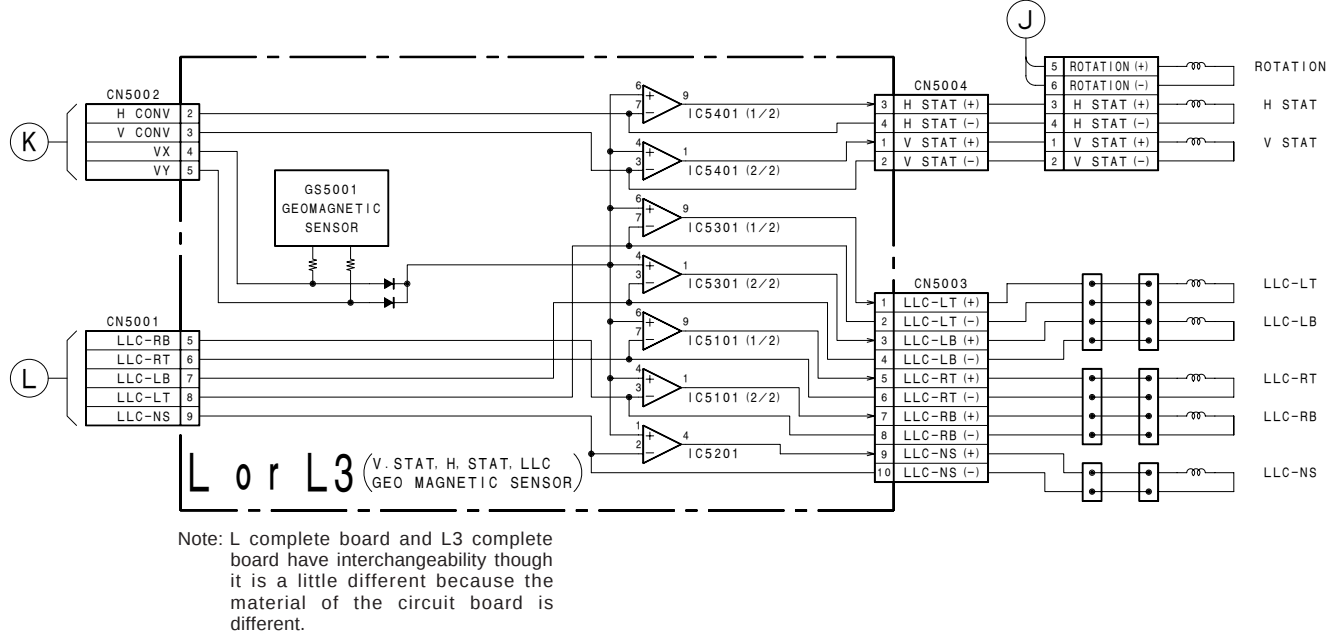
