ORDER NO. VRD9301M102

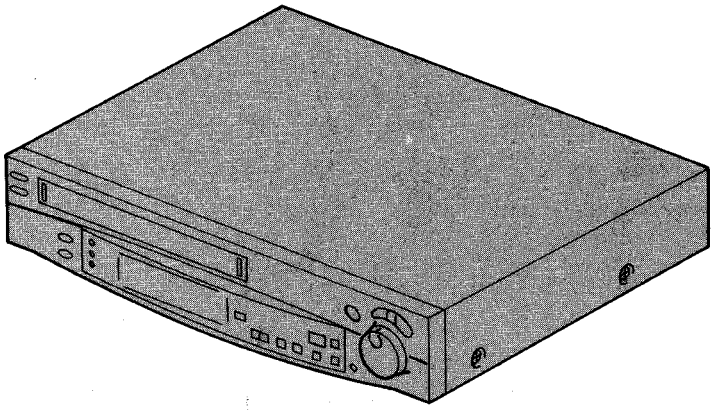
Service Manual

Video Cassette Recorder

Panasonic VHS HQ PAL

NV-SD20EE

K-MECHANISM



Panasonic

SPECIFICATIONS

ITEM	SPECIFICATION
POWER	SOURCE: 110~240V AC 50/60Hz
	CONSUMPTION: 21 watts
RECORDING SYSTEM	2 rotary heads, helical scanning system
	PAL
TV TUNER SYSTEM	VHF I: CH1~CH5 (SECAM D, K1) CHE2~CHS3 (PAL B/SECAM B) VHF III: CH6~CH12 (SECAM D, K1) CHM1~CHU10 (PAL B/SECAM B) CH4~CH13 (PAL I) UHF: CH21~CH69 (PAL G, I/SECAM G, K) 75Ω terminated
RF OUT SYSTEM	UHF: CH38$^{+2}_{-6}$ (PAL G, I/SECAM G, K) 73±3dBμ, 75Ω terminated
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L′ -R′ heads)
	INPUT: VIDEO IN Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
	OUTPUT: VIDEO OUT Connector (Phono type) 1.0Vp-p, 75Ω unbalanced

ITEM	SPECIFICATION
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: AUDIO IN Connector (Phono type) More than −10dBV (316mV), More than 50kΩ MICROPHONE JACK −70dBV
	OUTPUT: AUDIO OUT Connector (Phono type) −6dBV (500mV), Less than 1kΩ
TAPE SPEED	SP: 23.39mm/s LP: 11.695mm/s Record/Playback Time: SP: 4 hours with 240min. type tape LP: 8 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
DIMENSIONS	380(W)×89(H)×357(D) mm
WEIGHT	4.6kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller

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

SECTION 1
GENERAL DESCRIPTIONS

1-1. TECHNICAL INFORMATION

INITIALIZATION OF CHANNEL
MEMORY IC (IC7504/M6M80021P)

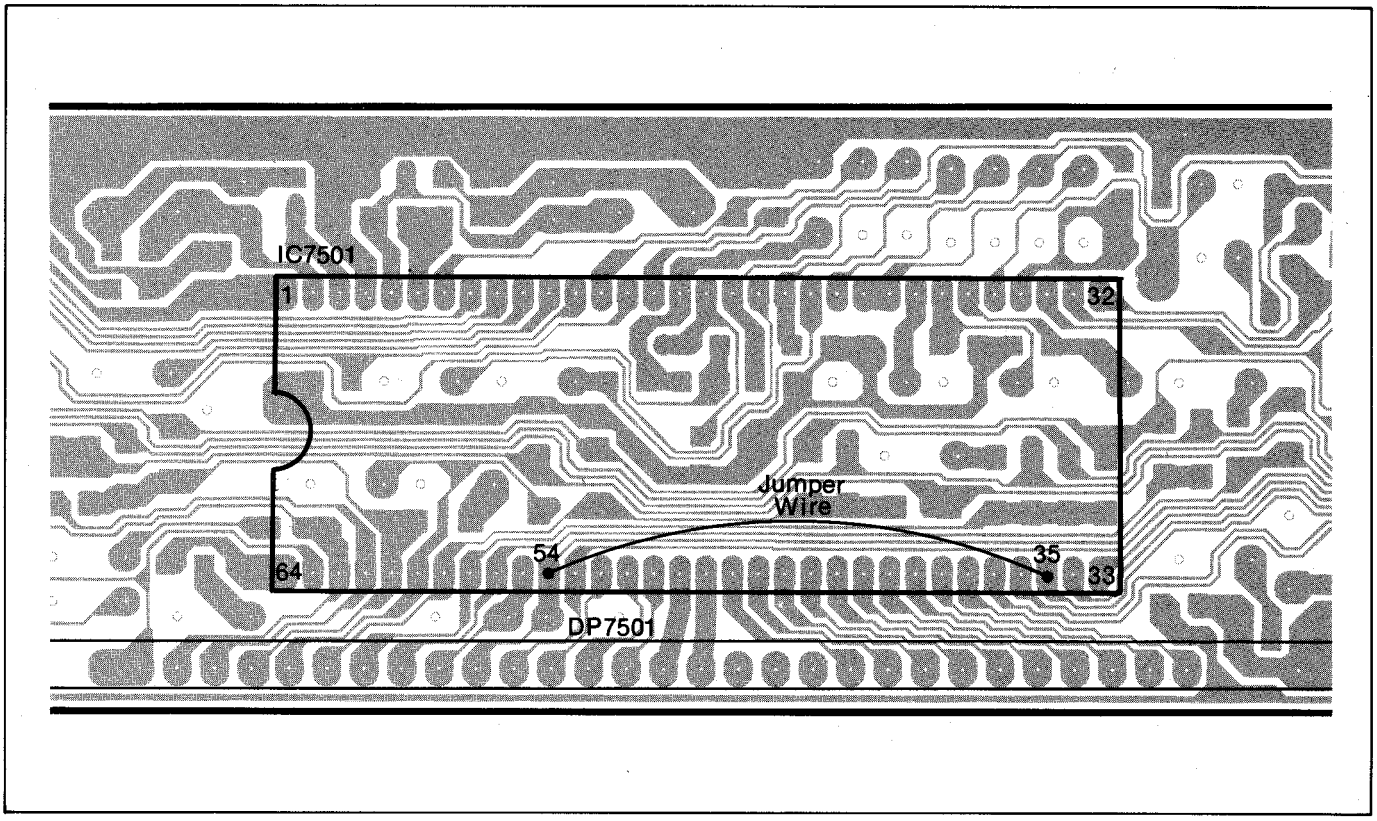
When replacing the channel memory IC (IC7504/M6M80021P), the memory IC should be initialized to original specifications.

Note:

1) This should be performed before tuner preset.
2) During initialization or after initialization within 1 second, do not disconnect the power source.
3) "INITIALIZATION" erases the "SKIP CH" and makes the POSITION CH and DISPLAY CH the same.

Method:

1) Press the CH UP/DOWN Button so that the Channel indicator indicates "3".
2) Connect a jumper wire between Pin 54 and Pin 35 of IC7501 for more than 1 second.
3) Channel indication should change from "3" to "1".



1-1-2. ASSEMBLY OF CAPSTAN STATOR UNIT

When replacing the CAPSTAN STATOR UNIT, the CENTRE FIXING TOOL(VFK0851) must be used to fix the centre of CAPSTAN STATOR UNIT.

Method:

1) Place the CAPSTAN STATOR UNIT into position.
2) Loosely tighten the 3 screws.
3) Insert the CENTRE FIXING TOOL(VFK0851) as shown in Fig.T2.
4) Tighten the 3 screws.

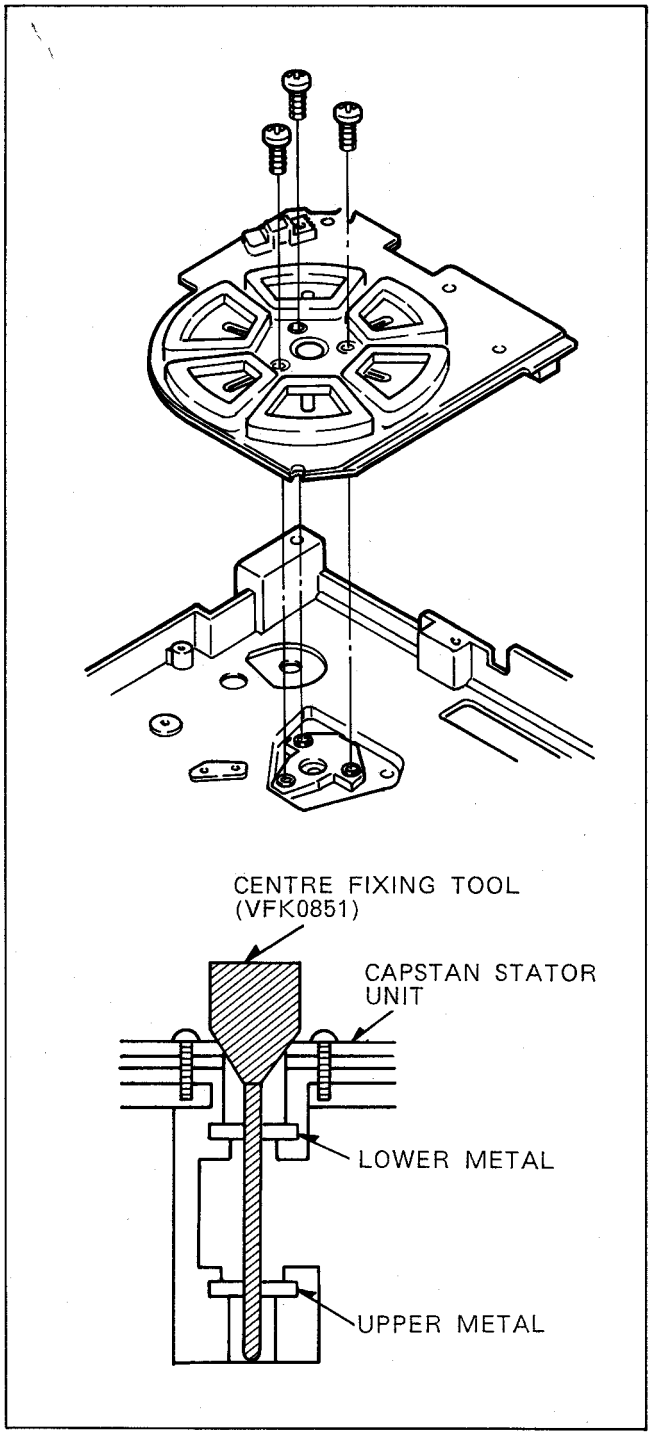


Fig. T2

1-1-3. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate.
For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

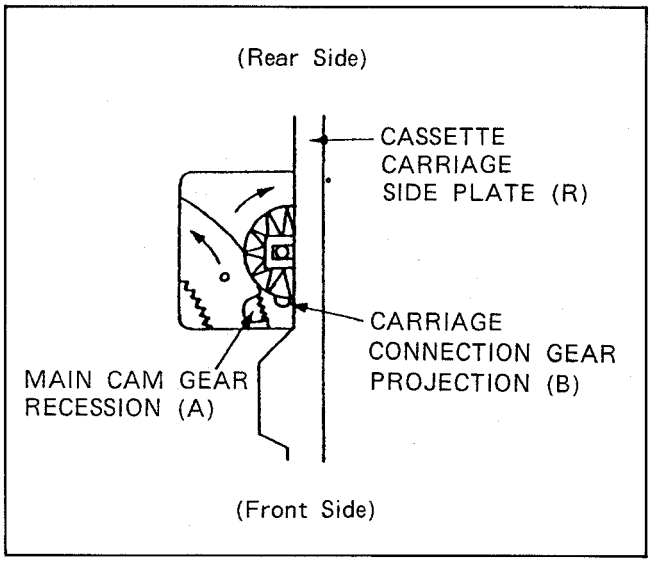


Fig. T3 Top View of Eject Operation

1-1-4. SERVICE INFORMATION DISPLAY

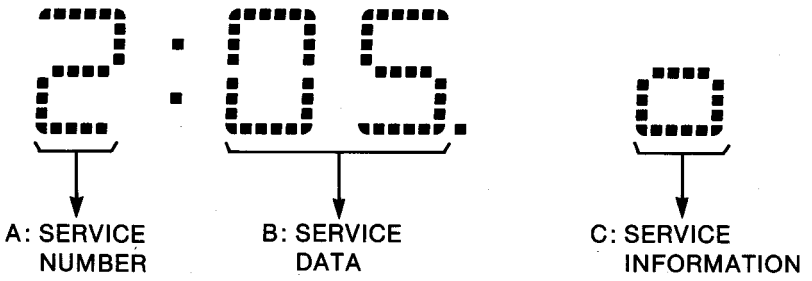
This unit can display service informations detected by the microprocessor IC6001 on the Front Indication Panel, which will help speed up troubleshooting and servicing.

Method:

1) Press the "EJECT" button while turning the "SHUTTLE RING" clockwise.
2) The counter of multi function display indicates microprocessor data approximately 1 minutes as shown in Fig.T4.

Note:

1) This mode can be entered even when the power is OFF.
2) It can also display the data when a jumper wire is connected between TP6001 and TPGND.
3) Press the "EJECT" button while turning the "SHUTTLE RING" clockwise to increase the service number.



A: SERVICE NUMBER	B: SERVICE DATA	CONTENTS	REMARKS
1	*0	can not detect Take-up and Supply Photo	
	*1	detect Take-up Photo	
	*2	detect Supply Photo	
	*3	detect Take-up and Supply Photo	
2	00	EJECT	
	01	CASSETTE DOWN	
	02	REVIEW	
	04	PLAY/STOP/CUE	
	06	FF/REW	
	07	During moving of each mode	
5	8*	CAPSTAN MOTOR ON	In case of the indication (8/9/U/A/-/⌐/L) or no indication, CAP MOTOR is turned on.
	*7	CAPSTAN MOTOR ROTATING DIRECTION	In case of the indication (0/1/2/3/4/5/6/7), CAP MOTOR is rotated in forward direction.
	*8	CAPSTAN MOTOR ROTATING DIRECTION	In case of the indication (8/9/U/A/-/⌐/L) or no indication, CAP MOTOR is rotated in REVERS direction.
6	1*		In case of the indication (1/3/5/7/9/A/⌐) or no indication, CYL MOTOR is turned on.

NOTE: "*"; No meaning

C: SERVICE INFORMATION
0: Normal
1: Cylinder lock (STOP)
2: Reel lock (STOP)
3: Mechanism lock during moving next position except NO. 4 or NO. 6 of service information.
(In this case, loading motor can be expected to break down.)
4: Mechanism lock during unloading
5: Less pulse of reels during unloading (In this case, capstan can be expected to break down.)
6: Mechanism lock during front loading (Cassette IN)
7: Serial data (IC6001−IC7501) can not be transmitted.

Fig. T4

2-3. MECHANICAL ADJUSTMENT PROCEDURES

2-3-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

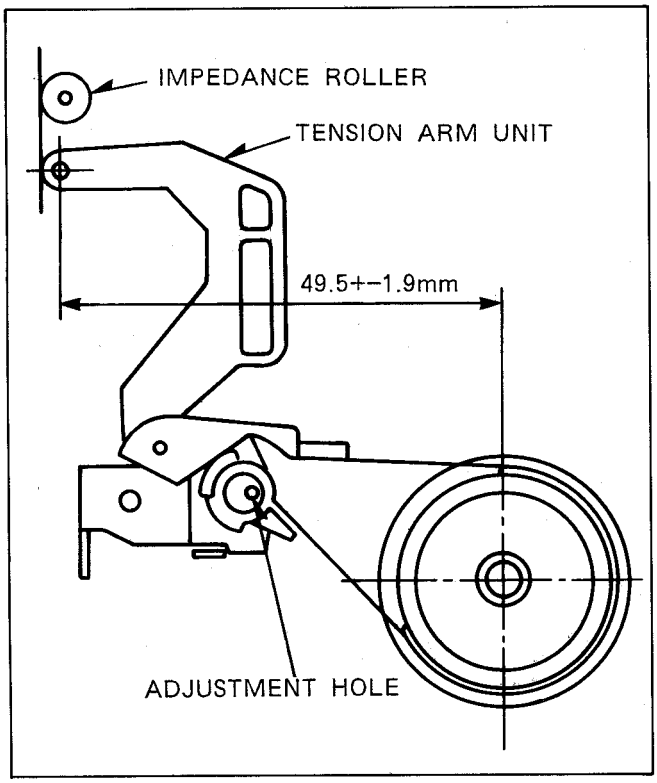


Fig. M1

2-3-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape: PAL)
(120 minutes tape: NTSC)

(Specification)
22.5−27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
(for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2.

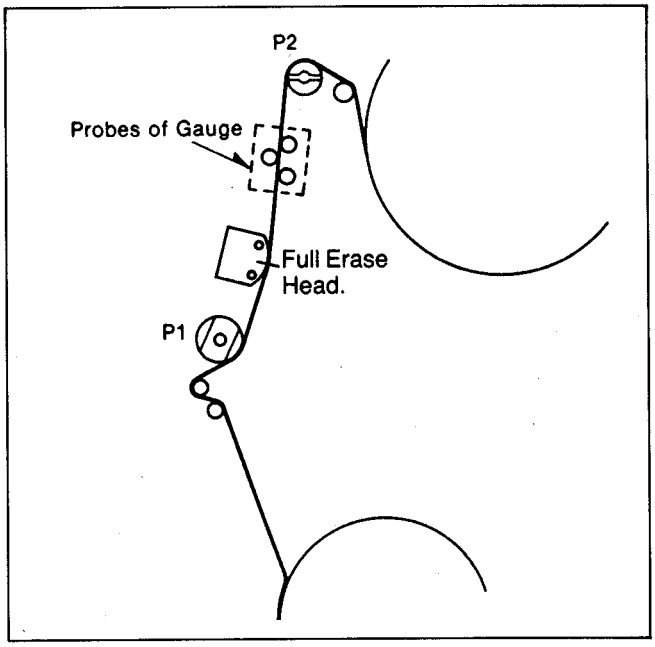


Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

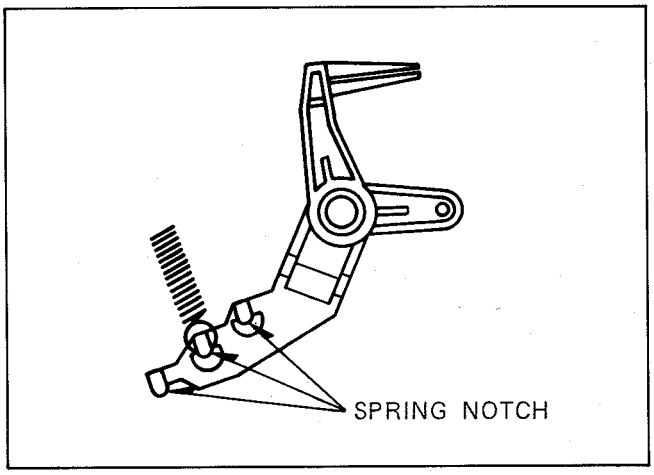


Fig. M3

2-3-3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

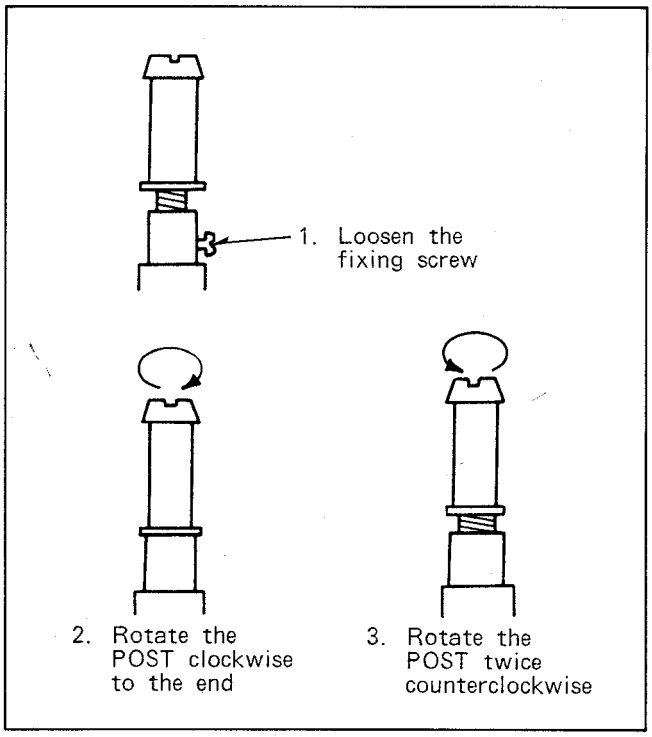


Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER.
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

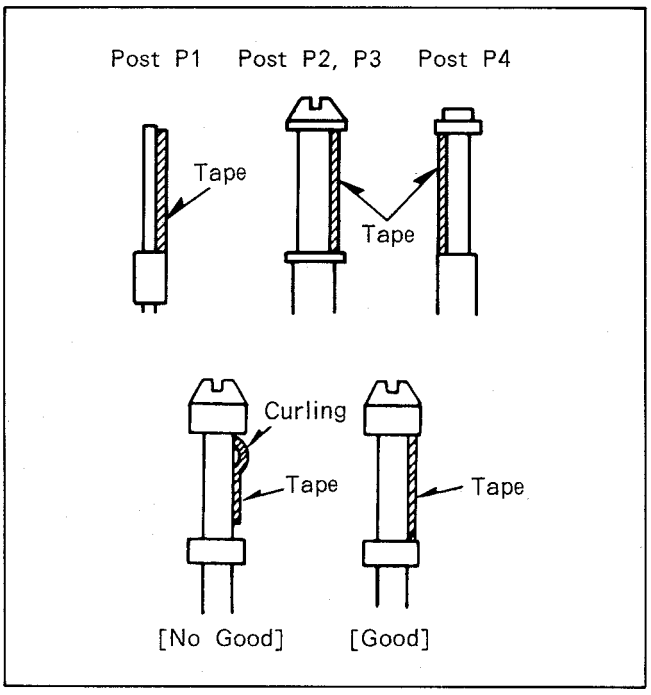


Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-3-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Proceed the following procedures for Tape Interchangeability Adjustment to do it correctly and smoothly.

(1) Adjustment of P2 and P3 Posts.
(2) Height Adjustment of A/C Head (1).
(3) Height Adjustment of A/C Head (2).
(4) Fine-Adjustment of A/C Head
(5) Horizontal Position Adjustment of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, connect a Cut Jumper Wire as shown in Fig.M6.
(Auto Tracking is turned off.)

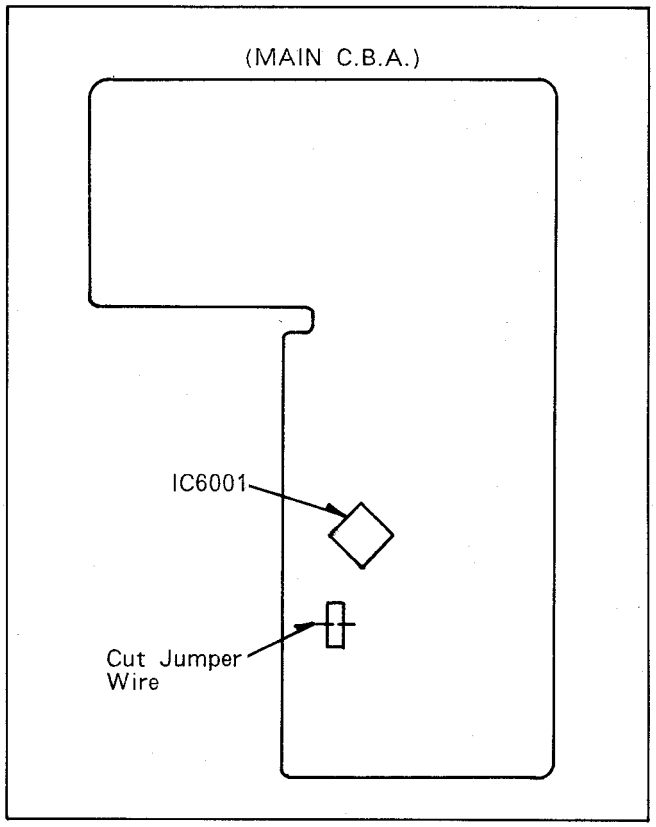


Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape(PAL/SECAM: VFJ8125H3F,
NTSC: VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

1. Set the tracking control into the fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:
To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

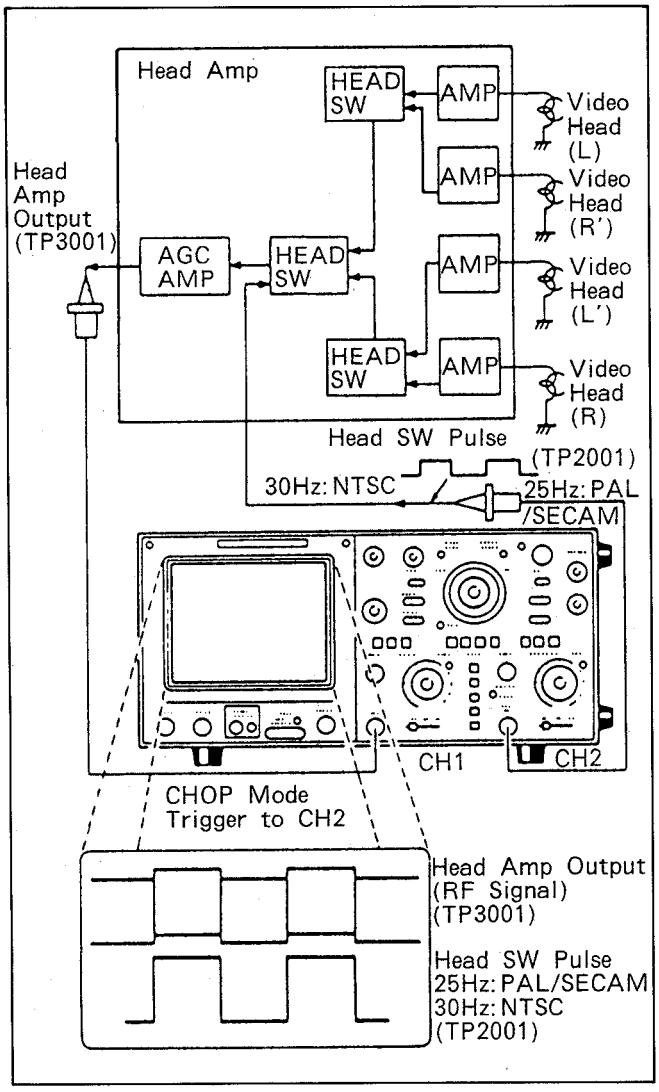


Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2: Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8−"C".

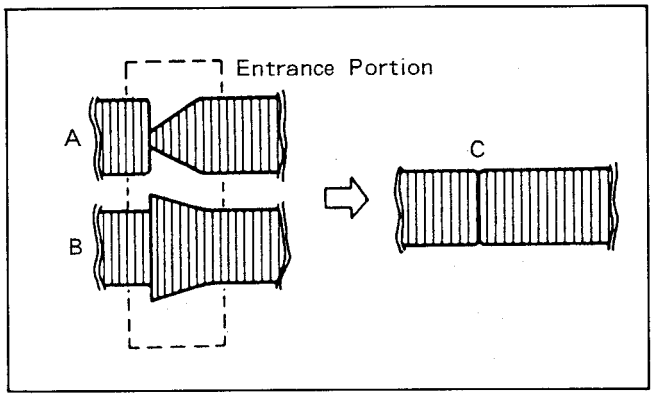


Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3: Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9−"F".

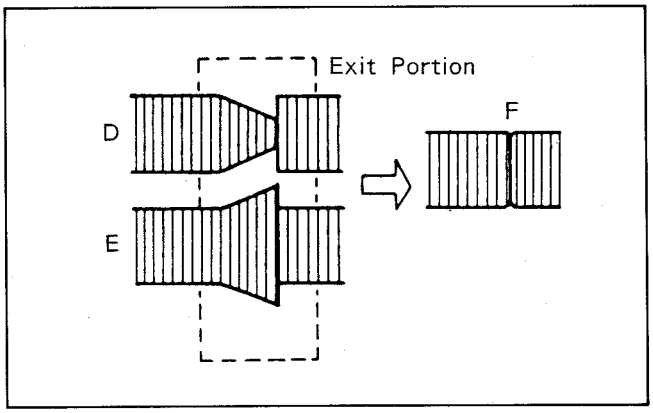


Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or − button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope.
If the RF envelope does not meet these specifications,
V1/V>=0.7, V2/V>=0.8 (Refer to Fig.M12)
then repeat steps 1−8 again.

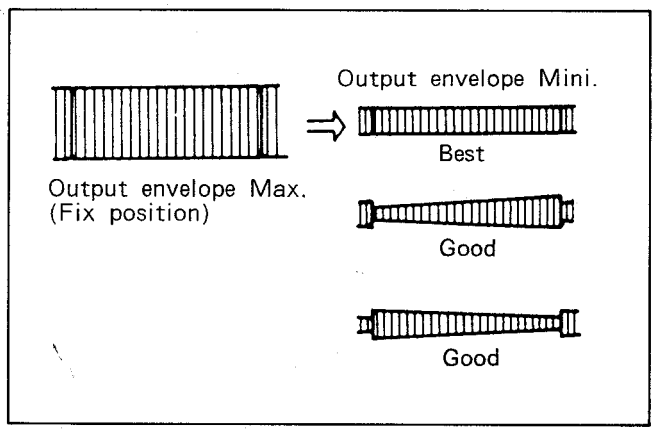


Fig. M10

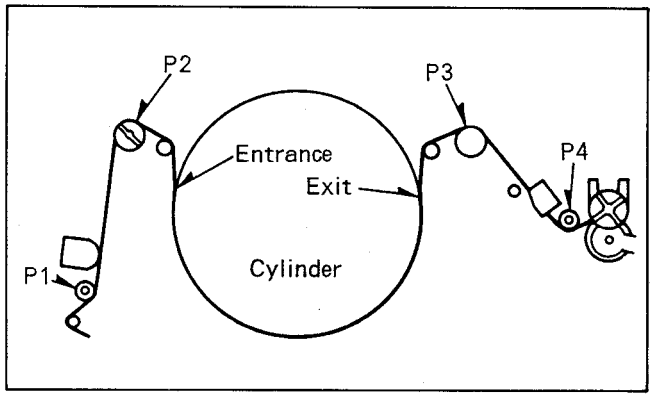


Fig. M11 Loading of Posts

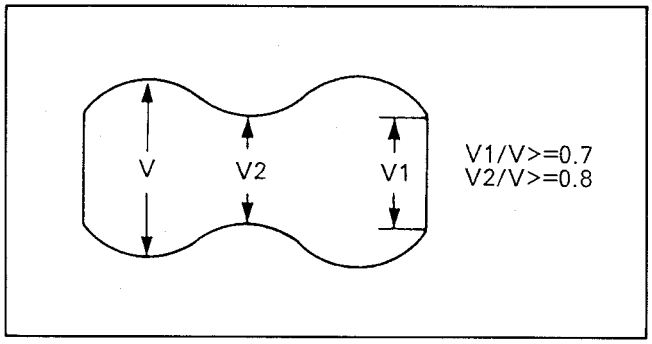


Fig. M12 Spec. of Envelope Figure

(2) Height Adjustment of A/C Head (1)

1) Install the A/C HEAD on the A/C HEAD BASE (E) by 3 screws (A),(B) and (C) with springs.
2) Tighten the screw (A) unit it touches chassis and then rotate the SCREW(A) counterclockwise for approx. 1.5 times.
3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE (D) and (E) is separate.

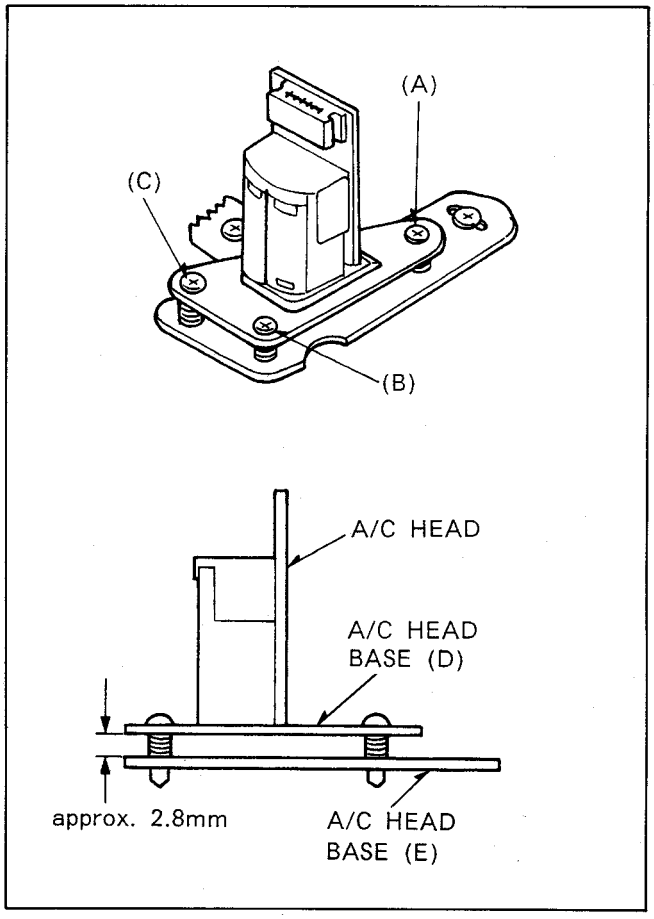
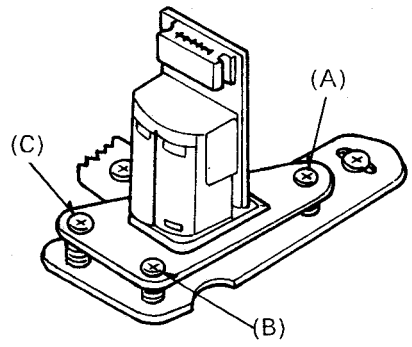
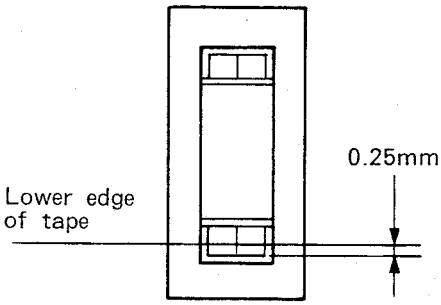


Fig. M13

(3) Height Adjustment of A/C Head (2)

1) Playback the alignment tape.
2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
4) Connect the oscilloscope to audio output terminal.
5) Rotate the screw (C) until audio signal is maximized.





