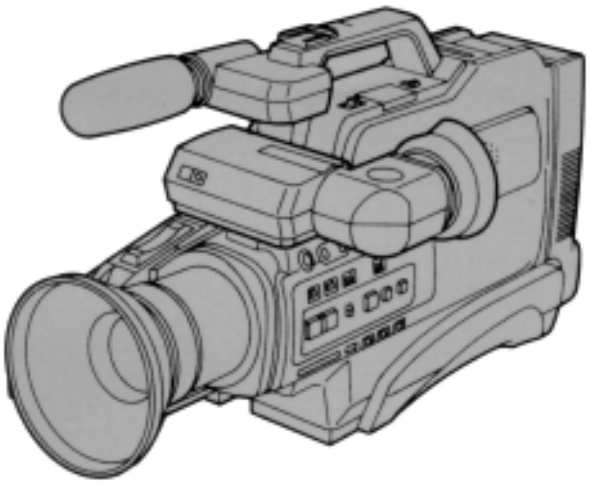
ORDER NO. VRD9208M147

Service Manual

Panasonic S-VHS VHS PAL 625

Hi-Fi HQ

S-VHS Movie



NV-MS4E/B/A
NV-M9000EN
NV-M9900MC

Panasonic

SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 12V Consumption; Recording mode; 9.3W (Battery operation)
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL
TAPE FORMAT	S-VHS/VHS Cassette Tape (Tape width 12.7mm)
TAPE SPEED	23.39mm/s Record/Playback Time 240min. with NV-E240 FF/REW Time less than 12min. with NV-E180
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)
	STANDARD ILLUMINATION: 1,400 lux
	MINIMUM REQUIRED ILLUMINATION: 1 lux (Digital Gain Up Mode)
	LENS: 12 : 1 Power Zoom Lens with 2 zooming speeds and Digital AI Auto Focus; Focal Length 5.6−67mm F1.6 Auto Iris/Manual Ilis Filter Diameter 49mm
	IMAGE SENSOR: 1/3 inch CCD Image Sensor
	VIEW FINDER: 0.7″ Electric View Finder

ITEM	SPECIFICATION
VIDEO	HEADS: 4 rotary heads, 1 flging erase head
	OUTPUT: PHONO CONNECTOR; 1.0Vp-p 75Ω unbalanced S-VIDEO OUT Terminal; 1.0Vp-p 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio) 4 rotary heads; 2 cahnnels (Hi-Fi Sound-Stereo)
	INPUT: MIC IN (M3); −70dB, 4.7kΩ unbalanced
	OUTPUT: PHONO CONNECTOR; −8dB, 47kΩ loaded EARPHONE JACK (M3); −28dB, 8Ω unbalanced
WEIGHT	Approx. 2.7kg (without Battery Pack)
DIMENSIONS	130(W)×245(H)×476(D)mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Shoulder Strap 1 pc. AV Output Cable (NV-MS4E/A, NV-M9000EN, NV-M9900MC) 2 pcs. AV Output Cable (NV-MS4B) 1 pc. DC Input Cable 1 pc. Battery Pack Charging Connector 1 pc. System Carrying Case (NV-MS4B) 1 pc. S-Video Cable 1 pc. AUDIO Cable (NV-MS4E)

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

Technical Information

Service caution

1–1. Service Extension Cables

Use the following extension cables when checking or adjusting the individual circuit boards.

	PART NBR	PART NAME	CONNECTION	Q'TY
1	VFK0667	30 PIN EXTENSION CABLE	MAIN C.B.A. B3001~PROCESS C.B.A. B302	1
2	VFK0724	32 PIN EXTENSION CABLE	SENSOR C.B.A. B201~PROCESS C.B.A. B301	1
3	VFK0783	12 PIN EXTENSION CABLE	CCD UNIT~SENSOR C.B.A. B202	1
4	VFK0802	24 PIN FLAT CABLE	LENS UNIT~PROCESS C.B.A. FP701	1
5	VFK0823	6 PIN FLAT CABLE	PROCESS C.B.A. FP301~CAMERA OPERATION C.B.A. FP6701	1

How to use extension cables.

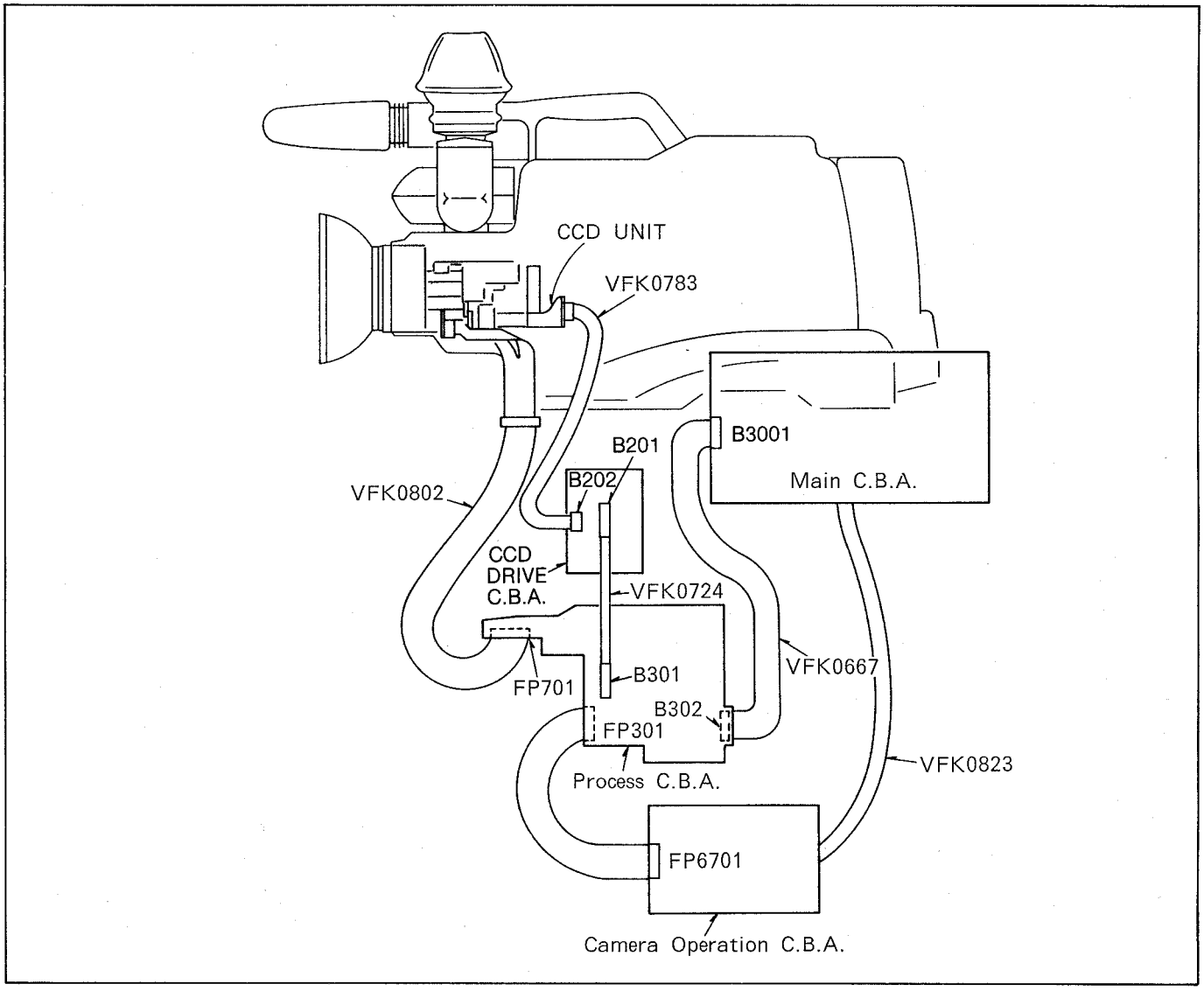
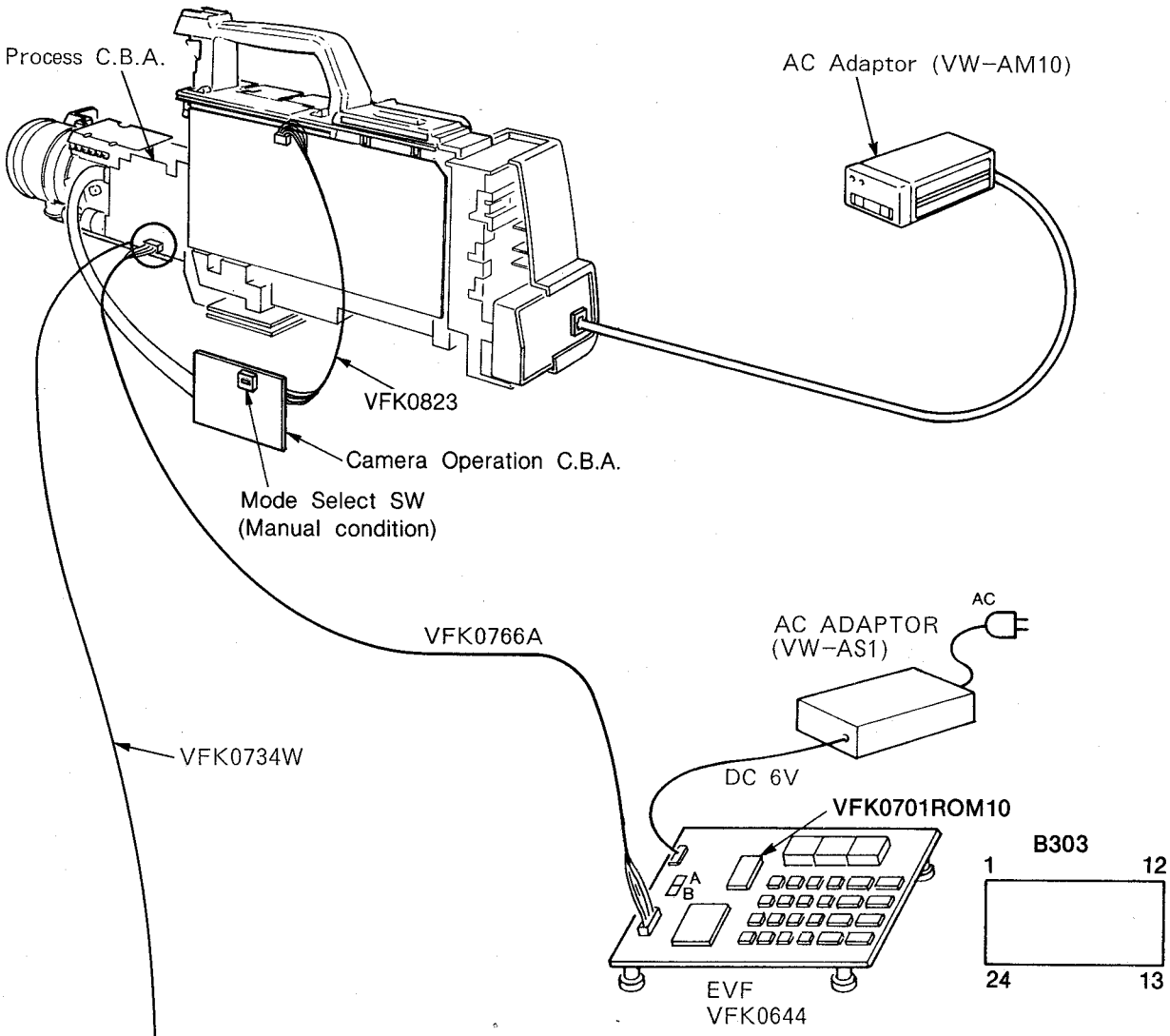
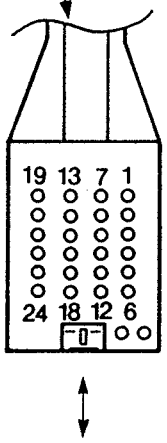


Fig. T1





Connect the VFK0766A

Note:
VFK0734 is 24 PIN connection cable for Measurement
Pin Arrangement of VFK0734W is same as B303.

PIN ARRANGEMENT OF B303

1	CAMERA CLOCK
2	SID
3	VD
4	Y SIGNAL
5	CDS OUT
6	A/D IN
7	Vref H
8	Vref T
9	OP2
10	WIDE
11	IRIS OPEN
12	FH2B
13	GND
14	5V
15	TELE
16	Z.ENC
17	Vref-T
18	Vref-L
19	SUB
20	AGC IN
21	AF CLOCK
22	AF DATA
23	CAMERA TEST
24	GND

Fig. T2

1–2. New ROM IC for EVR fixture.

We are pleased to introduce the new ROM IC (VFK0701ROM7) for EVR fixture that we developed to adjust this Movie Camera.
This ROM IC will provide you with many superior futures as automatic calculation of auto white balance and/or colour reproduction and more.

We are also pleased to introduce the new connecting cables (VFK0766A & VFK0734W) for this Movie Camera and EVR Fixture (VFK0644).

Connections between this Movie Camera and EVR fixture are soloderless when using the VFK0766A and VFK0734W.
Please refer to Fig.T3 for how to use the cables.

ROM NUMBER & availabilty	Applicable models & Function	PART NUMBER OF EVR CONNECTION CABLE
VFK0701ROM1 available	NV-MS70/NV-M810/NV-S1/NV-S100 (PAL & NTSC) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0769
VFK0701ROM2 available	NV-S5/NV-S500 (PAL & NTSC) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0730
VFK0701ROM3 available	NV-G1/G2/G3 (G100/G200/G300) & NV-MS95/MS950 (PAL ONLY) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0699
VFK0701ROM4 available	NV-S7/S9 (NTSC ONLY) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0766A
VFK0701ROM5 available	NV-S7/NV-S700/G220/G202 (PAL ONLY) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0766A & VFK0734W (NV-S7/S700) VFK0699 (NV-G220/G202)
VFK0701ROM6 available	NV-T1 (NTSC ONLY) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0766A & VFK0734W
VFK0701ROM10 available	NV-M40/NV-M3000/NV-M3300(PAL ONLY) NV-MS4/NV-M9000/NV-M9900 (PAL ONLY) ① General Adjustment for Camera unit ② Automatic Calculation for AWB & Colour Reproduction ③ Average Data Automatic rewriting	VFK0766A & VFK0734W

2. Self–diagnostic system and service mode

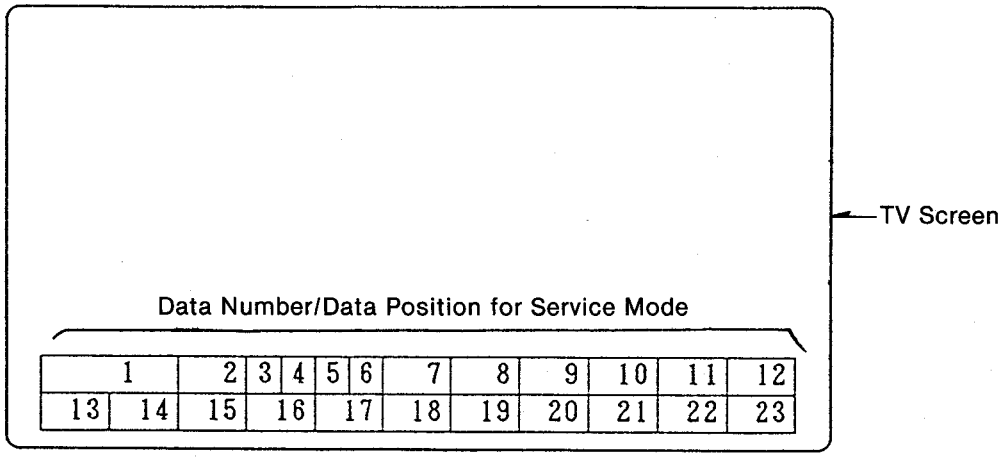
2–1. General

This Movie camera has a self–diagnostic system which faclitates quick trouble shooting.
Pressing the START/STOP Switch and Memory switch simultaneously, same time turn on the Power Switch, After that, unit into Service mode.

2–2. Service Mode

This Movie camera is possible to see RAM data of IC6004 on the TV screen or EVF.
How to read the RAM data is shown in Fig.T3.
All data is displayed in the Hexadecimal Number. (letters and number 0 or F)

Note:
Pressing the START/STOP Switch and Memory switch simultaneously, same time turn on the power switch.
After that this Movie camera Shows data 1 to data 23 on TV screen as shown in Fig.T3–T11.



DATA NUMBER	DATA CONTENTS
1	Data Number 1 is position that indicates Motor conditions data
2~4	Not used
5	Data Number 5 is position that indicates Mechanism positions data
6	Data Number 6 is position that indicates tape condition
7	Data Number 7 is position that indicates key operation informations
8	Data Number 8 is position that indicates I/O condition of IC6004 PIN 118~PIN 125
9	Data Number 9 is position that indicates I/O condition of IC6004 PIN 7~PIN 14
10	Data Number 10 is position that indicates I/O condition of IC6004 PIN 29~PIN 37
11~12	Data Number 11~12 are position that indicates Battery Voltage level
13~14	Not used
15	Not used
16~23	Not used

Fig. T3

2-3. Detail of Data for Service Mode

(1) Data Number 1:
If Data 1 indicate "CYL", There is possibility that cylinder Motor is locked up.

INDICATION AT POSITION 1	CONDITION OF MOTOR
TRL	REEL is locked up
UNLD	Unloading condition
LOAD	Loading condition
CYL	Cylinder Motor is locked up

Fig. T4

(2) Data Number 5:
If Data 5 indicate "01", Mechanism is Eject position.

INDICATION AT POSITION 5	MECHANISM CONDITION
01	EJECT
02	EJECT
03	STOP
04	———
05	S-LOAD
06	———
07	PRE-PAUSE
08	———
09	PAUSE
0A	———
0B	REVIEW
0C	———
0D	PLAY

Fig. T5

(3) Data Number 6:
If Data 6 indicate "A", There is possibility that sensor detect the tape end.

INDICATION AT POSITION 6	TAPE CONDITION
0	Normal condition
3	There is no video cassette inside
9	Detect the begining of Tape
A	Detect the Tape end

Fig. T6

(4) Data Number 7:
When the pushed STOP key, Data 7 indicate

INDICATION AT POSITION 7	KEY OPERATION
00	STOP
01	EJECT
02	REWIND
03	FF
04	REVIEW
05	CUE
06	PAUSE
08	REC
09	A. DUB
0A	PLAY
0C	F. ADV
54	COUNTER CLEAR
55	COUNTER MEMORY
57	OSD ON/OFF
67	DATE ON/OFF
9F	EDIT
B1	TRACKING UP
B2	TRACKING DOWN
B3	INSERT
CC	START/STOP
FF	NOP

Fig. T7

(5) Data Number 8:

INDICATION AT POSITION 8	I/O PORT CONDITION FOR I6004
80	Loading Command is output (PIN 125)
40	Unloading Command is output (PIN 124)
20	Not use
10	Audio Mute "H" is output (PIN 122)
8	Not use
4	Audio EE "H" is output (PIN 120)
2	Video EE "H" is output (PIN 119)
1	PB "L" is output (Pin 118)

Fig. T8

(6) Data Number 9

INDICATION AT POSITION 9	I/O PORT CONDITION FOR IC6004
80	SENSOR LED "L" Command is output (IC6004 PIN 14)
40	REMOCON LED "L" Command is output (IC6004 PIN 13)
20	TALLY LED "L" Command is output (IC6004 PIN 12)
10	POWER LED "L" Command is output (IC6004 PIN 11)
8	CYLINDER ON "L" Command is output (IC6004 PIN 10)
4	FULL ERASE ON Command is output (IC6004 PIN 9)
2	CAMERA P. ON Command is output (IC6004 PIN 8)
1	POWER ON Command is output (IC6004 PIN 7)

Fig. T9

(7) Data Number 10

INDICATION AT POSITION 10	I/O PORT CONDITION FOR IC6004
80	DC LIGHT ON Command is output (IC6004 PIN 37)
40	X. TAL ON Command is output (IC6004 PIN 36)
20	———
10	———
8	———
4	———
2	———
1	———

Fig. T10

(8) Data Number 11 and 12

INDICATION AT POSITION 11	INDICATION AT POSITION 12	BATTERY VOLTAGE LEVEL
00~03	10	Less than 10.5 Volt
04~0A	8	10.5~11.0 Volt
0B~0A	4	11.0~11.5 Volt
11~17	2	11.5~12.0 Volt
18~	1	More than 12.0 Volt

Fig. T11

3. HOW TO CHECK DIGITAL CIRCUIT (PROCESS)(Using Ramp Generator)

3–1. Checking Principle

The digital circuit can be checked if a ramp signal (sawtooth signal) is supplied to the input of A/D Converter (IC307–19). The output of A/D Converter is described below.
In addition to the A/D Converter (IC307) output, all digital ICs input and output signals become specified pulses, which are listed in schematic diagram.

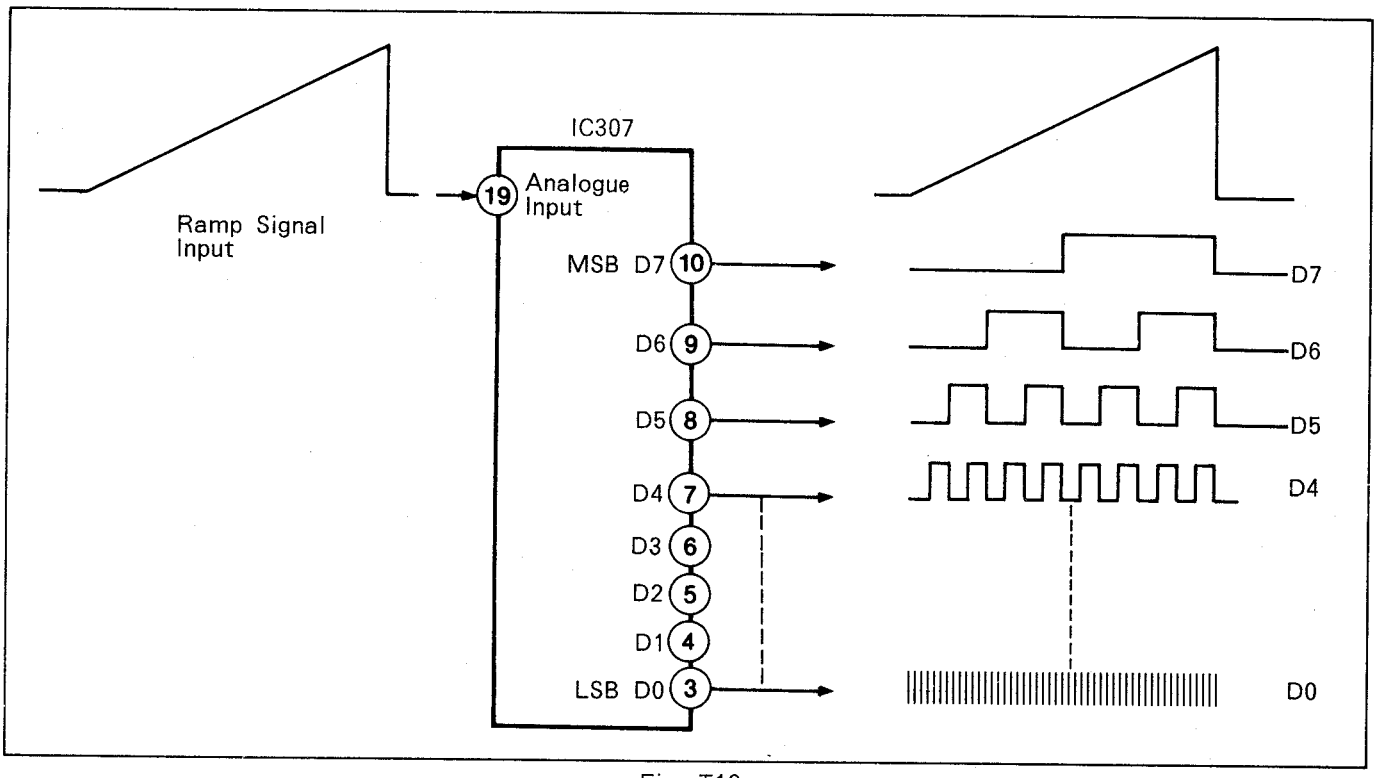
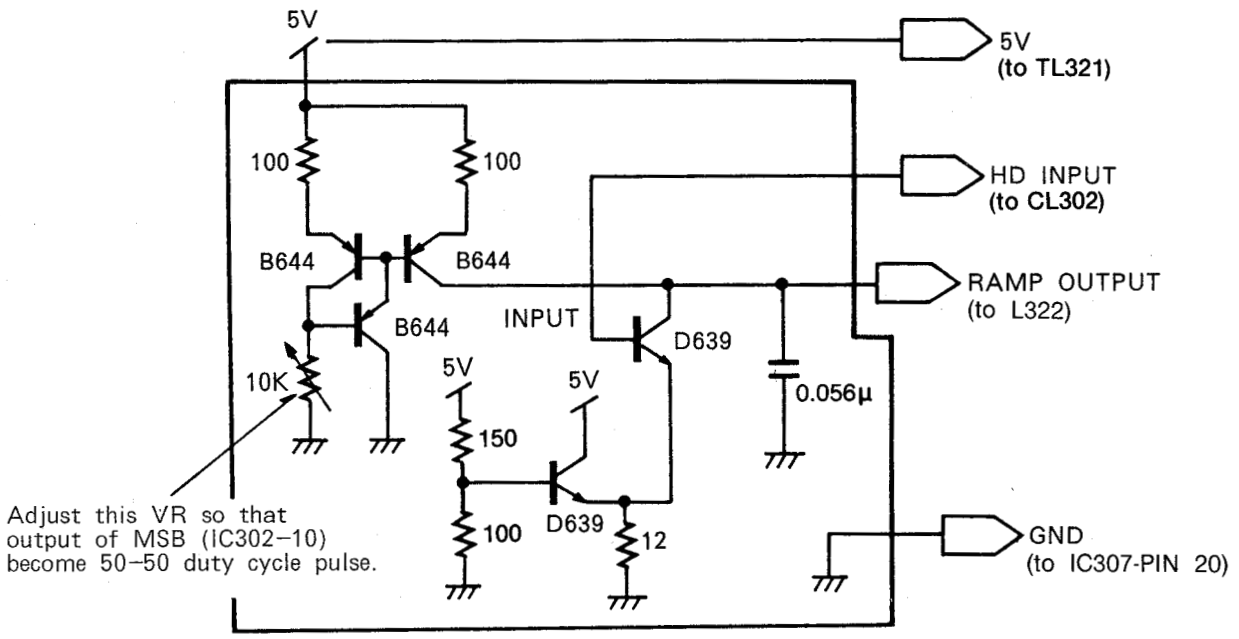


Fig. T12

3-2. How to Connect ramp generator

In order to generate a ramp signal that synchronizes with the HD(horizontal drive) of the camera, the following ramp generator circuit has been designed.
Construct and connect it to process board as shown in Fig.T13,14.



ITEMS	VALUE	PCS
RESISTOR		
ERDS2TJ120	**12ohm**	**1**
ERDS2TJ101	**100ohm**	**3**
ERDS2TJ151	**150ohm**	**1**
VARIABLE RESISTOR		
EVNDRAA00B14	**10Kohm**	**1**
TRANSISTOR		
2SB644	**PNP**	**3**
2SD639	**NPN**	**2**
CAPACITOR		
ECQB1H563JH	**0.056µ**	**1**

Fig. T13

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DETAILED DISSEMBLY METHOD

1. REMOVAL OF SHOULDED PAD/LENS HOOD

(1) Remove the 4 screws(A).
(2) Pull the shoulder PAD.
(3) Remove the Lens Hood.(By roatating counter-clockwise.)

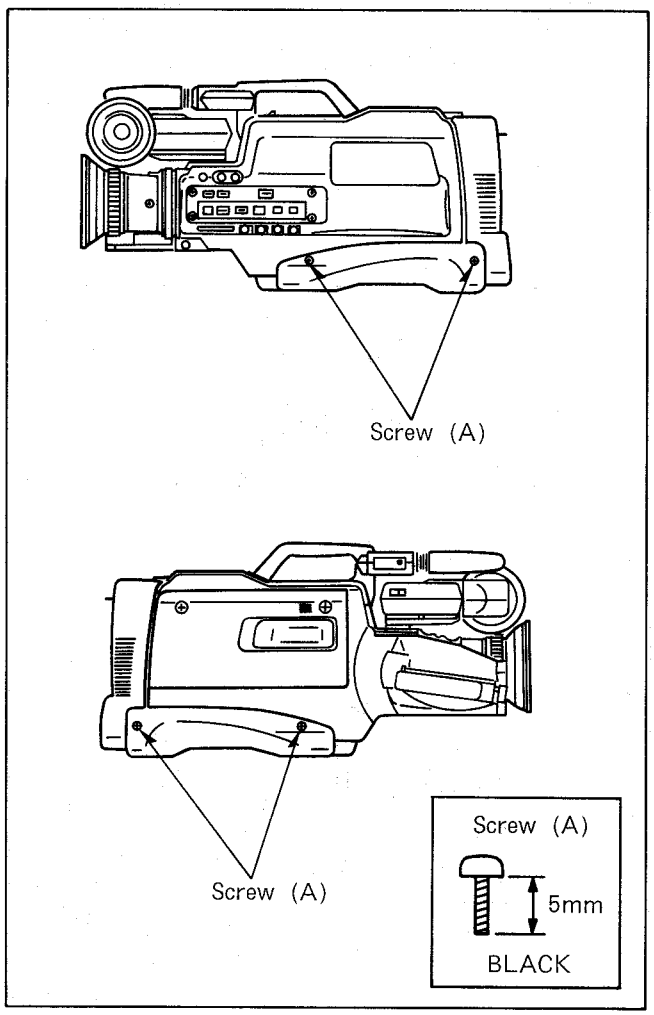


Fig. D1

2. REMOVAL OF CASSETTE COVER

(1) Remove 2 Screws(B).
(2) Pull the Cassette Cover straight up to remove.

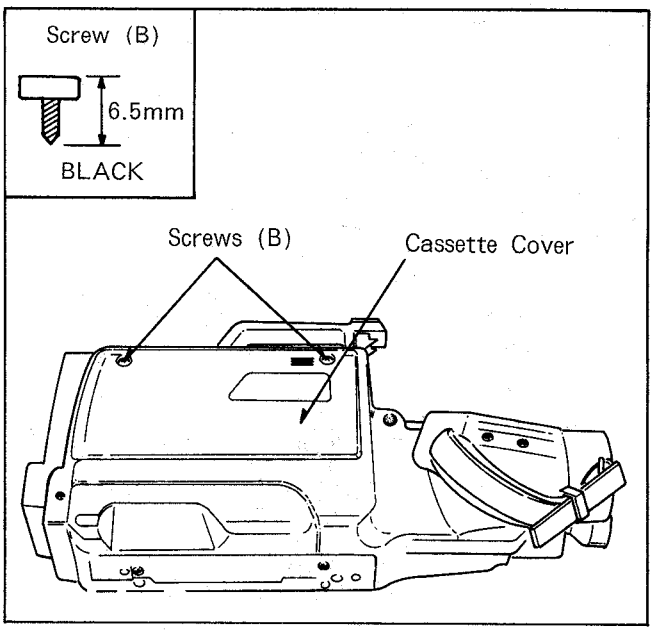


Fig. D2

3. REMOVAL OF THE MIC UNIT

(1) Remove 4 Screws (C), (D) and (E).
(2) Slide the MIC Unit in the direction shown by the arrow.
(3) Disconnect the connector on the MIC Unit.

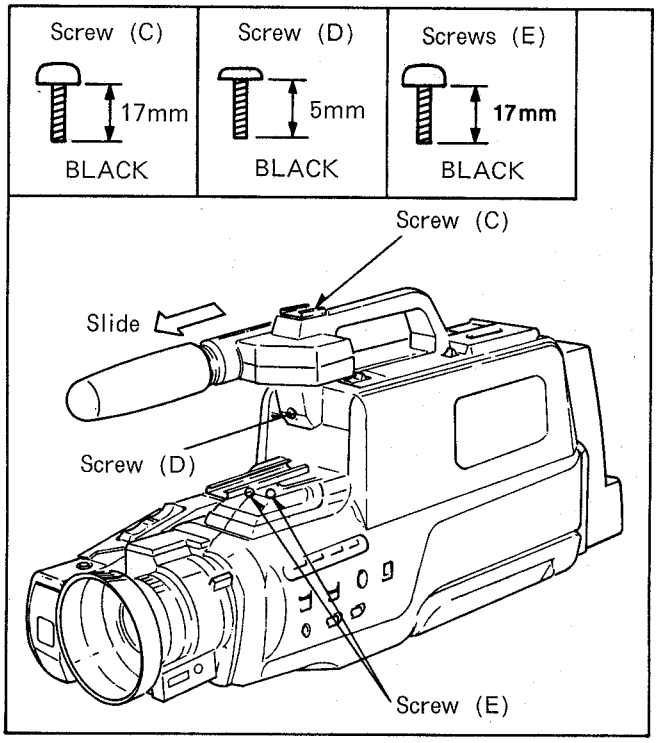


Fig. D3

4. REMOVAL OF SIDE CASE(R) UNIT

(1) Remove 2 Screws(E) shown in Fig.D3.
(2) Remove 7 Screws(F), 2 Screws(G).
(3) Lift the side case(R) unit slightly.
(4) Disconnect the connector P4501 from Main C.B.A.

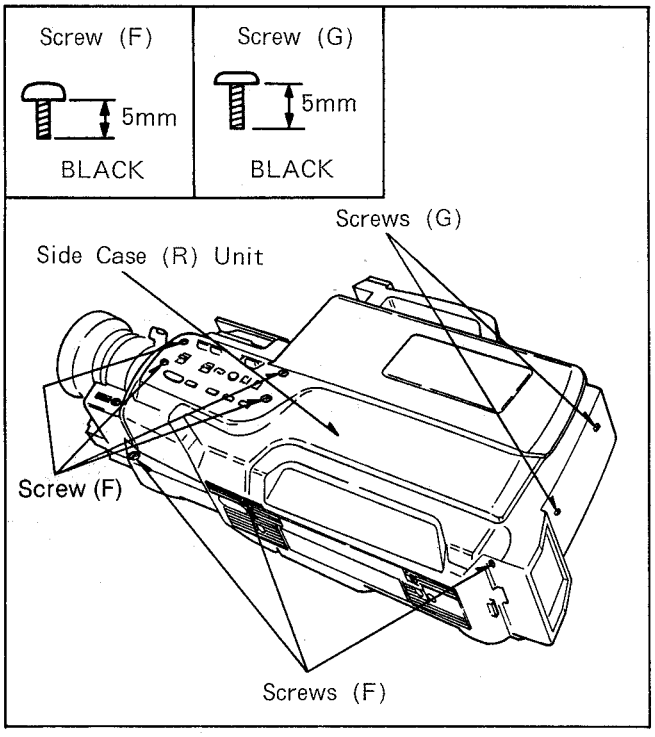


Fig. D4

5. REMOVAL OF SIDE CASE (L) UNIT

(1) Remove Screw(B), 2 Screws(H), 2 Screws(I) shown in Fig.D5.
(2) Lift the Side Case(L) Unit slightly. Then Disconnect the connector on Main C.B.A. and Process C.B.A..(EVF, TALLY, ZOOM)

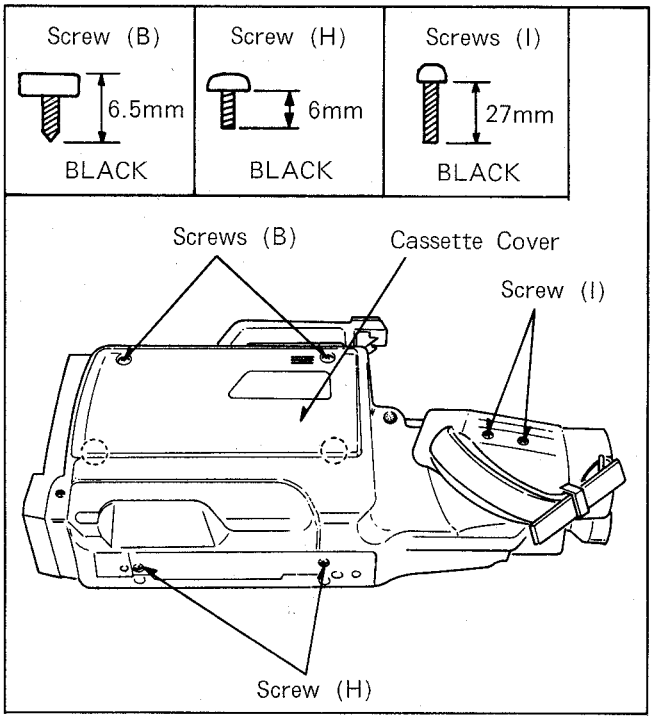


Fig. D5

6. REMOVAL OF OPERATION PANEL UNIT

(1) Disconnect the connector P6005(Safety tab), and Flexible Connector FP6001(Operation Panel) on Main C.B.A..

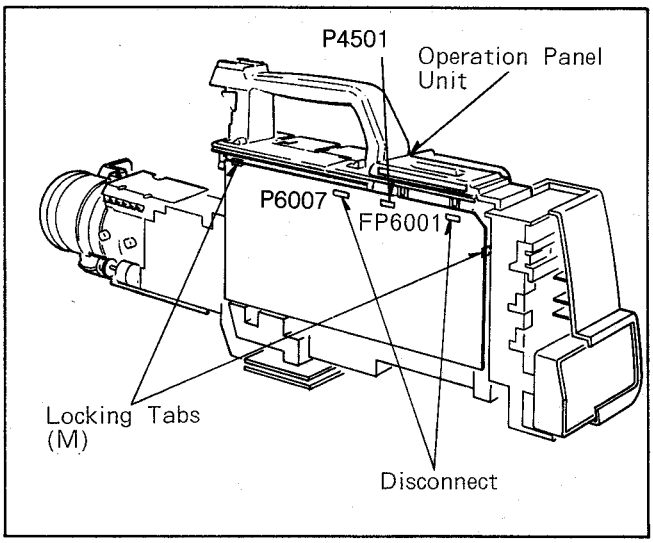


Fig. D6

7. OPENING OF MAIN C.B.A.

(1) Unsnap 2 Locking Tabs(O).
(2) Disconnect the Connector P3001(CHRA:GENE), and B3001.
(3) Open the Main C.B.A..

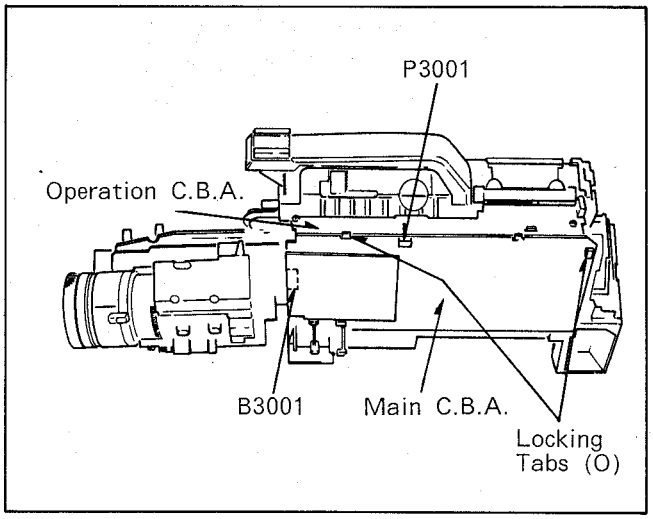


Fig. D7

8. REMOVAL OF CAMERA C.B.A.

(1) Remove Screw(J).
(2) Disconnect the Connector B301 and Flexible Connector FP701.
(3) Lift up the camera C.B.A. slightly and then Remove.

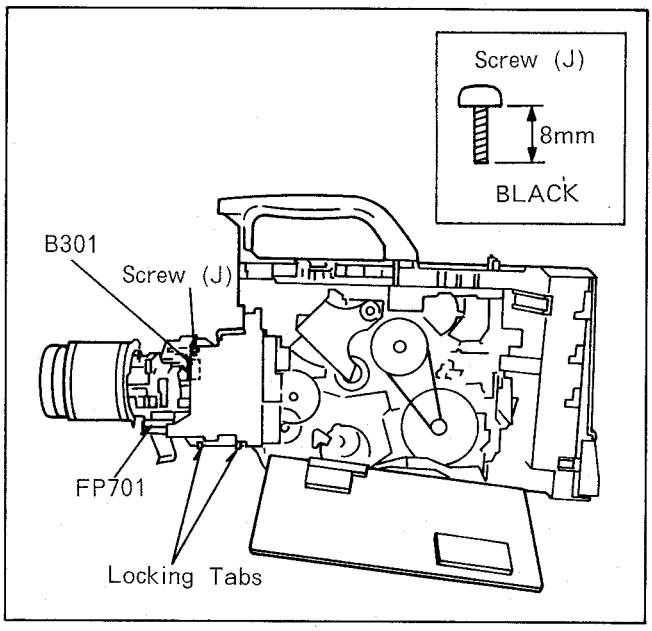


Fig. D8

9. REMOVAL OF LENS UNIT

(1) Remove 2 Screws(K).

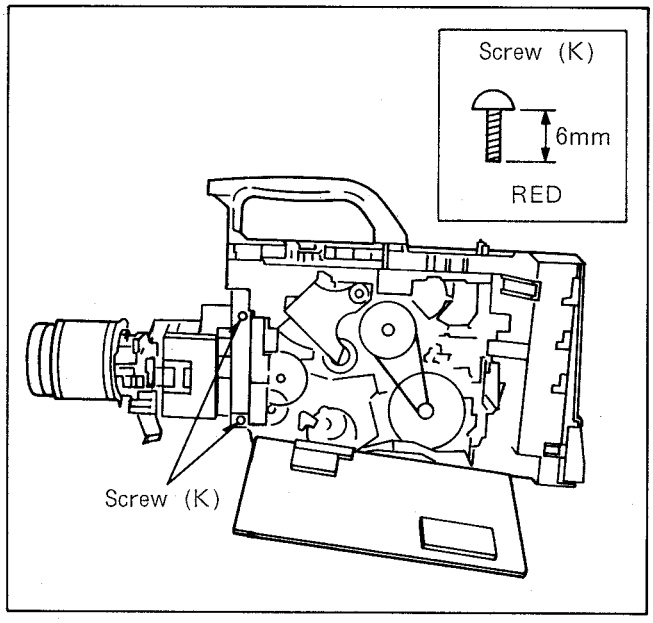


Fig. D9

10. REMOVAL OF SENSOR C.B.A.

(1) Disconnect the Connector B202.
(2) Remove 2 Screw(L).

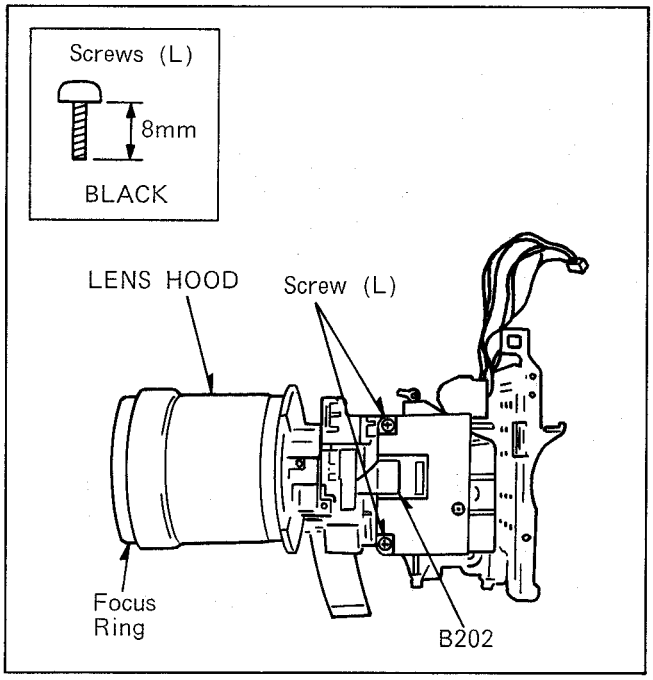


Fig. D10

11. REMOVAL OF THE LENS COVER

(1) Remove 2 Screws(M).

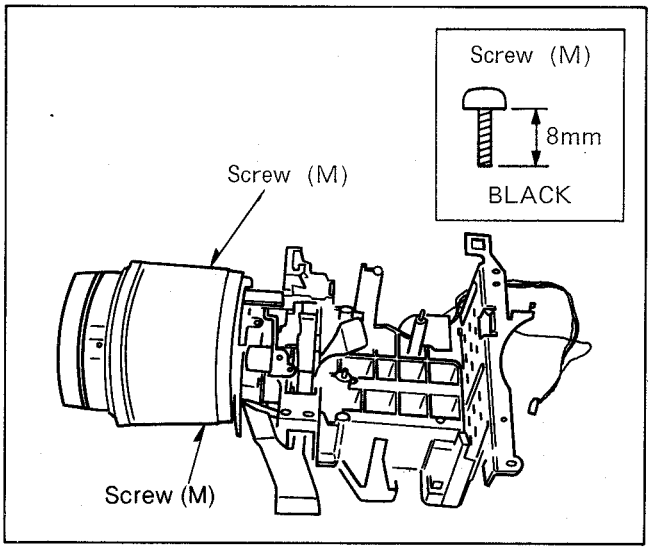


Fig. D11

12. REMOVAL OF THE LENS UNIT

(1) Remove 3 Screws(N).

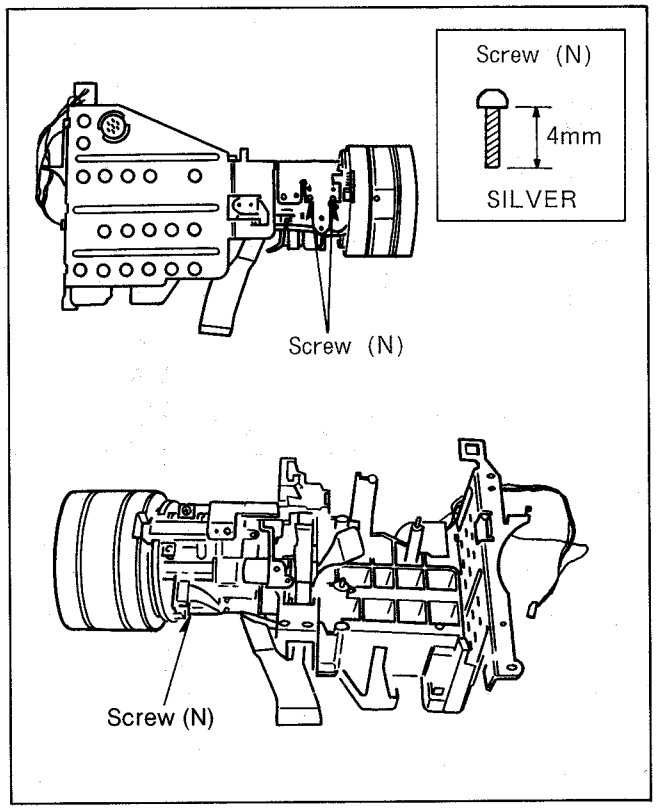


Fig. D12

13. REMOVAL OF EVF UNIT

(1) Remove 2 Screws (O).

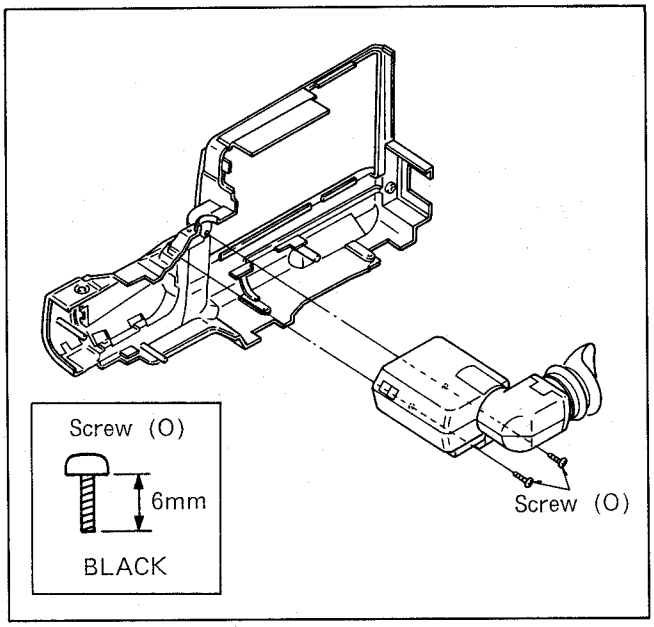


Fig. D13

14. DISASSEMBLY OF E.V.F. UNIT

(1) Remove 3 Screws (P) on the bottom of the E.V.F. Unit and then remove the Bottom Case.

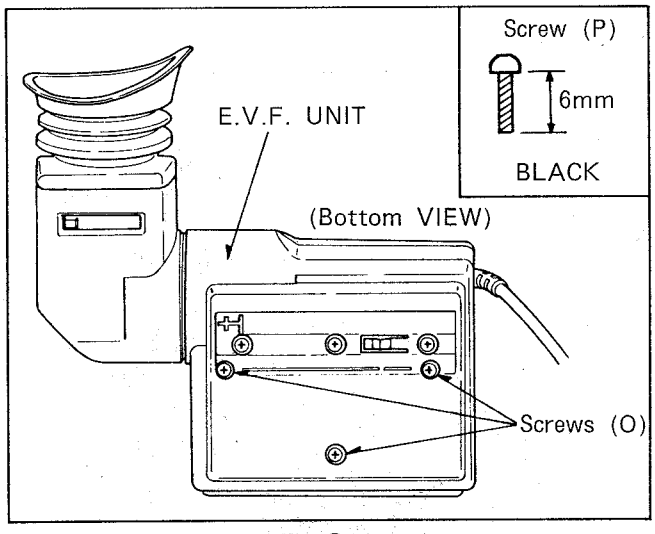


Fig. D14

(2) Lift the CRT Assembly up shown in Fig.D23.

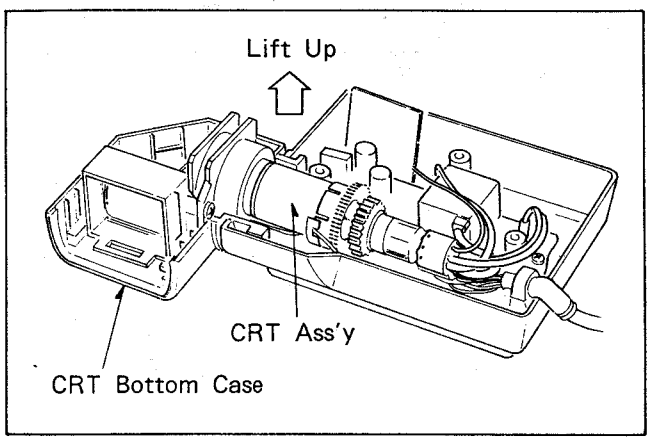


Fig. D15

(3) Rotate Nut(v) and then pull DY Assembly in the direction shown in Fig.D24 to remove it. Then the CRT can be replaced.

(4) For re-installation, reverse the above steps.

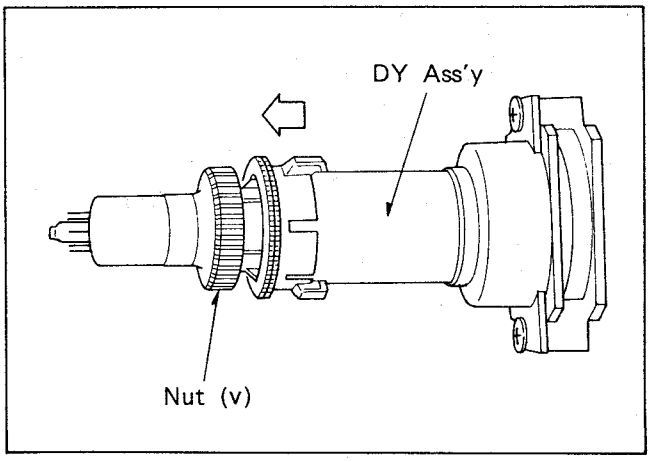


Fig. D16.

Battery Replacement

VL2020 size Button Type Battery is necessary for storing the date, time and selected tape speed in the memory, when the Movie Camera is turned off.

How to Exchange the Button Tupe Battery

Use only a "VL2020" size Button Type Battery.
The VL2020 is manufactrued by Panasonic only.

CAUTIONS FOR BATTERY REPLACEMENT

Load the new battery with its polarities (+ and −) correctly aligned.

Remove the spent battery immediately and dispose of it.

Do not try to short−circuit, heat the battery and do not throw it into a fire.

Keep the button−type battery out of reach of children.
If a battery has been swallowed, consult a doctor immediately.

Do not grasp the button−type battery with metallic tweezers because this could short−circuit it.

"THE LITHIUM BATTERY IS A CRITICAL COMPONENT (TYPE NUMBER VL2020 MANUFACTURED BY PANASONIC).

IT MUST NEVER BE SUBJECTED TO EXCESSIVE HEAT OR DISCHARGE. IT MUST THEREFORE ONLY BE FITTED IN EQUIPMENT DESIGNED SPECIFICALLY FOR ITS USE.

REPLACEMENT BATTERIES MUST BE OF THE SAME TYPE AND MANUFACTURER. THEY MUST BE FITTED IN THE SAME MANNER AND LOCATION AS THE ORIGINAL BATTERY, WITH THE CORRECT POLARITY CONNECTIONS OBSERVED.

DO NOT ATTEMPT TO RE−CHARGE THE OLD BATTERY OR RE−USE IT FOR ANY OTHER PURPOSE. IT SHOULD BE DISPOSED OF IN WASTE PRODUCTS DESTINED FOR BURIAL RATHER THEN INCINERATION".

2-2. REPLACEMENT PROCEDURES

2-2-1. REPLACEME T OF THE UPPER CYLINDER UNIT

(1) Preparation.....Removal of Side case.

1. Remove.....4 Screws (Screw (X), (Z)).
2. Remove.....Lift up the cassette frame.

(2) Replacement the upper cylinder.

Work with extremely care when removing or replacing the Upper Cylinder Unit.
Do not touch the Video Head during servicing.

1. Remove 2 screws as shown below.
2. Unsolder 18 soldered portions indicated by arrows on the Circuit Board.
3. Remove the Upper Cylinder Unit by lifting it upward.

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

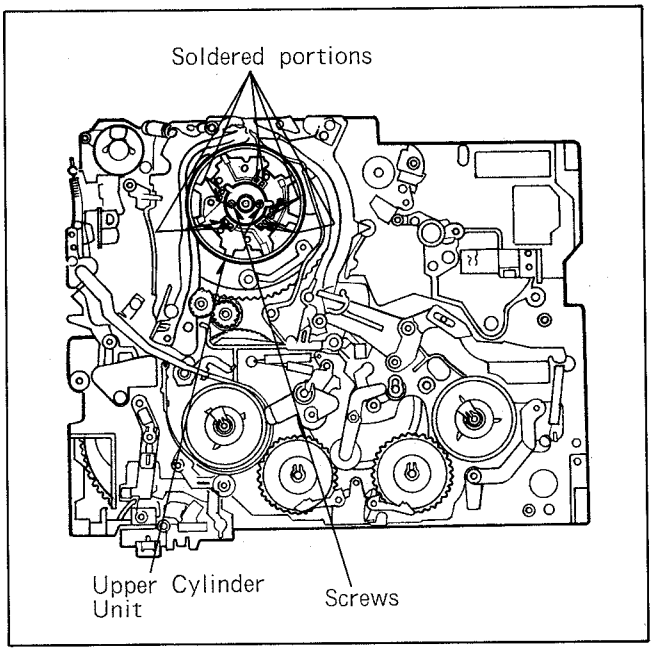


Fig. R1

4. The Upper Cylinder Unit can be reinstalled by reversing the removal procedure, however, when the Upper Cylinder is reinstalling, be extremely carefully so that VR1 of upper cylinder should be align 126' from lower cylinder alignment hole as Fig. R2.

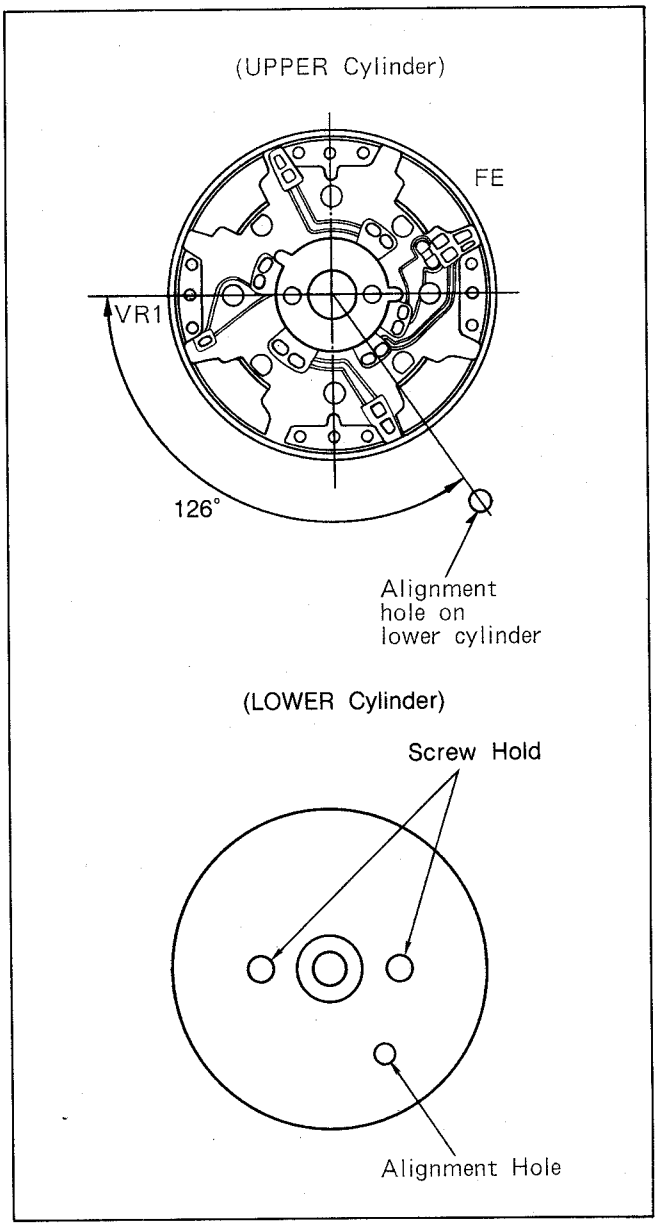


Fig. R2

2-2-2. REPLACEMENT OF DD CYLINDER UNIT

1. Remove the 3 screws and connector.
2. Take out D.D. Cylinder carefully.

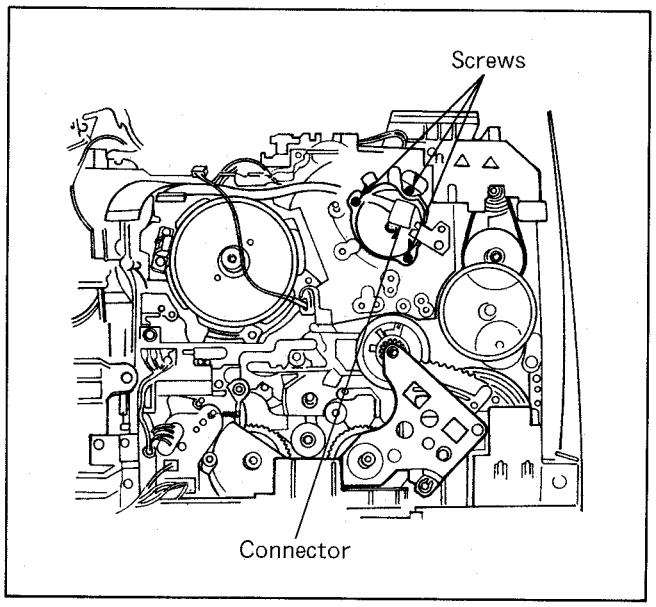


Fig. R3

Note:
Since there is very little clearance between the D.D. Cylinder Unit and the chassis, remove the D.D. Cylinder Unit carefully.

3. Reinstall the new D.D. Cylinder Unit, tighten the 3 screws and reconnect the connector.

Note:
(1) Gently rub the video head in direction of tape travel with Head cleaning stick.
(2) After replacement, confirm the performance.
If any further maintenance is required, perform "TAPE INTER-CHANGE ABILITY ADJUSTMENT.

2-2-3. REPLACEMENT OF CAPSTAN MOTOR UNIT

* Equipment required:
Reel Table Height Gauge (VFK0190)
* Specification...0.5+-0.05mm

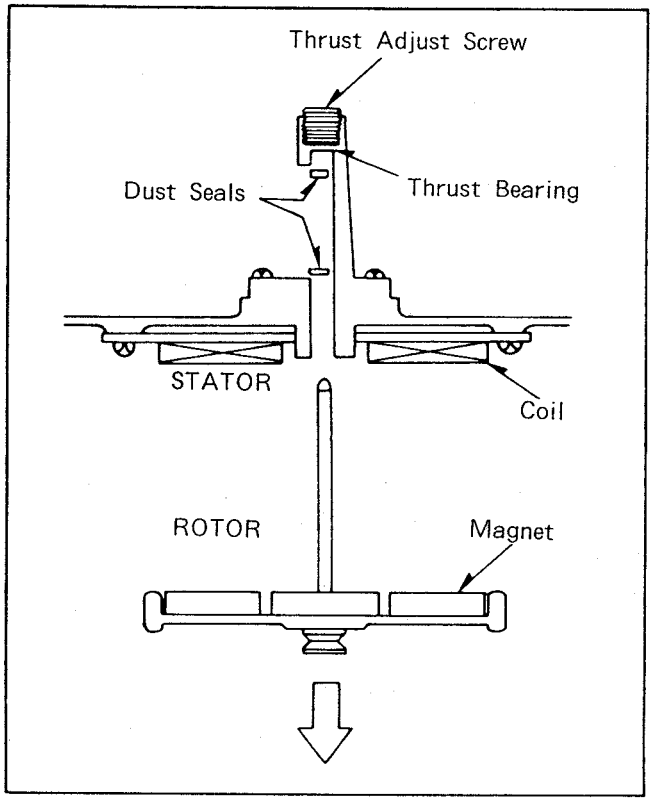


Fig. R4

(1) Remove the 2 screws and take belt cover off. After that remove the capstan belt.
(2) Tighten the Thrust Adjust Screw fully and pull the capstan rotor.

Note :

In this time pay attention not to lose two pieces of Dust Seal.

(3) Replace the new rotor with two pieces of Dust Seal.

Note :

(1) Pay attention to the replaced new rotor not to shock because of magnet absorbtion.
So hold the rotor firmly and replace it carefully.
(2) In this replacement, do not touch the Capstan shaft with any hard material like drivers or tweezers.

(4) After replacement, wipe off the Capstan shaft to remove oil, grease or dust.
(5) Unscrew Thrust Adjust Screw till the rotor is just touching to the stator.
(6) Turn this mechanism upside down and place the Reel Table Height Gauge so that the gauge fits to the chassis correctly, and read the height.
(7) Adjust the Thrust Adjust Screw so that the height difference just meets in the specification (0.5+−0.005mm) reading the height from the gauge.

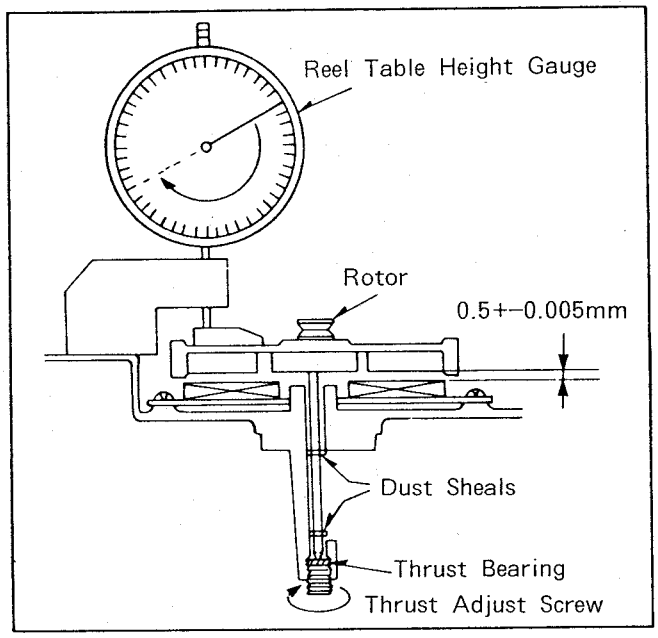


Fig. R5

Note:
If the Thrust Adjust Screw is fully opened, you have to pay attention not to lose Thrust Bearing.
When it is fixed, confirm that the direction of Thrust Bearing is correct as shown below.

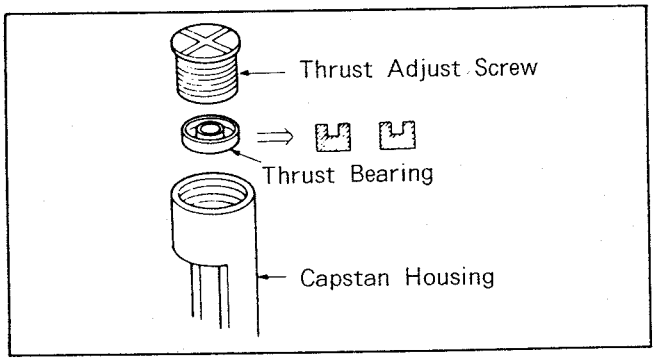


Fig. R6

2-2-4. REPLACEMENT OF TENSION BAND

(1) Remove the cassette compartment.
(2) Remove a retaining ring and take out a Rew Arm (A) Unit.
(3) Remove a retaining ring and a snap washer and take out a tension Band Unit.

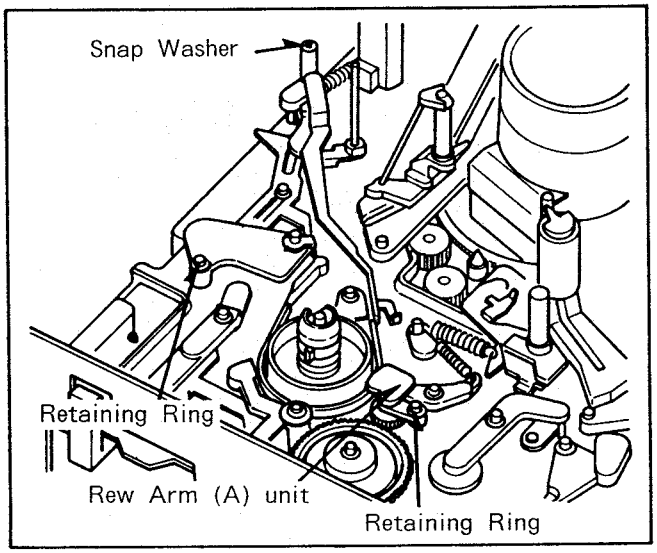


Fig. R7

(4) Remove a Tension Band from Band Release Arm and Tension Arm Unit.

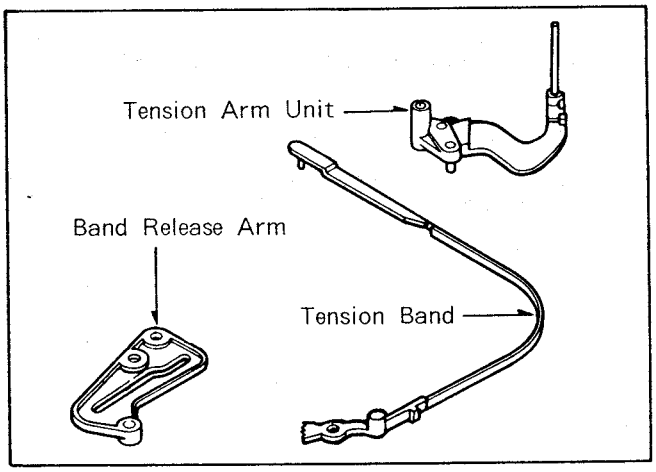


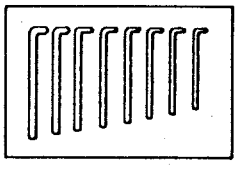
Fig. R8

(5) Replace a new Tension Band by Proceeding reverse steps shown above.

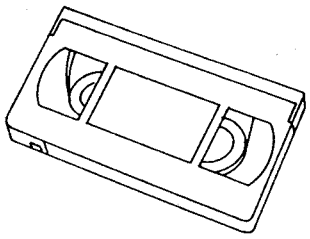
2-3. MECHANICAL ADJUSTMENT PROCEDURES

1. SERVICING FIXTURES & TOOLS

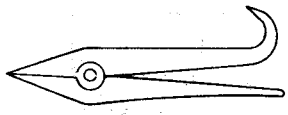
VFK0326 Hex Wrench Set (0.7, 0.9, 1.2, 1.5, 1.6, 2, 2.4, 3mm)



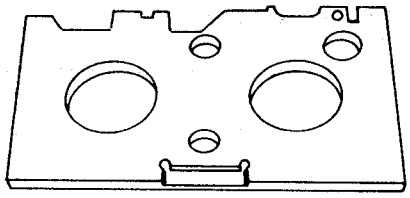
VFJ8125H3F VHS Alignment Tape



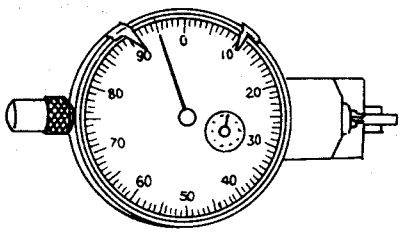
VFK0335 Retaining Ring Remover (3mm/4mm)



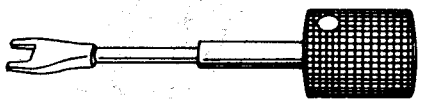
VFK0191 Post Adjustment Plate



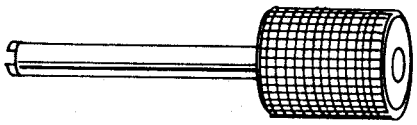
VFK0190 Reel Table Height Gauge



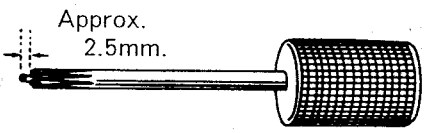
VFK0328 H-Position Adj. Fixture



VFK0329 Post Adjustment Screwdriver

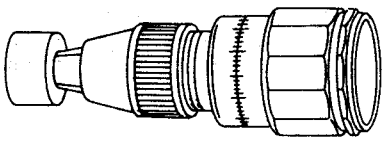


VFK0157 Fine Adjustment Screwdriver

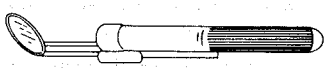


Grind the top portion approximately 2.5mm

VFK0133 Dial Torque Gauge
VFK0134 Adaptor for VFK0133
VFK0180 (Plastic Clamper Only))

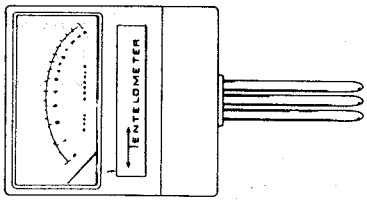


VFK0343 Check Light

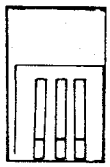


VFK0132 Back Tension Meter (TZ-H7-UM)

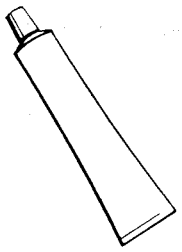
(Tentelometer, Made in U.S.A.)



VKF27 Head Cleaning Stick



MOR265 Morlytone Grease



High Quality Machine Oil
<Purchase Locally>
(Reel Shaft, Capstan Shaft etc.)

Cleaning Liquid
(Freon, TF, Alchol)
<Purchase Locally>
(Tape Transport Rubber Parts etc.)

2. PROCEDURES FOR CLEANING OF UPPER CYLINDER UNIT

(1) Position the video head to clean and hold the upper cylinder to keep it from turning while cleaning.
(2) Gently rub the video head in direction of tape travel whith Head Cleaning Stick.
(3) Repeat for the other three video heads.

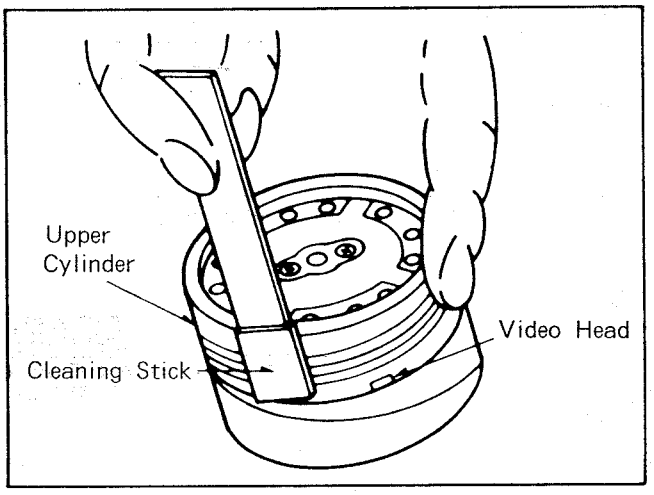


Fig. U1

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

3. TAPE INTERCHANGEABILITY ADJUSTMENT PROCEDURES

3-1. ADJUSTMENT FLOW CHART

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

AFTER REINSTALLING THE P1 POST, OR IF THE P1 POST HAS BEEN TURNED EXCESSIVELY.

↓

3-2-1. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS.

↓

* **Note:**
Adjust the tape guide post P1 only.

↓

3-2-2. CONFIRMATION OF THE TAPE TRANSPORT.

↓

3-2-5. CONFIRMATION OF THE ENVELOPE OUTPUT (LINEARITY).

AFTER REINSTALLING THE UPPER CYLINDER OR CYLINDER UNIT.

↓

3-2-5. CONFIRMATION OF THE ENVELOPE OUTPUT.

↓

3-2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE).

* **Note:**
Do not change the height of the P1 and P4 posts and position of the A/C head.

AFTER REINSTALLING ALL POSTS OR IF ALL POSTS HAVE BEEN TURNED EXTREMELY.

↓

3-2-1. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS.

↓

3-2-2. CONFIRMATION OF THE TAPE TRANSPORT.

↓

3-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5 POST) HEIGHT.

↓

3-2-4. CONFIRMATION OF THE A/C HEAD TILT.

↓

3-2-5. CONFIRMATION OF THE ENVELOPE OUTPUT.

AFTER REINSTALLING THE A/C HEAD.

↓

3-2-4. CONFIRMATION OF THE A/C HEAD TILT.

* **Note:**
Do not change the height of P4 post.

↓

3-2-6. COARSE ADJUSTMENT OF THE A/C HEAD HEIGHT.

↓

3-2-7. ADJUSTMENT OF THE A/C HEAD HEIGHT AND AZIMUTH.

↓

3-2-8. COARSE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE).

↓

3-2-9. FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION (X-VALUE).

AFTER REINSTALLING THE P4 POST, OR IF THE P4 POST HAS BEEN TURNED EXCESSIVELY.

↓

3-2-1. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS.

* **Note:**
Adjust the P4 post only.

↓

3-2-2. CONFIRMATION OF THE TAPE TRANSPORT.

* **Note:**
Adjust the P4 post only.

↓

3-2-4. CONFIRMATION OF THE A/C HEAD TILT.

↓

3-2-5. CONFIRMATION OF THE ENVELOPE OUTPUT (LINEARITY).

AFTER REINSTALLING THE PULL-OUT POST (P5 POST).

↓

3-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5 POST).

* **Note:**
Do not readjust any other post.

3-2. ADJUSTMENT PROCEDURES

3-2-1. COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHT (P1, P2, P3 AND P4)

* Equipment Required:
Post Adjustment Plate.....VFK0191
Reel Table Height Gauge.....VFK0190
Nut Driver (Purchase locally)
Post Adjustment Screwdriver.....VFK0329

1. Remove the cassette compartment from the mechanical chassis.
2. Place the Post Adjustment Plate over the reel tables.
(Fig. M1)
Confirm that the Post Adjustment Plate is firmly seated.

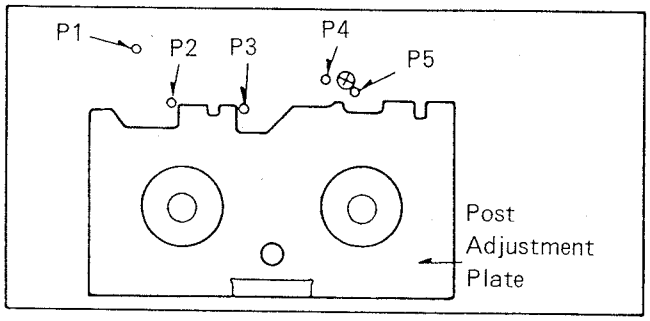


Fig. M1

3. Lower all 4 tape guide posts so that the lower tape guide on each post is below the top surface of the adjustment plate.
Use the post Adjustment screwdriver to lower posts P2 and P3, and the Nut Driver to lower Posts P1, P4 and P5.
4. Place the Reel Table Height Gauge on the Post Adjustment Plate and lower the scraper so that it touches the plate (Fig. M2).

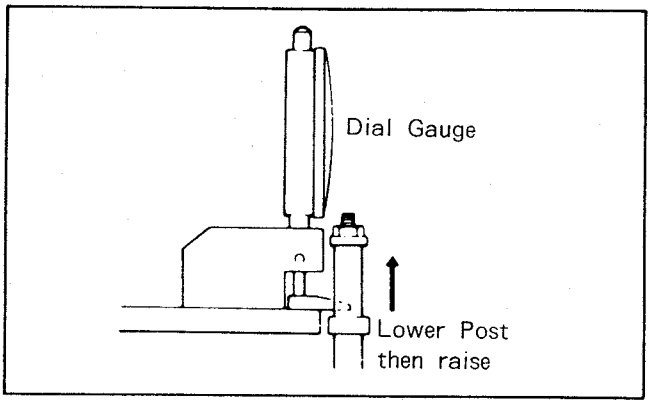


Fig. M2

5. Place the side of the scraper against the each post as shown in Figure M3, set the gauge to zero, then slowly raise the post until the lower tape guide just touches the bottom of the scraper. Use the gauge to determine the exact point at which the lower tape guide touches the scraper. (Fig. M3)

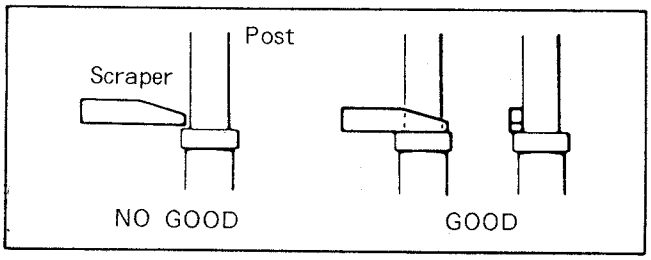


Fig. M3

3-2-2. CONFIRMATION OF THE TAPE TRANSPORT (TAPE GUIDE POSTS)

* Note:
1. The tape guide posts have been precisely adjusted at the factory. Therefore, normally do not change the height of P1, P4 and P5 posts. The following adjustment is required only when replacing the posts.
2. If curling is apparent proceed to the P4 post, wipe dirt from the pressure roller and capstan shaft using a soft cloth impregnated with Freon TF or cleaning liquid.
3. The adjustment of the post height is required only the one which has been replaced.

* Equipment Required
  Post Adjustment Screwdriver.....VFK0329
  Check Light.....VFK0343
  Nut Driver (Purchase locally)

1. To prevent the alignment tape from being damaged, use a normal cassette tape for this procedure.
   Playback the normal cassette tape and confirm that the tape travels without any curling at the edges of all the posts by using the check light. (Fig. M4 and Fig. M5)

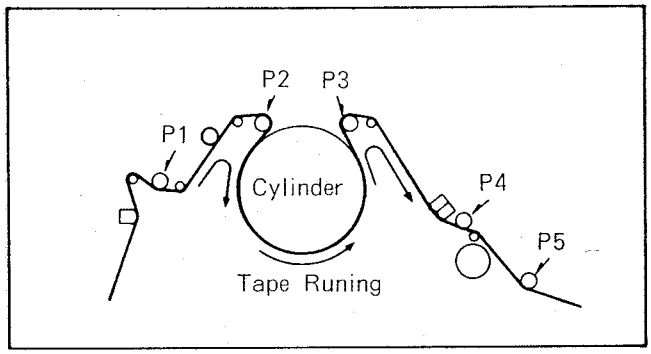


Fig. M4 Tape Transport Posts

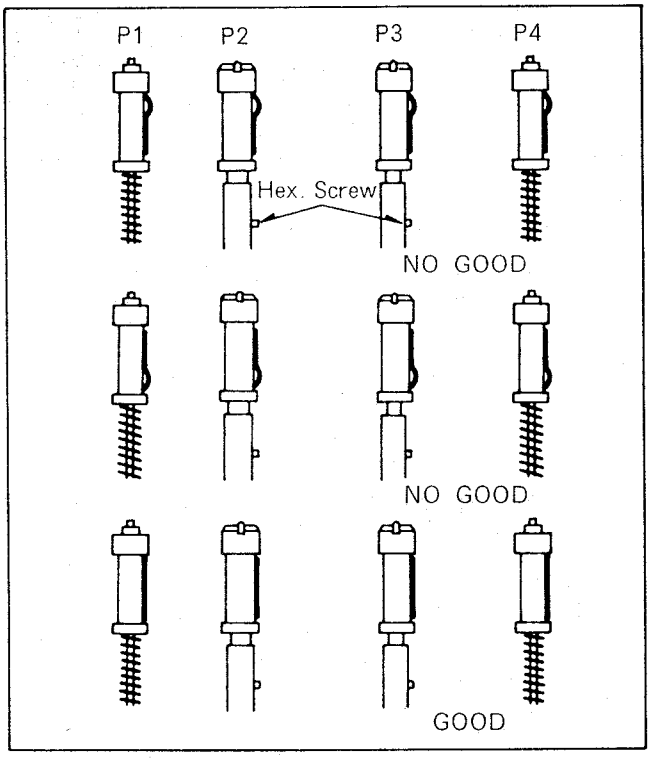


Fig. M5 Tape Guide Posts

2. If curling is apparent, adjust the height of posts by turning the top of post with the post adjustment screwdriver (posts P2 and P3) or the nut-driver (Posts P1 and P4). (Fig. M4 and M5)
3. After adjusting the P4 post, adjustment of the pull-out post (P5) is required.
   (Refer to "ADJUSTMENT OF THE PULL-OUT POST HEIGHT".)
4. If the tape curling cannot be corrected by adjusting the tape guide posts, then adjustment of the A/C head tilt may be needed.

3-2-3. ADJUSTMENT OF THE PULL-OUT POST (P5 POST) HEIGHT

* Notes:
  1. This adjustment should be performed only after adjusting tape guide post P4 as the height of the pull-out post is based on the height of post P4.
  * Tools and Equipment Required:
    Post Adjustment Plate.....VFK0191
    Reel Table Height Gauge.....VFK0190
    Check Light.....VFK0343
    Nut Driver (Purchase locally)

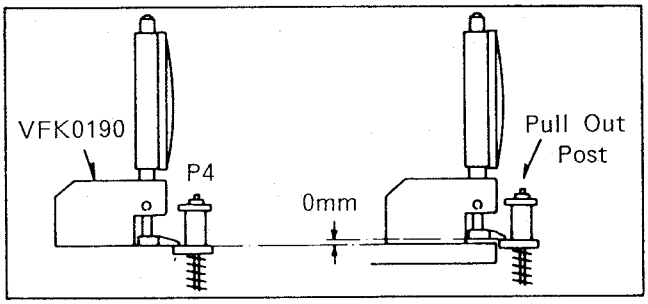


Fig. M6

1. Remove the cassette compartment by unscrewing 4 screws.
2. Place the Post Adjustment plate over the reel tables.
3. Place the Reel Table Height Gauge on the tape guide post P4, lower the scraper so that it touches the lower edges of P4, then set the gauge to zero ("0"). (Fig. M6)
4. Slightly lower the pull-out post by turning the nut on the post clockwise with the nut driver, and set the side of the scraper against the post as shown in Flg. M7.
5. Slowly turn the nut on the post counterclockwise until the gauge reads 0mm. (Fig. M6)
6. Confirm there is no tape curling at P4 post during reverse mode by using the check light. If tape curling occurs, Go back to step 3.

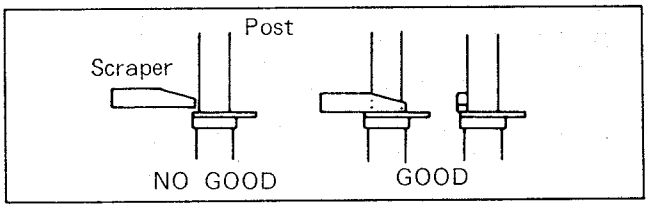


Fig. M7 Post Adjustment

3-2-4. CONFIRMATION OF THE A/C HEAD TILT

* Note:
This procedure should be performed after replacing the A/C head and pressure roller, and adjusting the height of the tape guide post (P4).
(Refer to "COARSE ADJUSTMENT OF THE TAPE GUIDE POST HEIGHTS".)

  * Tools and Eqipment Required:
    Hex. Wrench Set.....VFK0326
    Nut Driver (purchase locally)

1. Play back the begnning portion of NV-E240 blank cassette tape and confirm that the tape runs between lower and upper limiters of the P4 post. If there is waving or frilling in the lower edge or top edge of the tape, correct the tilt of the A/C head by turning the screw located behind the A/C head. (Fig. M8)

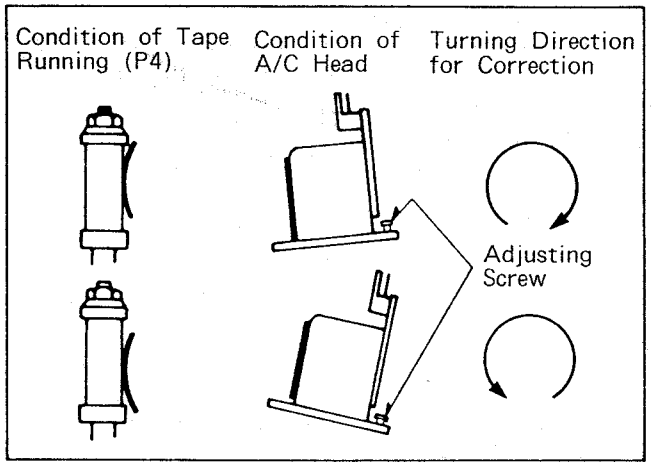


Fig. M8

2. If the tape curling cannot be removed by adjusting the A/C head tilt, then readjustment of the height of the tape guide post (P4) may be needed.

* Notes:

1. The tape guide post (P4) has been precisely adjusted at the factory. Therefore, normally the tape guide post (P4) readjustment is not required to eliminate the tape curling.
2. After adjusting the A/C head tilt, the A/C head height adjustment is required.

3-2-5. CONFIRMATION OF THE ENVELOPE OUTPUT (LINEARITY)

* Note:

Before playing back the alignment tape, play back a normal cassette tape and confirm correct transport.
(Refer to "CONFIRMATION OF THE TAPE TRANSPORT".)

* Tools and Equipment Required:
Post Adjustment Screwdriver.....VFK0329
Alignment Tape.....VFJ8125H3F

1. Connect the scope to the output of the Head Amp (CL3003) on the Main C.B.A. and TP6201 on the same C.B.A. to EX +- Trigger of the scope.
2. Play back the monoscope portion of the alignment tape VFJ8125H3F.
3. Turn the Tracking Control VR and adjust for maximum RF envelope.
4. If the RF envelope appears like example "A" or "B" in Fig.M9, then adjustment of tape guide post (P2 : Entrance) is necessary.
5. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown "C" in Fig.M9. (See Fig.M12 also)

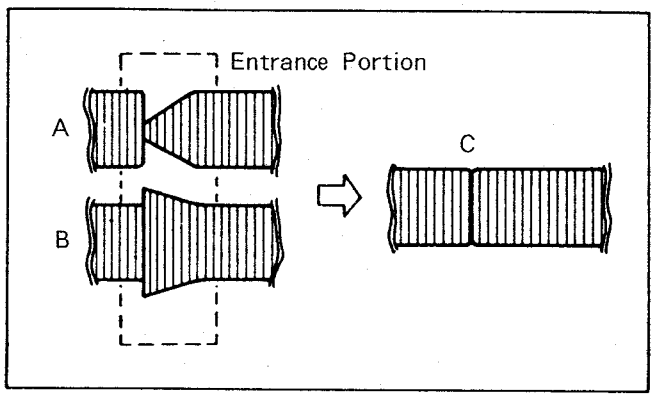


Fig. M9

6. If the RF envelope appears like example "D" or "E" in Fig. M10, then adjustment of the tape guide post (P3 : Exit) is necessary.
7. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in "F" in Fig. M10.

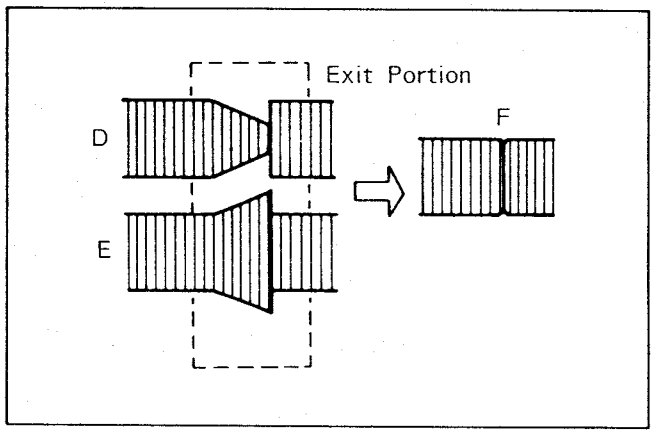


Fig. M10

8. Turn the Tracking VR from end to end.
The variation of RF envelope should be nearly parallel as shown in Figure M11.
9. Turn the Tracking VR and adjust for maximum RF envelope.
If the RF envelope does not meet these specs, V1/V 0.7, V2/V 0.8, then repeat steps 1-9 of item 3-2-5. again. (Fig. M13)

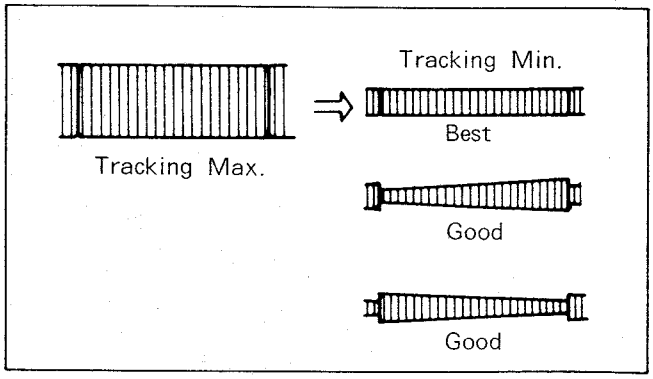


Fig. M11

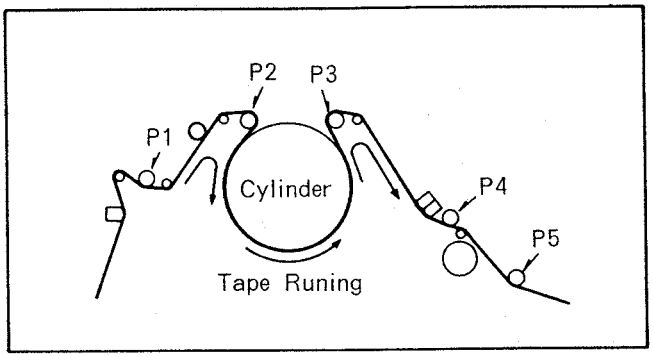


Fig. M12 Loading of post

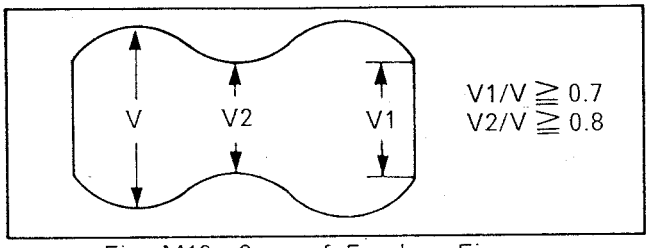


Fig. M13 Spec. of Envelope Figure

10. Turn the Tracking VR from end to end again and then back to the detent (Fix) position.
At the detent position, the RF envelope waveform should be at maximum. If it is not at maximum then "ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION" is necessary.
(Refer to "FINE ADJUSTMENT OF THE A/C HEAD HORIZONTAL POSITION".)

3-2-6. COARSE ADJUSTMENT OF THE A/C/ HEAD HEIGHT

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

* Tools and Equipment Required:
Check Light.....VFK0343
Nut Driver (Purchase locally)

(1) Looking at the lower edge of the control head within the tape running, ensure that lower edge of the tape runs along 0.25mm far from lower edge of the control head. (litte bit up position from lower edge of control head.) If it doesn't, slightly turn the nut (A) in either direction to correct clockwise to lower the head and counterclockwise to raise it.

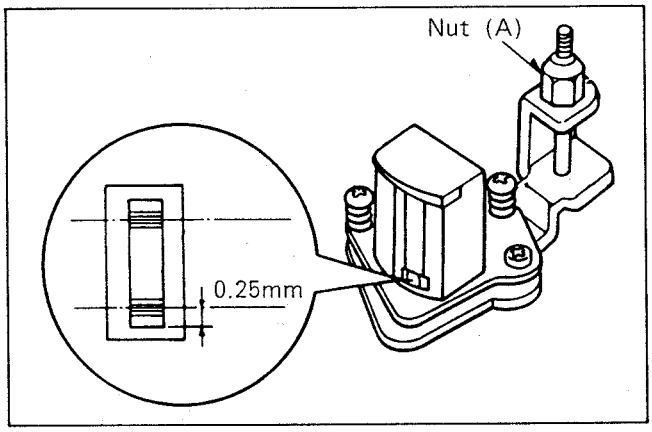


Fig. M14

3-2-7. ADJUSTMENT OF THE A/C HEAD AND AZIMUTH

* Note:
This procedure should be performed only when the A/C Head is replaced and posts hight are readjusted.

* Tools and Equipment Required:
Nut Driver (Purchase locally)
Alignment Tape.....VFJ8125H3F

1. Connect the scope to the audio output.
2. Play back the 2nd portion (Normal Audio 6KHz) of the alignment tape, VFJ8125H3F.
3. Adjust the screw (B) so that the audio output level becomes maximum. (Fig.M15)

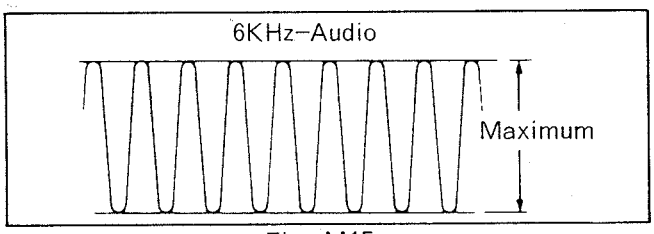


Fig. M15

4. Then adjust the nut (A) so that the audio output level (at TP4001) maximum.

3-2-8. ADJUSTMENT OF A/C HEAD HORIZONTAL POSITION

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

* Tools and Equipment Required:
H. Position Adj. Fixture.....VFK0328
Alignment Tape.....VFJ8125H3F

1. Set the Tracking Control VR to the center detent (fixed) position.
2. Connect the scope CH1 to TP3001 on the Main C.B.A., and TP4001 on the Audio C.B.A. to Ext–trigger the scope.
3. Play back the Monoscope pattern of the alignment tape (VFM8125H3F).
4. Adjust the adjust screw so that the RF envelope output level becomes is maximum at the detent position (Fig.M16,M17).
5. Turn the Tracking VR from end to end and then back to the detent position.
Confirm that the RF envelope output level is maximized at the detent position. (Fig.M11)

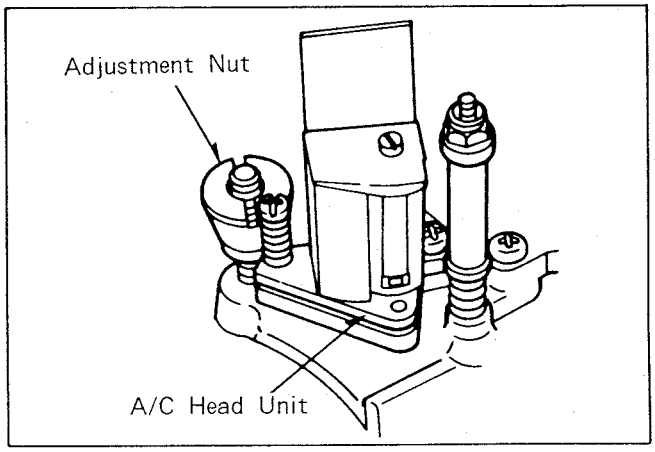


Fig. M16

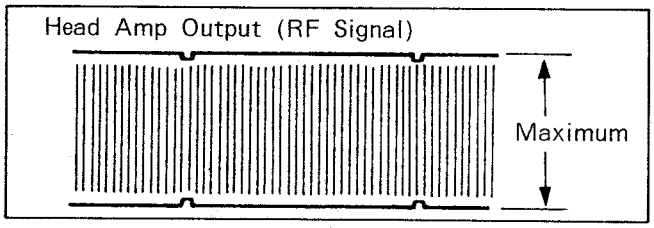


Fig. M17

4. OTHER ADJUSTMENT PROCEDURES

4-1. CONFIRMATION OF BRAKE TORQUE

* Equipment Required:
  Dial Torque Gauge.....VFK0133
  Adaptor for Gauge.....VFK0134
* Specification:-----see spec table (Fig. M19).

(1) Remove the cassette compartment by unscrewing 4 screws.
(2) Attach the adaptor to the torque gauge and place the unit in STOP mode.
(3) Place the torque on the reel table. The weight of gauge should not rest on the reel table.

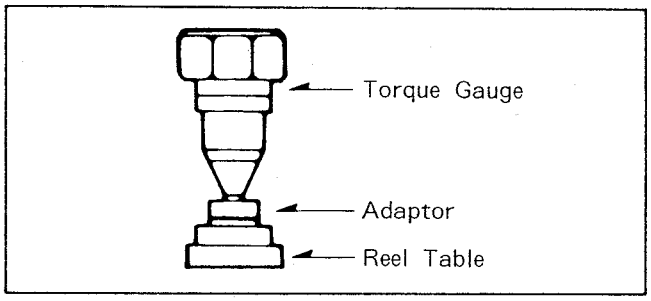
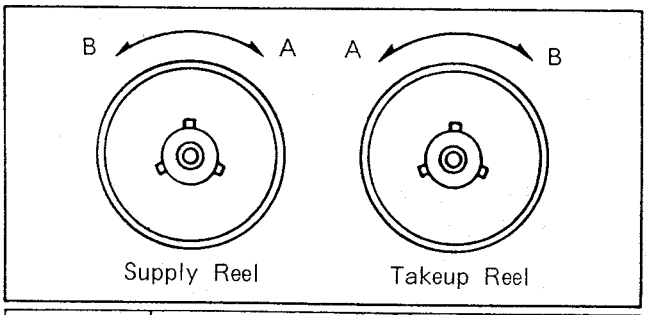


Fig. M18

(4) Turn torque gauge in either direction indicated in the Fig. M19, and read the gauge when the brake begins slipping.

Note:

If proper brake torque can not be optained, check the both take-up and supply clutch gear.



	A	B
Takeup	28+-8g-cm	28+-8g-cm
Supply	28+-8g-cm	28+-8g-cm

Fig. M19

4-2. TENSION POST POSITION ADJUSTMENT

* Specification : ----------2.4mm~2.9mm

(1) Remove the Cassette Up unit by unscrewing 4 screws. (Refer to the disassembly procedures titled in Removal of the Cassette Up Unit). Place the unit in Play mode by rotating Drive Gear (A) in clockwise shown below.

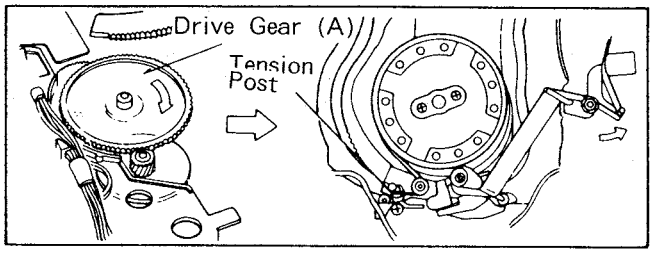


Fig. M20

Note:

In this case, make sure that the power is not applied.

(2) Loosen the screw (A) a little bit and adjust the Tension Post adjustment plate so that the "Distance (A)" shown below becomes just meet in the specification (2.4m~2.9mm).
(3) Tighten the screw (A) to fix it.

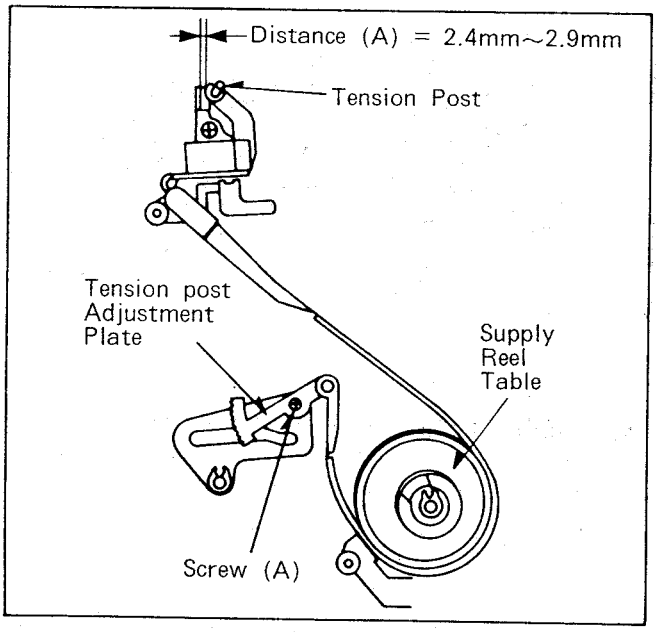


Fig. M21

4-3. BACK TENSION ADJUSTMENT

* Equipment Required:
  Back Tension Meter.....VFK0132
  VHS Cassette Tape (120min)
* Specification:----------19-23g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilized. (for approx. 10-20 seconds) is stabilized.

2. Insert the Back Tension Meter into the path of a tape, and measure if the back tension is within specification as shown in Fig.M22.

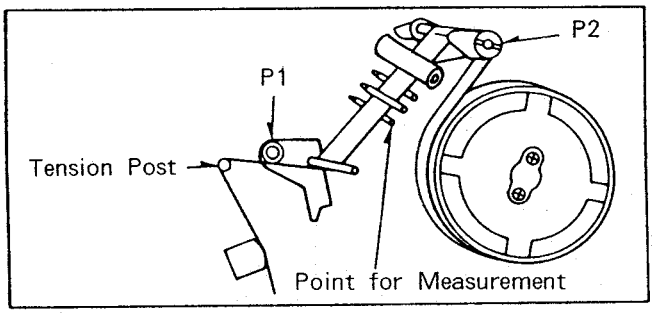


Fig. M22 Measurement of Back Tension

Note:

1. While measuring, make sure that the three probes of the meter are all in good contact with the tape.
2. As the tension meter is very sensitive, we recommend taking 3 separate readings.
3. If it is out of specification, change the spring notch as shown in Fig. M23.

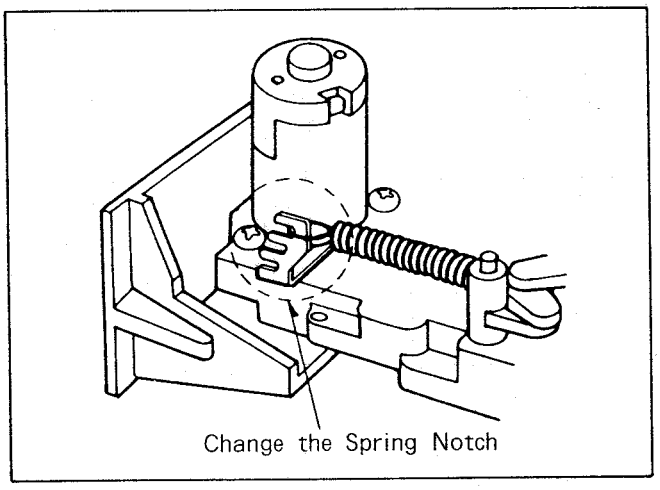


Fig. M23

4-4. REEL TABLES HEIGHT ADJUSTMENT

* Equipment Required:
  Post Adjustment Plate.....VFK0191
  Reel Table Height Gauge.....VFK0190
* Specification----------0~-0.15mm

Note:

Cut-out on Post Adjustment Plate is reference of reel table height and their height is measured based on this reference.

1. Place the post adjustment plate on the reels, and put the Gauge on the plate. Set the gauge to zero "0" with the foot scraper of the gauge touching the cut-out portion of the plate.

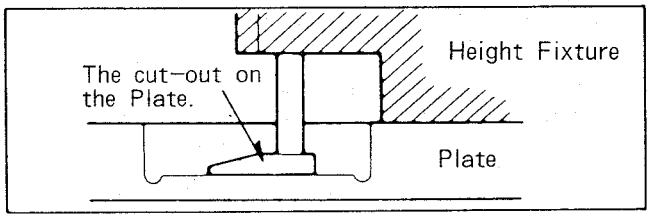


Fig. M24

2. Then measure the height of reel table and confirm the difference performed in step 1 as shown below. Do the same for the other reel table.

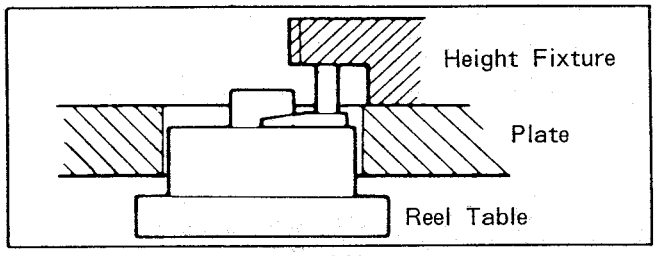


Fig. M25

3. If a height difference in readings between the cut-out portion of plate and reel tables is not 0~-0.15mm (higher or lower), adjust the height of the reel to obtain specified height.
4. For adjustment add or reduce a washer.

4-5. ADJUSTMENT OF FG HEAD GAP

* Specification:----------0.17~0.18mm

(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. (The thickness of the cover page is approx 0.17mm)
(3). After adjustment, tighten 2 screws.

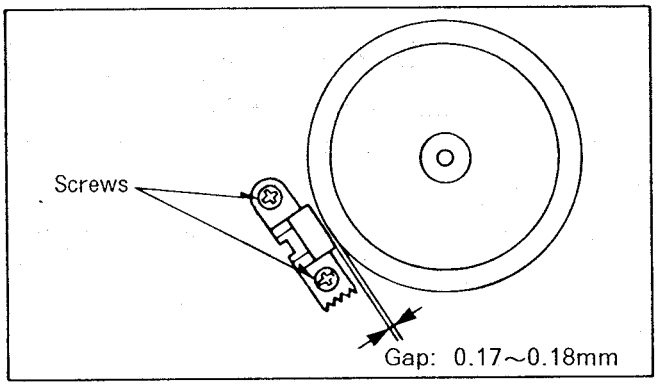


Fig. M26

Note:

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

4-6. ASSEMBLY ADJUSTMENT PROCEDURES OF MECHANISM

The mechanism of this model is mostly engaged to the System Control Circuit, through the mode select switch.
Therefore the relation between the mode select switch and the cam gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on.
If these parts are fixed in properly, the unit will be unloaded or compulsorily stopped.
And it will result being damage to any mechanical or electrical parts.

[1] PROCEDURES FOR ASSEMBLING LOADING RING AND LOADING GEARS

(1) Install a Loading Ring T (1) unit and a Loading Gear (B) so that both triangle marks line on as shown below.

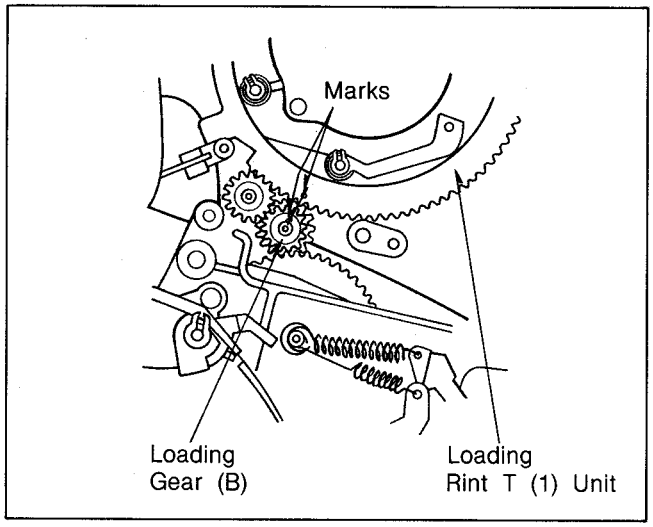


Fig. M27

(2) Install a Loading Gear (A) and next fix a Loading Ring S (1) Unit so that the holes of Loading Ring S (1) Unit and T (1) Unit line on as shown below.

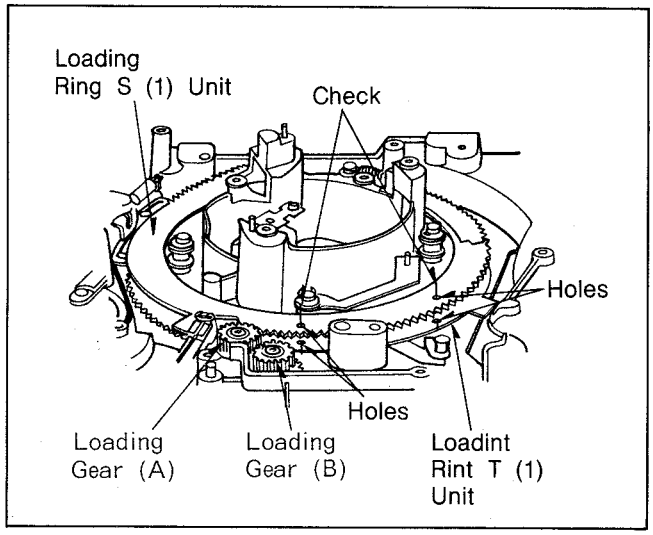


Fig. M28

Note:
Pay attention that the washers are remaining under the loading gears or any other parts.

[2] PROCEDURES FOR ASSEMBLING TAKE-UP LOADING GUIDE AND TAKE-UP LOADING POST UNIT

(1) Install Loading Guide T unit.
The small projection of a Loading Link T unit must be inserted into gap of Loading Guide T unit.

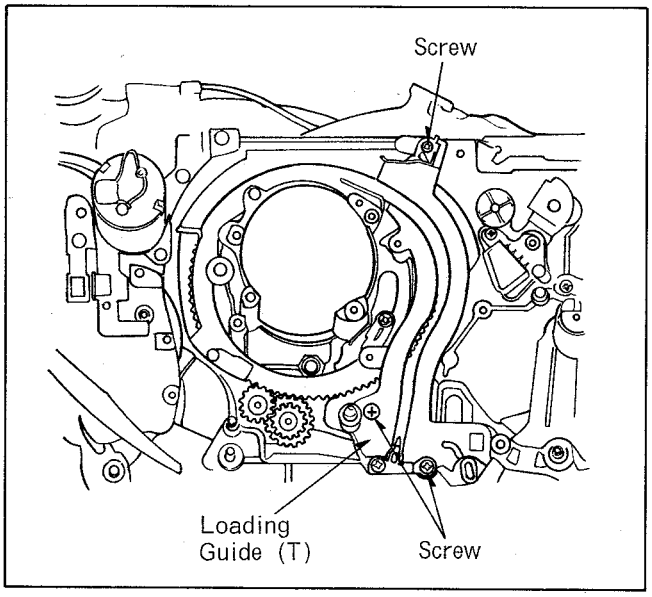


Fig. M29

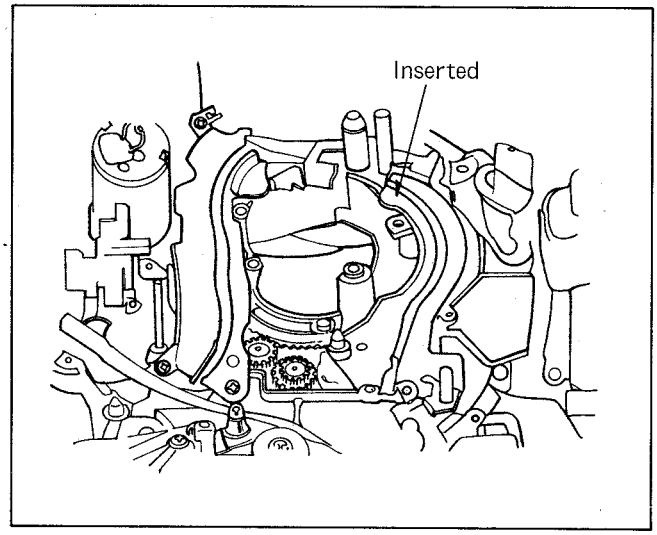


Fig. M30

(2) Fix a Take-up Side Loading Post unit holding the Small projection of the Loading Link T unit and install at shaft Holder Unit.

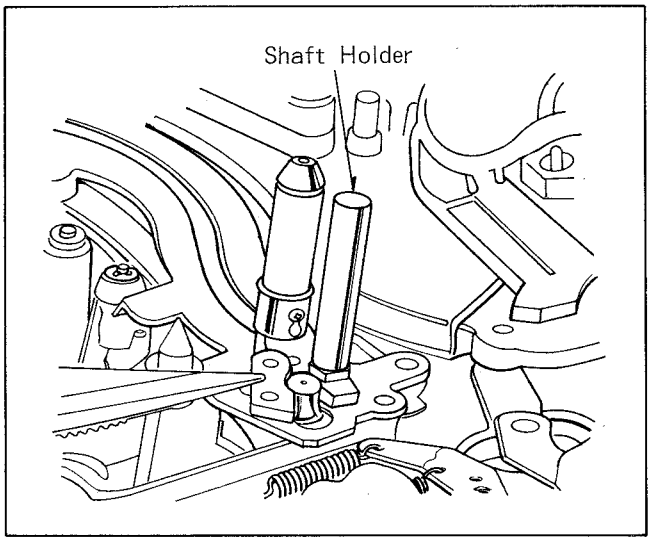


Fig. M31

[3] PROCEDURES FOR ASSEMBLING SUPPLY LOADING GUIDES AND SUPPLY LOADING POST UNIT

(1) Install the Loading Guide S-1 and S-2. Then tighten 3 screws.

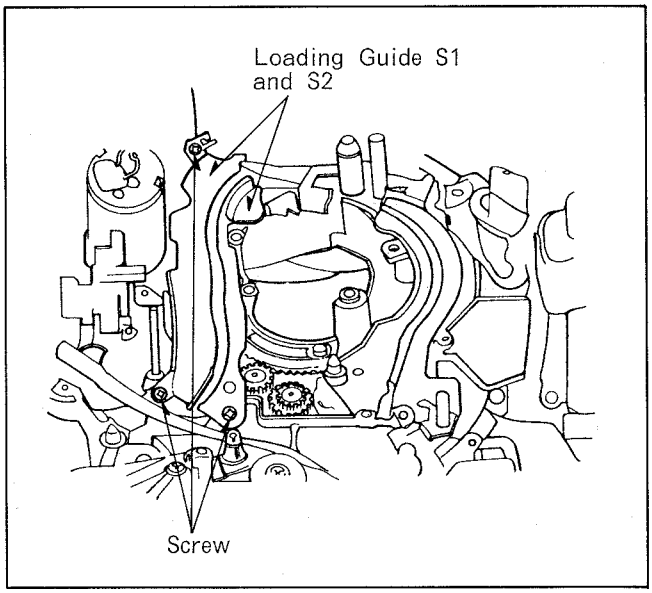


Fig. M32

(2) Slide a Supply Loading Post Unit into a gap between the Loading Guide S1 and S2 hooking a connection Rod to a connect Tie Unit as shown below.

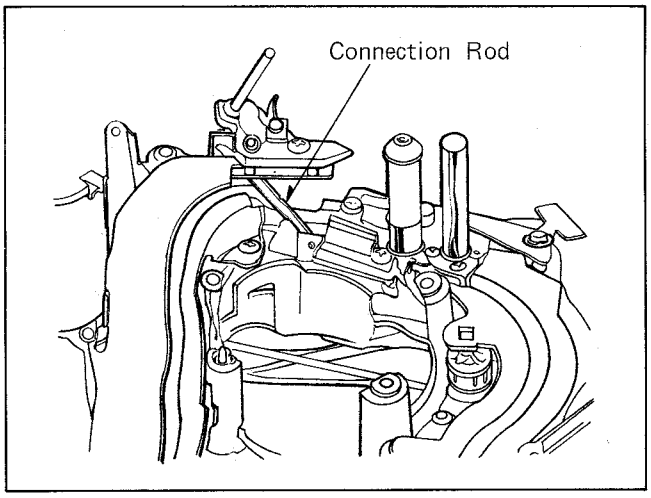


Fig. M33

(3) Install a V stopper Base and Supply Post Stopper.

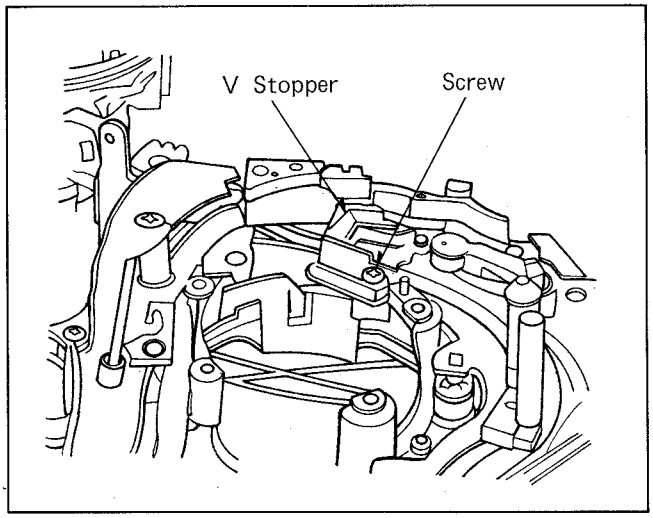


Fig. M34

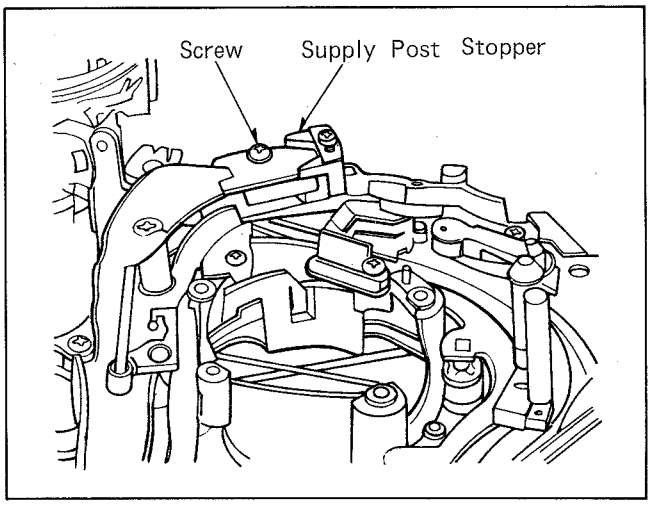


Fig. M35

(4) Set the Loading Post unit into Stop position. as Shown below.

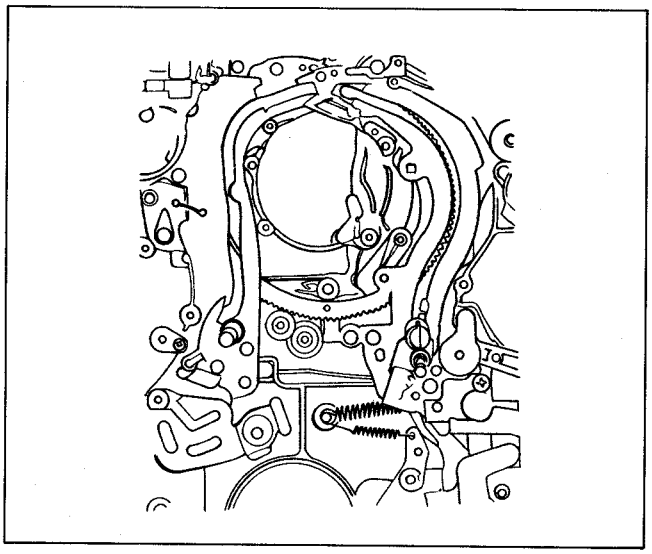


Fig. M36

[4] PROCEDURES FOR ASSEMBLING MAIN ROD

(1) Place a Main Rod inserting 3 Thrust Washers and then insert 3 washers.
After that, fix them using 2 retaining rings as shown below.

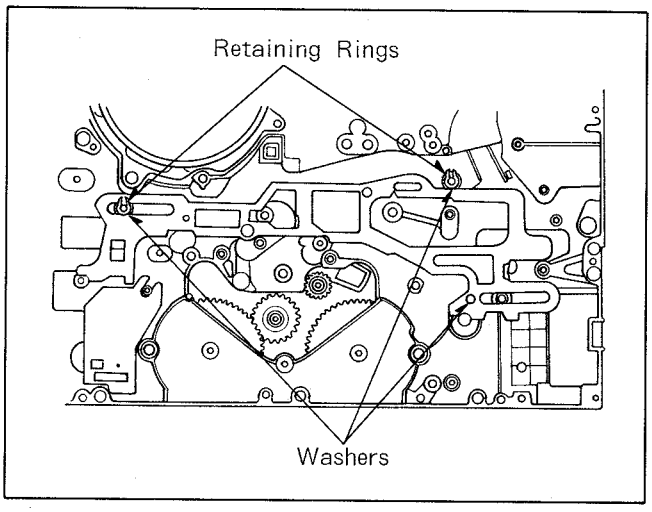


Fig. M37

(2) Install a Drive Arm kick Lever hooking a Drive Arm Kick Lever Spring and fix it using ring.

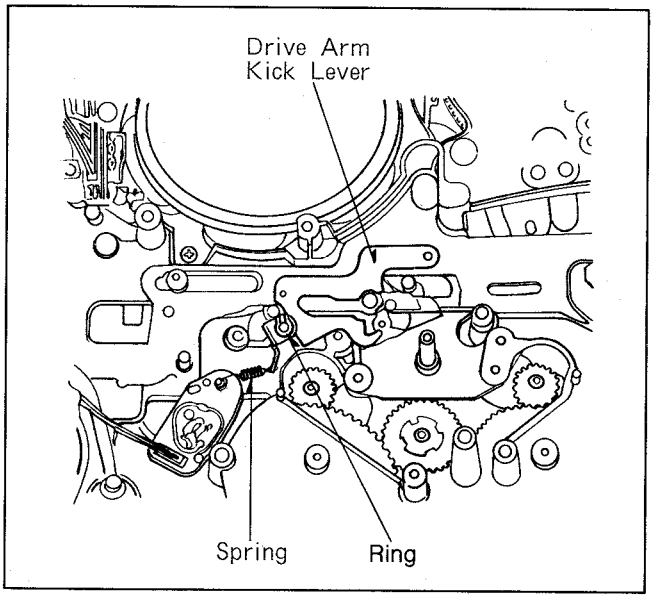


Fig. M38

[5] PROCEDURES FOR ASSEMBLING CAM GEAR AND LOADING GEAR (C)

(1) Make sure that the hole on a Main Rod Line up exactly with hole on chassis as shown below.
Make sure also, the holen a Cam Gear Line up with hole on chassis.

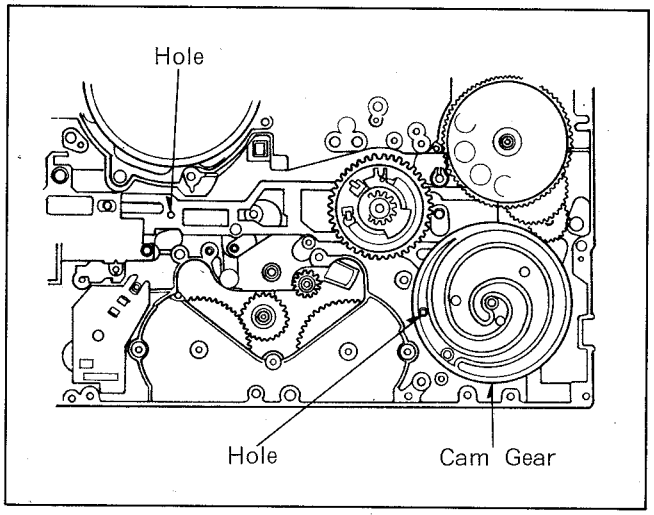


Fig. M39

(2) Install a Loading Gear (C) keeping the relation as shown below.

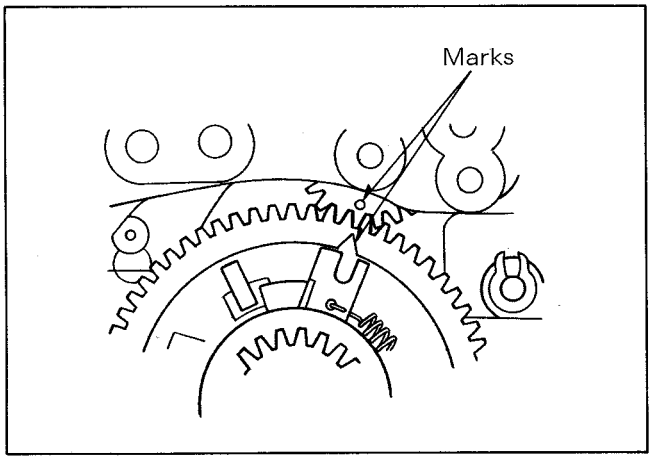


Fig. M40

(3) Install a Sector Gear as shown below.

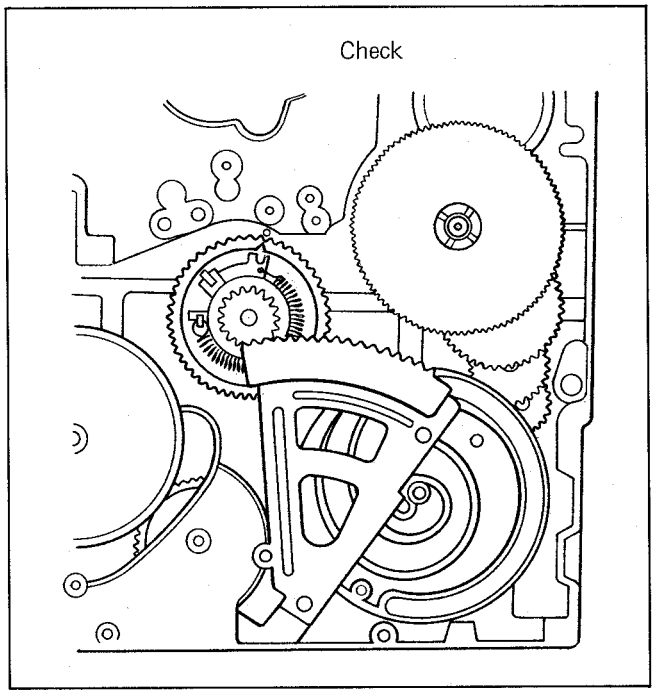


Fig. M41

(4) Fix a SG Limiter

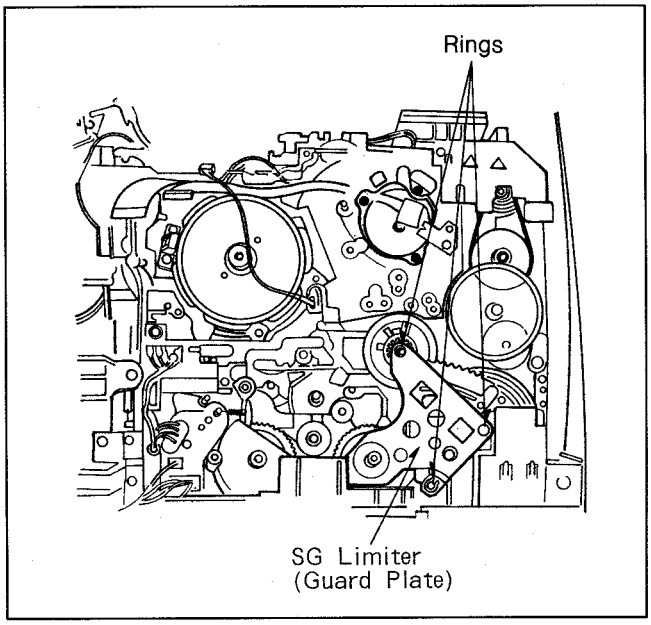


Fig. M42

[6] ASSEMBLY PROCEDURES OF MODE SELECT SWITCH

(1) Perform this procedures after confirming the complete setting of mechanical parts.
First of all, confirm that the hole on a Main Rod is meeting with a hole on a chassis.
(2) Move the moving contact of a Mode Select position as shown below.

