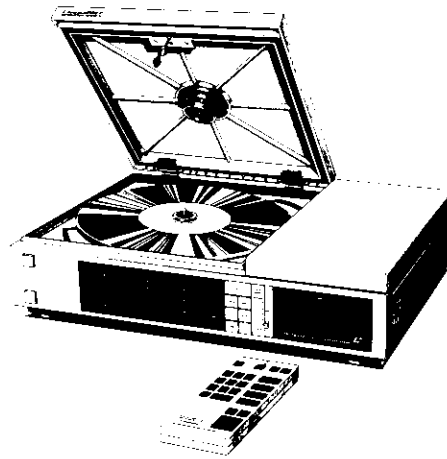


SUPPLEMENT 1

Service Manual



ORDER NO.
VRT-004-0

LASER DISC PLAYER

LD-1100

This service manual available for LD-1100 which has a serial no. beyond 3611501.
When other information should be needed, see original LD-1100 service manual.

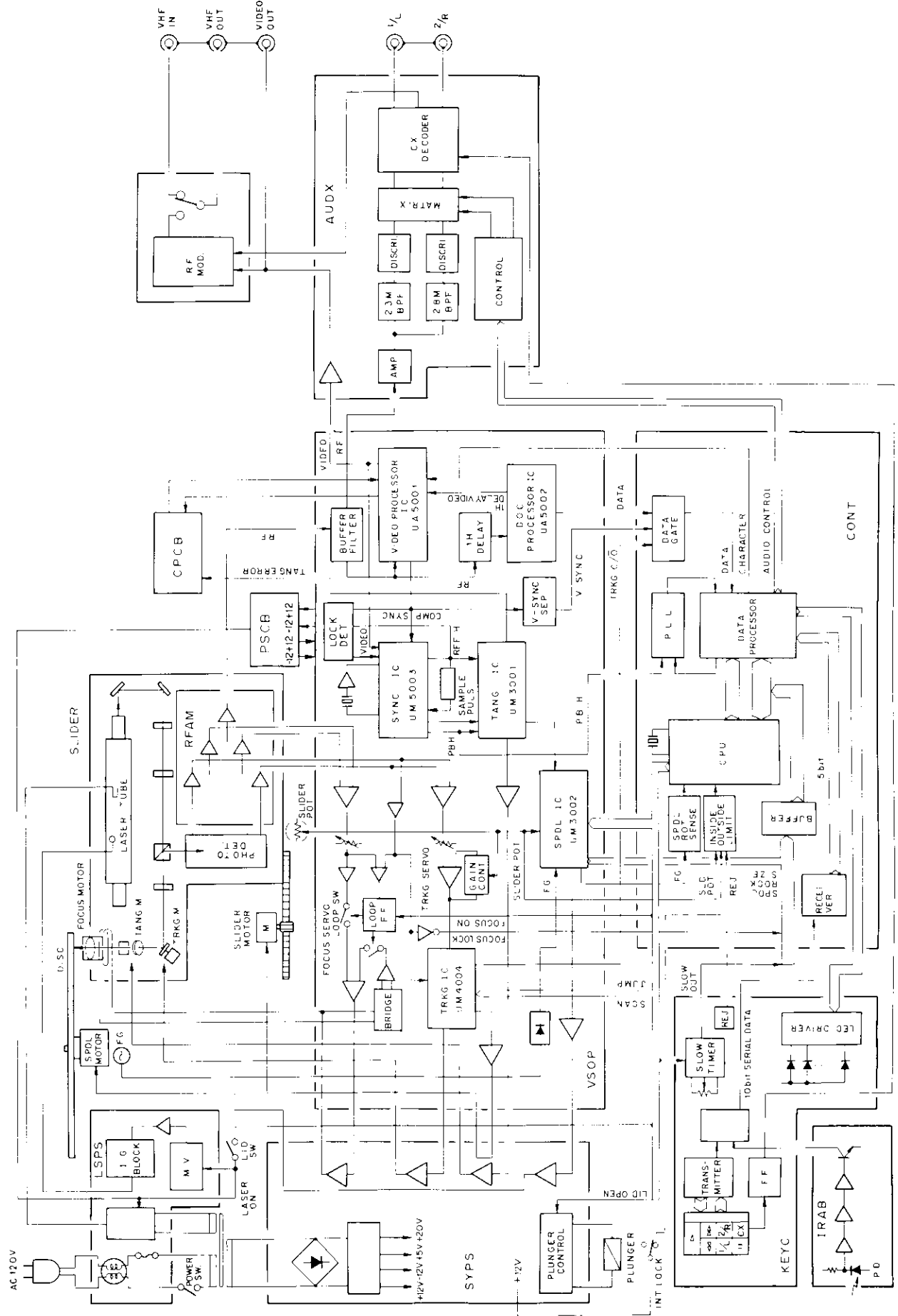
CONTENTS

1. BLOCK DIAGRAM	2	2. New SYPS, LSPS and MCNB	23
2. DISASSEMBLY		3. New VSOP, new CPCB and PSCB	29
1. ENCLOSURE AND PCBS	3	4. CONT and GATB	39
2. HOW TO REMOVE SLIDER FROM MECHA-CHASSIS	4	5. EXPLODED VIEW AND PARTS LIST	
3. ELECTRICAL ADJUSTMENTS	5	1. EXTERNAL AND TOP VIEW	45
4. SCHEMATIC DIAGRAM, PCB PATTERNS AND PARTS LIST		2. BOTTOM VIEW	49
1. OVERALL CONNECTION DIAGRAM	20	6. SAFETY CHECK	53

PART # VRT-004
S/B LD-1100 ADD
EM
V-MARK

TOTE
INV: 015002912
MP: 260-23

1. BLOCKDIAGRAM



10

1

2

3

2. DISASSEMBLY

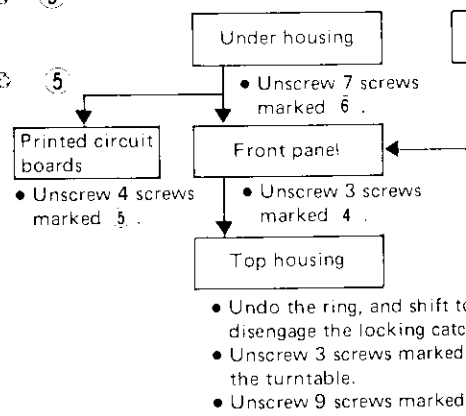
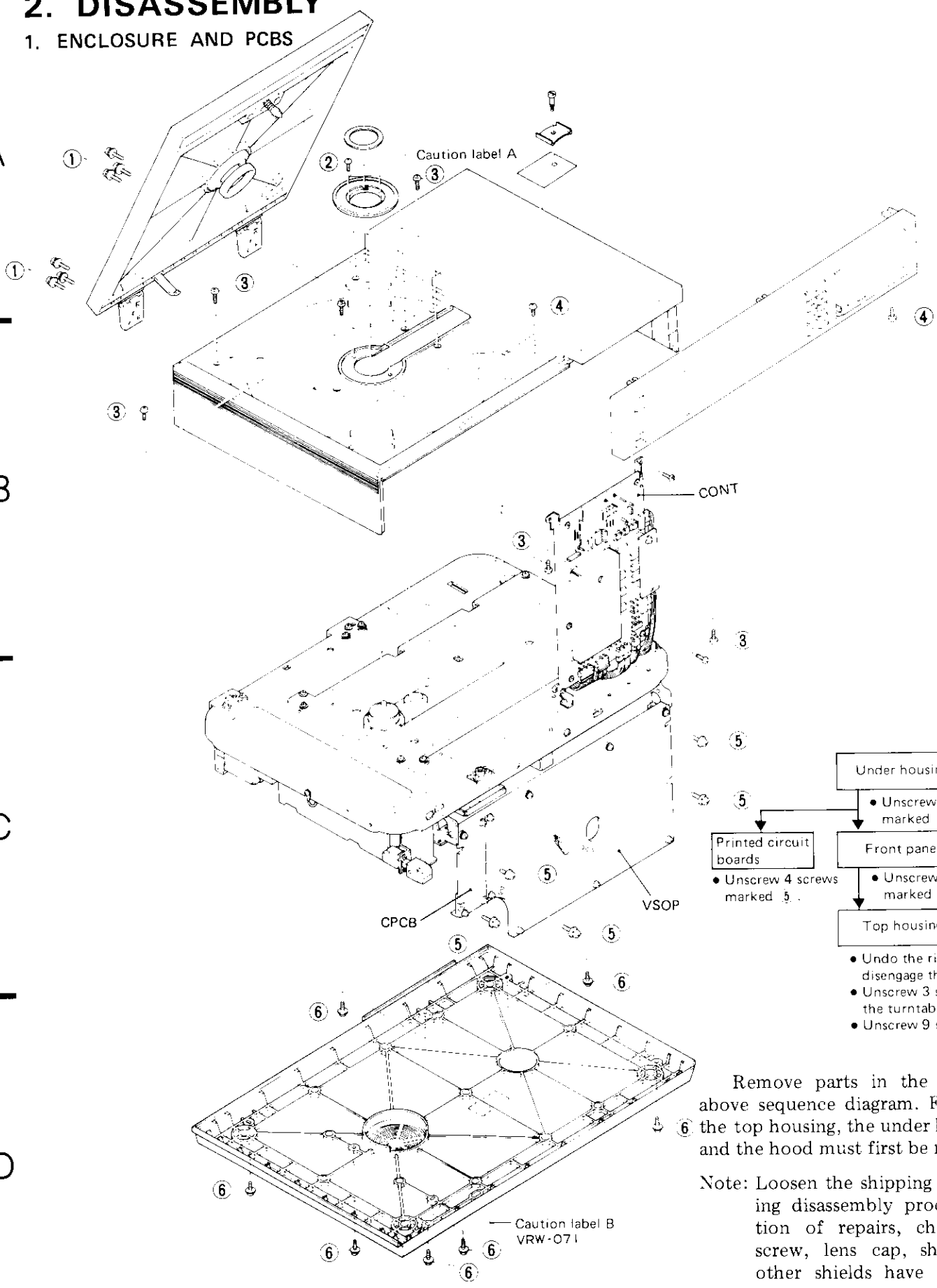
1. ENCLOSURE AND PCBS

A

B

C

D



Remove parts in the order indicated above sequence diagram. For example, to remove the top housing, the under housing, the printed circuit boards, and the hood must first be removed.

Note: Loosen the shipping screw before beginning disassembly procedures. Upon completion of repairs, check that the shipping screw, lens cap, shield case, and other shields have been fixed in their original positions.

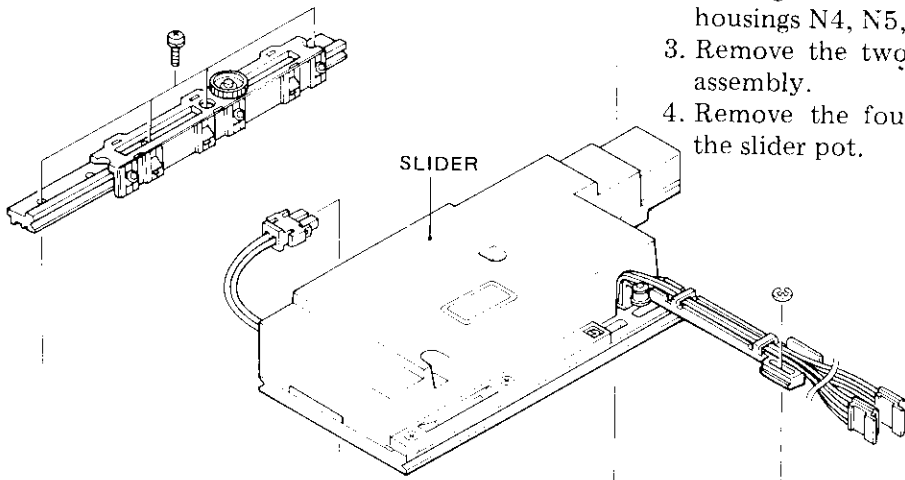
4

5

6

2. HOW TO REMOVE SLIDER FROM MECH-CHASSIS

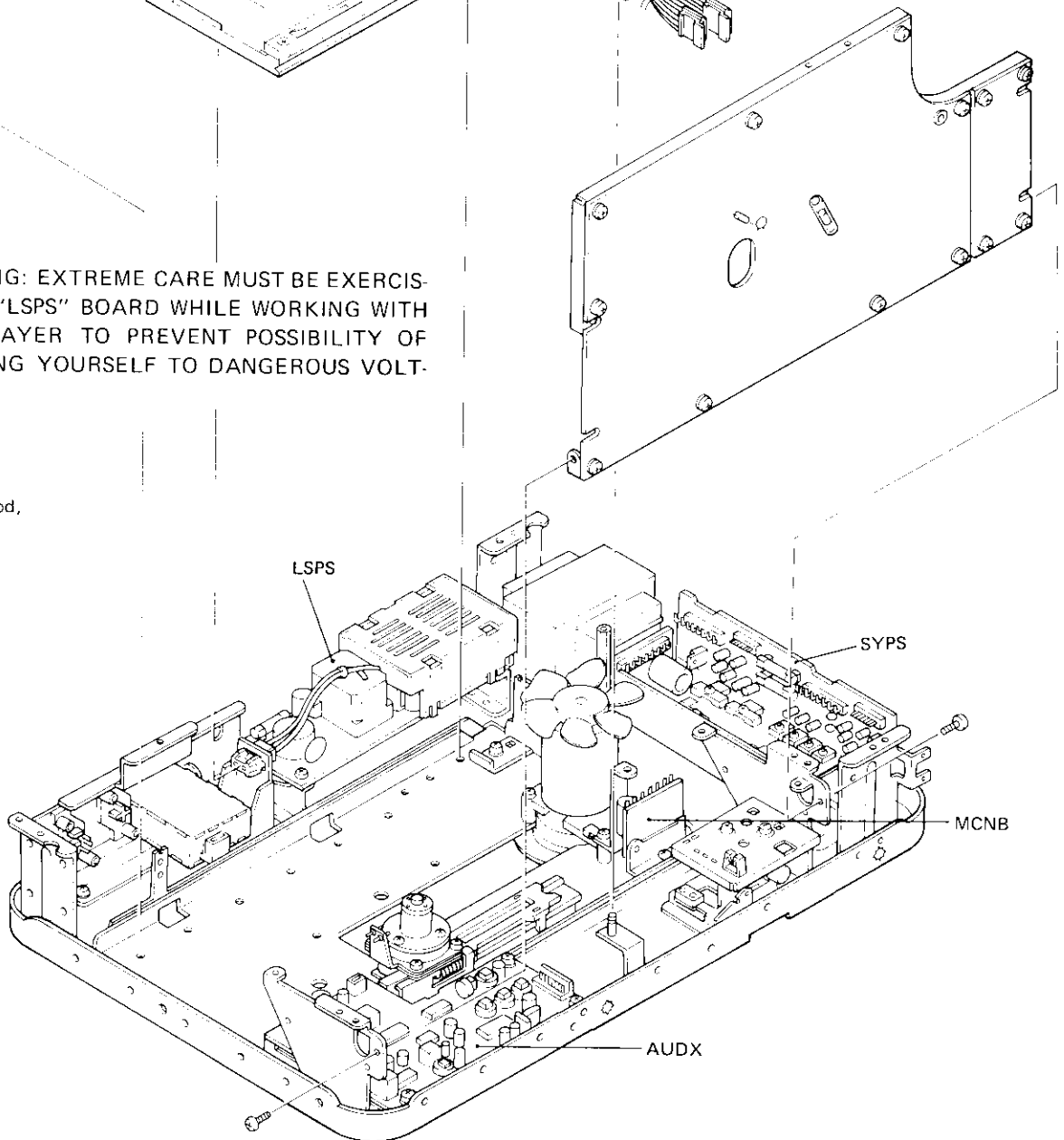
1. Remove the four fixing screws on the VSOP board, and open the VSOP.
2. Put the slider harness out of the joint by removing the E washer, and disconnect the housings N4, N5, and high voltage cap.
3. Remove the two screws installed the slider-pot assembly.
4. Remove the four screws installed the rail near the slider pot.



WARNING: EXTREME CARE MUST BE EXERCISED TO "LSPS" BOARD WHILE WORKING WITH THE PLAYER TO PREVENT POSSIBILITY OF EXPOSING YOURSELF TO DANGEROUS VOLTAGES.

ing
 v 7 screws
 6 .
 el
 v 3 screws
 4 .
 ing
 ing, and shift to one side to
 the locking catches.
 screws marked 2 , and remove
 ble.
 screws marked 3 .

Hood
 • Open the hood,
 and unscrew
 6 screws
 marked 1 .



order indicated in the
 For example, to remove
 housing, the front panel
 removed.

screw before commenc-
 edures. Upon comple-
 check that the shipping
 field case, barrier, and
 been fixed in suitable

A
 B
 C
 D

4

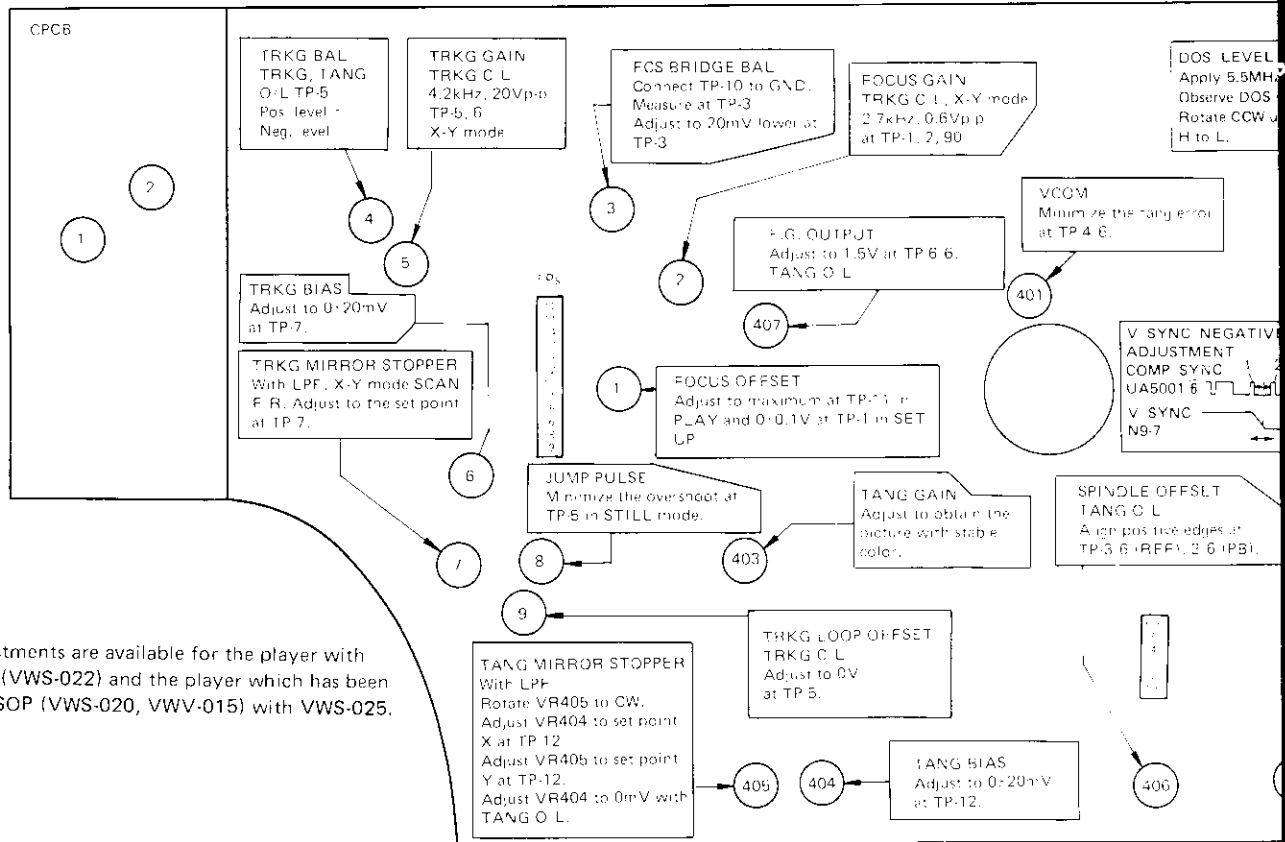
5

6

4

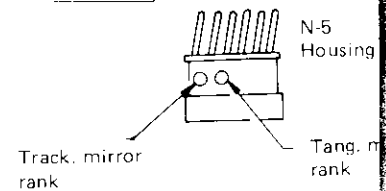
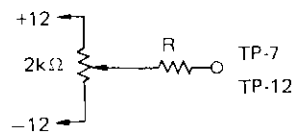
3. ELECTRICAL ADJUSTMENTS

ADJUSTMENT LOCATION VSOP Board



Beam Pass Check

MIRROR RANK	RESISTOR FOR APPLYING MIRROR BIAS: R (Ω)
C1	316
C2	300
C3	273
D	240
E	218

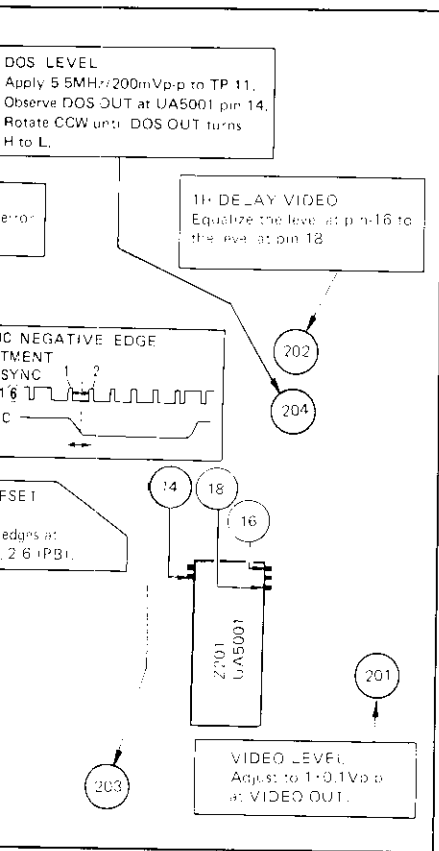


TRKG Mirror Stopper

MIRROR RANK	SET POINT (V)	
CODE	COLOR	SET POINT (V)
C 1	BLK	+ 0.50 ± 0.05
C 2	RED	+ 0.55 ± 0.05
C 3	YEW	+ 0.60 ± 0.05
D	BLU	+ 0.70 ± 0.10
E	GRN	+ 0.90 ± 0.10

TANG Mirror Stopper

MIRROR RANK	SET POINT X	
CODE	COLOR	SET POINT X
C1	BLK	- 0.55 (V)
C2	RED	- 0.60
C3	YEW	- 0.65
D	BLU	- 0.70
E	GRN	- 0.80



N-5
Housing

Tang. mirror
rank

Mirror Stopper

TP-12	
POINT X	SET POINT Y
55 (V)	- 0.40 (V)
60	- 0.45
65	- 0.50
70	- 0.55
80	- 0.65

The following tools and equipments will be required to perform service adjustment on the player unit.

