


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.

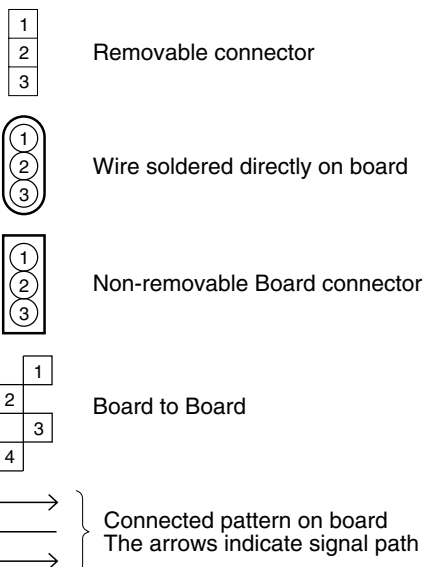
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K or k: k Ω (1000 Ω), M: M Ω (1000k Ω)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

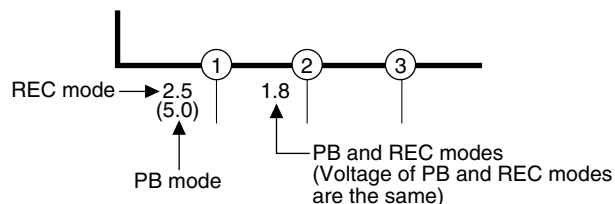
3. Interpreting Connector indications



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

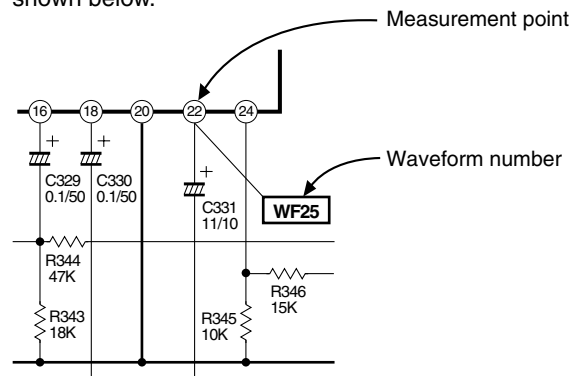
- 4) Indication on schematic diagram
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



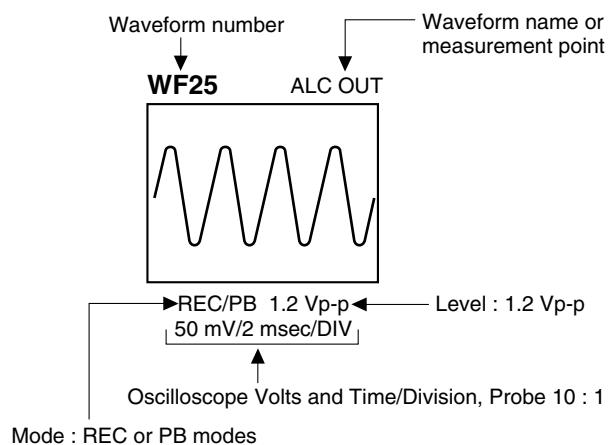
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

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.

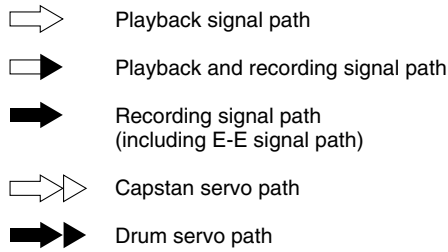


5) Waveform indications

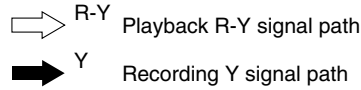


6. Signal path Symbols

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.



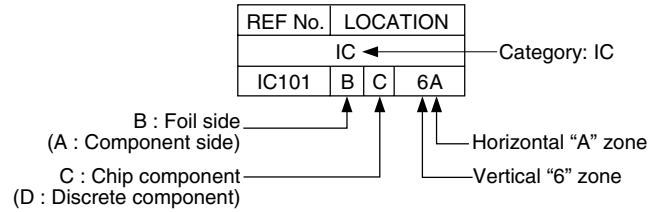
CIRCUIT BOARD NOTES

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

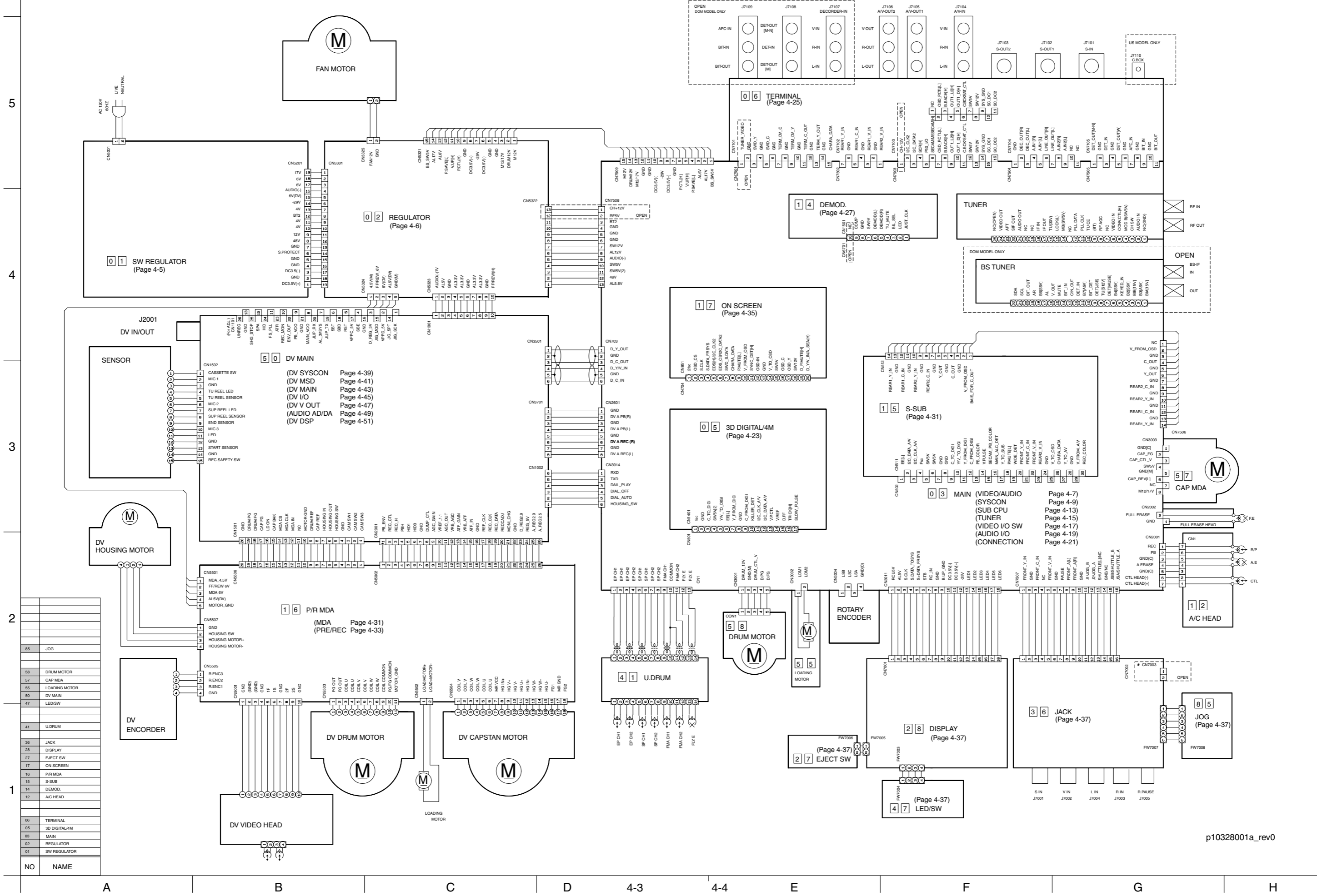
Parts location are indicated by guide scale on the circuit board.



Note:

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

4.1 BOARD INTERCONNECTIONS



5

4

3

2

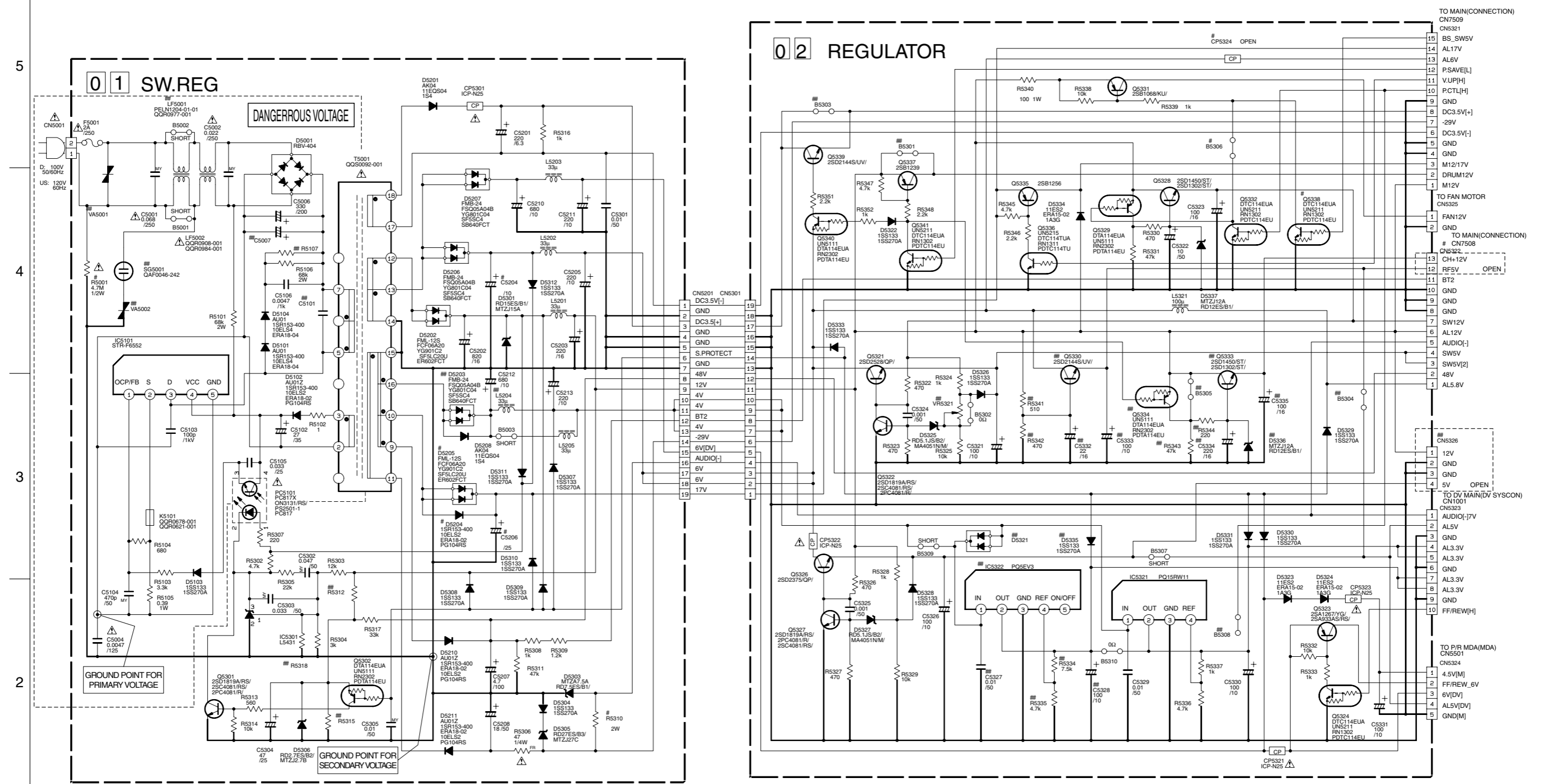
1

A B C D 4-3 4-4 E F G H

NO	NAME
85	JOG
58	DRUM MOTOR
57	CAP MDA
55	LOADING MOTOR
50	DV MAIN
47	LED/SW
41	U.DRUM
36	JACK
28	DISPLAY
27	EJECT SW
17	ON SCREEN
16	P/R MDA
15	S-SUB
14	DEMOD.
12	A/C HEAD
06	TERMINAL
05	3D DIGITAL/4M
03	MAIN
02	REGULATOR
01	SW REGULATOR

4.2 SWITCHING REGULATOR AND REGULATOR 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.



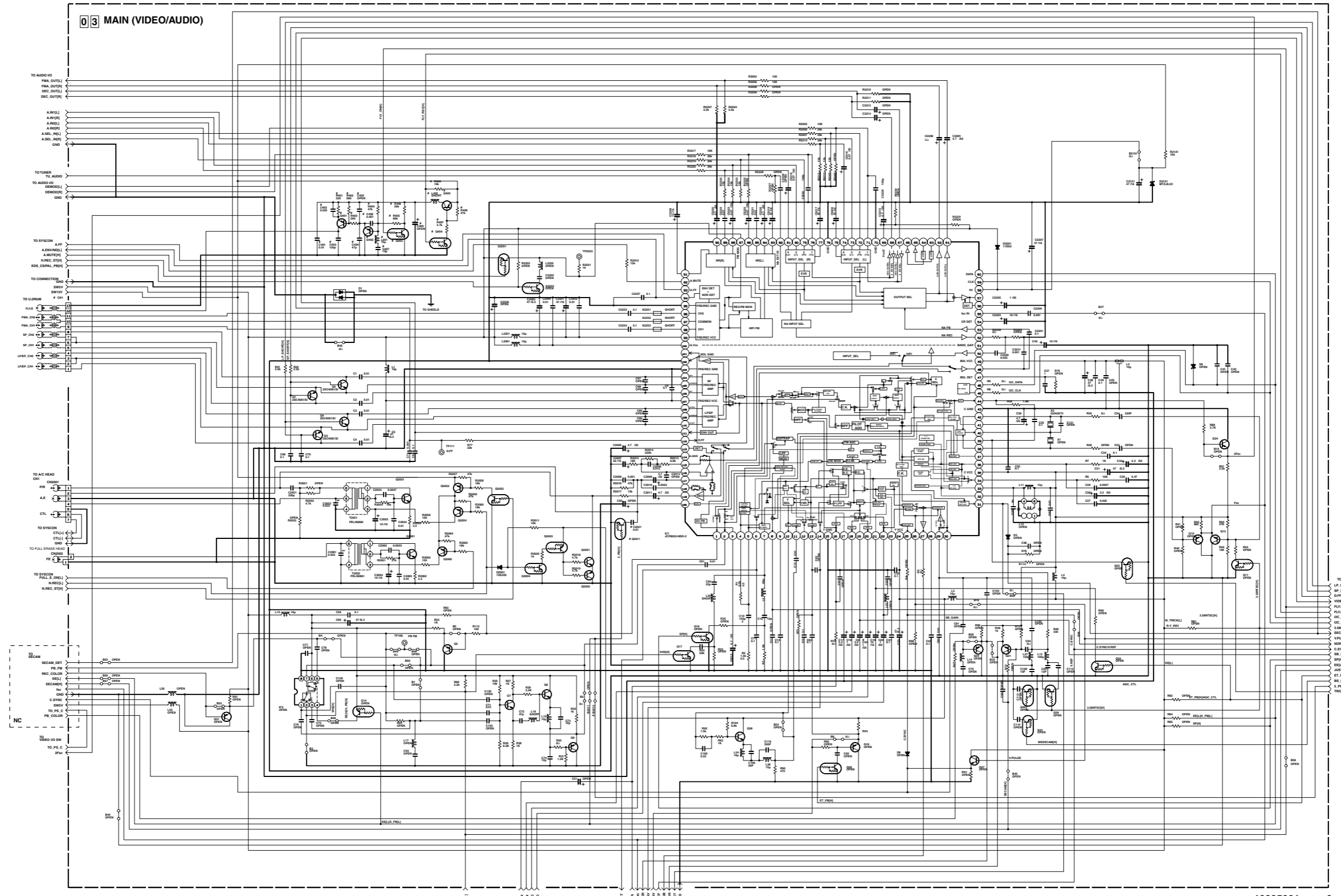
DIFFERENCE TABLE

	D5204	D5205	R5001	R5310	C5204	C5206	Q5308	CP5324	B5306
DOM	NO	YES	NO	680	2700	330	YES	YES	NO
US	YES	NO	YES	820	2200	180	NO	NO	YES

MARK ELEMENTS ARE NOT MOUNTED
p20190001a_rev1

4.3 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.



p10325001a_rev0

DIFFERENCE TABLE

SYMBOL	Q101-Q105 L401-L402 R401-R409 C401-C407,C409	CN1
W/FE HEAD	○	1-13
W/O FE HEAD	×	1-11

SYMBOL	C2011 C2021 B2012
W/SS, PB	○
W/O SS, PB	×

SYMBOL	C82
W/BS	○
W/O BS	×

NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN pF.
 ALL NPN TYPE TRANSISTORS ARE 2SC4881/90R5/
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/62R.
 ALL NPN TYPE DIGITAL TRANSISTORS ARE DT0144W0A.
 ALL PNP TYPE DIGITAL TRANSISTORS ARE DT0144W0A

ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

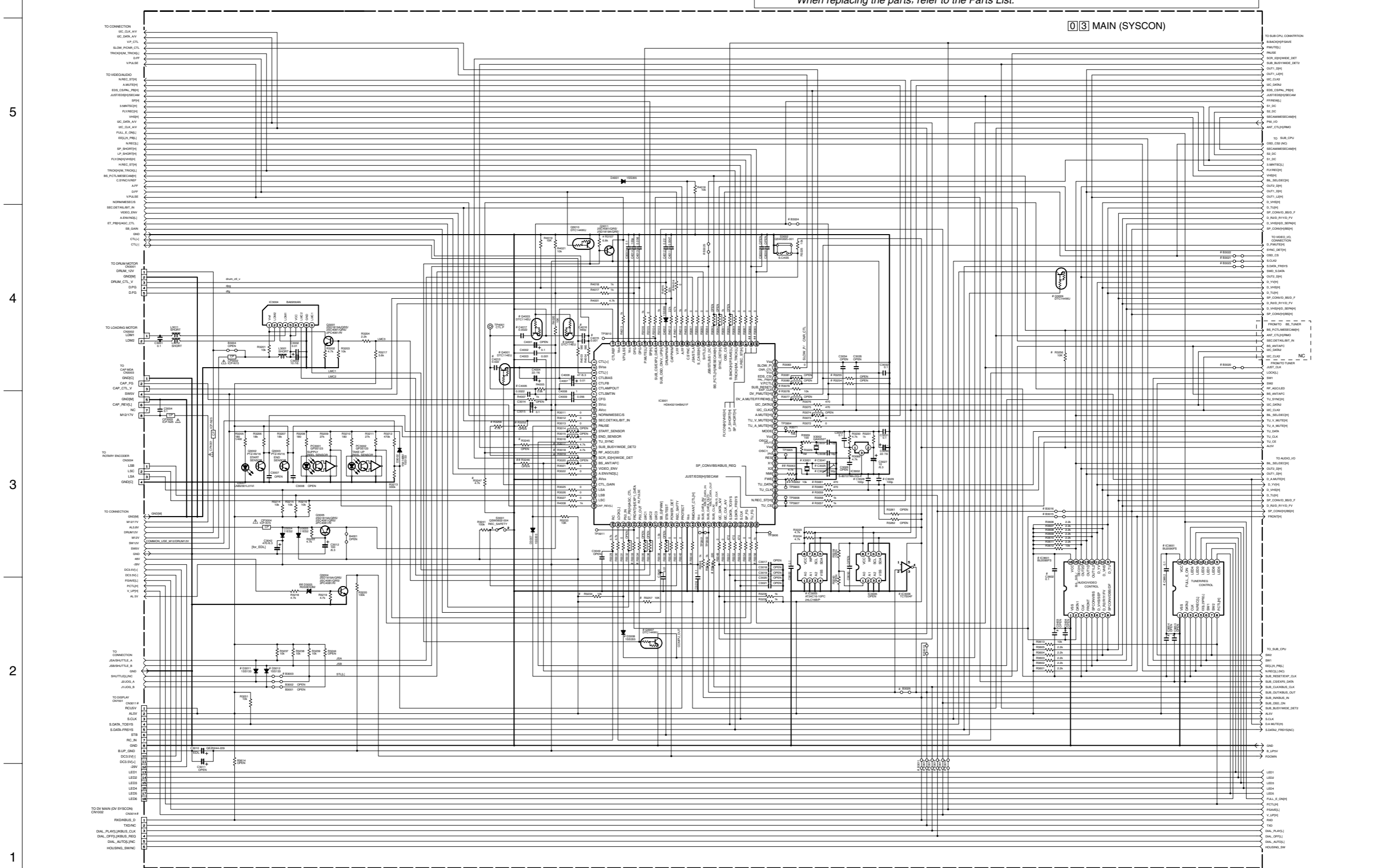
5
4
3
2
1

A B C D 4-7 4-8 E F G H

4.4 SYSTEM CONTROL 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.

03 MAIN (SYSCON)



NOTES UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN µF.
 [Symbol] ELECTROLYTIC
 [Symbol] CERAMIC
 [Symbol] MYLAR
 [Symbol] NON POLAR

Marked elements may differ depending on the model. Be sure to check the Parts List.

p1029001a_rev3

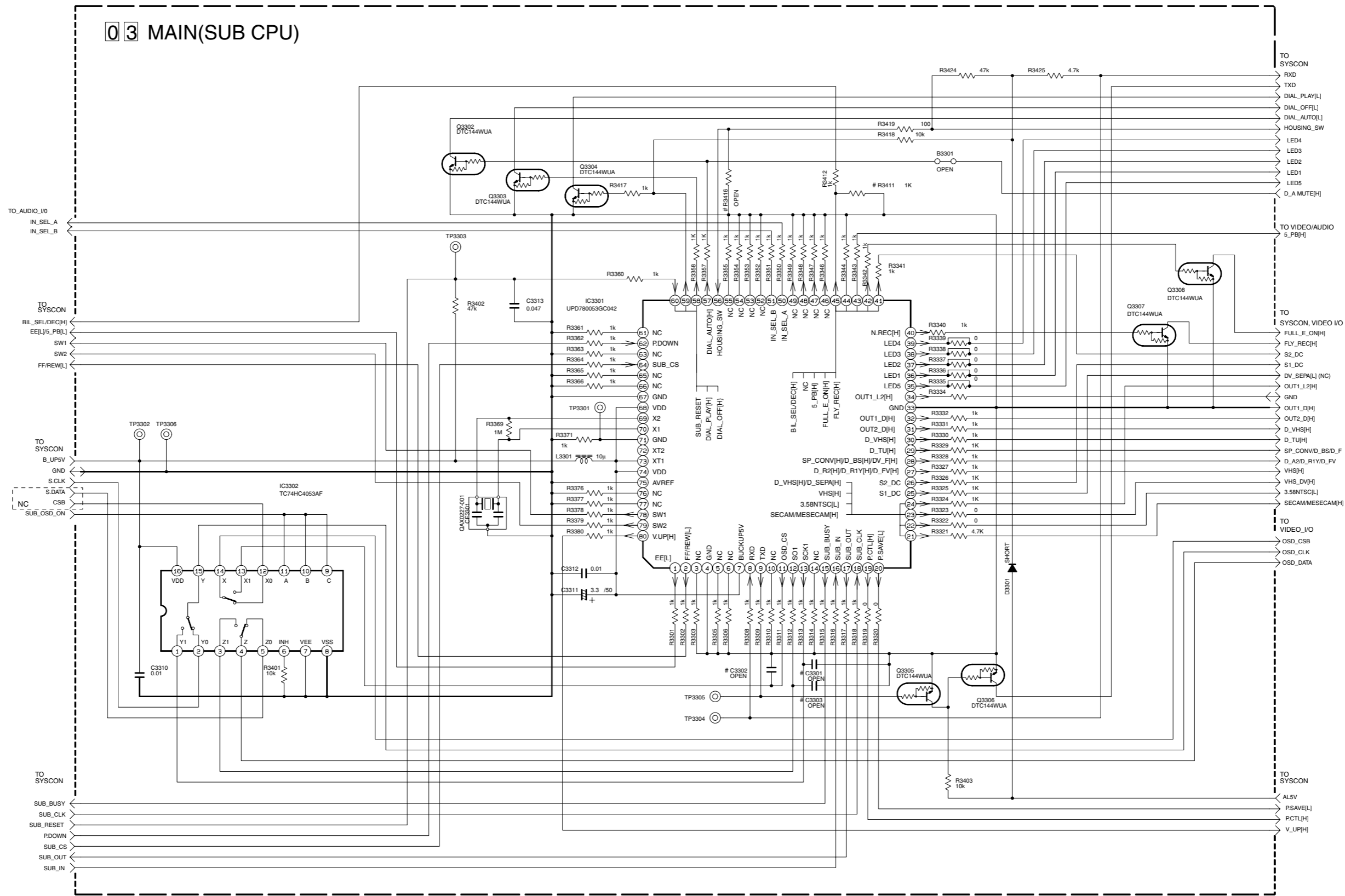
#DIFFERENCE TABLE ○ : Used
 X : Not used

ITEM		HR-DVS2 /SR-VS20 EU/EK	MS	US	DOM	HM-HDS1 DOM	PAL	MS	US
JOG/S	B3003 D3011 D3012	○	○	○	○	X	X	X	X
CTL_GAIN	C4010 Q4001	○	○	○	○	○	○	○	○
SEC.DET/KIL/BIT_IN	R3252	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
SUB_BUSY/W.DET2	R3245	X	X	X	X	X	X	X	X
	R3017	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k
RF_AGC/LED	R3018	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k
	R3247	X	X	4.7k	X	X	X	X	4.7k
SCR_ID/WIDE	R3019	6.8k	6.8k	X	4.7k	4.7k	6.8k	6.8k	X
	R3258	4.7k	4.7k	X	X	X	4.7k	4.7k	X
P50_IN	R3234	10k	10k	X	X	X	10k	10k	X
	Q3007 D3008	○	○	X	X	X	○	○	X
RMO/ANT_CTL	R3257	X	X	X	X	X	X	X	X
	R3044	0Ω	0Ω	X	1k	1k	0Ω	0Ω	X
JUST/EDS/SECAM	R3056	1k	1k	1k	1k	1k	1k	1k	1k
EEPROM	IC3003	16k	16k	8k	8k	8k	8k	8k	8k
TU_CE/CLK/DATA	R3057								
	R3060	○	○	○	○	○	○	○	X
	R3061								
SP_CONV/BS/KBUS_REQ	R3059	1k	1k	1k	1k	470	470	470	470
TU_CLK	C3028	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
TU_DATA	C3029	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
CRYSTAL	X3001	QAX0445	QAX0444	QAX0444	QAX0444	QAX0444	QAX0445	QAX0444	QAX0444
	C3025	○	X	X	X	X	○	X	X
	C3041	X	10p	10p	10p	10p	X	10p	10p
	C3024	22p	12p	12p	12p	12p	22p	12p	12p
EXPANDA	IC3601								
	IC3651								
	C3602								
	C3603								
	C3604	X	X	X	X	○	○	○	○
	C3652 C3653 C3654								
FRONT[H]/EXP1_DATA	B3015	○	○	○	○	X	X	X	X
SP_CONV/BS/KBUS_REQ	B3016	○	○	○	○	X	X	X	X
JUST_CLK	B3020	X	X	X	○	○	X	X	X
BS_PCTL	R3256	X	X	X	X	X	X	X	X
SUB_D.IN/KBUS D.IN/RXD	B3011	X	X	X	X	○	○	○	○
	B3019	X	X	X	X	1k	1k	1k	1k
SUB_D.OUT/KBUS D.OUT/TXD	B3012	X	X	X	X	X	X	X	X
SUB_CLK/KBUS CLK/DIAL_PLAY	B3013	X	X	X	X	○	○	○	○
SP_CONV/BS/KBUS_REQ /DIAL_OFF	B3014	X	X	X	X	○	○	○	○
CN3014	CN3014	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin
KBUS_DATA	IC3006	X	X	X	X	○	○	○	○
	B3026	○	○	○	○	X	X	X	X
SUB_OSD_ONV/UP	B3017	X	X	X	X	○	○	○	○
D_PMUTE	R3078	1k (10kΩ)	1k	1k	1k	1k	1k	1k	1k
	R3255	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
D_A.MUTE/FF/REW	R3254	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
	B3024	X	X	X	X	○	○	○	○
EDS	Q3009	X	X	○	X	X	X	X	○
OSD	B3021								
	B3022	X	X	X	X	○	○	○	○
	B3023								
JBS/STLB/S1_DC	B3025	X	X	X	X	○	X	X	X
CN3011	CN3011	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin
SUB_RESET/EXP.CLK FF/REW	R3079	1k	1k	1k	1k	1k	1k	1k	1k
	C4015	680p (330p)	680p	0.001	680p	680p	680p	680p	0.001
	Q4002 C4016	○	○	X	○	○	○	○	X
	Q4003 C4017	○	○	○	○	○	○	○	○
	C4005	X	X	X	X	X	X	X	X
SUB_CLK/KBUS_CLK	R3048	220	220	220	220	220	220	220	
B.BACK/P.SAVE	B3018	X	X	X	X	○	○	○	○
IN_SELA/EXP1_DATA	R3033	0Ω	0Ω	0Ω	0Ω	1k	1k	1k	1k
SUB_CS/EXP2_DATA	R3104	4.7k	4.7k	4.7k	4.7k	1k	1k	1k	1k
M_PULSE	Q3010								
	Q3011 R3107	X	X	○	○	○	X	X	○
P50_OUT/M_PULSE	R3034	0Ω	0Ω	4.7k	4.7k	4.7k	0Ω	0Ω	4.7k
	R4011	4.7k (2.2k)	4.7k	1k	1k	2.7k	2.7k	2.7k	2.7k
V.FF	R4014	0Ω (2.2k)	0Ω	1.8k	1.8k	0Ω	0Ω	0Ω	0Ω

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.

