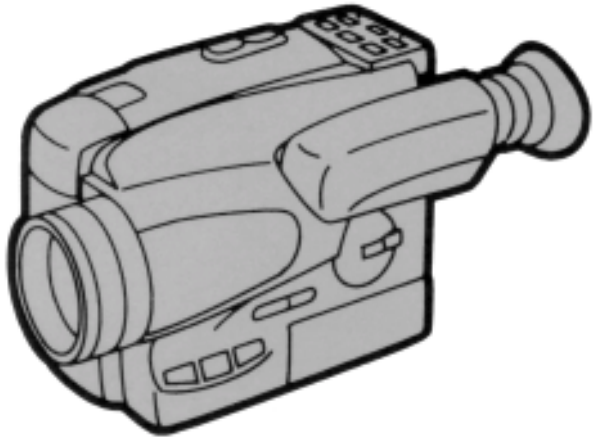
ORDER NO. VMD9301M102

Service Manual

Panasonic VHS C
PAL



HQ
VHS-C Movie

NV-S20E

Panasonic

SPECIFICATIONS

ITEM	SPECIFICATION
POWER	Source: BATTERY; DC 6.0V Consumption; Recording mode; 7.1W (Battery operation)
VIDEO RECORDING SYSTEM	4 rotary heads, helical scanning system PAL
TAPE FORMAT	VHS-C Cassette Tape (Tape width 12.7mm)
TAPE SPEED	23.39mm/s Record/Playback Time 45min. with NV-EC45XG FF/REW Time less than 5min. with NV-EC45XG
CAMERA	PICK-UP ELEMENT: CCD (Charge Coupled Device)
	STANDARD ILLUMINATION: 1,400 lux
	MINIMUM REQUIRED ILLUMINATION: 1 lux (Low Light Mode)
	LENS: Built-in 8 : 1 2-Speed Power Zoom Lens with Digital AI Auto Focus, Auto Iris, F1.4 (5~40mm), Filter Diameter 49mm
	IMAGE SENSOR: 1/3 inch CCD Image Sensor
	VIEW FINDER: 0.6″ Electric View Finder

ITEM	SPECIFICATION
VIDEO	HEADS: 4 rotary heads, 1 flging erase head
	OUTPUT: PHONO CONNECTOR; 1.0Vp-p 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: MIC IN (M3); −70dB, 4.7kΩ or more unbalanced
	OUTPUT: PHONO CONNECTOR; −8dB, 47kΩ loaded
WEIGHT	Approx. 950g (without Battery Pack)
DIMENSIONS	129(W)×121(H)×247(D)mm
STANDARD ACCESSORIES	1 pc. AC Adaptor 1 pc. Battery Pack 1 pc. Cassette Adaptor 1 pc. Shoulder Strap 1 pc. AV Output Cable 1 pc. DC Input Cable 1 pc. Battery for Cassette Adaptor Operation 1 pc. Battery for Clock Operation

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

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY PROCEDURES

1. R emoval of Tripod Frame

Remove.....3 screws(A)

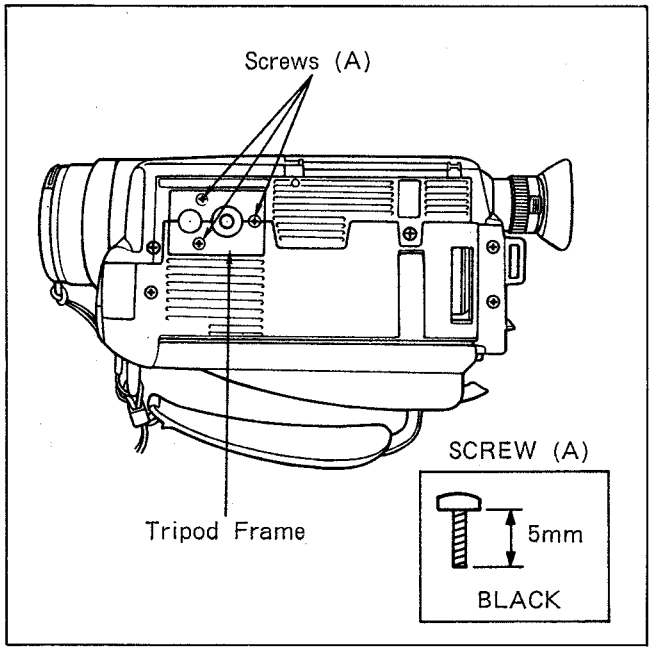


Fig. D1

2. Removal of Side Case (R)

Remove.....3 screws (B) and screw (C)
Disconnect.....EVF Connector(P3001)
Disconnect.....Cam Operation Connector(B302)
AV Jack Connector(B4003)

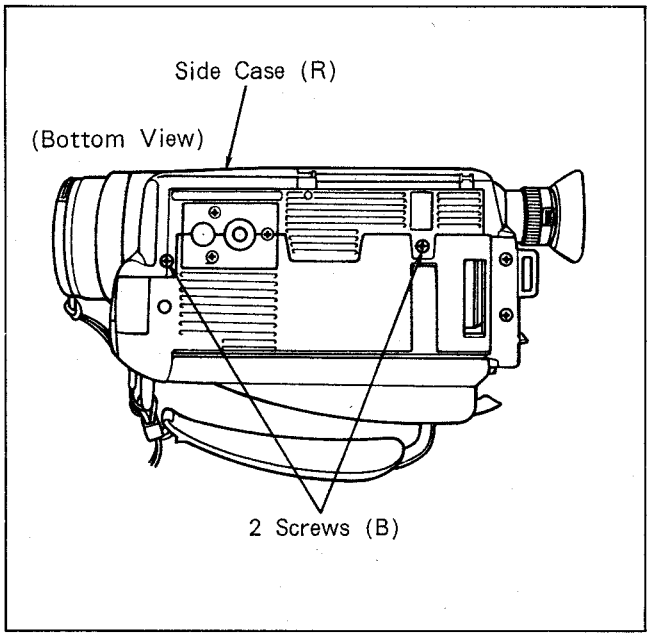


Fig. D2-1

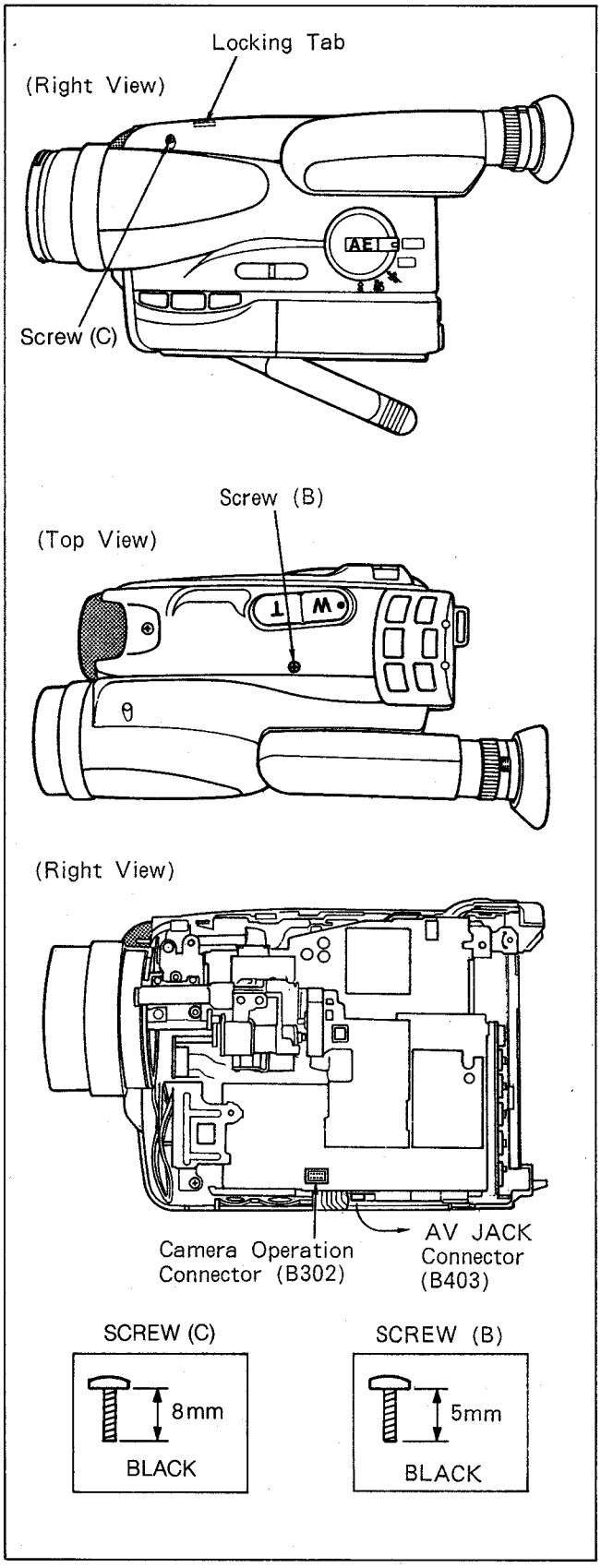


Fig. D2-2

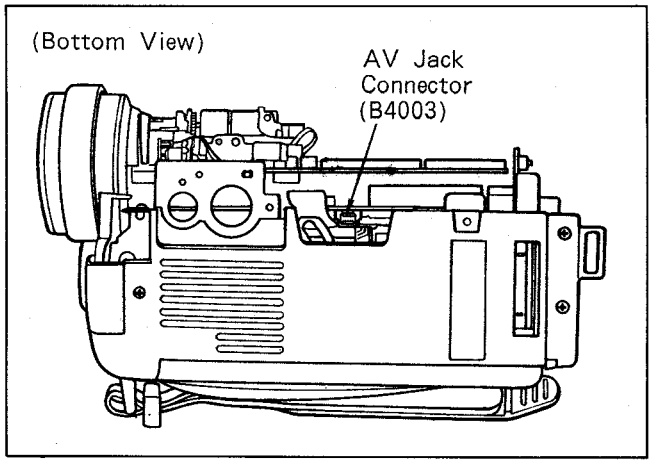


Fig. D2-3

3. Removal of Top Operation Panel

Remove.....Screw (C)
Disconnect.....Connector (B6003) and P6001

Note:
When disconnect the Connector, pay attention to do not damage to the VTR Operation C.B.A.

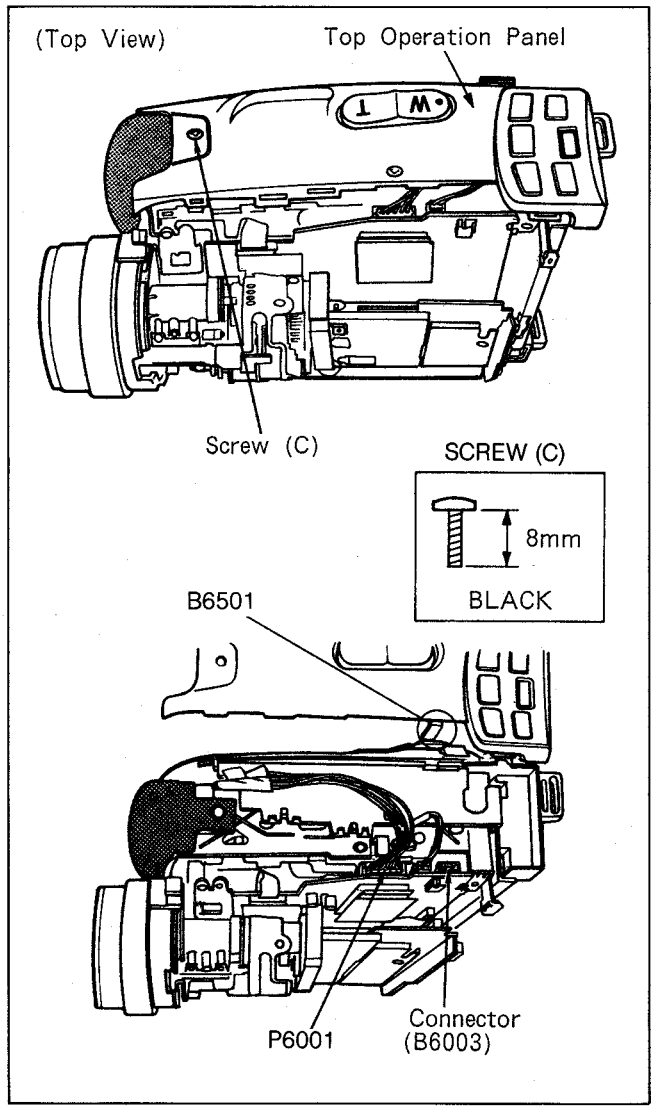


Fig. D3

4. Removal of Side Case (L)

Remove.....5 Screws(D)
Eject to Open the Cassette Cover
Remove.....Battery Case and Lens Cap
Disconnect.....Connector(P6001)
Disconnect.....Connector(B6501)
Remove.....Top Case
Remove.....Side Case(L)

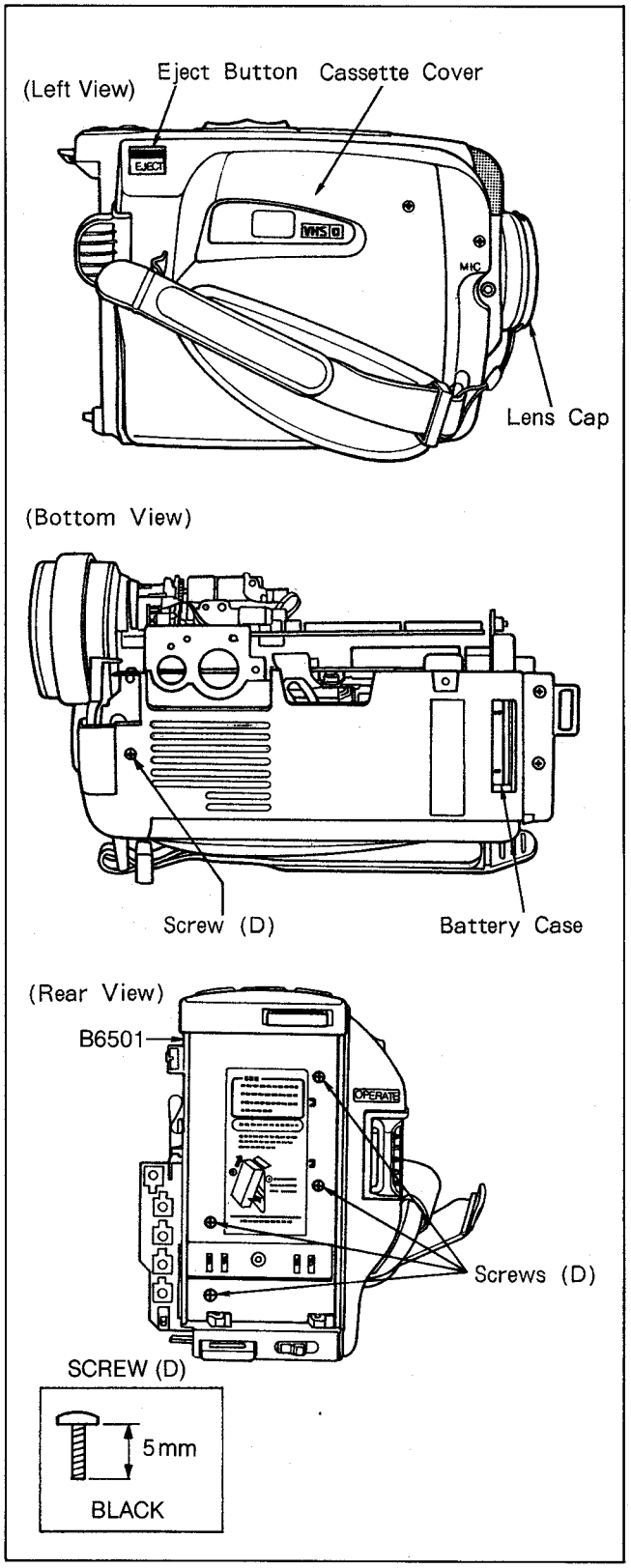


Fig. D4-1

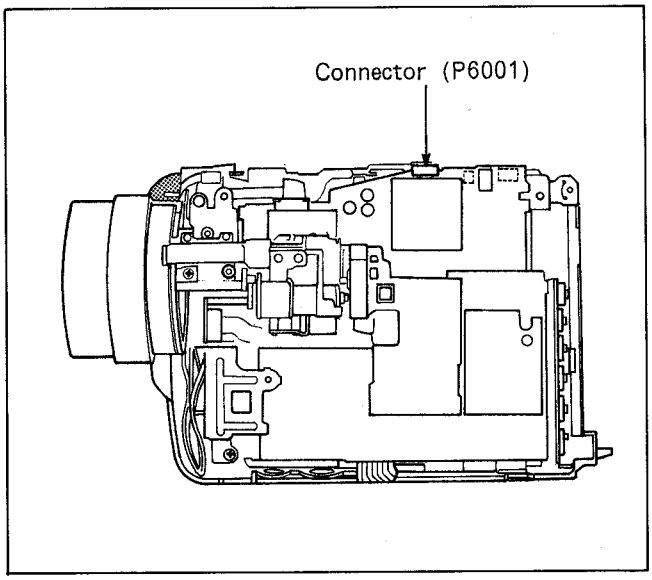


Fig. D4-2

5. Removal of the Front Case

Remove.....Connector P4001

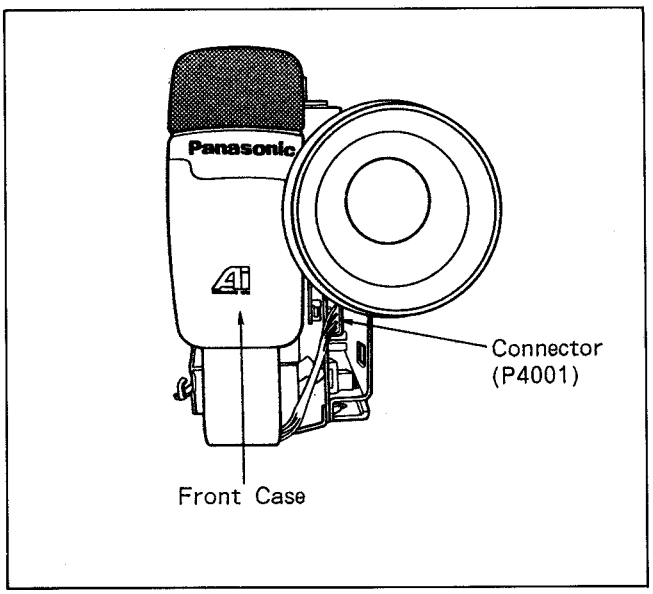


Fig. D5

6. Remove of Camera Unit

Remove.....2 screws(E)
Unlock.....3 locking portions
Disconnect.....Connector(FP1002)

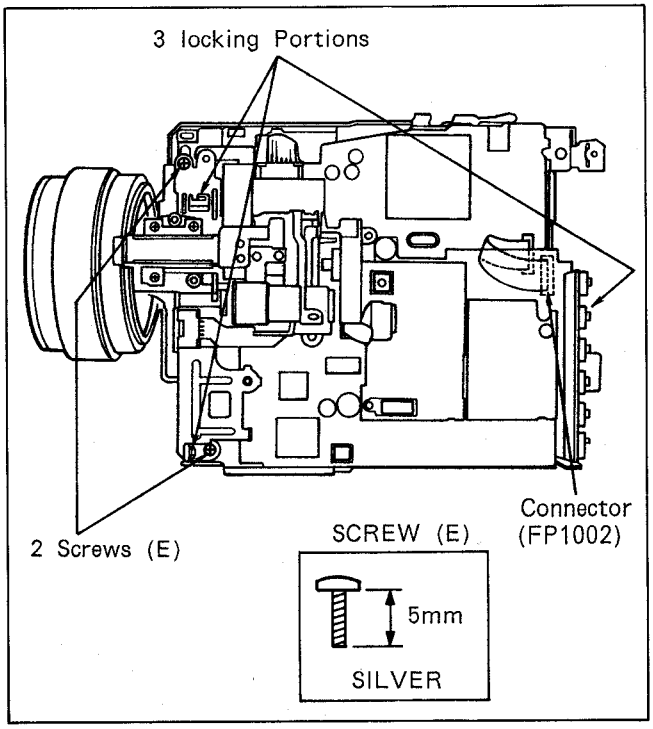


Fig. D6

7. Removal of VTR Main C.B.A. and Jack C.B.A.

Disconnect.....Connectors (FP4002, FP6001, FP5001 and P6002)
Remove.....4 screws(F) and (G)
Disconnect.....Direct Connector (B6001)
Unlock.....locking portions

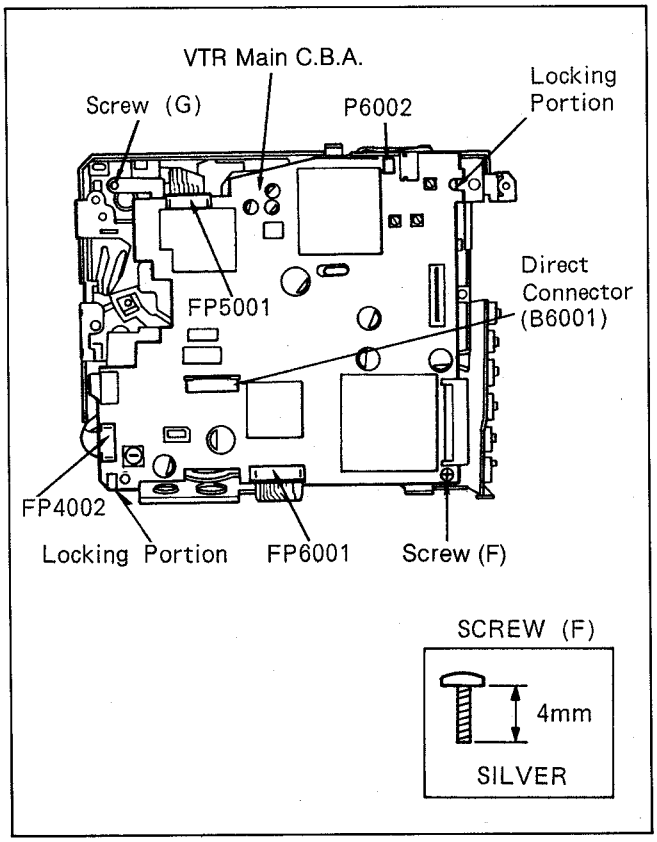


Fig. D7-1

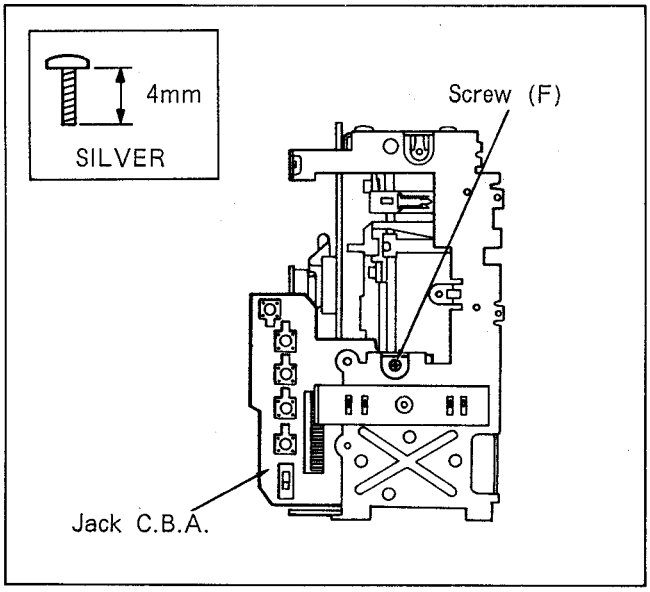


Fig. D7-2

8. REMOVAL OF THE MECHANISM FLEXIBLE CARD C.B.A. AND DRIVE C.B.A.

[DRIVE C.B.A.]

Remove.....3 Screws(V)
Disconnect.....2 Connectors(P2102,P2103)
Unsolder.....4 Soldering Portions(W)

[MECHANISM FLEXIBLE CARD C.B.A.]

Remove.....4 Screws(X)
Unsolder.....15 Soldering Portions(Y)

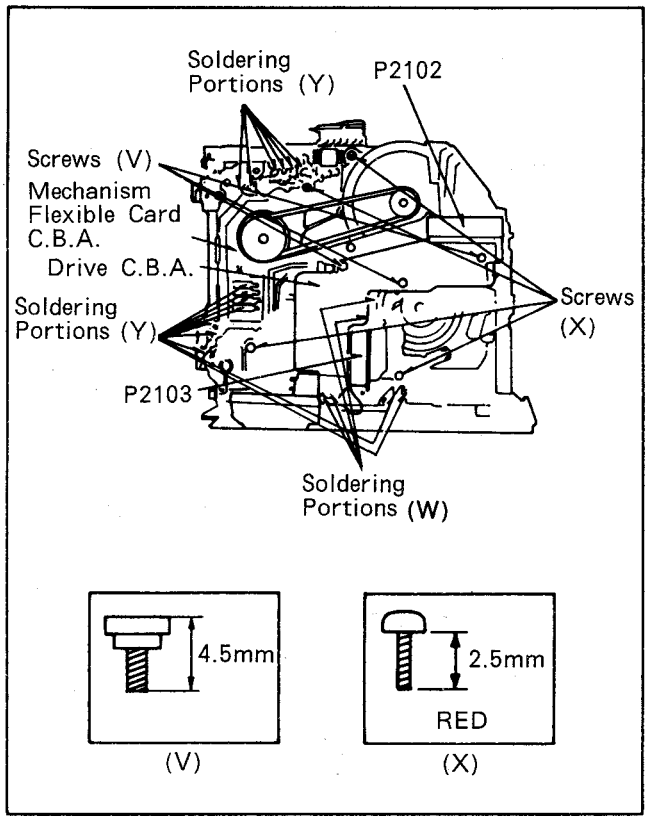


Fig. D8

2-2. REPLACEMENT OF THE CYLINDER UNIT

2-2-1. UPPER CYLINDER UNIT REPLACEMENT

Use extreme care when removing or installing the Upper Cylinder Unit. Do not touch the video heads during servicing.

1. Remove 2 screws as shown in Fig. D9.
2. Unsolder 20 solder points indicated by arrows on the Circuit Board.
3. Remove the Upper Cylinder Unit by lifting it upward.
4. Reinstall the Upper Cylinder Unit by reversing the removal procedure. When reinstalling the Upper Cylinder be careful that the white portions of the Upper Cylinder circuit board correctly matches the white portion of the bottom cylinder.

Note :
If the Upper Cylinder Unit is installed so that the white portions of the upper and if lower cylinder are reversed, no colour will appear when playing back a pre-recorded tape.

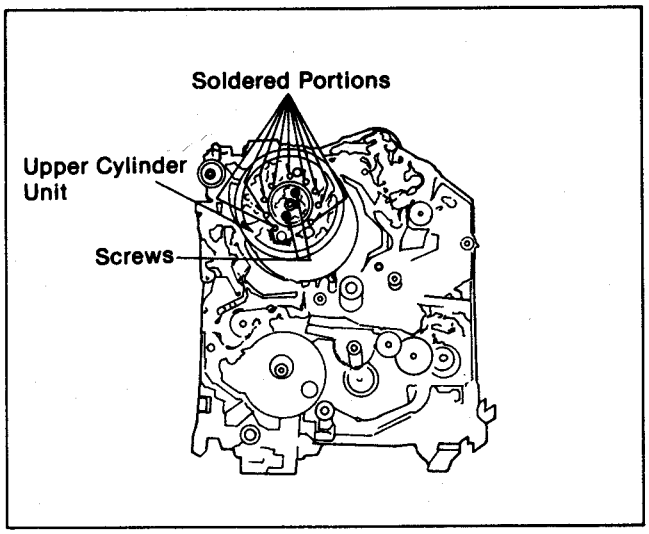


Fig. D9

2-2-2. DD CYLINDER UNIT REPLACEMENT

1. Disconnect connectors and remove the 3 screws.
2. Remove DD Cylinder.

Note:
Since there is very little clearance between the DD Cylinder and the chassis use extreme care when removing the DD Cylinder Unit. Do not touch the Video Heads while servicing.

3. Reinstall the DD Cylinder Unit, install 3 screws and reconnect the connectors.

Note:
After installing the DD Cylinder Unit:
1) Gently rub the video heads in the direction of tape travel with a head cleaning stick.
2) Check DD Cylinder performance. If further maintenance is required see "Tape Interchangeability Adjustment"

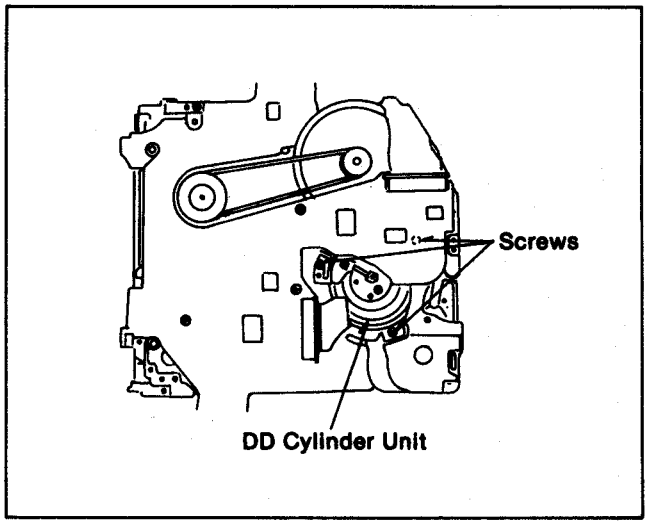
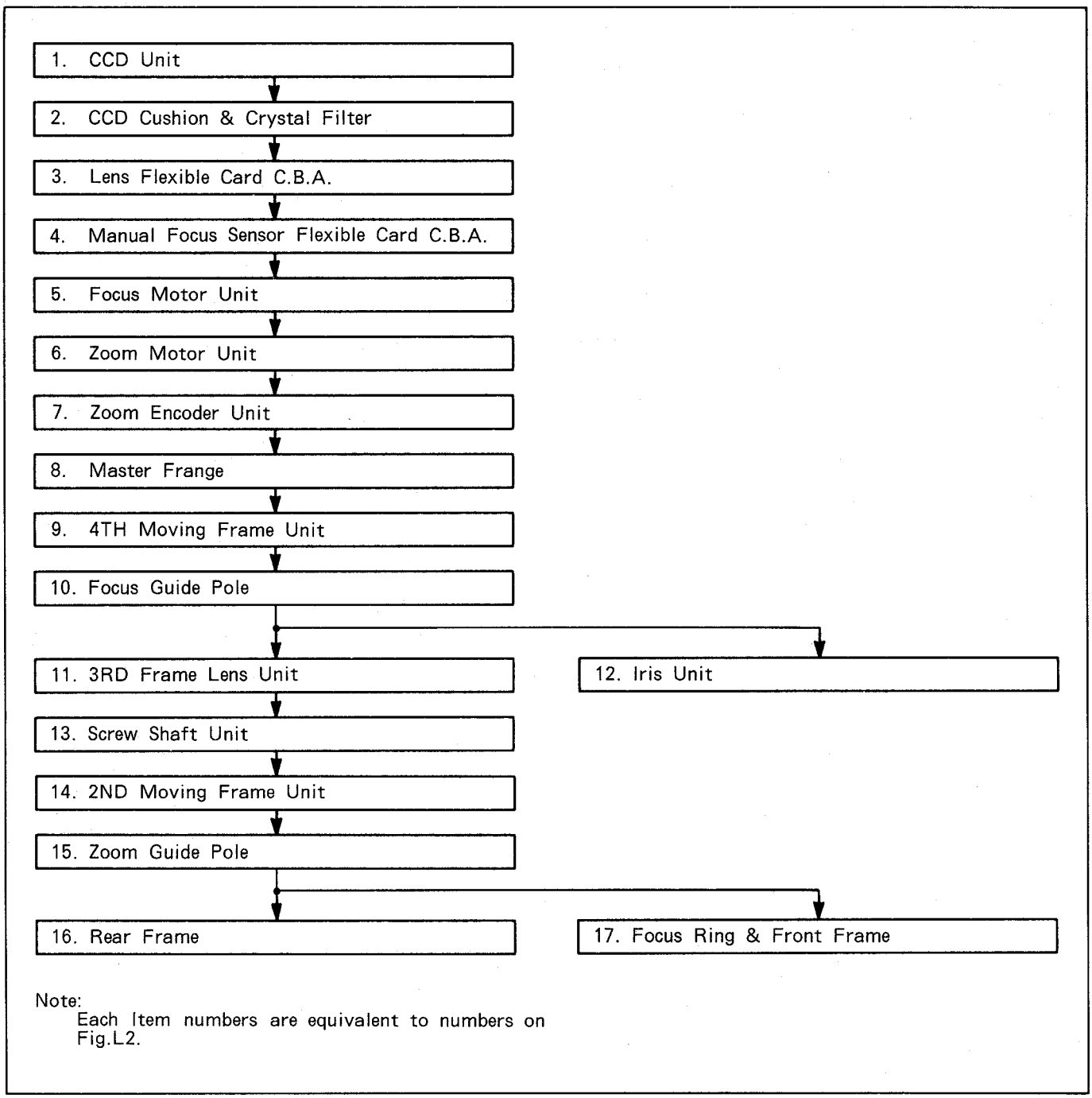


Fig. D10

2-3. DISASSEMBLY PROCEDURES OF ZOOM MOTOR AND FOCUS MOTOR

The following flowchart describes order or steps for removing the Lens Units and certain Printed Circuit Boards in order to make access to the items needing service.
To reassemble the unit follow the steps in reverse order.



Note:
Each Item numbers are equivalent to numbers on Fig.L2.

Fig. L1

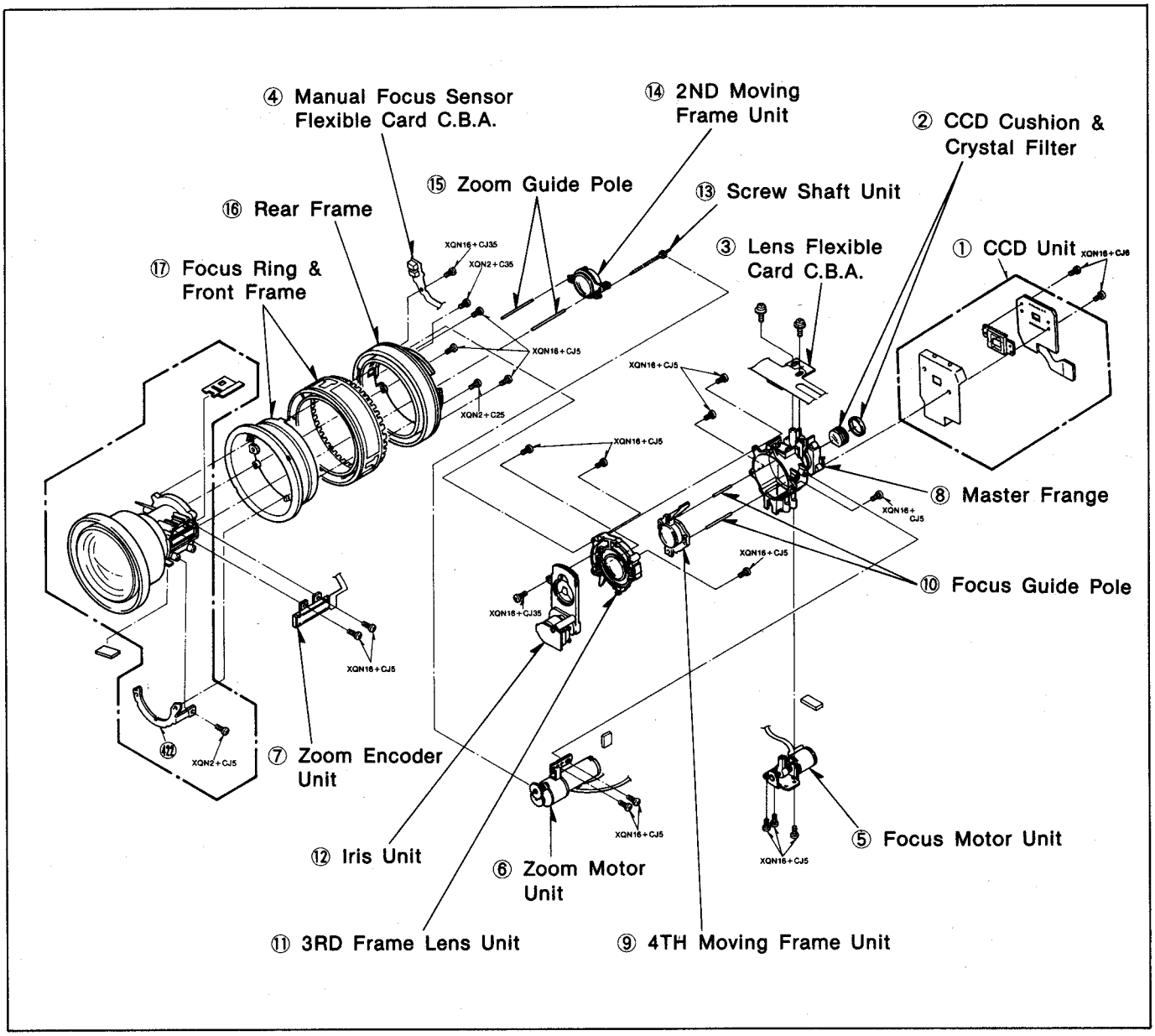

④ Manual Focus Sensor Flexible Card C.B.A.
⑭ 2ND Moving Frame Unit
② CCD Cushion & Crystal Filter
⑮ Zoom Guide Pole
⑬ Screw Shaft Unit
⑯ Rear Frame
③ Lens Flexible Card C.B.A.
① CCD Unit
⑰ Focus Ring & Front Frame
⑧ Master Frange
⑩ Focus Guide Pole
⑦ Zoom Encoder Unit
⑤ Focus Motor Unit
⑫ Iris Unit
⑥ Zoom Motor Unit
⑪ 3RD Frame Lens Unit
⑨ 4TH Moving Frame Unit

Fig. L2

2-4. 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 cam gear decides all further mechanical movement of the mechanical parts such as levers,gears,rollers and so on. If these parts are fixed improperly,the units will be unloaded or compulsory stopped.
And it will result being damaged at any mechanical or electrical parts.

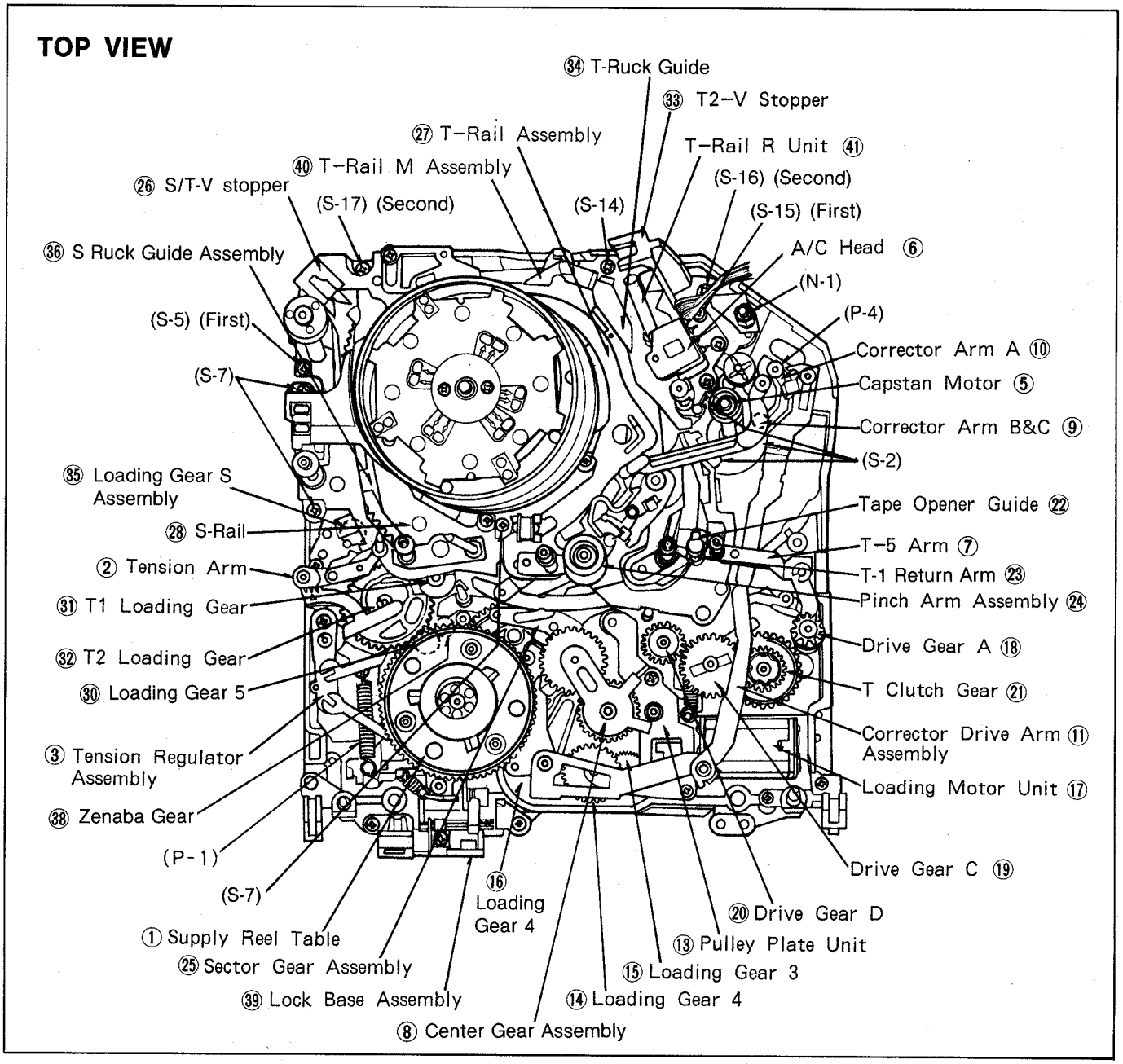


Fig. M1

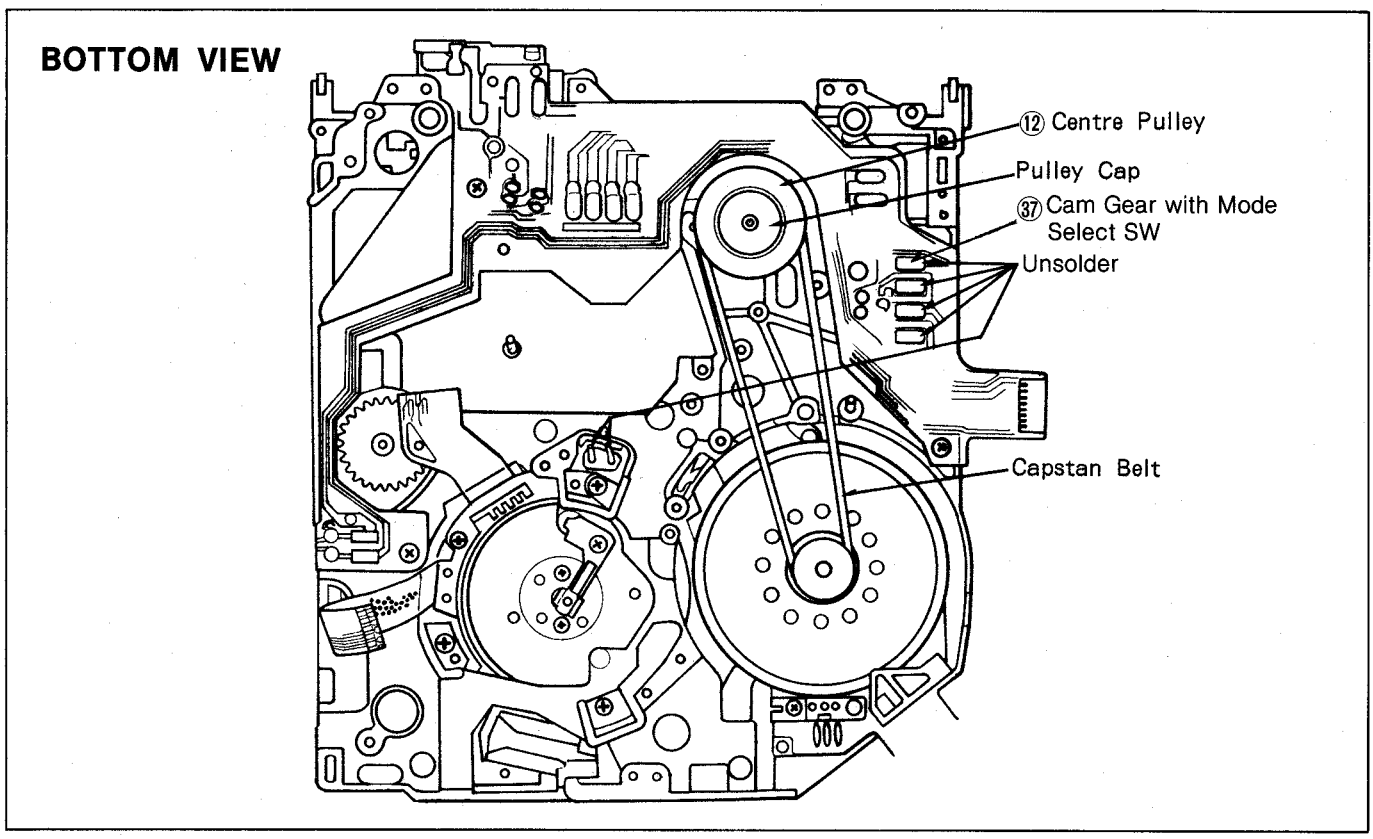


Fig. M2

2-4-1 Disassembly of Mechanism

Prior to disassembly of the mechanism remove the Mechanism Flexible Card CBA and Drive CBA [13] of [2-2-1] and DD Cylinder [2-2-2].

Note:
To prevent accidental damage to the DD Cylinder, removal of the DD Cylinder is recommended before complete or partial disassembly of mechanism.

1) Remove 2 red screws and lift the cassette holder assembly off of the mechanism assembly.
2) Remove the supply reel table C-ring and supply reel table. See Fig. M3.

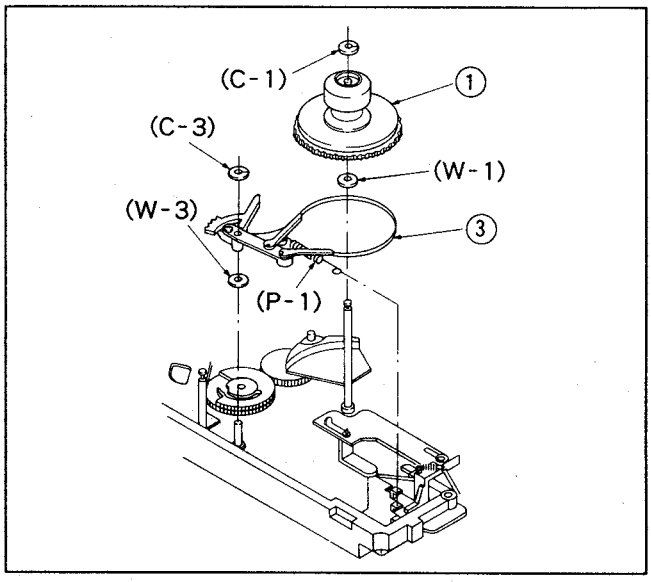


Fig. M3

3) Remove a C-ring and Tension Arm Assembly.

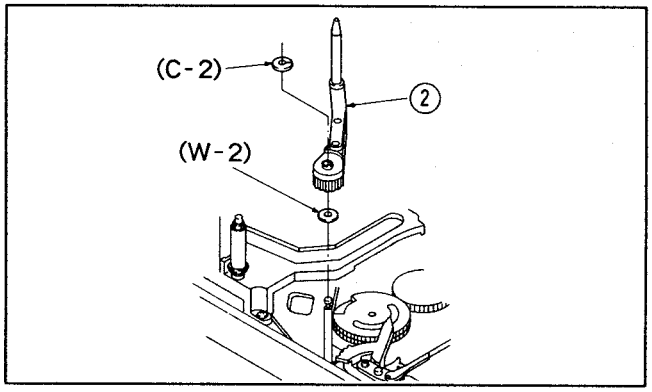


Fig. M4

4) Remove tension regulator assembly.
5) Remove tension regulator band from tension regulator assembly.
6) Remove T-5 arm unit. See Fig M5

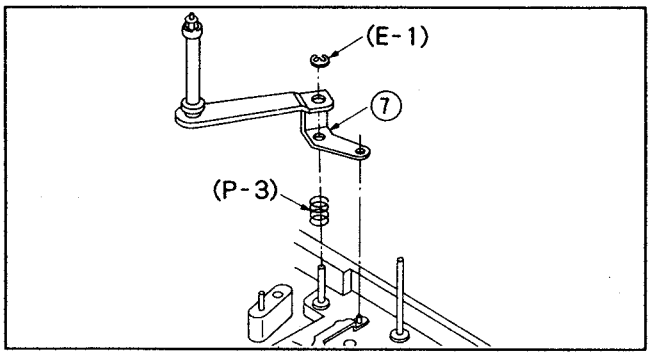


Fig. M5

7) Place corrector arm spring in initial hook position. See Fig. M6–A. Remove corrector arm C and B. See Flg. M6

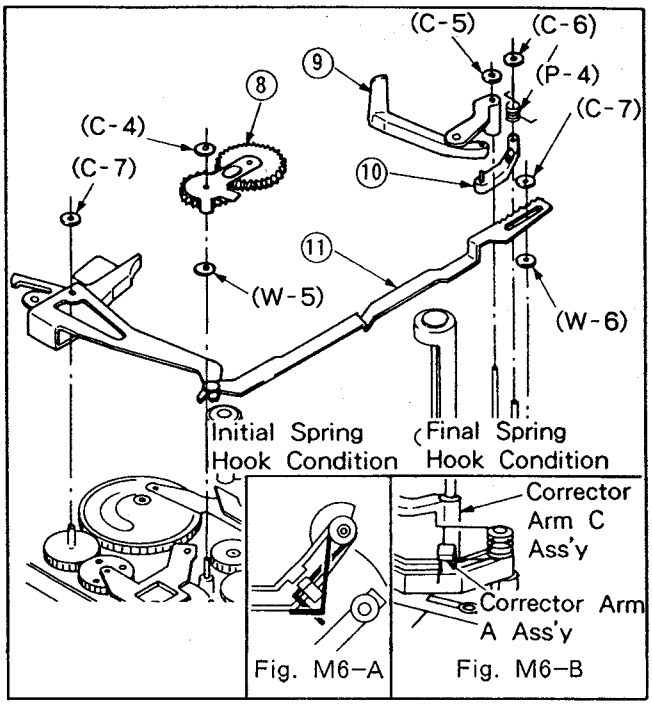


Fig. M6

8) Remove corrector arm A and spring.
9) Remove corrector drive arm assembly.
10) Remove centre gear assembly. See Fig. M1 & 7.

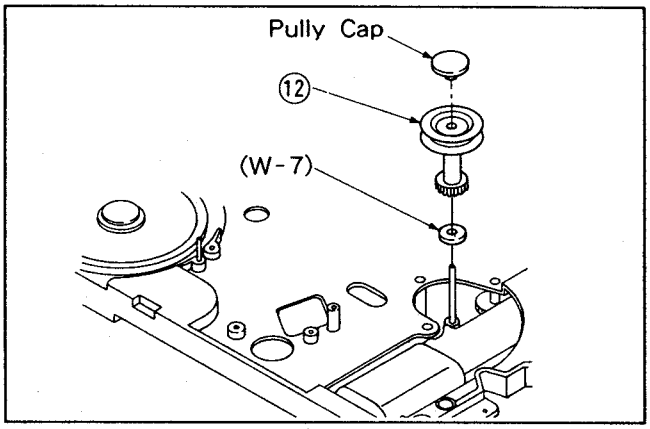


Fig. M7

12) Remove pulley cap and centre pulley.
13) Remove pulley plate unit. See Fig. M8.

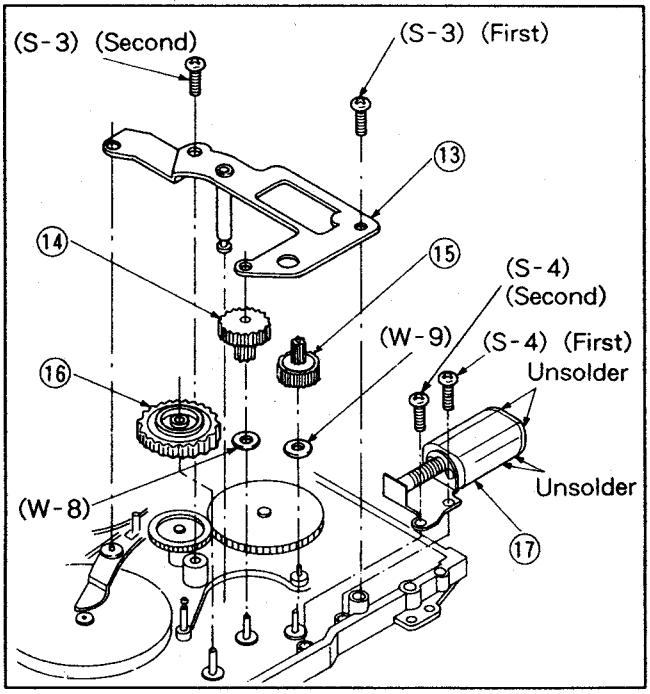


Fig. M8

14) Remove loading gear 3.
15) Remove loading gear 2.
16) Remove loading gear 4.
17) Remove loading gear motor unit.
18) Rotate the main cam gear clockwise to the fully loaded position then rotate counter–clockwise 90 degrees.
19) Remove the tape opener guide. See Fig. M9

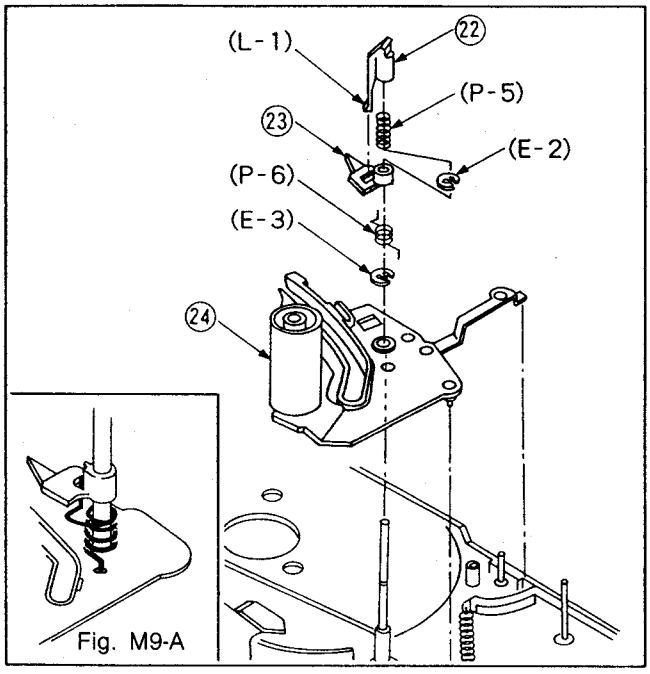


Fig. M9

20) Remove E-ring, T-1 return arm and spring.
21) Remove E-ring and pinch arm unit.
22) Remove drive gear A. See Fig. 10
23) Remove drive gear D.
24) Remove drive gear C.
25) Remove T-clutch gear assembly.
26) Remove sector gear assembly. See Fig M11
27) Rotate cam gear counter clockwise until T-post is partially unloaded to remove S/T-V stopper unit.
28) Remove S/T-V stopper unit. See fig M1
29) Remove S-rail.
30) Remove T-rail. See fig. M12.
31) Remove band guide. See fig. M13
32) Remove loading gear 5.
33) Remove T-1 loading gear.
34) Remove T-2 loading gear unit.

