


# SECTION 4 CHARTS AND DIAGRAMS

## NOTES OF SCHEMATIC DIAGRAM

### Safety precautions

The Components identified by the symbol  are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

### 1. Units of components on the schematic diagram

Unless otherwise specified.

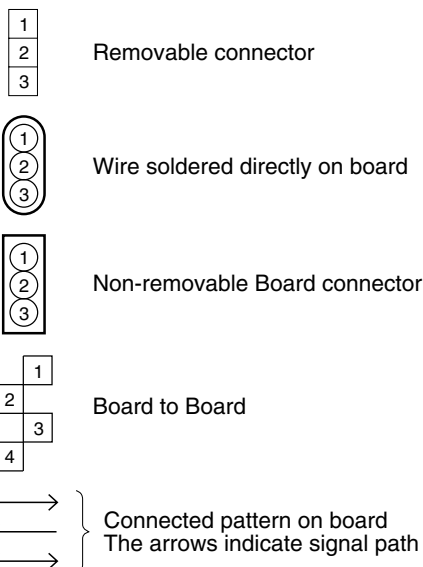
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).  
Chip resistors are 1/16 W.  
K or k: k $\Omega$  (1000 $\Omega$ ), M: M $\Omega$  (1000k $\Omega$ )
- 2) All capacitance values are in  $\mu$ F, (P: PF).
- 3) All inductance values are in  $\mu$ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

### 2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

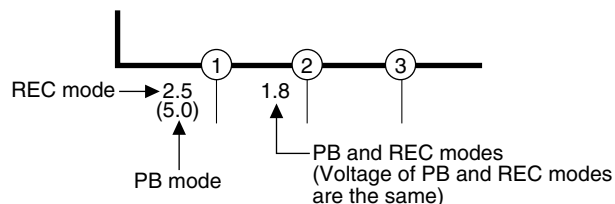
### 3. Interpreting Connector indications



### 4. Voltage measurement

- 1) Video circuits  
REC : Colour bar signal in SP mode, normal VHS mode  
PB : Alignment tape, colour bar SP mode, normal VHS mode  
— : Unmeasurable or unnecessary to measure
- 2) Audio circuits  
REC : 1KHz, -8 dBs sine wave signal in SP mode, Normal VHS mode  
PB : REC then playback it
- 3) Movie Camera circuits  
Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode

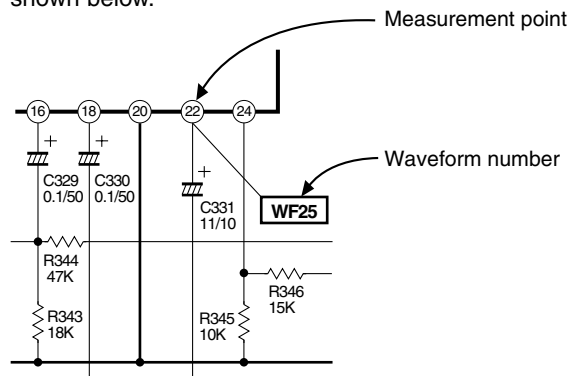
- 4) Indication on schematic diagram  
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



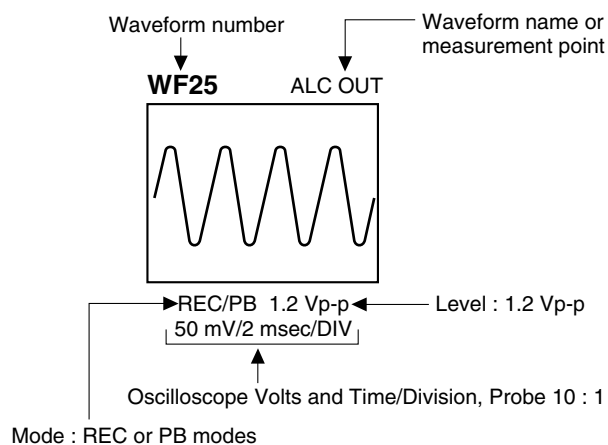
**Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.**

### 5. Waveform measurement

- 1) Video circuits  
REC : Colour bar signal in SP mode, normal VHS mode  
PB : Alignment tape, colour bar SP mode, normal VHS mode
- 2) Audio circuits  
REC : 1KHz, -8 dBs sine wave signal in SP mode, normal VHS mode  
PB : REC then playback it
- 3) Movie Camera circuits  
Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
- 4) Indication on schematic diagram  
Waveform indications on the schematic diagram are as shown below.

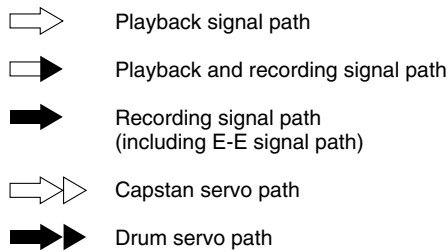


### 5) Waveform indications

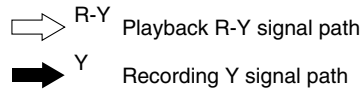


## 6. Signal path Symbols

The arrows indicate the signal path as follows.



(Example)



## 7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



## 8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



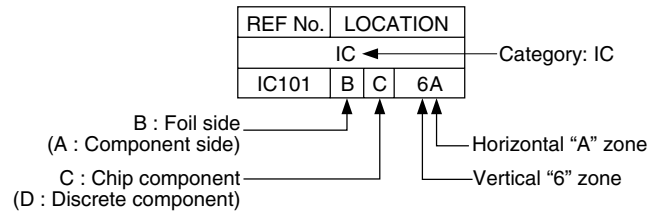
## CIRCUIT BOARD NOTES

### 1. Foil and Component sides

- 1) Foil side (B side) :  
Parts on the foil side seen from foil face (pattern face) are indicated.
- 2) Component side (A side) :  
Parts on the component side seen from component face (parts face) indicated.

### 2. Parts location guides

Parts location are indicated by guide scale on the circuit board.



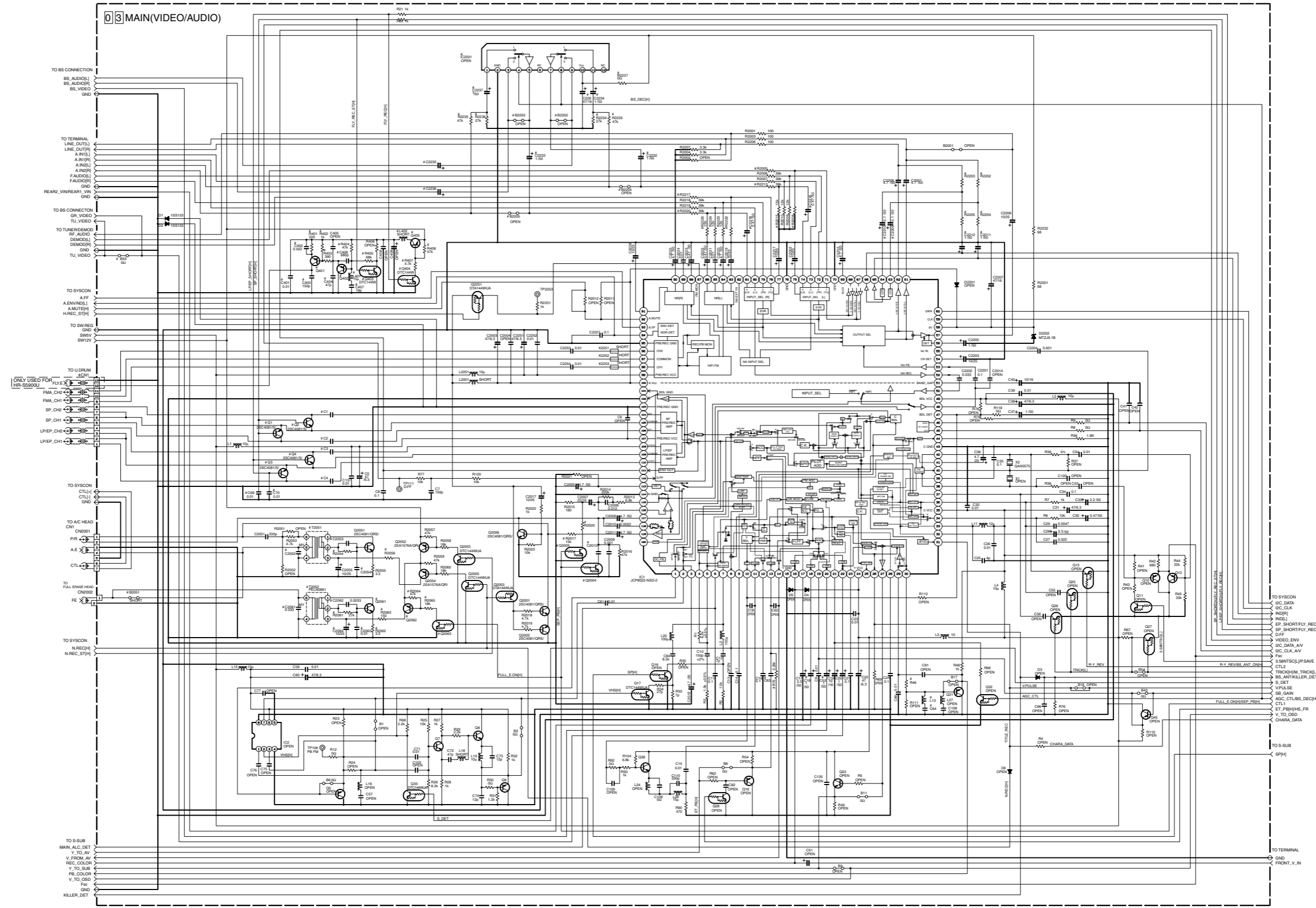
### Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).



# 4.2 MAIN (VIDEO/AUDIO) SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# DIFFERENCE TABLE

MODEL	Q401-Q405	C401-C409	CN1	Q1-Q4	C1-C4	MODEL	C52	R2212, R2214	MODEL	R2002, R2003, R2004, R2005	MODEL	R2002, R2003, R2004, R2005
FLYING ERASE	YES	L401, L402	1-13 PIN	X	0.01	BS DECODER	YES	R2216, R2221	C18	R2213, R2215, C2216	LND	YES
	NO	X	1-11 PIN	O	1	OR L2_IN	NO	R2216, R2221		R2220, R2215, C2218		NO

