

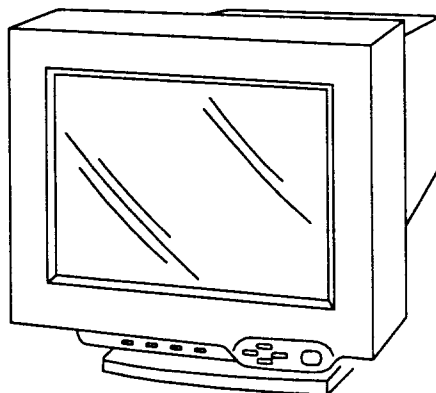
CPD-15SF1

SERVICE MANUAL

WORLD Model

Chassis No. SCC-H01A-A

Multiscan15sf



X-1 CHASSIS

SPECIFICATIONS

Picture Tube	0.25 mm aperture grill pitch 15 inches measured diagonally (14" visual) 90° -degree deflection
Maximum screen size	Approx. 285 x 213 mm (w/h) (11 ¹ / ₄ x 8 ¹ / ₂ inches)
Resolution	Horizontal : Max. 1280 dots Vertical : Max. 1024 lines
Standard picture size	Approx. 270 x 202 mm (w/h) (10 ³ / ₄ x 8 inches)
Deflection frequency	Horizontal : 31.5 to 64 kHz Vertical : 50 to 120 Hz
AC input voltage/current	100 to 120 V, 50-60 Hz, 1.8 A 220 to 240 V, 50-60 Hz, 1.0 A
Dimensions	368 x 373 x 384.5 mm (w/h/d) (14 ¹ / ₂ x 14 ³ / ₄ x 15 ¹ / ₄ inches)
Mass	Approx. 13.8kg (30 lb 7 oz)

Design and specifications are subject to change without notice.

POWER SAVING FUNCTION

This monitor meets the power saving guidelines set by the EPA Energy Star Program as well as the more stringent TC092 guidelines (NUTEK). It is capable of reduced power consumption when used with a computer equipped with Display Power Management Signaling (DPMS). By sensing the absence of the sync signal coming from the computer, it will reduce the power consumption as follows:

CAUTION: The Power Saving function will automatically put the monitor into Active-off state if the power switch is turned on without any video signal input. Once the horizontal and vertical syncs are sensed, the monitor will automatically return to its Normal operation state.

	State	Power consumption	Required resumption time	Power indicator	POWER SAVING indicator
1	Normal operation	100%	—————	green on	off
2	Suspend (1st step of power saving)	approx. 10%	approx. 3 sec.	green on	orange on
3	Active-off (2nd step of power saving)	approx. 7%	approx. 10 sec.	off	orange on

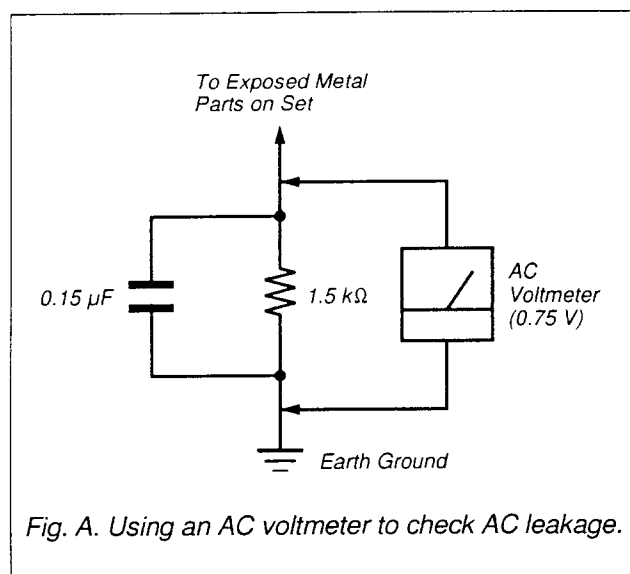
TIMING SPECIFICATION

Mode	1	2	3	4	5	6
Resolution(H x V)	640 x 480	800 x 600	832 x 624	1024 x 768	1024 x 768	1280 x 1024
Dot Clock(MHz)	25.175	50.000	57.283	65.000	75.000	110.000
Horizontal						
Hor. freq. (kHz)	31.469	48.077	49.727	48.363	56.476	63.953
H-total	31.778	20.800	20.11	20.677	17.707	15.636
H-Front porch	0.635	1.120	0.560	0.369	0.320	0.727
H-Sync width	3.813	2.400	1.110	2.092	1.813	1.018
H-Back porch	1.907	1.280	3.910	2.462	1.920	2.255
H-blanking	6.356	4.800	5.580	4.923	4.053	4.000
H-Active (μsec)	25.422	16.000	14.530	15.754	13.653	11.636
Vertical						
Ver. freq. (kHz)	59.940	72.187	74.550	60.000	70.069	59.940
V-total	525	666	667	806	806	1067
V-Front porch	10	37	1	3	3	1
V-Sync. width	2	6	3	6	6	5
V-Back porch	33	23	39	29	29	37
V-blanking	45	66	43	38	38	43
V-Active (Lines)	480	600	624	768	768	1024
Sync.	External	External	External	External	External	External
H-Polarity	(-)	(+)	(-)	(-)	(-)	(-)
V-Polarity	(-)	(+)	(-)	(-)	(-)	(-)
Scanning mode	Non-Interlace	Non-Interlace	Non-Interlace	Non-Interlace	Non-Interlace	Non-Interlace

SAFETY CHECK-OUT (US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate: be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.



LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVEE.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLODÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT

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The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

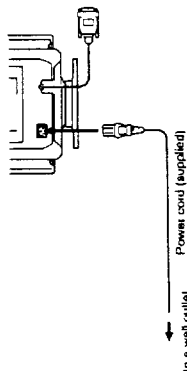
SECTION 1 GENERAL

Getting Started

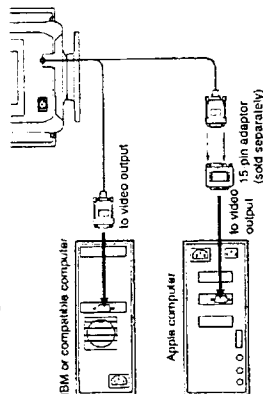
Before using this monitor, please make sure that the following items are included in your package: 15sf monitor (1), power cord (1), warranty card (1) and the operating instruction manual (1).

This monitor will sync with any IBM or compatible system equipped with VGA or greater graphics capability. Although this monitor will sync to other platforms running at horizontal frequencies between 31.5 and 64 kHz, including Macintosh, a cable adaptor is required. Please consult your dealer for advice on which adaptor is suitable for your needs.

Step one: With the monitor switched off, attach the power cord to the monitor and then to the power outlet.



Step two: With the computer switched off, attach the video signal cable to the video card.



Step three: Turn on the monitor and computer.

Step four: If necessary, adjust the user controls according to your personal preference.

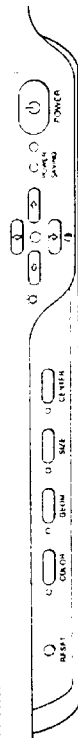
The installation of your 15sf is complete. Enjoy your monitor.

Adjustments

A number of digital controls are provided to allow you to optimize the display parameters to your preferences.

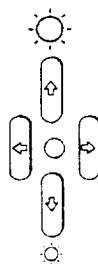
- When the initial value is reached, the POWER SAVING indicator will begin to flash.
- Adjustments will be stored automatically.

Control Panel

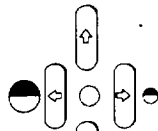


Normal Operation Mode

Brightness



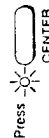
Contrast



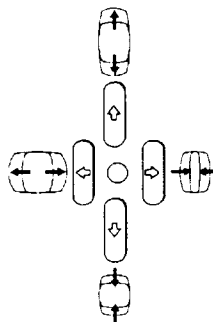
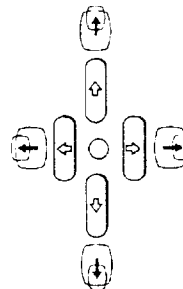
Adjustment Mode

- Select one of the 4 function buttons (CENTER, SIZE, GEOM, COLOR) and adjust as described below.
- The monitor will return to the normal operation mode after 20 seconds.

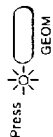
Centering



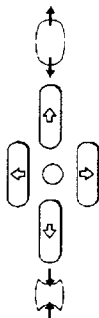
Size



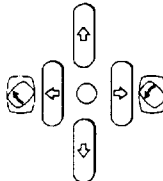
Geometry



Pincushion



Raster Rotation

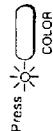


Resetting

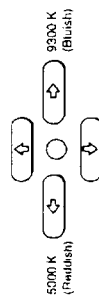
- Press the RESET button to recall the factory settings for brightness, contrast, horizontal and vertical size, center and pincushion for the mode currently in use.
- Press and hold the RESET button for 2 seconds to recall factory setting for all adjustments in all modes.



Color Temperature

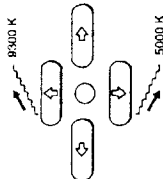


Preset color temperature



Monitor is initially set to 9300K.

User adjustable color temperature



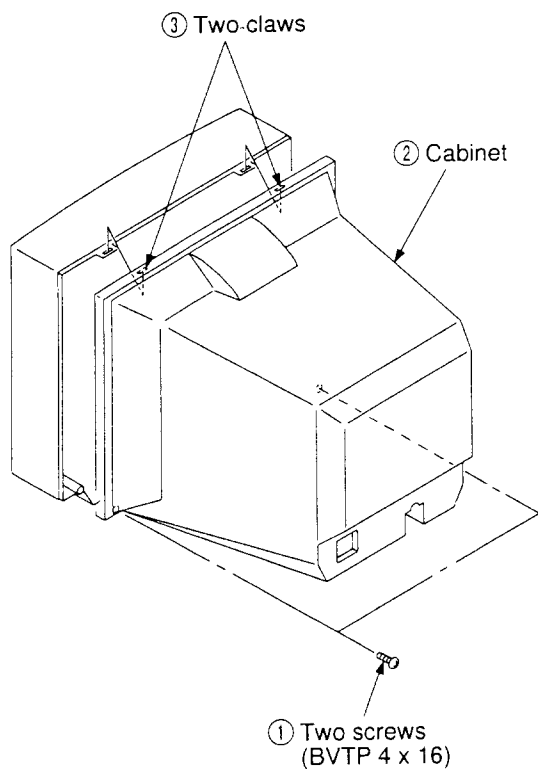
You can choose between the two factory preset color temperatures or adjust the color temperature to your preferences within a range of 5000 K - 9300 K. Your most recent adjusted color temperature will be recalled by pressing 0 or 6 button.

Entering New Timings

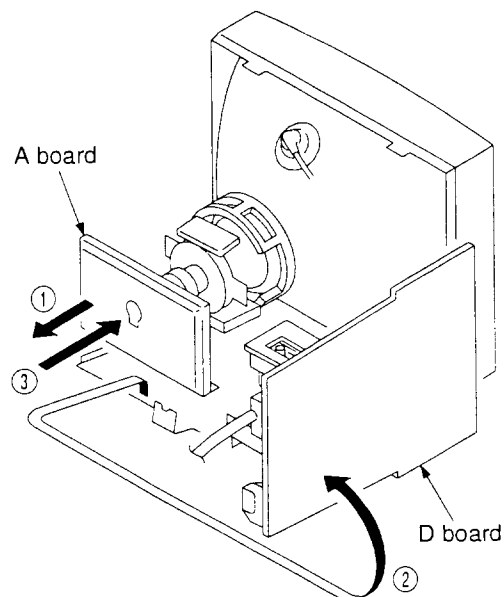
When using a video mode that is not one of the 6 factory preset modes, some line tuning may be required to optimize the display to your preferences. Simply adjust the monitor according to the preceding adjustment instructions. The adjustments will be stored automatically and recalled whenever that mode is used. A total of 10 user-defined modes can be stored in memory. If a 11th mode is entered, it will replace the first.

SECTION 2 DISASSEMBLY

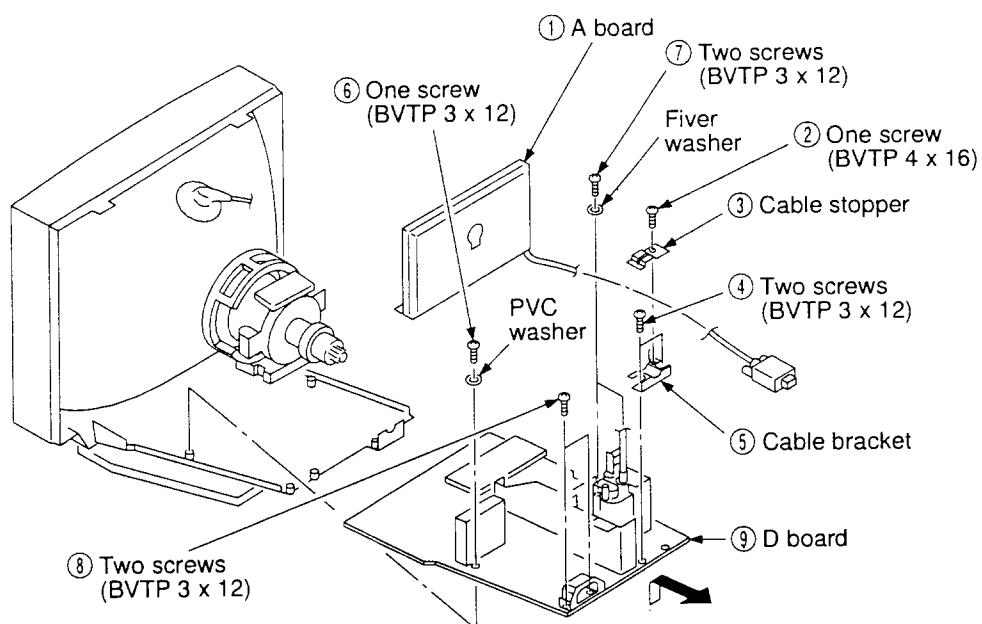
2-1. CABINET REMOVAL



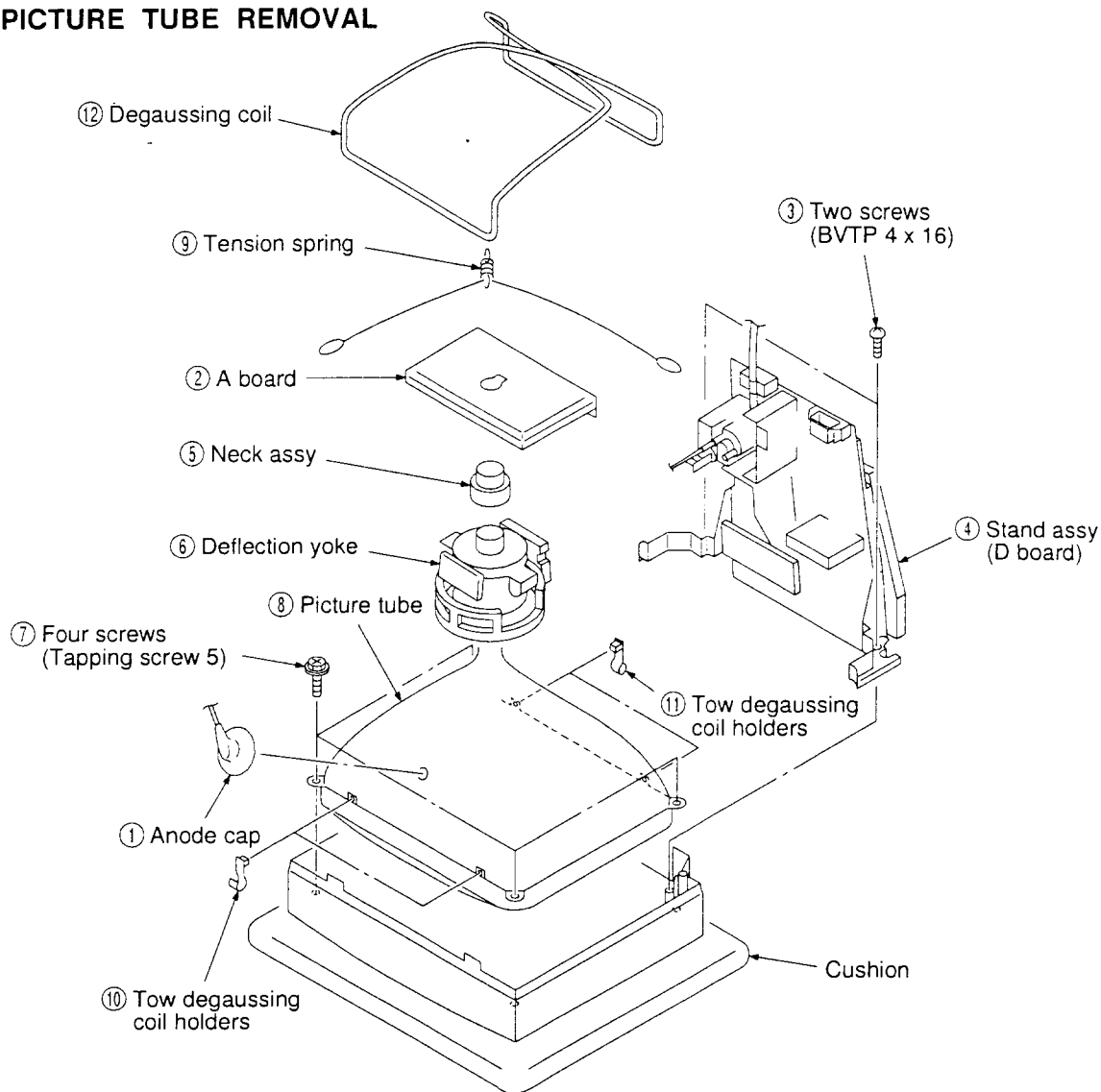
2-2. SERVICE POSITION



2-3. D BOARD REMOVAL



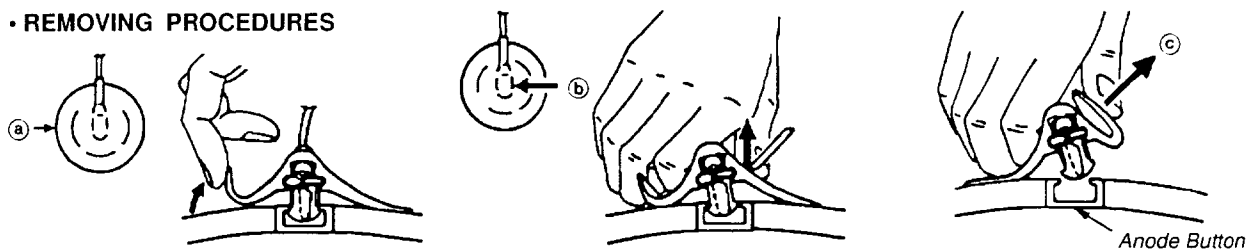
2-4. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

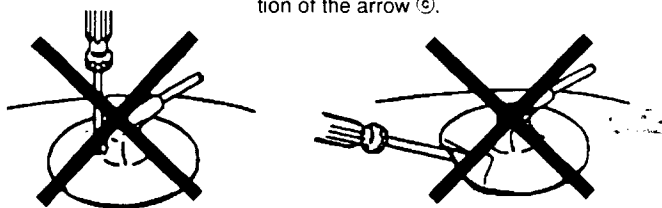
NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES



• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3

SAFETY RELATED ADJUSTMENT

When replacing or repairing the shown below table, the following operational checks must be performed as a safety precaution against X-rays emissions from the unit.

