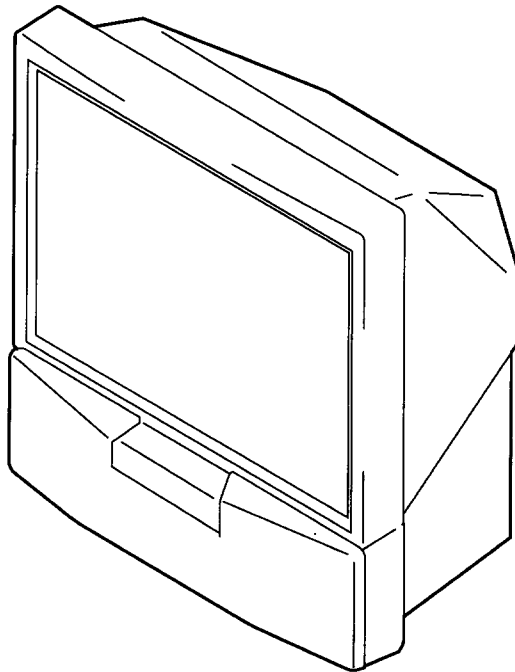
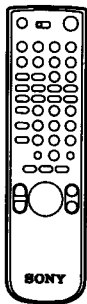


SERVICE MANUAL

RE-2 CHASSIS

<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>	<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST.</u>	<u>CHASSIS NO.</u>
KP-41S4	RM-862	AEP	SCC-N61A-A	KP-41S4K	RM-862	OIRT	SCC-N62A-A
KP-41S4B	RM-862	French	SCC-N63A-A	KP-41S4R	RM-862	Russ	SCC-N62B-A
KP-41S4G	RM-862	Greek	SCC-N60B-A	KP-41S4U	RM-862	UK	SCC-N61A-A



* Please file according to model size.

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PROJECTION TV
SONY®

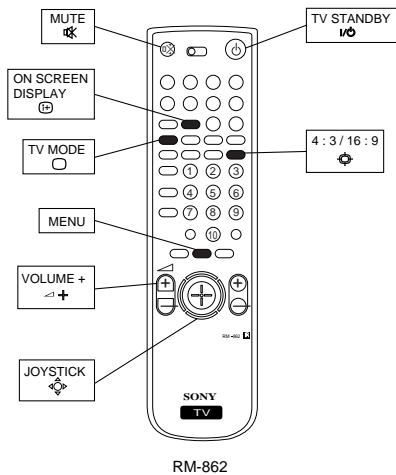
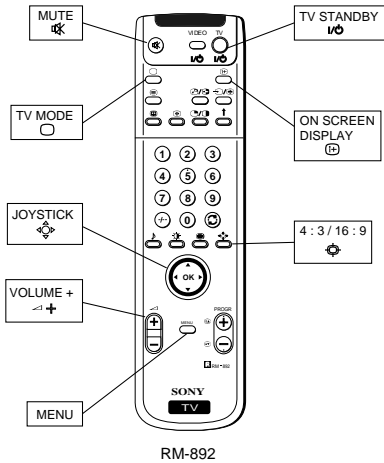
SECTION 6

ELECTRICAL ADJUSTMENTS

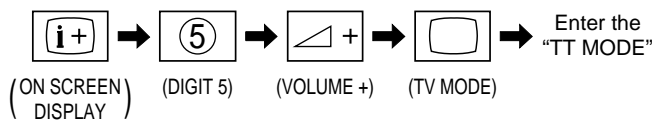
6-1. HOW TO ENTER THE SERVICE MODE

6-1-1. Adjustment Method with Commander

Service adjustment to this model can be performed with the supplied remote commander

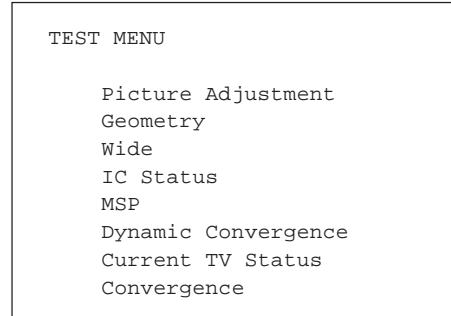


1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT - -" will appear in the top right corner of the screen.
Other status information will also be displayed.

3. Press "MENU" on the commander to obtain the following menu on the screen.
(With some models, display items may be different from the following)



4. Move to the corresponding adjustment using the joystick (▲ or ▼ : up or down) on the commander.
5. Move the joystick to the right (▶) to enter the selected adjustment.
6. Press "OK" to exit.
7. Before TURN OFF is necessary:
DATA WRITE : Press "MUTE" + "0"
DATA COPY : Press "ON SCREEN DISPLAY" + "0"
8. Turn off the power to quit the service mode when adjustments are completed.

6-1-2. Screen Display on the Test Menu

(With some models, display items and contents may be different from the following)

Picture Adjustment

PICTURE ADJUSTMENT

AFC Mode	1	0 - 3
Ref Position	3	0 - 3
SCP BGR	1	0 - 3
SCP BGF	1	0 - 3
Trap F0	0	0 - 15
Sub Contrast	11	0 - 15
Sub Colour	10	0 - 15
Sub Brightness	13	0 - 63
Green Drive	51	0 - 63
Blue Drive	43	0 - 63
Green Cutoff	8	0 - 15
Blue Cutoff	10	0 - 15
Gamma	1	0 - 3
Pre / Overshoot	2	0 - 3
Y Delay	3	0 - 7
D Pic	ON	ON/OFF
D Colur	OFF	ON/OFF
DC Transfer	ON	ON/OFF

Geometry (* : No need to adjust)

GEOMETRY ADJUSTMENT			
	4:3	16:9	
V Size	15	15	0 - 63
V Position	47	47	0 - 63
S Correction	0	0	0 - 15
V Linearity	12	12	0 - 15
H Size	40	40	0 - 63
H Position	15	15	0 - 15
Pin Amp	18	20	0 - 63
Pin Phase	12	12	0 - 15
AFC Bow	8	8	0 - 15
AFC Angle	9	9	0 - 15
* EHT V	1	1	0 - 3
* EHT H	0	0	0 - 3
Lo Corn Pin	4	6	0 - 15
Up Corn Pin	1	3	0 - 15

Wide (* : No need to adjust)

WIDE ADJUSTMENT			
	4:3	16:9	
* V Aspect	47	47	0 - 63
* V Scroll	25	25	0 - 63
* Upper V Lin	0	0	0 - 15
* Lower V Lin	0	0	0 - 15
* Left Blanking	11	11	0 - 15
* Right Blanking	11	11	0 - 15

IC Status

IC STATUS (CXA2076 / CXA2040)	
<u>CXA2076</u>	
H lock	1
IKR	1
V NG	0
XRAY	0
Colour System	7
CV1 Sync	0
<u>CXA2040</u>	
Sync Sep	1
S1 Mode Pin	01
S2 Mode Pin	01
<u>PORT EXPANDER</u>	
Power Good	0
<u>TUNER</u>	
Tuner Status	01111100

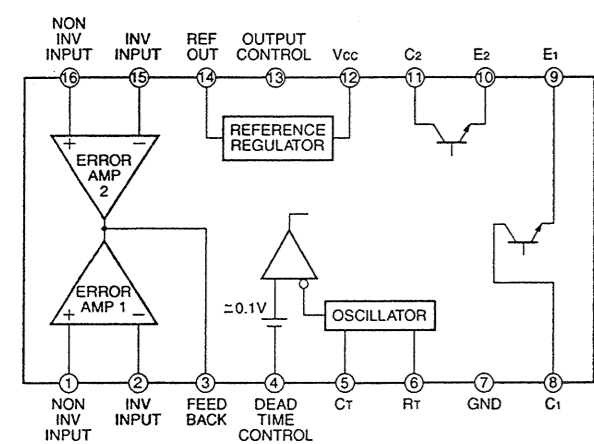
MSP

MSP ADJUSTMENT			
SDR	1	CONCCT	0 FAWCTIST 12
AGC On / Off		ON	ON/OFF
Constant Gain CDB	0		0 - 20
FM Prescale FMP	36		0 - 127
Zwei Mono-St WHI	36		0 - 127
Zwei St-Mono WLO	18		0 - 127
Zwei Mono-Bi WMH	36		0 - 127
Zwei Bi-Mono WLO	18		0 - 127
Time Zwei WML	41		0 - 127
FAWCT Limit	10		0 - 127
FAWCT Soll Init FAW	12		0 - 127
FAW ER Tol	2		0 - 127
NICAM Err Max CCT	10		0 - 127
NICAM Err Min	0		0 - 127
Time NICAM	26		0 - 127
Audio Clock ACO	HIZ		ON/HIZ
SCART Prescale	25		0 - 127
SCART Volume	64		0 - 127
NICAM Prescale I	127		0 - 127
NICAM Prescale L	97		0 - 127
NICAM Prescale BG	97		0 - 127
NICAM Prescale DK	97		0 - 127

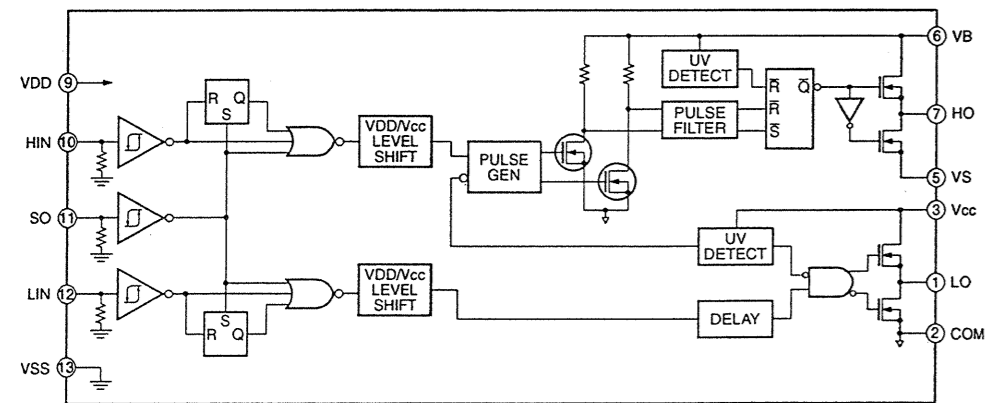
Dynamic Convergence

DYNAMIC CONVERGENCE		
Range	0	0 - 42
H stat	0	OFF - 63
H amp l	0	OFF - 63
H amp r	0	OFF - 63
Up Y	0	OFF - 63
Low Y	0	OFF - 63
Y up l	0	OFF - 63
Y up r	0	OFF - 63
Y low l	0	OFF - 63
Y low r	0	OFF - 63
Mbow up l	0	OFF - 63
Mbow up r	0	OFF - 63
Mbow low l	0	OFF - 63
Mbow low r	0	OFF - 63
V stat	0	OFF - 63

G BOARD : IC6004 IR3M02



G BOARD : IC6007 IR2112



Schematic diagram
G board →

G BOARD IC VOLTAGE LIST

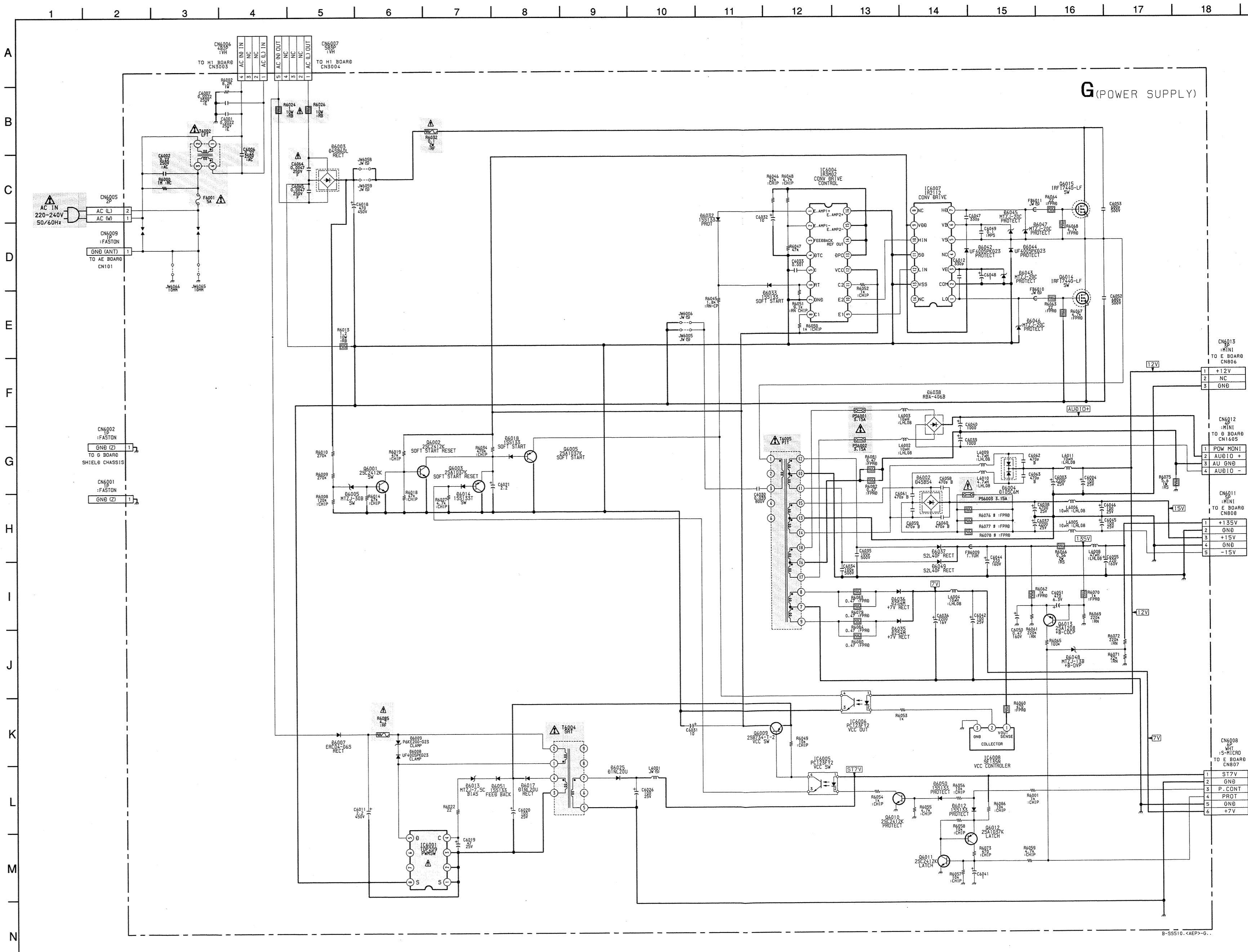
REF.	NO.	VOL.
● IC6001	1	GND
	2	GND
	3	GND
	4	5.9
	5	296.0
	8	GND
● IC6004	1	3.9
	2	4.8
	4	GND
	5	1.7
	6	3.9
	7	GND
	8	14.1
	9	5.8
	10	6.4
	11	14.4
	12	14.5
	13	5.3
	14	5.3
	15	5.3
	16	GND
● IC6005	1	7.0
	2	5.8
	3	13.5
	4	13.8
● IC6006	1	14.0
	2	13.0
	3	GND
	4	3.0
● IC6007	1	6.2
	2	GND
	3	14.5
	5	147.0
	6	159.0
	7	150.0
	9	14.5
	10	6.4
	11	GND
	12	5.8
	13	GND
● IC6008	1	134.5
	2	12.5
	3	GND