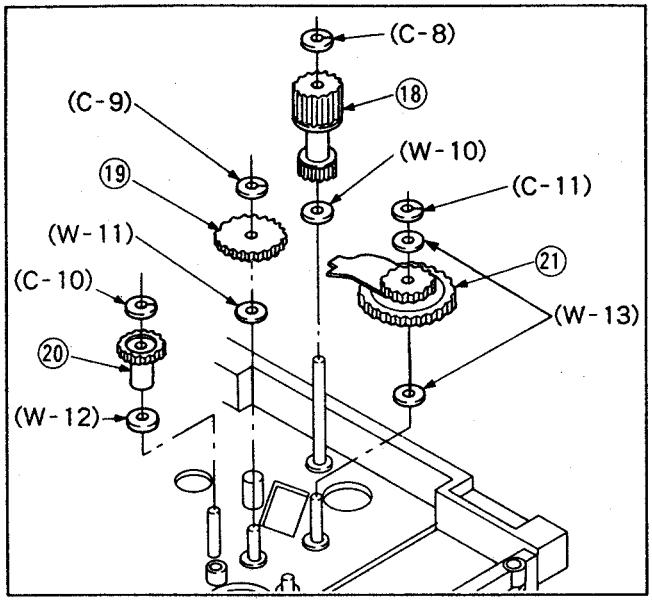


Fig. M10

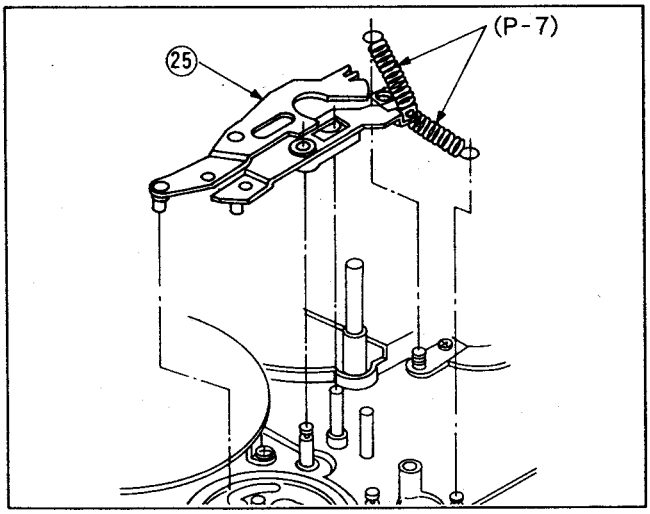


Fig. M11

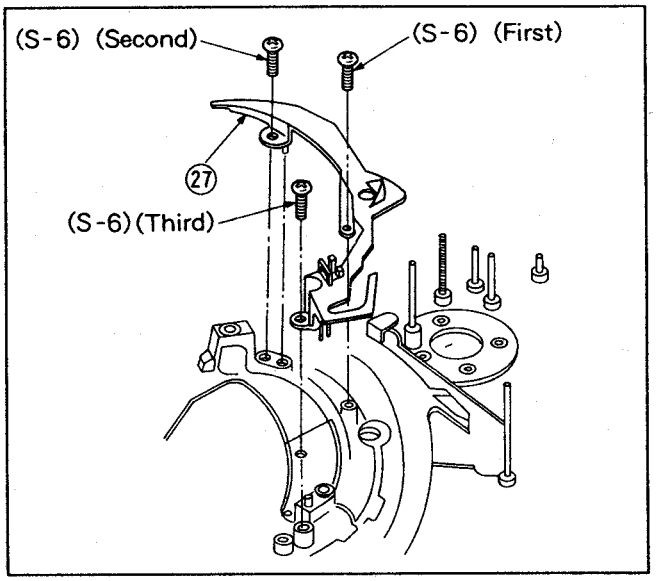


Fig. M12

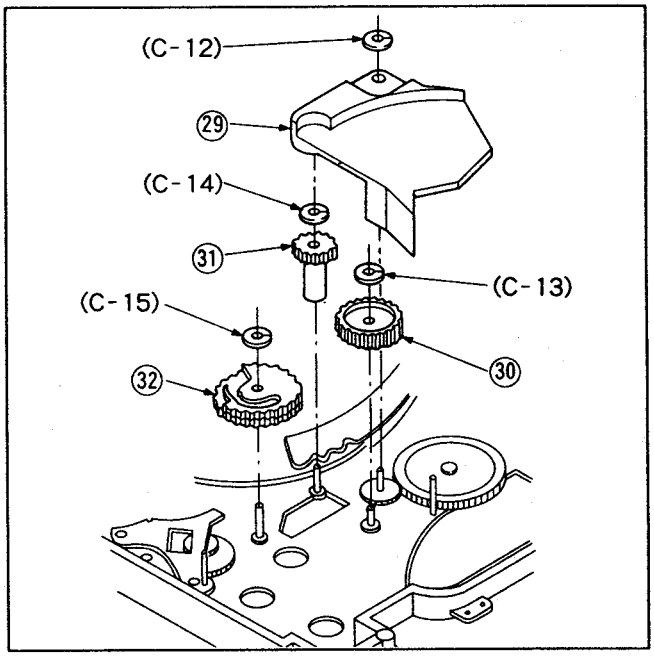


Fig. M13

36) Remove capstan drive motor. See fig. M1.
37) Remove T-rail R unit. See Fig. M15.
38) Remove T rack guide unit. See Fig. M16.
39) Remove loading gear S assembly. See Fig. M17.
40) Remove S rack guide assembly. See fig. M18.
41) Remove cam gear/mode select switch assembly. See fig. M19.
42) Remove zenaba gear.
43) Remove the lock base assembly. See Fig. M20.
44) Remove T-rail M assembly. See fig. M1.
45) Remove T2-V stopper.

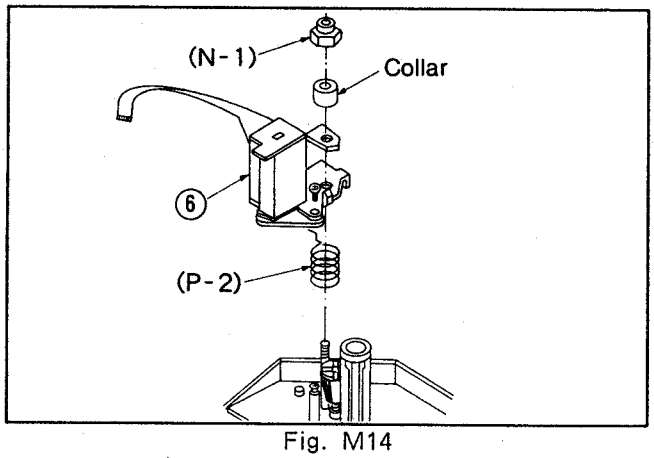


Fig. M14

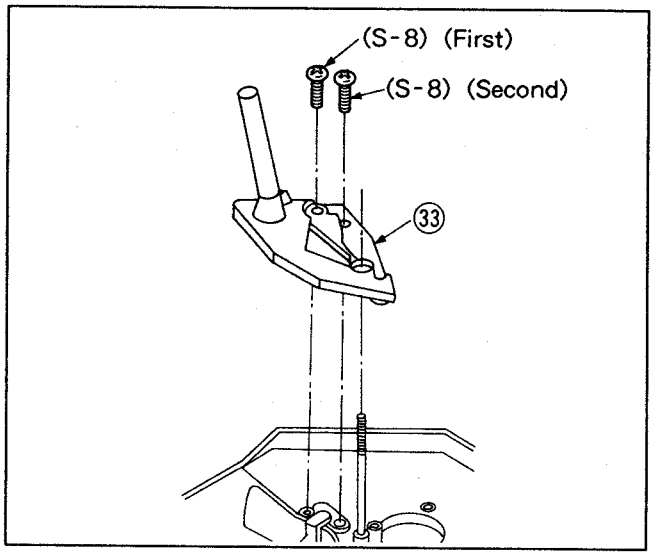


Fig. M15

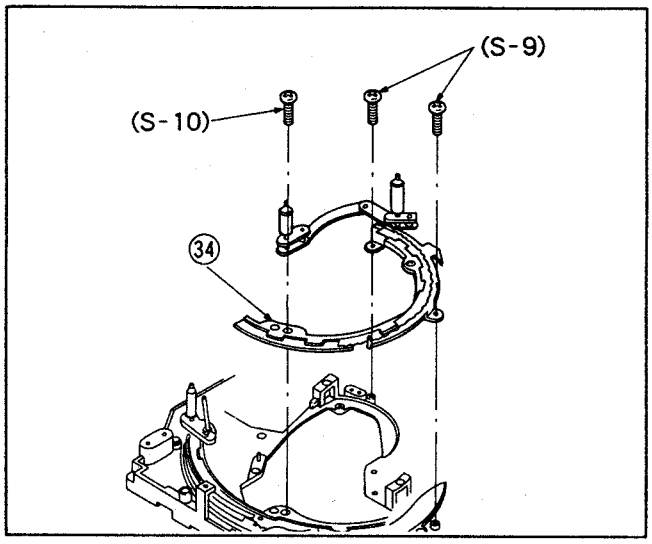


Fig. M16

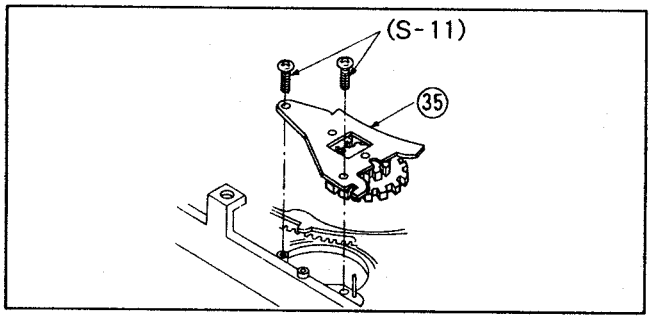


Fig. M17

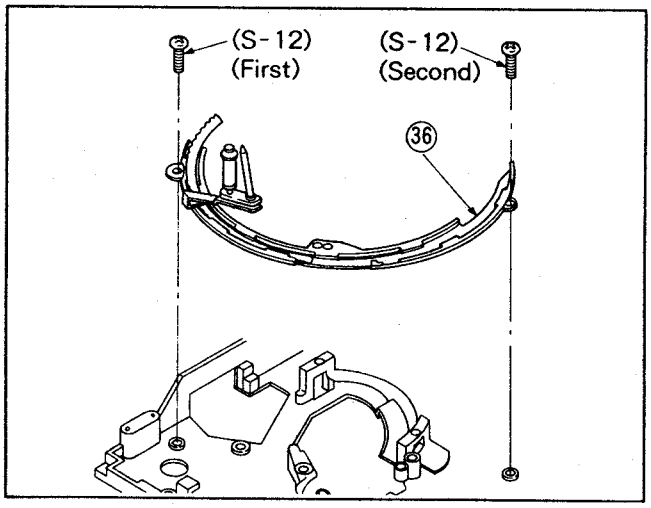


Fig. M18

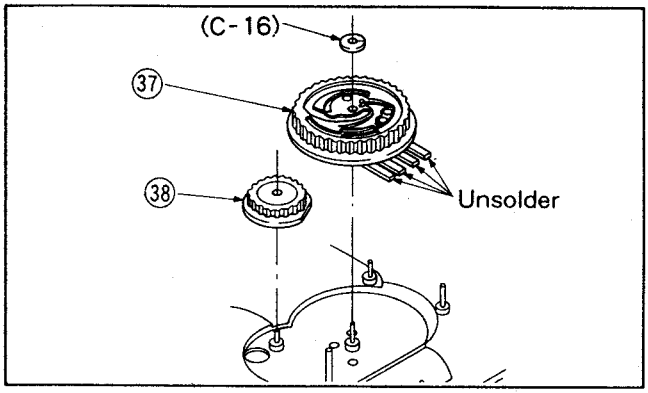


Fig. M19

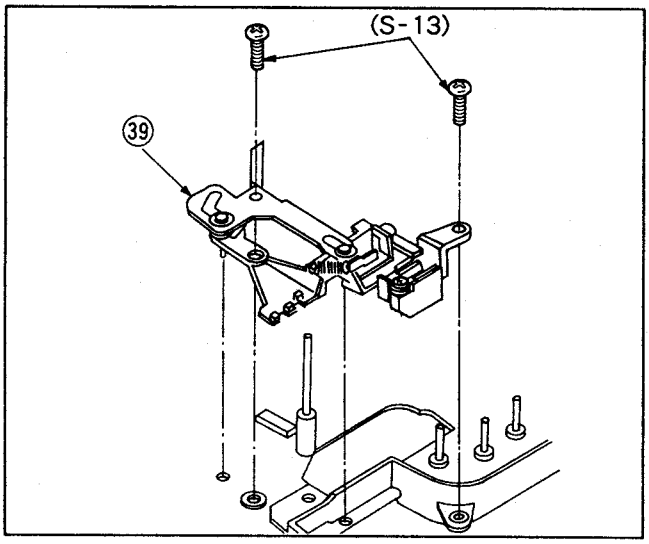


Fig. M20

2-4-2 Assembly of Mechanism

Note:
Alignment procedures in this section are critical.

Note:
All C-rings and E-rings should be replaced not re-used.

1) Reinstall T2-V stopper. Tighten screws as shown in fig M1.
2) Reinstall T-rail M assembly.
3) Reinstall lock base assembly. See fig. M20.
4) Reinstall cam gear/mode select switch. See fig.M19. Position the V-punch mark on the cam gear as shown in fig. A1.

Note:
If the eject lever prevents the cam gear from seating properly, rotate the cam gear until it seats then position the V-punch mark.

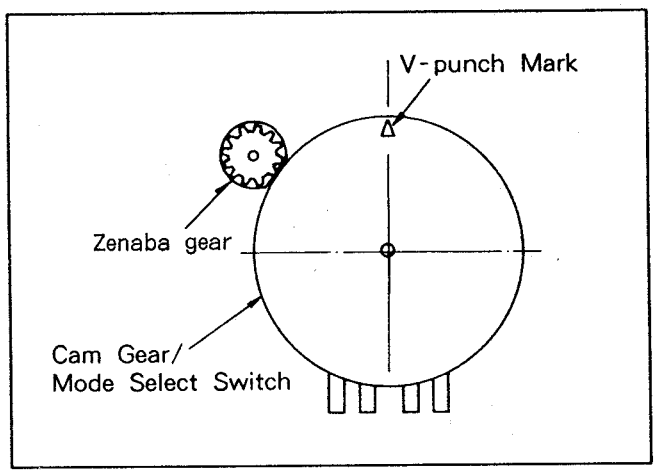


Fig. A1

5) Reinstall the zenaba gear so that the cut out of the zenaba gear is positioned towards the cam gear.
6) Reinstall the S rack assembly. See Fig. M18.
7) Reinstall the loading gear S assembly. See Fig.M17. See Fig. A3 for alignment procedure.

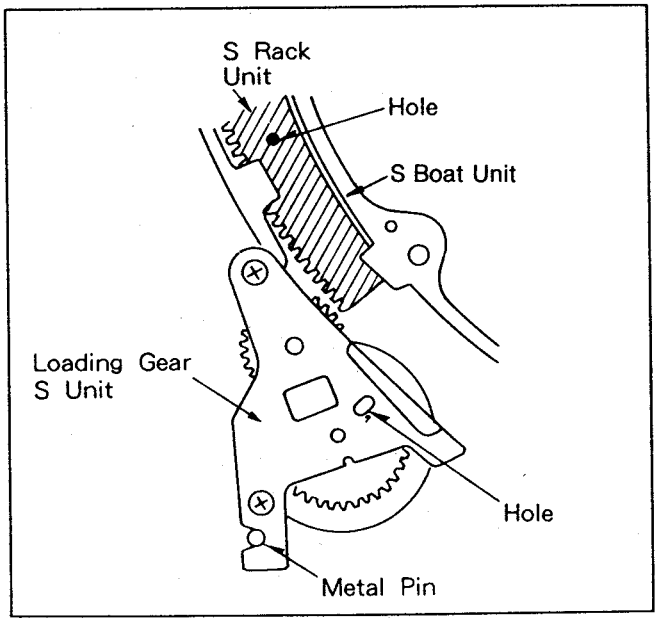


Fig. A3

8) Reinstall T rack guide assembly. See Fig. M16.
9) Reinstall T rail R Unit. Tighten screws as shown in Fig. DM15.
10) Check loading gear S assembly alignment as shown in Fig. A3. reinstall T2 loading gear. See Fig.M13. See Fig. A4 for alignment procedure.
11) Reinstall T1 loading gear aligning the small indentation on the T1 gear with the timing mark on the T rack guide unit. See Fig. A4.

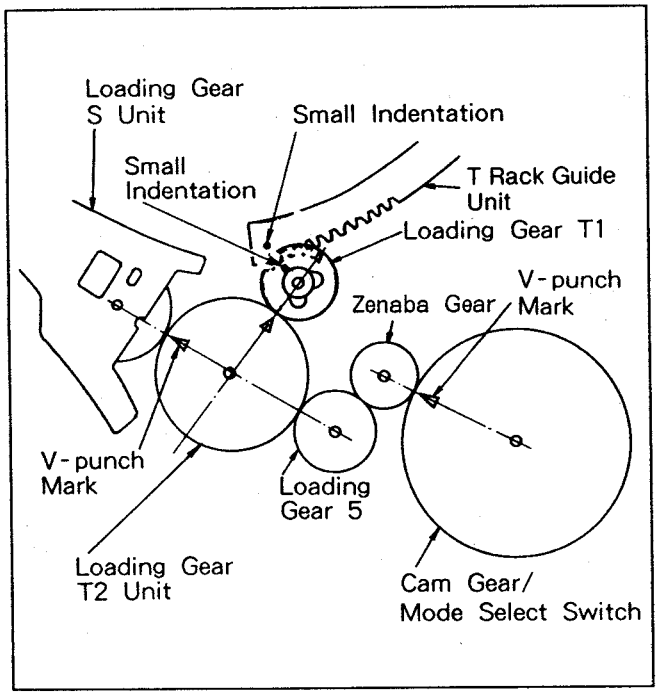


Fig. A4

12) Align V-punch mark on the cam gear with the shaft of the zenaba gear. See Fig. A2. Reinstall loading gear 5 with the flat side down.

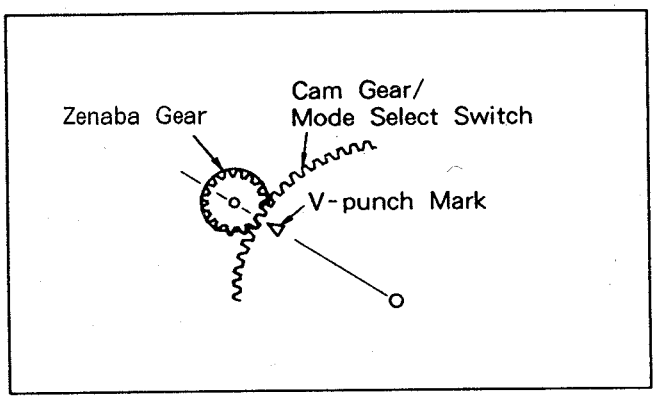


Fig. A2

13) Reinstall the band guide.
14) Reinstall the S rail unit. See Fig. M1.
15) Reinstall the T rail unit. Tighten the screws in the order shown in Fig. M12.
16) Rotate the cam gear counter clockwise to move the post to the fully loaded position.
17) Reinstall S/T–V stopper unit. Tighten screws in the order shown in Fig. M1.
18) Reinstall sector gear assembly. Install the pin on the sector gear assembly into the outer slot of the cam gear. See Fig. M11.
19) Rotate the cam gear clockwise to the fully loaded position then rotate the cam gear back 90 degrees.
20) Reinstall the pinch arm assembly. Install the E–ring. See fig.M9 & A 5.

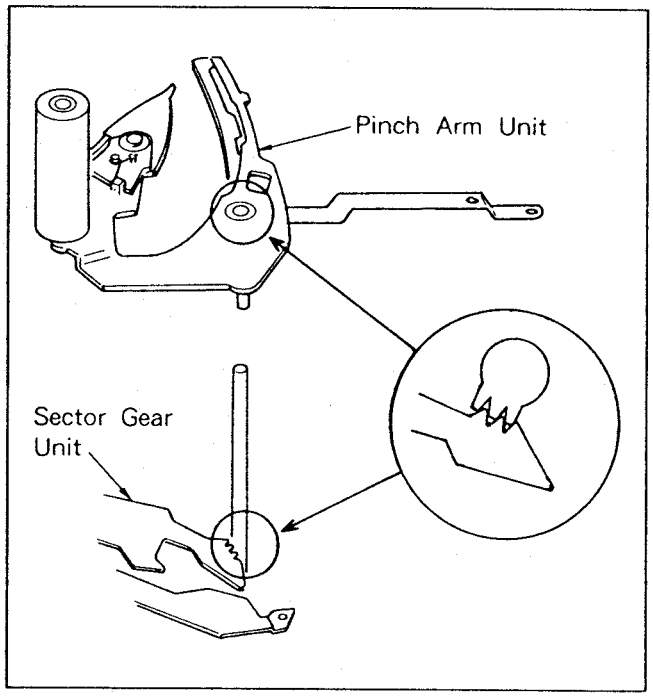


Fig. A5

21) Reinstall T1 return arm spring and T1 return arm. Install the E–ring. See Fig.M9–A.
22) Reinstall the tape opener guide.
23) Reinstall the T clutch gear unit. See Fig.M10.
24) Reinstall drive gear D.
25) Reinstall drive gear C with the flat side up.
26) Reinstall drive gear A.
27) Reinstall loading motor unit. Tighten the screws in the order shown in Fig.M8.
28) Reinstall the drive gear 2.
29) Reinstall drive gear 4 with the flat side down.
30) Reinstall the drive gear 3.
31) Reinstall the pulley plate unit. Tighten the screws in the order shown in Fig.M8.
32) Reinstall the centre pulley and centre pulley cap. See fig.M7.
33) Reinstall the corrector drive arm assembly. Place the corrector drive arm pin in the outer slot of the cam gear.
34) Reinstall the spring on corrector arm A as shown in Fig.DM6–A.
35) Reinstall corrector arm A so that the first tooth on the corrector arm engages the first groove of the corrector drive arm. See fig.A6.

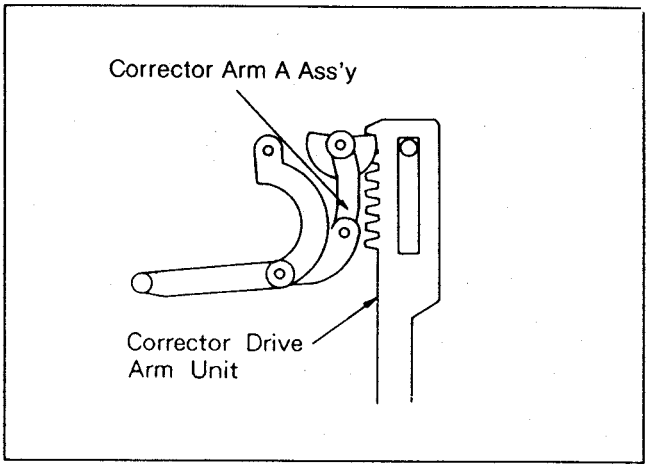


Fig. A6

36) Reinstall corrector arm C.
37) Reposition the spring on corrector arm A as shown in Fig. M6–B.
38) Reinstall the centre gear assembly.
39) Reinstall the T5 arm. See Fig. M5.
40) Reinstall the capstan motor unit. See Fig. M1.
41) Reinstall the A/C head. See Fig. M14. Position the spring as shown in Fig. M7.

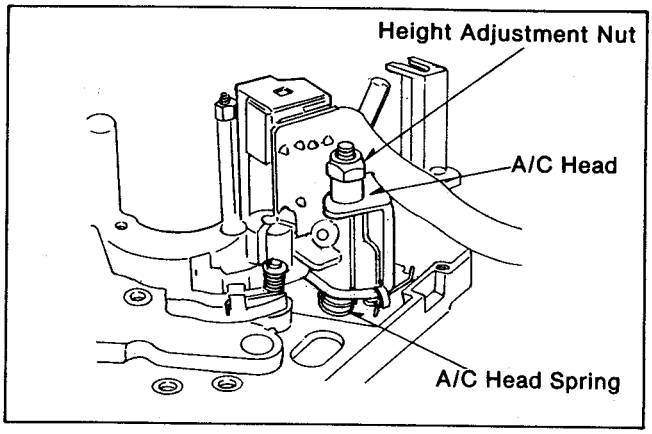


Fig. A7

42) Reinstall the capstan belt. See Fig.M2.
43) Reinstall the tension regulator band on the tension regulator assembly. See Fig. M3.
44) Reinstall the tension regulator assembly. Place the tension regulator assembly pin into the slot of T2 loading gear unit.
45) Reinstall the tension arm so that the U–notch on the tension arm unit aligns with the V–punch mark on the tension regulator assembly. See Fig. A8.

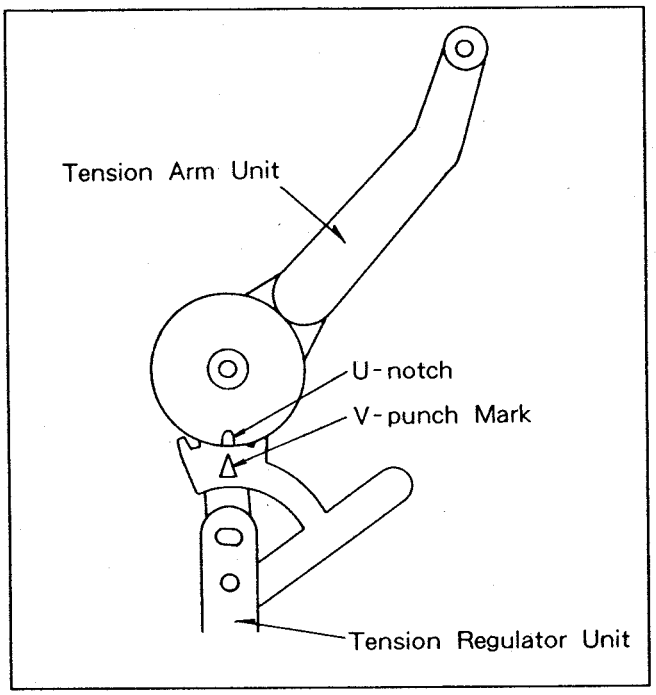


Fig. A8

46) Clean the rotating surface of the supply reel table with a soft dry cloth.
47) Reinstall the supply reel table.

Reinstall the DD Cylinder. See 2-2-2.

Reinstall the Mechanism Flexible Card CBA and Drive C.B.A.

2-5. INTERCHANGEABILITY ADJUSTMENT

2-5-1. ADJUSTMENT OF BACK TENSION

*Equipment Required.
Tension meter
Alignment tape (VFM8180HUPF)
Specification 17+-2g.

(1) Remove the Impedance Roller.
(2) Insert the cassette tape and playback the tape.
(3) Insert the Tension Meter to Mechanism as shown Fig.T1.

If Back tension is high, spring position change to (a) position as shown in Fig.T2.
If Back tension is low, spring position change to (c) position as shown in Fig.T2.

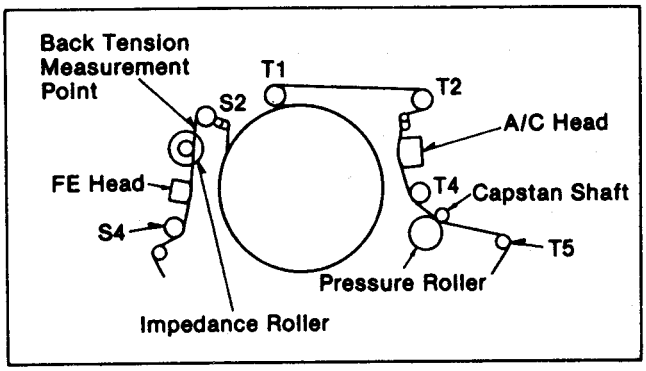


Fig.T1

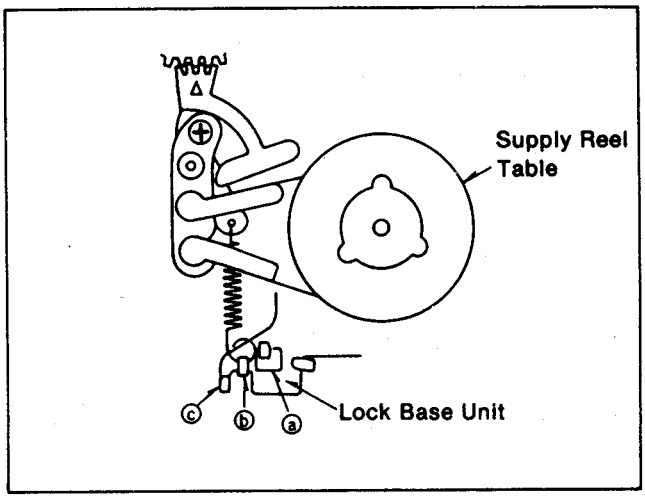


Fig.T2 S-REEL TABLE LOCK.BASE UNIT

(4) After check the Back tension, install the impedance Roller.

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

Height adjustment of S4 Post, T4 POST, T5 Post specification.

S4 Post: 17.125+−0.025mm
T5 Post: 17.175+−0.025mm
T4 Post: 17.175+−0.025mm

(1) For adjustment S4 Post height, turn 4mm Nut(A) Slightly in either direction as necessary to the correct clearance between the upper edge of lower tape guide on S4 Post and lower portion of Mecha chassis as shown in Fig.T3.

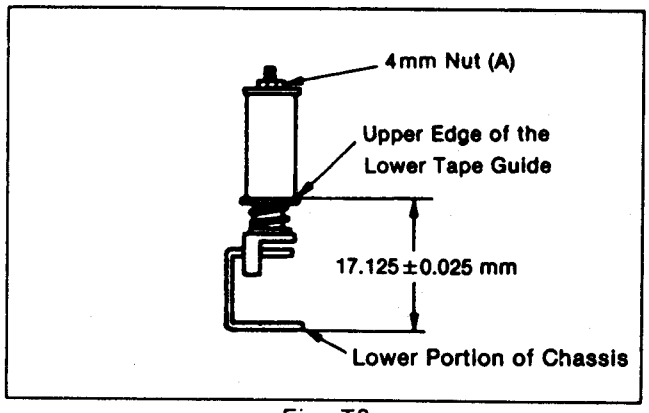


Fig. T3

Confirmation of Tape Travel

(1) Playback a cassette tape and confirm that the tape travels without curling at upper and lower guides on posts T4, T2, S4 and S2 as shown in Fig.T4.

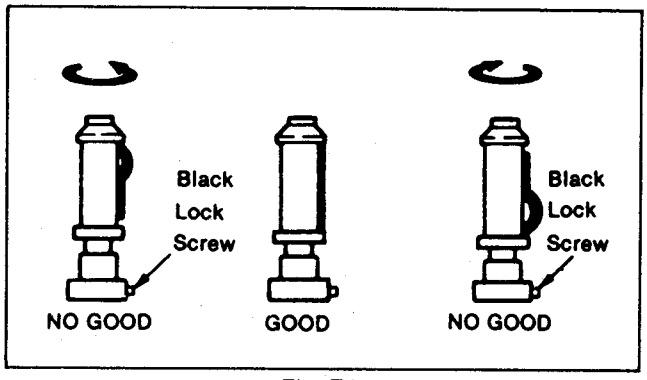


Fig. T4

(2) If curling is apparent adjust the height of posts by turning the top of post with Hex Wrench.

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

2-5-3. TAPE INTERCHANGEABILITY ADJUSTMENT

NOTE:
1) To perform these adjustment / confirmation procedures make sure that the Tracking Control is set in fixed position by pushing both of the Tracking Control Up/Down switches simultaneously.
2) Before these adjustment/confirmation procedures,remove the cassette protective tape cover from a cassette tape or the Alignment tape (VFM8180HUPF).

***Equipment Reqaired**
Dual Trace Oscilloscope
Alignment tape (VFM8180HUPF)

2-5-4. CONFIRMATION OF TAPE TRAVEL

(1) Confirmation of A/C Head. This confirmation is required when the A/C Head or capstan Motor is replaced and for preliminary height adjustment
(2) Looking at the lower edge of the Control Head with the tape in motion, ensure that lower edge of the tape runs 0.25mm above the lower edge of Control Head. If it doesn't turn the A/C Head Height Adjustment Nut slightly in either direction as necessary to correct it.

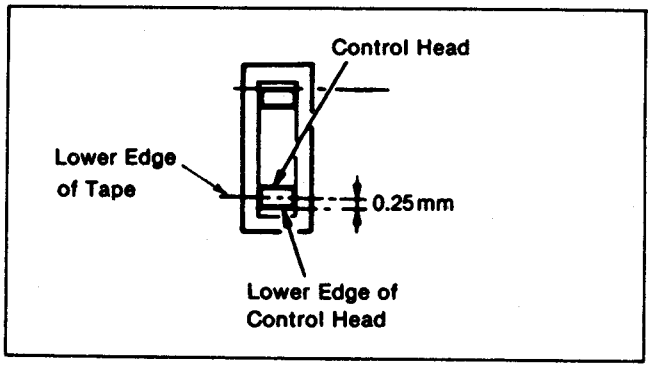


Fig.T5.

2-5-5. AZIMUTH ADJUSTMENT OF A/C HEAD.

(1) Connect the oscilloscope to Audio Line Output.
(2) Playback the Monoscope portion(6KHz, Mono) of the Alignment Tape.
(3) Adjust the Azimuth Adjustment Screw on the A/C Head Base as shown in Fig.T6 so that output level is at a maximum.

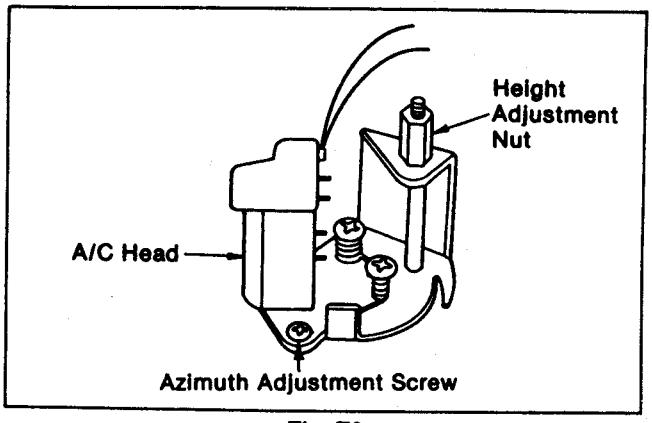


Fig. T6

2-5-6. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

(1) Set the Tracking Control to the fixed position by pushing both of the Tracking Control Up/Down switches simultaneously.
Connect the oscilloscope to TP8002.

(2) Playback the monoscope portion of the alignment tape and confirm that RF envelope appears as show Fig. T7

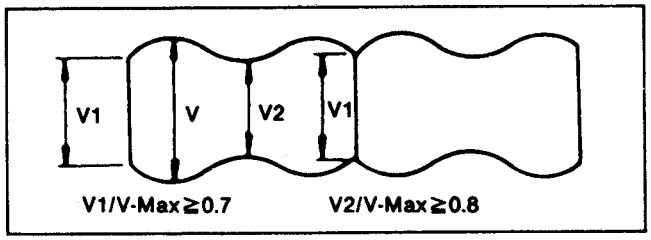


Fig. T7

(3) If adjustment is required, slowly move the A/C Head Base back and forth using the H-Position adjustment screwdriver(VFK0743) by turning screw(D) so that envelope is at a maximum.

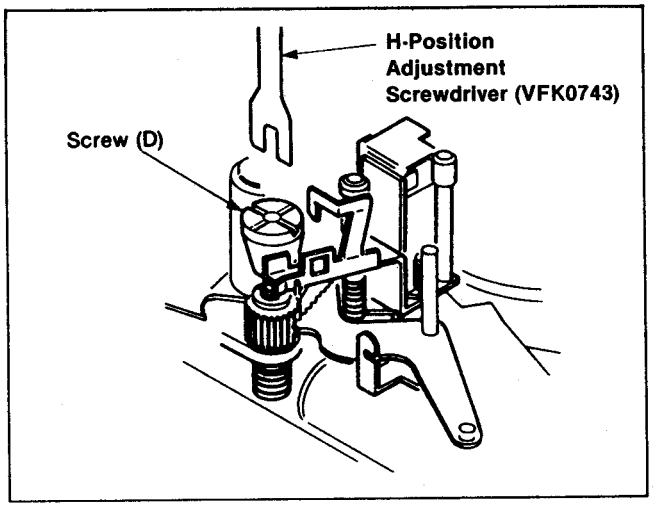


Fig. T8

(4) Confirmation of the correct adjustment can be made by alternately pushing the Tracking Control Up/Down Switches, to check the symmetry of the envelope.

(5) Reconfirm the symmetry of the envelope. If it has changed, repeat step(3) and (4).

2-5-7. CONFIRMATION/ADJUSTMENT OF ENVELOPE OUTPUT

(1) Set the Tracking Control to the fixed position by pushing both of the Tracking Control Up/Down Switches simultaneously, connect the Oscilloscope to TP8002.

(2) Playback the Monoscope portion of the Alignment Tape and adjust the height of posts S2, T1 posts watching the scope display so that the envelope becomes as flat as possible. (V1/V-MAX>=0.7, V2/V-MAX>=0.8)
If adjustment is required, turn top of post with Hex, wrench for adjustment of S2 and T1.

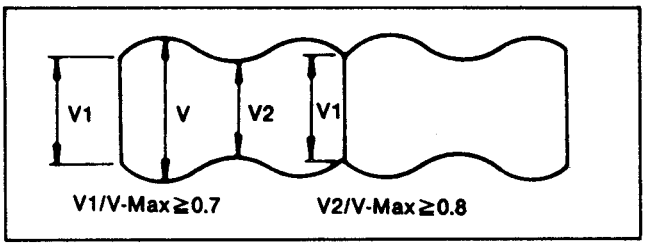


Fig. T9

(3) When the scope display is shown in Fig. T10 adjust the heihgt of S2 so that the wave looks like Fig.T12.

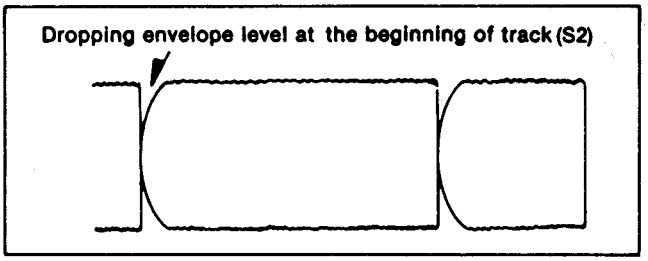


Fig. T10

(4) When the scope display is shown in Fig.T11. adjust the height of T1 so that the wave looks like Fig.T12.

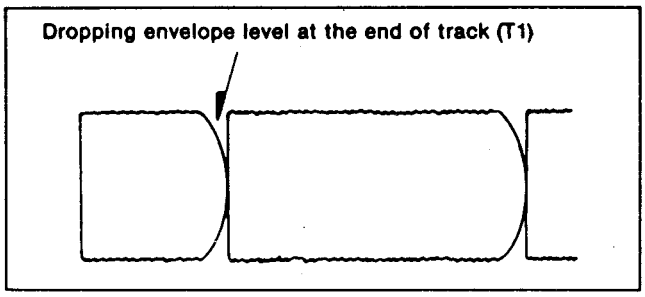


Fig. T11

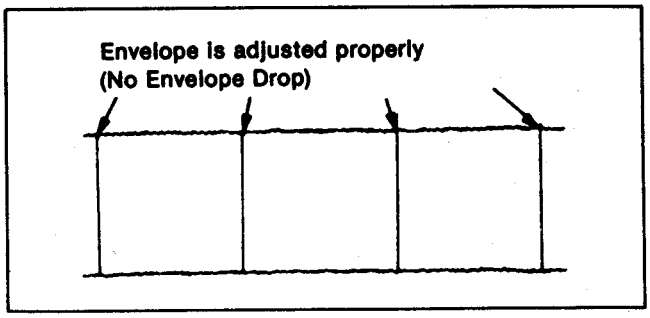


Fig. T12

Note: Adjustment procedure supplement for camera unit is separate volume from now.
Please refer to following manual for detail of adjustment procedure of camera.
Order number for adjustment procedure (camera) supplement: VMD9301M104.
(It will be supplied a few weeks later.)

2-6. ELECTRICAL ADJUSTMENT PROCEDURES

2-6-1. ELECTRICAL ADJUSTMENT FOR VTR SECTION

TEST EQUIPMENT AND TOOLS

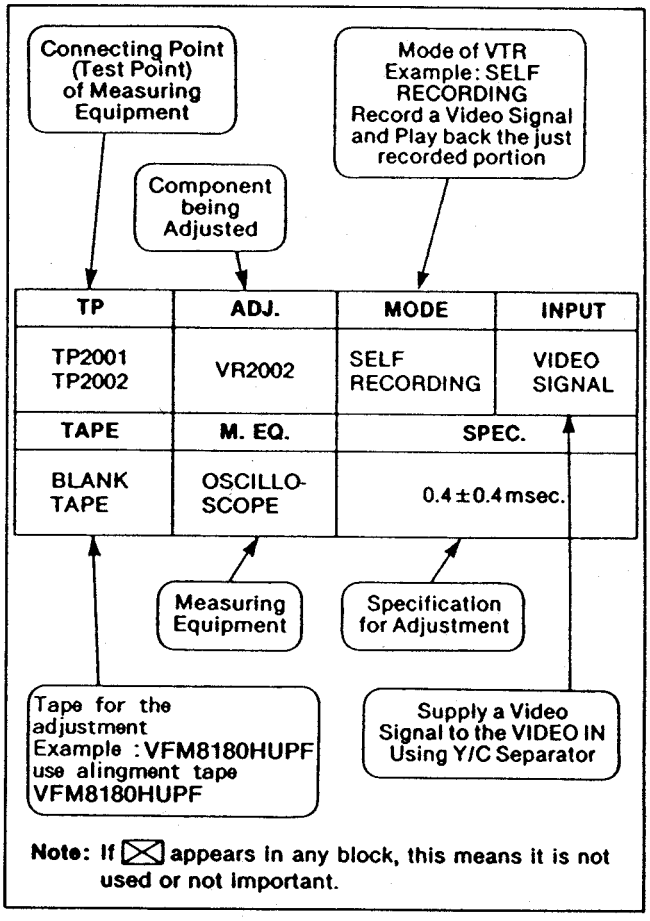
The following equipment is required for adjustment of the VTR section of VHS-Movie.

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-C-Movie Alignment Tape(VFM8180HUPF)
9. VHS-C 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 is necessary.
   VFK0825
   (Camera Main(FP301) to VTR Main(FP1002))
   VFK0885
   (Camera Main(P301) to EVF (P802))
   VFK0888
   (Camera Main(B302) to Camera Operation)
   VFK0888
   (VTR Main(B4003) to AV-JACK)

HOW TO READ THE ADJUSTMENT PROCEDURES



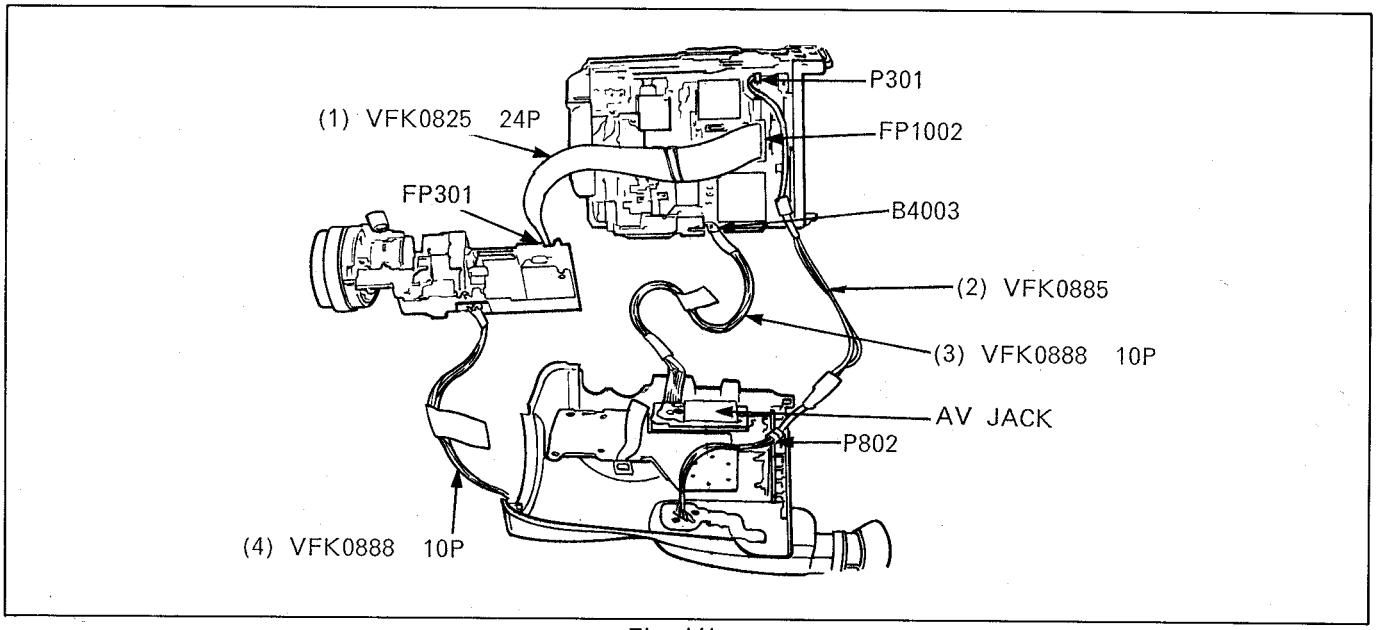


Fig. V1

Note 1:
TRIGGERING THE OSCILLOSCOPE

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

H. rate : (video output)
V. rate : CKE6(B6002–6) (Head Switching signal)

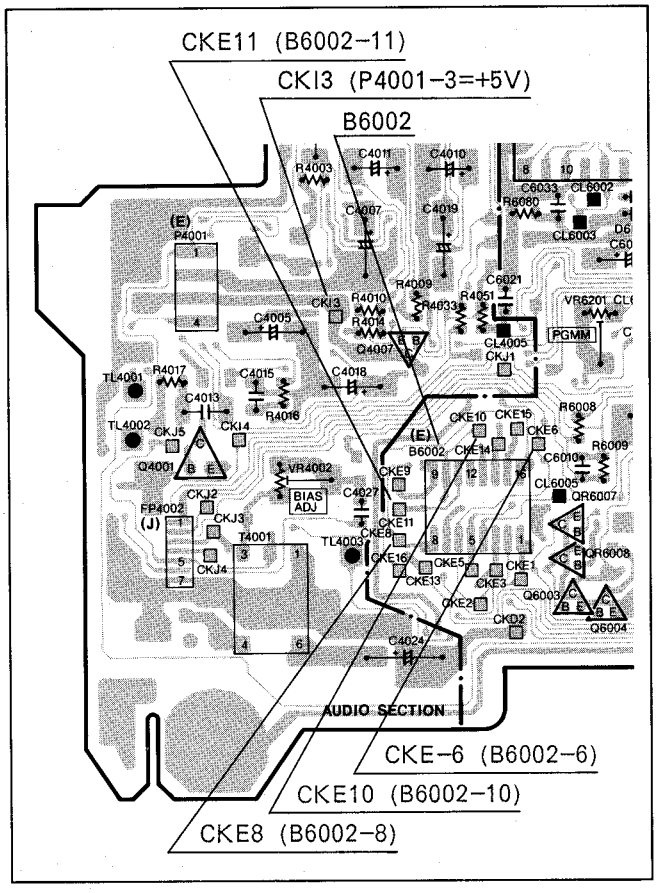


Fig. V2

SERVO SECTION

1. 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
B6002 ⑥ CKE-6 VIDEO OUT	VR6701	PLAY	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE (VFM8180HUPF)	OSCILLO-SCOPE	6.5H±0.5H	

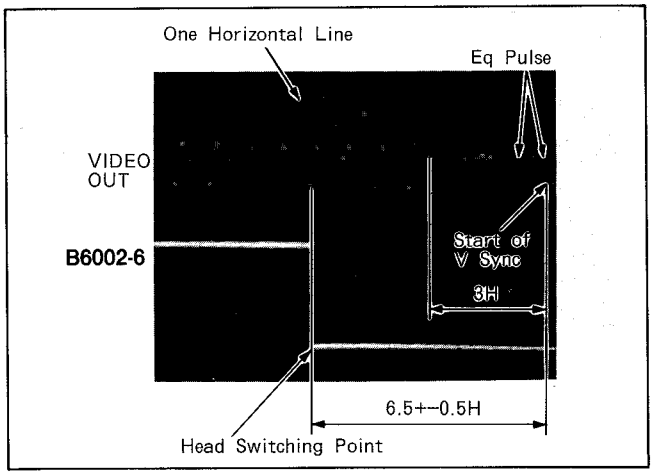


Fig. V3

LUMINANCE & CHROMINANCE SECTION

2. 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/PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
VHS BLANK TAPE	OSCILLO-SCOPE	12+–2mVp-p	

Note 1:
Cover the Lens 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. Make recording with SP mode.
3. Eliminate luminance signal by turning off.
4. Adjust the VR8001 so that chroma level is 12+–2mVp–p.

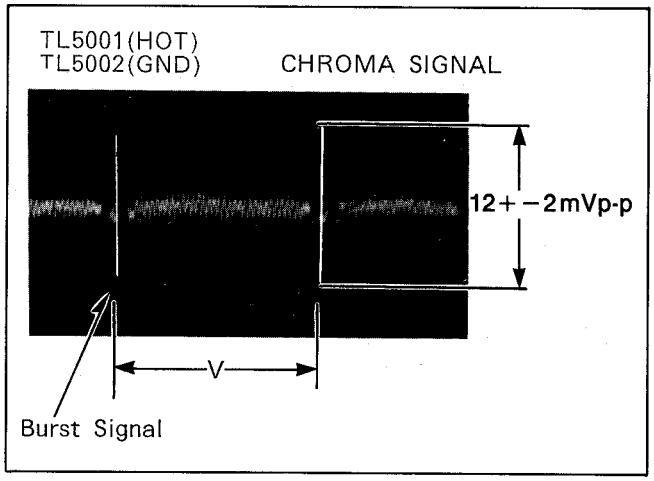


Fig. V4

3. LUMINANCE RECORDING CURRENT ADJUSTMENT

Purpose:
Set the optimum Recording Lumnance 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/PLAY	DARK PICTURE
TAPE	**M. EQ.**	**SPEC.**	
VHS-C BLANK TAPE	OSCILLO-SCOPE	110±4mVp-p	

Note:
Cover the Lens with cap.

1. Connect the oscilloscope to TL5001(HOT) and TL5002(GND).
2. Aim the camera a colour bar.
3. Make recording with SP mode.
4. Adjust the VR3001 so that luminance level is 110+−4mVp−p.

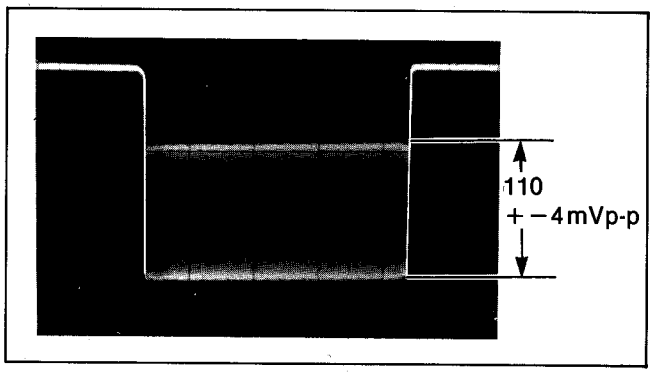


Fig. V5

4. YNR ADJUSTMENT

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

Symptom of Misadjustment:

TP	ADJ.	MODE	CHART
TL3004	VR3002	PLAY	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFM8180HUPF	OSCILLO-SCOPE	SIGNAL IS MINIMIZED (LESS THAN 50mV)	

1. Play Back the Alignment tape.
2. Connect the ocilloscope to TL3004.
3. Adjust VR3002 so that signal is minimized.

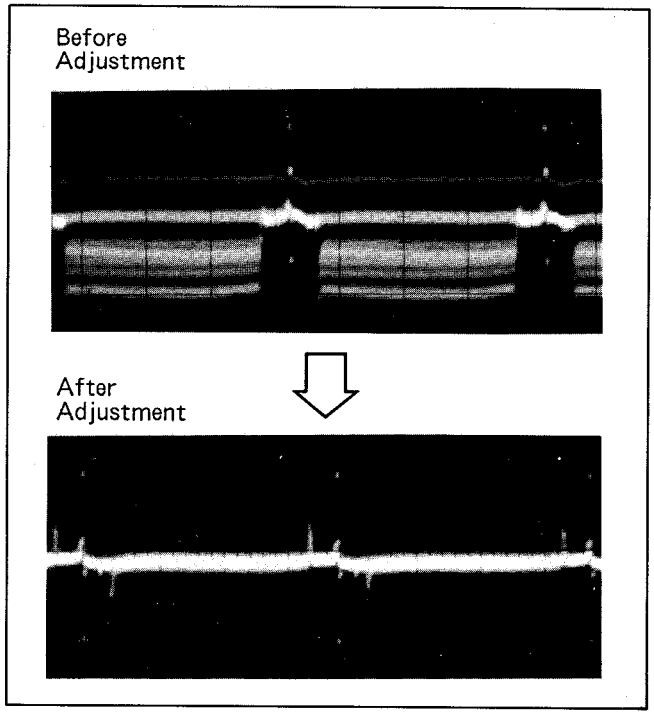


Fig. V6

5. 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	VR3003	SELF RECORDING	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	VIDEO SWEEP/ OSCILLO-SCOPE	A=0dB+−1dB (89∼112%)	

Note 1:
Process C.B.A. must be remove.

Note 2:
Connect the jumper wire between CKE8, CKE11 and CKI3. After that video signal can be input through CKE10(G6002−10).

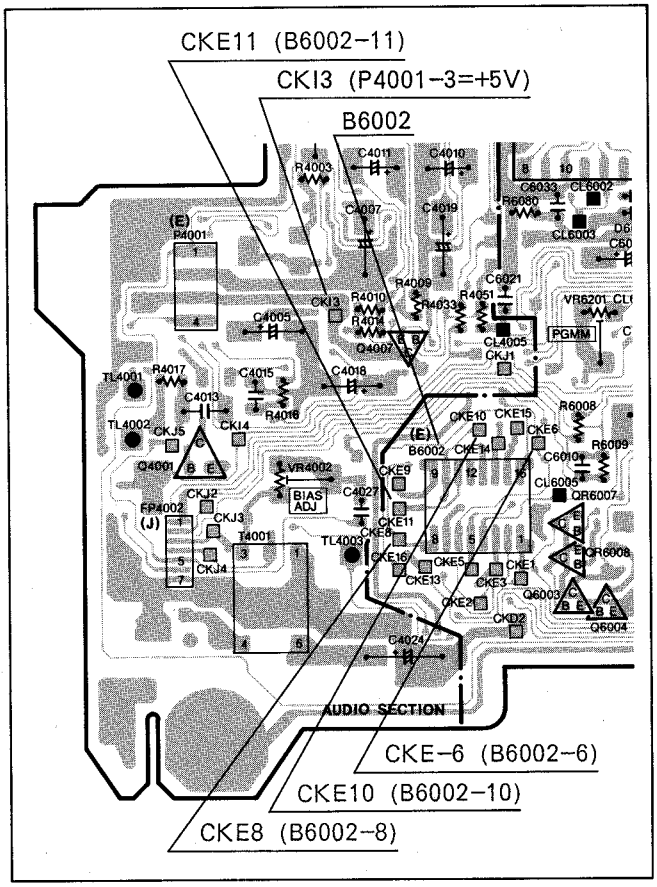


Fig. V7

1. Set the sweep generator output as shown below.

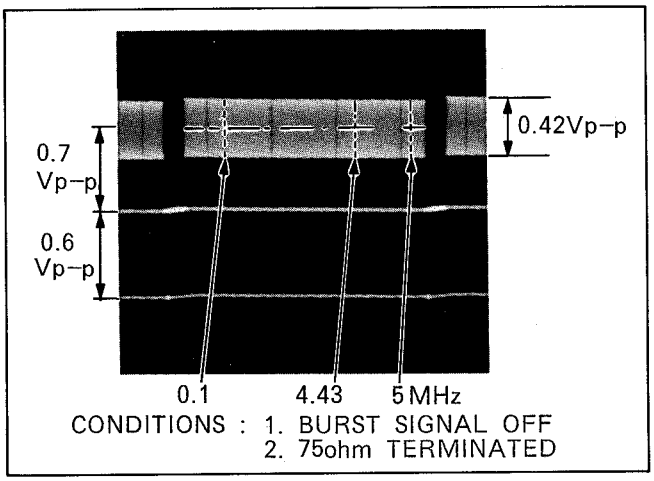


Fig. V8

2. Supply sweep signal to CKE10(B6002−10).
3. Record the signal for ten minutes.
4. Play back the recorded signal.
5. Adjust VR3003 so that the level is within the 2MHz spec. as shown below.

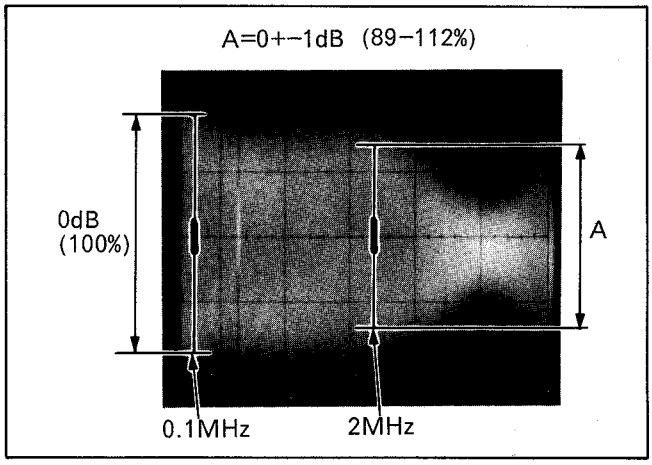


Fig. V9

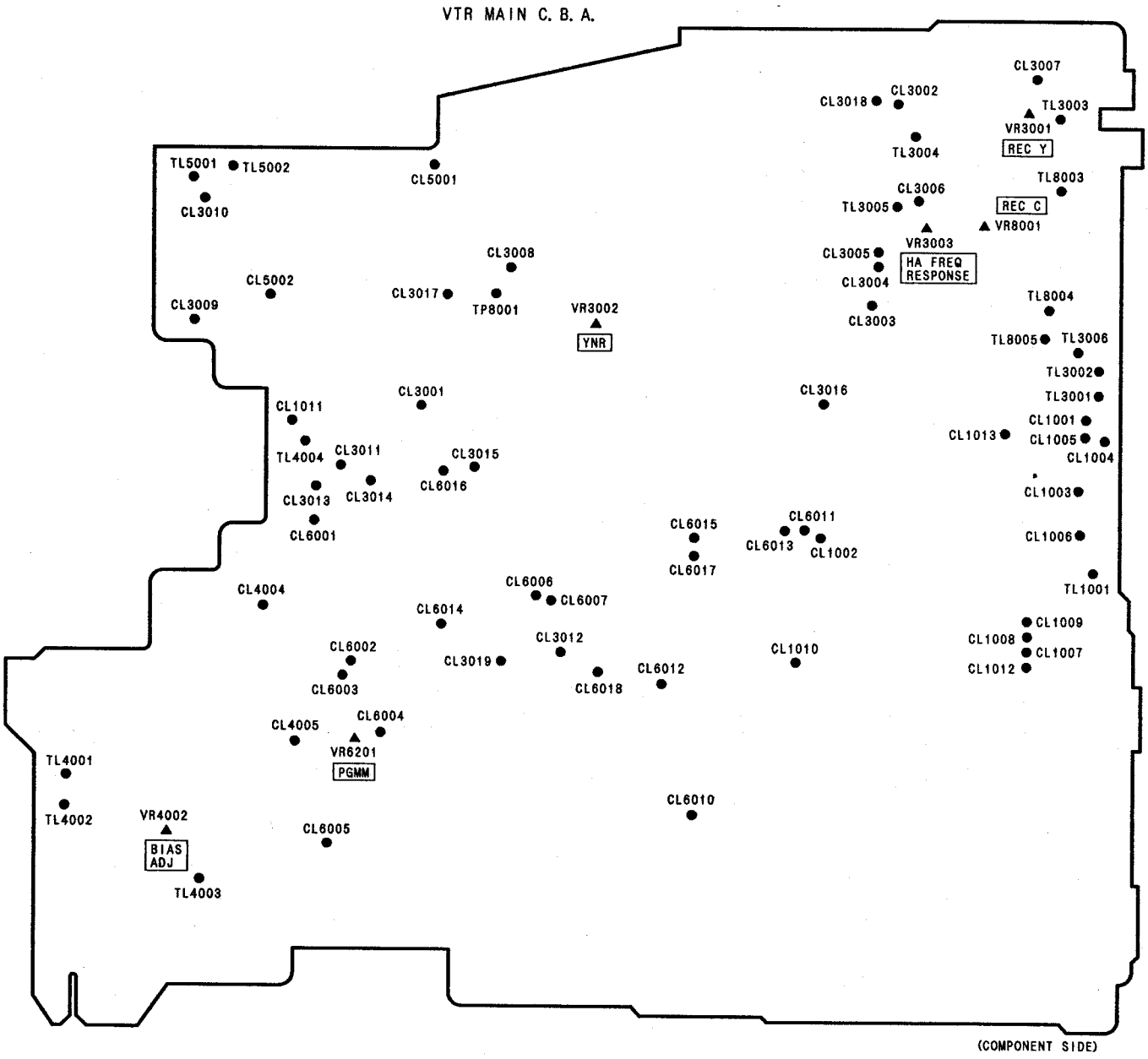
AUDIO SECTION

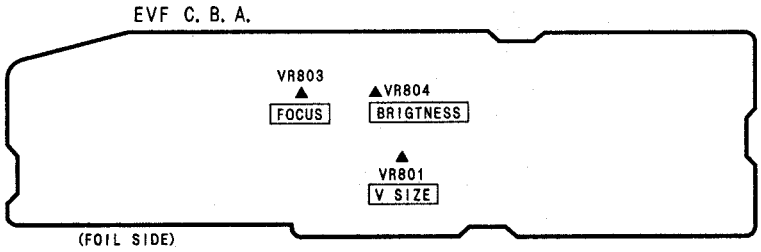
6. AUDIO BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TL4001 (HOT) TL4002 (GND)	VR4002	REC	disconnect P4001
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	oscilloscope (V.T.V.M.)	7.6+−0.3mVp−p (2.7mVrms+−0.1mVrms)	

Note:
Connector(P4001) must be disconnected.