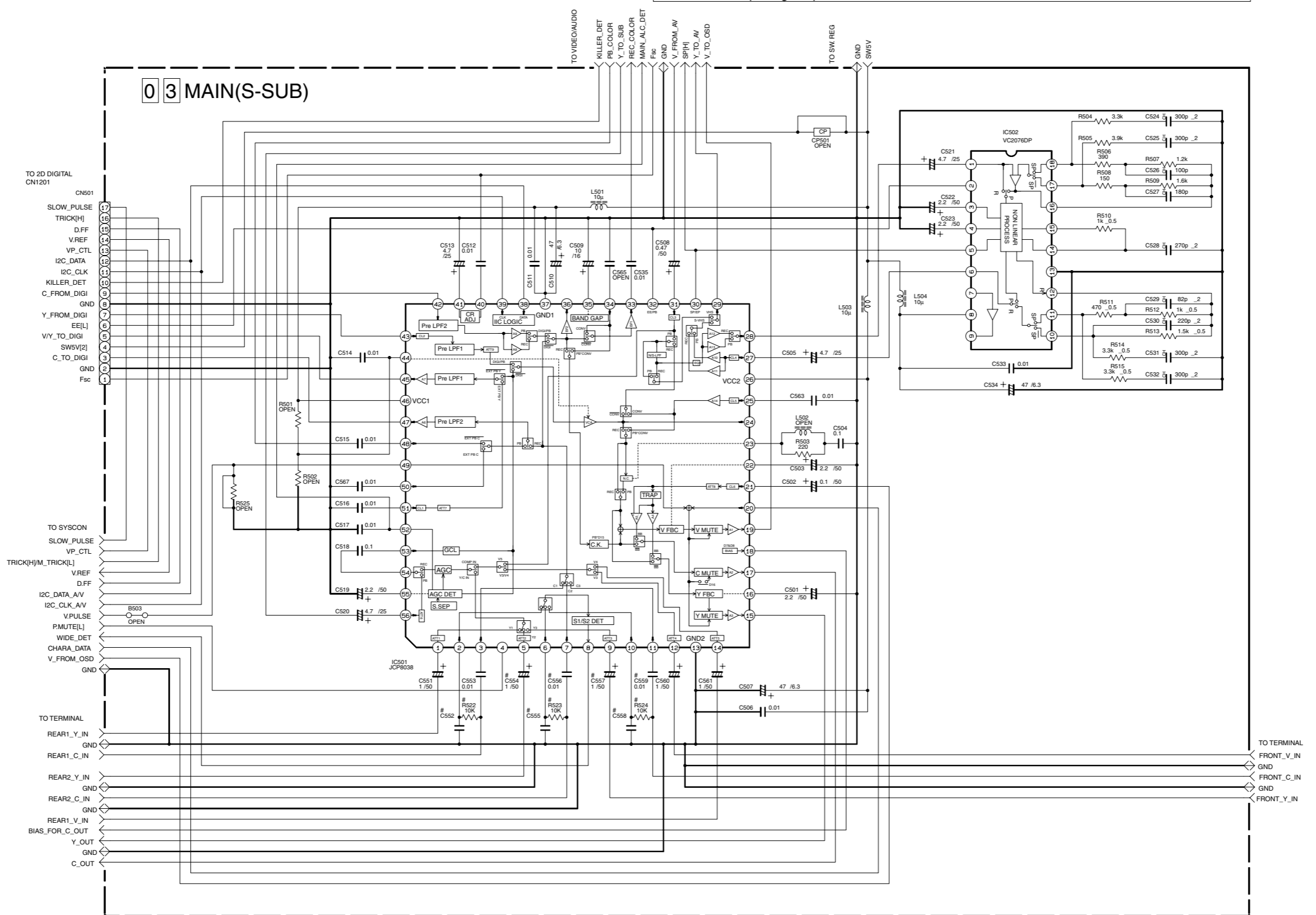
  

MODEL	B33	MODEL	R75	C83	MODEL	R46	L13	C64	MODEL	R2001, R2002, R2003, R2004, R2005	T2051	R2054	R2056	C2052	C2053	C2054
OR TUNER	YES	X	3D	X	0.1	BD(MC)	470	100μ	12μ	YES	PEL10080	15k	100	0.033	0.033	0.01
	NO	O	3D	O	0.047	DP(PCD)	350	68μ	20μ	NO	PEL10032	12k	82	0.047	0.047	0.022

NOTES UNLESS OTHERWISE SPECIFIED:  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 ALL PNP TYPE TRANSISTORS ARE 2SC4810(QPS).  
 ALL PNP TYPE TRANSISTORS ARE 2SA157A(QV).  
 — ELECTROLYTIC  
 — CERAMIC  
 — MYLER  
 — NON POLAR

### 4.3 MAIN (S-SUB) SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# DIFFERENCE TABLE

MODEL	SYMBOL	R523 C555	C554 C556	R522 C552	R524 C558	C557 C559	C555	C552 C558
S-VHS JPN F_S_IN REAR2_IN		○		○		○	0.01	0.01
S-VHS JPN F_S_IN		X		○		○	0.01	0.01
S-VHS US F_S_IN		X		X		○	0.01	0.01
S-VHS US		X		X		X	0.01	0.01

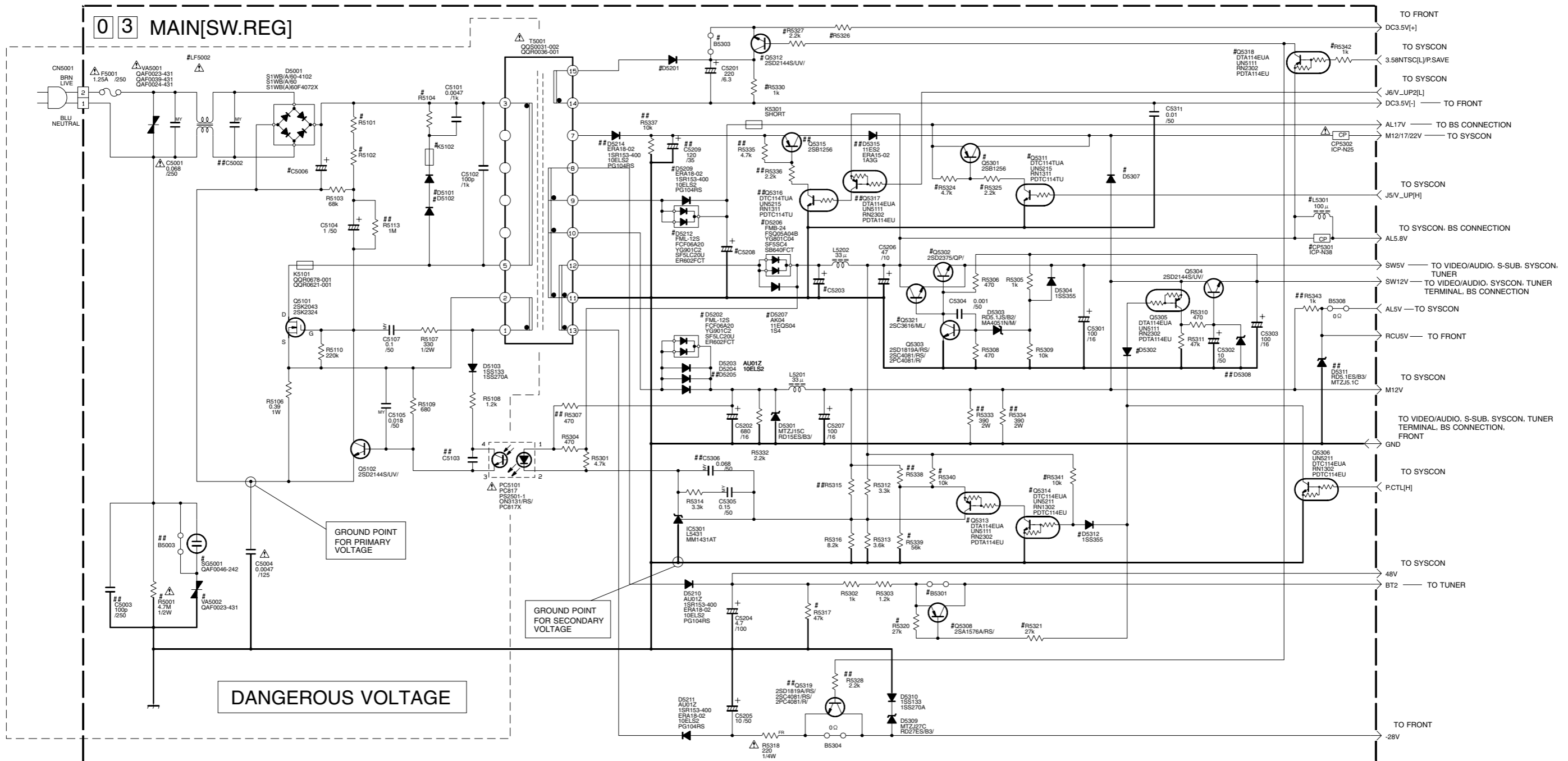
NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR/  
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR



# 4.5 MAIN (SW.REG) SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# MARK ELEMENT ARE NOT MOUNTED

#DIFFERENCE TABLE 1

	C5006	C5203	L5301	CP5301	D5206	D5207	R5001	Q5302	Q5321
D1	82/200	680/10	SHORT	NO	NO	NO	NO	NO	YES
D5	150/200	1200/10	NO	YES	NO	NO	NO	YES	NO
S1	150/200	1200/10	YES	NO	YES	NO	NO	YES	NO
SIU	150/200	1200/10	YES	NO	YES	NO	YES	YES	NO
S5	150/200	Oct-00	NO	YES	YES	NO	NO	YES	NO

#DIFFERENCE TABLE 2

	HIGH SPEED FF/REW	C5208	D5209	D5212	D5307	D5314 Q5308 Q5311	R5324 R5325
DOM(W/O BS)	180/25	YES	NO	NO	1.10E+03 ERA15-02 1A3G	YES	
DOM(W/TH BS)	330/25	NO	YES	1.10E+03 ERA15-02 1A3G	YES		
OTHER	NO	NO	NO	SHORT	NO		

#DIFFERENCE TABLE 3

	POWER SAVE	R5104	B5301 B5303	D5312 Q5308 Q5312 Q5314	Q5318 R5317 R5320 R5327	R5339 R5340 R5341 R5342	R5101 R5102	D5302
DOM	150k 2W	NO	NO	YES	YES		330k	1SS355
OTHER	68k 2W	YES	NO	NO	NO		220k	SHORT

#DIFFERENCE TABLE 4

LEVEL	IND.	DOM	AK04	D5201	11EQS04	1S4	R5326	3.9	3.9	SURGE	VA5002	SG5001
-NO-		OTHER	AU01Z	10ELS2			0			PH	YES	
-YES-			AK04	11EQS04	1S4		1			OTHER	NO	

#DIFFERENCE TABLE 6

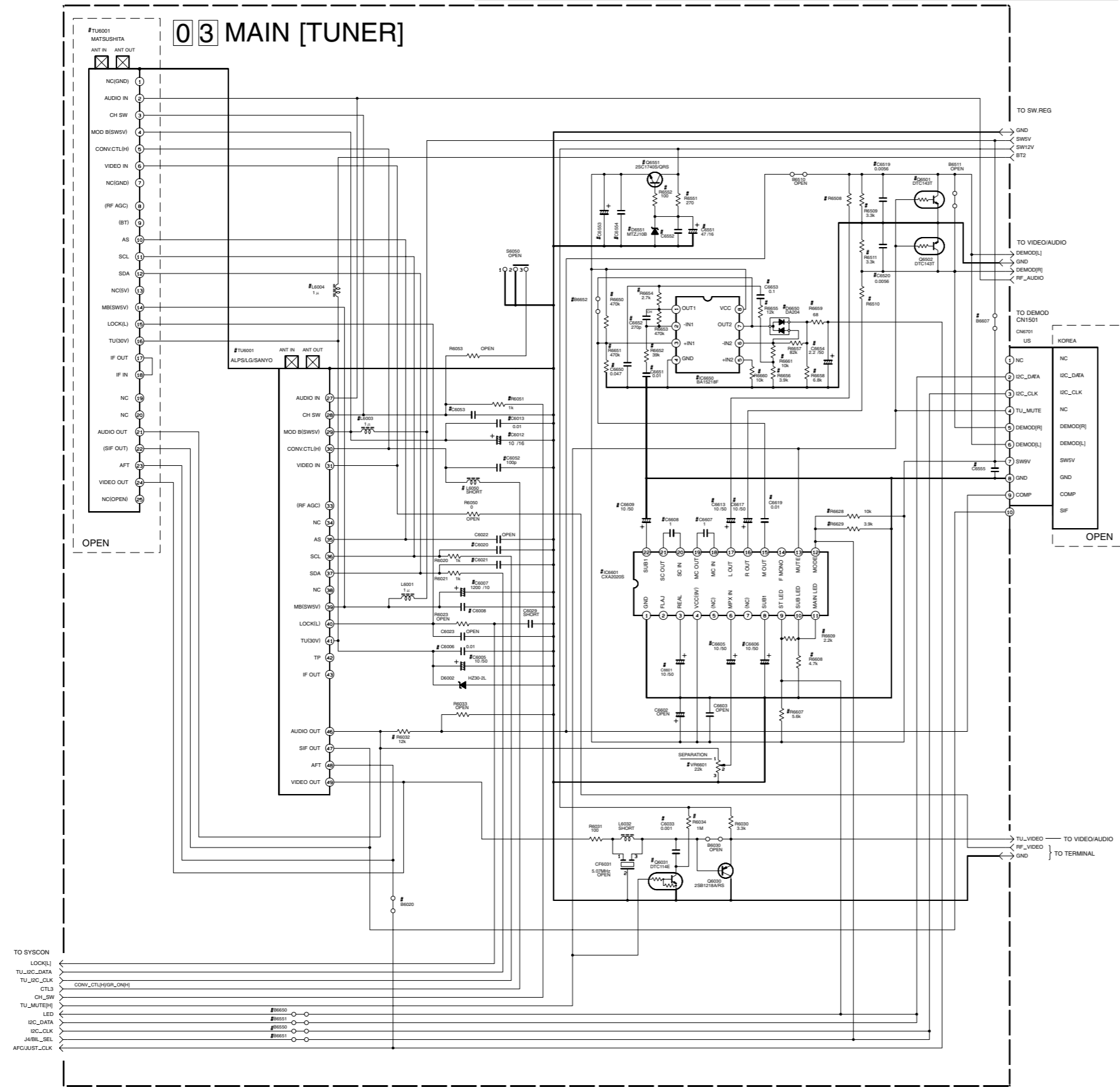
	K5102	QOR0678-001 QOR0621-001	AU01 10ELS4	D5101 D5102
DOM	SHORT	SHORT	AU01 10ELS4 1SR153-400 ERA18-04	
OTHER				

