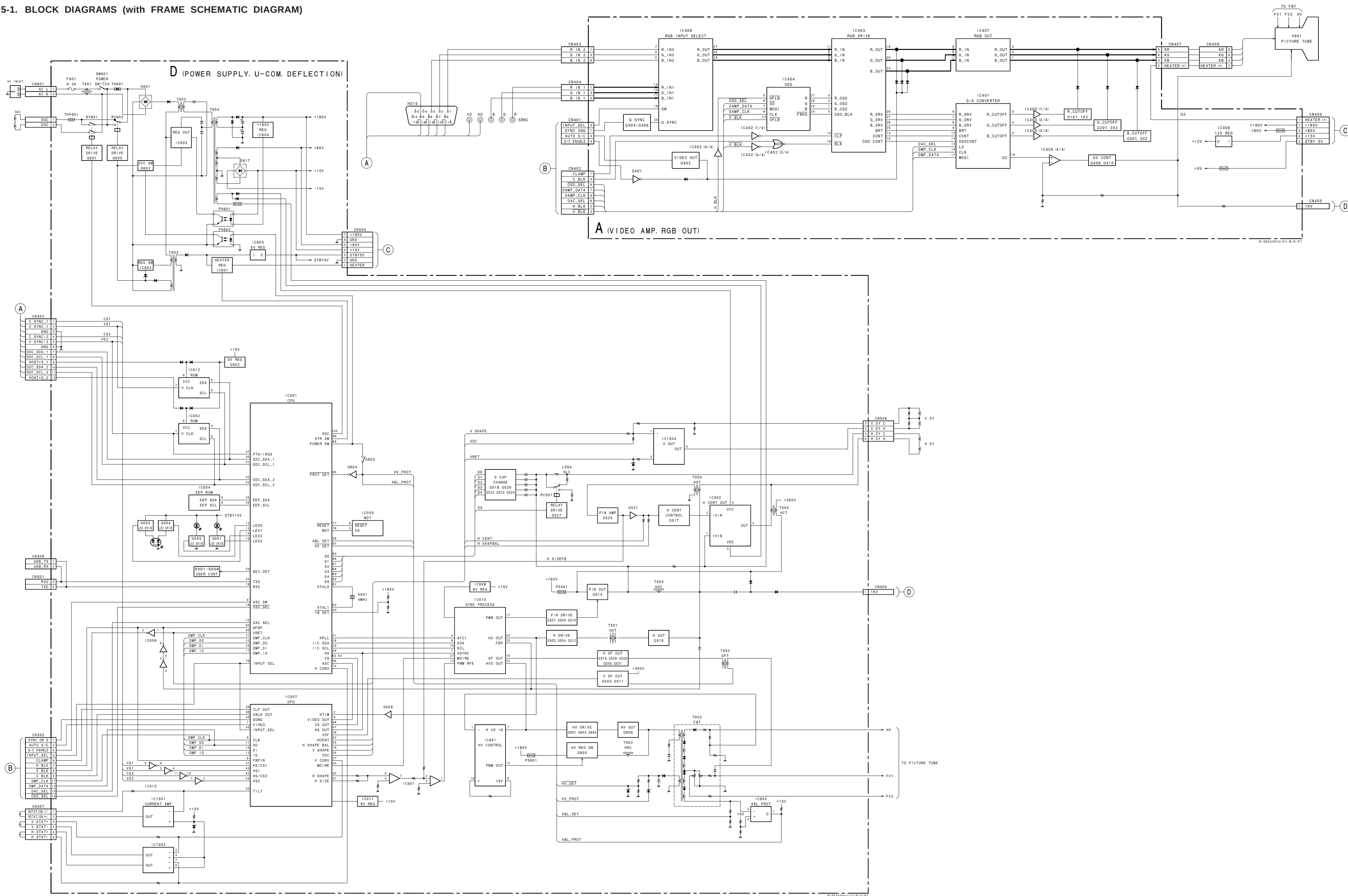


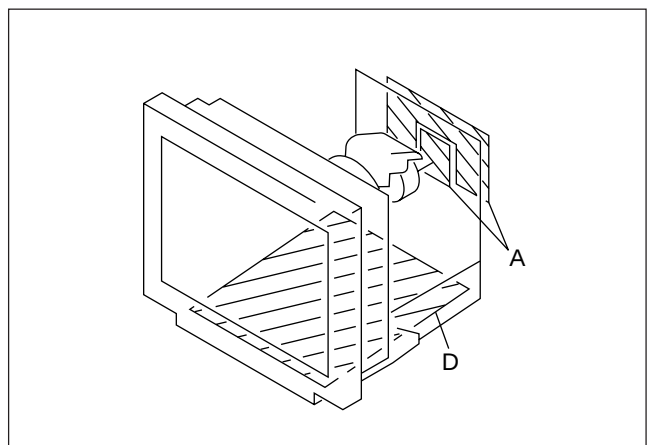
SECTION 5

DIAGRAMS

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



5-2. CIRCUIT BOARDS LOCATION



- 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  are critical for safety. Replace only with part number specified.