LOCATION OF TEST POINTS & CONTROLS





2-6-2. 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.

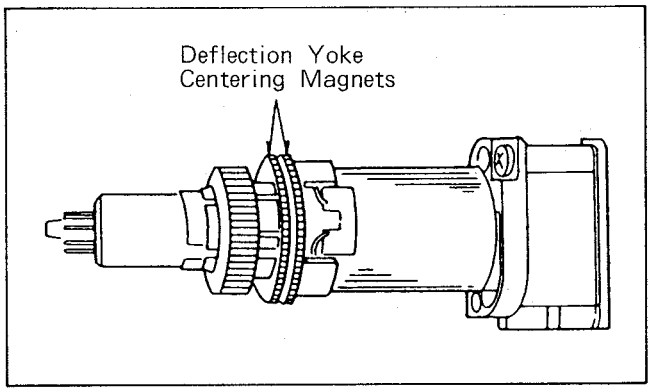


Fig. E1

2. FOCUS ADJUSTMENT

TP	ADJ.	LENS CAP	CHART
	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
	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.

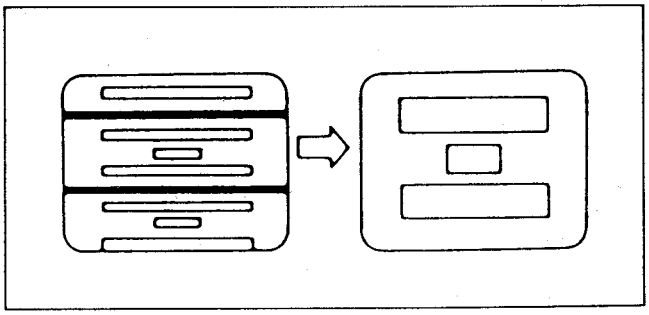


Fig. E2

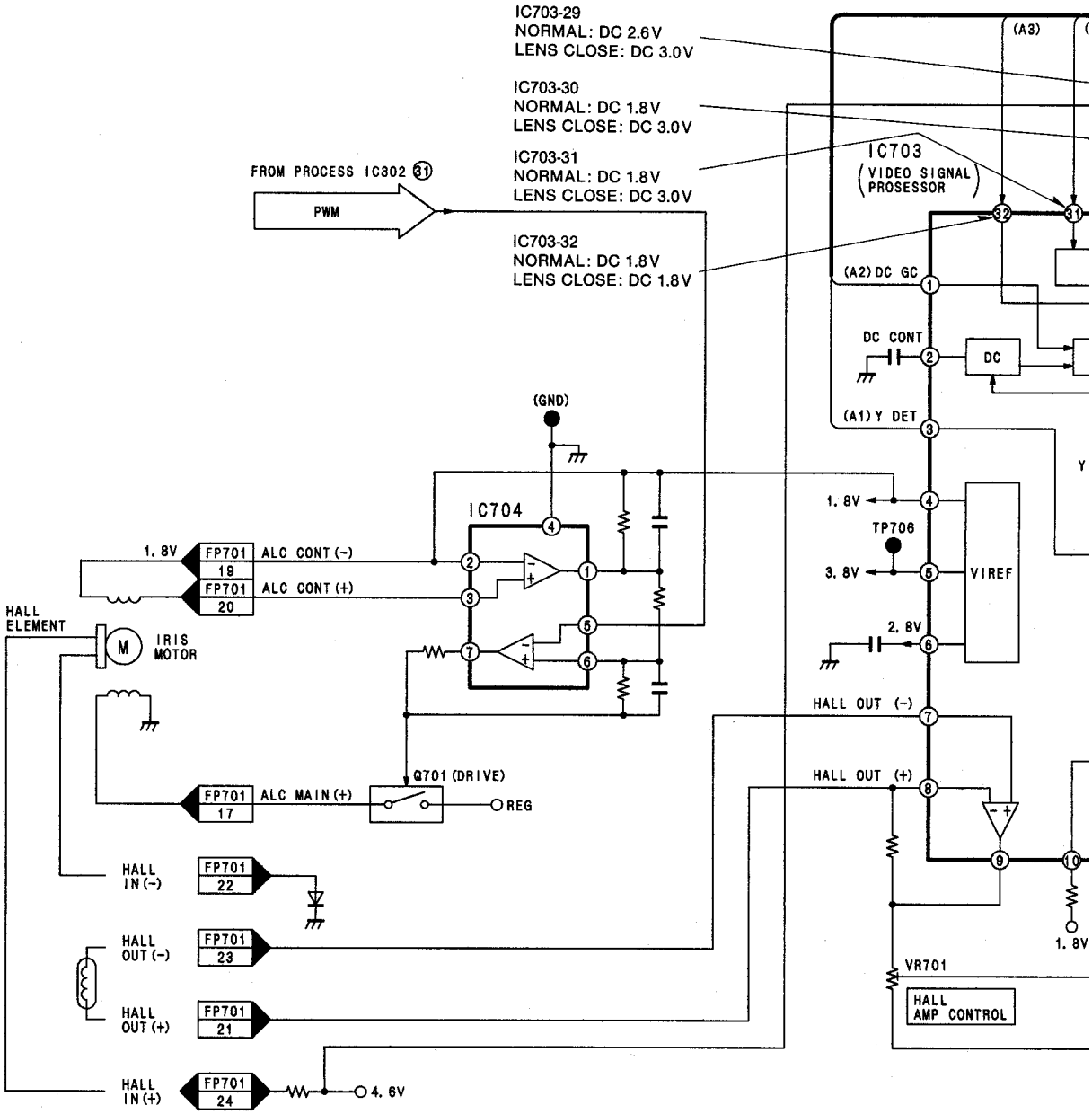
4. BRIGHTNESS ADJUSTMENT

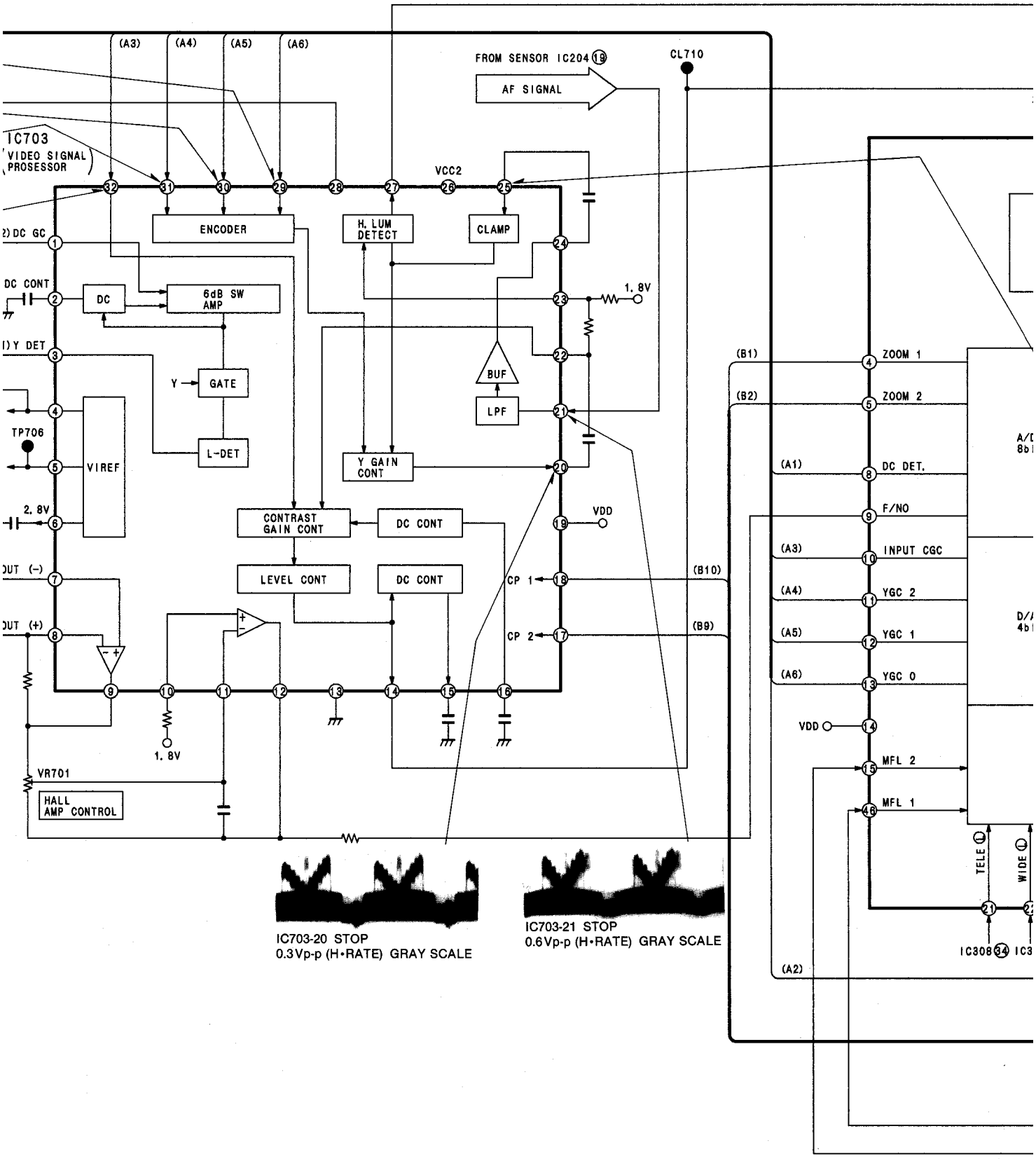
TP	ADJ.	LENS CAP	CHART
	VR804	NO	GRAY SCALE CHART
M. EQ.		SPEC.	
VIEWFINDER		NATURAL GRADATION	

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.

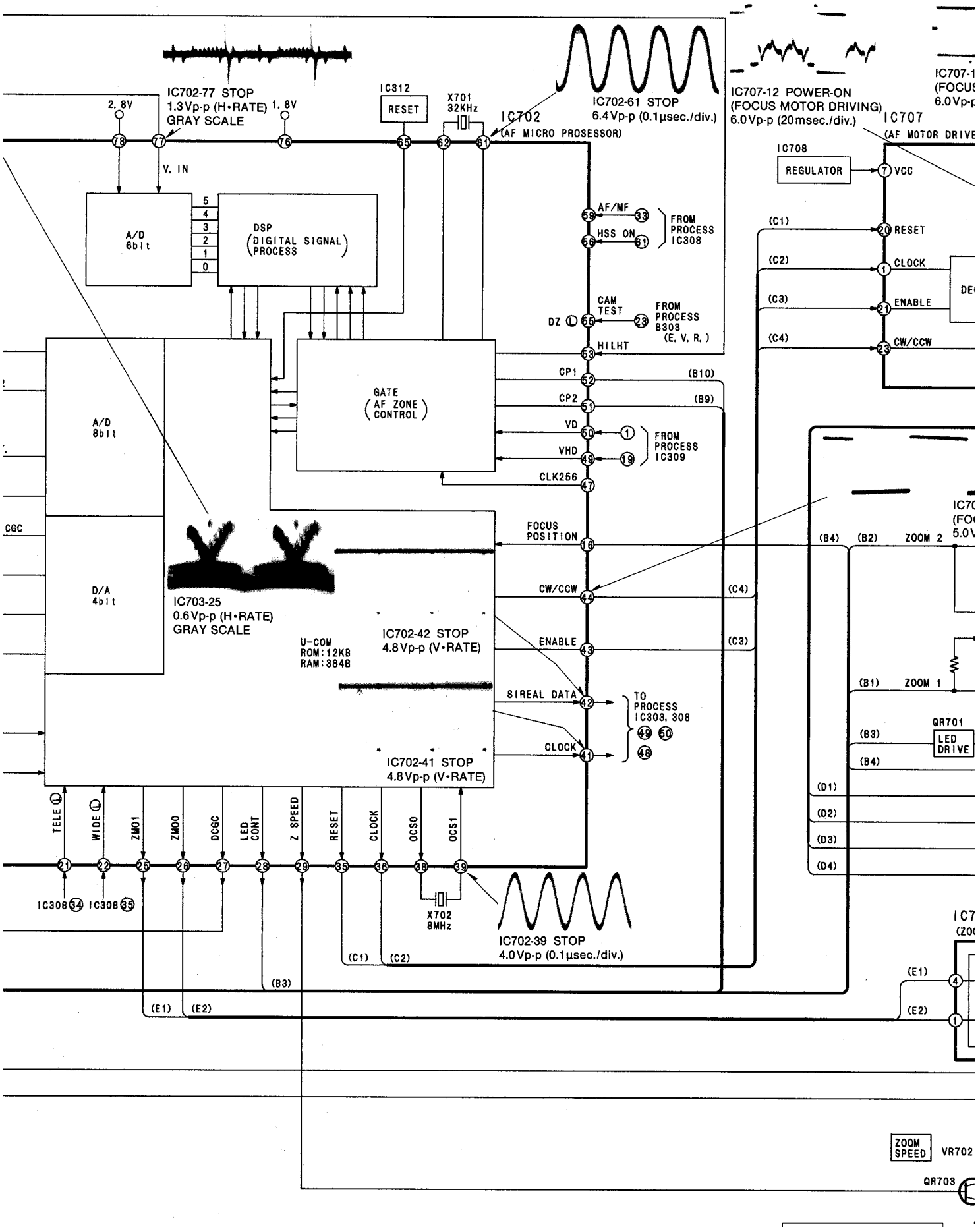
3-2. AUTO FOCUS BLOCK DIAGRAM

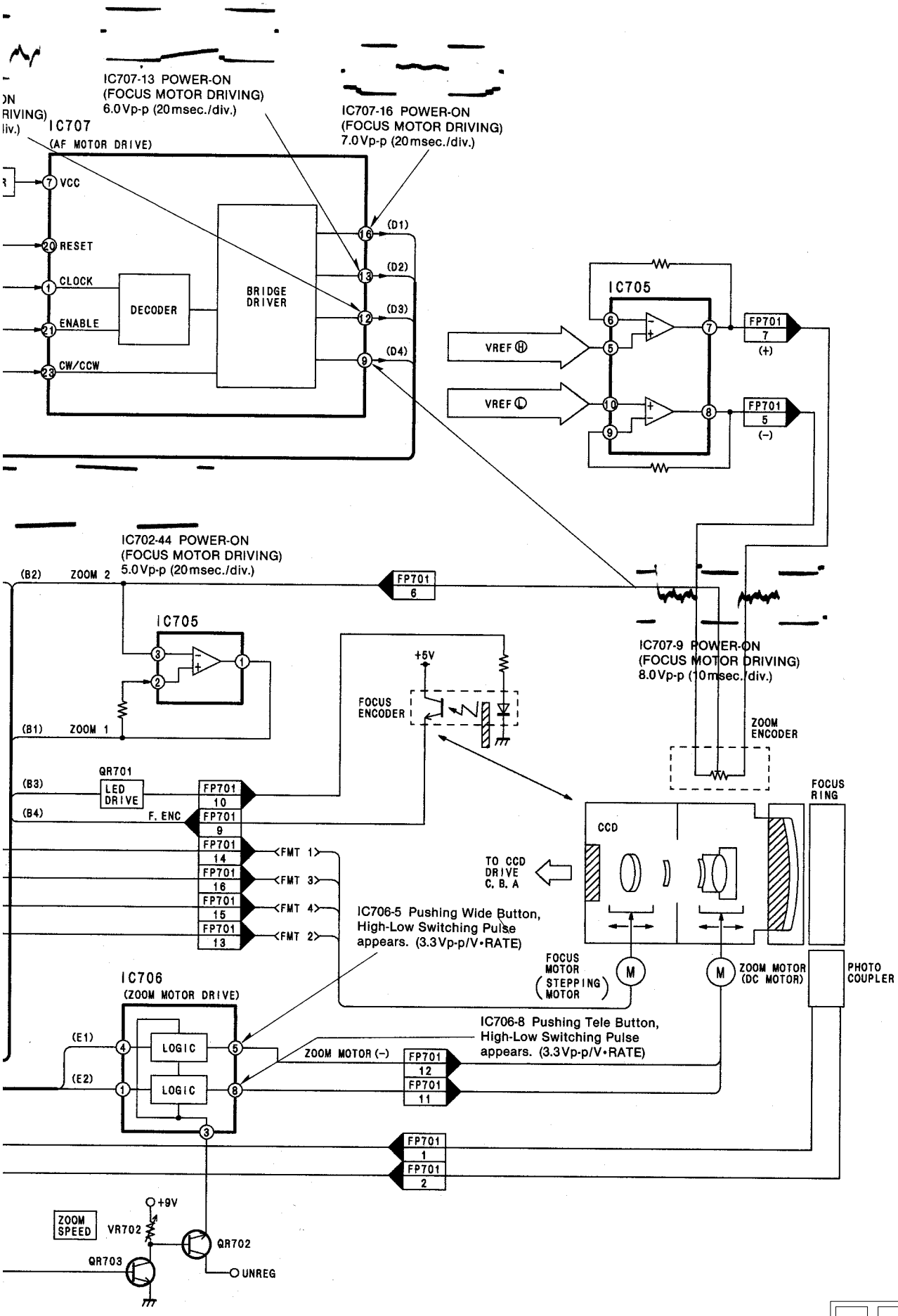




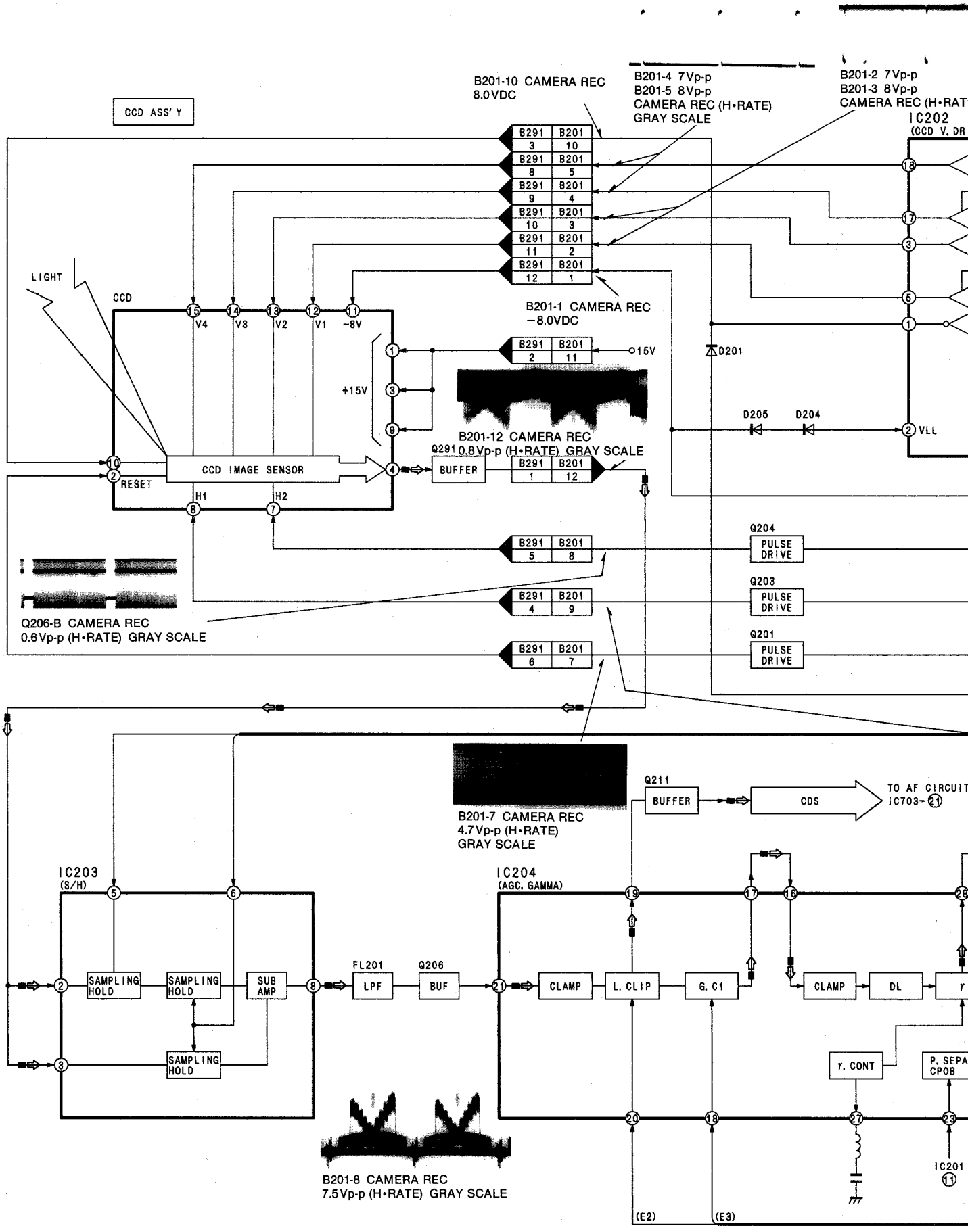
IC703-20 STOP
0.3Vp-p (H•RATE) GRAY SCALE

IC703-21 STOP
0.6Vp-p (H•RATE) GRAY SCALE


IC702-77 STOP
1.3Vp-p (H•RATE)
GRAY SCALE
2.8V
1.8V
IC312
RESET
X701
32KHz
IC702
(AF MICRO PROSESSOR)
IC702-61 STOP
6.4Vp-p (0.1μsec./div.)
IC707-12 POWER-ON
(FOCUS MOTOR DRIVING)
6.0Vp-p (20msec./div.)
IC707
(AF MOTOR DRIVE
IC708
REGULATOR
V. IN
A/D
6bit
DSP
(DIGITAL SIGNAL
PROCESS)
AF/MF
HSS ON
FROM
PROCESS
IC308
CAM
TEST
DZ
FROM
PROCESS
B303
(E. V. R.)
HILHT
CP1
CP2
VD
VHD
FROM
PROCESS
IC309
CLK256
GATE
(AF ZONE
CONTROL)
A/D
8bit
D/A
4bit
CGC
IC703-25
0.6Vp-p (H•RATE)
GRAY SCALE
U-COM
ROM:12KB
RAM:384B
IC702-42 STOP
4.8Vp-p (V•RATE)
IC702-41 STOP
4.8Vp-p (V•RATE)
FOCUS
POSITION
CW/CCW
ENABLE
SIREAL DATA
CLOCK
TO
PROCESS
IC303, 308
RESET
ENABLE
CLOCK
CW/CCW
VCC
ZOOM 2
ZOOM 1
QR701
LED
DRIVE
TELE
WIDE
ZMO1
ZMOO
DCGC
LED
CONT
Z SPEED
RESET
CLOCK
OCSO
OCS1
IC308
IC308
X702
8MHz
IC702-39 STOP
4.0Vp-p (0.1μsec./div.)
ZOOM
SPEED
VR702
QR703


IC707-13 POWER-ON
(FOCUS MOTOR DRIVING)
6.0Vp-p (20msec./div.)
IC707-16 POWER-ON
(FOCUS MOTOR DRIVING)
7.0Vp-p (20msec./div.)
IC707
(AF MOTOR DRIVE)
VCC
RESET
CLOCK
ENABLE
CW/CCW
DECODER
BRIDGE DRIVER
(D1)
(D2)
(D3)
(D4)
IC705
VREF Ⓗ
VREF Ⓛ
FP701 7 (+)
FP701 5 (-)
IC702-44 POWER-ON
(FOCUS MOTOR DRIVING)
5.0Vp-p (20msec./div.)
(B2) ZOOM 2
FP701 6
IC705
(B1) ZOOM 1
IC707-9 POWER-ON
(FOCUS MOTOR DRIVING)
8.0Vp-p (10msec./div.)
+5V
FOCUS ENCODER
ZOOM ENCODER
QR701
(B3) LED DRIVE
(B4) F. ENC
FP701 10
FP701 9
FP701 14 <FMT 1>
FP701 16 <FMT 3>
FP701 15 <FMT 4>
FP701 13 <FMT 2>
FOCUS RING
CCD
TO CCD DRIVE C. B. A
IC706-5 Pushing Wide Button,
High-Low Switching Pulse
appears. (3.3Vp-p/V•RATE)
FOCUS MOTOR (STEPPING MOTOR)
ZOOM MOTOR (DC MOTOR)
PHOTO COUPLER
IC706
(ZOOM MOTOR DRIVE)
(E1)
(E2)
LOGIC
LOGIC
ZOOM MOTOR (-)
IC706-8 Pushing Tele Button,
High-Low Switching Pulse
appears. (3.3Vp-p/V•RATE)
FP701 12
FP701 11
FP701 1
FP701 2
+9V
ZOOM SPEED
VR702
QR702
QR703
UNREG

3-3. CCD DRIVE BLOCK DIAGRAM



VIDEO SIGNAL

B201-2 7Vp-p
B201-3 8Vp-p
CAMERA REC (H•RATE) GRAY SCALE

IC202
(CCD V. DRIVE)

IC201
(CCD PULSE GEN.)

Q202
MIDDLE LEVEL

25. 75MHz
OSC
X201
C201
PLL VOLTAGE CONTROL

TO PROCESS

IC201-17 CAMERA REC
3.5Vp-p (H•RATE)
GRAY SCALE

TO AF CIRCUIT
IC703-21

B201-9 CAMERA REC
7.5Vp-p (H•RATE) GRAY SCALE

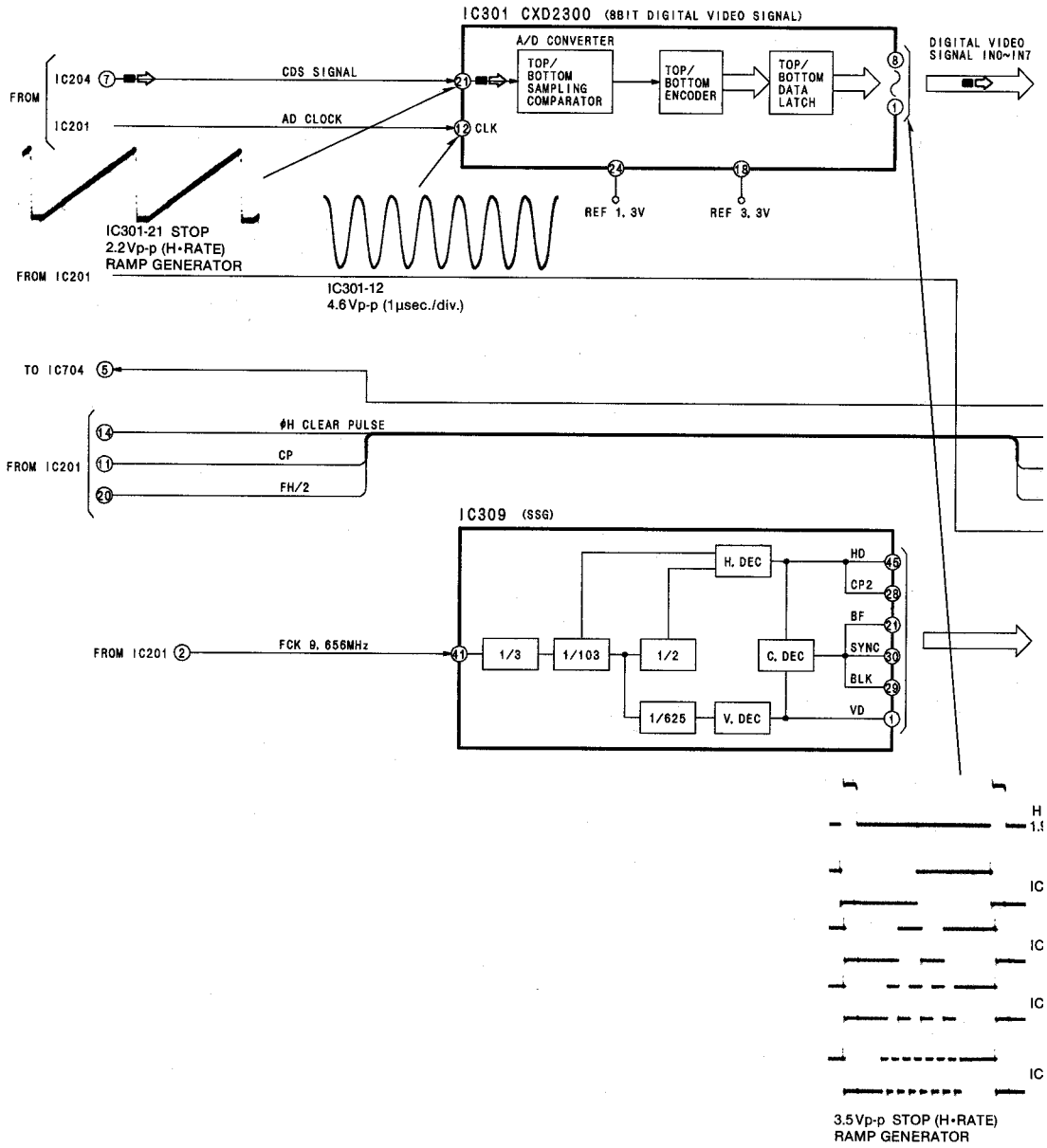
Q208
BUF
VR201
SUB

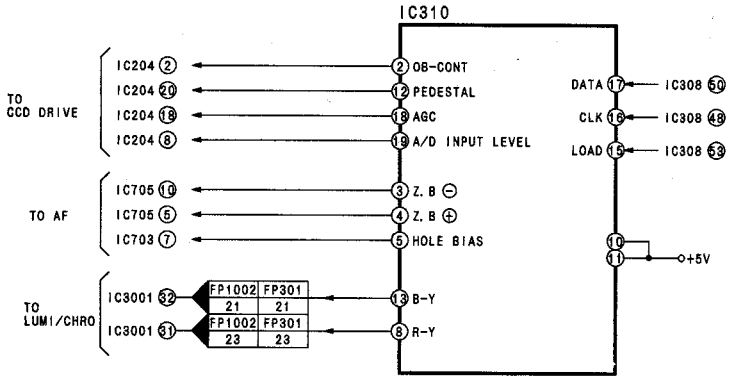
DL
Y
CLAMP
PRI BLK
G. C
DC CONT
Y. CONT
P. SEPA CP0B
P. SEPA CP2
V. REF4 1. 8V
V. REF2 3. 3V
V. REF1 1. 3V
V. REF3 1. 3~1. 6V

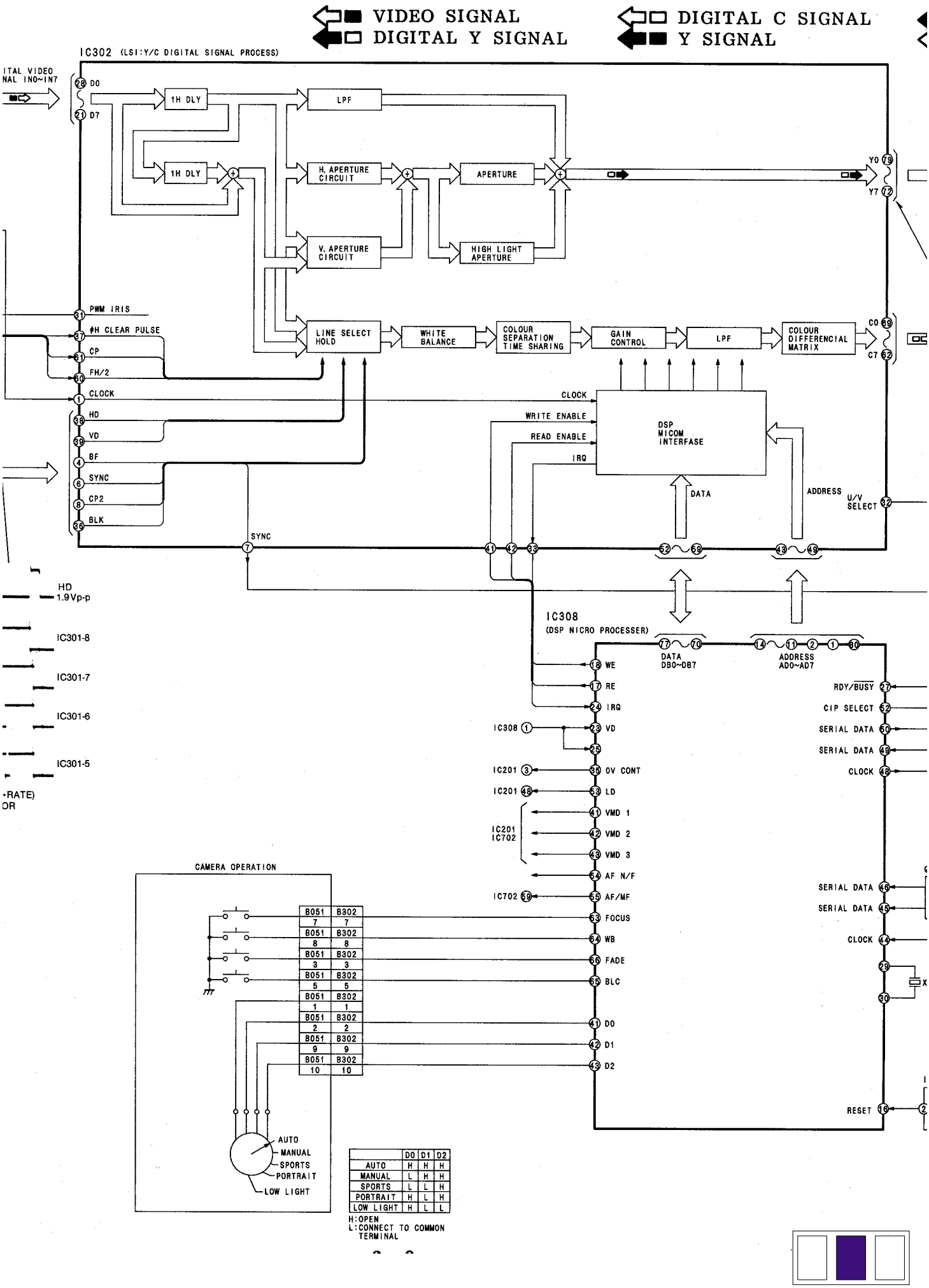
FROM IC310-19
TO IC301-21
FROM IC310

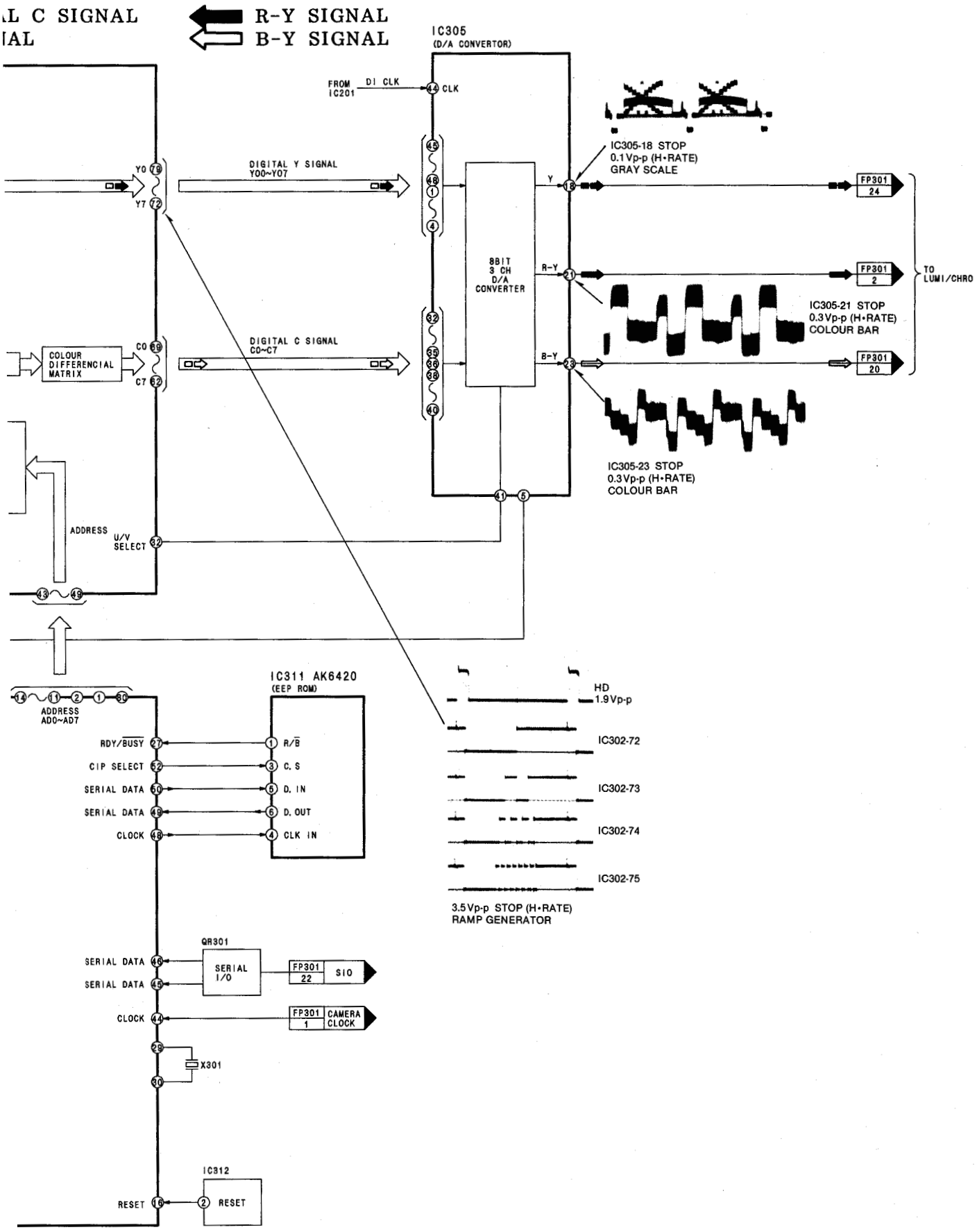
IC204-7 CAMERA REC
1.4Vp-p (H•RATE) GRAY SCALE

3-4. PROCESS BLOCK DIAGRAM

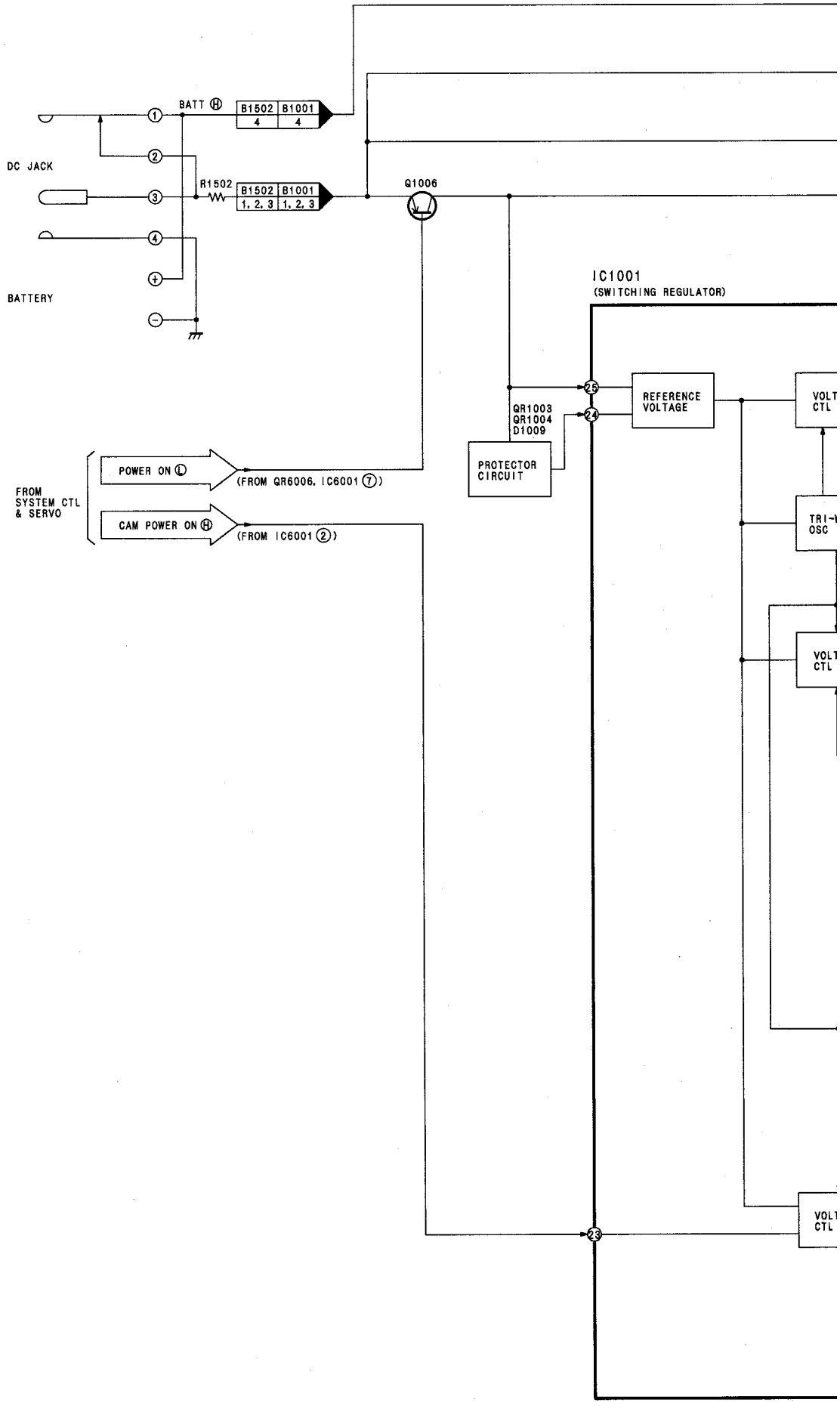


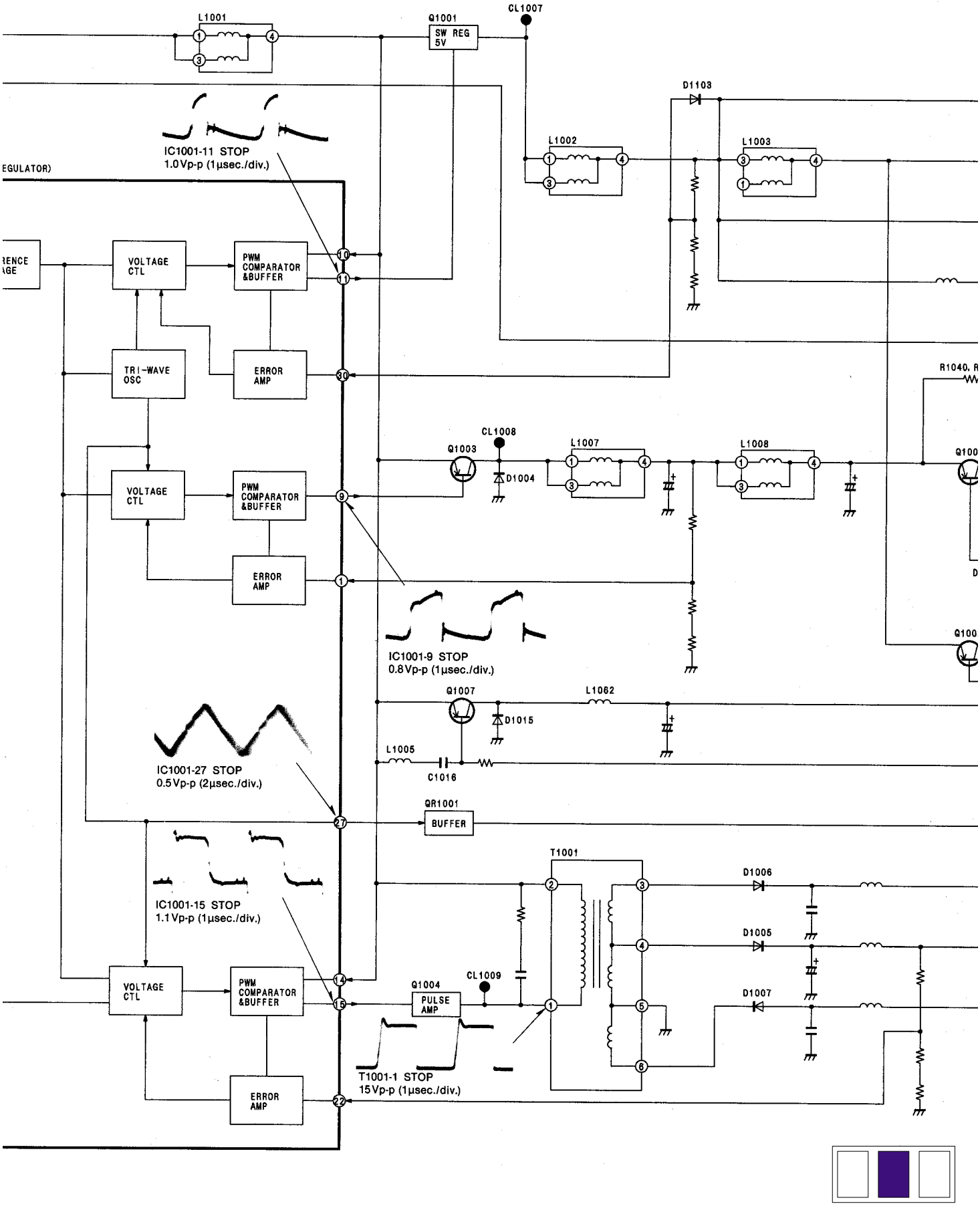


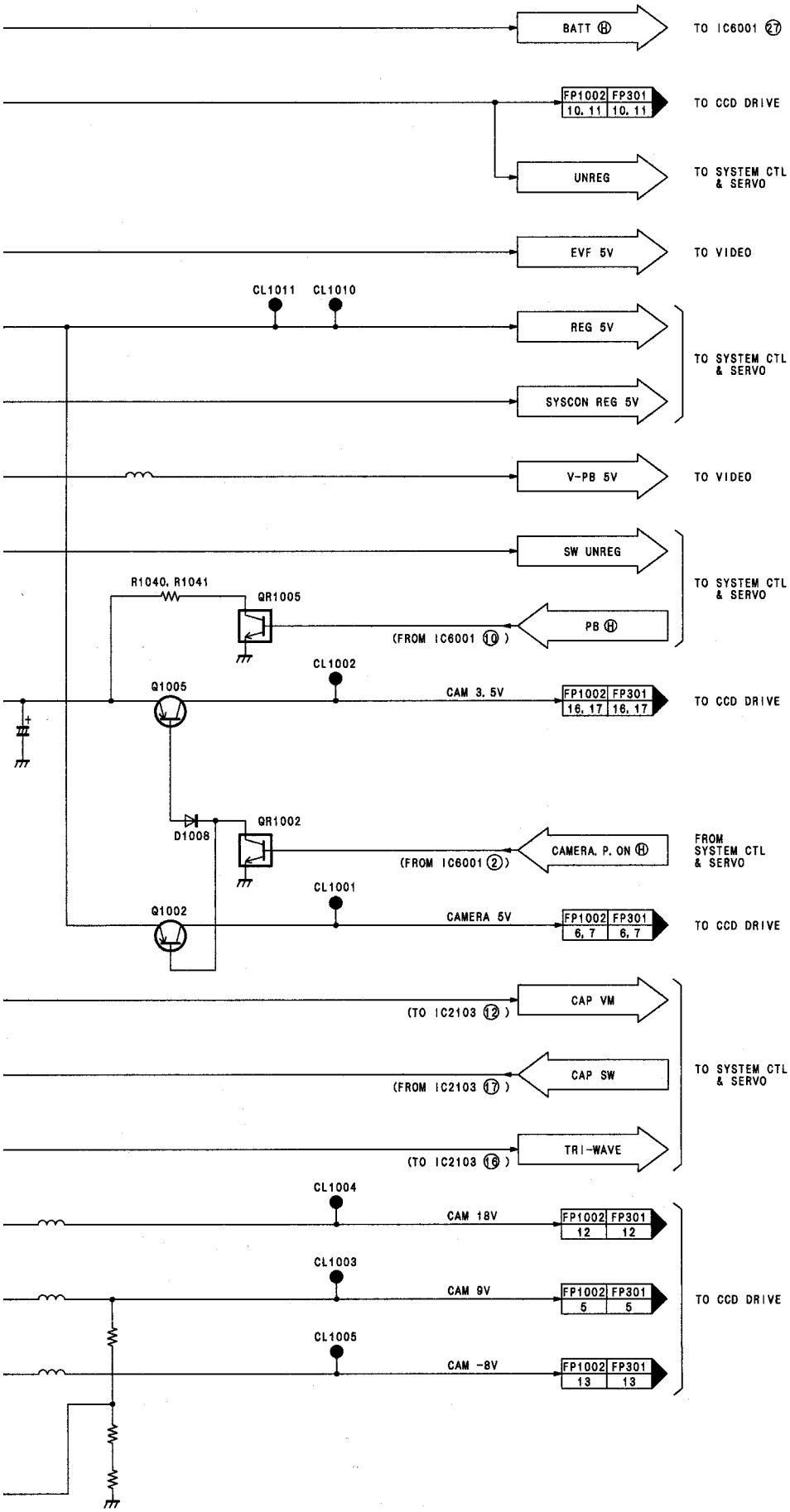

VIDEO SIGNAL
DIGITAL Y SIGNAL
DIGITAL C SIGNAL
Y SIGNAL
IC302 (LSI:Y/C DIGITAL SIGNAL PROCESS)
ITAL VIDEO
NAL IN0~IN7
D0
D7
1H DLY
1H DLY
LPF
H. APERTURE CIRCUIT
APERTURE
V. APERTURE CIRCUIT
HIGH LIGHT APERTURE
Y0
Y7
PWM IRIS
ΦH CLEAR PULSE
CP
FH/2
CLOCK
HD
VD
BF
SYNC
CP2
BLK
LINE SELECT HOLD
WHITE BALANCE
COLOUR SEPARATION TIME SHARING
GAIN CONTROL
LPF
COLOUR DIFFERENCIAL MATRIX
C0
C7
CLOCK
WRITE ENABLE
READ ENABLE
IRQ
DSP MICOM INTERFASE
DATA
ADDRESS
U/V SELECT
SYNC
HD
1.9Vp-p
IC301-8
IC301-7
IC301-6
IC301-5
·RATE)
OR
IC308
(DSP NICRO PROCESSER)
DATA DB0~DB7
ADDRESS AD0~AD7
WE
RE
IRQ
VD
OV CONT
LD
VMD 1
VMD 2
VMD 3
AF N/F
AF/MF
FOCUS
WB
FADE
BLC
D0
D1
D2
RDY/BUSY
CIP SELECT
SERIAL DATA
SERIAL DATA
CLOCK
SERIAL DATA
SERIAL DATA
CLOCK
RESET
IC308 1
IC201 3
IC201 48
IC201 IC702
IC702 59
CAMERA OPERATION
B051 B302
7 7
8 8
3 3
5 5
1 1
2 2
9 9
10 10
AUTO
MANUAL
SPORTS
PORTRAIT
LOW LIGHT
D0 D1 D2
AUTO H H H
MANUAL L H H
SPORTS L L H
PORTRAIT H L H
LOW LIGHT H L L
H:OPEN
L:CONNECT TO COMMON TERMINAL


L C SIGNAL
IAL
R-Y SIGNAL
B-Y SIGNAL
IC305
(D/A CONVERTOR)
FROM IC201
DI CLK
CLK
DIGITAL Y SIGNAL
Y00~Y07
Y0
Y7
8BIT
3 CH
D/A
CONVERTER
Y
R-Y
B-Y
IC305-18 STOP
0.1Vp-p (H-RATE)
GRAY SCALE
IC305-21 STOP
0.3Vp-p (H-RATE)
COLOUR BAR
IC305-23 STOP
0.3Vp-p (H-RATE)
COLOUR BAR
FP301
24
FP301
2
FP301
20
TO
LUMI/CHRO
COLOUR
DIFFERENCIAL
MATRIX
C0
C7
DIGITAL C SIGNAL
C0~C7
ADDRESS
U/V
SELECT
IC311 AK6420
(EEP ROM)
ADDRESS
AD0~AD7
RDY/BUSY
CIP SELECT
SERIAL DATA
SERIAL DATA
CLOCK
R/B
C. S
D. IN
D. OUT
CLK IN
HD
1.9Vp-p
IC302-72
IC302-73
IC302-74
IC302-75
3.5Vp-p STOP (H-RATE)
RAMP GENERATOR
QR301
SERIAL
I/O
SERIAL DATA
SERIAL DATA
CLOCK
FP301
22
SIO
FP301
1
CAMERA
CLOCK
X301
IC312
RESET
RESET

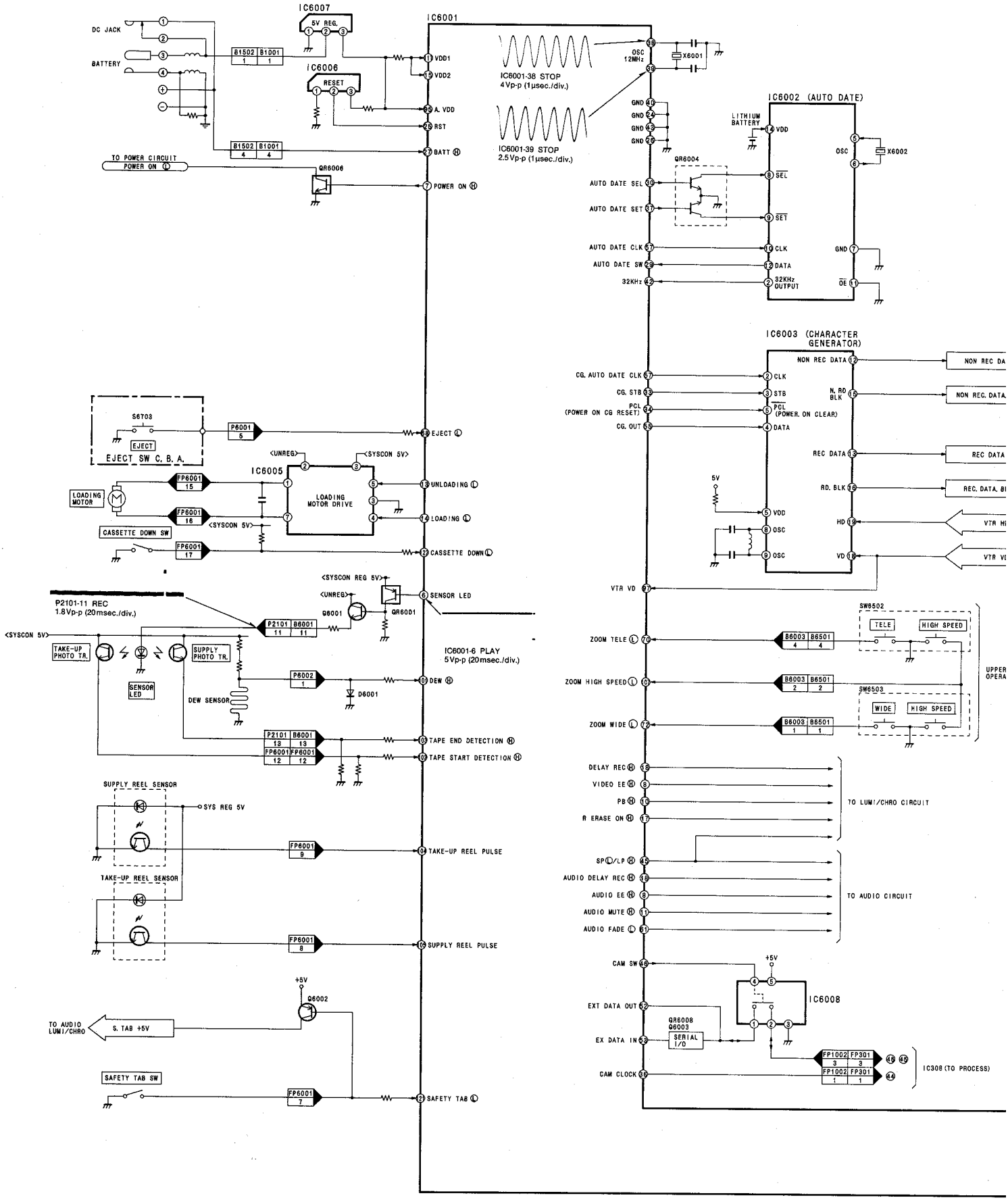
3-5. POWER BLOCK DIAGRAM

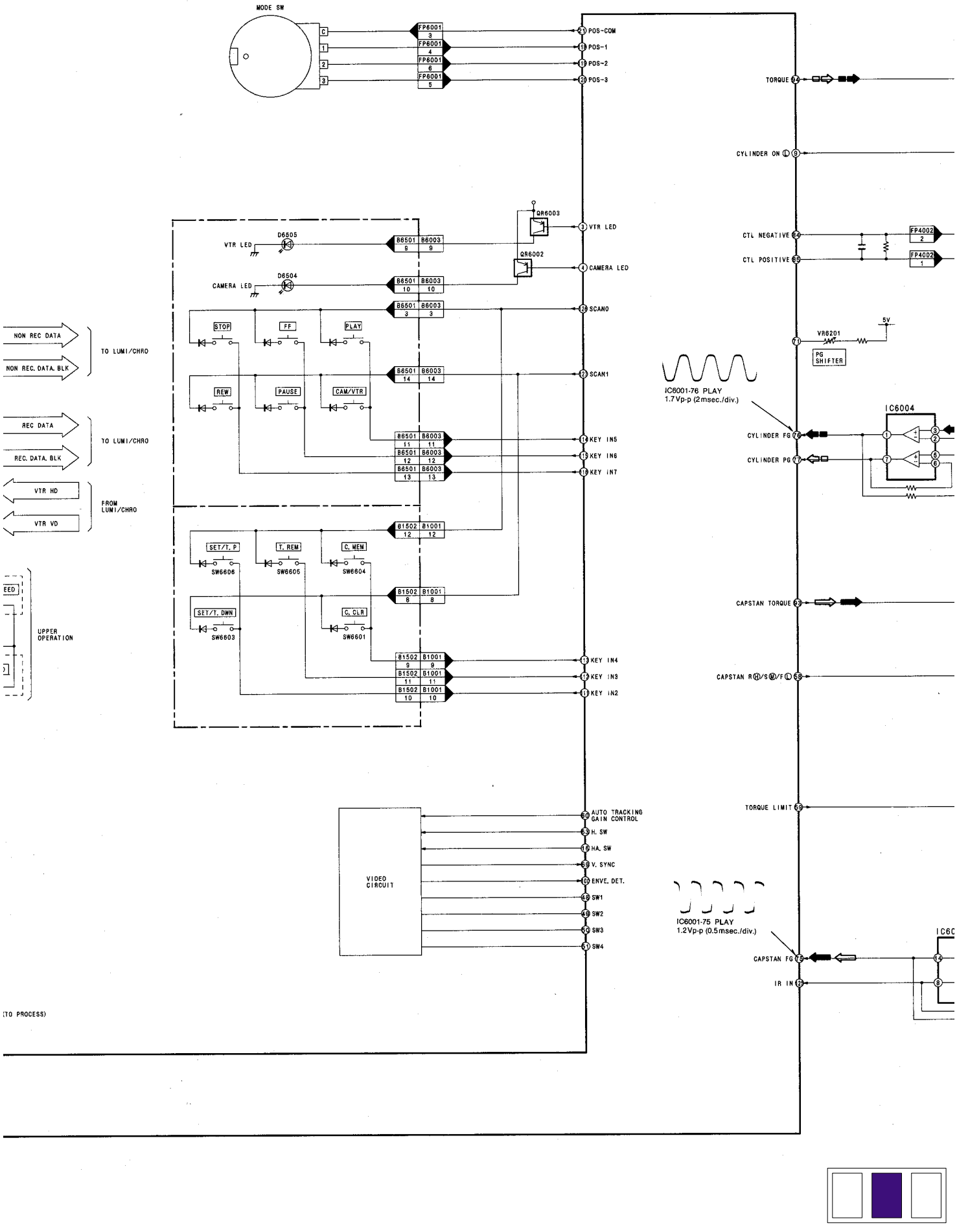



L1001
Q1001
SW REG 5V
CL1007
D1103
L1002
L1003
IC1001-11 STOP
1.0Vp-p (1µsec./div.)
EGULATOR)
VOLTAGE CTL
PWM COMPARATOR &BUFFER
TRI-WAVE OSC
ERROR AMP
CL1008
Q1003
D1004
L1007
L1008
R1040.
IC1001-9 STOP
0.8Vp-p (1µsec./div.)
Q1007
L1062
D1015
L1005
C1016
IC1001-27 STOP
0.5Vp-p (2µsec./div.)
QR1001
BUFFER
T1001
D1006
D1005
D1007
IC1001-15 STOP
1.1Vp-p (1µsec./div.)
Q1004
PULSE AMP
CL1009
T1001-1 STOP
15Vp-p (1µsec./div.)

