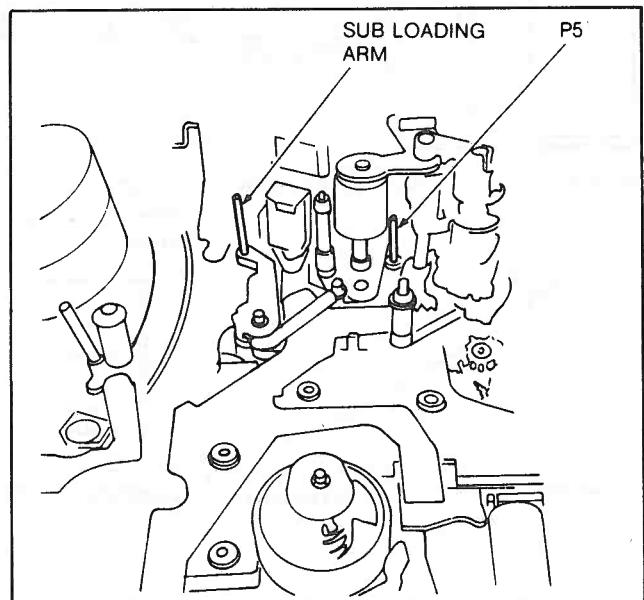


Figure M2

8. Now, any operation can be performed without cassette compartment.
- *Notes:
1. Don't add the large torque to any gears not to break it.
 2. When reinstalling the cassette compartment, refer to Reinstallation of Cassette Compartment procedures.
 3. Even though cassette switch is not connected to microprocessor, unit can work correctly.

3. CYLINDER MAINTENANCE PROCEDURES

3-1. REPLACEMENT OF THE D.D. CYLINDER UNIT

Work with extreme care when removing or replacing the D.D. cylinder unit.
Do not touch the video head during servicing.

1. Remove the 2 screws (R) to take the Head Amp Pack Out.
2. Remove the 1 screw (S) to take the Earth Holder Unit Out.
3. Disconnect the 5P connector on the cylinder drive C.B.A.

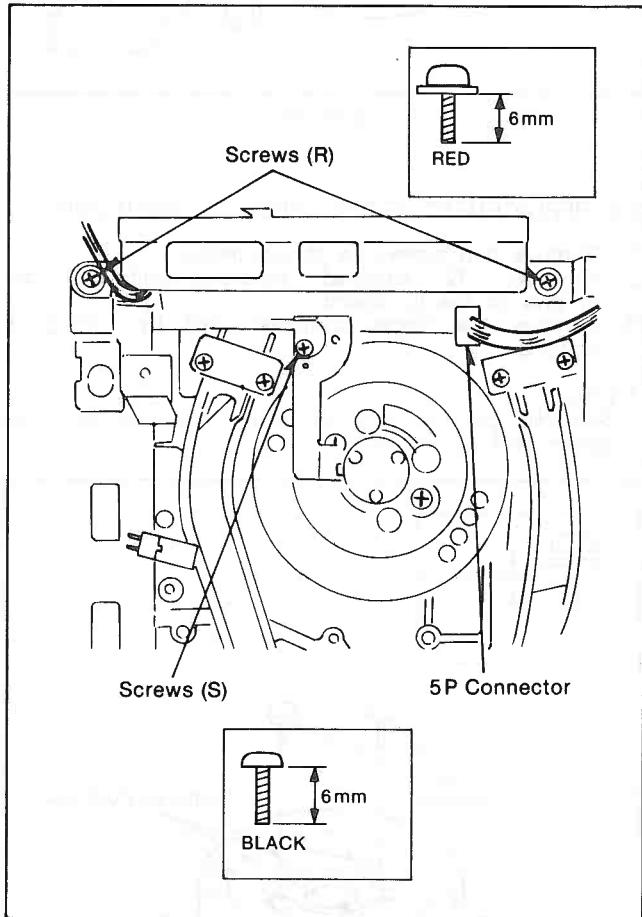


Figure M3

4. Remove the 3 screws (T) to take the D.D. cylinder unit (with the cylinder drive C.B.A.) out.

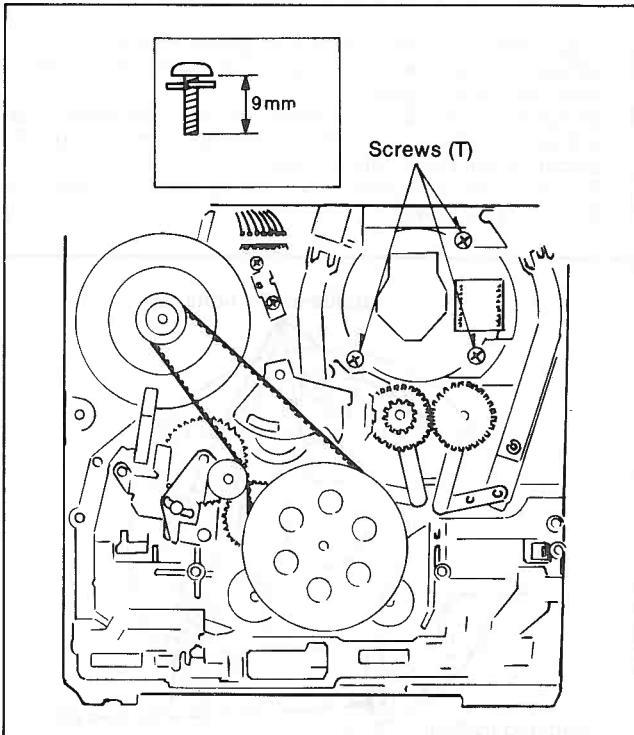


Figure M4

Note:

Since there is very little clearance between the D.D. cylinder unit and the chassis, remove the D.D. cylinder unit gently and carefully.

5. Reinstall the new D.D.Cylinder Unit, tighten the 3 screws (T) and reinstall the Earth Holder Unit, tighten the 1 screw (S). Then re-connect the Head Amp pack and 5P connector and tighten 2 screws (R).

*Note:

1. Gently rub the video head in direction of tape travel with Head cleaning stick.
2. After replacement, maintenance is required, perform "TAPE INTER-CHANGE ABILITY ADJUSTMENT".

3-2. REPLACEMENT OF THE CYLINDER DRIVE C.B.A.

1. Remove the D.D. Cylinder unit referring the Item 3-1.
2. Place the D.D. cylinder unit upside down.
3. Unsolder the soldered portion (V) for shield case to take it out.
4. Unsolder the 22 soldered pored portions (U) indicated by an arrow wark (including 14 soldered portions inside case).
5. Remove the 2 screws (W) to remove the cylinder drive C.B.A. unit.

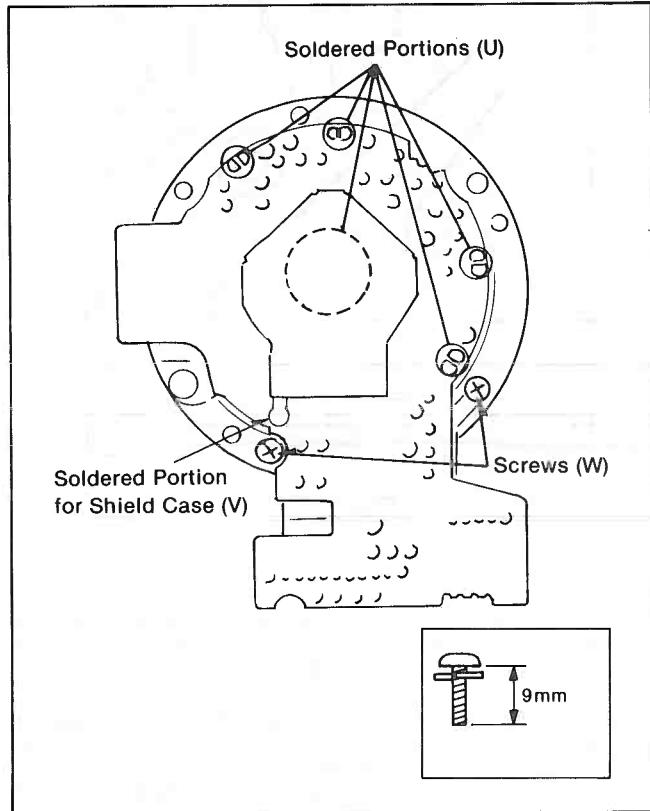


Figure M5

6. Reinstalling is just reverse way of above procedures.

3-3. REPLACEMENT OF THE CYLINDER DRIVE IC

1. Remove the Cylinder Drive C.B.A. as item 3-2.
2. Remove the screw (X) to take the heat sink Plate out.
3. Unsolder the 18 soldered portions of the Cylinder Drive IC to take it out.
4. Reinstall the New IC with the care of Pins location.
5. Re-solder the 18 pins of the Cylinder Drive IC.
6. Reinstall the Cylinder Drive C.B.A. to the D.D. Cylinder Unit.

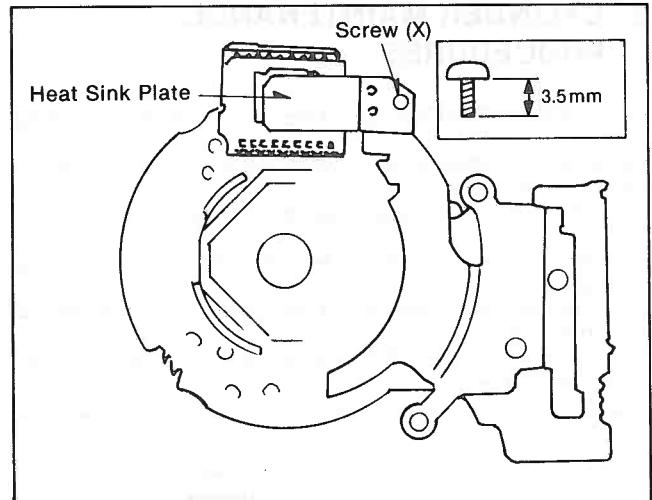


Figure M6

3-4. REPLACEMENT OF THE UPPER CYLINDER UNIT

1. Remove two screws as shown below.
2. Unsolder 12 soldered portions indicated by arrows on the C. Board.
3. Remove the Upper Cylinder Unit by lifting it upward.

*Note:
Soldered portion can be easily removed by using solder sucking wire,etc.

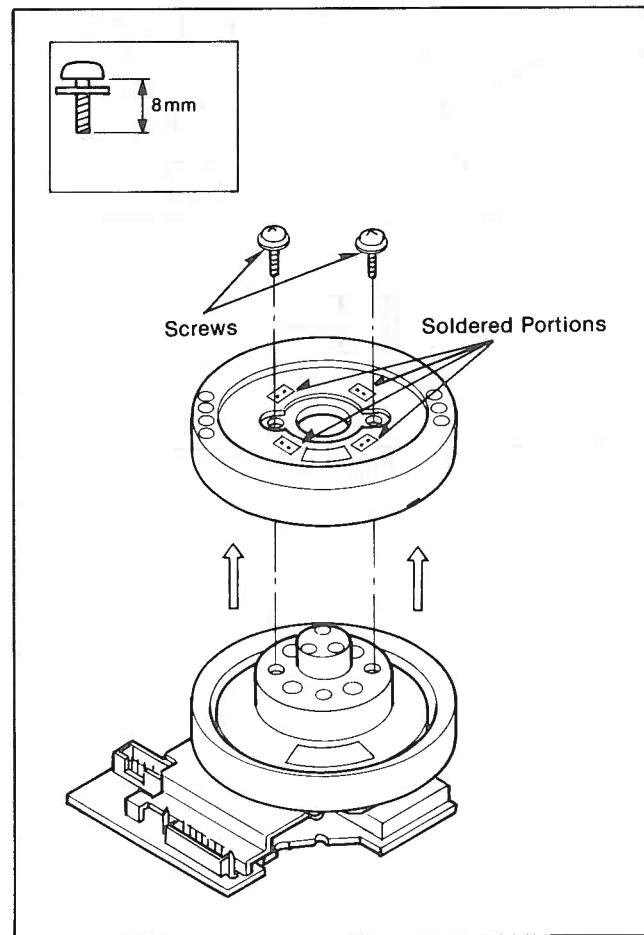


Figure M7

4. The upper cylinder unit can be reinstalled by reversing the removal procedure, however, when the upper cylinder is reinstalling, be extremely carefull so that white portion of C. Board of the upper cylinder correctly matches the white portion of the bottom cylinder as shown below.

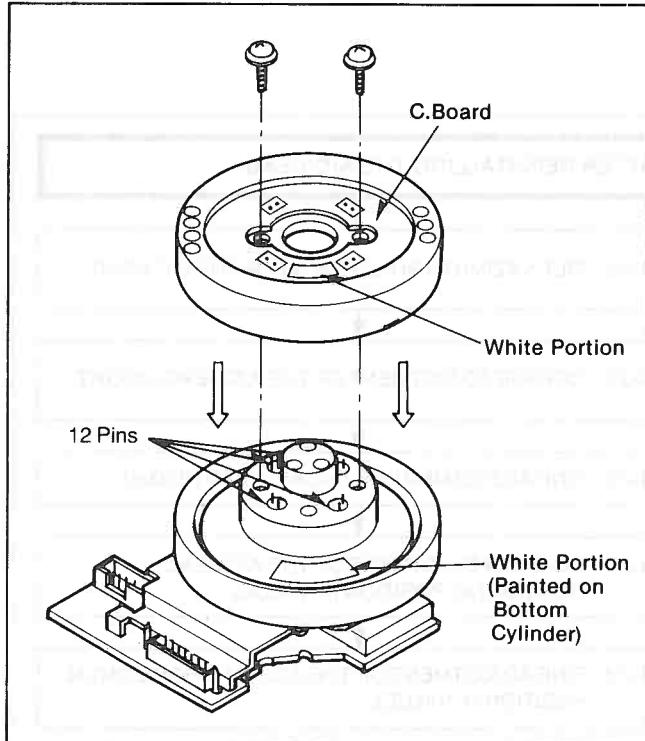


Figure M8

*Note:

1. If the Upper Cylinder Unit is reversely installed, no color would appear when playing back a pre-recorded tape.
2. Do not loosen the 3 small screws on the top of the cylinder as shown in Figure M9. If these 3 screws are loosened, Cylinder motor is broken and not restored.

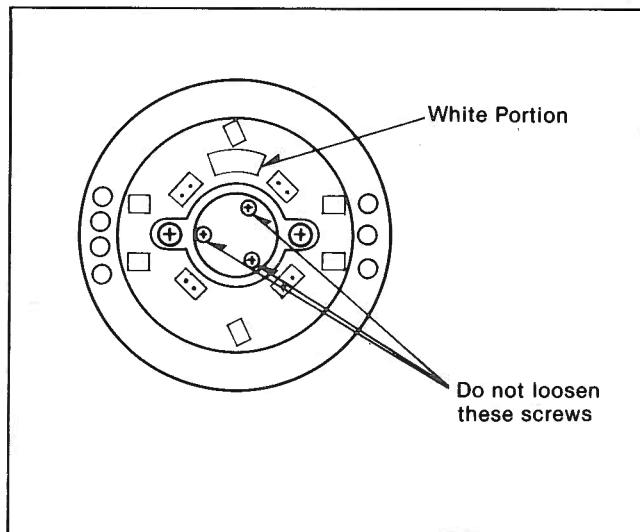


Figure M9

4. TAPE INTERCHANGEABILITY ADJUSTMENT PROCEDURES

4-1. ADJUSTMENT FLOW CHART

This flow chart describes the order of steps for adjusting the tape guide posts and A/C head in order to gain access to the items needing servicing. (Figure M10)

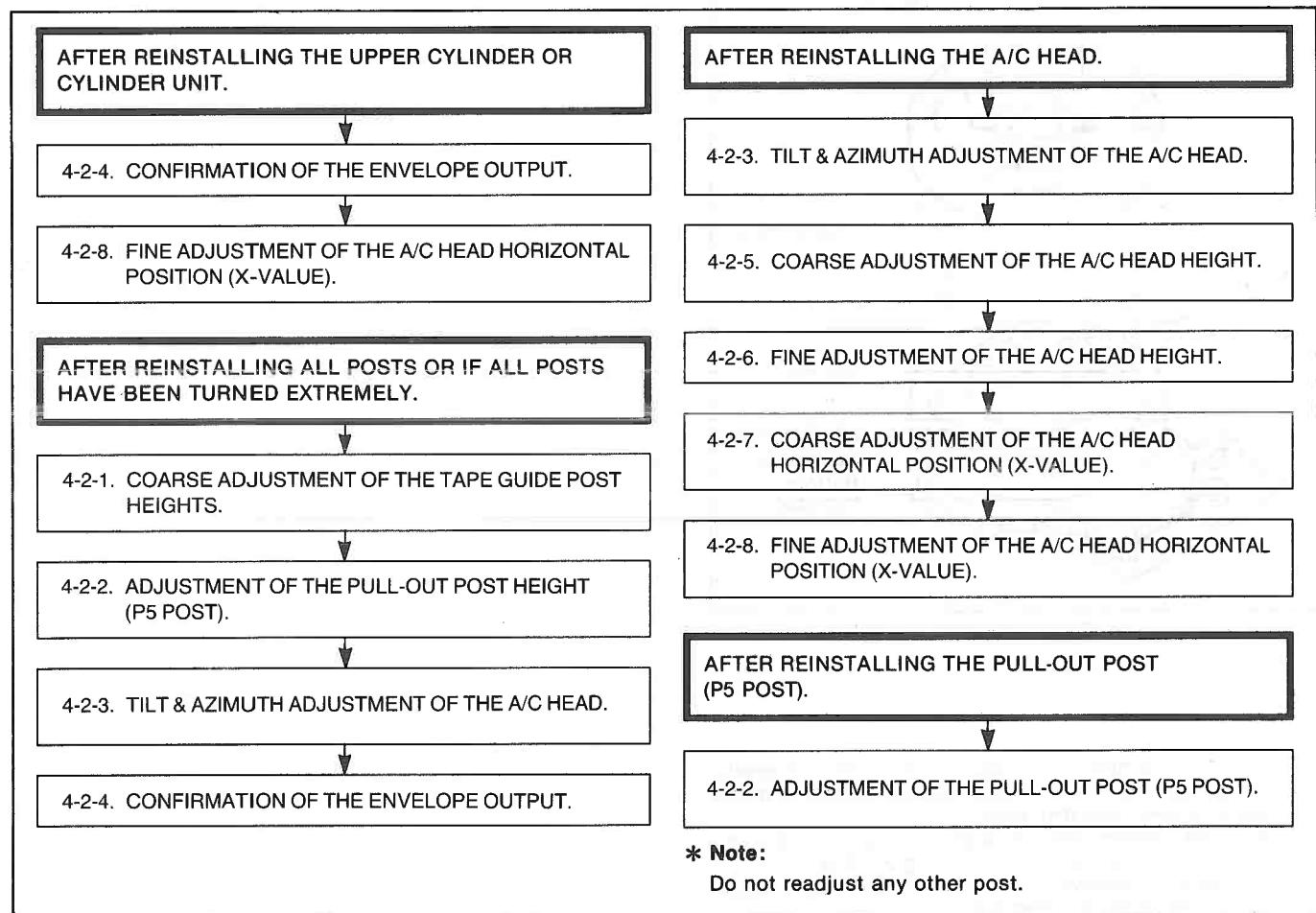


Figure M10

4-2. ADJUSTMENT PROCEDURES

4-2-1. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS (P2 and P3)

*Notes:

1. The Tape Guide Posts have been precisely adjusted at the factory.
Therefore, normally do not change the height of the P2 and P3 Posts.
The following adjustment is required only when replacing the posts.
2. To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.

*Tools and Equipment Required:

Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190
Post Adjustment Screwdriver.....VFK0329
L Type Adjustment Screwdriver.....VFK0269

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate over the reel tables. Confirm that the Post Adjustment Plate is firmly seated as shown in Figure M11.

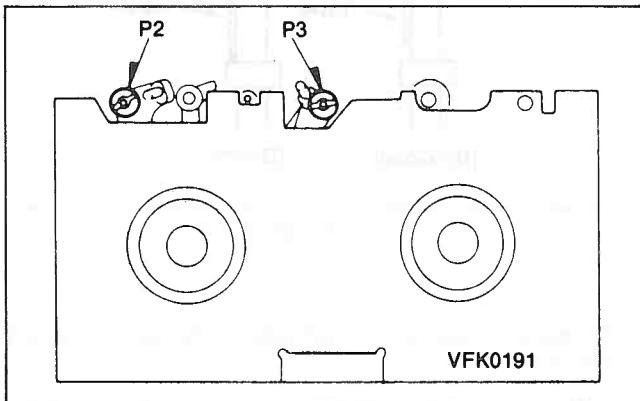


Figure M11

3. Lower 2 tape guide posts (P2 and P3) by turning the Post Adjustment screwdriver so that the condition of height becomes as shown in Figure M12. That is, the lower edge of Tape guide should be lower than surface of Adjustment Plate.

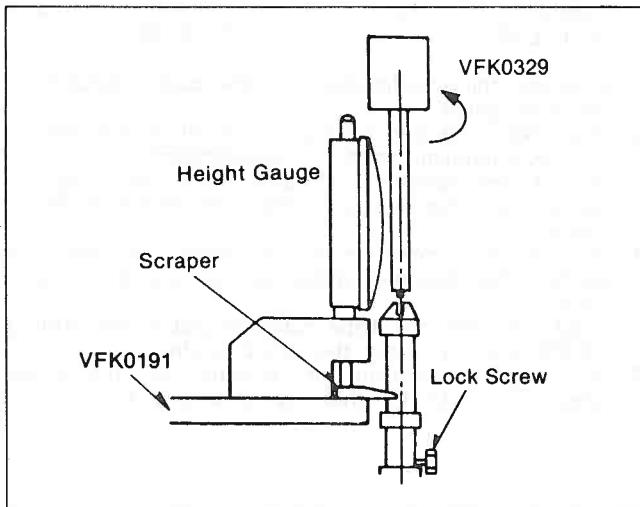


Figure M12

*Note:

Before turning P2 and P3 posts, slightly loosen the Lock Screw using the L Type Screwdriver.

4. Place the scraper of Reel Table Height Gauge as shown in Figure M13.

Set the gauge to zero, then raise the post slowly until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper.

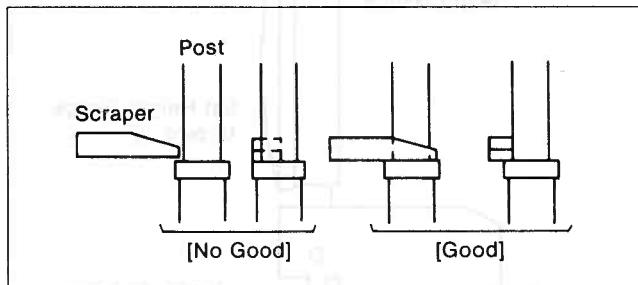


Figure M13

*Note:

After the adjustment, install the cassette compartment referring to Reinstillation of cassette compartment procedures.

4-2-2. ADJUSTMENT OF THE PULL-OUT POST HEIGHT

*Tools and Equipment Required:

Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190
Nut Driver.....(Purchase locally)

- * Specification..... $-0.06 \pm 0.01\text{mm}$

*Note:

Unless the replacement or adjustment this post is required, the adjustment nut should not be turned.

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate over the reel tables.
3. Turn the Capstan Motor counterclockwise (loading direction) until the mechanical condition becomes as shown in Figure M14.

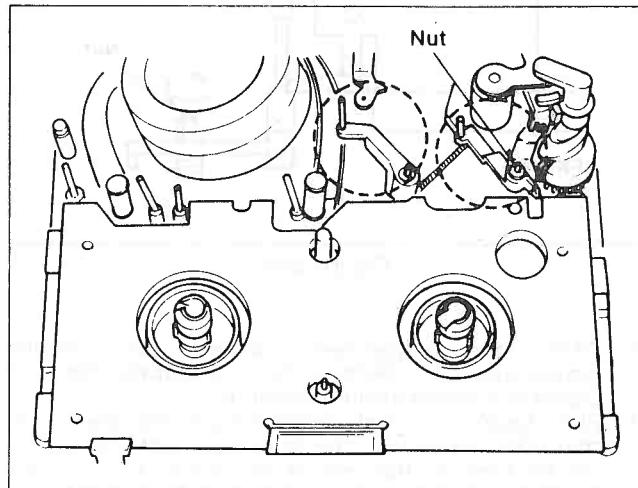


Figure M14

4. Place the Reel Table Height Gauge on the Post Adjustment Plate and set the gauge to zero "0" as shown in Figure M15.

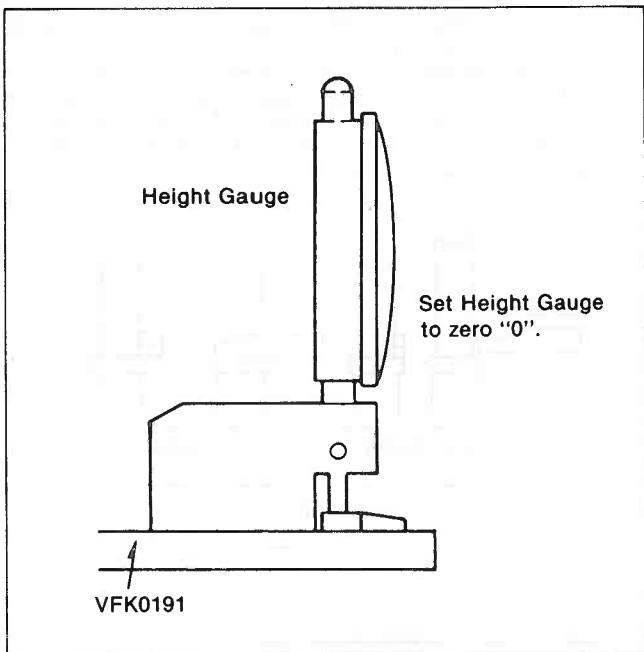


Figure M15

5. Place the Reel Table Height Gauge as shown in Figure M16 and turn the nut slowly until the gauge reads $-0.06 \pm 0.01\text{mm}$.

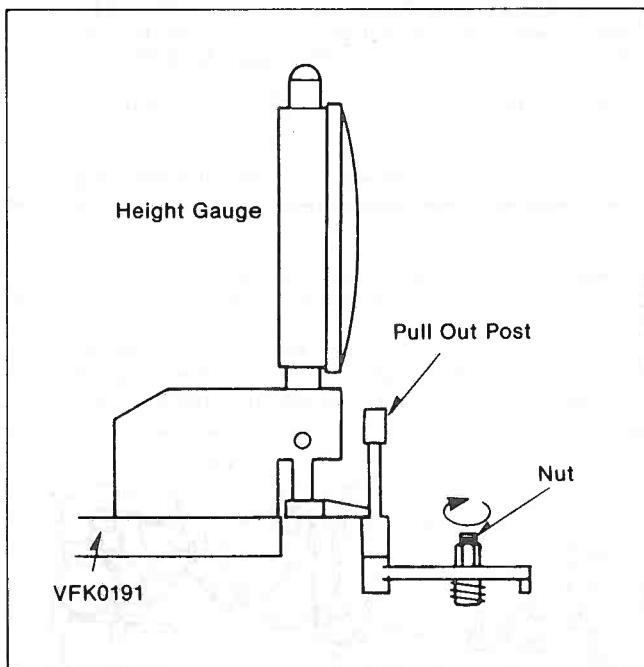


Figure M16

6. After the adjustment, install the cassette compartment. (Refer to Reinstallation of Cassette Compartment procedures).
 7. Play back a normal cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the posts P1, P2, P3, P4 and pull out post as shown in Figure M17 and M18.

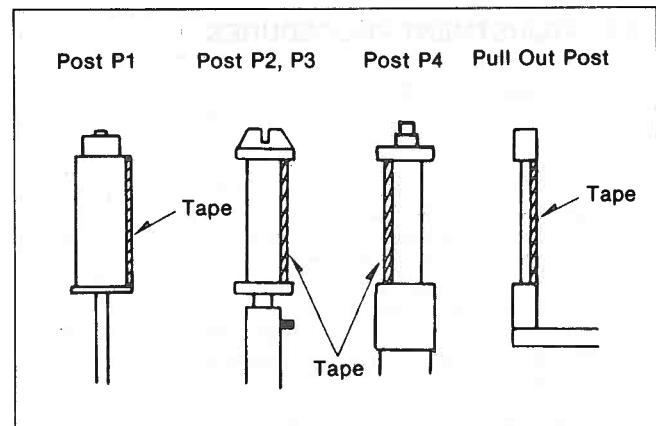


Figure M17

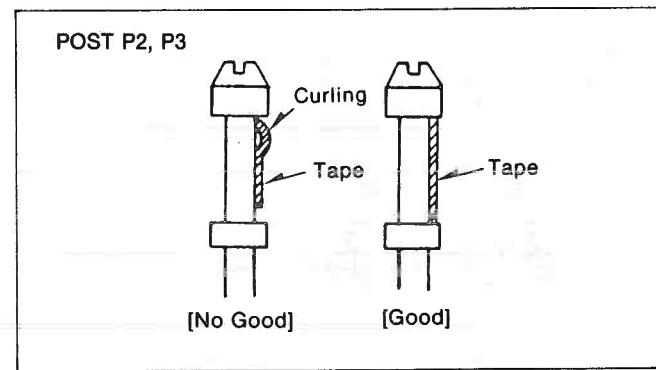


Figure M18

8. If curling appears, readjusts each post (except P1, P4).

4-2-3. TILT & AZIMUTH ADJUSTMENT OF THE A/C HEAD

*Note:

This procedure should be performed only when the A/C Head is replaced and posts height are readjusted.

*Equipment Required:

Alignment Tape.....VFM8080HQFP
Check Light.....VFK0343

1. Connect the oscilloscope to the audio output on the rear panel.
2. Play back the 2nd portion (Normal Audio 10KHz) of the alignment tape (VFM8080HQFP).
3. Adjust the screw (J)(Figure M19) so that the output level becomes maximum as shown in Figure M20.
4. Adjust the screw (H)(Figure M19) so that the output level becomes maximum as shown in Figure M20.
5. Confirm that the tape runs around lower limiter of P4 post by using the Check Light.
6. If there is waving or frilling in the lower edge (Figure M21), then repeat step 3 to 4.

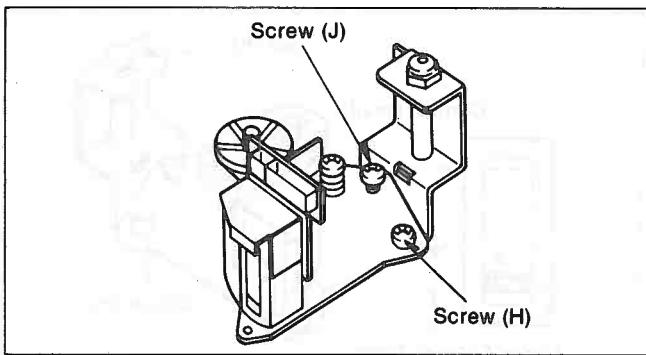


Figure M19

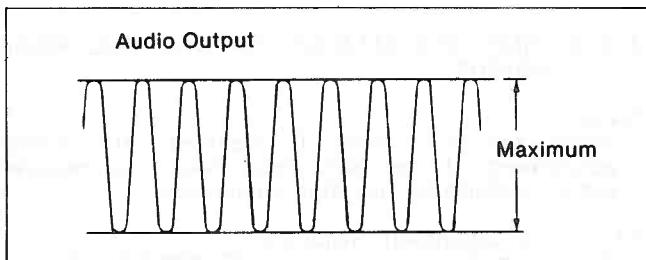


Figure M20

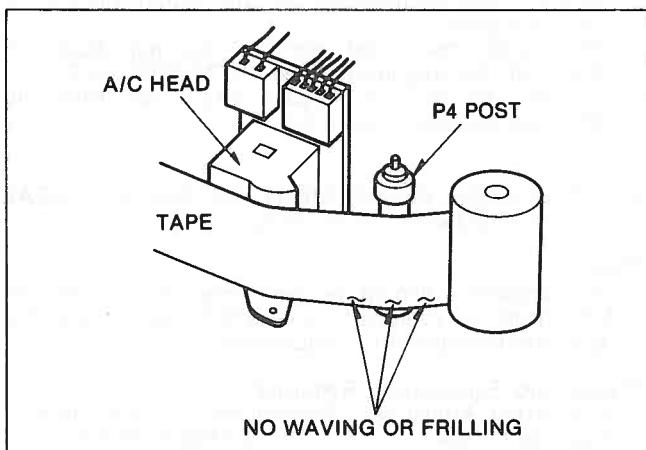


Figure M21

*Note:

After Tilt adjustment of A/C head, height adjustment of A/C head is required.

4-2-4. CONFIRMATION OF THE ENVELOPE OUTPUT

*Tools and Equipment Required:

Alignment Tape.....VFM8080HQFP
Post Adjustment Screwdriver.....VFK0329

*Note:

Before playing back the alignment tape, playback a normal cassette tape and confirm correct transport.

1. Connect the scope to test point of video FM envelope and test point of head switching pulse to Ext-Trigger the scope.
2. Playback the 1-st portion (Monoscope 1) of the alignment tape VFM8080HQFP.

3. Turn the Tracking Control VR and adjust for maximum VIDEO FM envelope.
4. If the RF envelope appears like example "A" or "B" in Figure M22 then adjustment of the tape guide post (P2 : Entrance) is necessary.
5. 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 Figure M22—"C".

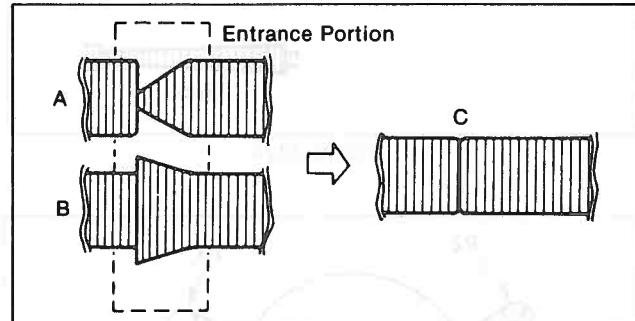


Figure M22

6. If the RF envelope appears like example "D" or "E" in Figure M23, then adjustment of the tape guide post (P3 : Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Figure M23—"F".

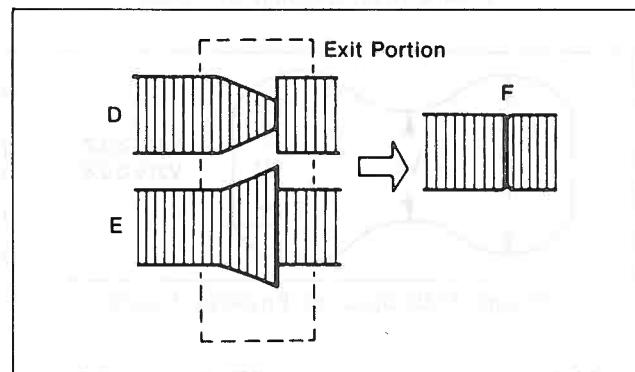


Figure M23

8. Turn the Tracking VR fully clockwise and counter clockwise. The output envelope should vary nearly parallel with other condition as shown in Figure M24.
9. Turn the Tracking VR into center fix position and adjust for maximum RF envelope. If the RF envelope does not meet these specifications,

$$V1/V \geq 0.7, V2/V \geq 0.8,$$

then repeat steps 1-9 again.

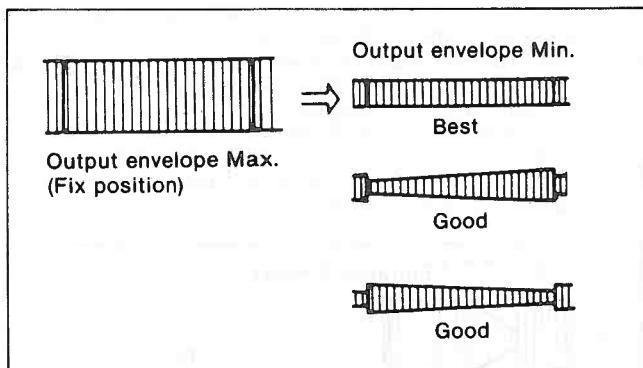


Figure M24

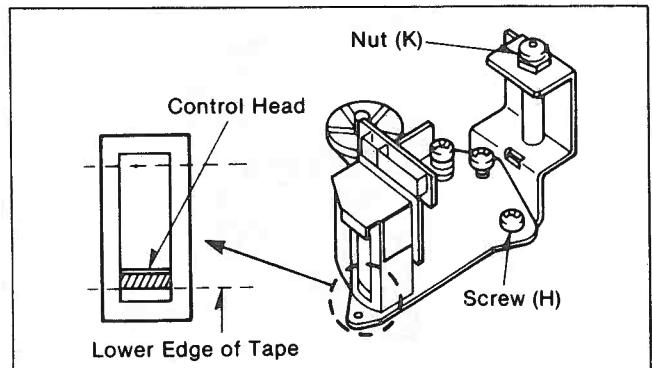


Figure M27

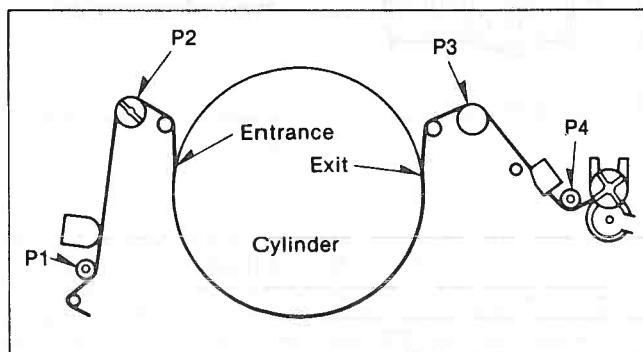


Figure M25 Loading of Posts

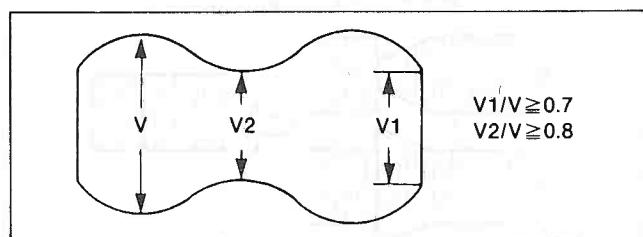


Figure M26 Spec. of Envelope Figure

4-2-5. COARSE ADJUSTMENT OF A/C HEAD HEIGHT

*Note:

This procedure should be performed only when the A/C Head is replaced.

*Tools and Equipment Required:

Check Light.....VFK0343
Nut Driver.....(Purchase locally)

With the tape running, look at the lower edge of the control head by using the check light and check if the lower edge of tape runs along the lower edge of the control head.

If it doesn't slightly turn the nut (K) behind the A/C Head (Figure M27) to either lower or raise the A/C head so that the tape runs along the lower edge of the control head.

Turn the nut (K) clockwise to lower the head, and counter-clockwise to raise it.

4-2-6. FINE ADJUSTMENT OF THE A/C HEAD HEIGHT

*Note:

When the A/C head is replaced, the coarse adjustment of the A/C head height is required before performing this fine adjustment.

*Tools and Equipment Required:

Alignment Tape.....VFM8080HQFP
Nut Driver.....(Purchase locally)

1. Connect the oscilloscope to the audio output on the rear panel.
2. Play back the 2-nd portion (Normal Audio 10 KHz) of the alignment tape (VFM8080HQFP).
3. Adjust the nut (K)(Figure M27) so that the envelope becomes maximum.

4-2-7. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION

*Note:

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

*Tools and Equipment Required:

H-Position Adjustment Screwdriver.....VFK0328
Alignment Tape.....VFM8080HQFP

1. Set the Tracking Control VR to the center detent (fixed) position.
2. Connect the scope to test point of video FM envelope and scope CH2 to the Audio Output on the rear panel.
3. Playback the 4-th position (Monoscope 3 and Audio / Every 10-th field is skipped) of the Alignment tape VFM8080HQFP.
4. Adjust A/C head horizontal position screw (Figure M28) so that the phase of audio drop out and video RF envelope drop-out becomes the same. (Figure M29)

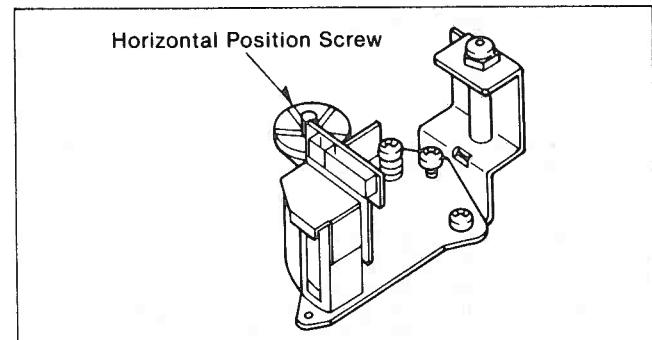


Figure M28

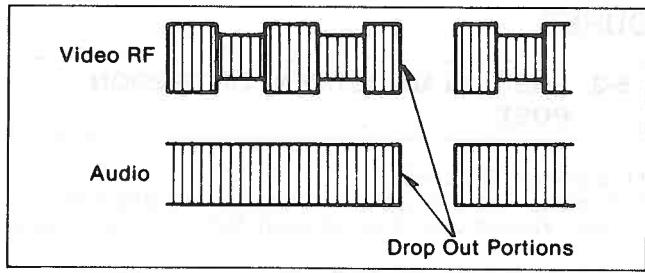


Figure M29 Horizontal Position Adjustment of A/C Head

*Note:

After completion the fine adjustment of the A/C head horizontal position, the phase of Audio drop-out and Video RF envelope drop-out may be changed slightly.

4-2-8. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE)

*Note:

This procedure should be performed only when the A/C head is replaced, and after performing the tape interchangeability adjustment.

*Tools and Equipment Required:

H-Position Adjustment Screwdriver.....VFK0328
Alignment Tape.....VFM8080HQFP

1. Set the Tracking Control VR to the centre fix position.
2. Connect the oscilloscope to test point of video FM envelope.
3. Play back the 1-st portion of the alignment tape (VFM8080HQFP).
4. Adjust the Horizontal Position Screw of A/C head so that the RF signal becomes maximum level.

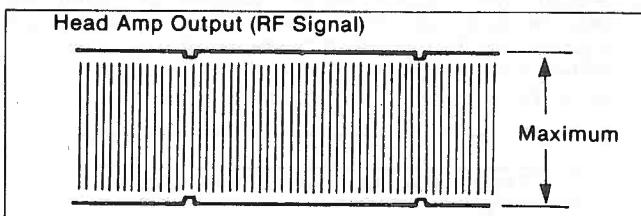


Figure M30

5. OTHER MECHANICAL ADJUSTMENT PROCEDURES

5-1. TENSION ADJUSTMENT OF TIMING BELT

*Equipment Required:

Fan Type Tension Gauge.....VFK66

*Specification.....40 +/- 5g

1. Loosen a screw (A) slightly by using the screwdriver.
2. Set the Fan Type Tension Gauge to the direction indicated by the arrow (B) as shown in Figure M31.
3. Tighten a screw (A) when the reading of the Fan Type Tension Gauge becomes within 40 +/- 5g.

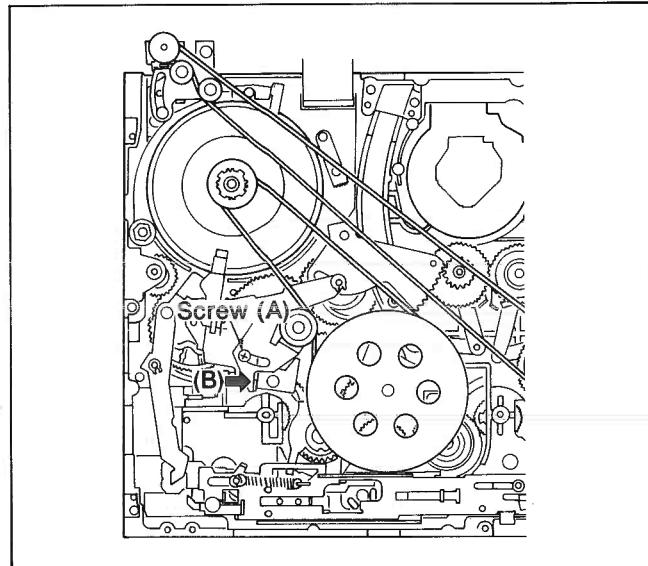


Figure M31

5-2. TENSION ADJUSTMENT FOR REV MOTOR TIMING BELT

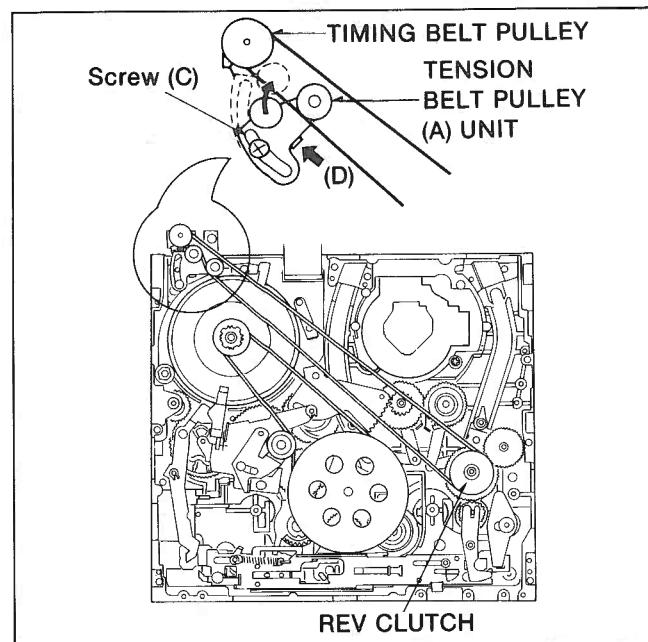


Figure M32

5-3. POSITION ADJUSTMENT OF TENSION POST

*Equipment Required:

Tension Post Adjustment Plate.....VFK0387

Hex. Wrench:2mm(Hex Wrench Set).....VFK0326

1. Disconnect the AC plug.
2. Remove the cassette compartment.
3. Turn the Capstan Motor to the clockwise while the change lever is being pushed until the loading is completed as shown in Figure M33.

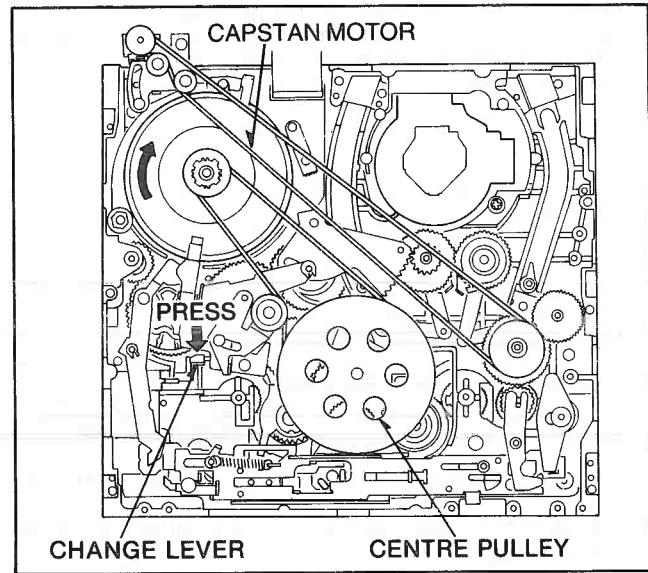


Figure M33

4. Place the Adjustment Plate and insert the hex wrench into the hole of Tension Band Fastener as shown in Figure M34.
5. Adjust the Tension Band Fastener by using the hex wrench so that the Tension Post just touches the fixture of Adjustment Plate.
6. After the Adjustment, turn the Capstan Motor until the unloading is completed.

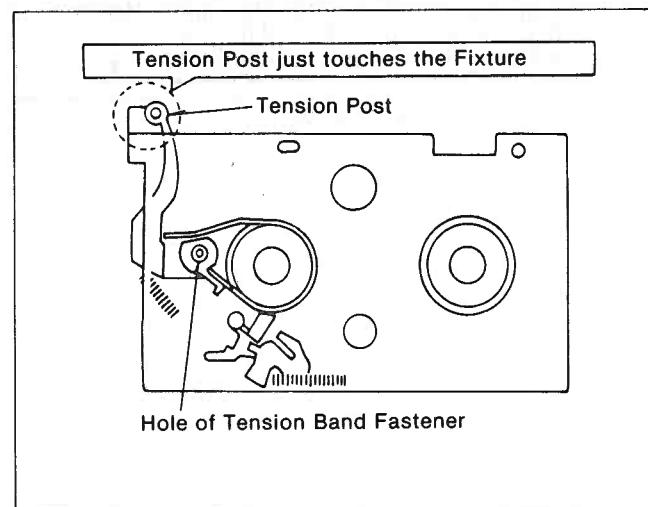


Figure M34

*Note:

When you assemble cassette compartment, refer to "Reinstallation of Cassette Compartment".

5-4. MEASUREMENT AND ADJUSTMENT OF BACK TENSION

*Equipment Required:
 Back Tension Meter.....VFK0132
 VHS Cassette Tape (120 minutes tape)
 *specification.....22.5g-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 Figure M34.

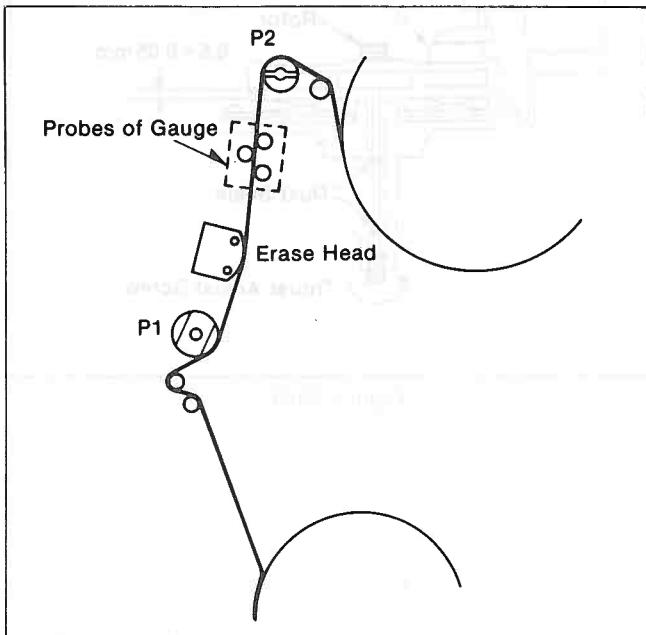


Figure M34 Measurement of Back Tension

3. If it is out of specification, change the spring notch as shown in Figure M35.

*Note:

1. While measuring, make sure that the three probes of the meter are all in good contact with the tape.
2. As the tension meter is very sensitive, we recommend taking 3 separate readings.

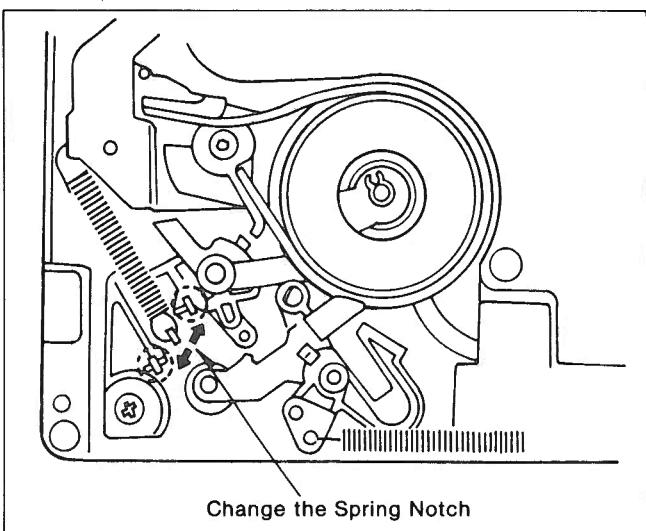


Figure M35

5-5. HEIGHT ADJUSTMENT OF THE REEL TABLES

*Equipment Required:
 Post Adjustment Plate.....VFK0191
 Reel Table Height Gauge.....VFK0190
 *Specification.....0 - 0.2mm

1. Remove the cassette compartment.
2. Place the Post Adjustment Plate on the reel tables.
3. Place the Reel Table Height Gauge on the plate so that the scraper of the gauge touches the cut-out portion of the plate, then set the gauge to zero "0" as shown in Figure M36.

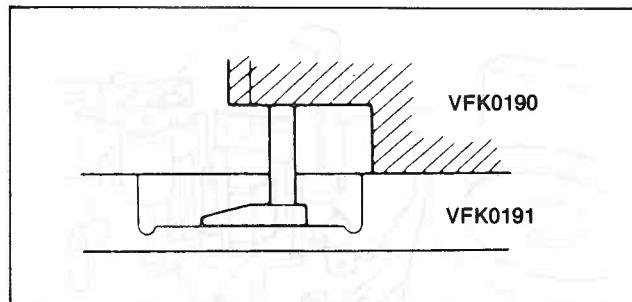


Figure M36

4. Measure the meter indication of top surface of reel table as shown in Figure M37. And then perform the same measurement and confirmation for the other reel table.

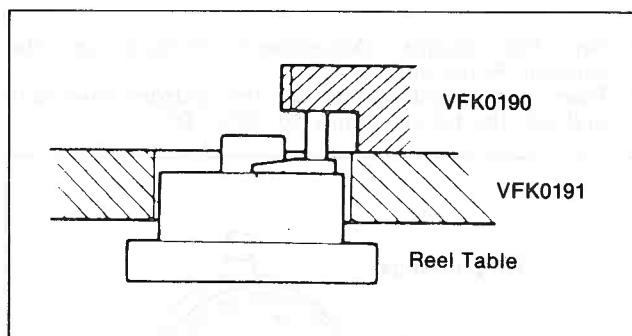


Figure M37

5. If the difference is more than 0.2mm higher or lower, replace or remove the poly-slider washer located under the reel table with one of the appropriate thickness. Reel washers are available in thickness of 0.2mm, 0.3mm and 0.5mm.

Thickness	Washer	Part No.
0.2mm		VMX1238
0.3mm		VMX1239
0.5mm		VMX1171

Figure M38

5-6. ADJUSTMENT OF THE CAPSTAN THRUST GAP

*Equipment Required:

Reel Table Height Gauge.....VFK0190
Height Adjustment Fixture.....VFK0344

*Specification.....0.5 – 0.55mm

1. Turn a Thrust Adjust Screw slightly until the capstan roter unit just touches the coil of the capstan stator unit.

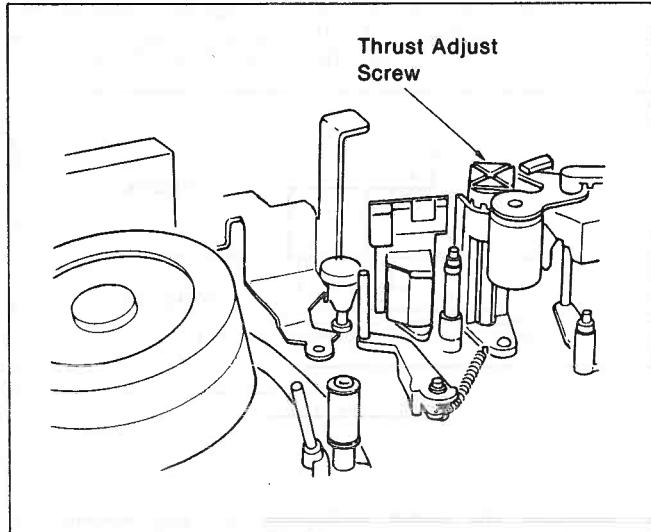


Figure M39

4. Adjust a Thrust Adjust Screw so that the thrust gap becomes 0.5 – 0.55mm.

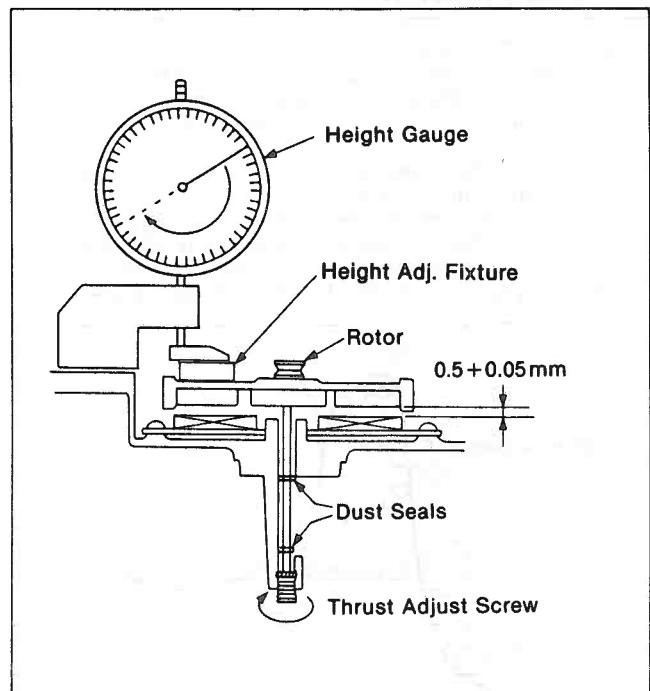


Figure M41

2. Set the Height Adjustment Fixture on the capstan Roter unit.
3. Place the height gauge on the bottom case unit and set the height gauge to zero "0".

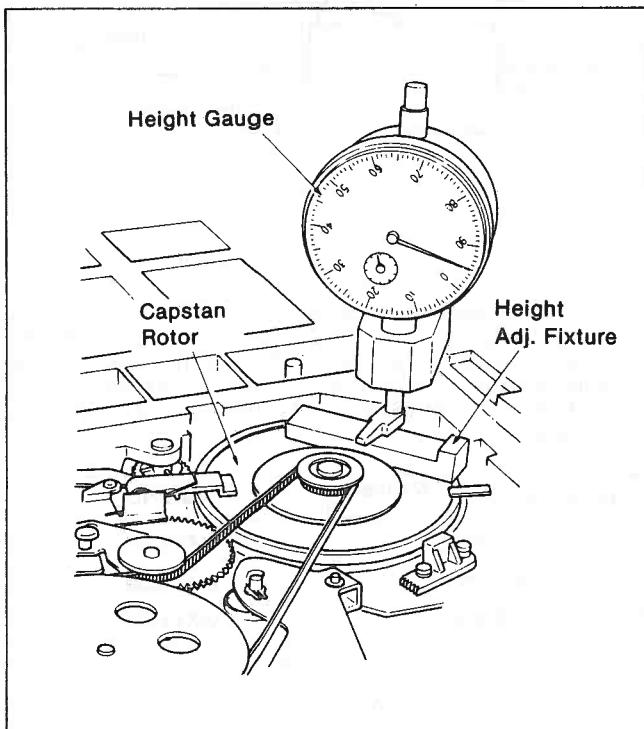


Figure M40

6. ASSEMBLY AND ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch.

Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.