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

5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. (pF: μpF)
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.
-  : 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 3-1)
- When replacing the part in below table, be sure to perform the related adjustment.

	Part replaced ()
HV ADJ	RV901

	Part replaced ()	
HV Regulator Circuit	D board	IC901, R903, R922, T901 • Mounted D board
HV HOLD DOWN Circuit	D board	D913, D916, C923, R920, R927, T901 • Mounted D board
Beam Current Protector Circuit	D board	IC901, D902, D928, IC919, R923, R928, R932, R933, R934, R942, R944, R945, R947, R948, R951, T901 • Mounted D board

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

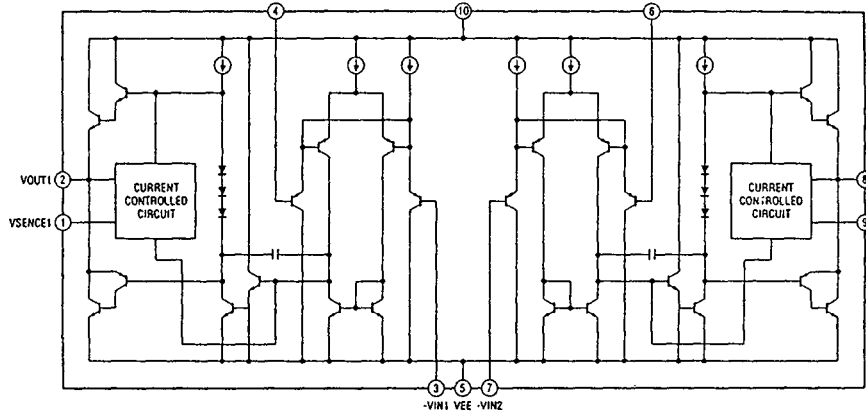
Device	Printed symbol	Terminal name	Circuit
① Transistor		Collector Base Emitter	
② Transistor		Collector Base Emitter	
③ Diode		Cathode — Anode	
④ Diode		Cathode Anode (VC)	
⑤ Diode		Cathode Anode (VC)	
⑥ Diode		Common Anode Cathode	
⑦ Diode		Common Anode Cathode	
⑧ Diode		Common Anode Anode	
⑨ Diode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