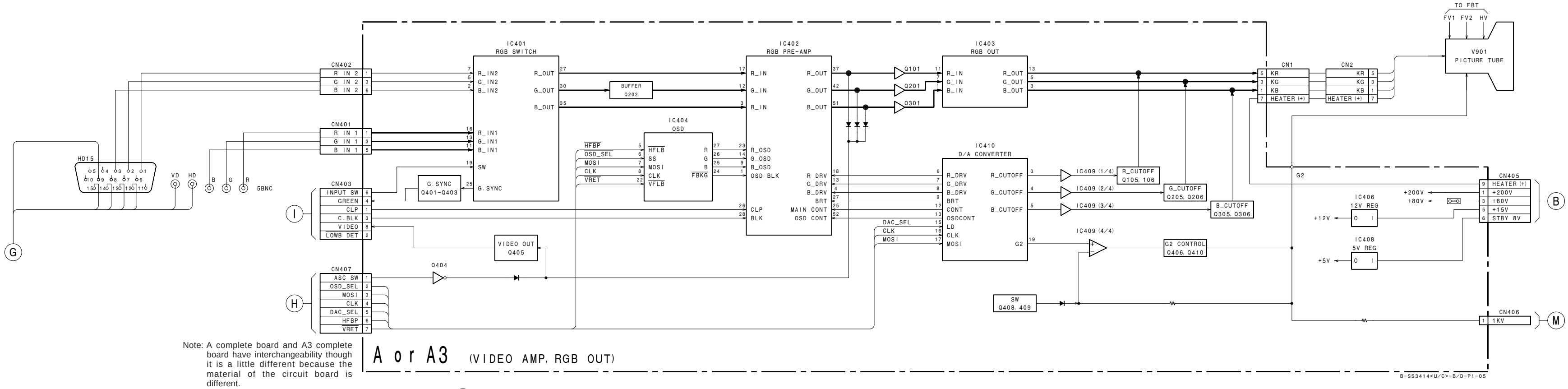
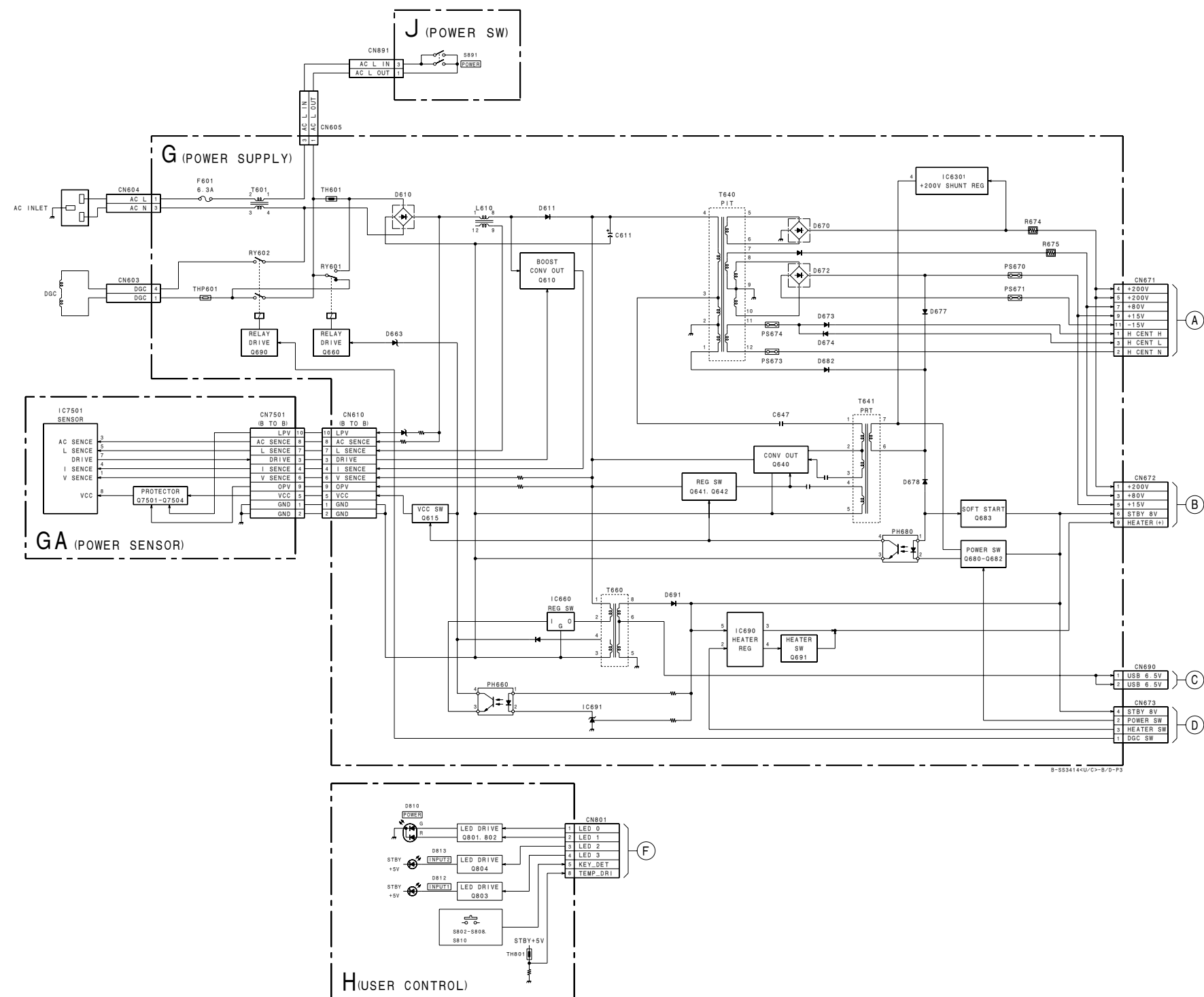