- Dual trace oscilloscope
- Monitor TV
- Test disc (A2-04)
- AF oscillator
- Frequency counter or NTSC signal generator
- Short post (GGV-050) 4-pcs
- Long post (GGV-051) 4-pcs
- 30° player stand (GGV-031)
- Extension cable (GGV-032)
- Short clip
- Disc clamp
- Low-pass filter (47-kilohms/0.01μF)

Prior to making general adjustments, prepare the unit in accordance with the items listed in the following:

- Remove the under housing for VSOP adjustment. Using the 30° player stand, tilt the front of the unit 30° from the horizontal. Remove the 4 fixing screws on the VSOP board, then connect the extension cable into the test points on the VSOP board.
- Install a test disc (A2-04) on the spindle, and clamp the disc.
- Connect the monitor TV to the VIDEO OUTPUT terminal.
- Turn on and hold the inter-lock and lid switch.
- Slider must be completely aligned (with exception of Grating).
- Verify correct power supply voltages.
- Plug the power cord into a 120V/60Hz outlet.

NOTE:

- 10:1 probes are used in these adjustment. Scope ranges are shown with the probe in use. However, it may be necessary with some scope to use a 1:1 probe in X-Y mode to obtain sufficient gain.

WARNING: EXTREME CARE MUST BE EXERCISED TO "LSPS" BOARD WHILE WORKING WITH THE PLAYER TO PREVENT POSSIBILITY OF EXPOSING YOURSELF TO DANGEROUS VOLTAGES.

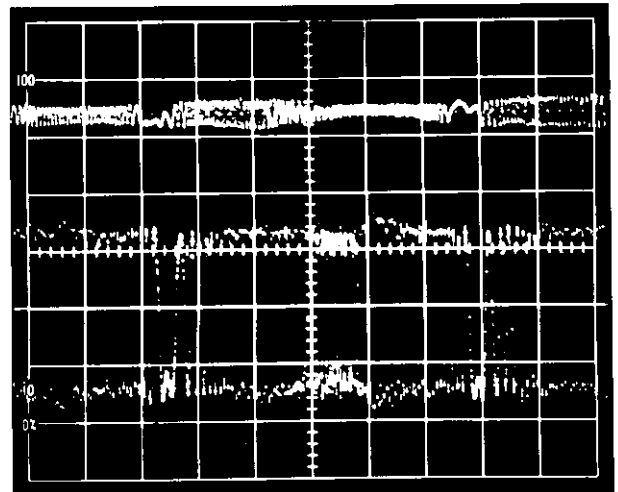
VSOP board TPs list

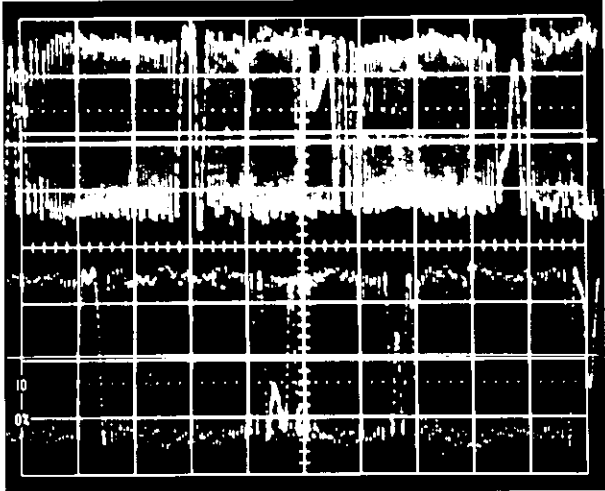
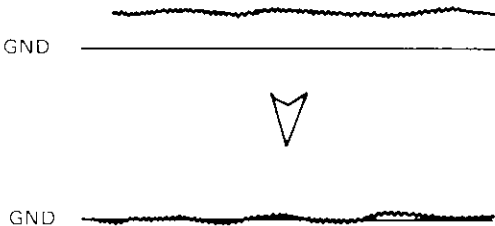
TP-1	Focus error	1/6	To make tangential loop open, short to GND.
2	OSC (focus) input	2	PB H
3	Bridge balance	3	REF H
4	GND	4	tangential error
5	Tracking error	5	N.C.
6	OSC (tracking) input	6/6	FG Output
7	Tracking return		
8	To make tracking loop open, short to GND.		
9	GND		
10	Focus drive		
11	RF signal		
12	Tangential return		

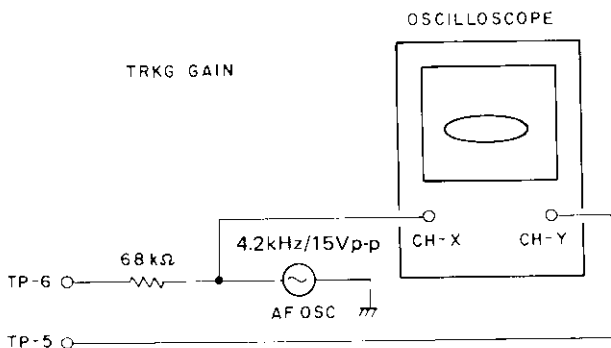
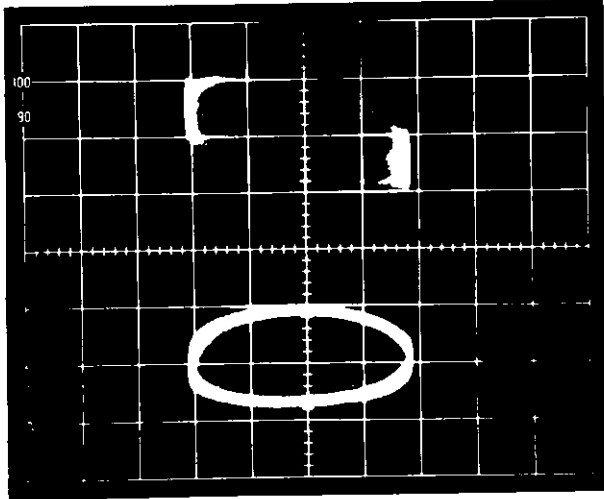
Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
						<p>PLAYER WITH NEW VSOP BOARD (VWS-022) Connect pin-1 (wrapping terminal) of PSCB board for the adjustments step 1 to 5; thereby the +12V and -12V lines on the VSOP board are activated.</p>
1	SET UP	5mV/div		TP-12	VR404	<p>TANGENTIAL MIRROR BIAS When VSOP board is replaced, this step is necessary to protect the tangential mirror. Verify the voltage on TP-12 is $0 \pm 20\text{mV}$; if not, adjust the VR404 to satisfy the above.</p>
2	SET UP	5mV/div		TP-7	VR6	<p>TRACKING MIRROR BIAS When VSOP board is replaced, this step is necessary to protect the tracking mirror. Verify the voltage on TP-7 lies within $0 \pm 20\text{mV}$. If not, adjust the VR6 to satisfy the above.</p>
3	SET UP	5mV/div		TP-10 TP-3	VR3	<p>FOCUS BRIDGE BALANCE Connect TP-10 to GND. Measure the voltage at TP-3, then disconnect TP-10 from GND. Adjust VR3 (bridge bal.) so that the voltage at TP-3 will be 20mV lower than that measured voltage. This adjustment must be finished within one minute after the POWER is turned on.</p>
4	SET UP	5mV/div		TP-1	VR1	<p>FOCUS OFFSET INITIAL SET Adjust to 0mV at TP-1.</p>
5	SET UP	0.2V/div		TP-3/6	VC401	<p>REF. H FREQUENCY Connect frequency counter to TP-3/6 and verify the ref. H. frequency is 15.734kHz; if not, adjust VC-401 to satisfy the above.</p> <p>If you have an NTSC signal generator, connect CH-1 of the scope to the REF H out of the NTSC generator, and also connect CH-2 to TP-3/6. With triggering by CH-1 input, adjust VC401 to stop the current of the waveform in CH-2.</p>

Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
6	PLAY		TANG O/L TRKG O/L	TP-6/6	VR407	<p>SPINDLE LOCK CHECK</p> <p>Connect TP-1/6 to GND to make tangential servo loop open. Scan to middle of the disc, then player in PLAY mode; verify spindle servo loop has been locked. If not, F.G. output adjustment should be performed.</p> <p>Press REJECT key, then set VR407 (F.G.) to the mechanical center. Again, press PLAY key; after the spindle servo has been locked, adjust VR407 to 1.5V at TP-6/6.</p>
7	STILL	0.1V/div 5ms/div	TANG O/L TRKG O/L	TP-5	GRATING	<p>TRACKING ERROR CHECK, GRATING ADJUSTMENT</p> <p>With the tangential servo loop still opened, connect TP-8 to GND to make tracking loop open. Verify the tracking error level is more than 2Vp-p; if not, grating must be adjusted.</p> <p>Scan to the point where the slider's hole (for grating adjustment) comes on center of the mech. chassis opening, then player in STILL mode. Insert grating driver into the opening, then engage the cog of the grating and driver. While observing the tracking error, adjust the grating to find the smooth null point waveform; then rotate the grating driver CCW direction to find the first point where the maximum tracking error with smooth envelope is obtained.</p> <p>Remove the tracking driver while making sure the waveform gets no smaller.</p>

#14,000



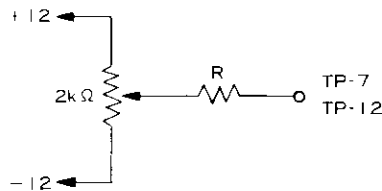
Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
8	PLAY #20,000	0.1V/div 5ms/div	TANG O/L TRKG O/L	TP-5	VR4	<p>TRACKING BALANCE</p> <p>Push PLAY key and scan to middle of the disc. With the tracking and tangential servo loops still opened, adjust VR4 (tracking balance) to where the tracking error waveform is centered on 0V, and the positive and negative peak amplitudes are same level.</p> 
8'	PLAY	0.1V/div	TRKG C/L	TP-5	VR9	<p>TRKG LOOP OFFSET (VWS-025, VWS-022)</p> <p>Disconnect TP-8 from GND (TRKG C/L). Adjust VR9 to where the tracking error waveform is centered on 0V.</p> 

Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
9	PLAY #20,000	CH-X: 0.2V/div CH-Y: 50mV/div	TANG O/L TRKG C/L	TP-6 TP-5	VR5	<p>TRACKING LOOP GAIN</p> <p>Disconnect TP-8 from GND (to make tracking loop close), set the oscilloscope into X-Y mode and AF oscillator output to 4.2kHz, 15Vp-p. Scan to middle of the disc.</p> <p>Connect the oscillator output to CH-X of the scope and also to TP-6 through a 68-kilohms, 1/4W resistor. Connect CH-Y to TP-5. (refer to the connection diagram shown below)</p>  <p>Adjust VR5 (tracking gain) to make lissajous figure into horizontal ellipse. This means the phase shift between CH-X and CH-Y is 90-degrees. After this adjustment has been done, disconnect the oscillator and oscilloscope, and reset the oscilloscope mode to normal mode.</p> 

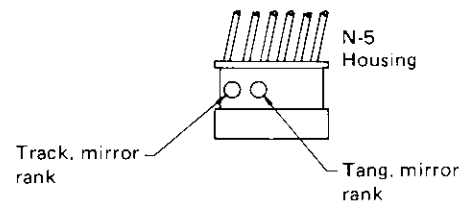
Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
10	PLAY #20,000	CH-X: 10mV/div CH-Y: 20mV/div	TANG O/L TRKG C/L	TP-2 TP-1		<p>FOCUS GAIN</p> <p>Set the oscilloscope into X-Y mode and AF oscillator output to 2.7kHz, 0.6Vp-p. Push PLAY key and scan to the middle of the disc.</p> <p>Connect the oscillator output to CH-X of the scope and also to TP-2 through a 68-kilohms, 1/4W resistor. Connect CH-Y to TP-1. (refer to the connection diagram shown below)</p> <div data-bbox="885 598 1492 945" data-label="Diagram"> </div> <p>VR2</p> <p>Adjust VR2 (focus gain) to make lissajous figure into horizontal ellipse. This means the phase shift between CH-X and CH-Y is 90-degrees. After this adjustment has been done, disconnect the oscillator and oscilloscope, and reset the oscilloscope mode to normal mode.</p> <div data-bbox="901 1333 1500 1837" data-label="Image"> </div>

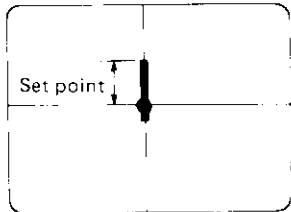
Step No.	Mode, Frame No.	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
11	PLAY #100	10mV/div	TANG C/L TRKG C/L	TP-11	VR1	<p>FOCUS OFFSET</p> <p>Player in PLAY mode. TANG, TRKG C/L. While observing RF signal at TP-11, adjust VR1 (focus offset) to obtain maximum RF signal. Next, while observing focus error at TP-1, adjust the scope V-position VR to center the focus error to a horizontal scale line of the scope. Push REJECT button, then read the offset level from that horizontal scale line. The reading should be lied within a range of $0 \pm 0.1V$; if not, adjust VR1 to the near limit of the range.</p>
	SET UP			TP-1		
12	PLAY #20,000		TANG O/L TRKG O/L			<p>BEAM PASS CHECK</p> <p>* This step has to be performed when the slider is replaced or the problem seems to relate with optics.</p> <p>Player in PLAY mode at middle of the disc, connect TP-8 and TP-1/6 to GND (tracking and tangential servo open). Release the tracking and tangential mirror stoppers. Tracking and tangential mirrors are classified into 5 ranks by their sensitivities as shown below and the mirror ranks are designated on the connector. Verify the mirror ranks.</p>

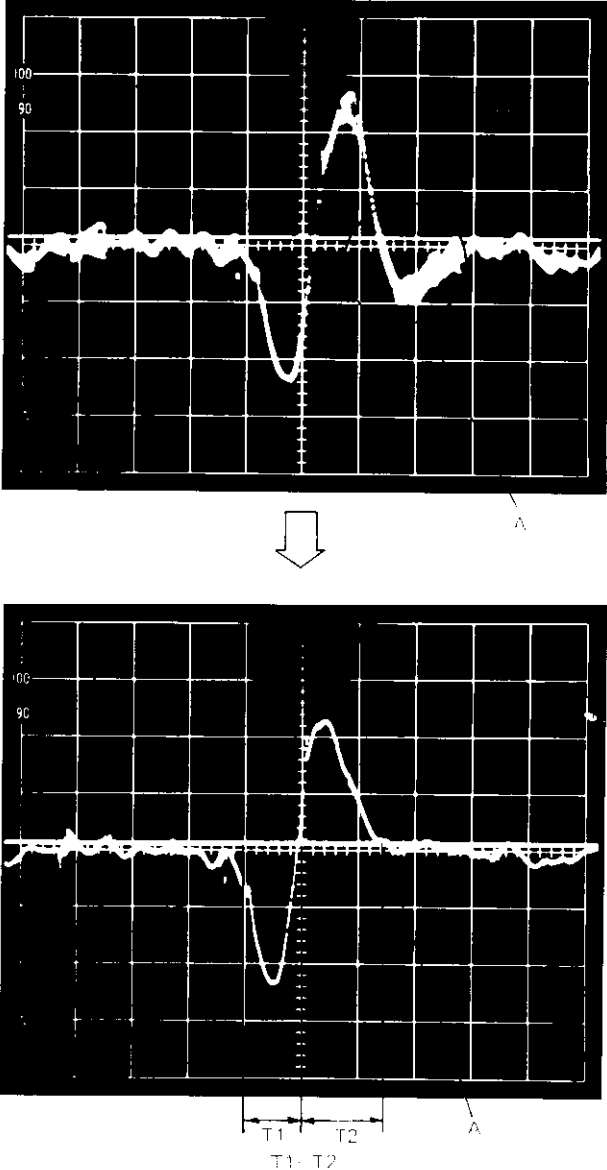
BEAM PASS CHECK JIG



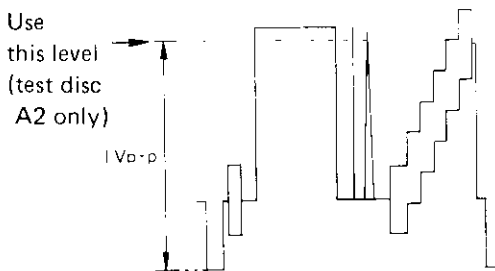
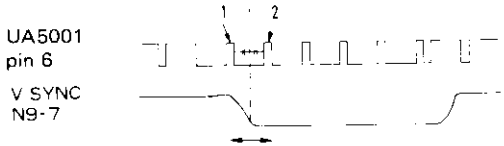
MIRROR RANK		RESISTOR FOR APPLYING MIRROR BIAS: R (Ω)
CODE	COLOR	
C1	BLK	316
C2	RED	300
C3	YEW	273
D	BLU	240
E	GRN	218



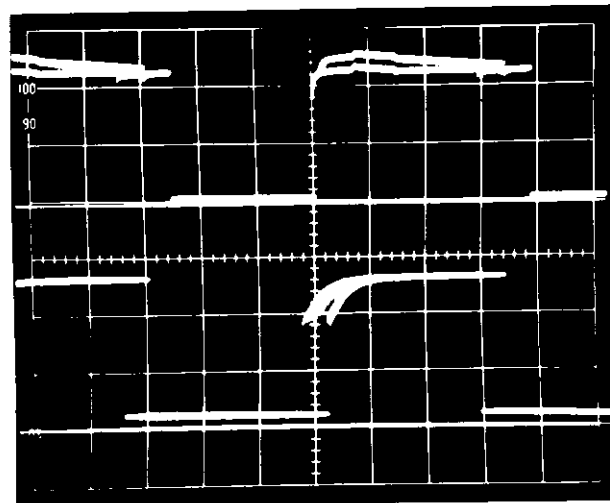
Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details																				
12				TP-7 TP-5 TP-12 TP-5		<p>Connect each end of VR, jig to +12V line and -12V line of VSOP, and also center tap of the VR jig to TP-7 (TRKG return) through the resistor corresponding to the mirror rank.</p> <p>Connect the scope to TP-5 (TRKG error).</p> <p>Adjust the VR jig to obtain maximum tracking error, and note the peak-to-peak amplitude Eto.</p> <p>Rotate the VR jig so that maximum positive mirror bias is put to the tracking mirror, and measure the tracking error peak-to-peak amplitude Etp.</p> <p>Then rotate the VR jig so that maximum negative mirror bias is put to the mirror, and measure the tracking error peak-to-peak amplitude Etn.</p> <p>Likewise, put mirror bias to the tangential mirror at TP-12 (TANG return), and measure the tracking error peak-to-peak amplitudes Eto, Etp, and Etn at TP-5.</p> <p>Make sure the followings $Etp > 0.65Eto$, and $Etn > 0.65Eto$ If not, the slider needs realignment.</p>																				
13	SCAN FWD		TANG C/L TRKG C/L	TP-7	VR7	<p>TRACKING MIRROR STOPPER</p> <p>Insert a low-pass filter (47-kilohms/0.01μF) between the probe (10:1) and scope input (CH-Y), set the oscilloscope into X-Y mode.</p> <p>Connect the probe to TP-7, and verify the ground level in CH-Y input. CH-X is not used. While scanning to forward direction, adjust VR7 to obtain a positive voltage depending on the mirror rank. Mirror ranks and set points are shown below. Disconnect the low-pass filter, and reset the oscilloscope to normal mode.</p> <table border="1" data-bbox="891 1381 1413 1684"> <thead> <tr> <th colspan="2">MIRROR RANK</th> <th rowspan="2">SET POINT (V)</th> </tr> <tr> <th>CODE</th> <th>COLOR</th> </tr> </thead> <tbody> <tr> <td>C 1</td> <td>BLK</td> <td>+0.50\pm0.05</td> </tr> <tr> <td>C 2</td> <td>RED</td> <td>+0.55\pm0.05</td> </tr> <tr> <td>C 3</td> <td>YEW</td> <td>+0.60\pm0.05</td> </tr> <tr> <td>D</td> <td>BLU</td> <td>+0.70\pm0.10</td> </tr> <tr> <td>E</td> <td>GRN</td> <td>+0.90\pm0.10</td> </tr> </tbody> </table> 	MIRROR RANK		SET POINT (V)	CODE	COLOR	C 1	BLK	+0.50 \pm 0.05	C 2	RED	+0.55 \pm 0.05	C 3	YEW	+0.60 \pm 0.05	D	BLU	+0.70 \pm 0.10	E	GRN	+0.90 \pm 0.10
MIRROR RANK		SET POINT (V)																								
CODE	COLOR																									
C 1	BLK	+0.50 \pm 0.05																								
C 2	RED	+0.55 \pm 0.05																								
C 3	YEW	+0.60 \pm 0.05																								
D	BLU	+0.70 \pm 0.10																								
E	GRN	+0.90 \pm 0.10																								

Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
14	STILL	50mV/div H: A: 5ms/div B: delayed 0.1ms/div	TANG C/L TRKG C/L	TP-5	VR8	<p>JUMP PULSE ADJUSTMENT</p> <p>Scan to inside of the disc, and push the STILL key. Observe the tracking error at TP-5, then set the scope into "A inten." sweep mode. Catch the jump pulse by adjusting the delay time control of the scope, then set the scope into the delayed sweep mode.</p> <p>Adjust VR8 to minimize the negative over-shoot as shown below.</p> <p>Reset the scope to normal sweep mode.</p> 