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

- D BOARD VOLTAGE LIST

7-D BOARD WAVEFORMS

①	②	③	④	⑤	⑥	⑦
						
5.0 Vp-p (4MHz)	4.5 Vp-p (H)	2.0 Vp-p (H)	600 Vp-p (H)	45.0 Vp-p (H)	45.0 Vp-p (V)	1.0 Vp-p (V)

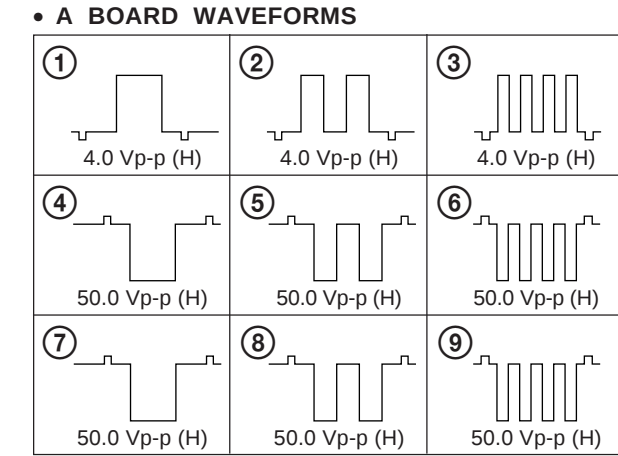
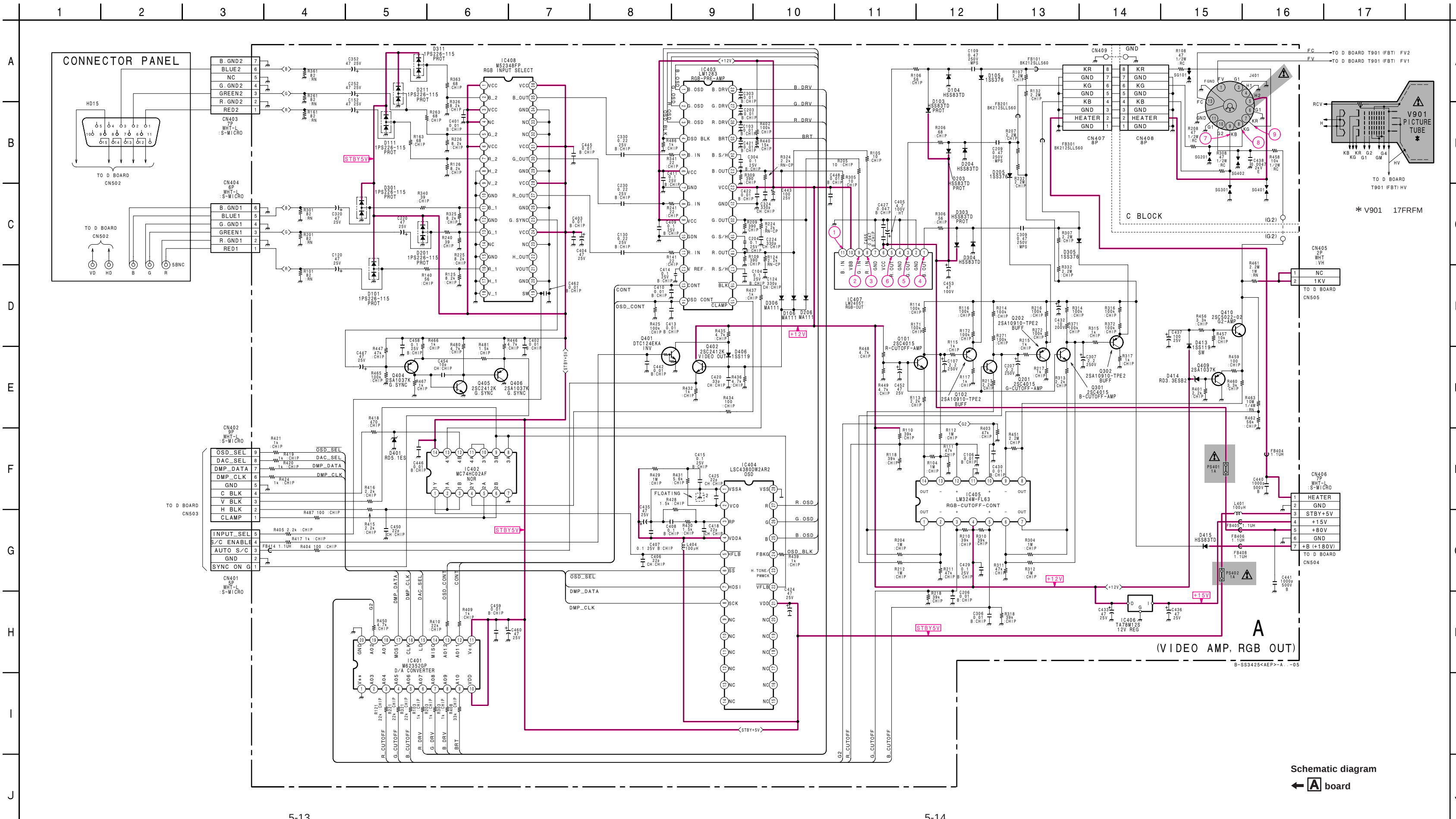