4.5 SUB CPU 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.



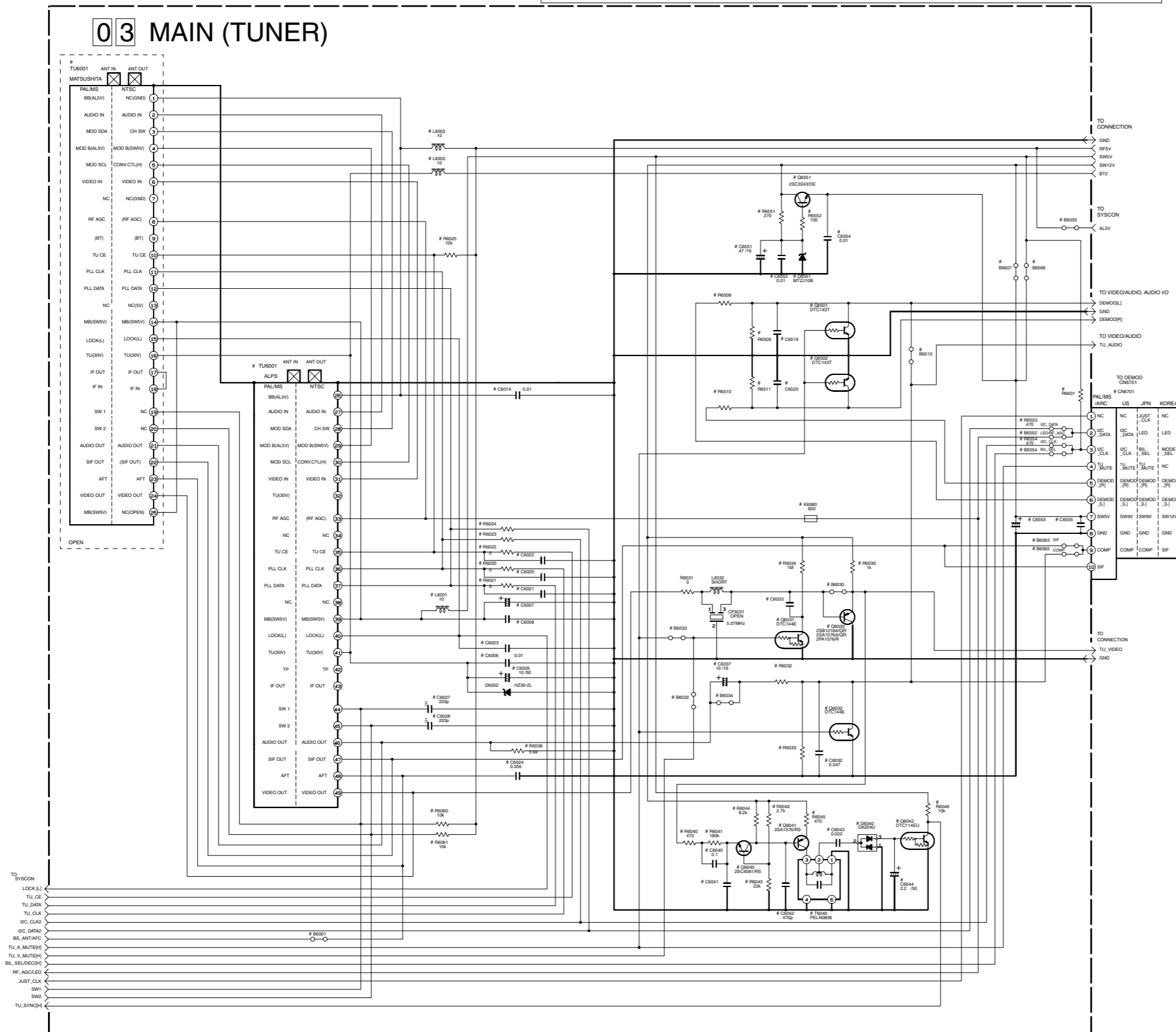
MARK ELEMENTS ARE NOT MOUNTED.
NOTES: UNLESS OTHERWISE SPECIFIED,
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

p20174001a_rev1

4.6 TUNER 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

TUNER	SYMBOL	EU/EK	FRANCE	JAPAN			US	
				MS	DVS2	HDS1	DVS2/VS20	HDS1
TUNER	TU6001	ALPS	ALPS	MATSUSHITA	MATSUSHITA	ALPS	ALPS	
AT5+	K8080							
VIDEO BUFFER	R6030, C6030							
TU_V_MUTE	B6031							
TU_A_MUTE	R6032							
AUDIO OUT	R6033, R6034, R6035, C6033, C6034, C6037							
AFC	B6001, C6024							
CENELEC	C6027, C6028							
TU(30V)	C6005, C6006							
MB(SWV)	L6005, C6007							
BB(ALSV)	C6014, R6020							
PLL CLK	R6023							
PLL DATA	R6021							
TU CE	R6022							
LOCK	C6023							
SYSTEM SW	R6030, R6031							
SYNC DET	R6040-R6046, C6040-C6042, D6040, T6040							

DEMOC	SYMBOL	EU/EK	FRANCE	JAPAN			US	
				MS	DVS2	HDS1	DVS2/VS20	HDS1
DEMOC PWR ASSY	CN6701	LPA10094*	LPA10094*	PS11087*	PS11087*	PS11078*	PS11078*	
SV REG	R6551, R6552, C6551, C6551							
DEMOC REG	C6553							
PASS CON	C6554							
SW12V	B6607							
DEMOC OUT	R6508, R6510							
MUTE	C6501, C6502							
TUNER MONO	B6510							
DEMOC SELECTION	R6553, R6554, B6553, B6554, B6555, B6556, B6557							

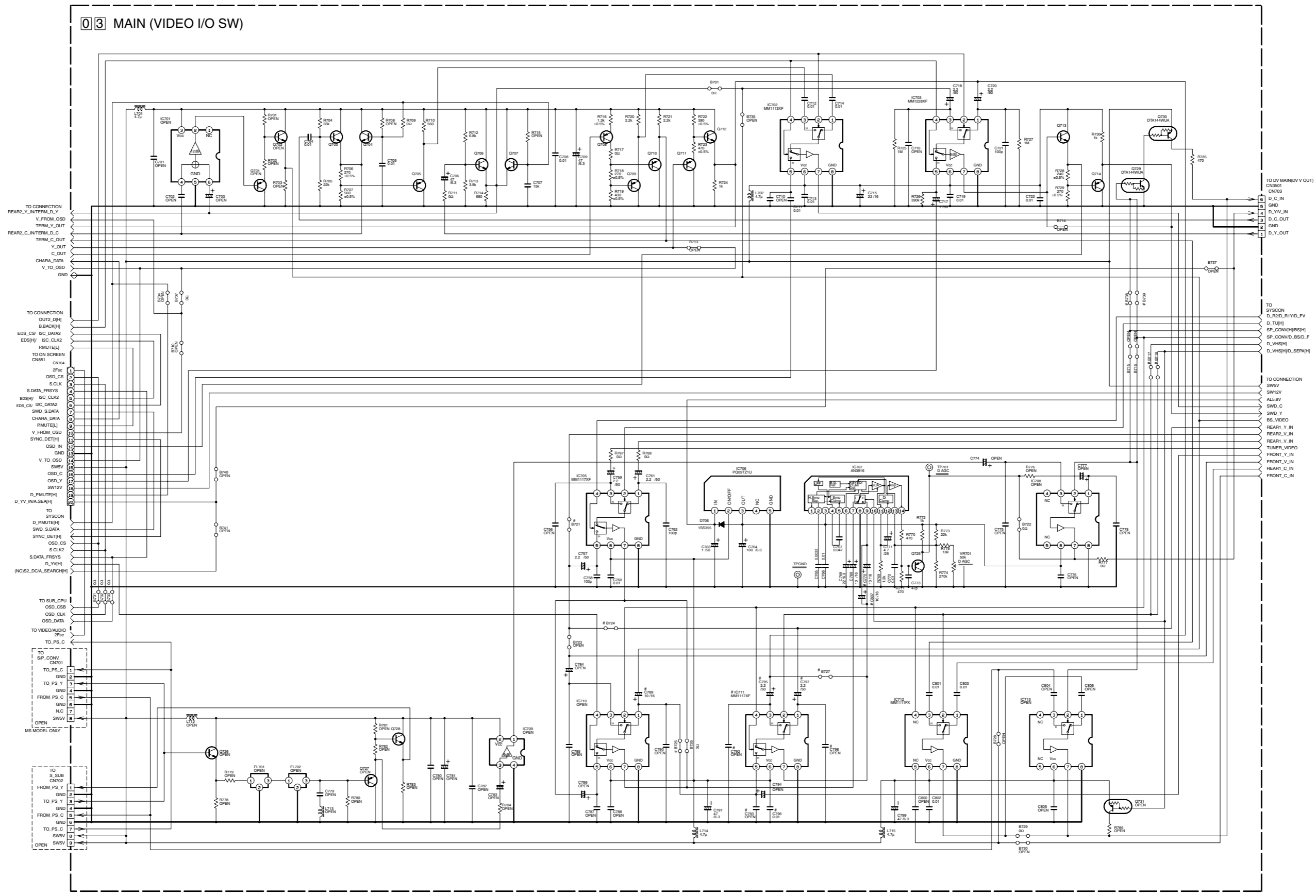
NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

⊕ ELECTROLYTIC
C CERAMIC
M MYLAR
N NON POLAR

p10306001a_rev0

4.7 VIDEO I/O SWITCH 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.



TO CONNECTION REAR_Y_INTERM_D_Y V_FROM_OSD TERM_Y_OUT REAR_C_INTERM_D_C TERM_C_OUT Y_OUT C_OUT CHARA_DATA V_TO_OSD GND

TO CONNECTION OUTZ_DP[1] B[BACK][1] ED[S][1] IC[DATA] ED[S][1] IC[CLK2] PMUTE[1] TO ON SCREEN CN[1] JF[1] OSD_CS S.CLK S.DATA_FRSYS ED[S][1] IC[CLK2] ED[S][1] IC[DATA] SWD_S_DATA CHARA_DATA PMUTE[1] V_FROM_OSD SYNC_DET[1] OSD_IN GND V_TO_OSD SW5V OSD_C OSD_Y SW12V D_P[MUTE][1] D_YV_INA[SEARCH][1]

TO SYSCON D_P[MUTE][1] SWD_S_DATA SYNC_DET[1] OSD_CS S.CLK2 S.DATA_FRSYS D_YV[1] (NC)[S2][DATA][SEARCH][1]

TO SUB_CPU OSD_CSB OSD_CLK OSD_DATA

TO VIDEO/AUDIO ZF[1] TO_PS_C

TO SP_CONV CN[01] TO_PS_C 1 GND 2 TO_PS_Y 3 GND 4 FROM_PS_C 5 GND 6 N.C. 7 SW5V 8 OPEN MS MODEL ONLY

TO S.SUBI CN[702] FROM_PS_Y 1 GND 2 TO_PS_Y 3 GND 4 FROM_PS_C 5 GND 6 TO_PS_C 7 SW5V 8 OPEN 9 SW5V

TO DV MAIN(DV V OUT) CN[01] CN[703] GND D.C.IN 4 D.VV.IN 5 D.C.OUT 6 GND D.Y.OUT 7

TO SYSCON D_P[01] RYID_FV D_TU[1] SP_CONV[1] BS[1] SP_CONV[1] BS[1] D_VHS[1] D_VHS[1] SEPA[1]

TO CONNECTION SW5V SW12V ALS.5V SWD_C SWD_Y BS_VIDEO REAR1_Y_IN REAR2_Y_IN REAR1_V_IN TUNER_VIDEO FRONT_Y_IN FRONT_V_IN REAR1_C_IN FRONT_C_IN

DIFFERENCE TABLE

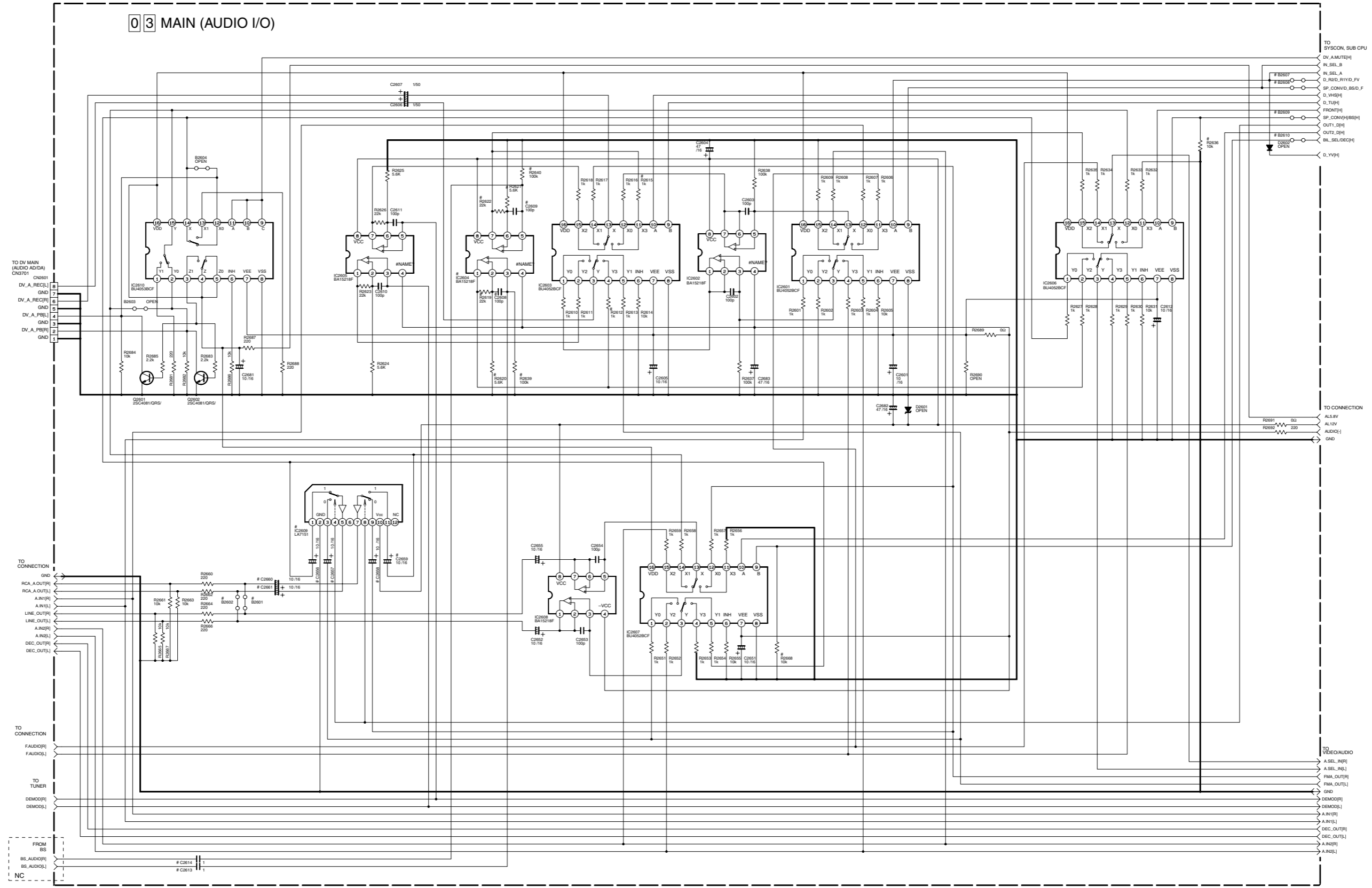
S.NO	IC711	C788, C789, C793, C795, C798, C807	C770
MODEL			
DOM	O		X
US	X		O

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

ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

4.8 AUDIO I/O 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.



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DIFFERENCE TABLE

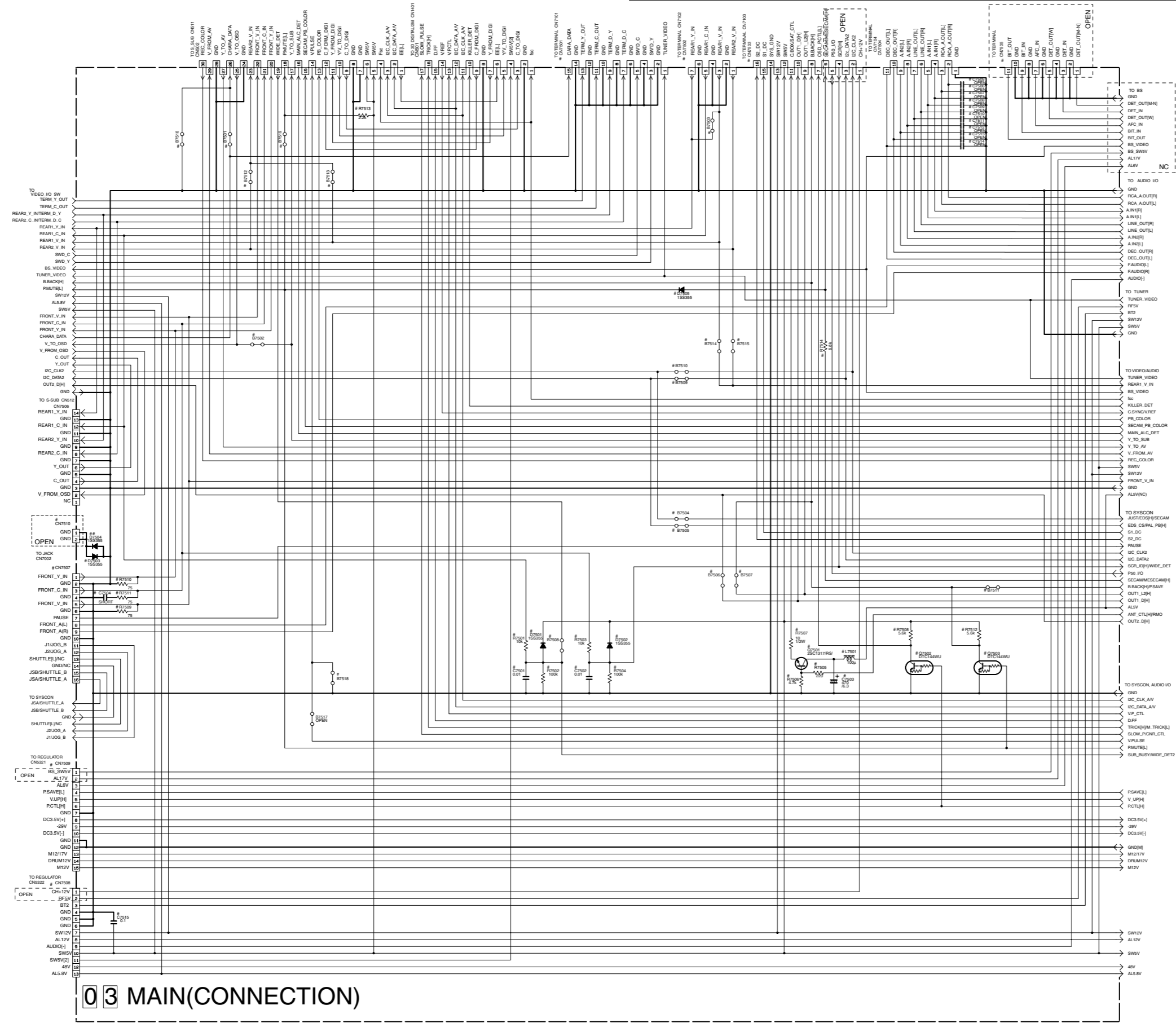
SYMBOL	MODEL	SYMBOL	MODEL	SYMBOL	MODEL
B2601, B2602	B2607, B2608	C2609	C2604, C2601	IC2604	R2612, R2615
With DVC	X	O	O	With BS	O
With HDD	O	X	X	With BS	X

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

4.9 CONNECTION 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.



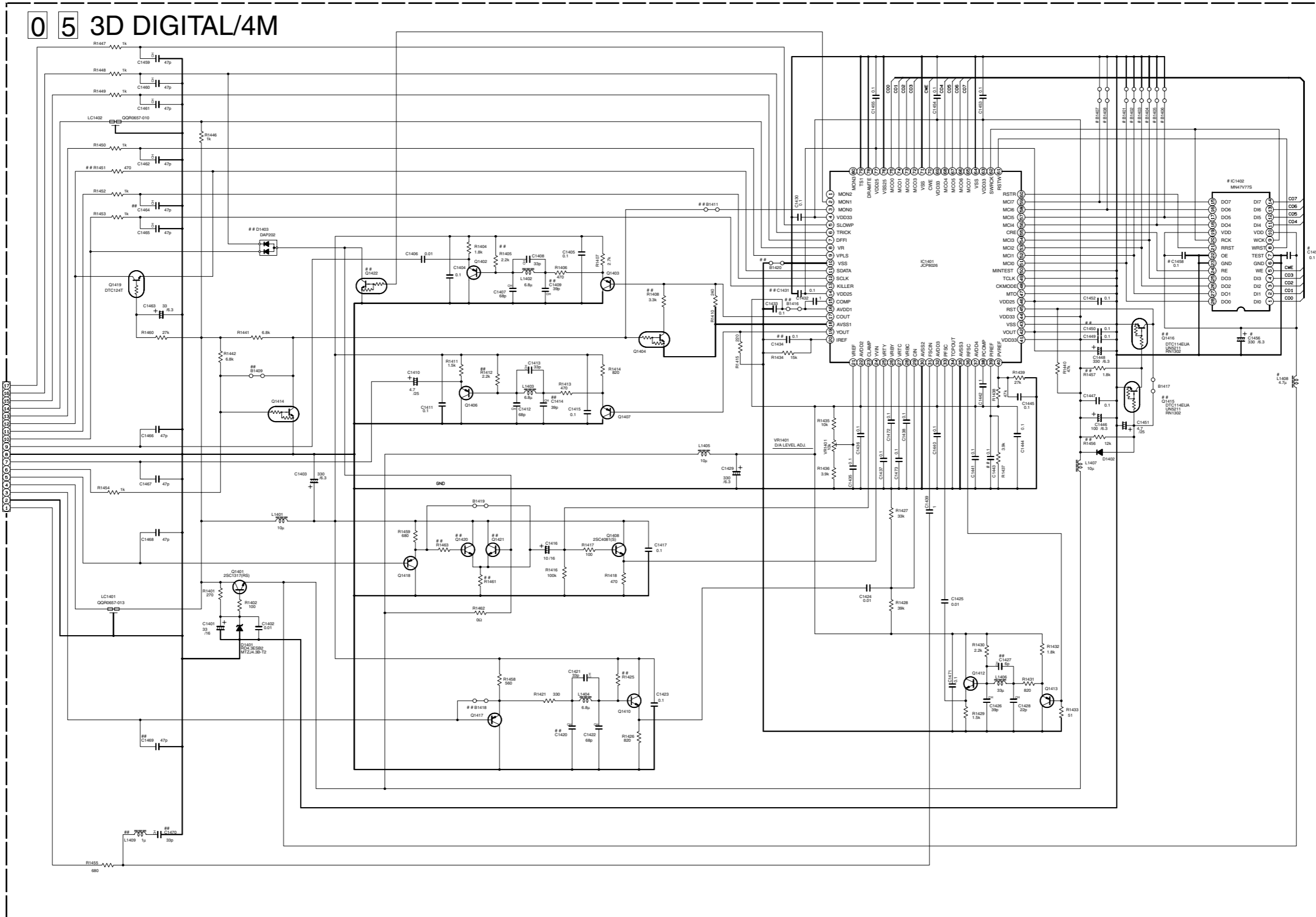
DIFFERENCE TABLE

Model	EU	EK	MS	DOM	US	HM-H051	US
B7501	X	X	X	X	X	O	
B7502	X	X	X	X	X	X	
B7503	O	O	O	O	X	X	
B7504	X	X	X	X	O	X	
B7505	X	X	X	X	X	X	
B7506	X	X	X	X	X	X	
B7507	X	X	X	X	X	X	
B7508	X	X	X	X	X	X	
B7509	O	O	O	X	X	X	
B7510	O	O	O	X	X	X	
B7511	O	O	O	O	X	X	
B7512	O	O	O	X	X	X	
B7513	X	X	X	O	O	O	
B7514	O	O	O	X	X	X	
B7515	X	X	X	O	O	O	
B7516	O	O	O	O	X	X	
B7517	X	X	O	X	X	X	
B7518	O	O	O	O	O	O	
B7519	X	X	X	O	O	O	
B7513	O	O	O	X	X	X	
R7501							
R7502							
R7503							
R7504							
C7501	X	X	X	X	X	O	
C7502							
D7501							
D7502							
C7505	X	X	X	X	X	X	
D7514	X	X	X	O	O	O	
Q7501							
R7505							
R7506	O	O	O	X	O	X	
R7507							
L7501	O	O	O	O	O	X	
C7503							
R7508	O	O	O	O	O	X	
Q7502	O	O	O	O	O	O	
R7512	X	X	X	X	X	O	
Q7503							
R7509							
R7510	X	X	X	X	X	X	
R7511	X	X	X	X	X	X	
C7504							
CN7510	X	X	X	X	X	X	
D7503							
CN7501	1-16	1-15	1-15	3-15	3-15	3-6	
CN7502	1-5	1-5	1-5	1-7	1-7	1-7	
CN7503	1-14	1-14	1-14	7-16	7-16	8-15	
CN7505	X	X	X	1-11	X	1-11	
CN7507	1-16	1-16	1-16	1-16	1-16	1-10	
CN7508	1-13	1-13	1-13	3-13	3-13	3-13	
CN7509	3-15	3-15	3-15	1-15	3-15	1-15	
D7505	O	O	O	X	X	X	
R7514	O	O	O	X	X	X	

