ORDER NO. VRD9907M148

Service Manual

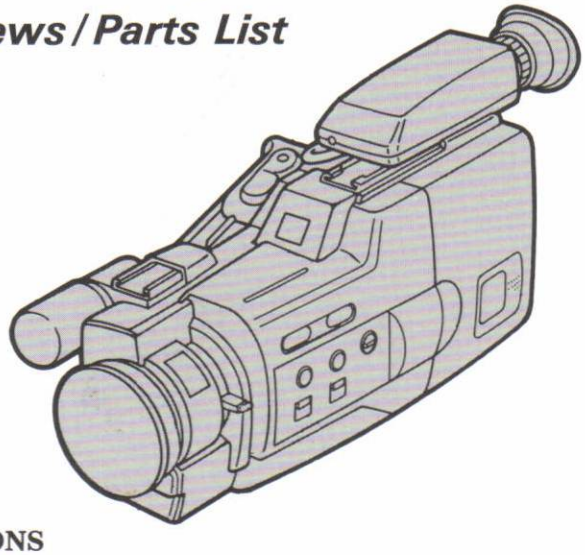
VHS-C Movie

Panasonic VHSC PAL

Hi-Fi HQ

NV-MC30 E/EP B/EW EG

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



SPECIFICATIONS

ITEM	SPECIFICATION	ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 9.6 V Consumption; Camera search mode; 10.5 W (Battery operation)	VIDEO	HEADS: 4 rotary heads, 1 flging erase head
			OUTPUT: 8 PIN CONNECTOR; 1.0 Vp-p 75Ω unbalanced
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL	AUDIO	HEAD: 4 rotary heads (Hi-Fi Audio) 1 Stationary head (Normal Audio)
Hi-Fi AUDIO RECORDING SYSTEM	4 rotary heads, helical scanning system		INPUT: MIC IN (M3); −70 dB, 4.7 kΩ unbalanced
			OUTPUT: 8 PIN CONNECTOR; −8 dB 600Ω unbalanced
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7 mm)	WEIGHT	Approx. 1.4 kg (without Battery Pack)
TAPE SPEED	SP mode: 23.39 mm/s LP mode: 11.70 mm/s Record/Playback Time SP mode: 30 min. with NV-EC30HG LP mode: 60 min. with NV-EC30HG FF/REW Time less than 3 min. with NV-EC30HG	DIMENSIONS	125(W) × 159(H) × 283(D) mm
		STANDARD ACCESSORIES	1 pc. AV Output Cable 1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Shoulder Strap 1 pc. Battery for Clock & VHS-C Adaptor 1 pc. VHS-C Cassette Adaptor 1 pc. VHS-C Cassette Tape 1 pc. System Case (NV-MC30B/EP ONLY) 1 pc. Earphone 1 pc. DC Input Cable 1 pc. RF Adaptor (NV-MC30B ONLY) 1 pc. RF Cable (NV-MC30B ONLY)
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)		
	STANDARD ILLUMINATION: 1,400 lux		
	MINIMUM REQUIRED ILLUMINATION: 10 lux		
	LENS: Built-in 6 : 1, Power Zoom Lens with MACRO Function, Auto Iris, Auto Focus System, F1.2 (9~54 mm), Lens Front Diameter/φ49 mm		
	VIEW FINDER: 2/3″ Electric View Finder		

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

Panasonic

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INTRODUCTION

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

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

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

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

Section 3 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...

Section 4 contains exploded views and parts list.

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

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

CONTENTS

SECTION 4 EXPLODED VIEWS & PARTS LIST

Technical Information

Service Caution

1. Servicing the VTR Section

When servicing the VTR section, connection of the extension cabies and Y/C separator are necessary as shown in Fig. S1, S2.

Servicing Fixtures (VTR Section)

PART NO.	PART NAME	PCS	CONNECTION
VFK0493	Extension Cable (22P)	1	P2001~P2601
VFKS0075	Extension Cable (16P)	1	P5001~P3501
VFKS0060	Extension Cable (2P)	2	P6009~LOADING MOTOR P6013~SAFETY TAB SW
VFK0499	Extension Cable (3P)	2	P6005~MODE SELECT SW P6010~REEL SENSOR
VFK0304	Y/C Separator	1	———
VFK0430	Extension Cable (14P)	1	P3502~VFKS0074
VFKS0074	Connector	1	Y/C Separator~VFK0430

Fig. S1

Connection Method of Extension Cables

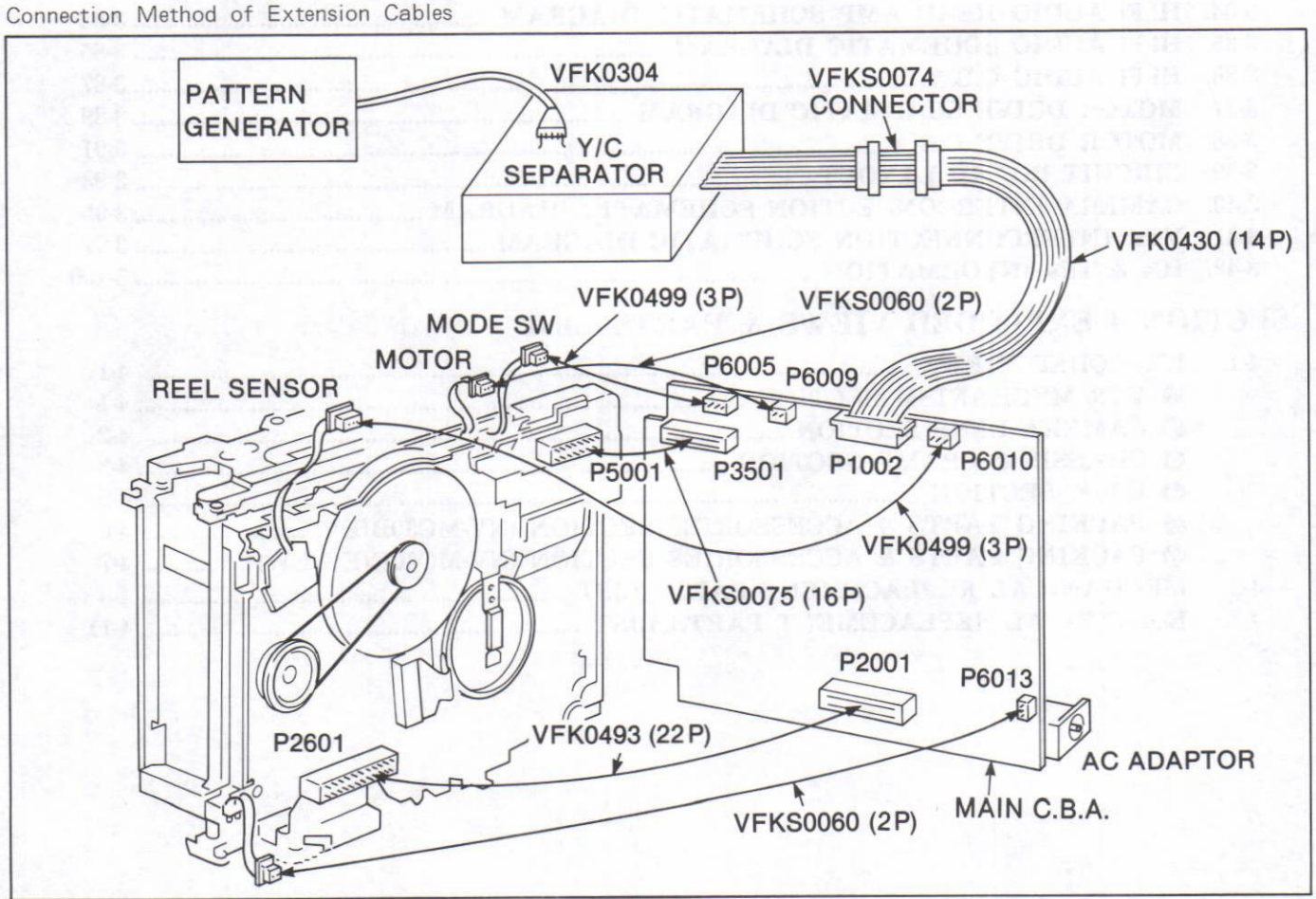


Fig. S2

2. Servicing the Camera Section

When servicing the camera section connection of extension cables and Diffusion Plate are necessary as shown in Fig. S3, S4.

Servicing Fixture (Camera Section)

PART NO.	PART NAME	PCS	CONNECTION
VFKS0051	Extension Cable (3P)	1	P704~ACTUATOR UNIT
VFKS0052	Extension Cable (6P)	1	P701~FOCUS & ZOOM SENSOR
VFK0503	Extension Cable (5P)	1	FP302~FP601
VFK0380	Extension Cable (18P)	1	B301~B201
VFK0497	Extension Cable (6P)	1	P703~FOCUS MOTOR & IRIS MOTOR
VKW1049	Diffusion Plate	1	

Fig. S3

Connection Method of Extension Cables

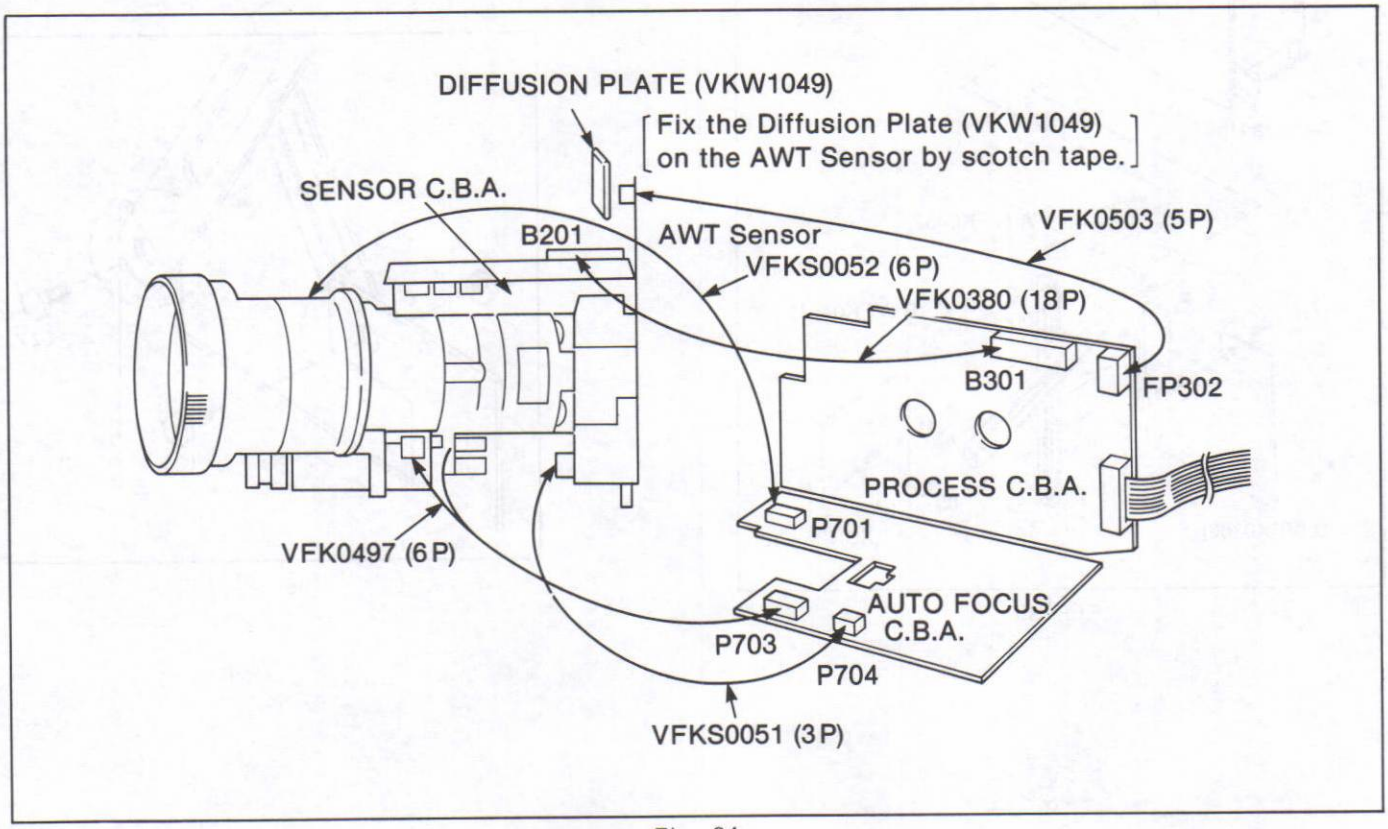


Fig. S4

3. How To Use Camera Holder Arm (VFK0431)

This Camera Holder Arm which is adjustable the span must be mounted to VFK0382 (Camera Holder of NV–M5) and it can be used with VFK0432 for camera adjustments or checking.

(A) --- VFK0432 Holder Spacer (2pcs.)
(B) --- VFK0431 Camera Holder Arm
(C) --- XSN26+18 Screw (2pcs.)
(D) --- VFK0382 Camera Holder

1. Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig.S5.
2. Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig. S6.
3. Tightn the screws (C) with the Holder Spacers (A) as shown in Fig. S5.

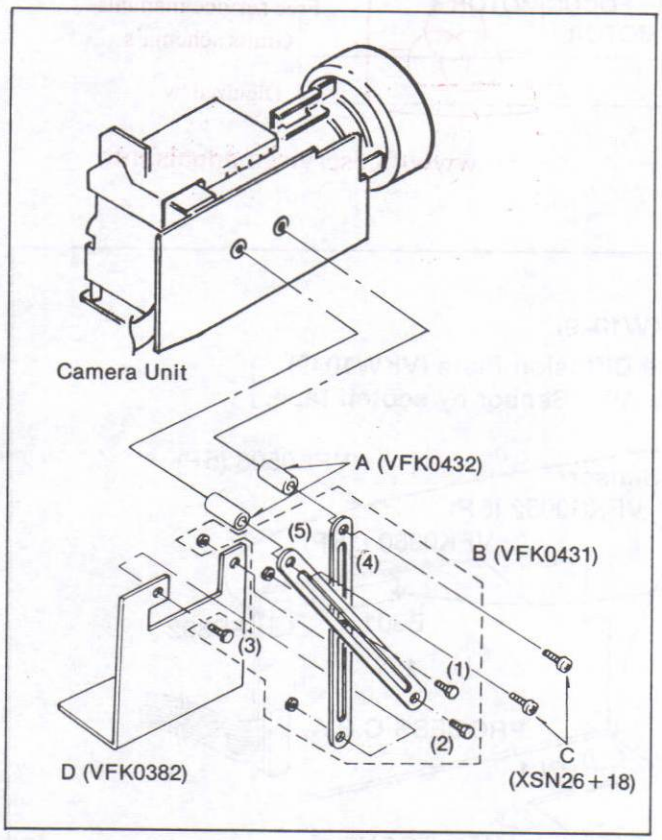


Fig. S5

4. How To Connect the Y/C Separator and Y/C Separator Connection Cable

When the Y/C Separator Connection Cable (VFKS0074) is used to connect to Y/C Separator the caution should be paid the following items:

*Cut off the marked portion of Y/C Separator output connector as shown in Fig.S7

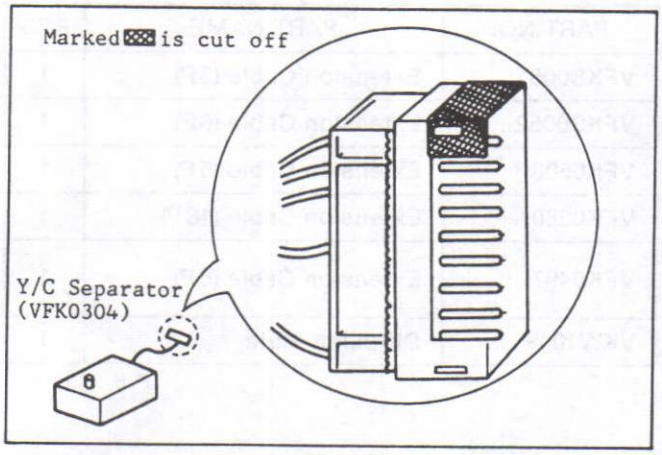


Fig. S7

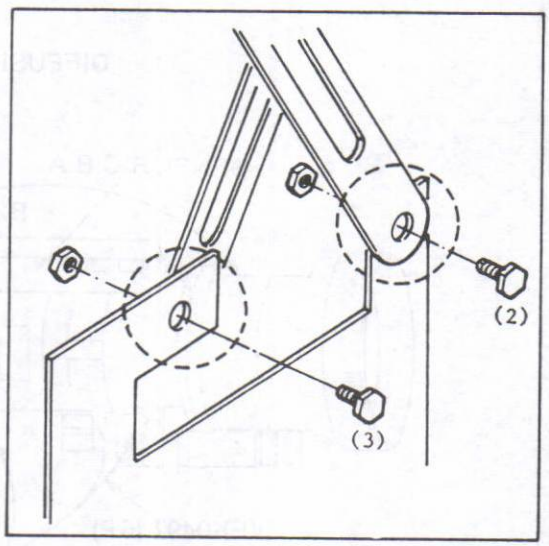


Fig. S6

5. Set Tracking Control to the Fixed position

If the Tracking Control is required to be in the fixed (neutral) position, push both of the tracking Control Up/Down Switchs, on the Main C.B.A., in at the same time in Playback Mode.

6. Manual Eject–Tape in and Carriage closed

1. Remove Cassette Cover by removing 2 Screws.
2. Push on upper end of Lock Lever to release cassette carriage.

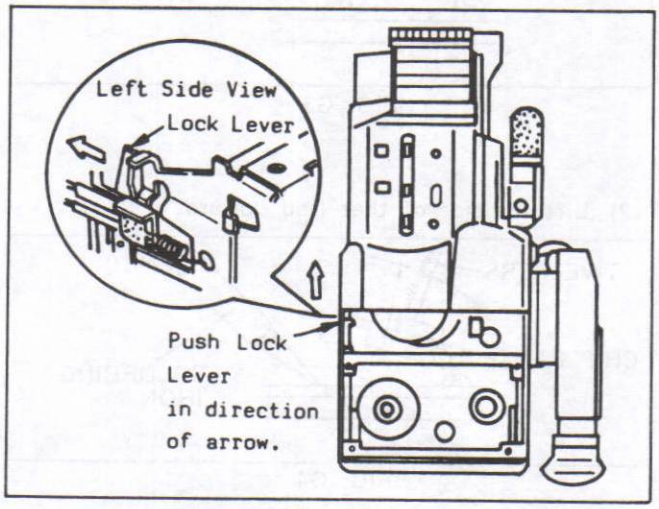


Fig. S8

7. Elimination of Tape slack

Before inserting the Cassette Tape in the VHS–C Movie, take up slack in the tape by turning the Takeup Tape Gear on the side of the Cassette Tape. Turn it in the direction of the arrow until no slack is evident and opposite reel begins to turn.

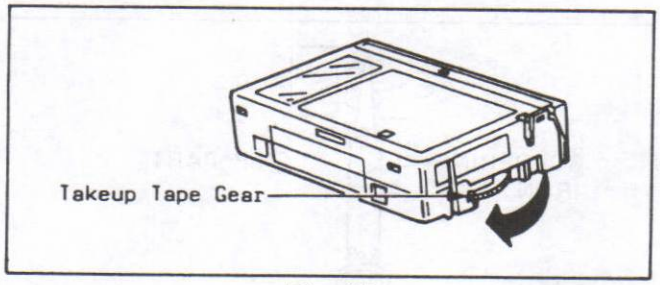


Fig. S9

8. Insertion (or Removal) of cassette Tape

As in Fig. 5, hold the tape vertically with fingers and thumb to insert or remove the tape. (Be sure to eliminate slack before inserting the tape.)

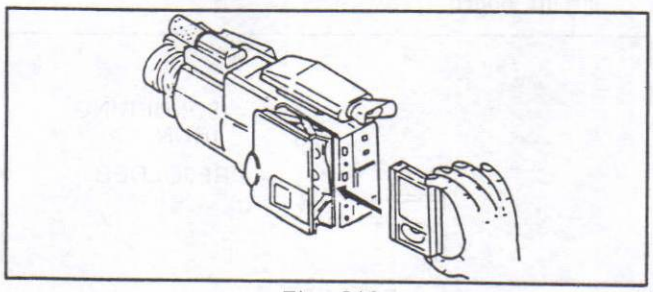


Fig. S10

9. Connection of the Flexible Cables to Trap Connectors

a. Removal

1. On the trap Connector, pull out on both ends of the Locking Tab Surrounding the cable end to release the Trap on the Connector. Then pull Flexible Cable out to remove as shown in Fig. 6.

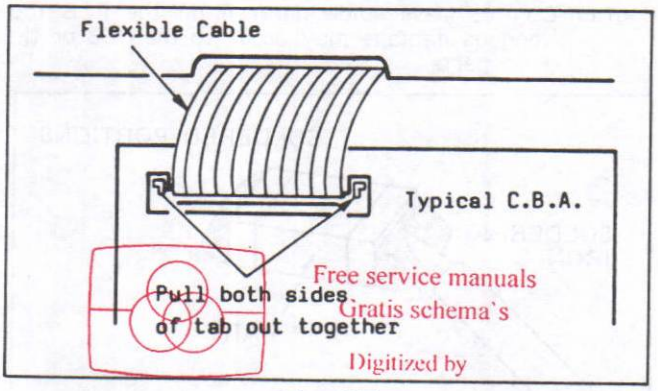


Fig. S11

b. Installation

1. Insert the end of the Flexible Cable into the Trap Connector so it lays smoothly across the slot.
2. Press the middle of the cable firmly against the Trap Connector slot, and hold it securly.
3. Without pinching the Cable, press the Locking Tabs in against the Trap Connector until both ends snap into their locked positions.
4. Pull lightly on the Cable to check for positive connection.

Note:
1. Take care when removing or installing the Flexible Cable to prevent Cable damage.

10. Service of Operation Bracket Unit

When removing and reinstalling the Operation Bracket Unit and Switch Cover, first, install the Switch Cover over the Operation Key portion (CAMERA MODE) of the Operation Bracket Unit, and then install assembly parts.

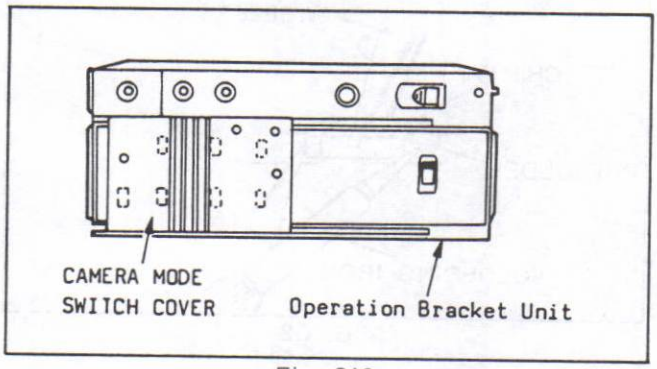


Fig. S12

SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

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

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

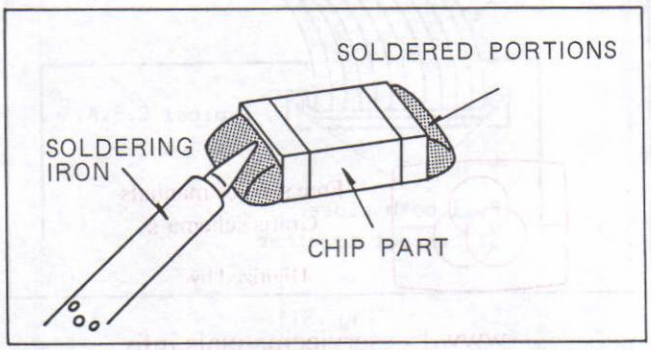


FIG. G1

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

1-2. HOW TO REPLACE THE CHIP PART

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

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

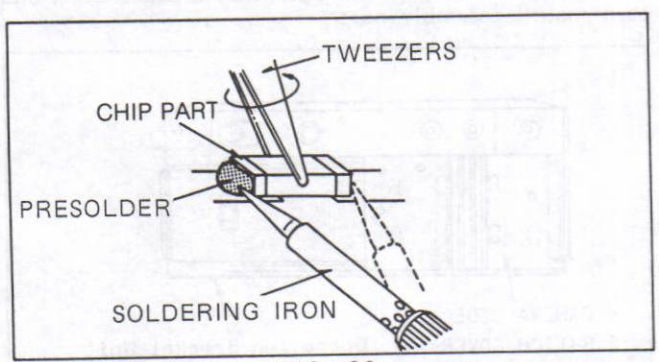


FIG. G2

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

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

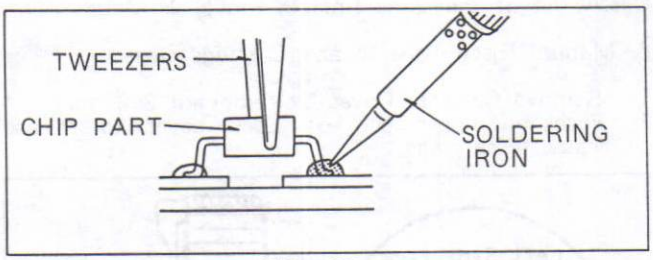


FIG. G3

(2) Lift the side of that lead upward.

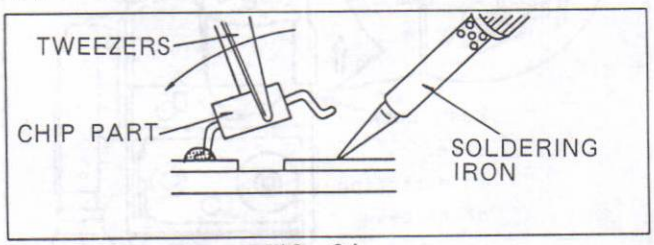


FIG. G4

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

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

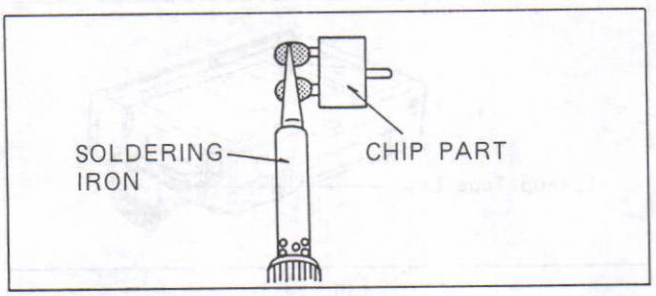


FIG. G5

3) INSTALLATION

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

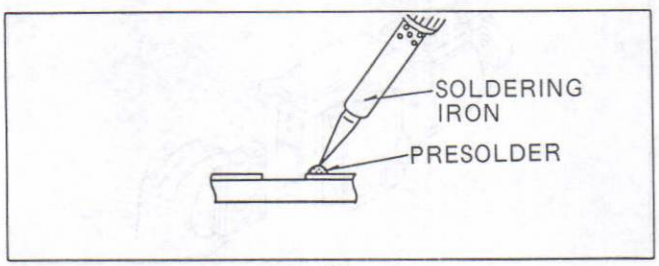


FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

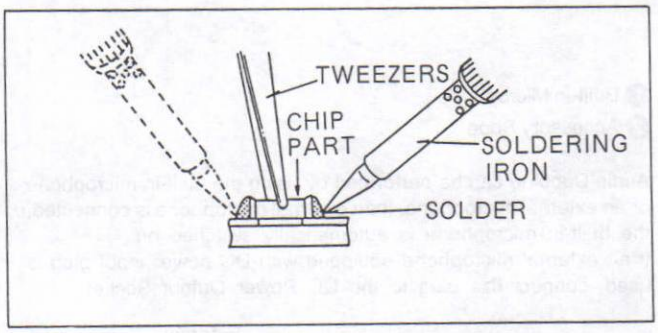


FIG. G7

1-3.HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

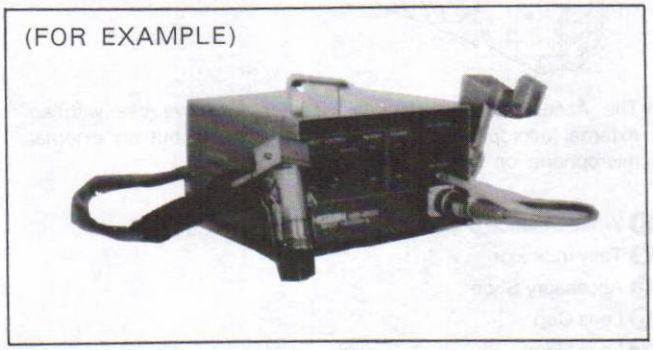


FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

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

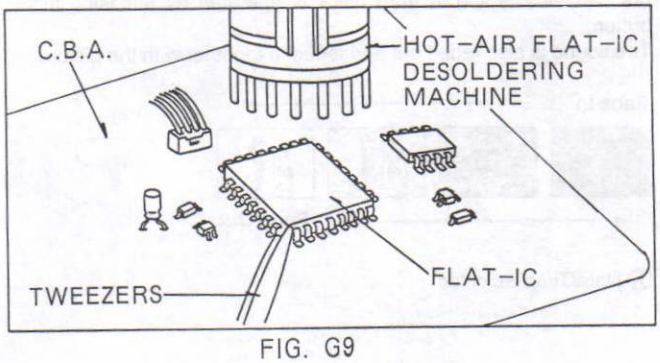


FIG. G9

(WITH SOLDERING IRON)

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

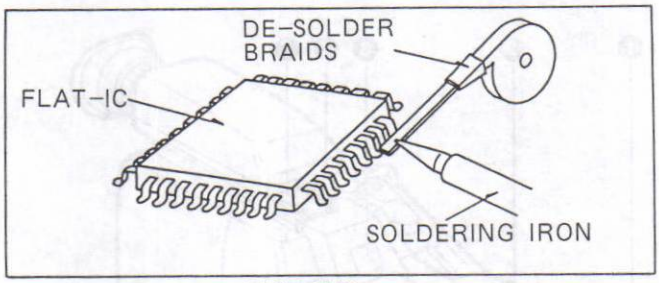


FIG. G10

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

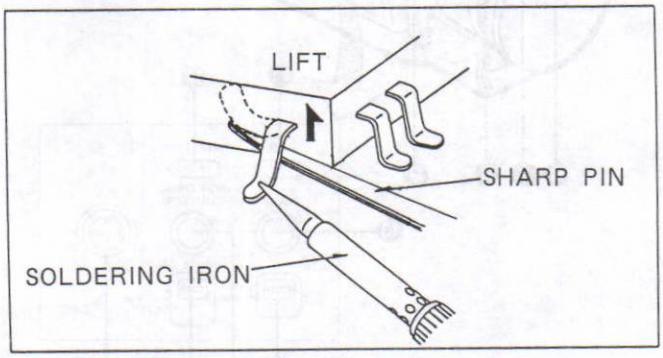


FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

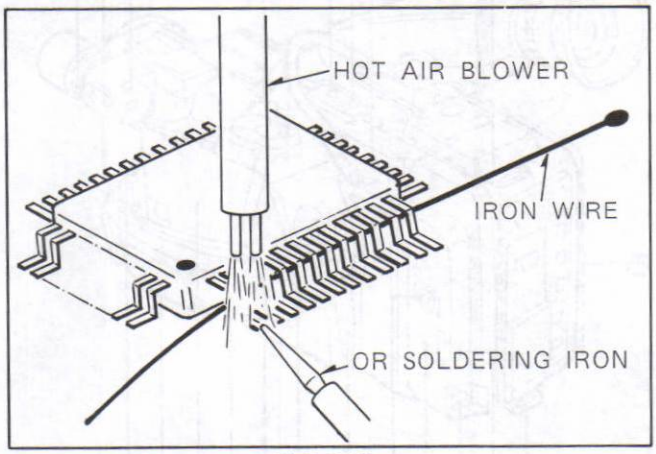
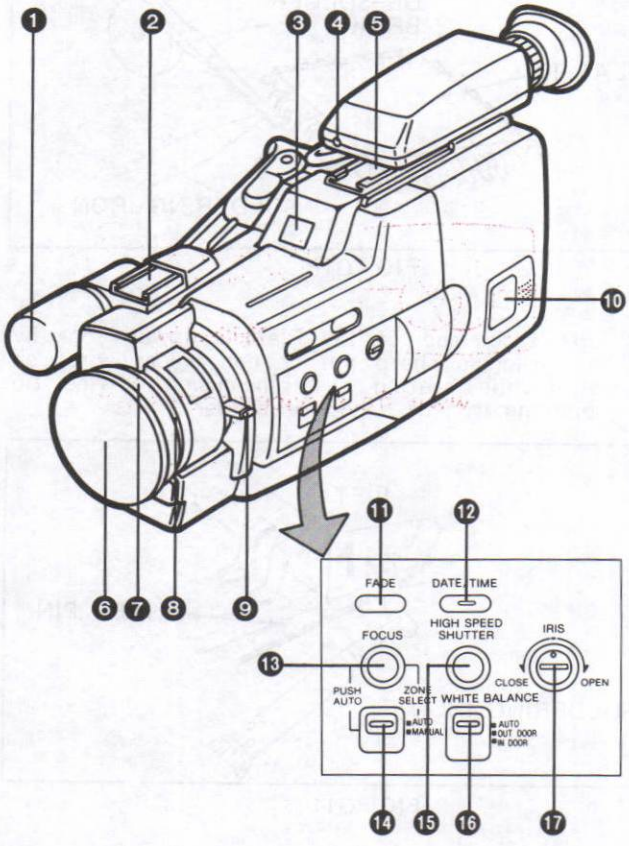


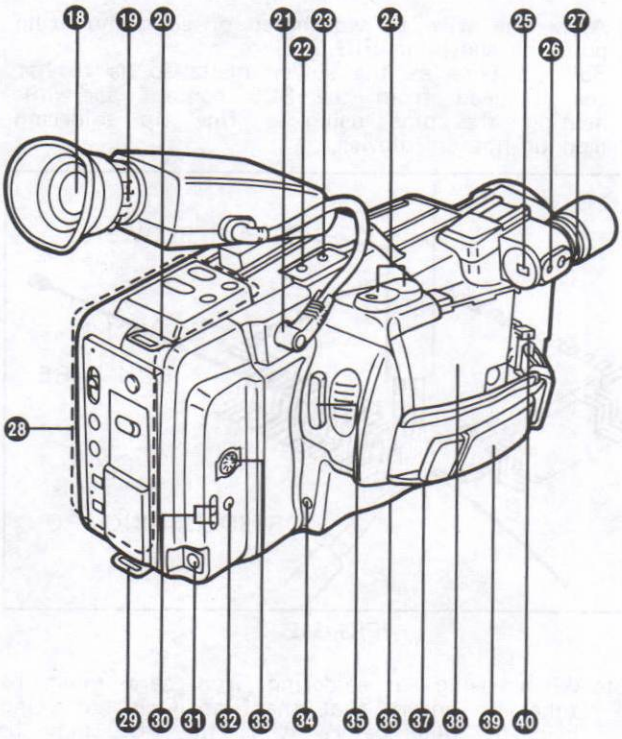
FIG.G12

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

SECTION 1
GENERAL DESCRIPTION

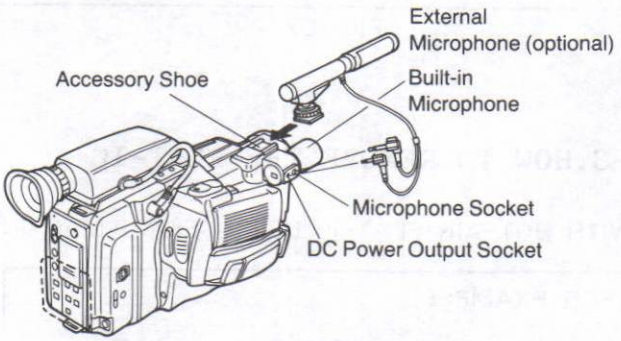
1-1. CONTROLS AND COMPONENTS





❶ Built-in Microphone
❷ Accessory Shoe

Audio Dubbing can be performed by using the built-in microphone or an external microphone. If an external microphone is connected, the built-in microphone is automatically switched off.
If an external microphone equipped with DC power input plug is used, connect this plug to the DC Power Output Socket.



- The Accessory Shoe is designed for exclusive use with an external microphone. Do not mount anything but an external microphone on it.

❸ White Balance Sensor Window
❹ Tally Indicator
❺ Accessory Shoe
❻ Lens Cap
❼ Lens Hood
❽ Focus Ring
❾ Manual Zoom Lever with Macro Button

Shooting Small Objects
The macro function allows shooting small plants and tiny insects. It is also possible to shoot photos from a photo album.
(The focus can be adjusted within a distance of 1.2 m.)

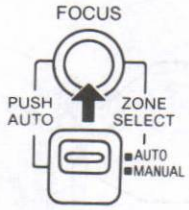
❿ Cassette Compartment
⓫ Fade Button

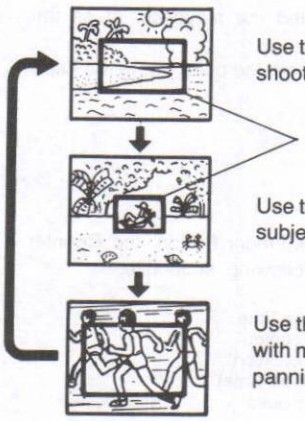
Fading out a scene to black is possible by keeping the Fade Button pressed, and fading in from black is operated by releasing this button.
The sound is also faded out and faded in together with the picture.

⓬ Date/Time Selector

⑬ Focus Adjusting Button/Zone Selector

Focusing Zone Selection with the Focus Adjusting Button
The focus will automatically be adjusted to the object within the focusing zone.





Use this setting for ordinary shooting.

Focusing Zone Frame.

Use this setting for a small subject.

Use this setting for subjects with much movement and for panning and tilting.

⑭ Focus Mode Selector
⑮ High Speed Shutter Selector

The VHS-C Movie has 3 different shutter speeds:

1/50 s normal shutter speed
1/500 s electronic high speed shutter
1/1000 s electronic high speed shutter

By repeatedly pushing the High Speed Shutter Selector, the shutter speed can be changed as follows:
1/500 sec.→1/1000 sec.→Normal

⑯ White Balance Mode Selector

The VHS-C Movie, like any other video camera, responds differently to the colours depending on the weather and the time, even under seemingly same sunlight. The adjustment necessary to assure natural colour rendition is called "white balance adjustment".

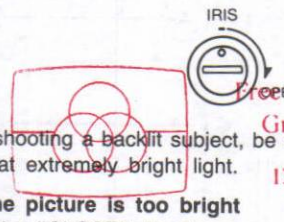
"AUTO" position ..... The white balance is automatically adjusted as the illumination changes.

In certain cases, the use of the preset positions is recommended:

"INDOOR" ..... When shooting under the light from incandescent light bulbs or halogen lamps.
"OUTDOOR" ..... When shooting outdoors under the sunlight.

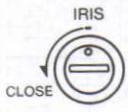
⑰ Iris Close/Open Control

When a Subject is backlit
Turn in the "OPEN" direction.



- When shooting a backlit subject, be careful that the lens is not aimed at extremely bright light.

When the picture is too bright
Turn in the "CLOSE" direction.



- For normal lighting conditions, this control should be set to the centre detent position. (Automatic adjustment)

⑱ Electronic Viewfinder
⑲ Eyepiece Corrector Control

This control makes it possible for people who wear glasses to adjust the eyepiece to their eyesight.

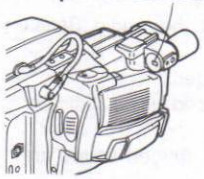
⑳ Metal Fitting for Shoulder Strap
㉑ EVF/Character Generator Terminal
㉒ Date Shift Button
㉓ Date Set Button
㉔ Power Zoom Control Buttons

To zoom to wide-angle, press the "W" Button.

To zoom to telephoto, press the "T" Button.

㉕ Microphone Sensitivity Selector

Microphone Sensitivity Selector

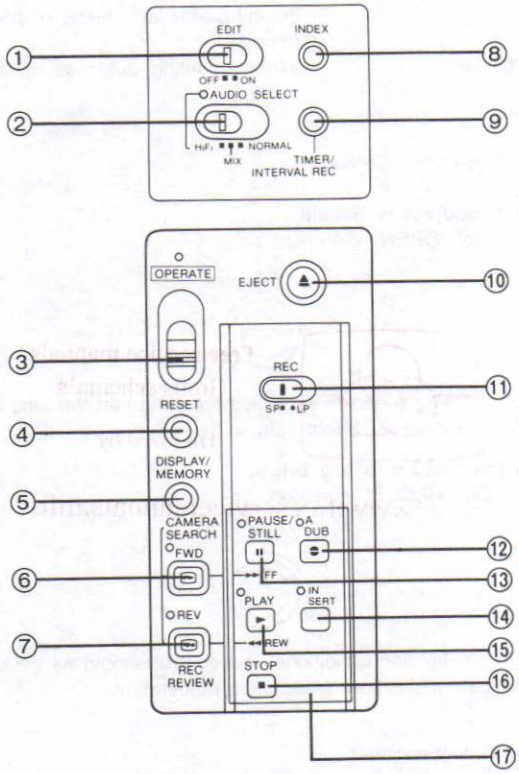


The sensitivity of the Microphone can be increased by setting the Microphone Sensitivity Selector to "HIGH". Usually, this selector is left in the "NORMAL" position.

- If this selector is switched from "HIGH" to "NORMAL" during recording, the recording of the audio signal will be interrupted for a few seconds. However, this is not due to any malfunction.
- In audio dubbing, the original sound on the normal audio track will be replaced.

㉖ DC Power Output Socket
㉗ External Microphone Socket

㉘ General Operation Controls



① Edit Switch
② Audio Select Switch

■ **Playing Back a Tape on Which Insert Editing Was Performed**

Select the sound to be played back with the Audio Select Switch.

Hi-Fi: The newly inserted sound (stereo) is reproduced.
NORMAL: The original sound (mono) is reproduced. (The indicator lamp goes out.)
MIX: Both newly inserted sound and original sound are reproduced mixed together.

- To ensure optimum sound reproduction, use the "Hi-Fi" position for ordinary use.

■ **Playing Back a Tape on Which Audio Dubbing was Performed**

Select the sound to be played back with the Audio Select Switch.

Hi-Fi: The original sound is reproduced.
NORMAL: The dubbed sound is reproduced. (The indicator lamp goes out.)
MIX: Both original sound and newly dubbed sound are reproduced together.

- To ensure optimum sound reproduction, use the "Hi-Fi" position for ordinary use.

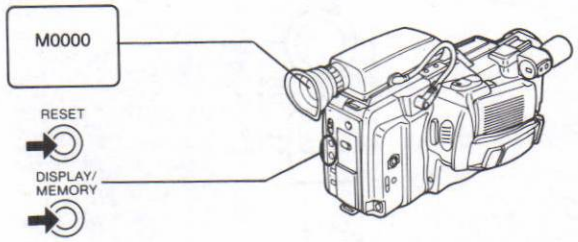
③ Operation On/Off Switch

④ Reset Button

Tape Counter and Memory Function

Press the Reset Button at a desired point and then press the Display/Memory Button.

- The Tape Counter is reset to "0000" and the Memory Indicator "M" appears.



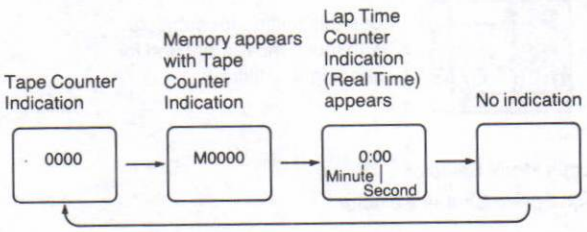
After pressing the Stop Button to end the playback, press the Rewind/Review Button.

- The tape will automatically stop at about the point where the Tape Counter reads "0000".

⑤ Display/Memory Button

Counter Indication

By repeatedly pressing the Display/Memory Button, the Counter Indication can be changed in the following sequence.



- The indication of the Lap Time Counter counts up only during recording.

⑥ Fast Forward/Cue Button
⑦ Rewind/Review Button
⑧ Index Signal Recording Button

The recording of index signals at the beginning of and during recordings makes possible the use of the VHS Index Search or the Intro Scan function when playing back the tape on a VTR equipped with the VISS function.

An index signal is recorded when one of the following operations is performed.

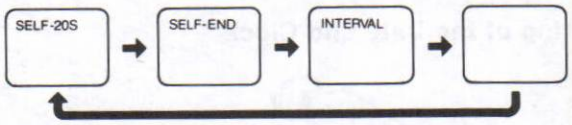
- When recording is started for the first time after the VHS-C Movie is turned on.
- When recording is restarted after the cassette is exchanged or the tape is played back.
- When recording is restarted after the Index Signal Recording Button was pressed during the recording pause mode.
- When the Index Signal Recording Button is pressed during recording.

In each of these cases, the "INDEX" indication will flash for a few seconds in the EVF.

- When recording index signals, space the signals at least 5 minutes in the LP mode and 2 minutes in the SP mode.

⑨ Timer/Interval Recording Button

■ **Pressing the Timer/Interval Recording Button repeatedly:**



- Depending on the TV set used, the top of the picture may become distorted when playing back scenes shot with the interval recording function.
- During the Interval Recording, the approximate elapsed recording time is displayed when the counter display is in the lap time counter display mode. The counter skips counting every tenth second, however, this is not a malfunction.

Self-Timer Recording

10 Seconds after the self-timer function is activated on the VHS-C Movie, the recording will start.
If the VHS-C Movie is mounted on a tripod, this handy function allows the person behind the camera to join the action that is being recorded.

Interval Recording

This recording function automatically makes recordings of approx. 1 second at 5-second intervals. This enables timer-lapse recordings, for example of the unfolding of a blossom, by shortening the recorded action to approx. 1/5th of the actual time it took.

⑩ Eject Button
⑪ Recording Speed Selector

- **SP:** For recording at the normal tape speed.
- **LP:** The recording time is twice as long as in the SP mode.
- Cassettes that were recorded on the VHS-C Movie in the LP mode cannot be played back on a VHS VTR that operates only in the SP mode.

⑫ Audio Dubbing Button
⑬ Pause/Still Button
⑭ Insert Button

- When insert editing on a tape that was recorded in the LP mode, picture noise will appear for an instant at the end of the inserted scene.

⑮ Play Button
⑯ Stop Button
⑰ Camera/VTR Selector Cover

Closed (as illustrated) ..... For camera recording.
Open ..... For other operations than camera recording.

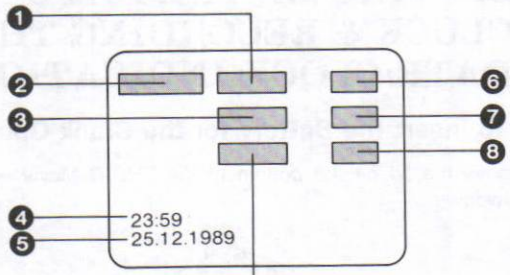
㉙ Metal Fitting for Shoulder Strap
㉚ Tracking Up/Down Buttons

- When the playback picture contains noise bar distortion as shown in the picture above, it can be eliminated by pressing the Tracking Up or Down Button.
  To return the tracking control to the former setting, press the two buttons simultaneously.
- When playing back a tape which has been recorded on another video recorder, it may not be possible to completely eliminate this distortion.

㉛ DC Input Socket
㉜ Remote Control Socket
㉝ RF/AV Adaptor Socket
㉞ Earphone Socket
㉟ Start/Stop Button
㊱ Battery Compartment for Auto Date/Clock
㊲ Tripod Receptacle
㊳ Battery Holder
㊴ Grip Belt
㊵ Battery Locking Lever

1-2. ELECTRONIC VIEWFINDER

The following indications are displayed in the Electronic Viewfinder (EVF) to inform you of the operating conditions of the VHS-C Movie.



Warning/Alarm Indications

BATT	There is little battery power left. The VHS-C Movie will be turned off in a few minutes. Replace the battery pack by a fully recharged one.
TAPE	It is impossible to record because the erasure prevention tab of the cassette is not intact.
END	During recording, the tape has almost reached its end. Replace the tape with a new one. The indication will remain lit when the tape has reached its end.
DEW	When condensation has formed inside the VHS-C Movie, the "DEW" indication will flash and a few seconds later, the unit will turn itself off.

❶ Remaining Battery Power/Index Indication

E---F The "▬" indications begin to disappear from right to left as the power of the battery pack weakens.
INDEX This indicator flashes when a recording is started or when the Index Signal Recording Button is pressed and it indicates that an index signal is being recorded.

❷ Self-Timer/Interval Indication

SELF-20S Self-timer recording for 20 seconds.
SELF-END Self-timer recording until the end of the tape.
INTERVAL Recordings of approx. 1 second will be made at 5-second intervals.

❸ Counter Indication

M0123 Tape Counter
1:23 Lap Time Counter

❹ Clock Indications

❺ Date Indications

❻ Recording/Insert Indication

REC	Recording
———	Recording Pause
INST	Insert
———	Insert Pause

Camera Search Indication

——→	In forward direction
←——	In reverse direction

❼ Recording Mode Indication

SP	SP mode
LP	LP mode

❽ High Speed Shutter Mode Indication

1/500	1/500 sec.
1/1000	1/1000 sec.

Manual White Balance indication

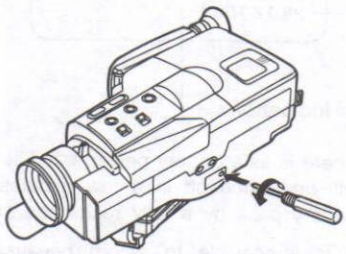
OUT	OUTDOOR
IN	INDOOR

- Some of the above indications may light up alternately at the same place in the EVF to indicate the corresponding operating condition or warning.

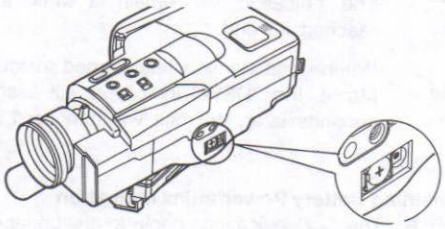
1-3. SETTING OF THE DATE AND CLOCK & RECORDING THE DATE/CLOCK INDICATIONS

How to Insert the Battery for the Clock Operation

❶ Remove the lid on the bottom of the VHS-C Movie with a screwdriver.



❷ Insert the "LR1130" size battery with the polarities (⊕ and ⊖) aligned correctly and then replace the lid.
- The clock starts working as soon as the battery is inserted.

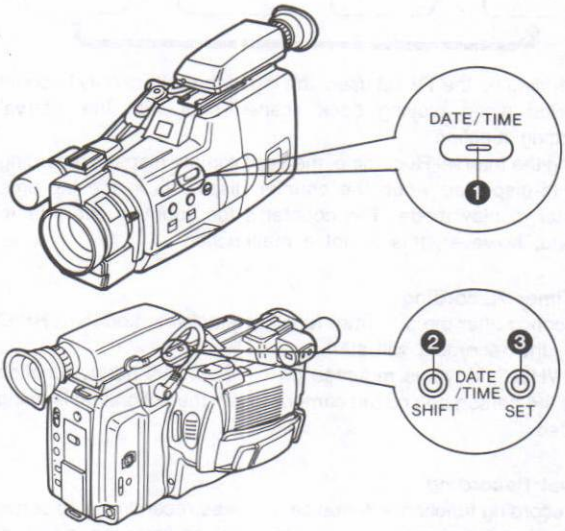


The "LR1130" size battery (supplied) is necessary for the operation of the built-in digital clock, and to memorize the Date/Clock Indications when the VHS-C Movie is turned off.

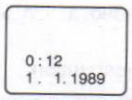
Cautions
- When this battery is almost exhausted, the whole time and date indication will flash.
- When this battery is completely exhausted, the indication "PLEASE SET BATTERY" will appear.
- To make this indication disappear, press the Date/Time Selector twice.
- If this indication is still displayed after the battery has been replaced, turn the VHS-C Movie off and then on again.

CAUTION FOR BATTERY REPLACEMENT
- The life of the battery is about one year, however, it depends on the frequency of use. Inspect and if necessary, replace the battery once a year.
- Load the new battery with their polarities (⊕ and ⊖) aligned correctly.
- Do not apply heat to battery, or internal short-circuit may occur.
- Remove spent battery immediately and dispose of it.

Setting of the Date and Clock



❶ When the Date/Time Selector is pushed, the indication shown on the right will appear in the EVF.



- If no battery is inserted, the indication "PLEASE SET BATTERY" will light up.

❷ When the Shift Button is pushed, the flashing portion displayed will be changed in the following sequence.

Year→Month→Date→Hour→Minute

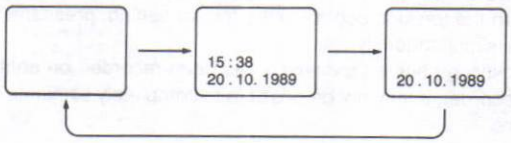
❸ When the Set Button is pushed, the flashing portion displayed will be changed in the following sequence.

YEAR: 1989→1990→ .... →2086→1987→1988
MONTH: 1→2→ ..... →12
DATE: 1→2→ ..... →28→(29)→(30)→(31)
HOUR: 0→1→ ..... →23
MINUTE: 00→01→ ..... →59

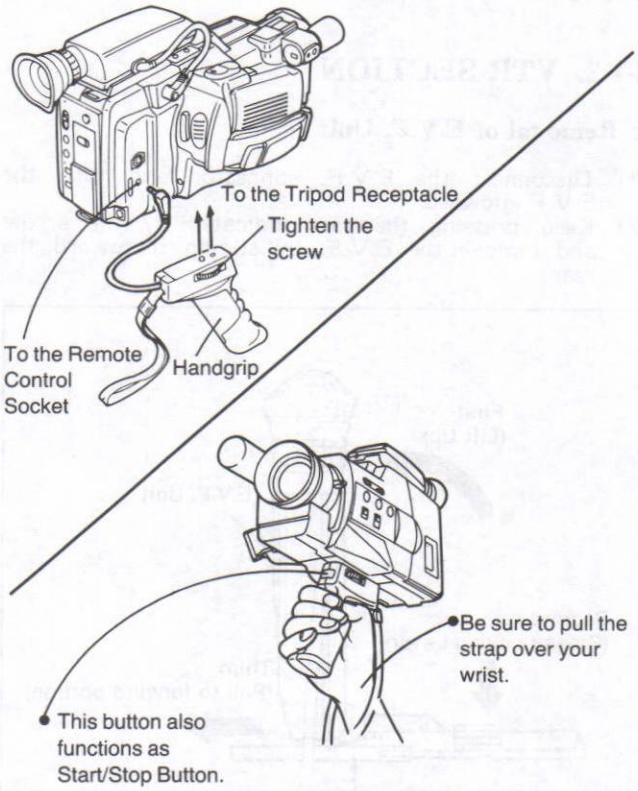
- Repeat procedures ❷ and ❸ until all five items have been set.
- Once the time and date are set, press the Shift Button in response to a precise time signal so that the clock may begin to function.

Recording the Date/Clock Indications
When the Date/Time Selector is pushed repeatedly, the indication will change in the following sequence.

To record neither the Date nor the Clock Indication: → **To record the Date and Clock Indications:** → **To record only the Date Indication:**



1-4. HOW TO USE HANDGRIP (OPTIONAL)



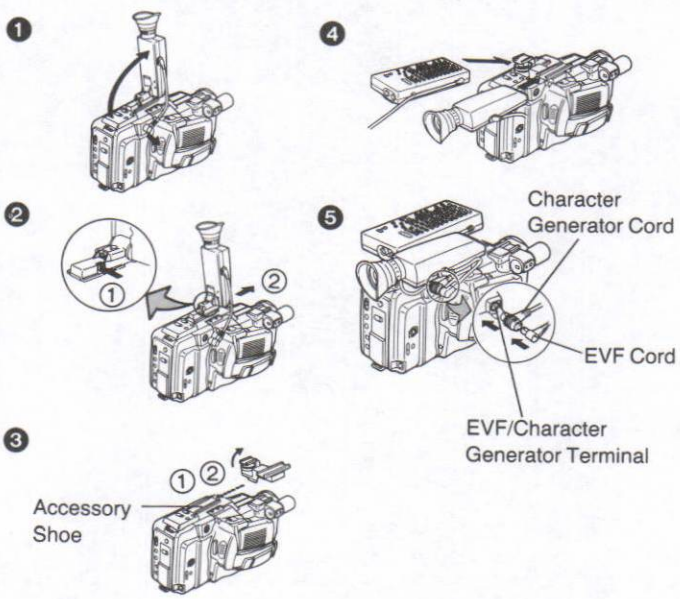
1-5. USING THE CHARACTER GENERATOR (OPTIONAL)

The use of the character Generator makes it possible to record titles, time, date and stopwatch while shooting some scene.

How to Attach the Character Generator

Use the Shoe Adaptor that is supplied with the Character Generator.

- Before attaching the Character Generator, turn the VHS-C Movie off with the Operation On/Off Switch.



1. Disconnect the EVF Cord and turn the EVF upward.
2. Keep pressing the part indicated by the arrow and remove the EVF by sliding it toward the rear.
3. Attach the Shoe Adaptor and tighten the screw.
4. Attach the EVF and the Character Generator to the Shoe Adaptor
5. Insert the plug of the EVF Cord into the back of the plug of the Character Generator Cord and insert them together into the EVF/Character Generator Terminal.

- For the operation of the Character Generator, see the operating instructions of the Character Generator.

1-6. VHS-C MOVIE SYSTEM ACCESSORIES

Standard Accessories

○ Supplied
× Not supplied

	NV-MC30 EG, E, EW	NV-MC30 EP, B
AC Adaptor	○	○
Battery Pack	○	○
AV Output Cable	○	○
Shoulder Strap	○	○
System Carrying Case	×	○
VHS Cassette Adaptor	○	○
Battery for Clock Operation	○	○
Earphone	○	○
DC Input Cable	○	○
Battery for VHS-Cassette Adaptor Operation	○	○

Optional Accessories

Pause Remote Control Unit (VW-RM1)
Character Generator (VW-CG2)
Car Battery Cord (VW-ACC5)
Carrying Bag (VW-CB30E)
RF Adaptor (VW-RFC1E)
Handgrip (VW-GPC1E)
System Carrying Case* (VW-SHMC4)

*Please ask your local dealer about availability.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY PROCEDURES

2-1-1. DISASSEMBLY FLOW CHART

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

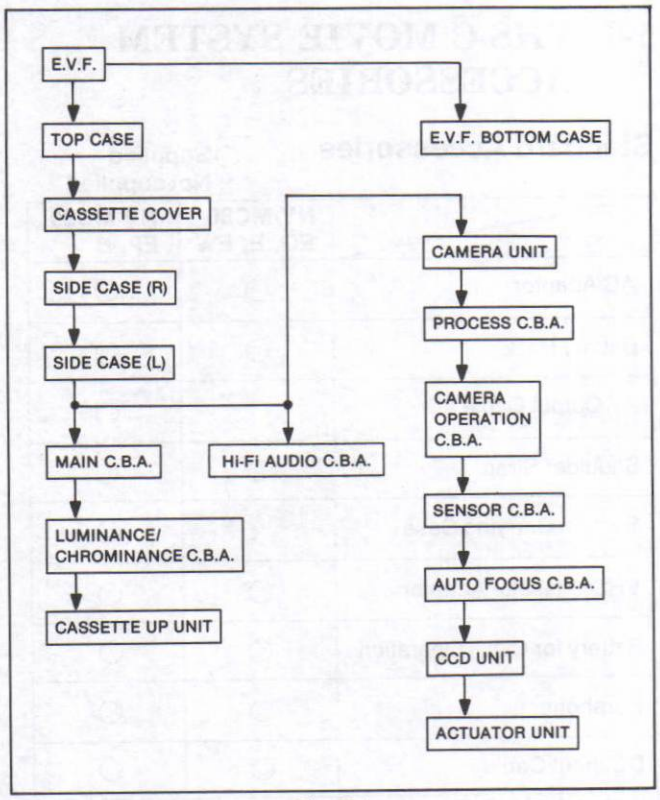


Fig.D1

Note:
(1) When removing the cabinet, work with care so as not to break the locking tabs.
(2) Place a cloth or some other soft material under the P.C.Boards or Unit to prevent damage.
(3) When re-installing, ensure that the connectors are connected and electrical components have not been damaged.
(4) Do not supply power to the Unit during disassembly.

2-1-2. VTR SECTION

1. Removal of E.V.F. Unit

(1) Disconnect the E.V.F. connector and turn the E.V.F. upward.
(2) Keep pressing the part indicated by the arrow and remove the E.V.F. by sliding it toward the rear.

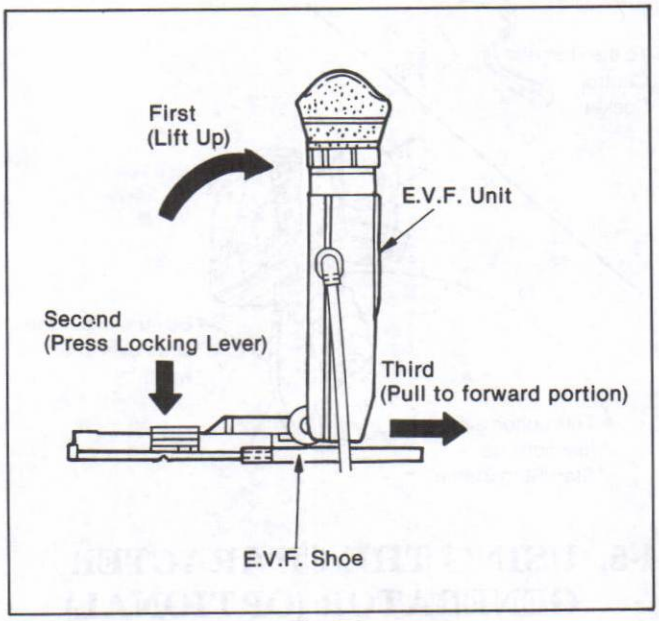


Fig.D2

2. Removal of Top case

(1). Remove 5 screws (A).
(2). Lift the Top Case slightly and then disconnect the connector P2 and Flexible card P1 on the VTR SUB Operation C.B.A.

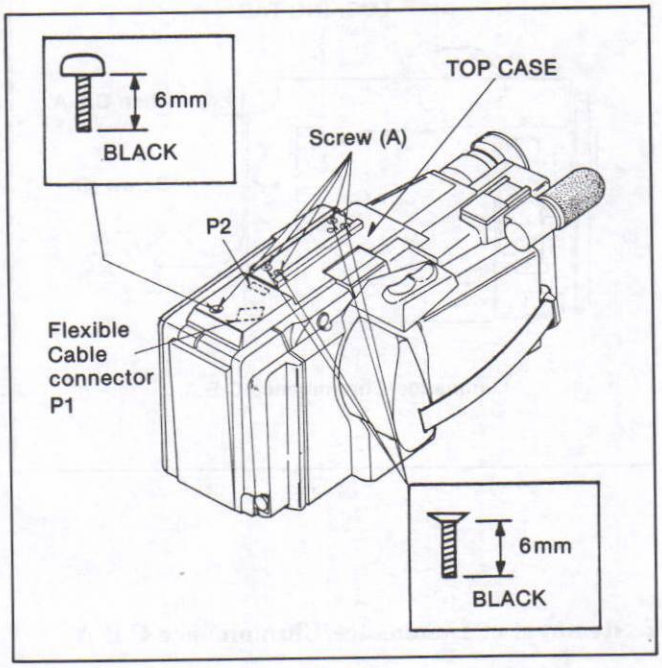


Fig.D3

3. Removal of cassette cover

(1). Remove 2 screws (B)
(2). Slide the cassette cover to remove.

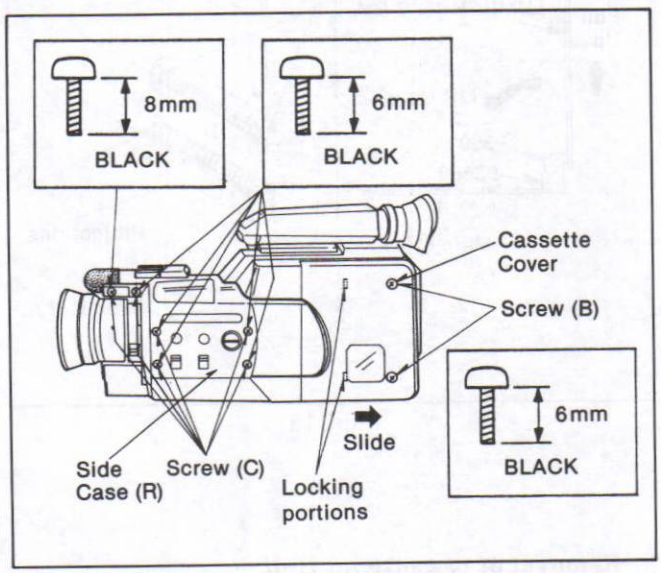


Fig.D4

4. Removal of side case (R)

(1) Remove 6 screws (C) as shown in Fig. D4 and 4 screws (D).
(2) Remove the side case (R).

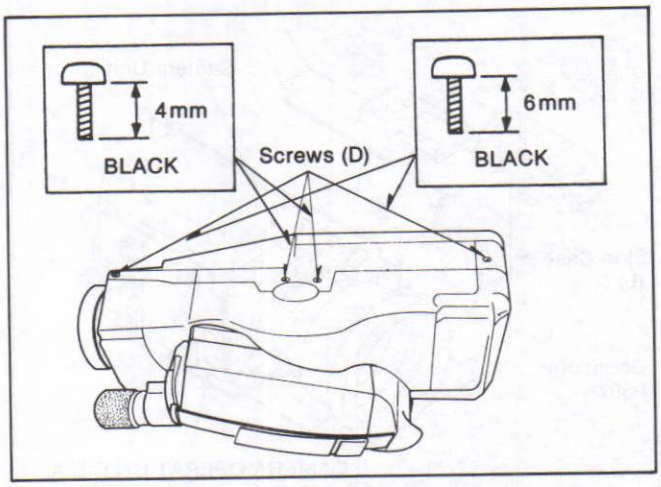


Fig.D5

5. Removal of side case (L)

(1). Remove 4 screws (E) as shown in Fig. D6 and 3 screws (F) as shown in Fig. D8.

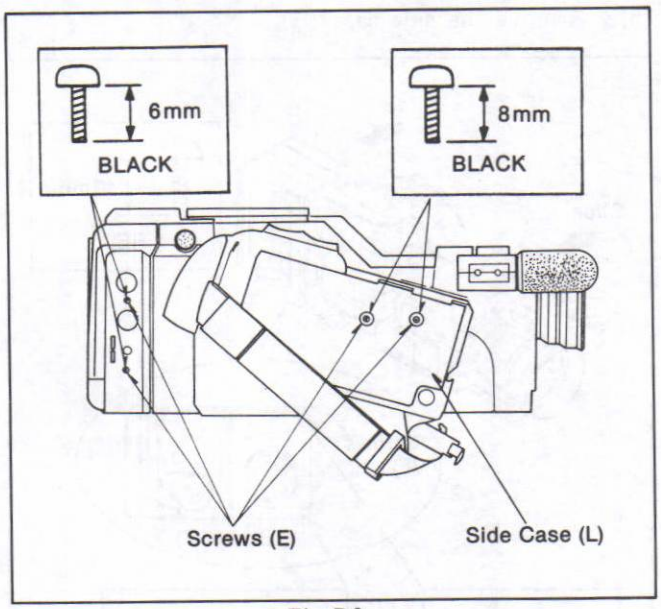


Fig.D6

(2). Remove the side case (L) slightly.
(3). Disconnect the connector P307 on Process C.B.A. and disconnect the flexible card FP001 on Camera Operation C.B.A.