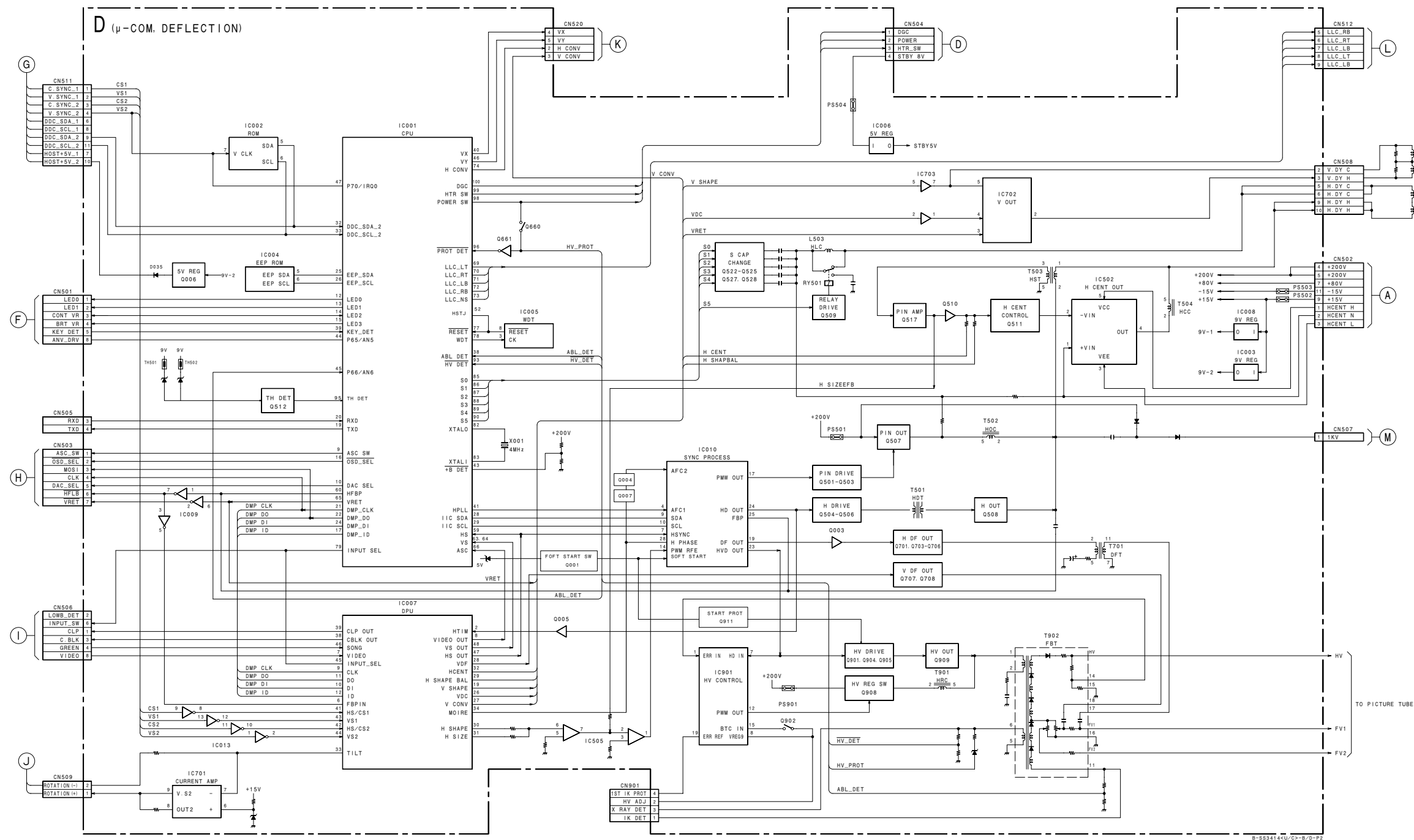


SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAMS

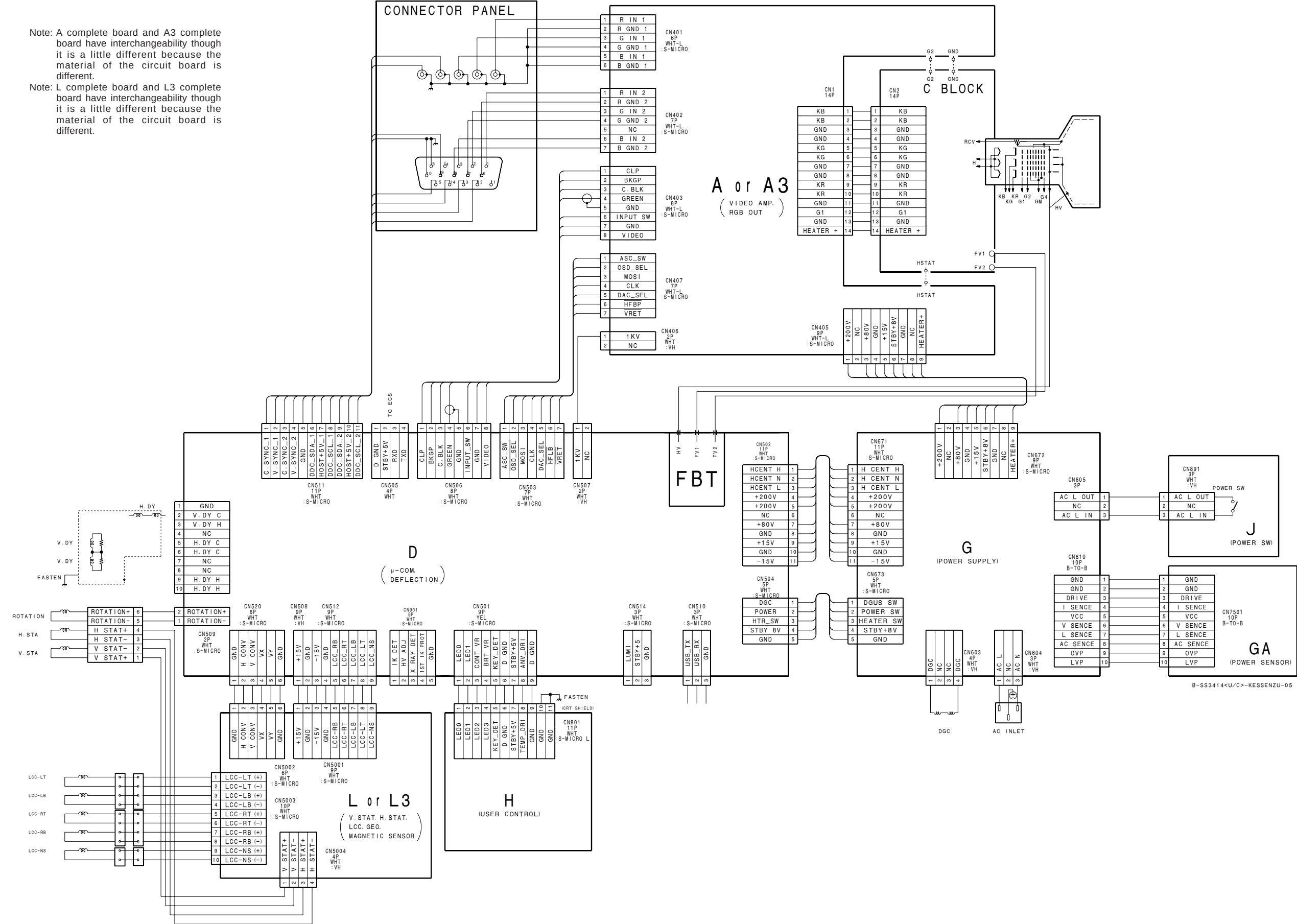




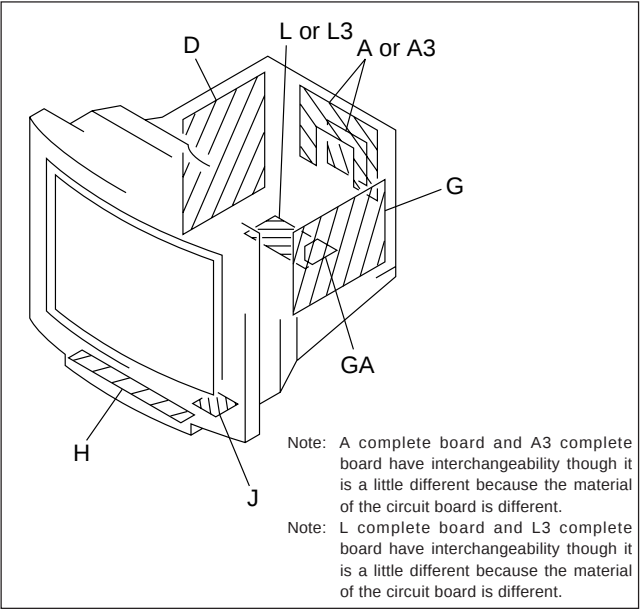
5-2. FRAME SCHEMATIC DIAGRAM

Note: A complete board and A3 complete board have interchangeability though it is a little different because the material of the circuit board is different.

Note: L complete board and L3 complete board have interchangeability though it is a little different because the material of the circuit board is different.



5-3. CIRCUIT BOARDS LOCATION



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

Note: 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.

- 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.

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 Cathode	
⑬ Transistor (FET)		Source Gate	
⑭ Transistor (FET)		Source Gate	
⑮ Transistor (FET)		Source Drain Gate	
⑯ Transistor		Emitter Drain Collector Base	
—	Discrete semiconductor		

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

Note:

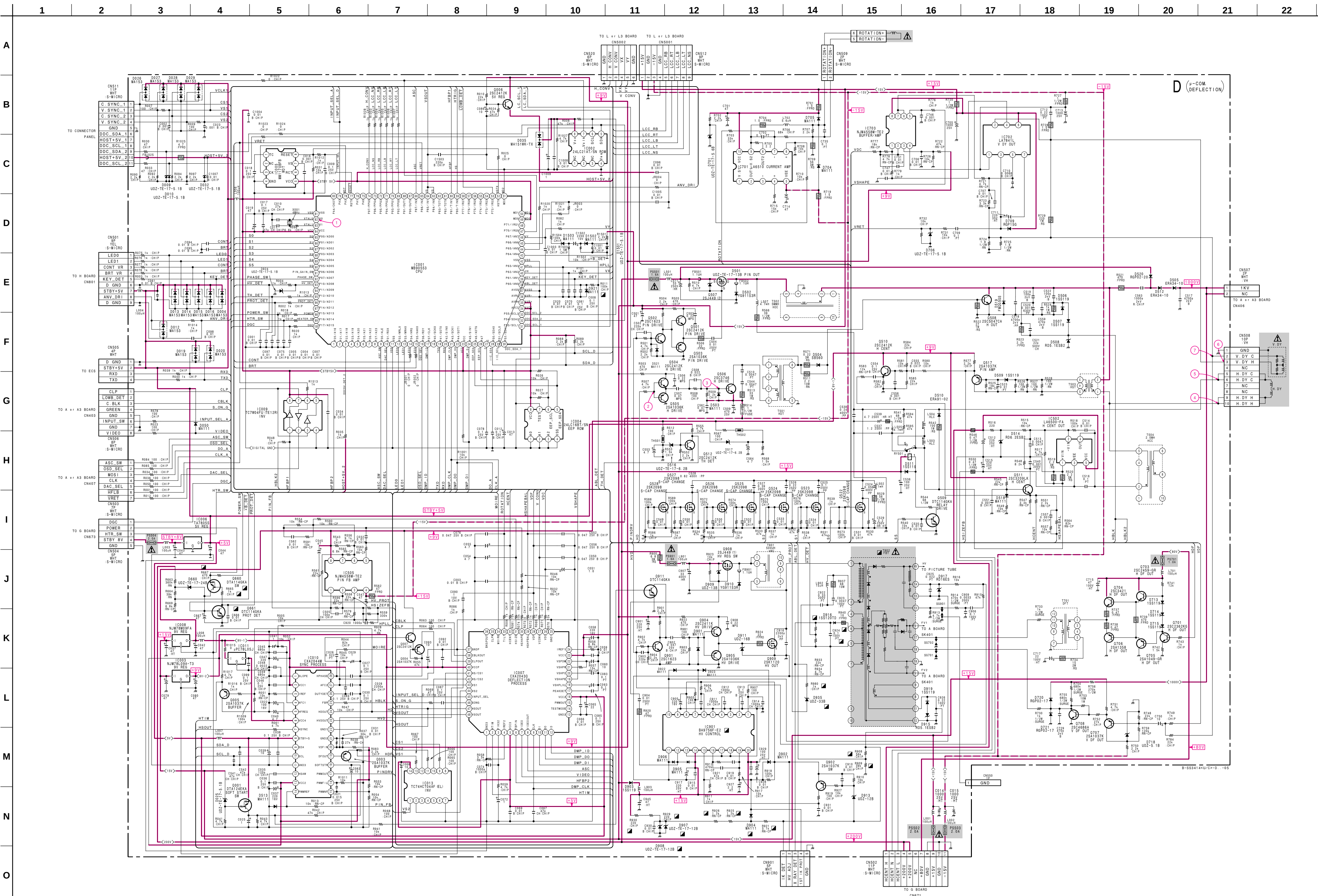
- All capacitors are in μ F unless otherwise noted. (pF: μ F)
- Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm
Rating electrical power 1/4 W (CHIP : 1/10 W)

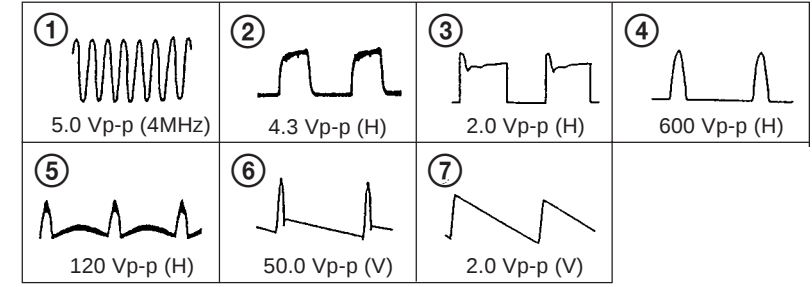
- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- $\triangle$: internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$: earth-ground.
- $\text{---}\text{---}\text{---}$: 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 ()
HV Regulator Circuit Check	D Board	IC901, T902 • Mounted D board
HV Protector Circuit Check	D Board	Q660, Q661, D916, D935, C924, R665, R667, R940, R980, T902 • Mounted D board
	G Board	PH680, Q680, Q683, D680, R680, R685, R686, R687, R688, R689 • Mounted G board
Beam Current Protector Circuit Check	D Board	IC901, D904, D907, D908, R011, R908, R909, R921, R925, R926, R929, R930, T902 • Mounted D board