Marked elements may differ depending on the model. Be sure to check 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
MYLER
NON POLAR

4.10 3D DIGITAL / 4M SCHEMATIC DIAGRAM



p10277001a_rev1

NOTES UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.
 ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

MARK ELEMENTS ARE NOT MOUNTED.
 ALL DIODES ARE 1SS133 OR 1N4148
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A(QR) OR 2PA1576
 ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS) OR 2PC4081
 ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC1449WA OR UN2621E OR RN1309

DIFFERENCE TABLE

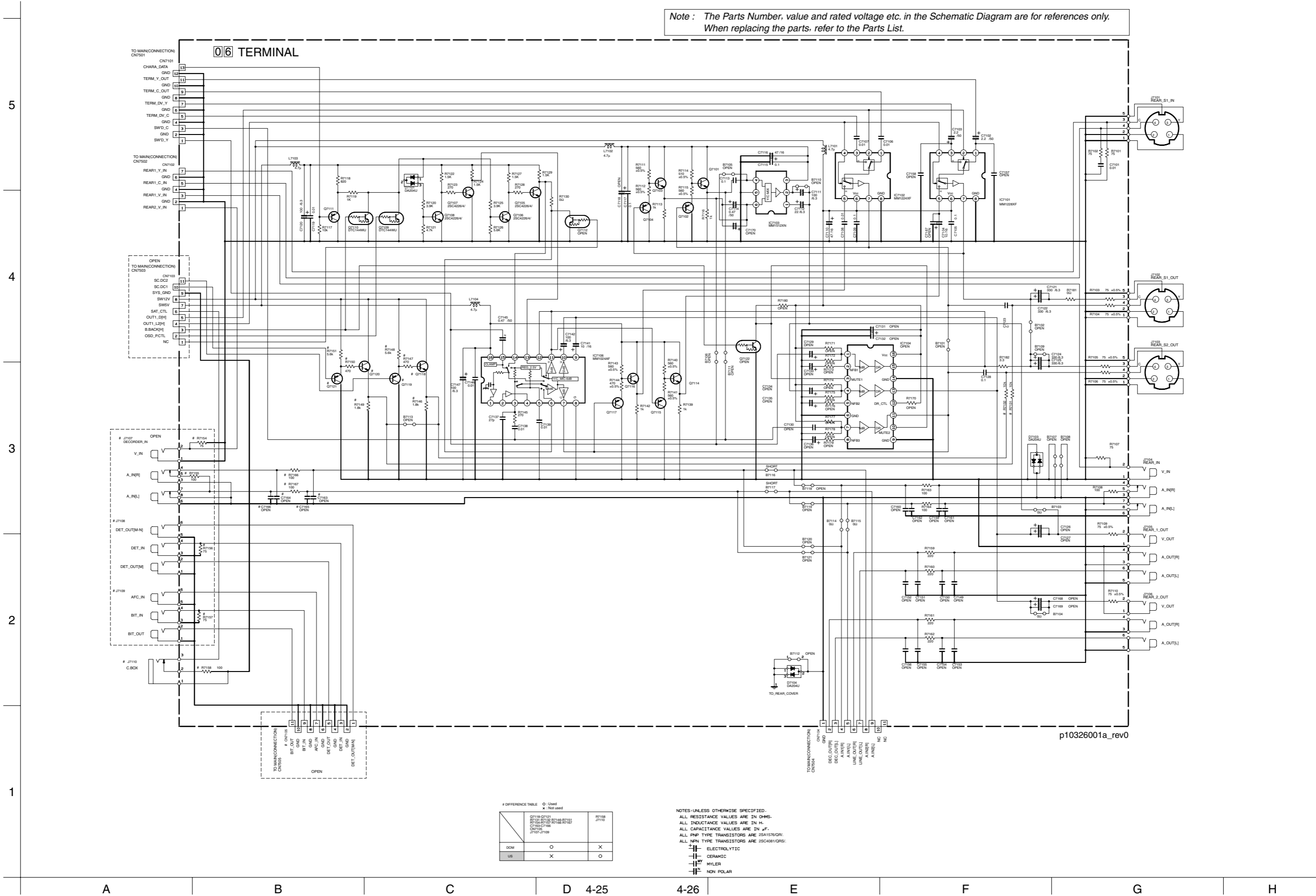
SYSTEM	IC1402, L1408 C1405, C1407, C1408	B1401-B1406
4M	○	×
3M	×	○

5
4
3
2
1

A B C D 4-23 4-24 E F G H

4.11 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.



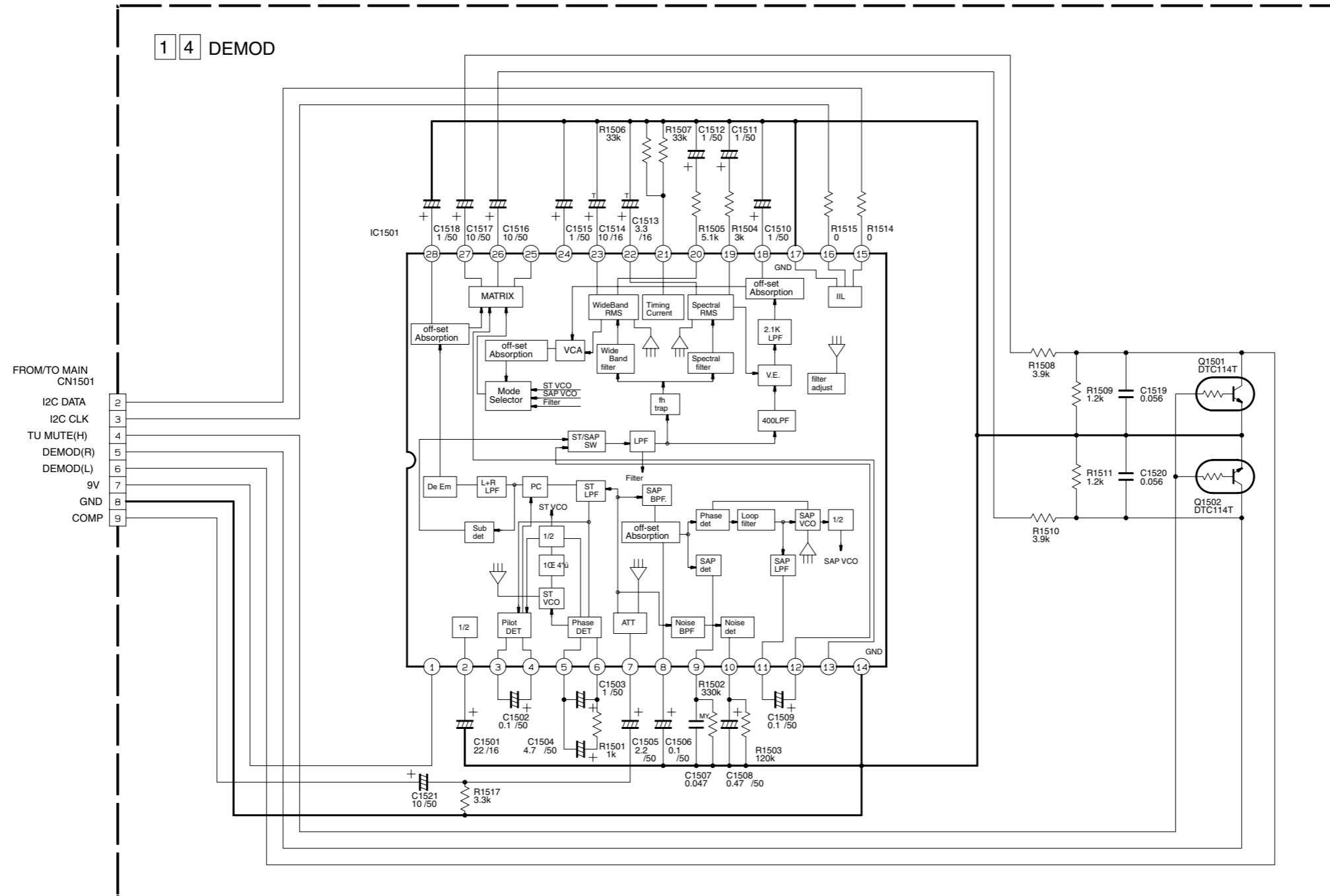
p10326001a_rev0

REFERENCE TABLE

	O : Used	X : Not used
Q7118 Q7121	O	X
R7118 R7121 R7148 R7151	O	X
R7154 R7155 R7156 R7157	O	X
C7118 C7121	O	X
J7107 J7108	O	X
US	X	O

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 2SC4157(Q/R).
 ALL NPN TYPE TRANSISTORS ARE 2SC4081(Q/R/S).
 ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

4.12 DEMODULATOR SCHEMATIC DIAGRAM



p97596_rev0

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

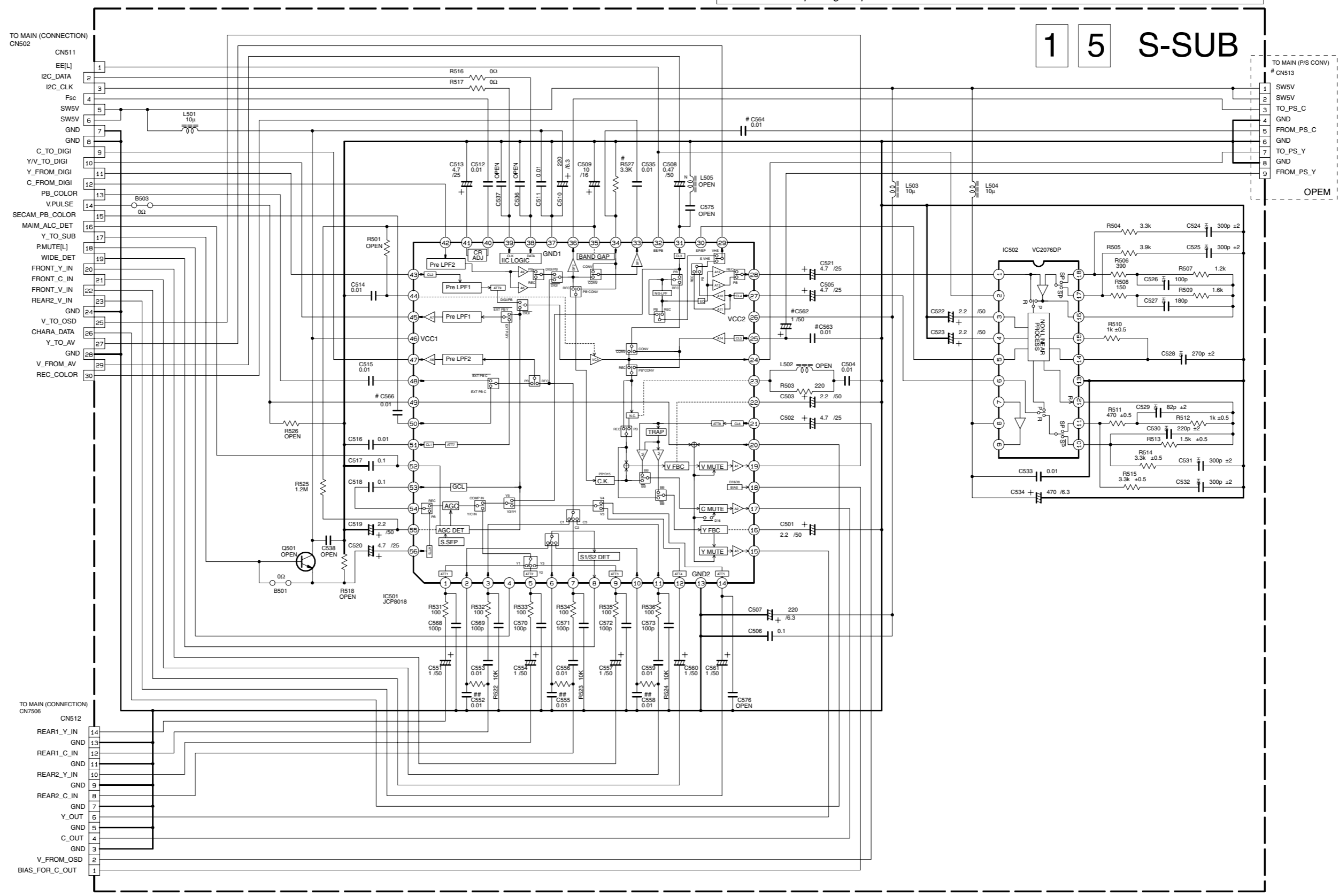
5
4
3
2
1

A B C D 4-27 4-28 E F G H

4.13 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.

1 5 S-SUB



p20168001a_rev0

DIFFERENCE TABLE

	○ Used	× Not used
MS	○	×
OTHERS	×	○

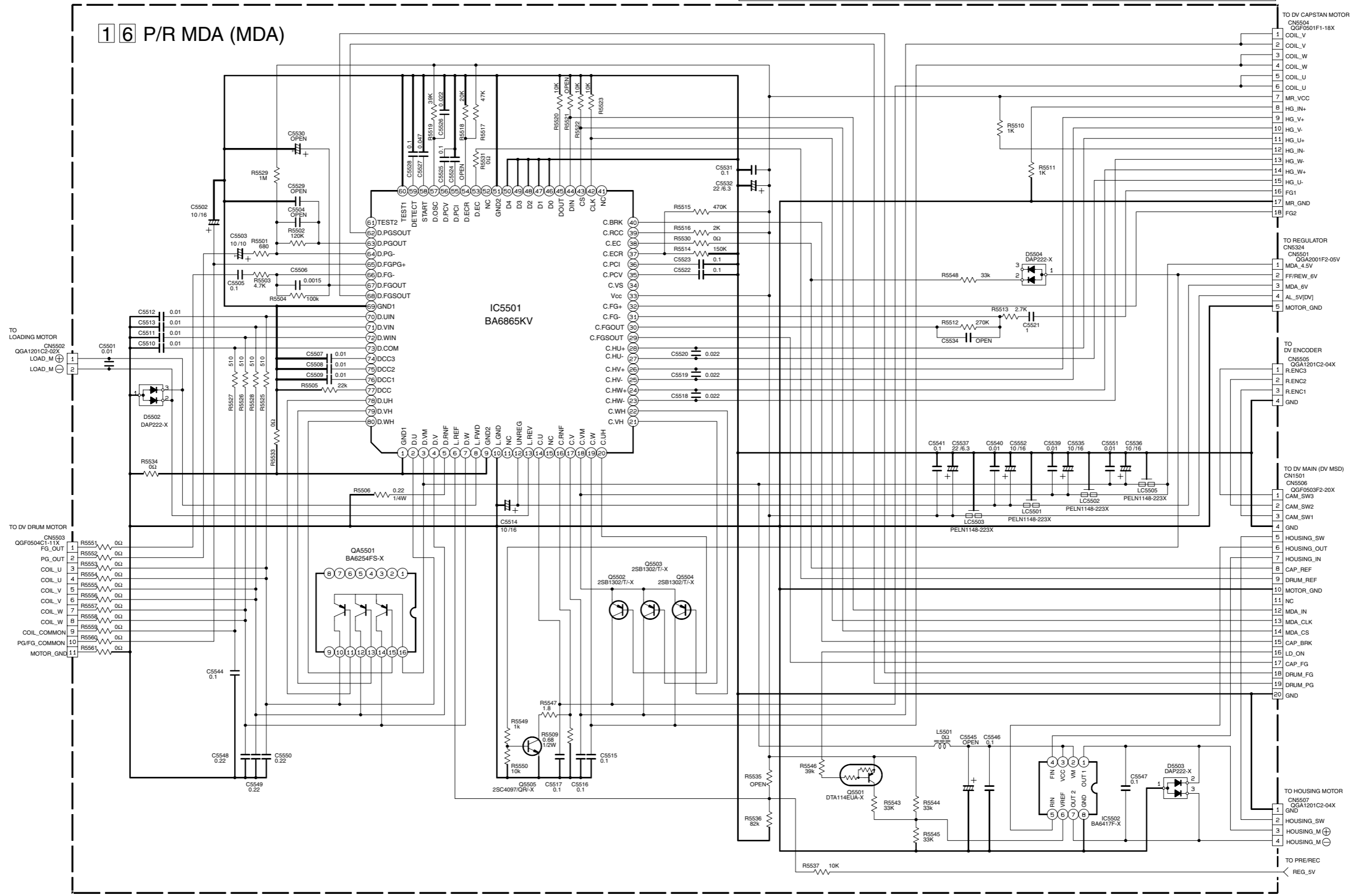
Marked elements may differ depending on the model. Be sure to check the Parts List.

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

- ⊥ ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

4.14 MDA 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.



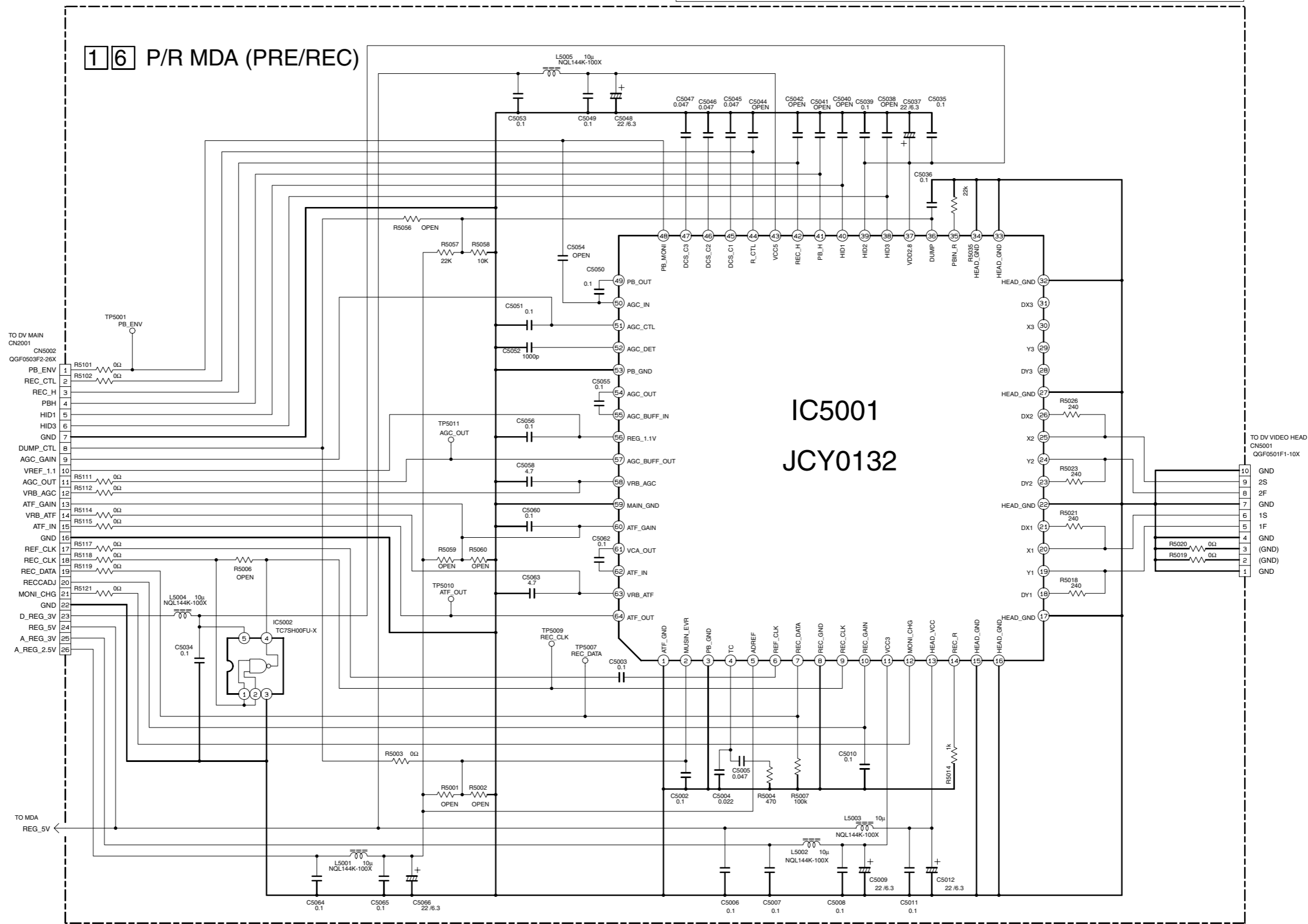
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

p20172001a_rev0

4.15 PRE / REC 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.



p20171001a_rev0

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

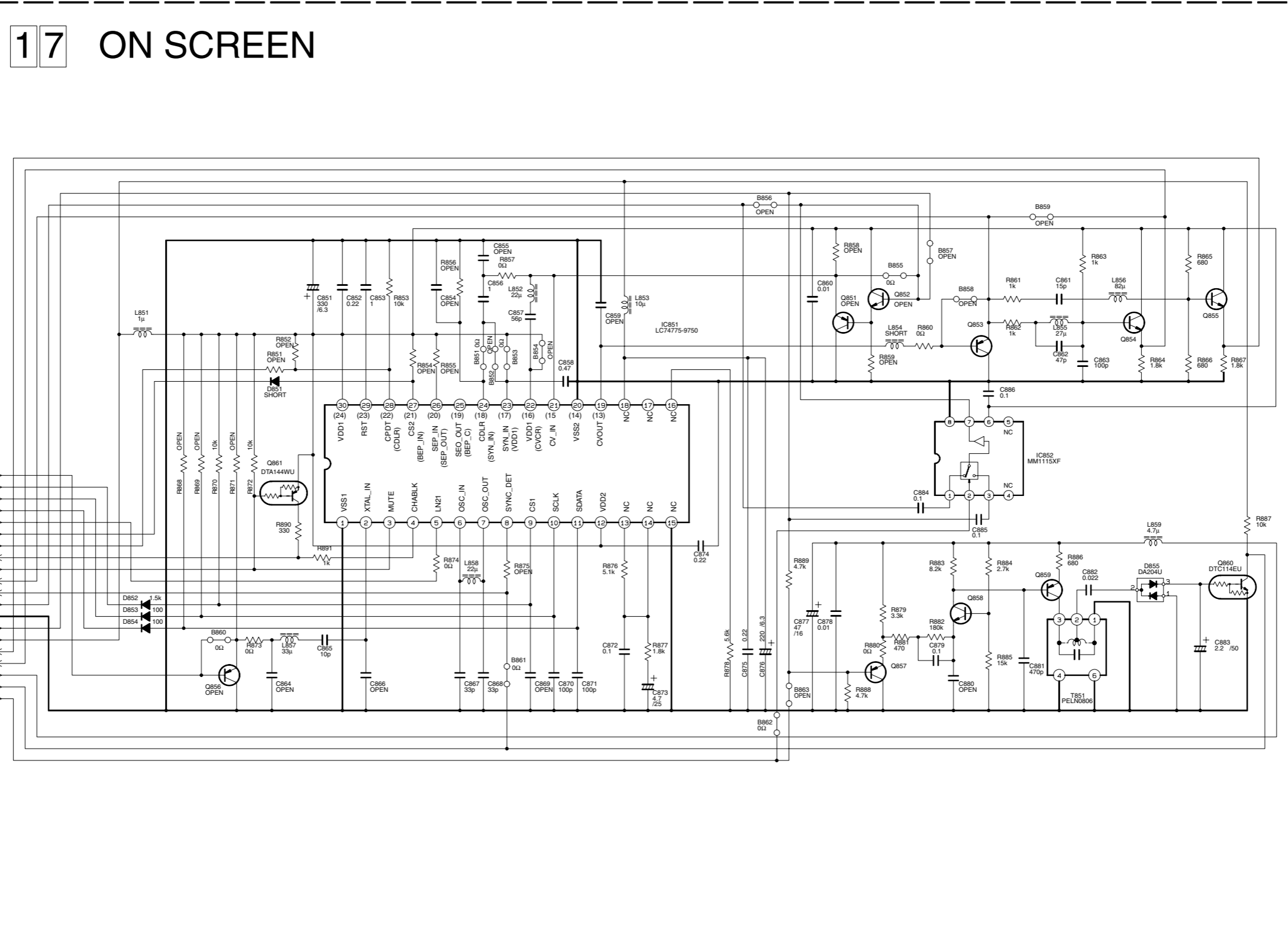
ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

5
4
3
2
1

A B C D 4-33 4-34 E F G H

4.16 ON SCREEN 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.



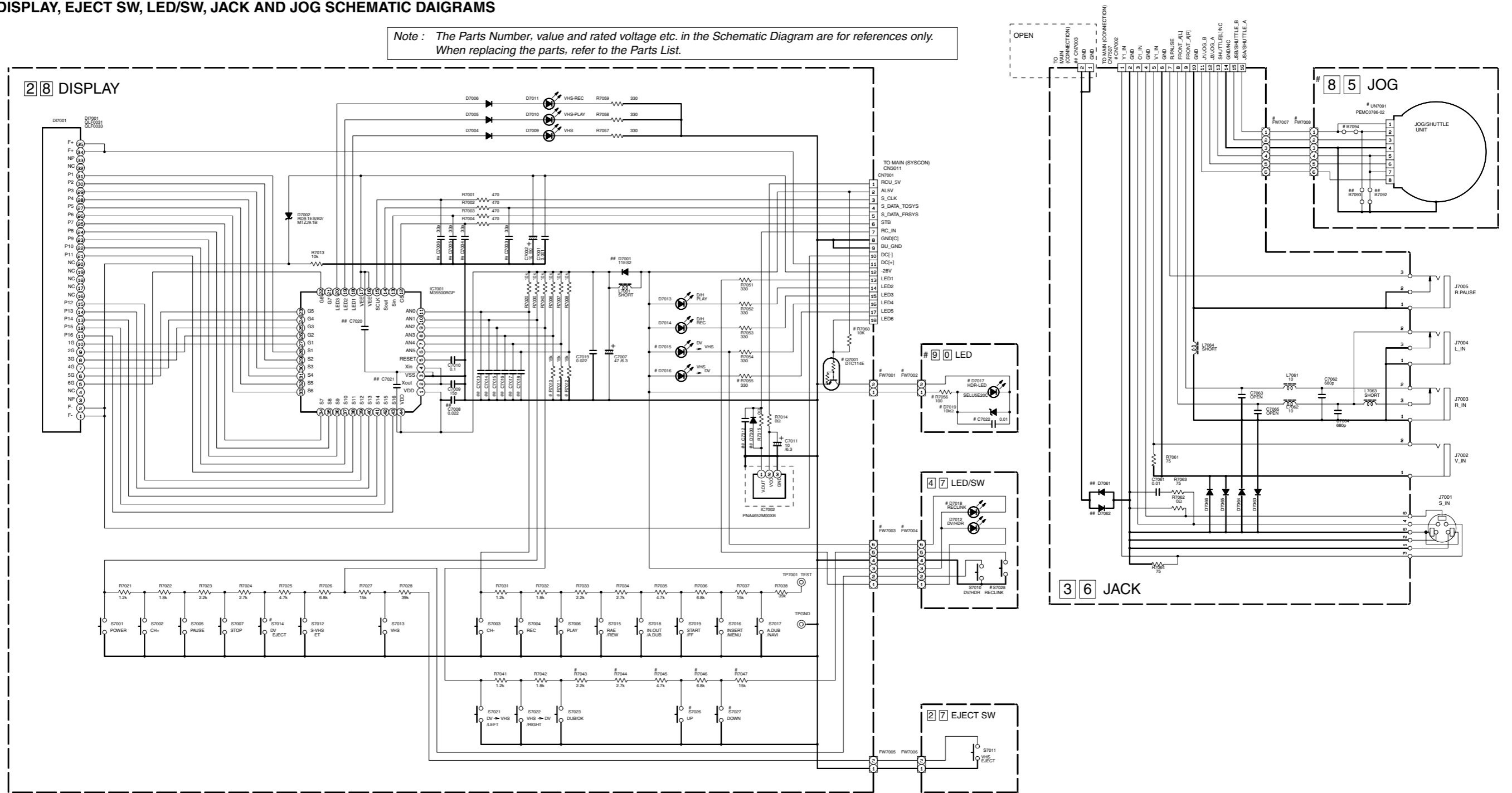
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR5/
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QRV.