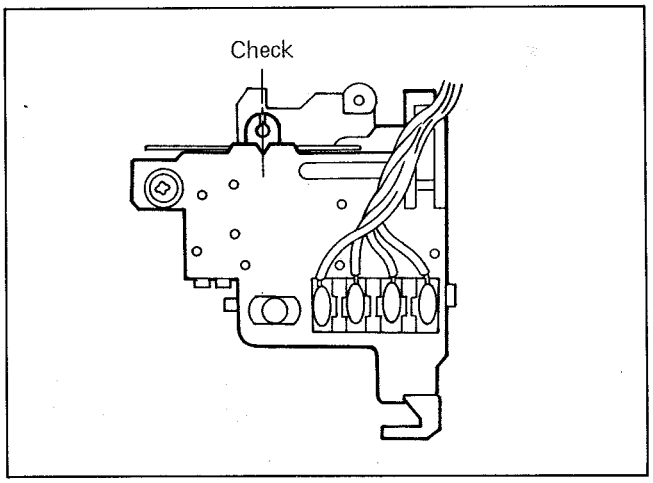


Fig M43

(3) Install the Mode Select Switch keeping these relation writen in item (1) and (2) by screwing 2 screw.

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) TEST EQUIPMENT

1. Oscilloscope
   Dual Trace, 50MHz, 2mV/DIV
   10:1 Probe
   1:1 Probe
2. Digital Volt Meter of 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.

2) TOOLS

   * Logarithmic Gray Scale Chart
     (Part No.:YWV2310RB99)
   * Colour Chip Chart
     (Part No.:YWV2100RB98)
   * Hunting Chart
     (Part No.:VFK0546)
   * J Chart & Ball Chart
     (Part No.:VFK0580)
   * Colour Bar Chart
     (Part No.:VFK0677)

10. Plastic Tip Driver
11. E.V.R. FIXTURE (Part No.:VFK0644)
    * ROM 10 (Part No.:VFK0701ROM10)

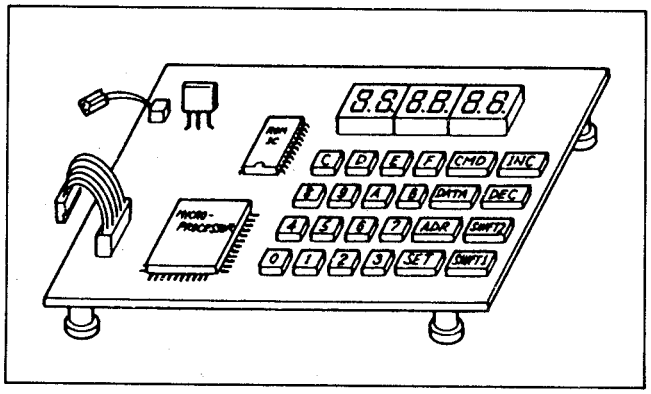


Fig. C1

12. Colour Temperature Conversion Filter
    * C12 Filter (Part No. VFK0374 or VFK0713)
    * C2 Filter (Part No. VFK0375 or VFK0716)
    * Movie Light Box VRD91MLB
      (including VFK0777 Gray Scale Chart)
13. Extension Cable
    * CONNECTION Cable for Measurement (24P)
      (Part No.VFK0766A)
    * EVR CONNECTION Cable (15P)
      (Part No.VFK0734W)
14. Camera Extension Cables

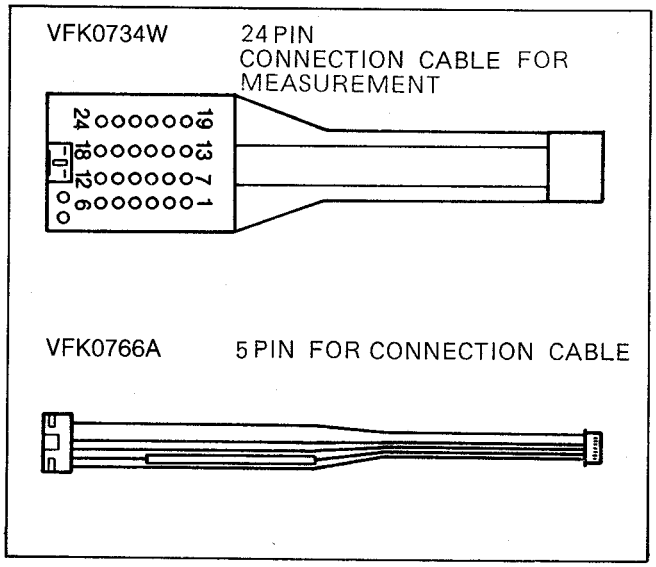


Fig. C2

(Standard Setting for Camera Adjustment)

The camera switches must be set in the following position for camera adjustment unless other wise specified each adjustment procedure.

1) White Balance Switch...White set
   (Refer to How to White Set)
   AF...Auto
   High speed shutter...OFF
   Fade...OFF
2) Iris...Center(ALC condition)
3) Use 3200 degrees kelvin light source for lighting.
4) To trigger the oscilloscope, use Video output.
5) Service work for camera unit must be performed in a dust free location to maintain the lens cleanliness.

(How to set White Balance)

1) Aim the camera at white chart.
2) Push [SHIFT 1 + 8] simultaneously.

(Description of Command)

Selecting the communication for the type of data exchange performed between EVR Fixture and camcorder.

Command	Communication	Contents
02	EVR Fixture → EEPROM	Writing the data to address of EEPROM. (Lower Digit)
12	EVR Fixture → EEPROM	Writing the data to address of EEPROM. (Upper Digit)
04	EEPROM → EVR Fixture	Reading out the data of EEPROM. (Lower Digit)
14	EEPROM → EVR Fixture	Reading out the data of EEPROM. (Upper Digit)
08	EVR Fixture → Micro Computer (RAM)	Data transmission of EVR Fixture to Micro computer (RAM).
18	EVR Fixture → Micro computer (RAM)	Data tranmission of EVR Fixture to Micro computer (RAM).
09	Micro computer (RAM) → EVR Fixture	Reading out the data of Micro computer (RAM).
19	Micro computer (RAM) → EVR Fixture	Reading out the data of Micro computer (RAM).

Fig. C3

(Error Indication)

If an error is occurs while EVR is operating, EVR will display one of the error massages listed in Fig.C4 for 2 seconds and then return to the previous indication.

Error NO.	Contents of Error	Simple checking method
1	Set the command number	
2	Set the wrong Address number	
3	VD signal from camera is not coming.	TP lead wire may be cut
4~6	Detect the error during communication	TP lead wire may be cut
7	Writing error in the EEPROM of camera.	Command or address cure wrong
8	Communication error in the EEPROM of camera	Same as above

Fig. C4

(Macro Operation)
The following operation is provided to transfer the data by one touch.

<table>
<tr><th>NO.</th><th>Buttom to be pushed</th><th>Operation</th></tr>
<tr><td>1</td><td>SHIFT 1+0</td><td>Fully opens the IRIS</td></tr>
<tr><td>2</td><td>SHIFT 1+1</td><td>Fully close the IRIS.</td></tr>
<tr><td>3</td><td>SHIFT 1+2</td><td>Minimizes AGC Gain.</td></tr>
<tr><td>4</td><td>SHIFT 1+3</td><td>Maximizes AGC Gain.</td></tr>
<tr><td>5</td><td>SHIFT 1+4</td><td>Turns Fade on.</td></tr>
<tr><td>6</td><td>SHIFT 1+5</td><td>Turns Fade off.</td></tr>
<tr><td>7</td><td>SHIFT 1+6</td><td>NOT USED</td></tr>
<tr><td>8</td><td>SHIFT 1+7</td><td>Switcing the Auto/manual Focus.
* Press the SHIFT 1+7 to select the Auto or Manual Focus.
(The focus mode selected is displayed on Address LED only while the keys are depresses)
<table><tr><th>LED INDICATION</th><th>MODE</th></tr><tr><td>0</td><td>Manual Focus mode.</td></tr><tr><td>1</td><td>Auto Focus mode.</td></tr></table></td></tr>
<tr><td>9</td><td>SHIFT 1+8</td><td>White set</td></tr>
<tr><td>10</td><td>SHIFT 1+9</td><td>Making Iris manual condition.</td></tr>
<tr><td>11</td><td>SHIFT 1+A</td><td>Iris is return to Auto Mode.</td></tr>
<tr><td>12</td><td>SHIFT 1+B</td><td>AGC Gain is return to Auto Mode.</td></tr>
<tr><td>13</td><td>SHIFT 2+2</td><td>Writes the Average data and Fixed data to the EEPROM.</td></tr>
<tr><td>14</td><td>SHIFT 2+3</td><td>Automatically Calculates the Colour Reproduction and White Balance.</td></tr>
<tr><td>15</td><td>SHIFT 2+4</td><td>NOT USED</td></tr>
<tr><td>16</td><td>SHIFT 2+5</td><td>Zooms to "WIDE" position.</td></tr>
<tr><td>17</td><td>SHIFT 2+6</td><td>Stop the Zoom.</td></tr>
<tr><td>18</td><td>SHIFT 2+7</td><td>Zooms to "TELE" position.</td></tr>
<tr><td>19</td><td>SHIFT 2+8</td><td>Stop the Zoom.</td></tr>
<tr><td>20</td><td>SHIFT 2+9</td><td>Automatic Calculating for Manual Iris setting.</td></tr>
</table>

Fig. C5

PREPARATION

1) Remove both side cases referring to disassembly method.
2) Connect the E.V.R. FIXTURE and measuring equipment as shown in Fig.C6.

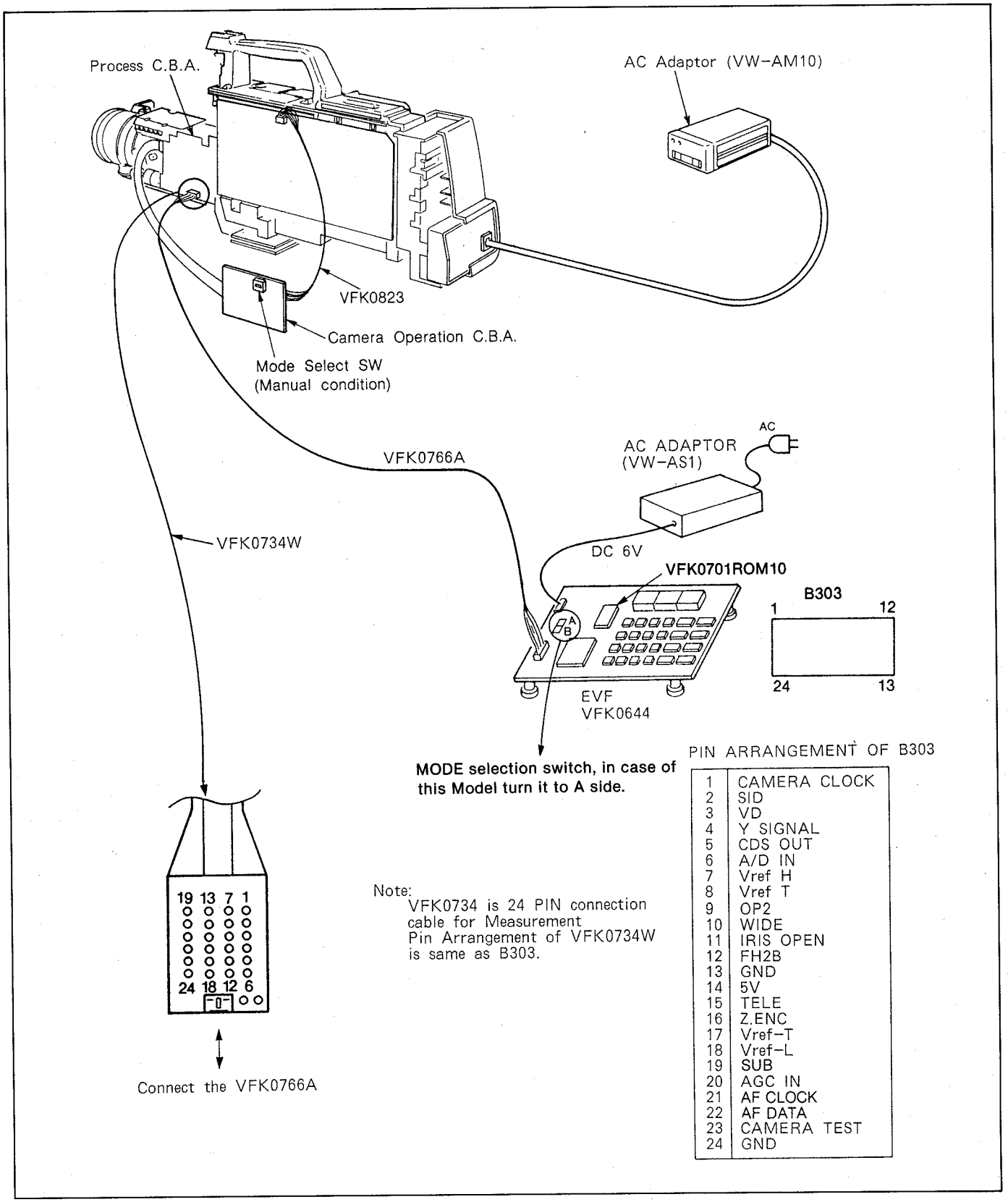
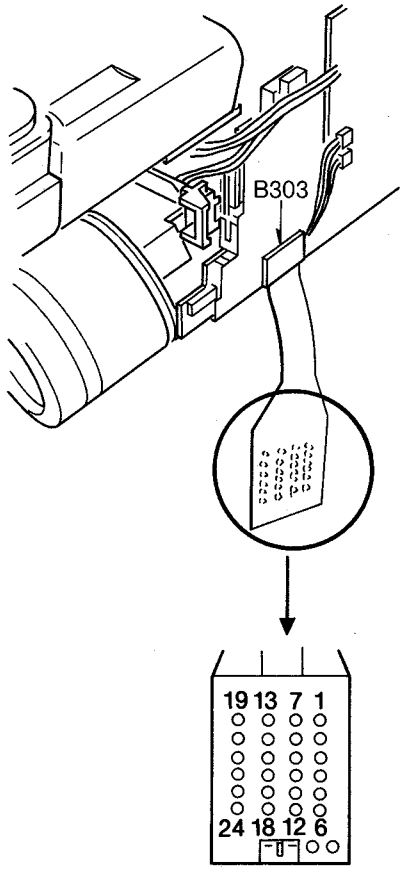


Fig. C6-1

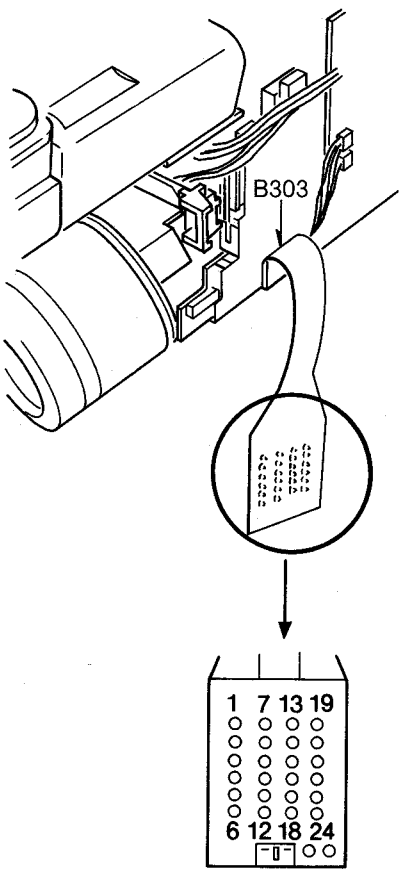
How to connect the EVR Fixture

Wrong



(Front Side of VFK0734W)

Correct



(Rear Side of VFK0734W)

Caution:
If connect the VFK0734W between EVR and Movie camera as above figure, Iris making fully open condition and EVR can't use for Adjutment of camera.

Fig. C6-2

1) Set the mode selector on the E.V.R. Fixture to "B" side. (Refer to Fig.C27)
2) Turn on the power SW of Movie camera.
3) Turn on the power SW of E.V.R. fixture. The LED Display on E.V.R. Fixture will indicate 08,80,00. If it does not indicated, push the Reset button and/or check the cable connections between EVR and CAMERA.
4) Mode Select SW on the camera Operation C.B.A., should be "manual" condition.
If "AUTO" condition, focus is always "AUTO".

HOW TO READ THE ADJUSTMENT PROCEDURES
(FOR USE OF CONVENTIONAL VR)

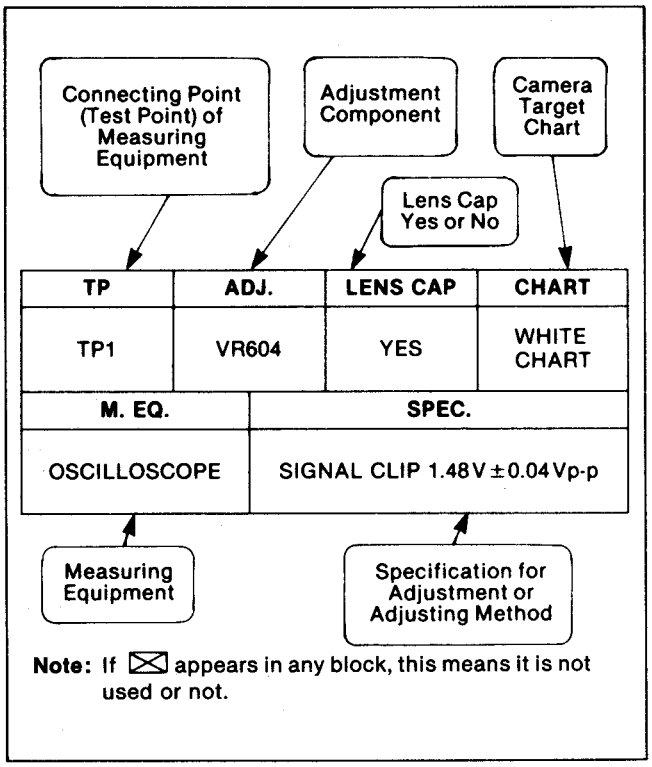


Fig. C7

HOW TO READ THE ADJUSTMENT PROCEDURES
(FOR USE OF E.V.R.)

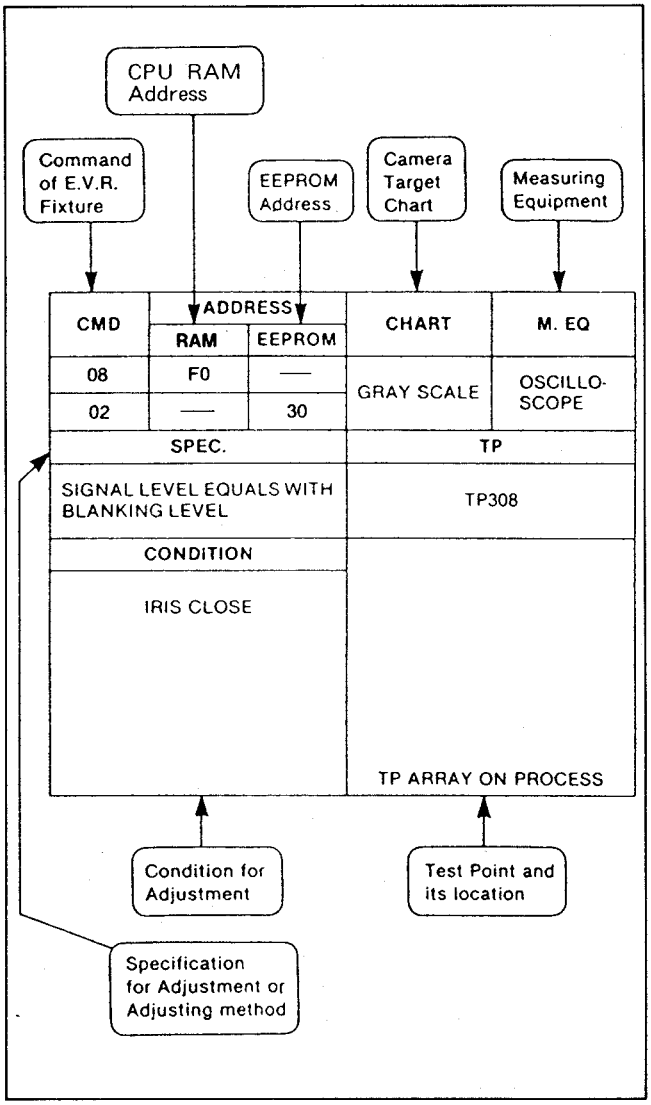


Fig. C8

1. DATA WRITING

When EEPROM is replaced, all item needs re-adjustment.

But If VFK0701ROM10 (New ROM) is installed to the EVR Fixture (VFK0644), when the pushing [SHIFT 2 and "2" keys simultaneously,Average Data is written in to EEPROM Automatically.

		UPPER							
LOWER		0	1	2	3	4	5	6	7
0	H DIGIT	B-Y Gain 6000 2E	B-Y MAT 6000 79	B-Y WB 6000 51	B-Y limit 6000 37	B-hili 6000 3B	BACKUP 1 76	vap-cl D0	cnt lapt 25
	L DIGIT	R-Y Gain 6000 3E	R-Y MAT 6000 5E	R-Y WB 6000 4C	R-Y limit 6000 34	R-hili 6000 57	BACKUP 1 AB	vap-core 25	g lap 83
1	H DIGIT	B-Y Gain 5100 2E	B-Y MAT 5100 79	B-Y WB 5100 60	B-Y limit 5100 3B	B-hili 5100 6C	BACKUP 2 91	Hap-cor 82	cnt ck B0
	L DIGIT	R-Y Gain 5100 3E	R-Y MAT 5100 5E	R-Y WB 5100 54	R-Y limit 5100 36	R-hili 5100 6A	BACKUP 2 73	hi-l, ap 10	cnt ct E0
2	H DIGIT	B-Y Gain 4500 2E	B-Y MAT 4500 79	B-Y WB 4500 74	B-Y limit 4500 6C	B-hili 4500 93	BACKUP 3 85	cnt2-up 06	cnt lapk 25
	L DIGIT	R-Y Gain 4500 3E	R-Y MAT 4500 5E	R-Y WB 4500 4E	R-Y limit 4500 44	R-hili 4500 5B	BACKUP 3 51	cnt2-dn 80	g lapk F8
3	H DIGIT	B-Y Gain 3600 30	B-Y MAT 3600 87	B-Y WB 3600 82	B-Y limit 3600 74	B-hili 3600 A3	BACKUP 4 F0	H+gain 20	NOT USED 00
	L DIGIT	R-Y Gain 3600 3D	R-Y MAT 3600 5C	R-Y WB 3600 66	R-Y limit 3600 5B	R-hili 3600 75	BACKUP 4 17	Vap-gain 0D	NOT USED 00
4	H DIGIT	B-Y Gain 3300 50	B-Y MAT 3300 87	B-Y WB 3300 8C	C-FLAG TH 67	CSPDm 08	agclim 2 A0	c-g-ap 20	NOT USED 00
	L DIGIT	R-Y Gain 3300 36	R-Y MAT 3300 5D	R-Y WB 3300 72	CHSPD 04	CSPDs 19	EIS ON/OFF 83	c-g-sw 55	NOT USED 00
5	H DIGIT	B-Y Gain 3100 50	B-Y MAT 3100 87	B-Y WB 3100 94	B-limit 3100 7B	B-hili 3100 CA	ped-h 0A	H-st/p 30	NOT USED 00
	L DIGIT	R-Y Gain 3100 36	R-Y MAT 3100 5D	R-Y WB 3100 7B	R-limit 3100 75	R-hili 3100 CC	ped-1H-ed/p 0A	H-ed 40	NOT USED 00
6	H DIGIT	B-Y Gain 2800 44	B-Y MAT 2800 87	B-Y WB 2800 9C	B-limit 2800 7B	B-hili 2800 CA	ped-st 50	V-st/b 30	NOT USED 1D
	L DIGIT	R-Y Gain 2800 39	R-Y MAT 2800 5D	R-Y WB 2800 88	R-limit 2800 CC	R-hili 2800 CC	ped-end 90	V-ed/p 18	NOT USED 00
7	H DIGIT	STH FF	 00	Bwb Llimit 51	B-limit SKY 00	B-hili SKY 37	Ped-lvl 00	H-st/b 4C	NOT USED 78
	L DIGIT	 00	 00	Rwb Llimit 4C	R-limit SKY 31	R-hili SKY 57	flag3 FD	sw 3E	NOT USED 00
8	H DIGIT	Hap gain 20	Hap-core 82	Bwb Hlimit 60	B-limit TREE 6C	B-hili TREE A3	flag7 FF	Y-base AC	NOT USED 10
	L DIGIT	Uap gain 10	 00	Rwb Hlimit 54	R-limit TREE 31	R-hili TREE 44	flag8 03	Vap-core 05	NOT USED 00
9	H DIGIT	Houwa-U D0	HAP-NO 3C	B-Y WB 4900 60	BWBZ B 00	BWBZ C 00	Tree BK 03	cntlap 28	NOT USED 00
	L DIGIT	Houwa-L B0	PEAKLPF 11	R-Y WB 4900 54	RWBZ B 00	RWBZ C 00	P-WAITE A0	g-lap D3	NOT USED 00
A	H DIGIT	palflag F4	cls4 31	DSP Ver 11	U puls 18	Baxish Th 6C	st-alcp 05	D-Aagc 40	NOT USED 42
	L DIGIT	haloth 17	cls8 71	MODEL-NBR C4	d puls 98	Baxish Th 5B	st-alcn 05	cntc E0	NOT USED 05
B	H DIGIT	B in 05	VSTART 1D	TH 1 55	TH 3 6F	PALBR 00	open g 1 40	Ychk h A0	NOT USED 01
	L DIGIT	R in 05	ab set 93	TH 2 02	TH 4 10	LOOPTH 02	open g 2 6F	Ychk 1 28	NOT USED 18
C	H DIGIT	Outb1 9F	ina1 F3	OPS 4 31	KOTEI A 20	OPEN 1 9B	OPEN 3 0A	Yclpv 1 80	NOT USED 47
	L DIGIT	Outb2 7B	ina2 E6	ST 82	KOTEI B 20	OPEN 2 B3	OPEN G 3 82	darklv 1 00	NOT USED 00
D	H DIGIT	Outb3 5C	ina3 CD	Seki D0	KOTEI C 18	CLOSE 1 73	CLOSE 3 A7	BACK UP 1A	NOT USED 02
	L DIGIT	Outb4 4F	ina4 B3	AGC lim B0	KOTEI D 18	CLOSE 2 63	CLOSE G 3 96	BACK UP 00	NOT USED 00
E	H DIGIT	Outb0 0B	close 00	SW-set 83	keisha 03	ag cnt1 3F	CORE 03	loop gn 19	NOT USED 31
	L DIGIT	T-gain 24	open 00	MIX 03	AG-CENTER 9F	f cnd 48	CLOSE G2 A9	loop gt 00	NOT USED 3C
F	H DIGIT	A/D IN 97	AF-ap 95	OR bias 76	R-YKB 48	LOW CLIP 81	OPS8 71	clpmax E0	NOT USED 2D
	L DIGIT	AF-Vn 85	AF-AMP A6	PWM-B CF	Y-GAIN 1B	B-YKB 48	CLOSE G3 BC	PAL flkg 41	NOT USED A0

Fig. C9 Address map of all Average data.

2. VTR CARRIER BALANCE ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	R:B8 B:BB	—		VECTOR-SCOPE
12, 02	—	R−Y:3F (H) B−Y:4F (L)		
SPEC.			TP	
CENTRE OF ECTORSCOPE			VIDEO OUT	

Purpose:
Set chroma signal black and white level.

Symptom of Misadjustment:
With a large shift, colour is added to Black and white areas in the picture.

Note:
Refer to preparation for connection of EVR.

<Preparation>
1. Connect the vectorscope to Video out.
2. Aim the camera at white chart.
3. Push [SHIFT 1 + 8] keys simultaneously for white set.
4. Place the unit to "IRIS CLOSE" by pushing [SHIFT 1 + 1] keys simultaneously.

<Adjustment for R−Y>
Push following keys in order.
5. * [CMD], [1], [8].
   * [ADR], [B], [B].
6. Push [INC] or [DEC] keys until the vectors are in or close as possible to the centre, See Fig.C10.

<Data writing for R−Y>
Push following keys in order.
7. * [CMD], [1], [2].
   * [ADR], [3], [F]. (Does not change the data).
   * [SET].

<Adjustment for B−Y>
Push following keys in order.
8 * [CMD], [1], [8].
   * [ADR], [B], [8].
9. * Push [INC] or [DEC] keys until the vectors are in or as close as possible to the centre, See Fig.C10.

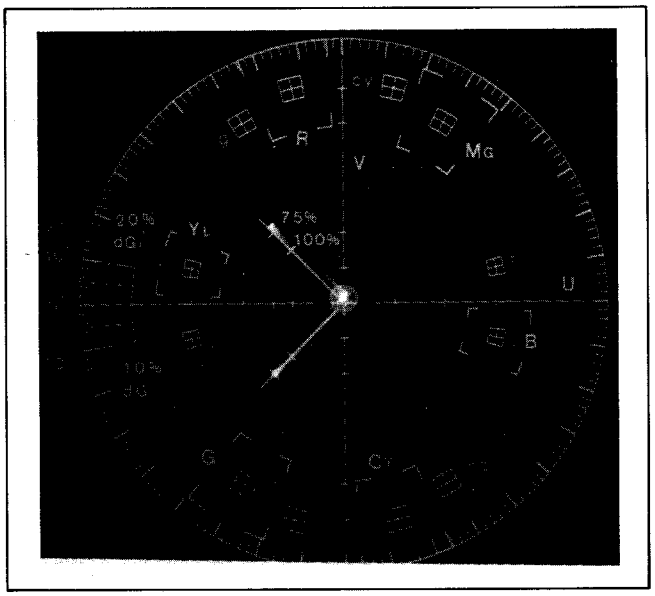


Fig. C10

<Data writing for B−Y>
Push following keys in order.
10. * [CMD], [0], [2].
    * [ADR], [4], [F]. (Does not change the data).
    * [SET].
    * [SHIFT 1 + A] (Iris is return to Auto Mode).

3. HALL AMP ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	B5	—		D.V.M
	VR701	—		
02	—	IF		
SPEC.			TP	
VOLTAGE B303-9 (VFK0734W-PIN 9)= VOLTAGE B303-18 (VFK0734W-PIN 18) VOLTAGE B303-9 (VFK0734W-PIN 9)= VOLTAGE B303-7 (VFK0734W-PIN 7)			B303-9 (PIN Number 9 of VFK0734W) VFK0734W-REAR 1 7 13 19 6 12 18 24	

Purpose:
Hall Amp Adjustment

Symptom of Misadjustment:
Hunting occurs or focus stops.

<Preparation>
1. Connect the jumper wire between B303−11 (VFK0734W−PIN11) and GND for Making Iris close. (Do not use EVR for IRIS close)

<Adjustment 1>
Push the following keys in order.
2. * [CMD], [1], [8].
   * [ADR], [B], [5].
3. * Push [INC] or [DEC] keys until the voltage Level at B303−9 (VFK0734W−PIN9) become Vref 1 +− 10mV. (Vref 1 = B303−18 (VFK0734W−PIN18)).

<Data Writing for Adjustment 1>
Push the following keys in order.
4. * [CMD], [0], [2].
   * [ADR], [1], [F].
   * [SET].
   * Remove the jumper wire.

<Adjustment 2>
5. Connect the jumper wire between B303−11 (VFK0734W−PIN11) and B303−14 (VFK0734W −PIN14) for fully open the Iris.
6. Adjust the VR701 so that Voltage at B303−9 (VFK0734W−PIN9) become Vref 3+−30mV. (Vref 3 = B303−7 (VFK0734W−PIN7))
7. Remove the jumper wire.

4. PLL FREQUENCY ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
CL203	C223		
M. EQ.		SPEC.	
FREQUENCY COUNTER		12.875000MHz±15Hz	

Purpose:
CCD Drive pulse adjustment

Symptom of Misadjustment:
Picture sync misoperation.

5. P WM ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	B7	—		D.V.M
02	—	2F (L)		
SPEC.			TP	
			B303-9 (VFK0734W-PIN 9) VFK0734W-REAR	

<Pre paration>
1. Set the Iris to "open". (Push [SHIFT 1 + 0]).
2. Connect the D.V.M. to B303-9 (VFK0734W-PIN9).

<Pre-Adjustment>

Push the following keys in order.

3. * [CMD], [1], [8].
   * [ADR], [B], [7].
4. Push [INC] or [DEC] keys until the Voltage level at B303-9 (VFK0734W-PIN9) become Vref 1+-50mV. (Vref 1 = Voltage at B303-7-500mV)
5. * [SHIFT 1 + 1] (fully close the Iris).
6. * [SHIFT 1 + 0] (fully open the Iris).

<Fine-Adjustment>
Push the following keys in order.

7. * [CMD], [1], [8].
   * [ADR], [B], [7].
8. Push [INC] or [DEC] keys until the Voltage level at B303-9 (VFK0734W-PIN9) become Vref2+-20mV. (Vref 2 = Voltage at B303-7-140mV).

<Data Writing>
Push the following keys in order.

9. * [CMD], [0], [2].
   * [ADR], [2], [F]. (Does not change the data).
   * [SET].
   * [SHIFT 1 + A] (Iris is return to Auto Mode).

6. ZOOM ENCODER AND FOCUS ENCODER ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	T: B4 W: B3	—	object: 1m (Hunting chart)	DIGITAL VOLTMETER
12	—	T: 1F (H)		
02	—	W: 0F (L)		
SPEC.			TP	
To be calculated			B303-8 (VF0734W-8) B303-17 (VFK0734W-17) VFK0734W-REAR	
CONDITION				
• Focus Manual (SHIFT 1+7)				

Note:
1) Unless you replaced Zoom Encoder, 3rd lens (1) unit or 4th moving frame (1) unit, do not perform this adjustment. (Because this adjustment is critical).
2) Regarding the connection of EVR, refer to preparation. (Fig.C6)

<Initial Measurement and Preparation>

1. Check the voltage at B303-8(VFK0734W-PIN8) and B303-17(VFK0734W-PIN17) before changing the defective lens unit.
   For example:
   B303-8(VFK0734W-PIN8) : 3.652V
   B303-17(VFK0734W-PIN17) : 1.456V

2. Make note the potential difference between B303-8(VFK0734W-PIN8) and B303-17(VFK0734W-PIN17).
   For example:
   3.652-1.456 = 2.196V

3. Turn off the power SW.

4. Replace lens unit.

5. Loosen 2 screws of Focus encoder C.B.A. and move C.B.A. to center position as shown in Fig.C11-1.

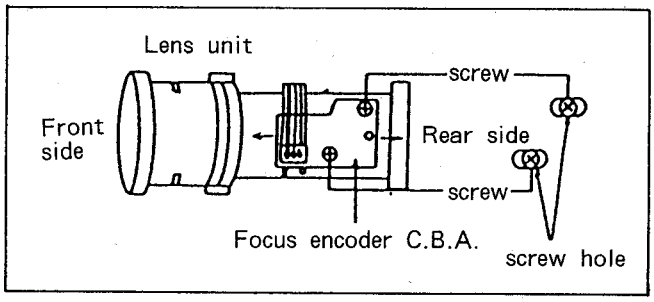


Fig. C11-1

6. Turn on the power SW.

7. Set the Focus system to Manual Focus.
(Pushing [SHIFT 1 + 7] keys simultaneously switches the Focus system between Manual and Auto Focus, "0" displayed at address LED while [SHIFT 1 + 7] keys depressed indicates Manual Focus, "1" indicates Auto Focus.

8. Zoom the lens to full tele position.
Push [SHIFT 2 + 7] keys simultaneously.

9. Aim the unit at Hunting chart from a distance 1 meter.
10. Set the focus to full (−) position.
    * Turn the focus ring counterclockwise until the picture focus does not change.

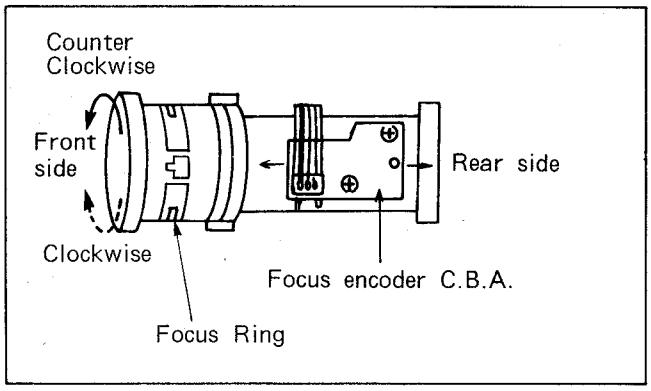


Fig. C11−2

<Adjustment for Tele Side>
Push the following keys in order.

11. * [CMD], [1], [8].
    * [ADR], [B], [4].

12. * Push [INC] or [DEC] keys until the lens focus is in correct position.

[Note 1]
The focus does not change while focus voltage is being adjusted on the EVR.
To see the focus adjustment the lens unit must be zoomed from TELE to WIDE and back to TELE to activate the focus.

[Note 2]
Using the zoom controls on the EVR disables the Zoom controls of TELE/WIDE button on the camera.
Therefore, use EVR([SHIFT 2 + 7] or [SHIFT 2 + 5]) to move zoom for the TELE or WIDE position.

13. When lens focus comes to the correct position cat fully TELE Side), Push the following keys in order for store the data to EEPROM directly.
    * [CMD], [1], [2].
    * [ADR], [1], [F].
    * [SET].

    If the lens assembly cannot be focused, the Focus Encoder C.B.A. must be repositioned.
    Turn the focus ring clockwise.
    * If the focus improves more, the Focus Encoder C.B.A. to the rear.
    * If the focus deteriorates more, the Focus Encoder C.B.A. to the front.

      Return to Step(6) to reposition the Focus Encoder C.B.A..

<Adjustment for Wide Side>

14. Check the Voltage at **B303-8 (VFK0734W-PIN 8).**
15. Subtract the voltage that was noted at step(2) from the voltage at step(14).
    For example:
    If the voltage at B303−8(VFK0734W−PIN8) is 3.662V.
    3.662 − 2.196 = 1.466
16. Set the voltage at B303−17(VFK0734W−PIN17) to 1.466V with EVR as follows.
    Push the following keys in order.
    * [CMD], [1], [8].
    * [ADR], [B], [3].
    * Push [INC] or [DEC] until the voltage at B303−17(VFK0734W−PIN17) is 1.466V.
17. Push the following keys in order for store the data to EEPROM Directly.
    * [CMD], [0], [2]. (Does not change the data).
    * [ADR], [0], [F].
    * [SET].

<Confirm the focus when zooming to Wide Side>
18. Turn OFF and ON the Power SW.
19. Set the focus system to Manual focus as step(7).
20. Check the back focus while Zooming.
    (If back focus is not good refer to following table)

1) Focus is not good at full wide side.

   Adjust the data of ADR "B3" at the full Wide Side keeping the voltage at B303−(18) within +− 0.05V of the voltage in Step(16).

   Check back focus While Zooming.
   * If back focus is good, go to Step(19).
   * If back focus is not good, stop the zoom at the position of bad focus.
     Turn the focus ring clockwise and/or counter−clockwise.

     If focus improves when the focus ring is turned counter−clockwise reposition the Focus Encoder C.B.A. to the front.

     If focus improves when the focus ring is turned clockwise, reposition the Focus Encoder C.B.A. to the rear.

     Return to Step(5) to reposition the Focus Encoder C.B.A.

2) Focus is not good−between TELE and WIDE.
   Stop the zoom at the position of bad focus.
   Turn the focus ring clockwise and/or counter−clockwise.
   * If focus improves when the focus ring is turned counter−clockwise, reposition the Focus Encoder C.B.A. to the front.
   * If focus improves when the focus ring is turned clockwise, reposition the Focus Encoder C.B.A. to the rear.
     Return to Step(5) to reposition the Focus Encoder C.B.A..

7. V-SUB ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	B6	—	HALOGEN LAMP	MONITOR TV
12	—	2F		
SPEC.			TP	
NO BLOOMING				

1. Zoom all the way in (full tele position or full wide position) and aim the camera at the Halogen Lamp as shown in Fig.C12.
2. Set the High Speed Shutter SW to "OFF" position.
3. Diffuse the incoming light using frosted glass or acryl plate. Place the cardboard which has been cut to "U" shape as shown in Fig.C12. between the diffusion plate and the camera.
4. Set the Iris to "Open [SHIFT 1 + 0].

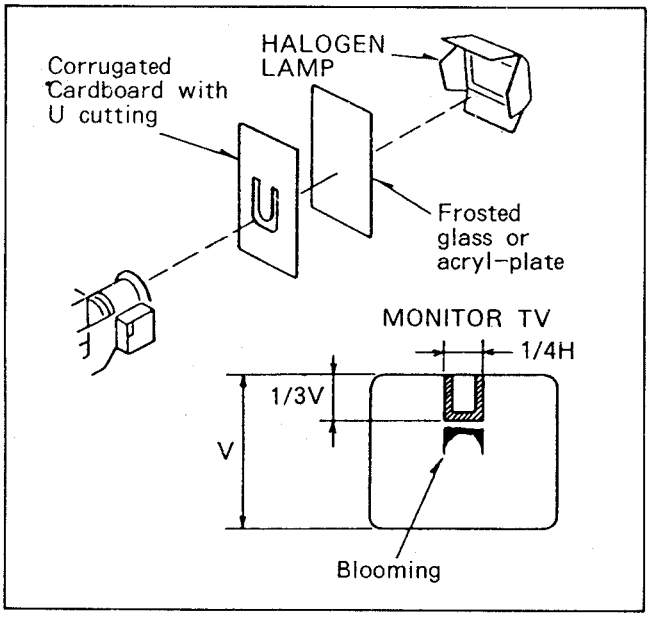


Fig. C12

<Adjustment>
Push the following keys in order.

5. * [CMD], [1], [8].
   * [ADR], [B], [6].
6. * Push [INC], or [DEC] keys until the blooming disappears (If blooming does not disappear completely, adjust until the blooming mimize).

<Data Writing>

Push the following keys in order.

7. * [CMD], [1], [2].
   * [ADR], [2], [F].
   * [SET].
   * [SHIFT 1 + A].
8. Confirm that the monitored picture does not contain Blooming in both High Speed Shutter "ON" and "OFF" modes even if the camera moves as shown in Fig.C13.

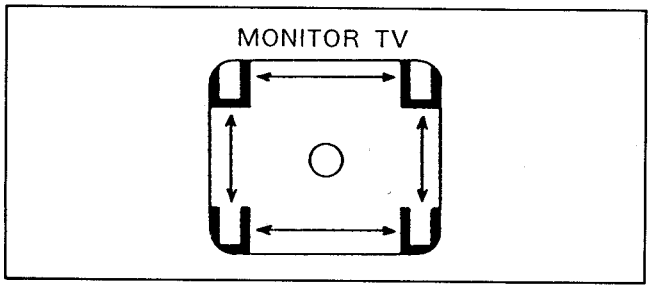


Fig. C13

8. PEDESTAL LEVEL ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	BA	—		OSCILLO-SCOPE
12	—	4F		
SPEC.			TP	
A=0mV±10mV			B303-6 (VFK0734W-6) VFK0734W-REAR	

<Preparation>
1. Cover the lens.
   Push [SHIFT 1 + 3] keys (Maximizes AGC Gain).
   Push [SHIFT 1 + 9] keys (Making Iris manual condition).
2. Connect the oscilloscope to B303-6(VFK0734W-PIN6).

<Adjustment>
   Push the following keys in order.
3. * [CMD], [1], [8].
   * [ADR], [B], [A].
4. * Push [INC] or [DEC] keys until the "A" level is minimized, as shown in Fig.C14.

<Data writing>
   Push the following keys in order.
5. * [CMD], [1], [2].
   * [ADR], [4], [F].
   * [SET].
6. * [SHIFT 1 + A].

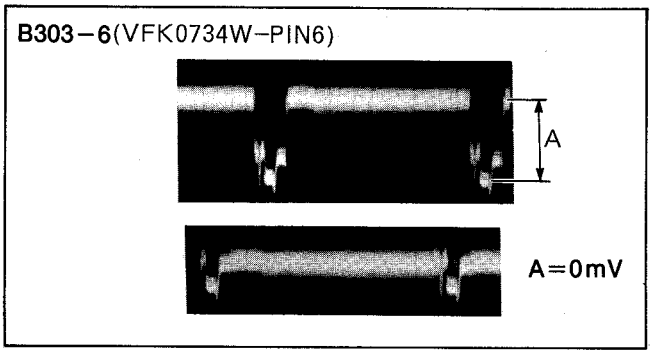
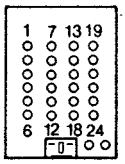


Fig. C14

9. AGC ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	BC	—	GRAY SCALE CHART	OSCILLO-SCOPE
12	—	6A		
SPEC.			TP	
230mV±20mV			B303-5 (VFK0734W-PIN 5) B303-20 (VFK0734W-PIN 20) VFK0734W-REAR 	

Purpose:
Set standard signal gain.

Symptom of Misadjustment:
The picture is sometimes too dark or too bright.

< Preset for AGC Adjustment >

1. Making Iris manual condition [SHIFT 1+9].
2. Aim the camera at Gray Scale Chart.
3. Connect the Oscilloscope to B302-5. (VFK0734W-PIN5)

<Preset 1-Rough>
Push the following keys in order.

4. * [CMD], [1], [8].
   * [ADR], [D], [F].
5. * Push [INC] or [DEC] keys until signal level at B303-5(VFK0734W-PIN5) is 300mV +- 10mV.

<Preset 2-Fine>
Push the following keys in order.

6. * [CMD], [1], [8].
   * [ADR], [D], [E].
7. * Push [INC] or [DEC] keys until signal level at B303-5(VFK0734W-PIN5) is 300mV +- 10mV.

<AGC Adjustment>
Push the following keys in order.

8. * [CMD], [1], [8].
   * [ADR], [B], [C].
9. * Push [INC] or [DEC] keys until the signal level at B303-20(VFK0734W-PIN20) is 300mV +- 20mV.

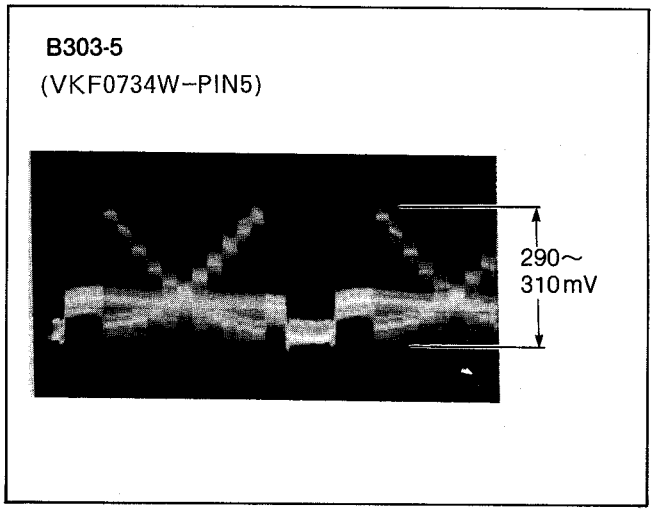


Fig. C15-1

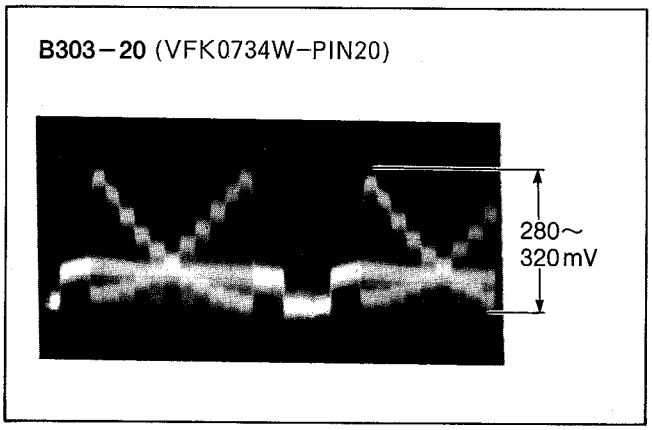
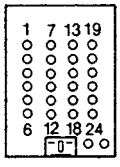


Fig. C15-2

< Data Writing >
Push the following keys in order.

10. * [CMD], [1], [2]. (Does not change the Data).
    * [ADR], [6], [A].
    * [SET].
11. * Push [SHIFT 1+A] keys (Iris return to Auto mode)

10. A/D INPUT LEVEL ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	B1	—	GRAY SCALE CHART	OSCILLO-SCOPE
12	—	0F		
SPEC.			TP	
1.2V±40mV			B303-5 (VFK0734W-PIN 5) B303-6 (VFK0734W-PIN 6) 	

Purpose:
A/D converter input Level adjustment.

Symptom of Misadjustment:
The picture becomes too dark or too bright.

< Preset for AGC Adjustment >
1. Making Iris manual condition [SHIFT 1+9].
2. Aim the camera at Gray Scale Chart.
3. Connect the Oscilloscope to B302-5. (VFK0734W-PIN5)

< Preset 1-Rough >
Push the following keys in order.
4. * [CMD], [1], [8].
   * [ADR], [D], [F].
5. * Push [INC] or [DEC] keys until signal level at B303-5 (VFK0734W-PIN5) is 300mV+-10mV.

< Preset 2-Fine >
Push the following keys in order.
6. * [CMD], [1], [8].
   * [ADR], [D], [E].
7. * Push [INC] or [DEC] keys until signal level at B303-5 (VFK0734W-PIN5) is 300mV+-10mV.

< A/D Input level Adjustment >
8. * [CMD], [1], [8].
   * [ADR], [B], [1].
9. * Push [INC] or [DEC] keys until the signal level at B303-6 (VFK0734W-PIN6) is 1.2V+-40mV.

< Data Writing >
Push the following keys in order.
10. * [CMD], [1], [2]. (Does not change the Data)
    * [ADR], [0], [F].
    * [SET].
    Push [SHIFT 1+A] keys. (Iris return to Auto mode)

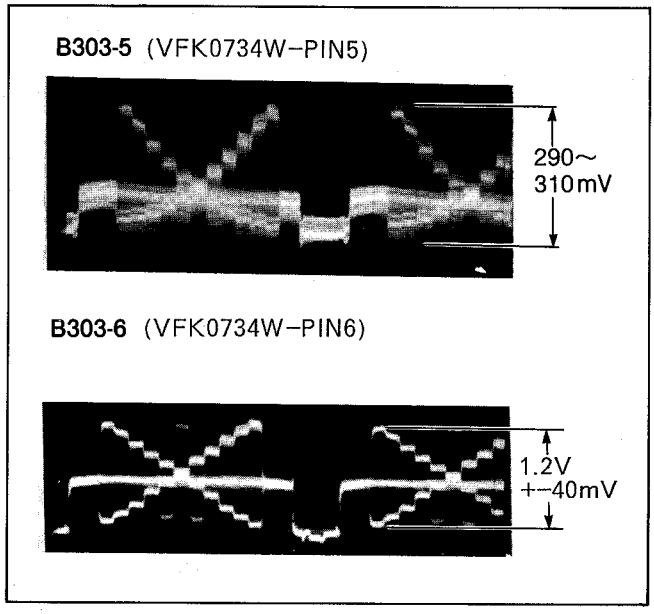
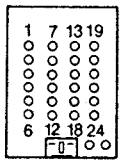


Fig. C16

11. ALC ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	D4	—	GRAY SCALE CHART	OSCILLO-SCOPE
02	—	2C		
SPEC.			TP	
1.20V±40mV			B303-6 (VFK0734W-PIN 6) 	

Note:
Perform this adjustment after finishing the AGC and A/D INPUT LEVEL ADJUSTMENT.

Purpose:
ALC level adjustment.

Symptom of Misadjustment:
The picture is too white or too dark.

<Preparation>
1. Set the IRIS to Auto [SHIFT 1 + A].
2. Aim the camera at Gray Scale Chart.
3. Connect the oscilloscope to B303-6(VFK0734W-PIN6).

<Adjustment>
Push the following keys in order.
4. * [CMD], [1], [8].
   * [ADR], [D], [4].
5. * Push [INC] or [DEC] keys until the signal level at B303-6(VFK0734W-PIN6) is 1.20V +-40mV.

<Data Writing>
Push the following keys in order.
6. * [CMD], [0], [2]. (Does not change the Data)
   * [ADR], [2], [C].
   * [SET].

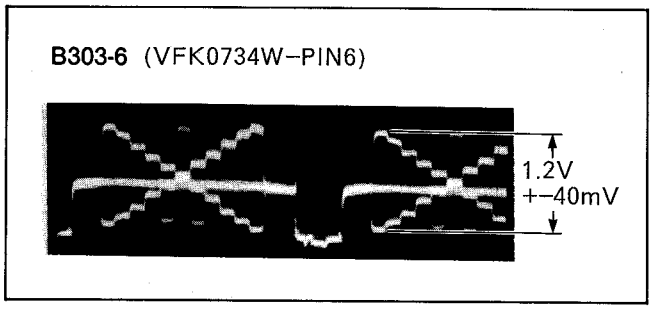


Fig. C17

12. MANUAL IRIS ADJUSTMENT

NO.	ITEM	EEPROM ADDRESS	FORMULA	CMD	RESULT OF CALCULATION
1	OPEN1	4C (High digit)	ADR (2C)+24	READ: 04 WRITE: 12	
2	OPEN2	4C (Low digit)	ADR (4C)+24	READ: 14 WRITE: 02	
3	OPEN3	5C (High digit)	ADR (4C)+24	READ: 04 WRITE: 12	
4	CLOSE1	4D (High digit)	ADR (2C)−16	READ: 04 WRITE: 12	
5	CLOSE2	4D (Low digit)	ADR (4D)−16	READ: 14 WRITE: 02	
6	CLOSE3	5D (High digit)	ADR (4D)−16	READ: 04 WRITE: 12	

Calculation for Manual IRIS.

Note 1:
ADR(2C) = ALC Data

Note 2:
Push [SHIFT 2 + 9] keys simultaneously.
(All formulas for Manual Iris are performed and results are stored into EEPROM Automatically

Note 3:
If the ALC Adjustment is incorrect the Manual Iris SET UP will also be incorrect.
Be sure to carry out the ALC Adjustment procedure correctly before doing the Manual Iris Adjustment.

* Example
Item 1 : OPEN 1
Formula : ADR(2C)+24

Read out the data From Address(2C) of EEPROM as follows.

* Select read command(04) => Push [CMD],[0],[4].
* Select Address(2C) => Push [ADR],[2],[C].
* Push (SET) to Read the data => Push [SET].

When the (SET) key is pushed, the data LED will indicate the data of Address(2C).
Convert this data to decimal.
If data LED indicate(6D).
HEX(6D) = 109(Decimal Value)

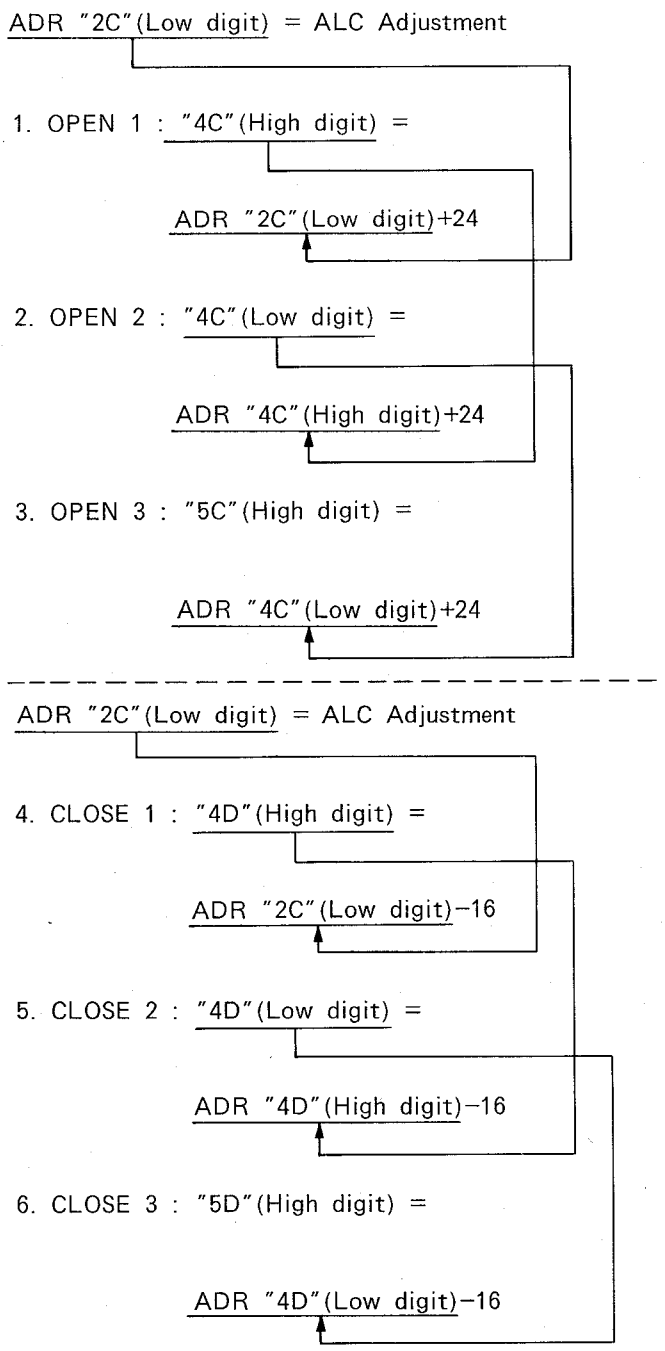
Now using the formula (2C)+24 Calculate the Reset.
(Substitute the Decimal Value for the HEX data in (2C)109+24=133.

Convert the Result to a HEX Value using the table (Fig.C18)
133(decimal)=85(in HEX CODE)

Store the above HEX Value in the EEPROM.
Address(4C) High digit as follows.

* Select command(12) => Push [CMD],[1],[2].
* Select Address(4C) => Push [ADR],[4],[C].
* Set the data(85) => Push [DATA],[8],[5].
* Push (SET) to write the data => Push [SET].

Note 4:
Priority of Formula.



Hexadecimal lower digit / Hexadecimal upper digit	0	1	2	3	4	5	6	7	8	9	A	b	C	d ②	E	F
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
① 6	96	97	98	99	100	101	102	103	104	105	106	107	108	(109)	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
b	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
d	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

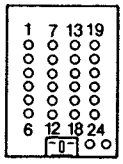
For example: If indication of EVR is "6D" (as upper digit is "6" and lower digit is "D"), a decimal value of "109" is obtained from the intersection of ① and ② in the above table.

Fig. C18 Hexadecimal–Decimal Conversion Table

(Hexadecimal–Decimal Conversion Table)

For some of adjustment items, calculation of hexadecimal data (indicated on LED of EVR Fixture) is needed to obtain the adjustment data.
In these cases, convert the hexadecimal value to decimal value before calculation and after calculation is finished reconvert the result to hexadecimal to obtain the adjustment data. Write the new hexadecimal adjustment data into EEPROM.
A hexadecimal–decimal conversion table is shown in Fig.C18.

13. Y CLIP LEVEL ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
18	B9	—	WHITE CHART	OSCILLO-SCOPE
02	—	3F		
SPEC.			TP	
V/S=7.7:3			B303-4 (VFK0734W-PIN 4) VFK0734W-REAR 	

<Preparation>
1. Set the IRIS to "OPEN". [SHIFT1 + 0].
2. Aim the camera at white chart.
3. Connect the Oscilloscope to B303–4. (VFK0734W–PIN4)

<Adjustment>
Push the following keys in order.
4. * [CMD], [1], [8].
   * [ADR], [B], [9].
5. * Push [INC] or [DEC] keys until ratio of V and S is 7.7:3.

<Data Writing>
Push the following keys in order.
6. * [CMD], [0], [2]. (Does not change the data)
   * [ADR], [3], [F].
   * [SET].
7. * [SHIFT 1 + A] (IRIS return to Auto Mode)

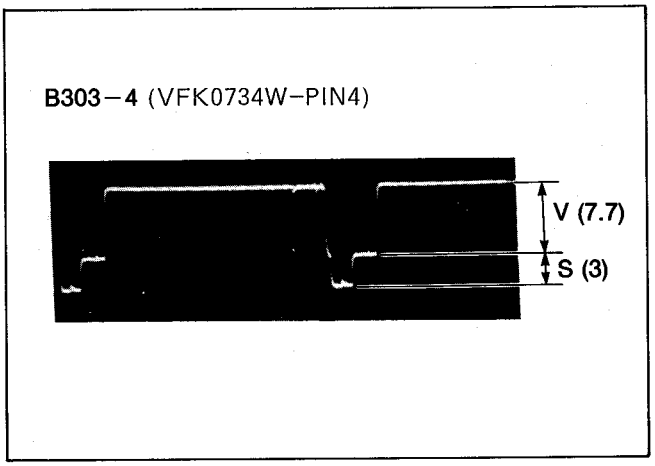


Fig. C19

14. INDOOR WHITE BALANCE ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ
	RAM	EEPROM		
09	BB (R-Y) AB (B-Y)	—	WHITE CHART	VECTOR-SCOPE OR OSCILLO-SCOPE
02	—	25 (R-Y)		
12	—	25 (R-Y)		
SPEC.			TP	
VECTOR COMES CENTRE OR WAVEFORM IS MINIMIZED			VIDEO OUT	
CONDITION				
IRIS: ALC				

<Preparation>
1. Connect the Video out to Vectorscope.
2. Aim the camera at white chart.
   And Push [SHIFT 1 + 8] for white set.
   (Please confirm, vector came to center)

<Read Out the data for R–Y>
Push the following keys in order.
3. * [CMD], [0], [9].
   * [ADR], [B], [B].
   * [SET].
   (When the pushed [SET] key, Data LED of EVR indicate the data of white balance for R–Y)

<Data Writing for R–Y>
Push the following keys in order.
4. * [CMD], [0], [2]. (Do not change the data)
   * [ADR], [2], [5].
   * [SET].

<Read Out the data for B–Y>

Push the following keys in order.
5. * [CMD], [0], [9].
   * [ADR], [A], [B].
   * [SET].

   (When the pushed [SET] key, Data LED of EVR indicate the data of white balance for B–Y)

<Data writing for B–Y>
Push the following keys in order.
6. * [CMD], [1], [2]. (Do not change the data)
   * [ADR], [2], [5].
   * [SET].

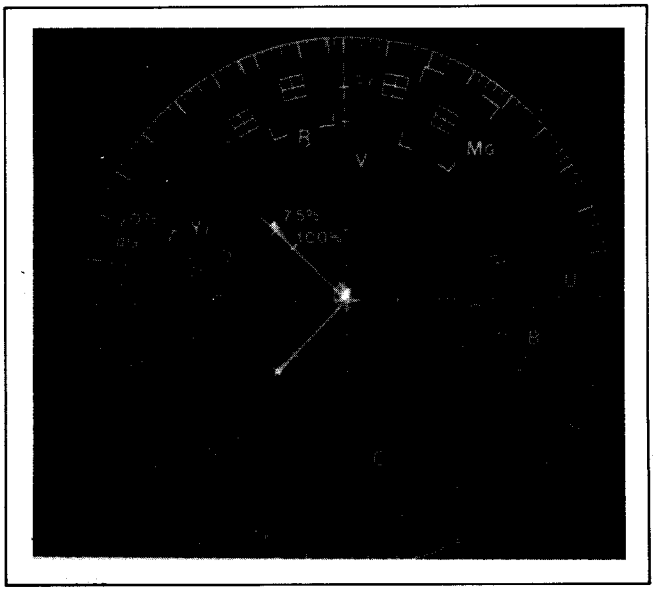


Fig. C20

15. COLOUR PHASE AND GAIN ADJUSTMENT (INDOOR)

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
08	95 (R-Y G) 97 (R-Y P) 94 (B-Y G) 96 (B-Y P)	—	COLOUR BAR CHART	VECTOR SCOPE
02	—	05 (R-Y G) 15 (R-Y P)		
12	—	05 (B-Y G) 15 (B-YP)		
SPEC.			TP	
RED: 104+−3 degree/PHASE 190%+−10%/GAIN (RED/BURST) 168+−3 degree/PHASE 140%+−10%/GAIN (Yellow/BURST)			VIDEO OUT	

Note:
Be sure to carry out the Indoor White Balance Adjustment before doing this Adjustment.

1. Aim the camera at Colour Bar Chart.
2. Connect the Video out to vectorscope.

<R−Y GAIN>
(Step3 to 5 are R−Y Gain Adjustment)

Push the following keys in order.
3. * [CMD], [0], [8].
   * [ADR], [9], [5].
4. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C21.

<Data Writing for R−Y Gain>
Push the following keys in order.
5. * [CMD], [0], [2]. (Does not change the data)
   * [ADR], [0], [5].
   * [SET].

<R−Y PHASE>
(Step6 to 8 are R−Y Phase Adjustment)
Push the following keys in order.

6. * [CMD], [0], [8].
   * [ADR], [9], [7].
7. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C21.

<Data Writing for R−Y Phase>

Push the following keys in order.
8. * [CMD], [0], [2]. (Does not change the data)
   * [ADR], [1], [5].
   * [SET].

<B−Y Gain>
(Step9 to 11 are B−Y Gain Adjustment)
Push the following keys in order.

9. * [CMD], [0], [8].
   * [ADR], [9], [4].
10. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C21.

<Data Writing for B−Y GAIN>
Push the following keys in order.

11. * [CMD], [1], [2].
    * [ADR], [0], [5].
    * [SET].

<B−Y PHASE>
(Step12 to 14 are B−Y PHASE Adjustment)
Push the following keys in order.
12. * [CMD], [0], [8].
    * [ADR], [9], [6].
13. * Push [INC] or [DEC] keys until phase of red and Yellow Vectors are as close as possible to Spec. See Fig.C21.

<Data Writing for B−Y PHASE>
Push the following keys in order.
14. * [CMD], [1], [2].
    * [ADR], [1], [5].
    * [SET].
15. Repeat the Step(3) to Step(14) unit vectors becomes within Spec.

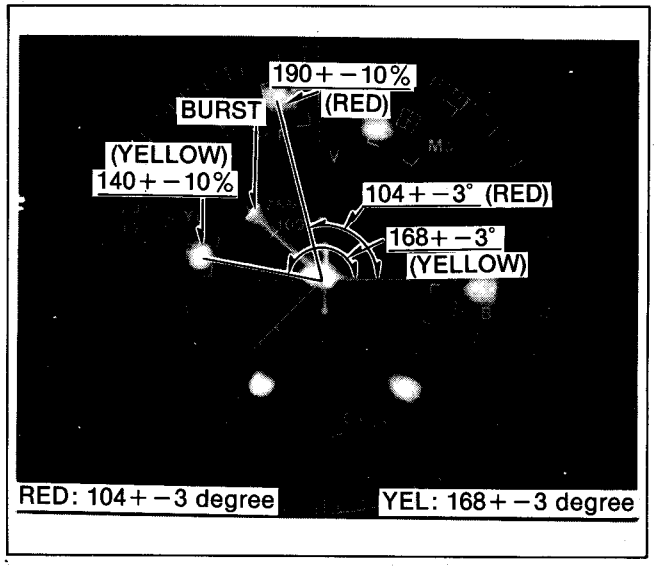


Fig. C21

16. OUTDOOR WHITE BALANCE ADJUSTMENT

CMD	ADDRESS		CHART	M. EQ
	RAM	EEPROM		
09	BB (R-Y) AB (B-Y)	—	WHITE CHART	VECTOR-SCOPE OR OSCILLO-SCOPE
02	—	21 (R-Y)		
12	—	21 (B-Y)		
SPEC.			TP	
VECTOR COMES CENTRE OR WAVEFORM IS MINIMIZED			VIDEO OUT	
CONDITION				
TEMPERATURE CONVERSION FILTER: VFK0713 (C12) VFK0716 (C2) IRIS: ALC				

Purpose:
Set standard white level for each colour temperature.

Symptom of Misadjustment:
White becomes bluish or reddish.

<Preparation>
1. Connect the Video Out to Vectorscope.
2. Cover the lens with colour temperature conversion filter VFK0713 and VFK0716 to imitate the Outdoor lighting.
3. Aim the camera at white chart, and push [SHIFT 1 + 8] keys for white set.
(Please confirm, vectors came to center)

<Read Out the data for R–Y>

Push the following keys in order.

4. * [CMD], [0], [9].
* [ADR], [B], [B].
* [SET].
(When the pushed [SET] key, Data LED of EVR indicate the data of white balance for R–Y)

<Data Writing for R–Y>

Push the following keys in order.

5. * [CMD], [0], [2]. (Does not change the data)
* [ADR], [2], [1].
* [SET].

<Read Out the data for B–Y>
Push the following keys in order.

6. * [CMD], [0], [9].
* [ADR], [A], [B].
* [SET].

(When the pushed [SET] key, data LED of EVR indicate the data of white balance for B–Y)

<Data Writing for B–Y>
Push the following keys in order.

7. * [CMD], [1], [2]. (Does not change the data)
* [ADR], [2], [1].
* [SET].

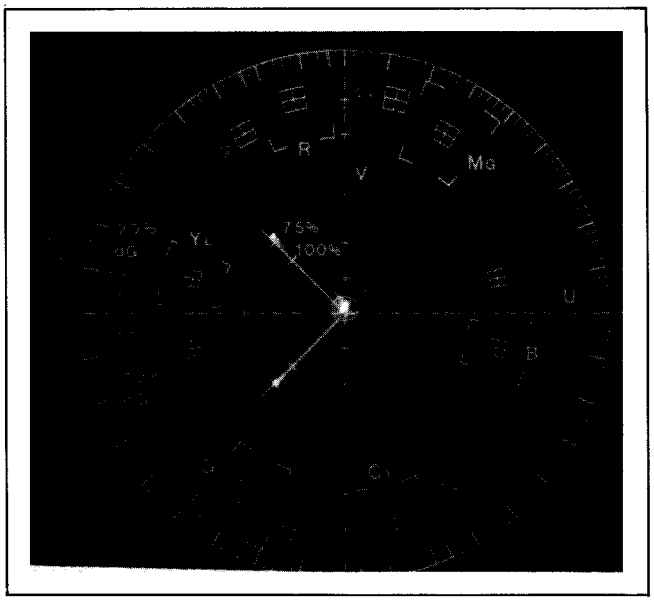


Fig. C22

17. COLOUR PHASE AND GAIN ADJUSTMENT (OUTDOOR)

CMD	ADDRESS		CHART	M. EQ.
	RAM	EEPROM		
08	95 (R-Y G) 97 (R-Y P) 94 (B-Y G) 96 (B-Y P)	—	COLOUR BAR CHART	VECTOR SCOPE
02	—	01 (R-Y G) 11 (R-Y P)		
12	—	01 (B-Y G) 11 (B-YP)		
SPEC.			TP	
RED: 104+−3 degree/ PHASE, 190%+−10% GAIN (Red/BURST) YEL: 168+−3 degree/ PHASE, 140%+−10% GAIN Yellow/BURST)			VIDEO OUT	

Note:
Be sure to carry out the Outdoor white balance Adjustment before doing this Adjustment.

<Preparation>
1. Connect the Video output to vectorscope.
2. Aim the camera at colour bar chart and cover the lens with colour temperature conversion filter VFK0713 and VFK0716 to imitate the outdoor lighting.

<R–Y Gain>
(Step3 to 5 are R–Y Gain Adjustment)

Push the following keys in order.

3. * [CMD], [0], [8].
* [ADR], [9], [5].
4. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C22.

<Data Writing for R–Y Gain>
Push the following keys in order.

5. * [CMD], [0], [2]. (Do not change the data)
* [ADR], [0], [1].
* [SET].

<R–Y PHASE>
(Step6 to 8 are R–Y Phase Adjustment)

Push the following keys in order.

6. * [CMD], [0], [8].
* [ADR], [9], [7].
7. * Push the [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C23.

<Data Writing for R–Y Phase>

Push the following keys in order.

8. * [CMD], [0], [2]. (Do not change the data)
* [ADR], [1], [1].
* [SET].

<B–Y Gain>
(Step9 to 11 are B–Y Gain Adjustment)

Push the following keys in order.

9. * [CMD], [0], [8].
   * [ADR], [9], [4].
10. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C23.

<Data Writing for B–Y Gain>

Push the following keys in order.

11. * [CMD], [1], [2]. (Do not change the data)
    * [ADR], [0], [1].
    * [SET].

<B–Y PHASE>
(Step12 to 14 are B–Y Phase Adjustment)

Push the following keys in order.

12. * [CMD], [0], [8].
    * [ADR], [9], [6].
13. * Push [INC] or [DEC] keys until phase of red and yellow vectors are as close as possible to Spec. See Fig.C23.

<Data Writing for B–Y Phase>

Push the following keys in order.

14. * [CMD], [1], [2]. (Do not change the data)
    * [ADR], [1], [1].
    * [SET]
15. Repeat the Step(3) to Step(14) until vectors becomes within Spec. as shown in Fig.C23.

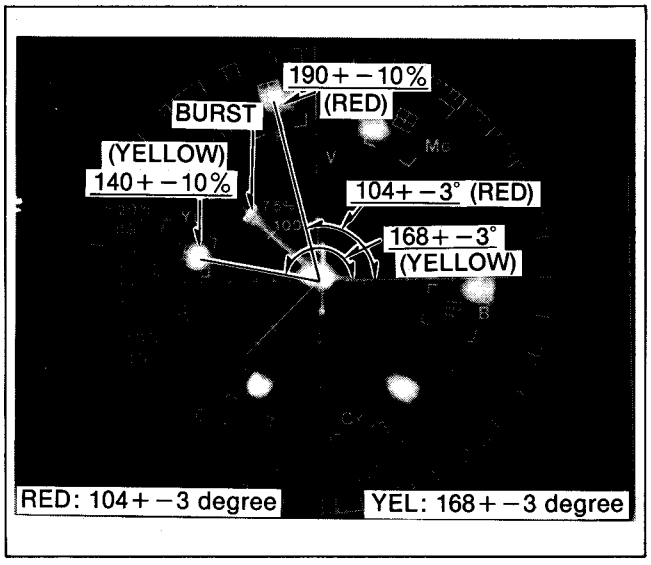


Fig. C23

18. DATA WRITING FOR COLOUR REPRODUCTION AND WHITE BALANCE

Purpose:
Each adjustment voltage is recorded in EEPROM as digital data. For colour reproduction adjustments such as white balance, phase and gain adjustments, the adjustments have only been performed for indoor lighting (3200 degree kelvin) and outdoor lighting (5600 degree kelvin). The EEPROM requires the data for other lighting conditions such as 3600 degree kelvin, 4500 degree kelvin and 6000 degree kelvin. In order to supply the rest of the data the following calculation has to be done and the results entered in the proper address of EEPROM.

Misentering:
White balance and colour reproduction in lighting conditions between indoor and outdoor are poor.

Note 1:
VFK0701ROM10 (New ROM) for EVR must be installed in EVR fixture.
Mode selector should be "A" side.

1. Push [SHIFT 2 + 3] key simultaneously.
   (All formulas in Fig.C24, are performed and results stored in EEPROM automatically)

Note 2:
How to calculate and enter the data manually.
You can do calculation and entering the data to EEPROM manually as follows;

(For example)
ITEM : R–Y GC 36

FORMULA : ADR05+0.882x(ADR01–ADR05)

EEPROM ADDRESS : 03

1) Read Out the data.
   ADR05 : Set the command to "04".
   Set the address to "05".
   Push the "SET" button.
   The number which is indicated in "DATA" LED is a data of ADR05(Address "05") for example, if indicated data is "56", substitute "56" to ADR05. (This is hexadecimal number)
   The same as above, read out the data from address "01".
   For example if data which is read out is ADR01="6C", ADR05="56" above formula becomes;
   R–Y GC 36 = 56+−1.00x(6C–56).
2) Convert the hexadecimal data into decimal number using conversion table. (Shown in Fig.C18) For example, "56" in hexadecimal is "86" in decimal from intersection of 5 and 6.
   Substitute it into the formula.
   Therefore,
   R–Y GC 36 = 86+0.882x(108–86)
   = 86+0.882x(22)
   = 105
3) Convert the result "105" to hexadecimal using conversion table (Fig.C18).
   "105" decimal is "69" in hexadecimal.
   Write the "69" into EEPROM address "03".
   * Set the command to [02].
   * Set the address to [03].
   * Set the data [69].
   * Push the [SET] key.

Calculation for Colour Reproduction

NBR	ITEM	EEPROM ADDRESS	CMD	RESULT OF CALCULATION	FORMULA
(1)	R-Y GC 36	03 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "05" + 0.882 × (ADR "01" − ADR "05")
(2)	R-Y GC 45	02 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "05" + 1.000 × (ADR "01" − ADR "05")
(3)	R-Y GC 28	06 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "05" + 0.412 × (ADR "01" − ADR "05")
(4)	R-Y GC 60	00 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "05" + 1.000 × (ADR "01" − ADR "05")
(5)	R-Y GC 33	04 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "05" + 0.000 × (ADR "01" − ADR "05")
(6)	R-Y MAT 28	16 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "15" + 0.000 × (ADR "11" − ADR "15")
(7)	R-Y MAT 36	13 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "15" − 0.091 × (ADR "11" − ADR "15")
(8)	R-Y MAT 45	12 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "15" − 1.000 × (ADR "11" − ADR "15")
(9)	R-Y MAT 60	10 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "15" + 1.000 × (ADR "11" − ADR "15")
(10)	R-Y MAT 33	14 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "15"
(11)	B-Y GC 28	06 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "05" + 0.333 × (ADR "01" − ADR "05")
(12)	B-Y GC 36	03 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "05" + 0.741 × (ADR "01" − ADR "05")
(13)	B-Y GC 45	02 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "05" + 1.000 × (ADR "01" − ADR "05")
(14)	B-Y GC 60	00 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "05" + 1.000 × (ADR "01" − ADR "05")
(15)	B-Y GC 33	04 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "05" − 0.000 × (ADR "01" − ADR "05")
(16)	B-Y MAT 28	16 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "15" + 0.000 × (ADR "11" − ADR "15")
(17)	B-Y MAT 36	13 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "15" − 0.000 × (ADR "11" − ADR "15")
(18)	B-Y MAT 45	12 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "15" − 1.000 × (ADR "11" − ADR "15")
(19)	B-Y MAT 60	10 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "15" + 1.000 × (ADR "11" − ADR "15")
(20)	B-Y MAT 33	14 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "15"
(21)	R-Y WB 28	26 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" + 0.255 × (ADR "25" − ADR "21")
(22)	R-Y WB 33	24 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.300 × (ADR "25" − ADR "21")
(23)	R-Y WB 36	23 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.575 × (ADR "25" − ADR "21")
(24)	R-Y WB 45	22 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.125 × (ADR "25" − ADR "21")
(25)	R-Y WB 49	29 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.125 × (ADR "25" − ADR "21")
(26)	R-Y WB 60	20 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.186 × (ADR "25" − ADR "21")
(27)	R-Y WB L-LIM	27 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.186 × (ADR "25" − ADR "21")
(28)	R-Y WB H-LIM	28 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.000 × (ADR "25" − ADR "21")
(29)	B-Y WB 28	26 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" + 0.048 × (ADR "25" − ADR "21")
(30)	B-Y WB 33	24 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.214 × (ADR "25" − ADR "21")
(31)	B-Y WB 36	23 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.405 × (ADR "25" − ADR "21")
(32)	B-Y WB 45	22 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.643 × (ADR "25" − ADR "21")
(33)	B-Y WB 49	29 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.000 × (ADR "25" − ADR "21")
(34)	B-Y WB 60	20 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.269 × (ADR "25" − ADR "21")
(35)	B-Y WB L-LIM	27 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.269 × (ADR "25" − ADR "21")
(36)	B-Y WB H-LIM	28 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.000 × (ADR "25" − ADR "21")

Calculation for Auto White Balance

NBR	ITEM	EEPROM ADDRESS	CMD	RESULT OF CALCULATION	FORMULA
(1)	BH 28	46 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" + 0.864 × (ADR "25" − ADR "21")
(2)	BH 30	45 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" + 0.864 × (ADR "25" − ADR "21")
(3)	BH 36	43 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" + 0.182 × (ADR "25" − ADR "21")
(4)	BH 45	42 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.100 × (ADR "25" − ADR "21")
(5)	BH 51	41 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.788 × (ADR "25" − ADR "21")
(6)	BH 60	40 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.500 × (ADR "25" − ADR "21")
(7)	BH TR	48 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" + 0.182 × (ADR "25" − ADR "21")
(8)	BH SKY	47 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.561 × (ADR "25" − ADR "21")
(9)	Baxisth	4A (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.788 × (ADR "25" − ADR "21")
(10)	BL 28	36 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.523 × (ADR "25" − ADR "21")
(11)	BL 30	35 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.523 × (ADR "25" − ADR "21")
(12)	BL 36	33 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.643 × (ADR "25" − ADR "21")
(13)	BL 45	32 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.788 × (ADR "25" − ADR "21")
(14)	BL 51	31 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.500 × (ADR "25" − ADR "21")
(15)	BL 60	30 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 1.561 × (ADR "25" − ADR "21")
(16)	BL TR	38 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "25" − 0.788 × (ADR "25" − ADR "21")
(17)	BL SK	37 (HIGH DIGIT)	READ : 14 WRITE: 12		ADR "00"
(18)	RH 28	46 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" + 1.152 × (ADR "25" − ADR "21")
(19)	RH 30	45 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" + 0.375 × (ADR "25" − ADR "21")
(20)	RH 36	43 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.150 × (ADR "25" − ADR "21")
(21)	RH 45	42 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.833 × (ADR "25" − ADR "21")
(22)	RH 51	41 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.470 × (ADR "25" − ADR "21")
(23)	RH 60	40 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.939 × (ADR "25" − ADR "21")
(24)	RH TR	48 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.348 × (ADR "25" − ADR "21")
(25)	RH SK	47 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.939 × (ADR "25" − ADR "21")
(26)	Rxisth	4A (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.833 × (ADR "25" − ADR "21")
(27)	RL 28	36 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" + 0.375 × (ADR "25" − ADR "21")
(28)	RL 30	35 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.150 × (ADR "25" − ADR "21")
(29)	RL 36	33 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 0.833 × (ADR "25" − ADR "21")
(30)	RL 45	32 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.348 × (ADR "25" − ADR "21")
(31)	RL 51	31 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.682 × (ADR "25" − ADR "21")
(32)	RL 60	30 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.742 × (ADR "25" − ADR "21")
(33)	RL TR	38 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.803 × (ADR "25" − ADR "21")
(34)	RL SK	37 (LOW DIGIT)	READ : 04 WRITE: 02		ADR "25" − 1.803 × (ADR "25" − ADR "21")

Fig. C24–2

19. ADDITIONAL FOR HOW TO USE E.V.R.

E.V.R. FIXTURE

Camera Process section uses a memory IC called a E.E.P.R.O.M.(Electrical Erasable Programmable Read Only Memory) that replaces the variable resistor in conventional camera process. In the conventional camera process, each adjustment point was adjusted by turning variable resistors as shown in Fig.C25. In the Movie Camera adjustment voltage is recorded in the EEPROM as 8 bit digital data. The EEPROM supplies the recorded adjustment voltage to the adjustment point as shown in Fig.C26.

The data in the EEPROM can be changed electrically. The E.V.R.(Electric Variable Resistor) has been designed to change the 8 bit data of EEPROM in process circuit. The E.V.R. can also communicate directly with the RAM of the micro processor to change each control voltage. In normal operation the EEPROM would send the voltage data to RAM where the digital data is used to changed the adjustment values in the various circuits. Using the E.V.R. you can change the data stored in the EEPROM easily there by adjusting the camera process section. And the E.V.R. can also send the data to the RAM directly to confirm the adjustment.

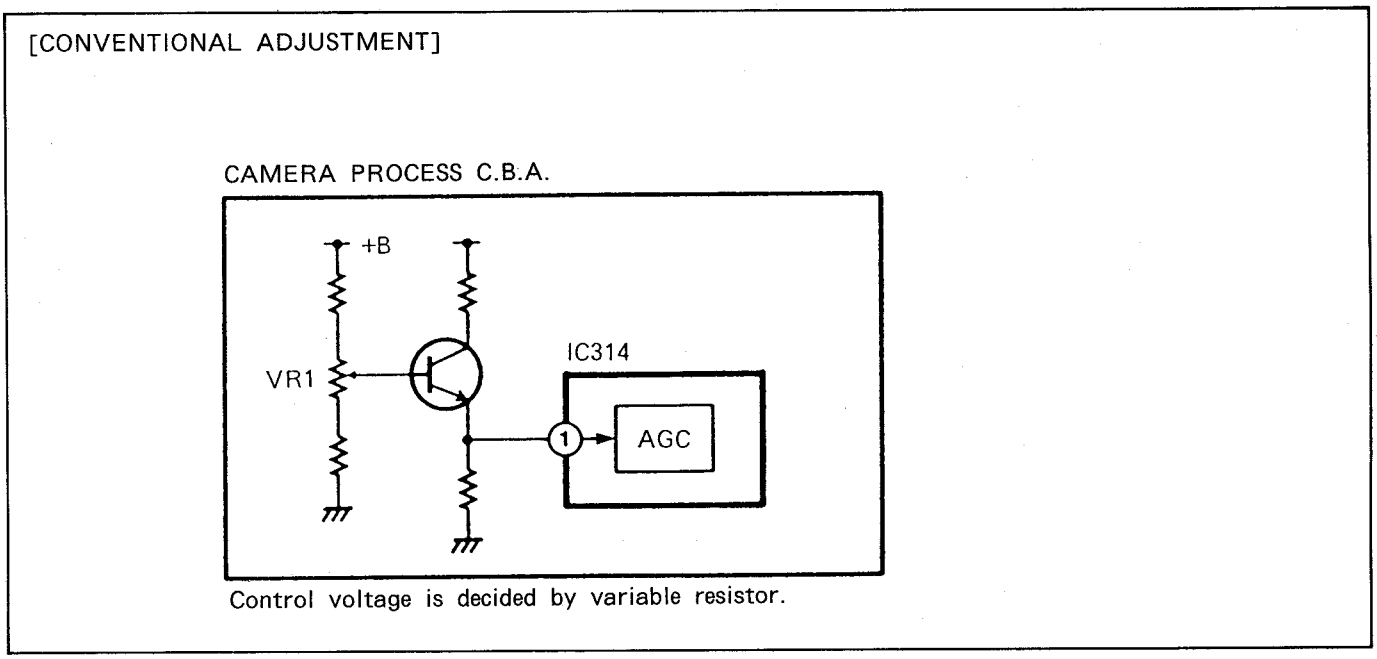


Fig. C25

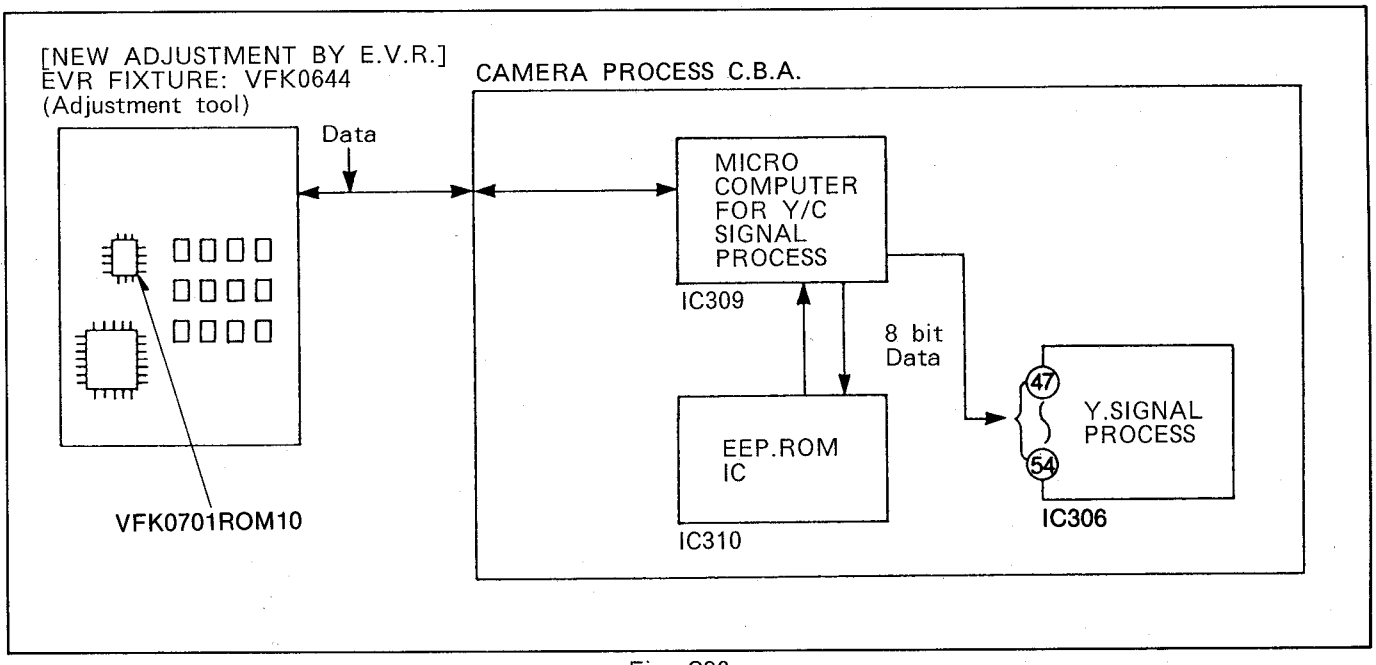
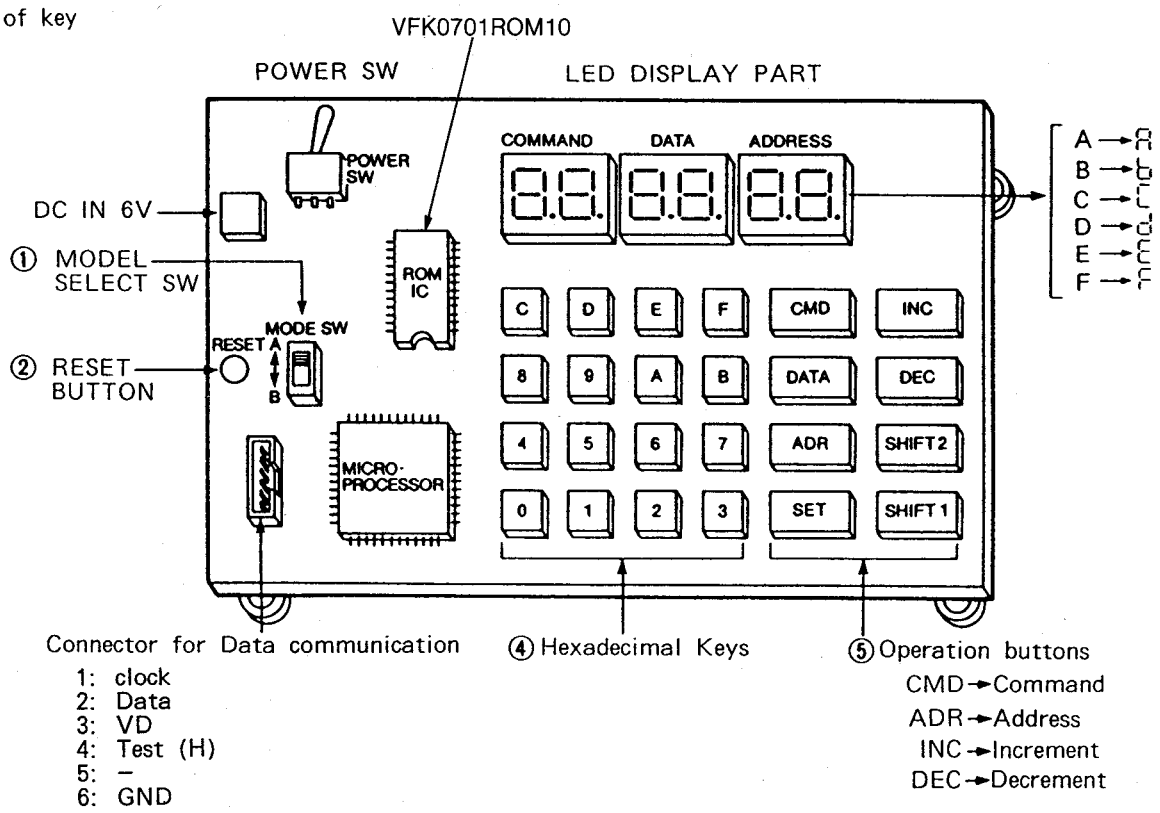


Fig. C26

Name of key



NO.	NAME	DESCRIPTION
①	MODE SW	MODEL selection switch. In case of this model turn it to A side
②	RESET BUTTON	After Power is on, if operation is not stable, push this SW.
③	ROM IC	ROM IC of which Programing (to operate E.V.R) is memorized in. In the future, to cope with new camcorder servicing, this ROM IC could be replaced to new version.
④	HEXADECIMAL KEYS	Key buttons of 16 pieces (from "O" to "F"). These are used when "COMMAND", "DATA" or "ADDRESS" is set.
⑤	OPERATION BUTTONS	The buttons to operate writing, reading or setting the data.
	CMD: Command button	This is used to decide the which mode (command) between E.V.R and camcorder (for example, data writing or reading) to perform.
	DATA: Data button	For changing Data.
	ADR: Address button	To appoint the EEPROM address or RAM address.
	SET: Set button	To perform the appointed command (for example reading or writing).
	INC: Incliment DEC: Decliment	Increase or decrease the data one by one (+1, −1)
	SHIFT 1 button	To carry out macro operation (while pushing with hexadecimal keys) SHIFT 1 button is used. (Macro operations will be described later)
	SHIFT 2 button	To carry out macro operation(while pushing with hexadecimal keys) SHIFT 2 button is used (Macro operations will be described later.)

Fig. C27

(Before Adjusting How to use the E.V.R. Fixture)

1) How to read out the data which is being stored in EEPROM.
Connect the E.V.R. Fixture as shown in Fig.C3.

Result:
Adjustment value of AGC has been set for "6A". It is advisable to read out the data like this and make a note of it before writing the new data so that if a error should occur you can rewrite original data.

Item	Proceduring Order		Buttons to be Pushed	LED Indication
For Example, Reading out the data of AGC Adjustment comunication from camcorder to E.V.R. EEPROM→ E.V.R.	1	Set the Command mode to "14", "14" is read out command. (Refer to command description)	CMD 1 4	LED lights up 14/80 00 Command setting
	2	Set the Address of EEPROM	ADR 6 A	14 80 6A Address setting of EEPROM LED lights up
	3	Read out the data	SET Push this for 2 seconds	14 09 6A data for AGC for example LED lights up

Fig. C28

2) Writing the New Data.

(1) Search and Write Procedure
(For example : AGC Adjustment).

Confirmation:
Confirm whether data is written correctly or not.

Procedure:
1. Set the Command to [04].
2. Set the Address to [41].
3. Push the [SET] button.
4. The number which is indicated on DATA LED is a data which has been written.

Item	Proceduring Order		Buttons to be Pushed	LED Indication
For Example, writing the AGC adjustment data. E.V.R. → EEPROM	1	Set the command to "18".	CMD 1 8	Command for search mode.
	2	Set the Address of RAM to "BC" E.V.R.→ RAM (communication from E.V.R. to RAM)	ADR B C	LED lights up. 18/80 6C
	3	Adjustment Push "DEC" or "INC" button so that AGC at B302-20 becomes 240	Search with INC or DEC	18 9 1 6C LED lights up
	4	Change the command to "12"	CMD 1 2	LED lights up 12/9 1 6C Command for Direct Writing

Fig. C29

Item	Procedurng Order		Buttons to be Pushed	LED Indication
	5	Set the address of EEPROM to "6A"	ADR 4 F	address of EEPROM 02 9 16 A LED lights up
	6	Do not change the data after adjustment	DATA 9 1	02 9 16 A LED lights up
	7	Write the data	SET Push this for 2sec.	LED disappear 02 9 16 A

Fig. C30

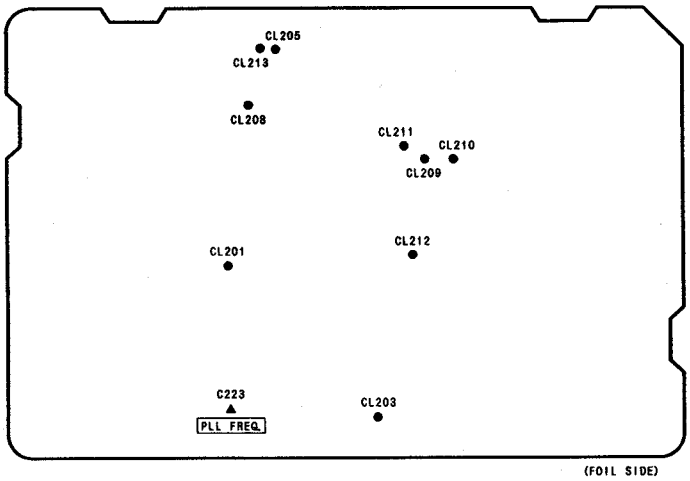
3) Direct Writing Procedure

Item	Procedurng Order		Buttons to be Pushed	LED Indication
For Example, writing the AGC adjustment data	1 2 3	**Searching the best Point.** **same as (1)**	same as (2)	same as (2)
	4	Change the command to "01"	CMD 1 2	LED lights up 12/00 2 1 Command for Direct writing
	5	Set the address of EEPROM to "6A"	ADR 6 A	address of EEPROM 12 00 6 A LED lights up
	6	Set the data of best point "91"	DATA 9 1	12 9 16 A LED lights up
	7	**Write the data**	SET Push this for 2sec.	LED disappear. 12 9 16 A

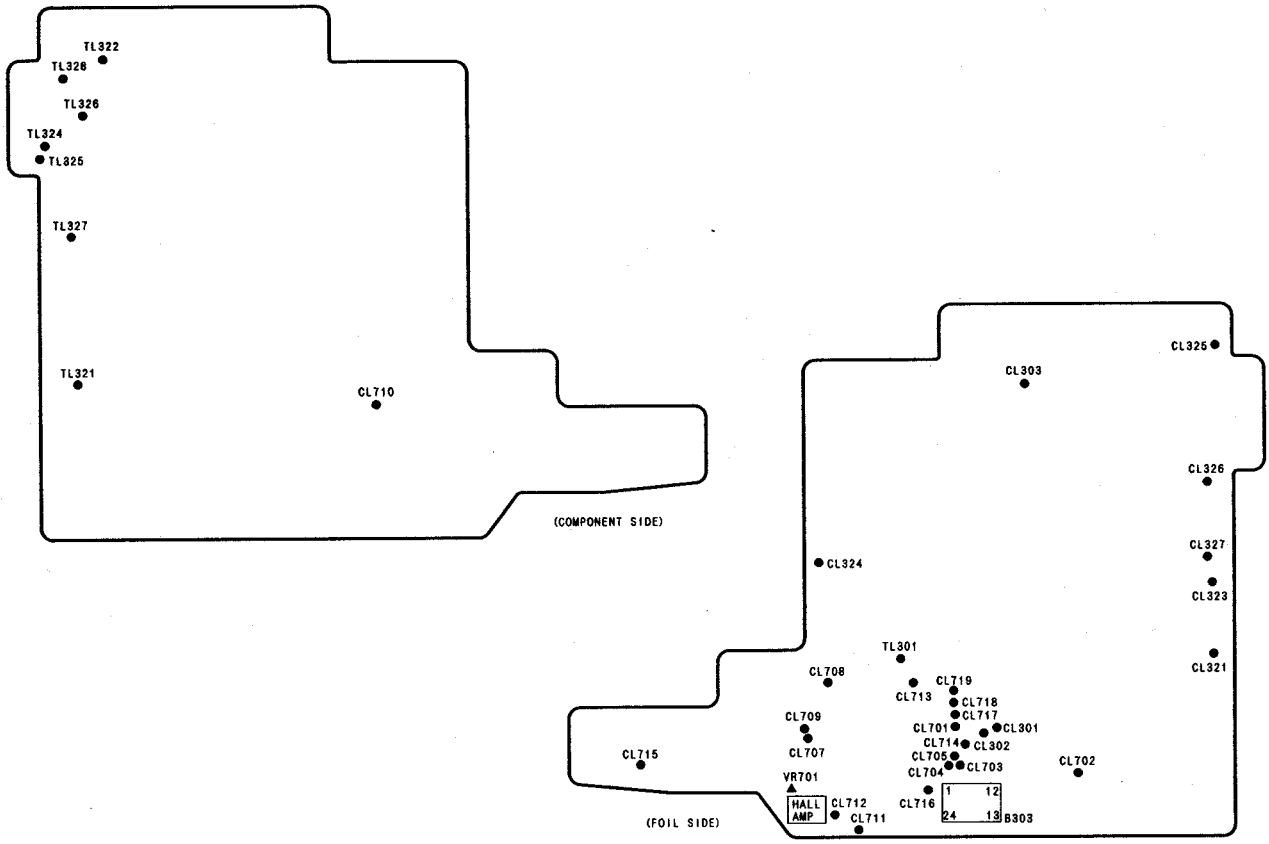
Fig. C31

LOCATION OF TEST POINTS AND CONTROLS (1)

CCD DRIVE C.B.A.

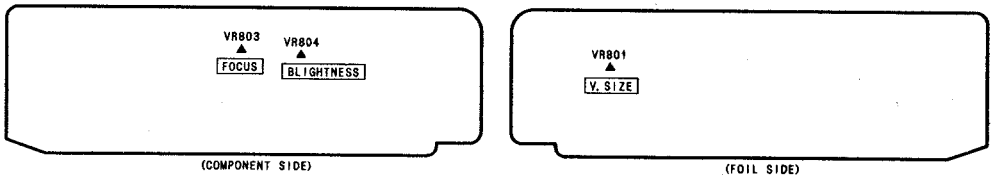


PROCESS & AF C.B.A.

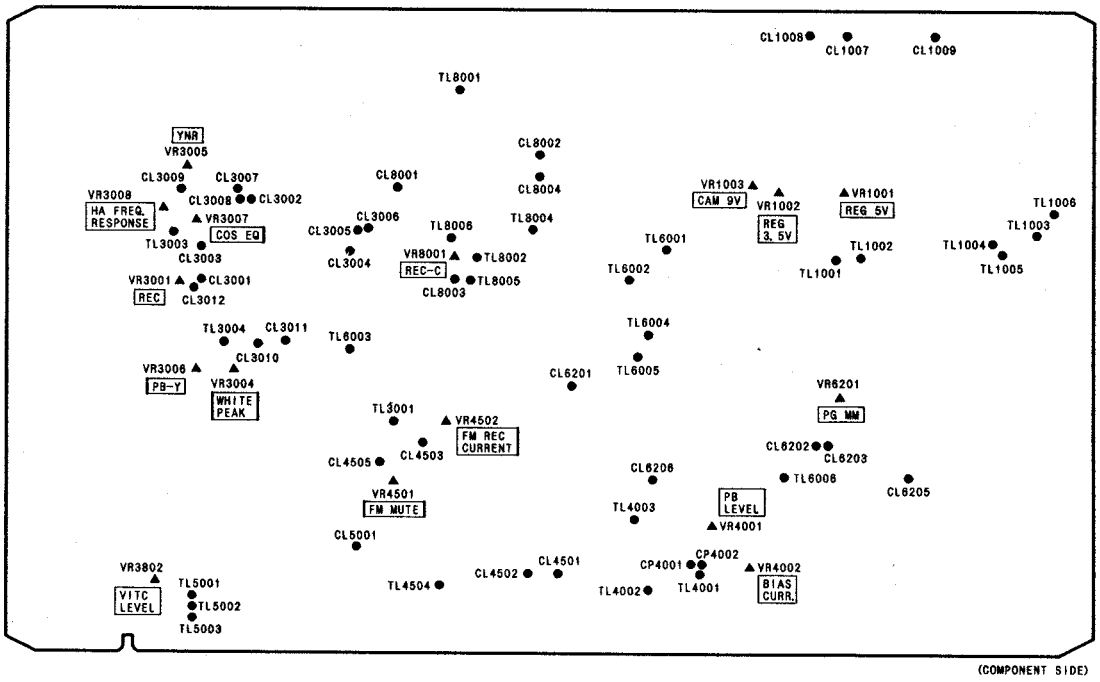


LOCATION OF TEST POINTS AND CONTROLS (2)

E.V.F. C.B.A.



MAIN C.B.A.



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

The following adjustment are for Electric 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. CENTERING ADJUSTMENT

(1) Aim the camera at the registration chart.
(2) Adjust the deflection Yole centering magnets turning them so that the picture on monitor TV is centered.

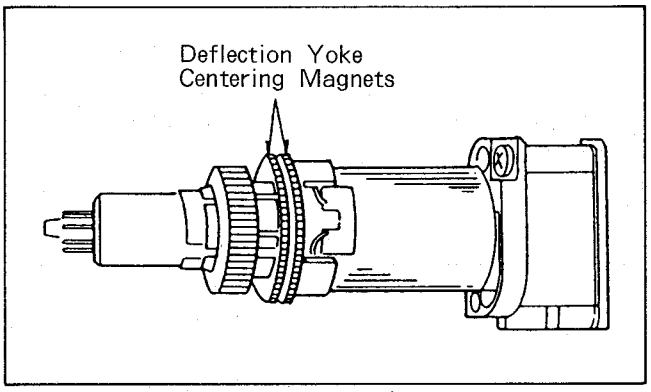


Fig. E1

2. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR803	NO	BALL CHART
M. EQ.		SPEC.	
VIEWFINDER		BEST RESOLUTION	

NOTE VR803: E.V.F. C.B.A.
1) Aim the connect at Ball chart.
2) Adjust the VR803 for best resolution in viewfinder.

3. V.SIZE ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR801	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		VERTICAL SIZE IS FIXED	

NOTE:
VR801 : E.V.F. C.B.A.

(1) Aim the camera at the gray scale chart.
(2) Adjust the vertical size(VR801) so that the Vertical size is correct and the picture does not roll as shown in Fig.E2.

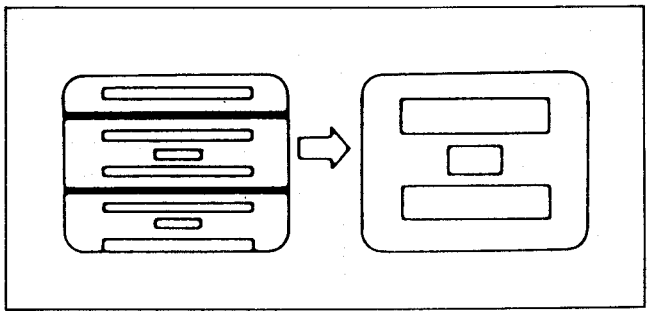


Fig. E2

4. BRIGHTNESS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
X	VR804	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		NATURAL GRADATION	

NOTE:
VR804 : E.V.F. C.B.A.

(1) Aim the camera at gray scale chart.
(2) Adjust the brightness control(VR804) so that the black and white bars in the E.V.F. screen are the same as they are in the monitor TV screen.

2-4-3. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

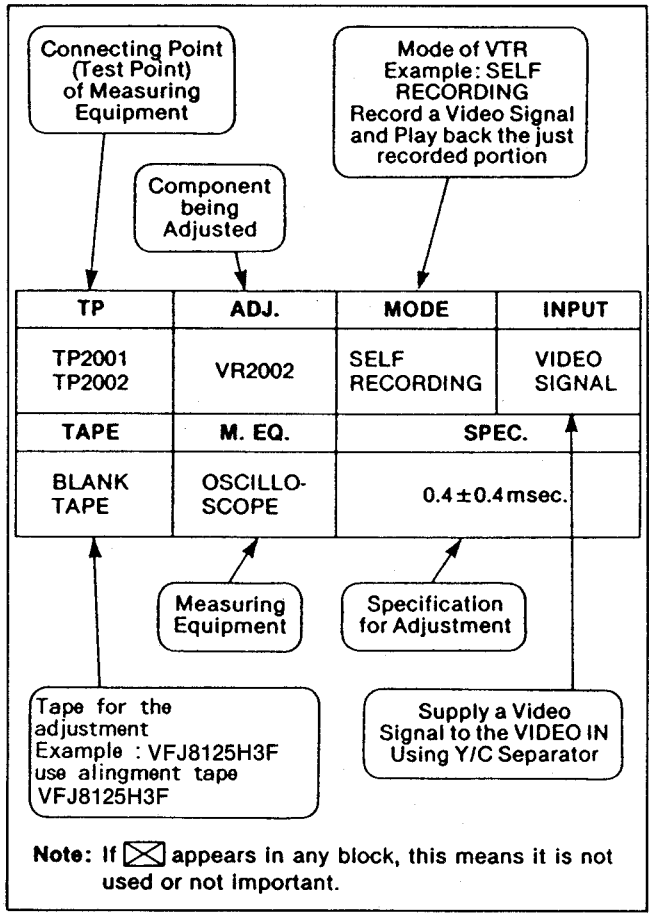
The following equipment is required for adjustment of the VTR section of VHS–Movie.

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–Movie. Alignment Tape (VFJ8125H3F)
9. VHS–Movie. Blank Tape
10. Pattern Generator
11. Vectorscope
12. DC Power Supply

PREPARATION

1. Remove the casing panels.
   (Refer to the disassembly method)
2. Connect the extension cable if necessary.
   VFK0823

HOW TO READ THE ADJUSTMENT PROCEDURES



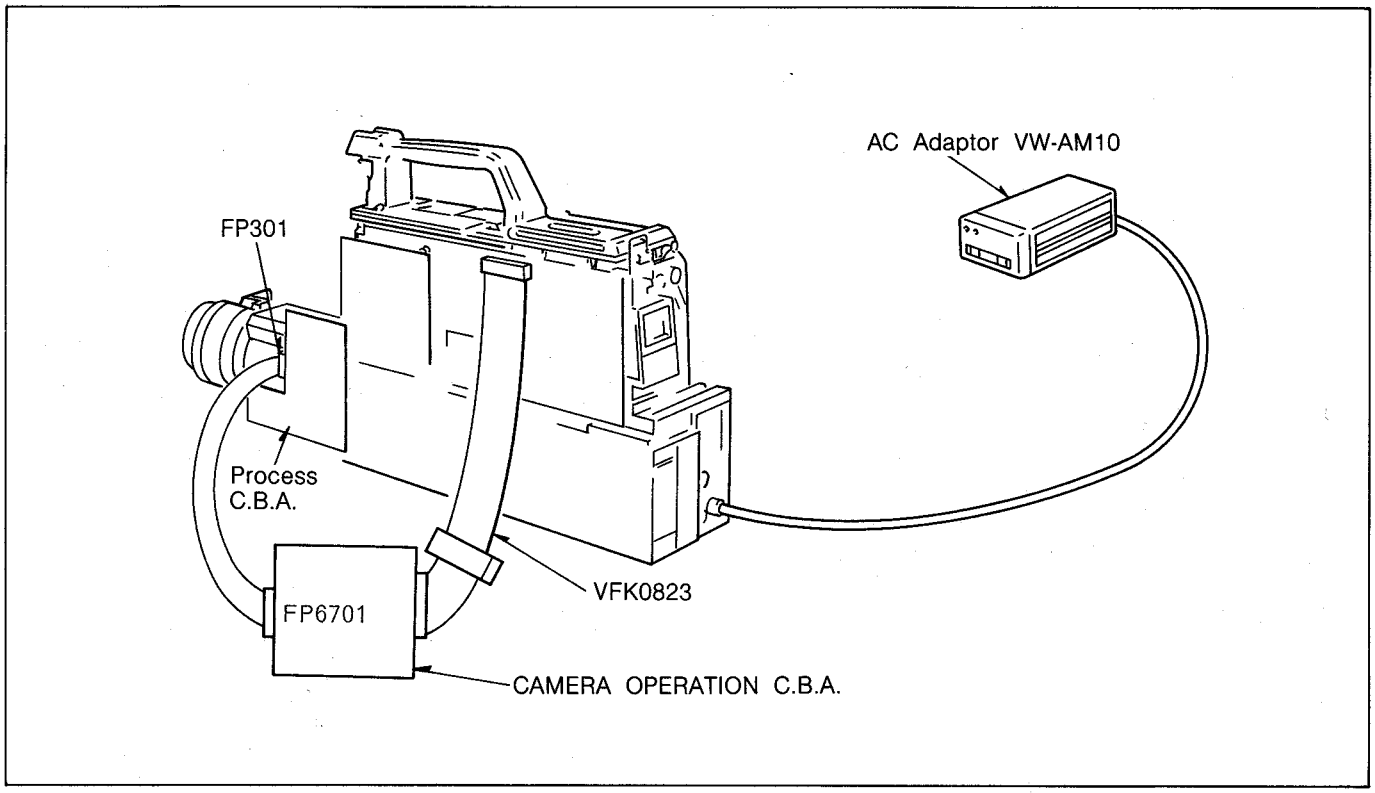


Fig. V1

TRIGGERING THE OSCILLOSCOPE

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

H. rate : TP (video output)
V. rate : CKJ6 (Head Switch signal)
(B6001(6))

POWER SECTION

1. REG. 5V ADJUSTMENT

Purpose:
To properly calibrate the 5V voltage to 4.87 DC+−0.025V.

Symptom of Misadjustment:
All circuits in the unit will not operate properly.

TP	ADJ.	MODE	INPUT
TL1001 (HOT) TL1006 (GND)	VR1001	S-VHS CAMERA RECORDING (EIS ON)	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	D.V.M.	4.87 + −0.025V	

Note:
Sensor, process, and camera operation C.B.A. are connect to the main C.B.A.

(1) Connect the D.V.M. To TL1001(HOT) and TL1006 (GND) Adjust the VR1001 so that D.V.M. is 4.87+−0.025V.

2. CAMERA 3.5V ADJUSTMENT

Purpose:
To properly calibrate the voltage to 3.51V DC +−0.025V.

Symptom of Misadjustment:
All circuits in N Unit will not operate properly.

TP	ADJ.	MODE	INPUT
TL1002 (HOT) TL1006 (GND)	VR1002	S-VHS CAMERA RECORDING (EIS ON)	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	D.V.M.	3.51 + −0.025V	

Note:
Sensor, process, and camera operation C.B.A. are connect to the main C.B.A.
Turn the power sw on and then set EIS system to the ON position.

(1) Connect the D.V.M. to the TL1002(HOT) and TL1006(GND) Adjust the VR1002 so that D.V.M. is 3.51+−0.025V.

3. CAMERA 9V REGULATOR

TP	ADJ.	MODE	INPUT
TL1003 (HOT) TL1006 (GND)	VR1003	S-VHS CAMERA RECORDING (EIS ON)	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	D.V.M.	8.70+0.05V −0.05V	

Note:
Eis system must be set to the ON position.

(1) Connect the D.V.M. To TL1003(HOT) and TL1006 (GND) Adjust the VR1003 so that D.V.M. is 8.70+0.05V,−0.05V.

SERVO SECTION

4. PG SHIFTER ADJUSTMENT

Purpose:
Determine the Head Switching point during play−back.

Symptom of Misadjustment:
May cause Head Switching Noise and/or Vertical jitter in the picture.

TP	ADJ.	MODE	INPUT
B6001 ⑥ (CKJ6) VIDEO OUT	VR6201	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFJ8125H3F)	OSCILLO- SCOPE	6.5H±0.5H	

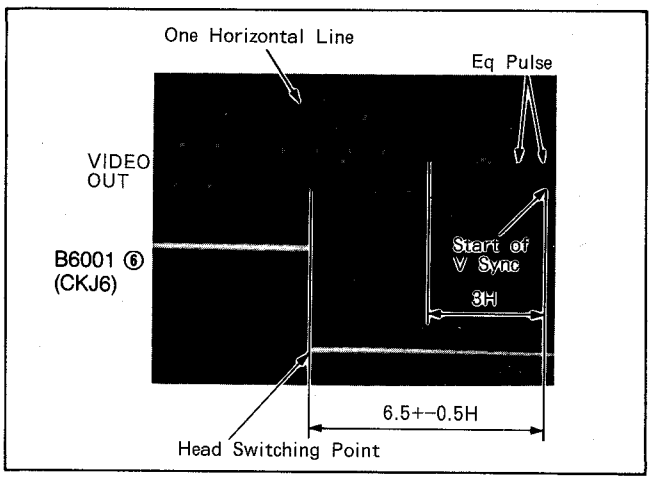


Fig. V2

LUMINANCE & CHROMINANCE SECTION

5. S-VHS MODULATOR LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL3003	VR3004	S-VHS STOP	COLOUR BAR B6001 ⑩ (CKJ ⑩)
TAPE	**M. EQ.**	**SPEC.**	
	OSCILLO-SCOPE	0.34+−0.01Vp-p	

1. Connect the jumper wire between TEST MODE PIN 7 and PIN 11.
2. Supply Colour Bar signal to TEST MODE PIN 10.
3. Connect the oscilloscope to TL3003.
4. Adjust the VR3004 so that signal level is 0.34+−0.01Vp-p.

6. RECORDING CURRENT ADJUSTMENT
REC CHROMA LEVEL ADJUSTMENT

Purpose:
Set the optimum Record Chroma Level.

Symptom of Misadjustment:
If the Record Chroma Level is too high, Beats may be seen in the picture. If the Level is too low, Picture will be Black and White.

TP	ADJ.	MODE	INPUT
TL5001 (HOT) TL5002 (GND)	VR8001	VHS REC	DARK PICTURE
TAPE	**M. EQ.**	**SPEC.**	
VHS BLANK TAPE	OSCILLO-SCOPE	14+−2mVp-p	

Note 1:
Cover the Lens with black cap.

Note 2:
Minimize the luminance recording current by turning VR3001 before this adjustment.

1. Connect the oscilloscope to TL5001(HOT) and TL5002(GND).
2. Aim the camera at colour bar.
3. Make recording with SP mode.
4. Eliminate luminance signal by turning off.
5. Adjust the VR8001 so that chroma level is 14+−2mVp-p.

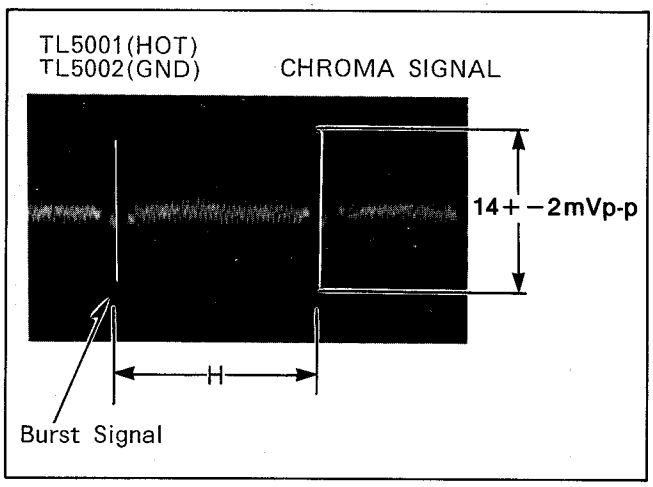


Fig. V3

7. LUMINANCE RECORDING CURRENT ADJUSTMENT

Purpose:
Set the optimum Recording Luminance Level.

Symptom of Misadjustment:
If the Record Luminance Level is too high, video may overload.
If the Level is too low, the S/N Ratio deteriorates.

TP	ADJ.	MODE	INPUT
TL5001 (HOT) TL5002 (GND)	VR3001	VHS REC	DARK PICTURE
TAPE	**M. EQ.**	**SPEC.**	
VHS BLANK TAPE	OSCILLO-SCOPE	100+−5mVp-p	

Note:
Cover the Lens with black cap.

1. Connect the oscilloscope to TL5001(HOT) and TL5002(GND).
2. Aim the camera at colour bar.
3. Make recording with SP mode.
4. Adjust the VR3001 so that luminance level is 100+−5mVp-p.

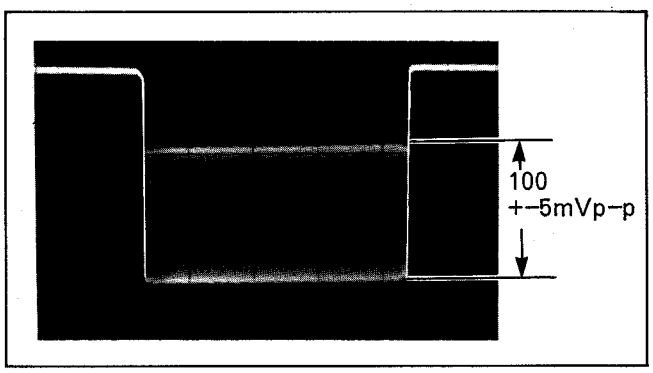


Fig. V4

8. YNR ADJUSTMENT

Purpose:
Improve the overall S/N Ratio especially in the Low Frequency component.

Symptom of Misadjustment:
The S/N Ratio is low.

TP	ADJ.	MODE	CHART
TL3004	VR3005	PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	SIGNAL IS MINIMIZED (LESS THAN 50mV)	

1. Play Back the Alignment tape.
2. Connect the Video output to oscilloscope.
3. Adjust VR3005 so that signal is minimized.

9. S-VHS VIDEO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3006	S-VHS SELF RECORDING	COLOUR BAR B6001 ⑩ (CKJ ⑩)
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLACK TAPE	OSCILLO-SCOPE	A: 1.0+-0.1Vp-p	

1. Terminate the Video out by 75 ohm.
2. Connect the jumper wire between Test Mode Pin 14 and Pin 16.
3. Supply Colour Bar signal to Test Mode Pin 10.
4. Record it for 10 min with S-VHS-Movie.
5. Connect the oscilloscope to Video out.
6. Playback the recorded signal.
7. Adjust VR3007 untill signal level is A=1.0+-0.1Vp-p.

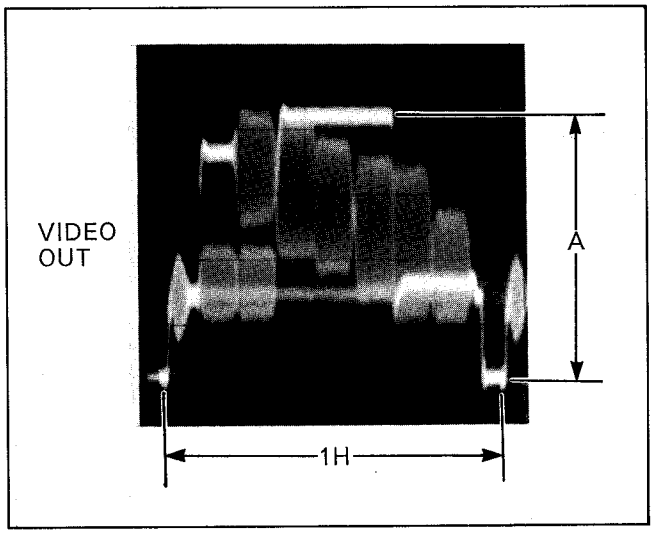


Fig. V5

10. COS EQ ADJUSTMENT

TP	ADJ.	MODE	INPUT
S-VHS LUMI OUT	VR5001	S-VHS SELF RECORDING/ PB	VIDEO SWEEP SIGNAL B6001 ⑩ (CKJ ⑩)
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A=-6±1dB (50%)	

1. Set the sweep generator output as shown below.

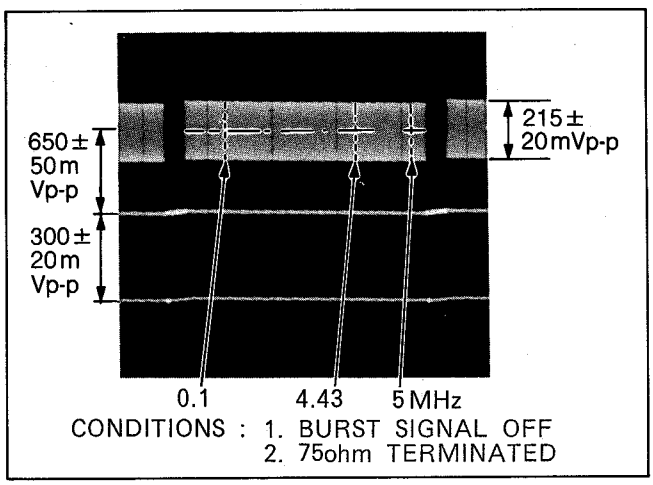


Fig. V6

2. Connect a jumper between B6001(7)(CKJ(7)) B6001(11)(CKJ(11)).
3. Supply sweep signal to B6001(10)(CKJ(10)).
4. Record the signal for a about ten minutes.
5. Playback the recorded signal.
6. Adjust VR5001 so that level at 4MHz is within spec. as shown in Fig.V12.

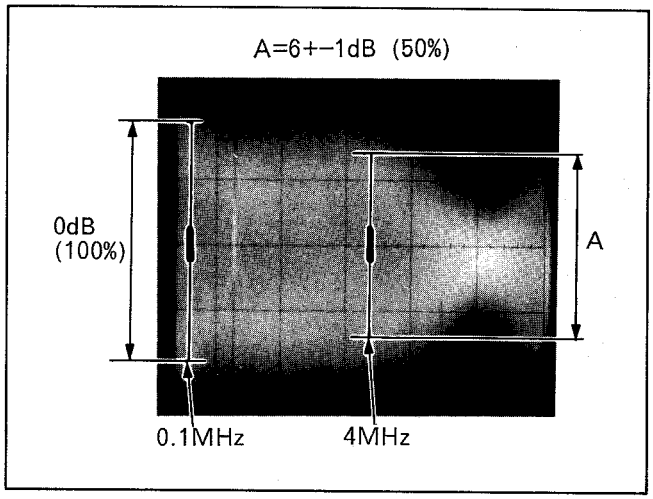


Fig. V7

11. HEAD AMP FREQUENCY RESPONSE ADJUSTMENT

Purpose:
To improve Video Frequency Response Level.

Symptom of Misadjustment:
Video Frequency Response deteriorates.
Picture is noisy.

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3008	VHS SELF RECORDING/ PB	VIDEO SWEEP SIGNAL B6001 ⑩ (CKJ ⑩)
TAPE	M. EQ.	SPEC.	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A=0dB+−1dB (100%)	

1. Set the sweep generator output as shown below.

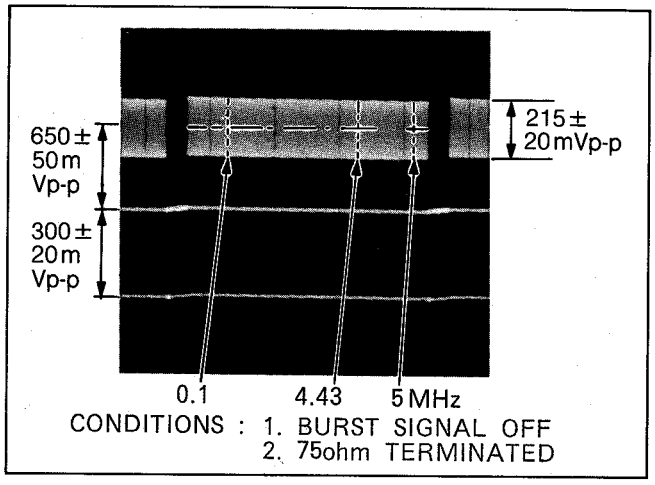


Fig. V8

2. Connect a jumper between B6001(7)(CKJ(7)) and B6001(11)(CKJ(11)).
3. Supply sweep signal to B6001(10)(CKJ(10)).
4. Record the signal for ten minutes.
5. Play back the recorded signal.
6. Adjust VR3008 so that the level is within the 2MHz spec. as shown below.

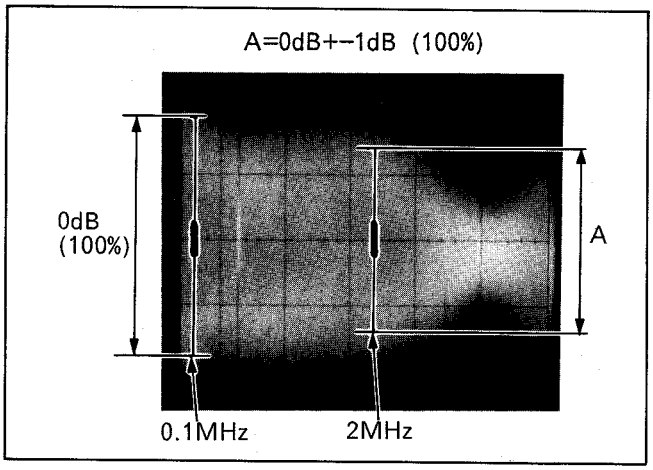


Fig. V9

AUDIO SECTION

12. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL4001 (HOT) TL4002 (GND)	VR4002	REC	disconnect P4001
TAPE	M. EQ.	SPEC.	
BLANK TAPE	oscilloscope (V.T.V.M.)	8.5±0.3mVp-p (3±0.1mVrms)	

Note
Connector (P4001) must be disconnected.
Set the normal audio mode.

13. AUDIO PLAYBACK LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
LINE OUT	VR4001	VHS REC/PB	1kHz Audio 8.9±0.5mVp-p (−50dBV ±0.5dB) CKR1 (P4001 ③) IN CKR2 (P4001 ②) GND
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	SIGNAL GENERATOR/ OSCILLO-SCOPE (V.T.V.M)	1.1+−0.1Vp−p (−8+−0.5dB)	

Note:
Audio bias current adjustment must be completed before the adjustment.

1. Set the normal audio mode.
2. Supply the audio signal (1kHz/−50dBV+−0.5dB sine−wave) to audio circuit through the test point. (CKR1, CKR2)
3. Audio VR4001 so that the level is PB Level 1.1+−0.1Vp−p. (−8dB+−0.5dB)

Hi-Fi AUDIO SECTION

14. Hi−Fi AUDIO RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL5003 (HOT) TL5001 (GND)	VR4502	S-VHS RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
S-VHS BLANK TAPE	OSCILLO-SCOPE	220+−5mVp-p	

1. Connector (P4001) must be disconnected.
2. Connect the OSCILLOSCOPE to TL5003(HOT) and TL5001(GND).
3. Adjust VR4502 so that the Audio recording current is 220+−5mVp−p as shown below.