	SCREW (A)	SCREW (B)
To appear the wrinkle on the lower edge of tape	COUNTER CLOCKWISE	CLOCKWISE
To disappear the wrinkle on the lower edge of tape	CLOCKWISE	COUNTER CLOCKWISE

Fig. M14

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

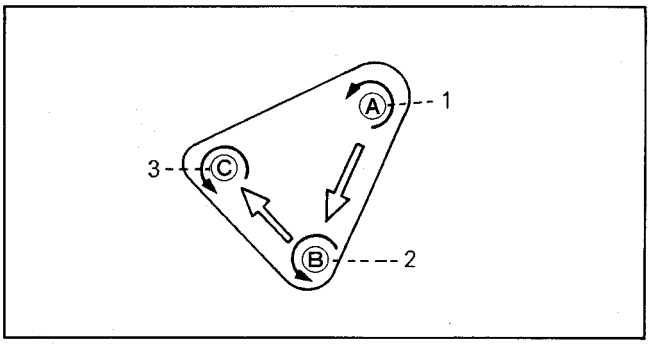


Fig. M15

<When moving the A/C HEAD down>

1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape a P4 post.
2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) clockwise until the audio signal is miximized.

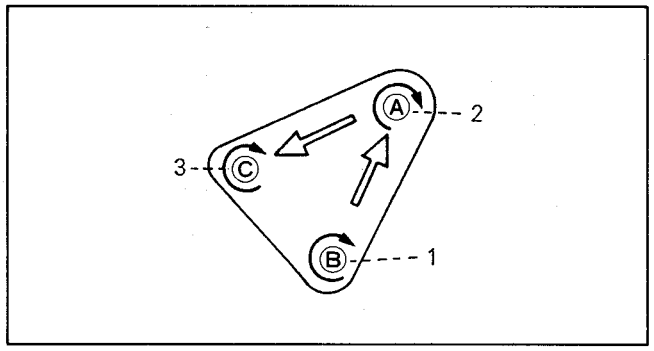


Fig. M16

(5) Horizontal Position Adjustment of A/C HEAD

1) Set the tracking control into the centre fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
2) Connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.
3) Playback the alignment tape.
4) Loosen the 2 screws (F) and (G).
5) Adjust the A/C HEAD BASE (E) until the RF envelope waveform is maximized.

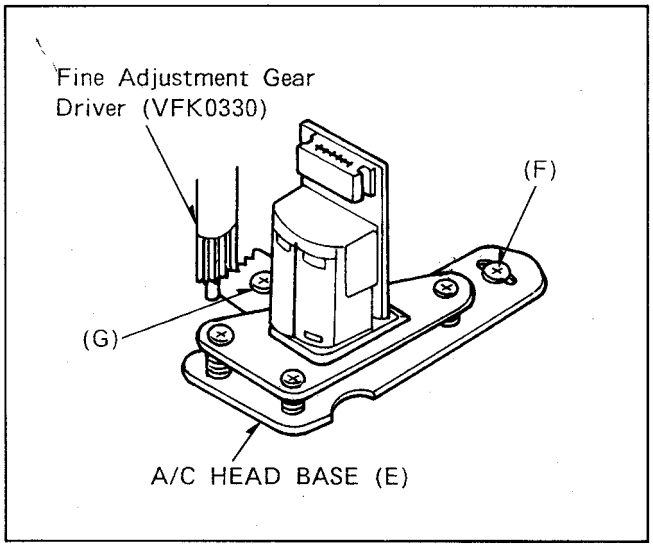


Fig. M17

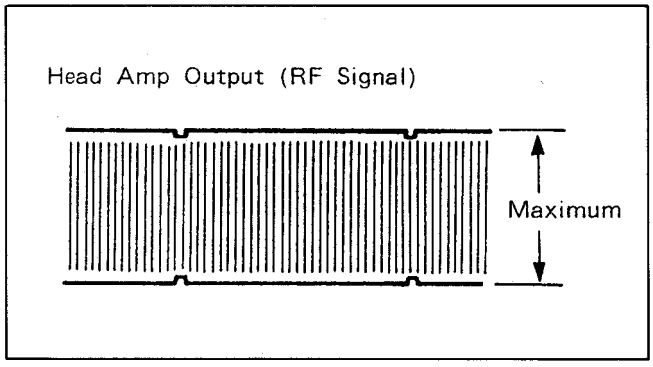
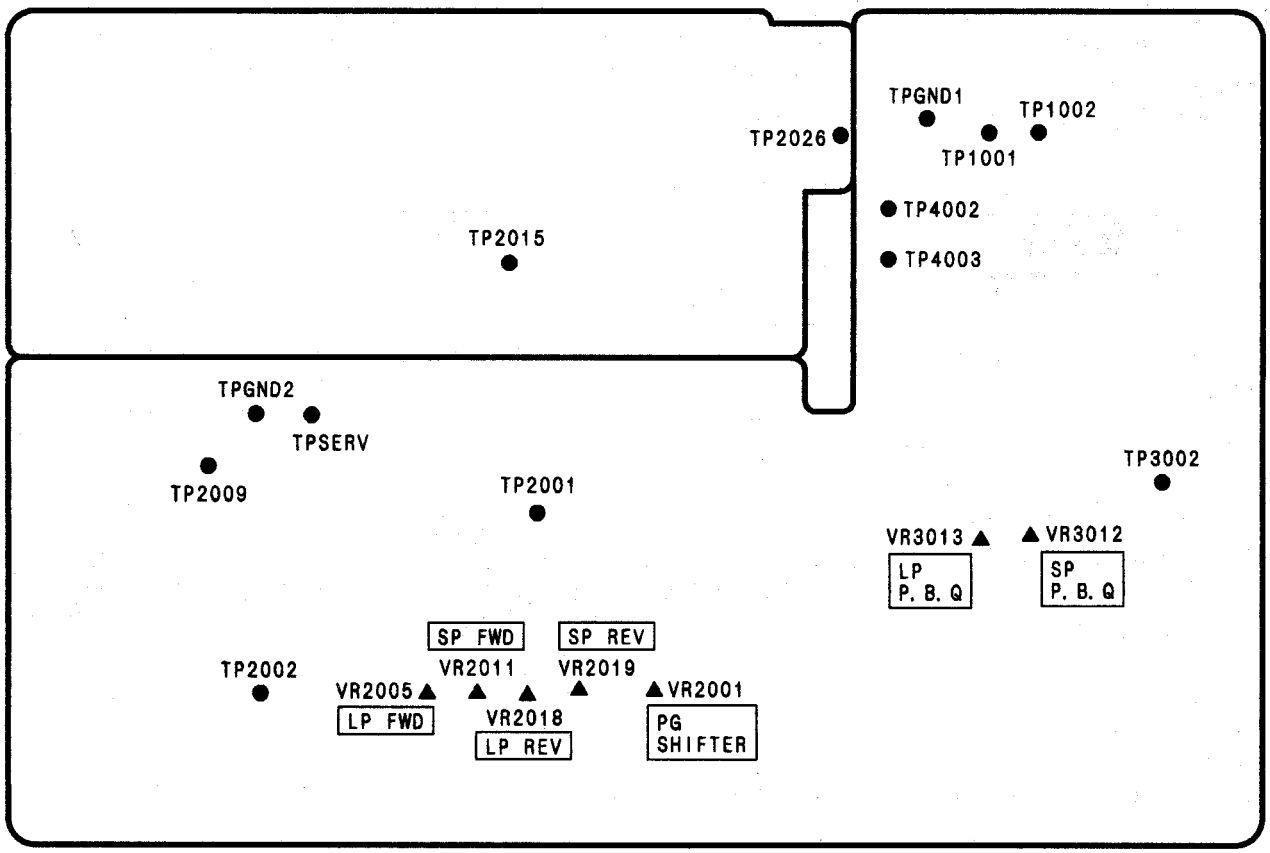


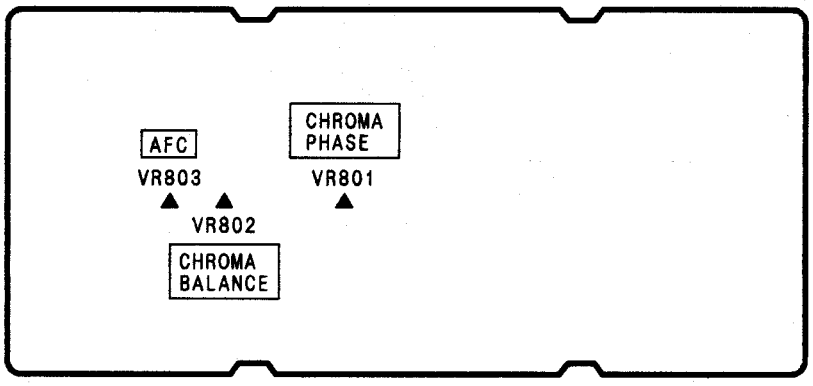
Fig. M18

LOCATION OF TEST POINTS & CONTROLS

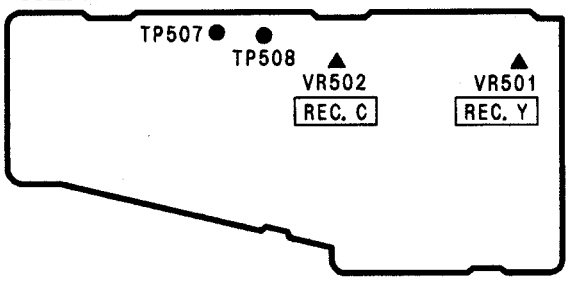
MAIN C.B.A.



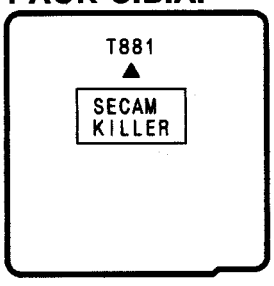
LUMINANCE & CHROMINANCE PACK C.B.A.



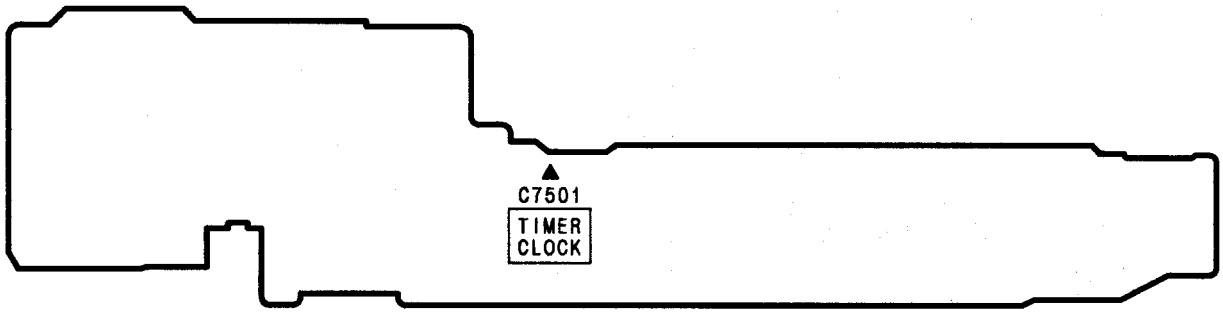
HEAD AMP C.B.A.



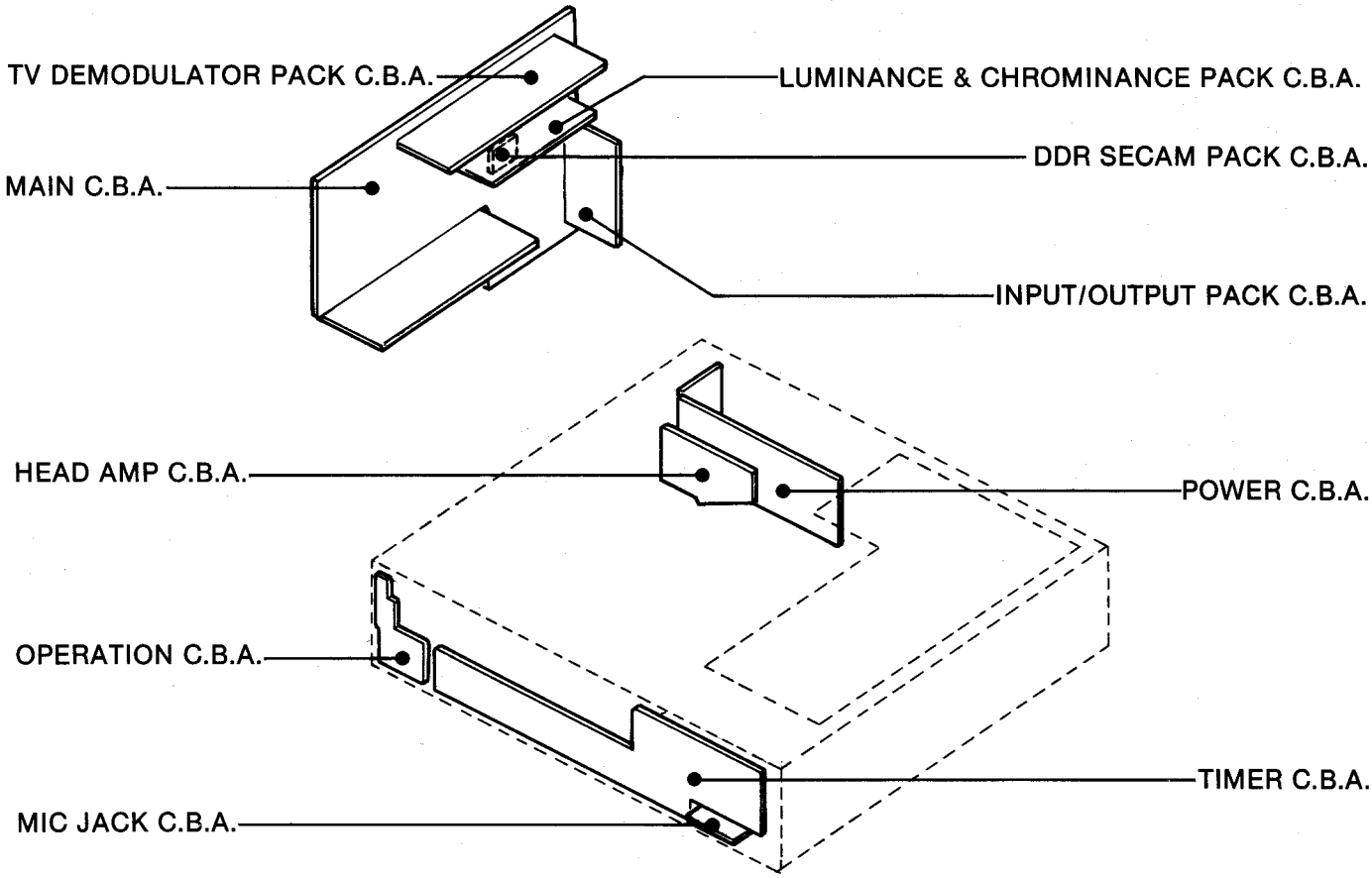
DDR SECAM PACK C.B.A.



TIMER C.B.A.



CIRCUIT BOARD LAYOUT



2-6. ELECTRICAL ADJUSTMENT PROCEDURES

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

2-6-1. TEST EQUIPMENT

To perform electrical adjustments following equipment is required.

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

2-6-2. PREPARATION

During adjustment, set each selector as follows: when no indication in the procedure.

NOISE FILTER/EDIT SW.....OFF
TEST SIGNAL SW (REAR).....OFF
TAPE SPEED.....SP

2-6-3. HOW TO READ ADJUSTMENT PROCEDURES

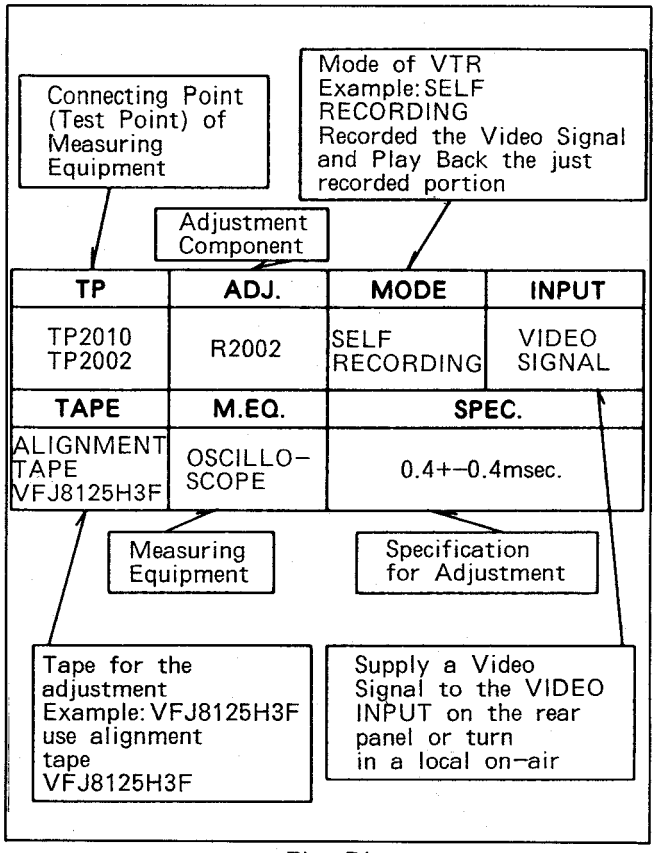


Fig. E1

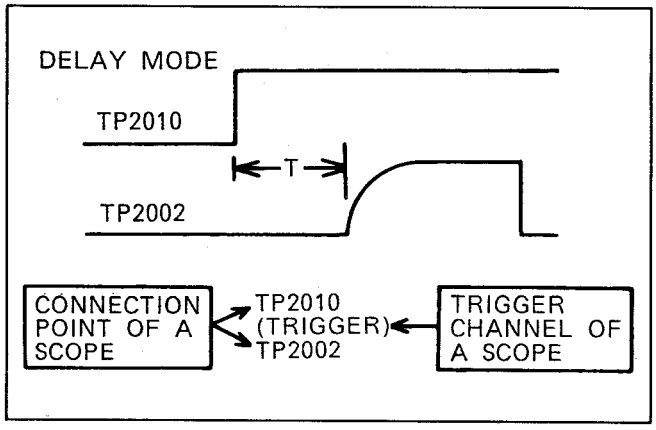


Fig. E2

SERVO SECTION

2-6-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE, VFJ8125H3F	OSCILLO-SCOPE	7.0+-0.5(H)	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT)
2. Playback the alignment tape.
3. Adjust VR2001 so that phase difference between falling edge of Head SW pulse and V-Sync is 7.0+-0.5(H).

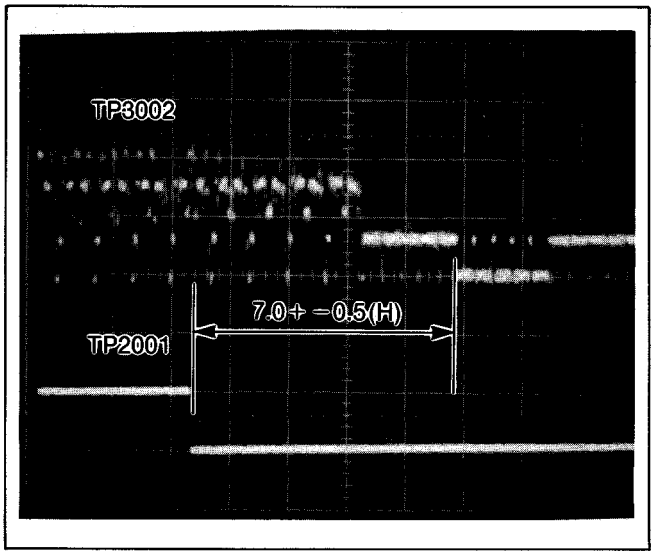


Fig. E3

2-6-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011(SP) VR2006(LP)	SP (SELF RECORDED) STILL	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	A=B (A+B)/V<1/6	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2011(SP)(VR2006(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect a jumper wire.

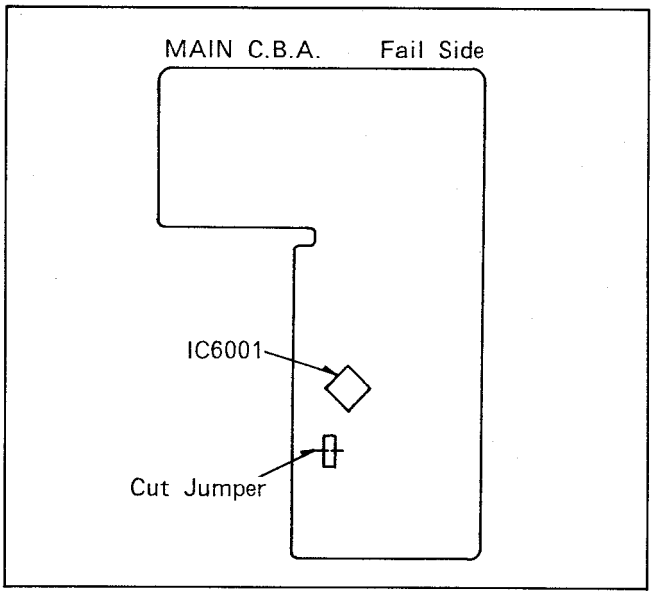


Fig. E4

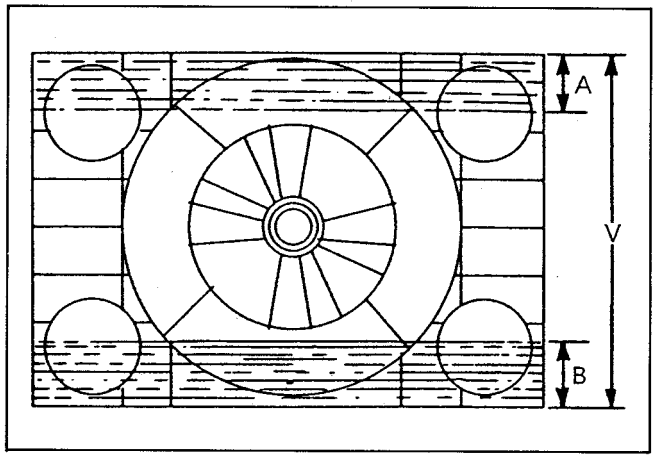


Fig. E5

2-6-6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019(SP) VR2018(LP)	REVERSE SLOW	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	SP: A=B (A+B)/V=<1/6 LP: A=0 B/V=<1/3	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2019(SP)(VR2018(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect a jumper wire.

LUMINANCE & CHROMINANCE SECTION

2-6-7. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT

TP	ADJ.	MODE	INPUT
PIN (9) of IC802	VR803	STOP	SINEWAVE 8KHz -10dB (316mV)
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER SINEWAVE GENERATOR	15735+-100(Hz)	

Note:
Supply +5V DC to Pin 27 of IC802.

1. Supply a sinewave (8KHz/-10dB) to Line In. (Video In)
2. Connect the frequency counter to Pin 9 of IC802.
3. Turn VR803 to maximum frequency.
4. Adjust VR803 so the frequency is 15735+-100(Hz).

2-6-8. RECORDING CURRENT ADJUSTMENT

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

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so the amplitude of sync tip portion is 130+-5mVp-p.
4. Supply +5V DC to PP3001-6 to reduce luminance component.
5. Adjust VR502 until the amplitude of Cyan is 32 +-2mVp-p.

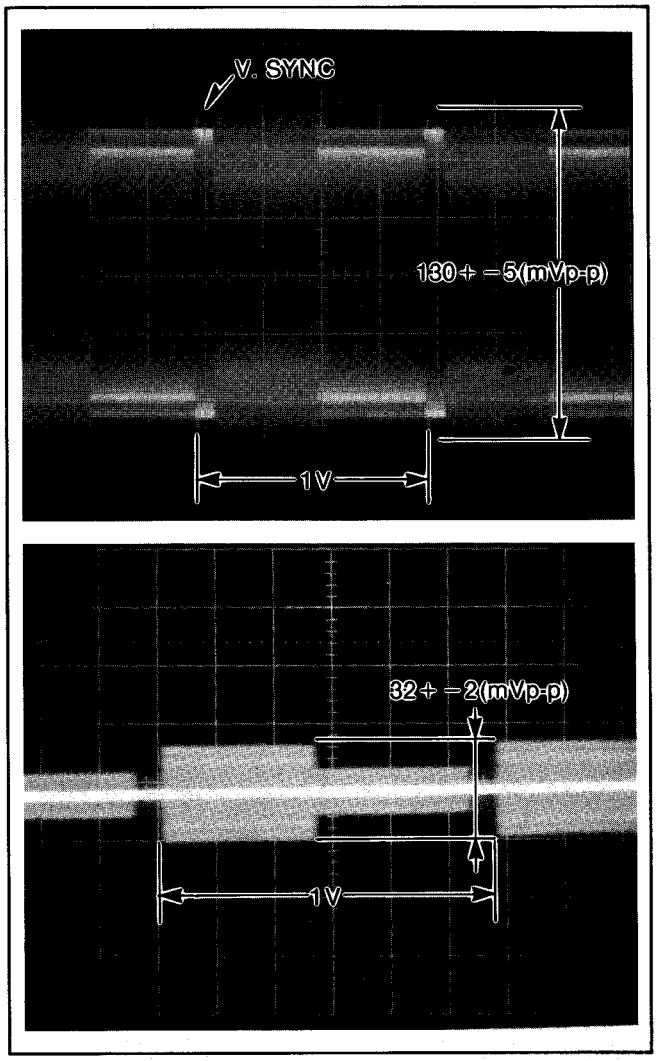


Fig. E6

2-6-9. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE VIDEO SWEEP GENERATOR	SP: 0+-1(dB) (90 - 110%) LP: 0+-1(dB) (90 - 110%)	

Note:
(1) Set the Video Sweep Signal as shown in Fig.E7.

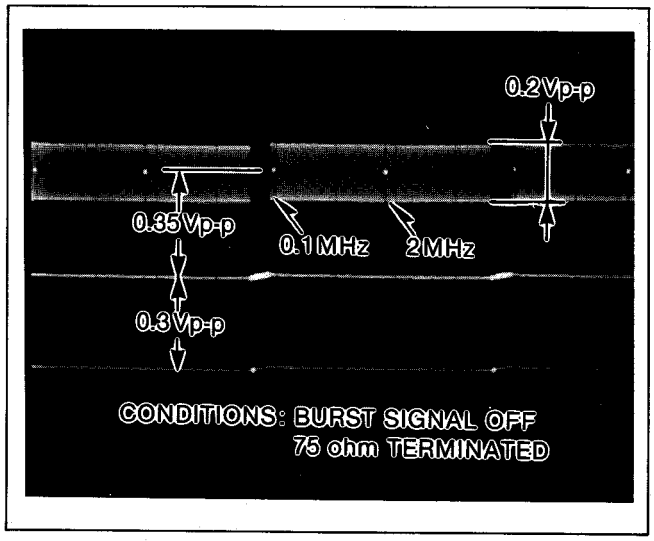


Fig. E7

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0+-1dB at 2MHz portion by comparing with 0.1MHz portion.

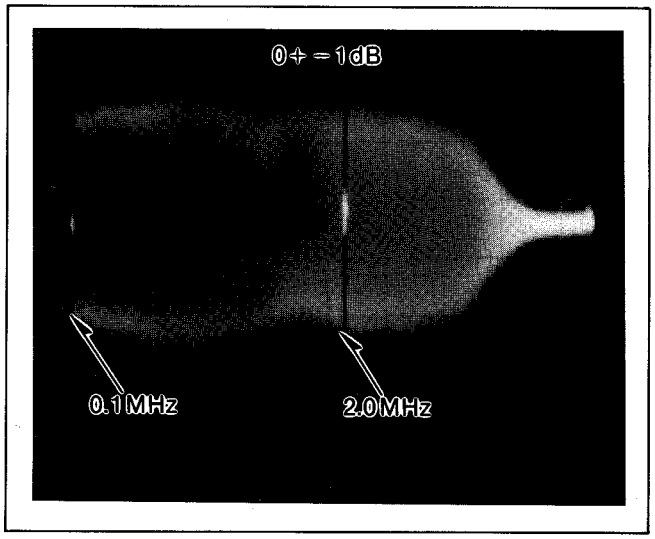


Fig. E8

2-6-10. SECAM KILLER ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC881-11	T881	SP RECORDING	SECAM COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE	MAXIMIZE AMPLITUDE ("A"PORTION: NEGATIVE PEAK)	

1. Record SECAM color bar.
2. Adjust T881 until the amplitude of the signal at the Pin 11 of IC881 is maximum. (To make "A"portion negative peak)

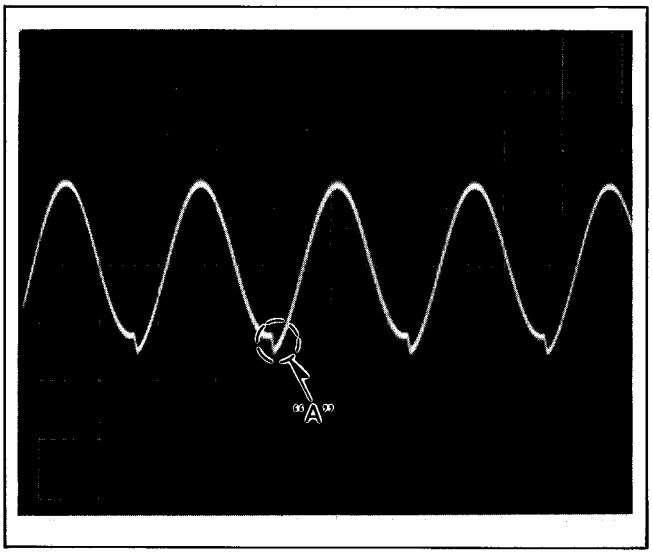


Fig. E9

2-6-11. CHROMINANCE RECURSIVE ADJUSTMENT

TP	ADJ.	MODE	INPUT
IC301-17	VR801 VR802	SELF REC&PB	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO- SCOPE	MINIMIZE AMPLITUDE	

1. Record the color bar and play back the just recorded portion.
2. Adjust VR801 and VR802 until the amplitude of the signal at the Pin 17 of IC301 is minimum.

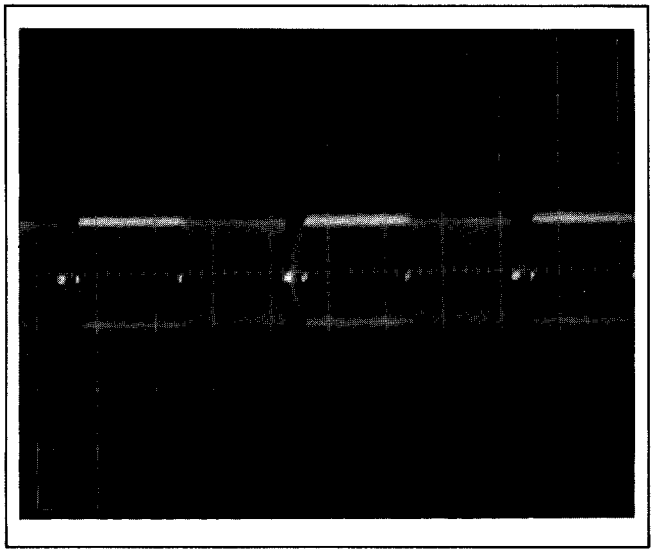


Fig. E10 Before adjustment.

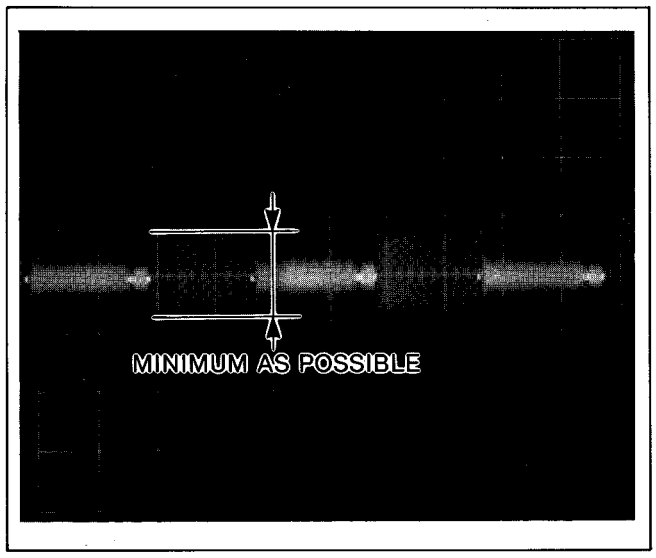


Fig. E11 After adjustment.

AUDIO SECTION

2-6-12. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.9+-0.1(mVrms)	

Note:
Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 so reading of V.T.V.M. is 2.9+-0.1(mVrms).