4.17 DISPLAY, EJECT SW, LED/SW, JACK AND JOG SCHEMATIC DAIGRAMS

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.



p10309001a_rev1

DIFFERENCE TABLE

	Used	Not used
# DIFFERENCE TABLE	○ Used	✗ Not used
# [8] JOG		
UN7091	○	
S7094	○	
FW7007	○	
FW7008	○	
CN7002		
D7017	○	
FW7001	○	
FW7002	○	
R7060	○	
Q7001	○	
D7018	○	
S7028	○	
R7044	○	
R7045	○	
R7046	○	
R7047	○	
S7014	○	
D7015	○	
D7016	○	
R7055	○	
DVS2 /V520	○	
HDS1	✗	

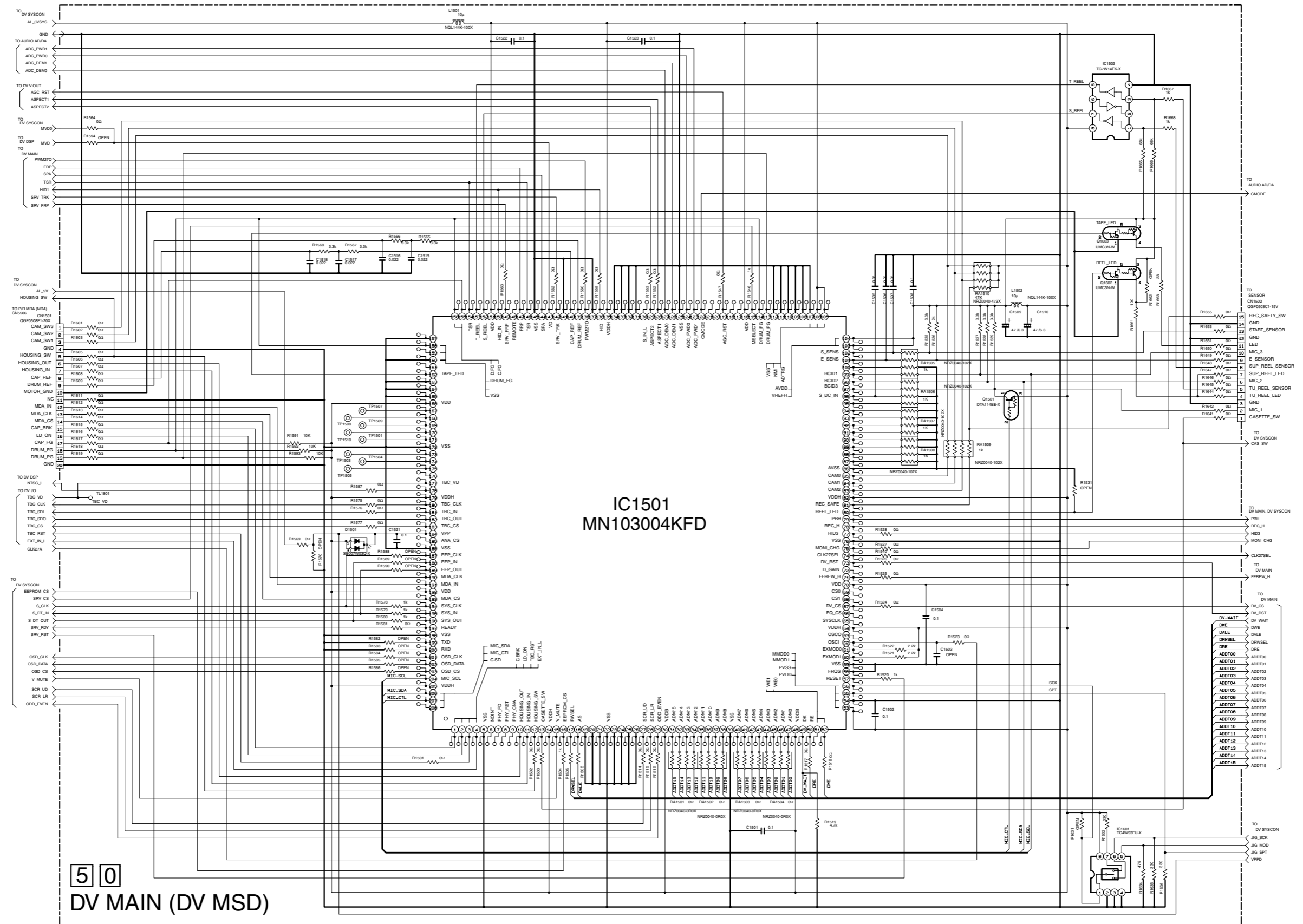
NOTES: UNLESS OTHERWISE SPECIFIED, ALL RESISTANCE VALUES ARE IN OHMS. ALL INDUCTANCE VALUES ARE IN H. ALL DIODES ARE 1N4148M OR 1SS133. ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR
 ##:NOT USED

4.19 DV MSD 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.

5
4
3
2
1



50 DV MAIN (DV MSD)

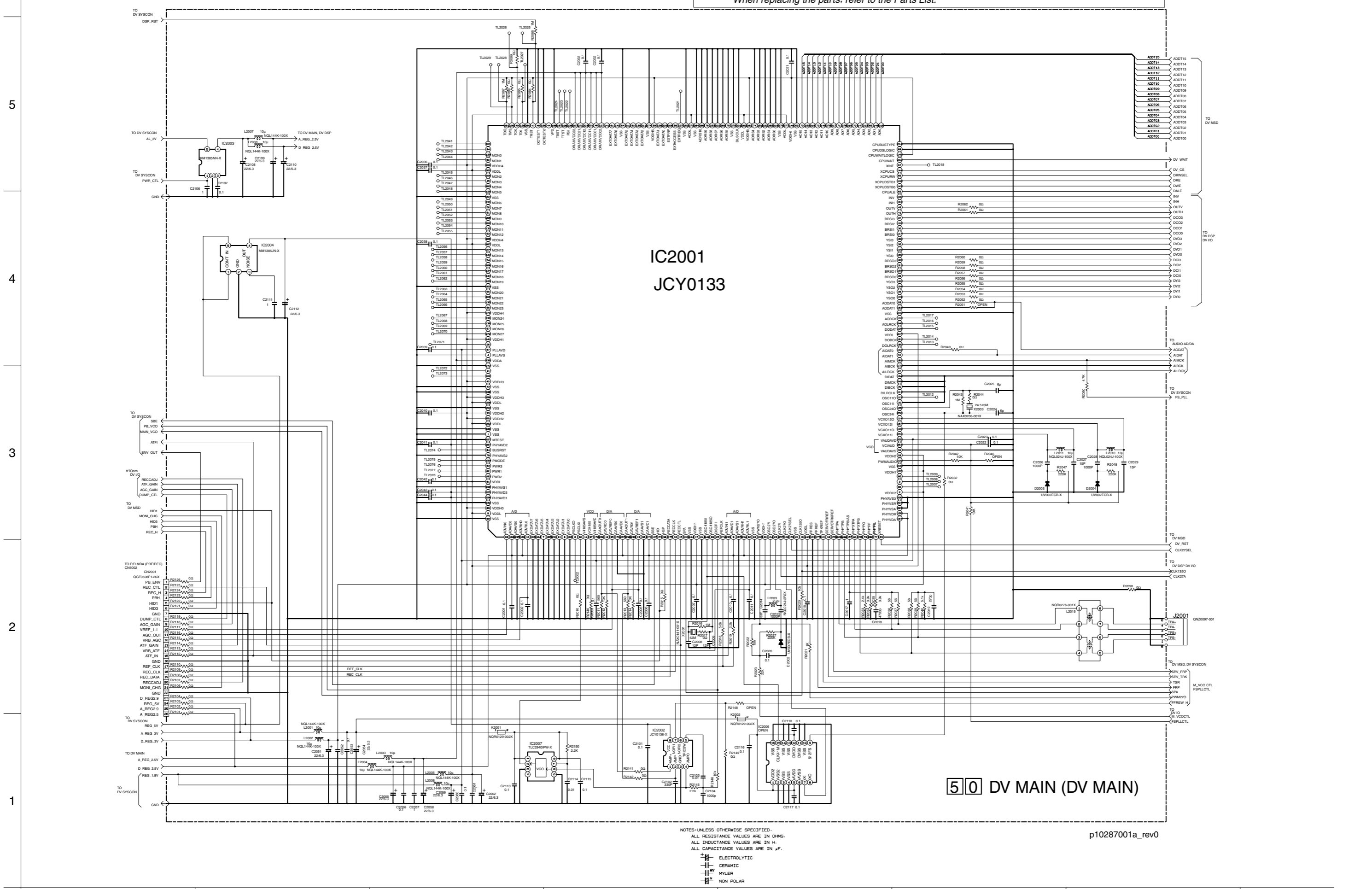
p10286001a_rev0

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

A B C D 4-41 4-42 E F G H

4.20 DV MAIN 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.



IC2001
JCY0133

50 DV MAIN (DV MAIN)

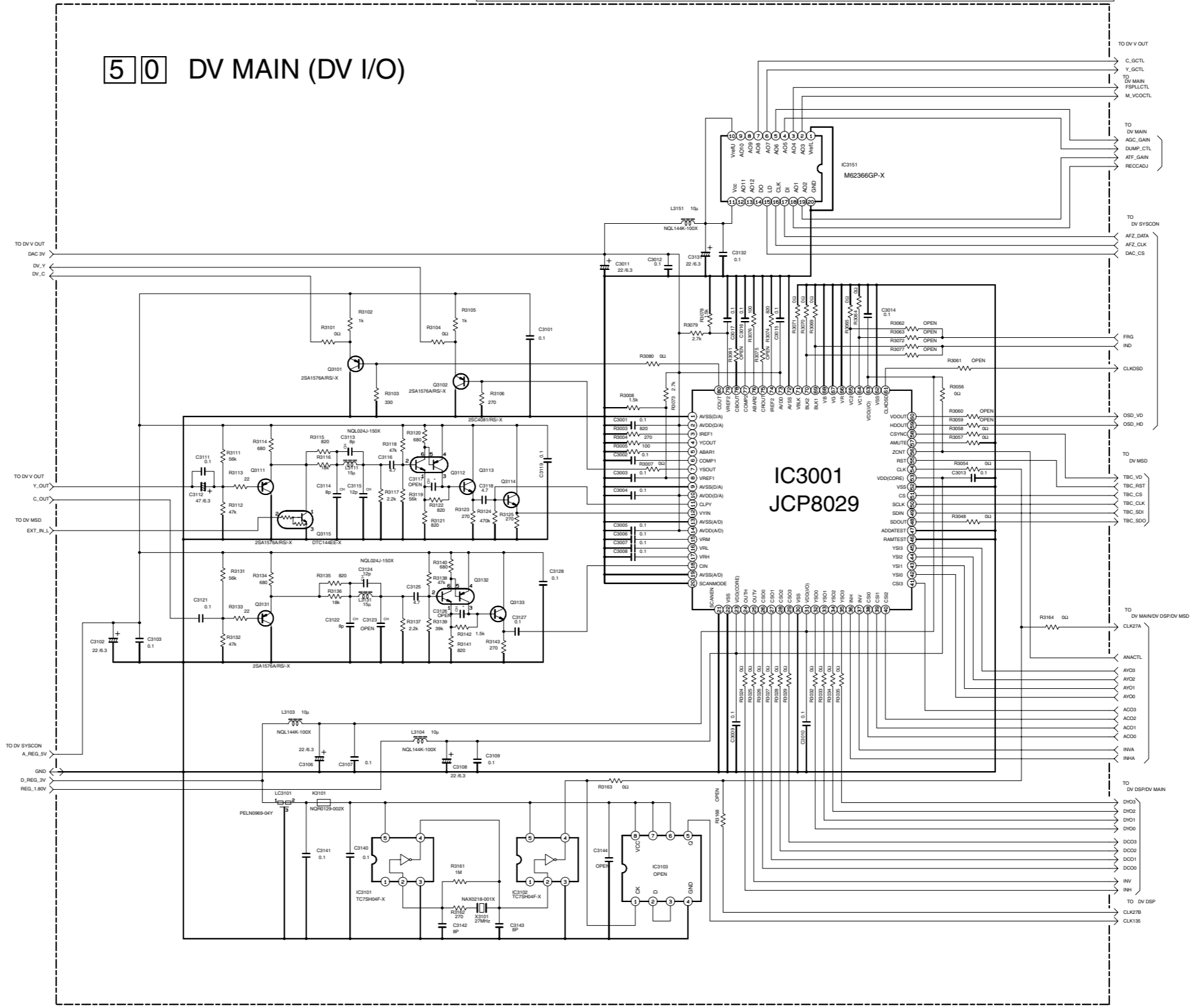
NOTES-UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.
ELECTROLYTIC
CERAMIC
MYLAR
NON POLAR

p10287001a_rev0

4.21 DV I/O 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.

5 0 DV MAIN (DV I/O)



p10288001a_rev0

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

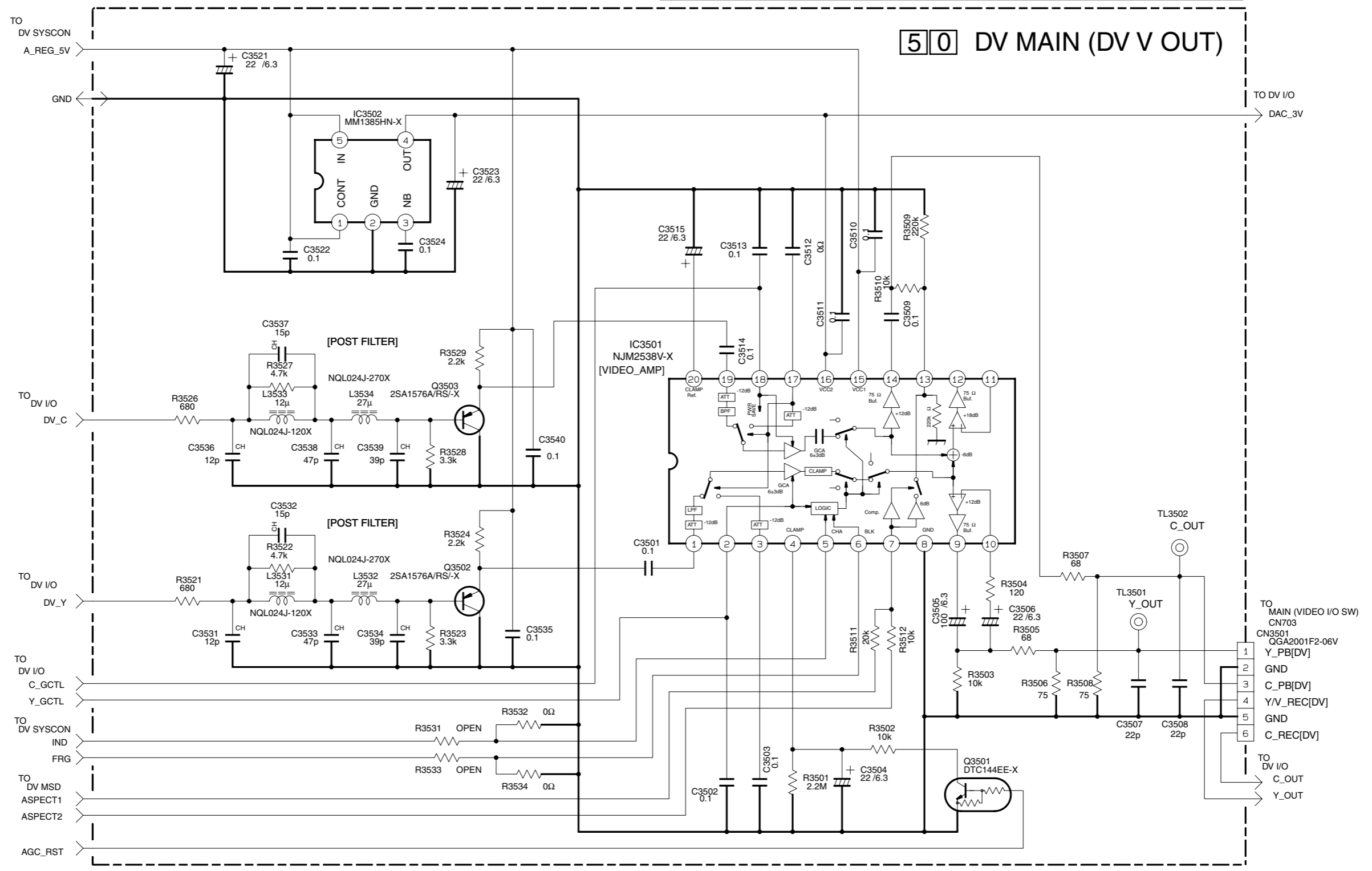
ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

5
4
3
2
1

A B C D 4-45 4-46 E F G H

4.22 DV V OUT 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.



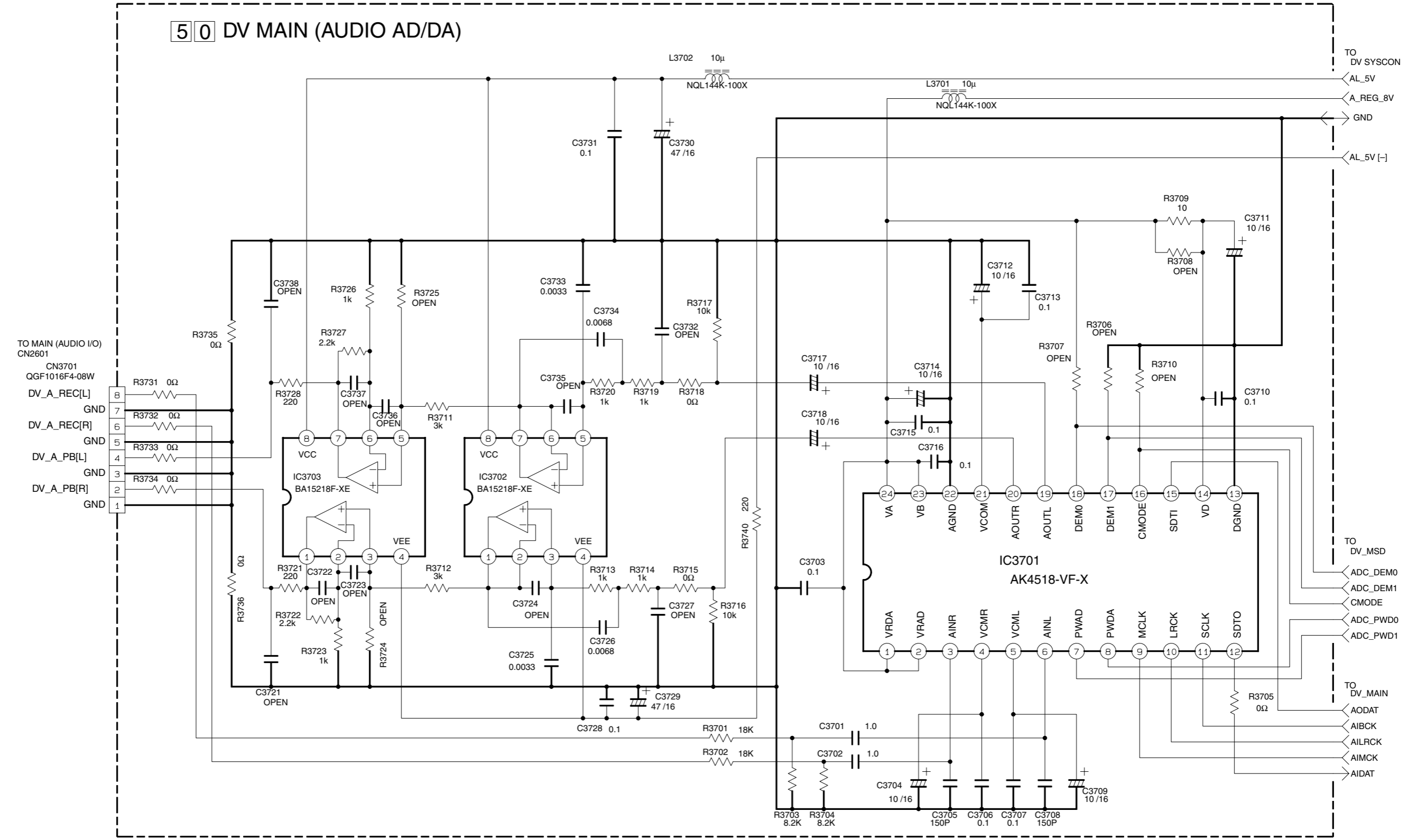
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.

- ELECTROLYTIC
- CERAMIC
- MYLAR
- NON POLAR

p30073001a_rev0

4.23 AUDIO AD/DA 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.



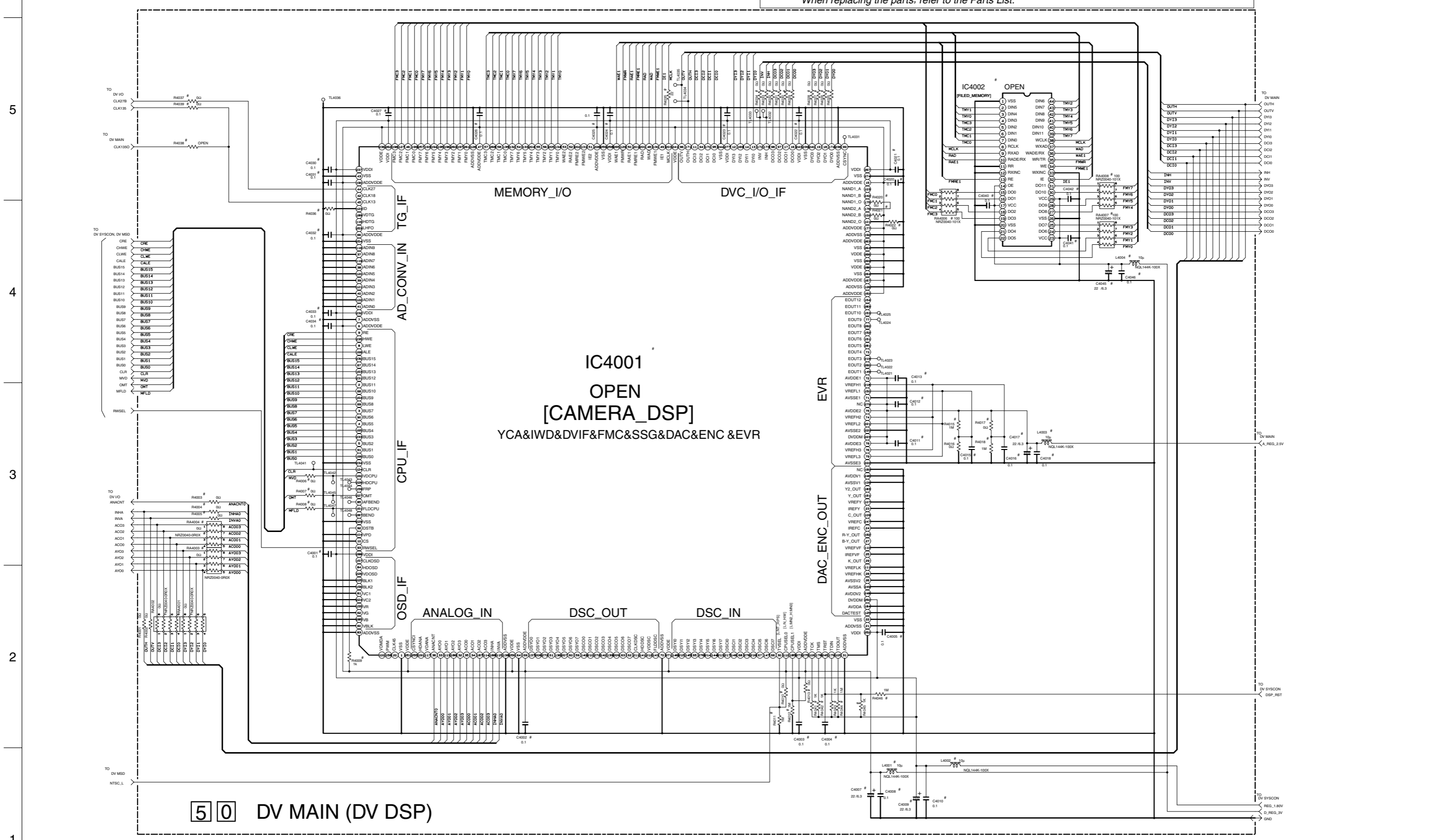
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

p30074001a_rev0

4.24 DV DSP 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.



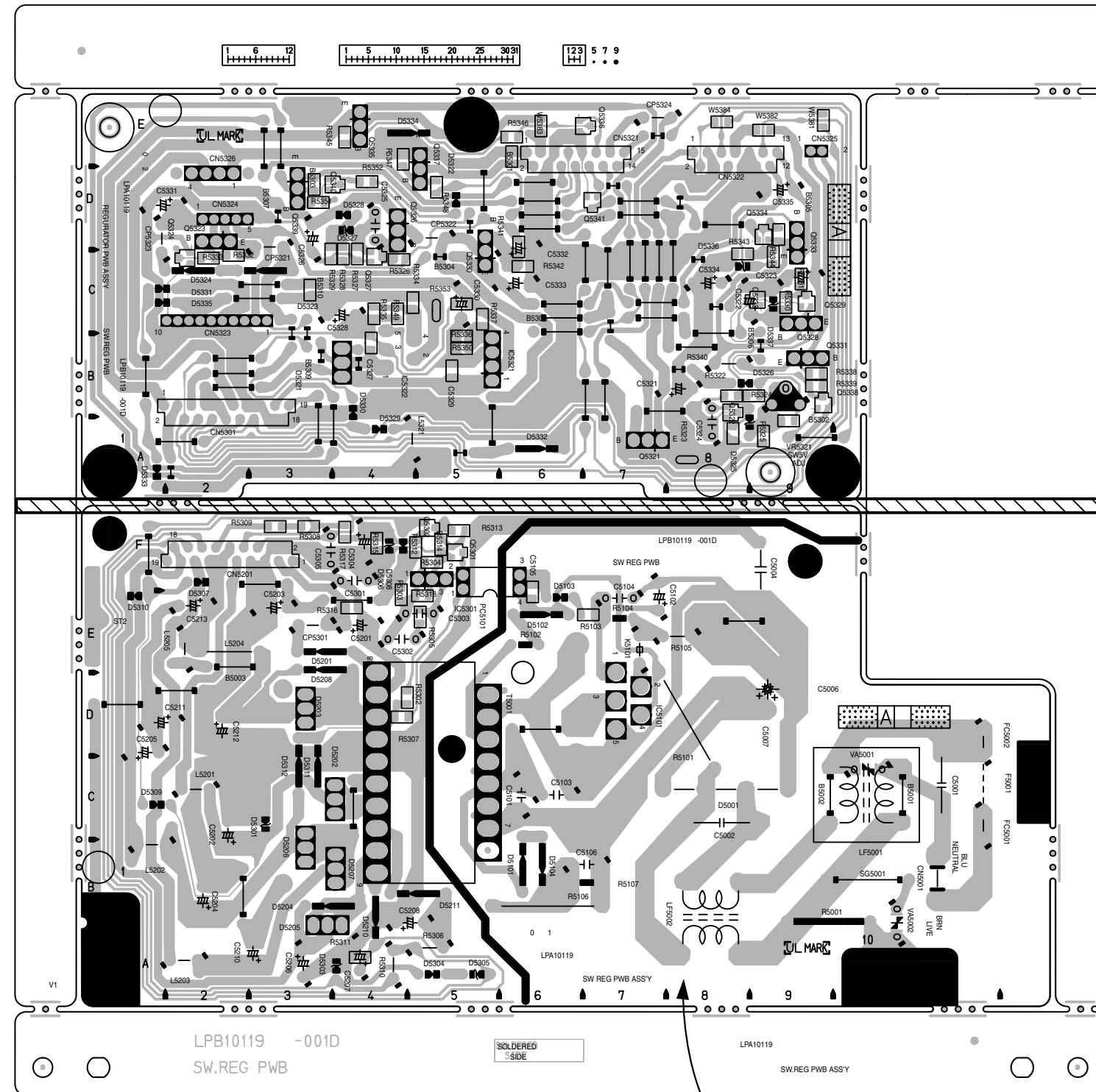
50 DV MAIN (DV DSP)

p10289001a_rev0

NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN µF.
 [Symbol] ELECTROLYTIC
 [Symbol] CERAMIC
 [Symbol] MYLER
 [Symbol] NON POLAR