#DIFFERENCE TABLE 7

	SVHS WITH BS	LF5002
OTHER	QOR0908-001 QOR0994-001 QOR0233-001 QOR0233-001 QOR016-001 QOR0815-001 QOR0932-001	

4.6 MAIN (TUNER/DEMODO) SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# DIFFERENCE TABLE

		JPN	US	KR
<b>TUNER</b>				
AFC	B6030	X	O	O
MUTE	Q6031, R6034, C6033	X	X	X
RF CONV	L6003, L6050, R6050, R6051	X	O	O
US AUDIO	R6032	X	O	X
SV	C6007	O	X	X
	C6005, C6008, C6012, C6013, C6020, C6021, C6052, C6053	X	X	X
<b>DEMODO</b>				
UNIT	C60701	X	US	KR
MUTE	Q6001, C6002	X	X	X
REG	C6051, C6051, R6051, R6052	O	O	X
IC	B6050, B6051	X	O	O
AUDIO OUT	R6008, R6010	12k	0	0
	R6009, R6011, C6019, C6020	O	X	X
	C6001, C6005, C6050, V6001, R6007, R6009, R6028, R6029, R6050, R6051, C6001, C6009, C6009, C6013, C6017, C6018, C6050, C6054, B6050, B6051	O	X	X
KR	B6007	X	X	O

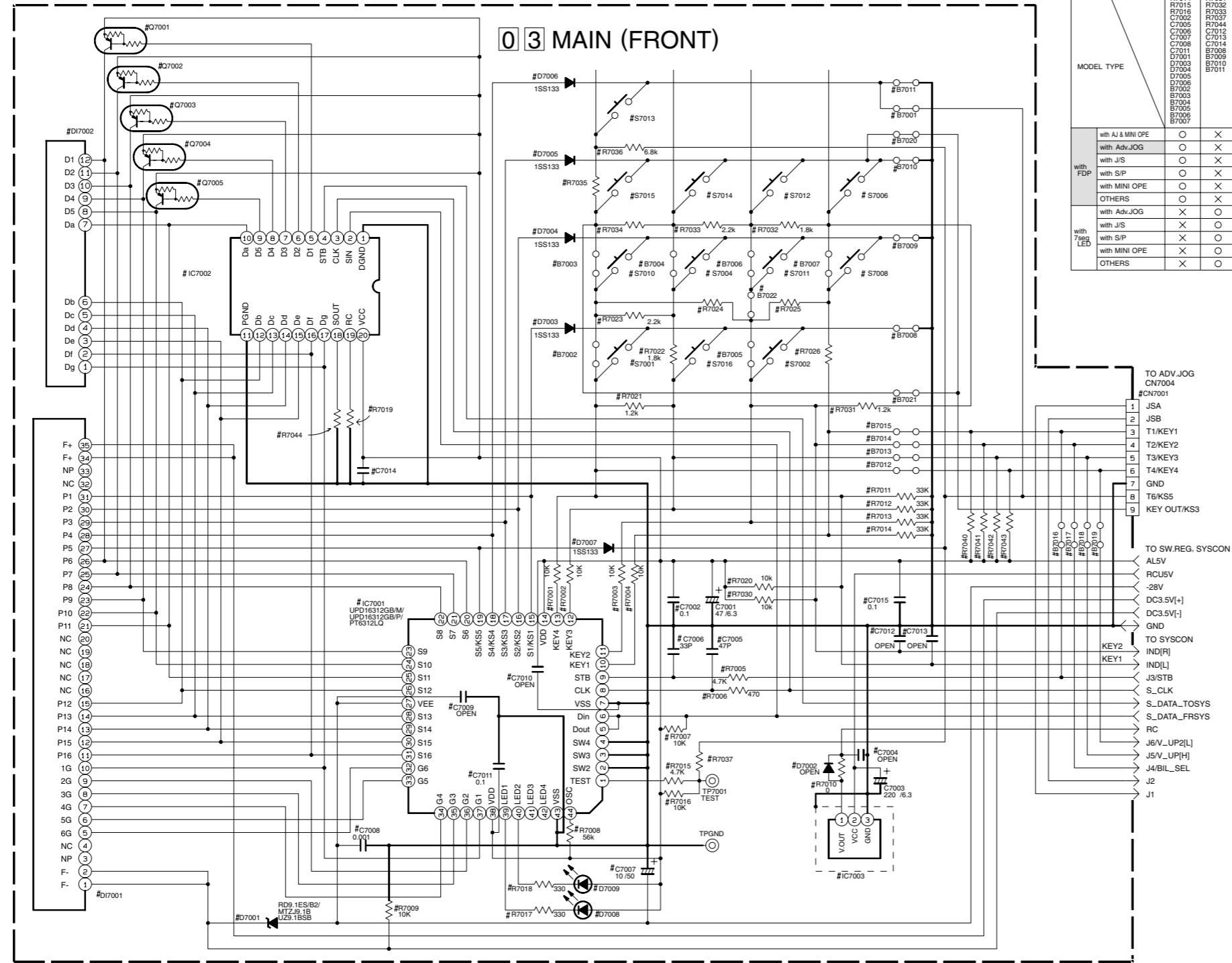
NOTES: UNLESS OTHERWISE SPECIFIED, ALL RESISTANCE VALUES ARE IN OHMS. ALL INDUCTANCE VALUES ARE IN H. ALL CAPACITANCE VALUES ARE IN pF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON-POLAR



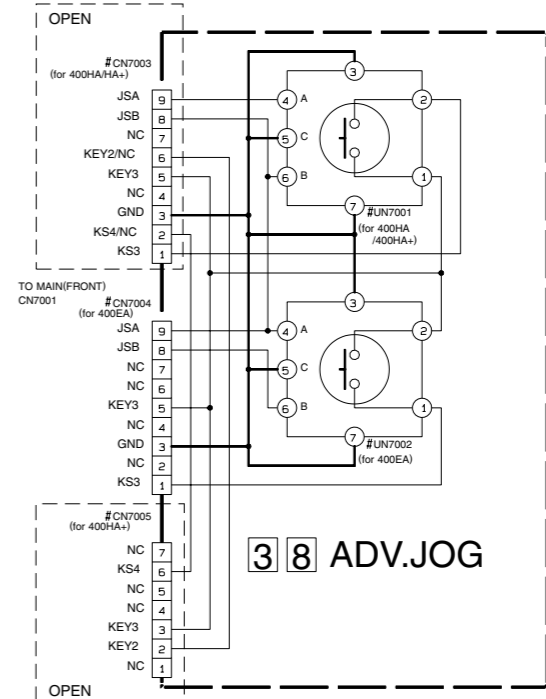
4.7 MAIN (FRONT) AND ADV.JOG SCHEMATIC DIAGRAMS

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



SYMBOL	D7001 IC7001 R7001 R7002 R7003 R7004 R7005 R7006 R7007 R7008 R7009 R7010 R7011 R7012 R7013 R7014 R7015 R7016 R7017 R7018 R7019	D7002 IC7002 C7001 C7002 C7003 C7004 C7005 C7006 C7007 C7008 C7009 C7010 C7011 C7012 C7013 C7014 C7015 C7016 C7017 C7018 C7019	R7034	R7036	D7007	R7022 R7026	R7035	B7012 B7015	B7013	B7014	B7016 B7017 B7018 B7019	B7001	B7020	B7021	CN7001
with AJ & MINI OPE			X	X	X	SHORT	SHORT	X	O	O	X	O	O	X	O
with Adv.JOG			X	X	X	SHORT	SHORT	X	O	X	X	X	X	X	O
with J/S			X	X	X	SHORT	SHORT	O	O	O	X	X	X	X	O
with S/P			X	X	X	SHORT	SHORT	O	O	O	X	X	X	X	O
with MINI OPE			X	X	X	SHORT	SHORT	O	O	O	X	X	X	X	O
OTHERS			X	X	X	SHORT	SHORT	X	X	X	X	X	X	X	X
with Adv.JOG	X	O	O	O	X	O	4.7k	X	X	X	X	X	X	X	O
with J/S	X	O	O	O	X	O	4.7k	X	X	X	X	X	X	X	O
with S/P	X	O	O	O	X	O	4.7k	X	X	X	X	X	X	X	O
with MINI OPE	X	O	SHORT	X	X	O	X	X	X	X	X	X	X	X	O
OTHERS	X	O	O	O	X	O	4.7k	X	X	X	X	X	X	X	X

FDP	LED													
	Al+	Adv.JOG	J/S	S/Play	MINI OPE	OTHERS	Adv.JOG	J/S	S/Play	MINI OPE	OTHERS			
CN7001 PIN No.	1	9	JSA	JSA	JSA	NC	NC	JSA	JSA	NC	NC	NC	NC	NC
CN7003 PIN No.	2	8	JSB	JSB	JSB	NC	NC	JSB	JSB	NC	NC	NC	NC	NC
CN7004 PIN No.	3	7	NC	NC	T1	T1	KEY1	NC	NC	T1	T1	NC	NC	NC
CN7005 PIN No.	4	6	KEY2	NC	T2	T2	KEY2	NC	NC	T2	T2	NC	NC	NC
CN7006 PIN No.	5	5	KEY3	KEY3	T3	T3	KEY3	NC	NC	T3	T3	NC	NC	NC
CN7007 PIN No.	6	4	NC	NC	T4	T4	KEY4	NC	NC	T4	T4	NC	NC	NC
CN7008 PIN No.	7	3	GND	GND	GND	GND	NC	NC	GND	GND	GND	GND	NC	NC
CN7009 PIN No.	8	2	KS4	NC	KS5	KS5	KS4	NC	T6	NC	T6	T6	NC	NC
CN7010 PIN No.	9	1	KS3	KS3	NC	KS3	NC	NC	NC	NC	NC	KEY OUT	NC	NC



SYMBOL	R7017 D7008	R7018 D7009
LED		
for S7002	O	X
for S7016	X	O

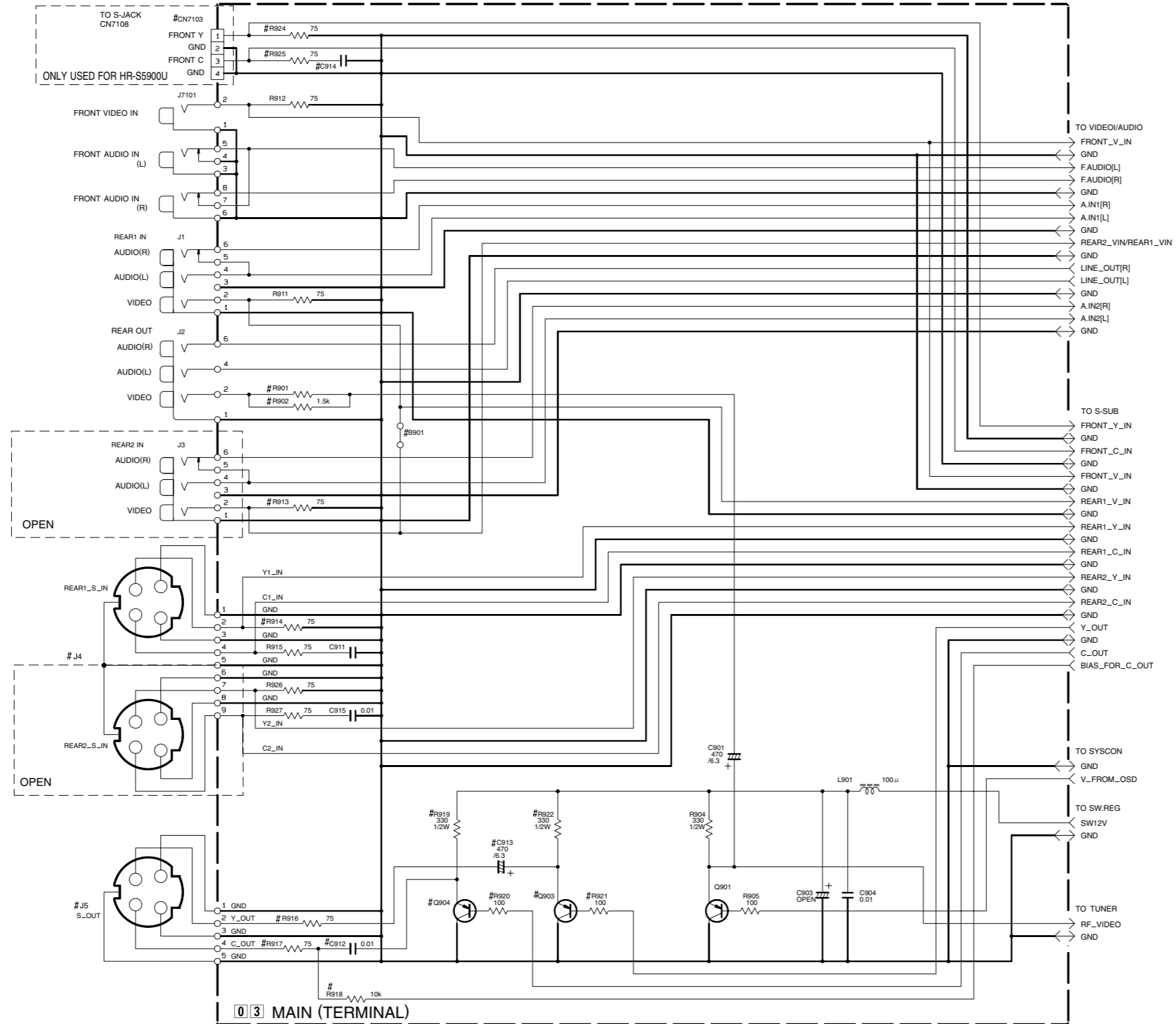
RCU	R7010	C7004 D7002	IC7003
JVC	SHORT	X	GP1U291Q PNA4652MOOYC PIC-28143LJ
PHILIPS	SHORT	X	GP1U290Q PNA4652MOOYC PIC-28142LJ