If these parts are not fixed properly, the unit will be unloaded or compulsorily stopped.

And it will result being damaged at any mechanical or electrical parts.

The overall mechanical condition (alignment) of bottom and top view are shown in Figure M42 and Figure M43. This mechanical adjustment is performed in STOP mode.

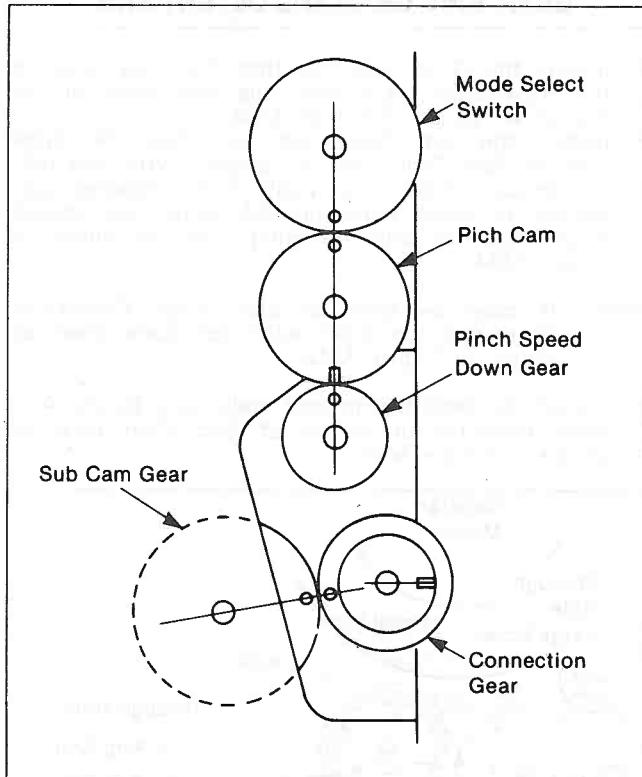


Figure M42 Top View of Overall Mechanical Condition

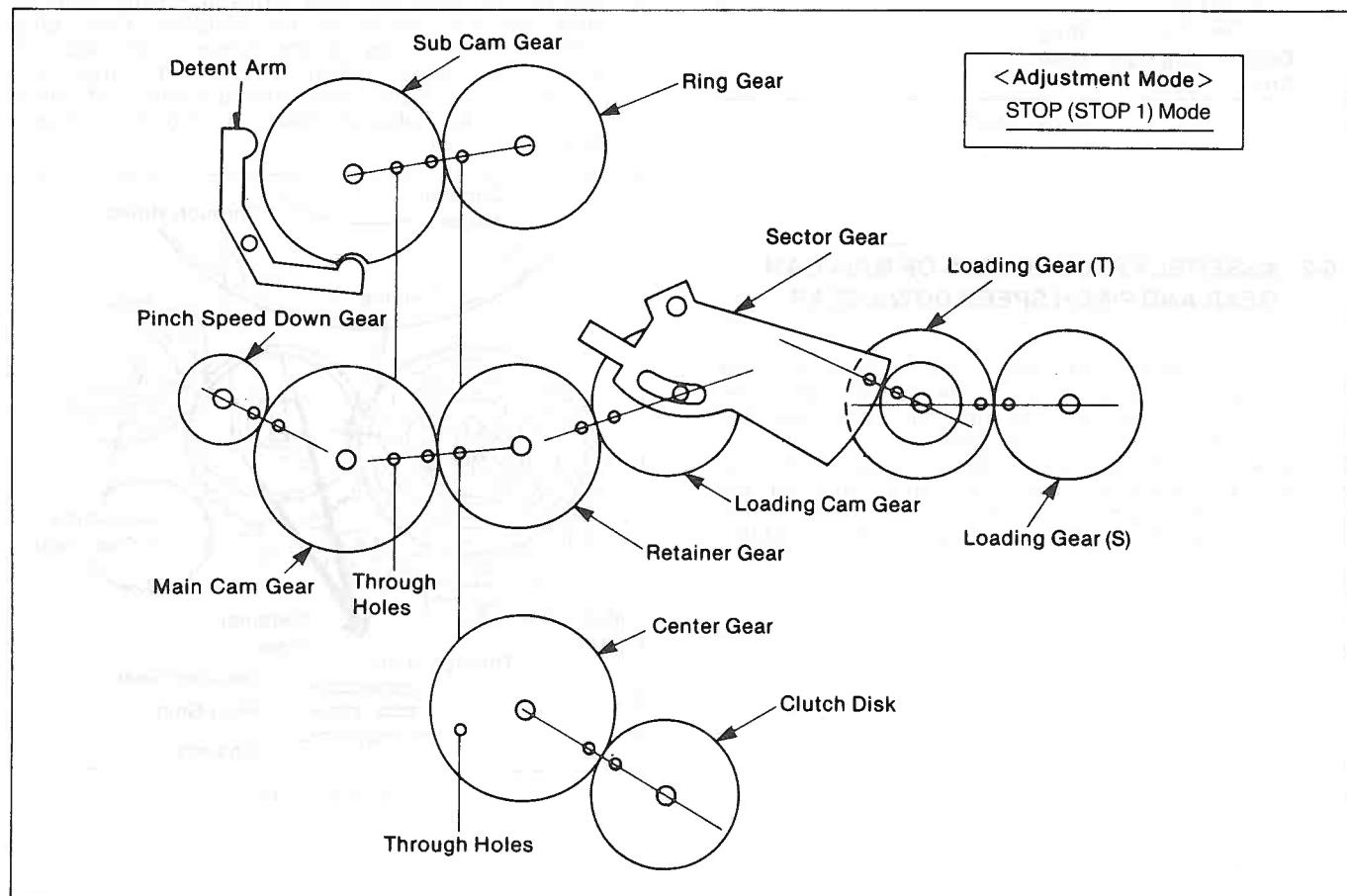


Figure M43 Top View of Overall Mechanical Condition

6-1. ASSEMBLY PROCEDURES OF SUB CAM GEAR, RING GEAR AND DETENT ARM

1. Install the Ring Gear so that the two holes in the Ring Gear align with the two holes in the chassis as shown in Figure M44.
2. Install the Sub Cam Gear so that the large hole in Sub Cam Gear is aligned with the hole in chassis. Also the small hole (located just outside of large hole) on Sub Cam Gear should align with the hole on Ring Gear as shown in Figure M44.

*Note: It may be best to also align Connection Gear (on top side) with Sub Cam Gear as shown in Figure M42.

3. Install the Detent Arm and make sure Detent Arm seats perfectly in detent of Sub Cam Gear as shown in Figure M44.

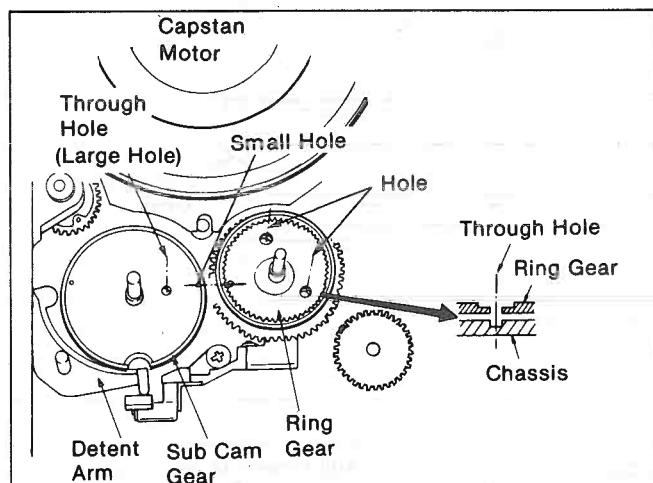


Figure M44

6-2. ASSEMBLY PROCEDURES OF MAIN CAM GEAR AND PINCH SPEED DOWN GEAR

1. Install the Main Cam Gear onto the Sub Cam Gear so that the large hole on the Main Cam Gear aligns with large hole on the Sub Cam Gear and chassis as shown in Figure M45.
2. Install the Pinch Speed Down Gear from top side of chassis so that the outer hole on the Main Cam Gear aligns with small hole on the Pinch Speed Down Gear as shown in Figure M45.

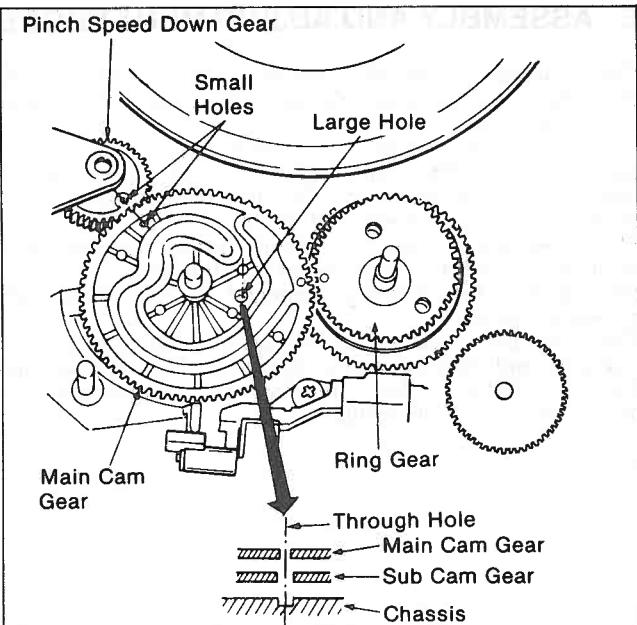


Figure M45

6-3. ASSEMBLY PROCEDURES OF LOADINGCAM GEAR AND RETAINER GEAR

1. Install the Retainer Gear onto the Ring Gear so that the two holes in the Retainer Gear align with the two holes in the Main Cam Gear, at this time, small indent outside of large hole on the Main Cam Gear should align with small hole on the Retainer Gear as shown in Figure M46.

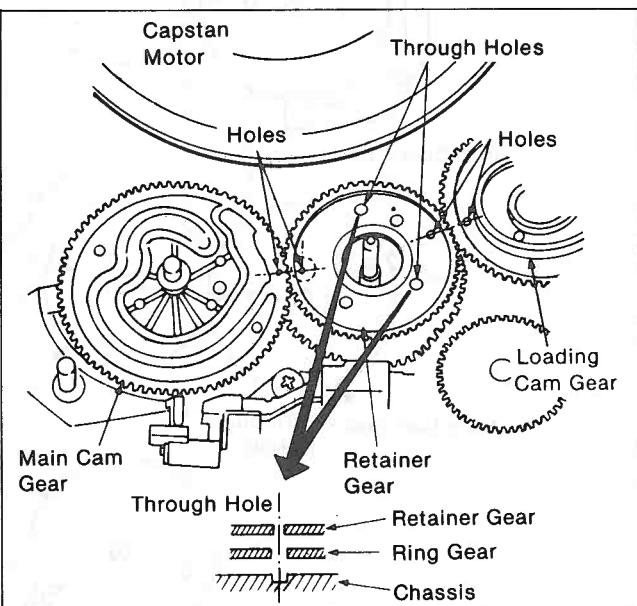


Figure M46

- Push the Sub Loading Arm to the STOP position and keep it as shown in Figure M47.
- Install the Loading Cam Gear so that the small hole which is directly outside of the large hole on the Loading Cam Gear is aligned with the outside hole of the Retainer Gear as shown in Figure M46.

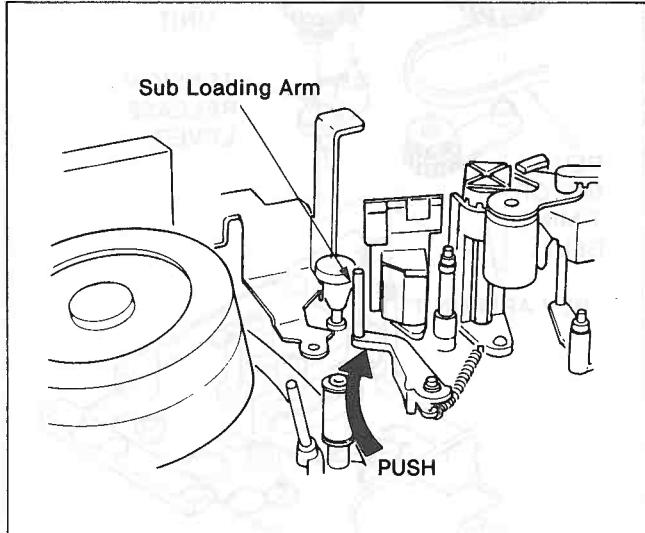


Figure M47

6-5. ASSEMBLY PROCEDURES OF MAIN LEVER (1) UNIT AND CAM FOLLOWER ARM UNIT

- Install the Main Lever (1) Unit and then insert the cut washers and hitches the spring as shown in Figure M49.

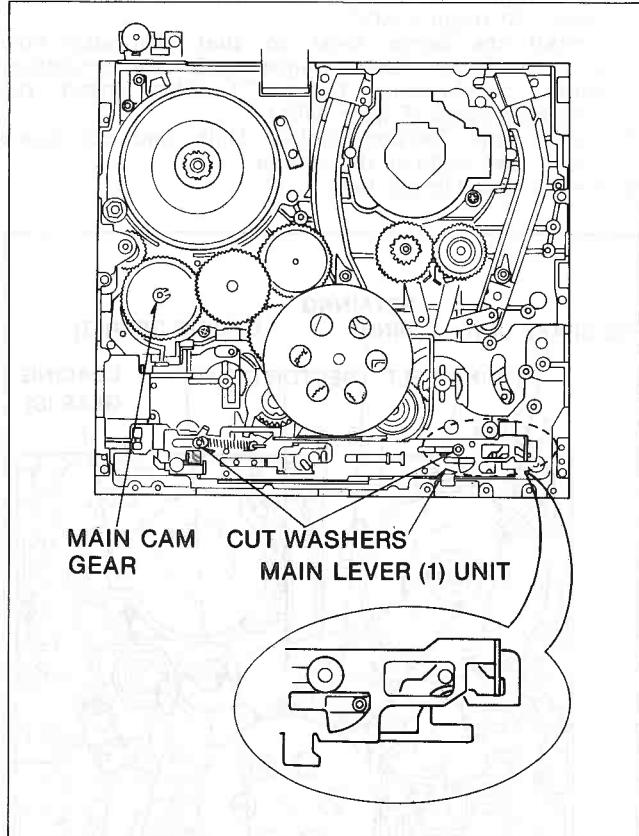


Figure M49

- Install the Cam Follower Arm Unit so that the pin of Cam Follower Arm insert to the groove of Main Cam Gear then insert a retaining ring.

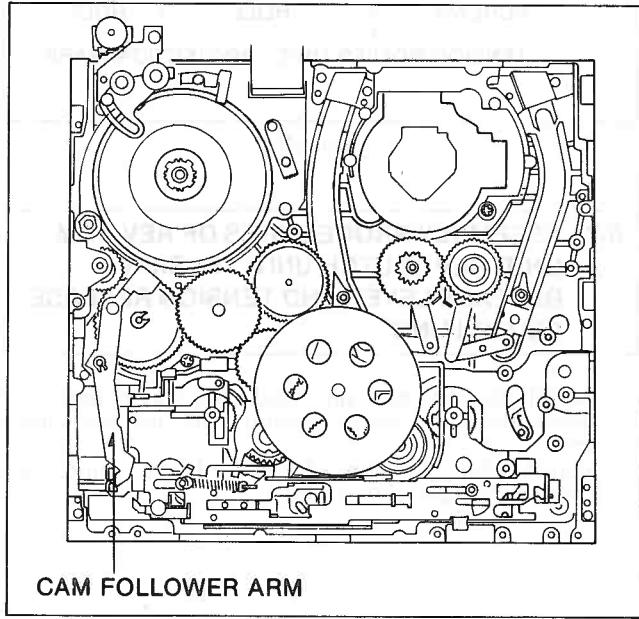


Figure M50

6-4. ASSEMBLY PROCEDURE OF CENTER GEAR

- Install the Center Gear onto the Retainer Gear so that the two holes in the Center Gear align with the holes on the Retainer Gear, then install the cut washer as shown in Figure M48.
- Install the Clutch Disk so that the small outside hole on the Center Gear aligns with the small outside hole on the Clutch Disk, then insert the cut washer as shown in Figure M48.
- Install the Center Pully and cut washer.

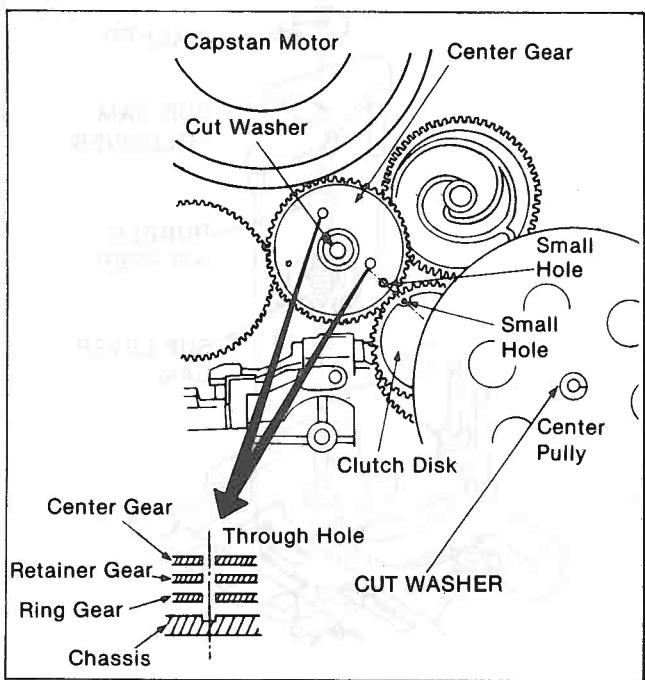


Figure M48

6-6. ASSEMBLY PROCEDURES OF LOADING GEAR (T), LOADING GEAR (S) SECTOR GEAR, TENSION ROLLER

1. Set the P2 and P3 posts to fully unloaded position, then install the Loading Gear (T) and (S) so that the outer hole in the Loading Gear (T) aligns with the outer hole in the Loading Gear (S). (Figure M51)
2. Install the Sector Gear so that the outer hole in the Sector Gear aligns with the projection mark on Loading Gear (T). Then insert the retaining rings. (Figure M51)
3. Install the Tension Roller Unit and SS Brake Unit, then tighten the screws.
4. Install the Timing Belt.

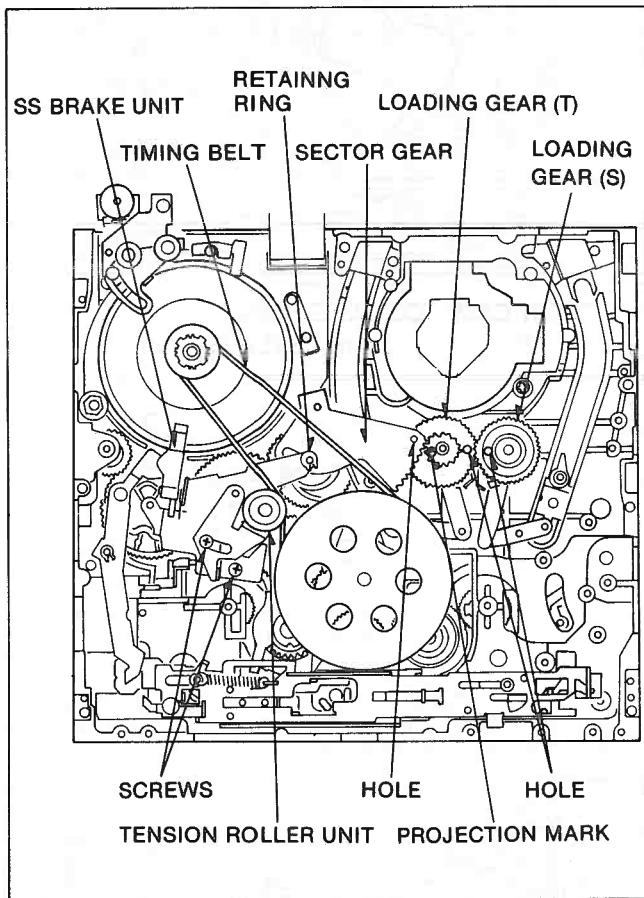


Figure M51

6-7. ASSEMBLY PROCEDURES OF REV ARM UNIT, REV CLUTCH UNIT, TENSION RELEASE LEVER AND TENSION RELEASE CLUTCH UNIT

1. Install the Rev arm unit and Rev clutch unit.
2. Hitch the Rev motor timing belt to Rev clutch unit.
3. Install the Tension Release Lever unit and Tension Release clutch unit.

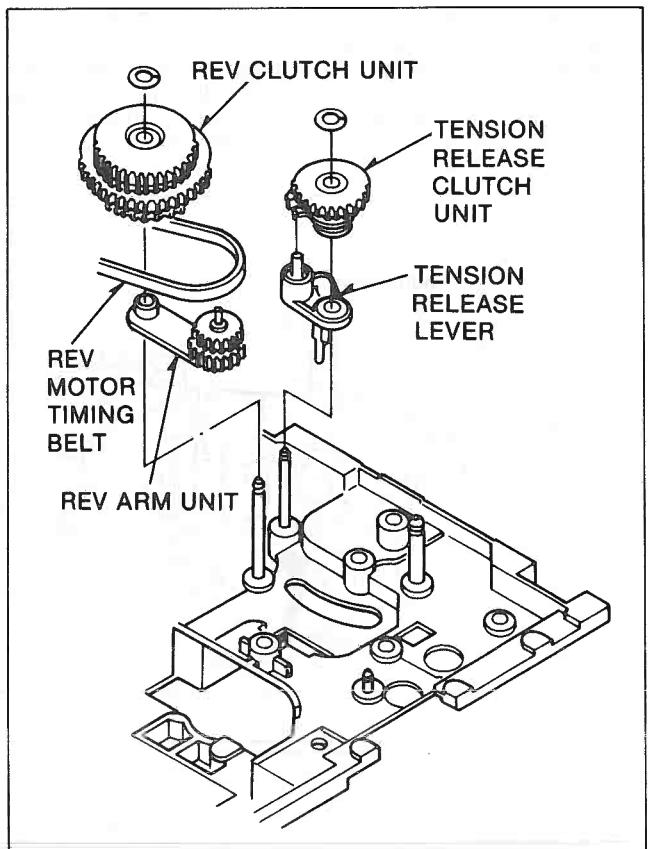


Figure M52

6-8. ASSEMBLY PROCEDURES OF SUB LEVER CAM, SUB CAM FOLLOWER AND REV CONTROL LEVER

1. Install the SUB LEVER CAM RUBBER STOPPER, SUB CAM FOLLOWER and washer as shown in Figure M53.

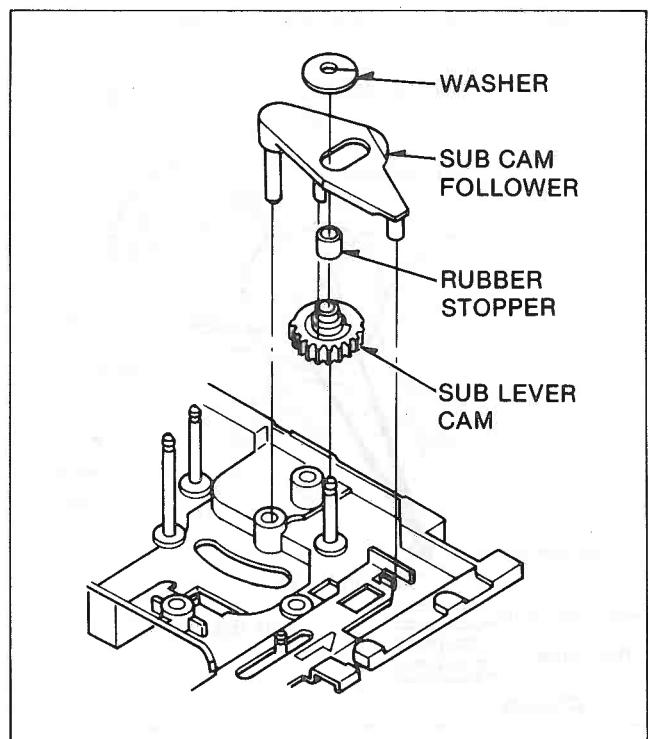


Figure M53

2. Install the Review Control Lever as shown in Figure M54.

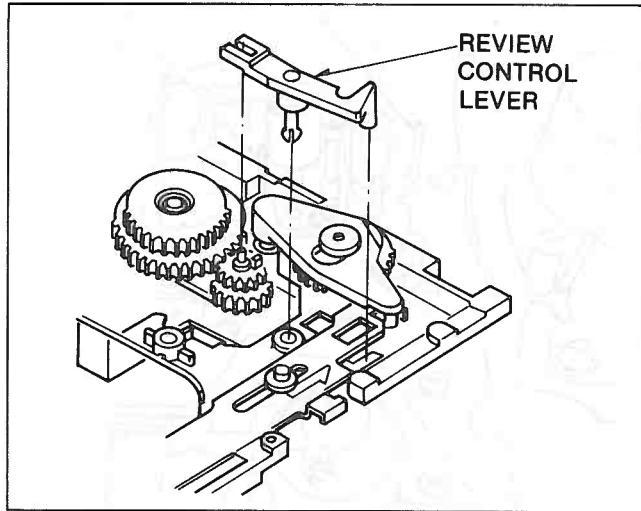


Figure M54

6-9. ASSEMBLY PROCEDURES OF TENSION PULLEY BASE (A) UNIT

1. Install the Tension Pulley Base (A) unit as shown in Figure M55.
2. Hitch the Rev Motor Timing belt. (Refer to "Tension Adjustment For REV Motor Timing Belt").

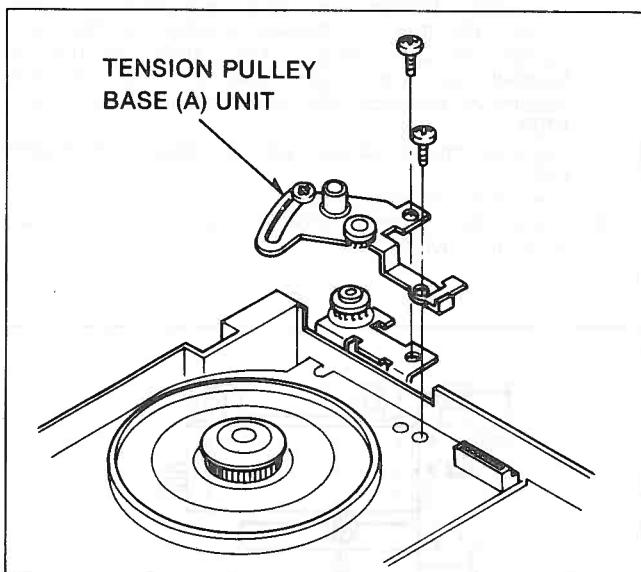


Figure M55

6-10. ASSEMBLY PROCEDURES OF CONNECTION GEAR

*Note: Before assembling, Sub Cam Gear position (and positions of bottom side gears) must be correct as described before (STOP mode).

1. Install the Connection Gear so that the small hole in the Connection Gear aligns with the small hole in the Sub Cam Gear as shown in Figure M56.

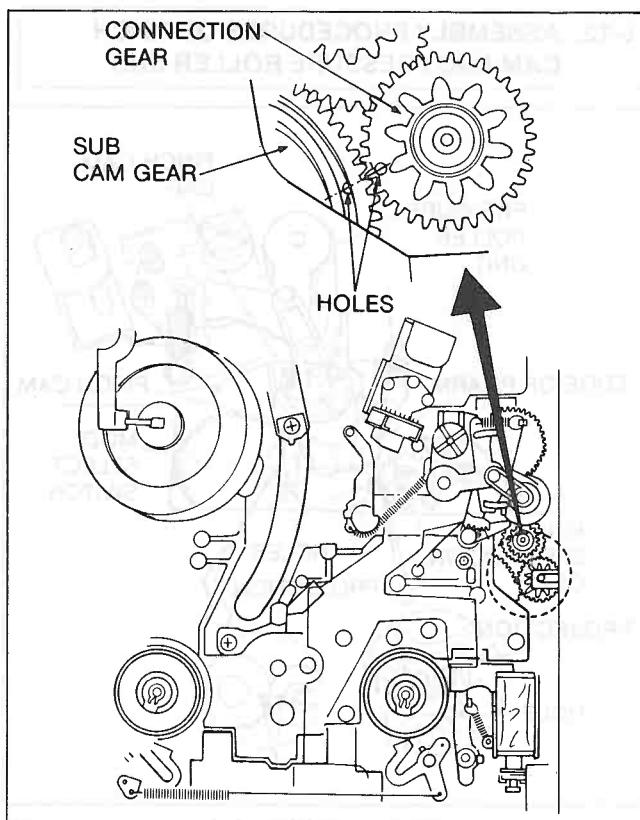


Figure M56

6-11. ASSEMBLY PROCEDURES OF MODE SELECT SWITCH AND P5 PULL OUT SECTOR GEAR

1. Install the Mode Select Switch and tighten the mounting screw, then solder the 5 soldering portions.
2. Install the P5 Pull Out Sector Gear so that the hole of P5 Pull Out Sector Gear aligns with the tip of edge at P5 gear as shown in Figure M57.

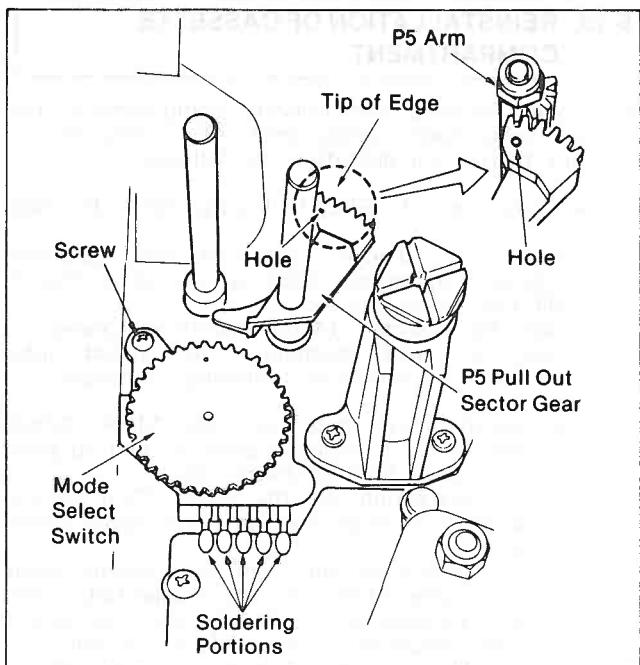


Figure M57

6-12. ASSEMBLY PROCEDURES OF PINCH CAM AND PRESSURE ROLLER UNIT

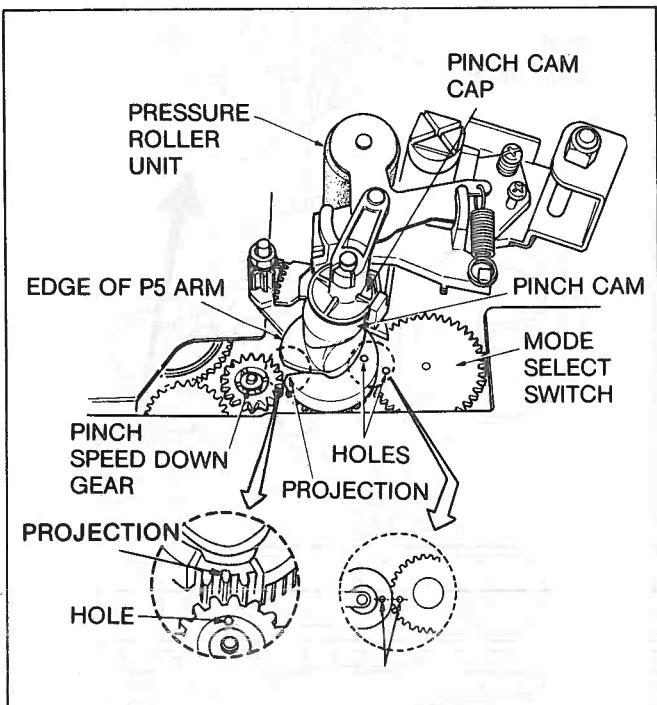


Figure M58

1. Install the Pinch Cam while pushing the P5 post forward. The Pinch Cam Gear should drop to a seated position. In this position make sure hole in the Mode Select Switch aligns with small hole on the Pinch Cam, also the small rift on the Pinch Cam should align with the hole on the Pinch Speed Down Gear as shown in Figure M58.
2. Install the Pressure Roller Unit. Make sure the seats perfectly onto the Pinch Cam, then install the Pinch Cam Cap.

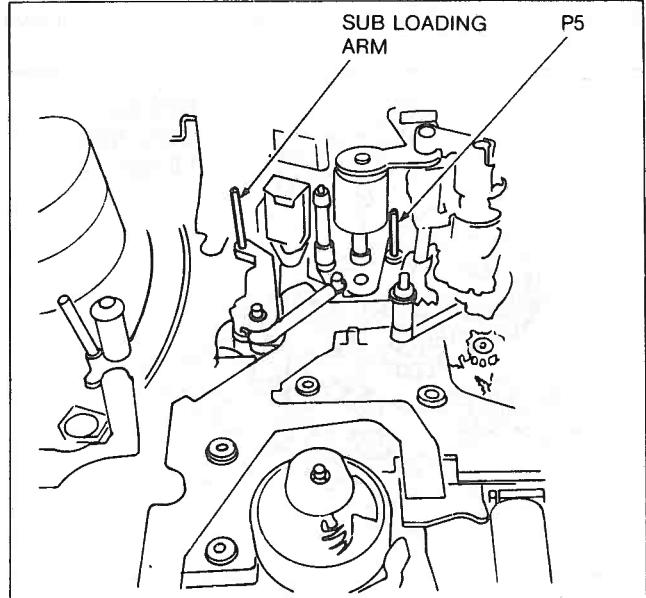


Figure M59

B. Confirmation of Cassette Compartment

1. Confirm that the Cassette Compartment is aligned properly. In the EJECT position (Cassette Holder up and advanced to the front) the two V-shaped marks on the slide switch should align. The slide switch is located on the right side of the Cassette Assembly towards the rear as shown in Figure M60.
2. Remove the 2 screws (A) as shown in Figure M61.
3. Take the top plate out.
4. Take the cassette Holder unit out as shown in Figure M62.

6-13. REINSTALLATION OF CASSETTE COMPARTMENT

When you reinstall the cassette compartment, the position adjustment (alignment) of mechanism is necessary for correct operation, as follows.

A. Confirmation of STOP1 Figure M59 Position

1. Press the change Lever in the direction indicated by arrow mark as shown in Figure M1 (to release the lock).
2. Turn the Capstan Motor counter-clockwise or clockwise until mechanism is placed into the STOP1 position as following conditions.
 - a) Identification hole on the Mode Select Switch at 6 o'clock position and aligned with small hole on Pinch Cam.
 - b) The projection on the Pinch Cam should align with small hole on Pinch Speed Down Gear.
 - c) Small hole on Sub Cam Gear should align with small hole on the Connection Gear and rectangular mark on the Connection Gear should be at a 3 o'clock position.

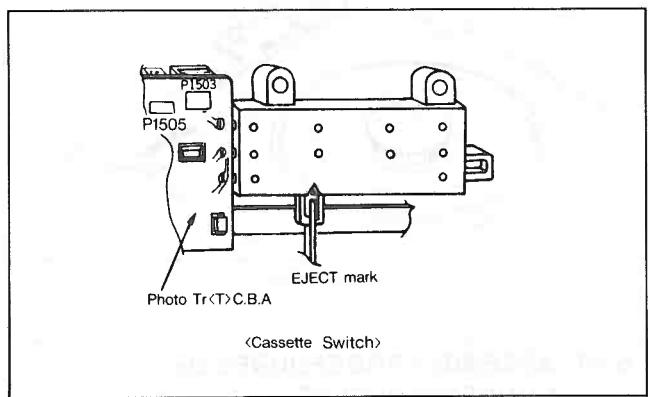


Figure M60

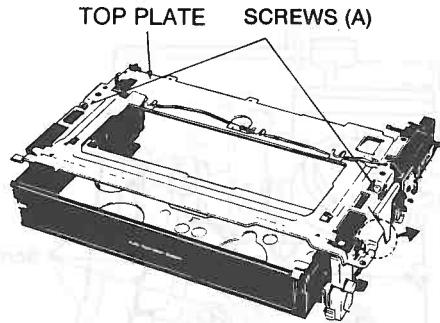


Figure M61

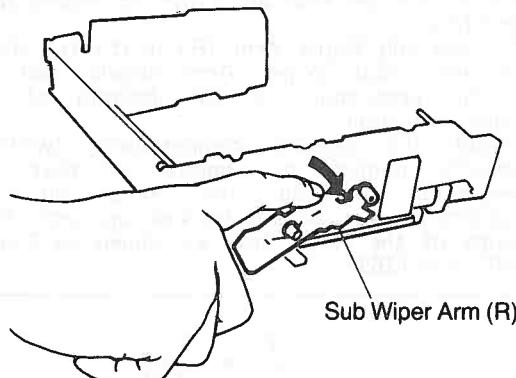


Figure M63

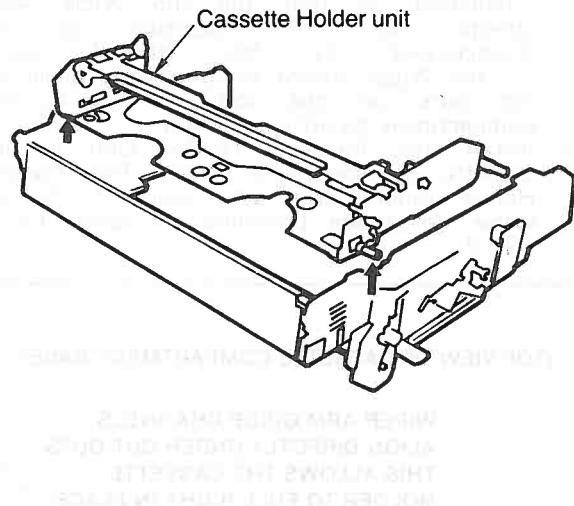


Figure M62 Removal of cassette holder unit

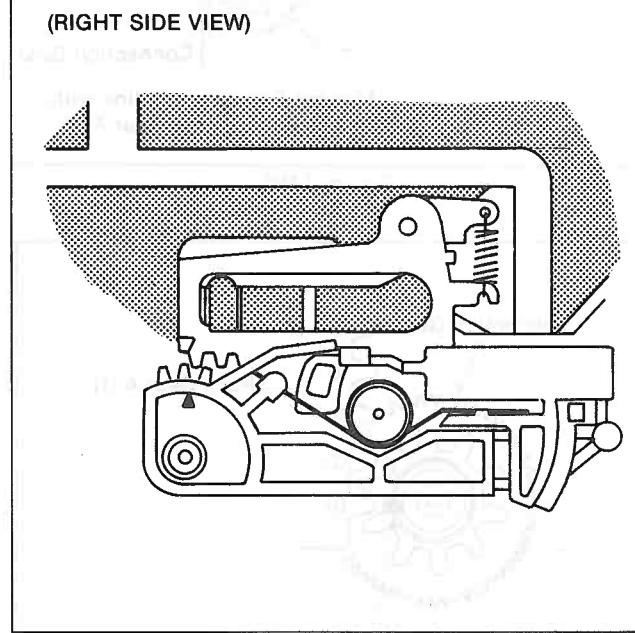


Figure M64

5. Press the sub wiper arm (R) to direction indicated by arrow so that the sub wiper arm (R) comes to cassette down position (STOP1) completely as shown in Figure M63 and keep it.
In this position, the arrow on the Wiper Arm should align with the arrow on the Rack (A)(1) Unit as shown in Figure M64.

6. If the Cassette Compartment is not aligned, re-alignment may be accomplished by pushing the Main Shaft Unit to the right (gently) and pushing the front of the Rack Unit to the left. This procedure will disengage the teeth of the Rack Gear from the teeth on Sub Wiper Arm assembly. This will allow you to change the positional relationship between the Sub Wiper Arm Assembly and Rack Unit. This procedure is best attempted in the EJECT position. Once this is done, check for smooth operation of the compartment by inserting a cassette, and pushing in, and down.

C. Installation Procedure

1. Bring loading mechanism to the STOP (Sub Load) position.
2. Confirm that the chassis is aligned properly for STOP1 position as shown in Figure M42 and M43.
3. Put the Sub Wiper Arm (R) in its full down position (Sub Wiper Arm should rest on plastic protrusion on the bottom of the right side plat).
4. Install the cassette compartment (without cassette holder) to chassis so that the rectangular marking (or slot) on the connection gear should be line up with first tooth of the Rack Gear as shown in Figure M65 and M66.

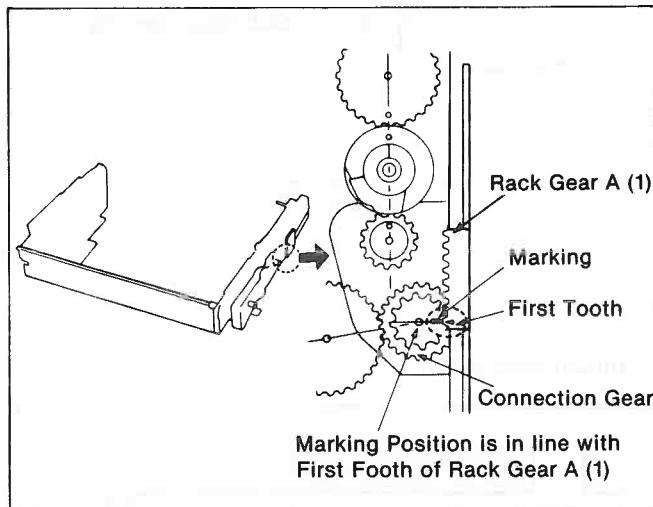


Figure M65

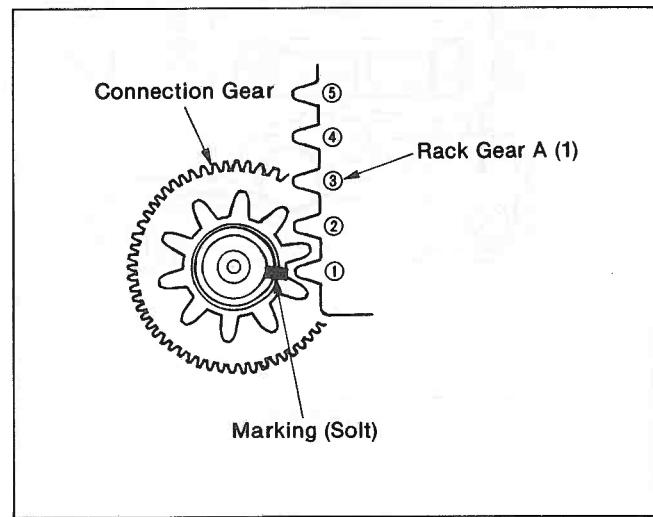


Figure M66

5. Tighten the 4 screws (D) as shown in Figure M67.

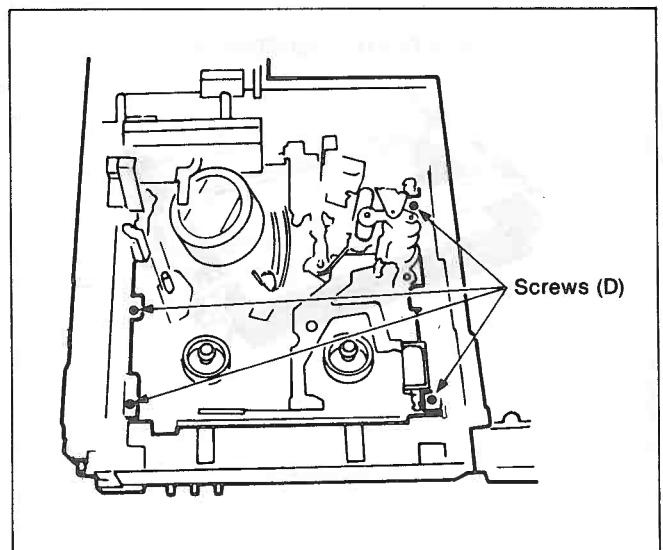


Figure M67

6. Press the Change Lever and manually move the loading mechanism toward the EJECT position
7. Stop the manual eject procedure just before completion, so that the Sub Wiper Arms straight up. This position is also characterized by the channel guides (In the Wiper Arms) being directly under the cut outs on the top of the Cassette Compartment base(Figure M68).
8. Install the Cassette Holder Unit in the Cassette Compartment Base. The Cassette Holder should drop into place if the Sub Wiper Arms are positioned as called for in step 7.

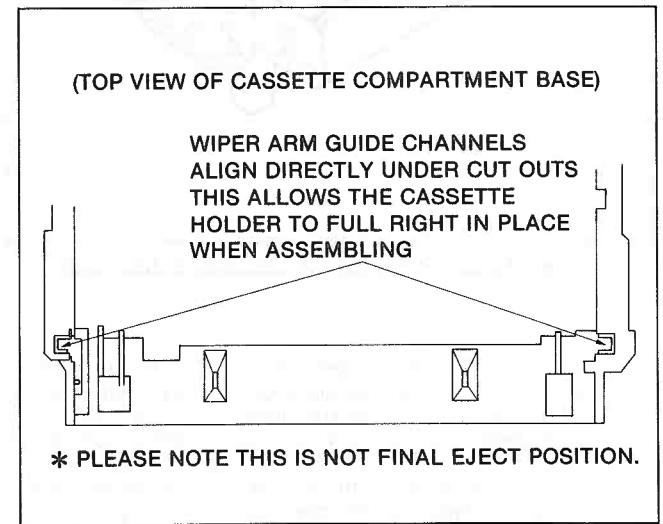


Figure M68

*Note: For proper front loading, the guide pin on the opener lever should follow the upper track of the right side panel as shown in Figure M69.

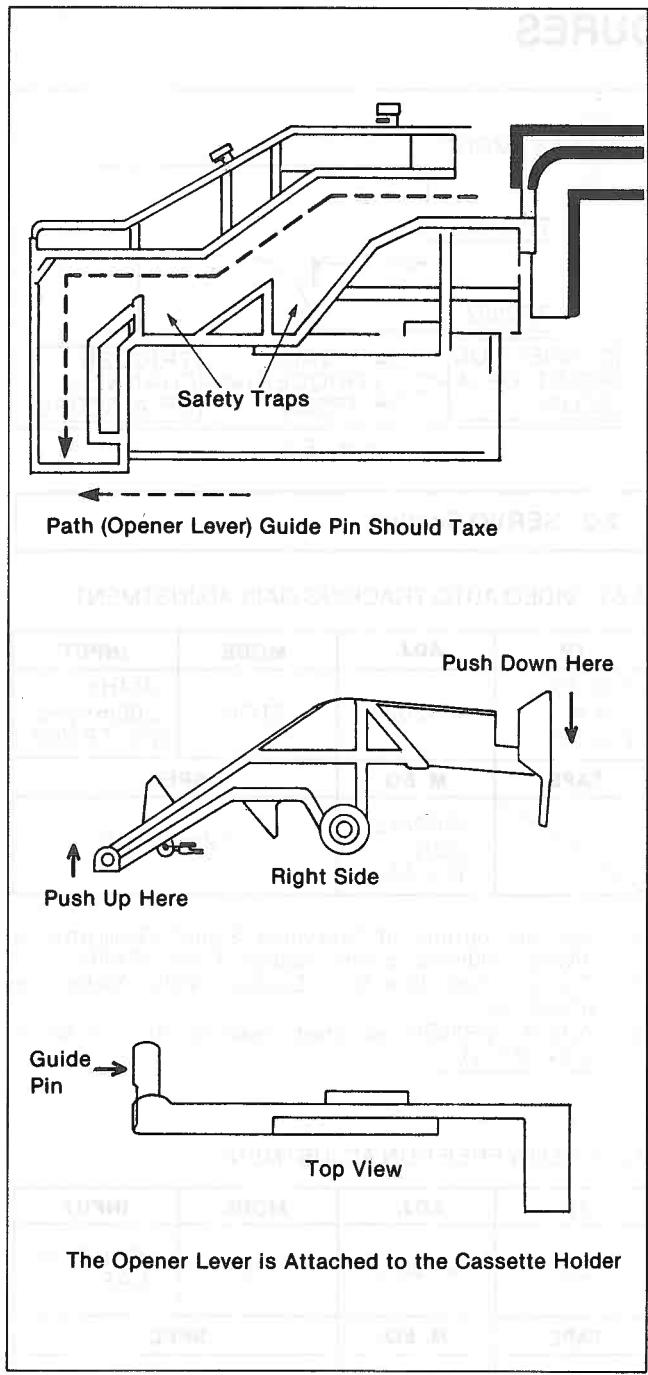


Figure M69 Right Side Plate

9. Install the top plate on the Cassette Compartment Base and tighten the 2 screws (A) as shown in Figure M61.
10. Manually confirm that front loading and main loading run smoothly. Also confirm EJECT before power is applied.

ELECTRICAL ADJUSTMENT PROCEDURES

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

1. TEST EQUIPMENTS

To perform the electrical adjustments completely following equipments are required.

1. VTVM (Vacuum Tube Volt Meter) and DVM (Digital Volt Meter)
Voltage Range: 0.001~50V
2. Dual-Trace Oscilloscope
Voltage range: 0.005~50V/div.
Frequency Range: DC~30MHz
Probes: 10:1
3. Frequency counter
Frequency Range: 0~10MHz
4. Signal Generator (Sinewave)
Frequency Range: 0~500KHz
5. Video Sweep Generator
Frequency Range: 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS Alignment Tape
9. Pattern Generator

2. ADJUSTMENT PROCEDURES

2-1. HOW TO READ THE ADJUSTMENT PROCEDURES

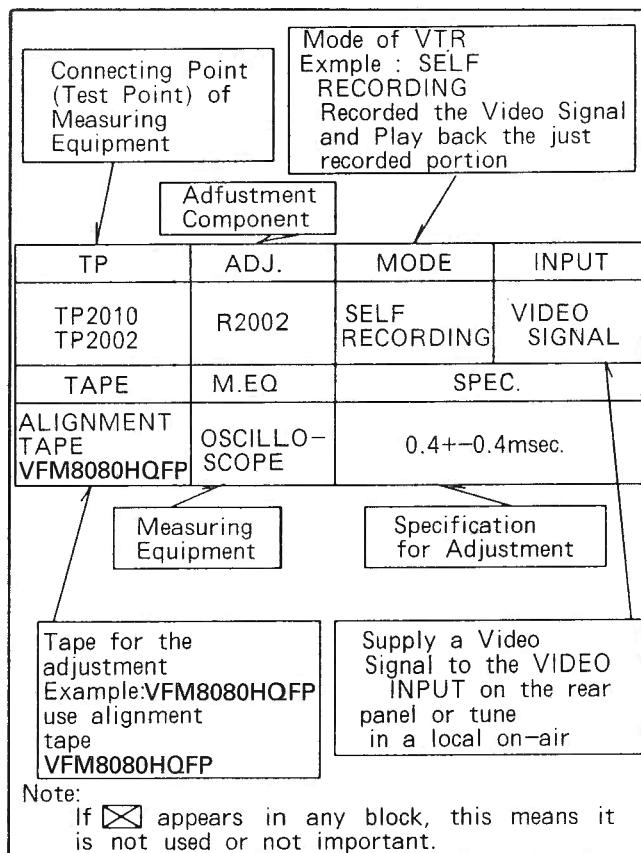


Fig. E1

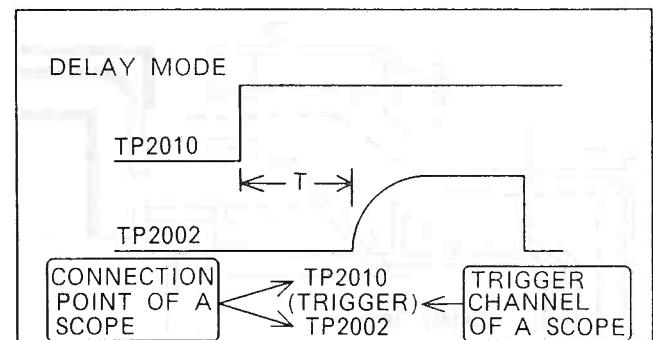


Fig. E2

2-2. SERVO Section

2-2-1. VIDEO AUTO TRACKING GAIN ADJUSTMENT

TP	ADJ.	MODE	INPUT
Y/C PACK C.B.A. PIN-32	VR3020	STOP	4MHz 200mVp-p (TO TP3001)
TAPE	M. EQ.	SPEC.	
	SIGNAL GEN D.V.M.	3.0+-0.1(V)	

1. Set the output of Sinewave Signal Generator to 4MHz, 200mVp-p and supply it to TP3001.
2. Connect the D.V.M. (Digital Volt Meter) to IC3001-6.
3. Adjust VR3020 so that reading of D.V.M. is 3.0+-0.1 (V).

2-2-2. SLOW FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2015	VR2013	STILL	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	648+-15 (Hz)	

1. Record the Colour Bar in SP Mode and Playback the just recorded portion. Then place the unit in STILL Mode, by pressing JOG/SHUTTLE SW.
2. Make a test mode as shown in Fig. Test mode. Connect a cut Jumper wire.
3. Connect the jumper wire between TP2026 and GND.
4. Adjust VR2013 so that reading of the Frequency Counter is 648+-15 (Hz).

Connect a cut Jumper wire.

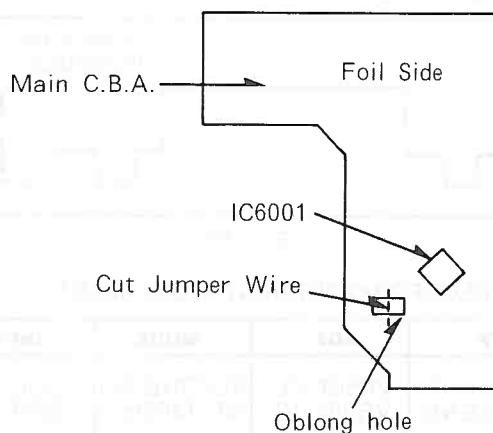


Fig. Test mode

2-2-3. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAY BACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFM8080 HQFP	OSCILLOSCOPE	6.5+-0.5 (H)	

1. Connect the Oscilloscope to TP2001 and TP3002.
2. **Playback the VHS Alignment Tape (VFM8080HQFP).**
3. Adjust VR2001 so that the phase difference becomes 6.5+-0.5 (H) as shown in Fig.E3.

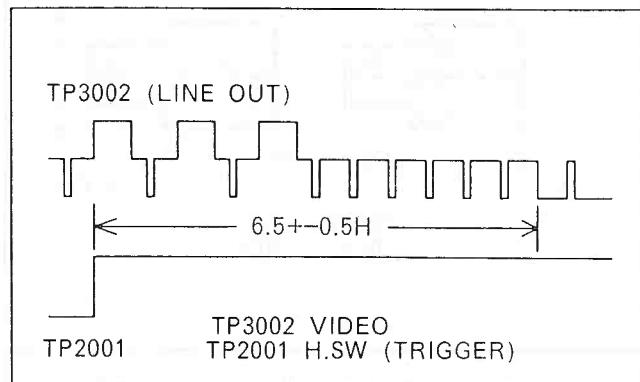


Fig. E3

2-2-4. ARTIFICIAL V-SYNC ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2010(SP) VR2009(SLP)	STILL	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	MONITOR	NO V-DANCING	

1. Record the Video Signal in SP Mode and playback the just recorded portion. Then place the unit in STILL Mode.
2. Adjust VR2010 so that the V-Dancing does not appear on the Monitor Screen.
3. Record the Video Signal in SLP Mode and playback the just recorded portion. Then place the unit in STILL Mode.
4. Adjust VR2009 so that the V-Dancing does not appear on the Monitor Screen.

2-2-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2002 TP2026	VR2011 (SP) VR2006 (LP/ SLP)	SLOW	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	6.0+-2 (msec) (SP) 10.0+-2 (msec) (LP/SLP)	

Connect the Oscilloscope to TP2002 and TP2026.

1. Record the Color Bar in SP Mode and playback the just recorded portion. Then place the Unit in 1/5 Speed Slow by Infra-red remote controller. (Press [SEARCH] button and then press \pm button 5 times)
2. Adjust VR2011 so that the phase difference becomes 6.0+-2 (msec) as shown in Fig. E4.
3. Record the Colour Bar in SLP Mode and playback the just recorded portion. Then place the Unit in 1/5 Speed Slow by Infra-red remote controller.
4. Adjust VR2006 so that the phase difference becomes 10.0+-2 (msec) as shown in Fig. E4.

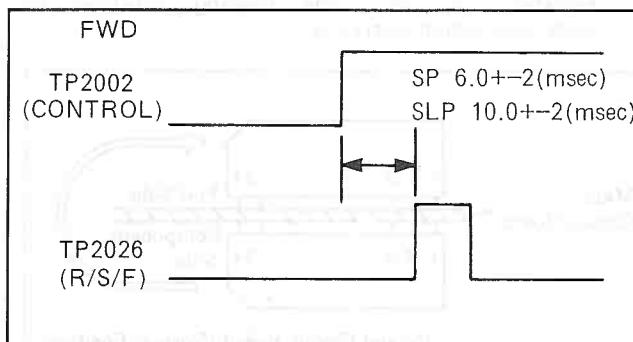


Fig. E4

2-2-6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2002 TP2026	VR2019 (SP) VR2018 (SLP)	REVERSE SLOW	COLOR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	4.0+-2 (msec) (SP) 7.0+-2 (msec) (LP/SLP)	

Connect the Oscilloscope to TP2002 and TP2026

1. Record the Colour Bar in SP Mode and playback the just recorded portion. Then place the Unit in 1/5 Reverse Slow Mode by Infra-red remote controller. (Press **[SEARCH]** button and then press **[button 5 times]**)
2. Adjust VR2019 so that the phase difference becomes $4.0+/-2$ (msec) as shown in Fig.E5.
3. Record the Color Bar in SLP Mode and playback the just recorded portion. Then place the Unit in 1/5 Reverse Slow Mode by Infra-red remote controller.
4. Adjust VR2018 so that the phase difference becomes $7.0+/-2$ (msec) as shown in Fig.E5.