4.25 SWITCHING REGULATOR AND REGULATOR CIRCUIT BOARDS

<01> SW REG, <02> REGULATOR
LPB10119-001C



COMPONENT PARTS LOCATION GUIDE <SWITCHING REGULATOR>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		CONNECTOR		D5311	A D 3C	R5306	A D 5A
C5001	A D 11D	CN5001	A D 11B	D5312	A D 3C	R5307	B C 4D
C5002	A D 8C	CN5201	A D 3F	IC			
C5004	A D 9E	DIODE				R5308	B C 3F
C5006	A D 8D	D5001	A D 7C	IC5101	A D 7E	R5309	B C 3F
C5007	A D 9D	D5101	A D 6B	IC5301	A D 5F	R5310	A D 4A
C5101	A D 6C	D5102	A D 6E	COIL			
C5102	A D 7E	D5103	A D 6E	L5201	A D 2C	R5311	B C 4A
C5103	A D 6C	D5104	A D 6C	L5202	A D 2B	R5312	B C 5F
C5104	A D 7E	D5201	A D 4E	L5203	A D 2A	R5313	B C 5F
C5105	B C 6E	D5202	A D 4C	L5204	A D 3E	R5314	B C 5F
C5106	A D 6B	D5203	A D 3D	L5205	A D 2E	R5315	B C 4F
C5201	A D 4E	D5204	A D 3A	TRANSISTOR			
C5202	A D 2B	D5205	A D 4B	Q5301	B C 5F	OTHER	
C5203	A D 3E	D5206	A D 3B	Q5302	B C 5F	CP5301	A D 3E
C5204	A D 2B	D5207	A D 4B	RESISTOR			
C5205	A D 1D	D5208	A D 4E	R5001	A D 9B	F5001	A D 11C
C5206	A D 3A	D5210	A D 4B	R5101	A D 8C	FC5001	A D 11C
C5207	A D 4A	D5211	A D 5B	R5102	A D 6E	K5101	A D 7E
C5208	A D 4B	D5301	A D 3C	R5103	B C 7E	LF5001	A D 10C
C5210	A D 3A	D5303	A D 4A	R5104	A D 7E	PC5101	A D 5F
C5211	A D 2D	D5304	A D 5A	R5105	A D 7E	SG5001	A D 9B
C5212	A D 2D	D5305	A D 5A	R5106	A D 5B	T5001	A D 5D
C5213	A D 2E	D5306	A D 4F	R5107	A D 7B	VA5001	A D 10C
C5301	A D 4F	D5307	A D 2F	R5302	B C 4D	VA5002	A D 10A
C5302	A D 5E	D5308	A D 4F	R5303	B C 4E		
C5303	A D 5E	D5309	A D 1C	R5304	B C 5F		
C5304	A D 4F	D5310	A D 1E	R5305	B C 5E		
C5305	A D 3F						

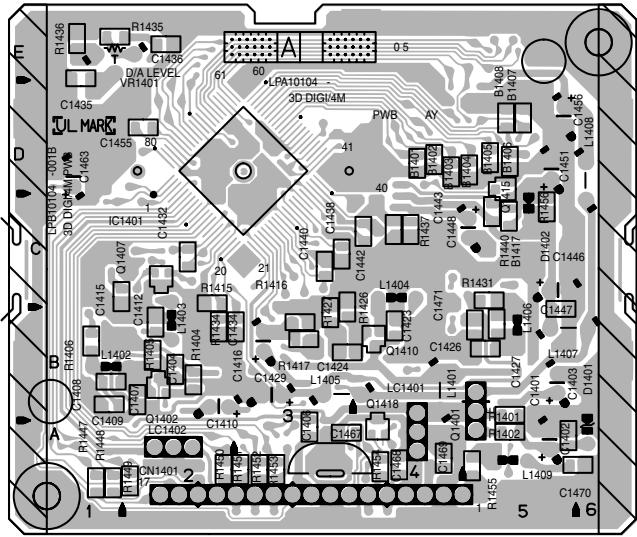
COMPONENT PARTS LOCATION GUIDE <REGULATOR>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		D5323	A D 3C	Q5328	A D 9C	R5335	B C 4C
C5321	A D 7B	D5324	A D 2C	Q5329	B C 9C	R5336	B C 5B
C5322	A D 9C	D5325	A D 9B	Q5330	A D 5C	R5337	B C 5C
C5323	A D 9C	D5326	A D 9B	Q5331	A D 9B	R5338	B C 9B
C5324	A D 8A	D5327	A D 4D	Q5332	B C 9C	R5339	B C 9B
C5325	A D 4D	D5328	A D 4D	Q5333	A D 9C	R5340	A D 8B
C5326	A D 3D	D5329	A D 4A	Q5334	B C 9D	R5341	B C 6D
C5327	B C 4B	D5330	A D 4A	Q5335	A D 4E	R5342	B C 6C
C5328	A D 3C	D5331	A D 1C	Q5336	A D 5E	R5343	B C 8C
C5329	B C 5B	D5332	A D 6A	Q5337	A D 5E	R5344	B C 9C
C5330	A D 5C	D5333	A D 1A	Q5338	B C 9B	R5345	B C 4E
C5331	A D 2D	D5334	A D 4E	Q5339	A D 3D	R5346	B C 6E
C5332	A D 6D	D5335	A D 1C	Q5340	B C 4D	R5347	B C 4E
C5333	A D 6C	D5336	A D 8C	Q5341	B C 7D	R5348	B C 5D
C5334	A D 8C	D5337	A D 9C	RESISTOR			
C5335	A D 9D	IC				R5349	B C 4C
CONNECTOR		IC5321	A D 5B	R5322	B C 8B	R5350	B C 5B
CN5301	A D 1B	IC5322	A D 4B	R5323	B C 8A	R5351	B C 3D
CN5321	A D 6E	COIL				R5324	B C 9B
CN5322	A D 8E	L5321	A D 4A	R5325	B C 9A	R5352	B C 4D
CN5323	A D 3C	TRANSISTOR				R5326	B C 4C
CN5324	A D 2D	Q5321	A D 7A	R5327	B C 4C	OTHER	
CN5325	A D 9E	Q5322	B C 8B	R5328	B C 4C	CP5321	A D 3D
CN5326	A D 2D	Q5323	A D 2D	R5329	B C 3C	CP5322	A D 5D
DIODE		Q5324	B C 2C	R5330	B C 9C	CP5323	A D 1C
D5321	A D 4B	Q5326	A D 4D	R5331	B C 9C	CP5324	A D 8E
D5322	A D 5D	Q5327	B C 4C	R5332	B C 2C		
				R5333	B C 2C		
				R5334	B C 4C		

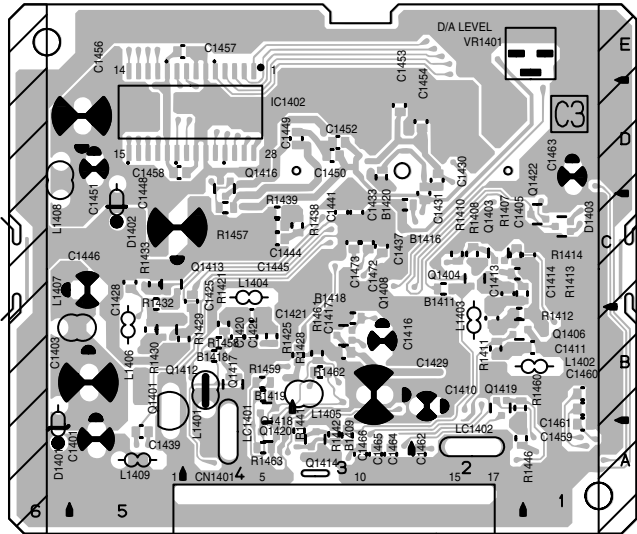
4.26 3D DIGITAL/4M IRCUIT BOARDS

<05> 3D DIGITAL/4M
LPB10104-001B

– FOIL SIDE(B) –



– COMPONENT SIDE(A) –

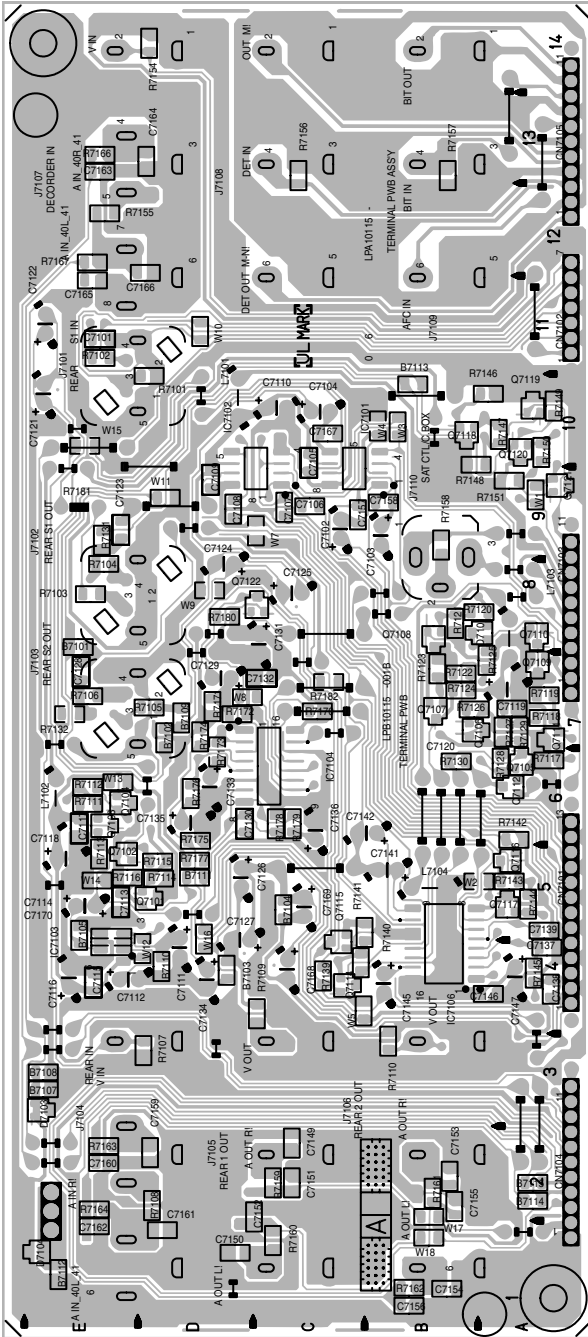


COMPONENT PARTS LOCATION GUIDE <3D DIGITAL/4M>

REF.NO.	LOCATION			REF.NO.	LOCATION			REF.NO.	LOCATION		
CAPACITOR											
C1401	A	D	5A	C1465	A	C	3A	R1414	A	C	2C
C1402	B	C	5A	C1466	A	C	3A	R1415	B	C	2C
C1403	A	D	5B	C1467	B	C	3A	R1416	B	C	3B
C1404	B	C	2B	C1468	B	C	4A	R1417	B	C	3B
C1405	A	C	1C	C1469	B	C	4A	R1418	A	C	3B
C1406	B	C	3A	C1470	B	C	6A	R1421	A	C	4B
C1407	B	C	2B	C1471	B	C	5B	R1425	A	C	4B
C1408	B	C	1B	C1472	A	C	3C	R1426	B	C	3C
C1409	B	C	1B	C1473	A	C	3C	R1427	B	C	3C
C1410	A	D	2B					R1428	A	C	3B
C1411	A	C	1B	CONNECTOR				R1429	A	C	4B
C1412	B	C	2B	CN1401	A	D	5A	R1430	A	C	5B
C1413	A	C	2C					R1431	B	C	5C
C1414	A	C	2C	DIODE				R1432	A	C	5C
C1415	B	C	1C	D1401	A	D	6B	R1433	A	C	5C
C1416	A	D	3B	D1402	A	D	5D	R1434	B	C	2B
C1417	A	C	3B	D1403	A	C	1C	R1435	B	C	1E
C1420	A	C	4B	IC				R1436	B	C	1E
C1421	A	C	4B	IC1401	B	C	3D	R1437	B	C	4C
C1422	A	C	4B	IC1402	A	C	4D	R1438	A	C	3C
C1423	B	C	4B	COIL				R1439	A	C	4C
C1424	B	C	3B	L1401	A	D	4B	R1440	B	C	5C
C1425	A	C	4C	L1402	A	D	1B	R1441	A	C	3A
C1426	B	C	5B	L1403	A	D	2B	R1442	A	C	3A
C1427	B	C	5B	L1404	A	D	4C	R1446	A	C	2A
C1428	A	C	5C	L1405	A	D	4B	R1447	B	C	1A
C1429	A	D	3B	L1406	A	D	5B	R1448	B	C	1A
C1430	A	C	2D	L1407	A	D	6B	R1449	B	C	2A
C1431	A	C	2D	L1408	A	D	6A	R1450	B	C	2A
C1432	B	C	2C	L1409	A	D	5A	R1451	B	C	3A
C1433	A	C	3C					R1452	B	C	3A
C1434	B	C	3B	TRANSISTOR				R1453	B	C	3A
C1435	B	C	1E	Q1401	A	D	5B	R1454	B	C	4A
C1436	B	C	2E	Q1402	B	C	2B	R1455	B	C	5A
C1437	A	C	3C	Q1403	A	C	2C	R1456	B	C	5C
C1438	B	C	3C	Q1404	A	C	2C	R1457	A	C	4B
C1439	A	C	5A	Q1406	A	C	2B	R1458	A	C	4B
C1440	B	C	3C	Q1407	B	C	2C	R1459	A	C	2B
C1441	A	C	3C	Q1408	A	C	3B	R1460	A	C	4B
C1442	B	C	4C	Q1410	B	C	4B	R1461	A	C	3B
C1443	B	C	4C	Q1412	A	C	5B	R1462	A	C	3B
C1444	A	C	4C	Q1413	A	C	5C	R1463	A	C	4A
C1445	A	C	4C	Q1414	A	C	3A	VR1401	A	D	1E
C1446	A	D	5C	Q1415	B	C	5D				
C1447	B	C	5B	Q1416	A	C	4D	OTHER			
C1448	A	D	5C	Q1417	A	C	4B	LC1401	A	D	4A
C1449	A	C	4D	Q1418	B	C	4A	LC1402	A	D	2A
C1450	A	C	3D	Q1419	A	C	2B				
C1451	A	D	5D	Q1420	A	C	4A				
C1452	A	C	3D	Q1421	A	C	4B				
C1453	A	C	3D	Q1422	A	C	1C				
C1454	A	C	2D	RESISTOR							
C1455	B	C	2D	R1401	B	C	5B				
C1456	A	D	5D	R1402	B	C	5A				
C1457	A	C	5E	R1404	B	C	2B				
C1458	A	C	5D	R1405	B	C	2B				
C1459	A	C	1A	R1406	B	C	1B				
C1460	A	C	1B	R1407	A	C	2C				
C1461	A	C	1B	R1408	A	C	2C				
C1462	A	C	2A	R1410	A	C	2C				
C1463	A	D	1D	R1411	A	C	2B				
C1464	A	C	3A	R1412	A	C	2B				
				R1413	A	C	2C				

4.27 TERMINAL CIRCUIT BOARD

<06> TERMINAL LPB10115-001B



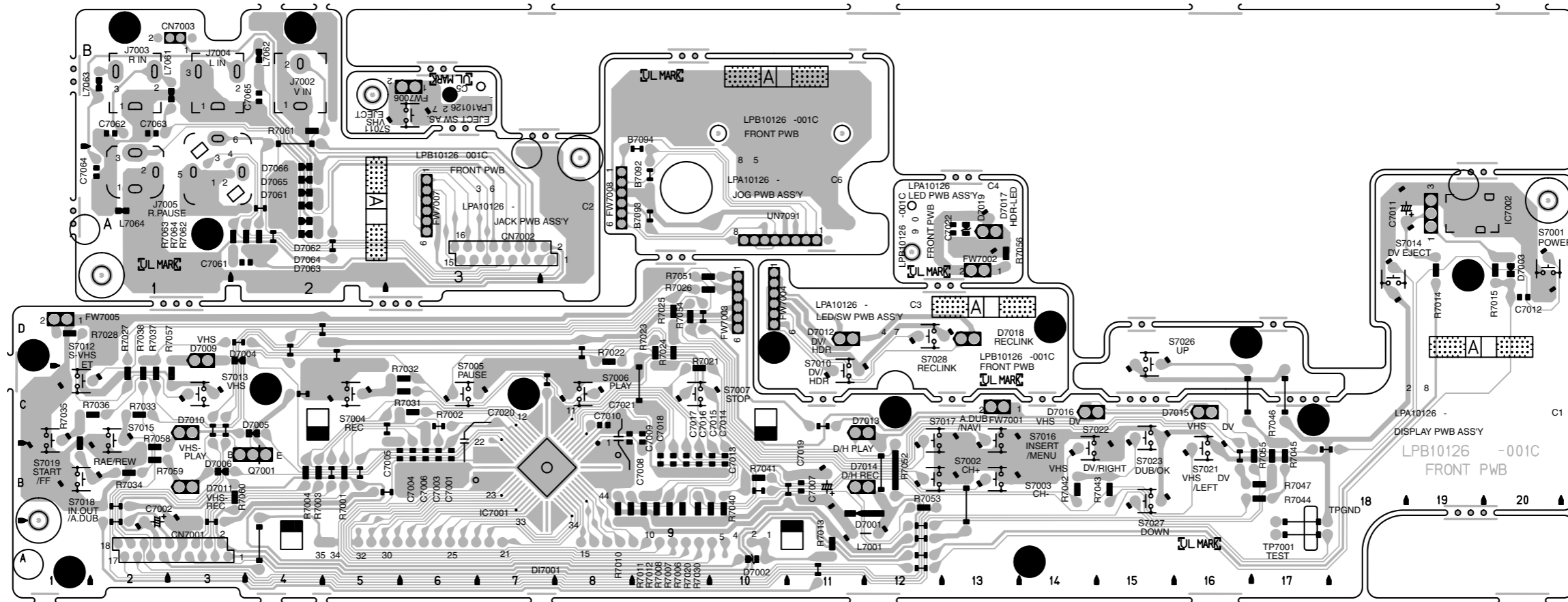
COMPONENT PARTS LOCATION GUIDE

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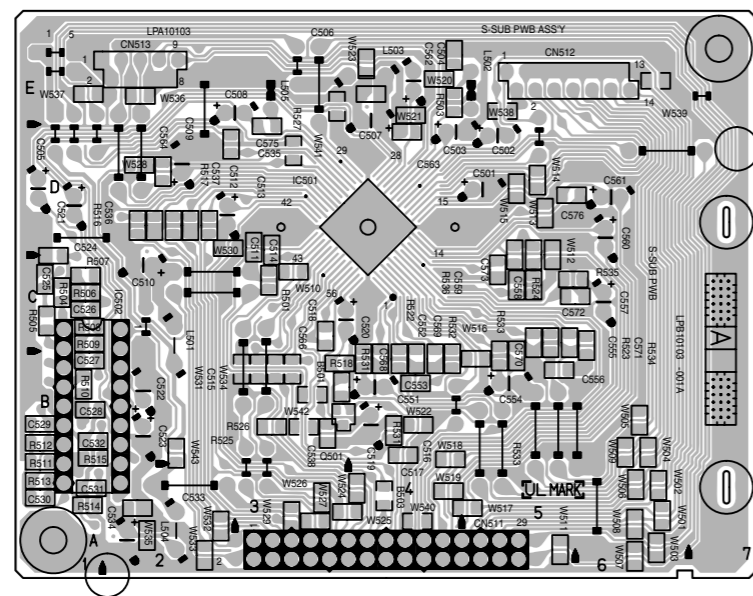
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		CONNECTOR		R7111	B C 6E
C7101	B C 10E	CN7101	A D 4A	R7112	B C 6E
C7102	A D 8C	CN7102	A D 10A	R7113	B C 5E
C7103	A D 8B	CN7103	A D 7A	R7114	B C 5D
C7104	A D 10C	CN7104	A D 1A	R7115	B C 5D
C7105	B C 9C	CN7105	A D 11A	R7116	B C 5E
C7106	B C 9C	DIODE		R7117	B C 6A
C7107	B C 9C	D7101	B C 7A	R7118	B C 7A
C7108	B C 9D	D7103	B C 3E	R7119	B C 7A
C7109	B C 9D	D7104	B C 1E	R7120	B C 8A
C7110	A D 10C	IC		R7121	B C 7B
C7111	A D 4D	IC7101	B C 9C	R7122	B C 7B
C7112	A D 4E	IC7102	B C 9C	R7123	B C 7B
C7113	B C 5E	IC7103	B C 4E	R7124	B C 7B
C7114	A D 5E	IC7104	B C 6C	R7125	B C 7A
C7115	B C 4E	IC7106	B C 4B	R7126	B C 7B
C7116	A D 4E	JACK		R7127	B C 6A
C7117	B C 5E	J7101	A D 10E	R7128	B C 6A
C7118	A D 5E	J7102	A D 8E	R7129	B C 6A
C7119	B C 7A	J7103	A D 7E	R7130	B C 6B
C7120	A D 7A	J7104	A D 2E	R7131	B C 8E
C7121	A D 10E	J7105	A D 2C	R7132	B C 7E
C7122	A D 10E	J7106	A D 2B	R7139	B C 4C
C7123	B C 8E	J7107	A D 12E	R7140	B C 4C
C7124	A D 8D	J7108	A D 12C	R7141	B C 4C
C7125	A D 8C	J7109	A D 12B	R7142	B C 5A
C7126	A D 5D	J7110	A D 8B	R7143	B C 5A
C7127	A D 4D	COIL		R7144	B C 5A
C7128	B C 7E	L7101	A D 10D	R7145	B C 4A
C7129	A D 7D	L7102	A D 6E	R7146	B C 10A
C7130	B C 6D	L7103	A D 8A	R7147	B C 9A
C7131	A D 7C	L7104	A D 5B	R7148	B C 9B
C7132	B C 7C	TRANSISTOR		R7149	B C 10A
C7133	A D 6D	Q7101	B C 5D	R7150	B C 9A
C7134	A D 4D	Q7102	B C 5E	R7151	B C 9A
C7135	A D 6D	Q7103	B C 6E	R7154	B C 13D
C7136	A D 5C	Q7104	B C 6E	R7155	B C 12E
C7137	B C 4A	Q7105	B C 6A	R7156	B C 12C
C7138	B C 4A	Q7106	B C 6B	R7157	B C 12B
C7139	B C 4A	Q7107	B C 7B	R7158	B C 8B
C7140	A D 5B	Q7108	B C 7B	R7159	B C 2C
C7141	A D 5B	Q7109	B C 7A	R7160	B C 1C
C7142	A D 4B	Q7110	B C 7A	R7161	B C 2B
C7143	A D 4A	Q7111	B C 6A	R7162	B C 1B
C7144	B C 2C	Q7112	B C 6A	R7163	B C 2E
C7145	B C 1D	Q7113	B C 4C	R7164	B C 2E
C7146	B C 2C	Q7114	B C 4C	R7166	B C 12E
C7147	B C 2C	Q7115	B C 4C	R7167	B C 11E
C7148	B C 2B	Q7116	B C 5A	R7170	B C 7C
C7149	B C 1B	Q7117	B C 5A	R7171	B C 7D
C7150	B C 1B	Q7118	B C 9B	R7172	B C 7D
C7151	B C 2B	Q7119	B C 10A	R7173	B C 6D
C7152	B C 1B	Q7120	B C 9A	R7174	B C 6D
C7153	B C 9C	Q7121	B C 9A	R7175	B C 5D
C7154	B C 9B	Q7122	B C 8C	R7176	B C 6D
C7155	B C 2D	RESISTOR		R7177	B C 5D
C7156	B C 2E	R7101	B C 10D	R7178	B C 6C
C7157	B C 2D	R7102	B C 10E	R7179	B C 6C
C7158	B C 2E	R7103	B C 8E	R7180	B C 8D
C7159	B C 12E	R7104	B C 8E	R7181	A D 9E
C7160	B C 12D	R7105	B C 7D	R7182	B C 7C
C7161	B C 11E	R7106	B C 7E		
C7162	B C 11D	R7107	B C 3D		
C7163	B C 9C	R7108	B C 2D		
C7164	A D 4C	R7109	B C 4C		
C7165	A D 5C	R7110	B C 3B		
C7166	A D 5E				