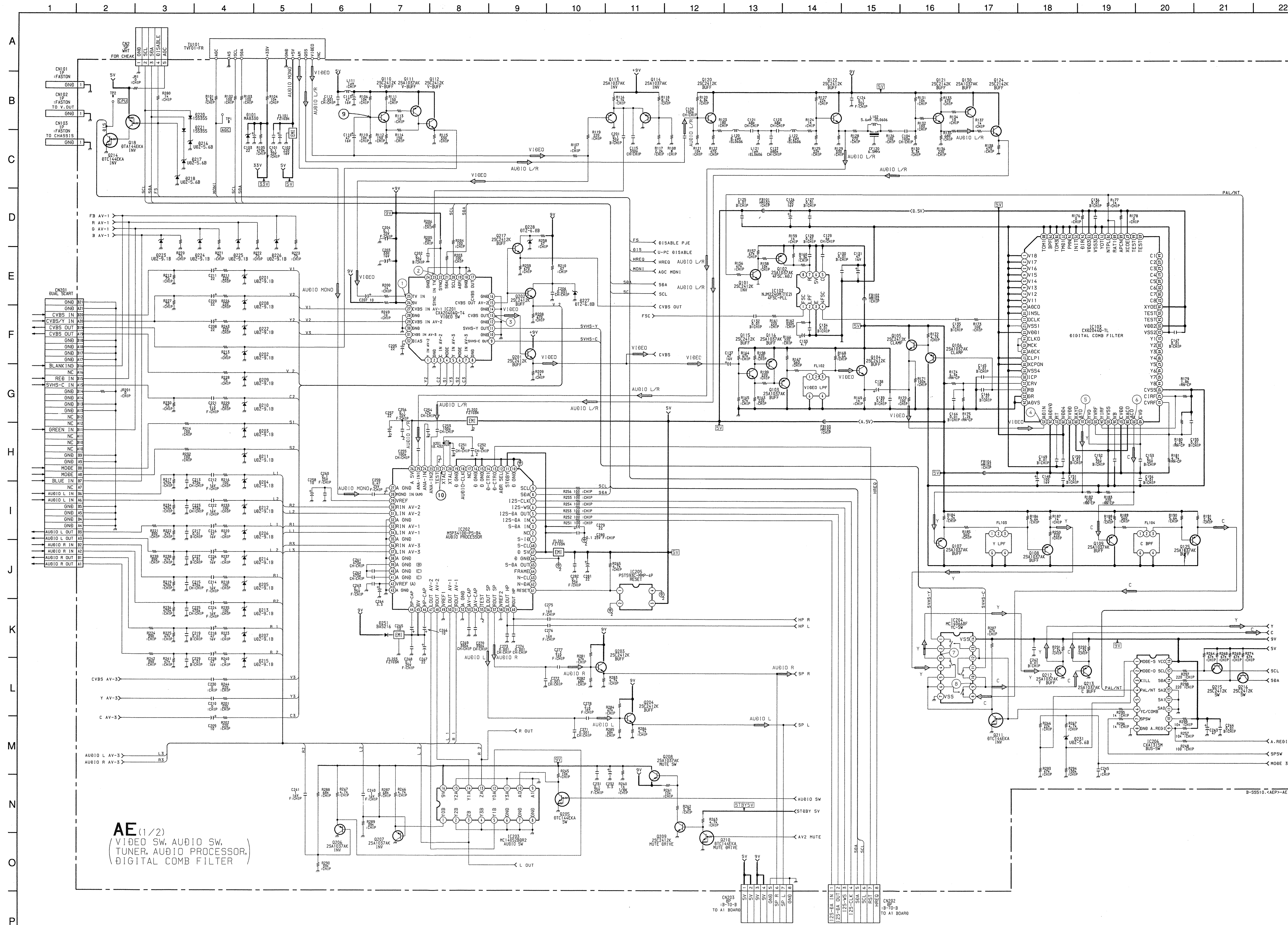
*All voltage are in V.
*Pin numbers which are not described are not used.
● The figures in the parentheses are the voltage difference from primary side ground.

G BOARD TRANSISTOR VOLTAGE LIST

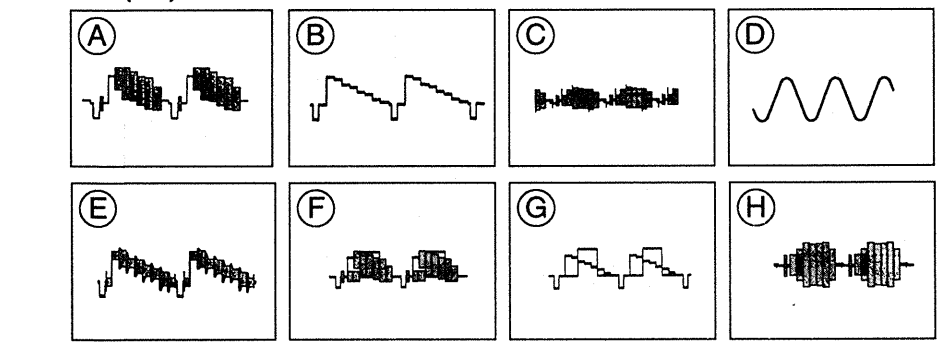
REF.	VOL.
● Q6001	B 0.8
	E GND
	C 0
● Q6002	B 0
	E GND
	C 13.8
● Q6003	B *
	E 13.8
	C GND
● Q6005	B 0.7
	E 3.0
	C GND
● Q6009	B 13.8
	E 14.5
	C 14.5
Q6010	B 0.7
	E GND
	C 0.1
Q6011	E GND
	B 7.0
Q6012	E 7.0
	C 0
Q6013	E 135.1
	C 0
	G 6.1
● Q6014	D 147.0
	S GND
● Q6015	G 150.0
	S 292.0
	S 147.0

All voltages are in V.
● The figures in the parentheses are the voltage difference from primary side ground.





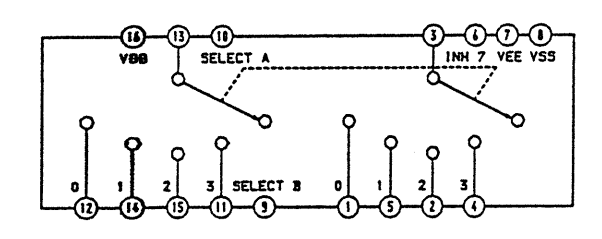
• AE(1/2) BOARD WAVEFORMS



• WAVEFORMS AE(1/2) BOARD

CIRCUIT WAVEFORM REFERENCE	PAL	SECAM	NTSC
1	A 1.1Vp-p(H)	E 1.2Vp-p(H)	F 1.5Vp-p(H)
2	A 0.9Vp-p(H)	E 1.0Vp-p(H)	F 0.9Vp-p(H)
3	A 1.0Vp-p(H)	E 1.2Vp-p(H)	F 1.5Vp-p(H)
4	A 1.0Vp-p(H)	E 1.0Vp-p(H)	F 2.2Vp-p(H)
5	B 1.3Vp-p(H)	B 1.3Vp-p(H)	G 1.6Vp-p(H)
6	C 0.5Vp-p(H)	C 0.4Vp-p(H)	H 1.5Vp-p(H)
7	B 1.1Vp-p(H)	B 1.1Vp-p(H)	G 1.2Vp-p(H)
8	C 0.5Vp-p(H)	C 0.4Vp-p(H)	H 1.2Vp-p(H)
9	A 1.1Vp-p(H)	E 1.2Vp-p(H)	F 1.4Vp-p(H)
10	D 1.6Vp-p(18.4MHz)		

AE(1/2) BOARD : IC203 MC14052BDR2



AE(1/2) BOARD IC VOLTAGE LIST

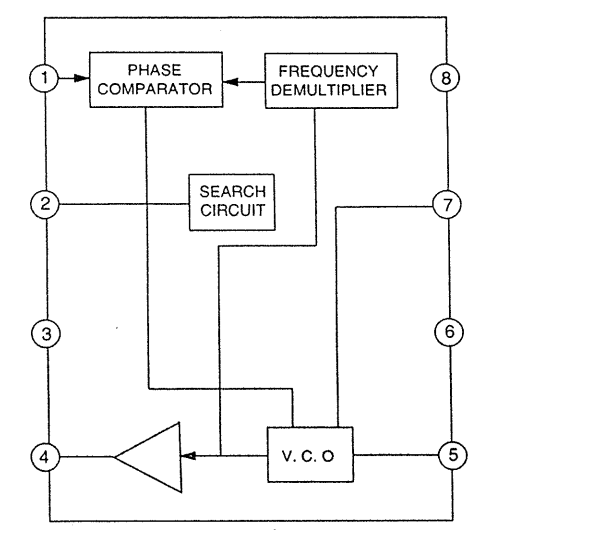
REF. NO.	VOL	REF. NO.	VOL	REF. NO.	VOL
IC102 1	2.4	2	GND	46	8.2
2	1.9(2.1)	3	4.3	46	7.1
3	GND	4	0.2	47	4.6-3.9-(3.9)
4	2.9	5	4.2	48	4.5-3.9-(3.9)
5	3.2	6	3.2	49	GND
6	4.7	7	4.3	50	4.6-3.9-(3.9)
7	3.4	8	GND	51	4.5-3.9-(3.9)
10	GND	9	4.3	52	GND
11	2.3	10	GND	53	4.7-3.9-(3.9)
12	GND	11	4.3	54	4.7-3.9-(3.9)
13	GND	12	GND	55	GND
14	4.5	13	4.3	56	0
15	2.0	14	GND	57	0
16	2.0	15	4.3	58	GND
17	4.5	16	GND	59	0.2
18	4.56	17	4.6	60	0.2
19	GND	18	GND	61	4.7
20	4.2	19	GND	62	GND
21	4.5	20	4.2	63	GND
22	4.5	21	4.5	67	4.8
23	4.5	22	4.6	IC203 1	4.3
24	GND	23	3.2	2	GND
25	1.2	24	GND	3	4.4-3.9-(3.8)
26	4.5	25	4.3	4	GND
27	4.5	26	8.5	5	4.5-4.5-(3.8)
28	4.56	27	4.3	6	GND
29	GND	28	GND	7	GND
30	9	29	4.5	8	GND
31	1.1	30	GND	9	GND
32	0.6	31	4.3	10	8.9
33	GND	32	4.3	11	GND
34	GND	33	4.3	12	4.3
35	GND	34	2.5	13	4.4-3.9-(3.8)
36	4.5	35	2.6-4.4-(2.4)	14	4.4-3.8-(3.8)
37	2.3	36	2.4	15	GND
38	4.5	37	2.4	16	GND
39	4.5	38	4.5	17	8.9
40	0.0(0.8)	39	4.7(4.4)	18	4.3
41	4.8	40	GND	19	2.6(2.8)
42	2.6	41	4.8	20	2.6(2.8)
43	1.5	42	GND	21	4.7
44	1.5	43	GND	22	8.9
45	GND	44	GND	23	4.7
46	0.9	45	GND	24	4.7
47	4.5	46	2.3	25	4.7
48	4.5	47	2.3	26	4.7
49	GND	48	2.3	27	GND
50	4.5	49	2.3	28	GND
51	4.5	50	GND	29	4.5
52	GND	51	4.3	30	0.8
53	4.5	52	0.5-0.8	31	3.9
54	4.5	53	1.8	32	GND
55	4.5	54	1.8	33	4.0
56	4.5	55	1.6	34	4.0
57	4.5	56	1.6	35	4.0
58	4.5	57	4.8	36	4.7
59	4.5	58	GND	37	4.7
60	4.5	59	2.7	38	4.7
61	4.5	60	3.9	39	4.7
62	GND	61	4.0	40	GND
63	GND	62	3.9	41	9
64	GND	63	3.9	42	0.0-0.2-(0.2)
65	0.5	64	5.0	43	GND
66	0.5	65	4.0	44	GND
67	0.5	66	4.0		
68	0.5	67	4.0		
69	0.5	68	4.0		
70	0.5	69	4.0		
71	GND	70	0.5		
72	GND	71	0.5		
73	GND	72	0.5		
74	5.0(4.5)	73	3.9		
75	GND	74	3.9		
76	GND	75	3.9		
77	GND	76	3.9		
78	GND	77	3.9		
79	GND	78	3.9		
80	GND	79	3.9		
IC201 1	4.2	80	GND	14	4.4-4.1-
				15	4.7-4.2-
				16	8.9

AE(1/2) BOARD TRANSISTOR VOLTAGE LIST

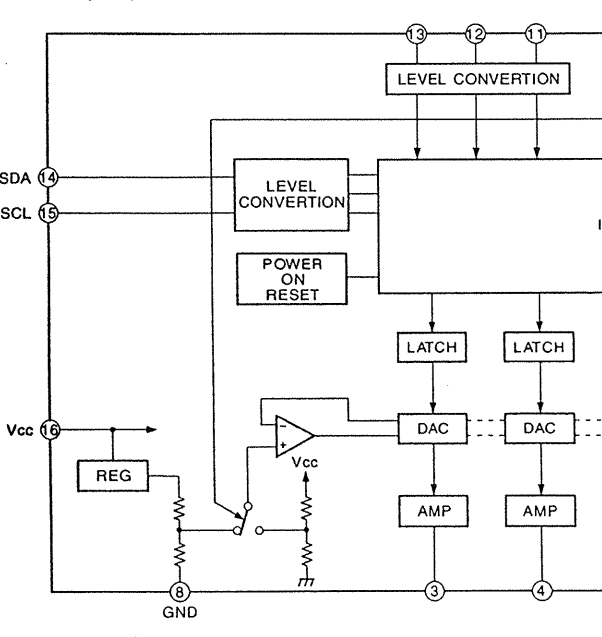
REF.	VOL	REF.	VOL
Q18 B	4.8	Q124 B	5.4
Q18 E	4.9	Q124 E	4.7
C	0	C	9.0
Q101 B	0.6	B	1.7
C	4.6	C	GND
Q102 E	4.7	Q130 E	9.0
C	4.6	C	8.9
Q103 E	2.8	Q201 E	3.6
C	GND	C	8.6
Q104 B	2.9	B	4.3
C	4.5	C	7.3
Q105 E	1.2	Q203 E	4.5
C	0.6	C	8.9
Q106 E	1.1	Q204 E	3.8
C	GND	C	8.9
Q107 B	2.3	Q205 B	5.2
C	GND	C	8.9
Q108 E	2.2	Q206 E	4.3
C	GND	C	GND
Q109 E	1.4	Q207 E	4.3
C	GND	C	GND
Q110 B	2.3	B	8.2
C	4.1	C	9.0
Q111 E	4.7	Q209 E	GND
C	2.6	C	0
Q112 E	1.9	Q210 E	0
C	4.7	C	0.7
Q113 E	2.3	Q211 E	8.9
C	GND	C	8.9
Q114 E	2.3	Q212 E	3.3
C	GND	C	9.0
Q115 E	1.4	Q213 E	2.6
C	4.0	C	GND
Q116 E	4.6	Q214 E	GND
C	2.1	C	2.6
Q120 E	4.5	Q215 E	4.9-4.7-
C	2.2	C	4.2-4.5-
Q121 E	1.6	Q216 E	4.9-4.7-
C	8.3	C	4.4-4.1-
Q122 E	3.5	Q217 E	3.7
C	9.0	C	7.2

All voltages are in V.