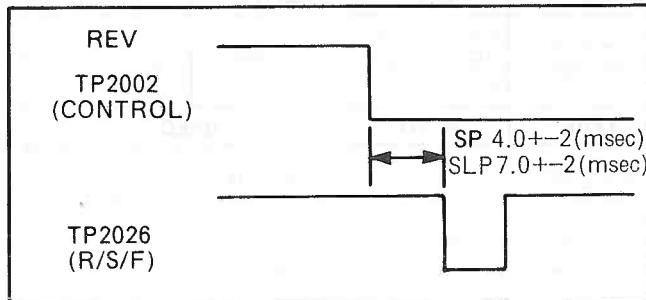


Fig. E5

2-3. LUMINANCE, CHROMINANCE & HEAD AMP Section

Note: When adjusting item 2-3-9, 2-3-10, 2-3-12, and 2-3-13, it can install the Luminance/Chrominance pack on other side of the circuit board ;the foil side. Remove the packed circuit board carefully not to damage anything and reinstall on foil side keeping relation of each connection correctly.

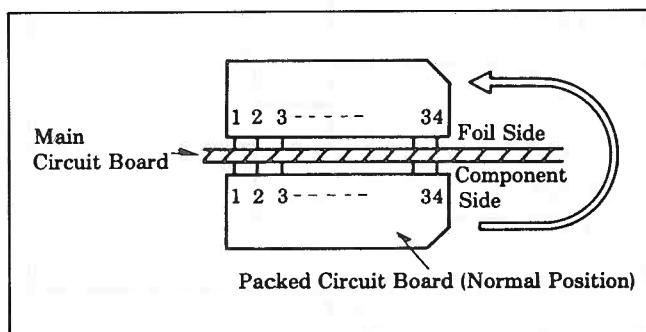


Fig. E6

2-3-1. LINE NOISE CANCELER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC301-9	VR301	RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	WAVE-FORM IS MINIMIZED	

NOTE: EDIT SW is turn OFF Mode.

1. Record the Colour Bar.
2. Connect the Oscilloscope to IC301-9.
3. Adjust VR301 so that waveform becomes minimum.

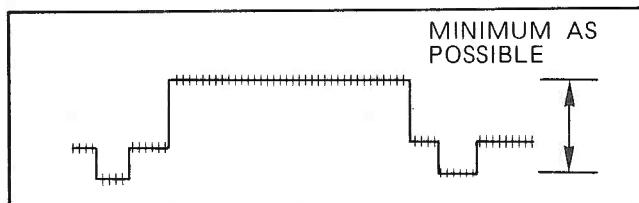


Fig. E7

2-3-2. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501 (Y) VR502 (C)	RECORDING (SP MODE)	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	$36+/-2$ (mVp-p) (C) $140+/-5$ (mVp-p) (Y)	

1. Record the Colour Bar in SP Mode.
2. Connect the Oscilloscope to TP507 (HOT) and TP508 (GND).
3. Turn VR501 so that luminance recording current signal becomes closed. (means minimum waveform)
4. Adjust VR502 so that the Chrominance recording current becomes $36+/-2$ (mVp-p) as shown in Fig. E8.
5. Next, adjust VR501 so that Luminance Recording current becomes $140+/-5$ (mVp-p) as shown in Fig. E9.

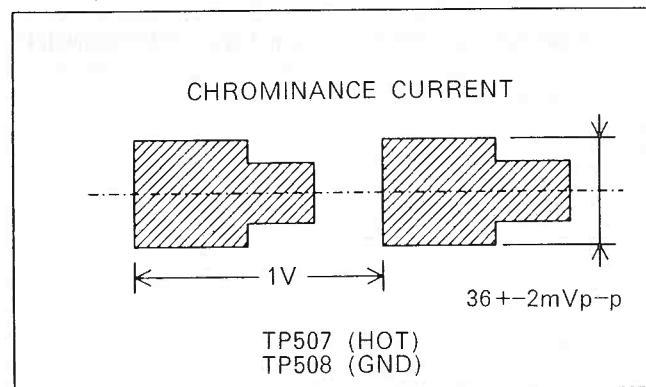


Fig. E8

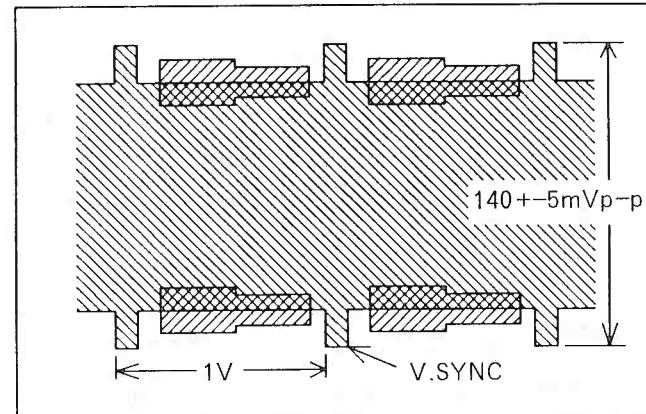


Fig. E9

2-3-3. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012 (SP) VR3013(SLP)	SELF RECORDING AND PLAYBACK	VIDEO SWEEP SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE / VIDEO SWEEP GENERATOR	[SP] B/A=-1+-3 (dB) (63 ~ 126%) [SLP] B/A=-3+-4 (dB) (45 ~ 112%)	

- Set the Video Sweep Generator output as shown in Fig. E10.

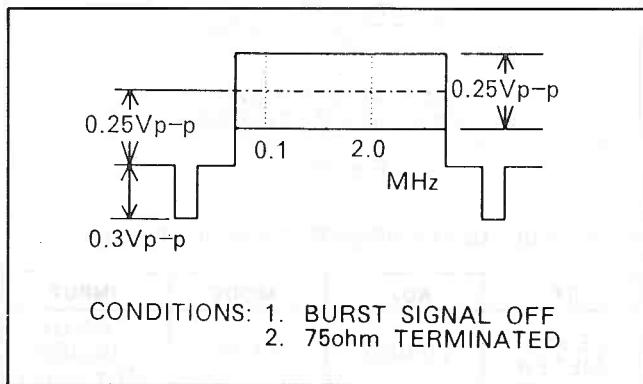


Fig. E10

- Record the Video Sweep Signal in SP Mode and playback just recorded portion.
- Set the Tracking control to Fix position.
- Adjust VR3012 so that the Frequency Response becomes $B/A=-1+-3dB$ as shown in Fig.E11.
- Record the Video Sweep Signal in SLP Mode and playback just recorded portion.
- Set the Tracking control to Fix position.
- Adjust VR3013 so that the Frequency Response becomes $B/A = -3+-4dB$ as shown in Fig.E11.

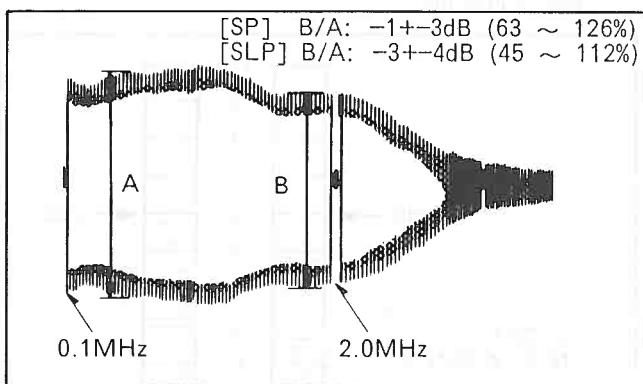


Fig. E11

2-3-4. AFC FREE-RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
P801-9	VR801	STOP	
TAPE	M. EQ.	SPEC.	
	SIGNAL GEN V.T.V.M.	15735+-100 (Hz)	

- Connect the 5V to IC802 pin 15.
- Set the Si Generator to 8 (kHz), -10dBv (316mVrms).
- Connect the frequency Counter to P801 PIN 9.
- Adjust VR801 so that P801 PIN 9 becomes 100 (Hz).

2-4. NORMAL AUDIO & Hi-Fi AUDIO Section

2-4-1. AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
SHIELD (GND)	VR4502 (L) VR4507 (R)	SELF RECORDING AND PLAYBACK	1KHz -10dBV (316mVrms)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M./ SINEWAVE SIGNAL GEN	PLAYBACK LEVEL IS SAME AS E-E LEVEL	

- Set the Output of Signal Generator to 1KHz, -10dBV (316mVrms).
- Connect the Signal Generator to both Audio In terminal.
- Adjust the level of Signal Generator so that Audio output level becomes 400mVrms (-8dBV).
- Record the Audio Signal and playback the just recorded portion.
- Adjust VR4502 so that the Audio (L) Output Level becomes 400mVrms (-8dBV).
- Adjust VR4507 so that the Audio (R) Output Level becomes 400mVrms (-8dBV).

2-4-2. AUDIO CARRIER FREQUENCY (f₀) ADJUSTMENT

TP	ADJ.	MODE	INPUT
(L) BETWEEN C4516 AND R4513	(L) VR4501		
(R) BETWEEN C4566 AND R4563	(R) VR4509	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	(L) 1.3 (MHz)+-3 (KHz) (R) 1.7 (MHz)+-3 (KHz)	

1. Connect the Frequency Counter to between C4516 and R4513.
2. Adjust VR4501 so that reading of Frequency counter is 1.3 (MHz)+-3 (KHz).
3. Connect the Frequency Counter to between C4566 and R4563.
4. Adjust VR4509 so that reading of Frequency counter is 1.7 (MHz)+-3 (KHz).

2-4-3. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (+) TP4003 (-)	VR4002	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	V.T.V.M.	2.4+-0.1 (mVrms)	

1. Connect the V.T.V.M. to TP4002 (+) and TP4003 (-). (Do not use long cable for Connection)
2. Make a short circuit at terminal of the Audio input.
3. Place the Unit in Recording Mode.
4. Adjust VR4002 so that reading of V.T.V.M. becomes 2.4+-0.1 (mVrms).

2-4-4. Hi-Fi AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4511 TP2001	VR4510	PLAYBACK	
TAPE	M. EQ.	SPEC.	
ALIGNMENT TAPE VFM8080 HQFP	OSCILLO- SCOPE	$T = \frac{T_2 + T_1}{2}$ (msec)	

1. Playback the VHS Alignment Tape VFM8080HQFP.
2. Connect the Oscilloscope to TP4511 and TP2001.
3. Adjust VR4510 while listening to the stereo playback sound.

- (1) Confirm the "T2" time when the abnormal sound just occurs during turning clockwise on VR4510.
- (2) Confirm the "T1" time when the abnormal sound just occurs during turning counter clockwise on VR4510.
- (3) Adjust VR4510 so that the falling edge "T" of Audio H.SW. pulse becomes the center portion of the both "T2" and "T1"

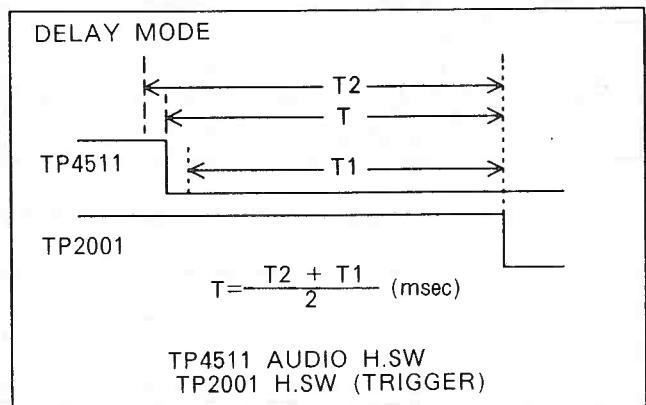


Fig. E12

2-4-5. LEVEL METER SENSITIVITY ADJUSTMENT

TP	ADJ.	MODE	INPUT
LEVEL METER	VR4004	STOP	1(KHz) -10(dBV) (316mVrms)
TAPE	M. EQ.	SPEC.	
	SIGNAL GEN./ V.T.V.M.	0dB INDICATOR JUST LIGHTS UP	

1. Set the Audio Out Selector (On Remote controller) for STEREO position.
2. Set the output of Signal Generator to 1(KHz), -10dBV (316mVrms) and supply it to both Audio input jacks (L) and (R).
3. Adjust VR4004 so that the 0dB of Level Meter just lights up.

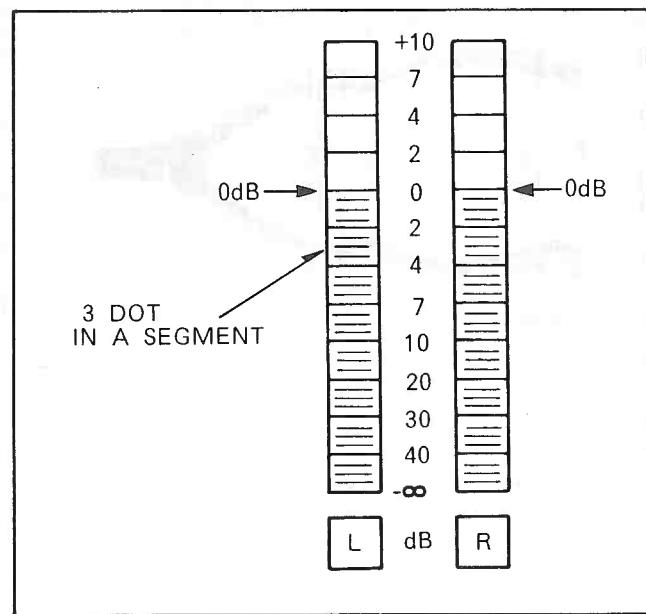


Fig. E13

2-4-6. Hi-Fi AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507	VR4503	RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	480+−10 (mVp−p)	

NOTE:

Befor this adjustment set the Test mode which refer to the SLOW FREE RUN ADJUSTMENT Fig.Test mode .

1. Set the Input Signal Selector to LINE.
2. Connect the oscilloscope to TP4507.
3. Place the Unit in recording with SP mode.
4. Adjust VR4503 so that the recording current becomes 480+−10 (mVp−p).

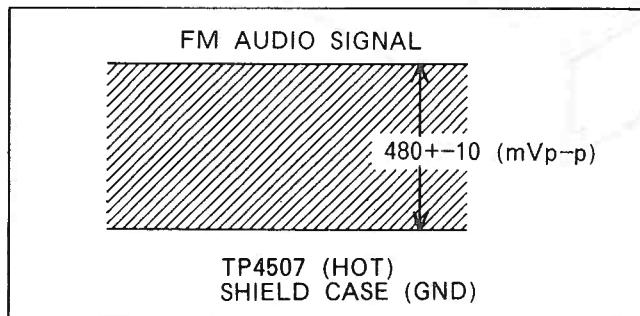


Fig. E14

2-4-7. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4001	SELF RECORDING AND PLAYBACK	(AUDIO) 1(KHz) −10(dBV) (316mVrms) (VIDEO) COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	SIGNAL GEN./ V.T.V.M.	E-E LEVEL+−0.5 (dB) (E-E LEVEL+−20mVrms)	

Note:

Befor this adjustment Tape Interchangeability Adjustment must be completed.

Set the audio output selector to Normal mode by using the Remote controller.

1. Set the Signal Generator to 1(KHz), −10(dBV) (316mVrms) and record the Colour Bar with 1(KHz), −10(dBV) (316mVrms) Audio Signal in SP mode.
2. Memorize the Audio E-E Level while recording Audio Signal 1(KHz), −10(dBV) (316mVrms).
3. Playback just recorded portion.
4. Adjust VR4001 so that the Playback Level becomes E-E Level+−0.5(dB).

2-4-8. Hi-Fi AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4502	VR4505	SELF RECORDING AND PLAYBACK	VIDEO SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLOSCOPE	STEREO INDICATION JUST LIGHTS UP	

Note 1:

Before this adjustment "Tape interchangeability" must be completed.

Note 2:

To achieve this adjustment, the luminance recording current adjustment should be performed as follows.

- (1) Connect the Oscilloscope to TP507 (HOT) and TP508 (GND) and then adjust VR501 for 135 (mVp-p) [Refer to Luminance Recording Current Adjustment.]
- (2) After this Adjustment, the Luminance Recording Current Adjustment must be returned to original position again.

1. Set the Audio Out Selector to STEREO position.
2. Preadjust VR4505 until the Hi-Fi indicator on the front panel display turns the NORMAL indication.
3. Then slowly adjust VR4505 where the STEREO indication just light up.
4. Confirm that the abnormal sound does not contain in the playback Hi-Fi sound.

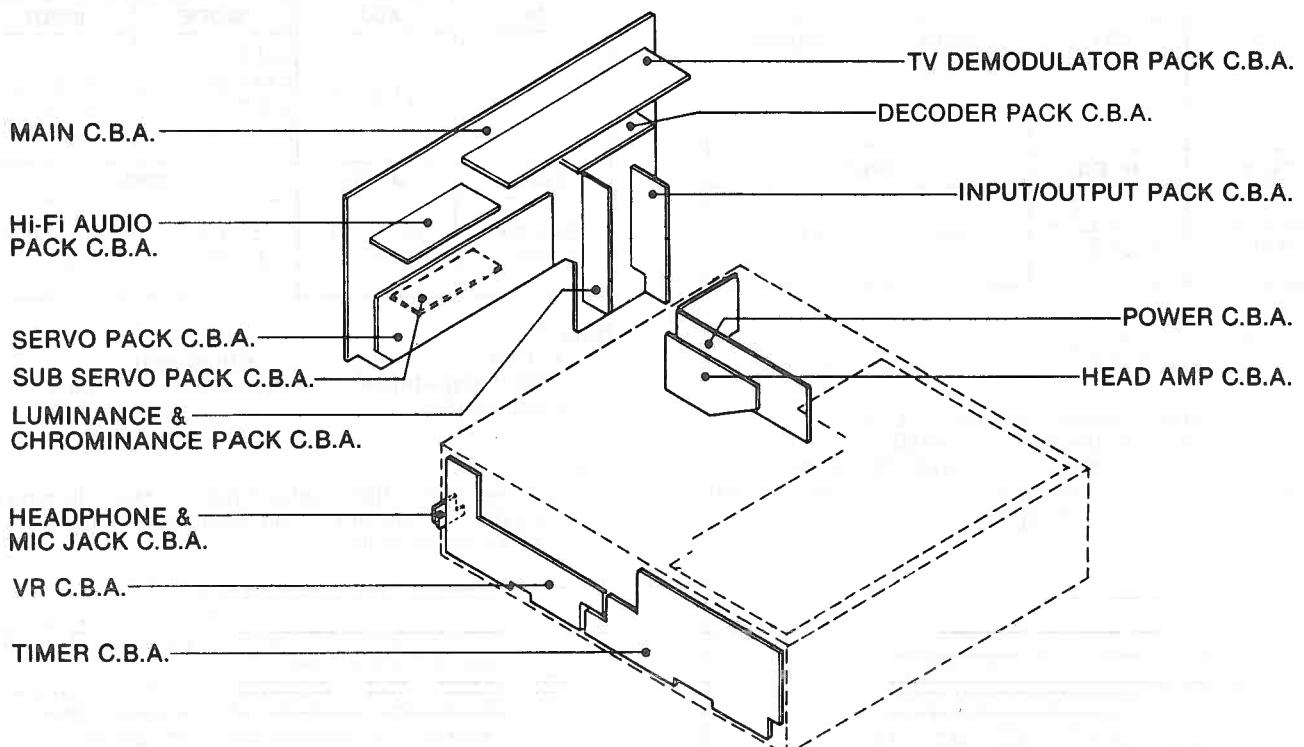
2-5. TIMER Section

2-5-1. TIMER REFERENCE CLOCK ADJUSTMENT

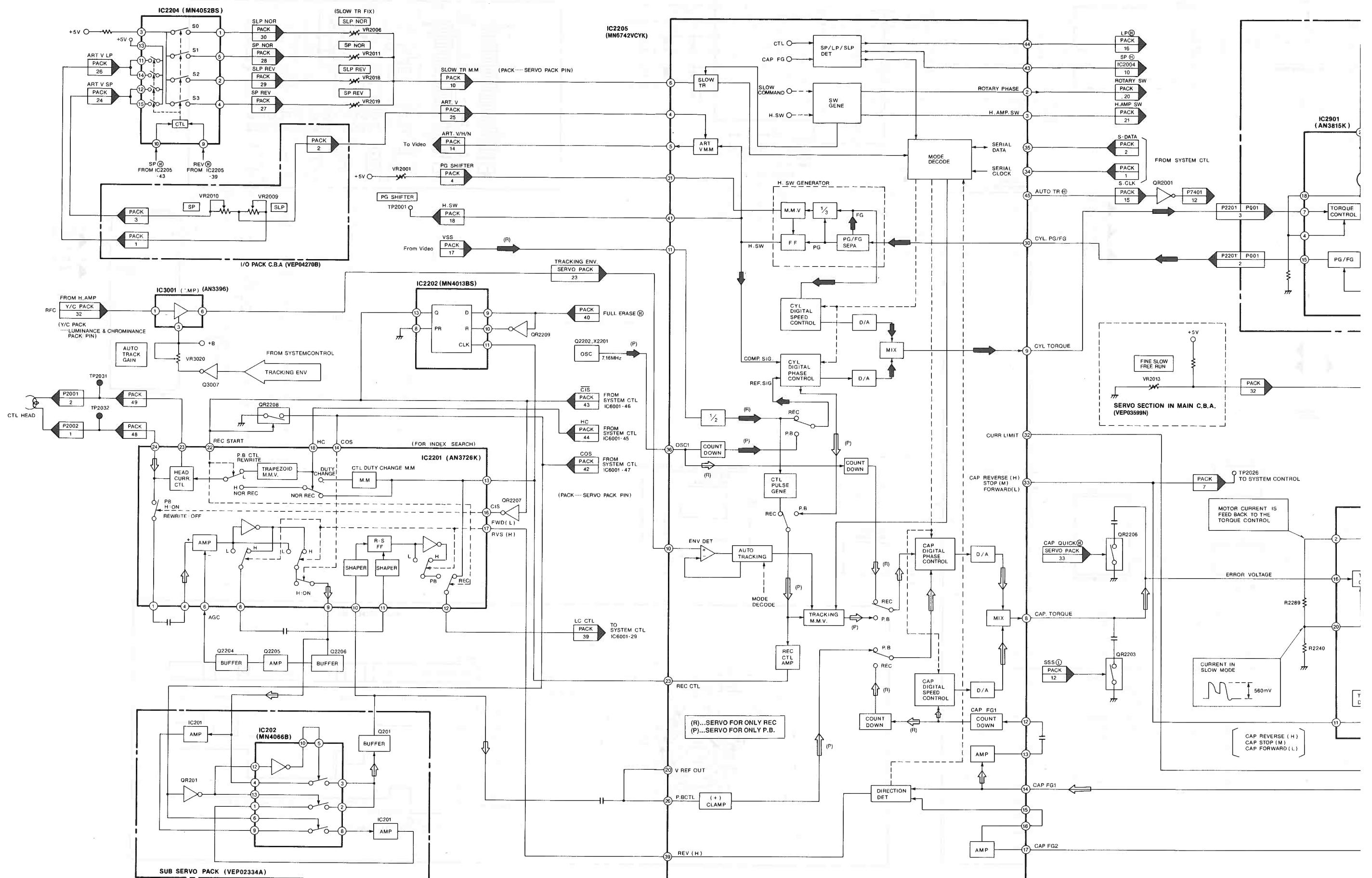
TP	ADJ.	MODE	INPUT
TP7501	C7501	STOP	
TAPE	M. EQ.	SPEC.	
	FREQUENCY COUNTER	7812.5+−0.015 (us)	

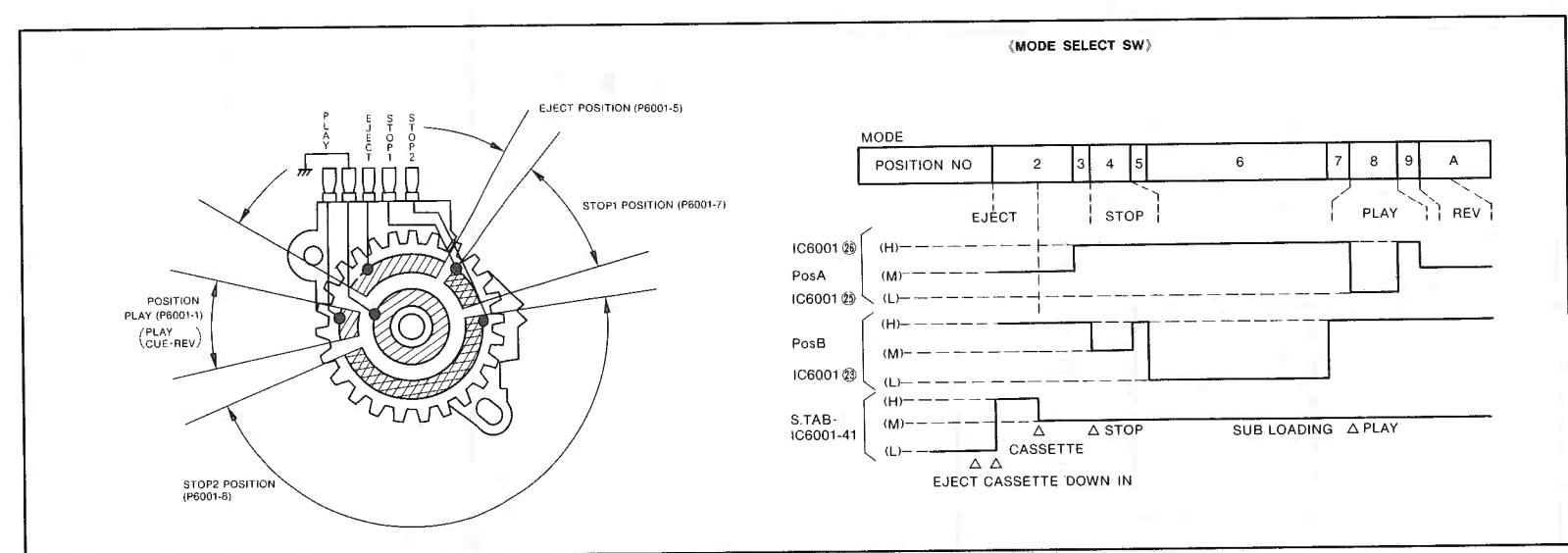
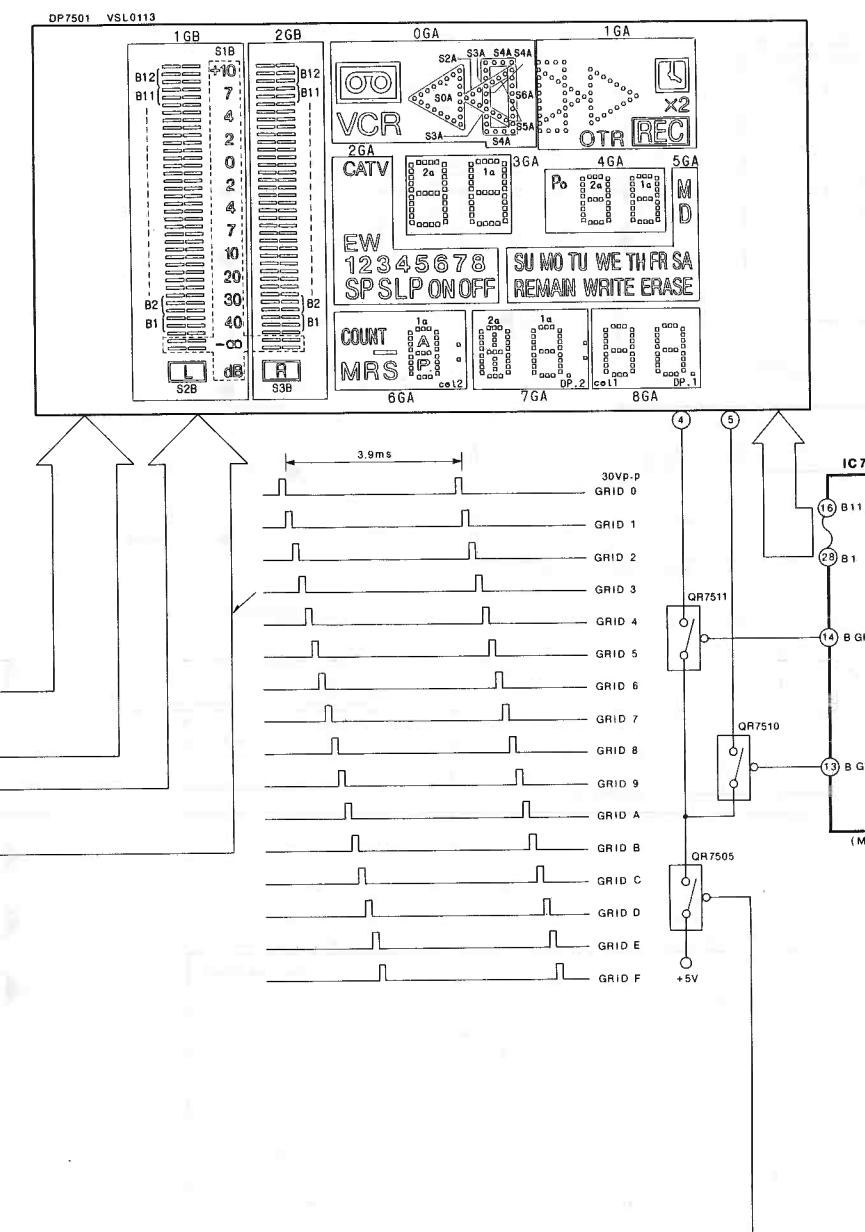
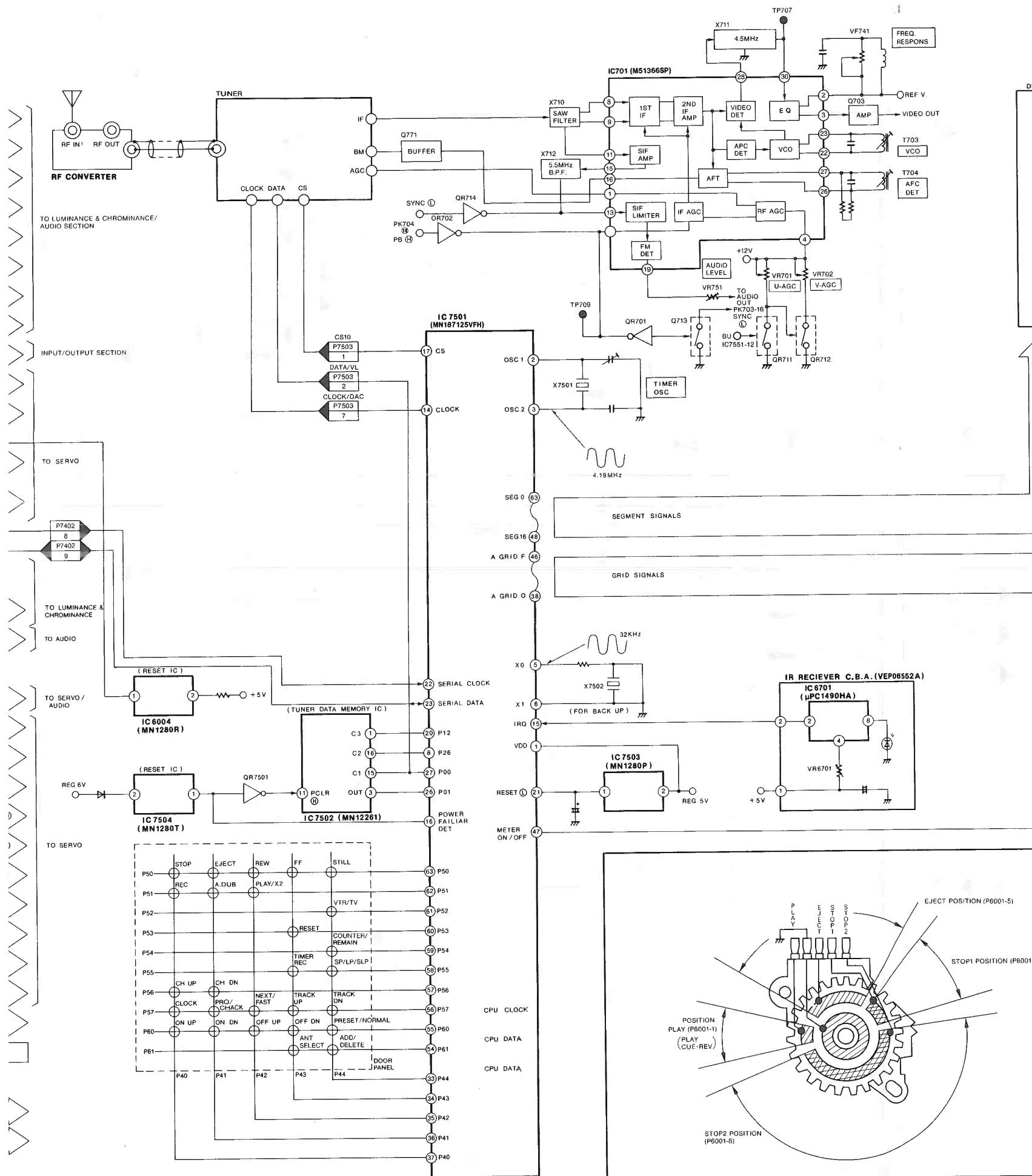
1. Connect P7501-3 and P7501-4, then supply DC 5.0+−0.1(V) to P7501-3.
2. Connect P7501-6 and GND.
3. Connect the Frequency Counter to TP7501.
4. Adjust C7501 so that TP7501 becomes 7812.5+−0.015(us)

CIRCUIT BOARD LAYOUT

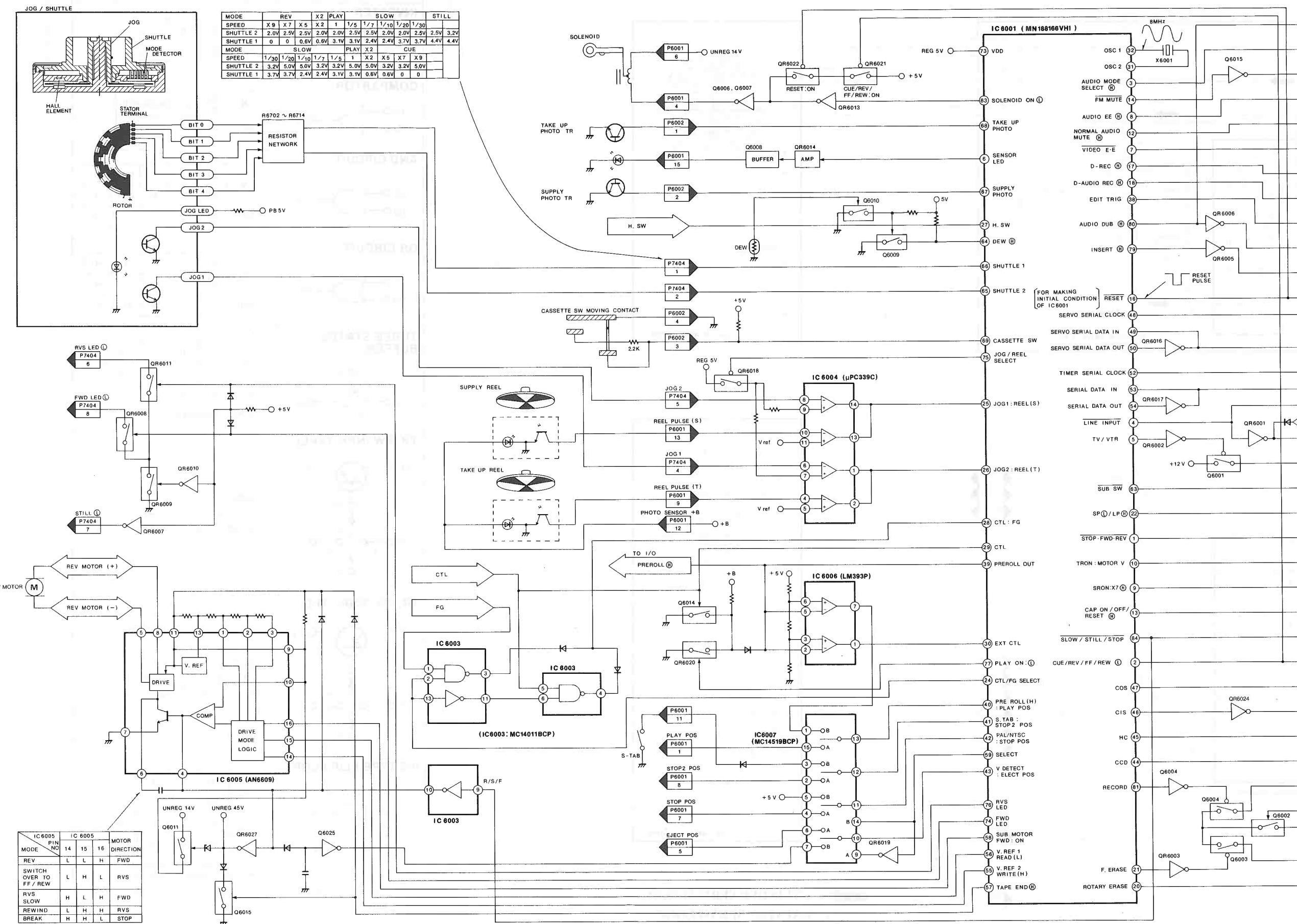


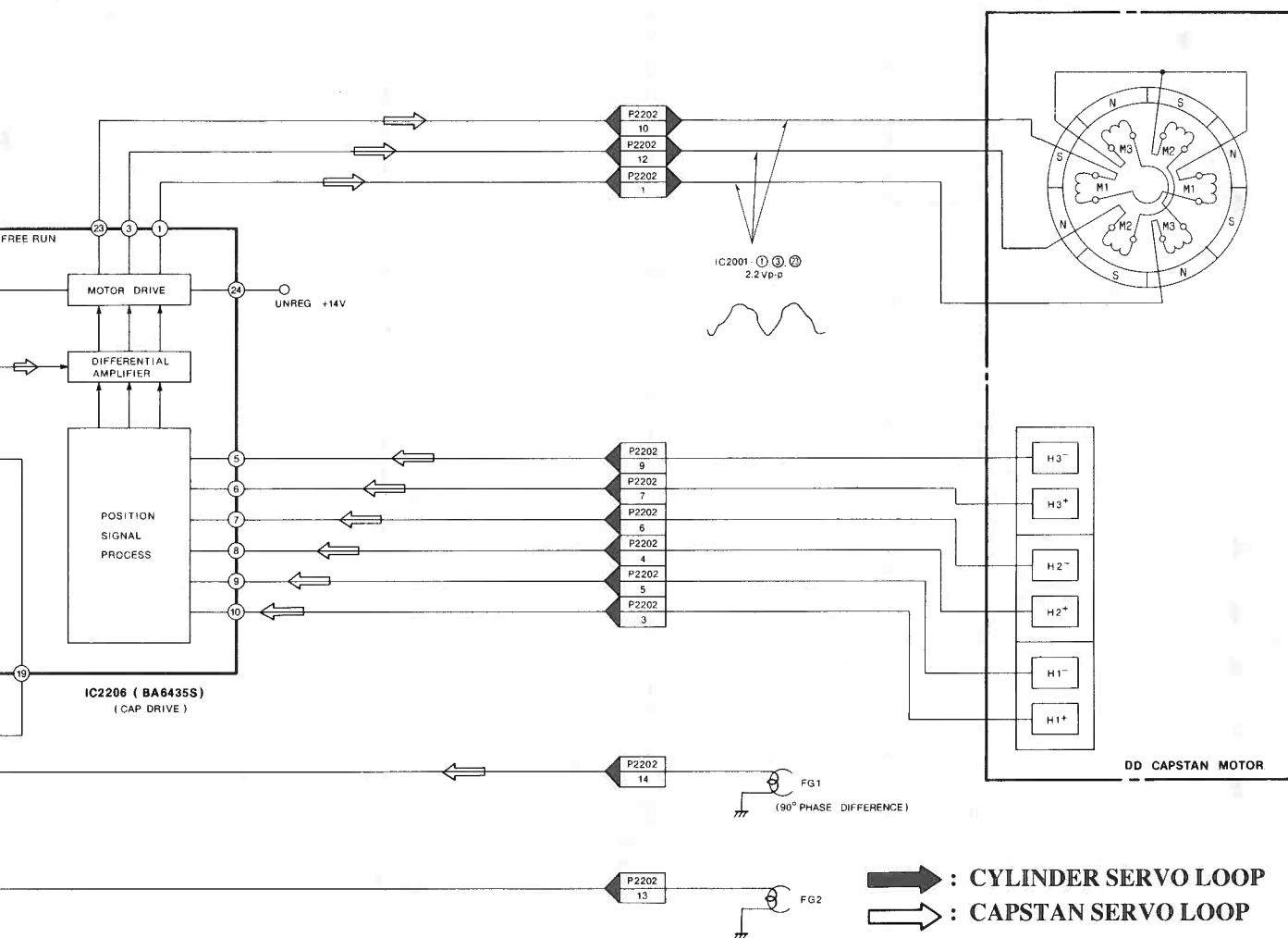
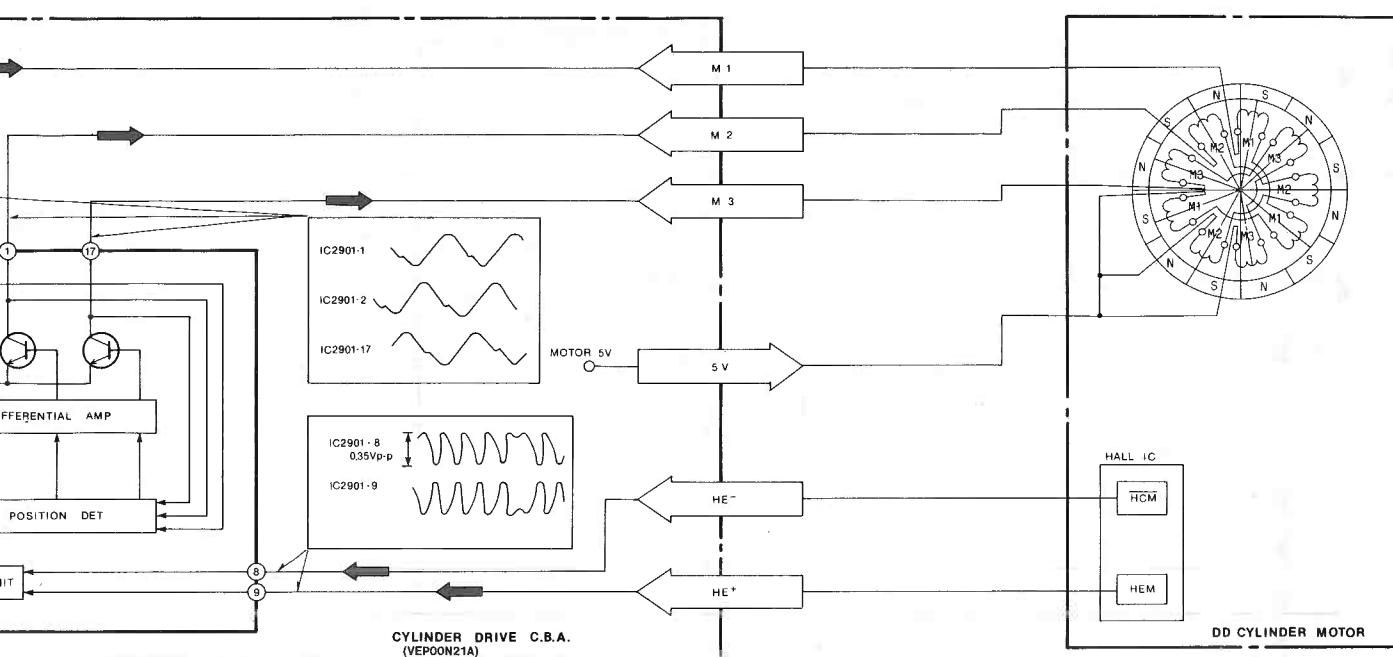
3-1. SERVO BLOCK DIAGRAM





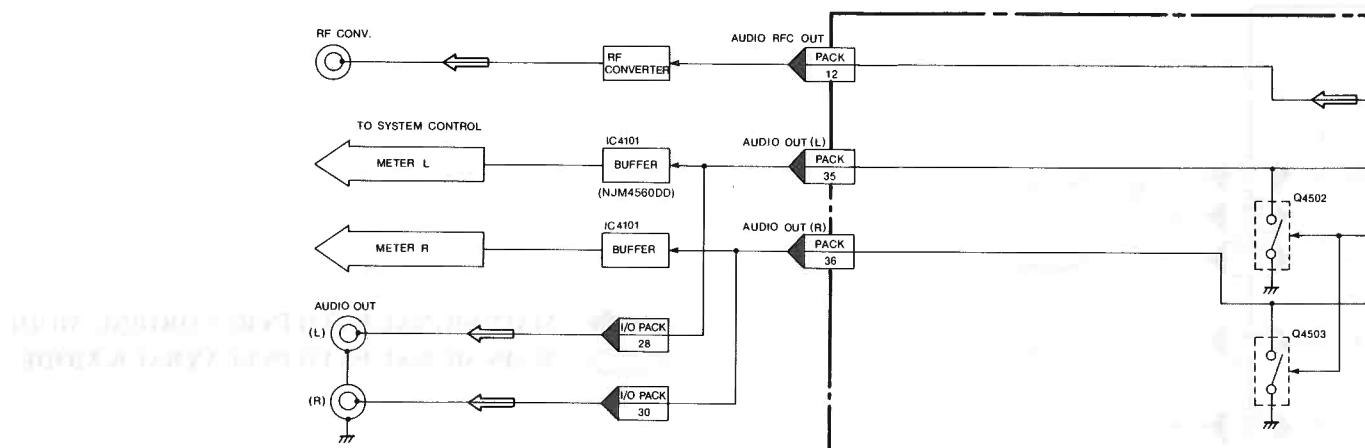
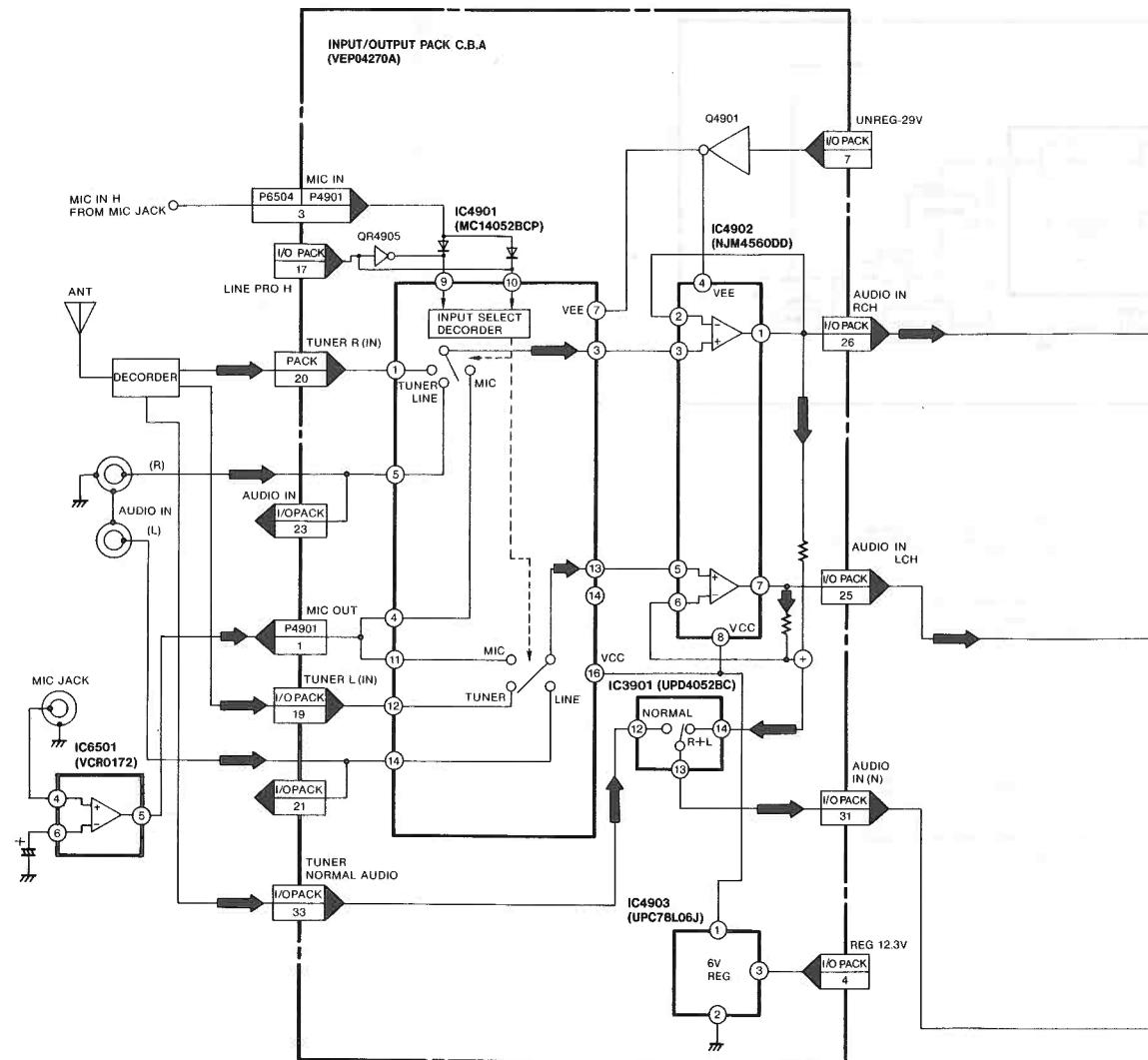
3-2. SYSTEM CONTROL BLOCK DIAGRAM



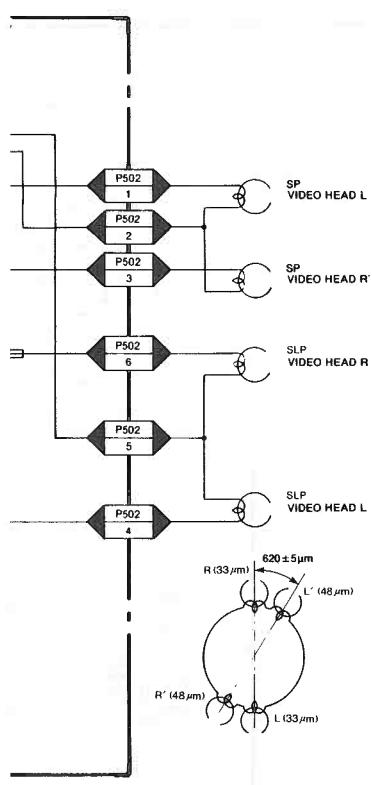
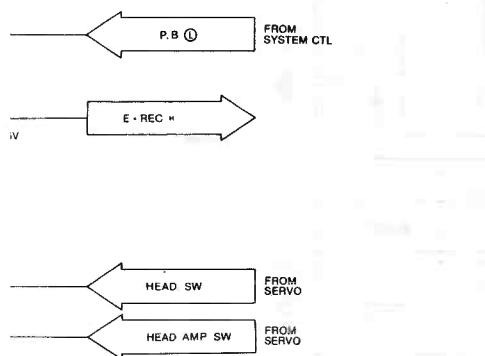
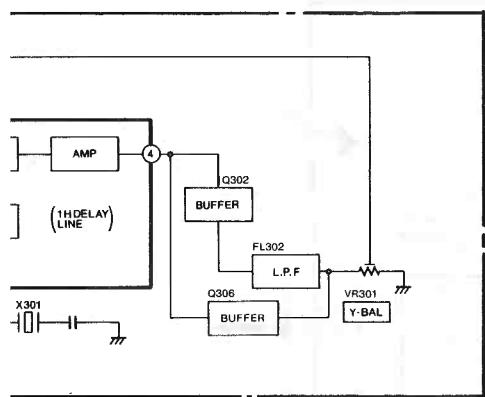


SYMBOL	TRUTH VALUE TABLE																							
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IN	(a)	H	L																					
OUT	(b)	L	H																					
COMPARTOR (a) O + (b) O → O (c)	<table border="1"> <tr> <td>IN</td><td>(a) (b)</td><td>(a) > (b)</td><td>(a) < (b)</td></tr> <tr> <td>OUT</td><td>(c)</td><td>H</td><td>L</td></tr> </table>				IN	(a) (b)	(a) > (b)	(a) < (b)	OUT	(c)	H	L												
IN	(a) (b)	(a) > (b)	(a) < (b)																					
OUT	(c)	H	L																					
AND CIRCUIT (a) O (b) O → O (c)	<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		
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	(b)	L	H	L	H																			
OUT	(c)	L	L	L	H																			
OR CIRCUIT (a) O (b) O → O (c)	<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 (a) O (b) O → O (c)	<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>				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	※																				
※ High Impedance																								
TR. SW (NPN TYPE) (C) O → O (E)	<table border="1"> <tr> <td>BASE</td><td>H</td><td>L</td><td></td></tr> <tr> <td>TR. SW</td><td>ON</td><td>OFF</td><td></td></tr> </table>				BASE	H	L		TR. SW	ON	OFF													
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TR. SW (PNP TYPE) (E) O → O (C)	<table border="1"> <tr> <td>BASE</td><td>H</td><td>L</td><td></td></tr> <tr> <td>TR. SW</td><td>OFF</td><td>ON</td><td></td></tr> </table>				BASE	H	L		TR. SW	OFF	ON													
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R-S TYPE FLIP-FLOP (a) O S Q → O (c) (b) O R \bar{Q} → O (d)	<table border="1"> <tr> <td>IN</td><td>(a)</td><td>L</td><td>L</td><td>↑L</td></tr> <tr> <td></td><td>(b)</td><td>L</td><td>↑L</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>				IN	(a)	L	L	↑L		(b)	L	↑L	L	OUT	(c)	※	L	H		(d)	◆	H	L
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	(b)	L	↑L	L																				
OUT	(c)	※	L	H																				
	(d)	◆	H	L																				
※ Initial condition is maintained. ◆ Initial condition is reversed.																								