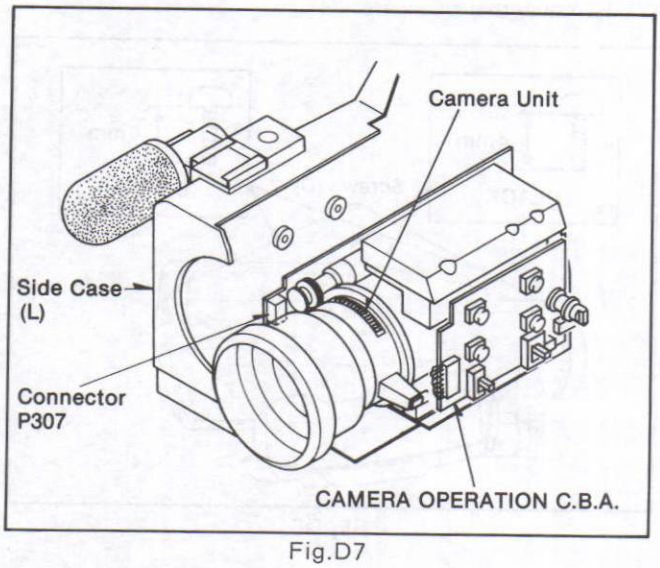


Fig.D7

(4). Disconnect the Flexible card P1002 on Main C.B.A., P4501(From MIC Unit) P4506(From SUB Operation) on Hi-Fi Audio C.B.A. and P4004 (From EAR Jack C.B.A.),P1001(From Battery Terminal).
(5). Remove the side case (R).

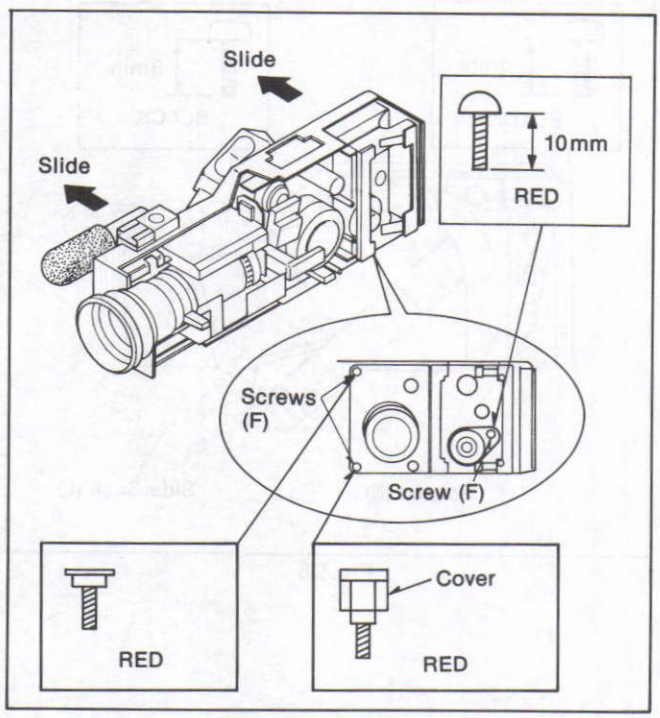


Fig.D8

6. Removal of Main C.B.A.

(1). Remove screw (G) to remove the Main C.B.A.

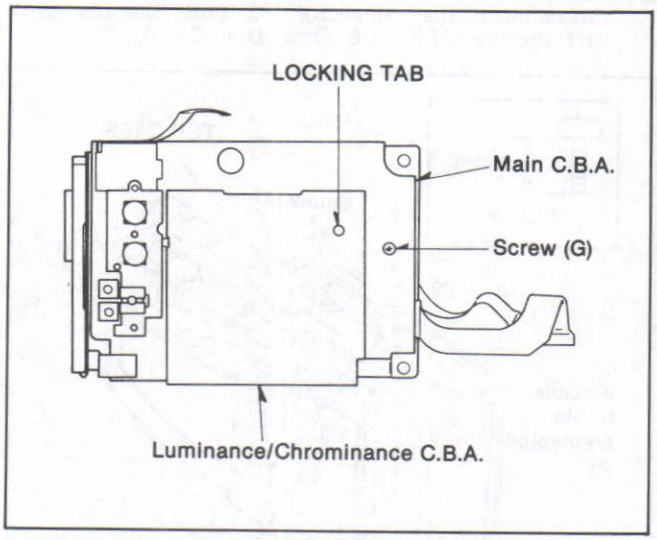


Fig.D9

7. Removal of Luminance/Chrominance C.B.A.

(1). Unlock locking tab to lift it up.
(2). Remove the luminance/chrominance C.B.A.

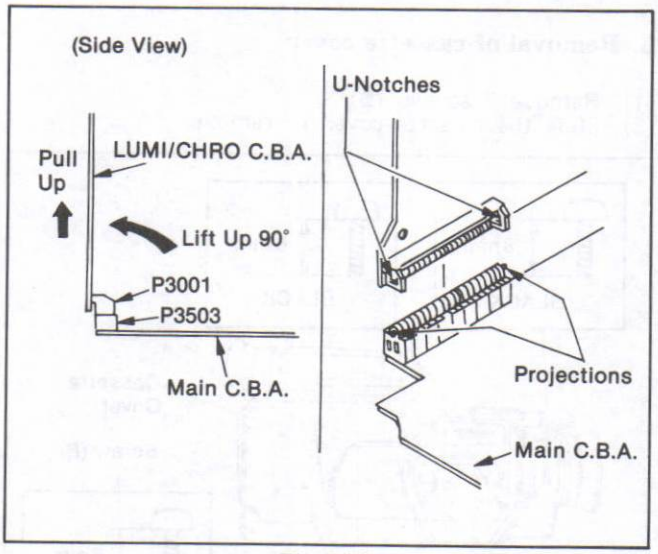


Fig.D10

8. Removal of cassette up Unit

(1). Remove 2 screws (H)
(2). Slide the cassette Up Unit in direction of allow and release the pins on the moving levers of cassette up unit from the enlarged circular insertion hole at end of the cassette guide slot.

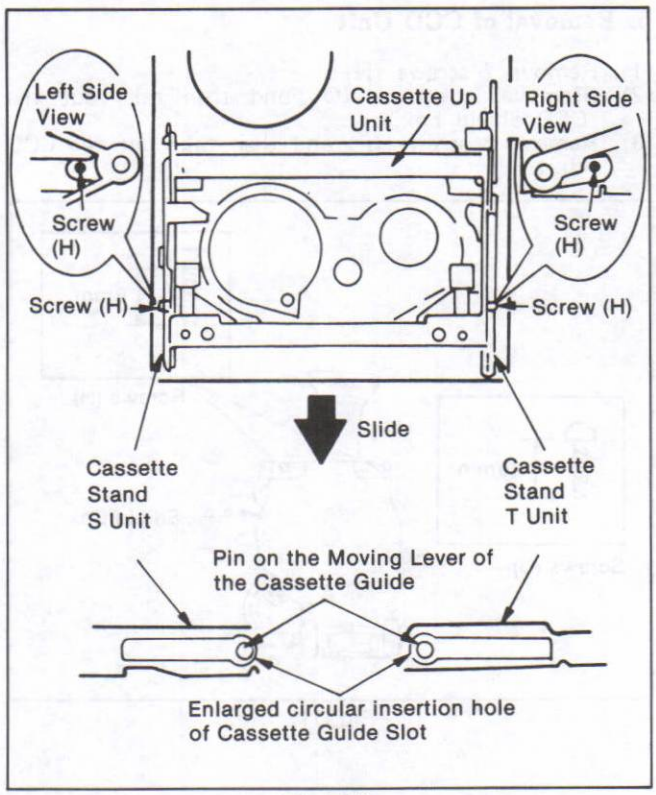


Fig.D11

9. Removal of Hi-Fi AUDIO C.B.A.

(1). Disconnect P4502, P4503.

2-1-3. CAMERA SECTION

1. Removal of process C.B.A.

(1). Remove 2 screw (I) and disconnect the connectors P303, P308, B305, B301, P309 and flexible card FP302 on process C.B.A.
(2). Remove the process C.B.A.

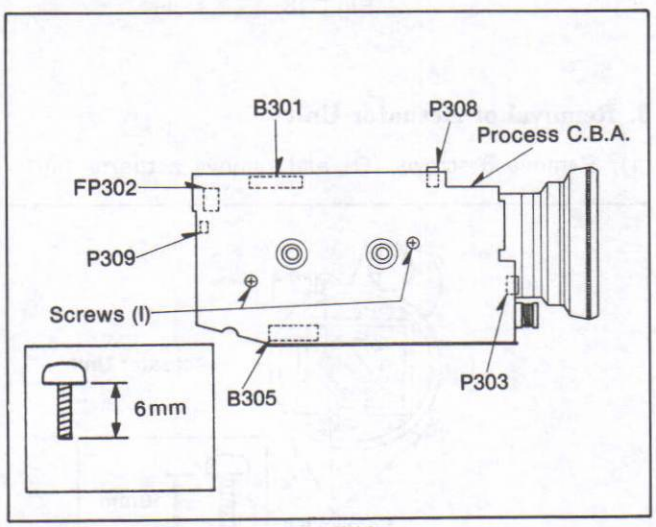


Fig.D12

2. Removal of camera operation C.B.A.

(1). Remove screw (J) and disconnect the connectors P001, P002 on camera operation C.B.A.
(2). Remove the camera operation C.B.A.

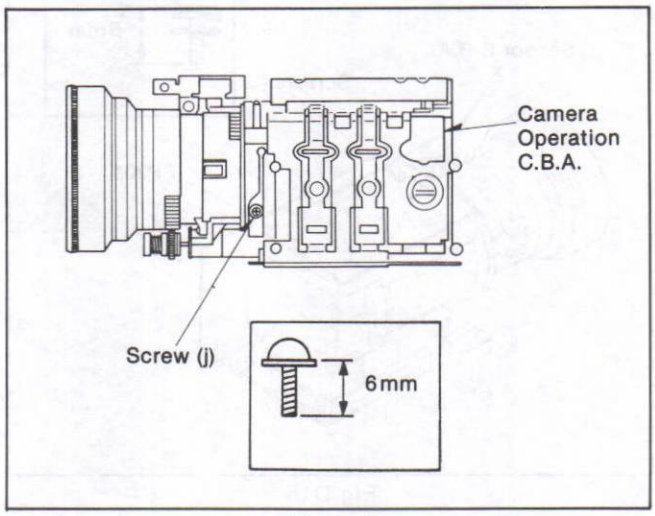


Fig.D13

3. Removal of sensor C.B.A.

(1). Remove 2 screws (K) to remove the shield box.

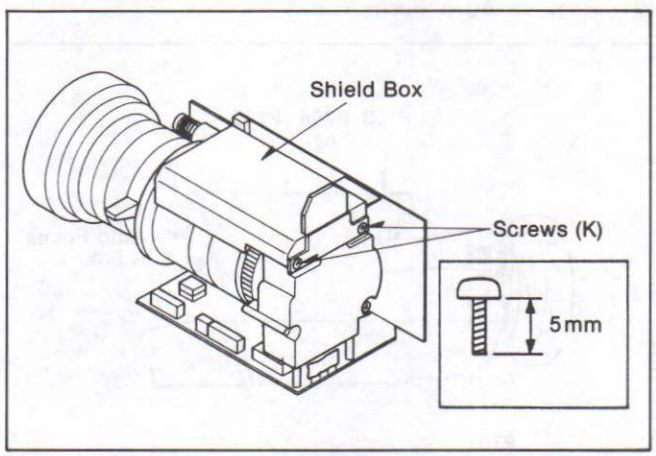


Fig.D14

(2). Remove 2 screws (L) and disconnect the flexible card FP201 on sensor C.B.A.
(3). Remove the sensor C.B.A.

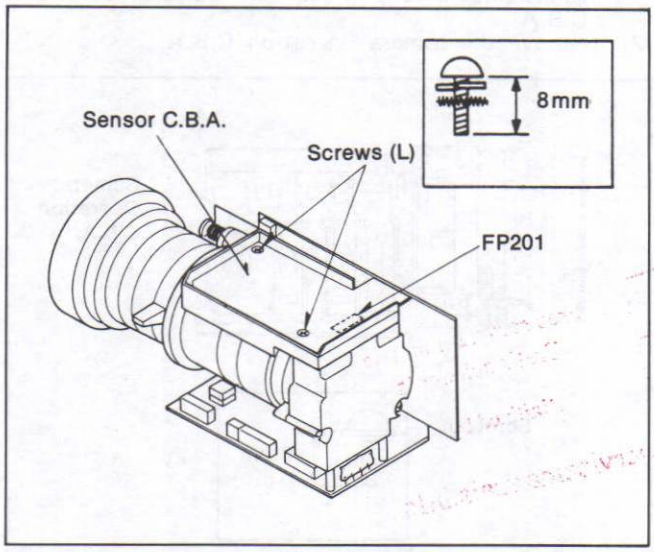


Fig.D15

4. Removal of Auto Focus C.B.A.

(1). Remove 3 screws (M) and disconnect the connectors P703, P704, P705, P701 on Auto Focus C.B.A.
(2). Remove Auto Focus C.B.A.

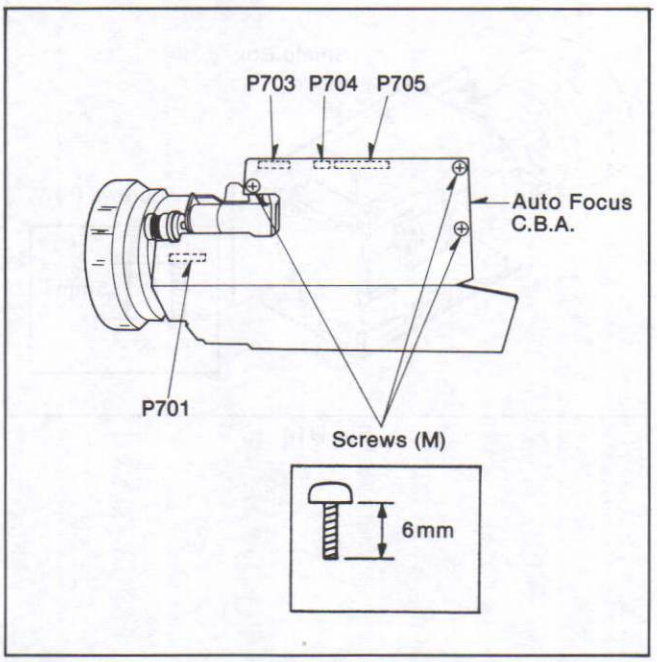


Fig.D16

5. Removal of CCD Unit

(1). Remove 2 screws (N)
(2). Remove 2 screws (O) and then take out the CCD Shield box.
(3). Remove 2 screws (P) and then take out the CCD Unit.

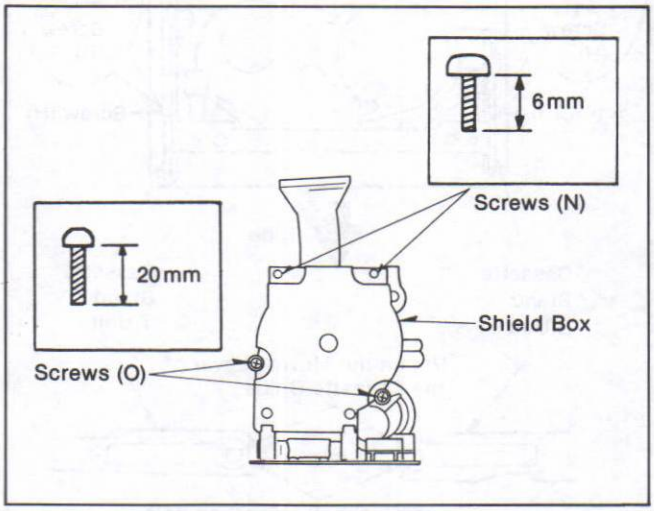


Fig.D17

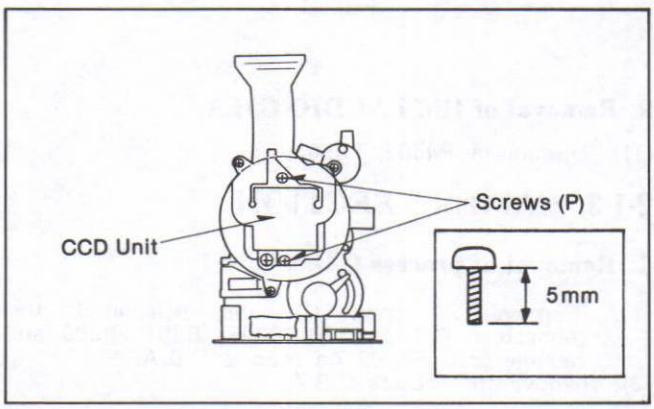


Fig.D18

6. Removal of Actuator Unit

(1). Remove 3 screws (Q) and remove actuator unit.

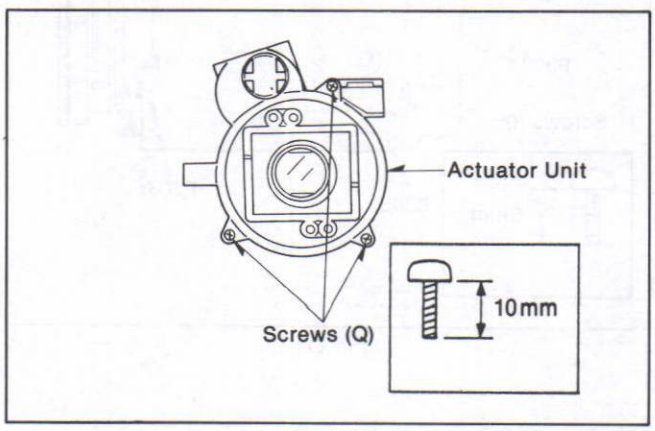


Fig.D19

2-1-4. E.V.F. SECTION

1. Removal of Bottom case

(1). Remove 2 screws (R) to remove the bottom case.

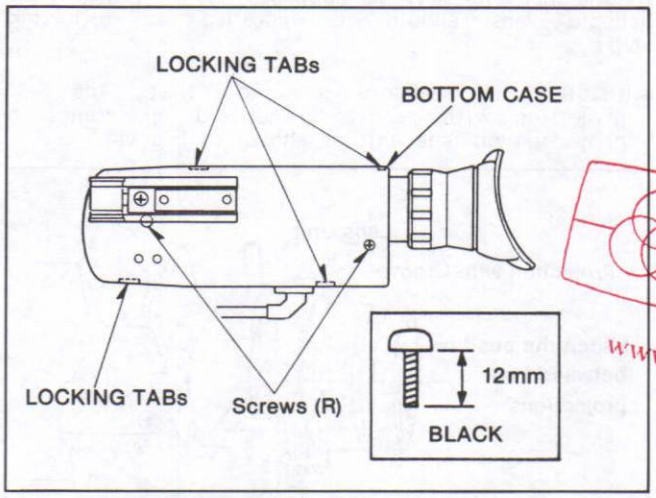


Fig.D20

2-2. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT

(1) Position the Video Head to permit access for cleaning, and hold the Upper Cylinder to keep it from turning while cleaning.
(2) Gently rub the Video Head in the direction of tape travel with a Head Cleaning Stick (VFK27) moistened with Freon TF.
(3) Repeat for the other Video Heads.

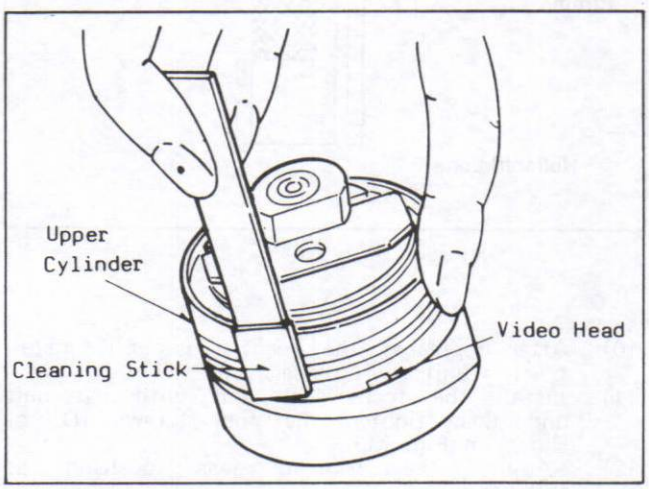


Fig. U1

Note:
(1) Do not rub vertically.
(2) Do not apply any pressure to the head. If the contaminant is not easily removed, continued gentle wiping will usually remove it.

2-3. REPLACEMENT AND ADJUSTMENT PROCEDURES

2-3-1. REPLACEMENT OF FOCUS LENS UNIT

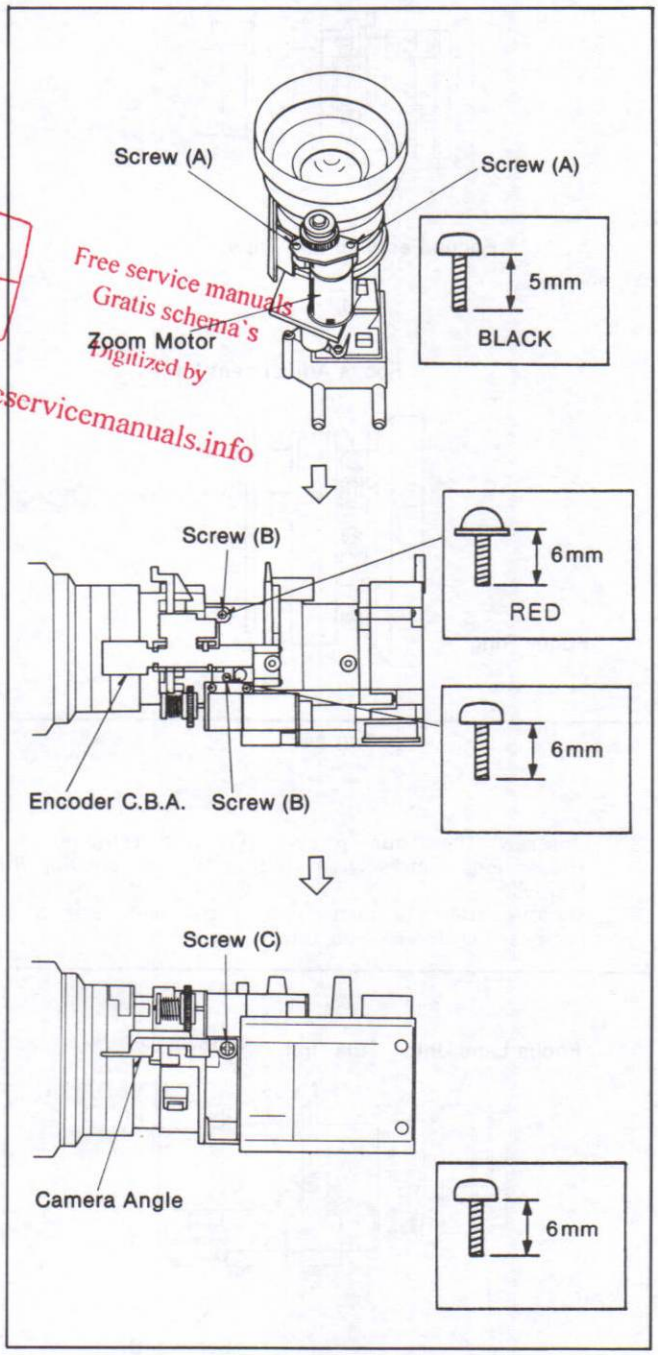


Fig.M1

(1). Remove the camera unit from the VHS-C Movie.
(2). Remove the C.B.As (Process, Auto Focus, Sensor) from the camera unit.
(3). Unscrew the two screws (A) and remove the zoom motor.
(4). Unscrew the two screws (B) and remove the encoder C.B.A.
(5). Unscrew the screw (C) and remove the camera angle.

(6). Remove the focus fastener and tape as shown in Fig.M2.
(7). Remove the focus ring by turning the focus adjustment pitch to the counter clockwise.

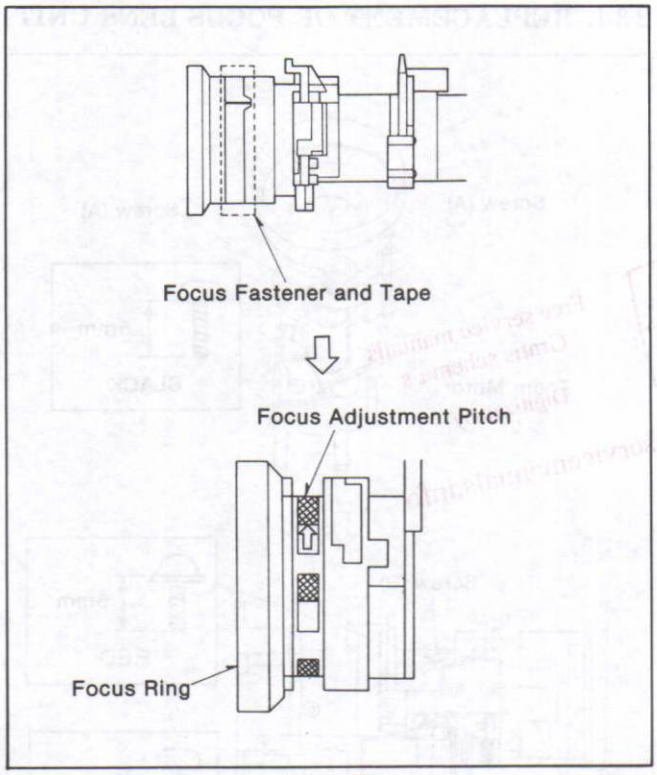


Fig.M2

(8). Unscrew the four screws (D) and remove the focus lens unit with iris unit as shown in Fig.M3.
(9). Remove the iris unit from focus lens unit and replace the focus lens unit.

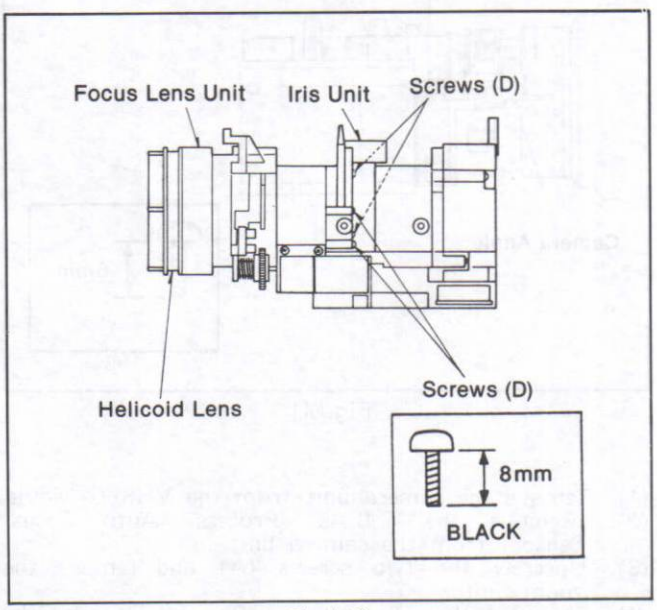


Fig.M3

[Adjustment Procedures]

Note:
Do not remove the helicoid lens from focus lens unit because it has the relation of pairing between them.

If the helicoid lens is happened to be removed,the helicoid lens should be installed as following step.

a.Install the helicoid lens so that the projection with groove on helicoid lens comes to projection on lens unit as shown in Fig.M4.

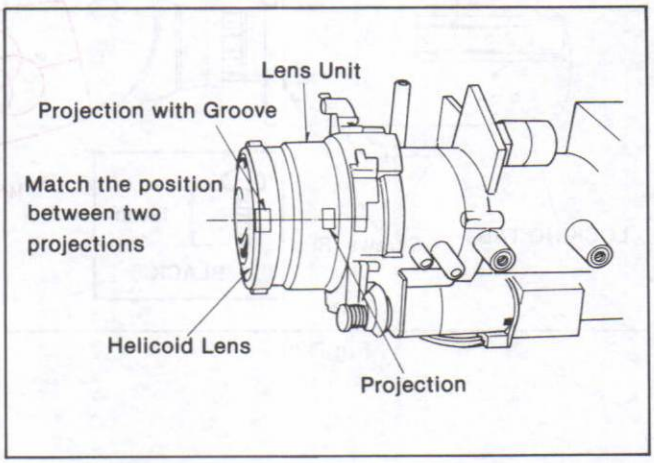


Fig. M4

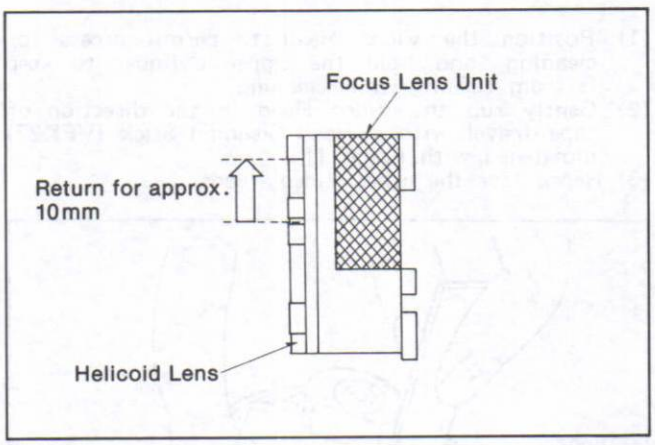


Fig. M5

(10). After replacing the focus lens unit, install the iris unit to focus lens unit.
(11). Install the focus lens unit with iris unit and then tighten the four screws (D) as shown in Fig. M3.
(12). Adjust the helicoid lens position as follows.

a. Turn the helicoid lens to fully clockwise and return it for approx. 10mm (so that next installation become easy) as shown in Fig.M5.

(13). Install the focus ring so that the infinity ( ) mark on focus ring is come to red-line on focus lens unit as shown in Fig.M6.

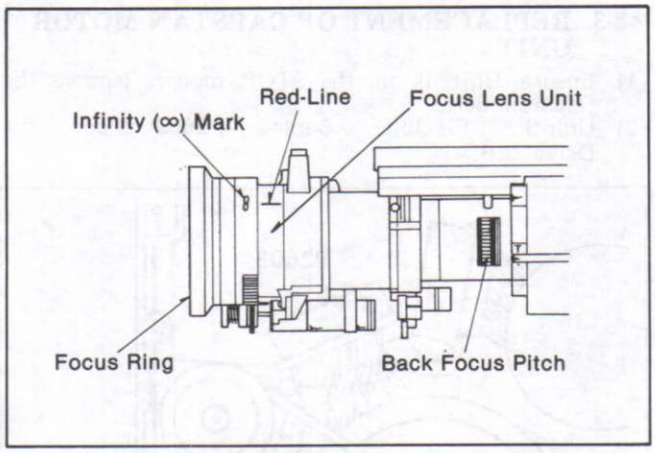


Fig.M5

(14). Install the C.B.As (Process, Auto Focus, Sensor, Encoder) and zoom motor in reverse assembly order.

(15). After installation of the focus ring ,adjust the position of focus adjustment pitch and back focus pitch as follows.

a. Aim the camera at the object in 3m distance from the surface of CCD unit (in 2.9m distance from focus ring).
b. Set the focus ring so that the 3m mark of distance indication on focus ring is come to red-line(Distance indication Line) on focus lens unit and keep the focus ring not to move during following adjustment.
c. Turn the zoom ring fully to "Tele" position (54mm position).
d. Adjust the focus adjustment pitch (refer to Fig. M2) to obtain the best focus and stick the tape(which was stuck on the unit before) on to the focus adjustment pitch(refer to Fig.M2).
e. Install the focus fastener as shown in Fig.M2.
f. Turn the zoom ring fully to "wide" position (9mm position).
g. Prepare the Hunting chart for object and aim the camera at the hunting chart 3m distance.
h. Zoom all the way in full tele position and focus the lens on the object.
i. Confirm that the focus ring indicates 3m.
j. Adjust the back focus pitch so that the sharpest focus is obtained.
k. Zoom all the way back and adjust the back focus pitch (refer to Fig.M6)so that the sharpest focus is obtained.
l. Repeat the procedure as follows, zoom in,focus,zoom out and adjust until the best focus is obtained over the entire zoom range.

2-3-2. REPLACEMENT OF ROTARY TRANSFORMER

Reinstallation of Rotary Transformer (R) Unit

(1) Reistall the Rotary Transformer (R) Unit carefully so that the white portion of Upper Cylinder Unit is properly aligned with white portion of Rotary Transformer (R).
(2) Tighten the 2 screws (C) and solder 8 Lead Pins (B).

Reinstallation of Upper Rotary Transformer (S) Unit

(1) Befor reinstalling a Upper Rotary Transformer (S) Unit, clean the surface of Rotary transformer (R) and Rotary Transformer (S) with a soft cloth.
(2) Place the Spacer (VMX1340) on Rotary Transformer (R). Reinstall the Upper Rotary Transformer (S) Unit so that insert the shaft (VMS3504) to center of Rotary transformer (S) surely through the center of Upper Rotary transformer (R).

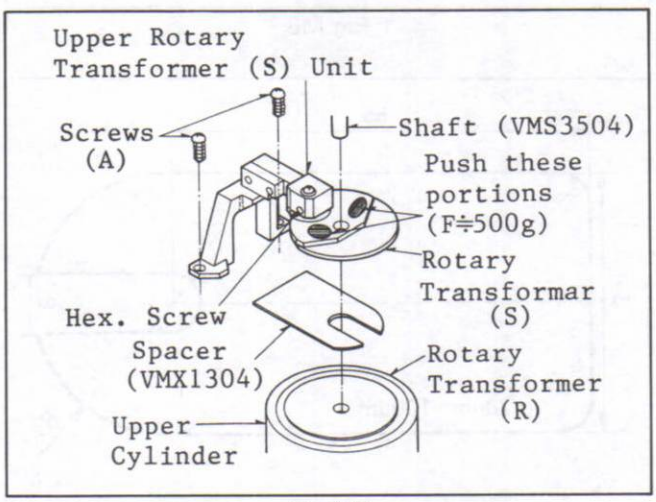


Fig.M7

(3) Tighth the 2 screws (A).
(4) Loosen the Hex. Screw (1.2mm).
(5) Push the Upper Rotary Transformer (S) C.B. (F=500g) and then remove the Shaft and tightn the Hex. Screw.
(6) Remove the spacer.

Simplifide adjustment of Upper Rotary Transformer (S) Unit

(1) Clean the surface of the Rotary Transformer (R) and (S) with a soft cloth before reinstall a Upper Rotary Transformer (S) Unit.
(2) Place a piece of paper on Rotary Transformer (R) which has the same thickness as an ordinary page of Service Manual (not cover page but the other thinner pages) cutting as follows. (The specification of this gap is between 70um ~ 100um.)
(3) Install the Rotary Transformer (S) unit so that the center portion comes to the center of Upper Cylinder Motor.
(4) Tighten the 2 Screws (A).
(5) Loosen the Hex. screw.

(6) Push the screened portions of the Rotary Transformer (S) (approx. 500g) and then tighten the Hex. screw with Hex wrench.
(7) Remove the paper which is used as spacer.
(8) Confirm that the Upper Cylinder can rotate smoothly.

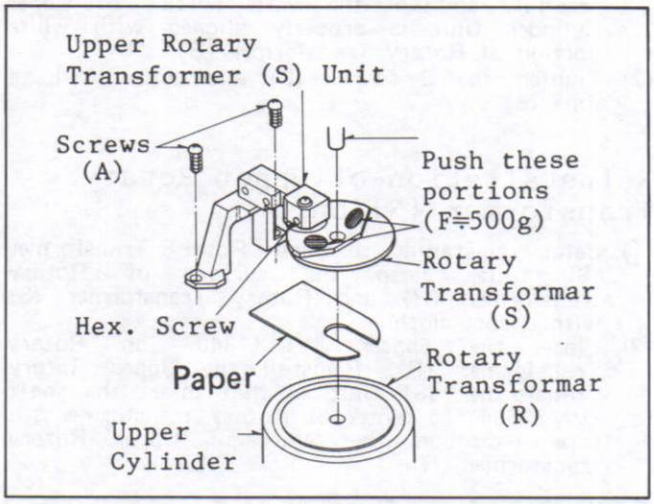


Fig.M8

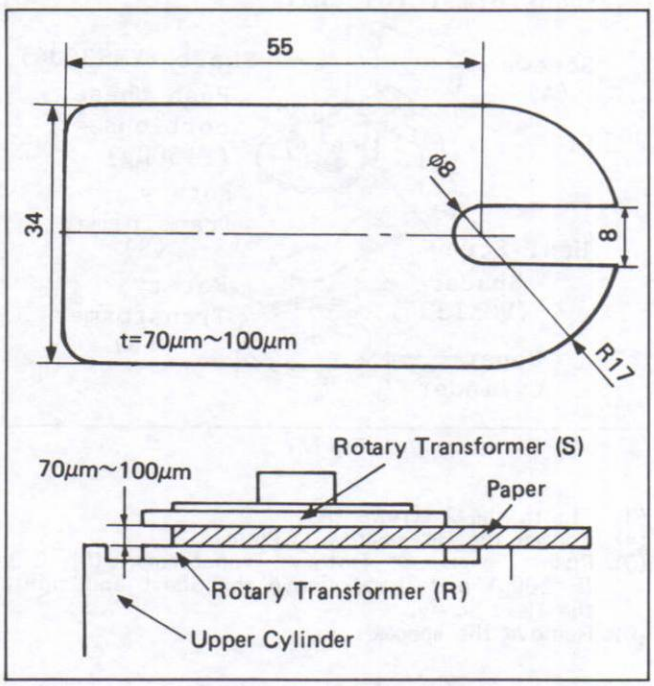


Fig.M9

Confirmation of replacement

(1) Confirm the rotarion of Upper Cylinder Unit. (Upper Cylinder Unit rotate smoothly.)
(2) Insert the Spacer to gap of Rotaly Trans. (It must be smoothly also gap must not be too wide.)
(3) Confirm the selfrecording and Playback picture on LP mode. (Play back picture must not noisy)
(4) If condition is no good, review the item No.6 Reinstllation of Upper Rotary Transformer (S) Unit.
(5) After confirmation, perform "TAPE INTERCHANGEABILITY ADJUSTMENT."

2-3-3. REPLACEMENT OF CAPSTAN MOTOR UNIT

(1) Ensure Unit is in the STOP mode. Remove the Capstan Belt.
(2) Unlock Flexible Cable P2603 on the Drive C.B.A.

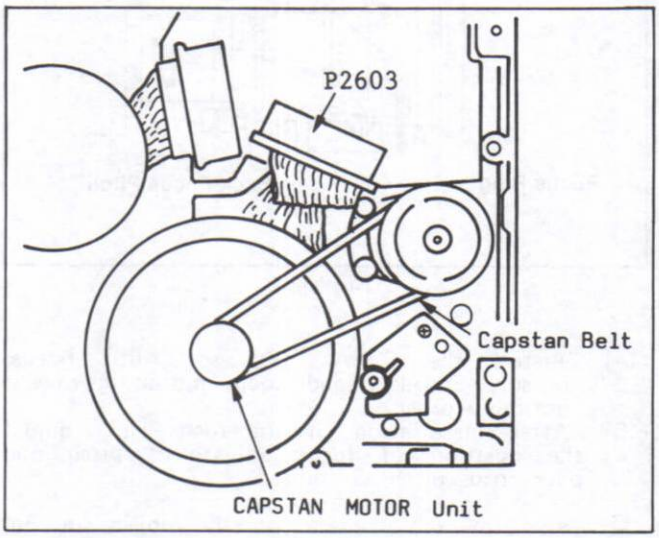


Fig.M10

(3) Remove the Cassette Up Holder. LP Head Amp, Head Amp Holder and Mode Select Switch Unit.
(4) Take out the Idler Gear while pushing on the Tape Guide Lever Unit until it clears the Idler Gear Teeth as shown in Fig. M11.

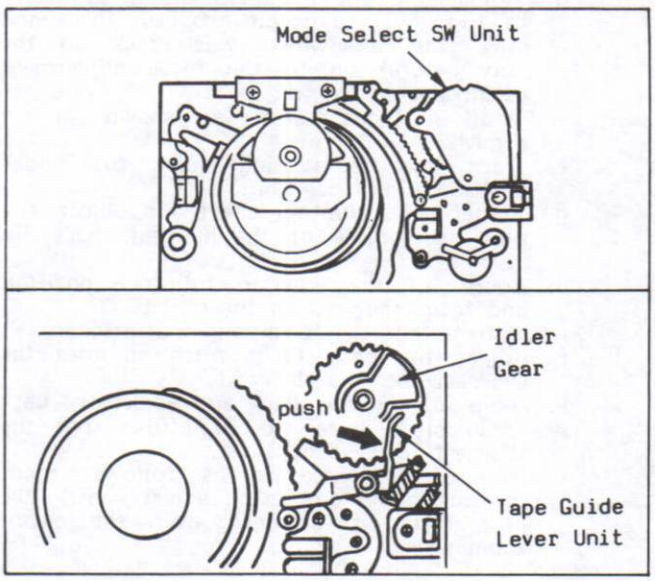


Fig.M11

(5) Remove 2 Screws (B). Then remove Screw (C) while slightly pushing on the Sector Gear Unit to reveal Screw (C) as shown in Fig. M12. Then remove the A/C Head Base Unit.

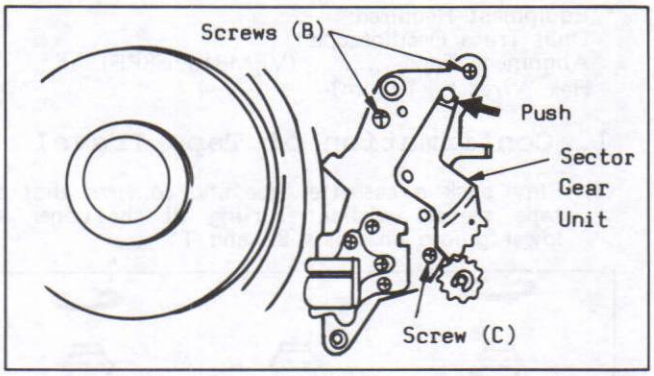


Fig.M12

(6) Remove the Cut Washer and Motor Gear. Then place the Unit in play position completely by rotating Loading Idle Gear clockwise as shown in Fig. M13.

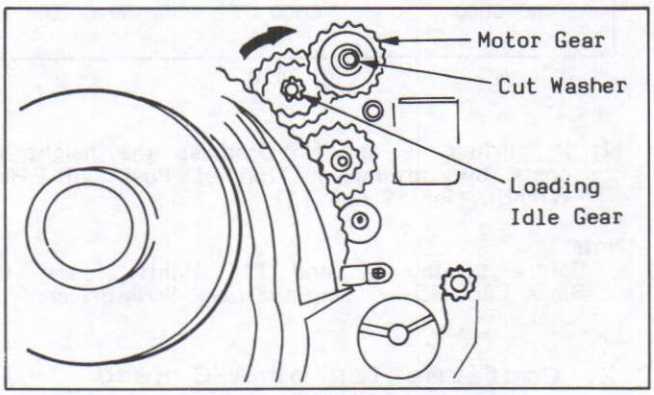


Fig.M13

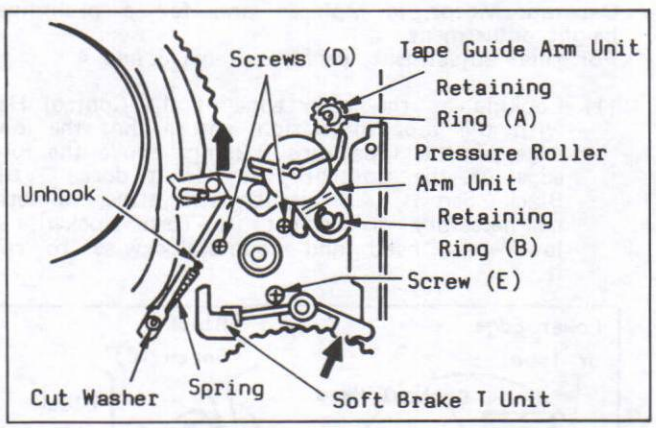


Fig.M14

(7) Remove Retaining Ring (A) and Tape Guide Arm Unit by pushing it in the direction shown by arrow and lifting it off its Post.
(8) Remove the Cut Washer and unhook the Spring.
(9) Remove Retaining Ring (B) and Pressure Roller Arm Unit.
(10) Refer to the Disassembly/Assembly and Adjustment Procedures of Mechanism. Use steps 3, 4 and 5 to remove the Takeup Reel Gear, Clutch Gear Unit and Soft Brake T Unit.
(11) Remove 2 Screws (D) and Screw (E) while pushing slightly on the Soft Brake T Unit.Then remove the Capstan Stator Unit from Bottom Side.
(12) Replace the new Capstan Motor Unit and then tighten 2 Screws (D) and Screw (E).

Adjustment of FG Head Gap

* Specification: ..... 0.1~0.15mm
(1) Slightly loosen the 2 screws.
(2) Put the paper which is used for cover page of this volume into the gap between F.G.Head and Capstan rotor.
(3) Afer adjustment, tighten 2 screws.

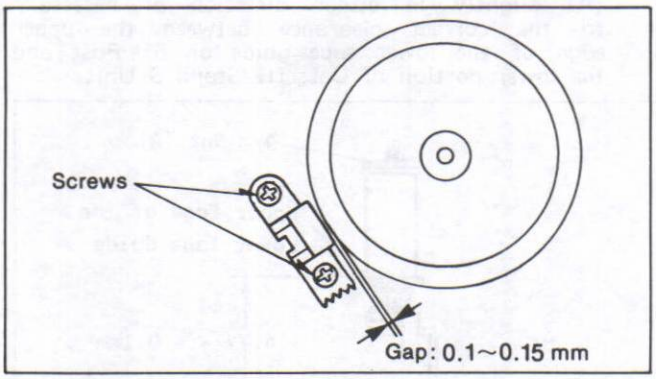


Fig. M15

Note:
Do not touch the surface of rotor and keep any magnetizable material away.

2-3-4. ADJUSTMENT OF TENSION POST POSITION

(1) Remove the Cassette Up Unit.
(2) Cover the Tape End Sensor and Cassette Up/Down Sensor with Black Tape.
(3) Push the Play button to complete loading operation sequence.
(4) As soon as loading is completed, disconnect the AC plug of AC Adaptor.
(5) Loosen Screw (F) a little bit and adjust the Tension Adjust Piece (in either direction) as indicated by the arrow so that the center of the Tension Post is 1mm to the left of the center of the S1 Post as shown in Fig. M16. Tighten Screw (F) to secure it.

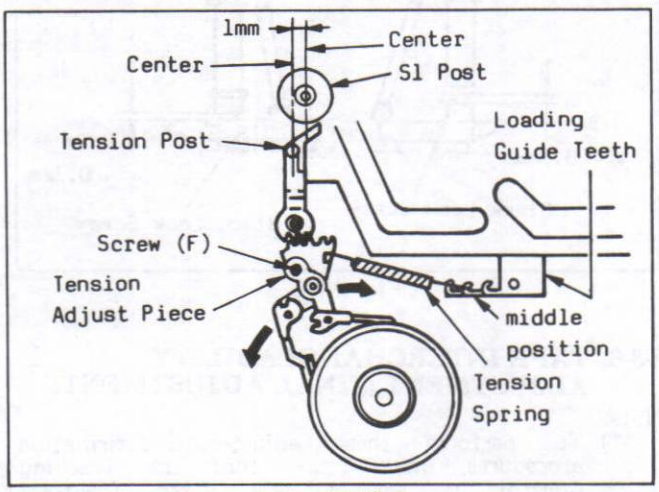


Fig. M16

Note:
After this adjustment, reposition Tension Spring on Loading Guide Teeth to middle position as a Back Tension Adjustment as shown in Fig. M16.

2-3-5. HEIGHT ADJUSTMENT OF TAPE GUIDE POST (PRELIMINARY ADJUSTMENT)

Height adjustment of S1 Post

* Specification: ..... 14.72+−0.1mm

(1) For adjustment of S1 post height, turn 4mm Nut (A) slightly in either direction as necessary to the correct clearance between the upper edge of the lower tape guide on S1 Post and the lower portion of Cassette Stand S Unit.

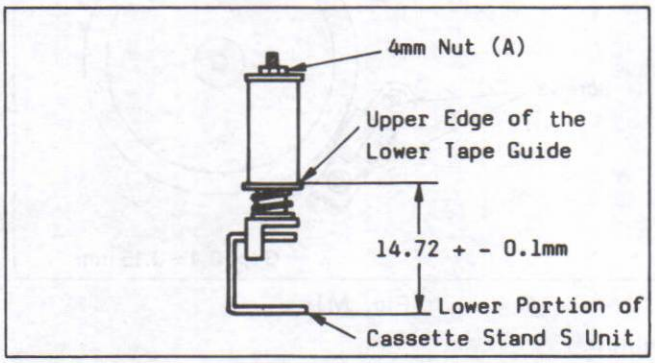


Fig. M17

Height adjustment of S2 and T1 Posts

* Specification:
  S2 Post ..... 0.56+−0.1mm
  T1 Post ..... 0.74+−0.1mm

(1) For adjustment of S2 and T1 post height, loosen the Black Lock Screw located on the lower portion of Posts (S2 & T1) using the Lock Screwdriver .
(2) Turn top of post with Hex. Wrench (1.5mm) slightly in either direction as necessary to the correct clearance as shown in Fig. M18.

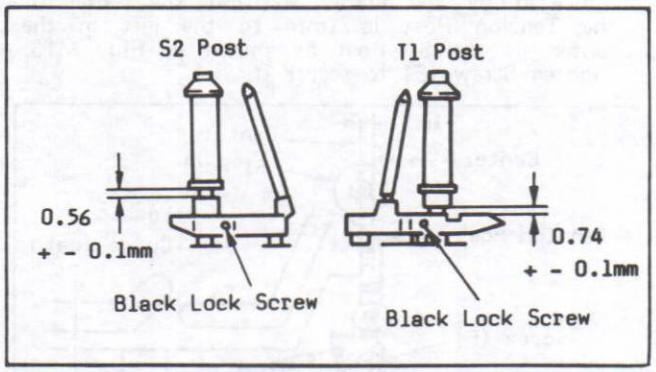


Fig. M18

2-3-6. TAPE INTERCHANGEABILITY ADJUSTMENT (FINAL ADJUSTMENT)

Note:
1) To perform these adjustment/confirmation procedures, make sure that the Tracking Control is set in the fixed (neutral) positionby pushing both of the Tracking Control Up/Down Switches, on the Main C.B.A., in at the same time.
2) Before these adjustment/confirmation procedures, remove the cassette protective Tape Cover from a Cassette Tape or the Alignment Tape (VFM8180H8PF).

* Equipment Required:
  Dual Trace Oscilloscope
  Alignment Tape ..... (VFM8180H8PF)
  Hex. Wrench (1.5mm)

1. Confirmation of Tape Travel

(1) Play back a cassette tape and confirm that the tape travels without curling at the upper and lower guides on Posts S2 and T1.

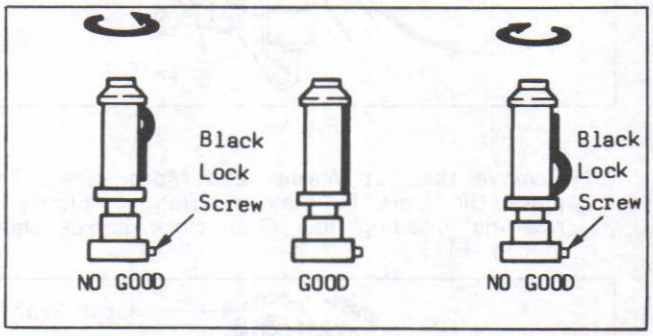


Fig. M19

(2) If curling is apparent, adjust the height of posts by turning the top of Post with Hex. Wrench. (for S2 and T1)

Note:
Before turning S2 and T1, slightly loosen the Black Lock Screw using the Lock Screwdriver.

2. Confirmation of A/C Head

This confirmation is required when the A/C Head or Capstan Motor is replaced and for a preliminary height adjustment.
For final adjustment, perform items 3 and 4.

(1) Looking at the lower edge of the Control Head with the tape in motion, ensure that the lower edge of the tape runs 0.25mm above the lower edge of the Control Head. If it doesn't, turn Black Screw (A) slightly in either direction as necessary to correct it. Turn clockwise to lower the head and counterclockwise to raise it.

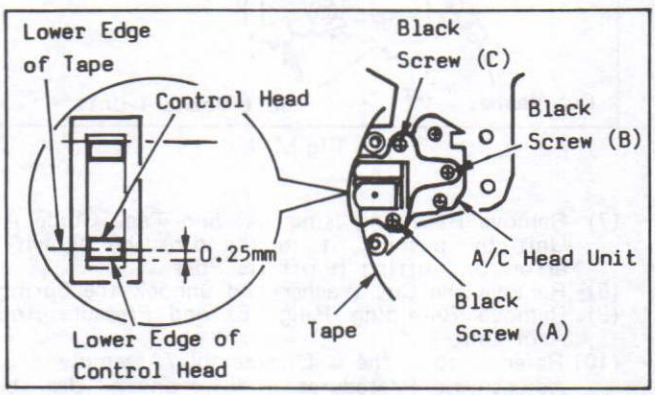


Fig. M20

3. Confirmation of Tilt of A/C Head

(1) Play back a cassette tape and confirm that the tape runs properly between lower and upper limits of T3 Post. Also confirm that the tape is running smoothly.
(2) If adjustment is required, turn Black Screw (B), in Fig. M20, counterclockwise until curling is apparent at lower edge of T3 Post. Then turn Black Screw (B) clockwise until the curling smoothes out.

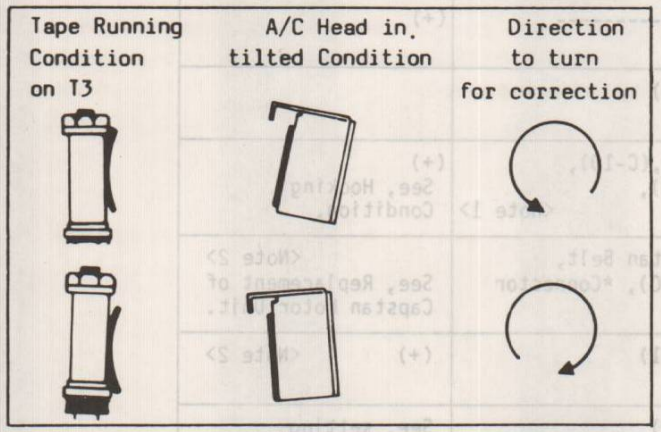


Fig. M21

4. Height and Azimuth Adjustment of A/C Head

(1) Connect the oscilloscope to TP4001 on the Main C.B.A.
(2) Play back the Monoscope portion (6KHz, Mono) of the Alignment Tape.
(3) Adjust Black Screw (C) on the A/C Head Base in Fig. M20 so that the output level is at a maximum.

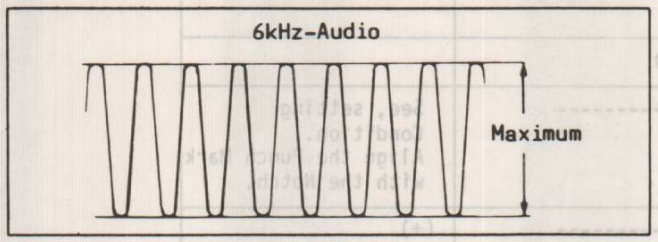


Fig. M22

(4) Readjust Black Screw (A) shown in Fig. M20 for maximum output.
(5) Disconnect the oscilloscope.

5. Horizontal Position Adjustment of A/C Head

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
(2) Play back the monoscope portion of the Alignment Tape and confirm that RF envelope appears, as in Fig. M24.
(3) If adjustment is required, loosen 2 Black Screws (D) and then slowly move the A/C Haed Base back and forth using a screwdriver so that the envelope is at a maximum.

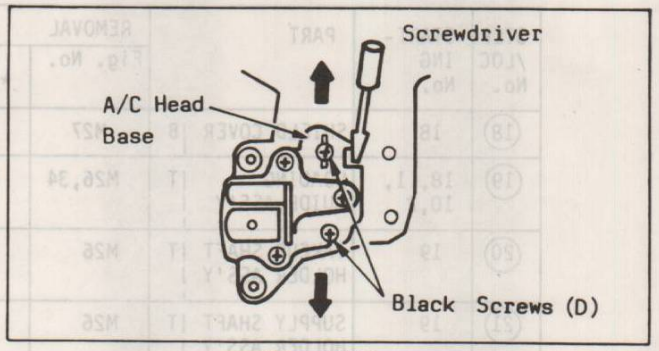


Fig. M23

(4) Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, on the Main C.B.A. to check the symmetry of the envelope.
(5) Trghten 2 Black Screws (D).
(6) Reconfirm the symmetry of the envelope. If it has changed, repeat steps (3) ~ (5).

6. Confirmation/Adjustment of Envelope Output

(1) Set the tracking control to the fixed (neutral) position by pushing both of the tracking control Up/Down Switches, on the Main C.B.A., in at the same time. Connect the oscilloscope to TP3501 on the Main C.B.A. Use TP2001 as a trigger.
(2) Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2 and T1 watching the scope display so that the envelope becomes as flat as possible.
(V1/V-max >= 0.7, V2/V-max >= 0.8)
If adjustment is required, turn top of post with Hex. Wrench (1.5mm). For adjustment of S2 and T1, refer to Item 1 and it's Note.

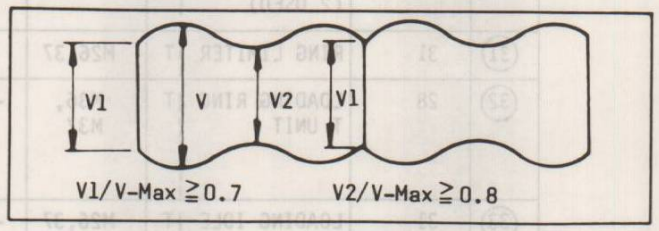


Fig. M24

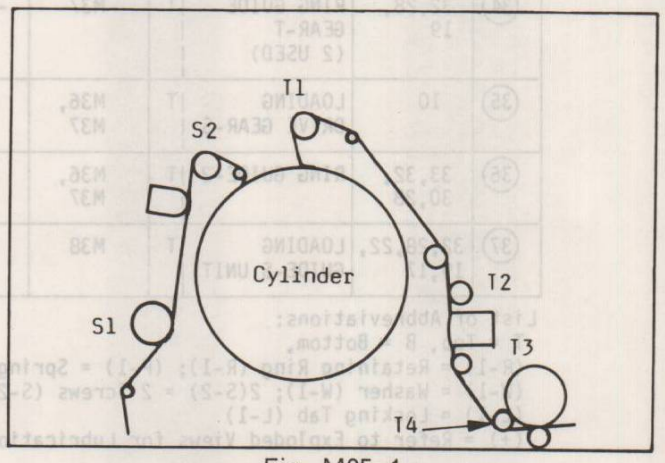


Fig. M25-1

(3) When the scope display is as shown in Fig. M25-2, adjust the height of S2 so that the waveform looks like Fig. M25-4.

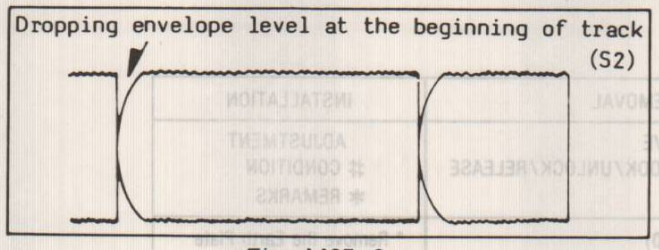


Fig. M25-2

(4) When the scope display is as shown in Fig. M25-3, adjust the height of T1 so that the waveform looks like Fig. M25-4.

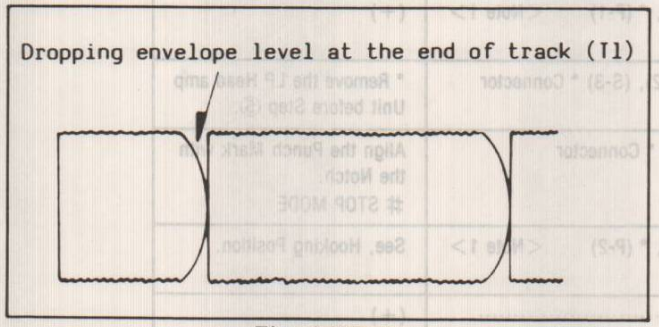


Fig. M25-3

(5) The scope display should appear as shown in Fig. M25-4 when S2 and T1 Posts are adjusted properly.

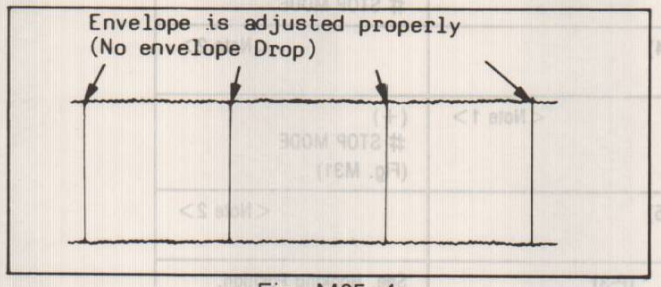


Fig. M25-4

Note:
1) Upon completion of adjustment of S2 and T1, tighten the Black Lock Screw on S2 and T1 using Lock Screwdriver. Then confirm the Horizontal Position of A/C Head by pushing the Tracking Control Up or Down switches on the Main C.B.A. alternately to check the symmetry of the envelope. And if required, perform "Horizontal Position Adjustment of A/C Head".
2) After these adjustment/confirmation procedures, replace the cassette protective Tape Cover.

2-3-7. ASSEMBLY AND ADJUSTMENT PROCEDURE OF MECHANISM

This procedure starts with the condition that the Cabinet parts and Cassette Up Unit have been removed.
When re-assembling, perform the step (s) in the reverse order.