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

4.8 MAIN (TERMINAL) SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# DIFFERENCE TABLE

MODEL	SYMBOL	R913 J3	J4	R924 R925 CN7103	C914	R926 R927 C915	R918	C911	R902 R914-R917 R919-R922	Q903,Q904 C912,C913 J5	B901	R901
S-VHS JPN F_S_IN REAR2_IN		O	S1/S2	O	0.01	O	O	0.01		O	X	82
S-VHS JPN F_S_IN		X	S1	O	0.01	X	O	0.01		O	X	82
S-VHS US F_S_IN		X	S1	O	0Ω	X	X	0Ω		O	X	82
S-VHS US		X	S1	X	X	X	X	0Ω		O	X	82
VHS		X	X	X	X	X	X	X		X	O	75

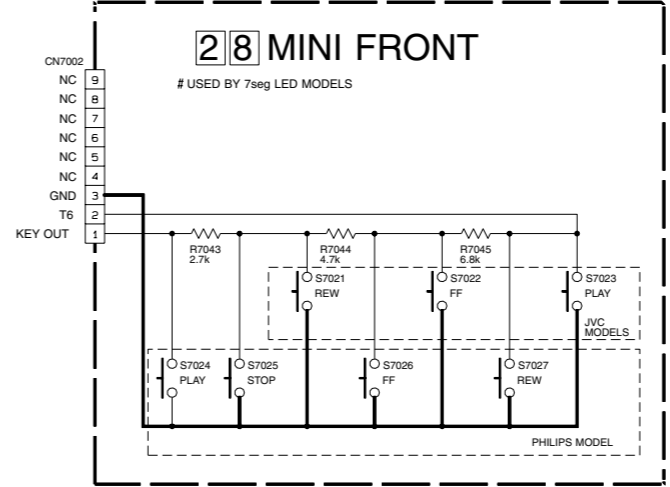
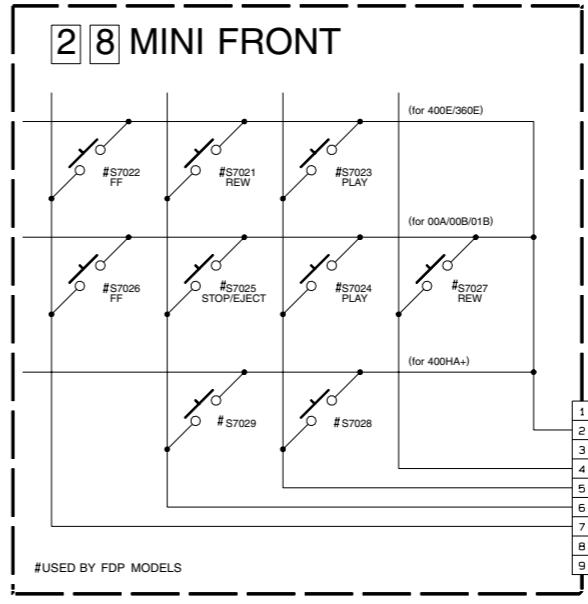
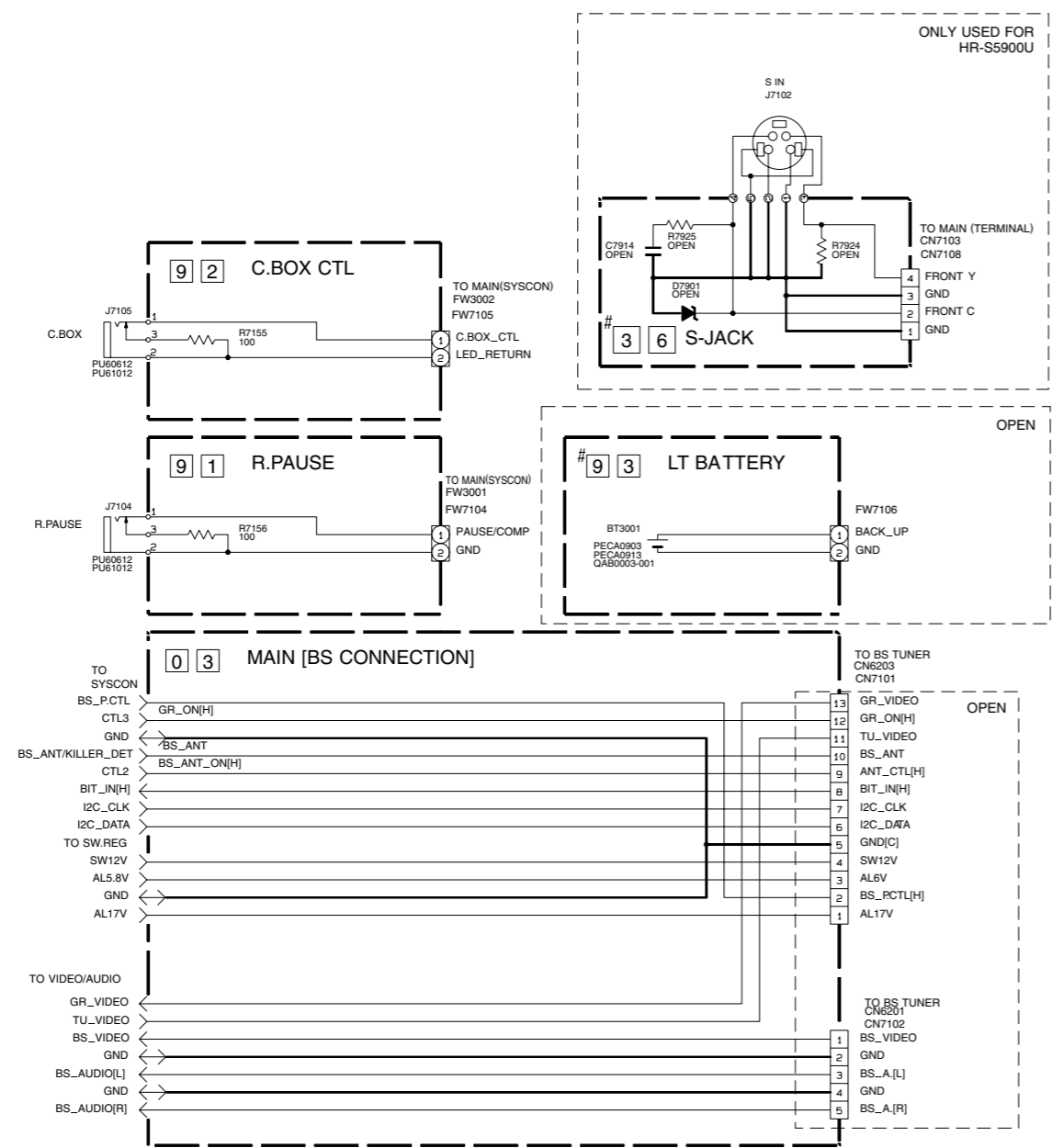
O : Used  
x : Not used

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR5/  
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