	Part Replaced (<input checked="" type="checkbox"/>)
SCREEN	RV470

	Part Replaced (<input checked="" type="checkbox"/>)	
HV Regulator Circuit	D board	IC506, FBT (T501), R457, R475, R485, R487, R509, R512, R610, RV470, C544
HV Hold-Down Circuit	D board	IC501, IC503, Q515, D515, D517, R472, R494, R496, R499, R572, R573, FBT (T501)
	N board	<ul style="list-style-type: none"> • Mounted D board • Mounted N board
Beam Current Protector Circuit	D board	IC501, IC503, IC512, Q506, D516, D536, R459, R462, R465, R469, R495, R571, R574, R575, R576, R577, R578
	N board	<ul style="list-style-type: none"> • Mounted D board • Mounted N board

※ Confirm one minute later turning on the power.

a) HV Hold-Down Check

- 1) Input 41.75 ± 0.25 V DC to Cathode of D515 from external power supply to check that the raster goes out.

b) Beam Protector Check

- 1) Confirm that the raster appears on the CRT screen.
- 2) Short between pin ⑥ of IC 503 and GND further short between R495, R465 and GND.
- 3) Using an external DC power supply, apply the voltage shown below between pin ⑧ of FBT and GND, and confirm that the voltage of the pin ⑤ of IC503 is within the voltage range shown below.

Input voltage 4.65 ± 0.05 V DC

Check condition less than 2 V DC

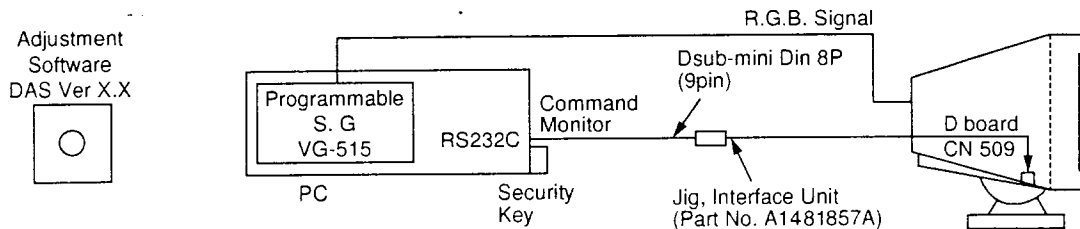
c) +B Regulator Check

- 1) Input cross-hatch signal.
- 2) Minimize contrast and bright.
- 3) Check that the voltage at pin ⑥ of CN505 is 141 ± 2 V DC.

SECTION 4

ADJUSTMENTS

Connect the communication cable of the computer to the connector located on the D board on the monitor. Run the service software and then follow the instruction.



● H.CENT Adjustment

(This should be performed before Convergence Adjustment.)

- 1) Receive the picture with maximum frequency. (Dot signal)
- 2) Adjust "BRT" to "255", "H.SIZE" to "-127" and "H.SHIFT" to "127". (CENTER)
- 3) Select the minimum point of right and left difference of the raster at connector switch (CN506, CN514). Then fine adjust H.CENT at switch (S500).

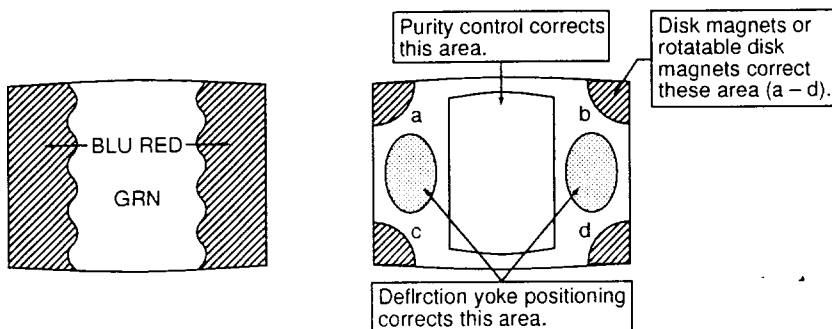
- ※ Connector inserting change : Correction direction change-over.
- ※ Switch change-over : Correction distance change-over.

● BEAM LANDING Adjustment

Preparation

- Face the PICTURE TUBE to east or west so as not to be influenced by magnetic force.
- Turn ON the POWER switch, and degauss the entire screen with degausser.

- 1) Receive a signal of 768 LINE ($f_H = 48.7$ kHz) with signal generator.
- 2) Set purity controls to center position.
- 3) Switch over the signal generator to green.
- 4) Move the deflection yoke backward, and adjust purity magnet so that the green on the screen to become in the center of screen.
- 5) Move the deflection yoke forward, and adjust with so that the entire screen to become green entirely.
- 6) Switch over the signal to blue and green, and confirm the condition.
- 7) When landing at the corners is not right, correct by using the magnet.

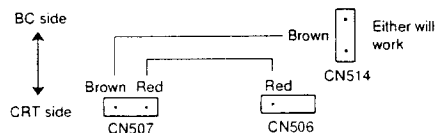


☆ Polarity Change-over

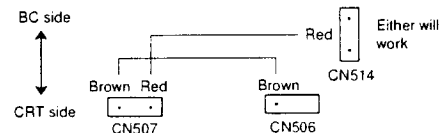
(Raster swings by changing CN506 and CN514)

< Top View of the board >

In moving raster to the left.



In moving raster to the right.



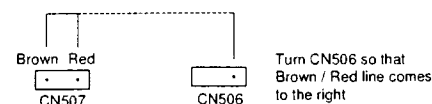
The correction size switches at S500.



☆ No Correction

(Turn CN506 when raster right-left correction is not necessary.)

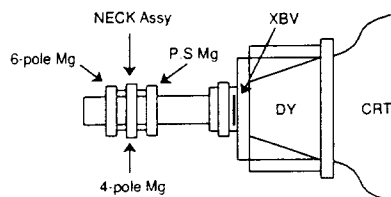
< Top View of the board >



● Convergence Adjustment

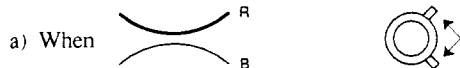
※ Set DY four-pole magnet to mechanical center before adjustment.

※ This should be prime mode.

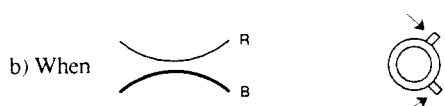


- 1) Receive R.B. cross-hatch.
- 2) Adjust H.STAT and V.STAT at four-pole magnet.
- 3) Receive White cross-hatch.
- 4) Adjust HMC and VMC at six-pole magnet.
- 5) Receive R.B. cross-hatch.
- 6) Adjust XBV at DY four-pole magnet.

XBV Correction



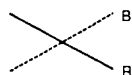
1. Open DY four-pole. (Do not move H.STAT)
2. Re-adjust H.STAT with four-pole at NECK Ass'y.



1. Close DY four-pole. (Do not move H.STAT)
2. Re-adjust V.STAT with four-pole at NECK Ass'y.

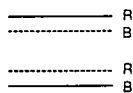
- 7) Repeat the above procedure so that R.G.B. will be on X. Y axis.
- 8) Adjust H.TILT by swinging the DY neck right and left.
- 9) Adjust XCV with XCV core.

XCV movement



- 10) Adjust V.TILT with TLV VR.

TLV movement



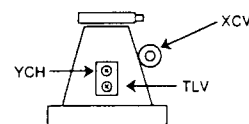
- 11) Adjust Y.CLOTH with YCH VR.

YCH movement

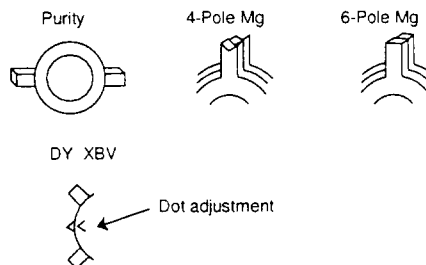


- 12) Paint lock the four-, six-pole Mg.

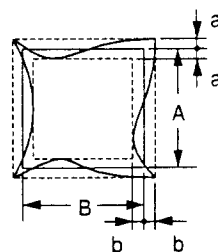
< VR Adjustment on DY >



< Zero Position NECK Ass'y >



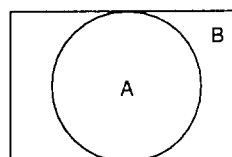
● Vertical and Horizontal Position and Size Specification



$a < 2.5\text{mm}$
 $b < 2.5\text{mm}$

A	B
202	270

● Convergence Specification

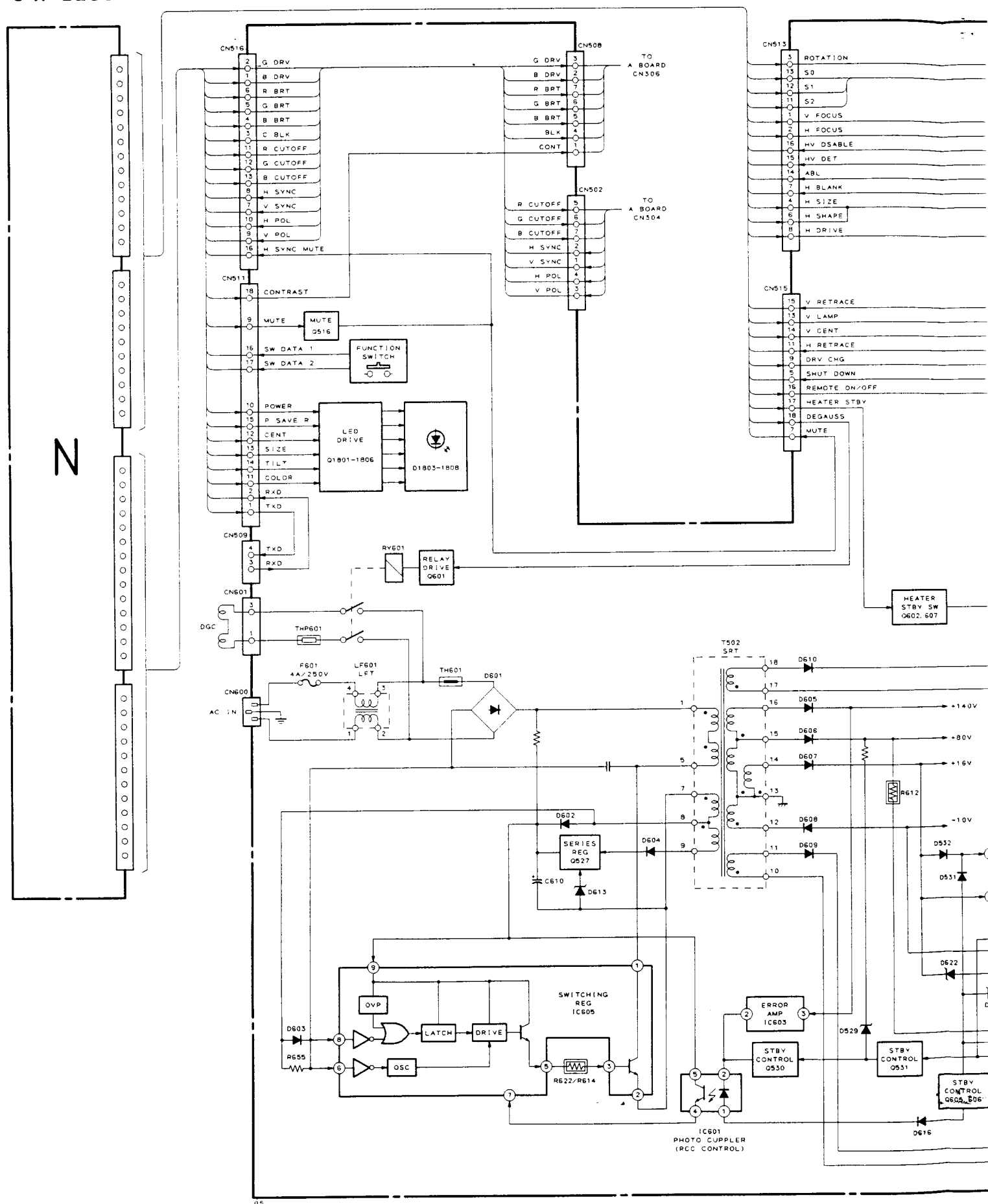


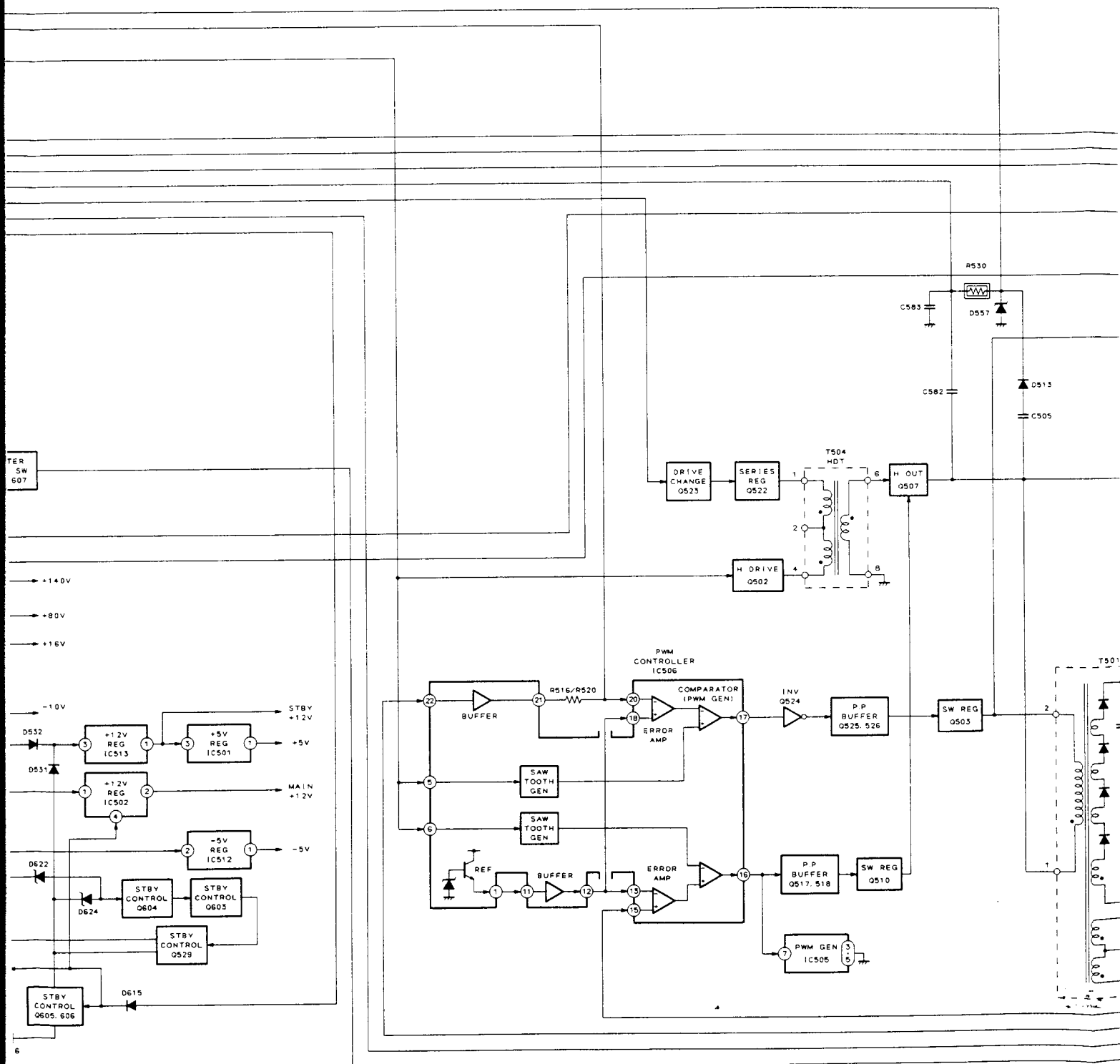
$a \leq 0.30\text{mm}$
 $b \leq 0.35\text{mm}$