STEP /LOC No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE * UNHOOK/UNLOCK/RELEASE	ADJUSTMENT # CONDITION * REMARKS
①	1	RT (S) UNIT D.D. CYL. UNIT	T/B	M27, 28	3 (S-0) * Connectors	* Remove the Earth Plate before Step ①
②	3	TAKEUP REEL GEAR	T	M26, 28	(C-1), (W-1) <Note 1>	(+)
③	3	CLUTCH GEAR UNIT	T	M26, 28	(C-2), (W-2) <Note 1>	(+)
④	4	SOFT BRAKE T UNIT	T	M26, 28	(C-3), * (P-1) <Note 1>	(+)
⑤	6	HEAD AMP ANGLE	T	M29	2 (S-2), (S-3) * Connector	* Remove the LP Head amp Unit before Step ⑤.
⑥	6	MODE SELECT SWITCH UNIT	T	M26, 29	(S-3) * Connector	Align the Punch Mark with the Notch. # STOP MODE
⑦	6	TAPE GUIDE LEVER UNIT	T	M26, 29	(C-4), * (P-2) <Note 1>	See, Hooking Position.
⑧	7	IDLER GEAR	T	M26, 30	.....	(+) Align the Notch with the Shaft of Loading Idle Gear. # STOP MODE
⑨	8	SECTOR GEAR UNIT	T	M26, 30	.....	(+) Align the Hole with the Notch. # STOP MODE
⑩	9	A/C HEAD BASE UNIT	T	M26, 30	3 (S-4)	<Note 2>
⑪	10	MOTOR GEAR	T	M26, 31	(C-5) <Note 1>	(+) # STOP MODE (Fig. M31)
⑫	11, 10	LOADING MOTOR UNIT	T	M31	2 (S-5)	<Note 2>
⑬	10	TAPE GUIDE LEVER UNIT	T	M26, 31	(R-1), * (P-3)	See, Hooking Position.
⑭	14	TENSION ARM UNIT	T	M26, 32	(C-6), (W-3) <Note 1>	(+) See, Adjustment of Tension Post Position. Align the Punch Mark with the Notch. # Loading
⑮	15	SUPPLY REEL TABLE UNIT	T	M26, 32	(C-7), (W-4) <Note 1>	(+)
⑯	15	TENSION BAND ARM UNIT	T	M26, 32	(C-8), * (P-4) <Note 1>	(+)
⑰	16, 14	CASSETTE STAND S ASS'Y	T	M26, 33	2 (S-6), * Connector	(+) <Note 2>

STEP /LOC No.	START-ING No.	PART		REMOVAL		INSTALLATION
				Fig. No.	REMOVE *UNHOOK/UNLOCK/RELEASE	ADJUSTMENT #CONDITION
⑱	18	SHIELD COVER	B	M27	(S-7)	
⑲	18,11, 10,2	LOADING GUIDE ASS'Y	T	M26,34	6(S-8), *(L-1), *Connector	(+) <Note 2> <Note 3> # Loading
⑳	19	TAKEUP SHAFT HOLDER ASS'Y	T	M26	(C-9)	(+) <Note 1>
㉑	19	SUPPLY SHAFT HOLDER ASS'Y	T	M26	----------	(+)
㉒	19	V STOPPER BASE ASS'Y	T	M26	2(S-9)	
㉓	19,13	PRESSURE ROLLER ARM UNIT	T	M26, M35	(R-2),(C-10), *(P-5), <Note 1>	(+) See, Hooking Condition.
㉔	23,5	CAPSTAN MOTOR UNIT	T	M26,27, M35	*Capstan Belt, 3(S-10), *Connector	<Note 2> See, Replacement of Capstan Motor Unit.
㉕	4	CASSETTE STAND-T	T	M26, M35	2(S-11)	(+) <Note 2>
㉖	19	RING GUIDE 1	T	M36	(S-12)	See, setting condition.
㉗	19	RING GUIDE 3	T	M36	(S-13)	See, setting condition.
㉘	27,26, 21,20	LOADING RING S UNIT	T	M26, M36	----------	(+) Align the Hole with punch Mark.
㉙	28	LOADING DRIVE GEAR-T	T	M36	(C-11) <Note 1>	(+)
㉚	28	RING GUIDE GEAR-S (2 USED)	T	M36	----------	---------- White Color Gear
㉛	31	RING LIMITER	T	M26,37	(S-14)	
㉜	28	LOADING RING T UNIT	T	M36, M37	----------	See, setting Condition. Align the Punch Mark with the Notch.
㉝	31	LOADING IDLE GEAR	T	M26,37	----------	(+) Align the Punch Mark with the Notch.
㉞	32,28, 19	RING GUIDE GEAR-T (2 USED)	T	M37	----------	(+) Black Color Gear # STOP MODE
㉟	10	LOADING DRIVE GEAR-S	T	M36, M37	(C-12) <Note 1>	(+)
㊱	33,32, 30,28	RING GUIDE-2	T	M36, M37	(S-15)	
㊲	32,28,22, 19,17	LOADING GUIDE-S UNIT	T	M38	3(S-16)	<Note 2>

List of Abbreviations:
T = Top, B = Bottom,
(R-1) = Retaining Ring (R-1); (P-1) = Spring (P-1); (S-1) = Screw (S-1);
(W-1) = Washer (W-1); 2(S-2) = 2 Screws (S-2); (C-1) = Cut Washer (C-1);
(L-1) = Locking Tab (L-1)
(+) = Refer to Exploded Views for Lubrication information

TOP VIEW

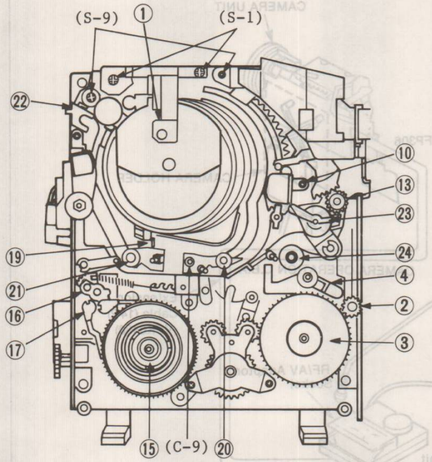


Fig. M26

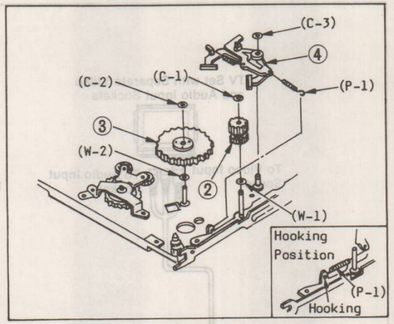


Fig. M28

BOTTOM VIEW

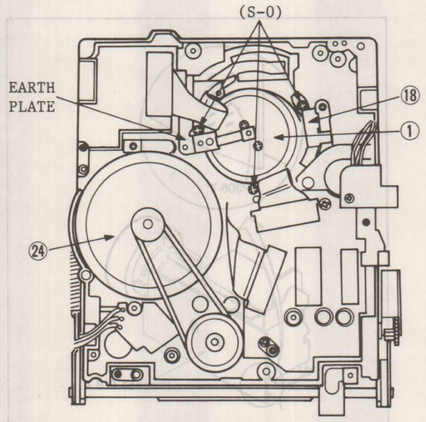


Fig. M27

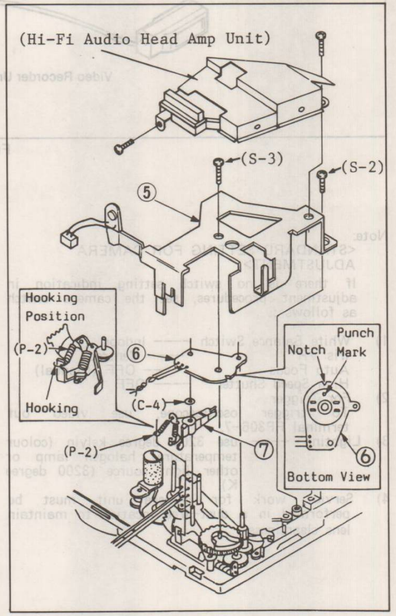


Fig. M29

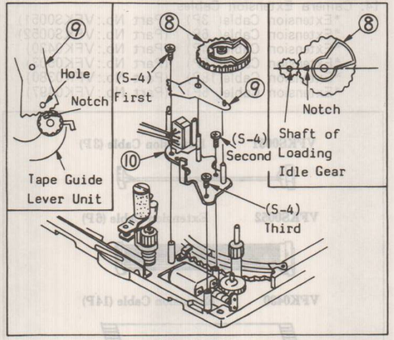


Fig. M30

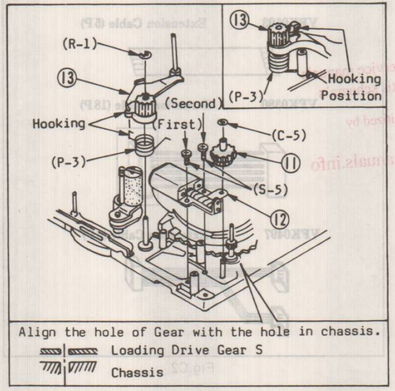


Fig. M31

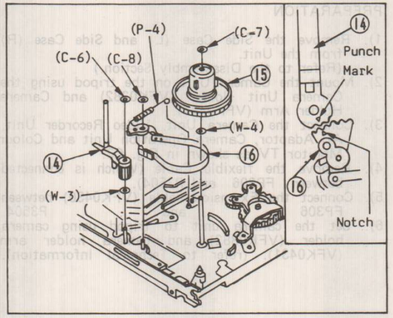


Fig. M32

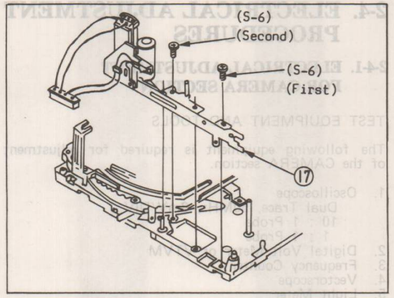


Fig. M33

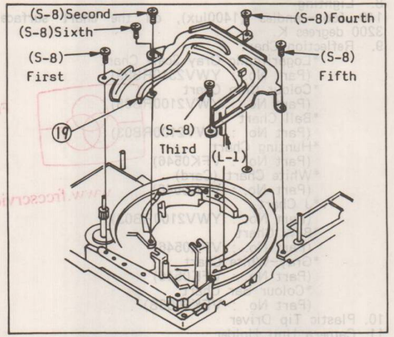


Fig. M34

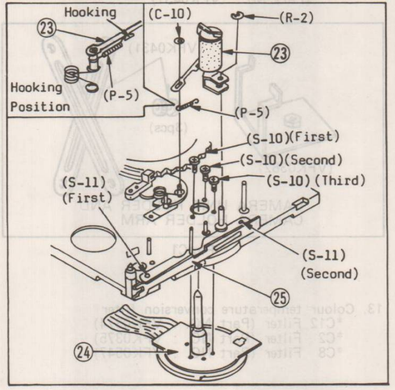


Fig. M35

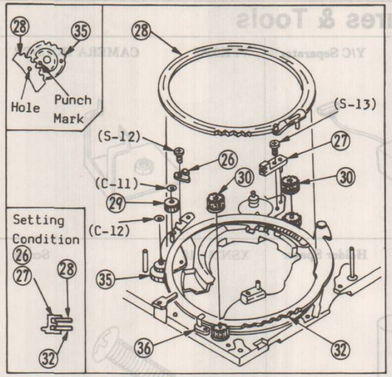


Fig. M36

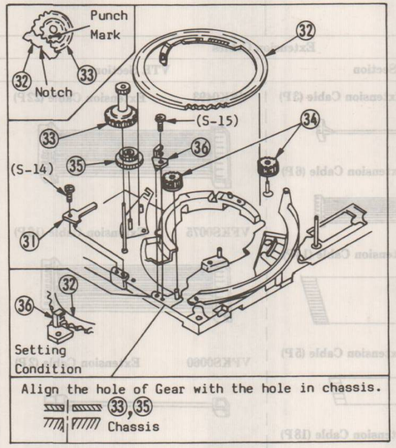


Fig. M37

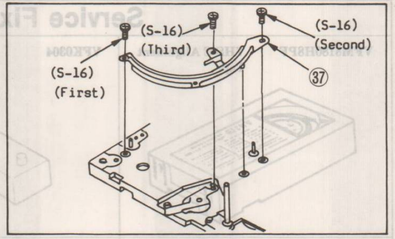


Fig. M38

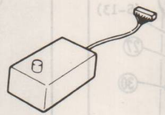
Reference's <Notes> in Table 7 :

1. This Cut Washer is not reusable. If removed, install a new one.
2. In each figure, tighten the screws in the order indicated in the diagram.
3. Remove the shield cover over the PG Pickup to allow the release of (L−1).

Service Fixtures & Tools

VFM8180H8PF VHS-C Alignment Tape

VFK0304 Y/C Separator



VFK0382 CAMERA HOLDER

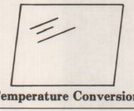
VFK0431 Camera Holder Arm

(3 pcs)

VFK0432 Holder Spacer

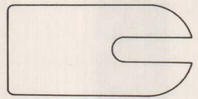
XSN26+18 Screw

VFK0374 (C12)
VFK0375 (C2)
VFK0547 (C8)



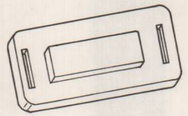
Colour Temperature Conversion Filter

VMX1304 Clearance Spacer



VMS3504 Alignment Shaft

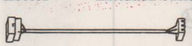
VKW1049 Diffusion Plate



Extension Cables

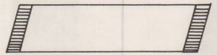
Camera Section

VFKS0051 Extension Cable (3P)

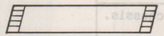


VFKS0052 Extension Cable (6P)

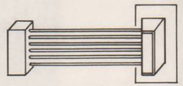
VFK0430 Extension Cable (14P)



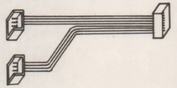
VFK0503 Extension Cable (5P)



VFK0380 Extension Cable (18P)



VFK0497 Extension Cable (6P)

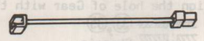


VTR Section

VFK0493 Extension Cable (22P)

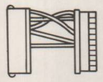
VFKS0075 Extension Cable (16P)

VFKS0060 Extension Cable (2P)



VFK0499 Extension Cable (3P)

VFKS0074 Connector



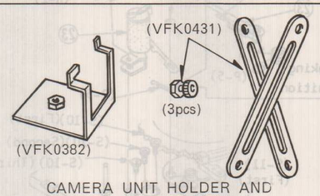
2-4. ELECTRICAL ADJUSTMENT PROCEDURES

2-4-1. ELECTRICAL ADJUSTMENT FOR CAMERA SECTION

TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the CAMERA section.

1. Oscilloscope
   Dual Trace, 50MHz, 2mV/DIV,
   10 : 1 Probe
   1 : 1 Probe
2. Digital Volt Meter or VTVM
3. Frequency Counter
4. Vectorscope
5. Light Meter
6. Tripod
7. Colour Video Monitor
8. Lighting
   140 foot-candles (1400lux), on the chart surface 3200 degrees K.
9. Reflection Chart
   - *Logarithmic Gray Scale Chart (Part No. : YWV2310RB99)
   - *Colour Chip Chart (Part No. : YWV2100RB98)
   - *Ball Chart (Part No. : YWV2100RB03)
   - *Hunting Chart (Part No. : VFK0546)
   - *White Chart (Card) (Part No. : VFK0546)
   - *J Chart (Part No. : YWV2100RB03)
   - *B/W Chart (Part No. : VFK0546)
   - *Gray-White Chart (Part No. : VFK0546)
   - *Colour Bar Chart (Part No. : VFKS003B)
10. Plastic Tip Driver
11. Camera Unit Holder (Part No. : VFK0382)
12. Camera Holder Arm (Part No. : VFK0431)



CAMERA UNIT HOLDER AND CAMERA HOLDER ARM

Fig.C1

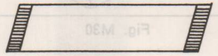
13. Colour temperature conversion filter
    - *C12 Filter (Part NO. : VFK0374)
    - *C2 Filter (Part NO. : VFK0375)
    - *C8 Filter (Part NO. : VFK0547)

14. Camera Extension Cables
    - *Extension Cable(3P) (Part No.: VFKS0051)
    - *Extension Cable(6P) (Part No.: VFKS0052)
    - *Extension Cable(14P) (Part No.: VFK0430)
    - *Extension Cable(5P) (Part No.: VFK0503)
    - *Extension Cable(18P) (Part No.: VFK0380)
    - *Extension Cable(6P) (Part No.: VFK0497)

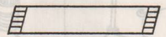
VFKS0051 Extension Cable (3P)

VFKS0052 Extension Cable (6P)

VFK0430 Extension Cable (14P)



VFK0503 Extension Cable (5P)



VFK0380 Extension Cable (18P)

VFK0497 Extension Cable (6P)

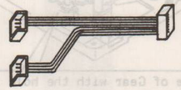


Fig.C2

PREPARATION

1). Remove the Side Case (L) and Side Case (R) from the Unit.
   (Refer to the Disassembly Section.)
2). Mount the Camera Unit on the tripod using the Camera Unit Holder (VFK0382) and Camera Holder Arm (VFK0431).
3). Connect the Camera Unit, Video Recorder Unit, AC Adaptor, Camera Operation Unit and Colour Monitor TV as shown in Fig. C3.
4). Remove the flexible Cable (Which is connected between FP306 and P3504).
5). Connect the Extension cable (VFK0430) between FP306 and P3504.
6). Set the camera unit to tripod using camera holder (VFK0382) and camera holder arm (VFK0431). (refer to Technical Information).

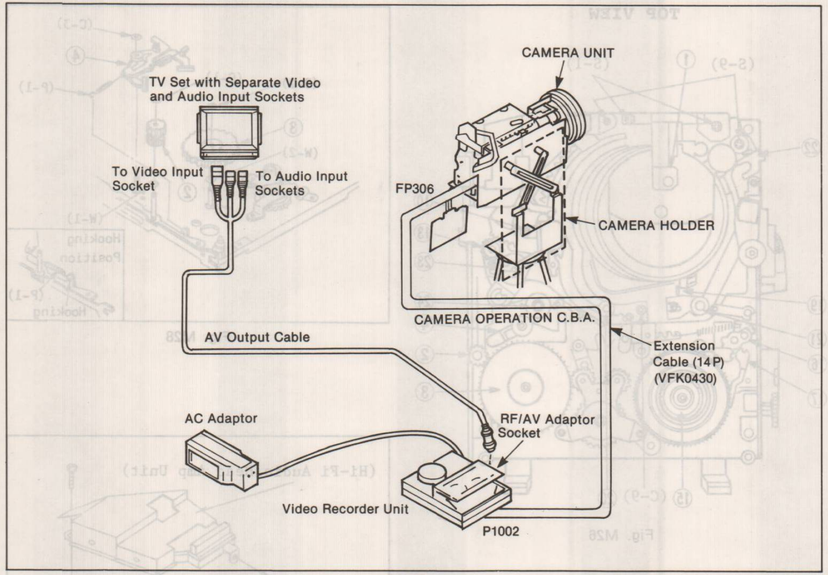


Fig.C3

Note:
<STANDARD SETTING FOR CAMERA ADJUSTMENT>
If there is no switch setting indication in adjustment procedures, set the camera switch as follows :

1) White Balance Switch ----- Indoor
   Iris VR ----- Centre
   Auto Focus ----- OFF (Manual)
   High Speed Shutter ----- OFF
2) For Trigger
   To trigger oscilloscope, use video out terminal FP306-7.
3) Lighting ----- use 3200 degree kelvin (colour temperature) halogen lamp or other light source (3200 degree K)
4) Service work for camera unit must be performed in a dust-free location to maintain lens cleanliness.

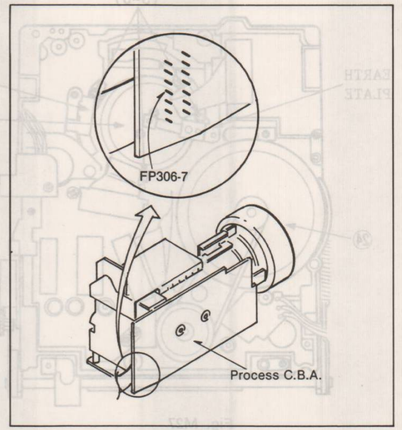


Fig. C4-1

HOW TO USE CAMERA HOLDER ARM (VFK0431)

This Camera Holder Arm which is adjustable the span must be mounted to VFK0382 and it can be used with VFK0432 for camera adjustment or checking.

(A) --- VFK0432 Holder Spacer (2pcs.)
(B) --- VFK0431 Camera Holder Arm
(C) --- XSN26+18 Screw (2pcs.)
(D) --- VFK0382 Camera Holder

(1) Fix the Holder Arm (4) and (5) temporarily by screw (1) as shown in Fig. C4–2.
(2) Mount the Camera Holder Arm (B) to the Camera Holder (D) by screws (2) and (3) as shown in Fig. C4–3.
(3) Tighten the screws (C) with the Holder Spacers (A) as shown in Fig. C4–2.

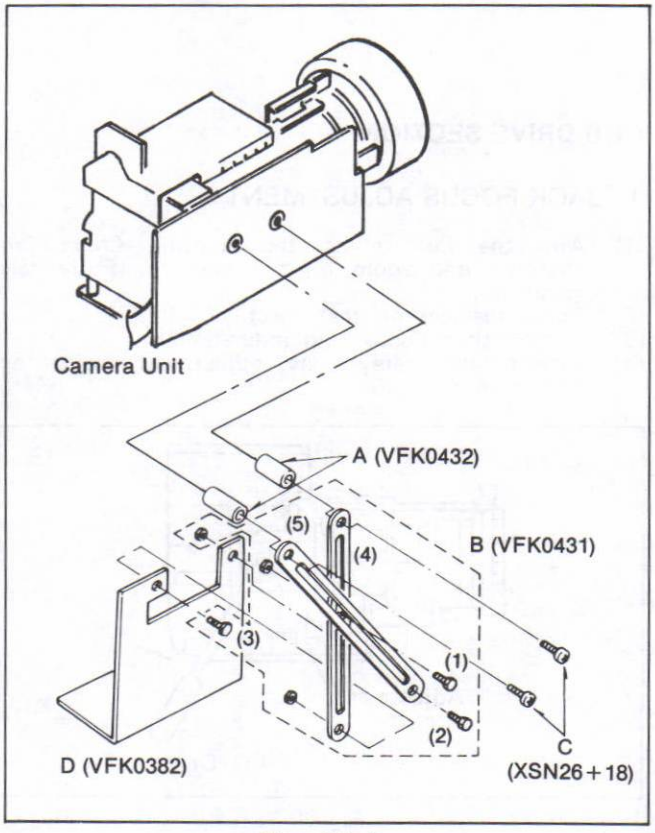


Fig. C4–2

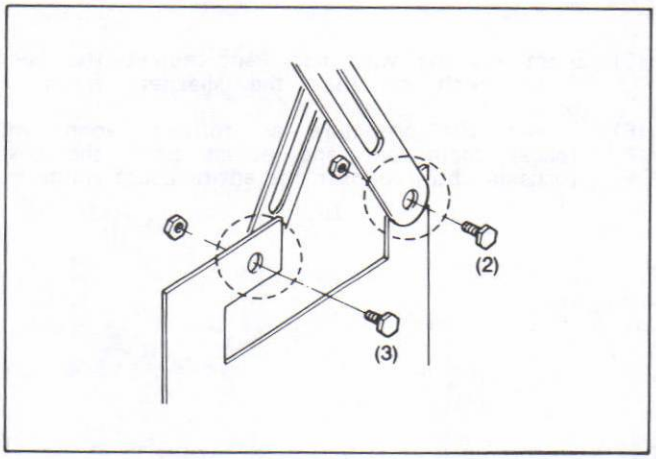


Fig. C4–3

HOW TO READ THE ADJUSTMENT PROCEDURES

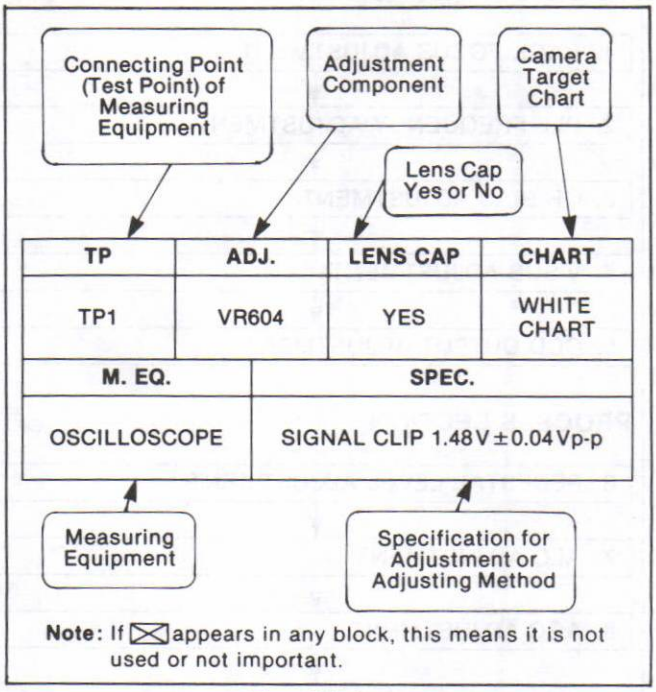


Fig. C5–1

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT
2. PLL FREQUENCY ADJUSTMENT
3. OR BIAS ADJUSTMENT
4. V-SUB ADJUSTMENT
5. CCD OUTPUT ADJUSTMENT

PROCESS SECTION

6. PEDESTAL LEVEL ADJUSTMENT
7. ALC ADJUSTMENT
8. AGC ADJUSTMENT
9. IRIS VR ADJUSTMENT
10. Y 1H/2H DELAY LEVEL ADJUSTMENT
11. YH LEVEL ADJUSTMENT
12. CARRIER BALANCE AND BLACK LEVEL ADJUSTMENT
13. CHROMA 1H/2H DELAY LEVEL ADJUSTMENT
14. INDOOR WHITE BALANCE ADJUSTMENT
15. OUTDOOR WHITE BALANCE ADJUSTMENT
16. AWB OFFSET ADJUSTMENT
17. COLOR BURST AND R-Y/B-Y GAIN ADJUSTMENT
18. COLOUR PHASE AND R-Y/B-Y GAIN ADJUSTMENT
19. HIGH INTENSITY SUPPRESS ADJUSTMENT
20-1. AWT MODE (OFFSET) ADJUSTMENT
20-2. AWT MODE (GAIN) ADJUSTMENT
20-3. HIGH COLOUR TEMPERATURE ADJUSTMENT

AUTO FOCUS SECTION

21. AF GATE ADJUSTMENT
22. BIMOLF GAIN CONTROL ADJUSTMENT
23. AF AMP BIAS GAIN ADJUSTMENT
24. AF VH FREQUENCY ADJUSTMENT

Fig. C5–2

CCD DRIVE SECTION

1. BACK FOCUS ADJUSTMENT

(1) Aim the Camera at the Hunting Chart 3m distance and zoom all the way in (Fully tele position.)
(2) Focus the lens on the object.
(3) Confirm that Focus–ring indicates 3m.
(4) Adjust the relay lens adjustment point as shown in Fig. C6.

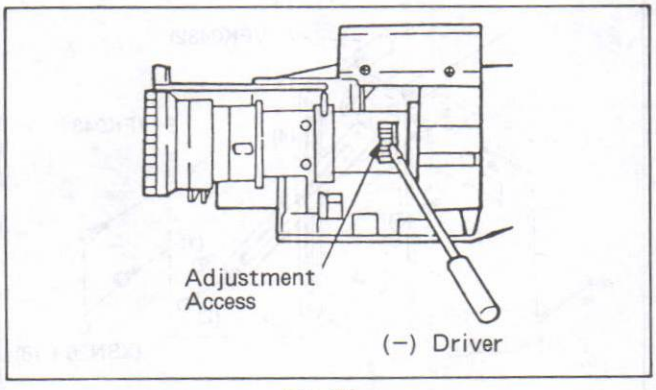


Fig.C6

(5) Zoom all the way back and adjust the back focus pitch so that the sharpest focus is obtained.
(6) Repeat the procedure as follows, zoom in, focus, zoom out and adjust until the best focus is obtained over the entire Zoom range.

2. PLL FREQUENCY ADJUSTMENT

(1) Remove the Sensor Shield Case by removing its 2 Screw.

TP	ADJ.	LENS CAP	CHART
PIN 7 OF B201	C292		
M. EQ.		SPEC.	
FREQUENCY COUNTER		12.875MHz +– 10Hz	

Note:
B201, C292 : Sensor C.B.A.

3. ΦR BIAS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP201	VR203	NO	J CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		WAVEFORM "A" IS MAXIMIZED	

Note:
VR203, VR201, TP201 : ON SENSOR C.B.A.
TP516, TP520 : ON PROCESS C.B.A.

(1) Set the zoom ring to fully TELE position. Aim the camera at J chart and connect the jumper wire between TP516 and TP520.
(2) Pre–adjust VR201 (V–SUB VR) so that blooming or smear (vertical line) is appeared on TV screen.
(3) Connect the oscilloscope to TP201.
(4) Adjust the VR203 so that level "A" is maximized and signal does not distorted.

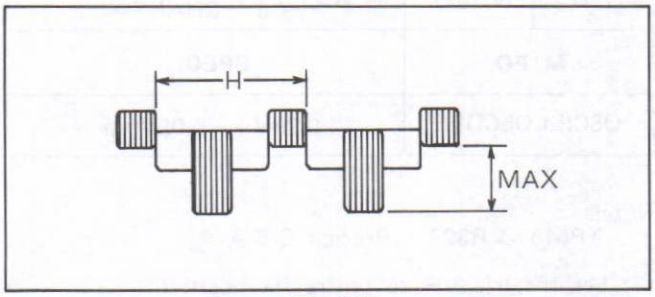


Fig.C7

4. V-SUB ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR201	NO	HALOGEN LAMP
M. EQ.		SPEC.	
MONITOR TV		NO BLOOMING	

(1) Zoom all the way in (Fully tele position) and aim the camera at the Halogen Lamp as shown in Fig. C8–1.

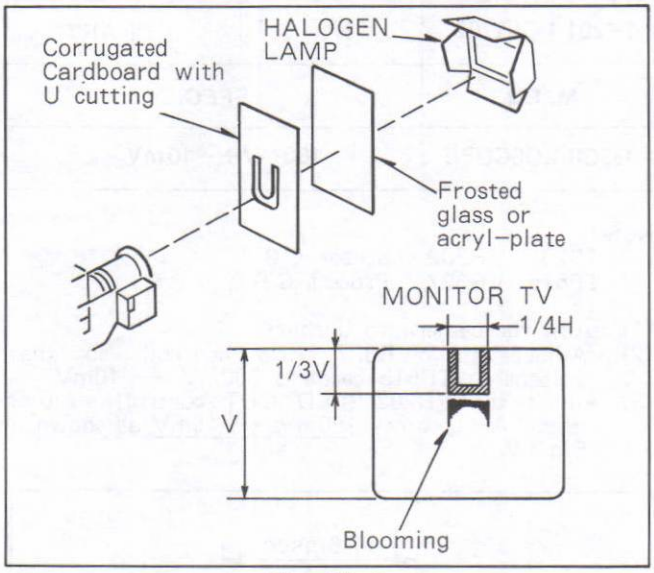


Fig. C8–1

(2) Set the High Speed Shutter SW to "OFF" portion
(3) Blind the lighting using frosted glass or acryl plate to diffuse incoming light. And also put a corrugated cardboard which inside is cut to "U" shape as shown in Fig. C8–2.
(4) Connect the jumper wire between TP516 and TP520 to open the Iris.
(5) Adjust VR201 so that blooming is just disappear.
(If blooming is not disappeared completely, adjust until minimum blooming)
(6) High Speed Shutter "ON" and "OFF" both mode, confirm that the monitored picture does not contain the Blooming even if the camera moves as shown in Fig. C8–2.

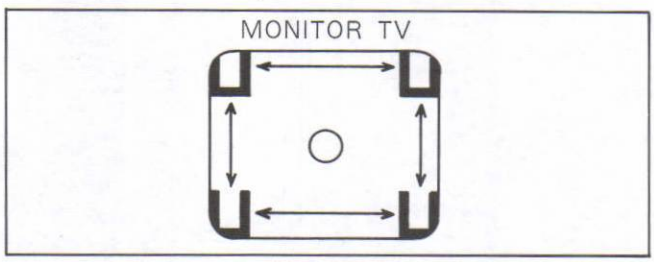


Fig. C8–2

Note:
J chart is also available for rough adjustment.

(1) Aim the camera at J chart.
(2) Set the lens to fully Tele position.
And set the distance so that lower 1/3 of J chart comes to full picture frame of TV screen.
(3) Connect the jumper wire between TP516 and TP520 to open the Iris.
(4) Adjust the VR201 so that blooming is just disappeared.

5. CCD OUTPUT ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP201	VR202	NO	J CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		180mV+−10mV	

Note1:
TP201, VR202 : Sensor C.B.A.
TP515, VR327 : Process C.B.A.

(1) Aim the camera to J chart.
(2) Adjust the VR327 (Iris control) so that voltage at TP515 becomes 300mV +− 10mV.
(3) Adjust the VR202 (CCD OUT control) so that level "A" becomes 180mV +− 10mV as shown in Fig C9.

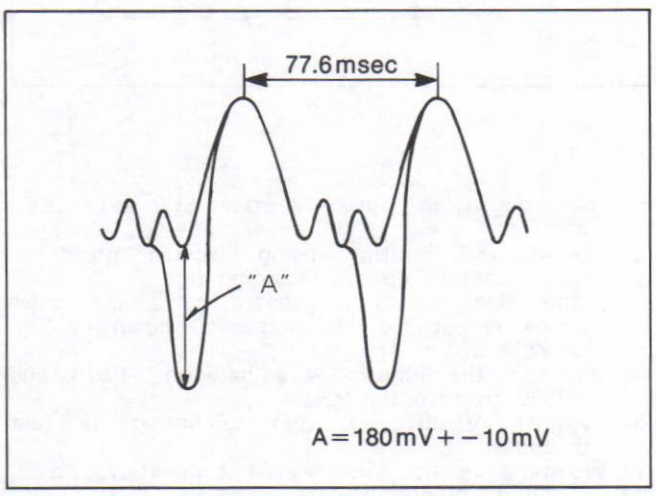


Fig.C9

PROCESS SECTION

6. PEDESTAL LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR301	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		SIGNAL LEVEL EQUALS THE BLANKING (BLANK) LEVEL.	

Note:
TP514, VR301 : Process C.B.A.

(1) Cover the Camera Lens with the Lens Cap.
(2) Connect the scope to TP514 and trigger with Pin 7 of FP306 (H−Rate).
(3) Adjust the Pedestal Level Control (VR301) so that the signal level equals the BLK level as shown in Fig. C10.

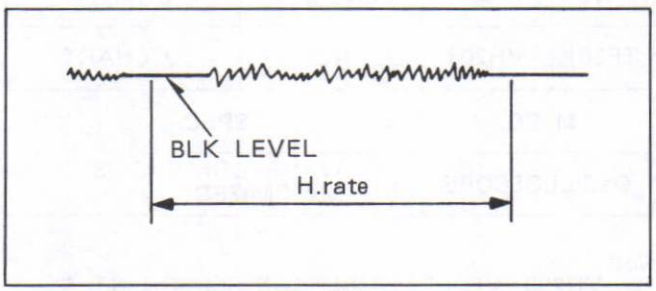


Fig.C10

7. ALC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP515	VR327	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		0.28V+−0.02Vp-p	

Note:
TP515, VR327 : Process C.B.A.

(1) Set the Iris VR to centre fix position.
(2) Aim the camera at the gray scale chart.
(3) Connect the scope to TP515 and trigger with Pin 7 of FP306 (H−Rate).
(4) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C11.
(5) Adjust the Auto Iris Control (VR327) so that the signal level is 0.28V +− 0.02Vp−p.

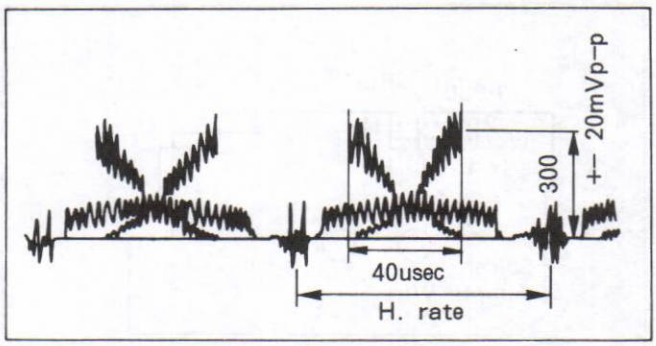


Fig.C11

8. AGC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP514	VR324	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
OSCILLOSCOPE		0.30V +− 0.02Vp−p	

Note 1:
TP514, VR324 : Process C.B.A.

Note 2:
Confirm that voltage at TP523 is less than 3V. If not, adjust Iris VR.

(1) Aim the camera at the gray scale chart.
(2) Connect the scope to TP2 and trigger with Pin 7 of FP306 (H−Rate).
(3) Adjust the Camera Unit to obtain 40usec picture frame as shown in Fig. C12.
(4) Adjust the AGC Control (VR324) so that the signal level is 0.30V +− 0.02Vp−p.

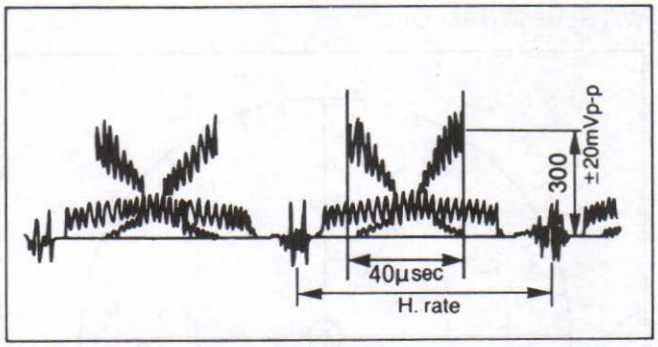


Fig.C12

9. IRIS VR ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP523	VR322	YES	
M. EQ.		SPEC.	
D.V.M		2.1V±0.1V	

Note:
TP523, VR322 : Process C.B.A.

(1) Set the Iris VR to centre fix position.
(2) Cover the lens with lens cap.
(3) Connect the volt meter to TP523.
(4) Adjust the VR322 so that voltage at TP523 becomes 2.1V +− 0.1V.

10. Y 1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TS5, TS2, TS8 (TEST ROUND)	VR320 VR318	NO	GRAY SCALE
M. EQ.		SPEC.	
OSCILLOSCOPE		0±4.5mVp-p	

Note: VR320, TS5, TS2, TS8 : PROCESS C.B.A.
: (The gain CHA, CHB for oscilloscope should be same)

(1) Aim the camera at gray scale chart.
(2) Connect the oscilloscope to TS5 (CHA) and TS2 (CHB).
(3) Set the CHB for "INVERT" mode.
(4) Set the oscilloscope for "ADD" mode.
(5) Adjust the 1H delay level control (VR320) so that waveform becomes 0 +− 4.5mVp−p as shown below.
(6) Reconnect the CHB probe to TS8, (CHA is still connecting to TS5
CHB : INVERT mode.
oscilloscope : ADD mode.)
(7) Adjust the 2H delay level control (VR318) so that waveform becomes 0 +− 4.5mVp−p as shown below.

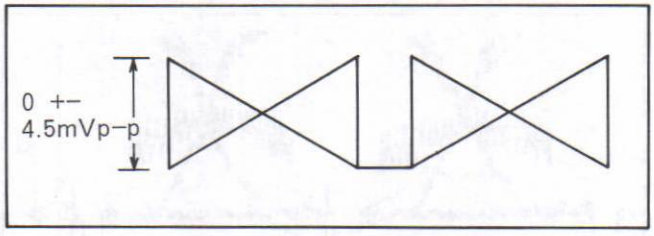


Fig.C13−1

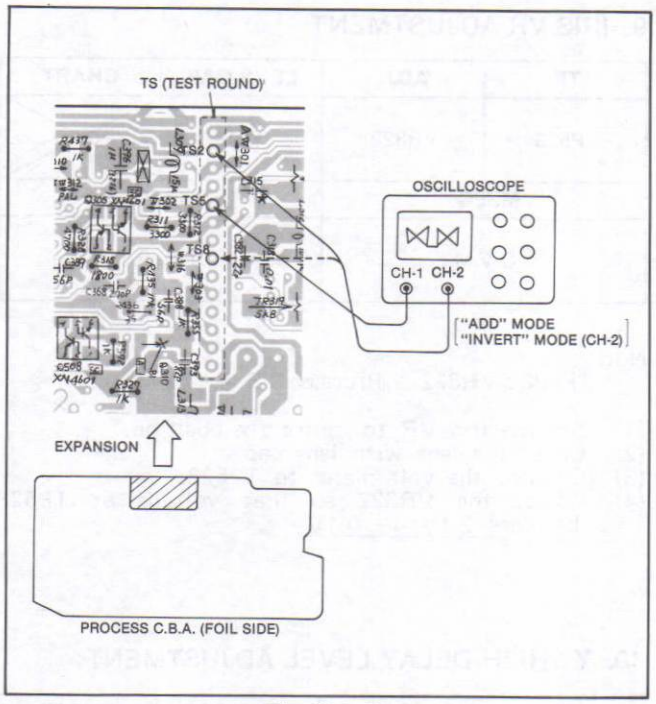


Fig.C13-2

11. YH LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
PIN 7 OF FP 306	VR315	NO	GRAY SCALE CHART
M. EQ.	**SPEC.**		
OSCILLOSCOPE	B/A = 2.33 +– 0.15		

Note:
VR315, FP306 : Process C.B.A.
(1) Aim the camera at the gray scale chart.
(2) Connect the jumper wire among TP511,TP512 and TP513.
(3) Connect the scope to pin 7 of FP306. (Refer to Fig. C15)
(4) Adjust the YH Level Control (VR315) so that the signal level "B/A" is 2.33 +– 0.15 as shown in Fig. C14.
(5) Disconnect the jumper wire.

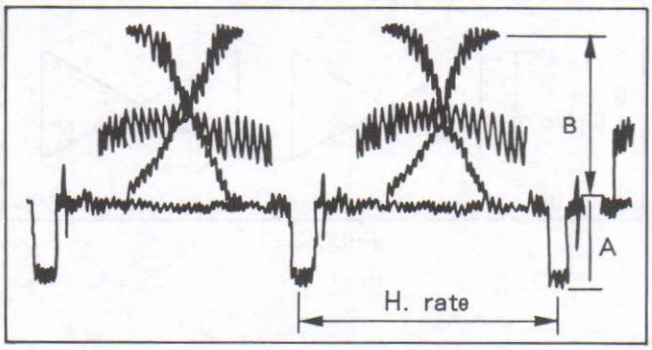


Fig.C14

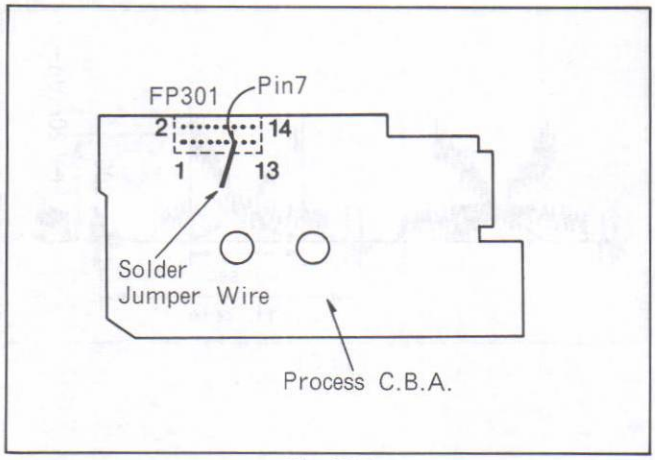


Fig.C15

12. CARRIER BALANCE AND BLACK PEDESTAL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR305 VR306 VR303 VR304	YES	
M. EQ.	**SPEC.**		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:
VR305, VR306, VR303, VR304 : Process C.B.A.
TP511, TP512, TP513, TP522, TP511

WITH VECTORSCOPE

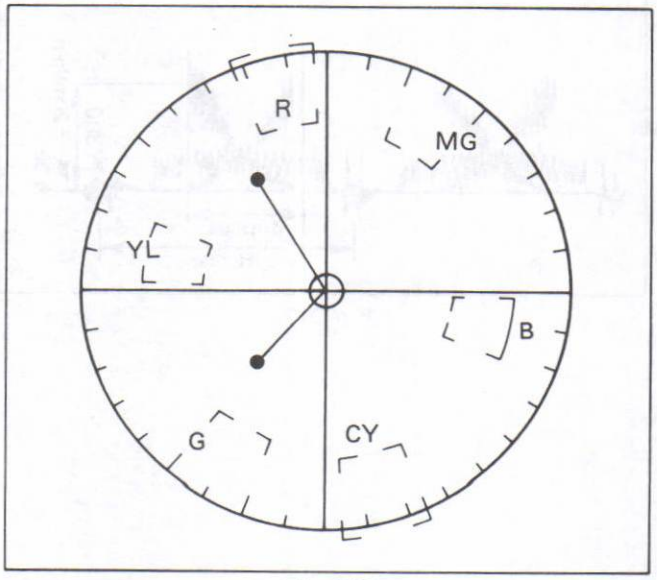


Fig.C16

(1) Cover the Camera Lens with the Lens Cap.
(2) Connect the jumper wire among TP511, TP512, and TP513 on process C.B.A. (to cut the feed back line (R−Y,B−Y))
(3) Connect the jumper wire between TP522 and TP511 to minimize AGC gain.
(4) Adjust the Black Pedestal Control (VR305, VR306) so that the colour vectors at the centre of screen on the vectorscope.
(5) Disconnect the jumper wire only between TP522 and TP511.
(6) Adjust the Carrier Balance Controls (VR303 and VR304) so that the colour vectors collect at the centre of screen on the vectorscope.

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR305, and VR306, first and Adjust VR303, VR304 next so that the waveform is minimized as shown in Fig. C17.

13. CHROMA 1H/2H DELAY LEVEL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TS7, TS10, TS11 (TEST ROUND)	VR319 VR317	YES	
M. EQ.		SPEC.	
OSCILLOSCOPE		0±4.5mV	

(1) Cover the camera lens with the lens cap.
(2) Supply the "WHD" signal(B305−2:process C.B.A) to TS7(test round) through the Buffer circuit and adjust VR1(on Buffer circuit) so that the voltage of TS7(test round) becomes 300mVp−p+−5mVp−p as shown in Fig.C18−1.

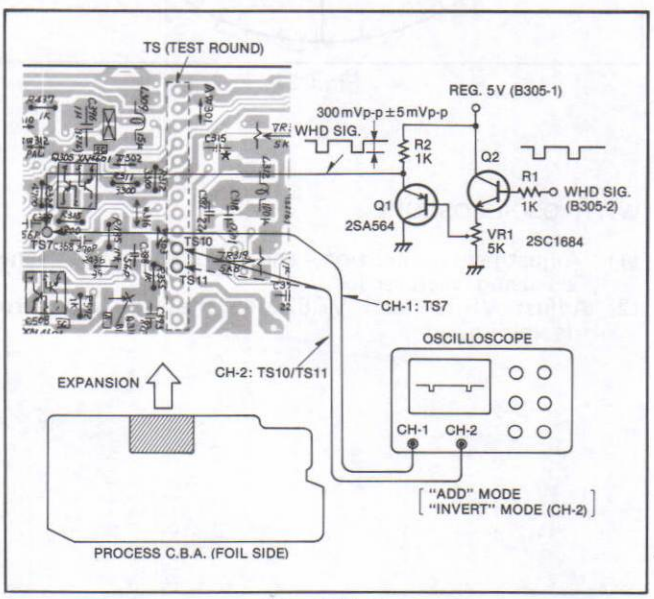


Fig.C18−1

(3) Set the oscilloscope to"ADD" mode and "INVERT" mode for CH−2.
And connect the oscilloscope CH−1 to TS7(test round) and CH−2 to TS10(test round).
(4) Adjust VR319 so that the level of waveform becomes 0+−4.5mV as shown in Fig.C18−2.
(5) Connect the oscilloscope CH−1 to TS7(test round) and CH2 to TS11(test round).
(6) Adjust VR317 so that the level of waveform becomes 0+−4.5mVp−p as shown in Fig.C18−2.

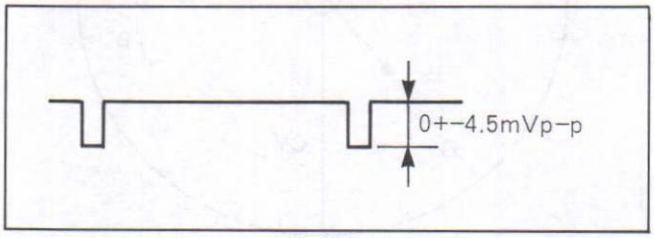


Fig.C18−2

14. INDOOR WHITE BALANCE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR311 VR312	NO	WHITE CHART
M. EQ.	SPEC.		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:
VR311, VR312 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White Balance Switch to "INDOOR" side.
(2) Connect the jumper wire among TP511, TP512 and TP513 on process C.B.A. to cut the R−Y, B−Y feed back loop.
(3) Aim the camera at the White Chart.
(4) Supply the video signal to the vectorscope.
(5) Adjust the White Balance Controls (VR311 and VR312) so that the colour vectors are collected at the centre of screen on the vectorscope as shown in Fig. C19.

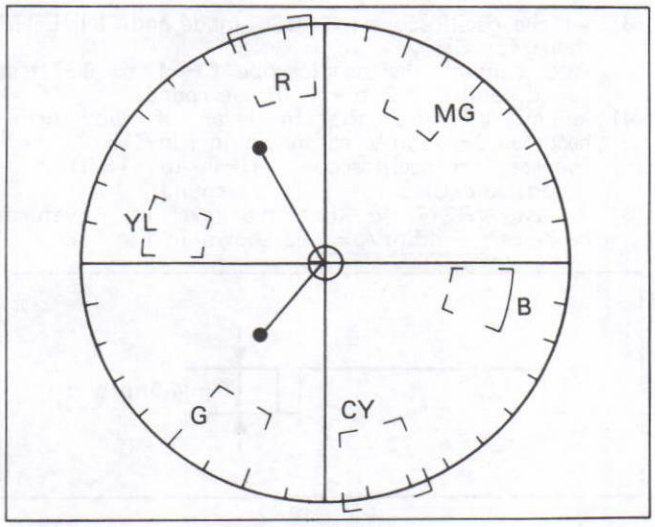


Fig.C19

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR311 and VR312 so that the waveform is minimized.

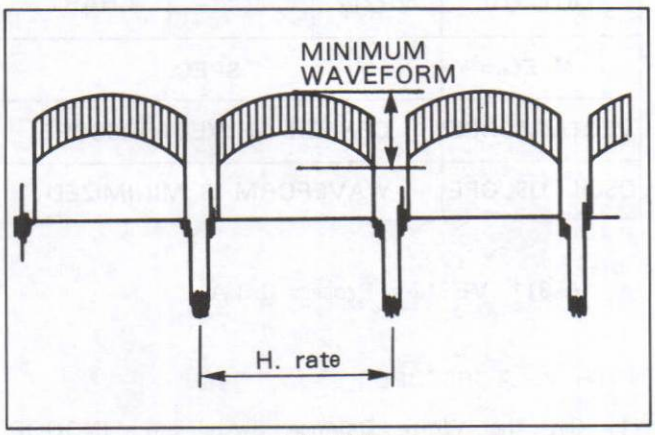


Fig.C20

15. OUTDOOR WHITE BALANCE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR528 VR529	NO	WHITE CHART
M. EQ.	**SPEC.**		
VECTORSCOPE	CENTER OF VECTORSCOPE		
OSCILLOSCOPE	WAVEFORM IS MINIMIZED		

Note:
VR528, VR529 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White Balance Switch on the Camera Operation Unit to the "OUTDOOR".
(2) Connect the jumper wire among TP511, TP512 and TP513 on Process C.B.A. to cut the R–Y, B–Y feed back loop.
(3) Aim the camera at the White Chart (lighting should be 3200 degrees K Halogen lamp.)
(4) Supply the video signal to the vectorscope.
(5) Attach the colour temperature conversion filter (VFK0374 and VFK0375) which convert 3200 degrees Kelvin to 5600 degrees Kelvin in front of the lens (Refer to Note 1).
(6) If the colour temperature conversion filter is not available, use a day light source. (Refer to Note 2)
(7) Adjust the White Balance (B–Y) Outdoor Gain and White Balance (R–Y) Outdoor Gain Controls (VR528 and VR 529) so that the colour vectors move to the centre of screen on the vectorscope. (Refer to Fig. C21)
(8) Remove the colour temperature conversion filter with the fixture from the lens.
(9) Remove the jumper wire from TP511, TP512, TP513.

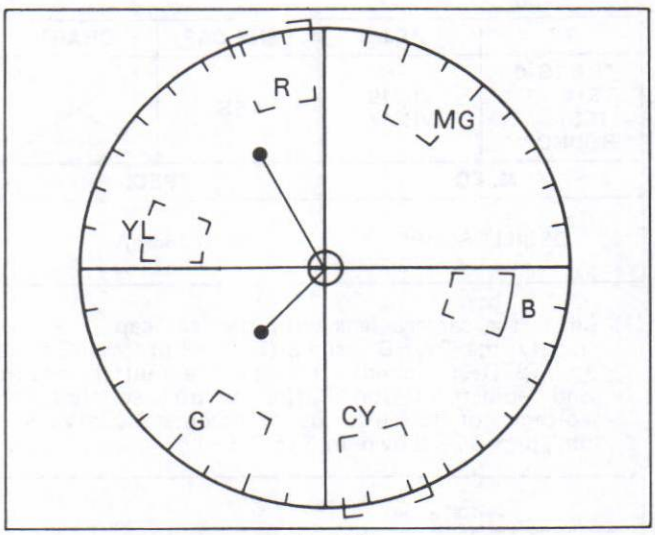


Fig.C21

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR528 and VR529 so that the waveform is minimized.

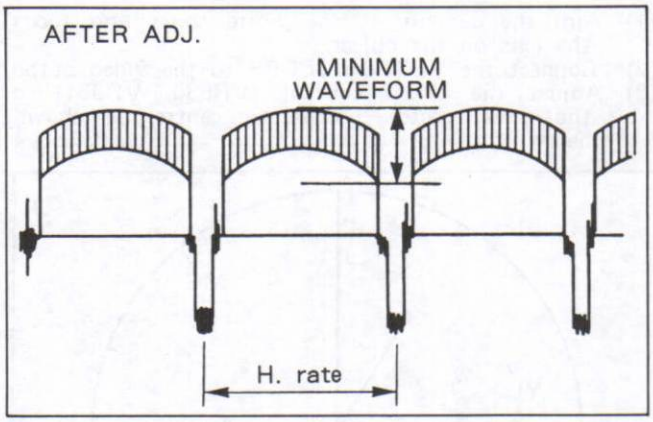


Fig.C22

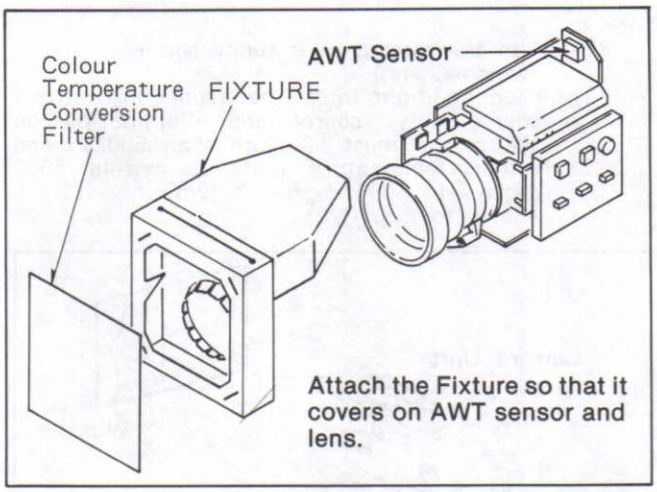


Fig.C23

Note 1:

Attach the fixture (make a fixture yourself referring measurements and How to make fixture below shown in Fig. C24) to the lens and then set the colour temperature conversion filter to fixture.

<How to make a fixture>

a) Print the actual measure an the hard paper referring Fig.C24.
b) Cut the paper along the solid line.
c) Apply the past to the oblique line.
d) Fold the paper along the dotted line.
e) Construct the fixture referring completion drawing as shown in Fig. C24.

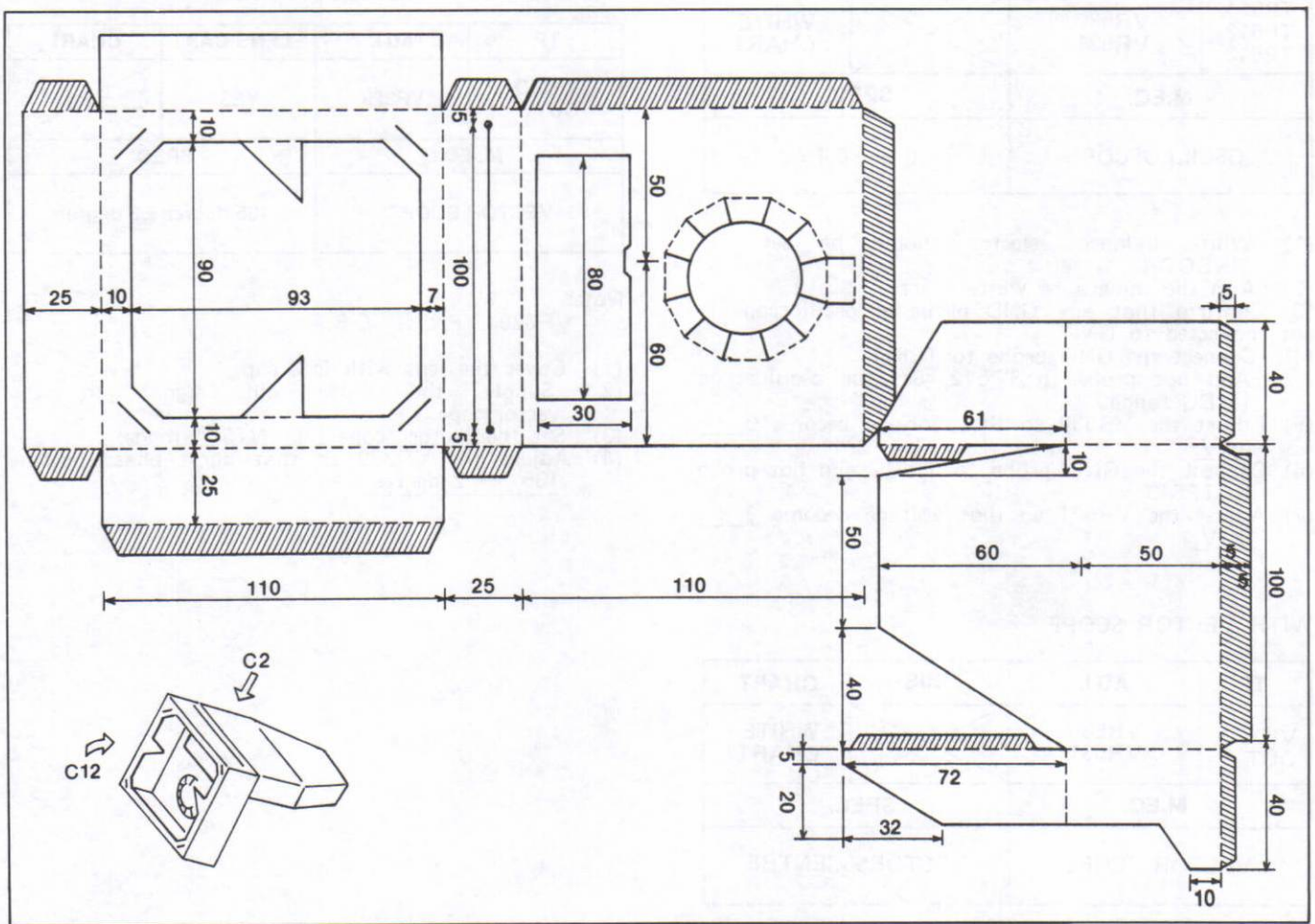


Fig.C24

Note 2:
(1) Aim the camera at a sunny source (window, etc.).
(2) Incoming light must be from an outdoor source only, source and illumination on the sensor must be more than 500Lx, and colour temperature must be within 5000 degrees to 6000 degrees Kelvin. (Refer to Fig. C25)

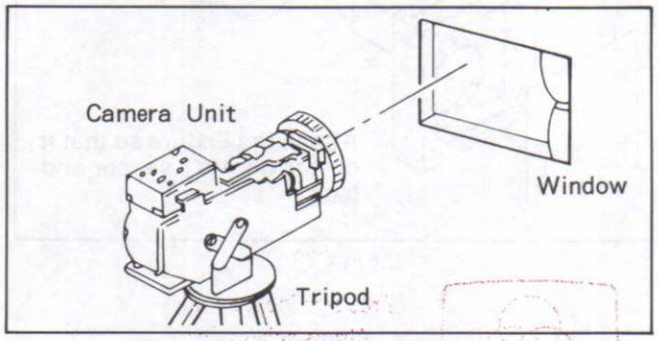


Fig.C25

16. AWB OFFSET ADJUSTMENT WITH OSCILLOSCOPE

TP	ADJ.	IRIS	CHART
TP511, TP512 TP513	VR530 VR531		WHITE CHART
M.EQ.		SPEC.	
OSCILLOSCOPE		0 +− 0.1V	

(1) White balance selector should be set for "INDOOR".
(2) Aim the camera to white chart.
(3) Confirm that any GND probe of oscilloscope is not connected to GND.
(4) Connect the GND probe to TP511. And hot probe to TP512. Set the oscilloscope to DC range.
(5) Adjust the VR530 so that voltage become 0 +− 0.1V.
(6) Connect the GND probe to TP511 and hot probe to TP513.
(7) Adjust the VR531 so that voltage become 0 +− 0.1V.

WITH VECTOR SCOPE

TP	ADJ.	IRIS	CHART
VIDEO OUT	VR530 VR531		WHITE CHART
M.EQ.		SPEC.	
VECTOR SCOPE		VECTORS CENTRE	

(1) Aim the camera at the white chart and focus the lens on the object.
(2) Connect the VECTOR SCOPE to the video output.
(3) Adjust the offset control (VR530, VR531) so that the vector comes to centre as shown below.

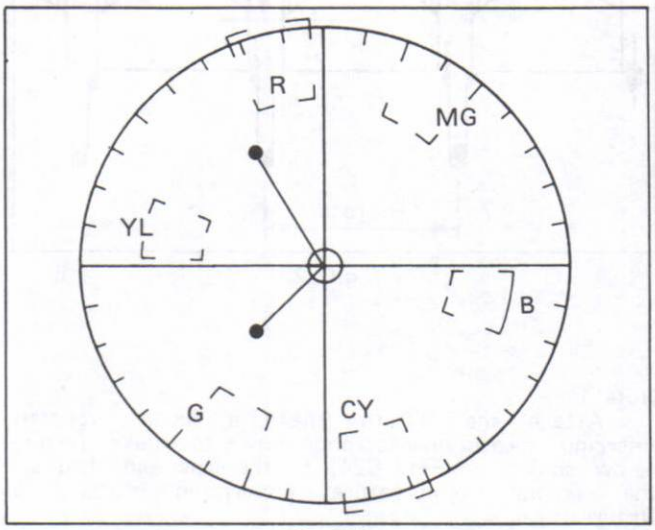


Fig.C26

17. BURST PHASE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUT	VR329	YES	
M. EQ.		SPEC.	
VECTOR SCOPE		135 degree ±2 degree	

Note:
VR329 : Process C.B.A.

(1) Cover the lens with lens cap.
(2) Supply the video out signal to the vectorscope.
(3) Set the vector scope for "NTSC" mode.
(4) Adjust the VR329 so that burst phase become 135 +− 2 degree.

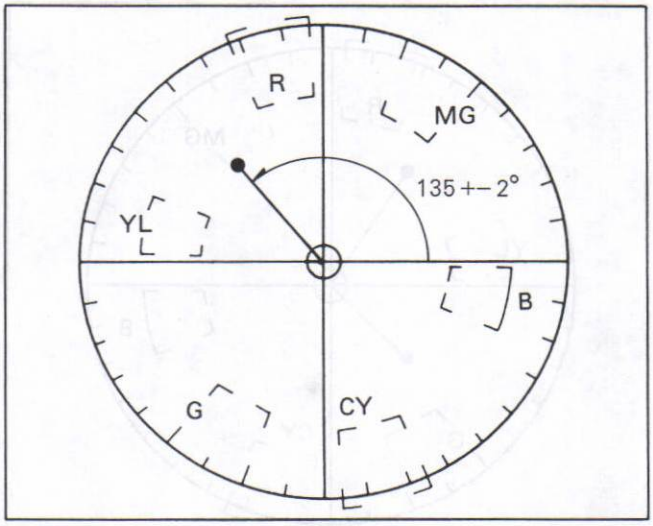


Fig.C27

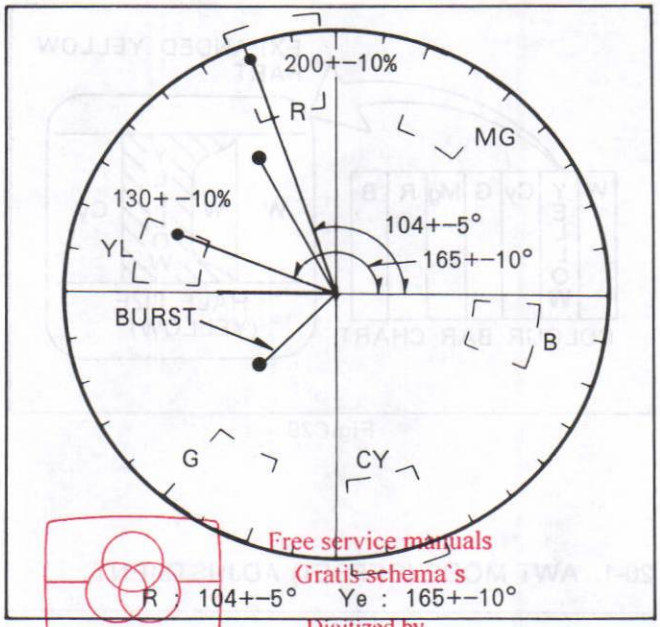


Fig.C28

18. COLOUR PHASE AND R-Y/B-Y GAIN ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR310, VR307, VR314, VR313, VR328	NO	COLOUR CHIP CHART

M. EQ.	SPEC.
VECTORSCOPE	Fig.C28

Note:
VR310, VR307, VR314, VR313, VR328 : Process C.B.A

(1) Aim the camera at a Colour Chip Chart.
(2) Set the vector scope to NTSC mode.
(3) Adjust the VR310 so that cracked Red vector comes one.
(4) Set the vector scope to PAL mode.
(5) Connect the jumper wire among TP511, TP512 and TP513 on the Process C.B.A.
(6) Supply the video signal to the vectorscope.
(7) Adjust the Colour Phase Control (VR307 and VR314), the R−Y Gain Control (VR313) and the B−Y Gain Control (VR328) so that the vector of each colour is as shown in Fig. C23.

19. HIGH INTENSITY SUPPRESS (HC) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR309	NO	COLOUR CHART

M. EQ.	SPEC.
TV MONITOR	HALF SIZE (YELLOW) YELLOW COLOUR IS JUST BEFORE CUT OFF

Note:
VR309 : Process C.B.A.

(1) Aim the camera at the colour chart. (colour bar).
(2) Set the horizontal picture frame (H size) to 40usec, and memorize the level of yellow part.
(3) Set the horizontal picture frame to 16usec.
(4) In case that the level of yellow part is more than 50% compared with the yellow level of when horizontal picture frame is 40 usec :
Adjust the VR309 so that the level of yellow becomes 50% as shown in Fig. C30.
(5) In case that the level of yellow part is already less than 50% of when the horizontal picture frame is 40usec:
Adjust the VR309 until just before yellow part begins to disappear.

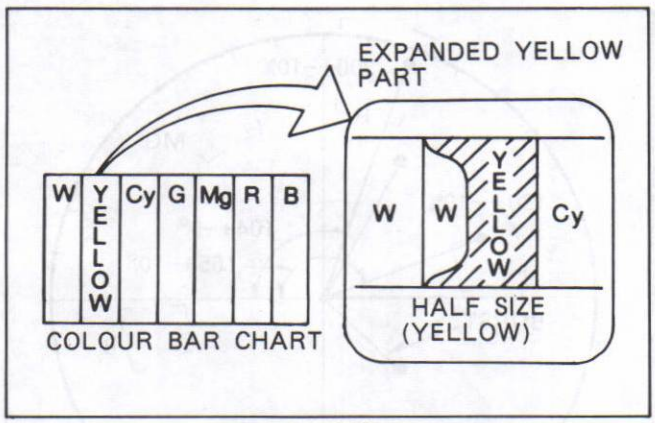


Fig.C29

20-1. AWT MODE (OFFSET) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR525 VR526	NO	WHITE CHART

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE
OSCILLOSCOPE	WAVEFORM IS MINIMIZED

Note:
VR525,VR526 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White balance selector for "AUTO" position.
(2) Aim the camera at the white chart.
(3) Supply the video signal to the vectorscope.
(4) Connect the jumper wire among TP511, TP512 and TP513 to cut the R-Y, B-Y feed back line.
(5) Set the diffusion plate on to surface of AWT sensor and taping around sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
(6) Adjust the VR525 and VR526 so that the colour vectors move to centre of screen on vector scope. (Refer to Fig. C30)

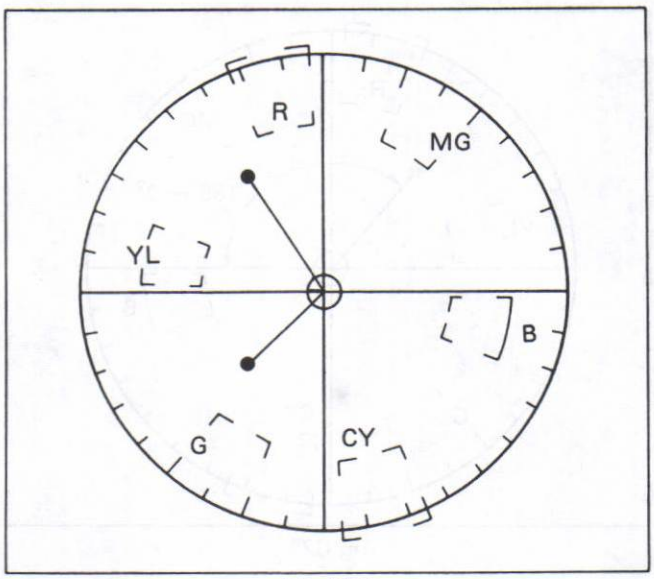


Fig.C30

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR525 and VR526 so that the waveform is minimized.

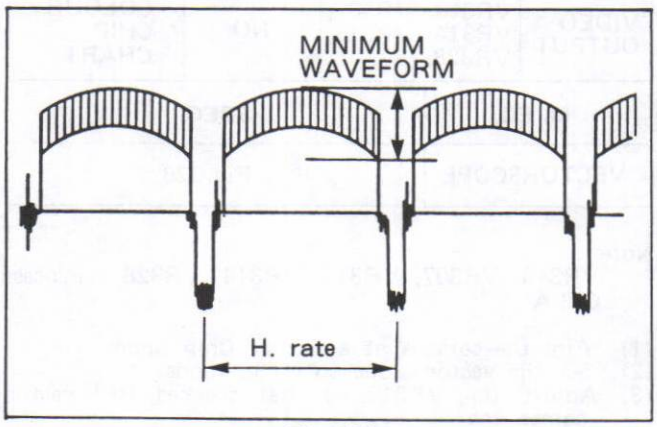


Fig.C31

20-2. AWT MODE (GAIN) ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
VIDEO OUTPUT	VR523, VR527	NO	WHITE CHART

M. EQ.	SPEC.
VECTORSCOPE	CENTER OF VECTORSCOPE
OSCILLOSCOPE	WAVEFORM IS MINIMIZED

Note:
VR523, VR527 : Process C.B.A.