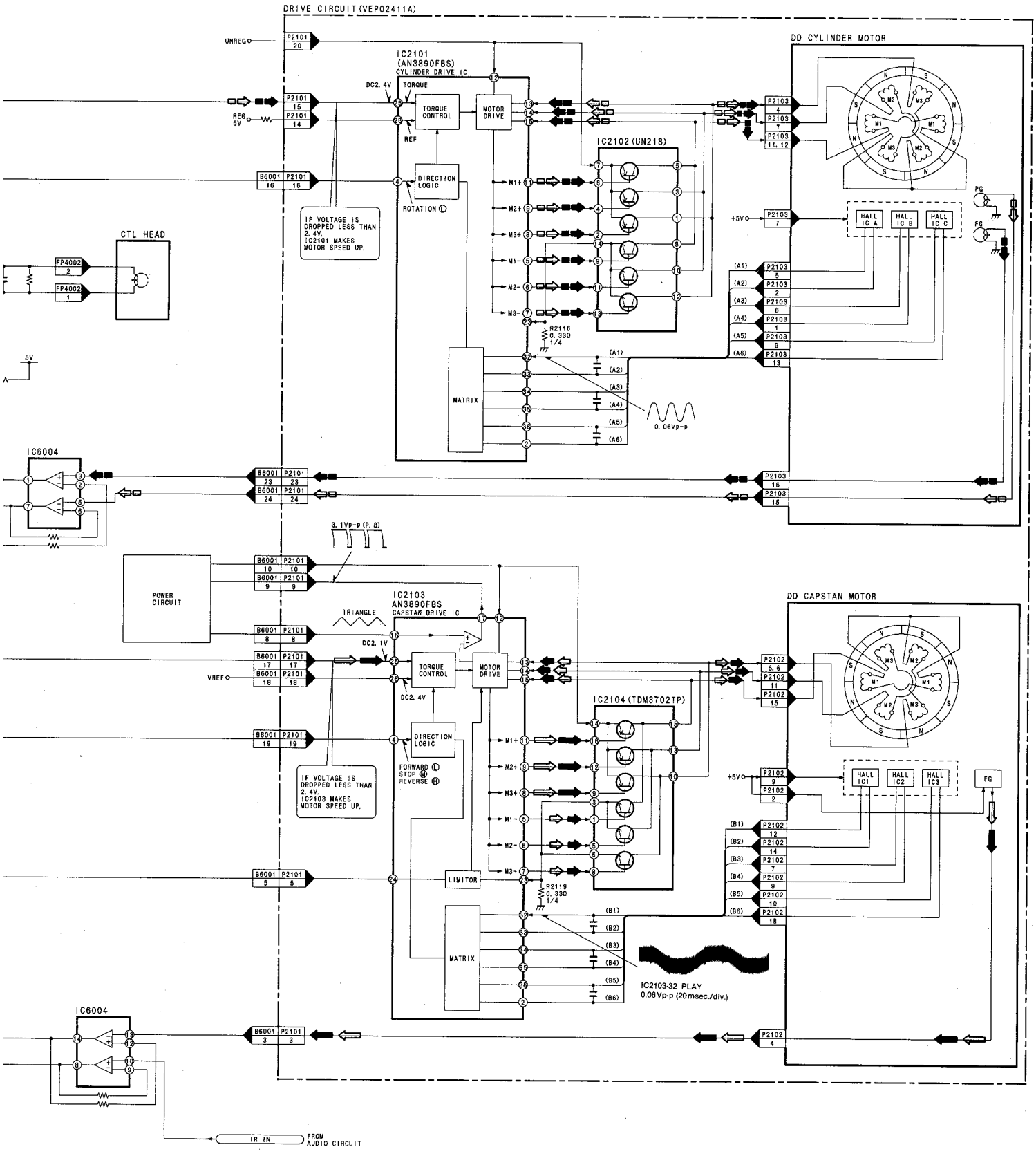

BATT Ⓗ
TO IC6001 27
FP1002 FP301
10, 11 10, 11
TO CCD DRIVE
UNREG
TO SYSTEM CTL & SERVO
EVF 5V
TO VIDEO
CL1011
CL1010
REG 5V
SYSCON REG 5V
TO SYSTEM CTL & SERVO
V-PB 5V
TO VIDEO
SW UNREG
TO SYSTEM CTL & SERVO
R1040, R1041
QR1005
PB Ⓗ
(FROM IC6001 10)
CL1002
Q1005
CAM 3.5V
FP1002 FP301
16, 17 16, 17
TO CCD DRIVE
D1008
QR1002
CAMERA P. ON Ⓗ
(FROM IC6001 2)
FROM SYSTEM CTL & SERVO
CL1001
Q1002
CAMERA 5V
FP1002 FP301
6, 7 6, 7
TO CCD DRIVE
CAP VM
(TO IC2103 12)
CAP SW
(FROM IC2103 17)
TRI-WAVE
(TO IC2103 16)
TO SYSTEM CTL & SERVO
CL1004
CAM 18V
FP1002 FP301
12 12
CL1003
CAM 9V
FP1002 FP301
5 5
CL1005
CAM -8V
FP1002 FP301
13 13
TO CCD DRIVE

3-6. SYSTEM CONTROL AND SERVO BLOCK DIAGRAM

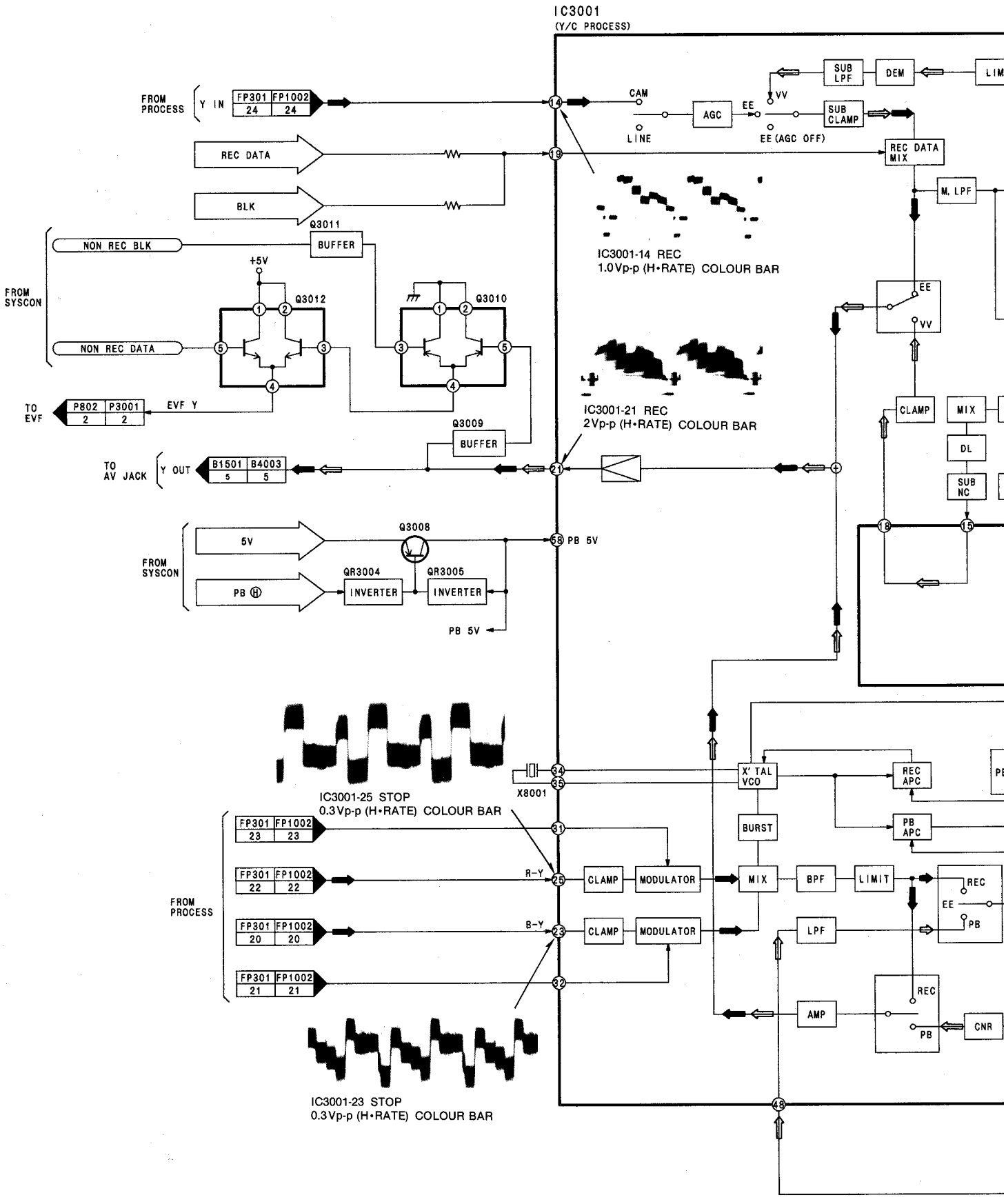



MODE SW
C
1
2
3
FP6001 3
FP6001 4
FP6001 6
FP6001 5
21 POS-COM
18 POS-1
19 POS-2
20 POS-3
TORQUE 24
CYLINDER ON 9
CTL NEGATIVE 24
CTL POSITIVE 25
FP4002 2
FP4002 1
QR6003
QR6002
VTR LED
D6505
B6501 B6003 9 9
3 VTR LED
CAMERA LED
D6504
B6501 B6003 10 10
4 CAMERA LED
B6501 B6003 3 3
26 SCAN0
STOP
FF
PLAY
REW
PAUSE
CAM/VTR
B6501 B6003 14 14
27 SCAN1
B6501 B6003 11 11
14 KEY IN5
B6501 B6003 12 12
15 KEY IN6
B6501 B6003 13 13
16 KEY IN7
VR6201
5V
PG SHIFTER
71
IC6001-76 PLAY
1.7Vp-p (2msec./div.)
IC6004
CYLINDER FG 76
CYLINDER PG 77
NON REC DATA
NON REC. DATA. BLK
TO LUMI/CHRO
REC DATA
REC. DATA. BLK
TO LUMI/CHRO
VTR HD
VTR VD
FROM LUMI/CHRO
B1502 B1001 12 12
SET/T. P
T. REM
C. MEM
SW6606
SW6605
SW6604
B1502 B1001 8 8
SET/T. DWN
C. CLR
SW6603
SW6601
B1502 B1001 9 9
13 KEY IN4
B1502 B1001 11 11
12 KEY IN3
B1502 B1001 10 10
11 KEY IN2
UPPER OPERATION
CAPSTAN TORQUE 23
CAPSTAN RⓂ/SⓂ/FⓁ 58
TORQUE LIMIT 59
VIDEO CIRCUIT
60 AUTO TRACKING GAIN CONTROL
53 H. SW
54 HA. SW
55 V. SYNC
52 ENVE. DET.
48 SW1
49 SW2
50 SW3
51 SW4
IC6001-75 PLAY
1.2Vp-p (0.5msec./div.)
CAPSTAN FG 75
IR IN 22
(TO PROCESS)

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

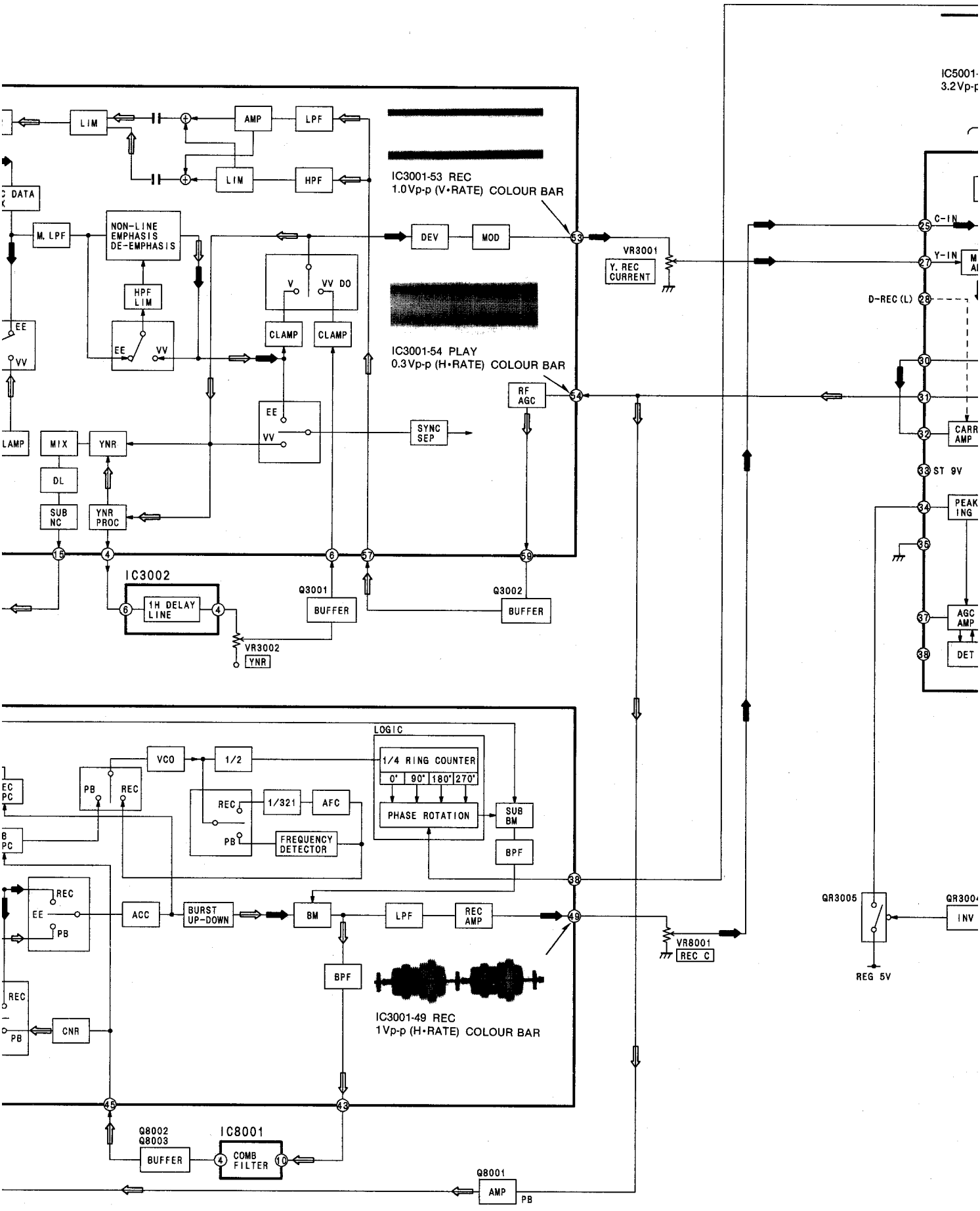


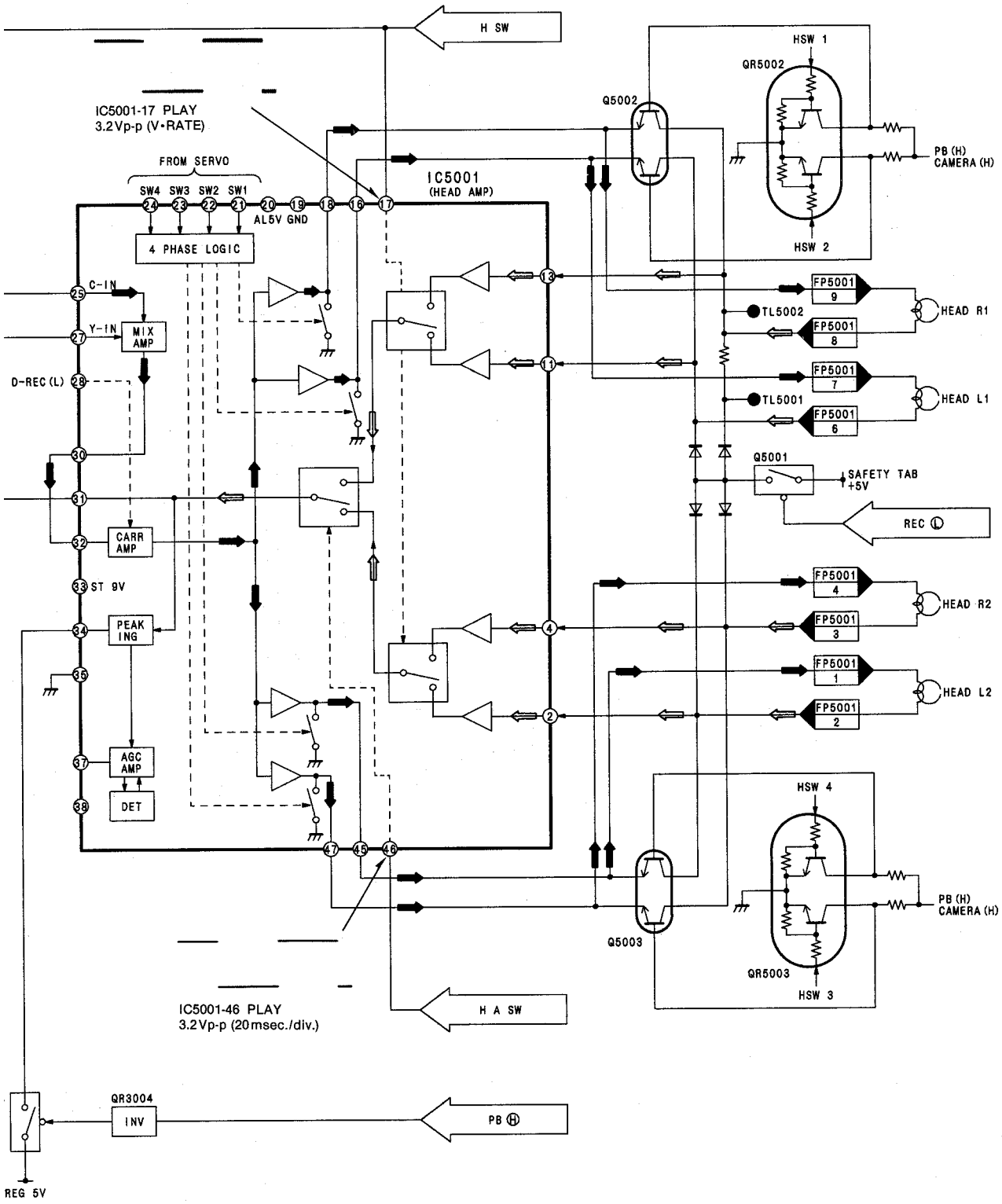
3-7. LUMINACE/CHROMINANCE AND HEAD AMP BLOCK DIAGRAM



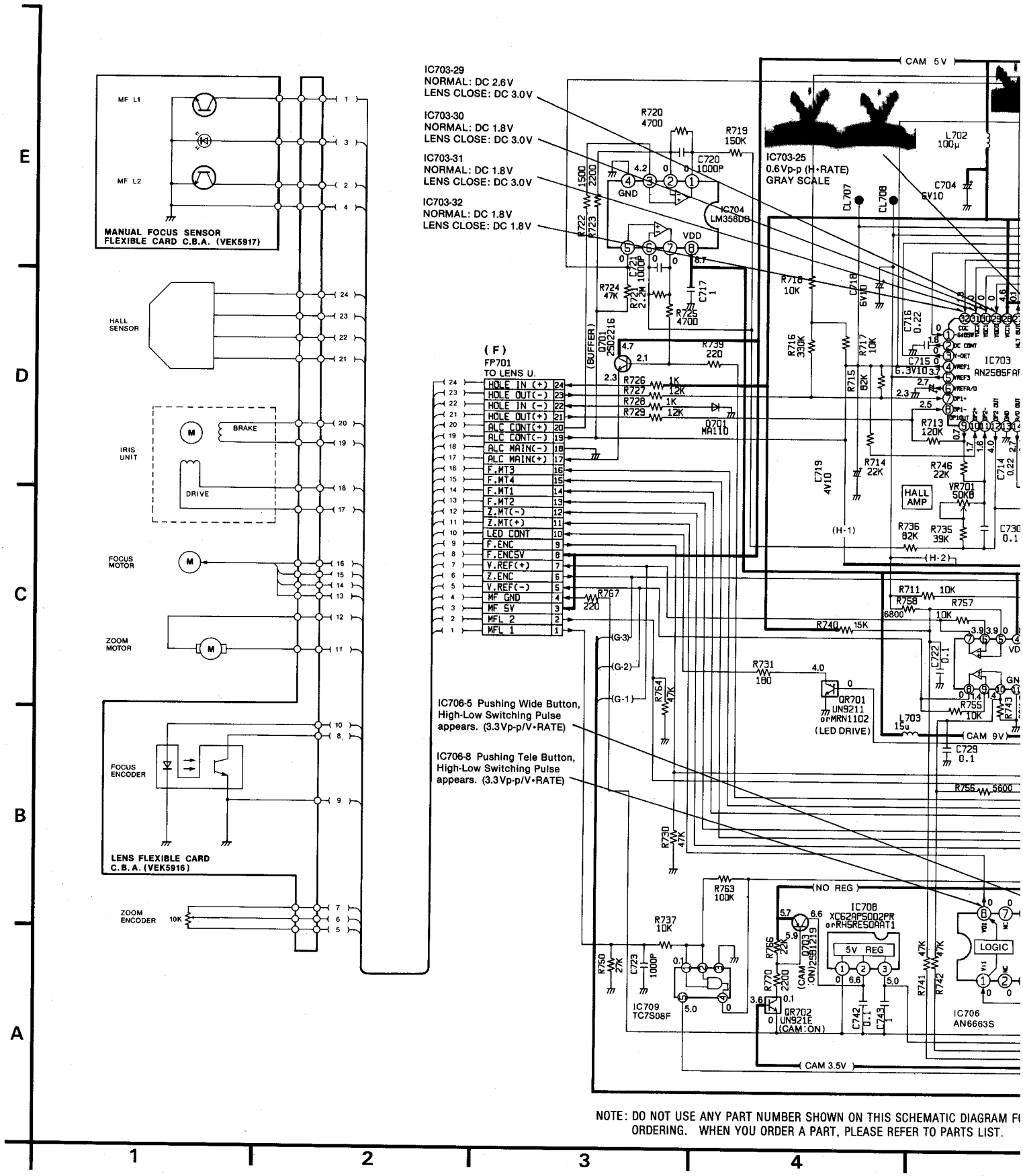
AM

MAIN SIGNAL PATH IN REC MODE

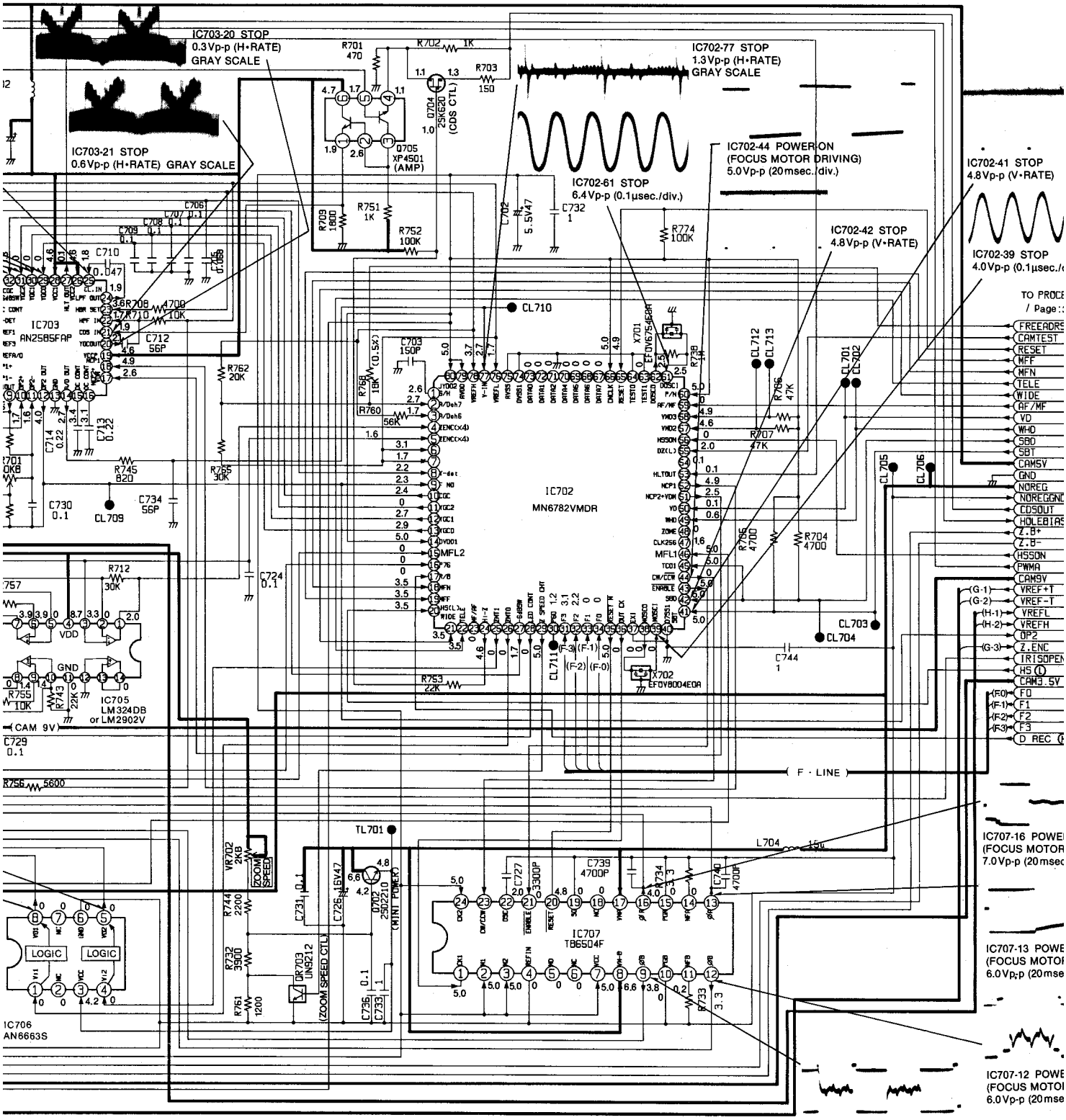



H SW
IC5001-17 PLAY
3.2Vp-p (V•RATE)
FROM SERVO
SW4 SW3 SW2 SW1
24 23 22 21 20 19 18 16 17
AL5V GND
IC5001
(HEAD AMP)
4 PHASE LOGIC
C-IN
25
Y-IN
27
MIX AMP
D-REC (L) 28
30
31
32
CARR AMP
33 ST 9V
34
PEAK ING
35
37
AGC AMP
38
DET
47 45 46
13
11
4
2
Q5002
HSW 1
QR5002
HSW 2
PB (H)
CAMERA (H)
FP5001 9
FP5001 8
FP5001 7
FP5001 6
TL5002
TL5001
HEAD R1
HEAD L1
Q5001
SAFETY TAB
+5V
REC Ⓛ
FP5001 4
FP5001 3
FP5001 1
FP5001 2
HEAD R2
HEAD L2
Q5003
HSW 4
HSW 3
QR5003
IC5001-46 PLAY
3.2Vp-p (20msec./div.)
H A SW
QR3004
INV
PB Ⓗ
REG 5V

3-8. AUTO FOCUS SCHEMATIC DIAGRAM



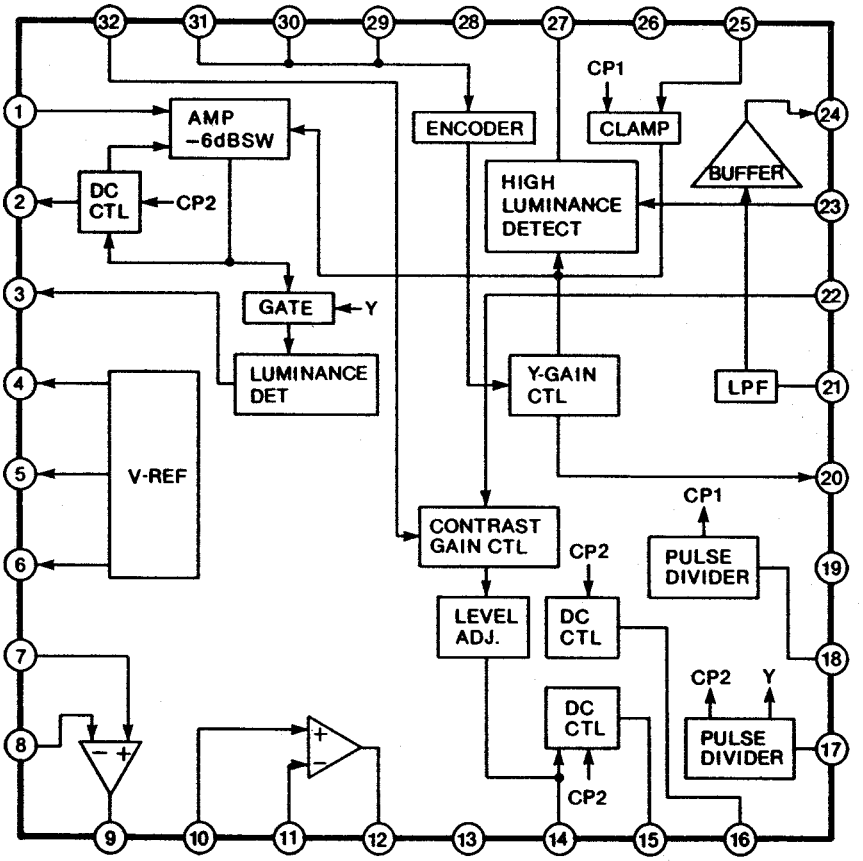
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM F
ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.



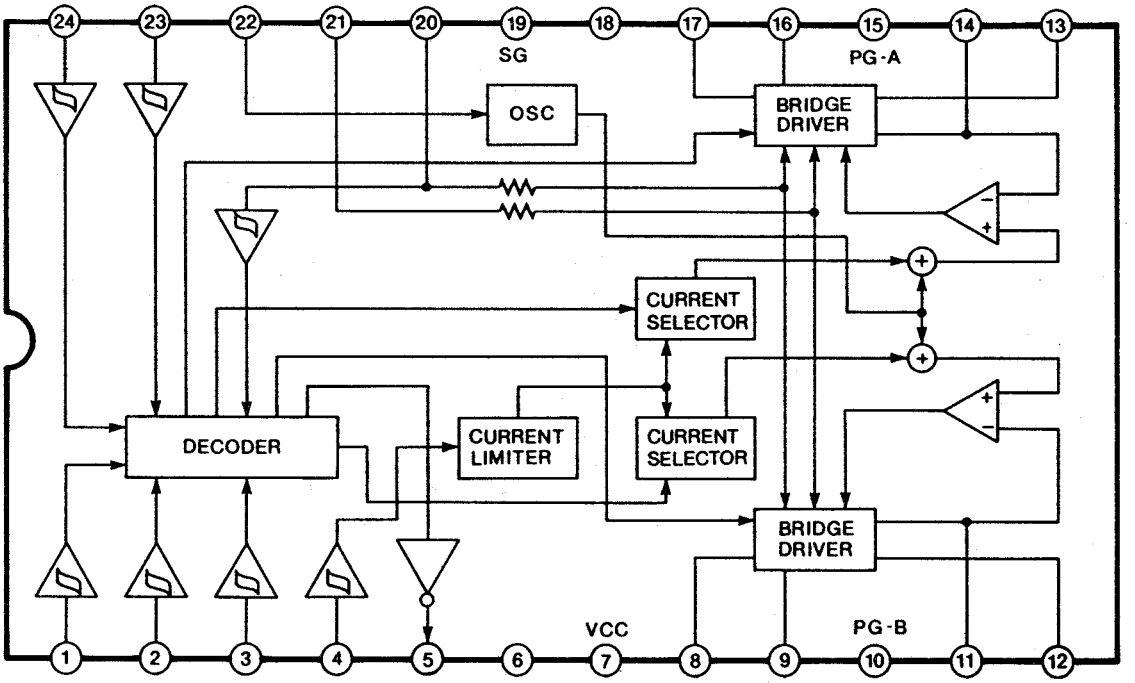
C DIAGRAM FOR
RTS LIST.

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

IC703 (AN2585FAP)



IC707 (TB6504F)



02-41 STOP
Vp-p (V•RATE)

702-39 STOP
Vp-p (0.1µsec./div.)

TO PROCESS
/ Page : 3 · 27

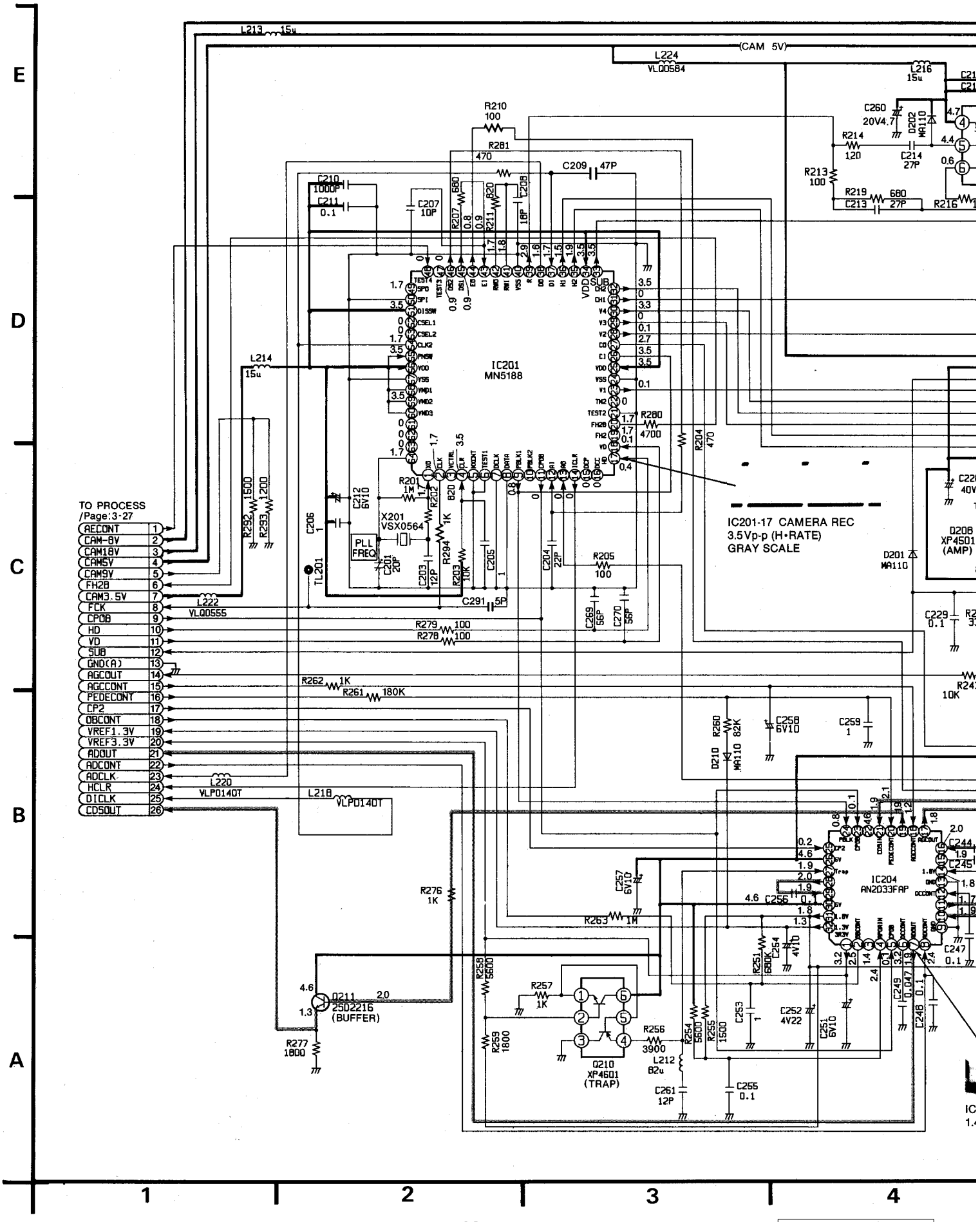
FREEADRS 1
CAMTEST 2
RESET 3
MFF 4
MFN 5
TELE 6
WIDE 7
AF/MF 8
VD 9
WHD 10
SBD 11
SBT 12
CAM5V 13
GND 14
NOREG 15
NOREGGND 16
CDSOUT 17
HOLEBIAS 18
Z.B+ 19
Z.B- 20
HSSDN 21
PWMA 22
CAM3V 23
VREF+T 24
VREF-T 25
VREFL 26
VREFH 27
CP2 28
Z.ENC 29
IRISOPEN 30
HS 31
CAM3.5V 32
FD 33
F1 34
F2 35
F3 36
D REC (H) 37

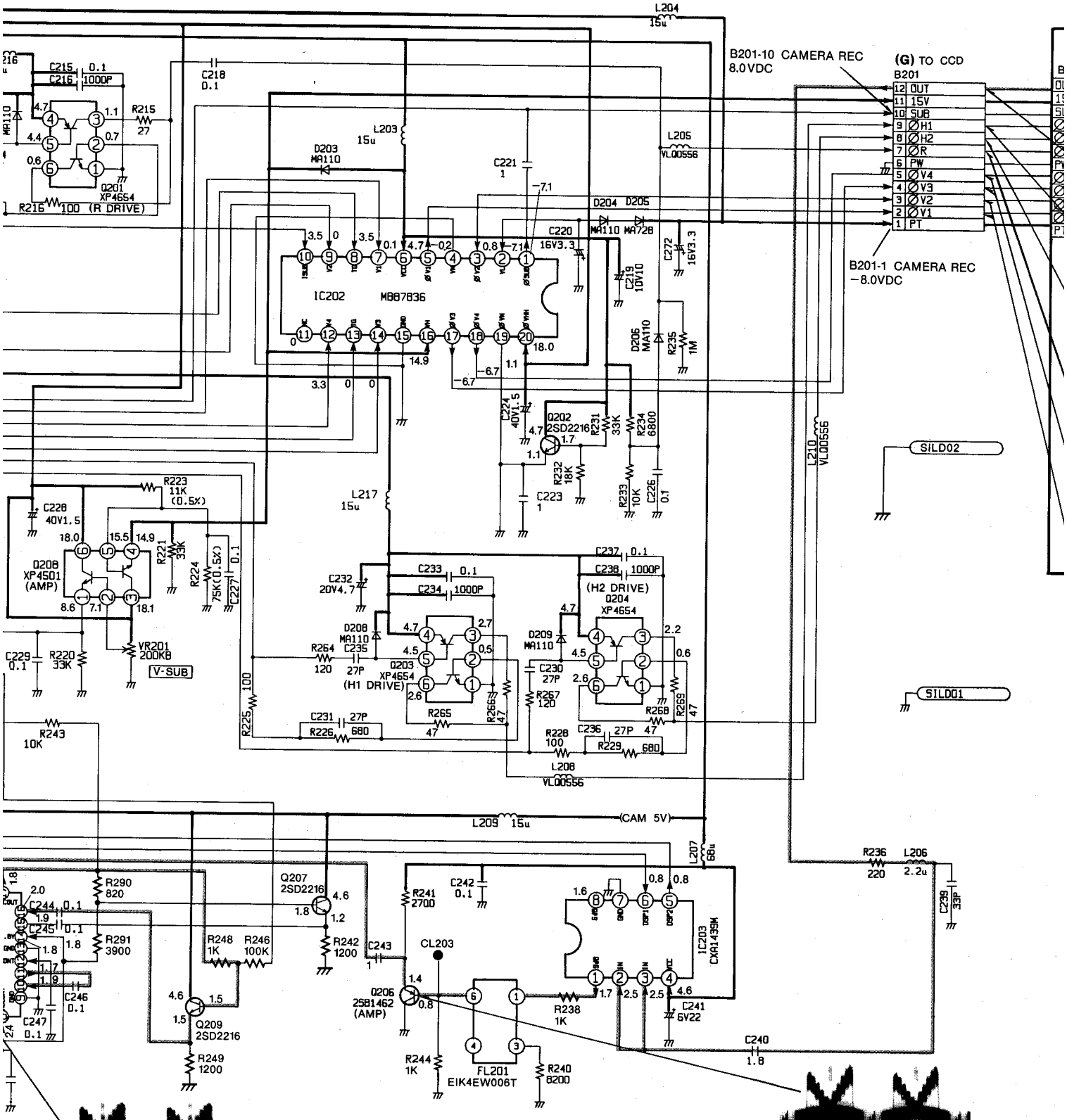
C707-16 POWER-ON
FOCUS MOTOR DRIVING)
.0Vp-p (20msec./div.)

IC707-13 POWER-ON
FOCUS MOTOR DRIVING)
3.0Vp-p (20msec./div.)

IC707-12 POWER-ON
FOCUS MOTOR DRIVING)
3.0Vp-p (20msec./div.)

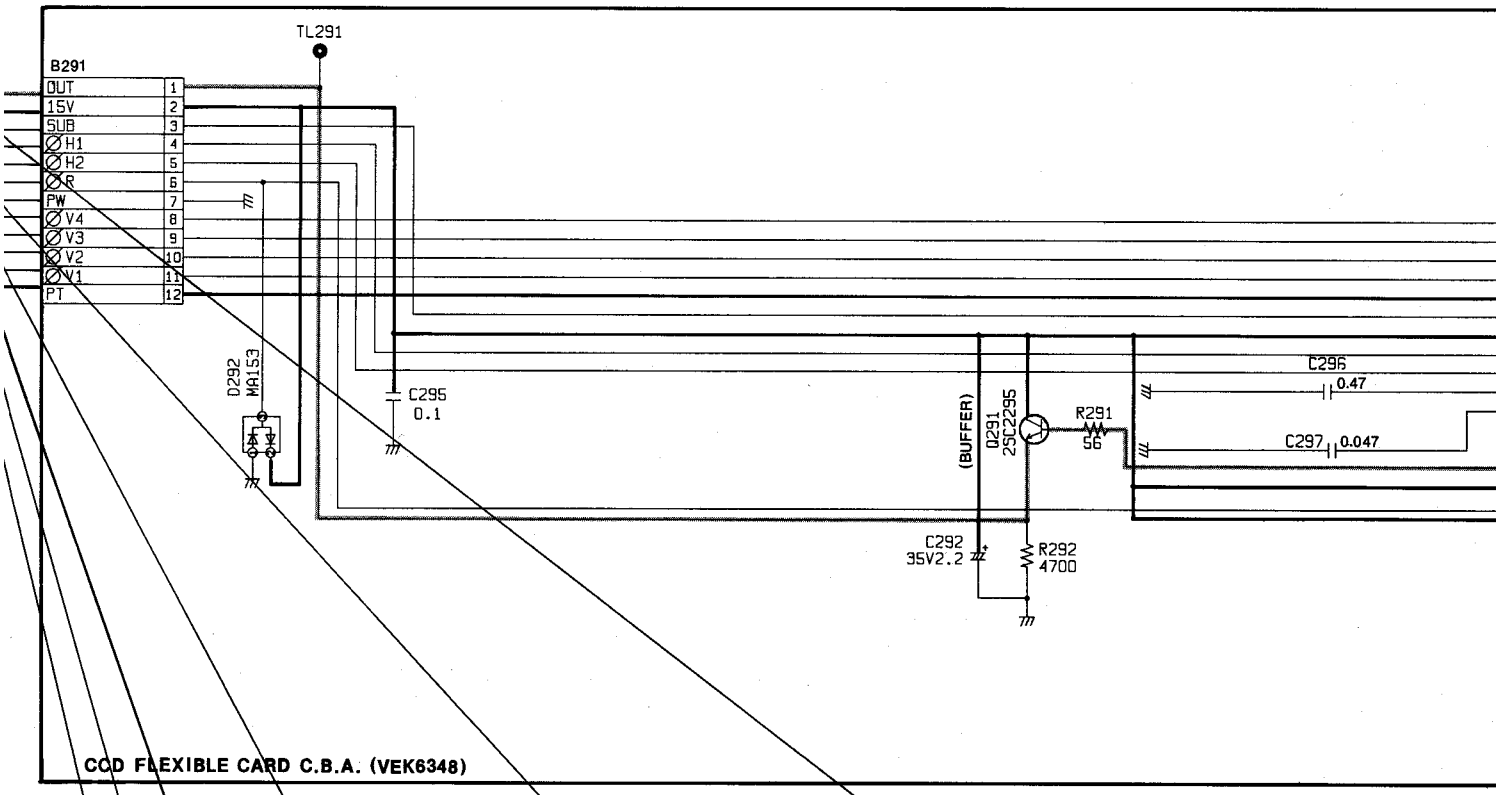
3-9. CCD DRIVE SCHEMATIC DIAGRAM





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

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



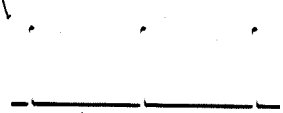
CCD FLEXIBLE CARD C.B.A. (VEK6348)

B201-8 CAMERA REC
7.5Vp-p (H•RATE) GRAY SCALE

B201-9 CAMERA REC
7.5Vp-p (H•RATE) GRAY SCALE

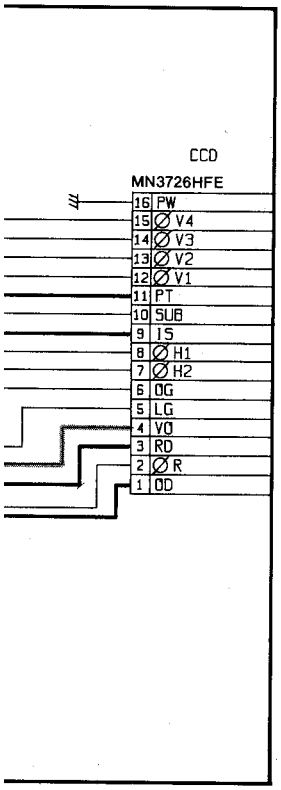
B201-12 CAMERA REC
0.8Vp-p (H•RATE) GRAY SCALE

B201-7 CAMERA REC
4.7Vp-p (H•RATE)
GRAY SCALE

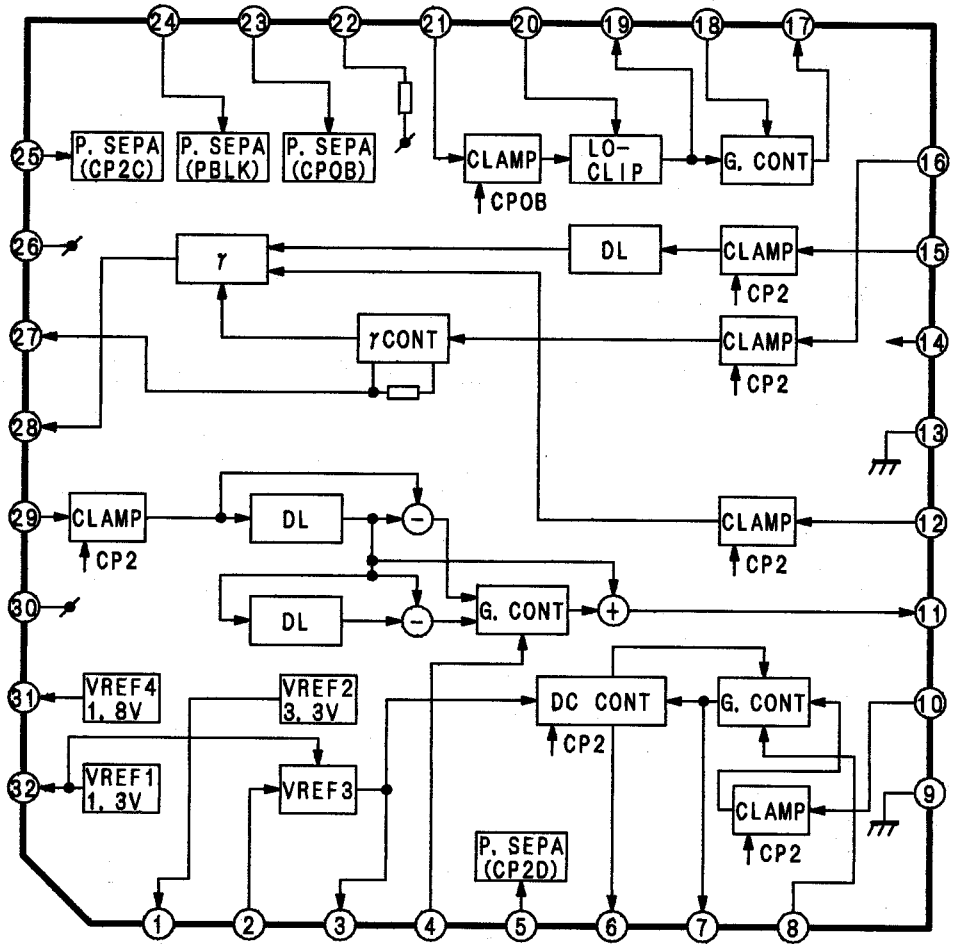


B201-4 7Vp-p
B201-5 8Vp-p
CAMERA REC (H•RATE)
GRAY SCALE

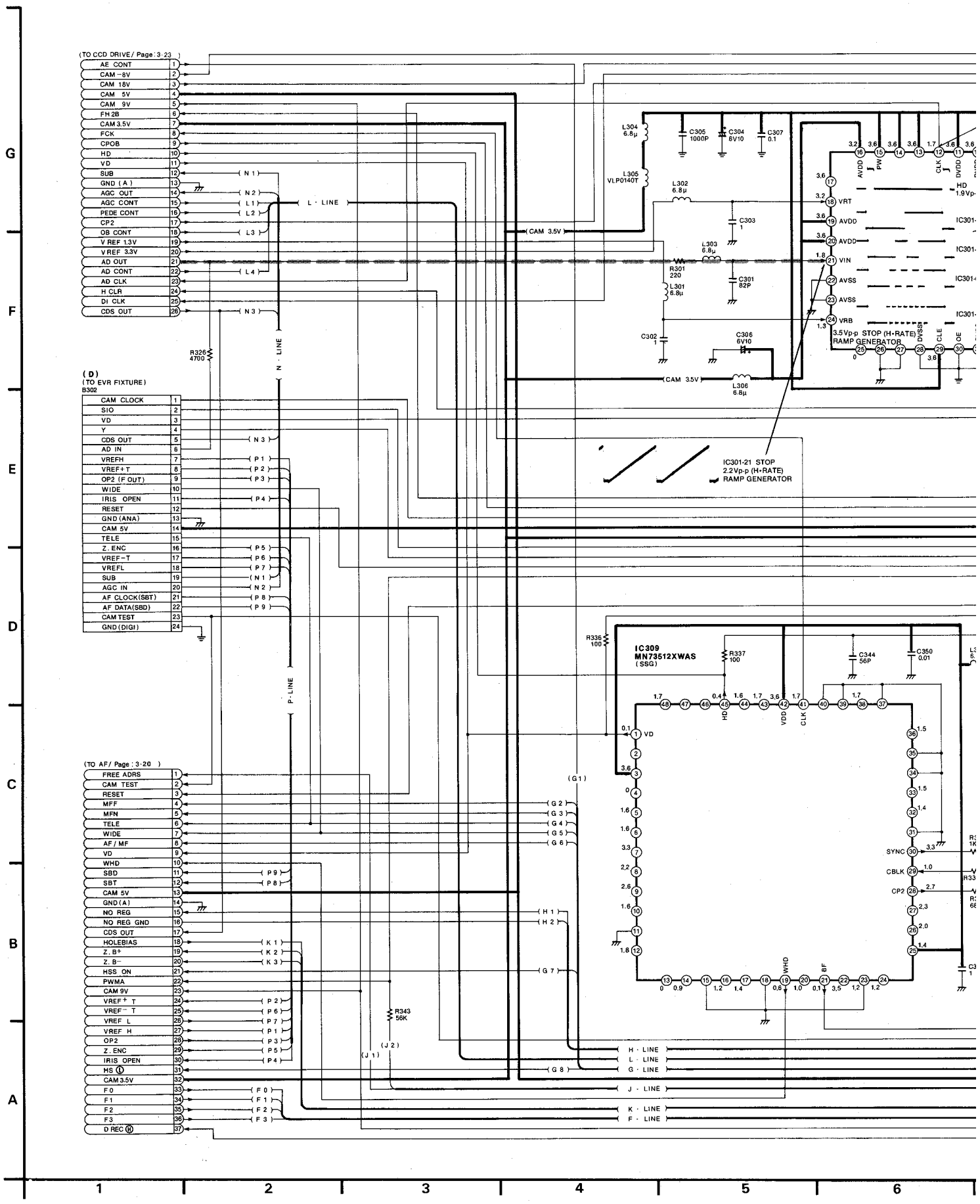
B201-2 7Vp-p
B201-3 8Vp-p
CAMERA REC (H•RATE)
GRAY SCALE