4.9 MAIN (BS CONNECTION), S-JACK, R.PAUSE AND C.BOX CTL SCHEMATIC DIAGRAMS

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



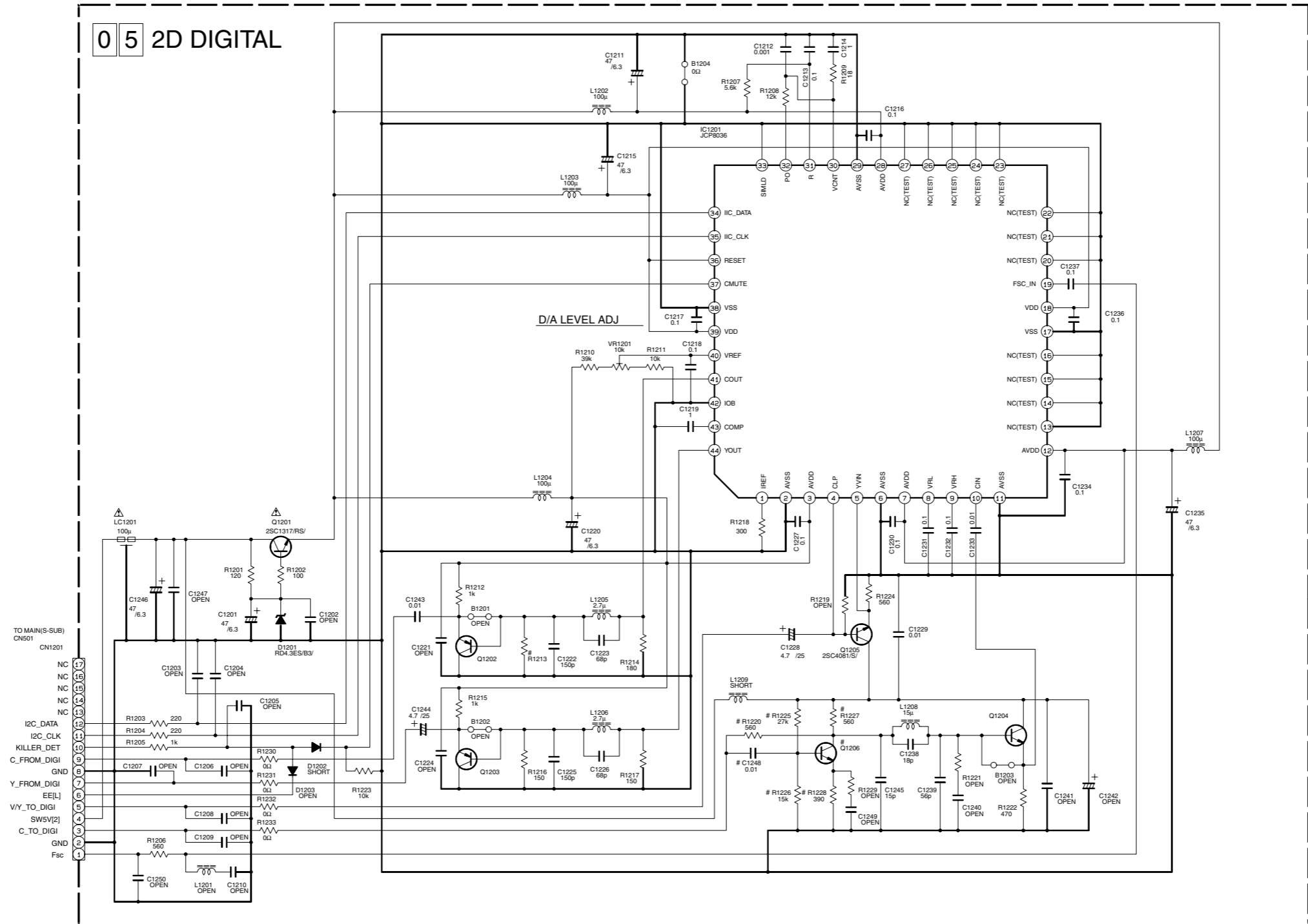
	BS MODELS	GR MODELS
CN7101	1-10	1-13

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

4.10 2D DIGITAL SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



# DIFFERENCE TABLE

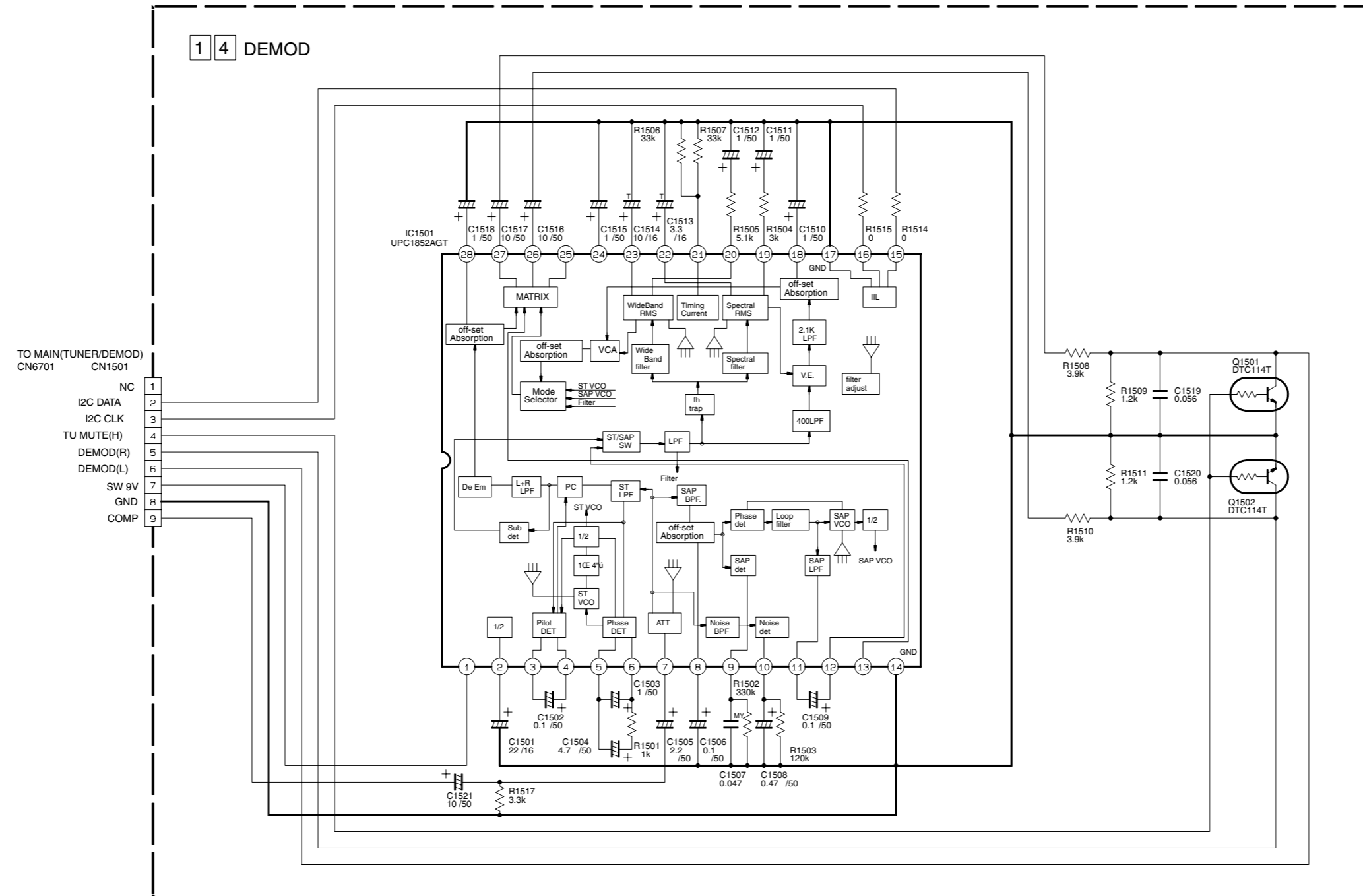
SYMBOL	Q1206	R1225-R1228	R1220	R1213
MODEL				
PCEC	○	X	150	
OTHER	X	○	180	

NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.  
 ALL NPN TYPE TRANSISTORS ARE 2SC4081/ORS/.  
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

4.11 DEMODULATOR SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



NOTES: UNLESS OTHERWISE SPECIFIED.  
 ALL RESISTANCE VALUES ARE IN OHMS.  
 ALL INDUCTANCE VALUES ARE IN H.  
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC  
 CERAMIC  
 TANTAL

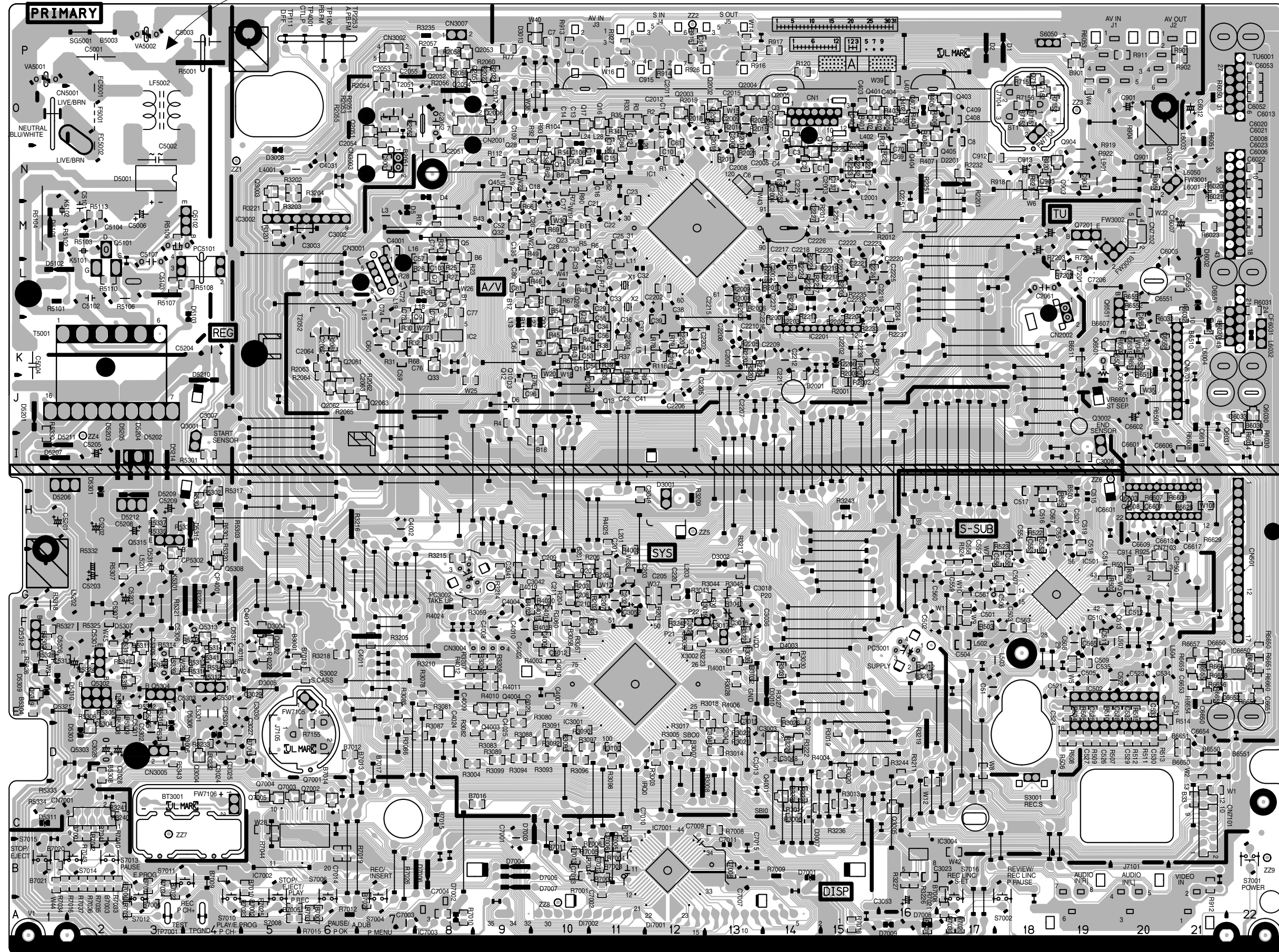
4.12 MAIN, R.PAUSE AND C.BOX CTL CIRCUIT BOARDS

<03>MAIN, <91>R.PAUSE, <92>C.BOX CTL  
LPB10134-001E

**DANGEROUS VOLTAGE**



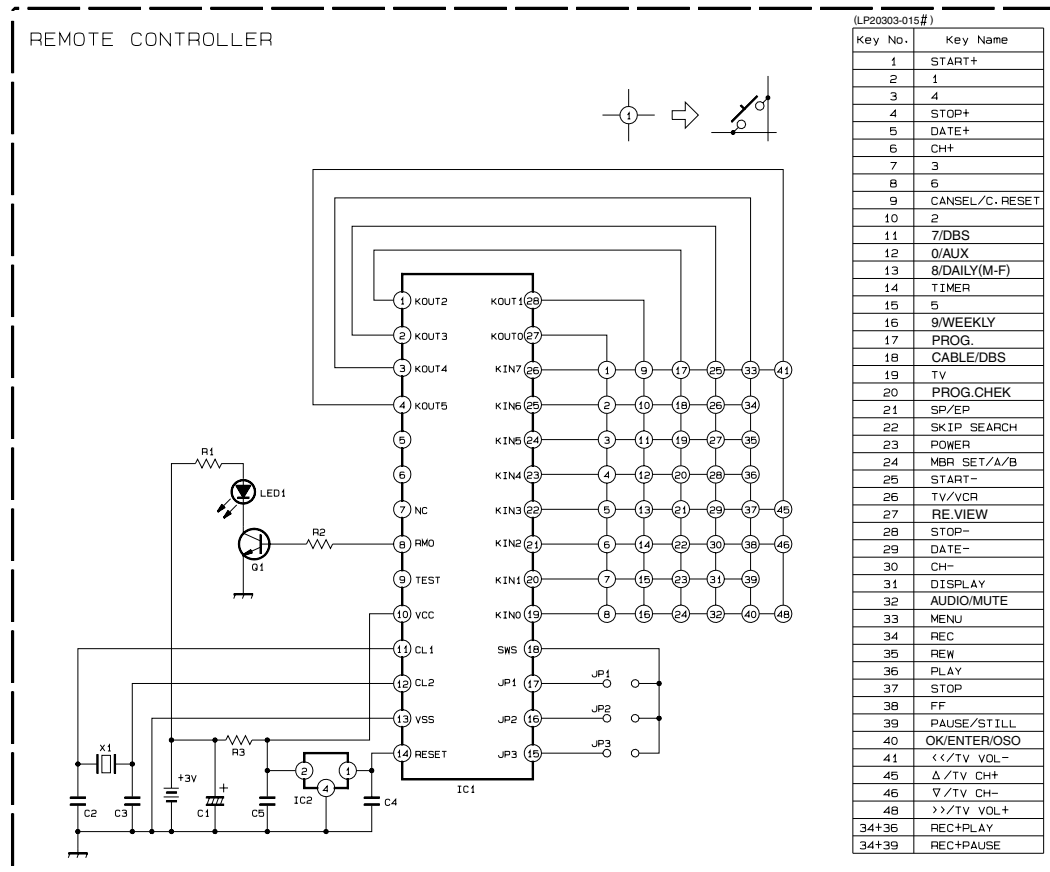
CAUTION :  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE CP(S) MANUFACTURED BY ROHM.  
ATTENTION :  
REPLACER PAR DES FUSIBLE DE MEME TYPE.





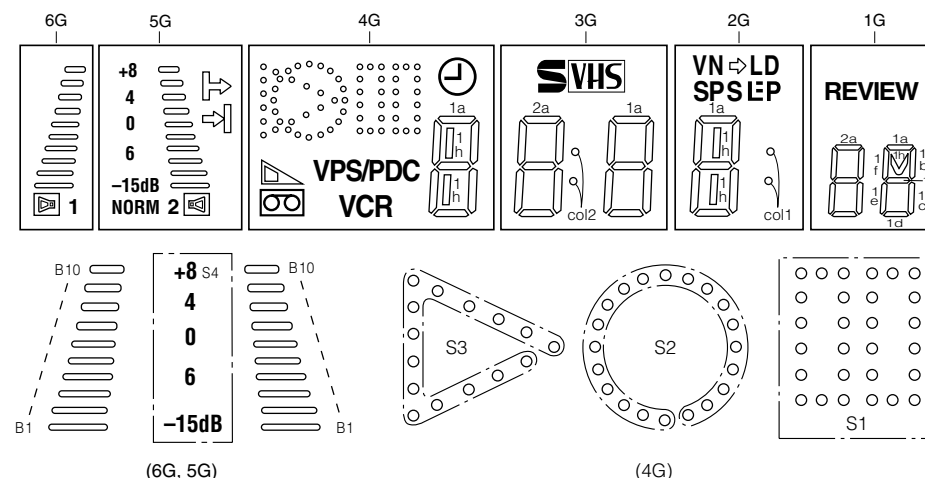
4.14 REMOTE CONTROLLER SCHEMATIC DIAGRAM

NOTES:  
 1. All parts shown in this schematic are critical for safety.  
 2. This schematic is only for reference.  
 Avoid replacing individual parts.  
 Replace the entire unit only.