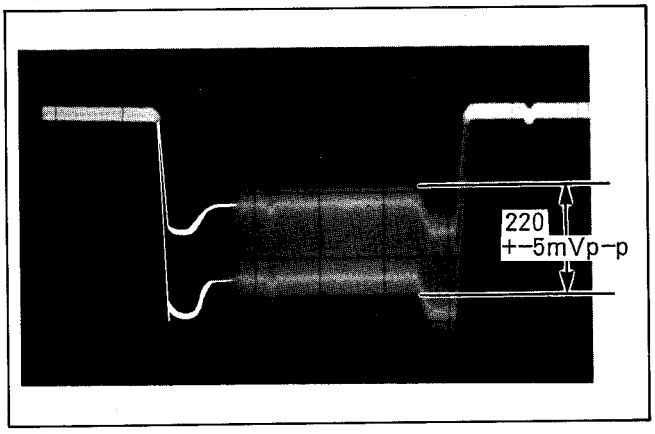


Fig. V10

15. AUDIO MUTING ADJUSTMENT

TP	ADJ.	MODE	INPUT
B5001-3	VR4501	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
VFJ8125H3F	OSCILLO-SCOPE		

Note:
Tape Interchangeability Adjustment must be completed before this adjustment.

1. Playback the Alignment tape.
2. Push the tracking Button untill signal level at B5001−3 becomes maximum.
3. Adjust VR4501 to anti−clockwise untill sound mode change to normal from Hi−Fi mode, and return it to clockwise untill sound mode change to Hi−Fi from normal mode.

VITC SECTION

16. VITC SIGNAL LEVEL ADJUSTMENT

TP	ADJ.	MODE	INPUT
VIDEO OUT	VR3802	VHS REC PAUSE	GRAY SCALE CHART
TAPE	**M. EQ.**	**SPEC.**	
	VITC GENERATOR/ OSCILLO-SCOPE	V/S 1.8+−0.07 (540+−20mVp-p)	

1. Connect the VITC generator to 10 pin multiconnector.
2. Aim the Camera at Gray Scale Chart.
3. Set the unit to VHS−Movie. Mode and set to Rec Pause mode.
4. Adjust the VR3802 so that ratio of V and S is 1.8+−0.07 as shown below.

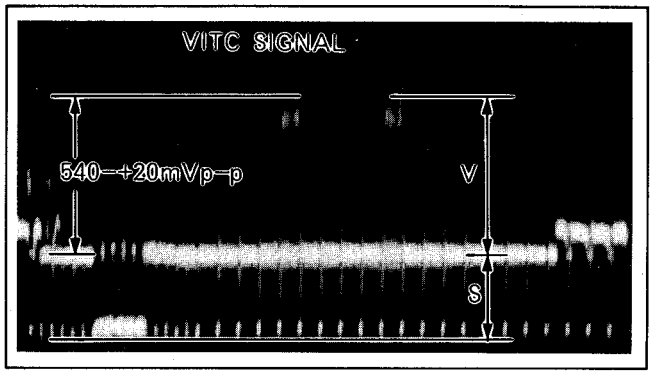
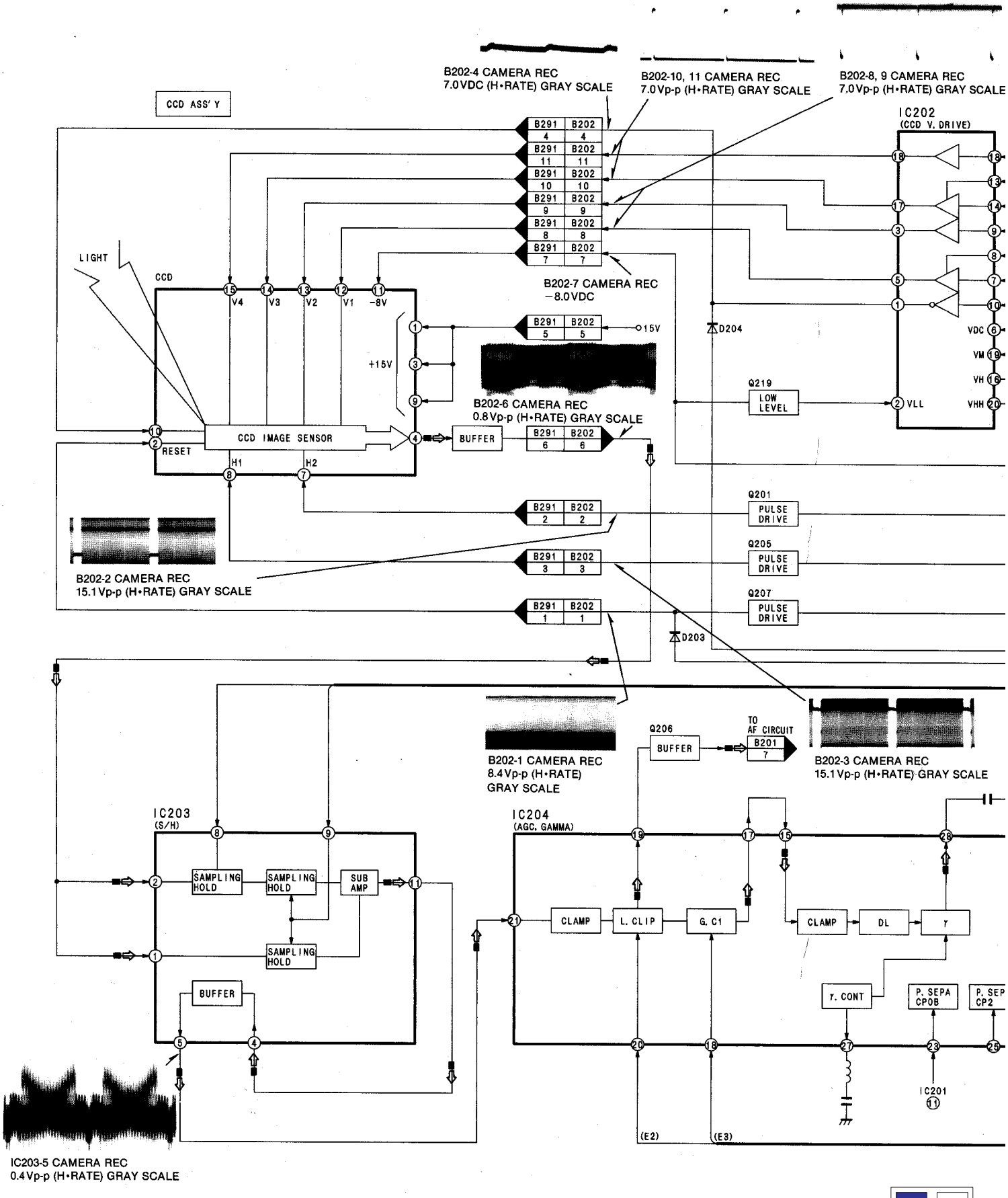
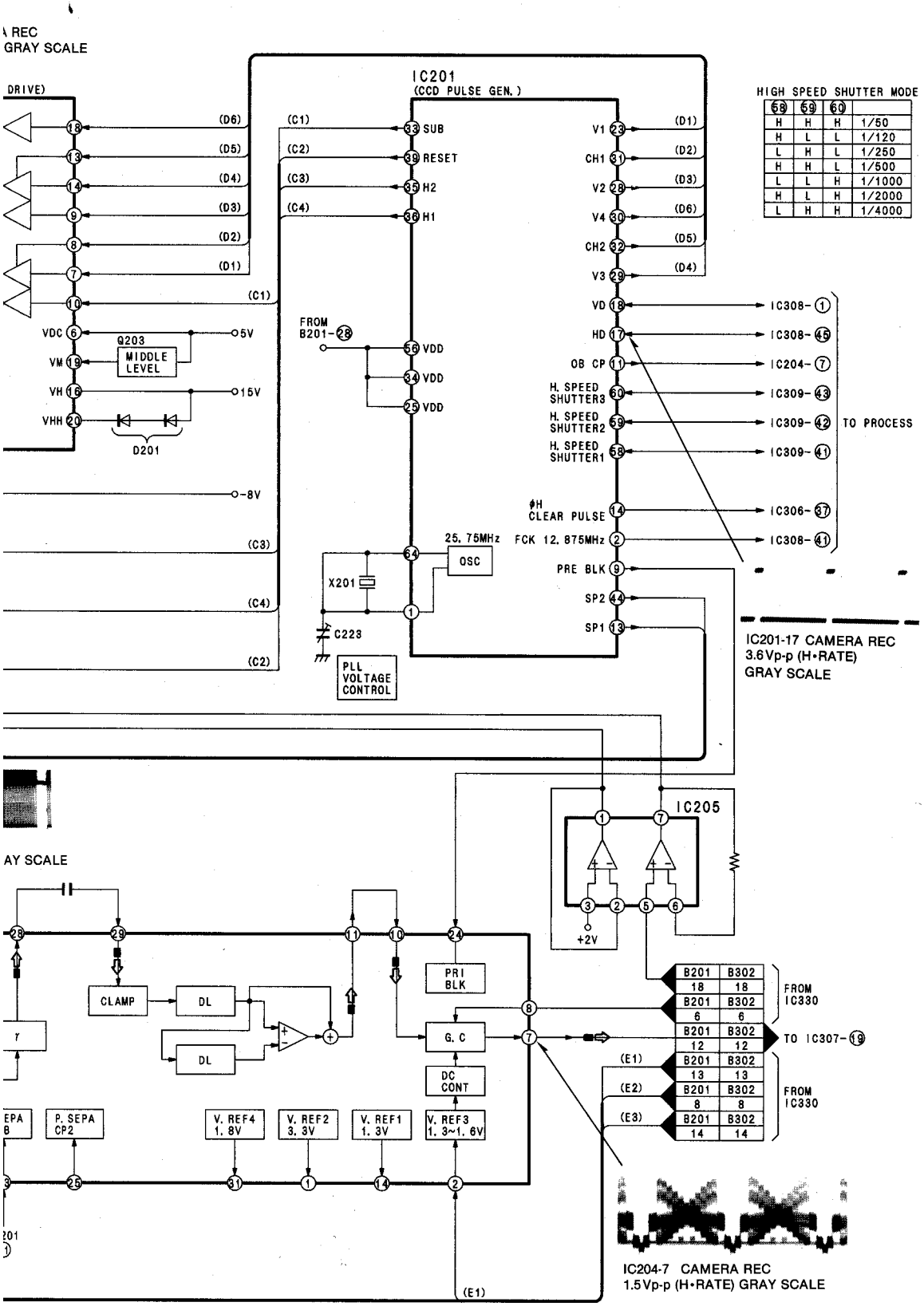


Fig. V11

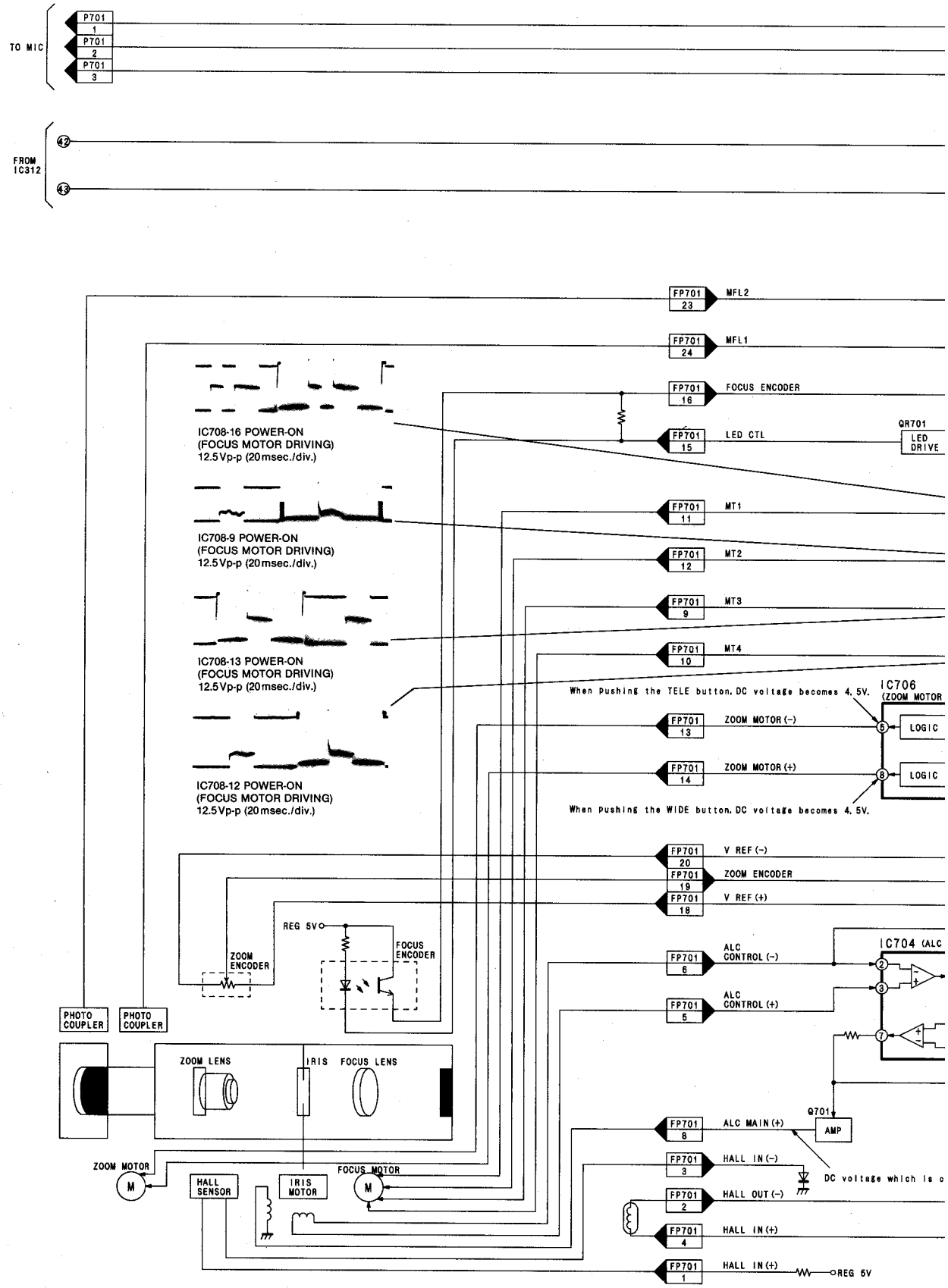
SECTION 3
BLOCK DIAGRAM & SCHEMATIC DIAGRAMS
3-1. CCD DRIVE BLOCK DIAGRAM



PRE VIDEO SIGNAL



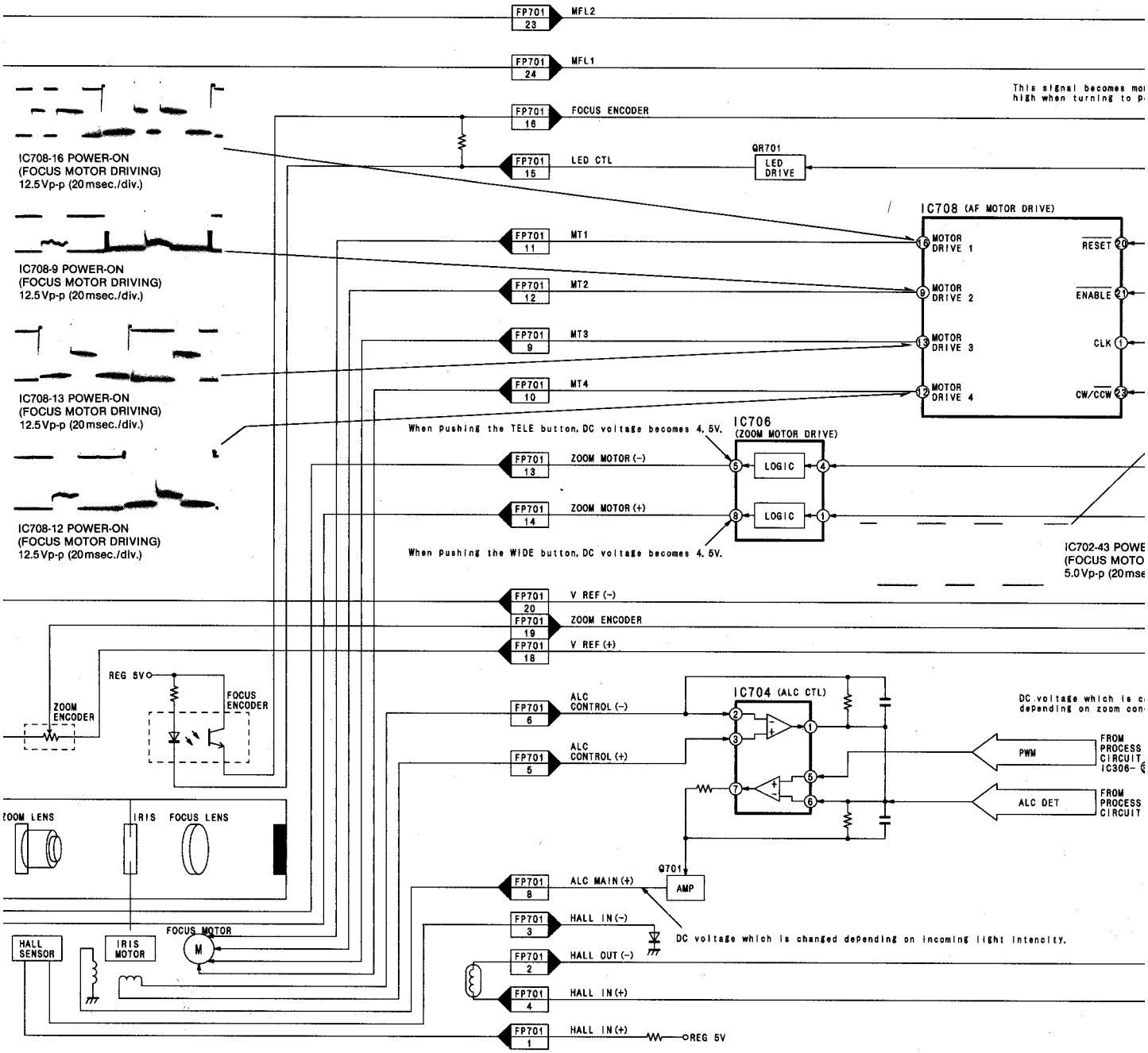
3-2. AUTO FOCUS BLOCK DIAGRAM

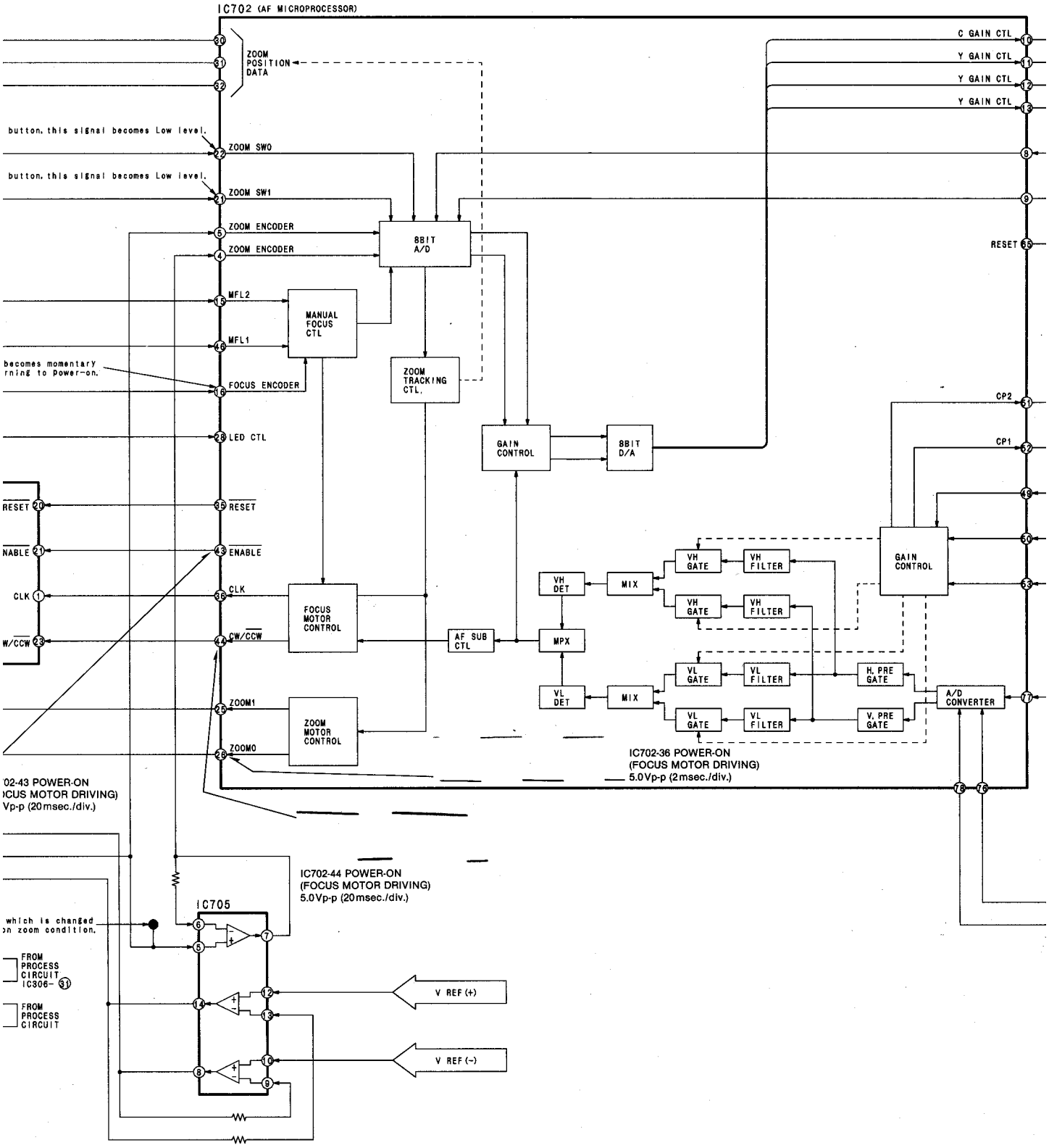


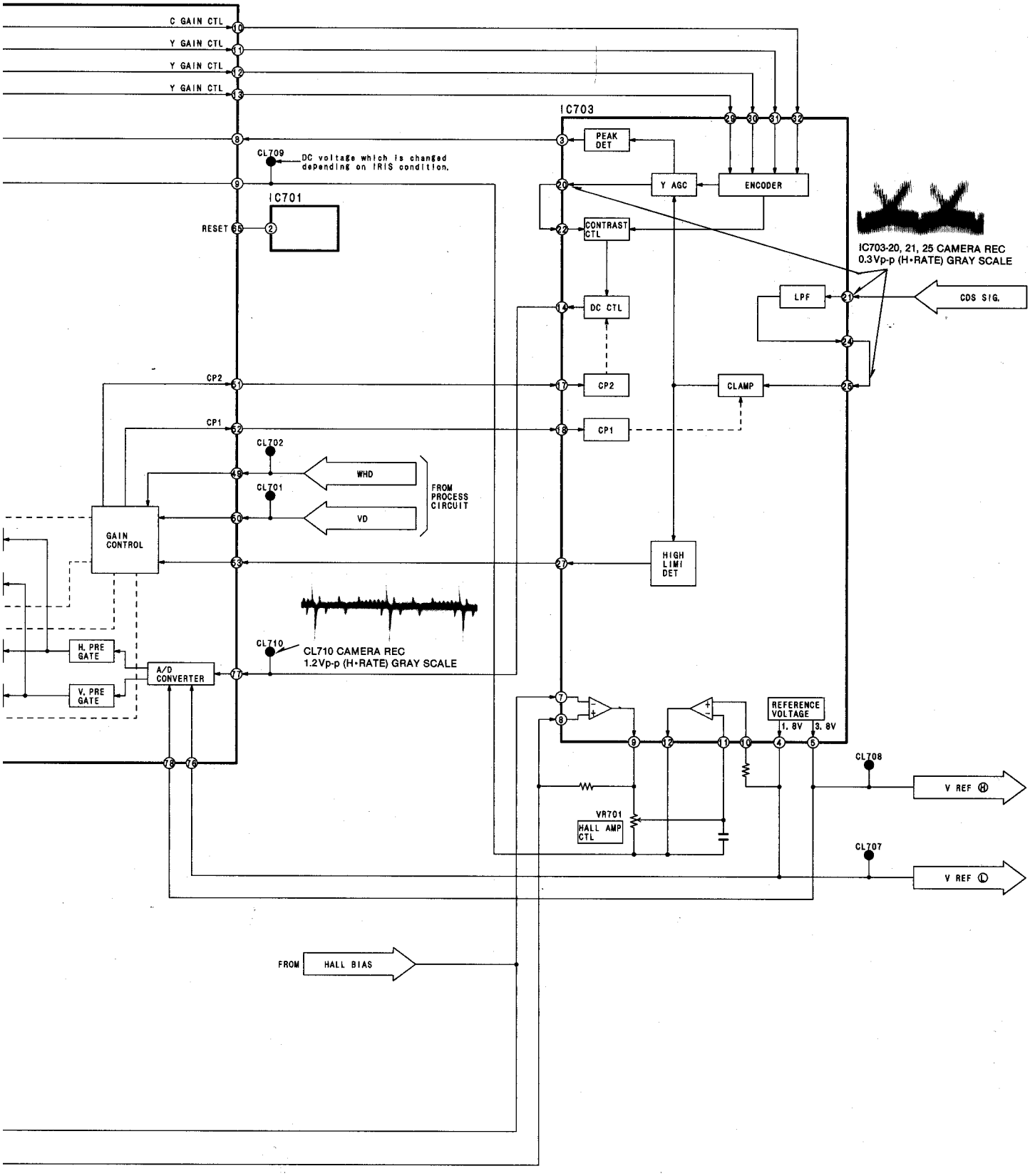
FOCUS BLOCK DIAGRAM

When pushing the TELE button, th

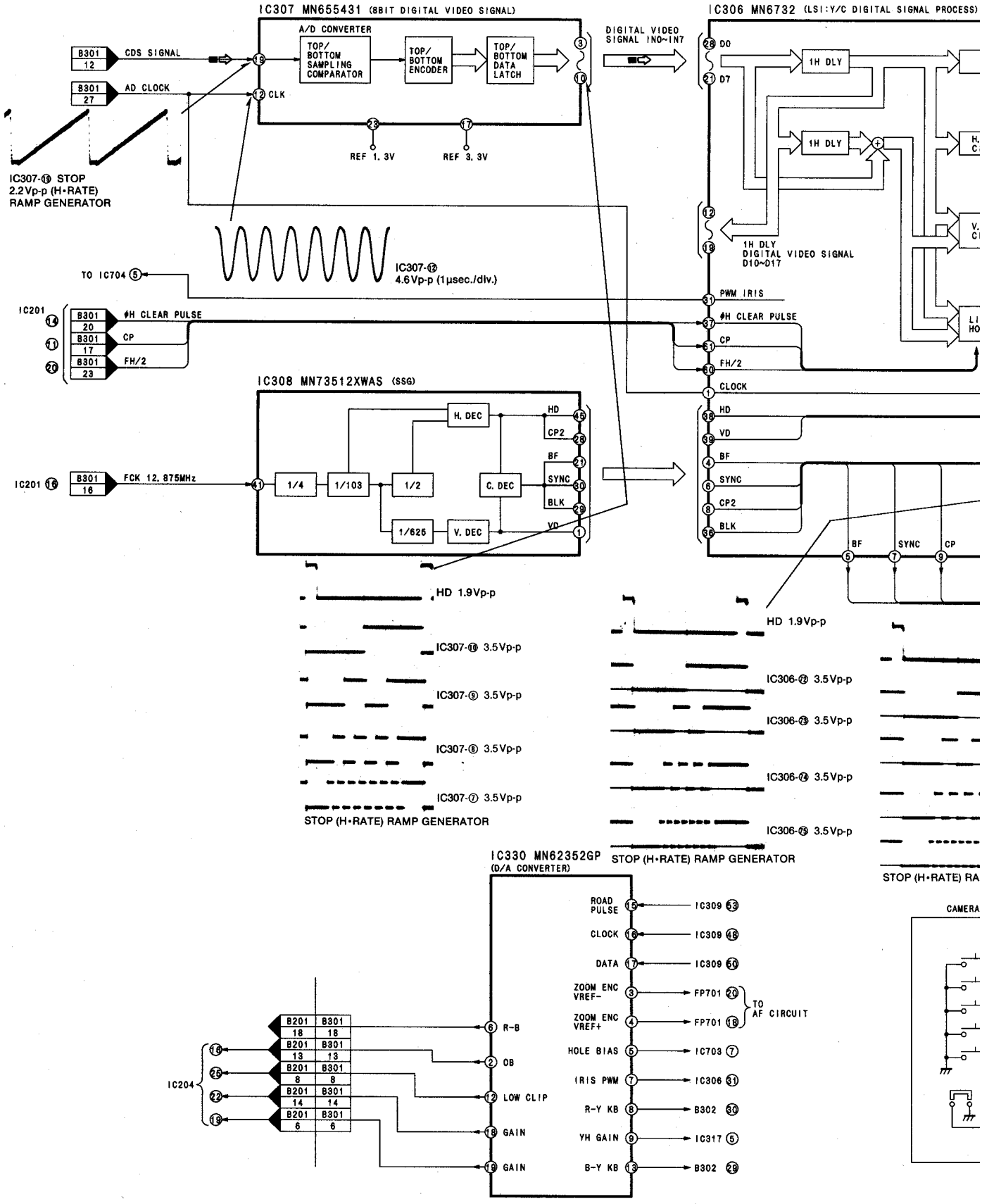
When pushing the WIDE button, th

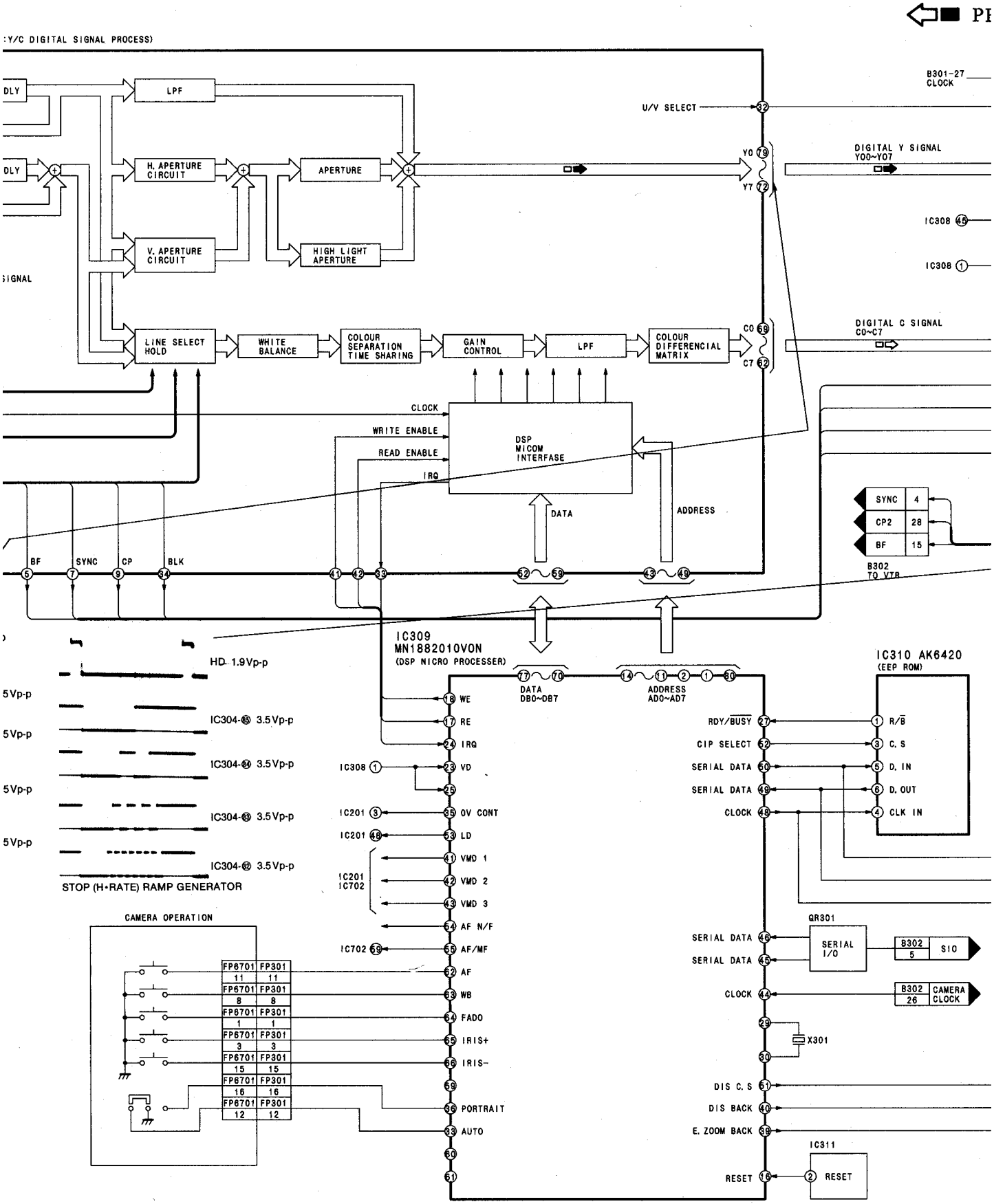


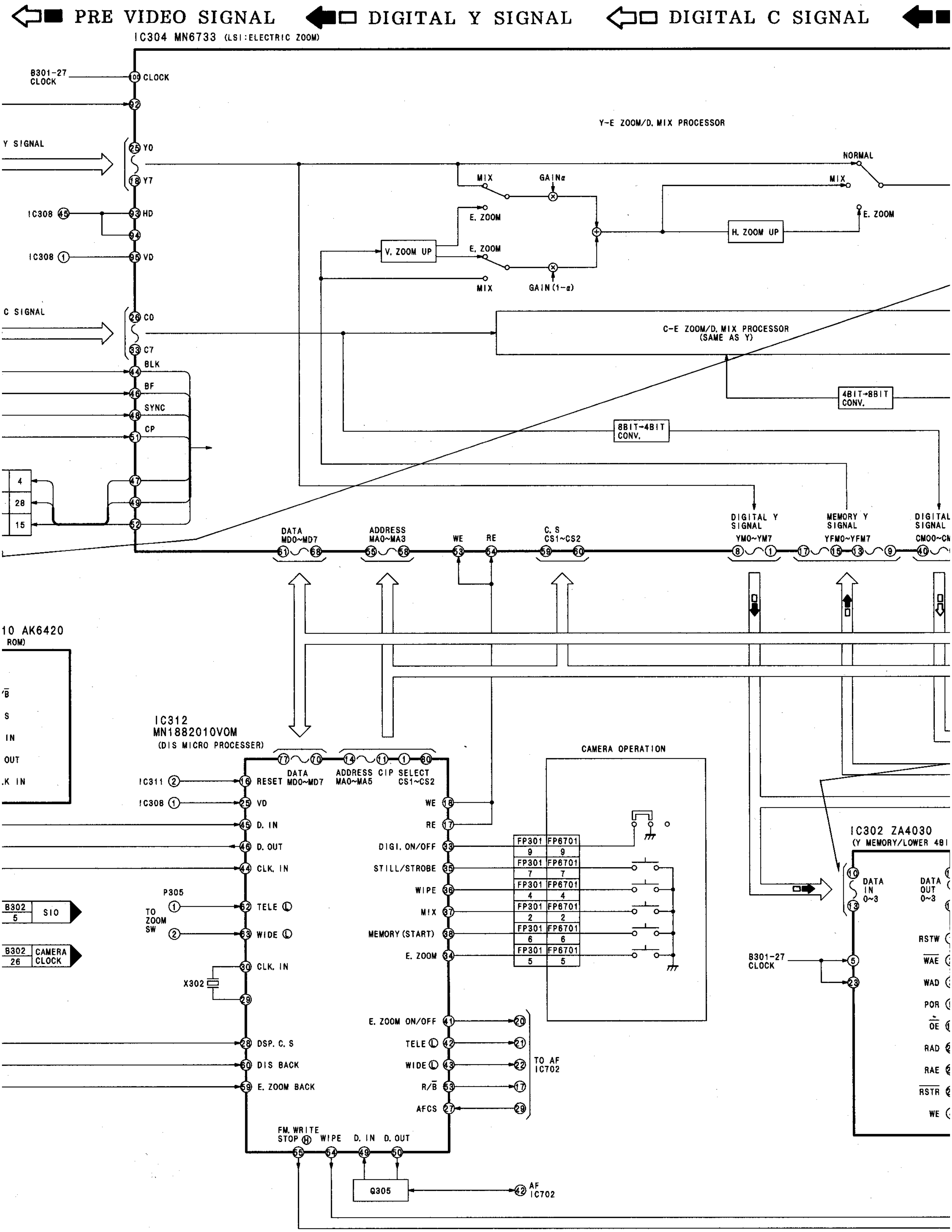

IC702 (AF MICROPROCESSOR)
ZOOM POSITION DATA
ZOOM SW0
ZOOM SW1
ZOOM ENCODER
ZOOM ENCODER
MFL2
MFL1
FOCUS ENCODER
LED CTL
RESET
ENABLE
CLK
CW/CCW
ZOOM1
ZOOM0
8BIT A/D
MANUAL FOCUS CTL
ZOOM TRACKING CTL.
GAIN CONTROL
8BIT D/A
FOCUS MOTOR CONTROL
ZOOM MOTOR CONTROL
AF SUB CTL
MPX
VH DET
VL DET
MIX
VH GATE
VH FILTER
VL GATE
VL FILTER
H. PRE GATE
V. PRE GATE
A/D CONVERTER
C GAIN CTL
Y GAIN CTL
Y GAIN CTL
Y GAIN CTL
RESET
CP2
CP1
GAIN CONTROL
IC702-36 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (2msec./div.)
IC702-44 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
IC705
V REF (+)
V REF (-)
FROM PROCESS CIRCUIT IC306- 31
FROM PROCESS CIRCUIT


C GAIN CTL
Y GAIN CTL
Y GAIN CTL
Y GAIN CTL
IC703
PEAK DET
CL709
DC voltage which is changed depending on IRIS condition.
IC701
Y AGC
ENCODER
RESET
CONTRAST CTL
IC703-20, 21, 25 CAMERA REC
0.3Vp-p (H•RATE) GRAY SCALE
LPF
CDS SIG.
DC CTL
CP2
CP2
CLAMP
CP1
CP1
CL702
WHD
CL701
VD
FROM PROCESS CIRCUIT
GAIN CONTROL
HIGH LIMI DET
CL710
CL710 CAMERA REC
1.2Vp-p (H•RATE) GRAY SCALE
H. PRE GATE
A/D CONVERTER
V. PRE GATE
REFERENCE VOLTAGE
1. 8V
3. 8V
CL708
V REF Ⓗ
VR701
HALL AMP CTL
CL707
V REF Ⓛ
FROM
HALL BIAS

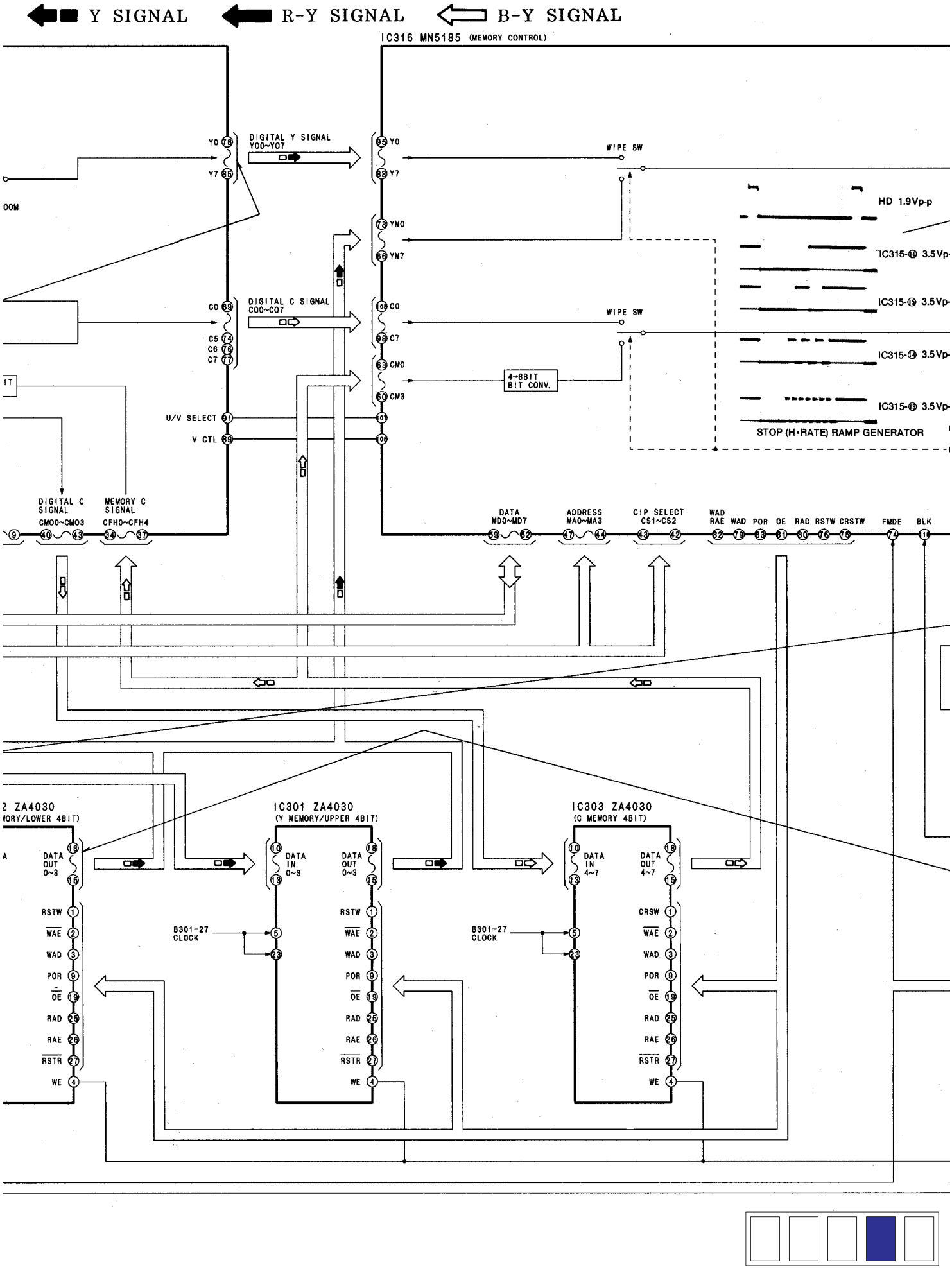
3-3. PROCESS BLOCK DIAGRAM

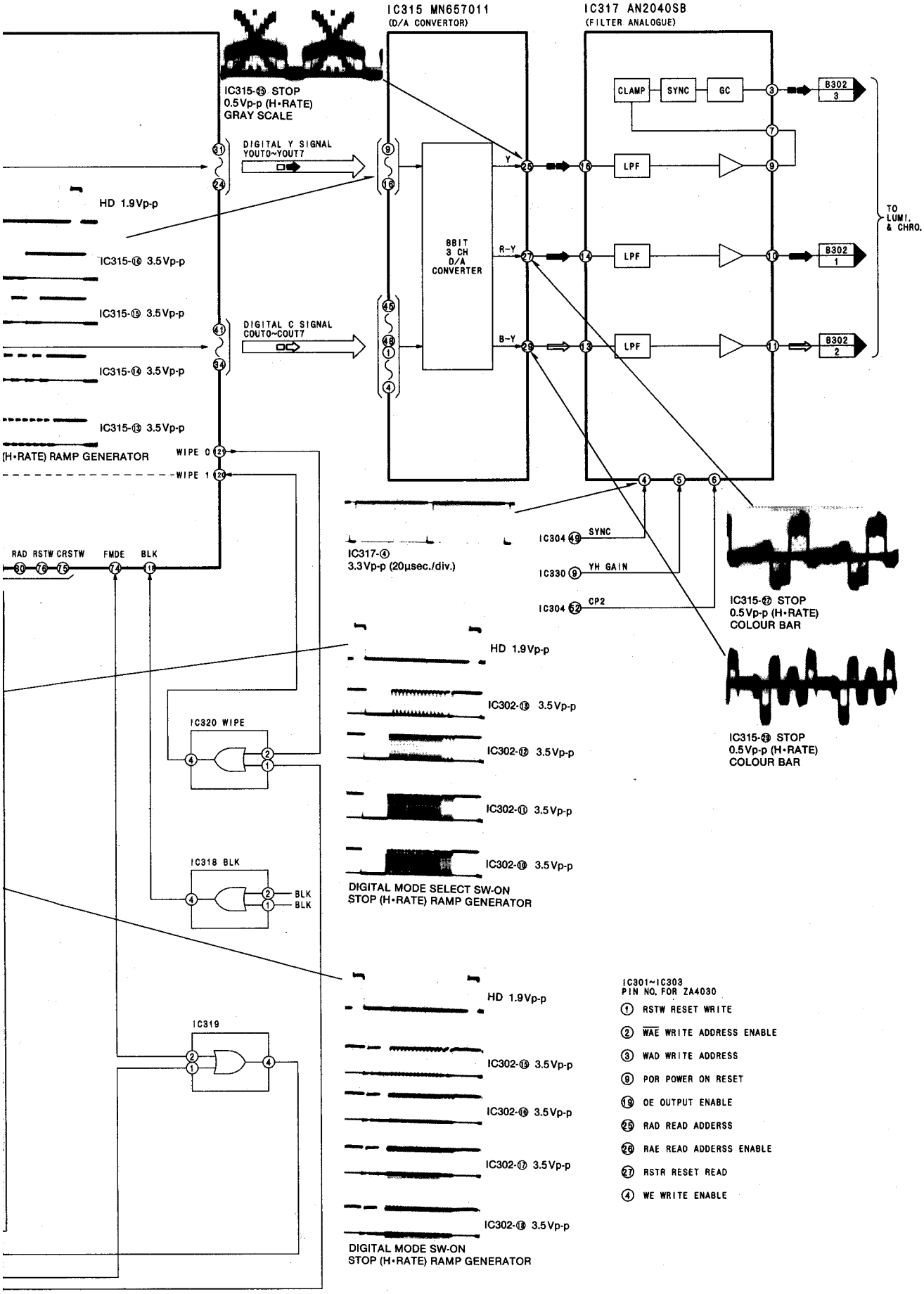



Y/C DIGITAL SIGNAL PROCESS)
DLY
LPF
H. APERTURE CIRCUIT
APERTURE
V. APERTURE CIRCUIT
HIGH LIGHT APERTURE
SIGNAL
LINE SELECT HOLD
WHITE BALANCE
COLOUR SEPARATION TIME SHARING
GAIN CONTROL
LPF
COLOUR DIFFERENCIAL MATRIX
U/V SELECT
B301-27 CLOCK
Y0
Y7
DIGITAL Y SIGNAL Y00~Y07
IC308 45
IC308 1
C0
C7
DIGITAL C SIGNAL C0~C7
CLOCK
WRITE ENABLE
READ ENABLE
IRQ
DSP MICOM INTERFASE
DATA
ADDRESS
BF
SYNC
CP
BLK
SYNC 4
CP2 28
BF 15
B302 TO VTR
IC309
MN1882010VON
(DSP NICRO PROCESSER)
DATA DB0~DB7
ADDRESS AD0~AD7
IC310 AK6420
(EEP ROM)
HD 1.9Vp-p
IC304-83 3.5Vp-p
IC304-84 3.5Vp-p
IC304-83 3.5Vp-p
IC304-82 3.5Vp-p
5Vp-p
STOP (H•RATE) RAMP GENERATOR
WE
RE
IRQ
VD
OV CONT
LD
VMD 1
VMD 2
VMD 3
AF N/F
AF/MF
AF
WB
FADO
IRIS+
IRIS-
PORTRAIT
AUTO
RDY/BUSY
CIP SELECT
SERIAL DATA
SERIAL DATA
CLOCK
R/B
C. S
D. IN
D. OUT
CLK IN
CAMERA OPERATION
FP6701 FP301
11 11
8 8
1 1
3 3
15 15
16 16
12 12
QR301
SERIAL I/O
B302 5 SIO
B302 26 CAMERA CLOCK
X301
DIS C. S
DIS BACK
E. ZOOM BACK
IC311
RESET

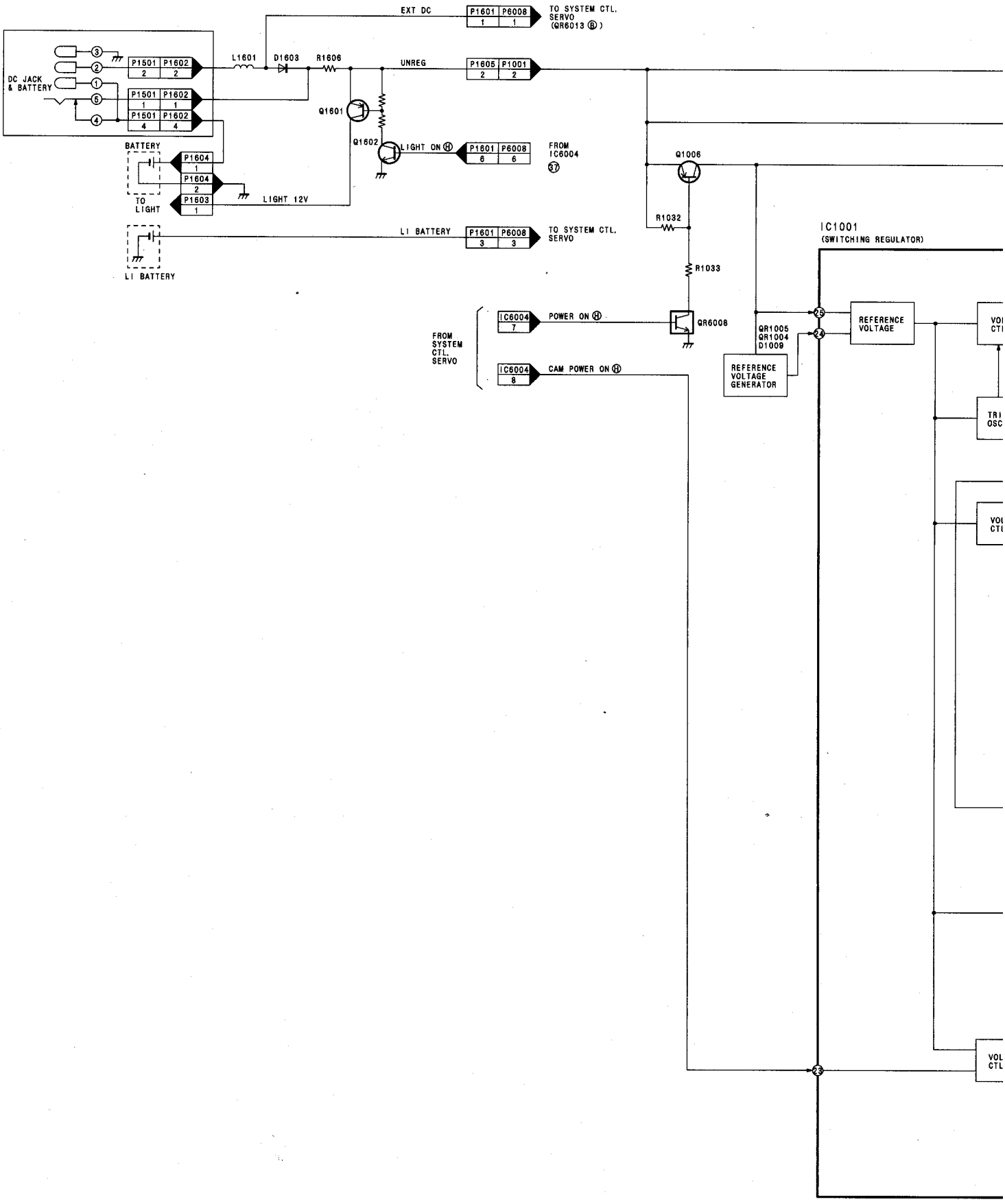


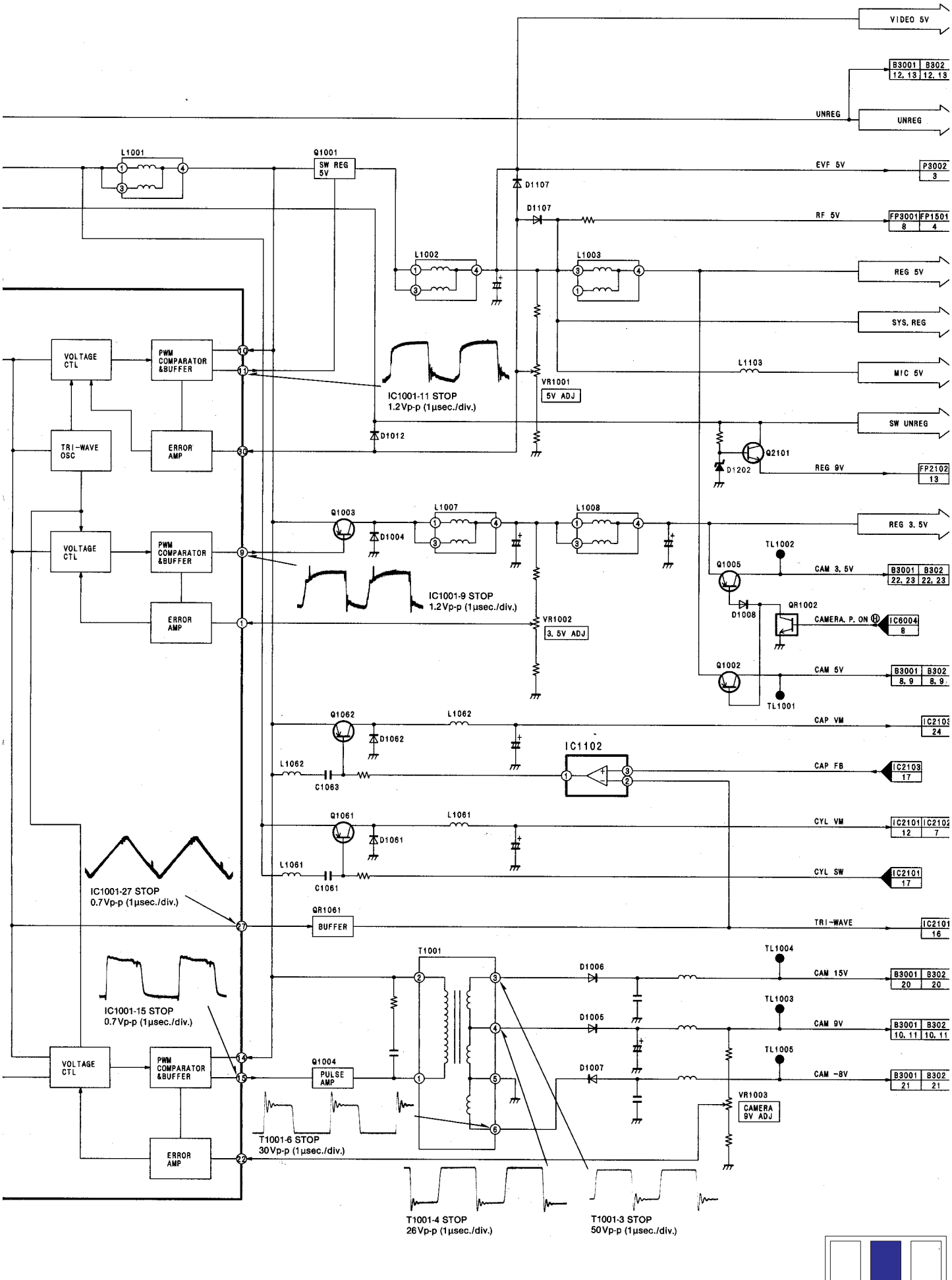
PRE VIDEO SIGNAL
DIGITAL Y SIGNAL
DIGITAL C SIGNAL
IC304 MN6733 (LSI:ELECTRIC ZOOM)
B301-27 CLOCK
CLOCK
Y SIGNAL
Y0
Y7
IC308 45
HD
IC308 1
VD
C SIGNAL
C0
C7
BLK
BF
SYNC
CP
Y-E ZOOM/D.MIX PROCESSOR
NORMAL
MIX
GAINα
E. ZOOM
V. ZOOM UP
H. ZOOM UP
GAIN(1-α)
C-E ZOOM/D.MIX PROCESSOR (SAME AS Y)
4BIT→8BIT CONV.
8BIT→4BIT CONV.
DATA MD0~MD7
ADDRESS MA0~MA3
WE
RE
C.S CS1~CS2
DIGITAL Y SIGNAL YM0~YM7
MEMORY Y SIGNAL YFM0~YFM7
DIGITAL SIGNAL CM00~CM
10 AK6420
ROM)
IC312 MN1882010VOM (DIS MICRO PROCESSER)
IC311 2
RESET
IC308 1
VD
D. IN
D. OUT
CLK. IN
P305
TO ZOOM SW
TELE
WIDE
B302 5 SIO
B302 26 CAMERA CLOCK
X302
DATA MD0~MD7
ADDRESS MA0~MA5
CIP SELECT CS1~CS2
DIGI. ON/OFF
STILL/STROBE
WIPE
MIX
MEMORY (START)
E. ZOOM
CAMERA OPERATION
FP301 FP6701
E. ZOOM ON/OFF
R/B
AFCS
TO AF IC702
DSP. C. S
DIS BACK
E. ZOOM BACK
FM. WRITE STOP
D. IN
D. OUT
Q305
AF IC702
IC302 ZA4030 (Y MEMORY/LOWER 4BI
DATA IN 0~3
DATA OUT 0~3
B301-27 CLOCK
RSTW
WAE
WAD
POR
OE
RAD
RAE
RSTR
WE

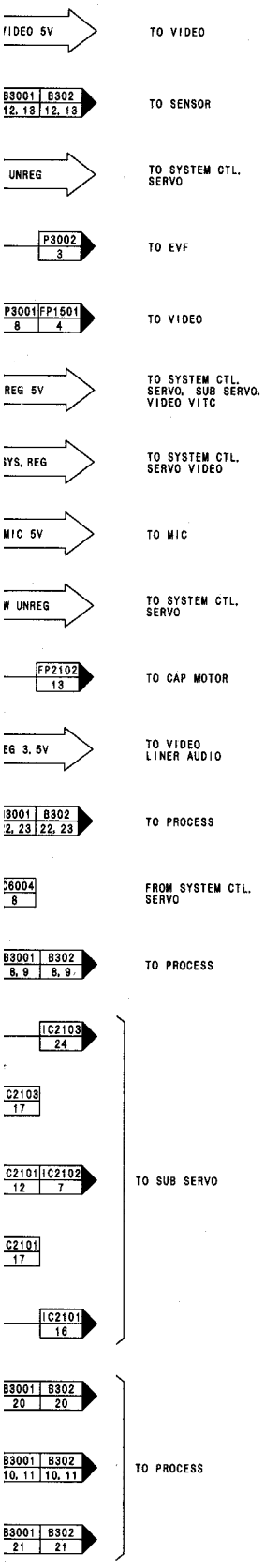

Y SIGNAL
R-Y SIGNAL
B-Y SIGNAL
IC316 MN5185 (MEMORY CONTROL)
DIGITAL Y SIGNAL
Y00~Y07
DIGITAL C SIGNAL
C00~C07
WIPE SW
WIPE SW
4→8BIT
BIT CONV.
HD 1.9Vp-p
IC315-⑲ 3.5Vp-
IC315-⑱ 3.5Vp-
IC315-⑭ 3.5Vp-
IC315-⑬ 3.5Vp-
STOP (H·RATE) RAMP GENERATOR
U/V SELECT
V CTL
DIGITAL C SIGNAL
CM00~CM03
MEMORY C SIGNAL
CFH0~CFH4
DATA
MD0~MD7
ADDRESS
MA0~MA3
CIP SELECT
CS1~CS2
WAD
RAE
WAD
POR
OE
RAD
RSTW
CRSTW
FMDE
BLK
IC301 ZA4030
(Y MEMORY/UPPER 4BIT)
IC303 ZA4030
(C MEMORY 4BIT)
DATA OUT 0~3
DATA IN 0~3
DATA OUT 0~3
DATA IN 4~7
DATA OUT 4~7
RSTW
WAE
WAD
POR
OE
RAD
RAE
RSTR
WE
CRSW
B301-27
CLOCK
B301-27
CLOCK


IC315 MN657011
(D/A CONVERTOR)
IC317 AN2040SB
(FILTER ANALOGUE)
IC315-㉕ STOP
0.5Vp-p (H•RATE)
GRAY SCALE
DIGITAL Y SIGNAL
YOUT0~YOUT7
HD 1.9Vp-p
IC315-⑯ 3.5Vp-p
IC315-⑬ 3.5Vp-p
DIGITAL C SIGNAL
COUT0~COUT7
IC315-⑭ 3.5Vp-p
IC315-⑬ 3.5Vp-p
8BIT
3 CH
D/A
CONVERTER
Y
R-Y
B-Y
CLAMP
SYNC
GC
LPF
LPF
LPF
B302
3
B302
1
B302
2
TO
LUMI.
& CHRO.
(H•RATE) RAMP GENERATOR
WIPE 0
WIPE 1
RAD RSTW CRSTW
FMDE
BLK
IC317-④
3.3Vp-p (20μsec./div.)
IC304 SYNC
IC330 YH GAIN
IC304 CP2
IC315-㉗ STOP
0.5Vp-p (H•RATE)
COLOUR BAR
IC315-㉓ STOP
0.5Vp-p (H•RATE)
COLOUR BAR
HD 1.9Vp-p
IC302-⑬ 3.5Vp-p
IC302-⑫ 3.5Vp-p
IC302-⑪ 3.5Vp-p
IC302-⑩ 3.5Vp-p
DIGITAL MODE SELECT SW-ON
STOP (H•RATE) RAMP GENERATOR
IC320 WIPE
IC318 BLK
BLK
BLK
IC319
HD 1.9Vp-p
IC302-⑮ 3.5Vp-p
IC302-⑯ 3.5Vp-p
IC302-⑰ 3.5Vp-p
IC302-⑱ 3.5Vp-p
DIGITAL MODE SW-ON
STOP (H•RATE) RAMP GENERATOR
IC301~IC303
PIN NO. FOR ZA4030
① RSTW RESET WRITE
② WAE WRITE ADDRESS ENABLE
③ WAD WRITE ADDRESS
⑨ POR POWER ON RESET
⑲ OE OUTPUT ENABLE
㉕ RAD READ ADDERSS
㉖ RAE READ ADDERSS ENABLE
㉗ RSTR RESET READ
④ WE WRITE ENABLE

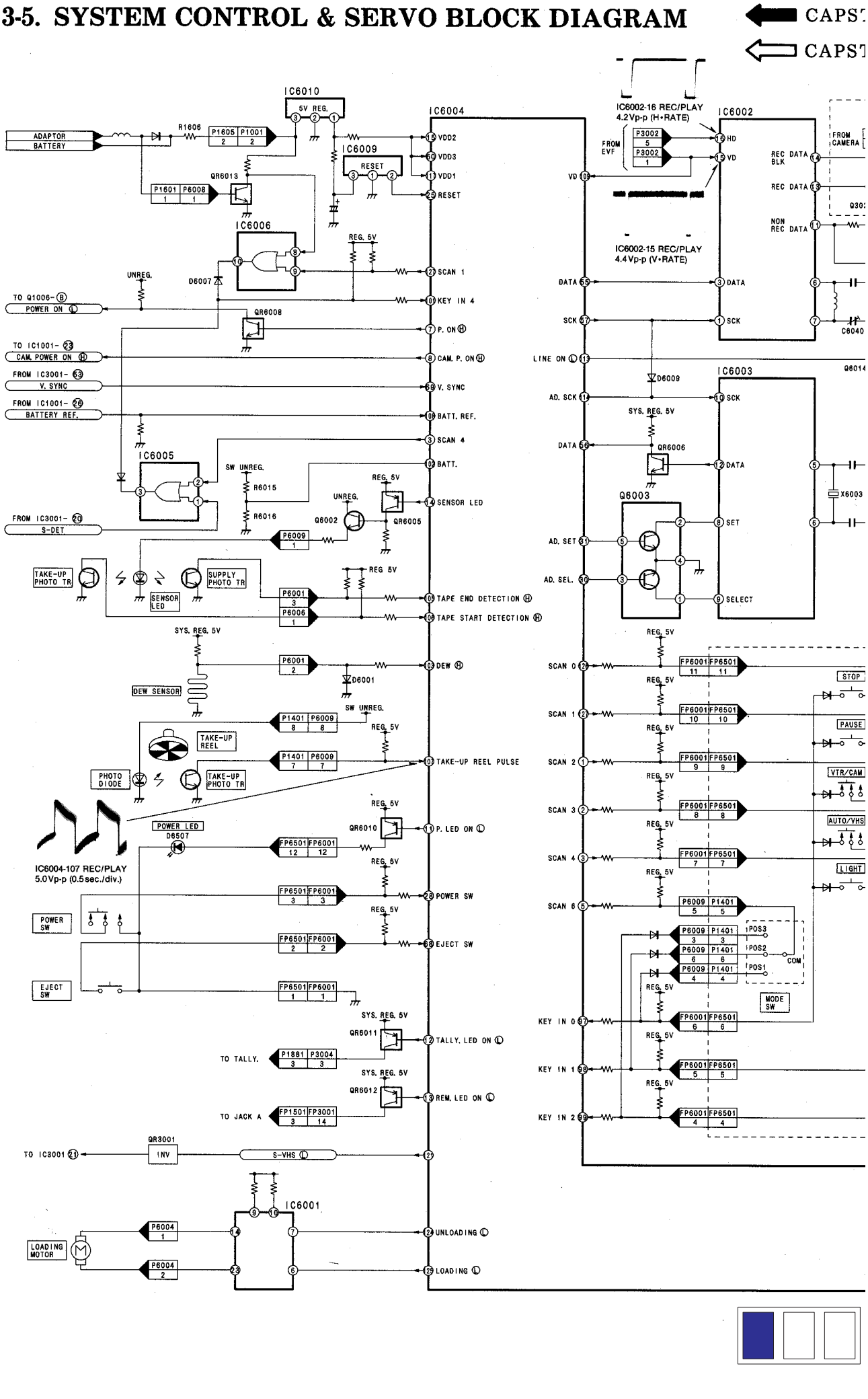
3-4. POWER BLOCK DIAGRAM




VIDEO 5V
B3001 B302
12, 13 12, 13
UNREG
UNREG
L1001
Q1001
SW REG 5V
EVF 5V
P3002 3
D1107
D1107
RF 5V
FP3001 FP1501
8 4
L1002
L1003
REG 5V
SYS. REG
L1103
MIC 5V
SW UNREG
VOLTAGE CTL
PWM COMPARATOR &BUFFER
TRI-WAVE OSC
ERROR AMP
IC1001-11 STOP
1.2Vp-p (1µsec./div.)
VR1001
5V ADJ
D1012
Q2101
D1202
REG 9V
FP2102 13
Q1003
L1007
L1008
REG 3.5V
D1004
TL1002
Q1005
CAM 3.5V
B3001 B302
22, 23 22, 23
IC1001-9 STOP
1.2Vp-p (1µsec./div.)
VR1002
3.5V ADJ
QR1002
D1008
CAMERA P. ON
IC6004 8
Q1002
CAM 5V
B3001 B302
8, 9 8, 9
TL1001
Q1062
L1062
D1062
CAP VM
IC2103 24
IC1102
L1062
C1063
CAP FB
IC2103 17
Q1061
L1061
D1061
CYL VM
IC2101 12
IC2102 7
L1061
C1061
CYL SW
IC2101 17
IC1001-27 STOP
0.7Vp-p (1µsec./div.)
QR1061
BUFFER
TRI-WAVE
IC2101 16
T1001
TL1004
D1006
CAM 15V
B3001 B302
20 20
IC1001-15 STOP
0.7Vp-p (1µsec./div.)
TL1003
D1005
CAM 9V
B3001 B302
10, 11 10, 11
TL1005
D1007
CAM -8V
B3001 B302
21 21
VOLTAGE CTL
PWM COMPARATOR &BUFFER
Q1004
PULSE AMP
VR1003
CAMERA 9V ADJ
ERROR AMP
T1001-6 STOP
30Vp-p (1µsec./div.)
T1001-4 STOP
26Vp-p (1µsec./div.)
T1001-3 STOP
50Vp-p (1µsec./div.)


IDEO 5V
TO VIDEO
B3001 B302
12, 13 12, 13
TO SENSOR
UNREG
TO SYSTEM CTL.
SERVO
P3002
3
TO EVF
P3001 FP1501
8 4
TO VIDEO
REG 5V
TO SYSTEM CTL.
SERVO, SUB SERVO,
VIDEO VITC
SYS. REG
TO SYSTEM CTL.
SERVO VIDEO
MIC 5V
TO MIC
W UNREG
TO SYSTEM CTL.
SERVO
FP2102
13
TO CAP MOTOR
EG 3.5V
TO VIDEO
LINER AUDIO
3001 B302
2, 23 22, 23
TO PROCESS
C6004
8
FROM SYSTEM CTL.
SERVO
B3001 B302
8, 9 8, 9
TO PROCESS
IC2103
24
C2103
17
C2101 IC2102
12 7
TO SUB SERVO
C2101
17
IC2101
16
B3001 B302
20 20
B3001 B302
10, 11 10, 11
TO PROCESS
B3001 B302
21 21

3-5. SYSTEM CONTROL & SERVO BLOCK DIAGRAM

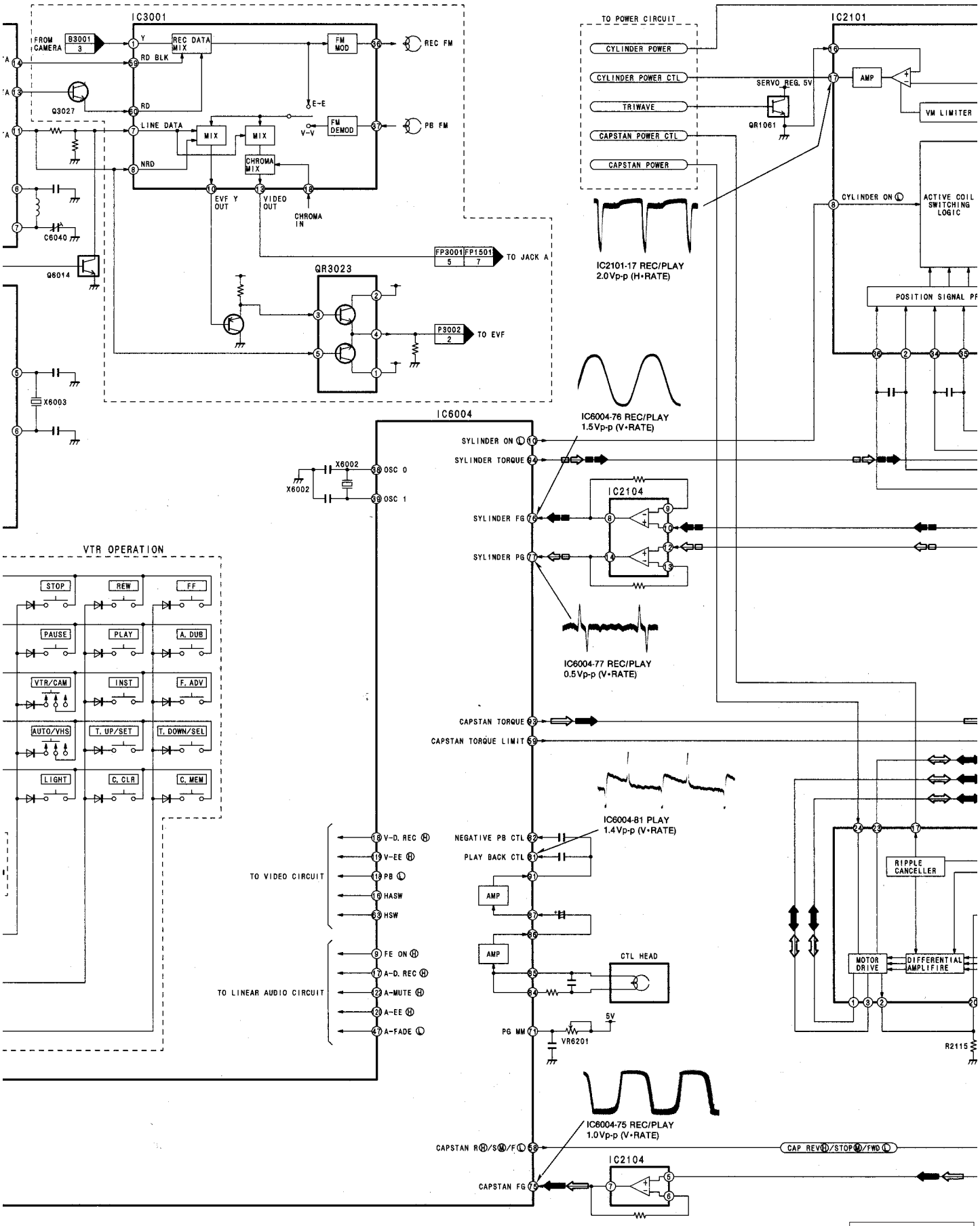


CAPSTAN SERVO SPEED LOOP

CAPSTAN SERVO PHASE LOOP

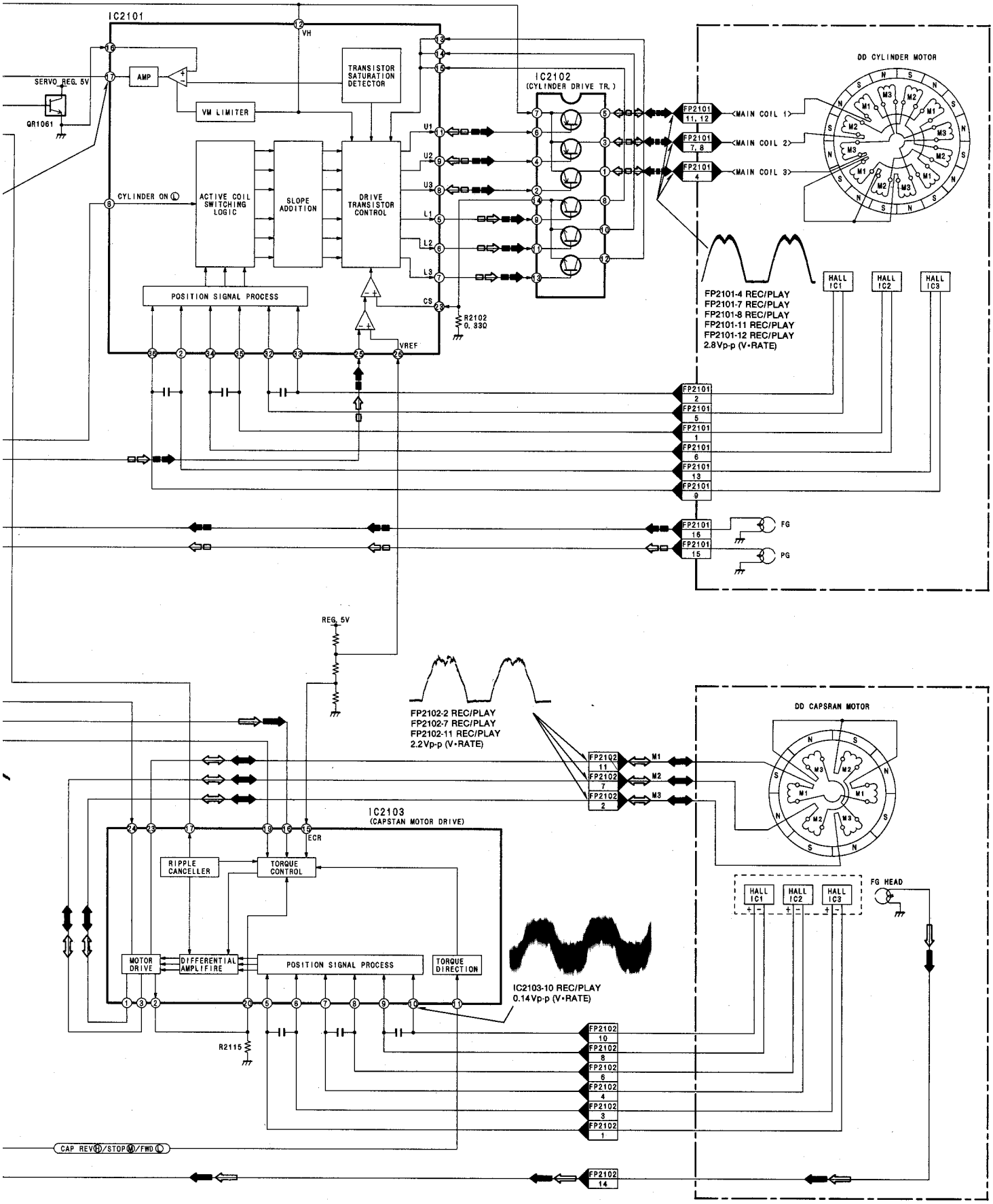
CYLINDER SERVO SPEED LOOP

CYLINDER SERVO PHASE LOOP

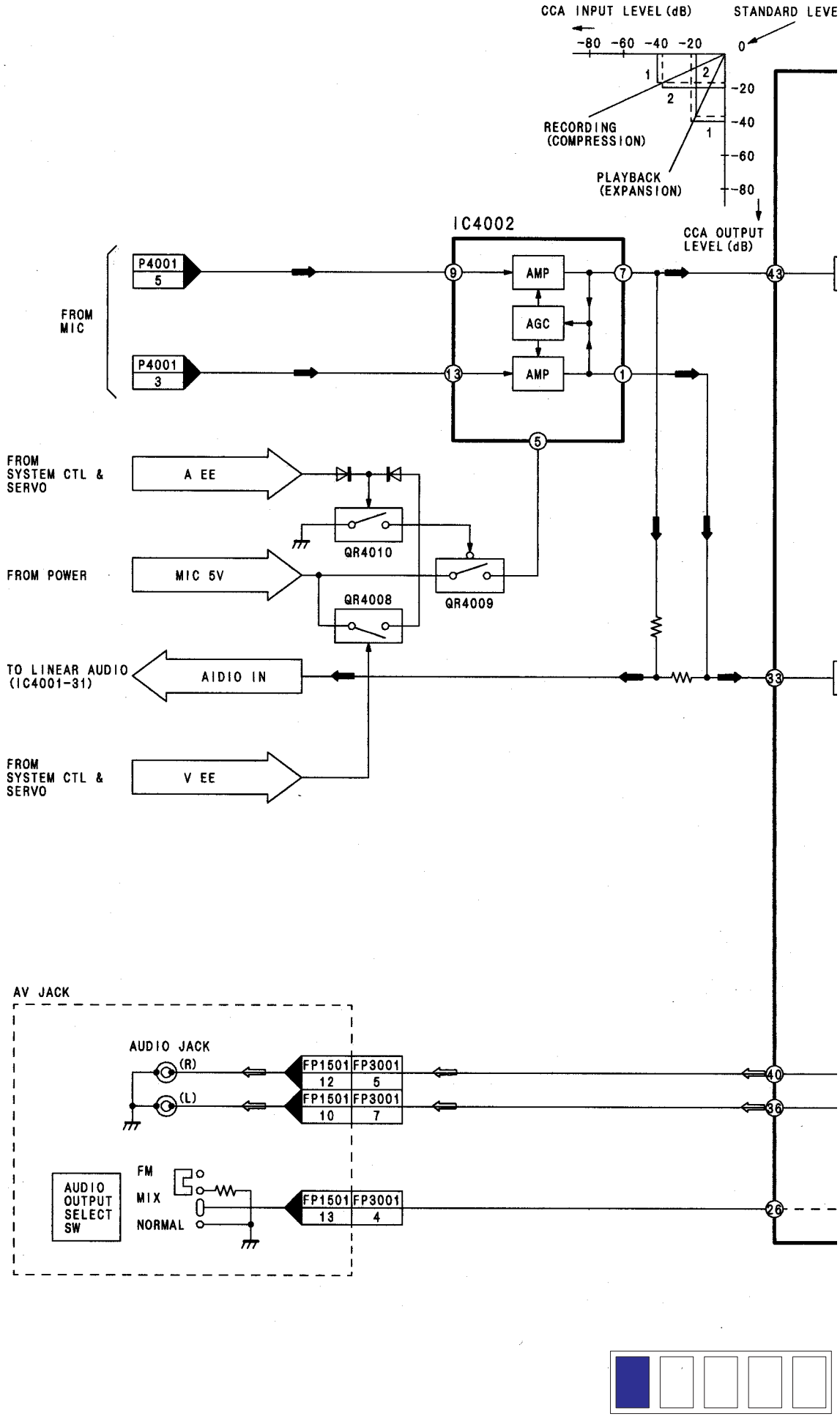


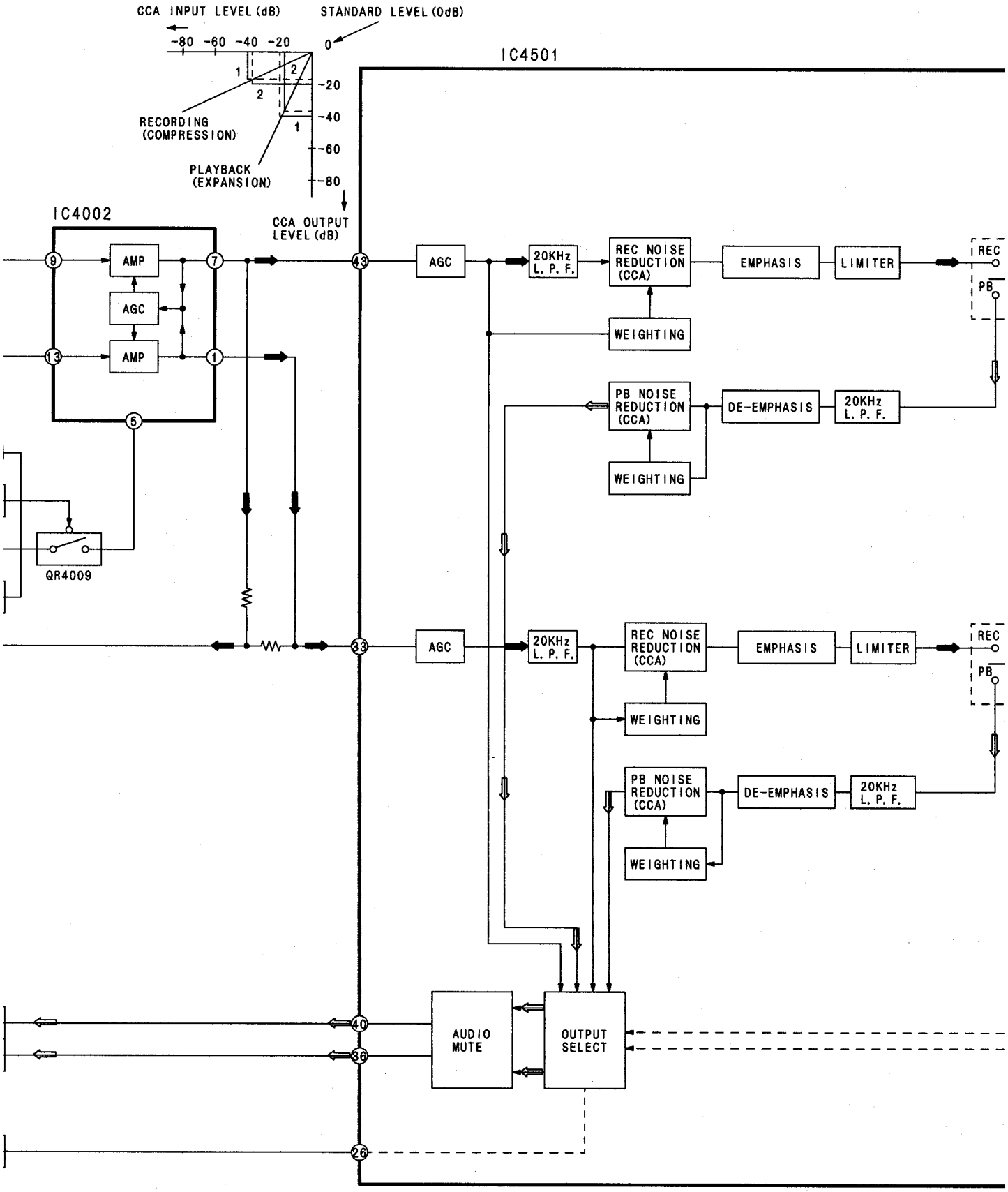
LOOP

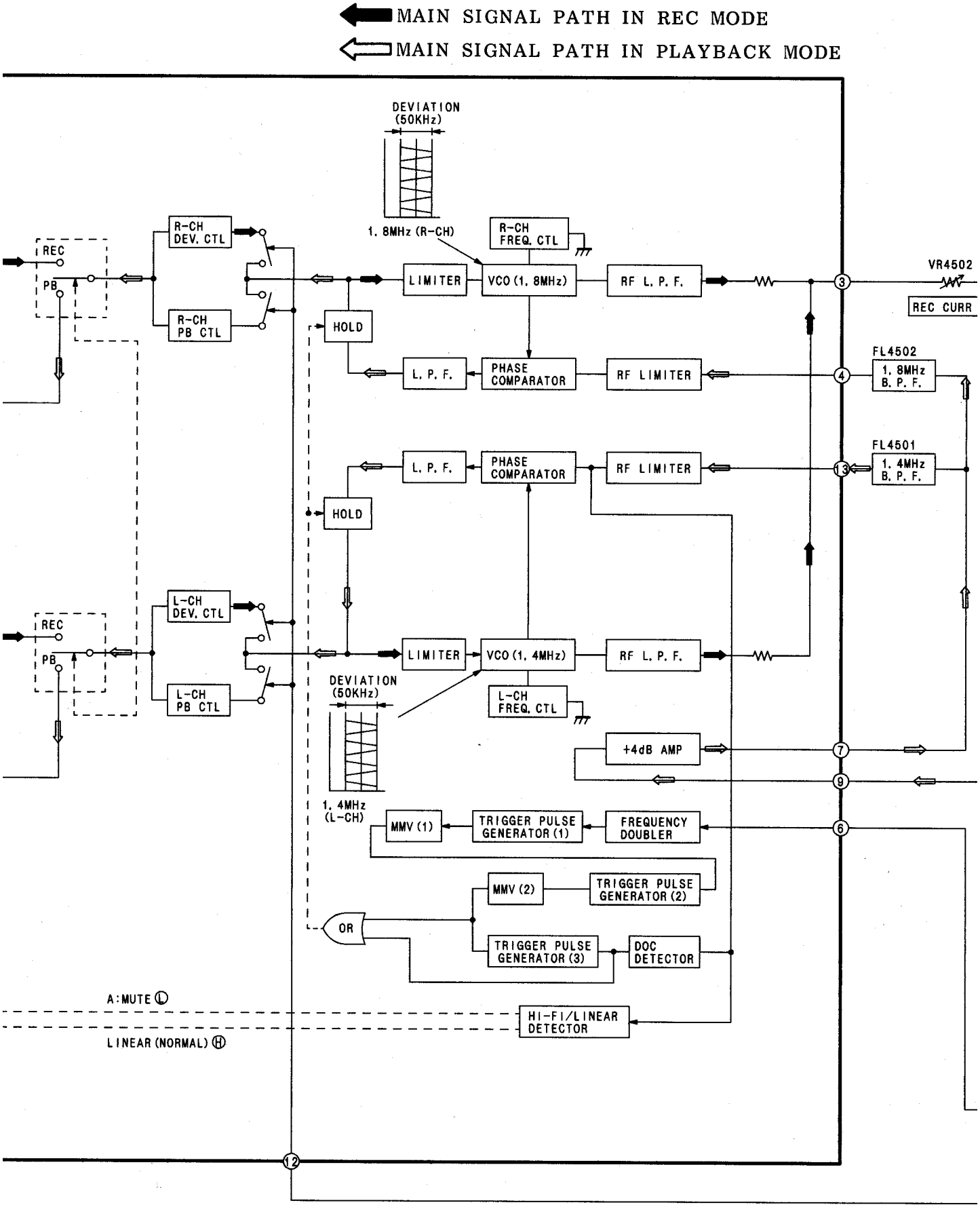
LOOP

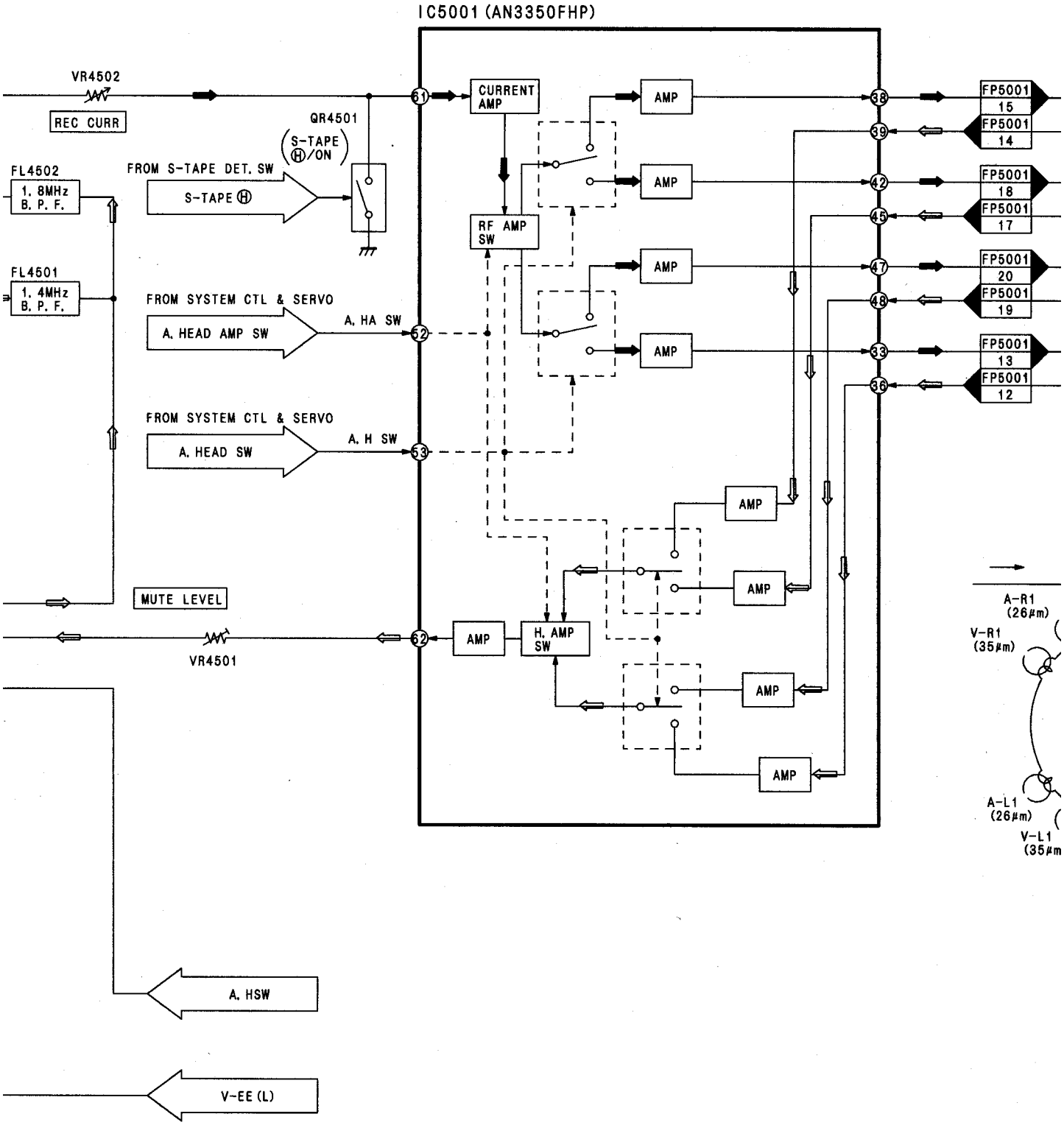

IC2101
VH
SERVO REG. 5V
AMP
QR1061
TRANSISTOR SATURATION DETECTOR
VM LIMITER
IC2102
(CYLINDER DRIVE TR.)
DD CYLINDER MOTOR
FP2101 11, 12
FP2101 7, 8
FP2101 4
MAIN COIL 1
MAIN COIL 2
MAIN COIL 3
CYLINDER ON
ACTIVE COIL SWITCHING LOGIC
SLOPE ADDITION
DRIVE TRANSISTOR CONTROL
U1
U2
U3
L1
L2
L3
CS
R2102 0.33Ω
POSITION SIGNAL PROCESS
VREF
HALL IC1
HALL IC2
HALL IC3
FP2101-4 REC/PLAY
FP2101-7 REC/PLAY
FP2101-8 REC/PLAY
FP2101-11 REC/PLAY
FP2101-12 REC/PLAY
2.8Vp-p (V•RATE)
FP2101 2
FP2101 5
FP2101 1
FP2101 6
FP2101 13
FP2101 9
FP2101 16
FP2101 15
FG
PG
REG. 5V
FP2102-2 REC/PLAY
FP2102-7 REC/PLAY
FP2102-11 REC/PLAY
2.2Vp-p (V•RATE)
DD CAPSRAN MOTOR
FP2102 11
FP2102 7
FP2102 2
M1
M2
M3
IC2103
(CAPSTAN MOTOR DRIVE)
ECR
RIPPLE CANCELLER
TORQUE CONTROL
MOTOR DRIVE
DIFFERENTIAL AMPLIFIRE
POSITION SIGNAL PROCESS
TORQUE DIRECTION
IC2103-10 REC/PLAY
0.14Vp-p (V•RATE)
FG HEAD
R2115
FP2102 10
FP2102 8
FP2102 6
FP2102 4
FP2102 3
FP2102 1
FP2102 14
CAP REV/STOP/FWD

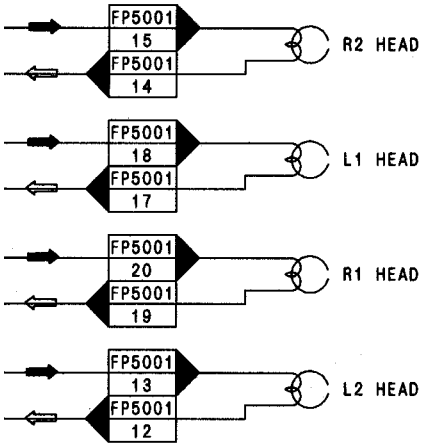
3-6. Hi-Fi AUDIO BLOCK DIAGRAM

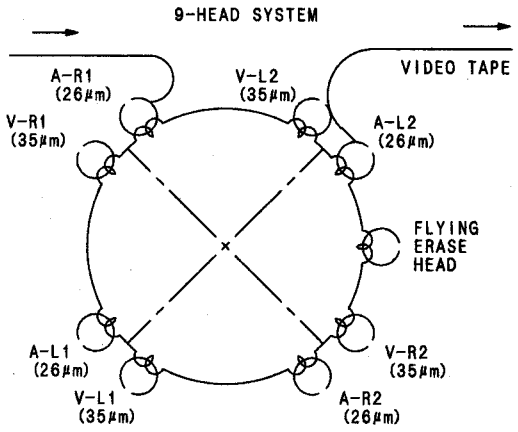



CCA INPUT LEVEL (dB)
STANDARD LEVEL (0dB)
-80 -60 -40 -20
0
-20
-40
-60
-80
RECORDING (COMPRESSION)
PLAYBACK (EXPANSION)
CCA OUTPUT LEVEL (dB)
IC4501
IC4002
AMP
AGC
AMP
QR4009
AGC
20KHz L. P. F.
REC NOISE REDUCTION (CCA)
EMPHASIS
LIMITER
REC
PB
WEIGHTING
PB NOISE REDUCTION (CCA)
DE-EMPHASIS
20KHz L. P. F.
WEIGHTING
AGC
20KHz L. P. F.
REC NOISE REDUCTION (CCA)
EMPHASIS
LIMITER
REC
PB
WEIGHTING
PB NOISE REDUCTION (CCA)
DE-EMPHASIS
20KHz L. P. F.
WEIGHTING
AUDIO MUTE
OUTPUT SELECT

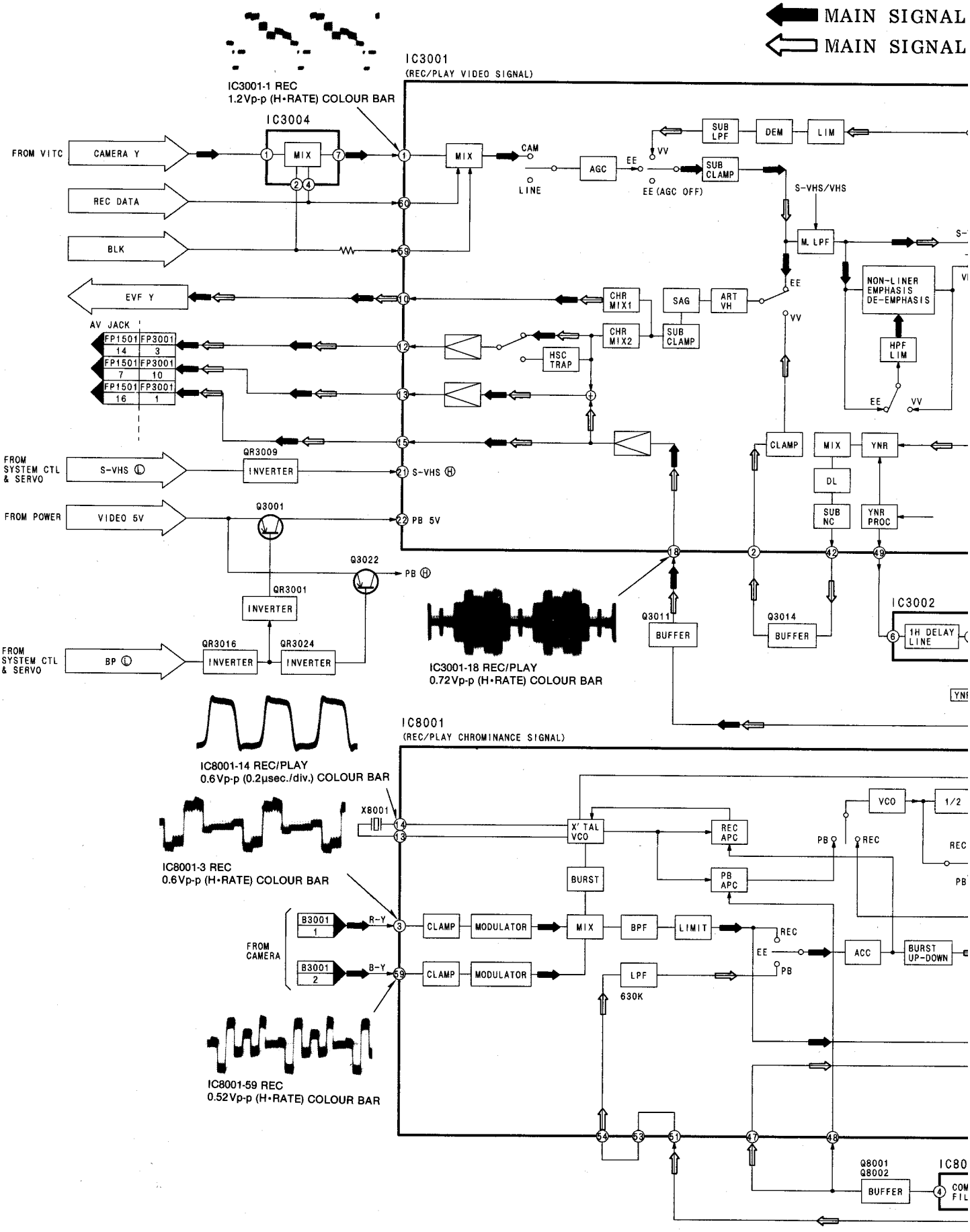

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
DEVIATION (50KHz)
1. 8MHz (R-CH)
R-CH DEV. CTL
R-CH PB CTL
R-CH FREQ. CTL
REC
PB
LIMITER
VCO (1. 8MHz)
RF L. P. F.
VR4502
REC CURR
HOLD
L. P. F.
PHASE COMPARATOR
RF LIMITER
FL4502
1. 8MHz B. P. F.
FL4501
1. 4MHz B. P. F.
L-CH DEV. CTL
L-CH PB CTL
L-CH FREQ. CTL
VCO (1. 4MHz)
DEVIATION (50KHz)
1. 4MHz (L-CH)
+4dB AMP
MMV (1)
TRIGGER PULSE GENERATOR (1)
FREQUENCY DOUBLER
MMV (2)
TRIGGER PULSE GENERATOR (2)
OR
TRIGGER PULSE GENERATOR (3)
DOC DETECTOR
A:MUTE Ⓛ
LINEAR (NORMAL) Ⓗ
HI-FI/LINEAR DETECTOR
3
4
13
7
9
6
12


IC5001 (AN3350FHP)
VR4502
REC CURR
QR4501
S-TAPE Ⓗ/ON
FL4502
1. 8MHz B. P. F.
FROM S-TAPE DET. SW
S-TAPE Ⓗ
FL4501
1. 4MHz B. P. F.
FROM SYSTEM CTL & SERVO
A. HEAD AMP SW
A. HA SW
FROM SYSTEM CTL & SERVO
A. HEAD SW
A. H SW
MUTE LEVEL
VR4501
A. HSW
V-EE (L)
61
52
53
62
CURRENT AMP
RF AMP SW
H. AMP SW
AMP
38
39
42
45
47
48
33
36
FP5001 15
FP5001 14
FP5001 18
FP5001 17
FP5001 20
FP5001 19
FP5001 13
FP5001 12
A-R1 (26μm)
V-R1 (35μm)
A-L1 (26μm)
V-L1 (35μm


FP5001
15
FP5001
14
R2 HEAD
FP5001
18
FP5001
17
L1 HEAD
FP5001
20
FP5001
19
R1 HEAD
FP5001
13
FP5001
12
L2 HEAD

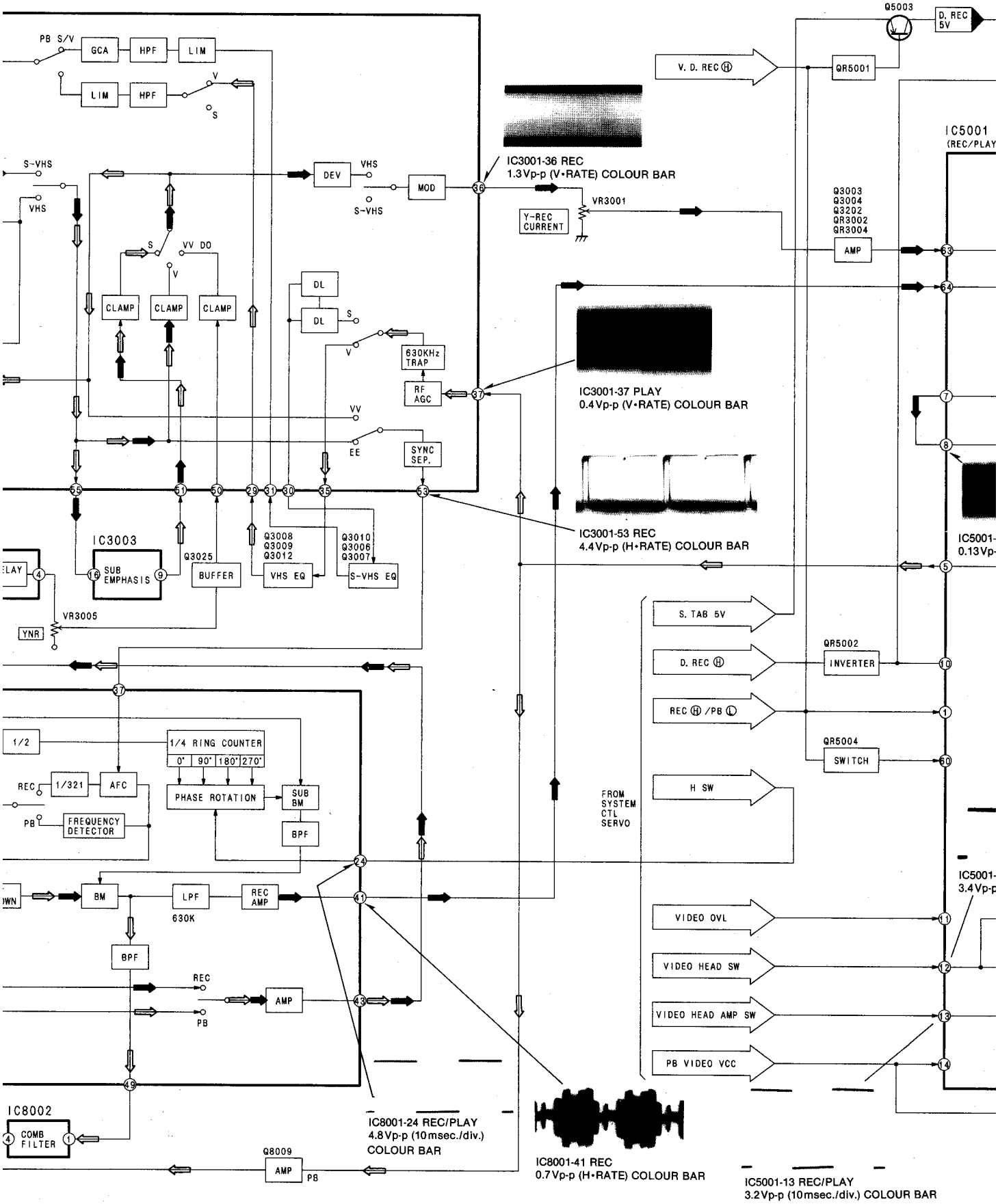

9-HEAD SYSTEM
VIDEO TAPE
A-R1
(26μm)
V-L2
(35μm)
V-R1
(35μm)
A-L2
(26μm)
FLYING
ERASE
HEAD
A-L1
(26μm)
V-R2
(35μm)
V-L1
(35μm)
A-R2
(26μm)

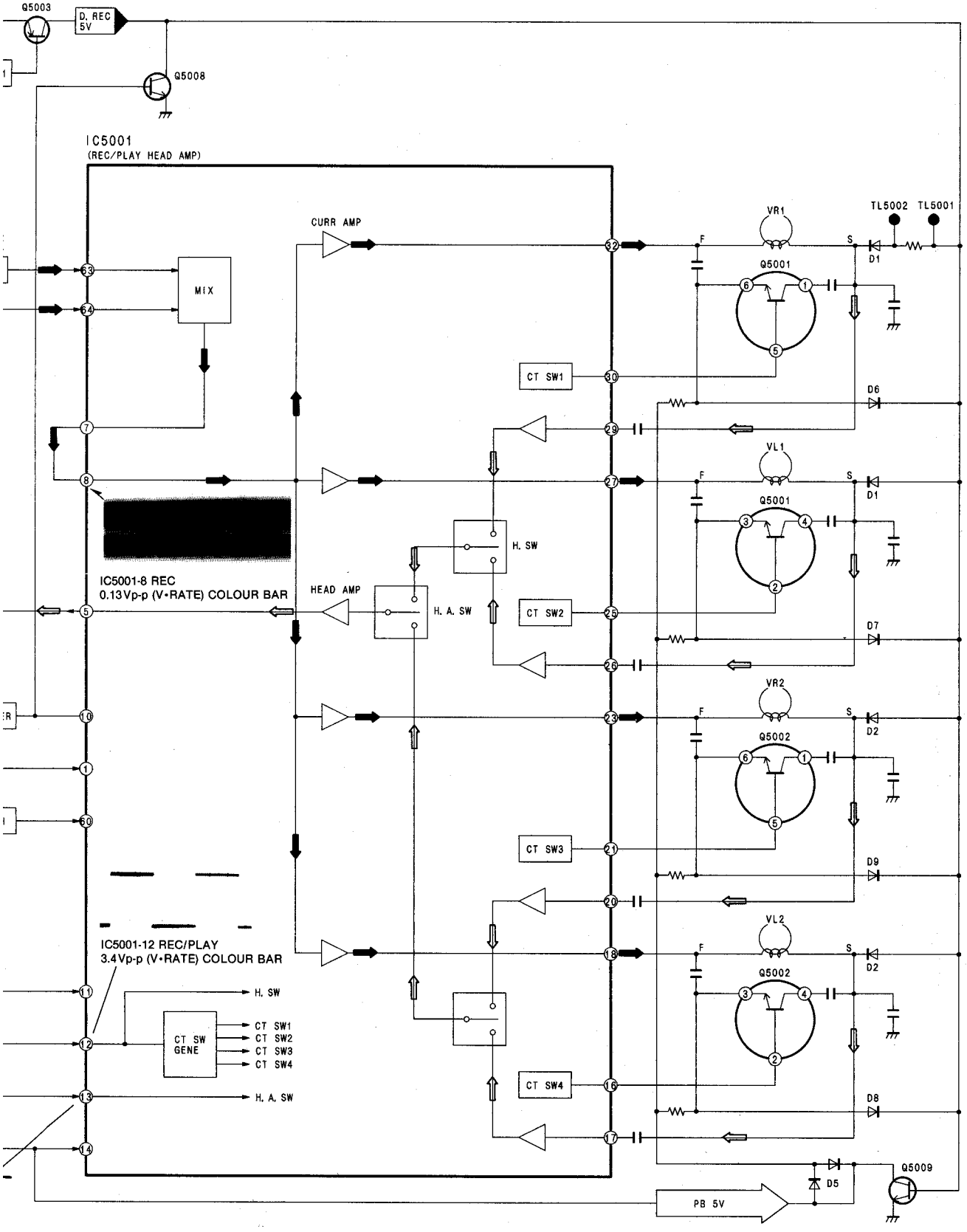
3-7. LUMINANCE/CHROMINANCE & HEAD AMP BLOCK DIAGRAM



[AL PATH IN REC MODE

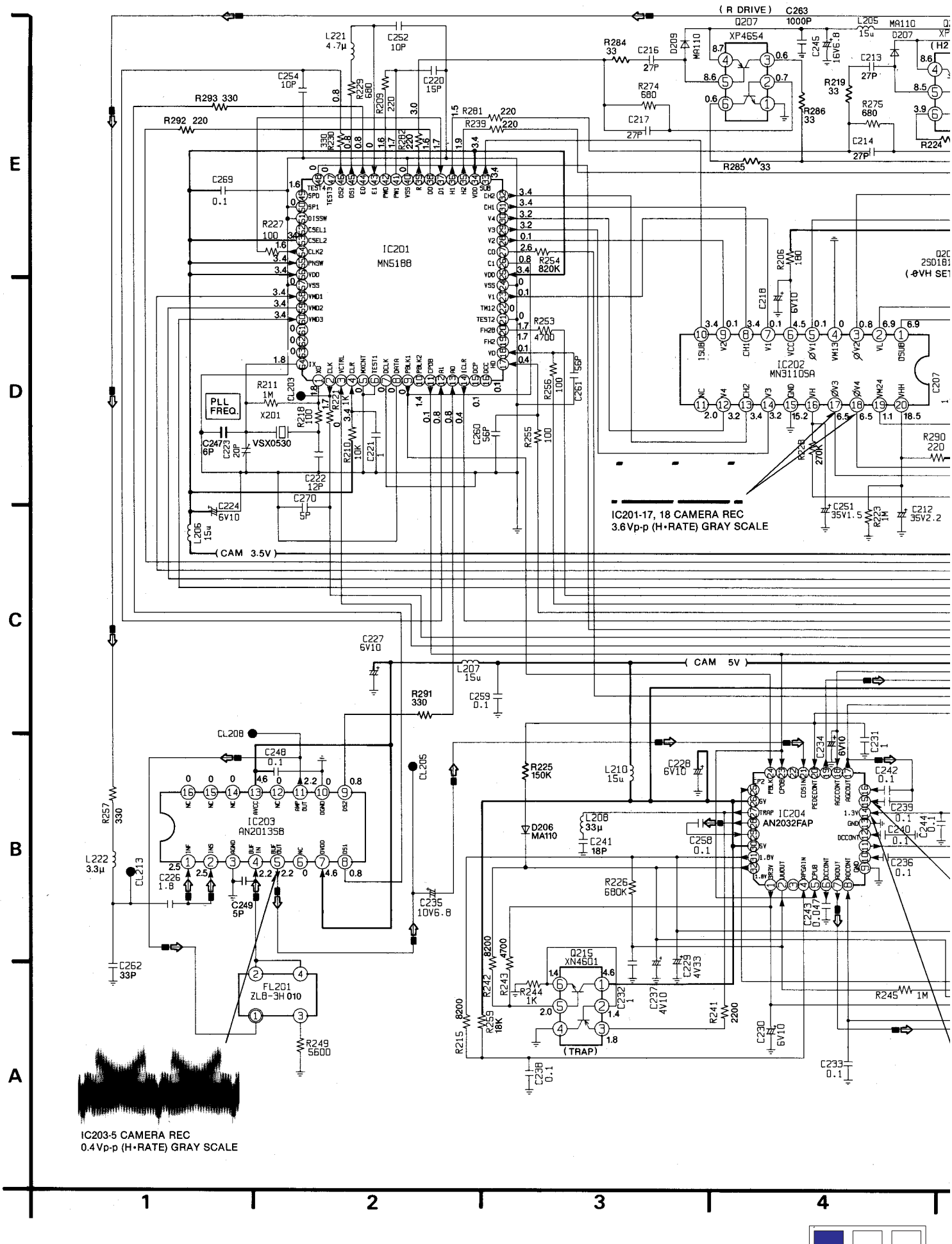
[AL PATH IN PLAYBACK MODE



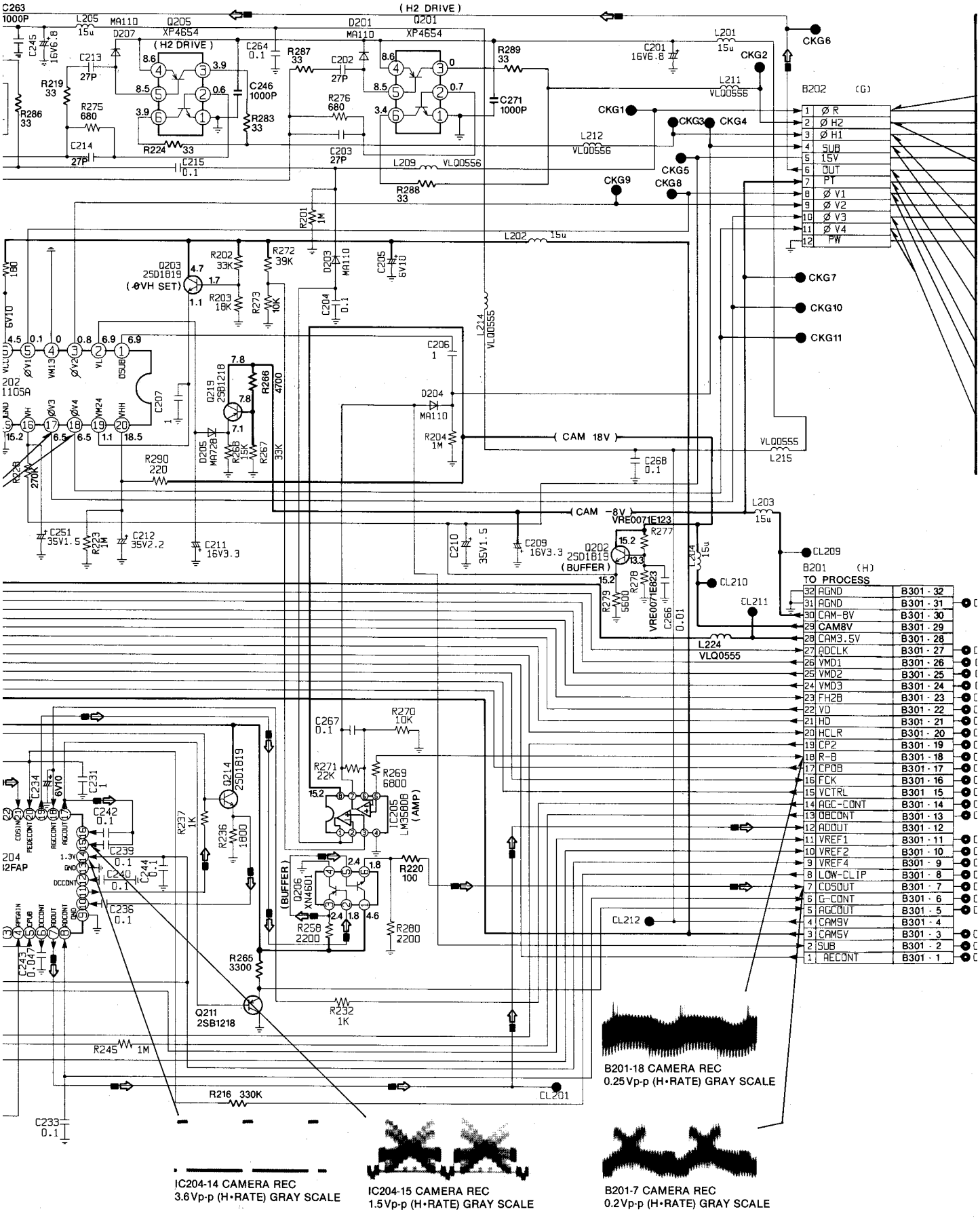

Q5003
D. REC 5V
Q5008
IC5001
(REC/PLAY HEAD AMP)
CURR AMP
MIX
CT SW1
H. SW
HEAD AMP
H. A. SW
CT SW2
CT SW3
CT SW4
CT SW GENE
H. SW
CT SW1
CT SW2
CT SW3
CT SW4
H. A. SW
IC5001-8 REC
0.13Vp-p (V•RATE) COLOUR BAR
IC5001-12 REC/PLAY
3.4Vp-p (V•RATE) COLOUR BAR
VR1
VL1
VR2
VL2
Q5001
Q5002
TL5002
TL5001
D1
D2
D5
D6
D7
D8
D9
Q5009
PB 5V

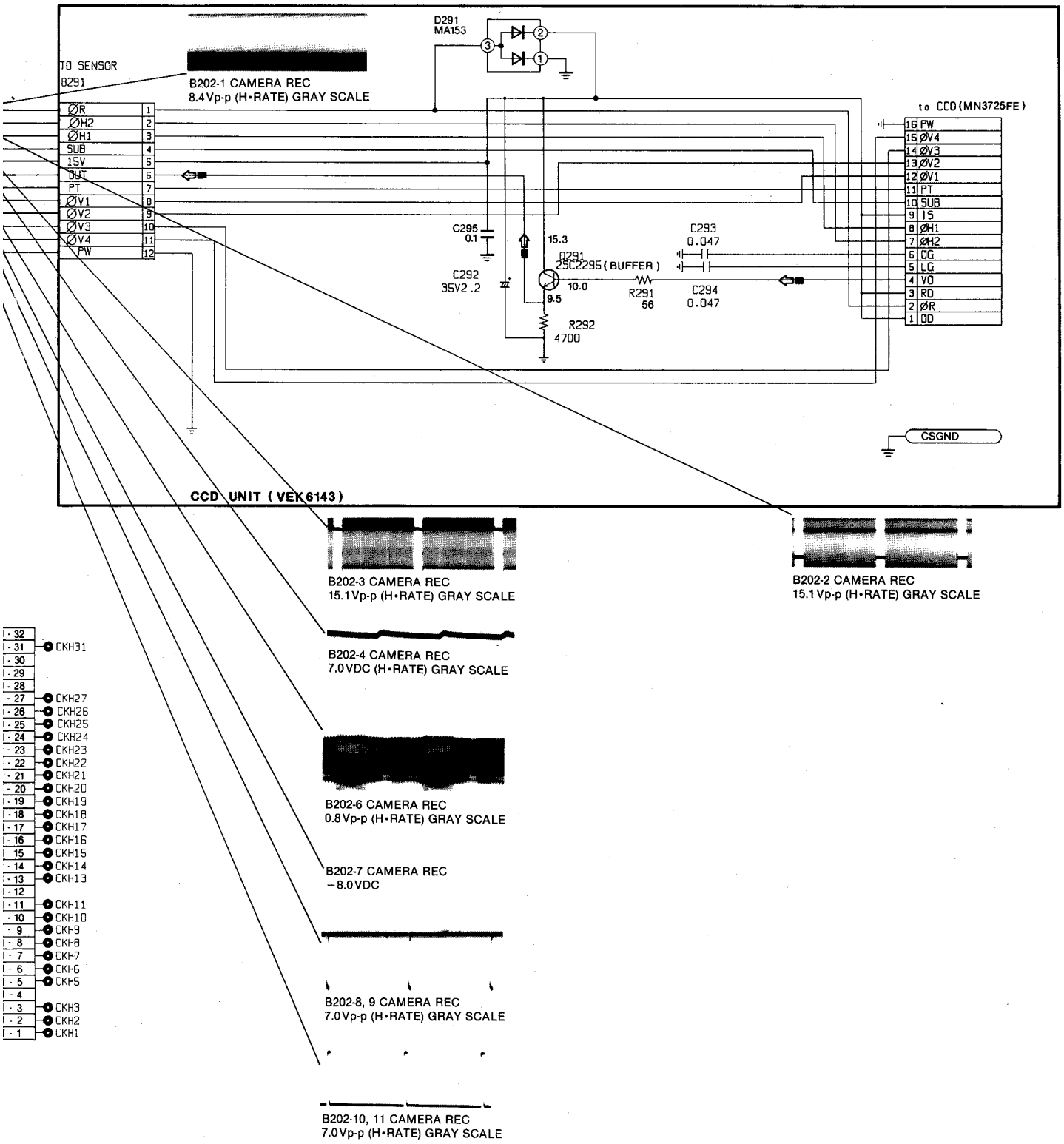
COLOUR BAR

3-8. CCD DRIVE SCHEMATIC DIAGRAM



VIDEO SIGNAL

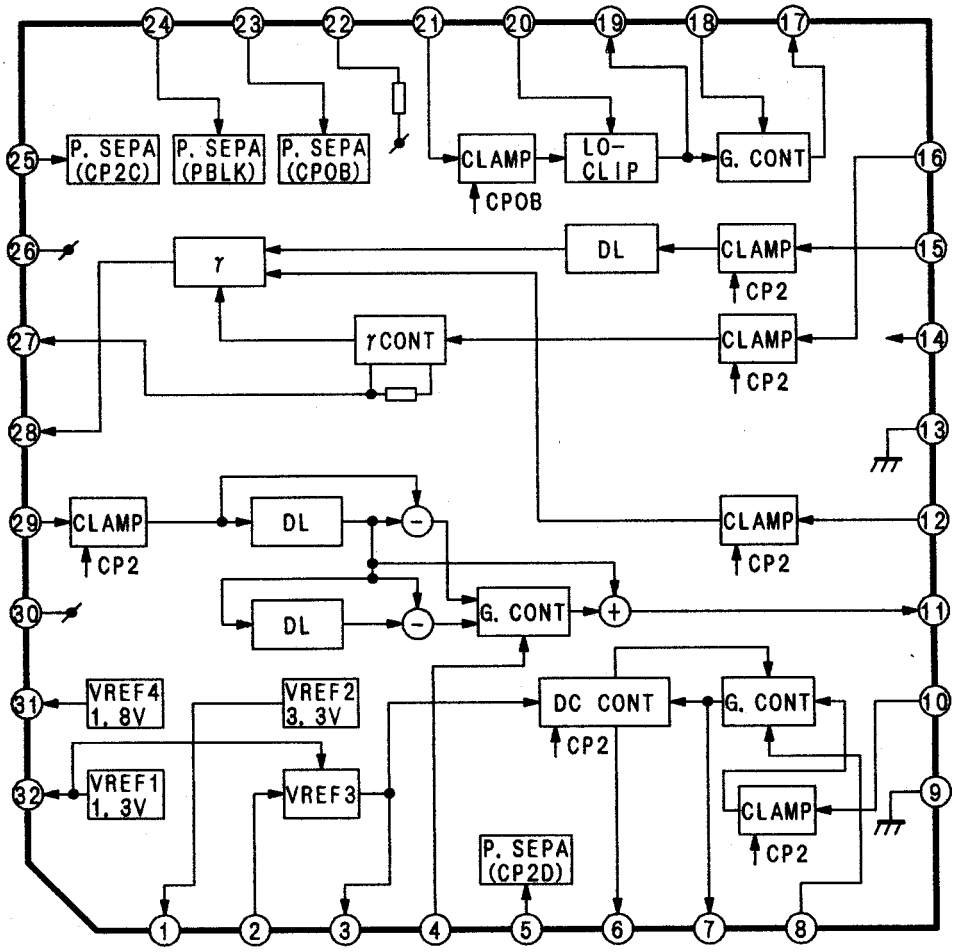




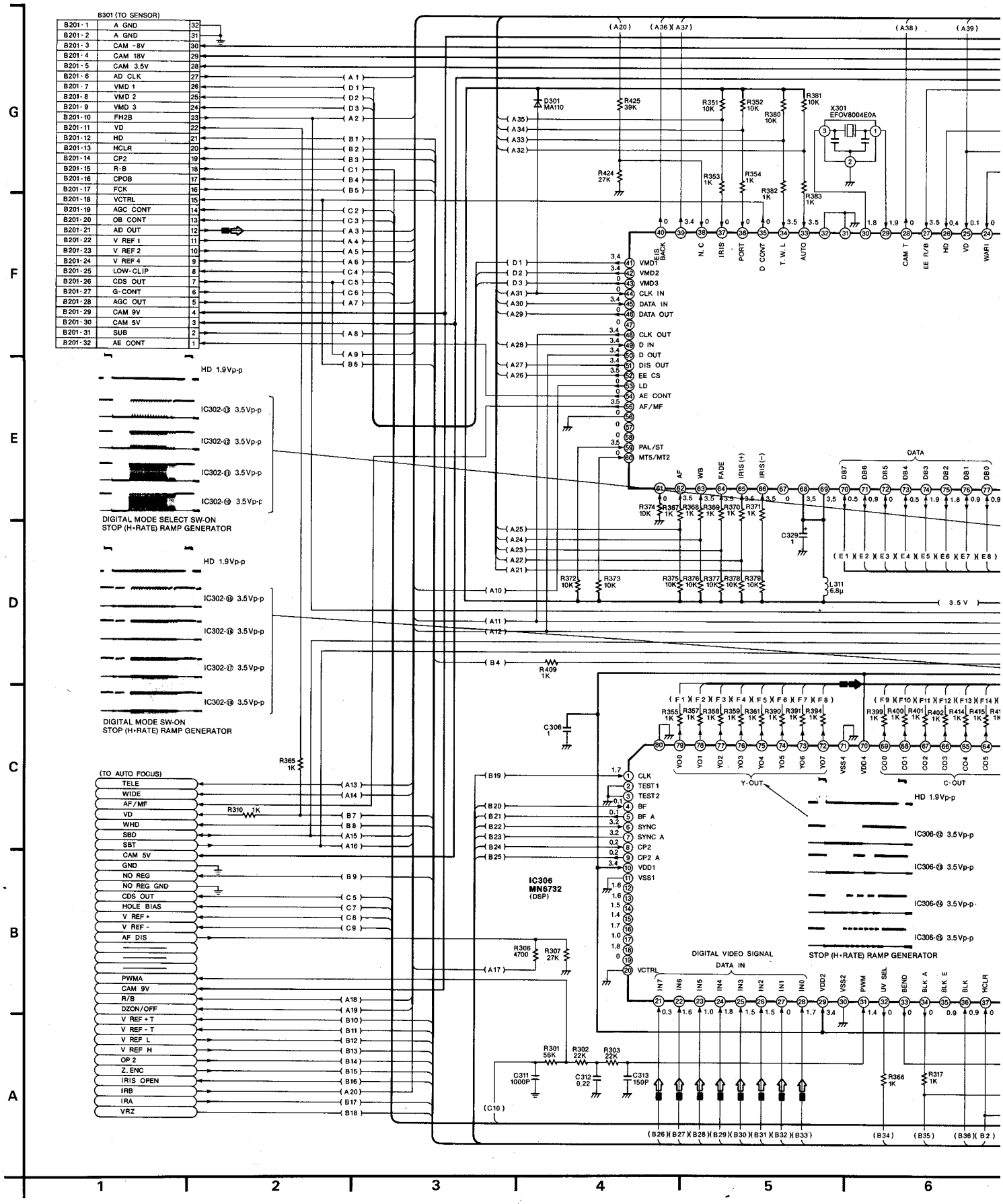
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