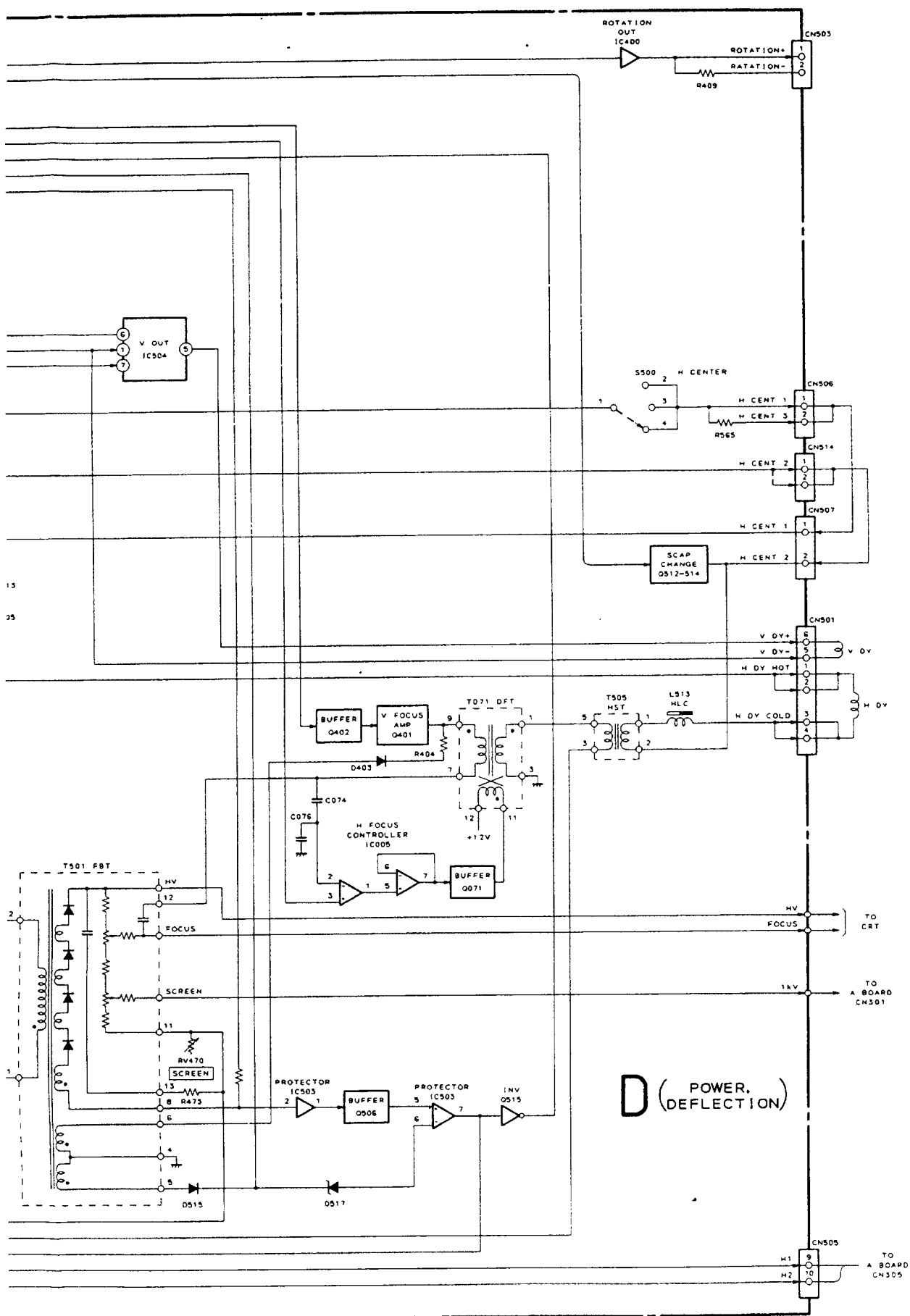
MEMO

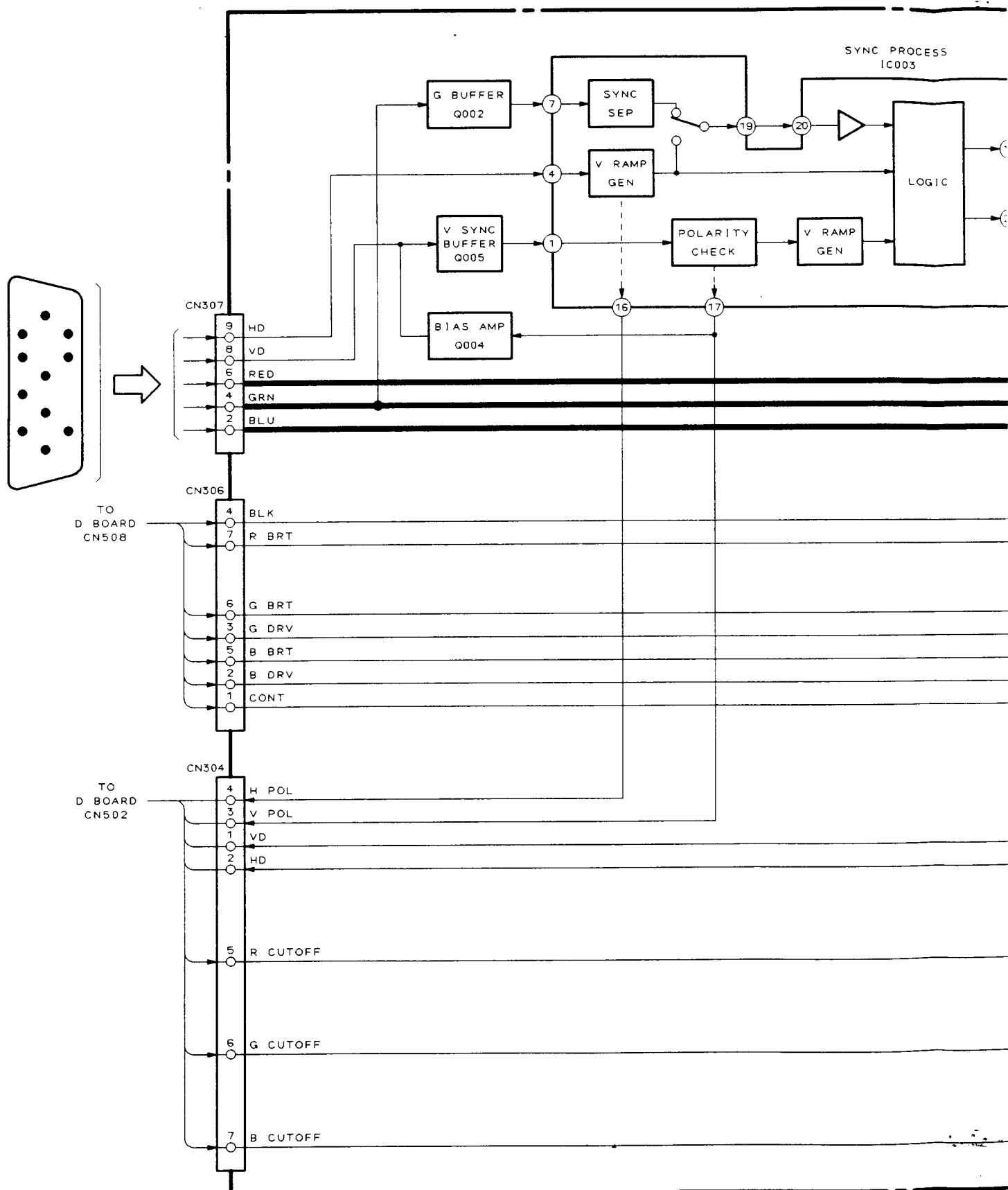
SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAMS

