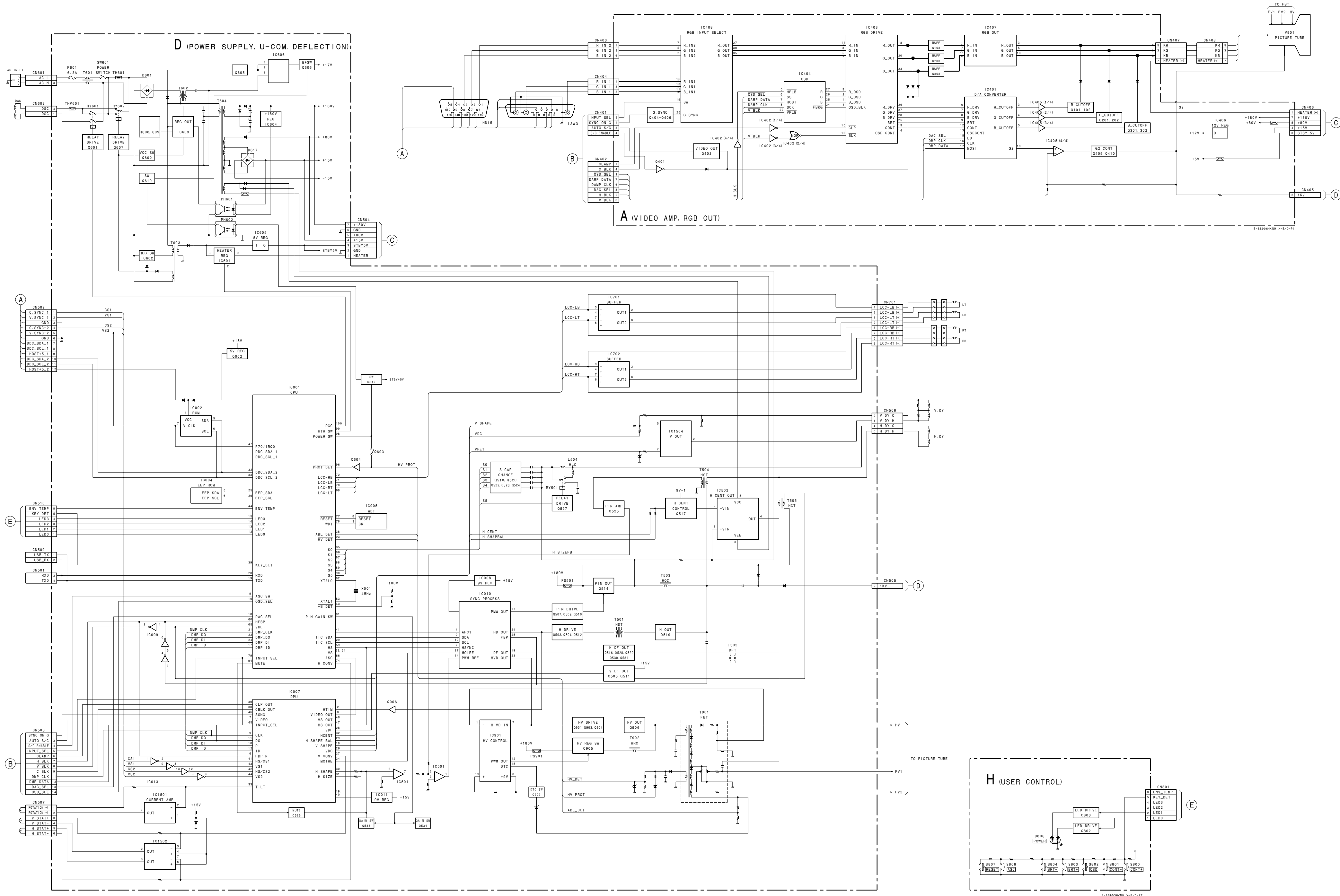


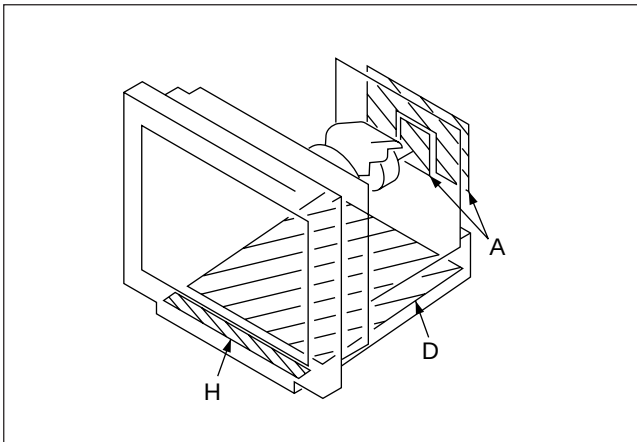
SECTION 5

DIAGRAMS

5-1. BLOCK DIAGRAMS (with FRAME SCHEMATIC DIAGRAM)