3-4. Hi-Fi AUDIO BLOCK DIAGRAM

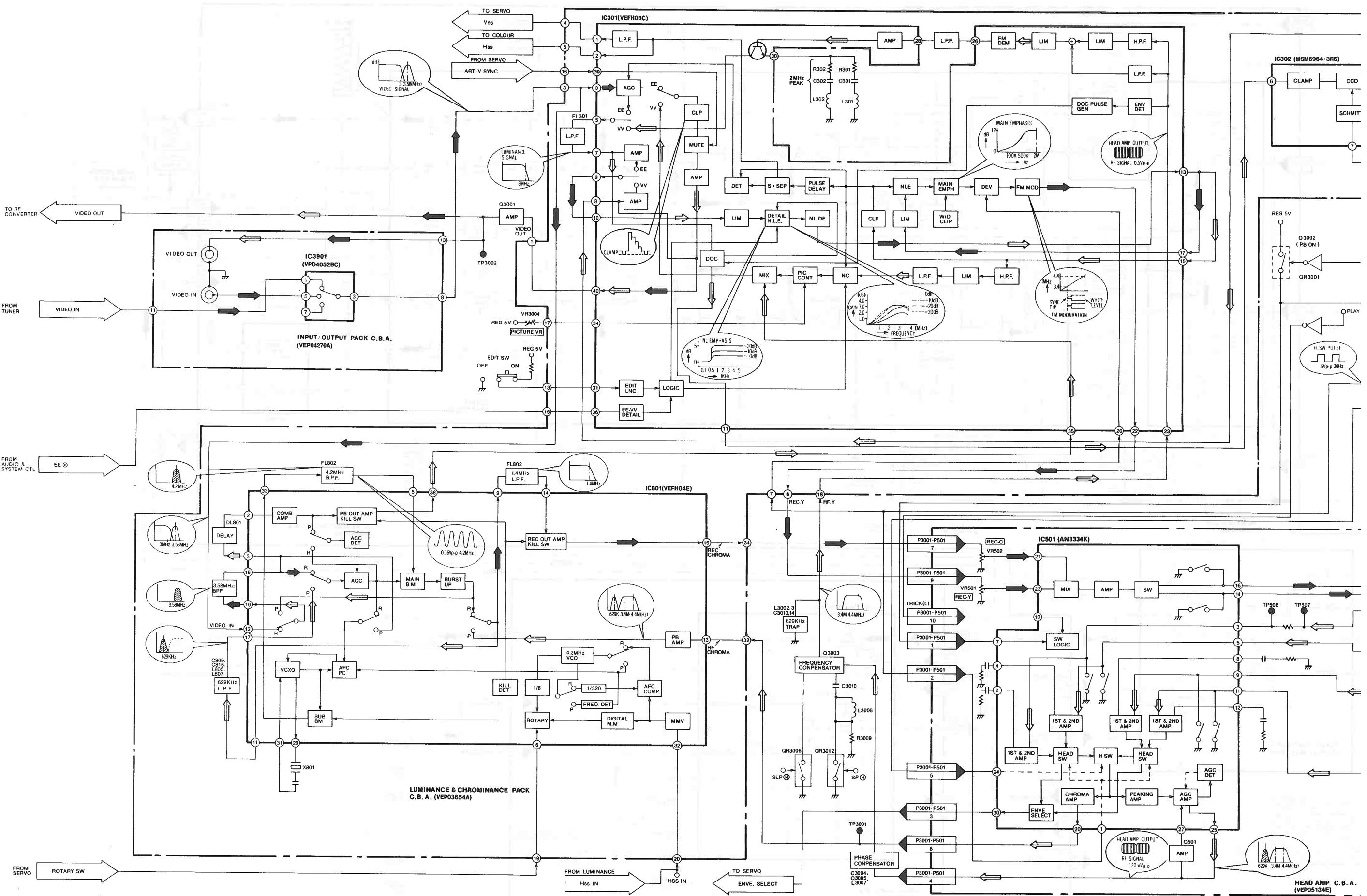


MODE	IC4501 - 72	LINE
STEREO		HIFI
LEFT	SWITCH AT EVERY FALLING EDGE	HIFI
RIGHT		HIFI
NORMAL	ST-L-R-N	NORM



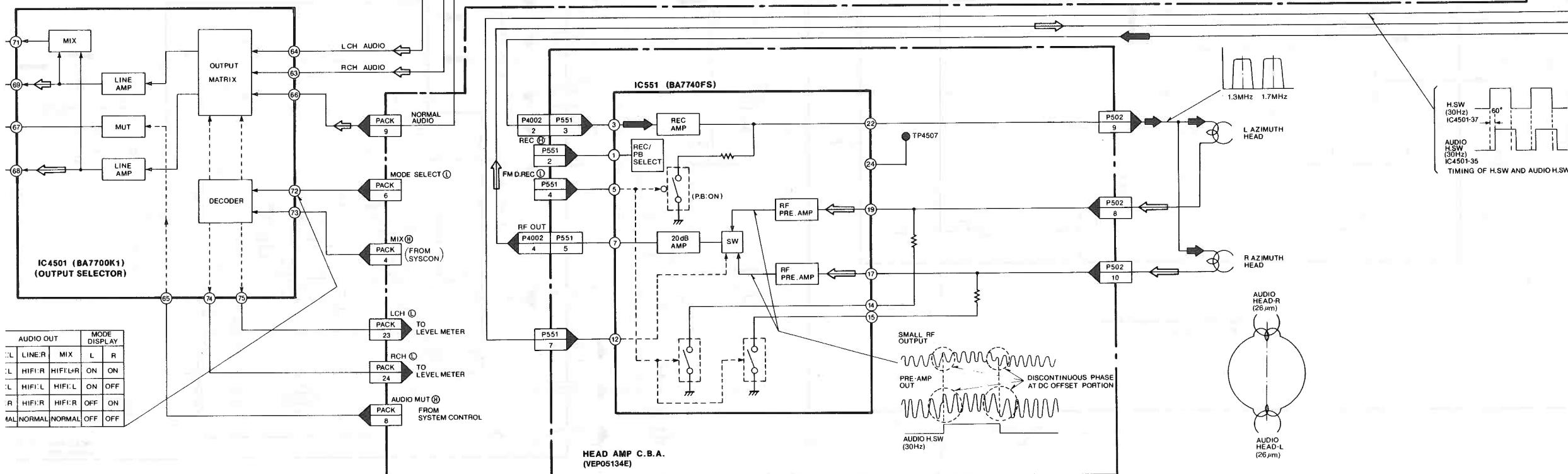
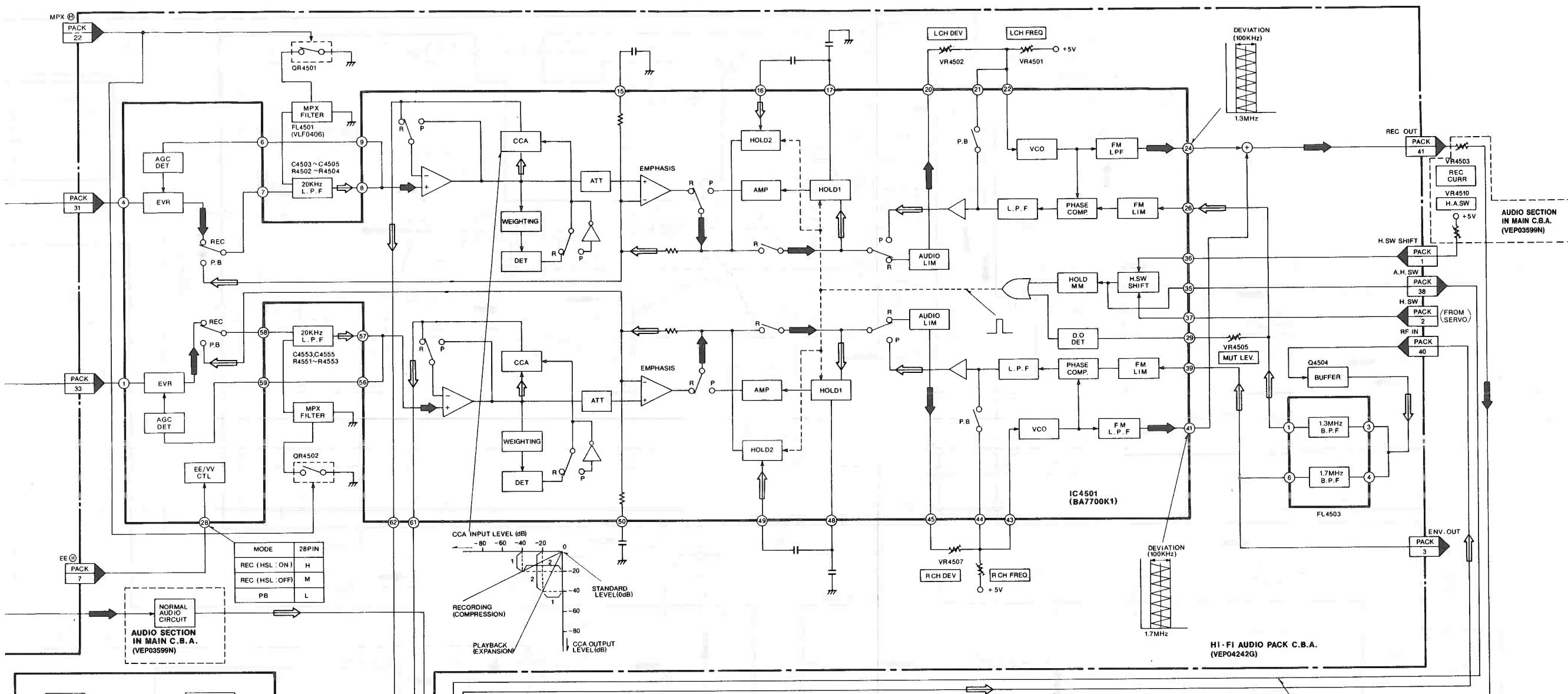
→ : MAIN SIGNAL PATH IN RECORDING MODE
↔ : MAIN SIGNAL PATH IN PLAYBACK MODE

3-3. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

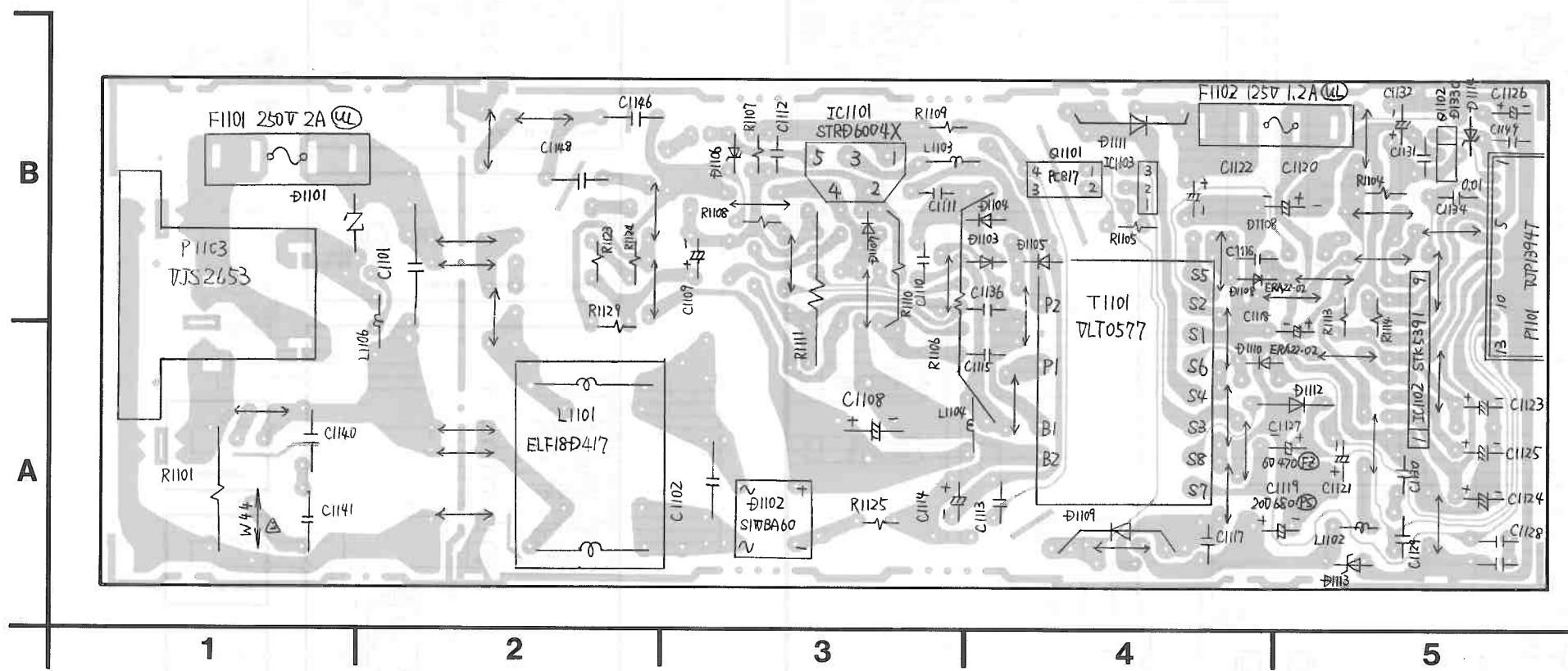


→: MAIN SIGNAL PATH IN REC MODE

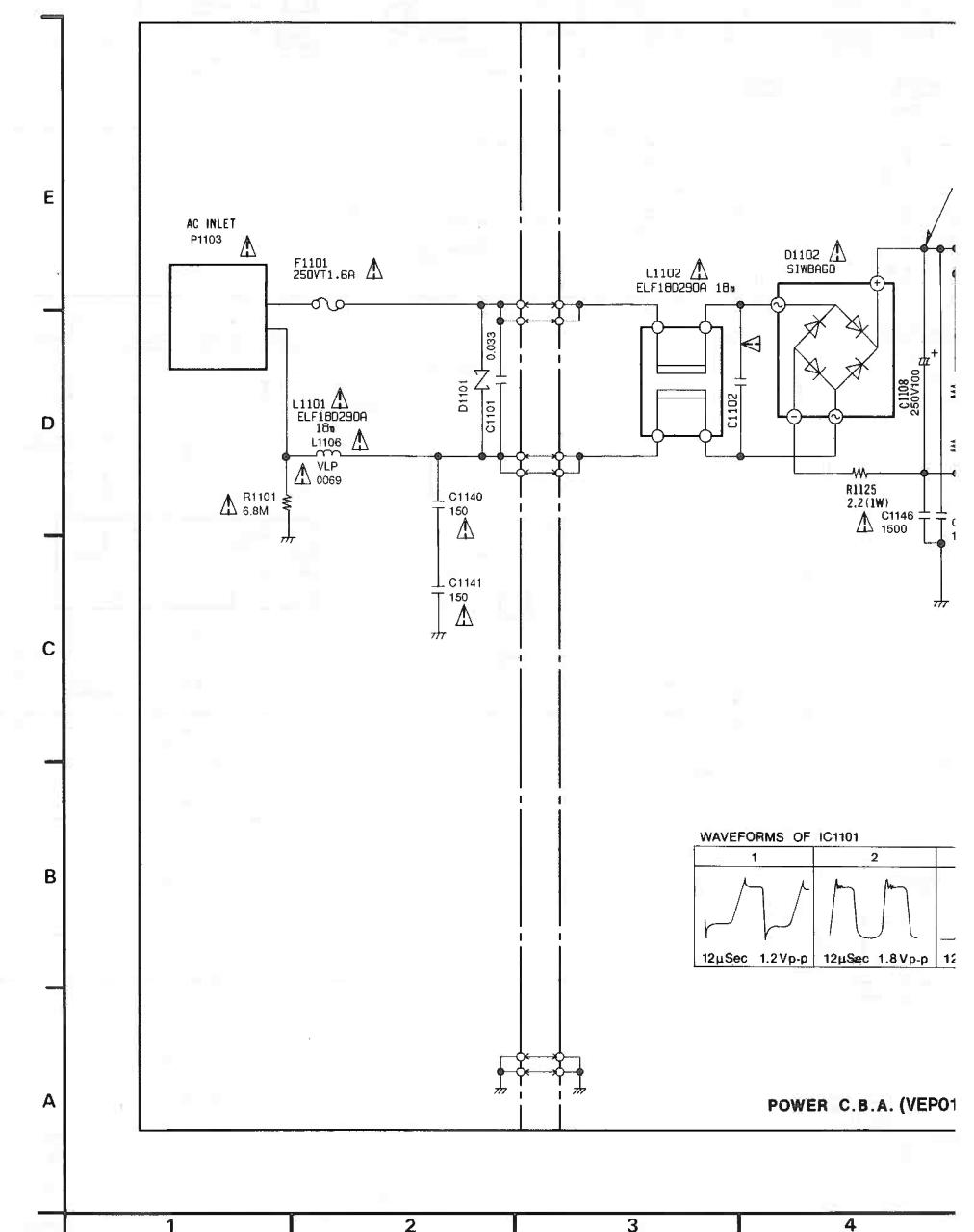
→: MAIN SIGNAL PATH IN PLAYBACK MODE

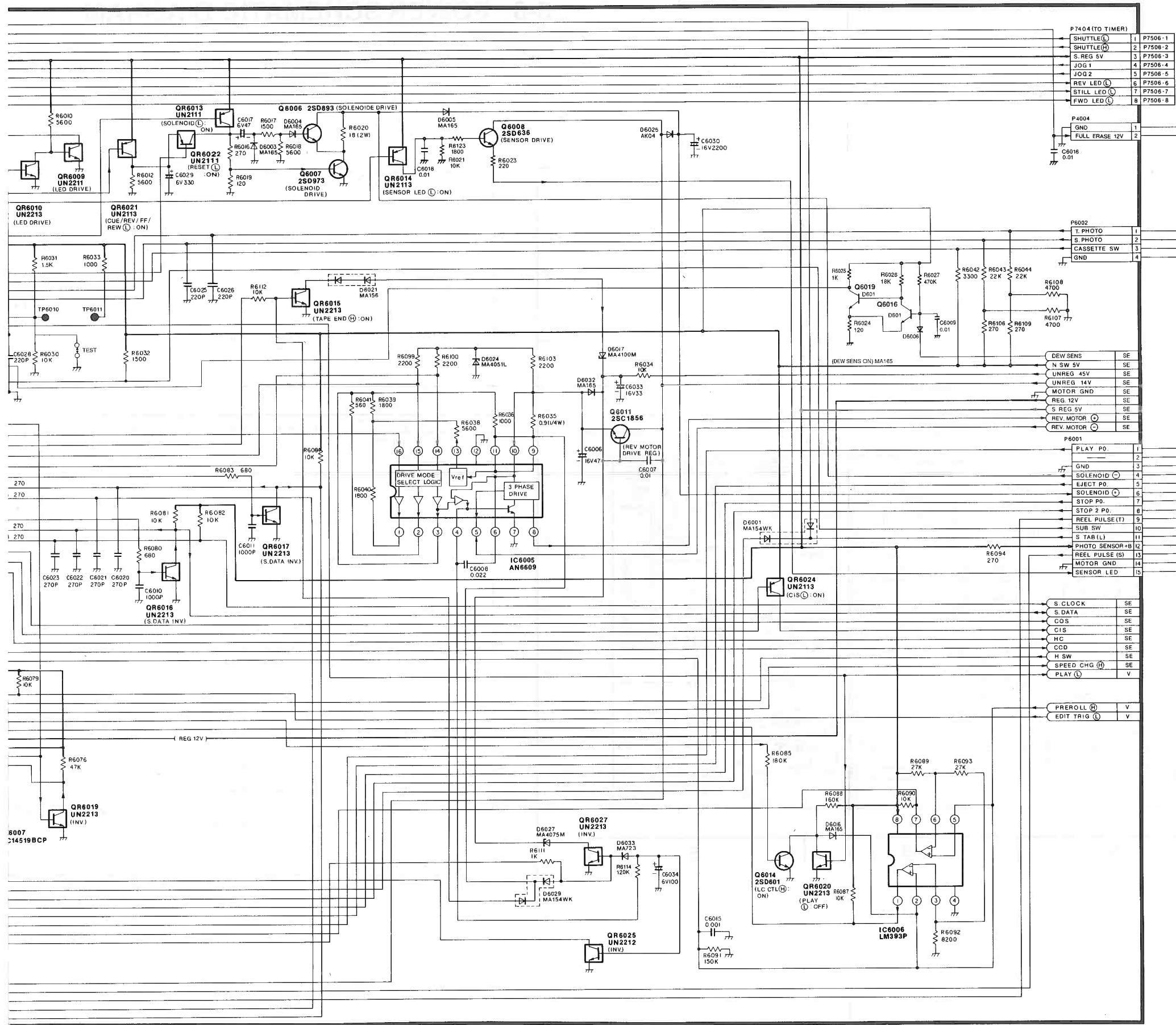


3-5. POWER C.B.A. (VEP01375)



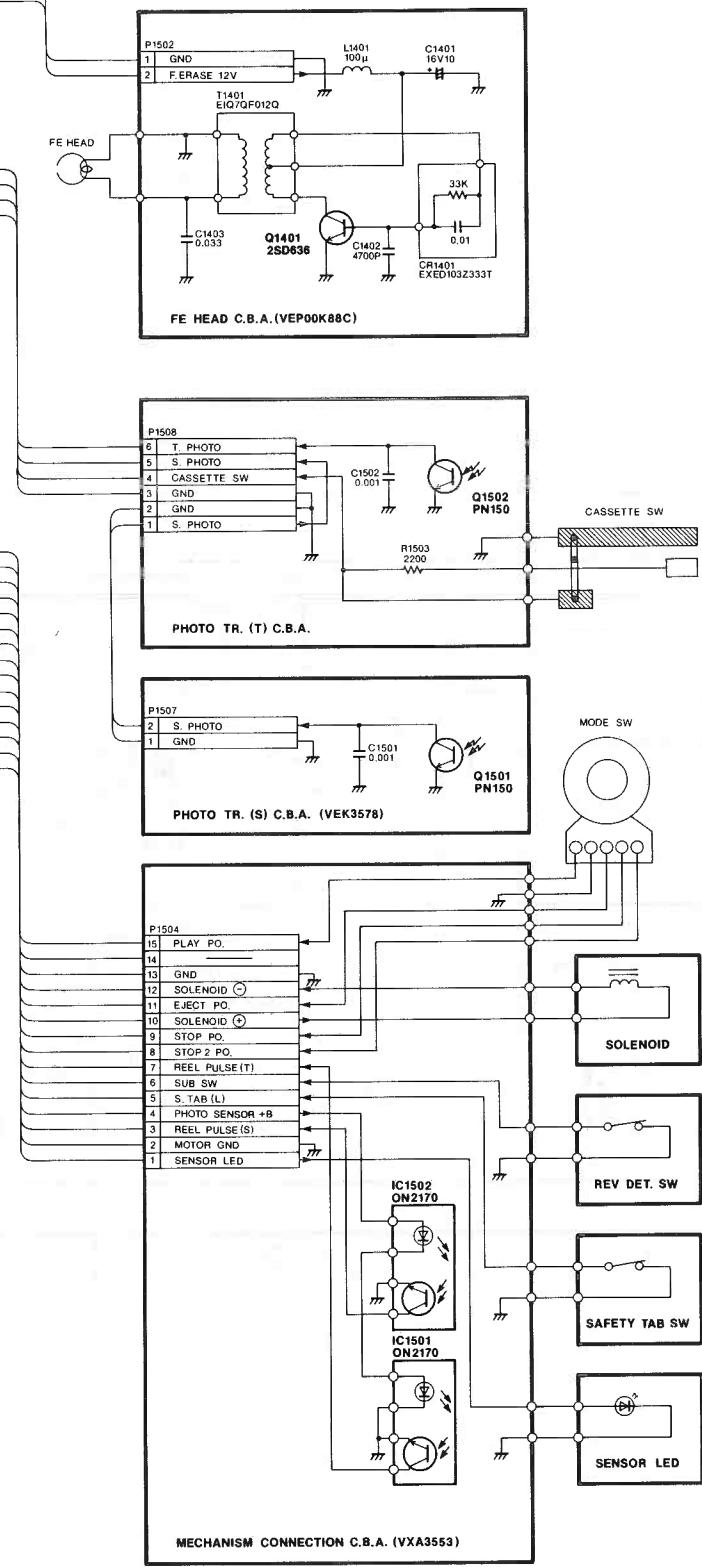
3-6. POWER SCHEMATIC DIAGRAM





12 13 14 15 16 17 18 19 20 21 22 23

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



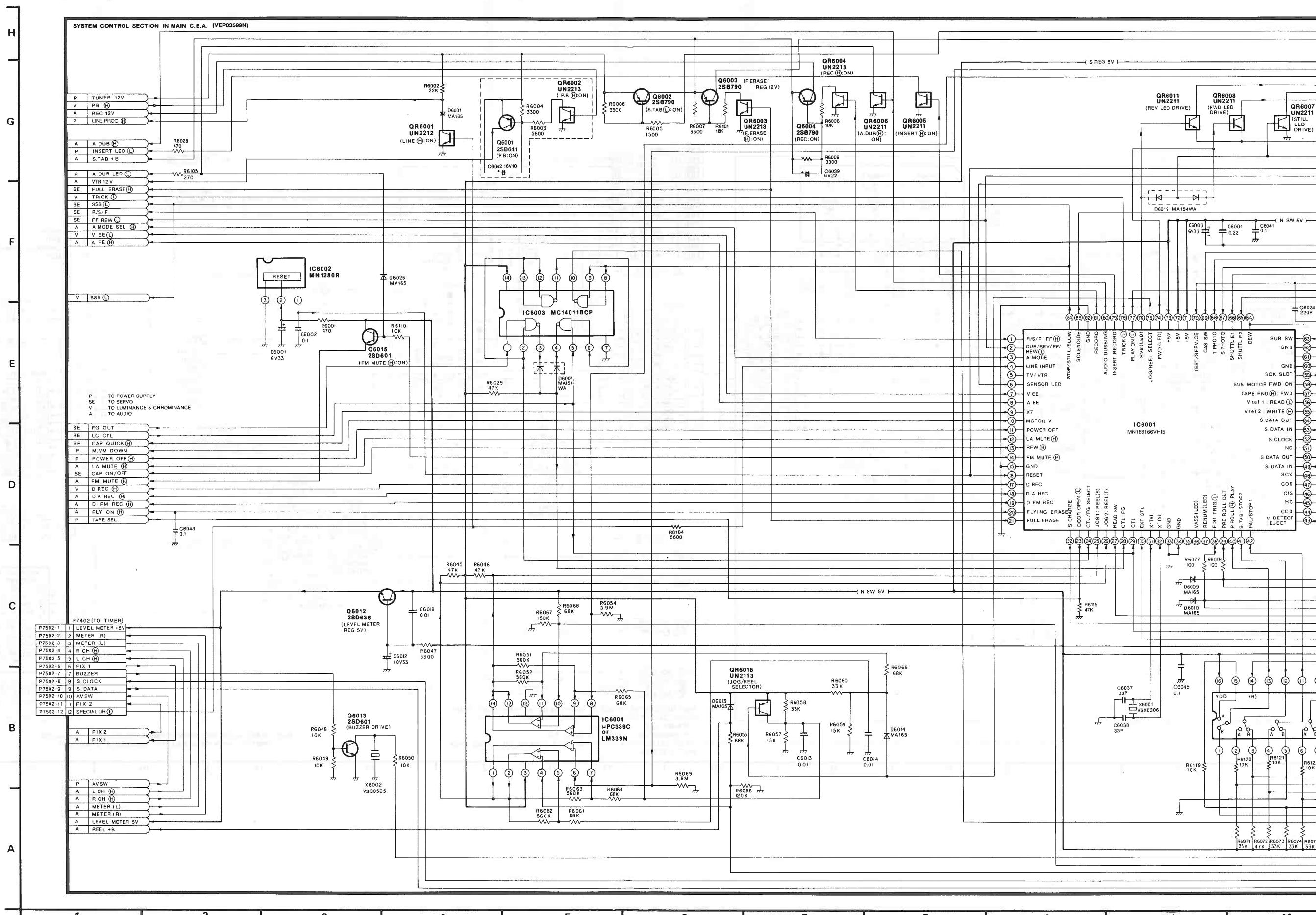
3-7. SYSTEM CONTROL SCHEMATIC DIAGRAM

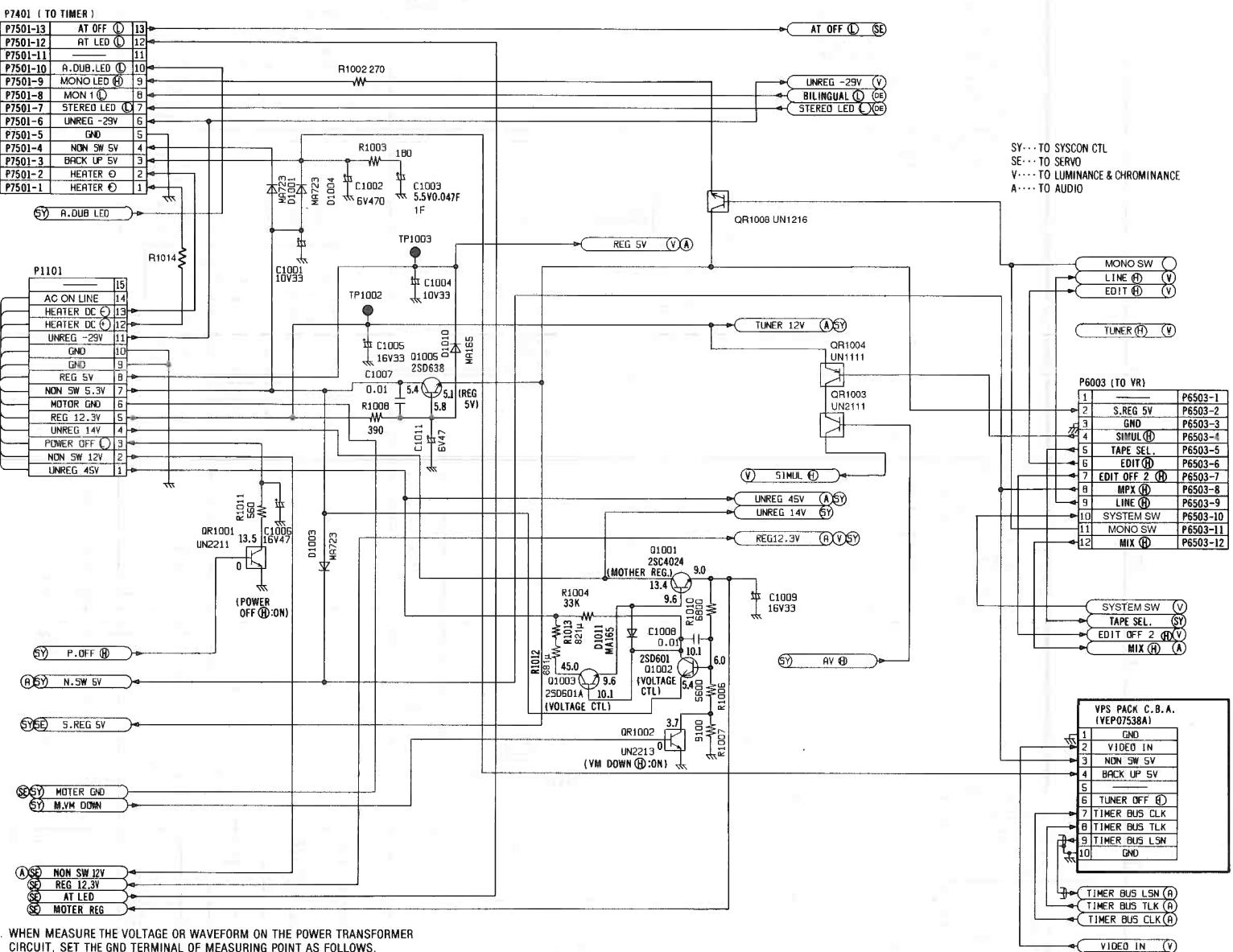
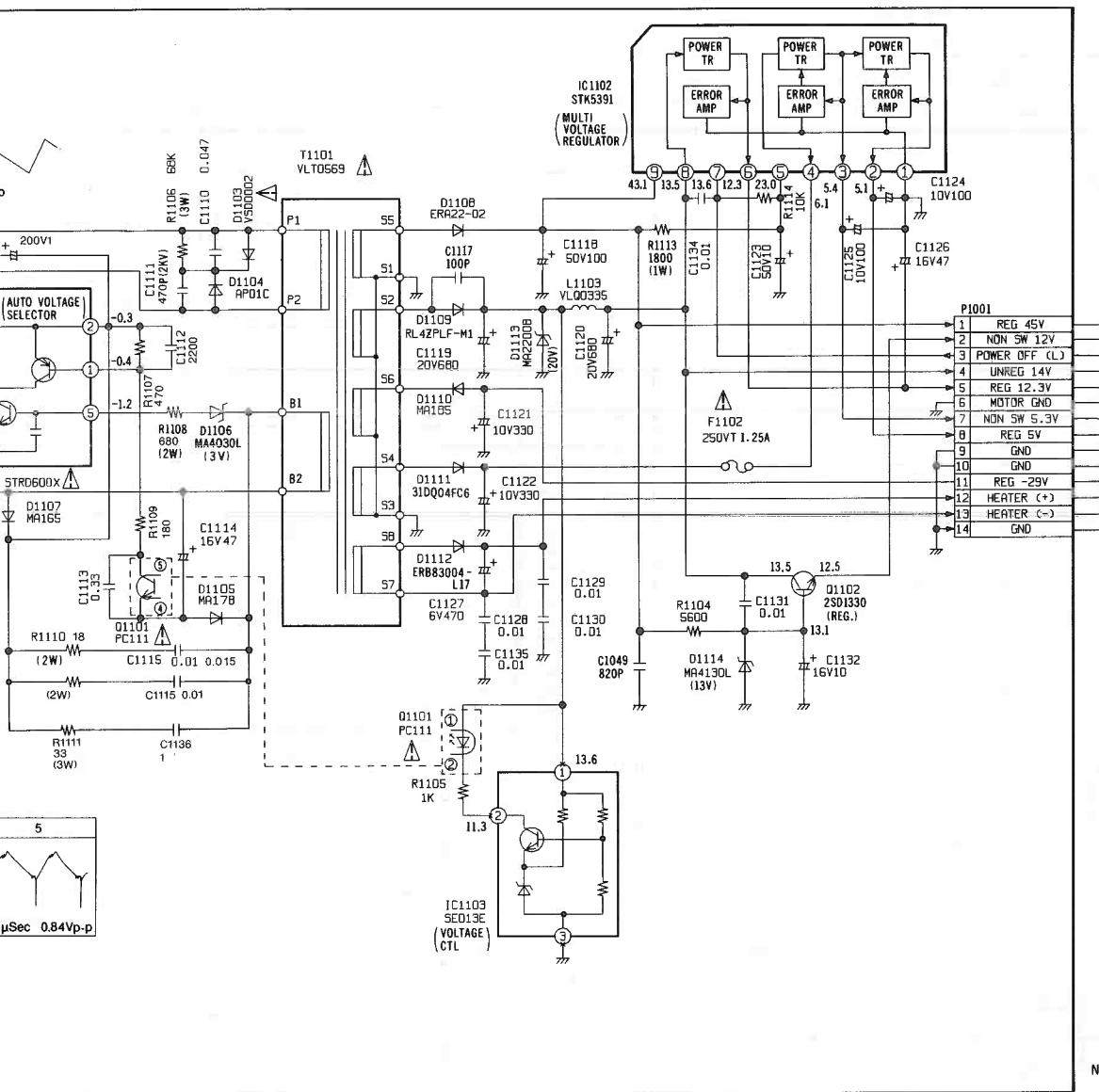
SYSTEM CONTROL

SYSTEM CONTROL

POWER C.B.A.

POWER C.B.A.





NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.

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

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 220V.

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

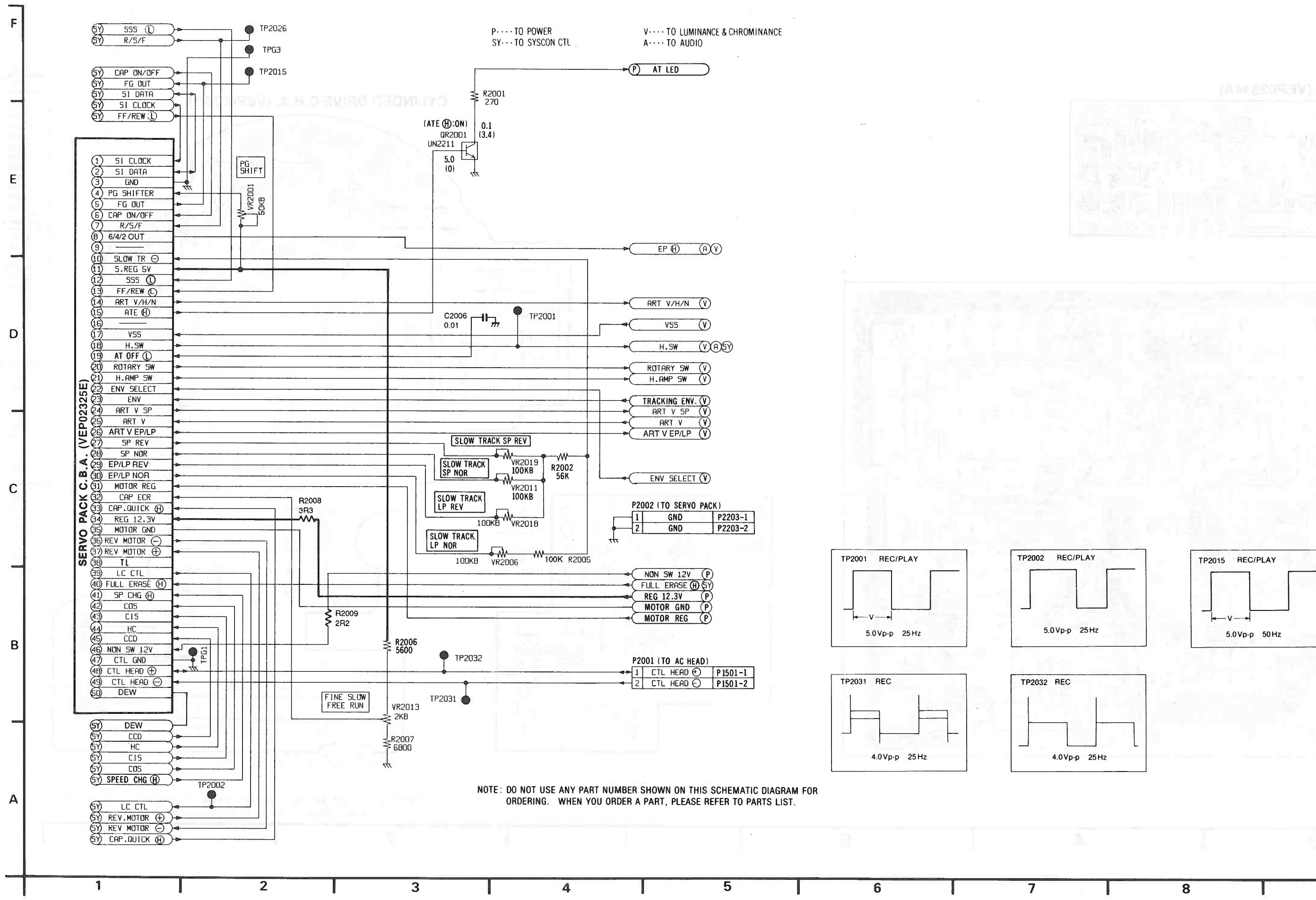
SYSTEM CONTROL ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	MODE	IC6001																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	STOP	2.1	4.9	0	4.9	0	4.4	0.4	4.9	0	4.9	0	0	0	0	0	4.6	0	0	0	0
	PLAY	0	4.9	0	4.9	0	4.4	4.9	0	0	0	0	0	4.9	0	0	4.5	0	0	0	0
	FF	0	0	0	4.9	0	4.4	0.3	4.9	0	4.9	0	0	4.9	0	0	4.9	0	0	0	0
REF. NO.	MODE	IC6001																			
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	STOP	0	0	0	0	0	4.8	0	5.1	0.1	5.1	2.6	—	0	0	4.9	0	0	4.9	0	1.3
	PLAY	0	0	0	0	4.9	4.9	2.5	2.2	2.7	3.1	2.7	—	0	0	4.9	0	0	4.9	1.1	0
	FF	0	0	0	0	2.9	2.8	0	2.1	2.5	5.1	2.6	—	0	0	4.9	0	0	4.9	0	1.3
REF. NO.	MODE	IC6001																			
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	STOP	1.3	4.0	4.9	4.9	4.9	4.9	4.9	5.0	0.4	0.2	0	4.6	4.3	0.5	4.9	4.9	4.9	0	3.9	0
	PLAY	1.1	4.9	4.9	4.9	4.9	4.9	4.9	5.0	0.4	0.4	0	4.6	4.2	0.6	4.9	4.9	4.9	0	3.8	0
	FF	1.3	4.0	4.9	4.9	4.9	4.9	4.9	5.0	0.4	0.3	0	4.6	4.3	0.5	4.9	4.9	4.9	0	3.9	0
REF. NO.	MODE	IC6001																			
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
	STOP	3.4	0	0	0	0.1	0.1	4.4	4.4	2.0	3.6	4.9	4.9	4.9	0	0	0	4.9	4.9	0	0
	PLAY	3.2	0	0	0	0	0.1	4.4	4.4	2.0	3.3	4.9	4.9	4.9	0	0	0	0	4.9	0	0
	FF	3.2	0	0	0	0.1	0.1	4.4	4.4	2.0	3.6	4.9	4.9	4.9	0	0	0	4.9	4.9	0	0
REF. NO.	MODE	IC6001										IC6002									
		81	82	83	84							1	2	3							
	STOP	0	0	4.9	4.9							4.5	4.8	0							
	PLAY	0	0	4.9	4.9							4.5	4.8	0							
	FF	0	0	4.9	4.9							4.9	4.9	0							
REF. NO.	MODE	IC6003																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14						
	STOP	5.1	0	5.1	5.1	0.1	5.1	0	4.9	4.9	0	5.1	0	0	5.1						
	PLAY	2.7	0	5.1	2.0	2.6	5.1	0	4.9	4.9	0	5.1	0	0	5.1						
	FF	2.5	0	5.1	2.1	2.6	5.1	0	4.9	4.9	0	5.1	0	0	5.1						
REF. NO.	MODE	IC6004										IC6005									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14						
	STOP	4.9	4.9	5.1	0.1	2.0	0.1	5.0	0.1	5.0	0.1	2.0	0	4.8	4.8						
	PLAY	4.9	4.9	5.1	3.3	1.7	0.1	4.6	0.1	4.7	3.0	1.8	0	4.9	4.8						
	FF	2.9	2.9	5.1	1.2	1.8	0.1	4.8	0.1	4.8	0.4	1.8	0	2.7	2.7						
REF. NO.	MODE	IC6006										IC6007									
		1	2	3	4	5	6	7	8												
	STOP	5.1	0.1	0.7	0	0	0	0.1	5.1												
	PLAY	2.9	1.0	0.7	0	1.0	2.9	0.1	5.1												
	FF	5.1	0	0.7	0	0	2.9	0.1	5.1												
REF. NO.	MODE	IC6007										IC6008									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
	STOP	0.2	4.9	0.5	0	4.9	4.9	4.9	0	1.3	4.3	4.0	1.3	1.0	4.0	4.9	4.9				
	PLAY	0.2	4.9	0.5	4.9	4.9	4.9	4.9	0	1.0	4.9	4.9	1.1	0	3.8	0	4.9				
	FF	0.2	4.9	0.5	0	4.9	4.9	4.9	0	1.0	4.9	3.9	1.0	1.0	4.0	4.9	4.9				

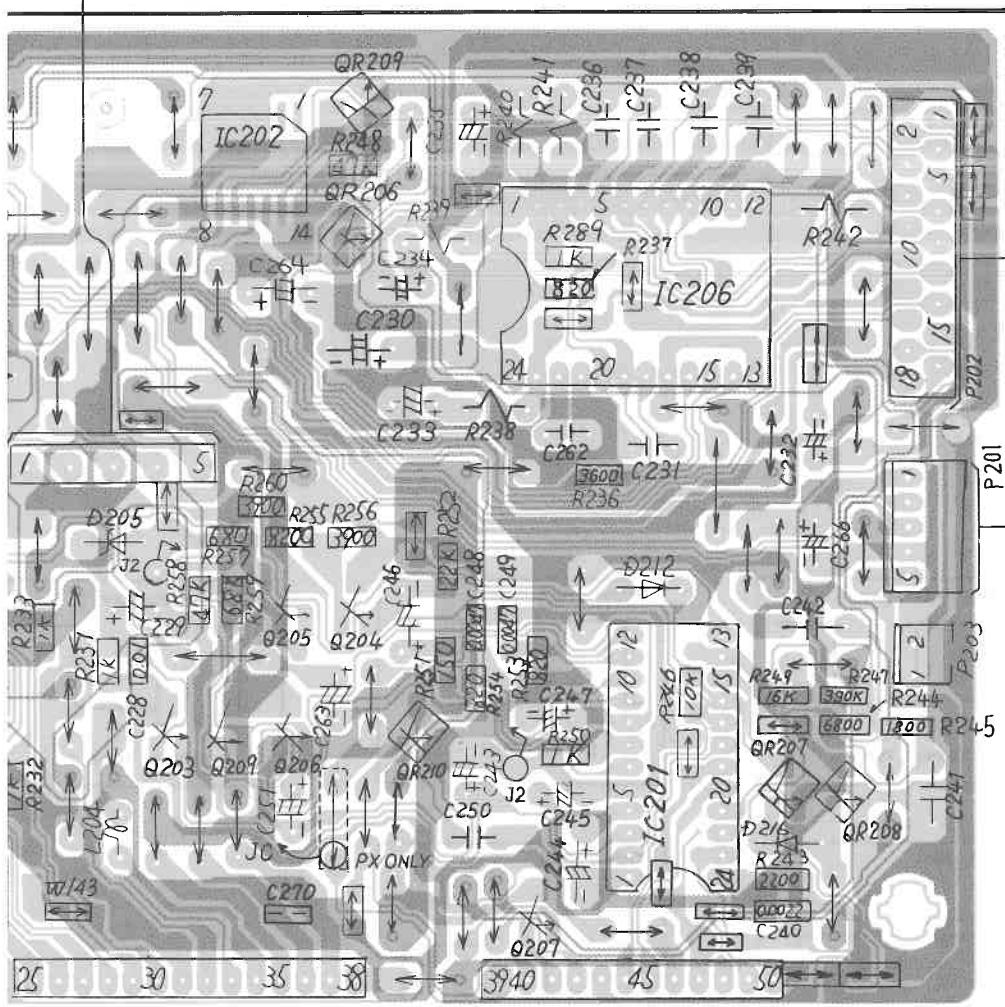
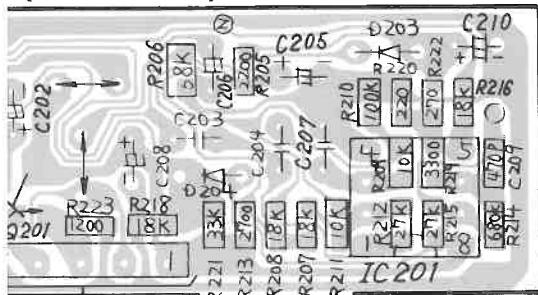
SYSTEM CONTROL TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.		Q601																	
MODE		E	C	B															
STOP	0	0.4	0																
PLAY	0	0.5	0																
FF	0	0.5	0.1																
REF. NO.		Q6001			Q6002			Q6003			Q6004			Q6006			Q6007		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	12.2	0	12.2	12.3	12.3	11.5	12.3	0.3	12.3	12.3	0	12.3	13.5	13.5	4.9	0	13.5	0	
PLAY	12.2	0	12.2	12.3	12.3	11.5	12.3	0.3	12.3	12.3	0.1	12.3	13.4	13.4	4.9	0	13.4	0	
FF	12.2	0	12.2	12.3	12.3	11.6	12.3	0.5	12.3	12.3	0.1	12.3	13.5	13.5	4.8	0	13.4	0	
REF. NO.		Q6008			Q6011			Q6012			Q6013			Q6014			Q6015		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0.7	13.5	0.6	10.3	13.5	11.6	4.9	4.9	5.6	0	0	0.7	0	0	0.1	0	4.9	0	
PLAY	0.6	13.4	0.5	10.3	13.4	11.6	4.9	4.9	5.6	0	0	0.7	0	0.9	0.4	0	4.9	0	
FF	0.8	13.5	0.5	10.3	13.5	11.6	4.9	4.9	5.6	0	0	0.7	0	0	0.5	0	4.9	0	
REF. NO.		QR6001			QR6002			QR6003			QR6004			QR6005			QR6006		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	4.1	0	12.2	0	0	12.3	0	0	12.3	0	0	3.3	0	0	3.4	0	
PLAY	0	0	4.1	0	12.2	0	0	12.3	0	0	12.3	0	0	3.5	0	0	3.4	0	
FF	0	0	4.1	0	12.2	0	0	12.3	0	0	12.2	0	0	3.3	0	0	3.4	0	
REF. NO.		QR6007			QR6008			QR6009			QR6010			QR6011			QR6013		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0.6	0.6	0	0.3	0	0	0	3.4	0	3.4	0.6	0	0.9	0	5.1	0	4.9	
PLAY	0	0.2	0.6	0	0.1	0	0	0	3.4	0	3.4	0.6	0	0.1	0	5.1	0	4.9	
FF	0	0.2	0.6	0	0	0	0	0	3.4	0	3.4	0.6	0	0.1	0	5.1	0	4.9	
REF. NO.		QR6014			QR6015			QR6016			QR6017			QR6018			QR6019		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	1.0	4.4	0	0.1	4.1	0	0.4	0.2	0	4.3	0.4	-5.1	5.1	0	0	0.9	4.0	
PLAY	5.1	0.5	4.4	0	0.1	4.1	0	0.4	0.2	0	4.2	0.5	5.1	5.1	0	0	1.0	3.8	
FF	5.1	0.6	4.4	0	0.1	4.1	0	0.4	0.2	0	4.3	0.4	5.1	5.1	0	0	1.2	1.2	
REF. NO.		QR6020			QR6021			QR6022			QR6024			QR6025			QR6026		
MODE		E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	4.9	5.1	1.0	4.9	1.0	0	4.5	4.9	0	4.9	0	4.9	0.1	0	4.4	0	
PLAY	0	1.3	0	5.1	1.0	4.9	1.0	0	4.5	4.9	0	4.9	0	4.9	0.1	0	4.4	0	
FF	0	0	4.9	5.1	5.1	0	5.1	0	4.9	4.9	0	4.9	0	4.9	0.1	0	4.4	0	

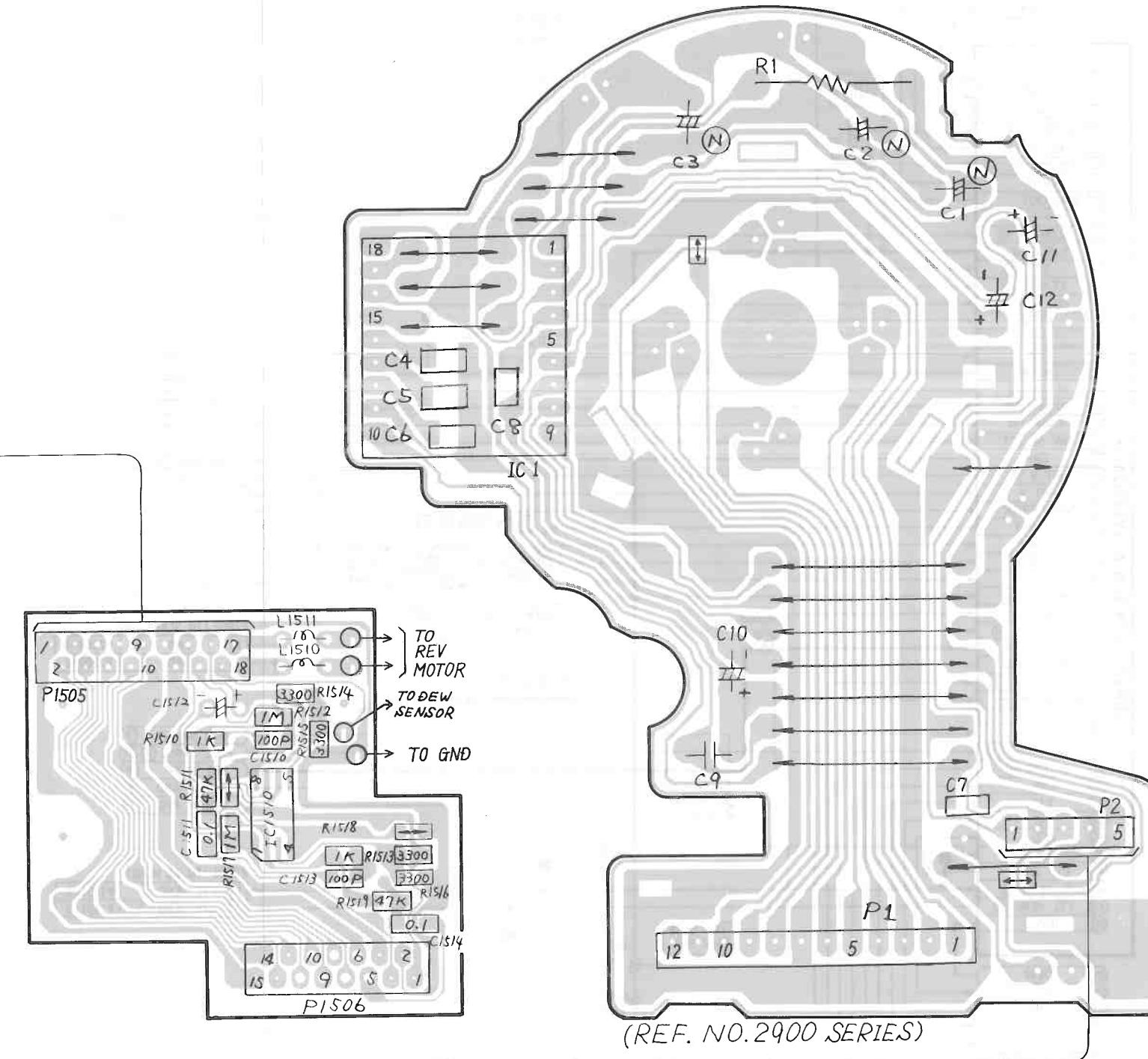
3-8. SERVO SCHEMATIC DIAGRAM



. (VEP02334A)



CYLINDER DRIVE C.B.A. (VEP00N21)



SERVO PACK C.B.A.	
Transistor	
Q201	C-3
Q2201	A-2
Q2202	C-3
Q2203	A-3
Q2204	B-4
Q2205	B-4
Q2206	A-4
Q2207	A-4
Q2208	A-2
Q2209	A-3
Q2214	B-1
Transistor & Resistor	
QR201	C-3
QR2201	A-2
QR2202	A-1
QR2204	A-3
QR2206	B-4
QR2207	A-5
QR2208	A-5
QR2209	C-4
QR2210	A-4
QR2212	A-3
QR2213	B-3
QR2215	C-2
Integrated Circuit	
IC201	C-4
IC202	C-3
IC1510	A-6
IC2201	A-4
IC2202	C-3
IC2203	B-2
IC2204	A-3
IC2205	B-2
IC2206	B-4
IC2901	B-7
Connector	
P1505	B-5
P1506	A-6
P2201	B-5
P2202	B-5
P2203	B-5
P2901	A-8
P2902	A-8

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

3-9. SERVO PACK C.B.A. (VEP02325E)

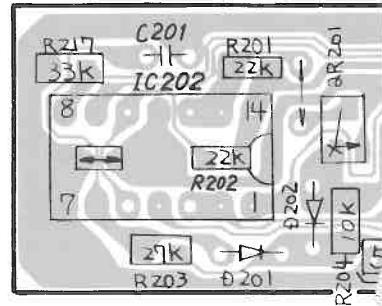
□

6

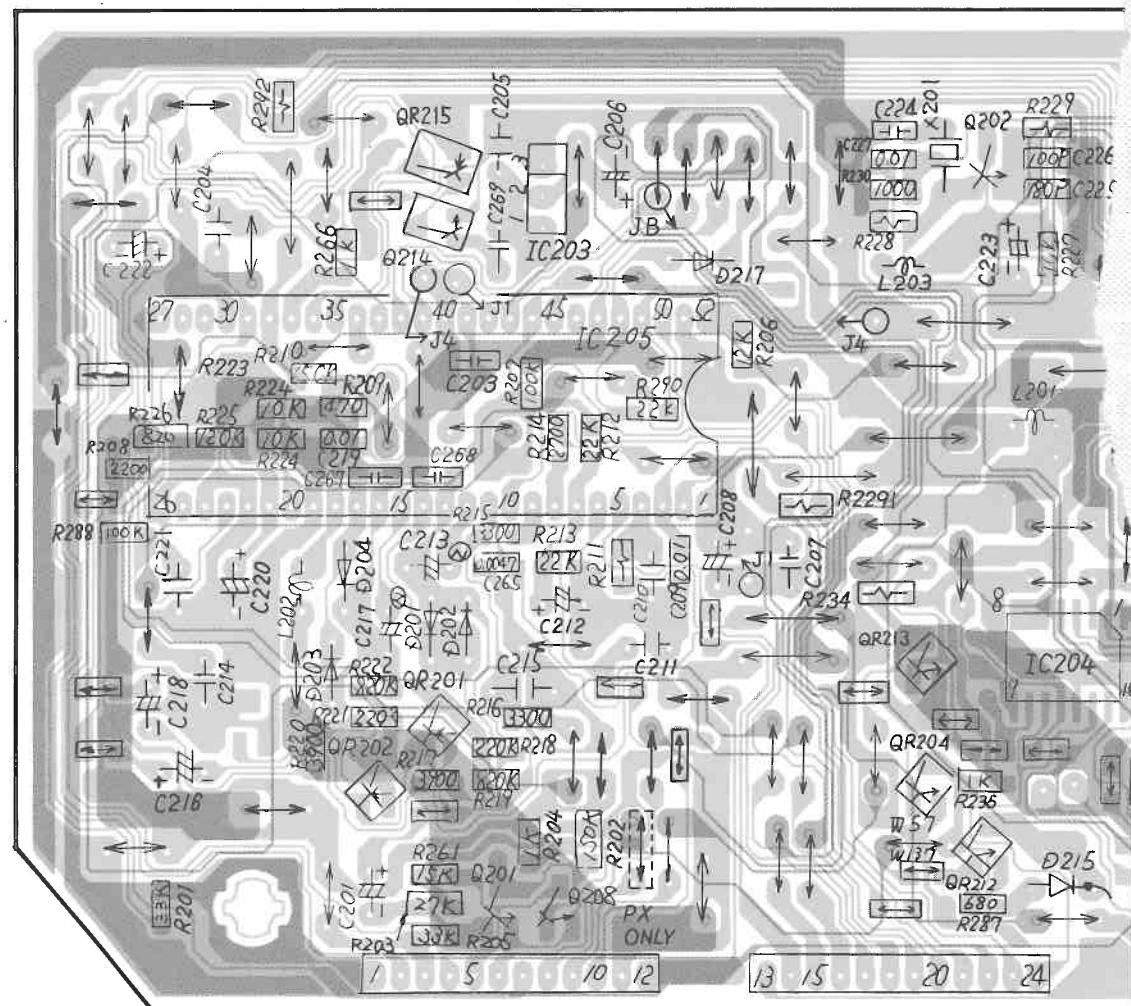
8

A

SUB SERVO PACK C.B.A.



SERVO PACK C.B.A. (VEP02325E)



(REF. NO. 2000 SERIES)

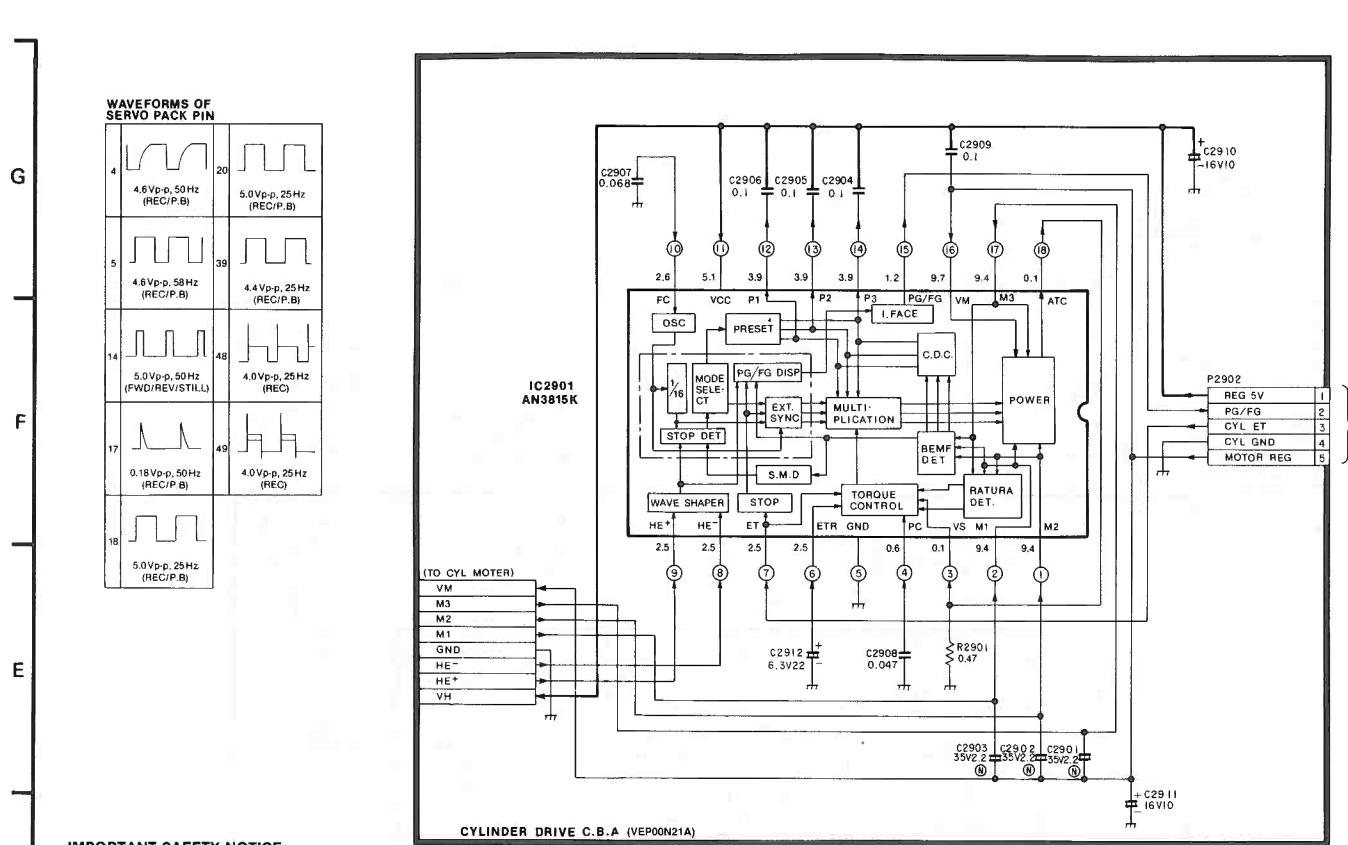
SERVO

SERVO PACK C.B.A.