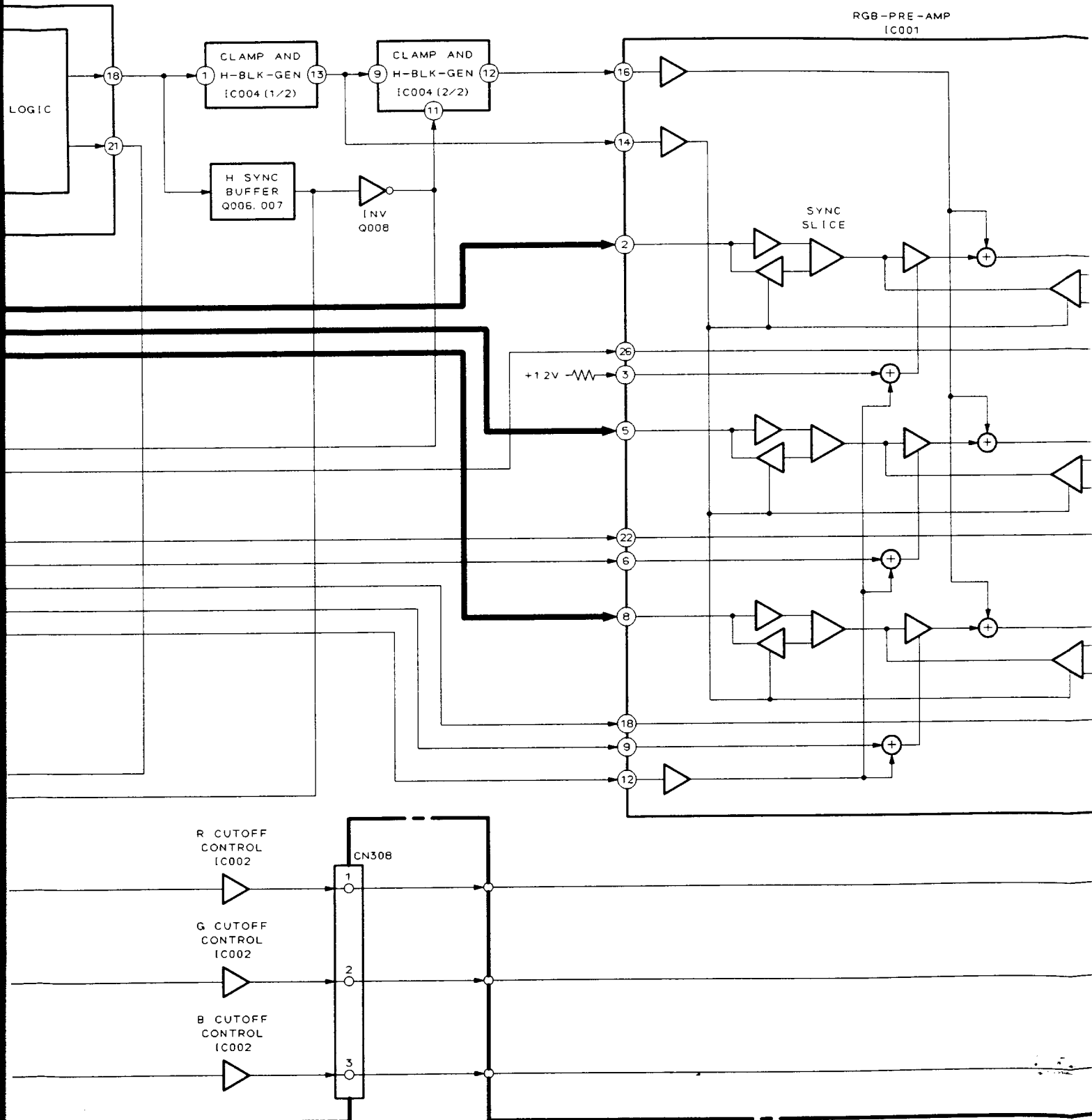


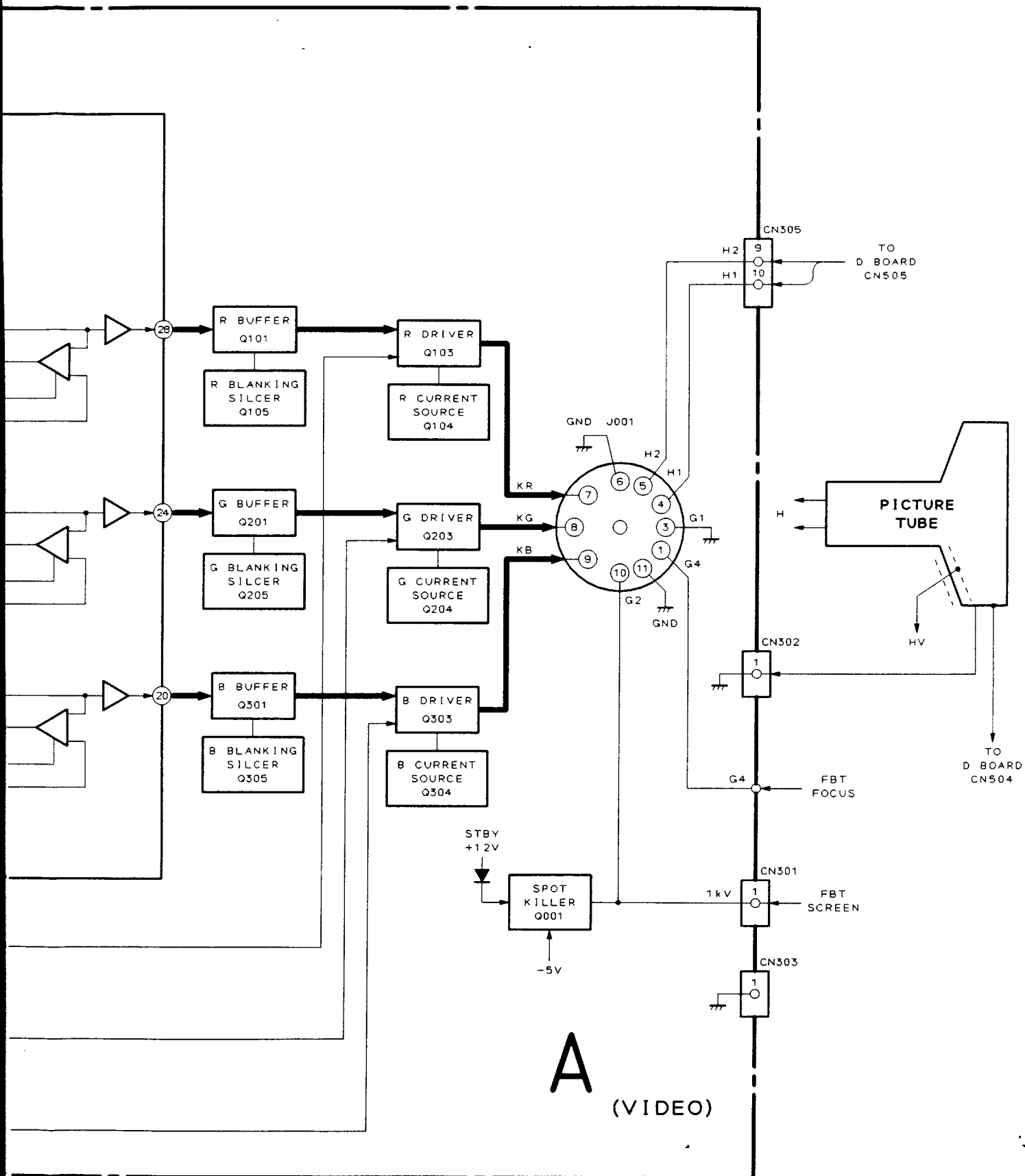




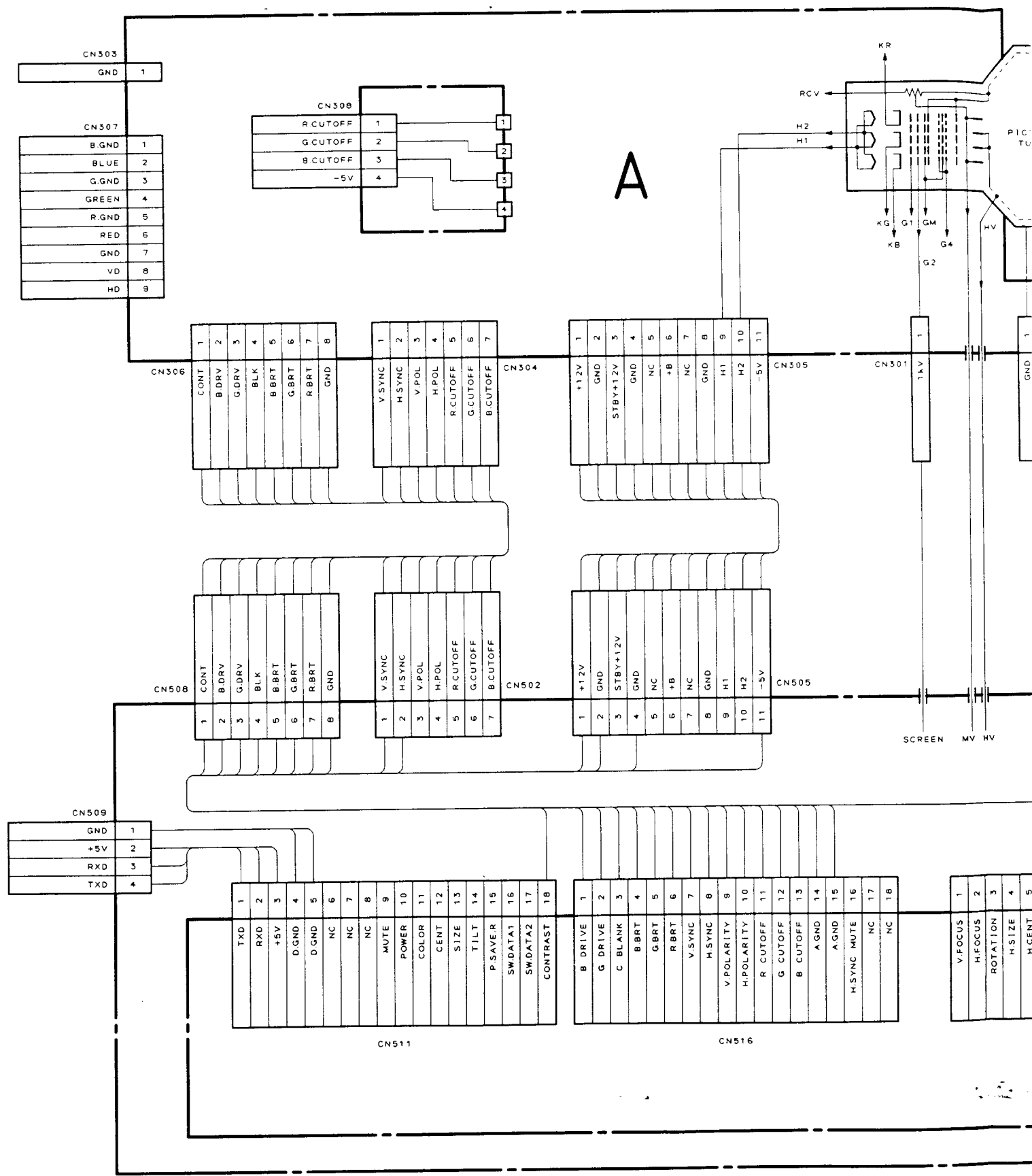


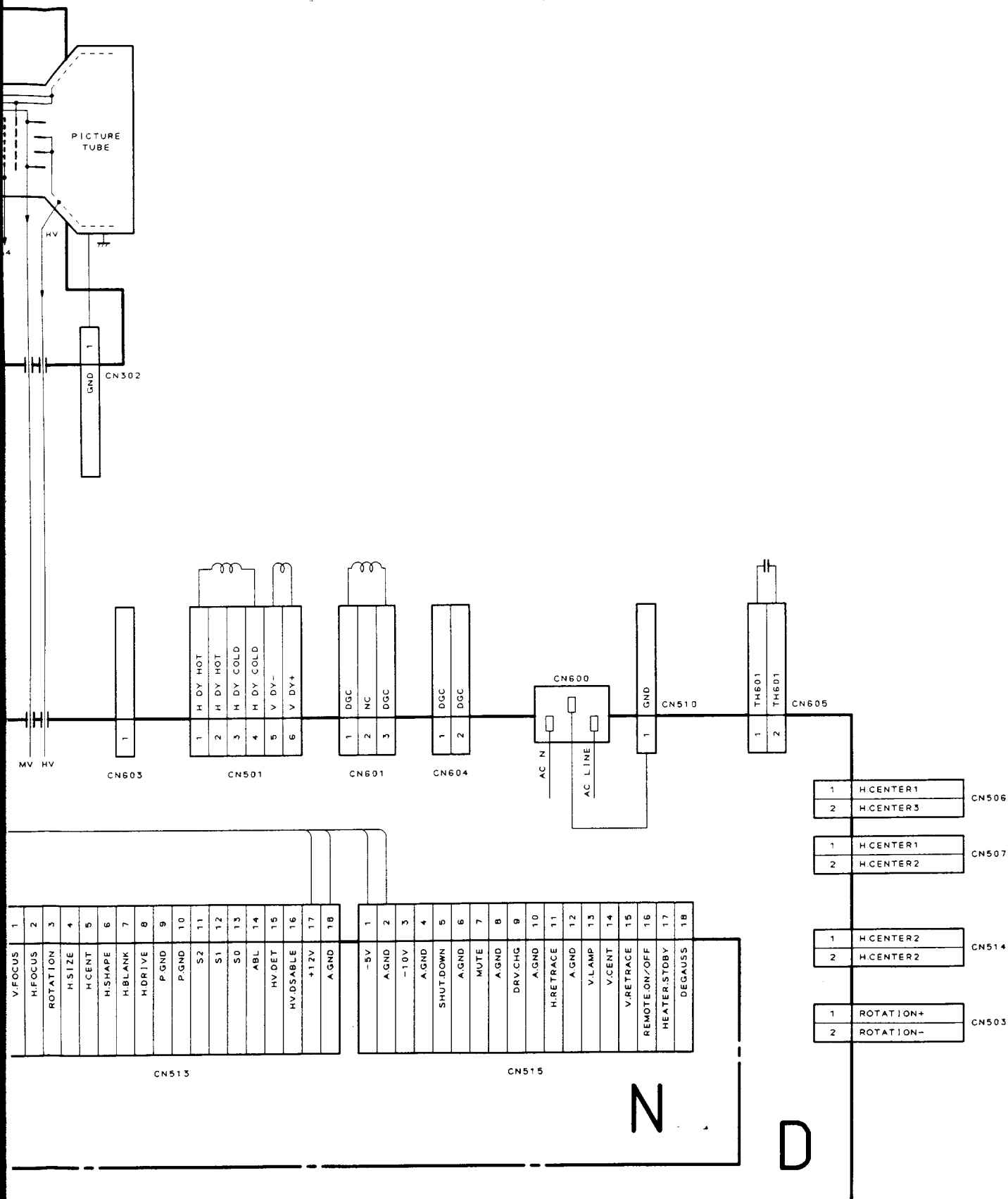
PROCESS
03



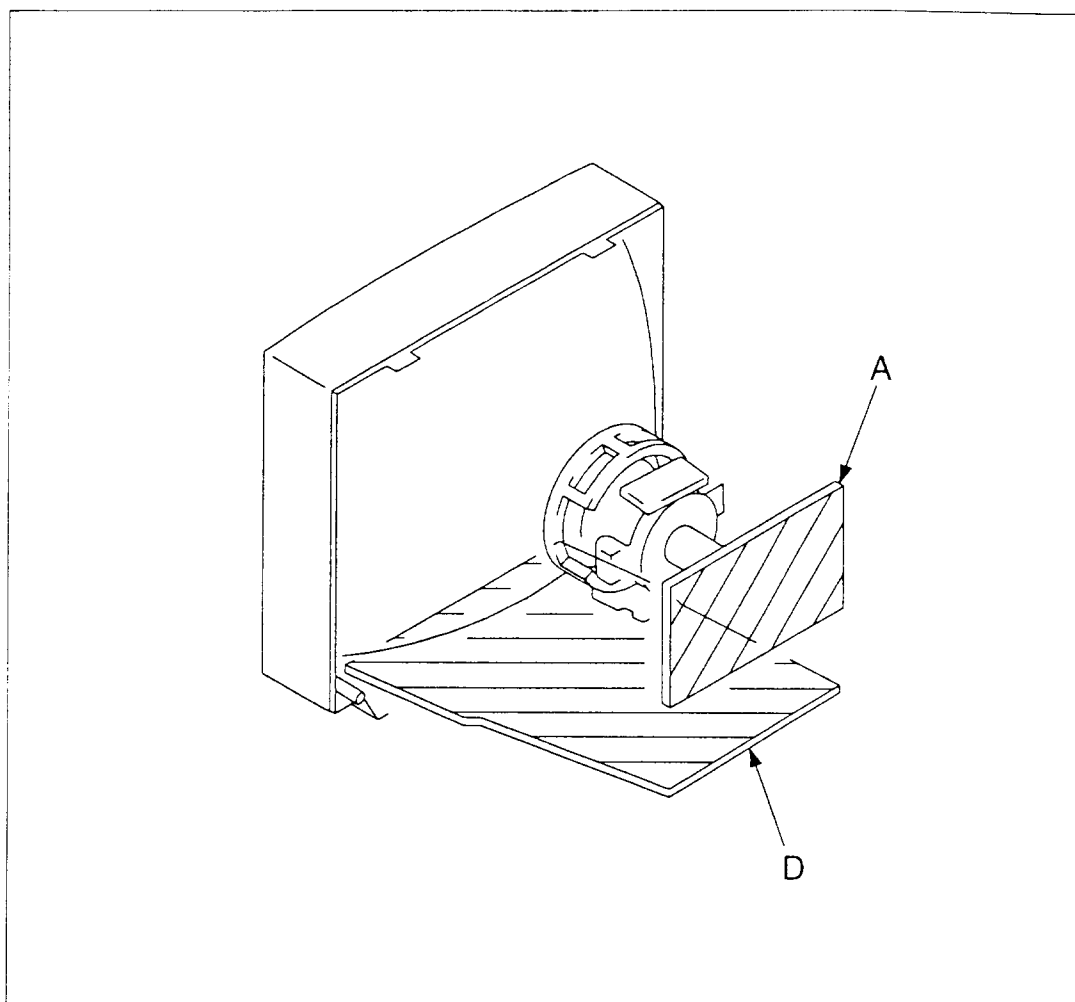


5-2. FRAME SCHEMATIC DIAGRAM





5-3. CIRCUIT BOARDS LOCATION











5-4. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS


Note:


- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytic.
- Indication of resistance, which does not have one for rating electrical power, is as follows.



Pitch: 5 mm


Rating electrical power 1/4 W (CHIP : 1/10 W)


- All resistors are in ohms.
-  : nonflammable resistor.
-  : fusible resistor.
-  : internal component.
-  : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : earth-ground.
-  : earth-chassis.
- The components identified by  in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. (See page 9)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced ()	
RV470	SCREEN

Part replaced ()	
D board	IC506, FBT (T501), R457, R475, R485, R487, R509, R512, R610, RV470, C544
	HV Regulator Circuit
D board	IC501, IC503, Q515, D515, D517, R472, R494, R496, R499, R572, R573, FBT (T501)
N board	• Mounted D board • Mounted N board
	HV Hold-Down Circuit
D board	IC501, IC503, IC512, Q506, D516, D536, R459, R482, R465, R469, R495, R571, R574, R575, R576, R577, R578
N board	• Mounted D board • Mounted N board
	Beam Current Protector Circuit

- All voltages are in V.
- Readings are taken with a 10 M Ω digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Can not be measured.
- Circled numbers are waveform references.
-  : B + bus.
-  : B - bus.

Note: The components identified by shading and mark  are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• D BOARD

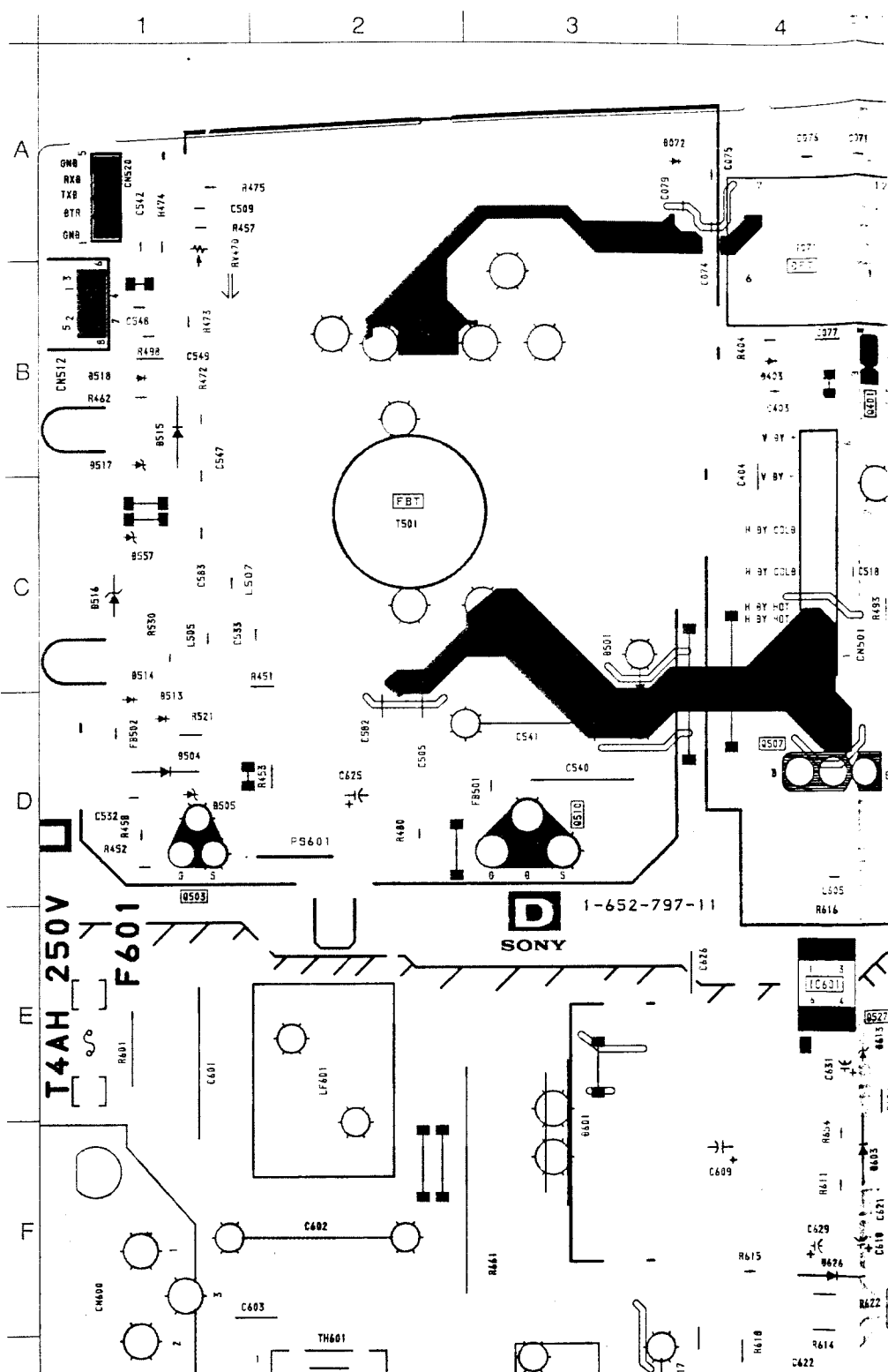
IC	
IC005	B - 5
IC400	E - 7
IC501	G - 9
IC502	E - 7
IC503	F - 8
IC504	B - 6
IC505	E - 8
IC506	E - 9
IC512	E - 6
IC513	F - 9
IC601	E - 4
IC603	E - 5
IC605	F - 5
TRANSISTOR	
Q401	B - 4
Q402	B - 5
Q502	D - 6
Q503	D - 1
Q506	F - 8
Q507	D - 4
Q510	D - 3
Q512	C - 6
Q513	C - 7
Q514	B - 7
Q515	C - 9
Q516	B - 8
Q517	D - 7
Q518	D - 7
Q522	D - 7
Q523	C - 9
Q524	E - 8
Q525	D - 9
Q526	D - 9
Q527	E - 5
Q529	G - 8
Q530	F - 9
Q531	F - 9
Q601	G - 6
Q602	G - 9
Q603	G - 9
Q604	G - 9
Q605	G - 9
Q606	F - 9
Q607	G - 8
Q1801	G - 10
Q1802	G - 9
Q1803	C - 9
Q1804	B - 9
Q1805	B - 9
Q1806	A - 9

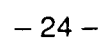
D [POWER DEFLECTION]