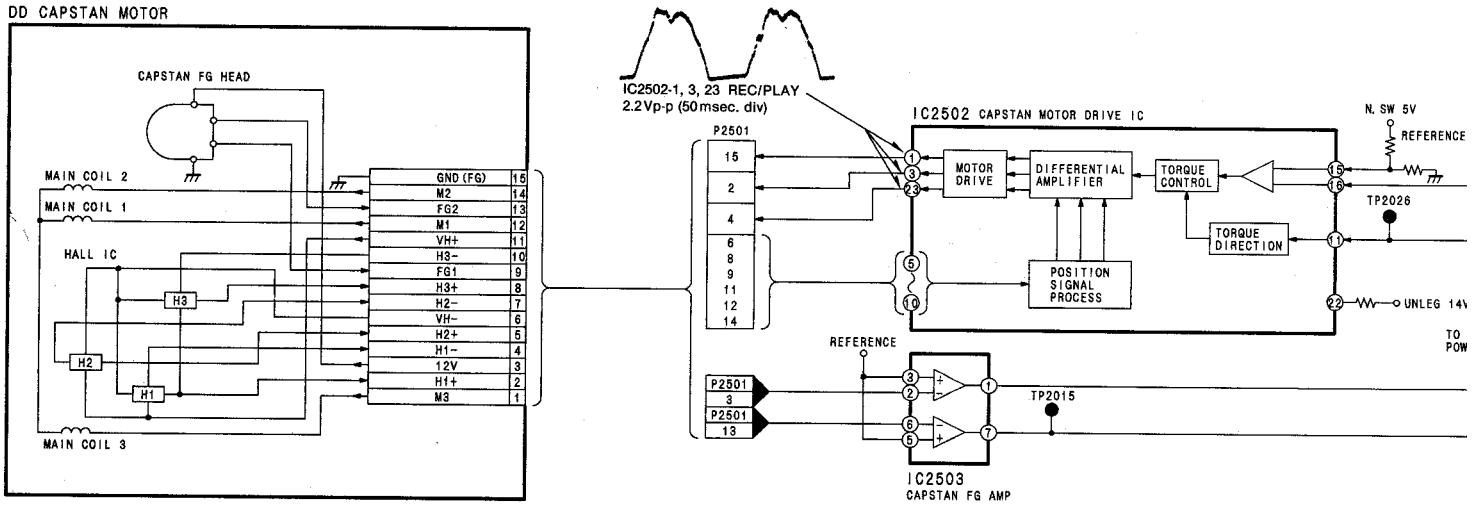
TIMER SECTION

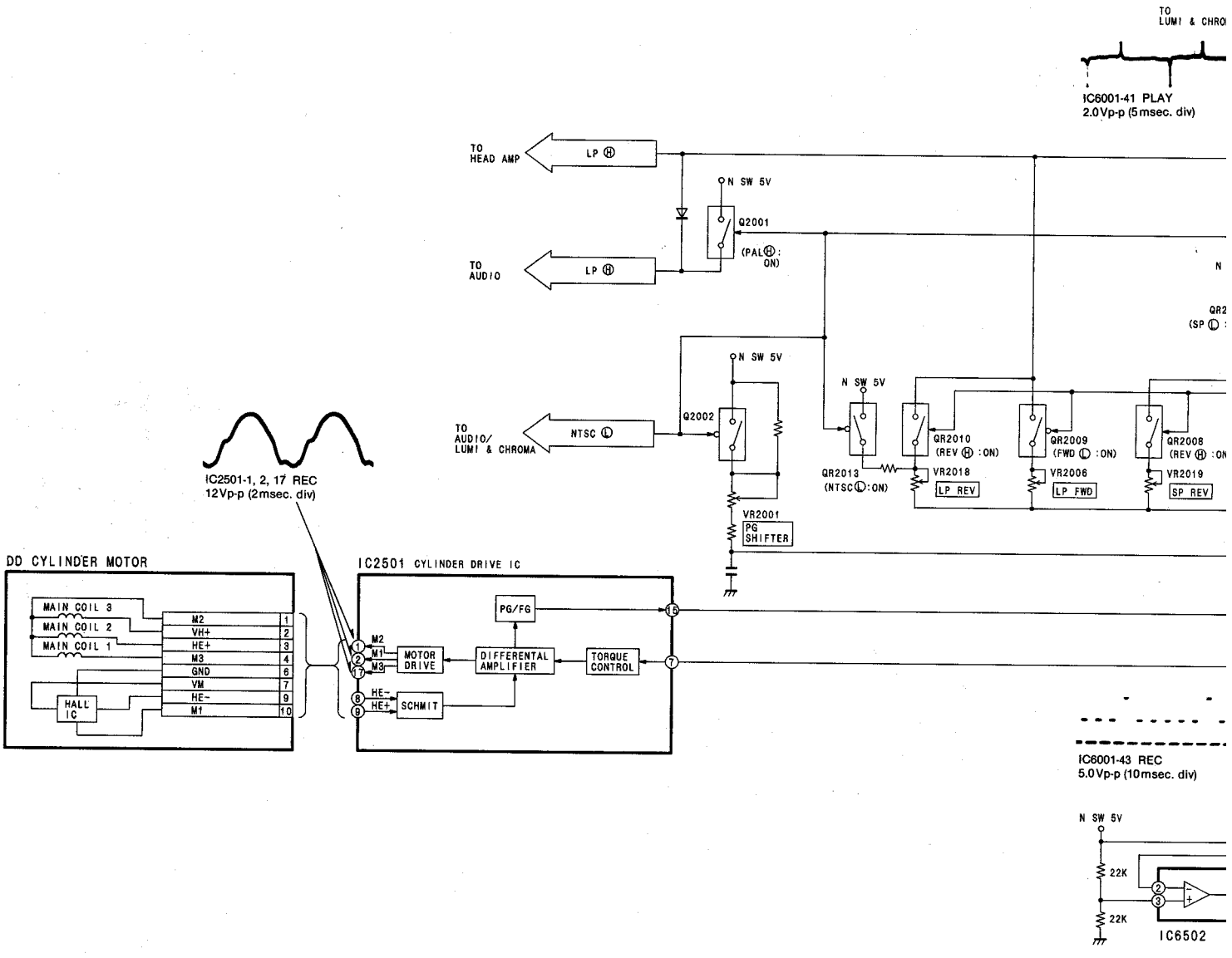
2-6-13. TIMER REFERENCE CLOCK ADJUSTMENT

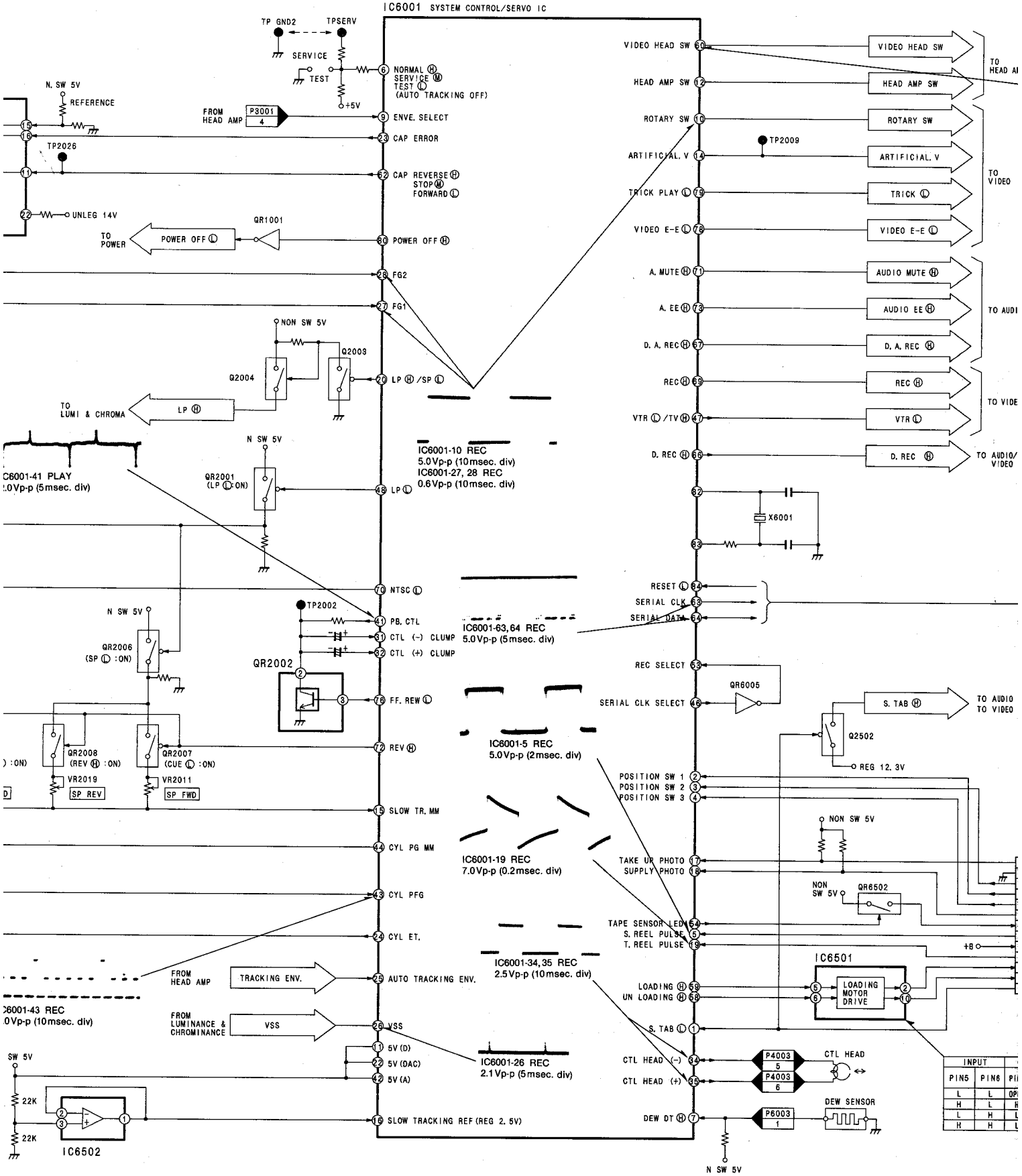
TP	ADJ.	MODE	INPUT
TP7501-28	C7501	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	7812.5+-0.015(us)	

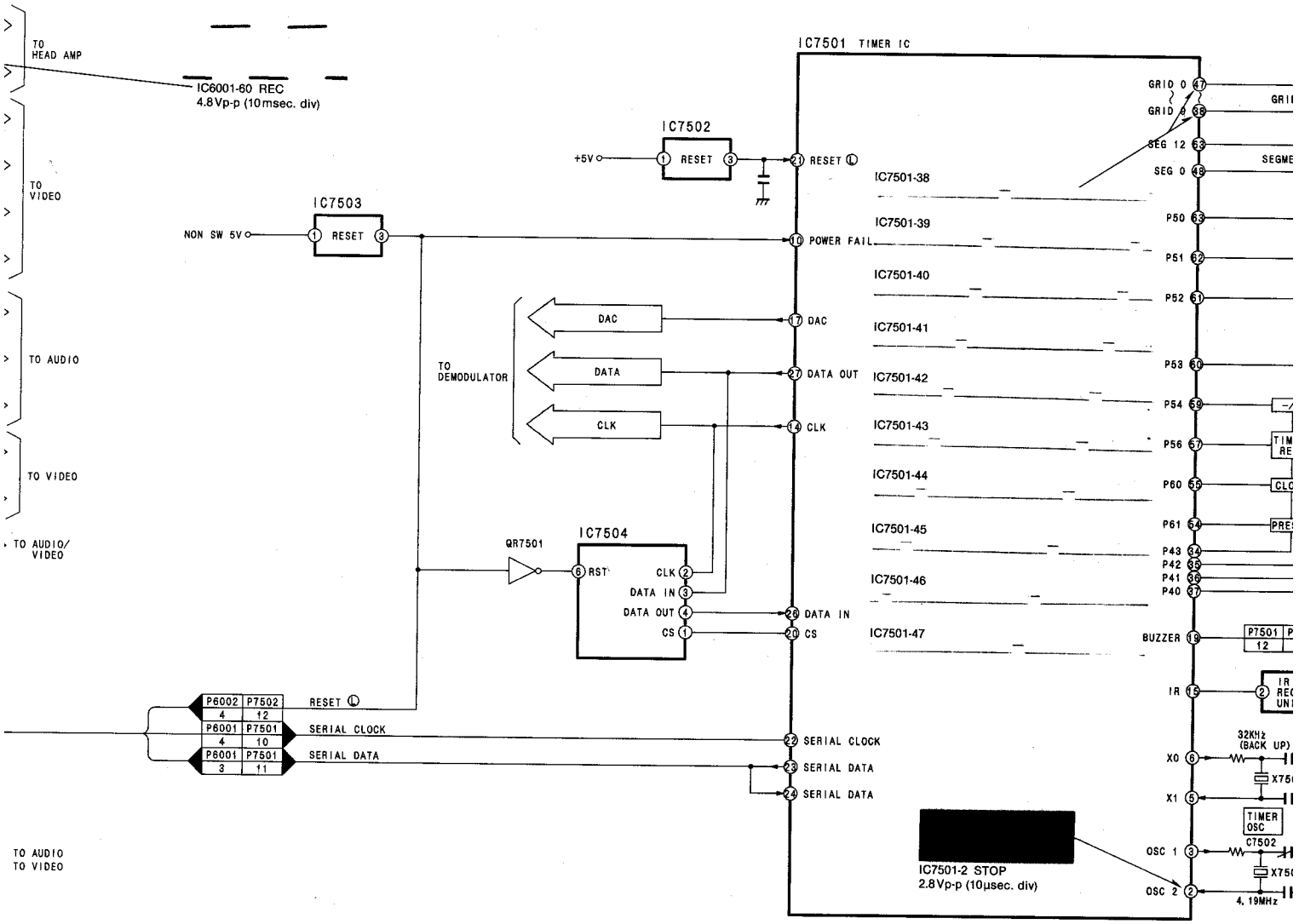
1. Connect the universal counter to TP7501-28.
2. Adjust C7501 so the reading of universal counter is 7812.5+-0.015us.

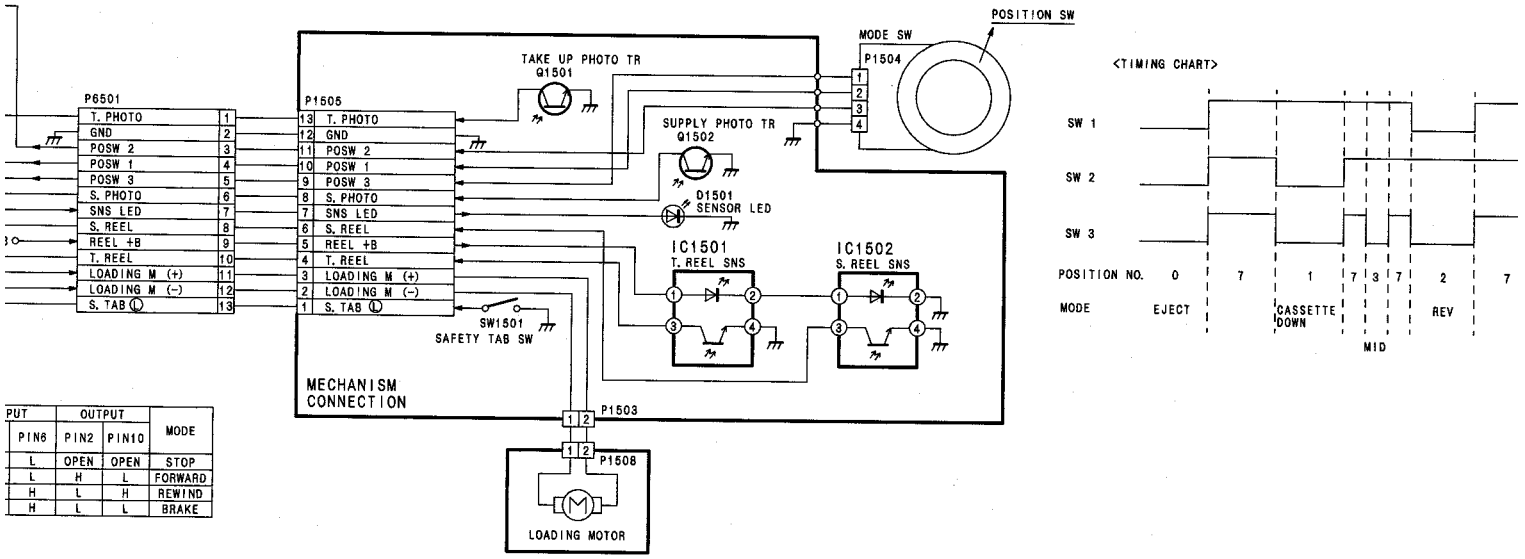
SECTION 3
BLOCK DIAGRAMS
3-1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM



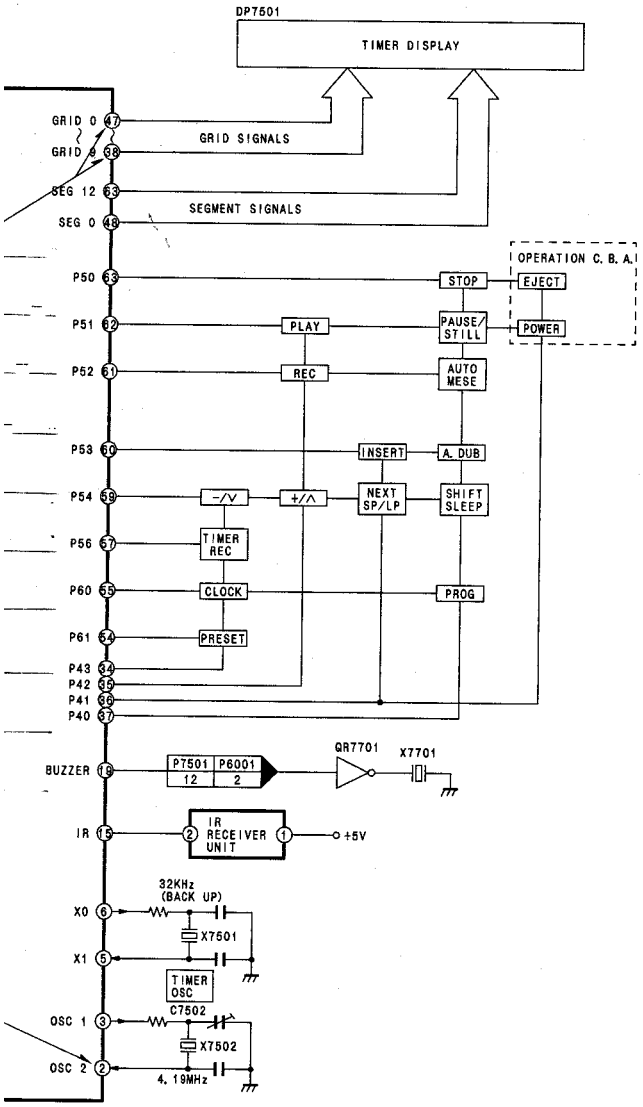


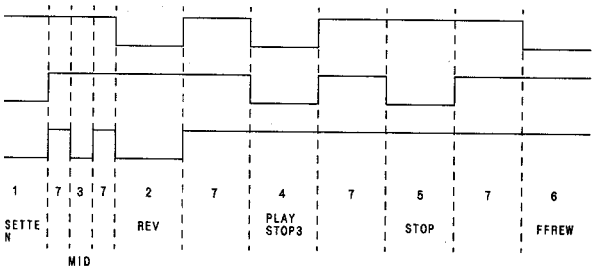

IC6001 SYSTEM CONTROL/SERVO IC
TP GND2
TPSERV
SERVICE
TEST
NORMAL H
SERVICE M
TEST L
(AUTO TRACKING OFF)
+5V
N. SW 5V
REFERENCE
FROM HEAD AMP
P3001
4
ENVE. SELECT
CAP ERROR
TP2026
CAP REVERSE H
STOP M
FORWARD L
UNLEG 14V
TO POWER
POWER OFF L
QR1001
POWER OFF H
FG2
FG1
NON SW 5V
Q2003
Q2004
LP H /SP L
TO LUMI & CHROMA
LP H
N SW 5V
QR2001
(LP L :ON)
LP L
IC6001-10 REC
5.0Vp-p (10msec. div)
IC6001-27, 28 REC
0.6Vp-p (10msec. div)
C6001-41 PLAY
.0Vp-p (5msec. div)
X6001
NTSC L
N SW 5V
TP2002
QR2006
(SP L :ON)
QR2002
PB. CTL
CTL (-) CLUMP
CTL (+) CLUMP
IC6001-63, 64 REC
5.0Vp-p (5msec. div)
FF. REW L
REW H
QR2008
(REV H :ON)
QR2007
(CUE L :ON)
VR2019
SP REV
VR2011
SP FWD
SLOW TR. MM
CYL PG MM
CYL PFG
CYL FT.
IC6001-5 REC
5.0Vp-p (2msec. div)
IC6001-19 REC
7.0Vp-p (0.2msec. div)
FROM HEAD AMP
TRACKING ENV.
AUTO TRACKING ENV.
IC6001-34, 35 REC
2.5Vp-p (10msec. div)
C6001-43 REC
.0Vp-p (10msec. div)
FROM LUMINANCE & CHROMINANCE
VSS
VSS
5V (D)
5V (DAC)
5V (A)
IC6001-26 REC
2.1Vp-p (5msec. div)
SW 5V
22K
22K
IC6502
SLOW TRACKING REF (REG 2.5V)
VIDEO HEAD SW
HEAD AMP SW
ROTARY SW
ARTIFICIAL. V
TRICK PLAY L
VIDEO E-E L
A. MUTE H
A. EE H
D. A. REC H
REC H
VTR L /TV H
D. REC H
TO HEAD AI
TO VIDEO
TO AUDI
TO VIDE
TO AUDIO/ VIDEO
TP2009
RESET L
SERIAL CLK
SERIAL DATA
REC SELECT
SERIAL CLK SELECT
QR6005
S. TAB H
TO AUDIO TO VIDEO
Q2502
REG 12. 3V
POSITION SW 1
POSITION SW 2
POSITION SW 3
NON SW 5V
TAKE UP PHOTO
SUPPLY PHOTO
NON SW 5V
QR6502
TAPE SENSOR LED
S. REEL PULSE
T. REEL PULSE
+B
IC6501
LOADING H
UN LOADING H
LOADING MOTOR DRIVE
S. TAB L
CTL HEAD (-)
CTL HEAD (+)
P4003
5
P4003
6
CTL HEAD
DEW DT H
P6003
1
DEW SENSOR
N SW 5V
INPUT
PIN5
PIN6
L L
H L
L H
H H





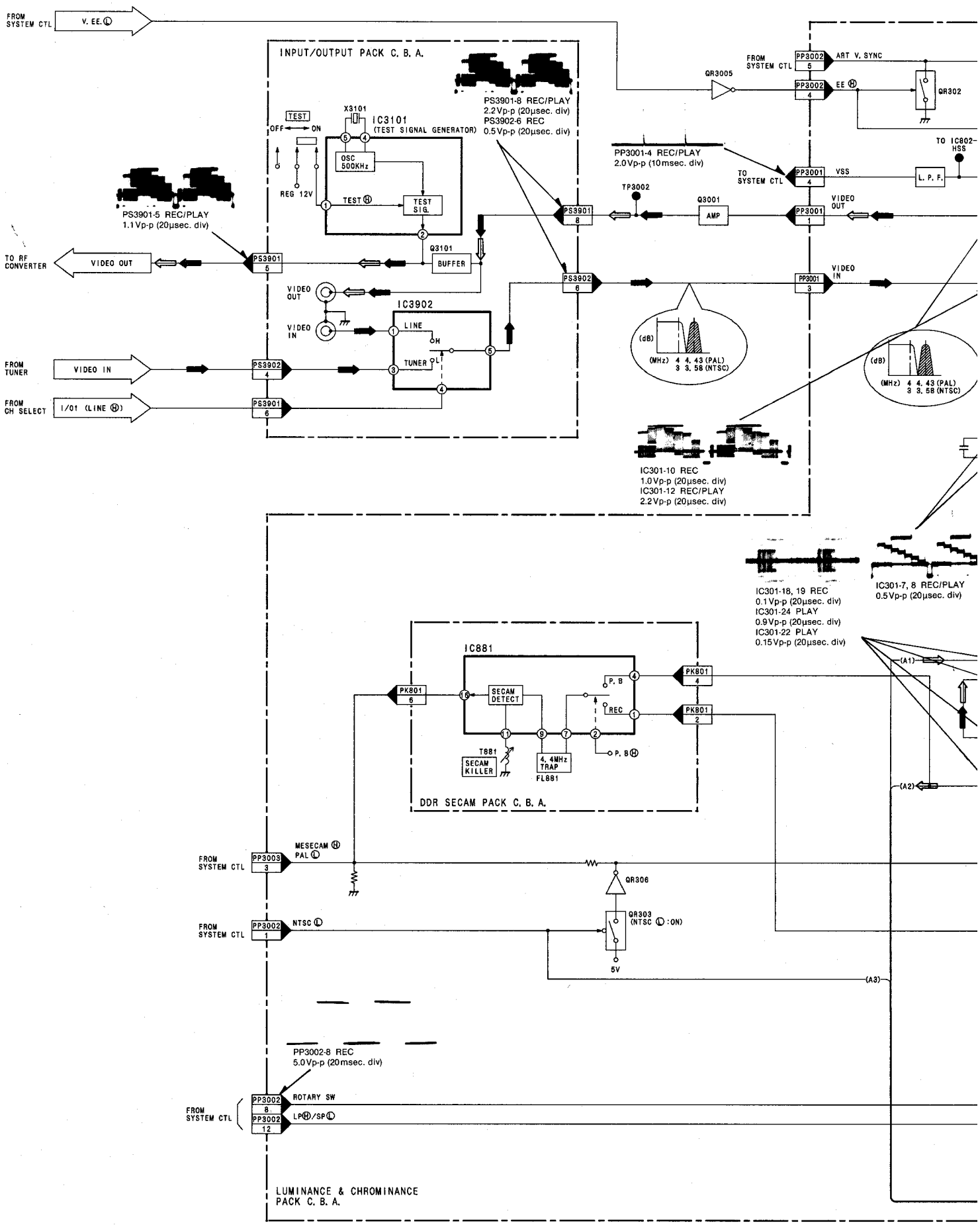
INPUT	OUTPUT		MODE
PIN6	PIN2	PIN10	
L	OPEN	OPEN	STOP
L	H	L	FORWARD
H	L	H	REWIND
H	L	L	BRAKE

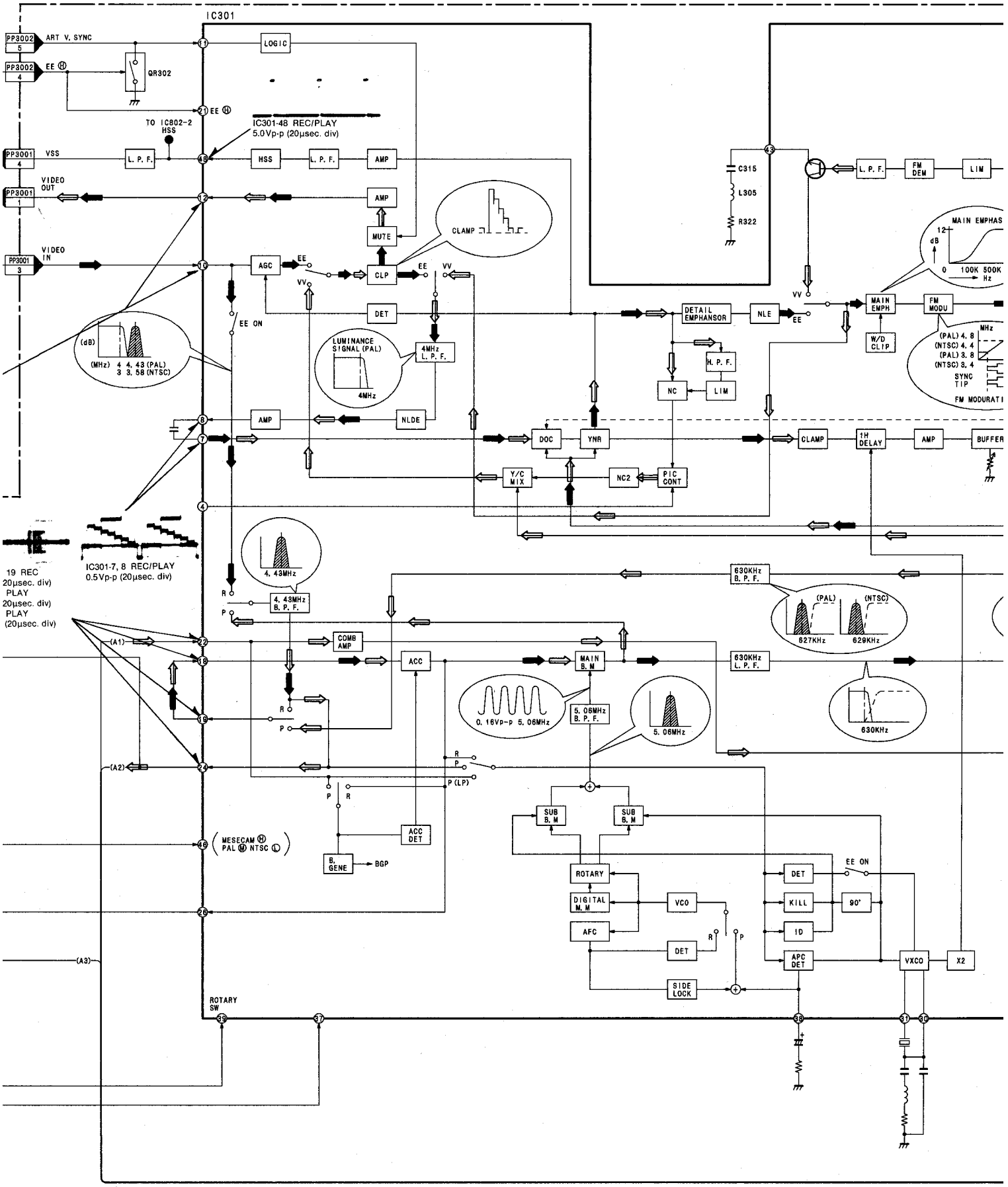


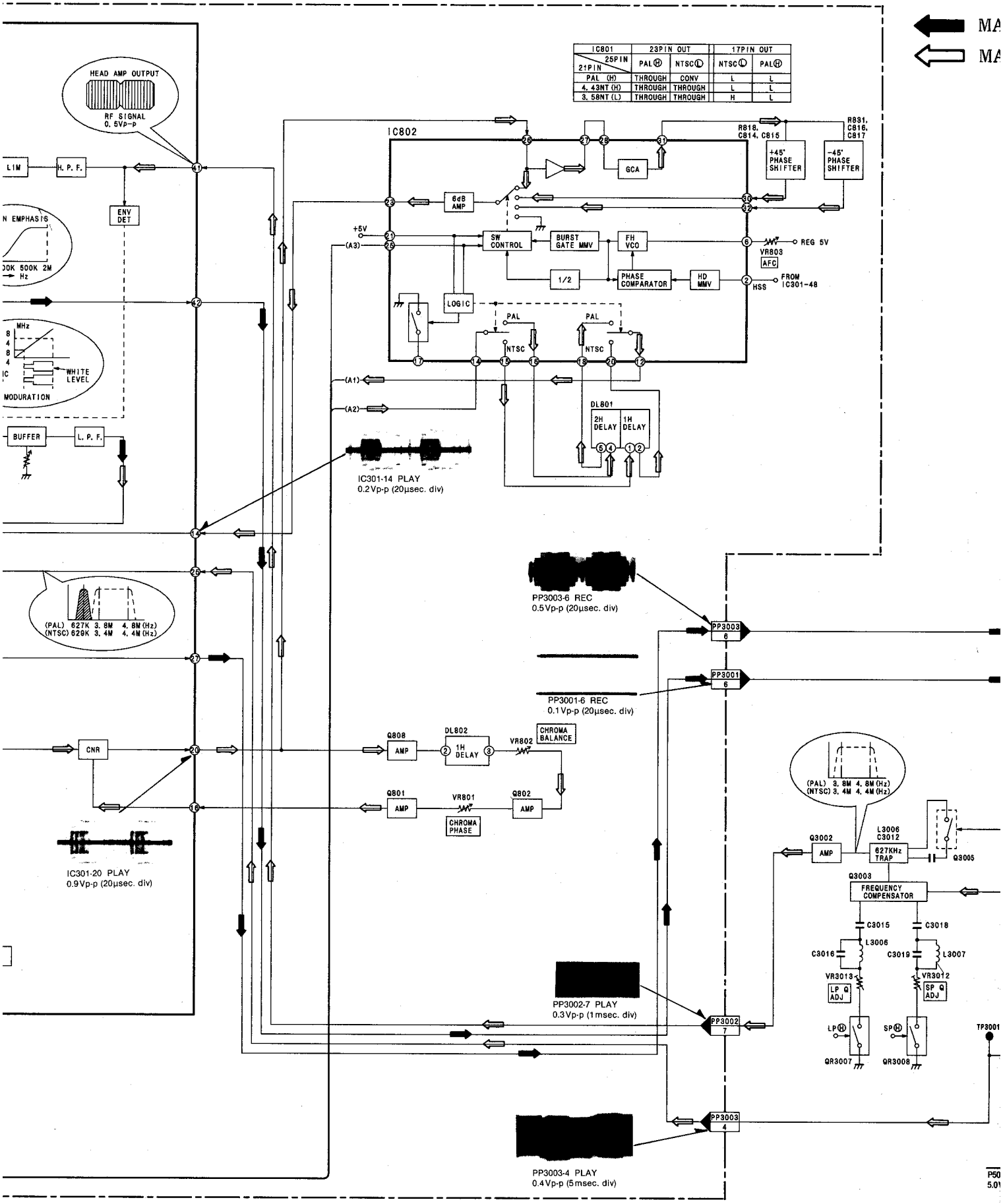


SYMBOL	TRUTH VALUE TABLE
INVERTER (a) (b)	IN (a) H L OUT (b) L H
COMPARTOR (a) (b) (c)	IN (a)/(b) (a)>(b) (a)<(b) OUT (c) H L
AND CIRCUIT (a) (b) (c)	IN (a) L L H H (b) L H L H OUT (c) L L L H
OR CIRCUIT (a) (b) (c)	IN (a) L L H H (b) L H L H OUT (c) L H H H
THREE STATES BUFFER (b) (a) (c)	IN (a) H L H or L (b) L L H OUT (c) H L ※ ※ High Impedance
TR. SW (NPN TYPE) (C) (E) (B)	BASE H L TR. SW ON OFF
TR. SW (PNP TYPE) (E) (C) (B)	BASE H L TR. SW OFF ON
R-S TYPE FLIP-FLOP (a) S Q (c) (b) R $\bar{Q}$ (d)	IN (a) L L ⎍ (b) L ⎍ L OUT (c) ※ L H (d) ◆ H L ※ Initial condition is maintained. ◆ Initial condition is reversed.