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- Note:**
- All capacitors are in μF unless otherwise noted. (μF : μF)
 - Capacitors without voltage indication are all 50 V.
 - 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.
 - FUS : nonflammable resistor.
 - FUS : fusible resistor.
 - Δ : internal component.
 - $\square$: panel designation, and adjustment for repair.
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
 - $\perp$: earth-ground.
 - H : 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 3-1)
 - When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (H)	
HV ADJ	RV901
Part replaced (A)	
HV Regulator Circuit	D board IC901, R903, R922, T901, RV901 • Mounted D board
HV HOLD DOWN Circuit	D board D913, D916, C923, R920, R927, R935, R936, T901 • Mounted D board
Beam Current Protector Circuit	D board IC901, D901, D902, D918, R053, R918, R923, R928, R932, R933, R934, R939, T901 • Mounted D board

- All voltages are in V.
- Readings are taken with a 10 M 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 Δ are critical for safety. Replace only with part number specified.

Note: 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.

Terminal name of semiconductors in silk screen printed circuit (*):

Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode Anode	
④ Diode		Cathode Anode (NC)	
⑤ Diode		Cathode Anode (NC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode		Common Anode Anode	
⑩ Diode		Common Cathode Cathode	
⑪ Diode		Common Cathode Cathode	
⑫ Diode		Anode Cathode Anode	
⑬ Transistor (FET)		Drain Source Gate	
⑭ Transistor (FET)		Drain Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Collector Base	

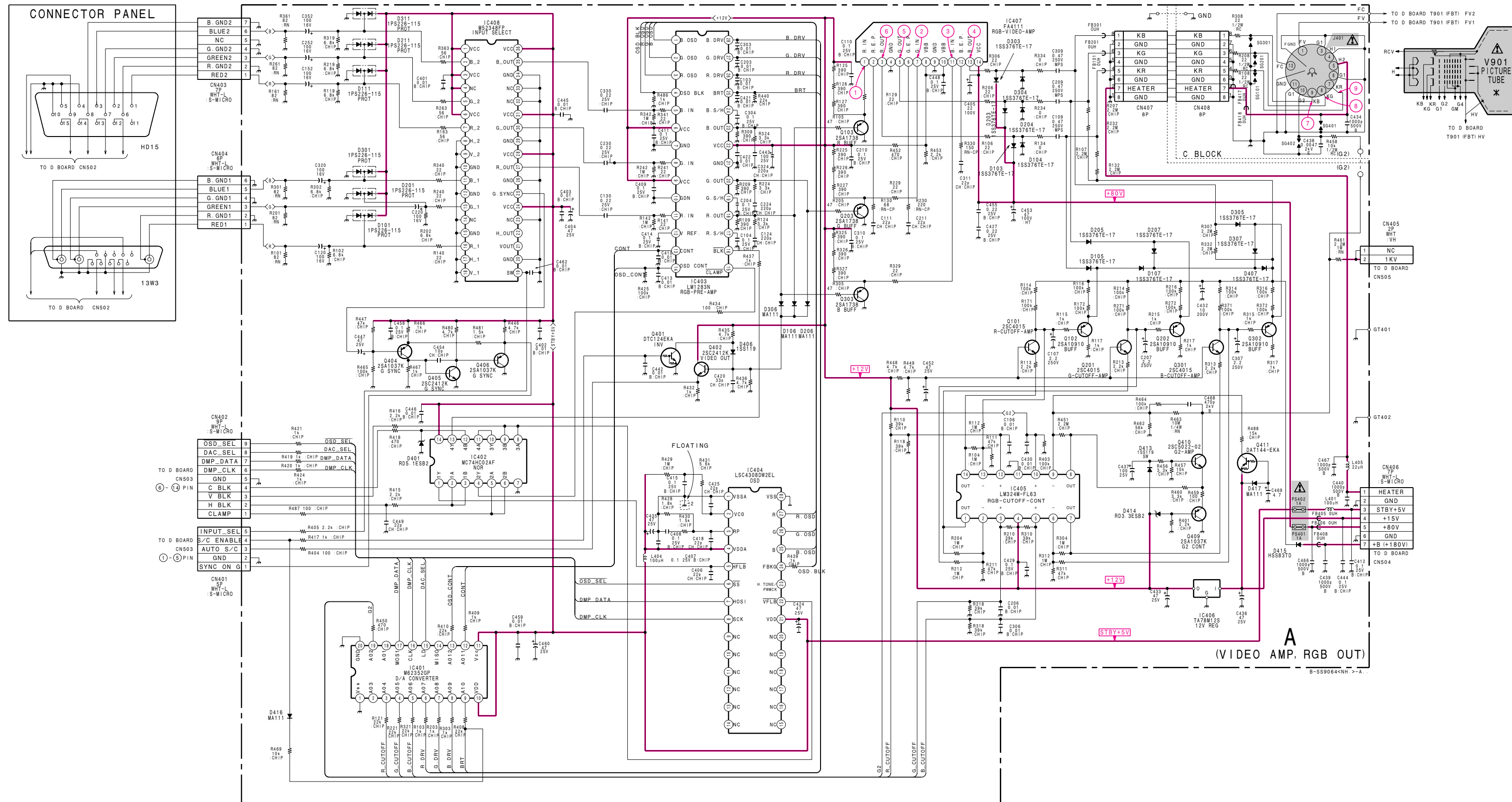
(Chip semiconductors that are not actually used are included.)