— D Board —

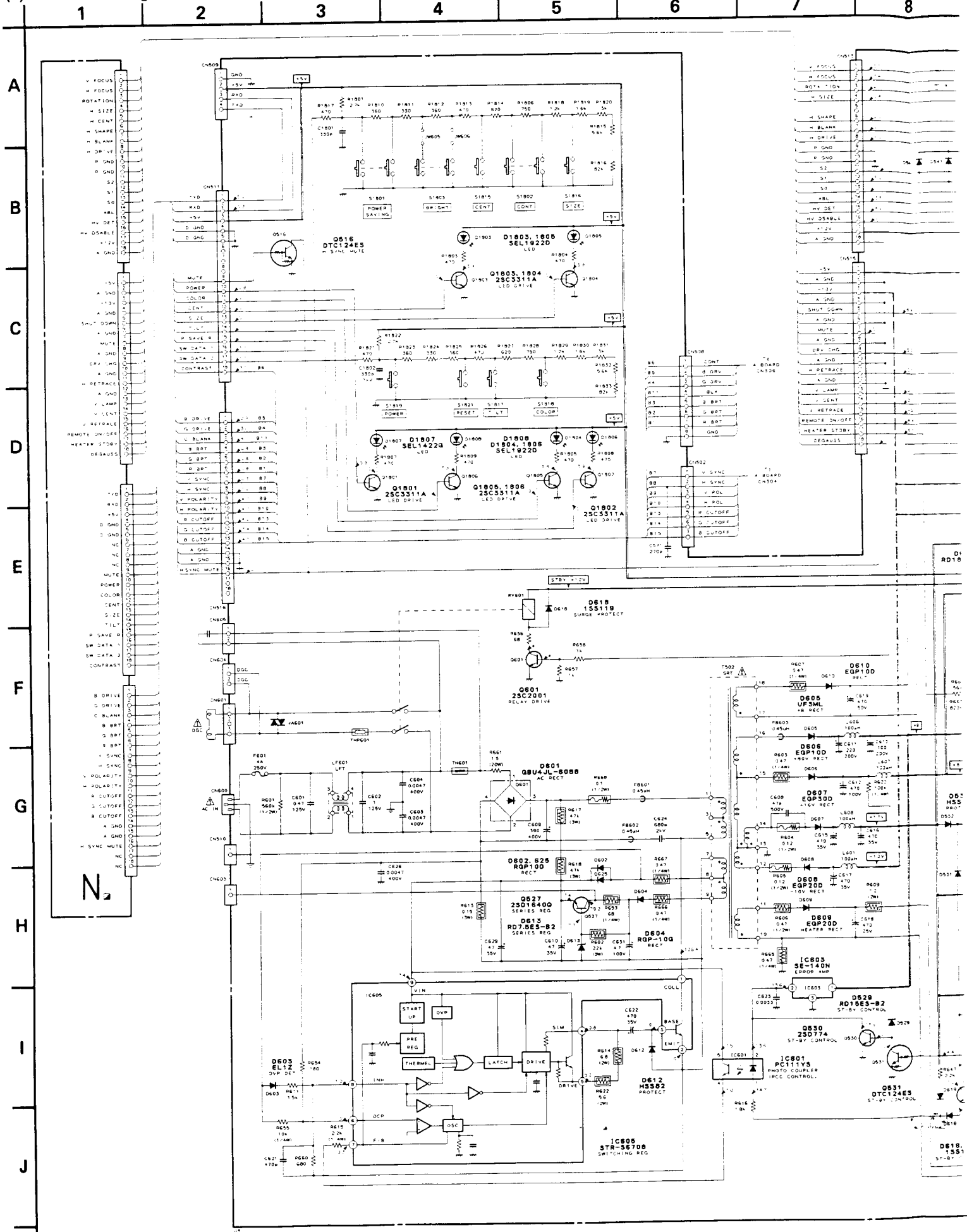
BOARD

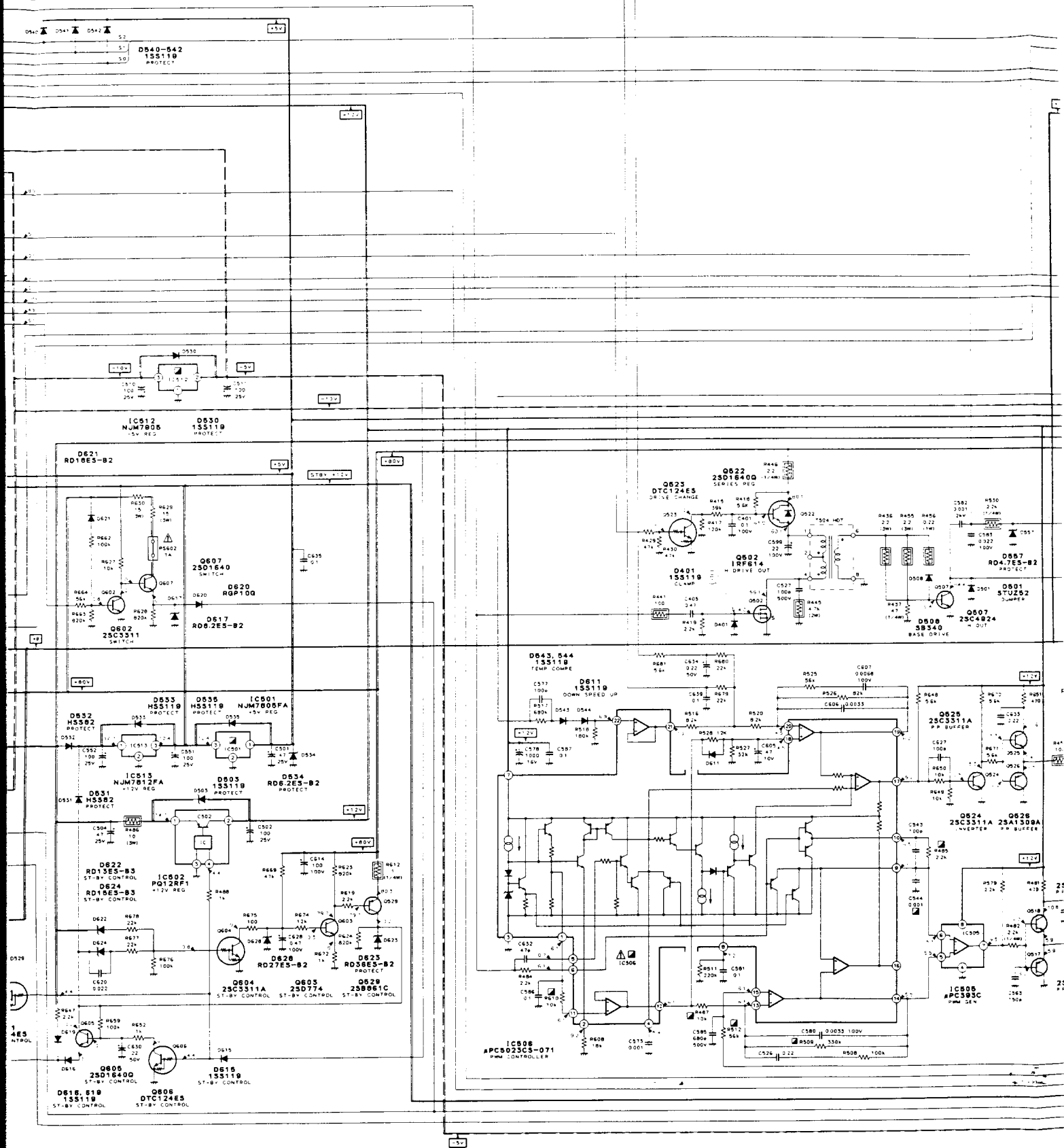
IC		DIODE			
05	B-5	D071	A-5	D612	G-4
00	E-7	D072	A-3	D613	E-4
01	G-9	D075	B-5	D614	E-8
02	E-7	D076	A-9	D616	G-9
03	F-8	D077	B-9	D617	G-8
04	B-6	D401	D-6	D618	G-3
05	E-8	D402	C-5	D619	G-9
06	E-9	D403	B-4	D620	E-6
02	E-6	D501	C-3	D621	G-8
03	F-9	D502	B-6	D622	G-9
01	E-4	D503	E-7	D623	G-8
03	E-5	D504	D-1	D624	G-9
05	F-5	D505	D-1	D625	F-5
TRANSISTOR		D508	D-5	D627	B-5
		D512	A-6	D628	G-8
		D513	D-1	D1803	D-9
		D514	D-1	D1804	B-9
		D515	B-1	D1805	C-9
		D516	C-1	D1806	G-10
		D517	B-1	D1807	G-10
		D518	B-1	D1808	A-9
		D520	B-9	VARIABLE RESISTOR	
		D522	C-7		
00	D-3	D523	C-6	RV470 A-1	
02	C-6	D525	A-6		
03	C-7	D529	F-8		
04	B-7	D530	E-6		
05	C-9	D531	F-9		
06	B-8	D532	F-9		
07	D-7	D533	F-9		
03	D-7	D534	G-9		
02	D-7	D535	G-9		
03	C-9	D536	F-8		
04	E-8	D537	F-8		
05	D-9	D538	F-9		
06	D-9	D539	F-8		
07	E-5	D540	B-9		
09	G-8	D541	A-9		
00	F-9	D542	B-9		
01	F-9	D543	E-9		
02	G-6	D544	E-9		
03	G-9	D557	C-1		
04	G-9	D601	F-3		
05	G-9	D602	F-5		
06	F-9	D603	F-4		
07	G-8	D604	F-5		
01	G-10	D605	G-7		
02	G-9	D606	G-7		
03	C-9	D607	F-7		
04	B-9	D608	F-6		
05	B-9	D609	E-6		
06	A-9	D610	G-6		
		D611	E-8		