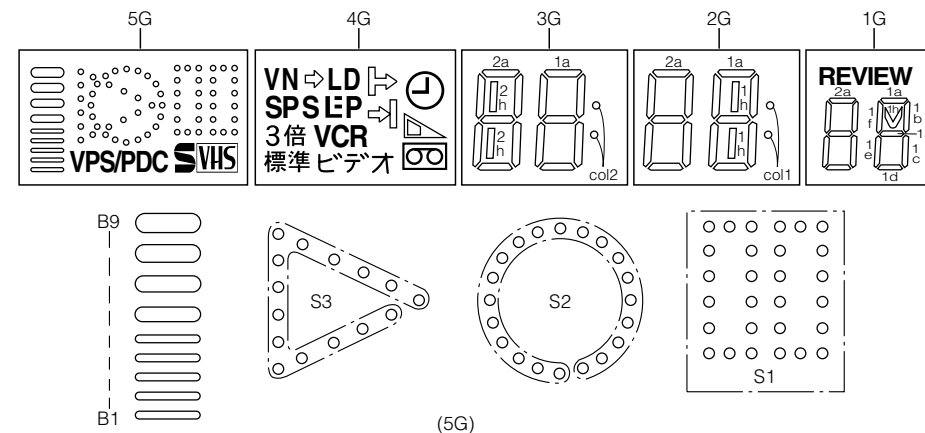


4.15 FDP GRID ASSIGNMENT AND ANODE CONNECTION

[A] (FDP with audio level indicator)



[B] (FDP without audio level indicator)



ANODE CONNECTION

[A]

	6G	5G	4G	3G	2G	1G
P 1	—	[FDP]	S2	1a	1a	1a
P 2	—	[FDP]	S1	1b	1b	1b
P 3	—	S4	S3	1f	1f	1f
P 4	—	NORM	VPS/PDC	1g	1g	1g
P 5	1	2	[FDP]	1c	1c	1c
P 6	[FDP]	[FDP]	[FDP]	1e	1e	1e
P 7	B10	B10	[FDP]	1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	1a	2a	col1	2a
P10	B7	B7	1b	2b	[FDP]	2b
P11	B6	B6	1f	2f	VN	2f
P12	B5	B5	1g	2g	LD	2g
P13	B4	B4	1c	2c	SP	2c
P14	B3	B3	1e	2e	S <sub>(SEP)</sub>	2e
P15	B2	B2	1d	2d	⋮ <sub>(SEP)</sub>	2d
P16	B1	B1	1h	SVHS	LP <sub>(SEP)</sub>	REVIEW

ANODE CONNECTION

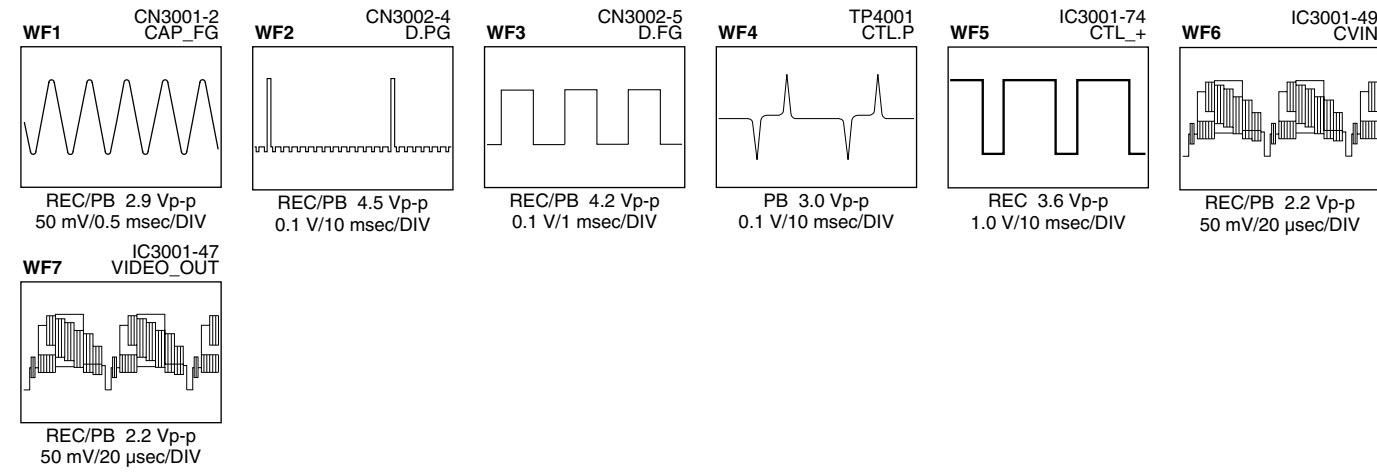
[B]

	5G	4G	3G	2G	1G
P 1	S2	[FDP]	1a	1a	1a
P 2	S1	[FDP]	1b	1b	1b
P 3	S3	3倍	1f	1f	1f
P 4	VPS/PDC	標準	1g	1g	1g
P 5	SVHS	[FDP]	1c	1c	1c
P 6	—	[FDP]	1e	1e	1e
P 7	—	[FDP]	1d	1d	1d
P 8	B9	VCR	col2	1h	1h
P 9	B8	ビデオ	2a	2a	2a
P10	B7	[FDP]	2b	2b	2b
P11	B6	VN	2f	2f	2f
P12	B5	LD	2g	2g	2g
P13	B4	SP	2c	2c	2c
P14	B3	S <sub>(SEP)</sub>	2e	2e	2e
P15	B2	⋮ <sub>(SEP)</sub>	2d	2d	2d
P16	B1	LP <sub>(SEP)</sub>	2h	col1	REVIEW