4.28 S-SUB AND DISPLAY, EJECT SW, JACK, LED/SW, JOG CIRCUIT BOARDS

<27> EJECT SW, <28> DISPLAY, <36> JACK, <47> LED/SW, <85> JOG
LPB10126-001C



<15> S-SUB
LPB10103-001A

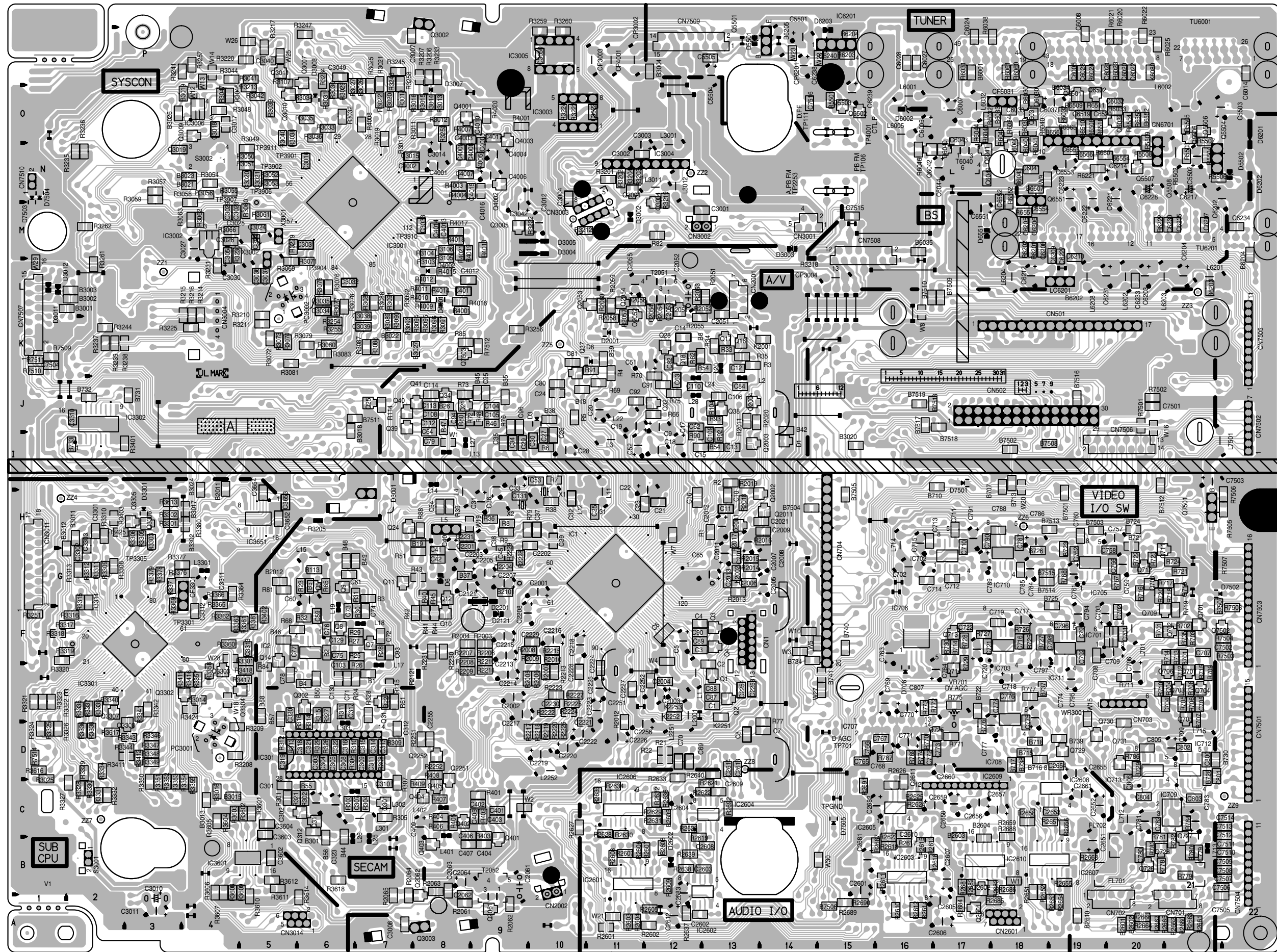


COPONENT PARTS LOCATION GUIDE <S-SUB>

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CAPACITOR					
C501	A D 5D	C555	B C 5C	R508	B C 1C
C502	A D 5D	C556	B C 5B	R509	B C 1C
C503	A D 4D	C557	A D 6C	R510	B C 1B
C504	B C 4E	C558	B C 5C	R511	B C 1B
C505	A D 1D	C559	B C 5C	R512	B C 1B
C506	B C 4E	C560	A D 6D	R513	B C 1A
C507	A D 4E	C561	A D 6D	R514	B C 1A
C508	A D 2E	C562	A D 4E	R515	B C 1B
C509	A D 2D	C563	B C 4D	R516	B C 2D
C510	A D 2C	C564	B C 2D	R517	B C 2D
C511	B C 3C	C565	B C 3B	R518	B C 3B
C512	B C 2D	C566	B C 4B	R522	B C 4B
C513	A D 2D	C567	B C 5B	R523	B C 5C
C514	B C 3C	C570	B C 5B	R524	B C 5C
C515	B C 3B	C571	B C 5C	R525	B C 3B
C516	B C 4B	C572	B C 6C	R526	B C 3B
C517	B C 4B	C573	B C 5C	R527	B C 3D
C518	B C 4B	C575	B C 3D	R531	B C 4B
C519	B C 3C	C576	B C 5D	R532	B C 4B
C520	A D 4B			R533	B C 5B
C521	A D 3C	CONNECTOR			
C522	A D 1D	CN511	A D 3A	R534	B C 6C
C523	A D 2B	CN512	A D 5E	R535	B C 5C
C524	B C 1C	CN513	A D 1E	R536	B C 5C
C525	B C 1C				
C526	B C 1C	IC			
C527	B C 1B	IC501	B C 4D		
C528	B C 1B	IC502	A D 1C		
C529	B C 1B	COIL			
C530	B C 1A	L501	A D 2B		
C531	B C 1A	L502	A D 5E		
C532	B C 1B	L503	A D 3E		
C533	B C 2A	L504	A D 2A		
C534	A D 2A	L505	A D 3E		
C535	B C 2D	TRANSISTOR			
C536	B C 2D	Q501	B C 3B		
C537	B C 2D	RESISTOR			
C538	B C 3B	R501	B C 3C		
C551	A D 4B	R503	B C 4E		
C552	B C 4B	R504	B C 1C		
C553	B C 4B	R505	B C 1C		
C554	A D 5B	R506	B C 1C		
		R507	B C 1C		

4.29 MAIN CIRCUIT BOARD

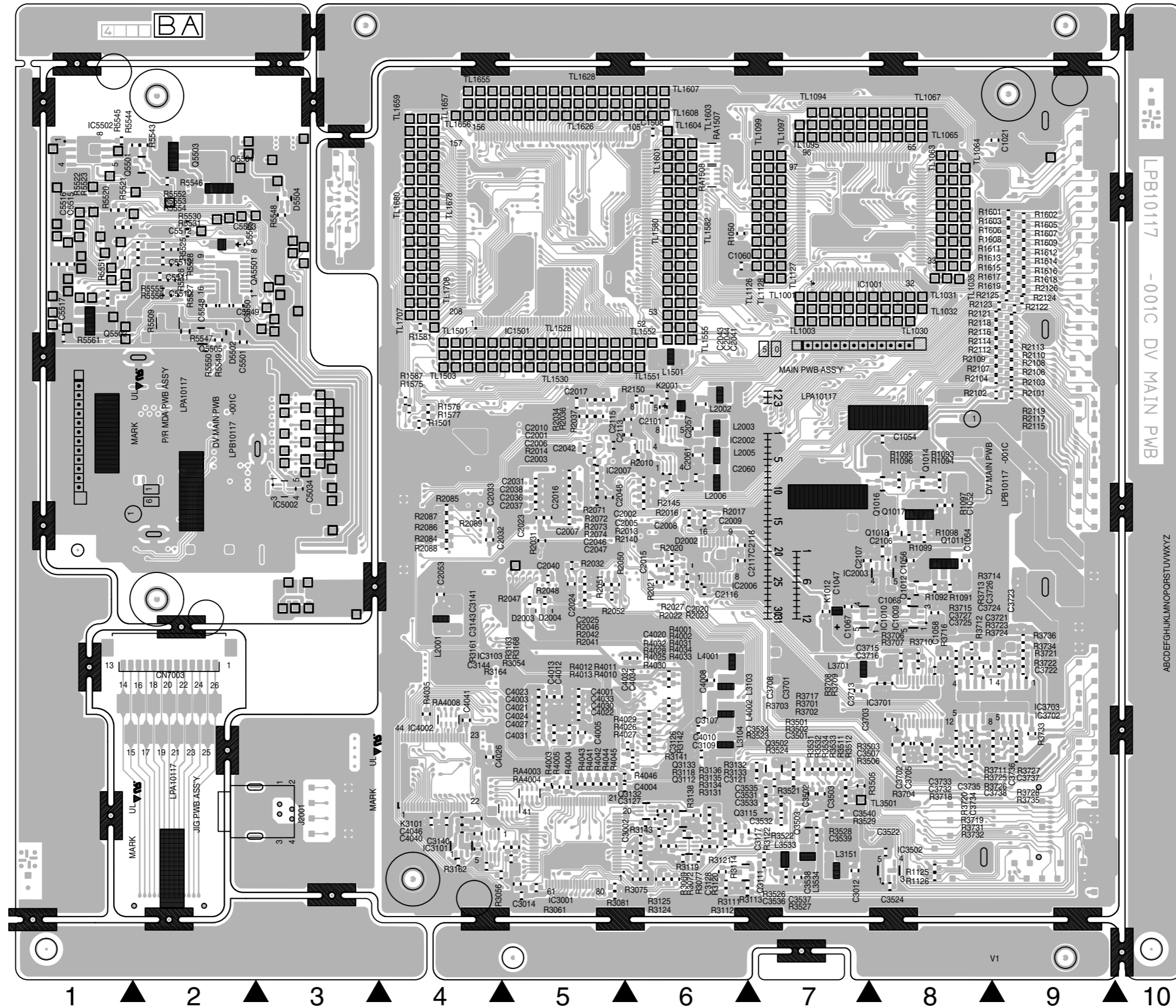
<03> MAIN
LPB10113-001D



4.31 PR/MDA, DV MAIN CIRCUIT BOARDS

<16> P/R MDA, <50> DV MAIN
LPB10117-001C

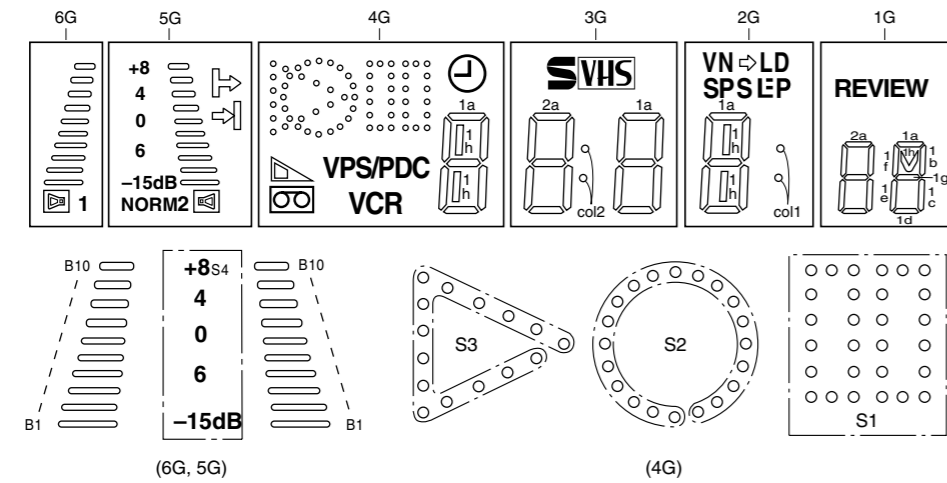
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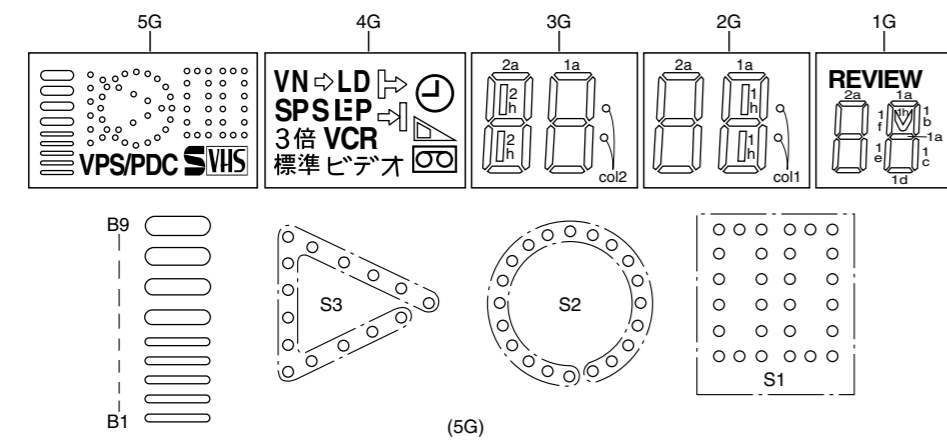
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R4041	B C 4C	TL1041	B C 8H	TL1506	B C 3G	TL1599	B C 5I	TL1692	B C 2H	TL4045	A C 4D		
R4042	B C 4C	TL1042	B C 8I	TL1507	B C 3G	TL1600	B C 6I	TL1693	B C 3H	TL4046	A C 5D		
R4043	B C 4C	TL1043	B C 8I	TL1508	B C 3G	TL1601	B C 5J	TL1694	B C 3H	TL4047	A C 5D		
R4044	B C 5C	TL1044	B C 8I	TL1509	B C 3G	TL1602	B C 5J	TL1695	B C 2H	TL4048	A C 4D		
R4045	B C 5C	TL1045	B C 8I	TL1510	B C 3G	TL1603	B C 6J	TL1696	B C 3H	X1001	A C 8H		
R4046	B C 5C	TL1046	B C 8I	TL1511	B C 3G	TL1604	B C 5J	TL1697	B C 3H	X1002	A C 7I		
RA1001	A C 8I	TL1047	B C 8I	TL1512	B C 3G	TL1605	B C 5J	TL1698	B C 2H	X2001	A C 6F		
RA1002	A C 7I	TL1048	B C 8I	TL1513	B C 3G	TL1606	B C 5J	TL1699	B C 3H	X2003	A C 4E		
RA1003	A C 7I	TL1049	B C 8I	TL1514	B C 3G	TL1607	B C 5J	TL1700	B C 3H	X3101	A C 3B		
RA1004	A C 7I	TL1050	B C 8I	TL1515	B C 3G	TL1608	B C 5J	TL1701	B C 2H				
RA1005	A C 9I	TL1051	B C 8I	TL1516	B C 3G	TL1609	B C 5J	TL1702	B C 3H				
RA1006	A C 9I	TL1052	B C 8I	TL1517	B C 3G	TL1610	B C 5J	TL1703	B C 3H				
RA1501	A C 4H	TL1053	B C 8I	TL1518	B C 3G	TL1611	B C 5J	TL1704	B C 2H				
RA1502	A C 4H	TL1054	B C 8I	TL1519	B C 4G	TL1612	B C 5J	TL1705	B C 3H				
RA1503	A C 4H	TL1055	B C 8I	TL1520	B C 4G	TL1613	B C 5J	TL1706	B C 3H				
RA1504	A C 4H	TL1056	B C 8I	TL1521	B C 4G	TL1614	B C 5J	TL1707	B C 2H				
RA1505	A C 5J	TL1057	B C 8I	TL1522	B C 4G	TL1615	B C 5J	TL1708	B C 3H				
RA1506	A C 5I	TL1058	B C 8I	TL1523	B C 4G	TL1616	B C 5J	TL1801	A C 3B				
RA1507	B C 6I	TL1059	B C 8I	TL1524	B C 4G	TL1617	B C 5J	TL2002	A C 5F				
RA1508	B C 6I	TL1060	B C 8I	TL1525	B C 4G	TL1618	B C 5J	TL2007	A C 5F				
RA1509	A C 5I	TL1061	B C 8I	TL1526	B C 4G	TL1619	B C 5J	TL2008	A C 5F				
RA1510	A C 4I	TL1062	B C 8I	TL1527	B C 4G	TL1620	B C 5J	TL2009	A C 5F				
RA4001	A C 4B	TL1063	B C 8I	TL1528	B C 4G	TL1621	B C 5J	TL2012	A C 4E				
RA4002	A C 4C	TL1064	B C 8I	TL1529	B C 4G	TL1622	B C 5J	TL2013	A C 5E				
RA4003	B C 4B	TL1065	B C 8J	TL1530	B C 4G	TL1623	B C 4J	TL2014	A C 5E				
RA4004	B C 4C	TL1066	B C 8J	TL1531	B C 4G	TL1624	B C 4J	TL2015	A C 5E				
RA4006	A C 3C	TL1067	B C 8J	TL1532	B C 4G	TL1625	B C 4J	TL2016	A C 5E				
RA4007	A C 3C	TL1068	B C 8J	TL1533	B C 4G	TL1626	B C 4J	TL2017	A C 5E				
RA4008	B C 3C	TL1069	B C 8J	TL1534	B C 4G	TL1627	B C 4J	TL2018	A C 3F				
TEST POINT													
		TL1070	B C 8J	TL1535	B C 4G	TL1628	B C 4J	TL2021	A C 3F				
TP1001	A C 9I	TL1071	B C 8J	TL1536	B C 4G	TL1629	B C 4J	TL2022	A C 3E				
TP1002	A C 9I	TL1072	B C 8J	TL1537	B C 4G	TL1630	B C 4J	TL2023	A C 3E				
TP1501	A C 2I	TL1073	B C 8J	TL1538	B C 4G	TL1631	B C 4J	TL2024	A C 3E				
TP1503	A C 3I	TL1074	B C 8J	TL1539	B C 4G	TL1632	B C 4J	TL2025	A C 3E				
TP1504	A C 3I	TL1075	B C 8J	TL1540	B C 5G	TL1633	B C 4J	TL2026	A C 3E				
TP1505	A C 3I	TL1076	B C 8J	TL1541	B C 5G	TL1634	B C 4J	TL2027	A C 3E				
TP1507	A C 2J	TL1077	B C 7J	TL1542	B C 5G	TL1635	B C 4J	TL2028	A C 3E				
TP1508	A C 3J	TL1078	B C 7J	TL1543	B C 5G	TL1636	B C 4J	TL2029	A C 3E				
TP1509	A C 3J	TL1079	B C 7J	TL1544	B C 5G	TL1637	B C 4J	TL2041	A C 5F				
TP1510	A C 2J	TL1080	B C 7J	TL1545	B C 5G	TL1638	B C 4J	TL2042	A C 5F				
		TL1081	B C 7J	TL1546	B C 5G	TL1639	B C 4J	TL2043	A C 3F				
		TL1082	B C 7J	TL1547	B C 5G	TL1640	B C 4J	TL2044	A C 3F				
OTHER													
K1001	A C 7H	TL1083	B C 7J	TL1548	B C 5G	TL1641	B C 4J	TL2045	A C 3F				
K1011	A C 8G	TL1084	B C 7J	TL1549	B C 5G	TL1642	B C 4J	TL2046	A C 3E				
K1012	B C 7E	TL1085	B C 7J	TL1550	B C 5G	TL1643	B C 4J	TL2047	A C 3E				
K2001	B C 5G	TL1086	B C 7J	TL1551	B C 5G	TL1644	B C 3J	TL2048	A C 3E				
K2002	A C 6E	TL1087	B C 7J	TL1552	B C 5G	TL1645	B C 3J	TL2049	A C 3F				
K3101	B C 3B	TL1088	B C 7J	TL1553	B C 5G	TL1646	B C 3J	TL2050	A C 3F				
LC1002	A C 8G	TL1089	B C 7J	TL1554	B C 5G	TL1647	B C 3J	TL2051	A C 3F				
LC1003	A C 8F	TL1090	B C 7J	TL1555	B C 6G	TL1648	B C 3J	TL2052	A C 3E				
LC1005	A C 8E	TL1091	B C 7J	TL1556	B C 5H	TL1649	B C 3J	TL2053	A C 3F				
LC3101	A C 3B	TL1092	B C 7J	TL1557	B C 5H	TL1650	B C 3J	TL2054	A C 3F				
TH2001	A C 5F	TL1093	B C 7J	TL1558	B C 6H	TL1651	B C 3J	TL2055	A C 3F				
TL1001	B C 7H	TL1094	B C 7J	TL1559	B C 5H	TL1652	B C 3J	TL2056	A C 3F				
TL1002	B C 7H	TL1095	B C 7J	TL1560	B C 5H	TL1653	B C 3J	TL2057	A C 3F				
TL1003	B C 7H	TL1096	B C 7J	TL1561	B C 6H	TL1654	B C 3J	TL2058	A C 3F				
TL1004	B C 7H	TL1097	B C 6I	TL1562	B C 5H	TL1655	B C 3J	TL2059	A C 3F				
TL1005	B C 7H	TL1098	B C 6I	TL1563	B C 5H	TL1656	B C 3J	TL2060	A C 3E				
TL1006	B C 7H	TL1099	B C 6I	TL1564	B C 6H	TL1657	B C 3J	TL2061	A C 3F				
TL1007	B C 7H	TL1100	B C 6I	TL1565	B C 5H	TL1658	B C 3J	TL2062	A C 3E				
TL1008	B C 7H	TL1101	B C 6I	TL1566	B C 5H	TL1659	B C 2J	TL2063	A C 3F				
TL1009	B C 7H	TL1102	B C 6I	TL1567	B C 6H	TL1660	B C 3J	TL2064	A C 3F				
TL1010	B C 7H	TL1103	B C 6I	TL1568	B C 5H	TL1661	B C 3J	TL2065	A C 3F				
TL1011	B C 7H	TL1104	B C 6I	TL1569	B C 5H	TL1662	B C 2J	TL2066	A C 3F				
TL1012	B C 7H	TL1105	B C 6I	TL1570	B C 6H	TL1663	B C 3J	TL2067	A C 3F				
TL1013	B C 7H	TL1106	B C 6I	TL1571	B C 5H	TL1664	B C 3J	TL2068	A C 3F				
TL1014	B C 7H	TL1107	B C 6I	TL1572	B C 5H	TL1665	B C 2J	TL2069	A C 3F				
TL1015	B C 7H	TL1108	B C 6I	TL1573	B C 6H	TL1666	B C 3I	TL2070	A C 3F				
TL1016	B C 7H	TL1109	B C 6I	TL1574	B C 5H	TL1667	B C 3I	TL2071	A C 5E				
TL1017	B C 7H	TL1110	B C 6I	TL1575	B C 5H	TL1668	B C 2I	TL2072	A C 5F				
TL1018	B C 7H	TL1111	B C 6I	TL1576	B C 6H	TL1669	B C 3I	TL2073	A C 5F				
TL1019	B C 7H	TL1112	B C 6I	TL1577	B C 5I	TL1670	B C 3I	TL2074	A C 5F				
TL1020	B C 7H	TL1113	B C 6I	TL1578	B C 5I	TL1671	B C 2I	TL2075	A C 5G				
TL1021	B C 7H	TL1114	B C 6I	TL1579	B C 6I	TL1672	B C 3I	TL2076	A C 5G				
TL1022	B C 8H	TL1115	B C 6I	TL1580	B C 5I	TL1673	B C 3I	TL2077	A C 5G				
TL1023	B C 8H	TL1116	B C 6I	TL1581	B C 5I	TL1674	B C 2I	TL2078	A C 5G				
TL1024	B C 8H	TL1117	B C 6I	TL1582	B C 6I	TL1675	B C 3I	TL3501	B C 7B				
TL1025	B C 8H	TL1118	B C 6I	TL1583	B C 5I	TL1676	B C 3I	TL3502	A C 8B				
TL1026	B C 8H	TL1119	B C 6I	TL1584	B C 5I	TL1677	B C 2I	TL4021	A C 3D				
TL1027	B C 8H	TL1120	B C 6I	TL1585	B C 6I	TL1678	B C 3I	TL4022	A C 3D				
TL1028	B C 8H	TL1121	B C 6H	TL1586	B C 5I	TL1679	B C 3I	TL4023	A C 4D				
TL1029	B C 8H	TL1122	B C 6H	TL1587	B C 5I	TL1680	B C 2I	TL4024	A C 4D				
TL1030	B C 8H	TL1123	B C 6H	TL1588	B C 6I	TL1681	B C 3I	TL4025	A C 4D				
TL1031	B C 8H	TL1124	B C 6H	TL1589	B C 5I	TL1682	B C 3I	TL4031	A C 5C				
TL1032	B C 8H	TL1125	B C 6H	TL1590	B C 5I	TL1683	B C 2I	TL4032	A C 5C				
TL1033	B C 8H	TL1126	B C 6H	TL1591	B C 6I	TL1684	B C 3I	TL4033	A C 5C				
TL1034	B C 8H	TL1127	B C 6H	TL1592	B C 5I	TL1685	B C 3I	TL4034	A C 5D				
TL1035	B C 8H	TL1128	B C 6H	TL1593	B C 5I	TL1686	B C 2I	TL4035	A C 5D				
TL1036	B C 8H	TL1501	B C 3G	TL1594	B C 6I	TL1687	B C 3I	TL4036	A C 4D				
TL1037	B C 8H	TL1502	B C 3G	TL1595	B C 5I	TL1688	B C 3I	TL4041	A C 3C				
TL1038	B C 8H	TL1503	B C 3G	TL1596	B C 5I	TL1689	B C 2I	TL4042	A C 5D				
TL1039	B C 8H	TL1504	B C 3G	TL1597	B C 6I	TL1690	B C 3H	TL4043	A C 5D				
TL1040	B C 8H	TL1505	B C 3G	TL1598	B C 5I	TL1691	B C 3H	TL4044	A C 4D				

4.32 FDP GRID ASSIGNMENT AND ANODE CONNECTION

[A] (FDP with audio level indicator)



[B] (FDP without audio level indicator)



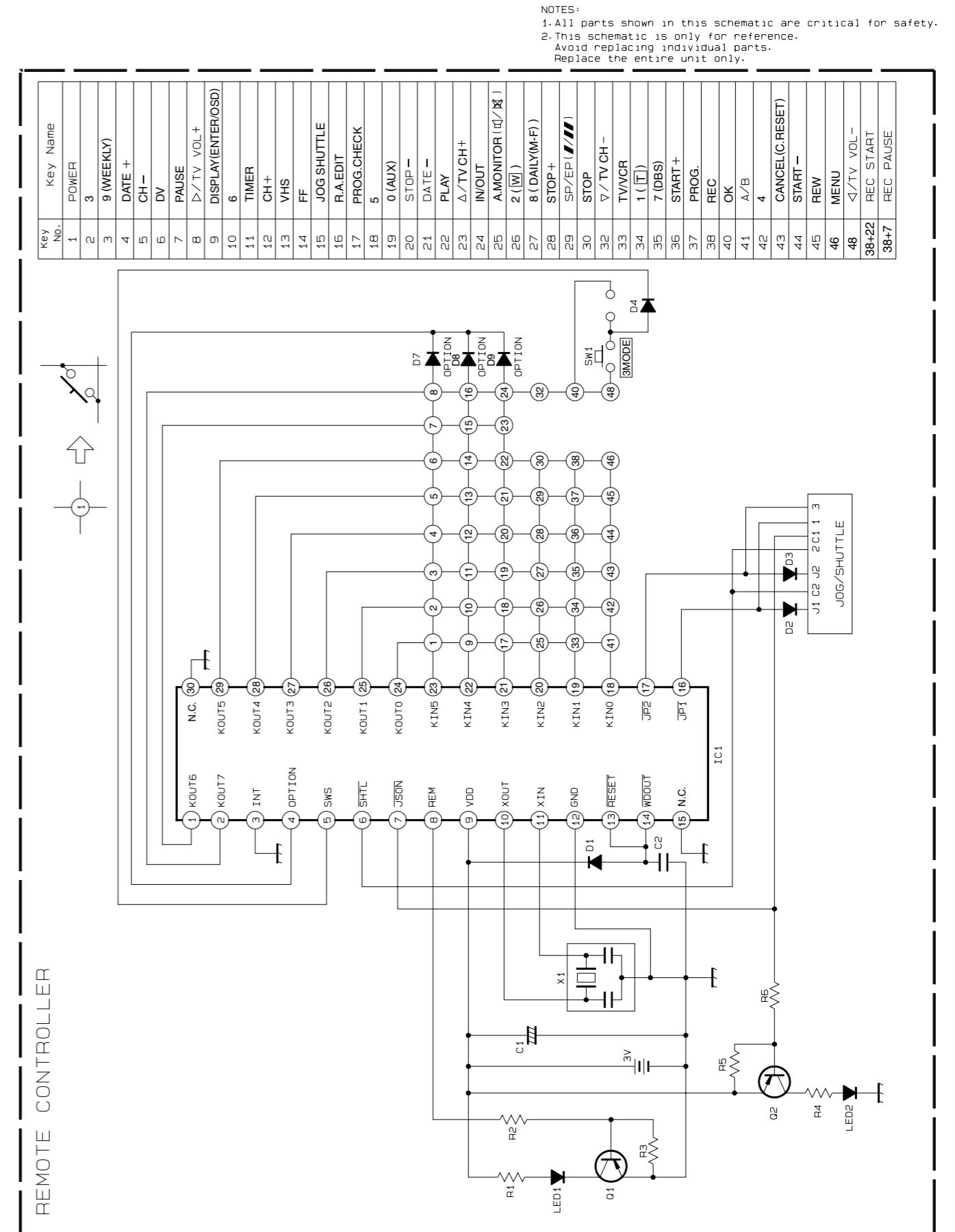
ANODE CONNECTION

	6G	5G	4G	3G	2G	1G
P 1	—	→	S2	1a	1a	1a
P 2	—	→	S1	1b	1b	1b
P 3	—	S4	S3	1f	1f	1f
P 4	—	NORM	VPS/PDC	1g	1g	1g
P 5	1	2	⌚	1c	1c	1c
P 6	→	→	→	1e	1e	1e
P 7	B10	B10	⌚	1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	1a	2a	col1	2a
P10	B7	B7	1b	2b	↔	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 _(SEP)	2e
P15	B2	B2	1d	2d	⋮ _(SEP)	2d
P16	B1	B1	1h	SVHS	LP _(SEP)	REVIEW