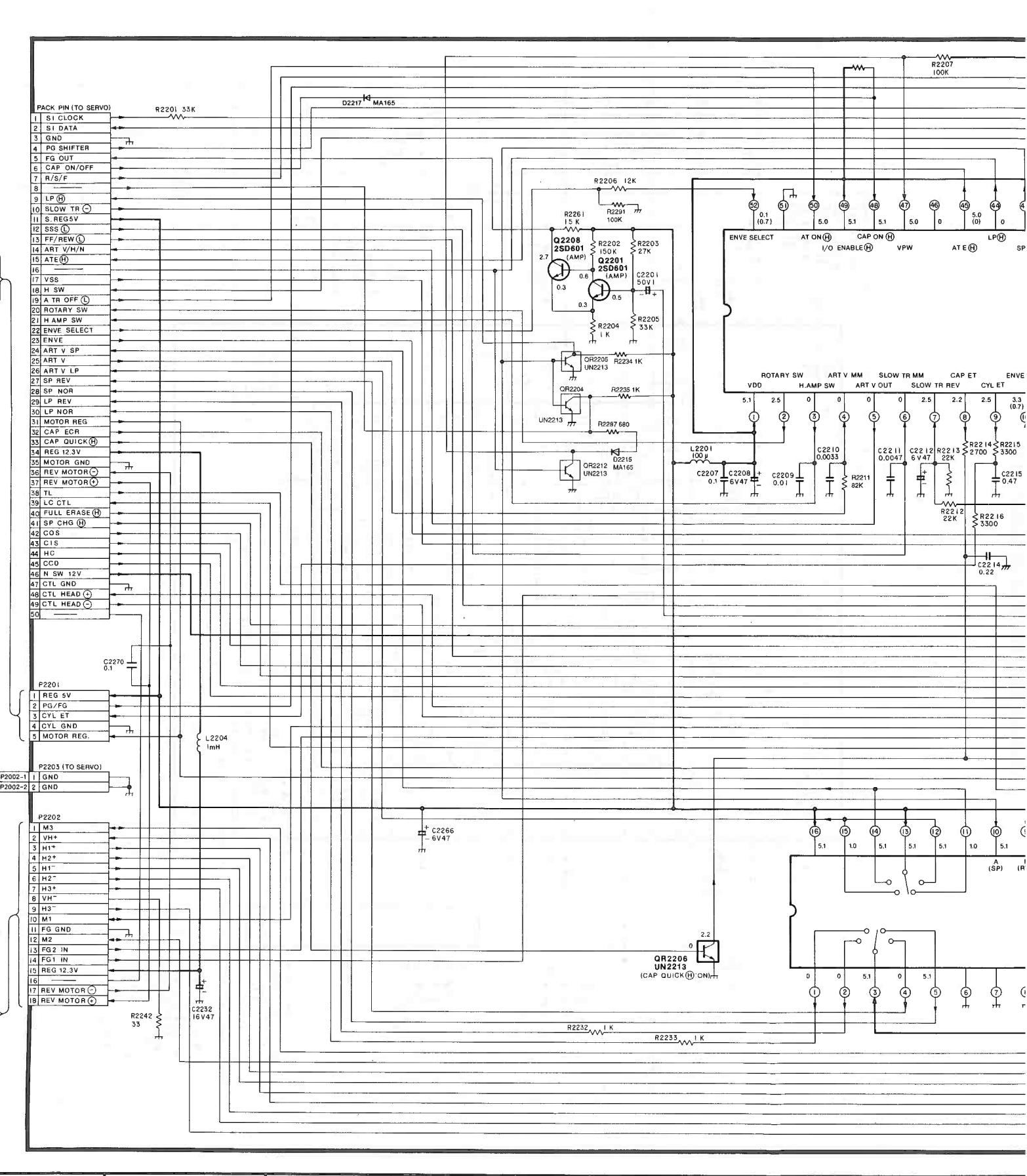
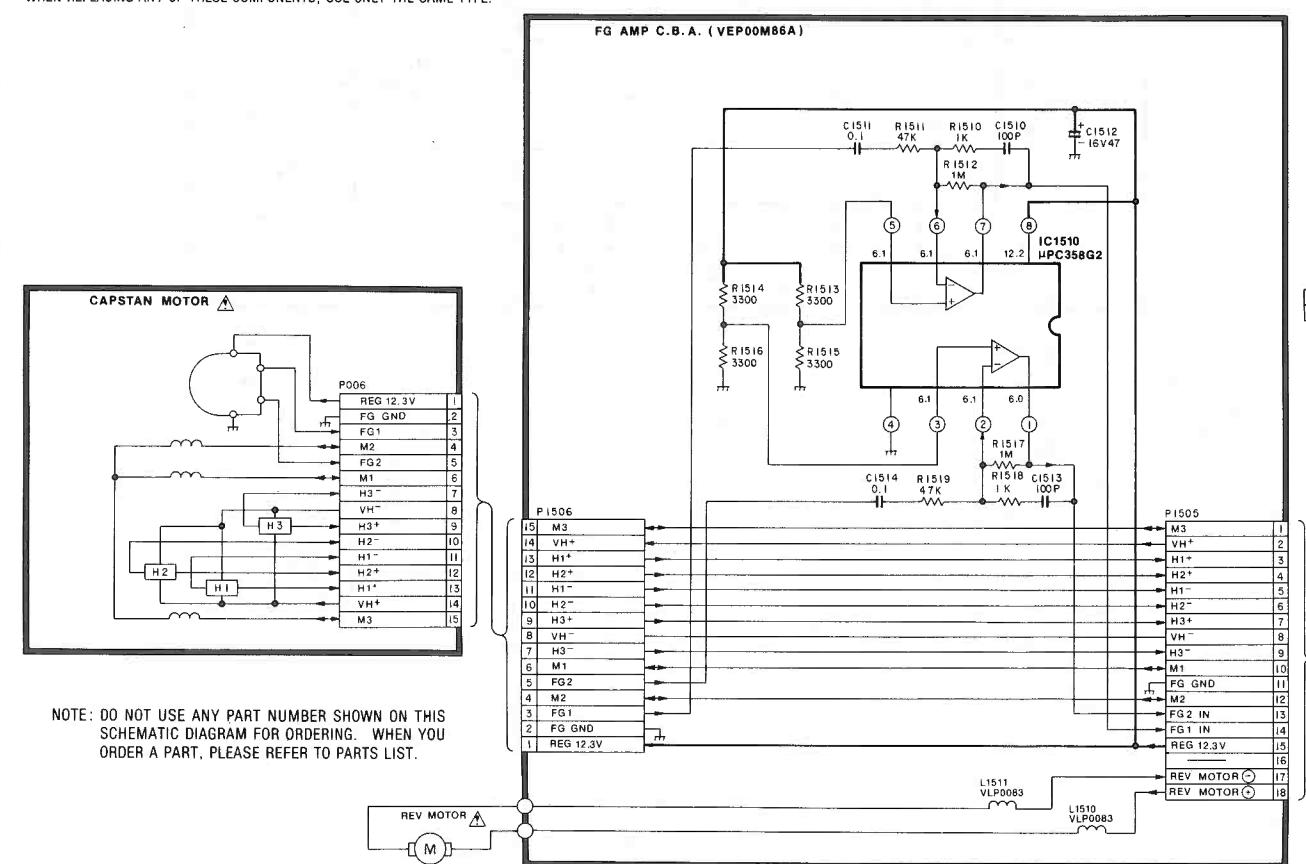
3-2 SERVO PACK C.B.A. (VTP0525P)



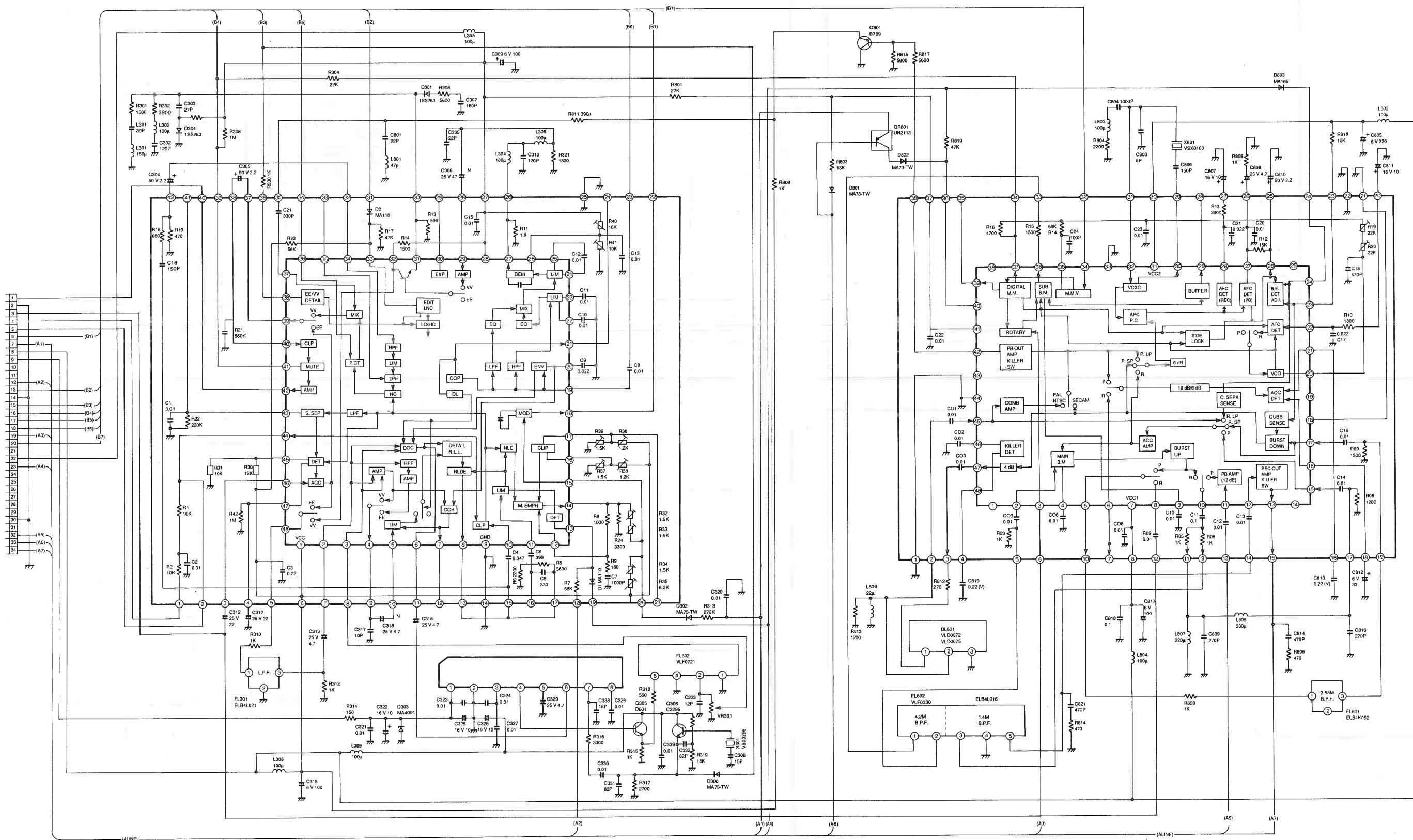
3-10. SERVO PACK SCHEMATIC DIAGRAM

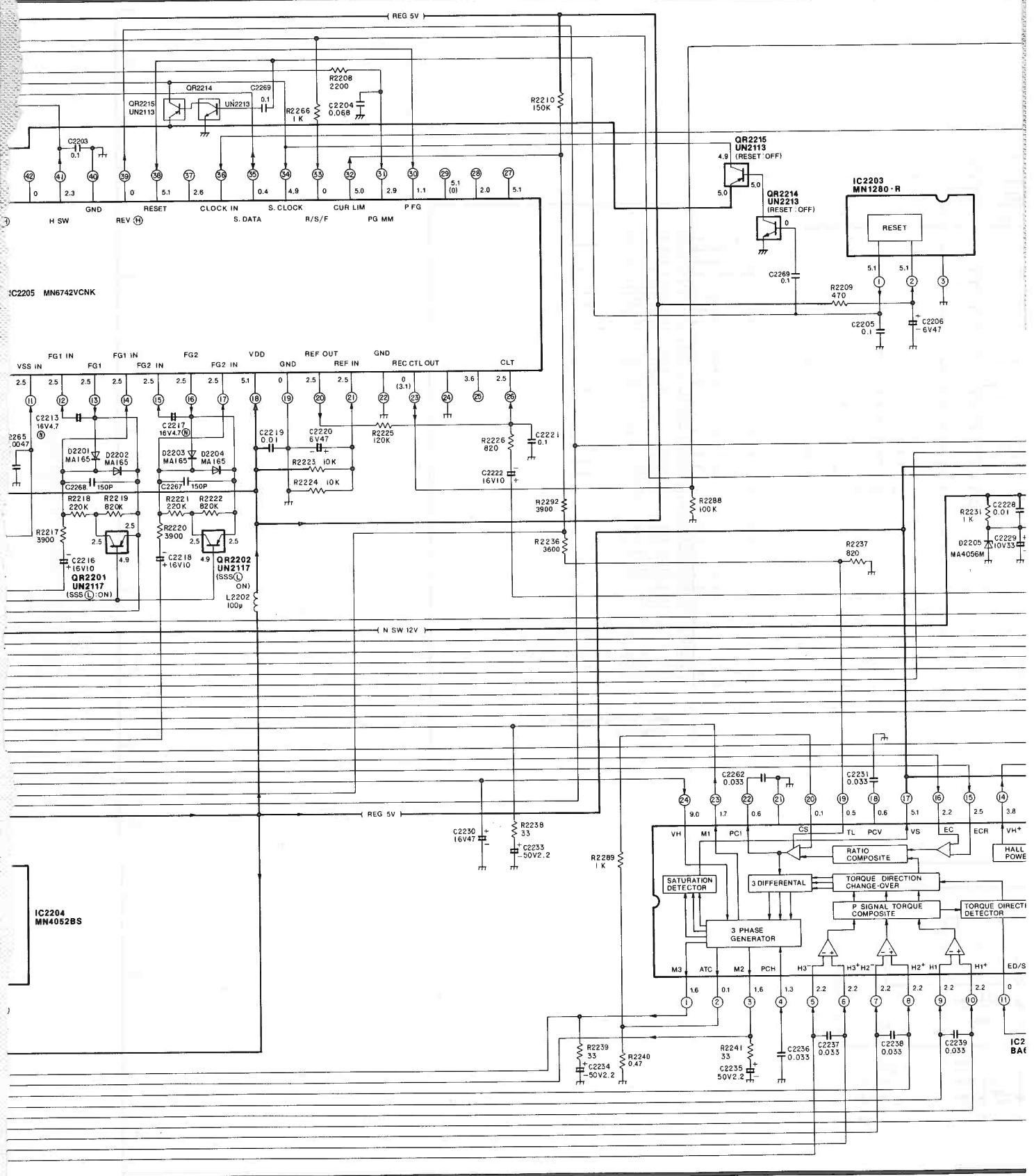


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK Δ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



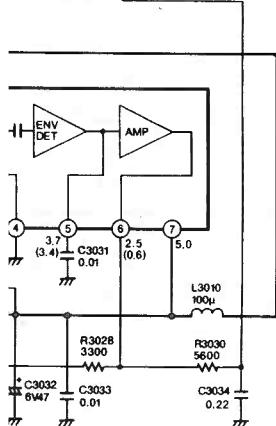
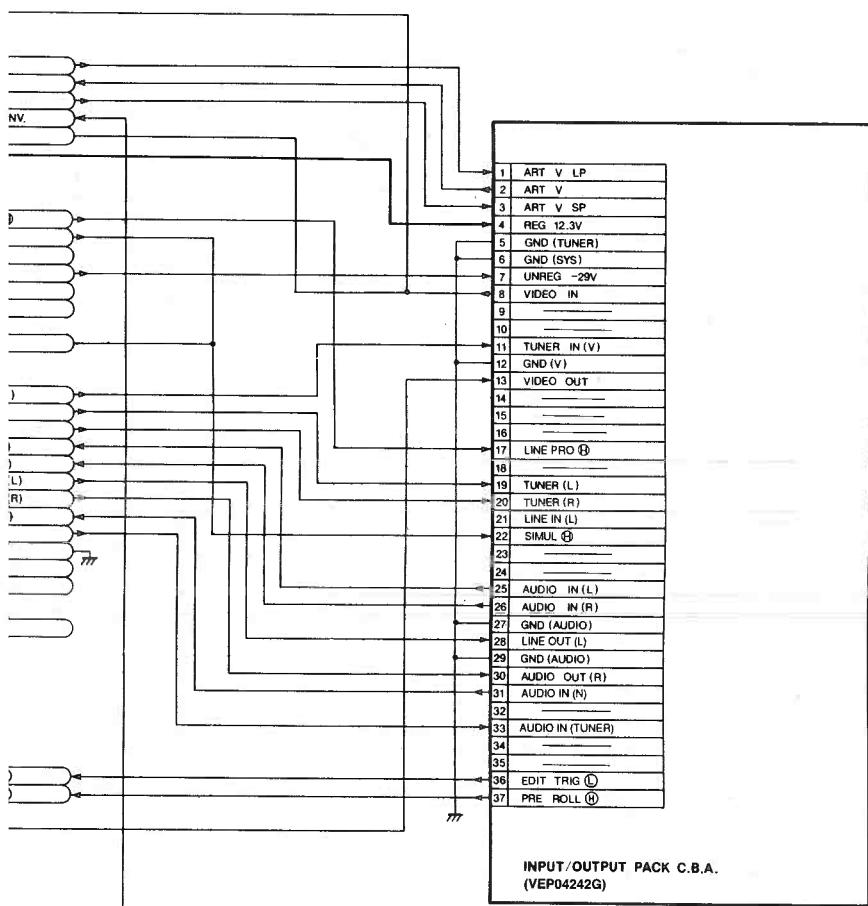
VINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM





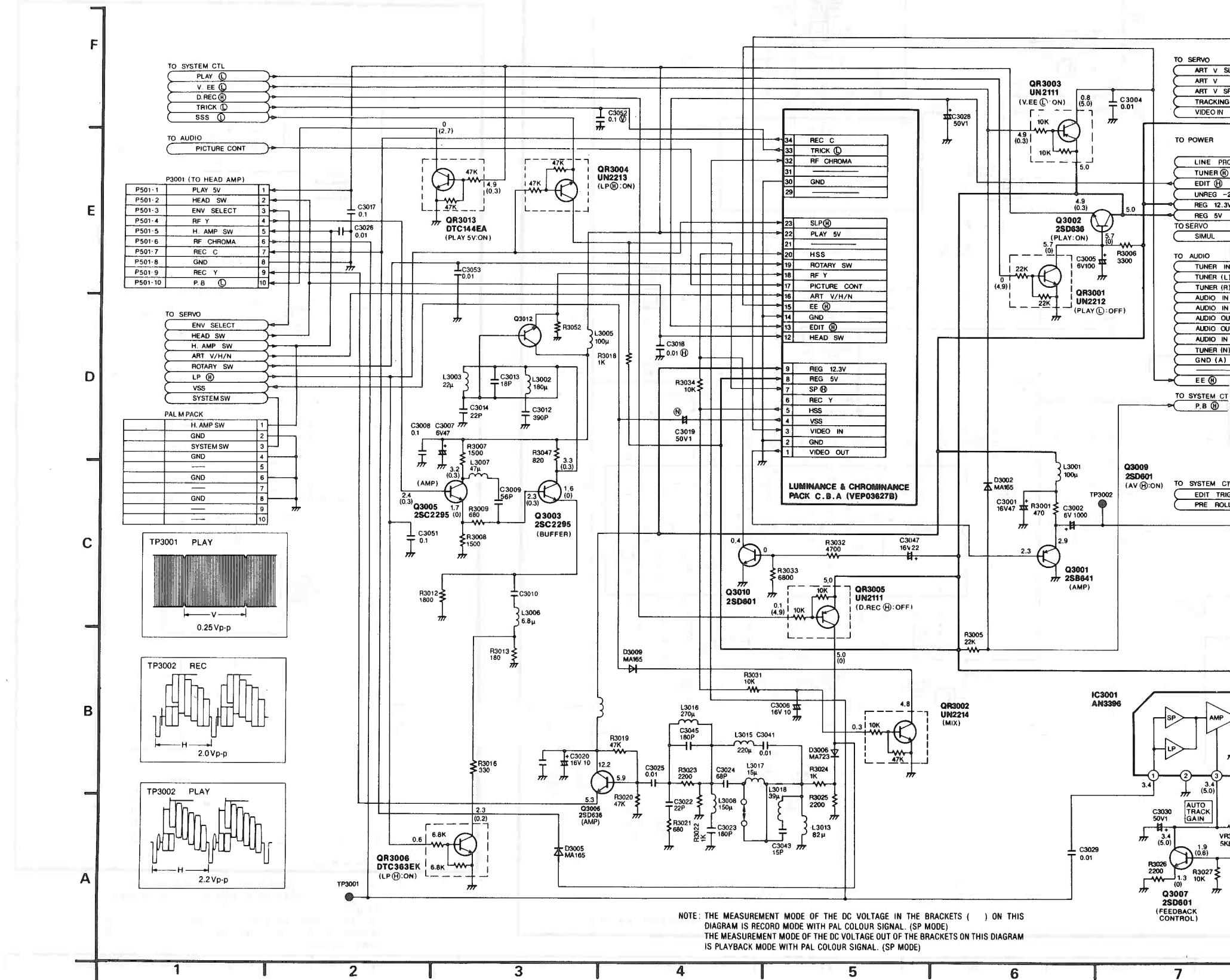
H
G
F
E
D
C
B
A

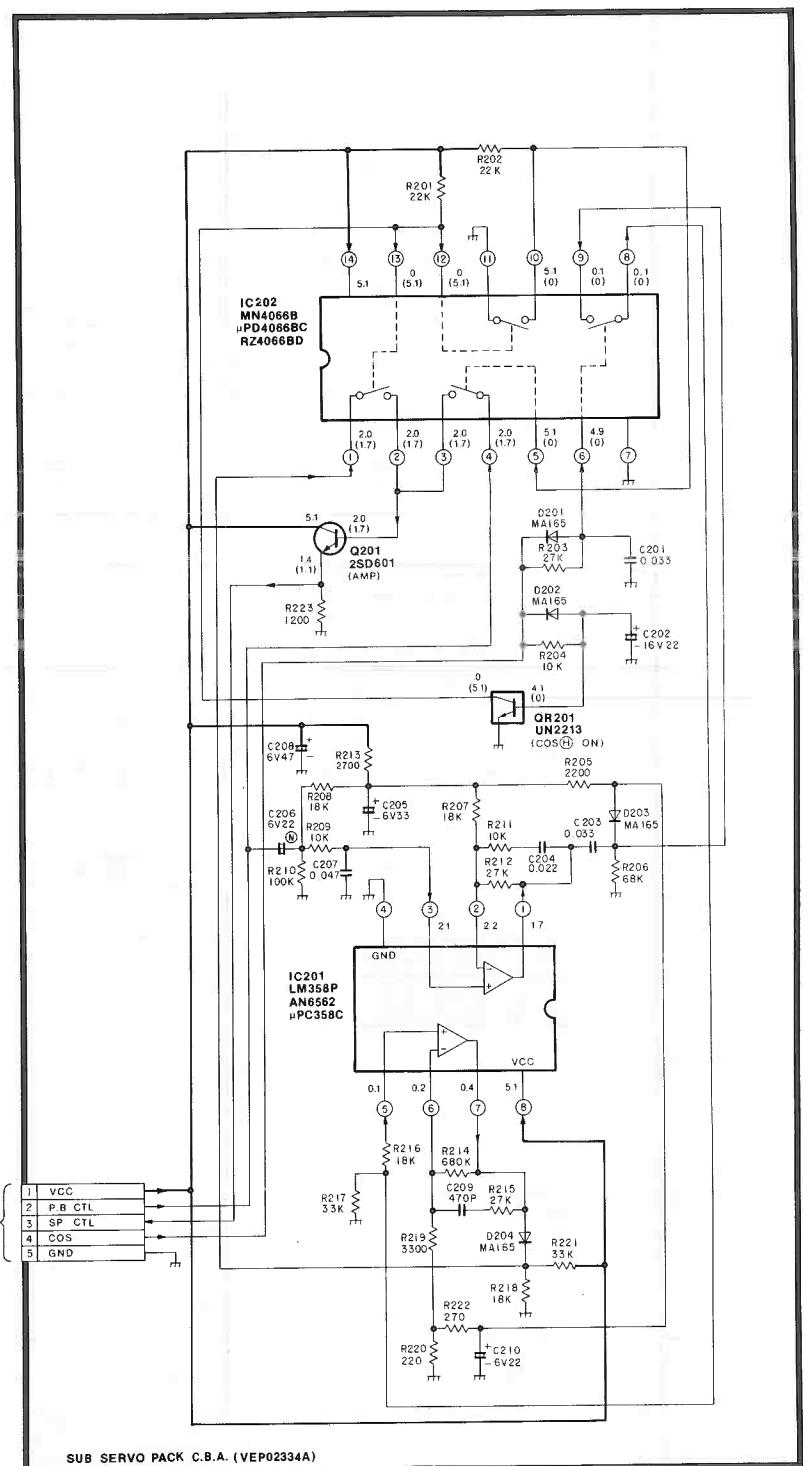
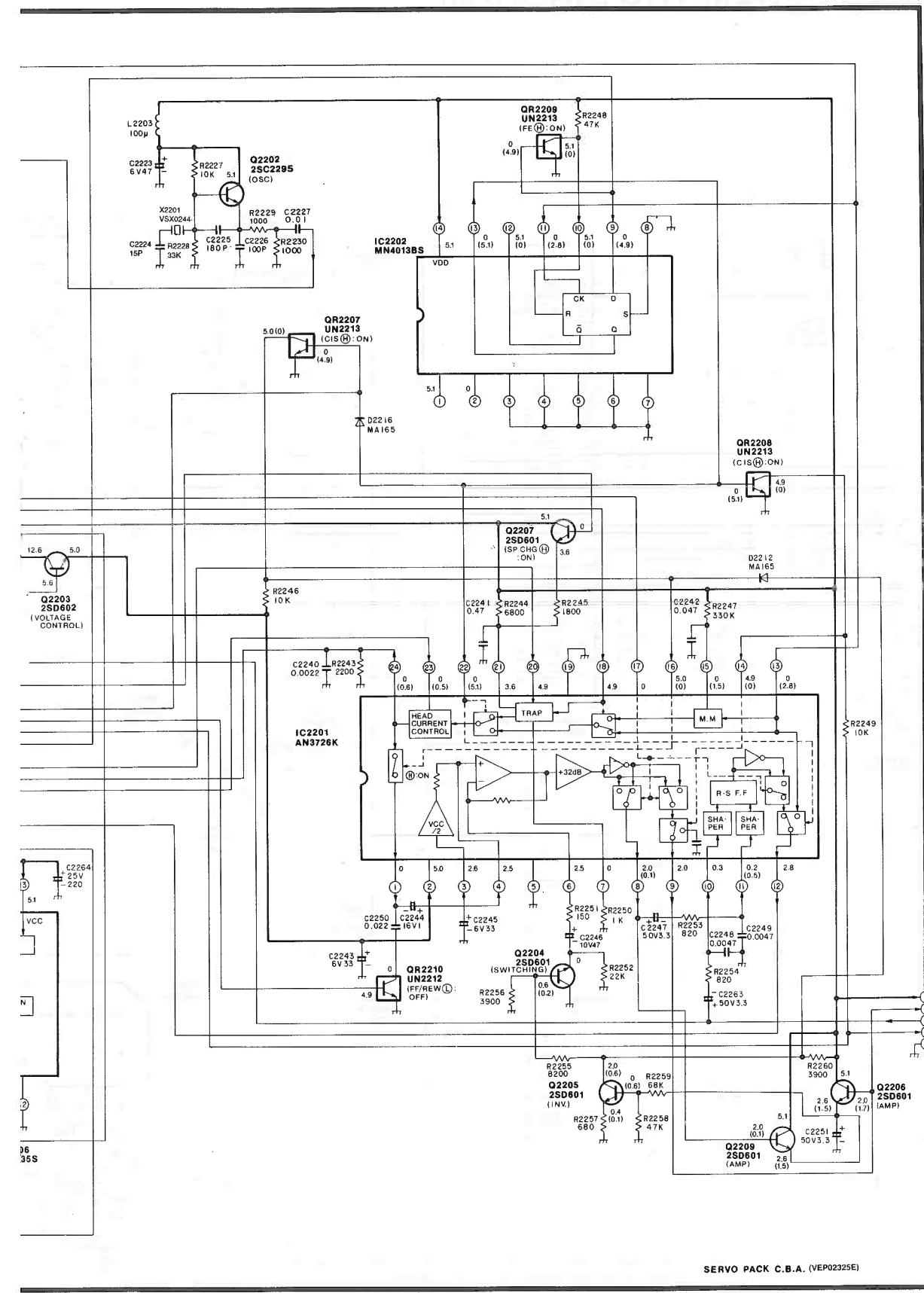
VIDEO OUT
GND
VIDEO IN
VSS
SYNC SEP
REC Y
SP (H)
REG 5 V
REG 12 V
H SW
EDIT (H)
GND
EE (H)
ART. V SYNC
PICTURE CTL
RF Y
ROTARY
SYNC SEP IN
EX REC 5 V
SP/LP/SLP
GND
RF CHROMA
S.S.(L)
REC CHROMA



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

3-11. LUMINANCE & CHROMINANCE SCHEMATIC DIAGRAM

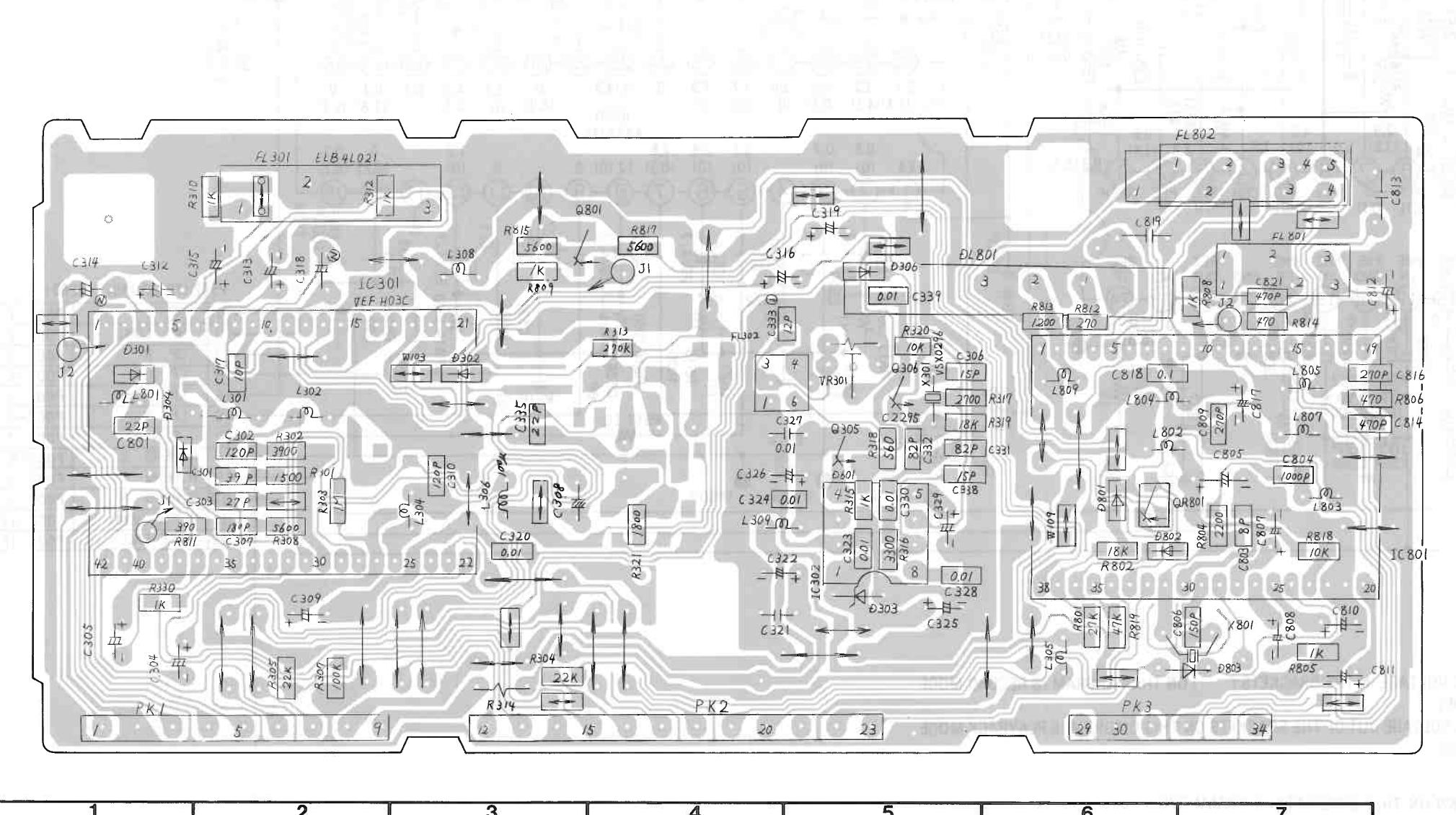




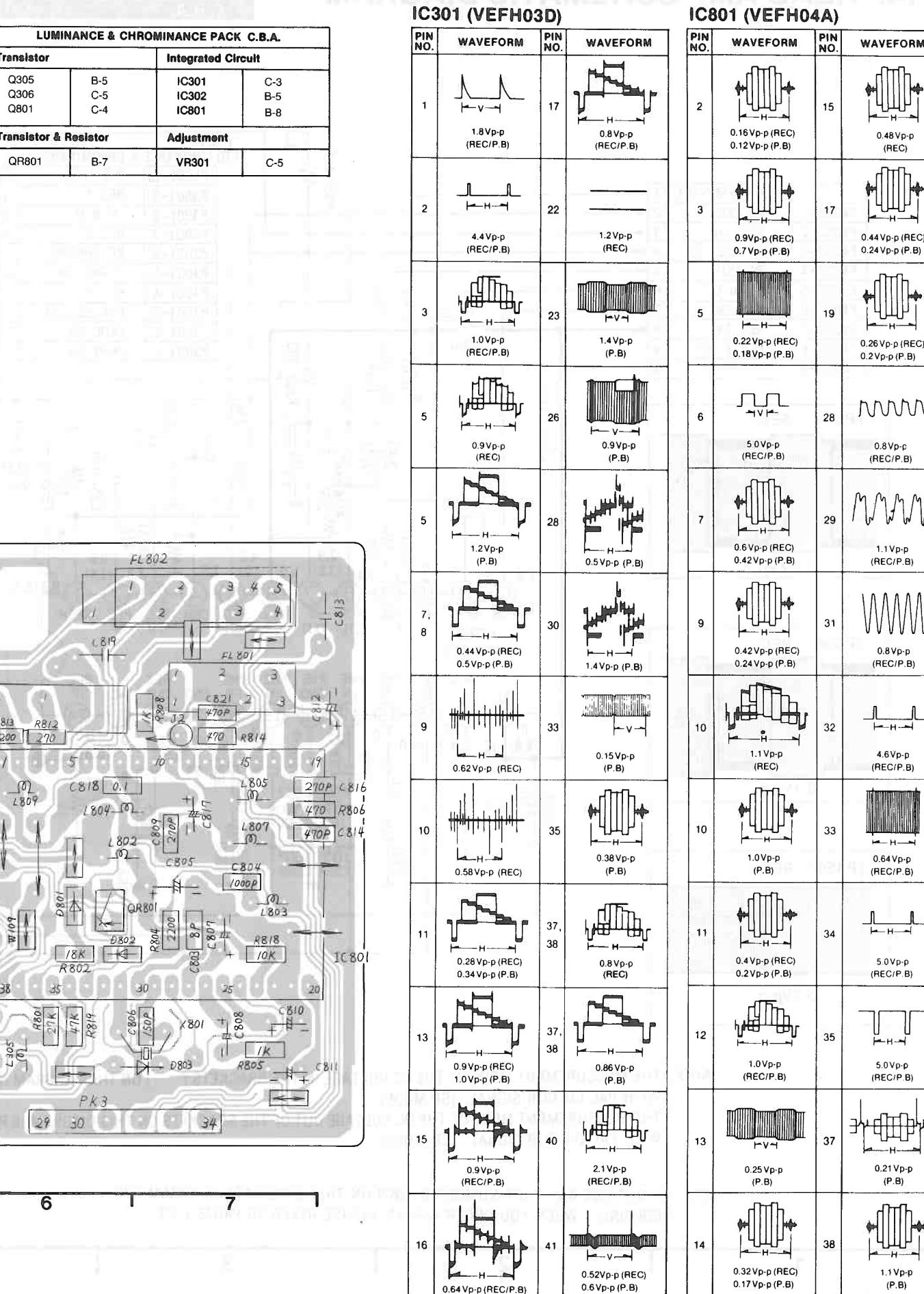
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL.
(SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE
BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR
SIGNAL. (SP MODE)

19 20 21 22 23 24 25 26

3-13. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03654A)



LUMINANCE & CHROMINANCE PACK C.B.A.			
Transistor	Integrated Circuit		
Q305	B-5	IC301	C-3
Q306	C-5	IC302	B-5
Q801	C-4	IC801	B-8
Transistor & Resistor		Adjustment	
QR801	B-7	VR301	C-5



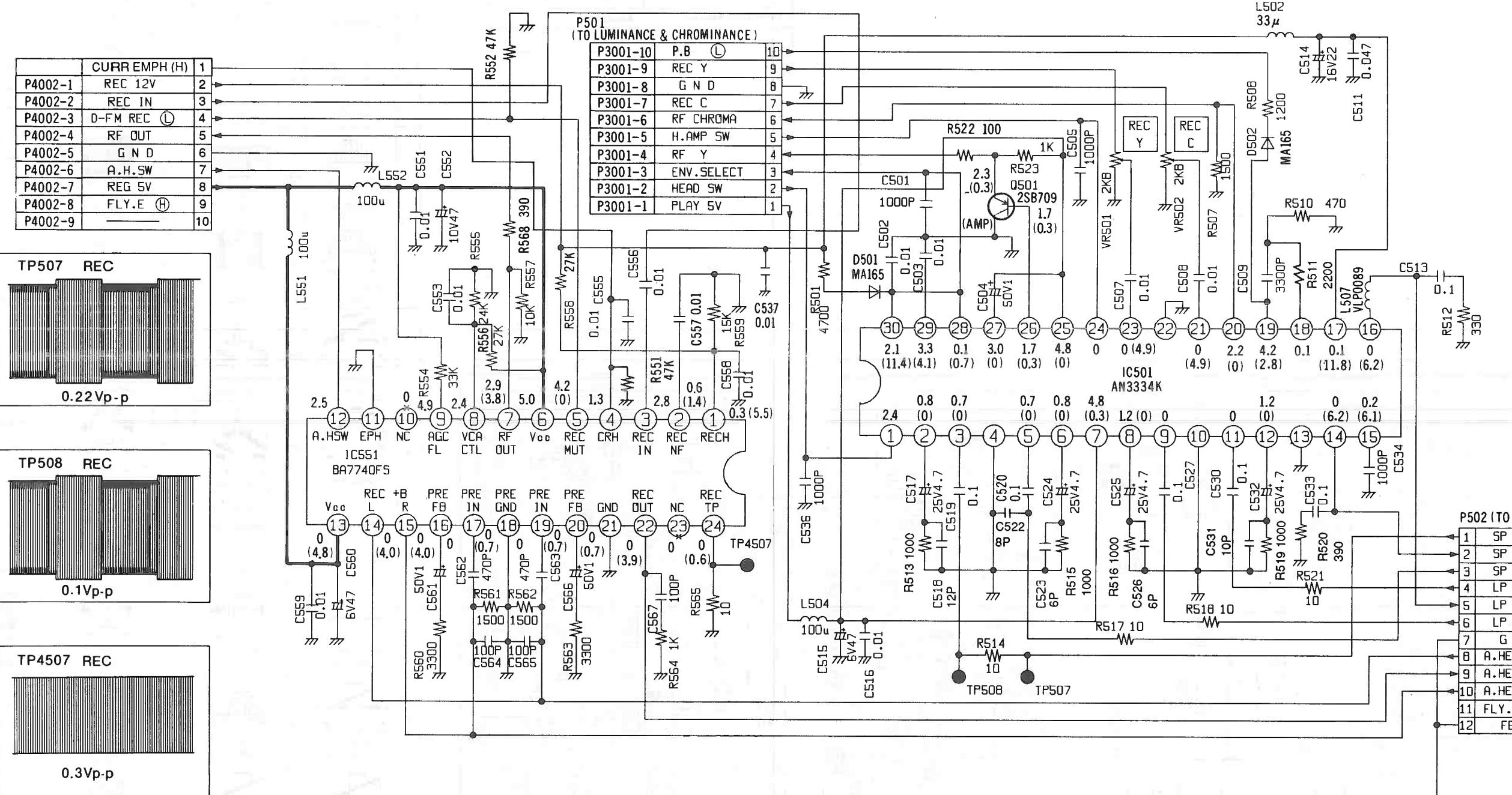
14. HEAD AMP SCHEMATIC DIAGRAM

HEAD AMP

LUMINANCE &
CHROMINANCE PACK
C.B.A.

HEAD AMP

LUMINANCE &
CHROMINANCE PACK
C.B.A.



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.

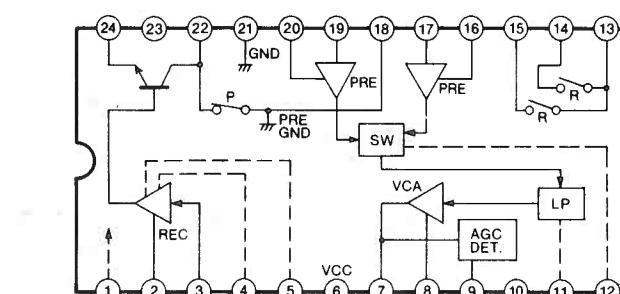
3-15. HEAD AMP C.B.A. (VEP05134E)



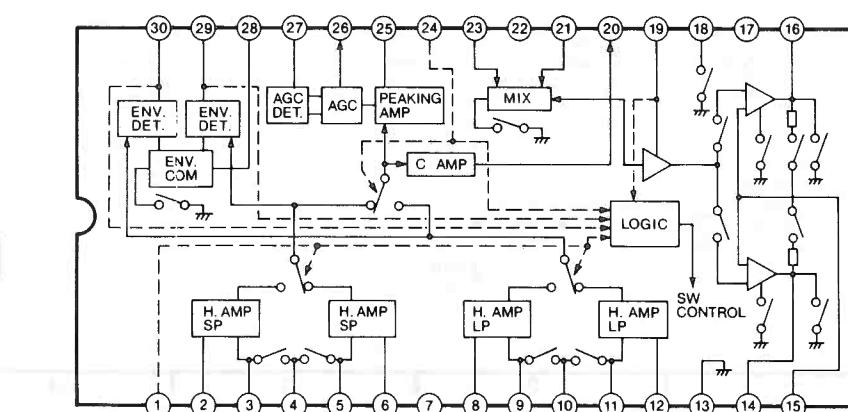
HEAD AMP C.B.A.	
Transistor	
Q501	C-2
Integrated Circuit	
IC501	B-2
IC551	B-4
Test Point	
TP507	C-4
TP508	C-3
TP4507	C-5
Adjustment	
VR501	C-3
VR502	C-2
Connector	
P501	C-1
P502	A-2
P551	B-5

IC BLOCK

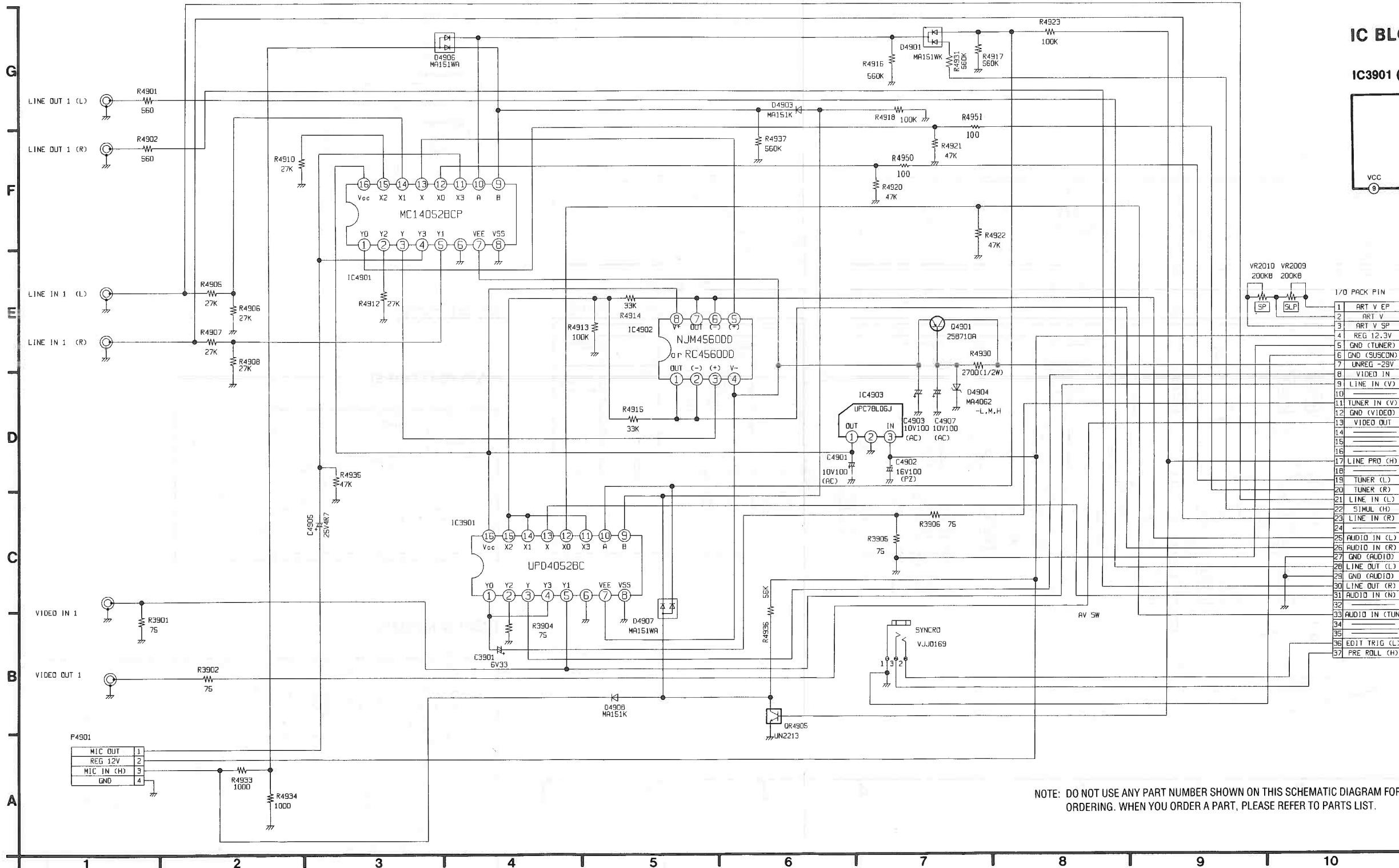
IC551 (BA7740FS)



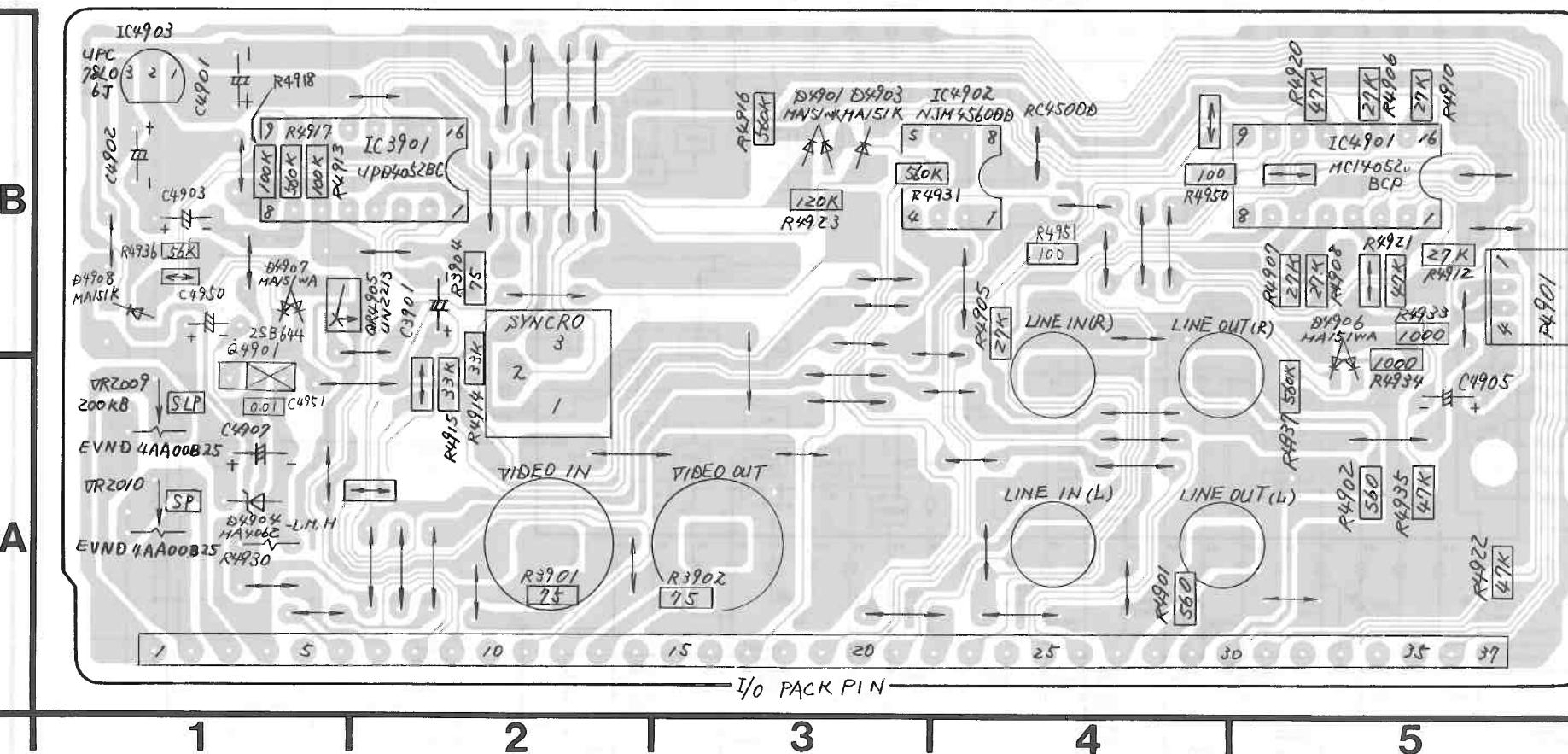
IC501 (AN3334H)



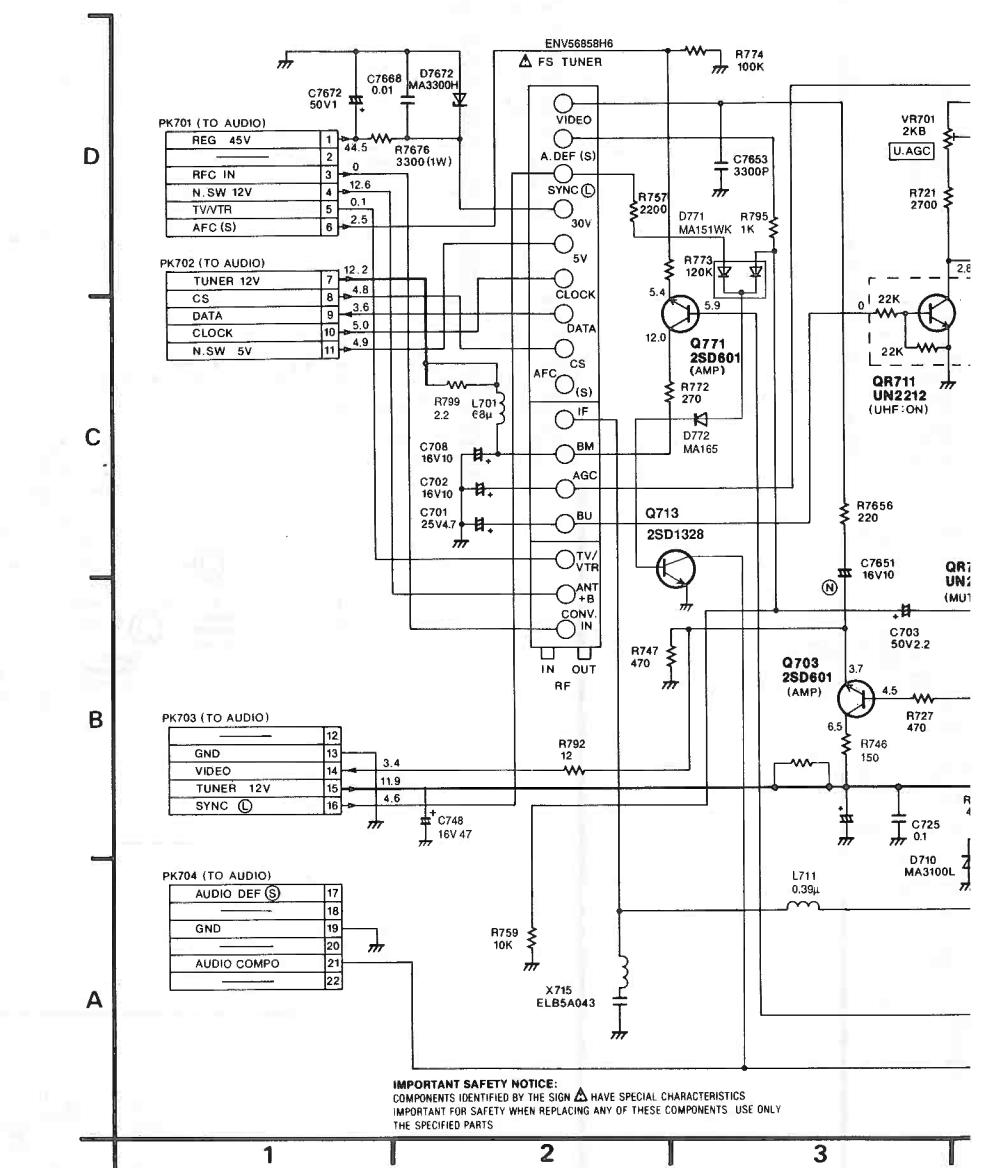
3-16. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM



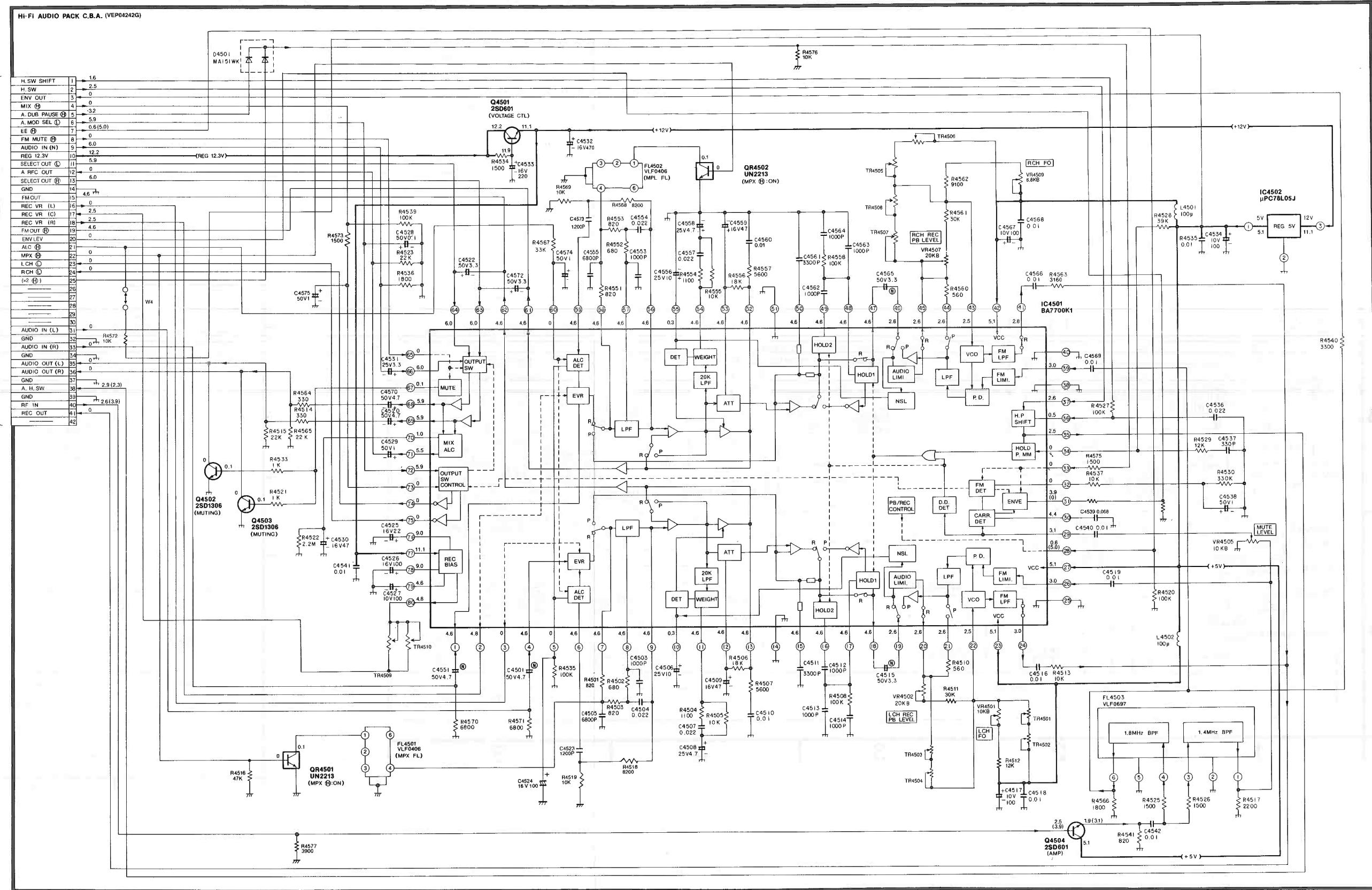
3-17. INPUT/OUTPUT PACK C.B.A. (VEP04270A)



3-18. TV DEMODULATOR PACK SCHEMATIC



B + B	SY
REC	SY
X	SE
IUTE	SY
(TO HI-FI AUDIO)	
H.SW SHIFT	1
H.SW	2
ENV OUT	3
MIX	4
A.DUB PAUSE	5
A.MODE SEL	6
EE	7
FM MUTE	8
AUDIO IN (N)	9
REG 12.3V	10
A.RFC OUT	11
GND	12
REC VR (L)	13
REC VR (C)	14
REC VR (R)	15
MPX	16
LCH	17
RCH	18
	19
	20
	21
	22
	23
	24
	25
	26
	27
	28
	29
	30
AUDIO IN (L)	31
GND	32
AUDIO IN (R)	33
GND	34
AUDIO OUT (L)	35
GND	36
A.H.SW	37
GND	38
RF IN	39
REC OUT	40
	41
	42
X	SE
EL + B	SY
P4003 (TO VR)	
1 H.P OUT (R)	P6501-1
2 H.P OUT (L)	P6501-2
3 GND	P6501-3
4 PICTURE CNT	P6501-4
5	
6	
7	
AER BUS LSN	P
AER BUS TLK	P
AER BUS CLK	P
P4001 (TO A/C HEAD)	
1 A. HEAD (R)	P1501-3
2 A. HEAD (L)	P1501-4
3 GND	P1501-5
4 A. ERASE	P1501-6
EE	SY
DIO IN (N)	V
SSW	SE
TER (L)	SY
TER (R)	SY
ID (A)	V
CNTURE CNT	V
IN02	SE
K1	SY
K2	SY
P7403 (TO TIMER)	
11 TIMER BUS CLK	P7503-11
10 TIMER BUS TLK	P7503-10
9 TIMER BUS LSN	P7503-9
8 AFC (S CURVE)	P7503-8
7 DAC/CLOCK	P7503-7
6 GND	P7503-6
5 AUDIO DEF	P7503-5
4 SYNC	P7503-4
3 AFC DEF	P7503-3
2 DATA/BAND VL	P7503-2
1 CS/BAND U	P7503-1

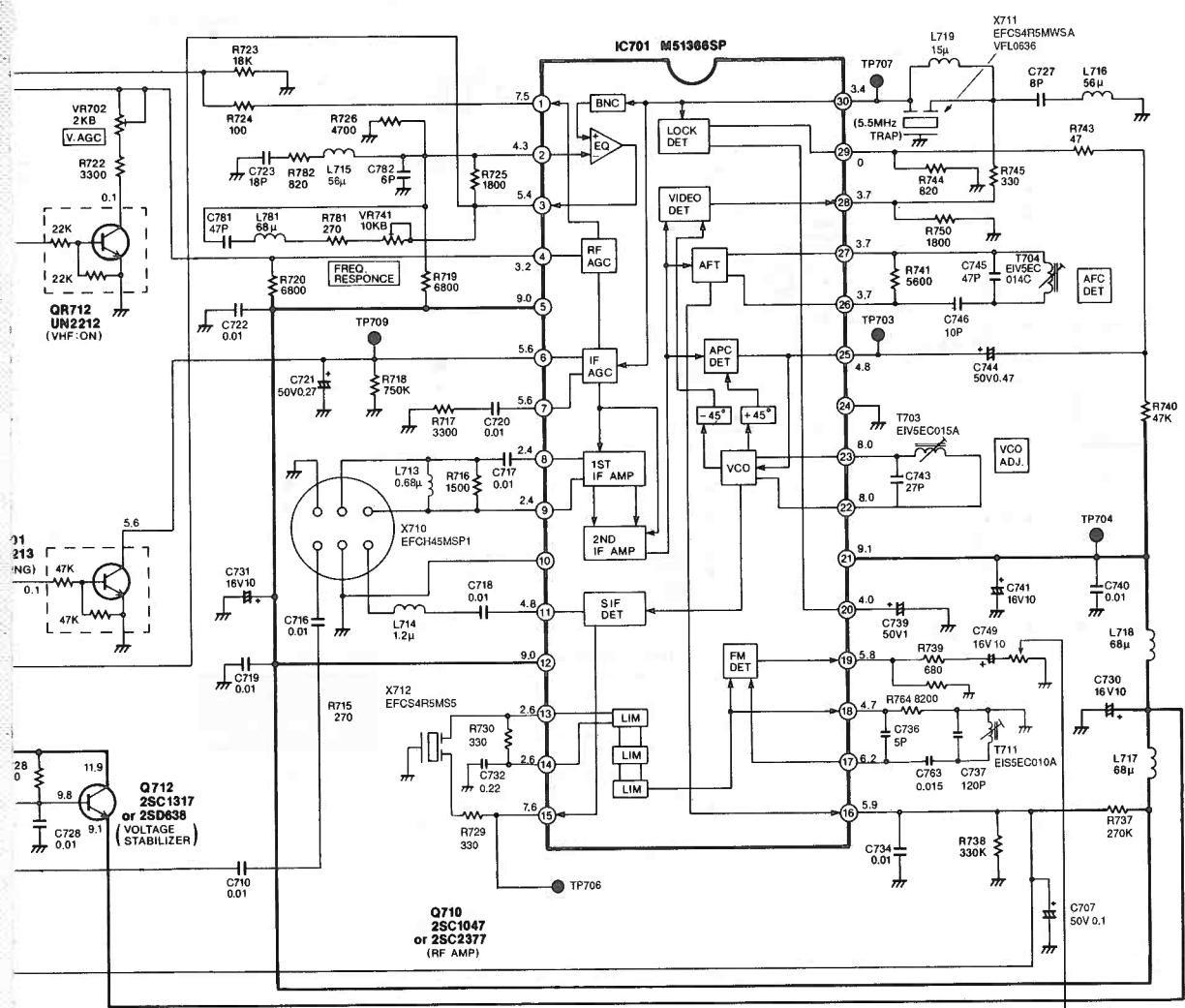


NOTE: THE MEASUREMENT MODE OF THE
DC VOLTAGES ARE FOLLOWING CONDITION.