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

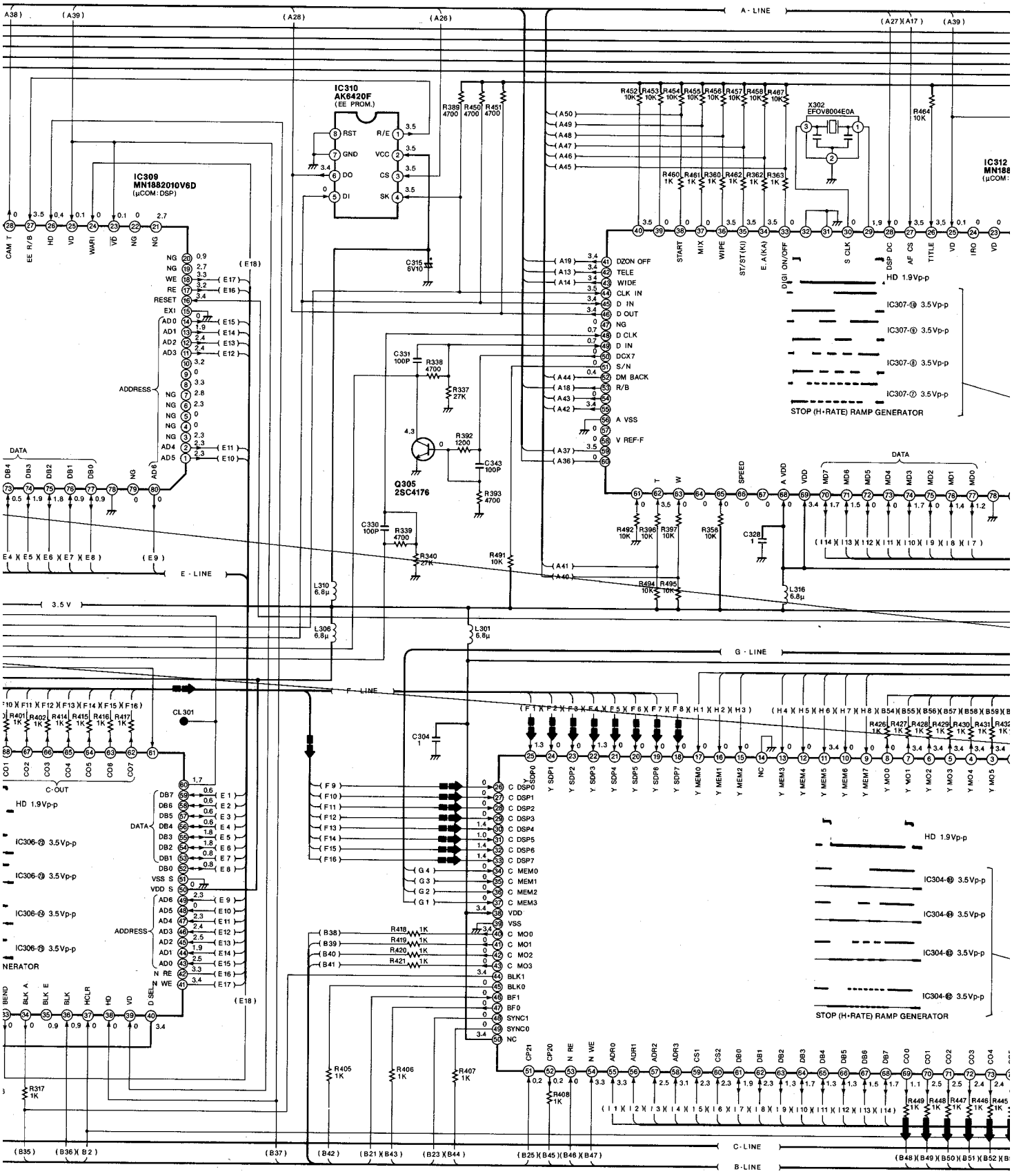
IC204
AN2033FAP
AN2032FAP

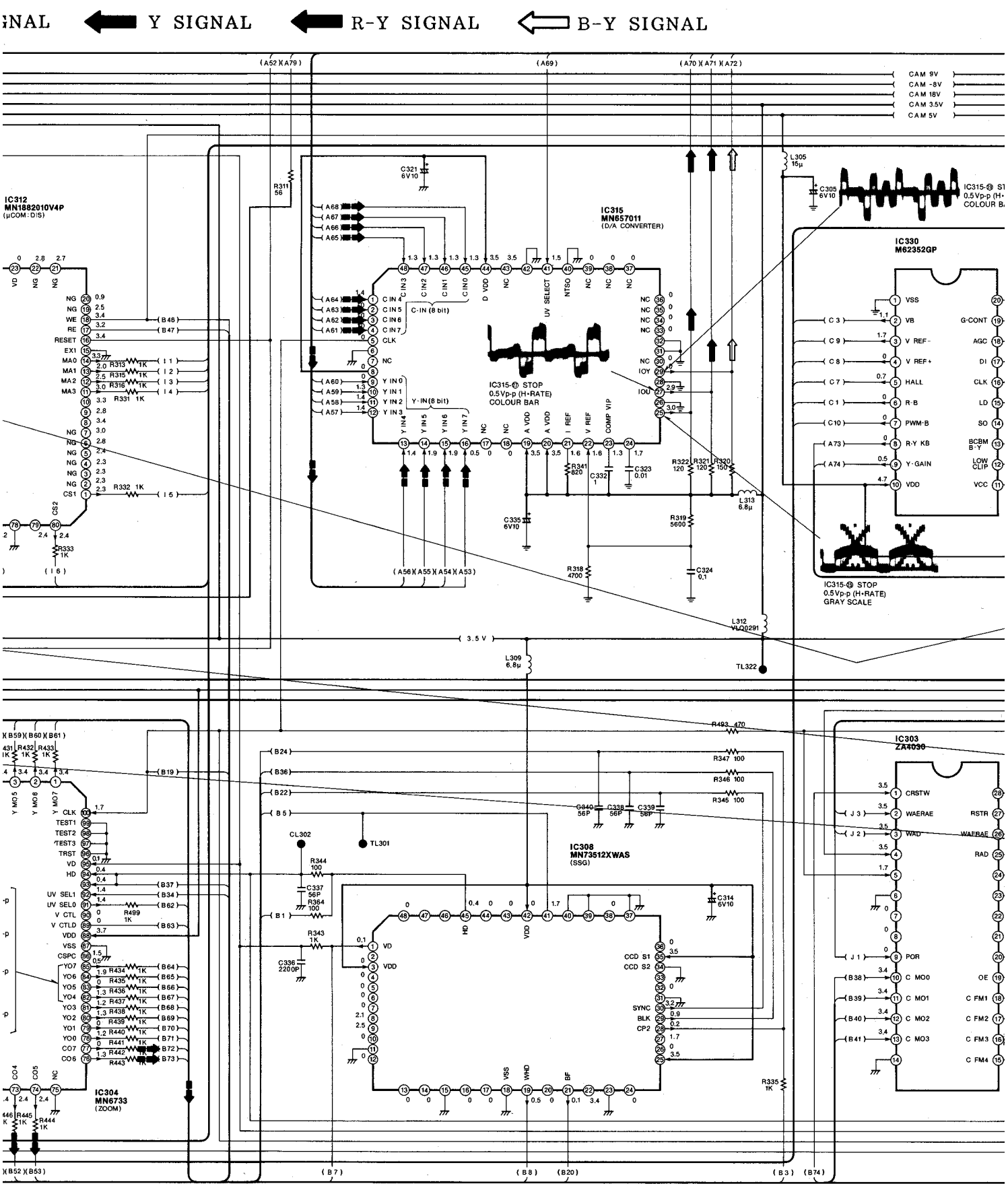


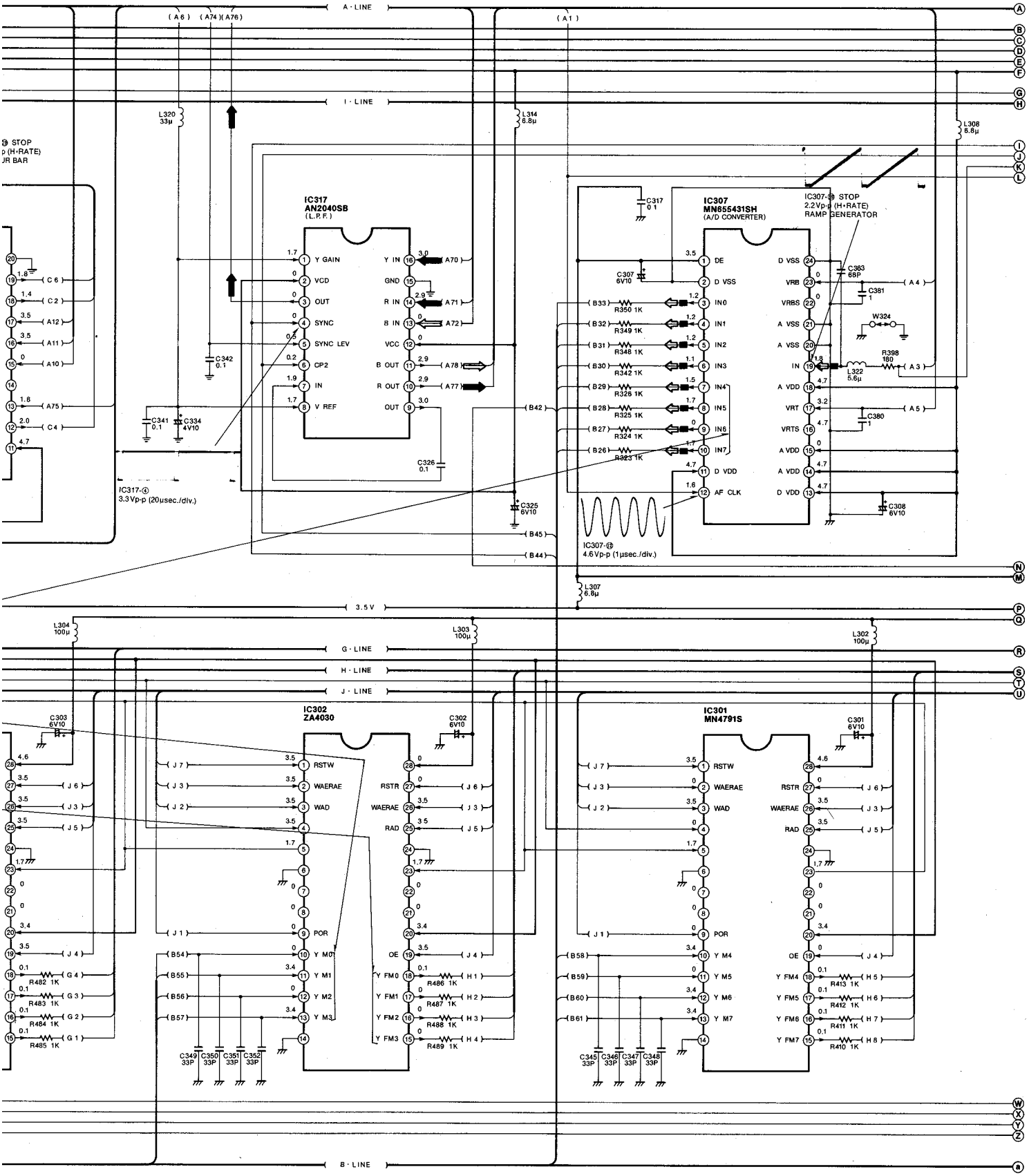
3-10. PROCESS, CAMERA OPERATION SCHEMATIC DIAGRAM

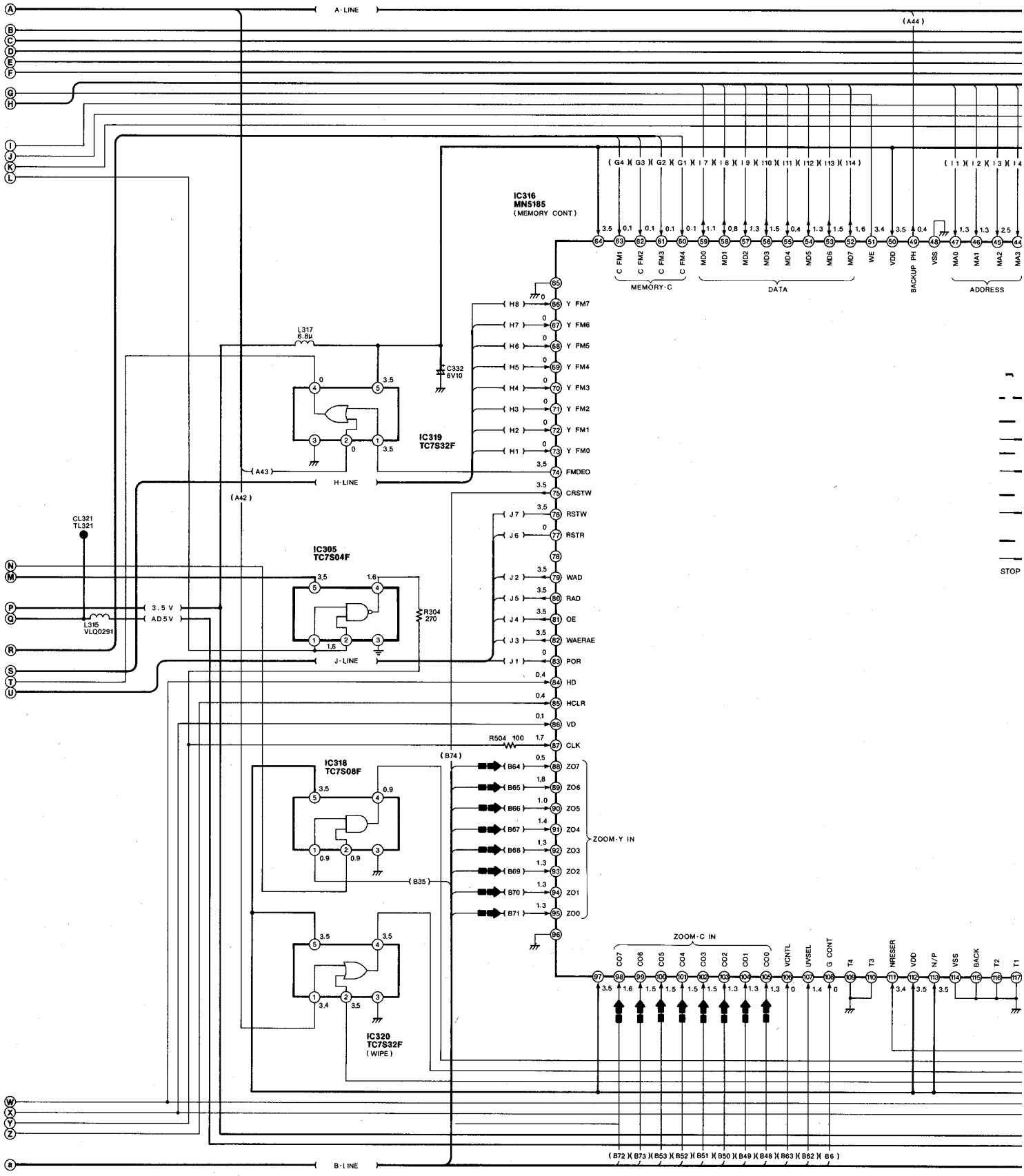


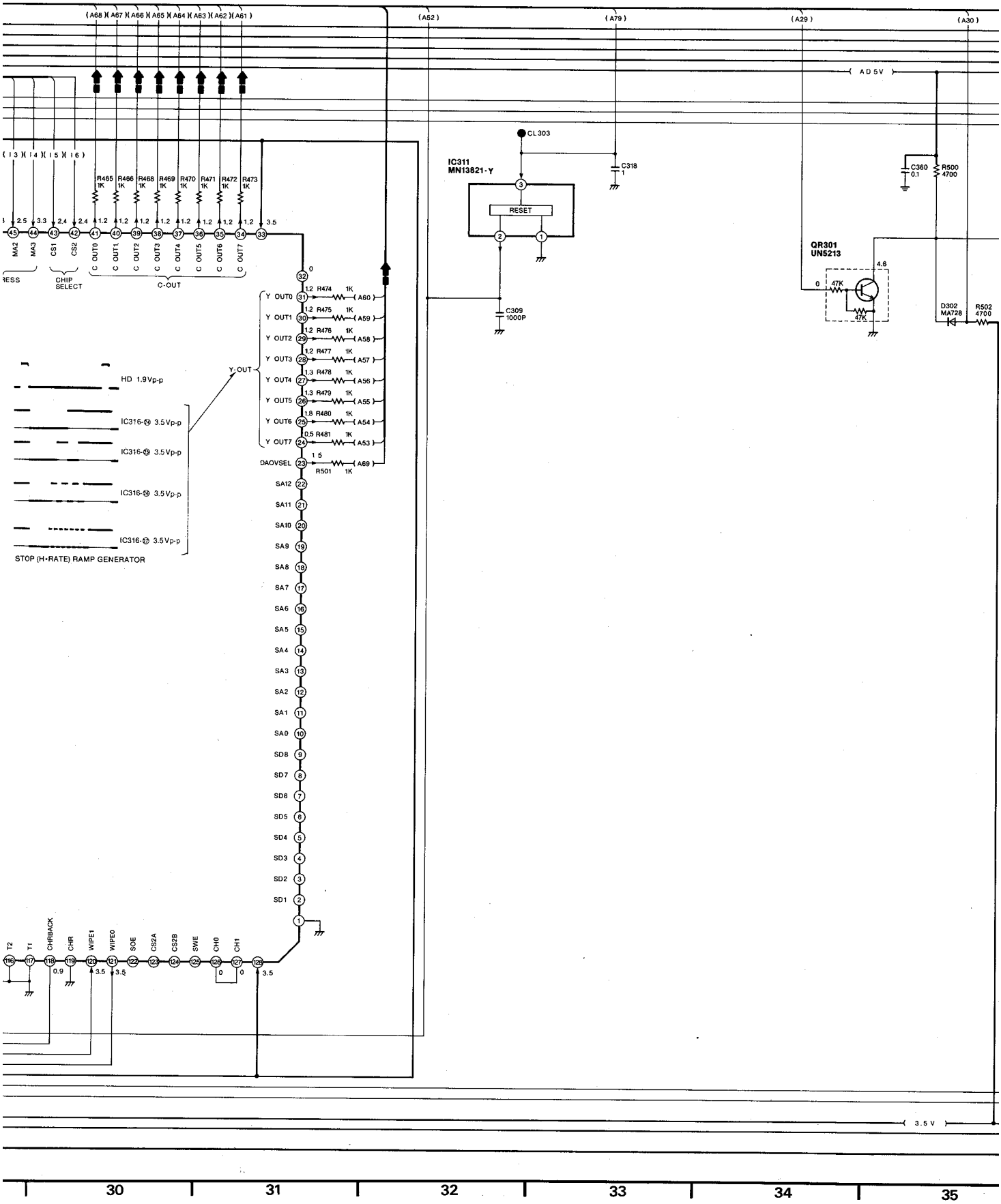
PRE VIDEO SIGNAL ◀ DIGITAL Y SIGNAL ◀ DIGITAL C SIGNA

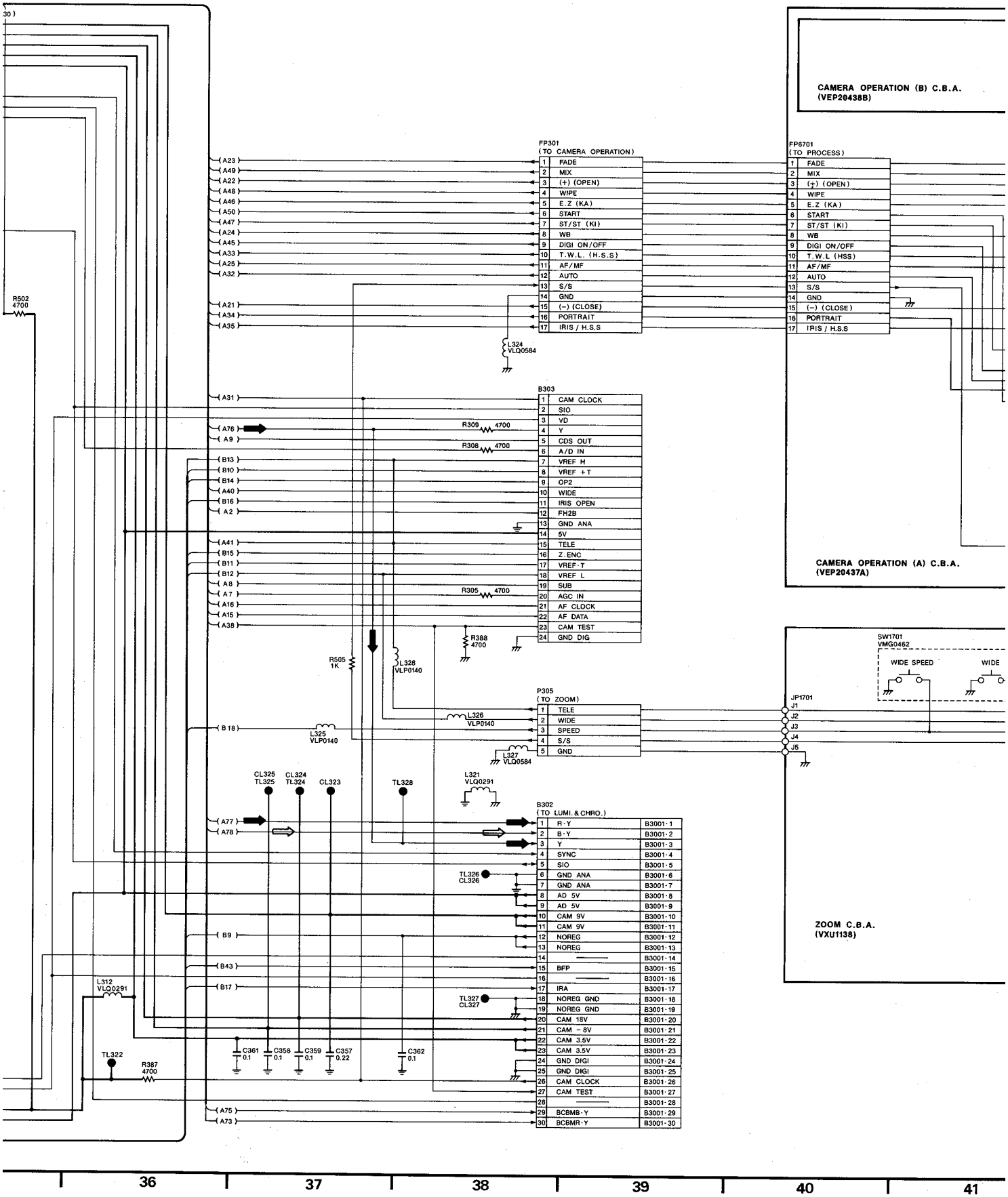


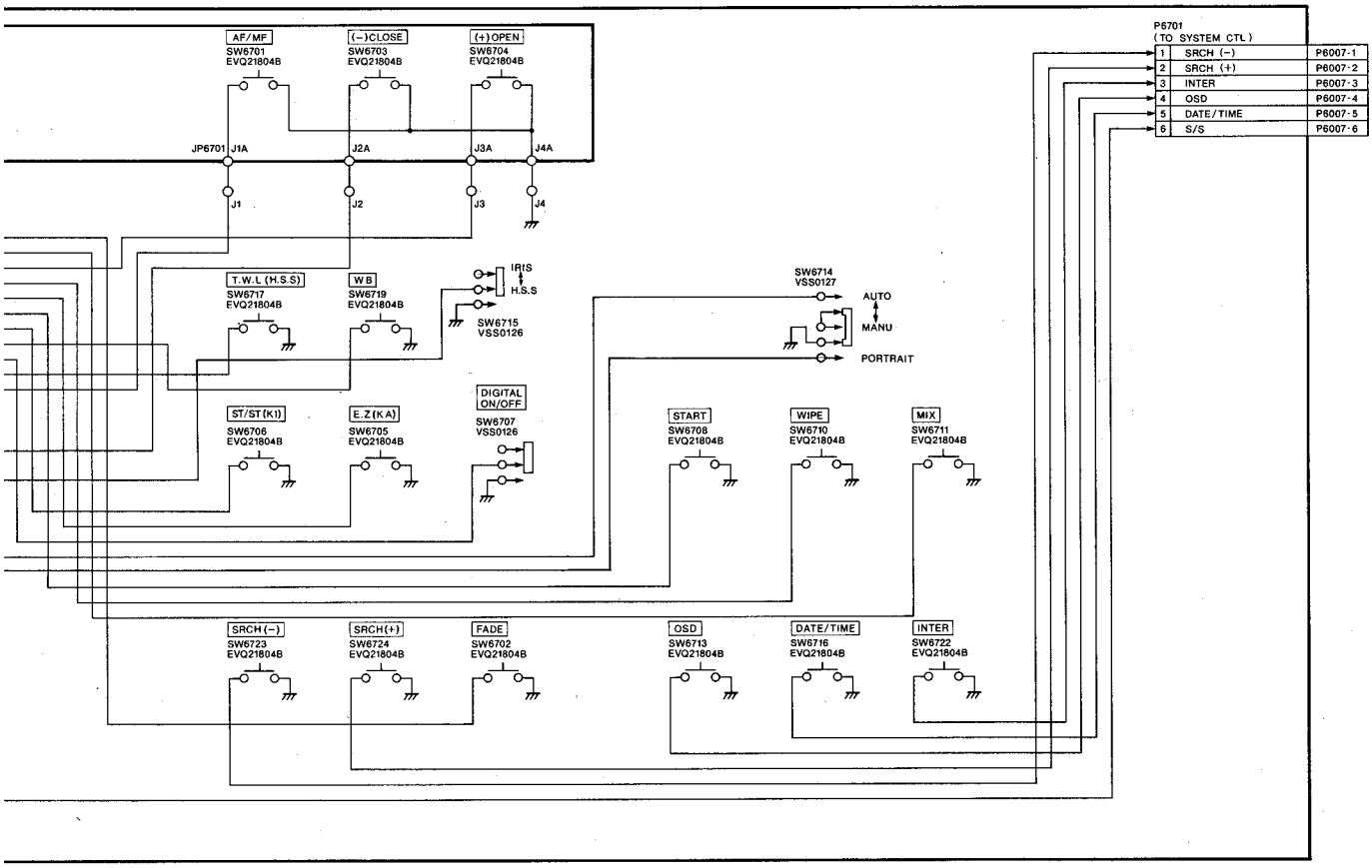

NAL
Y SIGNAL
R-Y SIGNAL
B-Y SIGNAL
IC312
MN1882010V4P
(μCOM : DIS)
IC315
MN657011
(D/A CONVERTER)
IC330
M62352GP
IC315-ⓕ STOP
0.5Vp-p (H•RATE)
COLOUR BAR
IC315-ⓖ STOP
0.5Vp-p (H•RATE)
GRAY SCALE
IC308
MN73512XWAS
(SSG)
IC303
ZA4036
IC304
MN6733
(ZOOM)
CAM 9V
CAM -8V
CAM 18V
CAM 3.5V
CAM 5V
3.5 V
12
13
14
15
16
17

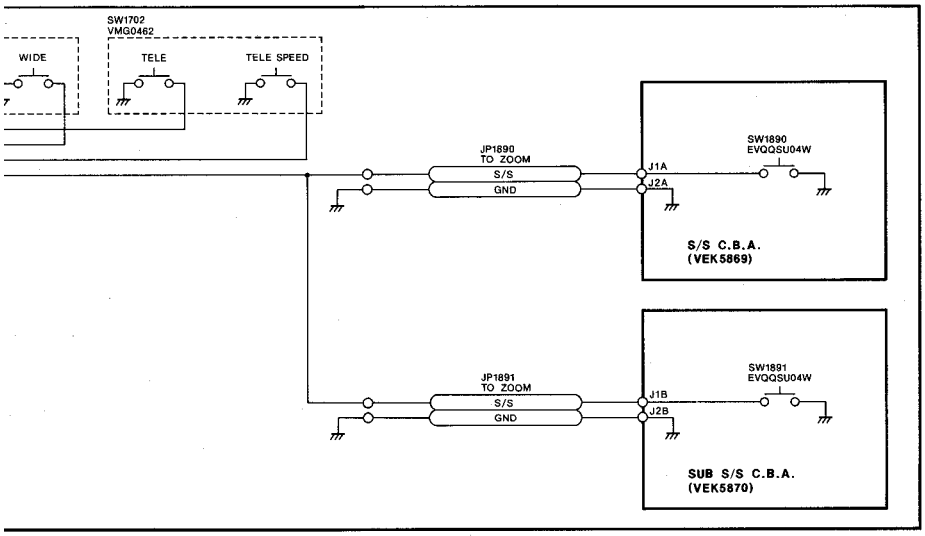

A · LINE
I · LINE
G · LINE
H · LINE
J · LINE
3.5 V
B · LINE
IC317
AN2040SB
(L.P.F.)
IC307
MN655431SH
(A/D CONVERTER)
IC307-⑲ STOP
2.2Vp-p (H·RATE)
RAMP GENERATOR
IC317-④
3.3Vp-p (20μsec./div.)
IC307-⑰
4.6Vp-p (1μsec./div.)
IC302
ZA4030
IC301
MN4791S
L320 33μ
L314 6.8μ
L308 6.8μ
L307 6.8μ
L304 100μ
L303 100μ
L302 100μ
L322 5.6μ
C317 0.1
C342 0.1
C341 0.1
C334 4V10
C326 0.1
C325 6V10
C307 6V10
C308 6V10
C383 68P
C381 1
C380 1
W324
R398 180
Y IN
GND
R IN
B IN
VCC
B OUT
R OUT
V REF
Y GAIN
VCD
OUT
SYNC
SYNC LEV
CP2
IN
DE
D VSS
IN0
IN1
IN2
IN3
IN4
IN5
IN6
IN7
D VDD
AF CLK
VRB
VRBS
A VSS
IN
A VDD
VRT
VRTS
RSTW
WAERAE
WAD
RSTR
WAERAE
RAD
POR
OE
Y M0
Y M1
Y M2
Y M3
Y M4
Y M5
Y M6
Y M7
Y FM0
Y FM1
Y FM2
Y FM3
Y FM4
Y FM5
Y FM6
Y FM7
C303 6V10
C302 6V10
C301 6V10
C349 33P
C350 33P
C351 33P
C352 33P
C345 33P
C346 33P
C347 33P
C348 33P
18
19
20
21
22
23


A-LINE
(A44)
IC316
MN5185
(MEMORY CONT)
C FM1
C FM2
C FM3
C FM4
MEMORY-C
MD0
MD1
MD2
MD3
MD4
MD5
MD6
MD7
DATA
WE
VDD
BACKUP PH
VSS
MA0
MA1
MA2
MA3
ADDRESS
L317
6.8μ
C332
8V10
IC319
TC7S32F
H8
H7
H6
H5
H4
H3
H2
H1
Y FM7
Y FM6
Y FM5
Y FM4
Y FM3
Y FM2
Y FM1
Y FM0
FMDEO
(A43)
H-LINE
(A42)
CRSTW
RSTW
RSTR
STOP
CL321
TL321
L315
VLQ0291
3.5 V
AD5V
IC305
TC7S04F
R304
270
J-LINE
J7
J6
J2
J5
J4
J3
J1
WAD
RAD
OE
WAERAE
POR
HD
HCLR
VD
CLK
R504 100
(B74)
IC318
TC7S08F
B35
ZO7
ZO6
ZO5
ZO4
ZO3
ZO2
ZO1
ZO0
ZOOM-Y IN
IC320
TC7S32F
(WIPE)
ZOOM-C IN
CO7
CO6
CO5
CO4
CO3
CO2
CO1
CO0
VCNTL
UVSEL
G CONT
T4
T3
NRESER
VDD
N/P
VSS
BACK
T2
T1
B-LINE
(B72) (B73) (B53) (B52) (B51) (B50) (B49) (B48) (B63) (B62) (B6)
24
25
26
27
28
29


A68 A67 A66 A65 A64 A63 A62 A61
A52
A79
A29
A30
AD 5V
CL303
IC311
MN13821-Y
RESET
C318
1
C309
1000P
C360
0.1
R500
4700
QR301
UN5213
47K
47K
D302
MA728
R502
4700
R465 1K
R466 1K
R468 1K
R469 1K
R470 1K
R471 1K
R472 1K
R473 1K
MA2
MA3
CS1
CS2
C OUT0
C OUT1
C OUT2
C OUT3
C OUT4
C OUT5
C OUT6
C OUT7
CHIP SELECT
C-OUT
Y OUT0
Y OUT1
Y OUT2
Y OUT3
Y OUT4
Y OUT5
Y OUT6
Y OUT7
Y-OUT
R474 1K A60
R475 1K A59
R476 1K A58
R477 1K A57
R478 1K A56
R479 1K A55
R480 1K A54
R481 1K A53
DAOVSEL
R501 1K A69
HD 1.9Vp-p
IC316-㉘ 3.5Vp-p
IC316-㉙ 3.5Vp-p
IC316-㉚ 3.5Vp-p
IC316-㉗ 3.5Vp-p
STOP (H-RATE) RAMP GENERATOR
SA12
SA11
SA10
SA9
SA8
SA7
SA6
SA5
SA4
SA3
SA2
SA1
SA0
SD8
SD7
SD6
SD5
SD4
SD3
SD2
SD1
T2
T1
CHRBACK
CHR
WIPE1
WIPE0
SOE
CS2A
CS2B
SWE
CH0
CH1
3.5 V
30
31
32
33
34
35


CAMERA OPERATION (B) C.B.A.
(VEP20438B)
CAMERA OPERATION (A) C.B.A.
(VEP20437A)
ZOOM C.B.A.
(VXU1138)
FP301
(TO CAMERA OPERATION)
FP6701
(TO PROCESS)
B303
P305
(TO ZOOM)
B302
(TO LUMI. & CHRO.)
SW1701
VMG0462
WIDE SPEED
WIDE
JP1701
R502 4700
R309 4700
R308 4700
R305 4700
R388 4700
R505 1K
L328 VLP0140
L326 VLP0140
L325 VLP0140
L327 VLQ0584
L324 VLQ0584
L321 VLQ0291
L312 VLQ0291
CL325 TL325
CL324 TL324
CL323
TL328
TL326 CL326
TL327 CL327
TL322
R387 4700
C361 0.1
C358 0.1
C359 0.1
C357 0.22
C362 0.1
36
37
38
39
40
41





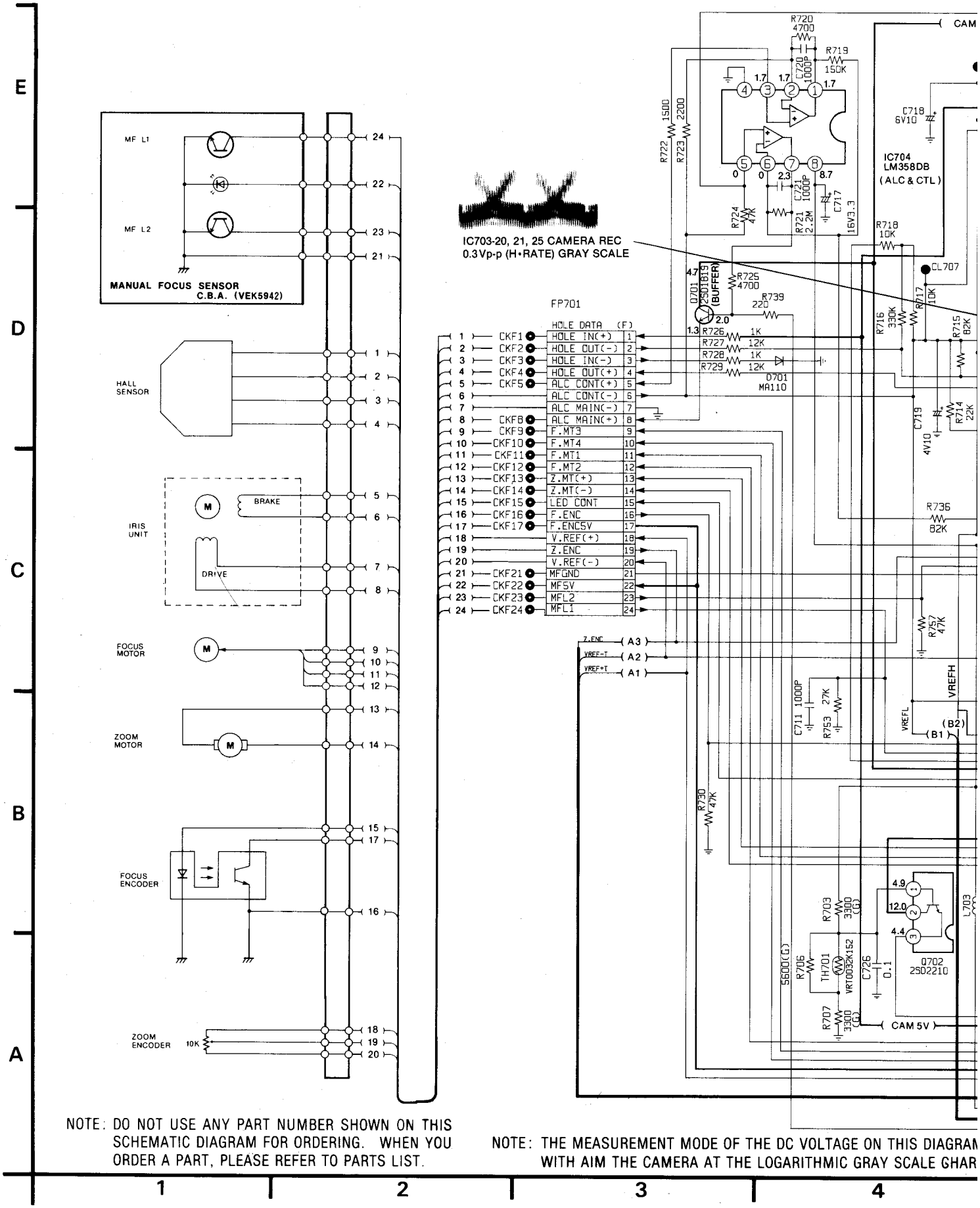
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

G F E D C B A

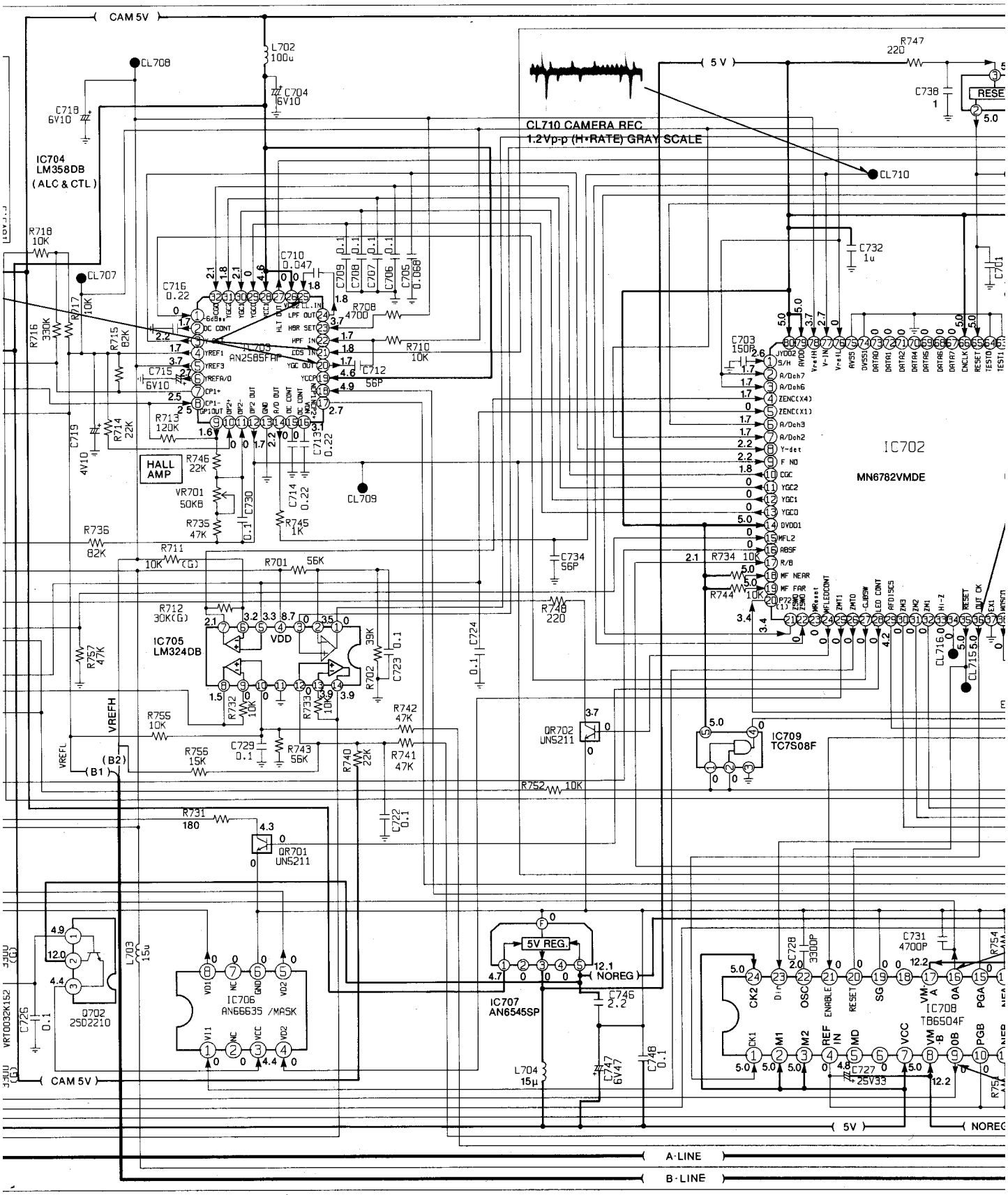
41 42 43 44 45 46

3-11. AUTO FOCUS SCHEMATIC DIAGRAM



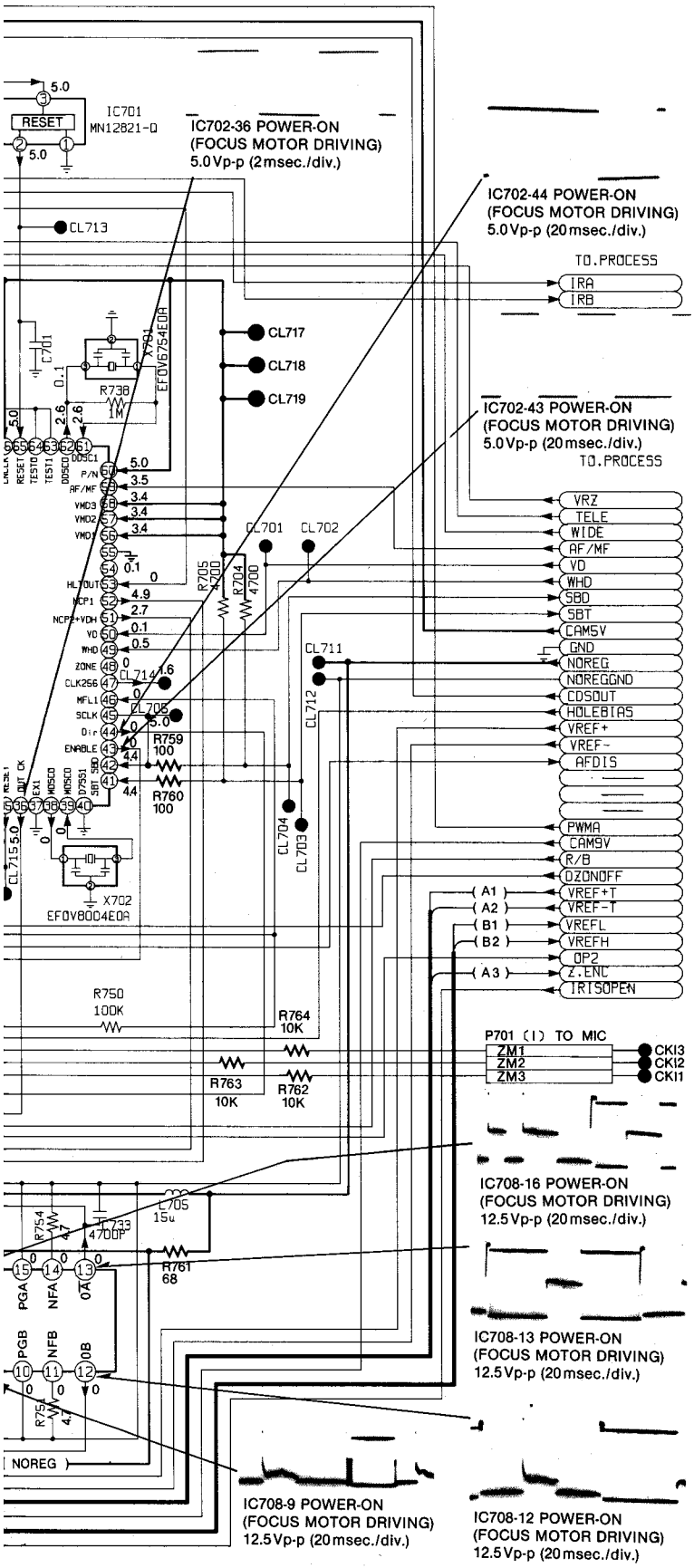
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHAR

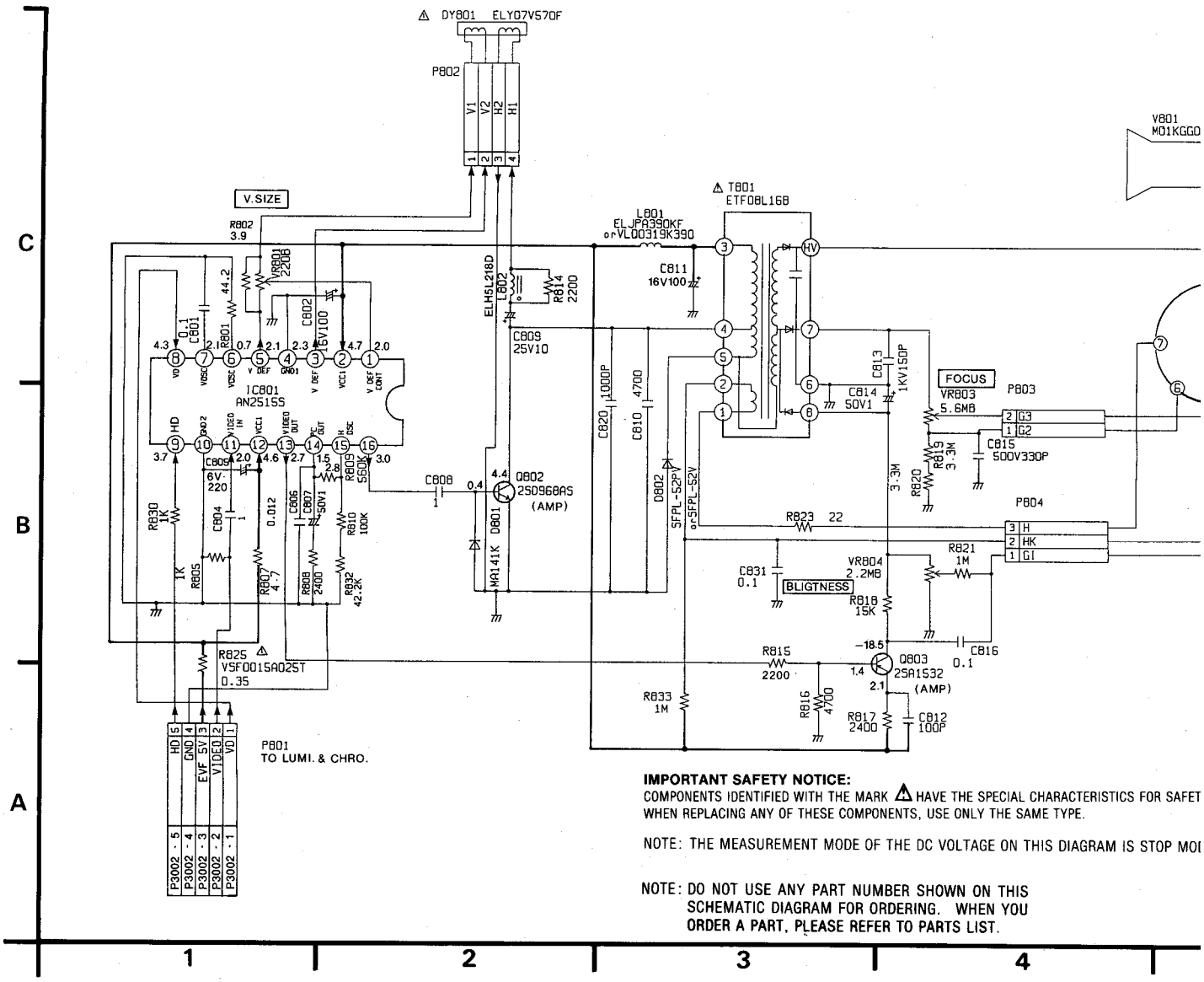


GE ON THIS DIAGRAM IS STOP MODE
GRAY SCALE GHART.

4 5 6 7


IC701
MN12821-D
RESET
IC702-36 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (2msec./div.)
IC702-44 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
TO.PROCESS
IRA
IRB
IC702-43 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
TO.PROCESS
VRZ
TELE
WIDE
AF/MF
VD
WHD
SBD
SBT
CAM5V
GND
NOREG
NOREGGND
COSOUT
HOLEBIAS
VREF+
VREF-
AFDIS
PWMA
CAM9V
R/B
DZONOFF
VREF+T
VREF-T
VREFL
VREFH
OP2
Z.ENC
IRISOPEN
A1
A2
B1
B2
A3
CL701
CL702
CL703
CL704
CL705
CL706
CL711
CL712
CL713
CL714
CL715
CL717
CL718
CL719
X701
X702
EF0V6754E0A
EF0V8004E0A
R738
1M
R759
100
R760
100
R750
100K
R764
10K
R763
10K
R762
10K
R761
68
P701 (1) TO MIC
ZM1
ZM2
ZM3
CKI3
CKI2
CKI1
IC708-16 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-13 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-9 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-12 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
NOREG
PGA
NFA
OA
PGB
NFB
OB

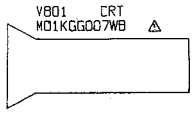
3-14. EVF SCHEMATIC DIAGRAM

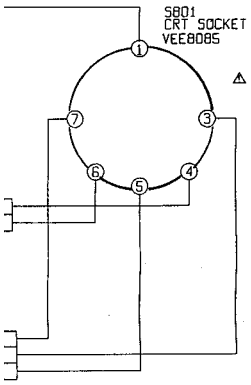


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFET
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

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

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

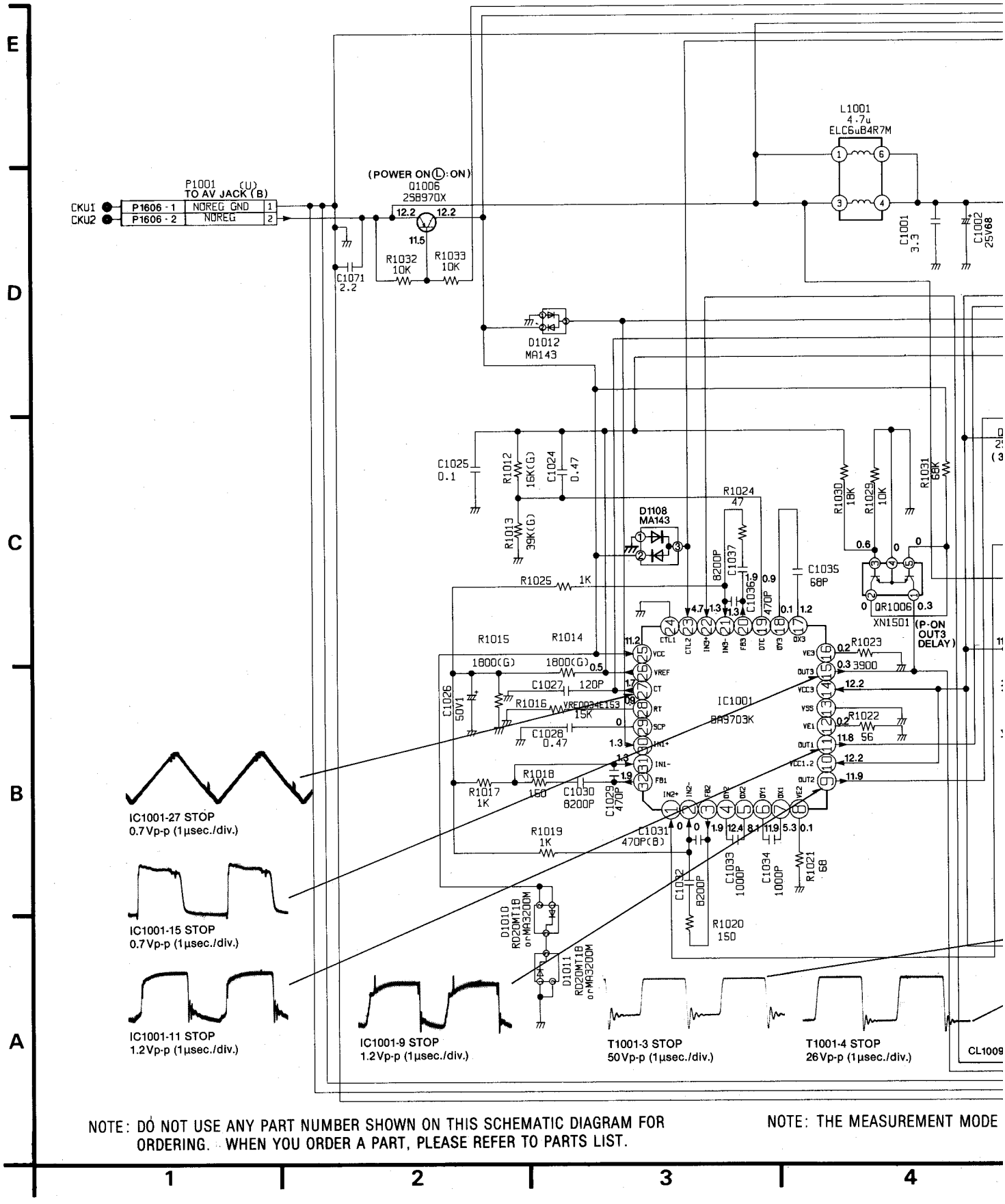




IISTICS FOR SAFETY.

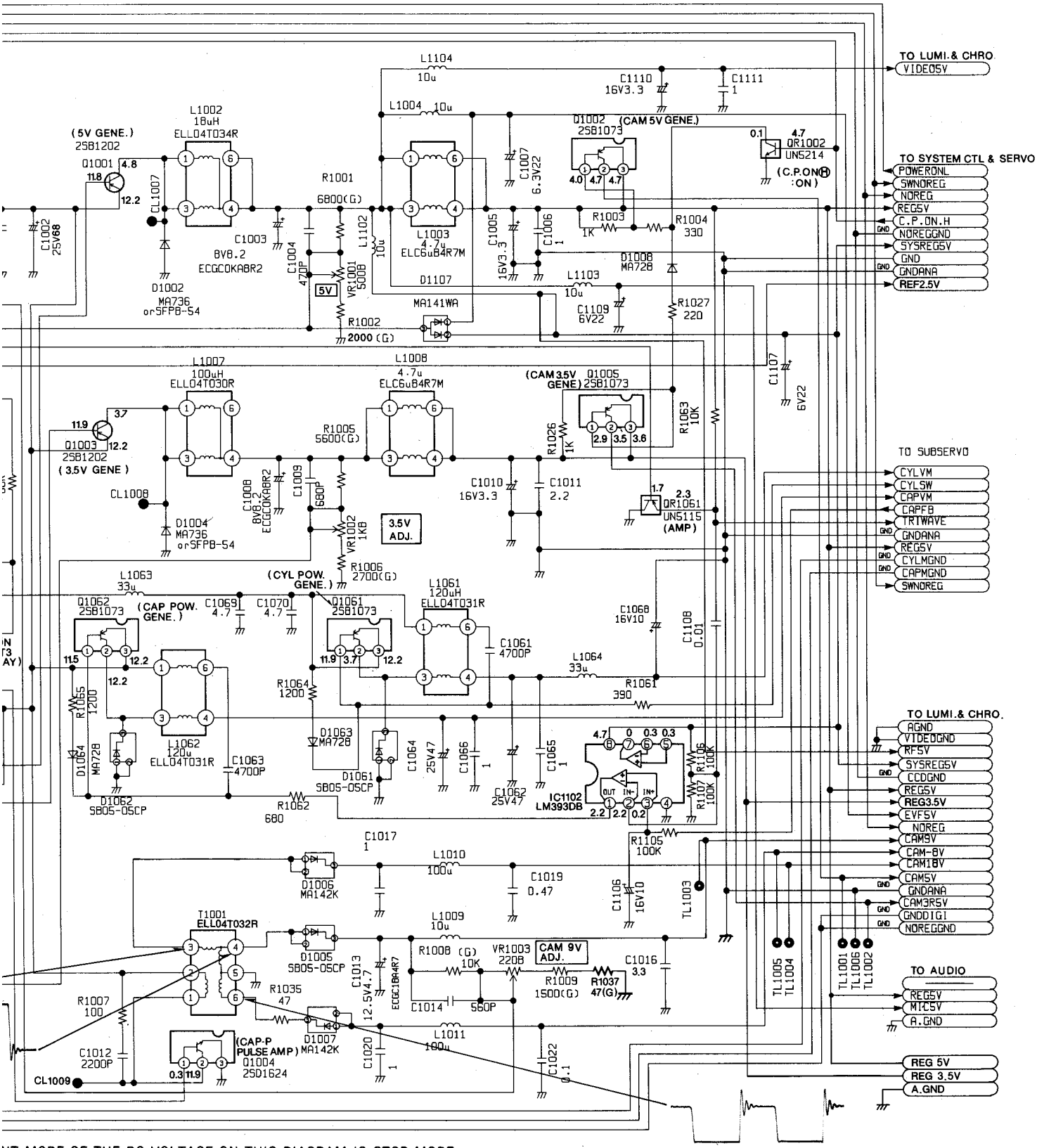
IAM IS STOP MODE.

3-16. POWER 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



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

5 6 7 8

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	0	0	0	0	0	12.2	12.2	0	0	0	0	0	0	0	0	0	0
REC/PLAY	0	0	0	0	0	0	0	0	12.1	12.1	0	0	0	0	0	0.1	0	0	0	0
F.F	0	0	0	0	0	0	0	0	12.0	12.1	0	0	0	0	0	0	0	0	0	0

REF. NO.	IC6001																			
MODE	21	22	23	24																
STOP	0	0	0	0																
REC/PLAY	0	0	0.1	0																
F.F	0	0	0	0																

REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	4.6	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0.1	0	0	4.3	3.8				
REC/PLAY	4.7	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0	0	0	4.3	3.7				
F.F	4.7	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0	0	0	4.3	3.8				

REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						
REC/PLAY	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						
F.F	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						

REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.7	4.7	4.7	4.7	4.7	4.6	4.7	4.7	0	4.7	0	4.7	4.7	4.7	4.7	4.7	0	0	0	0
REC/PLAY	4.7	4.7	4.7	4.6	4.7	4.6	4.7	4.7	0	0	0	4.7	4.7	4.7	4.7	—	4.7	4.7	4.7	4.2
F.F	4.7	4.6	4.7	4.7	4.7	4.6	4.7	4.7	0	4.7	0	4.7	4.7	3.5	4.7	0	0	0	0	0

REF. NO.	IC6004																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	—	—	0
REC/PLAY	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	—	—	0
F.F	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	0.1	4.7	0

REF. NO.	IC6004																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.1	0.8	1.0	0	0	0.8	4.7	—	—	4.7	0	4.3	4.6	4.5	4.7	4.7	4.7	2.3	4.6	4.7
REC/PLAY	0	2.1	1.0	0	0	0.8	4.7	—	0.3	—	—	4.4	4.5	4.5	4.7	4.7	4.7	0	4.6	4.7
F.F	0	0.8	1.0	0	0	0.8	4.7	4.7	0	4.7	0	4.4	4.6	4.4	4.7	4.7	4.6	0	4.6	4.7

REF. NO.	IC6004																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	4.7	0	4.7	0	0	4.7	2.3	0	4.7	0	0	0	2.4	2.4	2.3	0	2.4	2.4
REC/PLAY	0	0	—	0	—	0	0	4.7	2.3	0	1.3	0	0	0	2.4	2.3	2.3	0	2.4	2.4
F.F	0	0	4.7	0	4.7	0	0	4.7	2.3	0	4.7	0	0	0	2.4	2.4	2.3	0	2.4	2.4

REF. NO.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	2.1	2.6	4.7	0	0	0	2.4	2.4	0	0	2.4	0	0	4.1	4.7	0	4.7	4.7	4.7	4.7
REC/PLAY	2.1	2.6	4.7	—	—	0	2.4	2.3	0	0	2.4	0	2.1	2.3	4.7	0	4.6	4.7	4.7	4.6
F.F	2.1	2.6	4.7	0	0	0	2.4	2.4	0	0	2.4	0	1.9	4.1	4.7	0	4.7	4.7	4.7	4.6

REF. NO.	IC6004																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	4.6	2.9	0	0	4.7	4.7	3.7	2.5	4.3	0	0	0	4.7	4.7	4.5	4.7	4.7	4.7	4.7	4.7
REC/PLAY	4.6	2.9	0	0	4.7	4.7	—	2.5	4.6	—	0	0	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7
F.F	4.6	2.9	0	0	4.7	4.7	—	2.5	4.3	0	0	0	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7

REF. NO.	IC6004																			
MODE	121	122	123	124	125	126	127	128												
STOP	4.7	4.7	4.7	0	0	4.7	4.7	0												
REC/PLAY	4.7	0	0	0	0	4.7	4.7	0												
F.F	4.7	4.7	4.7	0	0	4.7	4.7	0												

REF. NO.	IC6005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.7	4.7	4.7	4.7	0	4.7						
REC/PLAY	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.7	4.7	4.7	4.7	0	4.7						
F.F	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.6	4.7	4.6	4.6	0	4.7						

REF. NO.	IC6006																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						
REC/PLAY	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						
F.F	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						

REF. NO.	IC607																			
MODE	1	2	3	4	5															
STOP	4.3	4.6	0	0.8	4.7															
REC/PLAY	4.3	4.6	0	0.8	4.7															
F.F	4.4	4.6	0	0.8	4.7															

REF. NO.	IC6008																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						
REC/PLAY	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						
F.F	4.7	4.6	4.7	4.7	4.6	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						

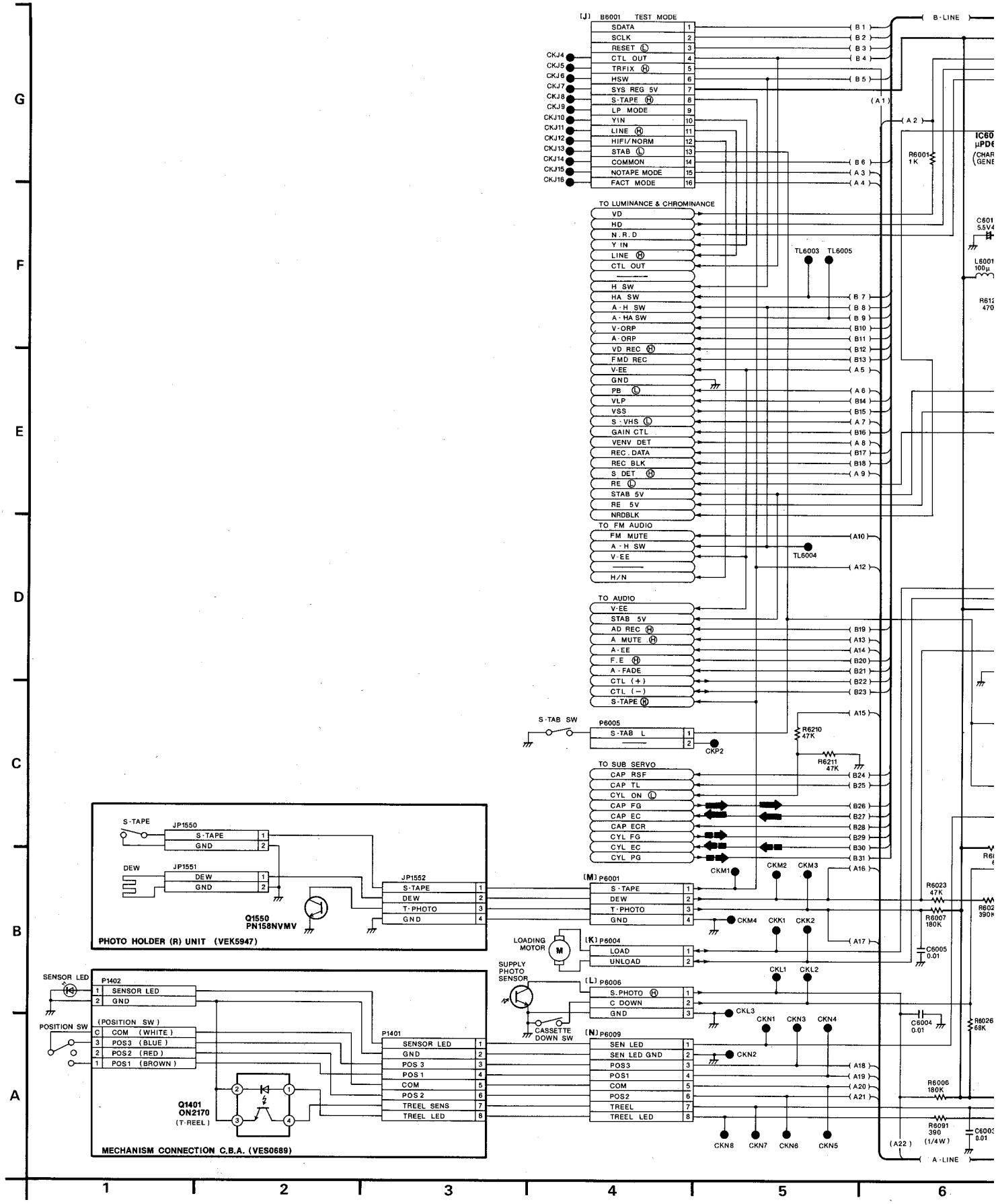
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

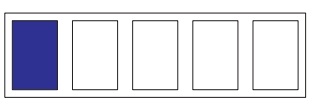
REF. NO.	IC6009										IC6010									
MODE	1	2	3								1	2	3							
STOP	0	4.7	4.7								5.0	0	12.2							
REC/PLAY	0	4.7	4.7								5.0	0	12.1							
F.F	0	4.7	4.7								5.0	0	12.1							
REF. NO.	IC6011																			
MODE	1	2	3	4	5															
STOP	4.7	4.5	0	4.5	4.7															
REC/PLAY	4.7	4.6	0	4.6	4.7															
F.F	4.6	4.6	0	4.7	4.7															

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART

REF. NO.	Q6002			Q6003						Q6004			Q6005			Q6006		
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	0	12.2	0	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.6	0.1
REC/PLAY	0	12.1	0	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.7	0.1
F.F	1.6	10.9	1.6	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.6	0.1
REF. NO.	Q6007			Q6008			Q6009			Q6010			Q6012					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	4.7	0	4.7	3.1	0	0	0	4.9	0	9.8	12.2	10.4	0	4.6	0			
REC/PLAY	4.7	0	4.7	3.1	3.9	0	0	4.7	0.1	9.8	12.0	10.2	0	4.6	0			
F.F	4.7	0	4.7	3.1	4.0	0	0	4.8	0	9.7	12.0	10.2	0	4.6	0			
REF. NO.	QR6001			QR6002			QR6003			QR6004						QR6005		
MODE	E	C	B	E	C	B	E	C	B	1	2	3	4	5	6	E	C	B
STOP	0	0.1	0	4.7	0.1	4.7	0	0	0	4.7	4.0	4.7	4.7	4.1	4.7	4.7	0	4.7
REC/PLAY	0	0	4.4	4.7	1.6	4.7	0	4.7	0.1	4.7	0	4.7	4.6	4.0	4.7	4.7	0	4.7
F.F	0	0	0	4.7	0.1	4.7	0	4.7	0	4.7	4.0	4.7	4.7	4.1	4.7	4.7	1.6	3.8
REF. NO.	QR6006			QR6007			QR6008			QR6010			QR6011			QR6012		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	0	0	0.1	4.5	0	0.1	4.7	4.7	4.6	0	4.7	0	4.7	4.7	0	4.7
REC/PLAY	0	4.7	0	0	0.1	4.3	0	0.1	4.7	4.7	4.6	0	4.7	0	0	4.7	4.7	0
F.F	0	4.7	0	0	0.1	4.3	0	0.1	4.7	4.7	4.6	0	4.7	0	4.7	4.7	0	4.7
REF. NO.	QR6013			QR6014			QR6015			QR6016			QR6017			QR6018		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	12.6	0	0	0	0	0	0	0	0	0	0	0	4.5	0	0	2.1
REC/PLAY	0	0	12.5	0	0	4.7	0	0	4.7	0	0	0	0	0	4.5	0	0	2.1
F.F	0	0	12.4	0	0	0	0	0	0	0	0	0	0	0	4.5	0	0	2.1

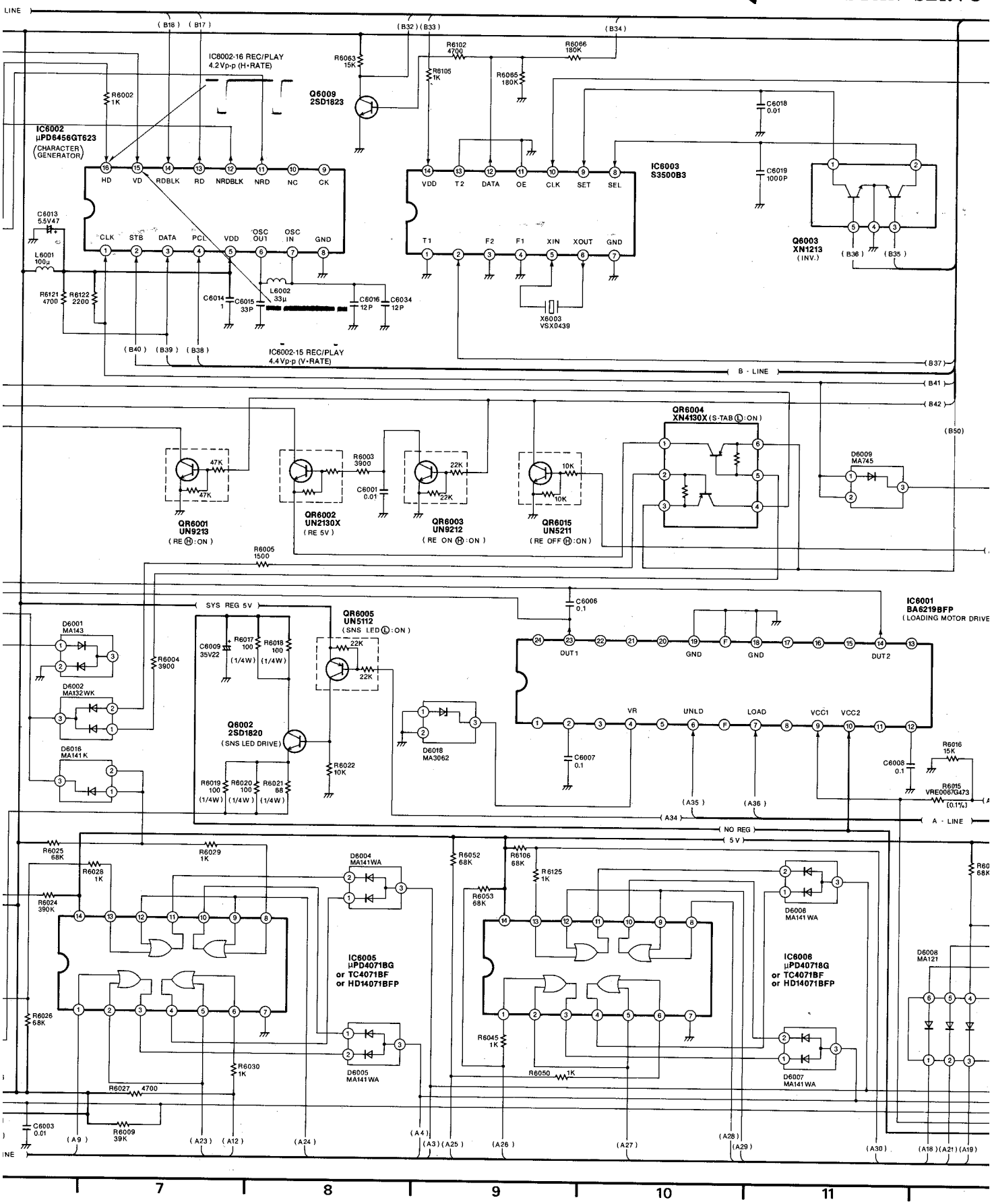
3-17. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM



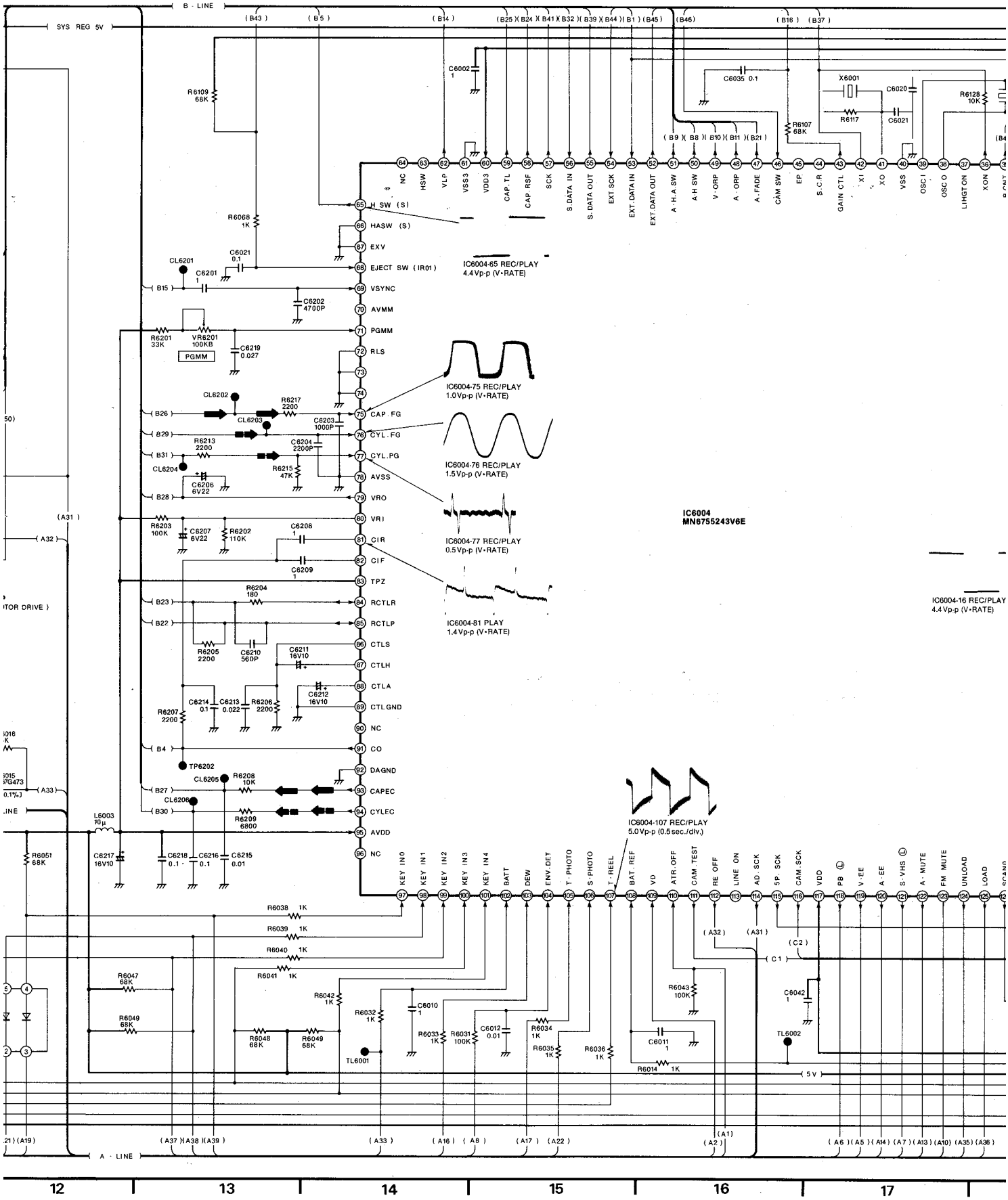


CAPSTAN SERVO SPEED LOOP

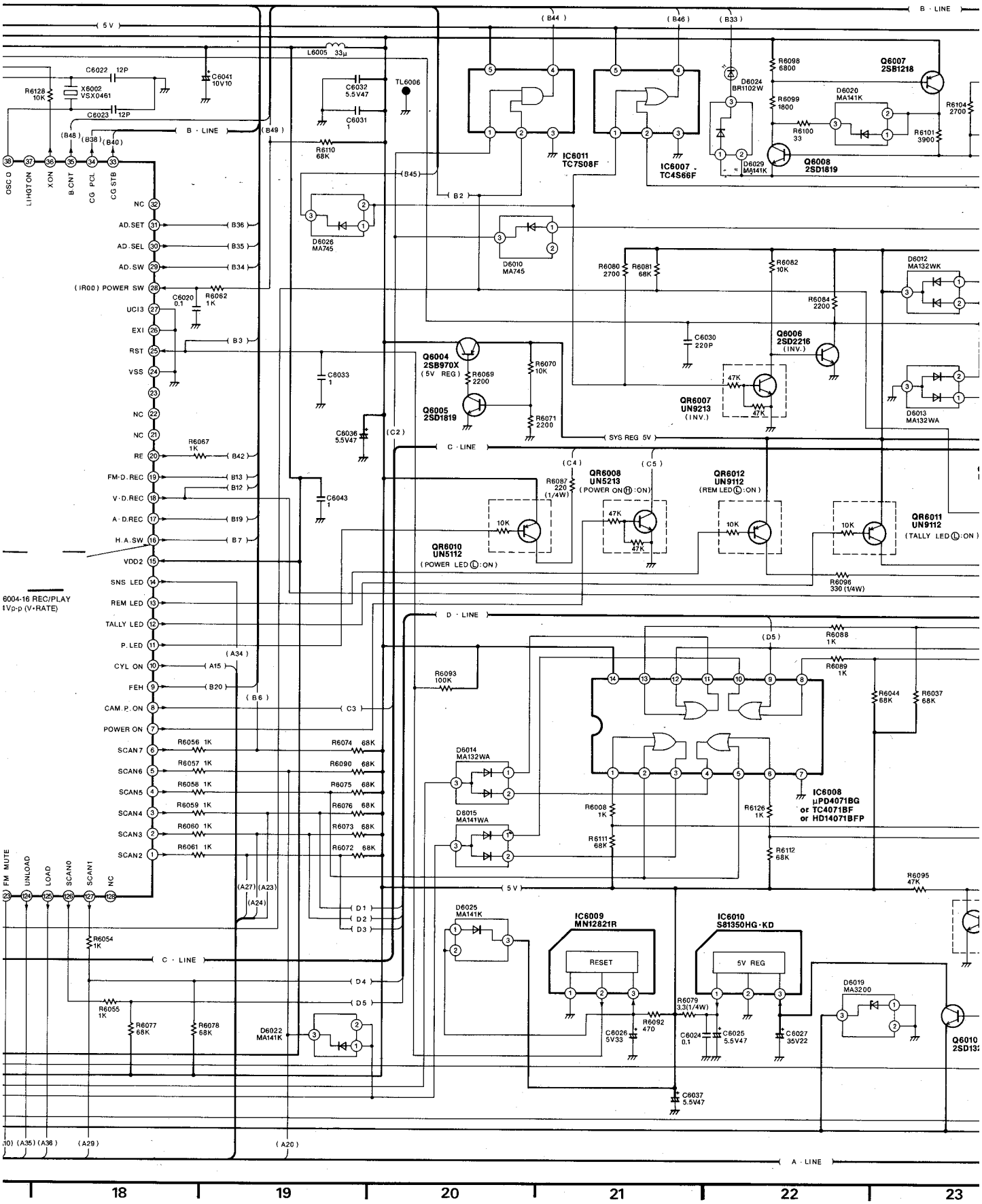
CAPSTAN SERVO

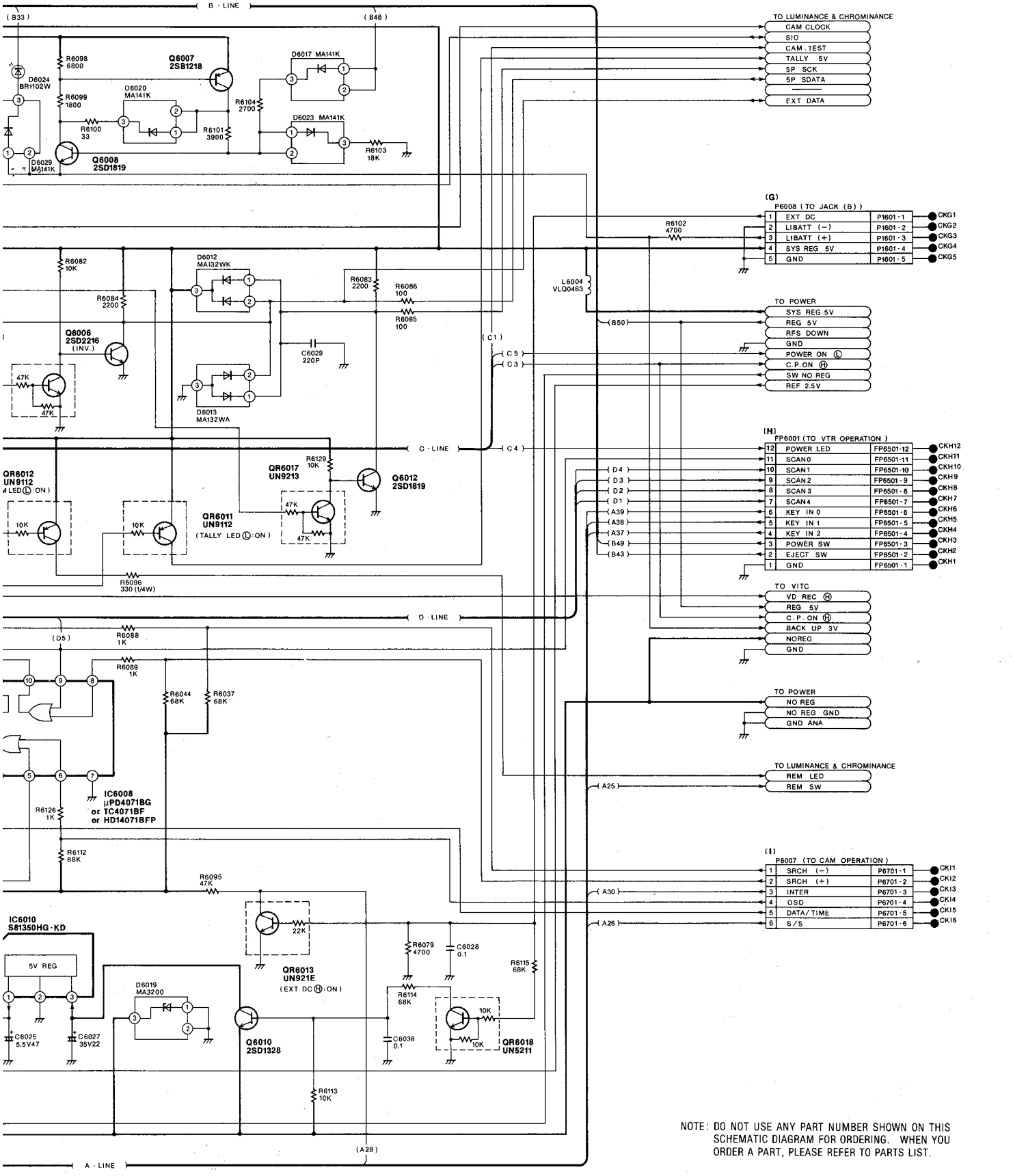


VO PHASE LOOP ◀■ CYLINDER SERVO SPEED LOOP ◀■ CYL

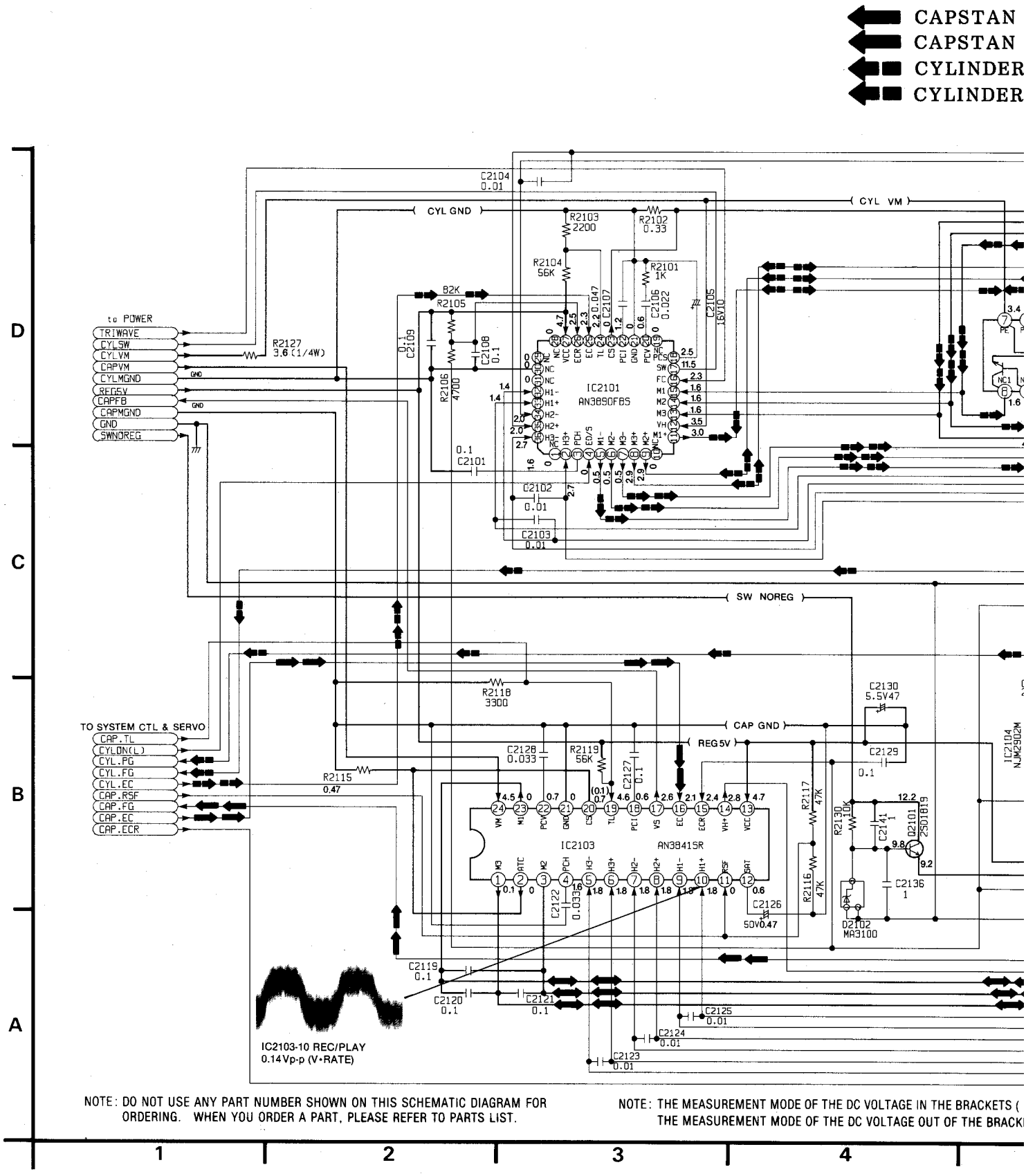


CYLINDER SERVO PHASE LOOP




B · LINE
(B33)
(B48)
TO LUMINANCE & CHROMINANCE
CAM CLOCK
SIO
CAM . TEST
TALLY 5V
5P SCK
5P SDATA
EXT DATA
R6098 6800
Q6007 2SB1218
D6017 MA141K
D6024 BR1102W
R6099 1800
D6020 MA141K
R6104 2700
R6100 33
R6101 3900
D6023 MA141K
R6103 18K
Q6008 2SD1819
D6029 MA141K
[G]
P6008 (TO JACK (B))
1 EXT DC P1601 · 1 CKG1
2 LIBATT (−) P1601 · 2 CKG2
3 LIBATT (+) P1601 · 3 CKG3
4 SYS REG 5V P1601 · 4 CKG4
5 GND P1601 · 5 CKG5
R6102 4700
R6082 10K
D6012 MA132WK
R6083 2200
R6086 100
L6004 VLQ0463
R6084 2200
R6085 100
TO POWER
SYS REG 5V
REG 5V
RFS DOWN
GND
POWER ON Ⓛ
C.P.ON Ⓗ
SW NO REG
REF 2.5V
(B50)
(C1)
C 5
C 3
Q6006 2SD2216 (INV.)
C6029 220P
47K
47K
D6013 MA132WA
[H]
FP6001 (TO VTR OPERATION)
12 POWER LED FP6501-12 CKH12
11 SCAN0 FP6501-11 CKH11
10 SCAN1 FP6501-10 CKH10
9 SCAN2 FP6501-9 CKH9
8 SCAN3 FP6501-8 CKH8
7 SCAN4 FP6501-7 CKH7
6 KEY IN 0 FP6501-6 CKH6
5 KEY IN 1 FP6501-5 CKH5
4 KEY IN 2 FP6501-4 CKH4
3 POWER SW FP6501-3 CKH3
2 EJECT SW FP6501-2 CKH2
1 GND FP6501-1 CKH1
C · LINE
C 4
(D4)
(D3)
(D2)
(D1)
(A39)
(A38)
(A37)
(B49)
(B43)
QR6012 UN9112 (LED Ⓛ·ON)
R6129 10K
QR6017 UN9213
Q6012 2SD1819
QR6011 UN9112 (TALLY LED Ⓛ·ON)
10K
10K
47K
47K
R6096 330 (1/4W)
TO VITC
VD REC Ⓗ
REG 5V
C.P.ON Ⓗ
BACK UP 3V
NOREG
GND
D · LINE
(D5)
R6088 1K
R6089 1K
R6044 68K
R6037 68K
TO POWER
NO REG
NO REG GND
GND ANA
TO LUMINANCE & CHROMINANCE
REM LED
REM SW
(A25)
IC6008 μPD4071BG or TC4071BF or HD14071BFP
R6126 1K
R6112 68K
[I]
P6007 (TO CAM OPERATION)
1 SRCH (−) P6701-1 CKI1
2 SRCH (+) P6701-2 CKI2
3 INTER P6701-3 CKI3
4 OSD P6701-4 CKI4
5 DATA/TIME P6701-5 CKI5
6 S/S P6701-6 CKI6
(A30)
(A26)
R6095 47K
IC6010 S81350HG·KD
22K
R6079 4700
C6028 0.1
R6115 68K
5V REG
D6019 MA3200
QR6013 UN921E (EXT DC Ⓗ·ON)
R6114 68K
10K
C6025 5.5V47
C6027 35V22
Q6010 2SD1328
C6038 0.1
QR6018 UN5211
10K
R6113 10K
(A28)
A · LINE
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.
22
23
24
25
26
27

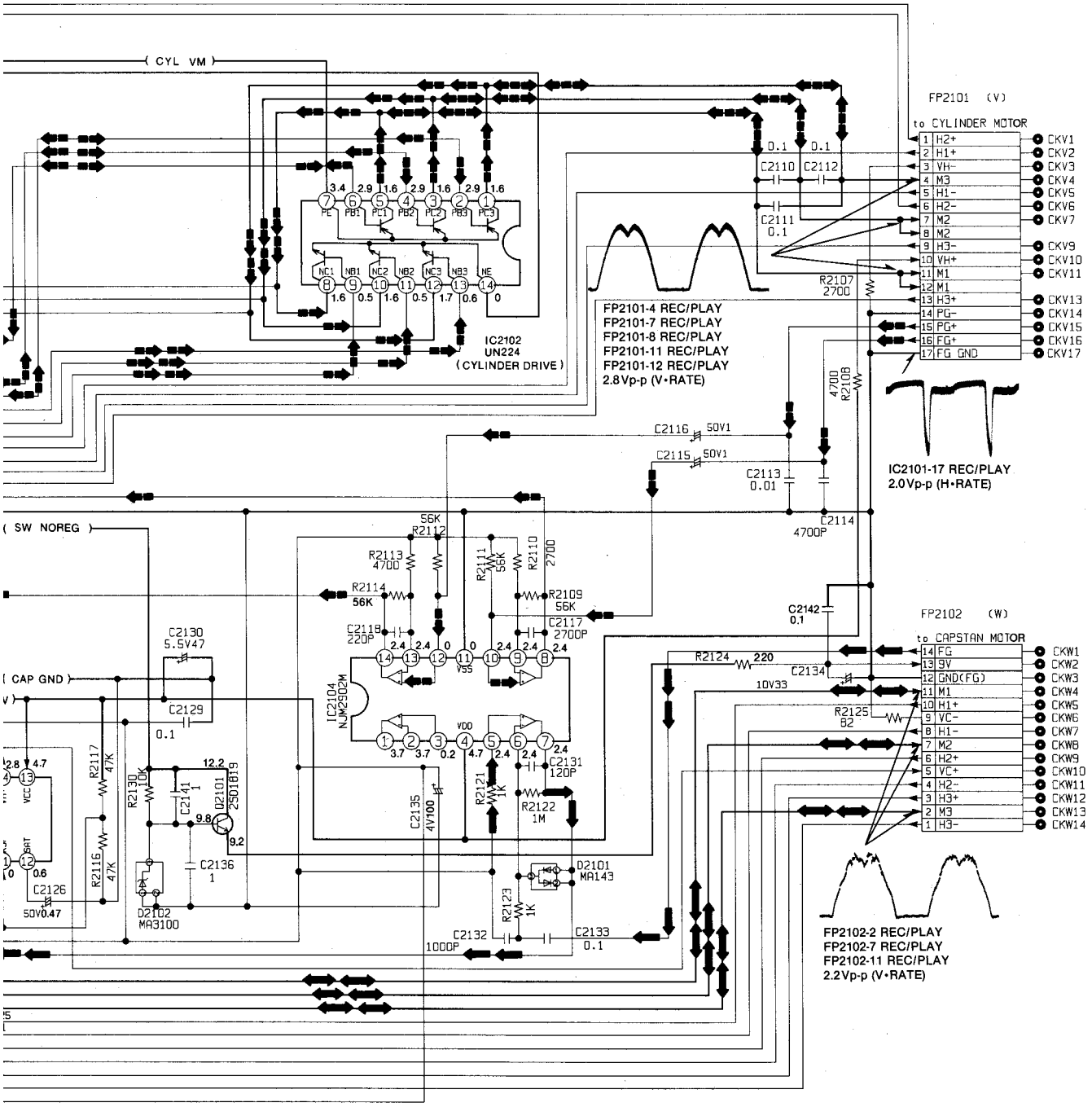
3-18. SUB SERVO SCHEMATIC DIAGRAM



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 IN THE BRACKETS (THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACK

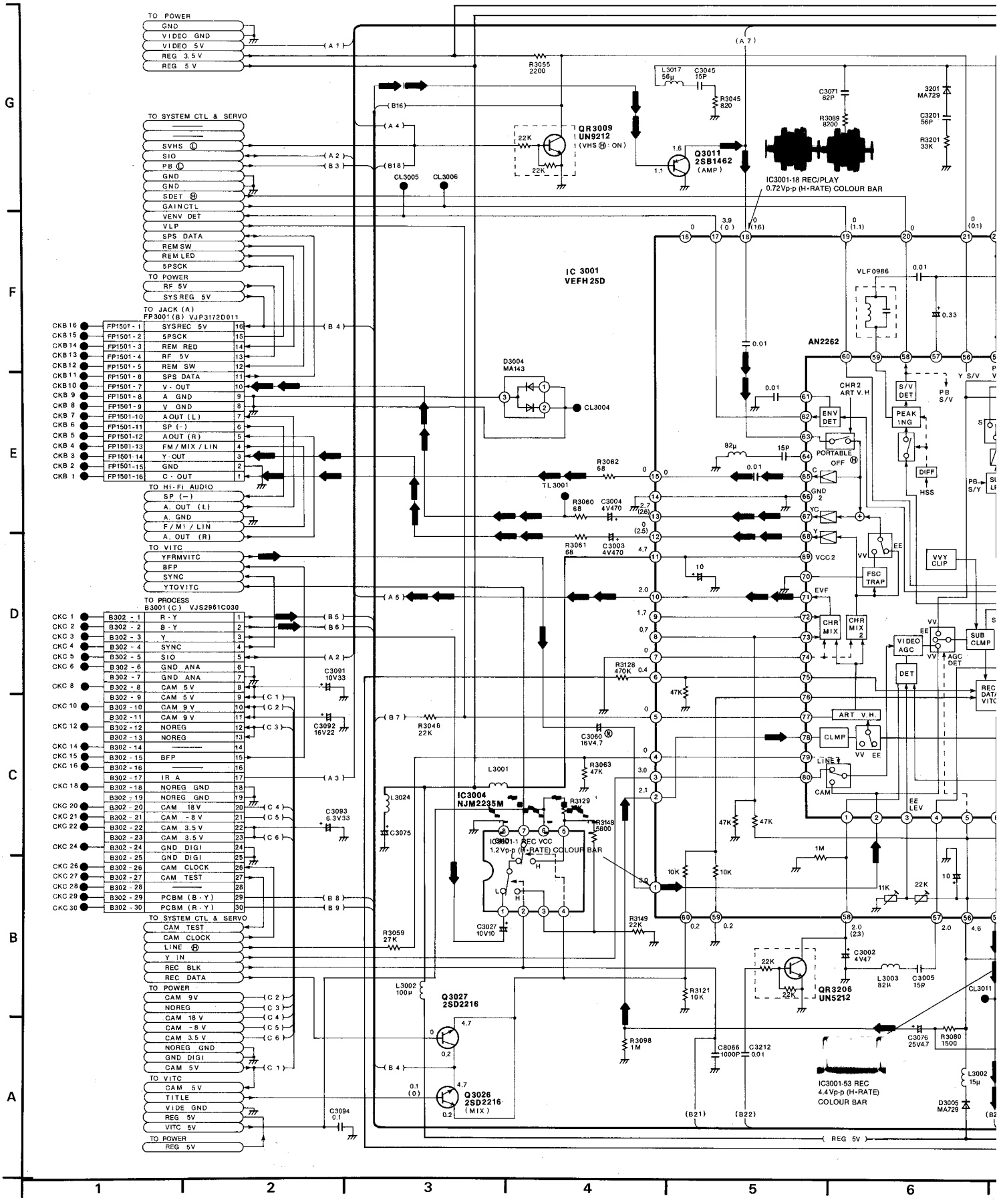
CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP



REMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE.
REMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

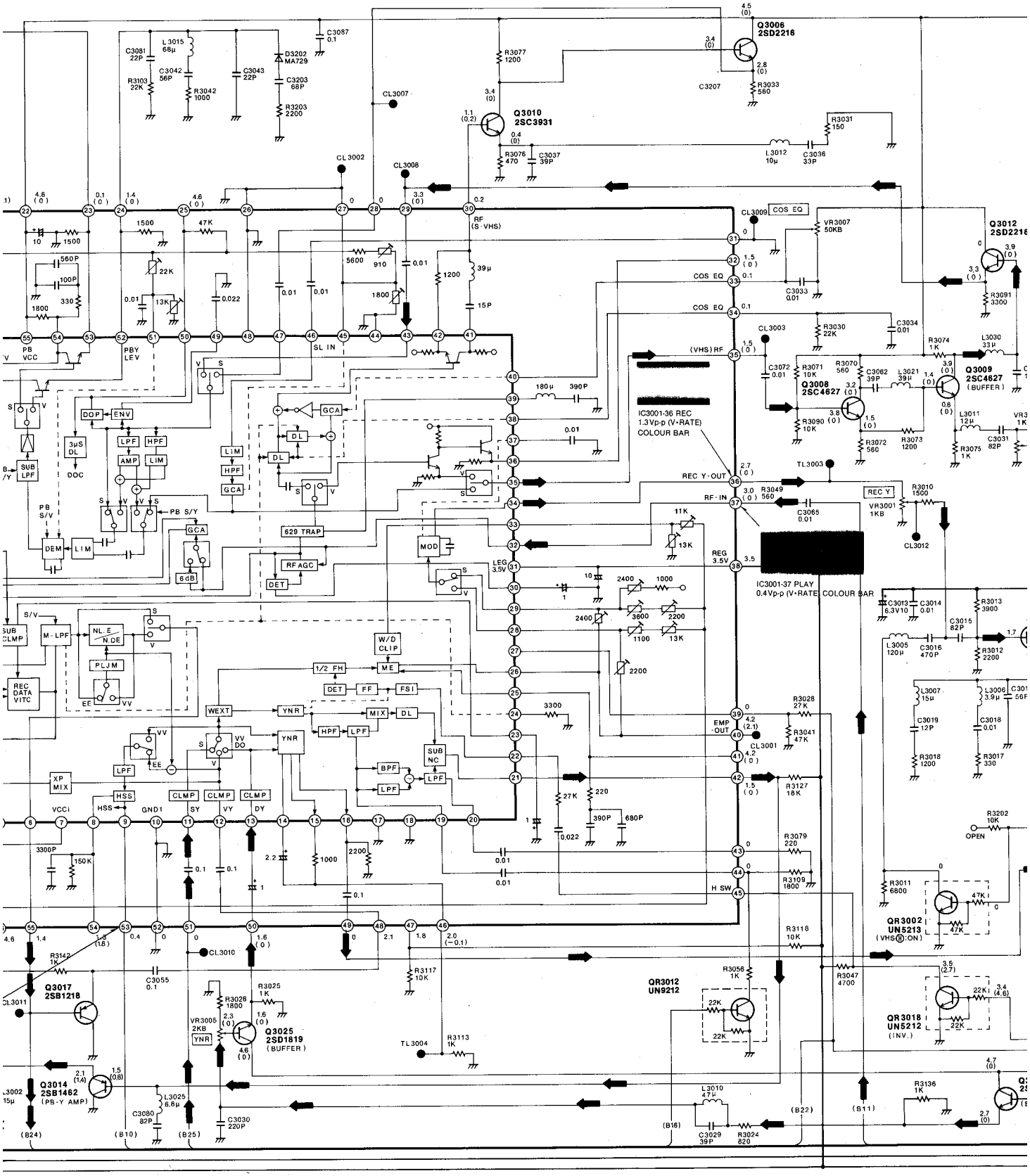
4 5 6 7

3-19. LUMINANCE/CHROMINANCE & HEAD AMP SCHEMATIC D

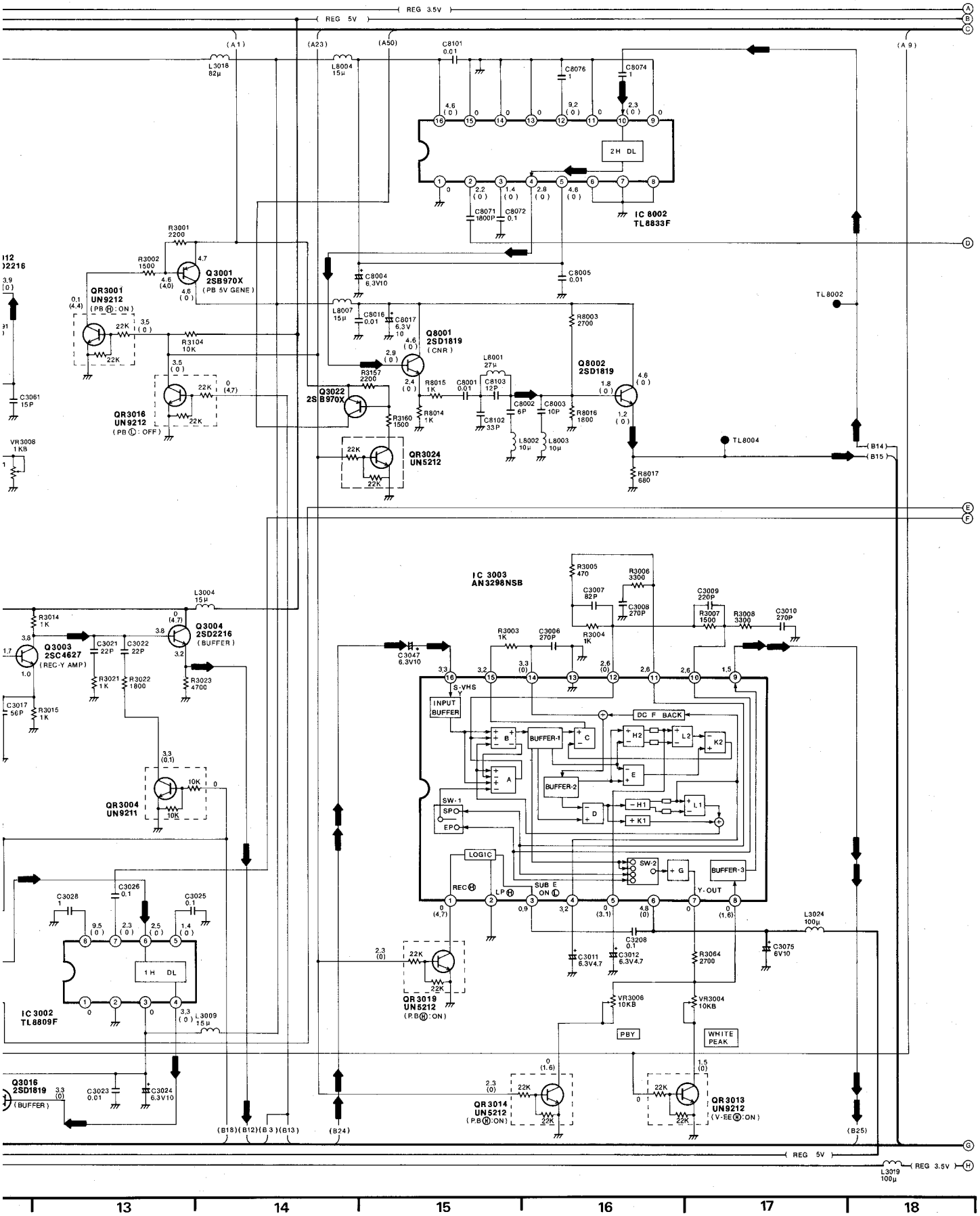


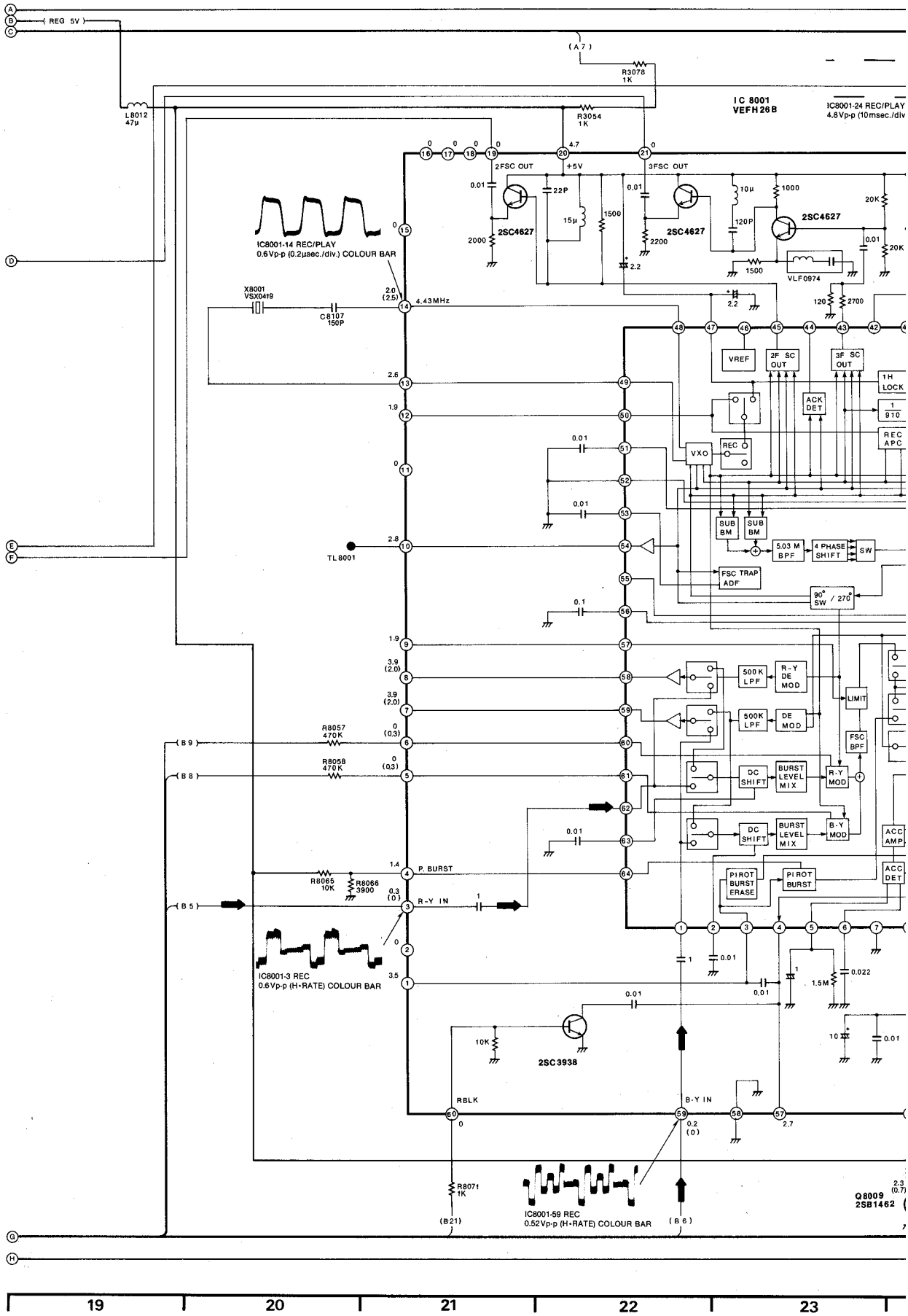
DIAGRAM

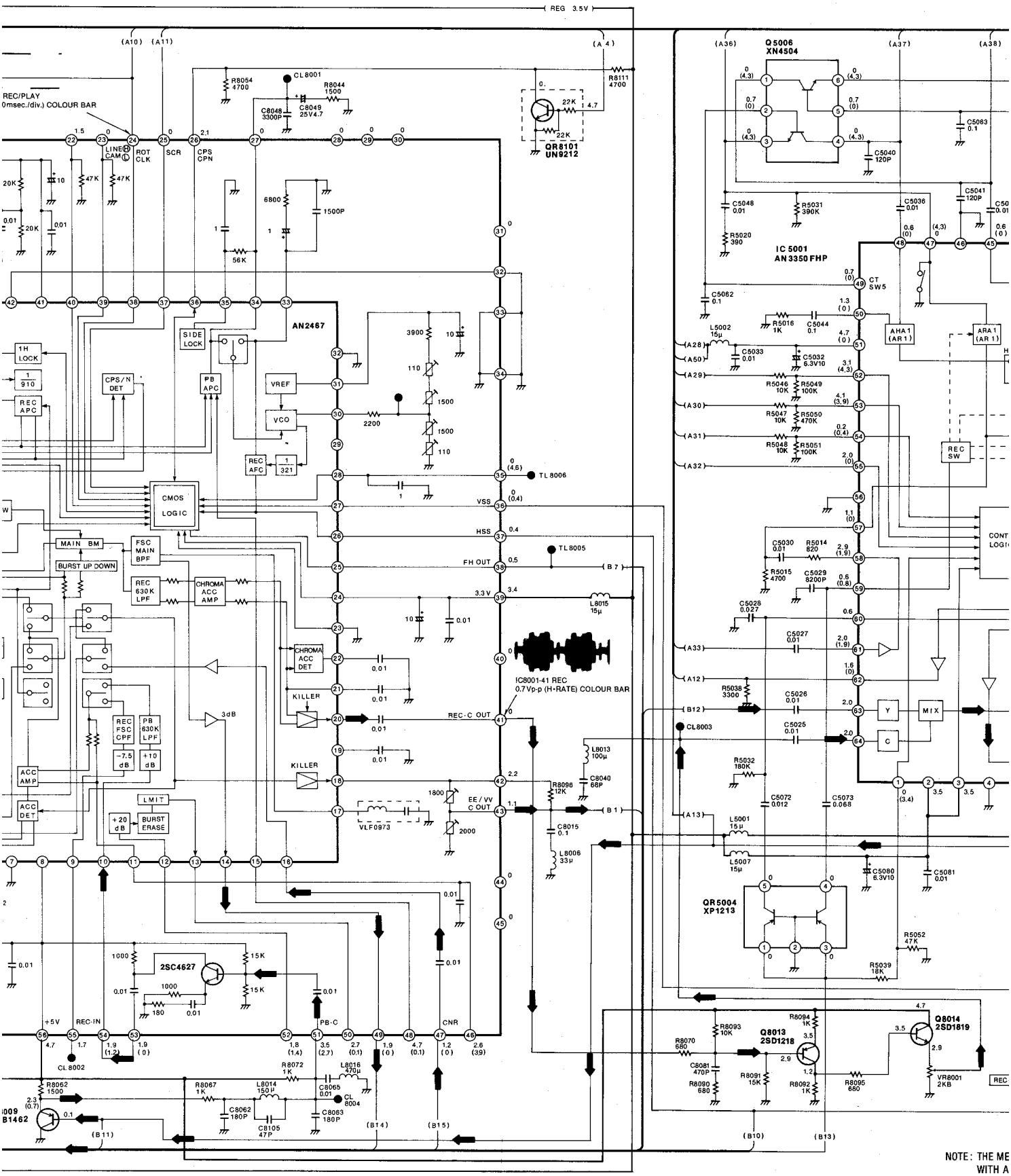
MAIN SIGNAL PATH IN REC MODE



■ MAIN SIGNAL PATH IN PLAYBACK MODE

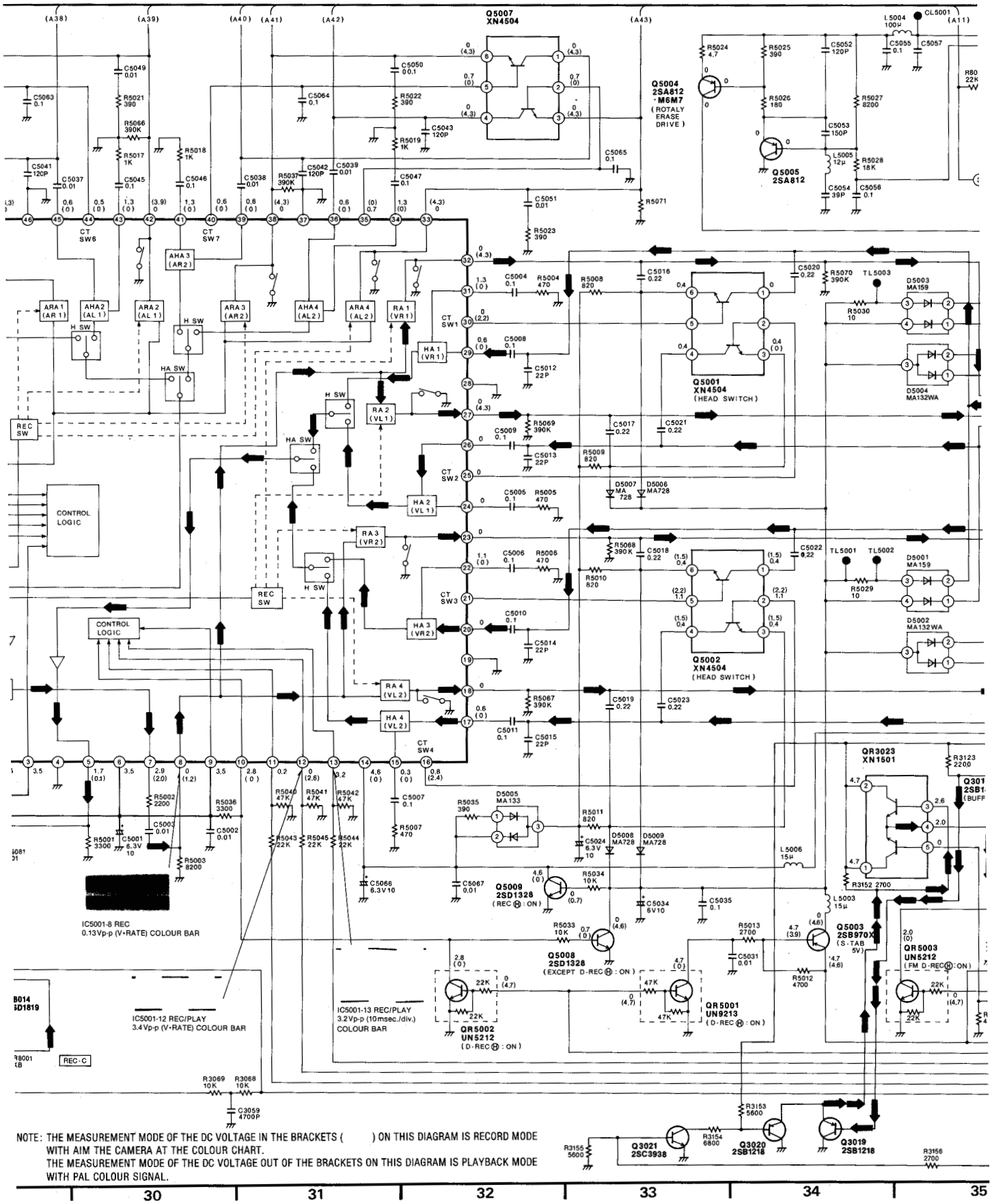



REG 5V
(A7)
R3078 1K
L8012 47µ
R3054 1K
IC 8001 VEFH26B
IC8001-24 REC/PLAY 4.8Vp-p (10msec./div
2FSC OUT
+5V
3FSC OUT
2SC4627
2SC4627
2SC4627
VLF0974
IC8001-14 REC/PLAY 0.6Vp-p (0.2µsec./div.) COLOUR BAR
X8001 VSX0419
C8107 150P
4.43MHz
TL8001
VREF
2F SC OUT
3F SC OUT
1H LOCK
ACK DET
REC APC
VXO
REC
SUB BM
SUB BM
5.03 M BPF
4 PHASE SHIFT
SW
FSC TRAP ADF
90° SW / 270°
500K LPF
R-Y DE MOD
500K LPF
DE MOD
LIMIT
FSC BPF
DC SHIFT
BURST LEVEL MIX
R-Y MOD
DC SHIFT
BURST LEVEL MIX
B-Y MOD
ACC AMP
ACC DET
PIROT BURST ERASE
PIROT BURST
R8057 470K
R8058 470K
R8065 10K
R8066 3900
P. BURST
R-Y IN
IC8001-3 REC 0.6Vp-p (H-RATE) COLOUR BAR
2SC3938
RBLK
B-Y IN
R8071 1K
IC8001-59 REC 0.52Vp-p (H-RATE) COLOUR BAR
Q8009 2SB1462
(B9)
(B8)
(B5)
(B21)
(B6)



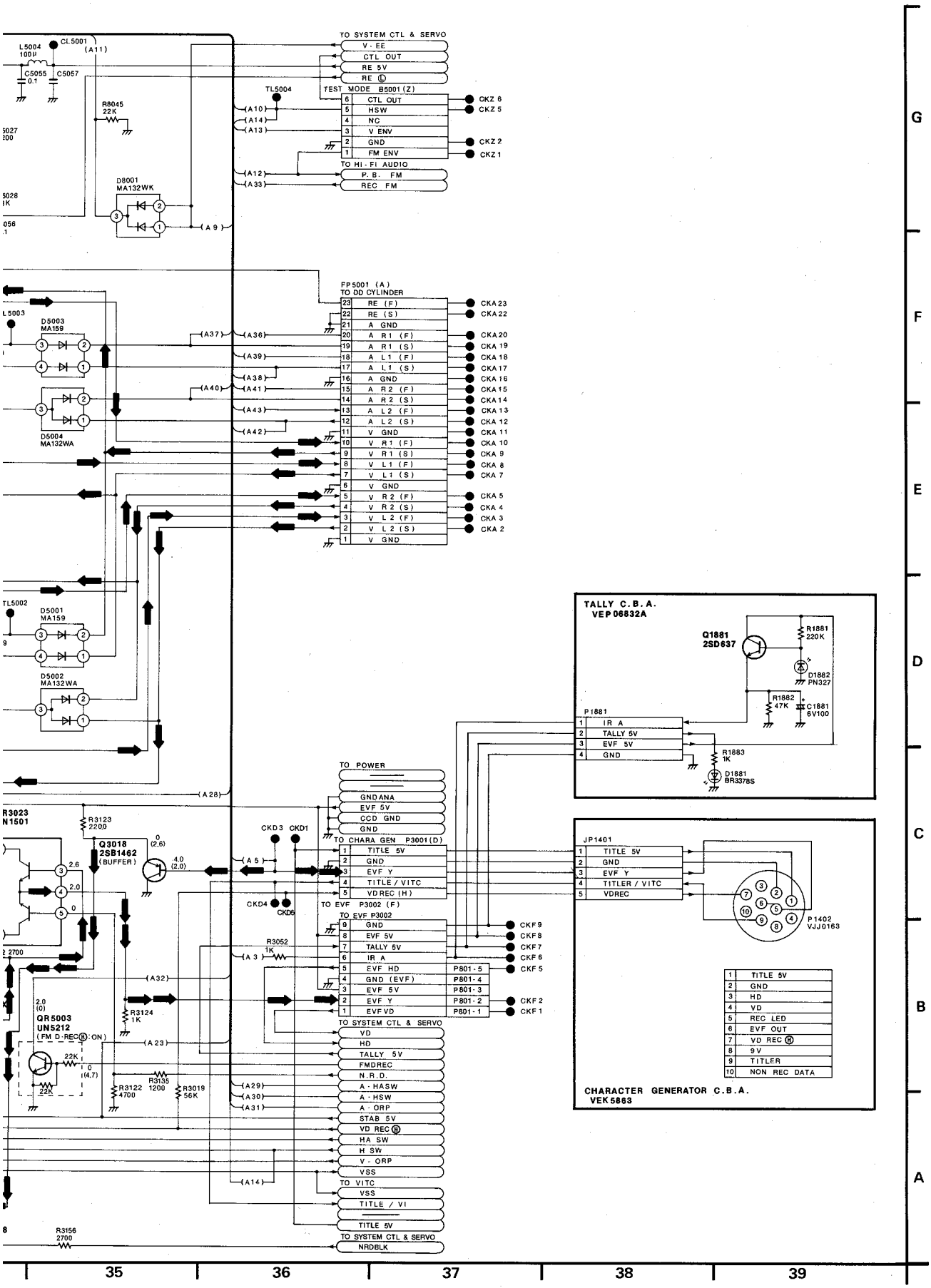
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE ME
WITH A
THE ME
WITH P



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.