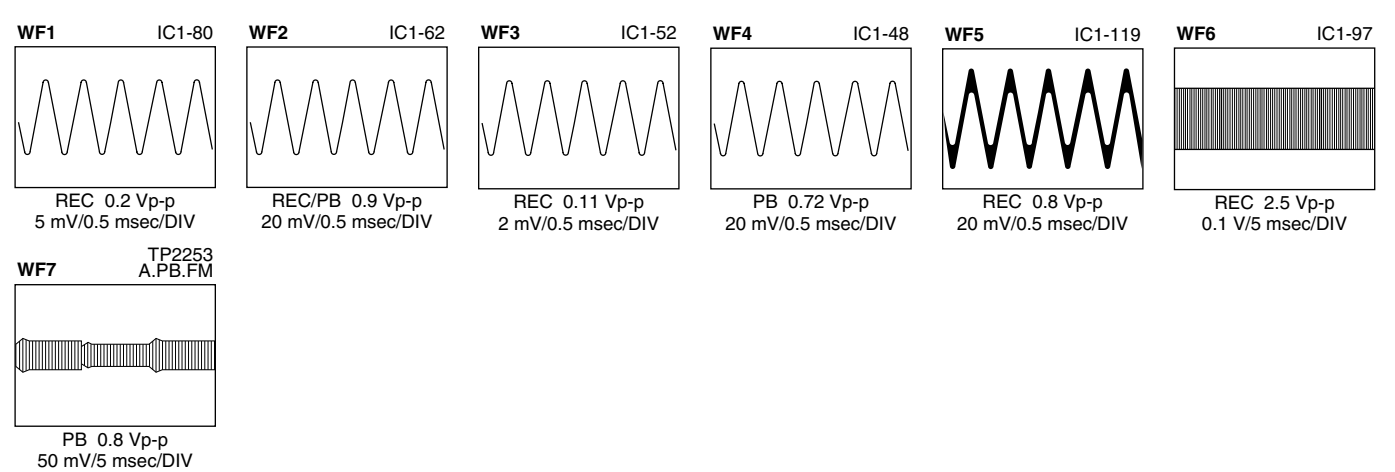


## 4.16 WAVEFORMS

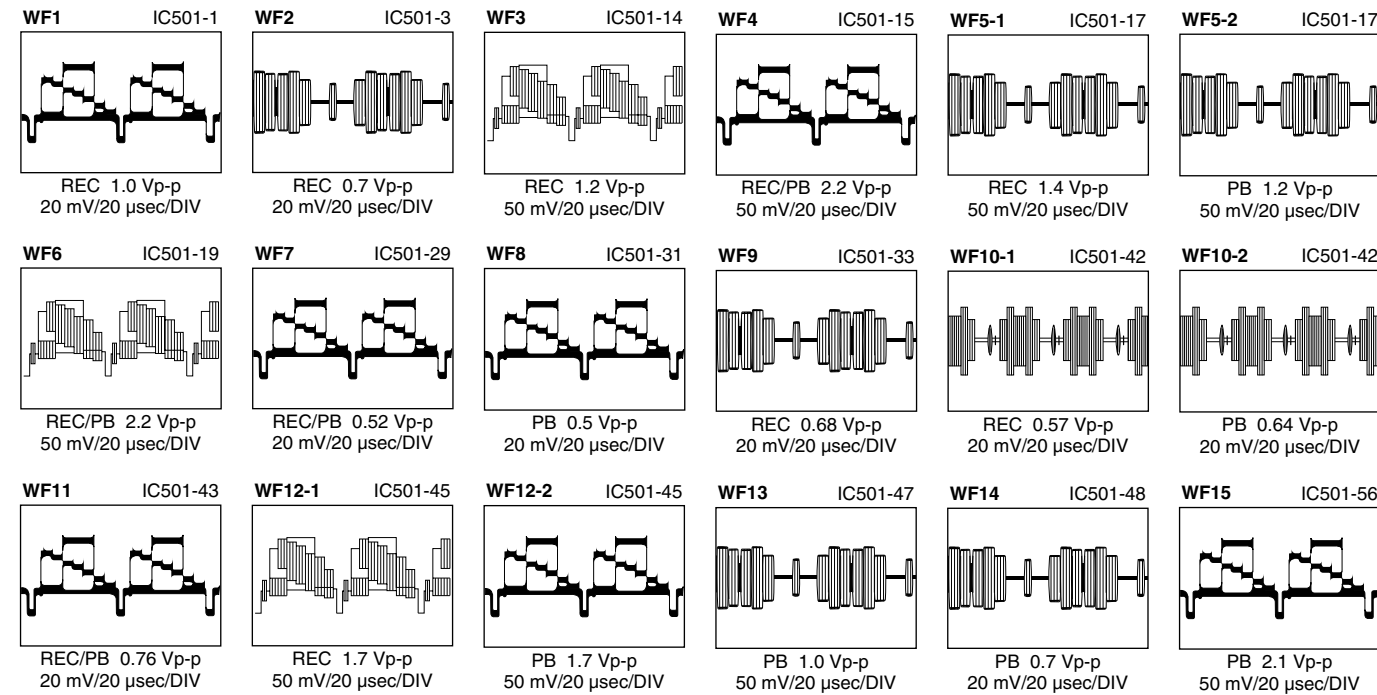
### < SYSCON >



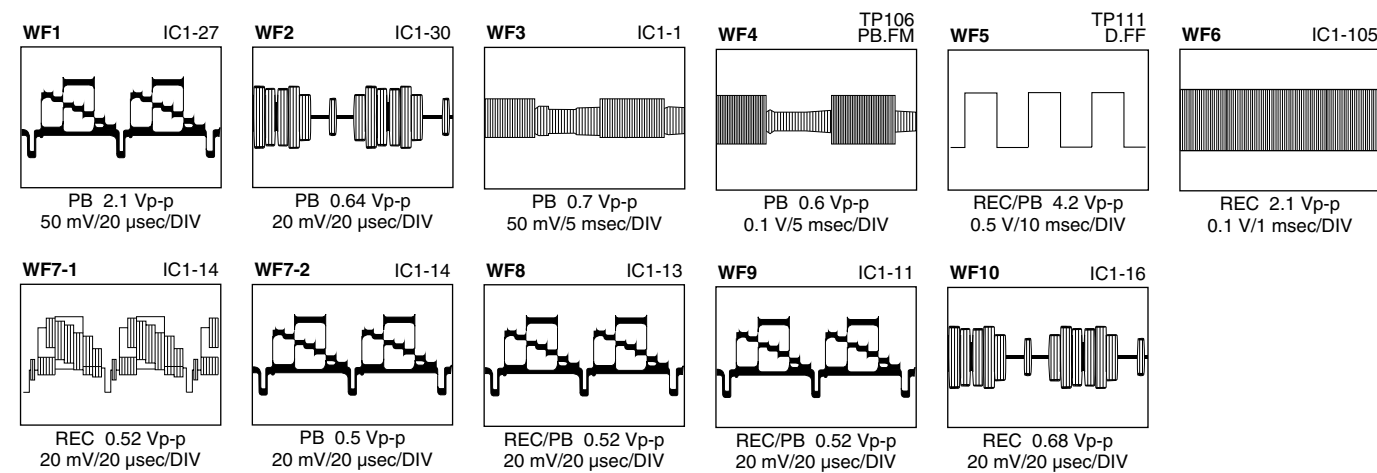
### < AUDIO >



### < S-SUB >



### < VIDEO >



#### 4.17 VOLTAGE CHARTS

<MAIN>

MODE PIN NO.	REC	PLAY
1	1.6	2.1
2	2.8	2.8
3	2.6	2.6
4	1.9	1.5
5	1.9	1.5
6	2.4	2.1
7	1.5	0.8
8	0	0
9	2.7	3.1
10	2.4	2.4
11	3.1	3.1
12	2.8	2.4
13	3.1	3.1
14	3.6	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	0.9	1.1
20	2.8	2.8
21	1.5	1.9
22	2.8	2.8
23	3.1	2.9
24	5.0	5.0
25	0.4	0.4
26	0	0
27	1.3	2.3
28	2.8	2.4
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.4	2.4
33	5.0	5.0
34	2.7	2.4
35	5.0	5.0
36	2.4	2.4
37	2.3	2.8
38	0.2	0.3
39	1.3	1.2
40	1.7	1.7
41	2.7	2.7
42	2.2	2.2
43	0	0
44	2.1	2.1
45	3.4	3.4
46	3.8	3.8
47	2.9	2.9
48	2.6	2.6
49	5.0	5.0
50	2.5	2.5
51	2.8	2.8
52	2.3	2.3
53	2.3	2.3
54	2.4	2.4
55	2.2	2.2
56	0.5	0.5
57	2.3	2.3
58	8.8	8.8
59	4.5	4.5
60	4.5	4.5
61	4.6	4.5
62	4.5	4.4
63	2.3	2.3
64	2.3	2.3
65	0.7	0.7
66	0.7	0.7
67	3.3	3.3
68	3.3	3.3
69	2.3	2.3
70	0	0
71	0.2	0.2
72	0.2	0.2
73	0.2	0.2
74	2.3	2.3
75	2.7	2.7
76	0	0
77	2.7	2.7
78	0.2	0.2
79	0.2	0.2
80	0.2	0.2
81	2.3	2.3
82	0.7	0.8
83	0	0
84	2.3	2.3
85	2.3	2.3
86	2.3	2.3
87	1.7	1.8
88	2.3	2.3
89	2.3	2.3
90	2.3	2.3
91	0.1	0.1
92	0	0
93	0	2.4
94	0	2.0
95	0	0
96	2.5	2.3
97	2.7	2.3
98	2.6	2.3
99	5.0	5.0
100	5.0	5.0

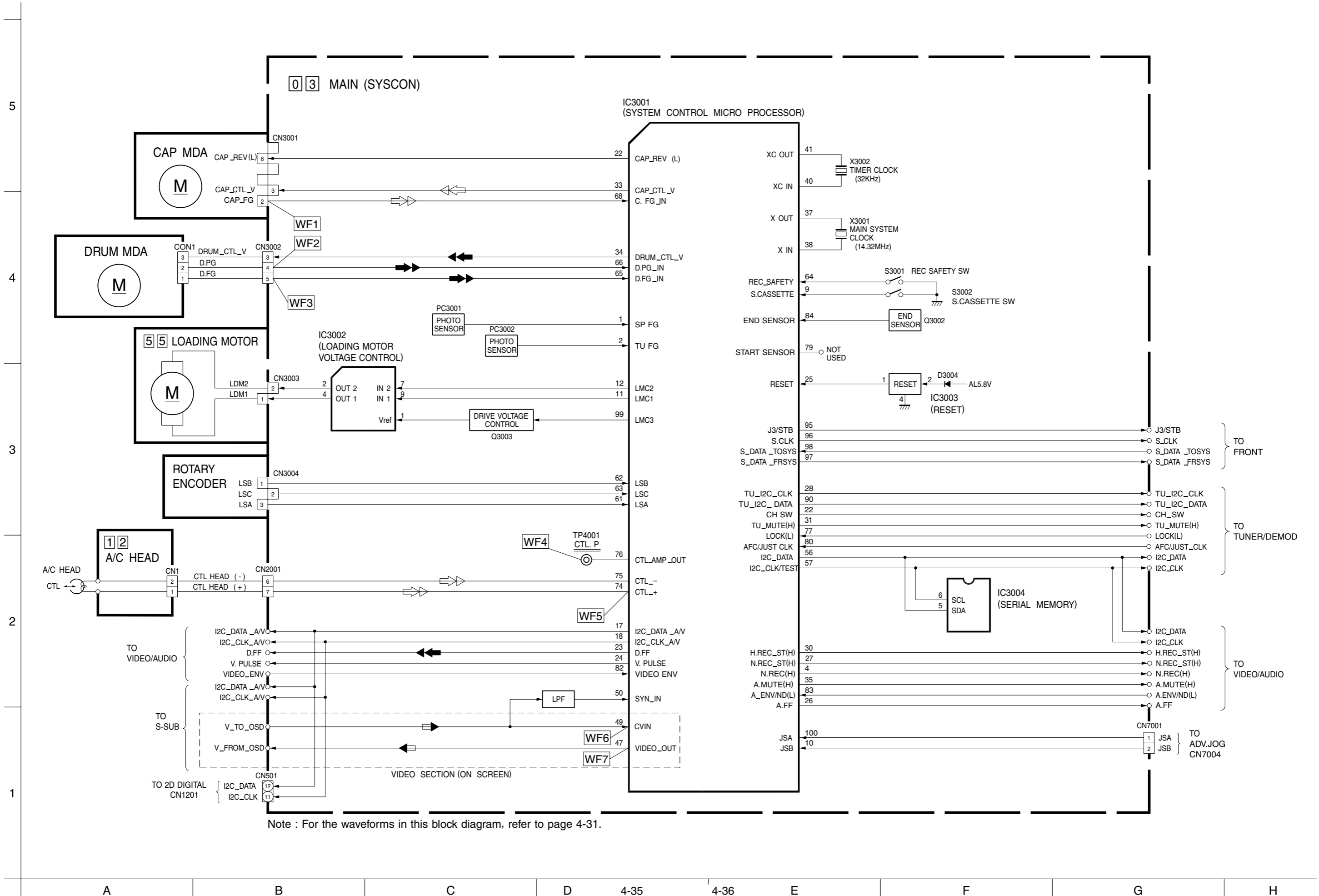
MODE PIN NO.	REC	PLAY
101	0	0
102	0	0
103	0	0
104	2.3	2.3
105	2.5	2.3
106	2.3	2.3
107	5.0	5.0
108	0	0
109	0	0
110	0	0
111	0	2.7
112	2.5	2.5
113	0.5	0.5
114	0	0
115	2.6	2.6
116	2.5	2.5
117	2.5	2.5
118	0	0
119	2.5	2.5
120	0	0
IC501		
1	2.8	2.8
2	0	0
3	2.1	2.1
4	4.9	4.9
5	2.8	2.8
6	0	0
7	2.8	2.8
8	0.1	0
9	2.8	2.8
10	0	0
11	2.1	2.1
12	2.8	2.8
13	0	0
14	2.8	2.8
15	2.3	2.3
16	2.7	2.7
17	2.4	2.4
18	0	0
19	2.3	2.3
20	0	0
21	3.5	3.5
22	2.7	2.7
23	2.9	2.1
24	2.8	2.8
25	2.8	2.8
26	4.9	4.9
27	3.0	3.0
28	2.4	2.3
29	2.5	2.3
30	4.9	4.9
31	2.7	3.0
32	0.1	4.9
33	2.8	2.8
34	2.8	2.8
35	2.8	2.8
36	2.8	2.8
37	0	0
38	3.7	3.7
39	3.3	3.3
40	2.8	2.8
41	2.6	2.6
42	2.8	2.8
43	3.3	3.3
44	2.0	1.9
45	2.0	2.0
46	4.9	4.9
47	0.5	2.4
48	2.8	2.8
49	0	0
50	2.8	2.8
51	2.9	2.9
52	2.4	2.4
53	3.1	3.1
54	2.3	2.4
55	1.9	1.1
56	2.5	3.4
IC502		
1	2.0	2.0
2	1.4	4.9
3	3.3	3.3
4	3.4	3.4
5	4.9	4.9
6	2.2	2.2
7	2.0	2.0
8	4.9	4.9
9	1.5	1.5
10	2.9	2.8
11	2.9	2.8
12	2.9	2.8
13	0	0
14	2.8	2.8
15	2.8	2.8
16	1.9	2.0
17	1.9	2.0
18	1.9	2.0
IC3001		
1	-	-
2	-	-
3	0.6	0.6
4	4.8	5.0

MODE PIN NO.	REC	PLAY
5	4.8	4.8
6	0	0
7	0	0
8	4.8	0
9	0	0
10	4.8	4.8
11	0	0
12	0	0
13	4.8	4.8
14	0	0
15	0	4.8
16	4.8	4.8
17	3.7	3.7
18	3.2	3.2
19	4.8	0
20	4.8	0
21	0.9	1.1
22	4.3	4.3
23	2.4	2.4
24	0	0
25	-	-
26	0	2.4
27	4.8	0
28	4.8	4.8
29	0	0
30	4.8	4.8
31	4.8	4.8
32	0	0
33	2.5	2.5
34	1.4	1.4
35	0	0
36	4.8	4.8
37	-	-
38	-	-
39	2.4	0
40	-	-
41	-	-
42	0	0
43	4.8	4.8
44	0	0
45	4.8	4.8
46	4.4	4.4
47	2.3	2.3
48	0	0
49	2.3	2.3
50	2.5	2.5
51	5.0	5.0
52	2.5	2.5
53	2.5	2.5
54	0	0
55	0	0
56	4.5	4.5
57	4.5	4.5
58	0	0
59	4.8	4.8
60	0	0
61	0	0
62	4.9	4.9
63	4.9	4.9
64	4.9	4.9
65	2.6	2.6
66	0.4	0.4
67	2.4	2.4
68	2.4	2.4
69	2.4	2.4
70	2.4	2.4
71	0	0
72	2.4	2.4
73	4.9	4.9
74	2.9	2.9
75	1.9	2.4
76	2.4	2.4
77	0	0
78	0	0
79	0	0
80	1.1	1.1
81	0	0
82	0	2.7
83	0	2.0
84	4.9	4.9
85	0	0
86	0	0
87	-	-
88	0	0
89	0	0
90	4.9	4.9
91	0	0
92	0	0
93	0	0
94	4.9	4.9
95	3.8	3.8
96	4.5	4.5
97	0.4	0.4
98	0.1	0.1
99	0	0
100	4.9	4.9
IC3002		
1	7.3	7.3
2	0.1	0.1
3	0	0
4	0.1	0.1

MODE PIN NO.	REC	PLAY
5	11.6	11.6
6	11.6	11.6
7	0	0
8	0	0
9	0	0
10	4.9	4.9
12	4.9	4.9
3	0	0
4	0	0
IC3003		
1	4.9	4.9
2	4.9	4.9
3	0	0
4	0	0
IC3004		
1	0	0
2	0	0
3	0	0
4	0	0
5	4.5	4.5
6	4.5	4.5
7	0	0
8	4.9	4.9
IC5301		
1	2.4	2.4
2	0	0
3	4.4	4.4
IC7001		
1	4.9	4.9
2	0	0
3	0	0
4	0	0
5	0.7	0.7
6	0.7	0.7
7	0	0
8	4.5	4.5
9	4.5	4.5
10	0	0
11	0	0
12	0	0
13	0	0
14	4.9	4.9
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-27.4	-27.4
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	4.9	4.9
39	4.9	4.9
40	4.9	4.9
41	4.9	4.9
42	4.9	4.9
43	0	0
44	2.6	2.6
IC7003		
1	4.9	4.9
2	4.9	4.9
3	0	0
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.4	2.4
6	2.4	2.4
7	2.4	2.4
8	2.4	2.4
9	2.7	2.4
10	2.7	2.4
11	2.7	2.4
12	0	0
13	0	0
CN501		
1	3.7	3.7
2	0	0
3	0.5	2.4
4	5.0	5.0
5	2.0	2.0
6	0.1	4.9
7	3.3	3.3
8	0	0
9	2.8	2.8
10	0	0
11	3.3	3.3
12	3.8	3.8
13	0	0
14	0	0
15	2.4	2.4
16	0	0
17	0	0