- LINE IN SIGNAL LEVEL... -10dB 1kHz
- MEASUREMENT MODE
REC...BRACKETS ()
PLAY...WITHOUT BRACKETS

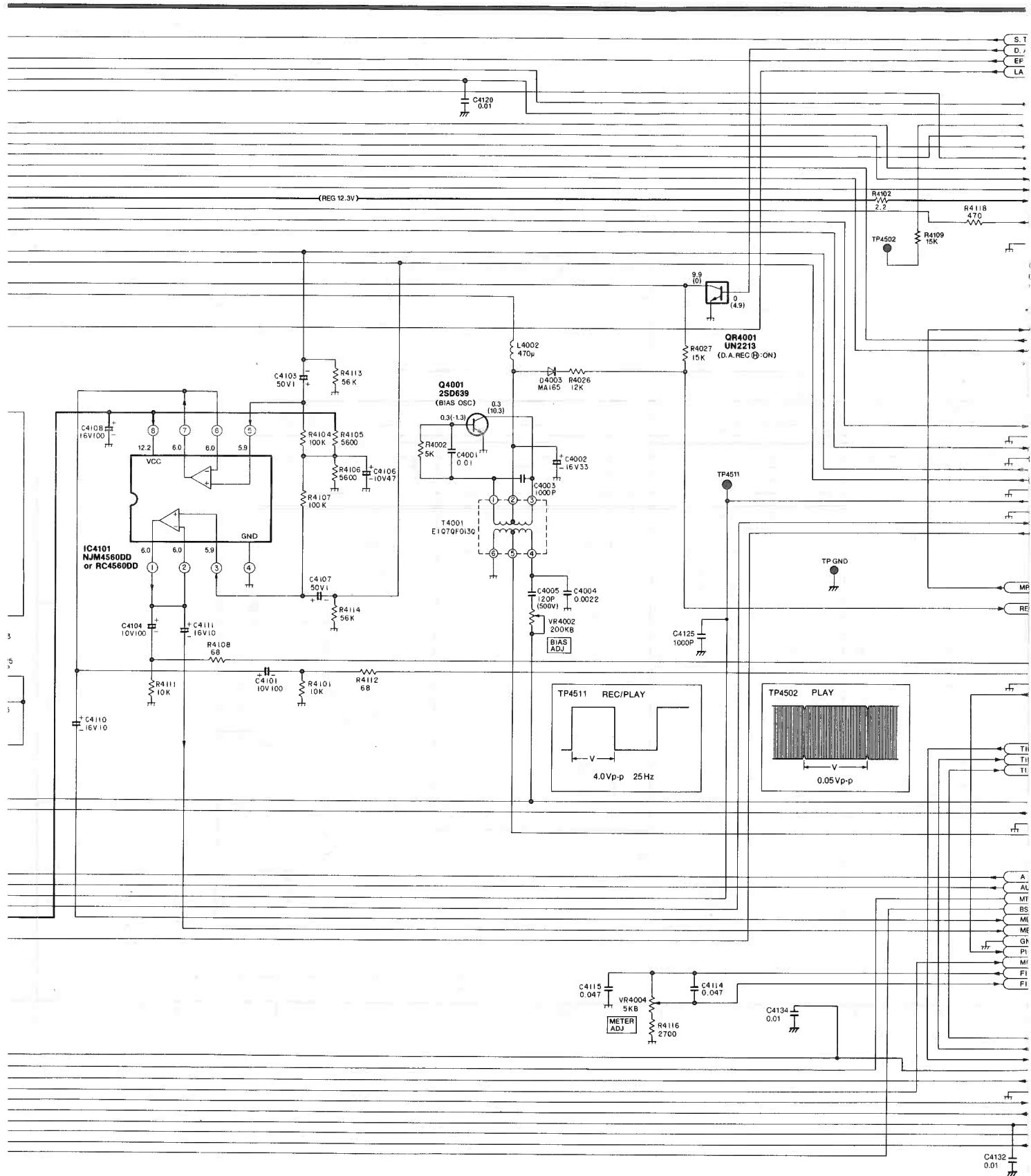
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS
SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU
ORDER A PART, PLEASE REFER TO PARTS LIST.

CIRCUIT DIAGRAM

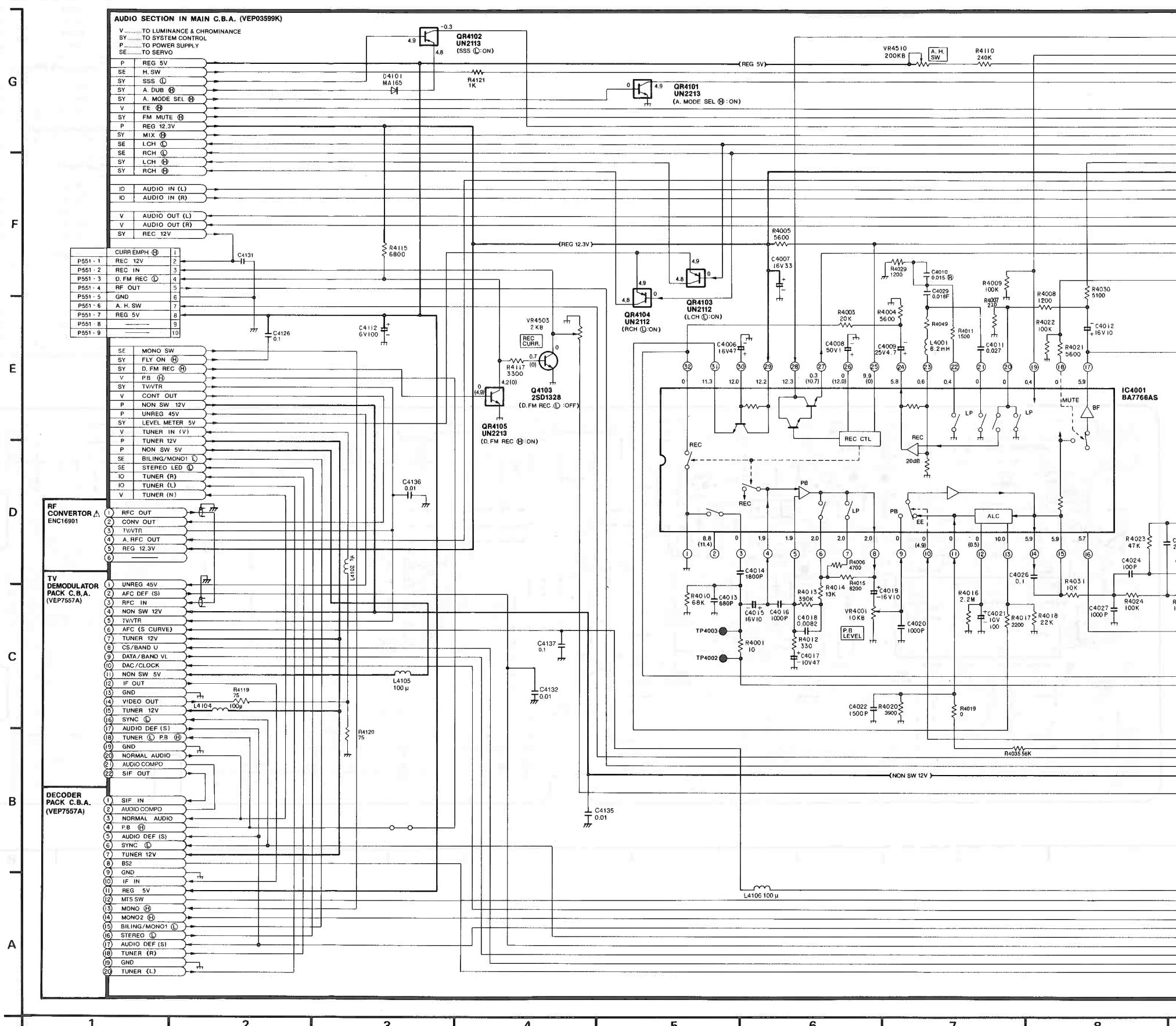


NOTE THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE

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



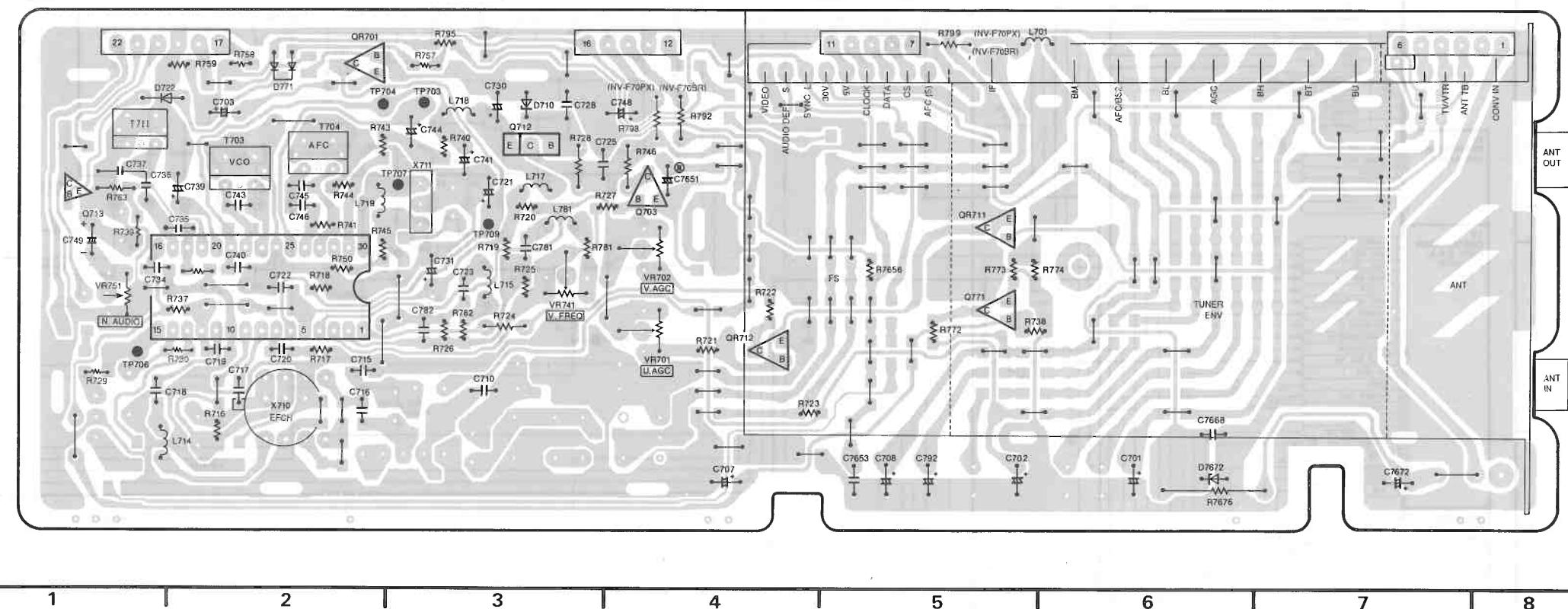
3-20. AUDIO & Hi-Fi AUDIO PACK SCHEMATIC DIAGRAM



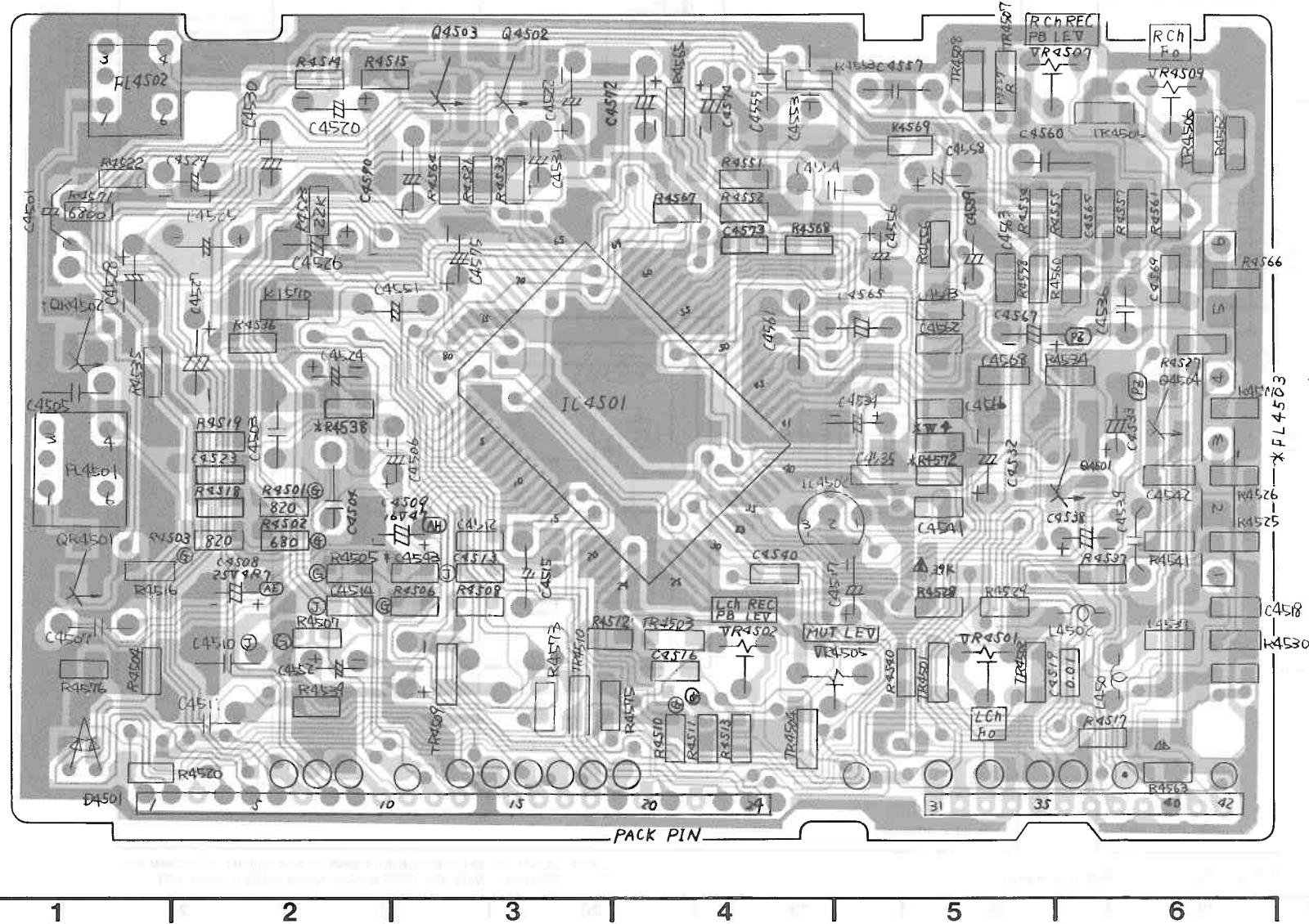
9. TV DEMODULATOR PACK C.B.A. (VEP07536E)

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q703	B-4
Q712	C-3
Q713	B-1
Q771	B-5
Transistor & Resistor	
QR701	C-2
QR711	B-5
QR712	B-4
Integrated Circuit	
IC701	B-2
Test Point	
TP703	C-3
TP704	C-2
TP706	B-1
TP707	B-3
TP709	B-3
Adjustment	
T703	C-2
T704	C-2
T711	C-1
VR701	B-4
VR702	B-4
VR741	B-3

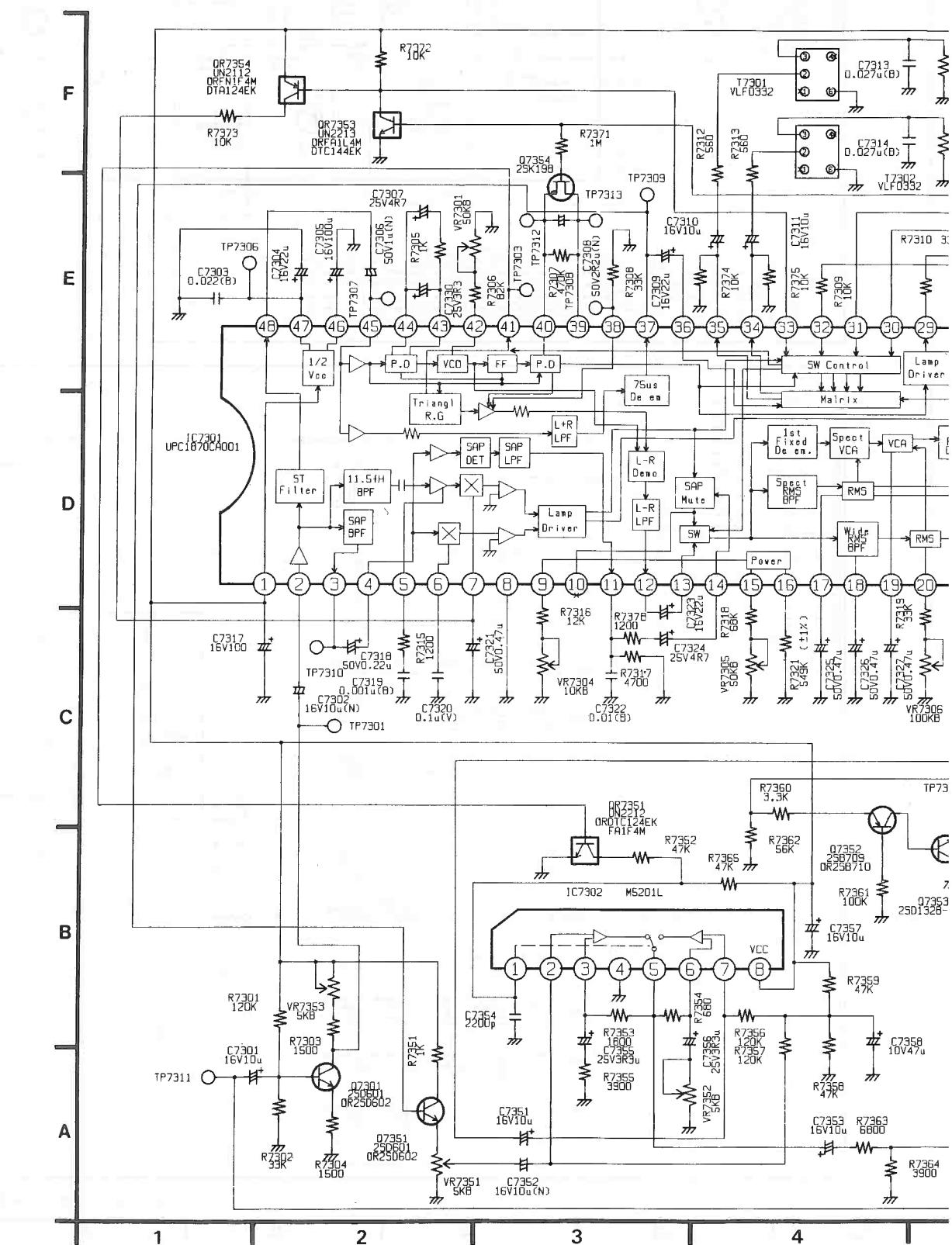
ADDRESS INFORMATION

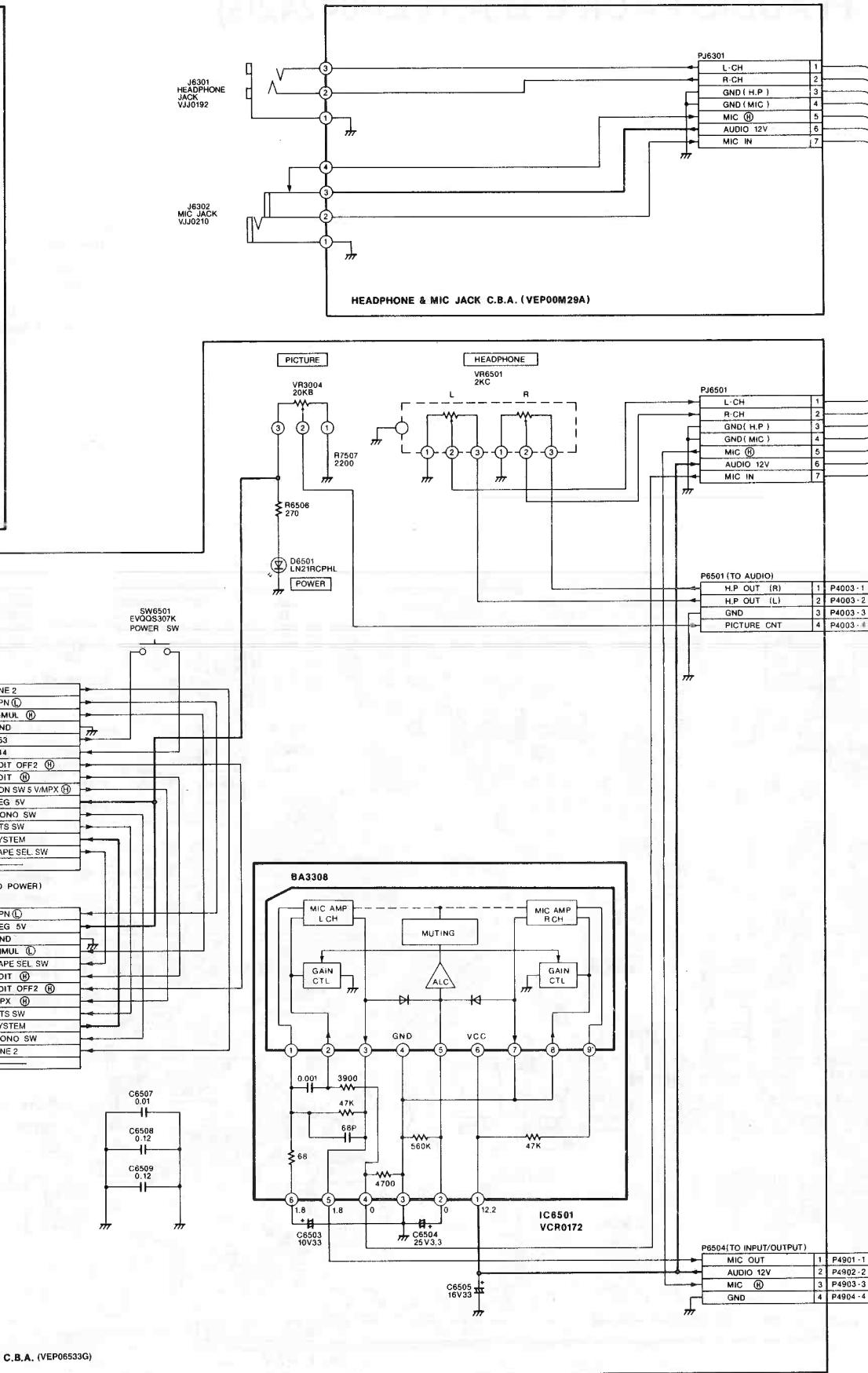
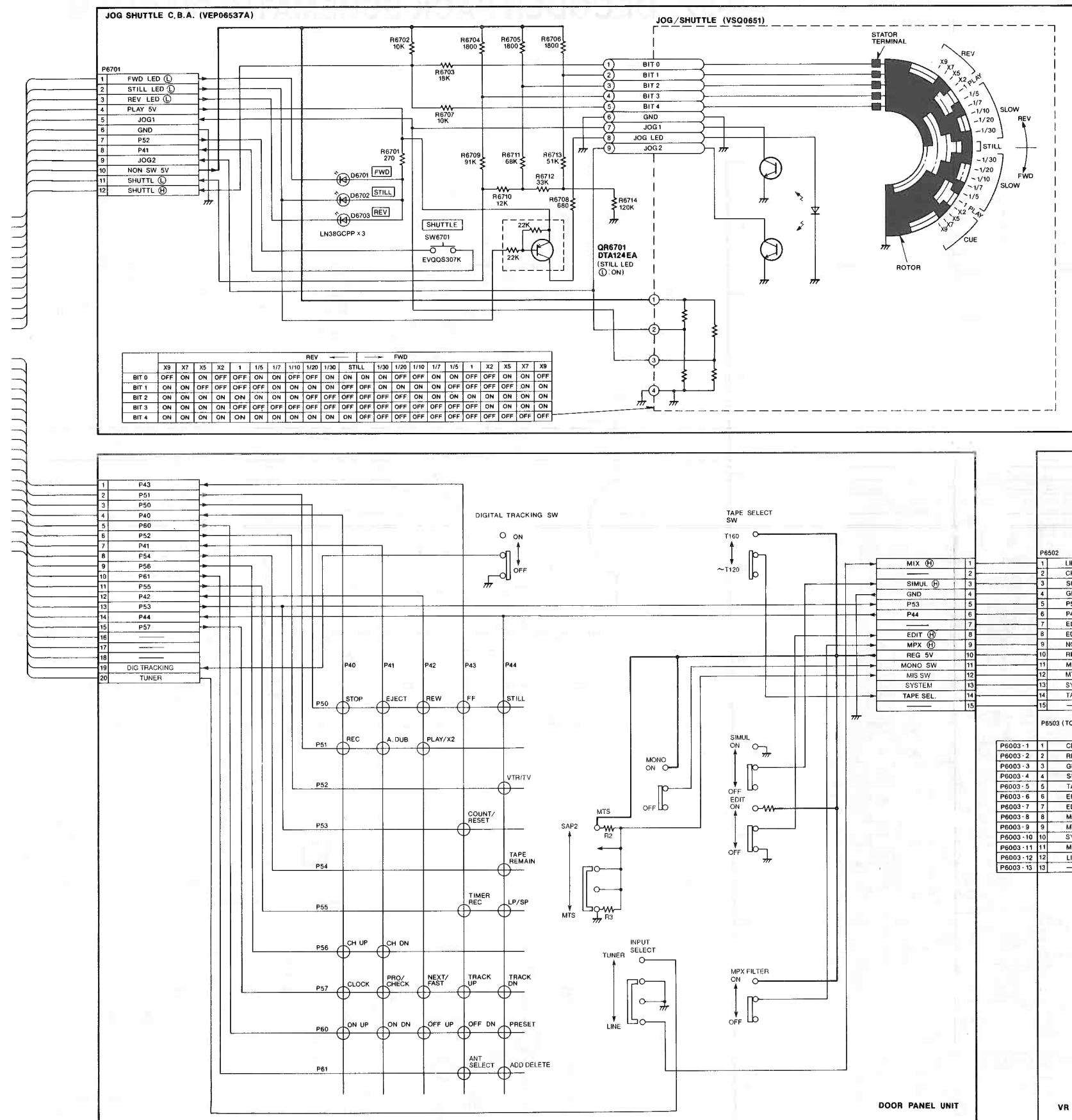


3-21. Hi-Fi AUDIO PACK C.B.A. (VEP04242G)



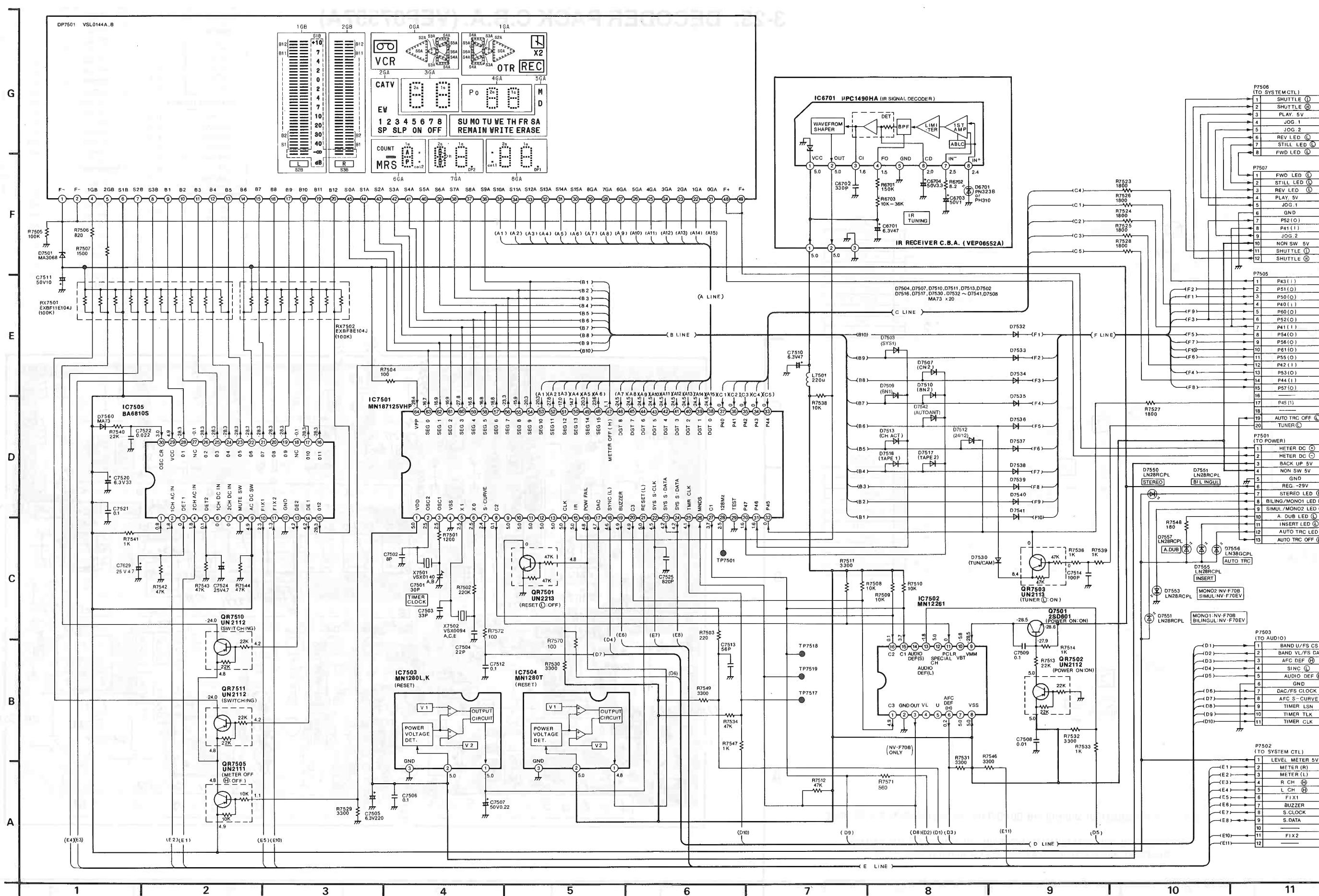
3-22. DECODER PACK SCHEMATIC DIAGRAM



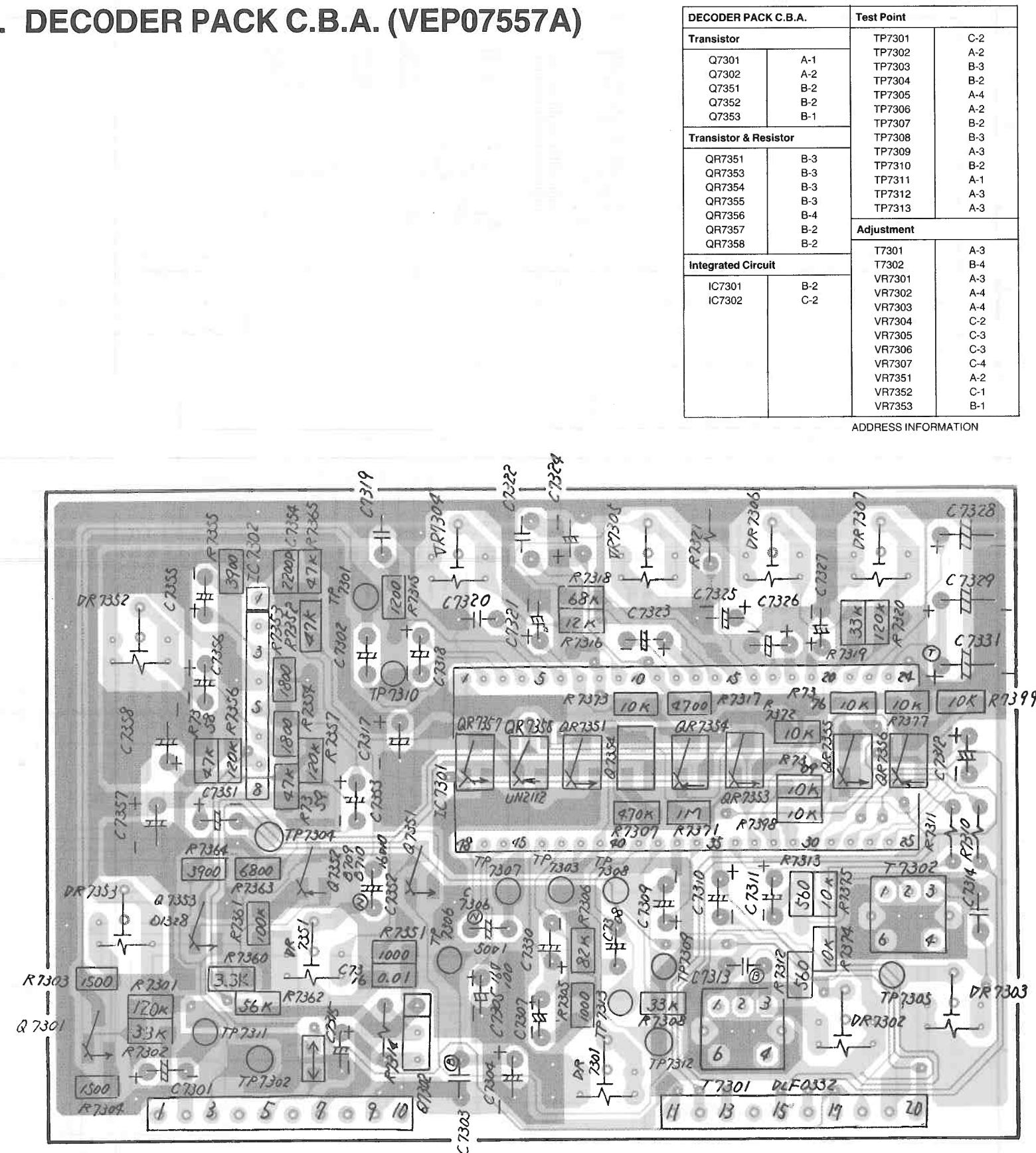
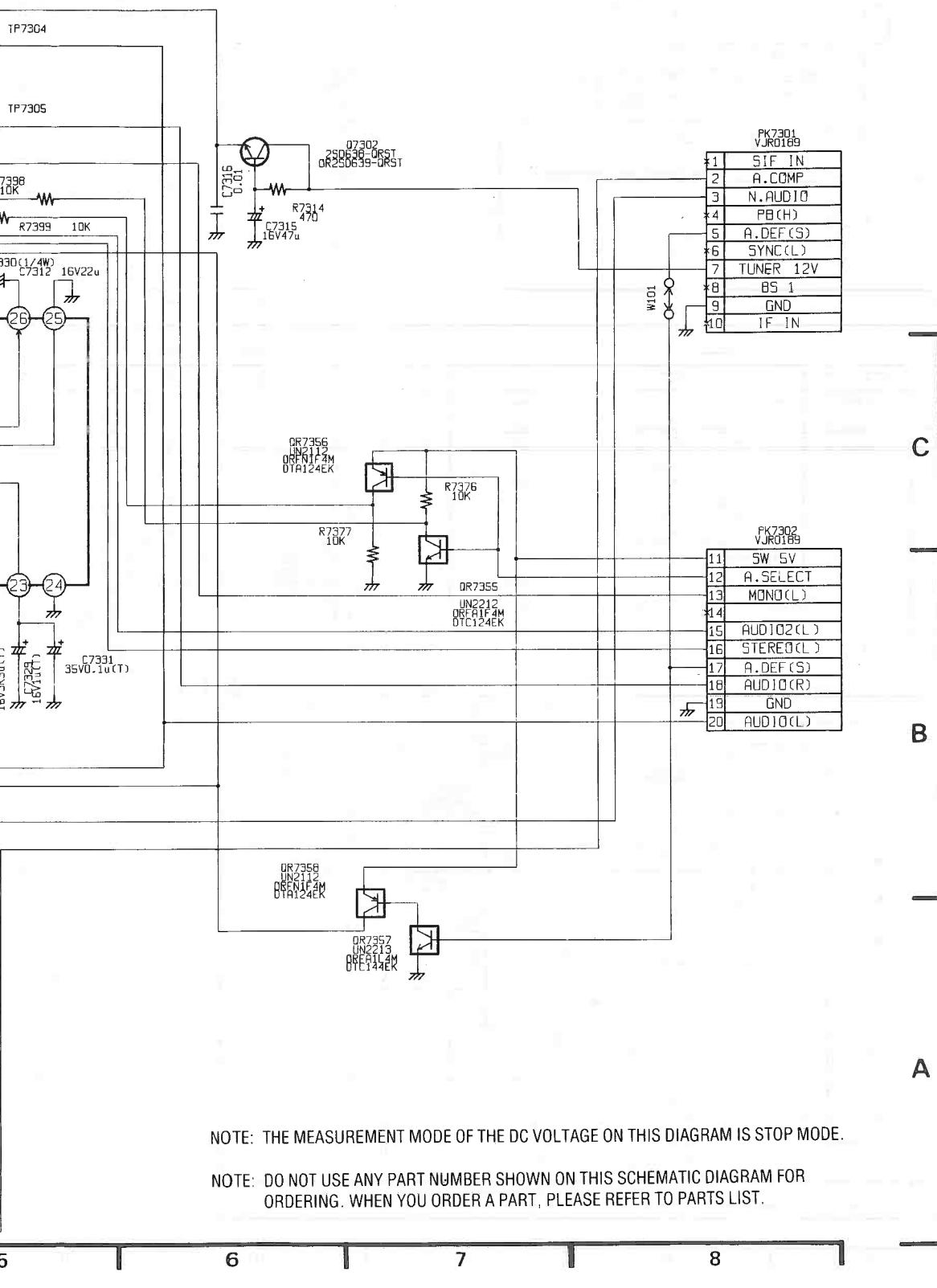


3-24. TIMER & VR SCHEMATIC DIAGRAM

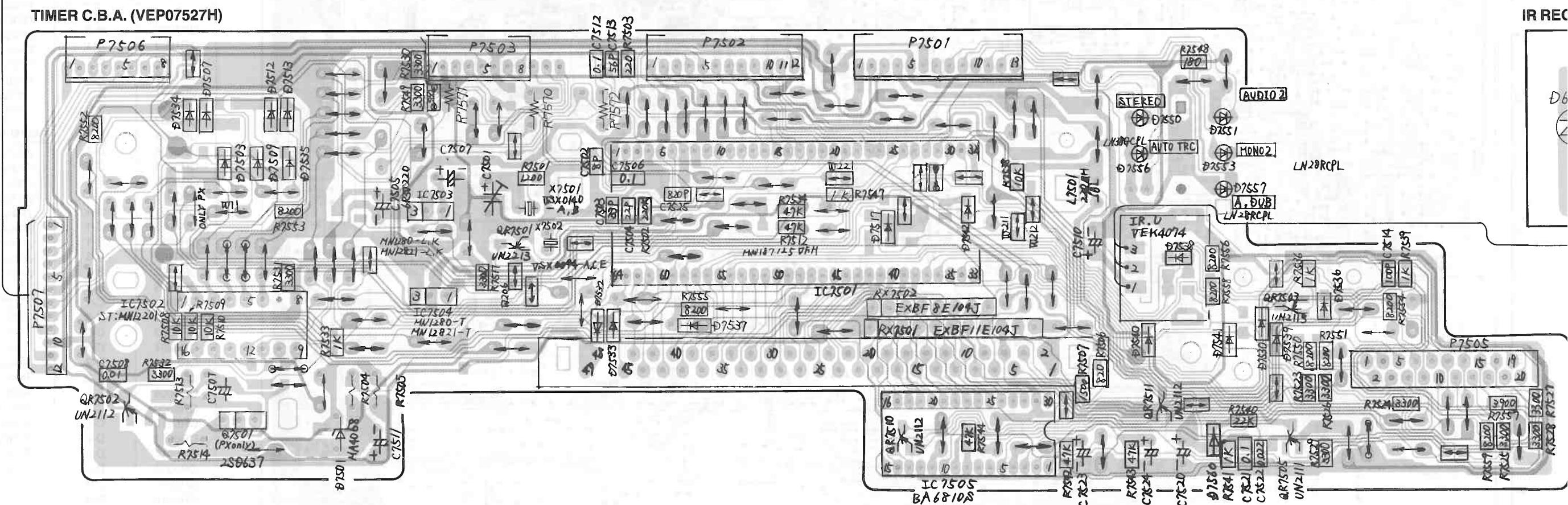
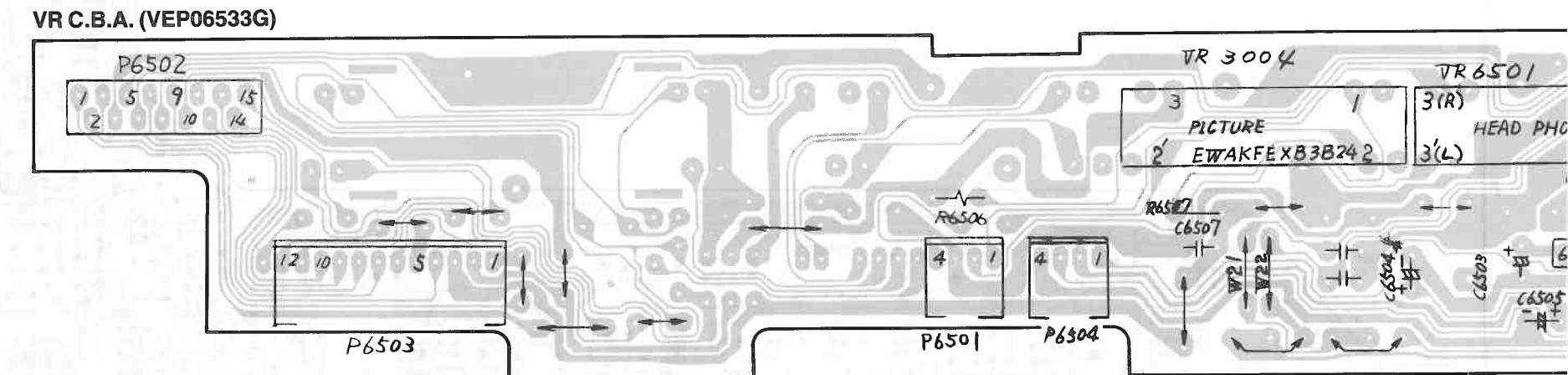
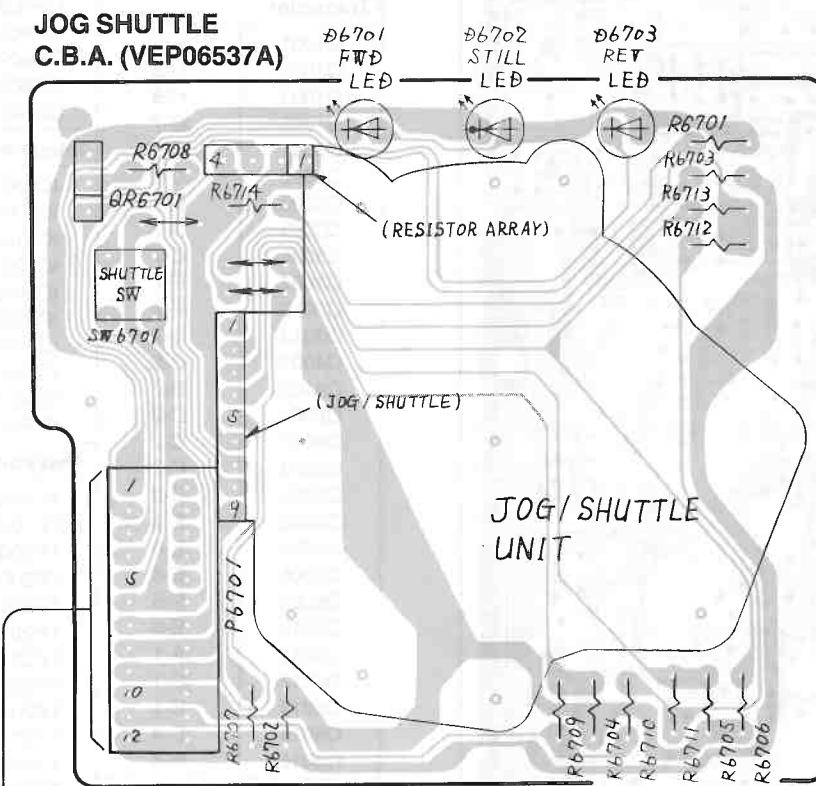
Hi-fi AUDIO, DECODER PACK



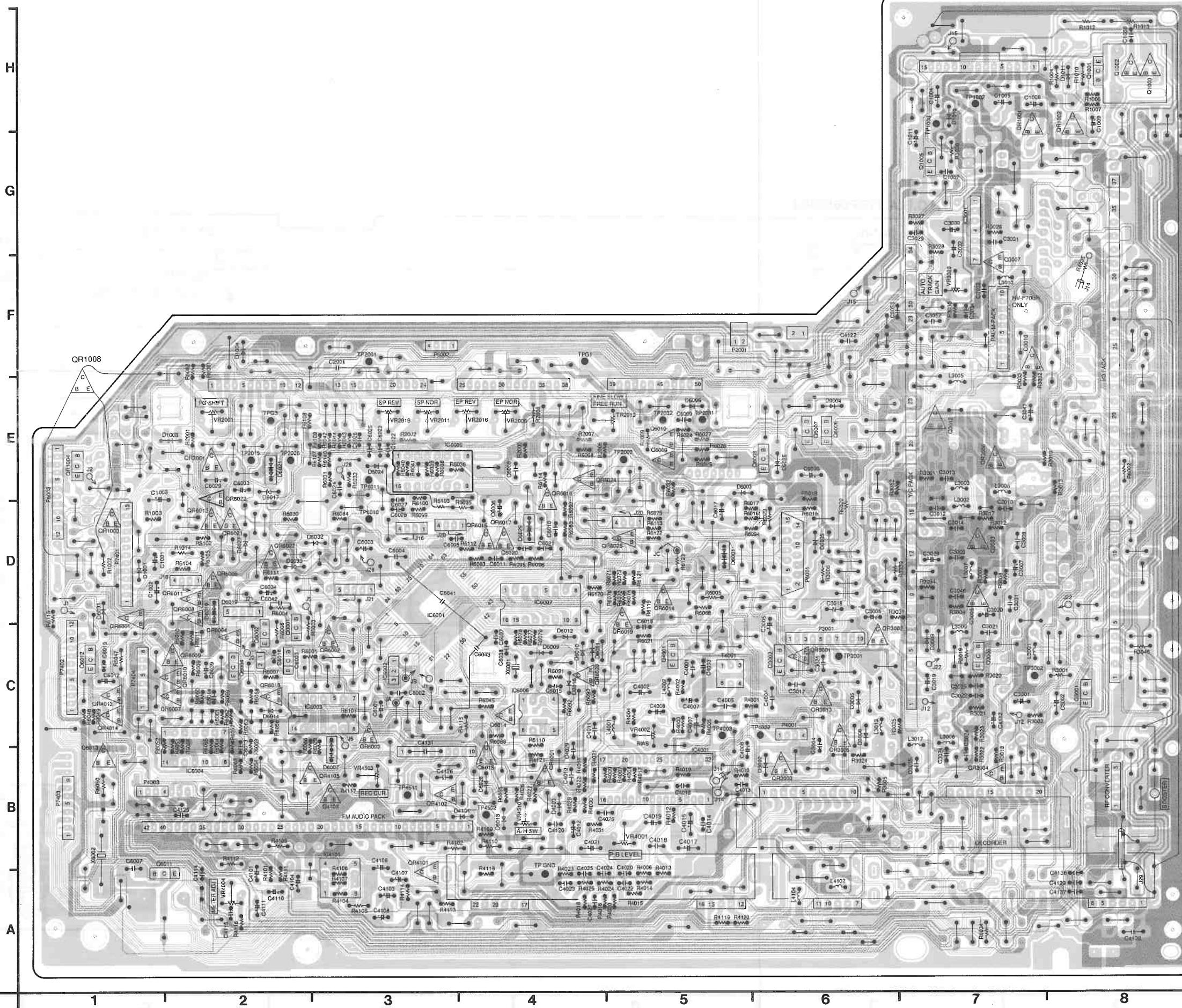
3-23. DECODER PACK C.B.A. (VEP07557A)



3-25. TIMER C.B.A. (VEP07527E) & VR C.B.A. (VEP06533G)

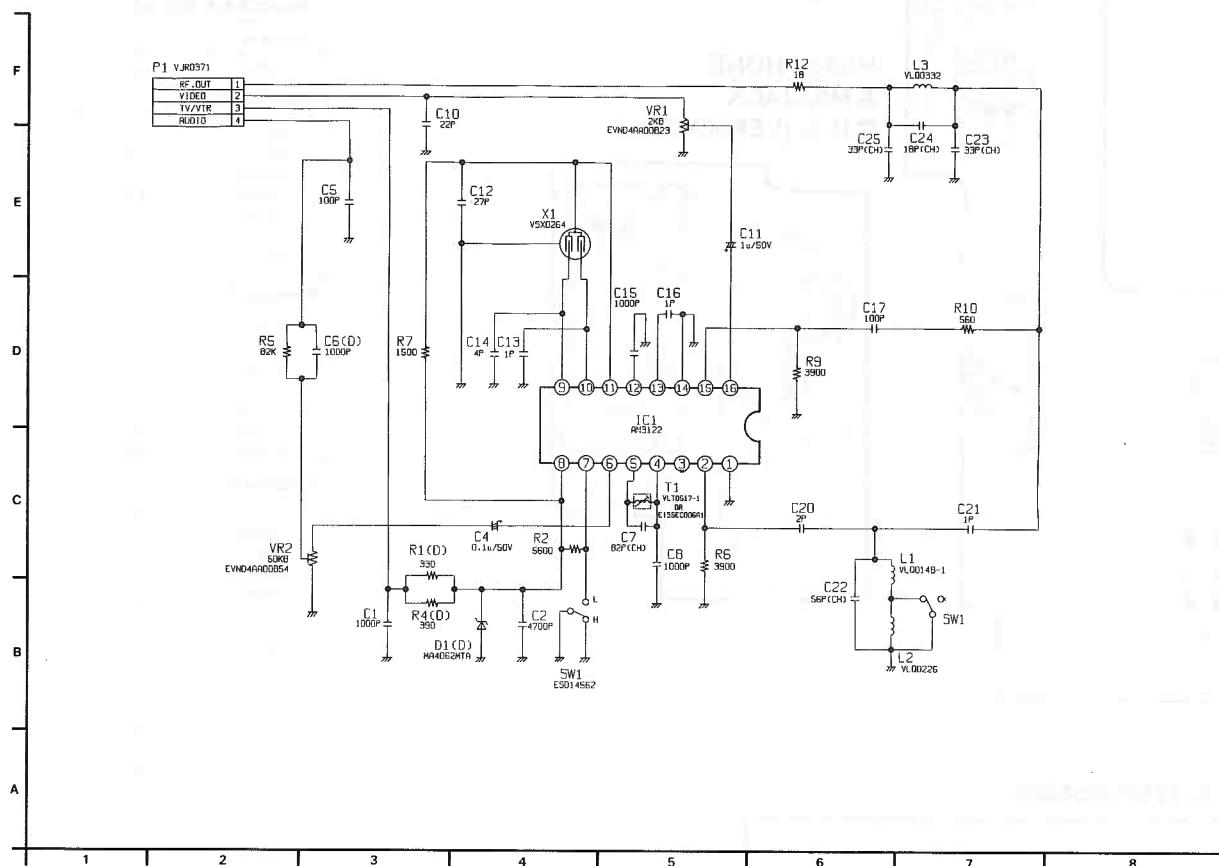


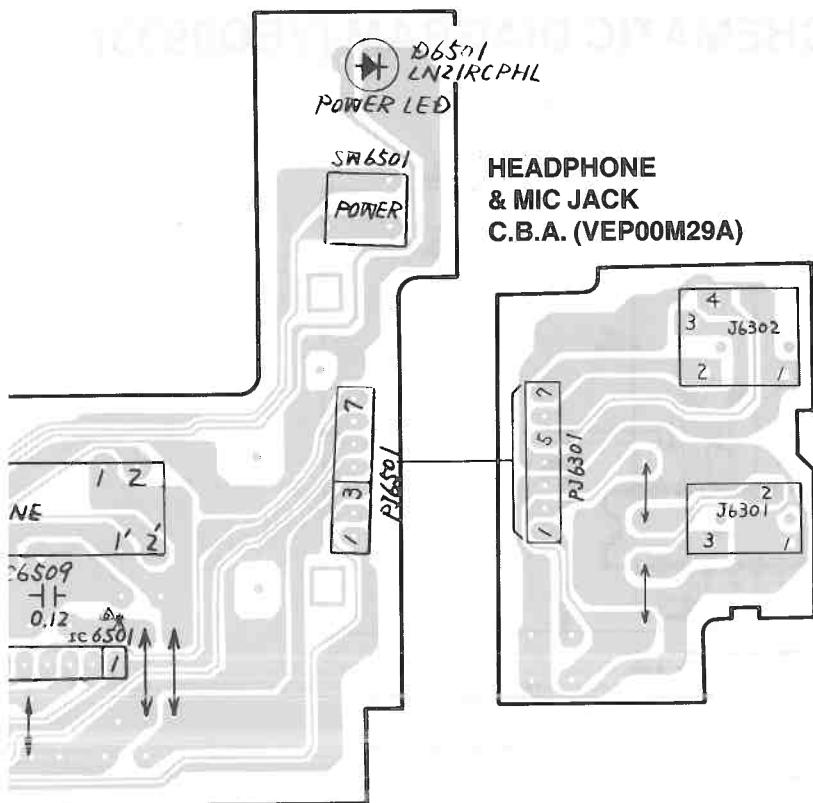
3-27. MAIN C.B.A. (VEP03599N)