30 31 32 33 34 35


TO SYSTEM CTL & SERVO
V · EE
CTL OUT
RE 5V
RE Ⓛ
TL5004
TEST MODE B5001(Z)
6 CTL OUT
5 HSW
4 NC
3 V ENV
2 GND
1 FM ENV
CKZ 6
CKZ 5
CKZ 2
CKZ 1
TO Hi-Fi AUDIO
P. B. FM
REC FM
L5004 100μ
CL5001
C5055 0.1
C5057
R8045 22K
D8001 MA132WK
FP5001 (A) TO DD CYLINDER
23 RE (F)
22 RE (S)
21 A GND
20 A R1 (F)
19 A R1 (S)
18 A L1 (F)
17 A L1 (S)
16 A GND
15 A R2 (F)
14 A R2 (S)
13 A L2 (F)
12 A L2 (S)
11 V GND
10 V R1 (F)
9 V R1 (S)
8 V L1 (F)
7 V L1 (S)
6 V GND
5 V R2 (F)
4 V R2 (S)
3 V L2 (F)
2 V L2 (S)
1 V GND
CKA 23
CKA 22
CKA 20
CKA 19
CKA 18
CKA 17
CKA 16
CKA 15
CKA 14
CKA 13
CKA 12
CKA 11
CKA 10
CKA 9
CKA 8
CKA 7
CKA 5
CKA 4
CKA 3
CKA 2
D5003 MA159
D5004 MA132WA
D5001 MA159
D5002 MA132WA
TL5002
TALLY C.B.A. VEP06832A
Q1881 2SD637
R1881 220K
D1882 PN327
R1882 47K
C1881 6V100
P1881
1 IR A
2 TALLY 5V
3 EVF 5V
4 GND
R1883 1K
D1881 BR3378S
TO POWER
GNDANA
EVF 5V
CCD GND
GND
TO CHARA GEN P3001(D)
1 TITLE 5V
2 GND
3 EVF Y
4 TITLE / VITC
5 VDREC (H)
JP1401
1 TITLE 5V
2 GND
3 EVF Y
4 TITLER / VITC
5 VDREC
P1402 VJJ0163
1 TITLE 5V
2 GND
3 HD
4 VD
5 REC LED
6 EVF OUT
7 VD REC Ⓗ
8 9V
9 TITLER
10 NON REC DATA
CHARACTER GENERATOR C.B.A. VEK5863
R3023
N1501
R3123 2200
Q3018 2SB1462 (BUFFER)
CKD3 CKD1
CKD4 CKD5
TO EVF P3002 (F)
TO EVF P3002
9 GND
8 EVF 5V
7 TALLY 5V
6 IR A
5 EVF HD P801-5
4 GND (EVF) P801-4
3 EVF 5V P801-3
2 EVF Y P801-2
1 EVF VD P801-1
CKF 9
CKF 8
CKF 7
CKF 6
CKF 5
CKF 2
CKF 1
R3052 1K
QR5003 UN5212 (FM D-REC Ⓡ ON)
R3124 1K
22K
R3122 4700
R3135 1200
R3019 56K
TO SYSTEM CTL & SERVO
VD
HD
TALLY 5V
FMDREC
N.R.D.
A · HASW
A · HSW
A · ORP
STAB 5V
VD REC Ⓡ
HA SW
H SW
V · ORP
VSS
TO VITC
VSS
TITLE / VI
TITLE 5V
TO SYSTEM CTL & SERVO
NRDBLK
R3156 2700
(A 9)
(A10)
(A11)
(A12)
(A13)
(A14)
(A23)
(A28)
(A29)
(A30)
(A31)
(A32)
(A33)
(A36)
(A37)
(A38)
(A39)
(A40)
(A41)
(A42)
(A43)
(A 3)
(A 5)
G
F
E
D
C
B
A
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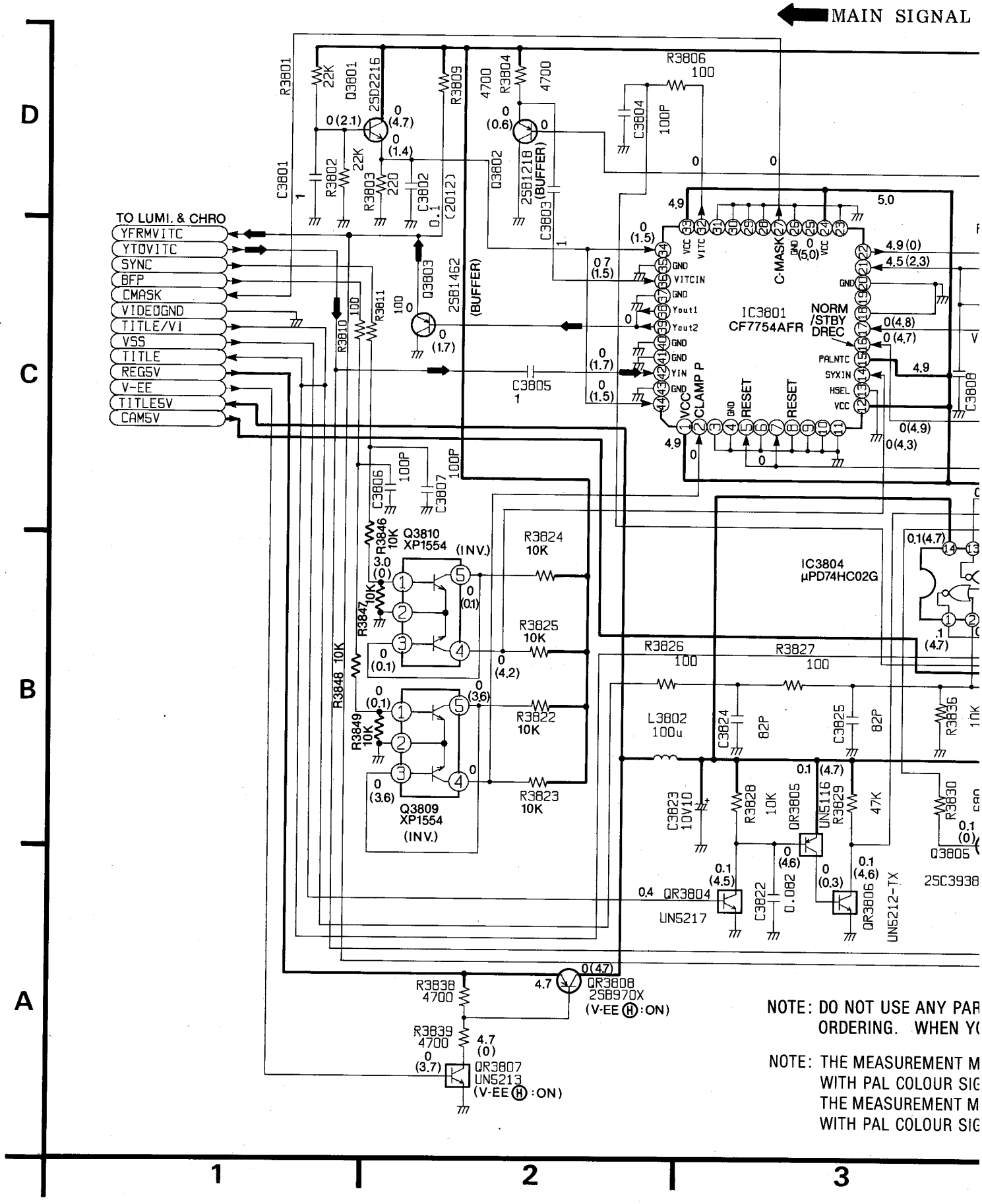
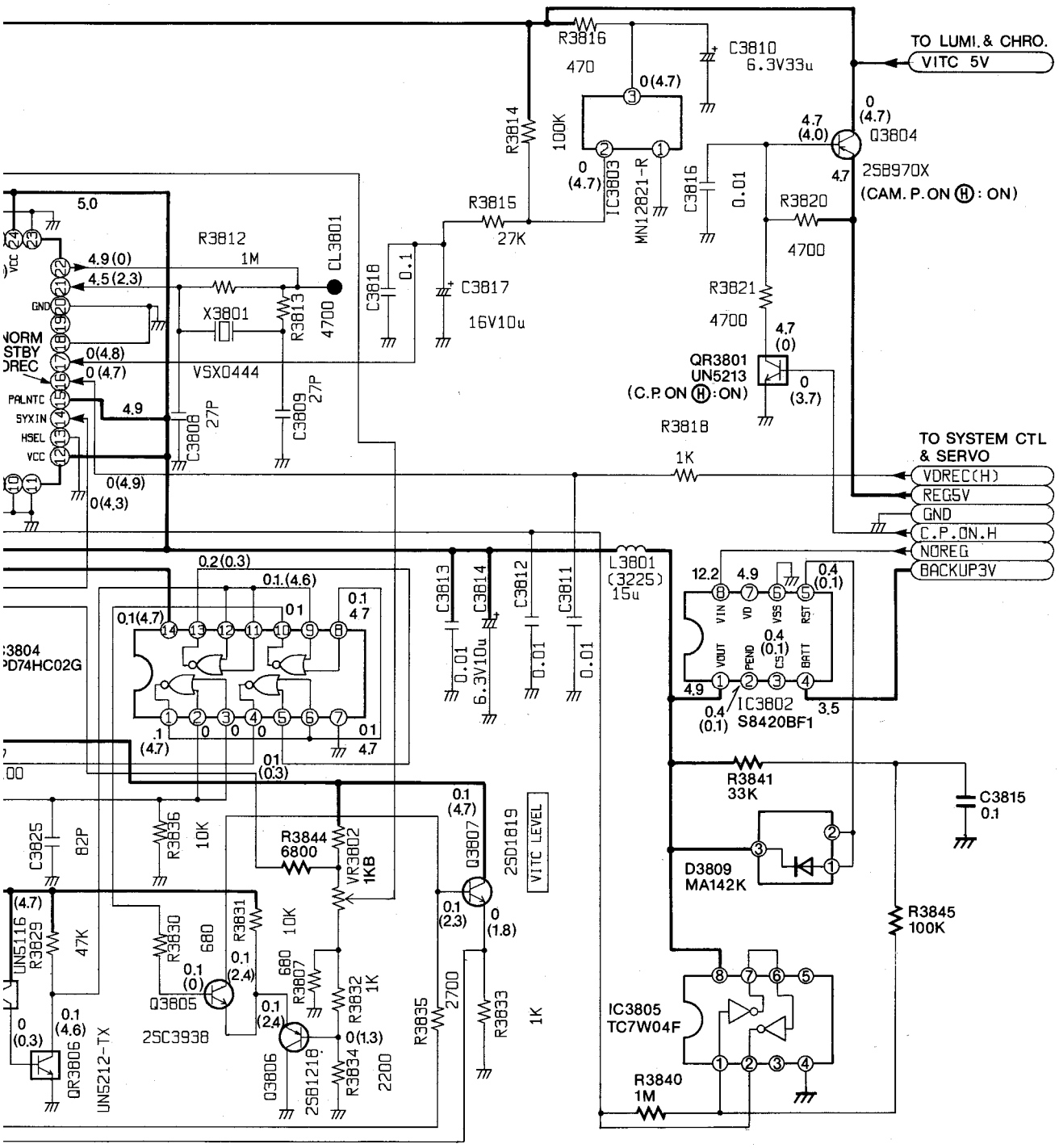
3-20. VITC SCHEMATIC DIAGRAM



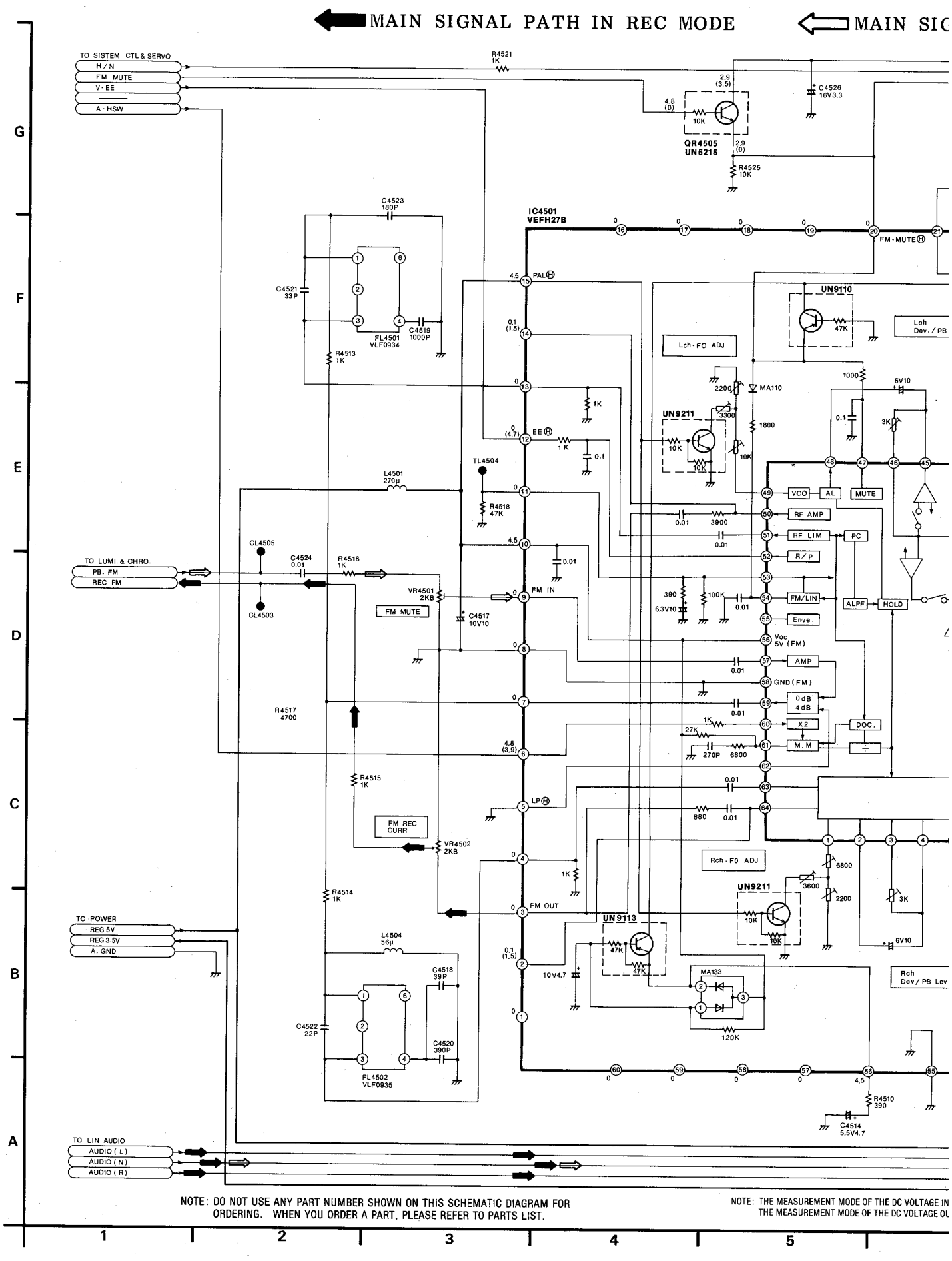
■MAIN SIGNAL PATH



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

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

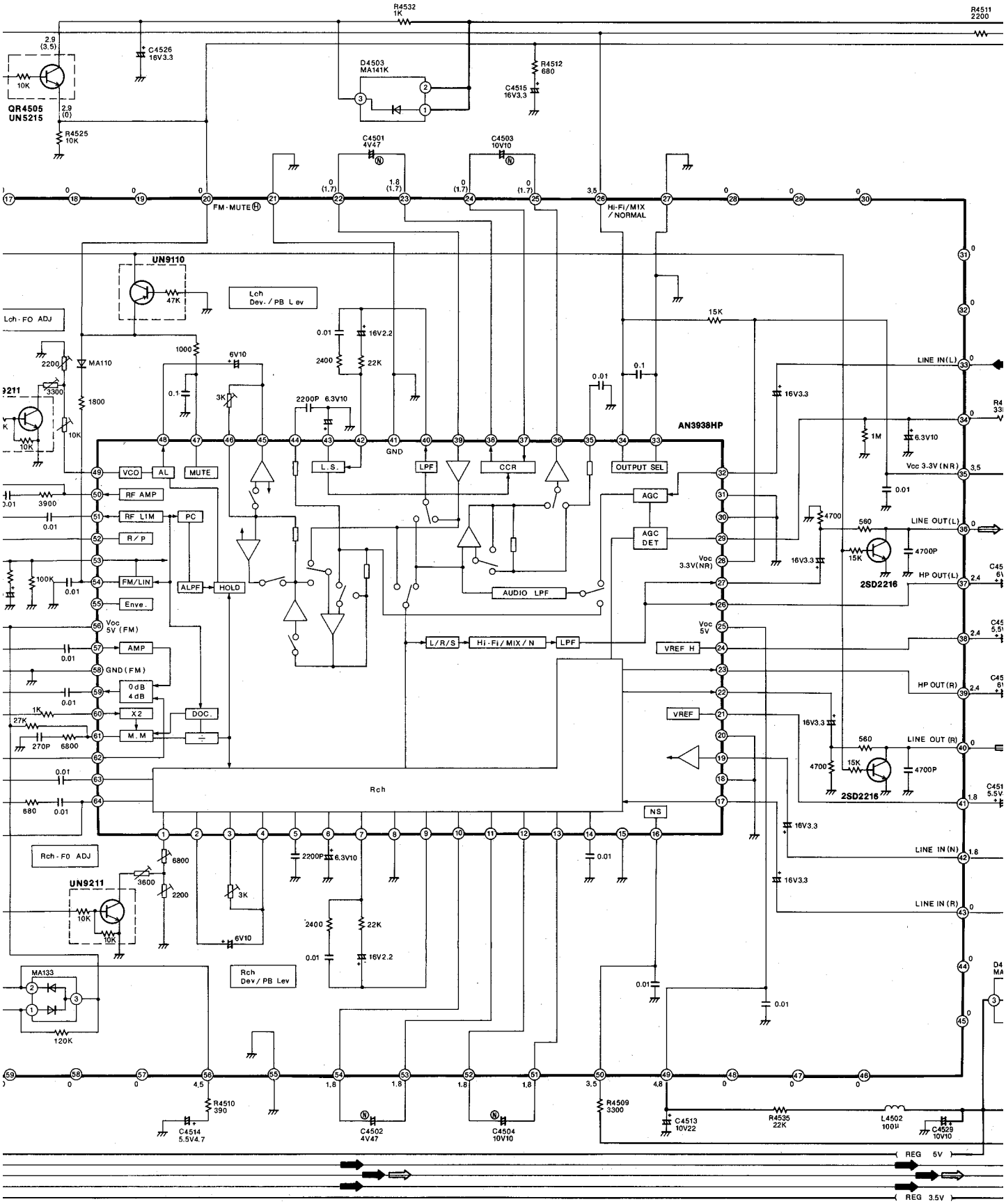
3-21. Hi-Fi AUDIO SCHEMATIC DIAGRAM



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 IN
THE MEASUREMENT MODE OF THE DC VOLTAGE OU

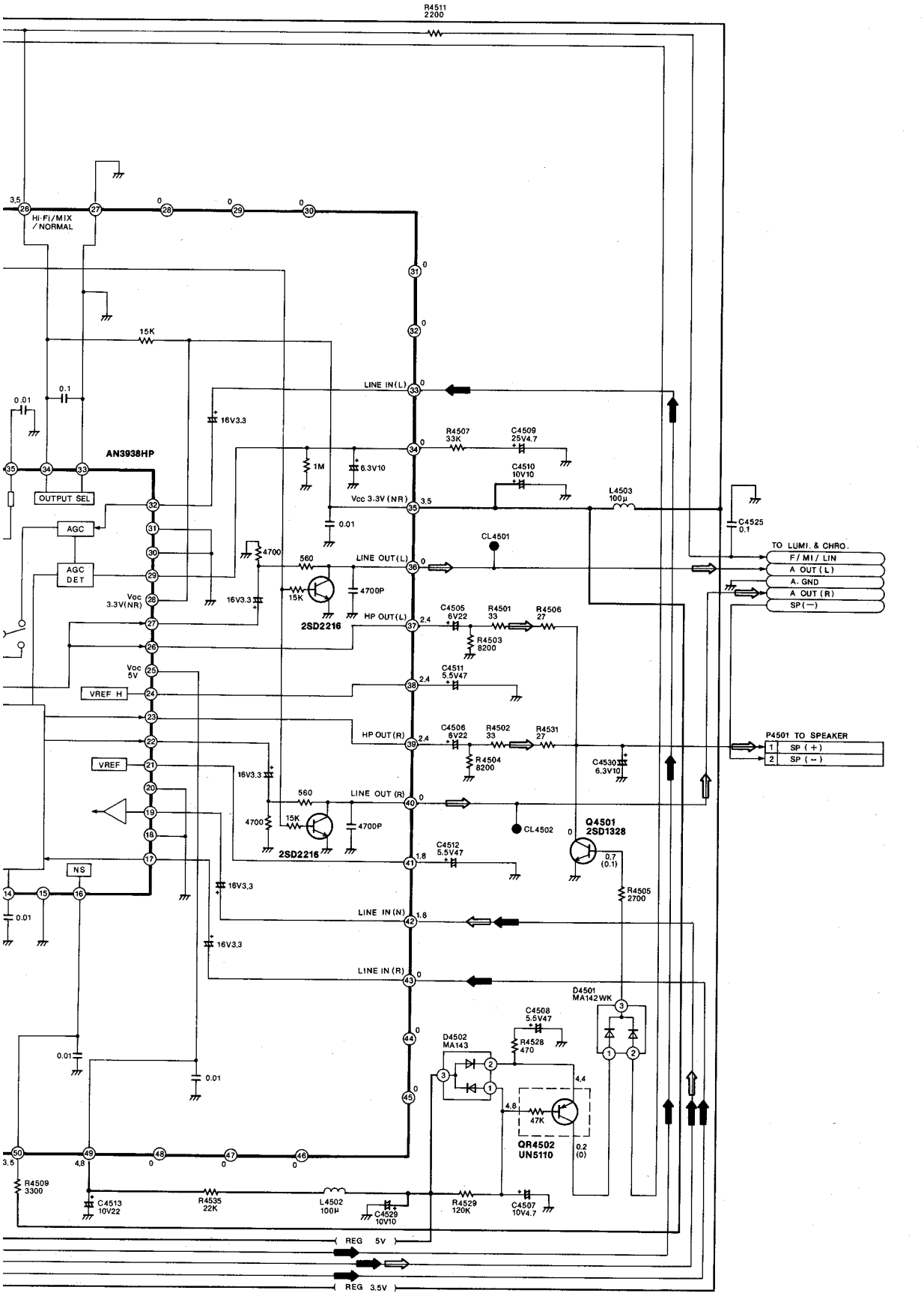
MODE ⇦ MAIN SIGNAL PATH IN PLAYBACK MODE



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

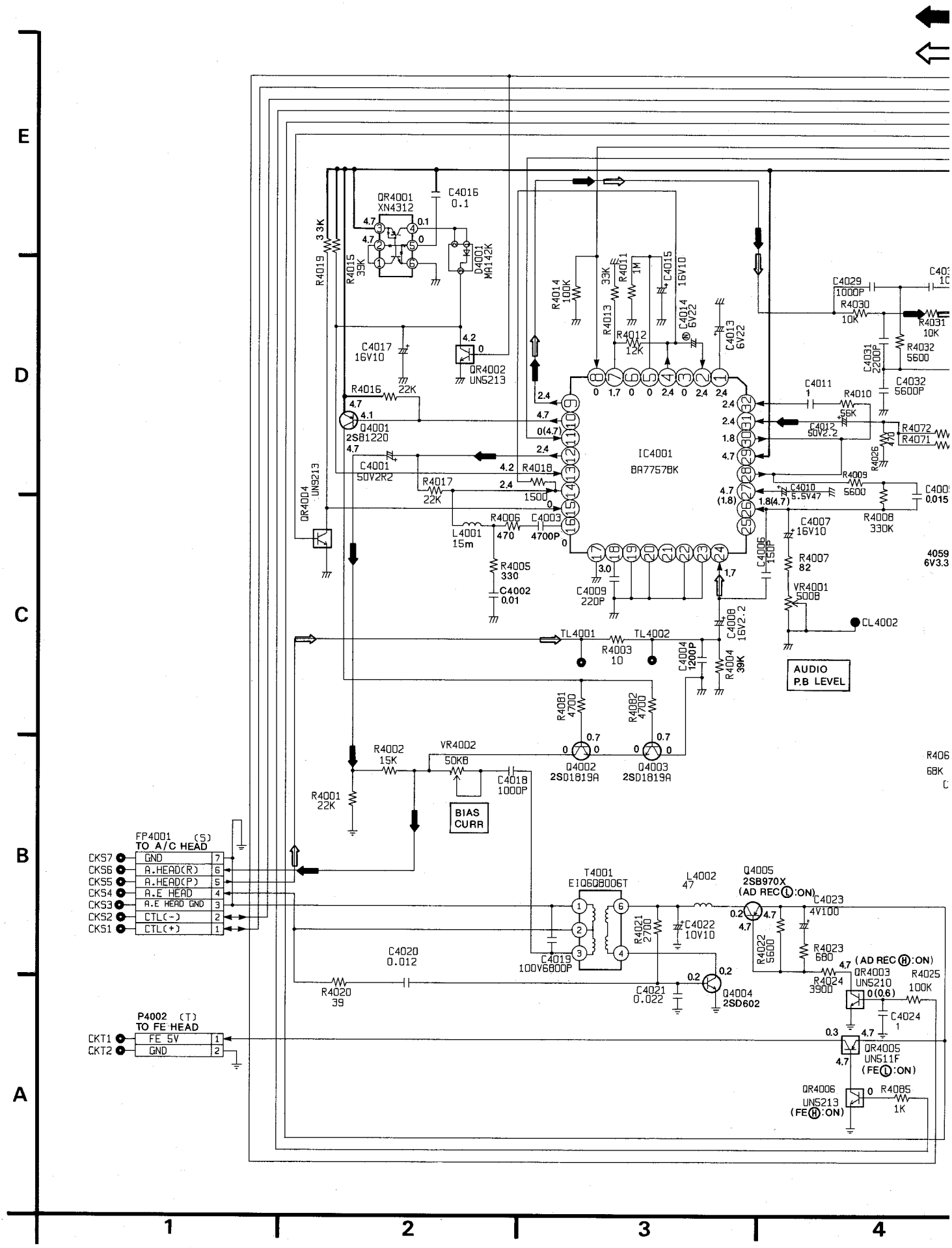
5 6 7 8 9 1

MODE



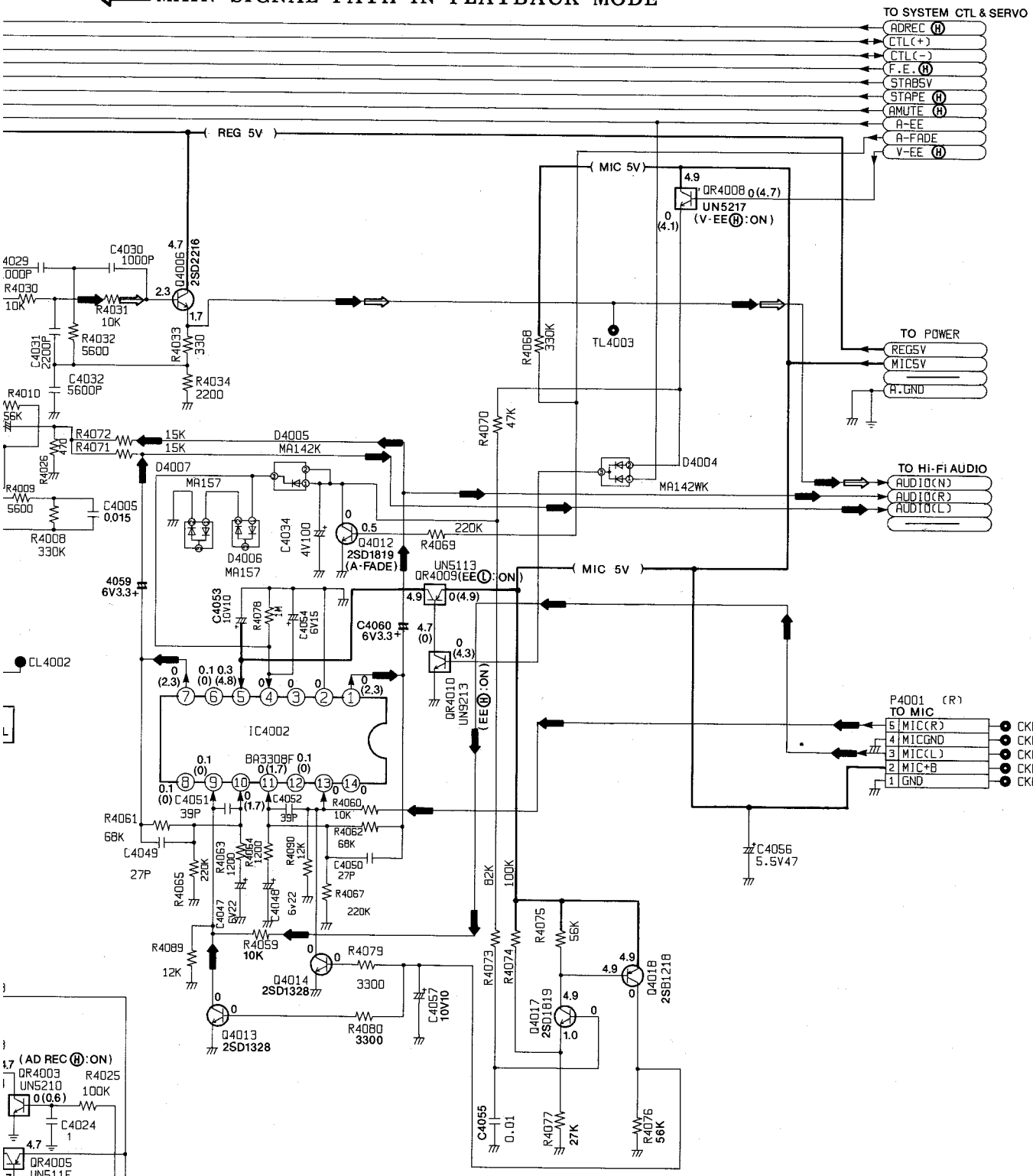
8 | 9 | 10 | 11 | 12

3-22. AUDIO 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. THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

MAIN C.B.A. ADDRESS INFORMATION

POWER Section	
Transistor	
Q1001	G-14
Q1002	E-13
Q1003	G-15
Q1004	G-14
Q1005	F-13
Q1006	E-16
Q1061	G-15
Q1062	G-16
Transistor & Resistor	
QR1002	F-14
QR1006	F-14
QR1061	E-15
Integrated Circuit	
IC1001	F-15
IC1102	E-16
Test Point	
CL1007	G-9
CL1008	G-9
CL1009	G-10
TL1001	E-9
TL1002	E-9
TL1003	E-10
TL1004	E-10
TL1005	E-10
TL1006	E-10
Adjustment	
VR1001	F-9
VR1002	F-9
VR1003	E-8
Connector	
P1001	G-11

ADDRESS INFORMATION

SUB SERVO Section	
Transistor	
Q2101	B-11
Integrated Circuit	
IC2101	B-14
IC2102	A-14
IC2103	B-13
IC2104	B-13
Test Point	
CL2101	B-9
Connector	
FP2101	A-9
FP2102	A-11

ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section	
Transistor	
Q6002	D-13
Q6003	C-16
Q6004	C-10
Q6005	C-10
Q6006	A-17
Q6007	C-10
Q6008	C-10
Q6009	C-10
Q6010	F-16
Q6012	B-17
Transistor & Resistor	
QR6001	C-18
QR6002	C-19
QR6003	D-18
QR6004	D-19
QR6005	C-13
QR6007	A-17
QR6008	E-8
QR6010	D-14
QR6011	E-17
QR6012	B-17
QR6013	D-11
QR6015	D-17
QR6017	B-17
QR6018	E-16
Integrated Circuit	
IC6001	C-13
IC6002	C-14
IC6003	C-13
IC6004	D-8
IC6005	D-14
IC6006	D-13
IC6007	C-17
IC6008	D-14
IC6009	F-17
IC6010	F-17
IC6011	D-6
Test Point	
CL6004	D-7
CL6005	D-7
CL6201	D-6
CL6202	C-9
CL6203	C-9
CL6204	B-10
CL6205	C-10
CL6206	B-7
TL6001	E-7
TL6002	E-7
TL6003	D-4
TL6004	D-7
TL6005	D-7
TL6006	C-8
Adjustment	
VR6201	C-9
Connector	
B6001	E-8
FP6001	G-11
P6001	F-11
P6004	A-7
P6005	G-6
P6006	D-1
P6007	G-5
P6008	C-11
P6009	D-11

ADDRESS INFORMATION

LUMINANCE/CHROMINANCE & HEAD AMP Section			
Transistor		**Integrated Circuit**	
Q3001	D-22	IC3001	E-3
Q3004	D-21	IC3002	F-21
Q3006	F-20	IC3003	D-22
Q3008	E-21	IC3004	D-5
Q3009	E-21	IC5001	B-3
Q3010	E-3	IC8001	E-5
Q3011	G-22	IC8002	F-19
Q3012	E-21	**Test Point**	
Q3014	D-21	CL3001	E-3
Q3016	F-22	CL3002	E-3
Q3017	D-3	CL3003	E-3
Q3018	F-20	CL3004	E-4
Q3019	G-3	CL3005	E-4
Q3020	G-3	CL3006	E-4
Q3021	G-3	CL3007	E-3
Q3022	C-2	CL3008	E-3
Q3025	F-2	CL3009	E-2
Q3026	D-20	CL3010	D-3
Q3027	E-20	CL3011	D-4
Q5001	B-20	CL3012	E-3
Q5002	A-21	CL5001	B-4
Q5003	B-20	CL8001	E-5
Q5004	A-4	CL8002	F-6
Q5005	A-5	CL8003	E-5
Q5006	B-20	CL8004	F-6
Q5007	B-20	TL3001	C-5
Q5008	B-19	TL3003	E-2
Q5009	A-20	TL3004	D-3
Q8001	F-5	TL5001	A-3
Q8002	E-6	TL5002	A-3
Q8009	F-18	TL5003	A-3
Q8013	E-6	TL5004	D-8
Q8014	E-18	TL8001	F-5
Transistor & Resistor		TL8002	E-5
QR3001	D-22	TL8004	E-6
QR3002	D-2	TL8005	E-5
QR3004	D-21	TL8006	E-5
QR3009	E-20	**Adjustment**	
QR3012	E-21	VR3001	D-2
QR3013	D-21	VR3004	D-3
QR3014	D-2	VR3005	F-2
QR3016	D-22	VR3006	D-3
QR3018	D-3	VR3007	E-3
QR3019	D-2	VR3008	E-2
QR3023	F-4	VR8001	E-5
QR3024	C-2	**Connector**	
QR3206	C-3	B3001	E-22
QR5001	C-19	B5001	C-4
QR5002	B-3	FP3001	B-6
QR5003	C-3	FP5001	A-3
QR5004	C-21	P3001	G-2
QR8101	E-19	P3002	G-4

ADDRESS INFORMATION

VITC Section	
Transistor	
Q3801	B-22
Q3802	B-1
Q3803	B-22
Q3804	C-2
Q3809	B-22
Q3810	C-22
Transistor & Resistor	
QR3801	C-1
QR3807	C-22
QR3808	C-22
Test Point	
CL3801	A-1
Integrated Circuit	
IC3801	B-22
IC3802	B-22
IC3803	B-2
IC3805	C-21
Adjustment	
VR3802	A-2

ADDRESS INFORMATION

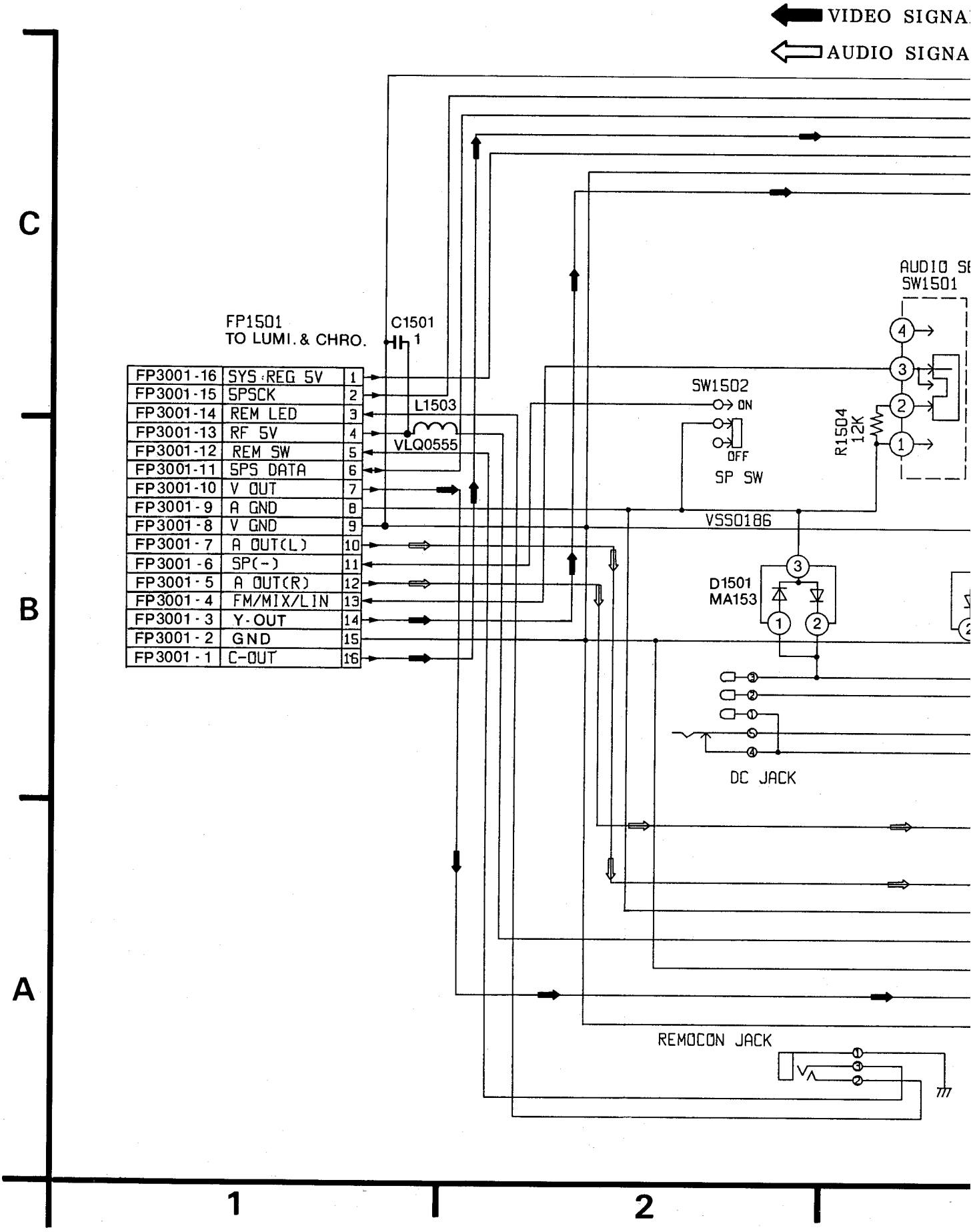
Hi-Fi AUDIO Section	
Transistor	
Q4501	B-18
Transistor & Resistor	
QR4502	B-18
QR4505	B-18
Integrated Circuit	
IC4501	B-6
Test Point	
CL4501	B-7
CL4502	B-6
CL4503	C-5
CL4505	C-5
TL4504	B-5
Adjustment	
VR4501	C-5
VR4502	C-5

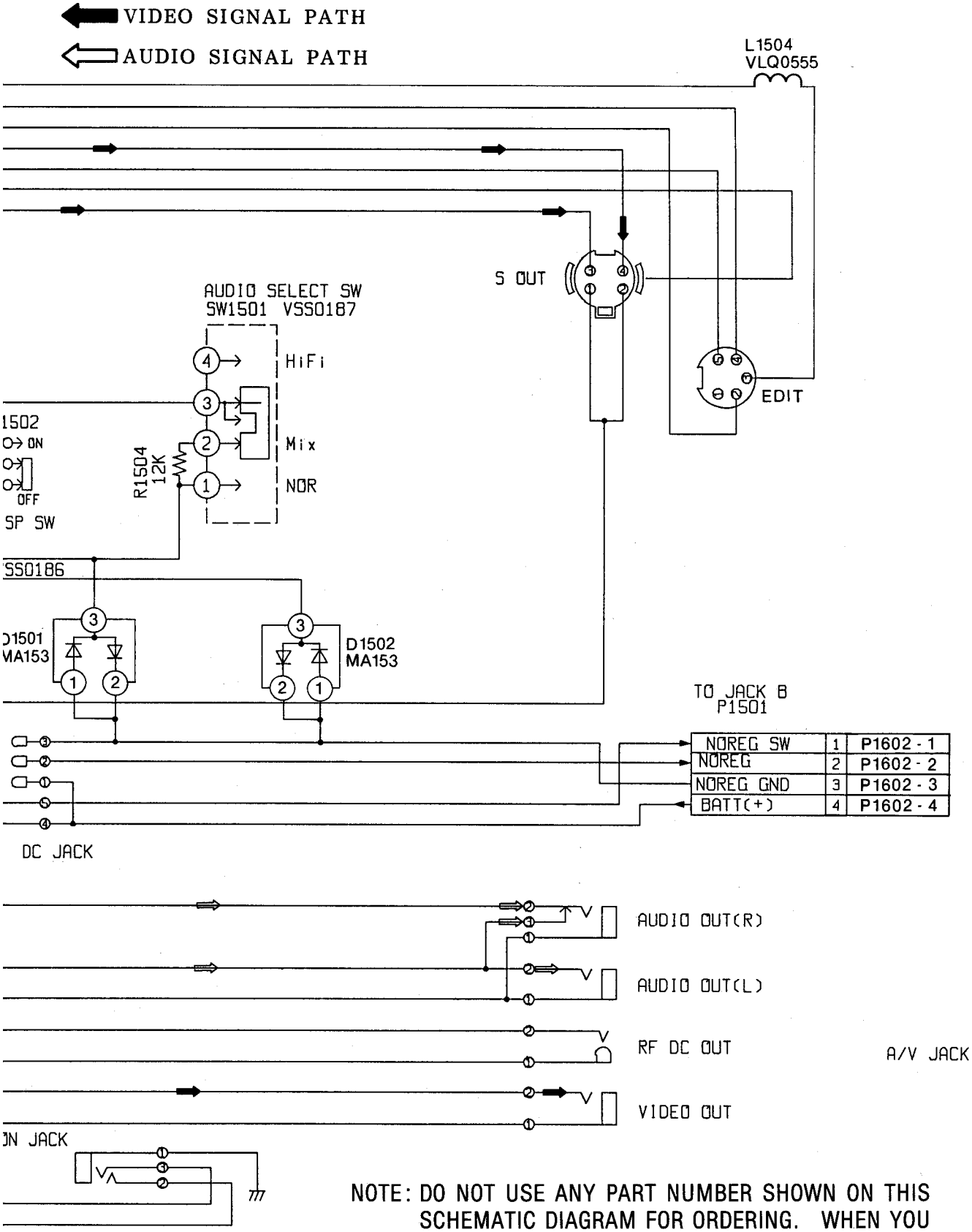
ADDRESS INFORMATION

AUDIO Section	
Transistor	
Q4001	B-15
Q4002	A-16
Q4003	A-16
Q4004	A-15
Q4005	A-15
Q4006	B-15
Q4010	B-16
Q4012	F-7
Q4013	G-17
Q4014	F-17
Q4017	F-7
Q4018	F-7
Transistor & Resistor	
QR4001	B-15
QR4002	B-15
QR4003	A-16
QR4004	B-16
QR4005	A-16
QR4006	A-16
QR4008	F-7
QR4009	F-7
Integrated Circuit	
IC4001	B-16
IC4002	F-17
Test Point	
CL4001	B-8
CL4002	B-8
TL4001	B-8
TL4002	A-7
TL4003	B-7
Adjustment	
VR4001	B-8
VR4002	B-8
Connector	
FP4001	A-8
P4001	G-6
P4002	C-1

ADDRESS INFORMATION

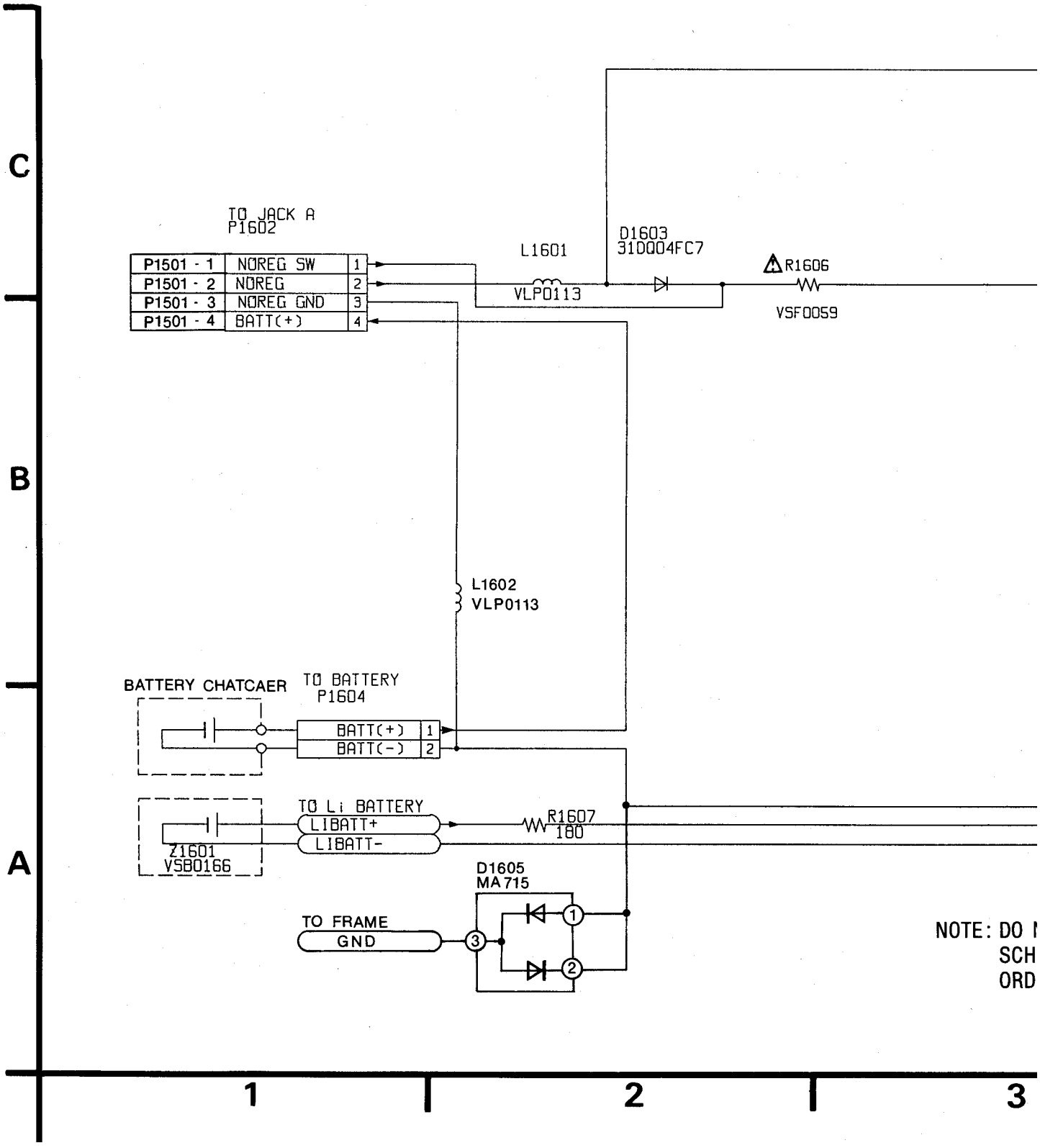
3-24. AV JACK (A) SCHEMATIC DIAGRAM

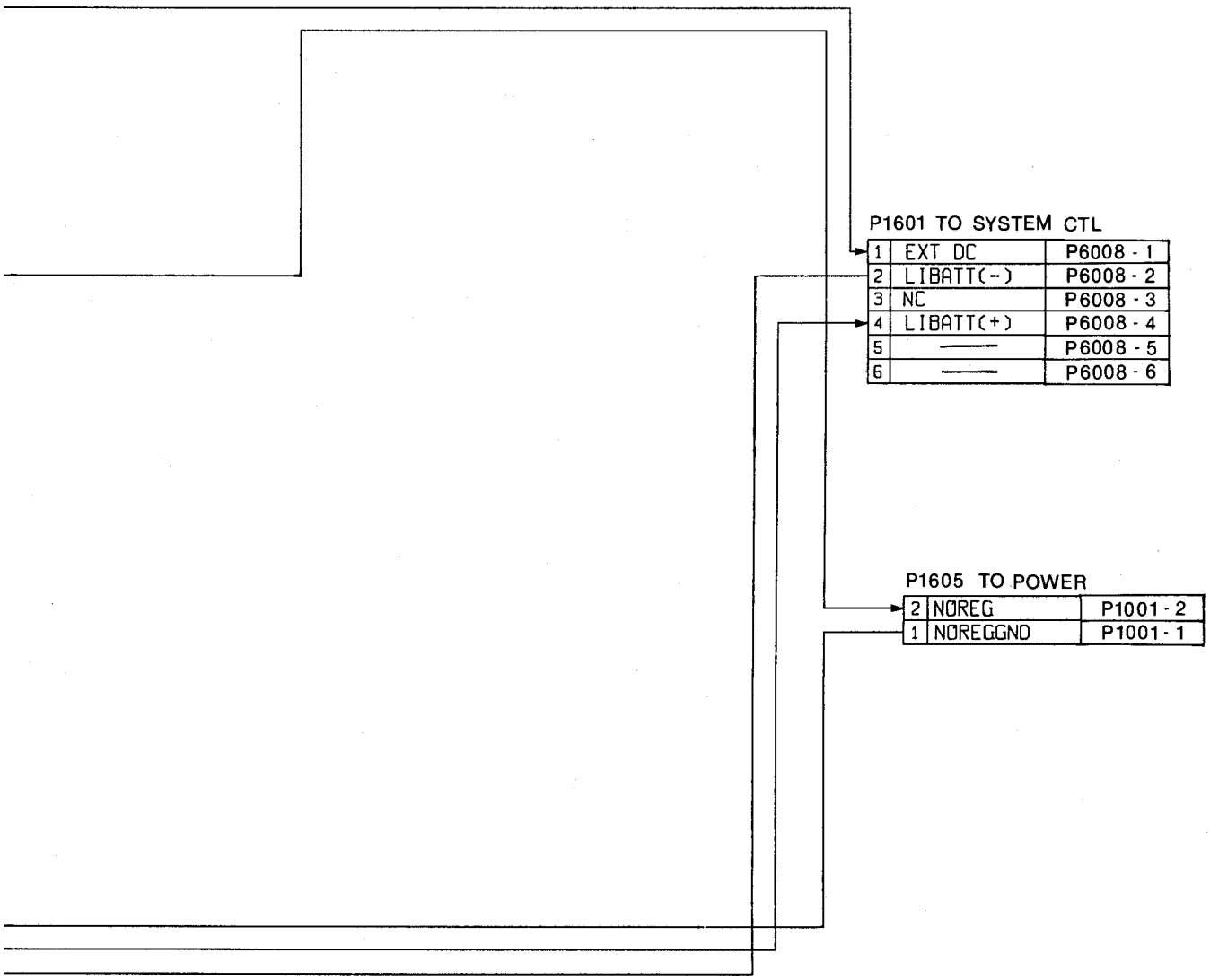




NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-26. AV JACK (B) SCHEMATIC DIAGRAM

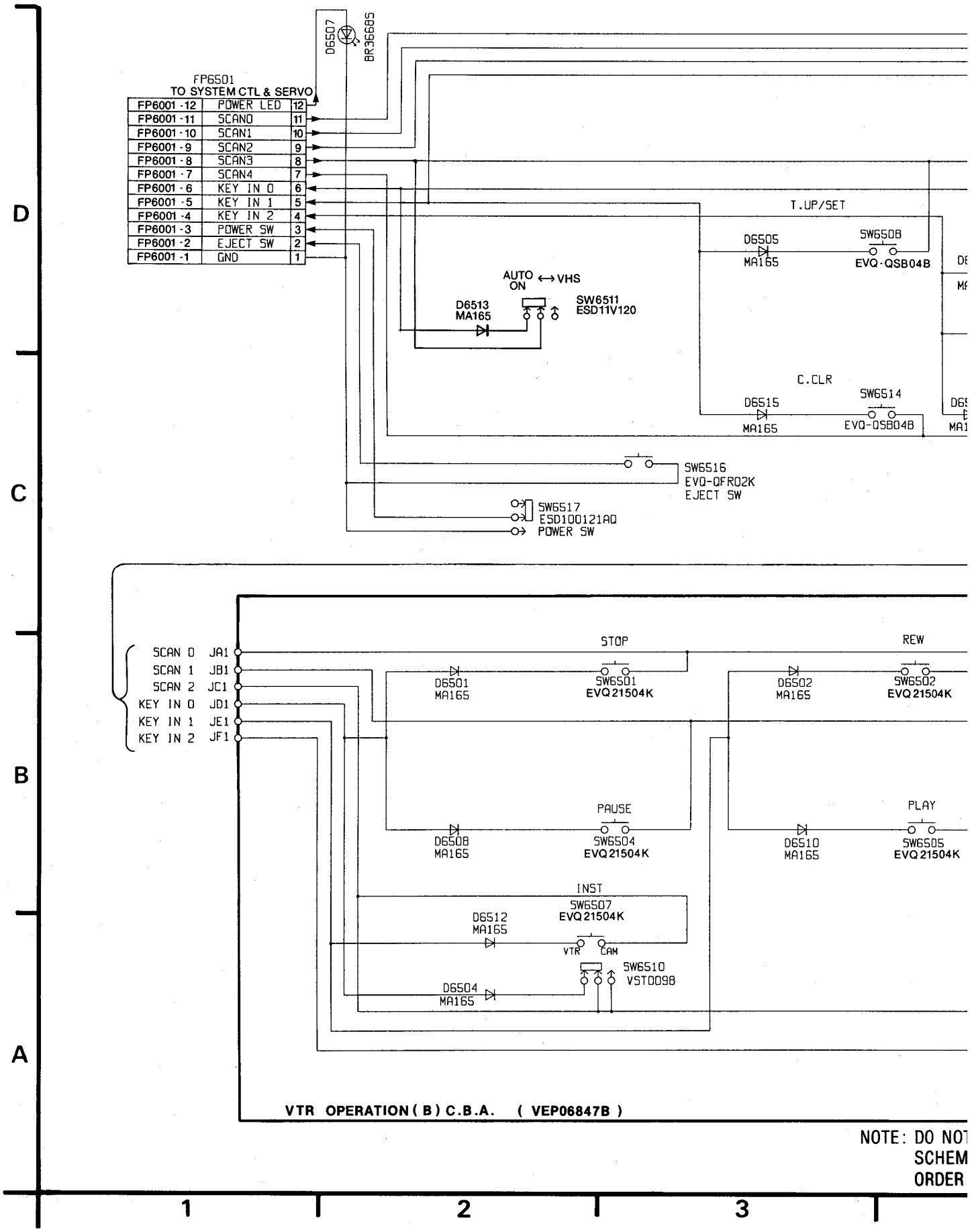


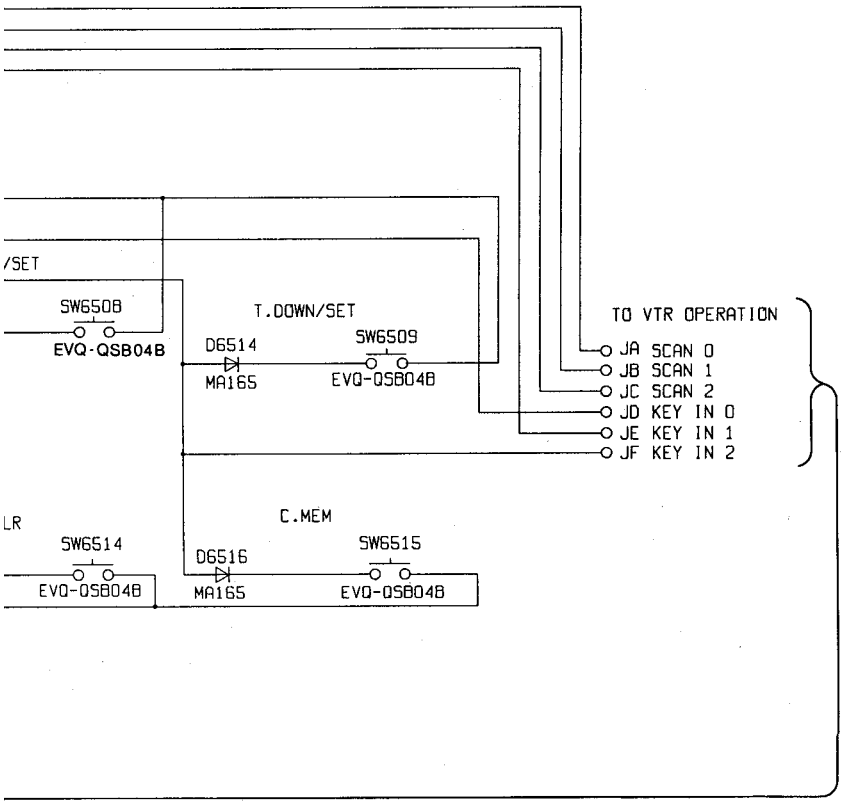


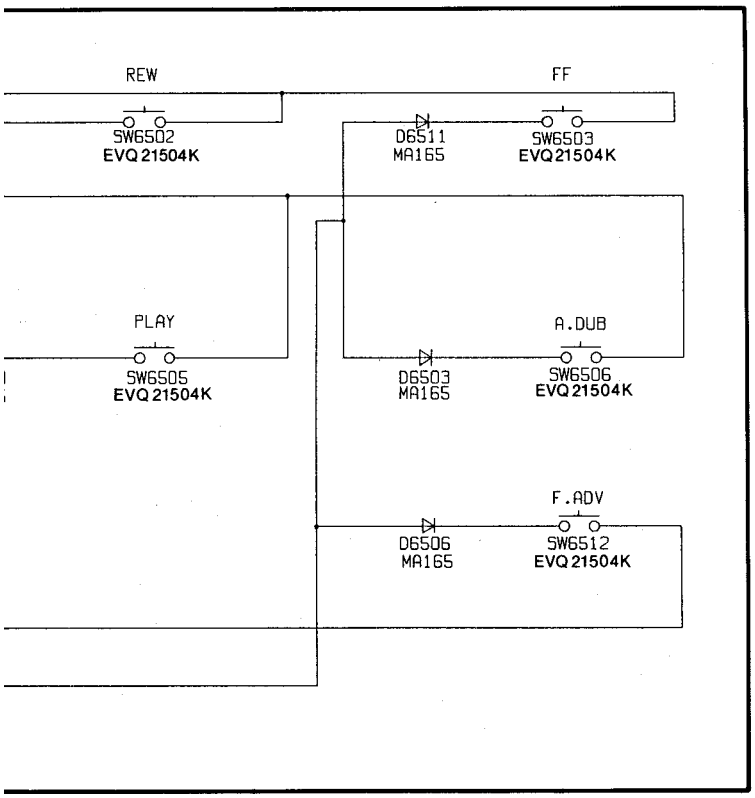
:: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3 4 5

3-28. VTR OPERATION SCHEMATIC DIAGRAM

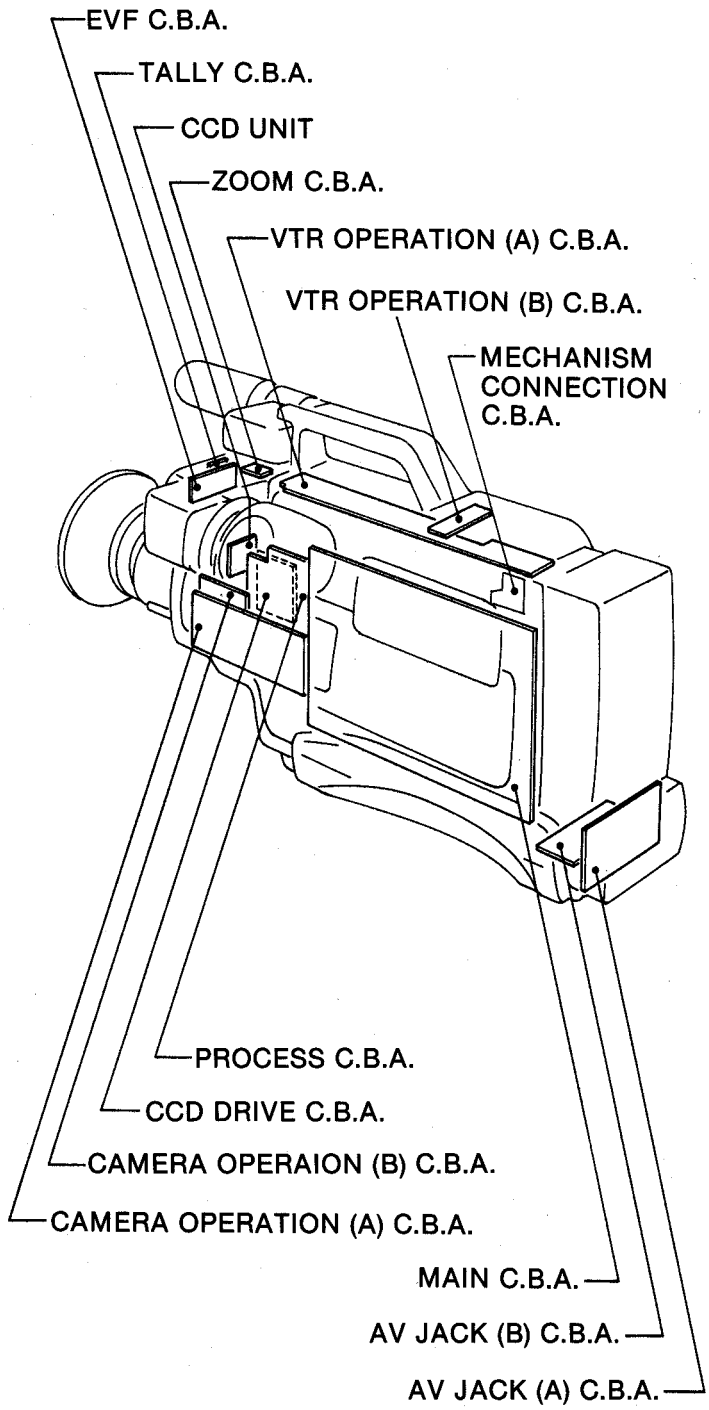




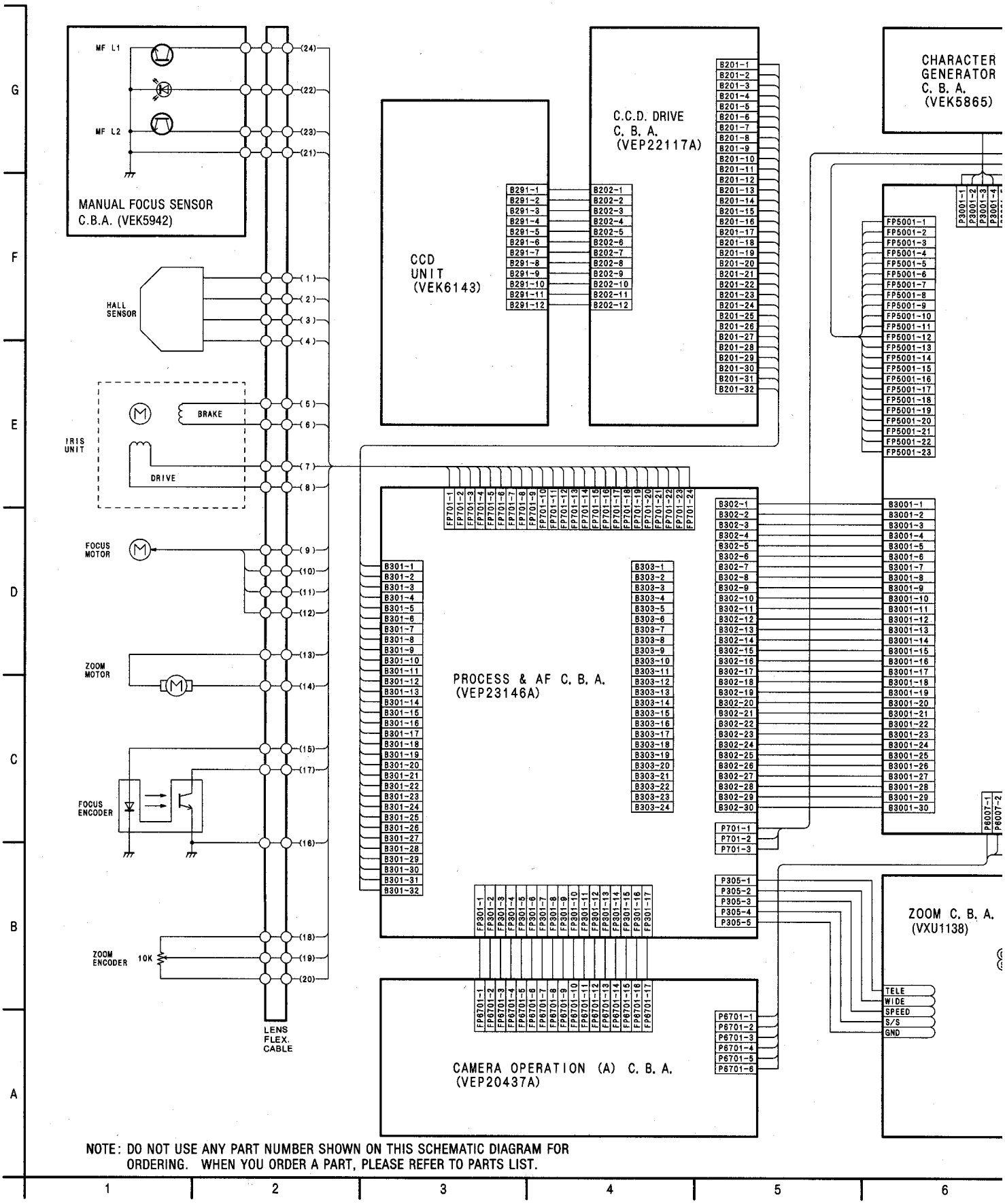


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

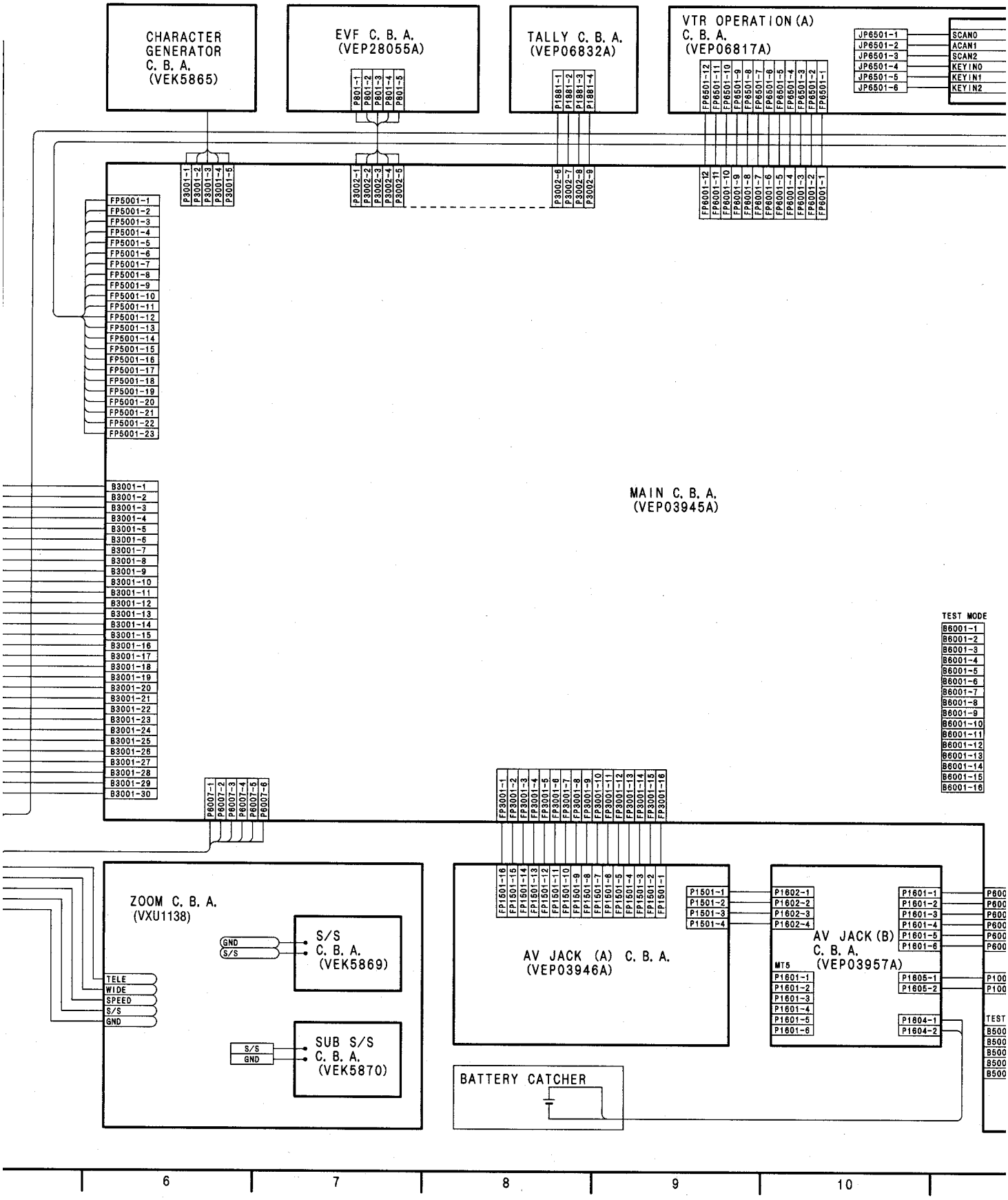
3-30. CIRCUIT BOARD LAYOUT

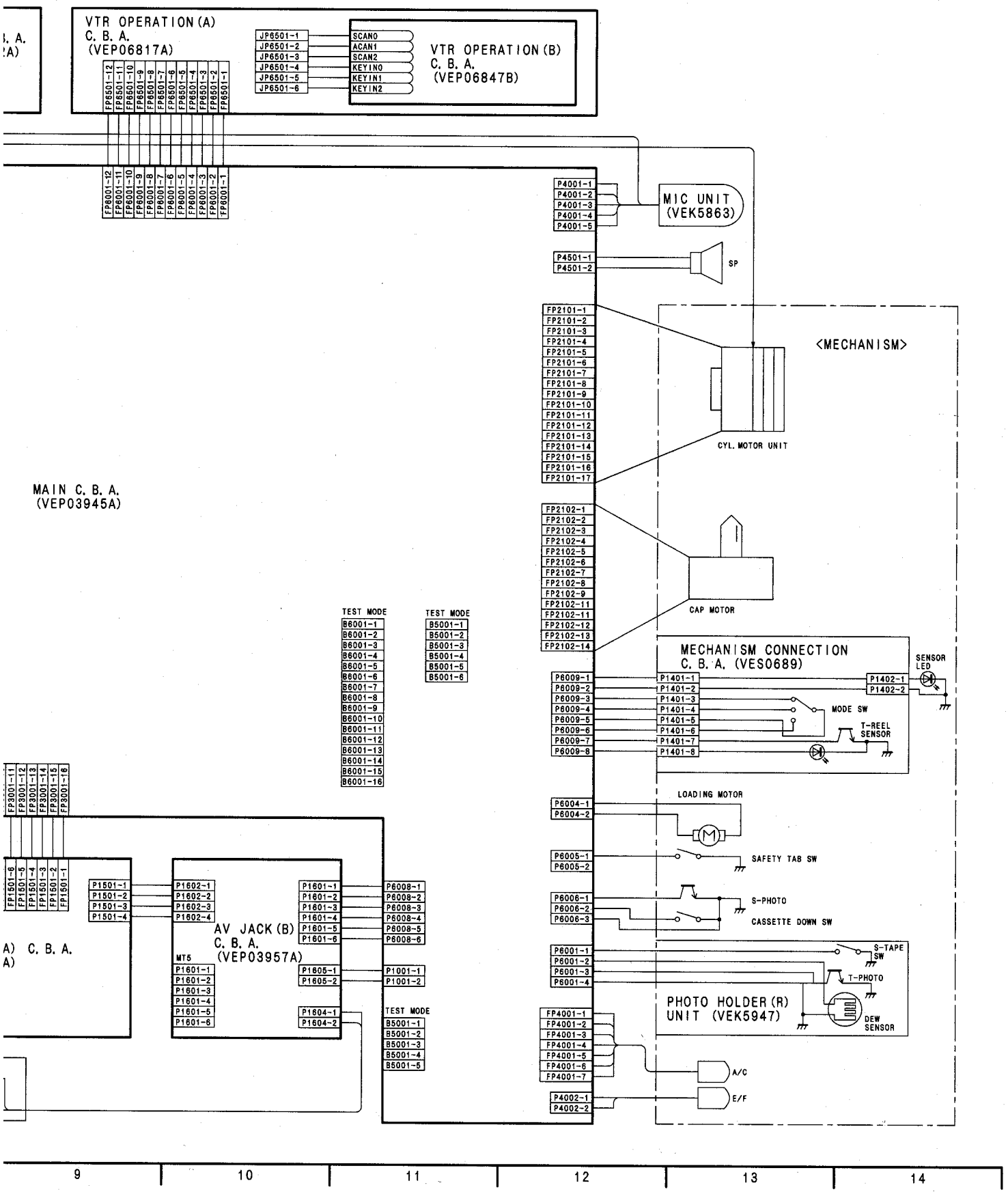


3-31. INTERCONNECTION SCHEMATIC DIAGRAM



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

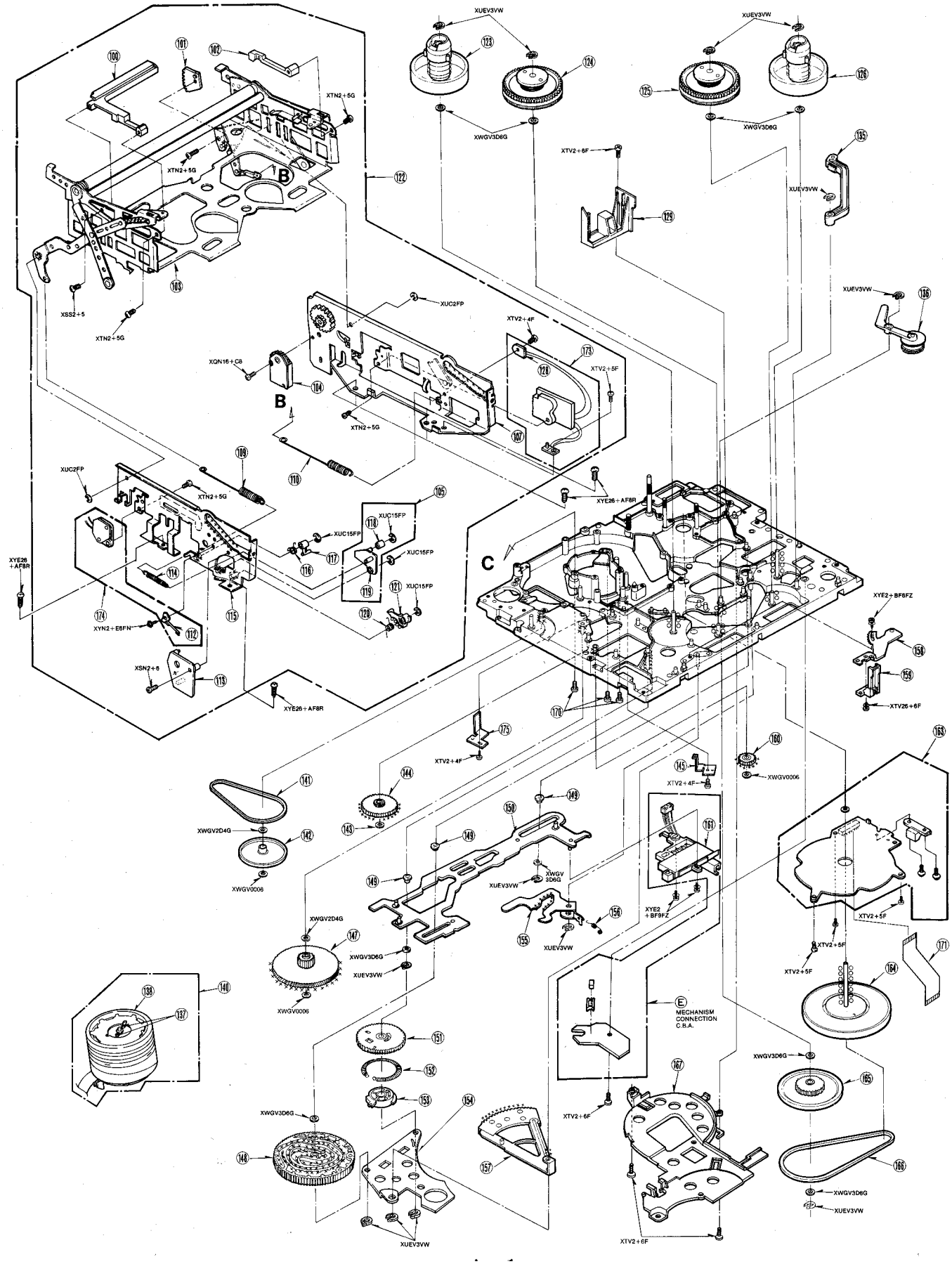

CHARACTER GENERATOR C. B. A. (VEK5865)
EVF C. B. A. (VEP28055A)
TALLY C. B. A. (VEP06832A)
VTR OPERATION (A) C. B. A. (VEP06817A)
MAIN C. B. A. (VEP03945A)
ZOOM C. B. A. (VXU1138)
S/S C. B. A. (VEK5869)
SUB S/S C. B. A. (VEK5870)
AV JACK (A) C. B. A. (VEP03946A)
AV JACK (B) C. B. A. (VEP03957A)
BATTERY CATCHER
TEST MODE
SCAN0
ACAN1
SCAN2
KEYIN0
KEYIN1
KEYIN2
TELE
WIDE
SPEED
S/S
GND
6
7
8
9
10


VTR OPERATION (A)
C. B. A.
(VEP06817A)
VTR OPERATION (B)
C. B. A.
(VEP06847B)
JP6501-1
JP6501-2
JP6501-3
JP6501-4
JP6501-5
JP6501-6
SCAN0
ACAN1
SCAN2
KEYIN0
KEYIN1
KEYIN2
FP6501-12
FP6501-11
FP6501-10
FP6501-9
FP6501-8
FP6501-7
FP6501-6
FP6501-5
FP6501-4
FP6501-3
FP6501-2
FP6501-1
FP6001-12
FP6001-11
FP6001-10
FP6001-9
FP6001-8
FP6001-7
FP6001-6
FP6001-5
FP6001-4
FP6001-3
FP6001-2
FP6001-1
P4001-1
P4001-2
P4001-3
P4001-4
P4001-5
MIC UNIT
(VEK5863)
P4501-1
P4501-2
SP
FP2101-1
FP2101-2
FP2101-3
FP2101-4
FP2101-5
FP2101-6
FP2101-7
FP2101-8
FP2101-9
FP2101-10
FP2101-11
FP2101-12
FP2101-13
FP2101-14
FP2101-15
FP2101-16
FP2101-17
<MECHANISM>
CYL. MOTOR UNIT
MAIN C. B. A.
(VEP03945A)
FP2102-1
FP2102-2
FP2102-3
FP2102-4
FP2102-5
FP2102-6
FP2102-7
FP2102-8
FP2102-9
FP2102-11
FP2102-11
FP2102-12
FP2102-13
FP2102-14
CAP MOTOR
TEST MODE
B6001-1
B6001-2
B6001-3
B6001-4
B6001-5
B6001-6
B6001-7
B6001-8
B6001-9
B6001-10
B6001-11
B6001-12
B6001-13
B6001-14
B6001-15
B6001-16
TEST MODE
B5001-1
B5001-2
B5001-3
B5001-4
B5001-5
B5001-6
MECHANISM CONNECTION
C. B. A. (VES0689)
SENSOR
LED
P6009-1
P6009-2
P6009-3
P6009-4
P6009-5
P6009-6
P6009-7
P6009-8
P1401-1
P1401-2
P1401-3
P1401-4
P1401-5
P1401-6
P1401-7
P1401-8
P1402-1
P1402-2
MODE SW
T-REEL
SENSOR
LOADING MOTOR
P6004-1
P6004-2
P6005-1
P6005-2
SAFETY TAB SW
P6006-1
P6006-2
P6006-3
S-PHOTO
CASSETTE DOWN SW
P6001-1
P6001-2
P6001-3
P6001-4
S-TAPE
SW
T-PHOTO
DEW
SENSOR
PHOTO HOLDER (R)
UNIT (VEK5947)
FP4001-1
FP4001-2
FP4001-3
FP4001-4
FP4001-5
FP4001-6
FP4001-7
A/C
E/F
P4002-1
P4002-2
FP3001-11
FP3001-12
FP3001-13
FP3001-14
FP3001-15
FP3001-16
FP1501-6
FP1501-5
FP1501-4
FP1501-3
FP1501-2
FP1501-1
P1501-1
P1501-2
P1501-3
P1501-4
P1602-1
P1602-2
P1602-3
P1602-4
AV JACK (B)
C. B. A.
(VEP03957A)
MT5
P1601-1
P1601-2
P1601-3
P1601-4
P1601-5
P1601-6
P6008-1
P6008-2
P6008-3
P6008-4
P6008-5
P6008-6
P1605-1
P1605-2
P1001-1
P1001-2
P1604-1
P1604-2
TEST MODE
B5001-1
B5001-2
B5001-3
B5001-4
B5001-5
A) C. B. A.
A)
9
10
11
12
13
14

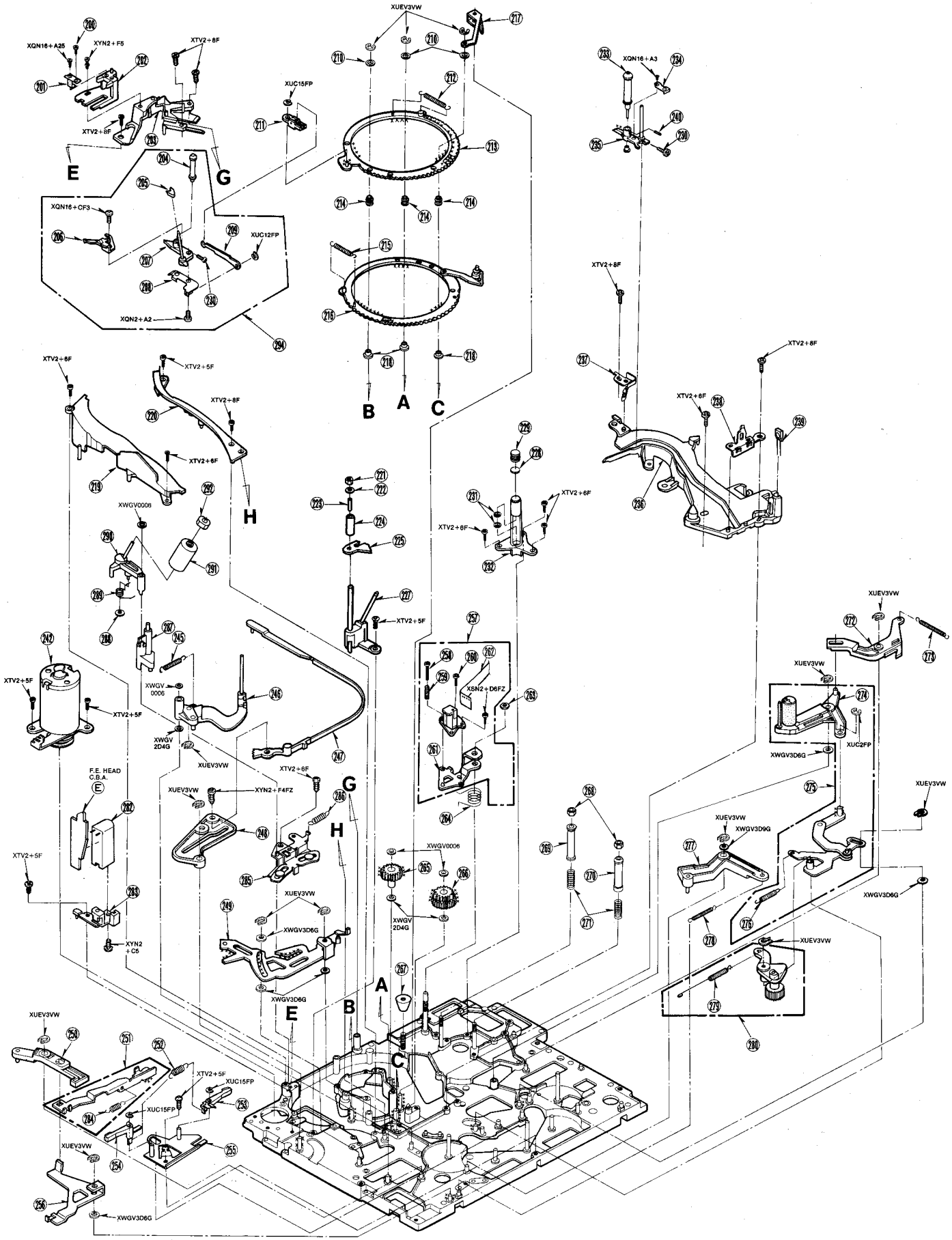
SECTION 4
EXPLODED VIEWS & PARTS LISTS

4-1. EXPLODED VIEWS

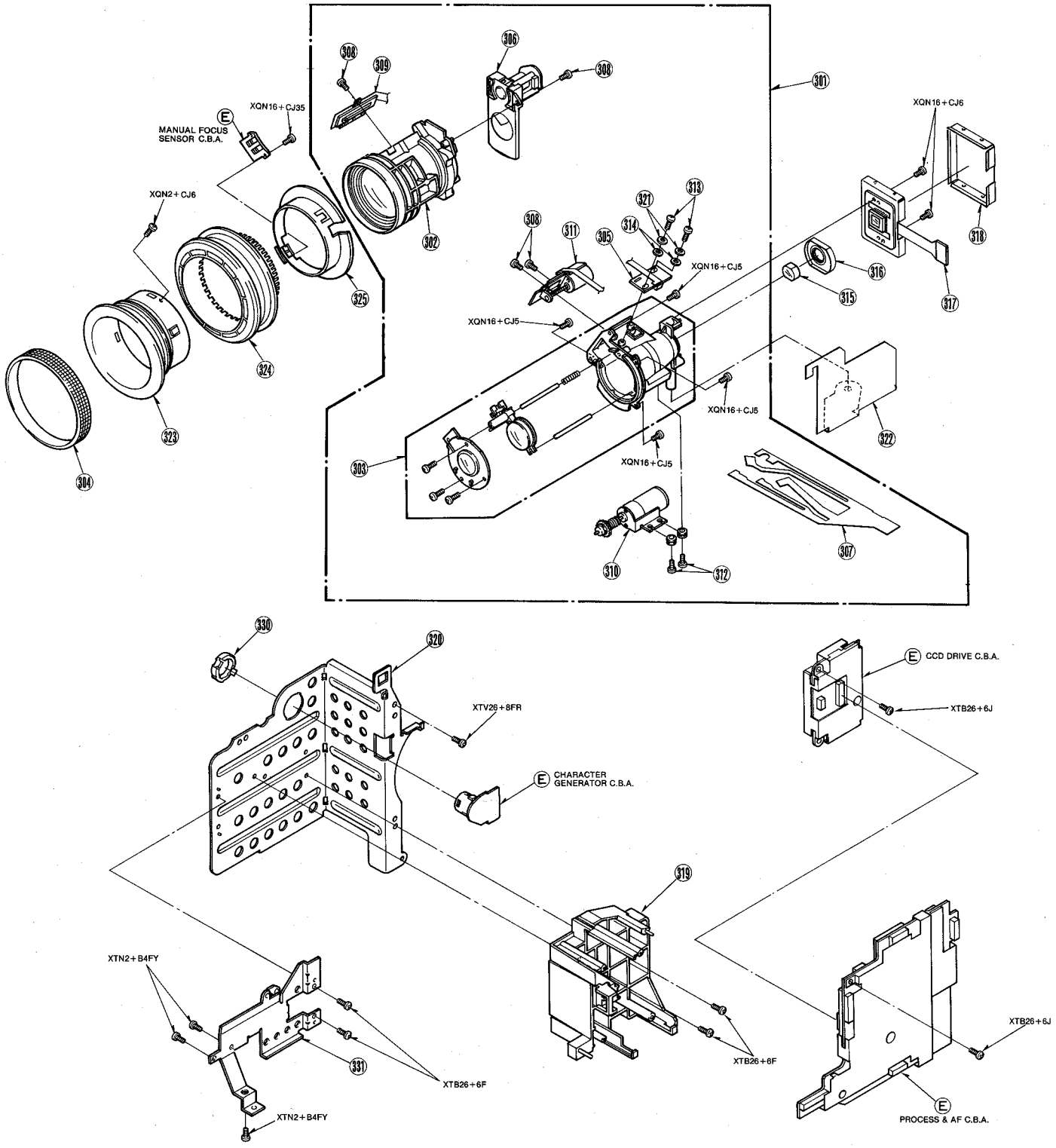
❶ VTR MECHANISM SECTION (1)



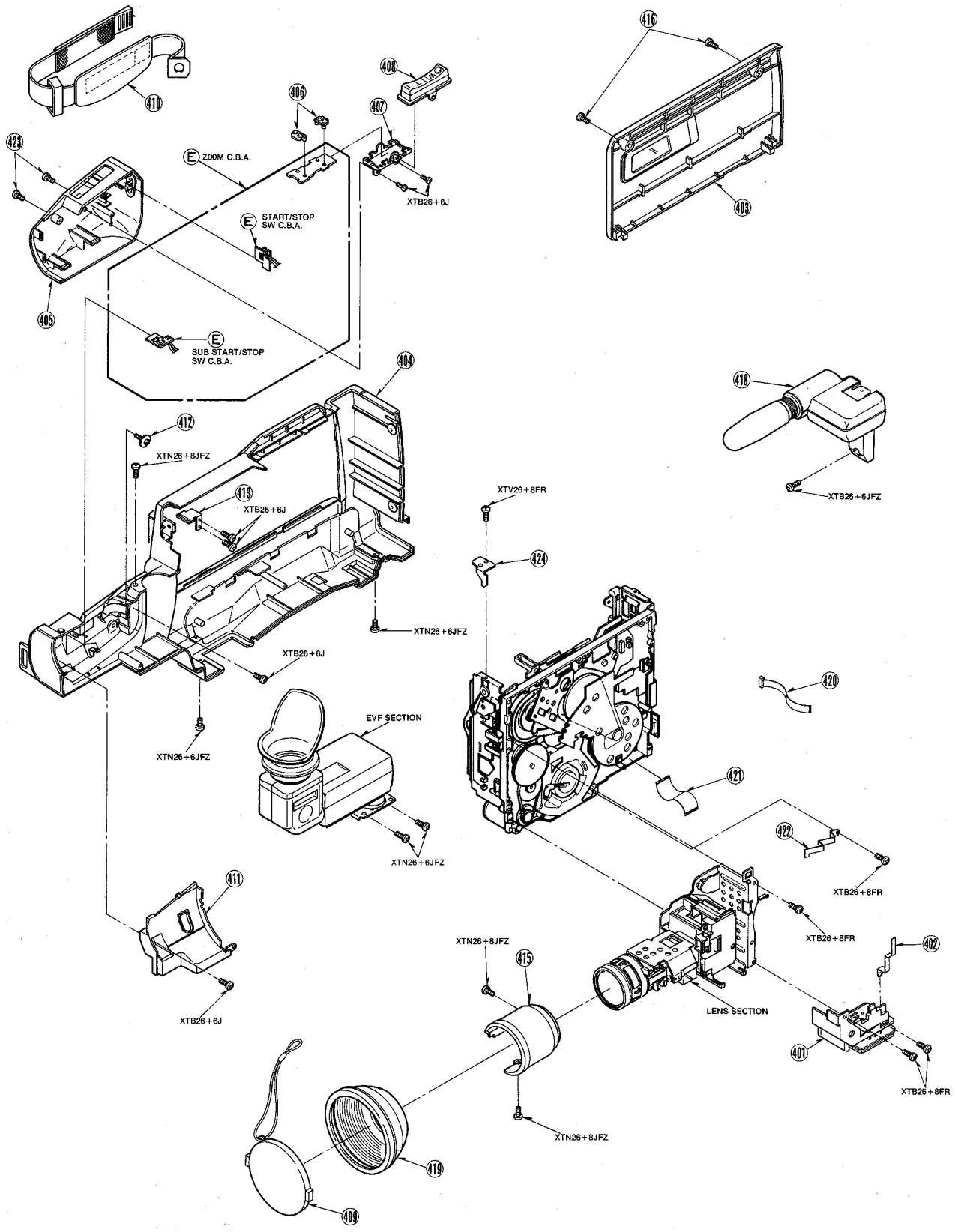
❷ VTR MECHANISM SECTION (2)



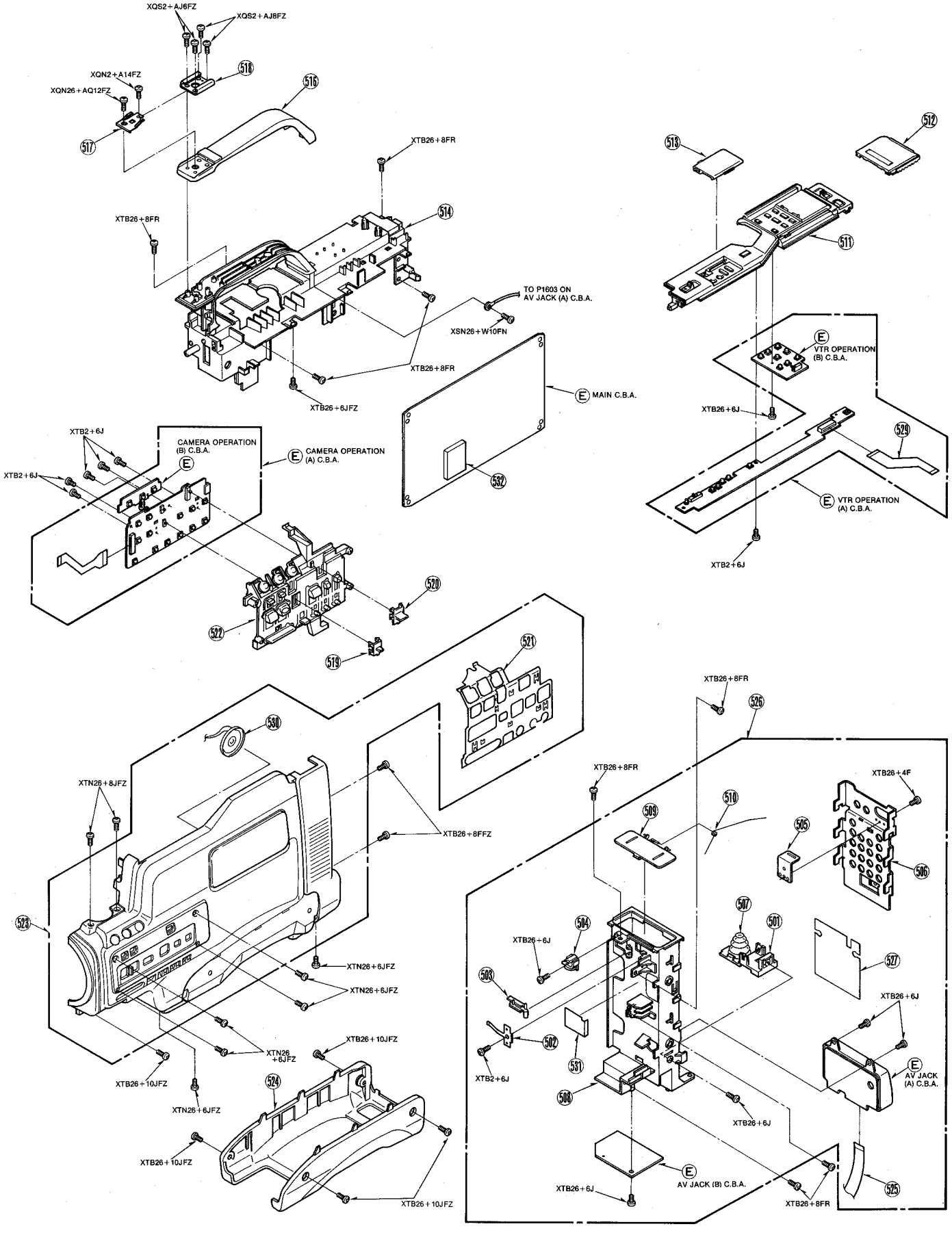
❸ CAMERA LENS SECTION



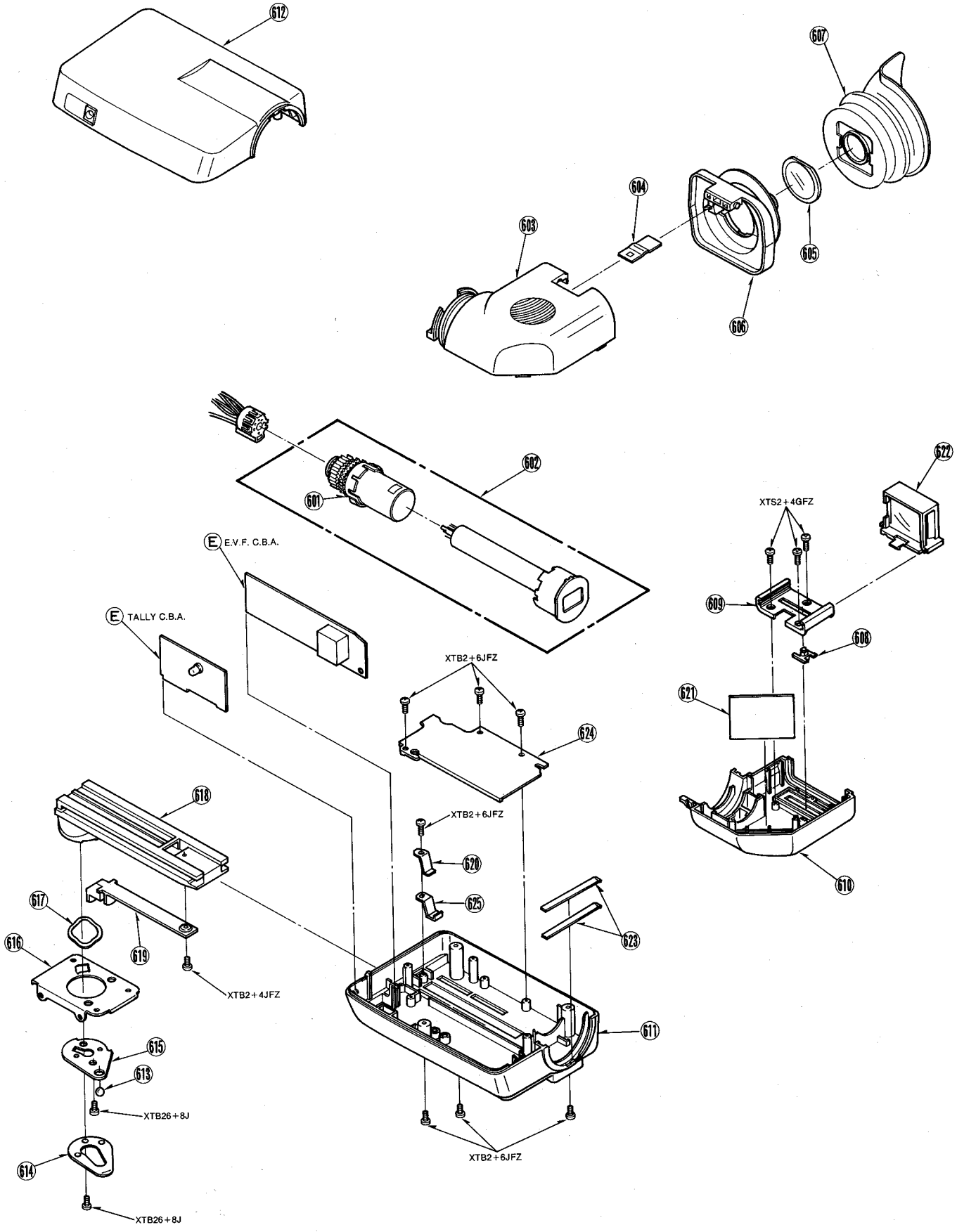
❹ FRAME & CASING PARTS SECTION (1)



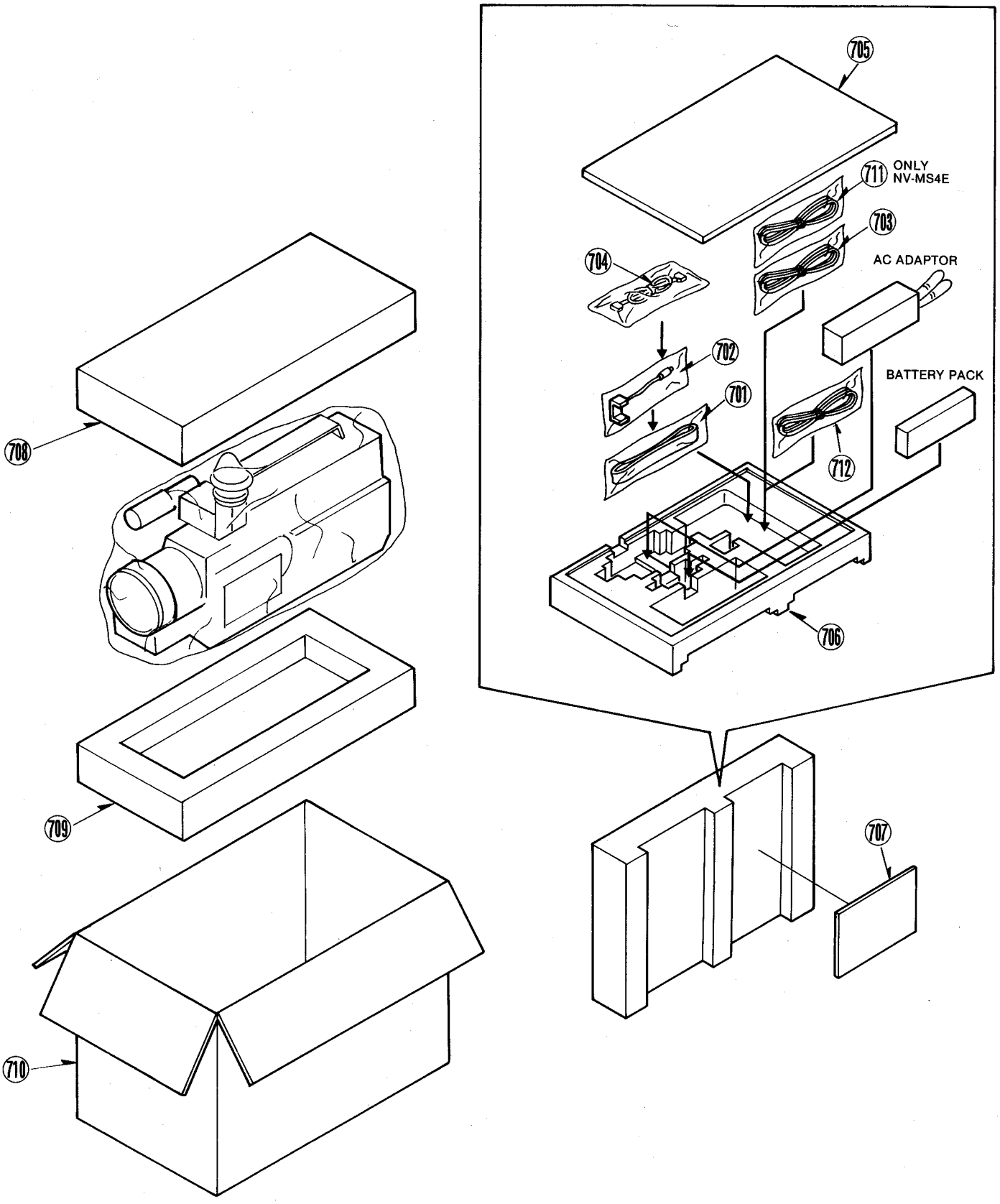
❺ FRAME & CASING PARTS SECTION (2)



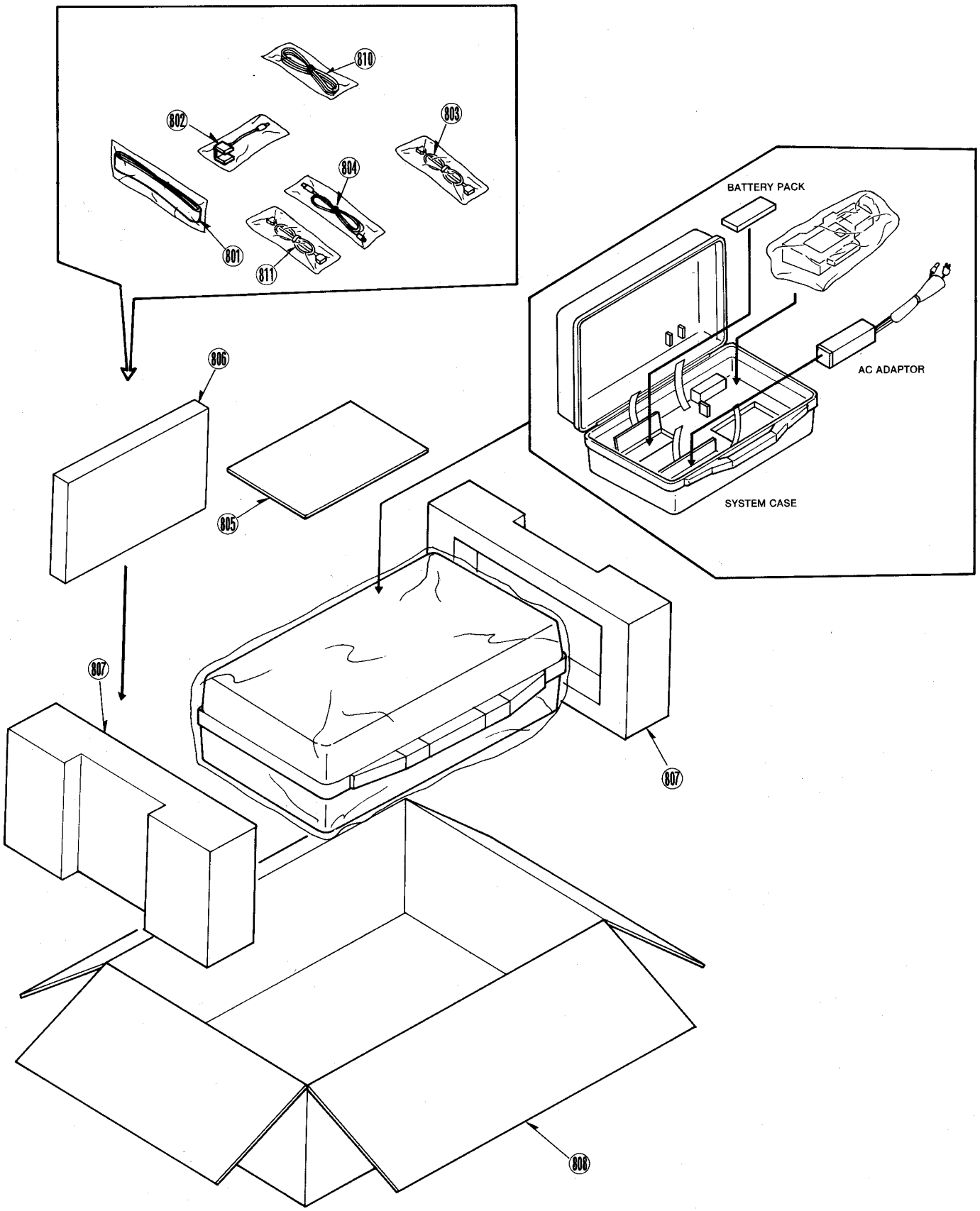
❻ EVF SECTION



❼ PACKING PARTS & ACCESSORIES SECTION
(NV-MS4E/A, M9000EN, M9900MC)



❽ PACKING PARTS & ACCESSORIES SECTION (NV-MS4B)



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
100(1)		VMD0954	CASSETTE GUIDE (L)	1	
101(1)		VDG0610	MAIN ARM GEAR (A)	1	
102(1)		VMD0953	CASSETTE GUIDE (R)	1	
103(1)		VXA4856	CASSETTE HOLDER UNIT	1	
104(1)		VXP1139	DAMPER UNIT	1	
105(1)		VXL1984	LOCK LEVER UNIT	1	
107(1)		VXA3863	STAND (R) UNIT	1	
109(1)		VMB1329	HOLDER SPRING (L)	1	
110(1)		VMB1621	HOLDER SPRING (R)	1	
112(1)		VSH0026	LEAF SW	1	
113(1)		VMD0952	LEAF SW COVER (O)	1	
114(1)		VMB1330	LOCK BOARD SPRING	1	
115(1)		VXA3023	STAND (L) UNIT	1	
116(1)		VMB1453	LOCK LEVER (B) SPRING	1	
117(1)		VML1650	LOCK LEVER (B)	1	
118(1)		VDP1096	LOCK ROLLER (O)	1	
119(1)		VXL1648	LOCK BOARD UNIT	1	
120(1)		VMB1331	LOCK LEVER (A) SPRING	1	
121(1)		VML1649	LOCK LEVER (A)	1	
122(1)		VXA4832	CASSETTE UP (O) UNIT	1	
123(1)		VXR0200	SUPPLY REEL TABLE	1	
124(1)		VXP0900B	SUPPLY CLUTCH UNIT	1	
125(1)		VXP0901B	TAKE-UP CLUTCH UNIT	1	
126(1)		VXR0201	TAKE-UP REEL TABLE	1	
128(1)		VSQ0808	DEW DETECTOR UNIT	1	
129(1)		VGQ0888	CASSETTE OPENER	1	
135(1)		VXZ0246	SOFT BRAKE (T) UNIT	1	
136(1)		VXP0899B	DRIVE GEAR ARM UNIT	1	
137(1)		VHD0593	CYLINDER UNIT SCREW	2	
138(1)		VEH0583	UPPER CYLINDER UNIT	1	
140(1)		VEG0992	CYLINDER UNIT	1	
141(1)		VDV0167	LOADING BELT	1	
142(1)		VDG0370	INTERMEDIATE PULLEY GEAR	1	
143(1)		VMX0653	CUT WASHER	1	
144(1)		VDG0372	DRIVE GEAR (B)	1	
145(1)		VXS0112	EARTH BRUSH UNIT	1	
147(1)		VDG0371	DRIVE GEAR (A)	1	
148(1)		VDG0202	CAM GEAR	1	
149(1)		VMX0388	THRUST WASHER	3	
150(1)		VXL1654	MAIN ROD (K) UNIT	1	
151(1)		VDG0211	LOADING GEAR (C) (2)	1	
152(1)		VMB1324	LOADING GEAR (C) SPRING	1	
153(1)		VDG0210	LOADING GEAR (C) (1)	1	
154(1)		VMA7228	GUARD PLATE	1	
155(1)		VML1707	DRIVE ARMKICK LEVER	1	
156(1)		VMB1388	DRIVE ARMKICK LEVER SPRING	1	
157(1)		VXP0632	SECTOR GEAR UNIT	1	
158(1)		VMA6560	SAFETY TAB SW BASE	1	
159(1)		VSH0023	SAFETY TAB SW	1	
160(1)		VDG0207	DRIVE GEAR (C)	1	
161(1)		VSS0193	MODE SW	1	
163(1)		VEK5926	STATOR UNIT	1	
164(1)		VXP1355	ROTOR UNIT	1	
165(1)		VXP0897	MAIN PULLEY UNIT	1	
166(1)		VDV0155	CAPSTAN BELT	1	
167(1)		VMD0935	BELT COVER	1	
170(1)		VHD0750	CYLINDER SCREW	3	
171(1)		VWJ0636	CAPSTAN FPC	1	
173(1)		VEK6098	PHOTO TR (R) U.	1	
174(1)		VEK6035	PHOTO TR (L) U.	1	
175(1)		VMA8865	RT-FPC SHIELD PLATE	1	
200(2)		VHD0282	P2 ADJUST PLATE SCREW	1	
201(2)		VMA6542	P2 ADJUST PLATE	1	
202(2)		VMD0701	SUPPLY POST STOPPER	1	
203(2)		VMD1161	V STOPPER BASE	1	
204(2)		VXP0841	SUPPLY ROLLER POST UNIT	1	
205(2)		VGQ0842	P2 CAP	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
206(2)		VMD0769	TAPE PROTECTOR	1	
207(2)		VXA2221	SUPPLY SHAFT HOLDER(1)UNIT	1	
208(2)		VXA2256	SUPPLY SHAFT HOLDER ANGLE	1	
			UNIT	1	
209(2)		VMM0144	CONNECTION ROD	1	
210(2)		VMX1282	RING GUIDE SLEEVE UNIT	3	
211(2)		VXA2231	CONNECTION TIE UNIT	1	
212(2)		VMB1319	LOADING SPRING	1	
213(2)		VXA2253	LOADING RING (S) (1) UNIT	1	
214(2)		VDP1160	RING GUIDE ROLLER	3	
215(2)		VMB1319	LOADING SPRING	1	
216(2)		VXA3576	LOADING RING (T) (1) UNIT	1	
217(2)		VMC0250	PRESSER SPRING	1	
218(2)		VMX1279	RING GUIDE SLEEVE	3	
219(2)		VMD1155	LOADING GUIDE (S) (1)	1	
220(2)		VMD1128	LOADING GUIDE (S) (2)	1	
221(2)		VMX1088	SUPPLY UPPER LIMITER	1	
222(2)		VMS2888	P1 POST SLEEVE (B)	1	
223(2)		VMX1581	P1 COLLAR	1	
224(2)		VDP1265	P1 ROLLER	1	
225(2)		VMA6547	P1 LIMITER PLATE	1	
227(2)		VXA3112	P1 BASE (1) UNIT	1	
228(2)		VXD0098	THRUST SPACER	1	
229(2)		VHD0204	THRUST SCREW NUT	1	
230(2)		VHD0368	ROLLER POST SCREW	2	
231(2)		VMX0775	DUST SEAL	2	
232(2)		VXD0108	CAPSTAN HOUSING UNIT	1	
233(2)		VXP0927	TAKE-UP ROLLER POST UNIT	1	
234(2)		VMA6546	TAKE-UP SHAFT HOLDER ANGLE	1	
235(2)		VXA3116	TAKE-UP SHAFT HOLDER (A)	1	
			UNIT		
236(2)		VMD1165	TAKE-UP LOADING BASE	1	
237(2)		VMC0352	SHAFT HOLDER PRESSURE	1	
			SPRING		
238(2)		VMA7226	SHAFT HOLDER PLATE ANGLE	1	
239(2)		LN59NV	LED	1	
240(2)		VHD0367	TAKE-UP SHAFT ADJ. SCREW	1	
242(2)		VEM0287	LOADING MOTOR UNIT	1	
245(2)		VMB1747	TENSION SPRING	1	
246(2)		VXL1262	TENSION ARM UNIT	1	
247(2)		VXZ0245	TENSION BAND UNIT	1	
248(2)		VML2065B	BAND RELEASE ARM	1	
249(2)		VXA4828	TENSION KICK LEVER	1	
250(2)		VML2064B	EJECT LEVER (A)	1	
251(2)		VXA3020	SUPPORTER UNIT	1	
252(2)		VMB1405	BRAKE SPRING	1	
253(2)		VXZ0207B	BRAKE (R) UNIT	1	
254(2)		VXZ0206B	BRAKE (L) UNIT	1	
255(2)		VXA4263	BRAKE PLATE (1) UNIT	1	
256(2)		VML2073	EJECT LEVER (B)	1	
257(2)		VED0183	A/C HEAD UNIT	1	
258(2)		VHD0275	A/C HEAD ADJUST SCREW	1	
259(2)		VMB1321	A/C HEAD ADJUST SPRING	1	
260(2)		VHD0381	A/C HEAD TILT ADJUST SCREW	1	
261(2)		VXL2256	A/C HEAD ARM UNIT	1	
262(2)		VWJ0608	A/C HEAD FPC	1	
263(2)		VHN0077	A/C HEAD ARM NUT	1	
264(2)		VMB1320	A/C HEAD SPRING	1	
265(2)		VDG0208	LOADING GEAR (A)	1	
266(2)		VDG0461	LOADING GEAR (B)	1	
267(2)		VHN0072	ADJUST NUT	1	
268(2)		VHN0047	M2 NYLON NUT	2	
269(2)		VMS2693	P4 POST SLEEVE	1	
270(2)		VXJ0057	P5 POST SLEEVE	1	
271(2)		VMB1322	P4,P5 SPRING	2	
272(2)		VML2067	PINCH LEVER	1	
273(2)		VMB2071	PINCH LEVER SPRING	1	
274(2)		VXL1652	PINCH ROLLER ARM (1) UNIT	1	
275(2)		VXL1650	PINCH ARM UNIT	1	
276(2)		VMB1326	PINCH ARM SPRING	1	
277(2)		VXL1264B	SOFT BRAKE LEVER (S) UNIT	1	
278(2)		VMB1314	SOFT BRAKE SPRING (S)	1	
279(2)		VMB1771	REW ARM SPRING	1	
280(2)		VXL1649B	FF/REW ARM UNIT	1	
282(2)		VBS0021	FE HEAD	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
283(2)		VMD1129	FE HEAD BASE	1	
284(2)		VMB1447	SUPPORTER SPRING	1	
285(2)		VXA3579	SLIDE BASE (O) UNIT	1	
286(2)		VMB1965	SLIDE SPRING	1	
287(2)		VML2285	IMPEDANCE LEVER	1	
288(2)		VHN0109	PUSH NUT	1	
289(2)		VMB1964	IMPEDANCE DRIVE SPRING	1	
290(2)		VXL1879	IMPEDANCE ARM (1) UNIT	1	
291(2)		VDP1285	IMPEDANCE ROLLER	1	
292(2)		VMX1088	SUPPLY UPPER LIMITER	1	
294(2)		VXA2220	SUPPLY SHAFT HOLDER UNIT	1	
301(3)		VXW0119	LENS U.	1	
302(3)		VXW0124	MAIN LENS U.	1	
303(3)		VXW0125	MASTER LENS U.	1	
304(3)		VDW0198	FOCUS RING (2)	1	
305(3)		VEK6302	FOCUS ENCODER U.	1	
306(3)		VEM2305	IRIS U.	1	
307(3)		VWJ0690	LENS FLEXIBLE CABLE	1	
308(3)		VHD0779	SCREW	5	
309(3)		EVAJHKUA3B14	ZOOM ENCODER U.	1	
310(3)		VEM0448	ZOOM MOTOR U.	1	
311(3)		VEM0449	FOCUS MOTOR U.	1	
312(3)		VHD0780	SCREW	2	
313(3)		VHD0781	SCREW	2	
314(3)		VMX2231	WASHER	2	
315(3)		VDL0322	CRYSTAL FILTER	1	
316(3)		VMX2195	CCD CUSHION	1	
317(3)		VEK6143	CCD U.	1	
318(3)		VSC3633	CCD SHIELD CASE	1	
319(3)		VMD2023	CAM P.C.BOARD FRAME	1	
320(3)		VMP3695	CAMERA FRAME	1	
321(3)		VMX2232	WASHER	2	
322(3)		VMZ2085	CAMERA FLEX. BARRIER	1	
323(3)		VDW0195	FRONT FRAME	1	
324(3)		VDW0196	FOCUS RING (1)	1	
325(3)		VDW0197	REAR FRAME	1	
330(3)		VGQ1986	CHARA. GENE. JACK PIECE	1	
331(3)		VMP3693	LENS FRAME	1	
401(4)		VMD2007	TRIPOD FRAME	1	
402(4)		VSC3733	TRIPOD SHIELD PLATE	1	
403(4)		VYP4221	CASSETTE COVER U.	1	NV-MS4E/B/A
403(4)		VYP4223	CASSETTE COVER U.	1	NV-M9000EN
403(4)		VYP4224	CASSETTE COVER U.	1	NV-M9900MC
404(4)		VYK4490	SIDE CASE (L)(1) U.	1	
405(4)		VYK4497	GRIP CASE (1) U.	1	
406(4)		VMG0462	ZOOM RUBBER CONTACT	2	
407(4)		VGQ1790	ZOOM PIECE	1	
408(4)		VGU5007	ZOOM BUTTON	1	
409(4)		VYF1893	HOOD CAP U.	1	
410(4)		VYC0557	GRIP BELT U.	1	
411(4)		VKM3149	FRONT CASE	1	
412(4)		VHD0386	GRIP BELT SCREW	1	
413(4)		VMP3822	SHOLDER ANGLE (F)	1	
415(4)		VKM3089	LENS COVER	1	NV-MMS4E/B/A
415(4)		VKM3286	LENS COVER	1	NV-M9000EN,M9900MC
416(4)		VHD0371	SCREW	2	
418(4)		VEK5863	MIC U.	1	
419(4)		VDW0191	LENS HOOD	1	
420(4)		VWJ0632	CYLINDER FLEX.CABLE	1	
421(4)		VWJ0636	CAPSTAN FLEX.CABLE	1	
422(4)		VSC3632	EARTH PLATE	1	
423(4)		VHD0771	SCREW	2	
424(4)		VMP3688	FRAME SET. ANGLE	1	
501(5)		VGQ1129	BATTERY CATCHER	1	
502(5)		VMC0876	BATTERY LOCK ANGLE	1	
503(5)		VGQ2849	BATTERY LOCK	1	
504(5)		VGQ2850	INTERMEDIATE LEVER	1	
505(5)		VMP3689	SHOLDER ANGLE	1	
506(5)		VMP3692	BATTERY CASE FIX.ANGLE	1	
507(5)		VMB2524	BATTERY PUSHING SPRING	1	
508(5)		VKM3072	BATTERY CASE U.	1	
509(5)		VKF1876	BATTERY DOOR	1	
510(5)		VMC0237	DOOR SPRING	1	
511(5)		VXU1122	TOP OPERATION PANEL (1)U.	1	
512(5)		VKF1935	CURSOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
513(5)		VKF1878	RESET MEMORY DOOR	1	
514(5)		VMD2006	TOP FRAME	1	
516(5)		VKM3071	HANDLE UPPER CASE	1	
517(5)		VMC0726	SHOE SPRING	1	
518(5)		VMP2407	SHOE	1	
519(5)		VGU5898	SLIDE KNOB (A)	1	
520(5)		VGU5908	SLIDE KNOB (B)	1	
521(5)		VMC0889	CAMERA EARTH PLATE	1	
522(5)		VGP3162	CAMERA OPERATION PANEL	1	
523(5)		VYK4578	SIDE CASE (R) U.	1	NV-MS4E/B/A
523(5)		VYK4580	SIDE CASE (R) U.	1	NV-M9000EN
523(5)		VYK4581	SIDE CASE (R) U.	1	NV-M9900MC
524(5)		VMT0452	SHOLDER PAD	1	
525(5)		VWJ0609	AV JACK-MAIN CABLE	1	
526(5)		VYK4487	BATTERY CASE U.	1	
527(5)		VMZ2063	JACK BARRIER	1	
529(5)		VWJ0610	VTR OPE.-MAIN FLEX.	1	
530(5)		VEK6102	EAR SPEAKER U.	1	
531(5)		VMZ2090	BATT. BARRIER	1	
532(5)		VSC3632	HEAD AMP SHIELD CASE (C)	1	
601(6)		ELY07V570F	DY	1	
602(6)		VEK6002	CRT U.	1	
603(6)		VKM3078	FINDER CASE (UPPER)	1	
604(6)		VMC0316	EYE CAP HOLDER SPRING	1	
605(6)		VDL0140	LENS (2)	1	
606(6)		VKF1983	EYE CAP HOLDER	1	
607(6)		VMG0716	EYE CAP	1	
608(6)		VGU3895	EYESIGHT ADJ. LEVER	1	
609(6)		VKF1278	LENS HOLDER GUIDE	1	
610(6)		VKM3077	FINDER CASE (LOWER)	1	
611(6)		VYK4494	EVF MAIN CASE LOWER U.	1	NV-MS4E/A,M9000EN,
					M9900MC.
611(6)		VYK4644	EVF MAIN CASE LOWER U.	1	NV-MS4B
612(6)		VYK4493	EVF MAIN CASE UPPER U.	1	
613(6)		VMP1358	EVF BEARING	1	
614(6)		VMC0902	EVF LOCK SPRING	1	
615(6)		VMP3823	EVF ROTARY PLATE	1	
616(6)		VMP3690	EVF MOUNT ANGLE	1	
617(6)		VMX2172	WAVING WASHER	1	
618(6)		VGQ2914	EVF ROTATION BASE	1	
619(6)		VGQ2967	ROTARY BASE COVER	1	
620(6)		VMC0914	ROTARY BASE SPRING	1	
621(6)		VDL0349	MIRROR	1	
622(6)		VYQ0082	LENS HOLDER U.	1	
623(6)		VMC0890	SPRING PLATE	2	
624(6)		VGQ2846	WIRE COVER	1	
625(6)		VGQ3069	EVF SLIDER	1	
701(7)		VFC1309	SHOLDER STRAP	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
702(7)		VJA0180	BATTERY CATCHER	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
703(7)		VFA0028	AV OUTPUT CABLE	1	NV-MS4A,
					NV-M9000EN,M9900MC.
703(7)		VFA0096	AV OUTPUT CABLE	1	NV-MS4E
704(7)		VJA0573	3PIN DC INPUT CABLE	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
705(7)		VPN3478	ACCESSORY PAD	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
706(7)		VPN3476	ACCESSORY BOX	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
707(7)		VQT4832	OPERATING INSTRUCTIONS	1	NV-MS4E
			(ENGLISH)		
707(7)		VQT4833	OPERATING INSTRUCTIONS	1	NV-MS4E
			(ITALIAN)		
707(7)		VQT4834	OPERATING INSTRUCTIONS	1	NV-MS4E
			(FINNISH)		
707(7)		VQT4836	OPERATING INSTRUCTIONS	1	NV-MS4A
			(ENGLISH)		
707(7)		VQT4837	OPERATING INSTRUCTIONS	1	NV-M9000EN
			(ENGLISH)		
707(7)		VQT4838	OPERATING INSTRUCTIONS	1	NV-M9000EN
			(CHINESE)		
707(7)		VQT4839	OPERATING INSTRUCTIONS	1	NV-M9900MC
			(ENGLISH/CHINESE)		
708(7)		VPN3474	CUSHION (UPPER)	1	NV-MS4E/A,

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
					NV-M9000EN,M9900MC.
709(7)		VPN3475	CUSHION (LOWER)	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
710(7)		VPG6627	PACKING CASE	1	NV-MS4E
710(7)		VPG6626	PACKING CASE	1	NV-MS4A
710(7)		VPG6628	PACKING CASE	1	NV-M9000EN
710(7)		VPG6629	PACKING CASE	1	NV-M9900MC
711(7)		VFA0029	AUDIO CABLE	1	NV-MS4E
712(7)		VJA0658	4PIN S-VHS CABLE	1	NV-MS4E/A,
					NV-M9000EN,M9900MC.
801(8)		VFC1309	SHOLDER STRAP	1	NV-MS4B
802(8)		VJA0180	BATTERY CATCHER	1	NV-MS4B
803(8)		VJA0573	3PIN DC INPUT CABLE	1	NV-MS4B
804(8)		VFA0028	AV OUTPUT CABLE	1	NV-MS4B
805(8)		VQT4835	OPERATING INSTRUCTIONS	1	NV-MS4B
806(8)		VPK1515	ACCESSORY CASE	1	NV-MS4B
807(8)		VPN2612	CUSHION	2	NV-MS4B
808(8)		VPG6625	PACKING CASE	1	NV-MS4B
810(8)		VJA0658	4PIN S-VHS CABLE	1	NV-MS4B
811(8)		VFA0096	AV OUTPUT CABLE	1	NV-MS4B
			JIG & TOOLS		
		VFK0374	COLOUR TEMP. CONV. FILTER	1	
		VFK0375	COLOUR TEMP. CONV. FILTER	1	
		VFK0644	EVR FIXTURE	1	
		VFK0701ROM10	ROM10	1	
		VFK0766A	EVR CONNECTION CABLE	1	
		VFK0734W	CONNECTION CABLE FOR	1	
			MEASURMENT	1	
		VFK0667	EXTENSION CABLE 30P	1	
		VFK0724	EXTENSION CABLE 32P	1	
		VFK0783	EXTENSION CABLE 12P	1	
		VFK0802	FLAT CABLE 24P	1	
		VFK0823	FLAT CABLE 6P	1	
		VFJ8125H3F	VHS-ALLGNMENT TAPE (PAL)	1	
		VFK0144	RETAINING RING REMOVER	1	
			(3mm)		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0189	H-POSITION ADJ. -FIXTURE	1	
		VFK0137	POST ADJUSTMENT SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0343	CHECK LIGHT	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0136	FINE ADJUSTMENT SCREWDRIVER	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0133	DIAL TORQUE GAUGE	1	

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.
5.The marking(RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP22117A	CCD DRIVE C.B.A.	1	(RTL)
		VEP23146A	PROCESS C.B.A.	1	(RTL)
		VEP22118A	CCD FLEXIBLE CARD C.B.A.	1	(RTL)
		VEP20437A	CAMERA OPERATION (A) C.B.A.	1	(RTL)
					INCLUDING THE CAMERA
					OPERATION (A) C.B.A.
					(VEP20438B).
		VEP20438B	CAMERA OPERATION (B) C.B.A.	1	(RTL)
					INCLUDED IN CAMERA
					OPERATION (A) C.B.A.
					(VEP20437A).
		VWJ0690	LENS FLEXIBLE CARD C.B.A.	1	(RTL)
		VEK5942	MANUAL FOCUS SENSOR	1	(RTL)
			FLEXIBLE CARD C.B.A.		
		VEP28055A	EVF C.B.A.	1	(RTL)
		VEP06832A	TALLY C.B.A.	1	(RTL)
		VEP03945A	MAIN C.B.A.	1	(RTL)
		VEP06817A	VTR OPERATION (A) C.B.A.	1	(RTL)
					INCLUDING THE VTR
					OPERATION (B) C.B.A.
					(VEP06847B).
		VEP06847B	VTR OPERATION (B) C.B.A.	1	(RTL)
					INCLUDED IN VTR
					OPERATION (A) C.B.A.
					(VEP06817A).
		VEP03946A	AV JACK (A) C.B.A.	1	(RTL)
		VEP03957A	AV JACK (B) C.B.A.	1	(RTL)
		VXU1138	ZOOM BUTTON C.B.A.	1	(RTL)
					INCLUDING THE S/S
					C.B.A.(VEK5869),
					SUB S/S C.B.A.
					(VEK5870).
		VEK5869	S/S C.B.A.	1	(RTL)
					INCLUDED IN ZOOM
					BUTTON C.B.A.
					(VXU1138).