(1) Schematic Diagram of D Board

• D BOARD VOLTAGE LIST

IC002	Ref.	Pin No.	Voltage [V]	IC702	Ref.	Pin No.	Voltage [V]	Q518	Ref.	Pin No.	Voltage [V]	
	5	0.5	1		0.8	F518	G		0			
	6	3.5	2		0.8		D		31.2			
IC004	5	4.9	7	0	7	1.3	6	1.3	Q519	B	-0.9	
		6		4.9		4				1.3	C	76.5
		7		0		6				1.3		
IC005	1	0.4	8	1.6	8	1.6	Q520	G	4.8			
		3		0		9		1.6	D	0		
		7		4.9								
IC009	1	-0.5	IC901	2	5.3	Q521	B	4.3				
		2		0	4		0	E	3.8			
		3		0	6		1.1	G	4.9			
IC010	1	3.8	IC1501	1	2.8	Q522	G	0				
		3		4	-1.3		2	2.8	D	0		
		4		2.6								
IC012	5	0.6	IC1502	1	0.1	Q527	B	4.9				
		6		5.0	2		0.1	C	0.4			
		7		0.3	3		3.5					
IC013	10	4.9	3	4.9	Q528	B	42.4					
		12		4.4		6	1.8	E	43.0			
		14		4.3		8	0.6					
IC015	15	4.3	IC1504	9	0.6	Q529	B	44.3				
		16		5.0	2		0.4	C	74.3			
		17		2.0	3		14.0	E	43.7			
IC016	18	-0.2	PH601	2	14.7	Q530	B	43.0				
		19		5.2	2		13.6	E	43.3			
		20		8.6	3		0					
IC017	23	1.2	PH602	1	1.0	Q531	B	43.7				
		24		2.3	2		0	C	74.3			
		25		0	3		0	E	43.4			
IC018	26	3.6	Q001	B	0	Q532	B	0				
		27		4	2.6		C	4.9				
		28		4.5	C		3.7					
IC019	1	0	Q003	B	0.2	Q533	B	5.1				
		2		5.0	E		0	C	0			
		3		4.0	C		3.7	Q601	B	0		
IC020	8	0.3	Q004	B	5.5	Q602	B	2.7				
		9		3.8	C		14.6	C	16.8			
		10		4.9	E		4.8	E	16.8			
IC021	11	0	Q006	B	2.6	Q603	B	0				
		1		4.3	E		0	C	2.5			
		2		0	E		4.2					
IC022	3	0	Q008	B	4.9	Q604	B	2.5				
		5		0	E		4.9	C	0			
		6		0	E		3.2	E	2.5			
IC023	1	76.1	Q005	B	4.9	Q605	G	10.8				
		2		76.2	C		0.1	D	96.0			
		4		75.6				S	0.2			
IC024	2	5.2	Q007	B	7.2	Q606	B	1.1				
		3		6.6	C		0	C	16.8			
		4		5.2	E		2.8	E	16.8			
IC025	5	8.0	Q008	B	2.3	Q607	B	0.8				
		D		412.0	E		2.3	C	0.1			
		C		6.0				E	0			
IC026	1	147.5	Q004	B	2.3	Q608	B	6.2				
		3		3.9	C		13.5	C	0			
		5		4.5	E		2.3	E	6.2			
IC027	6	2.2	Q005	B	3.5	Q609	B	0				
		7		3.8	E		7.0	C	6.2			
		9		0								
IC028	11	0	Q007	B	0.2	Q610	B	5.7				
		12		0	C		8.4	C	0.5			
		13		0				E	0.5			
IC029	14	16.5	Q009	B	8.4	Q612	B	5.0				
		15		10.6	E		8.2	E	4.3			
		17		0								
IC030	18	88.5	Q010	B	8.4	Q901	B	0.1				
		19		78.2	C		14.2	C	8.8			
					E		8.2					
IC031	1	179.8	Q511	B	7.5	Q902	B	9.3				
		3		2.5	+		0	C	9.3			
		4		12.6	C		7.0					
IC036	1	2.7	Q512	B	-14.3	Q903	B	7.8				
		2		3.4	C		-0.1	E	7.6			
		4		0.2	E		-14.3					
IC037	5	2.5	Q514	G	175.8	Q904	B	7.6				
		7		10.9	D		76.8	C	14.0			
		1		-0.3	S		180.1	E	7.6			
IC039	2	-0.5	Q516	B	5.2	Q905	G	177.3				
		3		1.3	C		42.4	D	60.2			
		4		1.3	E		4.6	S	179.8			
IC040	6	1.3	Q517	B	4.9	Q906	G	7.6				
		7		1.3	C		70.9	D	60.5			
		8		-1.3	E		4.4					