WITH VECTORSCOPE

(1) Set the White balance selector for "AUTO" position.
(2) Aim the camera at the white chart, Lighting should be a 3200 degrees K Halogen lamp.
(3) Supply the video signal to the vectorscope.
(4) Connect the jumper wire among TP511, TP512 and TP513.
(5) Attach the diffusion plate (VKW1049) onto surface of AWT sensor and taping around the sensor with black tape so that any light is not entered to sensor from the gap between sensor and diffusion plate.
(6) Set the fixture (refer to Note 1 of item 15, outdoor white balance Adjustment) to the lens.
(7) Set the colour temperature conversion filter to the fixture as shown in Fig. C32. (VFK0547 to front of lens)

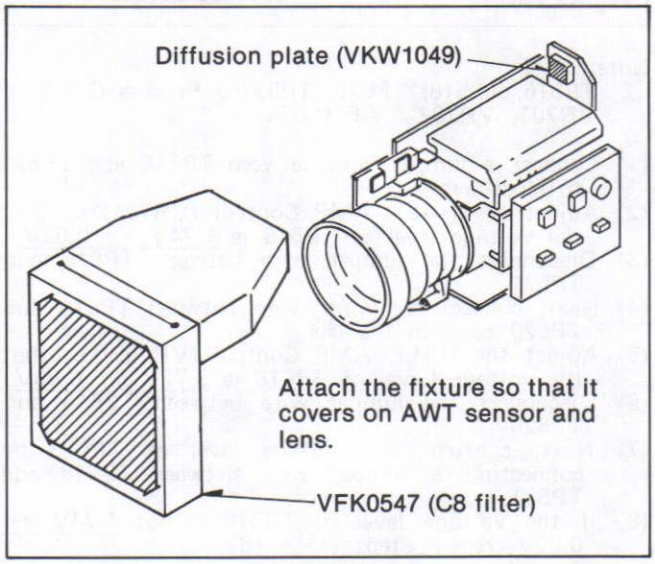


Fig.C32

(8) Adjust the VR523 and VR527 so that colour vectors collect at centre.
(9) Next, remove the colour temperature conversion filter with fixture from the lens. If the colour vectors do not collect at centre, adjust the AWT offset adjustment controls (VR525, VR526) so that colour vectors come to centre.
(10) Repeat steps (6)–(9).

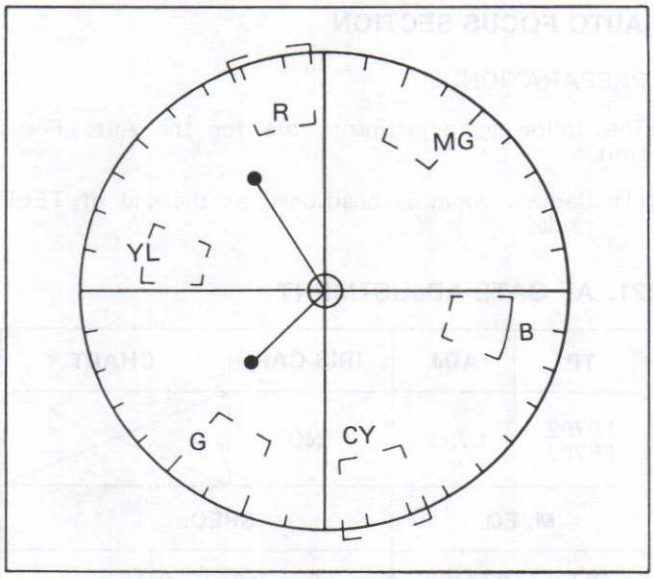


Fig.C33

WITH OSCILLOSCOPE

(1) Adjustment condition and procedure are same as using vectorscope.
(2) Adjust VR523, VR527, VR525 and VR526 that the waveform is minimized.

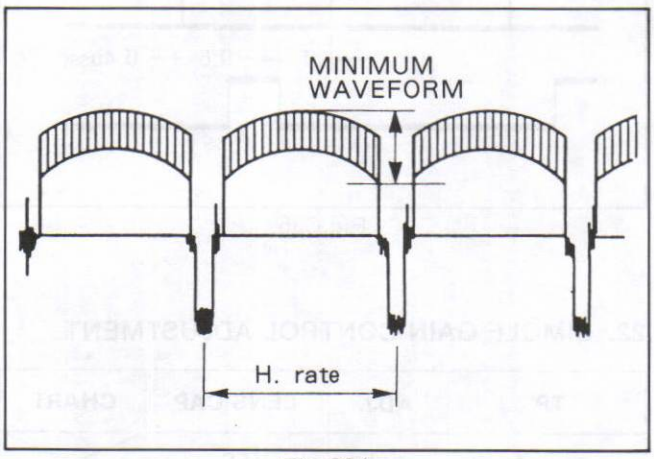


Fig.C34

AUTO FOCUS SECTION

PREPARATION

The following adjustments are for the Auto Focus Unit.

(1) Camera zoom is positioned at the end of TELE side.

21. AF GATE ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP702 TP703	C703	NO	
M. EQ.		**SPEC.**	
OSCILLOSCOPE		T = 9.6 +– 0.4u–sec.	

Note:
TP702, TP703, C703 : AF C.B.A.

(1) Set the AF Gate Control (C703) as shown in Fig. C35.

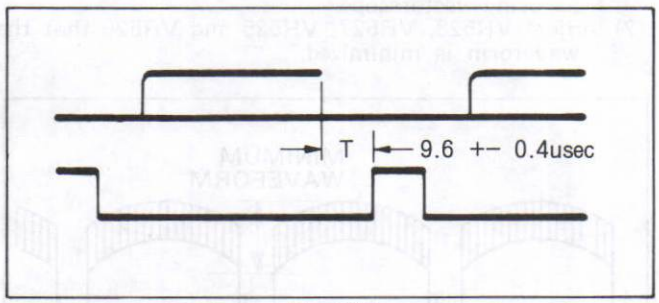


Fig.C35

22. BIMOLF GAIN CONTROL ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP704	VR703	YES	
M. EQ.	**SPEC.**		
OSCILLOSCOPE	A = 11V +– 0.5Vp–p		

Note:
TP704, VR703 : AF C.B.A.

(1) Set the Focus Switch to the MANUAL position.
(2) Cover the camera lens with the lens cap.
(3) Connect the scope to the TP704.
(4) Adjust the Bimolf Gain Control (VR703) so that the signal level (A) is 11V +– 0.5Vp–p.

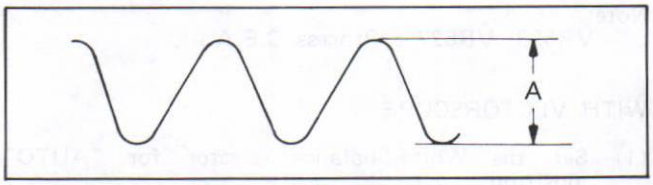


Fig.C36

23. HALL AMX ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
TP518, TP516 TP521, TP520	VR701 VR702	NO	GRAY SCALE CHART
M. EQ.		**SPEC.**	
D.V.M.		----------	

Note:
TP516, TP518, TP520, TP521 : Process C.B.A.
VR701, VR702 : AF C.B.A.

(1) Connect a jumper wire between TP516 and TP521 to close Iris.
(2) Adjust the HALL AMP Control (VR701) so that the voltage level at TP518 is 1.74V +– 0.02V.
(3) Disconnect the jumper wire between TP516 and TP521.
(4) Next, connect a jumper wire between TP516 and TP520 to open the Iris.
(5) Adjust the HALL AMP Control (VR702) so that the voltage Level of TP518 is 3.72V +– 0.05V.
(6) Disconnect the jumper wire between TP516 and TP520.
(7) Next, confirm the voltage level at TP518 by connecting a jumper wire between TP516 and TP521.
(8) If the voltage level at TP518 is not 1.74V +– 0.02V, repeat steps (1) – (6).

24. AF VH FREQUENCY ADJUSTMENT

TP	ADJ.	IRIS CAP	CHART
TP705	C737	NO	WHITE/GRAY CHART
M. EQ.		**SPEC.**	
OSCILLOSCOPE		A = 2.80V +– 0.05V DC–RANGE	

Note:
TP705, TP710 : AF C.B.A.
TP516, TP520 : Process C.B.A.
ZOOM : TELE SIDE
Focus : AUTO

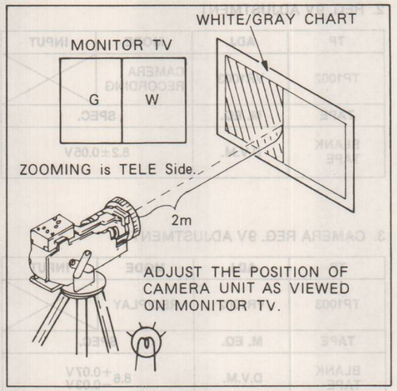


Fig.C37

(1) Connect a jumper between TP516 and TP520 to open the Iris.
(2) Aim the camera at the white/gray chart that was attached to previous service manual of Movie Camera.
(3) Set the lighting condition so that voltage at TP710 becomes 180mV +– 10mVp-p as shown below.

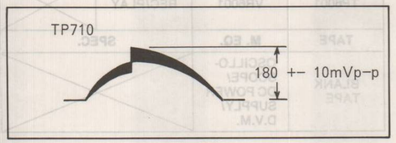


Fig.C38

(4) Adjust the VH frequency level control (C737) so that DC level at TP705 becomes 2.8V +– 0.05V as shown below.

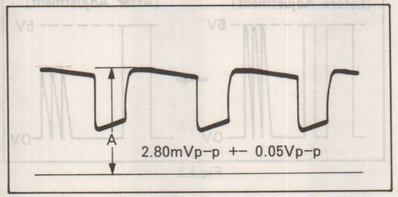


Fig.C39

2-4-2. ELECTRICAL ADJUSTMENT FOR E.V.F. SECTION

PREPARATION

The following adjustments are for Electronic Viewfinder.

(1) Connect the Viewfinder plug to the E.V.F. connector on the unit.
(2) The camera circuit must be completely aligned before viewfinder adjustments are made.

1. H-OSC ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
Pin 6 of P901	VR902	NO	BALL CHART
M. EQ.		SPEC.	
FREQUENCY COUNTER		15.9KHz +– 0.1KHz	

Note:
P901, VR902 : E.V.F. C.B.A.

(1) Connect the scope to Pin6 of P901, use DC.
(2) Adjust the H-OSC (VR902) so that the frequency is 15.9 +– 0.1KHz.

2. CENTERING ADJUSTMENT

(1) Aim the camera at the registration chart.
(2) Adjust the Deflection Yoke Centering Magnets by turning them so that the picture on monitor TV is centered.

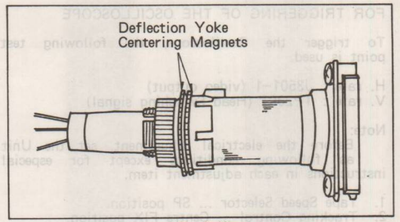


Fig.C40

3. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR904	NO	BALL CHART
M. EQ.		SPEC.	
VIEWFINDER		BEST RESOLUTION	

Note:
VR904 : E.V.F. C.B.A.

(1) Aim the camera at the Ball chart.
(2) Adjust the focus control (VR904) for best resolution in the viewfinder.

4. V. SIZE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR901	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		VERTICAL SIZE IS FIXED.	

Note:
VR901 : E.V.F. C.B.A.

(1) Aim the camera at the gray scale chart.
(2) Adjust the Vertical Size (VR901) so the Vertical Size is correct and the picture does not roll as shown in Fig. C41.

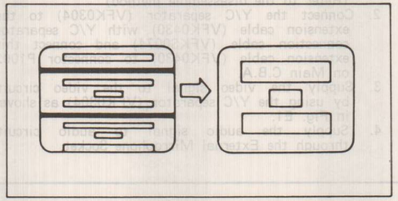


Fig.C41

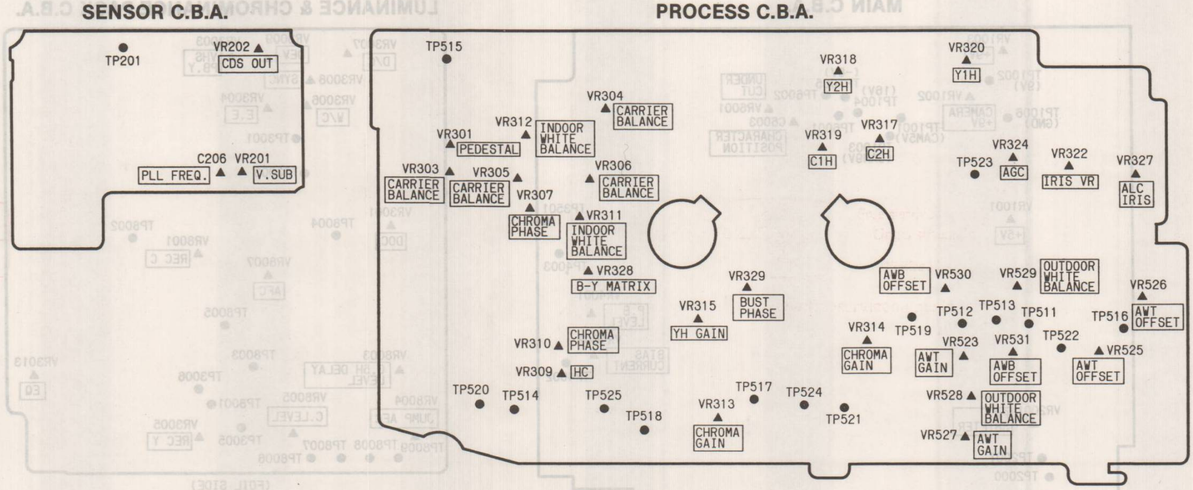
5. BRIGHTNESS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	VR905	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		NATURAL GRADATION	

Note:
VR905 : EVF C.B.A.

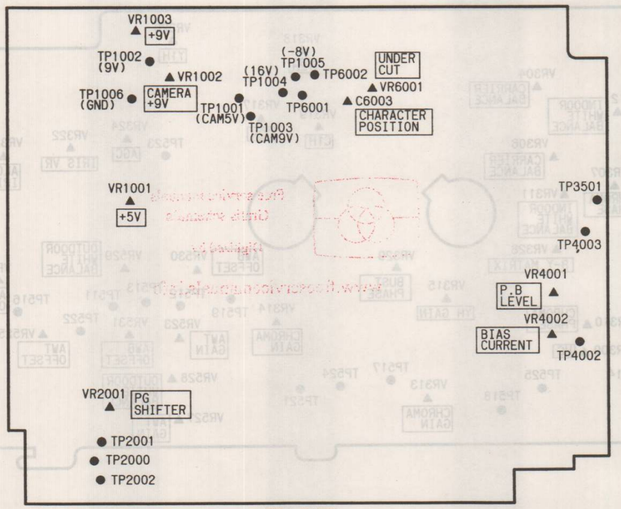
(1) Aim the camera at gray scale chart.
(2) Adjust the brightness control (VR905) so that the black and white bars in the EVF screen are the same as they are in the monitor TV screen.

LOCATION OF TEST POINTS & CONTROLS (1)



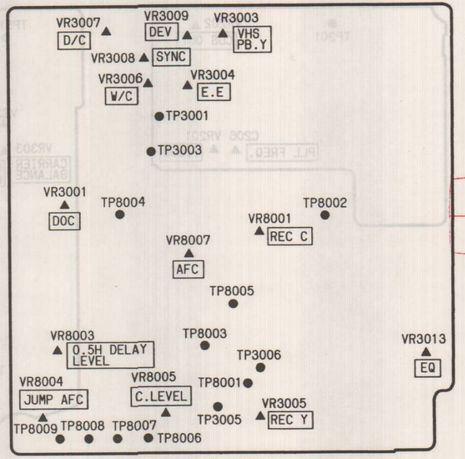
LOCATION OF TEST POINTS & CONTROLS (2)

MAIN C.B.A.



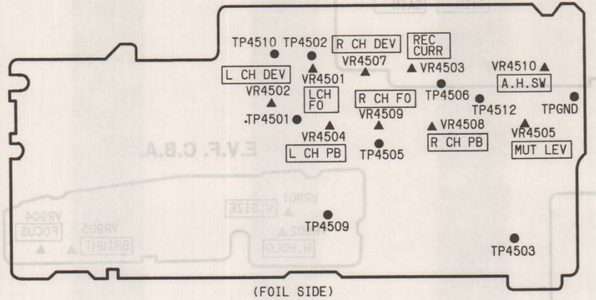
(FOIL SIDE)

LUMINANCE & CHROMINANCE PACK C.B.A.



(FOIL SIDE)

Hi-Fi AUDIO C.B.A.



(FOIL SIDE)

2-4-3. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

The following equipments are required for adjustment of the VHS-C Movie NV-MC30.

1. VTVM (Vacuum Tube Volt Meter)
   DVM (Digital Volt Meter)
   Voltage Range : 0.01~50V
2. Dual Trace Oscilloscope
   Voltage Range : 0.06~50V/div
   Frequency Range : 0~50MHz
   Probe : 10:1 or 1:1
3. Frequency counter
   Frequency Range : 0~10MHz
4. Signal Generator (Sinewave)
   Frequency Range : 0~10MHz
5. Video Sweep Generator
   Frequency Range : 0~10MHz
6. Colour Monitor TV
7. Plastic Tip Driver
8. VHS-C Alignment Tape (VFM8180H8PF)
9. VHS-C Blank Tape
10. Pattern Generator

PREPARATION

1. Remove the casing panels.
   (Refer to the disassemble method)
2. Connect the Y/C separator (VFK0304) to the extension cable (VFK0430) with Y/C separator connection cable (VFKS0074) and connect this extension cable (VFK0430) to connector P1002 on Main C.B.A.
3. Supply the video signal to the video circuit by using the Y/C separator (VFK0304) as shown in Fig. E1.
4. Supply the audio signal to audio circuit through the External Microphone Socket.

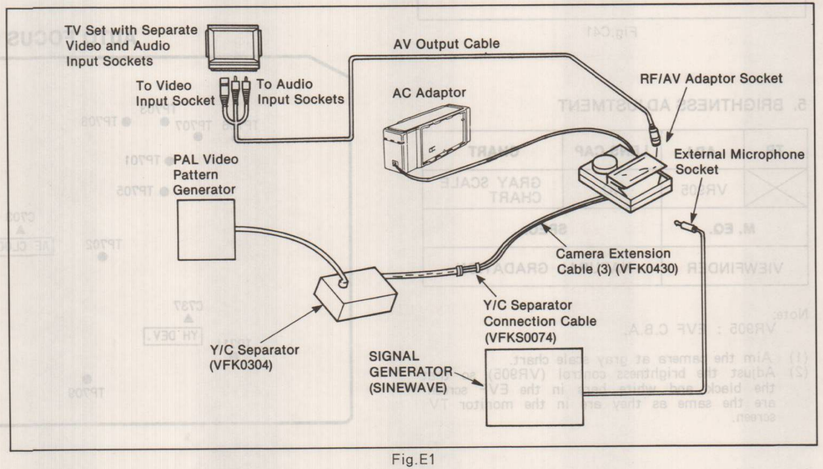
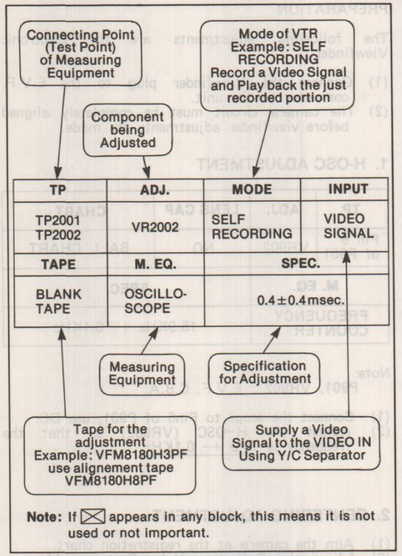


Fig.E1

HOW TO READ THE ADJUSTMENT PROCEDURES



FOR TRIGGERING OF THE OSCILLOSCOPE

To trigger the Oscilloscope, the following test point is used.

H. rate : J3501-1 (video output)
V. rate : TP2001 (Head Switching signal)

Note:
Before the electrical adjustment, set the Unit as following conditions except for especial instructions in each adjustment item.

1. Tape Speed Selector ... SP position.
2. Tracking Control ... Centre FIX position.

POWER SECTION

1. REG. 5V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1001	VR1001	REC/PLAY	⊠
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	4.91±0.025V	

2. REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1002	VR1003	CAMERA RECORDING	⊠
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	8.2±0.05V	

3. CAMERA REG. 9V ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP1003	VR1002	REC/PLAY	⊠
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	$8.6^{+0.07}_{-0.03}$V	

This adjustment should be always completed after REG. 5V ADJUSTMENT and REG. 9V ADJUSTMENT.

4. UNDER CUT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP6001	VR6001	REC/PLAY	⊠
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE/ DC POWER SUPPLY/ D.V.M.	⊠	

Note:
Do not connect AC Adaptor, connect a DC Power Supply to pin 2 (+) and pin 1 (−) of p1001, then supply the voltage 8.64 +− 0.05V.

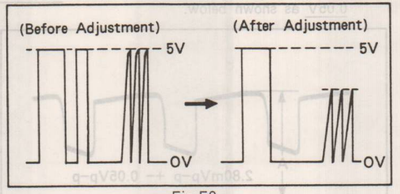


Fig.E2

SERVO SECTION

5. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 J3501-1	VR2001	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFM8180H8PF)	OSCILLO-SCOPE	6.5H±0.5H	

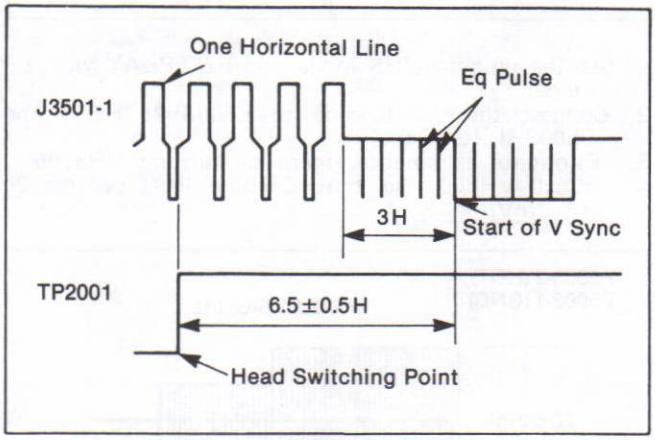


Fig.E3

LUMINANCE & CHROMINANCE SECTION

6. E-E LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-1	VR3004	STOP	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	A=1.0±0.05Vp-p B=0.6±0.1Vp-p (75Ω Terminated)	

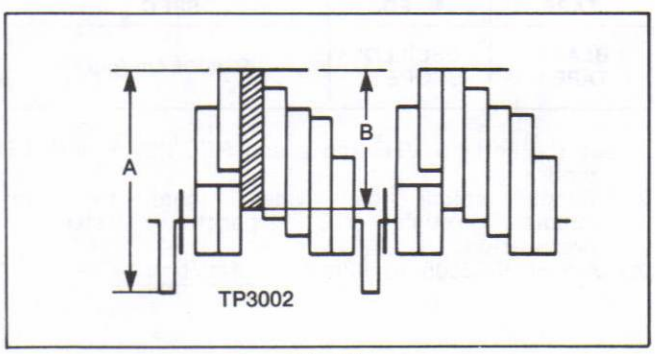


Fig.E4

7. AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8004	VR8007	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQ. COUNTER	623±15kHz	

1. Connect the jumper wire among TP8002, TP8003 and TP8001 (GND).
2. Connect the frequency counter to TP8004.
3. Adjust the VR8007 so that frequency become 623 +− 15KHz.

8. SYNC TIP FREQUENCY AND DEVIATION ADJUSTMENT

8-1. SYNC TIP FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3006	VR3008	REC. PLAY	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	FREQ. COUNTER	3.8MHz±0.05MHz	

8-2. DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5003-2 (HOT) P5003-1 (GND)	VR3009	REC. PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE/ FREQ. COUNTER	INNER BEAT IS MAXIMUM	

1. Supply colour bar video signal to video circuit through Y/C separator. (Refer to preparation)
2. Connect a signal generator (sine wave) to TP3006 on Main C.B.A. and set frequency and output level of it as follows.
   Frequency : 4.8MHz +− 0.05MHz
   Output : 0.1Vp−p
3. Connect the oscilloscope to P5003−2 (HOT) and P5003−1 (GND) and it uses a trigger at TP2001.
4. Adjust VR3009 so that inner beat at White portion of colour bar becomes maximum as shown in Fig. E5, Fig. E6.

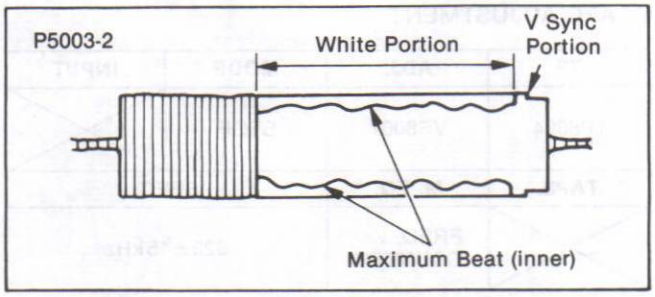


Fig.E5

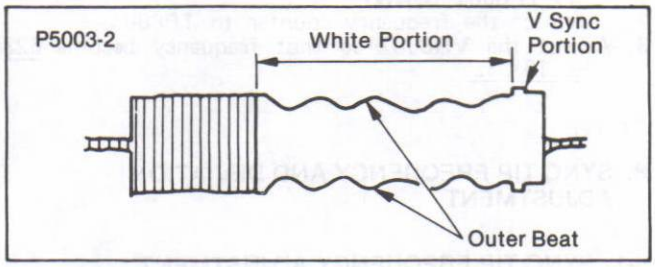


Fig.E6

9. WHITE AND DARK CLIP ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3001	VR3006 VR3007	REC (LP)	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	A=188±4% B=156±4%	

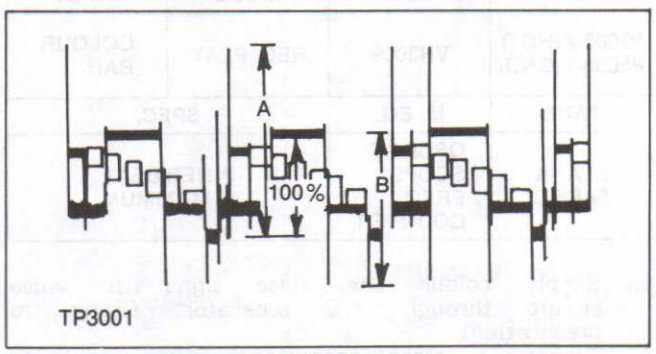


Fig.E7

1. Set the unit to LP Mode and REC.PLAY mode.
2. Supply colour bar signal to video circuit connector through Y/C separator. (refer to preparation).
3. Adjust VR3006, VR3007 so that the level of waveform is shown in Fig. E5.

10. RECORDING CURRENT ADJUSTMENT

10-1. REC CHROMA LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5003-2 (HOT) P5003-1 (GND)	VR8001	REC/PLAY (LP)	COLOUR BAR (W/WHITE WINDOW)
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	20±2mVp-p	

1. Set the unit to VHS mode and REC.PLAY with LP mode.
2. Connect the Oscilloscope to P5003–2 (HOT) and P5003–1 (GND).
3. Eliminate Luminance signal by turning VR3005.
4. Adjust VR8001 so that Chroma level become 20 +– 2mVp–p.

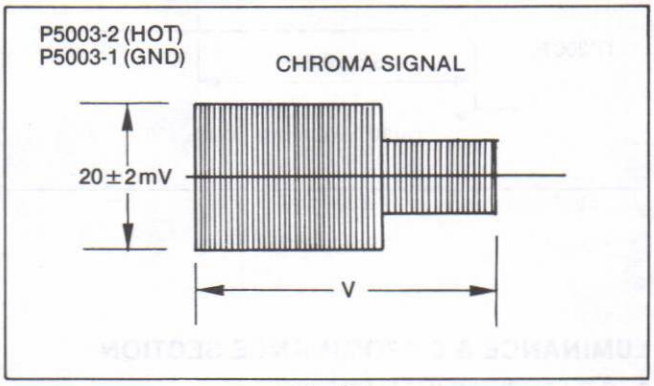


Fig.E8

10-2. LUMINANCE RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5003-2 (HOT) P5003-1 (GND)	VR3005	REC/PLAY (LP)	VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	92mV±4mVp-p	

1. Set the unit to VHS mode and REC.PLAY with LP mode.
2. Supply colour bar video signal to video circuit through Y/C separator. (refer to preparation)
3. Adjust VR3005 to 92mV +– 4mVp–p.

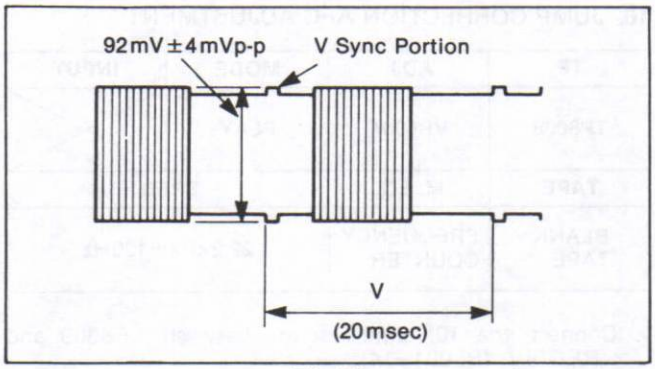


Fig.E9

11. LINE NOISE CANCEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3008	VR3001	SELF RECORDING	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	Less than 16mVp-p	

1. Record the video signal.
2. Connect the oscilloscope to TP3003.
3. Playback just recorded portion.
4. Adjust VR3003 so that level between sync and white 100% become less than 16mVp-p.

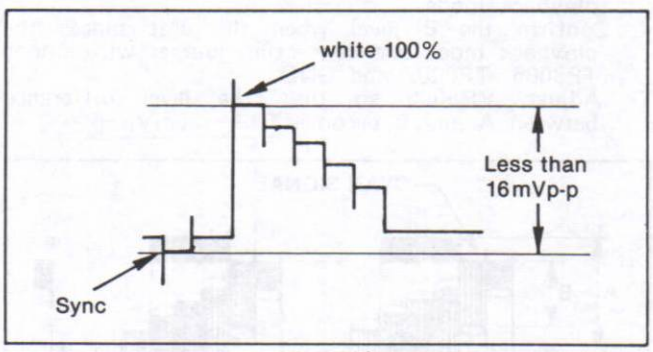


Fig.E10

12. VIDEO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-1	VR3003	SELF RECORDING (VHS MODE)	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLACK TAPE	OSCILLO-SCOPE	A=1.0±0.05Vp-p B=0.5±0.15Vp-p	

1. Record the colour bar signal.
2. Connect the oscilloscope to J3501-1.
3. Adjust the VR3003 so that level become A = 1.0 +- 0.05Vp-p, B = 0.5 +- 0.15Vp-p.

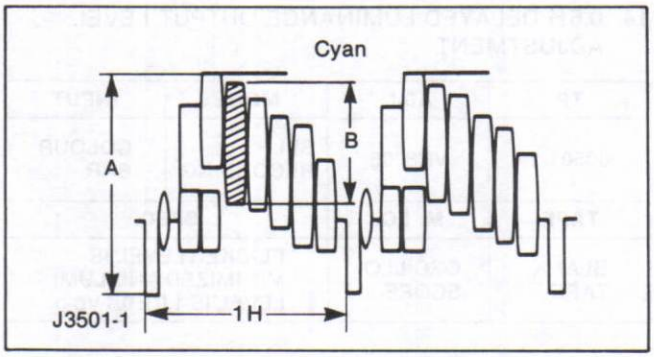


Fig.E11

13. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-1	VR3013	SELF RECORDING	VIDEO SWEEP SIGNAL
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A: 0±1dB (90~110%)	

Note: Edit switch must be off.

1. Set the sweep generator output as shown below.

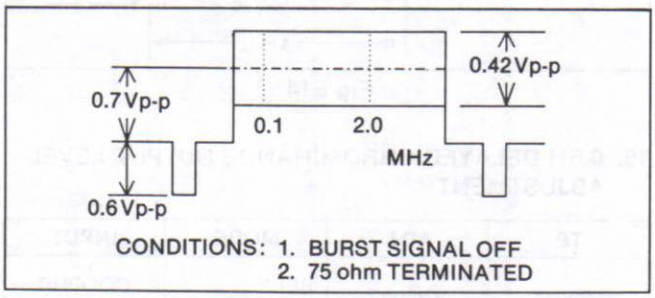


Fig.E12

2. Supply the sweep signal to video circuit through the Y/C separator.
3. Record the sweep signal for a few minutes.
4. Play back the just recorded portion.
5. Adjust VR3013 so that the level at 2MHz (A) becomes within specification comparing with the level at 0.1MHz as shownin Fig.E13.

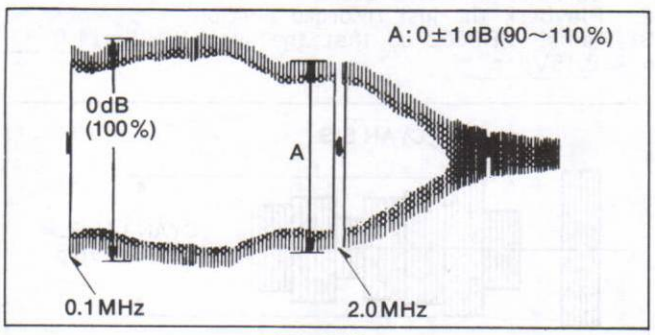


Fig.E13

14. 0.5H DELAYED LUMINANCE OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-1	VR8003	SELF RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	FLICKER LEVEL IS MINIMIZED AND LUMI LEVEL IS 1.0±0.1Vp-p.	

1. Supply the colour bar signal to video circuit through Y/C separator.
2. Playback the just recorded portion.
3. Place the unit to "STILL" mode.
4. Adjust VR8003 so that the flicker level is minimized.
5. Confirm the luminance level becomes 1.0 +− 0.1Vp−p.

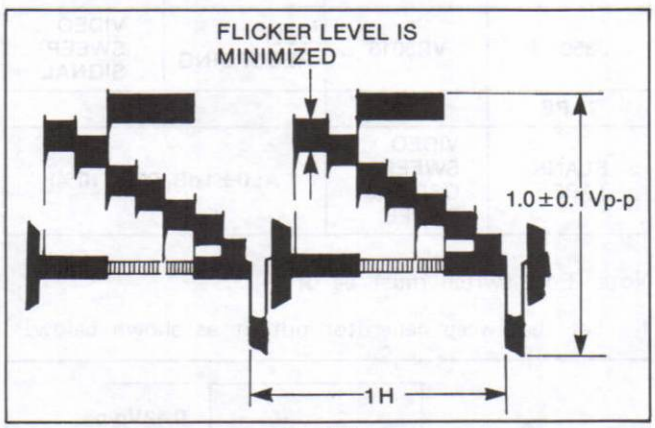


Fig.E14

15. 0.5H DELAYED CHROMINANCE OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8011	VR8002	SELF RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	CYAN LEVEL=1.0±0.15Vp-p	

1. Supply the colour bar signal to video circuit through Y/C separator.
2. Playback the just recorded portion.
3. Adjust VR8002 so that the cyan level is 1.0 +− 0.15Vp−p.

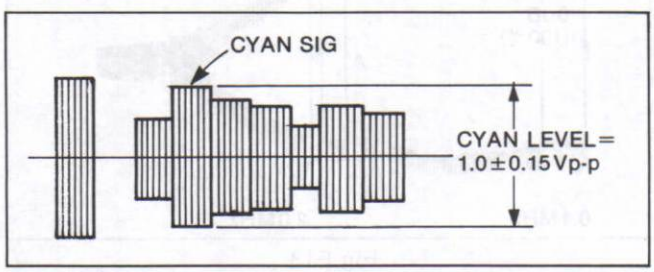


Fig.E15

16. JUMP CORRECTION AFC ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP8008	VR8004	PLAY	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	FREQUENCY COUNTER	22.2kHz±100Hz	

1. Connect the 10Kohm resistor between TP8009 and REG.5V (P3001−14).
2. Adjust VR8004 so that the reading of frequency counter is 22.2KHz +− 100Hz.

17. REVERSED PHASE VIDEO OUTPUT LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-1	VR8005	SELF RECORDING	COLOUR BAR
TAPE	M. EQ.	SPEC.	
BLANK TAPE	OSCILLO-SCOPE	A−B=0±30mVp-p	

1. Supply the colour bar signal to video circuit through Y/C separator.
2. Playback the just recorded portion.
3. Confirm the A level when the unit places the playback mode.
4. Confirm the B level when the unit places the playback mode and connecting jumper wire among TP8006, TP8007 and GND.
5. Adjust VR8005 so that the level difference between A and B becomes 0 +− 30mVp−p.

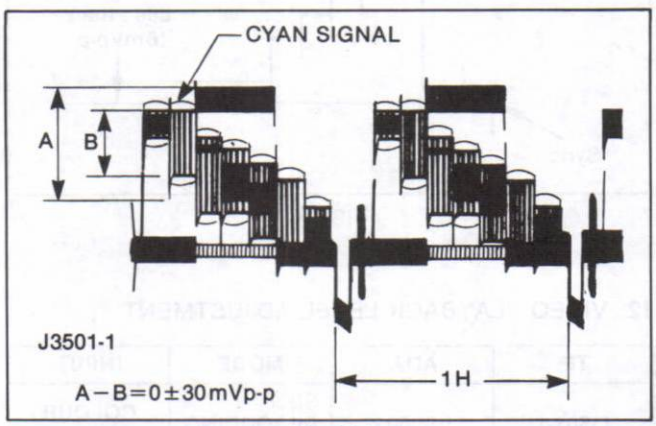


Fig.E16

AUDIO SECTION

18. AUDIO BAIS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	REC/PLAY	
TAPE	M. EQ.	SPEC.	
BLANK TAPE	D.V.M.	2.7mVrms±0.1mVrms	

19. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT (TP4001)	VR4001	SELF RECORDING	1kHz AUDIO −70dB SIGNAL/ VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERA-TOR/D.V.M.	EE LEVEL = −8.0±2dB PB LEVEL = EE LEVEL ±0.5dB	

1. Supply the audio signal (1KHz/−70dB sine−wave) to audio circuit through the MIC Input Jack.
2. Set the audio select SW to Normal position.
3. Adjust VR4001 so that the level is EE Level (−8 +− 2dB) +− 0.5dB.

SYSTEM CONTROL SECTION

20. CHARACTER POSITION ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIEW FINDER	C6003	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	VIEW FINDER	CHARACTER IS CENTRE	

1. Connect the EVF unit to the VTR unit.
2. Display the battery remaining indicator and counter number on the EVF.
3. Adjust the osc control (C6003) so that the character position is shown below.

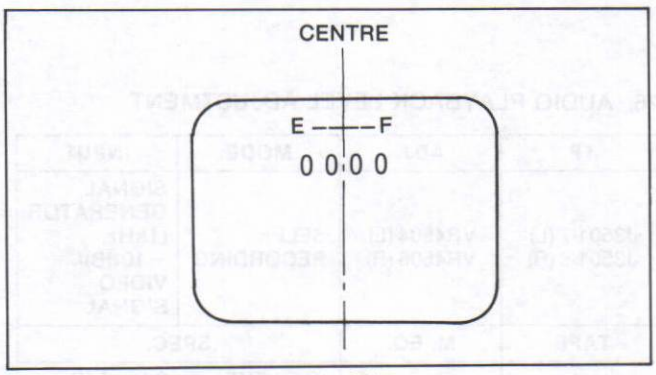


Fig.E17

Hi-Hi AUDIO SECTION

21. Hi-Fi AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
P5503-2 (HOT) P5503-1 (GND)	VR4503	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	OSCILLO-SCOPE	220+−5mVp-p	

1. Connect the OSCILLOSCOPE to P5503−2 (HOT) and P5503−1 (GND).
2. Adjust VR4503 so that the Audio recording current become 220 +− 5mVp−p as shown below.

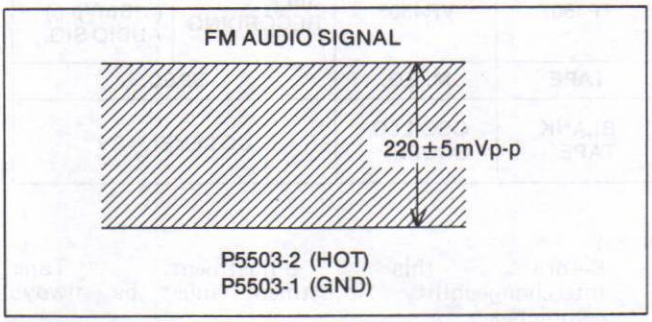


Fig.E18

22. AUDIO HEAD SWITCHING SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4506 TP2001	VR4510	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFM8180H8PF	OSCILLO-SCOPE	$T=T2-\frac{(T2-T1)}{2}$ msec.	

1. Play back the alignment tape (VFM8180H8PF).
2. Connect the oscilloscope to TP4511 and TP2001.
3. Play back the just recorded portion.
4. 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".

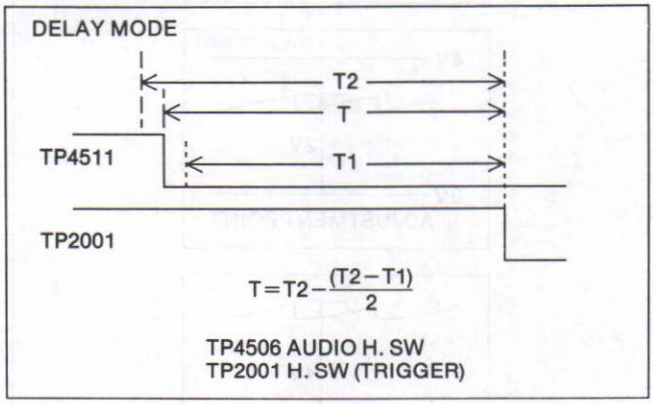


Fig.E19

23. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4507	VR4505	SELF RECORDING	1kHz, −10dB (316mVp-p) AUDIO SIG.
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	DC LEVEL=2V	

Note1
Before this adjustment, Tape interchangeability Adjustment must be always completed.

Note2
To achieve this adjustment, the luminance recording current adjustment should be performed as follows.
First connect the oscilloscope to P5003−2 (HOT) and P5003−1 (GND) and then adjust VR3005 for 115mVp−p (refer to Luminance Recording Current Adjustment [Item:12]).
After this adjustment, the luminance recording current must be returned to original position again.

1. Set the Audio Select SW to "STEREO" position.
2. Play back the just recorded portion.
3. Connect the oscilloscope to TP4507.
4. Preadjust VR4505 until the DC voltage is changed into low level (Approx. OV) at TP4507.
5. Then slowly adjust VR4505 so that the DC voltage comes at 2V as shown below.

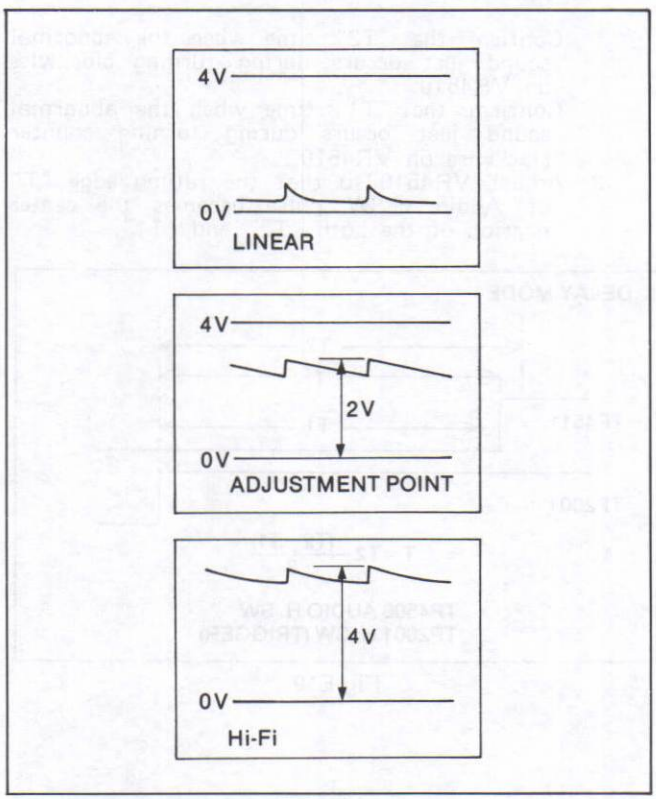


Fig.E20

24. Hi-Fi AUDIO CARRIER FREQUENCY ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-3 (L) IC4502-30 (R)	VR4501 (L) VR4509 (R)	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER	1400±10kHz (L) 1800±10kHz (R)	

25. AUDIO DEVIATION ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC4502-5 (L) IC4502-28 (R)	VR4502 (L) VR4507 (R)	REC. PLAY	1kHz, −6dB (500mVp-p) AUDIO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ D.V.M.	160mVp-p	

1. Set the output(600−ohm Terminated) of the Signal generator to 1KHz and −6dB(500mVp−p), and supply it through the MIC Input Jack.
2. Adjust VR4502 to 160mVp−p at IC4502−5 on HiFi AUDIO C.B.A. for L−Channel.
3. Adjust VR4507 to 160mVp−p at IC4502−28 on HiFi AUDIO C.B.A. for R−Channel.

NOTE:
Audio signal output(1KHz/−6dB:500mVp−p) should be terminated by 600−ohm.

26. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
J3501-7 (L) J3501-8 (R)	VR4504 (L) VR4508 (R)	SELF RECORDING	SIGNAL GENERATOR (1kHz, −10dB)/ VIDEO SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ V.T.V.M	E-E LEVEL=−8±−2dB (300mVrms~500mVrms) PLAYBACK LEVEL= E-E LEVEL ±0.05dB (±20mVrms)	

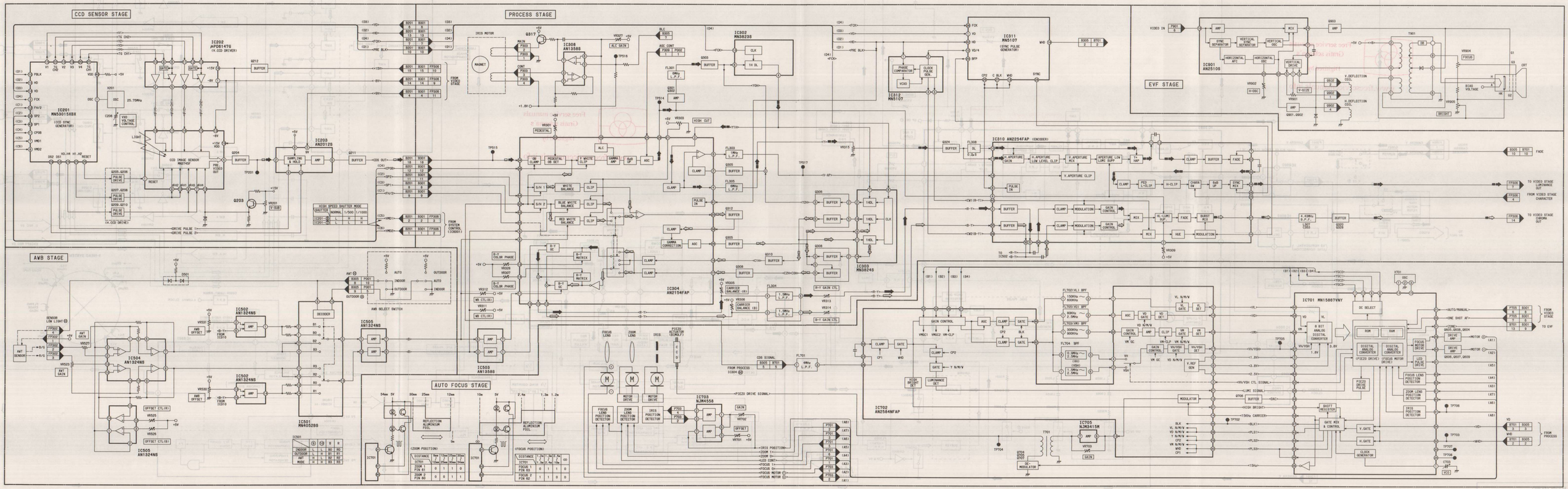
Note:
Before this adjustment, Tape Interchangeability Adjustment must be completed.

1. Play back the just recorded portion.
2. Adjust VR4504 and VR4508 volumes respectively so that the level of the playback becomes E−E level +− 0.5dB (+−20mVrms).

SECTION 3
BLOCK DIAGRAMS & SCHEMATIC DIAGRAMS

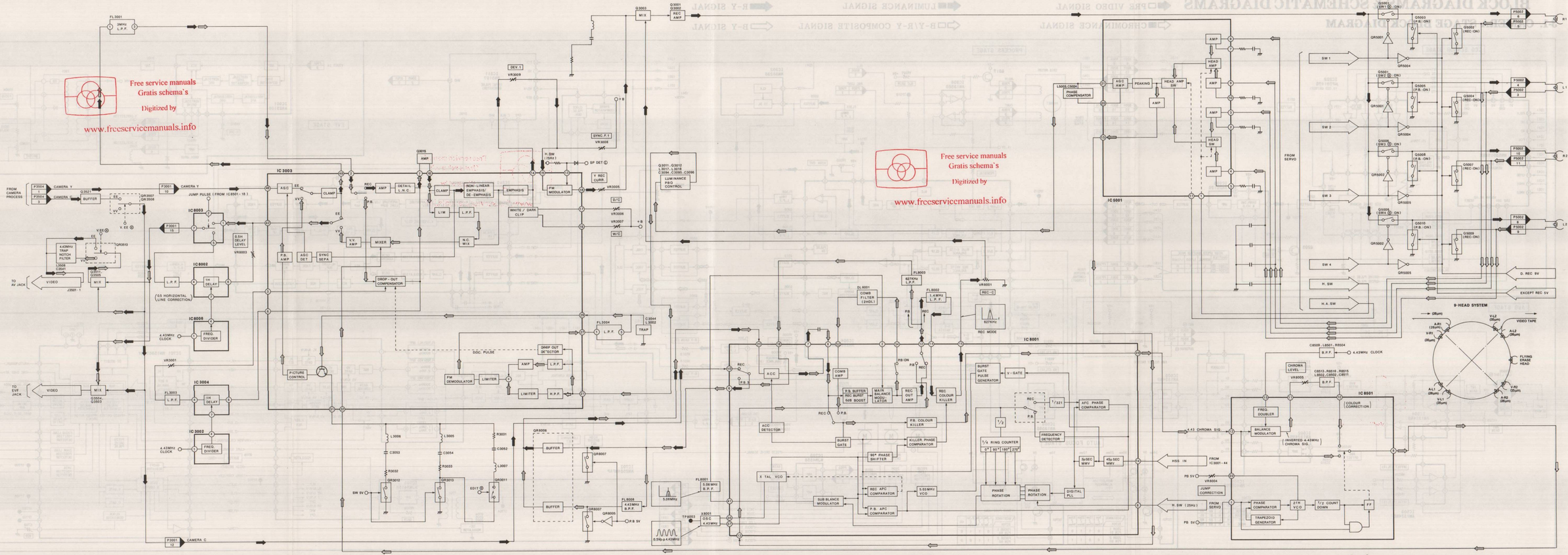
PRE VIDEO SIGNAL | LUMINANCE SIGNAL | R-Y SIGNAL
CHROMINANCE SIGNAL | B-Y/R-Y COMPOSITE SIGNAL | B-Y SIGNAL

3-1. CAMERA STAGE BLOCK DIAGRAM



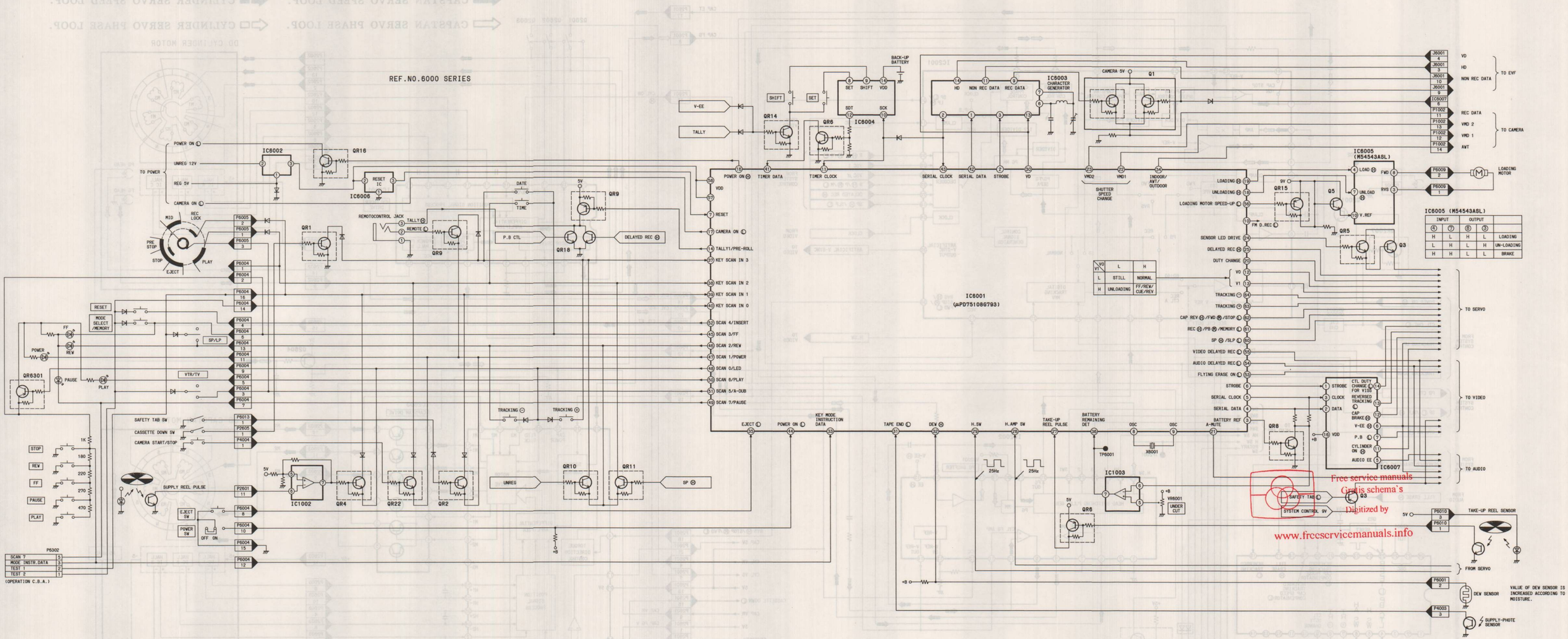
3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

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



Back Page:
CAMERA STAGE Section

3-3. SYSTEM CONTROL BLOCK DIAGRAM

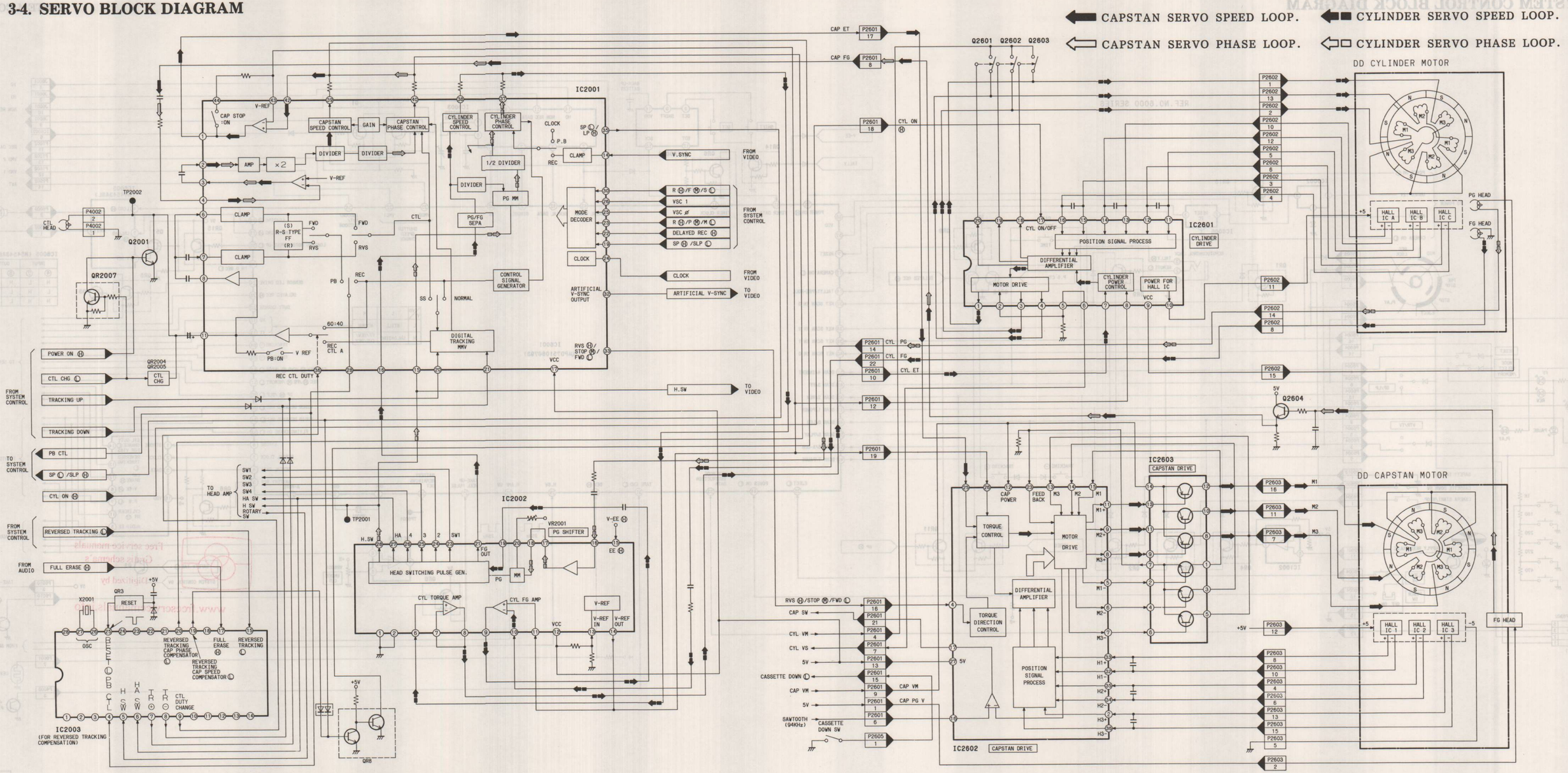


INPUT		OUTPUT		
④	⑦	⑧	③	
H	L	H	L	LOADING
L	H	L	H	UN-LOADING
H	H	L	L	BRAKE

V0 / V1	L	H
L	STILL	NORMAL
H	UNLOADING	FF/REW/ CUE/REV

Next Page:
SERVO Section

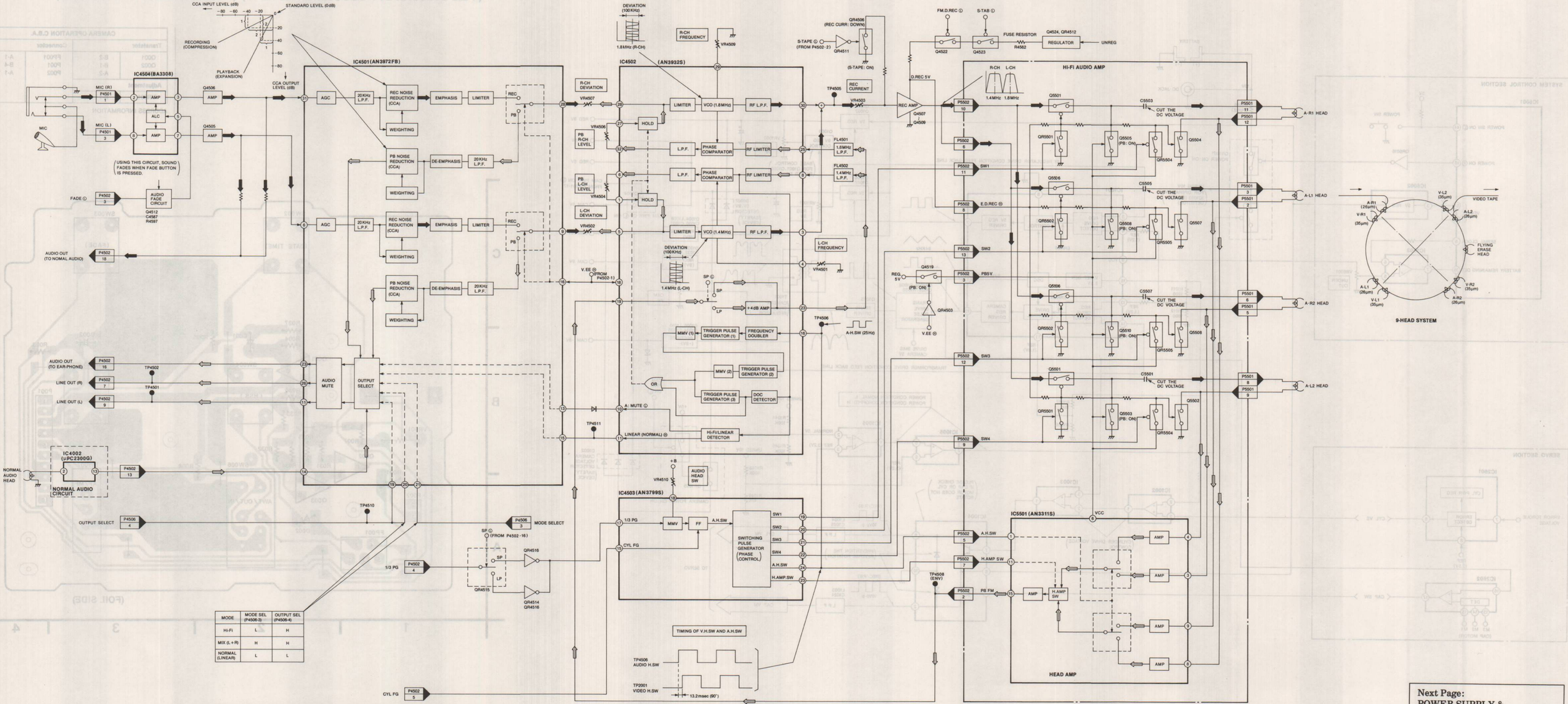
3-4. SERVO BLOCK DIAGRAM



3-5. Hi-Fi AUDIO BLOCK DIAGRAM

MAIN SIGNAL PATH IN REC MODE

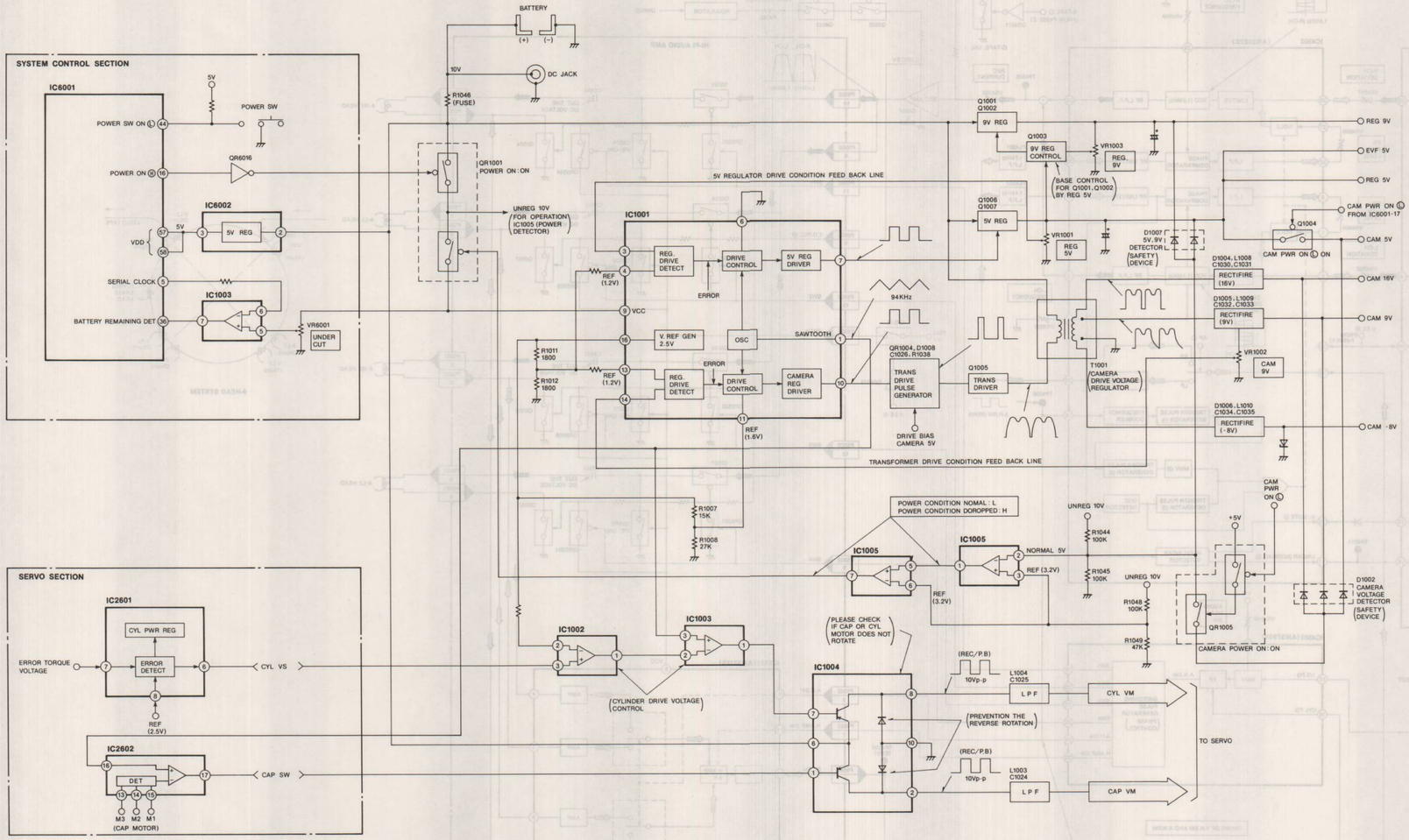
MAIN SIGNAL PATH IN PLAYBACK MODE



MODE	MODE SEL (P4506-3)	OUTPUT SEL (P4506-4)
Hi-Fi	L	H
MIX (L + P)	H	H
NORMAL (LINEAR)	L	L

Next Page:
POWER SUPPLY & CAMERA OPERATION Section

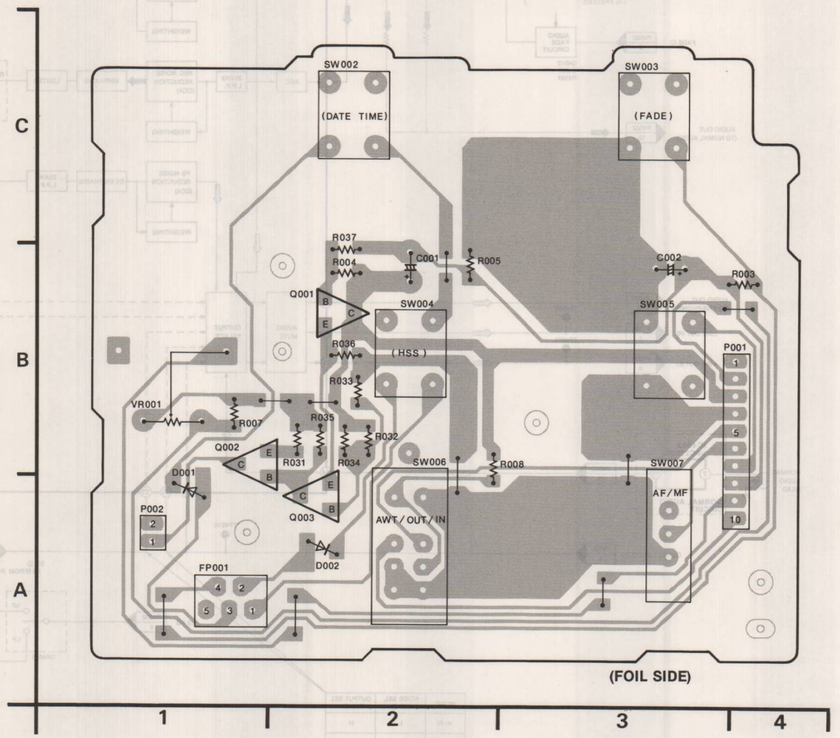
3-6. POWER SUPPLY BLOCK DIAGRAM



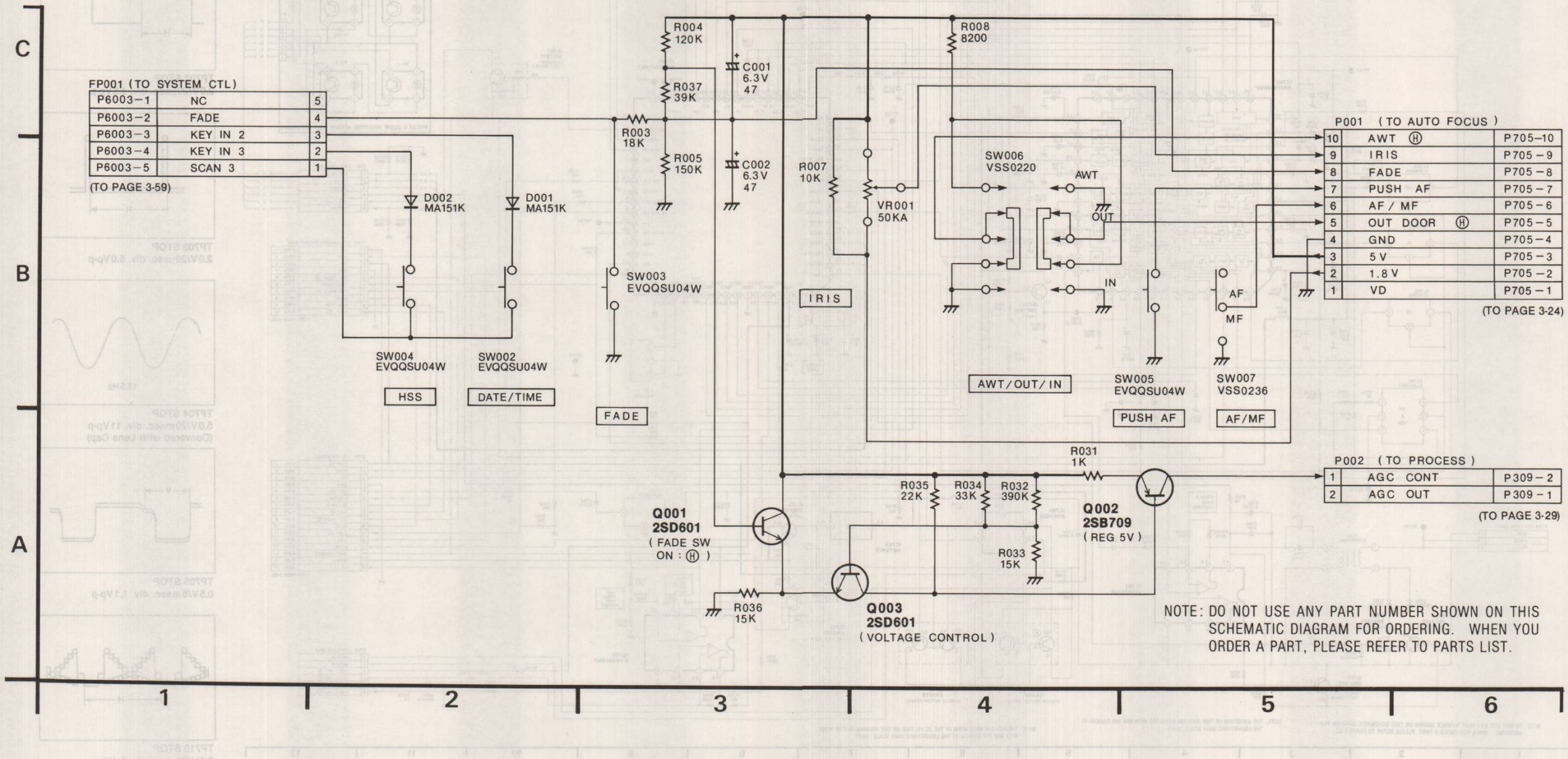
3-7. CAMERA OPERATION C.B.A.
(VEP20285A: NV-MC30E/B/EP/EW) (VEP20285B: NV-MC30EG)