- D BOARD SEMICONDUCTOR LOCATION

IC			D013		B-1		⑧	
(Conductor Side)		(Component Side)	D014		A-4		A-5	
			D017		A-4		⑧	
			D018		A-1		A-5	
			D020		A-3		⑧	
			D021		B-1		A-3	
			D022		A-3		⑧	
			D023		A-3		⑧	
			D024		A-3		A-3	
			D028		A-4		A-5	
			D030		A-3		⑧	
			D503		D-3		D-3	
			D504		G-1		⑧	
			D505		E-3		E-3	
			D506		D-1		D-5	
			D509		F-1		C-3	
			D510		F-1		F-5	
			D511		E-1		E-5	
			D512		C-3		C-3	
			D513		E-1		E-5	
			D514		E-1		E-5	
			D515		E-1		E-5	
			D516		D-1		D-5	
			D517		C-4		C-4	
			D518		C-3		⑧	
			D519		E-2		E-4	
			D520		D-2		D-4	
			D522		D-3		D-3	
			D523		D-3		D-3	
			D524		D-1		D-4	
			D525		D-1		D-4	
			D601		F-4		F-2	
			D602		F-4		F-2	
			D603		F-5		F-1	
			D604		E-4		E-2	
			D606		E-4		E-1	
			D607		C-5		C-1	
			D608		C-5		C-1	
			D609		C-5		C-1	
			D610		B-5		B-1	
			D611		B-5		B-1	
			D612		B-5		B-1	
			D613		C-3		C-3	
			D614		C-3		C-3	
			D615		E-4		E-2	
			D616		E-3		C-2	
			D617		C-4		C-3	
			D619		C-3		C-3	
			D620		C-4		C-2	
			D621		E-4		E-2	
			D622		E-4		E-2	
			D623		B-4		⑧	
			D624		B-4		⑧	
			D902		E-3		⑧	
			D903		E-3		⑧	
			D906		F-3		F-3	
			D907		F-3		⑧	
			D908		F-3		⑧	
			D909		C-4		C-2	
			D910		C-3		G-3	
			D912		C-3		C-3	
			D913		E-2		E-4	
			D914		F-2		F-4	
			D915		C-3		E-3	
			D916		E-4		E-3	
			D917		C-3		G-3	
			D918		E-3		⑧	
			D919		C-4		C-2	
			D1501		B-5		B-1	
			D1502		C-1		C-5	
			D1503		C-1		C-4	
			D1504		C-1		C-5	
			D1505		C-1		C-4	
			D1506		C-2		C-4	
TRANSISTOR			D520		D-2		D-4	
(Conductor Side)		(Component Side)	D522		D-3		D-3	
			D523		D-3		D-3	
			D524		D-1		D-4	
			D525		D-1		D-4	
			D601		F-4		F-2	
			D602		F-4		F-2	
			D603		F-5		F-1	
			D604		E-4		E-2	
			D606		E-4		E-1	
			D607		C-5		C-1	
			D608		C-5		C-1	
			D609		C-5		C-1	
			D610		B-5		B-1	
			D611		B-5		B-1	
			D612		B-5		B-1	
			D613		C-3		C-3	
			D614		C-3		C-3	
			D615		E-4		E-2	
			D616		E-3		C-2	
			D617		C-4		C-3	
			D619		C-3		C-3	
			D620		C-4		C-2	
			D621		E-4		E-2	
			D622		E-4		E-2	
			D623		B-4		⑧	
			D624		B-4		⑧	
			D902		E-3		⑧	
			D903		E-3		⑧	
			D906		F-3		F-3	
			D907		F-3		⑧	
			D908		F-3		⑧	
			D909		C-4		C-2	
			D910		C-3		G-3	
			D912		C-3		C-3	
			D913		E-2		E-4	
			D914		F-2		F-4	
			D915		C-3		E-3	
			D916		E-4		E-3	
			D917		C-3		G-3	
			D918		E-3		⑧	
			D919		C-4		C-2	
			D1501		B-5		B-1	
			D1502		C-1		C-5	
			D1503		C-1		C-4	
			D1504		C-1		C-5	
			D1505		C-1		C-4	
			D1506		C-2		C-4	
DIODE			D520		D-2		D-4	
(Conductor Side)		(Component Side)	D522		D-3		D-3	
			D523		D-3		D-3	
			D524		D-1		D-4	
			D525		D-1		D-4	
			D601		F-4		F-2	
			D602		F-4		F-2	
			D603		F-5		F-1	
			D604		E-4		E-2	
			D606		E-4		E-1	
			D607		C-5		C-1	
			D608		C-5		C-1	
			D609		C-5		C-1	
			D610		B-5		B-1	
			D611		B-5		B-1	
			D612		B-5		B-1	
			D613		C-3		C-3	
			D614		C-3		C-3	
			D615		E-4		E-2	
			D616		E-3		C-2	
			D617		C-4		C-3	
			D619		C-3		C-3	
			D620		C-4		C-2	
			D621		E-4		E-2	
			D622		E-4		E-2	
			D623		B-4		⑧	
			D624		B-4		⑧	
			D902		E-3		⑧	
			D903		E-3		⑧	
			D906		F-3		F-3	
			D907		F-3		⑧	
			D908		F-3		⑧	
			D909		C-4		C-2	
			D910		C-3		G-3	
			D912		C-3		C-3	
			D913		E-2		E-4	
			D914		F-2		F-4	
			D915		C-3		E-3	
			D916		E-4		E-3	
			D917		C-3		G-3	
			D918		E-3		⑧	
			D919		C-4		C-2	
			D1501		B-5		B-1	
			D1502		C-1		C-5	
			D1503		C-1		C-4	
			D1504		C-1		C-5	
			D1505		C-1		C-4	
			D1506		C-2		C-4	
VARIABLE RESISTOR			D520		D-2		D-4	
(Conductor Side)		(Component Side)	D522		D-3		D-3	
			D523		D-3		D-3	
			D524		D-1		D-4	
			D525		D-1		D-4	
			D601		F-4		F-2	
			D602		F-4		F-2	
			D603		F-5		F-1	
			D604		E-4		E-2	
			D606		E-4		E-1	
			D607		C-5		C-1	
			D608		C-5		C-1	
			D609		C-5		C-1	
			D610		B-5		B-1	
			D611		B-5		B-1	
			D612		B-5		B-1	
			D613		C-3		C-3	
			D614		C-3		C-3	
			D615		E-4		E-2	
			D616		E-3		C-2	
			D617		C-4		C-3	
			D619		C-3		C-3	
			D620		C-4		C-2	
			D621		E-4		E-2	
			D622		E-4		E-2	
			D623		B-4		⑧	
			D624		B-4		⑧	
			D902		E-3		⑧	
			D903		E-3		⑧	
			D906		F-3		F-3	
			D907		F-3		⑧	
			D908		F-3		⑧	
			D909		C-4		C-2	
			D910		C-3		G-3	
			D912		C-3		C-3	
			D913		E-2		E-4	
			D914		F-2		F-4	
			D915		C-3		E-3	
			D916		E-4		E-3	
			D917		C-3		G-3	
			D918		E-3		⑧	
			D919		C-4		C-2	
			D1501		B-5		B-1	
			D1502		C-1		C-5	
			D1503		C-1		C-4	
			D1504		C-1		C-5	
			D1505		C-1		C-4	
			D1506		C-2		C-4	
VARIABLE RESISTOR			D520		D-2		D-4	
(Conductor Side)		(Component Side)	D522		D-3		D-3	
			D523		D-3		D-3	
			D524		D-1		D-4	
			D525		D-1		D-4	
			D601		F-4		F-2	
			D602		F-4		F-2	
			D603		F-5		F-1	
			D604		E-4		E-2	
			D606		E-4		E-1	
			D607		C-5		C-1	
			D608		C-5		C-1	
			D609		C-5		C-1	
			D610		B-5		B-1	
			D611		B-5		B-1	
			D612		B-5		B-1	
			D613		C-3		C-3	
			D614		C-3		C-3	
			D615		E-4		E-2	
			D616		E-3		C-2	
			D617		C-4		C-3	
			D619		C-3		C-3	
			D620		C-4		C-2	
			D621		E-4		E-2	
			D622		E-4		E-2	
			D623		B-4		⑧	
			D624		B-4		⑧	
			D902		E-3		⑧	
			D903		E-3		⑧	
			D906		F-3		F-3	
			D907		F-3		⑧	
			D908		F-3		⑧	
			D909		C-4		C-2	
			D910		C-3		G-3	