3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

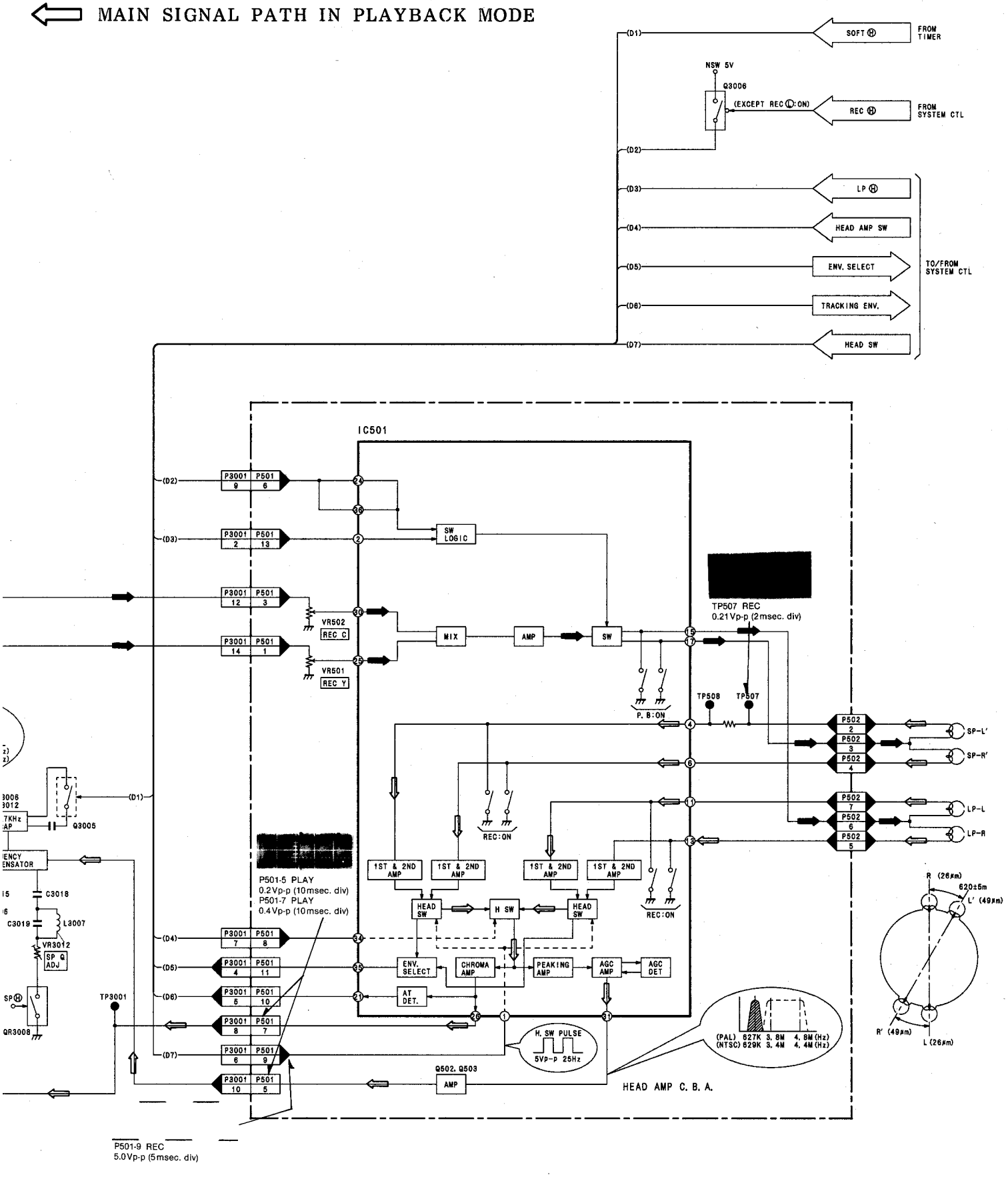



IC301
PP3002 5
ART V. SYNC
PP3002 4
EE Ⓗ
QR302
TO IC802-2 HSS
IC301-48 REC/PLAY
5.0Vp-p (20μsec. div)
PP3001 4
VSS
L. P. F.
HSS
AMP
VIDEO OUT
PP3001 1
MUTE
VIDEO IN
PP3001 3
AGC
CLP
CLAMP
DET
EE ON
(dB)
(MHz) 4 4. 43 (PAL) 3 3. 58 (NTSC)
LUMINANCE SIGNAL (PAL)
4MHz
4MHz L. P. F.
NLDE
LOGIC
C315
L305
R322
FM DEM
LIM
MAIN EMPHAS
12 dB
0 100K 500K Hz
DETAIL EMPHANSOR
NLE
MAIN EMPH
FM MODU
W/D CLIP
H. P. F.
NC
LIM
(PAL) 4. 8
(NTSC) 4. 4
(PAL) 3. 8
(NTSC) 3. 4
SYNC TIP
FM MODURATI
DOC
YNR
CLAMP
1H DELAY
BUFFER
Y/C MIX
NC2
PIC CONT
19 REC 20μsec. div)
PLAY 20μsec. div)
PLAY (20μsec. div)
IC301-7, 8 REC/PLAY
0.5Vp-p (20μsec. div)
4. 43MHz
4. 43MHz B. P. F.
630KHz B. P. F.
(PAL)
(NTSC)
627KHz
629KHz
COMB AMP
ACC
MAIN B. M
630KHz L. P. F.
0. 16Vp-p 5. 06MHz
5. 06MHz B. P. F.
5. 06MHz
630KHz
(A1)
(A2)
(A3)
P (LP)
ACC DET
MESECAM Ⓗ PAL Ⓜ NTSC Ⓛ
B. GENE
BGP
SUB B. M
SUB B. M
ROTARY
DIGITAL M. M
AFC
VCO
DET
SIDE LOCK
DET
KILL
ID
APC DET
EE ON
90°
VXCO
X2
ROTARY SW

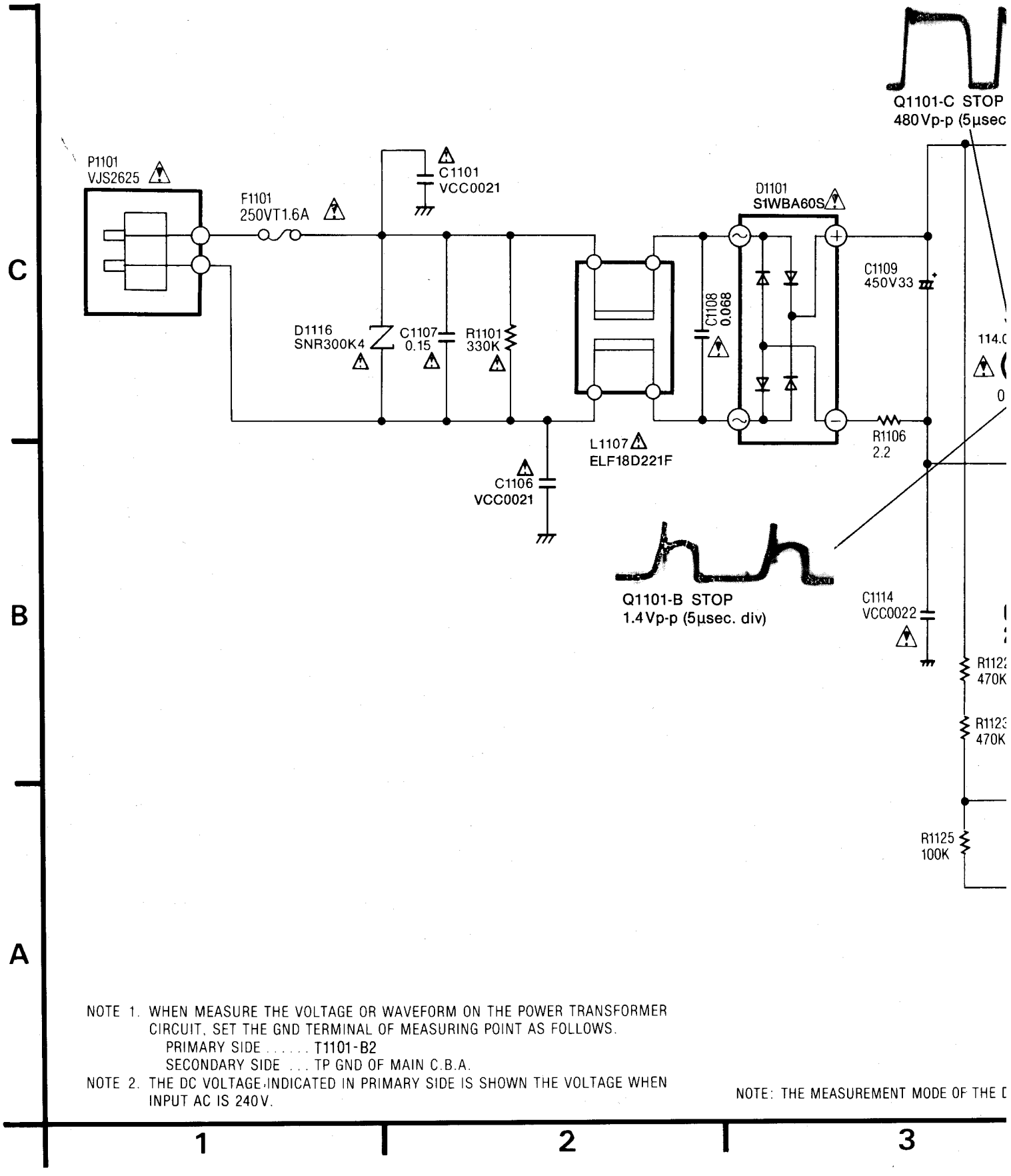

MA
MA
IC801
25PIN
21PIN
23PIN OUT
PAL Ⓗ
NTSC Ⓛ
17PIN OUT
NTSC Ⓛ
PAL Ⓗ
PAL (H) THROUGH CONV L L
4.43NT (H) THROUGH THROUGH L L
3.58NT (L) THROUGH THROUGH H L
HEAD AMP OUTPUT
RF SIGNAL
0.5Vp-p
IC802
R818, C814, C815
R831, C816, C817
+45° PHASE SHIFTER
-45° PHASE SHIFTER
GCA
6dB AMP
SW CONTROL
BURST GATE MMV
FH VCO
VR803
AFC
REG 5V
1/2
PHASE COMPARATOR
HD MMV
HSS
FROM IC301-48
LOGIC
PAL
NTSC
+5V
(A1)
(A2)
(A3)
DL801
2H DELAY
1H DELAY
LIM
H. P. F.
ENV DET
BUFFER
L. P. F.
WHITE LEVEL
IC301-14 PLAY
0.2Vp-p (20μsec. div)
PP3003-6 REC
0.5Vp-p (20μsec. div)
PP3001-6 REC
0.1Vp-p (20μsec. div)
PP3003
PP3001
(PAL) 627K 3.8M 4.8M (Hz)
(NTSC) 629K 3.4M 4.4M (Hz)
CNR
Q808
AMP
DL802
1H DELAY
VR802
CHROMA BALANCE
Q801
AMP
VR801
CHROMA PHASE
Q802
AMP
IC301-20 PLAY
0.9Vp-p (20μsec. div)
(PAL) 3.8M 4.8M (Hz)
(NTSC) 3.4M 4.4M (Hz)
Q3002
AMP
L3006
C3012
627KHz TRAP
Q3005
Q3003
FREQUENCY COMPENSATOR
C3015
C3018
C3016
L3006
C3019
L3007
VR3013
LP Q ADJ
VR3012
SP Q ADJ
LPⒽ
SPⒽ
QR3007
QR3008
TP3001
PP3002-7 PLAY
0.3Vp-p (1msec. div)
PP3002
PP3003
PP3003-4 PLAY
0.4Vp-p (5msec. div)

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE



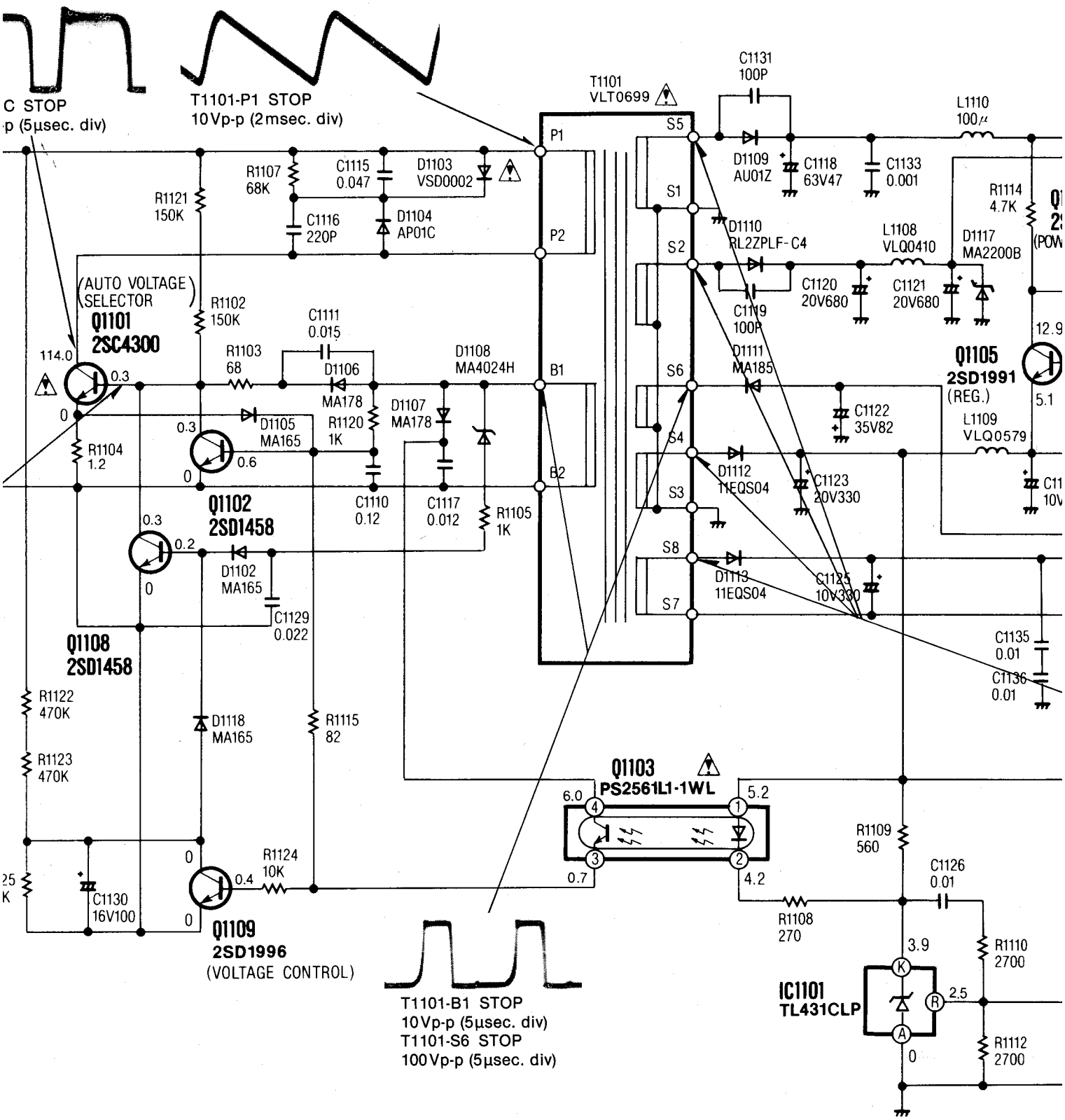
SECTION 4
SCHEMATIC DIAGRAMS
4-1. POWER SCHEMATIC DIAGRAM



NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE T1101-B2
SECONDARY SIDE . . . TP GND OF MAIN C.B.A.

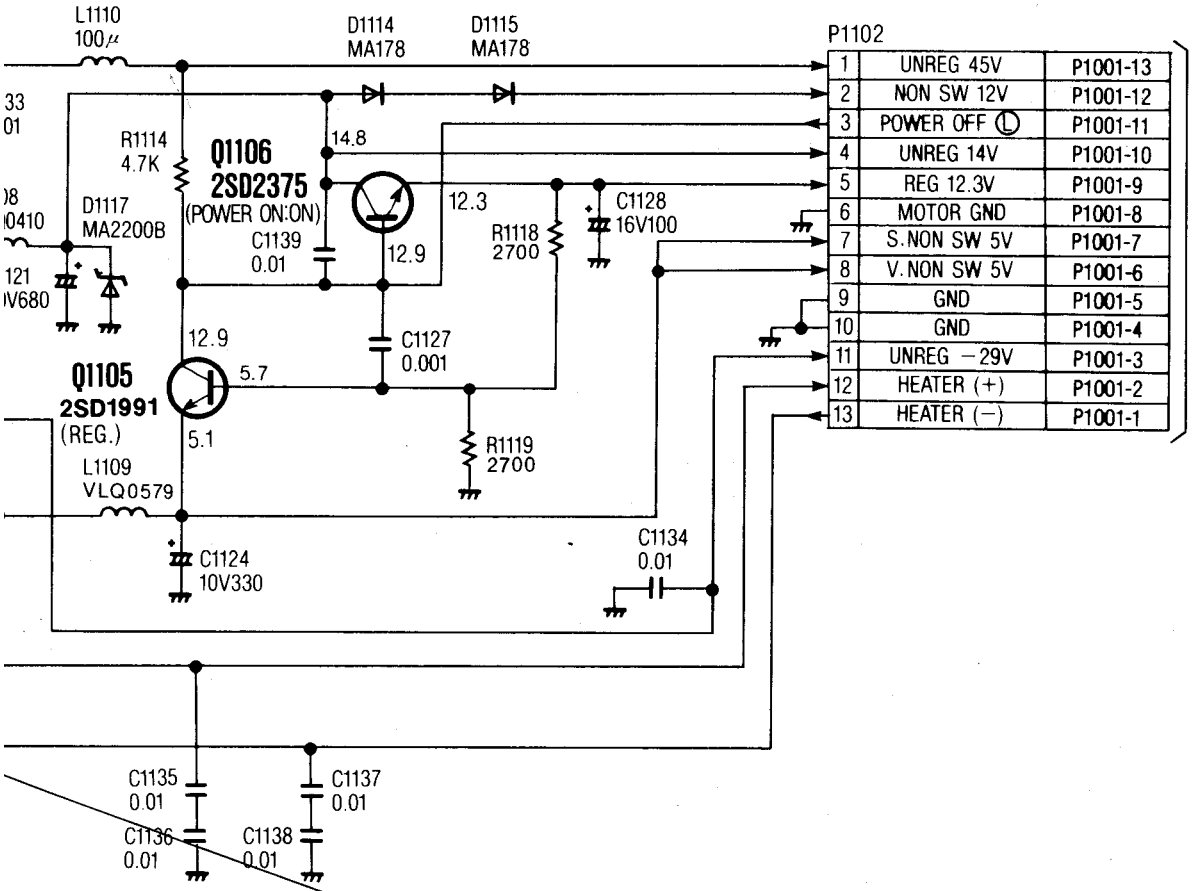
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

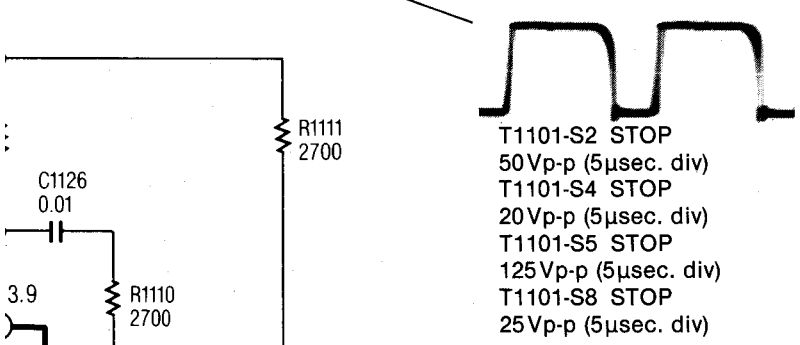
NOTE: THE MEASUREMENT MODE OF THE D



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

4 5 6



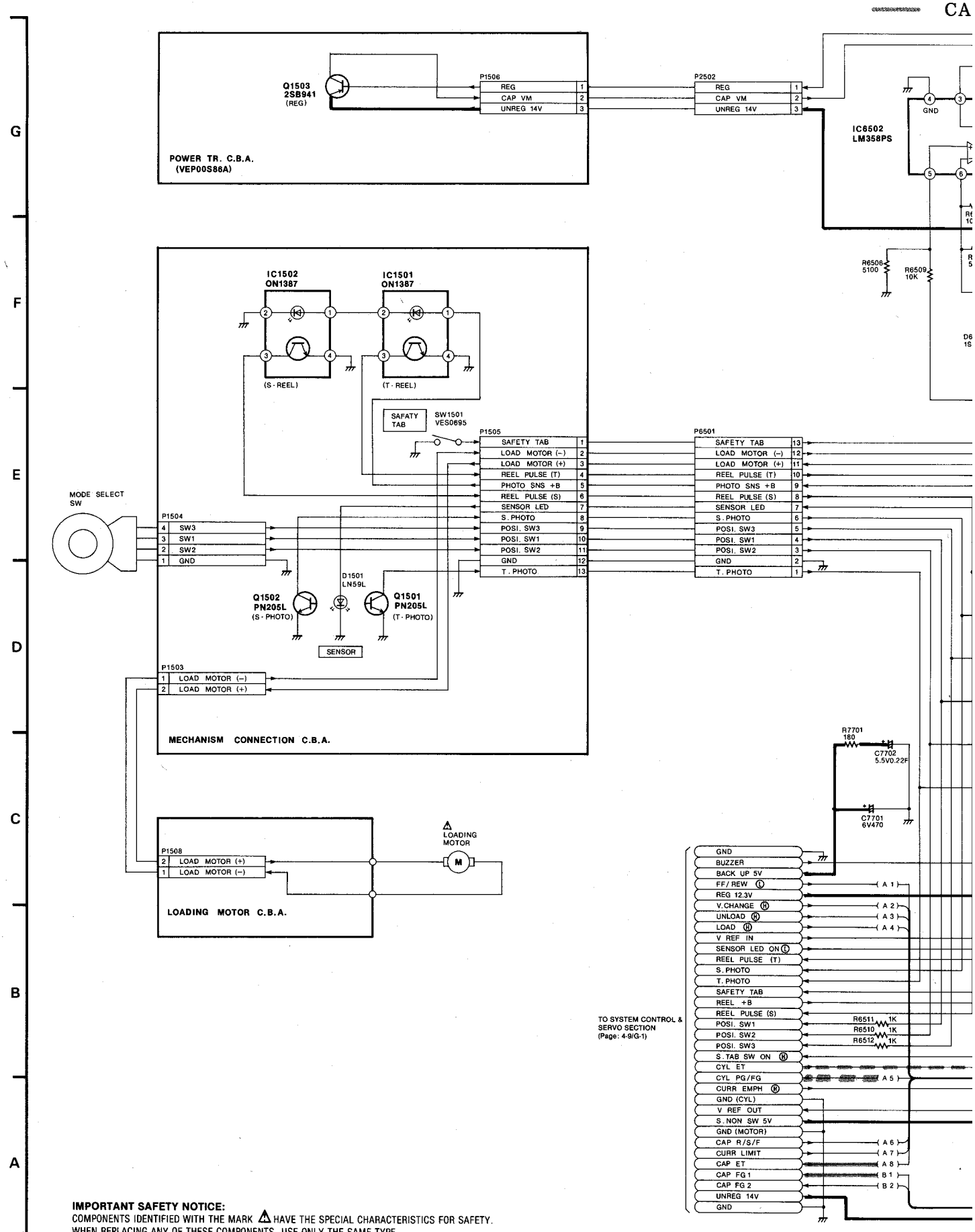


T1101-S2 STOP
50Vp-p (5μsec. div)
T1101-S4 STOP
20Vp-p (5μsec. div)
T1101-S5 STOP
125Vp-p (5μsec. div)
T1101-S8 STOP
25Vp-p (5μsec. div)

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

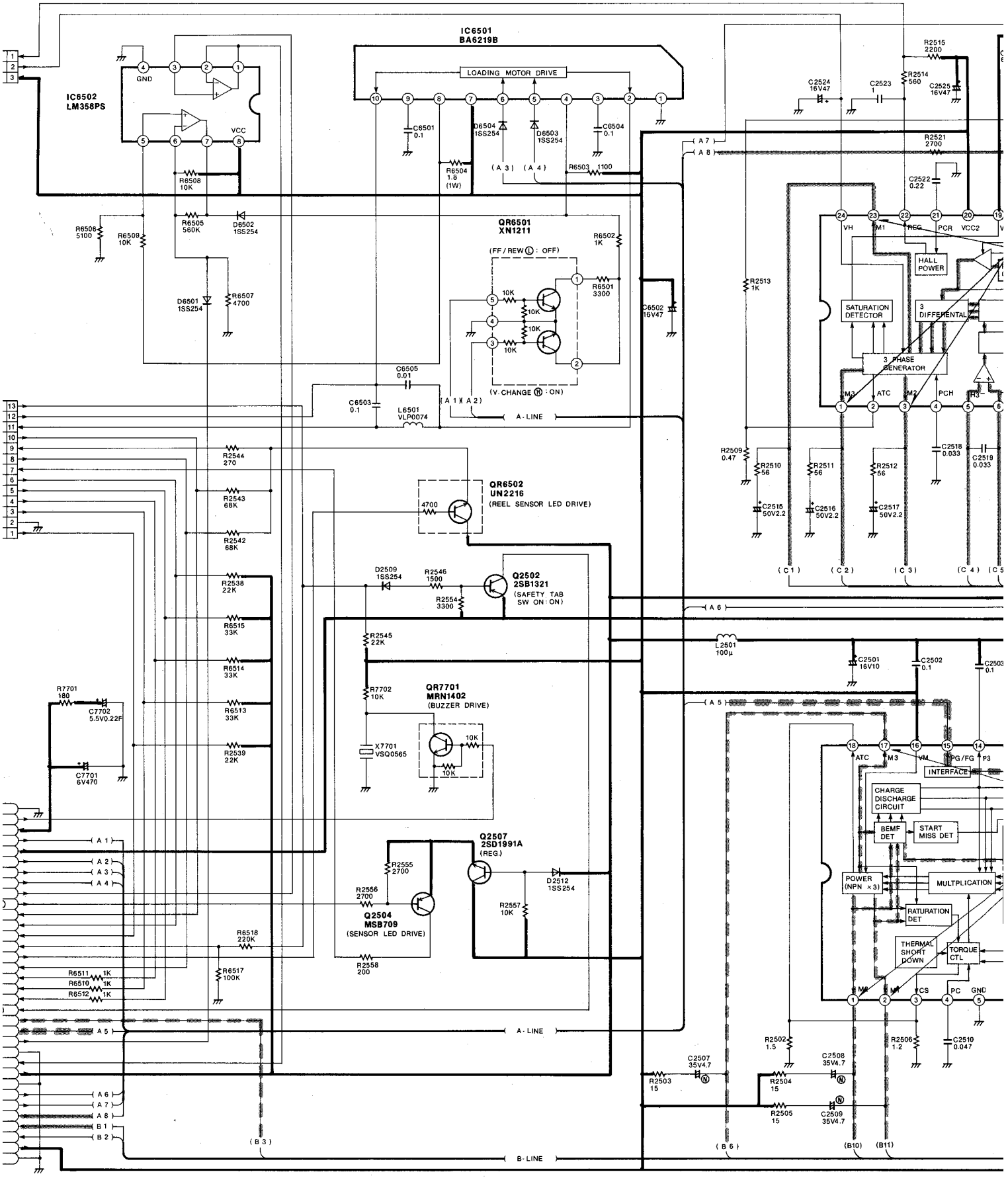
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-2. SUB SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

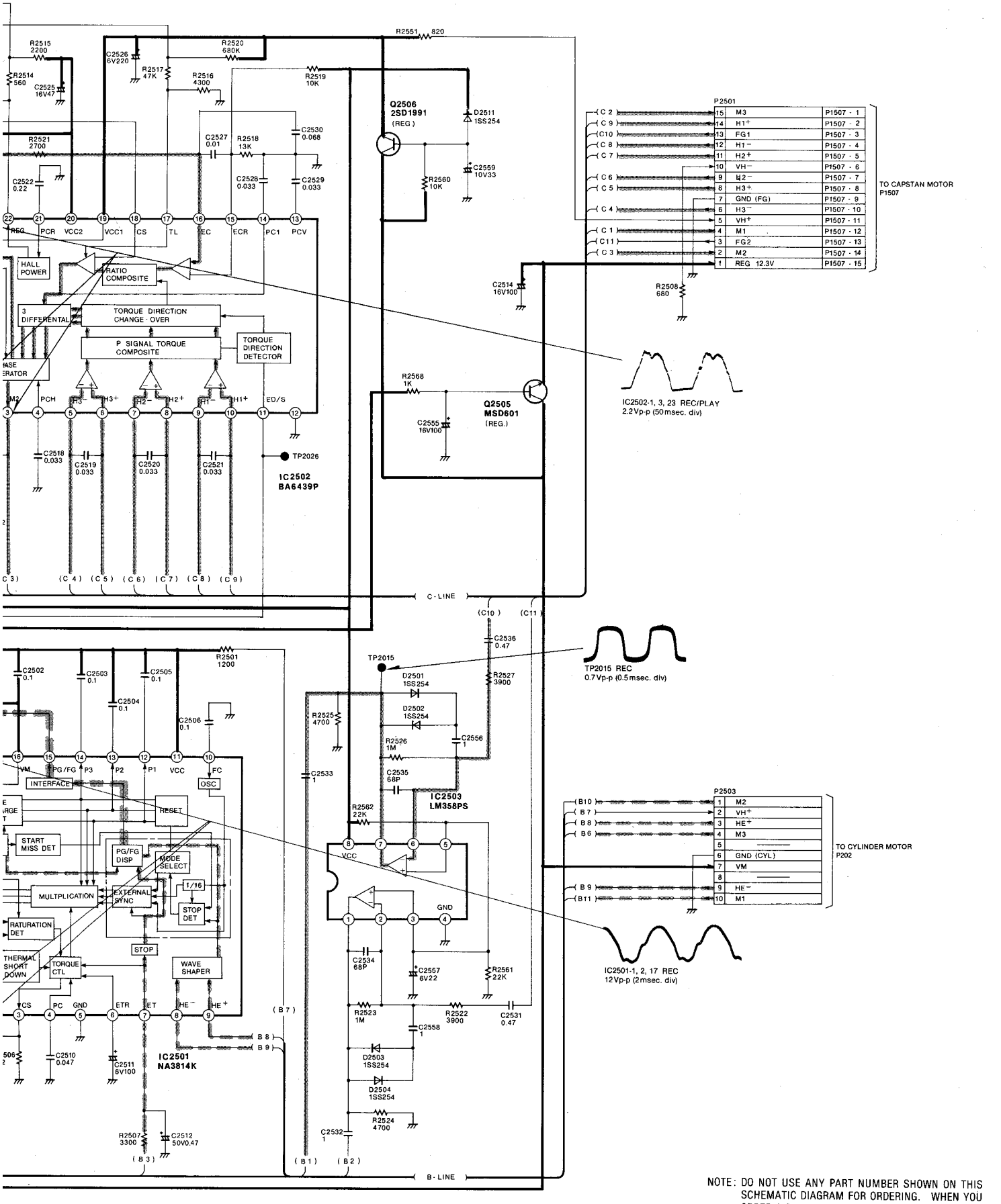


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CAPSTAN SERVO SPEED LOOP — — — CYLINDER SERVO SPEED LOOP



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.