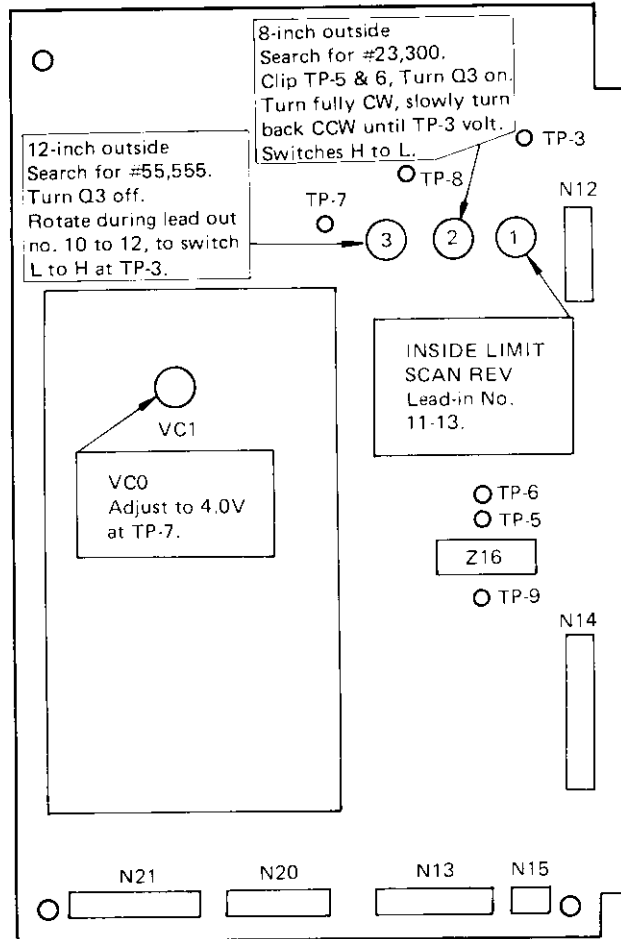
Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details																									
15	PLAY #1,000	5mV/div A.C. coupled Trigger ext. on V-sync.	TANG C/L TRLG C/L	TP-4/6	VR401	<p>VCOM ADJUSTMENT</p> <p>Adjust VR401 (VCOM) to minimize the tangential error waveform in vertical blanking interval at TP-4/6.</p>																									
16	PLAY #1,000	10mV/div	TANG C/L TRKG C/L TANG O/L	TP-12	VR405 VR404 VR405 VR404	<p>TANGENTIAL MIRROR STOPPER</p> <p>Insert the low-pass filter (47-kilohm/0.01μF) between the probe (10:1) and the scope input. Connect the probe to TP-12 (tang. return). First, rotate VR405 fully CW direction (to widen the mirror operating range); adjust VR404 (tang. offset) to obtain the set point X in relation to the tangential mirror sensitivity (mirror rank). (refer to the below table)</p> <p>Next, rotate VR405 slowly to CCW direction and adjust to the set point Y at TP-12.</p> <p>After this adjustment has been done, connect TP-1/6 to GND (to make tangential servo loop open), adjust VR404 (tangential offset) to 0mV at TP-12.</p> <p>Disconnect TP-1/6 from GND.</p> <table border="1" data-bbox="881 1444 1475 1646"> <thead> <tr> <th rowspan="2"></th> <th rowspan="2">Mirror Rank.</th> <th>C 1</th> <th>C 2</th> <th>C 3</th> <th>D</th> <th>E</th> </tr> <tr> <th>BLK</th> <th>RED</th> <th>YEW</th> <th>BLU</th> <th>GRN</th> </tr> </thead> <tbody> <tr> <td rowspan="2">TP-12</td> <td>SET POINT X (V)</td> <td>-0.55</td> <td>-0.60</td> <td>-0.65</td> <td>-0.70</td> <td>-0.80</td> </tr> <tr> <td>SET POINT Y (V)</td> <td>-0.40</td> <td>-0.45</td> <td>-0.50</td> <td>-0.55</td> <td>-0.65</td> </tr> </tbody> </table>		Mirror Rank.	C 1	C 2	C 3	D	E	BLK	RED	YEW	BLU	GRN	TP-12	SET POINT X (V)	-0.55	-0.60	-0.65	-0.70	-0.80	SET POINT Y (V)	-0.40	-0.45	-0.50	-0.55	-0.65
	Mirror Rank.	C 1	C 2	C 3	D	E																									
		BLK	RED	YEW	BLU	GRN																									
TP-12	SET POINT X (V)	-0.55	-0.60	-0.65	-0.70	-0.80																									
	SET POINT Y (V)	-0.40	-0.45	-0.50	-0.55	-0.65																									

Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
17	STILL #21,000	20mV/div	TANG C/L TRKG C/L	VIDEO OUT	VR201	<p>VIDEO OUTPUT LEVEL</p> <p>Player in STILL mode in composite test pattern reproducing.</p> <p>With Video Output terminated into 75-ohms, verify the video level is $1 \pm 0.1V$ from sync. tip to white level. If not, adjust VR201 slowly to satisfy the above.</p> 
18	STILL #21,000	20mV/div A.C. coupled	TANG C/L TRKG C/L	Z201 UA5001 pin-16 pin-18	VR202	<p>1-H DELAYED VIDEO LEVEL</p> <p>Verify that the video level at pin-16 of UA 5001 is equal to the video level at pin-18 of UA5001; if not, adjust VR202 slowly to satisfy the above.</p>
18'	SET UP	0.2V/div	TANG C/L TRKG C/L	TP-11 UA5001 pin 14	VR204	<p>DOS LEVEL ADJUSTMENT (VWS-025, VWS-022)</p> <p>Apply a signal of 5.5 MHz/200 mvp-p to TP-11, and observe DOS OUT at UA5001 pin-14s.</p> <p>Rotate VR204 fully clockwise, then slowly back to counter-clockwise until the DOS OUT turns H to L.</p>
19	PLAY #20,000		TANG C/L TRKG C/L	N9-7 UA5001 pin-6	VR203	<p>V SYNC NEGATIVE EDGE ADJUSTMENT</p> <p>Play in the vicinity of #20,000, and observe COMP SYNC (UA5001 pin6) and V sync (N9-7).</p> <p>Check that the V SYNC negative edge is aligned with the center position between the 1st and 2nd equalization pulses after the start of the vertical synchronizing negative edge (see diagram below).</p> <p>If not, adjust with VR203.</p> 

Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
20	STILL #49,000	0.1V/div	TANG C/L TRKG C/L	Monitor	VR403	<p>TANG GAIN, CPCB ADJUSTMENT</p> <p>Search for #49,000 and switch to STILL mode. Turn VR403 (TANG gain) fully clockwise, and check the presence of color distortion. Turn CPCB VR2 fully clockwise. Turn VR403 back counter clockwise until after the color distortion ceases altogether. Turn CPCB VR2 back counter clockwise until the red streaking in the picture become inconspicuous. Check for the presence of jump waves. If there is a large overshoot following a jump wave, readjust VR8 as described in step 14. Also check that there is no conspicuous disturbance in TRKG error which will cause red streaking.</p>
21	PLAY #20,000	CH:1 0.2V/div CH:2 0.2V/div H: 10 μ s/div	TANG O/L TRKG C/L	TP-3/6 (REF H) TP-2/6 (PB H)	VR406	<p>SPDL OFFSET</p> <p>Connect TP-1/6 to ground (TANG O/L) and switch to PLAY mode at about #20,000. Adjust VR406 to align the center of positive edge of PB H (TP-2/6, including jitter) with the positive edge of the REF H (TP-3/6). Check that the phase difference between PB H and REF H is less than $\pm 2\mu$s after 20 to 30 seconds. If the phase difference is greater, fine adjust the VR406. Disconnect TP-1/6 from ground (TANG C/L), and check that there is no red streaking or other color distortion in the monitor TV.</p>



CONT Board



Step No.	Mode	Scope Range	Servo Loop	Test Point No.	Adj. Point	Adjustment and Check Details
22	SCAN REV Inner most track		TRKG O/L	Monitor	CONT VR1	CONT INSIDE LIMIT Following PLAY mode, proceed with SCAN FWD and SCAN REV modes, and adjust VR1 so that still mode is obtained between lead-in nos. 8 and 10 on the monitor. (no. 9 should be seen on the screen)
23	PLAY	0.2V/div	C/L	TP-7	VC1	VCO ADJUSTMENT Turn trimmer VC1 inside the shield case to obtain a DC level at TP-7 of 4.0V. Also check that the frame number is steady.
24	STILL #23,300 ±150			TP-5 TP-6 TP-8 TP-3	VR2	8-INCH OUTSIDE LIMIT Search for #23,300. Clip TP-5 and TP-6 together with a shorting clip, and connect a 10 kΩ resistor between TP-5 and TP-8 (thereby turning Q3 on). After turning VR2 fully clockwise, slowly turn back counter clockwise until the position where the TP-3 voltage switches from H to L is reached. Disconnect the resistor between TP-5 and TP-8.
25	PLAY #55,555			TP-5 TP-6 TP-3	VR3	12-INCH DISC OUTSIDE LIMIT Search for #55,555 and switch to PLAY mode. Turn VR3 during playback of lead-out no. 10~12 to switch the TP-3 voltage from L to H. Continue in PLAY mode and check that the TP-3 voltage changes back to L from H between 8 and 15 seconds after no. 19 appears in the monitor. Readjust VR3 if necessary to satisfy this requirement. Switch to SCAN REV mode and return to around lead out no. 10. Remove the shorting clip between TP-5 and TP-6 and return to PLAY mode. Play no. 19 and check that the reject operation occurs from 8 to 15 seconds later.

4. SCHEMATIC DIAGRAM P. C. B. PATTERNS AND PARTS LIST

1. OVERALL CONNECTION DIAGRAM

LD-1100 (Serial No. 3611501-)

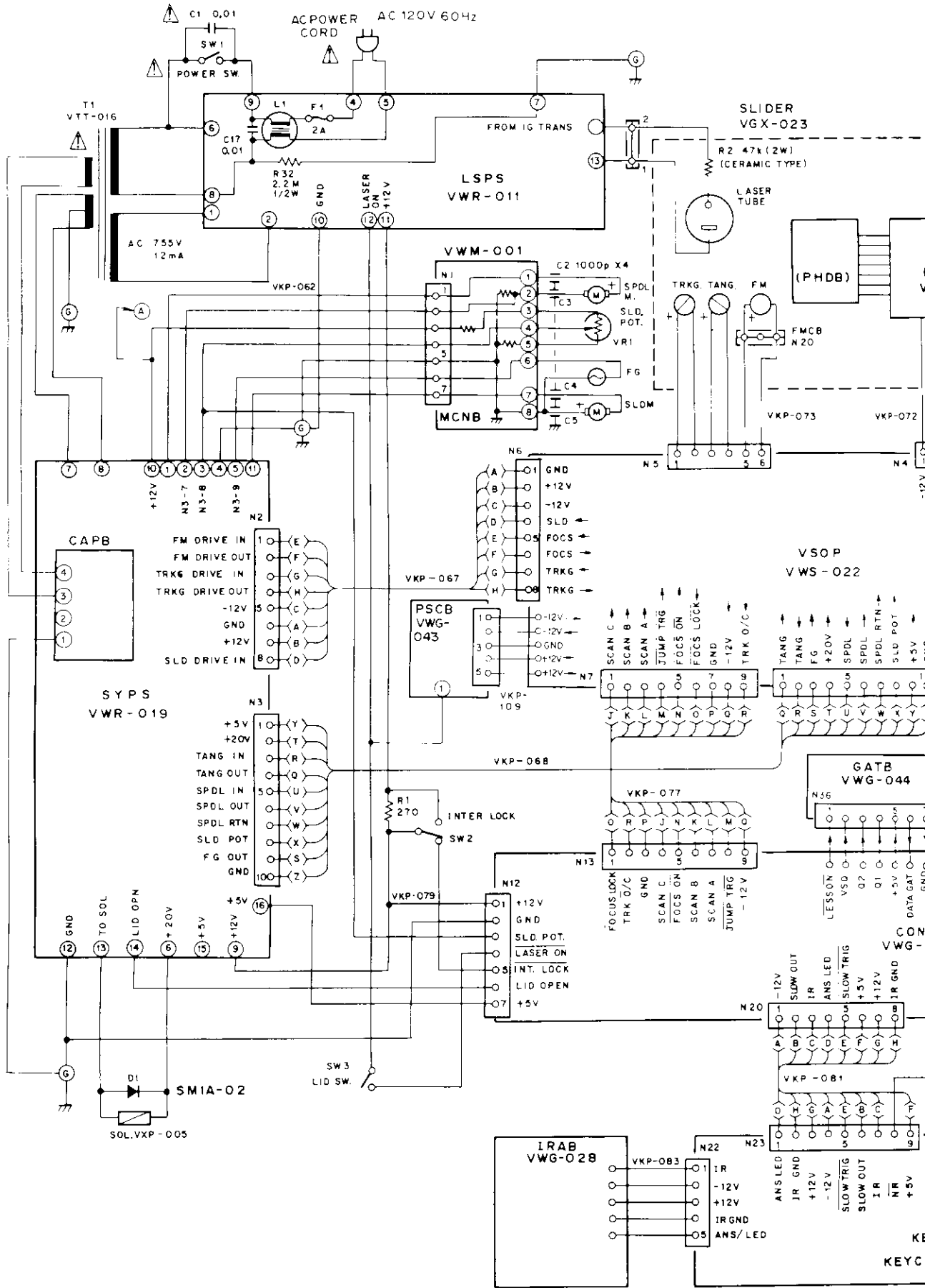
Part No.	Symbol & Description	Part No.	Symbol & Description
SM1A-02	D1	VWG-052	CONT
RD1/4PS271J	R1	VWG-028	IRAB
VCS-005	VR1	VWL-006	RFMD
VCG-011	C1	VWM-001	MCNB
		VWR-019	SYPS
CKDYF333Z50	C6		
VSF-006	SW2	VWG-043	PSCB
VSF-007	SW3	VWR-011	LSPS
VTT-016	T1	VWS-022	VSOP
VDG-003		VWV-010	RFAM
VSA-003	SW1	VWV-019	AUDX
VXP-005		VWV-023	CPCB
VXM-013 (VXM-015)		VWV-025	KEYC
VXM-010		VWG-044	GATB
VDA-013			
VKP-062	N1-SYPS		
VKP-067	N2-N6		
VKP-068	N3-N8		
VKP-072	N4-RFAM		
VKP-073	N5-Slider		
VKP-077	N7-N13		
VKP-078	N9, N10-N14		
VKP-079	N12-SYPS		
VKP-080	N15-N16		
VKP-081	N20-N23		
VKP-083	N22-IRAB		
VKP-090	N18-RFMD		
VKP-091	N11-AUDX		
VKP-105	N31-VSOP		
VKP-108	N34-VSOP		
VKP-109	N35-VSOP		
VKP-126	N36-CONT		

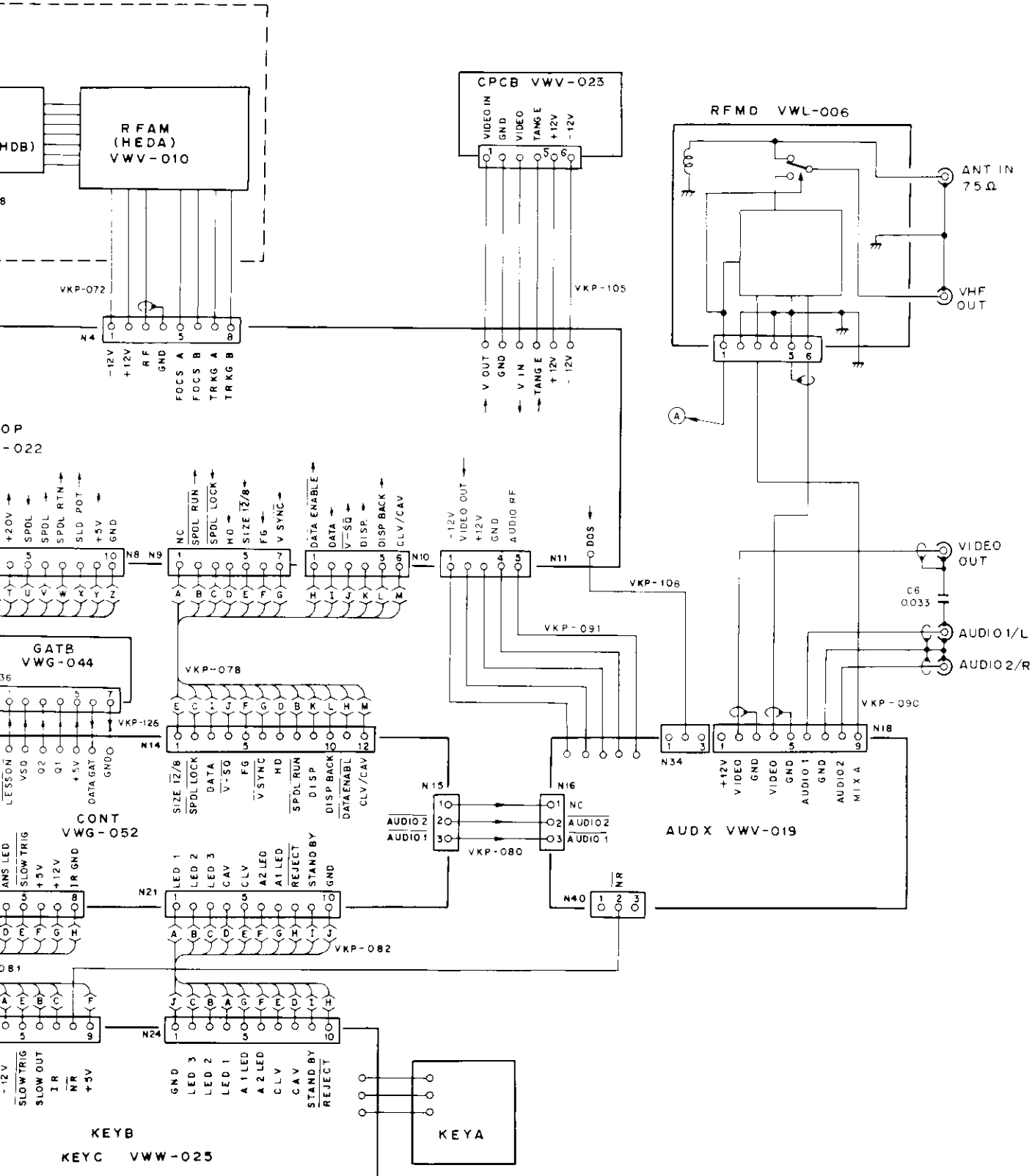
A

B

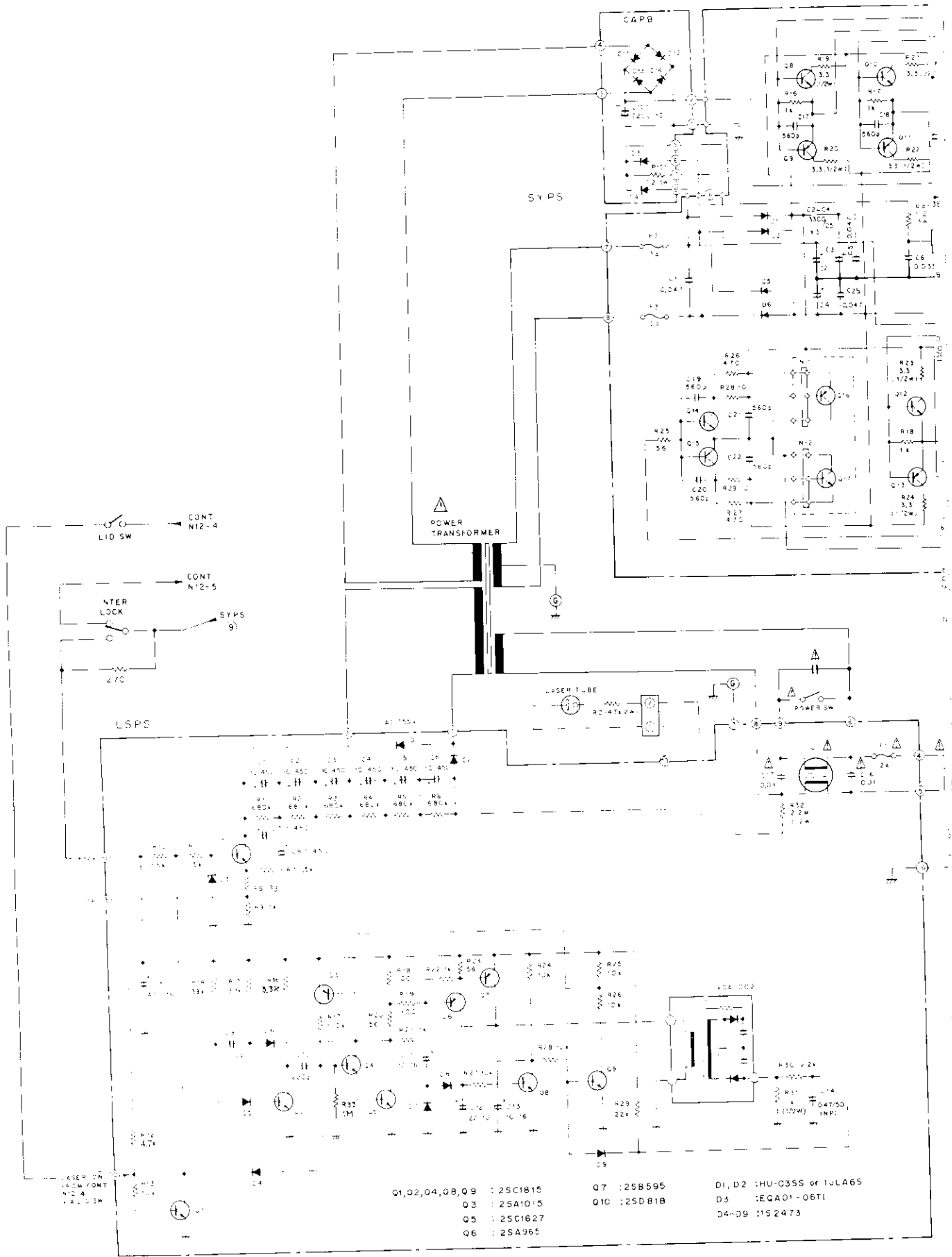
C

D

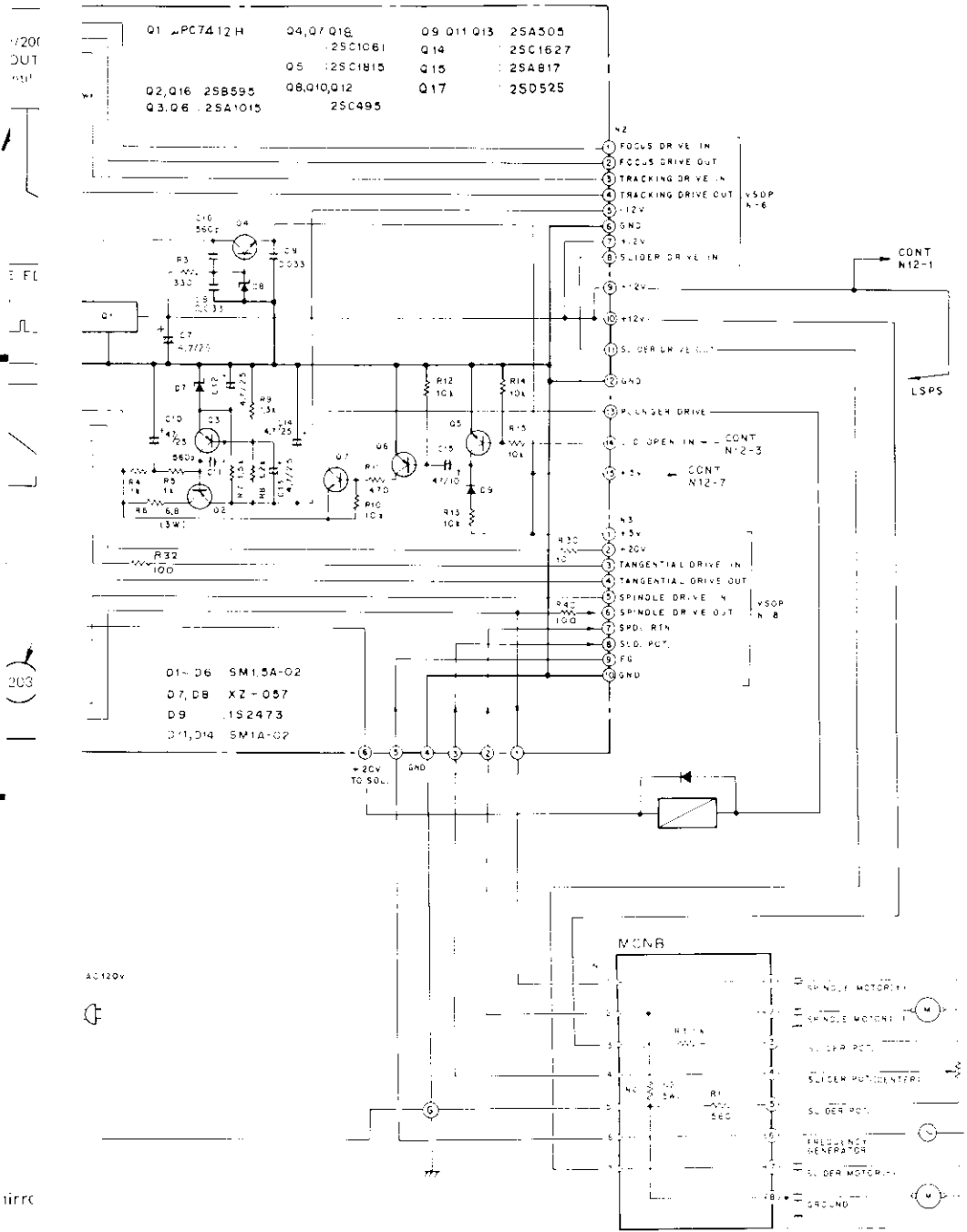




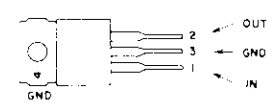
2. New SYPS, LSPS and MCNB



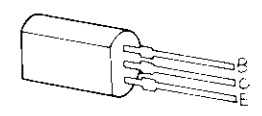
- | | | | | | |
|--------------------|-----------|-----|----------|--------|----------------------|
| Q1, Q2, Q4, Q8, Q9 | : 25C1815 | Q7 | : 25B595 | D1, D2 | : 1HU-C355 or 1JLA65 |
| Q3 | : 25A1015 | Q10 | : 25D818 | D3 | : EGA01-06T1 |
| Q5 | : 25C1627 | | | D4-D9 | : 1S2473 |
| Q6 | : 25A965 | | | | |



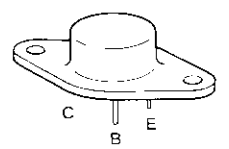
μ PC14312H
 μ PC7812H



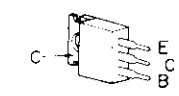
2SA965



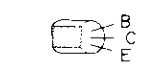
2SD818



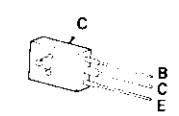
2SB595
2SC1061



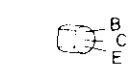
2SC1627
2SA817
2SC2320



2SA505
2SC495



2SA1015
2SC1815



WARNING: EXTREME CARE MUST BE EXERCISED TO "LSPS" BOARD WHILE WORKING WITH THE PLAYER TO PREVENT POSSIBILITY OF EXPOSING YOURSELF TO DANGEROUS VOLTAGES.