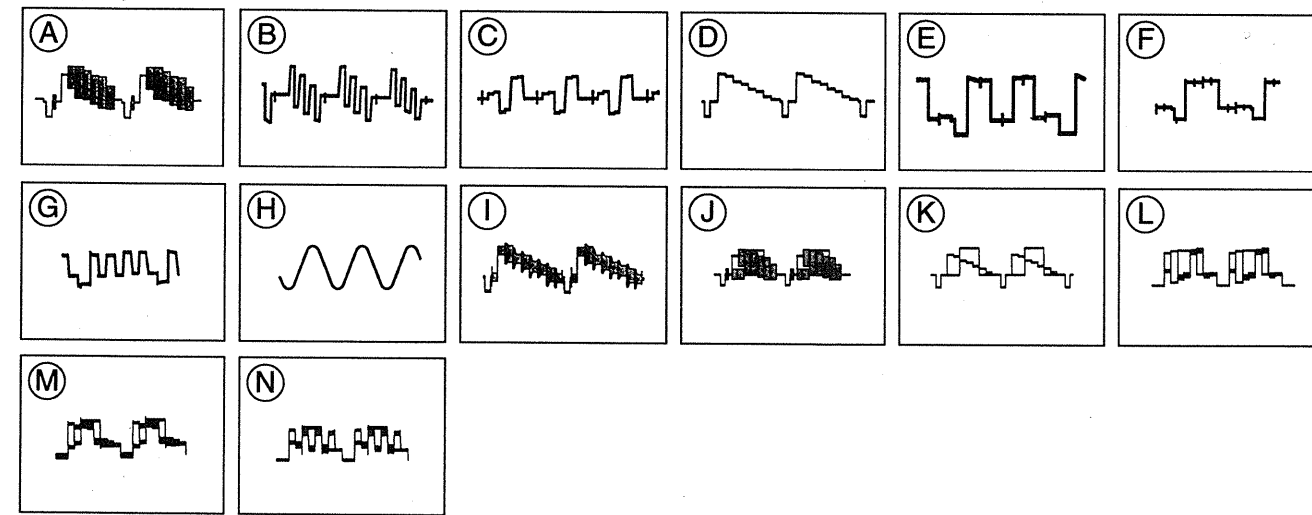
AE(1/2) BOARD : IC102 NJM2240M(TE2)



AE(1/2) BOARD : IC206 CXA1315M



• AE(2/2) BOARD WAVEFORMS



• WAVEFORMS AE(2/2) BOARD

CIRCUIT WAVEFORM REFERENCE	PAL	SECAM	NTSC
1	A 1.70Vp-p(0.8)	I 1.70Vp-p(0.8)	J 1.80Vp-p(0.8)
2	C 0.6Vp-p(0.3)	B 1.0Vp-p(0.5)	C 0.4Vp-p(0.2)
3	B 0.6Vp-p(0.3)	C 1.5Vp-p(0.7)	B 0.4Vp-p(0.2)
4	B 1.2Vp-p(0.6)	B 1.1Vp-p(0.5)	B 1.2Vp-p(0.6)
5	C 1.5Vp-p(0.7)	C 1.5Vp-p(0.7)	C 1.5Vp-p(0.7)
6	A 1.2Vp-p(0.6)	I 1.2Vp-p(0.6)	J 1.6Vp-p(0.8)
7	D 1.8Vp-p(0.9)	D 2.2Vp-p(1.1)	K 2.2Vp-p(1.1)
8	E 3.0Vp-p(1.5)	E 3.0Vp-p(1.5)	L 3.0Vp-p(1.5)
9	F 3.0Vp-p(1.5)	F 3.0Vp-p(1.5)	M 3.0Vp-p(1.5)
10	G 3.4Vp-p(1.7)	G 3.7Vp-p(1.85)	N 3.0Vp-p(1.5)
11	H 3.4Vp-p(1.7)	H 3.4Vp-p(1.7)	H 3.4Vp-p(1.7)
12	H 1.7Vp-p(0.85)	H 1.7Vp-p(0.85)	H 1.7Vp-p(0.85)

AE(2/2) BOARD IC VOLTAGE LIST

REF. NO.	VOL.	REF. NO.	VOL.	REF. NO.	VOL.		
IC1	2	0	4	GND	38	8.0	
	3	5.0	5	4.4+4.6	37	3.2	
	4	5.0	6	4.2+4.4	38	3.4	
	5	5.0	7	4.9	39	4.7	
	6	0	8	5.0	40	4.2	
	7	0.8	1	5.0	41	2.4	
	8	0.1	2	*	42	GND	
	9	0.1	3	*	43	1.8	
	10	0	4	*	44	8.9	
	11	1.8	5	1.9	45	2.5	
	12	GND	6	*	46	4.0	
	13	5.0	7	5.0	47	3.2	
	14	2.4	8	2.5	48	4.4	
	15	2.3	9	2.2	49	6.4	
	16	4.6(5.0)	10	2.5	50	4.5	
	17	1.7	11	2.5	51	3.9(4.5)	
	18	0	12	2.5	52	4.3(5.0)	
	19	3.0	13	2.1	53	4.0(4.2)	
	20	0	14	2.0	54	5.0	
	21	2.5(2.9)	15	2.1	55	4.0	
	22	1.0	16	GND	57	4.2	
	23	3.5(3.2)	17	1.8+1.7(1.9)	58	8.8	
	24	3.2	18	2.8	60	5.4+4.7(5.6)	
	25	2.2(1.6)	19	2.9	61	2.4(1.4)	
	26	2.4	20	2.7	62	7.4(5.9)	
	27	2.6	21	3.0	63	GND	
	28	3.5	22	GND	64	5.3	
	29	2.7	23	*	IC302	1	4.9
	30	2.7	24	GND	3	GND	
	31	2.6	25	*	4	GND	
	32	2.3	26	*	5	0.6	
	33	2.7	27	*	8	GND	
	34	2.6	28	*	9	2.6	
	35	2.6	29	0.9	10	GND	
	36	3.0	30	0	11	3.1	
	37	2.5	31	5.0	12	3.0	
	38	2.8	32	5.0	14	1.4	
	39	2.2	1	5.0	16	1.4	
	40	2.6	2	GND	IC303	1	1.6+4.9(1.2)
	41	0.9(2.1)	3	5.0	5	5.1	
	42	5.0(3.0)	4	GND	9	GND	
	43	2.6(2.1)	1	1.6+4.9(1.6)	9	3.5(3.2)	
	44	4.2(1.7)	2	GND	10	3.3	
	50	GND	3	5.7+3.0(5.7)	11	5.7+3.0(5.7)	
	51	5.0	4	5.7+3.0(5.7)	12	5.7+3.0(5.7)	
	52	0	5	3.7	19	0.7	
	53	0	6	5.0	20	3.6	
	54	1.9	7	5.5	4	0.9	
	55	0.8	8	5.5	5	1.3	
	56	0(4.5)	9	GND	6	1.6	
	57	0(4.4)	10	0.7	7	1.8	
	58	0.6(1.5)	11	0.1	9	GND	
	60	5.0(2.3)	12	5.5	10	0(1.1)	
	61	0	13	5.5	11	4.8	
	62	3.9	14	5.5	12	4.8	
	63	4.6	15	0	13	GND	
	64	0.6(1.1)	16	0	16	4.7	
	65	5.0	17	5.5	17	0.1	
	66	0	18	5.5	21	4.8	
	67	3.9(2.3)	19	5.5	23	2.9	
	68	GND	20	5.9	25	7	
	69	0	21	4.4	44	GND	
	70	0	22	1.8+2.0(1.8)	49	GND	
	71	0	23	4.4	55	GND	
	72	5.0	24	1.7+1.9(1.7)	56	0	
	73	4.9	25	4.9	58	GND	
	74	0(4.7)	26	1.6+1.9(1.8)	59	GND	
	75	5.0(4.6)	27	4.9(4.4)	60	GND	
	76	5.0(4.7)	28	4.4+2.8(3.5)	61	0	
	77	5.0(3.0)	29	8.8	62	0	
	78	0	30	0.6	63	0	
	79	0.8	31	3.0	64	0	
	80	5.0	32	3.0	66	4.3+4.8(4.7)	
	1	GND	33	4.1	67	4.9(4.7)	
	2	GND	34	4.0	68	3.5+3.0(3.0)	
	3	GND	35	4.6			

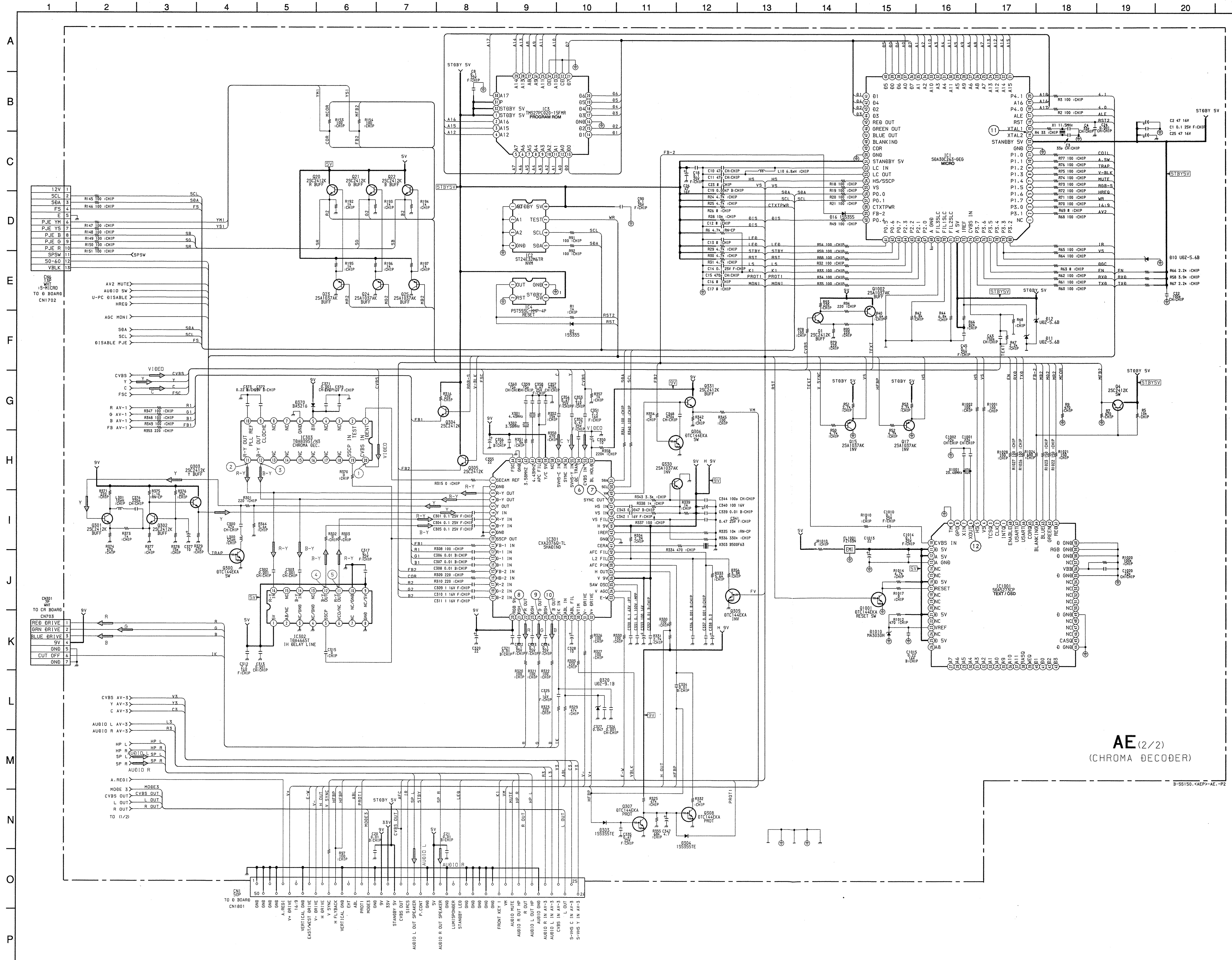
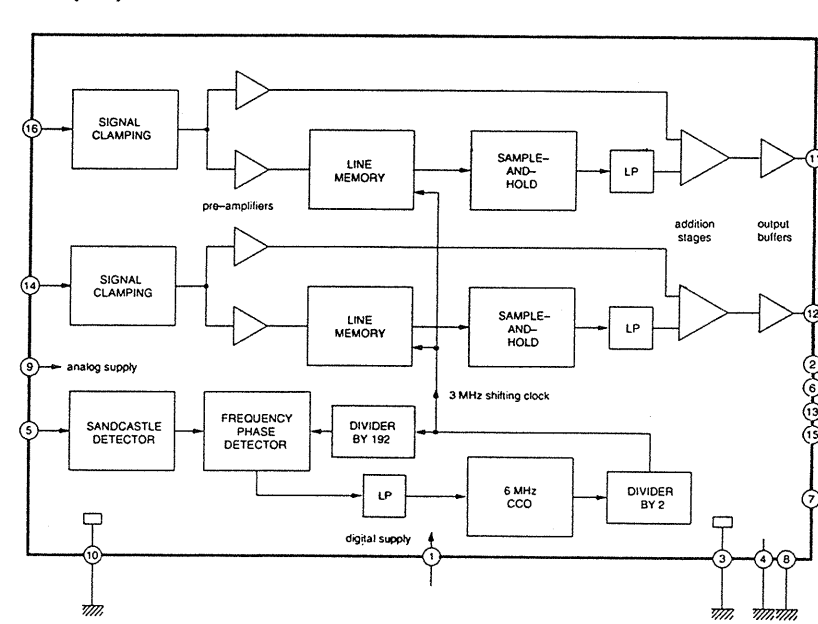
*All voltage are in V.
*Can not measured.
Pin numbers which are not described are not used.