CAMERA OPERATION C.B.A.			
Transistor		**Connector**	
Q001	B-2	FP001	A-1
Q002	B-1	P001	B-4
Q003	A-2	P002	A-1
Adjustment			
VR001	B-1		

ADDRESS INFORMATION

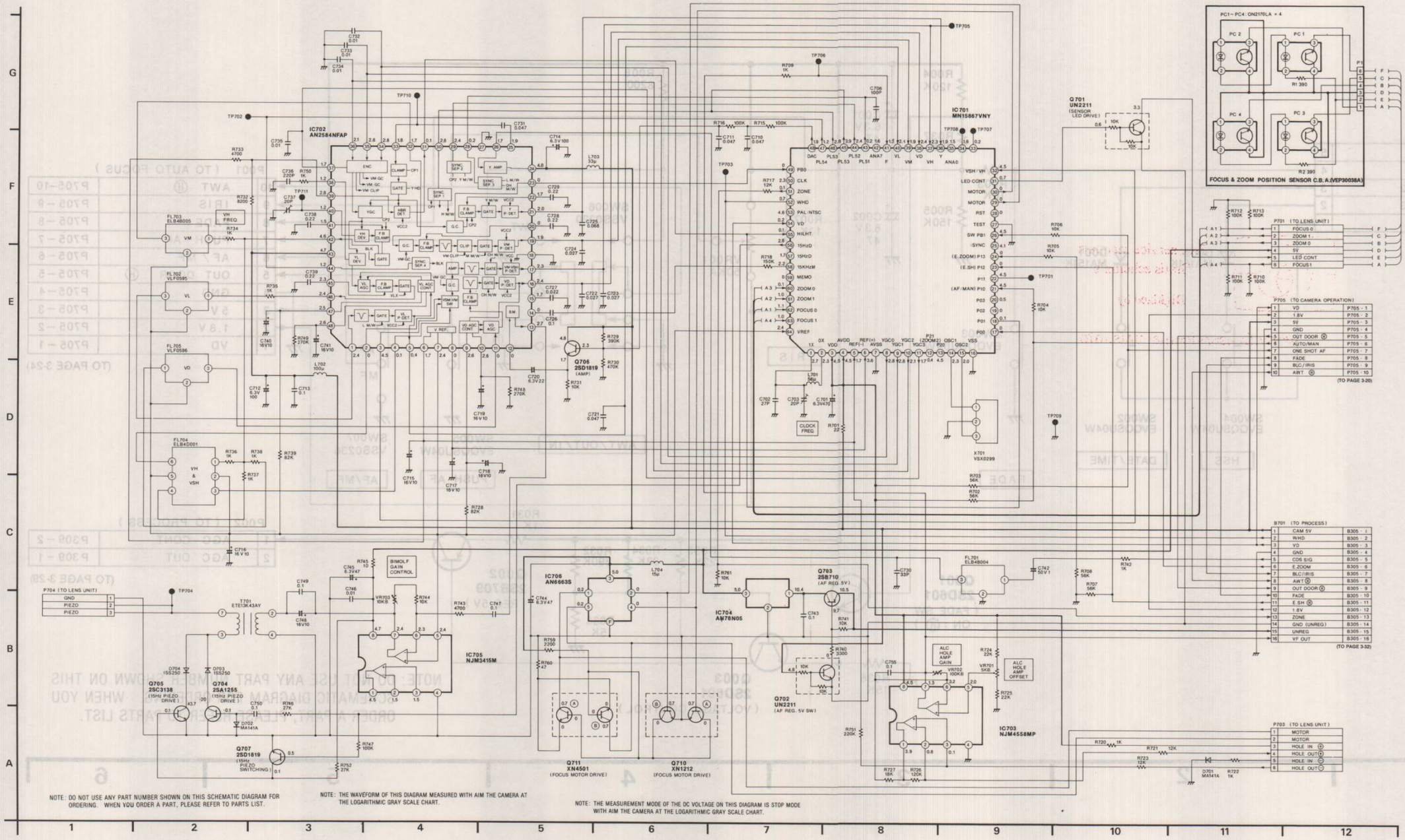


3-8. CAMERA OPERATION SCHEMATIC DIAGRAM



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

3-9. AUTO FOCUS SCHEMATIC DIAGRAM

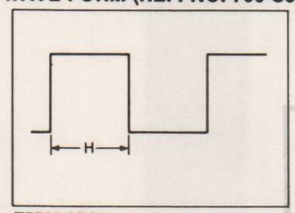


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

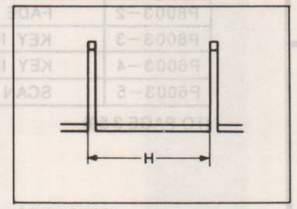
NOTE: THE WAVEFORM OF THIS DIAGRAM MEASURED WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

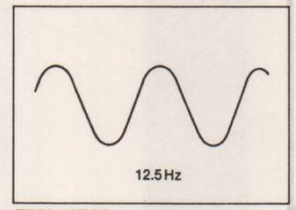
AUTO FOCUS CIRCUIT TP (Test Point) WAVE FORM (REF. NO. 700 Series)



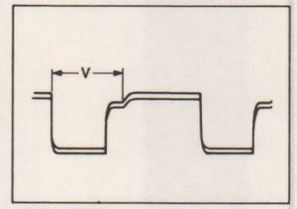
TP702 STOP
2.0V/20µsec. div. 4.5Vp-p



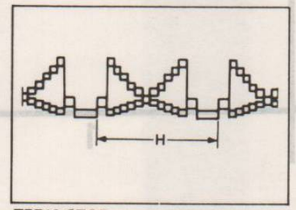
TP703 STOP
2.0V/20µsec. div. 5.0Vp-p



TP704 STOP
5.0V/20msec. div. 11Vp-p
(Convered with Lens Cap)



TP705 STOP
0.5V/5msec. div. 1.1Vp-p

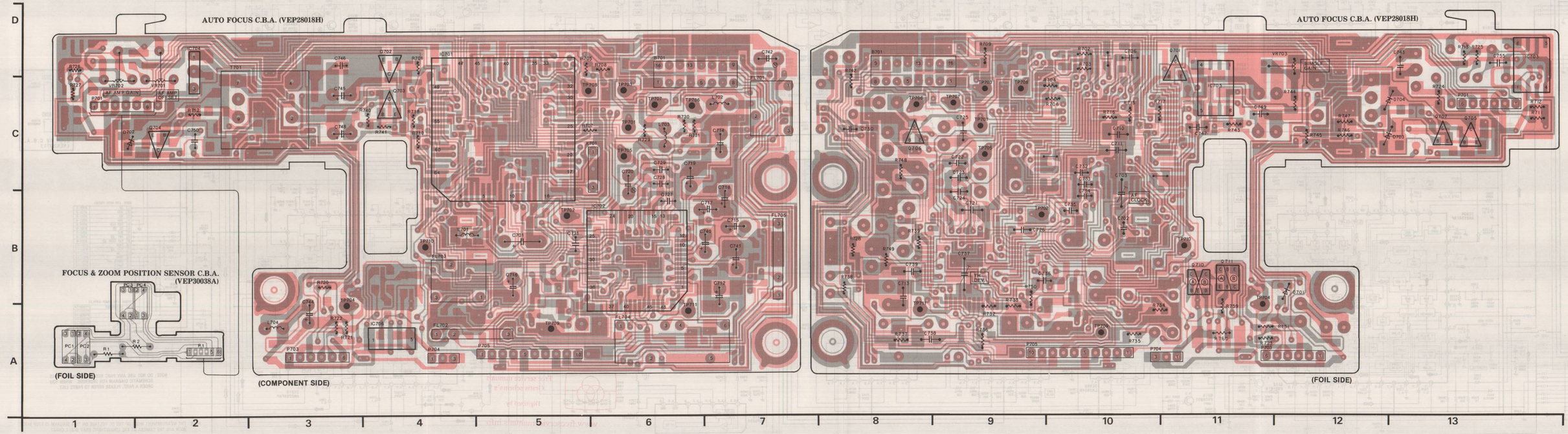


TP710 STOP
0.1V/20µsec. div. 0.4Vp-p

TP711 STOP
0.2V/20µsec. div. 0.7Vp-p

Back Page:
CAMERA OPERATION Section

3-10. AUTO FOCUS C.B.A. (VEP28018H)

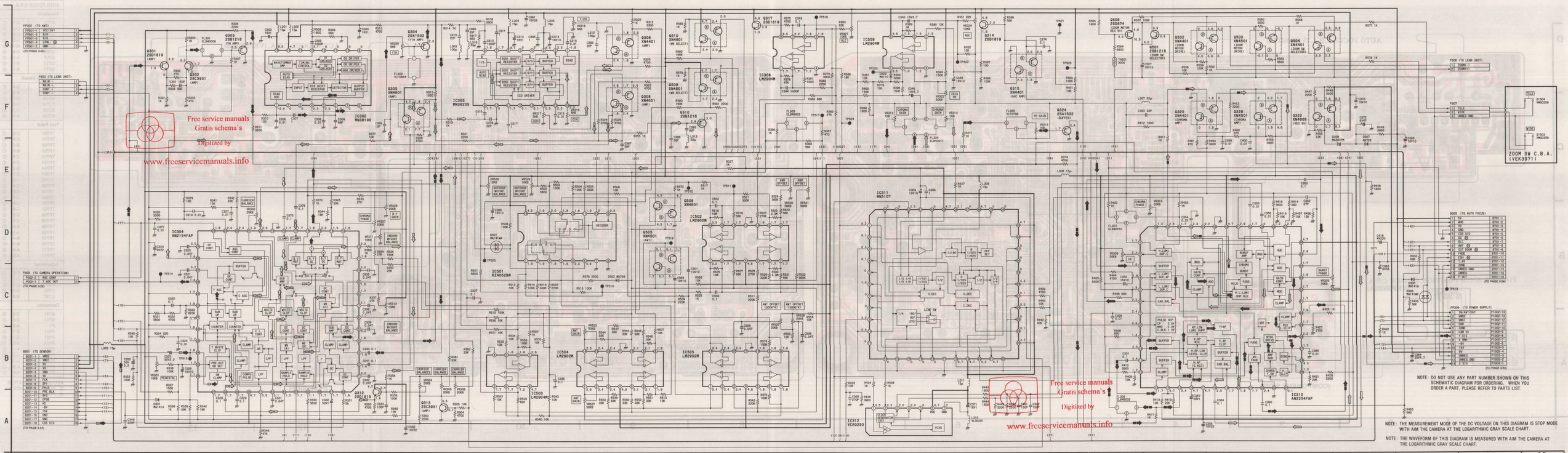


AUTO FOCUS C.B.A.	
Translstor	
Q701	D-11
Q702	D-4
Q703	C-4
Q704	C-2
Q705	C-13
Q706	C-8
Q707	C-13
Q710	B-11
Q711	A-11
Integrated Circuit	
IC701	D-4
IC702	B-6
IC703	D-13
IC704	D-2
IC705	C-11
IC706	A-4
Test Point	
TP701	C-6
TP701	C-9
TP702	B-5
TP702	B-9
TP703	C-6
TP703	C-9
TP704	B-3
TP704	B-11
TP705	C-6
TP705	C-9
TP706	C-6
TP706	C-8
TP707	C-6
TP707	C-9
TP708	C-5
TP708	C-9
TP709	A-5
TP709	A-10
TP710	B-4
TP710	B-11
TP711	A-6
TP711	A-8
Adjustment	
VR701	C-2
VR702	C-1
VR703	D-11
C703	C-10
C737	B-9
Connector	
B701	D-6
B701	D-8
P1	A-2
P701	C-1
P701	C-13
P703	A-3
P703	A-11
P704	A-4
P704	A-10
P705	A-5
P705	A-9

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-11. PROCESS SCHEMATIC DIAGRAM

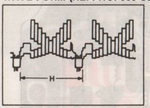
PRE VIDEO SIGNAL
LUMINANCE SIGNAL
R-Y SIGNAL
CHROMINANCE SIGNAL
B-Y/R-Y COMPOSITE SIGNAL
B-Y SIGNAL



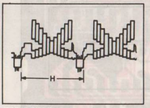
Back Page:
AUTO FOCUS Section

3-12. PROCESS C.B.A. (VEP23089E)

PROCESS CIRCUIT TP (Test Point)
WAVE FORM (REF. NO. 500 Series)

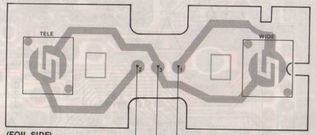


TP514 STOP
0.1 V/20μsec. div. 0.32 Vp-p



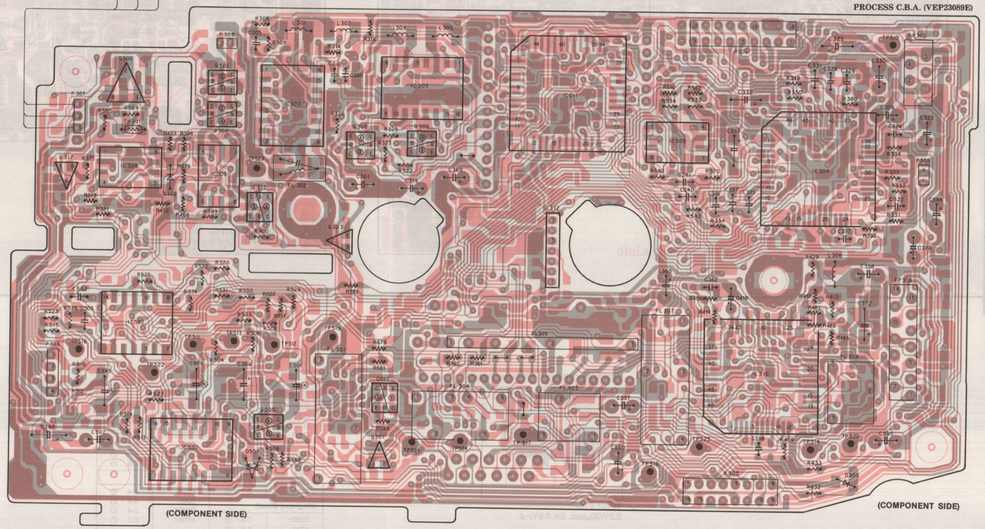
TP515 STOP
0.1 V/20μsec. div. 0.5 Vp-p

ZOOM SW C.B.A. (VEK3971)



(FOIL SIDE)

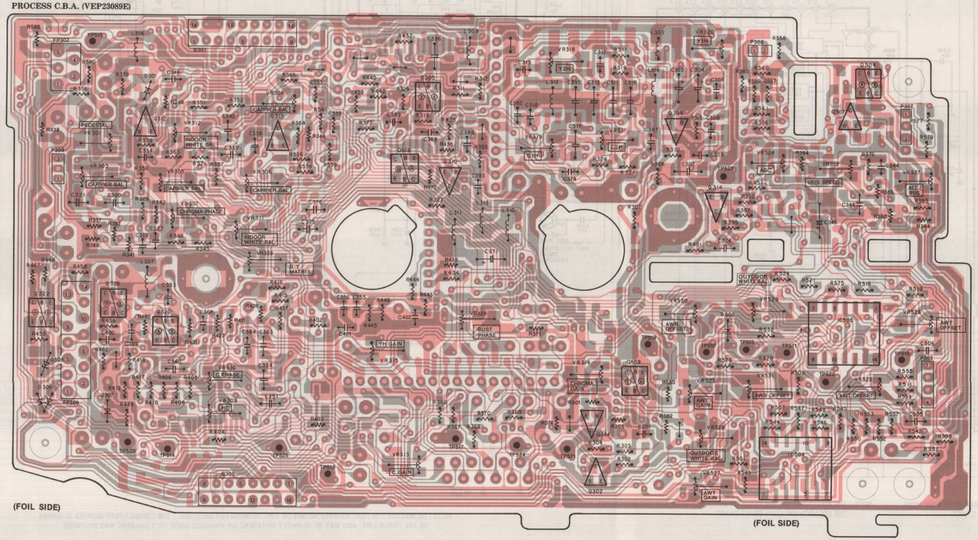
PROCESS C.B.A. (VEP23089E)



(COMPONENT SIDE)

(COMPONENT SIDE)

PROCESS C.B.A. (VEP23089E)



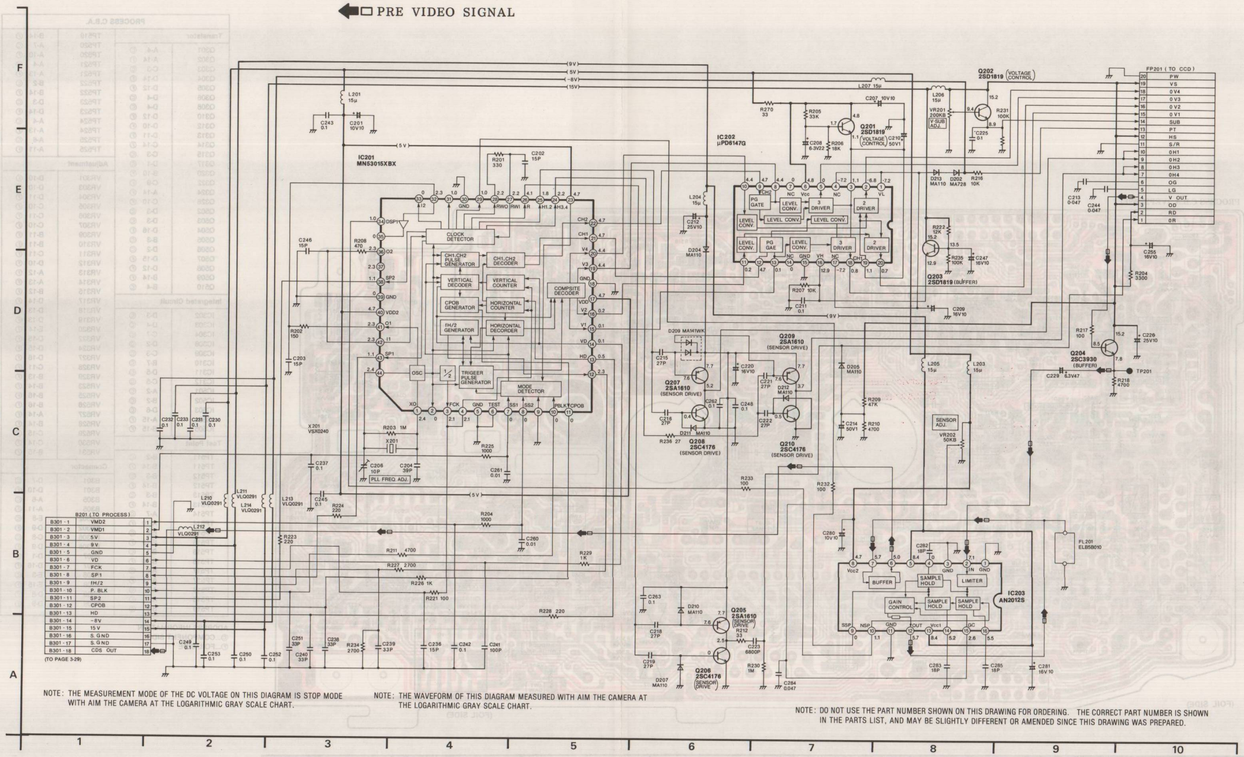
(FOIL SIDE)

(FOIL SIDE)

PROCESS C.B.A.			
Transistor		TP519	B-14
Q301	A-4	TP520	A-7
Q302	A-14	TP520	A-10
Q303	C-3	TP521	A-4
Q304	D-14	TP521	A-13
Q305	D-12	TP522	B-2
Q306	D-4	TP522	B-14
Q308	D-4	TP523	D-3
Q310	D-12	TP523	D-14
Q312	D-10	TP524	A-4
Q313	D-11	TP524	A-13
Q314	C-14	TP525	A-6
Q315	C-3	TP525	A-11
Q317	D-1	**Adjustment**	
Q320	B-10	VR301	D-10
Q322	C-9	VR303	D-10
Q324	A-14	VR304	D-11
Q328	C-10	VR305	C-10
Q502	D-3	VR306	C-11
Q503	D-3	VR307	C-10
Q504	D-16	VR309	B-11
Q505	B-3	VR310	B-11
Q506	D-2	VR311	C-11
Q507	D-15	VR312	D-10
Q508	D-12	VR313	A-12
Q509	B-14	VR314	A-13
Q510	B-4	VR315	B-12
Integrated Circuit		VR317	D-14
IC302	D-3	VR318	D-13
IC303	D-4	VR319	D-13
IC304	C-7	VR320	E-14
IC308	D-2	VR322	D-15
IC309	C-3	VR324	D-15
IC310	B-7	VR327	D-16
IC311	D-5	VR328	C-11
IC312	C-5	VR329	B-13
IC501	A-2	VR523	B-14
IC502	B-2	VR525	B-16
IC503	D-6	VR526	B-16
IC504	A-15	VR527	A-14
IC505	B-15	VR528	B-14
Test Point		VR529	C-15
TP511	B-2	VR530	C-14
TP511	B-14	VR531	B-15
TP512	B-3	**Connector**	
TP512	B-14	B301	D-7
TP513	B-3	B301	D-10
TP513	B-14	B305	A-6
TP514	A-7	B305	A-11
TP514	A-10	FP302	E-8
TP515	E-8	FP302	D-9
TP515	E-10	FP306	C-8
TP516	B-1	FP306	D-9
TP516	B-16	P307	D-1
TP517	A-5	P307	D-16
TP517	A-12	P308	E-3
TP518	A-6	P308	E-15
TP518	A-11	P309	D-8
TP519	B-3	P309	D-9

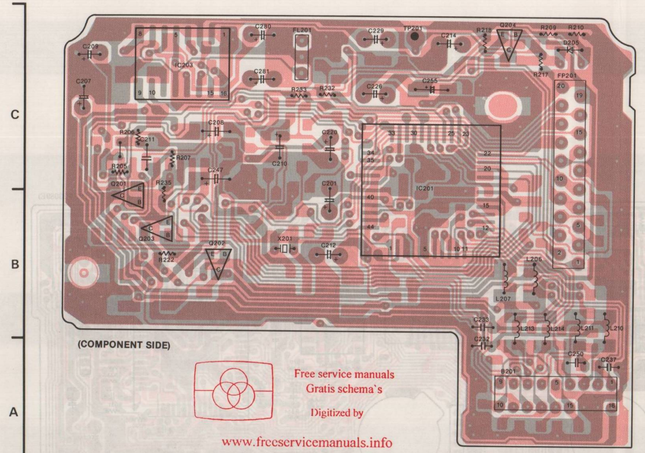
ADDRESS INFORMATION
◎...COMPONENT SIDE
Ⓕ...FOIL SIDE

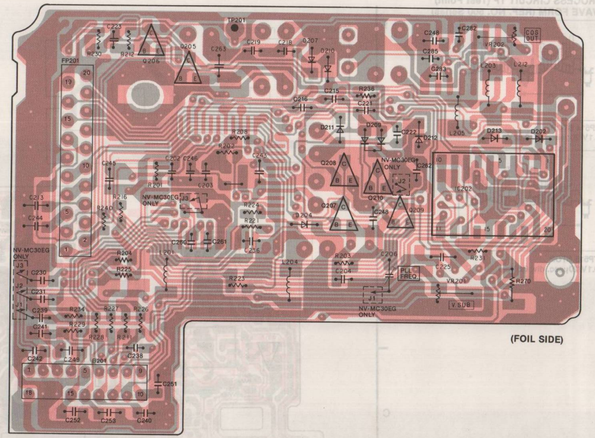
3-13. SENSOR SCHEMATIC DIAGRAM



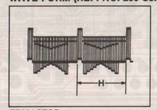
Back Page:
PROCESS Section

3-14. SENSOR C.B.A. (VEP22082A: NV-MC30E/B/EP/EW) (VEP22082C: NV-MC30EG)





SENSOR CIRCUIT TP (Test Point)
WAVE FORM (REF. NO. 200 Series)

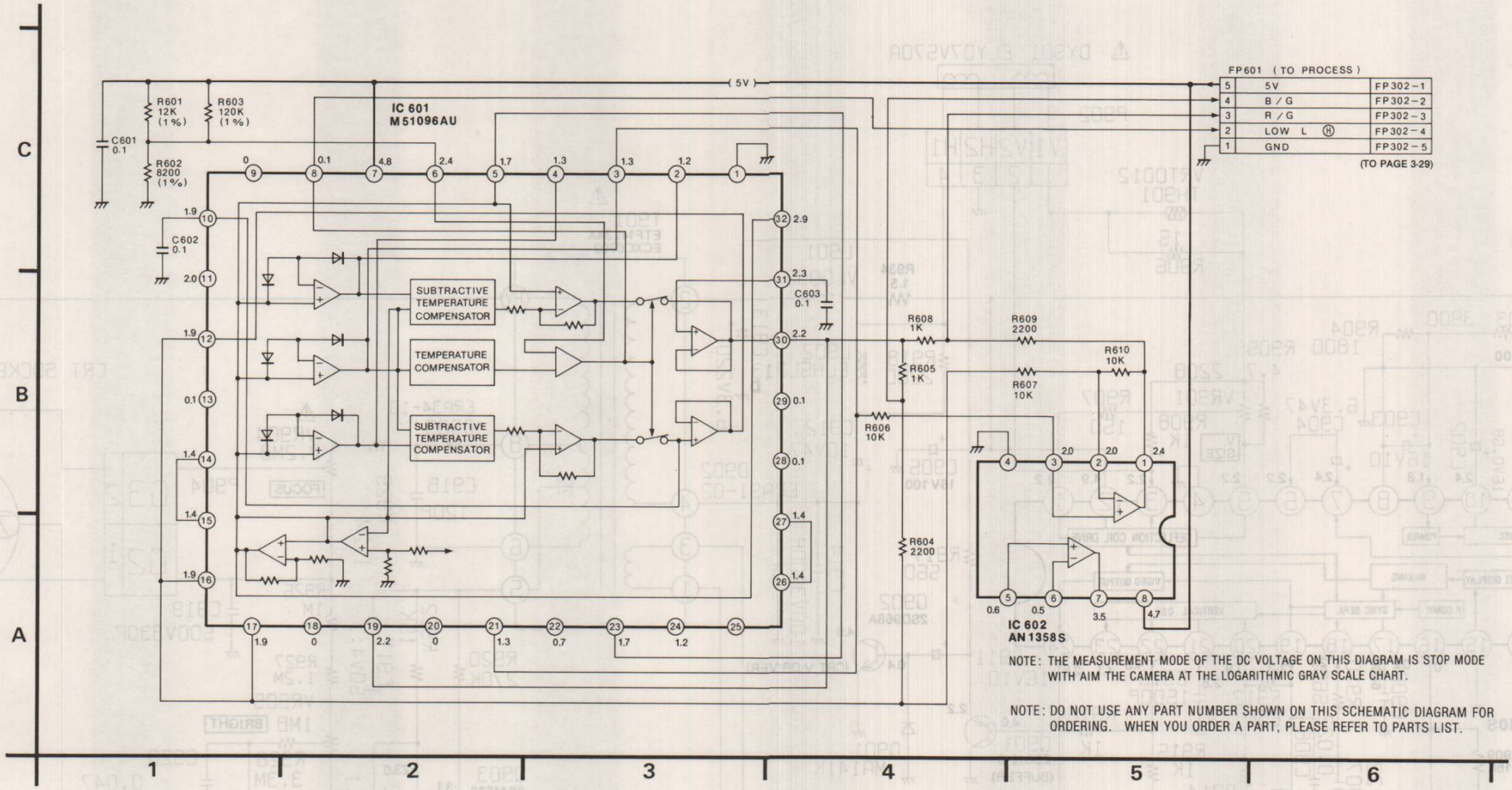


TP201 STOP
0.2V/20μsec. div. 0.6Vp-p

SENSOR C.B.A.			
Transistor		**Test Point**	
Q201	C-1 Ⓒ	TP201	C-3 Ⓒ
Q202	B-2 Ⓒ	TP201	C-6 Ⓕ
Q203	B-1 Ⓒ	**Adjustment**	
Q204	C-4 Ⓒ	C206	B-8 Ⓕ
Q205	C-6 Ⓒ	VR201	B-8 Ⓕ
Q206	C-6 Ⓕ	VR202	C-8 Ⓕ
Q207	B-7 Ⓕ	**Connector**	
Q208	C-7 Ⓕ	B201	A-4 Ⓒ
Q209	B-8 Ⓕ	B201	A-6 Ⓕ
Q210	B-7 Ⓕ	FP201	C-4 Ⓒ
Integrated Circuit		FP201	C-5 Ⓕ
IC201	C-3 Ⓒ		
IC202	B-8 Ⓕ		
IC203	C-2 Ⓒ		

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

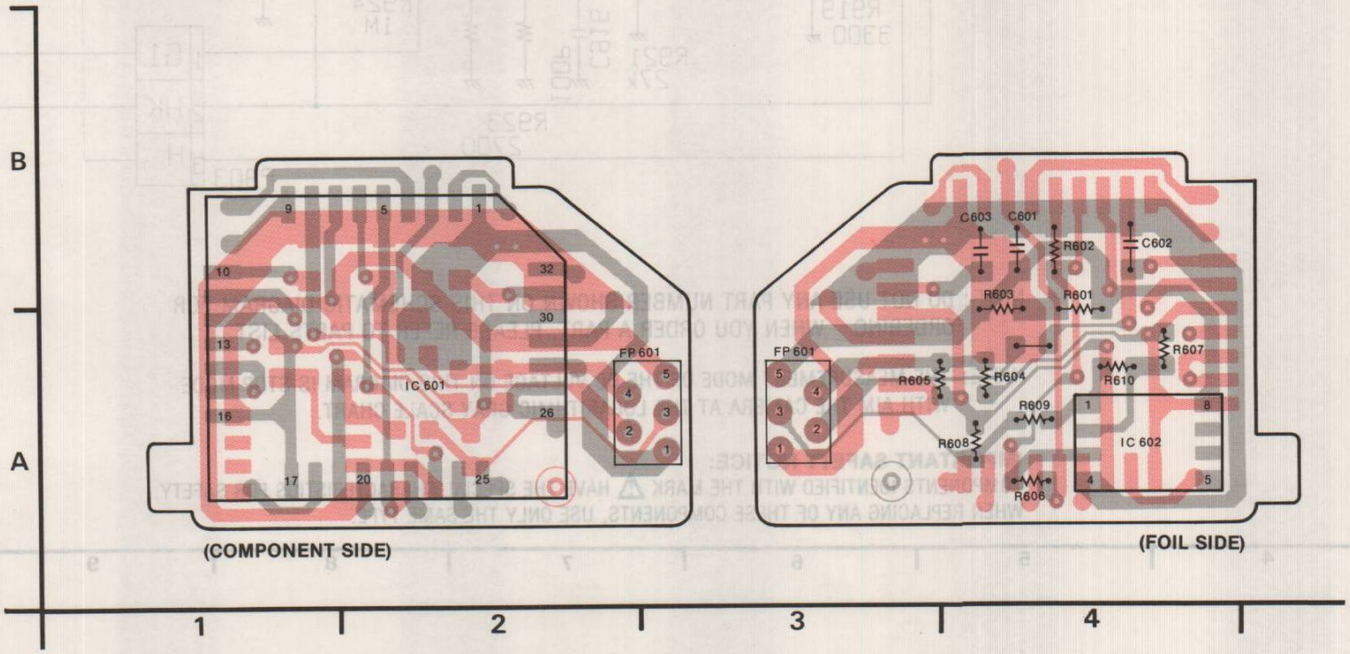
3-15. AWT (3) SCHEMATIC DIAGRAM



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

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

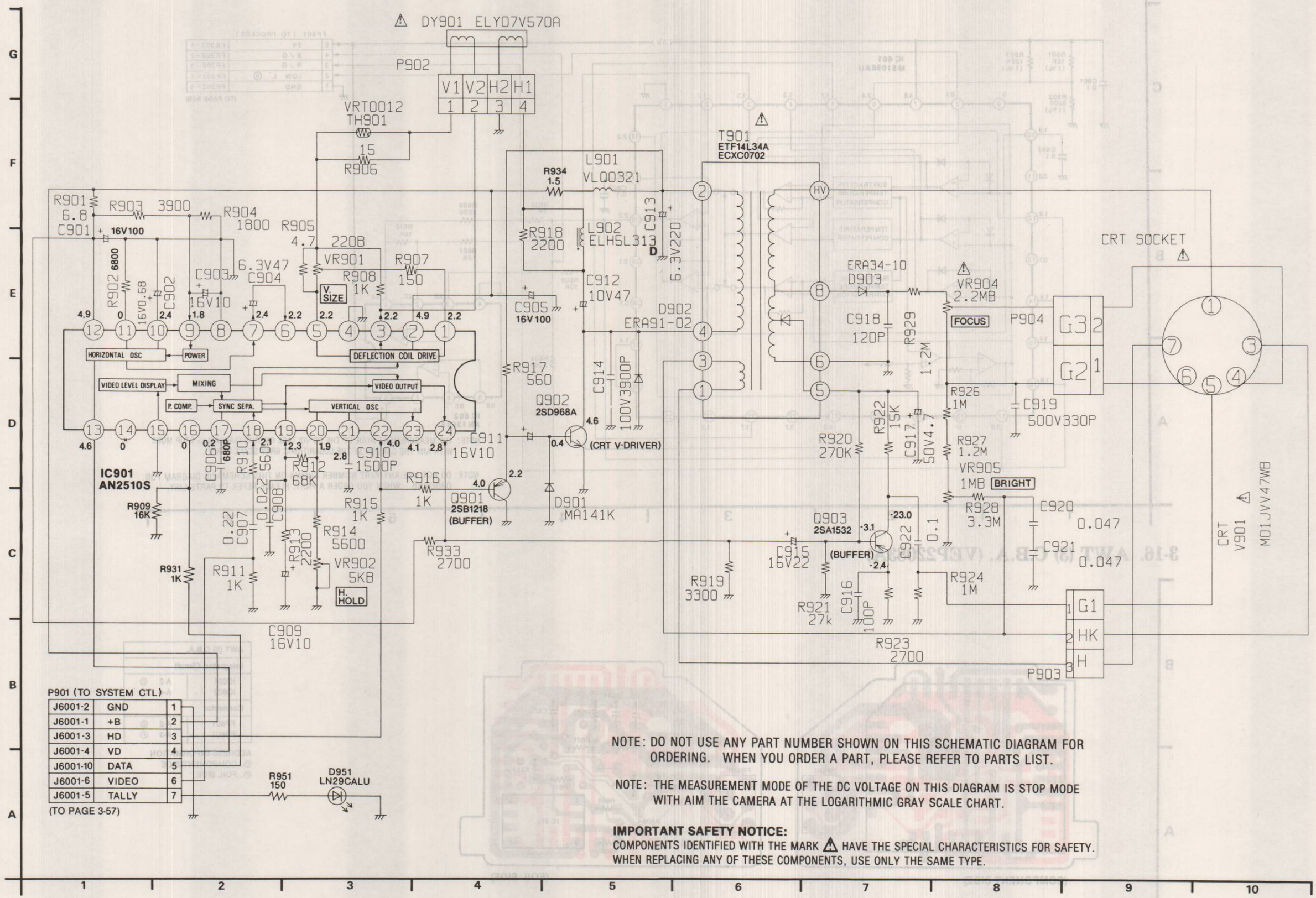
3-16. AWT (3) C.B.A. (VEP22083A)



AWT (3) C.B.A.	
Integrated Circuit	
IC601	A-2 ©
IC602	A-4 Ⓕ
Connector	
FP601	A-2 ©
FP601	A-3 Ⓕ

ADDRESS INFORMATION
©...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-17. E.V.F. SCHEMATIC DIAGRAM



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

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

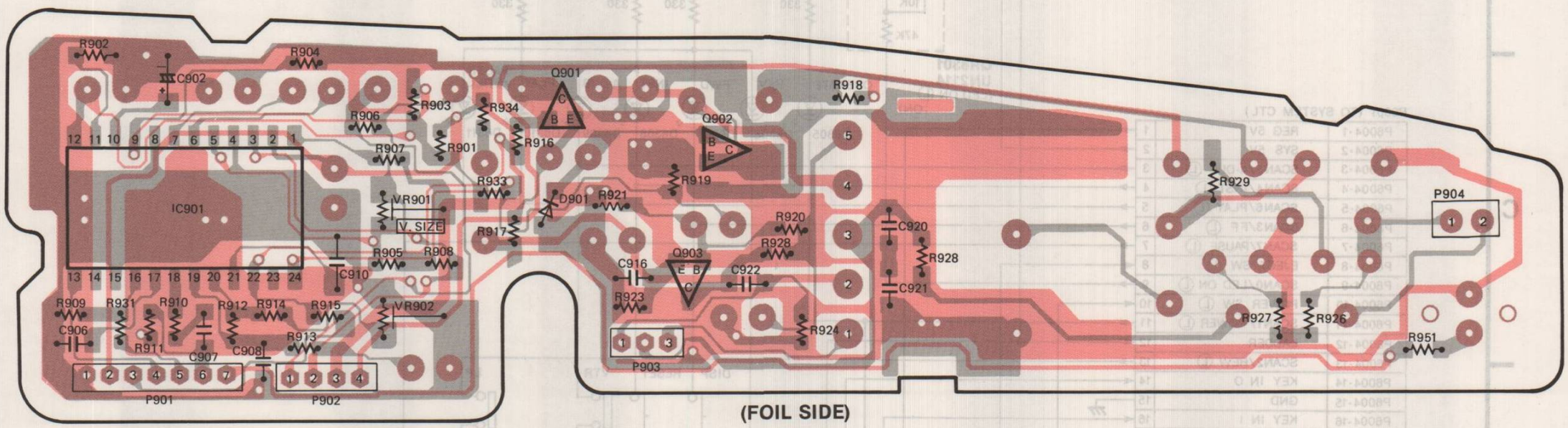
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

Back Page:
AWT (3) Section

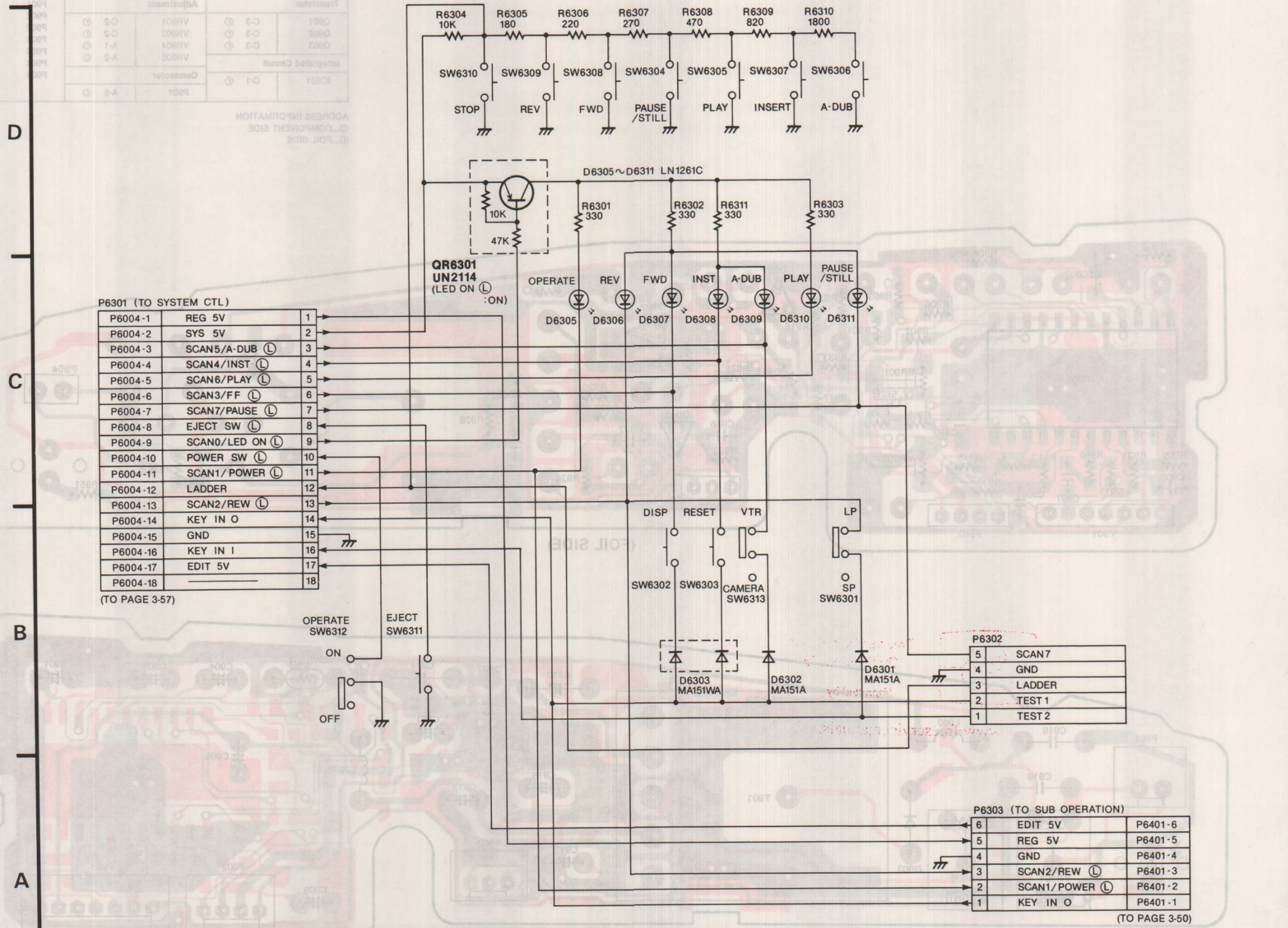
3-18. E.V.F. C.B.A. (VEP27038C)

E.V.F. C.B.A.					
Transistor		**Adjustment**		P901	B-1 Ⓕ
Q901	C-3 Ⓕ	VR901	C-2 Ⓕ	P902	A-5 Ⓒ
Q902	C-3 Ⓕ	VR902	C-2 Ⓕ	P902	B-2 Ⓕ
Q903	C-3 Ⓕ	VR904	A-1 Ⓒ	P903	A-4 Ⓒ
Integrated Circuit		VR905	A-2 Ⓒ	P903	C-3 Ⓕ
IC901	C-1 Ⓕ	**Connector**		P904	B-1 Ⓒ
		P901	A-5 Ⓒ	P904	C-5 Ⓕ

ADDRESS INFORMATION
Ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE



3-19. VTR OPERATION SCHEMATIC DIAGRAM

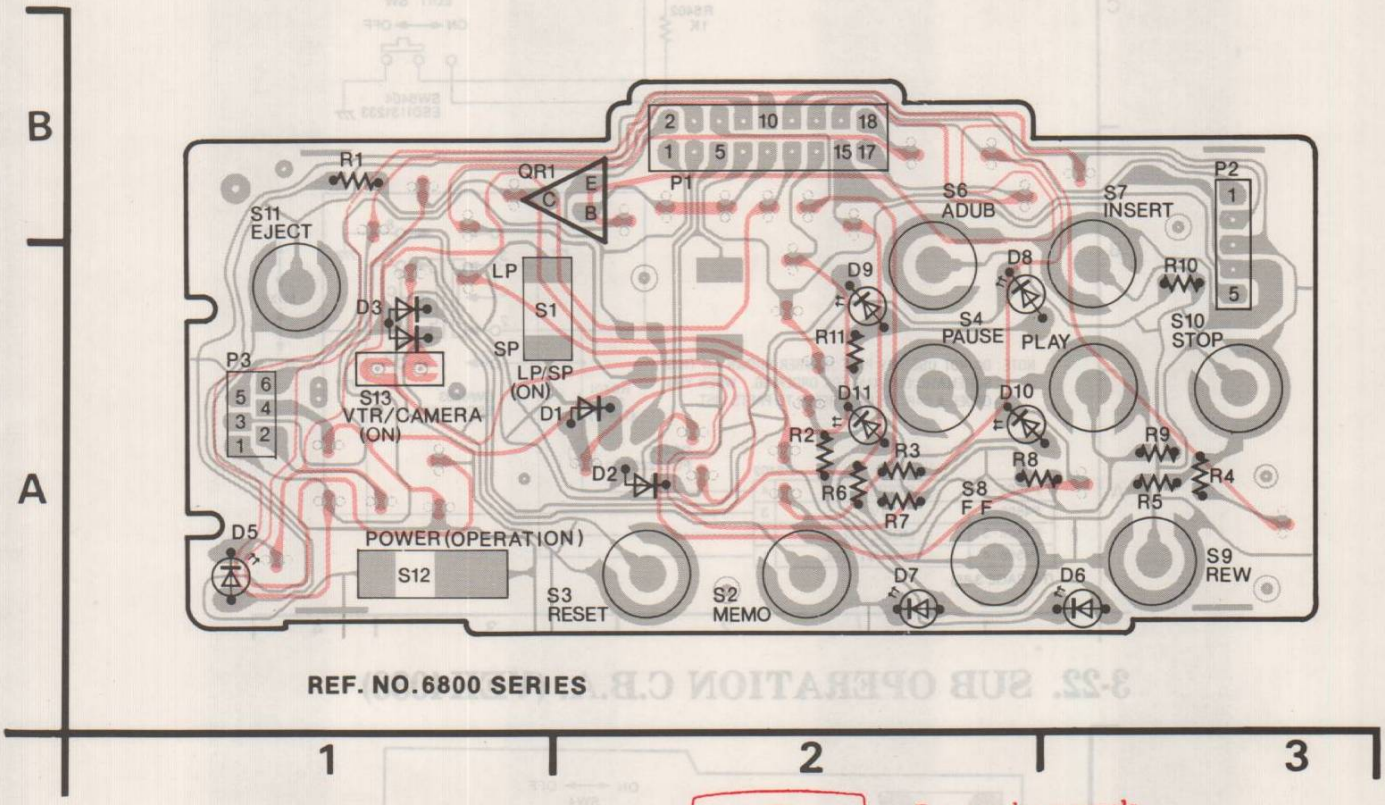


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

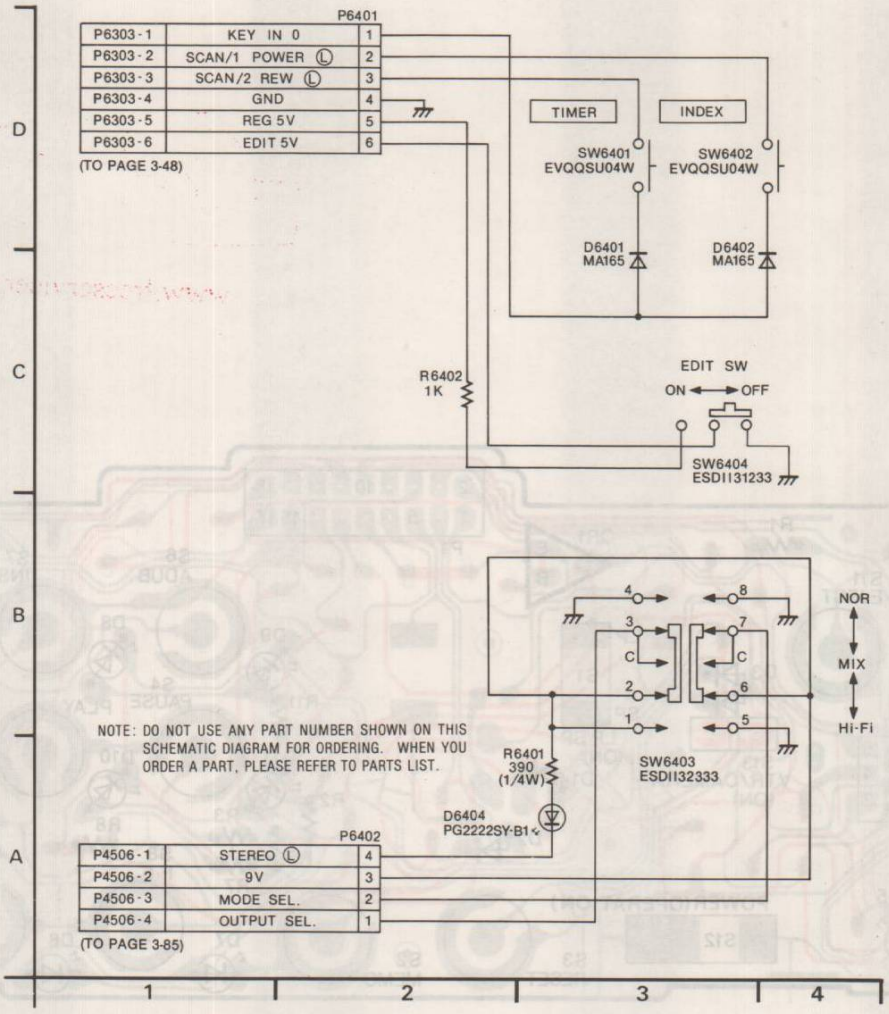
Back Page:
E.V.F. Section

3-20. VTR OPERATION C.B.A. (VEP06515D)

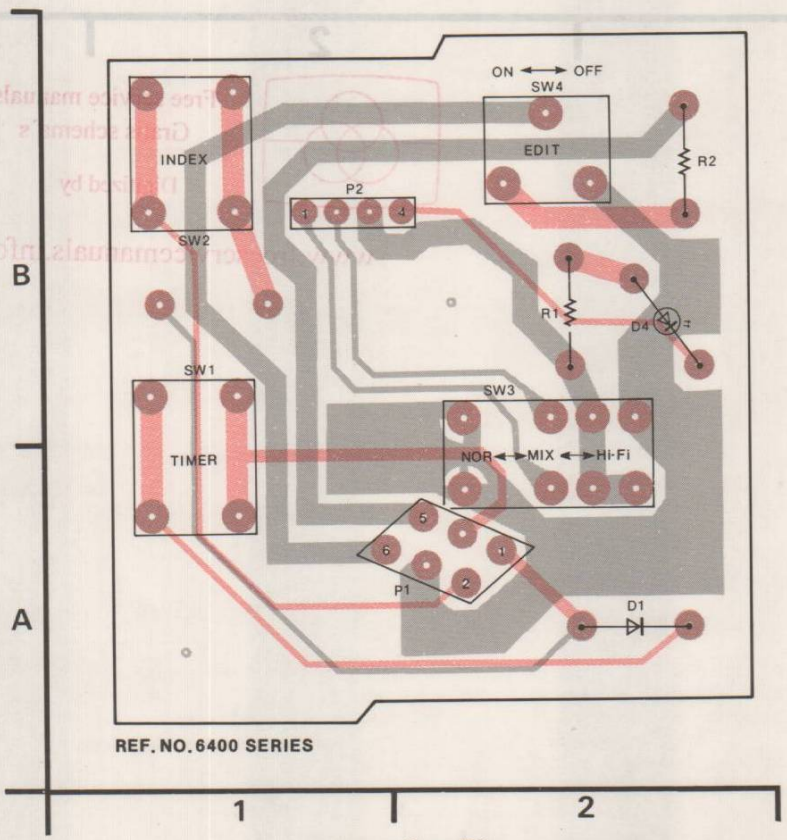


REF. NO.6800 SERIES

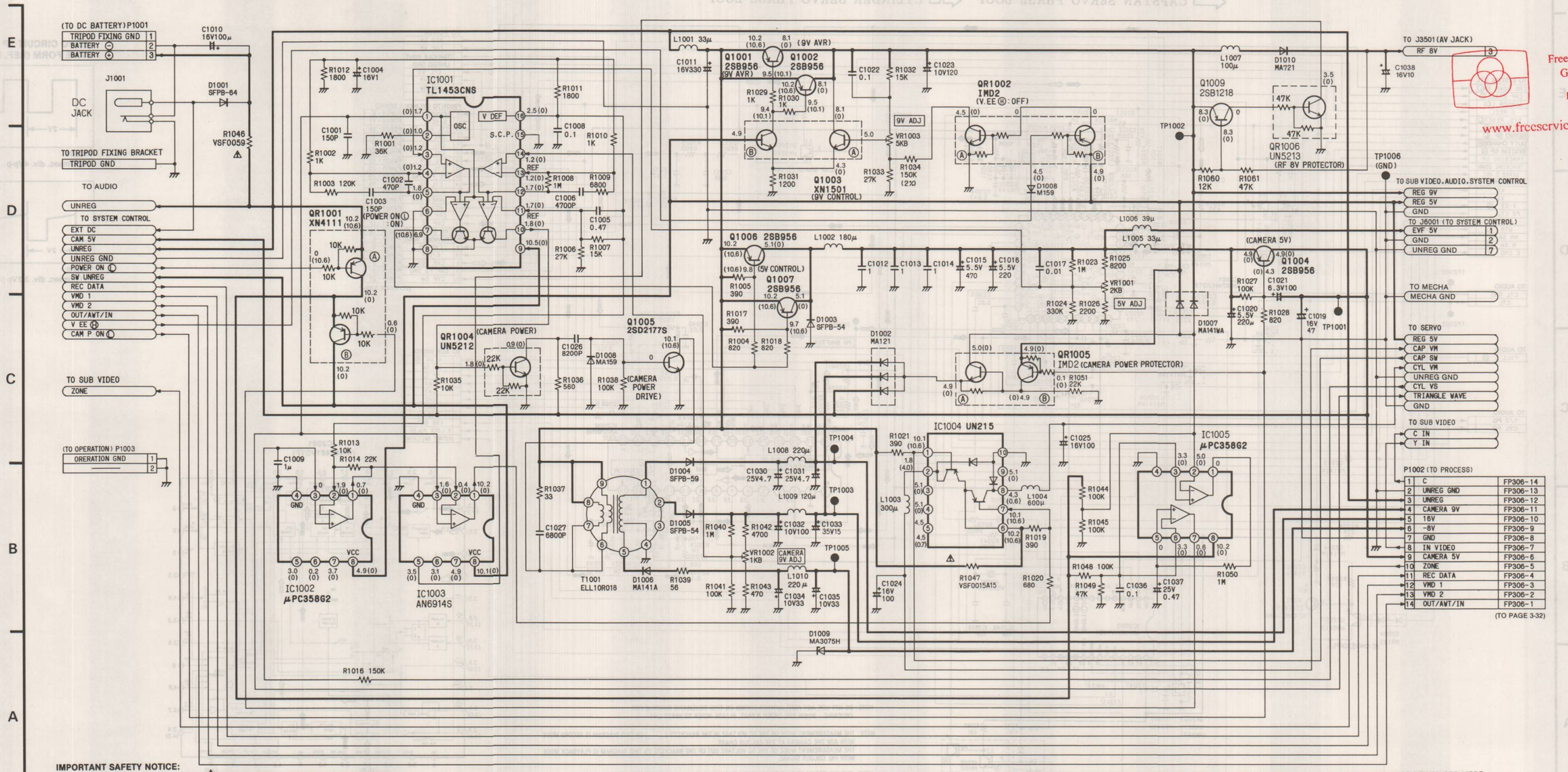
3-21. SUB OPERATION SCHEMATIC DIAGRAM



3-22. SUB OPERATION C.B.A. (VEK4033)



3-23. POWER SUPPLY SCHEMATIC DIAGRAM



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

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

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS POWER OFF MODE.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS STOP MODE.

Next Page: SERVO Section

3-24. SERVO SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP

TO SYSTEM CTL
CAS DOWN SW
CAP BRAKE (H)
SENSOR LED
S-REEL
SYS. RESET (L)
CYL ON (H)
SERVO SP (L)
DUTY CHANGE (H)
SYSTEM SP (H)
TRACKING UP
TRACKING DOWN
SERVO D REC
R/P/VT
VD
V1
V-EE (H)
PB CTL
R/F/S
UTR (L)
HR SW 1
H SW (H)
C CHG (L)

TO AUDIO
CTL GND
CTL

TO AUDIO
FULL E (H)

TO AUDIO
1/3 PG
CYL FG

TP2000
TP2002

IC2001
MN67461VDTF

(C CHG (L) :ON)
(C CHG (L) :ON)

(CAP BRAKE (H) :ON)

PG SHIFTER

TP2001

HEAD SW PULSE GENERATOR
MM
2.5V GENERATOR

IC2002
AN3798NS

IC2003
MN1551VYJS4

X2001
VSX0154

Q2001
2SD1819
(C CHG. :ON)

QR2007
UN5213
(C CHG (L) OFF)

QR2003
UN5213
(RESET)

QR2008
XN1212

TO POWER

REG 5V	
CAP VM	
TRIANGLE WAVE	
UNREG GND	
CYL VS	
CYL VM	
CAP SW	
GND	

P2001(TO CYLINDER DRIVE)

5	SENSOR LED	P2601 - 5
11	S-REEL	P2601 - 11
9	CYL ON (H)	P2601 - 18
4	CYL VM	P2601 - 4
7	CYL VS	P2601 - 7
10	CYL ET	P2601 - 10
12	CYL ETR	P2601 - 12
22	CYL FG	P2601 - 22
20	CYL FG GND	P2601 - 20
14	CYL PG	P2601 - 14
1	V PG (5V)	P2601 - 1
2	UNREG GND	P2601 - 2
13	REG 5V	P2601 - 13
19	CAP ECR	P2601 - 19
17	CAP EC	P2601 - 17
15	CAS DOWN SW	P2601 - 15
6	TRIANGLE WAVE	P2601 - 6
9	CAP VM	P2601 - 9
16	R/S/F	P2601 - 16
8	CAP FG	P2601 - 8
3	CAP FG GND	P2601 - 3
21	CAP SW	P2601 - 21

(TO PAGE 3-89)

TO SUB VIDEO

H SW (H)
H.R.SW
SP (L)
SW4
SW3
SW2
SW1
4.43MHz
VSS OUT
V LOCK PULSE
ROTARY SWITCHING

IC2001
(MN67461VDTF)

SERVO CIRCUIT TP (Test Point)
WAVE FORM (REF. NO. 2000 Series)

TP2001
2V/10msec. div. 4Vp-p

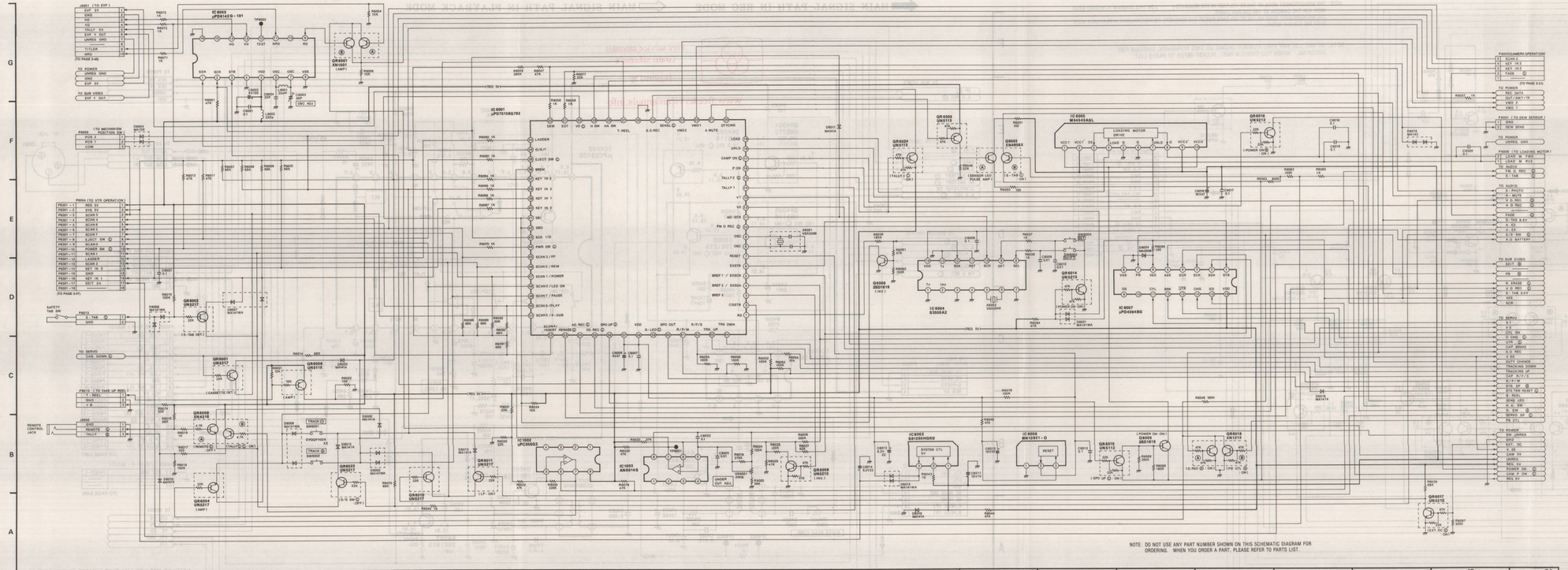
TP2002
2V/10msec. div. 3.2Vp-p

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

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

NOTE: THE WAVEFORM OF THIS DIAGRAM IS MEASURED WITH AIM THE CAMERA AT THE COLOR CHART.