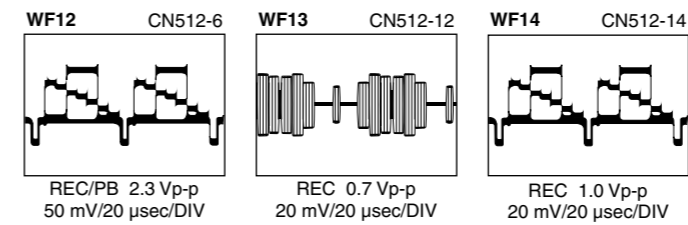
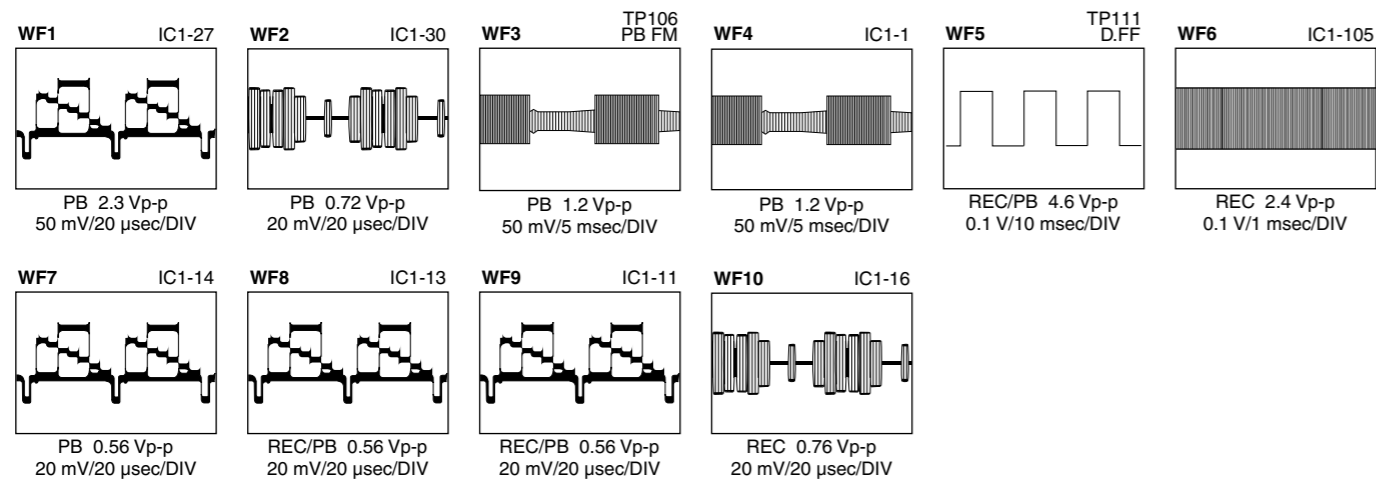
ANODE CONNECTION

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

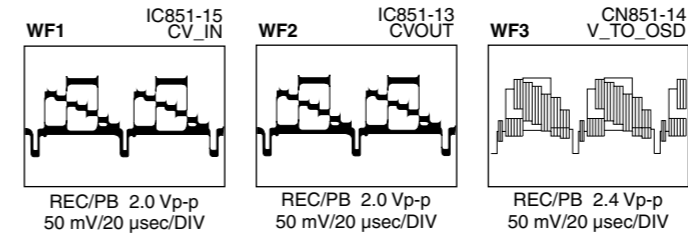
4.33 REMOTE CONTROL SCHEMATIC DIAGRAM



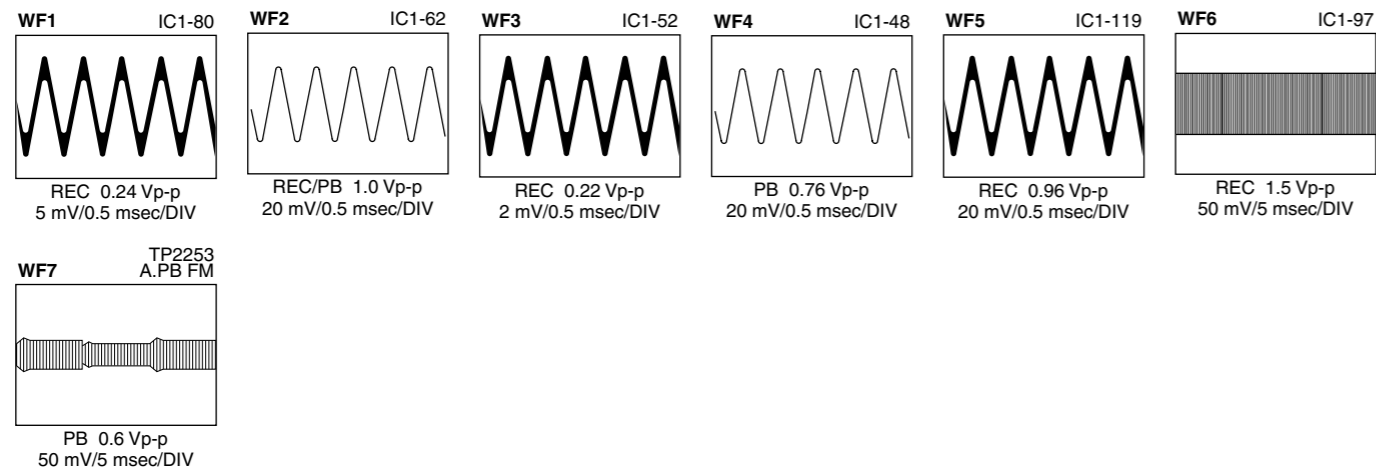
4.34 WAVEFORMS
< VIDEO >



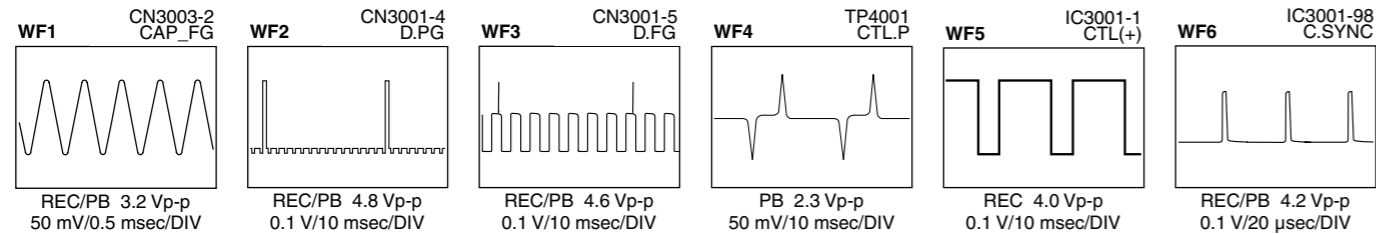
< ON SCREEN >



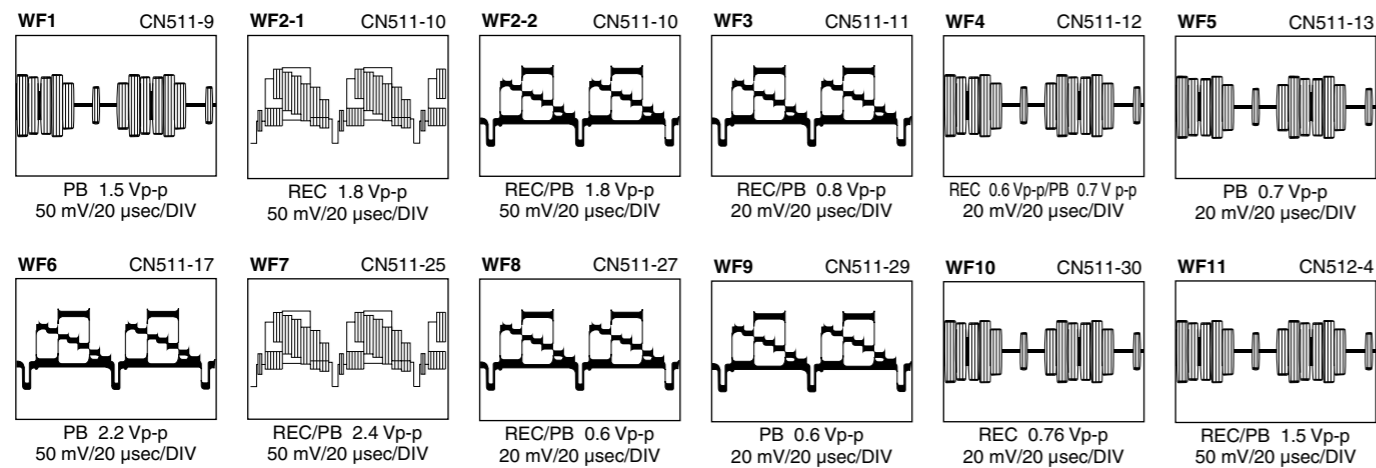
< AUDIO >



< SYSCON >



< S-SUB >



4.35 VOLTAGE CHARTS

<SW REGULATOR>

MODE PIN NO.	REC	PLAY
IC5101	7.9	7.9
1	7.9	7.9
2	87.4	87.4
3	16.1	16.1
4	7.8	0
5	0	0
IC5301	2.4	2.4
1	0	0
2	10.6	10.6
3	0	0
4	-19.3	-19.3
5	0	0
6	-15.6	-15.6
7	0	0
8	43.3	43.3
9	12.3	12.3
10	4.3	4.3
11	4.3	4.3
12	31.7	31.7
13	4.3	4.3
14	-28.3	-28.3
15	7.2	7.2
16	-7.2	-7.2
17	6.4	6.4
18	6.4	6.4
19	19.1	19.1

<REGULATOR>

MODE PIN NO.	REC	PLAY
IC5321	4.3	4.3
1	3.2	3.2
2	0	0
3	0	0
4	2.6	2.6
IC5301	21.4	21.4
1	6.4	6.4
2	6.4	6.4
3	-7.2	-7.2
4	7.2	7.2
5	-28.3	-28.3
6	4.3	4.3
7	31.7	31.7
8	4.3	4.3
9	4.3	4.3
10	12.3	12.3
11	43.3	43.3
12	0	0
13	2.2	2.2
14	0	0
15	-15.6	-15.6
16	0	0
17	0	0
18	-19.3	-19.3
19	0	0
IC5321	12.2	12.2
1	11.6	11.6
2	0	0
3	0	0
4	0	0
5	0	0
6	-19.3	-19.3
7	-28.4	-28.4
8	-15.8	-15.8
9	0	0
10	4.8	4.8
11	0	0
12	4.8	4.8
13	0	0
14	19.0	19.0
15	5.0	5.0
IC5322	5.6	5.6
1	43.3	43.3
2	4.9	4.9
3	-7.3	-7.3
4	12.2	12.2
5	11.4	11.4
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	31.9	31.9
IC5323	-7.2	-7.2
1	5.1	5.1
2	0	0
3	3.2	3.2
4	3.2	3.2
5	3.2	3.2
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0	0
10	0	0

MODE PIN NO.	REC	PLAY
CN5324	6.7	6.7
1	0	0
2	0	0
3	7.1	7.1
4	5.1	5.1
5	0	0
IC5325	11.2	11.2
1	0	0
2	0	0

<VIDEO/AUDIO>

MODE PIN NO.	REC	PLAY
IC1	4.2	2.1
1	2.8	2.8
2	2.6	2.6
3	1.9	1.4
4	1.9	1.4
5	1.9	1.4
6	2.4	2.4
7	2.1	0.7
8	0	0
9	2.7	2.7
10	2.2	2.2
11	3.1	3.1
12	2.8	2.8
13	3.1	3.1
14	3.5	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	1.9	1.9
20	0	2.8
21	0	1.9
22	2.8	2.8
23	3.1	2.9
24	4.8	4.8
25	0.3	0.3
26	0	0
27	1.3	2.3
28	2.3	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.6	2.6
33	4.9	4.9
34	2.7	2.2
35	4.8	4.8
36	2.6	2.6
37	2.3	2.3
38	-	-
39	1.2	1.2
40	-	-
41	2.5	2.5
42	-	-
43	0	0
44	2.1	2.1
45	4.6	4.6
46	4.2	4.2
47	2.9	2.9
48	2.6	2.6
49	4.9	4.9
50	2.5	2.5
51	2.8	2.8
52	2.3	2.3
53	2.3	2.3
54	2.5	2.5
55	2.1	2.1
56	1.4	1.4
57	2.3	2.3
58	8.4	8.4
59	4.6	4.6
60	4.2	4.2
61	4.2	4.2
62	4.2	4.2
63	2.3	2.3
64	2.3	2.3
65	1.4	1.4
66	2.8	3.2
67	4.2	4.2
68	4.2	4.2
69	4.2	4.2
70	4.2	4.2
71	0.3	0.3
72	1.2	1.2
73	0.2	0.2
74	2.2	2.2
75	2.4	2.4
76	0.4	0.4
77	0.6	0.6
78	0.6	0.6
79	0.3	0.3
80	0.2	0.2
81	1.2	1.2
82	0.7	0.7
83	0	0
84	2.3	2.3
85	2.3	2.3
86	2.2	2.2
87	1.5	1.5

MODE PIN NO.	REC	PLAY
88	2.2	2.2
89	2.2	2.2
90	2.3	2.3
91	0.1	0.1
92	0	0
93	0	2.6
94	0	0
95	0	0
96	2.4	2.4
97	2.7	2.3
98	2.4	2.4
99	4.9	4.9
100	4.9	4.9
101	0	0
102	0	0
103	0	0
104	2.4	2.4
105	2.3	2.3
106	2.3	2.3
107	4.9	4.9
108	0	0
109	0	0
110	0	0
111	0	2.5
112	2.6	2.6
113	1.7	0.9
114	0	0
115	2.5	2.5
116	2.5	2.5
117	2.5	2.5
118	0	0
119	2.4	2.4
120	4.6	4.6

<VIDEO/AUDIO>

MODE PIN NO.	REC	PLAY
IC1	4.2	2.1
1	2.8	2.8
2	2.6	2.6
3	1.9	1.4
4	1.9	1.4
5	1.9	1.4
6	2.4	2.4
7	2.1	0.7
8	0	0
9	2.7	2.7
10	2.2	2.2
11	3.1	3.1
12	2.8	2.8
13	3.1	3.1
14	3.5	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	1.9	1.9
20	0	2.8
21	0	1.9
22	2.8	2.8
23	3.1	2.9
24	4.8	4.8
25	0.3	0.3
26	0	0
27	1.3	2.3
28	2.3	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.6	2.6
33	4.9	4.9
34	2.7	2.2
35	4.8	4.8
36	2.6	2.6
37	2.3	2.3
38	-	-
39	1.2	1.2
40	-	-
41	2.5	2.5
42	-	-
43	0	0
44	2.1	2.1
45	4.6	4.6
46	4.2	4.2
47	2.9	2.9
48	2.6	2.6
49	4.9	4.9
50	2.5	2.5
51	2.8	2.8
52	2.3	2.3
53	2.3	2.3
54	2.5	2.5
55	2.1	2.1
56	1.4	1.4
57	2.3	2.3
58	8.4	8.4
59	4.6	4.6
60	4.2	4.2
61	4.2	4.2
62	4.2	4.2
63	2.3	2.3
64	2.3	2.3
65	1.4	1.4
66	2.8	3.2
67	4.2	4.2
68	4.2	4.2
69	4.2	4.2
70	4.2	4.2
71	0.3	0.3
72	1.2	1.2
73	0.2	0.2
74	2.2	2.2
75	2.4	2.4
76	0.4	0.4
77	0.6	0.6
78	0.6	0.6
79	0.3	0.3
80	0.2	0.2
81	1.2	1.2
82	0.7	0.7
83	0	0
84	2.3	2.3
85	2.3	2.3
86	2.2	2.2
87	1.5	1.5

<SYSCON>

MODE PIN NO.	REC	PLAY
IC3001	2.7	2.7
1	0	0
2	0	0
3	1.8	2.4
4	2.4	2.4
5	0	0.6
6	2.5	2.5
7	2.4	2.4
8	2.4	2.4
9	4.9	4.9
10	4.8	4.8
11	0	0
12	0	0
13	0	0
14	4.3	4.3
15	4.4	4.4
16	0.6	0.6
17	2.7	2.7
18	5.0	5.0
19	0	0
20	4.5	4.5
21	0	2.5
22	0	0
23	0	0
24	4.8	4.8
25	0	0
26	4.9	4.9
27	4.9	4.9
28	4.8	4.8
29	4.8	4.8
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	1.9	1.9

MODE PIN NO.	REC	PLAY
39	4.2	4.2
40	0	0
41	4.7	4.7
42	4.5	4.5
43	0	0
44	0	0
45	4.8	4.8
46	4.7	4.7
47	0	0
48	4.8	4.8
49	4.2	4.2
50	4.6	4.6
51	4.8	4.8
52	3.4	1.1
53	4.3	4.3
54	-	-
55	-	-
56	5.1	0
57	0	0
58	5.2	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	-	-
65	-	-
66	-	-
67	-	-
68	0	0
69	-	-
70	4.8	4.8
71	4.8	4.8
72	4.8	4.8
73	4.8	4.8
74	4.8	4.8
75	4.5	4.5
76	4.5	4.5
77	0	0
78	0	0
79	4.8	4.8
80	0	0
81	4.8	4.8
82	4.8	4.8
83	2.5	2.5
84	0	0
85	0	0
86	4.5	4.5
87	4.8	4.8
88	4.8	4.8
89	0	0
90	0	0
91	2.7	2.8
92	0	0
93	5.2	5.2
94	0	0
95	0	0
96	0	0
97	0.5	0.5
98	0.4	0.4
99	0	2.7
100	2.5	2.5
101	2.5	2.5
102	1.2	1.2
103	0	0
104	0	0
105	2.8	2.8
106	4.8	4.8
107	4.7	4.7
108	4.8	4.8
109	4.8	4.8
110	0	0
111	0	0
112	2.4	2.4
113	0	0
114	0	0
115	0	0
116	0	0
117	0	

MODE PIN NO.	REC	PLAY
111	0	0
112	3.1	3.1
113	3.1	3.1
114	3.1	3.1
115	3.1	3.1
116	0	0
117	0	0
118	0	0
119	3.0	3.0
120	0.2	0.2
121	3.1	3.1
122	0	0
123	3.1	3.1
124	3.1	3.1
125	0.2	0.2
126	3.1	3.1
127	0	0
128	0.2	0.2
IC1002		
1	0	0
2	0.5	0.5
3	3.1	3.1
4	0	0
5	0	0
6	2.6	2.6
7	3.1	3.1
8	3.1	3.1
IC1005		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
IC1006		
1	0	0
2	3.1	3.1
3	2.6	2.6
4	0	0
5	3.1	3.1
6	0.5	0.5
7	0.4	0.4
8	3.1	3.1
IC1007		
1	3.1	3.1
2	2.6	2.6
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	3.1	3.1
IC1008		
1	3.1	3.1
2	3.1	3.1
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	3.1	3.1
IC1009		
1	3.1	3.1
2	0	0
3	0	0
4	1.8	1.8
5	3.1	3.1
IC1010		
1	3.1	3.1
2	0	0
3	0	0
4	1.8	1.8
5	3.1	3.1
CN1001		
1	-7.2	-7.2
2	5.1	5.1
3	0	0
4	3.2	3.2
5	3.2	3.2
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0	0
10	0	0
CN1002		
1	0	0
2	3.0	3.0
3	3.0	3.0
4	0	0
5	2.8	2.8
6	3.8	3.8
CN1101		
1	0	0
2	5.1	5.1
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	0	0
9	1.3	1.3
10	0	0
11	1.5	1.5

MODE PIN NO.	REC	PLAY
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	3.0	3.0
18	3.1	3.1
19	3.4	3.4
20	2.7	2.7
21	0	0
22	0	0
23	2.5	1.9
24	1.6	1.6
25	0	0
26	0	0

<DV MSD>

MODE PIN NO.	REC	PLAY
IC1501		
1	0	0
2	3.1	3.1
3	3.1	3.1
4	0	0
5	0	0
6	0.2	0.2
7	3.1	3.1
8	0	0
9	0.2	0.2
10	0	0
11	0	0
12	0	0
13	0	0
14	3.1	3.1
15	0	0
16	3.1	3.1
17	2.9	2.9
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	3.1	3.1
30	3.1	3.1
31	0.2	0.2
32	0.2	0.2
33	0.4	0.4
34	0.6	0.6
35	0.6	0.6
36	0.6	0.6
37	0.6	0.6
38	0.6	0.6
39	0	0
40	0.2	0.2
41	0.2	0.2
42	0.3	0.3
43	0.2	0.2
44	0.2	0.2
45	0.3	0.3
46	0.2	0.2
47	0.5	0.5
48	3.1	3.1
49	0.4	0.4
50	2.9	2.9
51	0	0
52	3.0	3.0
53	3.1	3.1
54	0	0
55	0	0
56	3.1	3.1
57	-	-
58	0	0
59	0	0
60	3.1	3.1
61	3.1	3.1
62	1.5	1.5
63	1.1	1.1
64	3.1	3.1
65	0	0
66	3.1	3.1
67	2.7	2.7
68	0	0
69	0	0
70	3.1	3.1
71	0	0
72	3.1	3.1
73	3.1	3.1
74	0	0
75	0	0
76	0	0
77	0	3.1
78	3.1	0
79	0	3.1
80	3.1	3.1
81	0	0

MODE PIN NO.	REC	PLAY
82	3.1	3.1
83	3.1	3.1
84	3.1	3.1
85	0	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0
92	0	0
93	0	0
94	0	0
95	0	0
96	0	0
97	3.1	3.1
98	3.1	3.1
99	3.1	3.1
100	0	0
101	3.1	3.1
102	3.1	3.1
103	3.1	3.1
104	3.1	3.1
105	3.1	3.1
106	3.1	3.1
107	0	0
108	0	0
109	0	0
110	0	0
111	0	0
112	0	0
113	2.7	2.7
114	1.5	1.5
115	1.6	1.6
116	3.1	3.1
117	0	0
118	0	0
119	0	0
120	0.2	0.2
121	0.3	0.3
122	3.1	3.1
123	3.1	3.1
124	3.1	3.1
125	0	0
126	0	0
127	3.1	3.1
128	0	0
129	0	0
130	3.1	3.1
131	0	0
132	0	0
133	0	0
134	0	0
135	3.1	3.1
136	1.6	1.6
137	0	0
138	0	0
139	1.9	1.9
140	1.5	1.5
141	0	0
142	1.5	1.5
143	0	0
144	0	0
145	0	0
146	1.6	1.6
147	1.7	1.7
148	0.3	0.3
149	1.5	1.5
150	1.6	1.6
151	3.1	3.1
152	-	-
153	-	-
154	1.6	1.6
155	1.6	1.6
156	1.6	1.6
157	0	0
158	1.5	1.5
159	0.2	0.2
160	0	0
161	0.2	0.2
162	0	0
163	0	0
164	0	0
165	0	0
166	3.1	3.1
167	0	0
168	0	0
169	0.2	0.2
170	3.1	0
171	0	0
172	0	0
173	3.1	3.1
174	3.1	3.1
175	3.0	0.3
176	0.2	0.2
177	0	0
178	3.1	3.1
179	3.1	3.1
180	3.1	3.1
181	3.1	3.1
182	0	0

MODE PIN NO.	REC	PLAY
183	2.7	2.7
184	5.1	5.1
185	0	0
186	0	0
187	0.2	0.2
188	3.1	0
189	0.2	0.2
190	3.1	3.1
191	3.1	3.1
192	3.1	3.1
193	0	0
194	3.1	3.1
195	2.3	2.3
196	3.1	3.1
197	1.4	1.4
198	0	0
199	3.1	3.1
200	0	0
201	2.8	2.8
202	2.8	2.8
203	0	0
204	3.1	3.1
205	3.1	3.1
206	3.1	3.1
207	3.1	3.1
208	0	0.3
IC1502		
1	-	-
2	3.1	3.1
3	-	-
4	0	0
5	-	-
6	0.1	0.1
7	-	-
8	3.1	3.1
IC1601		
1	3.1	3.1
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	3.1	3.1
8	3.1	3.1
CN1501		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	1.5	1.5
9	1.7	1.7
10	0	0
11	0	0
12	3.1	3.1
13	3.1	3.1
14	0	0
15	0	0
16	3.1	3.1
17	1.6	1.6
18	1.6	1.6
19	2.8	2.8
20	0	0
CN1502		
1	0	0
2	3.1	3.1
3	0	0
4	1.2	1.2
5	-	-
6	3.1	3.1
7	1.2	1.2
8	-	-
9	3.1	3.1
10	3.1	3.1
11	0	0
12	0	0
13	3.1	3.1
14	0	0
15	0	0

<DV MAIN>

MODE PIN NO.	REC	PLAY
IC2001	-	-
IC2002		
1	0	0.4
2	0	0.4
3	0	0
4	1.4	1.4
5	0.1	0
6	3.1	0
7	0	0
8	2.9	2.9
IC2003		
1	3.1	3.1
2	0	0

MODE PIN NO.	REC	PLAY
3	1.2	1.2
4	2.5	2.5
5	3.1	3.1
IC2004		
1	5.1	5.1
2	0	0
3	1.2	1.2
4	2.9	2.9
5	5.1	5.1
IC2007		
1	3.1	3.1
2	0.9	0.9
3	0	0
4	0	0
5	0	0
6	1.4	1.4
7	2.4	2.4
8	3.1	3.1
CN2001		
1	0	0
2	3.1	0
3	3.1	0
4	0	3.1
5	1.5	1.5
6	0	3.1
7	0	0
8	0.7	0.7
9	1.5	1.5
10	1.1	1.1
11	2.5	1.9
12	2.5	1.3
13	1.2	1.2
14	2.5	1.3
15	2.5	1.9
16	0	0
17	0.4	0.4
18	0.5	0
19	1.4	0
20	1.2	1.2
21	0	0
22	0	0
23	3.1	3.1
24	5.1	5.1
25	3.1	3.1
26	2.5	2.5