AE(2/2) BOARD TRANSISTOR VOLTAGE LIST

REF.	VOL.	REF.	VOL.
Q1	B 3.6	Q302	B 3.6
	C 3.0		C 3.0
	C 8.2		C 5.7
	B 0.4		B 5.7
Q4	E 0	Q303	E 5.1
	C 5.0		C 8.9
	B 0.2		B 0
	E 0.8	Q304	E 0
	C GND		C 5.0
	B 0.7		B 0
Q17	E 1.4	Q306	E 0
	C GND		C 5.0
	B 0.7		B 0
Q20	E 0.2	Q306	E GND
	C 4.9		C 0.2
	B 0.7		B 4.2
Q21	E 0.2	Q307	E GND
	C 4.7		C 0
	B 0.7		B 0
Q22	E 0.2	Q308	E GND
	C 4.8		C 3.4
	B 0		B 0(4.9)
Q23	E 0.7	Q309	E GND
	C GND		C 3.6(0)
	B 0		B 4
Q24	B 0	Q330	B 4.4(4.7)
	C GND		C 8.9
	E 0.7		E 5.1(5.3)
Q25	E 0.7	Q331	E 5.7
	C GND		C 8.9
	B 0		B 4.8
Q300	E GND	Q1001	E GND
	C 0		C 0.1
	B 3.7		B 8.3
Q301	E 3.0	Q1002	E 3.0
	C 7.5		C 5.3

All voltages are in V.

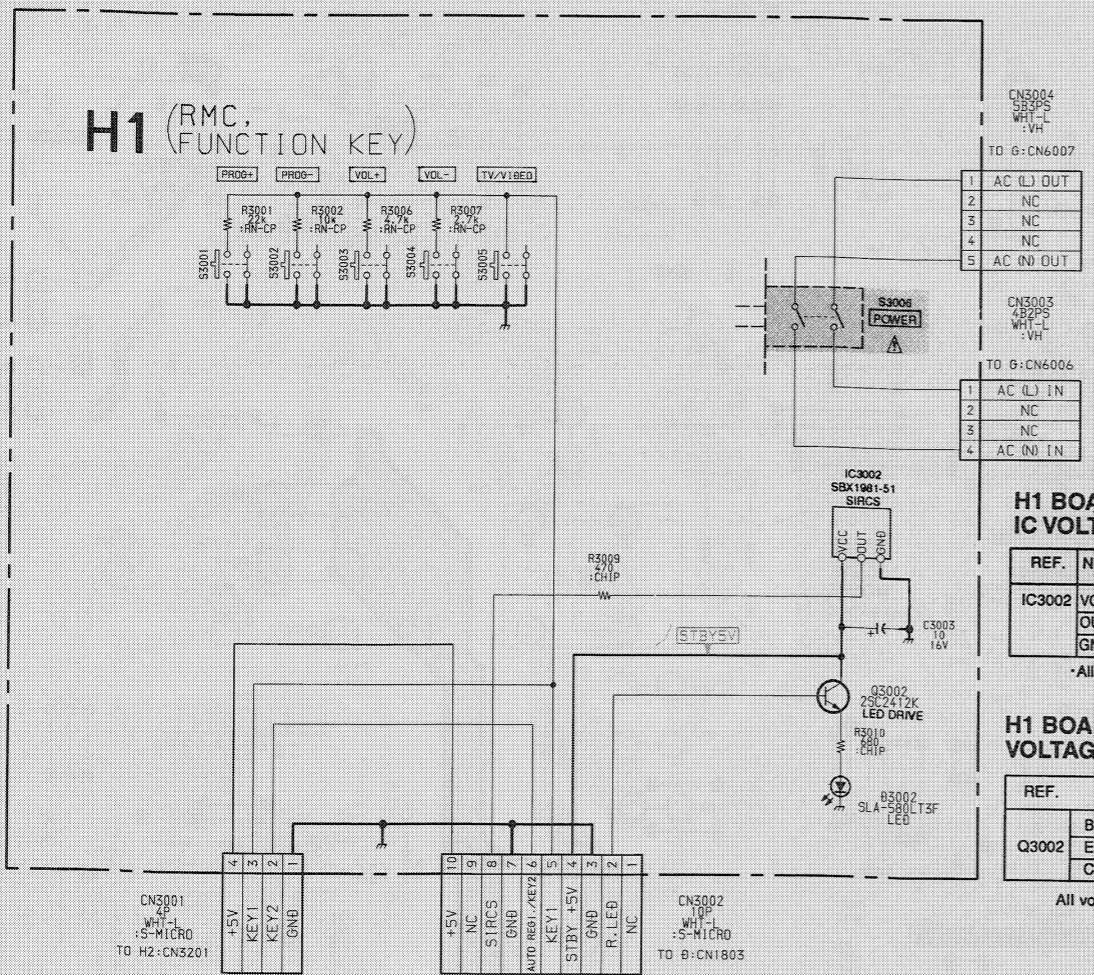
AE(2/2) BOARD : IC302 TDA4665T



AE(2/2)
(CHROMA RECOVER)

B-88150-CAEP-AE-2

A
B
C
D
E
F
G
H
I
J



H1 BOARD IC VOLTAGE LIST

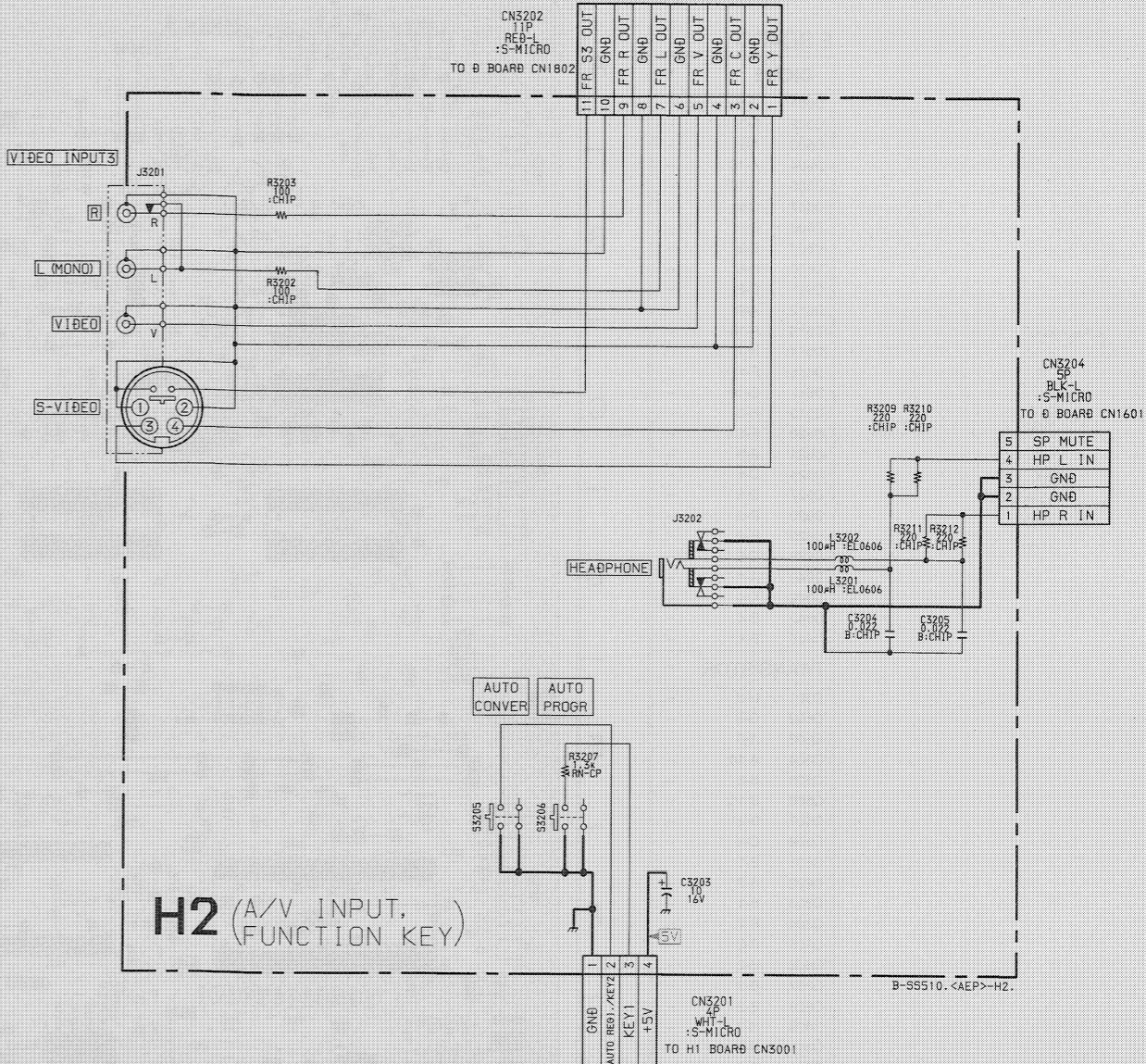
REF.	NO.	VOL.
IC3002	VCC	5.0
	OUT	5.0
	GND	GND

*All voltage are in V.

H1 BOARD TRANSISTOR VOLTAGE LIST

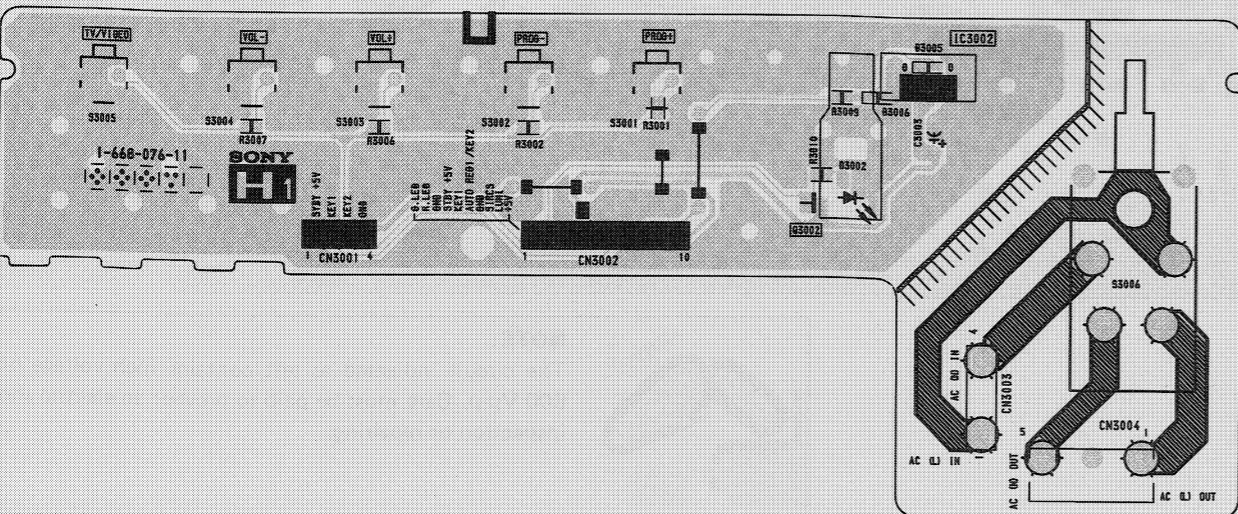
REF.	VOL.
Q3002	B 0.5
	E 0.1
	C 5.0

All voltages are in V.



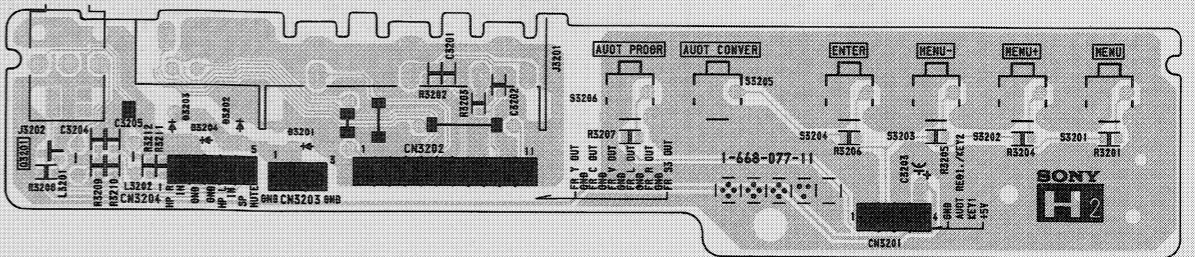
H1 [FUNCTION KEY, RMC]

- H1 Board -

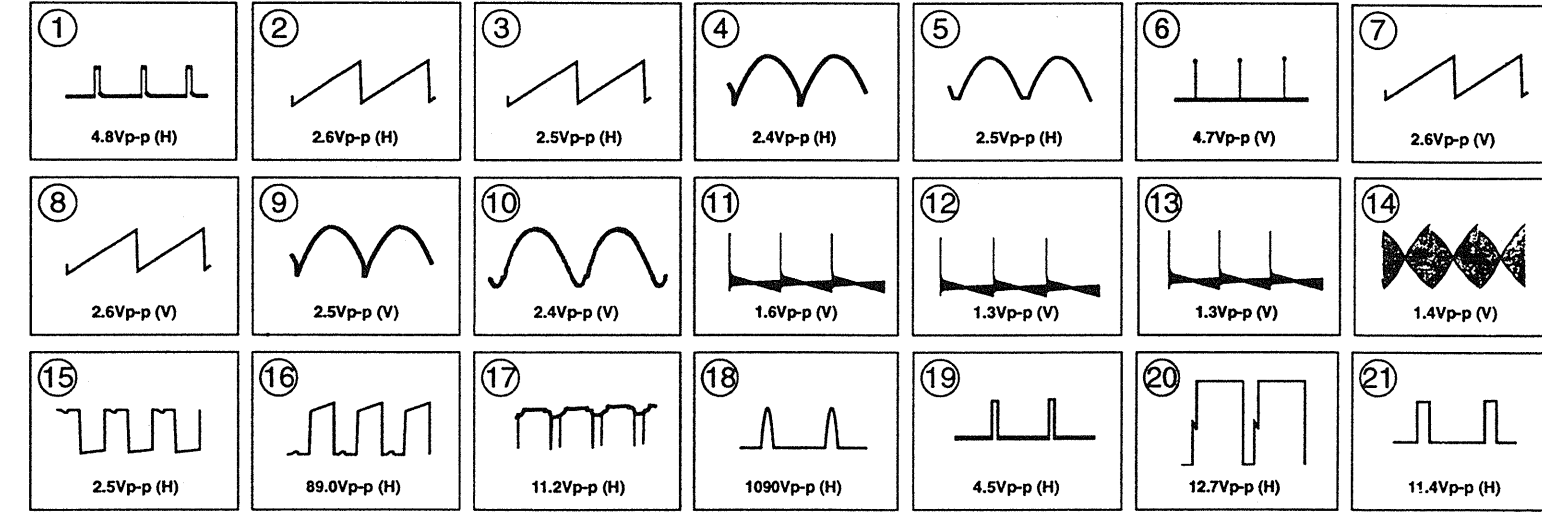


H2 [AV INPUT, FUNCTION KEY]