*: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 5-4)

(2) Schematic Diagrams of A Board



• A BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC403	1	1.6	Q202	B	91.7
	2	1.6		C	0.6
	3	1.6		E	92.3
	4	0			
	5	2.2	Q301	B	5.8
	8	2.2		C	92.1
	11	2.2		E	5.2
	12	2			
	13	1.7	Q302	B	92.1
	14	1.5		C	0.6
	15	4.8		E	92.7
	16	4			
	17	6.7	Q401	B	0
	18	2.2		C	6.1
	19	6.8	Q402	B	5.5
	20	2.1		E	4.8
	23	2.1			
	24	6.8	Q404	B	3.5
	25	1.5		C	0.6
	26	3.4		E	4.1
	27	3.5	Q405	B	0.6
	28	3.4		C	3.3
IC407	1	50.6			
	3	50.6	Q406	B	3.3
	5	50.6		E	3.6
	8	2.1			
	9	2.1	Q409	B	8.3
	11	2.1		E	7.8
Q101	B	5.8	Q410	B	8.3
	C	93.3		C	463
	E	5.2		E	7.8
Q102	B	93.3	J401	KB	70
	C	0.6		KG	70
	E	94		KR	70
				G2	462
Q201	B	5.8		H2	6.2
	C	91.7			
	E	5.2			

Schematic diagram
← A board