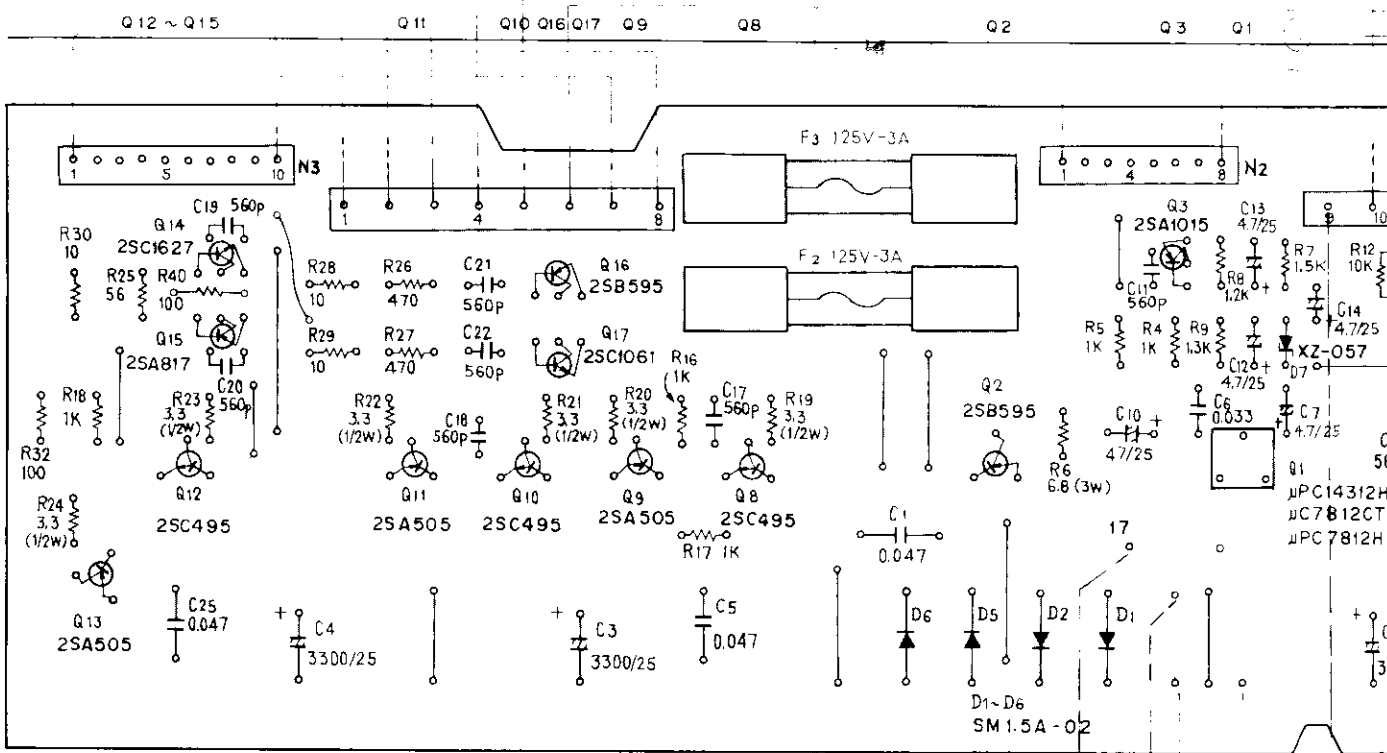
1

2

3

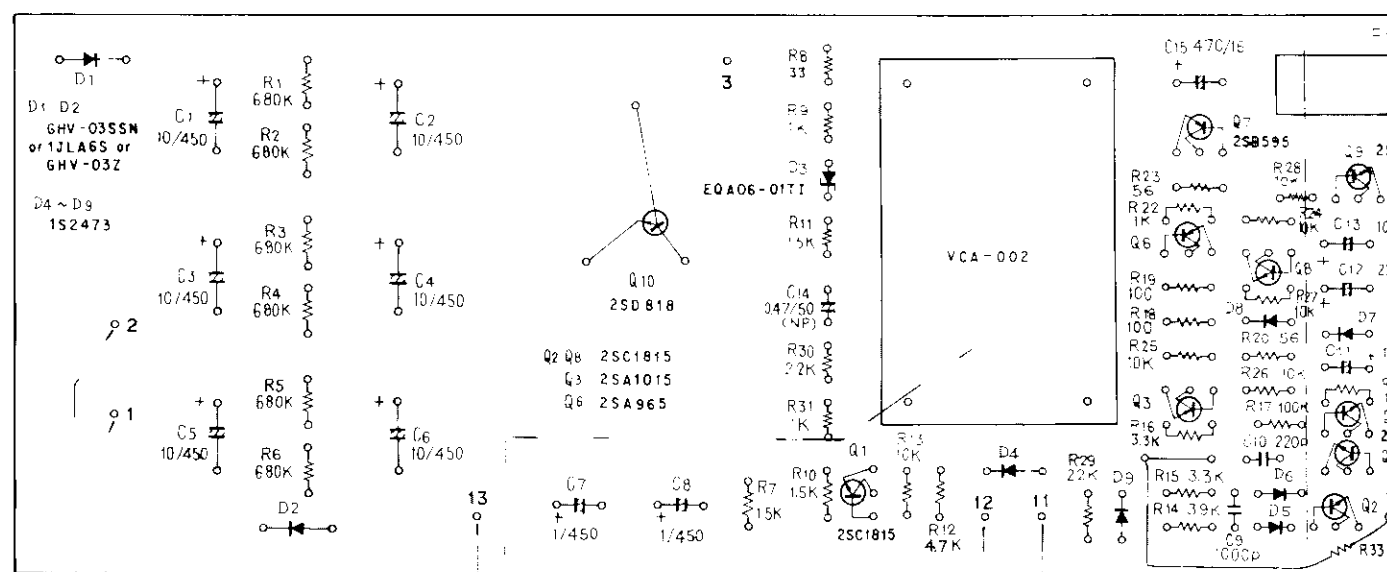
A

B



C

D



1

2

3

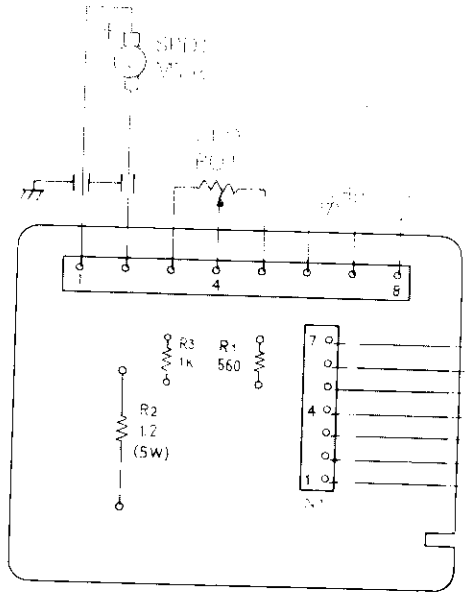
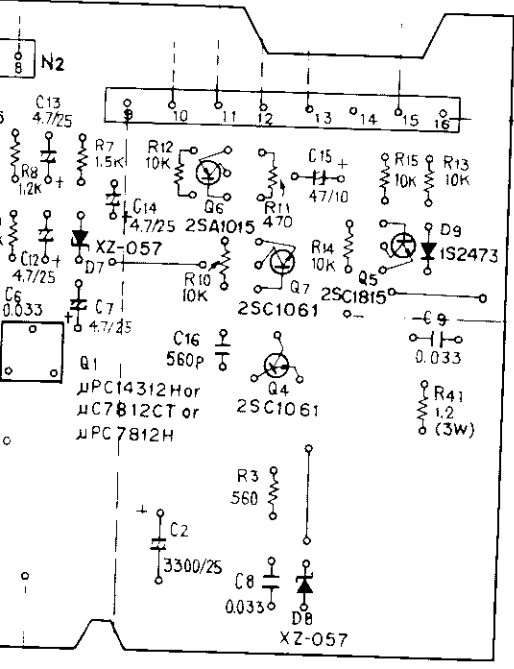
25

SYP

SEM

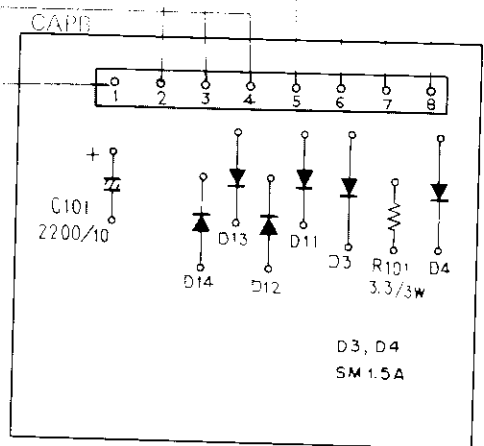
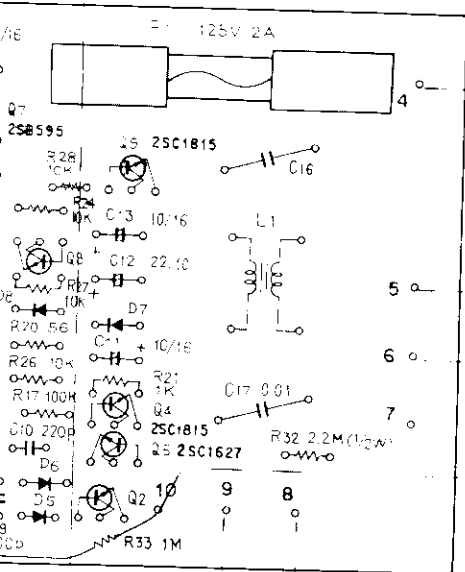
Mark

Q1 Q6 Q7 Q4 Q5



RESI

Mark



CAPA

Mark

OTHE

Mark

SYPS (VWR-019)

SEMICONDUCTORS

Mark	Part No.	Symbol & Description
	UPC7812H	Q1
	2SB595-O/Y	Q2, Q16
	2SA1015-O/Y/GR	Q3, Q6
	2SC1016-B/C	Q4, Q7
	2SC1815-O/Y/GR	Q5
	2SC495-O/Y	Q8, Q10, Q12
	2SA505-O/Y	Q9, Q11, Q13
	2SC1627-O/Y	Q14
	2SA817-O/Y	Q15
	2SD525-O/Y/GR	Q17
	SM1.5A-02	D1D6
	XZ-057	D7, D8
	1S2473	D9
	SM1A-02	D11-D14

RESISTORS

Mark	Part No.	Symbol & Description
	RD1/4VS□□□J	R3-R5, R7-R18, R25-R29, R32, R40, R33
	VCN-016	R6
	RD1/2VS□□□J	R19-R24
	VCN-004	R30
	VCN-009	R41, R101

CAPACITORS

Mark	Part No.	Symbol & Description
	CKDYF473Z50	C1, C5, C25
	VCH-009	C2-C4
	CKDYF333Z50	C6, C8, C9
	CEA4R7M25	C7, C12-C14
	CEA470M25	C10
	CKDYB561K50	C11, C16-C22
	CEA470M10	C15
	CEA222M10	C101

OTHERS

Mark	Part No.	Symbol & Description
	VKP-060	Q16 ... SYPS Housing assembly
	VKP-061	Q17 ... SYPS Housing assembly
	VEC-028	Holder
	VEC-002	Mica insulator
	VEC-072	Mica insulator
	VBA-003	Screw
	VEK-006	F1, F2 Fuse 3A

LSPS (VWR-011)

SEMICONDUCTORS

Part No.	Symbol & Description
2SC1815-O/Y/GR (2SC2320-E/F)	Q1, Q2, Q4, Q8, Q9
2SA1015-O/Y/GR	Q3
2SC1627-O/Y	Q5
2SA965-O/Y	Q6
2SB595-O/Y	Q7
2SD818	Q10
1JLA6S (GHV-03SSN)	D1, D2
EQA01-06T1	D3
1S2473	D4-D9

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description
RD¼VS□□□J	R1-R8, R10-R30
RN¼PR□□□□F	R9
RD¼VS□□□J	R31, R32

CAPACITORS

Part No.	Symbol & Description
VCH-003	C1-C6
VCH-010	C7, C8
CKDYB 102K 50	C9
CCDSL 221J 50	C10
CEA 100M 16	C11, C13
CEA R47M 50 NP	C14
CEA 221M 16	C15
VCG-011	C17

COILS

Part No.	Symbol & Description
VTL-001 (VTL-002)	L1 Line filter

OTHERS

Part No.	Symbol & Description
VKR-001	Fuse holder
VDA-005	HV wire assembly
VKN-049	HV cap
VCA-002 (VCA-004)	IG block
VEK-004	F1 Fuse 2A

MCNB (VWM-001)

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description
RD¼VS□□□J	R1, R3
VCN-018	R2

10

11

12

A

B

C

D

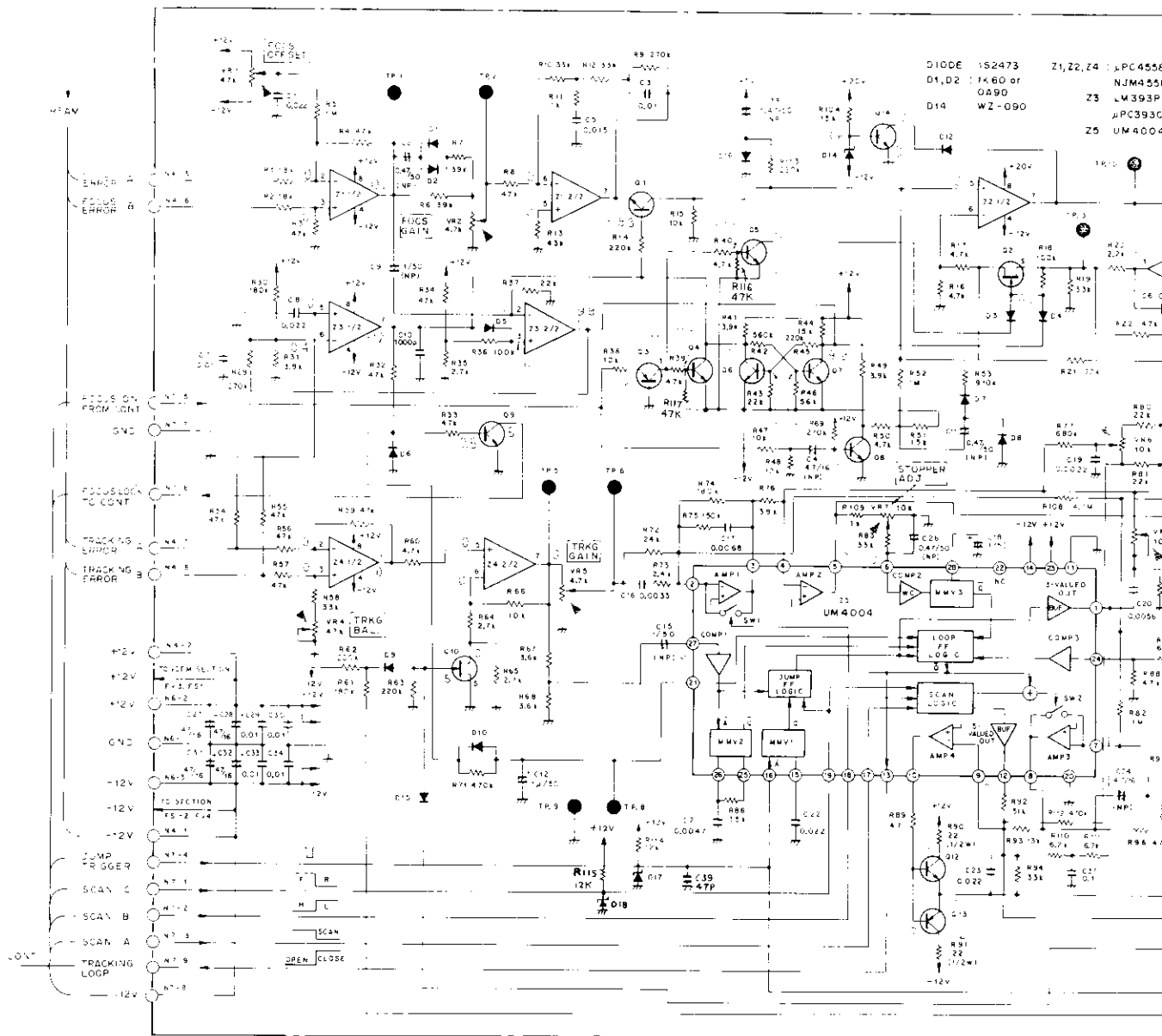
10

11

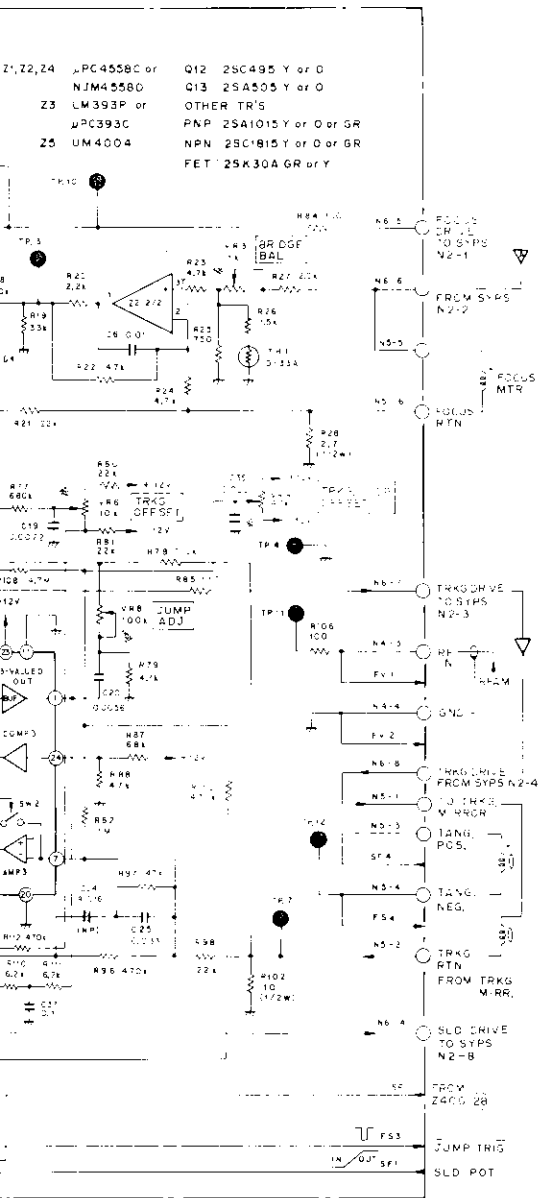
12

3. New VSOP, new CPCB and PSCB

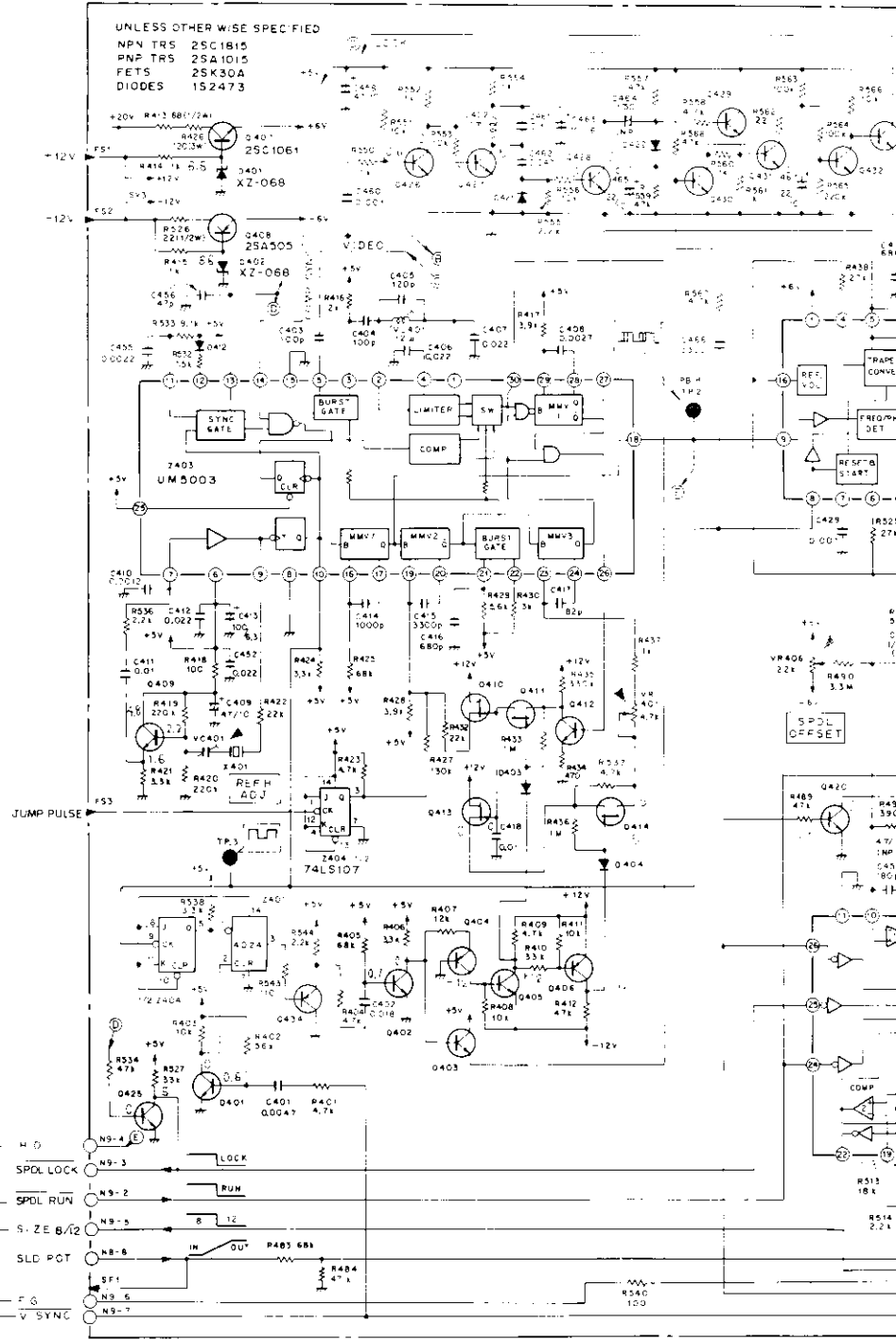
VSOP
(FTS section)