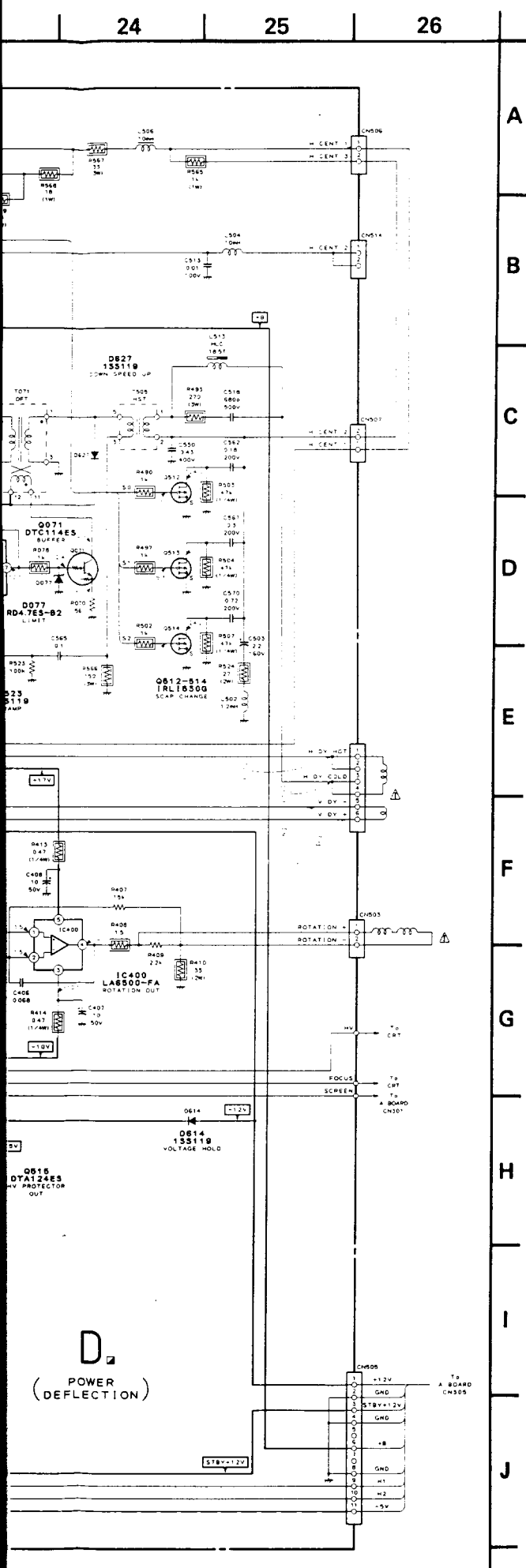


(1) Schematic Diagram of D Board

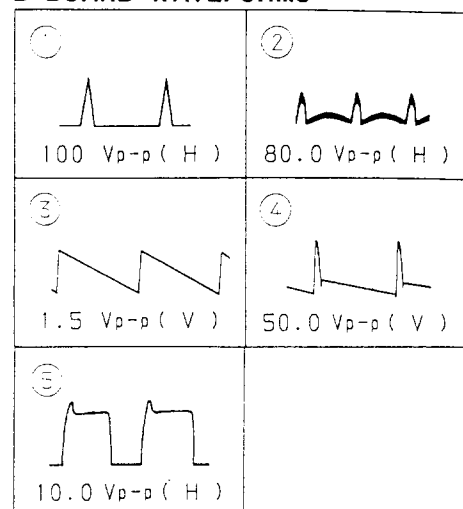






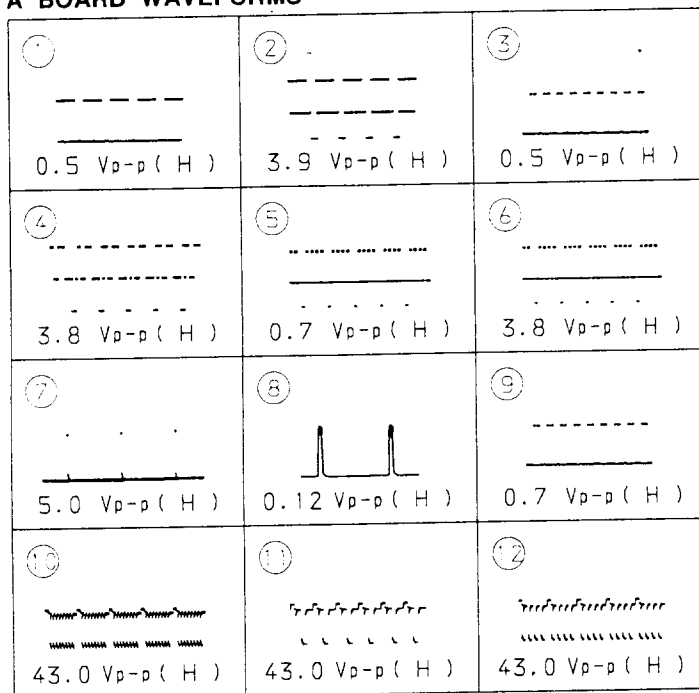


D BOARD WAVEFORMS



(2) Schematic Diagram of A Board

A BOARD WAVEFORMS

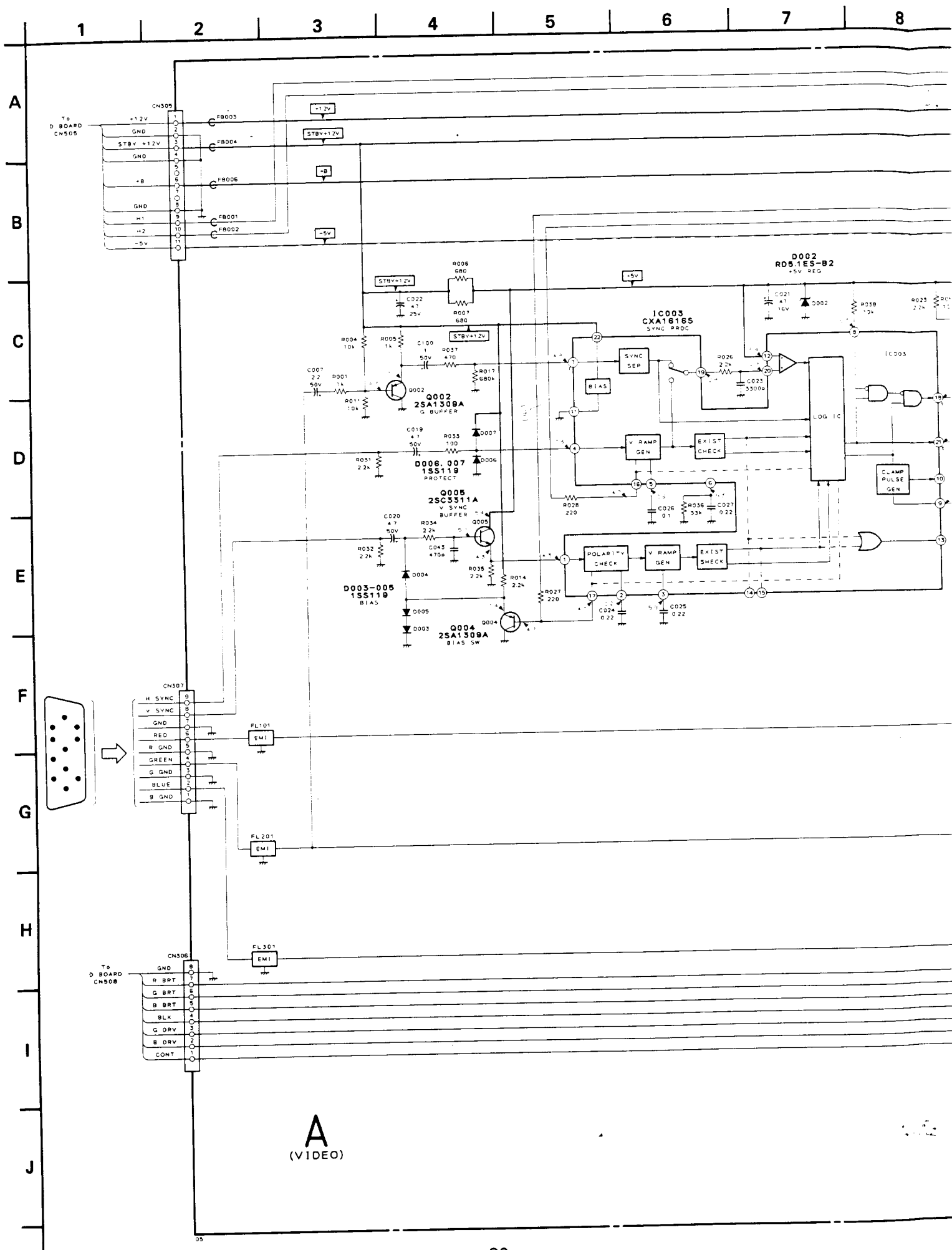


Schematic diagram

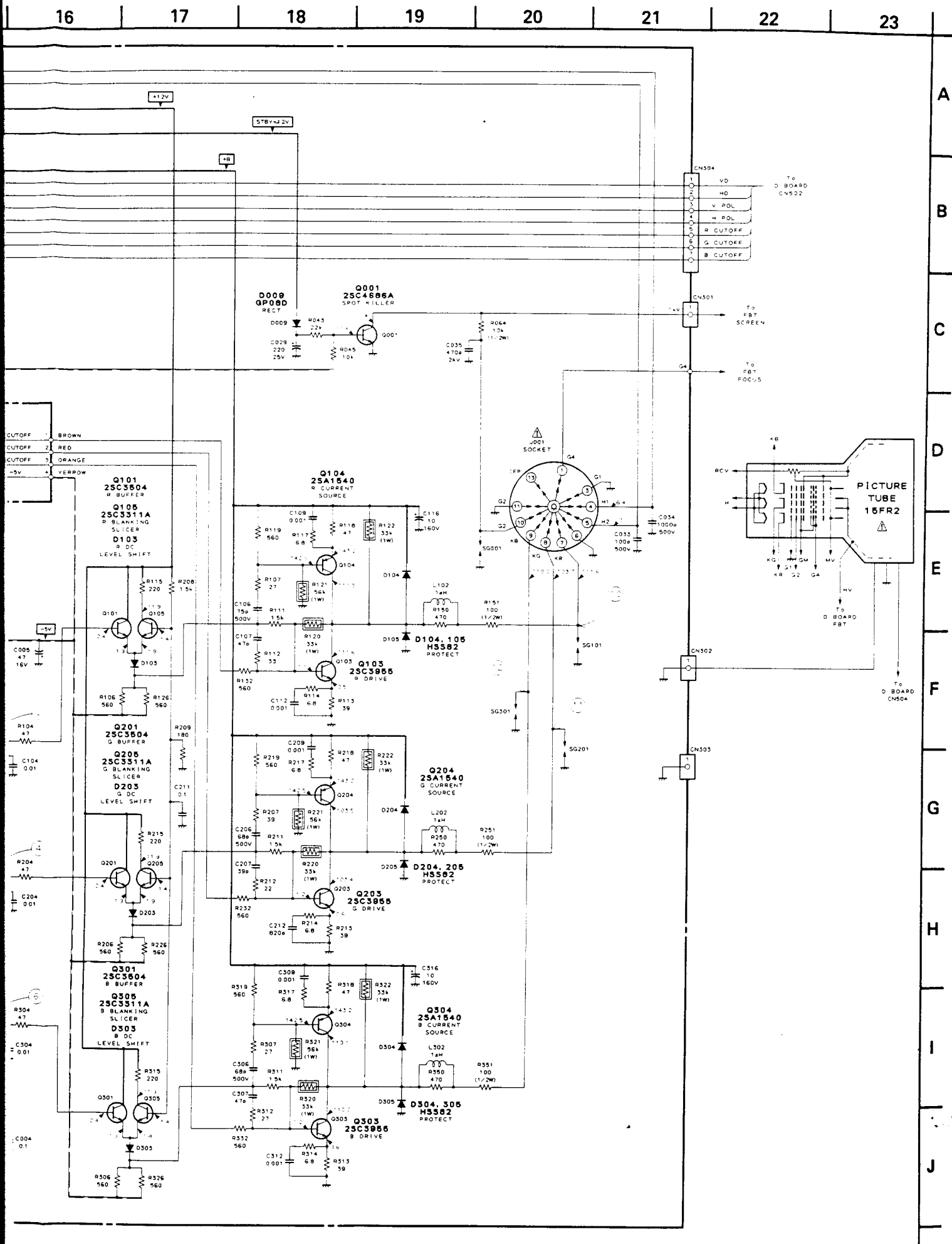
← D board

Schematic diagram

A board →







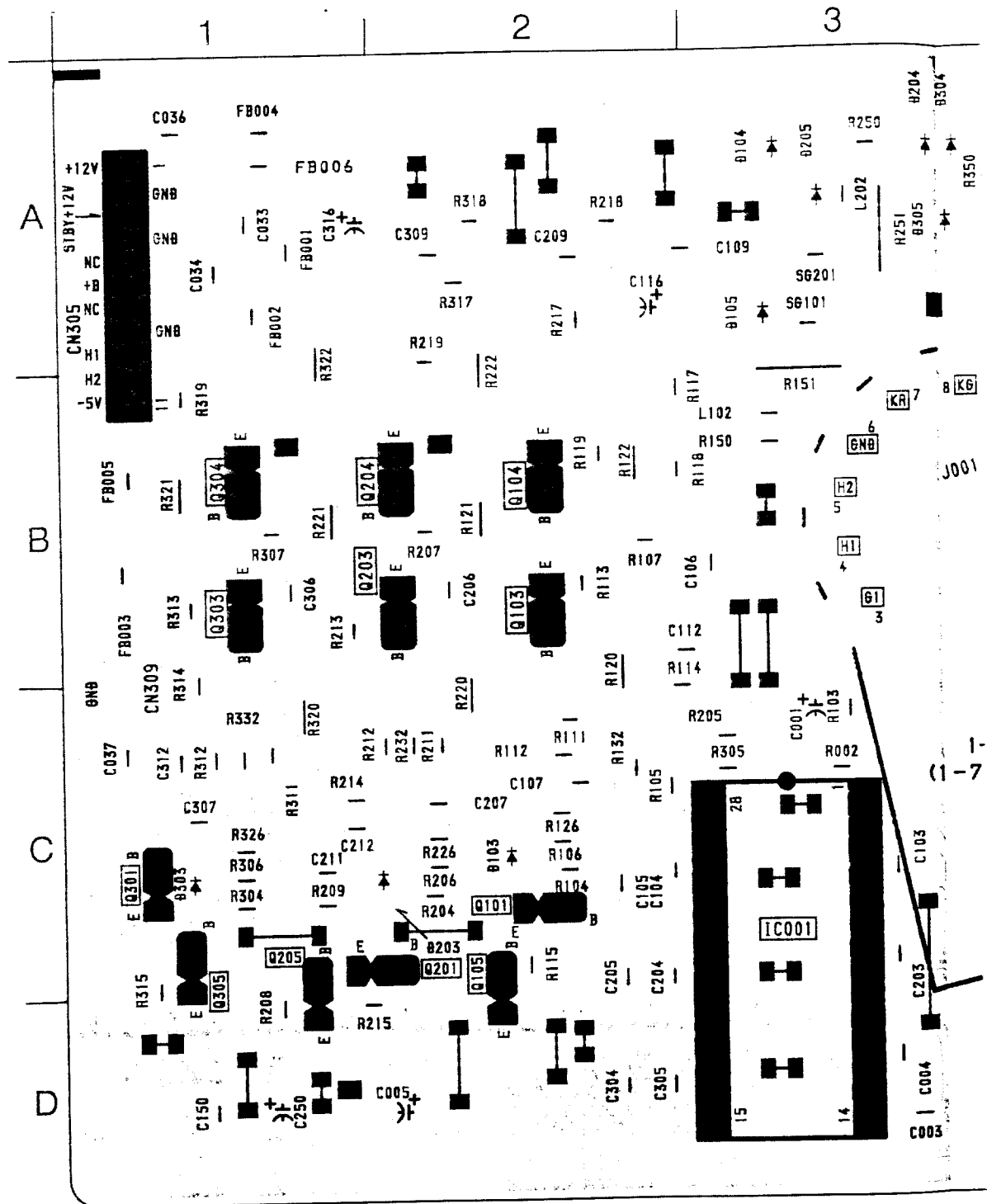
VIDEO

— A Board —

TRANSISTOR

Q001	A - 4
Q002	C - 6
Q004	B - 6
Q005	B - 6
Q006	A - 6
Q007	B - 6
Q008	C - 5
Q101	C - 2
Q103	B - 2
Q104	B - 2
Q105	C - 2
Q201	C - 2
Q203	B - 2
Q204	B - 2
Q205	C - 1
Q301	C - 1
Q303	B - 1
Q304	B - 1
Q305	C - 1

D002	B - 6
D003	B - 6
D004	B - 6
D005	B - 6
D006	C - 6
D007	B - 6
D009	A - 4
D010	D - 4
D101	D - 4
D102	D - 4
D103	C - 2
D104	A - 3
D105	A - 3
D201	D - 5
D202	D - 5
D203	C - 2
D204	A - 3
D205	A - 3
D301	D - 5
D302	D - 5
D303	C - 1
D304	A - 3
D305	A - 3

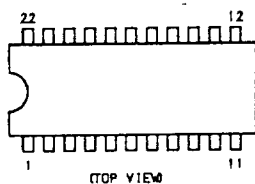




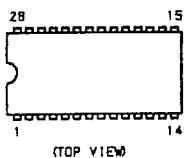
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

5-5. SEMICONDUCTORS

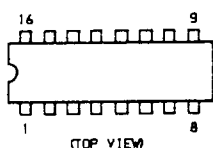
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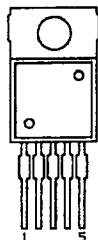
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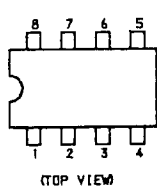
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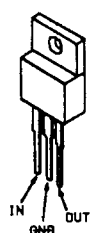
LA6500-FA



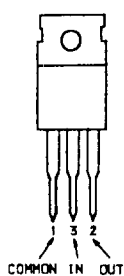
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NJM4558D-D
#PC393C



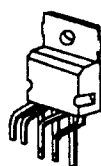
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NJM7812FA



NJM7905FA



T0A8172



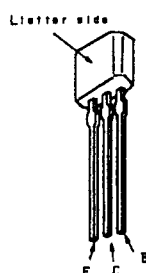
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0TC124ES



IRF614
2SB940-P



2SA1175-HFE
2SA1309



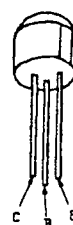
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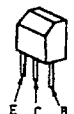
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2SC2610BK



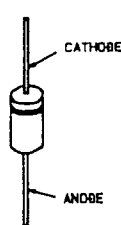
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2SC3311A



2SD774-3
2SD774-34



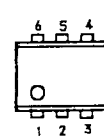
EL-1Z
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RGP10GP



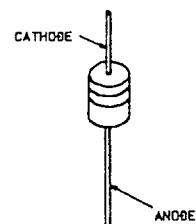
FE30



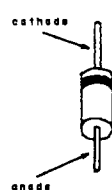
PC111YS



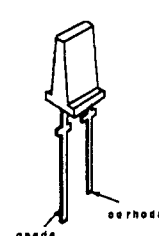
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R012ES-B2
R013ES-B3
R015ES-B2
R015ES-B3
R018ES-B2
R027ES-B2
R036ES-B2
R04.7ES-B2
R05.1ES-B2
R06.2ES-B2
R08.2ES-B3
1SS119



SB340



SEL1422G
SEL19220



SECTION 6

EXPLODED VIEWS

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

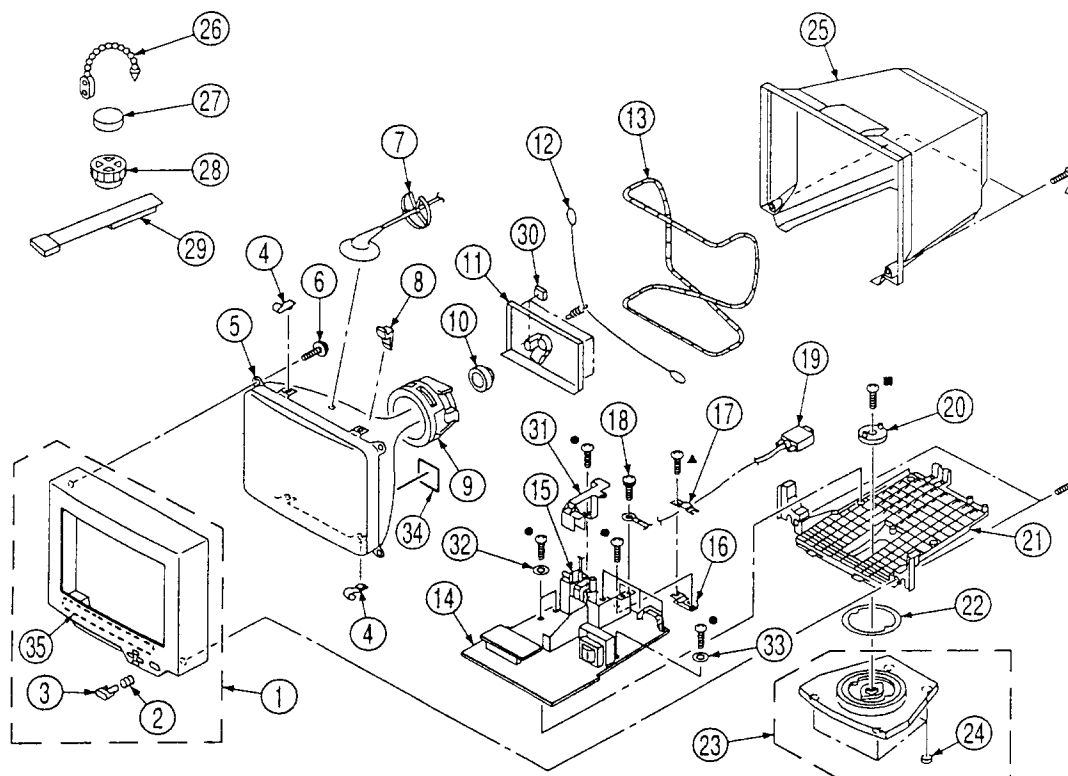
NOTE:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CHASSIS

- 7-685-648-79 SCREW +BVTP 3X12
- 7-685-663-14 SCREW +BVTP 4X16
- \triangle 7-685-663-79 SCREW +BVTP 4X16
- \blacktriangle 7-682-561-04 SCREW +BVTP 4X8

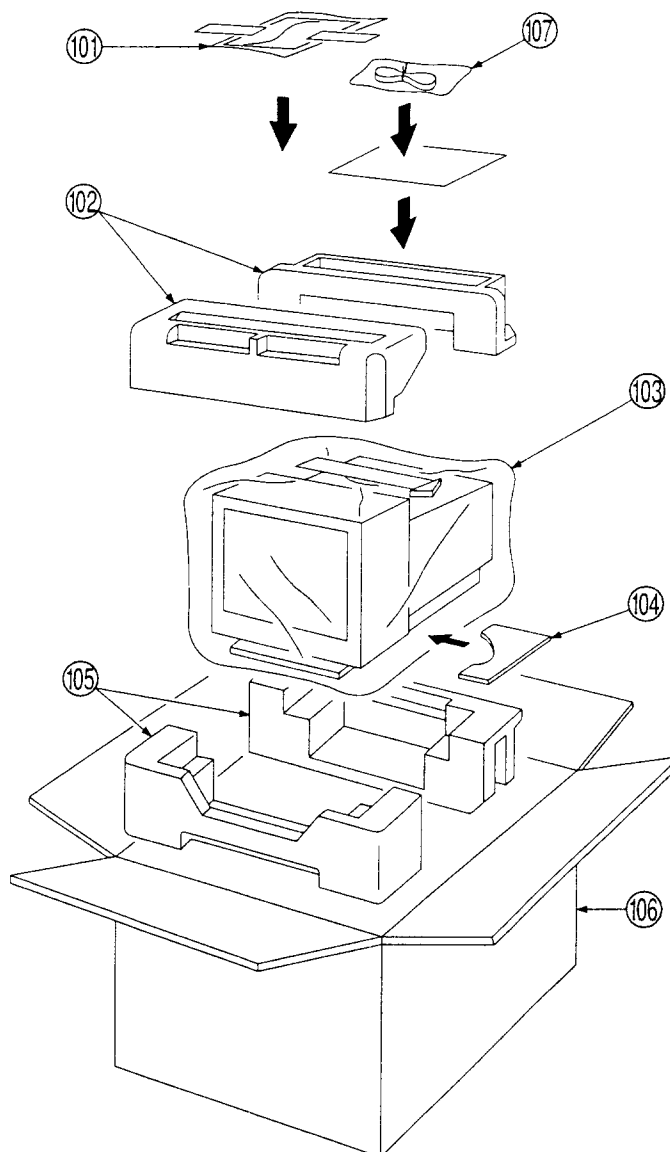


REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4032-050-1	BEZEL ASSY	2, 3, 35	19	1-765-688-11	CABLE, RGB	
2	4-045-116-01	BUTTON, POWER		20	4-045-121-01	STOPPER (A), STAND	
3	3-571-801-01	SPRING, COMPRESSION		21	4-045-114-01	COVER, BOTTOM	
4	4-045-123-01	HOLDER, DEGAUSSING COIL		22	4-045-122-01	RING, TILT SWIVEL	
5	\triangle 8-734-824-05	PICTURE TUBE (M36LDJ15X)		23	X-4032-051-0	BASE ASSY, STAND	24
6	4-365-808-01	SCREW (5), TAPPING		24	4-860-711-00	FELT	
7	*3-704-372-01	HOLDER, HV CABLE		25	4-045-113-01	CABINET	
8	3-703-003-00	SPACER, DY		26	4-308-870-00	CLIP LEAD WIRE	
9	\triangle 8-451-445-21	DY Y15FRFM2		27	1-452-032-00	MAGNET, DISK 10mm ϕ	
10	\triangle 1-452-756-11	NECK ASSY (NA293)		28	1-452-094-00	MAGNET, ROTATABLE DISK 15mm ϕ	
11	8-934-888-00	A BOARD, COMPLETE		29	X-4030-584-1	PERMALLOY ASSY, CORRECTION	
12	4-369-318-00	SPRING, TENSION		30	*4-046-063-01	CUSHION, (A)	
13	\triangle 1-409-799-11	COIL, DEGAUSSING		31	*4-045-773-01	HOLDER, FBT	
14	8-934-891-00	D BOARD, COMPLETE		32	4-308-030-31	WASHER (ϕ 4), FIVER	
15	\triangle 1-453-168-11	TRANSFORMER ASSY FLYBACK		33	4-046-042-01	WASHER, PVC	
16	*4-045-130-01	BRACKET, CABLE		34	4-034-778-01	TAPE (B)	
17	*4-045-131-01	STOPPER, CABLE		35	4-046-171-01	SPACER	
18	4-389-025-01	SCREW (M4X8)(EXT TOOTH WASHER)					

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

6-2. PACKING MATERIALS

Les composants identifiés par un trame et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
101	3-758-954-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, ITALIAN)		106	*4-045-084-01	INDIVIDUAL CARTON	
102	*4-045-089-01	CUSHION UPPER (ASSY)		107	\triangle 1-765-718-11	CORD SET, POWER	10A/125V
103	*4-380-340-01	BAG, POLYETHYLENE					
104	*4-045-088-01	PAT, TILT FIXED					
105	*4-045-090-01	CUSHION (LOWER) (ASSY)					