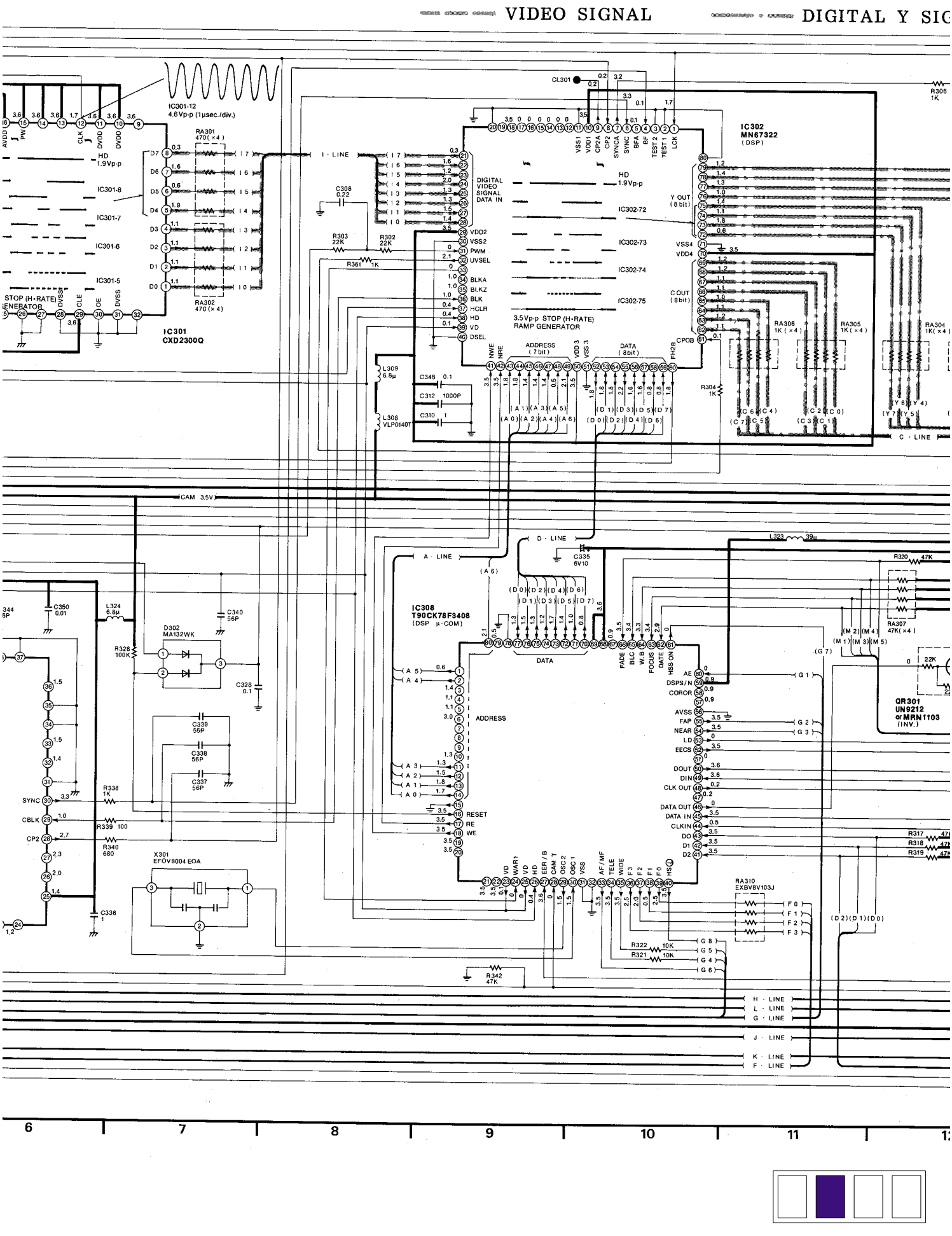


IC204 (AN2033FAP)

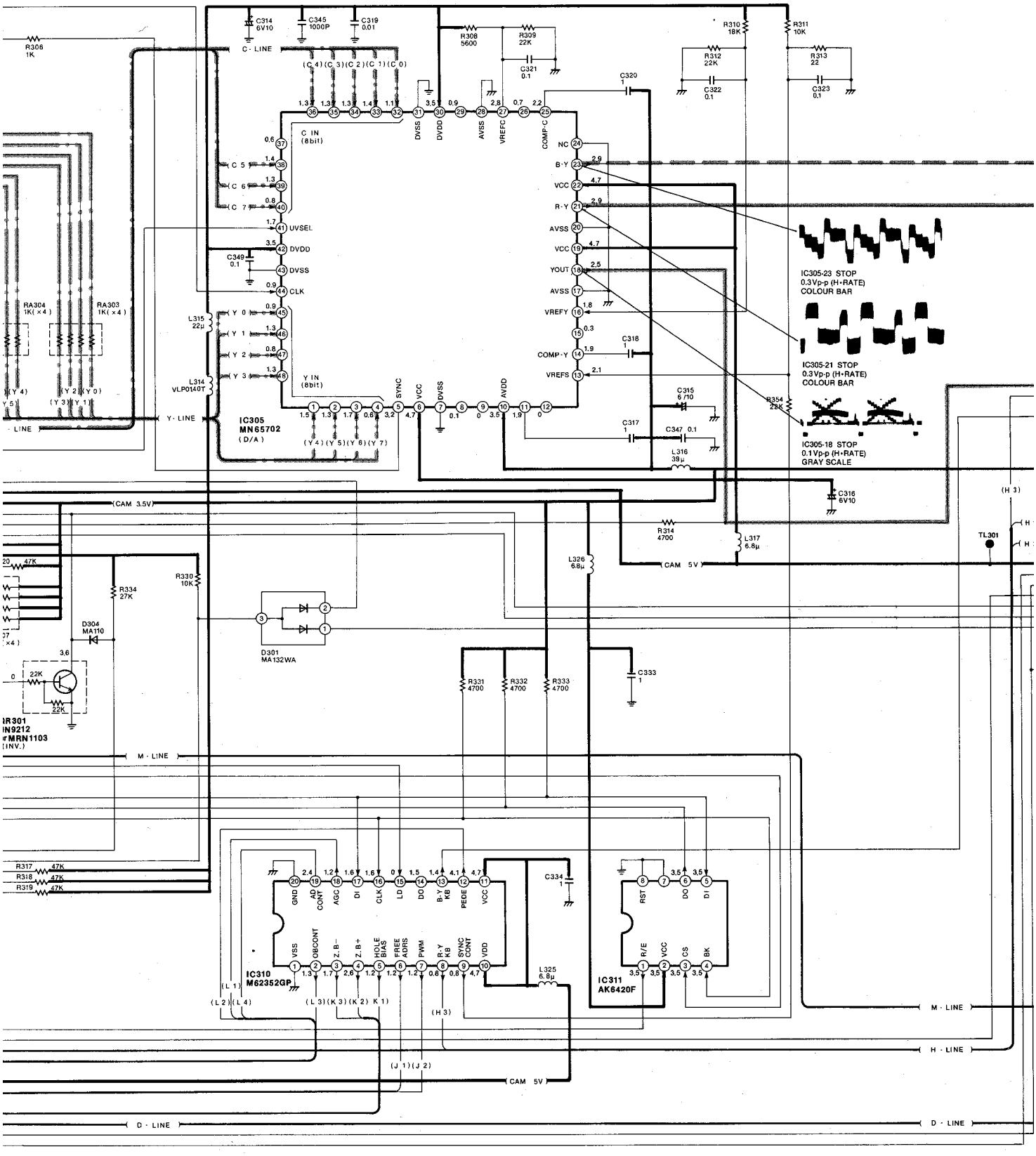


3-10. PROCESS SCHEMATIC DIAGRAM



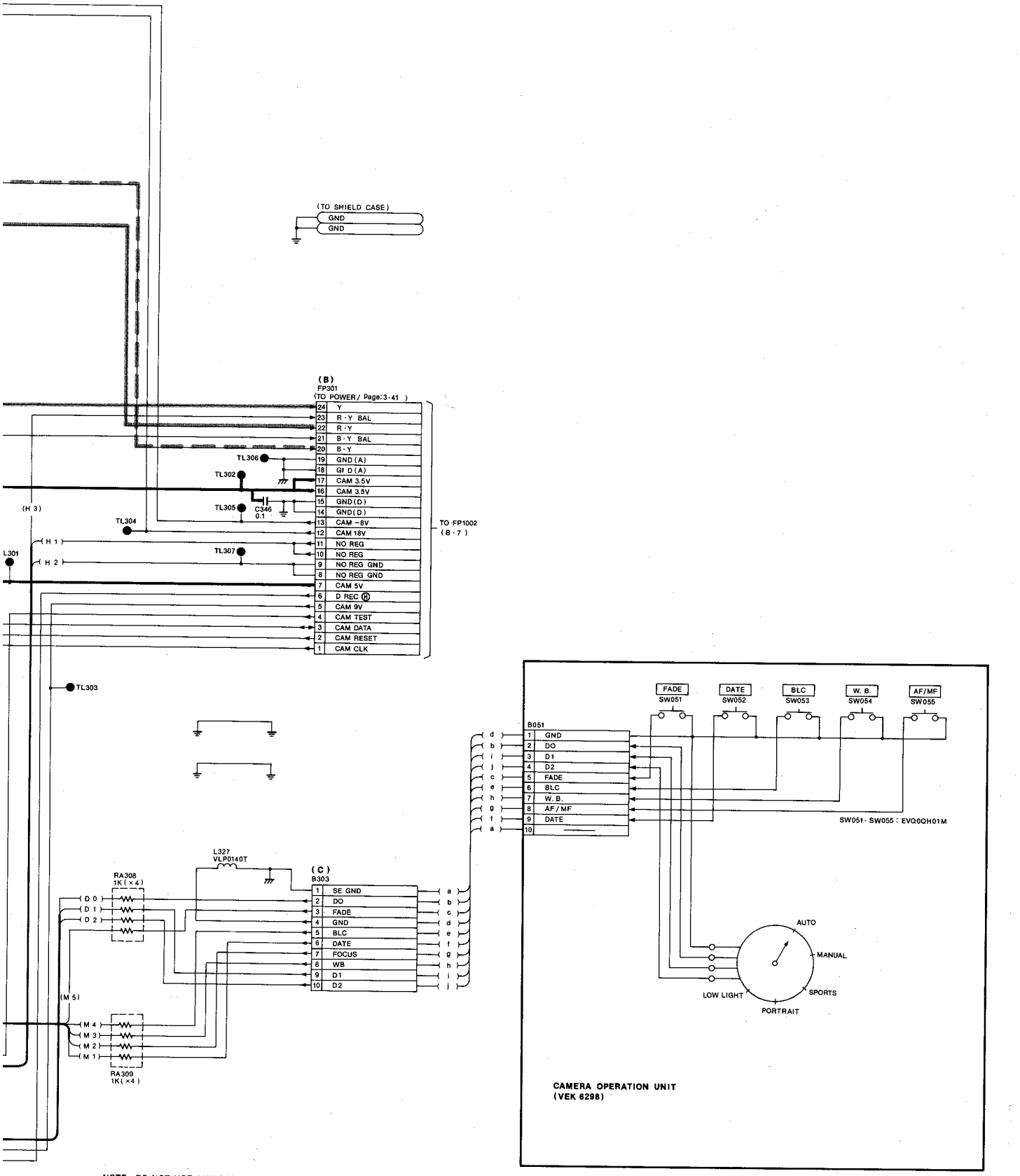

VIDEO SIGNAL
DIGITAL Y SIG
IC301
CXD2300Q
IC302
MN67322
(DSP)
IC308
T90CK78F3408
(DSP μ-COM)
IC301-12
4.6Vp-p (1μsec./div.)
HD
1.9Vp-p
IC301-8
IC301-7
IC301-6
IC301-5
RA301
470 (×4)
RA302
470 (×4)
I-LINE
DIGITAL
VIDEO
SIGNAL
DATA IN
IC302-72
IC302-73
IC302-74
IC302-75
3.5Vp-p STOP (H-RATE)
RAMP GENERATOR
Y OUT
(8 bit)
C OUT
(8 bit)
ADDRESS
(7 bit)
DATA
(8 bit)
RA306
1K (×4)
RA305
1K (×4)
RA304
1K (×4)
C-LINE
D-LINE
A-LINE
CAM 3.5V
C308
0.22
R303
22K
R302
22K
R361
1K
L309
6.8μ
L308
VLP0140T
C348
0.1
C312
1000P
C310
1
R304
1K
C335
6V10
L323
39μ
R320
47K
RA307
47K(×4)
QR301
UN9212
or MRN1103
(INV.)
C350
0.01
L324
6.8μ
D302
MA132WK
C340
56P
R328
100K
C328
0.1
C339
56P
C338
56P
C337
56P
R338
1K
R339
100
R340
680
C336
1
X301
EFOV8004 EOA
R342
47K
RA310
EXBV8V103J
R322
10K
R321
10K
R317
R318
R319
H-LINE
L-LINE
G-LINE
J-LINE
K-LINE
F-LINE

SIGNAL — DIGITAL C SIGNAL — Y SIGNAL — R-Y SIGNA



12 | 13 | 14 | 15 | 16 | 17

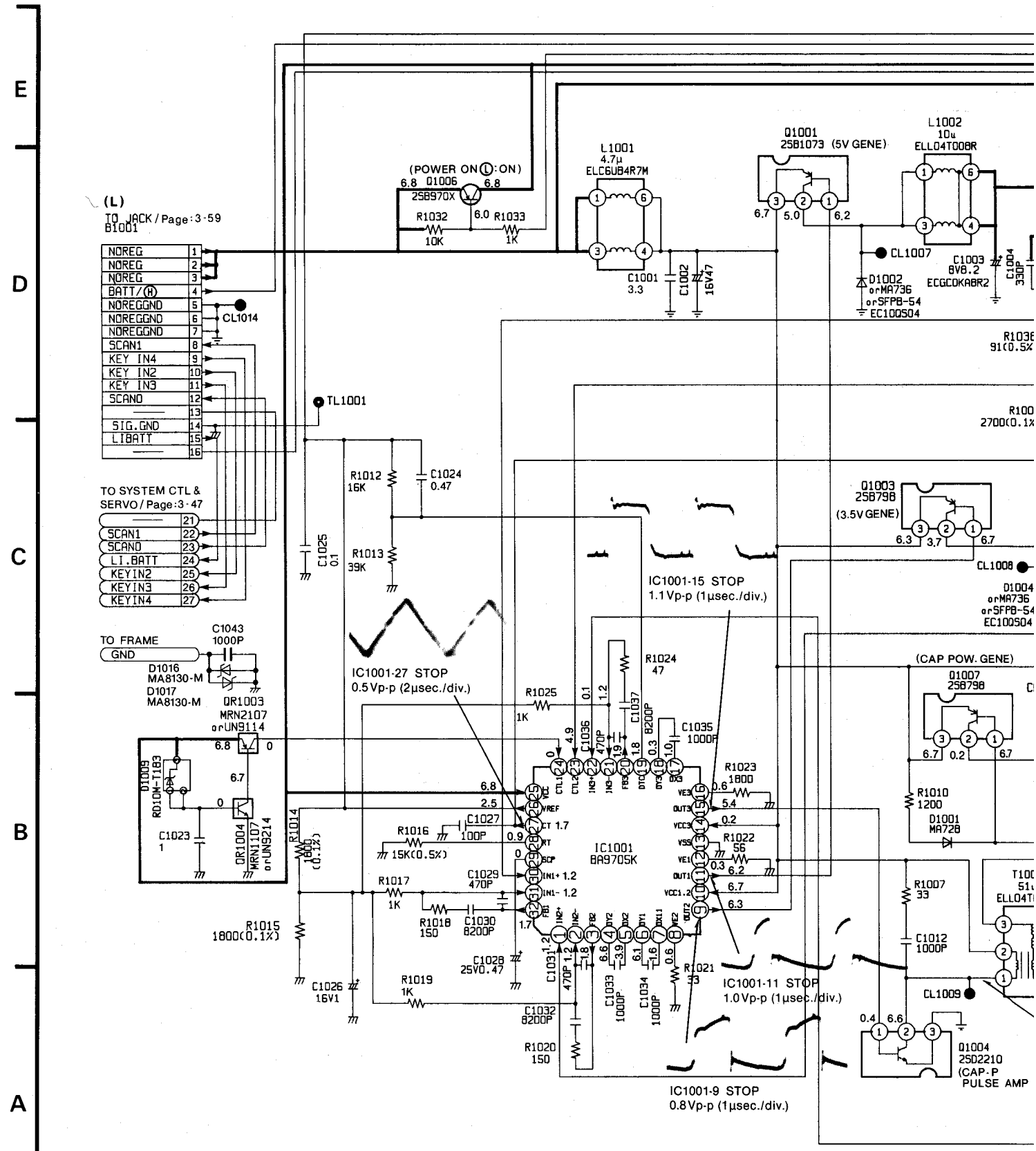
SIGNAL ——— B-Y SIGNAL



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

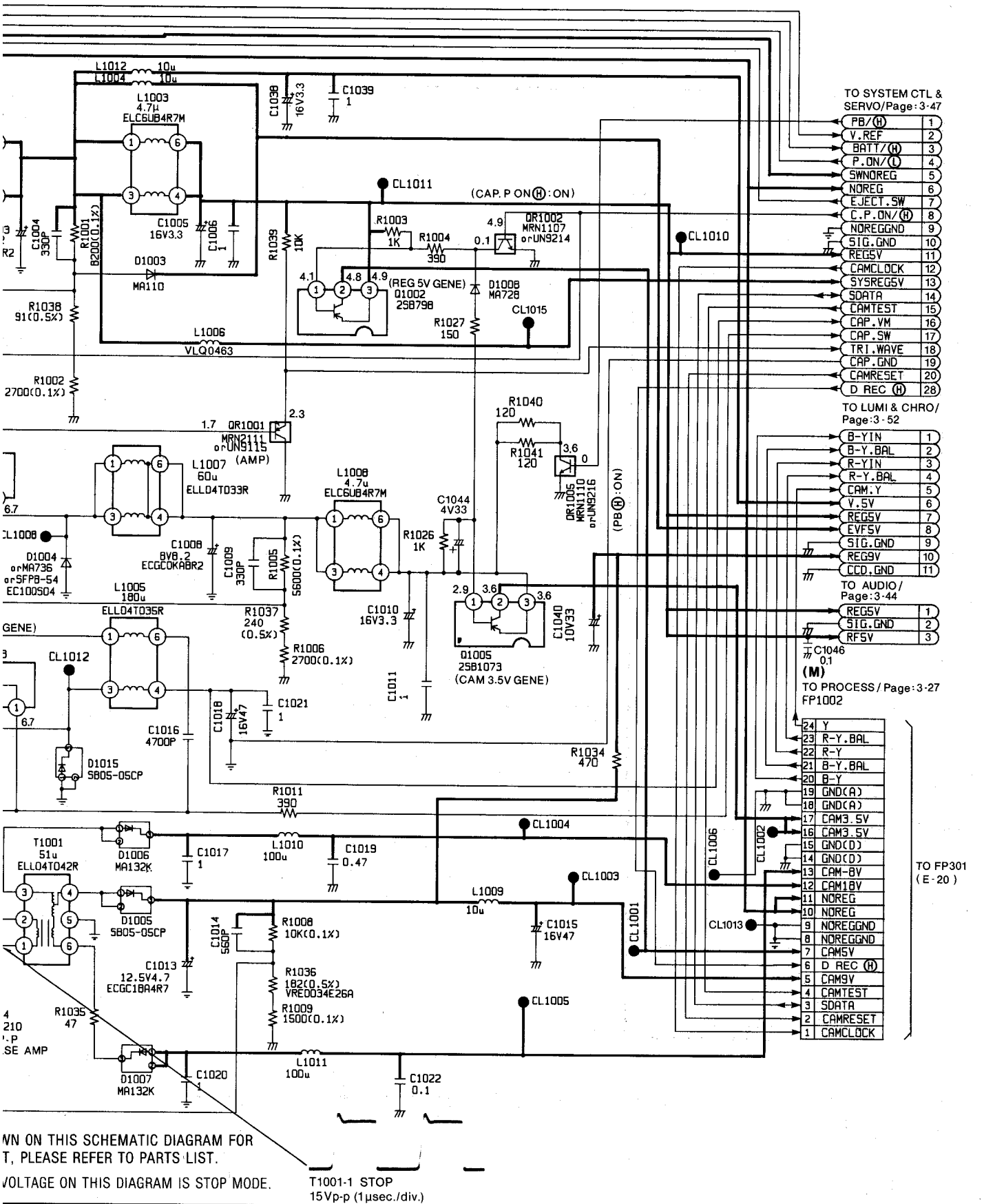
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE WITH AIM THE CAMERA AT THE LOGARITHMIC GRAY SCALE CHART.

3-13. POWER SCHEMATIC DIAGRAM



NOTE: DO NOT USE ANY PART NUMBER SHOWN ON T
ORDERING. WHEN YOU ORDER A PART, PLEA

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE

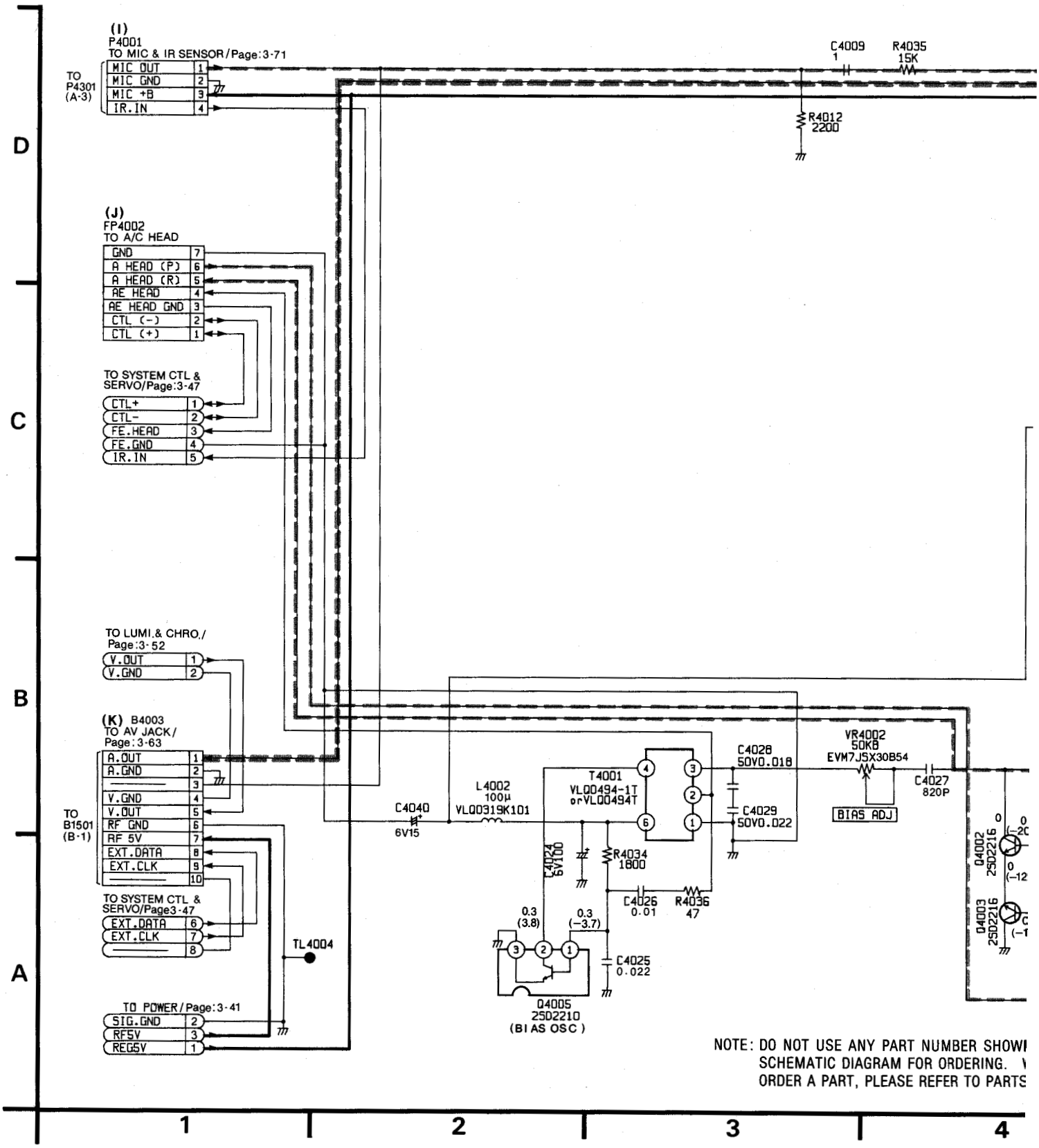


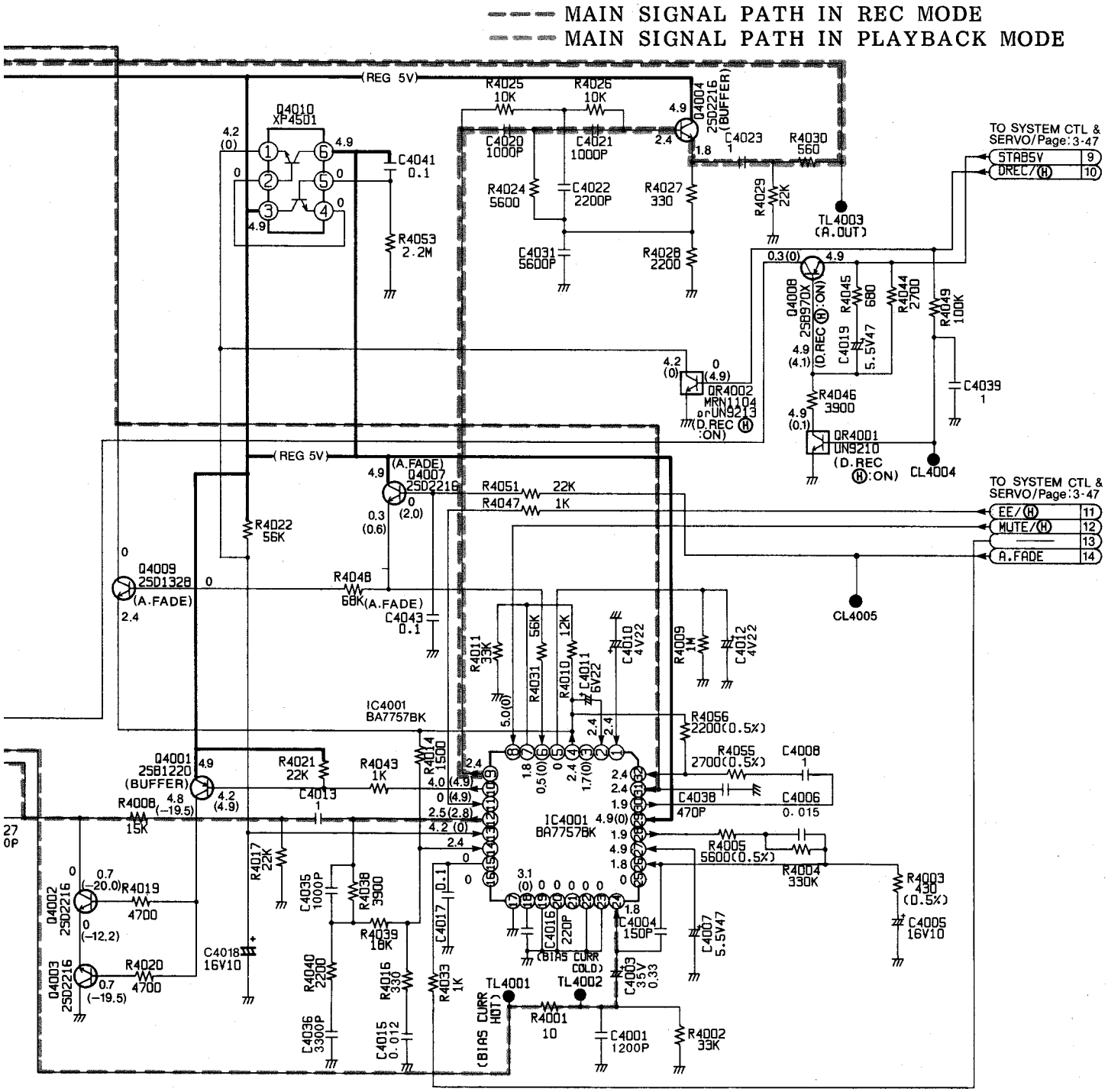
WN ON THIS SCHEMATIC DIAGRAM FOR T, PLEASE REFER TO PARTS LIST.

VOLTAGE ON THIS DIAGRAM IS STOP MODE.

T1001-1 STOP
15Vp-p (1µsec./div.)

3-14. AUDIO SCHEMATIC DIAGRAM

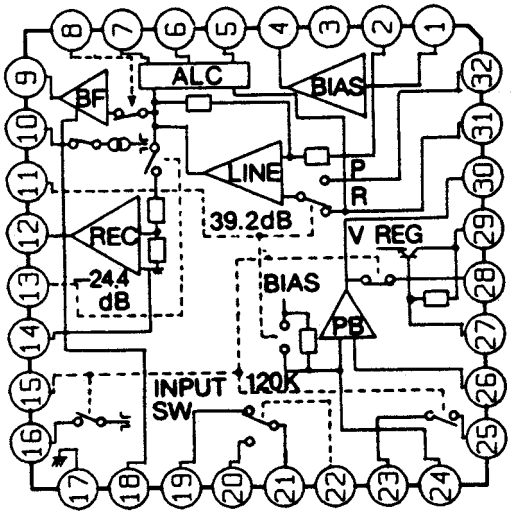




JMBER SHOWN ON THIS ORDERING. WHEN YOU FER TO PARTS LIST.

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

IC4001 (BA7757BK)



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	4.9	4.9	0	4.9	4.9	4.9	4.9	0	0	0	4.9	0	0	4.9	0	0	0	0	0
REC/PLAY	0	4.9	4.9	0	4.9	4.9	4.9	4.9	0	0	0	4.9	0	0	5.0	4.9	0	4.9	4.9	0
F.F	0	4.9	0	5.0	5.0	4.6	5.0	5.0	0	0	5.0	5.0	0	0	5.0	5.0	0	0	0	0

REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	2.0	0	4.9	0	0	0	0.4	0	0	0	0	0	4.7	4.8	5.0	2.3	2.4	0
REC/PLAY	0	0	2.0	0	4.9	0	0	0	0.4	0	0	0	0	0	4.8	4.7	4.9	2.3	2.3	0
F.F	0	0	2.0	0	5.0	0	0	0	0.4	0	0	0	0	0	4.8	4.8	4.9	2.3	2.3	0

REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	5.0	0	0	0	0	0.5	5.0	0	5.0	0	0	4.3	4.6	4.2	4.8	4.8	4.7	2.0	0.2	1.0
REC/PLAY	4.9	0	0	0	0	1.1	4.9	0	4.9	0.3	2.2	4.4	4.6	4.4	4.7	4.4	4.7	0	0.2	1.0
F.F	5.0	0	0	0.4	0	0.6	0.6	4.9	0	0	0	0	4.7	4.3	4.7	4.4	4.7	0	0.2	1.0

REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	0	0	0	0	4.8	4.9	2.0	4.8	0.4	4.8	0	1.8	2.4	2.5	2.5	0	2.5	0.7
REC/PLAY	0	0	4.9	0	0	0	4.8	4.9	2.0	4.2	1.6	4.8	0	1.8	2.4	2.5	2.5	0	2.5	2.5
F.F	0	0	4.7	0	0	0	4.8	4.9	2.0	4.8	1.6	4.8	0	2.0	2.5	2.5	2.5	0	2.5	2.5

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	2.2	2.7	5.0	0	0	0	2.5	2.5	0	2.6	2.6	5.0	0.1	5.0	5.0	2.0	4.8	3.0	2.5	0
REC/PLAY	2.2	2.7	5.0	–	–	0	2.5	2.4	0	2.6	2.5	5.0	2.2	2.4	5.0	2.6	4.8	2.9	2.5	0.2
F.F	–	2.7	5.0	0	0	0	2.5	3.2	0	2.9	3.1	5.0	3.1	3.1	5.0	3.1	4.8	2.9	2.5	1.2

REF. NO.	IC6001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	0	0	0	0.1	4.1	0	4.8	4.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	0.1	4.9
REC/PLAY	0	0	0.6	3.8	3.8	0.5	4.8	4.7	4.9	4.9	4.9	4.8	4.9	4.9	4.9	4.9	4.9	3.0	3.0	2.8
F.F	0.1	0.7	0.9	3.3	3.3	1.3	3.6	3.6	3.9	3.5	3.9	3.6	4.0	4.0	3.7	3.5	5.0	4.0	3.7	0.3

REF. NO.	IC6001																			
MODE	121	122	123	124	125	126	127	128												
STOP	0	4.8	5.0	5.0	3.7	5.0	5.0	0												
REC/PLAY	0	4.8	5.0	5.0	3.7	4.9	4.9	0.2												
F.F	0.1	3.8	5.0	5.0	3.7	4.9	4.9	2.7												

REF. NO.	IC6002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	0	0	0	0	0	0.1	0	0.2	0	4.9	0	0.1	0	0.2						
REC/PLAY	0	0	0	0.8	0.4	0.4	0	0.2	0.2	4.9	0	0.5	0	0.2						
F.F	0	0	0	0	0.4	0.3	0	0.2	0.2	4.9	0	0.1	0	0.2						

REF. NO.	IC6003																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	4.7	0	4.7	0	4.8	0.9	2.3	0	0	0	0	0	0	0	0	0	4.8	4.0	0
REC/PLAY	0	4.7	0	4.7	0	4.8	0.9	2.3	2.3	0	0	0	0	0	0.1	0	0	4.8	4.0	0.1
F.F	0	4.7	0	4.7	0	4.8	0	2.3	2.3	0	0	0	0	0	0.1	0	0	4.8	4.0	0

REF. NO.	IC6004																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
STOP	2.5	2.5	2.5	4.8	2.5	2.5	2.5	0	3.7	0.3	0	2.5	2.5	2.4						
REC/PLAY	2.5	2.5	2.4	4.8	1.8	2.5	2.4	3.7	3.4	1.6	0	2.5	2.5	2.5						
F.F	2.5	2.5	2.5	4.8	1.1	2.5	2.4	3.7	3.7	0.2	0	2.5	2.5	2.5						

REF. NO.	IC6005									IC6006										
MODE	1	2	3	4	5	6	7	8		1	2	3								
STOP	0	6.8	4.8	0	0	3.8	0	0		0	0	5.1								
REC/PLAY	2.7	6.6	4.8	0	0	3.8	3.2	0		0	4.9	5.0								
F.F	2.2	6.5	4.8	0	0	3.8	2.8	0		0	4.9	5.0								

REF. NO.	IC6007									IC6008										
MODE	1	2	3							1	2	3	4	5						
STOP	0	6.8	5.1							4.6	3.6	0	1.1	4.8						
REC/PLAY	0	6.6	5.1							4.4	3.5	0	1.1	4.8						
F.F	0	6.5	1.5							4.4	3.5	0	1.1	4.8						

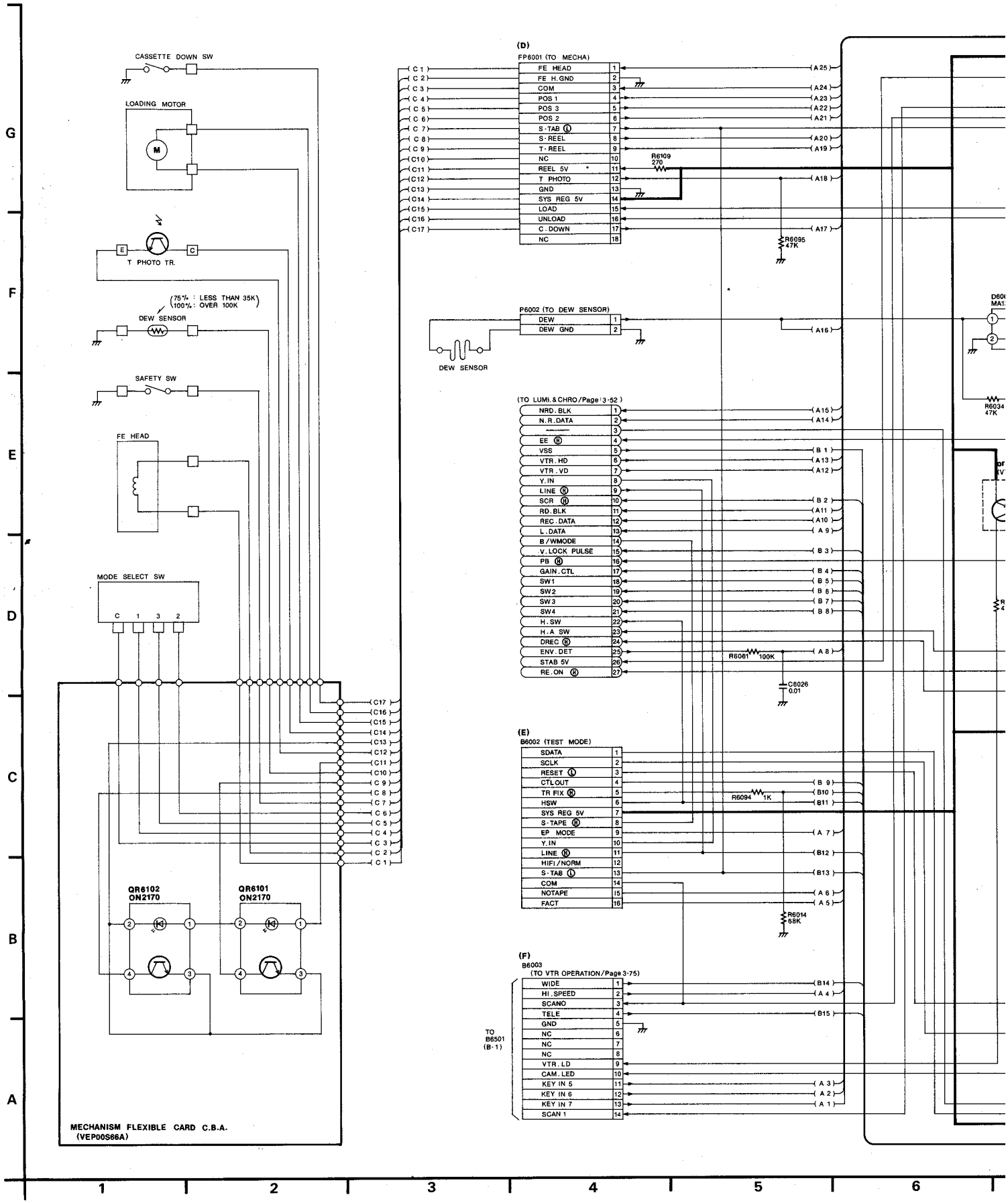
SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART

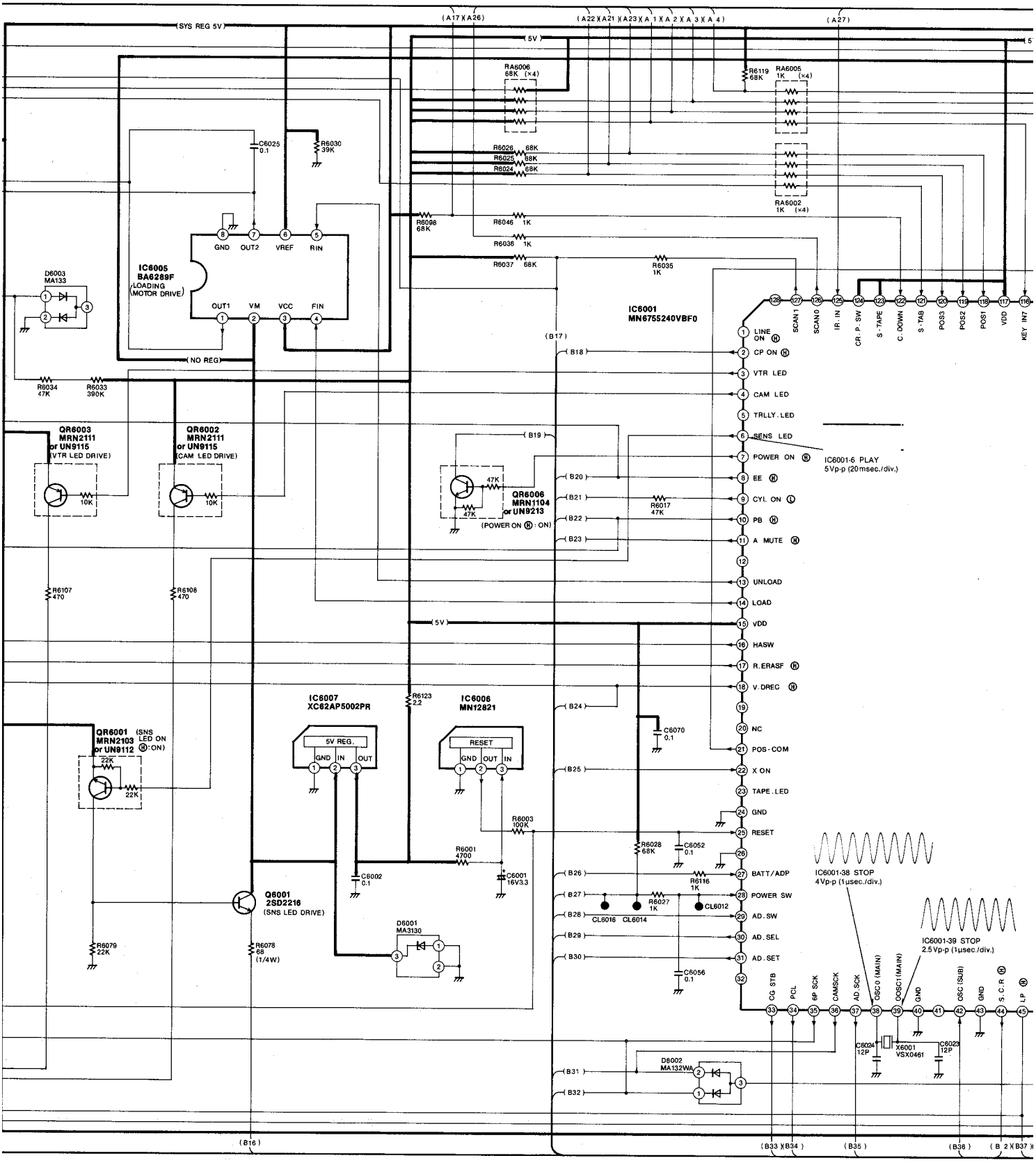
REF. NO.	Q6001			Q6002			Q6003			Q6004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0	6.8	0	4.9	4.9	4.2	0	4.8	0	0	4.7	0						
REC/PLAY	0	6.6	0	4.9	4.8	4.1	0	4.8	0	0	4.7	0						
F.F	0.9	6.5	0.8	4.9	4.9	4.2	0	4.6	0	0	4.7	0						

REF. NO.	QR6001			QR6002			QR6003			QR6004						QR6005		
MODE	E	C	B	E	C	B	E	C	B	1	2	3	4	5		E	C	B
STOP	4.8	0	5.0	5.0	0	5.0	4.8	0	0	0.2	0.2	0	0	0		0	4.4	0.1
REC/PLAY	4.8	0	4.9	5.0	4.9	0	4.8	0.1	0	0.2	0.2	0	0	0		0	0.1	0.1
F.F	4.8	0.8	4.2				4.8	4.8	0	0.2	0.2	0	0	0		0	4.4	0.1

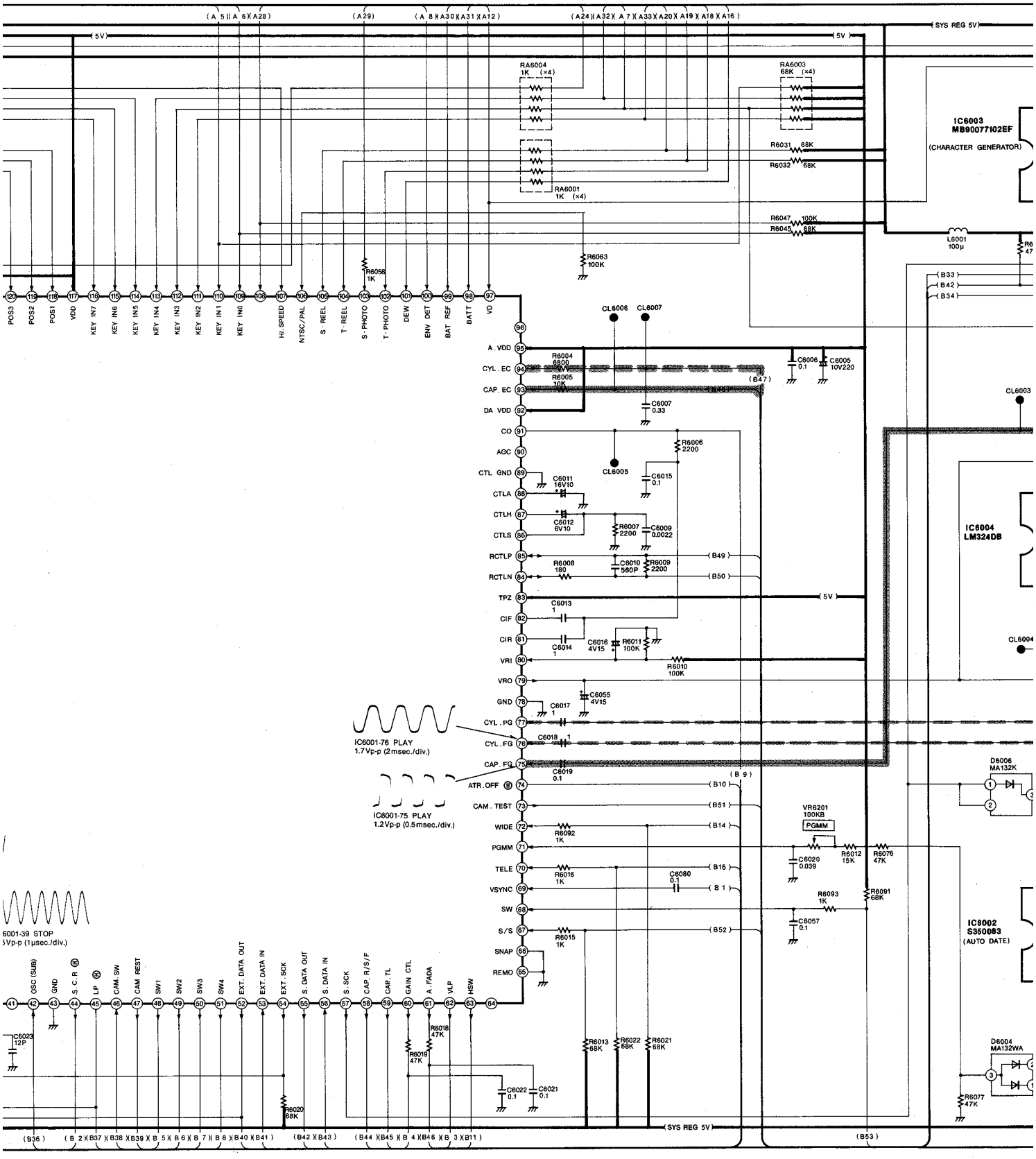
REF. NO.	QR6006			QR6007			QR6008			QR6013								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0	0	5.0	0	0	4.7	0	0	4.5	0	1.1	0						
REC/PLAY	0	0.1	4.9	0	0	4.7	0	0	4.4	0	1.1	0						
F.F	0	0.1	5.0	0	0	4.7	0	0	4.4	0	1.1	0						

3-15. SYSTEM CONTROL AND SERVO SCHEMATIC DIAGRAM

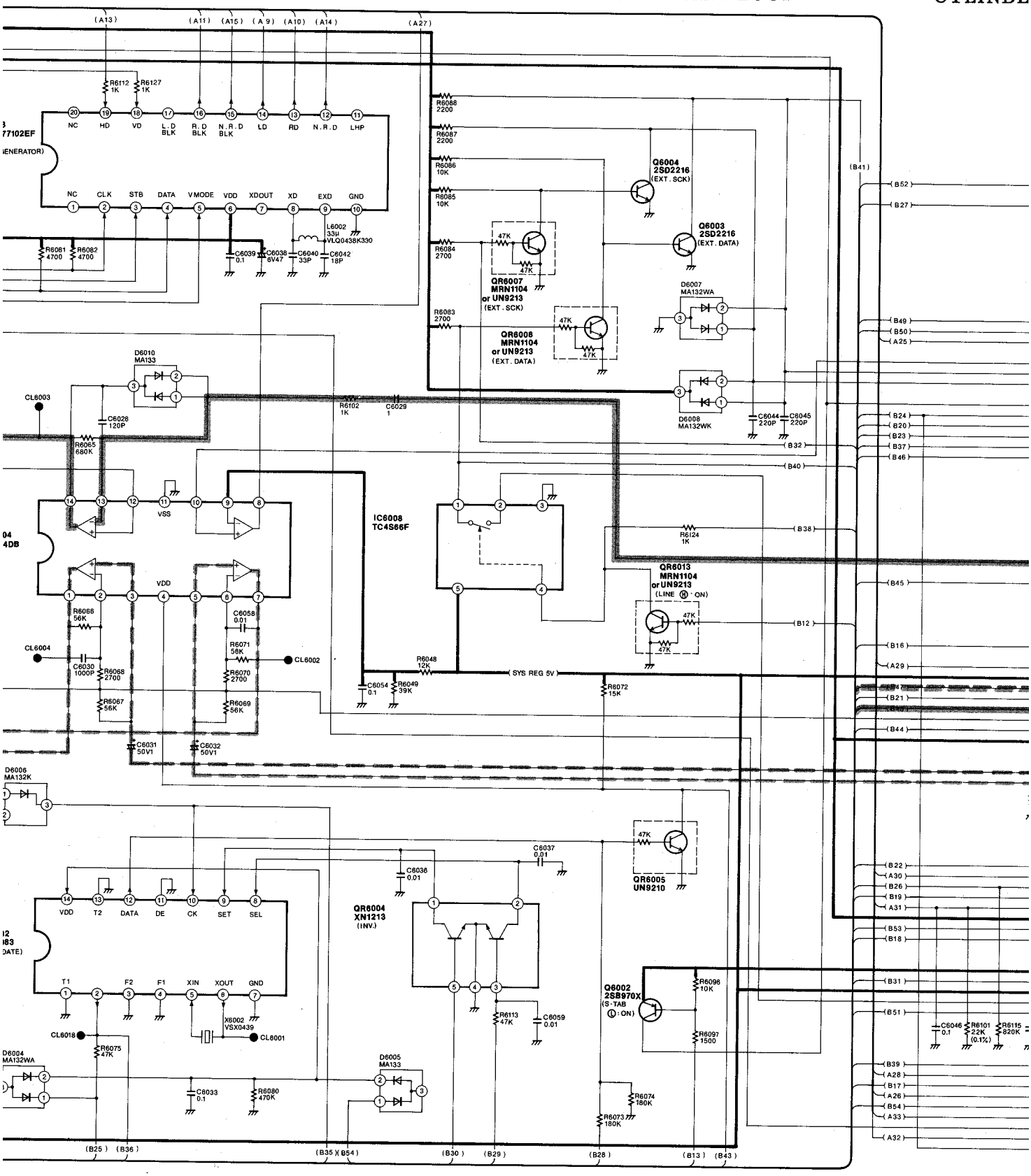



SYS REG 5V
NO REG
5V
IC6005
BA6289F
(LOADING
(MOTOR DRIVE)
GND OUT2 VREF RIN
OUT1 VM VCC FIN
D6003
MA133
IC6001
MN6755240VBF0
LINE ON
CP ON
VTR LED
CAM LED
TRLLY.LED
SENS LED
POWER ON
EE
CYL ON
PB
A MUTE
UNLOAD
LOAD
VDD
HASW
R.ERASF
V.DREC
NC
POS-COM
X ON
TAPE.LED
GND
RESET
BATT/ADP
POWER SW
AD.SW
AD.SEL
AD.SET
SCAN1
SCAN0
IR.IN
CR.P.SW
S-TAPE
C.DOWN
S-TAB
POS3
POS2
POS1
VDD
KEY IN7
CG STB
PCL
6P SCK
CAMSCK
AD.SCK
OSC0 (MAIN)
OSC1(MAIN)
GND
OSC (SUB)
GND
S.C.R
LP
X6001
VSX0461
C6024 12P
C6023 12P
QR6003
MRN2111
or UN9115
(VTR LED DRIVE)
QR6002
MRN2111
or UN9115
(CAM LED DRIVE)
QR6006
MRN1104
or UN9213
(POWER ON Ⓗ : ON)
QR6001 (SNS LED ON
MRN2103 Ⓗ:ON)
or UN9112
Q6001
2SD2216
(SNS LED DRIVE)
IC6007
XC62AP5002PR
5V REG.
IC6006
MN12821
RESET
D6001
MA3130
D6002
MA132WA
IC6001-6 PLAY
5Vp-p (20msec./div.)
IC6001-38 STOP
4Vp-p (1μsec./div.)
IC6001-39 STOP
2.5Vp-p (1μsec./div.)
(A17)(A26)
(A22)(A21)(A23)(A1)(A2)(A3)(A4)
(A27)
(B16)
(B17)
(B18)
(B19)
(B20)
(B21)
(B22)
(B23)
(B24)
(B25)
(B26)
(B27)
(B28)
(B29)
(B30)
(B31)
(B32)
(B33)(B34)
(B35)
(B36)
(B37)

7 8 9 10 11 12


IC6003
MB90077102EF
(CHARACTER GENERATOR)
IC6004
LM324DB
IC8002
S350083
(AUTO DATE)
RA6004 1K (×4)
RA6003 68K (×4)
RA6001 1K (×4)
R6031 68K
R6032 68K
R6047 100K
R6045 68K
R6063 100K
R6058 1K
L6001 100µ
CL6006
CL6007
CL6005
CL6003
CL6004
C6006 0.1
C6005 10V220
C6007 0.33
C6011 16V10
C6012 6V10
C6015 0.1
C6009 0.0022
C6010 560P
C6013 1
C6014 1
C6016 4V15
C6017 1
C6018 1
C6019 0.1
C6055 4V15
C6080 0.1
C6020 0.039
C6057 0.1
C6022 0.1
C6021 0.1
C6023 12P
R6004 6800
R6005 10K
R6006 2200
R6007 2200
R6008 180
R6009 2200
R6010 100K
R6011 100K
R6012 15K
R6076 47K
R6091 68K
R6092 1K
R6093 1K
R6015 1K
R6016 1K
R6018 47K
R6019 47K
R6020 68K
R6013 68K
R6022 68K
R6021 68K
R6077 47K
VR6201 100KB
PGMM
D6006 MA132K
D6004 MA132WA
IC6001-76 PLAY
1.7Vp-p (2msec./div.)
IC6001-75 PLAY
1.2Vp-p (0.5msec./div.)
6001-39 STOP
5Vp-p (1µsec./div.)
5V
SYS REG 5V
POS3
POS2
POS1
VDD
KEY IN7
KEY IN6
KEY IN5
KEY IN4
KEY IN3
KEY IN2
KEY IN1
KEY IN0
HI. SPEED
NTSC/PAL
S. REEL
T. REEL
S. PHOTO
T. PHOTO
DEW
ENV DET
BAT REF
BATT
VD
A. VDD
CYL. EC
CAP. EC
DA VDD
CO
AGC
CTL GND
CTLA
CTLH
CTLS
RCTLP
RCTLN
TPZ
CIF
CIR
VRI
VRO
GND
CYL. PG
CYL. FG
CAP. FG
ATR. OFF
CAM. TEST
WIDE
PGMM
TELE
VSYNC
SW
S/S
SNAP
REMO
OSC (SUB)
GND
S. C. R
LP
CAM. SW
CAM. REST
SW1
SW2
SW3
SW4
EXT. DATA OUT
EXT. DATA IN
EXT. SCK
S. DATA OUT
S. DATA IN
S. SCK
CAP. R/S/F
CAP. TL
GAIN CTL
A. FADA
VLP
HSW
(B 36)
(B 2)(B37)(B38)(B39)(B 5)(B 6)(B 7)(B 8)(B40)(B41)
(B42)(B43)
(B44)(B45)(B 4)(B46)(B 3)(B11)
(B53)
(B 9)
(B10)
(B51)
(B14)
(B15)
(B 1)
(B52)
(B47)
(B49)
(B50)
(B33)
(B42)
(B34)
12
13
14
15
16
17