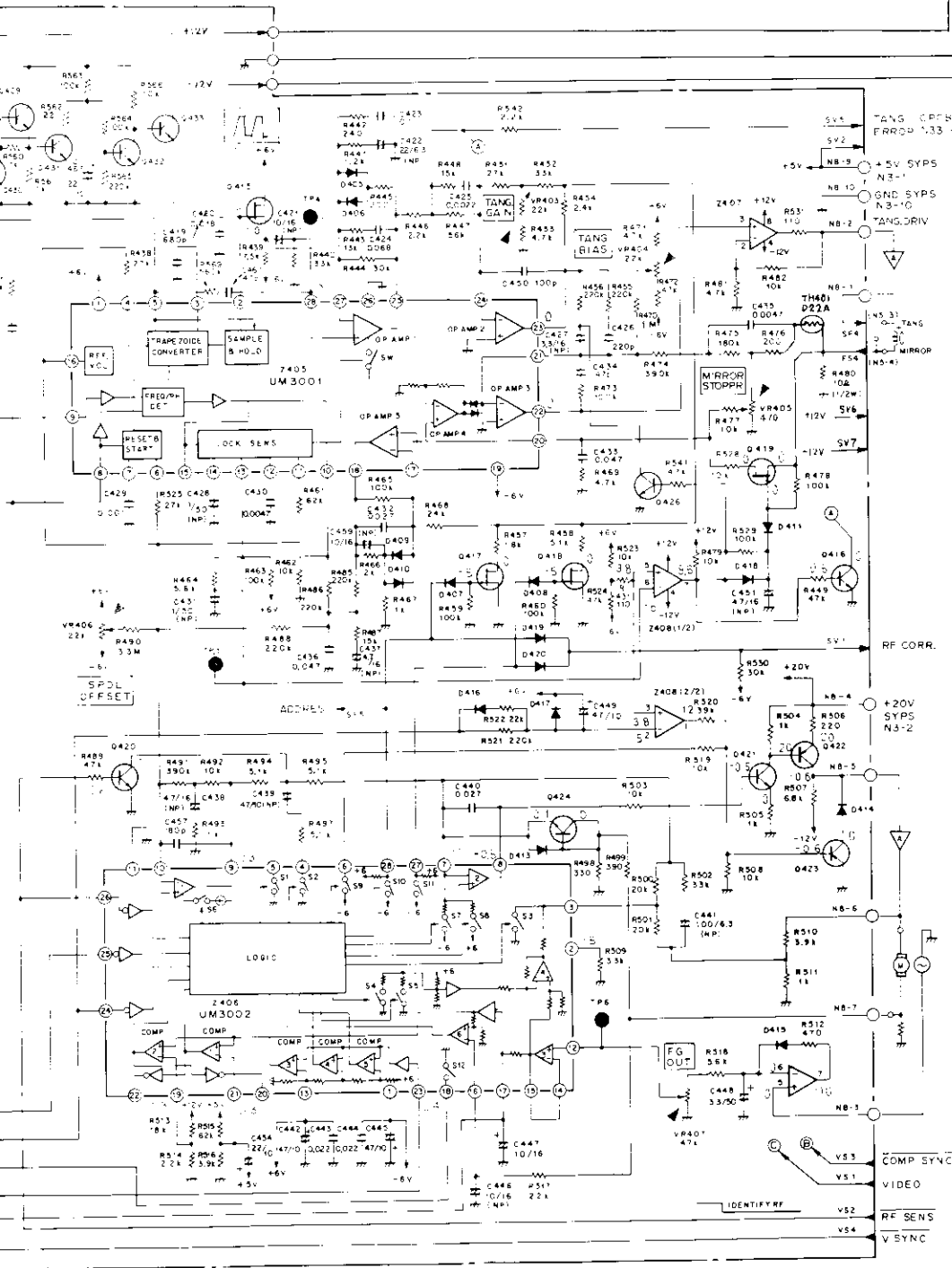


- DIODE 1S2473
- D1, D2 1A60 or 0A90
- D14 WZ-090
- Z1, Z2, Z4 1PC455
- NJM455
- Z3 LM393P
- μPC393C
- Z5 UM4004

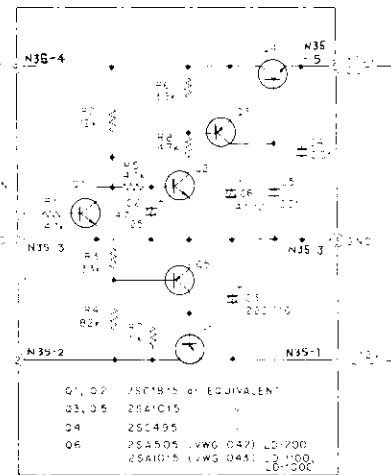


VSOP
(SPDL, TANG section)

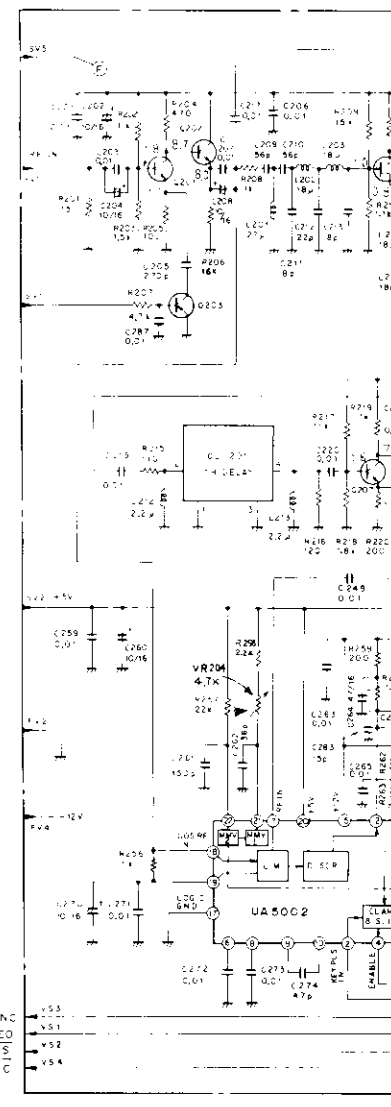




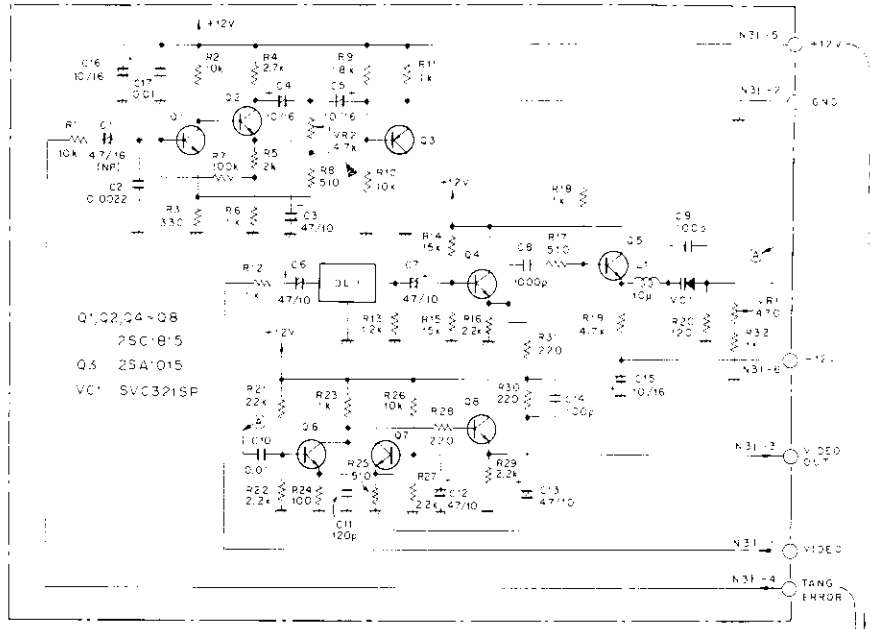
PSCB



VSOP (VDEM section)

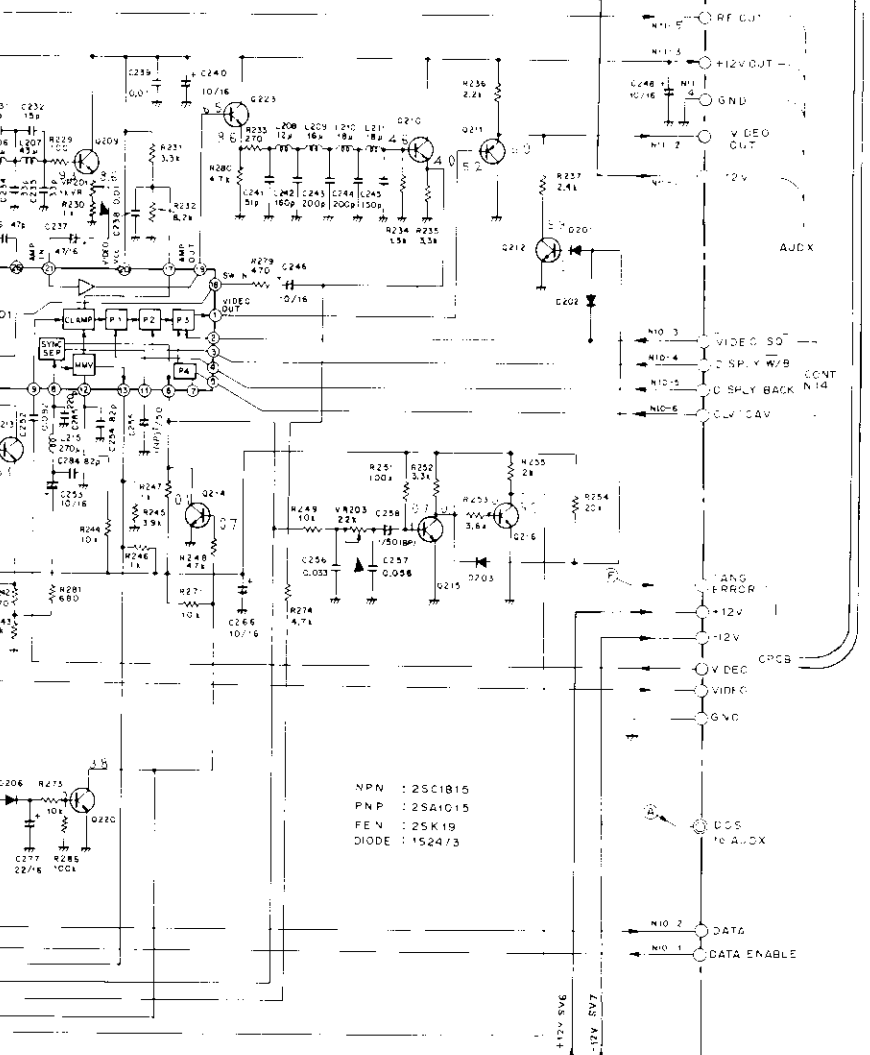
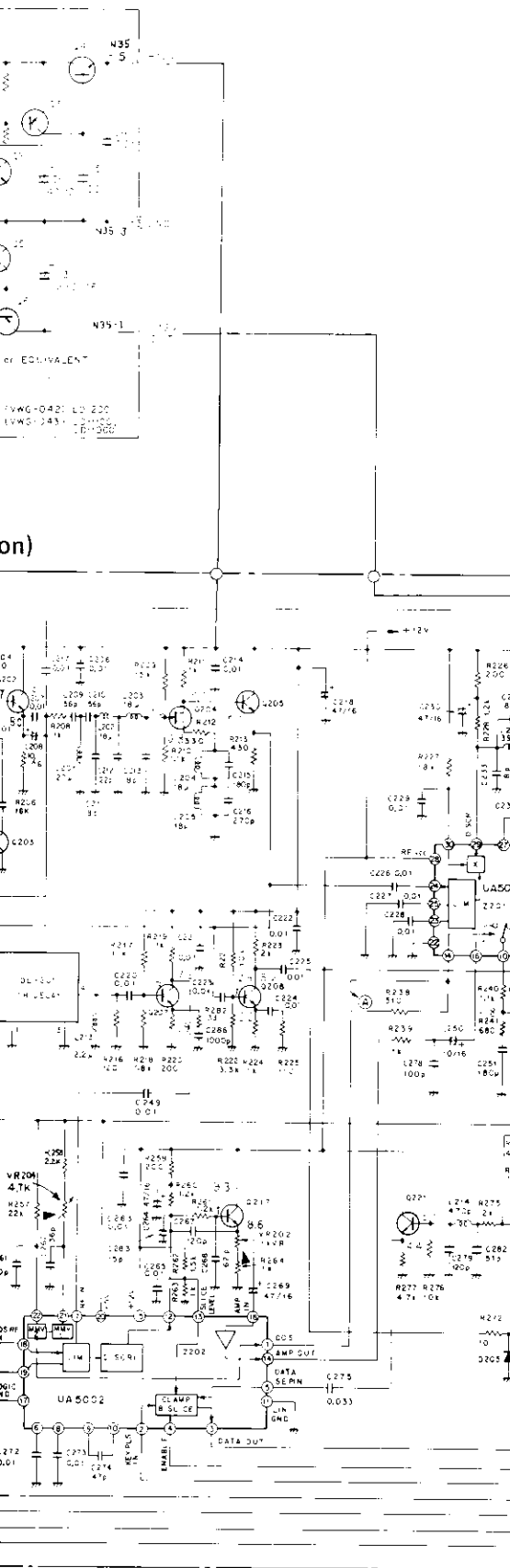


CPCB



A

B



C

D

VSOP (VWS-022) (Serial No. 3611501 ~)
SEMICONDUCTORS

Part No.	Symbol & Description
μ PC4558C (NJM4558D)	Z1, Z2, Z4, Z407
μ PC393C (LM393P)	Z3, Z408
UM4004	Z5
UA5001	Z201
UA5002	Z202
TC4024BP (MB84024BM)	Z401
UM5003	Z403
HD74LS107P (SN74LS107N)	Z404
UM3001	Z405
UM3002	Z406
2SC1815-O/Y/GR	Q1, Q6, Q7, Q201, Q205, Q207, Q208, Q210, Q213, Q215, Q221, Q223, Q401, Q402, Q409, Q412, Q421, Q424
2SC1815-Y/GR	Q8
2SK30A-Y/GR	Q2, Q410, Q411, Q413-Q415, Q417-Q419
2SA1015-O/Y/GR	Q3, Q203, Q211, Q404, Q406, Q422, Q423, Q434
2SK30A-Y	Q10
2SC495-O/Y	Q12, Q407
2SA505-O/Y	Q13, Q408
2SK19TMY (2SK19-Y)	Q204
2SC1815-O/Y/GR (2SC2320-E/F) (2SC2603-E/F) (2SC1740-Q/R/S) (2SC2021-Q/R/S)	Q4, Q5, Q9, Q14, Q202, Q209, Q212, Q214, Q216, Q217, Q220, Q403, Q405, Q416, Q420, Q425-Q433, Q435
1K60 (OA90-R)	D1, D2
1S2473	D3-D10, D12, D15, D201-D203, D205, D206, D403-D411, D413-D422, D16, D412
WZ-090	D14
WZ-048	D17, D18
XZ-068 (EQA01-07R2)	D401, D402
1S2473	D412

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description
RD $\frac{1}{2}$ PS □□□J	R1-R27, R29-R40, R42-R48, R50-R69, R71-R89, R92-R94, R96-R98, R104, R106-R111, R201-R213, R215-R213, R215-R281, R401-R412, R414-R425, R428-R430, R433-R479, R481-R489, R491-R506, R508, R509, R511, R512, R515-R525, R527- R541, R543-R569, R114, R115
RD $\frac{1}{2}$ VS □□□J	R28, R90, R91, R102, R413, R480, R526
RD $\frac{1}{2}$ VS □□□J	R41, R112, R282, R427, R431, R432, R490, R507, R510, R542
VCN-020	R426
RN $\frac{1}{4}$ PR □□□□ F	R513, R514
VCP-029	VR1, VR4, (47k) VR9, VR407
VCP-026	VR2, VR5, (4.7k) VR204, VR401
VCP-024	VR3, VR201, (1k) VR202
VCP-027	VR6, VR7 (10k)
VCP-030	VR8 (100k)
VCP-028	VR203, VR403, (22k) VR404, VR406
VCP-021	VR405

COILS

Part No.	Symbol & Description
VTL-065 (VTL-028)	L201 (27 μ H)
VTL-064 (VTL-026)	L202-L205, (18 μ H) L210, L211
VTL-066 (VTL-030)	L206 (39 μ H)
VTL-067 (VTL-051)	L207 (43 μ H)
VTL-062 (VTL-024)	L208, L401 (12 μ H)
VTL-063 (VTL-056)	L209 (16 μ H)
VTL-060 (VTL-015)	L212, L213 (2.2 μ H)
VTL-069 (VTL-043)	L214 (470 μ H)
VTL-040 (VTL-073)	L215 (270 μ H)
VTL-043 (VTL-070)	L402 (1mH)

CAPACITORS

Part No.	Symbol & Descriptions
CKDYF 223Z 50	C1, C8, C19, C23, C35, C406, C407, C412, C443, C444, C452
CEA R47M 50 NP	C2, C11, C26, C38
CQMA 103J 50	C3, C418
CEA 4R7M 16 NP	C4, C24, C437, C438, C451
CQMA 153J 50	C5
CKDYF 103Z 50	C6, C7, C29, C30, C33, C34, C201, C203, C206, C207, C214, C217, C219–C229, C238, C239, C247, C249, C259, C263, C265, C271–C273, C287, C411
CEA 010M 50 NP	C9, C15, C255, C258, C428, C431, C464
CKDYB 102K 50	C10, C286, C460
CEA 010M 50	C12
CQMA 332J 50	C16, C415
CQMA 682J 50	C17
CEA 010M 50	C18
CQMA 562J 50	C20
CQMA 472J 50	C21
CQMA 223J 50	C22
CQMA 333J 50	C25, C256, C275
CEA 100M 16	C27, C28, C31, C32, C202, C204, C208, C240, C246, C248, C250, C253, C260, C270, C277, C447, C463
CQMA 104J 50	C37, C423, C461
CCDSL 271J 50	C205, C216
CCDCH 560J 50	C209, C210
CCDCH 080D 50	C211, C213, C231, C233
CCDCH 220J 50	C212
CCDSL 181J 50	C215, C251, C457
CEA 470M 16	C218, C230, C264
CCDCH 150J 50	C232
CCDCH 330J 50	C234, C235
CCDUJ 470J 50	C236
CEA 470M 10	C237, C269, C409, C413, C442, C445, C449, C458
CCDSL 510J 50	C241, C282
CCDSL 161J 50	C242
CCDSL 201J 50	C243, C244
CCDSL 151J 50	C245
CQMA 823J 50	C252
CCDSL 820J 50	C254, C284, C417
CQMA 563J 50	C257
CEA 470M 10	C237, C269, C409, C413, C442, C445, C449, C458
CCDCH 360J 50	C262
CEA 100M 16	C266
CCDSL 121J 50	C267, C279, C405
CCDCH 620J 50	C268
CCDCH 470J 50	C274
CCDSL 101J 50	C278, C403, C404, C450

CAPACITORS

Part No.	Symbol & Description
CCDSL 150J 50	C283
CCDSL 221J 50	C285, C426
CQMA 472J 50	C401, C430, C435
CQMA 183J 50	C402, C420
CQMA 272J 50	C408
CQMA 122J 50	C410
CQSH 102J 50	C414
CQSH 102J 50	C416, C419
CEA 100M 16 NP	C421, C446, C459
CEA 220M 6 NP	C422
CQMA 683J 50	C424
CQMA 222J 50	C425, C455
CEA 3R3M 16 NP	C427
CQMA 102J 50	C429
CQMA 273J 50	C432, C440
CQMA 473J 50	C433, C436, C462
CCDSL 470J 50	C434, C456
CEA 470M 10 NP	C439
CEA 101M 6 NP	C441
CEA 3R3M 50	C448
CEA 220M 10	C454, C465, C467
CCDSL 331J 50	C466
CCDCH 470J 50	C467
VCM-004 (VCM-005)	VC401

OTHERS

Part No.	Symbol & Description
VTF-012 (VTF-013) (VTF-030) (VTD-033)	DL201
D33A VSS-005	TH1 X401
VKP-105 VKP-108 VKP-109	N31–VSOP N34–VSOP N35–VSOP
	Housing assembly Housing assembly Housing assembly