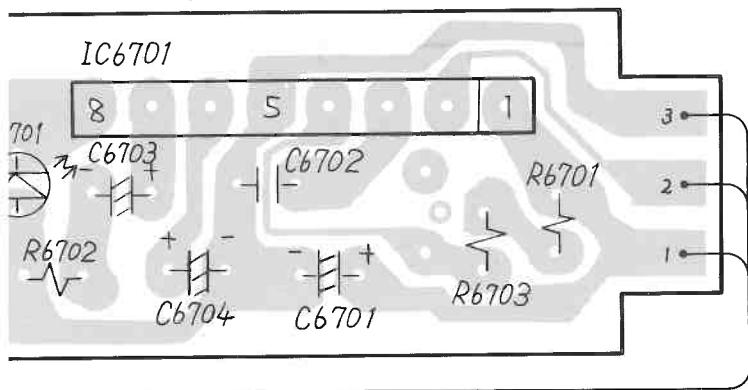
MAIN C.B.A. ADDRESS INFORMATION		
Transistor	QR6021 QR6022 QR6024 QR6025 QR6027	D-2 D-2 E-4 D-5 D-2
Q1001	H-8	
Q1002	H-8	
Q1003	H-8	
Q1005	G-7	
Q3001	C-8	
Q3002	C-6	
Q3003	D-7	
Q3005	D-7	
Q3006	C-7	
Q3007	F-7	
Q3010	F-7	
Q3012	E-7	
Q4001	C-5	
Q4103	B-2	
Q6001	C-2	
Q6002	C-2	
Q6003	C-2	
Q6004	C-2	
Q6006	E-6	
Q6007	E-6	
Q6008	E-6	
Q6009	E-5	
Q6010	E-5	
Q6011	A-1	
Q6012	C-1	
Q6013	B-1	
Q6014	C-4	
Q6015	B-4	
Test Point		
TP1002	TP1003	H-7
TP2001	TP2002	F-3
TP2011	TP2015	E-5
TP2019	TP2026	E-3
TP2026	TP2031	E-2
TP2032	TP3001	C-6
TP3002	TP4002	C-7
TP4003	TP4502	C-6
TP4511	TP6010	B-4
TP6011	TP6011	B-2
TPG3	TPG	E-2
Transistor & Resistor		
QR1001	G-7	
QR1002	H-8	
QR1003	D-1	
QR1004	E-1	
QR1008	E-1	
QR2001	E-2	
QR3001	C-6	
QR3002	C-6	
QR3003	B-2	
QR3004	B-7	
QR3005	C-6	
QR3006	E-7	
QR3013	C-6	
QR4001	B-4	
QR4013	C-1	
QR4014	C-1	
QR4101	A-3	
QR4102	B-3	
QR4105	B-2	
QR6001	C-1	
QR6002	C-3	
QR6003	C-3	
QR6004	C-2	
QR6006	D-2	
QR6007	C-2	
QR6008	C-2	
QR6009	C-2	
QR6010	C-2	
QR6011	D-2	
QR6013	D-2	
QR6014	D-5	
QR6015	D-4	
QR6016	D-4	
QR6017	D-4	
QR6018	C-2	
QR6019	C-5	
QR6020	C-4	
Adjustment		
VR2001	VR2006	E-2
VR2006	VR2018	E-4
VR2018	VR3020	E-4
VR3020	VR4001	F-7
VR4001	VR4002	B-5
VR4002	VR4004	C-5
VR4004	VR4503	A-2
VR4503	VR4510	B-2
Connector		
P2001	P3001	F-5
P3001	P4001	C-6
P4001	P4003	C-6
P4003	P6001	B-1
P6001	P6002	D-6
P6002	P6003	F-3
P6003	P7401	D-1
P7401	P7402	C-1
P7402	P7403	B-1
P7403	P7404	C-1

3-26. RF CONVERTER SCHEMATIC DIAGRAM (VEQ0933)





RECEIVER C.B.A. (VEP06552A)

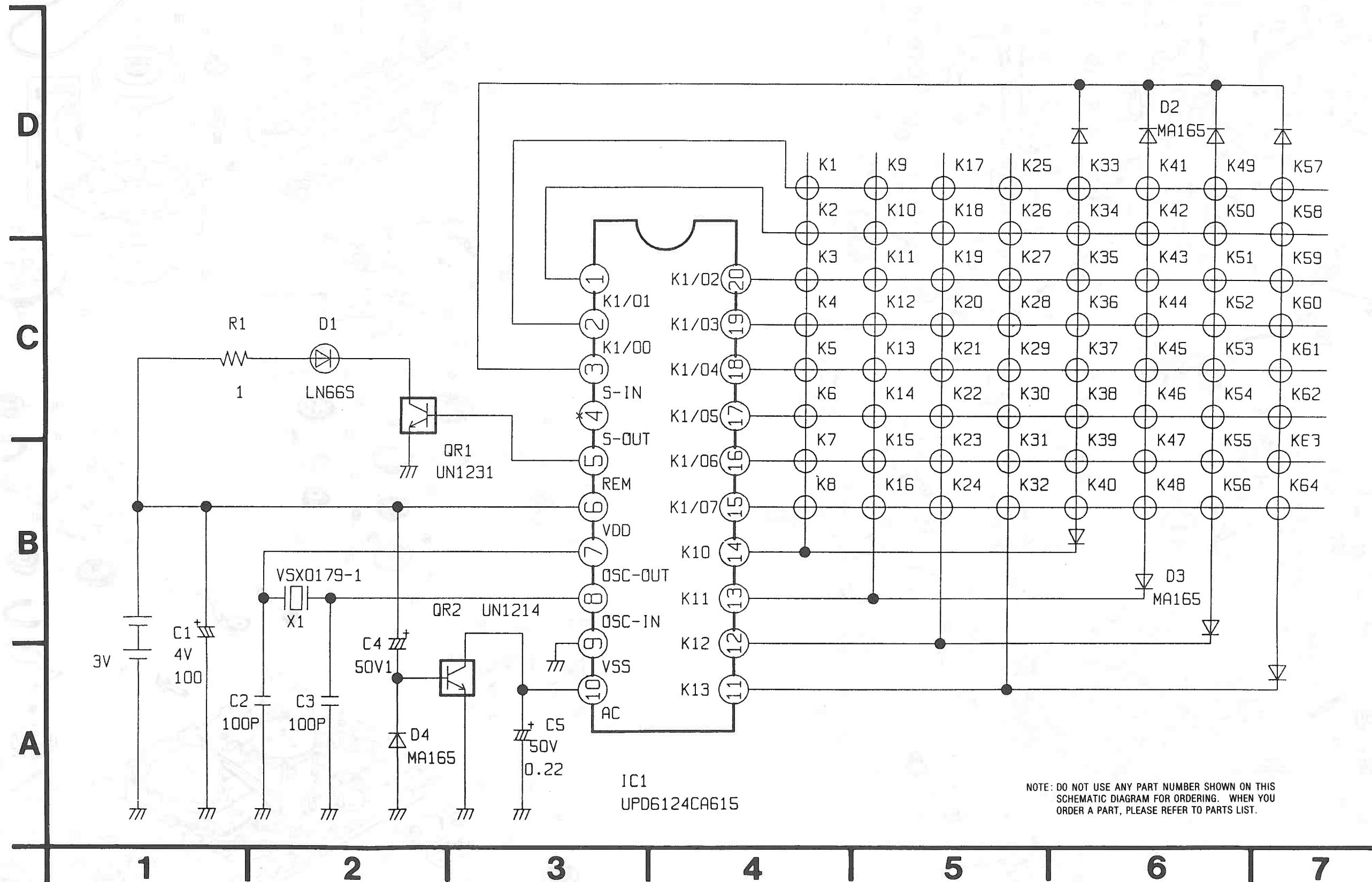


TIMER C.B.A. & VR C.B.A.	
Transistor	
Q7501	A-1
Transistor & Resistor	
QR6701	D-1
QR7501	B-3
QR7502	A-1
QR7503	A-6
QR7505	A-6
QR7510	A-4
QR7511	A-5
Integrated Circuit	
IC6501	C-7
IC6701	B-7
IC7501	B-4
IC7502	A-1
IC7503	B-2
IC7504	A-2
IC7505	A-4
Adjustment	
C7501	B-3
VR3004	D-6
VR6501	D-7
Connector	
P6501	C-5
P6502	D-3
P6503	C-3
P6504	C-5
P6701	C-1
P7501	B-4
P7502	B-3
P7503	B-3
P7505	A-6
P7506	B-1
P7507	B-1
PJ6501	C-7
PJ6301	C-8

ADDRESS INFORMATION

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

3-28. REMOTE CONTROLLER SCHEMATIC DIAGRAM

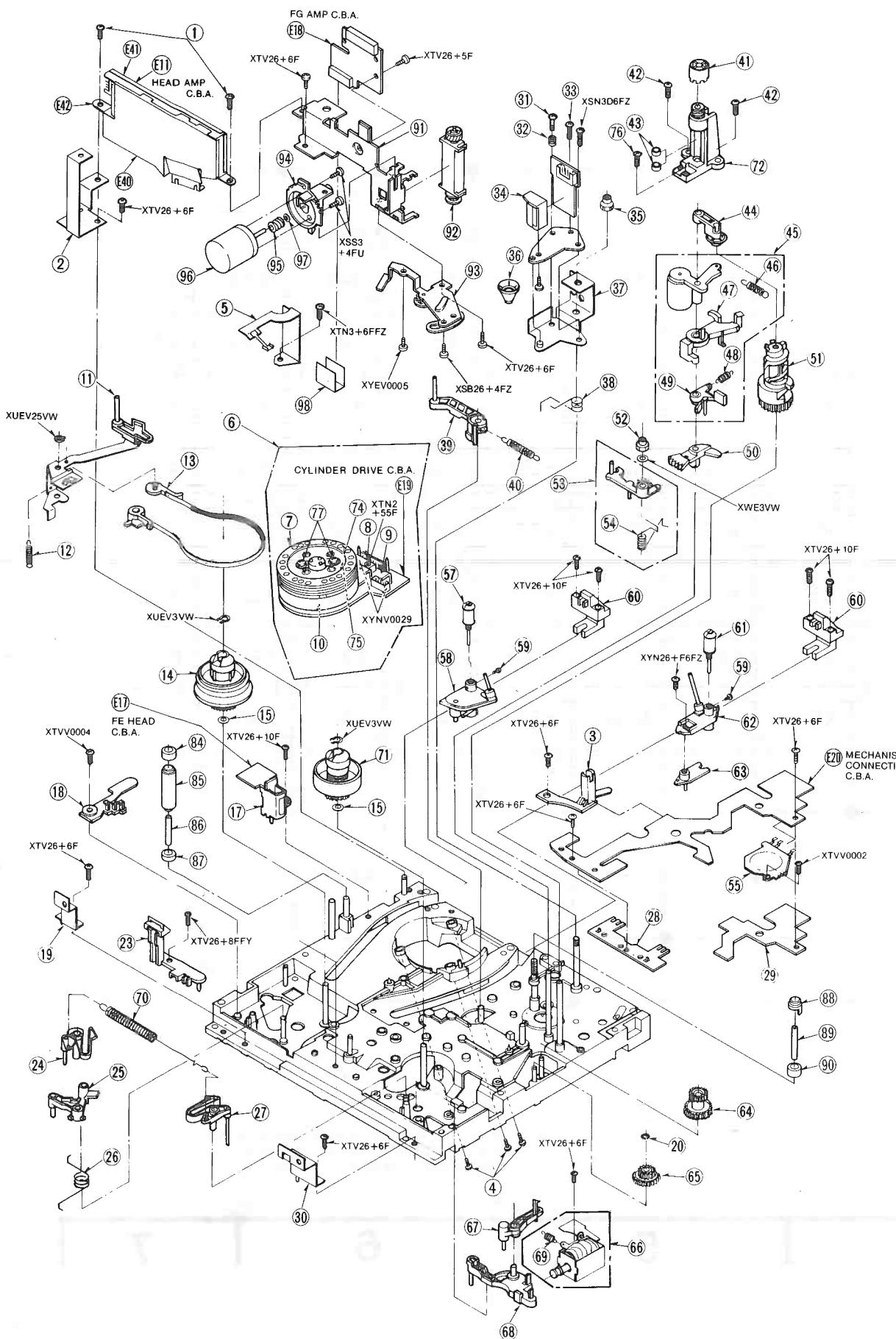


EXPLODED VIEWS

EXPLODED VIEWS

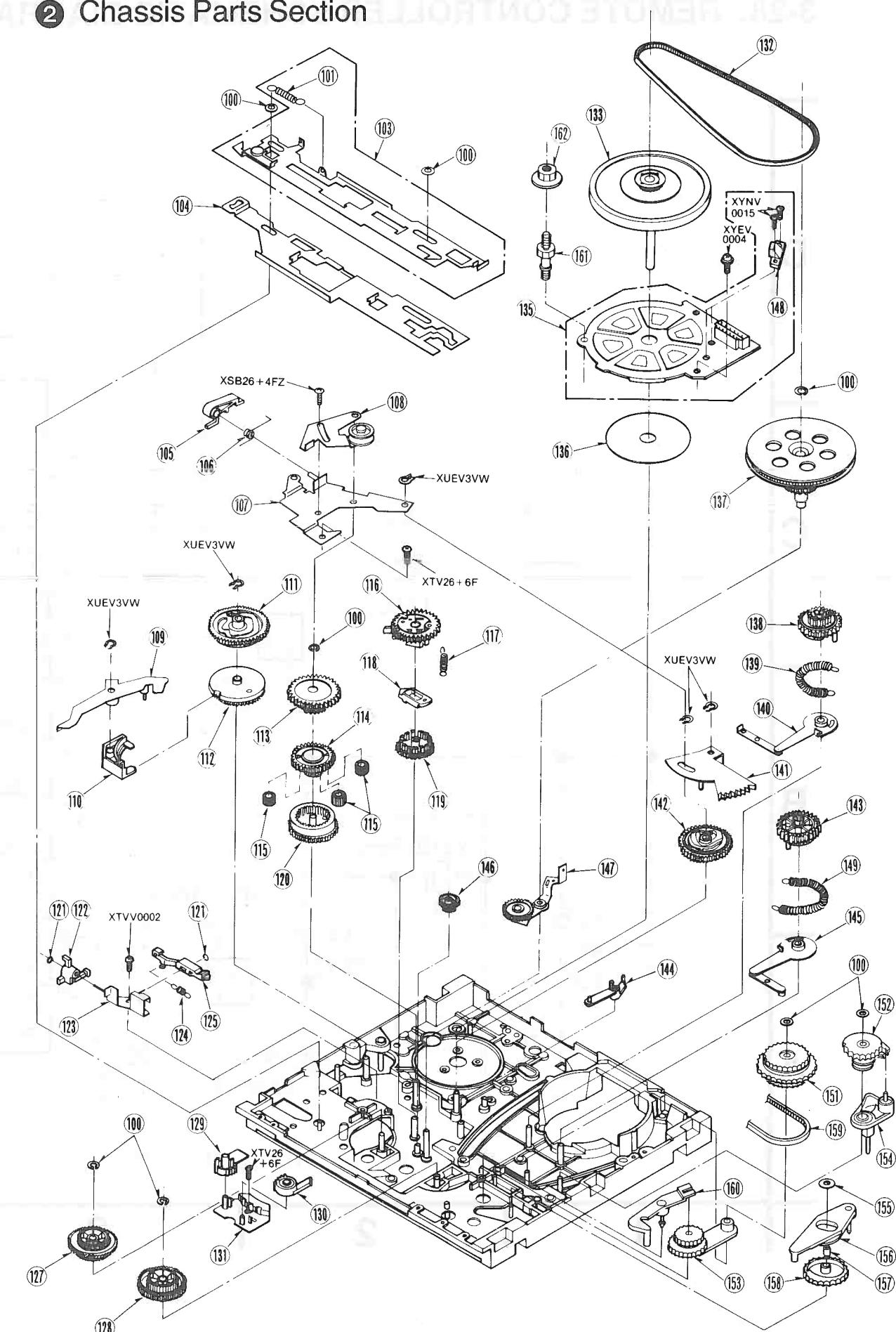
EXPLODED VIEWS

① Chassis Parts Section



4-1

② Chassis Parts Section



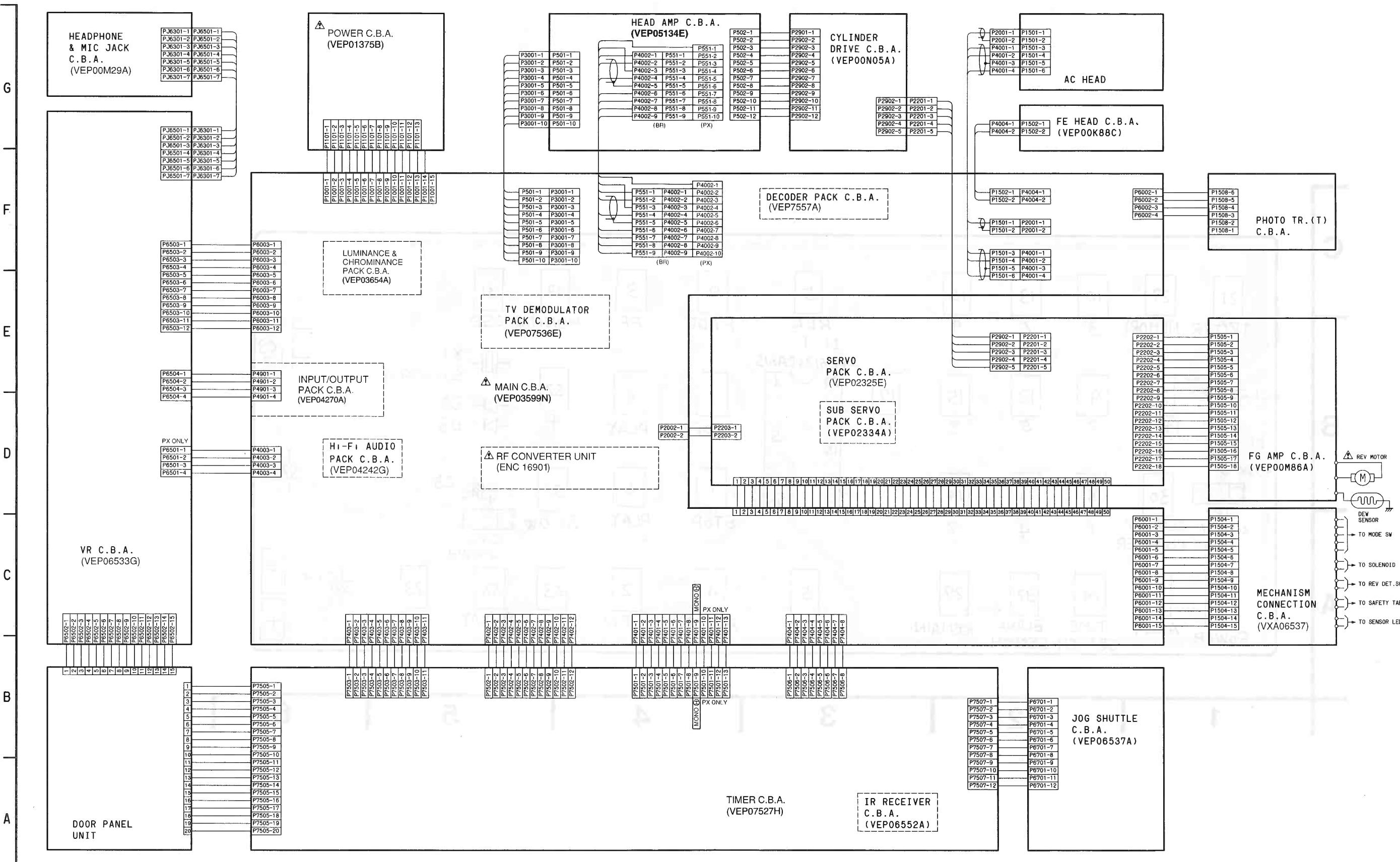
4-2

3-30. INTERCONNECTION SCHEMATIC DIAGRAM

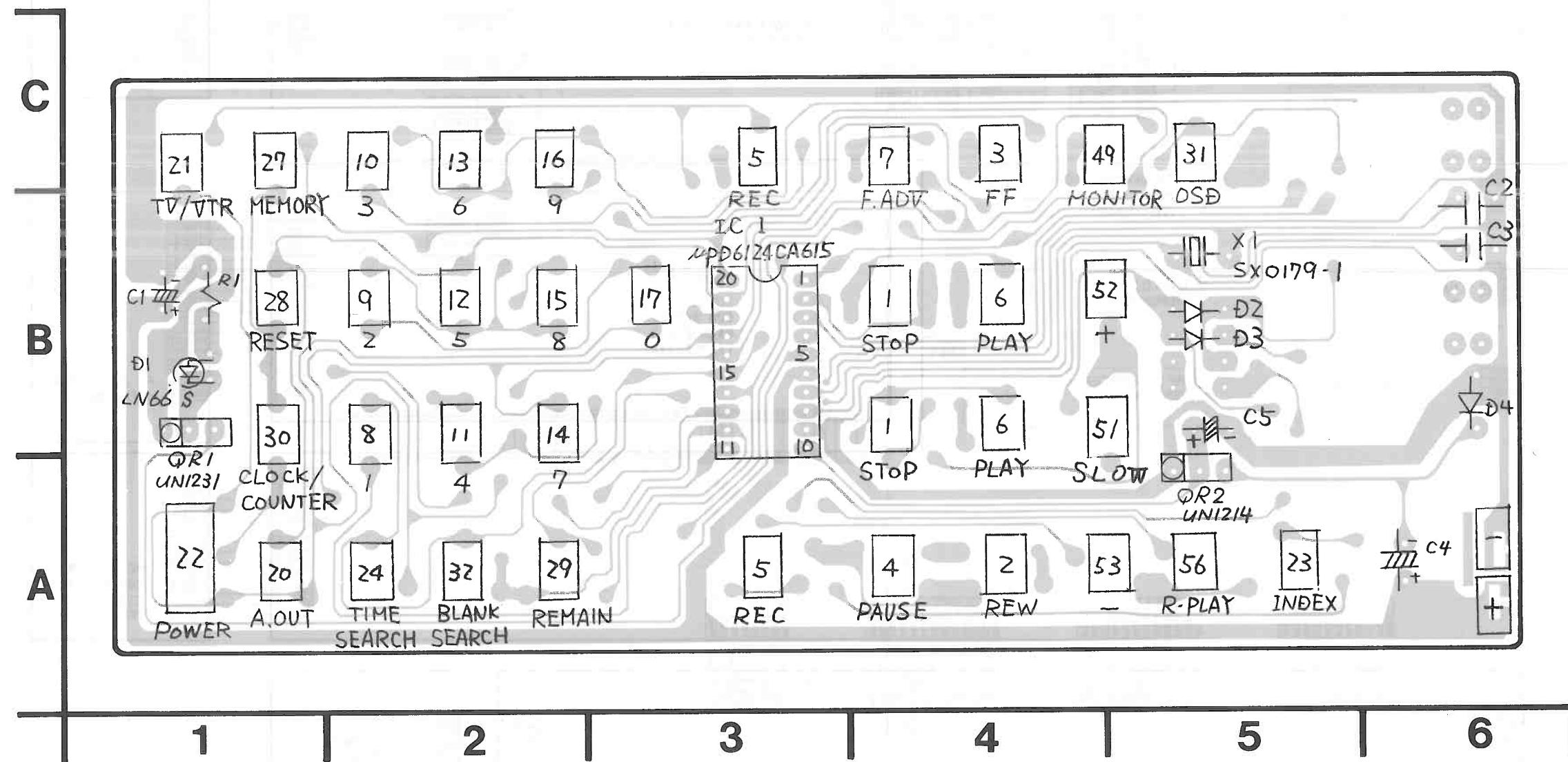
INTERCONNECTION

REMOTE CONTROL

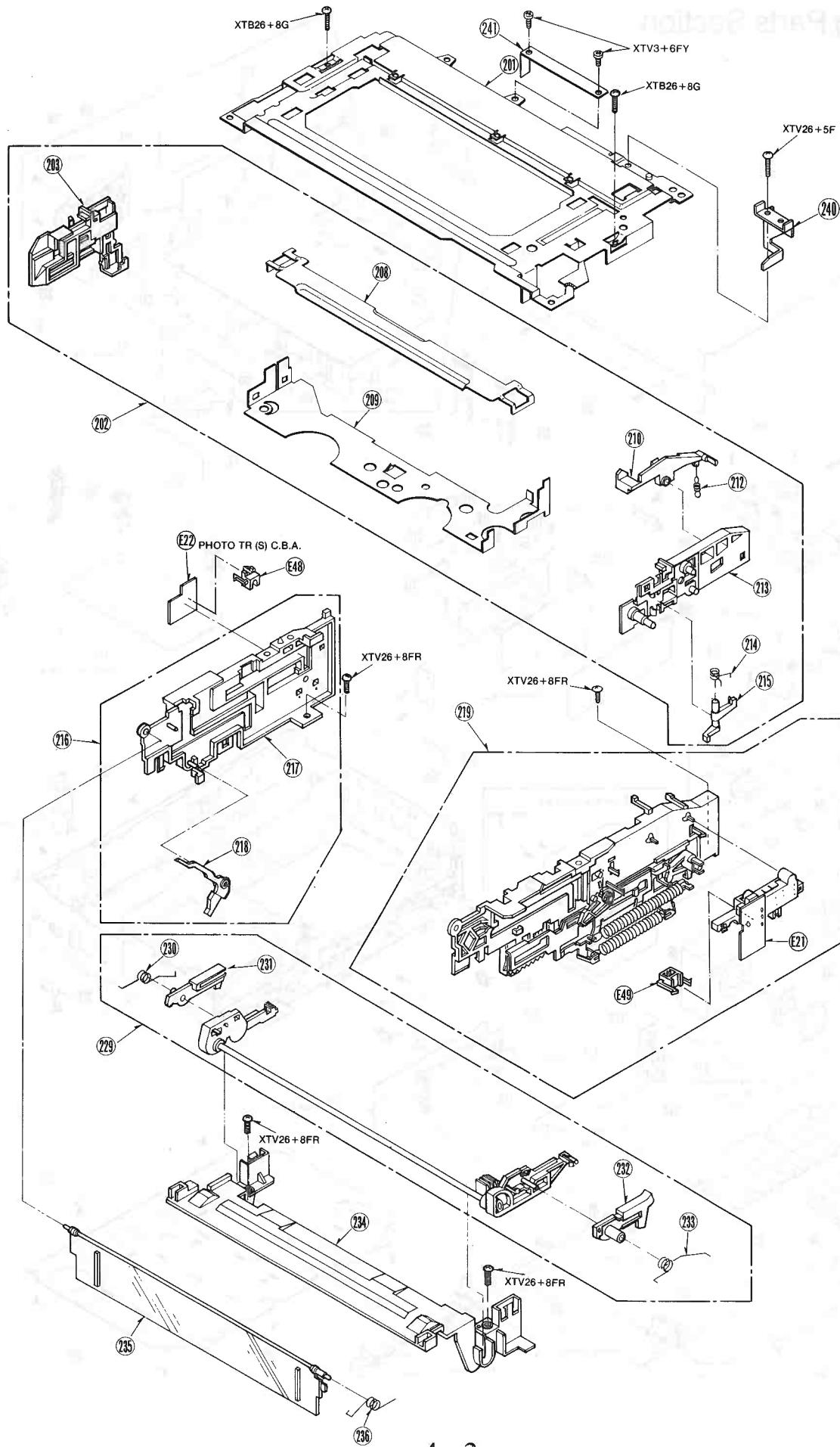
3-30. REMOTE CONTROLLER C.B.A. (VEP000109)



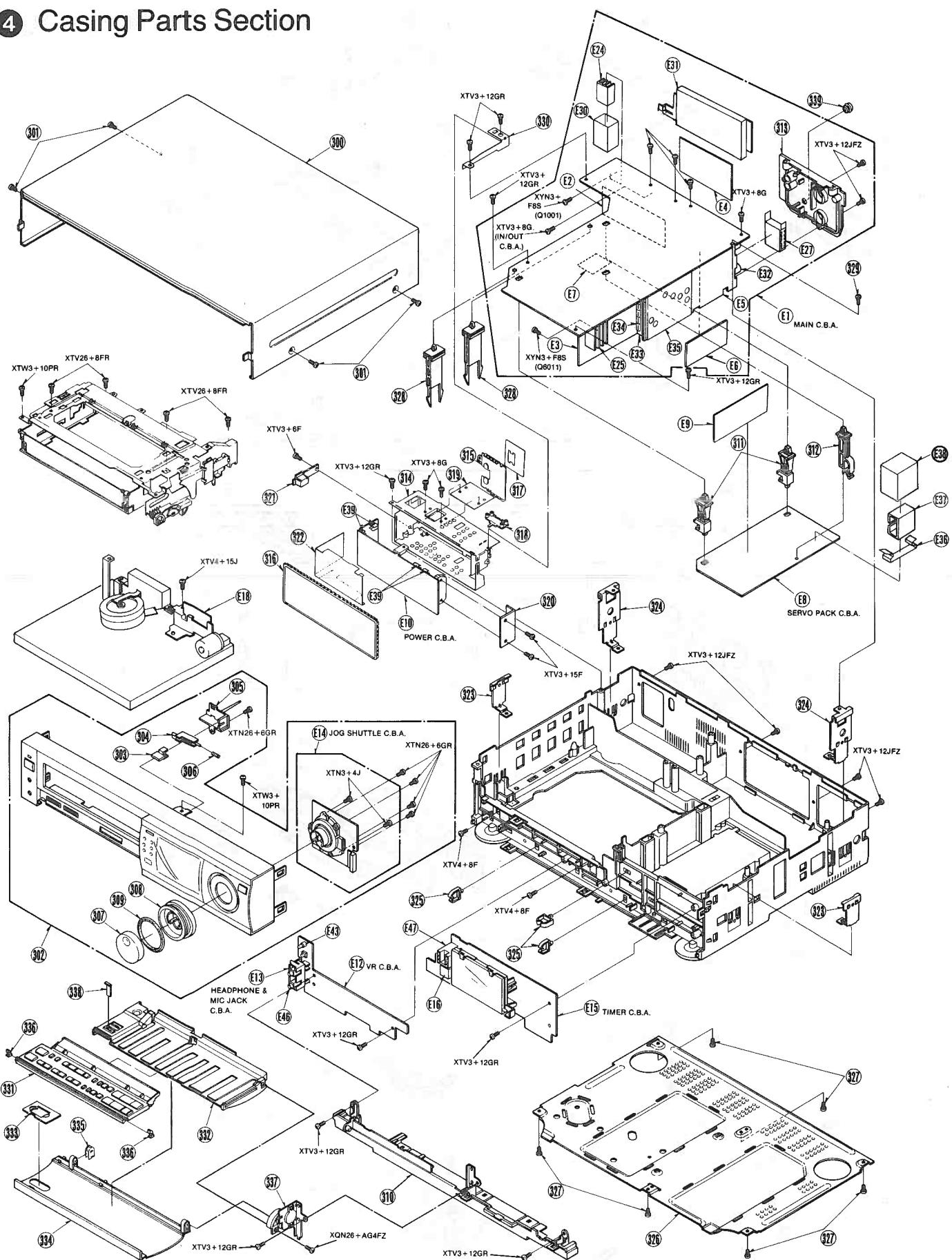
3-29. REMOTE CONTROLLER C.B.A. (VEP66102)

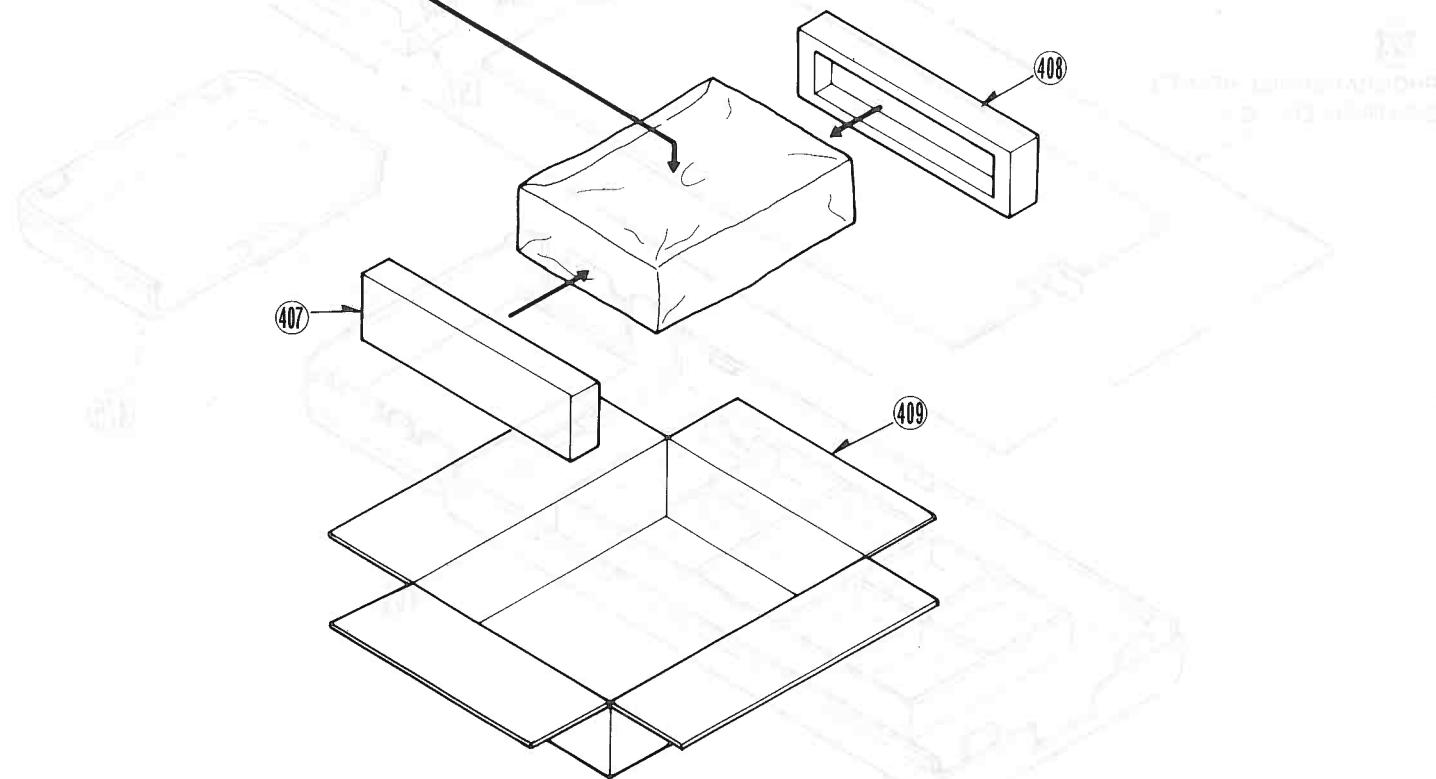
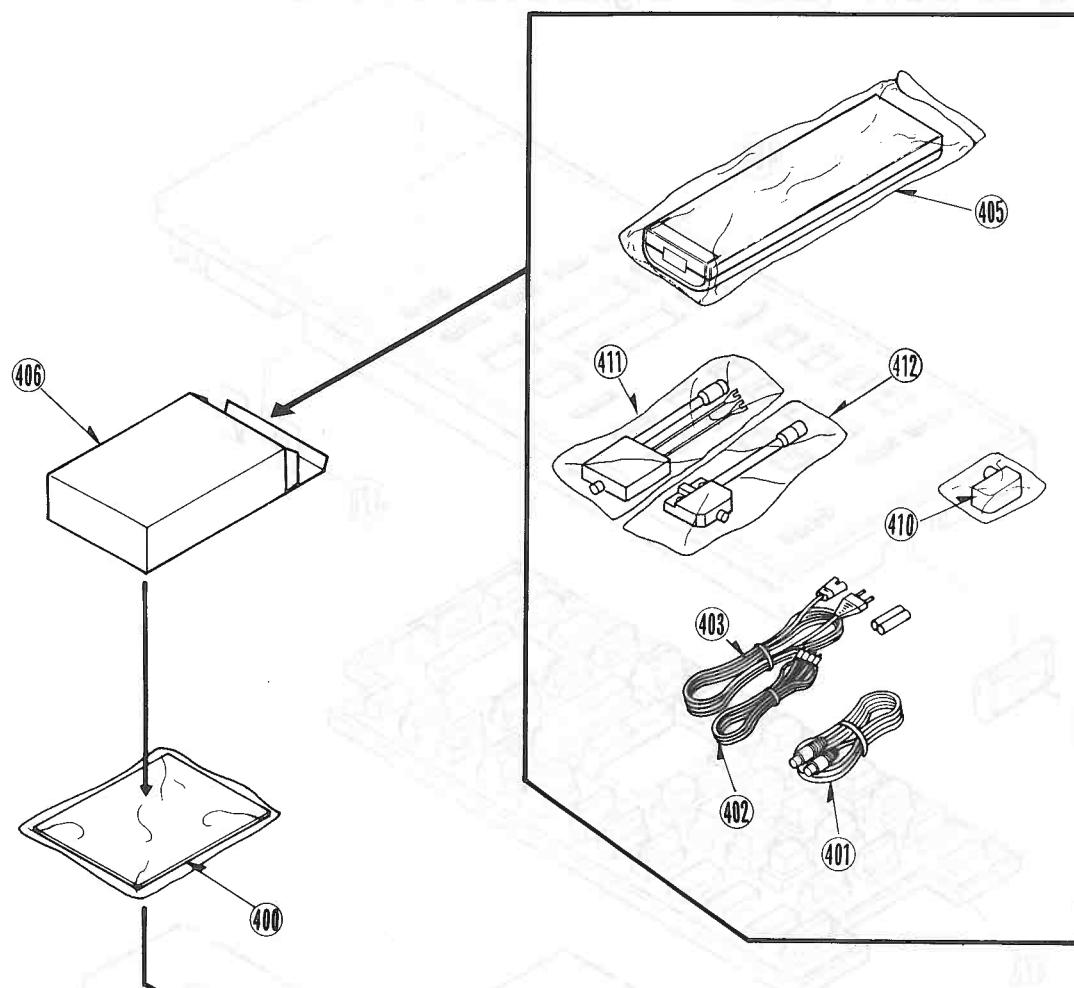


③ Cassette UP Mechanism Section

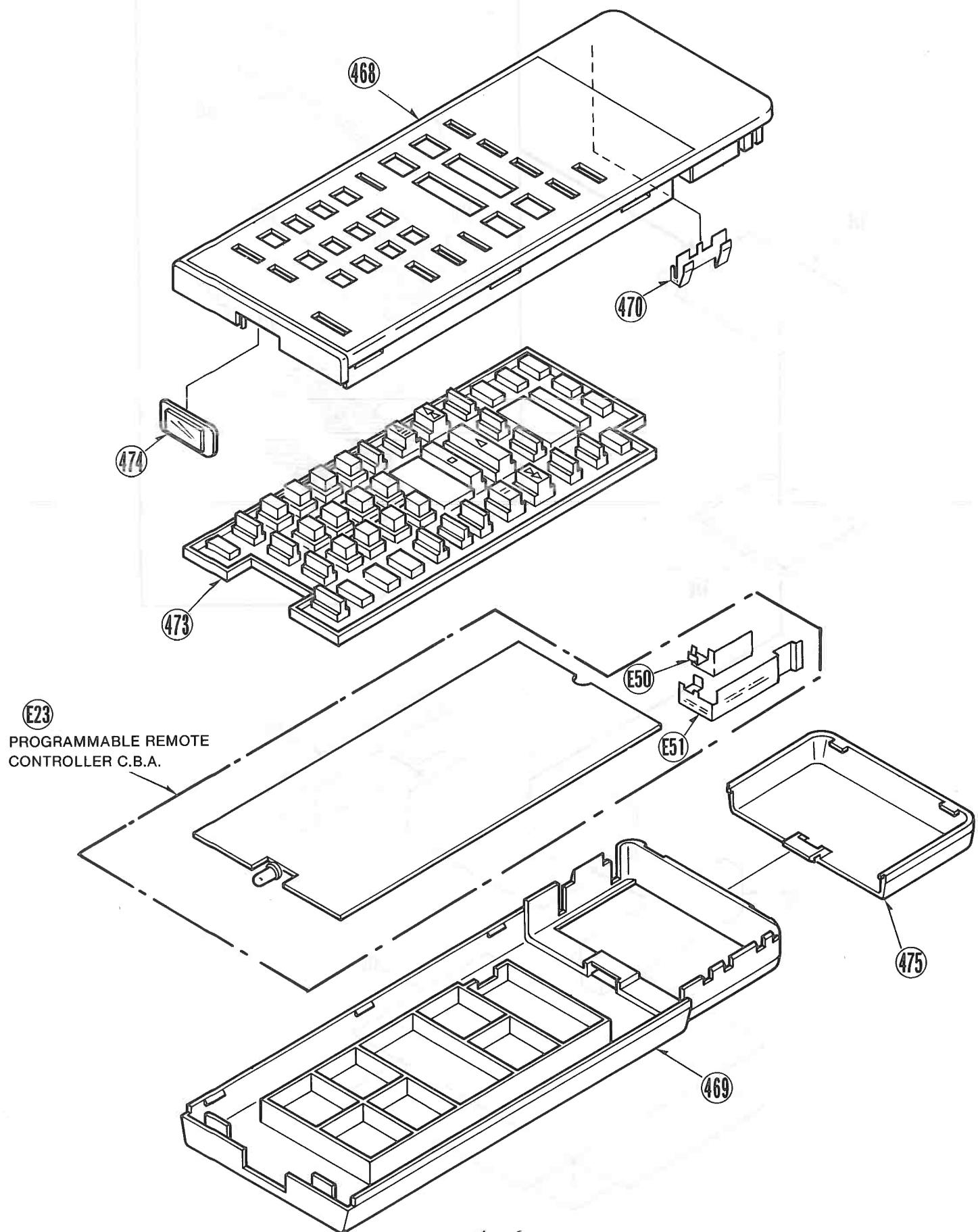


④ Casing Parts Section



⑤ Packing Parts Section

⑥ Remote Controller (Build in Digital Scanner) Unit



REPLACEMENT PARTS LIST

Notes:

1. Be sure to make your orders of replacement parts according to this list.
2. **IMPORTANT SAFETY NOTICE**
Components identified by "Δ" have special characteristics important for safety. When replacing any of these components, use only the original ones. Meaning of symbol Δ on this parts list is exactly the same as symbol Δ on Schematic and Circuit Board Diagrams.
3. Unless otherwise specified:
All resistors are in OHMS (Ω), K=1,000Ω, M=1,000 kΩ.
4. ITEM NUMBERS WITH CAPITAL LETTER E (Example: E1, E2,...) in Ref. No. column mean that the parts are listed with the E item numbers in the exploded views.
5. The main assembled parts are shown below C.B.A. marked with "■".
6. When ordering parts, use part No. only from Part No. column.
7. Printed circuit board assembly with mark (NLA) is no longer available after discontinuation of the product.

MECHANICAL REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1(1)	VHD0418	HEAD AMP SET SCREW	2	
2(1)	VMA6897	HEAD AMP MOUNT ANGLE (L)	1	
3(1)	VXA3520	LED HOLDER UNIT	1	
4(1)	VHD0342	CYLINDER SCREW	3	
5(1)	VXA2702	EARTH PLATE UNIT	1	
6(1)	VEG0713	CYLINDER UNIT	1	<1><R><M>
7(1)	VFH0338	UPPER CYLINDER UNIT	1	<R><M>
8(1)	VRH0015	HEATER	1	<R>
9(1)	VMA6884	MAIN HOLDER	1	
10(1)	VSC2188	CYLINDER C.B.A. SHIELD PLATE	1	
11(1)	VXL1855	TENSION ARM (1) UNIT	1	
12(1)	VMB1563	TENSION SPRING	1	
13(1)	VXZ0267	TENSION BAND UNIT	1	<R><M>
14(1)	VR0179	SUPPLY REEL TABLE UNIT	1	<R><M>
15(1)	VMX1171	REEL WASHER (0.5mm)	2	<R>
15(1)	VMX1239	REEL WASHER (0.3mm)	2	<R>
15(1)	VMX1238	REEL WASHER (0.2mm)	2	<R>
17(1)	VBS0038	FE HEAD	1	<R><M>
18(1)	VMD1316	TENSION SPRING HOOK	1	
19(1)	VMA6895	MOUNT ANGLE (L)	1	
20(1)	VMX1079	CUT WASHER	1	
23(1)	VES0486	SAFETY SW	1	<R>
24(1)	VXZ0259	SUPPLY MAIN BRAKE UNIT	1	<R><M>
25(1)	VXZ0274	SUPPLY SOFT BRAKE(1)UNIT	1	<R><M>
26(1)	VMB1564	SUPPLY SOFT BRAKE SPRING	1	
27(1)	VXZ0262	TAKE UP MAIN BRAKE UNIT	1	<R><M>
28(1)	VMA7829	REINFORCEMENT PLATE (F)	1	
29(1)	VMA7830	REINFORCEMENT PLATE (R)	1	
30(1)	VMA6896	MOUNT ANGLE (R)	1	
31(1)	VHD0322	ADJUST SCREW	1	
32(1)	VMB1251	ADJUST SPRING	1	
33(1)	VHD0089B	AZIMUTH ADJUST SCREW	1	
34(1)	VR0132	A/C HEAD	1	<R><M>
35(1)	VHN0063	M4 NYLON NUT	1	
36(1)	VHN0110	ADJUST NUT	1	
37(1)	VMA7831	HEAD BASE	1	
38(1)	VMB1567	A/C HEAD SPRING	1	
39(1)	VXL1910	SUB LOADING ARM (1) UNIT	1	
40(1)	VMB1566	SUB POST SPRING	1	
41(1)	VXQ0006	THRUST SCREW UNIT	1	
42(1)	VHD0317	HOUSING SCREW	2	
43(1)	VMK1033	OIL SEAL	2	
44(1)	VMK1353	PINCH CAM CAP	1	
45(1)	VXL1858	PRESSURE ROLLER UNIT	1	<R><M>
46(1)	VMB1941	PIN PRESSURE SPRING	1	
47(1)	VML2232	PINCH PRESSURE ARM	1	
48(1)	VMB1569	PINCH PRESSURE ARM RELEASE	1	
		SPRING		
49(1)	VML1874	PINCH LIFT ARM	1	
50(1)	VDG0597	P5 PULL OUT SECTOR GEAR	1	
51(1)	VDG0421	PINCH CAM	1	
52(1)	VHN0023	M3 NYLON NUT	1	
53(1)	VXL1485	P5 UNIT	1	
54(1)	VMB1554	P5 SPRING	1	
55(1)	VSS0175	MODE SW	1	<R><M>
57(1)	VXP0863	ROLLER POST UNIT	1	
58(1)	VXA2729	INCLIND BASE (S)(1)UNIT	1	
59(1)	VHD0133	ROLLER POST SCREW	2	
60(1)	VMD0910	POST STOPPER	2	
61(1)	VXZ1094	ROLLER POST UNIT	1	
62(1)	VXA2686	INCLIND BASE(T)(1)UNIT	1	
63(1)	VXA2687	INCLIND ADJUST PLATE UNIT	1	
64(1)	VDC0483	PINCH SPEED DOWN GEAR	1	
65(1)	VDG0332	CONNECTION GEAR	1	
66(1)	VSJ0073	SOLENOID	1	<R>
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	<R><M>
71(1)	VR0176	TAKE UP REEL TABLE UNIT	1	<R><M>
72(1)	VXD0101	HOUSING UNIT	1	
74(1)	VSC1843	HEAT SINK PLATE	1	
75(1)	VHD0329	HEAT SINK SCREW	1	
76(1)	VHD0374	HOUSING SCREW	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
77(1)	VHD0425	UPPER CYLINDER SCREW	2		159(2)	VWD0199	REVIEW CLUTCH TIMING BELT	1	
84(1)	VMX1088	SUPPLY UPPER LIMITER	1		160(2)	VML2200	REVIEW CONTROL LEVER	1	
85(1)	VDP1072	SUPPLY ROLLER	1		161(2)	VHD0431	STATOR SPACER SCREW	1	
86(1)	VMX1581	P1 COLLAR	1		162(2)	VHN0102	STATOR NUT	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		201(3)	VMA7223	TOP PLATE	1	
91(1)	VXA3518	MOTOR MOUNT PLATE UNIT	1		202(3)	VXA3765	CASSETTE HOLDER UNIT	1	
92(1)	VXA3517	WORM WHEEL BEARING UNIT	1		203(3)	VXA3766	HOLDER GUIDE (L) UNIT	1	
93(1)	VXA3701	TENSION PULLEY BASE (A)	1		208(3)	VXA3494	HOLDER ANGLE UNIT	1	
		UNIT			209(3)	VMA8036	CASSETTE HOLDER	1	
94(1)	VXA3564	REEL MOTOR BRACKET UNIT	1		210(3)	VML1882	OPENER LEVER	1	
95(1)	VXP1047	WORM GEAR UNIT	1		212(3)	VMB1584	OPENER LEVER SPRING	1	
96(1)	VEM0320	REV MOTOR	1	<!><R><M>	213(3)	VMD1352	HOLDER GUIDE (R)	1	
97(1)	VMX1535	WORM WASHER	1		214(3)	VMB1576	RELEASE SPRING	1	
98(1)	VWJ15TWO60M	FLEXIBLE CADE	1	<R>	215(3)	VML1881	RELEASE LEVER	1	
					216(3)	VXA2676	SIDE PLATE (L) UNIT	1	
					217(3)	VMD0917	SIDE PLATE (L)	1	
					218(3)	VML1880	OPENER LEVER	1	
100(2)	VMX1079	CUT WASHER	8		219(3)	VXA3495	SIDE PLATE (R) UNIT	1	
101(2)	VMB1883	SUB LEVER SPRING	1		221(3)	VXA3498	SLIDE SW UNIT	1	<R>
103(2)	VXA3510	SUB LEVER UNIT	1		229(3)	VXP0987	MAIN SHAFT UNIT	1	
104(2)	VXL1853	MAIN LEVER	1		230(3)	VMB1836	SUB WIPER SPRING (L)	1	
105(2)	VXL1873	SS BRAKE ARM UNIT	1		231(3)	VML1878	SUB WIPER ARM	1	
106(2)	VMB1588	SS BRAKE SPRING	1		232(3)	VML1879	SUB WIPER ARM (R)	1	
107(2)	VXA3512	SS BRAKE BASE (1) UNIT	1		233(3)	VMB1837	SUB WIPER SPRING (R)	1	
108(2)	VXA3516	TENSION ROLLER UNIT	1		234(3)	VMA6900	CASSETTE GUIDE	1	
109(2)	VXL1632	C/WM FOLLOWER ARM UNIT	1		235(3)	VKF0996	BLINDER PANEL	1	<R>
110(2)	VNL1861	DETENT ARM	1		236(3)	VMB1258	BLINDER SPRING	1	
111(2)	VDG0574	MAIN CAM GEAR	1		240(3)	VMA7224	CASSETTE HOLDER ANGLE	1	
112(2)	VDG0343	SUB CAM GEAR	1		241(3)	VMA7999	CASSETTE STOPPER ANGLE	1	
113(2)	VDG0348	CENTER GEAR	1						
114(2)	VDG0422	RETAINER GEAR	1						
115(2)	VDG0345	PLANET GEAR	3						
116(2)	VDG0547	CLUTCH DISK	1						
117(2)	VMB1558	CLUTCH SPRING	1						
118(2)	VDG0350	LOCK SLIDE GEAR	1						
119(2)	VDG0335	DRIVE DISK	1						
120(2)	VDG0342	RING GEAR	1						
121(2)	VMX0967	CUT WASHER	2						
122(2)	VML1859	CHANGE LEVER	1						
123(2)	VXA2672	RELEASE LEVER (1) UNIT	1						
124(2)	VMB1557	RELEASE SPRING	1						
125(2)	VML1860	RELEASE LEVER	1						
127(2)	VXP1031	TAKE UP REEL GEAR UNIT	1						
128(2)	VXP0981	SUPPLY REEL GEAR UNIT	1						
129(2)	VML1658	RETURN LEVER (R)	1						
130(2)	VML1857	RETURN LEVER (L)	1						
131(2)	VMD0913	STOPPER BASE	1						
132(2)	VWD0169	TIMING BELT	1	<R><M>					
133(2)	VXP0777	ROTOR UNIT	1	<R><M>					
135(2)	VEK4097	STATOR UNIT	1	<!><R>					
136(2)	VMA6847	SUB PLATE	1						
137(2)	VXP1050	CENTER PULLEY UNIT	1						
138(2)	VDG0564	LOADING GEAR (T)	1						
139(2)	VMB1555	LOADING SPRING (T)	1						
140(2)	VXL1489	LOADING ARM (T)(1) UNIT	1						
141(2)	VXA3515	SECTION GEAR UNIT	1						
142(2)	VDG0516	LOADING CAM GEAR	1						
143(2)	VDG0419	LOADING GEAR (S)	1						
144(2)	VML2266	PLAY CONTROL ARM	1						
145(2)	VXL1487	LOADING ARM (S)(1) UNIT	1						
146(2)	VDG0546	INTERMEDIATE GEAR	1						
147(2)	VXL1861	PLAY ARM UNIT	1						
148(2)	VBK0048	FG HEAD	1						
149(2)	VMB1746	LOADING SPRING(S)	1						
151(2)	VXP1029	REVIEW CLUTCH UNIT	1						
152(2)	VXP1030	TENSION RELEASE CLUTCH UNIT	1						
153(2)	VXL1851	REVIEW ARM UNIT	1						
154(2)	VML2197	TENSION RELEASE LEVER	1						
155(2)	VMX1536	CUT WASHER	1						
156(2)	VML2233	SUB CAM FOLLOWER	1						
157(2)	VMX1495	RUBBER STOPPER	1						
158(2)	VDG0517	SUB LEVER CAM	1						

ELECTRICAL REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
400(5)	VQT3209	OPERATING INSTRUCTIONS	1	<!>(R)
401(5)	VJA0322	ANTENNA CABLE	1	
402(5)	VJA0231	AUDIO CABLE	1	
403(5)	VJA0488	AC CORD	1	<!>(R)
405(5)	VEQ0963	REMOTE CONTROLLER UNIT	1	(R)
406(5)	VPK0834	ACCESSORIES PACKING	1	
407(5)	VPN2348	CUSHION (L)	1	(R)
408(5)	VPN2349	CUSHION (R)	1	(R)
409(5)	VPG4726	PACKING	1	(R)
410(5)	VSQ0057	ANTENNA ADAPTOR	1	
411(5)	VSQ0702	U/V SPLITTER	1	
412(5)	VSQS0699	U/V MIXER	1	
468(6)	VVK2497	TOP COVER UNIT	1	(R)
469(6)	VKM1673	BOTTOM COVER	1	(R)
470(6)	VJRO497	ELECTRODE (COMMON)	1	
473(6)	VSP0457	RUBBER CONTACT (A)	1	(R)
474(6)	VKG0878	IR WINDOW	1	(R)
475(6)	VGF1202	BATTERY COVER	1	(R)