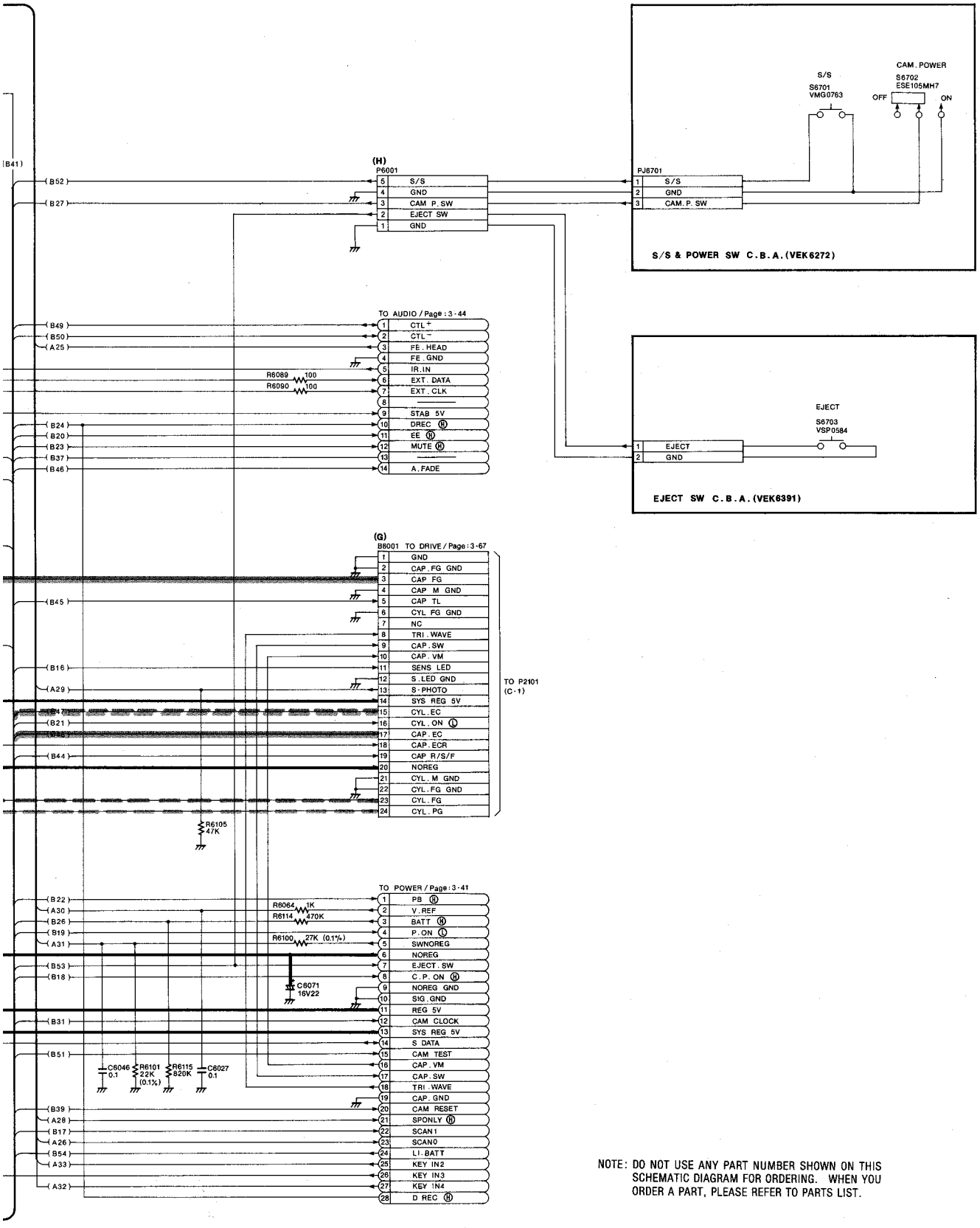
APSTAN SERVO SPEED LOOP — CAPSTAN SERVO PHASE LOOP — CYLINDE



18 | 19 | 20 | 21 | 22 | 23

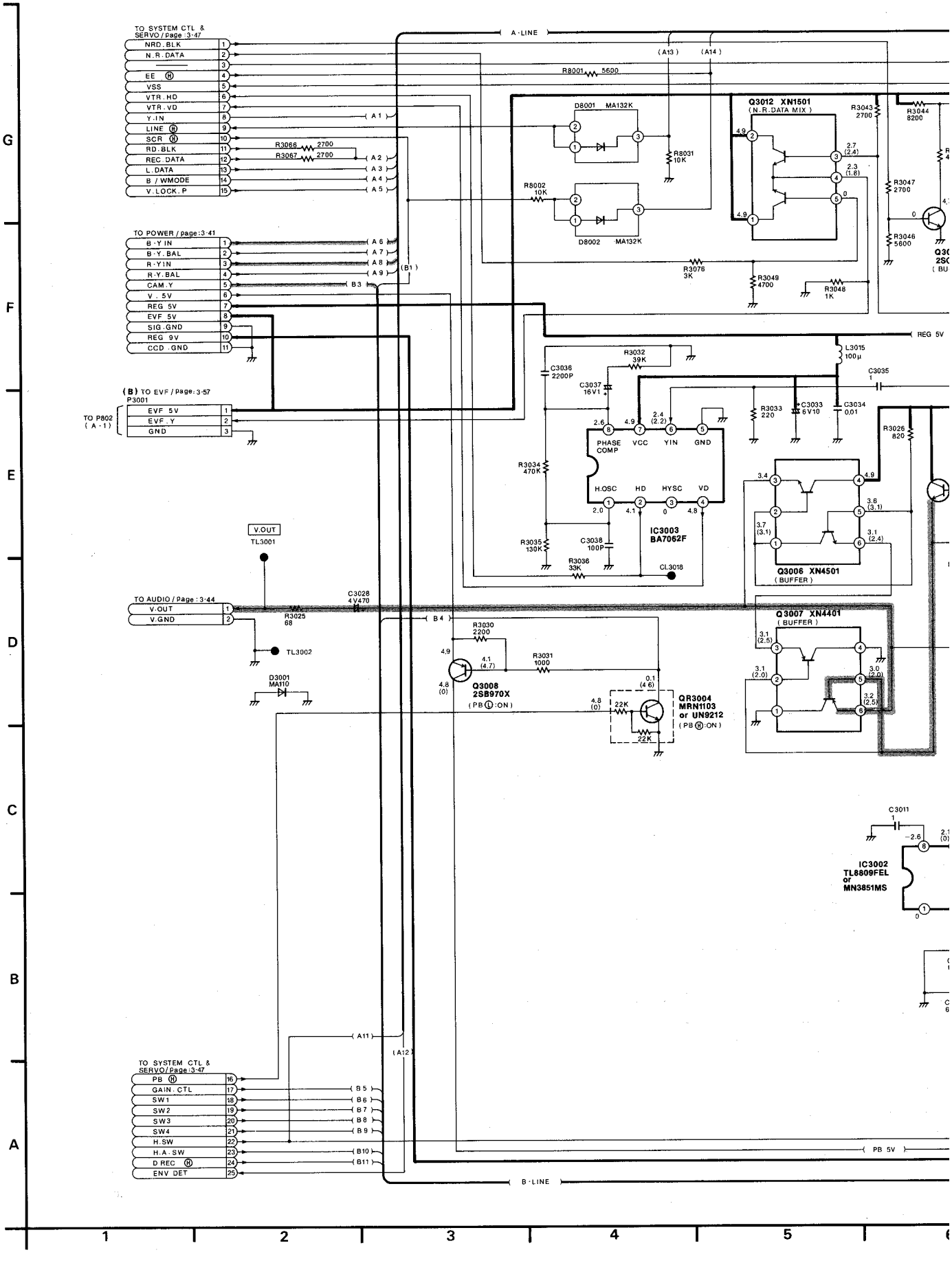
CYLINDER SERVO SPEED LOOP

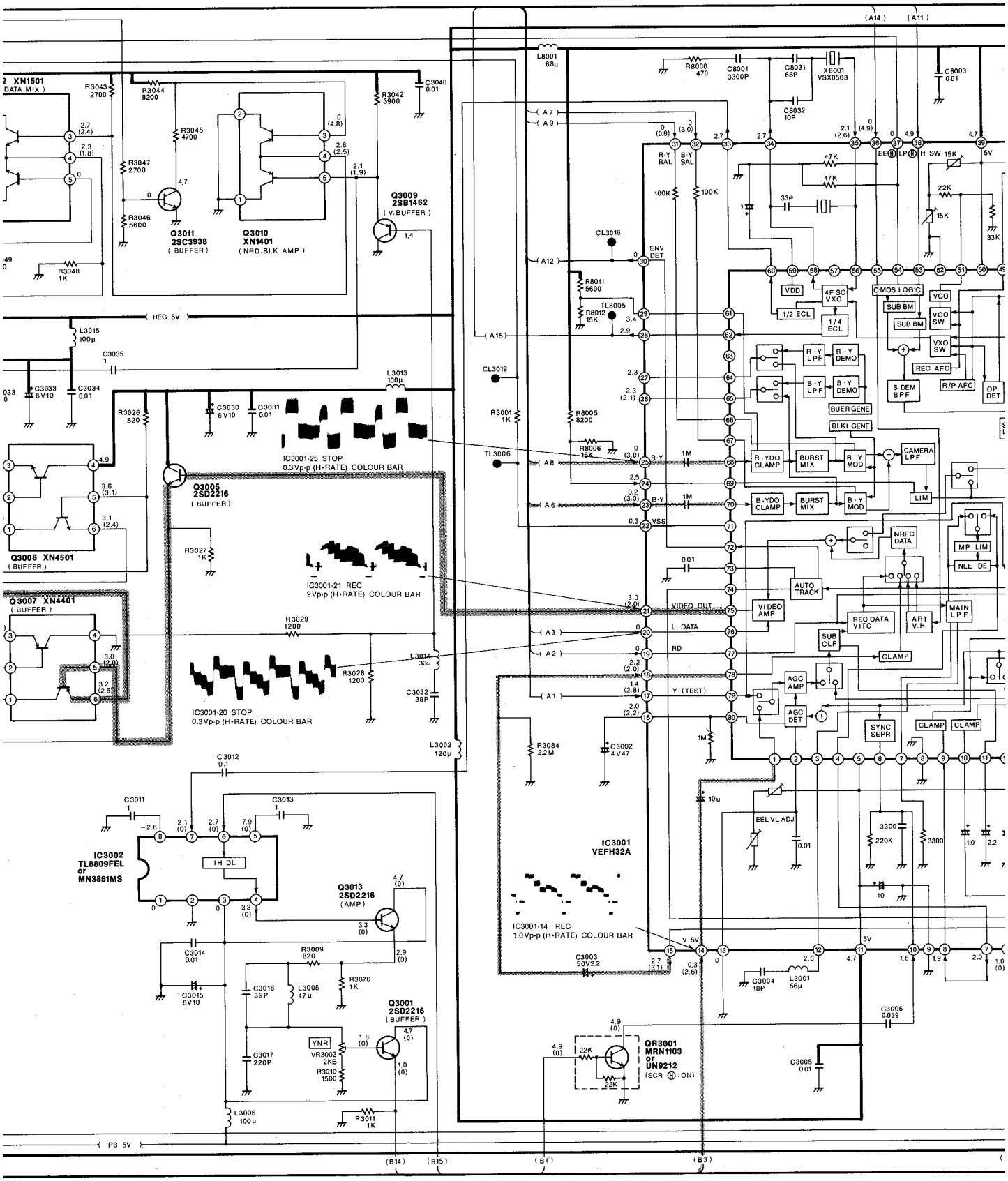
CYLINDER SERVO PHASE LOOP

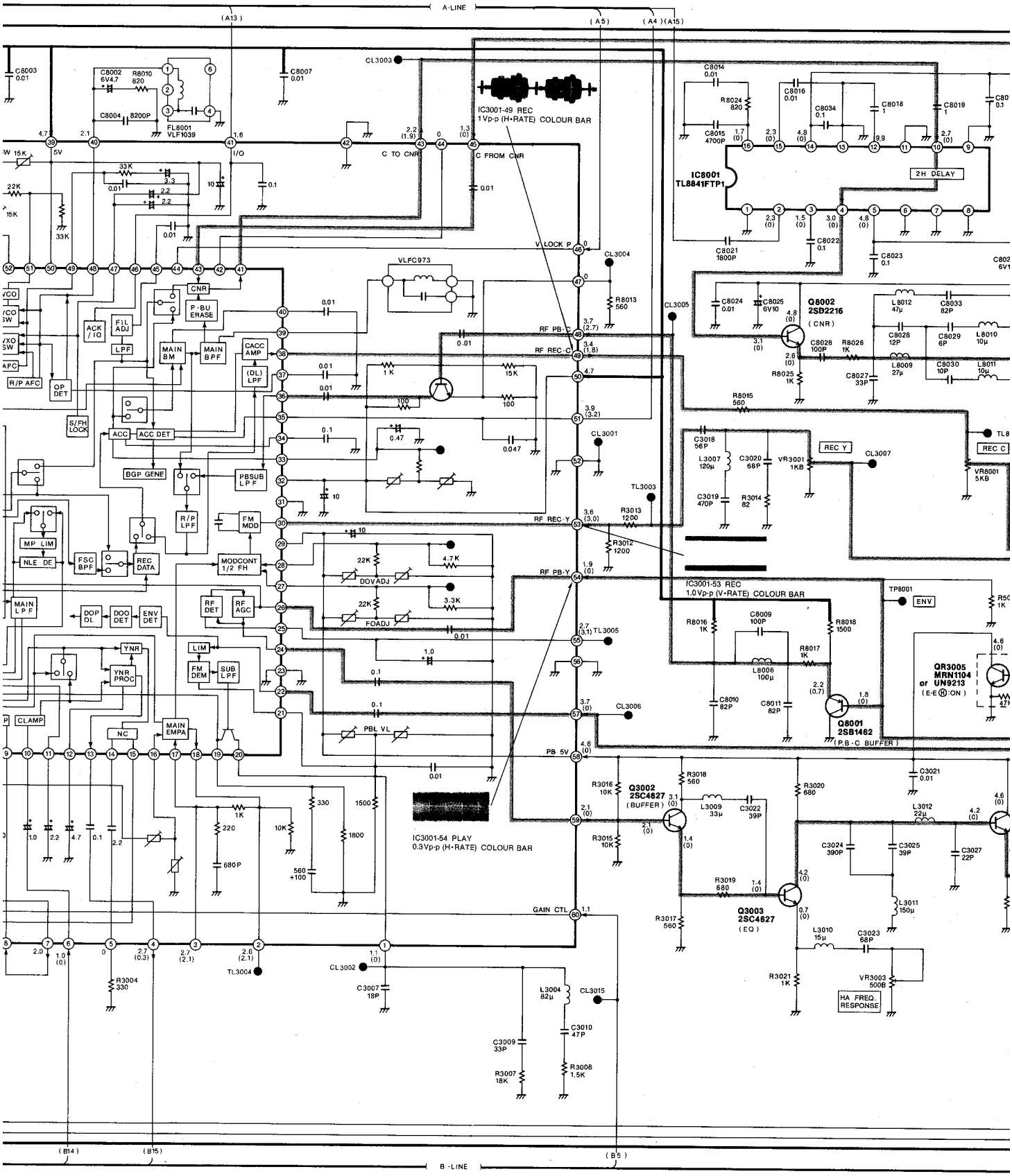


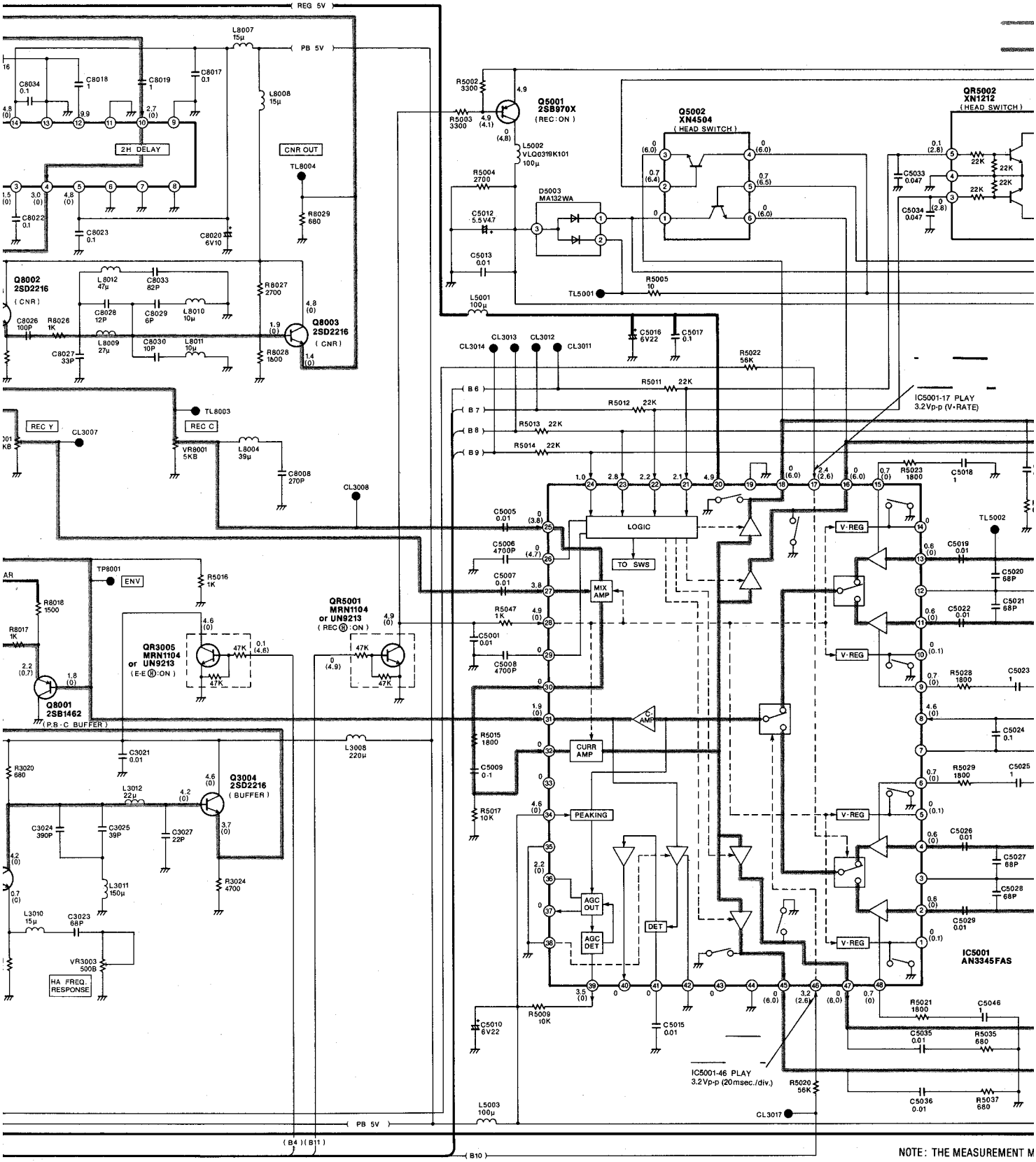
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

3-16. LUMINANCE/CHROMINANCE AND HEAD AMP SCHEMATIC DIA




XN1501
(DATA MIX)
R3043 2700
R3044 8200
R3045 4700
R3047 2700
R3046 5600
R3048 1K
Q3011 2SC3938 (BUFFER)
Q3010 XN1401 (NRD.BLK AMP)
R3042 3900
C3040 0.01
Q3009 2SB1462 (V.BUFFER)
REG 5V
L3015 100µ
C3035 1
C3033 6V10
C3034 0.01
C3030 6V10
C3031 0.01
L3013 100µ
R3026 820
IC3001-25 STOP
0.3Vp-p (H-RATE) COLOUR BAR
Q3005 2SD2216 (BUFFER)
Q3008 XN4501 (BUFFER)
R3027 1K
IC3001-21 REC
2Vp-p (H-RATE) COLOUR BAR
Q3007 XN4401 (BUFFER)
R3029 1200
R3028 1200
L3014 33µ
C3032 39P
IC3001-20 STOP
0.3Vp-p (H-RATE) COLOUR BAR
L3002 120µ
C3012 0.1
C3011 1
C3013 1
IC3002 TL8809FEL or MN3851MS
1H DL
Q3013 2SD2216 (AMP)
C3014 0.01
C3015 6V10
R3009 820
R3070 1K
C3016 39P
L3005 47µ
C3017 220P
YNR
VR3002 2KB
R3010 1500
Q3001 2SD2216 (BUFFER)
L3006 100µ
R3011 1K
PB 5V
L8001 68µ
R8008 470
C8001 3300P
C8031 68P
X8001 VSX0563
C8032 10P
C8003 0.01
47K
100K
33P
22K
15K
33K
CL3016
ENV DET
R8011 5600
R8012 15K
TL8005
CL3019
R3001 1K
R8005 8200
R8006 15K
TL3006
R-Y BAL.
B-Y BAL
EE
LP
H SW
5V
VDD
4F SC VXO
C-MOS LOGIC
VCO
1/2 ECL
1/4 ECL
SUB BM
VCO SW
VXO SW
REC AFC
S DEM BPF
R/P AFC
OP DET
R-Y LPF
B-Y DEMO
B-Y LPF
BUER GENE
BLKI GENE
R-Y DO CLAMP
BURST MIX
R-Y MOD
CAMERA LPF
B-Y DO CLAMP
B-Y MOD
LIM
NREC DATA
MP LIM
NLE DE
AUTO TRACK
VIDEO AMP
REC DATA VITC
ART V.H
MAIN LPF
SUB CLP
CLAMP
AGC AMP
AGC DET
SYNC SEPR
R-Y
B-Y
VSS
VIDEO OUT
L. DATA
RD
Y (TEST)
R3084 2.2M
C3002 4 V 47
EEL VL ADJ
IC3001 VEFH32A
IC3001-14 REC
1.0Vp-p (H-RATE) COLOUR BAR
C3003 50V2.2
C3004 18P
L3001 56µ
C3006 0.039
C3005 0.01
QR3001 MRN1103 or UN9212
(SCR M : ON)
(B14)
(B15)
(B1)
(B3)


A-LINE
B-LINE
IC3001-49 REC
1Vp-p (H-RATE) COLOUR BAR
IC3001-53 REC
1.0Vp-p (V-RATE) COLOUR BAR
IC3001-54 PLAY
0.3Vp-p (H-RATE) COLOUR BAR
IC8001
TL8841FTP1
2H DELAY
Q8002
2SD2216
(CNR)
Q8001
2SB1462
(P.B-C BUFFER)
Q3002
2SC4627
(BUFFER)
Q3003
2SC4627
(EQ)
QR3005
MRN1104
or UN9213
(E-E-H-ON)
FL8001
VLF1039
VLFC973
CL3003
CL3004
CL3005
CL3001
CL3007
CL3006
CL3002
CL3015
TL3003
TL3004
TL3005
V LOCK P
RF PB-C
RF REC-C
RF REC-Y
RF PB-Y
PB 5V
GAIN CTL
C TO CNR
C FROM CNR
I/O
REC Y
REC C
ENV
HA FREQ. RESPONSE
CNR
P-BU ERASE
ACK / IO
FIL ADJ
LPF
MAIN BM
MAIN BPF
CACC AMP
(DL) LPF
R/P AFC
OP DET
S/FH LOCK
ACC
ACC DET
BGP GENE
PBSUB L P F
R/P LPF
FM MOD
MP LIM
NLE DE
FSC BPF
REC DATA
MODCONT 1/2 FH
MAIN L P F
DOP DL
DOQ DET
ENV DET
RF DET
RF AGC
YNR
YNR PROC
LIM
FM DEM
SUB LPF
CLAMP
NC
MAIN EMPA
DOVADJ
FOADJ
PBL VL
(A13)
(A5)
(A4)(A15)
(B14)
(B15)
(B5)



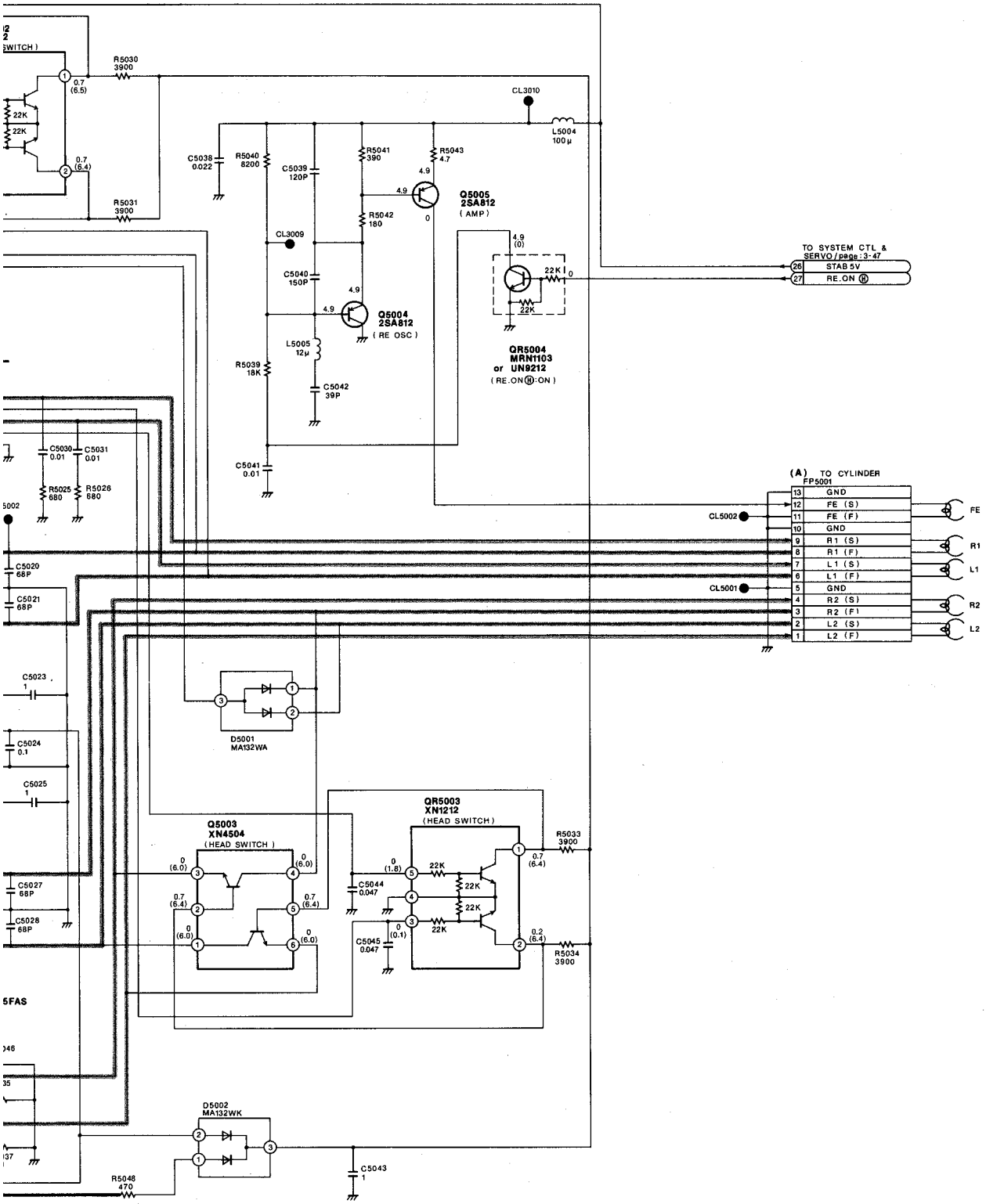
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT M
WITH AIM THE CAMER
THE MEASUREMENT M
WITH PAL COLOUR SIG

16 17 18 19 20 21

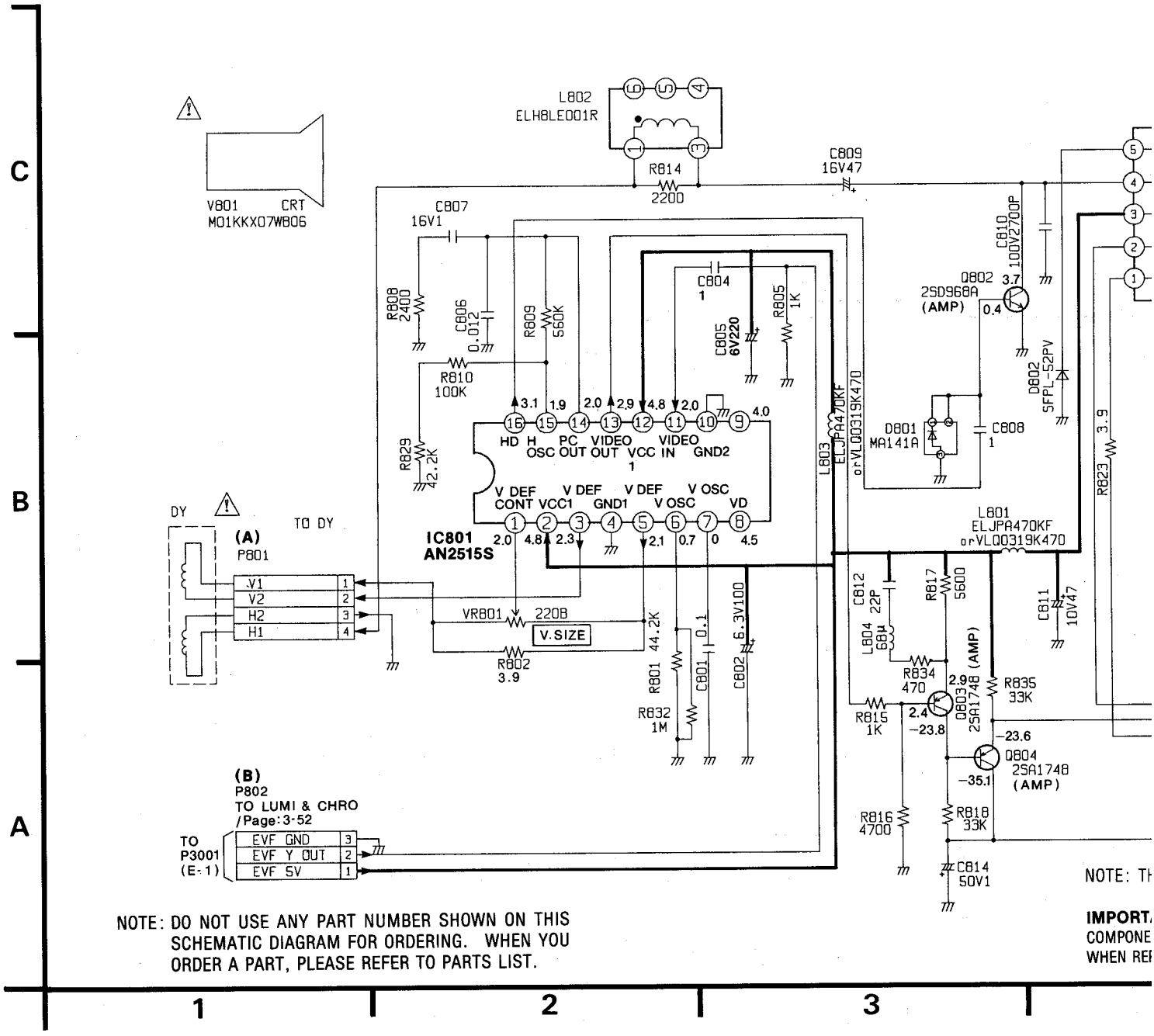
MAIN SIGNAL PATH IN REC MODE

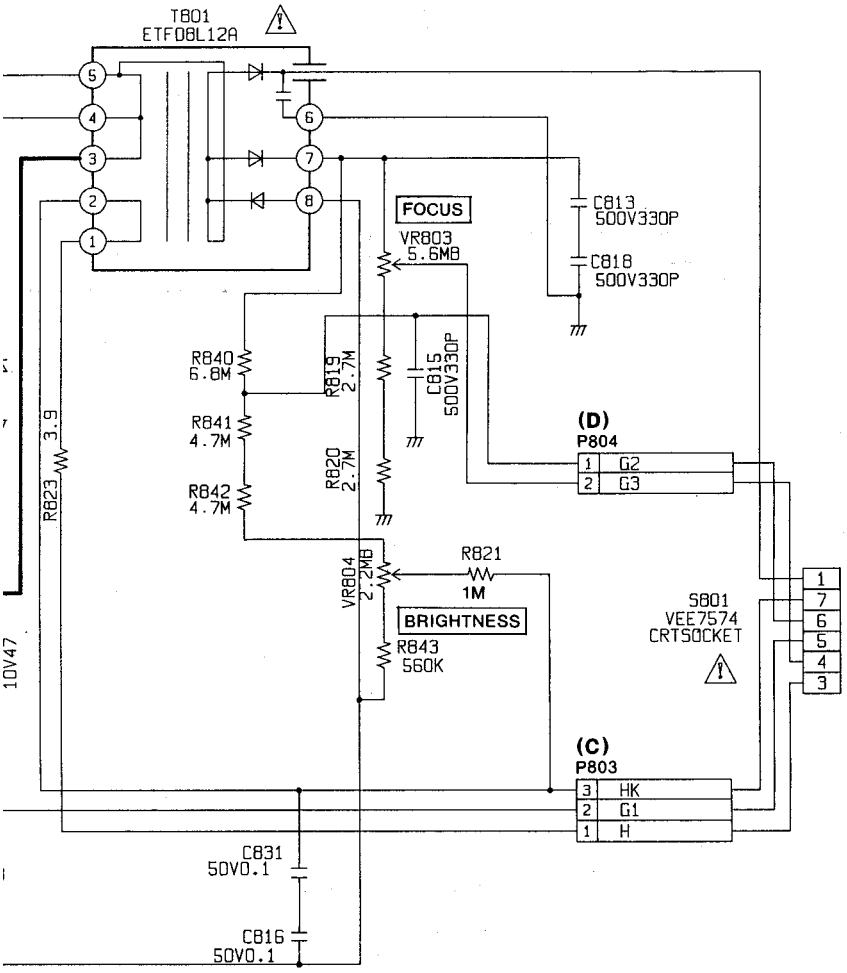
MAIN SIGNAL PATH IN PLAYBACK MODE



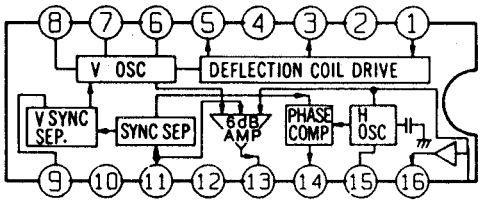
REMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE
HE CAMERA AT THE COLOUR CHART.
REMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE
OLOUR SIGNAL.

3-17. EVF SCHEMATIC DIAGRAM





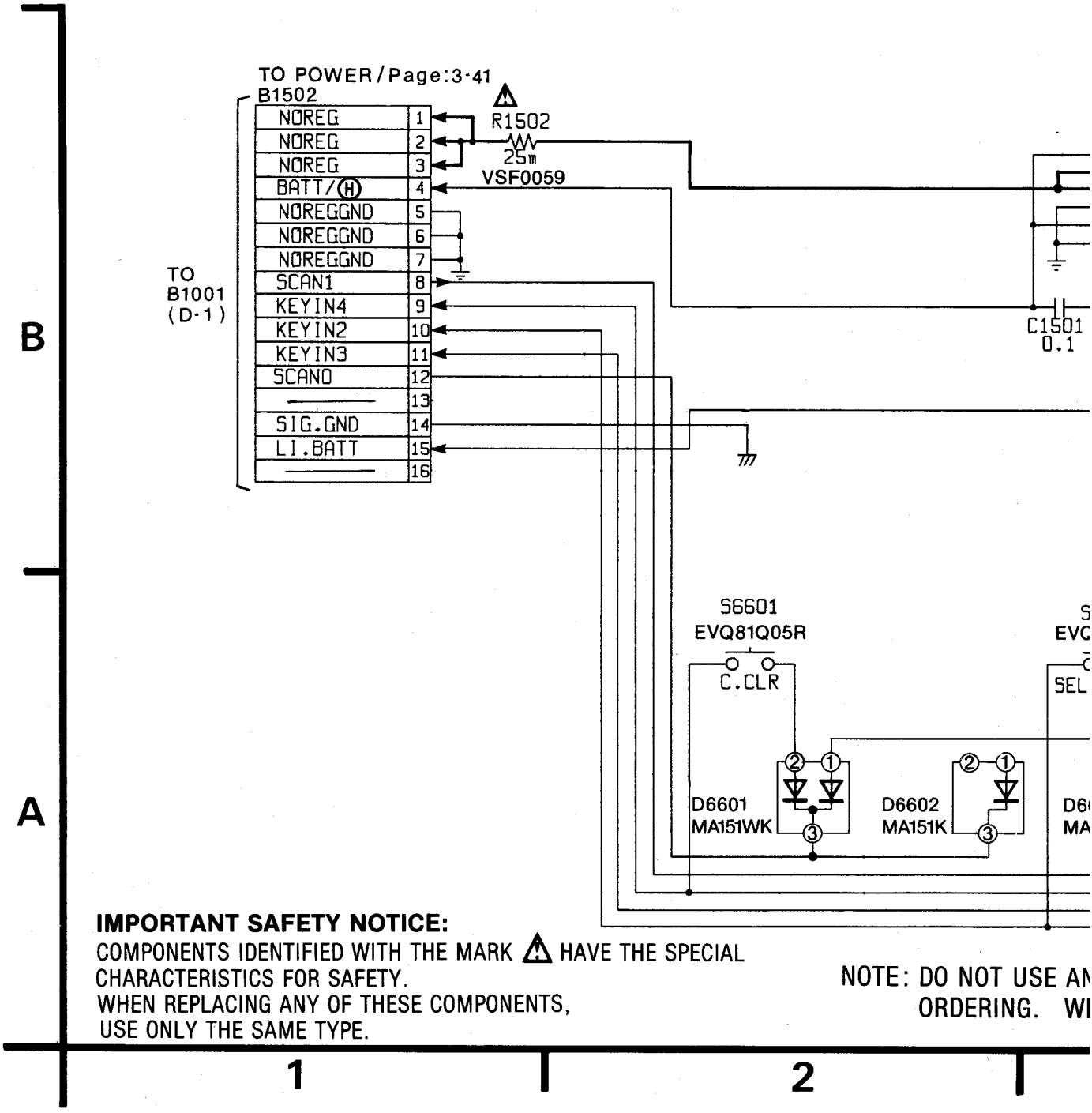
IC801 (AN2515S)

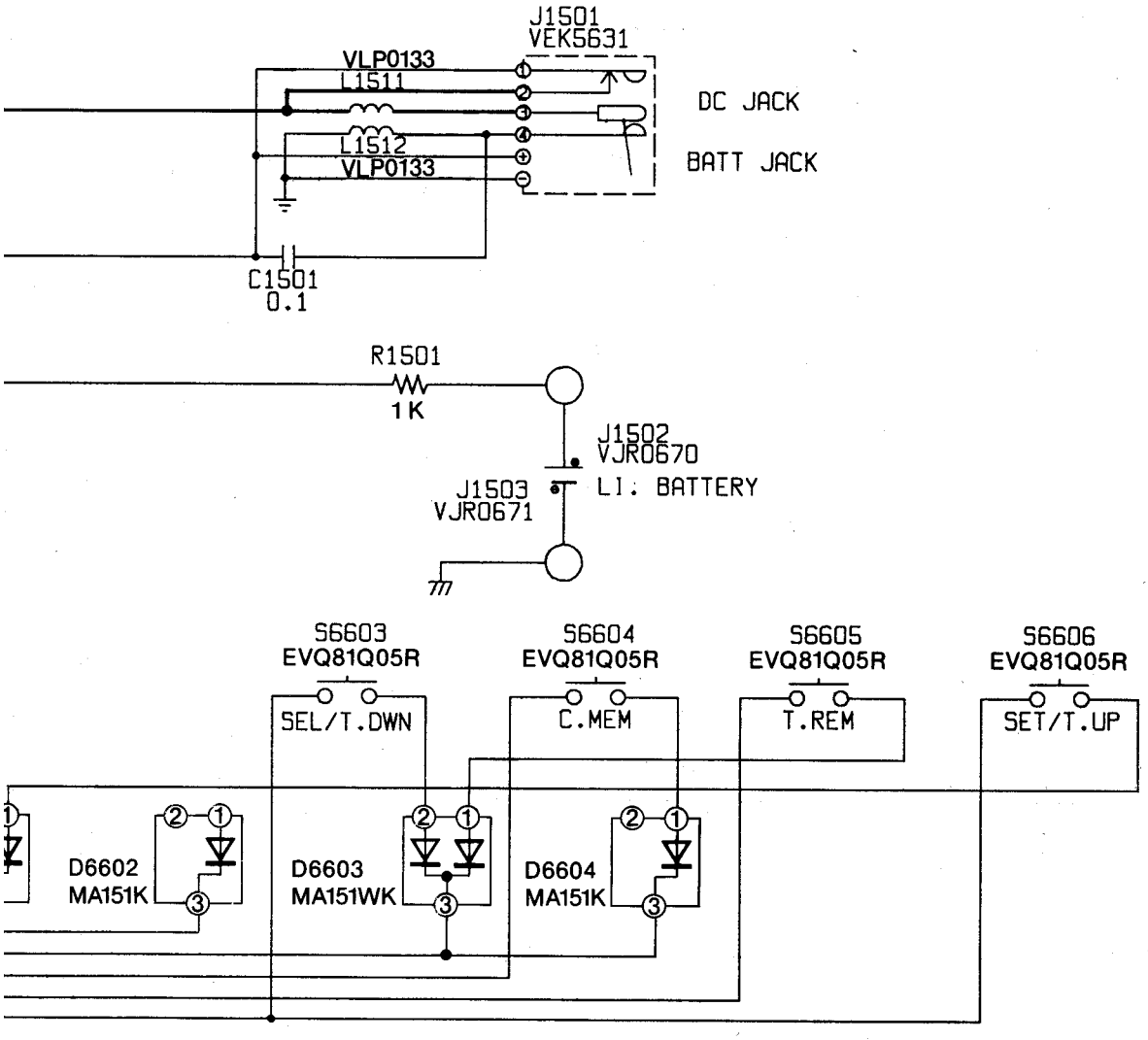


NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

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.

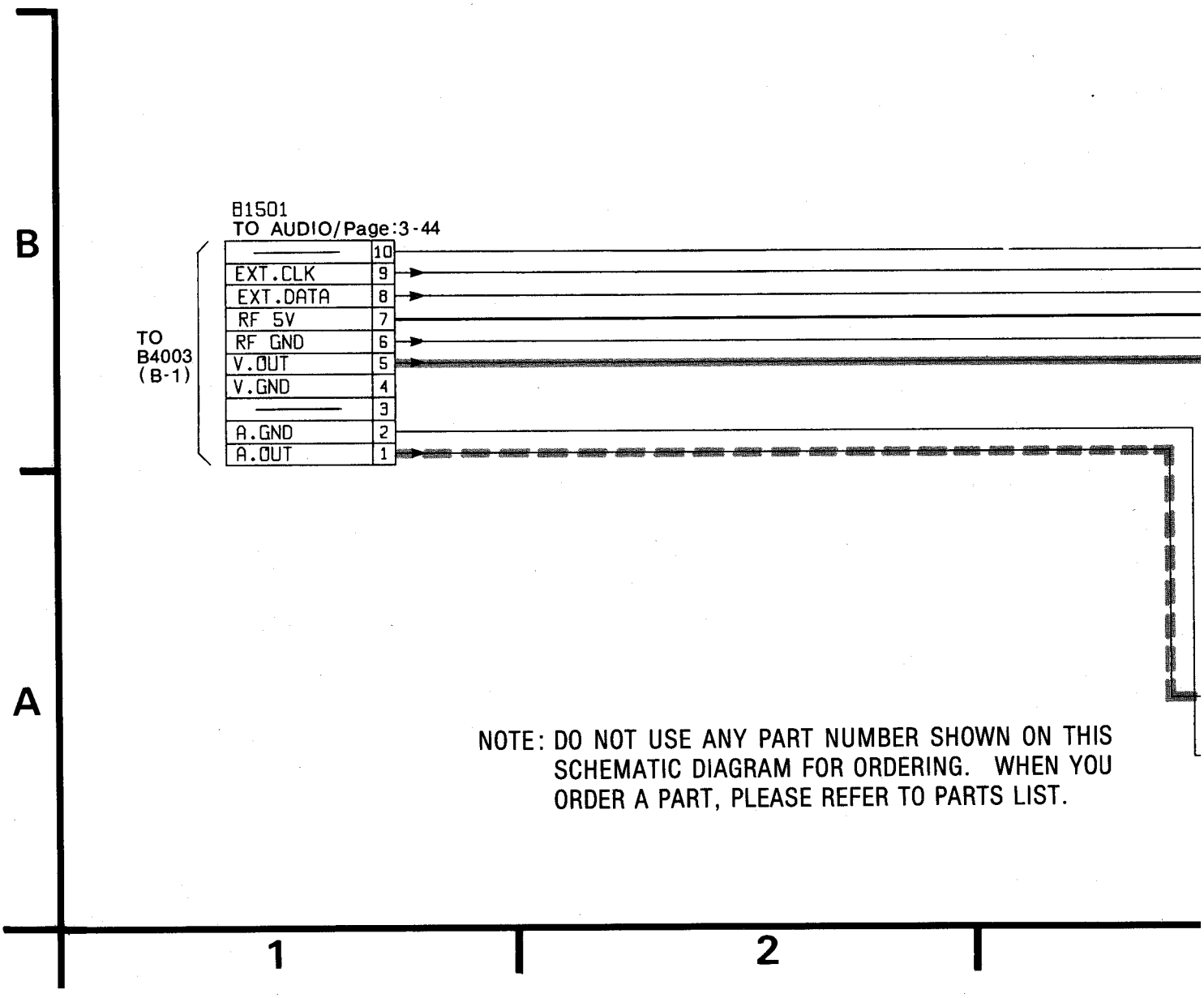
3-19. DC JACK SCHEMATIC DIAGRAM



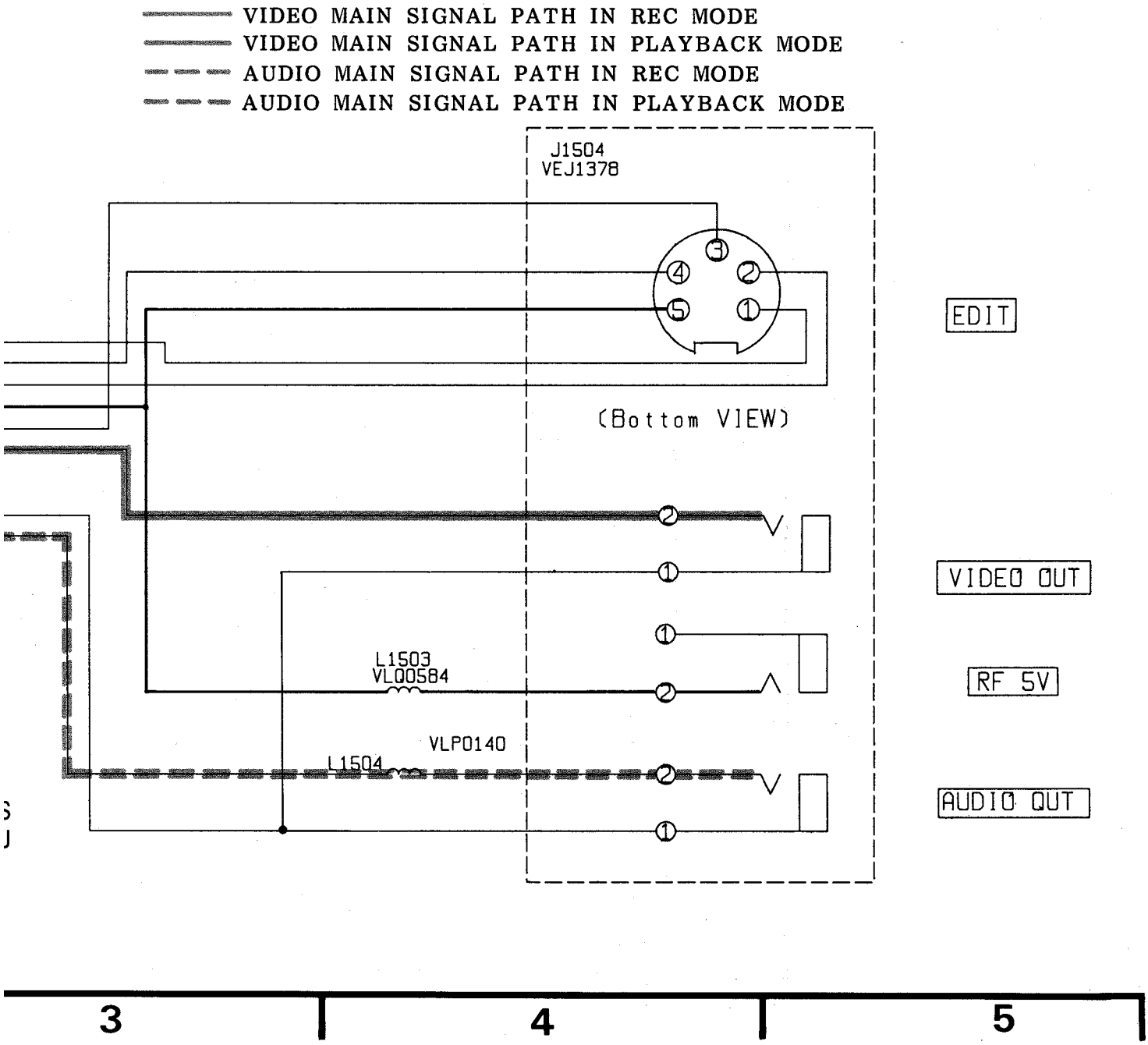


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

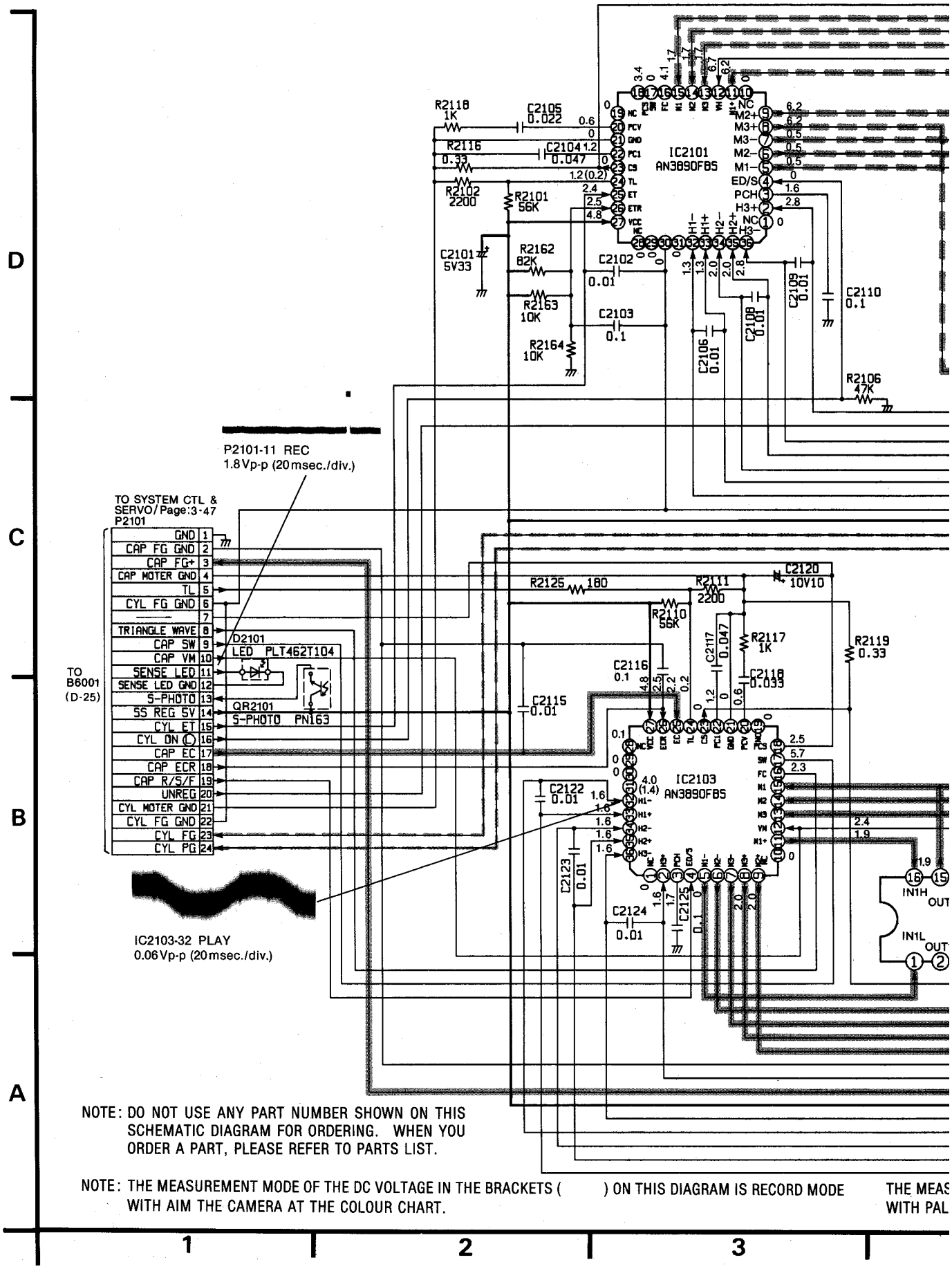
3-21. AV JACK SCHEMATIC DIAGRAM



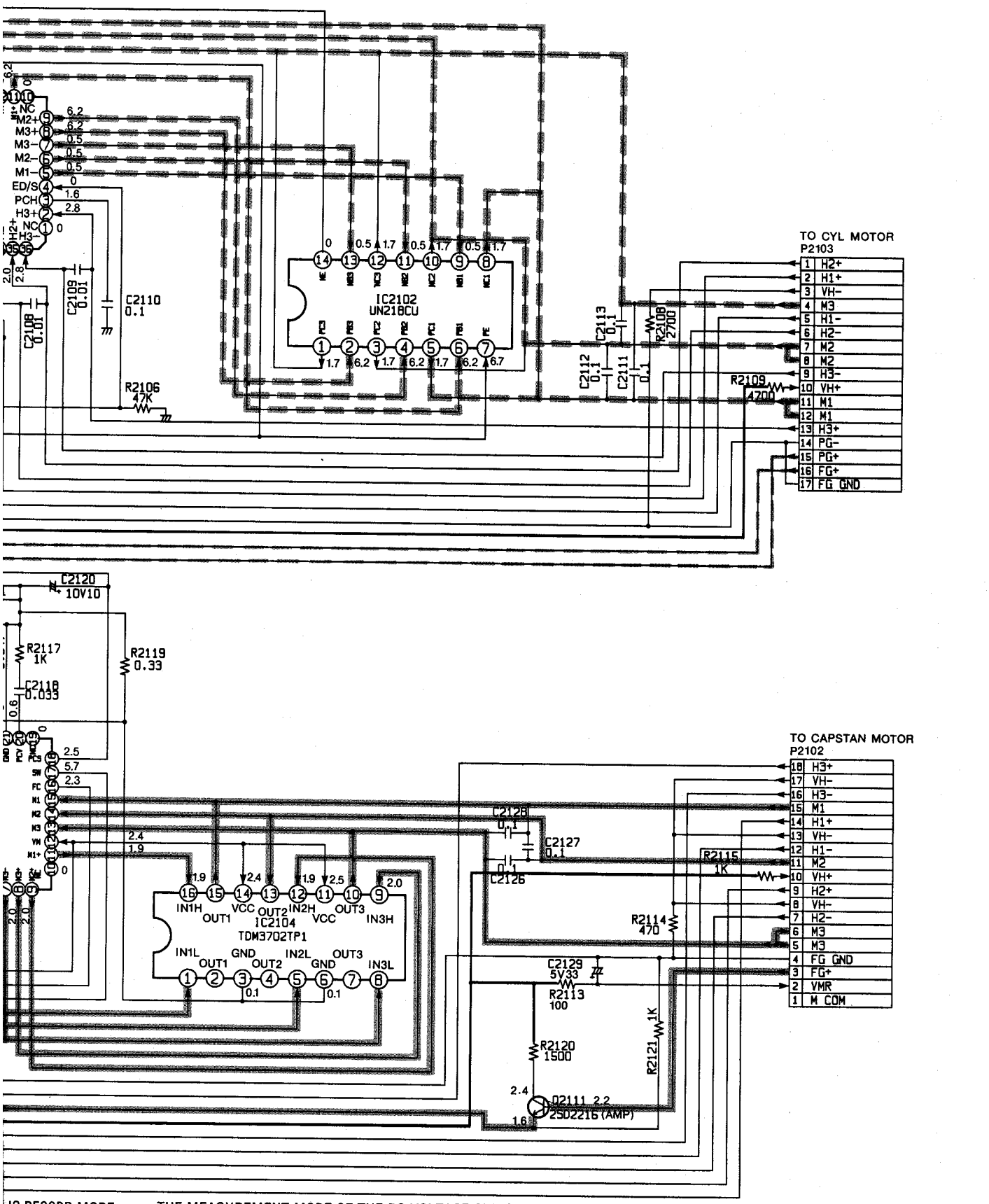
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
J1504
VEJ1378
(Bottom VIEW)
EDIT
VIDEO OUT
RF 5V
AUDIO OUT
L1503
VLQ0584
VLP0140
L1504
3
4
5

3-23. DRIVE SCHEMATIC DIAGRAM



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

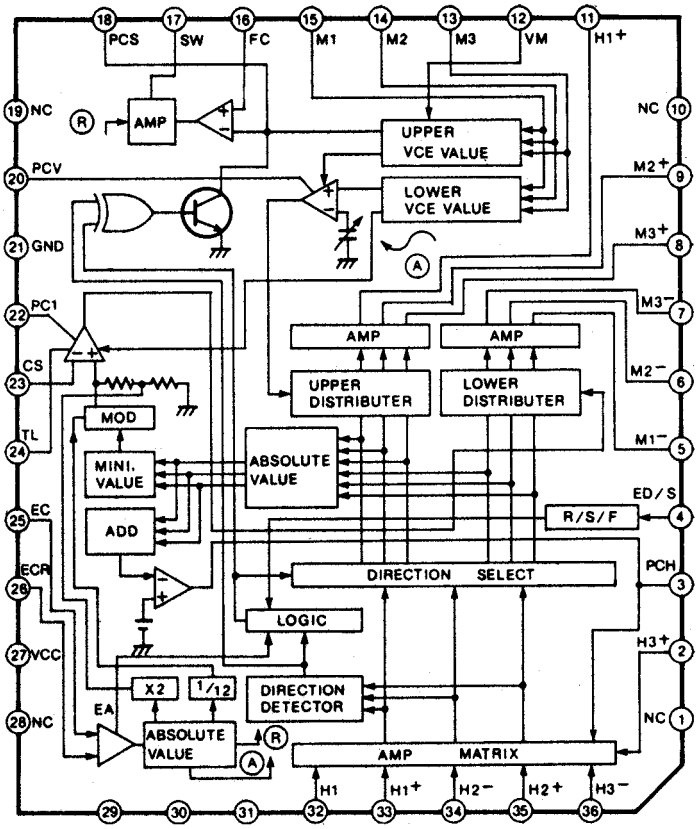


IS RECORD MODE

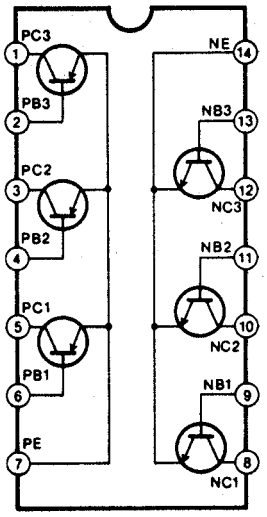
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL.