<DV I/O>

MODE PIN NO.	REC	PLAY
IC3001		
1	0	0
2	3.0	3.0
3	1.1	1.1
4	0.5	0.5
5	0.8	0.8
6	1.6	

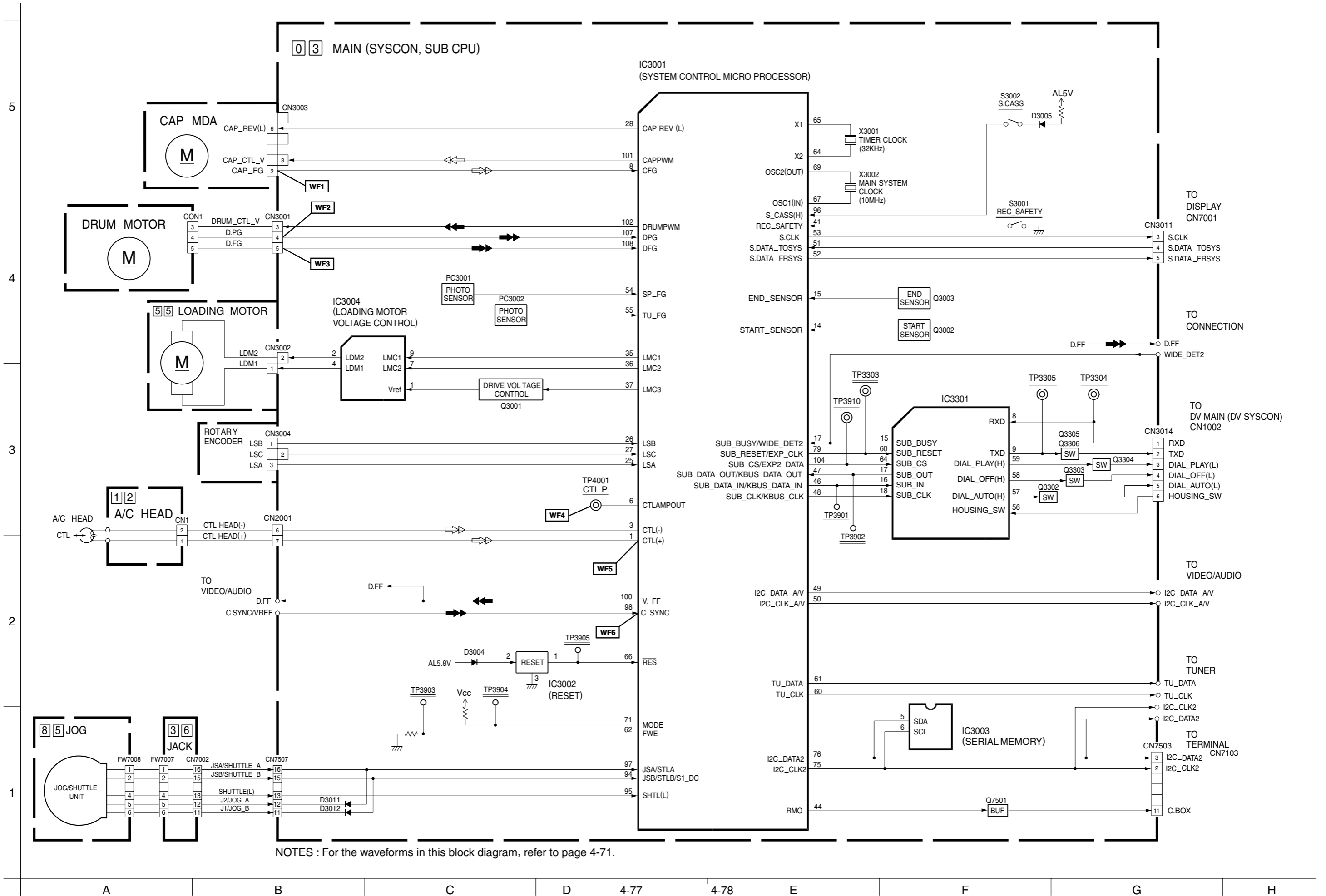
4.36 CPU PIN FUNCTION

<SYSCON IC3001>

PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBIAS	-	CTL BIAS VOLTAGE
5	CTLFB	IN	CTL PULSE FEEDBACK
6	CTLAMPOUT	OUT	CTL PULSE OUTPUT
7	CTLSMTIN	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	SVHS MODE:H
12	SECAM_DET(H)/KILLER_DET(BIT_IN(H))	IN	NC/COLOR KILLER DETECT/NC
13	PAUSE	IN	PAUSE CONTROL
14	START_SENSOR	IN	START SENSOR
15	END_SENSOR	IN	END SENSOR
16	TU_SYNC	-	NC
17	SUB_BUSY/WIDE_DET2	IN	SERIAL TRANSMISSION SIGNAL FOR SUB CPU/NC
18	RF_AGC/LED	IN	CHANGES IN AT&S-IC OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT:NC
19	SCR_ID(H)/WIDE_DET	IN	SCRAMBLECONTROL INPUT (SCRAMBLE:H)/NC
20	BS_ANT/AFC	IN	NC/TUNING CLOCK
21	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV.INPUT/NON HIFI MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP_REV(L)	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD:H/REV:L)
29	RC	IN	REMOTE CONTROL DATA INPUT
30	LOCK(L)	IN	TUNING PLL LOCK DETECT:L
31	P50_IN	IN	CONTROL SIGNAL FOR TV LINK
32	ET_PB(H)/AGC_CTL	IN	NC
33	FRONT(H)/EXP1_DATA	OUT	FRONT INPUT:H/NC
34	P50_OUT/M_PULSE	OUT	CONTROL SIGNAL FOR TV LINK/NC
35	LMC1	OUT	LOADING MOTOR DRIVE(1)
36	LMC2	OUT	LOADING MOTOR DRIVE(2)
37	LMC3	OUT	LOADING MOTOR DRIVE(3)
38	SB_G(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	STB/TEST	OUT	STROBE SIGNAL (FOR FDP DRIVER)
40	POWER_DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
42	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
43	VSS	-	GND
44	RMO/ANT_CTL(H)	OUT	REMOTE CONTROL OUTPUT FOR SATELLITE RECEIVER/NC
45	VCC	-	SYSTEM POWER
46	SUB_DATA_IN/KBUS_DATA_IN	IN/OUT	SERIAL DATA TRANSFER INPUT FOR SUB CPU/NC
47	SUB_DATA_OUT/KBUS_DATA_OUT	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR SUB CPU/NC
48	SUB_CLK/KBUS_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR SUB CPU/NC
49	I2C_DATA_AV	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO/AUDIO IC
50	I2C_CLK_AV	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO/AUDIO IC
51	S.DATA_TOSYS	IN	SERIAL DATA TRANSFER OUTPUT FROM THE ON-SCREEN IC TO THE FDP DRIVER
52	S.DATA_FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	JUST/EDS(H)/SECAM	IN	NC

PIN NO.	LABEL	IN/OUT	FUNCTION
57	TU_CE	OUT	CHIP ENABLE OF THE TUNER UNIT
58	N.REC_ST(H)	OUT	NORMAL AUDIO SOUND RECORDING START
59	SP_CONV/BS/KBUS_REQ	IN	AUDIO INPUT SWITCHING FOR DV
60	TU_CLK	OUT	CLOCK FOR DATA TRANSFER TO THE TUNER UNIT
61	TU_DATA	OUT	TUNING DATA
62	FWE	-	NC
63	NMI(L)	-	NC
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES(L)	-	RESET TERMINAL (RESET ON:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC	-	SYSTEM POWER
71	MODE	-	NC
72	TU_A_MUTE(H)	OUT	TUNER AUDIO MUTE CONTROL (MUTE:H)
73	TU_V_MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C_CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C_DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	DV_A.MUTE/FF/REW(L)	OUT	DV AUDIO MUTE CONTROL (MUTE:H)/NC/NC
78	DV_P.MUTE(H)	OUT	DV PICTURE MUTE CONTROL (MUTE:H)
79	SUB_RESET/EXP_CLK	OUT	SUB CPU RESET/NC
80	V.PCTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	EDS_CS/PAL.PB(H)	OUT	NC/PLAYBACK MODE FOR PAL:H
82	VCC	-	SYSTEM POWER
83	SLOW_P/CNR_CTL	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE / NC
84	VSS	-	GND
85	SP_SHORT(H)	OUT	MODE SELECT
86	LP_SHORT(H)	OUT	MODE SELECT
87	FLY_ON(H)/VHS(H)	OUT	FLYING ERASE ON:H/NC
88	H.REC_ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	TRICK(H)/M_TRICK(L)	OUT	SPECIAL PLAYBACK: H/REC AFC FILTER, PB APC FILTER, BURST ACC FILTER, COLOR KILLER DET FILTER
90	B.BACK(H)/P.SAVE(L)	OUT	BLUE BACK MODE:H/NC
91	OSD_CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
92	SYNC_DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL (DETECTED:H)
93	BS_P.CTL(H)/MESECAM(H)	OUT	NC/MESECAM:H
94	JSB/STLB/S1_DC	IN	INPUT FOR THE JOG SHUTTLE/NC
95	SHTL(L)/JOGA	IN	INPUT FOR THE JOG SHUTTLE
96	S_CASS(H)	IN	DETECTION SIGNAL FOR S VHS CASSETTE (S VHS:H)
97	JSA/STLA	IN	INPUT FOR THE JOG SHUTTLE
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	SUB_OSD_ON/V_UP(H)	OUT	OSD IC CONTROL FOR MULTI DUBBING DISPLAY MODE:H/NC
104	SUB_CS/EXP2_DATA	OUT	TRANSMISSION START SIGNAL TO SUB CPU/NC
105	SP(H)	-	NC
106	P.MUTE(L)	OUT	PICTURE CONTROL (MUTE:L)
107	DPG	IN	DRUM PICKUP PULSE INPUT (SWITCHING PULSE)
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

4.37 SYSTEM CONTROL BLOCK DIAGRAM (VHS)



NOTES : For the waveforms in this block diagram, refer to page 4-71.

4.38 VIDEO BLOCK DIAGRAM (VHS)

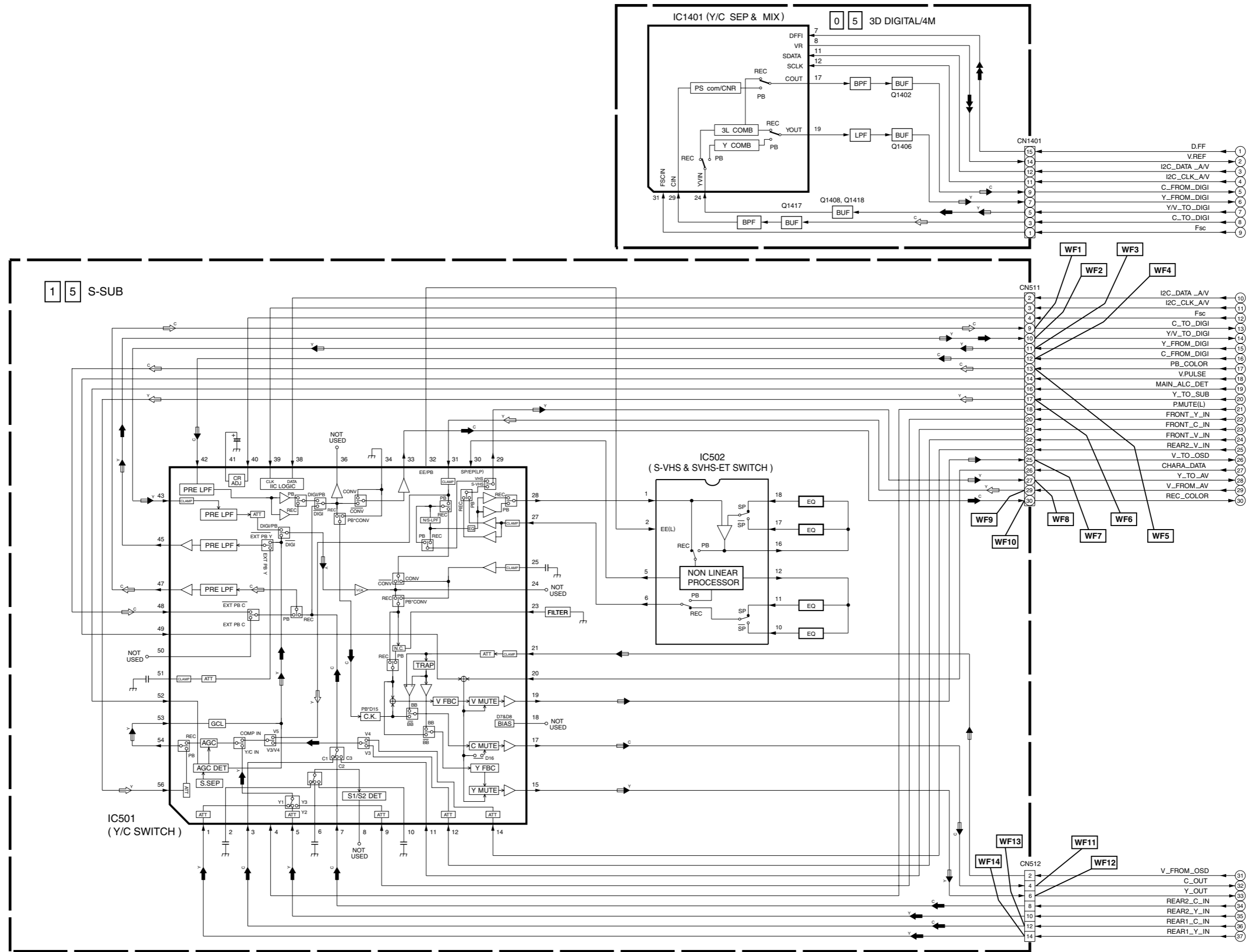
5

4

3

2

1



NOTES : For the waveforms in this block diagram, refer to page 4-71.

A

B

C

D 4-79

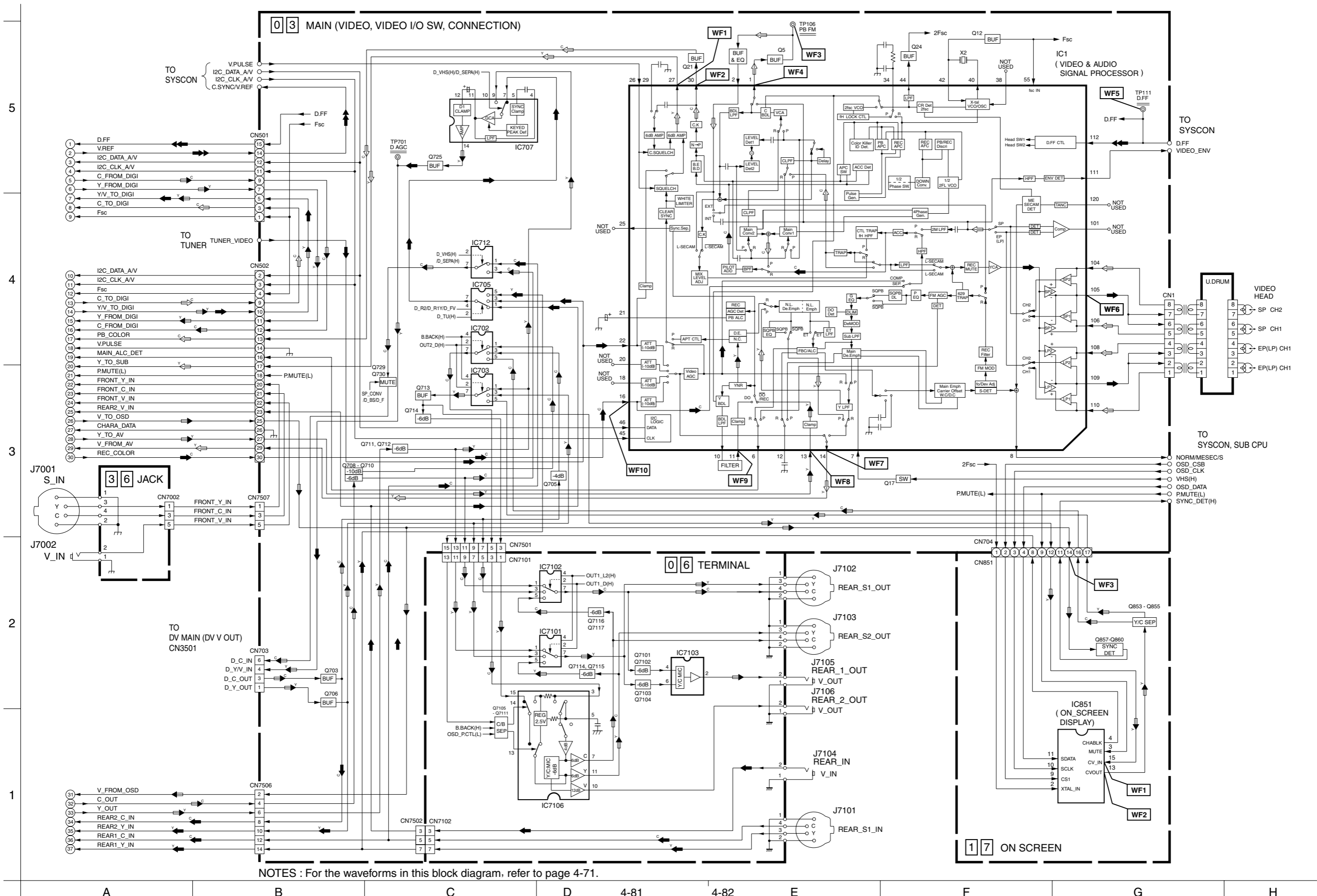
4-80

E

F

G

H



03 MAIN (VIDEO, VIDEO I/O SW, CONNECTION)

06 TERMINAL

17 ON SCREEN

IC1
(VIDEO & AUDIO
SIGNAL PROCESSOR)

IC851
(ON_SCREEN
DISPLAY)

NOTES : For the waveforms in this block diagram, refer to page 4-71.

A B C D 4-81 4-82 E F G H

5
4
3
2
1

TO SYSCON
V.PULSE
I2C_DATA_AV
I2C_CLK_AV
C.SYNC/REF

TO TUNER
TUNER_VIDEO

TO SYSCON
D.F.F
VIDEO_ENV

U.DRUM
VIDEO HEAD
SP CH2
SP CH1
EP(LP) CH1
EP(LP) CH1

TO SYSCON, SUB CPU

NORMMESEC/S
OSD_CSB
OSD_CLK
VHS(H)
OSD_DATA
PMUTE(L)
SYNC_DET(H)

TO DV MAIN (DV V OUT)
CN3501
D_C_IN
D_YV_IN
D_C_OUT
D_Y_OUT

J7102 REAR_S1_OUT
J7103 REAR_S2_OUT
J7105 REAR_1_OUT
J7106 REAR_2_OUT
J7104 REAR_IN
J7101 REAR_S1_IN

Q853-Q855
Y/C SEP
Q857-Q860
SYNC_DET

1 D.F.F
2 V.REF
3 I2C_DATA_AV
4 I2C_CLK_AV
5 C_FROM_DIGI
6 Y_FROM_DIGI
7 YV_TO_DIGI
8 C_TO_DIGI
9 Fsc

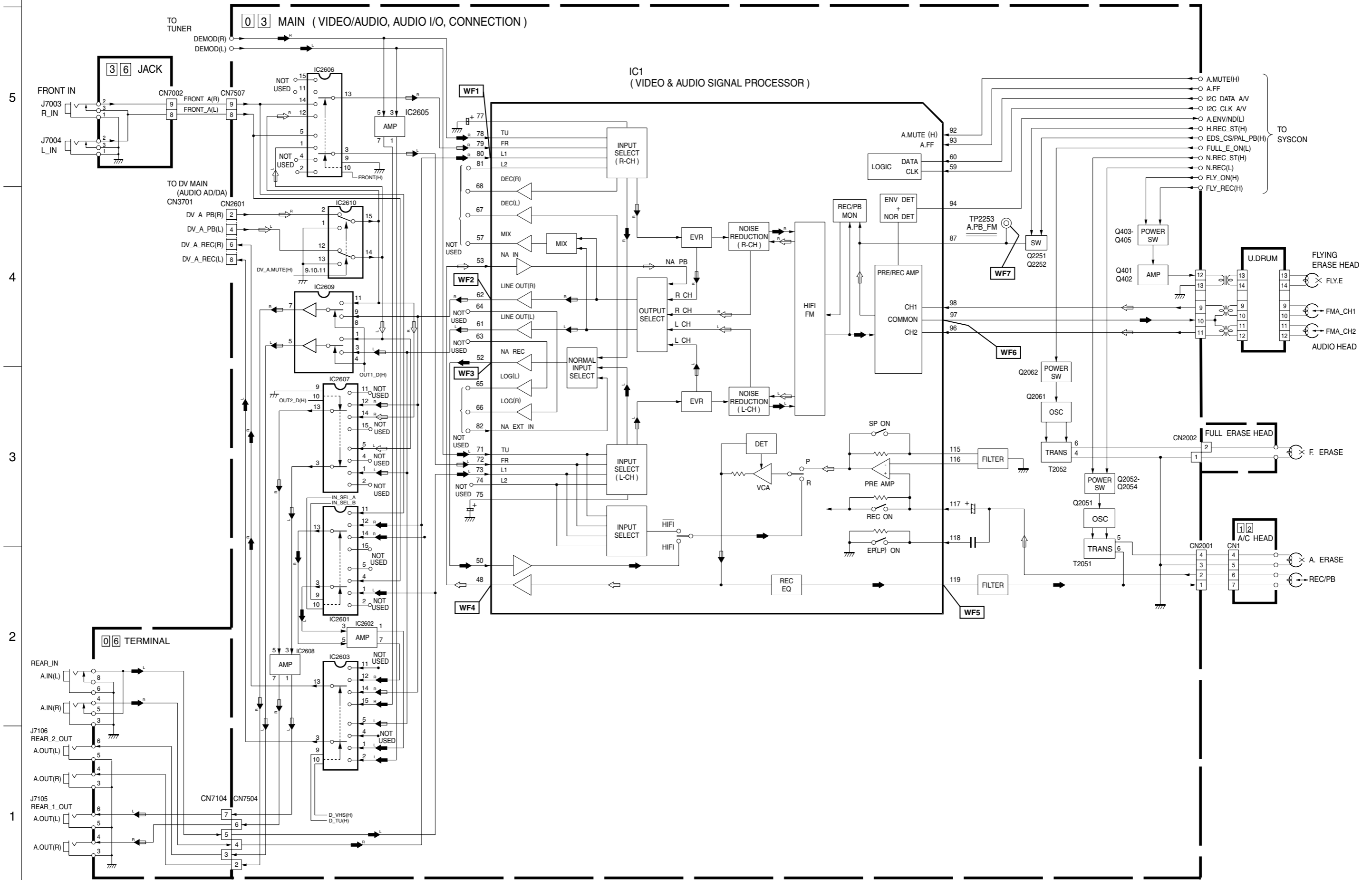
10 I2C_DATA_AV
11 I2C_CLK_AV
12 Fsc
13 C_TO_DIGI
14 YV_TO_DIGI
15 Y_FROM_DIGI
16 C_FROM_DIGI
17 PB_COLOR
18 V.PULSE
19 MAIN_ALC_DET
20 Y_TO_SUB
21 PMUTE(L)
22 FRONT_Y_IN
23 FRONT_C_IN
24 REAR2_V_IN
25 V_TO_OSD
26 CHARA_DATA
27 Y_TO_AV
28 V_FROM_AV
29 REC_COLOR
30

J7001 S_IN
1 Y
2 C
3

J7002 V_IN
1

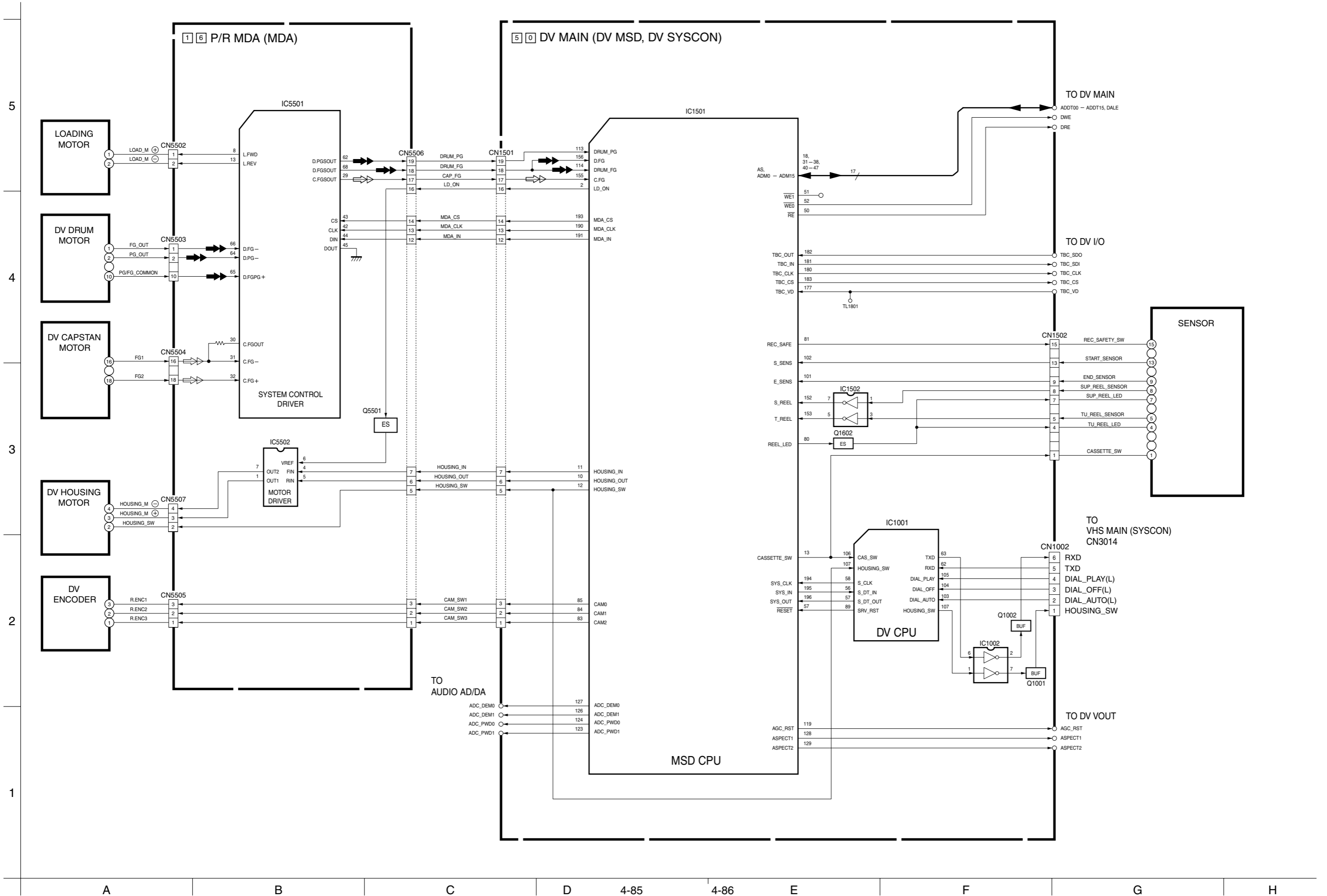
31 V_FROM_OSD
32 C_OUT
33 Y_OUT
34 REAR2_C_IN
35 REAR2_Y_IN
36 REAR1_C_IN
37 REAR1_Y_IN

4.39 AUDIO BLOCK DIAGRAM (VHS)



NOTES : For the waveforms in this block diagram, refer to page 4-71.

4.40 SYSTEM CONTROL BLOCK DIAGRAM (DV)



4.41 VIDEO BLOCK DIAGRAM (DV)