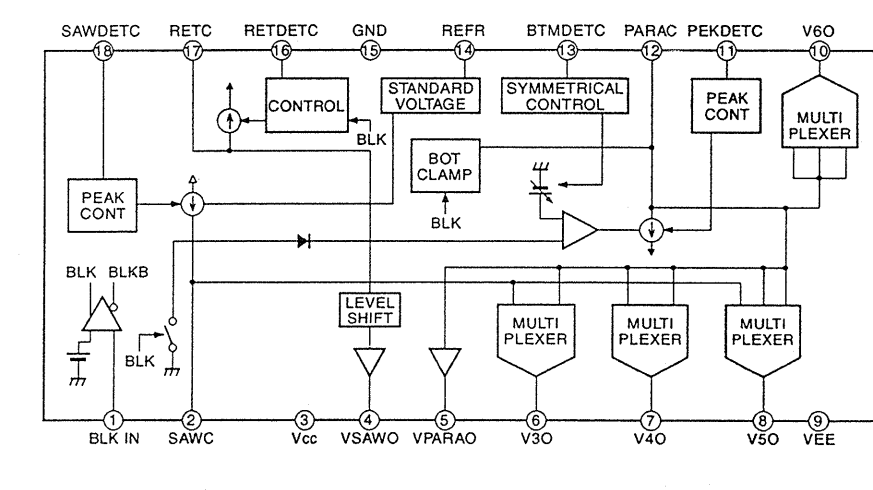
- H2 Board -



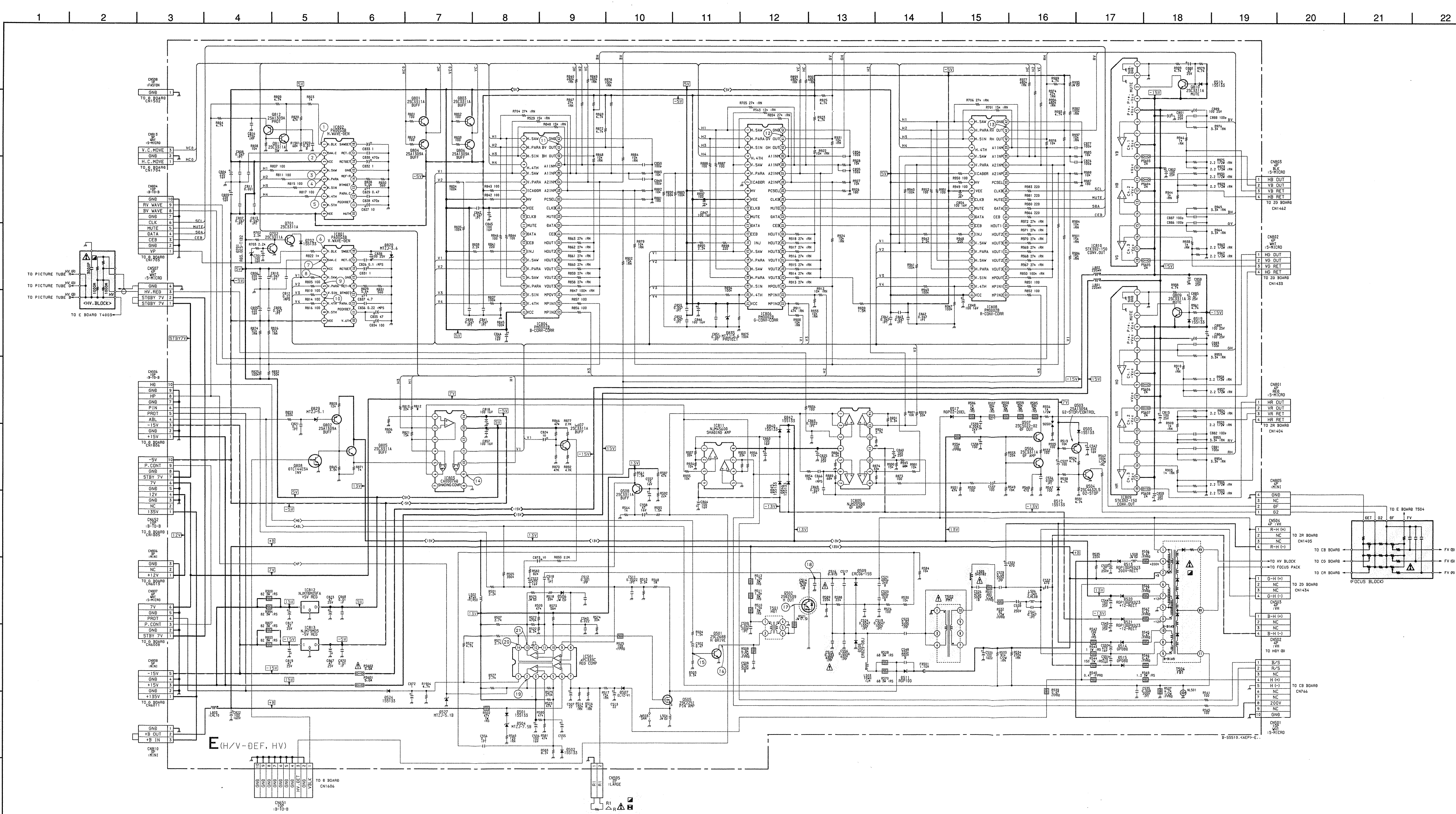
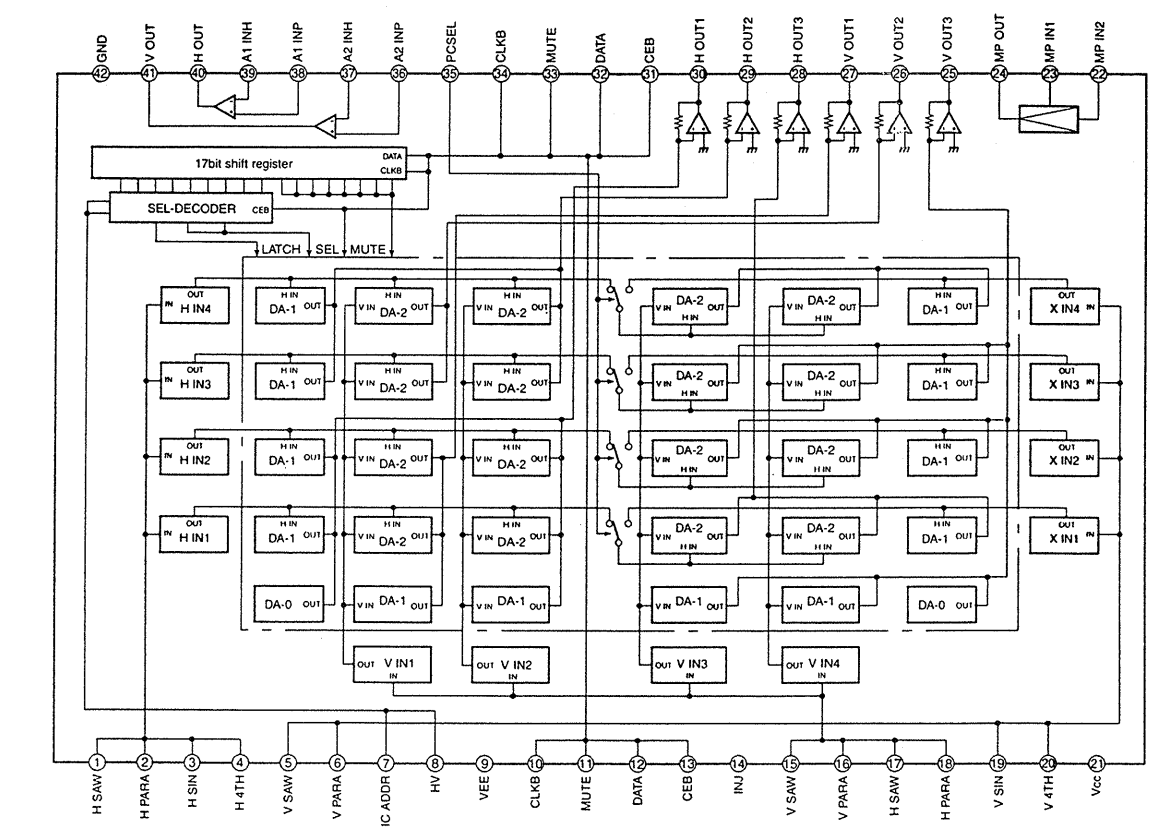
• E BOARD WAVEFORMS



E BOARD : IC801,802 PA0053B



E BOARD : IC804,806,808 PM0020B



E BOARD IC VOLTAGE LIST

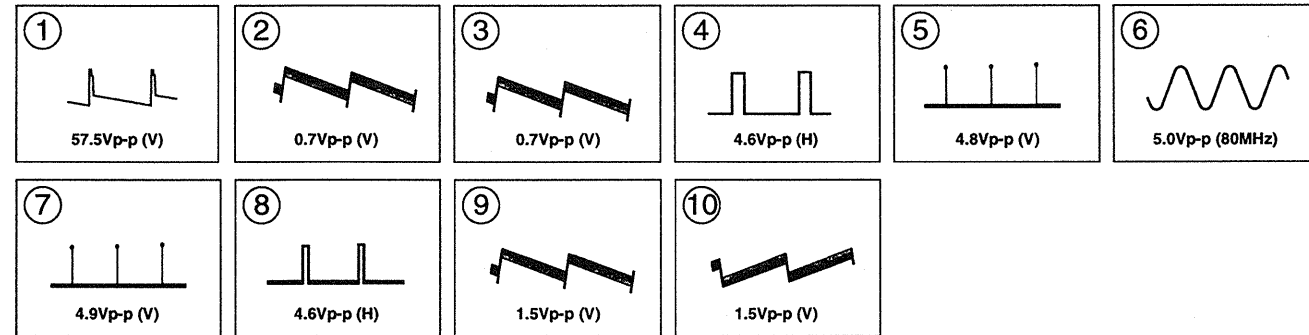
IC	REF.	NO.	VOL.	REF.	NO.	VOL.	REF.	NO.	VOL.
IC801	1	0.1		28	0.1	11	5.0		
	2	0.7		29	-0.1	12	0.2		
	3	12.2		30	-0.5	13	4.6		
	4	6.1		31	4.6	14	-2.0		
	5	1.8		32	0.2	15	0		
	6	8.3		33	5.0	16	0.8		
	7	7.9		34	4.7	17	0		
	8	1.6		35	0.1	18	-0.8		
	9	2.5		36	0.1	19	0.1		
	10	4.5		37	0	20	-0.5		
	11	1.8		38	0.1	21	5.0		
	12	GND		39	0	22	0		
	13	1.6		40	0.2	23	0		
	14	10.1		41	0	24	0.1		
	15	GND		42	GND	25	-0.1		
IC802	1	0.2		26	0.1				
	2	1.1		27	0				
	3	5.0		28	0.1				
	4	0		29	0.1				
	5	-0.8		30	-0.2				
	6	0		31	4.6				
	7	-1.1		32	0.2				
	8	-0.8		33	5.0				
	9	-5.0		34	4.7				
	10	0.5		35	0.1				
	11	0.5		36	0.1				
	12	-0.9		37	0				
	13	0.3		38	0.1				
	14	1.2		39	0				
	15	GND		40	0.2				
	16	-1.7		41	0				
	17	1.2		42	GND				
	IC803	1	0		1	7.4			
2		0		2	7.4				
3		0		3	7.2				
4		0		4	12.3				
5		-0.8		5	0				
6		0		6	0				
7		-1.1		7	0				
8		-0.8		8	-0.8				
9		0		9	0				
10		0.5		10	0.5				
11		0.5		11	5.0				
IC804		1	0		1	0.4			
	2	0		2	-0.8				
	3	0		3	0				
	4	0		4	-1.1				
	5	0.9		5	0				
	6	0		6	-0.4				
	7	-4.9		7	-4.9				
	8	5.0		8	5.0				
	9	0		9	-4.9				
	10	0		10	0				
	11	0		11	0				
	12	0.3		12	0.3				
	13	5.0		13	5.0				
	14	-5.0		14	-5.0				
IC806	1	0		1	0.4				
	2	0		2	-0.8				
	3	0		3	0				
	4	-1.1		4	-1.1				
	5	0		5	0				
	6	-0.4		6	-0.4				
	7	-4.9		7	-4.9				
	8	5.0		8	5.0				
	9	0		9	-4.9				
	10	0		10	0				
	11	0		11	0				
	12	0.3		12	0.3				
	13	5.0		13	5.0				
	14	-5.0		14	-5.0				
	IC808	1	0		1	0			
2		0		2	0				
3		0		3	0				
4		-1.1		4	-1.1				
5		0		5	0				
6		-0.4		6	-0.4				
7		-4.9		7	-4.9				
8		5.0		8	5.0				
9		0		9	0				
10		0		10	0				
11		0		11	0				
12		0.3		12	0.3				
IC810		1	0		1	0			
	2	0		2	0				
	3	0		3	0				
	4	-1.1		4	-1.1				
	5	0		5	0				
	6	-0.4		6	-0.4				
	7	-4.9		7	-4.9				
	8	5.0		8	5.0				
	9	0		9	0				
	10	0		10	0				
	11	0		11	0				
	12	0.3		12	0.3				