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
E1	VEPO3599N	MAIN C.B.A.	1	(NLA) <R> INCLUDING THE LUMINANCE/CHROMINANCE C.B.A. (VEPO3654A), HI-HI AUDIO PACK (VEPO4242G), I/O PACK (VEPO4270B), TV DEMODU.PACK (VEPO7536E), DECODER PACK (VEPO7557A), SUB SYSTEM CONTROL C.B.A. (VEPO6584)
E2	VEPO3654A	LUMINANCE & CHROMINANCE C.B.A.	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN C.B.A.(VEPO3599N)
E3	VEPO4242G	HI-FI AUDIO PACK C.B.A.	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN C.B.A.(VEPO3599N)
E4	VEPO4270B	INPUT/OUTPUT C.B.A.	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN
E5	VEPO7536E	TV DEMODULATOR PACK C.B.A.	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN C.B.A. (VEPO3599N)
E6	VEPO7557A	DECODER PACK C.B.A	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN C.B.A. (VEPO3599N)
E7	VEPO6584A	SUB SYSTEM CONTROL C.B.A	1	(NLA) <R> PART LIST IS INCLUDED IN MAIN C.B.A. (VEPO3599N)
E8	VEPO2325E	SERVO PACK C.B.A.	1	(NLA) <R> INCLUDING THE SUB SERVO PACK C.B.A. (VEPO2334A)
E9	VEPO2334A	SUB SERVO PACK C.B.A.	1	(NLA) <R> PART LIST IS INCLUDED IN SERVO C.B.A(VEPO2325E)
E10	VEPO1375B	POWER C.B.A	1	(NLA) <R>
E11	VEPO5134E	HEAD AMP C.B.A.	1	(NLA) <R>
E12	VEPO6533G	VR (OPERATION) C.B.A	1	(NLA)<R> INCLUDED THE HEAD PHONE JACK C.B.A. (VEPO0M29A)
E13	VEPO0M29A	HEAD PHONE JACK C.B.A.	1	(NLA)<R> PART LIST IS INCLUDED IN VR C.B.P. (VEPO6533G)
E14	VEPO6537A	JOG/SHUTTLE C.B.A.	1	(NLA) <R>
E15	VEPO7527H	TIMER C.B.A.	1	(NLA) <R> INCLUDED THE IR RECIEVER C.B.A (VEPO6552A)
E16	VEPO6552A	IR RECIEVER C.B.A.	1	(NLA)<R> PART LIST IS INCLUDED IN TIMER C.B.A (VEPO7527H)
E17	VEPOOK88C	FE HEAD C.B.A.	1	(NLA) <R>

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
E18	VEPOOM86A	FG AMP C.B.A.	1	(NLA) <R>	C710	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
E19	VEPOON21A	CYLINDER DRIVE C.B.A.	1	(NLA) <R>	C716-20	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	5	
E20	VXA3553	MECHANISM CONNECTION (VENT FLEX)	1	(NLA) <R>	C721	ECEA1HKR27K	E. CAPACITOR 50V 0.27U	1	
E21	VXA3498	SLIDE SW UNIT	1	<R>	C722	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
E22	VEK3578	PHOTO TR(S) C.B.A.	1	(NLA) <R>	C723	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
E23	VEP66102A	REMOTE CONTROLLER C.B.A.	1	(NLA) <R>	C725	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
		MISCELLANEOUS			C728	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
F1101	XBA2C16TBO	FUSE 250V 1.6A	1	<!><R>	C730	ECEA1CK100	E. CAPACITOR 16V 10U	1	
F1102	XBA2C12TBO	FUSE 250V 1.2A	1	<!><R>	C731	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
	WVJ0357	FLEXIBLE CABLE 15P	1	<R>	C732	ECQV1H224B	P. CAPACITOR 50V 0.22U	1	
	WVJ0358	FLEXIBLE CABLE 18P	1	<R>	C734	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
					C735	ECUM1H050CCN	C. CAPACITOR CH 50V 5P	1	
					C736	ECQB1H153JH	P. CAPACITOR 50V 0.015U	1	
					C737	ECUM1H121JCN	C. CAPACITOR CH 50V 120P	1	
					C739	ECEA1HK010	E. CAPACITOR 50V 1U	1	
					C740	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
					C741	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C743	ECUM1H270JUSN	C. CAPACITOR CH 50V 27P	1	
					C744	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1	
					C745	ECUM1H470JPN	C. CAPACITOR CH 50V 47P	1	
					C746	ECUM1H100DCN	C. CAPACITOR CH 50V 10P	1	
					C748	ECEA1CK470U	E. CAPACITOR 16V 47U	1	
					C749	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C781	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
					C782	ECUM1H080DCN	C. CAPACITOR CH 50V 80P	1	
					C801	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
					C803	ECUM1H080DCN	C. CAPACITOR CH 50V 8P	1	
					C804	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
					C805	ECEAOJK221	E. CAPACITOR 6.3V 220U	1	
					C806	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
					C807	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C808	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1	
					C809	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
					C810	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	1	
					C811	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C812	ECEAOJK330	E. CAPACITOR 6.3V 33U	1	
					C813	ECQV1H224JZ	P. CAPACITOR 50V 0.22U	1	
					C814	ECUM1H471KBN	C. CAPACITOR CH 50V 470P	1	
					C816	ECUM1H271JCN	C. CAPACITOR CH 50V 270P	1	
					C817	ECEAOJK101U	E. CAPACITOR 6.3V 100U	1	
					C818	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
					C819	ECQV1H224JZ	P. CAPACITOR 50V 0.22U	1	
					C821	ECUM1H471KBN	C. CAPACITOR CH 50V 470P	1	
					C1001	ECEA1AK330	E. CAPACITOR 10V 33U	1	
					C1002	ECEAOJK471	E. CAPACITOR 6.3V 47U	1	
					C1003	EECS5R5V105	TRIMMER	1	
					C1004	ECEA1CK330	E. CAPACITOR 10V 33U	1	
					C1005	ECEA1CK330U	E. CAPACITOR 16V 33U	1	
					C1006	ECEA1CK470U	E. CAPACITOR 16V 47U	1	
					C1007,08	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2	
					C1009	ECEA1CK330U	E. CAPACITOR 16V 33U	1	
					C1011	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
					C2001,06	ECQB1H103JH	P. CAPACITOR 50V 0.01U	2	
					C3001	ECEA1CK470U	E. CAPACITOR 16V 47U	1	
					C3002	ECEAOJK102	E. CAPACITOR 6.3V 1000U	1	
					C3004	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
					C3005	ECEAOJK101U	E. CAPACITOR 6.3V 100U	1	
					C3006	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C3007	ECEAOJK470	E. CAPACITOR 6.3V 47U	1	
					C3008	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
					C3009	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
					C3010	ECUM1H820JCN	C. CAPACITOR CH 50V 82P	1	
					C3012	ECUM1H391KBN	C. CAPACITOR CH 50V 390P	1	
					C3013	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
					C3014	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
					C3017	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1	
					C3018	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	
					C3019	ECEA1HKR010	E. CAPACITOR 50V 1U	1	
					C3020	ECEA1CK100	E. CAPACITOR 16V 10U	1	
					C3021	ECKF1H1032F	C. CAPACITOR 50V 0.01U	1	
					C3022	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
					C3023	ECUM1H331KBN	C. CAPACITOR CH 50V 330P	1	
					C3024	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
					C3025	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1	
					C3026	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3028	ECEA1HK010	E.CAPACITOR 50V 1U	1		C4525	ECEA1CP2220	E.CAPACITOR 16V 22U	1	
C3029	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4526	VCEA1CAH101	E.CAPACITOR 16V 100U	1	
C3030	ECEA1HK010	E.CAPACITOR 50V 1U	1		C4527	VCEA1AAE101	E.CAPACITOR 10V 100U	1	
C3031	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4528	ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C3032	ECEAOJK470	E.CAPACITOR 6.3V 47U	1		C4529	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C3033	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4530	ECEA1CK470U	E.CAPACITOR 16V 47U	1	
C3034	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1		C4531	ECEA1EK3R3	E.CAPACITOR 25V 3.3U	1	
C3046	ERJ6GMYOR00	M.RESISTOR CH 1/10W 0.00	1		C4532	ECEA1CP2471	E.CAPACITOR 16V 470U	1	
C3047	ECEA1CK220	E.CAPACITOR 16V 22U	1		C4533	ECEA1CP2221	E.CAPACITOR 16V 220U	1	
C3051, 52	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	2		C4534	VCEA1AAH101	E.CAPACITOR 10V 100U	1	
C3053	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C4535	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3055	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1		C4536	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C3901	ECEAOJK330	E.CAPACITOR 6.3V 33U	1		C4537	ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C4001	ECQB1H103JH	P.CAPACITOR 50V 0.01U	1		C4538	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4002	ECEA16M33	E.CAPACITOR 16V 33U	1		C4539	ECQB1H223JZ	P.CAPACITOR 50V 0.022U	1	
C4003	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C4540-42	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C4004	ECQP1222JZ	P.CAPACITOR 0.0022U	1		C4551	ECEA1HB24R7	E.CAPACITOR 50V 4.7U	1	
C4005	ECCD2H121JZ	C.CAPACITOR 500V 120P	1		C4553	ECQB1H102JA	P.CAPACITOR 50V 1000P	1	
C4006	ECEA1CK470U	E.CAPACITOR 16V 47U	1		C4554	ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4007	ECEA1CK330U	E.CAPACITOR 16V 33U	1		C4555	ECQB1H682JA	P.CAPACITOR 50V 6800P	1	
C4008	ECEA1HK010	E.CAPACITOR 50V 1U	1		C4556	VCEA1EAE100	E.CAPACITOR 25V 10U	1	
C4009	ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1		C4557	ECQB1H223JA	P.CAPACITOR 50V 0.022U	1	
C4010	ECQB1H153JH	P.CAPACITOR 50V 0.015U	1		C4558	VCEA1EAE4R7	E.CAPACITOR 25V 4.7U	1	
C4011	ECQB1H273JH	P.CAPACITOR 50V 0.027U	1		C4559	VCEA1CAH470	E.CAPACITOR 16V 47U	1	
C4012	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4560	ECQB1H103JA	P.CAPACITOR 50V 0.01U	1	
C4013	ECUM1H471KBN	C.CAPACITOR CH 50V 470P	1		C4561	ECQB1H332JA	P.CAPACITOR 50V 3300P	1	
C4014	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1		C4562	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C4015	ECEA16M10	E.CAPACITOR 16V 10U	1		C4563, 64	ECUM1H102JN	C.CAPACITOR CH 50V 1000P	2	
C4016	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C4565	ECEA1HB23R3	E.CAPACITOR 50V 3.3U	1	
C4017	ECEA10M47	E.CAPACITOR 10V 47U	1		C4566	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4018	ECQB1H822JH	P.CAPACITOR 50V 8200P	1		C4567	ECEA1APZ101	E.CAPACITOR 10V 100U	1	
C4019	ECEA1CK100	E.CAPACITOR 16V 10U	1		C4568, 69	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4020	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C4570	ECEA1HP24R7	E.CAPACITOR 50V 4.7U	1	
C4021	ECEA1AK101	E.CAPACITOR 10V 100U	1		C4572	ECEA1HP23R3	E.CAPACITOR 50V 3.3U	1	
C4022	ECUM1H152KBN	C.CAPACITOR CH 50V 1500P	1		C4573	ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C4023	ECUM1H221JN	C.CAPACITOR CH 50V 220P	1		C4574, 75	ECEA1HK010	E.CAPACITOR 50V 1U	2	
C4024, 25	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2		C4901	VCEA1AAC101E	E.CAPACITOR 10V 100U	1	
C4026	VCDY1C104MR1	S.CAPACITOR 16V 0.1U	1		C4902	ECEA1CPZ101	E.CAPACITOR 16V 100U	1	
C4027	ECUM1H102JN	C.CAPACITOR CH 50V 1000P	1		C4903	VCEA1AAC101E	E.CAPACITOR 10V 100U	1	
C4029	ECQB1H183JH	P.CAPACITOR 50V 0.018U	1		C4905	ECEA1EPK4R7	E.CAPACITOR 25V 4.7U	1	
C4101	ECEA1APK101	E.CAPACITOR 10V 100U	1		C4907	VCEA1AAC101E	E.CAPACITOR 10V 100U	1	
C4103	ECEA1HPK010	E.CAPACITOR 50V 1U	1		C4950	ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C4104	ECEA1APK101	E.CAPACITOR 10V 100U	1		C4951	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4106	ECEA1APK470	E.CAPACITOR 10V 47U	1		C6001	ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C4107	ECEA1HPK010	E.CAPACITOR 50V 1U	1		C6002	VCDY1C104MR1	S.CAPACITOR 16V 0.1U	1	
C4108	ECEA1CK101	E.CAPACITOR 16V 100U	1		C6003	ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C4110, 11	ECEA1CK100	E.CAPACITOR 16V 10U	2		C6004	ECQV1H224JZ	P.CAPACITOR 50V 0.22U	1	
C4112	ECEAOJK101U	E.CAPACITOR 6.3V 100U	1		C6005	ECUM1H151KBN	C.CAPACITOR CH 50V 150P	1	
C4114, 15	ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2		C6006	ECEA1CK470U	E.CAPACITOR 16V 47U	1	
C4120	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1		C6007	ECKF1H103ZFN	C.CAPACITOR 50V 0.01U	1	
C4125	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1		C6008	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4126	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C6009	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4131	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1		C6010, 11	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C4132-34	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3		C6012	ECEA1AK330	E.CAPACITOR 10V 33U	1	
C4135-38	ECKF1H103ZFN	C.CAPACITOR CH 50V 0.01U	4		C6013, 14	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4501	ECEA1HBZ4R7	E.CAPACITOR 50V 4.7U	1		C6015	ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4503	ECQB1H102JA	P.CAPACITOR 50V 1000P	1		C6016	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4504	ECQB1H223JA	P.CAPACITOR 50V 0.022U	1		C6017	ECEAOJK470	E.CAPACITOR 6.3V 47U	1	
C4505	ECQB1H682JA	P.CAPACITOR 50V 6800P	1		C6018, 19	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C4506	VCEA1EAE100	E.CAPACITOR 25V 10U	1		C6020-23	ECUM1H271KBN	C.CAPACITOR CH 50V 270P	4	
C4507	ECQB1H223JA	P.CAPACITOR 50V 0.022U	1		C6024-28	ECUM1H221KBN	C.CAPACITOR CH 50V 220P	5	
C4508	VCEA1EAE4R7	E.CAPACITOR 25V 4.7U	1		C6029	ECEAJU1331	E.CAPACITOR 6.3V 330U	1	
C4509	VCEA1CAH470	E.CAPACITOR 16V 47U	1		C6030	ECEA1CU222	E.CAPACITOR 16V 2200U	1	
C4510	ECQB1H103JA	P.CAPACITOR 50V 0.01U	1		C6033	ECEA1CK330U	E.CAPACITOR 16V 33U	1	
C4511	ECQB1H332JA	P.CAPACITOR 50V 3300P	1		C6034	ECEAOJK101U	E.CAPACITOR 6.3V 100U	1	
C4512	ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1		C6037, 38	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C4513, 14	ECUM1H102JN	C.CAPACITOR CH 50V 1000P	2		C6039	ECEAOJK220	E.CAPACITOR 6.3V 22U	1	
C4515	ECEA1HBZ3R3	E.CAPACITOR 50V 3.3U	1		C6042	ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4516	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1		C6043-45	ECQV1H104JZ	P.CAPACITOR 50V 0.1U	3	
C4517	ECEA1APZ101	E.CAPACITOR 10V 100U	1		C7301	ECEA1CK101	E.CAPACITOR 16V 10U	1	
C4518, 19	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2		C7302	ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C4520	ECEA1HP24R7	E.CAPACITOR 50V 4.7U	1		C7303	ECQB1H223JH	P.CAPACITOR 50V 0.022U	1	
C4522	ECEA1HP23R3	E.CAPACITOR 50V 3.3U	1		C7304	ECEA1CK220	E.CAPACITOR 16V 22U	1	
C4523	ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1		C7305	ECEA1CK101	E.CAPACITOR 16V 100U	1	
C4524	ECEA1CK101	E.CAPACITOR 16V 100U	1		C7306	ECEA1HKN010	E.CAPACITOR 50V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7307	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1		D6033	MA723	DIODE	1	<R>
C7308	ECEA1HKN2R2	E. CAPACITOR 50V 2.2U	1		D7672	MA3300H	DIODE	1	<R>
C7309	ECEA1CK220	E. CAPACITOR 16V 22U	1						
C7310, 11	ECEA1CK100	E. CAPACITOR 16V 10U	2						
C7312	ECEA1CK220	E. CAPACITOR 16V 22U	1						
C7313, 14	ECQB1H273JH	P. CAPACITOR 50V 0.027U	2		DL801	VLD0072	DELAY LINE	1	
C7315	ECEA1CK470U	E. CAPACITOR 16V 47U	1						
C7316	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1						
C7317	ECFA1CK101	E. CAPACITOR 16V 100U	1						
C7318	ECEA1HKR22	E. CAPACITOR 50V 0.22U	1		FL301	ELB41L021	FILTER	1	
C7319	ECQB1H102JH	P. CAPACITOR 50V 1000P	1		FL302	VLF0721	FILTER	1	
C7320	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1		FL801	ELB4K052	FILTER	1	
C7321	ECEA1HKR47	E. CAPACITOR 50V 0.47U	1		FL802	VLF0330	FILTER	1	
C7322	ECQB1H103JH	P. CAPACITOR 50V 0.01U	1		FL4501, 02	VLF0406	FILTER	2	
C7323	ECEA1CK220	E. CAPACITOR 16V 22U	1		FL4503	VLF0696	FILTER	1	
C7324	ECEA1EK4R7	E. CAPACITOR 25V 4.7U	1						
C7325-27	ECEA1HKR47	E. CAPACITOR 50V 0.47U	3						
C7328	ECSF1CE335	T. CAPACITOR 16V 3.3U	1						
C7329	ECSF1CE105	T. CAPACITOR 16V 1U	1		IC301	VERFH03C	IC	1	<R>
C7330	ECEA1EK3R3	E. CAPACITOR 25V 3.3U	1		IC302	MSM6964-3RS	IC	1	<R>
C7331	ECSF1VE104	T. CAPACITOR 35V 0.1U	1		IC701	MS1366SP	IC	1	<R>
C7351	ECEA1CK100	E. CAPACITOR 16V 10U	1		IC801	VERFH04E	IC	1	<R>
C7352	ECEA1CKN100	E. CAPACITOR 16V 10U	1		IC3001	AN3396	IC	1	<R>
C7353	ECEA1CK100	E. CAPACITOR 16V 10U	1		IC3901	UPD4052BC	IC	1	<R>
C7354	ECUM1H22KRN	C. CAPACITOR CH 50V 2200P	1		IC4001	BA7766AS	IC	1	<R>
C7355, 56	ECEA1EK3R3	E. CAPACITOR 25V 3.3U	2		IC4101	RC4560DD	IC	1	<R>
C7357	ECEA1CK100	E. CAPACITOR 16V 10U	1		IC4501	BA7700K1	IC	1	<R>
C7358	ECEA1AK470U	E. CAPACITOR 10V 47U	1		IC4502	UPC78L05J	IC	1	<R>
C7651	ECEA1CKN100	E. CAPACITOR 16V 10U	1		IC4901	MC14052BCP	IC	1	<R>
C7653	ECQB1H332JH	P. CAPACITOR 50V 3300P	1		IC4902	RC4560DD	IC	1	<R>
C7668	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1		IC4903	UPC78L06J	IC	1	<R>
C7672	ECEA1HKS010	E. CAPACITOR 50V 1U	1		IC6001	MN188166VH	IC	1	<R>
					IC6002	MN1280R	IC	1	<R>
					IC6003	MC14011BCP	IC	1	<R>
					IC6004	LM339N	IC	1	<R>
					IC6005	AN6609	IC	1	<R>
					IC6006	LM393P	IC	1	<R>
					IC6007	MC14519BCP	IC	1	<R>
					IC7301	UPC1870CA001	IC	1	<R>
					IC7302	M5201L	IC	1	<R>
D301	ISS283	DIODE	1	<R>	J701	VJR0231	PACK PIN	1	
D302	MA73	DIODE	1	<R>	J702, 03	VJR0406	PACK PIN	2	
D303	MAA091M	DIODE	1	<R>	J704	VJR0231	PACK PIN	1	
D304	ISS283	DIODE	1	<R>					
D306	MA73	DIODE	1	<R>	L301	VLQEL05F151K	COIL	150UH	1
D601	MA165	DIODE	1	<R>	L302	VLQEL05F121K	COIL	120UH	1
D710	MA3100L	DIODE	1	<R>	L304	VLQEL05F181K	COIL	180UH	1
D771	MA151WK	DIODE	1	<R>	L305, 06	VLQEL05F101K	COIL	100UH	2
D772	MA165	DIODE	1	<R>	L308, 09	VLQEL05F101K	COIL	100UH	2
D801, 02	MA73	DIODE	2	<R>	L701	ELESP680KA	COIL	68UH	1
D803	MA165	DIODE	1	<R>	L711	ELQTR39XB	COIL		1
D1001	MA723	DIODE	1	<R>	L713	VLQ0213MR68	COIL		1
D1003, 04	MA723	DIODE	2	<R>	L714	VLQ0305J1R2	COIL	1.2UH	1
D1010, 11	MA165	DIODE	2	<R>	L715	VLQ0213K560T	COIL	56UH	1
D3002	MA165	DIODE	1	<R>	L717, 18	ELESP680KA	COIL	68UH	2
D3005	MA165	DIODE	1	<R>	L719	ELESP150KA	COIL	15UH	1
D3006	MA723	DIODE	1	<R>	L781	ELESP680KA	COIL	68UH	1
D3009	MA165	DIODE	1	<R>	L801	VLQEL05F470K	COIL	47UH	1
D4003	MA165	DIODE	1	<R>	L802-04	VLQEL05F101K	COIL	100UH	3
D4101	MA165	DIODE	1	<R>	L805	VLQEL05F331K	COIL	330UH	1
D4501	MA151WK	DIODE	1	<R>	L807	VLQEL05F221K	COIL	220UH	1
D4901	MA151WK	DIODE	1	<R>	L809	VLQEL05F220K	COIL	22UH	1
D4903	MA151K	DIODE	1	<R>	L3001	VLQEL05F101K	COIL	100UH	1
D4904	MA4062	DIODE	1	<R>	L3002	VLQEL05F181K	COIL	180UH	1
D4906, 07	MA151WA	DIODE	2	<R>	L3003	VLQEL05F220K	COIL	180UH	1
D4908	MA151K	DIODE	1	<R>	L3005	VLQEL05F101K	COIL	100UH	1
D6001	MA204WK	DIODE	1	<R>	L3006	VLQEL05F150K	COIL	15UH	1
D6003-06	MA165	DIODE	4	<R>	L3007	VLQEL05F470K	COIL	47UH	1
D6007	MA204WA	DIODE	1	<R>	L3008	VLQEL05F121K	COIL	120UH	1
D6009-14	MA165	DIODE	6	<R>	L3009, 10	VLQEL05F101K	COIL	100UH	2
D6016	MA165	DIODE	1	<R>					
D6017	MA4100M	DIODE	1	<R>					
D6019	MA204WA	DIODE	1	<R>					
D6021	MA206	DIODE	1	<R>					
D6024	MA4051L	DIODE	1	<R>					
D6025	AK04V2	DIODE	1	<R>					
D6026	MA165	DIODE	1	<R>					
D6027	MA4075M	DIODE	1	<R>					
D6029	MA204WK	DIODE	1	<R>					
D6031, 32	MA165	DIODE	2	<R>					

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R716	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1		R3012	ERJ6GMYJ182	M. RESISTOR CH 1/10W 1.8K	1	
R717	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1		R3013	ERJ6GMYJ181	M. RESISTOR CH 1/10W 180	1	
R718	ERJ6GEYJ754	M. RESISTOR CH 1/10W 750K	1		R3014,15	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	2	
R719,20	ERJ6GEYJ682	M. RESISTOR CH 1/10W 6.8K	2		R3016	ERJ6GMYJ271	M. RESISTOR CH 1/10W 270	1	
R721	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K	1		R3017	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	1	
R722	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K	1		R3018	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R723	ERJ6GEYJ183	M. RESISTOR CH 1/10W 180K	1		R3019	ERDS2TJ473	C. RESISTOR 1/4W 47K	1	
R724	ERDS2TJ101	C. RESISTOR 1/4W 100	1		R3020	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R725	ERJ6GEYJ182	M. RESISTOR CH 1/10W 1.8K	1		R3021	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1	
R726	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4.7K	1		R3022,23	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	2	
R727	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1		R3024	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R728	ERDS2TJ471	C. RESISTOR 1/4W 470	1		R3025,26	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	2	
R729,30	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	2		R3027	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R737	ERJ6GEYJ274	M. RESISTOR CH 1/10W 270K	1		R3028	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R738	ERJ6GEYJ334	M. RESISTOR CH 1/10W 330K	1		R3030	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R739	ERJ6GEYJ681	M. RESISTOR CH 1/10W 680	1		R3031	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R740	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1		R3032	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R741	ERJ6GEYJ562	M. RESISTOR CH 1/10W 5.6K	1		R3033	ERJ6GMYJ682	M. RESISTOR CH 1/10W 6.8K	1	
R743	ERJ6GEYJ470	M. RESISTOR CH 1/10W 47	1		R3034	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R744	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820	1		R3039	ERDS2TJ3R3	C. RESISTOR 1/4W 3.3	1	
R745	ERJ6GEYJ331	M. RESISTOR CH 1/10W 330	1		R3043	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	1	
R746	ERDS2TJ151	C. RESISTOR 1/4W 150	1		R3046	ERDS2TJ3R3	C. RESISTOR 1/4W 3.3	1	
R750	ERJ6GEYJ182	M. RESISTOR CH 1/10W 1.8K	1		R3047	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R757	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K	1		R3052	ERJ6GMYJ681	M. RESISTOR CH 1/10W 680	1	
R759	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1		R3061	ERJ6GMYJ331	M. RESISTOR CH 1/10W 330	1	
R763	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K	1		R3901,02	ERJ6GEYJ750	M. RESISTOR CH 1/10W 75	2	
R764	ERJ6GEYJ822	M. RESISTOR CH 1/10W 8.2K	1		R3904	ERJ6GEYJ750	M. RESISTOR CH 1/10W 75	1	
R772	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1		R4001	ERJ6GMYJ100	M. RESISTOR CH 1/10W 10	1	
R773	ERJ6GEYJ124	M. RESISTOR CH 1/10W 120K	1		R4002	ERJ6GMYJ153	M. RESISTOR CH 1/10W 15K	1	
R774	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1		R4003	ERJ6GMYJ203	M. RESISTOR CH 1/10W 2K	1	
R781	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270	1		R4004	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R782	ERJ6GEYJ391	M. RESISTOR CH 1/10W 390	1		R4005	ERDS2TJ562	C. RESISTOR 1/4W 5.6K	1	
R792	ERDS2TJ120	C. RESISTOR 1/4W 12	1		R4006	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R795	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	1		R4007	ERJ6GMYJ221	M. RESISTOR CH 1/10W 220	1	
R798,99	ERDS2TJ2R2	C. RESISTOR 1/4W 2.2	2		R4008	ERJ6GMYJ122	M. RESISTOR CH 1/10W 1.2K	1	
R801	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1		R4009	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R802	ERJ6GMYJ183	M. RESISTOR CH 1/10W 18K	1		R4010	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R804	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1		R4011	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R805	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1		R4012	ERJ6GMYJ331	M. RESISTOR CH 1/10W 330	1	
R806	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1		R4013	ERJ6GMYJ394	M. RESISTOR CH 1/10W 390K	1	
R808,09	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	2		R4014	ERJ6GMYJ822	M. RESISTOR CH 1/10W 8.2K	1	
R811	ERJ6GMYJ391	M. RESISTOR CH 1/10W 390	1		R4015	ERJ6GMYJ123	M. RESISTOR CH 1/10W 12K	1	
R812	ERJ6GMYJ271	M. RESISTOR CH 1/10W 270	1		R4016	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	1	
R813	ERJ6GMYJ122	M. RESISTOR CH 1/10W 1.2K	1		R4017	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R814	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1		R4018	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1	
R815	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1		R4019	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	1	
R817	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1		R4020	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R818	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1		R4021	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R819	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1		R4022	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R1002	ERDS2TJ271	C. RESISTOR 1/4W 270	1		R4023	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R1003	ERJ6GMYJ181	M. RESISTOR CH 1/10W 180	1		R4024,25	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	2	
R1004	ERDS2TJ333	C. RESISTOR 1/4W 33K	1		R4026	ERJ6GMYJ123	M. RESISTOR CH 1/10W 12K	1	
R1006	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1		R4027	ERJ6GMYJ153	M. RESISTOR CH 1/10W 15K	1	
R1007	ERJ6GMYJ912	M. RESISTOR CH 1/10W 9.1K	1		R4029	ERJ6GMYJ122	M. RESISTOR CH 1/10W 1.2K	1	
R1008	ERDS2TJ391	C. RESISTOR 1/4W 390	1		R4030	ERJ6GMYJ512	M. RESISTOR CH 1/10W 5.1K	1	
R1009	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	1		R4031	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R1010	EROS2CKG6801	M. RESISTOR 1/4W 6.8K	1		R4035	ERDS2TJ563	C. RESISTOR 1/4W 56K	1	
R1011	ERJ6GMYJ561	M. RESISTOR CH 1/10W 560	1		R4101	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R1012	ERG2ANJ681U	M. RESISTOR 2W 680	1		R4102	ERDS2TJ2R2	C. RESISTOR 1/4W 2.2	1	
R1013	ERG2ANJ821U	M. RESISTOR 2W 820	1		R4104	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R1014	ERX1S2TJ2R7	M. RESISTOR 1W 2.7	1		R4105	ERDS2TJ562	C. RESISTOR 1/4W 5.6K	1	
R2001	ERJ6GMYJ271	M. RESISTOR CH 1/10W 270	1		R4106	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R2002	ERJ6GMYJ563	M. RESISTOR CH 1/10W 56K	1		R4107	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R2005	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1		R4108	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R2006	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1		R4109	ERJ6GMYJ153	M. RESISTOR CH 1/10W 15K	1	
R2007	ERJ6GMYJ682	M. RESISTOR CH 1/10W 6.8K	1		R4110	EROS2CKG1603	M. RESISTOR 1/4W 160K	1	
R2008	ERDS2TJ3R3	C. RESISTOR 1/4W 3.3	1		R4111	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R2009	ERDS2TJ2R2	C. RESISTOR 1/4W 2.2	1		R4112	ERDS2TJ680	C. RESISTOR 1/4W 68	1	
R3001	ERDS2TJ471	C. RESISTOR 1/4W 470	1		R4113,14	ERJ6GMYJ563	M. RESISTOR CH 1/10W 56K	2	
R3002	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1		R4115	ERDS2TJ682	C. RESISTOR 1/4W 6.8K	1	
R3005	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1		R4116	ERJ6GMYJ272	M. RESISTOR CH 1/10W 2.7K	1	
R3006	ERDS2TJ332	C. RESISTOR 1/4W 3.3	1		R4117	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R3007,08	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	2		R4118	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1	
R3009	ERJ6GMYJ681	M. RESISTOR CH 1/10W 680	1		R4119,20	ERJ6GMYJ750	M. RESISTOR CH 1/10W 75	2	
R3011	ERJ6GMYOR00	M. RESISTOR CH 1/10W 0.00	1		R4121	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4501	ERJ6GMY6821	M. RESISTOR CH 1/10W 820	1	
R4502	ERJ6GMY681	M. RESISTOR CH 1/10W 680	1	
R4503	ERJ6GMY6821	M. RESISTOR CH 1/10W 820	1	
R4504	VRE0034E112	RESISTOR 1/4W 1.1K	1	
R4505	ERJ6GMY103	M. RESISTOR CH 1/10W 10K	1	
R4506	ERJ6GMY183	M. RESISTOR CH 1/10W 18K	1	
R4507	ERJ6GMY562	M. RESISTOR CH 1/10W 5.6K	1	
R4508	ERJ6GMY104	M. RESISTOR CH 1/10W 100K	1	
R4510	ERJ6GMY561	M. RESISTOR CH 1/10W 560	1	
R4511	ERJ6GMY303	M. RESISTOR CH 1/10W 30K	1	
R4512	VRE0034E123	RESISTOR	1	
R4513	ERJ6GMY103	M. RESISTOR CH 1/10W 10K	1	
R4514	ERJ6GMY331	M. RESISTOR CH 1/10W 330	1	
R4515	ERJ6GMY223	M. RESISTOR CH 1/10W 22K	1	
R4516	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R4517	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	1	
R4518	ERJ6GMYJ822	M. RESISTOR CH 1/10W 8.2K	1	
R4519	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R4520	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R4521	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R4522	ERJ6GMYJ225	M. RESISTOR CH 1/10W 2.2M	1	
R4523	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1	
R4525, 26	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	2	
R4527	VRE0034E104	RESISTOR	1	
R4528	VRE0034E393	RESISTOR 1/4W 39K	1	
R4529	ERJ6GEY123	M. RESISTOR CH 1/10W 12K	1	
R4530	ERJ6GMYJ334	M. RESISTOR CH 1/10W 330K	1	
R4533	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R4534	VRE0034E152	RESISTOR	1	
R4535	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R4536	ERJ6GMYJ182	M. RESISTOR CH 1/10W 1.8K	1	
R4537	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R4538	ERJ6GMY0R00	M. RESISTOR CH 1/10W 0.00	1	
R4539	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K	1	
R4540	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R4541	ERJ6GMYJ821	M. RESISTOR CH 1/10W 820	1	
R4551	ERJ6GMY621	M. RESISTOR CH 1/10W 820	1	
R4552	ERJ6GMY681	M. RESISTOR CH 1/10W 680	1	
R4553	ERJ6GMY6821	M. RESISTOR CH 1/10W 820	1	
R4554	VRE0034E112	RESISTOR 1/4W 1.1K	1	
R4555	ERJ6GMY103	M. RESISTOR CH 1/10W 10K	1	
R4556	ERJ6GMY183	M. RESISTOR CH 1/10W 18K	1	
R4557	ERJ6GMY562	M. RESISTOR CH 1/10W 5.6K	1	
R4558	ERJ6GMY104	M. RESISTOR CH 1/10W 100K	1	
R4560	ERJ6GMY561	M. RESISTOR CH 1/10W 560	1	
R4561	ERJ6GMY303	M. RESISTOR CH 1/10W 30K	1	
R4562	VRE0034E103	RESISTOR 1/16W 10K	1	
R4563	VRE0034E49B	RESISTOR 1/4W 49	1	
R4564	ERJ6GMYJ331	M. RESISTOR CH 1/10W 330	1	
R4565	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	1	
R4566	ERJ6GMYJ182	M. RESISTOR CH 1/10W 1.8K	1	
R4567	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	1	
R4568	ERJ6GMYJ822	M. RESISTOR CH 1/10W 8.2K	1	
R4569	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R4570, 71	ERJ6GMYJ682	M. RESISTOR CH 1/10W 6.8K	2	
R4572	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R4573	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R4575	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R4576	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R4577	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R4901, 02	ERJ6GEYJ561	M. RESISTOR CH 1/10W 560	2	
R4905-08	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K	4	
R4910	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K	1	
R4912	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K	1	
R4913	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R4914, 15	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K	2	
R4916, 17	ERJ6GEYJ564	M. RESISTOR CH 1/10W 560K	2	
R4918	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R4920-22	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	3	
R4923	ERJ6GEYJ124	M. RESISTOR CH 1/10W 120K	1	
R4930	ERDS2TJ272	C. RESISTOR 1/2W 2.7K	1	
R4931	ERJ6GEYJ564	M. RESISTOR CH 1/10W 560K	1	
R4933, 34	ERJ6GEYJ102	M. RESISTOR CH 1/10W 1K	2	
R4935	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R4936	ERJ6GEYJ563	M. RESISTOR CH 1/10W 56K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R4937	ERJ6GEYJ564	M. RESISTOR CH 1/10W 560K	1	
R4950, 51	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	2	
R6001	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470	1	
R6002	ERDS2TJ223	C. RESISTOR 1/4W 22K	1	
R6003	ERDS2TJ562	C. RESISTOR 1/4W 5.6K	1	
R6004	ERDS2TJ332	C. RESISTOR 1/4W 3.3K	1	
R6005	ERDS2TJ152	C. RESISTOR 1/4W 1.5K	1	
R6006	ERDS2TJ332	C. RESISTOR 1/4W 3.3K	1	
R6007	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R6008	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6009	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R6010, 11	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	2	
R6016	ERJ6GMYJ271	M. RESISTOR CH 1/10W 270	1	
R6017	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R6018	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R6019	ERJ6GMYJ121	M. RESISTOR CH 1/10W 120	1	
R6020	ERGS2SJ180	M. RESISTOR 2W 18	1	
R6021	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6023	ERD2FCVG220	C. RESISTOR 2W 22	1	<1><R>
R6024	ERJ6GMYJ121	M. RESISTOR CH 1/10W 120	1	
R6025	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R6026	ERJ6GMYJ183	M. RESISTOR CH 1/10W 18K	1	
R6027	ERJ6GMYJ474	M. RESISTOR CH 1/10W 470K	1	
R6029	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R6030	ERJ6GMY103	M. RESISTOR CH 1/10W 10K	1	
R6031	ERJ6GMY153	M. RESISTOR CH 1/10W 15K	1	
R6032	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R6033	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R6034	ERDS2TJ103	C. RESISTOR 1/4W 10K	1	
R6035	ERBS30JR90	M. RESISTOR 1/4W 0.9	1	
R6036	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R6038	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	1	
R6039, 40	ERJ6GMYJ182	M. RESISTOR CH 1/10W 1.8K	2	
R6041	ERJ6GMYJ561	M. RESISTOR CH 1/10W 560	1	
R6042	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	
R6043, 44	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R6045, 46	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	2	
R6047	ERDS2TJ332	C. RESISTOR 1/4W 3.3K	1	
R6048, 49	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	2	
R6050	ERDS2TJ103	C. RESISTOR 1/4W 10K	1	
R6051, 52	ERJ6GMYJ564	M. RESISTOR CH 1/10W 560K	2	
R6054	ERJ6GMYK395	M. RESISTOR CH 1/10W 3.9M	1	
R6055	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R6056	ERJ6GMYJ124	M. RESISTOR CH 1/10W 120K	1	
R6057	ERJ6GMYJ153	M. RESISTOR CH 1/10W 15K	1	
R6058	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	1	
R6059	ERJ6GMYJ153	M. RESISTOR CH 1/10W 15K	1	
R6060	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	1	
R6061	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R6062, 63	ERJ6GMYJ564	M. RESISTOR CH 1/10W 560K	2	
R6064-66	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	3	
R6067	ERJ6GMYJ154	M. RESISTOR CH 1/10W 150K	1	
R6068	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	1	
R6069	ERJ6GMYK395	M. RESISTOR CH 1/10W 3.9M	1	
R6071	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	1	
R6072	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R6073-75	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	3	
R6076	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R6077, 78	ERJ6GMYJ101	M. RESISTOR CH 1/10W 100	2	
R6079	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6080	ERJ6GMYJ681	M. RESISTOR CH 1/10W 680	1	
R6081, 82	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	2	
R6083	ERJ6GMYJ681	M. RESISTOR CH 1/10W 680	1	
R6084	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6085	ERJ6GMYJ184	M. RESISTOR CH 1/10W 180K	1	
R6087	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6088	ERJ6GMYJ184	M. RESISTOR CH 1/10W 180K	1	
R6089	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1	
R6090	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R6091	ERJ6GMYJ154	M. RESISTOR CH 1/10W 150K	1	
R6092	ERJ6GMYJ822	M. RESISTOR CH 1/10W 8.2K	1	
R6093	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1	
R6094-98	ERJ6GMYJ271	M. RESISTOR CH 1/10W 270	5	
R6099, 00	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K	2	
R6101	ERJ6GMYJ183	M. RESISTOR CH 1/10W 18K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks	Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2217	ECEA1CKN4R7	E. CAPACITOR 16V 4.7U	1						
C2218	ECPA1CK100	E. CAPACITOR 16V 10U	1						
C2219	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	1						
C2220	ECEAOJK470	E. CAPACITOR 6.3V 47U	1						
C2221	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1						
C2222	ECEA1CK100	E. CAPACITOR 16V 10U	1						
C2223	ECEAOJK470	E. CAPACITOR 6.3V 47U	1						
C2224	ECUM1H150JCN	C. CAPACITOR CH 50V 15P	1						
C2225	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1						
C2226	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1						
C2227, 28	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U	2						
C2229	ECEA1AK330	E. CAPACITOR 10V 33U	1						
C2230	ECEA1CU470	E. CAPACITOR 16V 47U	1						
C2231	VCYD1C333MR1	S. CAPACITOR 16V 0.033U	1						
C2232	ECEA1CK470U	E. CAPACITOR 16V 47U	1						
C2233-35	ECEA1HK2R2	E. CAPACITOR 50V 2.2U	3						
C2236	VCYD1C333MR1	S. CAPACITOR 16V 0.033U	1						
C2237-39	ECQB1H333JH	P. CAPACITOR 50V 0.033U	3						
C2240	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1						
C2241	ECQV1H474JZ	P. CAPACITOR 50V 0.47U	1						
C2242	ECQV1H473JZ	P. CAPACITOR 50V 0.047U	1						
C2243	ECEAOJK330	E. CAPACITOR 6.3V 33U	1						
C2244	ECSF1CE105	T. CAPACITOR 16V 1U	1						
C2245	ECEA0JK330	E. CAPACITOR 6.3V 33U	1						
C2246	ECEA1OM47	E. CAPACITOR 10V 47U	1						
C2247	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1						
C2248, 49	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	2						
C2250	ECQB1H223JH	P. CAPACITOR 50V 0.022U	1						
C2251	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1						
C2262	VCYD1C333MR1	S. CAPACITOR 16V 0.033U	1						
C2263	ECEA1HK3R3	E. CAPACITOR 50V 3.3U	1						
C2264	ECEA1EU221	E. CAPACITOR 25V 220U	1						
C2265	ECUM1H472KBN	C. CAPACITOR CH 50V 4700P	1						
C2266	ECEAOJK470	E. CAPACITOR 6.3V 47U	1						
C2267, 68	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	2						
C2269	ECQV1H104JZ	P. CAPACITOR 50V 0.1U	1						
D201-04	MA165	DIODE	4	<R>					
D2201-04	MA165	DIODE	4	<R>					
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D2212	MA165	DIODE	1	<R>					
D2215-17	MA165	DIODE	3	<R>					
IC201	LM358P	IC	1	<R>					
IC202	RZ4066BD	IC	1	<R>					
IC2201	AN3726K	IC	1	<R>					
IC2202	MN4013BS	IC	1	<R>					
IC2203	MN1280R	IC	1	<R>					
IC2204	MN4052BS	IC	1	<R>					
IC2205	MN6742VCNK	IC	1	<R>					
IC2206	BA6435S	IC	1	<R>					
L2201-03	VLQEL05F101K	COIL	100UH	3					
L2204	VLQEL05F1R0J	COIL	1UH	1					
P2201	VJP1245T	CONNECTOR(MALE)	5P	1					
P2202	VJS1666	CONNECTOR(FEMALE)	18P	1					
P2203	VJP1148	CONNECTOR(MALE)	2P	1					
Q201	2SD601	TRANSISTOR CHIP	1	<R>					
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Q2202	2SC2295	TRANSISTOR	1	<R>					
Q2203	2SD602	TRANSISTOR CHIP	1	<R>					
Q2204-09	2SD601	TRANSISTOR CHIP	6	<R>					
OR201	UN2213	TRANSISTOR-RESISTOR						1	<R>
OR2201,02	UN2117	TRANSISTOR-RESISTOR						2	<R>
OR2204-09	UN2213	TRANSISTOR-RESISTOR						6	<R>
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OR2214	UN2213	TRANSISTOR-RESISTOR						1	<R>
OR2215	UN2113	TRANSISTOR-RESISTOR						1	<R>
		RESISTORS							
R201,02	ERJ6GEYJ223	M. RESISTOR CH 1/10W 22K						2	
R203	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K						1	
R204	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K						1	
R205	ERJ6GEYJ222	M. RESISTOR CH 1/10W 2.2K						1	
R206	ERJ6GEYJ683	M. RESISTOR CH 1/10W 68K						1	
R207,08	ERJ6GEYJ183	M. RESISTOR CH 1/10W 180K						2	
R209	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K						1	
R210	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K						1	
R211	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K						1	
R212	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K						1	
R213	ERJ6GEYJ272	M. RESISTOR CH 1/10W 2.7K						1	
R214	ERJ6GEYJ684	M. RESISTOR CH 1/10W 680K						1	
R215	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K						1	
R216	ERJ6GEYJ183	M. RESISTOR CH 1/10W 180K						1	
R217	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K						1	
R218	ERJ6GEYJ183	M. RESISTOR CH 1/10W 180K						1	
R219	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K						1	
R220	ERJ6GEYJ221	M. RESISTOR CH 1/10W 220						1	
R221	ERJ6GEYJ333	M. RESISTOR CH 1/10W 33K						1	
R222	ERJ6GEYJ271	M. RESISTOR CH 1/10W 270						1	
R223	ERJ6GEYJ122	M. RESISTOR CH 1/10W 1.2K						1	
R2201	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K						1	
R2202	ERJ6GMYJ154	M. RESISTOR CH 1/10W 150K						1	
R2203	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K						1	
R2204	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K						1	
R2205	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K						1	
R2206	ERJ6GMYJ123	M. RESISTOR CH 1/10W 12K						1	
R2207	ERJ6GMYJ104	M. RESISTOR CH 1/10W 100K						1	
R2208	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K						1	
R2209	ERJ6GMYJ471	M. RESISTOR CH 1/10W 470						1	
R2210	ERJ6GMYJ154	M. RESISTOR CH 1/10W 150K						1	
R2211	ERJ6GMYJ823	M. RESISTOR CH 1/10W 82K						1	
R2212,13	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K						2	
R2214	ERJ6GMYJ272	M. RESISTOR CH 1/10W 2.7K						1	
R2215,16	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K						2	
R2217	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K						1	
R2218	ERJ6GMYJ224	M. RESISTOR CH 1/10W 220K						1	
R2219	ERJ6GMYJ024	M. RESISTOR CH 1/10W 620K						1	
R2220	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K						1	
R2221	ERJ6GMYJ224	M. RESISTOR CH 1/10W 220K						1	
R2222	ERJ6GMYJ824	M. RESISTOR CH 1/10W 820K						1	
R2223,24	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K						2	
R2225	ERJ6GMYJ124	M. RESISTOR CH 1/10W 120K						1	
R2226	ERJ6GMYJ821	M. RESISTOR CH 1/10W 820						1	
R2227	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K						1	
R2228	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K						1	
R2229-35	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K						7	
R2236	ERJ6GMYC362	M. RESISTOR CH 1/10W 3.6K						1	
R2237	ERJ6GMYG821	M. RESISTOR CH 1/10W 820						1	
R2238,39	ERDS2TJ330	C. RESISTOR 1/4W 33						2	
R2240	ERX12SJ47E	M. RESISTOR 1/2W 0.47						1	
R2241,42	ERDS2TJ330	C. RESISTOR 1/4W 33						2	
R2243	ERJ6GMYJ222	M. RESISTOR CH 1/10W 2.2K						1	
R2244	ERJ6GMYJ682	M. RESISTOR CH 1/10W 6.8K						1	
R2245	ERJ6GMYJ182	M. RESISTOR CH 1/10W 1.8K						1	
R2246	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K						1	
R2247	ERJ6GMYC334	M. RESISTOR CH 1/10W 330K						1	
R2248	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K						1	
R2249	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K						1	
R2250	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K						1	
R2251	ERJ6GMYJ151	M. RESISTOR CH 1/10W 150						1	
R2252	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K						1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R2253,54	ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	2	
R2255	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R2256	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2257	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R2258	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R2259	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2260	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2261	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2266	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2287	ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R2288	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2289	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2290	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2291	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2292	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
X2201	VSX0244	CRYSTAL OSCILATOR	1	<R>
		MISCELLANEOUS		
E36	VMC0075	HEAT SINK FIX SPRING	1	FOR IC2206
E37	VSC2734	HEAT SINK	1	FOR IC2206
E38	VM21352	HEAT SINK COVER	1	
		CAPACITORS		
C1101	ECQU2A33MN	P.CAPACITOR 100V 0.033U	1	<!><R>
C1102	VCC0027	C.CAPACITOR	1	<!><R>
C1109	ECEA2GG010	E.CAPACITOR 400V 1U	1	
C1110	ECQE6473JZ	P.CAPACITOR 630V 0.047U	1	
C1112	ECQP1H512GZ	P.CAPACITOR 50V 5100P	1	
C1113	ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C1114	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1115	ECQB1H103JZ	P.CAPACITOR 50V 0.01U	1	
C1116	ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1117	ECQP1H01T404	P.CAPACITOR 100V 100P	1	
C1118	ECEA1HGE101	E.CAPACITOR 50V 100U	1	
C1119,20	ECEA1DPS681X	E.CAPACITOR 20V 680U	2	
C1121	ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1122	ECEA1AFZ681X	E.CAPACITOR 10V 680U	1	
C1123	ECEA1HGE100	E.CAPACITOR 50V 10U	1	
C1124,25	ECEA1AGE101	E.CAPACITOR 10V 100U	2	
C1126	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1127	ECEAOJF2471	E.CAPACITOR 6.3V 470U	1	
C1128-31	ECKFIH103ZF	C.CAPACITOR 50V 0.01U	4	
C1132	ECEA1CGE100	E.CAPACITOR 16V 10U	1	
C1134,35	ECKFLIH103ZF	C.CAPACITOR 50V 0.01U	2	
C1139	ECEA1HFS100	E.CAPACITOR 50V 10U	1	
C1140,41	VCK0038		2	<!><R>
C1146-48	VCK0083		3	<!><R>
C1149	ECKFLH821KB	C.CAPACITOR 50V 820P	1	
C1152	VCK0038		1	
		MISCELLANEOUS		
D1101	ENB461D-05A	SURGE ABSORBER 460V	1	<!><R>
D1102	S1WBA60	DIODE	1	<!><R>
D1103	VSD0002	DIODE	1	<!><R>
D1104	AP01C	DIODE	1	<!><R>
D1105	1OE1S2TA1	DIODE	1	<R>
D1106	MA4030L	DIODE	1	<R>
D1107	MA165	DIODE	1	<R>
D1108	ERA22-02	DIODE	1	<R>
D1109	RL42PLF	DIODE	1	<R>
D1110	ERA22-02	DIODE	1	<R>
D1111	31DQ04FC6	DIODE	1	<R>

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D1112	ERB83-004117	DIODE	1	<R>
D1113	MA2200B	DIODE	1	<R>
D1114	MA4130L	DIODE	1	<R>
D1116,17	MA178	DIODE	2	<R>
D1119	MA178	DIODE	1	<R>
IC1101	STRD6004X	IC	1	<!><R>
IC1102	STR5391	IC	1	<!><R>
IC1103	SE013E	IC	1	<R>
L1101	ELF18D417	COIL	1	<!><R>
L1102	VLQ0335	COIL	1	
L1103-05	VLP0069	COIL	3	
P1101	VJP1394T	CONNECTOR (MALE)	1	
P1102	VJS2653	CONNECTOR (FEMALE)	1	
Q1101	PC817AD	TRANSISTOR	1	<!><R>
Q1102	2SD1996	TRANSISTOR	1	<R>
Q1103	2SD1992	TRANSISTOR	1	<R>
		RESISTORS		
R1101	ERC12ZGK685	SOLID 1/2W 6.8M	1	<!><R>
R1104	ERDS2TJ562	C.RESISTOR 1/4W 5.6K	1	
R1105	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1106	ERG3ANJ683	M.RESISTOR 3W 68K	1	
R1107	EROS2CKG2000	M.RESISTOR 1/4W 200	1	
R1108	ERD2FTVG102	C.RESISTOR 1/4W 1K	1	<!><R>
R1109	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R1110	ERG2SJ680	M.RESISTOR 2W 68	1	
R1111	ERG3SJ330H	M.RESISTOR	1	
R1113	ERG1SJ182E	M.RESISTOR 1W 1.8K	1	
R1114	ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R1120,21	ERDS2TJ102	C.RESISTOR 1/4W 1K	2	
R1122	ERG2SJ220	M.RESISTOR 2W 22	1	
R1123,24	ERDS2TJ474	C.RESISTOR 1/4W 470K	2	
R1125	ERW1PK2R2	W.RESISTOR 1/2W 2.2	1	<!><R>
R1128	ERDS2TJ271	C.RESISTOR 1/4W 270	1	
T1101	VLTO577	TRANSFORMER	1	<!><R>
		MISCELLANEOUS		
E39	VJF0318	FUSE HOLDER	4	<!><R>
■ VEPO5134E	HEAD AMP C.B.A.			
		CAPACITORS		
C501	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C502,03	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C504	ECEA1HK010	E.CAPACITOR 50V 1U	1	
C505	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C507,08	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C509	ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C510	ERJ6GMY0R00	M.RESISTOR CH 1/10W 0.00	1	
C511	ECUM1E4732FN	C.CAPACITOR CH 25V 0.047U	1	
C513	ECUM1E1042FN	C.CAPACITOR CH 25V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks	Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS								
E43	KL04	LED SPACER		1		D6701	PN323B	PHOTO DIODE		1	<R>
E44	VYCO160	REC VR PANEL UNIT		1		D7501	MA4068	DIODE		1	<R>
E45	VGU4495	REC VR KNOB		1		D7502,03	MA73	DIODE		2	<R>
E46	VJF0691	HEAD PHONE JACK UNIT		1		D7507	MA73	DIODE		1	<R>
						D7509	MA73	DIODE		1	<R>
						D7512,13	MA73	DIODE		2	<R>
						D7517	MA73	DIODE		1	<R>
						D7530	MA73	DIODE		1	<R>
						D7532-42	MA73	DIODE		11	<R>
						D7550,51	LN28RCPL	DIODE		2	<R>
						D7553	LN28RCPL	DIODE		1	<R>
						D7556	LN38CCPL	DIODE		1	<R>
						D7557	LN28RCPL	DIODE		1	<R>
						D7560	MA73	DIODE		1	<R>
D6701-03	LN38GCPP	LED		3	<R>						
P6701	VJS2621	CONNECTOR (FEMALE)		1							
QR6701	UN1112	TRANSISTOR-RESISTOR		1	<R>						
R6701	ERDS2TJ271	C. RESISTOR 1/4W 270		1							
R6702	EROS2CKG1002	M. RESISTOR 1/4W 10K		1							
R6703	EROS2CKG1802	M. RESISTOR 1/4W 18K		1							
R6704-06	EROS2CKG1801	M. RESISTOR 1/4W 1.8K		3							
R6707	EROS2CKG1002	M. RESISTOR 1/4W 10K		1							
R6708	ERDS2TJ681	C. RESISTOR 1/4W 680		1							
R6709	EROS2CKG9102	M. RESISTOR 1/4W 91K		1							
R6710	EROS2CKG1202	M. RESISTOR 1/4W 12K		1							
R6711	EROS2CKG6802	M. RESISTOR 1/4W 68K		1							
R6712	EROS2CKG3302	M. RESISTOR 1/4W 33K		1							
R6713	EROS2CKG5102	M. RESISTOR 1/4W 51K		1							
R6714	EROS2CKG1203	M. RESISTOR 1/4W 120K		1							
SW6701	EVOQS307K	SWITCH		1	<R>						
			MISCELLANEOUS								
E52	KL02	LED SPACER		1		P7501	VJS2651B013W	CONNECTOR (FEMALE)	13P	1	
E53	VSQ0651	JOG/SHUTTLE DIAL		1		P7502	VJS2651B012W	CONNECTOR (FEMALE)	12P	1	
						P7503	VJS2651B008W	CONNECTOR (FEMALE)	8P	1	
						P7505	VJS2357A020	CONNECTOR (FEMALE)		1	
						P7506	VJS2651B008W	CONNECTOR (FEMALE)	8P	1	
						P7507	VJP2621	CONNECTOR (MALE)		1	
						Q7501	2SD637	TRANSISTOR		1	(Q,R,S) <R>
						QR7501	UN2213	TRANSISTOR-RESISTOR		1	<R>
						QR7502	UN2112	TRANSISTOR-RESISTOR		1	<R>
						QR7503	UN2113	TRANSISTOR-RESISTOR		1	<R>
						QR7505	UN2111	TRANSISTOR-RESISTOR		1	<R>
						QR7510,11	UN2112	TRANSISTOR-RESISTOR		2	<R>
R6701	ECEAOJK470I	E. CAPACITOR 6.3V 47U		1		R6701	ERDS2TJ154	C. RESISTOR 1/4W 150K		1	
C6702	ECKF1H331KBA	C. CAPACITOR 50V 330P		1		R6702	ERDS2TJ8R2	C. RESISTOR 1/4W 8.2		1	
C6703	ECEA1HK010	E. CAPACITOR 50V 1U		1		R6703	ERDS2TJ103	C. RESISTOR 1/4W 10K		1	
C6704	ECEA1HK3R3I	E. CAPACITOR 50V 3.3U		1		R7501	ERJ6GEYJ122	M. RESISTOR CH 1/10W 1.2K		1	
C7501	ECRHA030F41	TRIMMER		1		R7502	ERJ6GEYJ224	M. RESISTOR CH 1/10W 220K		1	
C7502	ECUM1HO80DCN	C. CAPACITOR CH 50V 80P		1		R7503	ERJ6GEYJ221	M. RESISTOR CH 1/10W 220		1	
C7503	ECUM1H330JCN	C. CAPACITOR CH 50V 33P		1		R7504	ERDS2TJ101	C. RESISTOR 1/4W 100		1	
C7504	ECUM1H220JCN	C. CAPACITOR CH 50V 22P		1		R7505	ERDS2TJ104	C. RESISTOR 1/4W 100K		1	
C7505	ECEAOJK221	E. CAPACITOR 6.3V 220U		1		R7506	ERJ6GEYJ821	M. RESISTOR CH 1/10W 820		1	
C7506	ECUM1E1042FN	C. CAPACITOR CH 25V 0.1U		1		R7507	ERJ6GEYJ152	M. RESISTOR CH 1/10W 1.5K		1	
C7507	ECEA1HKR22	E. CAPACITOR 50V 0.22U		1		R7508-10	ERJ6GEYJ103	M. RESISTOR CH 1/10W 10K		3	
C7508	ECUM1H1032FN	C. CAPACITOR CH 50V 0.01U		1		R7511	ERJ6GEYJ332	M. RESISTOR CH 1/10W 3.3K		1	
C7509	ECQV1H104JZ	P. CAPACITOR 50V 0.1U		1		R7512	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K		1	
C7510	ECEAOJK470	E. CAPACITOR 6.3V 47U		1							
C7511	ECEA1HK4100	E. CAPACITOR 50V 10U		1							
C7512	ECUM1E1042FN	C. CAPACITOR CH 25V 0.1U		1							
C7513	ECUX1H560JCN	C. CAPACITOR CH 50V 56P		1							
C7514	ECUM1H101JCN	C. CAPACITOR CH 50V 100P		1							
C7520	ECEAOJK330	E. CAPACITOR 6.3V 33U		1							
C7521	ECUM1E1042FN	C. CAPACITOR CH 25V 0.1U		1							
C7522	ECUM1H223ZFN	C. CAPACITOR CH 50V 0.022U		1							