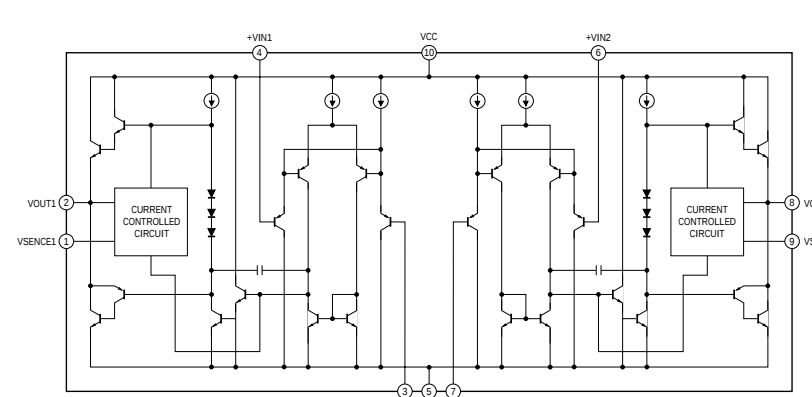
(1) Schematic Diagram of D Board



• D BOARD WAVEFORMS

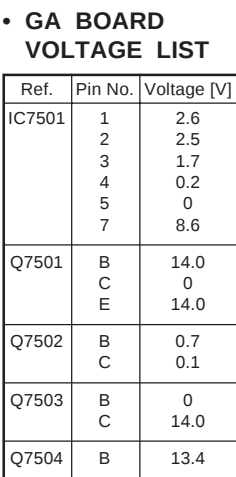


• D BOARD IC701 LA6510



• D BOARD VOLTAGE LIST

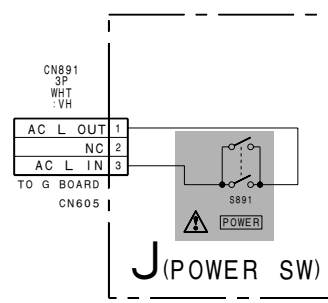
Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC002	5	1.1	11	0	
	6	4.2	12	11.2	
	7	0	15	0	
IC004	5	4.8	Q003	B	5.1
	6	4.8		C	0
				E	5.7
IC005	1	0.4	Q005	B	2.5
	3	0		C	0
	7	1.5		E	5.7
	8	4.8			
IC009	1	-0.1	Q501	B	11.2
	2	4.7		C	0
	3	4.5		E	10.8
	5	0.3	Q502	B	0.2
	6	0.3		C	11.2
	7	4.5		E	10.9
IC010	1	4.0	Q503	B	11.2
	3	3.0		C	12.0
	4	2.8	Q504	B	2.5
	5	2.3		C	12.0
	6	2.6		E	2.5
	7	0.6	Q505	B	2.5
	9	4.8		C	12.0
	12	5.4	Q506	B	-14.0
	14	4.5		C	-0.2
	15	4.5		E	-14.0
	16	5.4	Q507	G	197.4
	17	0		D	41.8
	18	0			
	19	5.1	Q508	B	-1.4
	20	3.7		C	41.0
	23	0.8			
	24	2.5	Q509	B	0
	25	-0.1		C	14.1
	26	4.0			
	27	4.0			
	28	4.4			
IC012	5	0.6	Q510	B	4.5
	6	3.9		E	3.9
	7	4.1	Q511	B	3.2
IC013	1	0		C	33.5
	2	4.9		E	2.6
	8	0.6	Q517	B	4.6
	9	3.6		E	5.1
	10	4.9	Q522	G	0
	11	0		D	15.2
	13	5.7			
IC014	1	3.5	Q523	G	4.7
	3	2.7		D	0
	5	0	Q524	G	4.7
	10	0.1		D	0
	12	4.9	Q525	G	4.7
	13	4.9		D	0
	14	3.2	Q527	G	4.7
	15	3.9		D	0
IC015	1	0.5	Q528	G	4.7
	2	4.2		D	0
	3	0.5	Q660	B	4.2
	4	0.5		C	0
	5	0		E	4.2
	6	0			
	8	0	Q661	B	0
	9	0		C	4.2
IC502	1	41.4	Q701	B	5.7
	2	41.4		C	36.0
	3	33.7		E	5.1
	4	42.3	Q703	B	37.9
	5	48.3		E	37.4
IC505	1	4.5	Q704	B	37.4
	2	0		E	37.0
	3	0	Q705	B	36.0
	5	0		E	36.6
	7	-10.0			
IC701	1	14.2	Q706	B	36.6
	2	14.2		E	37.0
	3	0	Q707	B	-0.6
	4	3.6		C	-5.0
	6	3.0		E	0
	7	3.0	Q708	B	0.6
	8	-0.7		C	477.0
	9	-0.7			
IC702	2	0.4	Q901	B	0.1
	3	13.5		C	9.9
	4	1.2	Q902	B	9.0
	5	1.2		C	0
	7	-13.0		E	9.0
IC703	1	1.2	Q904	B	8.6
	2	1.6		C	13.0
	3	1.6		E	8.4
	5	2.8	Q905	B	8.6
	6	2.8		E	8.4
	7	2.8			
IC901	1	9.3	Q908	G	196.6
	2	5.0		D	40.1
	3	5.6			
	4	1.1			
	6	0.9	Q909	G	8.4
	7	0.9		D	40.4
	8	0			
	10	0			