SUB SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.4	14.4	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.6	3.8	0.8	13.9	14.4	0.1		
PLAY	14.1	12.8	0.1	0.6	0	2.5	2.4	0.6	0.6	2.6	5.1	3.6	3.6	3.6	1.4	13.7	14.2	0.1		
REC	13.7	14.0	0.1	0.6	0	2.5	2.5	0.6	0.6	2.6	5.1	3.6	3.8	3.7	1.4	13.6	14.0	0.1		
F.F	13.0	13.9	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.8	3.6	1.1	13.7	14.1	0.1		
REW	12.7	13.9	0.1	0.6	0	2.5	2.5	0.6	0.6	2.7	5.1	3.7	3.7	3.7	1.4	13.6	13.8	0.1		
REF. NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.0	0	2.0	1.5	2.3	2.3	2.3	2.3	2.3	2.3	2.1	0	0	0.4	2.9	0.2	0.4	0	5.1	13.9
PLAY	2.8	0.1	2.8	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
REC	2.7	0.1	2.7	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
F.F	7.4	0.1	7.1	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.6	0.7	2.9	2.5	0.4	0.1	5.1	13.7
REW	7.3	0.1	5.6	1.5	2.3	2.3	2.3	2.3	2.3	2.3	5.1	0	0.7	0.7	2.9	2.4	0.4	0.1	5.0	13.6
REF. NO.	IC2502																			
MODE	21	22	23	24																
STOP	1.3	13.2	2.0	4.5																
PLAY	2.0	12.4	0.1	4.5																
REC	2.0	12.3	0.7	4.5																
F.F	11.5	3.5	7.3	13.5																
REW	11.5	12.2	7.2	13.5																
REF. NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
PLAY	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REC	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
F.F	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REW	2.5	2.6	2.6	0	2.6	2.6	2.6	5.1												
REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8		
STOP	0	0.3	0.1	6.7	0	0	13.9	13.9	0.1	0.3	2.5	2.5	2.5	0	4.7	0.7	12.7	13.9		
PLAY	0	0.5	0.1	6.6	0	0	13.7	13.7	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	12.4	13.7		
REC	0	0.3	0.1	6.5	0	0	13.5	13.5	0.1	0.3	2.6	2.6	2.5	0	4.6	0.7	12.3	13.5		
F.F	0	0.2	0.1	13.6	0	0	13.7	13.7	0.1	0.2	2.5	2.5	2.5	0	4.6	0.7	13.1	13.7		
REW	0	0.8	0.4	13.5	0	0	13.6	13.6	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	13.1	13.6		

SUB SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2502			Q2504			Q2505			Q2506			Q2507					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	12.2	12.2	11.5	5.2	−0.1	5.1	11.5	13.9	12.2	5.1	13.9	5.7	5.2	13.9	5.7			
PLAY	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REC	12.2	12.1	11.5	5.0	5.0	4.3	11.5	13.5	12.2	5.1	13.5	5.7	5.0	13.5	5.7			
F.F	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REW	12.2	12.2	11.5	5.0	5.0	4.2	11.5	13.6	12.2	5.1	13.6	5.7	5.0	13.6	5.7			
REF. NO.	QR6501						QR6502											
MODE	1	2	3	4	5		E	C	B									
STOP	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
PLAY	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
REC	0	0.1	5.1	0	5.0		5.1	5.1	9.8									
F.F	13.4	13.6	0	0	0		5.0	5.1	6.8									
REW	13.5	13.5	0	0.1	0		5.0	5.1	6.8									

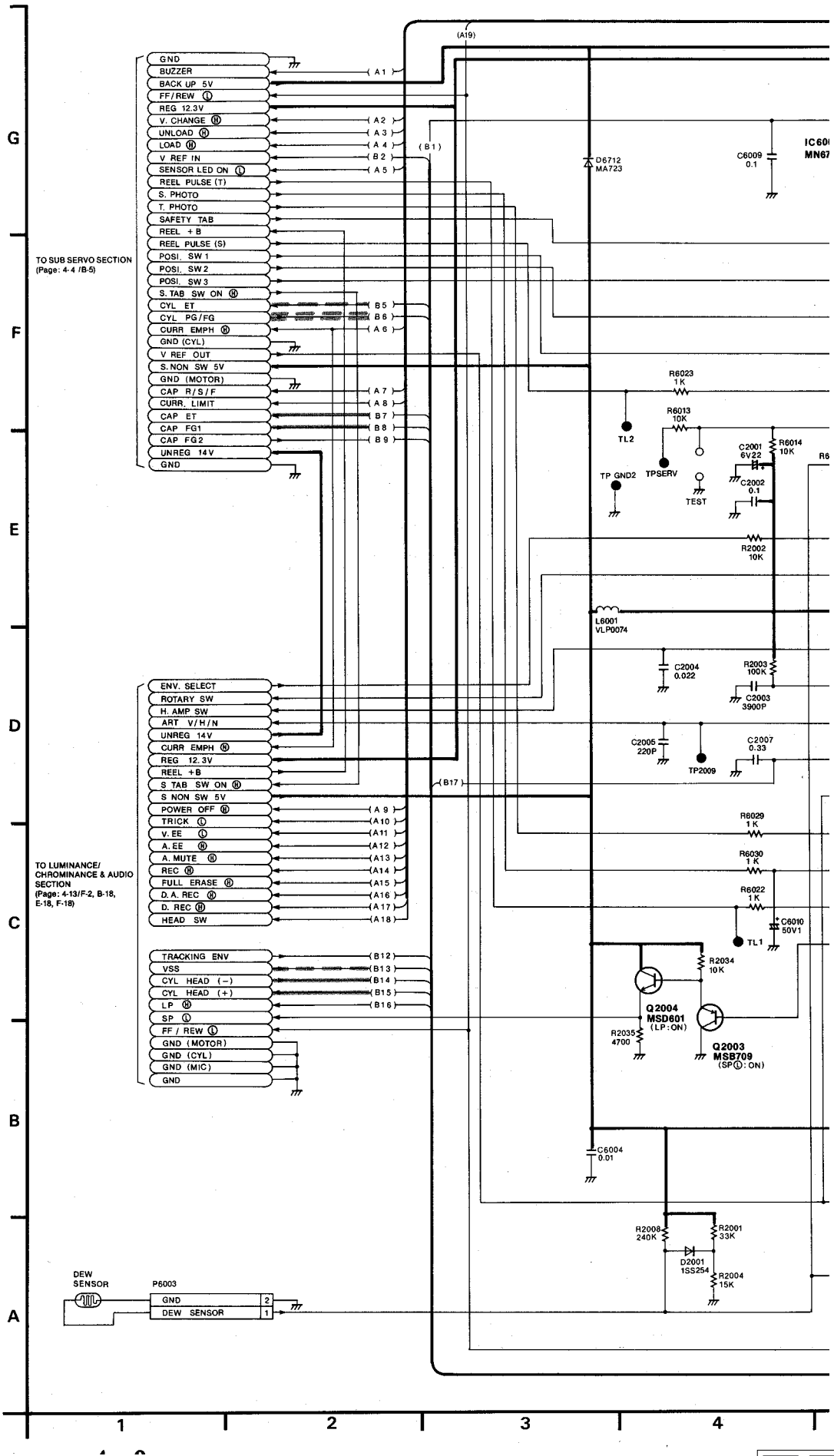
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

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	4.9	0	4.9	0.1	2.7	0	0	0.4	5.1	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
PLAY	0.1	4.9	0	0	0.1	5.1	0	0	4.0	1.5	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
REC	0.6	5.0	0	0	4.8	5.1	0	0	4.6	5.0	5.1	0	0	0	0	2.5	5.0	5.0	5.0	0
F.F	0	5.0	4.9	0	2.4	5.1	0	0	3.0	5.1	5.1	0	0	0	0	2.5	4.9	4.9	1.6	0
REW	0	5.1	5.1	0	1.6	5.1	0	0	2.6	5.1	5.1	0	0	0	0	2.5	4.7	4.9	1.7	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	5.0	5.1	0.2	2.5	0.3	2.2	2.0	2.5	0	2.5	2.4	2.0	5.0	0	2.0	2.0	2.0	2.5	2.2	2.5
PLAY	5.1	5.1	2.6	2.4	3.8	2.5	2.5	2.5	0	2.5	2.7	2.4	5.0	0	0	0	2.5	2.5	0	2.8
REC	0	5.1	2.7	2.5	0.4	2.5	2.5	2.5	0	2.5	2.4	2.7	5.0	3.5	3.7	0	2.5	2.5	0	2.5
F.F	5.1	5.1	2.2	2.5	2.7	2.5	2.5	2.5	0	2.5	2.5	2.6	5.0	0	0	0	2.5	1.6	0	2.9
REW	5.1	5.1	2.3	2.4	2.1	2.8	2.1	2.3	0	2.5	2.5	2.6	5.0	2.6	2.6	2.0	2.5	1.8	0	2.9
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	2.5	5.1	1.4	3.6	0	4.3	0	5.1	0	0	0	5.0	1.4	5.1	5.0	5.1	0	0	0	0.3
PLAY	2.4	5.1	0.8	3.8	3.8	4.5	0	5.1	0	0	0	0	1.3	0	0	0	0	0	0	0
REC	2.5	5.1	0.8	3.8	0	4.6	0	0	0	0	0	5.1	1.3	0.1	5.1	0	0	0	0	5.1
F.F	2.5	5.1	1.5	3.7	0	4.3	0	5.1	0	0	0	5.1	1.3	0.1	0	5.1	0	0	0	5.1
REW	2.5	5.1	1.1	3.7	0	4.4	0	5.1	0	0	0	4.9	1.0	0.1	0	5.1	0	0	0	5.0
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	5.1	2.1	4.6	4.0	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	5.0	0	0	5.1	0
PLAY	5.1	0	4.9	4.5	0	0	0	0	0.3	5.1	0	0	0	0	0.1	5.0	0	5.1	5.1	0
REC	5.1	0	4.6	4.4	5.1	5.1	5.1	5.1	5.1	5.1	0	0	5.1	0	0.1	5.0	0	0	5.1	0
F.F	5.1	0	4.6	4.6	0	0	0	0	0.3	5.1	0	0	5.1	0	0.1	0	0	0	5.1	0
REW	5.1	5.1	4.6	4.6	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	0	0	0	5.1	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	2.6	2.6	3.9																
PLAY	0	2.6	2.6	4.1																
REC	0	2.6	2.6	4.3																
F.F	0	2.6	2.6	4.1																
REW	0	2.6	2.6	3.9																
REF. NO.	IC6710																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	4.8	5.1
PLAY	0	3.9	4.9	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	2.2	0	5.1	0.1	0.1	4.8	5.1
REC	0	4.1	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	4.8	5.1
F.F	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.0	0.1	0.1	4.8	4.8
REW	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0	0.1	4.8	5.1

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

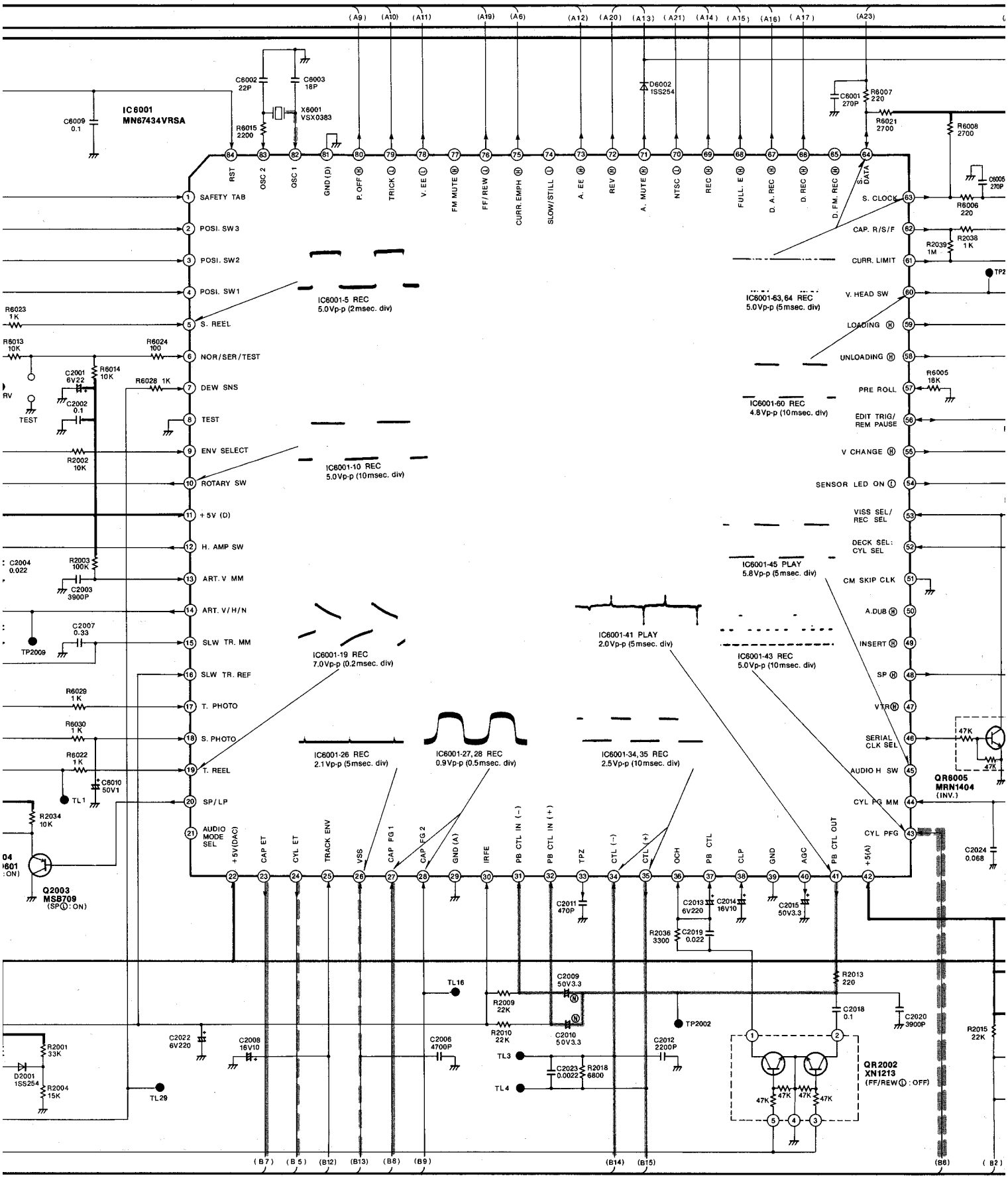
REF. NO.	Q2001			Q2002			Q2003			Q2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	2.9	5.1	3.4	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
PLAY	2.9	5.1	3.4	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
REC	2.9	5.1	3.3	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
F.F	2.9	5.1	3.4	5.1	4.6	5.0	0.6	0	0	0.3	5.1	0.6						
REW	2.9	5.1	3.5	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
REF. NO.	QR2001			QR2002						QR2006			QR2007			QR2008		
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	5.1	0.3	5.1	0	0	5.0	1.8	5.0		5.1	5.1	0.3	5.1	0	5.1	0	5.1	5.1
PLAY	5.1	0.2	5.1	0	0	5.0	0	5.0		0	5.1	0.2	5.1	5.1	0	0.3	5.1	0
REC	5.1	0.2	5.1	0	0	5.0	0	5.0		5.1	5.1	0.2	5.1	5.1	0	0.2	5.1	0
F.F	5.1	0.2	5.1	0	2.0	0	0	0		4.3	5.1	0.2	5.1	5.0	0	0.3	5.1	0
REW	5.1	0.3	5.1	0	1.2	0	0	0		5.1	5.1	0.3	5.1	3.0	5.1	4.5	5.1	5.1
REF. NO.	QR2009			QR2010			QR2013			QR6005			QR6710					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	0.3	−0.2	5.1	0.4	0.3	5.1	5.1	0	5.1	0	1.1	4.1	5.1	0.3	5.0			
PLAY	0.2	−0.3	0	−0.1	0.2	0	5.1	0	5.1	0	1.1	4.1	5.1	0.3	4.9			
REC	0.2	−0.2	0	−0.1	0.2	0	5.1	0	5.1	0	1.4	3.7	5.1	0.3	5.1			
F.F	0.2	−3.7	0	−0.1	0.2	0	5.1	0	5.1	0	1.4	3.5	5.1	0.3	4.9			
REW	0.4	−1.0	5.1	0.4	0.4	5.1	5.1	0	5.1	0	1.4	3.7	5.1	0.3	4.9			

4-3. SYSTEM CONTROL & SERVO SECTION IN MAIN S

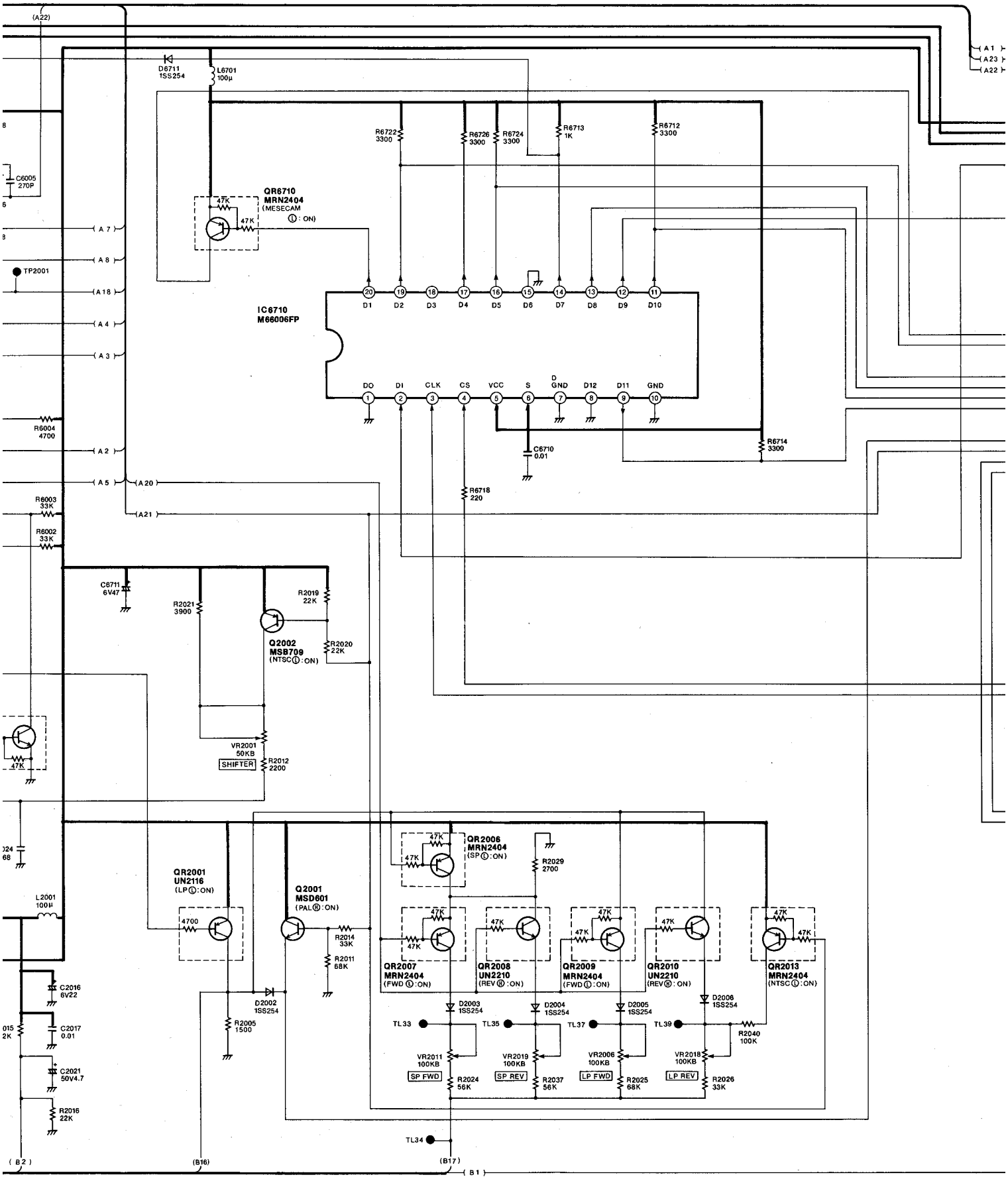


IN MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP

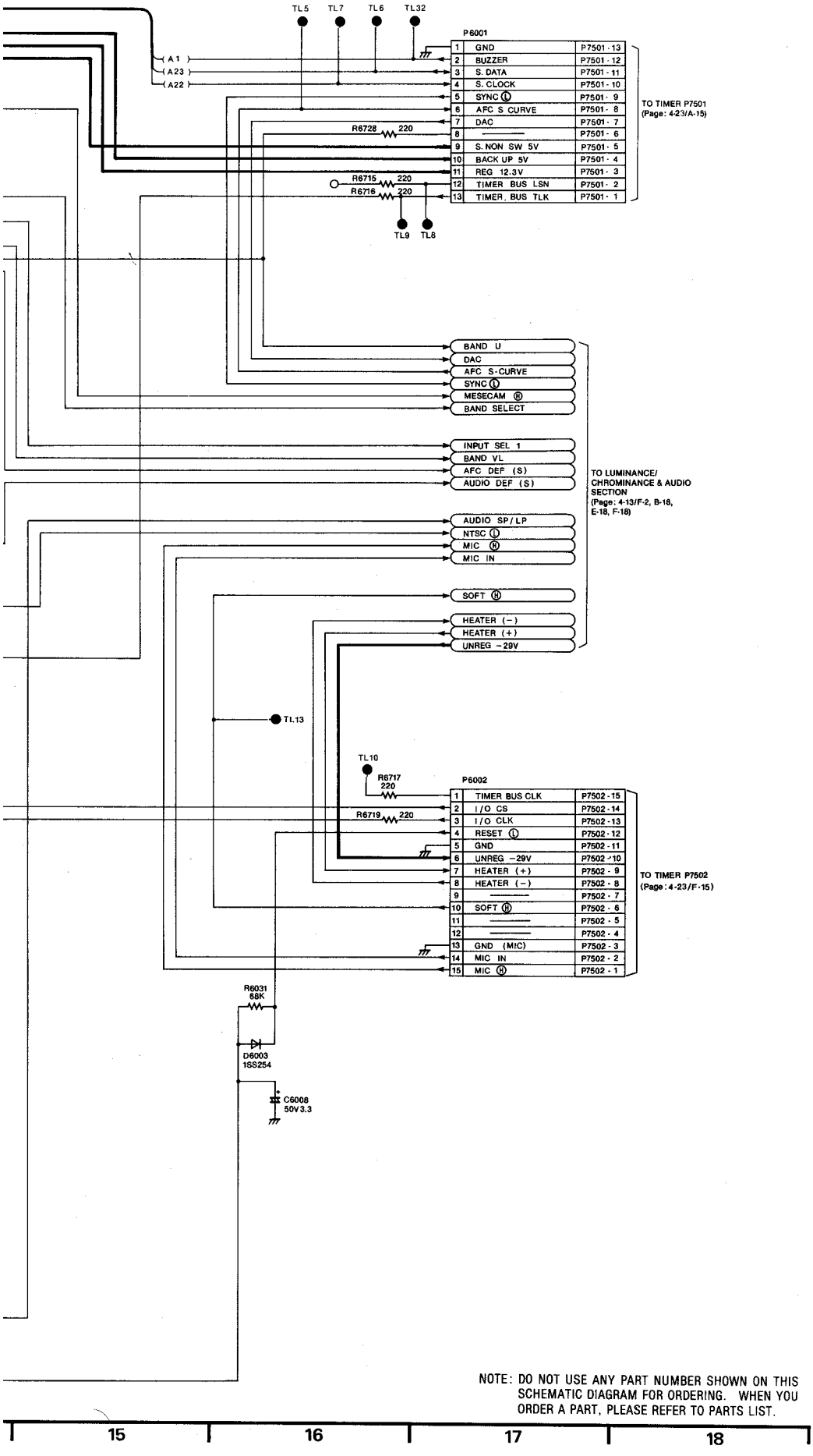


CAPSTAN SERVO PHASE LOOP — — — CYLINDER SERVO SPEED LOOP



10 | 11 | 12 | 13 | 14 | 15

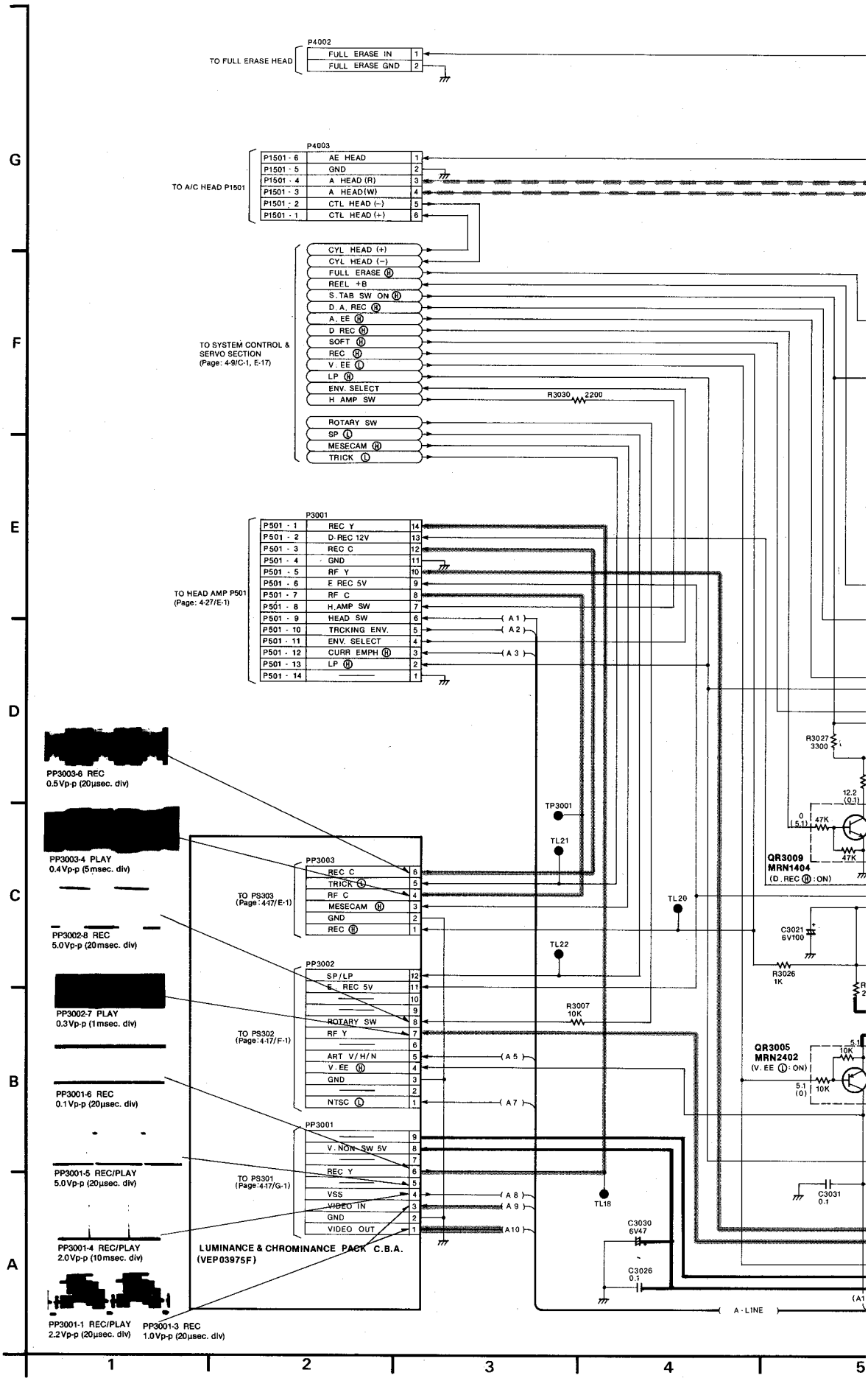
LOOP ---- CYLINDER SERVO PHASE LOOP



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

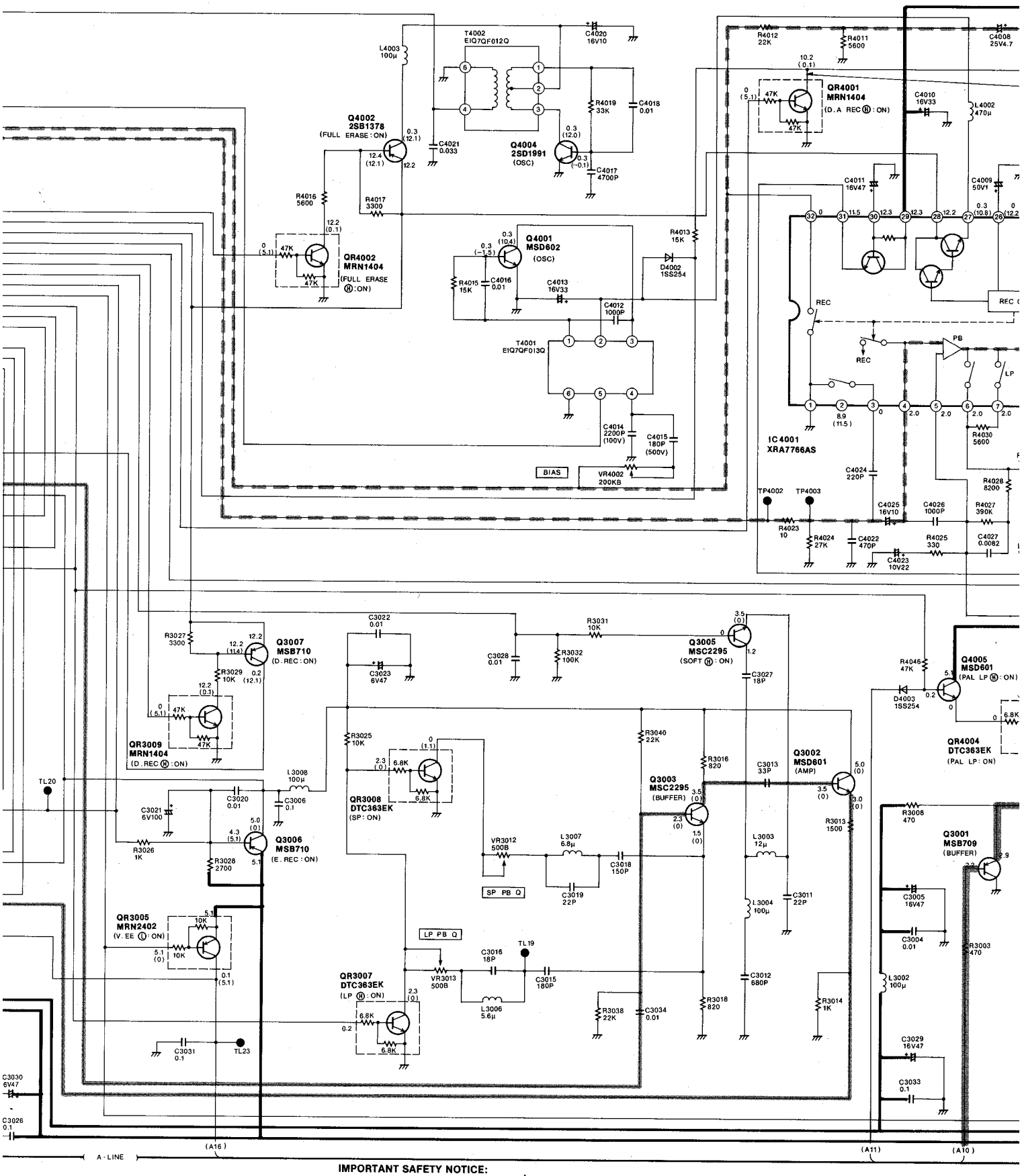
15 16 17 18

4-4. LUMINANCE/CHROMINANCE & AUDIO SECTION IN M



O SECTION IN MAIN SCHEMATIC DIAGRAM

VIDEO
VIDEO



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

NOTE: THE MEASUREMENT MO
WITH PAL COLOUR SIGN

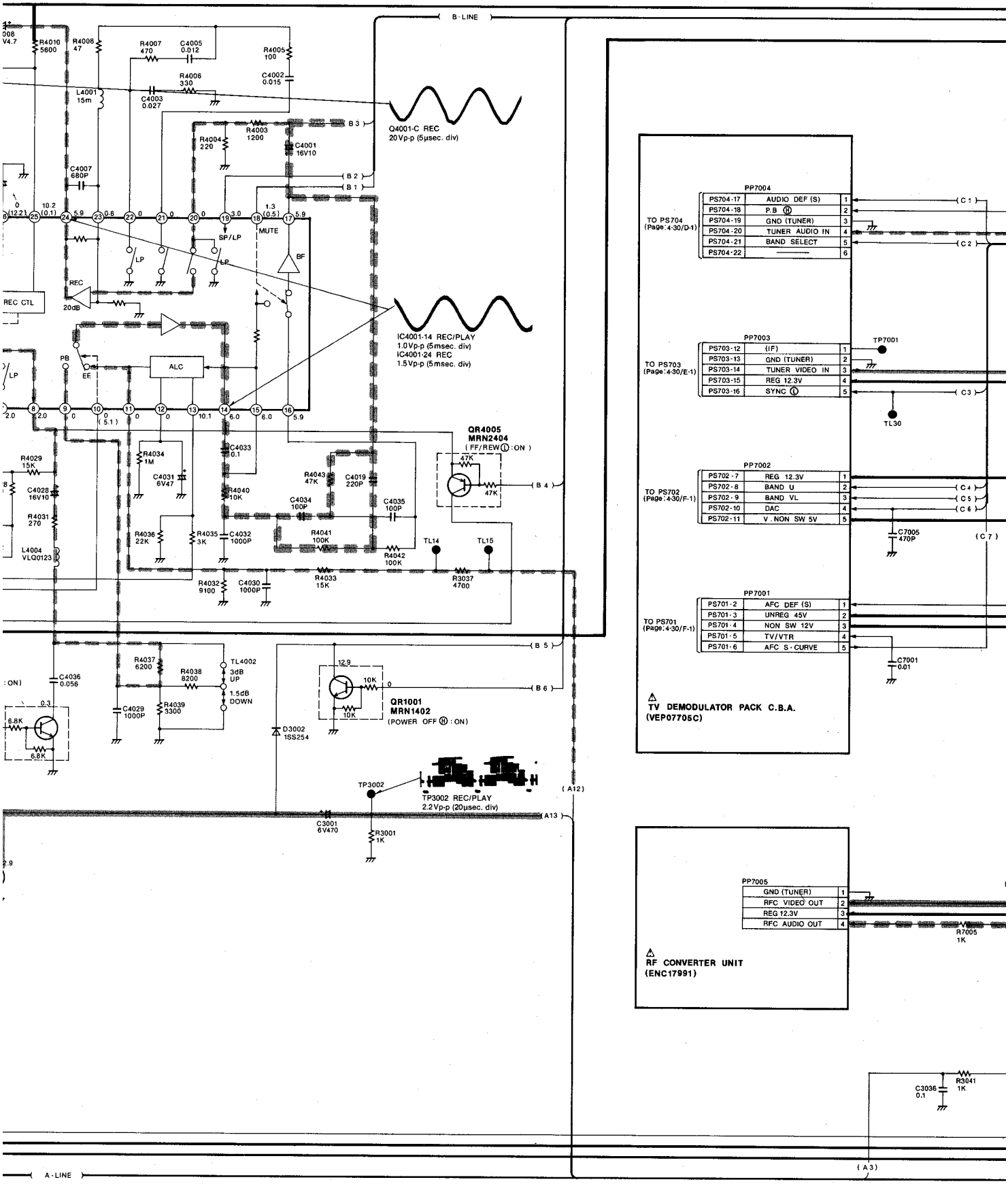
4 5 6 7 8 9

O MAIN SIGNAL PATH IN REC MODE

O MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN RE

AUDIO MAIN SIGNAL PATH IN PL



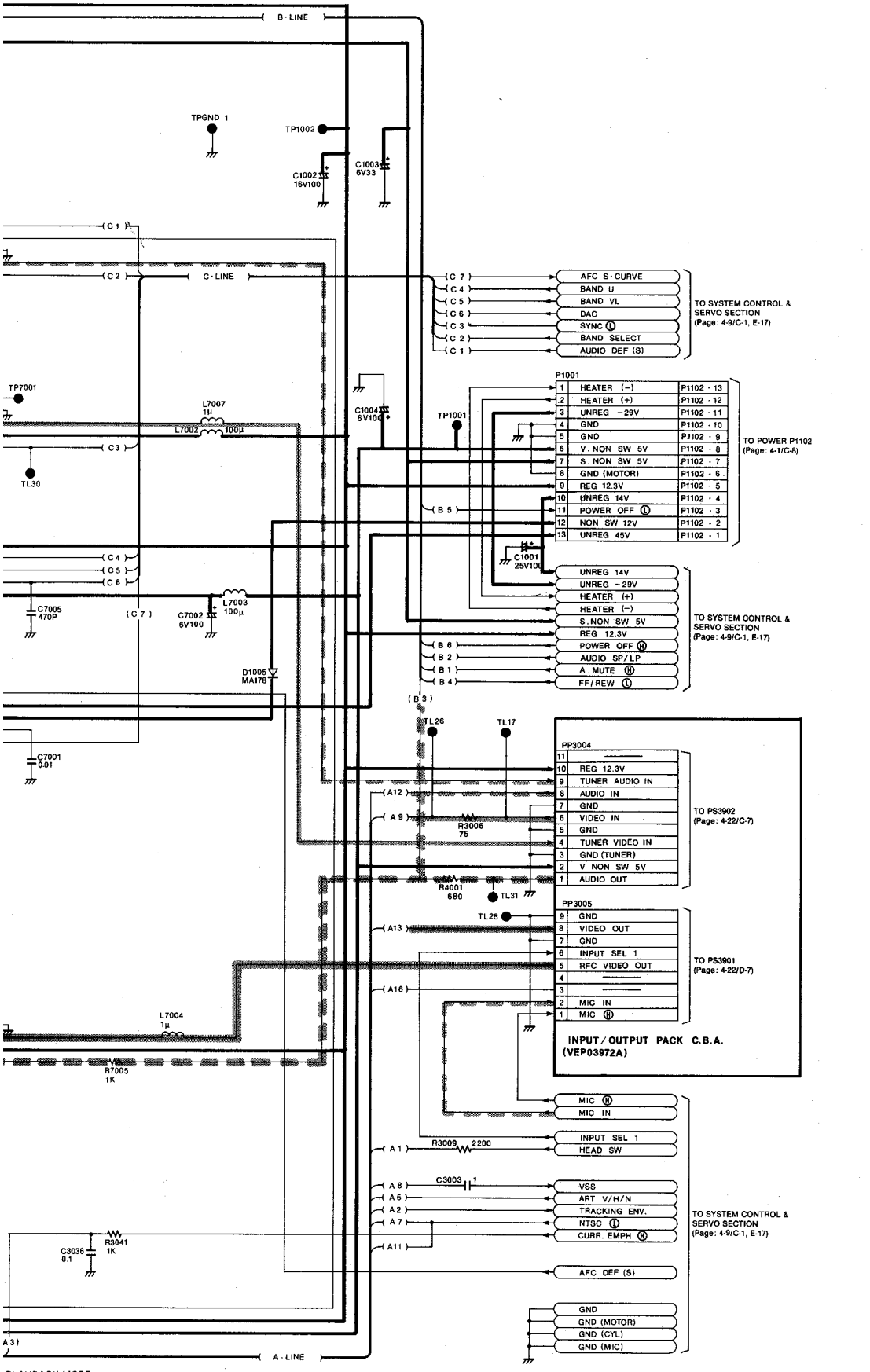
MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE SIGNAL. (SP MODE)