3 4 5 6

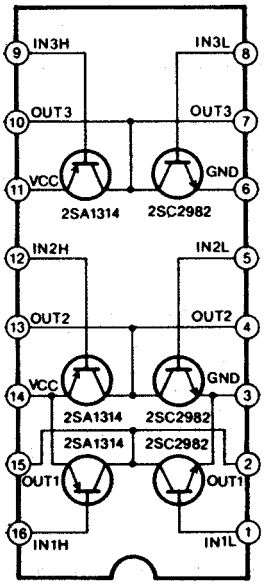
IC2101, 2103 (AN3890FBS)



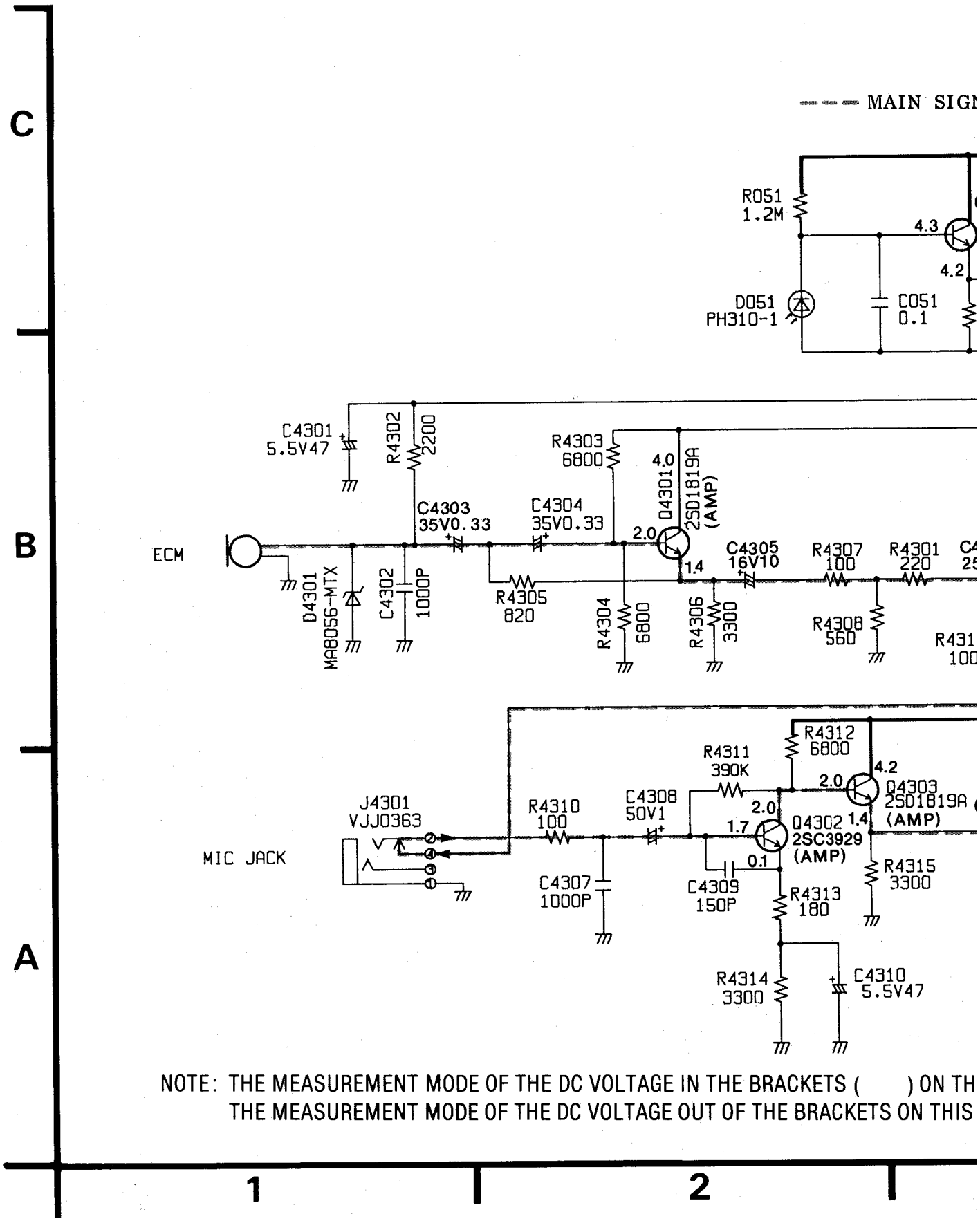
IC2102 (UN218CU)



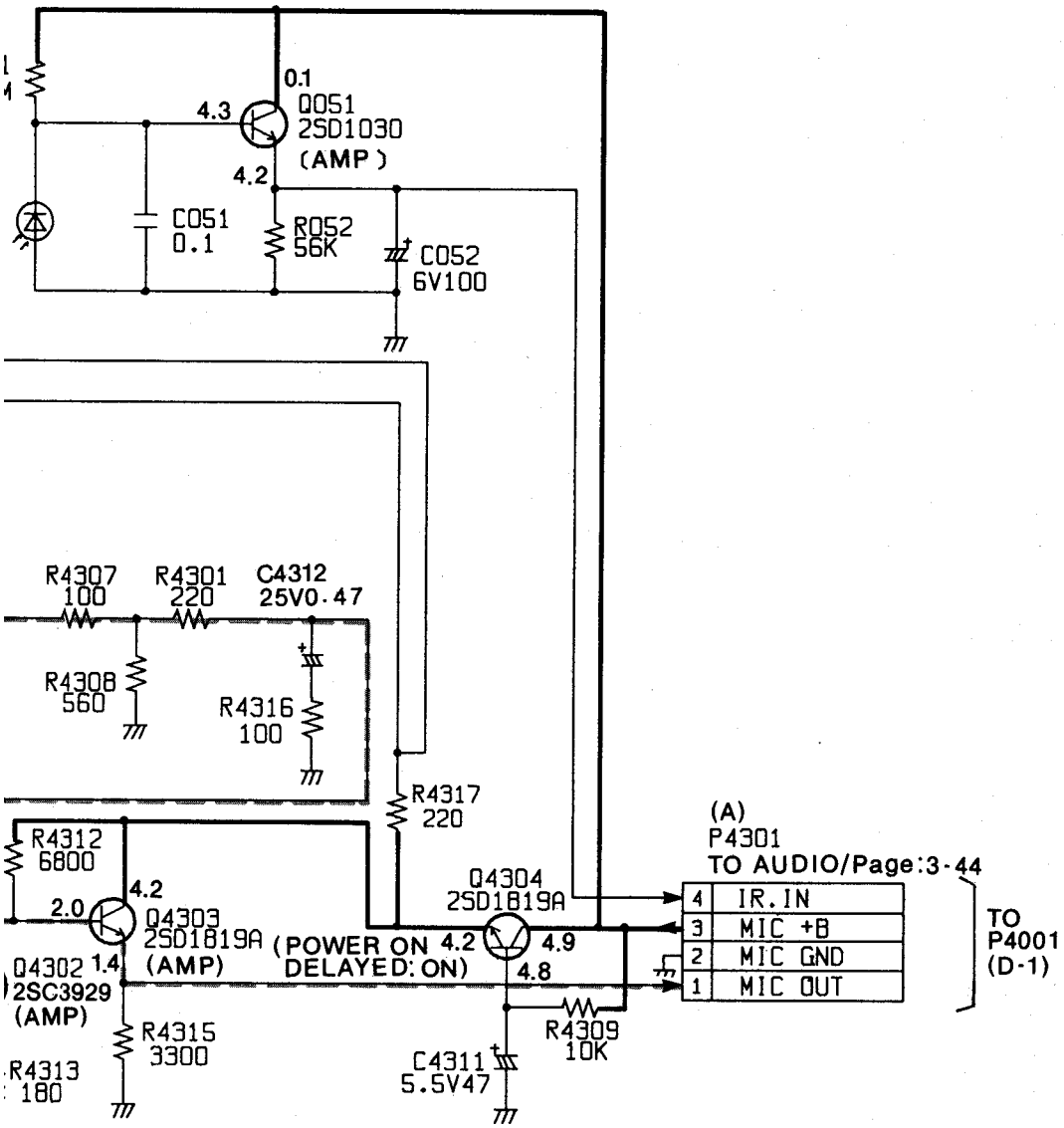
IC2104 (TDM3702TP)



3-25. MIC/IR SENSOR SCHEMATIC DIAGRAM



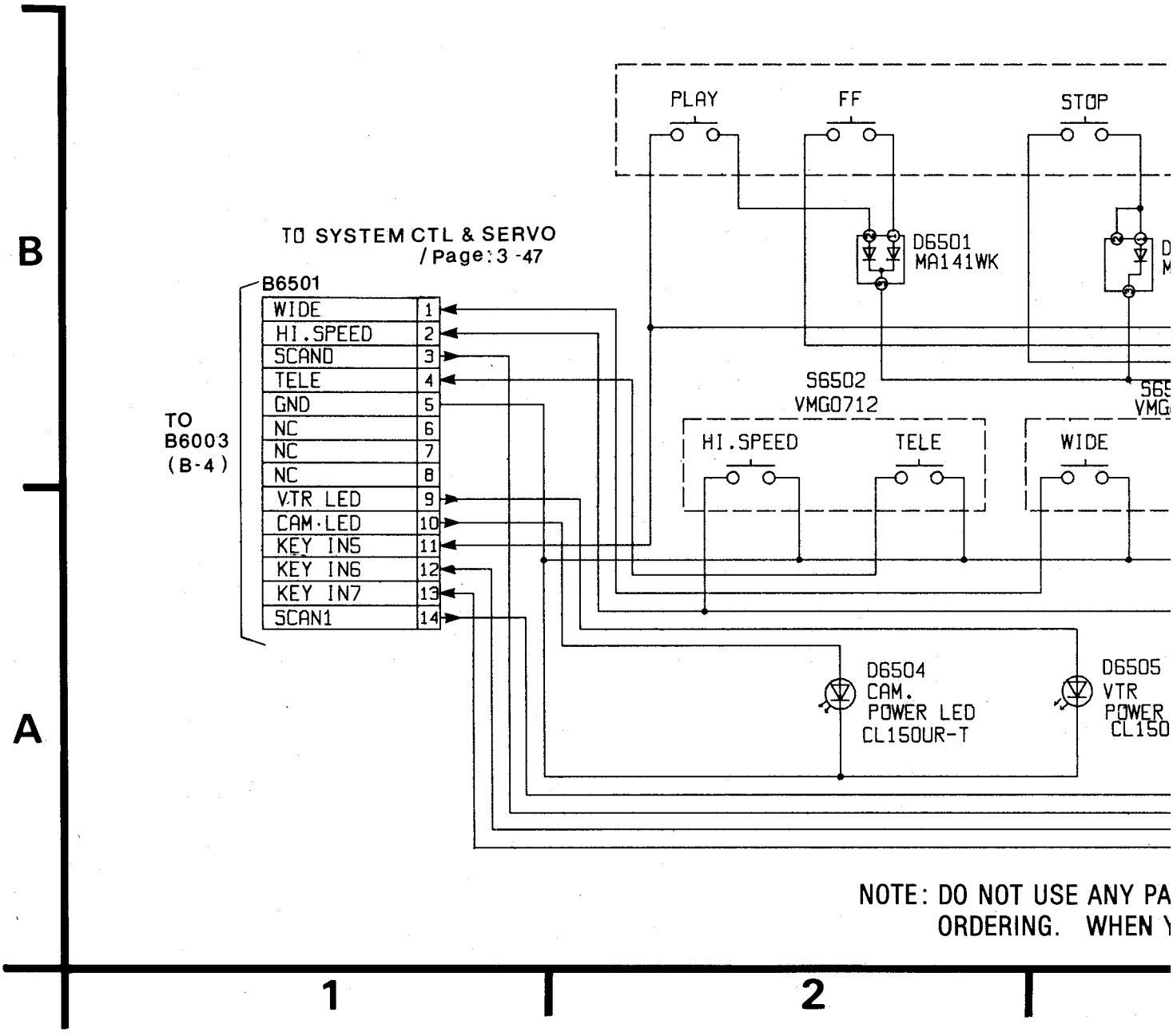
---- MAIN SIGNAL PATH IN REC MODE

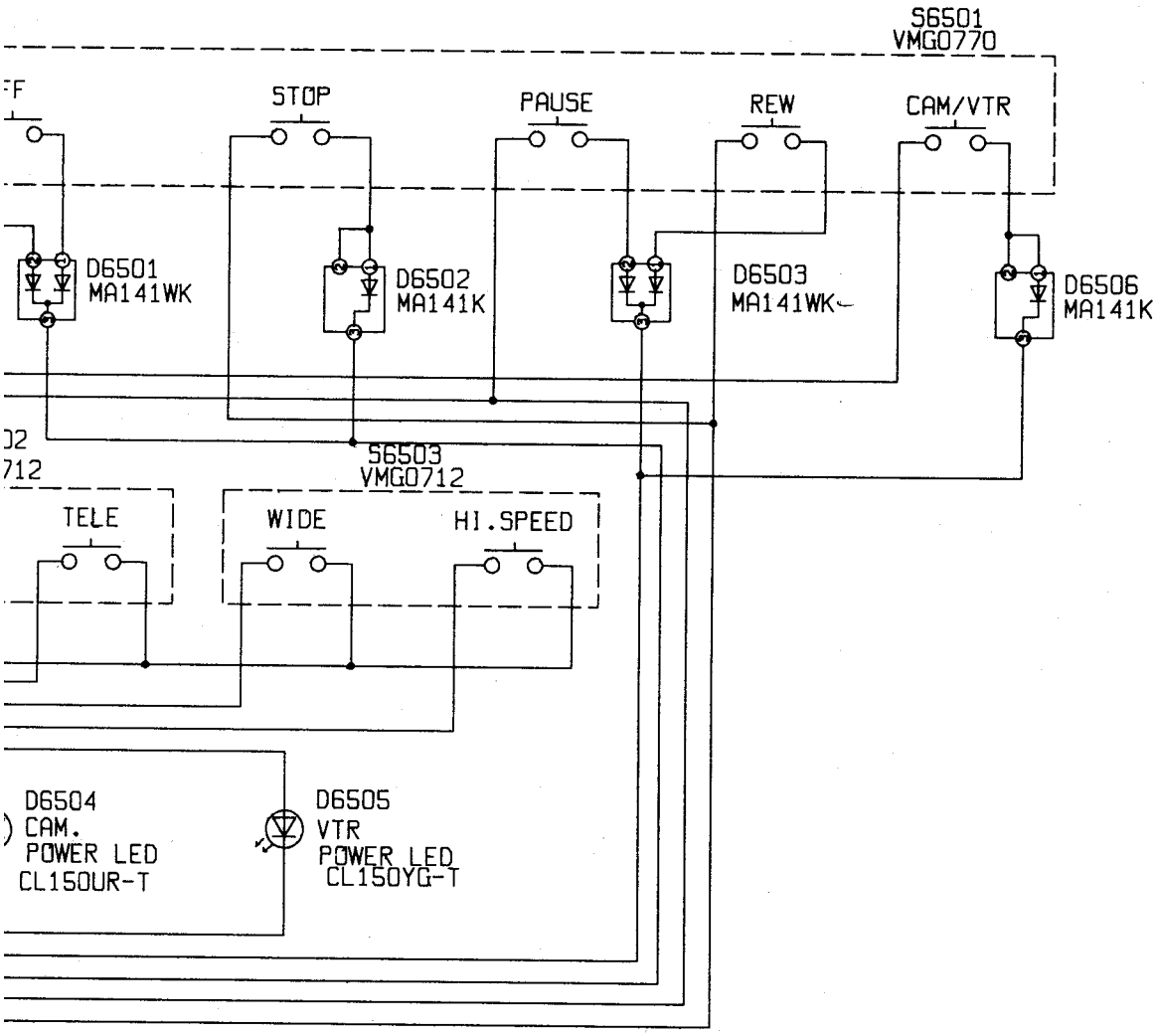


NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

CKETS ( ) ON THIS DIAGRAM IS RECORD MODE.
BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE.

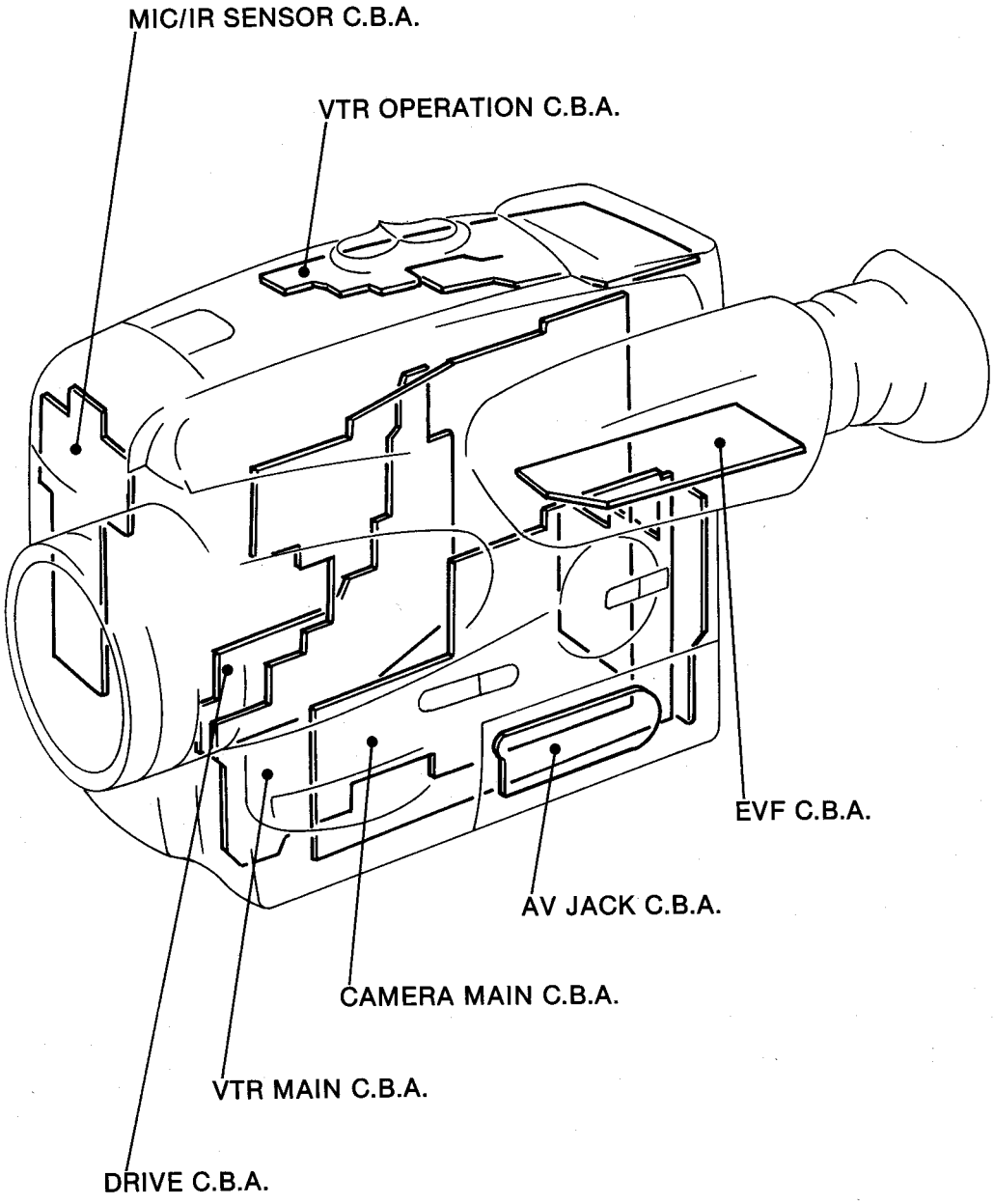
3-27. VTR OPERATION SCHEMATIC DIAGRAM





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

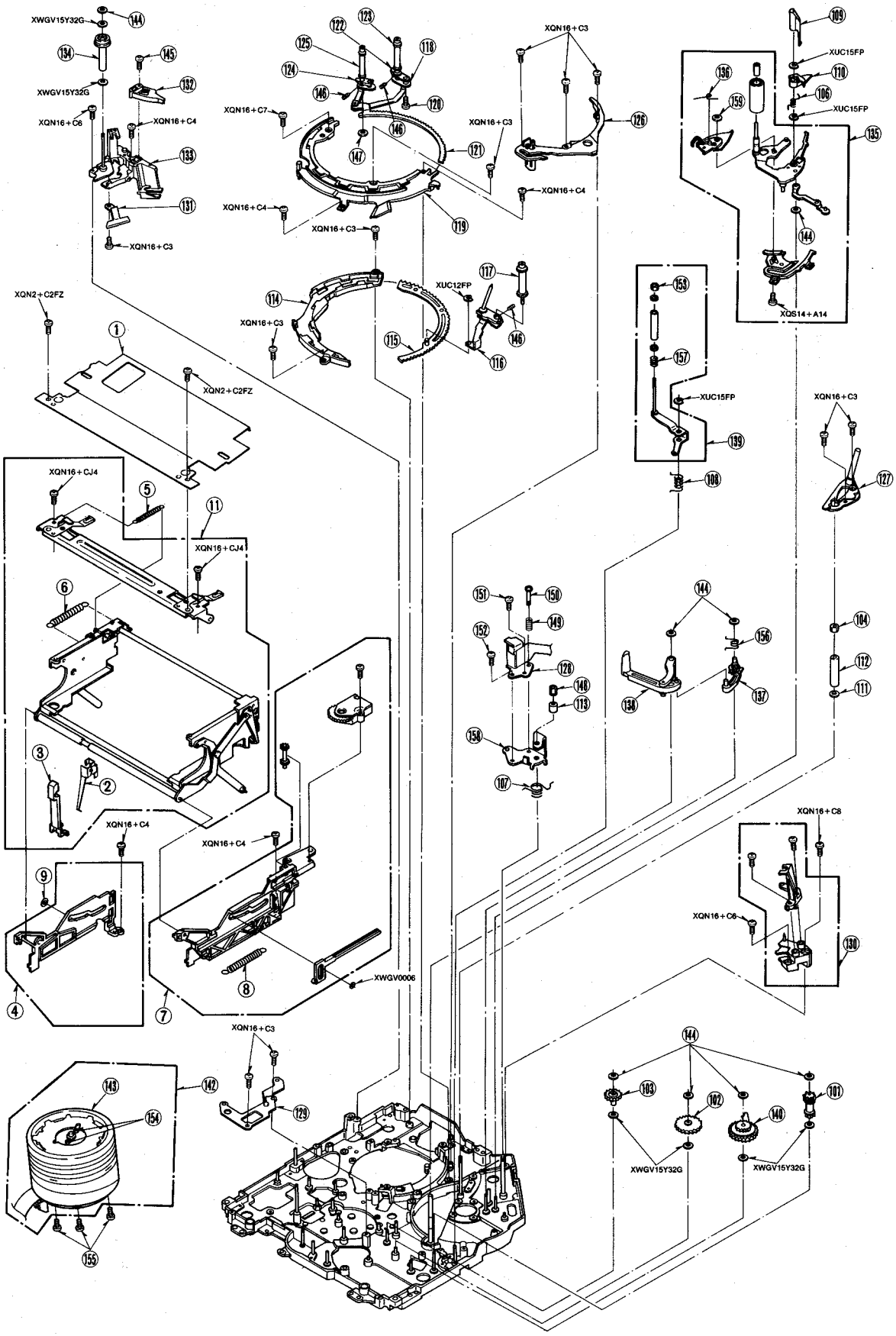
3-29. CIRCUIT BOARD LAYOUT



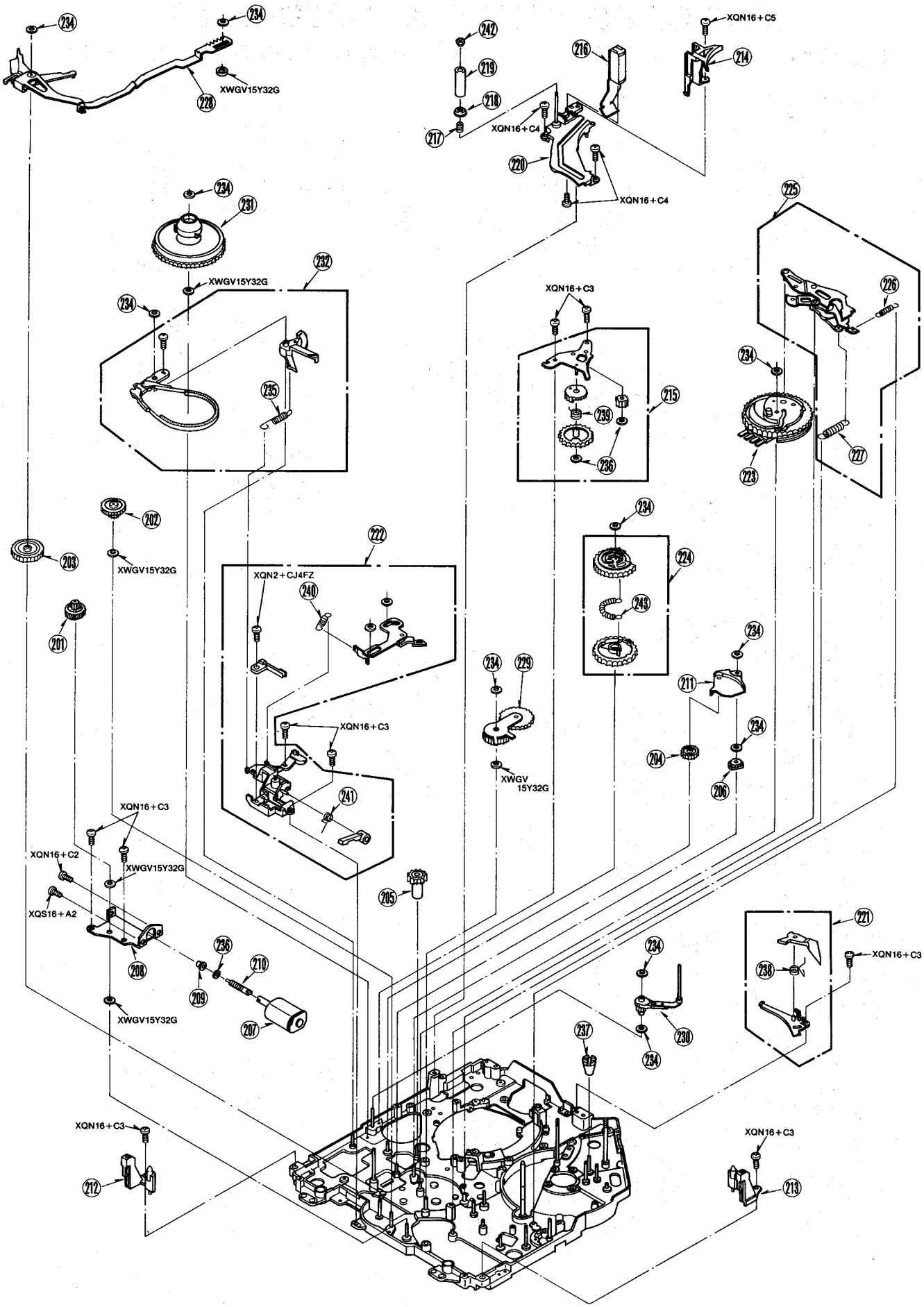
SECTION 4
EXPLODED VIEWS & PARTS LIST

4-1. EXPLODED VIEWS

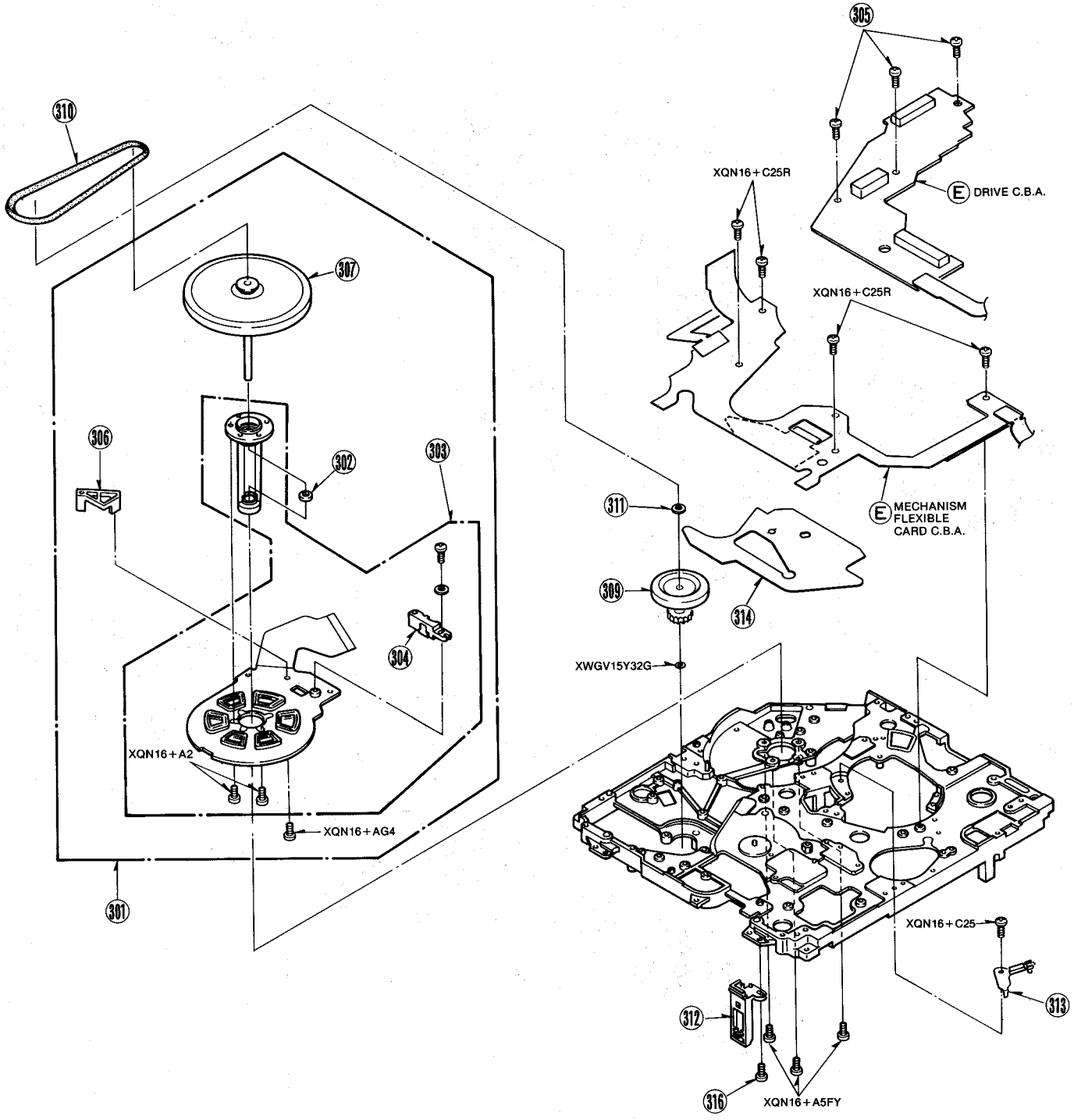
❶ VTR MECHANISM SECTION (1)



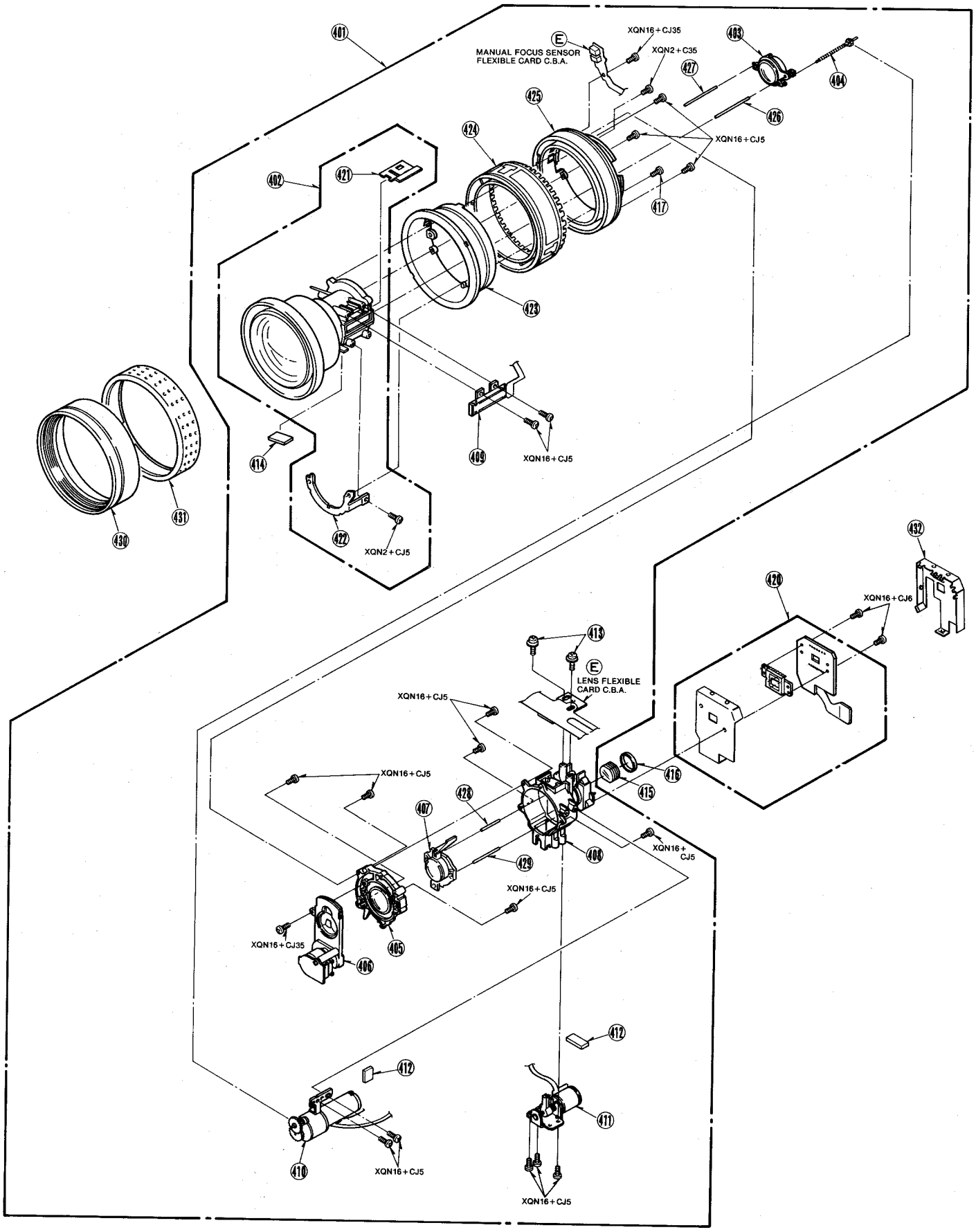
❷ VTR MECHANISM SECTION (2)



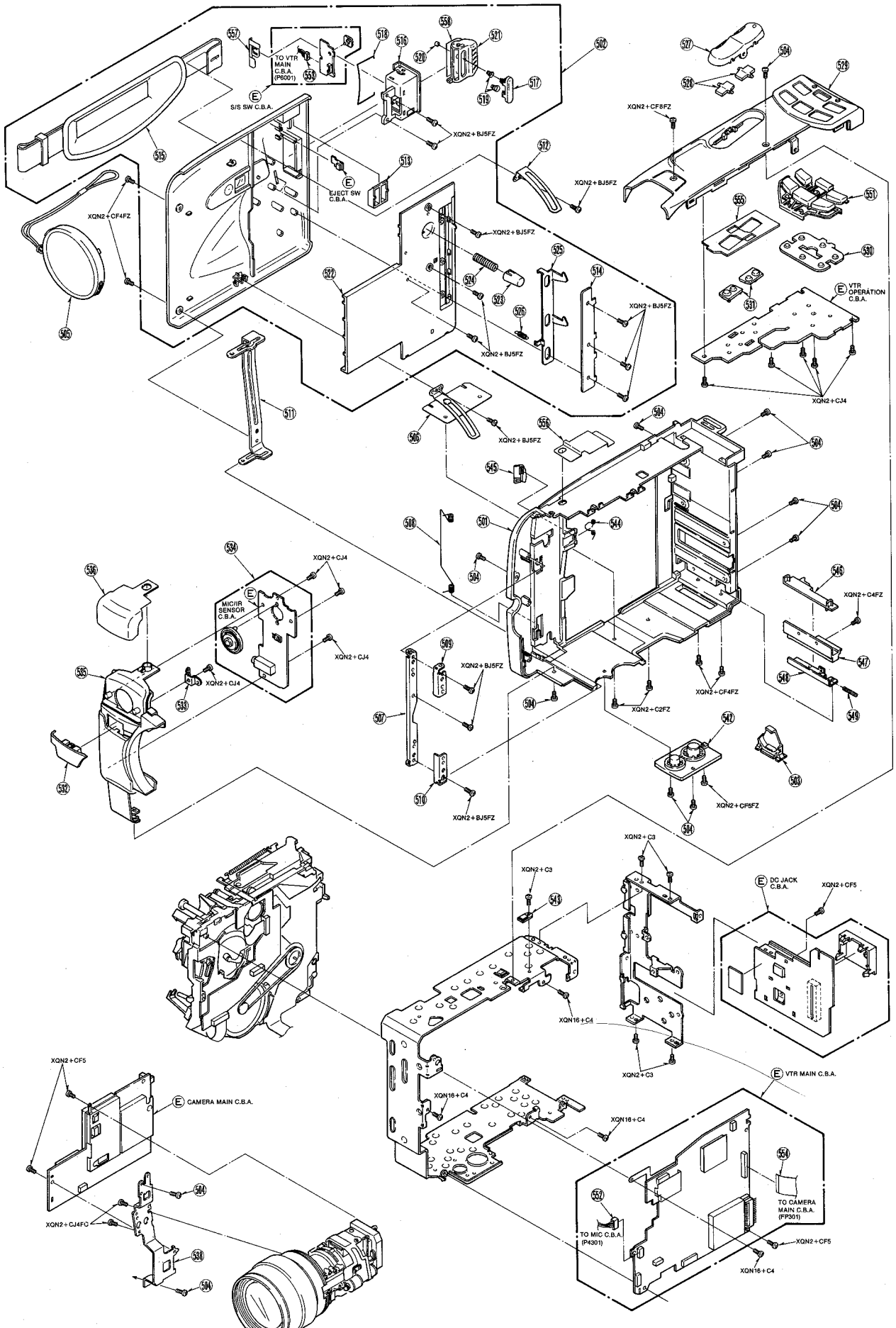
❸ VTR MECHANISM SECTION (3)



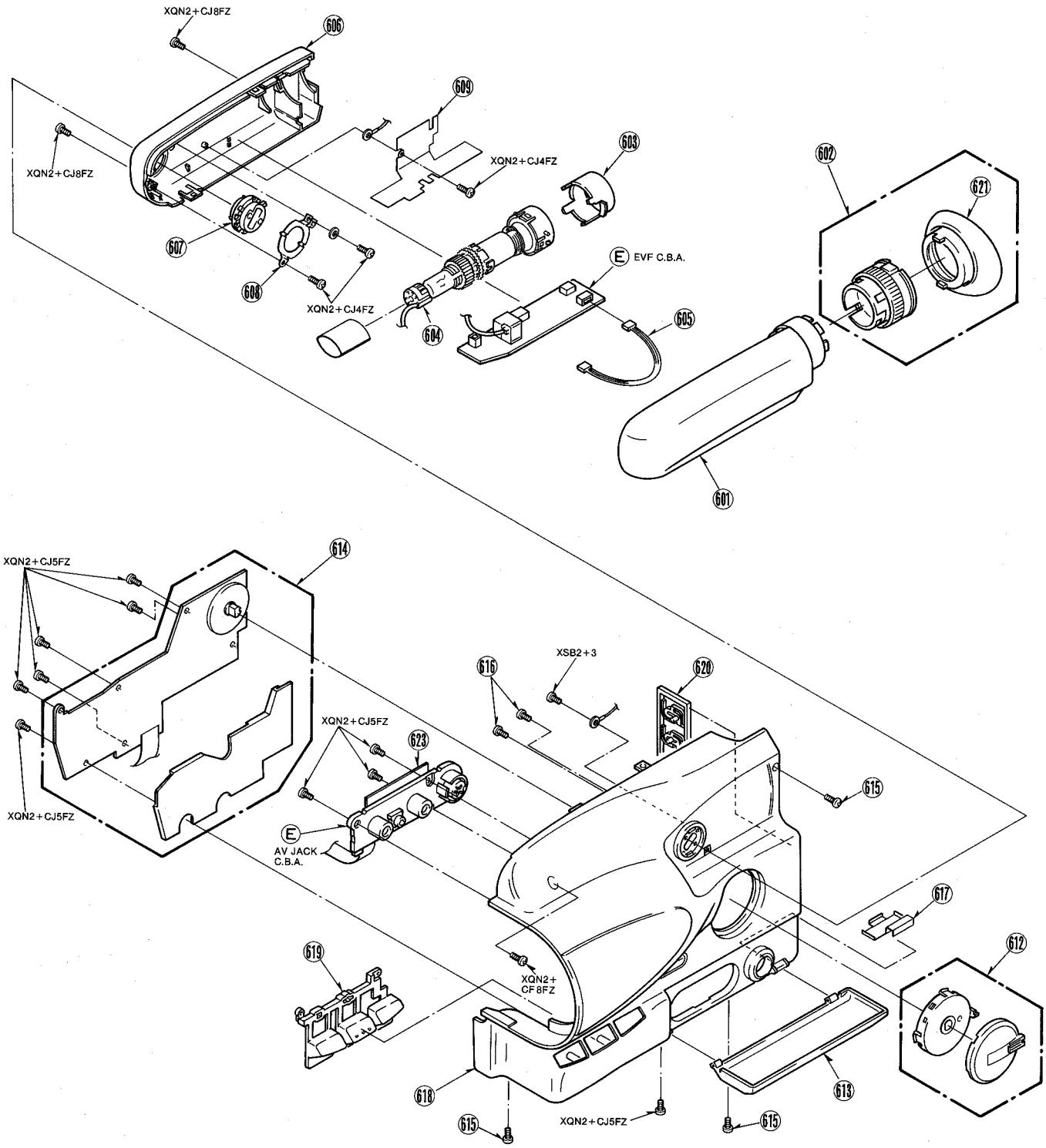
❹ CAMERA LENS SECTION



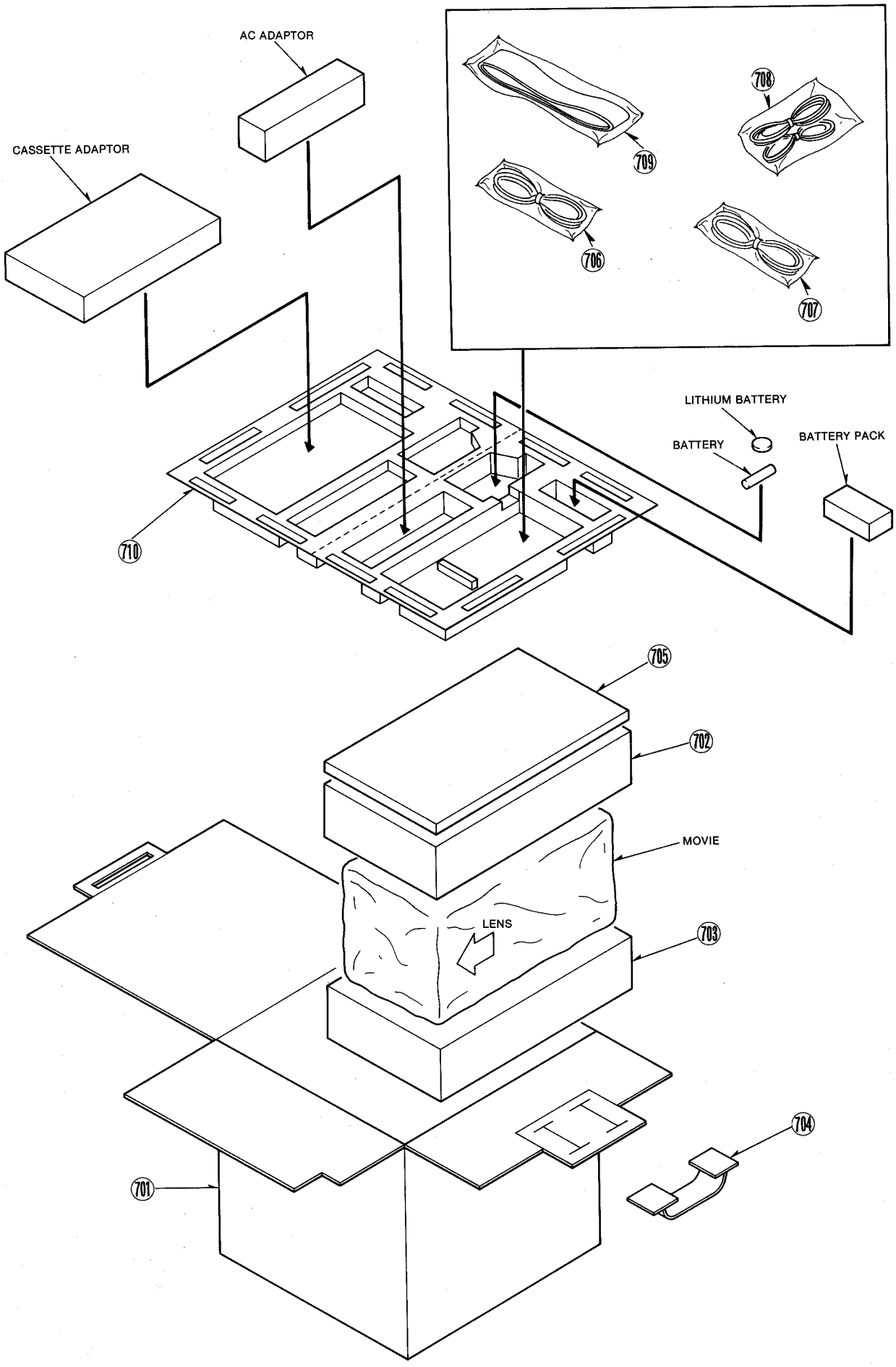
❺ FRAME & CASING PARTS SECTION (1)



❻ FRAME & CASING PARTS SECTION (2)