CPCB (VWV-023)
SEMICONDUCTORS

Part No.	Symbol & Description
2SC1815-O/Y/GR (2SC1740-Q/R/S)	Q1, Q2, Q4-8
2SA1015-O/Y/GR	Q3
SVC321SP-B1 (SVC321SP-D1)	VC1

A

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description
RD4VS 0000J	R1 -R32
VCP-023	VR1 (470)
VCP-026	VR2 (4.7k)

CAPACITORS

Part No.	Symbol & Description
CEA 4R7M 16 NP	C1
CKDYB 222K 50	C2
CEA 470M 10	C3, C6, C12, C13
CEA 100M 16	C4, C5, C15, C16
CKDYB 102K 50	C8
CCDSL 101J 50	C9, C14
CKDYF 103Z 50	C10, C17
CCDSL 121J 50	C11

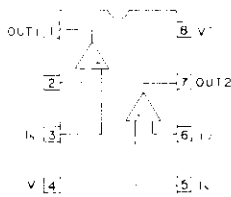
B

COILS

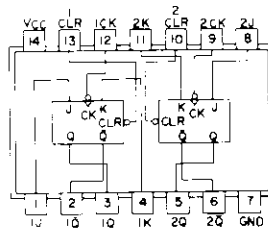
Part No.	Symbol & Description
VTL-023 (VTL-061)	L1
VTF-032	DL1

C

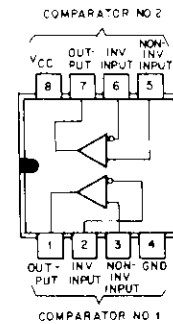
μPC4558C
NJM4558D



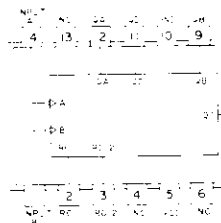
HD74LS107P
SN74LS107N



LM393C
μPC393P



HD74LS93P
SN74LS93N



D

2SK30A



2SA1015
2SC1815



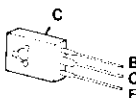
2SK19TM



2SC2320
2SC1740

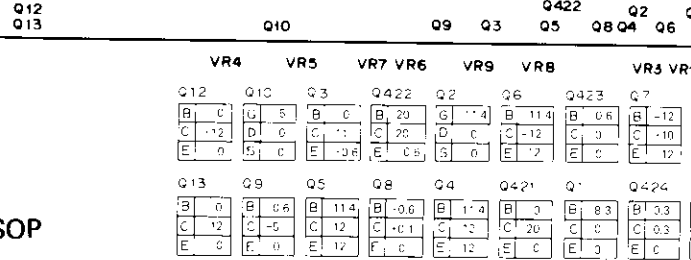
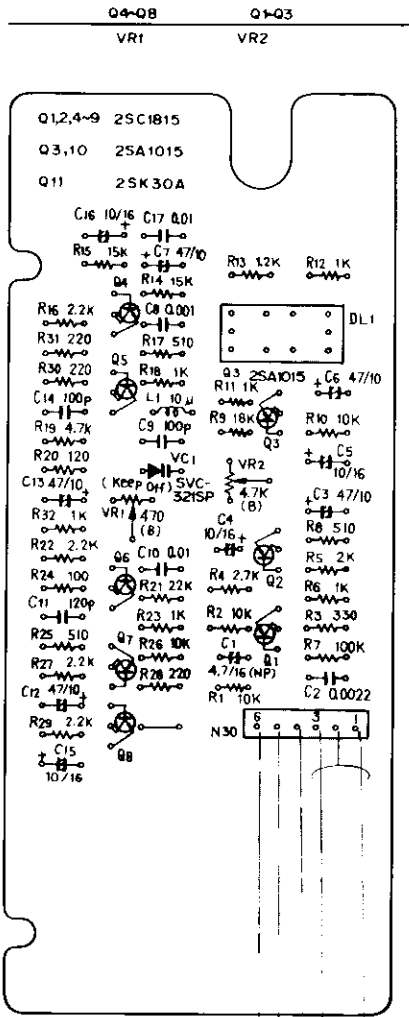


2SA505
2SC495

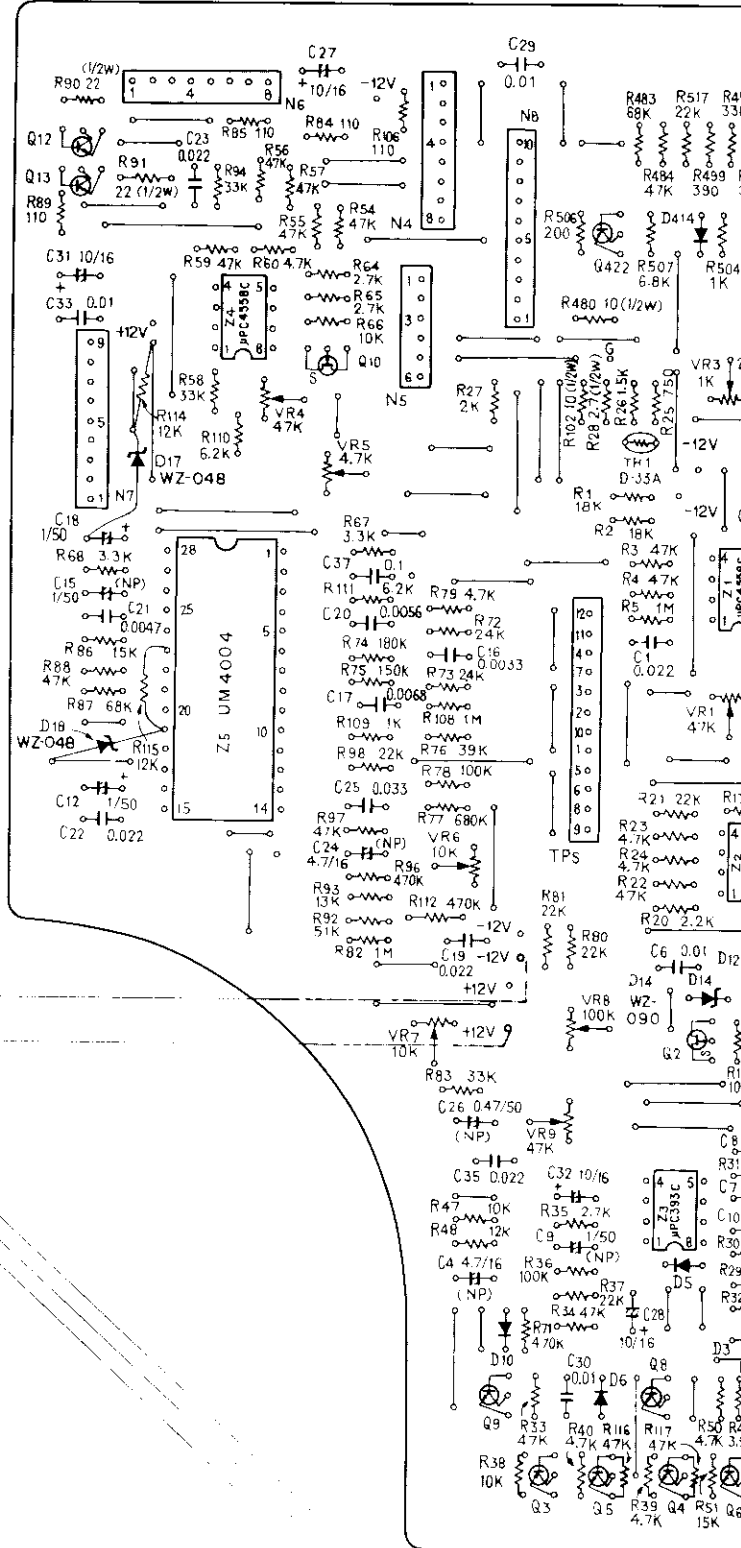


VSOP (VWS-022),
CPCB (VWV-023),
PSCB (VWG-043)

CPCB

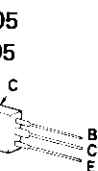
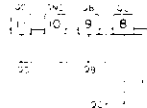


VSOP

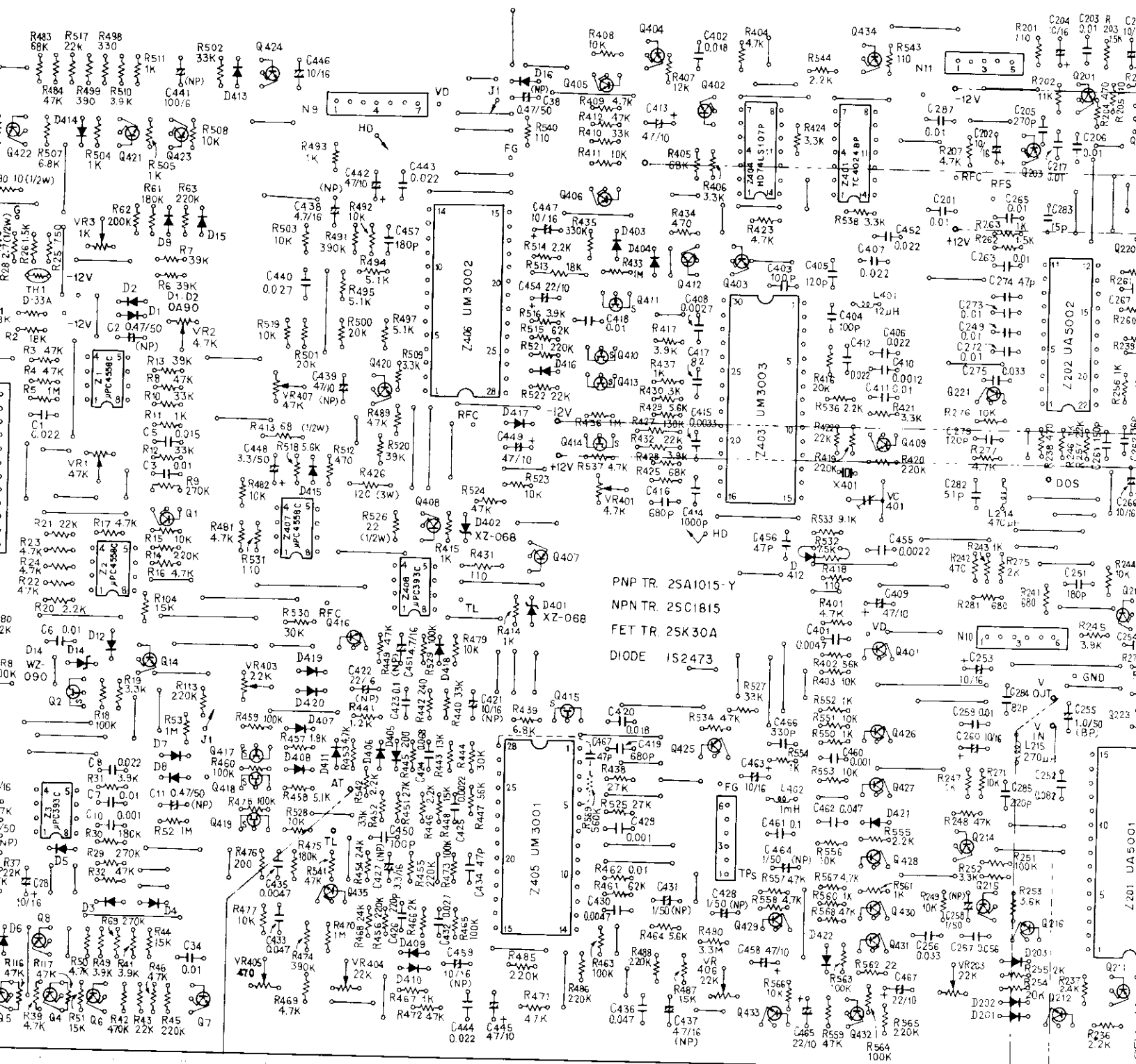


70

3P
3N



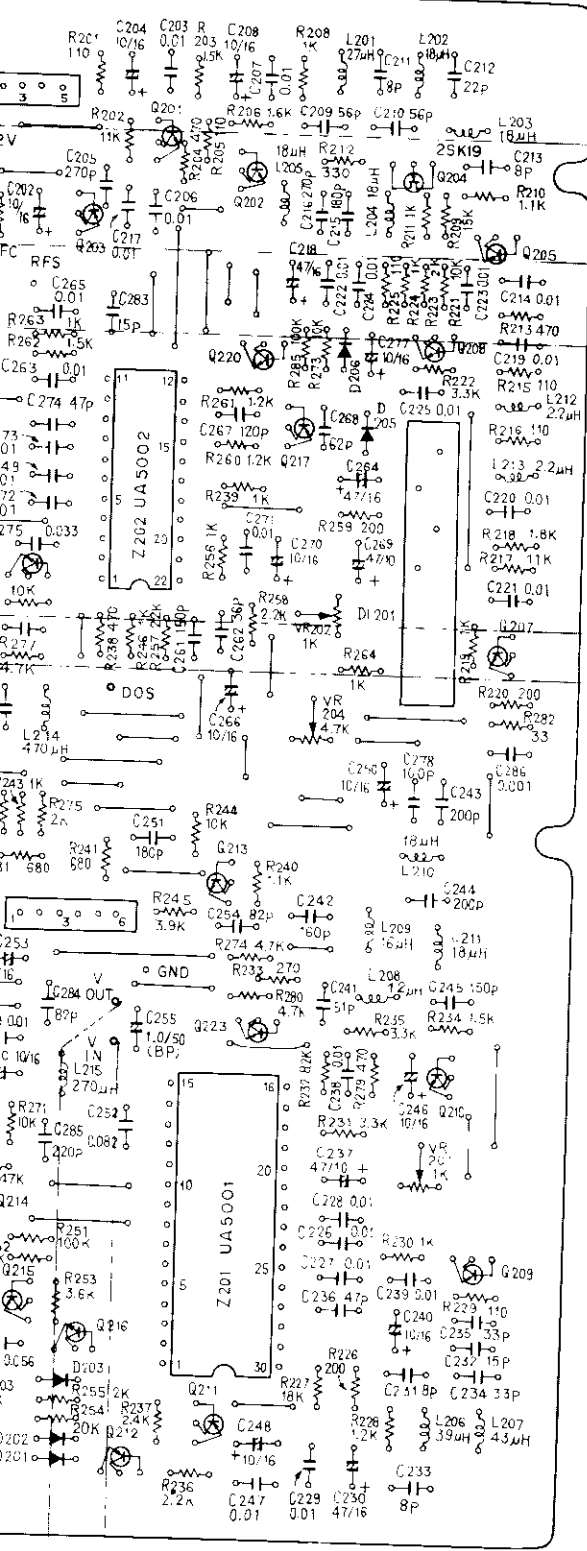
Z3	Z1	Z2	Z407	Z408	Z406	Z405	Q405	Z404	Z403	Z401	Q409	Z202														
Q422	Q2	Q421	Q423	Q424	Q416	Q420	Q406	Q411	Q404	Q402	Q403	Q429	Q432	Q430	Q431	Q224	Q215	Q226	Q212							
Q5	Q8	Q4	Q6	Q14	Q1	Q7	Q417-Q419	Q435	Q408	Q407	Q415	Q410	Q413	Q414	Q404	Q402	Q403	Q429	Q433	Q434	Q430	Q431	Q224	Q215	Q226	Q212



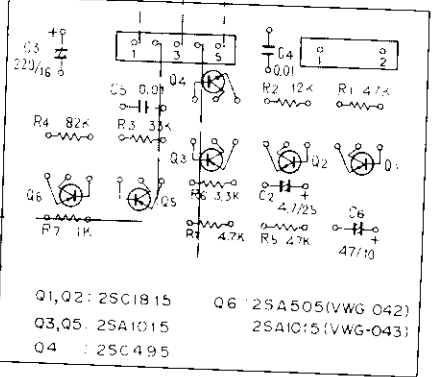
Z202 Z201
 Q221 Q203 Q201 Q202 Q205
 Q224 Q215 Q216 Q212 Q213 Q220 Q217 Q204 Q208 Q210 Q209
 Q211 Q223

Q202		Q213		Q211		Q223		Q208		Q205		Q209	
B 1 2	B 1 3	B 1 4	B 1 5	B 1 6	B 1 7	B 1 8	B 1 9	B 1 10	B 1 11	B 1 12	B 1 13	B 1 14	B 1 15
C 1 1	C 1 2	C 1 3	C 1 4	C 1 5	C 1 6	C 1 7	C 1 8	C 1 9	C 1 10	C 1 11	C 1 12	C 1 13	C 1 14
E 1 1	E 1 2	E 1 3	E 1 4	E 1 5	E 1 6	E 1 7	E 1 8	E 1 9	E 1 10	E 1 11	E 1 12	E 1 13	E 1 14

Q206		Q220		Q217		Q204		Q210		Q207	
B 1 1	B 1 2	B 1 3	B 1 4	B 1 5	B 1 6	B 1 7	B 1 8	B 1 9	B 1 10	B 1 11	B 1 12
C 1 1	C 1 2	C 1 3	C 1 4	C 1 5	C 1 6	C 1 7	C 1 8	C 1 9	C 1 10	C 1 11	C 1 12
E 1 1	E 1 2	E 1 3	E 1 4	E 1 5	E 1 6	E 1 7	E 1 8	E 1 9	E 1 10	E 1 11	E 1 12