E BOARD TRANSISTOR VOLTAGE LIST

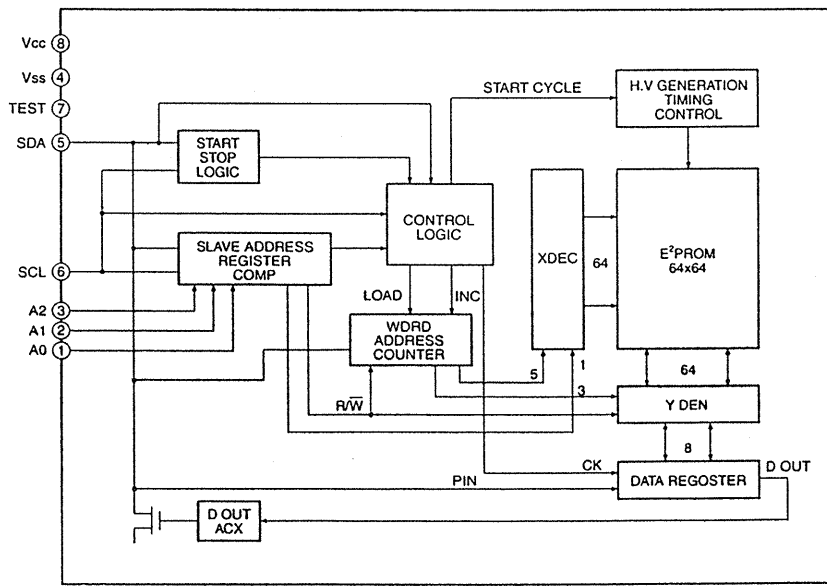
REF.	NO.	VOL.
Q501	B	-0.6
	C	GND
	E	48.1
Q502	B	-0.1
	C	GND
	E	137.5
Q503	B	6.9
	C	0
	E	0
Q504	E	0
	C	450.0
Q505	E	1.7
	C	12.3
	B	12.3
Q506	E	1.2
	C	12.3
Q507	E	12.3
	C	660
	B	1.1
Q508	E	3.5
	C	8.3
	B	0.7
Q701	E	GND
	C	0
	B	2.3
Q702	E	GND
	C	4.8
	B	2.3
Q801	E	1.8
	C	5.0
	B	6.0
Q802	E	7.5
	C	1.6
	B	2.3
Q803	E	1.9
	C	5.0
	B	2.3
Q804	E	1.9
	C	-5.0
	B	1.5
Q805	E	0.9
	C	12.3
	B	-13.1
Q806	E	1.9
	C	0
	B	0.6
Q807	E	1.9
	C	4.0
	B	0.6
Q808	E	GND
	C	1.5
	B	-14.2
Q809	E	-14.2
	C	-13.1
	B	-14.2
Q810	E	-14.2
	C	-13.1
	B	0.1
Q811	E	GND
	C	0.4
	B	0.6
Q812	E	0
	C	0.1
	B	10.2
Q505	D	20.0
	S	GND

All voltages are in V.
*Pin numbers which are not described are not used.

D BOARD WAVEFORMS



D BOARD : IC1702 ST24C08FM6TR



D BOARD IC VOLTAGE LIST

REF. NO.	VOL.	REF. NO.	VOL.
IC1501	1 1.1	32 0	
	2 14.4	34 0.1	
	3 -13.1	35 0.1	
	4 -14.3	36 2.8	
	5 0.2	37 2.8	
	6 14.3	38 5.0	
	7 1.1	39 5.0	
IC1502	1 GND	40 GND	
	2 0	42 4.9	
	3 0	44 4.8	
	4 0.1	45 4.8	
	5 0.1	46 4.4	
	6 0.1	47 4.7	
	8 GND	48 4.3	
	9 0	49 2.2	
	10 0.1	50 2.3	
	11 -0.4	51 2.3	
	13 5.0	52 2.0	
	14 -4.9	53 0	
IC1503	1 3.1	2 GND	
	2 3.1	3 GND	
	3 3.1	4 GND	
	4 GND	5 4.8	
	5 3.0	6 4.8	
	6 3.0	7 GND	
	7 3.0	8 5.0	
	8 5.0	9 3.9	
IC1602	1 0	2 0	
	2 23.0	3 GND	
	3 0	4 -14.4	
	4 20.5	5 GND	
	5 -23.0	6 0	
	6 0	7 5.8	
	7 GND	8 14.6	
	8 0	9 1.0	
IC1603	1 4.1	2 0	
	2 9.0	3 GND	
	3 4.1	4 -14.4	
	4 GND	5 GND	
	5 0.8	6 0	
	6 0	7 2.9	
	7 0	8 14.6	
	8 0.6	9 GND	
IC1701	1 0.2	2 GND	
	2 0	4 4.9	
	3 0	5 5.0	
	4 4.7	IC1801 1 5.0	
	5 5.0	G GND	
	6 0.2	O 7.0	
	7 0.2	IC1802 1 13.8	
	9 0.7	GND	
	10 0.2	O 9.1	
	11 5.0	IC1803 1 14.6	
	12 GND	G GND	
	13 2.4	O 12.1	
	14 2.1	I 6.7	
	17 2.5	G GND	
	18 0.2	O 5.0	
	19 3.9	IC1805 1 4.8	
	20 3.1	2 2.4	
	21 0	3 2.4	
	22 0	4 GND	
	23 5.0	5 2.4	
	24 5.0	6 2.4	
	25 0	7 4.8	
	30 0.1	8 9.0	
	31 0		

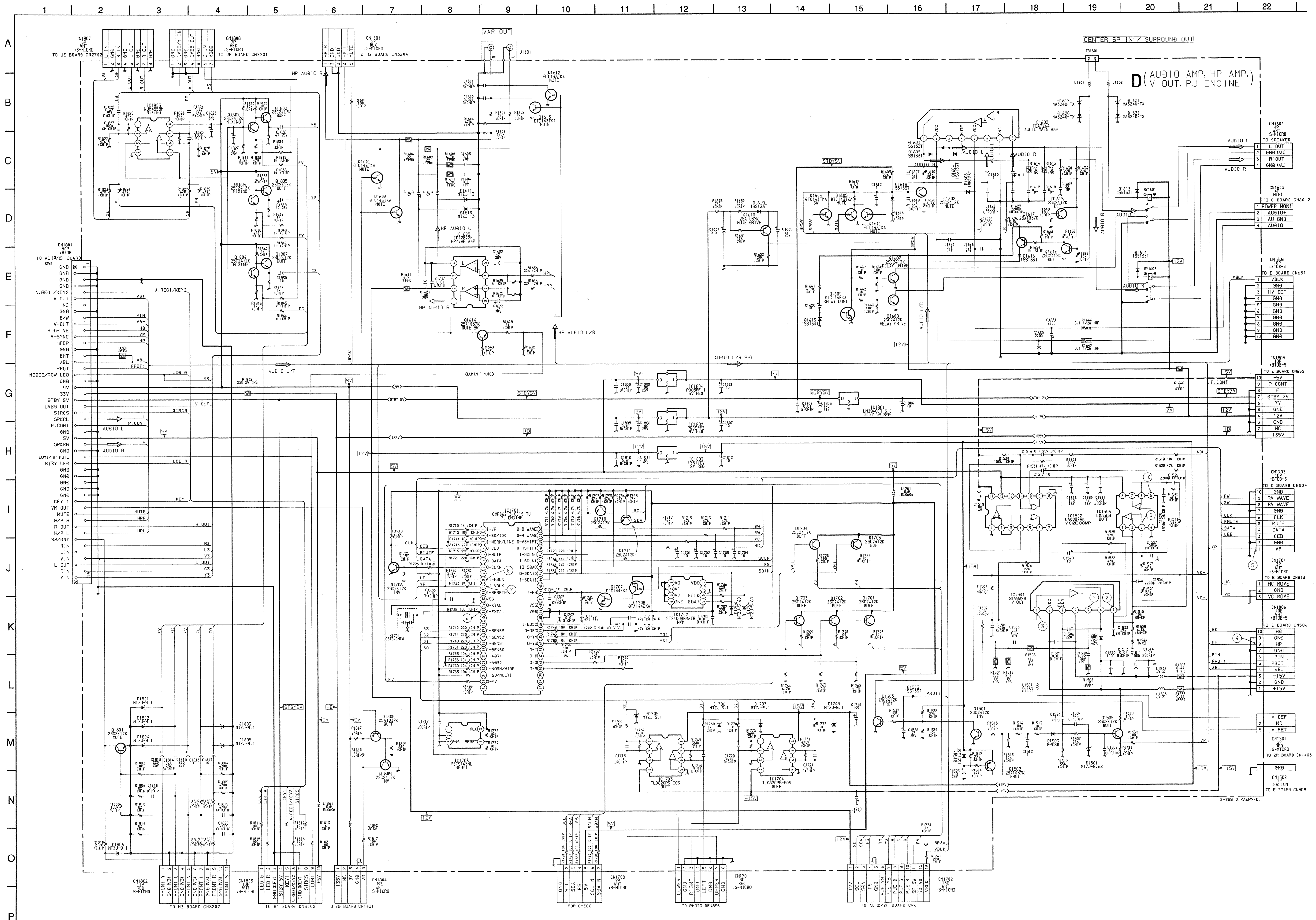
D BOARD TRANSISTOR VOLTAGE LIST

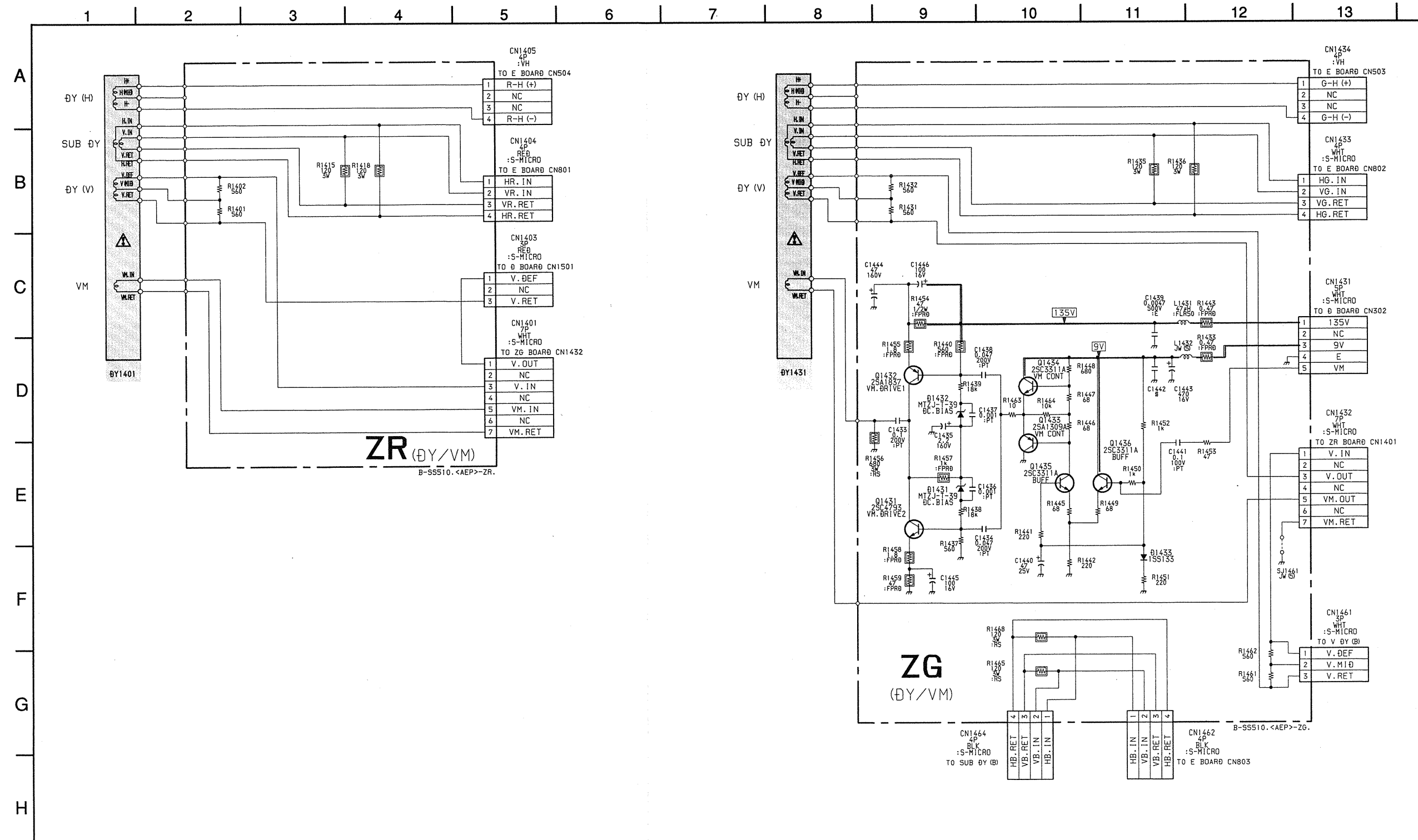
REF.	VOL.	REF.	VOL.
Q1501	B 0.7	Q1701	E 0.2
	C 0	C 5.0	
	B 14.5	B 0	
Q1502	E 14.6	Q1702	E 0.2
	C 2.0	C 5.0	
	B 0	B 0	
Q1505	E 0.2	Q1704	E 0
	C 14.4	C 5.0	
	B 0.7	B 0	
Q1601	E GND	Q1705	E 0
	B 1.1	B 0.2	
	C 0.6	Q1706	E GND
	C 20.7	C 4.7	
	B 0.7	B 0	
Q1603	E GND	Q1707	E GND
	C 0	C 5.0	
	B 0.3	B 4.9	
Q1604	E GND	Q1708	E 5.0
	C 1.1	C 0	
	B 0.8	B 4.6	
Q1605	E GND	Q1710	E 4.7
	C 0.1	C 4.7	
	B 0.3	B 4.6	
Q1607	E GND	Q1711	E 4.3
	C 13.9	C 4.0	
	B 0.3	B 0	
Q1608	E GND	Q1801	E GND
	C 13.9	C 0	
	B 0	B 2.4	
Q1609	E GND	Q1802	E 1.8
	C 0.3	C 5.0	
	B 13.9	B 5.0	
Q1610	E 13.7	Q1803	E 4.3
	C 0.1	C 9.0	
	B 0	B 2.4	
Q1611	E GND	Q1804	E 1.7
	C 0	C 5.0	
	B 0.7	B 5.0	
Q1612	E GND	Q1805	E 4.4
	C 0	C 9.0	
	B 0.7	B 2.4	
Q1613	E GND	Q1806	E 1.8
	C 0	C 5.1	
	B 0.2	B 5.1	
Q1614	E 0.8	Q1807	E 4.4
	C 0.7	C 9.0	
	B 0	B 5.8	
Q1615	E 0	Q1808	E 6.4
	C 0.2	C 0.7	
	B 0	B 0.7	
Q1616	E GND	Q1809	E GND
	C 11.7	C 1.2	
	B 0.4		

All voltages are in V.