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEK5870	SUB S/S C.B.A.	1	(RTL)
					INCLUDED IN ZOOM
					BUTTON C.B.A.
					(VXU1138).
		VEK5865	CHARA/GENE C.B.A.	1	(RTL)
		VEK5868	FE HEAD C.B.A.	1	(RTL)
		VES0689	MECHANISM CONNECTION C.B.A.	1	(RTL)
			(MODE SELECT SWITCH UNIT)		
	■	VEP22117A	CCD DRIVE C.B.A.		(RTL)
			CONNECTORS		
B201		VJP3159C032	CONNECTOR (MALE)	1	
B202		VJP2962C012	CONNECTOR (MALE)	1	
			CAPACITORS		
C201		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C202,03		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C204		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C205		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C206,07		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C209		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C210		ECST1VX155Z	T.CAPACITOR 35V 1.5U	1	
C211		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C212		ECST1VX225Z	T.CAPACITOR 35V 2.2U	1	
C213,14		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C215		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C216,17		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C218		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C220		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C221		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C222		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C223		ECRJA020E11	CAPACITOR	1	
C224		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C226		ECUM1C185ZFN	C.CAPACITOR CH 16V 1.8U	1	
C227,28		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C229		ECEV0GA330	E.CAPACITOR 4V 33U	1	
C230		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C231,32		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C233		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C234		ECUM1C185ZFN	C.CAPACITOR CH 16V 1.8U	1	
C235		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C236		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C237		ECST0GY106Z	T.CAPACITOR CH 4V 10U	1	
C238-40		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C241		ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C242		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C243		ECUX1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C244		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C245		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C246		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C247		ECUX1H060CCV	C.CAPACITOR CH 50V 6P	1	
C248		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C251		ECST1VX155Z	T.CAPACITOR 35V 1.5U	1	
C252		ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C254		ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C258,59		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C260,61		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	2	
C262		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C264		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C266		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C267-69		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	3	
C270		ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C271		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C280		ECUM1H070CCV	C.CAPACITOR CH 50V 7P	1	
			DIODES		
D201		MA110	DIODE	1	
D203,04		MA110	DIODE	2	
D205		MA728	DIODE	1	
D206,07		MA110	DIODE	2	
D209		MA110	DIODE	1	
			FILTERS		
FL201		ELB3H010	FILTER	1	
			INTEGRATED CIRCUITS		
IC201		MN5188	IC	1	
IC202		MN3110SA	IC	1	
IC203		AN2013SB	IC	1	
IC204		AN2032FAP	IC	1	
IC205		LM358DB	IC	1	
			COILS		
L201-07		ELJFC150KF	COIL 15UH	7	
L208		ELJSC330KB	COIL 33UH	1	
L209		VLQ0556	COIL	1	
L210		ELJFC150KF	COIL 15UH	1	
L211,12		VLQ0556	COIL	2	
L214,15		VLQ0555	COIL	2	
L221		VLQ0401K4R7	COIL 4.7UH	1	
L222		ELJFC3R3KF	COIL 3.3UH	1	
L223		ELJFC220KB	COIL 22UH	1	
			TRANSISTORS		
Q201		XP4654	TRANSISTOR	1	
Q202,03		2SD1819	TRANSISTOR	2	
Q205		XP4654	TRANSISTOR	1	
Q206		XN4601	TWIN TRANSISTOR	1	
Q207		XP4654	TRANSISTOR	1	
Q211		2SB1218	TRANSISTOR	1	
Q214		2SD1819	TRANSISTOR	1	
Q215		XN4601	TWIN TRANSISTOR	1	
Q219		2SB1218	TRANSISTOR	1	
			RESISTORS		
R201		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R202		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R203		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R204		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R206		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R209		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R210		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R211		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R212		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R214		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R215		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R216		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R218		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R219		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R220		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R221		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R223		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R224		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R225		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R226		ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R227		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R228		ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	1	
R229		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R230		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R232		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R236		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R237		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R239		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R241		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R242		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R243		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R244		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R245		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R249		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R253		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R254		ERJ3GEYJ824	M.RESISTOR CH 1/16W 820K	1	
R255,56		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R257		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R258		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R259		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R265		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R266		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R267		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R268		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R269		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R270		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R271		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R272		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R273		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R274-76		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	3	
R277		VRE0071E123	RESISTOR	1	
R278		VRE0071E823	RESISTOR	1	
R279		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R280		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R281-83		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R284		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R285,86		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R287		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R288,89		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R290		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
			CRYSTAL OSCILLATORS		
X201		VSX0530	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3635	SHIELD COVER (A)	1	
		VSC3636	SHIELD COVER (B)	1	
	■	VEP23146A	PROCESS C.B.A.		(RTL)
			CONNECTORS		
B301		VJS3024C032	CONNECTOR (FEMALE)	1	
B302		VJP2962C030	CONNECTOR (MALE)	1	
B303		VJP2962C024	CONNECTOR (MALE)	1	
			CAPACITORS		
C301-03		ECST0JY106Z	T.CAPACITOR 6.3V 10U	3	
C304		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C305		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C306		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C307,08		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C309		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C311		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C312		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C313		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C314,15		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C317		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C318		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C321	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C322	ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C323	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C324	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C325	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C326	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C328,29	ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C330,31	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C332	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C334	ECST0GY106Z	T.CAPACITOR CH 4V 10U	1	
C335	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C336	ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C337-40	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	4	
C341,42	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C343	ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C345-52	ECUX1H330JCV	C.CAPACITOR CH 50V 33P	8	
C357	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C358-62	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	5	
C363	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C380,81	ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C701	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C703	ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C704	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C705	ECUM1C683ZFV	C.CAPACITOR CH 16V 0.068U	1	
C706-09	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C710	ECUX1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C711	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C712	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C713,14	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
C715	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C716	ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C717	ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C718	ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C719	ECST0GY106Z	T.CAPACITOR CH 4V 10U	1	
C720,21	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C722-24	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C726	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C727	ECEV1EA330	E.CAPACITOR CH 25V 33U	1	
C728	ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C729,30	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C731	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C732	ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C733	ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C734	ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C738	ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C746	ECUM1C225ZFM	C.CAPACITOR CH 16V 2.2U	1	
C747	ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C748	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
		DIODES		
D301	MA110	DIODE	1	
D302	MA728	DIODE	1	
D701	MA110	DIODE	1	
		CONNECTORS		
FP301	VJS2958D017	CONNECTOR (FEMALE)	1	
FP701	VJS2959D024	CONNECTOR (FEMALE)	1	
		INTEGRATED CIRCUITS		
IC301	MN4791S	IC	1	
IC302,03	ZA4030	IC	2	
IC304	MN6733	IC	1	
IC306	MN6732	IC	1	
IC307	MN655431SH	IC	1	
IC308	MN73512XWAS	IC	1	
IC309	MN188201OV4Q	IC	1	
IC310	AK6420F	IC	1	
IC311	MN13821-Y	IC	1	
IC312	MN188201OV4P	IC	1	
IC315	MN657011H	IC	1	
IC316	MN5185	IC	1	
IC317	AN2040SB	IC	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
IC318	TC7S08F	IC	1	
IC319,20	TC7S32F	IC	2	
IC330	M62352GP	IC	1	
IC701	MN12821Q	IC	1	
IC702	MN6782VMDE	IC	1	
IC703	AN2585FAP	IC	1	
IC704	LM358DB	IC	1	
IC705	LM324DB	IC	1	
IC706	AN6663S	IC	1	
IC707	AN6545SP	IC	1	
IC708	TB6504F	IC	1	
IC709	TC7S08F	IC	1	
		COILS		
L301	ELJFC6R8ZB	COIL 6.8UH	1	
L302-04	ELJSC101KF	COIL 100UH	3	
L305	ELJFC150KF	COIL 15UH	1	
L306-11	ELJFC6R8ZB	COIL 6.8UH	6	
L312	VLQ0291	COIL	1	
L313,14	ELJFC6R8ZB	COIL 6.8UH	2	
L315	VLQ0291	COIL	1	
L316,17	ELJFC6R8ZB	COIL 6.8UH	2	
L320	ELJSC330KB	COIL 33UH	1	
L322	ELJFC6R8ZB	COIL 6.8UH	1	
L323	VLQ0291	COIL	1	
L324	VLQ0584	TRANSFORMER	1	
L702	ELJPA101KB	COIL 100UH	1	
L703	ELJFC150KF	COIL 15UH	1	
L704	ELJFA150KB	COIL 15UH	1	
L705	ELJPA150KB	COIL 15UH	1	
		CONNECTORS		
P305	VJP3172D005	CONNECTOR (MALE)	1	
P701	VJP3172D003	CONNECTOR (MALE)	1	
P701	VJS3172B003	CONNECTOR (FEMALE)	1	
P4302	VJS3172B003	CONNECTOR (FEMALE)	1	
		TRANSISTORS		
Q305	2SC4176	TRANSISTOR	1	
Q701	2SD1819	TRANSISTOR	1	
Q702	2SD2210	TRANSISTOR	1	
		COMBINATION PARTS		
QR301	UN5213	TRANSISTOR	1	
QR701,02	UN5211	TRANSISTOR-RESISTOR	2	
		RESISTORS		
R301	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R302,03	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R304	ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R305,06	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R307	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R308,09	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R310	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R311	ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R312	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R313	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R314	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R315-17	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R318	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R319	ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R320	ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R321,22	ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	2	
R323-26	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4	
R328	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R331-33	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R335	ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R337	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R338,39	ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R340	ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R341		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R342,43		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R344-47		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R348-50		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R351,52		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R353-55		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R356		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R357-63		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	7	
R364		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R365-71		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	7	
R372-81		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	10	
R382,83		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R384		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R387-89		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	3	
R390,91		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R392		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R393		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R394		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R396,97		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R398		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R399-02		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4	
R405-21		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	17	
R424		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R425		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R426-49		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	24	
R450,51		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R452-58		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	7	
R460-62		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R464		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R465,66		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R467		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R468-89		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	22	
R491,92		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R493		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R494,95		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R499		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R500		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R501		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R502		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R503		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R504		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R701		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R702		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R703		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R704,05		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R706		ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R707		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R708		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R710		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R711		ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	1	
R712		ERJ3GEYG303	M.RESISTOR CH 1/16W 30K	1	
R713		ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R714		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R715		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R716		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R717,18		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R719		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R720		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R721		ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R722		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R723		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R724		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R725		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R726		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R727		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R728		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R729		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R730		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R731		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R732-34		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R735		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R736		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R738		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R739		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R740		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R741,42		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R743		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R744		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R745		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R746		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R747,48		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R749		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R750		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R751		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R752		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R753		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R754		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R755		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R756		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R757		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R758		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R759,60		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R761		ERJ8GEYJ680	M.RESISTOR CH 1/8W 68	1	
			THERMISTORS		
TH701		VRT0032K152	THERMISTOR	1	
			VARIABLE RESISTORS		
VR701		EVM7JSX30B54	V.RESISTOR 50K	1	
			CRYSTAL OSCILLATORS		
X301,02		EFOV8004B0A	CRYSTAL OSCILLATOR	2	
X701		EFOV6754B0A	CRYSTAL OSCILLATOR	1	
X702		EFOV8004B0A	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3637	SHIELD COVER (A)	1	
		VSC3638	SHIELD COVER (B)	1	
		VEE7791	MIC B CONNECTION CABLE	1	
		VMZ2077	C.B.A. BARRIER	1	
	■	VEP22118A	CCD FLEXIBLE CARD C.B.A.		(RTL)
			MISCELLANEOUS		
		ECST1VX2252	T.CAPACITOR 35V 2.2U	1	
		ECUV1E104ZFN	C.CAPACITOR 25V 0.1U	1	
		ECUV1E473ZFN	C.CAPACITOR 25V 0.047U	2	
		ERJ6GEYF472	M.RESISTOR 4700P	1	
		ERJ6GEYF560	M.RESISTOR 56P	1	
		ERJ6GEY0R00	M.RESISTOR 0	1	
		MA153	DIODE	1	
		VJS2961C012	CONNECTOR (FEMALE)	1	
		2SC2295	TRANSISTOR	1	
	■	VEP20437A	CAMERA OPERATION (A) C.B.A.		(RTL)
			CONNECTORS		
FP6701		VJS2140	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P6007		VJS3172B006	CONNECTOR (FEMALE)	1	
P6701		VJP3331B006	CONNECTOR (MALE)	1	
P6701		VJS3172B006	CONNECTOR (FEMALE)	1	
			SWITCHES		
SW6701-06		EVQ21804B	SWITCH	6	
SW6707		VSS0126	SWITCH	1	
SW6708		EVQ21804B	SWITCH	1	
SW6710,11		EVQ21804B	SWITCH	2	
SW6713		EVQ21804B	SWITCH	1	
SW6714		VSS0127	SWITCH	1	
SW6715		VSS0126	SWITCH	1	
SW6716,17		EVQ21804B	SWITCH	2	
SW6719		EVQ21804B	SWITCH	1	
SW6722-24		EVQ21804B	SWITCH	3	
			MISCELLANEOUS		
		VEE7784	CONNECTION CABLE	1	(MAIN-CAMERA)
	■	VEK5942	MANUAL FOCUS SENSOR		(RTL)
			FLEXIBLE CARD C.B.A.		
			MISCELLANEOUS		
		ON1004R	PHOTO COUPLER	1	
	■	VEP28055A	EVF C.B.A.		(RTL)
			CAPACITORS		
C801		ECHU1C104J	F.CAPACITOR CH 16V 0.1U	1	
C802		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C804		ECUM1C155ZFN	C.CAPACITOR CH 16V 1.5U	1	
C805		ECEA0JKE221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1E123KBN	C.CAPACITOR CH 25V 0.012U	1	
C807		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C808		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C809		ECA1EKF100	E.CAPACITOR 25V 10U	1	
C810		ECUM2A472JUM	C.CAPACITOR CH 4700P	1	
C811		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C812		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C813		VCK0088K151	CAPACITOR	1	
C814		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C815		ECUM2H331KBM	C.CAPACITOR 500V 330P	1	
C816		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C820		ECUM2A102JUN	C.CAPACITOR CH 100V 1000P	1	
C831		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
			DIODES		
D801		MA141K	DIODE	1	
D802		SFPL-52	DIODE	1	
			INTEGRATED CIRCUITS		
IC801		AN2515S	IC	1	
			COILS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L801		VLQ0319K390	COIL 39UH	1	
L802		ELH51L218D	COIL	1	
			CONNECTORS		
P801		VJP1598T	CONNECTOR (MALE) 5P	1	
P802		VJP3007E004	CONNECTOR (MALE)	1	
P803		VJP1229T	CONNECTOR (MALE)	1	
P804		VJP3007E003	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q802		2SD968A-S	TRANSISTOR	1	
Q803		2SA1532	TRANSISTOR	1	
			RESISTORS		
R801		ERJ6ENF4422	M.RESISTOR	1	
R802		ERJ6GEYJ3R9	M.RESISTOR CH 1/10W 3.9	1	
R805		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R807		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R808		ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R809		ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R810		ERJ6GMYF104	M.RESISTOR	1	
R814,15		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R816		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R817		ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R818		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R819,20		ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	2	
R821		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R823		ERJ3GEYJ220	M.RESISTOR CH 1/16W 22	1	
R825		VSF0015A025	FUSE	1	<!>
R830		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R832		ERJ6ENF4222	RESISTOR	1	
R833		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
			TRANSFORMERS		
T801		ETF08L16B	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR801		EVM7JSX30BE2	V.RESISTOR	1	
VR803		EVMLPNA00BV6	V.RESISTOR	1	
VR804		EVMLPNA00BE6	V.RESISTOR	1	
	■	VEP06832A	TALLY C.B.A.		
			CAPACITORS		
C1881		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
			DIODES		
D1881		BR3378S	DIODE	1	
D1882		PN327	DIODE	1	
			CONNECTORS		
P1881		VJP1597T	CONNECTOR (MALE) 4P	1	
			TRANSISTORS		
Q1881		2SD637	TRANSISTOR	1	
			RESISTORS		
R1881		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1882		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R1883		ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
	■	VEP03945A	MAIN C.B.A.		(RTL)
			CONNECTORS		
B3001		VJS2961C030	CONNECTOR (FEMALE)	1	
B5001		VJS2961C006	CONNECTOR (FEMALE)	1	
B6001		VJP3358C016	CONNECTOR (MALE)	1	
			CAPACITORS		
C1001		ECUM1C335ZFM	C.CAPACITOR CH 16V 3.3U	1	
C1002		ECEV1EA680	E.CAPACITOR CH 25V 68U	1	
C1003		ECGC0KA8R2	CAPACITOR	1	
C1004		ECUX1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1005		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1006		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C1007		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1008		ECGC0KA8R2	CAPACITOR	1	
C1009		ECUX1H681KBV	C.CAPACITOR CH 50V 680P	1	
C1010		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1011		ECUM1C225ZFM	C.CAPACITOR CH 16V 2.2U	1	
C1012		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C1013		ECGC1BA4R7	CAPACITOR	1	
C1014		ECUX1H561KBV	C.CAPACITOR CH 50V 560P	1	
C1016		ECUM1C335ZFM	C.CAPACITOR CH 16V 3.3U	1	
C1017		ECUM1E105ZFM	C.CAPACITOR CH 25V 1U	1	
C1019		ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	1	
C1020		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C1022		ECUM1H104ZFM	C.CAPACITOR CH 50V 0.1U	1	
C1024		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C1025		ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C1026		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C1027		ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C1028		ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C1029		ECUX1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1030		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1031		ECUX1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1032		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1033,34		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C1035		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C1036		ECUX1H471KBV	C.CAPACITOR CH 50V 470P	1	
C1037		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1061		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1062		ECEV1EA470	E.CAPACITOR 25V 47U	1	
C1063		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1064		ECEV1EA470	E.CAPACITOR 25V 47U	1	
C1065,66		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C1068		ECST1CC106Z	T.CAPACITOR 16V 10U	1	
C1069,70		ECUM1C475ZFM	C.CAPACITOR CH 16V 4.7U	2	
C1071		ECUM1C225ZFM	C.CAPACITOR CH 16V 2.2U	1	
C1106		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C1107		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1108		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1109		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1110		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1111		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2101		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C2102-04		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2105		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C2106		ECUM1H223KBM	C.CAPACITOR CH 50V 0.022U	1	
C2107		ECUX1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C2108		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2109-12		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C2113		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2114		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2115,16		ECEV1HA010	E.CAPACITOR 50V 1U	2	
C2117		ECUX1H272KBV	C.CAPACITOR CH 50V 2700P	1	
C2118		ECUX1H221KBV	C.CAPACITOR CH 50V 220P	1	
C2119-21		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C2122		ECUM1H333ZFV	C.CAPACITOR CH 50V 0.033U	1	
C2123-25		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2126		ECEV1HAR47	E.CAPACITOR 50V 0.47U	1	
C2127		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2128		ECUM1H333ZFV	C.CAPACITOR CH 50V 0.033U	1	
C2129		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2130		ECEV0SA470	E.CAPACITOR 4V 47U	1	
C2131		ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C2132		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C2133		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2134		ECEV1AA330	E.CAPACITOR 10V 330U	1	
C2135		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C2136		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C2141		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2142		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2143		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3002		ECEV0GA470	E.CAPACITOR 4V 47U	1	
C3003,04		ECEV0GA471	E.CAPACITOR 4V 470U	2	
C3005		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3006		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3007		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3008		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3009		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3010		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3011,12		ECST0JY475Z	T.CAPACITOR 6.3V 4.7U	2	
C3013		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3014		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3015		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3016		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3017		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3018		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3019		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3021,22		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3023		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3024		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3025,26		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C3027		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3028		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3029		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3030		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3031		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3033,34		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3036		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3037		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3042		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3043		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3045		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3047		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3055		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3059		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3060		ECEV1CAN4R7	E.CAPACITOR CH 16V 4.7U	1	
C3061		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3062		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3065		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3071		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3072		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3075		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3076		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C3080		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3081		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3087		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3091		ECST1AD336Z	T.CAPACITOR 10V 33U	1	
C3092		ECST1CD226Z	T.CAPACITOR 16V 22U	1	
C3093		ECST0JC336Z	T.CAPACITOR 6.3V 33U	1	
C3201		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3203		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3208		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3212		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3801		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3802		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3803		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3804		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3806,07		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C3808,09		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C3810		ECST0JC336Z	T.CAPACITOR 6.3V 33U	1	
C3811-13		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C3814		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3815		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3816		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3817		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C3818		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3822		ECWU1C823JA	P.CAPACITOR CH 16V 0.082U	1	
C4001		ECEV1HA2R2	E.CAPACITOR 50V 2.2U	1	
C4002		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4003		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4004		ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4005		ECUM1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4006		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4007		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4008		ECST1CY225Z	T.CAPACITOR 16V 2.2U	1	
C4009		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C4010		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C4011		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4012		ECEV1HA2R2	E.CAPACITOR 50V 2.2U	1	
C4013		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C4014		ECEV0JAN220	E.CAPACITOR 6.3V 22U	1	
C4015		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4016		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4017		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4018		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4019		ECUM2A682JCM	C.CAPACITOR CH 10V 6800P	1	
C4020		ECUM1H123KBV	C.CAPACITOR CH 50V 0.012U	1	
C4021		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4022		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4023		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C4024		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4029,30		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C4031		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4032		ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C4034		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C4047,48		ECST0JX226Z	T.CAPACITOR 6.3V 22U	2	
C4049,50		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C4051,52		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	2	
C4053		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4054		ECST0JX156Z	T.CAPACITOR 6.3V 15U	1	
C4055		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4056		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C4057		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4501,02		ECEV0GAN470	E.CAPACITOR 4V 47U	2	
C4503,04		ECEV1AAN100	E.CAPACITOR 10V 10U	2	
C4505,06		ECEV0A5470	E.CAPACITOR 4V 47U	2	
C4507		ECST1AY475Z	T.CAPACITOR CH 10V 4.7U	1	
C4508		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C4509		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C4510		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4511,12		ECEV0A5470	E.CAPACITOR 4V 47U	2	
C4513		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4514		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C4515		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C4517		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4518		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C4519		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4520		ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C4521		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4522		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C4523		ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C4524		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4525		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4526-28		ECST1CY335Z	T.CAPACITOR 16V 3.3U	3	
C4530		ECST0JY685Z	T.CAPACITOR 6.3V 6.8U	1	
C5001		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5002,03		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5004-11		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	8	
C5012-15		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	4	
C5016-23		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	8	
C5024		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5025-27		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C5028		ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	1	
C5029		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C5030,31		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5032		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5033		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5034		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5035		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5036-39		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C5040-43		ECUX1H121JCV	C.CAPACITOR CH 50V 120P	4	
C5044-47		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C5048-51		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C5052		ECUX1H121JCV	C.CAPACITOR CH 50V 120P	1	
C5053		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C5054		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C5055,56		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C5062-65		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C5066		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5067		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5072		ECUX1E123KBV	C.CAPACITOR CH 25V 0.012U	1	
C5073		ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C5080		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5081		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6001		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6002		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C6003-05		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C6006-08		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C6009		ECEV1VA220	E.CAPACITOR CH 35V 22U	1	
C6010,11		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C6012		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6013		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C6014		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C6015		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C6016		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6018		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6019		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6020,21		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6022,23		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	2	
C6024		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6025		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C6026		ECEV0A330	E.CAPACITOR 4V 33U	1	
C6027		ECEV1VA220	E.CAPACITOR CH 35V 22U	1	
C6028		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6029,30		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C6031		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C6032		ECEV0A5470	E.CAPACITOR 4V 47U	1	
C6033		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C6034		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6035		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6036,37		ECEV0A5470	E.CAPACITOR 4V 47U	2	
C6038		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6041		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C6042,43		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C6201		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C6202		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C6203		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6206,07		ECEV0JA220	E.CAPACITOR 6.3V 22U	2	
C6208,09		ECUM1C105KBP	C.CAPACITOR CH 16V 1U	2	
C6210		ECUX1H561KBV	C.CAPACITOR CH 50V 560P	1	
C6211,12		ECEV1CA100	E.CAPACITOR 16V 10U	2	
C6213		ECUX1E223ZFV	C.CAPACITOR CH 25V 0.022U	1	
C6214		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6215		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6216		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C6217		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C6218		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6219		ECUM1H273KBM	C.CAPACITOR CH 50V 0.027U	1	
C8001		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8002		ECUX1H060CCV	C.CAPACITOR CH 50V 6P	1	
C8003		ECUX1H100DCV	C.CAPACITOR CH 50V 10P	1	
C8004		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C8005		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8015		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8016		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8017		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8040		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C8048		ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C8049		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C8062,63		ECUX1H181JCV	C.CAPACITOR CH 50V 180P	2	
C8066		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C8071		ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C8072		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8074		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C8076		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C8081		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C8082		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8101		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8102		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C8103		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C8105		ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C8107		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
			DIODES		
D1002		MA736	DIODE	1	
D1004		MA736	DIODE	1	
D1005		SB05-05CP	DIODE	1	
D1006,07		MA142K	DIODE	2	
D1008		MA728	DIODE	1	
D1010,11		MA3200-M	DIODE	2	
D1012		MA143	DIODE	1	
D1061,62		SB05-05CP	DIODE	2	
D1063,64		MA728	DIODE	2	
D1107		MA141WA	DIODE	1	
D1108		MA143	DIODE	1	
D2101		MA143	DIODE	1	
D2102		MA3100	DIODE	1	
D3004		MA143	DIODE	1	
D3201,02		MA729	DIODE	2	
D3809		MA142K	DIODE	1	
D4001		MA142K	DIODE	1	
D4004		MA142WK	DIODE	1	
D4005		MA142K	DIODE	1	
D4006-08		MA157	DIODE	3	
D4501		MA142WK	DIODE	1	
D4502		MA143	DIODE	1	
D4503		MA141K	DIODE	1	
D5001		MA159	DIODE	1	
D5002		MA132WA	DIODE	1	
D5003		MA159	DIODE	1	
D5004		MA132WA	DIODE	1	
D5005		MA133	DIODE	1	
D5006-09		MA728	DIODE	4	
D6001		MA143	DIODE	1	
D6002		MA132WK	DIODE	1	
D6004-07		MA141WA	DIODE	4	
D6008		MA121	DIODE	1	
D6009,10		MA745	DIODE	2	
D6012		MA132WK	DIODE	1	
D6013		MA132WA	DIODE	1	
D6014,15		MA141WA	DIODE	2	
D6016,17		MA141K	DIODE	2	
D6018		MA3062	DIODE	1	
D6019		MA3200	DIODE	1	
D6020		MA141K	DIODE	1	
D6022,23		MA141K	DIODE	2	
D6024		BR1102W	DIODE	1	
D6025		MA141K	DIODE	1	
D6026		MA745	DIODE	1	
D6029		MA141K	DIODE	1	
D6201		MA141K	DIODE	1	
D8001		MA132WK	DIODE	1	
			FILTERS		
FL4501		VLF0934	FILTER	1	
FL4502		VLF0935	FILTER	1	
			CONNECTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
FP2101		VJS2959D017	CONNECTOR (FEMALE)	1	
FP2102		VJS2848B014	CONNECTOR (FEMALE)	1	
FP3001		VJS2956T	CONNECTOR (FEMALE)	1	
FP4001		VJS2959B007	CONNECTOR (FEMALE)	1	
FP5001		VJS2958D023	CONNECTOR (FEMALE)	1	
FP6001		VJS2960A012	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC1001		BA9703K	IC	1	
IC1102		LM393DB	IC	1	
IC2101		AN3890FBS	IC	1	
IC2102		UN224	TRANSISTOR	1	
IC2103		AN3841SR	IC	1	
IC2104		NJM2902M	IC	1	
IC3001		VEFH25D	IC	1	
IC3002		TL8809F	IC	1	
IC3003		AN3298NSB	IC	1	
IC3004		NJM2235MA	IC	1	
IC3801		CF77544AFR	IC	1	
IC3802		S8420BF	IC	1	
IC3803		MN12821R	IC	1	(R)
IC3805		TC7W04F	IC	1	
IC4001		BA7757BK	IC	1	
IC4002		BA3308F	IC	1	
IC4501		VEFH27B	IC	1	
IC5001		AN3350FHP	IC	1	
IC6001		BA6219BFPY	IC	1	
IC6002		UPD6456GT623	IC	1	
IC6003		S3500B3	IC	1	
IC6004		MN6755243V6E	IC	1	
IC6005,06		UPD4071BG	IC	2	
IC6007		TC4S66F	IC	1	
IC6008		UPD4071BG	IC	1	
IC6009		MN12821R	IC	1	(R)
IC6010		S81350HGKD	IC	1	
IC6011		TC7S08F	IC	1	
IC8001		VEFH26B	IC	1	
IC8002		TL8833F	IC	1	
			COILS		
L1001		ELC6UB4R7M	COIL 4.7UH	1	
L1002		ELL04T034R	COIL	1	
L1003		ELC6UB4R7M	COIL 4.7UH	1	
L1004		VLQ0319K100	COIL 10UH	1	
L1007		ELL04T030R	COIL	1	
L1008		ELC6UB4R7M	COIL 4.7UH	1	
L1009		VLQ0319K100	COIL 10UH	1	
L1010,11		VLQ0319K101	COIL 100UH	2	
L1061,62		ELL04T031R	COIL	2	
L1063,64		VLQ0319K330	COIL 39UH	2	
L1102-04		VLQ0319K100	COIL 10UH	3	
L3001		VLQ0319K181	COIL 180UH	1	
L3002		VLQ0319K121	COIL 120UH	1	
L3003		VLQ0163J820	COIL 82UH	1	
L3004		ELJFC150KF	COIL 15UH	1	
L3005		ELJFA121JB	COIL 120UH	1	
L3006		VLQ0426J3R9	COIL 3.9UH	1	
L3007		VLQ0426J150	COIL 15UH	1	
L3009		VLQ0319F150	COIL 15UH	1	
L3010		VLQ0426J470	COIL 47UH	1	
L3011		VLQ0426J120	COIL 12UH	1	
L3012		VLQ0426J100	COIL 10UH	1	
L3015		VLQ0426J680	COIL 68UH	1	
L3017		VLQ0426J560	COIL 56UH	1	
L3018		VLQ0319K820	COIL 82UH	1	
L3019		VLQ0319K101	COIL 100UH	1	
L3021		VLQ0426J390	COIL 39UH	1	
L3024		VLQ0319K101	COIL 100UH	1	
L3025		VLQ0464	COIL	1	
L3030		VLQ0426J330	COIL 33UH	1	
L3801		ELJFA150KB	COIL 15UH	1	
L4001		VLQ0423J153	COIL 15MH	1	
L4002		VLQ0319K470	COIL 47UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L4501		VLQ0319K271	COIL 270UH	1	
L4502,03		VLQ0319K101	COIL 100UH	2	
L4504		VLQ0426J560	COIL 56UH	1	
L5001-03		VLQ0319F150	COIL 15UH	3	
L5004		VLQ0319K101	COIL 100UH	1	
L5005		VLQ0163J120	COIL 12UH	1	
L5006,07		VLQ0319F150	COIL 15UH	2	
L6001		ELJSC101KF	COIL 100UH	1	
L6002		VLQ0426J330	COIL 33UH	1	
L6003		VLQ0319K100	COIL 10UH	1	
L6004		VLQ0463	COIL	1	
L6005		ELJSC330KB	COIL 33UH	1	
L8001		VLQ0426J270	COIL 27UH	1	
L8002,03		VLQ0426J100	COIL 10UH	2	
L8004		VLQ0319F150	COIL 15UH	1	
L8006		VLQ0426J330	COIL 33UH	1	
L8007		VLQ0319F150	COIL 15UH	1	
L8012		VLQ0319K470	COIL 47UH	1	
L8013		VLQ0426J101	COIL 100UH	1	
L8014		ELJFA151KB	COIL 150UH	1	
			CONNECTORS		
P1001		VJP3327D002	CONNECTOR (MALE)	1	
P3001		VJP3172D005	CONNECTOR (MALE)	1	
P3002		VJP3172D009	CONNECTOR (MALE)	1	
P4001		VJP3172D005	CONNECTOR (MALE)	1	
P4001		VJS3172B005	CONNECTOR (FEMALE)	1	
P4002		VJP3172D002	CONNECTOR (MALE)	1	
P4301		VJS3172B005	CONNECTOR (FEMALE)	1	
P4501		VJP3172D002	CONNECTOR (MALE)	1	
P6001		VJP3172D004	CONNECTOR (MALE)	1	
P6004,05		VJP3172D002	CONNECTOR (MALE)	2	
P6006		VJP3172D003	CONNECTOR (MALE)	1	
P6007,08		VJP3172D006	CONNECTOR (MALE)	2	
P6009		VJP3172D008	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q1001		2SB1202-S	TRANSISTOR	1	
Q1002		2SB1073	TRANSISTOR	1	
Q1003		2SB1202-S	TRANSISTOR	1	
Q1004		2SD1624-S	TRANSISTOR	1	(S,T)
Q1005		2SB1073	TRANSISTOR	1	
Q1006		2SB970X	TRANSISTOR	1	
Q1061,62		2SB1073	TRANSISTOR	2	
Q2101		2SD1819	TRANSISTOR	1	
Q3001		2SB970X	TRANSISTOR	1	
Q3003		2SC4627	TRANSISTOR	1	
Q3004		2SD2216	TRANSISTOR	1	
Q3006		2SD2216	TRANSISTOR	1	
Q3008,09		2SC4627	TRANSISTOR	2	
Q3010		2SC3931	TRANSISTOR	1	
Q3011		2SB1462	TRANSISTOR	1	
Q3012		2SD2216	TRANSISTOR	1	
Q3014		2SB1462	TRANSISTOR	1	
Q3016		2SD1819	TRANSISTOR	1	
Q3017		2SB1218	TRANSISTOR	1	
Q3018		2SB1462	TRANSISTOR	1	
Q3019,20		2SB1218	TRANSISTOR	2	
Q3021		2SC3938	TRANSISTOR	1	
Q3022		2SB970X	TRANSISTOR	1	
Q3025		2SD1819	TRANSISTOR	1	
Q3026,27		2SD2216	TRANSISTOR	2	
Q3801		2SD2216	TRANSISTOR	1	
Q3802		2SB1218	TRANSISTOR	1	
Q3803		2SB1462	TRANSISTOR	1	
Q3804		2SB970X	TRANSISTOR	1	
Q3808		2SB970X	TRANSISTOR	1	
Q4001		2SB1220	TRANSISTOR	1	
Q4002,03		2SD1819A	TRANSISTOR	2	
Q4004		2SD602-R	TRANSISTOR	1	(R)
Q4005		2SB970X-R	TRANSISTOR	1	
Q4006		2SD2216	TRANSISTOR	1	
Q4012		2SD1819	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q4013,14		2SD1328	TRANSISTOR CHIP	2	
Q4017		2SD1819	TRANSISTOR	1	
Q4018		2SB1218	TRANSISTOR	1	
Q4501		2SD1328	TRANSISTOR CHIP	1	
Q5001,02		XN4504	TRANSISTOR-TRANSISTOR	2	
Q5003		2SB970X	TRANSISTOR	1	
Q5004,05		2SA812	TRANSISTOR	2	
Q5006,07		XN4504	TRANSISTOR-TRANSISTOR	2	
Q5008,09		2SD1328	TRANSISTOR CHIP	2	
Q6002		2SD1820R	TRANSISTOR	1	
Q6003		XN1213	TWIN TRANSISTOR	1	
Q6004		2SB970X	TRANSISTOR	1	
Q6005		2SD1819	TRANSISTOR	1	
Q6006		2SD2216	TRANSISTOR	1	
Q6007		2SB1218	TRANSISTOR	1	
Q6008		2SD1819	TRANSISTOR	1	
Q6009		2SD1823	TRANSISTOR	1	
Q6010		2SD1328	TRANSISTOR CHIP	1	
Q6012		2SD1819	TRANSISTOR	1	
Q8001,02		2SD1819	TRANSISTOR	2	
Q8009		2SB1462	TRANSISTOR	1	
Q8013		2SB1218	TRANSISTOR	1	
Q8014		2SD1819	TRANSISTOR	1	
			COMBINATION PARTS		
QR1002		UN5214	TRANSISTOR-RESISTOR	1	
QR1006		XN1501	TWIN TRANSISTOR	1	
QR1061		UN5115	TRANSISTOR-RESISTOR	1	
QR3001		UN9212	TRANSISTOR-RESISTOR	1	
QR3002		UN5213	TRANSISTOR	1	
QR3004		UN9211	TRANSISTOR-RESISTOR	1	
QR3009		UN9212	TRANSISTOR-RESISTOR	1	
QR3013		UN9212	TRANSISTOR-RESISTOR	1	
QR3014		UN5212	TRANSISTOR-RESISTOR	1	
QR3016		UN9212	TRANSISTOR-RESISTOR	1	
QR3018,19		UN5212	TRANSISTOR-RESISTOR	2	
QR3023		XN1501	TWIN TRANSISTOR	1	
QR3024		UN5212	TRANSISTOR-RESISTOR	1	
QR3206		UN5212	TRANSISTOR-RESISTOR	1	
QR3801		UN5213	TRANSISTOR	1	
QR3802,03		XP1211	TRANSISTOR-RESISTOR	2	
QR3807		UN5213	TRANSISTOR	1	
QR4001		XN4312	TRANSISTOR-TRANSISTOR	1	
QR4002		UN5213	TRANSISTOR	1	
QR4003		UN5210	TRANSISTOR	1	
QR4004		UN9213	TRANSISTOR-RESISTOR	1	
QR4005		UN511F	TRANSISTOR-RESISTOR	1	
QR4006		UN5213	TRANSISTOR	1	
QR4008		UN5217	TRANSISTOR-RESISTOR	1	
QR4009		UN5113	TRANSISTOR-RESISTOR	1	
QR4010		UN9213	TRANSISTOR-RESISTOR	1	
QR4501		UN9213	TRANSISTOR-RESISTOR	1	
QR4502		UN5110		1	
QR4505		UN5215	TRANSISTOR-RESISTOR	1	
QR5001		UN9213	TRANSISTOR-RESISTOR	1	
QR5002,03		UN5212	TRANSISTOR-RESISTOR	2	
QR5004		XP1213	TWIN TRANSISTOR	1	
QR6001		UN9213	TRANSISTOR-RESISTOR	1	
QR6002		UN2130	TRANSISTOR-RESISTOR	1	
QR6003		UN9212	TRANSISTOR-RESISTOR	1	
QR6004		XN4130	TRANSISTOR-RESISTOR	1	
QR6005		UN5112	TRANSISTOR-RESISTOR	1	
QR6007		UN9213	TRANSISTOR-RESISTOR	1	
QR6008		UN5213	TRANSISTOR	1	
QR6010		UN5112	TRANSISTOR-RESISTOR	1	
QR6011,12		UN9112	TRANSISTOR-RESISTOR	2	
QR6013		UN521E	TRANSISTOR-RESISTOR	1	
QR6014		UN5213	TRANSISTOR	1	
QR6015		UN5211	TRANSISTOR-RESISTOR	1	
QR6016		UN5113	TRANSISTOR-RESISTOR	1	
QR6017		UN5213	TRANSISTOR	1	
QR6018		UN5211	TRANSISTOR-RESISTOR	1	
QR8101		UN9212	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R1001		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R1002		ERJ6GEYG202	M.RESISTOR CH 1/10W 2K	1	
R1003		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1004		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R1005		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R1006		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R1007		ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
R1008		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1009		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R1012		ERJ3GEYG163	M.RESISTOR CH 1/16W 16K	1	
R1013		ERJ3GEYG393	M.RESISTOR CH 1/16W 39K	1	
R1014,15		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	2	
R1016		VRE0034E153	M.RESISTOR CH 1/10W 15K	1	
R1017		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1018		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1019		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R1020		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1021		ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R1022		ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R1023		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1024		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1025,26		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R1027		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R1029		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1030		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R1031		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R1032,33		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R1034		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1035		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1036		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1037		ERJ3GEYG470	M.RESISTOR CH 1/16W 47	1	
R1061		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R1062		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R1063		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1064,65		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R1105-07		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	3	
R1108		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2101		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R2102		ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2103		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2104		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2105		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R2106		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R2107		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R2108		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R2109		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2110		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R2111,12		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R2113		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R2114		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R2115		ERJ8GEYJR47	M.RESISTOR CH 1/8W 0.47	1	
R2116,17		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R2118		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R2119		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2121		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R2122		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R2123		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R2124		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R2125		ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R2126		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2127		ERJ8GEYJ5R6	M.RESISTOR CH 1/8W 5.6	1	
R2130		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3001		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3002		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3003,04		ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3005		ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3006		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3007		ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3008		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3010		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3011		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R3012		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3013		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3014,15		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R3016		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3017		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3018		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3019		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3021		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3022		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3023		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3024		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3025		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3026		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3028		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3030		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3031		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3032		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3033		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3041		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3042		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3043		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3045		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3046		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3047		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3049		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3054		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3055		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3059		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3060-62		ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	3	
R3063		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3064		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3068,69		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3070		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3071		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3072		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3073		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3074,75		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R3076		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R3077		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3078		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3079		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3080		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3081		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3082		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3088		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3089		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R3090		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3091		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R3092		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3098		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3102		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3103		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3104		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3107		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3109		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3112		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3113		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3115		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3117,18		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3119		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3121		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3122		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3123		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3124		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3127		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3128		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R3129		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3135		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3136		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3137		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3142		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R3144		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3148		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3149		ERJ6GEYG223	M.RESISTOR CH 1/10W 22K	1	
R3150		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3152		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3153		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3154		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R3155		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3156		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3157		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3160		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R3201		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R3202		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3203		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R3221,22		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3226-29		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	4	
R3232		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3801,02		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R3803		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3804		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3805		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R3806		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3807		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3809		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3810,11		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3812		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3813		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3814		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3815		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3816		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R3818,19		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R3820,21		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R3822-25		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	4	
R3838,39		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R3840		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3841		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3843		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4001		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4002		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R4003		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R4004		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R4005		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4006		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4007		ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R4008		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4009		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4010		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4011		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4012		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R4013		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4014		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4015		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R4016,17		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R4018		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R4019		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4020		ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R4021		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R4022		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4023		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R4024		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4025		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4026		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4030,31		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R4032		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4033		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4034		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4037		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4041		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4059,60		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R4061,62		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R4063,64		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R4065		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4067		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4068		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4069		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4070		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4071,72		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	2	
R4073		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R4074		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4075,76		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R4077		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4078		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4079,80		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	2	
R4081,82		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R4085		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4089,90		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	2	
R4096		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4501,02		ERJ6GEYJ560	M.RESISTOR CH 1/10W 56	2	
R4503,04		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	2	
R4505		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R4506		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4507		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4509		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R4510		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R4511		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4512		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R4513-16		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4	
R4517		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R4518		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4520		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4521		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4525		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4528		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R4529		ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R4531		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4532		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R4533,34		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R4535		ERJ8GEYJ181	M.RESISTOR CH 1/8W 180	1	
R5001		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R5002		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5003		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5004-07		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	4	
R5008-11		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	4	
R5012		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R5013		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5014		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5015		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R5016-19		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	4	
R5020-23		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	4	
R5024		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R5025		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5026		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R5027		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5028		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R5029,30		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	2	
R5031		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R5032		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R5033,34		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5035		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5036		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R5037		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R5038		ERJ3GEYJ332	M.RESISTOR CH 1/16W 3.3K	1	
R5039		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R5040-42		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R5043-45		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	3	
R5046-48		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5049		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R5050		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R5051		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R5052		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R5066-71		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	6	
R5074		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6001,02		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6003,04		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R6005		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R6006,07		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	2	
R6008		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6009		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6014		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6015		VRE0067G473	M.RESISTOR 47K	1	
R6016		VRE0067G153	M.RESISTOR	1	
R6017-20		ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	4	
R6021		ERJ8GEYJ680	M.RESISTOR CH 1/8W 68	1	
R6022		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6023		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6024		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6025,26		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6027		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6028-30		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	3	
R6031		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6032-36		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	5	
R6037		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6038-42		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	5	
R6043		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6044		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6045		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6046-49		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	4	
R6050		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6051-53		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	3	
R6054-62		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	9	
R6063		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R6065,66		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	2	
R6067,68		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6069		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6070		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6071		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6072-78		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	7	
R6079		ERJ8GEYJ3R3	M.RESISTOR CH 1/8W 3.3	1	
R6080,81		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R6082		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6083,84		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R6085,86		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R6087		ERJ8GEYJ221	M.RESISTOR CH 1/8W 220	1	
R6088,89		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6090		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6091		ERJ8GEYJ391	M.RESISTOR CH 1/8W 390	1	
R6092		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R6093		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6095		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6096		ERJ8GEYJ331	M.RESISTOR CH 1/8W 330	1	
R6097		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6098		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R6099		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R6100		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R6101		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6102		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6103		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R6104		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R6105		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R6106,07		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6108		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6109-12		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	4	
R6113		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6114,15		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6121		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6122		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6123		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6124		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6125,26		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R6127		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6128		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6129		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6201		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R6202		ERJ3GEYJ114	M.RESISTOR CH 1/16W 110K	1	
R6203		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6204		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R6205-07		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R6208		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6209		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R6210,11		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R6212		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6213		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6215		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6216		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6217		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R8003		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R8014,15		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R8016		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R8017		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8030		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R8032		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8044		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R8045		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R8054		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R8056		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R8057,58		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	2	
R8062		ERJ3GEYJ152	M.RESISTOR CH 1/16W 1.5K	1	
R8064		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R8065		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8066		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R8067		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R8070		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8071,72		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	2	
R8075		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R8090		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8091		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R8092		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R8093		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8094		ERJ3GEYJ102	M.RESISTOR CH 1/16W 1K	1	
R8095		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8111		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
			TRANSFORMERS		
T1001		ELL04T032R	TRANSFORMER	1	
T4001		EIQ6QB006	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR1001		EVM7JSX30B52	V.RESISTOR 5.2K	1	
VR1002		EVM7JSX30B13	V.RESISTOR 1K	1	
VR1003		EVM7JSX30BE2	V.RESISTOR	1	
VR3001		EVM7JSX30B13	V.RESISTOR 1K	1	
VR3004		EVM7JSX30B14	V.RESISTOR 10K	1	
VR3005		EVM7JSX30B23	V.RESISTOR 2K	1	
VR3006		EVM7JSX30B14	V.RESISTOR 10K	1	
VR3007		EVM7JSX30B54	V.RESISTOR 50K	1	
VR3008		EVM7JSX30B52	V.RESISTOR 5.2K	1	
VR3802		EVM7JSX30B13	V.RESISTOR 1K	1	
VR4001		EVM7JSX30B52	V.RESISTOR 5.2K	1	
VR4002		EVM7JSX30B54	V.RESISTOR 50K	1	
VR4501,02		EVM7JSX30B23	V.RESISTOR 2K	2	
VR6201		EVM7JSX30B15	V.RESISTOR 100K	1	
VR8001		EVM7JSX30B23	V.RESISTOR 2K	1	
			CRYSTAL OSCILLATORS		
X3801		VSX0444	CRYSTAL OSCILLATOR	1	
X6002		VSX0461	CRYSTAL OSCILLATOR	1	
X6003		VSX0439	CRYSTAL OSCILLATOR	1	
X8001		VSX0419	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3639	POWER SHIELD COVER (A)	1	
		VSC3640	POWER SHIELD COVER (B)	1	
		VSC3630	H.A. SHIELD COVER (A)	1	
		VSC3631	H.A. SHIELD COVER (B)	1	
		VSC3784	POWER SINK HEAT PLATE	1	
		VEE7790	MIC A CONNECTION CABLE	1	
		VKC0412	C.B.A. POST	1	
	■	VEP06817A	VTR OPERATION (A) C.B.A.		(RTL)
			DIODES		
D6501-06		MA165VT	DIODE	6	
D6507		BR3668S	DIODE	1	
D6508		MA165VT	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D6510-16		MA165VT	DIODE	7	
			CONNECTORS		
FP6501		VJS2135	CONNECTOR (FEMALE)	1	
			SWITCHES		
SW6501-07		EVQ21504K	SWITCH	7	
SW6508,09		EVQQSB04B	SWITCH	2	
SW6510		VSTO098	SWITCH	1	
SW6511		ESD11V120	SWITCH	1	
SW6512		EVQ21504K	SWITCH	1	
SW6514,15		EVQQSB04B	SWITCH	2	
SW6516		EVQQFR02K	SWITCH	1	
SW6517		ESD100121AQ	SWITCH	1	
			MISCELLANEOUS		
		VWJ06C0040AA	JUMPER CONNECTOR	1	
		VWJ0610	FLEXIBLE	1	
	■	VEP03946A	AV JACK (A) C.B.A.		(RTL)
			CAPACITORS		
C1501		ECUM1C1052FN	C.CAPACITOR 16V 1U	1	
			DIODES		
D1501,02		MA153	DIODE	2	
			CONNECTORS		
FP1501		VJS2139	CONNECTOR (FEMALE)	1	
			COILS		
L1501-03		VLQ0555	COIL	3	
			CONNECTORS		
P1501		VJP1244T	CONNECTOR (MALE) 4P	1	
			RESISTORS		
R1504		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
			SWITCHES		
SW1501		VSS0187	SWITCH	1	
SW1502		VSS0186	SWITCH	1	
			MISCELLANEOUS		
		VEJ1288	PLATE	1	
		VGU3435	SWITCH KNOB	2	
	■	VEP03957A	AV JACK (B) C.B.A.		(RTL)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D1603		31DQ04FC7	DIODE	1	
D1605		MA715	DIODE	1	
			COILS		
L1601,02		VLP0113	COIL	2	
			CONNECTORS		
P1001		VJS1229T	CONNECTOR (FEMALE)	1	
P1601		VJP3318A006	CONNECTOR (MALE)	1	
P1601		VJS3172B006	CONNECTOR (FEMALE)	1	
P1602		VJP1231T	CONNECTOR (MALE) 4P	1	
P1604		VJP1229R	CONNECTOR (MALE)	1	
P6008		VJS3172B006	CONNECTOR (FEMALE)	1	
PJ1605		VJP1253	CONNECTOR (MALE)	1	
			RESISTORS		
R1606		VSF0059	FUSE	1	<!>
R1607		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
			BATTERYS		
Z1601		VSB0166	BATTERY	1	
			MISCELLANEOUS		
		VEE8184	A MECHA SHASIS EARTH CABLE	1	
		VEE7788	POWER JACK (B) CABLE UNIT	1	
	■	VXU1138	ZOOM BUTTON UNIT		(RTL)
			CONNECTORS		
P305		VJS3172B005	CONNECTOR (FEMALE)	1	
			SWITCHES		
SW1890,91		EVQQSU04W	SWITCH	2	
	■	VEK5865	CHARA/GENE C.B.A.		(RTL)
			CONNECTORS		
P1402		VJJ0163	JACK	1	
P3001		VJS3172B005	CONNECTOR (FEMALE)	1	
			MISCELLANEOUS		
		VEE7793	CONNECTION CABLE	1	
	■	VEK5868	FE HEAD C.B.A.		(NLA)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1901		ECEA1CKS100	E.CAPACITOR 16V	1	
C1902		VCYD1E103MR	S.CAPACITOR 25V 0.01U	1	
C1903		VCYD1E682KH	S.CAPACITOR 25V 6800P	1	
C1904		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
			COILS		
L1901		VLQEL05F221K	COILS 220UH	1	
			TRANSISTORS		
Q1901		2SC2603AE2F	TRANSISTOR	1	
			RESISTORS		
R1901		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
			TRANSFORMERS		
T1901		VLQ0586	TRANSFORMER	1	
	■	VES0689	MECHANISM CONNECTION C.B.A.		(NIA)
			(MODE SELECT SWITCH UNIT)		
			MISCELLANEOUS	1	
		ON2170	PHOTO COUPLER	1	
		VJP1229R	CONNECTOR (MALE)	1	
		VJP3318A008	CONNECTOR (MALE)	1	
		VEE2015	CABLE	1	
		VMX1280	SENSOR SPACER	1	

ORDER NO. VRD9308M130

Service Manual

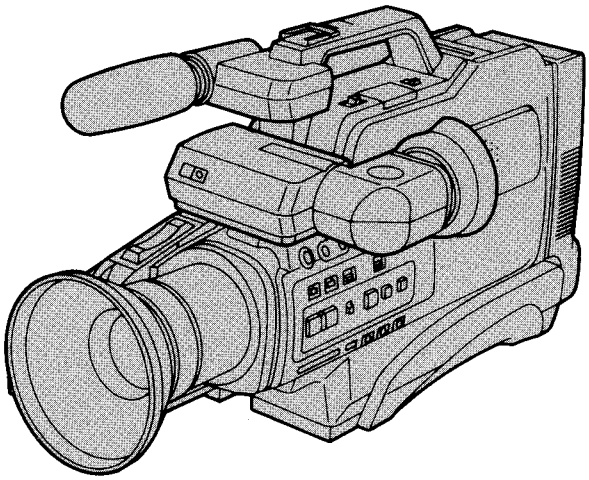
Simplified

Panasonic S-VHS VHS PAL 625

Hi-Fi HQ

S-VHS Movie

NV-MS4 E3 B3 A3
NV-M9000EN3
NV-M9900MC3



Panasonic

INTRODUCTION

This service manual contains technical information which will allow service Personnels to understand and service the S-VHS Movie Model NV-MS4E3/B3/A3, NV-M9000EN3 and NV-M9900MC3.
This service manual is based on NV-MS4E/B/A, NV-M9000EN and NV-M9900MC service manual. Therefore please refer to the descriptions (General Description, adjustment procedures and Block Diagrams) which are shown in NV-MS4E/B/A, NV-M9000EN and NV-M9900MC service manual Order No. VRD9208M147.

SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 12V Consumption; Recording mode; 9.3W (Battery operation)
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL
TAPE FORMAT	S-VHS/VHS Cassette Tape (Tape width 12.7mm)
TAPE SPEED	23.39mm/s Record/Playback Time 240min. with NV-E240 FF/REW Time less than 12min. with NV-E180
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)
	STANDARD ILLUMINATION: 1,400 lux
	MINIMUM REQUIRED ILLUMINATION: 1 lux (Digital Gain Up Mode)
	LENS: 12 : 1 Power Zoom Lens with 2 zooming speeds and Digital AI Auto Focus; Focal Length 5.6−67mm F1.6 Auto Iris/Manual Ilis Filter Diameter 49mm
	IMAGE SENSOR: 1/3 inch CCD Image Sensor
	VIEW FINDER: 0.7″ Electric View Finder

ITEM	SPECIFICATION
VIDEO	HEADS: 4 rotary heads, 1 flying erase head
	OUTPUT: PHONO CONNECTOR; 1.0Vp-p 75Ω unbalanced S-VIDEO OUT Terminal; 1.0Vp-p 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio) 4 rotary heads; 2 cahnnels (Hi-Fi Sound-Stereo)
	INPUT: MIC IN (M3); −70dB, 4.7kΩ unbalanced
	OUTPUT: PHONO CONNECTOR; −8dB, 47kΩ loaded EARPHONE JACK (M3); −28dB, 8Ω unbalanced
WEIGHT	Approx. 2.7kg (without Battery Pack)
DIMENSIONS	130(W)×245(H)×476(D)mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Shoulder Strap 1 pc. AV Output Cable (EXCEPT NV-MS4E3/B3) 1 pc. DC Input Cable 1 pc. Battery Pack Charging Connector 1 pc. System Carrying Case (NV-MS4B3) 1 pc. S-Video Cable 1 pc. 21 Pin Adaptor ((NV-MS4E3/B3)

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

1. COMPARISON CHART

1. COMPARISON CHART FOR NV-MS4E3/A3/B3, NV-M9900MC3,NV-M9000EN3.

This chart is described different part from the original model to the new model as shown below.

ORIGINAL MODEL: NV-MS4E/A/B,NV-9900,NV,NV-M9000EN.
NEW MODEL : NV-MS4E3/A3/B3, NV-M9900MC3,NV-M9000EN3.

Note : 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.

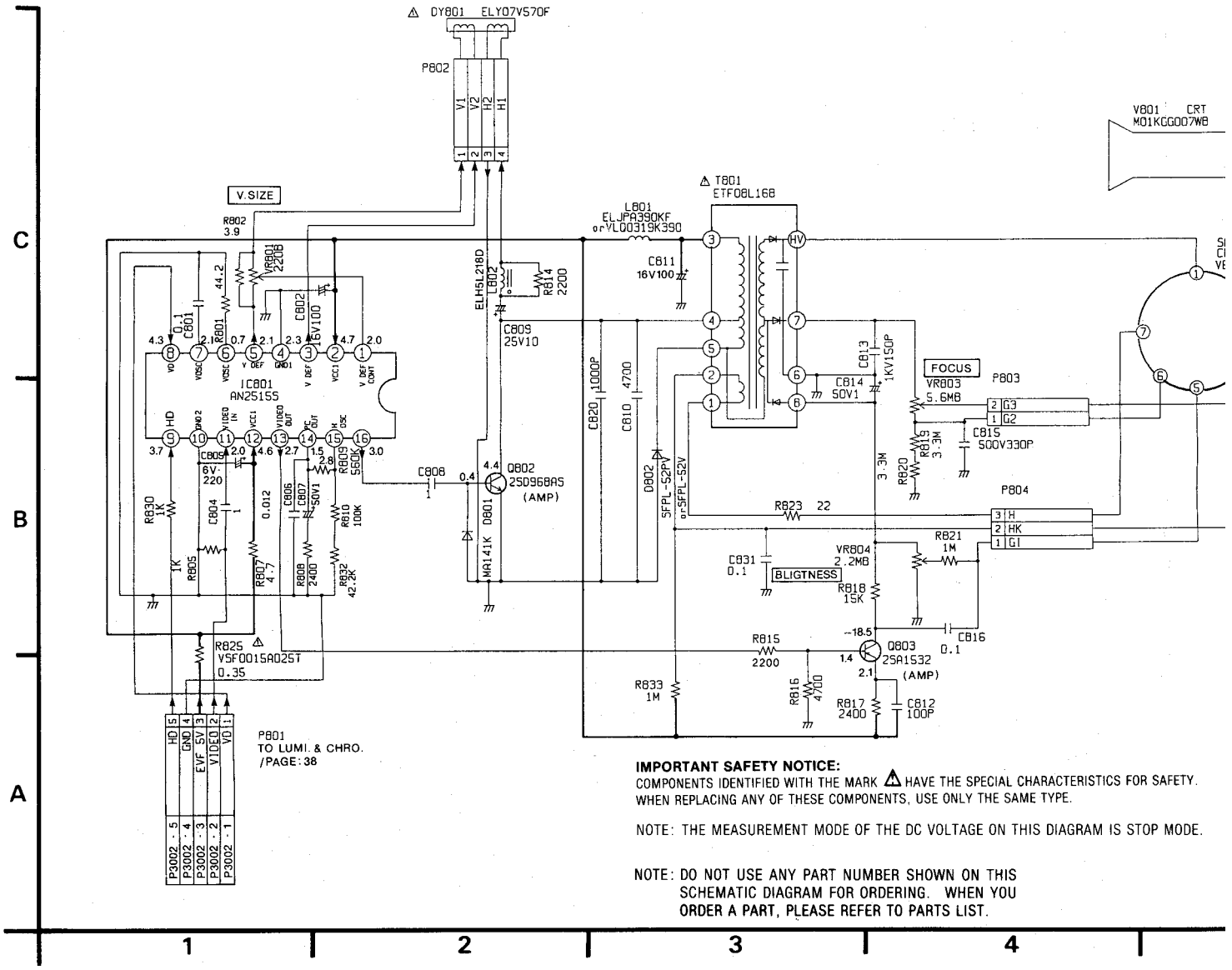
Comparison Chart of Mechanical Replacement parts. (A)..Added, (C)..Changed, (D)..Deleted

Ref. No.	NV-MS4E/A/B NV-M9900MC NV-M9000EN Part No.	NV-MS4E3/A3/B3 NV-M9900MC3 NV-M9000EN3 Part No.	Pcs /Set	Part Name & Description	Remarks
145 (1)	VXS0112	VXS0119	1	EARTH BRUSH UNIT	(C)
140 (1)	VEG0992	VEG1102	1	CYLINDER UNIT	(C)
138 (1)	VEH0583	--------	1→0		(D)
175 (1)	VMA8865	VEP03A93A	1	RTF FLEXIBLE CARD C.B.A.	(C)

Comparison Chart of Electrical Replacement Parts. (A)..Added, (C)..Changed, (D)..Deleted

Ref. No.	NV-MS4E/A/B NV-M9900MC NV-M9000EN Part No.	NV-MS4E3/A3/B3 NV-M9900MC3 NV-M9000EN3 Part No.	Pcs /Set	Part Name & Description	Remarks
	VEP03945A	VEP03A86A	1	MAIN C.B.A.	(C)

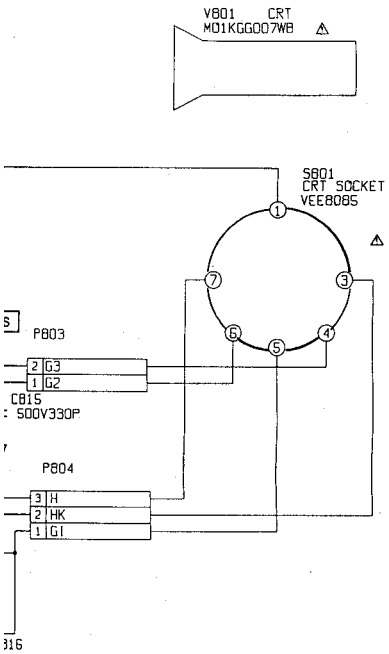
2. EVF SCHEMATIC DIAGRAM



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

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



EVF C.B.A.	
Transistor	
Q802	A-7
Q803	A-2
Integrated Circuit	
IC801	A-4
Adjustment	
VR801	A-6
VR803	A-3
VR804	A-3
Connector	
P801	A-4
P802	A-4
P803	A-2
P804	A-3

ADDRESS INFORMATION

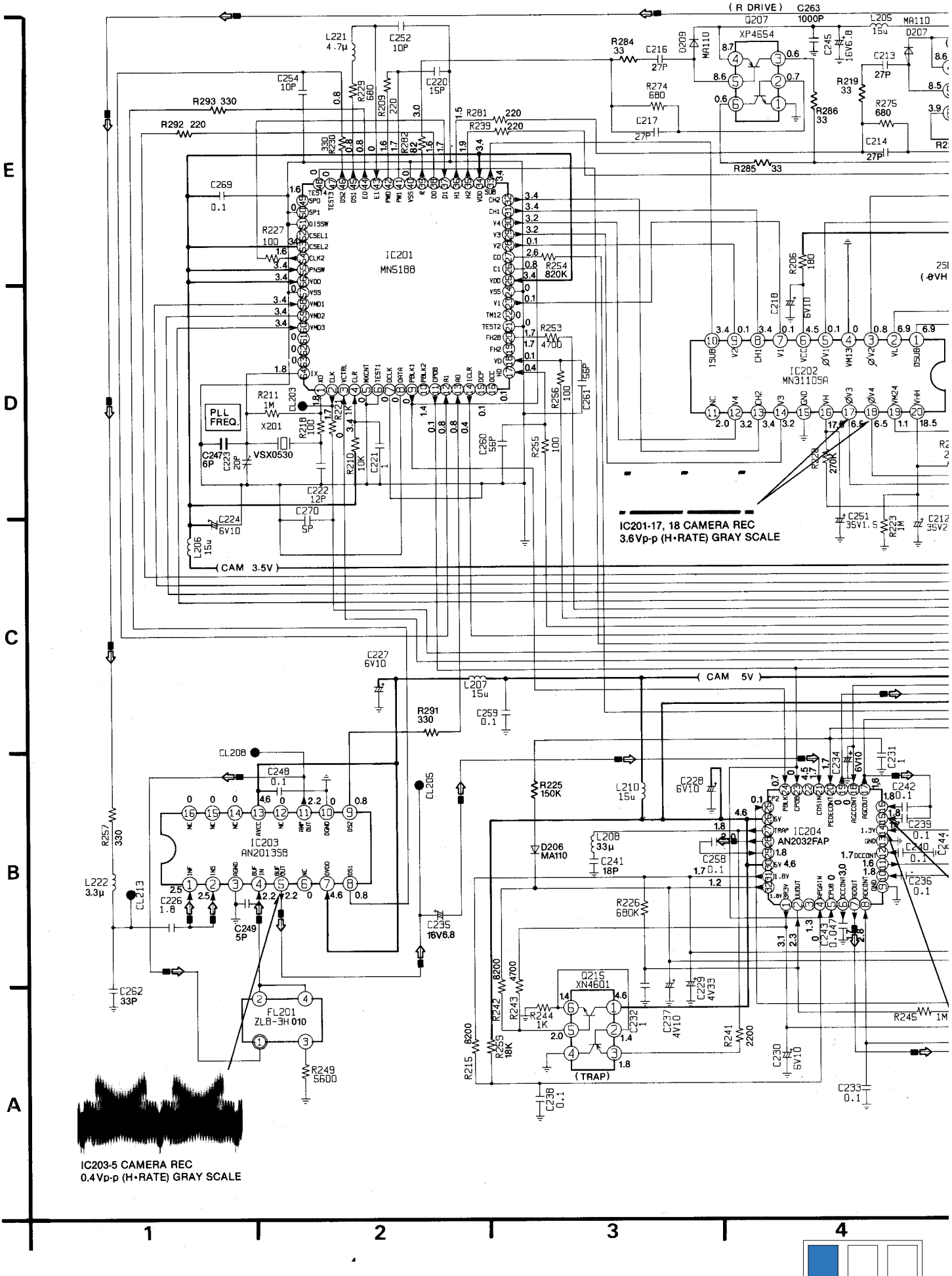
SPECIAL CHARACTERISTICS FOR SAFETY.
THE SAME TYPE.

GE ON THIS DIAGRAM IS STOP MODE.

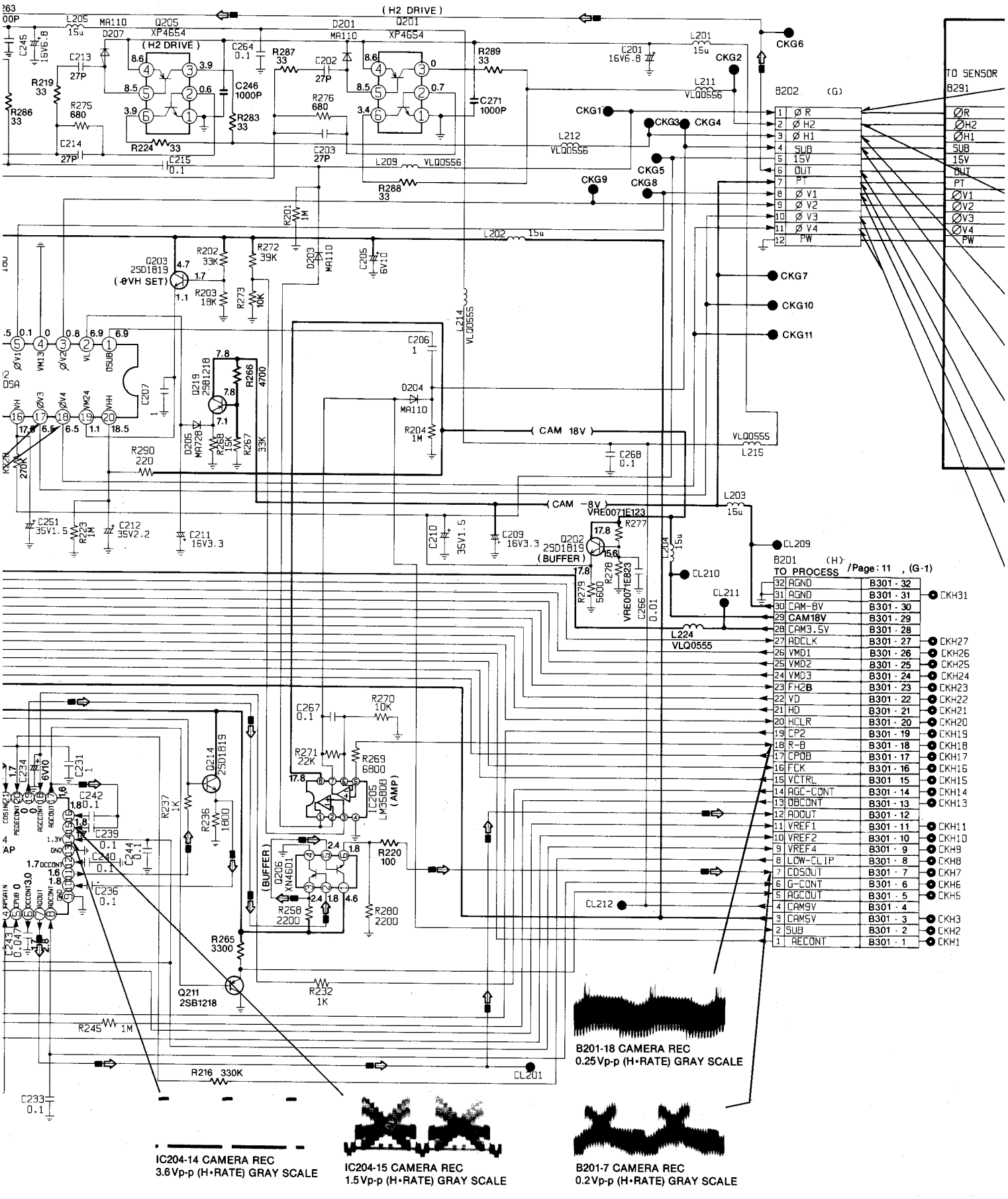
N THIS
EN YOU
ST.

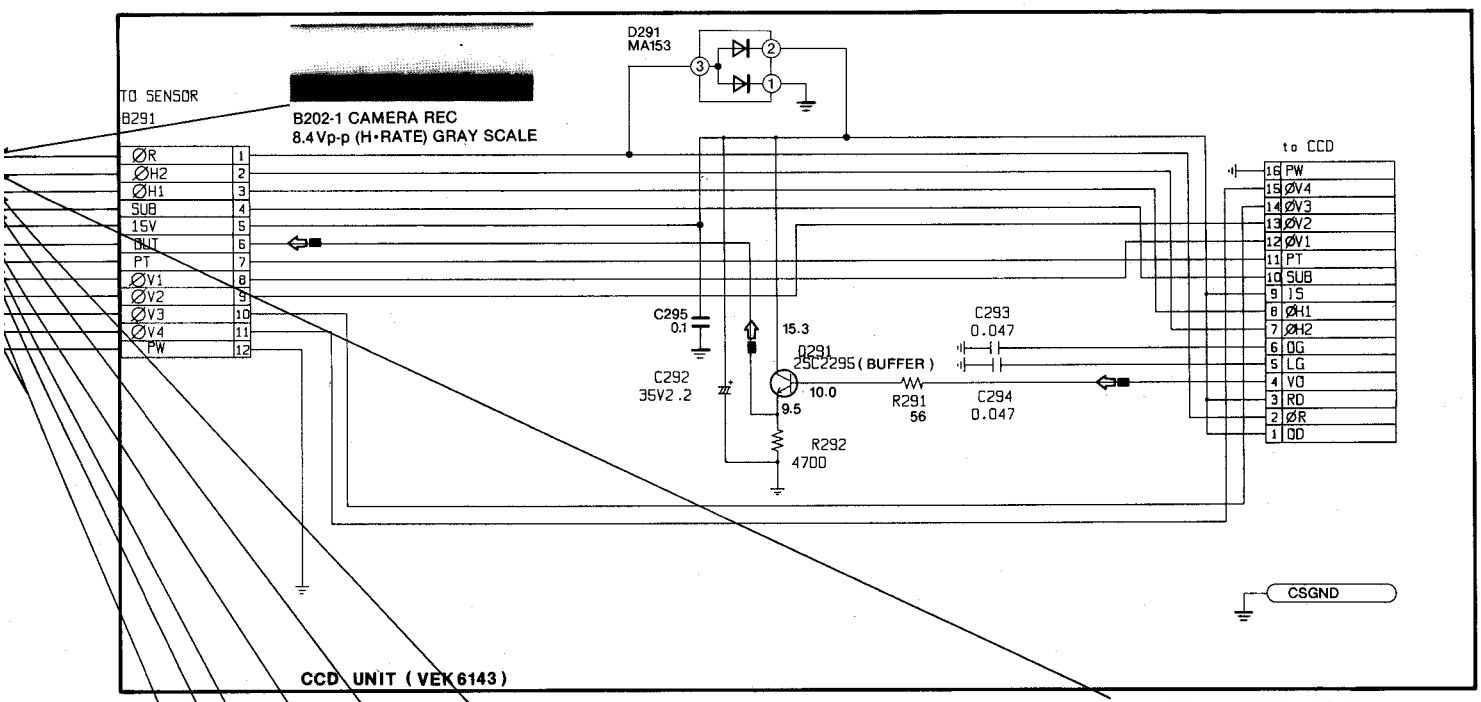
4 5

4. CCD DRIVE SCHEMATIC DIGRAM



VIDEO SIGNAL





B202-3 CAMERA REC
15.1Vp-p (H•RATE) GRAY SCALE

B202-2 CAMERA REC
15.1Vp-p (H•RATE) GRAY SCALE

B202-4 CAMERA REC
7.0VDC (H•RATE) GRAY SCALE

B202-6 CAMERA REC
0.8Vp-p (H•RATE) GRAY SCALE

B202-7 CAMERA REC
−8.0VDC

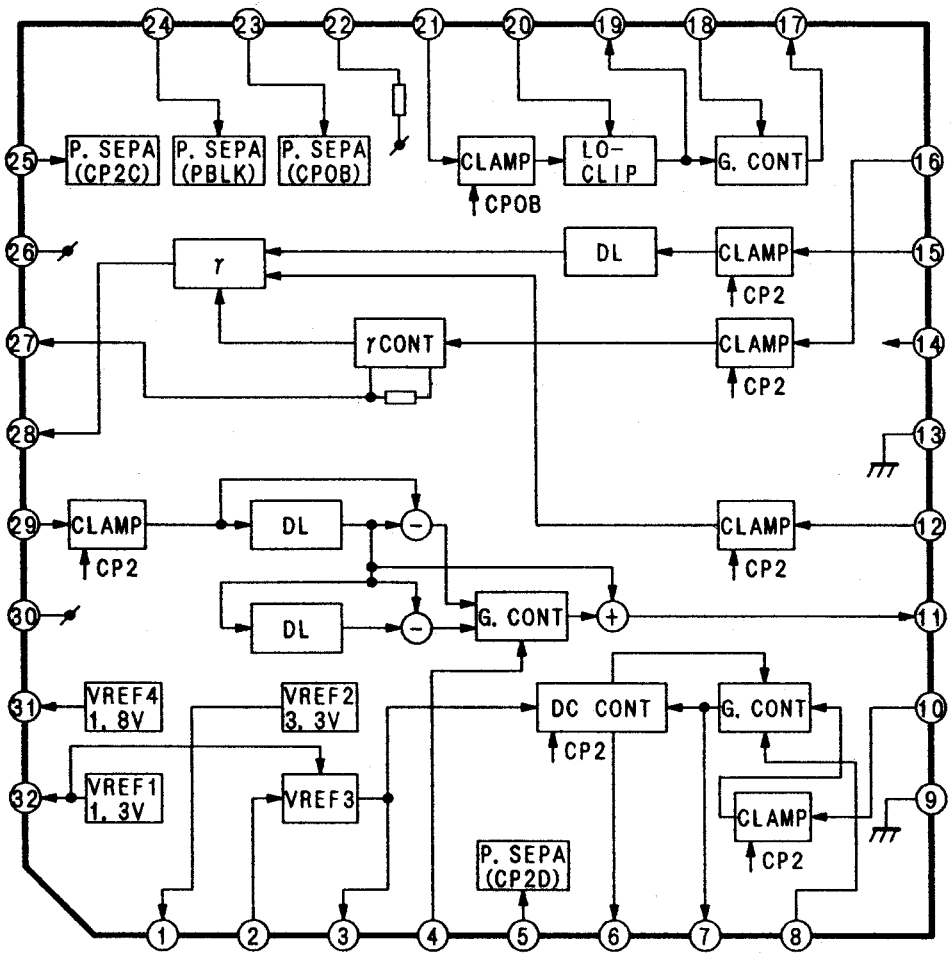
B202-8, 9 CAMERA REC
7.0Vp-p (H•RATE) GRAY SCALE

B202-10, 11 CAMERA REC
7.0Vp-p (H•RATE) GRAY SCALE

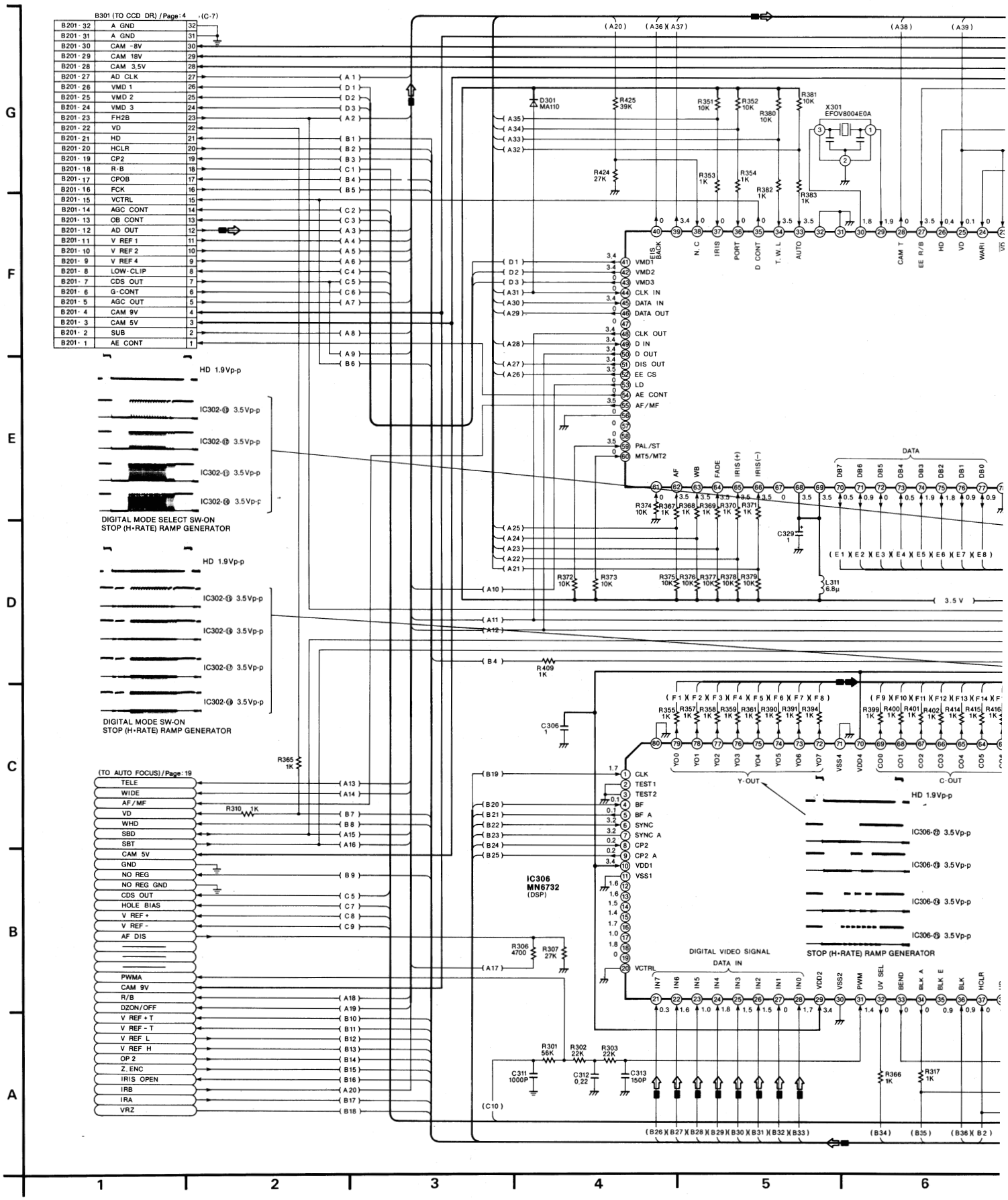
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

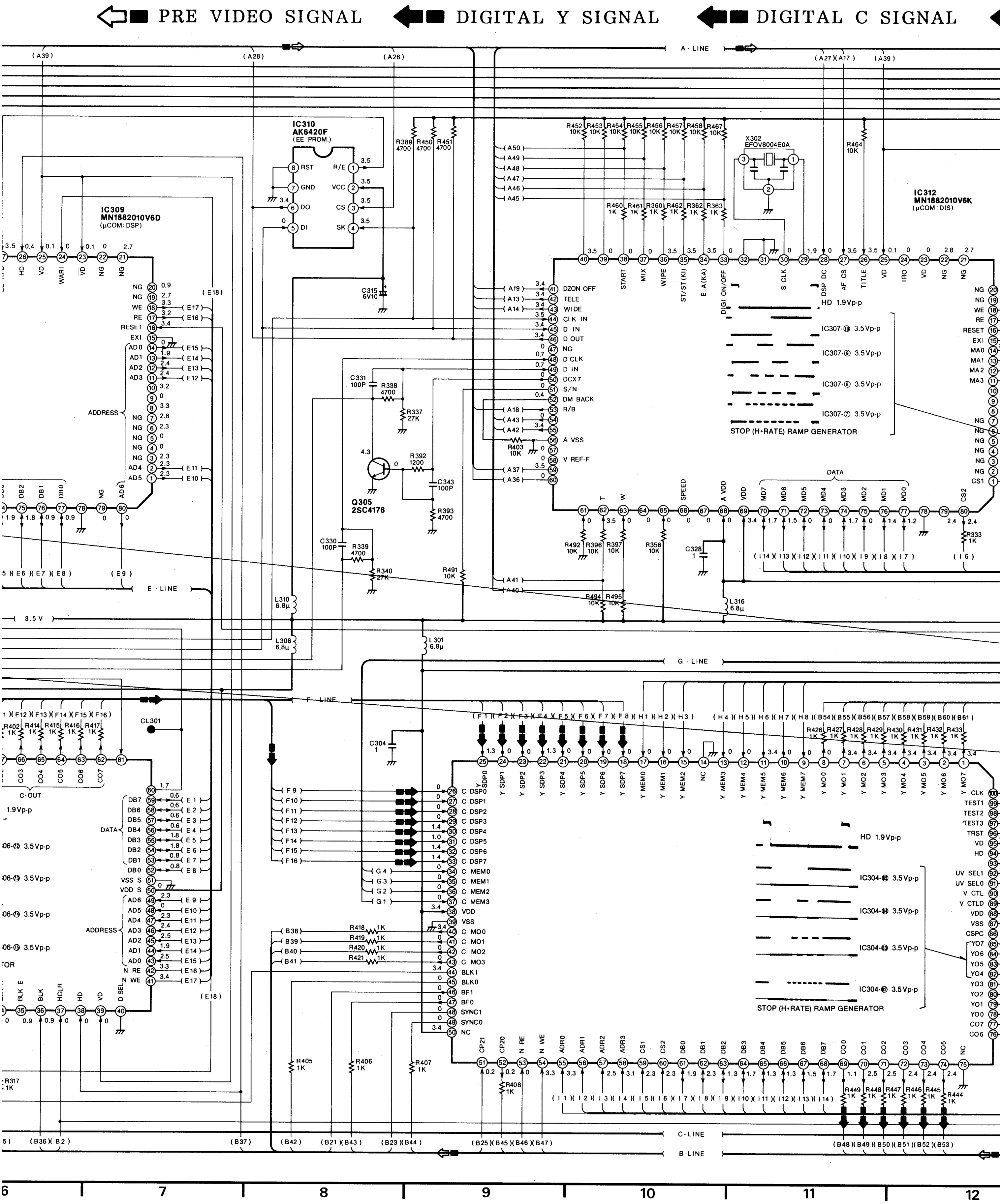
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

IC204
AN2033FAP
AN2032FAP

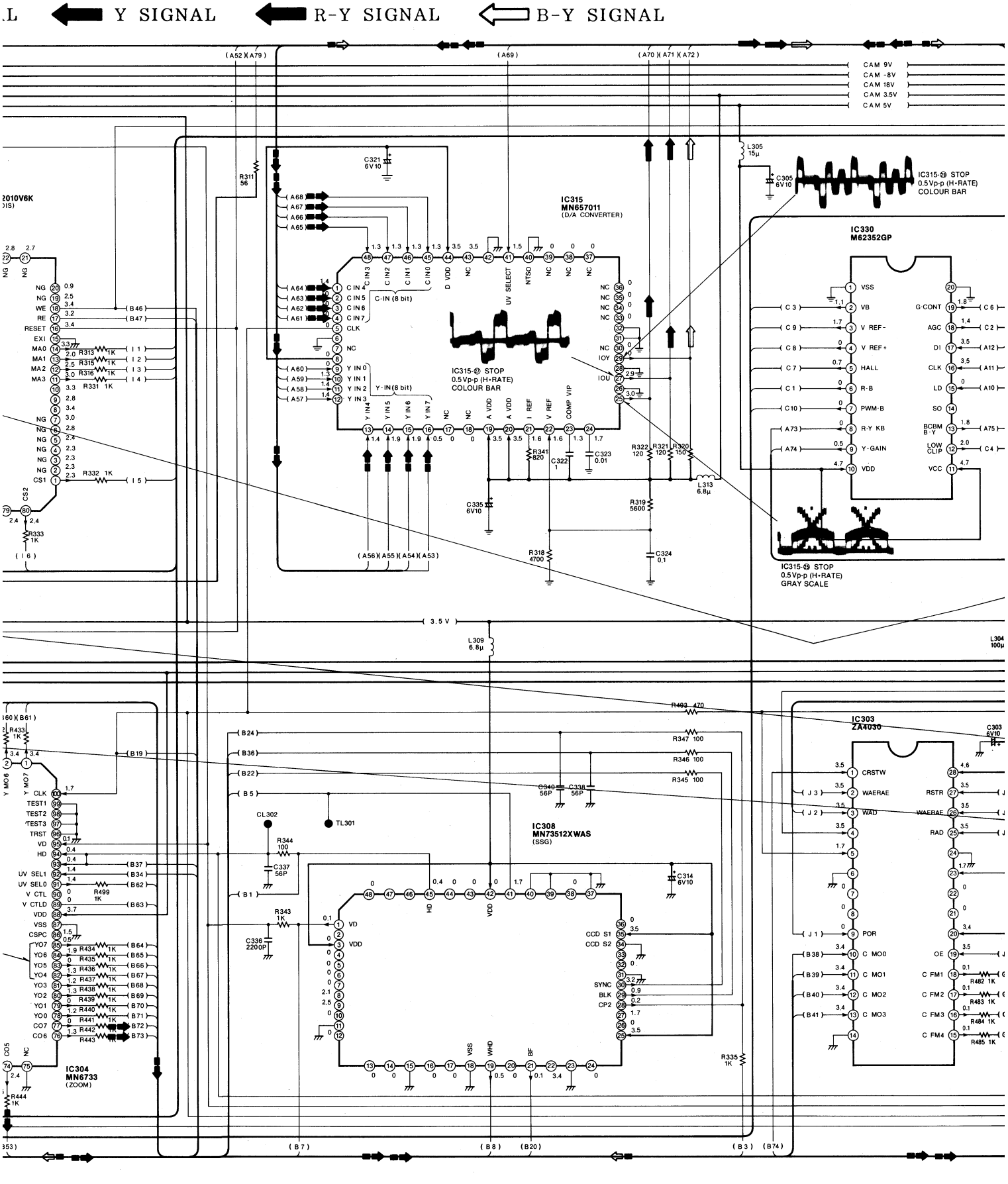


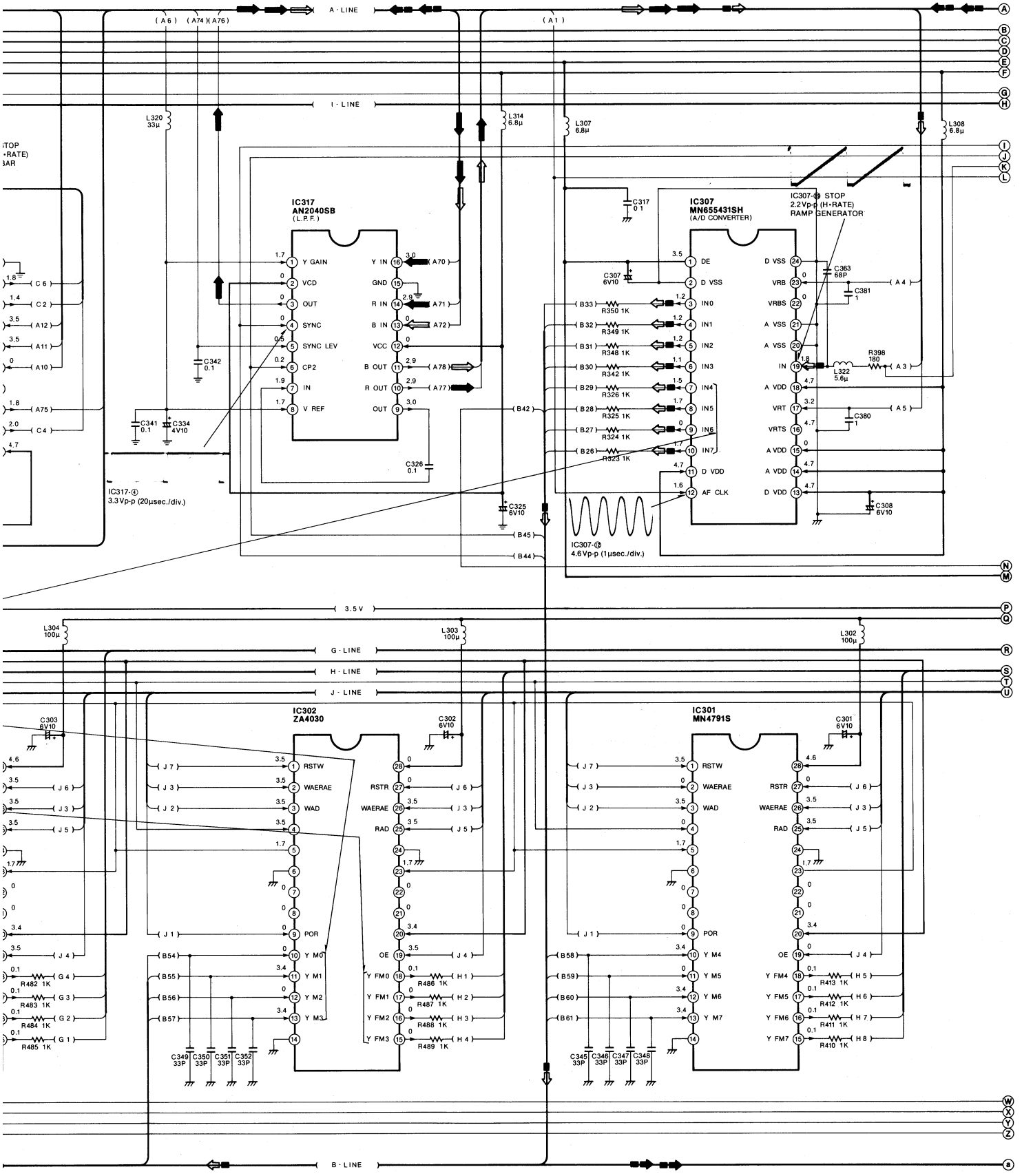
6. PROCESS & CAMERA OPERATION SCHEMATIC DIAGRAM



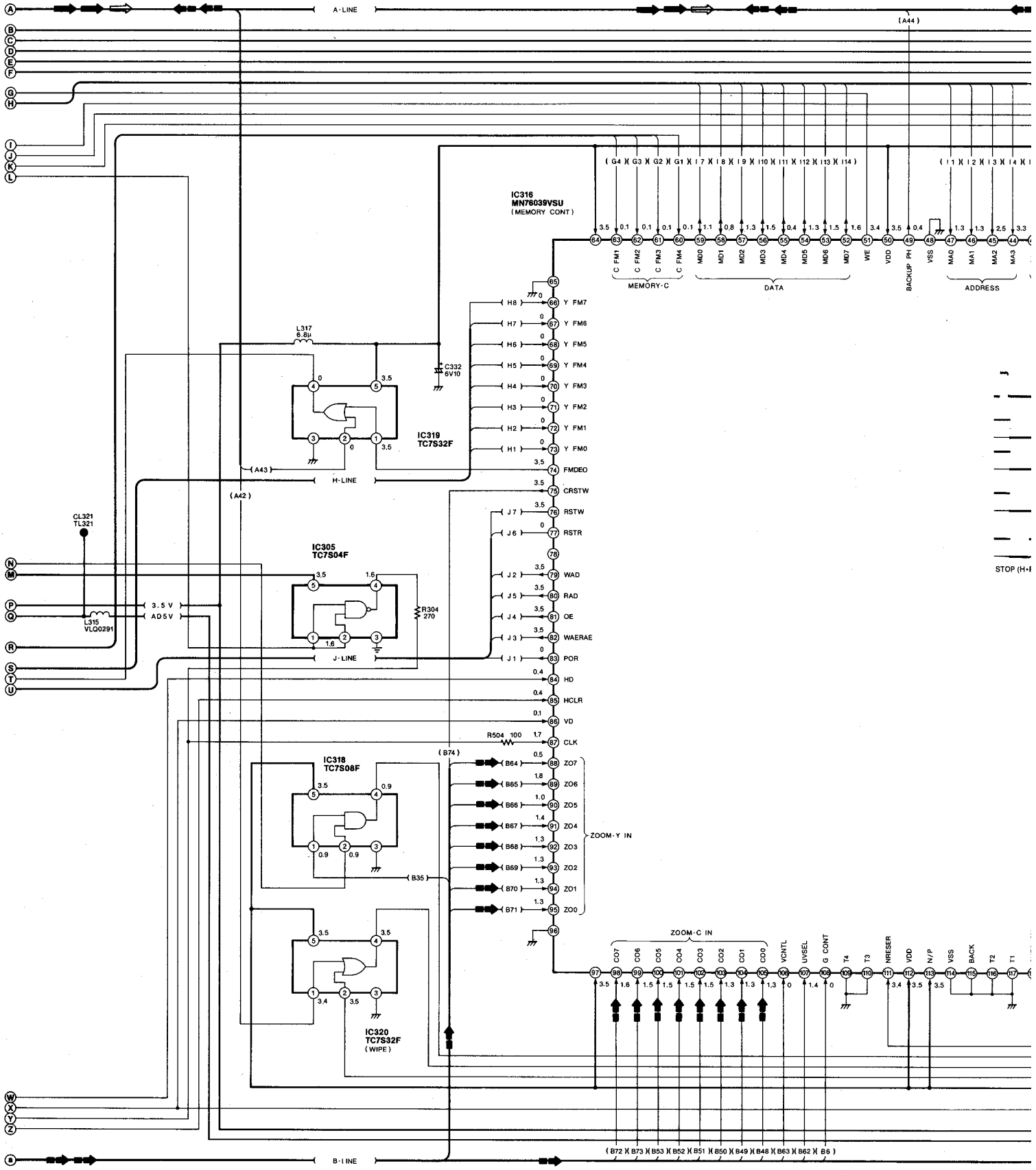


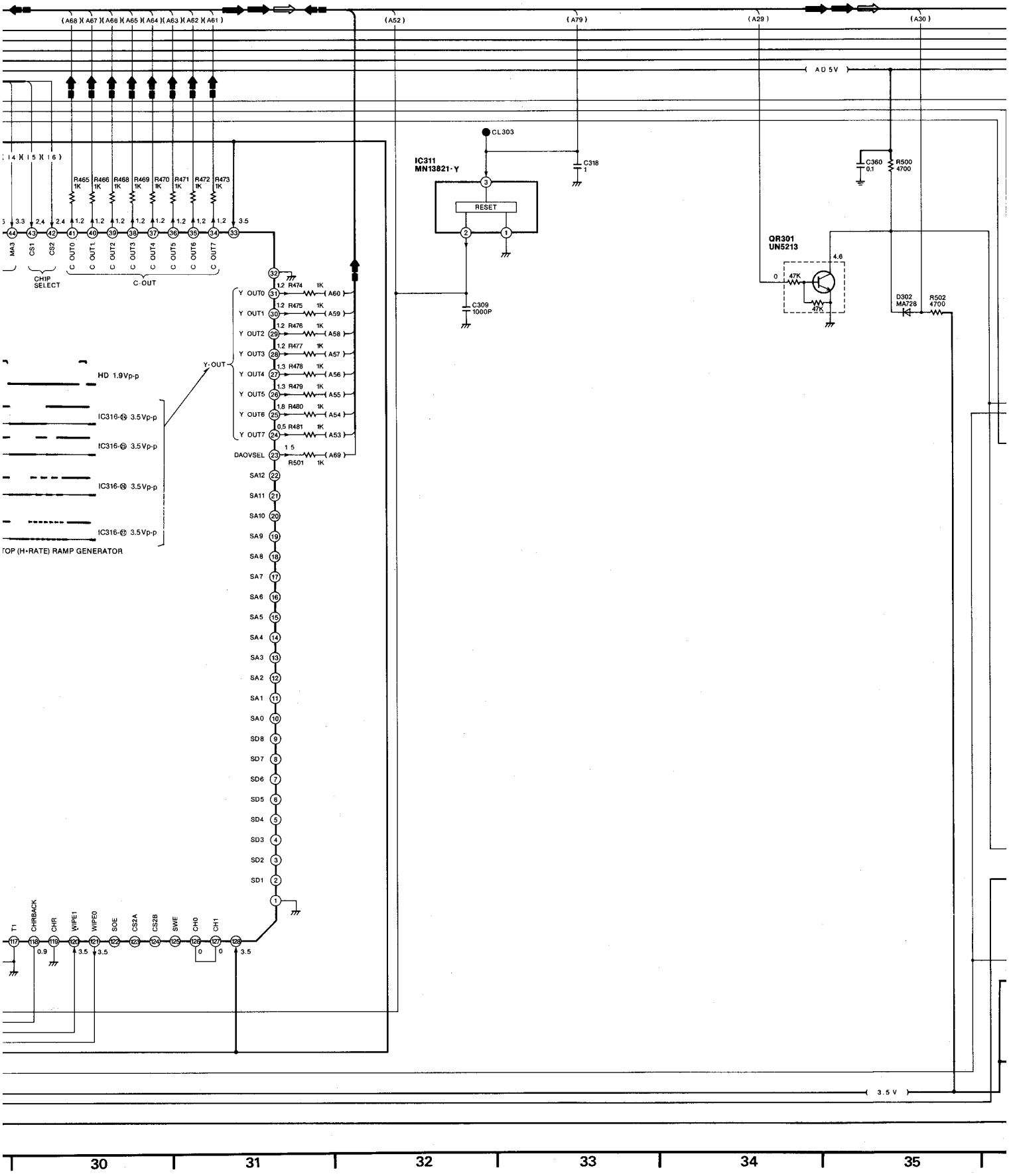
PRE VIDEO SIGNAL
DIGITAL Y SIGNAL
DIGITAL C SIGNAL
A-LINE
IC310
AK6420F
(EE PROM.)
IC309
MN1882010V6D
(μCOM: DSP)
IC312
MN1882010V6K
(μCOM: DIS)
X302
EFOV8004E0A
Q305
2SC4176
STOP (H-RATE) RAMP GENERATOR
E-LINE
G-LINE
F-LINE
C-LINE
B-LINE
CL301
C-OUT
DATA
ADDRESS
HD 1.9Vp-p
IC307-⑩ 3.5Vp-p
IC307-⑨ 3.5Vp-p
IC307-⑧ 3.5Vp-p
IC307-⑦ 3.5Vp-p
IC304-⑮ 3.5Vp-p
IC304-⑭ 3.5Vp-p
IC304-⑬ 3.5Vp-p
IC304-⑫ 3.5Vp-p
6
7
8
9
10
11
12

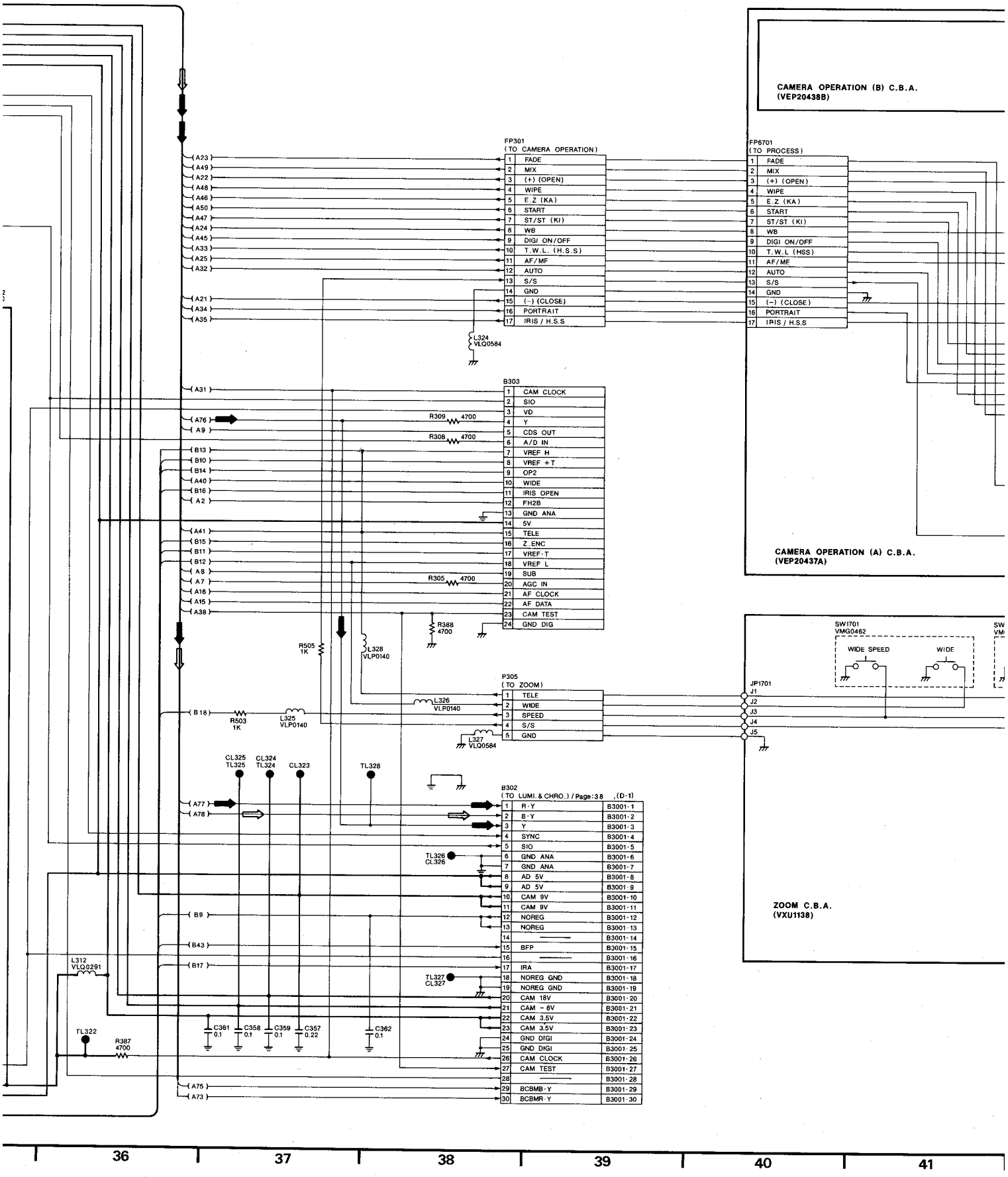

Y SIGNAL
R-Y SIGNAL
B-Y SIGNAL
CAM 9V
CAM -8V
CAM 18V
CAM 3.5V
CAM 5V
IC315
MN657011
(D/A CONVERTER)
IC330
M62352GP
IC303
ZA4030
IC308
MN73512XWAS
(SSG)
IC304
MN6733
(ZOOM)
IC315-㉙ STOP
0.5Vp-p (H•RATE)
COLOUR BAR
IC315-㉕ STOP
0.5Vp-p (H•RATE)
GRAY SCALE
C-IN (8 bit)
Y-IN (8 bit)
3.5 V
12
13
14
15
16
17
18

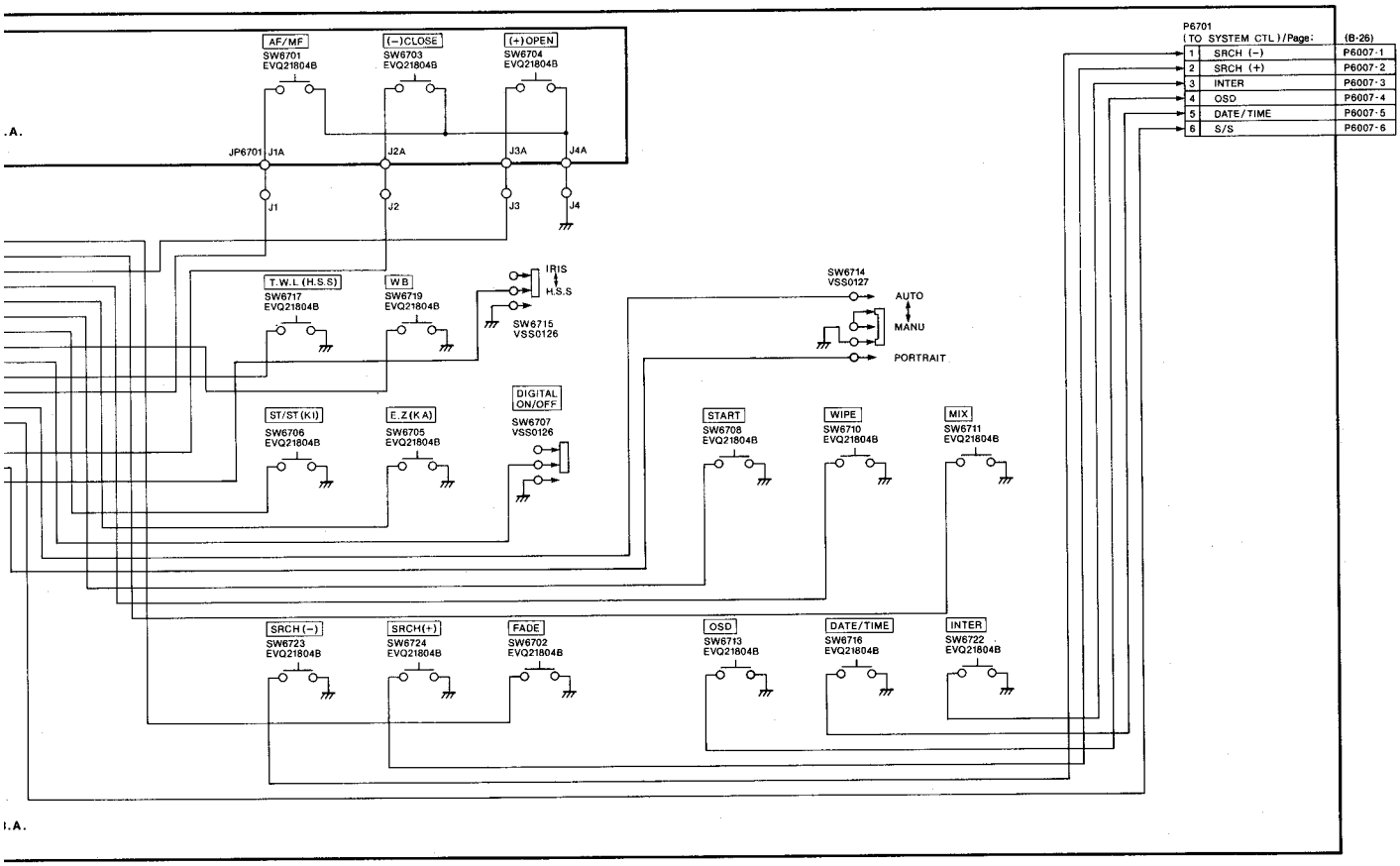


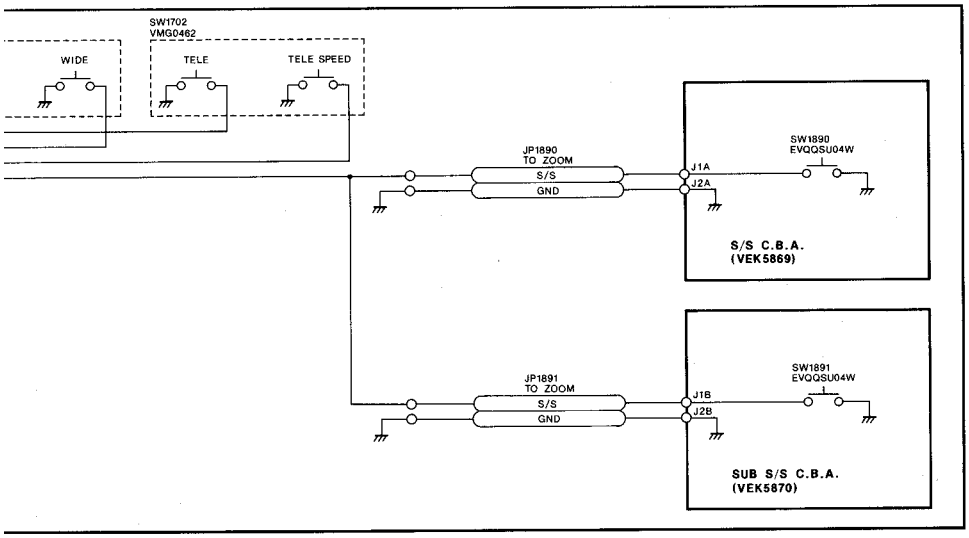
18 19 20 21 22 23


A-LINE
(A44)
IC316
MN76039VSU
(MEMORY CONT)
MEMORY-C
DATA
ADDRESS
BACKUP PH
VSS
VDD
WE
C FM1
C FM2
C FM3
C FM4
MD0
MD1
MD2
MD3
MD4
MD5
MD6
MD7
MA0
MA1
MA2
MA3
IC319
TC7S32F
L317
6.8μ
C332
6V10
Y FM7
Y FM6
Y FM5
Y FM4
Y FM3
Y FM2
Y FM1
Y FM0
FMDEO
CRSTW
RSTW
RSTR
WAD
RAD
OE
WAERAE
POR
HD
HCLR
VD
CLK
(A43)
H-LINE
(A42)
CL321
TL321
L315
VLQ0291
3.5 V
AD5V
IC305
TC7S04F
R304
270
J-LINE
R504 100
(B74)
IC318
TC7S08F
ZOOM-Y IN
ZO7
ZO6
ZO5
ZO4
ZO3
ZO2
ZO1
ZO0
(B35)
ZOOM-C IN
CO7
CO6
CO5
CO4
CO3
CO2
CO1
CO0
VCNTL
UVSEL
G CONT
T4
T3
NRESER
VDD
N/P
VSS
BACK
T2
T1
IC320
TC7S32F
(WIPE)
B-LINE
STOP (H•
24
25
26
27
28
29


(A68) (A67) (A66) (A65) (A64) (A63) (A62) (A61)
(A52)
(A79)
(A29)
(A30)
AD 5V
CL303
IC311
MN13821-Y
RESET
C318
1
C360
0.1
R500
4700
QR301
UN5213
4.6
47K
47K
D302
MA728
R502
4700
C309
1000P
R465 1K
R466 1K
R468 1K
R469 1K
R470 1K
R471 1K
R472 1K
R473 1K
MA3
CS1
CS2
C OUT0
C OUT1
C OUT2
C OUT3
C OUT4
C OUT5
C OUT6
C OUT7
CHIP SELECT
C OUT
Y OUT0
Y OUT1
Y OUT2
Y OUT3
Y OUT4
Y OUT5
Y OUT6
Y OUT7
DAOVSEL
R474 1K
R475 1K
R476 1K
R477 1K
R478 1K
R479 1K
R480 1K
R481 1K
R501 1K
A60
A59
A58
A57
A56
A55
A54
A53
A69
Y OUT
HD 1.9Vp-p
IC316-㉔ 3.5Vp-p
IC316-㉓ 3.5Vp-p
IC316-㉒ 3.5Vp-p
IC316-㉑ 3.5Vp-p
TOP (H·RATE) RAMP GENERATOR
SA12
SA11
SA10
SA9
SA8
SA7
SA6
SA5
SA4
SA3
SA2
SA1
SA0
SD8
SD7
SD6
SD5
SD4
SD3
SD2
SD1
CHRBACK
CHR
WIPE1
WIPE0
SOE
CS2A
CS2B
SWE
CH0
CH1
3.5 V
30
31
32
33
34
35

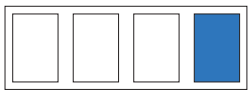

CAMERA OPERATION (B) C.B.A.
(VEP20438B)
FP301
(TO CAMERA OPERATION)
1 FADE
2 MIX
3 (+) (OPEN)
4 WIPE
5 E.Z (KA)
6 START
7 ST/ST (KI)
8 WB
9 DIGI ON/OFF
10 T.W.L. (H.S.S)
11 AF/MF
12 AUTO
13 S/S
14 GND
15 (-) (CLOSE)
16 PORTRAIT
17 IRIS / H.S.S
FP6701
(TO PROCESS)
1 FADE
2 MIX
3 (+) (OPEN)
4 WIPE
5 E.Z (KA)
6 START
7 ST/ST (KI)
8 WB
9 DIGI ON/OFF
10 T.W.L (HSS)
11 AF/MF
12 AUTO
13 S/S
14 GND
15 (-) (CLOSE)
16 PORTRAIT
17 IRIS / H.S.S
L324
VLQ0584
B303
1 CAM CLOCK
2 SIO
3 VD
4 Y
5 CDS OUT
6 A/D IN
7 VREF H
8 VREF +T
9 OP2
10 WIDE
11 IRIS OPEN
12 FH2B
13 GND ANA
14 5V
15 TELE
16 Z.ENC
17 VREF-T
18 VREF L
19 SUB
20 AGC IN
21 AF CLOCK
22 AF DATA
23 CAM TEST
24 GND DIG
R309 4700
R308 4700
R305 4700
R388 4700
R505 1K
L328
VLP0140
CAMERA OPERATION (A) C.B.A.
(VEP20437A)
SW1701
VMG0462
WIDE SPEED
WIDE
JP1701
J1
J2
J3
J4
J5
P305
(TO ZOOM)
1 TELE
2 WIDE
3 SPEED
4 S/S
5 GND
L326
VLP0140
L327
VLQ0584
R503
1K
L325
VLP0140
CL325
TL325
CL324
TL324
CL323
TL328
B302
(TO LUMI.& CHRO.) / Page:38 ,(D-1)
1 R-Y B3001-1
2 B-Y B3001-2
3 Y B3001-3
4 SYNC B3001-4
5 SIO B3001-5
6 GND ANA B3001-6
7 GND ANA B3001-7
8 AD 5V B3001-8
9 AD 5V B3001-9
10 CAM 9V B3001-10
11 CAM 9V B3001-11
12 NOREG B3001-12
13 NOREG B3001-13
14 B3001-14
15 BFP B3001-15
16 B3001-16
17 IRA B3001-17
18 NOREG GND B3001-18
19 NOREG GND B3001-19
20 CAM 18V B3001-20
21 CAM -8V B3001-21
22 CAM 3.5V B3001-22
23 CAM 3.5V B3001-23
24 GND DIGI B3001-24
25 GND DIGI B3001-25
26 CAM CLOCK B3001-26
27 CAM TEST B3001-27
28 B3001-28
29 BCBMB-Y B3001-29
30 BCBMR-Y B3001-30
TL326
CL326
TL327
CL327
L312
VLQ0291
TL322
R387
4700
C361 0.1
C358 0.1
C359 0.1
C357 0.22
C362 0.1
ZOOM C.B.A.
(VXU1138)
A23 A49 A22 A48 A46 A50 A47 A24 A45 A33 A25 A32
A21 A34 A35
A31
A76 A9
B13 B10 B14 A40 B16 A2
A41 B15 B11 B12 A8 A7 A16 A15 A38
B18
A77 A78
B9
B43
B17
A75 A73
36 37 38 39 40 41



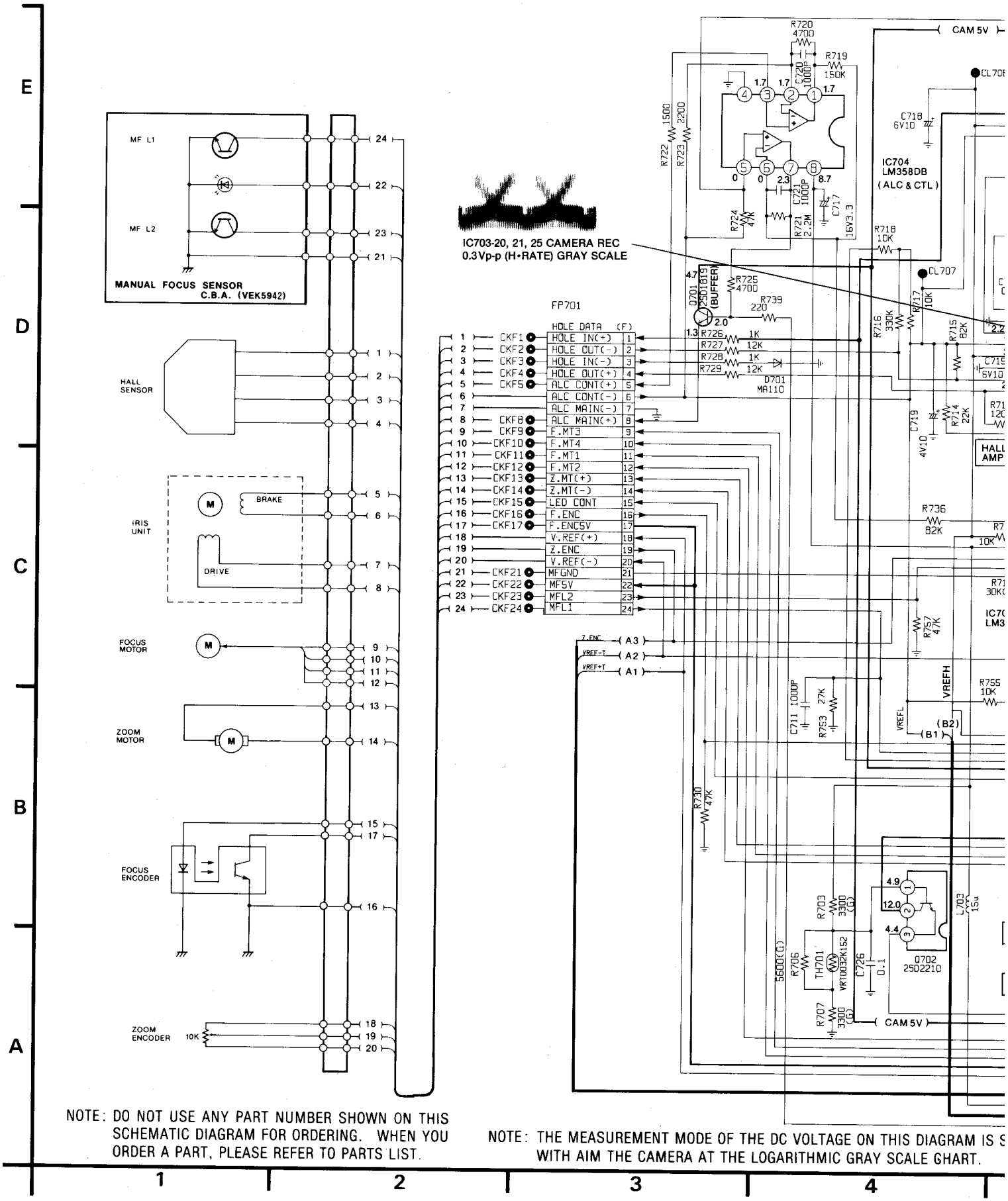


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

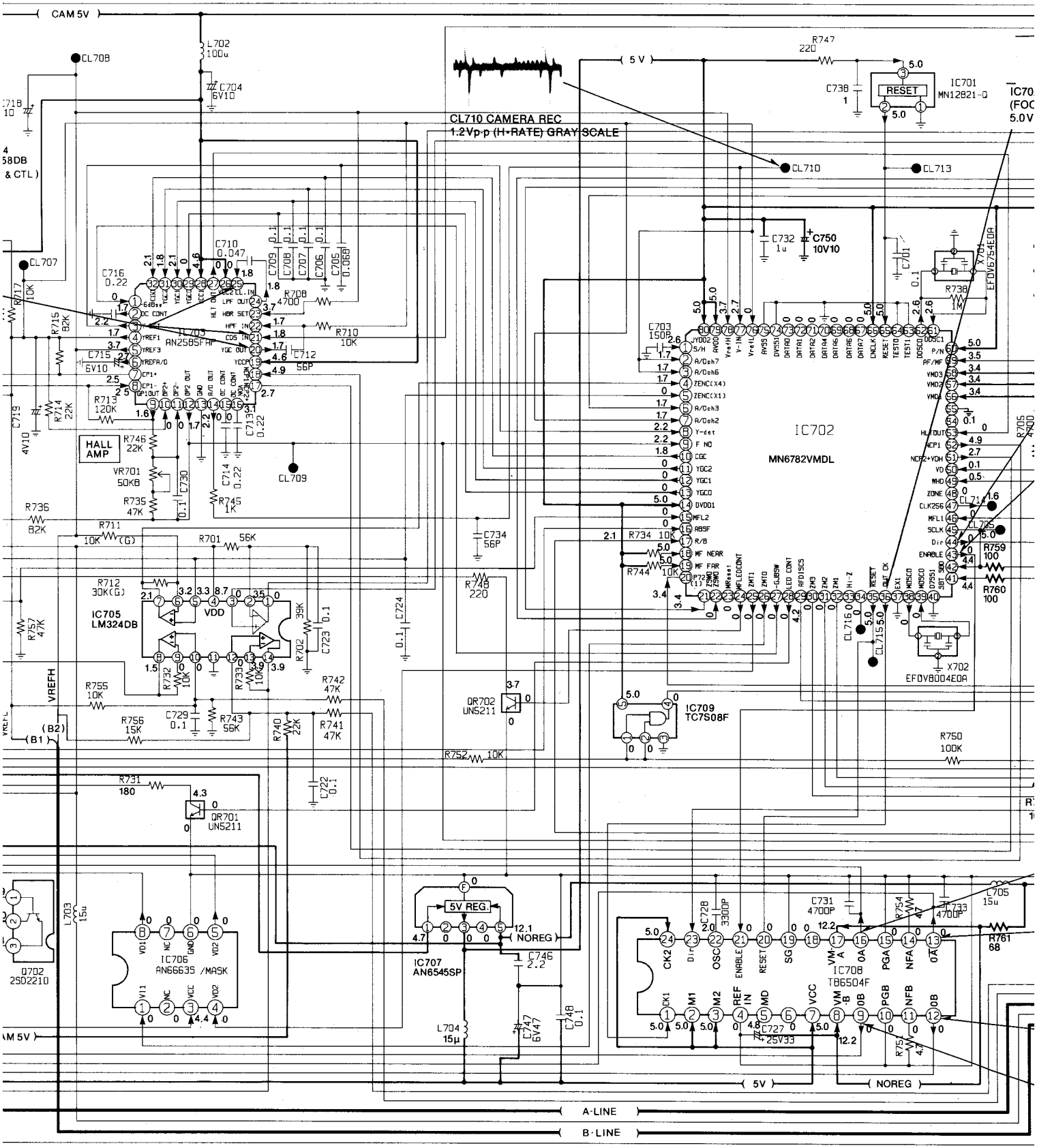


7. AUTO FOCUS SCHEMATIC DIAGRAM



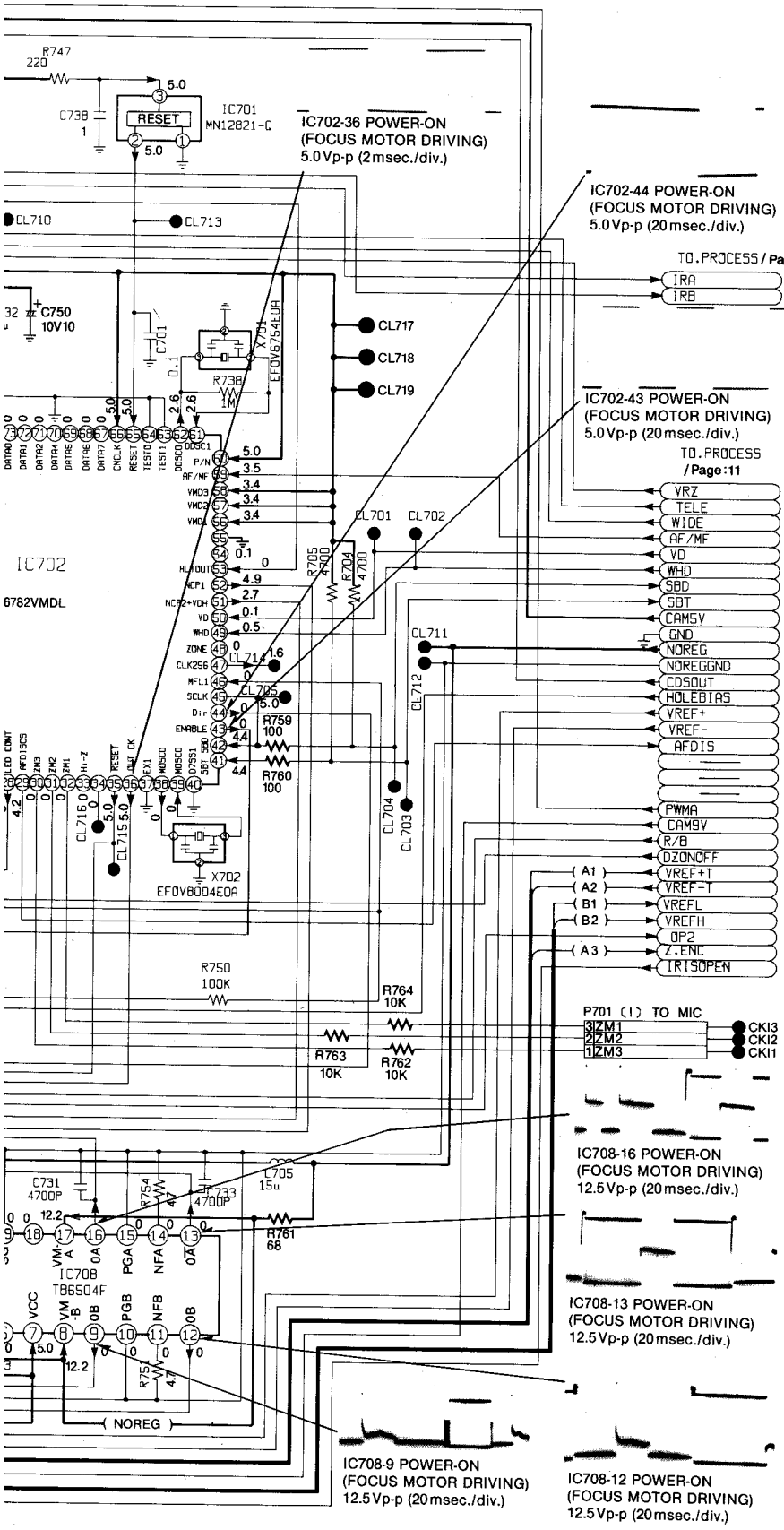
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

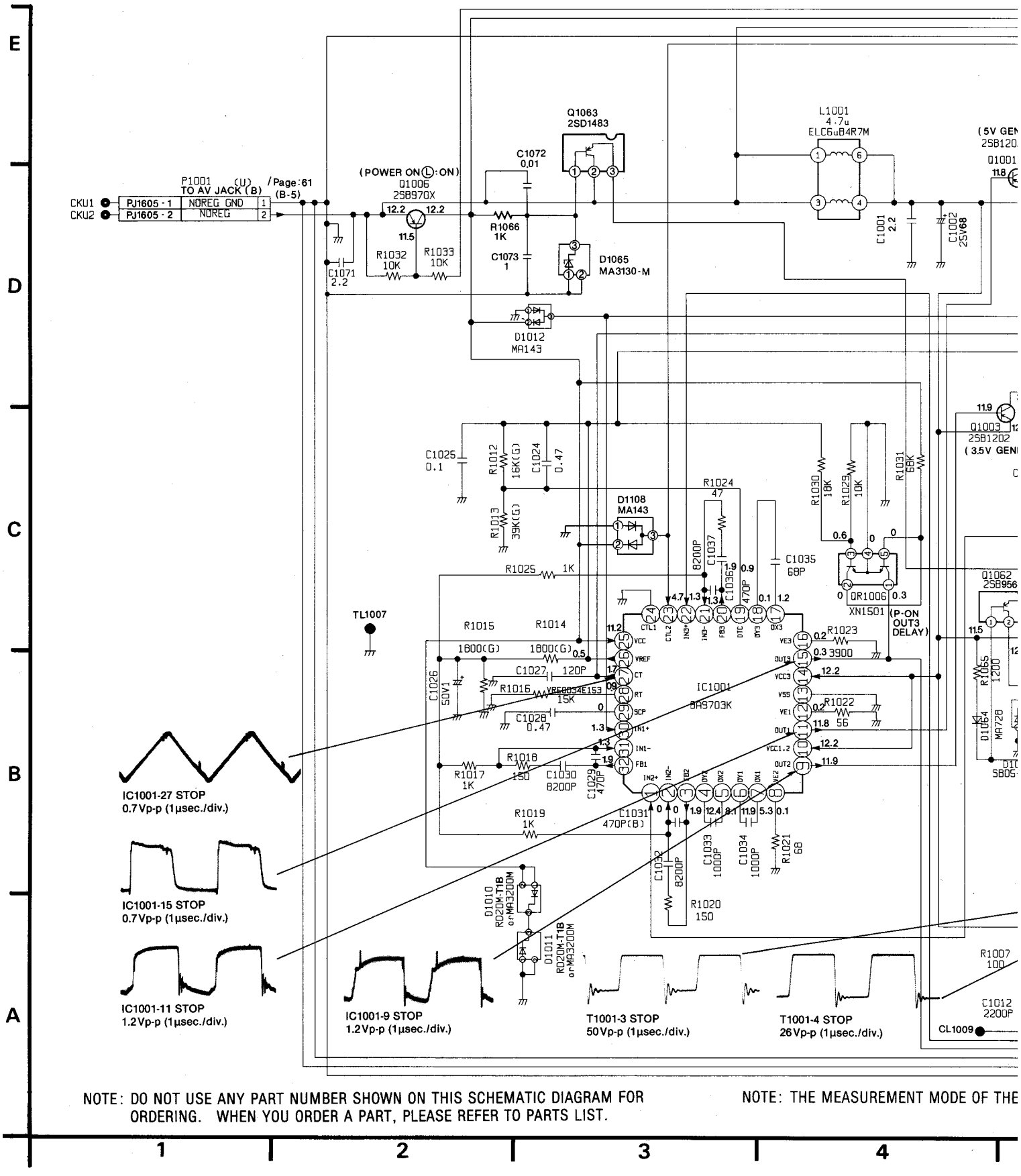


IIS DIAGRAM IS STOP MODE
CALE GHART.