PSCB



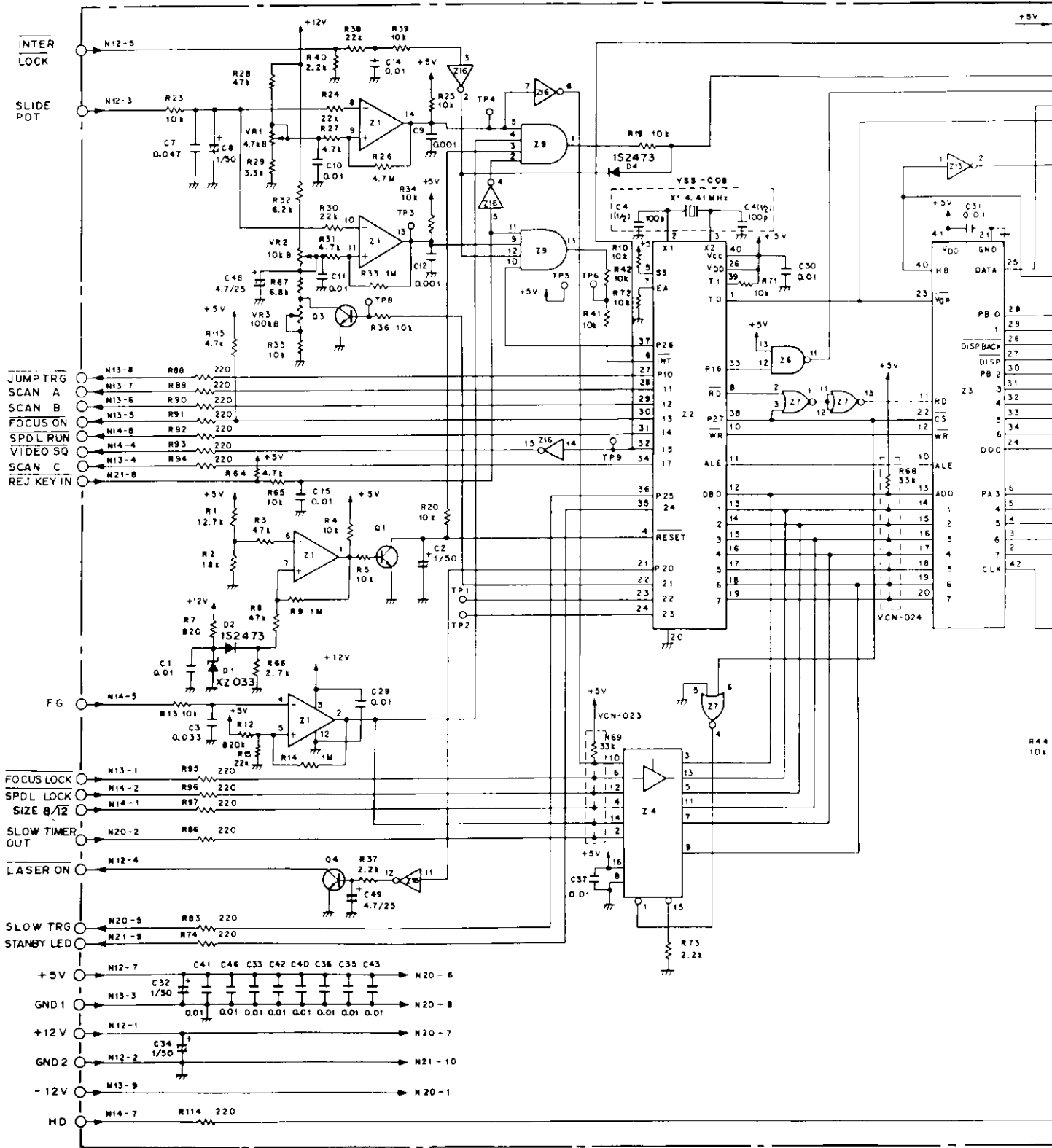
4. CONT and GATB

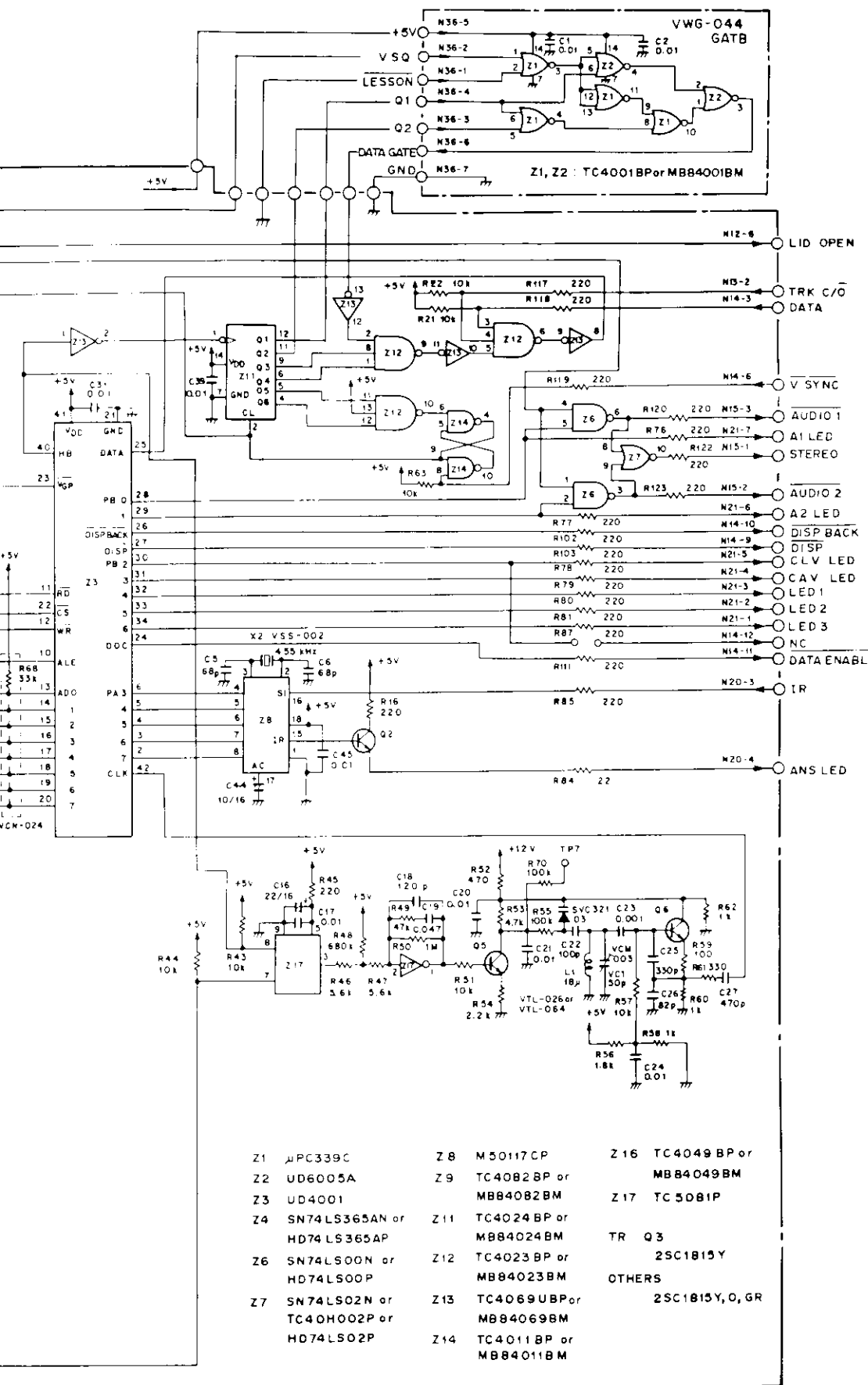
A

B

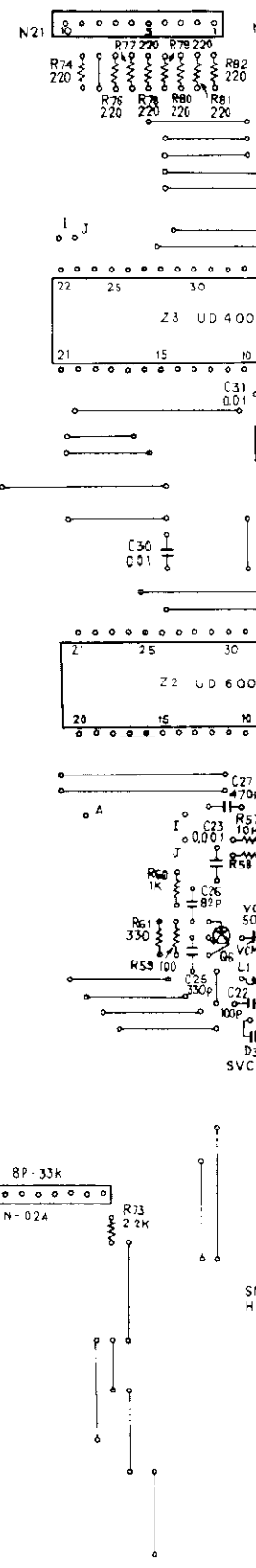
C

D

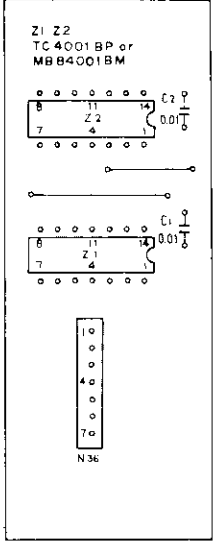
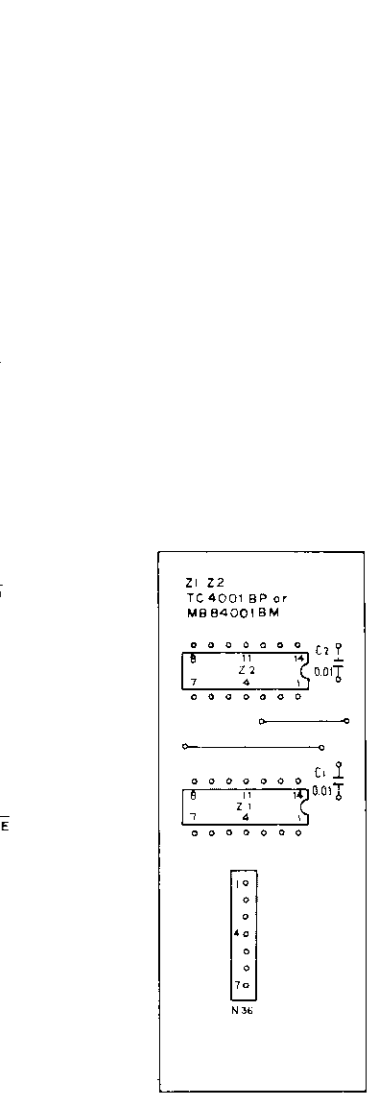
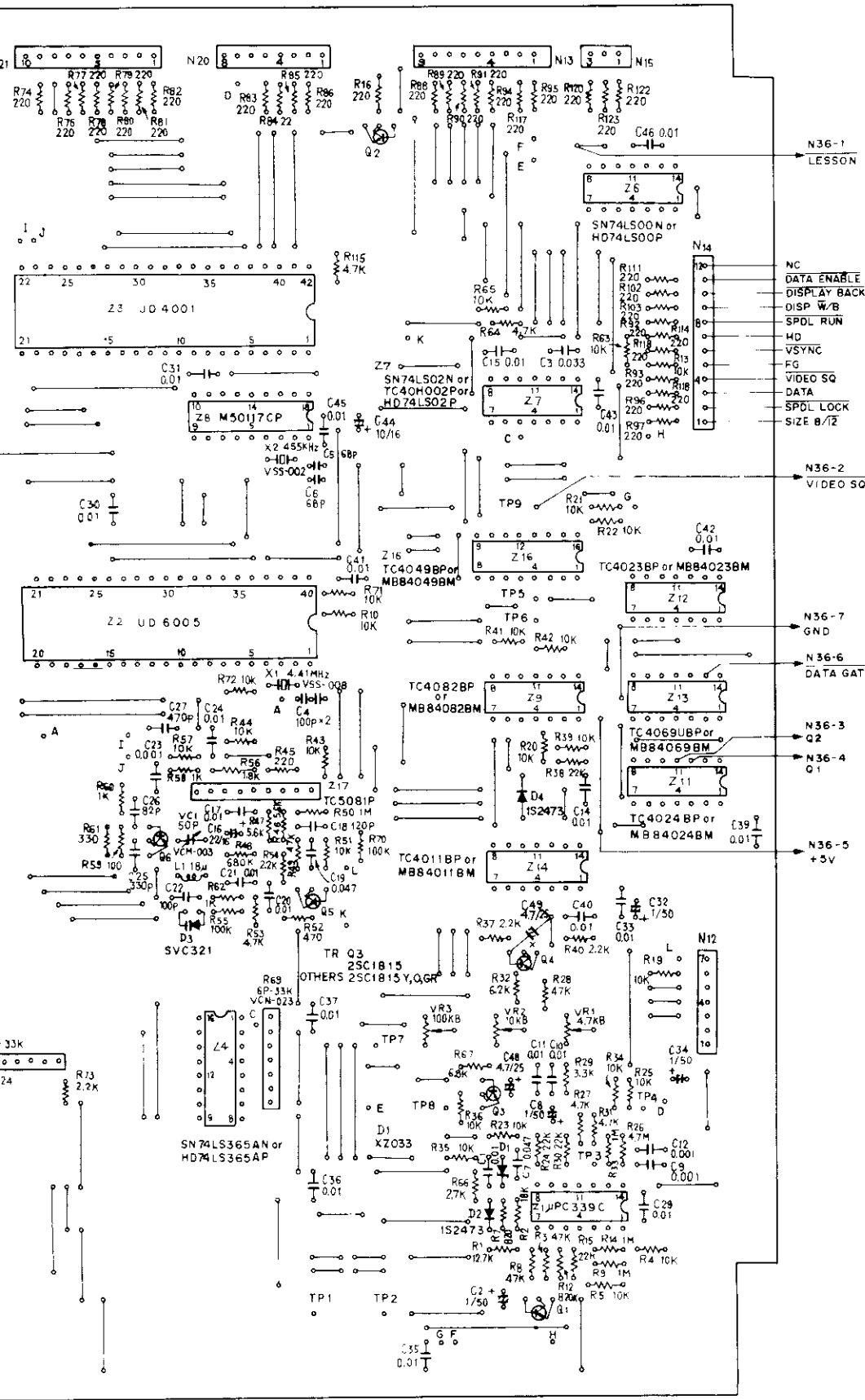




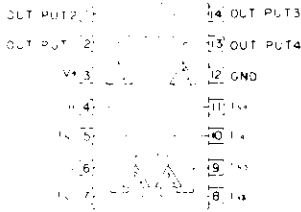
- | | | | | | |
|----|-------------------------------------|-----|------------------------|--------|-----------------------|
| Z1 | μPC339C | Z8 | M50117CP | Z16 | TC4049BP or MB84049BM |
| Z2 | UD6005A | Z9 | TC40828P or MB840828BM | Z17 | TC5081P |
| Z3 | UD4001 | Z11 | TC4024BP or MB84024BM | TR | Q3 |
| Z4 | SN74LS365AN or HD74LS365AP | Z12 | TC4023BP or MB84023BM | | 25C1815Y |
| Z6 | SN74LS00N or HD74LS00P | Z13 | TC4069UBP or MB84069BM | OTHERS | 25C1815Y, O, GR |
| Z7 | SN74LS02N or TC40H002P or HD74LS02P | Z14 | TC4011BP or MB84011BM | | |



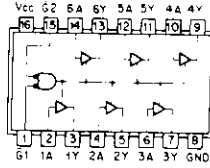
Z2 Z3 Z4 Z6 Z7 Z14 Z9 Z16 Z7 Z1 Z6 Z1-Z12
 Q6 Q5 Q2 VR3 VR2 VR1



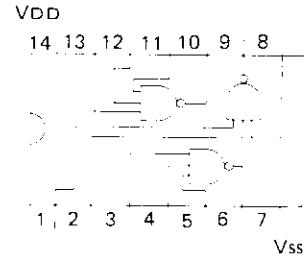
μPC339C



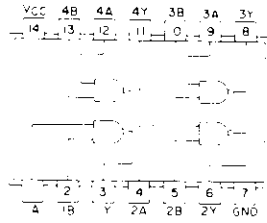
SN74LS365AN
HD74LS365AP



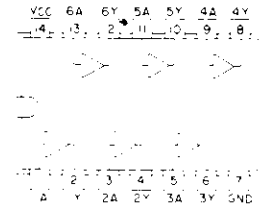
MB84023BM
TC4023BP



HD74LS00P
SN74LS00N



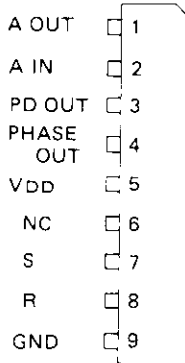
MB84069B
TC4069BP
MB84069BM
TC4069BP



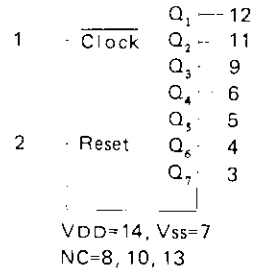
UD6005A

T0	1	40	Vcc
XTAL1	2	39	T1
XTAL2	3	38	P2 ₅
RESET	4	37	P2 ₆
SS	5	36	P2 ₇
INT	6	35	P2 ₈
EA	7	34	P1 ₁
RD	8	33	P1 ₂
PSEN	9	32	P1 ₃
WR	10	31	P1 ₄
ALE	11	30	P1 ₅
DB0	12	29	P1 ₆
DB1	13	28	P1 ₇
DB2	14	27	P1 ₈
DB3	15	26	VDD
DB4	16	25	PROG
DB5	17	24	P2 ₉
DB6	18	23	P2 ₁₀
DB7	19	22	P2 ₁₁
Vss	20	21	P2 ₁₂

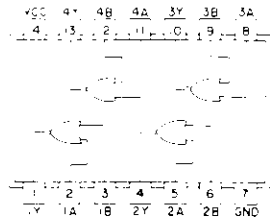
TC5081AP



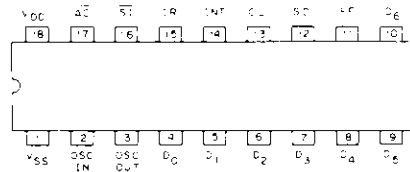
MB84024B
TC4024BP
DIP14P



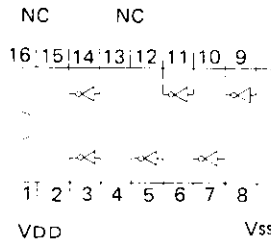
HD74LS02P
SN74LS02N
TC40H002P



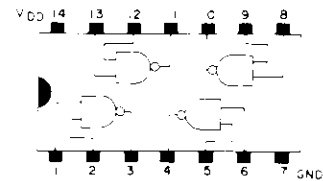
M50117CP



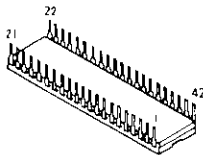
TC4049BP
MB84049BM



TC4011BP
MB84011BM



UD4001



2SA1015
2SC1815



CONT (VWG-052)

SEMICONDUCTORS

Part No.	Symbol & Description
μPC339C	Z1
UD6005A	Z2
UD4001	Z3
SN74LS365AN (HD74LS365AP)	Z4
SN74LS00N (HD74LS00P)	Z6
SN74LS02N (TC40H002P)	Z7
M50117CP	Z8
TC4082BP (MB84082BM)	Z9
TC4024BP (MB84024BN)	Z11
TC4023BP (MB84023BM)	Z12
TC4069UBP (MB84069BM)	Z13
TC4011BP (MB84011BM)	Z14
TC4049BP (MB84049BM)	Z16
TC5081P (TC5081AP)	Z17
2SC1815-O/Y/GR	Q1, Q2, Q4-Q6
2SC1815-Y	Q3
XZ-033	D1
1S2473	D2, D4
SVC321-B1 or D1	D3

RESISTORS

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description
RN¼PR □□□□ F	R1, R2
RD¼VS □□□□ J	R3-R5, R7-R10, R12-R16, R20-R67, R70-R72, R74, R76-R86, R88-R97, R102, R103, R111, R114, R115, R117-R120, R122, R123
VCN-024	R68
VCN-023	R69
VCP-026	VR1
VCP-027	VR2
VCP-030	VR3

CAPACITORS

Part No.	Symbol & Description
CKDYF 103Z 50	C1, C10, C11, C14, C15, C17, C20, C21, C24, C29-C31, C33, C35-C37, C39-C43, C45, C46
CEA 010M 50	C2, C8, C32, C34
CKDYF 333Z 50	C3
CCDSL 680J 50	C5, C6
CQMA 473K 50	C7, C19
CKDYB 102K 50	C9, C12, C23
CEA 220M 16	C16
CCDSL 121J 50	C18
CCDSL 101J 50	C22
CKDYB 331K 50	C25
CCDSL 820J 50	C26
CKDYB 471K 50	C27
CEA 100M 16	C44
CEA 4R7M 25	C48
VCM-003	VC1

COILS

Part No.	Symbol & Description
VTL-026 (VTL-064)	L1
VSS-008	X1
VSS-002	X2
VKH-017	IC socket (42P)
VKH-018	IC socket (40P)

GATB (VWG-044)

Part No.	Symbol & Description
TC4001BP (MB84001BM)	Z1, Z2
Part No.	Symbol & Description
CKDYF103Z50	C1, C2