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

• LINE

10 | 11 | 12 | 13 | 14 | 15

PATH IN REC MODE
PATH IN PLAYBACK MODE

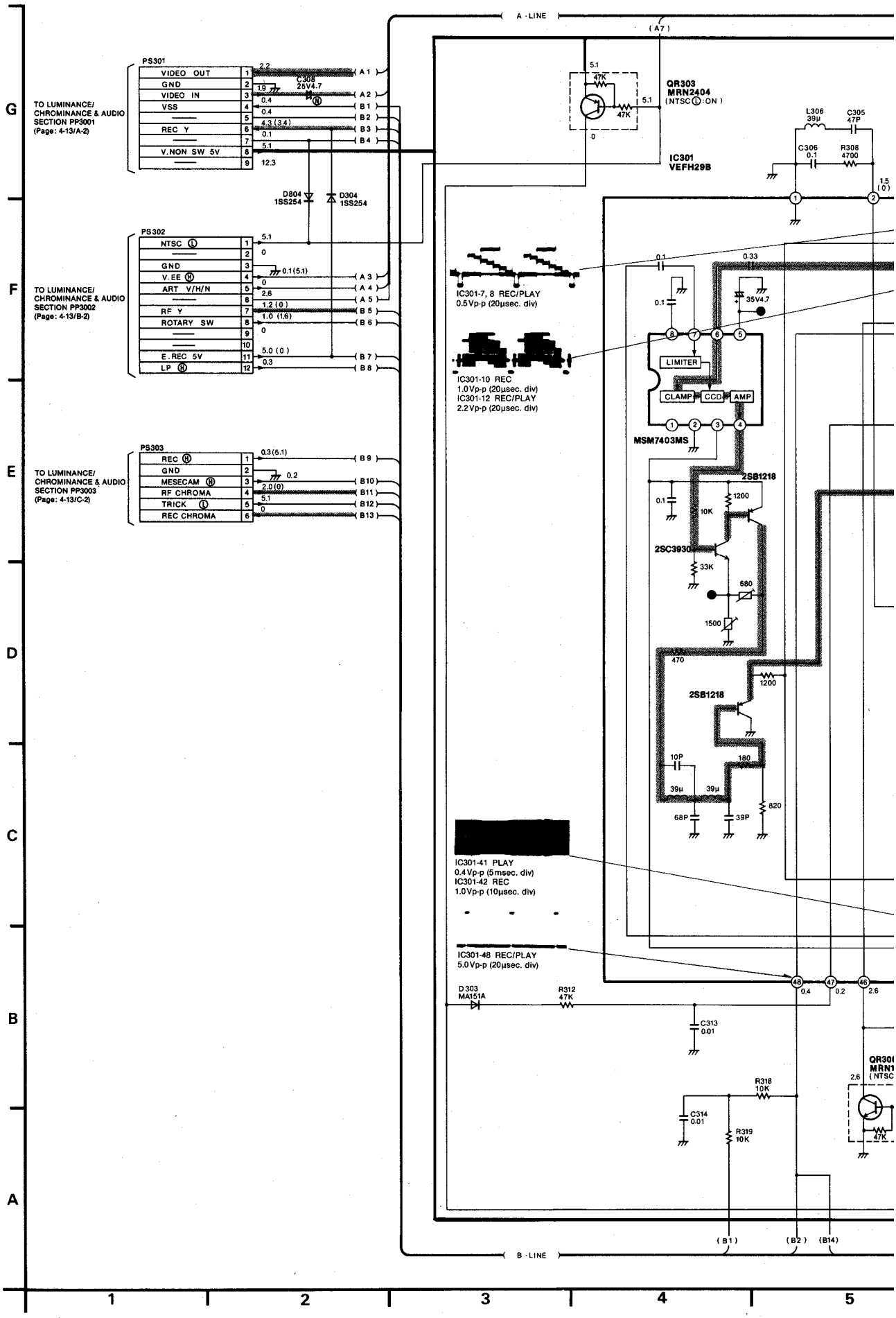


PLAYBACK MODE

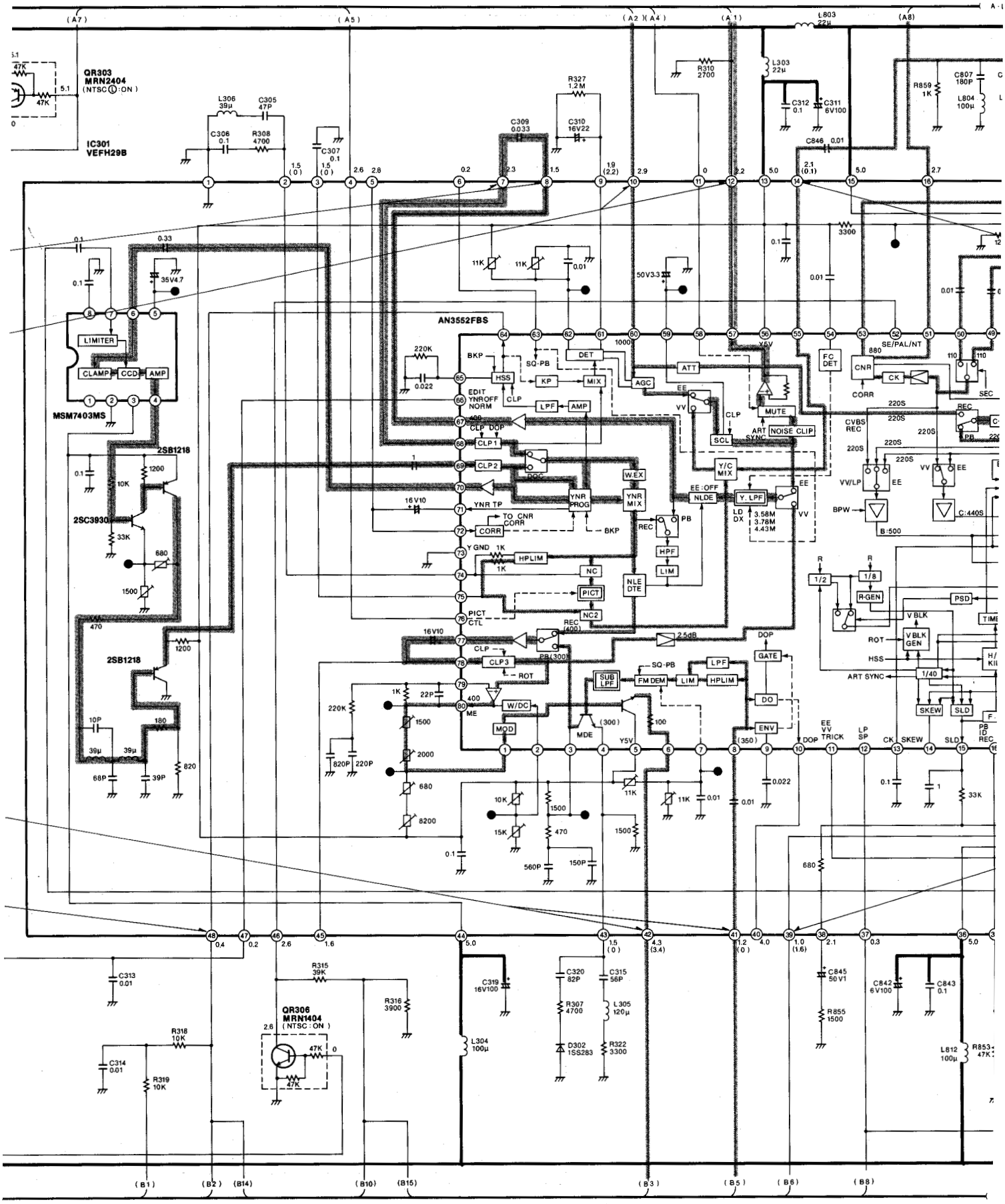
• LINE IN SIGNAL LEVEL... -10dB 1kHz

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

4-5. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRA

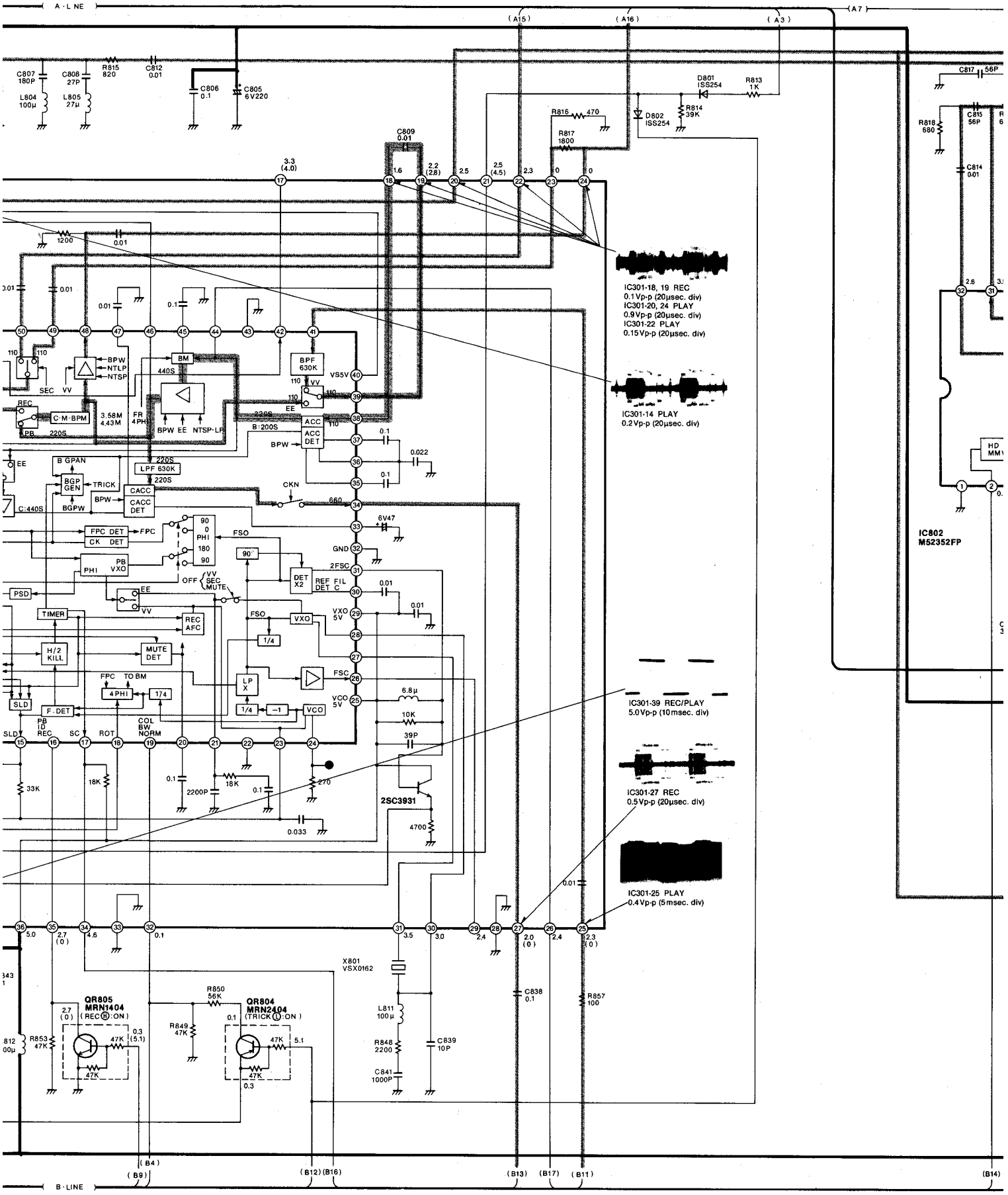


SCHEMATIC DIAGRAM

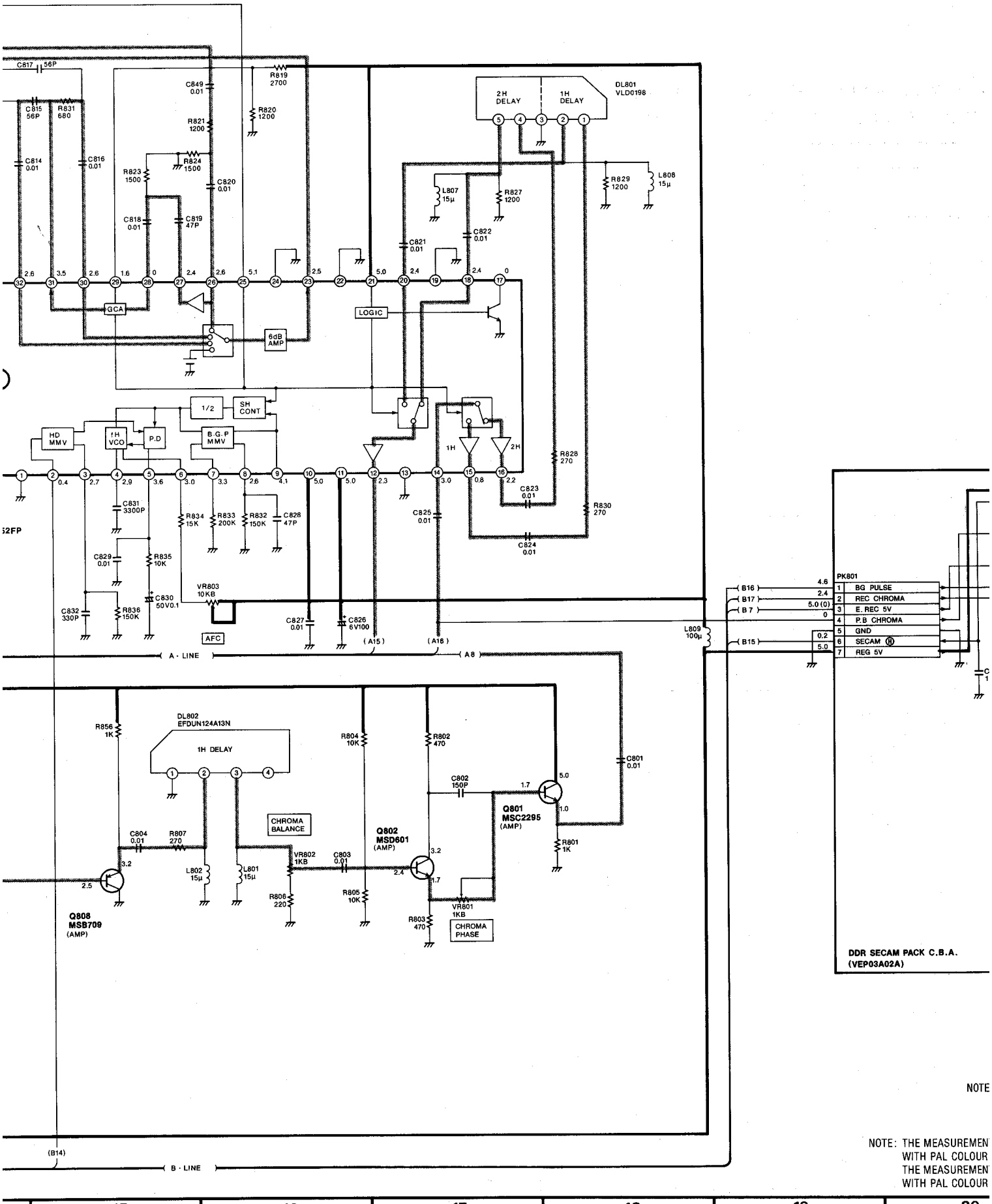


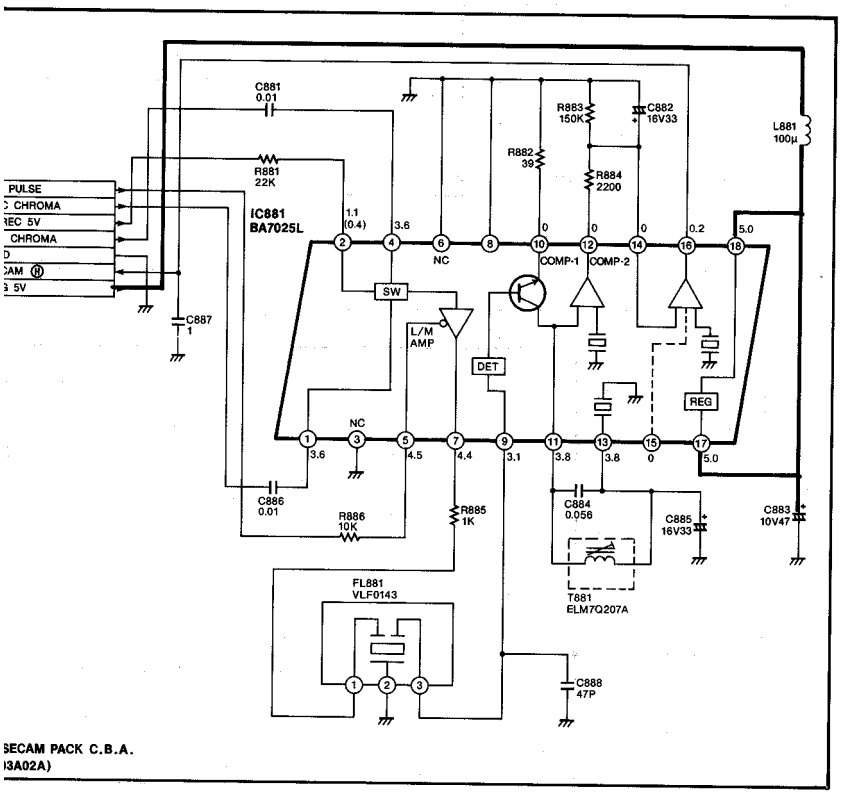
MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PL



IN PLAYBACK MODE



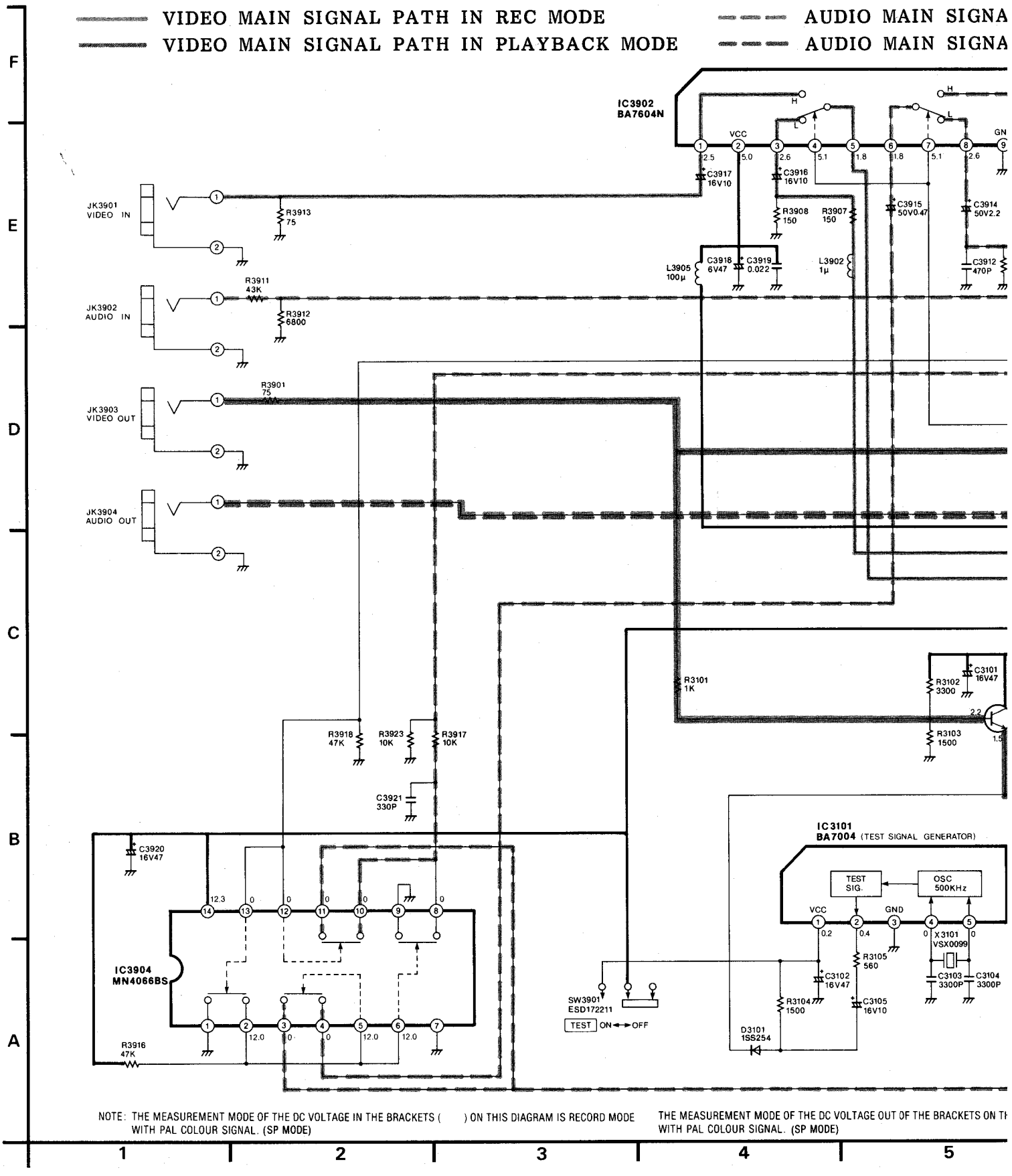


SECAM PACK C.B.A.
(3A02A)

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

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

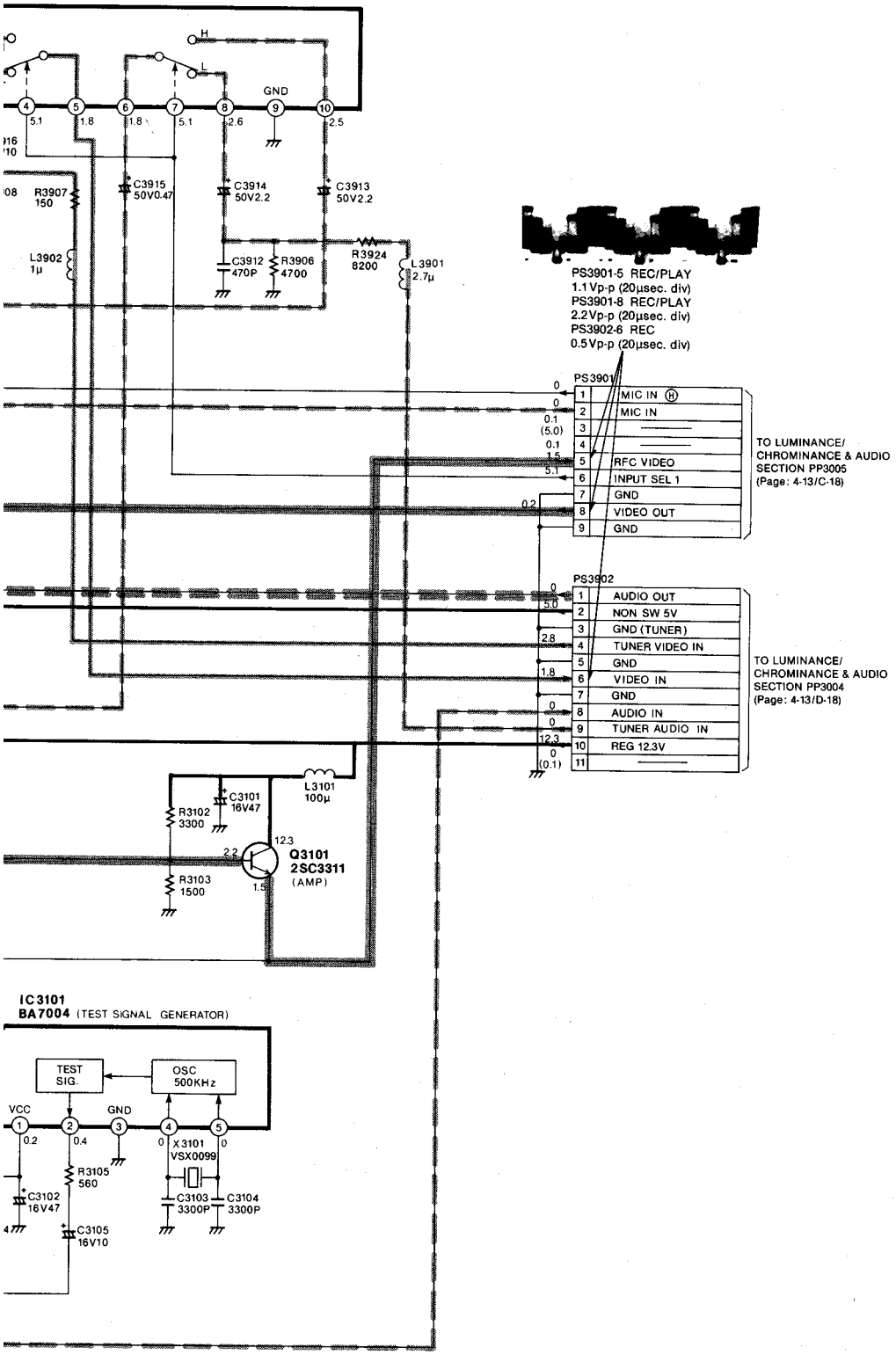
4-6. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM



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

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON TH WITH PAL COLOUR SIGNAL. (SP MODE)

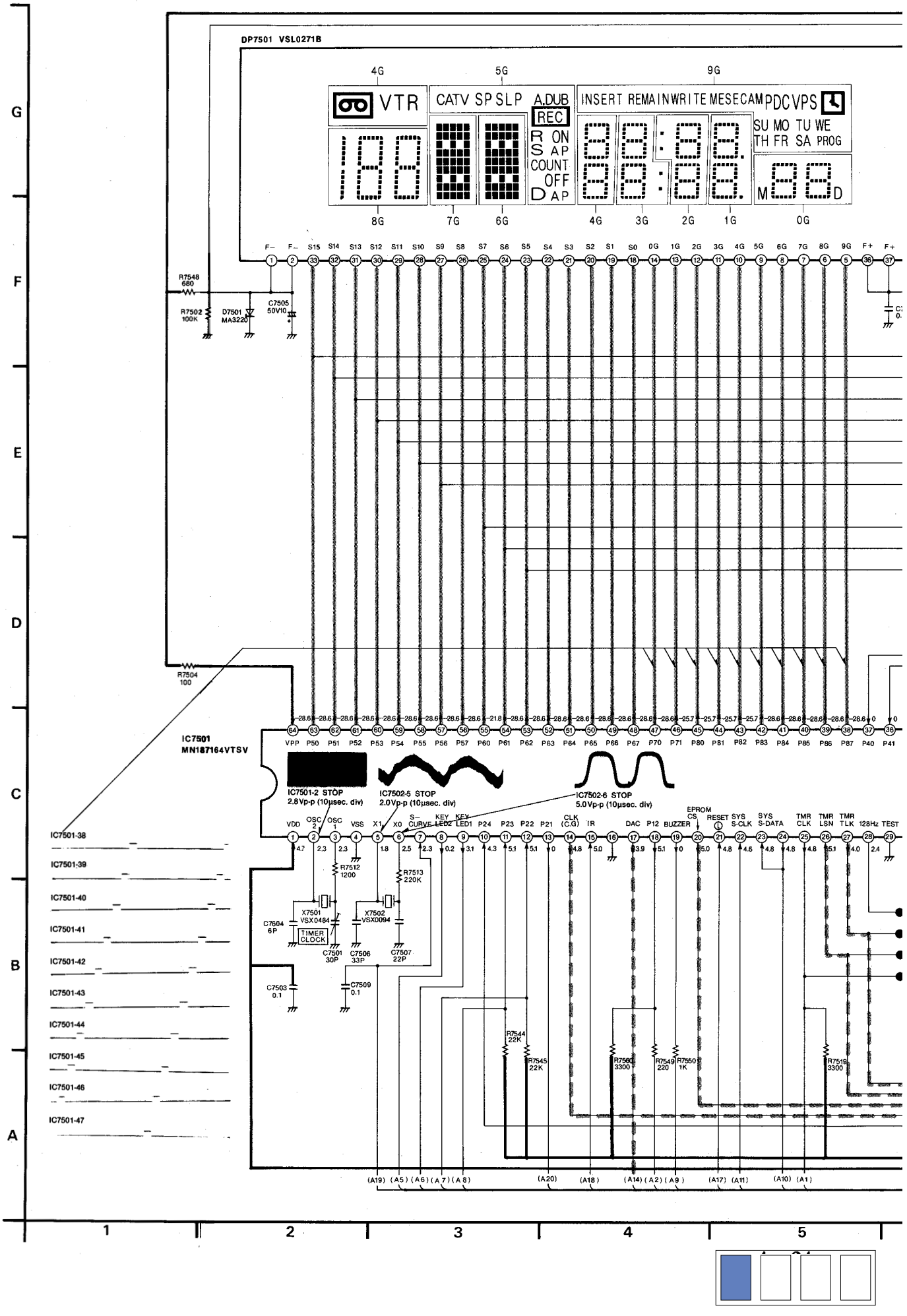
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



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

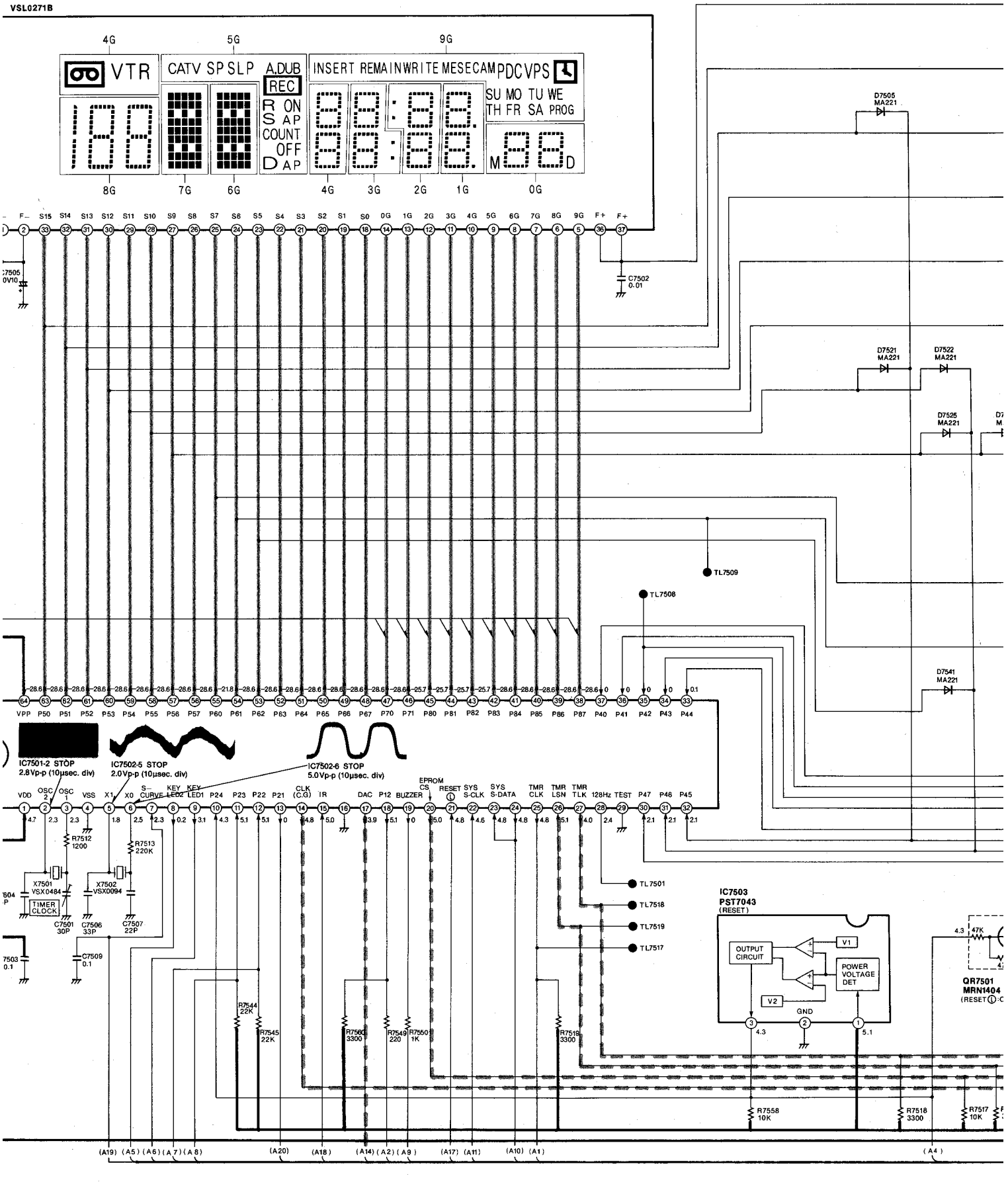
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-7. TIMER & OPERATION SCHEMATIC DIAGRAM