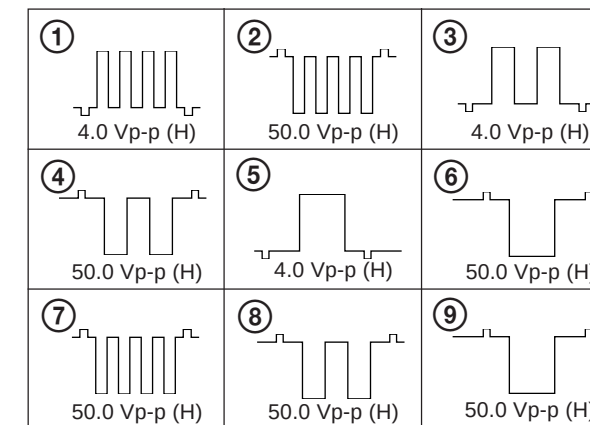
(2) Schematic Diagram of A Board



Schematic diagram

← **A** board

- A BOARD WAVEFORMS



- A BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]	
IC403	1	1.6		C	91.7	
	2	1.6		E	5.2	
	3	1.6		Q202	B	91.7
	4	0	C		0.6	
	5	2.2	E		92.3	
	8	2.2	Q203	B	1.9	
	11	2.2		E	2.6	
	12	2		Q301	B	5.8
	13	1.7	C		92.1	
	14	1.5	E		5.2	
	15	4.8	Q302	B	92.1	
	16	4		C	0.6	
	17	6.7		E	92.7	
	18	2.2	Q303	B	1.9	
	19	6.8		E	2.6	
	20	2.1		Q401	B	0
	23	2.1	C		6.1	
	24	6.8	Q402		B	5.5
	25	1.5		E	4.8	
	26	3.4		Q404	B	3.5
	27	3.5	C		0.6	
	28	3.4	E		4.1	
	IC407	1	2.8	Q405	B	0.6
		2	2.0		C	3.3
		3	50.8		Q406	B
		5	50.8	E		3.6
		6	1.9	Q409		B
		7	2.8		E	7.8
8		9.8	Q410		B	8.3
10		9.8		C	463	
11		2.8		E	7.8	
12		1.9	J401	KB	70	
13		50.8		KG	70	
Q101		B		5.8	KR	70
		C		93.3	G2	462
	E	5.2		H2	6.2	
Q103	B	1.9				
	C	2.6				
Q102	B	93.3				
	C	0.6				
	E	94				
Q201	B	5.8				

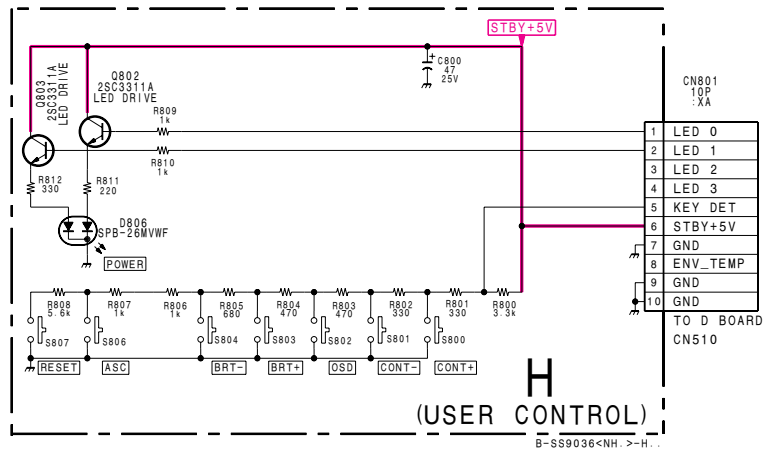
Schematic diagram

H board →



[USER CONTROL]

(3) Schematic Diagram of H Board



• H BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]
Q802	B	5.1
	E	4.4
Q803	B	0
	E	0.4

— H BOARD —