SECTION 7

ELECTRICAL PARTS LIST

**NOTE:**

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

The components identified by Δ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	8-934-888-00	A BOARD, COMPLETE		C115	1-137-399-11	FILM	0.1 μ F 5% 50V
		*****		C116	1-104-806-51	ELECT	10 μ F 20% 160V
	*4-045-124-01	COVER, VIDEO		C150	1-137-370-11	FILM	0.01 μ F 5% 50V
	4-382-854-11	SCREW (M3X10), P, SW (+)		C201	1-137-370-11	FILM	0.01 μ F 5% 50V
		(Q103, Q104, Q203, Q204, Q303, Q304)		C203	1-137-399-11	FILM	0.1 μ F 5% 50V
	<CAPACITOR>			C204	1-137-370-11	FILM	0.01 μ F 5% 50V
C001	1-124-126-00	ELECT	47 μ F 20% 16V	C205	1-137-399-11	FILM	0.1 μ F 5% 50V
C003	1-137-399-11	FILM	0.1 μ F 5% 50V	C206	1-107-608-11	CERAMIC	68pF 5% 500V
C004	1-137-399-11	FILM	0.1 μ F 5% 50V	C207	1-102-965-00	CERAMIC	39pF 5% 50V
C005	1-124-126-00	ELECT	47 μ F 20% 16V	C209	1-102-074-00	CERAMIC	0.001 μ F 10% 50V
C006	1-124-126-00	ELECT	47 μ F 20% 16V	C211	1-137-399-11	FILM	0.1 μ F 5% 50V
C007	1-124-925-11	ELECT	2.2 μ F 20% 50V	C212	1-102-074-00	CERAMIC	0.001 μ F 10% 50V
C016	1-124-927-11	ELECT	4.7 μ F 20% 50V	C214	1-126-320-11	ELECT	10 μ F 20% 16V
C017	1-102-121-00	CERAMIC	0.0022 μ F 10% 50V	C215	1-137-399-11	FILM	0.1 μ F 5% 50V
C018	1-102-110-00	CERAMIC	220pF 10% 50V	C250	1-124-903-11	ELECT	1 μ F 20% 50V
C019	1-124-927-11	ELECT	4.7 μ F 20% 50V	C301	1-137-370-11	FILM	0.01 μ F 5% 50V
C020	1-124-927-11	ELECT	4.7 μ F 20% 50V	C302	1-137-399-11	FILM	0.1 μ F 5% 50V
C021	1-124-126-00	ELECT	47 μ F 20% 16V	C303	1-137-399-11	FILM	0.1 μ F 5% 50V
C022	1-104-664-11	ELECT	47 μ F 20% 25V	C304	1-137-370-11	FILM	0.01 μ F 5% 50V
C023	1-102-123-00	CERAMIC	0.0033 μ F 10% 50V	C305	1-137-399-11	FILM	0.1 μ F 5% 50V
C024	1-136-169-00	FILM	0.22 μ F 5% 50V	C306	1-107-608-11	CERAMIC	68pF 5% 500V
C025	1-136-169-00	FILM	0.22 μ F 5% 50V	C307	1-101-880-00	CERAMIC	47pF 5% 50V
C026	1-137-399-11	FILM	0.1 μ F 5% 50V	C309	1-102-074-00	CERAMIC	0.001 μ F 10% 50V
C027	1-136-169-00	FILM	0.22 μ F 5% 50V	C312	1-102-074-00	CERAMIC	0.001 μ F 10% 50V
C028	1-101-880-00	CERAMIC	47pF 5% 50V	C314	1-126-320-11	ELECT	10 μ F 20% 16V
C029	1-104-666-11	ELECT	220 μ F 20% 25V	C315	1-137-399-11	FILM	0.1 μ F 5% 50V
C033	1-162-117-00	CERAMIC	100pF 10% 500V	C316	1-104-806-51	ELECT	10 μ F 20% 160V
C034	1-162-318-11	CERAMIC	0.001 μ F 10% 500V				
C035	1-162-134-11	CERAMIC	470pF 10% 2KV	<CONNECTOR>			
C037	1-102-074-00	CERAMIC	0.001 μ F 10% 50V	CN302	1-695-915-11	TAB (CONTACT)	
C043	1-102-114-00	CERAMIC	470pF 10% 50V	CN303	1-695-915-11	TAB (CONTACT)	
C100	1-124-903-11	ELECT	1 μ F 20% 50V	CN304	*1-564-510-11	PLUG, CONNECTOR 7P	
C101	1-137-370-11	FILM	0.01 μ F 5% 50V	CN305	*1-564-514-11	PLUG, CONNECTOR 11P	
C103	1-137-399-11	FILM	0.1 μ F 5% 50V	CN306	*1-564-511-11	PLUG, CONNECTOR 8P	
C104	1-137-370-11	FILM	0.01 μ F 5% 50V	CN307	*1-564-512-11	PLUG, CONNECTOR 9P	
C105	1-137-399-11	FILM	0.1 μ F 5% 50V				
C106	1-107-609-11	CERAMIC	75pF 5% 500V	<DIODE>			
C107	1-101-880-00	CERAMIC	47pF 5% 50V	D002	8-719-109-85	DIODE RD5.1ESB2	
C109	1-102-074-00	CERAMIC	0.001 μ F 10% 50V	D003	8-719-911-19	DIODE 1SS119	
C112	1-102-074-00	CERAMIC	0.001 μ F 10% 50V	D004	8-719-911-19	DIODE 1SS119	
C114	1-126-320-11	ELECT	10 μ F 20% 16V	D005	8-719-911-19	DIODE 1SS119	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R050	1-247-807-31	CARBON	100 5% 1/4W	R251	1-247-739-11	CARBON	100 5% 1/2W F
R064	1-202-830-00	SOLID	10K 20% 1/2W	R301	1-215-382-00	METAL	24 1% 1/4W
R101	1-215-382-00	METAL	24 1% 1/4W	R302	1-215-390-00	METAL	51 1% 1/4W
R102	1-215-390-00	METAL	51 1% 1/4W	R303	1-249-441-11	CARBON	100K 5% 1/4W
R103	1-215-447-00	METAL	12K 1% 1/4W	R304	1-249-401-11	CARBON	47 5% 1/4W
R104	1-249-401-11	CARBON	47 5% 1/4W	R305	1-249-441-11	CARBON	100K 5% 1/4W
R105	1-249-441-11	CARBON	100K 5% 1/4W	R306	1-249-414-11	CARBON	560 5% 1/4W
R106	1-249-414-11	CARBON	560 5% 1/4W	R307	1-249-398-11	CARBON	27 5% 1/4W F
R107	1-249-397-11	CARBON	22 5% 1/4W F	R311	1-249-419-11	CARBON	1.5K 5% 1/4W F
R111	1-249-419-11	CARBON	1.5K 5% 1/4W F	R312	1-249-398-11	CARBON	27 5% 1/4W
R112	1-249-399-11	CARBON	33 5% 1/4W	R313	1-249-400-11	CARBON	39 5% 1/4W F
R113	1-249-400-11	CARBON	39 5% 1/4W F	R314	1-249-391-11	CARBON	6.8 5% 1/4W
R114	1-249-391-11	CARBON	6.8 5% 1/4W	R315	1-249-409-11	CARBON	220 5% 1/4W
R115	1-249-409-11	CARBON	220 5% 1/4W	R317	1-249-391-11	CARBON	6.8 5% 1/4W
R117	1-249-391-11	CARBON	6.8 5% 1/4W	R318	1-249-401-11	CARBON	47 5% 1/4W F
R118	1-249-401-11	CARBON	47 5% 1/4W F	R319	1-249-414-11	CARBON	560 5% 1/4W F
R119	1-249-414-11	CARBON	560 5% 1/4W F	R320	1-215-878-00	METAL OXIDE	33K 5% 1W F
R120	1-215-878-00	METAL OXIDE	33K 5% 1W F	R321	1-216-443-11	METAL OXIDE	56K 5% 1W F
R121	1-216-443-11	METAL OXIDE	56K 5% 1W F	R322	1-215-878-00	METAL OXIDE	33K 5% 1W F
R122	1-215-878-00	METAL OXIDE	33K 5% 1W F	R325	1-249-441-11	CARBON	100K 5% 1/4W
R125	1-249-441-11	CARBON	100K 5% 1/4W	R326	1-249-414-11	CARBON	560 5% 1/4W
R126	1-249-414-11	CARBON	560 5% 1/4W	R330	1-249-441-11	CARBON	100K 5% 1/4W
R130	1-249-441-11	CARBON	100K 5% 1/4W	R331	1-249-439-11	CARBON	68K 5% 1/4W
R131	1-249-439-11	CARBON	68K 5% 1/4W	R332	1-249-414-11	CARBON	560 5% 1/4W
R132	1-249-414-11	CARBON	560 5% 1/4W	R333	1-249-409-11	CARBON	220 5% 1/4W
R133	1-249-409-11	CARBON	220 5% 1/4W	R350	1-249-413-11	CARBON	470 5% 1/4W
R150	1-249-413-11	CARBON	470 5% 1/4W	R351	1-247-739-11	CARBON	100 5% 1/2W F
R151	1-247-739-11	CARBON	100 5% 1/2W F	<SPARK GAP>			
R201	1-215-382-00	METAL	24 1% 1/4W	SG001	1-519-422-11	GAP, SPARK	
R202	1-215-390-00	METAL	51 1% 1/4W	SG101	1-519-504-11	GAP, DISCHARGE	
R203	1-249-441-11	CARBON	100K 5% 1/4W	SG201	1-519-504-11	GAP, DISCHARGE	
R204	1-249-401-11	CARBON	47 5% 1/4W	SG301	1-519-504-11	GAP, DISCHARGE	
R205	1-249-441-11	CARBON	100K 5% 1/4W	*****			
R206	1-249-414-11	CARBON	560 5% 1/4W	1-589-667-11	CONTROL PACK (N BOARD)		
R207	1-249-400-11	CARBON	39 5% 1/4W F	*****			
R208	1-249-419-11	CARBON	1.5K 5% 1/4W	8-934-891-00	D BOARD, COMPLETE		
R209	1-249-408-11	CARBON	180 5% 1/4W	*****			
R211	1-249-419-11	CARBON	1.5K 5% 1/4W F	1-533-223-11	HOLDER, FUSE (F601)		
R212	1-249-397-11	CARBON	22 5% 1/4W	2-832-002-00	BUSHING, INSULATING		
R213	1-249-400-11	CARBON	39 5% 1/4W F	4-034-094-01	SHEET, INSULATOR (Q510)		
R214	1-249-391-11	CARBON	6.8 5% 1/4W	*4-043-990-01	HEAT SINK (D601)		
R215	1-249-409-11	CARBON	220 5% 1/4W	4-043-999-01	SHEET, INSULATING (IC605)		
R217	1-249-391-11	CARBON	6.8 5% 1/4W	4-045-132-01	HOLDER (A), LED (D1806, D1807)		
R218	1-249-401-11	CARBON	47 5% 1/4W F	4-045-133-01	HOLDER (B), LED (D1803, D1804, D1805)		
R219	1-249-414-11	CARBON	560 5% 1/4W F	*4-045-690-01	SPRING, IC (IC605)		
R220	1-215-878-00	METAL OXIDE	33K 5% 1W F	4-382-854-11	SCREW (M3X10), P, SW (+)		
R221	1-216-443-11	METAL OXIDE	56K 5% 1W F	(Q503, Q507, Q510, Q522, IC502, IC504, IC512, D501, D601)			
R222	1-215-878-00	METAL OXIDE	33K 5% 1W F	7-685-646-79	SCREW +BVTP 3X8 (IC605 HOLDER)		
R225	1-249-441-11	CARBON	100K 5% 1/4W				
R226	1-249-414-11	CARBON	560 5% 1/4W				
R230	1-249-441-11	CARBON	100K 5% 1/4W				
R231	1-249-439-11	CARBON	68K 5% 1/4W				
R232	1-249-414-11	CARBON	560 5% 1/4W				
R233	1-249-409-11	CARBON	220 5% 1/4W				
R250	1-249-413-11	CARBON	470 5% 1/4W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
<CAPACITOR>				C549	1-106-391-12	MYLAR	0.1 μ F 10% 200V
C029	1-104-665-11	ELECT	100 μ F 20% 25V	C550	1-109-960-11	FILM	0.43 μ F 5% 400V
C070	1-137-372-11	FILM	0.022 μ F 5% 50V	C551	1-104-665-11	ELECT	100 μ F 20% 25V
C071	1-137-399-11	FILM	0.1 μ F 5% 50V	C552	1-104-665-11	ELECT	100 μ F 20% 25V
C072	1-130-489-00	FILM	0.033 μ F 5% 50V	C562	1-109-945-11	FILM	0.18 μ F 5% 200V
C073	1-101-005-00	CERAMIC	0.022 μ F 50V	C563	1-101-361-00	CERAMIC	150pF 5% 50V
C074	1-107-584-11	CERAMIC	4pF 0.25pF 500V	C565	1-136-244-11	FILM	0.1 μ F 5% 50V
C075	1-107-584-11	CERAMIC	4pF 0.25pF 500V	C566	1-136-169-00	FILM	0.22 μ F 5% 50V
C076	1-102-816-00	CERAMIC	120pF 5% 50V	C567	1-109-946-11	FILM	0.3 μ F 5% 200V
C077	1-164-281-11	CERAMIC	0.001 μ F 2KV	C569	1-137-370-11	FILM	0.01 μ F 5% 50V
C078	1-126-320-11	ELECT	10 μ F 20% 16V	C570	1-109-947-11	FILM	0.72 μ F 5% 200V
C079	1-110-400-91	CAP. CERAMIC		C571	1-102-980-00	CERAMIC	270pF 5% 50V
C401	1-106-220-00	MYLAR	0.1 μ F 10% 100V	C573	1-137-364-11	FILM	0.001 μ F 5% 50V
C402	1-137-370-11	FILM	0.01 μ F 5% 50V	C576	1-124-927-11	ELECT	4.7 μ F 20% 50V
C403	1-129-702-00	FILM	0.001 μ F 10% 630V	C577	1-102-106-00	CERAMIC	100pF 10% 50V
C404	1-136-601-11	FILM	0.01 μ F 10% 630V	C578	1-126-952-11	ELECT	1000 μ F 20% 16V
C405	1-136-173-00	FILM	0.47 μ F 5% 50V	C579	1-126-935-11	ELECT	470 μ F 20% 16V
C406	1-137-375-11	FILM	0.068 μ F 5% 50V	C580	1-137-413-11	FILM	0.0033 μ F 10% 100V
C407	1-126-964-11	ELECT	10 μ F 20% 50V	C581	1-137-399-11	FILM	0.1 μ F 5% 50V
C408	1-126-964-11	ELECT	10 μ F 20% 50V	C582	1-109-991-91	CERAMIC	0.001 μ F 10% 2KV
C409	1-124-903-11	ELECT	1 μ F 20% 50V	C583	1-106-375-12	MYLAR	0.022 μ F 10% 100V
C501	1-104-664-11	ELECT	47 μ F 20% 25V	C585	1-102-002-00	CERAMIC	680pF 10% 500V
C502	1-104-665-11	ELECT	100 μ F 20% 25V	C586	1-137-399-11	FILM	0.1 μ F 5% 50V
C503	1-124-668-11	ELECT	2.2 μ F 20% 160V	C587	1-137-399-11	FILM	0.1 μ F 5% 50V
C504	1-104-664-11	ELECT	47 μ F 20% 25V	C599	1-128-560-11	ELECT	22 μ F 20% 100V
C505	1-107-974-11	CERAMIC	47pF 5% 2KV	C601 Δ	1-104-708-11	FILM	0.47 μ F 20% 250V
C509 Δ	1-137-374-91	FILM	0.047 μ F 5% 50V	C602 Δ	1-107-533-11	FILM	1 μ F 20% 250V
C510	1-104-665-11	ELECT	100 μ F 20% 25V	C603 Δ	1-165-170-51	CERAMIC	0.0047 μ F 20% 400V
C511	1-104-665-11	ELECT	100 μ F 20% 25V	C604 Δ	1-165-170-51	CERAMIC	0.0047 μ F 20% 400V
C513	1-106-367-00	MYLAR	0.01 μ F 10% 100V	C605	1-126-947-11	ELECT	47 μ F 20% 10V
C514	1-101-006-00	CERAMIC	0.047 μ F 50V	C606	1-137-367-11	FILM	0.0033 μ F 5% 50V
C515	1-106-228-00	MYLAR	0.22 μ F 10% 100V	C607	1-137-415-91	FILM	0.0068 μ F 10% 100V
C516	1-137-399-11	FILM	0.1 μ F 5% 50V	C608	1-162-815-11	CERAMIC	47pF 5% 500V
C517	1-128-226-11	ELECT	220 μ F 20% 35V	C609	1-109-984-11	ELECT	390 μ F 20% 400V
C518	1-102-002-00	CERAMIC	680pF 10% 500V	C610	1-126-803-11	ELECT	47 μ F 20% 35V
C519	1-101-006-00	CERAMIC	0.047 μ F 50V	C611	1-125-700-11	ELECT	220 μ F 20% 200V
C520	1-124-557-11	ELECT	1000 μ F 20% 25V	C612	1-128-566-11	ELECT	470 μ F 20% 100V
C521	1-126-376-11	ELECT	470 μ F 20% 25V	C613	1-107-955-11	ELECT	100 μ F 20% 200V
C522	1-101-006-00	CERAMIC	0.047 μ F 50V	C614	1-128-563-11	ELECT	100 μ F 20% 100V
C523	1-126-947-11	ELECT	47 μ F 20% 10V	C615	1-107-896-11	ELECT	470 μ F 20% 35V
C524	1-124-903-11	ELECT	1 μ F 20% 50V	C616	1-107-896-11	ELECT	470 μ F 20% 35V
C525	1-124-902-00	ELECT	0.47 μ F 20% 50V	C617	1-107-896-11	ELECT	470 μ F 20% 35V
C526	1-136-169-00	FILM	0.22 μ F 5% 50V	C618	1-126-941-11	ELECT	470 μ F 20% 25V
C527	1-162-117-00	CERAMIC	100pF 10% 500V	C619	1-107-913-11	ELECT	470 μ F 20% 50V
C528	1-137-399-11	FILM	0.1 μ F 5% 50V	C620	1-137-372-11	FILM	0.022 μ F 5% 50V
C532	1-106-361-00	MYLAR	0.0056 μ F 99% 200V	C621	1-130-014-00	FILM	470pF 5% 50V
C533	1-101-821-00	CERAMIC	0.0022 μ F 500V	C622	1-126-951-11	ELECT	470 μ F 20% 35V
C540	1-136-065-00	FILM	0.0027 μ F 3% 2KV	C623	1-137-367-11	FILM	0.0033 μ F 5% 50V
C541	1-109-997-11	FILM	4300pF 3% 1.8K	C624	1-162-116-00	CERAMIC	680pF 10% 2KV
C542	1-137-368-11	FILM	0.0047 μ F 5% 50V	C625	1-107-955-11	ELECT	100 μ F 20% 200V
C543	1-102-973-00	CERAMIC	100pF 5% 50V	C626	1-165-170-11	CERAMIC	0.0047 μ F 20% 400V
C544	1-137-364-11	FILM	0.001 μ F 5% 50V	C627	1-102-106-00	CERAMIC	100pF 10% 50V
C545	1-126-967-11	ELECT	47 μ F 20% 50V	C628	1-128-577-11	ELECT	0.47 μ F 20% 100V
C547	1-137-399-11	FILM	0.1 μ F 5% 50V	C629	1-126-803-11	ELECT	47 μ F 20% 35V
C548	1-136-175-00	FILM	0.68 μ F 5% 50V	C630	1-126-233-11	ELECT	22 μ F 20% 50V