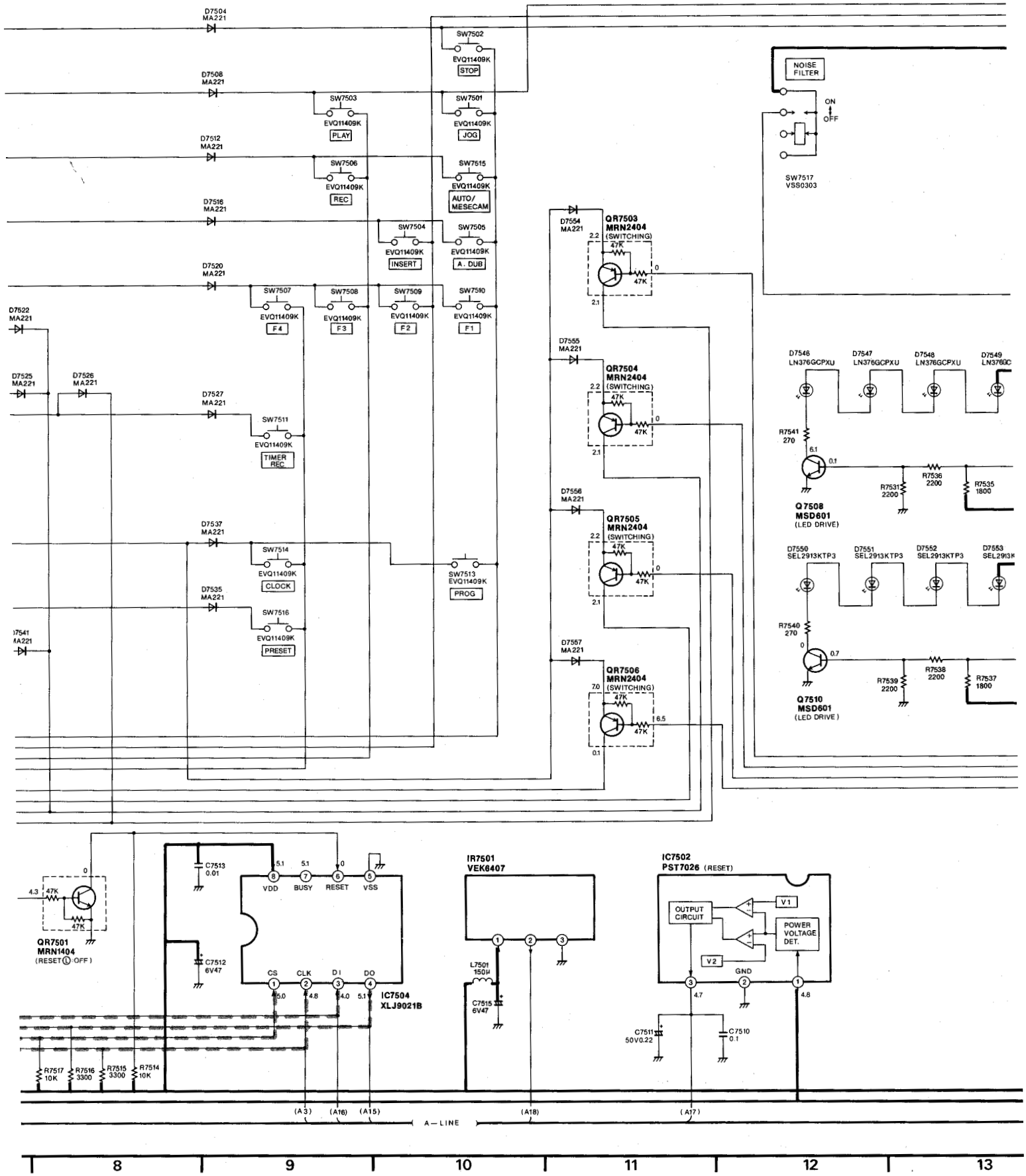
TION SCHEMATIC DIAGRAM

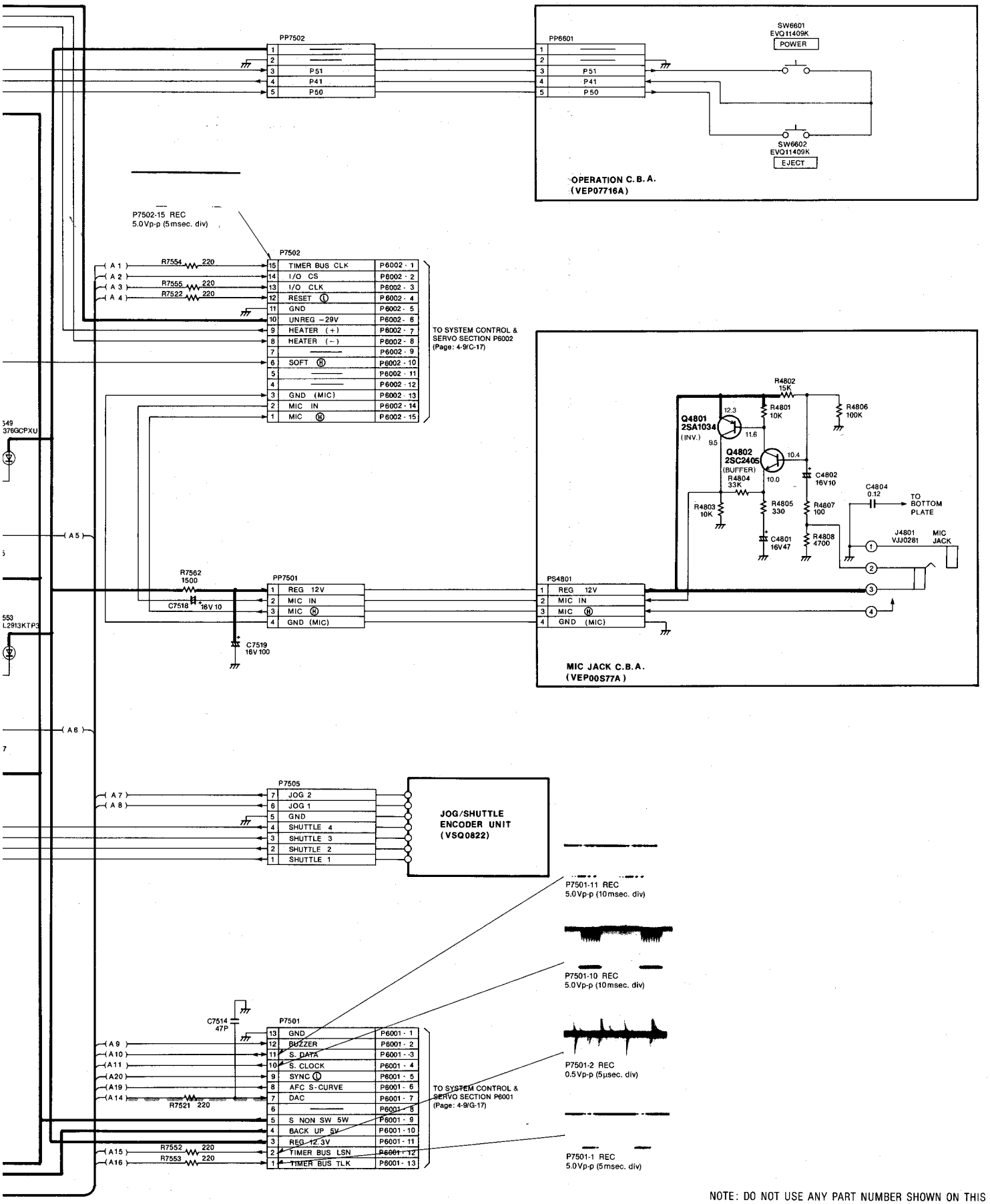
SEGMEN



2 | 3 | 4 | 5 | 6 | 7

SEGMENT CONTROL SIGNAL —— GRID CONTROL SIGNAL - - - TUNE CONTRC

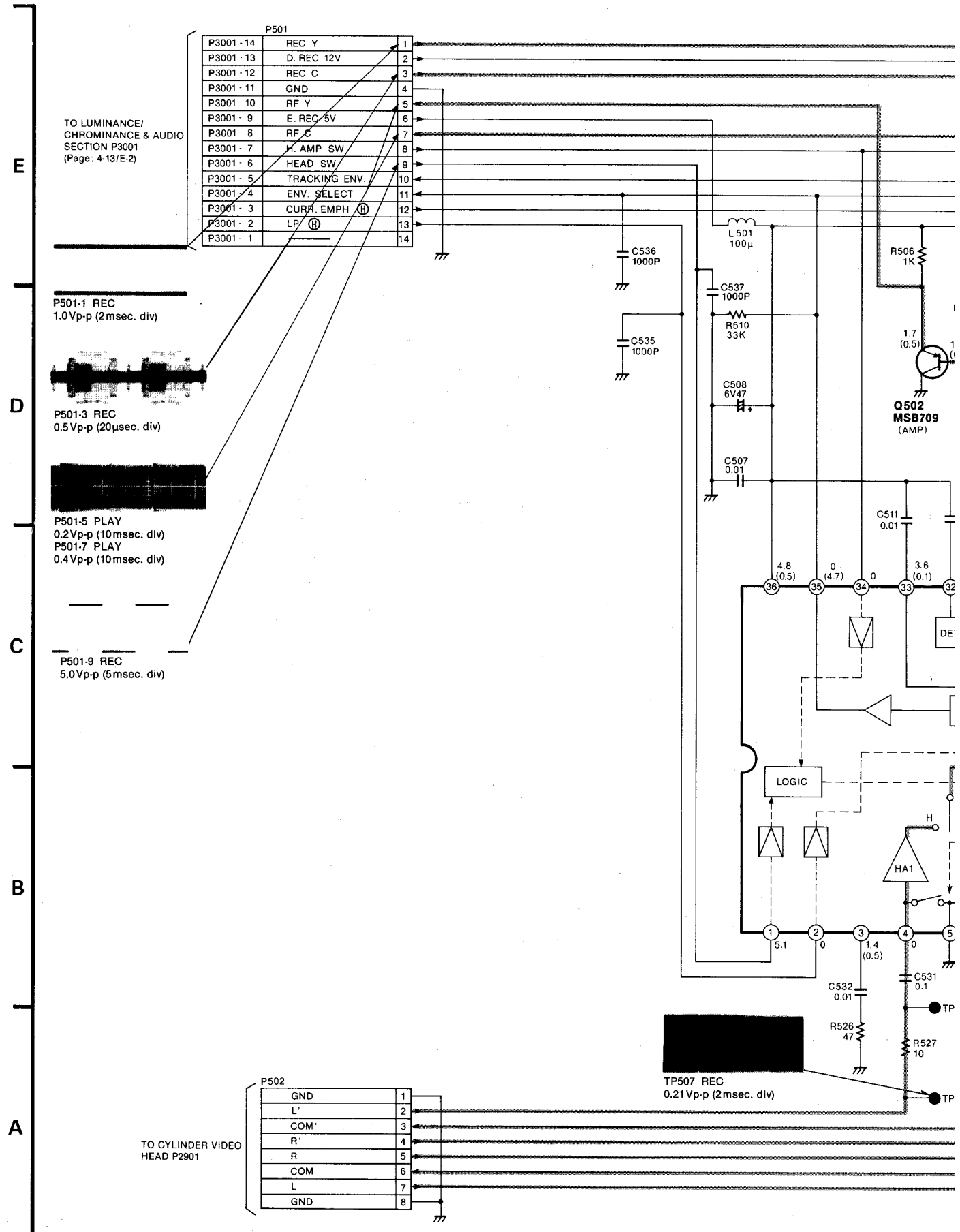




NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

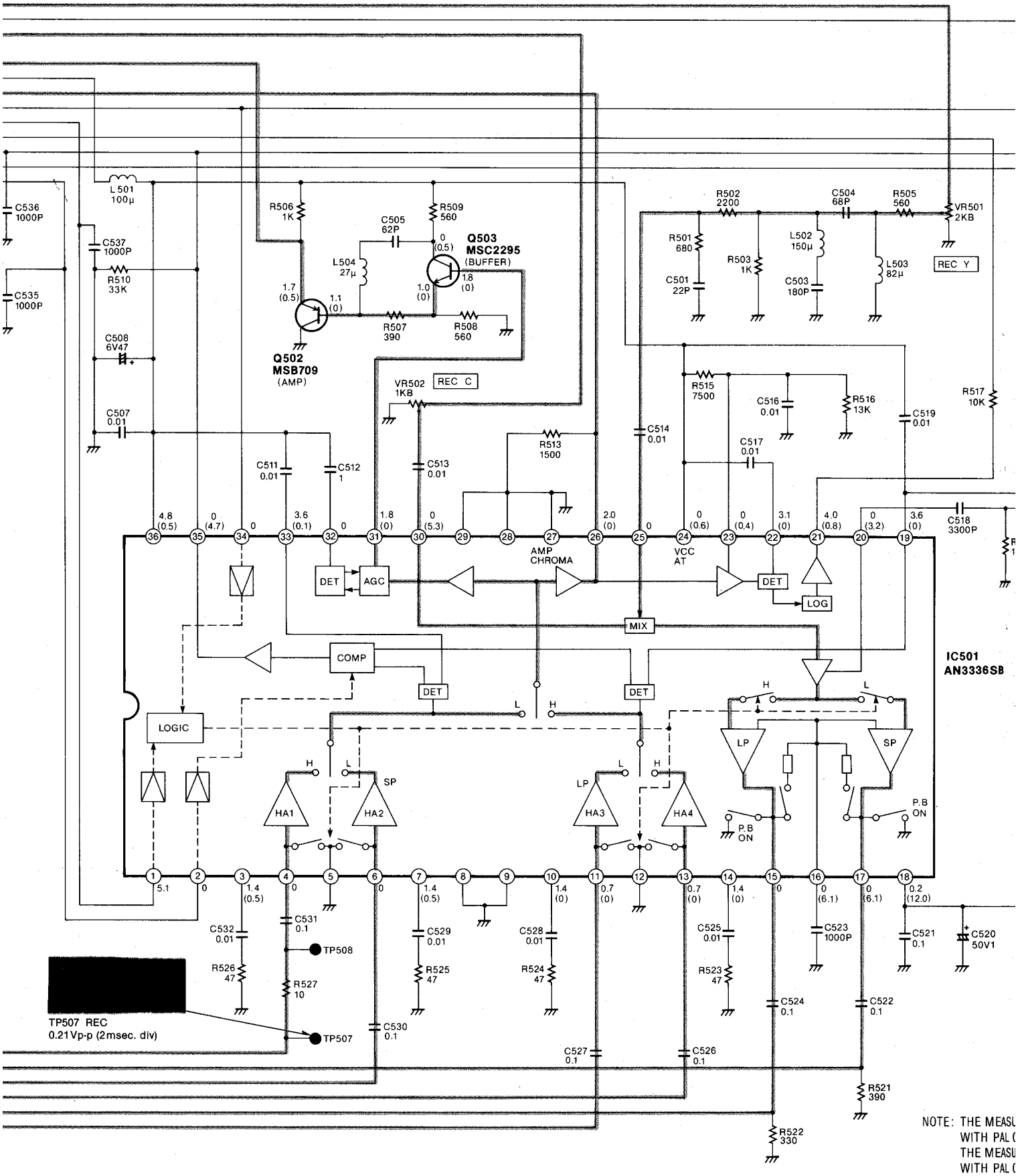
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-8. HEAD AMP SCHEMATIC DIAGRAM



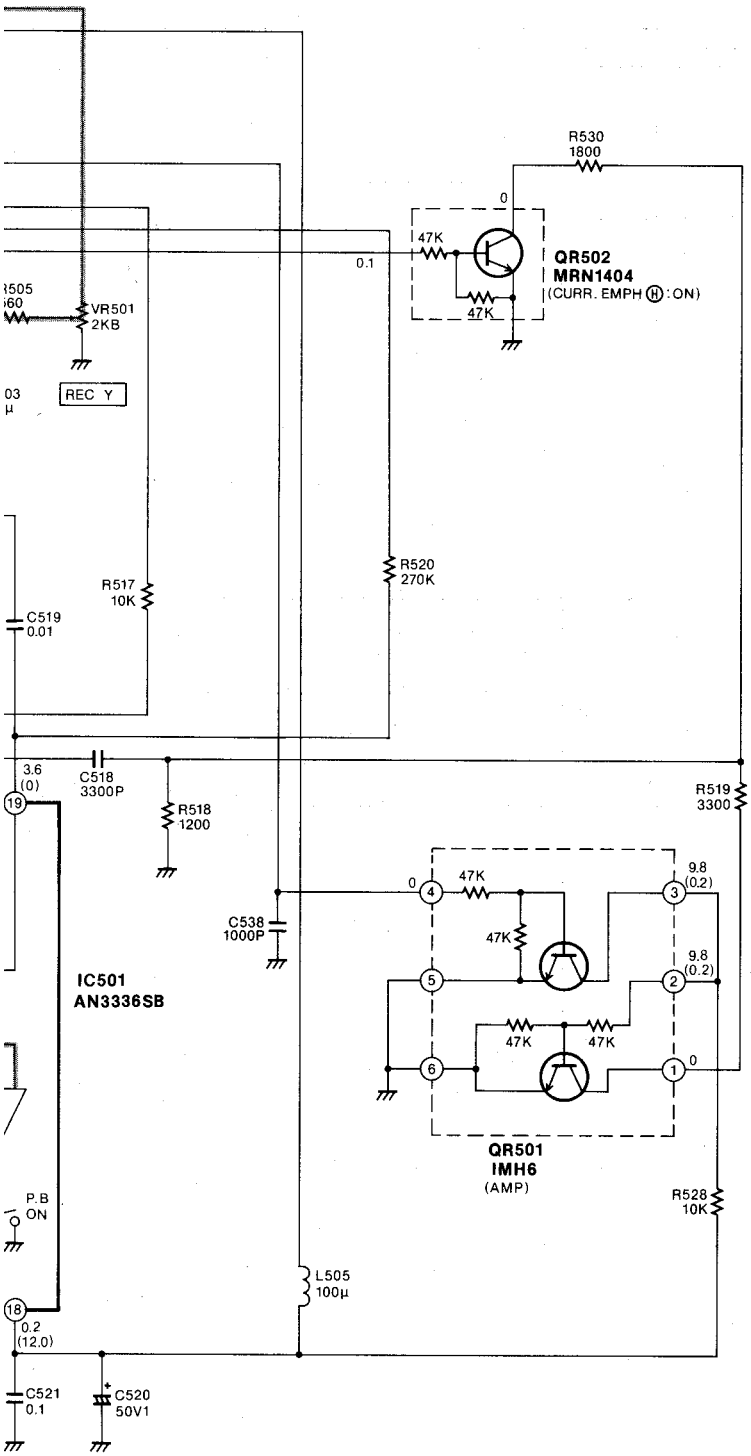
VIDEO MAIN SIGNAL PATH IN REC MODE

VIDEO MAIN SIGNAL PATH IN PLAYBACK



REC MODE

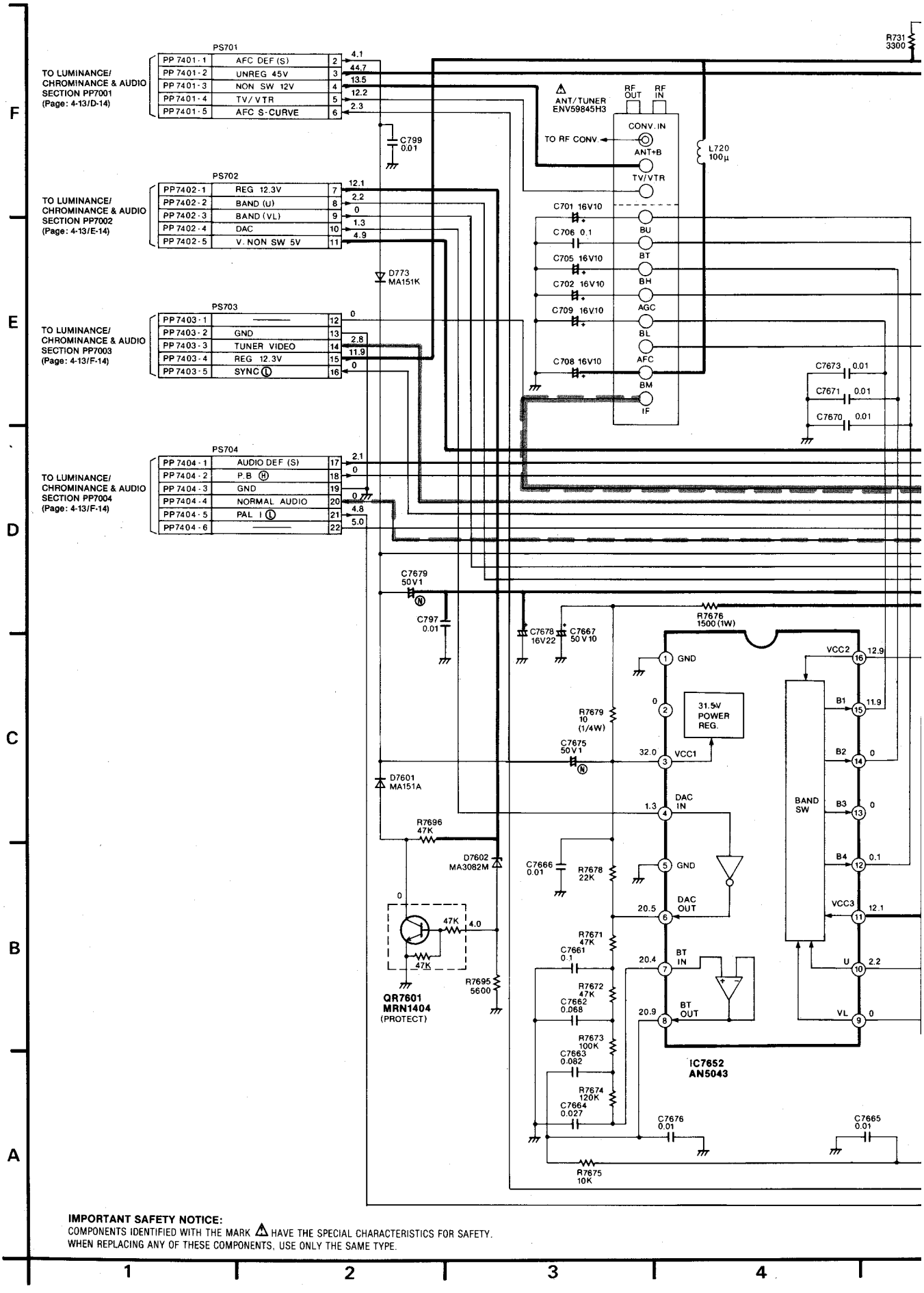
PLAYBACK MODE



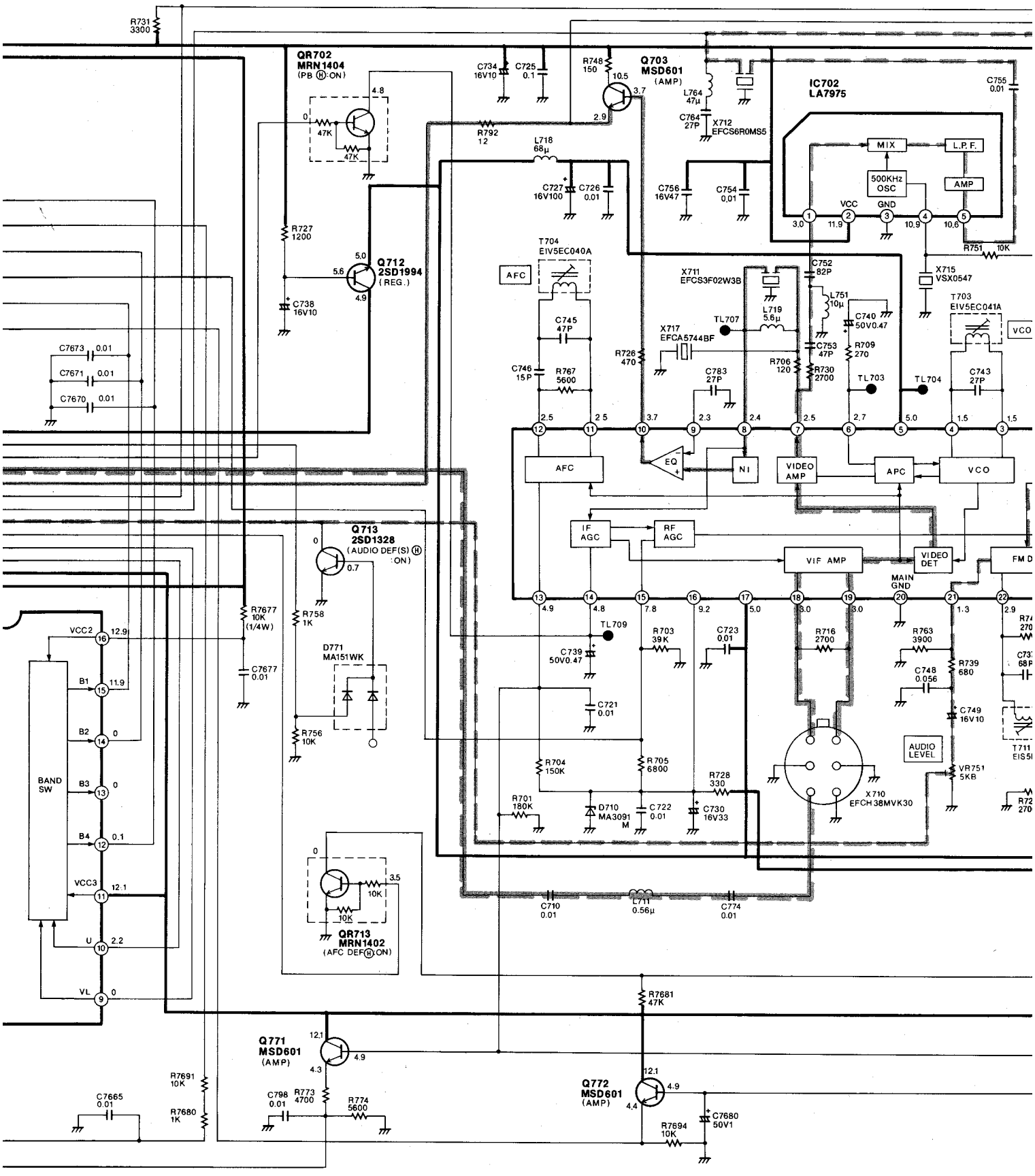
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

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

4-9. TV DEMODULATOR PACK SCHEMATIC DIAGRAM

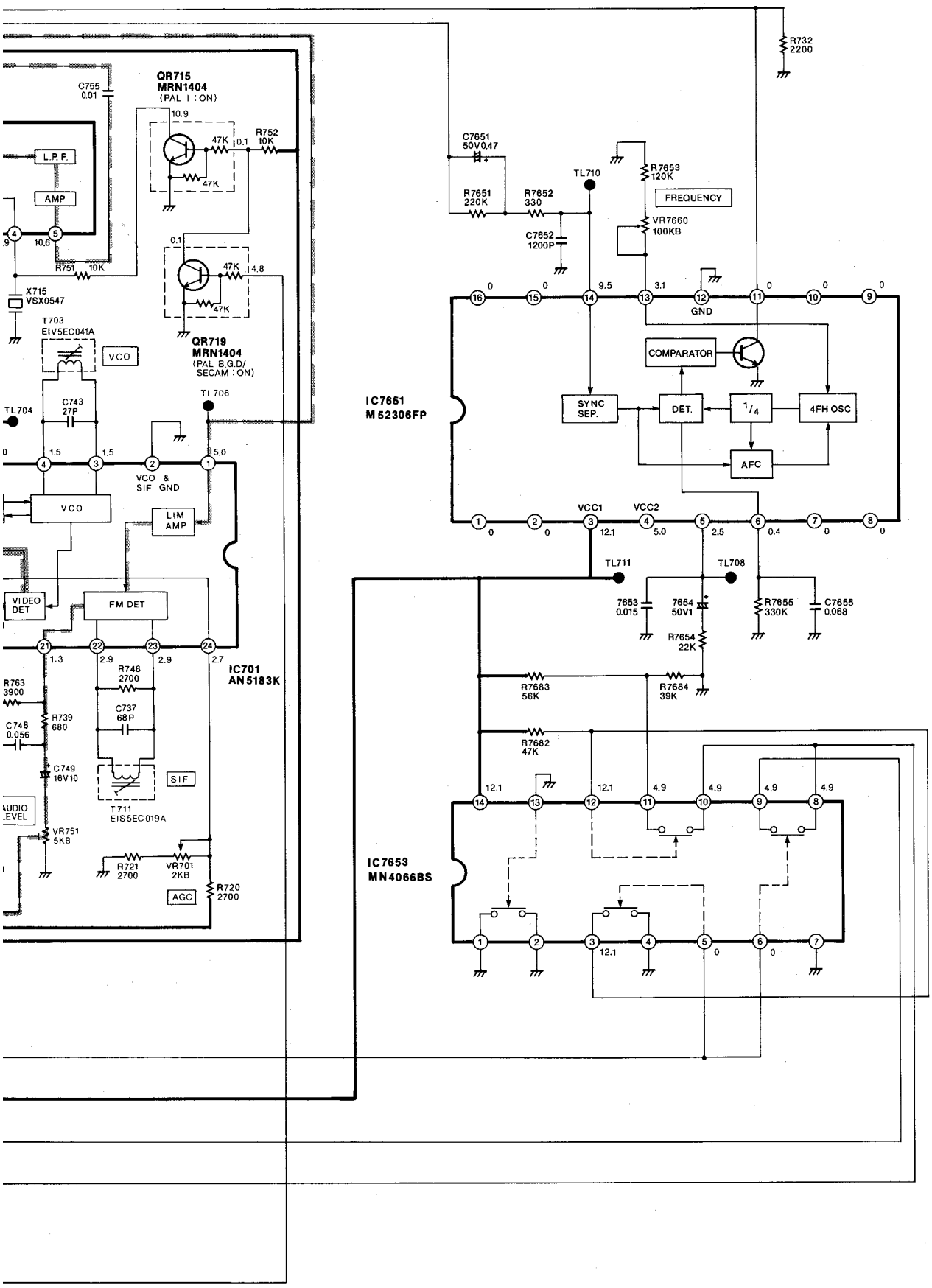


IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.



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

AUDIO SIGNAL PATH

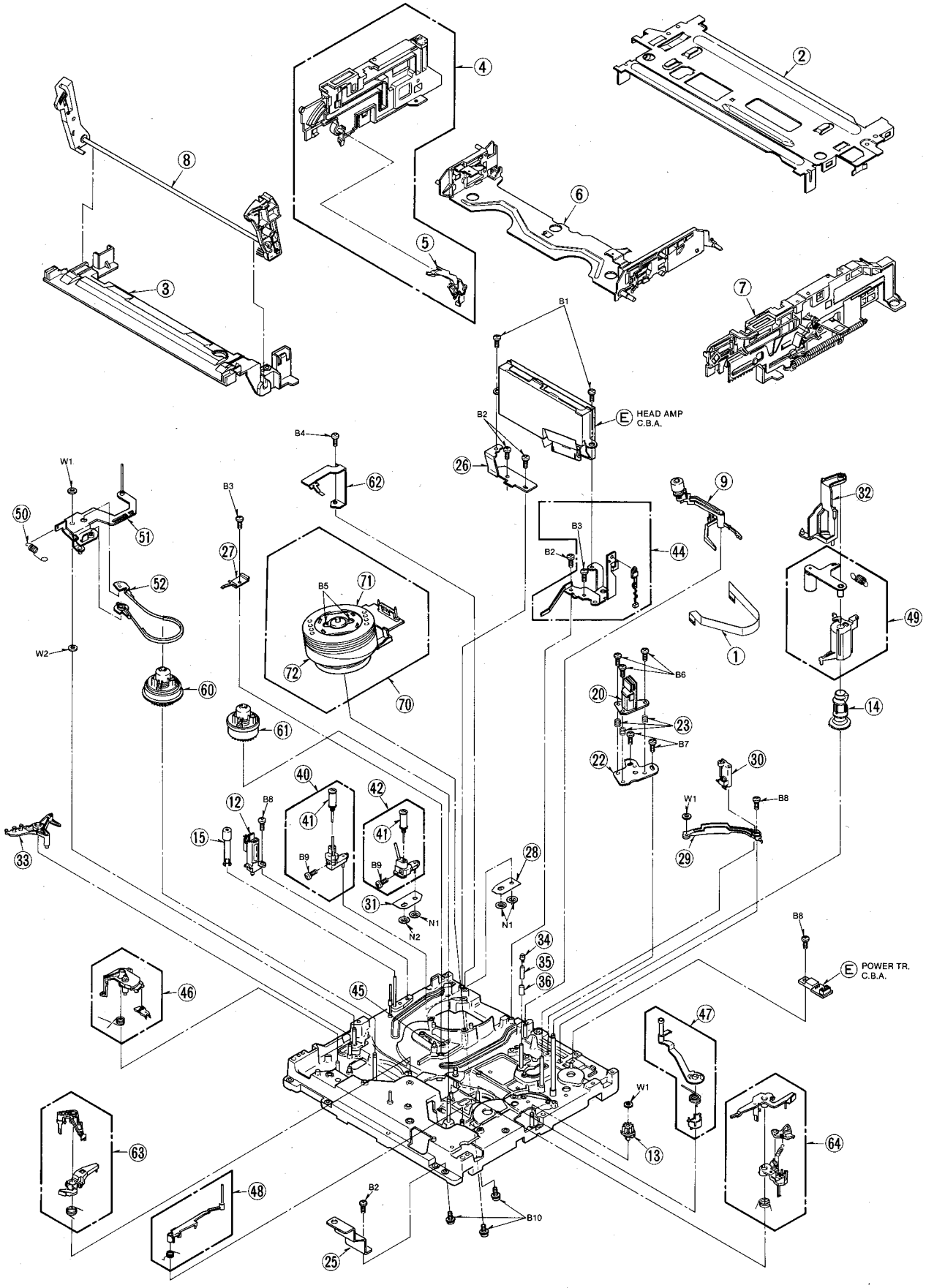


TOP MODE.