Schematic diagram
← [E] board

Schematic diagram
[D] board →





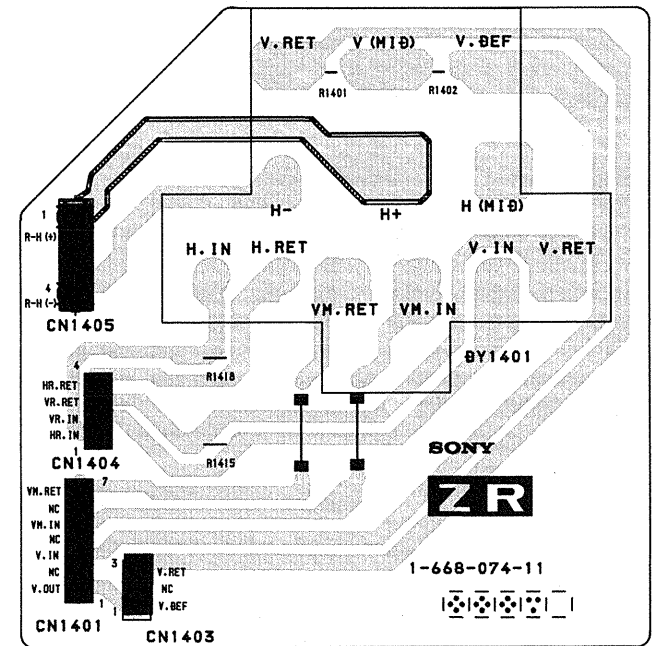
ZG BOARD TRANSISTOR VOLTAGE LIST

REF.	B	VOL.
Q1431	B	1.0
	E	0.5
	C	68.6
Q1432	B	134.5
	E	134.9
	C	68.6
Q1434	B	5.9
	E	6.1
	C	GND
Q1435	B	6.5
	E	6.1
	C	9.0
Q1436	B	2.2
	E	1.6
	C	9.0

All voltages are in V.

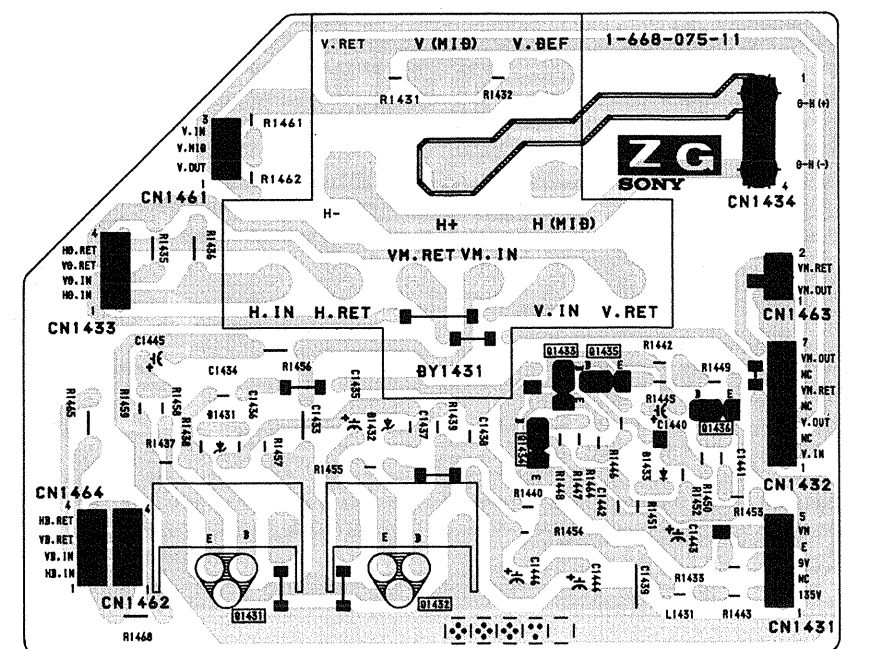
ZR [DY/VM]

- ZR Board -



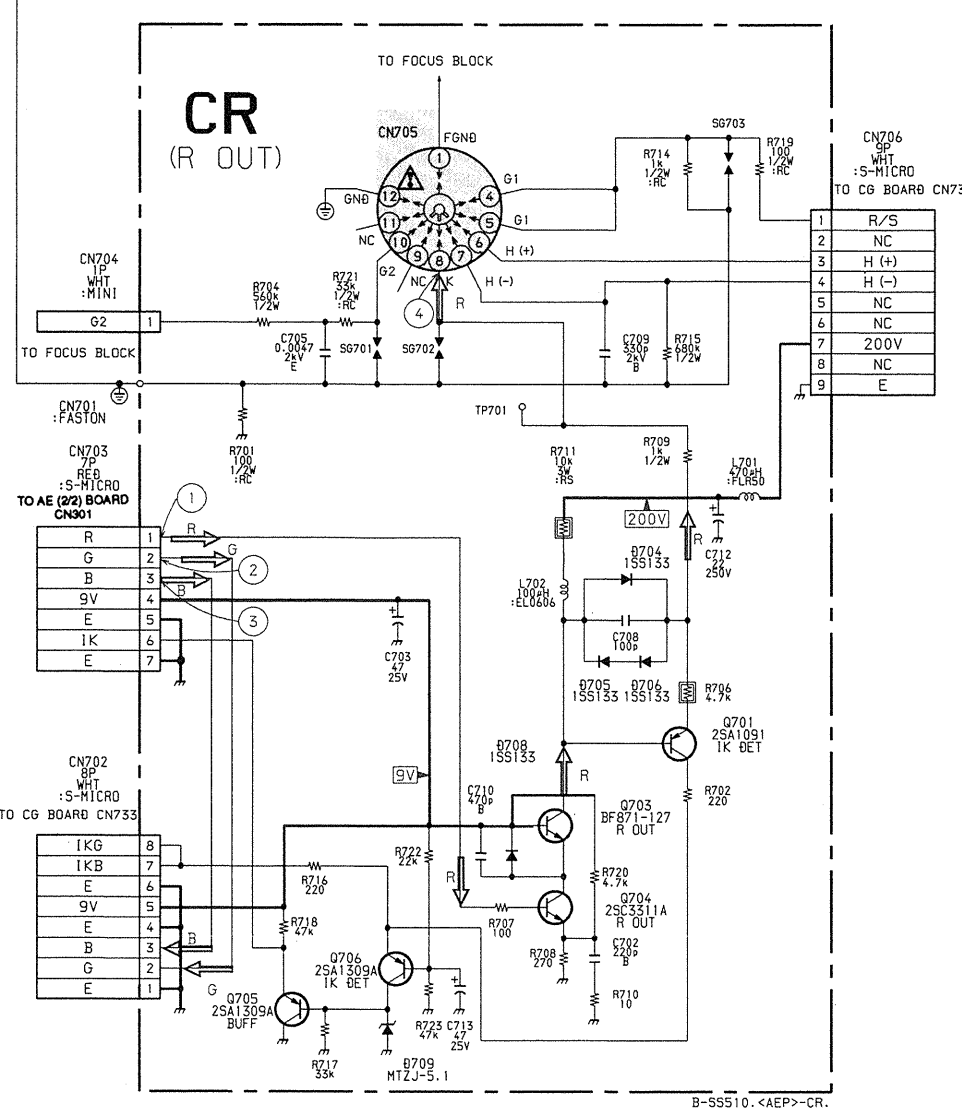
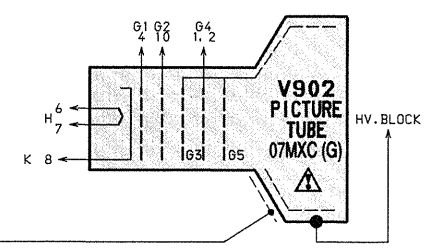
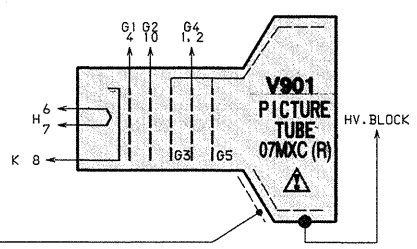
ZG [DY/VM]

- ZG Board -



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

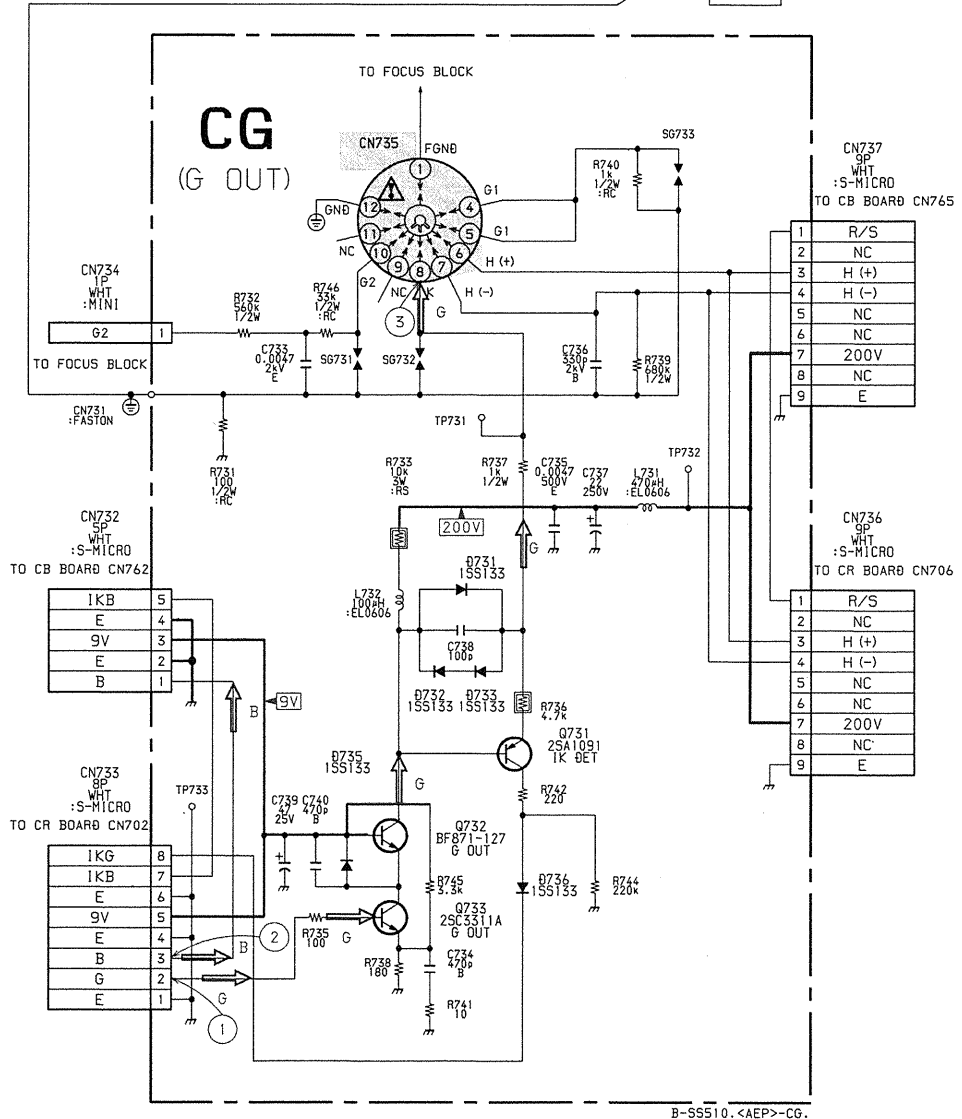
A
B
C
D
E
F
G
H
I
J



CR BOARD TRANSISTOR VOLTAGE LIST

REF.	VOL.
Q701	B 160.9
	E 156.9
	C 11.3
Q703	B 9.0
	E 8.5
	C 160.9
Q704	B 1.8
	E 1.2
	C 8.5
Q705	B 3.4
	E 3.2
	C GND
Q706	B 5.7
	E 10.9
	C 3.4

All voltages are in V.

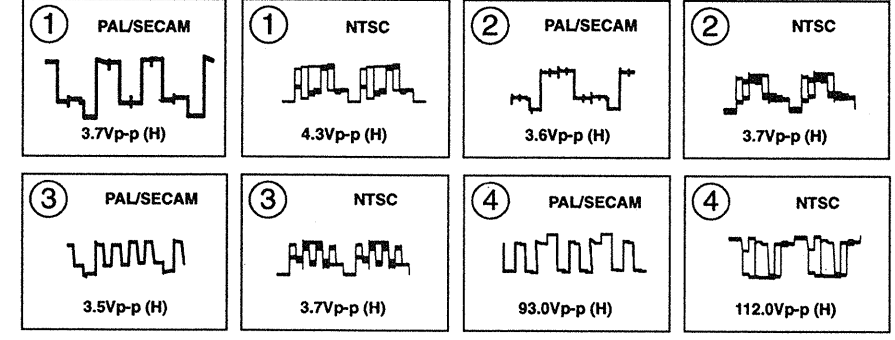


CG BOARD TRANSISTOR VOLTAGE LIST

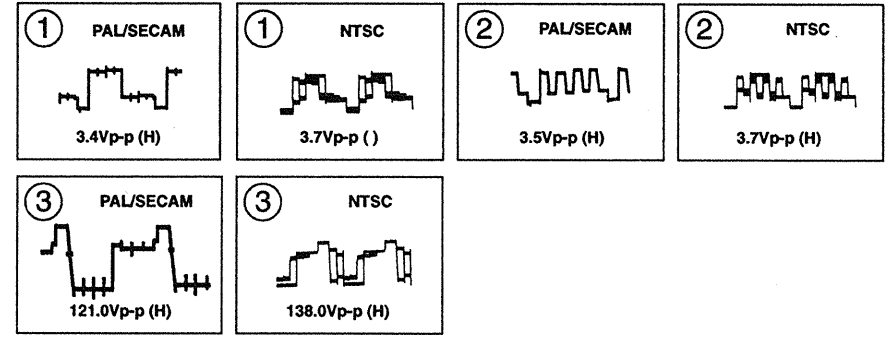
REF.	VOL.
Q731	B 150.4
	E 144.4
	C 11.5
Q732	B 9.0
	E 8.5
	C 150.4
Q733	B 1.8
	E 1.3
	C 8.5

All voltages are in V.