5 6 7 8

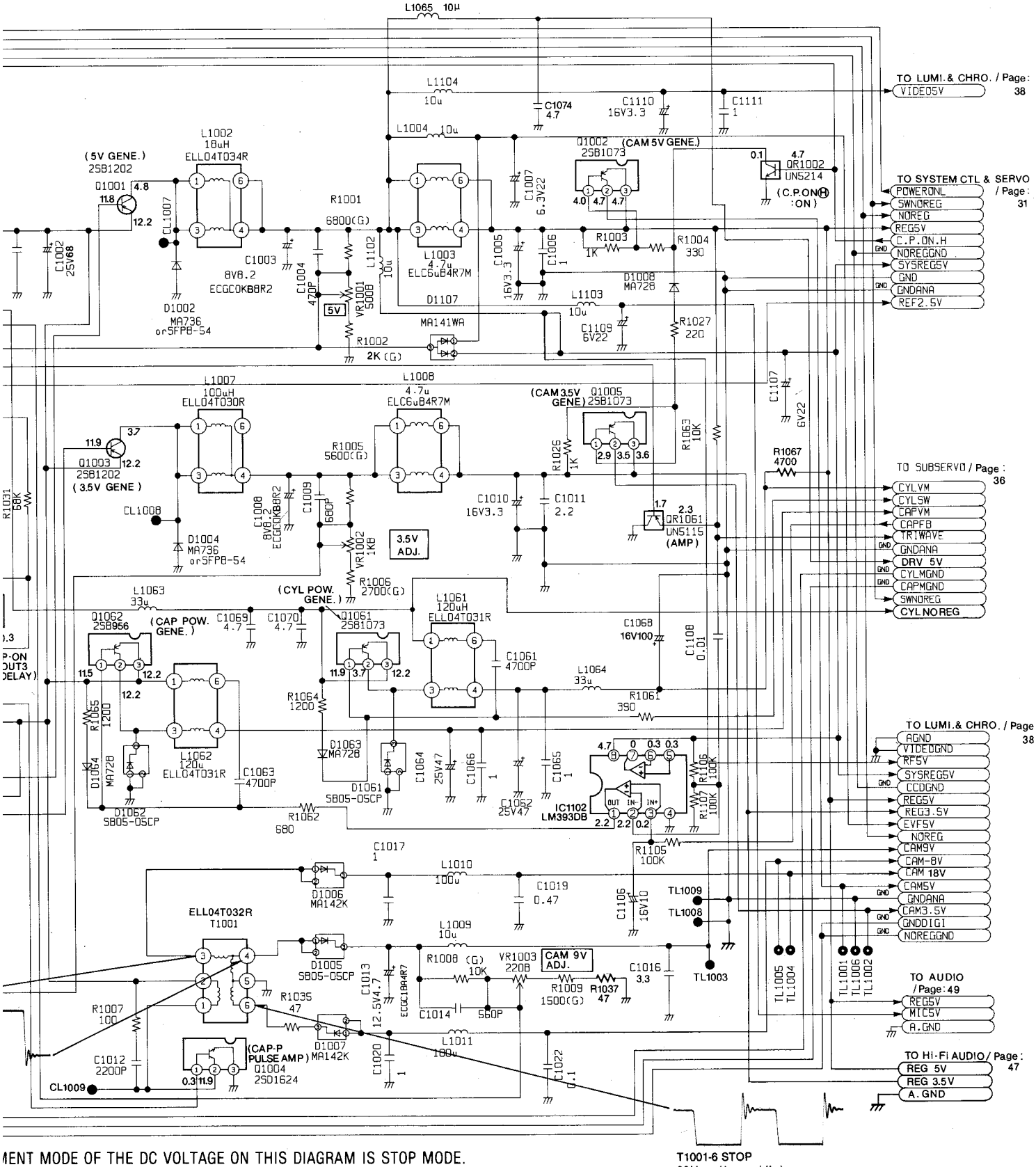

IC702-36 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (2msec./div.)
IC702-44 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
IC702-43 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
TO PROCESS / Page:11
IRA
IRB
VRZ
TELE
WIDE
AF/MF
VD
WHD
SBD
SBT
CAM5V
GND
NOREG
NOREGGND
CDSOUT
HOLEBIAS
VREF+
VREF-
AFDIS
PWMA
CAM9V
R/B
DZONOFF
VREF+T
VREF-T
VREFL
VREFH
OP2
Z.ENC
IRISOPEN
P701 (1) TO MIC
3ZM1
2ZM2
1ZM3
CKI3
CKI2
CKI1
IC708-16 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-13 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-9 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC708-12 POWER-ON
(FOCUS MOTOR DRIVING)
12.5Vp-p (20msec./div.)
IC702
6782VMDL
IC701
MN12821-Q
IC708
TB6504F
X701
EFOV6754E0A
X702
EFOV8004E0A
R747
220
C738
1
RESET
C750
10V10
C701
0.1
R738
1M
CL710
CL713
CL717
CL718
CL719
CL701
CL702
CL711
CL712
CL703
CL704
CL705
CL714
CL715
CL716
R705
4700
R704
4700
R759
100
R760
100
R750
100K
R764
10K
R763
10K
R762
10K
C731
4700P
C733
4700P
C705
15u
R754
4.7
R761
68
R752
4.7
NOREG
A1
A2
B1
B2
A3

10. POWER 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



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

5 6 7 8

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	0	0	0	0	0	12.2	12.2	0	0	0	0	0	0	0	0	0	0
REC/PLAY	0	0	0	0	0	0	0	0	12.1	12.1	0	0	0	0	0	0.1	0	0	0	0
F.F	0	0	0	0	0	0	0	0	12.0	12.1	0	0	0	0	0	0	0	0	0	0

REF. NO.	IC6001																			
MODE	21	22	23	24																
STOP	0	0	0	0																
REC/PLAY	0	0	0.1	0																
F.F	0	0	0	0																

REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	4.6	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0.1	0	0	4.3	3.8				
REC/PLAY	4.7	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0	0	0	4.3	3.7				
F.F	4.7	0.1	4.7	4.7	4.7	1.7	1.7	0	0	0	0	0	0	0	4.3	3.8				

REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						
REC/PLAY	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						
F.F	0	0.8	0	0	0.5	0.8	0	1.8	1.8	4.7	0	0	0	1.8						

REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.7	4.7	4.7	4.7	4.7	4.6	4.7	4.7	0	4.7	0	4.7	4.7	4.7	4.7	4.7	0	0	0	0
REC/PLAY	4.7	4.7	4.7	4.6	4.7	4.6	4.7	4.7	0	0	0	4.7	4.7	4.7	4.7	—	4.7	4.7	4.7	4.2
F.F	4.7	4.6	4.7	4.7	4.7	4.6	4.7	4.7	0	4.7	0	4.7	4.7	3.5	4.7	0	0	0	0	0

REF. NO.	IC6004																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	—	—	0
REC/PLAY	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	—	—	0
F.F	0	0	1.9	0	4.7	0	0	4.7	0.8	0	0	0	0.1	4.7	0	0	0	0.1	4.7	0

REF. NO.	IC6004																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.1	0.8	1.0	0	0	0.8	4.7	—	—	4.7	0	4.3	4.6	4.5	4.7	4.7	4.7	2.3	4.6	4.7
REC/PLAY	0	2.1	1.0	0	0	0.8	4.7	—	0.3	—	—	4.4	4.5	4.5	4.7	4.7	4.7	0	4.6	4.7
F.F	0	0.8	1.0	0	0	0.8	4.7	4.7	0	4.7	0	4.4	4.6	4.4	4.7	4.7	4.6	0	4.6	4.7

REF. NO.	IC6004																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	4.7	0	4.7	0	0	4.7	2.3	0	4.7	0	0	0	2.4	2.4	2.3	0	2.4	2.4
REC/PLAY	0	0	—	0	—	0	0	4.7	2.3	0	1.3	0	0	0	2.4	2.3	2.3	0	2.4	2.4
F.F	0	0	4.7	0	4.7	0	0	4.7	2.3	0	4.7	0	0	0	2.4	2.4	2.3	0	2.4	2.4

REF. NO.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	2.1	2.6	4.7	0	0	0	2.4	2.4	0	0	2.4	0	0	4.1	4.7	0	4.7	4.7	4.7	4.7
REC/PLAY	2.1	2.6	4.7	—	—	0	2.4	2.3	0	0	2.4	0	2.1	2.3	4.7	0	4.6	4.7	4.7	4.6
F.F	2.1	2.6	4.7	0	0	0	2.4	2.4	0	0	2.4	0	1.9	4.1	4.7	0	4.7	4.7	4.7	4.6

REF. NO.	IC6004																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	4.6	2.9	0	0	4.7	4.7	3.7	2.5	4.3	0	0	0	4.7	4.7	4.5	4.7	4.7	4.7	4.7	4.7
REC/PLAY	4.6	2.9	0	0	4.7	4.7	—	2.5	4.6	—	0	0	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7
F.F	4.6	2.9	0	0	4.7	4.7	—	2.5	4.3	0	0	0	4.7	4.7	4.6	4.6	4.7	4.7	4.7	4.7

REF. NO.	IC6004																			
MODE	121	122	123	124	125	126	127	128												
STOP	4.7	4.7	4.7	0	0	4.7	4.7	0												
REC/PLAY	4.7	0	0	0	0	4.7	4.7	0												
F.F	4.7	4.7	4.7	0	0	4.7	4.7	0												

REF. NO.	IC6005																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.7	4.7	4.7	4.7	0	4.7						
REC/PLAY	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.7	4.7	4.7	4.7	0	4.7						
F.F	0	4.7	4.7	4.7	4.7	4.7	0	0.5	4.6	4.7	4.6	4.6	0	4.7						

REF. NO.	IC6006																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						
REC/PLAY	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						
F.F	4.7	4.7	4.7	4.7	4.7	4.7	0	0	4.7	4.7	4.7	4.7	4.7	4.7						

REF. NO.	IC607																			
MODE	1	2	3	4	5															
STOP	4.3	4.6	0	0.8	4.7															
REC/PLAY	4.3	4.6	0	0.8	4.7															
F.F	4.4	4.6	0	0.8	4.7															

REF. NO.	IC6008																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						
REC/PLAY	4.7	4.7	4.7	4.7	4.7	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						
F.F	4.7	4.6	4.7	4.7	4.6	4.7	0	4.7	4.7	4.7	4.7	4.7	4.7	4.7						

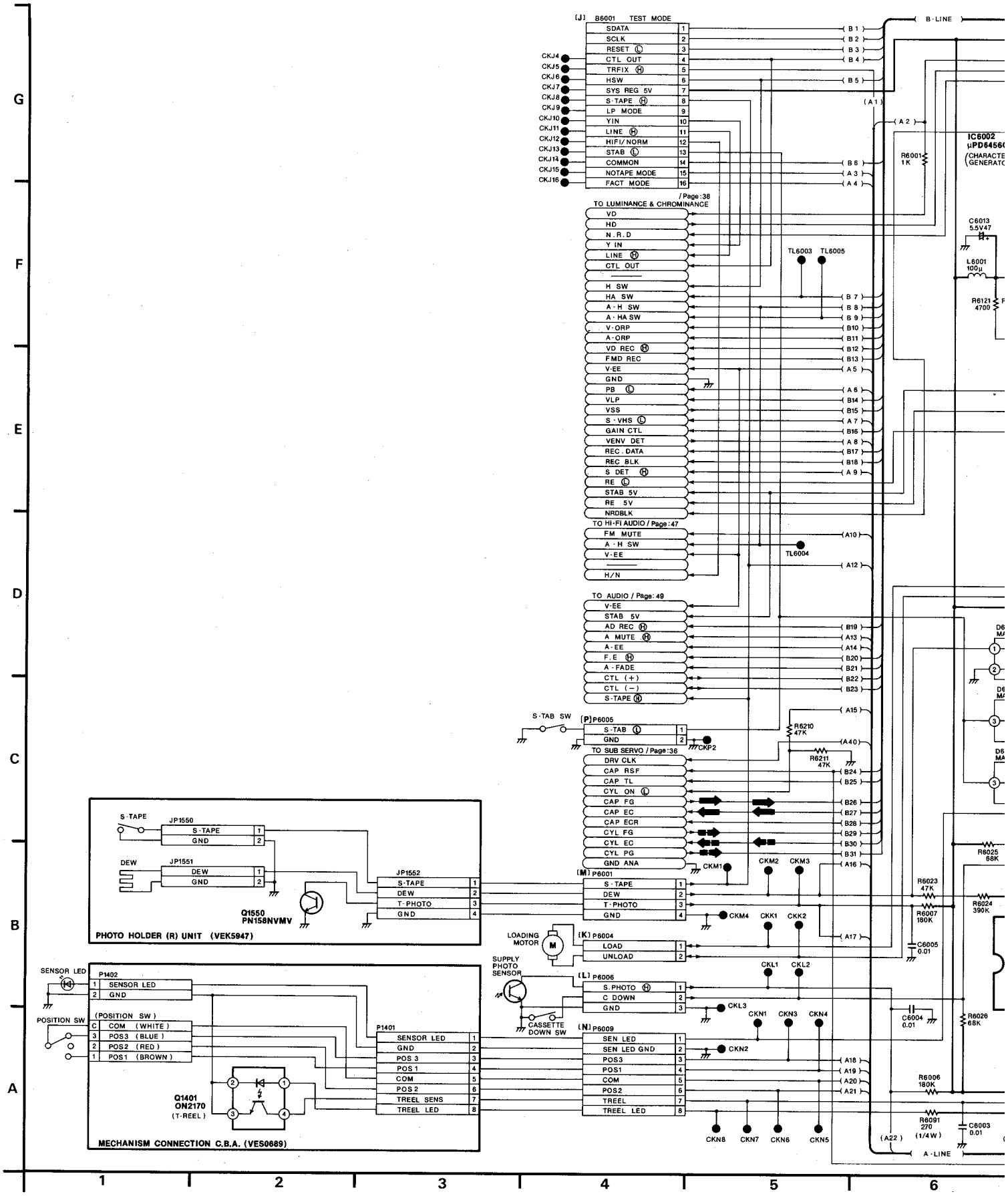
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART

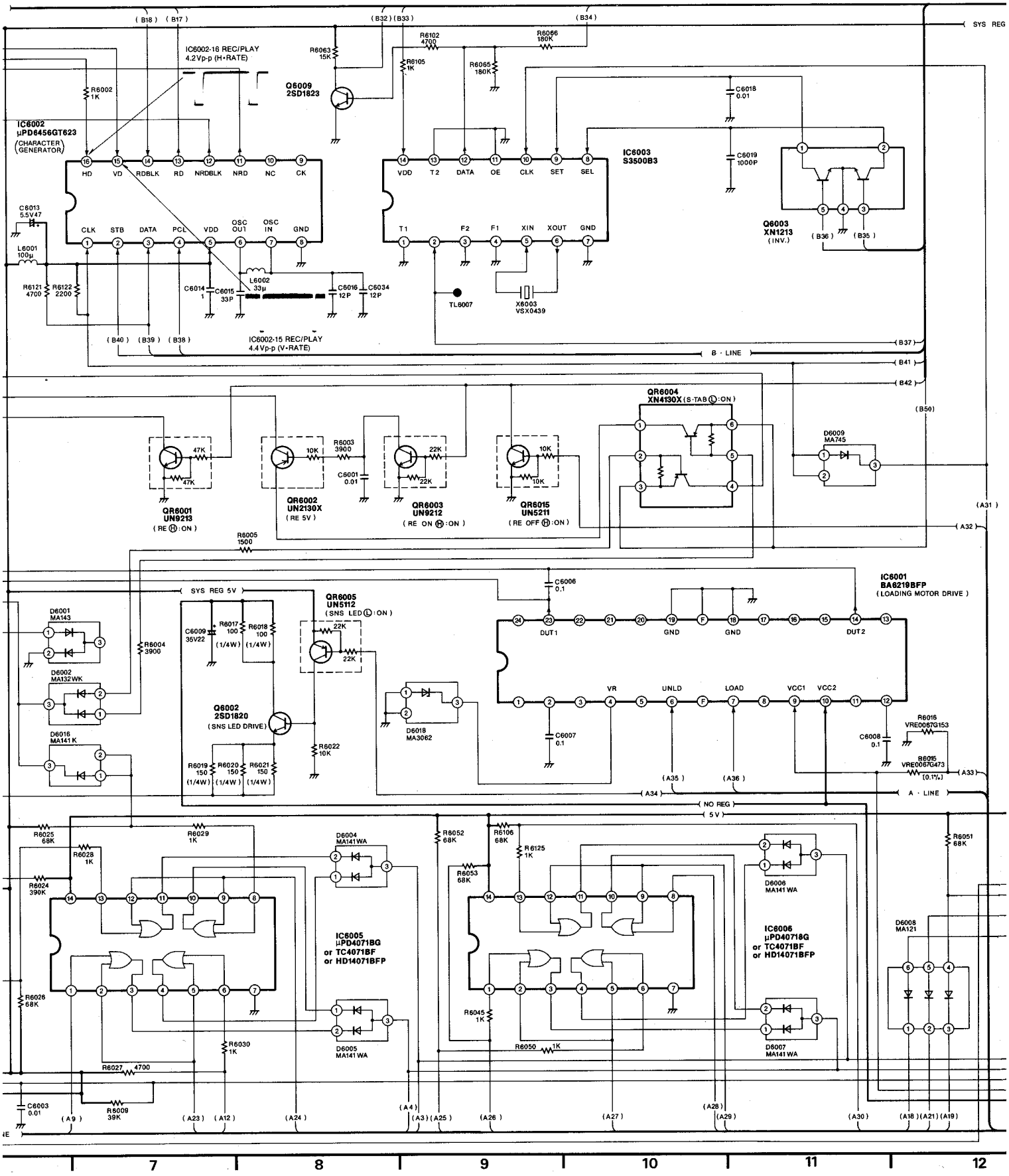
REF. NO.	IC6009										IC6010									
MODE	1	2	3								1	2	3							
STOP	0	4.7	4.7								5.0	0	12.2							
REC/PLAY	0	4.7	4.7								5.0	0	12.1							
F.F	0	4.7	4.7								5.0	0	12.1							
REF. NO.	IC6011																			
MODE	1	2	3	4	5															
STOP	4.7	4.5	0	4.5	4.7															
REC/PLAY	4.7	4.6	0	4.6	4.7															
F.F	4.6	4.6	0	4.7	4.7															

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART

REF. NO.	Q6002			Q6003						Q6004			Q6005			Q6006		
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	0	12.2	0	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.6	0.1
REC/PLAY	0	12.1	0	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.7	0.1
F.F	1.6	10.9	1.6	1.8	1.8	0	0	0		4.7	4.7	4.0	0	0.1	0.7	0	4.6	0.1
REF. NO.	Q6007			Q6008			Q6009			Q6010			Q6012					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	4.7	0	4.7	3.1	0	0	0	4.9	0	9.8	12.2	10.4	0	4.6	0			
REC/PLAY	4.7	0	4.7	3.1	3.9	0	0	4.7	0.1	9.8	12.0	10.2	0	4.6	0			
F.F	4.7	0	4.7	3.1	4.0	0	0	4.8	0	9.7	12.0	10.2	0	4.6	0			
REF. NO.	QR6001			QR6002			QR6003			QR6004						QR6005		
MODE	E	C	B	E	C	B	E	C	B	1	2	3	4	5	6	E	C	B
STOP	0	0.1	0	4.7	0.1	4.7	0	0	0	4.7	4.0	4.7	4.7	4.1	4.7	4.7	0	4.7
REC/PLAY	0	0	4.4	4.7	1.6	4.7	0	4.7	0.1	4.7	0	4.7	4.6	4.0	4.7	4.7	0	4.7
F.F	0	0	0	4.7	0.1	4.7	0	4.7	0	4.7	4.0	4.7	4.7	4.1	4.7	4.7	1.6	3.8
REF. NO.	QR6006			QR6007			QR6008			QR6010			QR6011			QR6012		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	0	0	0.1	4.5	0	0.1	4.7	4.7	4.6	0	4.7	0	4.7	4.7	0	4.7
REC/PLAY	0	4.7	0	0	0.1	4.3	0	0.1	4.7	4.7	4.6	0	4.7	0	0	4.7	4.7	0
F.F	0	4.7	0	0	0.1	4.3	0	0.1	4.7	4.7	4.6	0	4.7	0	4.7	4.7	0	4.7
REF. NO.	QR6013			QR6014			QR6015			QR6016			QR6017			QR6018		
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B
STOP	0	0	12.6	0	0	0	0	0	0	0	0	0	0	0	4.5	0	0	2.1
REC/PLAY	0	0	12.5	0	0	4.7	0	0	4.7	0	0	0	0	0	4.5	0	0	2.1
F.F	0	0	12.4	0	0	0	0	0	0	0	0	0	0	0	4.5	0	0	2.1

11. SYSTEM CONTROL & SERVO SCHEMATIC DIAGRAM

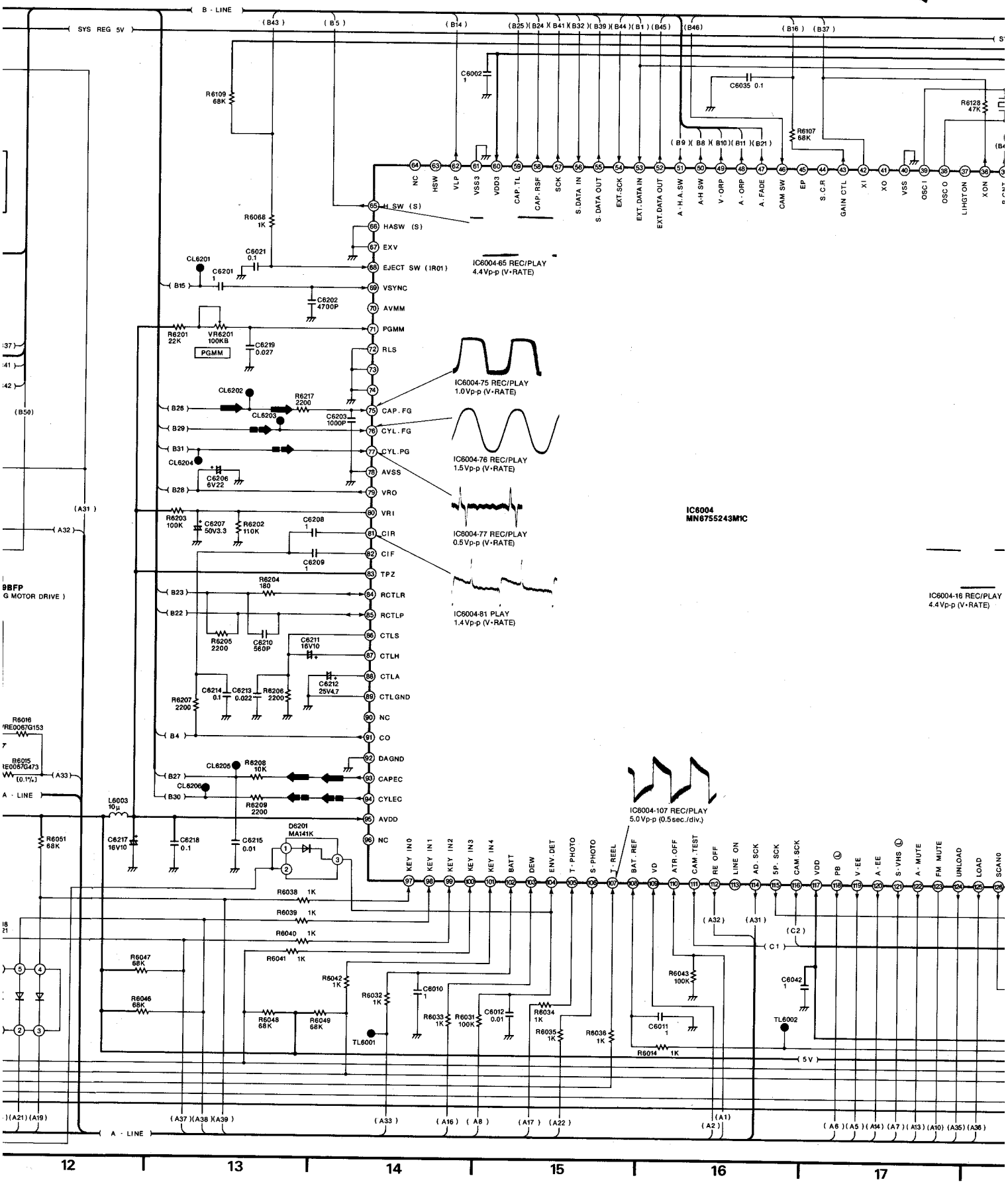



IC6002
μPD6456GT623
(CHARACTER GENERATOR)
HD VD RDBLK RD NRDBLK NRD NC CK
IC6002-16 REC/PLAY
4.2Vp-p (H•RATE)
Q6009
2SD1823
IC6003
S3500B3
VDD T2 DATA OE CLK SET SEL
T1 F2 F1 XIN XOUT GND
Q6003
XN1213
(INV.)
CLK STB DATA PCL VDD OSC OUT OSC IN GND
TL6007
X6003
VSX0439
IC6002-15 REC/PLAY
4.4Vp-p (V•RATE)
B · LINE
QR6004
XN4130X (S-TAB Ⓛ:ON)
QR6001
UN9213
(RE Ⓗ:ON)
QR6002
UN2130X
(RE 5V)
QR6003
UN9212
(RE ON Ⓗ:ON)
QR6015
UN5211
(RE OFF Ⓗ:ON)
D6009
MA745
SYS REG 5V
QR6005
UN5112
(SNS LED Ⓛ:ON)
Q6002
2SD1820
(SNS LED DRIVE)
D6001
MA143
D6002
MA132WK
D6016
MA141K
D6018
MA3062
IC6001
BA6219BFP
(LOADING MOTOR DRIVE)
DUT1 GND GND DUT2
VR UNLD LOAD VCC1 VCC2
A · LINE
NO REG
5V
IC6005
μPD4071BG
or TC4071BF
or HD14071BFP
IC6006
μPD40718G
or TC4071BF
or HD14071BFP
D6004
MA141WA
D6005
MA141WA
D6006
MA141WA
D6007
MA141WA
D6008
MA121
7
8
9
10
11
12

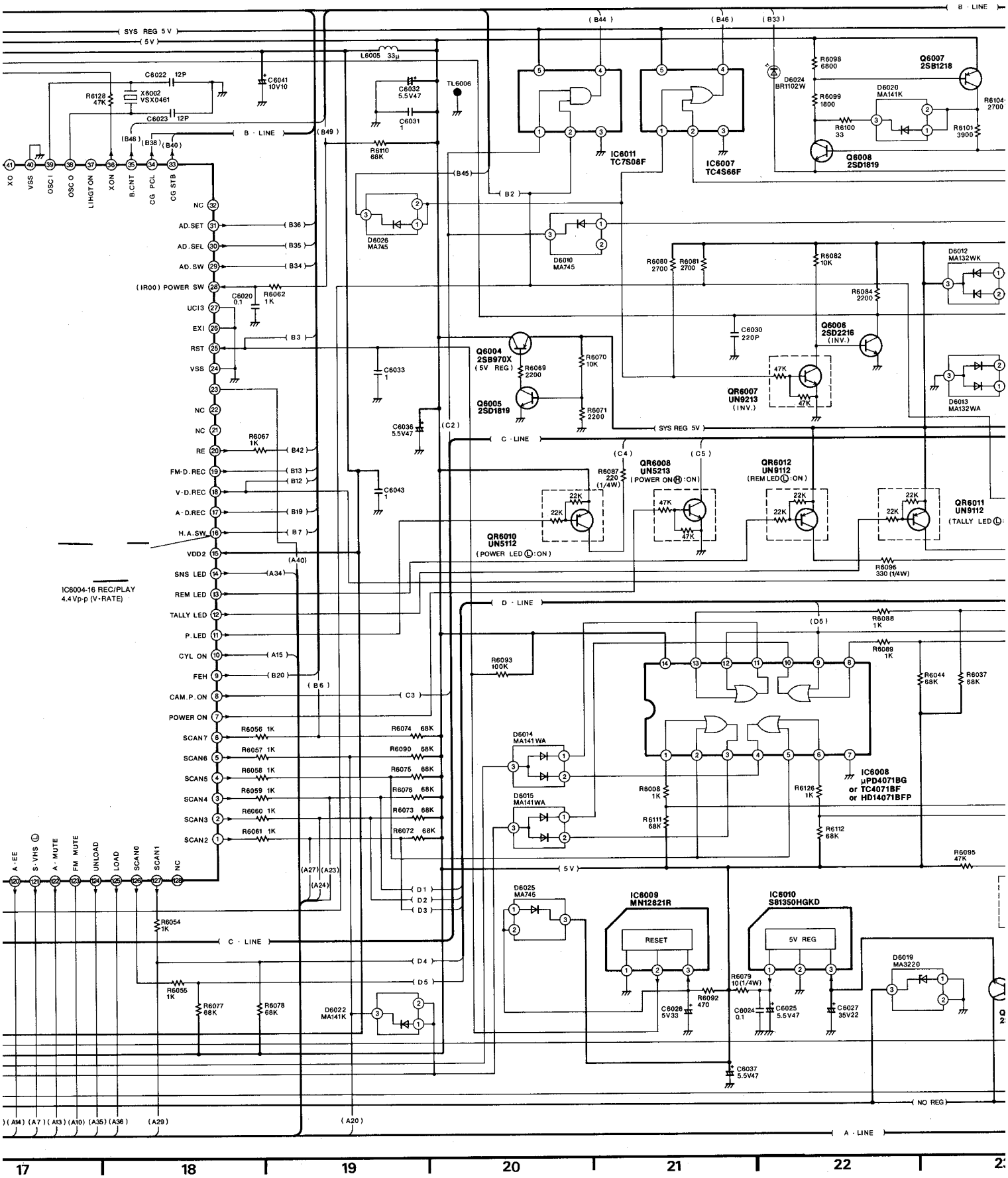
ERVO PHASE LOOP

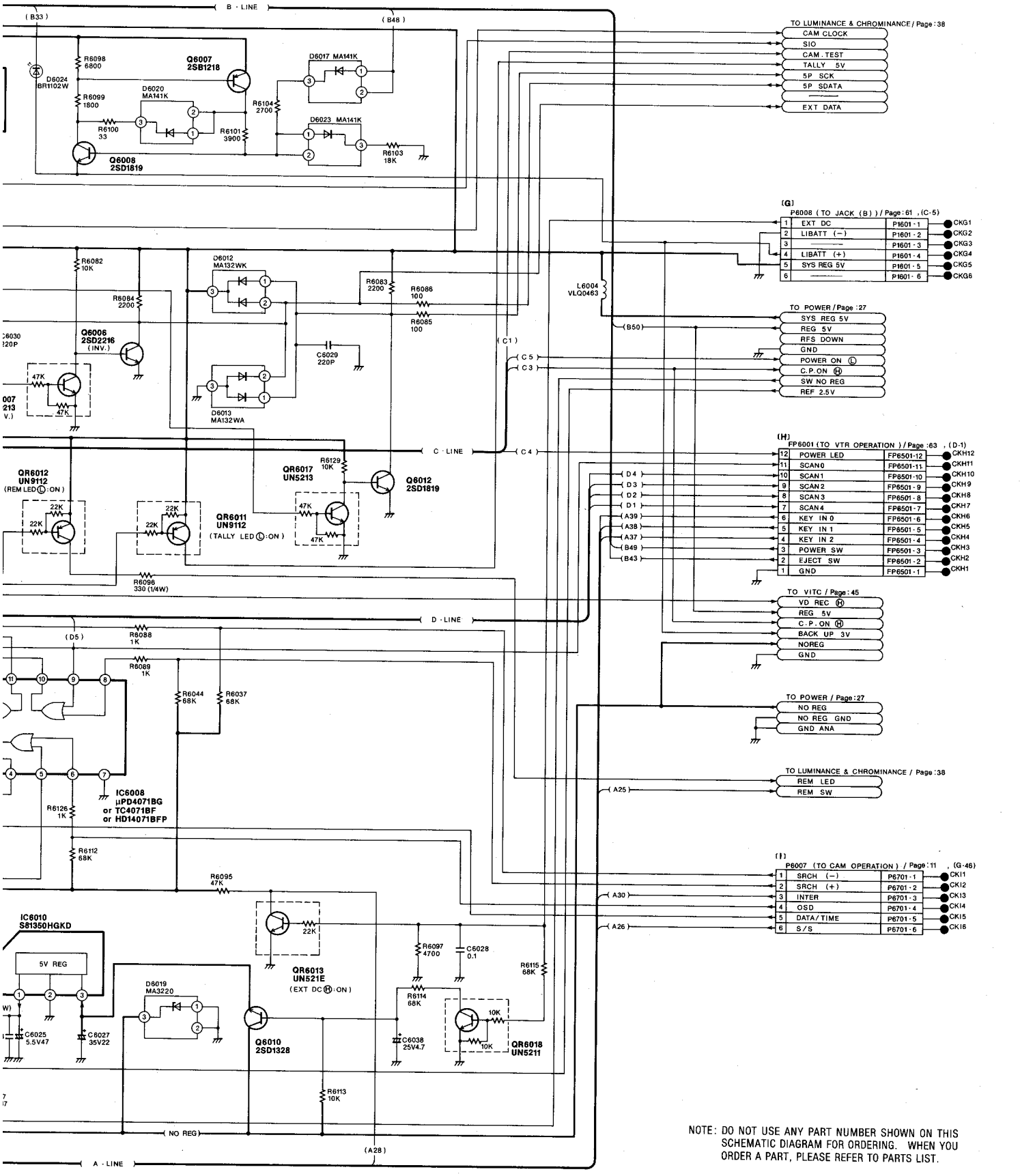
CYLINDER SERVO SPEED LOOP

CYL



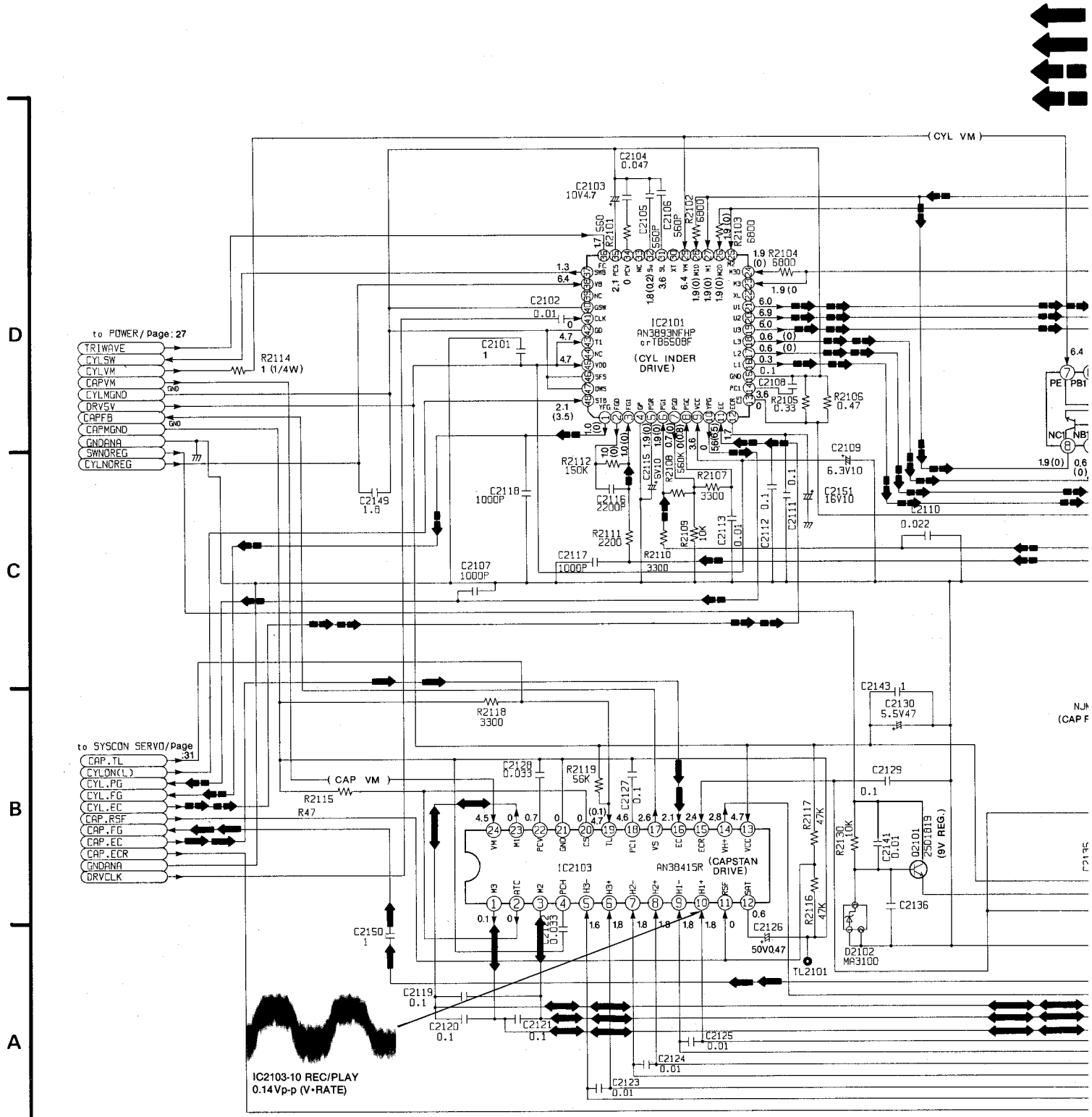
CYLINDER SERVO PHASE LOOP





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

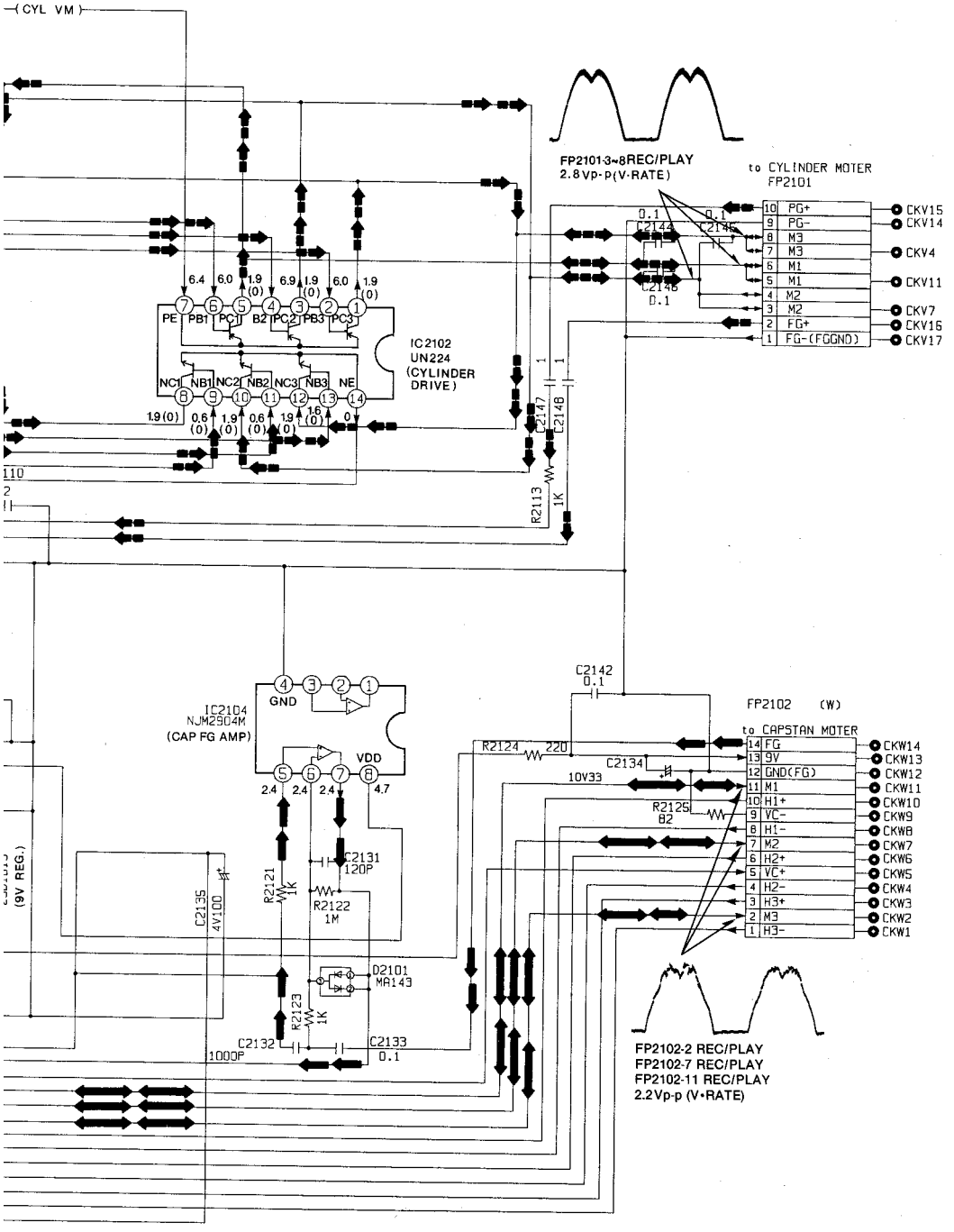
12. SUB SERVO SCHEMATIC DIAGRAM



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 IN THE BRACKETS ( ) ON TH
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS

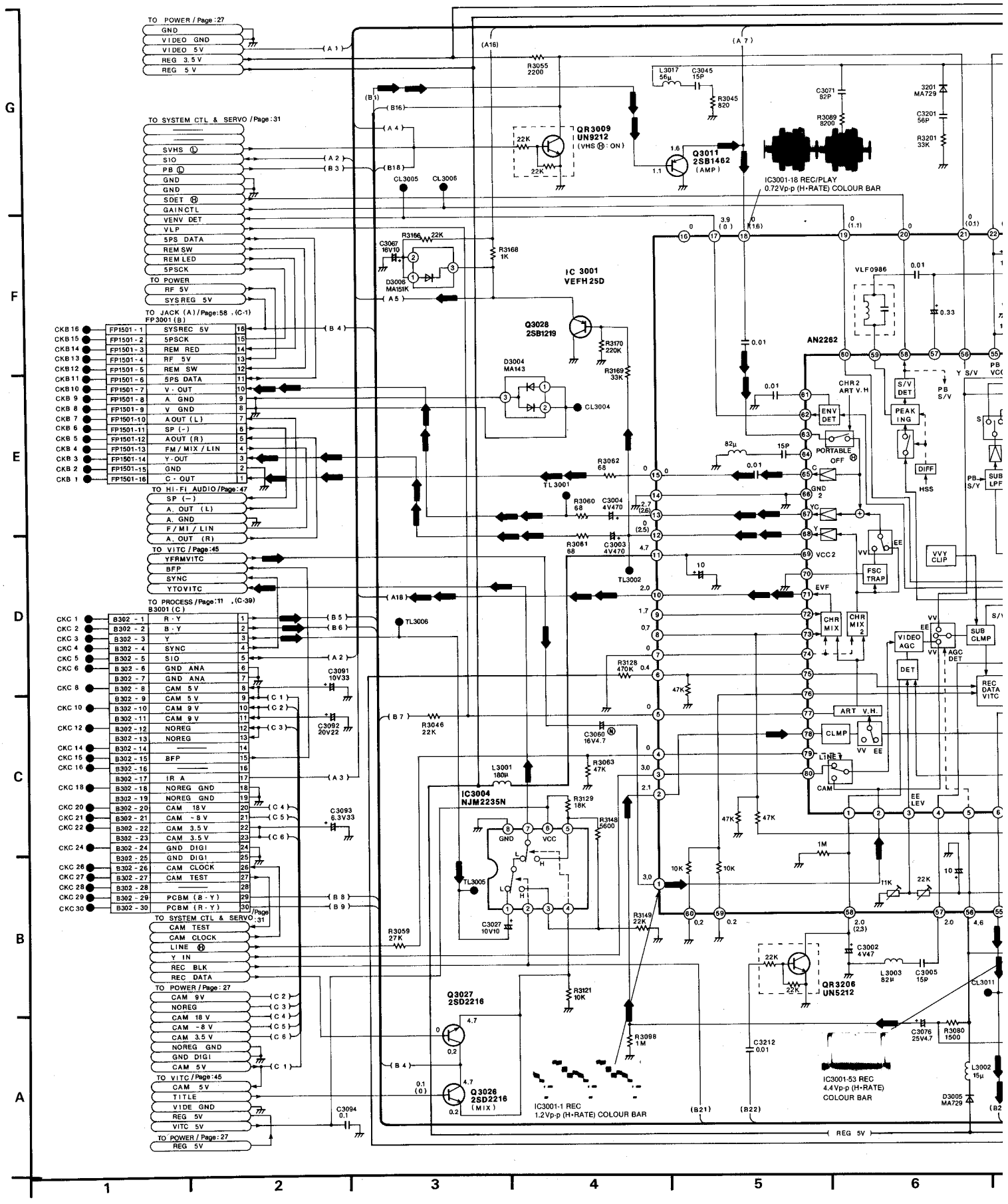
CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP

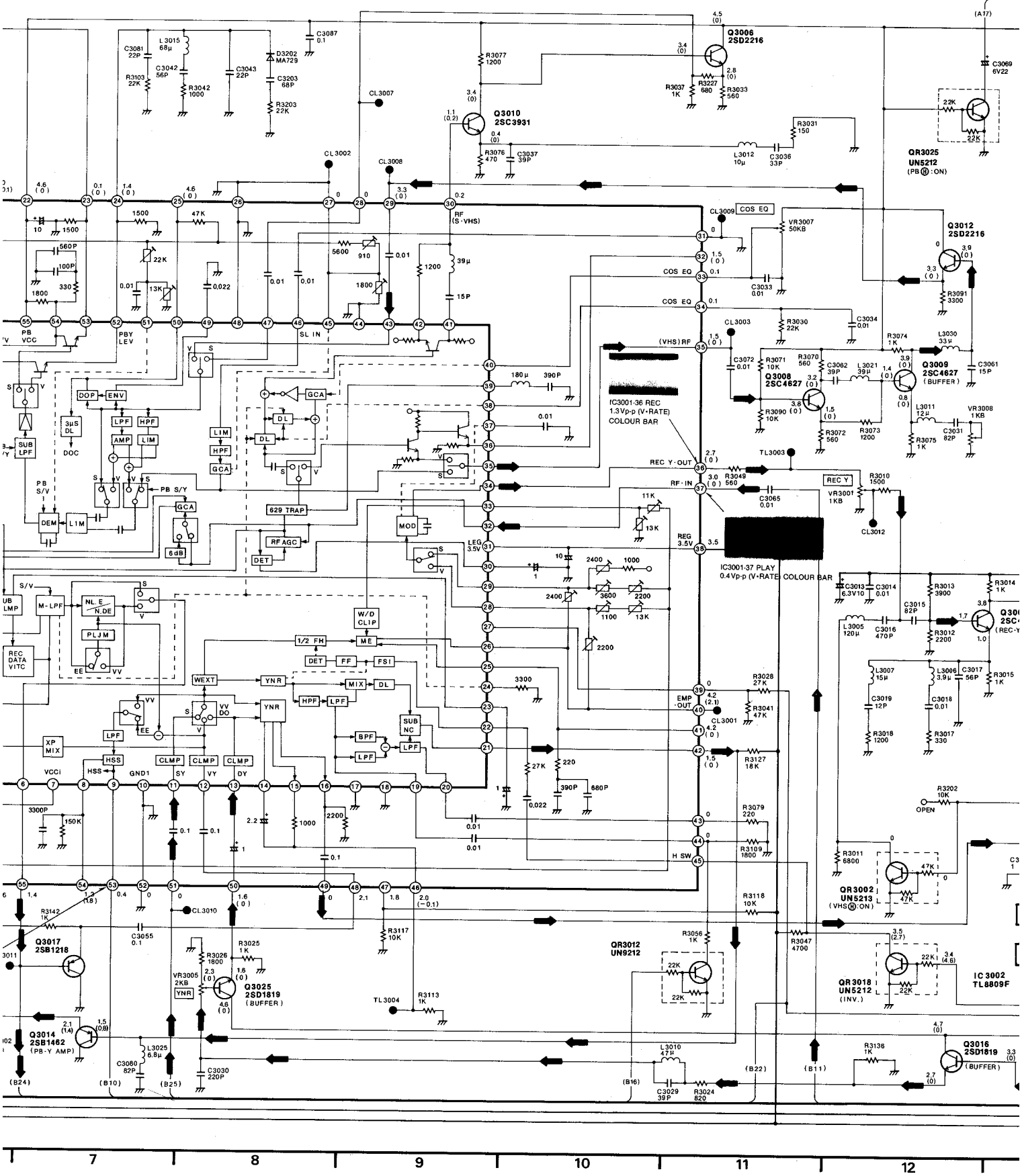


HE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE .
OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

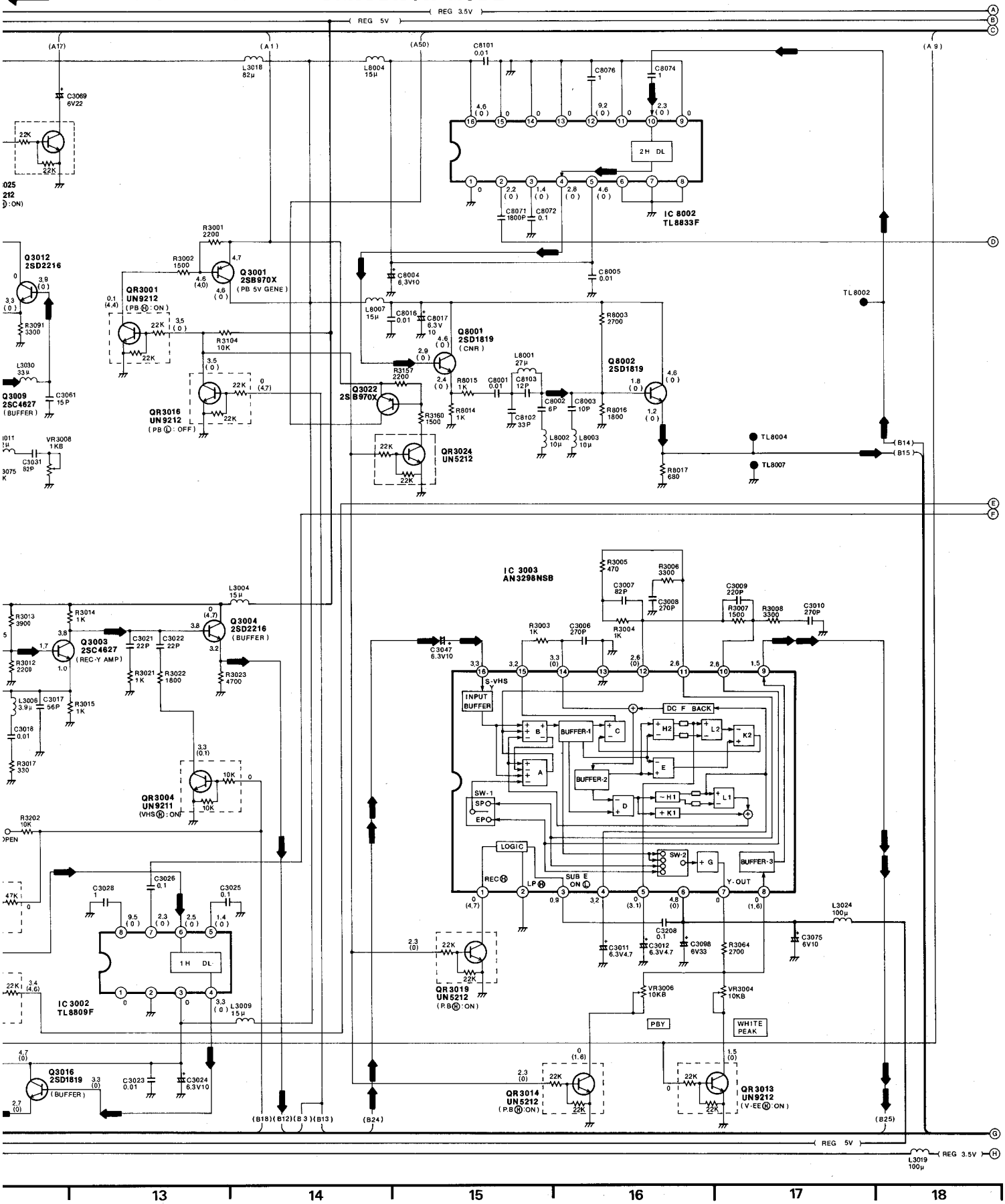
5 6 7

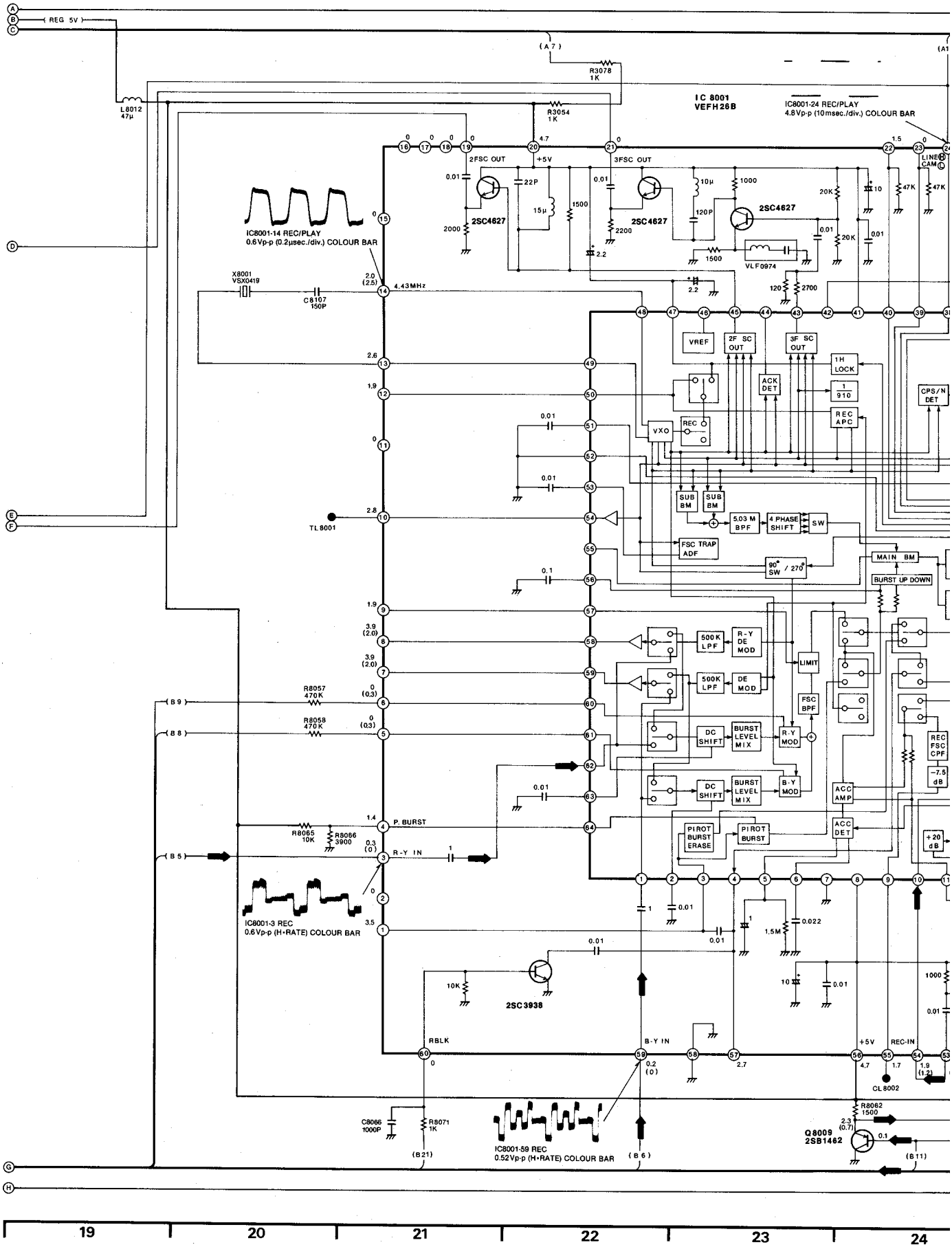
13. LUMINANCE/CHROMINANCE & HEAD AMP SCHEMATIC DIAGRAM

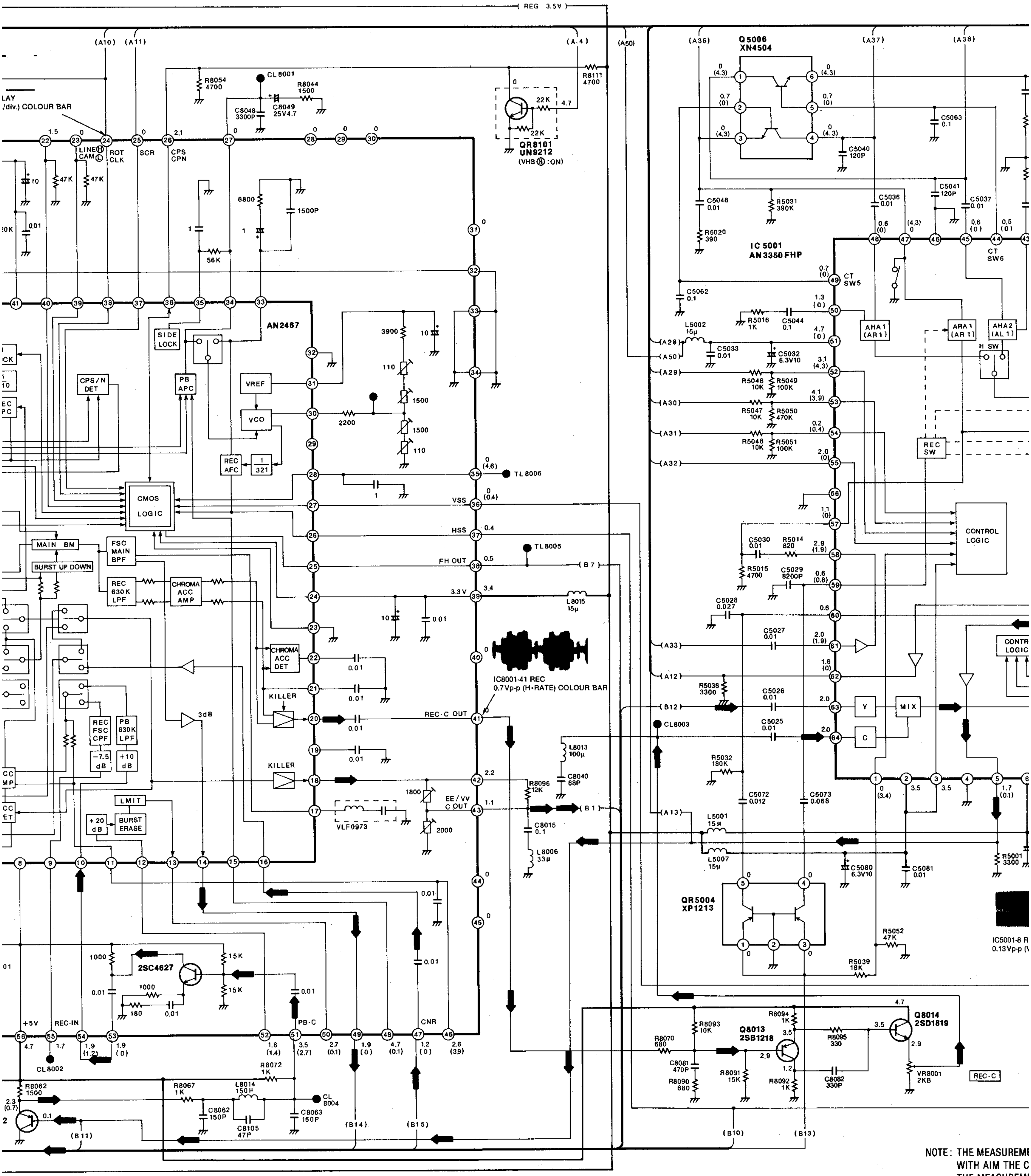



Q3006 2SD2216
Q3010 2SC3931
Q3012 2SD2216
Q3008 2SC4627 (BUFFER)
Q3009 2SC4627 (BUFFER)
QR3025 UN5212 (PB Ⓡ:ON)
IC3001-36 REC 1.3Vp-p (V-RATE) COLOUR BAR
IC3001-37 PLAY 0.4Vp-p (V-RATE) COLOUR BAR
Q3017 2SB1218
Q3014 2SB1462 (PB-Y AMP)
Q3025 2SD1819 (BUFFER)
QR3012 UN9212
QR3018 UN5212 (INV.)
IC 3002 TL8809F
QR3002 UN5213 (VHS Ⓡ:ON)
Q3016 2SD1819 (BUFFER)
CL3007
CL3002
CL3008
CL3009
CL3003
TL3003
CL3012
CL3001
CL3010
TL3004
COS EQ
RF (S-VHS)
(VHS) RF
REC Y-OUT
RF-IN
REC Y
EMP-OUT
H SW
PB VCC
PBY LEV
SL IN
PB S/Y
REC DATA VITC
XP MIX
W/D CLIP
629 TRAP
RF AGC
REG 3.5V
LEG 3.5V
(A17)
(B10)
(B11)
(B16)
(B22)
(B24)
(B25)

MAIN SIGNAL PATH IN PLAYBACK MODE




IC 8001
VEFH26B
IC8001-24 REC/PLAY
4.8Vp-p (10msec./div.) COLOUR BAR
IC8001-14 REC/PLAY
0.6Vp-p (0.2μsec./div.) COLOUR BAR
IC8001-3 REC
0.6Vp-p (H-RATE) COLOUR BAR
IC8001-59 REC
0.52Vp-p (H-RATE) COLOUR BAR
2SC4627
2SC4627
2SC4627
2SC3938
VLF0974
2SB1462
Q8009
X8001
VSX0419
4.43MHz
C8107
150P
TL 8001
L8012
47μ
R3078
1K
R3054
1K
R8057
470K
R8058
470K
R8065
10K
R8066
3900
C8066
1000P
R8071
1K
R8062
1500
CL 8002
2FSC OUT
+5V
3FSC OUT
VREF
2F SC OUT
3F SC OUT
1H LOCK
ACK DET
1/910
CPS/N DET
REC APC
VXO
REC
SUB BM
SUB BM
5.03 M BPF
4 PHASE SHIFT
SW
FSC TRAP ADF
90° SW / 270°
MAIN BM
BURST UP DOWN
500K LPF
R-Y DE MOD
500K LPF
DE MOD
LIMIT
FSC BPF
DC SHIFT
BURST LEVEL MIX
R-Y MOD
DC SHIFT
BURST LEVEL MIX
B-Y MOD
REC FSC CPF
-7.5 dB
ACC AMP
ACC DET
PIROT BURST ERASE
PIROT BURST
+20 dB
P. BURST
R-Y IN
B-Y IN
RBLK
+5V
REC-IN
LINE/CAM
CPS/N DET
(A7)
(REG 5V)
(B9)
(B8)
(B5)
(B21)
(B6)
(B11)

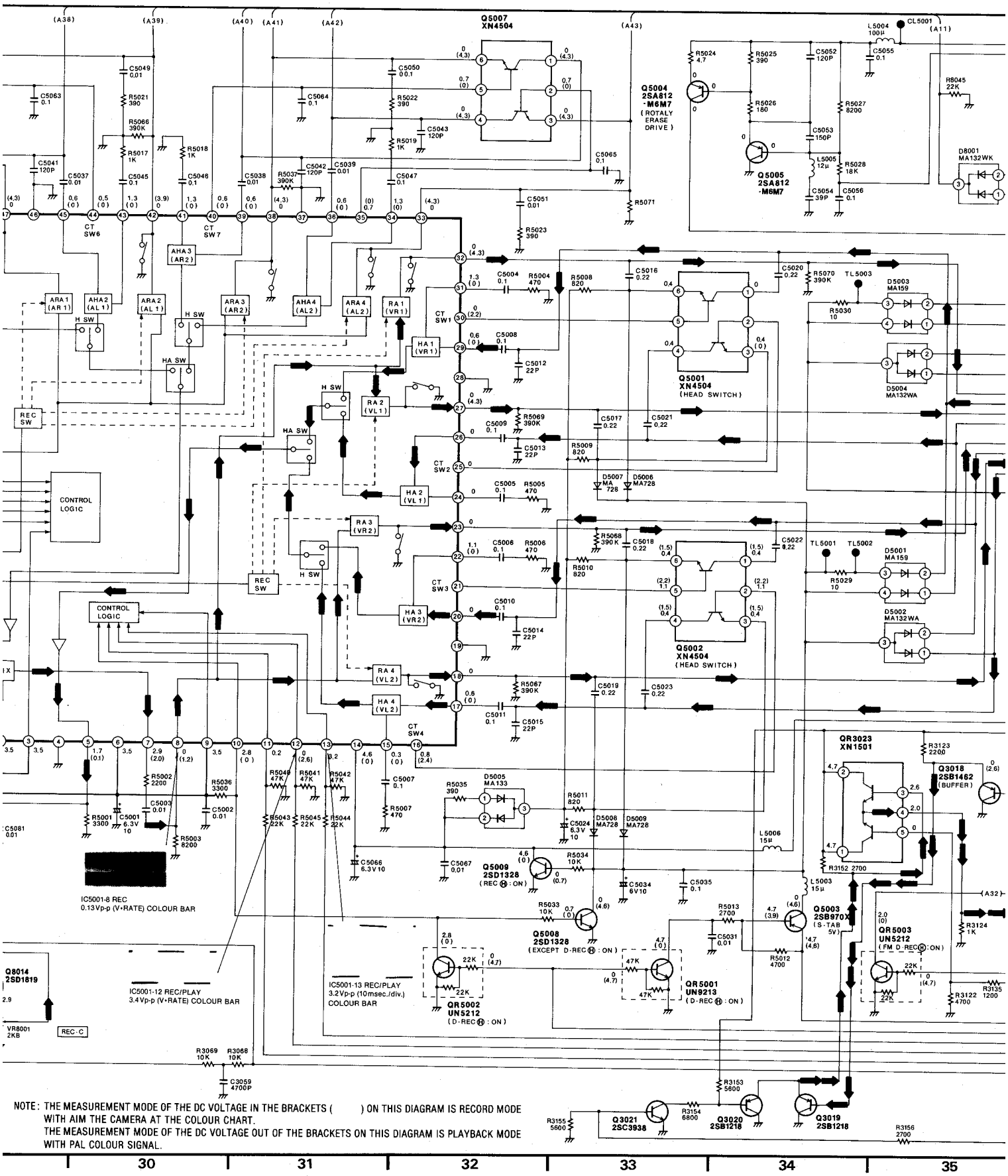


REG 3.5V
(A10) (A11) (A.4) (A50) (A36) (A37) (A38)
R8054 4700
CL8001
R8044 1500
C8048 3300P
C8049 25V4.7
R8111 4700
22K
4.7
QR8101 UN9212 (VHS Ⓗ :ON)
LAY
/div.) COLOUR BAR
LINE Ⓗ CAM Ⓛ
ROT CLK
SCR
CPS CPN
6800
1500P
56K
AN2467
SIDE LOCK
CPS/N DET
PB APC
VREF
VCO
REC AFC
1/321
CMOS LOGIC
3900
110
1500
2200
TL8006
VSS
HSS
FH OUT
3.3V
TL8005
L8015 15μ
MAIN BM
BURST UP DOWN
FSC MAIN BPF
REC 630K LPF
CHROMA ACC AMP
CHROMA ACC DET
KILLER
IC8001-41 REC
0.7Vp-p (H-RATE) COLOUR BAR
REC-C OUT
3dB
REC FSC CPF
PB 630K LPF
-7.5 dB
+10 dB
LMIT
+20 dB
BURST ERASE
EE/VV C OUT
VLF0973
1800
2000
L8013 100μ
C8040 68P
R8096 12K
C8015 0.1
L8006 33μ
CL8003
2SC4627
1000
15K
+5V
REC-IN
PB-C
CNR
CL8002
R8062 1500
R8067 1K
L8014 150μ
R8072 1K
C8062 150P
C8105 47P
C8063 150P
CL 8004
(B11) (B14) (B15) (B7) (B1) (B10) (B13) (B12)
Q5006 XN4504
C5063 0.1
C5040 120P
C5048 0.01
R5031 390K
C5036 0.01
C5041 120P
C5037 0.01
R5020 390
IC5001 AN3350FHP
CT SW5
CT SW6
C5062 0.1
R5016 1K
C5044 0.1
L5002 15μ
C5033 0.01
C5032 6.3V10
AHA1 (AR1)
ARA1 (AR1)
AHA2 (AL1)
H SW
R5046 10K
R5049 100K
R5047 10K
R5050 470K
R5048 10K
R5051 100K
REC SW
CONTROL LOGIC
C5030 0.01
R5014 820
R5015 4700
C5029 8200P
C5028 0.027
C5027 0.01
CONTR LOGIC
R5038 3300
C5026 0.01
C5025 0.01
Y
MIX
C
R5032 180K
C5072 0.012
C5073 0.068
L5001 15μ
L5007 15μ
C5080 6.3V10
C5081 0.01
R5001 3300
QR5004 XP1213
R5052 47K
R5039 18K
IC5001-8 R
0.13Vp-p (V
R8094 1K
R8093 10K
Q8013 2SB1218
Q8014 2SD1819
R8070 680
C8081 470P
R8090 680
R8091 15K
R8092 1K
R8095 330
C8082 330P
VR8001 2KB
REC-C

NOTE: THE MEASUREME
WITH AIM THE C
THE MEASUREMI
WITH PAL COLOU

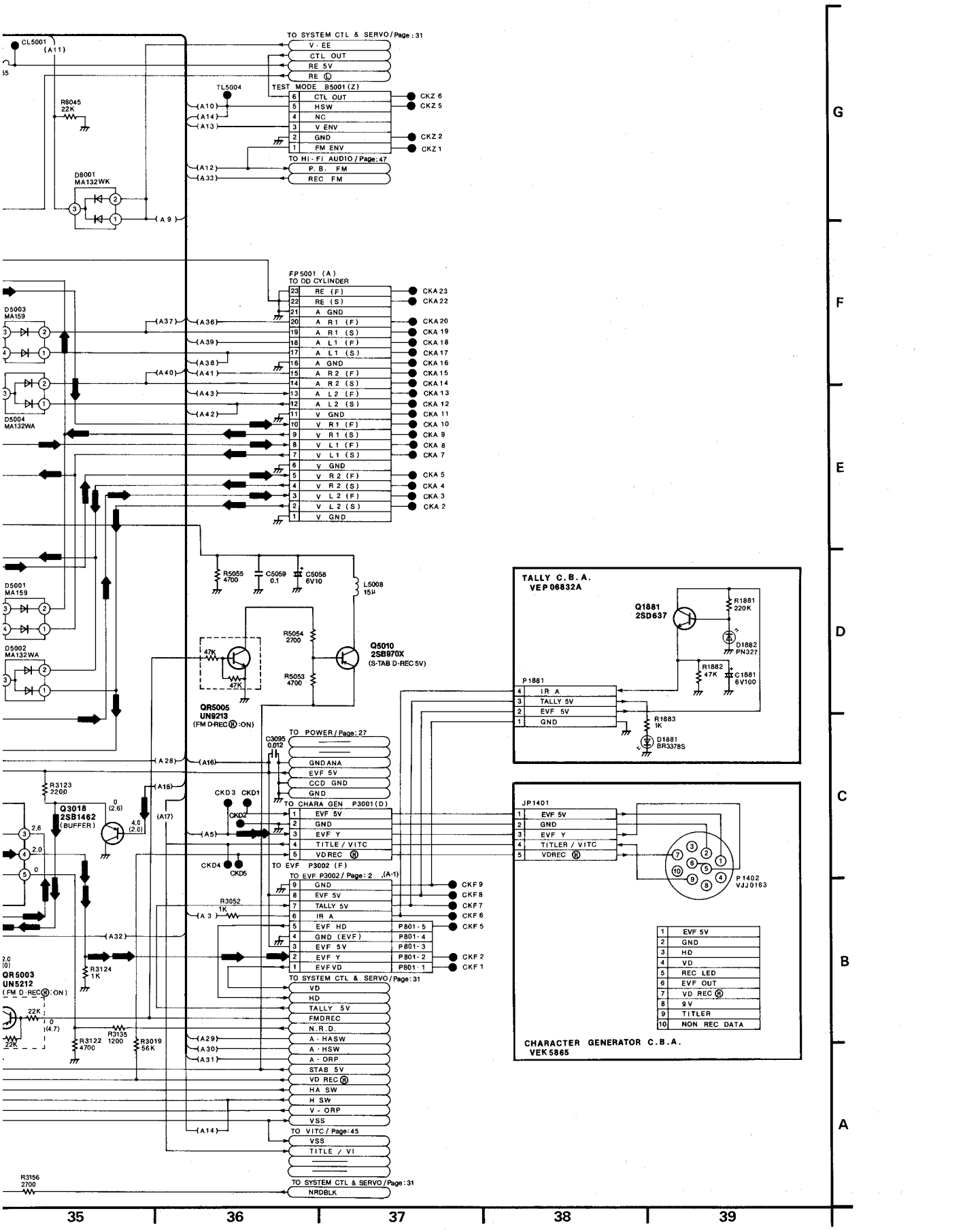
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

24 25 26 27 28 29

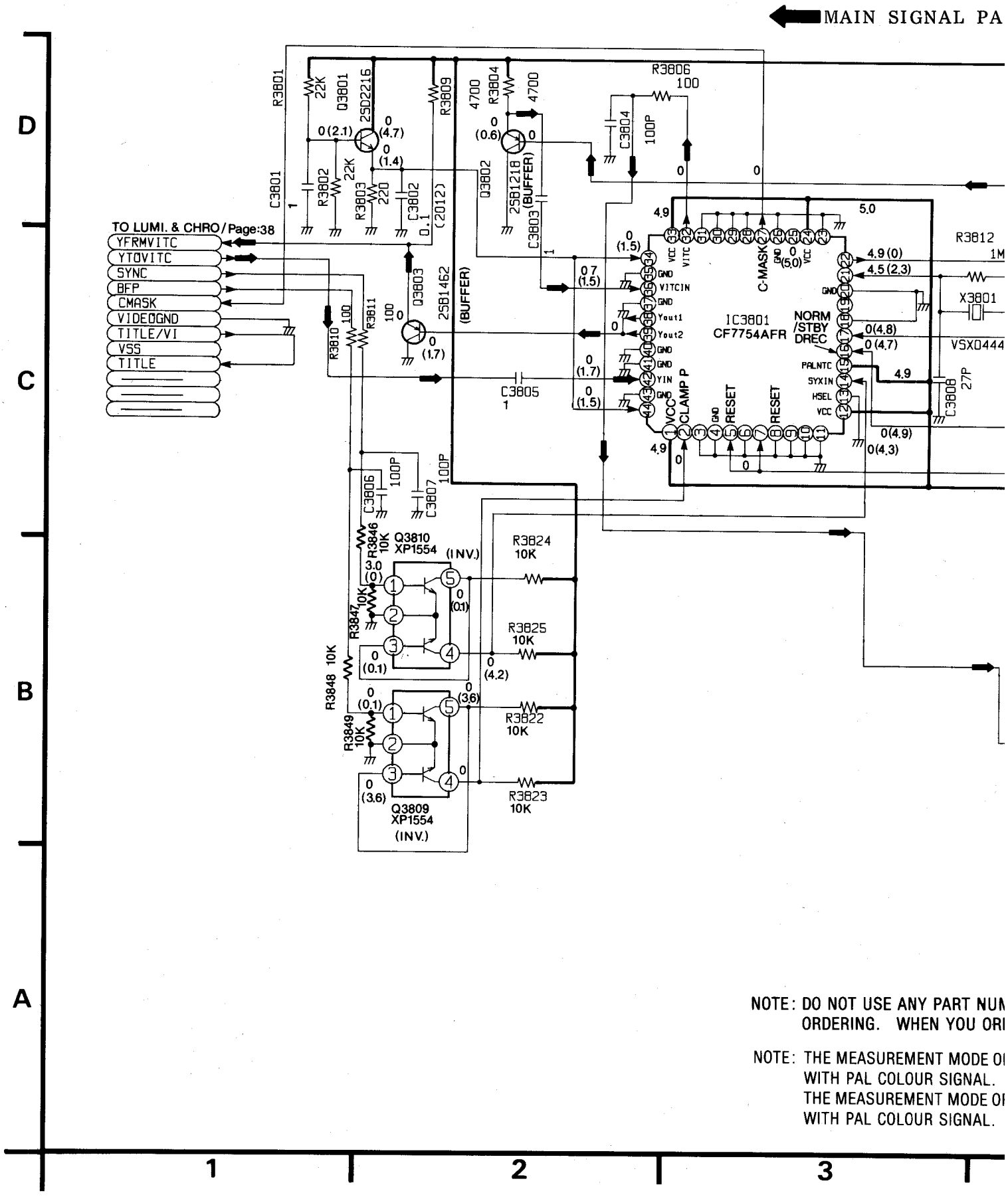


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH AIM THE CAMERA AT THE COLOUR CHART.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

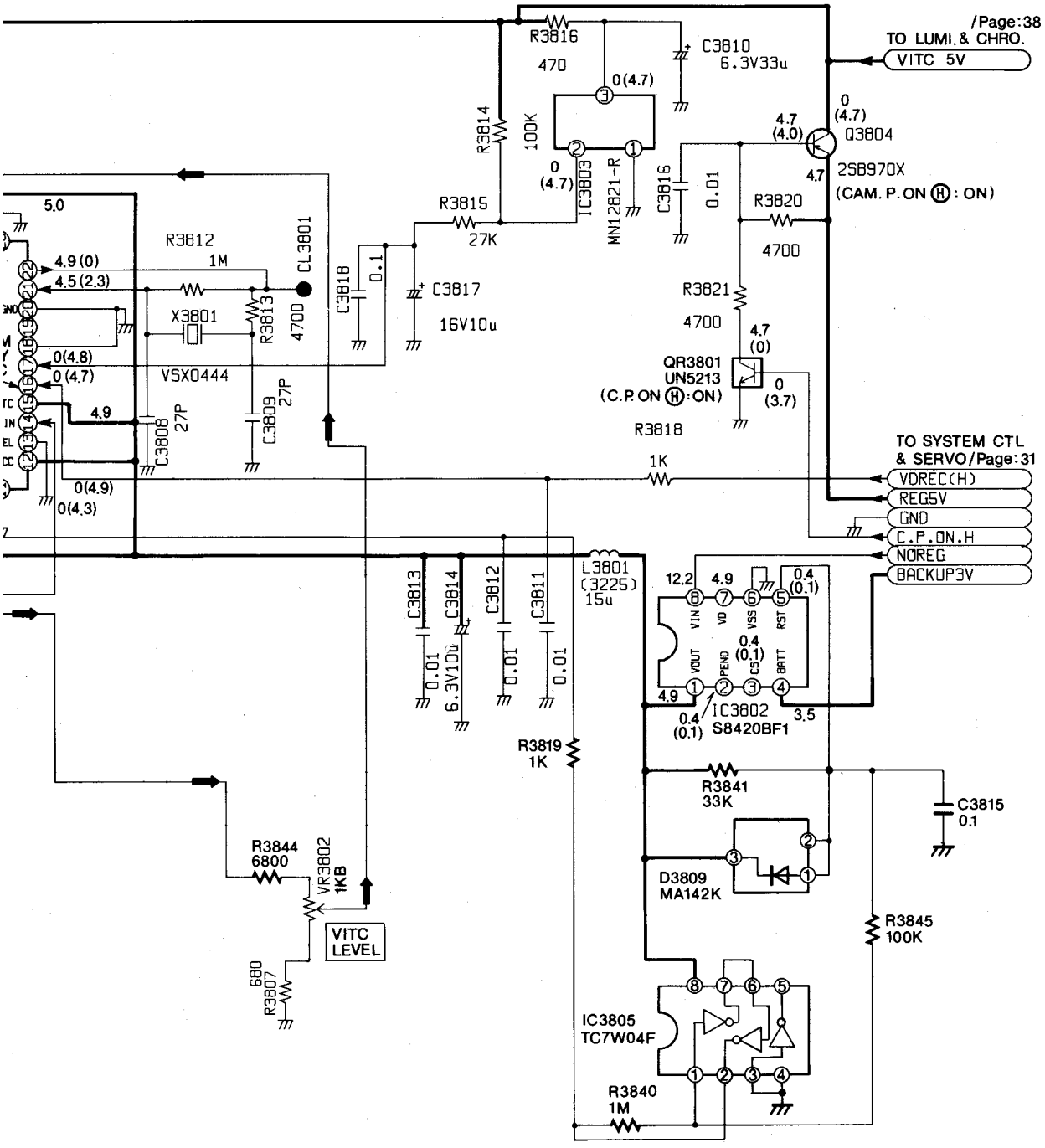
30 31 32 33 34 35


TO SYSTEM CTL & SERVO / Page : 31
V - EE
CTL OUT
RE 5V
RE
TEST MODE B5001 (Z)
CTL OUT
HSW
NC
V ENV
GND
FM ENV
TO Hi - FI AUDIO / Page : 47
P. B. FM
REC FM
TL5004
R8045 22K
D8001 MA132WK
CL5001 (A11)
CKZ 6
CKZ 5
CKZ 2
CKZ 1
FP5001 (A) TO DD CYLINDER
RE (F)
RE (S)
A GND
A R1 (F)
A R1 (S)
A L1 (F)
A L1 (S)
A GND
A R2 (F)
A R2 (S)
A L2 (F)
A L2 (S)
V GND
V R1 (F)
V R1 (S)
V L1 (F)
V L1 (S)
V GND
V R2 (F)
V R2 (S)
V L2 (F)
V L2 (S)
V GND
CKA 23
CKA 22
CKA 20
CKA 19
CKA 18
CKA 17
CKA 16
CKA 15
CKA 14
CKA 13
CKA 12
CKA 11
CKA 10
CKA 9
CKA 8
CKA 7
CKA 5
CKA 4
CKA 3
CKA 2
D5003 MA159
D5004 MA132WA
D5001 MA159
D5002 MA132WA
R5055 4700
C5059 0.1
C5058 6V10
L5008 15µ
R5054 2700
R5053 4700
47K
47K
Q5010 2SB970X (S-TAB D-REC 5V)
QR5005 UN9213 (FM D-REC H :ON)
TALLY C.B.A. VEP06832A
Q1881 2SD637
R1881 220K
D1882 PN327
R1882 47K
C1881 6V100
P1881
IR A
TALLY 5V
EVF 5V
GND
R1883 1K
D1881 BR3378S
TO POWER / Page : 27
C3095 0.012
GND ANA
EVF 5V
CCD GND
GND
TO CHARA GEN P3001 (D)
EVF 5V
GND
EVF Y
TITLE / VITC
VDREC H
JP1401
EVF 5V
GND
EVF Y
TITLER / VITC
VDREC H
P1402 VJJ0163
R3123 2200
Q3018 2SB1462 (BUFFER)
CKD3 CKD1
CKD2
CKD4 CKD5
TO EVF P3002 (F)
TO EVF P3002 / Page : 2
GND
EVF 5V
TALLY 5V
IR A
EVF HD
GND (EVF)
EVF 5V
EVF Y
EVF VD
P801 - 5
P801 - 4
P801 - 3
P801 - 2
P801 - 1
CKF 9
CKF 8
CKF 7
CKF 6
CKF 5
CKF 2
CKF 1
R3052 1K
R3124 1K
QR5003 UN5212 (FM D-REC H :ON)
22K
R3122 4700
R3135 1200
R3019 56K
TO SYSTEM CTL & SERVO / Page : 31
VD
HD
TALLY 5V
FMDREC
N.R.D.
A - HASW
A - HSW
A - ORP
STAB 5V
VD REC H
HA SW
H SW
V - ORP
VSS
TO VITC / Page : 45
VSS
TITLE / VI
TO SYSTEM CTL & SERVO / Page : 31
NRDBLK
R3156 2700
1 EVF 5V
2 GND
3 HD
4 VD
5 REC LED
6 EVF OUT
7 VD REC H
8 9V
9 TITLER
10 NON REC DATA
CHARACTER GENERATOR C.B.A. VEK5865
G
F
E
D
C
B
A
35
36
37
38
39

14. VITC SCHEMATIC DIAGRAM



MAIN SIGNAL PATH



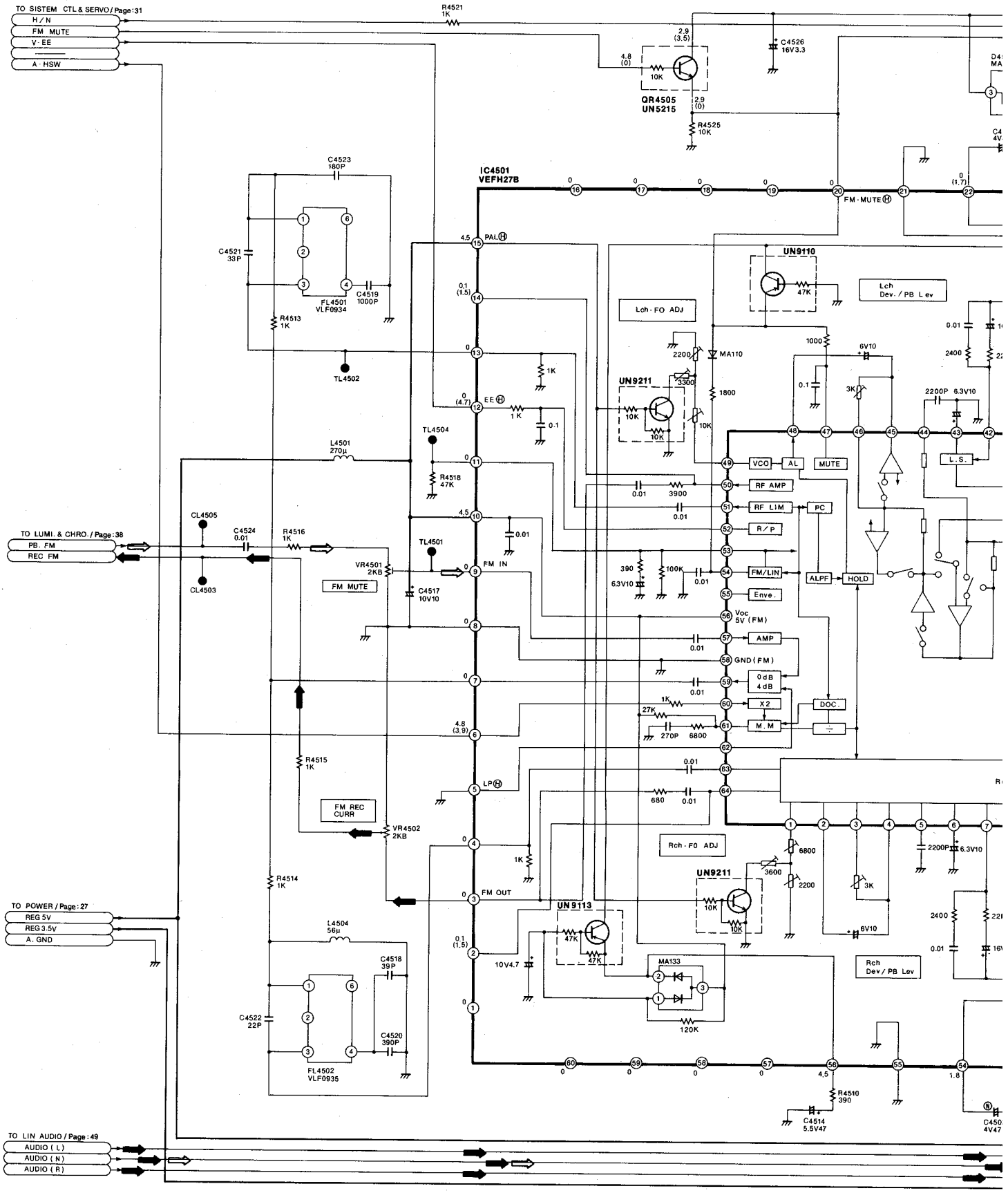
) NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR
RDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

. Hi-Fi AUDIO SCHEMATIC DIAGRAM

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PA

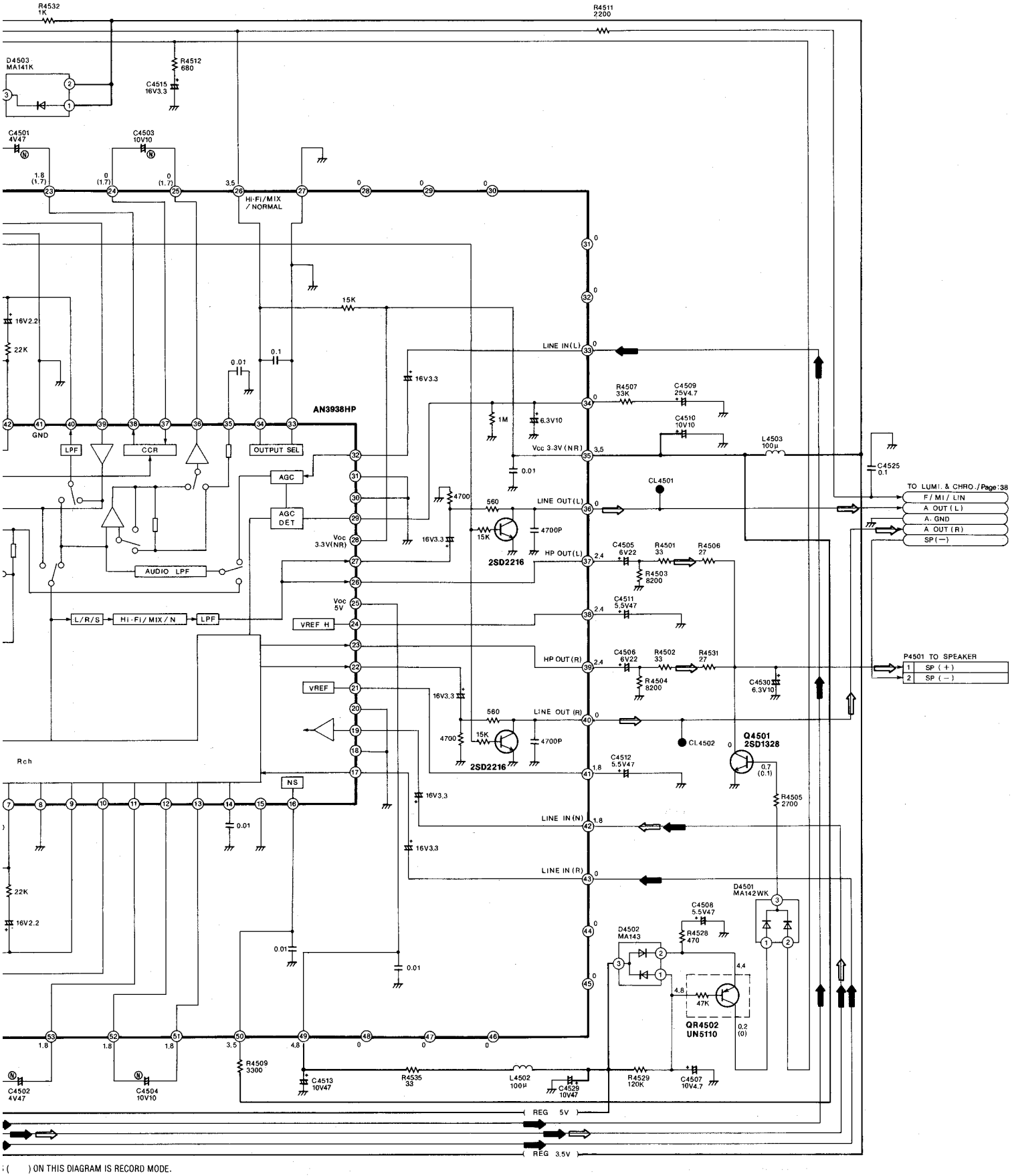


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS (

1 2 3 4 5 6

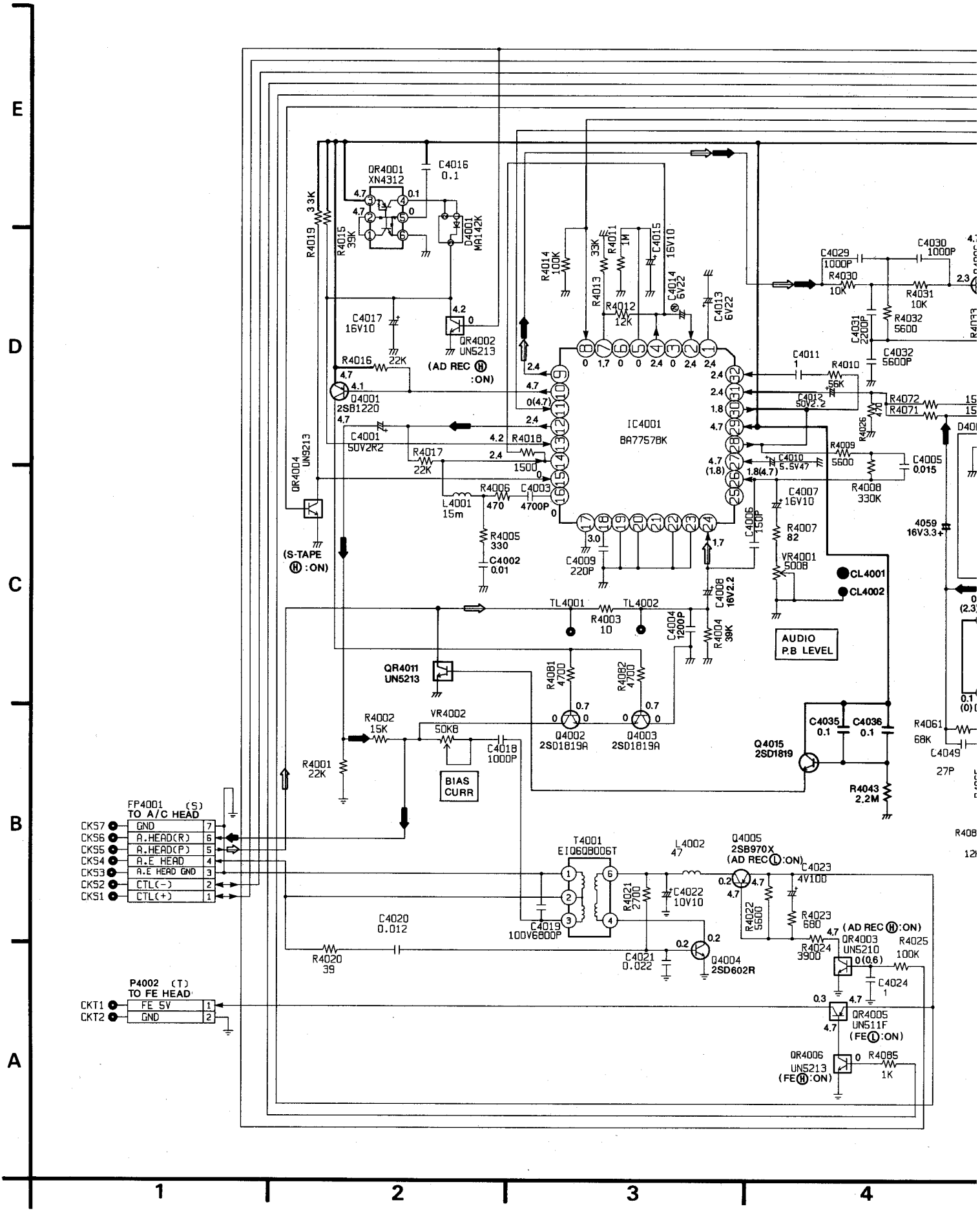
ATH IN PLAYBACK MODE



( ) ON THIS DIAGRAM IS RECORD MODE.
KETS ON THIS DIAGRAM IS PLAYBACK MODE.

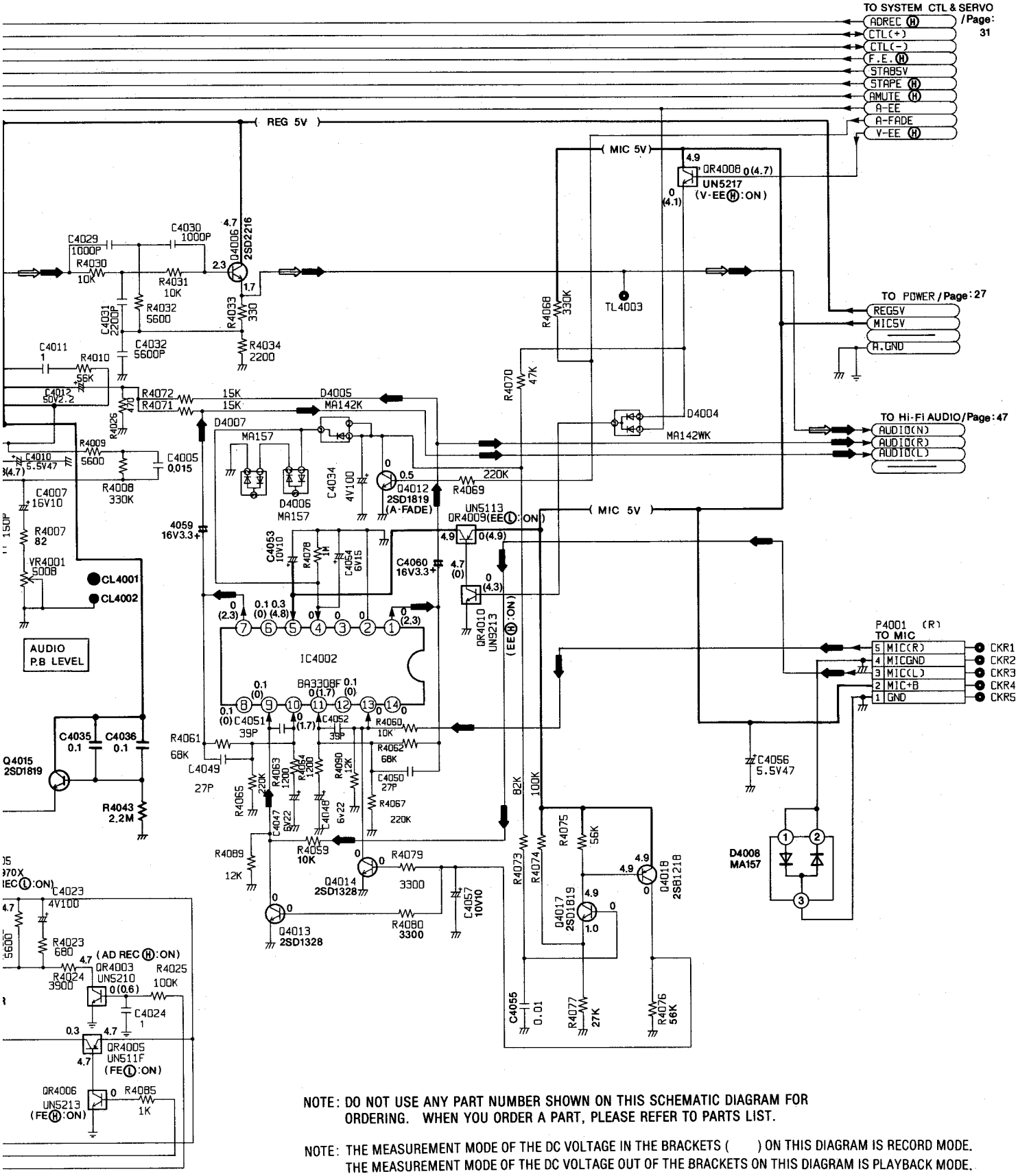
7 8 9 10 11 12

16. AUDIO SCHEMATIC DIAGRAM



MAIN SIGNAL PATH IN REC MODE

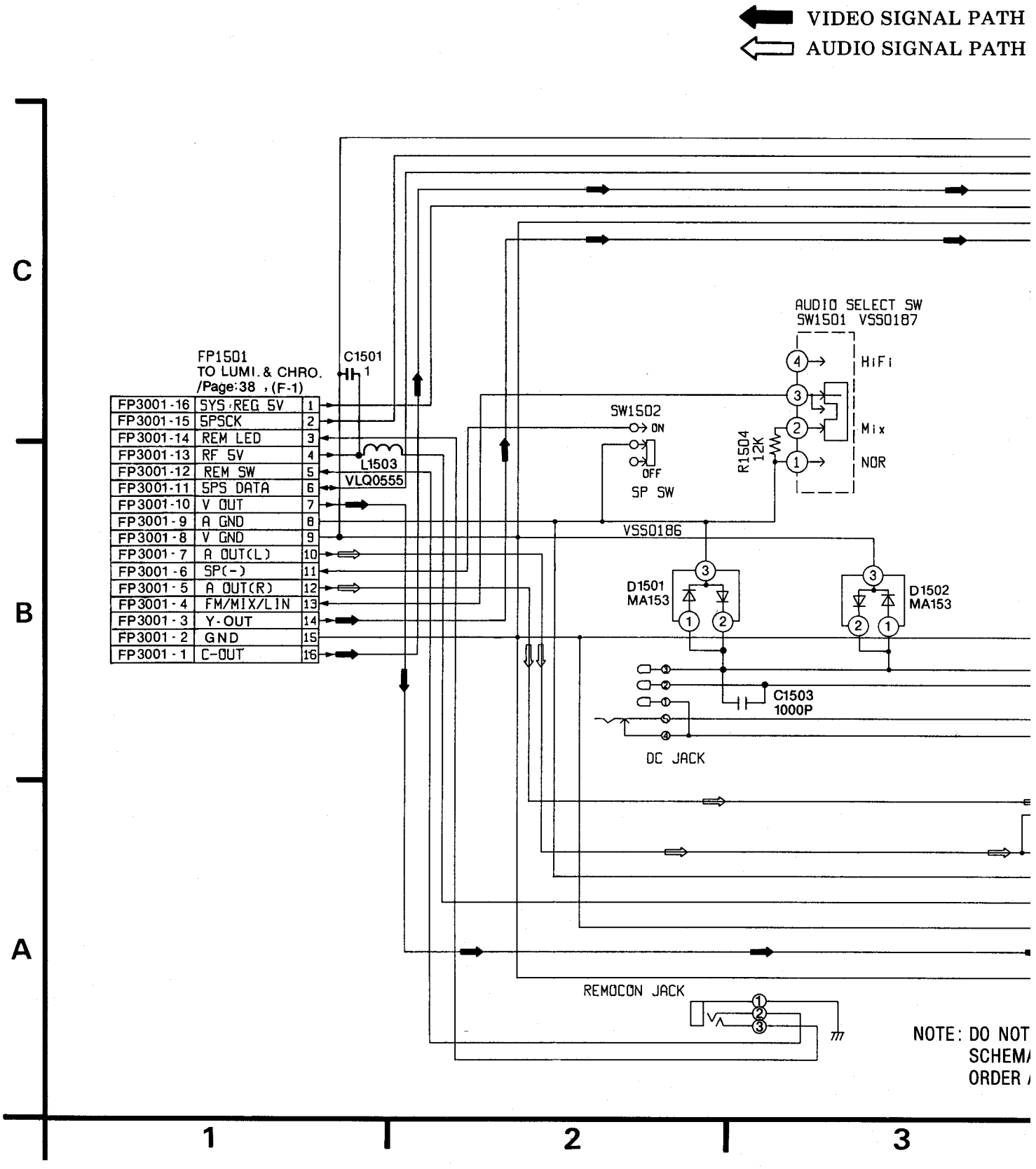
MAIN SIGNAL PATH IN PLAYBACK MODE



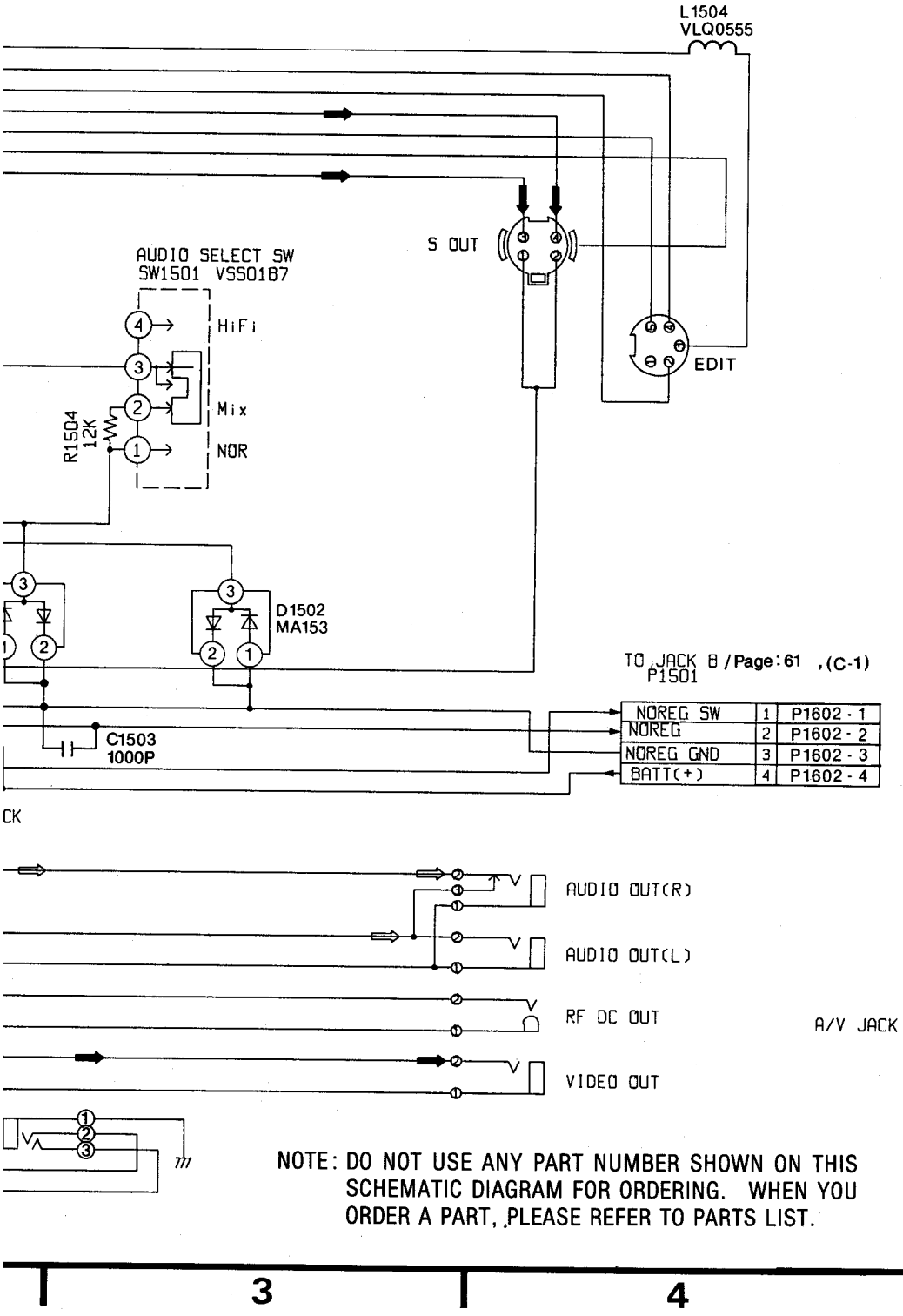
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

18. AV JACK (A) SCHEMATIC DIAGRAM

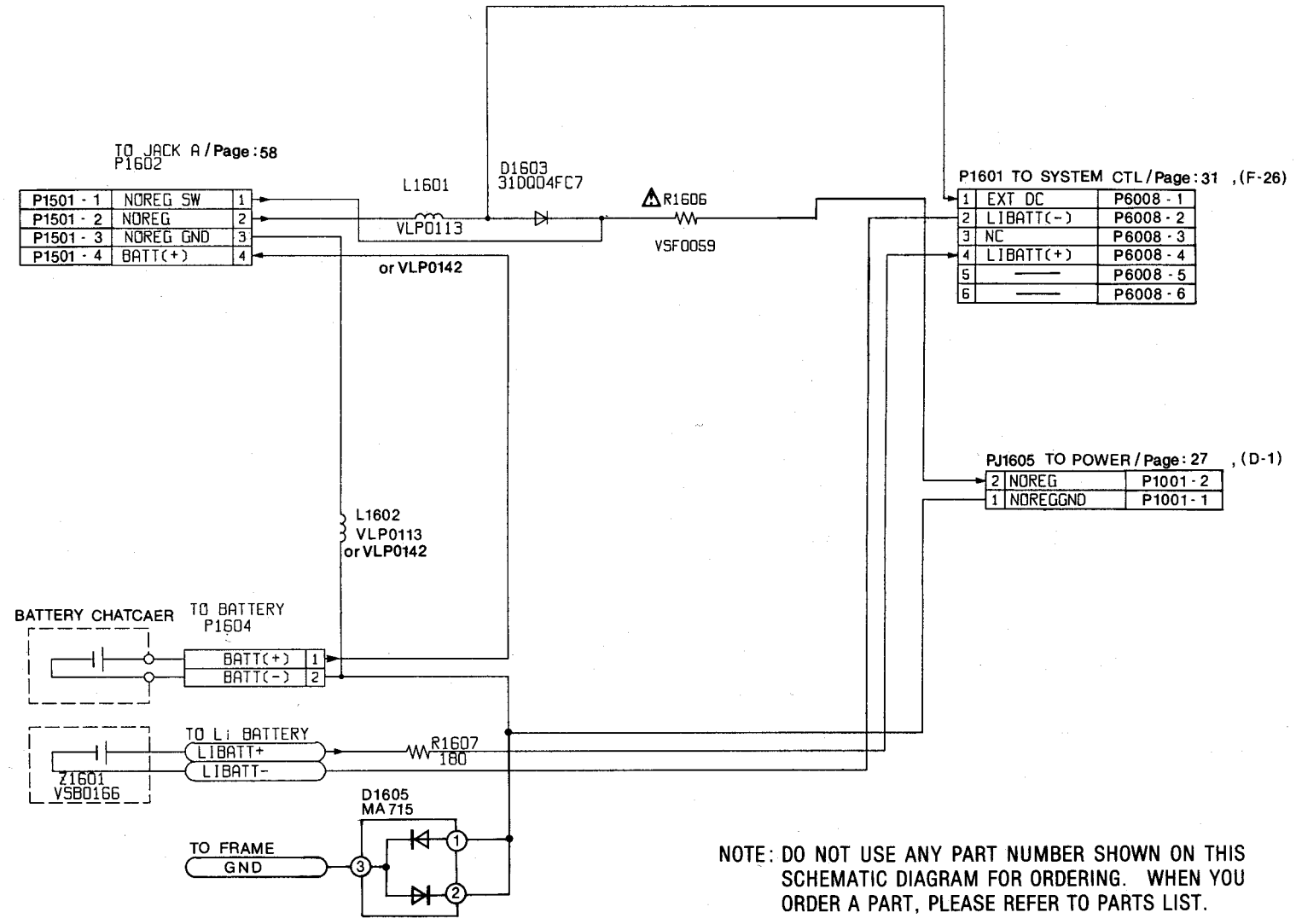


VIDEO SIGNAL PATH
AUDIO SIGNAL PATH



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

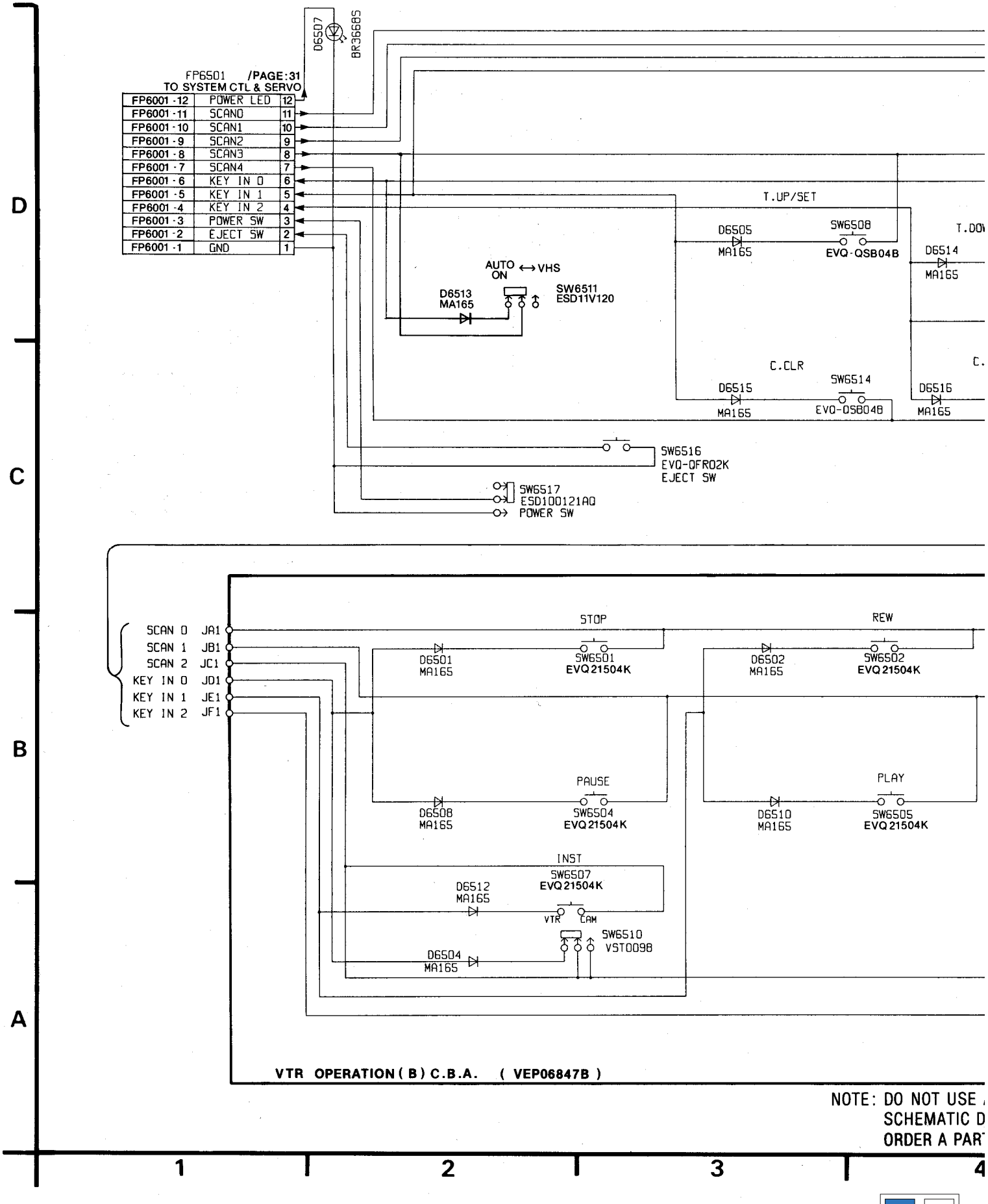
AV JACK (B) SCHEMATIC DIAGRAM



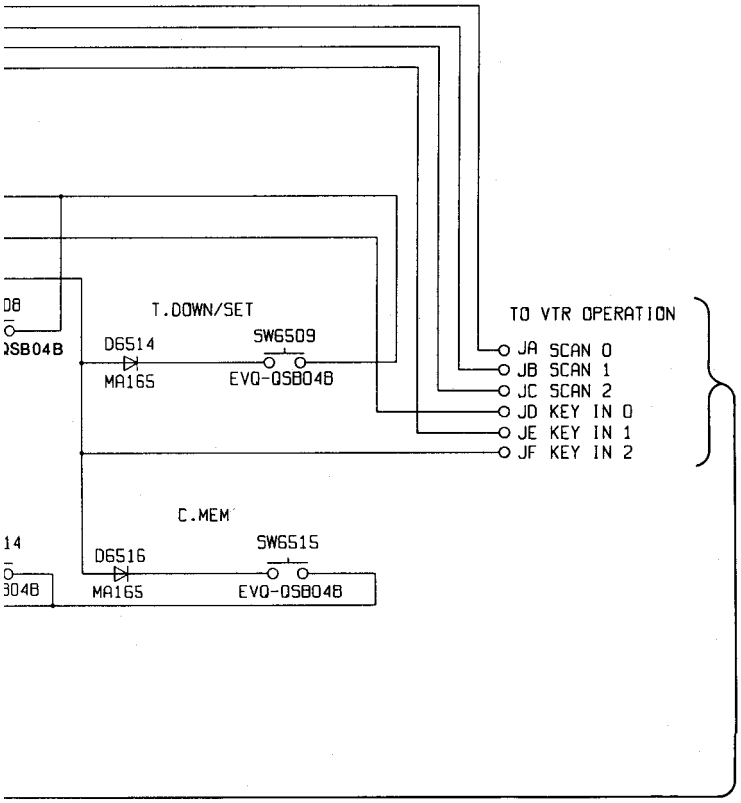
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

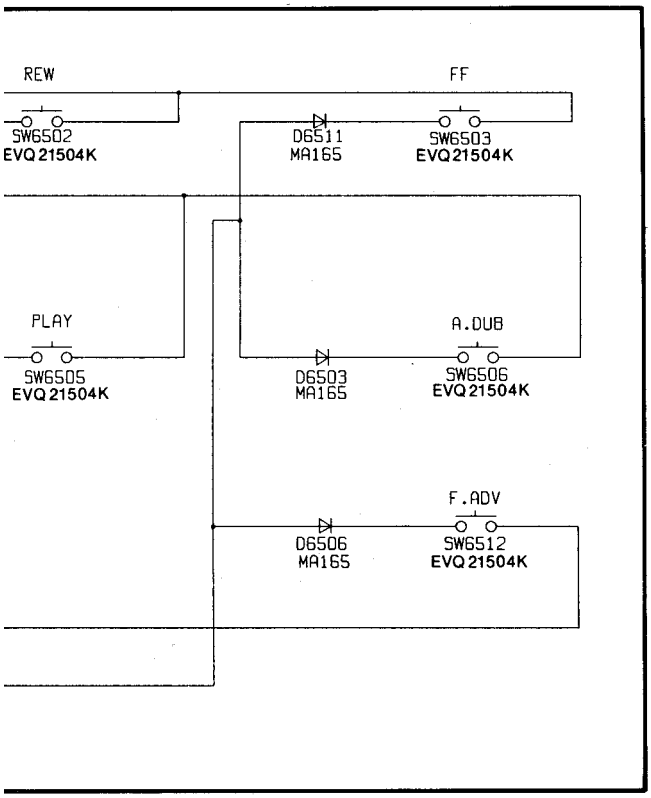
1 2 3 4

22. VTR OPERATION SCHEMATIC DIAGRAM



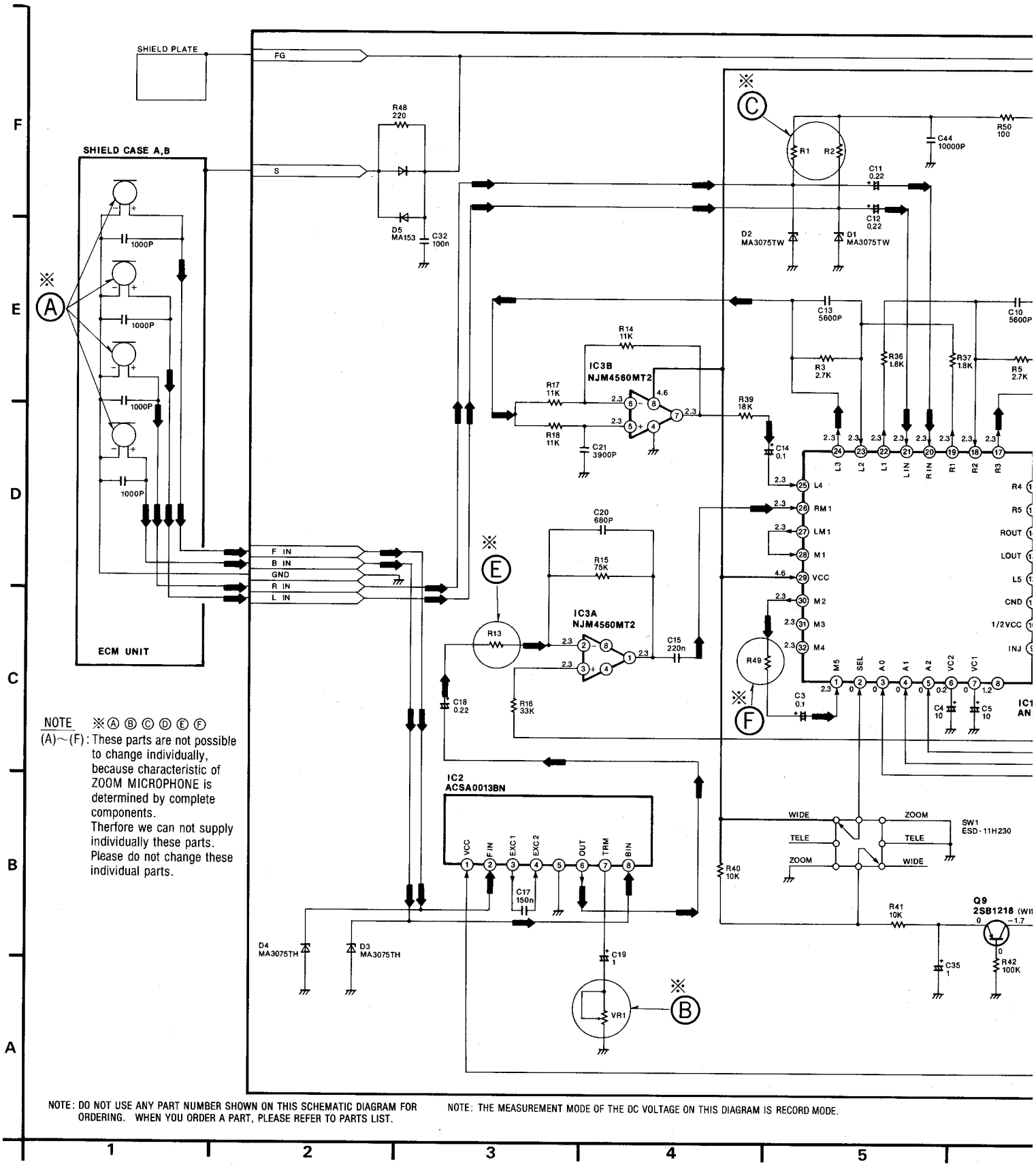
NOTE: DO NOT USE
SCHEMATIC D
ORDER A PAR





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

24. MIC SCHEMATIC DIAGRAM

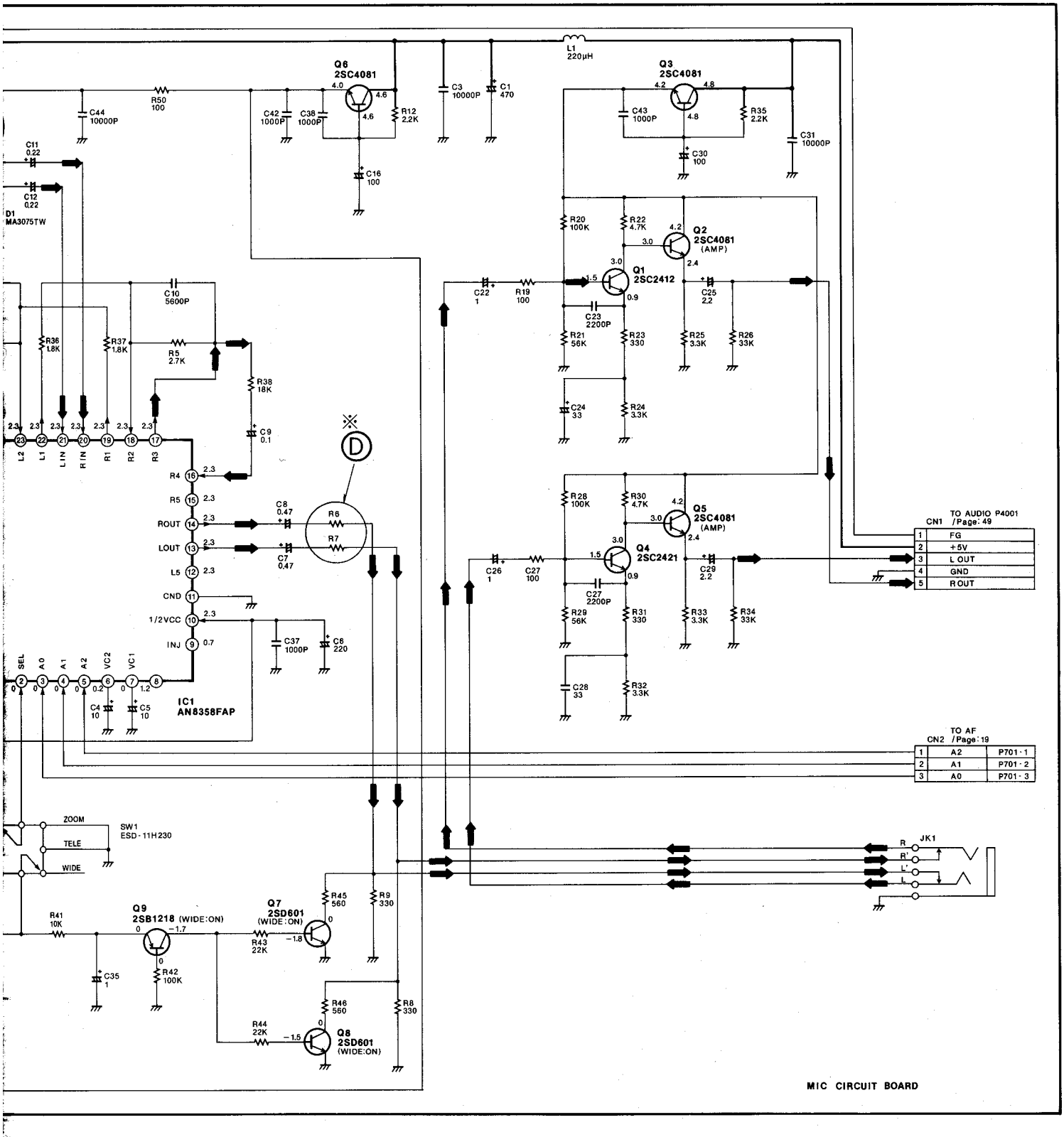


NOTE ※Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ
(A)~(F): These parts are not possible to change individually, because characteristic of ZOOM MICROPHONE is determined by complete components.
Therfore we can not supply individually these parts.
Please do not change these individual parts.

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

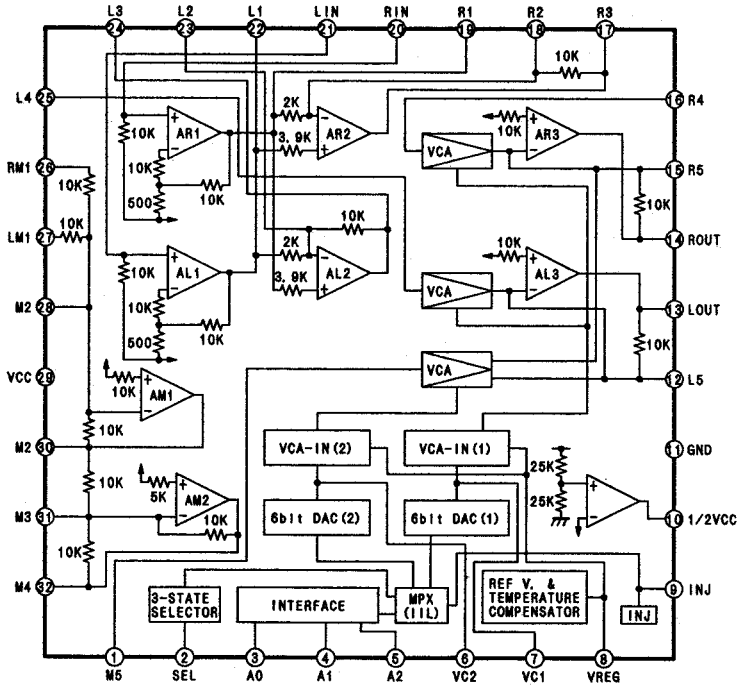
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS RECORD MODE.