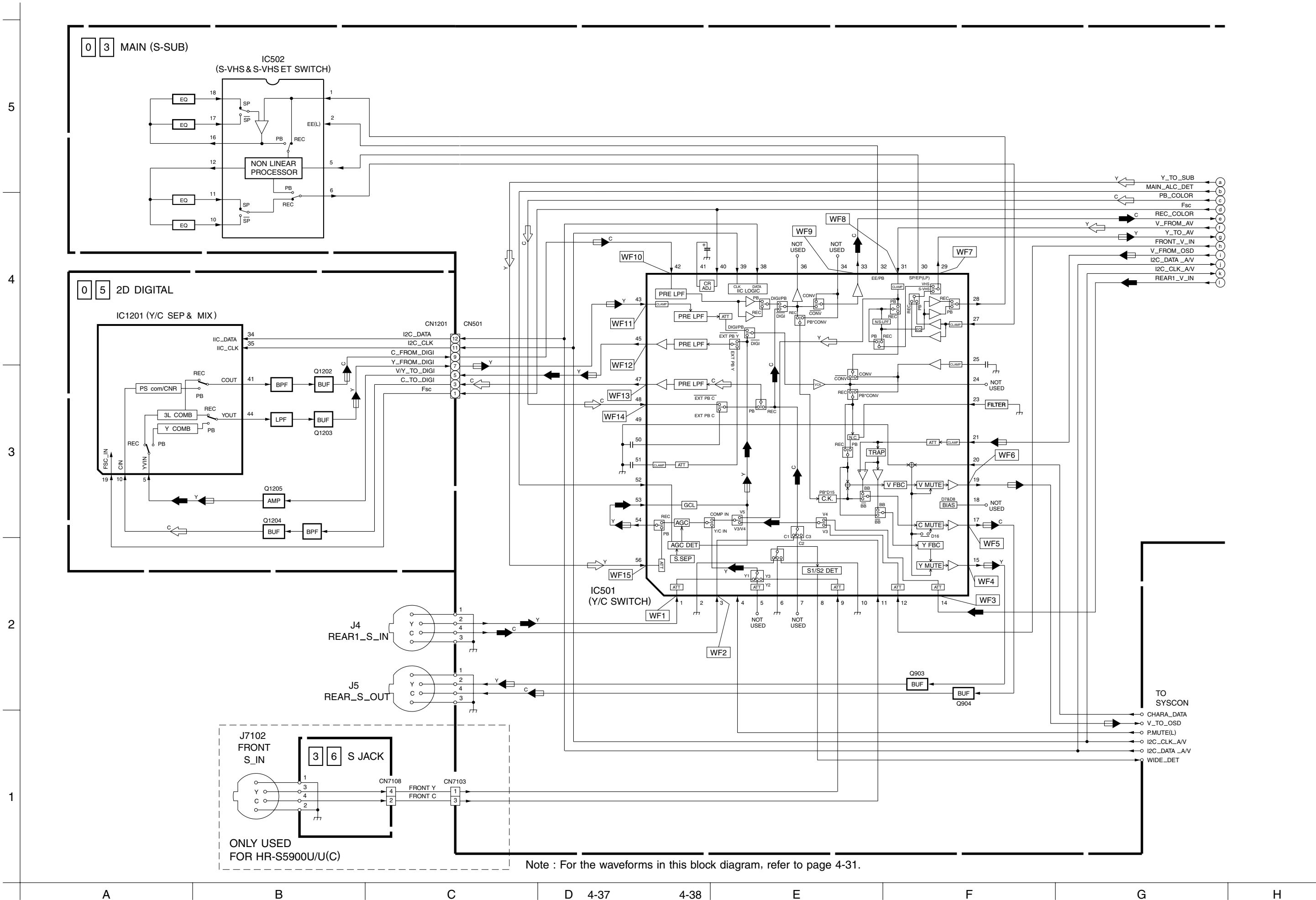
MODE PIN NO.	REC	PLAY
5	0	0
6	0	0
7	8.9	8.9
8	0	0
9	2.3	2.3
IC30001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	2.3	2.3
7	2.6	2.3
CN2002		
1	0	0
2	0	0
CN3001		
1	0	0
2	2.5	2.5
3	2.5	2.5
4	5.0	5.0
5	0	0
6	4.9	4.9
7	-	-
8	11.6	11.6
CN3002		
1	11.6	11.6
2	0	0
3	1.3	1.3
4	0.3	0.3
5	2.6	2.6
CN3003		
1	0.2	0.2
2	0.3	0.3
CN3004		
1	4.9	4.9
2	4.9	4.9
3	0	0
4	0	0
CN6701		
1	0	0
2	4.5	4.5
3	4.5	4.5
4	4.8	4.8
5	0	0

4.19 SYSTEM CONTROL BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-31.

4.20 VIDEO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-31.

0 3 MAIN (VIDEO, TERMINAL)

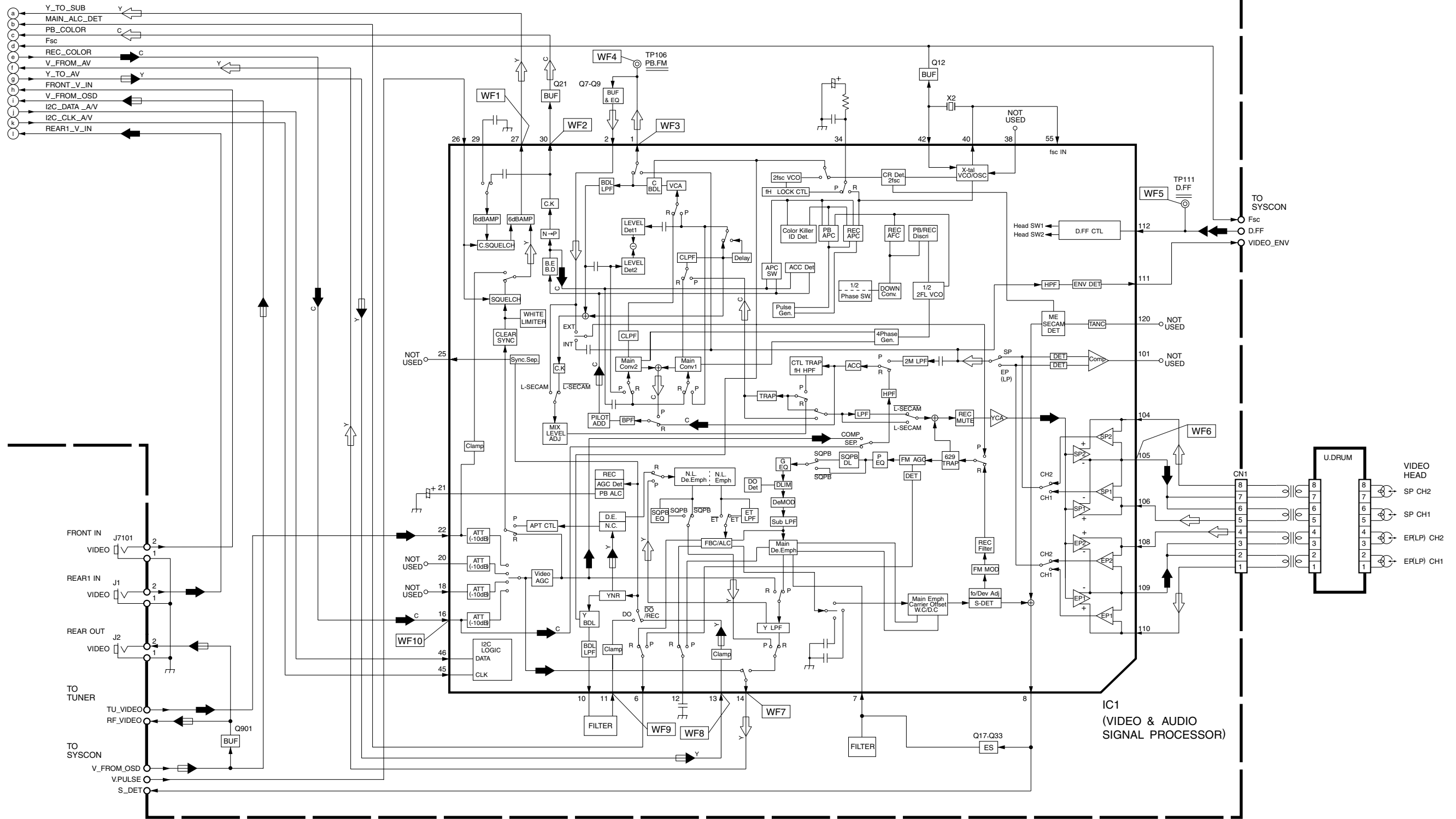
5

4

3

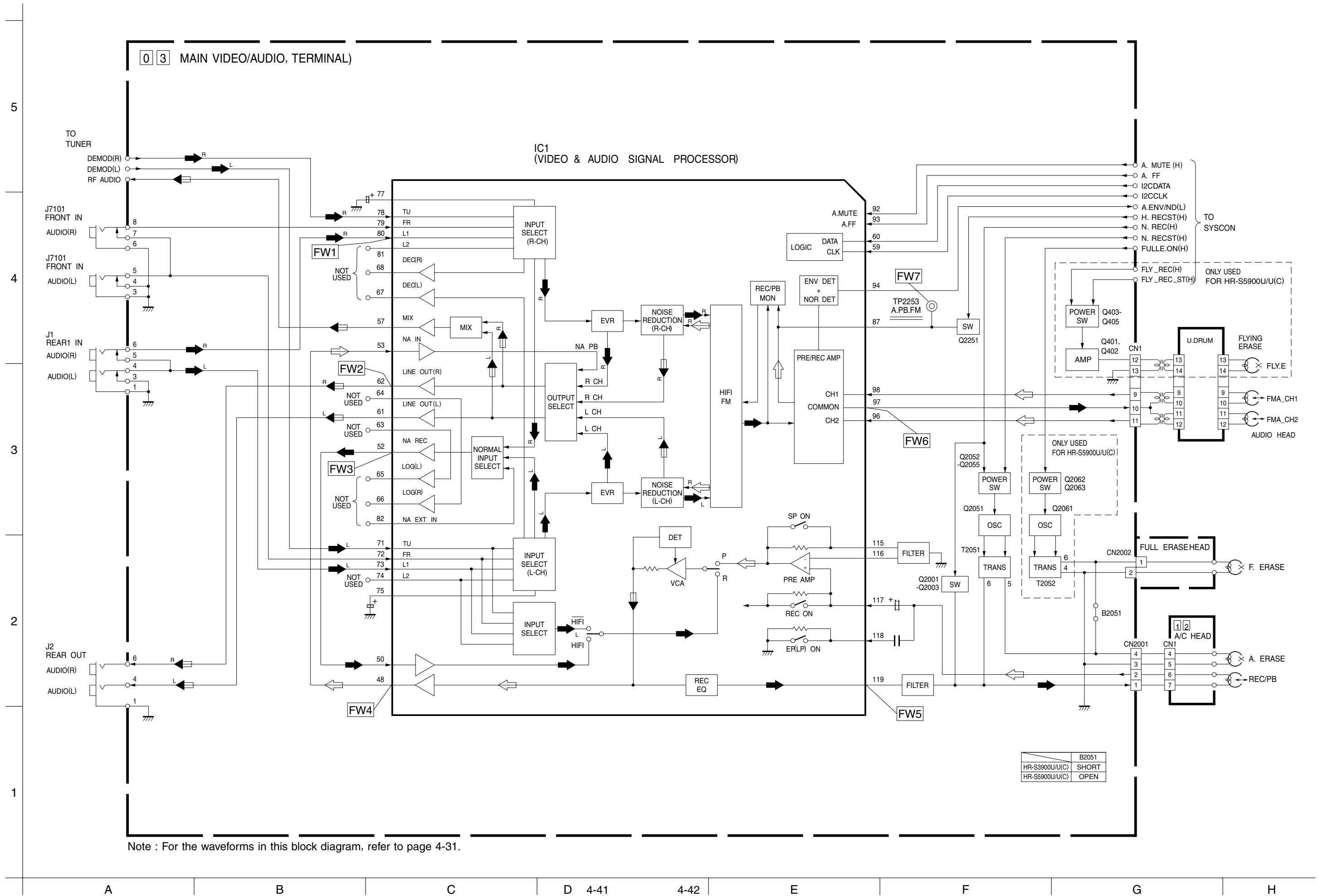
2

1



Note : For the waveforms in this block diagram, refer to page 4-31.

4.21 AUDIO BLOCK DIAGRAM



B2051	
HR-S3900U/U(C)	SHORT
HR-S5900U/U(C)	OPEN