3-25. SYSTEM CONTROL SCHEMATIC DIAGRAM



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 Section ICs VOLTAGE CHART (SP MODE)

REF. NO.	IC1002									IC1003								
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	
STOP	0.4	1.8	0	0	1.9	4.1	0	4.9		10.2	0.4	1.6	0	3.5	3.1	4.9	10.1	
PLAY	1.5	2.1	2.1	0	—	4.5	—	4.9		7.2	1.5	1.6	0	3.5	3.1	4.9	10.1	
F.F	0.4	1.8	0	0	—	—	—	4.9		10.1	0.4	1.6	0	3.5	3.1	4.9	10.1	

REF. NO.	IC5001																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	4.8	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0
PLAY	—	0	0	0	0	0	4.8	0	0	4.8	0	0	0	0	4.9	0	0	0	0	0
F.F	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	4.9	0.1	0.1	0.1	0.1	0.1	0

REF. NO.	IC5001																	
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	4.9	0	0	4.9	0	0	4.9	0	4.2	0.1	0	0	4.8	2.0	4.8	4.9	0.8	0.8	0	4.8
PLAY	0	0	0	4.9	0	0	—	—	—	0	0	0	4.8	0	4.8	4.9	0.8	0.8	0	0.8
F.F	4.9	0	0	4.9	0	0	—	4.8	4.3	0.1	0	0	4.8	2.0	4.7	4.8	0.8	0.7	—	4.7

REF. NO.	IC6001																	
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	—	—	4.8	4.8	4.8	4.8	0.2	0.2	3.5	4.8	—	4.8	0.1	0	0	0	0	0	0	0
PLAY	—	—	4.8	4.8	4.7	—	0	0.3	3.5	—	3.6	3.5	0.1	0.1	0.1	0.1	0.1	0.1	0	0
F.F	—	—	4.8	4.8	—	—	0.4	0.3	1.5	4.8	—	4.7	0	0	0	0	0	0	0	0

REF. NO.	IC6001																	
MODE	61	62	63	64														
STOP	0	0	0	0														
PLAY	0	0	0	0														
F.F	0	0	0	0														

REF. NO.	IC6002																	
MODE	1	2	3															
STOP	0	10.1	5.5															
PLAY	0.4	10.0	5.5															
F.F	0.4	10.0	5.5															

REF. NO.	IC6003																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
STOP	—	4.8	0	0	4.8	2.3	2.3	0	0	0	0	0	0	0	0	0		
PLAY	—	4.7	0.1	0	4.6	2.6	2.6	0	0	0	0	0	0	0	0	0		
F.F	—	4.8	0.1	0	4.6	2.6	2.6	0	0	0	0	0	0	0	0	0		

REF. NO.	IC6004																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14				
STOP	0	0	0	0	0	0	0	0	0	4.8	0	0.7	0	0				
PLAY	0	0	0	0	0	0	0	0	0	4.8	0	—	0	0				
F.F	0	0	0	0	0	0	0	0	0	4.9	0	—	0	0				

REF. NO.	IC6005																	
MODE	1	2	3	4	5	6	7	8	9	10								
STOP	4.8	10.2	0	0	0	0	0.5	10.2	4.8									
PLAY	5.0	10.2	0	0	0	0	0	10.2	5.1									
F.F	5.1	10.2	0	0	0	0	0	10.2	5.1									

REF. NO.	IC6006																	
MODE	1	2	3															
STOP	0	4.8	4.9															
PLAY	0	4.8	4.9															
F.F	0	4.8	4.9															

REF. NO.	IC6007																	
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
STOP	0	4.9	4.8	0	4.8	4.8	0	0	0	4.5	0	0	4.9	0	4.8	4.9		
PLAY	0	4.8	4.8	0	0	0	4.8	0	—	4.8	4.9	0	4.9	4.9	4.8	4.9		
F.F	0	4.8	4.8	0	0	0	4.8	0	0	—	0	0	4.9	4.9	4.8	4.9		

SYSTEM CONTROL TRANSISTORs VOLTAGE CHART

REF. NO.	Q6003 Ⓐ			Q6003 Ⓑ			Q6005			Q6006								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0	10.2	0	8.1	0.3	8.2	4.8	8.1	5.5	0	2.2	0.2						
PLAY	0	10.2	0	8.5	8.5	7.8	5.1	8.5	5.7	0	—	0.2						
F.F	0	10.2	0	9.0	9.4	8.6	4.8	8.1	5.5	0	—	0.2						

REF. NO.	QR6001			QR6002			QR6004			QR6005			QR6006			QR6008		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	3.7	3.6	4.3	0.5	—	1.6	0.2	0.1	3.7	4.9	0	4.9	4.9	0	4.9	0	0	4.8
PLAY	3.6	—	0	—	—	0.4	—	—	3.7	4.9	0	4.9	4.9	4.9	—	—	0	4.9
F.F	4.5	—	0	—	—	—	0.3	0.3	—	—	—	4.9	0	4.9	4.9	—	—	0	0	4.9

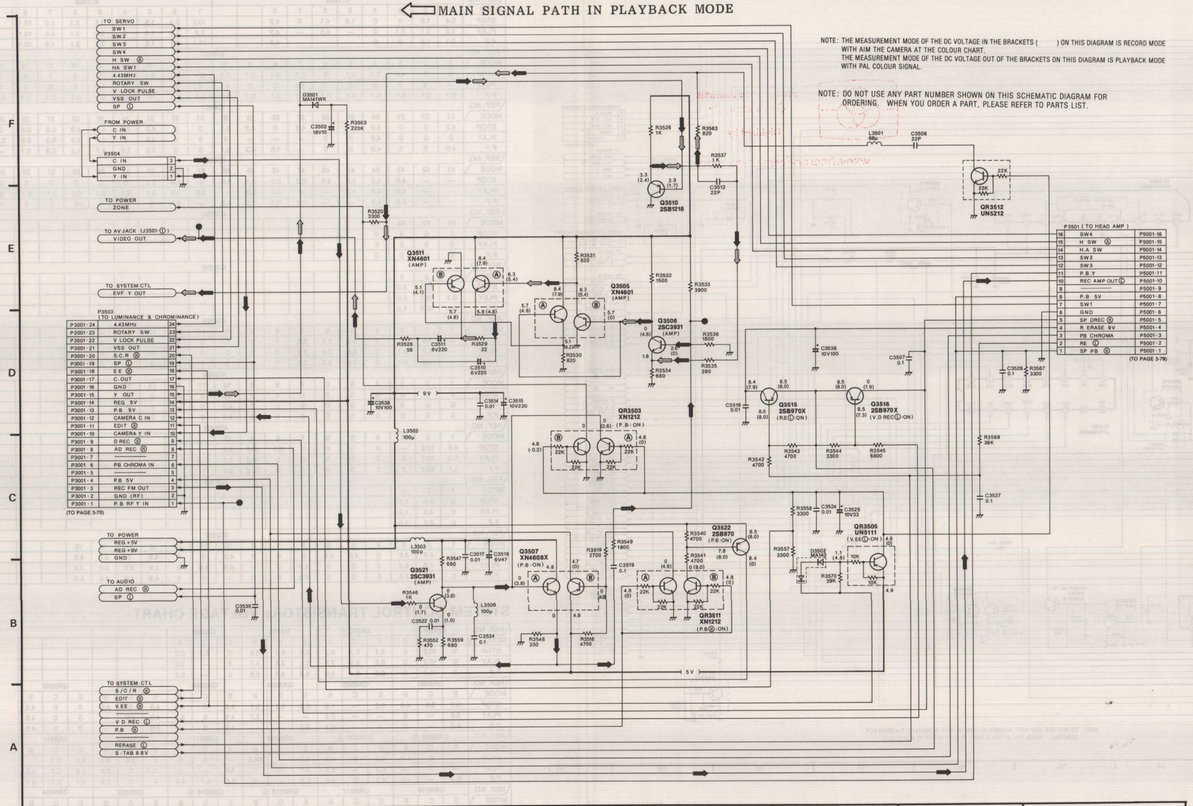
REF. NO.	QR6009 Ⓐ			QR6009 Ⓑ			QR6010			QR6011			QR6014			QR6015		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	—	0	1.2	4.9	0	4.9	4.8	—	0	4.8	—	0	2.6	8.1	5.5	8.1		
PLAY	—	—	—	4.9	—	4.9	4.8	—	0	4.8	—	0	−0.3	0	0.4	8.5	5.7	8.5
F.F	0.4	—	—	4.9	0	4.9	4.8	—	0	4.8	4.1	4.4	0	0	2.6	8.1	5.5	8.1

REF. NO.	QR6016			QR6017			QR6018 Ⓐ			QR6018 Ⓑ			QR6022			QR6024		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	4.8	0	0	10.6	0	0	0	0	0	0	—	—	1.6	4.9	0	4.9
PLAY	0	0	4.9	0	0	10.6	0	—	0	0	—	0	—	—	1.7	4.9	0	4.9
F.F	0	0	4.9	0	0	10.6	0	0	0	0	0	0	—	—	—	4.9	0	4.9

3-26. SUB VIDEO SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

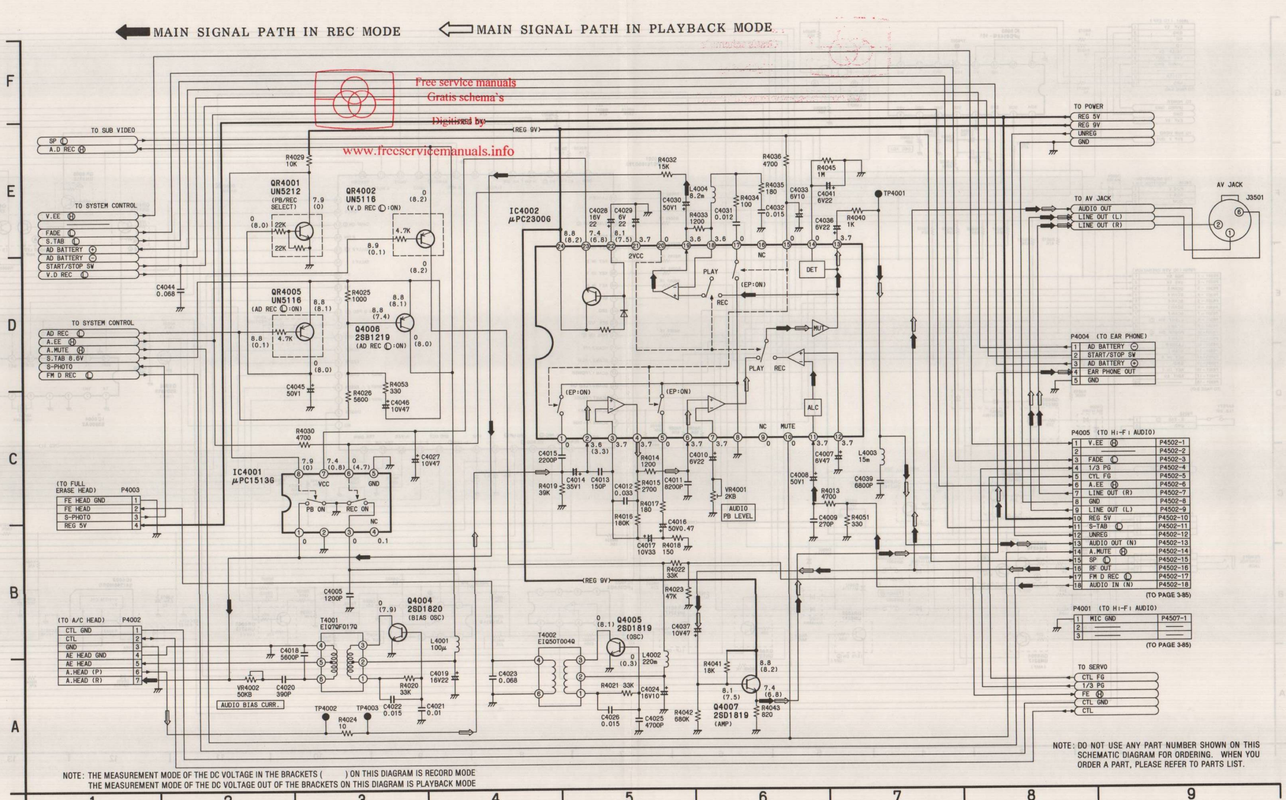


Back Page:
SYSTEM CONTROL Section

3-27. AUDIO SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE



3-28. MAIN [POWER SUPPLY, SERVO, SYSTEM CONTROL, SUB VIDEO, AUDIO Section] C.B.A. (VEP06572B)

SYSTEM CONTROL Section on MAIN C.B.A.

Transistor		
Q6001	E-7	ⓒ
Q6003	E-15	Ⓕ
Q6005	F-15	Ⓕ
Q6006	D-13	Ⓒ
Transistor & Resistor		
QR6001	D-13	Ⓒ
QR6002	D-13	Ⓒ
QR6004	D-7	ⓒ
QR6005	E-14	Ⓕ
QR6006	C-14	Ⓕ
QR6008	E-13	Ⓒ
QR6009	C-11	Ⓒ
QR6010	D-12	Ⓒ
QR6011	C-7	ⓒ
QR6014	F-14	Ⓕ
QR6015	F-5	ⓒ
QR6016	E-13	Ⓕ
QR6017	C-12	Ⓒ
QR6018	C-13	Ⓒ
QR6022	D-5	ⓒ
QR6024	E-14	Ⓕ
Integrated Circuit		
IC6001	D-6	ⓒ
IC6002	E-14	Ⓕ
IC6003	E-6	ⓒ
IC6004	D-15	Ⓒ
IC6005	E-5	ⓒ
IC6006	E-5	ⓒ
IC6007	C-6	ⓒ
Test Point		
TP6001	E-13	Ⓕ
TP6001	E-7	ⓒ
TP6002	E-13	Ⓒ
TP6002	E-7	ⓒ
Adjustment		
C6003	E-13	Ⓒ
VR6001	E-14	Ⓒ
Connector		
P6001	D-16	Ⓒ
P6001	D-4	ⓒ
P6003	B-14	Ⓒ
P6003	B-5	ⓒ
P6004	C-10	Ⓒ
P6004	D-9	ⓒ
P6005	F-15	Ⓒ
P6005	F-5	ⓒ
P6009	F-14	Ⓒ
P6009	F-5	ⓒ
P6010	F-12	Ⓒ
P6010	F-7	ⓒ
P6013	B-10	Ⓒ
P6013	B-10	ⓒ

ADDRESS INFORMATION
ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

POWER SUPPLY Section on MAIN C.B.A.

Transistor		
Q1001	F-10	Ⓕ
Q1002	F-11	Ⓕ
Q1003	E-11	Ⓕ
Q1004	D-8	ⓒ
Q1005	F-8	ⓒ
Q1006	E-9	ⓒ
Q1007	E-10	Ⓕ
Q1008	D-11	Ⓒ
Transistor & Resistor		
QR1001	D-13	Ⓕ
QR1002	F-11	Ⓒ
QR1004	F-12	Ⓒ
QR1005	D-8	ⓒ
QR1006	D-11	Ⓒ
Integrated Circuit		
IC1001	D-8	ⓒ
IC1002	D-12	Ⓒ
IC1003	D-12	Ⓒ
IC1004	E-11	Ⓒ
IC1005	D-12	Ⓒ
Test Point		
TP1001	E-12	Ⓕ
TP1001	E-7	ⓒ
TP1002	E-11	Ⓒ
TP1002	E-8	ⓒ
TP1003	E-12	Ⓒ
TP1003	E-7	ⓒ
TP1004	E-13	Ⓒ
TP1004	E-7	ⓒ
TP1005	E-13	Ⓒ
TP1005	E-7	ⓒ
TP1006	E-11	Ⓒ
TP1006	E-8	ⓒ
Adjustment		
VR1001	D-11	Ⓒ
VR1002	E-12	Ⓒ
VR1003	F-11	Ⓒ
Connector		
P1001	A-13	Ⓒ
P1001	A-7	ⓒ
P1002	F-13	Ⓒ
P1002	F-6	ⓒ
P1003	A-11	Ⓒ
P1003	A-9	ⓒ

ADDRESS INFORMATION
ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

SERVO Section on MAIN C.B.A.

Transistor		
Q2001	A-8	ⓒ
Transistor & Resistor		
QR2003	C-7	ⓒ
QR2004	B-11	Ⓒ
QR2005	B-9	Ⓒ
QR2006	B-7	Ⓒ
QR2007	A-8	Ⓒ
QR2008	C-12	Ⓒ
Integrated Circuit		
IC2001	B-8	Ⓒ
IC2002	C-8	ⓒ
IC2003	C-12	Ⓒ
Test Points		
TP2000	A-11	Ⓒ
TP2000	A-9	ⓒ
TP2001	A-11	Ⓒ
TP2001	A-9	ⓒ
TP2002	A-11	Ⓒ
TP2002	A-9	ⓒ
Adjustment		
VR2001	B-11	Ⓒ
Connector		
P2001	B-12	Ⓒ
P2001	B-7	ⓒ

ADDRESS INFORMATION
ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

SUB VIDEO Section on MAIN C.B.A.

Transistor		
Q3505	A-13	Ⓒ
Q3507	A-6	ⓒ
Q3510	A-14	Ⓒ
Q3511	A-13	Ⓒ
Q3515	E-6	ⓒ
Q3516	E-15	Ⓒ
Q3521	A-6	ⓒ
Transistor & Resistor		
QR3503	B-14	Ⓒ
QR3505	B-14	Ⓒ
QR3506	A-7	Ⓒ
QR3511	B-14	Ⓒ
QR3512	B-7	Ⓒ
QR3522	B-14	Ⓒ
Test Point		
TP3501	D-18	Ⓒ
TP3501	D-4	ⓒ
Connector		
P3501	F-15	Ⓒ
P3501	C-4	ⓒ
P3502	A-15	Ⓒ
P3503	A-5	Ⓒ
P3504	F-12	Ⓒ
P3504	F-7	ⓒ

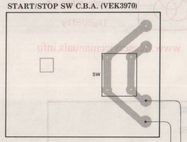
ADDRESS INFORMATION
ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

AUDIO Section on MAIN C.B.A.

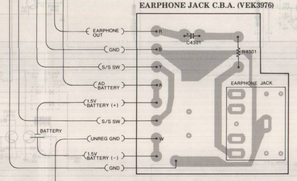
Transistor		
Q4004	B-15	Ⓒ
Q4005	A-14	Ⓒ
Q4006	D-5	ⓒ
Q4007	D-15	Ⓒ
Transistor & Resistor		
QR4001	C-5	Ⓒ
QR4002	A-15	Ⓒ
QR4005	D-5	ⓒ
Integrated Circuit		
IC4001	C-15	Ⓒ
IC4002	C-5	ⓒ
Test Point		
TP4002	B-16	Ⓒ
TP4002	C-4	ⓒ
TP4003	D-16	Ⓒ
TP4003	D-4	ⓒ
Adjustment		
VR4001	C-16	Ⓒ
VR4002	C-16	Ⓒ
Connector		
P4001	D-16	Ⓒ
P4001	C-4	ⓒ
P4002	C-16	Ⓒ
P4002	C-4	ⓒ
P4003	B-16	Ⓒ
P4003	B-4	ⓒ
P4004	B-16	Ⓒ
P4004	B-4	ⓒ
P4005	B-16	Ⓒ
P4005	C-4	ⓒ

ADDRESS INFORMATION
ⓒ...COMPONENT SIDE
Ⓕ...FOIL SIDE

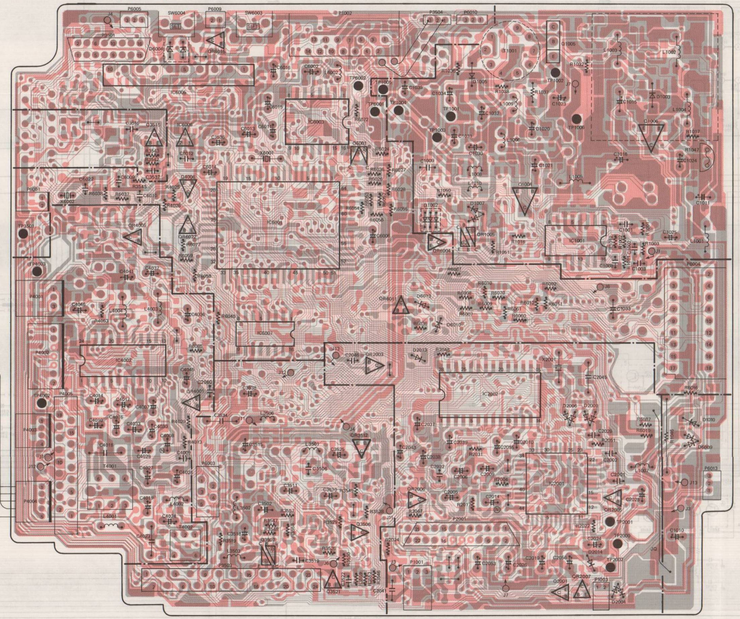
START/STOP SW C.B.A. (VEK3970)



EARPHONE JACK C.B.A. (VEK3976)

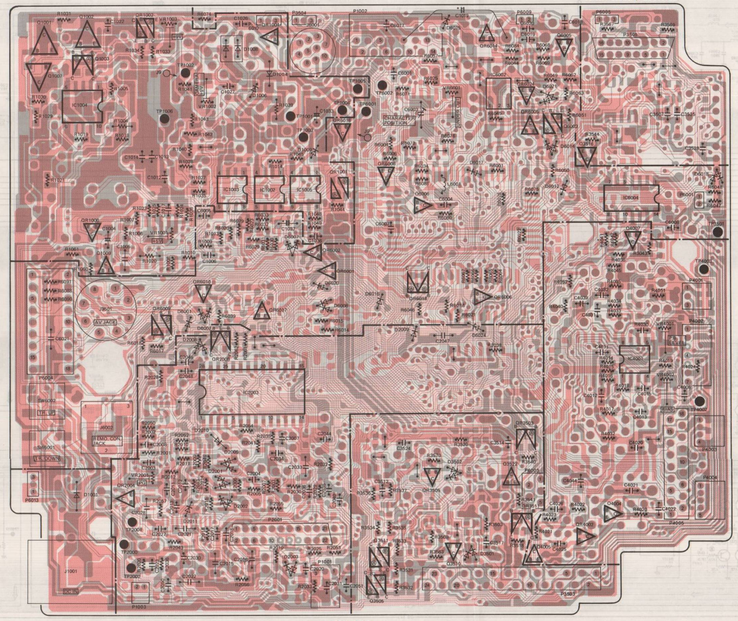


MAIN C.B.A. (VEP06572B)



(COMPONENT SIDE)

MAIN C.B.A. (VEP06572B)



(FOIL SIDE)

Next Page:
LUMINANCE &
CHROMINANCE PACK Section

3-29. LUMINANCE, CHROMINANCE & PAL JOG SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE.

MAIN SIGNAL PATH IN PLAYBACK MODE.

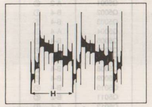
NOTE: THE WAVEFORM OF THIS DIAGRAM IS MEASURED WITH AIM THE CAMERA AT THE COLOUR CHART.

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

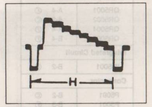
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH AIM THE CAMERA AT THE COLOUR CHART.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

3-30. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03617B) & PAL JOG PACK C.B.A. (VEP03616A)

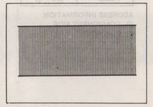
LUMINANCE & CHROMINANCE CIRCUIT TP (Test Point) WAVE FORM (REF. NO. 3000 Series)



TP3001 REC
0.2V/20μsec. div. 0.75Vp-p

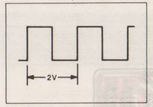


TP3005 REC/PLAY
0.1V/20μsec. div. 2Vp-p

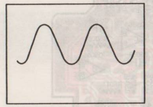


TP3006 REC
0.2V/20μsec. div. 1.2Vp-p

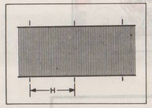
LUMINANCE & CHROMINANCE CIRCUIT TP (Test Point) WAVE FORM (REF. NO. 8000 Series)



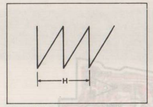
TP8002 REC/PLAY
1V/10msec. div. 4.0Vp-p



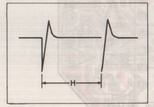
TP8003 REC/PLAY
0.1V/0.1μsec. div. 0.5Vp-p



TP8004 REC/PLAY
0.2V/20μsec. div. 0.7Vp-p

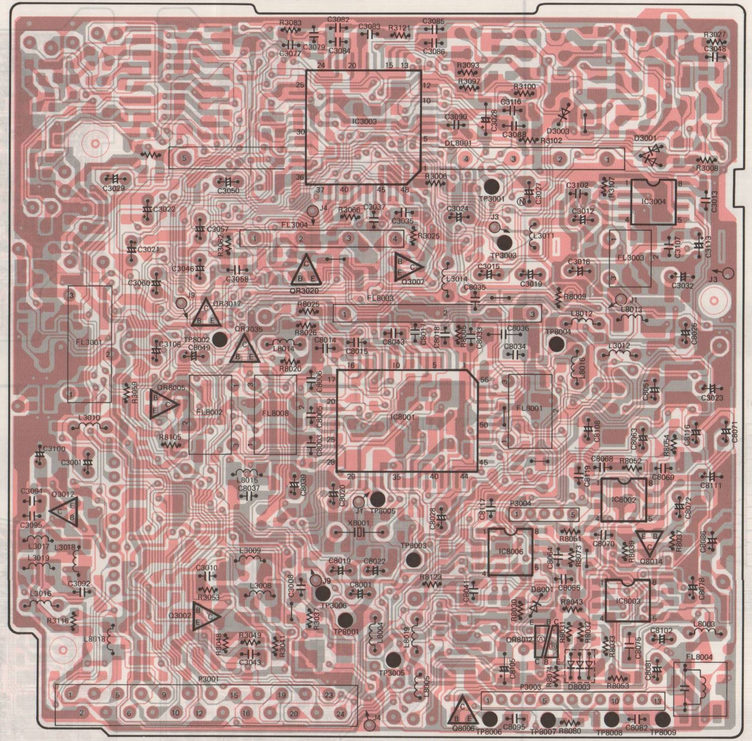


TP8008 PLAY
0.5V/20μsec. div. 2.2Vp-p



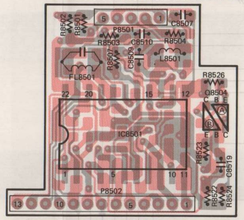
TP8009 PLAY
50mV/20μsec. div. 230mVp-p

LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03617B)



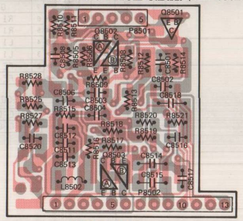
(COMPONENT SIDE)

PAL JOG PACK C.B.A. (VEP03616A)



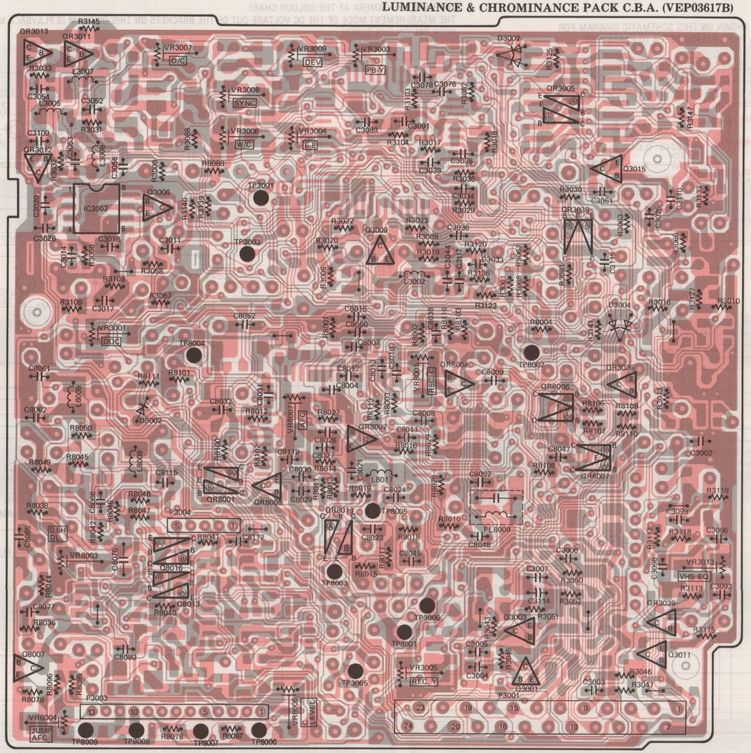
(COMPONENT SIDE)

PAL JOG PACK C.B.A. (VEP03616A)



(FOIL SIDE)

LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03617B)



(FOIL SIDE)

LUMINANCE & CHROMINANCE PACK C.B.A. & PAL JOG PACK C.B.A.

Transistor		TP3003	C-3
Q3001	A-9	TP3003	D-8
Q3002	A-2	TP3005	A-3
Q3003	B-9	TP3005	A-8
Q3006	D-7	TP3006	B-2
Q3007	C-3	TP3006	B-9
Q3009	D-8	TP8001	A-3
Q3011	A-10	TP8001	A-9
Q3012	B-1	TP8002	C-2
Q3015	D-10	TP8002	C-9
Q8006	A-3	TP8003	B-3
Q8007	A-7	TP8003	B-8
Q8013	B-7	TP8004	C-4
Q8014	B-4	TP8004	C-7
Q8016	B-7	TP8005	B-3
Q8501	B-6	TP8005	B-9
Q8502	B-5	TP8006	A-3
Q8503	A-6	TP8006	A-8
Q8504	C-6	TP8007	A-4
Transistor & Resistor		TP8007	A-8
QR3005	D-9	TP8008	A-4
QR3011	D-7	TP8008	A-7
QR3012	D-7	TP8009	A-4
QR3013	D-7	TP8009	A-7
QR3017	C-2	**Adjustment**	
QR3020	C-2	VR3001	C-7
QR3029	B-10	VR3003	D-8
QR3035	C-2	VR3004	D-8
QR3036	C-10	VR3005	A-9
QR3038	D-10	VR3006	D-8
QR8001	B-8	VR3007	D-7
QR8002	C-8	VR3008	D-8
QR8004	C-9	VR3009	D-8
QR8005	C-2	VR3013	B-10
QR8006	C-9	VR8001	C-9
QR8007	C-8	VR8003	B-7
QR8008	B-8	VR8004	A-7
QR8012	A-3	VR8005	A-8
QR8013	B-8	VR8007	C-8
Integrated Circuit		**Connector**	
IC3002	D-7	P3001	A-2
IC3003	D-3	P3001	A-9
IC3004	D-4	P3003	A-4
IC8001	C-3	P3003	A-7
IC8002	B-4	P3004	B-3
IC8003	B-4	P3004	B-7
IC8006	B-3	P8501	D-6
Test Point		P8501	B-6
TP3001	D-3	P8502	C-6
TP3001	D-8	P8502	A-6

ADDRESS INFORMATION
©...COMPONENT SIDE
Ⓕ...FOIL SIDE

3-31. VIDEO HEAD AMP SCHEMATIC DIAGRAM

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

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

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

P5001 (TO SUB VIDEO)

P3501-16	SW4	16
P3501-15	H.SW (A)	15
P3501-14	H.A SW	14
P3501-13	SW2	13
P3501-12	SW3	12
P3501-11	P.B.Y	11
P3501-10	REC AMP OUT (C)	10
P3501-9	——	9
P3501-8	P.B. 5V	8
P3501-7	SW1	7
P3501-6	GND	6
P3501-5	SP D REC (H)	5
P3501-4	R ERASE 9V	4
P3501-3	P.B. CHROMA	3
P3501-2	RE (L)	2
P3501-1	SP P.B. (H)	1

(TO PAGE 3-62)

(TO VIDEO HEAD) P5002

12	GND
11	R2 (F)
10	R2 (S)
9	L2 (S)
8	L2 (F)
7	GND
6	R1 (F)
5	R1 (S)
4	L1 (S)
3	L1 (F)
2	FE (F)
1	FE (S)

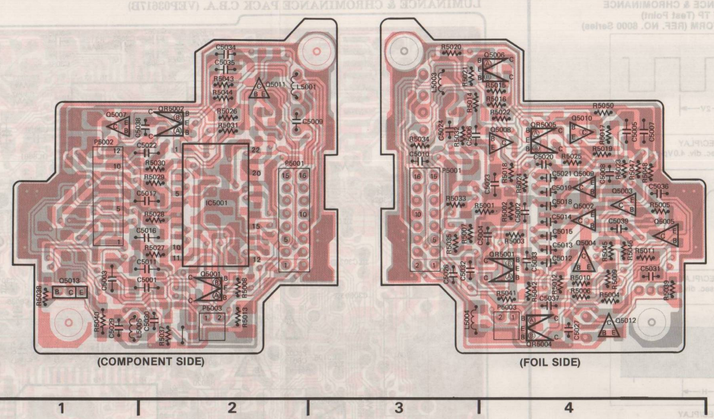
P5003

1	REC CURR(GND)
2	REC CURR(HOT)

(PHASE COMPENSATOR) 2SB1218

Back Page:
LUMINANCE &
CHROMINANCE PACK Section

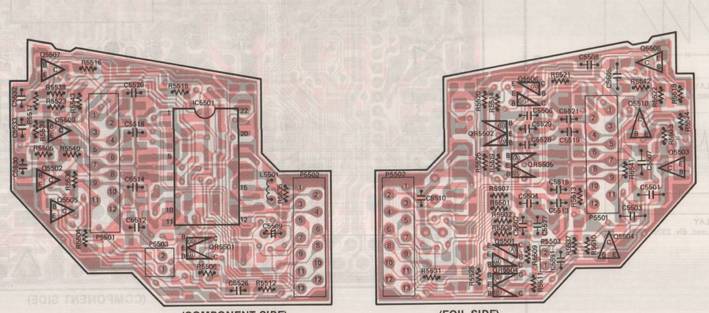
3-32. VIDEO HEAD AMP C.B.A. (VEP05132D)



VIDEO HEAD AMP C.B.A.		
Transistor		
Q5001	A-2	©
Q5002	B-4	©
Q5003	B-4	©
Q5004	A-4	©
Q5005	B-4	©
Q5006	B-4	©
Q5007	B-1	©
Q5008	B-4	©
Q5009	B-4	©
Q5010	B-4	©
Q5011	B-2	©
Q5012	A-4	©
Q5013	A-1	©
Transistor & Resistor		
QR5001	A-4	©
QR5002	A-2	©
QR5004	A-4	©
QR5005	B-4	©
Integrated Circuit		
IC5001	B-2	©
Connector		
P5001	B-2	©
P5001	B-3	©
P5002	B-1	©
P5003	A-2	©
P5003	A-4	©

ADDRESS INFORMATION
©...COMPONENT SIDE
(F)...FOIL SIDE

3-33. Hi-Fi AUDIO HEAD AMP C.B.A. (VEP05133B)



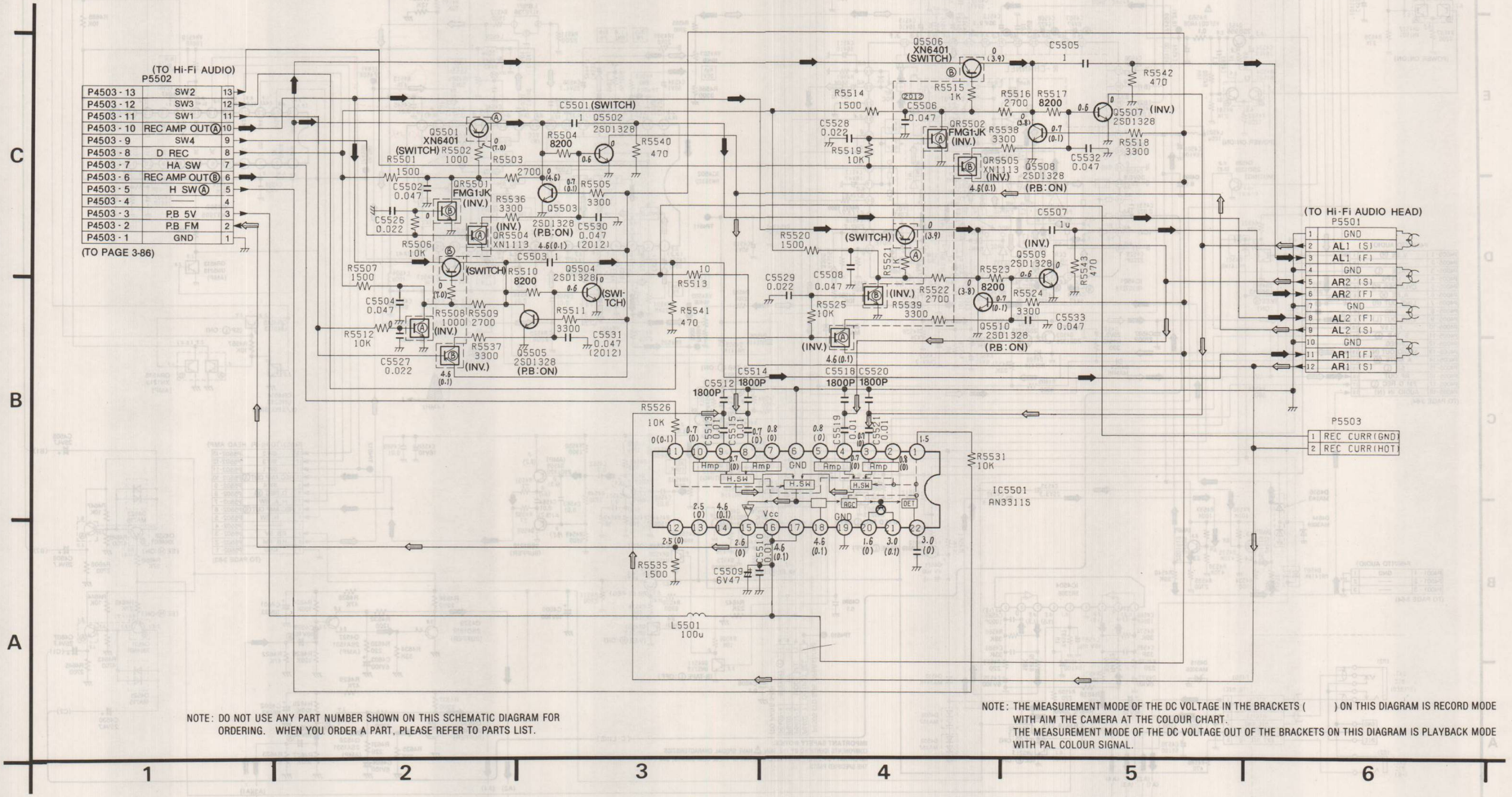
Hi-Fi AUDIO HEAD AMP C.B.A.		
Transistor		
Q5501	A-4	©
Q5502	B-1	©
Q5503	B-4	©
Q5504	A-4	©
Q5505	A-1	©
Q5506	B-4	©
Q5507	B-1	©
Q5508	B-4	©
Q5509	B-1	©
Q5510	B-4	©
Transistor & Resistor		
QR5501	A-2	©
QR5502	B-4	©
QR5504	A-4	©
QR5505	B-4	©
Integrated Circuit		
IC5501	B-2	©
Connector		
P5501	A-1	©
P5501	A-4	©
P5502	B-3	©
P5502	B-3	©
P5503	A-2	©
P5503	A-4	©

ADDRESS INFORMATION
©...COMPONENT SIDE
(F)...FOIL SIDE

3-34. Hi-Fi AUDIO HEAD AMP SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE.

MAIN SIGNAL PATH IN PLAYBACK MODE.



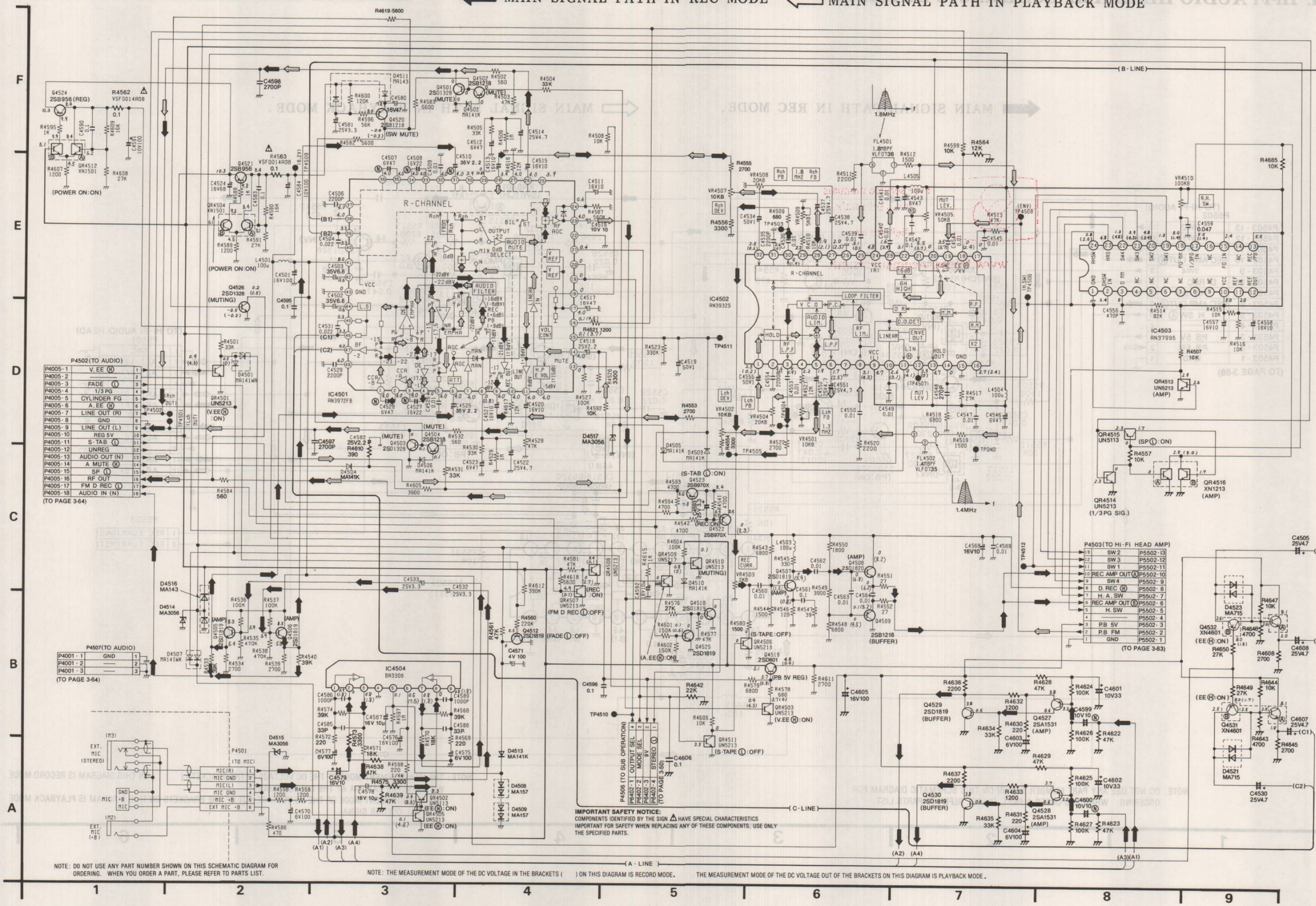
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

3-35. Hi-Fi AUDIO SCHEMATIC DIAGRAM

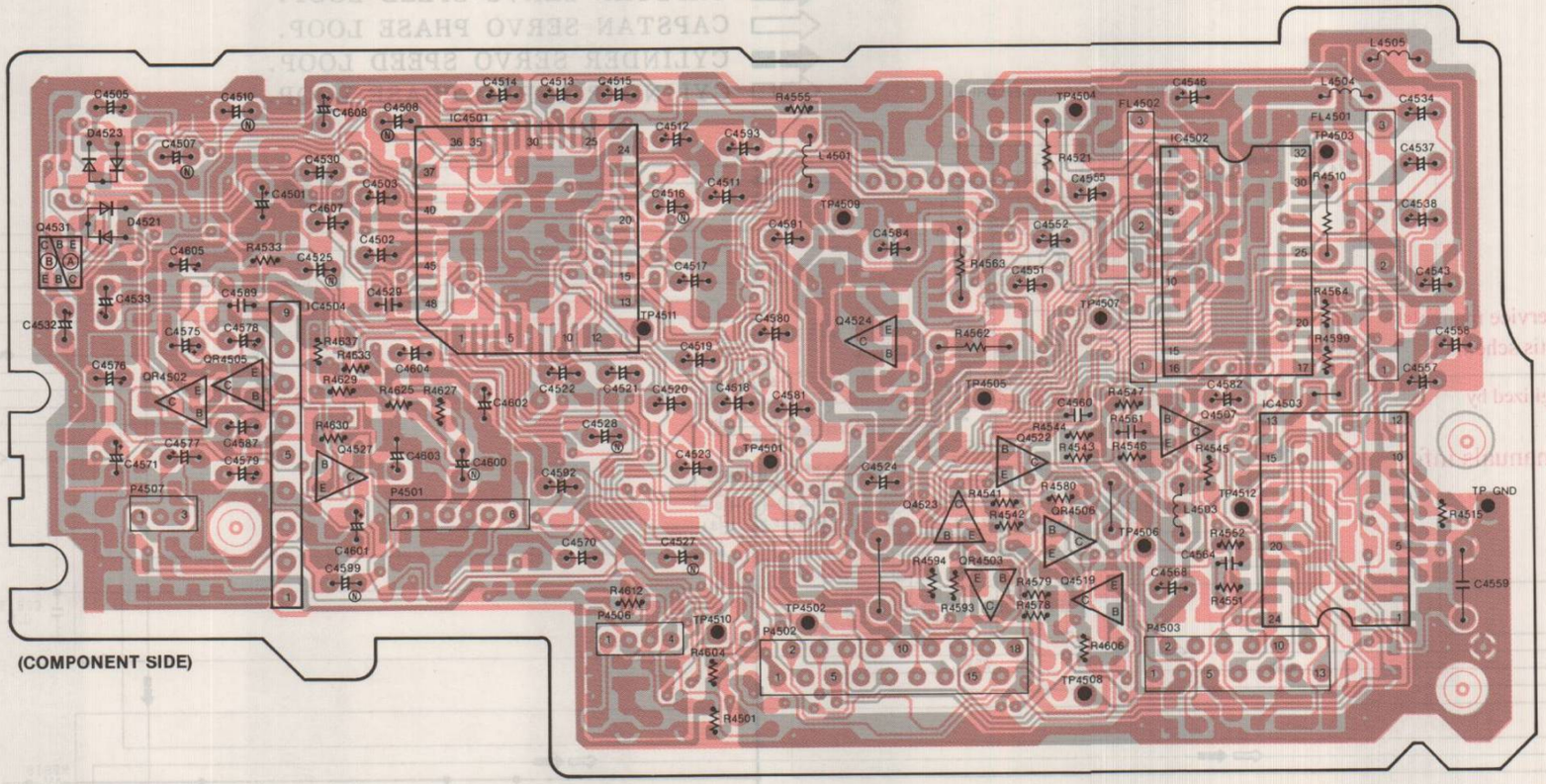
MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

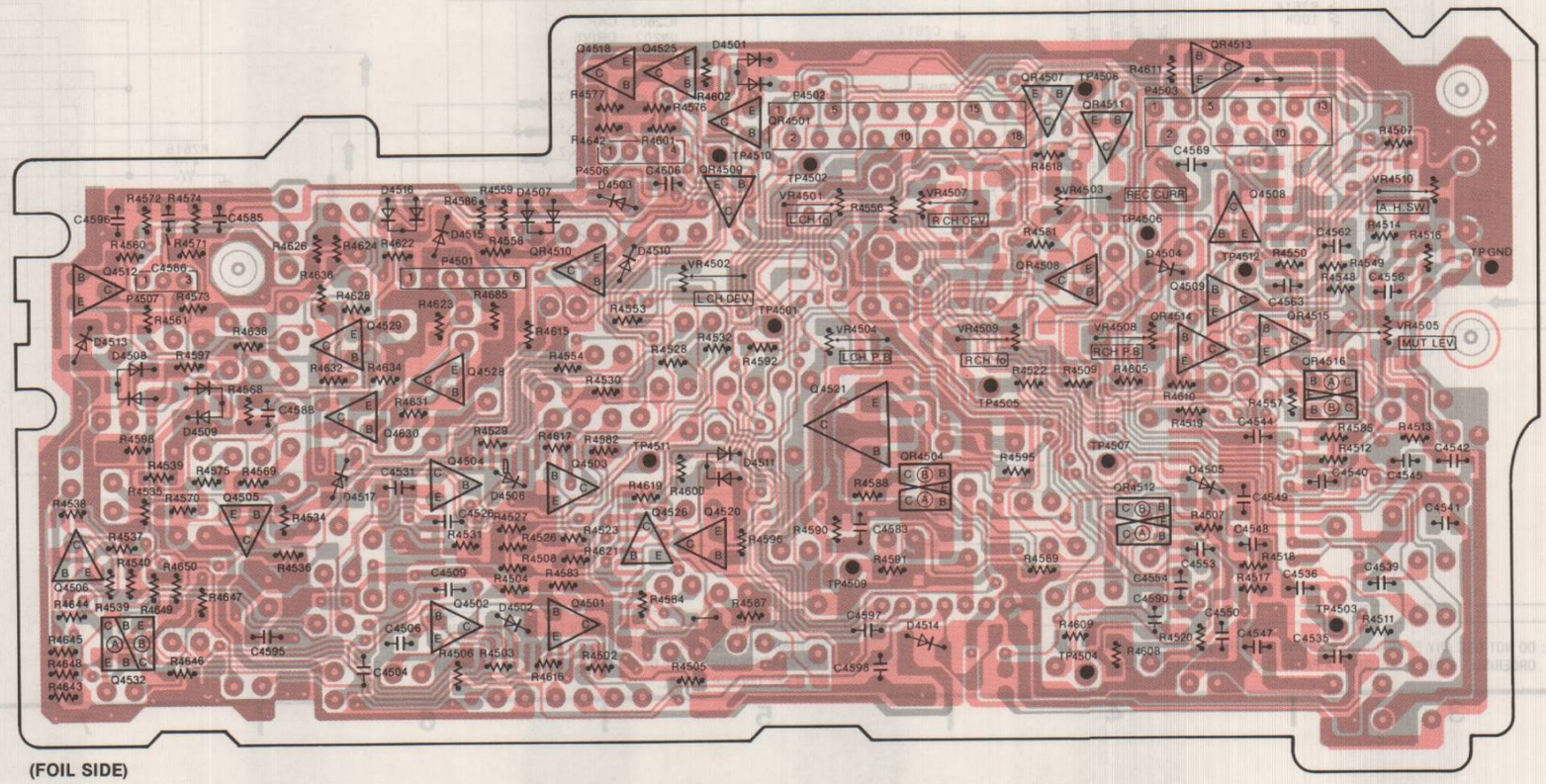


Back Page:
Hi-Fi AUDIO HEAD AMP Section

3-36. Hi-Fi AUDIO C.B.A. (VEP04276A)



(COMPONENT SIDE)



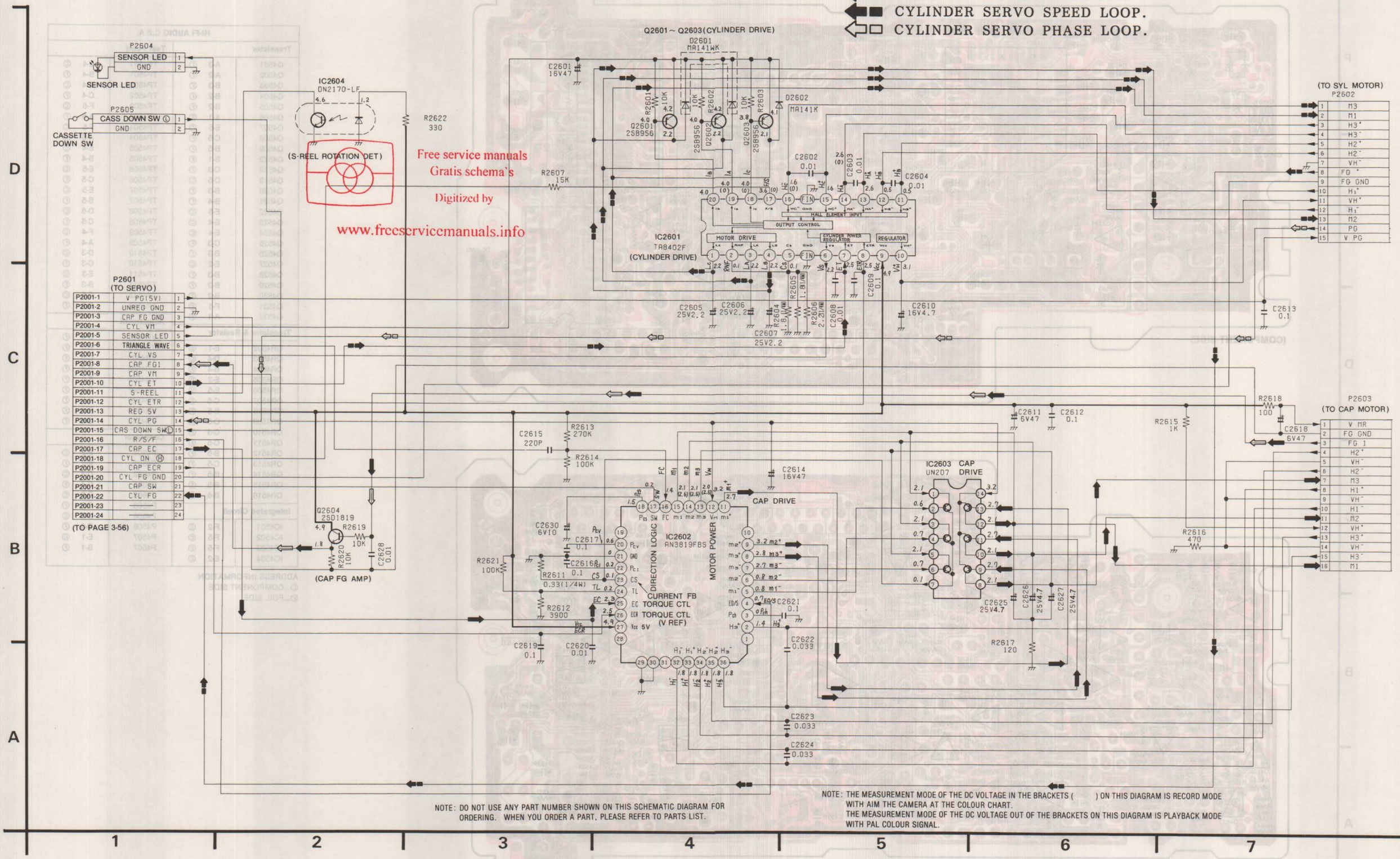
(FOIL SIDE)

Hi-Fi AUDIO C.B.A.			
Transistor		**Test Point**	
Q4501	A-3 (F)	TP4501	E-4 (C)
Q4502	A-2 (F)	TP4501	B-4 (F)
Q4503	B-3 (F)	TP4502	D-4 (C)
Q4504	B-2 (F)	TP4502	C-4 (F)
Q4505	B-2 (F)	TP4503	F-6 (C)
Q4506	A-1 (F)	TP4503	A-6 (F)
Q4507	E-5 (C)	TP4504	F-5 (C)
Q4508	C-5 (F)	TP4504	A-5 (F)
Q4509	B-5 (F)	TP4505	E-4 (C)
Q4512	B-1 (F)	TP4505	B-4 (F)
Q4518	C-3 (F)	TP4506	E-5 (C)
Q4519	D-5 (C)	TP4506	C-5 (F)
Q4520	B-3 (F)	TP4507	E-5 (C)
Q4521	B-4 (F)	TP4507	B-5 (F)
Q4522	E-5 (C)	TP4508	D-5 (C)
Q4523	E-4 (C)	TP4508	C-5 (F)
Q4524	E-4 (C)	TP4509	F-4 (C)
Q4525	C-3 (F)	TP4509	A-4 (F)
Q4526	B-3 (F)	TP4510	D-3 (C)
Q4527	E-2 (C)	TP4510	C-3 (F)
Q4528	B-3 (F)	TP4511	E-3 (C)
Q4529	B-2 (F)	TP4511	B-3 (F)
Q4530	B-2 (F)	TP4512	E-5 (C)
Q4531	F-1 (C)	TP4512	B-5 (F)
Q4532	A-1 (F)		
Transistor & Resistor		**Adjustment**	
QR4502	E-1 (C)	VR4501	C-4 (F)
QR4503	D-4 (C)	VR4502	B-3 (F)
QR4504	B-4 (F)	VR4503	C-5 (F)
QR4505	E-2 (C)	VR4504	B-4 (F)
QR4506	E-5 (C)	VR4505	B-6 (F)
QR4507	C-5 (F)	VR4507	C-4 (F)
QR4508	B-5 (F)	VR4508	B-5 (F)
QR4509	C-3 (F)	VR4509	B-4 (F)
QR4510	C-3 (F)	VR4510	C-6 (F)
QR4511	C-5 (F)	**Connector**	
QR4512	B-5 (F)	P4501	E-2 (C)
QR4513	C-5 (F)	P4501	B-2 (F)
QR4514	B-5 (F)	P4502	D-4 (C)
QR4515	B-5 (F)	P4502	C-4 (F)
QR4516	B-6 (F)	P4503	D-5 (C)
Integrated Circuit		P4503	C-5 (F)
IC4501	F-2 (C)	P4506	D-3 (C)
IC4502	F-5 (C)	P4506	C-3 (F)
IC4503	F-5 (C)	P4507	E-1 (C)
IC4504	E-2 (C)	P4507	B-1 (F)

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

3-37. MOTOR DRIVE SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP.
CAPSTAN SERVO PHASE LOOP.
CYLINDER SERVO SPEED LOOP.
CYLINDER SERVO PHASE LOOP.

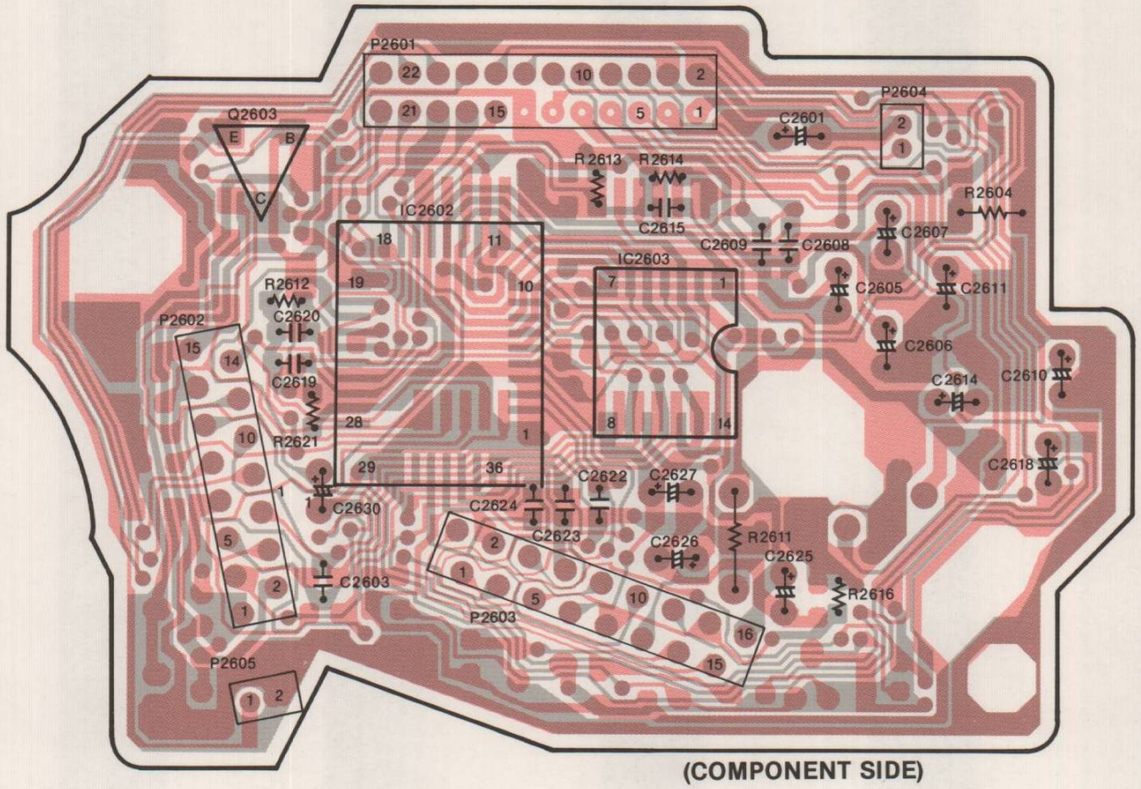


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

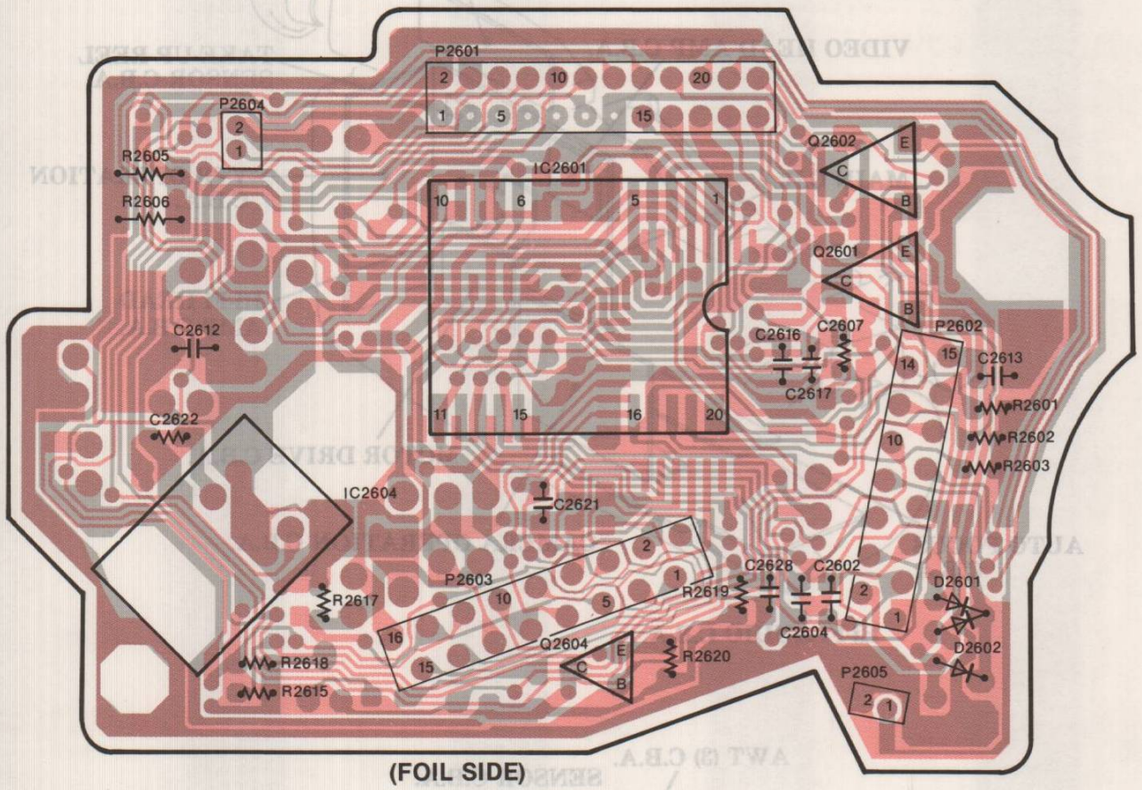
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH AIM THE CAMERA AT THE COLOUR CHART.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

Back Page:
Hi-Fi AUDIO Section

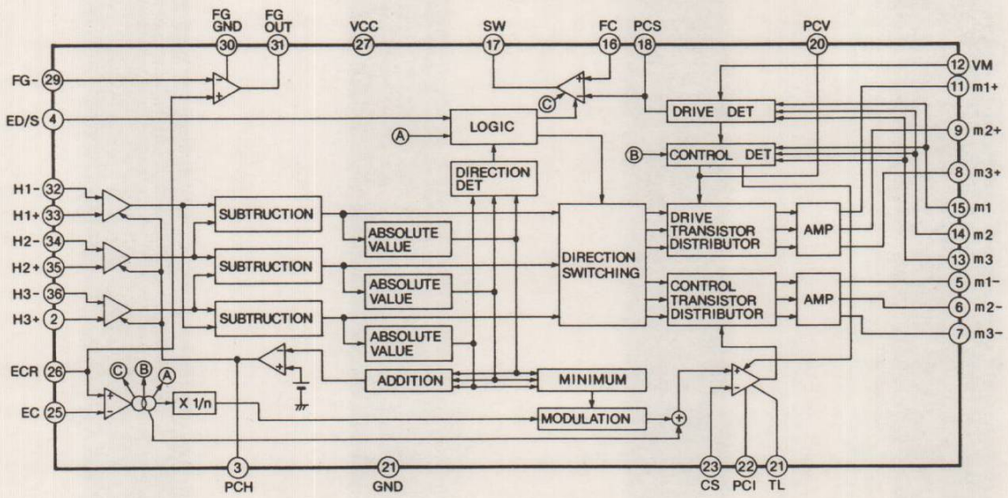
3-38. MOTOR DRIVE C.B.A. (VEP02318A)



(COMPONENT SIDE)



(FOIL SIDE)

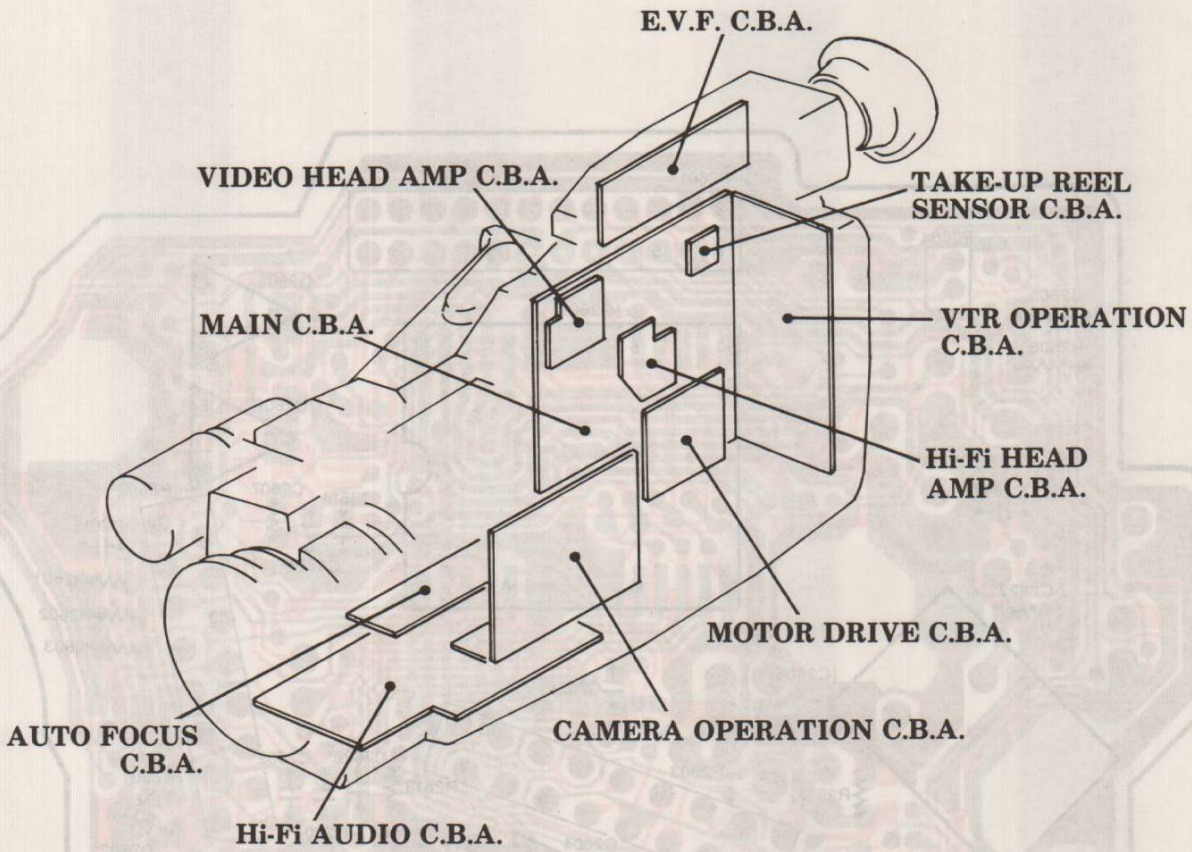


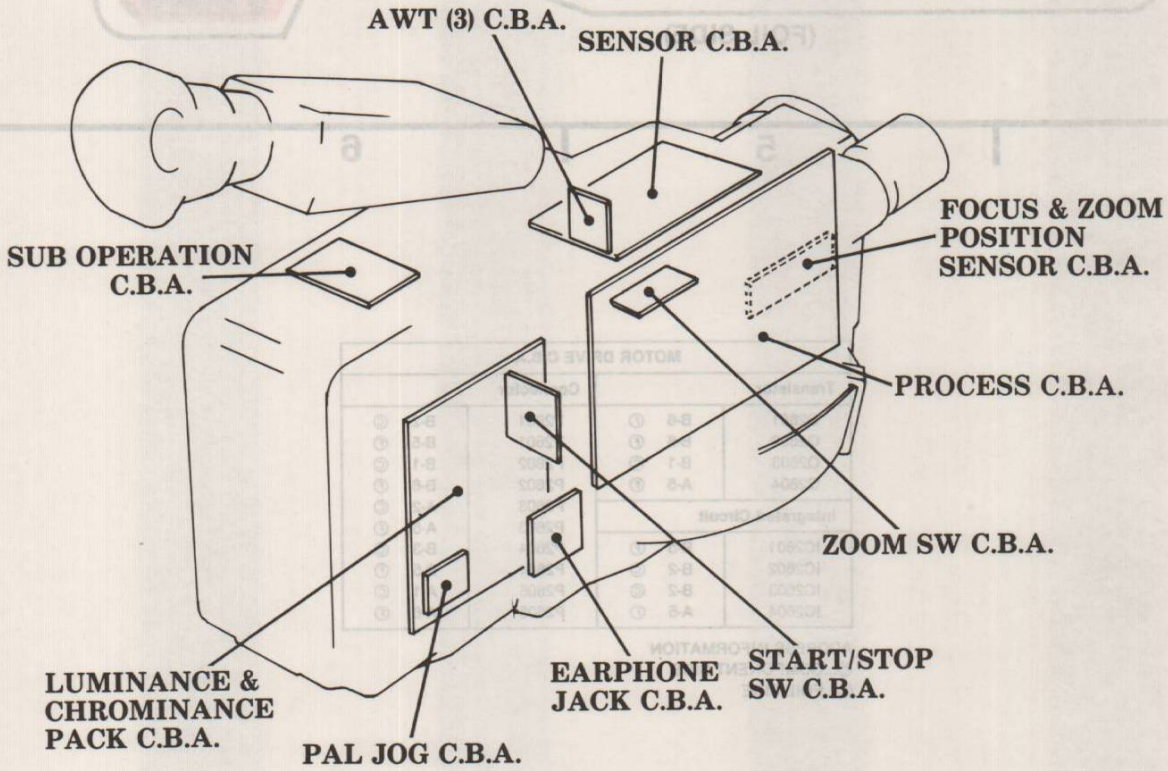
IC2602
(AN3819FBS)