• CR BOARD WAVEFORMS

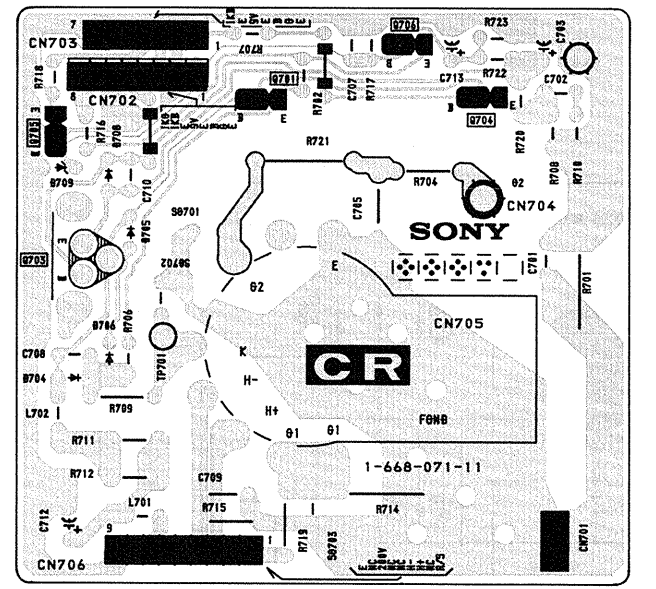


• CG BOARD WAVEFORMS



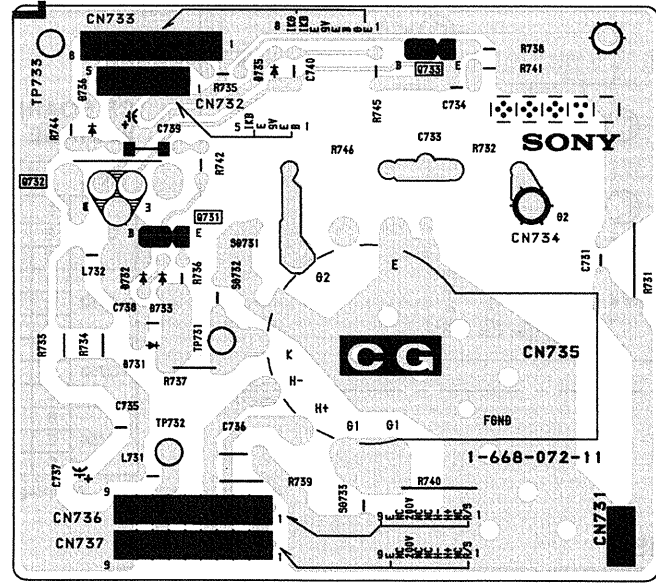
CR [R OUT]

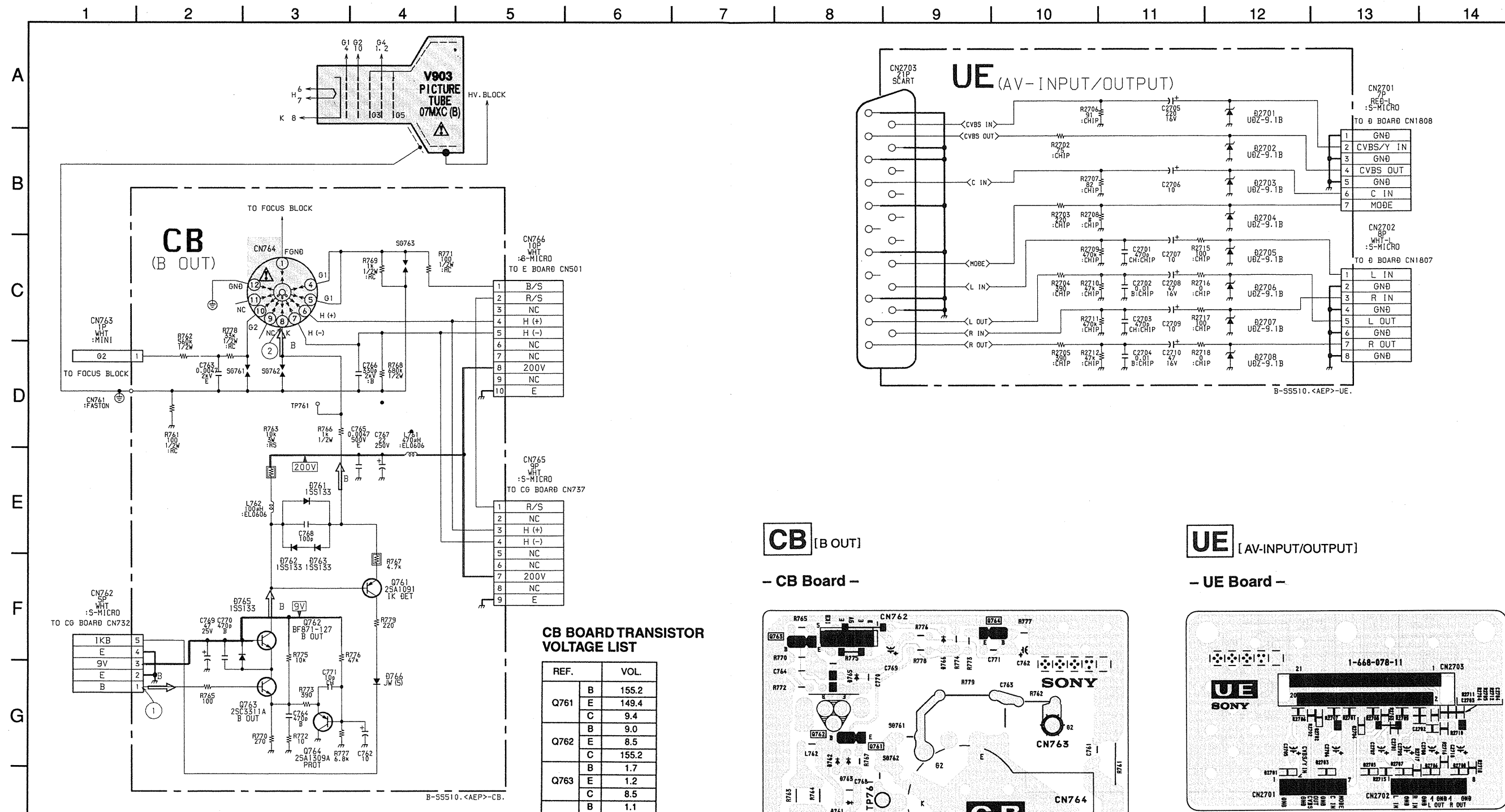
- CR Board -



CG [G OUT]

- CG Board -



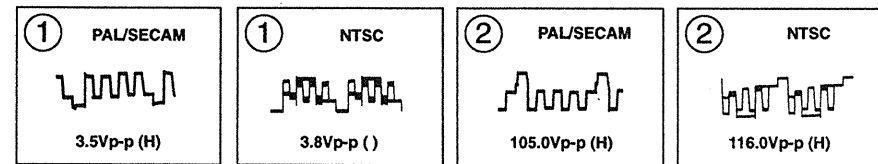


CB BOARD TRANSISTOR VOLTAGE LIST

REF.		VOL.
Q761	B	155.2
	E	149.4
	C	9.4
Q762	B	9.0
	E	8.5
	C	155.2
Q763	B	1.7
	E	1.2
	C	8.5
Q764	B	1.1
	E	1.2
	C	GND

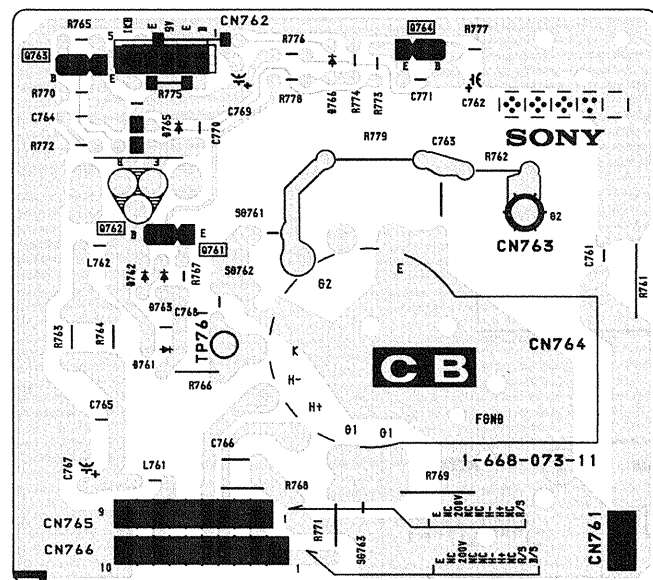
All voltages are in V.

• CB BOARD WAVEFORMS



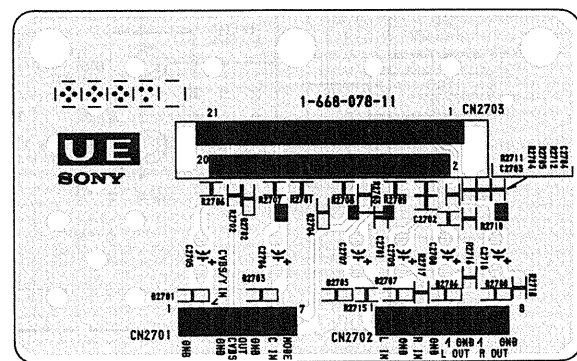
CB [B OUT]

- CB Board -



UE [AV-INPUT/OUTPUT]

- UE Board -



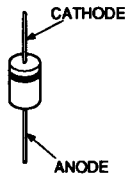
5-5. SEMICONDUCTORS

<p>AT24E32M6TR CA0007AM ST24C08FM6TR TL082M μPC4558G2</p> <p>TOP VIEW 8pin</p>	<p>CXP86213-001S</p> <p>TOP VIEW 52pin</p>	<p>PM0002B</p> <p>TOP VIEW 42pin</p>	<p>STK392-150</p> <p>MARKING SIDE VIEW 18pin</p>	<p>DTC144ESA-TP</p> <p>LETTER SIDE VIEW E C B</p>
<p>CA0007AD NJM2058D RC4560D TDA2822M TDA7264</p> <p>TOP VIEW 8pin</p>	<p>IR2112 μPC339C</p> <p>TOP VIEW 8pin</p>	<p>PQ05RF11</p> <p>TOP VIEW 14pin</p>	<p>TDA8395T/N3</p> <p>TOP VIEW 20pin</p>	<p>2SA1175-HFE 2SC2785-HFE</p> <p>LETTER SIDE VIEW E C B</p>
<p>CXA1315M MC14052BDR2</p> <p>TOP VIEW 16pin</p>	<p>IR3M02A TDA4665T-T</p> <p>TOP VIEW 16pin</p>	<p>PQ09RF2 TA7812S UPC2405HF</p> <p>TOP VIEW 14pin</p>	<p>TMS27PC020-15FMRW101</p> <p>TOP VIEW 32pin</p>	<p>2SA1208 2SC1091-O</p> <p>LETTER SIDE VIEW E C B</p>
<p>CXA2076Q-TL</p> <p>TOP VIEW 64pin</p>	<p>MC14066BF</p> <p>TOP VIEW 14pin</p>	<p>PST593C-MMP-4P PST9143NL</p> <p>TOP VIEW 4pin</p>	<p>SDA527CP-GEG</p> <p>TOP VIEW 8pin</p>	<p>2SB734-34</p> <p>LETTER SIDE VIEW E C B</p>
<p>CXD2024AQ-T4 SDA30C263-GEG</p> <p>TOP VIEW 80pin</p>	<p>MSP3410D-PS-B4-T-ND SDA527CP-GEG</p> <p>TOP VIEW 68pin</p>	<p>NJM7805FA NJM7905FA</p> <p>TOP VIEW 4pin</p>	<p>TOP209D</p> <p>TOP VIEW 8pin</p>	<p>2SC2688-LK</p> <p>LETTER SIDE VIEW E C B</p>
<p>CXD2044Q-TL</p> <p>TOP VIEW 80pin</p>	<p>PA0053B</p> <p>TOP VIEW 18pin</p>	<p>SE135N</p> <p>TOP VIEW 4pin</p>	<p>BF871-127</p> <p>TOP VIEW 8pin</p>	<p>2SC5022-02</p> <p>LETTER SIDE VIEW E C B</p>
<p>PC123F2</p> <p>TOP VIEW 18pin</p>	<p>STV9379</p> <p>TOP VIEW 18pin</p>	<p>DTA144EK-T146 DTC143TKA-T146 DTC144EK-T146 2SA1037K-T-146-R 2SA1162G 2SC1623-L5L6 2SC2412K-QR</p> <p>LETTER SIDE VIEW E C B</p>	<p>2SC4632LS-CB7 2SD2539 (LBSony-1)</p> <p>LETTER SIDE VIEW E C B</p>	

2SK2251-01-F119

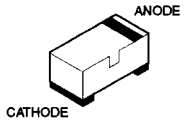


ERC06-15S
ERD29-08J
S2LA20F

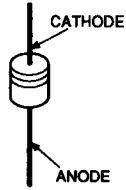


MTZJ-13
MTZJ-30B
MTZJ-7.5B
RD13ES-B2
RD20ES-B2
RD3.6ES-B1
RD39ES-B2
RD5.1ES-B1
RD5.1ES-B2
RD5.6ES-B2
RD7.5ES-B2
1SS119-25
1SS133T-77

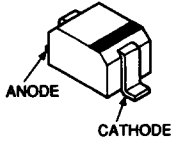
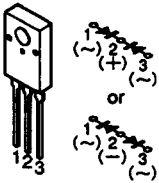
BAS216



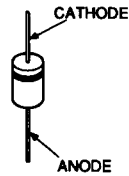
DTZ33B
DTZ6.8B
DTZ9.1
RD5.6S-B
UDZ-TE-17-6.8B
1SS355



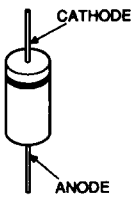
D10SC6M-4012



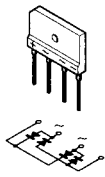
P6KE200AG23



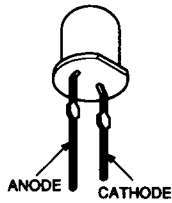
D2S4M
D4SBS4-F



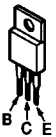
D6SB6OL
RBA-406B



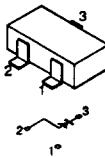
SLA-580LT3F



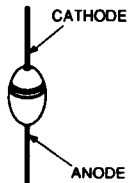
IRFI744G-LF



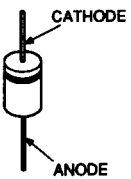
MA3030-H(TX)



U05G



EL1Z
GP08D
MTZ-T-77-9.1A
S2L40F
UF4005PKG23



MA3240-TX