1

2

3

5. EXPLODED VIEW AND PARTS LIST

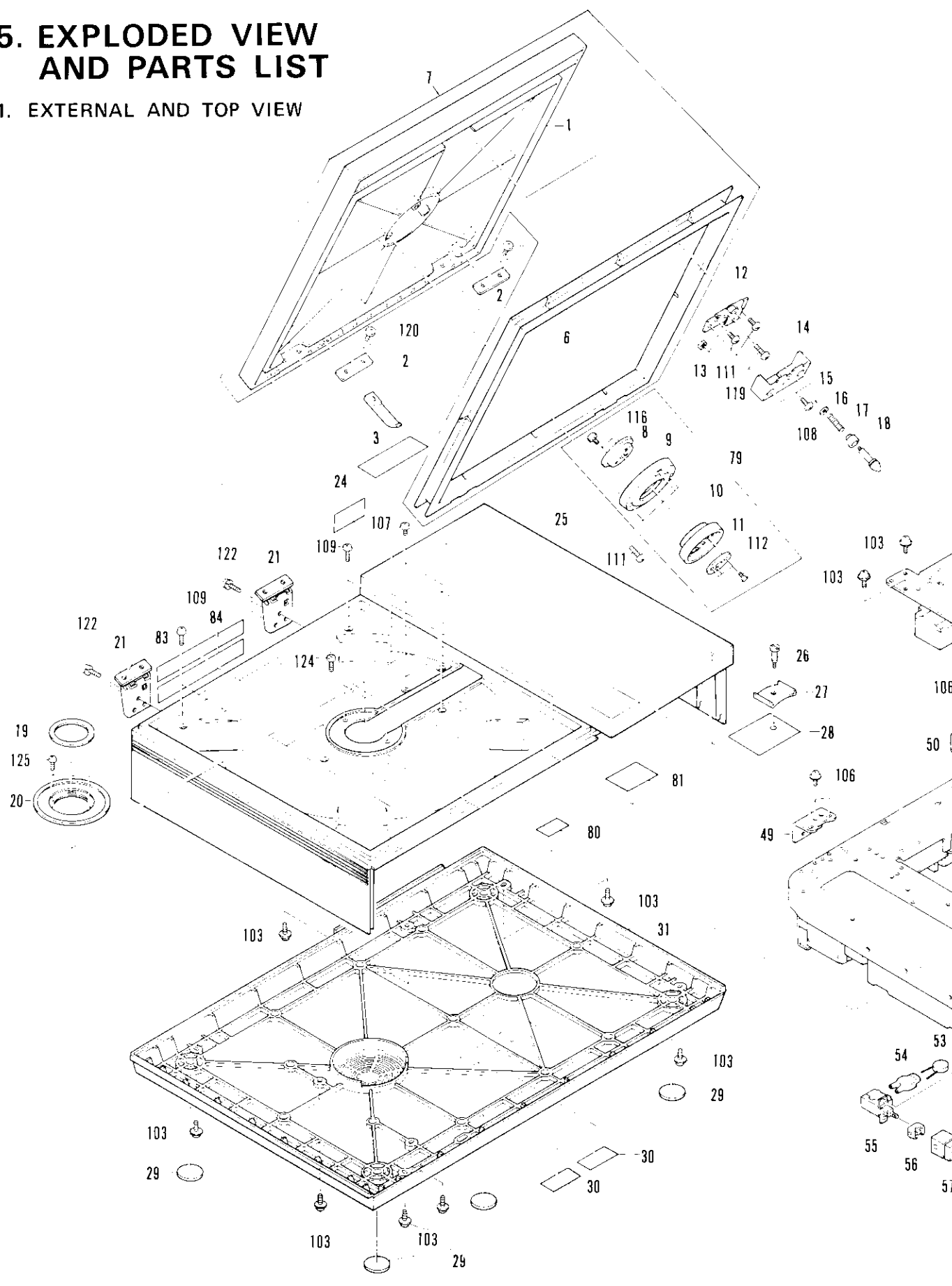
1. EXTERNAL AND TOP VIEW

A

B

C

D



1

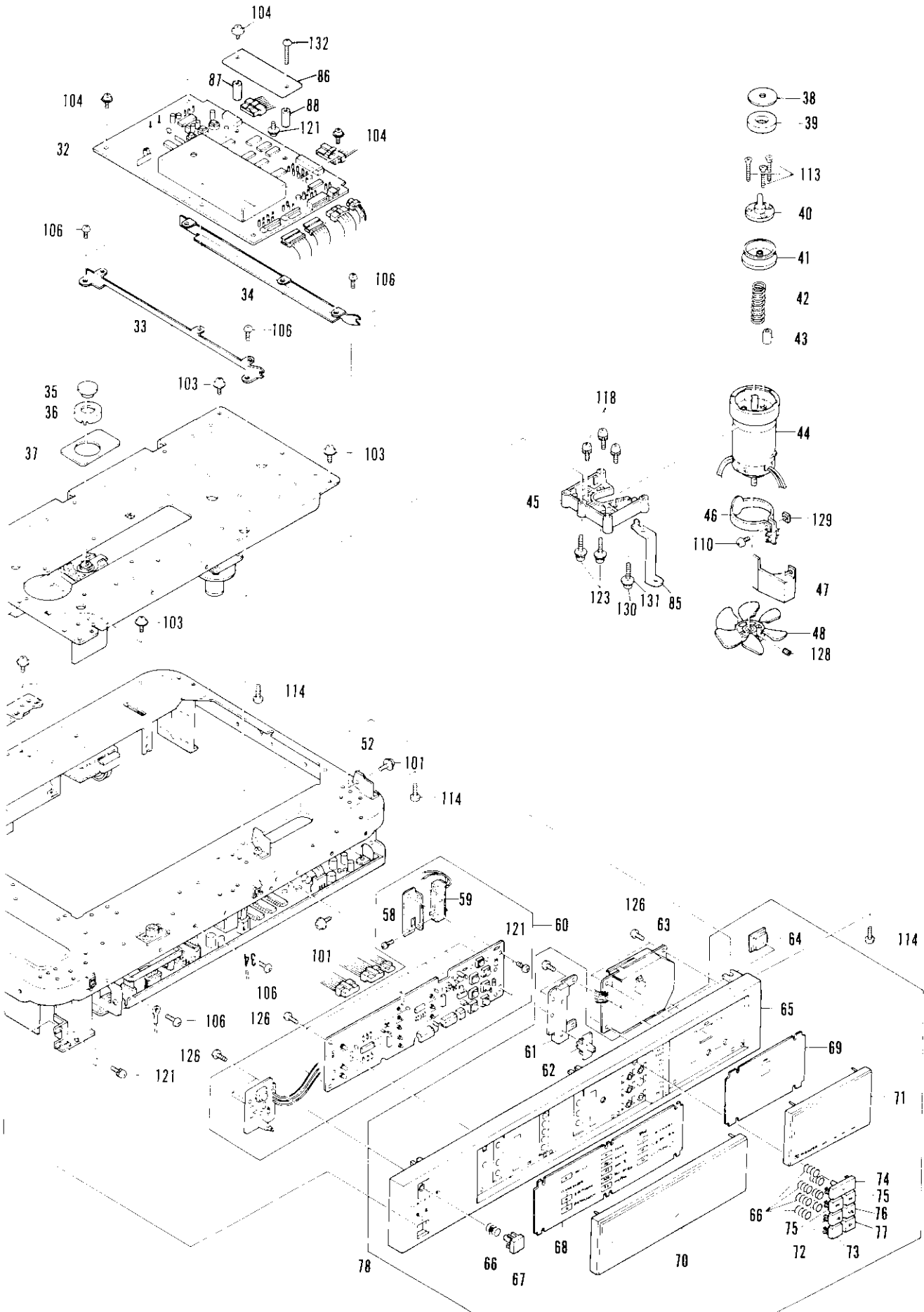
2

3

4

5

6



A

B

C

D

4

5

6

Parts List (Serial No. 3611501 ~

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description	Mark	No.
	1		Lid		51		Angle		
	2	VNE-244	Plate		52		Angle		
	3	VNE-286	Lid lever		53	VCG-011	Capacitor		
	4				54	VEC-063	Cover		
	5				55	VSA-003	Power switch		
	6		Insulation rubber		56	VEC-070	Flexible ring		
	7	VXX-044	Lid assembly		57	VAC-068	Power button		
	8		Clamper holder		58		Holder		
	9		Clamp cover		59	VCS-006	Slide volume		
	10		Clamper		60	VWW-025	KEYC		
	11		Plate		61	VNL-075	Volume plate		
	12	VNE-243	Inter lock base		62	VNL-074	Slide knob		
	13	VLA-040	Nut		63	VWG-028	IRAB		
	14	VNL-076	Inter lock protector		64	VAP-013	IR filter		
	15	VLL-078	Washer		65	VNK-047	Front panel		
	16	VBH-056	Spring		66	VBH-051	Key spring		
	17	VNL-022	Inter lock collar		67	VAC-069	REJECT/OPEN key		
	18	VLA-055	Inter lock pin		68		Display board (L)		
	19	VNL-077	Ring		69		Display board (R)		
	20	VNG-004	Turn table		70	VNK-042	Window (L)		
	21	VXA-053	Hinge		71	VNK-044	Window (R)		
	22		Label		72	VAC-052	1/L key		
	23				73	VAC-062	PAUSE key		
	24	VRW-017	Caution label (A)		74	VAC-061	PLAY key		
	25	VNK-051	Top housing		75	VAC-060	SCAN key		
	26	VLL-063	Shipping screw		76	VAC-053	2/R key		
	27	VNE-276	Shipping plate		77	VAC-070	CX key		
	28	VRW-034	Caution tag		78	VXX-035	Front panel assembly		
	29	VED-008	Cushion		79	VXX-041	Clamper assembly		
	30	VRW-050	UL caution label		80	VRW-022	Caution label (C)		
	31	VNK-036	Under housing		81	VRW-048	Service call label		
	32	VWG-052	CONT		82	VRW-095	Caution label		
	33		Holder		83		Name plate B		
	34		Holder		84		Name plate A		
	35	VHA-012	Lens cap		85	VNE-289	Angle		
	36	VNH-016	Stopper		86	VWG-044	GATB		
	37		Cover		87	VLL-081	Post		
	38	VEC-062	Yoke seal		88	VLL-087	Spacer		
	39	VMX-001	Clamper magnet		89				
	40	VXA-062	Yoke assembly		90				
	41	VNV-003	Centering hub		91				
	42	VBH-034	Centering spring		92				
	43	VLP-005	Cup spacer ring		93				
	44	VXM-013 or -015	Spindle motor		94				
	45		Spindle motor holder assembly		95				
	46	VCX-004	Thru type capacitor assembly		96				
	47		Cover		97				
	48	VNM-001	Fan		98				
	49		Plate		99				
	50		Plate		100				

Mark	No.	Part No.	Description
	101	ACZ 30P060 FMC	
	102	AMZ 30P060 FMC	
	103	AMZ 30P080 FMC	
	104	ASZ 30P060 FMC	
	105	BBZ 30P080 FNI	
	106	BCZ 30P050 FMC	
	107	BMZ 30P040 FNI	
	108	BMZ 30P060 FZK	
	109	BMZ 30P080 FNI	
	110	BMZ 40P100 FMC	
	111	BPZ 30P080 FZK	
	112	CMZ 26P080 FZK	
	113	CMZ 26P180 BNI	
	114	IPZ 30P080 FMC	
	115	PMA 26P050 FMC	
	116	PMA 26P060 FMC	
	117	PMA 30P060 FMC	
	118	PMA 30P080 FMC	
	119	PMA 30P120 FZK	
	120	PMA 40P120 FZK	
	121	PMB 30P060 FMC	
	122	PMB 30P100 FZK	
	123	PMB 30P200 FMC	
	124	PMZ 26P050 FMC	
	125	PMZ 26P060 FMC	
	126	VPZ 30P060 FMC	
	127	VPZ 30P080 FMC	
	128	ZMD 30H040 FBT	
	129	NZ 40 FMC	
	130	PMA 30P220 FMC	
	131	WA 32F080 N100	
	132	VCZ30P200FMC	

1

2

3

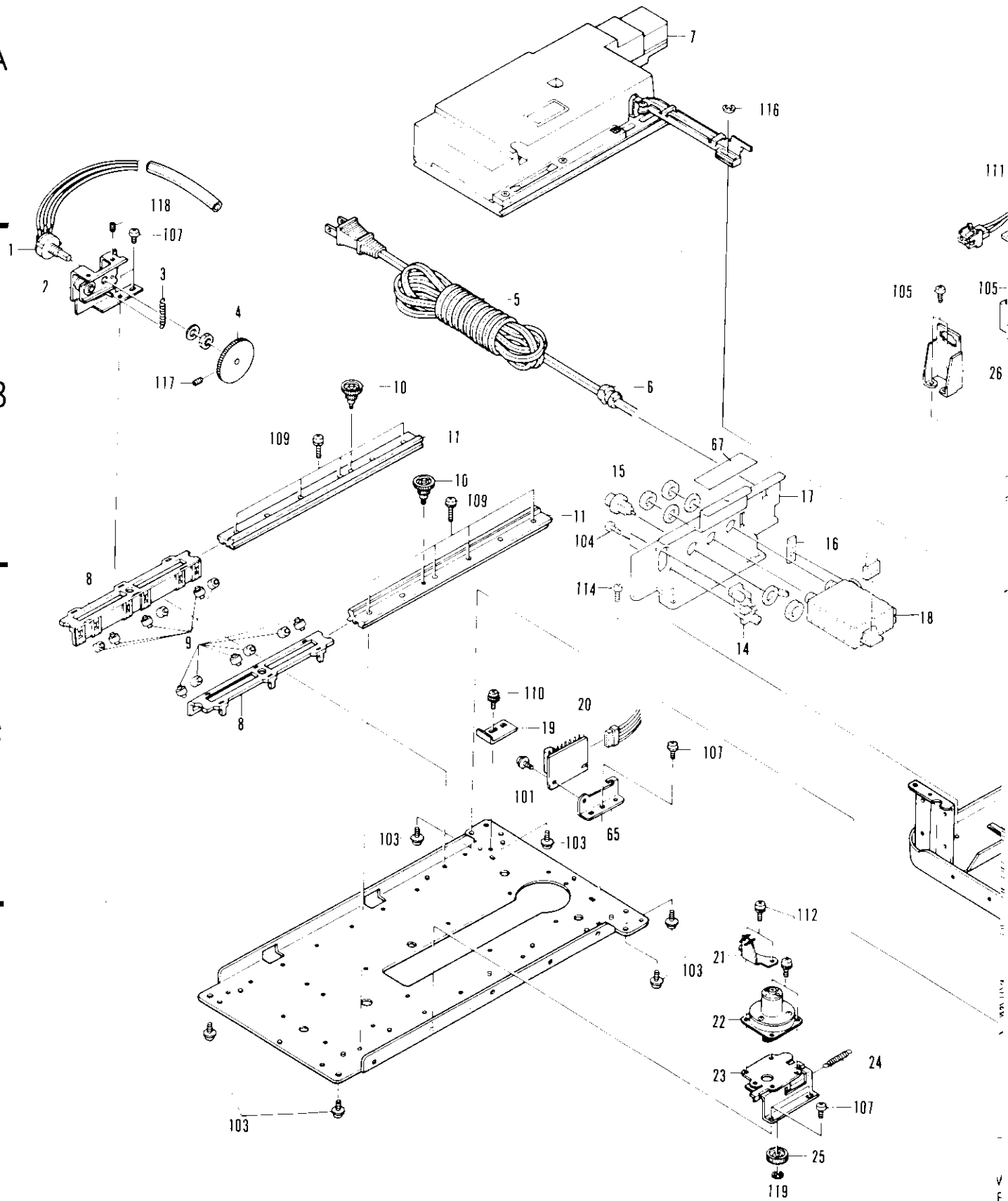
2. BOTTOM VIEW

A

B

C

D



1

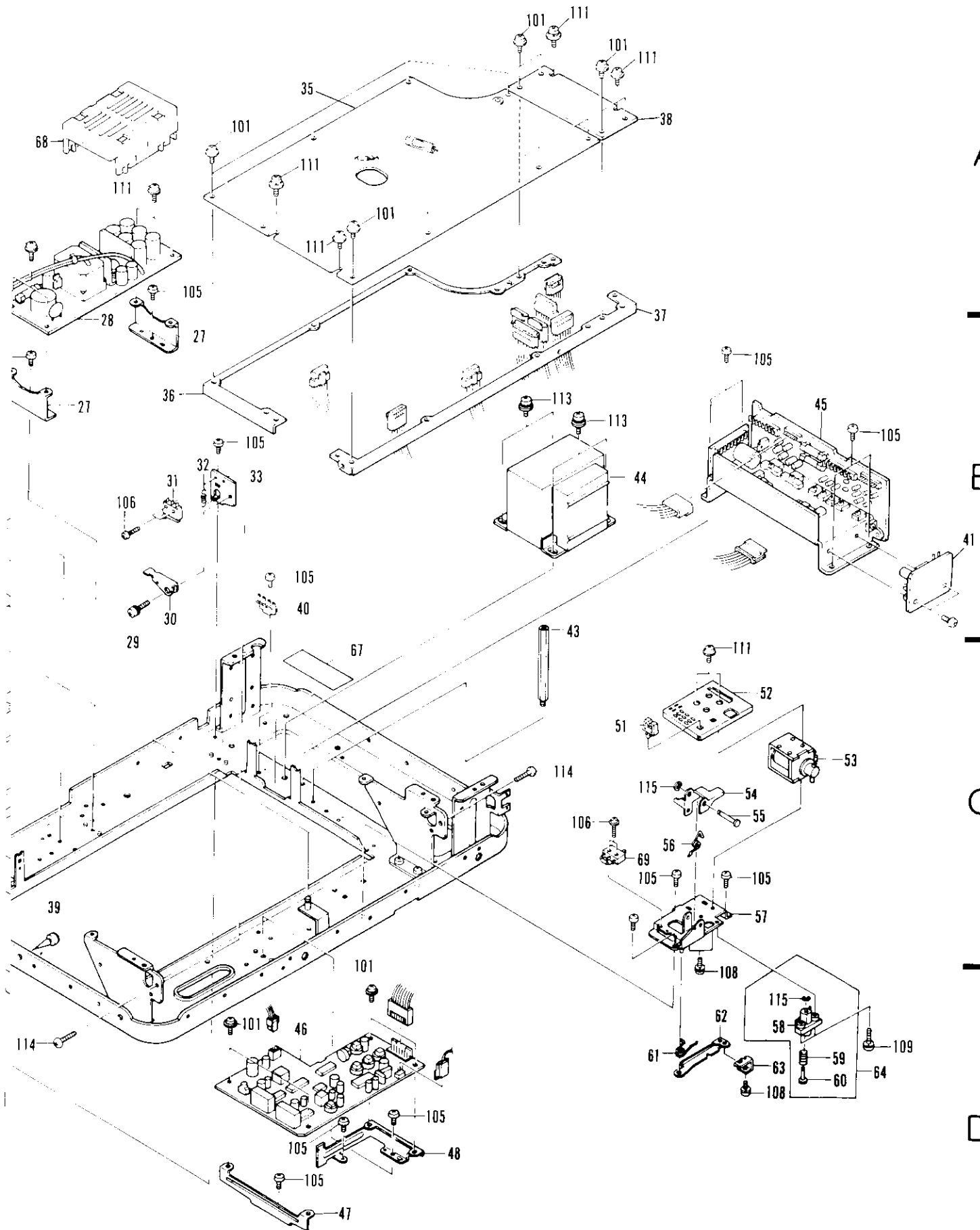
2

3

4

5

6



A

B

C

D

4

5

6

Parts list (Serial No. 3611501 ~

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1	VCS-005	Potentiometer		51		Wire clip
	2	VXA-059	Gear assembly		52		Cover
	3	VBH-042	Spring		53	VXP-005	Plunger
	4	VNL-045	Pinion		54		Inter lock link
	5	VDG-003	Power cord		55		Pin
	6	VEC-027	Cord stopper		56	VBH-045	Spring
	7	VGX-023	Slider assembly		57		Holder
	8	VNL-031	Retainer (A)		58		Inter link pin guide
	9	VNL-034	Roller		59		Spring
	10	VXX-006	Retainer pinion assembly		60		Pin
	11	VNG-002	Rail		61	VBH-043	Spring
	12	VLL-082	Nut		62		Inter lock
	13	VNE-270	Washer		63		Joint
	14	VKB-003	2P pin jack		64	VXX-039	Inter lock pin guide assembly
	15	VKN-070	F type jack		65		Holder
	16	VEC-080	Blind		66		
	17	VNE-269	Rear terminal board		67	VRW-021	Caution label (B)
	18	VWL-006	RFMD		68	VXX-055	High voltage cover
	19		Stopper		69	VSF-006	Micro switch
	20	VWM-001	MCNB		70		
	21	VCX-003	Thru type capacitor assembly		71		
	22	VXM-010	Slider motor		72		
	23	VXA-054	Slider motor holder		73		
	24	VBH-041	Spring		74		
	25	VNL-028	Pinion B		75		
	26		Connector holder		76		
	27		Holder		77		
	28	VWR-011	LSPS		78		
	29		Screw		79		
	30		Actuator		80		
	31	VSF-007	Micro-switch		101	ACZ 30P060 FMC	
	32	VBH-040	Micro-switch spring		102	AMZ 30P060 FMC	
	33		Base		103	AMZ 30P080 FMC	
	34				104	BBZ 30P080 FZK	
	35	VWS-022	VSOP		105	BCZ 30P050 FMC	
	36		Holder		106	IMZ 20P100 FMC	
	37		Holder		107	PMA 30P050 FMC	
	38	VWV-023	CPCB		108	PMA 30P060 FMC	
	39	VEB-031	Slider cushion		109	PMA 30P120 FMC	
	40	VKC-005	4P terminal		110	PMA 40P060 FMC	
	41	VWG-043	PSCB		111	PMB 30P060 FMC	
	42				112	PMB 30P080 FMC	
	43		Post		113	PMB 40P080 FMC	
	44	VTT-016	Power transformer		114	VCZ 30P080 FMC	
	45	VWR-019	SYPS		115	YE 20 FUC	
	46	VWV-019	AUDX		116	YE 30 FUC	
	47		Holder		117	ZMD 30H060 FBT	
	48		Holder		118	ZMK 40H080 FBT	
	49				119		
	50						

1

2

3

6. SAFETY CHECK

LaserDisc PIONEER LASER DISC PLAYER MODEL LD-1100	AC 120V 60Hz 85W	VRW-097
	PIONEER ELECTRONIC CORP.	
	NO. 4-1, MEGURO 1 CHOME, MEGURO-KU, TOKYO, 153, JAPAN.	
	MANUFACTURED BY UNIVERSAL PIONEER CORP TOKYO JAPAN	
	MANUFACTURED UNDER US PATENT 3,944,727 AND OTHER PATENTS PENDING.	
	MANUFACTURED	F SERIAL NO.

CERTIFICATION
THIS PRODUCT COMPLIES WITH
DHHS RULES 21 CFR
SUBCHAPTER J, PART 1040 AT
DATE OF MANUFACTURE.

SERVICING IS TO BE PERFORMED
ONLY WHILE THE APPLIANCE
IS DISCONNECTED FROM THE
BRANCH-CIRCUIT SUPPLY

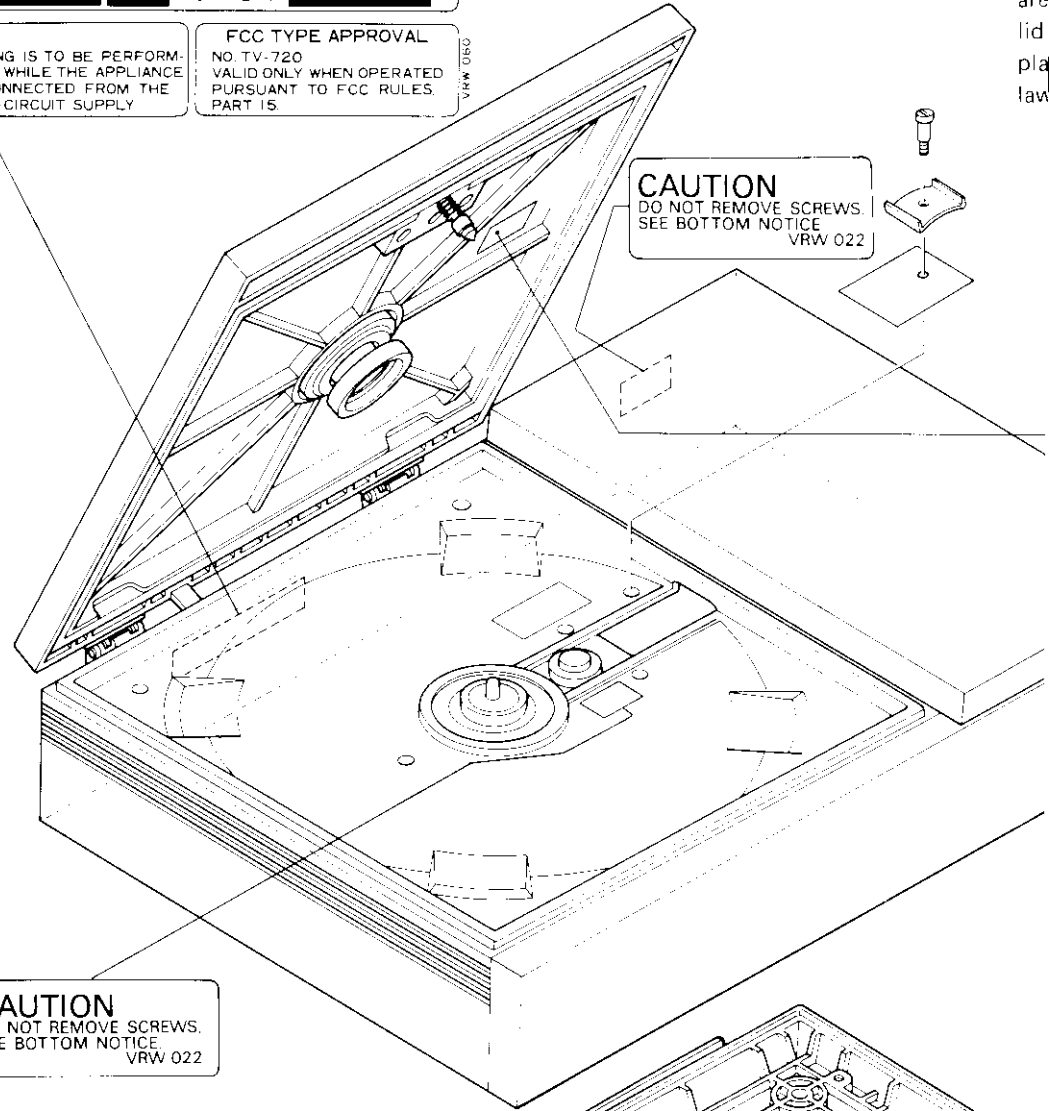
FCC TYPE APPROVAL
NO. TV-720
VALID ONLY WHEN OPERATED
PURSUANT TO FCC RULES,
PART 15.

A

B

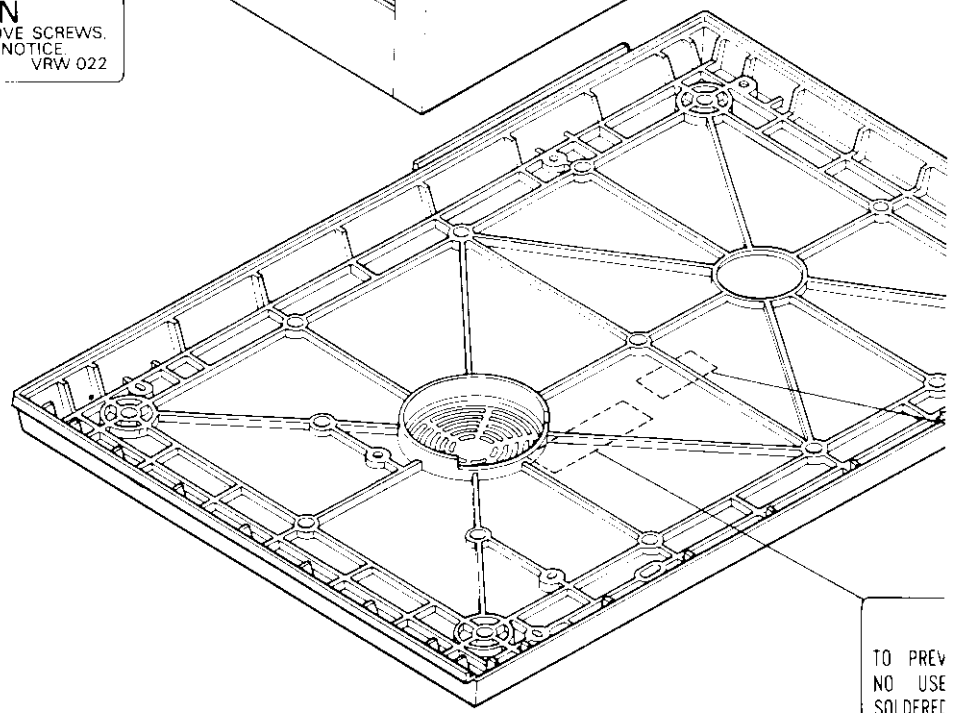
C

D



CAUTION
DO NOT REMOVE SCREWS.
SEE BOTTOM NOTICE.
VRW 022

CAUTION
DO NOT REMOVE SCREWS.
SEE BOTTOM NOTICE
VRW 022



TO PREVENT
NO USE
SOLDERED
SERVICE

1

2

3

Be
ma
are
lid
pla
law



PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
UNIVERSAL PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER VIDEO, INC. 200 West Grand Avenue, Montvale, New Jersey 07645 U.S.A.
U.S. PIONEER ELECTRONICS CORPORATION 85 Oxford Drive, Moonachie, New Jersey 07074, U.S.A.

© APR. 1982 Printed in Japan