MOTOR DRIVE C.B.A.					
Transistor			**Connector**		
Q2601	B-6	(F)	P2601	B-2	(C)
Q2602	B-6	(F)	P2601	B-5	(F)
Q2603	B-1	(C)	P2602	B-1	(C)
Q2604	A-5	(F)	P2602	B-6	(F)
Integrated Circuit			P2603	A-2	(C)
			P2603	A-5	(F)
IC2601	B-5	(F)	P2604	B-3	(C)
IC2602	B-2	(C)	P2604	B-5	(F)
IC2603	B-2	(C)	P2605	A-1	(C)
IC2604	A-5	(F)	P2605	A-6	(F)

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

3-39. CIRCUIT BOARD LAYOUT

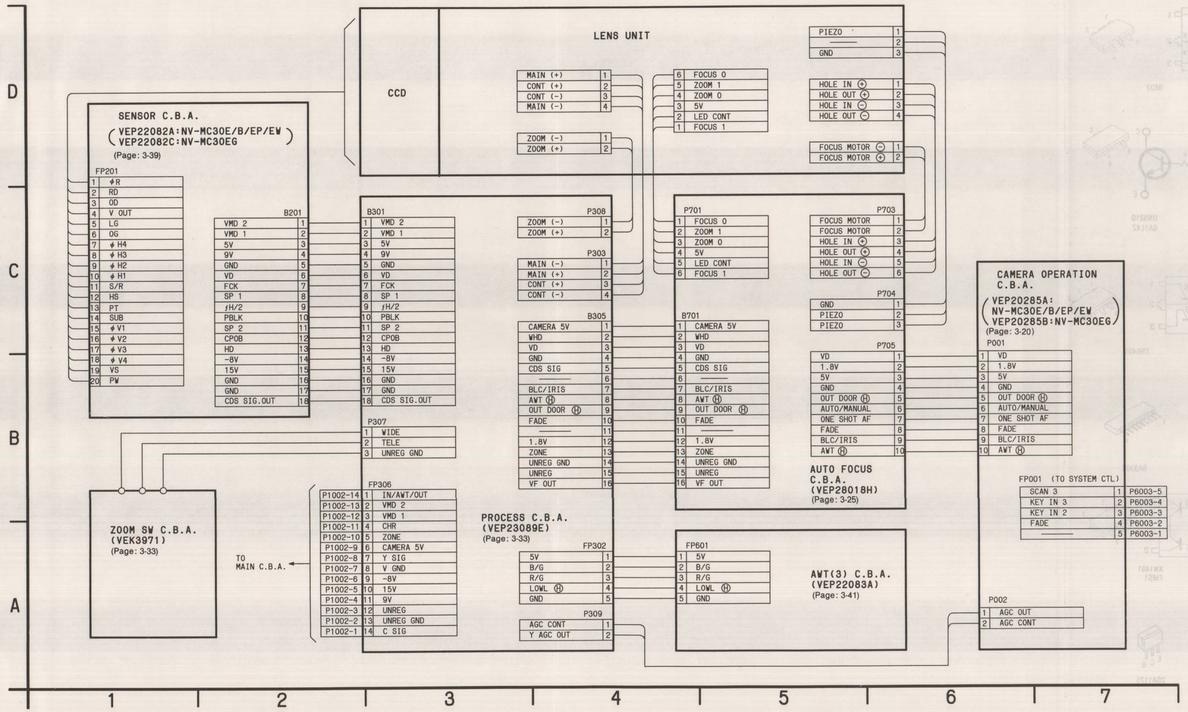




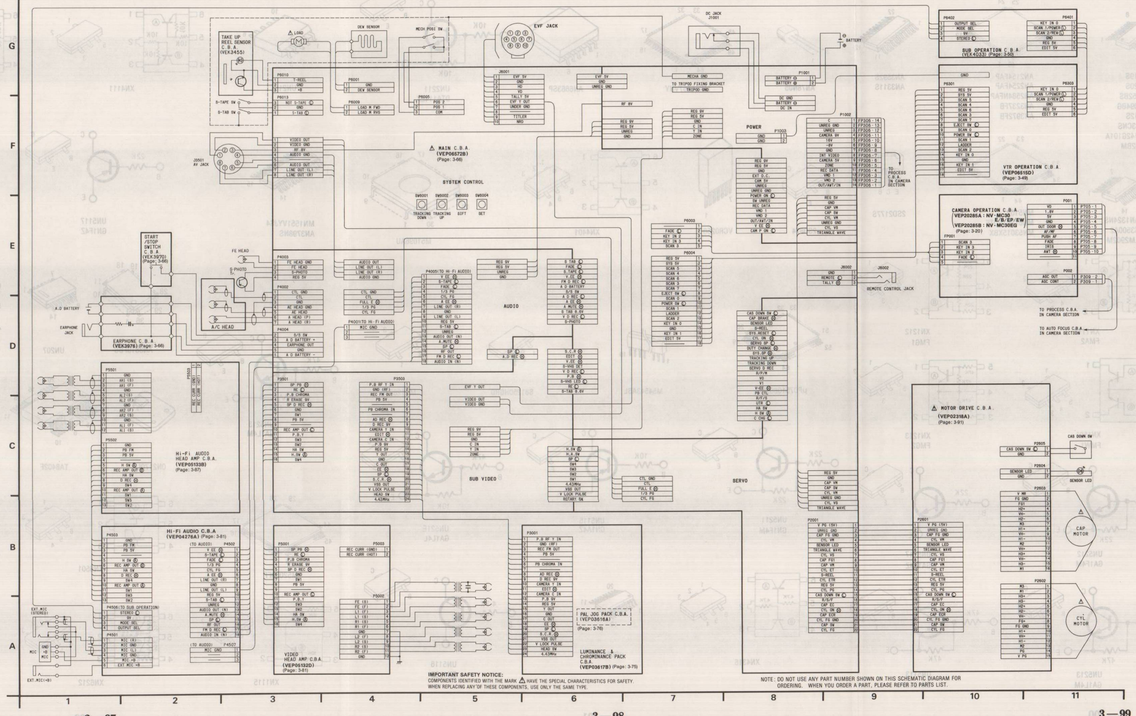
Back Page:
MOTOR DRIVE Section

Memo

3-40. CAMERA INTERCONNECTION SCHEMATIC DIAGRAM

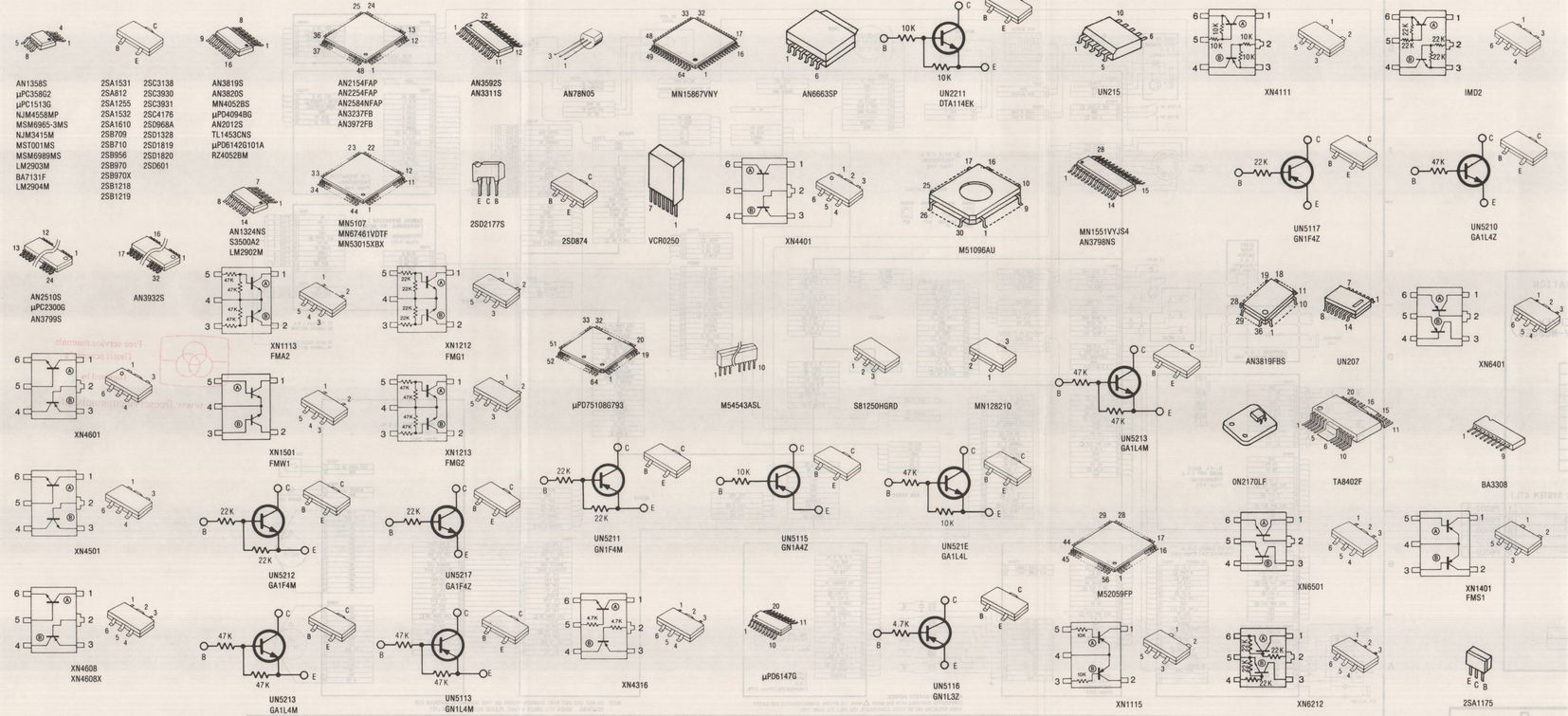


3-41. VTR INTERCONNECTION SCHEMATIC DIAGRAM

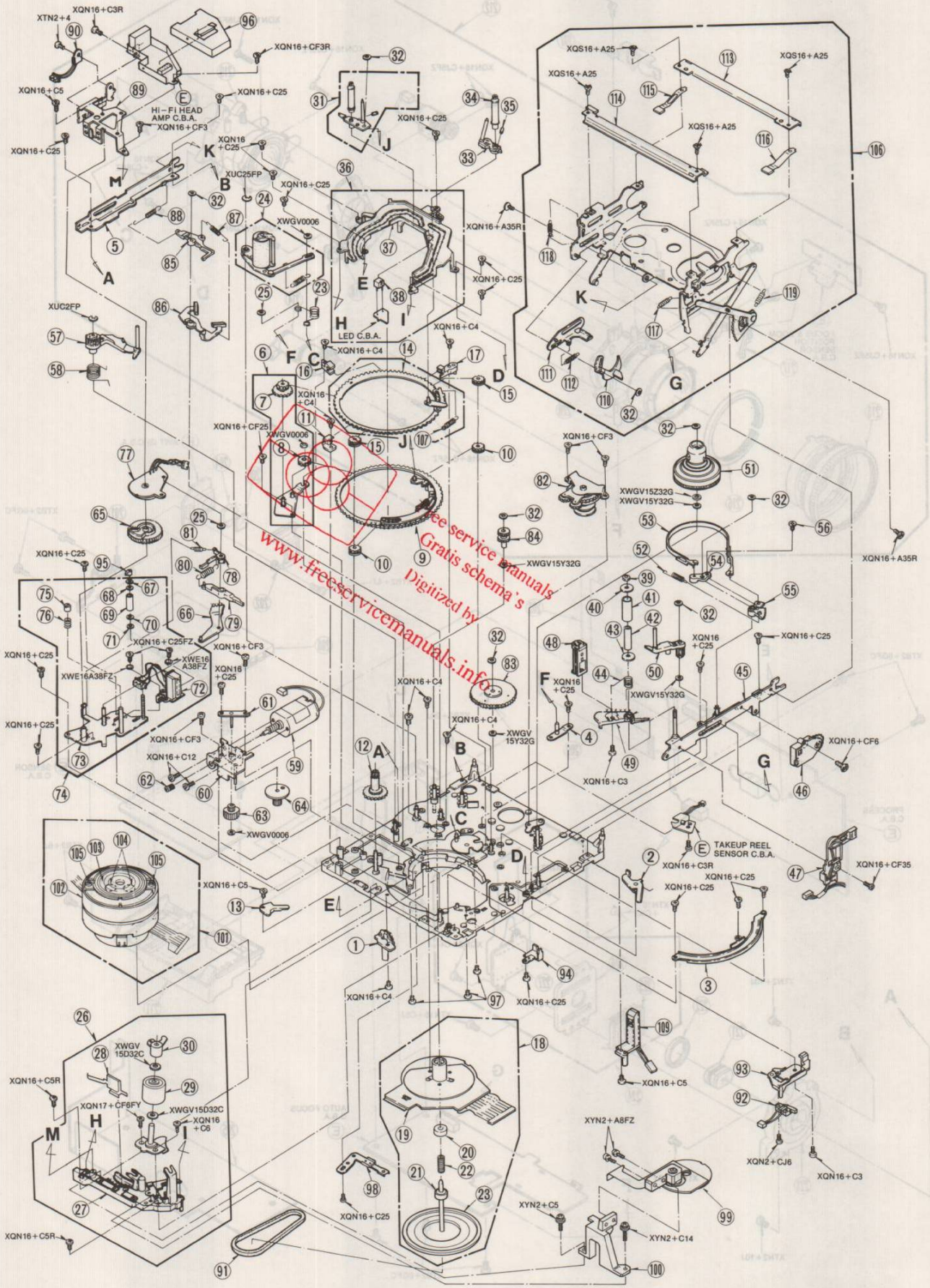


Next Page:
ICs & TRs INTERCONNECTION Section

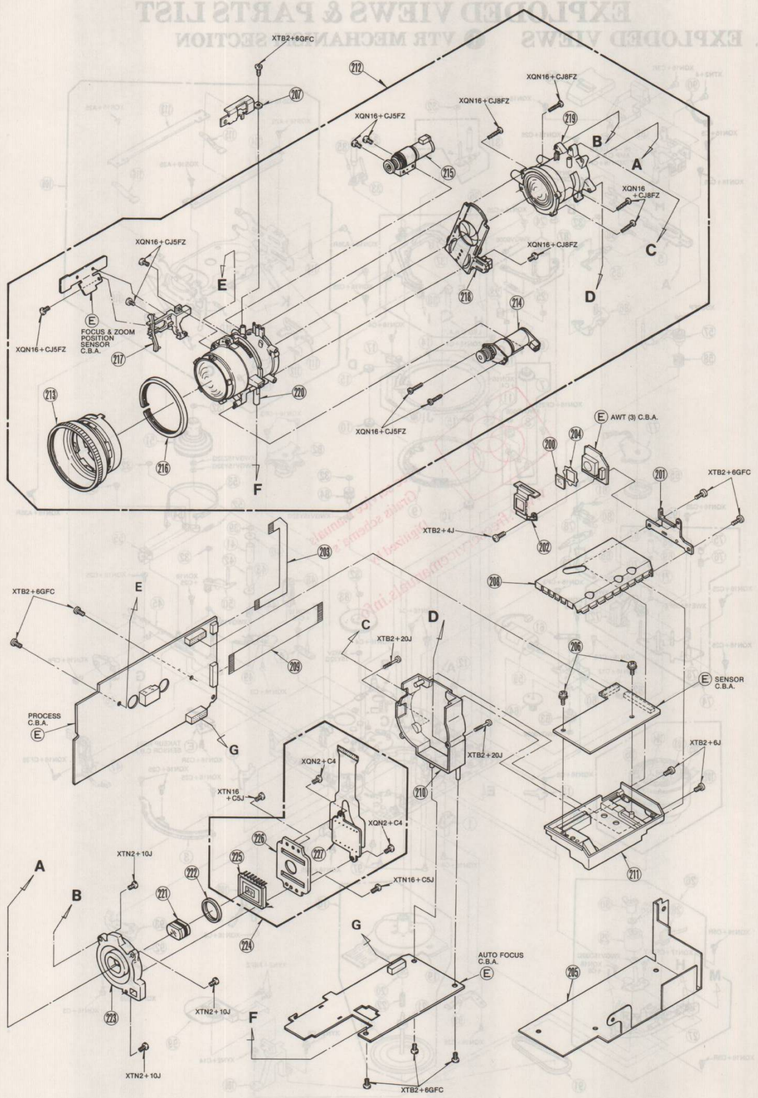
3-42. ICs & TRs INFORMATION



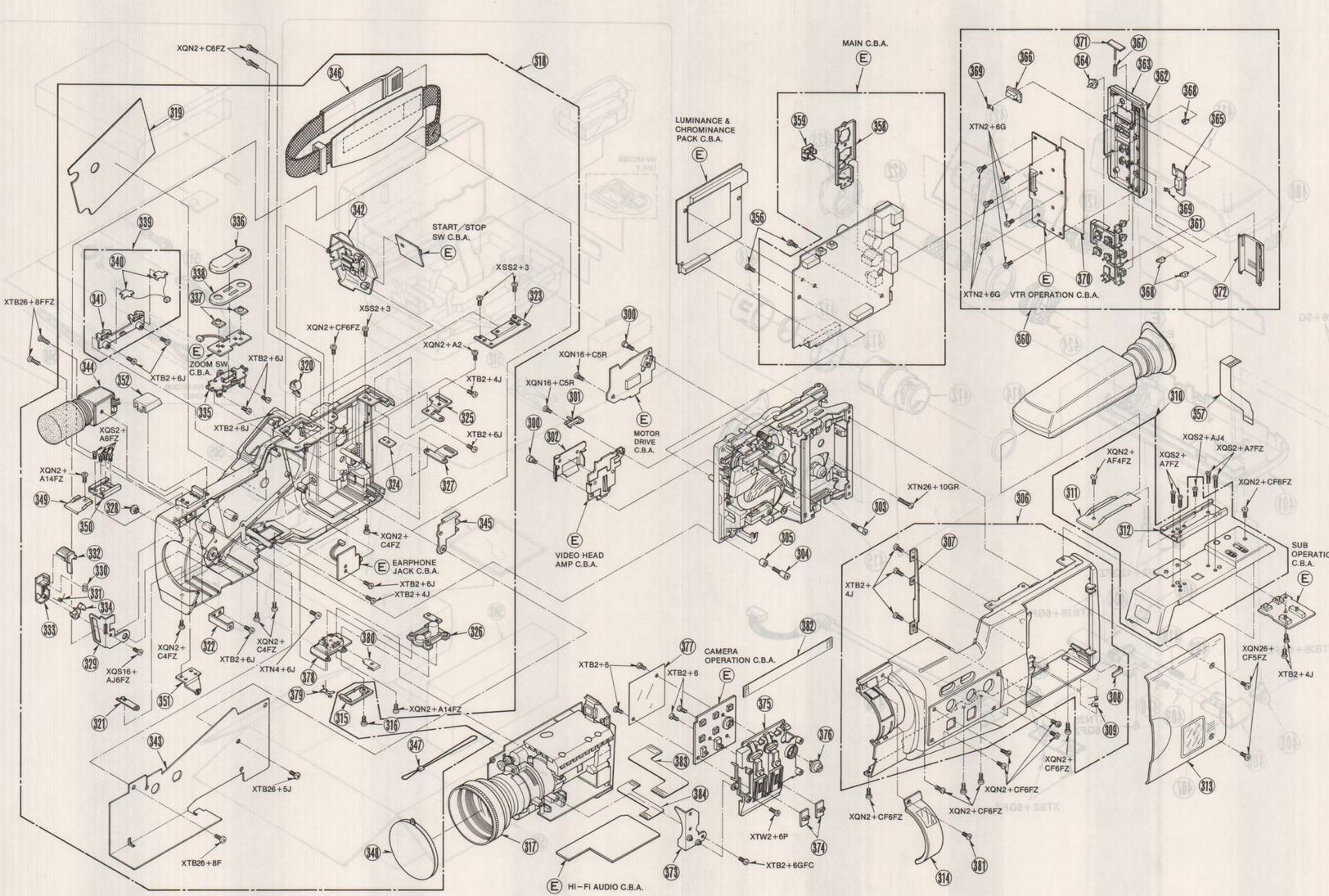
SECTION 4
EXPLODED VIEWS & PARTS LIST
4-1. EXPLODED VIEWS ❶ VTR MECHANISM SECTION



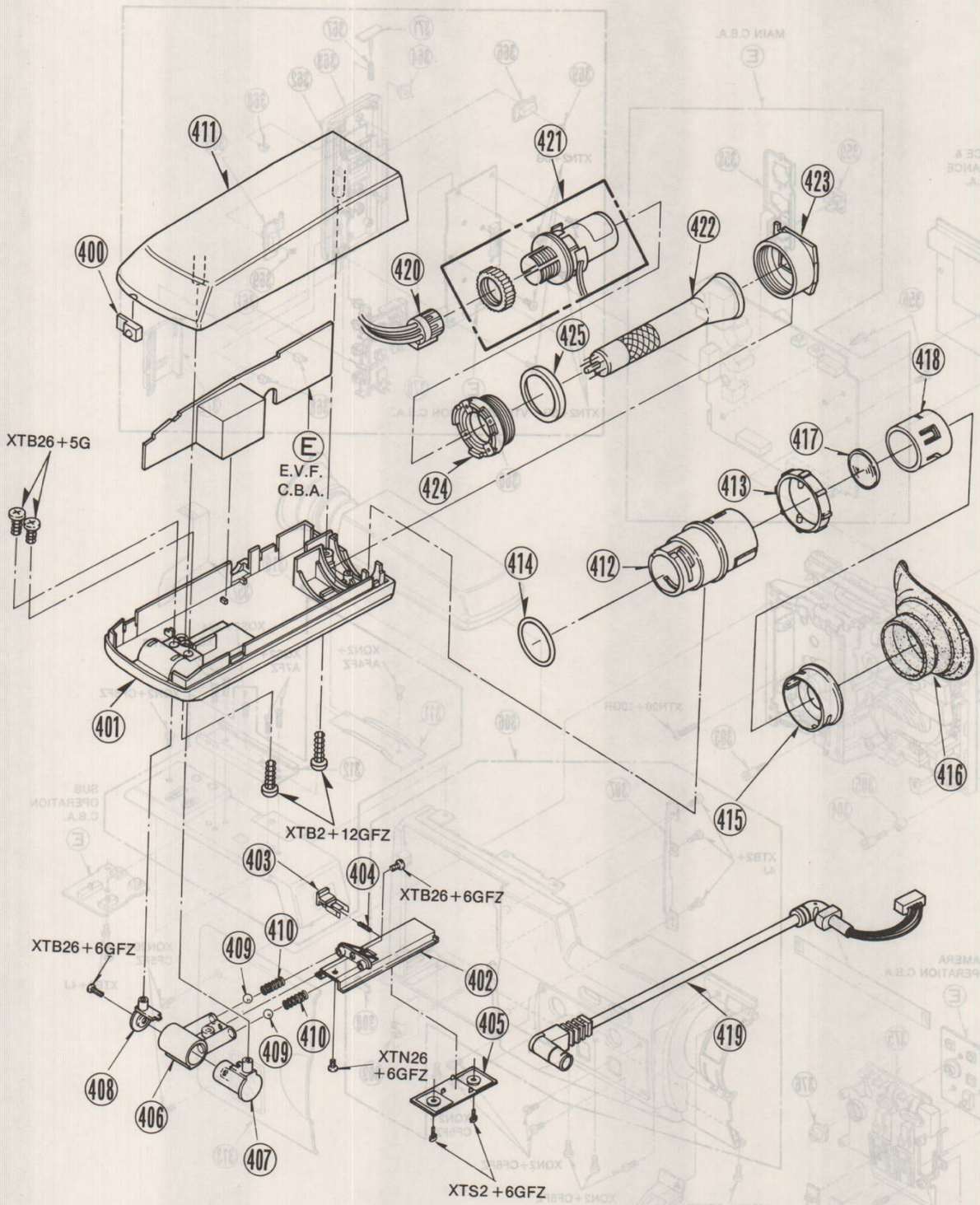
❷ CAMERA LENS SECTION



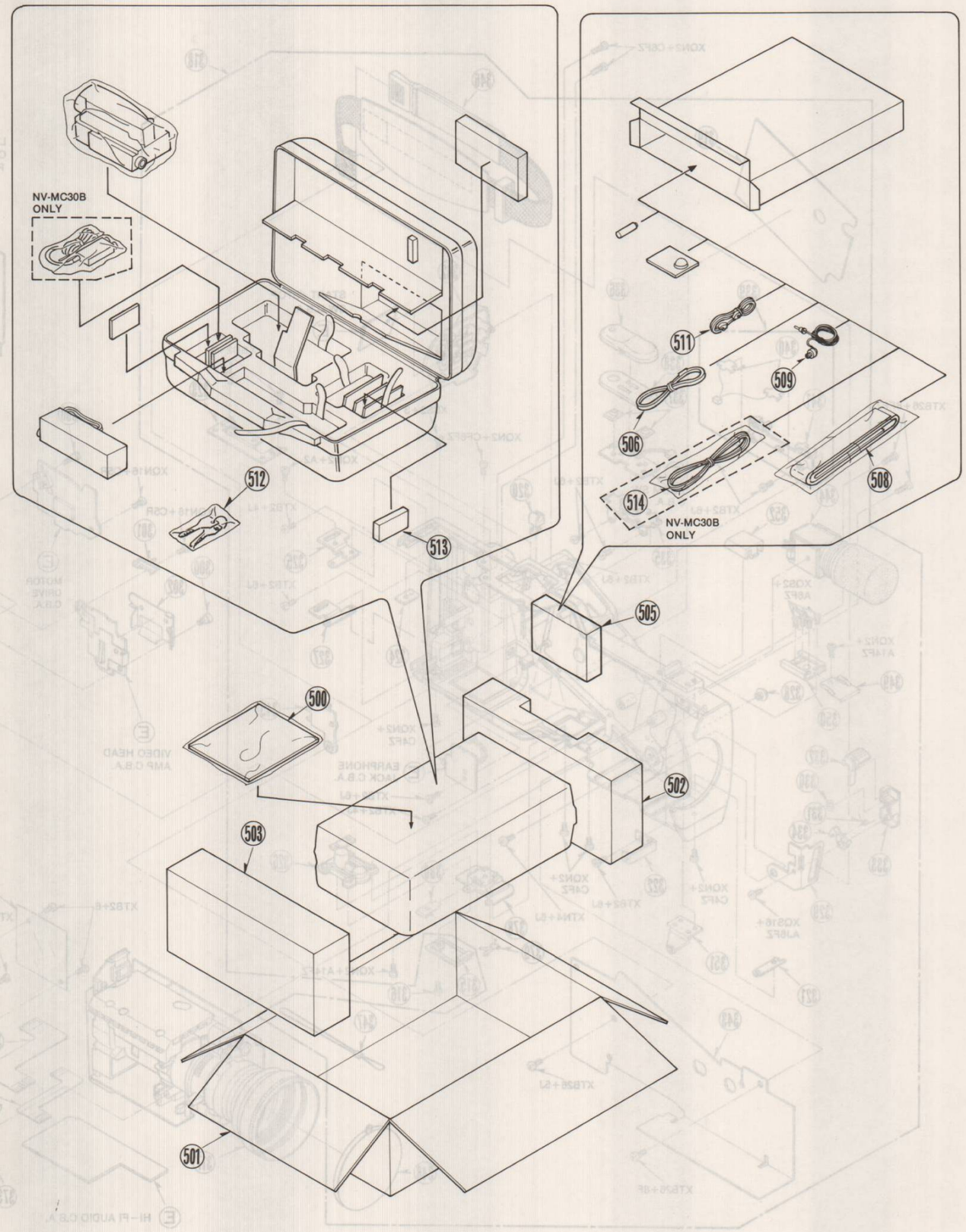
❸ CHASSIS & FRAME SECTION



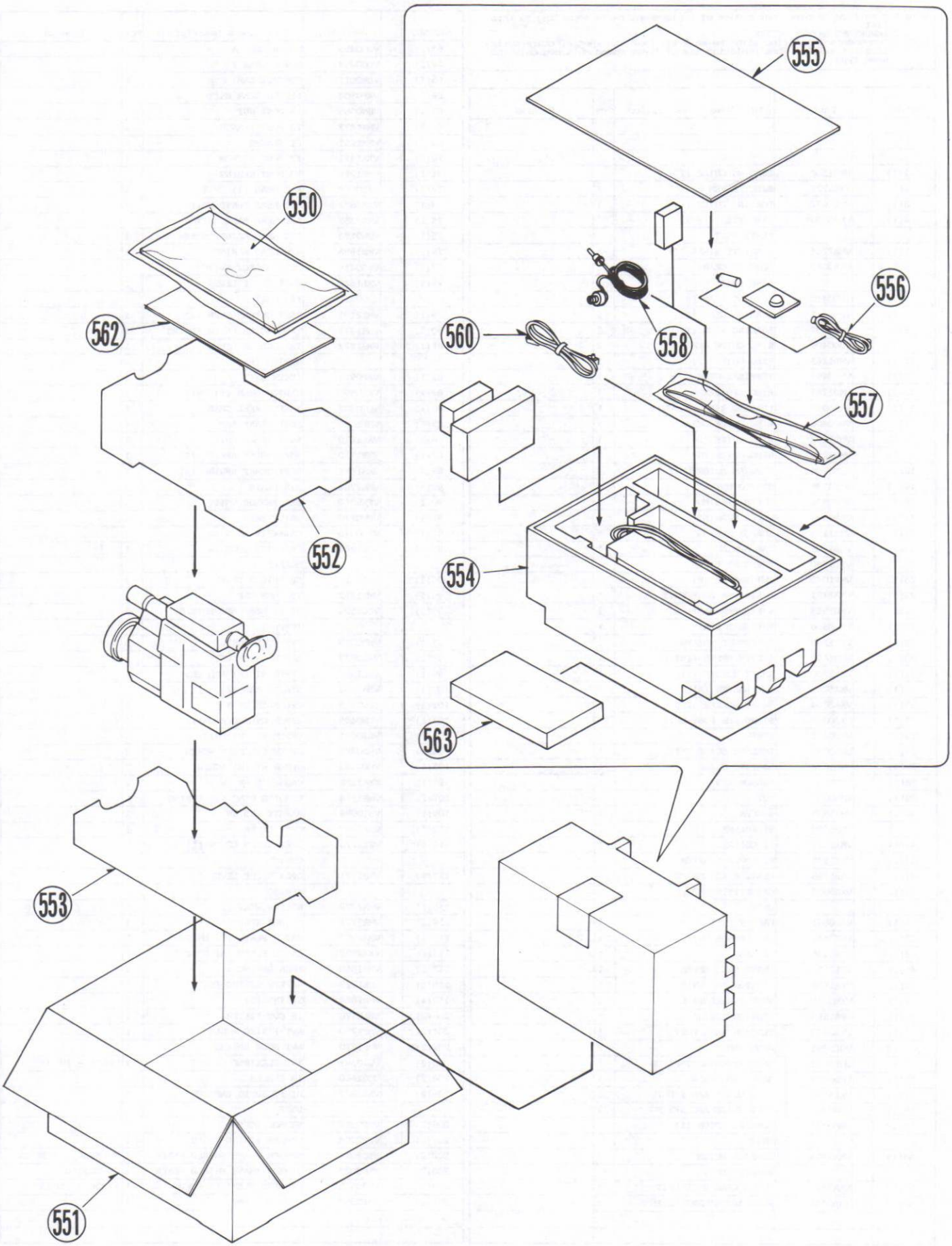
4 E.V.F. SECTION



5 PACKING PARTS & ACCESSORIES SECTION (NV-MC30B/EP)



❻ PACKING PARTS & ACCESSORIES SECTION (NV-MC30E/EG/EW)



4-2. MECHANICAL REPLACEMENT PARTS LIST

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

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VMD1100	LOADING GUIDE (T)	1	
2(1)		VXL1771	EJECT LEVER UNIT	1	
3(1)		VMD1077	LOADING GUIDE (S)	1	
4(1)		VXA3033	CASSETTE SUPPORT	1	
			PLATE UNIT		
5(1)		VMA7766	CASSETTE STAND (T)	1	
6(1)		VXA3052	LOADING GEAR	1	
			BASE UNIT		
7(1)		VDG0410	LOADING GEAR (S)	1	
8(1)		VDG0411	LOADING GEAR (T)	1	
9(1)		VXA3037	LOADING RING (T) UNIT	1	
10(1)		VDG0409	RING GUIDE GEAR (T)	2	
11(1)		VMD1263	RING GUIDE (2)	1	
12(1)		VDG0499	TERMINAL GEAR	1	
13(1)		VMD1265	RING LIMITER	1	
14(1)		VXA3038	LOADING RING (S) UNIT	1	
15(1)		VDG0408	RING GUIDE GEAR (S)	1	
16(1)		VMD1262	RING GUIDE (1)	1	
17(1)		VMD1264	RING GUIDE (3)	1	
18(1)		VEM0284	CAPSTAM MOTOR UNIT	1	
19(1)		VEK3345	STATOR UNIT	1	
20(1)		VDB0898	UPPER BEARING	1	
21(1)		VDB0899	UNDER BEARING	1	
22(1)		VMB1173	THRUST SPRING	1	
23(1)		VMB1705	CAM SPRING	1	
24(1)		VXL1980	PRESSURE LEVER	1	
25(1)		VMX1042	CUT WASHER (B)	2	
26(1)		VXA3771	V STOPPER BASE UNIT	1	
27(1)		VMD1523	V STOPPER BASE	1	
28(1)		VMC0360	PRESSURE PLATE	1	
29(1)		VDP1282	IMPEDANCE ROLLER	1	
30(1)		VMD1407	SUPPLY UPPER LIMITER	1	
31(1)		VXA3380	SHAFT HOLDER (T)	1	
32(1)		VMX1061	CUT WASHER (A)	9	
33(1)		VXA3064	SHAFT HOLDER S1 UNIT	1	
34(1)		VXJ0062	S1 ROLLER POST UNIT	1	
35(1)		VHD0392	SCREW	1	
36(1)		VXA3042	LOADING GUIDE UNIT	1	
37(1)		VMD1272	LOADING GUIDE	1	
38(1)		TLN107A	SENSOR LED	1	
39(1)		VHN0047	NUT	1	
40(1)		VMX1535	WASHER	1	
41(1)		VDP1209	S1 ROLLER	1	
42(1)		VMX1628	S1 COLLAR	1	
43(1)		VMX1335	S1 LOWER LIMITER	1	
44(1)		VMB1785	ERASE HEAD SPRING	1	
45(1)		VXA3053	CASSETTE STAND (S) 1	1	
			UNIT		
46(1)		VXP0891	DAMPER UNIT	1	
47(1)		VEK3446	END SENSOR UNIT	1	
48(1)		VBS0045	FE HEAD	1	
49(1)		VML2177	ERASE HEAD LEVER	1	
50(1)		VXL1658	TENSION ARM UNIT	1	
51(1)		VXR0175	SUPPLY REEL TABLE	1	
52(1)		VMB1868	TENSION SPRING	1	
53(1)		VX20249	TENSION BAND UNIT	1	
54(1)		VML2281	BAND ARM	1	
55(1)		VMD1082	BAND ADJUSTMENT PIECE	1	
56(1)		VHD0390	BAND ARM SCREW	1	
57(1)		VXL1789	TAPE GUIDE ARM F UNIT	1	
58(1)		VMB1707	TAPE GUIDE ARM SPRING	1	
59(1)		VEM0317	LOADING MOTOR (1)	1	
			UNIT		
60(1)		VXA3374	LOADING MOTOR	1	
			BRACKET UNIT		
61(1)		VXA3375	MOTOR GEAR BASE UNIT	1	
62(1)		VHD0442	WORM ADJUSTMENT SCREW	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
63(1)		VDG0495	MOTOR GEAR A	1	
64(1)		VDG0494	MOTOR GEAR B	1	
65(1)		VDK0017	CONTROL CAM	1	
66(1)		VXP0904	SECTOR GEAR UNIT	1	
67(1)		VHN0065	T3 POST NUT	1	
68(1)		VMX1472	T3 POST FLANGE	1	
69(1)		VMX1251	P1 SPACER	1	
70(1)		VMX1471	T3 POST BOTTOM	1	
71(1)		VMB1716	T3 POST SPRING	1	
72(1)		VED0088	A/C HEAD (1) UNIT	1	
73(1)		VXA3671	A/C HEAD PLATE UNIT	1	
74(1)		VXA3382	A/C HEAD BASE UNIT	1	
75(1)		VHN0133	A/C HEAD ADJUST SCREW	1	
76(1)		VMB1995	A/C HEAD SPRING	1	
77(1)		VES0416	MODE SELECT SWITCH	1	
78(1)		VXL1675	TAPE GUIDE LEVER	1	
			(2) UNIT		
79(1)		VML2191	TAPE GUIDE LEVER (1)	1	
80(1)		VMB1971	TAPE GUIDE LEVER SPRING	1	
81(1)		VMB1872	TAPE GUIDE LEVER	1	
			SPRING (2)		
82(1)		VXP0922	IDLER UNIT	1	
83(1)		VXP0890	CLUTCH GEAR (T) UNIT	1	
84(1)		VDG0407	TAKEUP REEL GEAR	1	
85(1)		VML2026	SOFT BRAKE ARM	1	
86(1)		VXL1670	SOFT BRAKE UNIT	1	
87(1)		VMB1710	SOFT BRAKE SPRING (1)	1	
88(1)		VMB1871	SOFT BRAKE SPRING (2)	1	
89(1)		VMA7764	H.A PLATE	1	
90(1)		VEE5010	DEW SENSOR UNIT	1	
91(1)		VDV0170	DRIVE BELT	1	
92(1)		VES0470	CASSETTE DOWN SW	1	
93(1)		VMD1266	CASSETTE DOWN SW	1	
			HOLDER		
94(1)		VMA7112	MR SHIELD COVER	1	
95(1)		VMD1212	T3 POST CAP	1	
96(1)		VSC2604	HI-FI HEAD AMP SHIELD	1	
			(UPPER)		
97(1)		VHD0389	CYLINDER SCREW	3	
98(1)		VXS0077	EARTH BRUSH UNIT	1	
99(1)		VXL1957	UPPER RT (S) ARM UNIT	1	
100(1)		VMA7801	STATOR ARM (2)	1	
101(1)		VEG0719	CYLINDER UNIT	1	<!>
102(1)		VEH0445	UPPER CYLINDER UNIT	1	<!>
103(1)		VET0081	UPPER RT (R) UNIT	1	
104(1)		VHD0288	UPPER CYLINDER SCREW	2	
105(1)		VHD0443	UPPER RT (R) SCREW	2	
106(1)		VXA3376	CASSETTE UP UNIT	1	
107(1)		VMB1714	LOADING RING (S) SPRING	1	
109(1)		VST0099	SAFETY TAB SW	1	
110(1)		VML2289	OPEN LEVER	1	
111(1)		VXL1676	OPEN SLIDE LEVER (1)	1	
			UNIT		
112(1)		VMB1721	OPEN SLIDE LEVER	1	
			SPRING		
113(1)		VMA7772	HOLDER STAY (F)	1	
114(1)		VMA7771	HOLDER STAY (R)	1	
115(1)		VXA2959	CATCH PLATE (T) UNIT	1	
116(1)		VXA2958	CATCH PLATE (S) UNIT	1	
117(1)		VMB1860	LOCK SPRING	1	
118(1)		VMB1723	SAFETY SPRING (S)	1	
119(1)		VMB1824	SPRING (S)	1	
200(2)		VDL0170	IR CUT FILTER	1	
201(2)		VMP1790	AWT FIXING ANGLE	1	
202(2)		VMP1810	AWT HOOK SPRING	1	
203(2)		VWJ0341	AWT FLEXIBLE CORD	1	FP601 - FP302
204(2)		VGQ1660	IR SPACER	1	
205(2)		VXA3672	HI-FI AUDIO BARRIER	1	
			UNIT		
206(2)		VHD0398	SENSOR SCREW	2	
207(2)		VMP2064	CAMERA FIXING ANGLE	1	
208(2)		VSC3016	SENSOR FRAME SHIELD PLATE	1	NV-MC30/E/B/EP/EW
208(2)		VSC3027	SENSOR FRAME SHIELD PLATE	1	NV-MC30EG
209(2)		VWJ0305	PROCESS FLEXIBLE CORD	1	FP306 - P1002
210(2)		VJF0654	SENSOR FRAME	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
211(2)		VMD1256	SENSOR C.B.A. FRAME	1	
212(2)		VXW0027	LENS UNIT	1	
213(2)		VDW0088	FOCUS RING	1	
214(2)		VEM0318	FOCUS MOTOR UNIT	1	
215(2)		VEM0319	ZOOM MOTOR UNIT	1	
216(2)		VGF0247	FOCUS FASTENER	1	
217(2)		VJF0661	POSITION SENSOR	1	
			HOLDER		
218(2)		VXL1635	IRIS UNIT	1	
219(2)		VXQ0057	LENS (1) UMIT	1	
220(2)		VXP1118	LENS (2) UNIT	1	
221(2)		VDL0143	CHRYSTAL FILTER	1	
222(2)		VMX1276	CCD CUSHION	1	
223(2)		VXQ0017	ACTUATER	1	
224(2)		VEK4539	CCD UNIT	1	
225(2)		MN3745F	CCD	1	
226(2)		VMA7183	CCD PLATE	1	
227(2)		VWJ0340	CCD FLEXIBLE CORD	1	
300(3)		VHD0439	SCREW (A)	2	
301(3)		VMD1268	SPACER	1	
302(3)		VSC2608	VIDEO HEAD AMP SHIELD	1	
			(UPPER)		
303(3)		VHD0451	SCREW	1	
304(3)		VHD0395	SCREW	1	
305(3)		VMX1332	SCREW SPACER	1	
306(3)		VYK2701	SIDE CASE (R) UNIT	1	
307(3)		VMP1793	SUPPORT ANGLE	1	
308(3)		VML2156	SAFETY LEVER	1	
309(3)		VMB1848	SAFETY SPRING	1	
310(3)		VYK2514	TOP CASE UNIT	1	
311(3)		VMC0400	E.V.F. SHOE SPRING	1	
312(3)		VMP2063	E.V.F. SHOE	1	
313(3)		VYP2893	CASSETTE COVER UNIT	1	
314(3)		VKW1144	LENS COVER	1	
315(3)		VKF1142	BATTERY LID	1	
316(3)		VHD0437	SCREW	1	
317(3)		VDW0089	LENS FOOD	1	
318(3)		VYK2710	SIDE CASE (L) UNIT	1	
319(3)		VGH2002	BATTERY NAME PLATE	1	
320(3)		VGQ1611	E.V.F. CORD HOLDER	1	
321(3)		VMP1789	FIXING ANGLE (B)	1	
322(3)		VMP1894	FIXING ANGLE (A)	1	
323(3)		VMP2043	SHOE FIXING ANGLE	1	
324(3)		VMP2160	BELT SUPPORT ANGLE	1	
325(3)		VMP1989	SHOULDER STRAP ANGLE	1	
			(UPPER)		
326(3)		VMD1344	TRIPOD FIXING BRACKET	1	
327(3)		VMP1355	SHOULDER STRAP ANGLE	1	
			(LOWER)		
328(3)		VKC0347	BATTERY LOCK HINGE	1	
329(3)		VMP1787	GRIP BELT ANGLE	1	
330(3)		VMB1847	BATTERY LOCK SPRING (A)	1	
331(3)		VMB1861	BATTERY LOCK SPRING (B)	1	
332(3)		VGU4388	BATTERY LOCK KNOB	1	
333(3)		VGQ1590	BATTERY LOCK HOLDER	1	
334(3)		VGQ1591	BATTERY LOCK	1	
335(3)		VGQ1592	ZOOM BUTTON HOLDER	1	
336(3)		VGU4389	ZOOM BUTTON	1	
337(3)		VMG0358	ZOOM RUBBER SWITCH	2	
338(3)		VGQ1750	ZOOM BUTTON SHEET	1	
339(3)		VYK2318	BATTERY TERMINAL UNIT	1	
340(3)		VMC0403	BATTERY TERMINAL PLATE	1	
341(3)		VGQ1608	BATTERY TERMINAL HOLDER	1	
342(3)		VYK2520	GRIP BELT HOOK COVER UNIT	1	
343(3)		VMZ1348	SHIELD BARRIER	1	
344(3)		VEK4519	MIC UNIT	1	
345(3)		VGQ1610	GRIP BELT SUPPORT ANGLE	1	
346(3)		VYC0283	GRIP BELT UNIT	1	
347(3)		VGQ1349	HOOD STRAP	1	
348(3)		VKF1196	HOOD CAP	1	
349(3)		VMC0241	MIC SHOE SPRING	1	
350(3)		VMP1079	MIC SHOE	1	
351(3)		VMP1833	MIC SHOE ANGLE	1	
352(3)		VGQ1932	SUB REC BUTTON HOLDER	1	
356(3)		VHD0440	MAIN SCREW	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
357(3)		VWJ0351	SUB OPERATION FLEXIBLE CORD	1	P6401 - P6303
358(3)		VMP1812	JACK FIXING ANGLE	1	
359(3)		VGQ1593	JACK HOLDER	1	
360(3)		VYK2678	VTR OPERATION CASE UNIT	1	
361(3)		VGU4692	VTR OPERATION BUTTON	1	
362(3)		VKM1894	VTR OPERATION CASE	1	
363(3)		VGH2216	VTR OPERATION PANEL	1	
364(3)		VGU4611	EJECT BUTTON	1	
365(3)		VGU4612	POWER SWITCH KNOB	1	
366(3)		VGU4613	SELECT KNOB	1	
367(3)		VMB1993	POWER SWITCH SPRING	1	
368(3)		VGL0390	PANEL LIGHT	3	
369(3)		VJR0522	CONTACT PIECE	2	
370(3)		VMZ1371	SHIELD PLATE B	1	
371(3)		VJF0724	SPRING STOPPER	1	
372(3)		VKF1300	CURSOR	1	
373(3)		VGQ1607	CAMERA OPERATION HOLDER	1	
374(3)		VGU4782	SLIDE KNOB	2	
375(3)		VGU4783	CAMERA OPERATION BUTTON	1	
			HINGE		
376(3)		VGU4916	IRIS ADJUSTMENT KNOB	1	
377(3)		VMZ1483	CAMERA OPERATION BARRIER	1	
378(3)		VKM1549	BATTERY BRACKET	1	
379(3)		VMC0399	BATTERY TERMINAL (B)	1	
380(3)		VMC0326	BATTERY TERMINAL (A)	1	
381(3)		VHD0494	LENS UNIT SCREW	1	
382(3)		VWJ05SW110LL	FLEXIBLE CORD	1	FP001 - P6003
383(3)		VWJ0350	FLEXIBLE CORD	1	P5502 - P4503
384(3)		VWJ0349	FLEXIBLE CORD	1	P4005 - P4502
400(4)		VGL0359	PANEL LIGHT	1	
401(4)		VKM1788	E.V.F BOTTOM CASE	1	
402(4)		VGQ1693	E.V.F FOOT	1	
403(4)		VGU4395	LOCK RELEASE KNOB	1	
404(4)		VMC0405	SPRING (B)	1	
405(4)		VGQ1596	LOCK FIXING PLATE	1	
406(4)		VKC0323	ROTALY PIECE	1	
407(4)		VKC0355	ROTALY HOLDER (A)	1	
408(4)		VKC0356	ROTALY HOLDER (B)	1	
409(4)		VMP1358	STEEL BALL	2	
410(4)		VMC0337	SPRING	2	
411(4)		VYK2526	TOP CASE UNIT	1	NV-MC30B
411(4)		VYK2527	TOP CASE UNIT	1	NV-MC30E/EG/EP/EW
412(4)		VKM1080	EYESIGHT CORRECTION CASE	1	
413(4)		VGU3946	EYESIGHT CORRECTION	1	
			RING		
414(4)		VMX1322	O RING	1	
415(4)		VJF0512	EYE CAP HOLDER	1	
416(4)		VMG0532	EYE CAP	1	
417(4)		VDL0145	E.V.F. LENS	1	
418(4)		VJF0511	LENS HOLDER	1	
419(4)		VEK3941	10P CORD	1	
420(4)		VEE4784	CRT SOKET UNIT	1	
421(4)		ELY07V570A	DY	1	
422(4)		M01JVV47WB	CRT	1	
423(4)		VGF0300	CRT MASKING	1	
424(4)		VJF0657	CRT HOLDER	1	
425(4)		VMX1462	CRT RUBBER	1	
500(5)		VQT3330	OPERATING INSTRUCTIONS	1	<!> NV-MC30B
			(ENGLISH)		
500(5)		VQT3327	OPERATING INSTRUCTIONS	1	<!> NV-MC30EP
			(ENGLISH,GARMAN,FRENCH)		
500(5)		VQT3328	OPERATING INSTRUCTIONS	1	<!> NV-MC30EP
			(SPANISH,DUTCH,ITALIAN)		
501(5)		VPG4905	PACKING	1	NV-MC30B
501(5)		VPG4907	PACKING	1	NV-MC30EP
502(5)		VPN1994	CUSHION (R)	1	NV-MC30EP/B
503(5)		VPN1995	CUSHION (L)	1	NV-MC30EP/B
505(5)		VPK1117	ACCESSORIES BOX	1	NV-MC30B
505(5)		VPK1118	ACCESSORIES BOX	1	NV-MC30EP
506(5)		VFA0078	AV OUTPUT CORD	1	NV-MC30EP/B
508(5)		VFC0472	SHOULDER STRAP	1	NV-MC30EP/B
509(5)		XEH1A1	EARPHONE	1	NV-MC30EP/B
511(5)		VJA0401	DC OUTPUT CORD	1	NV-MC30EP/B
512(5)		VYC0096	KEY	1	NV-MC30EP/B
513(5)		VXQ0050	CASSETTE ADAPTOR	1	NV-MC30EP/B

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
514(5)		VJA0376	RF CABLE	1	NV-MC30B
550(6)		VQT3327	OPERATING INSTRUCTIONS	1	<!> NV-MC30E/EG/EW
			(ENGLISH,GERMAN,FRENCH)		
550(6)		VQT3328	OPERATING INSTRUCTIONS	1	<!> NV-MC30E/EW
			(SPANISH, DUTCH,ITALIAN)		
550(6)		VQT3329	OPERATING INSTRUCTIONS	1	<!> NV-MC30E
			(SWEDISH,DANISH,FINNISH)		
551(6)		VPG4904	PACKING	1	NV-MC30E
551(6)		VPG4906	PACKING	1	NV-MC30EG
551(6)		VPG4908	PACKING	1	NV-MC30EW
552(6)		VPN2290	CUSHION (UPPER)		NV-MC30E/EG/EW
553(6)		VPN2291	CUSHION (LOWER)		NV-MC30E/EG/EW
554(6)		VPN2399	ACCESSORIES BOX	1	NV-MC30E/EG/EW
555(6)		VPN1997	PAD(A)	1	NV-MC30E/EG/EW
556(6)		VFA0078	AV OUTPUT CORD	1	NV-MC30E/EG/EW
557(6)		VFC0472	SHOULDER STRAP	1	NV-MC30E/EG/EW
558(6)		XEH1A1	EARPHONE	1	NV-MC30E/EG/EW
560(6)		VJA0401	DC OUTPUT CORD	1	NV-MC30E/EG/EW
562(6)		VPN2483	TOP PAD	1	NV-MC30E/EG/EW
563(6)		VXQ0050	CASSETTE ADAPTOR	1	NV-MC30E/EG/EW
			JIG & TOOLS		
		VFM8180H8PF	VHS-C ALIGNMENT TAPE	1	
		VFK0304	Y/C SEPARATOR	1	
		VFK0382	CAMERA HPLDER	1	
		VFK0431	CAMERA HOLDER ARM	1	
		VFK0432	HOLDER SPACER	1	
		XSN26+18	SCREW	2	
		VFK0546	HUNTING & GRAY/WHITE CHART	1	
		VFK0374	COLOUR TEMP. CONV. FILTER	1	(C12)
		VFK0375	COLOUR TEMP. CONV. FILTER	1	(C 2)
		VFK0547	COLOUR TEMP. CONV. FILTER	1	(C 8)
		VMX1304	CLEARANCE SPACER	1	
		VMS3504	ALIGNMENT SHAFT	1	
		VKW1049	DIFFUSION PLATE	1	
		VFKS0051	EXTENSION CABLE (3P)	1	
		VFKS0052	EXTENSION CABLE (5P)	1	
		VFK0430	EXTENSION CABLE (14P)	1	
		VFK0503	EXTENSION CABLE (5P)	1	
		VFK0380	EXTENSION CABLE (18P)	1	
		VFK0497	EXTENSION CABLE (6P)	1	
		VFKS0067	EXTENSION CABLE (22P)	1	
		VFKS0075	EXTENSION CABLE (16P)	1	
		VFKS0060	EXTENSION CABLE (2P)	1	
		VFK0499	EXTENSION CABLE (3P)	1	
		VFKS0074	CONNECTOR	1	
		VFK0335	RETAINING RING REMOVER	1	
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0343	CHECK LIGHT	1	
		VFK0326	HEX WRENCH SET	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks