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C631	1-128-581-11	ELECT	4.7 μ F 20% 100V	D532	8-719-970-83	DIODE HSS82	
C632	1-101-880-00	CERAMIC	47pF 5% 50V	D533	8-719-911-19	DIODE 1SS119	
C633	1-136-169-00	FILM	0.22 μ F 5% 50V	D534	8-719-109-93	DIODE RD6.2ESB2	
C634	1-136-169-00	FILM	0.22 μ F 5% 50V	D535	8-719-911-19	DIODE 1SS119	
C635	1-137-399-11	FILM	0.1 μ F 5% 50V	D536	8-719-911-19	DIODE 1SS119	
C636	1-124-927-11	ELECT	4.7 μ F 20% 50V	D537	8-719-911-19	DIODE 1SS119	
C639	1-137-399-11	FILM	0.1 μ F 5% 50V	D538	8-719-911-19	DIODE 1SS119	
C1801	1-102-112-00	CERAMIC	330pF 10% 50V	D539	8-719-110-17	DIODE RD10ESB2	
C1802	1-107-424-11	CERAMIC	330pF 10% 1KV	D540	8-719-911-19	DIODE 1SS119	
<CONNECTOR>				D541	8-719-911-19	DIODE 1SS119	
CN501	*1-580-798-11	CONNECTOR PIN (DY) 6P		D542	8-719-911-19	DIODE 1SS119	
CN502	*1-564-510-11	PLUG, CONNECTOR 7P		D543	8-719-911-19	DIODE 1SS119	
CN506	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D544	8-719-911-19	DIODE 1SS119	
CN507	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D557	8-719-109-81	DIODE RD4.7ESB2	
CN508	*1-564-511-11	PLUG, CONNECTOR 8P		D601 Δ	8-719-025-88	DIODE GBU4JL-6088	
CN509	*1-564-507-11	PLUG, CONNECTOR 4P		D602	8-719-300-76	DIODE RH-1A	
CN510	1-695-915-11	TAB (CONTACT)		D603	8-719-302-43	DIODE EL1Z	
CN514	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P		D604	8-719-302-43	DIODE EL1Z	
CN600 Δ	1-251-227-11	INLET, AC		D605	8-719-048-62	DIODE UF3ML-6505	
CN601	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P		D606	8-719-979-58	DIODE EGP10D	
CN603	1-695-915-11	TAB (CONTACT)		D607	8-719-979-50	DIODE EGP30D	
CN604	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P		D608	8-719-979-84	DIODE EGP20DPKG23	
CN605	*1-506-371-00	PIN, CONNECTOR 2P		D609	8-719-979-84	DIODE EGP20DPKG23	
<DIODE>				D610	8-719-979-58	DIODE EGP10D	
D071	8-719-911-19	DIODE 1SS119		D611	8-719-911-19	DIODE 1SS119	
D072	8-719-911-19	DIODE 1SS119		D612	8-719-970-83	DIODE HSS82	
D075	8-719-911-19	DIODE 1SS119		D613	8-719-110-03	DIODE RD7.5ESB2	
D076	8-719-109-81	DIODE RD4.7ESB2		D614	8-719-911-19	DIODE 1SS119	
D077	8-719-109-81	DIODE RD4.7ESB2		D615	8-719-911-19	DIODE 1SS119	
D401	8-719-911-19	DIODE 1SS119		D616	8-719-911-19	DIODE 1SS119	
D402	8-719-970-83	DIODE HSS82		D617	8-719-110-08	DIODE RD8.2ESB2	
D403	8-719-970-83	DIODE HSS82		D618	8-719-911-19	DIODE 1SS119	
D501	8-719-049-12	DIODE 5TUZ52		D619	8-719-911-19	DIODE 1SS119	
D502	8-719-979-58	DIODE EGP10D		D620	8-719-302-43	DIODE EL1Z	
D503	8-719-110-17	DIODE RD10ESB2		D621	8-719-110-49	DIODE RD18ESB2	
D504	8-719-988-11	DIODE FE3D		D622	8-719-110-37	DIODE RD13ESB3	
D505	8-719-110-17	DIODE RD10ESB2		D623	8-719-110-83	DIODE RD36ESB2	
D508	8-719-975-77	DIODE SB340		D624	8-719-110-42	DIODE RD15ESB2	
D513	8-719-970-83	DIODE HSS82		D625	8-719-300-76	DIODE RH-1A	
D514	8-719-970-83	DIODE HSS82		D627	8-719-911-19	DIODE 1SS119	
D515	8-719-979-58	DIODE EGP10D		D628	8-719-110-67	DIODE RD27ESB2	
D516	8-759-157-40	IC μ PC574J		D1803	8-719-311-90	DIODE SEL1922D-C	
D517	8-719-110-67	DIODE RD27ESB2		D1804	8-719-311-90	DIODE SEL1922D-C	
D518	8-719-911-19	DIODE 1SS119		D1805	8-719-311-90	DIODE SEL1922D-C	
D520	8-719-109-81	DIODE RD4.7ESB2		D1806	8-719-311-90	DIODE SEL1922D-C	
D522	8-719-911-19	DIODE 1SS119		D1807	8-719-311-15	DIODE SEL1422G-C,D	
D523	8-719-911-19	DIODE 1SS119		D1808	8-719-311-90	DIODE SEL1922D-C	
D525	8-719-110-31	DIODE RD12ESB2		<FUSE>			
D529	8-719-110-41	DIODE RD15ESB2		F601 Δ	1-576-231-21	FUSE (H.B.C.) 4A/250V	
D530	8-719-911-19	DIODE 1SS119		<FERRITE BEAD>			
D531	8-719-970-83	DIODE HSS82		FB501	1-410-396-41	FERRITE BEAD INDUCTOR 0.45 μ H	



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R412	1-215-439-00	METAL	5.6K 1% 1/4W	R504	1-249-437-11	CARBON	47K 5% 1/4W
R413	1-249-377-11	CARBON	0.47 5% 1/4W F	R507	1-249-437-11	CARBON	47K 5% 1/4W
R414	1-249-377-11	CARBON	0.47 5% 1/4W F	R508	1-215-469-00	METAL	100K 1% 1/4W
R415	1-215-459-00	METAL	39K 1% 1/4W	R509	1-215-481-00	METAL	330K 1% 1/4W
R417	1-215-471-00	METAL	120K 1% 1/4W	R511	1-247-887-00	CARBON	220K 5% 1/4W
R418	1-215-439-00	METAL	5.6K 1% 1/4W	R512	1-249-438-11	CARBON	56K 5% 1/4W
R419	1-249-421-11	CARBON	2.2K 5% 1/4W	R516	1-215-443-00	METAL	8.2K 1% 1/4W
R421	1-202-963-11	METAL	1 1% 1W	R517	1-215-489-00	METAL	680K 1% 1/4W
R422	1-215-866-11	METAL OXIDE	330 5% 1W F	R518	1-215-475-00	METAL	180K 1% 1/4W
R423	1-215-439-00	METAL	5.6K 1% 1/4W	R520	1-215-443-00	METAL	8.2K 1% 1/4W
R424	1-215-455-00	METAL	27K 1% 1/4W	R521	1-215-867-00	METAL OXIDE	470 5% 1W F
R425	1-249-429-11	CARBON	10K 5% 1/4W	R523	1-249-441-11	CARBON	100K 5% 1/4W
R426	1-249-387-11	CARBON	3.3 5% 1/4W F	R524	1-216-447-00	METAL OXIDE	27 5% 2W F
R427	1-249-417-11	CARBON	1K 5% 1/4W	R525	1-215-463-00	METAL	56K 1% 1/4W
R428	1-249-421-11	CARBON	2.2K 5% 1/4W	R526	1-215-467-00	METAL	82K 1% 1/4W
R429	1-249-437-11	CARBON	47K 5% 1/4W	R527	1-215-457-00	METAL	33K 1% 1/4W
R430	1-249-437-11	CARBON	47K 5% 1/4W	R528	1-215-447-00	METAL	12K 1% 1/4W
R436	1-216-393-00	METAL OXIDE	2.2 5% 3W F	R529	1-249-415-11	CARBON	680 5% 1/4W
R437	1-249-401-11	CARBON	47 5% 1/4W	R530	1-247-717-11	CARBON	2.2K 5% 1/4W F
R441	1-249-405-11	CARBON	100 5% 1/4W F	R565	1-215-869-11	METAL OXIDE	1K 5% 1W F
R445	1-215-896-00	METAL OXIDE	4.7K 5% 2W F	R566	1-215-912-11	METAL OXIDE	150 5% 3W F
R446	1-249-385-11	CARBON	2.2 5% 1/4W F	R567	1-215-908-00	METAL OXIDE	33 5% 3W F
R451	1-216-474-71	METAL OXIDE	82 5% 3W F	R568	1-216-422-11	METAL OXIDE	18 5% 1W F
R452	1-215-443-00	METAL	8.2K 1% 1/4W	R569	1-215-862-11	METAL OXIDE	68 5% 1W F
R453	1-216-474-11	METAL OXIDE	82 5% 3W F	R571	1-249-431-11	CARBON	15K 5% 1/4W
R455	1-216-393-00	METAL OXIDE	2.2 5% 3W F	R572	1-249-429-11	CARBON	10K 5% 1/4W
R456	1-216-341-11	METAL OXIDE	0.22 5% 1W F	R573	1-247-887-00	CARBON	220K 5% 1/4W
R457 Δ	1-215-469-91	METAL	100K 1% 1/4W	R574	1-247-887-00	CARBON	220K 5% 1/4W
R458	1-249-405-11	CARBON	100 5% 1/4W F	R575	1-249-441-11	CARBON	100K 5% 1/4W
R459	1-215-921-11	METAL OXIDE	4.7K 5% 3W F	R576	1-249-429-11	CARBON	10K 5% 1/4W
R462	1-215-451-00	METAL	18K 1% 1/4W	R577	1-249-427-11	CARBON	6.8K 5% 1/4W
R465	1-215-429-00	METAL	2.2K 1% 1/4W	R578	1-249-417-11	CARBON	1K 5% 1/4W
R469	1-215-465-00	METAL	68K 1% 1/4W	R579	1-249-421-11	CARBON	2.2K 5% 1/4W
R472	1-249-389-11	CARBON	4.7 5% 1/4W F	R601 Δ	1-202-882-91	SOLID	560K 20% 1/2W
R473	1-215-469-00	METAL	100K 1% 1/4W	R602	1-215-925-11	METAL OXIDE	22K 5% 3W F
R474	1-215-493-00	METAL	1M 1% 1/4W	R603	1-249-377-11	CARBON	0.47 5% 1/4W F
R475	1-215-421-00	METAL	1K 1% 1/4W	R604	1-211-874-11	FUSIBLE	0.12 10% 1/2W
R480	1-249-397-11	CARBON	22 5% 1/4W F	R605	1-211-874-11	FUSIBLE	0.12 10% 1/2W
R481	1-249-413-11	CARBON	470 5% 1/4W	R606	1-260-288-11	CARBON	0.47 5% 1/2W
R482	1-249-421-11	CARBON	2.2K 5% 1/4W	R607	1-249-377-11	CARBON	0.47 5% 1/4W F
R484	1-249-421-11	CARBON	2.2K 5% 1/4W	R608	1-215-451-00	METAL	18K 1% 1/4W
R485	1-215-427-00	METAL	1.8K 1% 1/4W	R609	1-216-370-11	METAL OXIDE	1.2 5% 2W F
R486	1-215-905-11	METAL OXIDE	10 5% 3W F	R610	1-249-429-11	CARBON	10K 5% 1/4W
R487	1-249-429-11	CARBON	10K 5% 1/4W	R611	1-249-419-11	CARBON	1.5K 5% 1/4W
R488	1-249-417-11	CARBON	1K 5% 1/4W	R612	1-249-381-11	CARBON	1 5% 1/4W F
R490	1-249-417-11	CARBON	1K 5% 1/4W F	R613	1-207-642-00	WIREWOUND	0.15 10% 3W F
R493	1-216-477-11	METAL OXIDE	270 5% 3W F	R614	1-216-379-11	METAL OXIDE	6.8 5% 2W F
R494	1-215-453-00	METAL	22K 1% 1/4W	R615	1-249-421-11	CARBON	2.2K 5% 1/4W
R495	1-215-463-00	METAL	56K 1% 1/4W	R616	1-249-420-11	CARBON	1.8K 5% 1/4W
R496 Δ	1-215-451-91	METAL	18K 1% 1/4W	R617	1-215-927-00	METAL OXIDE	47K 5% 3W F
R497	1-249-417-11	CARBON	1K 5% 1/4W F	R618	1-215-927-00	METAL OXIDE	47K 5% 3W F
R498	1-249-435-11	CARBON	33K 5% 1/4W	R619	1-249-421-11	CARBON	2.2K 5% 1/4W
R499	1-215-457-00	METAL	33K 1% 1/4W	R620	1-249-441-11	CARBON	100K 5% 1/4W
R502	1-249-417-11	CARBON	1K 5% 1/4W F	R622	1-216-378-11	METAL OXIDE	5.6 5% 2W F
R503	1-249-437-11	CARBON	47K 5% 1/4W	R623	1-247-901-11	CARBON	820K 5% 1/4W


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The components identified by manual have been carefully selected for each set in order to comply with the regulations regarding X-ray radiation. Should replacement be required, it must be done only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R624	1-247-901-11	CARBON	820K 5% 1/4W	R1818	1-215-423-00	METAL	1.2K
R627	1-249-429-11	CARBON	10K 5% 1/4W	R1819	1-215-426-00	METAL	1.6K
R628	1-247-901-11	CARBON	820K 5% 1/4W	R1820	1-215-432-00	METAL	3K
R629	1-215-906-11	METAL OXIDE	15 5% 3W F	R1821	1-215-413-00	METAL	470
R630	1-215-906-11	METAL OXIDE	15 5% 3W F	R1822	1-215-431-00	METAL	2.7K
R647	1-249-421-11	CARBON	2.2K 5% 1/4W	R1823	1-215-410-00	METAL	360
R648	1-249-426-11	CARBON	5.6K 5% 1/4W	R1824	1-215-409-00	METAL	330
R649	1-249-429-11	CARBON	10K 5% 1/4W	R1825	1-215-410-00	METAL	360
R650	1-249-429-11	CARBON	10K 5% 1/4W	R1826	1-215-413-00	METAL	470
R651	1-249-413-11	CARBON	470 5% 1/4W	R1827	1-215-416-00	METAL	620
R652	1-249-417-11	CARBON	1K 5% 1/4W	R1828	1-215-418-00	METAL	750
R653	1-249-403-11	CARBON	68 5% 1/4W F	R1829	1-215-423-00	METAL	1.2K
R654	1-249-408-11	CARBON	180 5% 1/4W	R1830	1-215-426-00	METAL	1.6K
R655	1-249-429-11	CARBON	10K 5% 1/4W	R1831	1-215-432-00	METAL	3K
R656	1-249-403-11	CARBON	68 5% 1/4W	R1832	1-215-439-00	METAL	5.6K
R657	1-249-417-11	CARBON	1K 5% 1/4W	R1833	1-215-467-00	METAL	82K
R658	1-249-417-11	CARBON	1K 5% 1/4W	<VARIABLE RESISTOR>			
R659	1-249-441-11	CARBON	100K 5% 1/4W	<input checked="" type="checkbox"/> RV470 Δ 1-241-766-11 RES, ADJ, CERME			
R660	1-249-415-11	CARBON	680 5% 1/4W	3-710-578-01 COVER, VOLUME, 6			
R661 Δ	1-205-781-11	WIREWOUND	1.5 5% 20W	<RELAY>			
R662	1-249-441-11	CARBON	100K 5% 1/4W	RY601 Δ 1-515-840-12 RELAY			
R663	1-247-901-11	CARBON	820K 5% 1/4W	<SWITCH>			
R664	1-249-438-11	CARBON	56K 5% 1/4W	S500 1-572-707-11 SWITCH, LEVER			
R665	1-249-377-11	CARBON	0.47 5% 1/4W F	S1801 1-762-093-11 SWITCH, TACTILE			
R666	1-249-377-11	CARBON	0.47 5% 1/4W F	S1802 1-762-093-11 SWITCH, TACTILE			
R667	1-249-377-11	CARBON	0.47 5% 1/4W F	S1803 1-762-093-11 SWITCH, TACTILE			
R668	1-202-933-61	FUSIBLE	0.1 10% 1/2W F	S1815 1-692-220-11 SWITCH, TACTILE			
R669	1-249-437-11	CARBON	47K 5% 1/4W	S1816 1-692-220-11 SWITCH, TACTILE			
R670	1-249-426-11	CARBON	5.6K 5% 1/4W	S1817 1-692-220-11 SWITCH, TACTILE			
R671	1-249-426-11	CARBON	5.6K 5% 1/4W	S1818 1-692-220-11 SWITCH, TACTILE			
R672	1-249-417-11	CARBON	1K 5% 1/4W	S1819 1-571-532-21 SWITCH, TACTIL			
R674	1-249-430-11	CARBON	12K 5% 1/4W	S1821 1-571-532-21 SWITCH, TACTIL			
R675	1-247-807-31	CARBON	100 5% 1/4W	<TRANSFORMER>			
R676	1-249-441-11	CARBON	100K 5% 1/4W	T071 1-426-793-11 TRANSFORMER, FE			
R677	1-249-433-11	CARBON	22K 5% 1/4W	T501 Δ 1-453-168-11 TRANSFORMER AS			
R678	1-249-433-11	CARBON	22K 5% 1/4W	T502 Δ 1-426-975-11 TRANSFORMER, CO			
R679	1-215-453-00	METAL	22K 1% 1/4W	T504 1-426-971-11 TRANSFORMER, FE			
R680	1-215-453-00	METAL	22K 1% 1/4W	T505 1-423-856-11 TRANSFORMER, FE			
R681	1-249-426-11	CARBON	5.6K 5% 1/4W	<THERMISTOR>			
R1801	1-215-431-00	METAL	2.7K 1% 1/4W	TH601 Δ 1-809-260-11 THERMISTOR, PO			
R1803	1-249-413-11	CARBON	470 5% 1/4W	THP601 Δ 1-809-827-11 THERMISTOR, PO			
R1804	1-249-413-11	CARBON	470 5% 1/4W	<VARISTOR>			
R1805	1-249-413-11	CARBON	470 5% 1/4W	VA601 Δ 1-810-622-11 VARISTOR			
R1806	1-215-418-00	METAL	750 1% 1/4W				
R1807	1-249-413-11	CARBON	470 5% 1/4W				
R1808	1-249-413-11	CARBON	470 5% 1/4W				
R1809	1-249-413-11	CARBON	470 5% 1/4W				
R1810	1-215-410-00	METAL	360 1% 1/4W				
R1811	1-215-409-00	METAL	330 1% 1/4W				
R1812	1-215-410-00	METAL	360 1% 1/4W				
R1813	1-215-413-00	METAL	470 1% 1/4W				
R1814	1-215-416-00	METAL	620 1% 1/4W				
R1815	1-215-439-00	METAL	5.6K 1% 1/4W				
R1816	1-215-467-00	METAL	82K 1% 1/4W				
R1817	1-215-413-00	METAL	470 1% 1/4W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS *****					
		1-409-799-11 COIL, DEMAGNETIZATION					
		1-452-756-11 NECK ASSY, PICTURE TUBE (NA293)					
		1-765-688-11 CABLE (D-SUB 15P-9P)					
		1-765-718-11 CORD SET, POWER	10A/125V				
V901		8-734-824-05 PICTURE TUBE (M36LDJ15X)					