❼ PACKING PARTS & ACCESSORIES SECTION



4-2. MECHANICAL REPLACEMENT PARTS LIST

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

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VGP3437	CASSETTE INNER COVER	1	
2(1)		VMC0651	LOCK LEVER (A) SPRING	1	
3(1)		VML2370	LOCK LEVER (A)	1	
4(1)		VXA4241	STAND (L) U.	1	
5(1)		VMB2096	HOLDER SPRING (L)	1	
6(1)		VMB2095	SAFETY LEVER SPRING	1	
7(1)		VXA4242	STAND (R) U.	1	
8(1)		VMB2097	HOLDER SPRING (R)	1	
9(1)		VMX1042	WASHER	1	
11(1)		VXA4372	CASSETTE HOLDER U.	1	
101(1)		VDG0642	DRIVE GEAR (A)	1	
102(1)		VDG0643	DRIVE GEAR (C)	1	
103(1)		VDG0644	DRIVE GEAR (D)	1	
104(1)		VMD1727	T4 CAP	1	
106(1)		VMB2099	T (1) TURNER SPRING	1	
107(1)		VMB2101	A/C BASE SPRING	1	
108(1)		VMB2103	T5 ARM SPRING	1	
109(1)		VMD1718	TAPE OPENER	1	
110(1)		VMD1517	T1 RETURNER	1	
111(1)		VMX1844	T4 FLANGE	1	
112(1)		VMX1805	T4 POST	1	
113(1)		VMX1806	A/C COLLAR	1	
114(1)		VMD1500	S RACK GUIDE	1	
115(1)		VXA3907	S RACK U.	1	
116(1)		VXA3909	S SHAFT HOLDER (2) U.	1	
117(1)		VXP1197	S2 ROLLER POST U.	1	
118(1)		VMC0566	T1 SHAFT HOLDER PLATE	1	
119(1)		VMD1843	T RACK GUIDE	1	
120(1)		VMS4254	T1 SHAFT HOLDER PIN	1	
121(1)		VXA3915	T RACK U.	1	
122(1)		VXA3917	T SHAFT HOLDER (1) U.	1	
123(1)		VXP1162	T ROLLER POST U.	1	
124(1)		VXA3920	T2 SHAFT HOLDER (2) U.	1	
125(1)		VXP1162A	ROLLER POST U.	1	
126(1)		VXA3923	T RAIL (L) U.	1	
127(1)		VXA3925	T RAIL (R) U.	1	
128(1)		VEK5122	A/C HEAD (B) (1) U.	1	
129(1)		VXA4771	PULLEY PLATE U.	1	
130(1)		VMD1671	T2 V STOPPER	1	
131(1)		VMC0586	SPRING	1	
132(1)		VMD1493	U-T1	1	
133(1)		VXA3940	ST-V STOPPER (1) U.	1	
134(1)		VDP1448	IMPEDANCE ROLLER U.	1	
135(1)		VXL2061	PINCH ARM U.	1	
136(1)		VMB2087	ARM SPRING	1	
137(1)		VML2362	CORRECTOR (A)	1	
138(1)		VXL2064	CORRECTOR (B) U.	1	
139(1)		VXL1976	T5 ARM U.	1	
140(1)		VXP1157	T CLUTCH GEAR U.	1	
142(1)		VEG0969	CYLINDER U.	1	
143(1)		VEH0574	UPPER CYLINDER U.	1	
144(1)		VMX1061	WASHER	8	
145(1)		VHD0592	SCREW	1	
146(1)		VHD0561	SCREW	3	
147(1)		VMX1777	WASHER	1	
148(1)		VHN0047	NUT	1	
149(1)		VMB2036	A/C TILT SPRING	1	
150(1)		VHD0525	SCREW	1	
151(1)		VHD0526	SCREW	1	
152(1)		VHD0536	SCREW	1	
153(1)		VHN0169	NUT	1	
154(1)		VHD0593	SCREW	2	
155(1)		VHD0389	SCREW	3	
156(1)		VMB2102	CORRECTOR SPRING	1	
157(1)		VMB2100	P5 POST SPRING	1	
158(1)		VMA8113	A/C HEAD BASE	1	
159(1)		VMX1776	WASHER	1	
201(2)		VDG0645	LOADING GEAR (2)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
202(2)		VDG0646	LOADING GEAR (3)	1	
203(2)		VDG0647	LOADING GEAR (4)	1	
204(2)		VDG0648	LOADING GEAR (5)	1	
205(2)		VDG0649	LOADING GEAR (T1)	1	
206(2)		VDG0731	ZENEBA GEAR	1	
207(2)		VEM0359	LOADING MOTOR (2) U.	1	<!>
208(2)		VMA8111	WORM HOLDER	1	
209(2)		VMX1744	WORM SHAFT HOLDER	1	
210(2)		VXP1175	WORM U.	1	
211(2)		VMD1515	BAND GUIDE	1	
212(2)		VMD1518	CASS. POSITIONING PIECE (S)	1	
213(2)		VMD1519	CASS. POSITIONING PIECE (T)	1	
214(2)		VMD1530	FE CAP	1	
215(2)		VXA4244	LOADING GEAR S1 U.	1	
216(2)		VEK4700	FE HEAD U.	1	
217(2)		VMB2082	S4 POST SPRING	1	
218(2)		VMX1740	S4 LOWER FLANGE	1	
219(2)		VMX1859	S4 SLEEVE	1	
220(2)		VXA4247	S RAIL (1) U.	1	
221(2)		VXA3924	T1 RAIL (M) U.	1	
222(2)		VXA3928	LOCK BASE U.	1	
223(2)		VXG0029	CAM GEAR U.	1	
224(2)		VXG0023	LOADING GEAR T2 U.	1	
225(2)		VXL1960	SECTOR GEAR U.	1	
226(2)		VMB2084	PINCH HOLDING SPRING	1	
227(2)		VMB2085	PINCH PRESSURE SPRING	1	
228(2)		VXL1964	CORRECTOR DRIVE ARM U.	1	
229(2)		VXL2062	CENTER GEAR U.	1	
230(2)		VXL2059	TENSION ARM U.	1	
231(2)		VXR0205	S REEL TABLE U.	1	
232(2)		VXZ0278	TENSION REGULATOR U.	1	
234(2)		VMX1061	WASHER	11	
235(2)		VMB2086	TENSION SPRING	1	
236(2)		VMX1840	WASHER	2	
237(2)		VHN0150	NUT	1	
238(2)		VMB2083	(T) RAIL SPRING	1	
239(2)		VMB2080	LOADING GEAR SPRING	1	
240(2)		VMB2091	EJECT LEVER (A) SPRING	1	
241(2)		VMB2093	EJECT LEVER (B) SPRING	1	
242(2)		VHN0168	NUT	1	
243(2)		VMB2081	(T) LOADING GEAR SPRING	1	
301(3)		VEM0384	CAPSTAN MOTOR U.	1	
302(3)		VDB1046	LOWER BEARING	1	
303(3)		VEK5078	STATOR U.	1	
304(3)		VBK0056	MR HEAD	1	
305(3)		VHD0439	SCREW	3	
306(3)		VJF0886	FPC HOLDER	1	
307(3)		VXP1225	ROTOR U.	1	
309(3)		VDP1300	PULLEY	1	
310(3)		VDV0212	CAPSTAN BELT	1	
311(3)		VMX1061	WASHER	1	
312(3)		VSH0044	SAFETY SWITCH	1	
313(3)		VXS0095	EARTH BRUSH	1	
314(3)		VMZ1648	MECH. FLEX. BARRIER	1	
316(3)		VHD0598	SCREW	1	
401(4)		VXW0135	LENS U.	1	
402(4)		VXQ0331	LENS MAIN U.	1	
403(4)		VXP1300	2ND MOVING FRAME U.	1	
404(4)		VXP1302	SCREW SHAFT U.	1	
405(4)		VXQ0266	3RD FRAME LENS U.	1	
406(4)		VXL2126	IRIS U.	1	
407(4)		VXP1301	4TH MOVING FRAME U.	1	
408(4)		VMD1815	MASTER FLANGE	1	
409(4)		EVAJH4J03B14	ZOOM ENCODER U.	1	
410(4)		VEM0452	ZOOM MOTOR U.	1	
411(4)		VEM0422	FOCUS MOTOR U.	1	
412(4)		VMI0342	MOTOR CUSHION	2	
413(4)		VHD0666	SCREW	2	
414(4)		VMI0336	IRIS CUSHION	1	
415(4)		VDL0314	CRYSTAL FILTER	1	
416(4)		VMX2124	CCD CUSHION	1	
417(4)		VHD0767	SCREW	1	
420(4)		VEK6348	CCD U.	1	
421(4)		VGF0416	SHADING PIECE	1	
422(4)		VMA8700	HOLD PLATE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
423(4)		VDW0182	FRONT FRAME	1	
424(4)		VDW0184	FOCUS RING	1	
425(4)		VDW0183	REAR FRAME	1	
426(4)		VMS4675	ZOOM GUIDE POLE	1	
427(4)		VMS4908	ZOOM GUIDE POLE (B)	1	
428(4)		VMS4676	FOCUS GUIDE POLE (A)	1	
429(4)		VMS4677	FOCUS GUIDE POLE (B)	1	
430(4)		VDW0218	LENS HOOD	1	
431(4)		VDW0217	MANUAL FOCUS RING RUBBER	1	
432(4)		VSC3844	CCD SHIELD CASE (COVER)	1	
501(5)		VYK4863	SIDE CASE (L) 1 U.	1	
502(5)		VYP5262	CASSETTE COVER U.	1	
503(5)		VKF1707	BATTERY COVER	1	
504(5)		VHD0729	SCREW	12	
505(5)		VYF1949	HOOD CAP U.	1	
506(5)		VYK4866	STAY SETTING ANGLE U.	1	
507(5)		VMP4000	OPENNER ANGLE	1	
508(5)		VMB2582	OPENNER SPRING	1	
509(5)		VMP4001	SHAFT ANGLE (A)	1	
510(5)		VMP4027	SHAFT ANGLE (B)	1	
511(5)		VMP3999	CASSETTE COVER ANGLE	1	
512(5)		VMP4002	CASSETTE COVER STAY (UPPER)	1	
513(5)		VGU6202	LOCK RELEASE BUTTON	1	
514(5)		VMP4015	CASSETTE LOCK ANGLE HOLDER	1	
515(5)		VYC0571	GRIP BELT U.	1	
516(5)		VGQ3117	S/S BUTTON HOLDER	1	
517(5)		VGU6201	S/S BUTTON	1	
518(5)		VMB2594	S/S BUTTON COVER SPRING	1	
519(5)		VMB2591	S/S BUTTON SPRING	2	
520(5)		VGQ3153	S/S BUTTON PIECE	1	
521(5)		VGP3398	S/S BUTTON COVER	1	
522(5)		VGQ3115	CASSETTE COVER HOLDER	1	
523(5)		VGQ3116	CASSETTE DOWN PIECE	1	
524(5)		VMB2578	CASS. DOWN PIECE SPRING	1	
525(5)		VMP4016	CASSETTE LOCK ANGLE	1	
526(5)		VMB2384	CASSETTE LOCK SPRING	1	
527(5)		VGU6276	ZOOM BUTTON	1	
528(5)		VGQ2840	ZOOM BUTTON PIECE	2	
529(5)		VYK4870	TOP CASE (1) U.	1	
530(5)		VMG0770	RUBBER CONTACT SHEET	1	
531(5)		VMG0712	RUBBER CONTACT	2	
532(5)		VKW1741	AWB WINDOW	1	
533(5)		VMP4004	FRONT FIXING ANGLE	1	
534(5)		VEK6273	MIC UNIT	1	
535(5)		VKM3350	FRONT CASE	1	
536(5)		VYQ0842	MIC NET U.	1	
538(5)		VMP4007	LENS FRAME	1	
540(5)		VMP4005	MAIN FRAME	1	
541(5)		VYQ0853	REAR FRAME U.	1	
542(5)		VMD2093	TRIPOD BASE	1	
543(5)		VEK5550	DEW SENSOR	1	
544(5)		VMB1848	SAFETY SPRING	1	
545(5)		VML2394	SAFETY LEVER	1	
546(5)		VGQ2615	BATTERY LOCK	1	
547(5)		VGQ2607	BATTERY LOCK HOLDER	1	
548(5)		VMP3323	BATTERY LOCK HOLDING ANGLE	1	
549(5)		VMB2386	BATTERY LOCK SPRING	1	
551(5)		VGU6207	VTR OPERATION BUTTON	1	
552(5)		VEE8328	MIC CONNECTOR U.	1	(P4001-P4301)
553(5)		VEE8331	S/S CONNECTOR U.	1	(P6001-PJ6701)
554(5)		VWJ0692	FLEXIBLE CARD	1	(FP1002-FP301)
555(5)		VGQ3202	ZOOM BUTTON SHEET	1	
556(5)		VGQ3203	STAY (UPPER) WIRE COVER	1	
557(5)		VGQ3201	S/S BUTTON SPACER	1	
558(5)		VGQ3200	S/S BUTTON SHEET	1	
601(6)		VYK5031	EVF CASE (R) U.	1	
602(6)		VYQ0843	EYE CAP U.	1	
603(6)		VKW1742	CRT PROTECTION PANEL	1	
604(6)		MO1KKX07WB06	ITC	1	
605(6)		VEE8330	EVF CABLE U.	1	
606(6)		VKM3351	EVF CASE (L)	1	
607(6)		VGQ3122	ROTATION PIECE	1	
608(6)		VMC0940	ROTATION LOCK SPRING	1	
609(6)		VMZ2131	ESD BARRIER	1	
612(6)		VXU1144	MODE SELECTION LEVER U.	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
613(6)		VKF2004	AV JACK DOOR	1	
614(6)		VEK6298	CAMERA OPERATION U.	1	
615(6)		VHD0729	SCREW	3	
616(6)		VHD0689	SCREW	2	
617(6)		VMC0939	DOOR LOCK SPRING	1	
618(6)		VYK4868	SIDE CASE (R) 1U.	1	
619(6)		VGU6203	CAMERA OPERATION BUTTON	1	
620(6)		VGU6205	RESET MEMORY BUTTON	1	
621(6)		VMG0631	EYE CAP	1	
623(6)		VGQ3207	AV JACK BARRIER	1	
701(7)		VPG6830	PACKING CASE	1	
702(7)		VPN3620	CUSHION (UPPER)	1	
703(7)		VPN3621	CUSHION (LOWER)	1	
704(7)		VPN2329	HANDLE	1	
705(7)		VQT5255	OPERATING INSTRUCTIONS	1	
			(ENGLISH/GERMAN/FRENCH/		
			SPANISH)		
705(7)		VQT5256	OPERATING INSTRUCTIONS	1	
			(ITALIAN/DUTCH/SWEDISH/		
			DENISH)		
706(7)		VJA0664	AC CORD	1	
707(7)		VJA0669	DC OUTPUT CABLE	1	
708(7)		VFA0095	AV OUTPUT CABLE	1	
709(7)		VFC0974	SHOULDER STRAP	1	
710(7)		VPN3619	ACCESSORY BOX	1	
			**** JIG & TOOLS *****		
			------ ELECTRICAL -------		
		VFM8180HUPF	VHS-C ALIGMENT TAPE	1	PAL
		VFK0374	COLOUR TEMP.CONV.FILRTER	1	(C12) OR VFK0713
		VEK0375	COLOUR TEMP.CONV.FILRTER	1	(C2) OR VFK0716
		VFK0644	EVR FIXTURE	1	
		VFK0701ROM13	ROM	1	
		VFK0766A	EVR CONNECTION CABLE 5P	1	
		VFK0734W	MEASUREMENT CABLE 24P	1	
		VFK0668	EXTENSITION CABLE 24P	2	
		VFK0670	EXTENSITION CABLE 18P	1	
		VFK0671W	FLAT CABLE 7P	1	
		VFK0782	EXTENSITION CABLE 14P	1	
		VFK0885	EXTENSITION CABLE 3P	1	
		VFK0888	EXTENSITION CABLE 10P	2	
		VFK0893	FLAT CABLE 24P	1	
		VFK0894	EXTENSITION CABLE 5P	1	
			---- MECHANICAL ------		
		VFK0335	RETAINING RING REMOVER	1	
		VFK0743	H-POSITION ADJUSTMENT	1	
		VFK0343	CHECK LIGHT	1	
		VFK0326	HEX WRENCH SET	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLTONE GREASE	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
			-------CAMERA SECTION------		
		VEP23163B	CAMERA MAIN C.B.A.	1	(RTL)
		VEK6348	CCD FLEXIBLE CARD C.B.A.	1	(RTL)
		VEK5916	LENS FLEXIBLE CARD C.B.A.	1	(RTL)
		VEK5917	MANUAL FOCUS SENSOR	1	(RTL)
			FLEXIBLE CARD C.B.A.		
			-------E.V.F SECTION-------		
		VEP28061A	E.V.F. C.B.A.	1	(RTL)
			--------VTR SECTION--------		
		VEP03A19A	MAIN C.B.A.	1	(RTL)
		VEP06869A	VTR OPERATION C.B.A.	1	(RTL)
		---------	MIC/IR C.B.A.	1	(RTL)
		VEP00T10A	JACK C.B.A.	1	(RTL)
		VEP24026A	AV JACK C.B.A.	1	(RTL)
		VEP00S66A	MECHANISM FLEXIBLE C.B.A.	1	(RTL)
		VEP02411A	DRIVE C.B.A.	1	(RTL)
		VEK6272	S/S C.B.A.	1	(RTL)
		VEK6391	EJECT SWITCH C.B.A.	1	(RTL)
	■	VEP23163B	CAMERA MAIN C.B.A.		(RTL)
			CONNECTORS		
B201		VJP2962C012	CONNECTOR (MALE)	1	
B302		VJP2962C024	CONNECTOR (MALE)	1	
B303		VJP2962C010	CONNECTOR (MALE)	1	
			CAPACITORS		
C201		ECRJA020E11	TRIMMER	1	
C203		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C204		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C205,06		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C207		ECUX1H100CCV	C.CAPACITOR 50V 10P	1	
C208		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C209		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C210		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C211		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C212		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C213,14		ECUX1H270JCV	C.CAPACITOR 50V 27P	2	
C215		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C216		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C218		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C219		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C220		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C221		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C223		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C224		ECST1GX155Z	T.CAPACITOR V 1.5U	1	
C226,27		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C228		ECST1GX155Z	T.CAPACITOR V 1.5U	1	
C229		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C230,31		ECUX1H270JCV	C.CAPACITOR 50V 27P	2	
C232		ECST1DX475Z	T.CAPACITOR 20V 4.7U	1	
C233		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C234		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C235,36		ECUX1H270JCV	C.CAPACITOR 50V 27P	2	
C237		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C238		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C239		ECUX1H330JCV	C.CAPACITOR 50V 33P	1	
C240		ECUM1C185ZFN	C.CAPACITOR CH 16V 1.8U	1	
C241		ECST0JX226Z	T.CAPACITOR 6.3V 22U	1	
C242		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C243		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C244-48		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	5	
C249		ECUX1C473ZFV	C.CAPACITOR CH 16V 0.047U	1	
C251		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C252		ECST0GX226Z	T.CAPACITOR 4V 22U	1	
C253		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C254		ECST0GY106Z	T.CAPACITOR 4V 10U	1	
C255,56		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C257,58		ECST0JY106Z	T.CAPACITOR 6.3V 10U	2	
C259		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C260		ECST1DX475Z	T.CAPACITOR 20V 4.7U	1	
C261		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C269,70		ECUX1H560JCV	C.CAPACITOR 50V 56P	2	
C271		ECUX1H050CCV	C.CAPACITOR CH 50V 5P	1	
C272		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C301		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C302,03		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C304		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C305		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C306		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C307		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C308		ECUM1C224ZFN	C.CAPACITOR CH 16V 0.22U	1	
C310		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C312		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C314-16		ECST0JY106Z	T.CAPACITOR 6.3V 10U	3	
C317,18		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C319		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C320		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C321-23		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C328		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C333		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C334		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C335		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C336		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C337-40		ECUX1H560JCV	C.CAPACITOR 50V 56P	4	
C344		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C345		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C346-49		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	4	
C350		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C702		ECEV0SA470	E.CAPACITOR 4V 47U	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	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C710		ECUX1C4732FV	C.CAPACITOR CH 16V 0.047U	1	
C712		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C713,14		ECUM1C2242FN	C.CAPACITOR CH 16V 0.22U	2	
C715		ECSTOJY106Z	T.CAPACITOR 6.3V 10U	1	
C716		ECUM1C2242FN	C.CAPACITOR CH 16V 0.22U	1	
C717		ECUM1C1052FM	C.CAPACITOR CH 16V 1U	1	
C718		ECSTOJY106Z	T.CAPACITOR 6.3V 10U	1	
C719		ECSTOGY106Z	T.CAPACITOR 4V 10U	1	
C720,21		ECUX1H102KBV	C.CAPACITOR 50V 1000P	2	
C722		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C723		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C724		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C726		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C727		ECUX1H332KBV	C.CAPACITOR 50V 3300P	1	
C729-31		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	3	
C732,33		ECUM1C1052FN	C.CAPACITOR CH 16V 1U	2	
C734		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C736		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C739,40		ECUX1H472KBV	C.CAPACITOR 50V 4700P	2	
C742		ECUX1C1042FV	C.CAPACITOR CH 16V 0.1U	1	
C743,44		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
			DIODES		
D201-04		MA110	DIODE	4	
D205		MA728	DIODE	1	
D206		MA110	DIODE	1	
D208-10		MA110	DIODE	3	
D301		MA132WA	DIODE	1	
D302		MA132WK	DIODE	1	
D304		MA110	DIODE	1	
D701		MA110	DIODE	1	
			FILTERS		
FL201		EIK4EW006	FILTER	1	
			CONNECTORS		
FP301		VJS3452C024	CONNECTOR (FEMALE)	1	
FP701		VJS2958D024	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC201		MN5188	IC	1	
IC202		MB87836PFV	IC	1	
IC203		CXA1439M	IC	1	
IC204		AN2033FAP	IC	1	
IC301		CXD2300Q	IC	1	
IC302		MN67322	IC	1	
IC305		MN65702H	IC	1	
IC308		T90CK78F3408	IC	1	
IC309		MN73512XWAS	IC	1	
IC310		M62352GP	IC	1	
IC311		AK6420F	IC	1	
IC702		MN6782VMDR	IC	1	
IC703		AN2585FAP	IC	1	
IC704		LM358DB	IC	1	
IC705		LM324DB	IC	1	
IC706		AN6663S	IC	1	
IC707		TB6504F	IC	1	
IC708		XC62AP5002PR	IC	1	
IC709		TC7S08F	IC	1	
			COILS		
L203,04		ELJFC150JB	COIL 15UH	2	
L205		VLQ0556	COIL	1	
L206		VLQ0426J2R2	COIL 2.2UH	1	
L207		VLQ0426J680	COIL 68UH	1	
L208		VLQ0556	COIL	1	
L209		ELJFC150JB	COIL 15UH	1	
L210		VLQ0556	COIL	1	
L212		VLQ0426J820	COIL 82UH	1	
L213,14		ELJFC150JB	COIL 15UH	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L216,17		ELJFC150JB	COIL 15UH	2	
L218		VLP0140	COIL	1	
L220		VLP0140	COIL	1	
L222		VLQ0555	COIL	1	
L224		VLQ0584	TRANSFORMER	1	
L301-04		ELJPC6R8JB	COIL 6.8UH	4	
L305		VLP0140	COIL	1	
L306		ELJPC6R8JB	COIL 6.8UH	1	
L308		VLP0140	COIL	1	
L309		ELJPC6R8JB	COIL 6.8UH	1	
L314		VLP0140	COIL	1	
L315		ELJFC220JB	COIL 22UH	1	
L316		VLQ0426J390	COIL 39UH	1	
L317		ELJPC6R8JB	COIL 6.8UH	1	
L323		VLQ0426J390	COIL 39UH	1	
L324-26		ELJPC6R8JB	COIL 6.8UH	3	
L327		VLP0140	COIL	1	
L702		ELJPA101KB	COIL 100UH	1	
L703		ELJFC150JB	COIL 15UH	1	
L704		ELJPA150KB	COIL 15UH	1	
			TRANSISTORS		
Q201		XP4654	TRANSISTOR-TRANSISTOR	1	
Q202		2SD2216	TRANSISTOR	1	
Q203,04		XP4654	TRANSISTOR-TRANSISTOR	2	
Q206		2SB1462	TRANSISTOR	1	
Q207		2SD2216	TRANSISTOR	1	
Q208		XP4501	TRANSISTOR-TRANSISTOR	1	
Q209		2SD2216	TRANSISTOR	1	
Q210		XP4601	TRANSISTOR-RESISTOR	1	
Q211		2SD2216	TRANSISTOR	1	
Q701		2SD2216	TRANSISTOR	1	
Q702		2SD2210	TRANSISTOR	1	
Q703		2SB1219	TRANSISTOR	1	
Q704		2SK620	TRANSISTOR	1	
Q705		XP4501	TRANSISTOR-TRANSISTOR	1	
			COMBINATION PARTS		
QR301		MRN1103	TRANSISTOR-RESISTOR	1	
QR701		MRN1102	TRANSISTOR-RESISTOR	1	
QR702		UN921E	TRANSISTOR-RESISTOR	1	
QR703		UN9212	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R201		ERJ2GEJ105	M.RESISTOR CH 2W 1M	1	
R202		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R203		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R204		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R205		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R207		ERJ2GEJ681	M.RESISTOR CH 2W 680	1	
R210		ERJ2GEJ101	M.RESISTOR CH 2W 1K	1	
R211		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R213		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R214		ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R215		ERJ3GEYJ270	M.RESISTOR CH 1/16W 27	1	
R216		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R219		ERJ2GEJ681	M.RESISTOR CH 2W 680	1	
R220,21		ERJ2GEJ333	M.RESISTOR CH 2W 33K	2	
R223		VRE0071E113	RESISTOR	1	
R224		VRE0071E753	RESISTOR	1	
R225		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R226		ERJ2GEJ681	M.RESISTOR CH 2W 680	1	
R228		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R229		ERJ2GEJ681	M.RESISTOR CH 2W 680	1	
R231		ERJ2GEJ333	M.RESISTOR CH 2W 33K	1	
R232		ERJ2GEJ183	M.RESISTOR CH 2W 18K	1	
R233		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R234		ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R235		ERJ2GEJ105	M.RESISTOR CH 2W 1M	1	
R236		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R238		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R240		ERJ2GEJ822	M.RESISTOR CH 2W 8.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R241		ERJ2GEJ272	M.RESISTOR CH 2W 2.7K	1	
R242		ERJ2GEJ122	M.RESISTOR CH 2W 1.2K	1	
R243		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R244		ERJ2GEJ102	M.RESISTOR CH 2W 1K	1	
R246		ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
R248		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R249		ERJ2GEJ122	M.RESISTOR CH 2W 1.2K	1	
R251		ERJ2GEJ684	M.RESISTOR CH 2W 680K	1	
R254		ERJ2GEJ562	M.RESISTOR CH 2W 5.6K	1	
R255		ERJ2GEJ152	M.RESISTOR CH 2W 1.5K	1	
R256		ERJ2GEJ392	M.RESISTOR CH 2W 3.9K	1	
R257		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R258		ERJ2GEJ562	M.RESISTOR CH 2W 5.6K	1	
R259		ERJ2GEJ182	M.RESISTOR CH 2W 1.8K	1	
R260		ERJ2GEJ823	M.RESISTOR CH 2W 82K	1	
R261		ERJ2GEJ184	M.RESISTOR CH 2W 180K	1	
R262		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R263		ERJ2GEJ105	M.RESISTOR CH 2W 1M	1	
R264		ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R265,66		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R267		ERJ3GEYJ121	M.RESISTOR CH 1/16W 120	1	
R268,69		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	2	
R271		ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R276		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R277		ERJ2GEJ182	M.RESISTOR CH 2W 1.8K	1	
R278,79		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R280		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R281		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R290		ERJ2GEJ821	M.RESISTOR CH 2W 820	1	
R291		ERJ2GEJ392	M.RESISTOR CH 2W 3.9K	1	
R292		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R293		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R294		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R301		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R302,03		ERJ2GEJ223	M.RESISTOR CH 2W 22K	2	
R304		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R306		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R308		ERJ2GEJ562	M.RESISTOR CH 2W 5.6K	1	
R309		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R310		ERJ2GEJ183	M.RESISTOR CH 2W 18K	1	
R311		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R312,13		ERJ2GEJ223	M.RESISTOR CH 2W 22K	2	
R314		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R315		ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R317-20		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	4	
R321,22		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R326		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R328		ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
R330		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R331-33		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	3	
R334		ERJ2GEJ273	M.RESISTOR CH 2W 27K	1	
R336,37		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R338		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R339		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R340		ERJ2GEJ681	M.RESISTOR CH 2W 680	1	
R342		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R343		ERJ2GEJ563	M.RESISTOR CH 2W 56K	1	
R354		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R359		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R361		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R701		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R702		ERJ2GEJ102	M.RESISTOR CH 2W 1K	1	
R703		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R704,05		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R706,07		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R708		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R709		ERJ2GEJ182	M.RESISTOR CH 2W 1.8K	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		ERJ2GEJ124	M.RESISTOR CH 2W 120K	1	
R714		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R715		ERJ2GEJ823	M.RESISTOR CH 2W 82K	1	
R716		ERJ2GEJ334	M.RESISTOR CH 2W 330K	1	
R717,18		ERJ2GEJ103	M.RESISTOR CH 2W 10K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R719		ERJ2GEJ154	M.RESISTOR CH 2W 150K	1	
R720		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R721		ERJ2GEJ225	M.RESISTOR CH 2W 2.2M	1	
R722		ERJ2GEJ152	M.RESISTOR CH 2W 1.5K	1	
R723		ERJ2GEJ222	M.RESISTOR CH 2W 2.2K	1	
R724		ERJ2GEJ473	M.RESISTOR CH 2W 47K	1	
R725		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R726		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R727		ERJ2GEJ123	M.RESISTOR CH 2W 12K	1	
R728		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R729		ERJ2GEJ123	M.RESISTOR CH 2W 12K	1	
R730		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R731		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R732		ERJ2GEJ392	M.RESISTOR CH 2W 3.9K	1	
R733,34		ERJ3GEYJ3R3	M.RESISTOR CH 1/16W 3.3	2	
R735		ERJ2GEJ393	M.RESISTOR CH 2W 39K	1	
R736		ERJ2GEJ823	M.RESISTOR CH 2W 82K	1	
R737		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R738		ERJ2GEJ105	M.RESISTOR CH 2W 1M	1	
R739		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R740		ERJ2GEJ153	M.RESISTOR CH 2W 15K	1	
R741,42		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	2	
R743		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R744		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R745		ERJ2GEJ821	M.RESISTOR CH 2W 820	1	
R746		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R747,48		ERJ2GE0R00	M.RESISTOR CH 2W 0	2	
R750		ERJ2GEJ273	M.RESISTOR CH 2W 27K	1	
R751		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R752		ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
R753		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R755		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R756		ERJ2GEJ562	M.RESISTOR CH 2W 5.6K	1	
R757		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R758		ERJ2GEJ682	M.RESISTOR CH 2W 6.8K	1	
R759		ERJ2GEJ563	M.RESISTOR CH 2W 56K	1	
R761		ERJ3GEYG122	M.RESISTOR CH 1/16W 1.2K	1	
R762		VRE0082A203T	RESISTOR	1	
R763		ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
R764		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R765		VRE0082A303T	RESISTOR	1	
R766		ERJ2GEJ223	M.RESISTOR CH 2W 22K	1	
R767		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R768		VRE0071E183	RESISTOR	1	
R770		ERJ2GEJ222	M.RESISTOR CH 2W 2.2K	1	
R774		ERJ2GEJ104	M.RESISTOR CH 2W 100K	1	
			COMBINATION PARTS		
RA301,02		EXBV8V471J	RESISTOR-RESISTOR	2	
RA303-06		EXBV8V102J	RESISTOR-RESISTOR	4	
RA307		EXBV8V473J	RESISTOR-RESISTOR	1	
RA308,09		EXBV8V102J	RESISTOR-RESISTOR	2	
RA310		EXBV8V103J	RESISTOR-RESISTOR	1	
			VARIABLE RESISTORS		
VR201		EVM7JSX30B25	V.RESISTOR 200K	1	
VR701		EVM7JSX30B54	V.RESISTOR 50K	1	
VR702		EVM7JSX30B23	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X201		VSX0564	CRYSTAL OSCILLATOR	1	
X301		EFOV8004B0A	CRYSTAL OSCILLATOR	1	
X701		EFOV6754B0A	CRYSTAL OSCILLATOR	1	
X702		EFOV8004B0A	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3840	SENSOR SHIELD COVER (TOP)	1	
		VSC3841	SENSOR SHIELD COVER(BOTTOM)	1	
		VSC3842	PROCESS SHIELD COVER (TOP)	1	
		VSC3843	PROCE. SHIELD COVER(BOTTOM)	1	
		VEE8521	CABLE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEK6348	CCD FLEXIBLE C.B.A.		(RTL)
			CONNECTORS		
B291		VJS2961C012	CONNECTOR (FEMALE)	1	
			CAPACITORS		
C292		ECST1VX225Z	T.CAPACITOR CH 35V 2.2U	1	
C295		ECUM1E104ZFN	C.CAPACITOR CH 25V 0.1U	1	
C293-94		ECUM1E473ZFN	C.CAPACITOR CH 25V 0.047U	2	
			DIODES		
D291		MA153	DIODE	1	
			TRANSISTORS		
Q291		2SC2295	TRAN$ISTOR	1	
			RESISTORS		
R291		ERJ6GEYJ560	M.RESISTOR 1/10W 56	1	
R292		ERJ6GEYJ472	M.RESISTOR 1/10W 4.7K	1	
R293		ERJ6GEY0R00	M.RESISTOR 1/10W 0	1	
	■	VEK5916	LENS FLEXIBLE CARD C.B.A.		(RTL)
			MISCELLANEOUS		
		ON1004-R	PHOTO SENSOR	1	
	■	VEK5917	MANUAL FOCUS SENSOR		(RTL)
			FLEXIBLE CARD C.B.A.		
			MISCELLANEOUS		
		SG-211S	PHOTO INTERUPTER	2	
	■	VEP28061A	E.V.F. C.B.A.		(RTL)
			CAPACITORS		
C801		ECQB1C104JA	P.CAPACITOR CH 16V 0.1U	1	
C802		ECEV0JA101	E.CAPACITOR 6.3V 100U	1	
C804		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C805		ECST1AV476Z	T.CAPACITOR 10V 47U	1	
C806		ECUM1E123KBN	C.CAPACITOR CH 25V 0.012U	1	
C807		ECUM1C105JB	C.CAPACITOR CH 16V 1U	1	
C808		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C809		ECEV1CA470F	E.CAPACITOR 16V 47U	1	
C810		ECUM2A272JUM	C.CAPACITOR 100V 2900P	1	
C811		ECST1AV476Z	T.CAPACITOR 10V 47U	1	
C812		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C813		ECUM2H331KBM	C.CAPACITOR 500V 330P	1	
C814		ECEV1HAS010	E.CAPACITOR 50V 1U	1	
C815		ECUM2H331KBM	C.CAPACITOR 500V 330P	1	
C816		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C818		ECUM2H331KBM	C.CAPACITOR 500V 330P	1	
C831		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
			DIODES		
D801		MA141A	DIODE	1	
D802		SFPL-52	DIODE	1	
			INTEGRATED CIRCUITS		
IC801		AN2515S	IC	1	
			COILS		
L801		VLQ0319K470	COIL 47UH	1	
L802		ELH8LE001R	COIL	1	
L803		VLQ0319K470	COIL 47UH	1	
L804		ELJFA680JB	COIL	1	
			CONNECTORS		
P801		VJP3125D004	CONNECTOR (MALE)	1	
P802		VJP3172D003	CONNECTOR (MALE)	1	
P803		VJP3125D003	CONNECTOR (MALE)	1	
P804		VJP1229T	CONNECTOR (MALE) 2P	1	
			TRANSISTORS		
Q802		2SD968A-S	TRANSISTOR	1	
Q803,04		2SA1748	TRANSISTOR	2	
			RESISTORS		
R801		ERJ6ENF4422	M.RESISTOR	1	
R802		ERJ6GMYJ3R9	M.RESISTOR CH 1/10W 3.9	1	
R805		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R808		ERJ3GEYJ242	M.RESISTOR CH 1/16W 2.4K	1	
R809		ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
R810		ERJ6GMYF104	M.RESISTOR CH 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 CH 1/16W 4.7K	1	
R817		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R818		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R819,20		ERJ6GMYJ275	M.RESISTOR CH 1/10W 2.7M	2	
R821		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R823		ERJ3GEYJ3R9	M.RESISTOR CH 1/16W 3.9	1	
R829		ERJ6ENF4222	RESISTOR	1	
R832		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R834		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R835		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R840		ERJ8GCYJ685	M.RESISTOR CH 1/8W 6.8M	1	
R841,42		ERJ6GMYJ475	M.RESISTOR CH 1/10W 4.7M	2	
R843		ERJ3GEYJ564	M.RESISTOR CH 1/16W 560K	1	
			TRANSFORMERS		
T801		ETF08L12A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR801		EVM7JSX30BE2	V.RESISTOR	1	
VR803		EVM7TSX00BV6	V.RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
VR804		EVM7TSX00BE6	V.RESISTOR	1	
			MISCELLANEOUS		
		VEE7574	CRT SOCKET UNIT	1	
	■	VEP03A19A	MAIN C.B.A.		(RTL)
			CONNECTORS		
B1001		VJP3326D016	CONNECTOR (MALE)	1	
B4003		VJP3126D010	CONNECTOR (MALE)	1	
B6001		VJS2961C024	CONNECTOR (FEMALE)	1	
B6002		VJP3358C016	CONNECTOR (MALE)	1	
B6003		VJP3126D014	CONNECTOR (MALE)	1	
			CAPACITORS		
C1001		ECUM1C335ZFM	C.CAPACITOR 16V 3.3U	1	
C1002		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C1003		ECGC0KA8R2	CAPACITOR	1	
C1004		ECUX1H331KBV	C.CAPACITOR CH 50V 330P	1	
C1005		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1006		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1008		ECGC0KA8R2	CAPACITOR	1	
C1009		ECUX1H331KBV	C.CAPACITOR CH 50V 330P	1	
C1010		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1011		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1012		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C1013		ECGC1BA4R7	CAPACITOR	1	
C1014		ECUX1H561KBV	C.CAPACITOR 50V 560P	1	
C1015		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C1016		ECUX1H472KBV	C.CAPACITOR 50V 4700P	1	
C1017		ECUM1E105ZFM	C.CAPACITOR CH 25V 1U	1	
C1018		ECEV1CA470P	E.CAPACITOR 16V 47U	1	
C1019		ECUM1E474ZFM	C.CAPACITOR 25V 0.47U	1	
C1020,21		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C1022		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C1023		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1024		ECUM1C474ZFN	C.CAPACITOR 16V 0.47U	1	
C1025		ECUM1C104KBN	C.CAPACITOR CH 16V 0.1U	1	
C1026		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C1027		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C1028		ECST1EY474Z	T.CAPACITOR	1	
C1029		ECUX1H471KBV	C.CAPACITOR 50V 470P	1	
C1030		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1031		ECUX1H471KBV	C.CAPACITOR 50V 470P	1	
C1032		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1033-35		ECUX1H102KBV	C.CAPACITOR 50V 1000P	3	
C1036		ECUX1H471KBV	C.CAPACITOR 50V 470P	1	
C1037		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C1038		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C1039		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C1040		ECEV1AA330	E.CAPACITOR 10V 330U	1	
C1043		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C1044		ECEV0GA330	E.CAPACITOR 4V 33U	1	
C1046		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3002		ECEV0GA470	E.CAPACITOR 4V 47U	1	
C3003		ECEV1HA2R2	E.CAPACITOR 50V 2.2U	1	
C3004		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C3005		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3006		ECUM1E393KBN	C.CAPACITOR CH 25V 0.039U	1	
C3007		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C3009		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3010		ECUX1H470JCV	C.CAPACITOR 50V 47P	1	
C3011		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3012		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C3013		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3014		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3015		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3016		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3017		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C3018		ECUX1H560JCV	C.CAPACITOR 50V 56P	1	
C3019		ECUX1H471KBV	C.CAPACITOR 50V 470P	1	
C3020		ECUX1H680JCV	C.CAPACITOR 50V 68P	1	
C3021		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3022		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3023		ECUX1H680JCV	C.CAPACITOR 50V 68P	1	
C3024		ECUX1H391JCV	C.CAPACITOR 50V 390P	1	
C3025		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3027		ECUX1H220JCV	C.CAPACITOR CH 50V 22P	1	
C3028		ECEV0GA471	E.CAPACITOR 4V 470U	1	
C3030		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3031		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3032		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C3033		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C3034		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C3035		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3036		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C3037		ECST1CY105Z	T.CAPACITOR 16V 1U	1	
C3038		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C3040		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECUX1H122KBV	C.CAPACITOR CH 50V 1200P	1	
C4003		ECST1VY334Z	T.CAPACITOR 35V 0.33U	1	
C4004		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4005		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4006		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4007		ECEV05A470	E.CAPACITOR 4V 47U	1	
C4008,09		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C4010		ECST0GX226Z	T.CAPACITOR 4V 22U	1	
C4011		ECST0JX226Z	T.CAPACITOR 6.3V 22U	1	
C4012		ECST0GX226Z	T.CAPACITOR 4V 22U	1	
C4013		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4015		ECUM1H123KBN	C.CAPACITOR CH 50V 0.012U	1	
C4016		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	1	
C4017		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4018		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4019		ECEV05A470	E.CAPACITOR 4V 47U	1	
C4020,21		ECUX1H102KBV	C.CAPACITOR 50V 1000P	2	
C4022		ECUX1H222KBV	C.CAPACITOR CH 50V 2200P	1	
C4023		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4024		ECEV0JA101	E.CAPACITOR 6.3V 100U	1	
C4025		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4026		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C4027		ECUX1H821KBV	C.CAPACITOR 50V 820P	1	
C4028		ECUM1H183KBN	C.CAPACITOR CH 50V 0.018U	1	
C4029		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4031		ECUX1H562KBV	C.CAPACITOR 50V 5600P	1	
C4035		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C4036		ECUX1H332KBV	C.CAPACITOR 50V 3300P	1	
C4038		ECUX1H471KBV	C.CAPACITOR 50V 470P	1	
C4039		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C4040		ECST0JX156Z	T.CAPACITOR 6.3V 15U	1	
C4041		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C4043		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5001		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5005		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C5007		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5008		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C5009		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5010		ECST0JX226Z	T.CAPACITOR 6.3V 22U	1	
C5012		ECEV1EA4R7	E.CAPACITOR 25V 4.7U	1	
C5013		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5015		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C5016		ECST0JX226Z	T.CAPACITOR 6.3V 22U	1	
C5017		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C5018		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5019		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5020,21		ECUX1H680JCV	C.CAPACITOR 50V 68P	2	
C5022		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5023		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5024		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C5025		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5026		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5027,28		ECUX1H680JCV	C.CAPACITOR 50V 68P	2	
C5029-31		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C5033,34		ECUM1H473KBN	C.CAPACITOR CH 50V 0.047U	2	
C5035,36		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C5038		ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C5039		ECUX1H121JCV	C.CAPACITOR 50V 120P	1	
C5040		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C5041		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C5042		ECUX1H390JCV	C.CAPACITOR CH 50V 39P	1	
C5043		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C5044,45		ECUM1H473KBN	C.CAPACITOR CH 50V 0.047U	2	
C5046		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6001		ECST1CY335Z	T.CAPACITOR 16V 3.3U	1	
C6002		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6005		ECEV1AA221	E.CAPACITOR CH 10V 220U	1	
C6006		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6007		ECUM1C334KBM	C.CAPACITOR 16V 0.33U	1	
C6009		ECUX1E223ZFV	C.CAPACITOR CH 25V 0.022U	1	
C6010		ECUX1H561KBV	C.CAPACITOR 50V 560P	1	
C6011		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C6012		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C6013,14		ECUM1C105KBM	C.CAPACITOR CH 16V 1U	2	
C6015		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6016		ECST0GY156Z	T.CAPACITOR 4V 15U	1	
C6017,18		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	2	
C6019		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6020		ECQB1C393JB	P.CAPACITOR 16V 0.039U	1	
C6021,22		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6023,24		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	2	
C6025		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6026		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6027		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6028		ECUX1H121JCV	C.CAPACITOR 50V 120P	1	
C6029		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6030		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C6031,32		ECEV1HA010	E.CAPACITOR 50V 1U	2	
C6033		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6036,37		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C6038		ECEV0JA470	E.CAPACITOR 6.3V 47U	1	
C6039		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6040		ECUX1H330JCV	C.CAPACITOR 50V 33P	1	
C6042		ECUX1H180JCV	C.CAPACITOR 50V 18P	1	
C6044,45		ECUX1H221JCV	C.CAPACITOR CH 50V 220P	2	
C6046		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6052		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6054		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6055		ECST0GY156Z	T.CAPACITOR 4V 15U	1	
C6056,57		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C6058		ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6059		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C6070		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C6071		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C6080		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8001		ECUX1H332KBV	C.CAPACITOR 50V 3300P	1	
C8002		ECST0JY475Z	T.CAPACITOR 6.3V 4.7U	1	
C8003		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8004		ECUX1H822KBV	C.CAPACITOR CH 50V 8200P	1	
C8007		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8008		ECUX1H271JCV	C.CAPACITOR CH 50V 270P	1	
C8009		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8010,11		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	2	
C8014		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8015		ECUX1H472KBV	C.CAPACITOR 50V 4700P	1	
C8016		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8017		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C8018,19		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C8020		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C8021		ECUX1H182KBV	C.CAPACITOR CH 50V 1800P	1	
C8022,23		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C8024		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C8025		ECST0JY106Z	T.CAPACITOR 6.3V 10U	1	
C8026		ECUX1H101JCV	C.CAPACITOR CH 50V 100P	1	
C8027		ECUX1H330JCV	C.CAPACITOR 50V 33P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C8028		ECUX1H120JCV	C.CAPACITOR CH 50V 12P	1	
C8029		ECUX1H060CCV	C.CAPACITOR CH 50V 6P	1	
C8030		ECUX1H100CCV	C.CAPACITOR 50V 10P	1	
C8031		ECUX1H680JCV	C.CAPACITOR 50V 68P	1	
C8032		ECUX1H100CCV	C.CAPACITOR 50V 10P	1	
C8033		ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C8034		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
			DIODES		
D1001		MA728	DIODE	1	
D1002		EC10QS04	DIODE	1	
D1003		MA110	DIODE	1	
D1004		EC10QS04	DIODE	1	
D1005		SB05-05CP	DIODE	1	
D1006,07		MA132K	DIODE	2	
D1008		MA728	DIODE	1	
D1009		RD10M	DIODE	1	
D1015		SB05-05CP	DIODE	1	
D1016,17		MA8130M	DIODE	2	
D3001		MA110	DIODE	1	
D5001		MA132WA	DIODE	1	
D5002		MA132WK	DIODE	1	
D5003		MA132WA	DIODE	1	
D6001		MA3130	DIODE	1	
D6002		MA132WA	DIODE	1	
D6003		MA133	DIODE	1	
D6004		MA132WA	DIODE	1	
D6005		MA133	DIODE	1	
D6006		MA132K	DIODE	1	
D6007		MA132WA	DIODE	1	
D6008		MA132WK	DIODE	1	
D6010		MA133	DIODE	1	
D8001,02		MA132K	DIODE	2	
			FILTERS		
FL8001		VLF1039	FILTER	1	
			CONNECTORS		
FP1002		VJS2960CC024	CONNECTOR (FEMALE)	1	
FP4002		VJS2959B007	CONNECTOR (FEMALE)	1	
FP5001		VJS2958D013	CONNECTOR (FEMALE)	1	
FP6001		VJS2959B018	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC1001		BA9705K	IC	1	
FI		VEFH32A	HIC	1	
IC3002		TL8809F	IC	1	
IC3003		BA7062F	IC	1	
IC4001		BA7757BK	IC	1	
IC5001		AN3345FAS	IC	1	
IC6001		MN6755240V8F	IC	1	
IC6002		S3500B3	IC	1	
IC6003		MB90077102EF	IC	1	
IC6004		LM324DB	IC	1	
IC6005		BA6289F	IC	1	
IC6006		MN12821R	IC	1	(R)
IC6007		XC62AP5002PR	IC	1	
IC6008		TC4S66F	IC	1	
IC8001		TL8841F	IC	1	
			COILS		
L1001		ELC6UB4R7M	COIL 4.7UH	1	
L1002		ELL04T008R	COIL	1	
L1003		ELC6UB4R7M	COIL 4.7UH	1	
L1004		VLQ0319K100	COIL 10UH	1	
L1005		ELL04T035R	COIL	1	
L1006		VLQ0463	COIL	1	
L1007		ELL04T033R	COIL	1	
L1008		ELC6UB4R7M	COIL 4.7UH	1	
L1009		VLQ0319K100	COIL 10UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L1010,11		VLQ0319K101	COIL 100UH	2	
L1012		VLQ0319K100	COIL 10UH	1	
L3001		VLQ0426J560	COIL 56UH	1	
L3002		VLQ0319K121	COIL 120UH	1	
L3004		VLQ0163J820	COIL 82UH	1	
L3005		VLQ0426J470	COIL 47UH	1	
L3006		VLQ0319K101	COIL 100UH	1	
L3007		VLQ0163J121	COIL 120UH	1	
L3008		VLQ0319K221	COIL 220UH	1	
L3009		VLQ0426J330	COIL 33UH	1	
L3010		VLQ0426J150	COIL 15UH	1	
L3011		VLQ0163J151	COIL 150UH	1	
L3012		VLQ0163J220	COIL 22UH	1	
L3013		VLQ0319K101	COIL 100UH	1	
L3014		VLQ0426J330	COIL 33UH	1	
L3015		VLQ0319K101	COIL 100UH	1	
L4002		VLQ0319K101	COIL 100UH	1	
L5001-04		VLQ0319K101	COIL 100UH	4	
L5005		VLQ0187K120	COIL 12H	1	
L6001		VLQ0426J101	COIL 100UH	1	
L6002		VLQ0438K330	COIL 33UH	1	
L8001		VLQ0319K680	COIL 68UH	1	
L8004		VLQ0426J390	COIL 39UH	1	
L8006		VLQ0163J101	COIL 100UH	1	
L8007,08		VLQ0319F150	COIL 15UH	2	
L8009		VLQ0426J270	COIL 27UH	1	
L8010,11		VLQ0426J100	COIL 10UH	2	
L8012		VLQ0426J470	COIL 47UH	1	
			CONNECTORS		
P3001		VJP3172D003	CONNECTOR (MALE)	1	
P4001		VJP3172D004	CONNECTOR (MALE)	1	
P6001		VJP3125D005	CONNECTOR (MALE)	1	
P6002		VJP3125D002	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q1001		2SB1073	TRANSISTOR	1	
Q1002,03		2SB798	TRANSISTOR	2	
Q1004		2SD2210	TRANSISTOR	1	
Q1005		2SB1073	TRANSISTOR	1	
Q1006		2SB970X	TRANSISTOR	1	
Q1007		2SB798	TRANSISTOR	1	
Q3001		2SD2216	TRANSISTOR	1	
Q3002,03		2SC4627	TRANSISTOR	2	
Q3004		2SD2216	TRANSISTOR	1	
Q3006		XN4501	TRANSISTOR-RESISTOR	1	
Q3007		XN4401	TRANSISTOR-RESISTOR	1	
Q3008		2SB970X	TRANSISTOR	1	
Q3009		2SB1462	TRANSISTOR	1	
Q3010		XN1401	TRANSISTOR-TRANSISTOR	1	
Q3011		2SC3938	TRANSISTOR	1	
Q3012		XN1501	TRANSISTOR-TRANSISTOR	1	
Q3013		2SD2216	TRANSISTOR	1	
Q4001		2SB1220	TRANSISTOR	1	
Q4002,03		2SD2216-R	TRANSISTOR	2	
Q4004		2SD2216	TRANSISTOR	1	
Q4005		2SD2210	TRANSISTOR	1	
Q4007		2SD2216	TRANSISTOR	1	
Q4008		2SB970X	TRANSISTOR	1	
Q4009		2SD1328	TRANSISTOR CHIP	1	
Q4010		XP4501	TRANSISTOR-TRANSISTOR	1	
Q5001		2SB970X	TRANSISTOR	1	
Q5002,03		XN4504	TRANSISTOR-TRANSISTOR	2	
Q5004,05		2SA812	TRANSISTOR	2	
Q6001		2SD2216	TRANSISTOR	1	
Q6002		2SB970X	TRANSISTOR	1	
Q6003,04		2SD2216	TRANSISTOR	2	
Q8001		2SB1462	TRANSISTOR	1	
Q8002,03		2SD2216	TRANSISTOR	2	
			COMBINATION PARTS		
QR1001		MRN2111	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR1002		MRN1107	TRANSISTOR-RESISTOR	1	
QR1003		MRN2107	TRANSISTOR-RESISTOR	1	
QR1004		MRN1107	TRANSISTOR-RESISTOR	1	
QR1005		MRN1110	TRANSISTOR-RESISTOR	1	
QR3001		MRN1103	TRANSISTOR-RESISTOR	1	
QR3004		MRN1103	TRANSISTOR-RESISTOR	1	
QR3005		MRN1104	TRANSISTOR-RESISTOR	1	
QR4001		UN9210	TRANSISTOR-RESISTOR	1	
QR4002		MRN1104	TRANSISTOR-RESISTOR	1	
QR5001		MRN1104	TRANSISTOR-RESISTOR	1	
QR5002,03		XN1212	TRANSISTOR-TRANSISTOR	2	
QR5004		MRN1103	TRANSISTOR-RESISTOR	1	
QR6001		MRN2103	TRANSISTOR-RESISTOR	1	
QR6002,03		MRN2111	TRANSISTOR-RESISTOR	2	
QR6004		XN1213	TRANSISTOR-TRANSISTOR	1	
QR6005		UN9210	TRANSISTOR-RESISTOR	1	
QR6006-08		MRN1104	TRANSISTOR-RESISTOR	3	
QR6013		MRN1104	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R1001		VRE0067G822	RESISTOR	1	
R1002		VRE0067G272	M.RESISTOR	1	
R1003		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1004		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R1005		VRE0067G562	M.RESISTOR	1	
R1006		VRE0067G272	M.RESISTOR	1	
R1007		ERJ8GEYJ330	M.RESISTOR CH 1/8W 33	1	
R1008		VRE0067G103	RESISTOR	1	
R1009		VRE0067G152	RESISTOR	1	
R1010		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	1	
R1011		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R1012		ERJ3GEYG163	M.RESISTOR CH 1/16W 16K	1	
R1013		ERJ3GEYG393	M.RESISTOR CH 1/16W 39K	1	
R1014,15		VRE0067G182	M.RESISTOR	2	
R1016		VRE0034E153	M.RESISTOR CH 1/10W 15K	1	
R1017		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R1018		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1019		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R1020		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1021		ERJ3GEYJ330	M.RESISTOR CH 1/16W 33	1	
R1022		ERJ3GEYJ560	M.RESISTOR CH 1/16W 56	1	
R1023		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R1024		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1025		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R1026		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1027		ERJ3GEYJ151	M.RESISTOR CH 1/16W 150	1	
R1031		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R1032		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1033		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R1034		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R1035		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R1036		VRE0034E26A	M.RESISTOR CH 1/10W 182	1	
R1037		VRE0034E241	M.RESISTOR CH 1/10W 240	1	
R1038		VRE0034E910	M.RESISTOR CH 1/10W 91	1	
R1039		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R1040,41		ERJ8GEYJ121	M.RESISTOR CH 1/8W 120	2	
R3001		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3004		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R3007		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R3008		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3009		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3010		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R3011		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3012,13		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R3014		ERJ3GEYJ820	M.RESISTOR CH 1/16W 82	1	
R3015,16		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R3017,18		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	2	
R3019,20		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R3021		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3024		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3025		ERJ3GEYJ680	M.RESISTOR CH 1/16W 68	1	
R3026		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R3028,29		ERJ3GEYJ122	M.RESISTOR CH 1/16W 1.2K	2	
R3030		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3031		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3032		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R3033		ERJ3GEYJ224	M.RESISTOR CH 1/16W 220K	1	
R3034		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R3035		ERJ3GEYJ134	M.RESISTOR CH 1/16W 130K	1	
R3036		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R3037-39		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0.00	3	
R3042		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R3043		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3044		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R3045		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3046		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R3047		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R3048		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3049		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R3054		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0.00	1	
R3066,67		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R3070		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R3071,72		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0.00	2	
R3076		ERJ3GEYG302	M.RESISTOR CH 1/16W 3K	1	
R3084		ERJ3GEYJ225	M.RESISTOR CH 1/16W 2.2M	1	
R3086		ERJ2GE0R00	M.RESISTOR CH 2W 0	1	
R4001		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R4002		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4003		VRE0071E431	RESISTOR	1	
R4004		ERJ3GEYJ334	M.RESISTOR CH 1/16W 330K	1	
R4005		VRE0071E562	M.RESISTOR	1	
R4008		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R4009		ERJ3GEYJ105	M.RESISTOR CH 1/16W 1M	1	
R4010		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R4011		ERJ3GEYJ333	M.RESISTOR CH 1/16W 33K	1	
R4012		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4014		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R4016		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4017		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4019,20		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R4021		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4022		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4024		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R4025,26		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R4027		ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R4028		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4029		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4030		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R4031		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R4033		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4034		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R4035		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R4036		ERJ3GEYJ470	M.RESISTOR CH 1/16W 47	1	
R4038		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4039		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R4040		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R4043		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4044		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R4045		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R4046		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R4047		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R4048		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R4049		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R4051		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R4052		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R4053		ERJ6GEYJ225	M.RESISTOR CH 1/10W 2.2M	1	
R4055		VRE0071E272	RESISTOR	1	
R4056		VRE0071E222	RESISTOR	1	
R5002,03		ERJ3GEYJ332	M.RESISTOR 1/16W 3.3K	2	
R5004		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R5005		ERJ3GEYJ100	M.RESISTOR CH 1/16W 10	1	
R5009		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5011-14		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	4	
R5015		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R5016		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R5017		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R5020		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R5021		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R5022		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R5023		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R5025,26		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	2	
R5028,29		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	2	
R5030,31		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R5033,34		ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	2	
R5035		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R5037		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R5039		ERJ3GEYJ183	M.RESISTOR CH 1/16W 18K	1	
R5040		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R5041		ERJ3GEYJ391	M.RESISTOR CH 1/16W 390	1	
R5042		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R5043		ERJ6GEYJ4R7	M.RESISTOR CH 1/10W 4.7	1	
R5047		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R5048		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R6001		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R6003		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6004		ERJ3GEYJ682	M.RESISTOR CH 1/16W 6.8K	1	
R6005		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6006,07		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R6008		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R6009		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R6010,11		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	2	
R6012		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R6013,14		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6015,16		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6017-19		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R6020-22		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	3	
R6024-26		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	3	
R6027		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6028		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6029		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6030		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6031,32		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	2	
R6033		ERJ3GEYJ394	M.RESISTOR CH 1/16W 390K	1	
R6034		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6035,36		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R6037		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6045		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6046		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6047		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6048		ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
R6049		ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R6058		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6061		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6063		ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R6064		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6065		ERJ3GEYJ684	M.RESISTOR CH 1/16W 680K	1	
R6066,67		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	2	
R6068		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R6069		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R6070		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R6071		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R6072		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R6073,74		ERJ3GEYJ184	M.RESISTOR CH 1/16W 180K	2	
R6075-77		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	3	
R6078		ERJ8GEYJ680	M.RESISTOR CH 1/8W 68	1	
R6079		ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R6080		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6081,82		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	2	
R6083,84		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	2	
R6085,86		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	2	
R6087,88		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	2	
R6089,90		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R6091		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6092-94		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	3	
R6095		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6096		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R6097		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R6098		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6100		VRE0067G273	M.RESISTOR	1	
R6101		VRE0067G223	RESISTOR	1	
R6102		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6105		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6107,08		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R6109		ERJ8GEYJ271	M.RESISTOR CH 1/8W 270	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6112		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6113		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R6114		ERJ3GEYJ474	M.RESISTOR CH 1/16W 470K	1	
R6115		ERJ3GEYJ824	M.RESISTOR CH 1/16W 820K	1	
R6116		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6119		ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R6123		ERJ8GEYJ2R2	M.RESISTOR CH 1/8W 2.2	1	
R6124		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R6127		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R8001		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R8002		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8005		ERJ3GEYJ822	M.RESISTOR CH 1/16W 8.2K	1	
R8006		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R8008		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R8010		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R8011		ERJ3GEYJ562	M.RESISTOR CH 1/16W 5.6K	1	
R8012		ERJ3GEYJ153	M.RESISTOR CH 1/16W 15K	1	
R8013		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R8015		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R8016,17		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R8018		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R8024		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R8025,26		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R8027		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R8028		ERJ3GEYJ182	M.RESISTOR CH 1/16W 1.8K	1	
R8029		ERJ3GEYJ681	M.RESISTOR CH 1/16W 680	1	
R8031		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R8032		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
			COMBINATION PARTS		
RA6001,02		EXBV8V102J	RESISTOR-RESISTOR	2	
RA6003		EXBV8V683J	RESISTOR ARRAY	1	
RA6004,05		EXBV8V102J	RESISTOR-RESISTOR	2	
RA6006		EXBV8V683J	RESISTOR ARRAY	1	
			TRANSFORMERS		
T1001		ELL04T042R	TRANSFORMER	1	
T4001		VLQ0494	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR3001		EVM7JSX10B13	V.RESISTOR	1	
VR3002		EVM7JSX10B23	V.RESISTOR	1	
VR3003		EVM7JSX10B52	V.RESISTOR	1	
VR4002		EVM7JSX10B54	V.RESISTOR	1	
VR6201		EVM7JSX10B15	V.RESISTOR	1	
VR8001		EVM7JSX10B53	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0461	CRYSTAL OSCILLATOR	1	
X6002		VSX0439	CRYSTAL OSCILLATOR	1	
X8001		VSX0563	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VSC3845	H.A. SHIELD COVER (TOP)	1	
		VSC3846	H.A. SHIELD COVER (BOTTOM)	1	
		VSC3659	POWER SHIELD COVER (TOP)	1	
		VSC3848	POWER SHIELD COVER (BOTTOM)	1	
		VEE8328	CABLE	1	(P4001-P4301)
		VMZ2140	SHIELD BARRIER	1	
		VGQ3208	CAMERA UNIT SPACER	1	
		VMZ2141	POWER SYSTEM CONTROL SHIELD	1	
			BARRIER		
		VMZ2147	POWER SHIELD BARRIER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP06869A	VIR OPERATION C.B.A.		(RTL)
			CONNECTORS		
B6501		VJS2961C014	CONNECTOR (FEMALE)	1	
			DIODES		
D6501		MA141WK	DIODE	1	
D6502		MA141K	DIODE	1	
D6503		MA141WK	DIODE	1	
D6504		CL150UR	DIODE	1	
D6505		CL150YG-CD-T	IC	1	
D6506		MA141K	DIODE	1	
	■	---------	MIC/IR C.B.A.		(RTL)
			CAPACITORS		
C051		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C052		ECEV0JA101	E.CAPACITOR 6.3V 100U	1	
C4301		ECEV05A470	E.CAPACITOR 4V 47U	1	
C4302		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C4303,04		ECST1VY334Z	T.CAPACITOR 35V 0.33U	2	
C4305		ECEV1CA100	E.CAPACITOR 16V 10U	1	
C4307		ECUX1H102KBV	C.CAPACITOR 50V 1000P	1	
C4308		ECEV1HA010	E.CAPACITOR 50V 1U	1	
C4309		ECUX1H151JCV	C.CAPACITOR CH 50V 150P	1	
C4310,11		ECEV05A470	E.CAPACITOR 4V 47U	2	
C4312		ECST1EY474Z	T.CAPACITOR	1	
			DIODES		
D051		PH310-1	DIODE	1	
D4301		MA8056-M	DIODE	1	
			JACKS		
J4301		VJJ0363	MIC JACK	1	
			CONNECTORS		
P4301		VJP3172D004	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q051		2SD1030-S	TRANSISTOR	1	
Q4301		2SD1819	TRANSISTOR	1	
Q4302		2SC3929	TRANSISTOR	1	
Q4303,04		2SD1819	TRANSISTOR	2	
			RESISTORS		
R051		ERJ6GEYJ125	M.RESISTOR CH 1/10W 1.2M	1	
R052		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R4301		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R4302		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R4303,04		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	2	
R4305		ERJ3GEYJ821	M.RESISTOR CH 1/16W 820	1	
R4306		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4307		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R4308		ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R4309		ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R4310		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R4311		ERJ6GEYJ394	M.RESISTOR CH 1/10W 390K	1	
R4312		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4313		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4314,15		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R4316		ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R4317		ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
	■	VEP00T10A	JACK C.B.A.		(RTL)
			CONNECTORS		
B1502		VJS3175A016	CONNECTOR (FEMALE)	1	
			CAPACITORS		
C1501		ECUM1H104ZFM	C.CAPACITOR CH 50V 0.1U	1	
			DIODES		
D6601		MA151WK	DIODE	1	
D6602		MA151K	DIODE	1	
D6603		MA151WK	DIODE	1	
D6604		MA151K	DIODE	1	
			JACKS		
J1501		VEK5631	POWER UNIT	1	
J1502		VJR0670	CONNECTOR	1	
J1503		VJR0671	CONNECTOR	1	
J1504		VGQ2498	BATTERY HOLDER	1	
			COILS		
L1511,12		VLP0133	COIL	2	
			RESISTORS		
R1501		ERJ8GEYJ102	M.RESISTOR CH 1/8W 1K	1	
R1502		VSF0059	FUSE	1	
			SWITCHES		
S6601		EVQ81Q05R	SWITCH	1	
S6603-06		EVQ81Q05R	SWITCH	4	
			MISCELLANEOUS		
		VMZ2148	BARRIER	1	
	■	VEP24026A	AV JACK C.B.A.		(RTL)
			CONNECTORS		
B1501		VJS2961A010	CONNECTOR (FEMALE)	1	
			CAPACITORS		
C1503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
			JACKS		
J1504		VEJ1378	AV JACK PLATE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COILS		
L1503		VLQ0584	TRANSFORMER	1	
L1504		VLP0140	COIL	1	
L1505		VLQ0584	TRANSFORMER	1	
			RESISTORS		
R1506		ERJ8GEY0R00	M.RESISTOR CH 1/8W 0	1	
R1507		ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
		VEP00S66A	MECHANISM FLEXIBLE C.B.A.	1	(RTL)
			MISCELLANEOUS		
		ON2170-LM	REEL SENSOR	2	
		VMD1498	T REEL SENSOR HOLDER	1	
		VMD1499	S REEL SENSOR HOLDER	1	
	■	VEP02411A	DRIVE C.B.A.		(RTL)
			CAPACITORS		
C2101		EMF5FC33B8	CAPACITOR	1	
C2102		ECUM1H103KBM	C.CAPACITOR 50V 0.01U	1	
C2103		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C2104		ECUM1H473KBM	C.CAPACITOR 50V 0.047U	1	
C2105		ECUM1H223KBM	C.CAPACITOR 50V 0.022U	1	
C2106		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C2108,09		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	2	
C2110		ECUM1C104KBN	C.CAPACITOR CH 16V 0.1U	1	
C2111-13		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C2114		ECST1AY475Z	T.CAPACITOR 10V 4.7U	1	
C2115		ECUM1H103KBM	C.CAPACITOR 50V 0.01U	1	
C2116		ECUM1E104KBM	C.CAPACITOR CH 25V 0.1U	1	
C2117		ECUM1H473KBM	C.CAPACITOR 50V 0.047U	1	
C2118		ECUM1H333KBM	C.CAPACITOR 50V 0.033U	1	
C2120		ECST1AX106Z	T.CAPACITOR 10V 10U	1	
C2122-24		ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	3	
C2125		ECUM1C104KBN	C.CAPACITOR CH 16V 0.1U	1	
C2126-28		ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	3	
C2129		EMF5FC33B8	.CAPACITOR V	1	
			INTEGRATED CIRCUITS		
IC2101		AN3890FBS	IC	1	
IC2102		UN218CU	IC	1	
IC2103		AN3890FBS	IC	1	
IC2104		TDM3702	IC	1	
			CONNECTORS		
P2101		VJP2962C024	CONNECTOR (MALE)	1	
P2102		VJS2959B018	CONNECTOR (FEMALE)	1	
P2103		VJS2959D017	CONNECTOR (FEMALE)	1	
			TRANSISTOR		
Q2111		2SD2216	TRANSISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2101		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2102		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2106		ERJ3GEYJ473	M.RESISTOR CH 1/16W 47K	1	
R2108		ERJ3GEYJ272	M.RESISTOR CH 1/16W 2.7K	1	
R2109		ERJ3GEYJ472	M.RESISTOR CH 1/16W 4.7K	1	
R2110		ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R2111		ERJ3GEYJ222	M.RESISTOR CH 1/16W 2.2K	1	
R2113		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R2114		ERJ3GEYJ471	M.RESISTOR CH 1/16W 470	1	
R2115		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R2116		ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2117,18		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	2	
R2119		ERJ8GEYJR33	M.RESISTOR CH 1/8W 0.33	1	
R2120		ERJ3GEYJ152	M.RESISTOR 1/16W 1.5K	1	
R2121		ERJ3GEYJ102	M.RESISTOR 1/16W 1K	1	
R2123		ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R2125		ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R2162		ERJ3GEYG823	M.RESISTOR CH 1/16W 82K	1	
R2163,64		ERJ3GEYG103	M.RESISTOR CH 1/16W 10K	2	
			MISCELLANEOUS		
		VMZ1672	BARRIER	1	
	■	VEK6272	S/S C.B.A.		(RTL)
			CONNECTORS		
PJ6701		VJP2272	CONNECTOR (MALE)	1	
			SWITCHES		
S6701		VMG0763	SWITCH	1	
S6702		ESE105MH7	SWITCH	1	
	■	VEK6391	EJECT SWITCH C.B.A.		(RTL)
			MISCELLANEOUS		
		VSP0584	EJECTER SWITCH	1	