4-3. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.
3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICRO-FARADS(uf),P=uuF.
4.The P.C.Board units marked width'■'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			---CAMERA SECTION---		
		VEP22083A	AWT(3) C.B.A.	1	(NLA)
		VEP22082A	SENSOR C.B.A.	1	(NLA)NV-MC30E,B,EP,EW
		VEP22082C	SENSOR C.B.A.	1	(NLA)NV-MC30EG
		VEP23089A	PROCESS C.B.A.	1	(NLA)
		VEP28018H	AUTO FOCUS C.B.A.	1	(NLA)
		VEP20285A	CAMERA OPERATION C.B.A.	1	(NLA)NV-MC30E,B,EP,EW
		VEP20285B	CAMERA OPERATION C.B.A.	1	(NLA)NV-MC30EG
		VEP30038A	FOCUS & ZOOM POSITION SENSOR C.B.A.	1	(NLA)
			---E.V.F. SECTION---		
		VEP27038C	E.V.F. C.B.A.	1	(NLA)
			---VTR SECTION---		
		VEP02318A	MOTOR DRIVE C.B.A.	1	(NLA)
		VEP05132D	VIDEO HEAD AMP C.B.A.	1	(NLA)
		VEP05133B	Hi-Fi AUDIO HEAD AMP C.B.A.	1	(NLA)
		VEP06572B	MAIN C.B.A.	1	(NLA)<!>
		VEP03617B	LUMINANCE/CHROMINANCE C.B.A.	1	(NLA) INCLUDING THE PAL JOG C.B.A. (VEP03616A)
		VEP03616A	PAL JOG C.B.A.	1	(NLA)
		VEP04276A	Hi-Fi AUDIO C.B.A.	1	(NLA)
		VEP06515D	OPERATION C.B.A.	1	(NLA)
		VEK4033	SUB OPERATION C.B.A.	1	(NLA)
		VEK3971	ZOOM SW C.B.A.	1	(NLA)
		VEK3970	START/STOP SW C.B.A.	1	(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEK3976	EARPHONE JACK C.B.A.	1	(NLA)
		VEK3455	TAKE-UP REEL SENSOR C.B.A.	1	(NLA)
	■	VEP22083A	AWT (3) C.B.A.		(NLA)
			CAPACITORS		
C601-03		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
			CONNECTOR		
FP601		VJS2110	CONNECTOR (FEMALE)	1	
			ICS		
IC601		M51096AU	IC	1	
IC602		AN1358S	IC	1	
			RESISTORS		
R601		ERJ6GEYF123	M.RESISTOR CH1/10W 12K	1	
R602		ERJ6GEYF822	M.RESISTOR CH1/10W 8.2K	1	
R603		ERJ6GEYF124	M.RESISTOR CH1/10W 120K	1	
R604		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R605		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R606,07		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R608		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R609		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R610		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
	■	VEP22082A	SENSOR C.B.A.		(NLA)NV-MC30E/B/EP/EW
	■	VEP22082C	SENSOR C.B.A.		(NLA)NV-MC30EG
B201		VJP1948	CONNECTOR (MALE)	1	
			CAPACITORS		
C201		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C202,03		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	2	
C204		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C206		ECRJA010A12	TRIMER	1	
C207		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C208		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C209		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C210		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C211		ECUM1E104ZFM	C.CAPACITOR CH 25V 0.1U	1	
C212		ECEA1EKS100I	E.CAPACITOR 25V 10U	1	
C213		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C214		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C215,16		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C218,19		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C220		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C221,22		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	2	
C223		ECUM1H682ZFV	C.CAPACITOR CH 50V 6800P	1	
C225		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C226		ECEA1EKS100I	E.CAPACITOR 25V 10U	1	
C229		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C230-33		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	4	
C236		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C237		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C238-40		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	3	
C241		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C242,43		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C244		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C245		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C246		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C247		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C248-50		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C251		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C252,53		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C255		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C260,61		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C262,63		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C280		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C281		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C282,83		ECUM1H180JCV	C.CAPACITOR CH 50V 18P	2	
C284		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C285		ECUM1H180JCV	C.CAPACITOR CH 50V 18P	1	
			DIODES		
D202		MA728	DIODE	1	
D204,05		MA110	DIODE	2	
D207		MA110	DIODE	1	
D209		MA141WK	DIODE	1	
D210-13		MA110	DIODE	4	
			FILTER		
FL201		ELB5B010	FILTER	1	
			CONNECTOR		
FP201		VJS2143	CONNECTOR (FEMALE)	1	
			ICS		
IC201		MN53015XBX	IC	1	
IC202		UPD6147G	IC	1	
IC203		AN2012S	IC	1	
			COILS		
L201		ELJFA150KF	COIL	1	
L203-07		ELJFA150KF	COIL	5	
L210-14		VLQ0291	COIL	5	
			TRANSISTORS		
Q201-03		2SD1819	TRANSISTOR	3	
Q204		2SC3930	TRANSISTOR	1	
Q205		2SA1610	TRANSISTOR	1	
Q206		2SC4176	TRANSISTOR	1	
Q207		2SA1610	TRANSISTOR	1	
Q208		2SC4176	TRANSISTOR	1	
Q209		2SA1610	TRANSISTOR	1	
Q210		2SC4176	TRANSISTOR	1	
			RESISTORS		
R201		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R202		ERJ3GEYJ151	M.RESISTOR CH1/20W 150	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R203		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R204		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R205		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R206		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R207		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R208		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R209		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R210,11		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R212		ERJ3GEYJ330	M.RESISTOR CH1/20W 33	1	
R216		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R217		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R218		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R221		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R222		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R223,24		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	2	
R225,26		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R227		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R228		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R229		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R230		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R231		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R232,33		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	2	
R234		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R235		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R236		ERJ3GEYJ270	M.RESISTOR CH1/20W 27	1	
R240		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R270		ERJ8GCYJ330	M.RESISTOR CH 1/8W 33	1	
			V.RESISTORS		
VR201		EVM7JSX30B25	V.RESISTOR 200K	1	
VR202		EVM7JSX30B54	V.RESISTOR 50K	1	
X201		VSX0240	CRYSTAL OSCILLATOR	1	
	■	VEP23089E	PROCESS C.B.A.		(NLA)
			CONNECTOR		
B301		VJS1948	CONNECTOR	1	
B305		VJS2574	CONNECTOR (FEMALE)	1	
			CAPACITORS		
C301		ECUM1H151JCV	C.CAPACITOR CH 50V 150P	1	
C303,04		ECST1CY1052	T.CAPACITOR 16V 1U	2	
C305		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C306		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C307		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C308		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C309		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C310		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C311		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C312		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C313		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C314		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C315		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C316,17		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C318,19		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C320,21		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C322		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C323		ECSF0JE226	T.CAPACITOR 6.3V 22U	1	
C324		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C325		ECEV1HA2R2	E.CAPACITOR 50V 2.2U	1	
C326		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C327		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C328,29		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C330		ECSF1AE226	T.CAPACITOR 10V 22U	1	
C331		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C332		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C333		ECEV1HA3R3	E.CAPACITOR 50V 3.3U	1	
C334		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C335		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C336,37		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C338,39		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C340,41		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C342		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C343		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C344		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C345		ECEV1CAN4R7R	E.CAPACITOR 16V 4.7U	1	
C346		ECST1AB475ZR	T.CAPACITOR 35V 4.7U	1	
C348		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C349		ECUM1H221JCV	C.CAPACITOR CH 50V 220P	1	
C350		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C351		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C353		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C354		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C355,56		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C357		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C358		ECSF1AE226	T.CAPACITOR 10V 22U	1	
C360		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C361		ECEA1CKS330	E.CAPACITOR 16V 33U	1	
C362		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
C363,64		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C365		ECSF0JE336	T.CAPACITOR 6.3V 33U	1	
C366		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C368		ECUM1H271JCV	C.CAPACITOR CH 50V 270P	1	
C369		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C371		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C372		ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C373		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C374-76		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	3	
C377		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C378		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C380		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C382		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C384		ECEA1EKS4R7I	E.CAPACITOR 25V 4.7U	1	
C385		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C386		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C387-89		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	3	
C393		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C395,96		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C398-00		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C401,02		ECUM1H151JCV	C.CAPACITOR CH 50V 150P	2	
C416		ECEA0GKS221	E.CAPACITOR 4V 220U	1	
C501		ECEV1AAN100	E.CAPACITOR 10V 10U	1	
C502,03		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C504		ECEV1AAN100	E.CAPACITOR 10V 10U	1	
C505,06		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
C507		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
			DIODES		
D301		MA141A	DIODE	1	
D305		MA141A	DIODE	1	
D306		MA141WK	DIODE	1	
D307		MA728	DIODE	1	
D308		MA3047M	DIODE	1	
D309		MA110	DIODE	1	
D501		MA141WA	DIODE	1	
D502		MA728	DIODE	1	
			FILTERS		
FL301		ELB4D009	FILTER	1	
FL302		VLF0664	FILTER	1	
FL303		ELB4B003	FILTER	1	
FL304		ELB4C011	FILTER	1	
FL305		VLF0798	FILTER	1	
FL307		ELB4D010	FILTER	1	
FL308		ELB4B030	FILTER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
FP302		VJS2596	CONNECTOR (FEMALE)	1	
FP306		VJS2137	CONNECTOR	1	
			ICS		
IC302		MN3819S	IC	1	
IC303		MN3820S	IC	1	
IC304		AN2154FAP	IC	1	
IC308,09		LM2904M	IC	2	
IC310		AN2254FAP	IC	1	
IC311		MN5107	IC	1	
IC312		VCR0250	IC	1	
IC501		RZ4052BM	IC	1	
IC502		LM2902M	IC	1	
IC503		LM2904M	IC	1	
IC504,05		LM2902M	IC	2	
			COILS		
L301		VLQ0163K150	COIL 15UH	1	
L302		VLQ0319F150	COIL 15UH	1	
L303		VLQ0163K101	COIL 100UH	1	
L304-06		VLQ0163K150	COIL 15UH	3	
L307		VLQ0163K330	COIL 33UH	1	
L308,09		VLQ0163K150	COIL 15UH	2	
L310		VLQ0291	COIL	1	
L311		VLQ0163K150	COIL 15UH	1	
L312		VLQ0163K101	COIL 100UH	1	
L313		VLQ0163K330	COIL 33UH	1	
L316		VLQ0163K330	COIL 33UH	1	
			CONNECTORS		
P303		VJP1608T	CONNECTOR(MALE)	1	
P307		VJP1607T	CONNECTOR(MALE)	1	
P308,09		VJP2260	CONNECTOR(MALE)	2	
			TRANSISTORS		
Q301		2SD1819	TRANSISTOR	1	
Q302		2SC3931	TRANSISTOR	1	
Q303		2SB1218	TRANSISTOR	1	
Q304		2SA1532	TRANSISTOR	1	
Q305		XN4601	TRANSISTOR	1	
Q306		XN4401	TRANSISTOR	1	
Q308		XN4601	TRANSISTOR	1	
Q310		2SB1218	TRANSISTOR	1	
Q312		2SD1819	TRANSISTOR	1	
Q313		2SC3931	TRANSISTOR	1	
Q314		2SD1819	TRANSISTOR	1	
Q315		XN4401	TRANSISTOR	1	
Q317		2SD1819	TRANSISTOR	1	
Q320		XN4401	TRANSISTOR	1	
Q322		XN4608	TRANSISTOR	1	
Q324		2SA1532	TRANSISTOR	1	
Q328		XN4501	TRANSISTOR	1	
Q502		XN4401	TRANSISTOR	1	
Q503		XN4501	TRANSISTOR	1	
Q504		XN4401	TRANSISTOR	1	
Q505		XN4501	TRANSISTOR	1	
Q506		2SD874	TRANSISTOR	1	
Q507		2SB1219	TRANSISTOR	1	
Q508-10		XN4601	TRANSISTOR	3	
			RESISTORS		
R301		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R302		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R303		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R304		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R305		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R306		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R307		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R308		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R309		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R310		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R311,12		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	2	
R313		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R314		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R315		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R317		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R318		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R319		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R321		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R322		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R323		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R324		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R325,26		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R327		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R328		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R329		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R330		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R331		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R332		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R333		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R334		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R336		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R337		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R338		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R339		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R340		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R341		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R342		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R343		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R344		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R345		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R348		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R349		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R350		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R351		ERJ3GEYJ560	M.RESISTOR CH1/20W 56	1	
R352		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R353		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R354		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R355		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R357		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R358		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R359		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R360		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R361,62		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	2	
R363		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R364		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R365		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R366		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R367		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R368		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R369-71		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	3	
R374,75		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R376		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R377		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R378		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R379		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R380		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R381		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R382		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R383		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R385		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R386		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R387		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R388		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R389		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R390		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R394		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R396		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R397		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R398		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R399		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R400		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R401		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R402,03		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R404		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R405		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R406		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R408		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R409		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R410		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R411		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R412		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R413		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R414		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R415		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R416		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R417		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R418		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R419		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R426		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R427		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R428		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R429		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R431		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R432		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R433		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R434		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R435		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R436		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R437,38		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R439		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R440		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R442		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R443,44		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	2	
R445-47		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	3	
R448		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R449		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R450		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R451		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R452		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R453		ERJ3GEYJ564	M.RESISTOR CH1/20W 560K	1	
R456,57		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	2	
R458		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R459		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R460		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R461		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R462		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R463		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R465		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R468		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R501,02		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	2	
R503,04		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R505		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R506,07		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R508		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R509		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R510		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R511		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R512,13		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R514,15		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R516		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R517		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R518		ERJ3GEK106	M.RESISTOR CH 3W 10M	1	
R519		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R520		ERJ3GEYJ274	M.RESISTOR CH1/20W 270K	1	
R521		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R522		ERJ3GEK335	M.RESISTOR CH 3W 3.3M	1	
R523		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R524		ERJ3GEYJ564	M.RESISTOR CH1/20W 560K	1	
R525		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R526		ERJ3GEK106	M.RESISTOR CH 3W 10M	1	
R527		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R528		ERJ3GEYJ274	M.RESISTOR CH1/20W 270K	1	
R529		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R530		ERJ3GEK335	M.RESISTOR CH 3W 3.3M	1	
R531		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R532		ERJ3GEYJ564	M.RESISTOR CH1/20W 560K	1	
R533		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R534-36		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	3	
R537		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R538		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R539		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R540,41		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R542		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R543		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R544-53		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	10	
R554-56		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	3	
R557		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R558		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R559		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R560		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R561,62		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R563,64		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	2	
R565		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R569-71		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	3	
R572		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R574,75		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R576		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R577-79		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	3	
R580		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R581		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R582		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R583		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R584		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R585		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
TH301		VRT0019	THERMISTOR	1	
			VARIABLE RESISTORS		
VR301		EVM7JSX30B14	V.RESISTOR 10K	1	
VR303		EVM7JSX30B24	V.RESISTOR 20K	1	
VR304		EVM7JSX30B54	V.RESISTOR 50K	1	
VR305-07		EVM7JSX30B24	V.RESISTOR 20K	3	
VR309,10		EVM7JSX30B24	V.RESISTOR 20K	2	
VR311,12		EVM7JSX30B14	V.RESISTOR 10K	2	
VR313-15		EVM7JSX30B13	V.RESISTOR 1K	3	
VR317-20		EVM7JSX30B53	V.RESISTOR 5K	4	
VR322		EVM7JSX30B54	V.RESISTOR 50K	1	
VR324		EVM7JSX30B14	V.RESISTOR 10K	1	
VR327		EVM7JSX30B14	V.RESISTOR 10K	1	
VR328		EVM7JSX30B24	V.RESISTOR 20K	1	
VR329		EVM7JSX30B14	V.RESISTOR 10K	1	
VR523		EVM7JSX30B54	V.RESISTOR 50K	1	
VR525,26		EVM7JSX30B24	V.RESISTOR 20K	2	
VR527		EVM7JSX30B54	V.RESISTOR 50K	1	
VR528,29		EVM7JSX30B14	V.RESISTOR 10K	2	
VR530,31		EVM7JSX30B54	V.RESISTOR 50K	2	
	■	VEP28018H	AUTO FOCUS C.B.A.		(NLA)
			CONNECTOR		
B701		VJP2574	CONNECTOR (MALE)	1	
			CAPACITORS		
C701		ECEA0JU471	E.CAPACITOR 6.3V 470U	1	
C702		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
C703		ECRJA02OE12	TRIMER	1	
C706		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C710,11		ECUM1E473KB	C.CAPACITOR CH 25V 0.047U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C712		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C713		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C714		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C715		ECSF1AE106	T.CAPACITOR 10V 10U	1	
C716-19		ECEA1CKS100	E.CAPACITOR 16V 10U	4	
C720		ECEA0JSN220	E.CAPACITOR 6.3V 22U	1	
C721		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C722-24		ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	3	
C725		ECUM1E683ZFN	C.CAPACITOR CH 25V 0.063U	1	
C726		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C727-29		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	3	
C730		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C731		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C732-35		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C736		ECUM1H221KBV	C.CAPACITOR CH 50V 220P	1	
C737		ECRJA02OE12	TRIMER	1	
C738,39		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
C740,41		ECEA1CKS100	E.CAPACITOR 16V 10U	2	
C742		ECEA1HSN010	E.CAPACITOR 50V 1U	1	
C743		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C744,45		ECEA0JKS470	E.CAPACITOR 6.3V 47U	2	
C746		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C747		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C748		ECEA1CU100	E.CAPACITOR 16V 10U	1	
C749,50		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C755		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
			DIODES		
D701,02		MA141A	DIODE	2	
D703,04		1SS250	DIODE	2	
			FILTERS		
FL701		ELB4B004	FILTER	1	
FL702		VLF0595	FILTER	1	
FL703		ELB4B005	FILTER	1	
FL704		ELB4D001	FILTER	1	
FL705		VLF0596	FILTER	1	
			ICS		
IC701		MN15867VNY	IC	1	
IC702		AN2584NFAP	IC	1	
IC703		NJM4558MP	IC	1	
IC704		AN78N05	IC	1	
IC705		NJM3415M	IC	1	
IC706		AN6663SP	IC	1	
			COILS		
L701		VLQ0300J560	COIL 56UH	1	
L702		VLQEL05F101K	COIL 100UH	1	
L703		VLQEL05F330K	COIL 33UH	1	
L704		VLQEL05F150K	COIL 15UH	1	
			CONNECTORS		
P701		VJP1599T	CONNECTOR(MALE) 6P	1	
P703		VJP1599T	CONNECTOR(MALE) 6P	1	
P704		VJP1596T	CONNECTOR(MALE) 3P	1	
P705		VJP1603T	CONNECTOR(MALE) 10P	1	
			TRANSISTORS		
Q701,02		UN2211	TRANSISTOR-RESISTOR	2	
Q703		2SB710	TRANSISTOR CHIP	1	
Q704		2SA1255	TRANSISTOR	1	
Q705		2SC3138	TRANSISTOR	1	
Q706,07		2SD1819	TRANSISTOR	2	
Q710		XN1212	TRANSISTOR	1	
Q711		XN4501	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R701		ERJ3GEYJ220	M.RESISTOR CH1/20W 22	1	
R702,03		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	2	
R704-06		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	3	
R707,08		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	2	
R709		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R710-13		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	4	
R715,16		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R717		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R718		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R720		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R721		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R722		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R723		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R724,25		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	2	
R726		ERJ3GEYJ124	M.RESISTOR CH1/20W 120K	1	
R727		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R728		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R729		ERJ3GEYJ394	M.RESISTOR CH1/20W 390K	1	
R730		ERJ3GEYJ474	M.RESISTOR CH1/20W 470K	1	
R731		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R732		ERJ3GEG822	M.RESISTOR CH 3W 8.2K	1	
R733		ERJ3GEG472	M.RESISTOR CH 3W 4.7K	1	
R734-38		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	5	
R739		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R740		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R741		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R742		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R743		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R744		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R745		ERJ3GEYJ100	M.RESISTOR CH1/20W 10	1	
R746		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R747		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R748,49		ERJ3GEYJ274	M.RESISTOR CH1/20W 270K	2	
R750		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R751		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R752		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R759		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R760		ERJ6GEYJ470	M.RESISTOR CH 1/10W 47	1	
			TRANSFORMAR		
T701		ETE13K43AY	TRANSFORMAR	1	
VR701		EVML1GA00B53	V.RESISTOR 5K	1	
VR702		EVML1GA00B15	V.RESISTOR 100K	1	
VR703		EVM7JSX30B14	V.RESISTOR 10K	1	
X701		VSX0299	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2318	SHIELD BOX	1	(FOR AUTO FOCUS)
		VSC2719	SHIELD BOX	1	(FOR COIL)
	■	VEP20285A	CAMERA OPERATION C.B.A.		(NLA)NV-MC30E/B/EP/EW
	■	VEP20285B	CAMERA OPERATION C.B.A.		(NLA)NV-MC30EG
			CAPACITORS		
C001,02		ECEA0JKS470	E.CAPACITOR 6.3V 47U	2	
			DIODE		
D001,02		MA151K	DIODE	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTOR		
FP001		VJS2596	CONNECTOR (FEMALE)	1	
			CONNECTORS		
P001		VJP1614T	CONNECTOR(MALE)	1	
P002		VJP1606T	CONNECTOR(MALE)	1	
			TRANSISTORS		
Q001		2SD601	TRANSISTOR CHIP	1	
Q002		2SB709	TRANSISTOR CHIP	1	
Q003		2SD601	TRANSISTOR CHIP	1	
			RESISTORS		
R003		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R004		ERJ6GMYJ124	M.RESISTOR CH1/10W 120K	1	
R005		ERJ6GMYJ154	M.RESISTOR CH1/10W 150K	1	
R006		ERJ6GMY0R00	M.RESISTOR CH 1/10W	1	
R007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R008		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R031		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R032		ERJ6GMYJ394	M.RESISTOR CH1/10W 390K	1	
R033		ERJ6GMYJ153V	M.RESISTOR CH 1/10W 15K	1	
R034		ERJ6GMYJ333	M.RESISTOR CH1/10W 33K	1	
R035		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R036		ERJ6GMYJ153V	M.RESISTOR CH 1/10W 15K	1	
R037		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
			SWITCHES		
SW002-05		EVQQSU04W	SWITCH	4	
SW006		VSS0220	SWITCH	1	
SW007		VSS0236	SWITCH	1	
			VARIABLE RESISTOR		
VR001		EVLH1AA00A54	V.RESISTOR 50K	1	(EXCEPT:NV-MC30B)
	■	VEP30038A	CAMERA OPERATION		(NLA)
		ERDS2TJ891T	RESISTOR 390	1	
		ON2170	PHOTO INTERRUPTER	1	
		VJP1610T	CONNECTOR 6P	1	
	■	VEP27038C	E.V.F. C.B.A.		(NLA)
			CAPACITORS		
C901		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C902		ECSE1CY684V	T.CAPACITOR 16V 0.68U	1	
C903		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C904		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C905		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C906		ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C907		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C908		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C909		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C910		ECUM1H152JP	C.CAPACITOR CH 50V 1500P	1	
C911		ECEA1CKS100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C912		ECEA1AF470	E.CAPACITOR 10V 47U	1	
C913		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C914		ECQK1392JZ	P.CAPACITOR 100V 3900P	1	
C915		ECEA1CKS220I	E.CAPACITOR 16V 22U	1	
C916		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C917		ECEA1HKS4R7	E.CAPACITOR 50V 4.7U	1	
C918		VCKO075K121	C.CAPACITOR 120P	1	
C919		VCKO058K331	C.CAPACITOR 330P	1	
C920,21		ECUX1H473ZFN	C.CAPACITOR CH 50V 0.047U	2	
C922		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
			DIODES		
D901		MA141K	DIODE	1	
D902		ERA91-02	DIODE	1	
D903		ERA34-10	DIODE	1	
D951		LN29CALU	DIODE	1	
			ICS		
IC901		AN2510S	IC	1	
			COILS		
L901		VLQ0321	COIL 320UH	1	
L902		ELH5L313D	COIL	1	
			CONNECTORS		
P901		VJP1600T	CONNECTOR	1	
P902		VJP1597T	CONNECTOR (MALE)	1	
P903		VJP1596T	CONNECTOR	1	
P904		VJP1229T	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q901		2SB1218	TRANSISTOR	1	
Q902		2SD968A	TRANSISTOR	1	
Q903		2SA1532	TRANSISTOR	1	
			RESISTORS		
R901		ERJ3GEYK6R8	M.RESISTOR CH1/20W 6.8	1	
R902		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R903		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R904		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R905		ERJ3GEK4R7	M.RESISTOR CH 3W 4.7	1	
R906		ERJ3GEJ150	M.RESISTOR CH 3W 15	1	
R907		ERJ3GEYJ151	M.RESISTOR CH1/20W 150	1	
R908		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R909		ERJ3GEYJ163	M.RESISTOR CH1/20W 16K	1	
R910		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R911		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R912		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R913		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R914		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R915,16		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R917		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R918		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R919		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R920		ERJ3GEYJ274	M.RESISTOR CH1/20W 270K	1	
R921		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R922		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R923		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R924		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R926		ERJ6GEYJ105	M.RESISTOR CH 1/10W 1M	1	
R927		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R928		ERJ6GEYK335	M.RESISTOR CH 1/10W 3.3M	1	
R929		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R931		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R933		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R934		ERJ3GEK1R5	M.RESISTOR CH 3W 1.5	1	
R951		ERJ6GEYJ151	M.RESISTOR CH 1/10W 150	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
T901		ETF14L34A	TRANSFORMER	1	
TH901		VRTO012	THERMISTER	1	
			VARIABLE RESISTOR		
VR901		EVM7JSX30BE2	V.RESISTOR	1	
VR902		EVM7JSX30B53	V.RESISTOR 5K	1	
VR904		VRV0040B225	V.RESISTOR 2.2M	1	
VR905		VRV0040B105	V.RESISTOR 1M	1	
	■	VEP02318A	MOTOR DRIVE C.B.A.		(NLA)
			CAPACITORS		
C2601		ECEA1CKS470I	E.CAPACITOR 16V 47U	1	
C2602-04		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2605-07		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	3	
C2608		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2609		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2610		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C2611		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2612,13		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C2614		ECEA1CKS470I	E.CAPACITOR 16V 47U	1	
C2615		ECUM1H221JV	C.CAPACITOR CH 50V 220P	1	
C2616,17		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C2618		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2619		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2620		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2621		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2622-24		ECUM1C333ZFV	C.CAPACITOR CH 16V 0.033U	3	
C2625-27		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	3	
C2628		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2630		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
			DIODES		
D2601		DAN202U	DIODE	1	
D2602		MA141K	DIODE	1	
			ICS		
IC2601		TA8402F	IC	1	
IC2602		AN3819FBS	IC	1	
IC2603		UN207	IC	1	
IC2604		ON2170LF	IC	1	
			CONNECTORS		
P2601		VJP2246	CONNECTOR	1	
P2602		VJS2582B015	CONNECTOR	1	
P2603		VJS2325	CONNECTOR	1	
P2604,05		VJP2271	CONNECTOR(MALE)	2	
			TRANSISTORS		
Q2601-03		2SB956	TRANSISTOR	3	(Q,R,S)
Q2604		2SD1819	TRANSISTOR	1	
			RESISTORS		
R2601-03		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	3	
R2604,05		ERJ8GCYJ1R8	M.RESISTOR CH 1/8W 1.8	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2606		ERJ8GCYJ2R2	M.RESISTOR CH 1/8W 2.2	1	
R2607		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R2611		VRE0049	RESISTOR	1	
R2612		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R2613		ERJ3GEYJ274	M.RESISTOR CH1/20W 270K	1	
R2614		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R2615		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R2616		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R2617		ERJ3GEYJ121	M.RESISTOR CH1/20W 120	1	
R2618		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R2619,20		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R2621		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R2622		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
			BARRIER		
Z2601		VMZ1092	BARRIER	1	
			MISCELLANEOUS		
		VMD1275	REEL SENSOR HOLDER (S)	1	
	■	VEP05132D	VIDEO HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C5001		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5002		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5003		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5004		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5005		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5006		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5007		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5008		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5009		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C5010		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5011		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5012		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C5013		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5014		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C5015		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5016,17		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C5018		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C5019		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5020		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C5021		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5022,23		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C5024		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C5026,27		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	2	
C5029		ECUM1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5030		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C5031		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C5032-35		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	4	
C5036-39		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	4	
			IC		
IC5001		AN3311S	IC	1	
			COILS		
L5001		VLQEL04F101K	COIL 100UH	1	
L5003		VLQ0163J470	COIL 47UH	1	
L5004		VLQ0163K100	COIL 10UH	1	
L5005		VLQEL04F120K	COIL 12UH	1	
			CONNECTORS		
P5001		VJP2243	CONNECTOR(MALE)	1	
P5002		VJS2236T	CONNECTOR(FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P5003		VJP2260	CONNECTOR(MALE)	1	
			TRANSISTORS		
Q5001		FMS1	TRANSISTOR-RESISTOR	1	
Q5002-05		2SD1328	TRANSISTOR CHIP	4	
Q5006		FMS1	TRANSISTOR-RESISTOR	1	
Q5007-10		2SD1328	TRANSISTOR CHIP	4	
Q5011		2SB1218	TRANSISTOR	1	
Q5012		2SA812	TRANSISTOR	1	
Q5013		2SA1175	TRANSISTOR	1	
			COMBINATION PARTS		
QR5001,02		FMG1	TRANSISTOR-RESISTOR	2	
QR5003		UN5217	TRANSISTOR-RESISTOR	1	
QR5004,05		FMA2	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R5001		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5002		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5003		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5004-06		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	3	
R5007		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5008		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5009		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5010-12		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	3	
R5013		ERJ3GEYJ100	M.RESISTOR CH1/20W 10	1	
R5014		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5015		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5016		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5017-19		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	3	
R5020		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5021		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5022		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5023-25		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	3	
R5026		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5027-30		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	4	
R5031		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5032		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R5033,34		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R5035		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5037		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R5038		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R5039		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R5040		ERJ8GCYJ4R7	M.RESISTOR CH 1/8W 4.7	1	
R5041-44		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	4	
R5045-48		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	4	
R5049		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R5050		ERJ3GEYJ100	M.RESISTOR CH1/20W 10	1	
			MISCELLANEOUS		
		VSC2609	SHIELD CASE (BOTTOM)	1	
		VMZ1298	BARRIER	1	
	■	VEP05133B	Hi-Fi AUDIO HEAD AMP C.B.A.		(NLA)
			CAPACITORS		
C5501		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5502		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5503		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5504		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5505		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5506		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5507		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C5508		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	1	
C5509		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C5510		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5512		ECUM1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C5513		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5514		ECUM1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C5515		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5518		ECUM1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C5519		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5520		ECUM1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C5521		ECUM1E103KBV	C.CAPACITOR CH 25V 0.01U	1	
C5526-29		ECUM1E223ZFV	C.CAPACITOR CH 25V 0.022U	4	
C5530-33		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	4	
			IC		
IC5501		AN3311S	IC	1	
			COIL		
L5501		VLQEL04F101K	COIL 100UH	1	
			CONNECTORS		
P5501		VJS2117	CONNECTOR	1	
P5502		VJS2118	CONNECTOR	1	
P5503		VJP2271	CONNECTOR(MALE)	1	
			TRANSISTORS		
Q5501		XN6401	TRANSISTOR-RESISTOR	1	
Q5502-05		2SD1328	TRANSISTOR CHIP	4	
Q5506		XN6401	TRANSISTOR-RESISTOR	1	
Q5507-10		2SD1328	TRANSISTOR CHIP	4	
			COMBINATION PARTS		
QR5501,02		FMG1	TRANSISTOR-RESISTOR	2	
QR5504,05		FMA2	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R5501		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5502		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5503		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5504		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R5505		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R5506		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5507		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5508		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5509		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5510		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R5511		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R5512		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5513		ERJ3GEYJ100	M.RESISTOR CH1/20W 10	1	
R5514		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5515		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5516		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5517		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R5518		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R5519		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5520		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5521		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R5522		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R5523		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R5524		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R5525,26		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R5531		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R5535		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R5536,37		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	2	
R5538		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R5539		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R5540-43		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	4	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VSC2605	SHIELD CASE	1	
		VMX1464	SHA SHIELD CASE SPACER	1	
	■	VEP06572B	MAIN C.B.A.		(NLA)
			CAPACITORS		
C1001		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C1002		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1003		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C1004		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C1005		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C1006		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1008		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1009		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C1010		ECEA1CU101	E.CAPACITOR 16V 100U	1	
C1011		ECEA1CU331	E.CAPACITOR 16V 330U	1	
C1012-14		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	3	
C1015		ECEA05KJ471	E.CAPACITOR 470U	1	
C1016		ECEA05KJ221	E.CAPACITOR 220U	1	
C1017		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1019		ECSF1CE476	T.CAPACITOR 16V 47U	1	
C1020		ECEA05KJ221	E.CAPACITOR 220U	1	
C1021		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1022		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1023		ECEA1AKJ121	E.CAPACITOR 10V 120U	1	
C1024,25		ECEA1CKE101	E.CAPACITOR 16V 100U	2	
C1026		ECUM1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1027		ECUM1H682KBV	C.CAPACITOR CH 50V 0.068U	1	
C1030,31		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C1032		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C1033		ECSF1VE156	T.CAPACITOR 35V 15U	1	
C1034,35		ECEA1AKS330	E.CAPACITOR 10V 33U	2	
C1036		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C1037		ECST1EY474ZL	T.CAPACITOR 35V 0.47U	1	
C1038		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2001,02		ECUM1H101JV	C.CAPACITOR CH 50V 100P	2	
C2003		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2004		ECUM1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C2005,06		ECEA0JKS470	E.CAPACITOR 6.3V 47U	2	
C2007		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C2008		ECUM1H101JV	C.CAPACITOR CH 50V 100P	1	
C2009,10		ECEA0JKS220	E.CAPACITOR 6.3V 22U	2	
C2011		ECUM1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C2012		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2013		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C2014		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	1	
C2015,16		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C2017		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2018		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C2019		ECEA1AKA330	E.CAPACITOR 10V 33U	1	
C2020		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C2021,22		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C2023		ECUM1C333ZFV	C.CAPACITOR CH 16V 0.033U	1	
C2024		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2025,26		ECEA0JKA101	E.CAPACITOR 6.3V 100U	2	
C2027		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C2028		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2029		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2030		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2031		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2032		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2033		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2034		ECUM1H101JV	C.CAPACITOR CH 50V 100P	1	
C2035		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2036		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2037		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C2038,39		ECEA1AKS330	E.CAPACITOR 10V 33U	2	
C2040		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2041		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2043		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2044		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2045		ECQV1H393JZ	P.CAPACITOR 50V 0.039U	1	
C2046		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2047		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2048,49		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	2	
C2050		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C2051		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2053		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2055		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C2056		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2060		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3502		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C3506		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3507		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3510,11		ECEA0JKA221	E.CAPACITOR 6.3V 220U	2	
C3512		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3514		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3515		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C3516,17		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C3518		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3519		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3522		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3524		ECUM1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3525		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C3528		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3534		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C3535		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3536		ECEA1ASJ101	E.CAPACITOR 10V 100U	1	
C3537		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3538		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C4005		ECUM1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4007		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4008		ECEA1HSN010	E.CAPACITOR 50V 1U	1	
C4009		ECUM1H271KBV	C.CAPACITOR CH 50V 270P	1	
C4010		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4011		ECUM1H822KBN	C.CAPACITOR CH 50V 8200P	1	
C4012		ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C4013		ECUM1H151JV	C.CAPACITOR CH 50V 150P	1	
C4014		ECSF1VE105GD	T.CAPACITOR 35V 1U	1	
C4015		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4016		ECEA1HKKR47	E.CAPACITOR 50V 0.47U	1	
C4017		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C4018		ECQP1562JZ	P.CAPACITOR 100V 5600P	1	
C4019		ECEA1CKS220	E.CAPACITOR 16V 22U	1	
C4020		ECUM1H391KBV	C.CAPACITOR CH 50V 390P	1	
C4021		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4022		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4023		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C4024		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4025		ECUM1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4026		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4027		ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C4028		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C4029		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4030		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4031		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C4032		ECUM1H183KBN	C.CAPACITOR CH 50V 0.018U	1	
C4033		ECEA0JKK100	E.CAPACITOR 6.3V 10U	1	
C4036		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4037		ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C4039		ECUM1H682KBN	C.CAPACITOR CH 50V 6800P	1	
C4041		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C4044		ECUM1E683ZFN	C.CAPACITOR CH 25V 0.063U	1	
C4045		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4046		ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C6001		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6002		ECEA0JSJ151	E.CAPACITOR 6.3V 150U	1	
C6003		ECRJA030E12	V.CAPACITOR	1	
C6004		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6005		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6006		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6007,08		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6009,10		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C6011		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C6012		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C6013,14		ECEA0JKS220	E.CAPACITOR 6.3V 22U	2	
C6015		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C6016		ECEA1CKS470I	E.CAPACITOR 16V 47U	1	
C6017		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6018,19		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C6020		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6021		ECUM1E104ZFM	C.CAPACITOR CH 25V 0.1U	1	
C6022		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
			DIODES		
D1001		SFPB-64	DIODE	1	
D1002		MA121	DIODE	1	
D1003		SFPB-54	DIODE	1	
D1004		SFPB-59	DIODE	1	
D1005		SFPB-54	DIODE	1	
D1006		MA141A	DIODE	1	
D1007		DAP202U	DIODE	1	
D1008		MA159	DIODE	1	
D1009		MA3075H	DIODE	1	
D1010		MA721	DIODE	1	
D2001-04		DA204U	DIODE	4	
D2005-08		DAN202U	DIODE	4	
D2009		MA141K	DIODE	1	
D2010		MA141A	DIODE	1	
D2011		MA141K	DIODE	1	
D2013,14		MA141K	DIODE	2	
D3501		DAN202U	DIODE	1	
D3502		DA204U	DIODE	1	
D6001		MA141A	DIODE	1	
D6002		DAP202U	DIODE	1	
D6004		MA159	DIODE	1	
D6007		DAP202U	DIODE	1	
D6008,09		DAN202U	DIODE	2	
D6010		MA141K	DIODE	1	
D6012,13		MA141A	DIODE	2	
D6014		DAP202U	DIODE	1	
D6015		MA141A	DIODE	1	
D6016		MA141K	DIODE	1	
D6017		MA141A	DIODE	1	
D6018		DA204U	DIODE	1	
D6020		MA141A	DIODE	1	
D6021		DAP202U	DIODE	1	
D6024		MA3056	DIODE	1	
			ICS		
IC1001		TL1453CNS	IC	1	
IC1002		UPC358G2	IC	1	
IC1003		LM2903M	IC	1	
IC1004		UN215	IC	1	
IC1005		UPC358G2	IC	1	
IC2001		MN67461VDTF	IC	1	
IC2002		AN3798NS	IC	1	
IC2003		MN1551VYJS4	IC	1	
IC4001		UPC1513G	IC	1	
IC4002		UPC2300G	IC	1	
IC6001		UPD75108G793	IC	1	
IC6002		S81250HGRD	IC	1	
IC6003		UPD6142G101A	IC	1	
IC6004		S3500A2	IC	1	
IC6005		M54543ASL	IC	1	
IC6006		MN12821Q	IC	1	
IC6007		UPD4094BG	IC	1	
			JACKS		
J1001		VJJ0165	DC JACK	1	
J3501		VJS1980	AV OUTPUT TERMINAL	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
J6001		VJJ0163	EVF CONNECTOR	1	
J6002		VJJ0169	REMOTE CONTROL JACK	1	
			COILS		
L1001		ELC06D005	COIL	1	
L1002		ELC10C001	COIL	1	
L1003		ELC08D024	COIL	1	
L1004		ELC08D025	COIL 600UH	1	
L1005		ELC06D005	COIL	1	
L1006		ELC04D002	COIL	1	
L1007		VLQEL05F101K	COIL 100UH	1	
L1008		VLQ0319F221	COIL 220UH	1	
L1009		ELC04D006	COIL 120UH	1	
L1010		VLQ0319F221	COIL 220UH	1	
L3501		VLQEL04F680K	COIL 68UH	1	
L3502,03		VLQEL05F101K	COIL 100UH	2	
L3506		VLQEL04F101K	COIL 100UH	1	
L4001		VLQEL05F101K	COIL 100UH	1	
L4002		VLQEL05F221K	COIL 220UH	1	
L4003		VLQEL07R153J	COIL 15mH	1	
L4004		VLQEL07F822J	COIL 8200UH	1	
L6001		VLQEL05F330J	COIL 33UH	1	
L6002		VLQEL04F221K	COIL 200UH	1	
			CONNECTORS		
P1001		VJP1607T	CONNECTOR(MALE)	1	
P1002		VJS2137	CONNECTOR	1	
P1003		VJP2260	CONNECTOR(MALE)	1	
P2001		VJS2583	CONNECTOR	1	
P3501		VJS2628	CONNECTOR	1	
P3503		VJP2237	CONNECTOR(MALE)	1	
P3504		VJP2272	CONNECTOR(MALE)	1	
P4001		VJP1607T	CONNECTOR(MALE)	1	
P4002		VJP1611T	CONNECTOR(MALE)	1	
P4003		VJP2262	CONNECTOR(MALE)	1	
P4004		VJP2263	CONNECTOR	1	
P4005		VJS2123	CONNECTOR	1	
P6001		VJP2260	CONNECTOR(MALE)	1	
P6003		VJS2110	CONNECTOR(FEMALE)	1	
P6004		VJS1984	CONNECTOR	1	
P6005		VJP2272	CONNECTOR(MALE)	1	
P6009		VJP2271	CONNECTOR(MALE)	1	
P6010		VJP2272	CONNECTOR(MALE)	1	
P6013		VJP2271	CONNECTOR(MALE)	1	
			TRANSISTORS		
Q1001,02		2SB956	TRANSISTOR	2	
Q1003		FMW1	TRANSISTOR-RESISTOR	1	
Q1004		2SB956	TRANSISTOR	1	
Q1005		2SD2177S	TRANSISTOR	1	
Q1006,07		2SB956	TRANSISTOR	2	
Q1009		2SB1218	TRANSISTOR	1	
Q2001		2SD1819	TRANSISTOR	1	
Q3505		XN4601	TRANSISTOR	1	
Q3506		2SC3931	TRANSISTOR	1	
Q3507		XN4608X	TRANSISTOR-RESISTOR	1	
Q3510		2SB1218	TRANSISTOR	1	
Q3511		XN4601	TRANSISTOR	1	
Q3515,16		2SB970X	TRANSISTOR	2	
Q3521		2SC3931	TRANSISTOR	1	
Q3522		2SB970	TRANSISTOR	1	
Q4004		2SD1820	TRANSISTOR	1	
Q4005		2SD1819	TRANSISTOR	1	
Q4006		2SB1219	TRANSISTOR	1	
Q4007		2SD1819	TRANSISTOR	1	
Q6001		FMW1	TRANSISTOR-RESISTOR	1	
Q6003		XN4608X	TRANSISTOR-RESISTOR	1	
Q6005,06		2SD1819	TRANSISTOR	2	
			COMBINATION PARTS		
QR1001		XN4111	TRANSISTOR-RESISTOR	1	
QR1002		IMD2	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR1004		GA1F4M	TRANSISTOR-RESISTOR	1	
QR1005		IMD2	TRANSISTOR-RESISTOR	1	
QR1006		GA1L4M	TRANSISTOR-RESISTOR	1	
QR2003		GA1L4M	TRANSISTOR-RESISTOR	1	
QR2004,05		GN1F4Z	TRANSISTOR-RESISTOR	2	
QR2006		GA1L4Z	TRANSISTOR-RESISTOR	1	
QR2007		GA1L4M	TRANSISTOR-RESISTOR	1	
QR2008		FMG1	TRANSISTOR-RESISTOR	1	
QR3503		FMG1	TRANSISTOR-RESISTOR	1	
QR3505		GN1A4M	TRANSISTOR-RESISTOR	1	
QR3511		FMG1	TRANSISTOR-RESISTOR	1	
QR3512		UN5212	TRANSISTOR-RESISTOR	1	
QR4001		GA1F4M	TRANSISTOR-RESISTOR	1	
QR4002		GN1L3Z	TRANSISTOR-RESISTOR	1	
QR4005		GN1L3Z	TRANSISTOR-RESISTOR	1	
QR6001,02		GA1F4Z	TRANSISTOR-RESISTOR	2	
QR6004		GA1F4Z	TRANSISTOR-RESISTOR	1	
QR6005		GN1L4M	TRANSISTOR-RESISTOR	1	
QR6006		GN1A4Z	TRANSISTOR-RESISTOR	1	
QR6008		GA1L4M	TRANSISTOR-RESISTOR	1	
QR6009		XN4316	COMBI.PARTS	1	
QR6010,11		GA1F4Z	TRANSISTOR-RESISTOR	2	
QR6014		GA1L4M	TRANSISTOR-RESISTOR	1	
QR6015		GN1F4M	TRANSISTOR-RESISTOR	1	
QR6016		GA1F4M	TRANSISTOR-RESISTOR	1	
QR6017		GA1L4L	TRANSISTOR-RESISTOR	1	
QR6018		FMG2	TRANSISTOR-RESISTOR	1	
QR6022		GA1F4Z	TRANSISTOR-RESISTOR	1	
QR6024		GN1L4M	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R1001		VRE0034E363	RESISTOR	1	
R1002		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R1003		ERJ3GEYJ124	M.RESISTOR CH1/20W 120K	1	
R1004		ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1	
R1005		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R1006		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R1007		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R1008		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R1009		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R1010		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R1011,12		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	2	
R1013		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R1014		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R1016		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R1017		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R1018		ERJ8GCYJ821	M.RESISTOR CH 1/8W 820	1	
R1019		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R1020		ERJ8GCYJ681	M.RESISTOR CH 1/8W 680	1	
R1021		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R1023		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R1024		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R1025		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R1026		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R1027		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R1028		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R1029,30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R1031		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R1032		ERJ6GMYJ153V	M.RESISTOR CH 1/10W 15K	1	
R1033		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1034		ERJ6GMYG154	M.RESISTOR CH1/10W 150K	1	
R1035		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R1036		ERJ6GMYJ561	M.RESISTOR CH1/10W 560	1	
R1037		ERJ8GCYJ330	M.RESISTOR CH 1/8W 33	1	
R1038		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R1039		ERJ8GCYJ560	M.RESISTOR CH 1/8W 56	1	
R1040		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R1041		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R1042		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R1043		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R1044,45		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R1046		VSF0059	FUSE	1	
R1047		VSF0015A15	FUSE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1048		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R1049		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R1050		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R1051		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R1052		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R1060		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R1061		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R2001,02		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R2003		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R2004		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R2005,06		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R2007		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R2009		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R2010		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R2011		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R2012		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R2013		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R2014		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R2015		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R2016		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R2017		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R2018		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R2019		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R2020		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R2022		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R2024		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R2025		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R2026		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R2028		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2029		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R2030		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R2031		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R2032		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R2033		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R2034		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R2035		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R2036		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R2038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2041		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R2043		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R2045		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R2046		ERJ8GCY0R00	M.RESISTOR CH 1/8W 0.00	1	
R2047		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R2048		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2049-51		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	3	
R2052		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R2053		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R2054		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	1	
R2055		ERJ3GEYJ184	M.RESISTOR CH1/20W 180K	1	
R2056		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R2057		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R2059		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R2061		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R2062		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R2063		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3503		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R3515		ERJ6GMY0R00	M.RESISTOR CH 1/10W	1	
R3518		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R3519		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R3520		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R3521		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3526		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3527		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3528		ERJ3GEYJ560	M.RESISTOR CH1/20W 56	1	
R3529		ERJ3GEYJ220	M.RESISTOR CH1/20W 22	1	
R3530		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3531		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R3532		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R3533		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R3534		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R3535		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R3536		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R3537		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3540		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3541-43		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3544		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R3545		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R3546		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3547		ERJ3GEG681	M.RESISTOR CH 3W 680	1	
R3548		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R3549		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R3552		ERJ3GEYG471	M.RESISTOR CH1/20W 470	1	
R3557,58		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	2	
R3559		ERJ3GEG681	M.RESISTOR CH 3W 680	1	
R3563		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R3567		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R3568		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3569,70		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	2	
R4009,10		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	2	
R4013		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R4014		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R4015		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4016		ERJ3GEYJ184	M.RESISTOR CH1/20W 180K	1	
R4017		ERJ3GEYJ181	M.RESISTOR CH1/20W 180	1	
R4018		ERJ3GEYJ151	M.RESISTOR CH1/20W 150	1	
R4019		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R4020-22		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	3	
R4023		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4024		ERJ3GEYJ100	M.RESISTOR CH1/20W 10	1	
R4025		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R4026		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4029		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4030		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R4032		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R4033		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R4034		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R4035		ERJ3GEYJ181	M.RESISTOR CH1/20W 180	1	
R4036		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R4040		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R4041		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	1	
R4042		ERJ3GEYJ684	M.RESISTOR CH1/20W 680K	1	
R4043		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R4045		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R4046		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R4051		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R4052		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R4053		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R4055		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R6001		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6004		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R6006		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R6007-09		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	3	
R6010		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6011		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6012		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6014		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R6015		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R6016		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6017		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R6018		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R6019		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R6020		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6021		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R6022		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R6023		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R6024		ERJ3GEYJ124	M.RESISTOR CH1/20W 120K	1	
R6025		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R6026		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R6027		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R6028		ERJ3GEYJ124	M.RESISTOR CH1/20W 120K	1	
R6029		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6030,31		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	2	
R6032		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6033		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R6034		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R6035		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R6036		ERJ3GEYJ184	M.RESISTOR CH1/20W 180K	1	
R6037,38		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R6039		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6040		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6043		ERJ6GMYJ100	M.RESISTOR CH1/10W 10	1	
R6044		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6045		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R6046		ERJ3GEYJ184	M.RESISTOR CH1/20W 180K	1	
R6047		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6048		ERJ3GEYJ394	M.RESISTOR CH1/20W 390K	1	
R6049		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R6050,51		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6052,53		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R6054		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R6055,56		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R6057-60		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	4	
R6061		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6062		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R6063		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R6064-67		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	4	
R6068		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R6069		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R6070-73		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	4	
R6074		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R6075		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	1	
R6076		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R6077		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R6078		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R6079		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6080		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R6081		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6082,83		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	2	
R6084		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R6085		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R6086		ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R6087		ERJ8GCYJ332	M.RESISTOR CH 1/8W 3.3K	1	
R6088,89		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	2	
R6090		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6091,92		ERJ3GEYJ683	M.RESISTOR CH1/20W 68K	2	
			SWITCHES		
SW6001,02		EVQQFV02K	SWITCH	2	
SW6003,04		EVQQSH04K	SWITCH	2	
			TRANSFORMERS		
T1001		ELL10R018	TRANSFORMER	1	
T4001		EIQ7QF017Q	TRANSFORMER	1	
T4002		EIQ5QT006Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR1001		EVM7JSX30B23	V.RESISTOR 2K	1	
VR1002		EVM7JSX30B13	V.RESISTOR 1K	1	
VR1003		EVM7JSX30B53	V.RESISTOR 5K	1	
VR2001		EVM7JSX30B15	V.RESISTOR 100K	1	
VR4001		EVM7JSX30B23	V.RESISTOR 2K	1	
VR4002		EVM7JSX30B54	V.RESISTOR 50K	1	
VR6001		EVM7JSX30B24	V.RESISTOR 20K	1	
			CRYSTAL OSCILLATORS		
X2001		VSX0154	CRYSTAL OSCILLATOR	1	
X6001		VSX0299	CRYSTAL OSCILLATOR	1	
X6002		VSX0249	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2642	POWER SHIELD CASE (TOP)	1	
		VSC2643	POWER SHIELD CASE (BOTTOM)	1	
		VMZ1328	SHIELD PLATE	1	
		VMX1563	SHIELD PLATE	1	
		VMZ1339	INSULATION SHEET	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03617B	LUMINANCE & CHROMINANCE		
			PACK C.B.A.		(NLA)
			CAPACITORS		
C3001		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3002		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3003		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3004,05		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3006		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3007		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3008		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3010		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C3011		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3012		ECEA1CKS220	E.CAPACITOR 16V 22U	1	
C3013,14		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3015,16		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C3017		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3018		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3019		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3020		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3022		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3023,24		ECEA0JSJ151	E.CAPACITOR 6.3V 150U	2	
C3025		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3026		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C3027		ECEA1CSN4R7	E.CAPACITOR 16V 4.7U	1	
C3028		ECST1VY104ZR	T.CAPACITOR 35V 0.1U	1	
C3029		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3032		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3033-37		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	5	
C3038		ECUM1H681JN	C.CAPACITOR CH 50V 680P	1	
C3039		ECUM1H470JCV	C.CAPACITOR CH 50V 47P	1	
C3043		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3044		ECUM1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3046		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3048		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C3050		ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	1	
C3051		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3052		ECUM1H101JV	C.CAPACITOR CH 50V 100P	1	
C3053		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3054		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3056		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3057		ECEA1HKS2R2	E.CAPACITOR 50V 2.2U	1	
C3058		ECUM1H273ZFN	C.CAPACITOR CH 50V 0.027U	1	
C3060		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C3076-78		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C3079		ECUM1E223ZFV	C.CAPACITOR CH 25V 0.022U	1	
C3082		ECUM1H100CCV	C.CAPACITOR CH 50V 10P	1	
C3083-86		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C3088		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C3089		ECUX1H471JN	C.CAPACITOR CH 50V 470P	1	
C3090		ECUM1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C3091		ECUX1H471JN	C.CAPACITOR CH 50V 470P	1	
C3092		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3093		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3094		ECUM1H391JCN	C.CAPACITOR CH 50V 390P	1	
C3095		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3096		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3098,99		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3100		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C3102		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3107		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3108		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C3109		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3110		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3113		ECSF1CE106	T.CAPACITOR 16V 10U	1	
C3114		ECUM1H681KBV	C.CAPACITOR CH 50V 680P	1	
C3115		ECUM1H392KBV	C.CAPACITOR CH 50V 3900P	1	
C3116		ECUM1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3117		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C8001		ECEA1CKK100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8002		ECUM1E223ZFV	C.CAPACITOR CH 25V 0.022U	1	
C8003		ECUM1H271JV	C.CAPACITOR CH 50V 270P	1	
C8004		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C8005		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C8006-18		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	13	
C8019		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C8020		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C8021		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8022		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C8023,24		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8025		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C8026		ECUM1H030CCV	C.CAPACITOR CH 50V 3P	1	
C8027		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C8028		ECEA0JSJ151	E.CAPACITOR 6.3V 150U	1	
C8029		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8030		ECUM1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8031-35		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	5	
C8036		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C8037		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C8038		ECUM1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C8039		ECEA1HKK0R1	E.CAPACITOR 50V 0.1U	1	
C8041		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8043		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8045		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C8047,48		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C8049		ECEA0JKS220	E.CAPACITOR 6.3V 22U	1	
C8050		ECUM1H153ZFV	C.CAPACITOR CH 50V 0.015U	1	
C8051		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C8052		ECUM1H221JV	C.CAPACITOR CH 50V 220P	1	
C8061		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	1	
C8062		ECUM1H270JCV	C.CAPACITOR CH 50V 27P	1	
C8063		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C8064		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8065		ECUM1H100CCV	C.CAPACITOR CH 50V 10P	1	
C8066		ECUM1H820JCV	C.CAPACITOR CH 50V 82P	1	
C8068		ECUM1H390JCV	C.CAPACITOR CH 50V 39P	1	
C8069		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8070		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8071		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C8072		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C8075,76		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C8077		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8078		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C8080		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8081		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C8082		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C8085		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8086		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C8095		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8102		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C8105		ECST1VY104ZR	T.CAPACITOR 35V 0.1U	1	
C8108		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C8111		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C8112		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8114,15		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	2	
C8116		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C8117		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C8118		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8501		ECUM1E223ZFV	C.CAPACITOR CH 25V 0.022U	1	
C8502		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8503		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C8504		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8506-08		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	3	
C8509		ECUM1H680JCV	C.CAPACITOR CH 50V 68P	1	
C8510		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8511,12		ECUM1H220JCV	C.CAPACITOR CH 50V 22P	2	
C8513		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C8514,15		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C8516		ECUM1H152KBV	C.CAPACITOR CH 50V 1500P	1	
C8517		ECUM1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C8518		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C8519,20		ECUM1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
			DIODES		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D3001,02		DAN202U	DIODE	2	
D3003		MA141K	DIODE	1	
D3004		DAN202U	DIODE	1	
D8001		MA141K	DIODE	1	
D8002		MA141A	DIODE	1	
D8003		MA121	DIODE	1	
			DELAY		
DL8001		VLD0174	DELAY	1	
			FILTERS		
FL3001		ELB4C014	FILTER	1	
FL3003		ELB4A010	FILTER	1	
FL3004		VLF0720	FILTER	1	
FL8001		ELB4B010	FILTER	1	
FL8002		ELB4B048	FILTER	1	
FL8003		VLF0625	FILTER	1	
FL8004		VLF0797T	FILTER	1	
FL8008		ELB4B024	FILTER	1	
FL8009		VLF0750	FILTER	1	
FL8501		VLF0733	FILTER	1	
			ICS		
IC3002		MST001MS	IC	1	
IC3003		AN3237FB	IC	1	
IC3004		MSM6965-3MS	IC	1	
IC8001		M52059FP	IC	1	
IC8002		MSM6989MS	IC	1	
IC8003		BA7131F	IC	1	
IC8006		MST001MS	IC	1	
IC8501		AN3592S	IC	1	
			COILS		
L3002		VLQ0163F180	COIL 18UH	1	
L3005		VLQ0163J101	COIL 100UH	1	
L3006		VLQ0163J121	COIL 120UH	1	
L3007		VLQ0163J221	COIL 220UH	1	
L3008		VLQ0163K3R9	COIL 3.9UH	1	
L3009		VLQ0163J121	COIL 120UH	1	
L3010		VLQEL05F101K	COIL 100UH	1	
L3011		VLQEL04F101K	COIL 100UH	1	
L3012		VLQEL05F101K	COIL 100UH	1	
L3014		VLQEL05F101K	COIL 100UH	1	
L3016		VLQEL05F101K	COIL 100UH	1	
L3017		VLQ0163J151	COIL 150UH	1	
L3018		VLQ0163J330	COIL 33UH	1	
L3019		VLQ0163J150	COIL 15UH	1	
L8003,04		VLQEL05F101K	COIL 100UH	2	
L8005		VLQEL04F101K	COIL 100UH	1	
L8008		VLQ0163K100	COIL 10UH	1	
L8009		VLQ0163K560	COIL 56UH	1	
L8012		VLQEL05F101K	COIL 100UH	1	
L8013		VLQ0163K150	COIL 15UH	1	
L8014		VLQEL05F681K	COIL 680UH	1	
L8015		VLQ0163J121	COIL 120UH	1	
L8016		VLQEL05F101K	COIL 100UH	1	
L8017,18		VLQ0163K101	COIL 100UH	2	
L8019		VLQEL05F101K	COIL 100UH	1	
L8501		VLQ0163K100	COIL 10UH	1	
L8502		VLQ0163K330	COIL 33UH	1	
			CONNECTORS		
P3001		VJS2237	CONNECTOR	1	
P8501		VJR0514	CONNECTOR	1	
P8502		VJR0368	CONNECTOR	1	
			TRANSISTORS		
Q3001		2SD1820	TRANSISTOR	1	
Q3002		2SB1219	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q3003		2SC3931	TRANSISTOR	1	
Q3006,07		2SD1819	TRANSISTOR	2	
Q3009		2SD1819	TRANSISTOR	1	
Q3011		2SC3931	TRANSISTOR	1	
Q3012		2SD1819	TRANSISTOR	1	
Q3015		2SD1819	TRANSISTOR	1	
Q8006,07		2SD1819	TRANSISTOR	2	
Q8013		XN4501	TRANSISTOR	1	
Q8014		2SD1819	TRANSISTOR	1	
Q8016		XN4601	TRANSISTOR	1	
Q8501		2SD1819	TRANSISTOR	1	
Q8502		XN6501	TRANSISTOR	1	
Q8503		XN4501	TRANSISTOR	1	
Q8504		XN4601	TRANSISTOR	1	
			COMBINATION PARTS		
QR3005		XN6212	TRANSISTOR-RESISTOR	1	
QR3011		GA1F4M	TRANSISTOR-RESISTOR	1	
QR3012		GA1L4M	TRANSISTOR-RESISTOR	1	
QR3013		GA1F4M	TRANSISTOR-RESISTOR	1	
QR3017		GA1F4M	TRANSISTOR-RESISTOR	1	
QR3020		GA1F4M	TRANSISTOR-RESISTOR	1	
QR3029		GA1L4M	TRANSISTOR-RESISTOR	1	
QR3035,36		GA1F4M	TRANSISTOR-RESISTOR	2	
QR3038		XN1115	TRANSISTOR-RESISTOR	1	
QR8001		XN6212	TRANSISTOR-RESISTOR	1	
QR8002		GA1F4M	TRANSISTOR-RESISTOR	1	
QR8004,05		GA1F4M	TRANSISTOR-RESISTOR	2	
QR8006		FMW1	TRANSISTOR-RESISTOR	1	
QR8007		FMG2	TRANSISTOR-RESISTOR	1	
QR8008		GA1F4M	TRANSISTOR-RESISTOR	1	
QR8012,13		XN6212	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R3004		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3005		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3006		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R3008		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3009		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R3010		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R3013		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3015,16		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R3017		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R3018		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R3019		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R3020		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R3022		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R3023		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3025		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R3027		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3029		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3030		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R3031,32		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	2	
R3033		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R3036		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3037		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R3039		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3041		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R3043		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R3045		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R3046,47		ERJ3GEYJ270	M.RESISTOR CH1/20W 27	2	
R3048,49		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	2	
R3050		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R3051		ERJ3GEYJ121	M.RESISTOR CH1/20W 120	1	
R3052		ERJ3GEYJ270	M.RESISTOR CH1/20W 27	1	
R3053		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R3056		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R3057,58		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R3059		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R3060		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R3061,62		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	2	
R3063		ERJ6GMYJ225	M.RESISTOR CH1/10W 2.2M	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3066		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R3067,68		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R3081		ERJ3GEYJ564	M.RESISTOR CH1/20W 560K	1	
R3082		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R3083		ERJ3GEYJ474	M.RESISTOR CH1/20W 470K	1	
R3088		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R3089		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R3090		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3093		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R3097		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R3100		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3102		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R3103,04		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R3107		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R3108		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R3109		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R3113		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R3115,16		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R3117		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R3118		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R3119		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3120		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R3121		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R3123		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R3125		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3127		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R3133		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R3135		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3136		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R3139,40		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	2	
R3141		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R3143		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R3145		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R3147		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R8001-03		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	3	
R8004		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R8005		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8009		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R8010		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R8011		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R8012		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8013		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R8014		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R8015		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R8016		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R8017		ERJ3GEYJ822	M.RESISTOR CH1/20W 8.2K	1	
R8018		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R8019		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R8020		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R8025,26		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R8027		ERJ3GEJ433	M.RESISTOR CH 3W 43K	1	
R8028		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R8029		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8030-33		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	4	
R8036		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R8037		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R8038		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8039		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R8040,41		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R8042		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R8043		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R8044		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R8045		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R8046		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R8047		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R8048		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R8049		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R8050		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8051		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R8052		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R8053		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R8054		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R8073		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R8074		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R8078		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8079		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R8080		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8088		ERJ3GEYJ271	M.RESISTOR CH1/20W 270	1	
R8095		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R8096		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R8097		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R8100		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R8101		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8102		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R8103		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8105		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8106		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R8107,08		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	2	
R8109		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R8110		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R8111		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8113		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R8116		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8123		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8501		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8502		ERJ3GEYJ153	M.RESISTOR CH1/20W 15K	1	
R8503		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R8504		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R8505		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8506		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R8507		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R8508		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R8509		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R8510		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R8511		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R8512		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8513		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R8514		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	1	
R8515		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R8516		ERJ3GEYJ821	M.RESISTOR CH1/20W 820	1	
R8517		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R8518		ERJ3GEYJ101	M.RESISTOR CH1/20W 100	1	
R8519		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R8520		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R8521		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R8522		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8523		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	
R8524		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R8525,26		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	2	
R8527		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R8528		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
			VARIABLE RESISTORS		
VR3001		EVM7JSX30B23	V.RESISTOR 2K	1	
VR3003		EVM7JSX30B24	V.RESISTOR 20K	1	
VR3004		EVM7JSX30B54	V.RESISTOR 50K	1	
VR3005		EVM7NSW00B23	V.RESISTOR 2K	1	
VR3006,07		EVM7JSX30B24	V.RESISTOR 20K	2	
VR3008		EVM7JSX30B53	V.RESISTOR 5K	1	
VR3009		EVM7JSX30B14	V.RESISTOR 10K	1	
VR3013		EVM7JSX30B52	V.RESISTOR 500	1	
VR8001		EVM7NSW00B13	V.RESISTOR 47K	1	
VR8003		EVM7JSX30B14	V.RESISTOR 10K	1	
VR8004		EVM7JSX30B54	V.RESISTOR 50K	1	
VR8005		EVM7JSX30B23	V.RESISTOR 2K	1	
VR8007		EVM7JSX30B24	V.RESISTOR 20K	1	
			CHRISTAL OSCILLATOR		
X8001		VSX0188	CHRISTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC2721	BARRIER	1	
	■	VMZ1379	BARRIER		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP04276A	Hi-Fi AUDIO C.B.A.		(NLA)
			CAPACITORS		
C4501		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4502,03		ECEA1VKG6R8	E.CAPACITOR 35V 6.8U	2	
C4504		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C4505		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C4506		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4507		ECEA0JSN470	E.CAPACITOR 6.3V 47U	1	
C4508		ECEA1CSN220	E.CAPACITOR 16V 22U	1	
C4509		ECUM1E103KBN	C.CAPACITOR CH 25V 0.01U	1	
C4510		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	1	
C4511		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4513		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4514		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C4515		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4516		ECEA1ASN100	E.CAPACITOR 10V 10U	1	
C4517		ECEA1CKS470I	E.CAPACITOR 16V 47U	1	
C4518		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C4519		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4520,21		ECEA1CKK100	E.CAPACITOR 16V 10U	2	
C4522		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C4523		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4524		ECEA1CSE680	E.CAPACITOR 16V 68U	1	
C4525		ECEA1VSN2R2	E.CAPACITOR 35V 2.2U	1	
C4526		ECUM1E103KBN	C.CAPACITOR CH 25V 0.01U	1	
C4527		ECEA1CSN220	E.CAPACITOR 16V 22U	1	
C4528		ECEA0JSN470	E.CAPACITOR 6.3V 47U	1	
C4529		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4530		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	1	
C4531		ECUM1E223KBN	C.CAPACITOR CH 25V 0.023U	1	
C4532,33		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	2	
C4534		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4535		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4536		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4537,38		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C4539-41		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C4542		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4543		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4544,45		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C4546		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C4547		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4548		ECUM1H271JV	C.CAPACITOR CH 50V 270P	1	
C4549,50		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C4551,52		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
C4553		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4554		ECUM1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4555		ECEA1HKK010	E.CAPACITOR 50V 1U	1	
C4556		ECUM1H471KBV	C.CAPACITOR CH 50V 470P	1	
C4557,58		ECEA1CKK100	E.CAPACITOR 16V 10U	2	
C4559		ECQV1H473JZ	P.CAPACITOR 50V 0.047U	1	
C4560		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4561		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4562-64		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C4568		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4569		ECUM1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4570		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C4571		ECEA0GKS101	E.CAPACITOR 100U	1	
C4575		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C4576		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4577		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C4578,79		ECEA1CKK100	E.CAPACITOR 16V 10U	2	
C4580		ECEA1CKS470I	E.CAPACITOR 16V 47U	1	
C4581		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C4582		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C4583		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4584		ECEA1ASE101	E.CAPACITOR 10V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4585		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4586		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4587		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4588		ECUM1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4589		ECUM1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4590		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C4591		ECEA1ASE101	E.CAPACITOR 10V 100U	1	
C4592		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C4593		ECEA1EKK3R3	E.CAPACITOR 25V 3.3U	1	
C4595,96		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	2	
C4597,98		ECUM1H272KBV	C.CAPACITOR CH 50V 2700U	2	
C4599,00		ECEA1ASN100	E.CAPACITOR 10V 10U	2	
C4601,02		ECEA1AKA330	E.CAPACITOR 10V 33U	2	
C4603,04		ECEA0JKA101	E.CAPACITOR 6.3V 100U	2	
C4605		ECEA1CKA101	E.CAPACITOR 16V 100U	1	
C4606		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4607,08		ECEA1EKK4R7	E.CAPACITOR 25V 4.7U	2	
			DIODES		
D4501		DAP202U	DIODE	1	
D4502-06		MA141K	DIODE	5	
D4507		DAN202U	DIODE	1	
D4508,09		MA157	DIODE	2	
D4510		MA141K	DIODE	1	
D4511		DA204U	DIODE	1	
D4513		MA141K	DIODE	1	
D4514,15		MA3056	DIODE	2	
D4516		MA143	DIODE	1	
D4517		MA3056	DIODE	1	
D4521		MA715	DIODE	1	
D4523		MA715	DIODE	1	
			FILTERS		
FL4501		VLF0736	FILTER	1	
FL4502		VLF0735	FILTER	1	
			ICS		
IC4501		AN3972FB	IC	1	
IC4502		AN3932S	IC	1	
IC4503		AN3799S	IC	1	
IC4504		BA3308	IC	1	
			COILS		
L4501		VLQEL05F101K	COIL 100UH	1	
L4503-05		VLQEL05F101K	COIL 100UH	3	
			CONNECTORS		
P4501		VJP1610T	CONNECTOR	1	
P4502		VJS2141	CONNECTOR	1	
P4503		VJS2136	CONNECTOR	1	
P4506		VJP1608T	CONNECTOR(MALE)	1	
P4507		VJP1607T	CONNECTOR(MALE)	1	
			TRANSISTORS		
Q4501		2SD1328	TRANSISTOR CHIP	1	
Q4502		2SB1218	TRANSISTOR	1	
Q4503		2SD1328	TRANSISTOR CHIP	1	
Q4504		2SB1218	TRANSISTOR	1	
Q4505-07		2SD1819	TRANSISTOR	3	
Q4508		2SD1820	TRANSISTOR	1	
Q4509		2SB1218	TRANSISTOR	1	
Q4512		2SD1819	TRANSISTOR	1	
Q4518		2SD1819	TRANSISTOR	1	
Q4519		2SD601	TRANSISTOR CHIP	1	
Q4520		2SB1218	TRANSISTOR	1	
Q4521		2SB956	TRANSISTOR	1	
Q4522,23		2SB970X	TRANSISTOR	2	
Q4524		2SB956	TRANSISTOR	1	
Q4525		2SD1819	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q4526		2SD1328	TRANSISTOR CHIP	1	
Q4527,28		2SA1531	TRANSISTOR	2	
Q4529,30		2SD1819	TRANSISTOR	2	
Q4531,32		XN4601	TRANSISTOR	2	
			COMBINATION PARTS		
QR4501		GA1L4M	TRANSISTOR-RESISTOR	1	
QR4502		GN1L4M	TRANSISTOR-RESISTOR	1	
QR4503		GA1L4M	TRANSISTOR-RESISTOR	1	
QR4504		FMW1	TRANSISTOR-RESISTOR	1	
QR4505-08		GA1L4M	TRANSISTOR-RESISTOR	4	
QR4509		GA1F4Z	TRANSISTOR-RESISTOR	1	
QR4510,11		GA1L4M	TRANSISTOR-RESISTOR	2	
QR4512		FMW1	TRANSISTOR-RESISTOR	1	
QR4513,14		GA1L4M	TRANSISTOR-RESISTOR	2	
QR4515		GN1L4M	TRANSISTOR-RESISTOR	1	
QR4516		FMG2	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R4501		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	1	
R4502		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R4503		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4504,05		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	2	
R4506		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R4507,08		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R4509		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R4510		ERQS2CKG1002	M.RESISTOR 1/4W 10K	1	
R4511		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R4512		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R4513		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4514		ERJ3GEYJ823	M.RESISTOR CH1/20W 82K	1	
R4515,16		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	2	
R4517		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R4518		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R4519		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R4520		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	1	
R4521		ERQS2CKG1202	M.RESISTOR 1/4W 12K	1	
R4522		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4523		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R4526		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R4527		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R4528		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4529		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R4530,31		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	2	
R4532		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R4533		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R4534		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4535		ERJ3GEYJ474	M.RESISTOR CH1/20W 470K	1	
R4536,37		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	2	
R4538		ERJ3GEYJ474	M.RESISTOR CH1/20W 470K	1	
R4539		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4540		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R4541,42		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R4543		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R4544		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R4545		ERJ3GEYJ331	M.RESISTOR CH1/20W 330	1	
R4546		ERJ3GEYJ121	M.RESISTOR CH1/20W 120	1	
R4547		ERJ3GEYJ390	M.RESISTOR CH1/20W 39	1	
R4548		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R4549		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R4550		ERJ3GEYJ182	M.RESISTOR CH1/20W 1.8K	1	
R4551,52		ERJ3GEYJ270	M.RESISTOR CH1/20W 27	2	
R4553		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4554		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R4555		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4556		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R4557		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4558,59		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	2	
R4560		ERJ3GEYJ224	M.RESISTOR CH1/20W 220K	1	
R4561		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4562,63		VSF0014A08	IC PROTECTOR	2	
R4564		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4568		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R4569		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R4570,71		ERJ3GEYJ183	M.RESISTOR CH1/20W 18K	2	
R4572		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	1	
R4573		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R4574		ERJ3GEYJ393	M.RESISTOR CH1/20W 39K	1	
R4575		ERJ3GEYJ332	M.RESISTOR CH1/20W 3.3K	1	
R4576		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	1	
R4577		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4578		ERJ3GEYJ681	M.RESISTOR CH1/20W 680	1	
R4579		ERJ3GEYJ682	M.RESISTOR CH1/20W 6.8K	1	
R4580		ERJ3GEYJ152	M.RESISTOR CH1/20W 1.5K	1	
R4581		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	1	
R4582,83		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	2	
R4584		ERJ3GEYJ561	M.RESISTOR CH1/20W 560	1	
R4585		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4586		ERJ3GEYJ471	M.RESISTOR CH1/20W 470	1	
R4587		ERJ3GEYJ564	M.RESISTOR CH1/20W 560K	1	
R4588		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R4589		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R4590		VRE0034E163	M.RESISTOR 16K	1	
R4591		VRE0034E273	M.RESISTOR 27K	1	
R4592		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4593,94		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	2	
R4595		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R4596		ERJ3GEYJ563	M.RESISTOR CH1/20W 56K	1	
R4597		ERJ3GEYJ105	M.RESISTOR CH1/20W 1M	1	
R4598		ERJ8GCYJ221	M.RESISTOR CH 1/8W 220	1	
R4599		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4600		ERJ3GEYJ124	M.RESISTOR CH1/20W 120K	1	
R4601,02		ERJ3GEYJ154	M.RESISTOR CH1/20W 150K	2	
R4603		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	1	
R4604		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	1	
R4605		ERJ3GEYJ392	M.RESISTOR CH1/20W 3.9K	1	
R4606		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4607		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R4608		VRE0034E273	M.RESISTOR 27K	1	
R4609		VRE0034E163	M.RESISTOR 16K	1	
R4610		ERJ3GEYJ391	M.RESISTOR CH1/20W 390	1	
R4611		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4612		ERJ3GEYJ334	M.RESISTOR CH1/20W 330K	1	
R4613,14		ERJ3GEY0R00	M.RESISTOR CH1/20W 0	2	
R4615		ERJ3GEYJ102	M.RESISTOR CH1/20W 1K	1	
R4616,17		ERJ3GEYJ123	M.RESISTOR CH1/20W 12K	2	
R4618,19		ERJ3GEYJ562	M.RESISTOR CH1/20W 5.6K	2	
R4621		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	1	
R4622,23		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	2	
R4624-27		ERJ3GEYJ104	M.RESISTOR CH1/20W 100K	4	
R4628,29		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	2	
R4630,31		ERJ3GEYJ221	M.RESISTOR CH1/20W 220	2	
R4632,33		ERJ3GEYJ122	M.RESISTOR CH1/20W 1.2K	2	
R4634,35		ERJ3GEYJ333	M.RESISTOR CH1/20W 33K	2	
R4636,37		ERJ3GEYJ222	M.RESISTOR CH1/20W 2.2K	2	
R4638,39		ERJ3GEYJ473	M.RESISTOR CH1/20W 47K	2	
R4640,41		ERDS2T0	C.RESISTOR 1/4W 0	2	
R4642		ERJ3GEYJ223	M.RESISTOR CH1/20W 22K	1	
R4643		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R4644		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4645		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4646		ERJ3GEYJ472	M.RESISTOR CH1/20W 4.7K	1	
R4647		ERJ3GEYJ103	M.RESISTOR CH1/20W 10K	1	
R4648		ERJ3GEYJ272	M.RESISTOR CH1/20W 2.7K	1	
R4649,50		ERJ3GEYJ273	M.RESISTOR CH1/20W 27K	2	
			VARIABLE RESISTORS		
VR4501,02		EVM7JSX30B14	V.RESISTOR 10K	2	
VR4503		EVM7JSX30B23	V.RESISTOR 2K	1	
VR4504		EVM7JSX30B24	V.RESISTOR 20K	1	
VR4505		EVM7JSX30B54	V.RESISTOR 50K	1	
VR4507		EVM7JSX30B14	V.RESISTOR 10K	1	
VR4508		EVM7JSX30B24	V.RESISTOR 20K	1	
VR4509		EVM7JSX30B53	V.RESISTOR 5K	1	
VR4510		EVM7JSX30B15	V.RESISTOR 100K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP06515C	OPERATION C.B.A.		(NLA)
D6301,6302		MA151A	DIODE	2	
D6303		MA151WA	DIODE	1	
D6305-6311		LN1261C	LED	7	
QR6301		UN2114	TRANSISTOR-RESISTOR	1	
R6301		ERJ8GMYJ330	C.RESISTOR CH 1/8W 33	1	
R6302,6303		ERJ6GMYJ330	C.RESISTOR CH 1/10W 33	2	
R6304		ERJ6GMYJ103	C.RESISTOR CH 1/10W 10K	1	
R6305		ERJ6GMYJ181	C.RESISTOR CH 1/10W 180	1	
R6306		ERJ6GMYJ221	C.RESISTOR CH 1/10W 220	1	
R6307		ERJ6GMYJ271	C.RESISTOR CH 1/10W 270	1	
R6308		ERJ6GMYJ471	C.RESISTOR CH 1/10W 470	1	
R6309		ERJ6GMYJ820	C.RESISTOR CH 1/10W 820	1	
R6310		ERJ6GMYJ182	C.RESISTOR CH 1/10W 1.8K	1	
R6311		ERJ6GMYJ330	C.RESISTOR CH 1/10W 33	1	
P6301		VJS2694	CONNECTOR(18P)	1	
P6302		VJS2695	CONNECTOR(5P)	1	
P6303		VJS2696	CONNECTOR(6P)	1	
	■	VEK4033	SUB OPERATION C.B.A.		(NLA)
			DIODES		
D6401-03		MA165	DIODE	3	
D6404		PG2222SY	DIODE	1	
P6401		VJS2582B006	CONNECTOR	1	
P6402		VJP1608T	CONNECTOR(MALE)	1	
			RESISTORS		
R6401		ERDS2TJ391	C.RESISTOR 1/4W 390	1	
R6402		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
			SWITCHES		
SW6401,02		EVQQSU04W	SWITCH	2	
SW6403		ESD1132333	SWITCH	1	
SW6404		ESD1131233	SWITCH	1	
	■	VEK3970	START/STOP SW C.B.A.		(NLA)
S1501		EVQQSU04W	SWITCH	1	
	■	VEK3976	EARPHONE JACK C.B.A.		(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C4301		ECEA1CKS470	E.CAPACITOR 16V 47U	1	
J4301		VJJ0203	EARPHONE JACK	1	
			RESISTORS		
R4301		ERDS2TJ820	C.RESISTOR 1/4W 82	1	
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