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

9 | 10 | 11 | 12

SECTION 5
EXPLODED VIEWS & PARTS LIST
5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST
❶ CHASSIS PARTS SECTION (1)



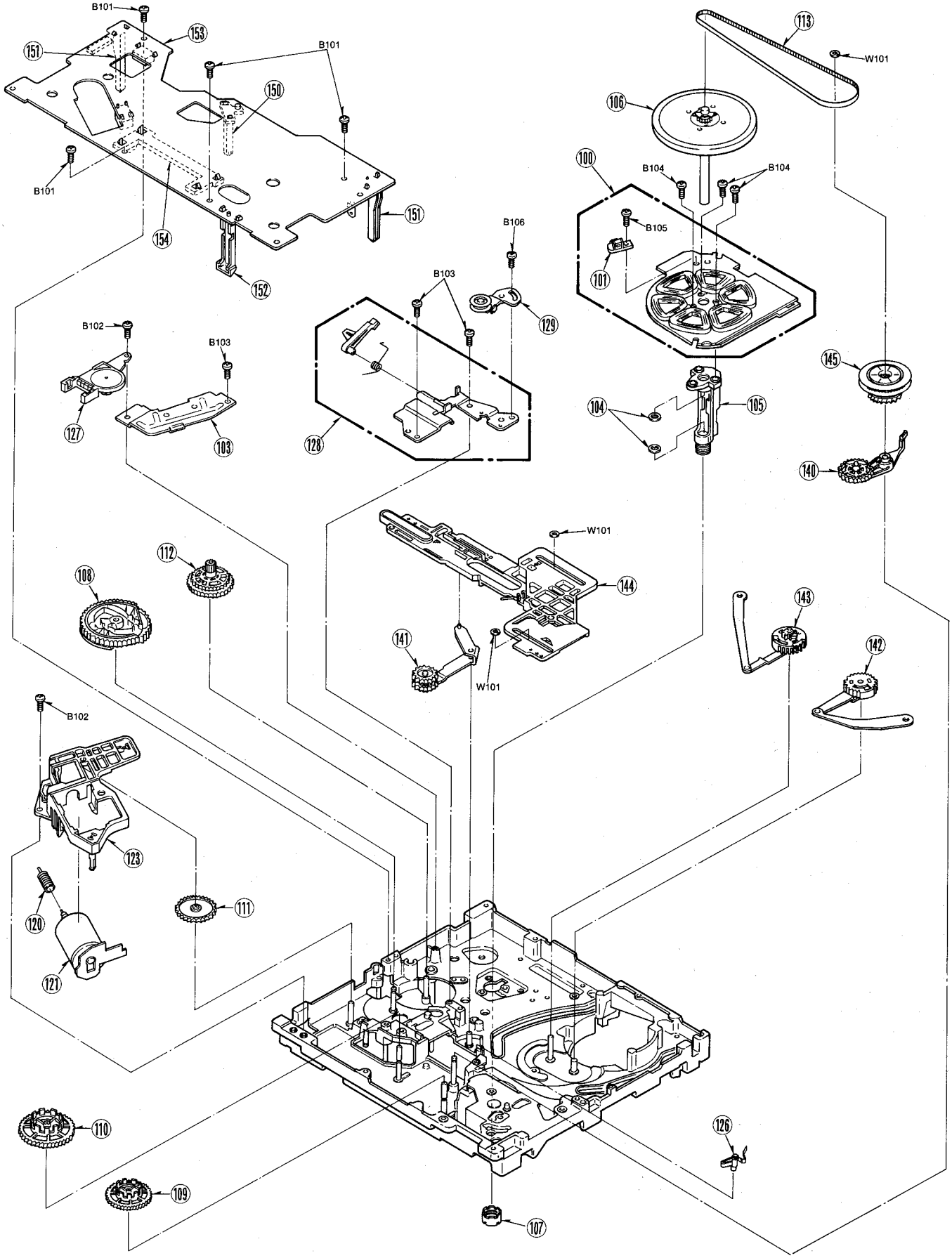
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VWJ0653	FLEXIBLE CABLE (6P)	1	P4003-P1501
2(1)		VMA8644	TOP PLATE	1	
3(1)		VMA8787	CASSETTE GUIDE	1	
4(1)		VXA4660	SIDE PLATE (L) UNIT	1	
5(1)		VXL2250	OPENER LEVER UNIT	1	
6(1)		VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)		VXA4806	SIDE PLATE (R) UNIT	1	
8(1)		VXP1339	MAIN SHAFT UNIT	1	
9(1)		VXL2251	CLEANER ARM UNIT	1	
12(1)		VBS0050	FE HEAD	1	
13(1)		VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)		VDG0886	PINCH CAM GEAR	1	
15(1)		VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)		VED0182	A/C HEAD (1) UNIT	1	
22(1)		VMA8624	A/C HEAD BASE	1	
23(1)		VMB2515	A/C HEAD SPRING	3	
25(1)		VMA8761	MOUNT ANGLE	1	
26(1)		VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)		VMC0917	EARTH SPRING	1	
28(1)		VMA8874	INCLIND BASE HOLDER (S)	1	
29(1)		VMD2078	P5 STOPPER BASE	1	
30(1)		VXA4927	P5 POST STOPPER	1	
31(1)		VMA8873	INCLIND BASE HOLDER (T)	1	
32(1)		VMD2101	OPENER PIECE	1	
33(1)		VML2776	TENSION SPRING ARM	1	
34(1)		VMX1544	P4 UPPER LIMITER	1	
35(1)		VMX2175	P4 SLEEVE	1	
36(1)		VMX2176	P4 LOWER LIMITER	1	
40(1)		VXA4982KIT	INCLIND BASE (S) UNIT	1	
41(1)		VXP1415	ROLLER POST (S)	1	
42(1)		VXA4984KIT	INCLIND BASE (T) UNIT	1	
44(1)		VXA4869	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)		VMS5383	CASSETTE POSITION FIXTURE	1	
46(1)		VXL2310	REVIEW ARM UNIT	1	
47(1)		VXL2306	P5 ARM UNIT	1	
48(1)		VXL2243	TAKE UP TENSION REGULATOR	1	
			ARM UNIT		
49(1)		VXL2246	PINCH ARM UNIT	1	
50(1)		VMB2434	TENSION SPRING	1	
51(1)		VXL2309	TENSION ARM (1) UNIT	1	
52(1)		VXZ0310	TENSION BAND UNIT	1	
60(1)		VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)		VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)		VXS0114	EARTH PLATE	1	
63(1)		VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)		VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)		VEG1023	CYLINDER UNIT	1	
71(1)		VEH0598	UPPER CYLINDER UNIT	1	
72(1)		VJR0082	RT TERMINAL	1	
B1		VHD0773	SCREW	2	
B2		XTV26+6F	SCREW	4	
B3		XTV26+4F	SCREW	2	
B4		XTN3+6FFZ	SCREW	1	
B5		VHD0425	SCREW	2	
B6		VHD0762	SCREW	3	
B7		XTV26+6FZ	SCREW	2	
B8		XTV26+8F	SCREW	3	
B9		VHD0760	SCREW	2	
B10		VHD0342	SCREW	3	
N1		VHN0192	NUT	3	
N2		VHN0193	NUT	1	
W1		VMX2208	WASHER	3	
W2		XWGV26D5G	WASHER	1	

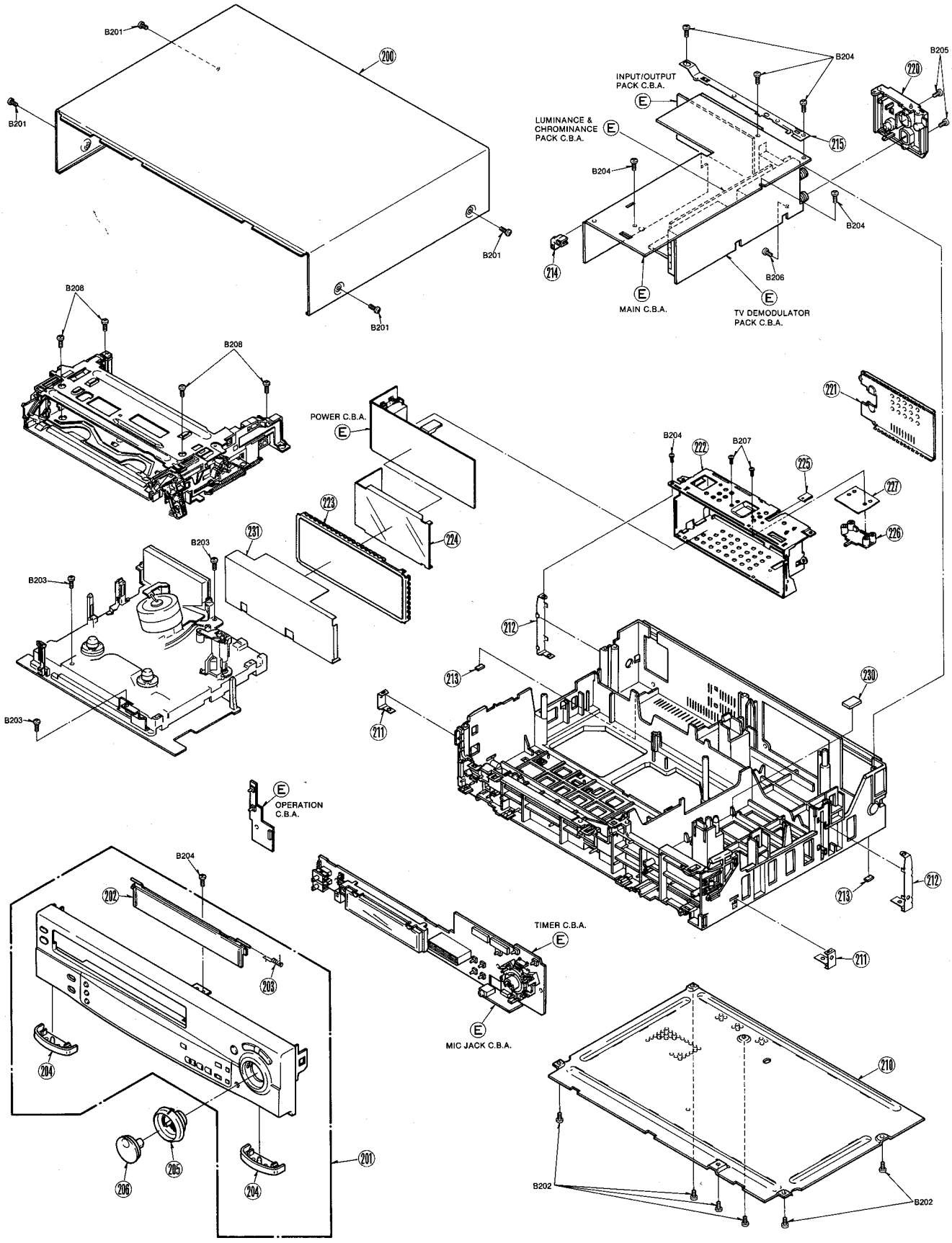
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VEK5927	STATOR UNIT	1	
101(2)		VBK0061	FG HEAD	1	
103(2)		VMA8765	ROTOR STOPPER	1	
104(2)		VMX1927	OIL SEAL	2	
105(2)		VXD0140	HOUSING UNIT	1	
106(2)		VXP1350	ROTOR UNIT	1	
107(2)		VXQ0297	THRUST SCREW UNIT	1	
108(2)		VDG0913	MAIN CAM GEAR	1	
109(2)		VDG0861	SUPPLY REEL GEAR	1	
110(2)		VDG0862	TAKE UP REEL GEAR	1	
111(2)		VDG0868	WORM WHEEL GEAR	1	
112(2)		VDG0885	SUB CAM GEAR	1	
113(2)		VDV0235	TIMING BELT	1	
120(2)		VDG0866	WORM GEAR	1	
121(2)		VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)		VMD1942	MOTOR BRACKET	1	
126(2)		VML2725	IDLER CONTROL LEVER	1	
127(2)		VSS0365	MODE SW	1	
128(2)		VXA4797	SS BRAKE BASE UNIT	1	
129(2)		VXA4799	TENSION ROLLER UNIT	1	
140(2)		VXL2229	IDLER ARM UNIT	1	
141(2)		VXL2230	DIRECT LEVER UNIT	1	
142(2)		VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)		VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)		VXL2307	MAIN LEVER UNIT	1	
145(2)		VXP1409	CENTRE CLUTCH	1	
150(2)		VMD1926	LED HOLDER	1	
151(2)		VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)		VES0695	SAFETY TAB SW	1	
153(2)		VJB00S63	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON
					THE C.B.A. IS LISTED
					ON ELECTRICAL PARTS
					LIST.
154(2)		VMD2029	REEL SHAFT GUIDE	1	
B101		VHD0772	SCREW	4	
B102		XTV26+8F	SCREW	2	
B103		XTV26+6F	SCREW	3	
B104		VHD0753	SCREW	3	
B105		VHD0754	SCREW	1	
B106		XSB26+4FZ	SCREW	1	
W101		VMX2208	WASHER	3	

❷ CHASSIS PARTS SECTION (2)



❸ CASING PARTS SECTION



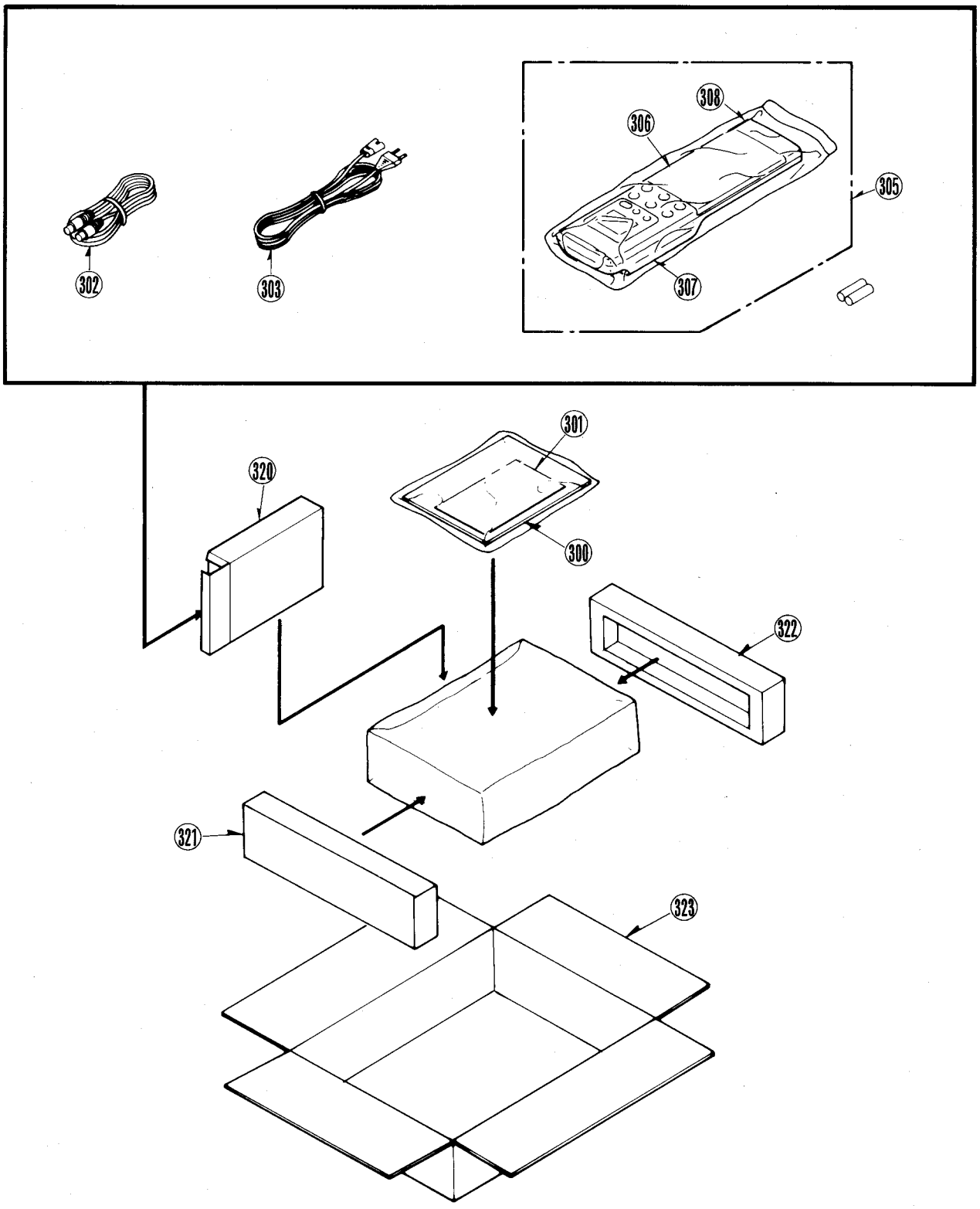
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
200(3)		VGM0988	TOP PANEL	1	
201(3)		VYP5240	FRONT PANEL UNIT	1	
202(3)		VKF1978	BLINDER PANEL	1	
203(3)		VMB2521	BLINDER SPRING	1	
204(3)		VKA0153	LEG	2	
205(3)		VGU6124	SHUTTLE KNOB	1	
206(3)		VXU1139	JOG NOB UNIT	1	
210(3)		VKU0379	BOTTOM PLATE	1	
211(3)		VMP3821	SIDE ANGLE (F)	2	
212(3)		VMP3940	SIDE ANGLE (R)	2	
213(3)		VKA0122	FOOT	2	
214(3)		VJF0374	MAIN C.B.A. HOLDER	1	
215(3)		VMP3939	EARTH ANGLE	1	
220(3)		VJH0682	RF ANT TERMINAL PLATE	1	
221(3)		VSC3110	POWER SHIELD COVER (TOP)	1	
222(3)		VXA4925	POWER SHIELD COVER (MAIN) U	1	
223(3)		VSC3375	POWER SHIELD COVER (BOTTOM)	1	
224(3)		VMZ1854	POWER BARRIER	1	
225(3)		VMC0357	TR. HOLDER SPRING	1	
226(3)		VGQ1377	TR. HOLDER	1	
227(3)		VMZ1224	INSULATION SHEET	1	
230(3)		VGQ0727	SPACER	1	
231(3)		VMZ2123	BARRIER	1	
B201		XTW3+10TFZ	SCREW	4	
B202		VHD0059	SCREW	6	
B203		VHD0168	SCREW	3	
B204		VHD0773	SCREW	7	
B205		XTV3+12JFZ	SCREW	2	
B206		XTV3+6F	SCREW	1	
B207		XTV3+8G	SCREW	2	
B208		XTV26+8FR	SCREW	4	

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
300(4)		VQT5191	OPERATING INSTRUCTIONS	1	<!>
			(ENGLISH/GERMAN)		
300(4)		VQT5192	OPERATING INSTRUCTIONS	1	<!>
			(RUSSIAN/POLISH/AFRICAANS)		
301(4)		VQC1839	PROGRAMME SHEET	1	
302(4)		VJA0376	DIN RF CABLE	1	
303(4)		VJA0664	AC CORD	1	
305(4)		VEQ1468	REMOTE CONTROLLER	1	
			(BUILD IN DIGITAL SCANNER)		
306(4)		VGP3344	DOOR PANEL	1	
307(4)		VKF1977	BATTERY COVER	1	
308(4)		VGQ3046	CAP	1	
320(4)		VPK0825	ACCESSORIES PACKING	1	
321(4)		VPN3542	CUSHION (L)	1	
322(4)		VPN3543	CUSHION (R)	1	
323(4)		VPG6785	PACKING	1	
			SERVICE FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	
		VFK0680	WHITE GREASE	1	
		VFK0851	CENTRE FIXING TOOL	1	
		VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	

❹ PACKING PARTS SECTION



5-2. 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
		VEP03971F	MAIN C.B.A.	1	(RTL)
		VEP03972A	INPUT/OUTPUT PACK C.B.A.	1	(RTL)
		VEP03975F	LUMINANCE & CHROMINANCE	1	(RTL)
			PACK C.B.A.		INCLUDING THE SECAM
					PACK C.B.A.
					(VEP03A02A).
		VEP03A02A	SECAM PACK C.B.A.	1	(RTL)
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03975F).
		VEP07705C	TV DEMODULATOR PACK C.B.A.	1	(RTL)
		VEP05180A	HEAD AMP C.B.A.	1	(RTL)
		VEP07699B	TIMER C.B.A.	1	(RTL)
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP00S77A	MIC C.B.A.	1	(RTL)
					INCLUDED IN TIMER
					C.B.A.(VEP07699B).
		VEP07716A	OPERATION C.B.A.	1	(RTL)
		VEP01518E	POWER C.B.A.	1	(RTL)<!>
		---------	MECHANISM CONNECTION C.B.A.	1	(RTL)
		VEP00S86A	POWER TRANSISTOR C.B.A.	1	(RTL)
		---------	MOTOR C.B.A.	1	(RTL)
		ENC17991	RF CONVERTER	1	<!>
		ENV59845H3	TUNER	1	<!>
F1101		XBA2C16TB0	FUSE	1	<!>
	■	VEP03971F	MAIN C.B.A.		(RTL)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.01U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7005		ECKF1H471KB	C.CAPACITOR 50V 470P	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001-06		1SS254	DIODE	6	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002-05		1SS254	DIODE	4	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	(VT)
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE) 2P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		XRA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRSA	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3006		ELESQ5R6KA	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L6701		ELESE101KA	COIL 100UH	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE) 10P	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE) 3P	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (MALE) 10P	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE) 3P	1	
P4003		VJS2331	CONNECTOR (FEMALE) 6P	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE) 5P	3	
PP7004		VJP3043A006W	CONNECTOR (MALE) 6P	1	
PP7005		VJP3043A004W	CONNECTOR (MALE) 4P	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	(R,S)
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	(R,S)
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	(R,S)
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3043		ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6722		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687	FLAT CARD CABLE	1	(P6501-P1505)
		VWJ0688	FLAT CARD CABLE	1	(P2501-P1507)
		VWJ0689	FLAT CARD CABLE	1	(P3001-P501)
		VWJ0690	FLAT CARD CABLE	1	(P1001-P1102)
		VWJ131W140BB	FLAT CARD CABLE	1	(P6001-P7501)
		VWJ150W140BB	FLAT CARD CABLE	1	(P6002-P7502)
		VEE8284	FLAT CARD CABLE	1	(P4002-FE HEAD)
		VEE8285	FLAT CARD CABLE	1	(P2503-P202)
		VEE8286	FLAT CARD CABLE	1	(P2502-P1506)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03972A	INPUT/OUTPUT PACK C.B.A.		(RTL)
			CAPACITORS		
C3101,02		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3912		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C3913,14		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3915		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3916,17		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C3918		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3919		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
C3920		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3921		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
			DIODES		
D3101		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC3101		BA7004	IC	1	
IC3902		BA7604N	IC	1	
IC3904		UPD4066BG	IC	1	
			COILS		
L3101		ELESQ101KA	COIL 100UH	1	
L3901		ELESQ2R7KA	COIL 2.7UH	1	
L3902		ELESQ1R0KA	COIL 1UH	1	
L3905		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
PS3901		VJS3043F009W	CONNECTOR (FEMALE)	1	
PS3902		VJS3043F011W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q3101		2SC3311	TRANSISTOR	1	
			RESISTORS		
R3101		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3103,04		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3105		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3901		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3906		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3907,08		ERDS2TJ151	C.RESISTOR 1/4W 150	2	
R3911		ERJ6GEYG433	M.RESISTOR CH 1/10W 43K	1	
R3912		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3913		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3916		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3917		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3918		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3921		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R3923		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3924		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
			SWITCHES		
SW3901		ESD172211	SWITCH	1	
			CRYSTAL OSCILLATORS		
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEJ1334	JACK PLATE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03975F	LUMINANCE & CHROMINANCE		(RTL)
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C801		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C802		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C803,04		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C814		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C815		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C816		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C817		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C818		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C819		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C820-25		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C826		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C827		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C828		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C829		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C830		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C831		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C832		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C881		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C882		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C883		ECEA1AK470	E.CAPACITOR 10V 47U	1	
C884		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C885		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C886		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C887		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C888		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
			DIODES		
D302		1SS283	DIODE	1	
D303		MA151A	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
D804		1SS254	DIODE	1	
			DELAYS		
DL801		VLD0198	DELAY	1	
DL802		EFDUN124A13N	DELAY	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			FILTERS		
FL881		VLF0143	FILTER	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
IC802		M52352FP	IC	1	
IC881		BA7025L	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	
L305		ELESP121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L801,02		VLQ0540K150	COIL 15UH	2	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807,08		VLQ0540J150	COIL 15UH	2	
L809		ELESQ101KA	COIL 100UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
L881		ELESE101KA	COIL 100UH	1	
			PACK PINS		
PK881		VJR0456	PACK PIN	1	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q801		MSC2295	TRANSISTOR	1	
Q802		MSD601	TRANSISTOR-RESISTOR	1	
Q808		MSB709	TRANSISTOR	1	
			COMBINATION PARTS		
QR303		MRN2404	TRANSISTOR-RESISTOR	1	
QR306		MRN1404	TRANSISTOR-RESISTOR	1	
QR804		MRN2404	TRANSISTOR-RESISTOR	1	
QR805		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R304		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R801		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R802,03		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	2	
R804,05		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R806		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R807		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R816		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R817		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R818		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R819		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R823,24		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R825		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R829		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R831		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R832		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R833		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R834		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R835		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R836		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R850		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R856		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R881		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R882		ERJ6GMYJ390	M.RESISTOR CH 1/10W 39	1	
R883		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R884		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R885		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R886		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			COILS		
T881		ELM7Q207A	COIL	1	
			VARIABLE RESISTORS		
VR801,02		EVTEASA00B13	V.RESISTOR	2	
VR803		EVNCBAA00B14	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP07705C	TV DEMODULATOR PACK C.B.A.		(RTL)
			CAPACITORS		
C701,02		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C705		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C706		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C708,09		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C721-23		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C726		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C727		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C730		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C734		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C737		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C738		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C739,40		ECEA1HKR47	E.CAPACITOR 50V 0.47U	2	
C743		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C745		ECUM1H470JPN	C.CAPACITOR CH 50V 47P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C752		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C753		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C754,55		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C756		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C764		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C774		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C783		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C797-99		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7651		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C7652		ECUM1H122KBN	C.CAPACITOR CH 50V 1200P	1	
C7653		ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C7654		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C7655		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7661		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7662		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7663		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7664		ECQB1H273KH	P.CAPACITOR 50V 0.027U	1	
C7665,66		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7667		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7670,71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7673		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7675		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7676,77		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7678		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7679		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7680		ECEA1HK010	E.CAPACITOR 50V 1U	1	
			DIODES		
D710		MA3091-M	DIODE	1	
D771		MA151WK	DIODE	1	
D773		MA151K	DIODE	1	
D7601		MA151A	DIODE	1	
D7602		MA3082M	DIODE	1	
			INTEGRATED CIRCUITS		
IC701		AN5183K	IC	1	
IC702		LA7975	IC	1	
IC7651		M52306FP	IC	1	
IC7652		AN5043	IC	1	
IC7653		MN4066BS	IC	1	
			COILS		
L711		VLQ0305JR56	COIL 0.56UH	1	
L718		ELESQ680KA	COIL 68UH	1	
L719		ELESQ5R6KA	COIL 5.6UH	1	
L720		ELESQ101KA	COIL 100UH	1	
L751		ELJFA100JB	COIL	1	
L764		ELJFA470JB	COIL 47UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE) 5P	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE) 6P	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SD1994	TRANSISTOR	1	
Q713		2SD1328-S	TRANSISTOR	1	
Q771,72		MSD601-S	TRANSISTOR	2	
			COMBINATION PARTS		
QR702		MRN1404	TRANSISTOR-RESISTOR	1	
QR713		MRN1402	TRANSISTOR-RESISTOR	1	
QR715		MRN1404	TRANSISTOR-RESISTOR	1	
QR719		MRN1404	TRANSISTOR-RESISTOR	1	
QR7601		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R701		ERJ6GEYJ184	M.RESISTOR CH 1/10W 180K	1	
R703		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R704		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R705		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R706		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R709		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R716		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R720,21		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R726		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R727		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R728		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R730		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R731		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R732		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R746		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R748		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R751,52		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R756		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R763		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R767		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R792		ERJ6GEYJ120	M.RESISTOR CH 1/10W 12	1	
R7651		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7652		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R7653		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7654		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R7655		ERJ6GEYJ334	M.RESISTOR CH 1/10W 330K	1	
R7671,72		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7673		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7674		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7675		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7677		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7678		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R7679		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7680		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7681,82		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7683		ERJ6GEYJ563	M.RESISTOR CH 1/10W 56K	1	
R7684		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R7691		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7694		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7695		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7696		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		
T703		EIV5EC041A	TRANSFORMER	1	
T704		EIV5EC040A	TRANSFORMER	1	
T711		EIS5EC019A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701		EVNCBAA00B23	V.RESISTOR	1	
VR751		EVNCBAA00B53	V.RESISTOR	1	
VR7660		EVNCBAA00B15	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MVK30	CRYSTAL OSCILLATOR	1	
X711		EFCT3F02W3B	CRYSTAL OSCILLATOR	1	
X712		EFCT6ROMS5	CRYSTAL OSCILLATOR	1	
X715		VSX0547	CRYSTAL OSCILLATOR	1	
X717		EFCT5744BF	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV59845H3	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3379	SHIELD COVER (TOP)	1	
	■	VEP05180A	HEAD AMP C.B.A.		(RTL)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CAPACITORS		
C501		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C503		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C504		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H620JCN	C.CAPACITOR 50V 62P	1	
C507		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C511		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C512		ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C513,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C519		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C520		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C521,22		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C528,29		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C530,31		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C532		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C535-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	4	
			INTEGRATED CIRCUITS		
IC501		AN3336SB	IC	1	
			COILS		
L501		ELESQ101KA	COIL 100UH	1	
L502		ELESQ151KA	COIL 150UH	1	
L503		ELESQ820KA	COIL 82UH	1	
L504		ELESQ270JA	COIL 27UH	1	
L505		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1684	CONNECTOR (FEMALE)	1	
P502		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709	TRANSISTOR	1	
Q503		MSC2295	TRANSISTOR	1	
			COMBINATION PARTS		
QR501		IMH6	TRANSISTOR	1	
QR502		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R502		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R503		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R506		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508,09		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R510		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R513		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R515		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R516		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R517		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R518		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R519		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R520		ERJ6GMYJ274	M.RESISTOR CH 1/10W 270K	1	
R521		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R522		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R523-26		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R527		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R528		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R530		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC3770	SHIELD COVER (BOTTOM)	1	
		VSC3768	SHIELD COVER (TOP)	1	
		VSC3304	SHIELD COVER (MAIN)	1	
	■	VEP07699B	TIMER C.B.A.		(RTL)
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E124ZFN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509,10		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	
			DIODES		
D7501		MA3220	DIODE	1	
D7504,05		MA221	DIODE	2	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7516		MA221	DIODE	1	
D7520-22		MA221	DIODE	3	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-57		MA221	DIODE	4	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSV	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		XLJ9021B	IC	1	
IR7501		VEK6407	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7501		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0484	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2035	JOG SHUTTLE HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07716A	OPERATION C.B.A.		(RTL)
			CONNECTORS		
PP6601		VJP3404A005W	CONNECTOR (MALE)	1	
			SWITCHES		
SW6601,02		EVQ11409K	SWITCH	2	
	■	VEP01518E	POWER C.B.A.		(RTL)<!>
			CAPACITORS		
C1101		VCC0021	C.CAPACITOR	1	<!>
C1106		VCC0021	C.CAPACITOR	1	<!>
C1107		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>
C1108		ECQU2A683MN	P.CAPACITOR 250V 0.068U	1	<!>
C1109		ECEC2GG330	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	
D1108		MA4024-H	DIODE	1	
D1109		AU012	DIODE	1	
D1110		RL2Z	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1116		SNR-300K4	SURGE ABSORBER	1	<!>
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
			COILS		
L1107		ELF18D221F	COIL 220UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD2259	TRANSISTOR	1	
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD2259	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0699	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
		VMZ1184	CAPACITOR COVER (B)	3	<!>
	■	---------	MECHANISM CONNECTION C.B.A.		(RTL)

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D1501		LN59L.VT	DIODE	1	
			INTEGRATED CIRCUITS		
IC1501,02		ON1387	IC	2	
			CONNECTORS		
P1503		VJS3316A002	CONNECTOR (FEMALE)	1	
P1504		VJS3317A004	CONNECTOR (FEMALE)	1	
P1505		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1501,02		PN205L-NC.VT	TRANSISTOR	2	
			SWITCHES		
SW1501		VES0695	SAFETY SWITCH	1	
	■	VEP00S86A	POWER TRANSISTOR C.B.A.		(RTL)
			CONNECTORS		
P1506		VJP1230T	CONNECTOR (MALE) 3P	1	
			TRANSISTORS		
Q1503		2SB941QBB	TRANSISTOR	1	
	■	---------	MOTOR C.B.A.		(RTL)
			MISCELLANEOUS		
		VJP3316B002	CONNECTOR (MALE)	1	