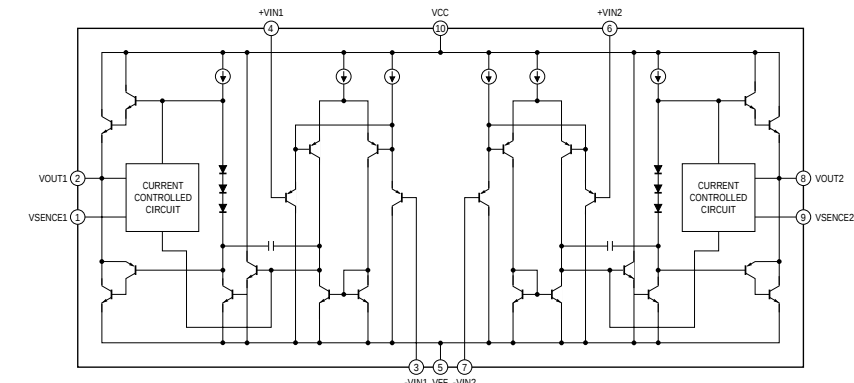
Ref.	Pin No.	Voltage [V]
IC7501	1	2.6
	2	2.5
	3	1.7
	4	0.2
	5	0
	7	8.6
Q7501	B	14.0
	C	0
	E	14.0
Q7502	B	0.7
	C	0.1
Q7503	B	0
	C	14.0
Q7504	B	13.4



Ref.	Pin No	Voltage [V]
IC630	3	2.5 11.6
IC660	IN OUT	6.1 410.0
IC690	2 3 4	5.0 6.7 5.3
PH660	1 2 3 4	4.5 3.3 6.1 16.7
PH680	1 2 3 4	1.3 0.1 0 0.7
Q610	G D S	8.7 102.4 0.2
Q615	B C E	13.6 14.2 14.3
Q640	B1 C1 B2 C2 E2	-2.0 199.2 196.8 408.0 199.2
Q641	B C C	1.1 -2.0 2.0
Q642	B C	-1.8 -2.0
Q660	B C	0.9 0.3
Q680	B C	0.8 0
Q681	B C	0.3 11.7
Q682	E	11.7
Q683	B C	7.5 8.3
Q690	B C	0 15.0
Q691	B C E	8.6 5.3 6.7



- L or L3 BOARD IC5101, 5301, 5401 LA6510



Ref.	Pin No.	Voltage [V]
GSS001	5	2.8
	6	1.0
IC5101	1	1.8
	2	1.0
	3	1.2
	4	1.2
	6	1.2
	7	1.2
	8	-0.2
IC5201	9	-0.2
	1	1.2
	2	1.2
IC5301	4	1.1
	1	-0.2
	3	-0.2
	2	1.2
	4	1.2
	6	1.2
	7	1.2
IC5401	8	0.4
	9	0.4
IC5401	1	0.6
	2	0.6
	3	3.4
	4	3.4
	6	1.8
	7	1.8
	8	0.4
	9	0.4

Note: L complete board and L3 complete board have interchangeability though it is a little different because the material of the circuit board is different.