MAIN SIGNAL PATH IN REC MODE

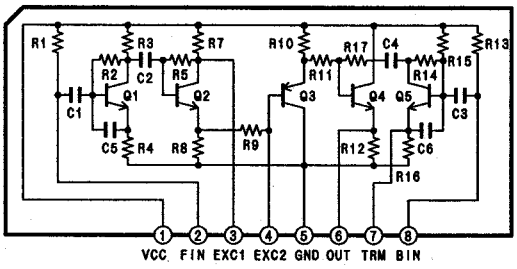


5 | 6 | 7 | 8 | 9 | 10

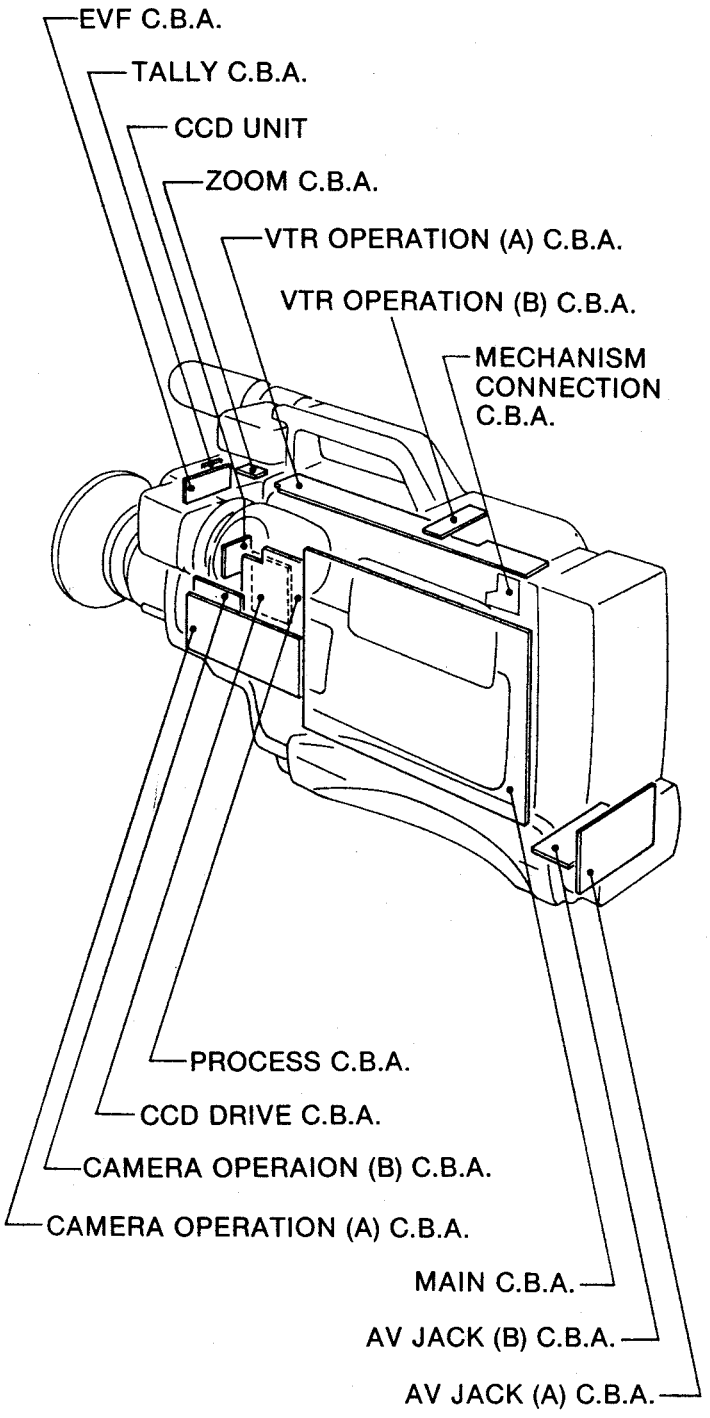
IC1 AN8358FAP



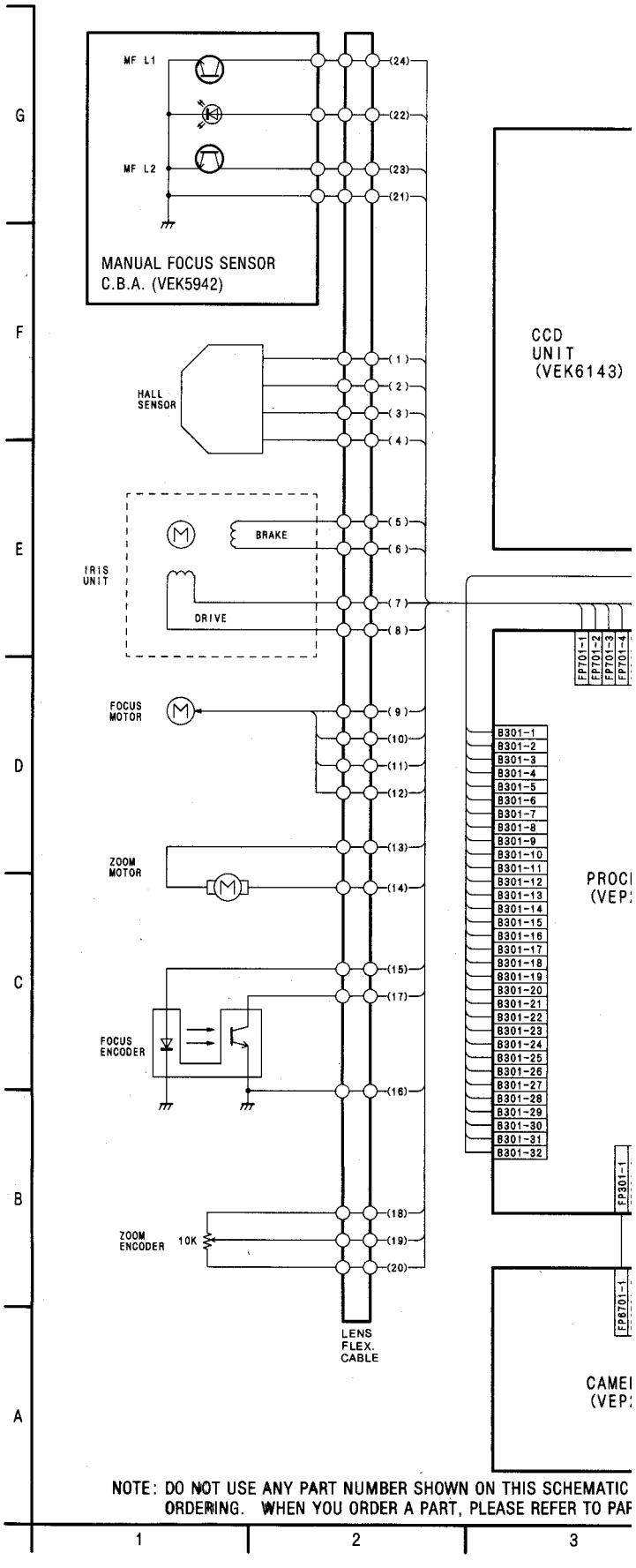
IC2 ACSA0013BN



26. CIRCUIT BOARD LAYOUT

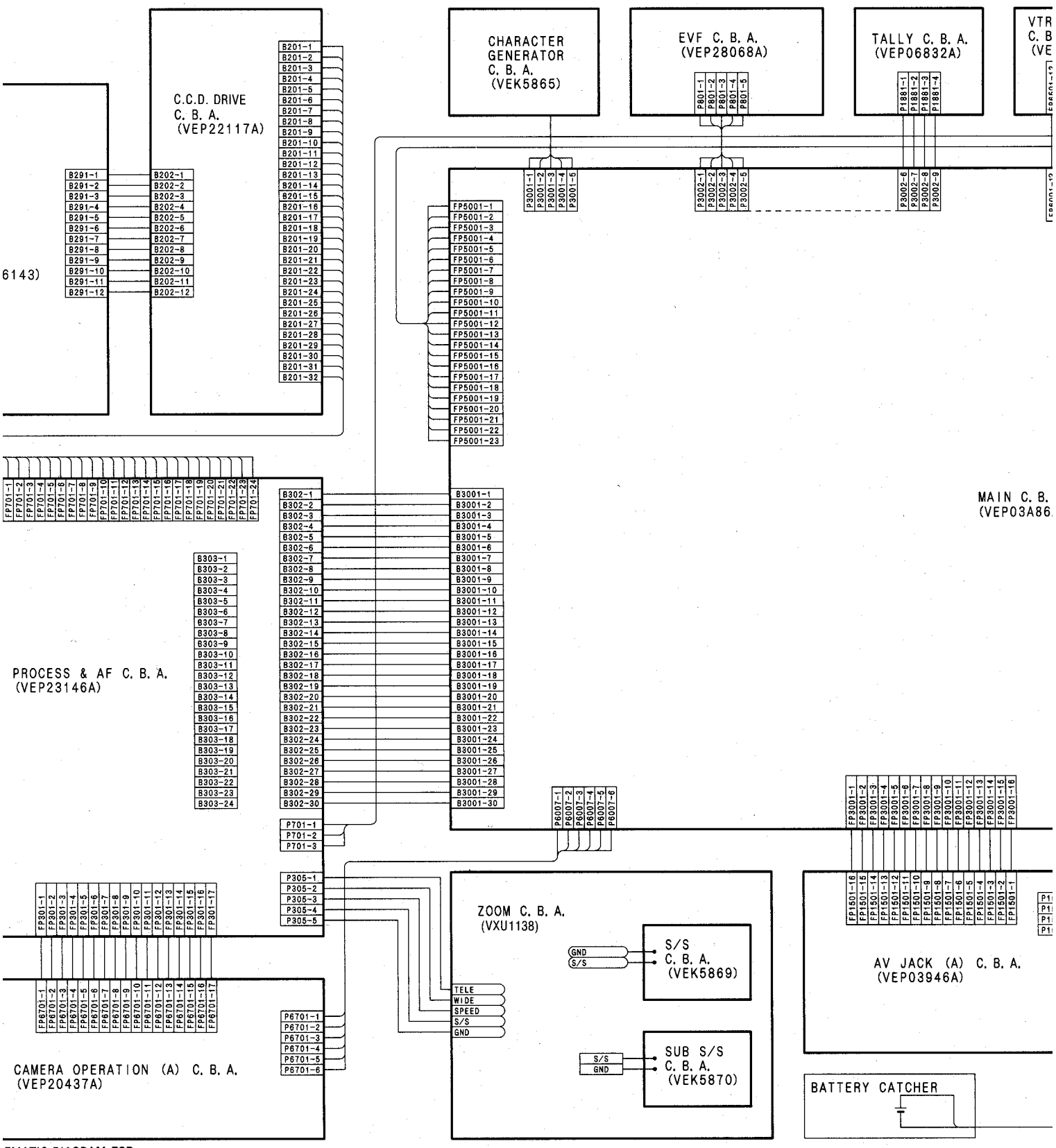


27. INTERCONNECTION SCHEMAT



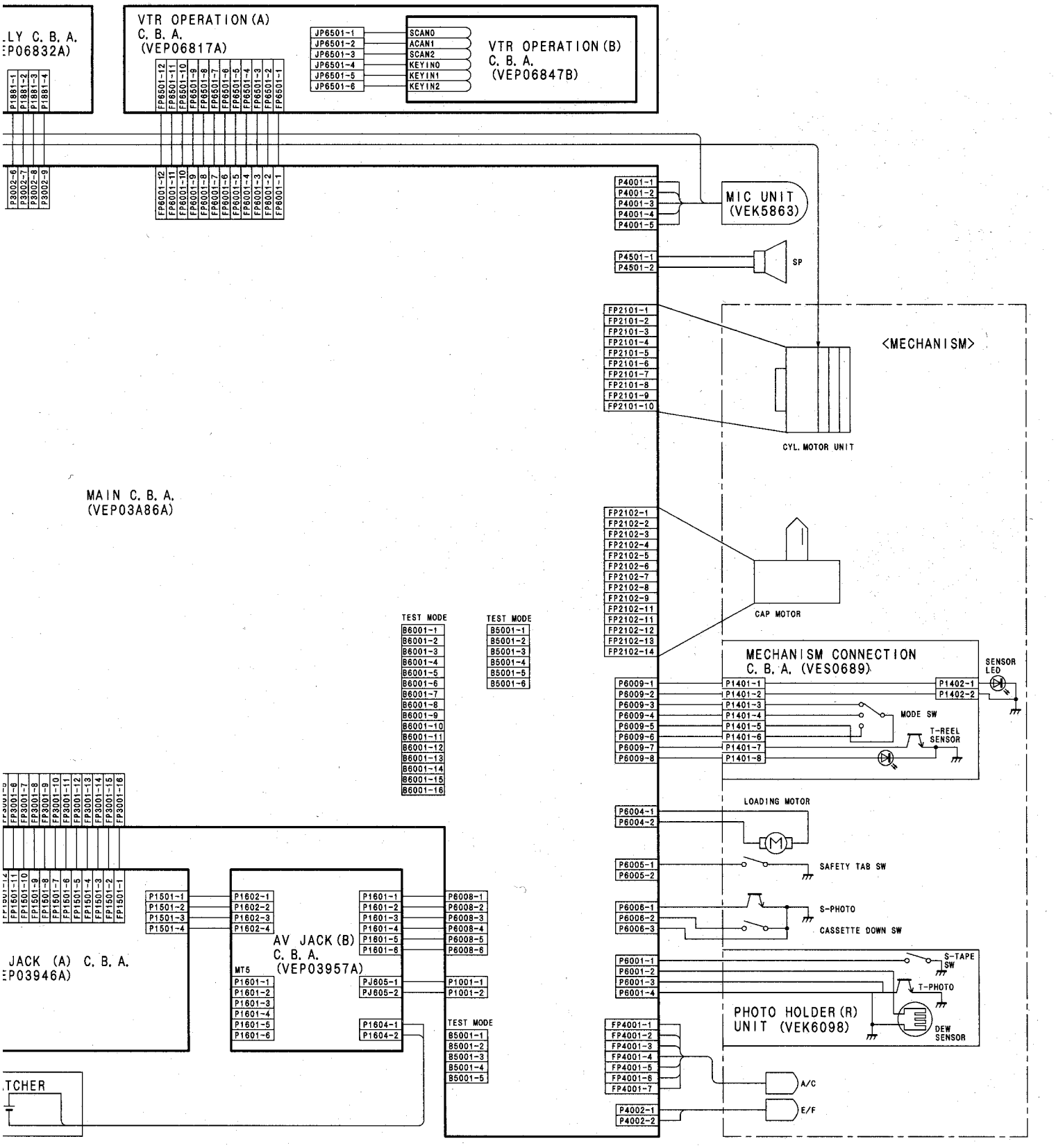
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PAR

[ATIC DIAGRAM



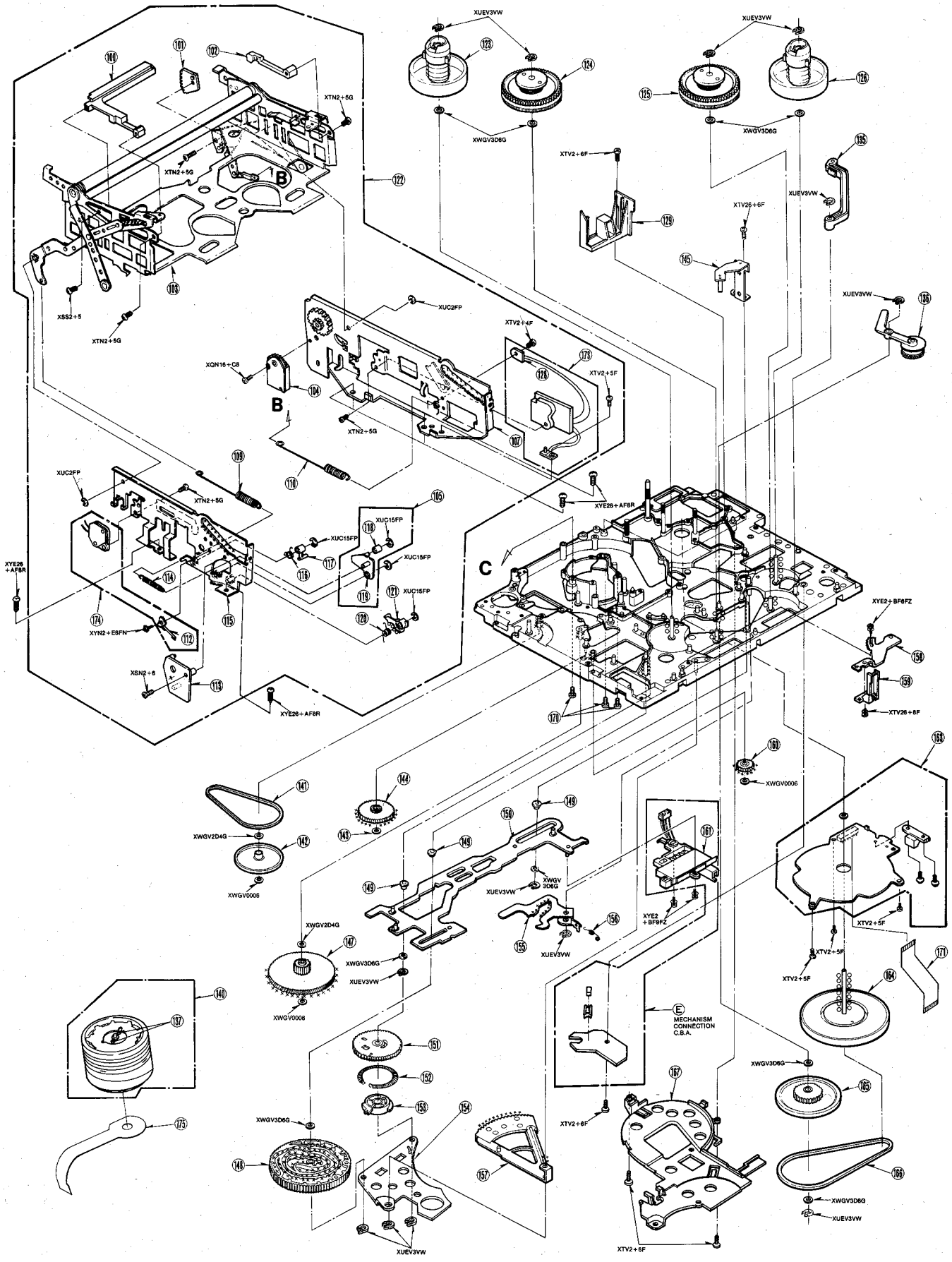
EMATIC DIAGRAM FOR
R TO PARTS LIST.

3 4 5 6 7 8 9

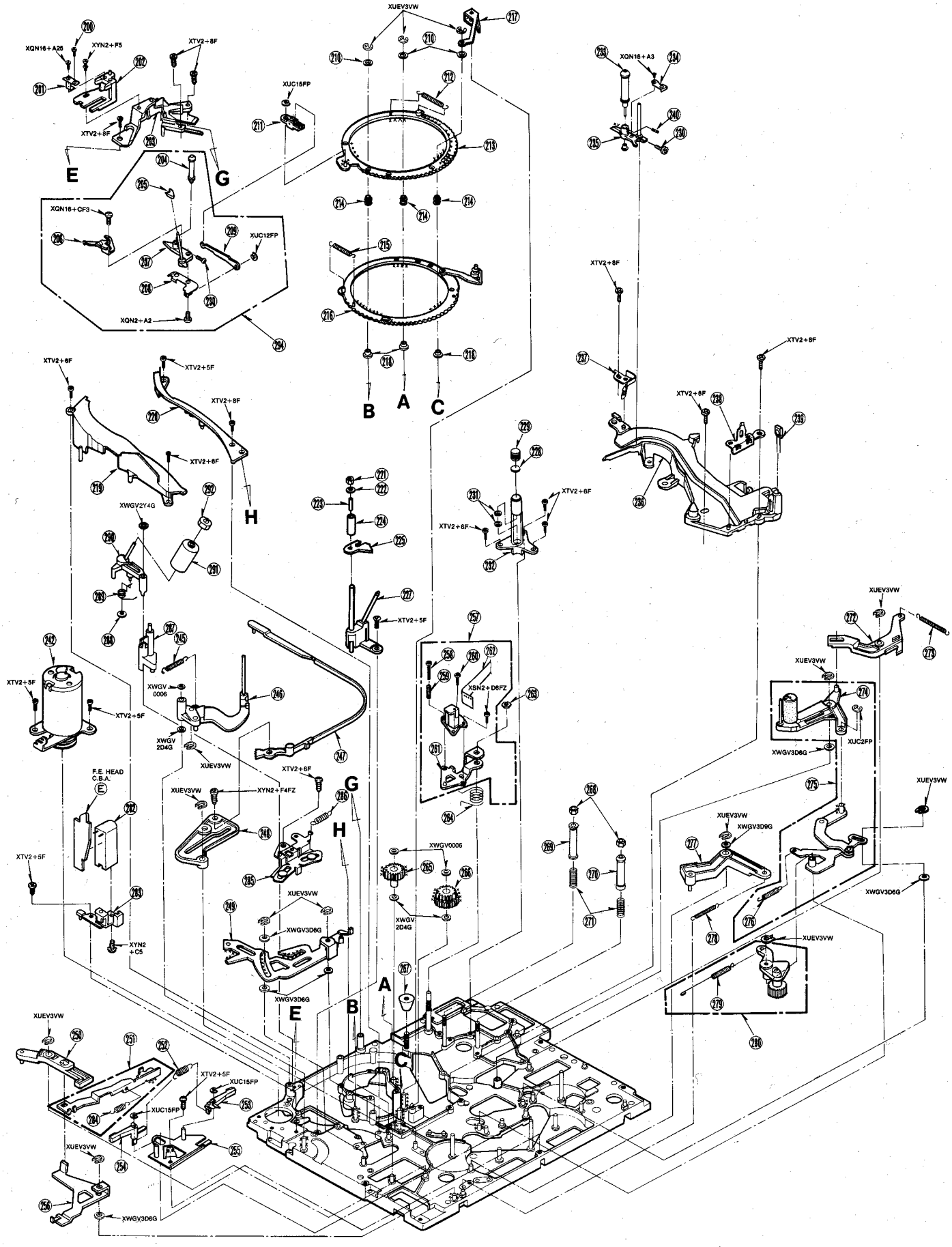

VTR OPERATION (A)
C. B. A.
(VEP06817A)
VTR OPERATION (B)
C. B. A.
(VEP06847B)
MIC UNIT
(VEK5863)
SP
<MECHANISM>
CYL. MOTOR UNIT
CAP MOTOR
MAIN C. B. A.
(VEP03A86A)
MECHANISM CONNECTION
C. B. A. (VES0689)
SENSOR LED
MODE SW
T-REEL SENSOR
LOADING MOTOR
SAFETY TAB SW
S-PHOTO
CASSETTE DOWN SW
S-TAPE SW
T-PHOTO
DEW SENSOR
PHOTO HOLDER (R)
UNIT (VEK6098)
A/C
E/F
AV JACK (B)
C. B. A.
(VEP03957A)
TEST MODE
TEST MODE
9
10
11
12
13
14

28. EXPLODED VIEWS & PARTS LISTS

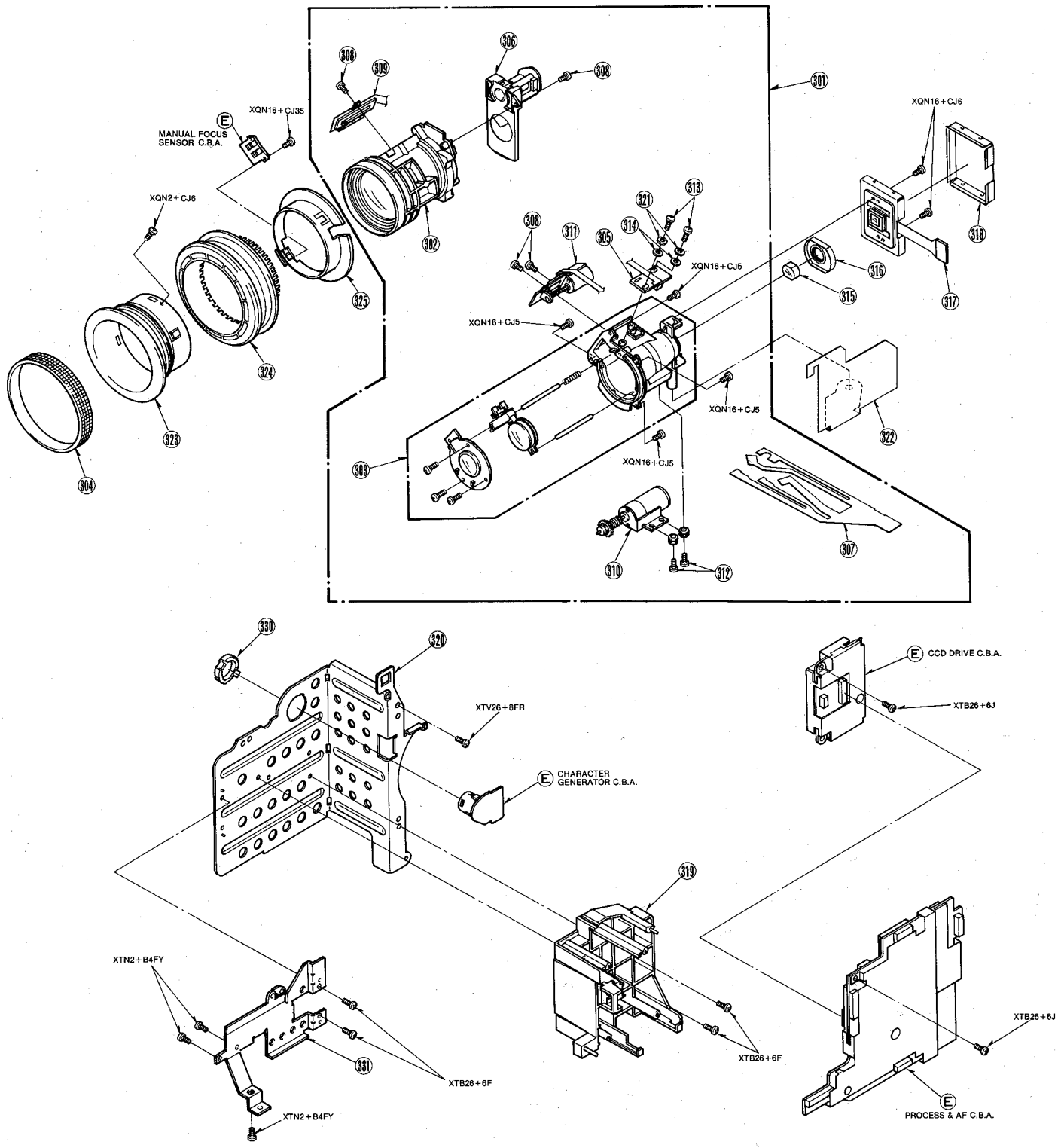
(1) VTR MECHANISM SECTION (1)



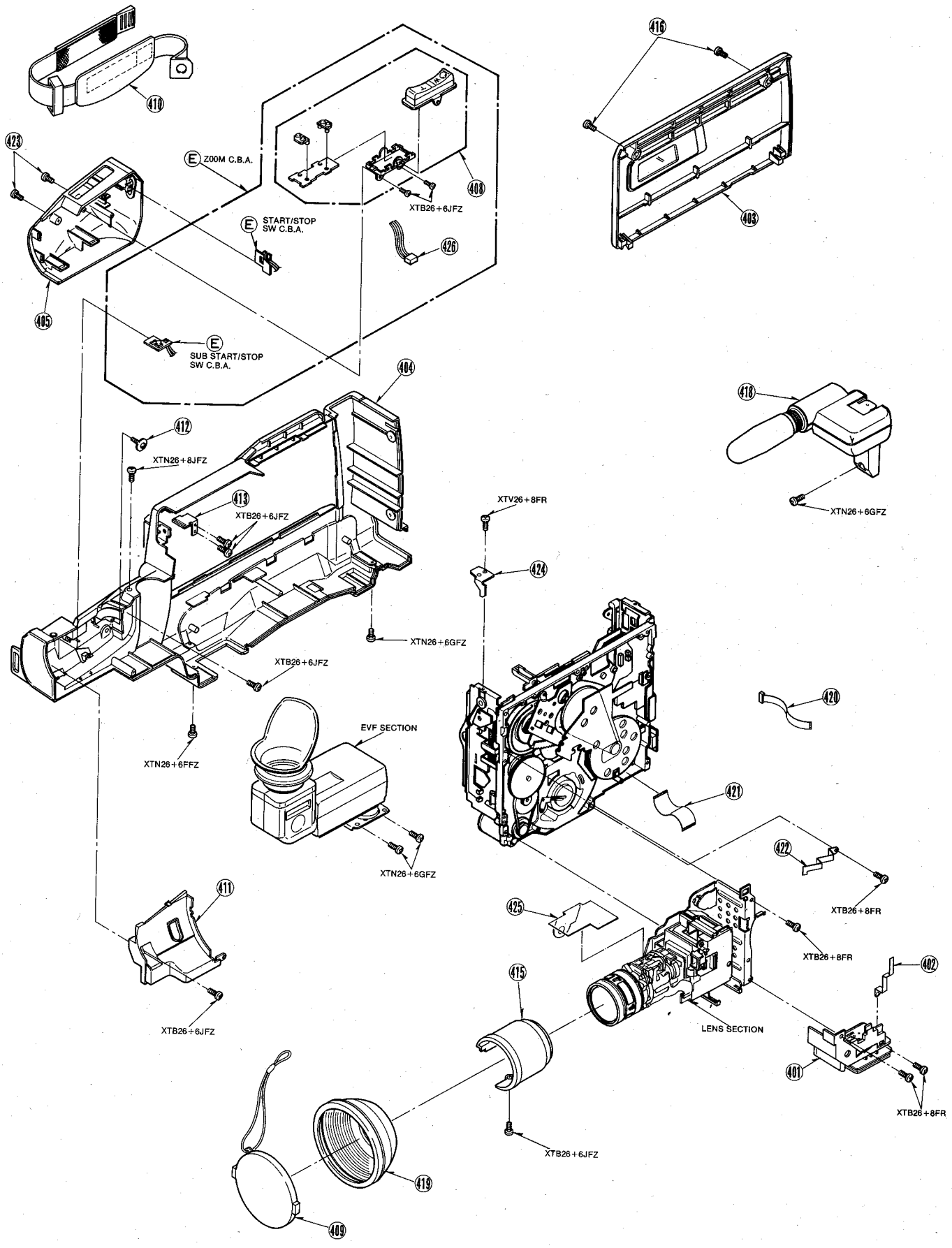
(2) VTR MECHANISM SECTION (2)



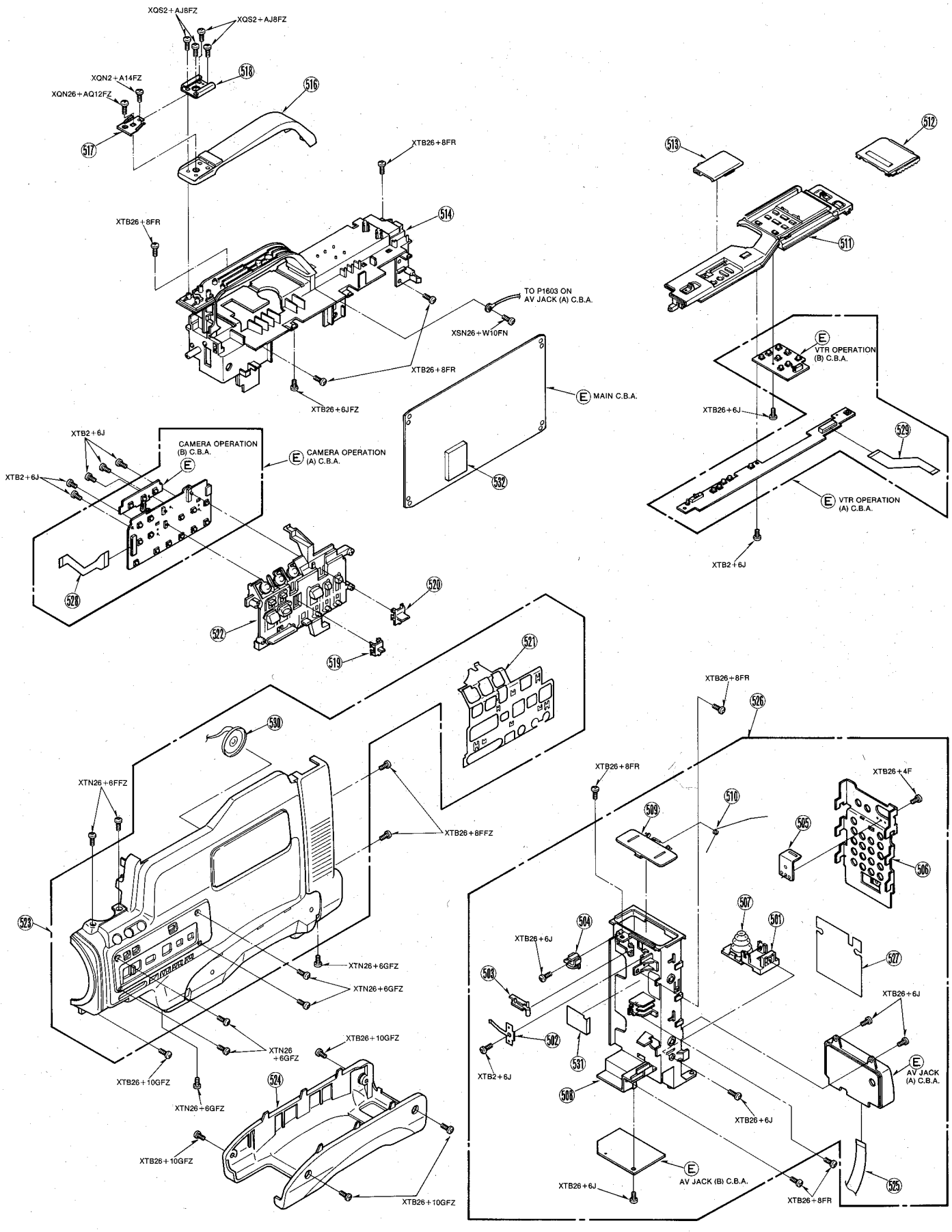
(3) CAMERA LENS SECTION



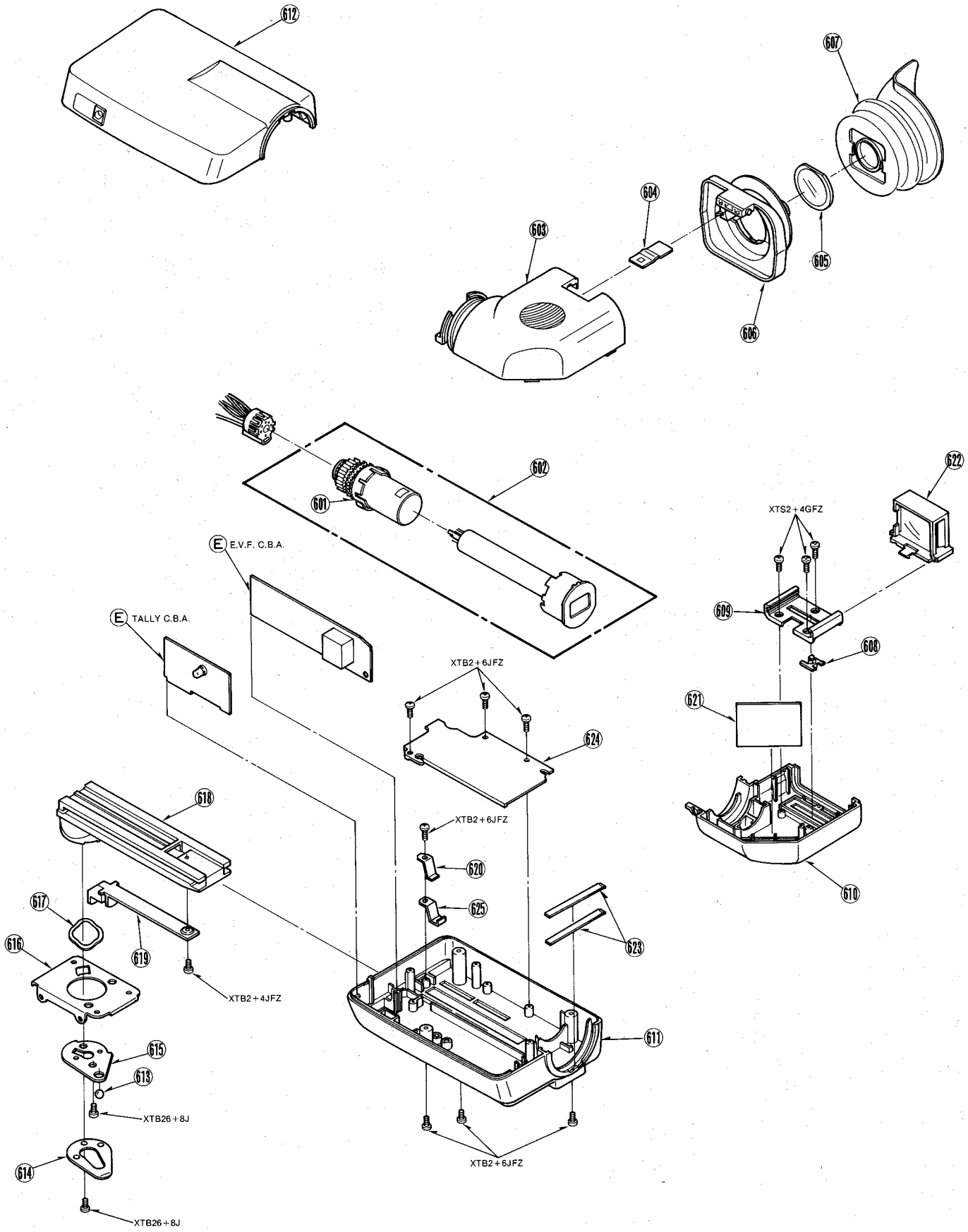
(4) FRAME & CASING PARTS SECTION (1)



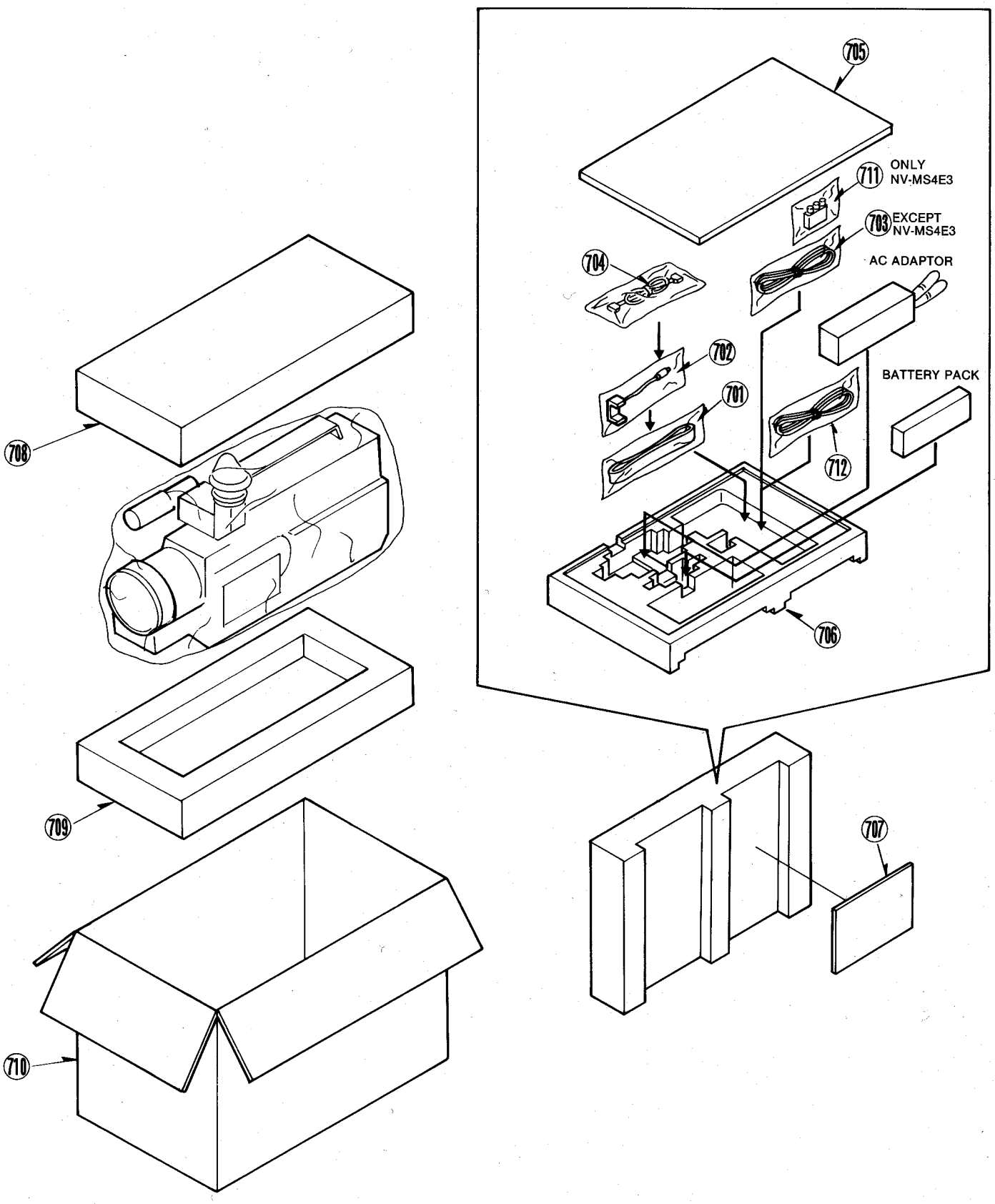
(5) FRAME & CASING PARTS SECTION (2)



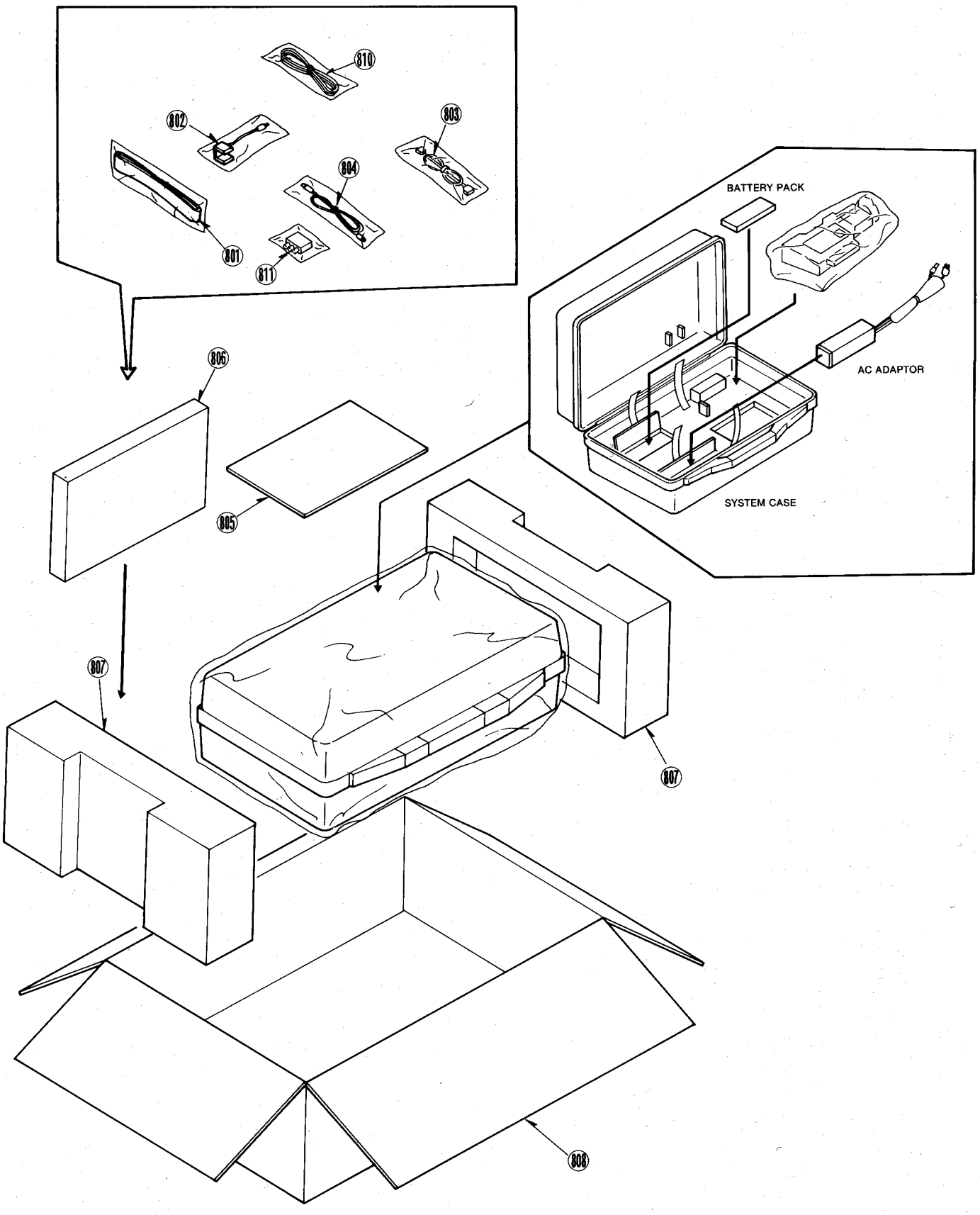
(6) EVF SECTION



(7) PACKING PARTS & ACCESSORIES SECTION
(NV-MS4E3/A3, NV-M9000EN3, NV-M9900MC3)



(8) PACKING PARTS & ACCESSORIES SECTION (NV-MS4B3)



29. 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
100(1)		VMD0954	CASSETTE GUIDE (L)	1	
101(1)		VDG0610	MAIN ARM GEAR (A)	1	
102(1)		VMD0953	CASSETTE GUIDE (R)	1	
103(1)		VXA4856	CASSETTE HOLDER UNIT	1	
104(1)		VXP1139	DAMPER UNIT	1	
105(1)		VXL1984	LOCK LEVER UNIT	1	
107(1)		VXA3863	STAND (R) UNIT	1	
109(1)		VMB1329	HOLDER SPRING (L)	1	
110(1)		VMB1621	HOLDER SPRING (R)	1	
112(1)		VSH0026	LEAF SW	1	
113(1)		VMD0952	LEAF SW COVER (O)	1	
114(1)		VMB1330	LOCK BOARD SPRING	1	
115(1)		VXA3023	STAND (L) UNIT	1	
116(1)		VMB1453	LOCK LEVER (B) SPRING	1	
117(1)		VML1650	LOCK LEVER (B)	1	
118(1)		VDP1096	LOCK ROLLER (O)	1	
119(1)		VXL1648	LOCK BOARD UNIT	1	
120(1)		VMB1331	LOCK LEVER (A) SPRING	1	
121(1)		VML1649	LOCK LEVER (A)	1	
122(1)		VXA4832	CASSETTE UP (O) UNIT	1	
123(1)		VXR0200	SUPPLY REEL TABLE	1	
124(1)		VXP0900B	SUPPLY CLUTCH UNIT	1	
125(1)		VXP0901B	TAKE-UP CLUTCH UNIT	1	
126(1)		VXR0201	TAKE-UP REEL TABLE	1	
128(1)		VSQ0808	DEW DETECTOR UNIT	1	
129(1)		VGQ0888	CASSETTE OPENER	1	
135(1)		VXZ0246	SOFT BRAKE (T) UNIT	1	
136(1)		VXP0899B	DRIVE GEAR ARM UNIT	1	
137(1)		VHD0593	CYLINDER UNIT SCREW	2	
				1	
140(1)		VEG1102	CYLINDER UNIT	1	
141(1)		VDV0167	LOADING BELT	1	
142(1)		VDG0370	INTERMEDIATE PULLEY GEAR	1	
143(1)		VMX0653	CUT WASHER	1	
144(1)		VDG0372	DRIVE GEAR (B)	1	
145(1)		VXS0119	EARTH BRUSH UNIT	1	
147(1)		VDG0371	DRIVE GEAR (A)	1	
148(1)		VDG0202	CAM GEAR	1	
149(1)		VMX0388	THRUST WASHER	3	
150(1)		VXL1654	MAIN ROD (K) UNIT	1	
151(1)		VDG0211	LOADING GEAR (C) (2)	1	
152(1)		VMB1324	LOADING GEAR (C) SPRING	1	
153(1)		VDG0210	LOADING GEAR (C) (1)	1	
154(1)		VMA7228	GUARD PLATE	1	
155(1)		VML1707	DRIVE ARMKICK LEVER	1	
156(1)		VMB1388	DRIVE ARMKICK LEVER SPRING	1	
157(1)		VXP0632	SECTOR GEAR UNIT	1	
158(1)		VMA6560	SAFETY TAB SW BASE	1	
159(1)		VSH0023	SAFETY TAB SW	1	
160(1)		VDG0207	DRIVE GEAR (C)	1	
161(1)		VSS0193	MODE SW	1	
163(1)		VEK5926	STATOR UNIT	1	
164(1)		VXP1355	ROTOR UNIT	1	
165(1)		VXP0897	MAIN PULLEY UNIT	1	
166(1)		VDV0155	CAPSTAN BELT	1	
167(1)		VMD0935	BELT COVER	1	
170(1)		VHD0750	CYLINDER SCREW	3	
171(1)		VWJ0636	CAPSTAN FPC	1	
173(1)		VEK6098	PHOTO TR (R) U.	1	
174(1)		VEK6035	PHOTO TR (L) U.	1	
175(1)		VEP03A93A	RT-FPC	1	
200(2)		VHD0282	P2 ADJUST PLATE SCREW	1	
201(2)		VMA6542	P2 ADJUST PLATE	1	
202(2)		VMD0701	SUPPLY POST STOPPER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
203(2)		VMD1166	V STOPPER BASE	1	
204(2)		VXP0841	SUPPLY ROLLER POST UNIT	1	
205(2)		VGQ0842	P2 CAP	1	
206(2)		VMD0769	TAPE PROTECTOR	1	
207(2)		VXA2221	SUPPLY SHAFT HOLDER(1)UNIT	1	
208(2)		VXA2256	SUPPLY SHAFT HOLDER ANGLE	1	
			UNIT	1	
209(2)		VMM0144	CONNECTION ROD	1	
210(2)		VMX1282	RING GUIDE SLEEVE UNIT	3	
211(2)		VXA2231	CONNECTION TIE UNIT	1	
212(2)		VMB1319	LOADING SPRING	1	
213(2)		VXA2253	LOADING RING (S) (1) UNIT	1	
214(2)		VDP1160	RING GUIDE ROLLER	3	
215(2)		VMB1319	LOADING SPRING	1	
216(2)		VXA3576	LOADING RING (T) (1) UNIT	1	
217(2)		VMC0250	PRESSER SPRING	1	
218(2)		VMX1279	RING GUIDE SLEEVE	3	
219(2)		VMD1155	LOADING GUIDE (S) (1)	1	
220(2)		VMD1128	LOADING GUIDE (S) (2)	1	
221(2)		VMX1088	SUPPLY UPPER LIMITER	1	
222(2)		VMS2888	P1 POST SLEEVE (B)	1	
223(2)		VMX1581	P1 COLLAR	1	
224(2)		VDP1265	P1 ROLLER	1	
225(2)		VMA6547	P1 LIMITER PLATE	1	
227(2)		VXA3112	P1 BASE (1) UNIT	1	
228(2)		VXD0098	THRUST SPACER	1	
229(2)		VHD0204	THRUST SCREW NUT	1	
230(2)		VHD0368	ROLLER POST SCREW	2	
231(2)		VMX0775	DUST SEAL	2	
232(2)		VXD0108	CAPSTAN HOUSING UNIT	1	
233(2)		VXP0927	TAKE-UP ROLLER POST UNIT	1	
234(2)		VMA6546	TAKE-UP SHAFT HOLDER ANGLE	1	
235(2)		VXA3116	TAKE-UP SHAFT HOLDER (A)	1	
			UNIT		
236(2)		VMD1165	TAKE-UP LOADING BASE	1	
237(2)		VMC0352	SHAFT HOLDER PRESSURE	1	
			SPRING		
238(2)		VMA7226	SHAFT HOLDER PLATE ANGLE	1	
239(2)		LN59NV	LED	1	
240(2)		VHD0367	TAKE-UP SHAFT ADJ. SCREW	1	
242(2)		VEM0431	LOADING MOTOR UNIT	1	<!>
245(2)		VMB1747	TENSION SPRING	1	
246(2)		VXL1262	TENSION ARM UNIT	1	
247(2)		VXZ0245	TENSION BAND UNIT	1	
248(2)		VML2065B	BAND RELEASE ARM	1	
249(2)		VXA4828	TENSION KICK LEVER	1	
250(2)		VML2064B	EJECT LEVER (A)	1	
251(2)		VXA3020	SUPPORTER UNIT	1	
252(2)		VMB1405	BRAKE SPRING	1	
253(2)		VXZ0207B	BRAKE (R) UNIT	1	
254(2)		VXZ0206B	BRAKE (L) UNIT	1	
255(2)		VXA4263	BRAKE PLATE (1) UNIT	1	
256(2)		VML2073	EJECT LEVER (B)	1	
257(2)		VED0183	A/C HEAD UNIT	1	
258(2)		VHD0275	A/C HEAD ADJUST SCREW	1	
259(2)		VMB1321	A/C HEAD ADJUST SPRING	1	
260(2)		VHD0381	A/C HEAD TILT ADJUST SCREW	1	
261(2)		VXL2256	A/C HEAD ARM UNIT	1	
262(2)		VWJ0608	A/C HEAD FPC	1	
263(2)		VHN0077	A/C HEAD ARM NUT	1	
264(2)		VMB1320	A/C HEAD SPRING	1	
265(2)		VDG0208	LOADING GEAR (A)	1	
266(2)		VDG0461	LOADING GEAR (B)	1	
267(2)		VHN0072	ADJUST NUT	1	
268(2)		VHN0047	M2 NYLON NUT	2	
269(2)		VMS2693	P4 POST SLEEVE	1	
270(2)		VXJ0057	P5 POST SLEEVE	1	
271(2)		VMB1322	P4,P5 SPRING	2	
272(2)		VML2067B	PINCH LEVER	1	
273(2)		VMB2071	PINCH LEVER SPRING	1	
274(2)		VXL1652	PINCH ROLLER ARM (1) UNIT	1	
275(2)		VXL1650	PINCH ARM UNIT	1	
276(2)		VMB1326	PINCH ARM SPRING	1	
277(2)		VXL1264B	SOFT BRAKE LEVER (S) UNIT	1	
278(2)		VMB1314	SOFT BRAKE SPRING (S)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
279(2)		VMB1771	REW ARM SPRING	1	
280(2)		VXL1649B	FF/REW ARM UNIT	1	
282(2)		VBS0021	FE HEAD	1	
283(2)		VMD1129	FE HEAD BASE	1	
284(2)		VMB1447	SUPPORTER SPRING	1	
285(2)		VXA3579	SLIDE BASE (O) UNIT	1	
286(2)		VMB1965	SLIDE SPRING	1	
287(2)		VML2285	IMPEDANCE LEVER	1	
288(2)		VHN0109	PUSH NUT	1	
289(2)		VMB1964	IMPEDANCE DRIVE SPRING	1	
290(2)		VXL1879	IMPEDANCE ARM (1) UNIT	1	
291(2)		VDP1285	IMPEDANCE ROLLER	1	
292(2)		VMX1088	SUPPLY UPPER LIMITER	1	
294(2)		VXA2220	SUPPLY SHAFT HOLDER UNIT	1	
301(3)		VXW0119	LENS U.	1	
302(3)		VXW0124	MAIN LENS U.	1	
303(3)		VXW0125	MASTER LENS U.	1	
304(3)		VDW0198	FOCUS RING (2)	1	
305(3)		VEK6302	FOCUS ENCODER U.	1	
306(3)		VEM2305	IRIS U.	1	
307(3)		VWJ0696	LENS FLEXIBLE CABLE	1	
308(3)		VHD0779	SCREW	5	
309(3)		EVAJHKUA3B14	ZOOM ENCODER U.	1	
310(3)		VEM0448	ZOOM MOTOR U.	1	
311(3)		VEM0449	FOCUS MOTOR U.	1	
312(3)		VHD0780	SCREW	2	
313(3)		VHD0781	SCREW	2	
314(3)		VMX2231	WASHER	2	
315(3)		VDL0322	CRYSTAL FILTER	1	
316(3)		VMX2195	CCD CUSHION	1	
317(3)		VEK6143	CCD U.	1	
318(3)		VSC3633	CCD SHIELD CASE	1	
319(3)		VMD2023	CAM P.C.BOARD FRAME	1	
320(3)		VMP3695	CAMERA FRAME	1	
321(3)		VMX2232	WASHER	2	
322(3)		VMZ2085	CAMERA FLEX. BARRIER	1	
323(3)		VDW0195	FRONT FRAME	1	
324(3)		VDW0196	FOCUS RING (1)	1	
325(3)		VDW0197	REAR FRAME	1	
330(3)		VGQ1986	CHARA. GENE. JACK PIECE	1	
331(3)		VMP3693	LENS FRAME	1	
401(4)		VMD2007	TRIPOD FRAME	1	
402(4)		VSC3732	TRIPOD SHIELD PLATE	1	
403(4)		VYP4221	CASSETTE COVER U.	1	NV-MS4E3/B3/A3
403(4)		VYP4223	CASSETTE COVER U.	1	NV-M9000EN3
403(4)		VYP4224	CASSETTE COVER U.	1	NV-M9900MC3
404(4)		VYK4828	SIDE CASE (L)(1) U.	1	
405(4)		VYK4795	GRIP CASE (1) U.	1	
408(4)		VXU1120	ZOOM BUTTON (1) U.	1	
409(4)		VYF1893	HOOD CAP U.	1	
410(4)		VYC0557	GRIP BELT U.	1	
411(4)		VKM3149	FRONT CASE	1	
412(4)		VHD0386	GRIP BELT SCREW	1	
413(4)		VMP3822	SHOLDER ANGLE (F)	1	
415(4)		VKM3089	LENS COVER	1	NV-MS4E3/B3/A3
415(4)		VKM3286	LENS COVER	1	NV-M9000EN3,M9900MC3
416(4)		VHD0371	SCREW	2	
418(4)		VEK5863	MIC U.	1	
419(4)		VDW0191	LENS HOOD	1	
420(4)		VWJ0789	CYLINDER FLEX.CABLE	1	
421(4)		VWJ0636	CAPSTAN FLEX.CABLE	1	
422(4)		VSC3632	EARTH PLATE	1	
423(4)		VHD0771	SCREW	2	
424(4)		VMP3688	FRAME SET. ANGLE	1	
425(4)		VMZ2085	CAMERA FLEX.BARRIER	1	
426(4)		VEE7782	ZOOM FLEX	1	
501(5)		VGQ1129	BATTERY CATCHER	1	
502(5)		VMC0876	BATTERY LOCK ANGLE	1	
503(5)		VGQ2849	BATTERY LOCK	1	
504(5)		VGQ2850	INTERMEDIATE LEVER	1	
505(5)		VMP3689	SHOLDER ANGLE	1	
506(5)		VMP3692	BATTERY CASE FIX.ANGLE	1	
507(5)		VMB2524	BATTERY PUSHING SPRING	1	
508(5)		VKM3072	BATTERY CASE U.	1	
509(5)		VKF1876	BATTERY DOOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
510(5)		VMC0237	DOOR SPRING	1	
511(5)		VXU1122	TOP OPERATION PANEL (1)U.	1	
512(5)		VKF1935	CURSOR	1	
513(5)		VKF1878	RESET MEMORY DOOR	1	
514(5)		VMD2006	TOP FRAME	1	
516(5)		VKM3071	HANDLE UPPER CASE	1	
517(5)		VMC0726	SHOE SPRING	1	
518(5)		VMP2407	SHOE	1	
519(5)		VGU5898	SLIDE KNOB (A)	1	
520(5)		VGU5908	SLIDE KNOB (B)	1	
521(5)		VMC0889	CAMERA EARTH PLATE	1	
522(5)		VGP3162	CAMERA OPERATION PANEL	1	
523(5)		VYK4578	SIDE CASE (R) U.	1	NV-MS4E3/B3/A3
523(5)		VYK4580	SIDE CASE (R) U.	1	NV-M9000EN3
523(5)		VYK4581	SIDE CASE (R) U.	1	NV-M9900MC3
524(5)		VMT0452	SHOLDER PAD	1	
525(5)		VWJ0609	AV JACK-MAIN CABLE	1	
526(5)		VYK4645	BATTERY CASE U.	1	
527(5)		VMZ2063	JACK BARRIER	1	
528(5)		VWJ0638	CAMERA OPE.-PROCESS FLEX.	1	
529(5)		VWJ0610	VTR OPE.-MAIN FLEX.	1	
530(5)		VEK6102	EAR SPEAKER U.	1	
531(5)		VMZ2090	BATT. BARRIER	1	
532(5)		VSC3632	HEAD AMP SHIELD CASE (C)	1	
601(6)		ELY07V570F	DY	1	
602(6)		VEK6002	CRT U.	1	
603(6)		VYK4496	FINDER CASE (UPPER)	1	
604(6)		VMC0316	EYE CAP HOLDER SPRING	1	
605(6)		VDL0140	LENS (2)	1	
606(6)		VKF1996	EYE CAP HOLDER	1	
607(6)		VMG0716	EYE CAP	1	
608(6)		VGU3895	EYESIGHT ADJ. LEVER	1	
609(6)		VKF1278	LENS HOLDER GUIDE	1	
610(6)		VKM3077	FINDER CASE (LOWER)	1	
611(6)		VYK4494	EVF MAIN CASE LOWER U.	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
611(6)		VYK4644	EVF MAIN CASE LOWER U.	1	NV-MS4B3
612(6)		VYK4493	EVF MAIN CASE UPPER U.	1	
613(6)		VMP1358	EVF BEARING	1	
614(6)		VMC0902	EVF LOCK SPRING	1	
615(6)		VMP3823	EVF ROTARY PLATE	1	
616(6)		VMP3690	EVF MOUNT ANGLE	1	
617(6)		VMX2172	WAVING WASHER	1	
618(6)		VGQ2914	EVF ROTATION BASE	1	
619(6)		VGQ2967	ROTARY BASE COVER	1	
620(6)		VMC0914	ROTARY BASE SPRING	1	
621(6)		VDL0349	MIRROR	1	
622(6)		VYQ0082	LENS HOLDER U.	1	
623(6)		VMC0890	SPRING PLATE	2	
624(6)		VGQ2846	WIRE COVER	1	
625(6)		VGQ3069	EVF SLIDER	1	
701(7)		VFC1309	SHOLDER STRAP	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
702(7)		VJA0180	BATTERY CATCHER	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
703(7)		VFA0028	AV OUTPUT CABLE	1	NV-MS4A3,
					NV-M9000EN3,M9900MC3.
704(7)		VJA0573	3PIN DC INPUT CABLE	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
705(7)		VPN3478	ACCESSORY PAD	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
706(7)		VPN3476	ACCESSORY BOX	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
707(7)		VQT4832	OPERATING INSTRUCTIONS	1	NV-MS4E3
			(ENGLISH)		
707(7)		VQT4833	OPERATING INSTRUCTIONS	1	NV-MS4E3
			(ITALIAN)		
707(7)		VQT4834	OPERATING INSTRUCTIONS	1	NV-MS4E3
			(FINNISH)		
707(7)		VQT4836	OPERATING INSTRUCTIONS	1	NV-MS4A3
			(ENGLISH)		
707(7)		VQT4837	OPERATING INSTRUCTIONS	1	NV-M9000EN3
			(ENGLISH)		
707(7)		VQT4838	OPERATING INSTRUCTIONS	1	NV-M9000EN3

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			(CHINESE)		
707(7)		VQT4839	OPERATING INSTRUCTIONS	1	NV-M9900MC3
			(ENGLISH/CHINESE)		
708(7)		VPN3474	CUSHION (UPPER)	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
709(7)		VPN3475	CUSHION (LOWER)	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
710(7)		VPG6627	PACKING CASE	1	NV-MS4E3
710(7)		VPG6626	PACKING CASE	1	NV-MS4A3
710(7)		VPG6628	PACKING CASE	1	NV-M9000EN3
710(7)		VPG6629	PACKING CASE	1	NV-M9900MC3
711(7)		VFA0151	21PIN ADAPTOR	1	NV-MS4E3
712(7)		VJA0658	4PIN S-VHS CABLE	1	NV-MS4E3/A3,
					NV-M9000EN3,M9900MC3.
801(8)		VFC1309	SHOLDER STRAP	1	NV-MS4B3
802(8)		VJA0180	BATTERY CATCHER	1	NV-MS4B3
803(8)		VJA0573	3PIN DC INPUT CABLE	1	NV-MS4B3
804(8)		VFA0028	AV OUTPUT CABLE	1	NV-MS4B3
805(8)		VQT4835	OPERATING INSTRUCTIONS	1	NV-MS4B3
806(8)		VPK1515	ACCESSORY CASE	1	NV-MS4B3
807(8)		VPN2612	CUSHION	2	NV-MS4B3
808(8)		VPG6625	PACKING CASE	1	NV-MS4B3
810(8)		VJA0658	4PIN S-VHS CABLE	1	NV-MS4B3
811(8)		VFA0151	21PIN ADAPTOR	1	NV-MS4B3
			JIG & TOOLS		
		VFK0374	COLOUR TEMP. CONV. FILTER	1	
		VFK0375	COLOUR TEMP. CONV. FILTER	1	
		VFK0644	EVR FIXTURE	1	
		VFK0701ROM10	ROM10	1	
		VFK0766A	EVR CONNECTION CABLE	1	
		VFK0734W	CONNECTION CABLE FOR	1	
			MEASURMENT	1	
		VFK0667	EXTENSION CABLE 30P	1	
		VFK0724	EXTENSION CABLE 32P	1	
		VFK0783	EXTENSION CABLE 12P	1	
		VFK0802	FLAT CABLE 24P	1	
		VFK0823	FLAT CABLE 6P	1	
		VFJ8125H3F	VHS-ALLGNMENT TAPE (PAL)	1	
		VFK0144	RETAINING RING REMOVER	1	
			(3mm)		
		VFK0191	POST ADJUSTMENT PLATE	1	
		VFK0190	REEL TABLE HEIGHT GAUGE	1	
		VFK0189	H-POSITION ADJ. -FIXTURE	1	
		VFK0137	POST ADJUSTMENT SCREWDRIVER	1	
		VFK66	FAN TYPE TENSION GAUGE	1	
		VFK0326	HEX WRENCH SET	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0136	FINE ADJUSTMENT SCREWDRIVER	1	
		VFK0134	ADAPTOR FOR VFK0133	1	
		VFK0133	DIAL TORQUE GAUGE	1	
			FLEX & CABLE		
171(1)		VWJ0636	CAPSTAN FPC	1	(-FP2102)
262(2)		VWJ0608	A/C HEAD FPC	1	(-FP4001)
307(3)		VWJ0696	LENS FLEXIBLE CABLE	1	
420(4)		VWJ0789	CYLINDER FLEX.CABLE	1	(-FP2101)
421(4)		VWJ0636	CAPSTAN FLEX.CABLE	1	(-FP2102)
426(4)		VEE7782	ZOOM FLEX	1	(VEK5862-P305)
525(5)		VWJ0609	AV JACK-MAIN CABLE	1	(P1501-FP3001)
528(5)		VWJ0638	CAMERA OPE.-PROCESS FLEX.	1	(P6701-FP301)
529(5)		VWJ0610	VTR OPE.-MAIN FLEX.	1	(FP6501-FP6001)
		VEE2015	CABLE	1	(-P1402)
		VEE7777	MECH FLEX.	1	(P6009-P1401)
		VEE7779	JACK A-B FLEX.	1	(P1501-P1602)
		VEE7780	BATTERY FLEX.	1	(-P1604)
		VEE7784	CONNECTION CABLE	1	(P6007-P6701)
		VEE7787	POWER JACK A FLEX.	1	(P1001-PJ1605)
		VEE7788	POWER JACK (B) CABLE UNIT	1	(P1601-P6008)
		VEE7789	F/E HEAD FLEX.	1	(-P4002)
		VEE7790	MIC A CONNECTION CABLE	1	(P4301-P4001)
		VEE7791	MIC B CONNECTION CABLE	1	(-P701)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEE7793	CONNECTION CABLE	1	(VEK5865-P3001)
		VEE7796	T-PHOTO FLEX.	1	(VEK6098-P6001)
		VEE7798	LOADING MOTOR FLEX.	1	(-P6004)
		VEE7799	SAFETY SW FLEX.	1	(-P6005)
		VEE7800	S-PHOTO FLEX.	1	(-P6006)
		VEE8184	A MECH CHASSIS EARTH CABLE	1	AV JACK B-MECH EARTH
		VWJ0610	VTR OPE-MAIN FLEX	1	(FP6501-FP6001)
		VWJ0638	CAMERA OPE - PROCESS FLEX	1	(P6701-FP301)
		VWJ0696	LENS FLEXIBLE CARD C.B.A.		
		VWJ06C0040AA	JUMPER CONNECTOR	1	(PJ6501-VTR OPE. (B))
		VEE7792	EVF FLEX.	1	(P3002-P801, P8001)

30. 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.
5. The marking(RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP06832A	TALLY C.B.A	1	(RTL)
		VEP28068A	EVF C.B.A.	1	(RTL)
		VXU1138	ZOOM C.B.A.	1	(RTL)
					INCLUDING THE S/S
					C.B.A.(VEK5869)
					SUB S/S C.B.A.
					(VEK5870).
		VEK5869	S/S C.B.A.	1	(RTL)
					INCLUDED IN ZOOM
					C.B.A.(VXU1138).
		VEK5870	SUB S/S C.B.A.	1	(RTL)
					INCLUDED IN ZOOM
					C.B.A.(VXU1138).
		VEP03A86A	MAIN C.B.A.	1	(RTL)
		VEP22117A	CCD DRIVE C.B.A	1	(RTL)
		VEP23146A	PROCESS C.B.A.	1	(RTL)
		VEP06817A	VTR OPERATION (A) C.B.A.	1	(RTL)
					INCLUDING THE VTR
					OPERATION (B) C.B.A.
					(VEP06847B)
		VEP06847B	VTR OPERATION (B) C.B.A.	1	(RTL)
					INCLUDED IN VTR
					OPERATION (A) C.B.A.
					(VEP06817A)
		VEP20437A	CAMERA OPERARION (A) C.B.A.	1	(RTL)
					INCLUDING THE CAMERA
					OPERATION (B) C.B.A.
					(VEP20438B)
		VEP20438B	CAMERA OPERARION (B) C.B.A.	1	(RTL)
					INCLUDED IN CAMERA
					OPERATION (A) C.B.A.
					(VEP20437A)
		VEP03946A	AV JACK (A) C.B.A.	1	(RTL)
		VEP03957A	AV JACK (B) C.B.A.	1	(RTL)
		VEK5868	FE HEAD C.B.A.	1	(RTL)
		VEP03A93A	RTF FLEXIBLE CARD C.B.A.	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP22118A	CCD FLEXIBLE CARD C.B.A.	1	(RTL)
		VEK5942	MANUAL FOCUS SENSOR	1	
			FLEXIBLE CARD C.B.A.		
		VEK5865	CHARA/GENE C.B.A.	1	(RTL)
		VES0689	MECHANISM CONNECTION C.B.A.	1	(RTL)
			(MODE SELECT SWITCH)		
		VEK5863	MIC UNIT	1	
	■	VEP06832A	TALLY C.B.A		(RTL)
			CAPACITORS		
C1881		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
D1881		BR3338S	DIODE	1	
D1882		PN327	DIODE	1	
P1881		VJP1597T	CONNECTOR (MALE) 4P	1	
Q1881		2SD637	TRANSISTOR	1	
			RESISTORS		
R1881		ERDS2TJ224	C.RESISTOR 1/4W 220K	1	
R1882		ERDS2TJ473	C.RESISTOR 1/4W 47K	1	
R1883		ERDS2TJ181	C.RESISTOR 1/4W 180	1	
	■	VEP28068A	EVF C.B.A.		(RTL)
			CAPACITORS		
C801		ECHU1C104J	F.CAPACITOR CH 16V 0.1U	1	
C802		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C804		ECUM1C155ZFN	C.CAPACITOR CH 16V 1.5U	1	
C805		ECEA0JKE221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1E123KBN	C.CAPACITOR CH 25V 0.012U	1	
C807		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C808		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C809		ECA1EKF100	E.CAPACITOR 25V 10U	1	
C810		ECUM2A472JUM	C.CAPACITOR CH 4700P	1	
C811		ECEA1CKE101	E.CAPACITOR 16V 100U	1	
C812		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C813		VCK0088K151E	CAPACITOR	1	
C814		ECEA1HKS010	E.CAPACITOR 50V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C815		ECUM2H331KBM	C.CAPACITOR 500V 330P	1	
C816		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C820		ECUM2A102JUN	C.CAPACITOR CH 100V 1000P	1	
C831		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D801		MA141K	DIODE	1	
D802		SFPL-52	DIODE	1	
IC801		AN2515S.K	IC	1	
L801		VLQ0319K390	COIL 39UH	1	
L802		ELH5L218D	COIL	1	
P801		VJP1598T	CONNECTOR (MALE) 5P	1	
P802		VJP3007E004	CONNECTOR (MALE) 4P	1	
P803		VJP1229T	CONNECTOR (MALE) 2P	1	
P804		VJP3007E003	CONNECTOR (MALE) 3P	1	
Q802		2SD968A-S	TRANSISTOR	1	
Q803		2SA1532	TRANSISTOR	1	
			RESISTORS		
R801		ERJ6ENF4422	M.RESISTOR 44.2	1	
R802		ERJ6GEYJ3R9	M.RESISTOR CH 1/10W 3.9	1	
R805		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R807		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R808		ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R809		ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R810		ERJ6GMYF104	M.RESISTOR 1/10W 10K	1	
R814		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R815		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R816		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R817		ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R818		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R819,20		ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	2	
R821		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R823		ERJ3GEYJ120	M.RESISTOR CH 1/16W 12	1	
R825		VSF0015A025	FUSE	1	<!>
R830		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R832		ERJ6ENF4222	M.RESISTOR CH 42.2K	1	
T801		ETF08L16B	TRANSFORMER	1	<!>
S801		VEE8085	CRT SOCKET U.	1	
VR801		EVM7JSX30BE2	V.RESISTOR 220	1	
VR803		EVMLPNA00BV6	V.RESISTOR 5.6M	1	
VR804		EVMLPNA00BE6	V.RESISTOR 2.2M	1	
	■	VXU1138	ZOOM C.B.A.		(RTL)
					INCLUDING THE S/S
					C.B.A.(VEK5869)
					SUB S/S C.B.A.
					(VEK5870)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P305		VJS3172B005	CONNECTOR (FEMALE) 5P	1	
SW1890		EVQQSU04W	SWITCH	1	(FOR VEK5869)S/S
SW1891		EVQQSU04W	SWITCH	1	(FOR VEK5870)SUB S/S
	■	VEP03A86A	MAIN C.B.A		(RTL)
B3001		VJS2961C030	CONNECTOR (FEMALE) 30P	1	
B5001		VJS2961C006	CONNECTOR (FEMALE) 6P	1	
B6001		VJP3358C016	CONNECTOR (MALE) 16P	1	
			CAPACITORS		
C1001		ECUM1E225ZFM	C.CAPACITOR CH 25V 2.2U	1	
C1002		ECEV1EA680	E.CAPACITOR CH 25V 68U	1	
C1003		ECGC0KB8R2	C.CAPACITOR 8V 8.2	1	
C1004		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1005		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1006		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C1007		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1008		ECGC0KB8R2	C.CAPACITOR 8V 8.2	1	
C1009		ECUM1H681JCV	C.CAPACITOR CH 50V 680P	1	
C1010		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1011		ECUM1C225ZFM	C.CAPACITOR CH 16V 2.2U	1	
C1012		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C1013		ECGC1BA4R7	C.CAPACITOR 8V 4.7	1	
C1014		ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C1016		ECUM1C335ZFM	C.CAPACITOR CH 16V 3.3U	1	
C1017		ECUM1E105ZFM	C.CAPACITOR CH 25V 1U	1	
C1019		ECUM1E474ZFM	C.CAPACITOR CH 25V 0.47U	1	
C1020		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C1022		ECUM1H104ZFM	C.CAPACITOR CH 50V 0.1U	1	
C1024		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C1025		ECUM1E104KBN	C.CAPACITOR CH 25V 0.01U	1	
C1026		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C1027		ECUX1H121JCV	C.CAPACITOR CH 50V 12P	1	
C1028		ECUM1C474KBM	C.CAPACITOR CH 16V 0.47U	1	
C1029		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1030		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1031		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1032		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1033,34		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C1035		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C1036		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C1037		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1061		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1062		ECEV1EA470	E.CAPACITOR 25V 47U	1	
C1063		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C1064		ECEV1EA470	E.CAPACITOR 25V 47U	1	
C1065,66		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C1068		ECEV1CA101	E.CAPACITOR 16V 10U	1	
C1069,70		ECUM1C475ZFM	C.CAPACITOR CH 16V 4.7U	2	
C1071		ECUM1E225ZFM	C.CAPACITOR CH 25V 2.2U	1	
C1072		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C1073		ECUM1E105ZFM	C.CAPACITOR CH 25V 1U	1	
C1074		ECUM1C475ZFM	C.CAPACITOR CH 16V 4.7U	1	
C1106		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C1107		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1108		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C1109		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C1110		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1111		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2101		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2102		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2103		ECST1AY475Z	T.CAPACITOR 10V 4.7U	1	
C2104		ECUM1E473KBN	C.CAPACITOR CH 25V 0.047U	1	
C2105,06		ECUX1H561KBV	C.CAPACITOR CH 50V 560P	2	
C2107		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C2108		ECUM1E104KBN	C.CAPACITOR CH 25V 0.01U	1	
C2109		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C2110		ECUX1E223KBV	C.CAPACITOR CH 25V 0.022U	1	
C2111		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2112		ECUM1E104KBN	C.CAPACITOR CH 25V 0.01U	1	
C2113		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C2115		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C2116		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C2117,18		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C2119-21		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C2122		ECUM1H333ZFV	C.CAPACITOR CH 50V 0.033U	1	
C2123-25		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2126		ECEV1HAR47	E.CAPACITOR 50V 0.47U	1	
C2127		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2128		ECUM1H333ZFV	C.CAPACITOR CH 50V 0.033U	1	
C2129		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2130		ECEV05A470	E.CAPACITOR 4V 47U	1	
C2131		ECUX1H121JCV	C.CAPACITOR CH 50V 12P	1	
C2132		ECUM1H102JCN	C.CAPACITOR CH 50V 1000P	1	
C2133		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2134		ECEV1AA330	E.CAPACITOR 10V 330U	1	
C2135		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C2136		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C2141		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2142		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2143		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C2144-46		ECUM1E104KBN	C.CAPACITOR CH 25V 0.01U	3	
C2147,48		ECUM1C105KBM	C.CAPACITOR CH 16V 1U	2	
C2149		ECUM1C185ZFN	C.CAPACITOR CH 16V 1.8U	1	
C2150		ECUM1C105KBM	C.CAPACITOR CH 16V 1U	1	
C2151		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C3002		ECEV0GA470	E.CAPACITOR 4V 47U	1	
C3003,04		ECEV0GA471	E.CAPACITOR 4V 470U	2	
C3005		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3006		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3007		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3008		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3009		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3010		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C3011,12		ECST0JY475Z	T.CAPACITOR 6.3V 4.7U	2	
C3013		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3014		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3015		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3016		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C3017		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3018		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3019		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C3021,22		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	2	
C3023		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3024		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3025,26		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C3027		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3028		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3029		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3030		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3031		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3033,34		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C3036		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C3037		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3042		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3043		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3045		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3047		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3055		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3059		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C3060		ECEV1CAN4R7	E.CAPACITOR CH 16V 4.7U	1	
C3061		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C3062		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3065		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3067		ECEV1CA100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3069		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C3071		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3072		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3075		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3076		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C3080		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C3081		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3087		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3091		ECST1AD336Z	T.CAPACITOR 10V 33U	1	
C3092		ECST1CD226Z	T.CAPACITOR 16V 22U	1	
C3093		ECST0JC336Z	T.CAPACITOR 6.3V 33U	1	
C3094		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3095		ECUM1H123KBV	C.CAPACITOR CH 50V 0.012U	1	
C3098		ECST0JC336Z	T.CAPACITOR 6.3V 33U	1	
C3201		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C3203		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C3208		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3212		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C3801		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3802		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3803		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3804		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3805		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3806,07		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C3808,09		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C3810		ECST0JC336Z	T.CAPACITOR 6.3V 33U	1	
C3811-13		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C3814		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3815		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3816		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3817		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C3818		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4001		ECEV1HA2R2	E.CAPACITOR 50V 2.2	1	
C4002		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4003		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C4004		ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4005		ECUM1H153KBV	C.CAPACITOR CH 50V 0.015U	1	
C4006		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4007		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4008		ECST1CY225Z	T.CAPACITOR 16V 2.2U	1	
C4009		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C4010		ECEV05A470	E.CAPACITOR 4V 47U	1	
C4011		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4012		ECEV1HA2R2	E.CAPACITOR 50V 2.2	1	
C4013		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C4014		ECEV0JAN220	E.CAPACITOR 6.3V 22U	1	
C4015		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4016		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4017		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4018		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4019		ECUM2A682JCM	C.CAPACITOR CH 0.68U	1	
C4020		ECUM1H123KBV	C.CAPACITOR CH 50V 0.012U	1	
C4021		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4022		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4023		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C4024		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4029,30		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C4031		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4032		ECUX1H562KBV	C.CAPACITOR CH 50V 5600P	1	
C4034		ECEV0GA101	E.CAPACITOR 4V 100U	1	
C4035,36		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C4047,48		ECST0JX226Z	T.CAPACITOR 6.3V 22U	2	
C4049,50		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C4051,52		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	2	
C4053		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4054		ECST0JX156Z	T.CAPACITOR 6V 15U	1	
C4055		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4056		ECEV05A470	E.CAPACITOR 4V 47U	1	
C4057		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4059,60		ECST1CY335Z	T.CAPACITOR 16V 3.3U	2	
C4501,02		ECEV0GAN470	E.CAPACITOR 4V 47U	2	
C4503,04		ECEV1AAN100	E.CAPACITOR 10V 10U	2	
C4505,06		ECEV0JA220	E.CAPACITOR 6.3V 22U	2	
C4507		ECST1AY475Z	T.CAPACITOR 10V 4.7U	1	
C4508		ECEV05A470	E.CAPACITOR 4V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4509		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C4510		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4511,12		ECEV0SA470	E.CAPACITOR 4V 47U	2	
C4513		ECST1AD476Z	T.CAPACITOR 10V 47U	1	
C4514		ECEV0SA470	E.CAPACITOR 4V 47U	1	
C4515		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C4517		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C4518		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C4519		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C4520		ECUX1H391JCV	C.CAPACITOR CH 50V 390P	1	
C4521		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C4522		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C4523		ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C4524		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C4525		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4526		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C4529		ECST1AD476Z	T.CAPACITOR 10V 47U	1	
C4530		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5001		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5002,03		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5004-11		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	8	
C5012-15		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	4	
C5016-23		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	8	
C5024		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5025-27		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C5028		ECUM1E273KBN	C.CAPACITOR CH 25V 0.027U	1	
C5029		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C5030,31		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5032		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5033		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5034		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5035		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5036-39		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C5040-43		ECUX1H121JCV	C.CAPACITOR CH 50V 12P	4	
C5044-47		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C5048-51		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	4	
C5052		ECUX1H121JCV	C.CAPACITOR CH 50V 12P	1	
C5053		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C5054		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C5055,56		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C5058		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5059		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5062-65		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C5066		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5067		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5072		ECUX1E123KBV	C.CAPACITOR CH 25V 0.012U	1	
C5073		ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C5080		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C5081		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6001		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6002		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6003-05		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C6006-08		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C6009		ECEV1VA220	E.CAPACITOR CH 35V 22U	1	
C6010,11		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C6012		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6013		ECEV0SA470	E.CAPACITOR 4V 47U	1	
C6014		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6015		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C6016		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6018		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6019		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6020,21		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6022,23		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	2	
C6024		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6025		ECEV0SA470	E.CAPACITOR 4V 47U	1	
C6026		ECEV0SA330	E.CAPACITOR 4V 33U	1	
C6027		ECEV1VA220	E.CAPACITOR CH 35V 22U	1	
C6028		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6029,30		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C6031		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6032		ECEV0SA470	E.CAPACITOR 4V 47U	1	
C6033		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6034		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C6035		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6036,37		ECEV0SA470	E.CAPACITOR 4V 47U	2	
C6038		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C6041		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C6042,43		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C6201		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C6202		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C6203		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C6206		ECEV0JA220	E.CAPACITOR 6.3V 22U	1	
C6207		ECEV1HA3R3	E.CAPACITOR 50V 3.3U	1	
C6208,09		ECUM1C105KBM	C.CAPACITOR CH 16V 1U	2	
C6210		ECUX1H561JCV	C.CAPACITOR CH 50V 560P	1	
C6211		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C6212		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C6213		ECUX1H223ZFV	C.CAPACITOR CH 50V 0.022U	1	
C6214		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6215		ECUX1H103KBV	C.CAPACITOR CH 50V 0.01U	1	
C6217		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C6218		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6219		ECUM1H273KBM	C.CAPACITOR CH 50V 0.027U	1	
C8001		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8002		ECUX1H060CCV	C.CAPACITOR CH 50V 6P	1	
C8003		ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C8004		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C8005		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8015		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8016		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8017		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C8040		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C8048		ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C8049		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C8062,63		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	2	
C8066		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C8071		ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C8072		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8074		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C8076		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C8081		ECUX1H471JCV	C.CAPACITOR CH 50V 470P	1	
C8082		ECUX1H331JCV	C.CAPACITOR CH 50V 330P	1	
C8101		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8102		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C8103		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C8105		ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C8107		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
D1002		MA736	IC	1	
D1004		MA736	IC	1	
D1005		SB05-05CP	IC	1	
D1006,07		MA142K	DIODE	2	
D1008		MA728	DIODE	1	
D1010,11		MA3200-M	DIODE	2	
D1012		MA143	DIODE	1	
D1061,62		SB05-05CP	IC	2	
D1063,64		MA728	DIODE	2	
D1065		MA3130-M	DIODE	1	
D1107		MA141WA	DIODE	1	
D1108		MA143	DIODE	1	
D2101		MA143	DIODE	1	
D2102		MA3100	DIODE	1	
D3004		MA143	DIODE	1	
D3005		MA729	DIODE	1	
D3006		MA141K	DIODE	1	
D3201,02		MA729	DIODE	2	
D3809		MA142K	DIODE	1	
D4001		MA142K	DIODE	1	
D4004		MA142WK	DIODE	1	
D4005		MA142K	DIODE	1	
D4006-08		MA157	DIODE	3	
D4009		MA143	DIODE	1	
D4501		MA142WK	DIODE	1	
D4502		MA143	DIODE	1	
D4503		MA141K	DIODE	1	
D5001		MA159	DIODE	1	
D5002		MA132WA	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D5003		MA159	DIODE	1	
D5004		MA132WA	DIODE	1	
D5005		MA133	DIODE	1	
D5006-09		MA728	DIODE	4	
D6001		MA143	DIODE	1	
D6002		MA132WK	DIODE	1	
D6004-07		MA141WA	DIODE	4	
D6008		MA121	DIODE	1	
D6009,10		MA745	DIODE	2	
D6012		MA132WK	DIODE	1	
D6013		MA132WA	DIODE	1	
D6014,15		MA141WA	DIODE	2	
D6016,17		MA141K	DIODE	2	
D6018		MA3062	DIODE	1	
D6019		MA3220	DIODE	1	
D6020		MA141K	DIODE	1	
D6022,23		MA141K	DIODE	2	
D6024		BR1102W	DIODE	1	
D6025,26		MA745	DIODE	2	
D6201		MA141K	DIODE	1	
D8001		MA132WK	DIODE	1	
FL4501		VLF0934	FILTER	1	
FL4502		VLF0935	FILTER	1	
FP2101		VJS2958D010	CONNECTOR (FEMALE) 10P	1	
FP2102		VJS2848B014	CONNECTOR (FEMALE) 14P	1	
FP3001		VJS3406D016	CONNECTOR (FEMALE) 16P	1	
FP4001		VJS2959B007	CONNECTOR (FEMALE) 7P	1	
FP5001		VJS2958D023	CONNECTOR (FEMALE) 23P	1	
FP6001		VJS2960A012	CONNECTOR (FEMALE) 12P	1	
IC1001		BA9703K	IC	1	
IC1102		LM393DB	IC	1	
IC2101		AN3893NFHP	IC	1	
IC2102		UN224	TRANSISTOR-RESISTOR	1	
IC2103		AN3841SR	IC	1	
IC2104		NJM2904M	IC	1	
IC3001		VEFH25D	IC	1	
IC3002		TL8809F	IC	1	
IC3003		AN3298NSB	IC	1	
IC3004		NJM2235MA	IC	1	
IC3801		CF77544AFR	IC	1	
IC3802		S8420BF	IC	1	
IC3803		MN12821R	IC	1	(R)
IC3805		TC7W04F	IC	1	
IC4001		BA7757BK	IC	1	
IC4002		BA3308F	IC	1	
IC4501		VEFH27B	IC	1	
IC5001		AN3350FHP	IC	1	
IC6001		BA6219BFPY	IC	1	
IC6002		UPD6456GT623	IC	1	
IC6003		S3500B3	IC	1	
IC6004		MN6755243M1C	IC	1	
IC6005,06		UPD4071BG	IC	2	
IC6007		TC4S66F	IC	1	
IC6008		UPD4071BG	IC	1	
IC6009		MN12821R	IC	1	(R)
IC6010		S81350HGKD	IC	1	
IC6011		TC7S08F	IC	1	
IC8001		VEFH26B	IC	1	
IC8002		TL8833F	IC	1	
L1001		ELC6UB4R7M	COIL 4.7UH	1	
L1002		ELL04T034R	COIL 18UH	1	
L1003		ELC6UB4R7M	COIL 4.7UH	1	
L1004		VLQ0319K100	COIL 10UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L1007		ELL04T030R	COIL 100UH	1	
L1008		ELC6UB4R7M	COIL 4.7UH	1	
L1009		VLQ0319K100	COIL 10UH	1	
L1010,11		VLQ0319K101	COIL 100UH	2	
L1061,62		ELL04T031R	COIL 120UH	2	
L1063,64		VLQ0319K330	COIL 39UH	2	
L1065		VLQ0319K100	COIL 10UH	1	
L1102-04		VLQ0319K100	COIL 10UH	3	
L3001		VLQ0319K181	COIL 180UH	1	
L3002		VLQ0319F150	COIL 15UH	1	
L3003		VLQ0163J820	COIL 82UH	1	
L3004		VLQ0426J150	COIL 15UH	1	
L3005		VLQ0163J121	COIL 120UH	1	
L3006		VLQ0426J3R9	COIL 3.9UH	1	
L3007		VLQ0426J150	COIL 15UH	1	
L3009		VLQ0319F150	COIL 15UH	1	
L3010		VLQ0426J470	COIL 47UH	1	
L3011		VLQ0426J120	COIL 12UH	1	
L3012		VLQ0426J100	COIL 10UH	1	
L3015		VLQ0426J680	COIL 68UH	1	
L3017		VLQ0426J560	COIL 56UH	1	
L3018		VLQ0319K820	COIL 82UH	1	
L3019		VLQ0319K101	COIL 100UH	1	
L3021		VLQ0426J390	COIL 39UH	1	
L3024		VLQ0319K101	COIL 100UH	1	
L3025		VLQ0464	COIL 6.8UH	1	
L3030		VLQ0426J330	COIL 33UH	1	
L3801		VLQ0163K150	COIL 15UH	1	
L4001		VLQ0423J153	COIL 15MH	1	
L4002		VLQ0319K470	COIL 47UH	1	
L4501		VLQ0319K271	COIL 270UH	1	
L4502,03		VLQ0319K101	COIL 100UH	2	
L4504		VLQ0426J560	COIL 56UH	1	
L5001-03		VLQ0319F150	COIL 15UH	3	
L5004		VLQ0319K101	COIL 100UH	1	
L5005		VLQ0163J120	COIL 12UH	1	
L5006-08		VLQ0319F150	COIL 15UH	3	
L6001		VLQ0426J101	COIL 100UH	1	
L6002		VLQ0426J330	COIL 33UH	1	
L6003		VLQ0319K100	COIL 10UH	1	
L6004		VLQ0463	COIL	1	
L6005		VLQ0319K330	COIL 39UH	1	
L8001		VLQ0426J270	COIL 27UH	1	
L8002,03		VLQ0426J100	COIL 10UH	2	
L8004		VLQ0319F150	COIL 15UH	1	
L8006		VLQ0426J330	COIL 33UH	1	
L8007		VLQ0319F150	COIL 15UH	1	
L8012		VLQ0319K470	COIL 47UH	1	
L8013		VLQ0426J101	COIL 100UH	1	
L8014		VLQ0163K151	COIL 150UH	1	
L8015		VLQ0426J150	COIL 10UH	1	
P1001		VJP3327D002	CONNECTOR (MALE) 2P	1	
P3001		VJP3172B005	CONNECTOR (MALE) 5P	1	
P3002		VJP3172B009	CONNECTOR (MALE) 9P	1	
P4001		VJP3172B005	CONNECTOR (MALE) 5P	1	
P4001		VJS3172B005	CONNECTOR (FEMALE) 5P	1	
P4002		VJP3172B002	CONNECTOR (MALE) 2P	1	
P4301		VJS3172B005	CONNECTOR (FEMALE) 5P	1	
P4501		VJP3172B002	CONNECTOR (MALE) 2P	1	
P6001		VJP3172B004	CONNECTOR (MALE) 4P	1	
P6004,05		VJP3172B002	CONNECTOR (MALE) 2P	2	
P6006		VJP3172B003	CONNECTOR (MALE) 3P	1	
P6007,08		VJP3172D006	CONNECTOR (MALE) 6P	2	
P6009		VJP3172D008	CONNECTOR (MALE) 8P	1	
Q1001		2SB1202-S	TRANSISTOR	1	(S,T)
Q1002		2SB1073	TRANSISTOR	1	
Q1003		2SB1202-S	TRANSISTOR	1	(S,T)
Q1004		2SD1624-S	TRANSISTOR	1	(S,T)
Q1005		2SB1073	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q1006		2SB970X	TRANSISTOR	1	
Q1061,62		2SB956-Q	TRANSISTOR	2	
Q1063		2SD1483	TRANSISTOR	1	
Q2101		2SD1819	TRANSISTOR	1	
Q3001		2SB970X	TRANSISTOR	1	
Q3003		2SC4627	TRANSISTOR	1	
Q3004		2SD2216	TRANSISTOR	1	
Q3006		2SD2216	TRANSISTOR	1	
Q3008,09		2SC4627	TRANSISTOR	2	
Q3010		2SC3931	TRANSISTOR	1	
Q3011		2SB1462	TRANSISTOR	1	
Q3012		2SD2216	TRANSISTOR	1	
Q3014		2SB1462	TRANSISTOR	1	
Q3016		2SD1819	TRANSISTOR	1	
Q3017		2SB1218	TRANSISTOR	1	
Q3018		2SB1462	TRANSISTOR	1	
Q3019,20		2SB1218	TRANSISTOR	2	
Q3021		2SC3938	TRANSISTOR	1	
Q3022		2SB970X	TRANSISTOR	1	
Q3025		2SD1819	TRANSISTOR	1	
Q3026,27		2SD2216	TRANSISTOR	2	
Q3028		2SB1219	TRANSISTOR	1	
Q3801		2SD2216	TRANSISTOR	1	
Q3802		2SB1218	TRANSISTOR	1	
Q3803		2SB1462	TRANSISTOR	1	
Q3804		2SB970X	TRANSISTOR	1	
Q3808		2SB970X	TRANSISTOR	1	
Q3809,10		XP1554	TRANSISTOR	2	
Q4001		2SB1220	TRANSISTOR	1	
Q4002,03		2SD1819A	TRANSISTOR	2	
Q4004		2SD602-R	TRANSISTOR	1	(R)
Q4005		2SB970X	TRANSISTOR	1	
Q4006		2SD2216	TRANSISTOR	1	
Q4012		2SD1819	TRANSISTOR	1	
Q4013,14		2SD1328	TRANSISTOR CHIP	2	
Q4015		2SD1819	TRANSISTOR	1	
Q4017		2SD1819	TRANSISTOR	1	
Q4018		2SB1218	TRANSISTOR	1	
Q4501		2SD1328	TRANSISTOR CHIP	1	
Q5001,02		XN4504	TRANSISTOR-TRANSISTOR	2	
Q5003		2SB970X	TRANSISTOR	1	
Q5004,05		2SA812	TRANSISTOR	2	
Q5006,07		XN4504	TRANSISTOR-TRANSISTOR	2	
Q5008,09		2SD1328	TRANSISTOR CHIP	2	
Q5010		2SB970X	TRANSISTOR	1	
Q6002		2SD1820-R	TRANSISTOR	1	
Q6003		XN1213	TRANSISTOR-TRANSISTOR	1	
Q6004		2SB970X	TRANSISTOR	1	
Q6005		2SD1819	TRANSISTOR	1	
Q6006		2SD2216	TRANSISTOR	1	
Q6007		2SB1218	TRANSISTOR	1	
Q6008		2SD1819	TRANSISTOR	1	
Q6009		2SD1823	TRANSISTOR	1	
Q6010		2SD1328	TRANSISTOR CHIP	1	
Q6012		2SD1819	TRANSISTOR	1	
Q8001,02		2SD1819	TRANSISTOR	2	
Q8009		2SB1462	TRANSISTOR	1	
Q8013		2SB1218	TRANSISTOR	1	
Q8014		2SD1819	TRANSISTOR	1	
QR1002		UN5214	TRANSISTOR-RESISTOR	1	
QR1006		XN1501	TRANSISTOR-TRANSISTOR	1	
QR1061		UN5115	TRANSISTOR-RESISTOR	1	
QR3001		UN9212	TRANSISTOR-RESISTOR	1	
QR3002		UN5213	TRANSISTOR	1	
QR3004		UN9211	TRANSISTOR-RESISTOR	1	
QR3009		UN9212	TRANSISTOR-RESISTOR	1	
QR3011		UN9212	TRANSISTOR-RESISTOR	1	
QR3013		UN9212	TRANSISTOR-RESISTOR	1	
QR3014		UN5212	TRANSISTOR-RESISTOR	1	
QR3016		UN9212	TRANSISTOR-RESISTOR	1	
QR3018,19		UN5212	TRANSISTOR-RESISTOR	2	
QR3023		XN1501	TRANSISTOR-TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR3024,25		UN5212	TRANSISTOR-RESISTOR	2	
QR3206		UN5212	TRANSISTOR-RESISTOR	1	
QR3801		UN5213	TRANSISTOR	1	
QR3807		UN5213	TRANSISTOR	1	
QR4001		XN4312	TRANSISTOR-TRANSISTOR	1	
QR4002		UN5213	TRANSISTOR	1	
QR4003		UN5210	TRANSISTOR	1	
QR4004		UN9213	TRANSISTOR-RESISTOR	1	
QR4005		UN511F	TRANSISTOR	1	
QR4006		UN5213	TRANSISTOR	1	
QR4008		UN5217	TRANSISTOR-RESISTOR	1	
QR4009		UN5113	TRANSISTOR-RESISTOR	1	
QR4010		UN9213	TRANSISTOR-RESISTOR	1	
QR4011		UN5213	TRANSISTOR	1	
QR4502		UN5110	TRANSISTOR-RESISTOR	1	
QR4505		UN5215	TRANSISTOR-RESISTOR	1	
QR5001		UN9213	TRANSISTOR-RESISTOR	1	
QR5002,03		UN5212	TRANSISTOR-RESISTOR	2	
QR5004		XP1213	TRANSISTOR-RESISTOR	1	
QR5005		UN9213	TRANSISTOR-RESISTOR	1	
QR6001		UN9213	TRANSISTOR-RESISTOR	1	
QR6002		UN2130X	IC	1	
QR6003		UN9212	TRANSISTOR-RESISTOR	1	
QR6004		XN4130X	TRANSISTOR-RESISTOR	1	
QR6005		UN5112	TRANSISTOR-RESISTOR	1	
QR6007		UN9213	TRANSISTOR-RESISTOR	1	
QR6008		UN5213	TRANSISTOR	1	
QR6010		UN5112	TRANSISTOR-RESISTOR	1	
QR6011,12		UN9112	TRANSISTOR-RESISTOR	2	
QR6013		UN521E	TRANSISTOR-RESISTOR	1	
QR6015		UN5211	TRANSISTOR-RESISTOR	1	
QR6017		UN5213	TRANSISTOR	1	
QR6018		UN5211	TRANSISTOR-RESISTOR	1	
QR8101		UN9212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R1001		ERJ6GEYG682	M.REISITOR CH 1/10W 6.8K	1	
R1002		ERJ6GEYG202	M.RESISTOR CH 1/10W 2K	1	
R1003		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1004		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R1005		ERJ6GEYG562	M.RESISTOR CH 1/10W 5.6K	1	
R1006		ERJ6GEYG272	M.RESISTOR CH 1/10W 2.7K	1	
R1007		ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	1	
R1008		ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R1009		ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R1012		ERJ3GEYG163	M.RESISTOR CH 1/16W 16K	1	
R1013		ERJ3GEYG393	M.RESISTOR CH 1/16W 39K	1	
R1014,15		ERJ6GEYG182	M.RESISTOR CH 1/10W 1.8K	2	
R1016		VRE0034E153	M.RESISTOR CH 1/10W 15K	1	
R1017		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1018		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1019		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1020		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1021		ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R1022		ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R1023		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R1024		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1025,26		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R1027		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R1029		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1030		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R1031		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R1032,33		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R1034		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1035		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1036		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1037		ERJ3GEYG470	M.RESISTOR CH 1/16W 47	1	
R1061		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R1062		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R1063		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1064,65		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R1066		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1067		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R1068		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R1105-07		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	3	
R1108		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2101		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R2102-04		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	3	
R2105		ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2106		ERJ8GEYJR47	M.RESISTOR 1/8W 0.47	1	
R2107		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R2108		ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R2109		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R2110		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R2111		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2112		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R2113		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R2114		ERJ8GEYJ1R0	M.RESISTOR CH 1/8W 1	1	
R2115		ERJ8GEYJR47	M.RESISTOR 1/8W 0.47	1	
R2116,17		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R2118		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R2119		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2121		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R2122		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R2123		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R2124		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R2125		ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R2126		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2130		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3001		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3002		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3003,04		ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	2	
R3005		ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R3006		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3007		ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R3008		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R3010		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3011		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	1	
R3012		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3013		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3014,15		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R3016		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3017		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3018		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3019		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R3021		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3022		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3023		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3024		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3025		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3026		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3028		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3030		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3031		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R3032		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3033		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3037		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3041		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3042		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3043		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3045		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3046		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3047		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3049		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3051		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3052		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3054		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3055		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3056		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3059		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3060-62		ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	3	
R3063		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R3064		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3068,69		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3070		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3071		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3072		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R3073		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3074,75		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R3076		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R3077		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3078		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3079		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3080		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3081		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3082		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R3087		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3089		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	1	
R3090		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3091		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R3098		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3102		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3103		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3104		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3107		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3109		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R3112		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3113		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3115		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3117,18		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3119		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3121		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3122		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3123		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3124		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3127		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3128		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R3129		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R3135		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R3136		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3137		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3142		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3144,45		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3148		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R3149		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R3150		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3152		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3153		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3154		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	1	
R3155		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3156		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3157		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R3160		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3162,63		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3166		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3167		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3168		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3169		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3170		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3171		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3201		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3202		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R3203		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R3221,22		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3226		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3227		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3228,29		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R3232		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3801,02		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R3803		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R3804		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3806		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R3807		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R3809		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3810,11		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R3812		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3813		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R3814		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3815		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R3816		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R3818,19		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R3820,21		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R3822-25		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3838,39		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R3840		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R3841		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3843		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R3844		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	1	
R3845		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R3846-49		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	4	
R4001		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4002		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R4003		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R4004		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R4005		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4006		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R4007		ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R4008		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4009		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4010		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4011		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4012		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R4013		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4014		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4015		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R4016,17		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R4018		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R4019		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4020		ERJ3GEYJ390	M.RESISTOR CH 1/16W 39	1	
R4021		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R4022		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4023		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R4024		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4025		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4026		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R4030,31		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R4032		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4033		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4034		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4037		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4041		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4043		ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R4059,60		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R4061,62		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R4063,64		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R4065		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4067		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4068		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4069		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R4070		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4071,72		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	2	
R4073		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R4074		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4075,76		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R4077		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R4078		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4079,80		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	2	
R4081,82		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R4085		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4089,90		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	2	
R4096		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4501,02		ERJ6GEYJ330	M.RESISTOR CH 1/10W 33	2	
R4503,04		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	2	
R4505		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R4506		ERJ6GEYJ270	M.RESISTOR CH 1/10W 27	1	
R4507		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4509		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R4510		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R4511		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4512		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R4513-16		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	4	
R4518		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R4520		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R4521		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4525		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4528		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R4529		ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R4531		ERJ6GEYJ270	M.RESISTOR CH 1/10W 27	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4532		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4535		ERJ8GEYJ330	M.RESISTOR CH 1/8W 33	1	
R5001		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R5002		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R5003		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	1	
R5004-07		ERJ3GEYJ471	M.RESISTOR 1/16W 470	4	
R5008-11		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	4	
R5012		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R5013		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5014		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R5015		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R5016-19		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	4	
R5020-23		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	4	
R5024		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R5025		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5026		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R5027		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	1	
R5028		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R5029,30		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	2	
R5031		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R5032		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	1	
R5033,34		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R5035		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5036		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R5037		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R5038		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R5039		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R5040-42		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R5043-45		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	3	
R5046-48		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R5049		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R5050		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R5051		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R5052		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R5053		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R5054		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5055		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R5066-71		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	6	
R5074		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6001,02		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6003,04		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R6005		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R6006,07		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	2	
R6008		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6009		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6014		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6015		VRE0067G473	M.RESISTOR 47K	1	
R6016		VRE0067G153	M.RESISTOR 15K	1	
R6017,18		ERJ8GEYJ101	M.RESISTOR CH 1/8W 100	2	
R6019-21		ERJ8GEYJ151	M.RESISTOR CH 1/8W 150	3	
R6022		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6023		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6024		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R6025,26		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6027		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R6028-30		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R6031		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6032-36		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	5	
R6037		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6038-42		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	5	
R6043		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6044		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6045		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6046-49		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	4	
R6050		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6051-53		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	3	
R6054-62		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	9	
R6063		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R6065,66		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	2	
R6067,68		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6069		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6070		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6071		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6072-78		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	7	
R6079		ERJ8GEYJ100	M.RESISTOR CH 1/8W 10	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6080,81		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R6082		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6083,84		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R6085,86		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R6087		ERJ8GEYJ221	M.RESISTOR CH 1/8W 220	1	
R6088,89		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6090		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6091		ERJ8GEYJ271	M.RESISTOR CH 1/8W 270	1	
R6092		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R6093		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6095		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6096		ERJ8GEYJ331	M.RESISTOR CH 1/8W 330	1	
R6097		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R6098		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	1	
R6099		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R6100		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R6101		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R6102		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R6103		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R6104		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R6105		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6106,07		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6108		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6109-12		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	4	
R6113		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6114,15		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6116		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6121		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R6122		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6125,26		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6127		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6128		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6129		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6130		ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R6201		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6202		ERJ3GEYJ114	M.RESISTOR CH 1/16W 110K	1	
R6203		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6204		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R6205-07		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	3	
R6208		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6209		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6210,11		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R6212		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R6215,16		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R6217		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R8003		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R8014,15		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R8016		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R8017		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8030		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R8032		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R8044		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R8045		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R8054		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R8057,58		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	2	
R8062		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R8064		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R8065		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8066		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R8067		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R8070		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8071,72		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R8090		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8091		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R8092		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R8093		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8094		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R8095		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R8096		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R8111		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
T1001		ELL04T032R	TRANSFORMER	1	
T4001		E1Q6QB006	TRANSFORMER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR1001		EVM7JSX30B52	V.RESISTOR 500	1	
VR1002		EVM7JSX30B13	V.RESISTOR 1K	1	
VR1003		EVM7JSX30BE2	V.RESISTOR 220	1	
VR3001		EVM7JSX30B13	V.RESISTOR 1K	1	
VR3004		EVM7JSX30B14	V.RESISTOR 10K	1	
VR3005		EVM7JSX30B23	V.RESISTOR 2K	1	
VR3006		EVM7JSX30B14	V.RESISTOR 10K	1	
VR3007		EVM7JSX30B54	V.RESISTOR 50K	1	
VR3008		EVM7JSX30B13	V.RESISTOR 1K	1	
VR3802		EVM7JSX30B13	V.RESISTOR 1K	1	
VR4001		EVM7JSX30B52	V.RESISTOR 500	1	
VR4002		EVM7JSX30B54	V.RESISTOR 50K	1	
VR4501,02		EVM7JSX30B23	V.RESISTOR 2K	2	
VR6201		EVM7JSX30B15	V.RESISTOR 100K	1	
VR8001		EVM7JSX30B23	V.RESISTOR 2K	1	
X3801		VSX0444	CRYSTAL OSCILLATOR	1	
X6002		VSX0461	CRYSTAL OSCILLATOR	1	
X6003		VSX0439	CRYSTAL OSCILLATOR	1	
X8001		VSX0419	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3639	POWER SHIELD COVER (A)	1	
		VSC3640	POWER SHIELD COVER (B)	1	
		VSC3630	H.A. SHIELD COVER (A)	1	
		VSC3631	H.A. SHIELD COVER (B)	1	
		VSC3784	POWER SINK HEAT PLATE	1	
		VEE7790	MIC A CONNECTION CABLE	1	(P4001 - MIC UNIT)
		VKC0412	C.B.A. POST	1	
		VMZ2084	POWER INSULATION SHEET	1	
	■	VEP22117A	CCD DRIVE C.B.A.		(RTL)
B201		VJP3159C032	CONNECTOR (MALE) 32P	1	
B202		VJP2962A012	CONNECTOR (MALE) 12P	1	
			CAPACITORS		
C201		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C202,03		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C205		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C206,07		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C209		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C210		ECST1VX155Z	T.CAPACITOR 35V 1.5U	1	
C211		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C212		ECST1VX225Z	T.CAPACITOR 35V 2.2U	1	
C213,14		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C215		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C216,17		ECUX1H270JCV	C.CAPACITOR CH 50V 27P	2	
C218		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C220		ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C221		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C222		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C223		ECRJA020E11	V.CAPACITOR 20P	1	
C224		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C226		ECUM1C185ZFN	C.CAPACITOR CH 16V 1.8U	1	
C227,28		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C229		ECEV0GA330	E.CAPACITOR 4V 33U	1	
C230		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C231,32		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C233		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C234		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C235		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C236		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C237		ECST0GY106Z	T.CAPACITOR 4V 10U	1	
C238-40		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C241		ECUX1H180JCV	C.CAPACITOR CH 50V 18P	1	
C242		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C243		ECUX1H473ZFV	C.CAPACITOR CH 50V 0.047U	1	
C244		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C245		ECST1CX685Z	T.CAPACITOR 16V 68U	1	
C246		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C247		ECUX1H060CCV	C.CAPACITOR CH 50V 6P	1	
C248		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C249		ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C251		ECST1VX155Z	T.CAPACITOR 35V 1.5U	1	
C252		ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C254		ECUX1H100CCV	C.CAPACITOR CH 50V 10P	1	
C258,59		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C260,61		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	2	
C262		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	1	
C263		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C264		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C266		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C267-69		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C270		ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C271		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
D201		MA110	DIODE	1	
D203,04		MA110	DIODE	2	
D205		MA728	DIODE	1	
D206,07		MA110	DIODE	2	
D209		MA110	DIODE	1	
FL201		ELB3H010	FILTER	1	
IC201		MN5188	IC	1	
IC202		MN3110SA	IC	1	
IC203		AN2013SB	IC	1	
IC204		AN2032FAP	IC	1	
IC205		LM358DB	IC	1	
L201-07		ELJFC150KB	COIL 15UH	7	
L208		VLQ0426J330	COIL 33UH	1	
L209		VLQ0556	FILTER	1	
L210		ELJFC150KB	COIL 15UH	1	
L211,12		VLQ0556	FILTER	2	
L214,15		VLQ0555	FILTER	2	
L221		VLQ0401K4R7	COIL 4.7UH	1	
L222		ELJFC3R3KB	COIL 3.3UH	1	
L224		VLQ0555	FILTER	1	
Q201		XP4654	TRANSISTOR-TRANSISTOR	1	
Q202,03		2SD1819	TRANSISTOR	2	
Q205		XP4654	TRANSISTOR-TRANSISTOR	1	
Q206		XN4601	TRANSISTOR-TRANSISTOR	1	
Q207		XP4654	TRANSISTOR-TRANSISTOR	1	
Q211		2SB1218	TRANSISTOR	1	
Q214		2SD1819	TRANSISTOR	1	
Q215		XN4601	TRANSISTOR-TRANSISTOR	1	
Q219		2SB1218	TRANSISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R201		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R202		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R203		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R204		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R206		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R209		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R210		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R211		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R212		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R214		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R215		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	1	
R216		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R218		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R219		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R220		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R221		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R223		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R224		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R225		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R226		ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R227		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R228		ERJ3GEYJ274	M.RESISTOR CH 1/16W 270K	1	
R229		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R230		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R232		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R236		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R237		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R239		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R241		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R242		ERJ3GEYJ822	M.RESISTOR 1/16W 8.2K	1	
R243		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R244		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R245		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R249		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R253		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R254		ERJ3GEYJ824	M.RESISTOR CH 1/16W 820K	1	
R255,56		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R257		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R258		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R259		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R265		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	1	
R266		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R267		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R268		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R269		ERJ3GEYJ682	M.RESISTOR 1/16W 6.8K	1	
R270		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R271		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R272		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R273		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R274-76		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	3	
R277		VRE0071E123	M.RESISTOR	1	
R278		VRE0071E823	RESISTOR	1	
R279		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R280		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R281,82		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R283-89		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	7	
R290		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R291		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R292		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R293		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
X201		VSX0530	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3635	SHIELD COVER (A)	1	
		VSC3636	SHIELD COVER (B)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP23146A	PROCESS C.B.A.		(RTL)
B301		VJS3024C032	CONNECTOR (FEMALE) 32P	1	
B302		VJP2962A030	CONNECTOR (MALE) 30P	1	
B303		VJP2962A024	CONNECTOR (MALE) 24P	1	
			CAPACITORS		
C301-03		ECST0JY106Z	T.CAPACITOR 6.3V 10U	3	
C304		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C305		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C306		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C307,08		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C309		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C311		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C312		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C313		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C314,15		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C317		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C318		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C321		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C322		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C323		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C324		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C325		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C326		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C328,29		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C330,31		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	2	
C332		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C334		ECST0GY106Z	T.CAPACITOR 4V 10U	1	
C335		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C336		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C337-40		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	4	
C341,42		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C343		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C345-52		ECUX1H330JCV	C.CAPACITOR CH 50V 33P	8	
C357		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C358-62		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	5	
C363		ECUX1H680JCV	C.CAPACITOR CH 50V 68P	1	
C380,81		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C701		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C703		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C704		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C705		ECUM1C683ZFV	C.CAPACITOR CH 16V 0.068U	1	
C706-09		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C710		ECUX1H473ZFV	C.CAPACITOR CH 50V 0.047U	1	
C711		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C712		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C713,14		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	2	
C715		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C716		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C717		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C718		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C719		ECST0GY106Z	T.CAPACITOR 4V 10U	1	
C720,21		ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	2	
C722-24		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C726		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C727		ECEV1EA330	E.CAPACITOR CH 25V 33U	1	
C728		ECUX1H332KBV	C.CAPACITOR CH 50V 3300P	1	
C729,30		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C731		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C732		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C733		ECUX1H472KBV	C.CAPACITOR CH 50V 4700P	1	
C734		ECUX1H560JCV	C.CAPACITOR CH 50V 56P	1	
C738		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C746		ECUM1C225ZFM	C.CAPACITOR CH 16V 2.2U	1	
C747		ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C748		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C750		ECST1AX106Z	T.CAPACITOR 10V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D301		MA110	DIODE	1	
D302		MA728	DIODE	1	
D701		MA110	DIODE	1	
FP301		VJS2958D017	CONNECTOR (FEMALE) 17P	1	
FP701		VJS2959B024	CONNECTOR (FEMALE) 24P	1	
IC301		MN4791S	IC	1	
IC302,03		ZA4030	IC	2	
IC304		MN6733	IC	1	
IC305		TC7S04F	IC	1	
IC306		MN6732	IC	1	
IC307		MN655431SH	IC	1	
IC308		MN73512XWAS	IC	1	
IC309		MN1882010V6D	IC	1	
IC310		AK6420F	IC	1	
IC311		MN13821-Y	IC	1	
IC312		MN1882010V6K	IC	1	
IC315		MN657011H	IC	1	
IC316		MN76039VSU	IC	1	
IC317		AN2040SB	IC	1	
IC318		TC7S08F	IC	1	
IC319,20		TC7S32F	IC	2	
IC330		M62352GP	IC	1	
IC701		MN12821Q	IC	1	
IC702		MN6782VMDL	IC	1	
IC703		AN2585FAP	IC	1	
IC704		LM358DB	IC	1	
IC705		LM324DB	IC	1	
IC706		AN6663S	IC	1	
IC707		AN6545SP	IC	1	
IC708		TB6504F	IC	1	
IC709		TC7S08F	IC	1	
L301		ELJPC6R8KB	COIL 6.8UH	1	
L302-04		VLQ0426J101	COIL 100UH	3	
L305		ELJFC150KB	COIL 15UH	1	
L306-11		ELJPC6R8KB	COIL 6.8UH	6	
L312		VLQ0291	FILTER	1	
L313,14		ELJPC6R8KB	COIL 6.8UH	2	
L315		VLQ0291	FILTER	1	
L316,17		ELJPC6R8KB	COIL 6.8UH	2	
L320		VLQ0426J330	COIL 33UH	1	
L322		VLQ0426J5R6	COIL 5.6UH	1	
L324		VLQ0584	FILTER	1	
L325,26		VLP0140	FILTER	2	
L327		VLQ0584	FILTER	1	
L328		VLP0140	FILTER	1	
L702		ELJPA101KB	COIL	1	
L703		ELJFC150KB	COIL 15UH	1	
L704		ELJFA150KB	COIL 15UH	1	
L705		ELJPA150KB	COIL 15UH	1	
P305		VJP3172B005	CONNECTOR (MALE) 5P	1	
P701		VJP3172B003	CONNECTOR (MALE) 3P	1	
P701		VJS3172B003	CONNECTOR (MALE) 3P	1	
P4302		VJS3172B003	CONNECTOR (MALE) 3P	1	
Q305		2SC4176	TRANSISTOR	1	
Q701		2SD1819	TRANSISTOR	1	
Q702		2SD2210	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR301		UN5213	TRANSISTOR	1	
QR701,02		UN5211	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R301		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R302,03		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	2	
R304		ERJ3GEYJ271	M.RESISTOR CH 1/16W 270	1	
R305,06		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R307		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R308,09		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R310		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R311		ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R313		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R314		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R315-17		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R318		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R319		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R320		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R321,22		ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	2	
R323-26		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	4	
R328		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R331-33		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R335		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R337		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R338,39		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R340		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R341		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R342,43		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R344-47		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	4	
R348-50		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R351,52		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R353-55		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R356		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R357-63		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	7	
R364		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R365-71		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	7	
R372-81		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	10	
R382,83		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R384		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R387-89		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	3	
R390,91		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R392		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R393		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R394		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R396,97		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R398		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R399-02		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	4	
R403		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R405-21		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	17	
R424		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R425		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R426-49		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	24	
R450,51		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R452-58		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	7	
R460-62		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R464		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R465,66		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R467		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R468-89		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	22	
R491,92		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R493		ERJ3GEYJ471	M.RESISTOR 1/16W 470	1	
R494,95		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R499		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R500		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R501		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R502		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R503		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R504		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R505		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R701		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R702		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R703		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R704,05		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	2	
R706		ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R707		ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R708		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R710		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R711		ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	1	
R712		ERJ3GEYG303	M.RESISTOR CH 1/16W 30K	1	
R713		ERJ3GEYJ124	M.RESISTOR CH 1/16W 120K	1	
R714		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R715		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R716		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R717,18		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R719		ERJ3GEYJ154	M.RESISTOR CH 1/16W 150K	1	
R720		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R721		ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R722		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R723		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R724		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R725		ERJ3GEYJ472	M.RESISTOR 1/16W 4.7K	1	
R726		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R727		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R728		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R729		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R730		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R731		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R732-34		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
R735		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R736		ERJ3GEYJ823	M.RESISTOR CH 1/16W 82K	1	
R738		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R739		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R740		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R741,42		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R743		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R744		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R745		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R746		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R747,48		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	2	
R749		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R750		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R751		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R752		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R753		ERJ3GEYJ273	M.RESISTOR CH 1/16W 27K	1	
R754		ERJ3GEYJ4R7	M.RESISTOR CH 1/16W 4.7	1	
R755		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R756		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R757		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R758		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R759,60		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R761		ERJ8GEYJ680	M.RESISTOR CH 1/8W 68	1	
R762-64		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	3	
TH701		VRT0032K152	THERMISTOR	1	
VR701		EVM7JSX30B54	V.RESISTOR 50K	1	
X301,02		EFOV8004B0A	OSCILLATOR	2	
X701		EFOV6754B0A	OSCILLATOR	1	
X702		EFOV8004B0A	OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3637	SHIELD COVER (A)	1	
		VSC3638	SHIELD COVER (B)	1	
		VMZ2077	C.B.A. BARRIER	1	
		VEE7791	MIC B CONNECTION CABLE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP06817A	VTR OPERATION (A) C.B.A.		(RTL)
					INCLUDING THE VTR
					OPERATION (B) C.B.A.
					(VEP06847B)
D6501-06		MA165VT	DIODE	6	
D6507		BR3668S	DIODE	1	
D6508		MA165VT	DIODE	1	
D6510-16		MA165VT	DIODE	7	
FP6501		VJS2135	CONNECTOR (FEMALE) 6P	1	
SW6501-07		EVQ21504K	SWITCH	7	
SW6508,09		EVQQSB04B	SWITCH	2	
SW6510		VST0098	SWITCH	1	
SW6511		ESD11V120	SWITCH	1	
SW6512		EVQ21504K	SWITCH	1	
SW6514,15		EVQQSB04B	SWITCH	2	
SW6516		EVQQFR02K	SWITCH	1	
SW6517		ESD100121AQ	SWITCH	1	
			MISCELLANEOUS		
		VWJ06C0040AA	JUMPER CONNECTOR 6P	1	(P6501 - VTR OPE.(B))
		VWJ0610	VTR OPE-MAIN FLEX 12P	1	(FP6501 -- FP6001)
	■	VEP20437A	CAMERA OPERARION (A) C.B.A.		(RTL)
					INCLUDING THE CAMERA
					OPERATION (B) C.B.A.
					(VEP20438B)
FP6701		VJS2140	CONNECTOR (FEMALE) 17P	1	
P6007		VJS3172B006	CONNECTOR (FEMALE) 6P	1	
P6701		VJP3331B006	CONNECTOR (MALE) 6P	1	
P6701		VJS3172D006	CONNECTOR (FEMALE) 6P	1	
SW6701-06		EVQ21804B	SWITCH	6	
SW6707		VSS0126	SWITCH	1	
SW6708		EVQ21804B	SWITCH	1	
SW6710,11		EVQ21804B	SWITCH	2	
SW6713		EVQ21804B	SWITCH	1	
SW6714		VSS0127	SWITCH	1	
SW6715		VSS0126	SWITCH	1	
SW6716,17		EVQ21804B	SWITCH	2	
SW6719		EVQ21804B	SWITCH	1	
SW6722-24		EVQ21804B	SWITCH	3	
			MISCELLANEOUS		
		VEE7784	CONNECTION CABLE	1	(P6701--P6007)
		VWJ0638	CAMERA OPE - PROCESS FLEX	1	(FP6701-FP301)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03946A	AV JACK (A) C.B.A.		(RTL)
			CAPACITORS		
C1501		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
D1501,02		MA153	DIODE	2	
FP1501		VJS2139	CONNECTOR (FEMALE) 16P	1	
L1503,04		VLQ0555	FILTER	2	
P1501		VJP1244T	CONNECTOR (MALE) 4P	1	
			RESISTORS		
R1504		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
SW1501		VSS0187	SWITCH	1	
SW1502		VSS0186	SWITCH	1	
			MISCELLANEOUS		
		VEJ1288	PLATE	1	
		VGU3435	SWITCH KNOB	2	
	■	VEP03957A	AV JACK (B) C.B.A.		(RTL)
D1603		31DQ04	DIODE	1	
D1605		MA715	DIODE	1	
L1601,02		VLP0113	FILTER	2	
P1001		VJS1229T	CONNECTOR (FEMALE) 2P	1	
P1601		VJP3318A006	CONNECTOR (MALE) 6P	1	
P1601		VJS3172D006	CONNECTOR (FEMALE) 6P	1	
P1602		VJP1231T	CONNECTOR (MALE) 4P	1	
P1604		VJP1229R	CONNECTOR (MALE) 2P	1	
P6008		VJS3172B006	CONNECTOR (FEMALE) 6P	1	
PJ1605		VJP1253	CONNECTOR (MALE) 2P	1	
			RESISTORS		
R1606		VSF0059	FUSE	1	<!>
R1607		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Z1601		VSB0166	BATTERY	1	
			MISCELLANEOUS		
		VEE7788	POWER JACK (B) CABLE UNIT	1	
	■	VEK5868	FE HEAD C.B.A.		(RTL)
			CAPACITORS		
C1901		ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C1902		VCYD1E103MR	.CAPACITOR V	1	
C1903		VCYD1E682KH	.CAPACITOR V	1	
C1904		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
L1901		VLQEL05F221K	COIL 220UH	1	
Q1901		2SC2603AE2F	TRANSISTOR	1	
			RESISTORS		
R1901		ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
T1901		VLQ0586	TRANSFORMER	1	
	■	VEP22118A	CCD FLEXIBLE CARD C.B.A.		(RTL)
B291		VJS2961C012	CONNECTOR (FEMALE) 12P	1	
C292		ECST1VX225Z	T.CAPACITOR 35V 2.2U	1	
C293,94		ECUV1E473ZFN	C.CAPACITOR 25V 0.047U	2	
C295		ECUV1E104ZFN	C.CAPACITOR 25V 0.1U	1	
D291		MA153	DIODE	1	
Q291		2SC2295	TRANSISTOR	1	
R291		ERJ6GEYF560	M.RESISTOR 56K	1	
R292		ERJ6GEYF472	M.RESISTOR 4.7K	1	
			MISCELLANEOUS		
		VJB22118	CCD FLEXIBLE CARD	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEK5942	MANUAL FOCUS SENSOR FLEXIBLE C.B.A.		(RTL)
			MISCELLANEOUS		
		ON1004-R	PHOTO COUPLER	1	
	■	VEK5865	CHARA/GENE C.B.A.		(RTL)
			CONNECTORS		
P1402		VJJ0163	JACK	1	
P3001		VJS3172B005	CONNECTOR (FEMALE) 5P	1	
			MISCELLANEOUS		
		VEE7793	CONNECTION CABLE	1	(P3001-JP1401)
	■	VES0689	MECHANISM CONNECTION C.B.A. (MODE SELECT SWITCH UNIT)		(RTL)
				1	
Q1401		ON2170	PHOTO COUPLER	1	(FOR TAKE-UP REEL)
P1402		VJP1229R	CONNECTOR (MALE) 2P	1	
P1401		VJP3318A008	CONNECTOR (MALE) 8P	1	
			MISCELLANEOUS		
		VEE2015	CABLE	1	(P1402-P6009)
		VMX1280	SENSOR SPACER	1	
	■	VEK5863	MIC UNIT		
C01		ECEA05KJ471	E.CAPACITOR 470U	1	
C03		ECEA1HKS0R1	E.CAPACITOR 50V 0.1U	1	
C04		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C05		ECEA1CKK100	E.CAPACITOR 16V 10U	1	
C06		ECEA0GKS221	E.CAPACITOR 4V 220U	1	
C07		ECEA1HKSR47	E.CAPACITOR 50V 0.47U	1	
C08		ECEA1HKSR47	E.CAPACITOR 50V 0.47U	1	
C09		ECEA1HKS0R1	E.CAPACITOR 50V 0.1U	1	
C10		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C11		ECST1VY224ZR	T.CAPACITOR 35V 0.22U	1	
C12		ECST1VY224ZR	T.CAPACITOR 35V 0.22U	1	
C13		ECUM1H562KBN	C.CAPACITOR CH 50V 5600P	1	
C14		ECEA1HKS0R1	E.CAPACITOR 50V 0.1U	1	
C15		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C16		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C17		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.15U	1	
C18		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C19		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C20		ECUM1H681KBN	C.CAPACITOR CH 50V 680P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C21		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C22		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C23		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C24		ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C25		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C26		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C27		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C28		ECEA0JKS330	E.CAPACITOR 6.3V 33U	1	
C29		ECEA1EKK2R2	E.CAPACITOR 25V 2.2U	1	
C30		ECEA0JKS101	E.CAPACITOR 6.3V 100U	1	
C31		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C32		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C35		ECEA1HKS010	E.CAPACITOR 50V 1U	1	
C36		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C37		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C42		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C43		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C44		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
D01		MA3075	DIODE	1	
D02		MA3075	DIODE	1	
D03		MA3075	DIODE	1	
D04		MA3075	DIODE	1	
D05		MA153	DIODE	1	
IC01		AN8358FAP	IC	1	
IC02		ACSA0013BN	IC	1	
IC03		NJM4560MD	IC	1	
JACK1		MOJ-B27-B	JACK	1	
L01		VLQ0163J221	COIL	1	
P01		VJP3331B005	CONNECTOR (MALE) 5P	1	
P02		VJP3331B003	CONNECTOR (MALE) 3P	1	
Q01		2SC2412KLNT	TRANSISTOR	1	
Q02		2SC4081T	TRANSISTOR	1	
Q03		2SC4081T	TRANSISTOR	1	
Q04		2SC2412KLNT	TRANSISTOR	1	
Q05		2SC4081T	TRANSISTOR	1	
Q06		2SC4081T	TRANSISTOR	1	
Q07		2SD601A	TRANSISTOR	1	
Q08		2SD601A	TRANSISTOR	1	
Q09		2SB1218	TRANSISTOR	1	
R03		ERJ6GEYJ272	M.RESISTOR 1/10W 2.7K	1	
R05		ERJ6GEYJ272	M.RESISTOR 1/10W 2.7K	1	
R08		ERJ6GEYJ331	M.RESISTOR 1/10W 330	1	
R09		ERJ6GEYJ331	M.RESISTOR 1/10W 330	1	
R12		ERJ6GEYJ222	M.RESISTOR 1/10W 2.2K	1	
R14		ERJ6GEYJ113	M.RESISTOR 1/10W 11K	1	
R15		ERJ6GEYJ753	M.RESISTOR 1/10W 75K	1	
R16		ERJ6GEYJ333	M.RESISTOR 1/10W 33K	1	
R17		ERJ6GEYJ113	M.RESISTOR 1/10W 11K	1	
R18		ERJ6GEYJ113	M.RESISTOR 1/10W 11K	1	
R19		ERJ6GEYJ101	M.RESISTOR 1/10W 100	1	
R20		VRE0034E104	M.RESISTOR 100K	1	
R21		VRE0034E563	M.RESISTOR 56K	1	
R22		VRE0034E472	M.RESISTOR 4.7K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R23		VRE0034E331	M.RESISTOR 330	1	
R24		VRE0034E332	M.RESISTOR 3.3K	1	
R25		ERJ6GEYJ332	M.RESISTOR 1/10W 3.3K	1	
R26		ERJ6GEYJ333	M.RESISTOR 1/10W 33K	1	
R27		ERJ6GEYJ101	M.RESISTOR 1/10W 100	1	
R28		VRE0034E104	M.RESISTOR 100K	1	
R29		VRE0034E563	M.RESISTOR 56K	1	
R30		VRE0034E472	M.RESISTOR 4.7K	1	
R31		VRE0034E331	M.RESISTOR 330	1	
R32		VRE0034E332	M.RESISTOR 3.3K	1	
R33		ERJ6GEYJ332	M.RESISTOR 1/10W 3.3K	1	
R34		ERJ6GEYJ333	M.RESISTOR 1/10W 33K	1	
R35		ERJ6GEYJ222	M.RESISTOR 1/10W 2.2K	1	
R36		ERJ6GEYJ182	M.RESISTOR 1/10W 1.8K	1	
R37		ERJ6GEYJ182	M.RESISTOR 1/10W 1.8K	1	
R38		ERJ6GEYJ183	M.RESISTOR 1/10W 18K	1	
R39		ERJ6GEYJ183	M.RESISTOR 1/10W 18K	1	
R40		ERJ6GEYJ103	M.RESISTOR 1/10W 100K	1	
R41		ERJ6GEYJ103	M.RESISTOR 1/10W 100K	1	
R42		ERJ6GEYJ104	M.RESISTOR 1/10W 100K	1	
R43		ERJ6GEYJ223	M.RESISTOR 1/10W 22K	1	
R44		ERJ6GEYJ223	M.RESISTOR 1/10W 22K	1	
R45		ERJ6GEYJ561	M.RESISTOR 1/10W 560	1	
R46		ERJ6GEYJ561	M.RESISTOR 1/10W 560	1	
R48		ERJ6GEYJ221	M.RESISTOR 1/10W 220	1	
R50		ERJ6GEYJ101	M.RESISTOR 1/10W 100	1	
SW1		ESD11H230-AQ	SWICH	1	
VR01		EVND1AA00B14	V.RESISTOR	1	