


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: KΩ (1000Ω), M: MΩ (1000KΩ)

2) All capacitance values are in μF, (P: PF).

3) All inductance values are in μH, (m: mH).

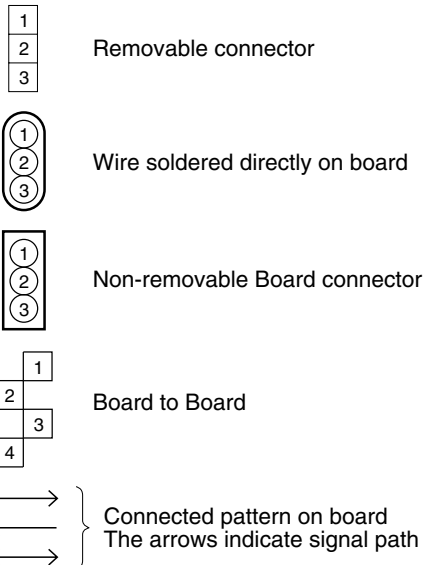
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

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

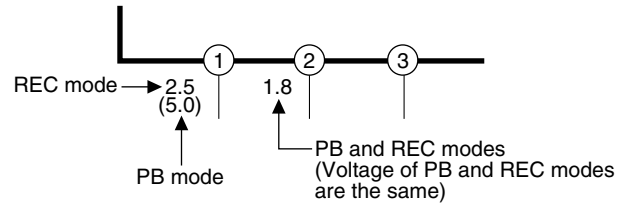
PB : REC then playback it

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

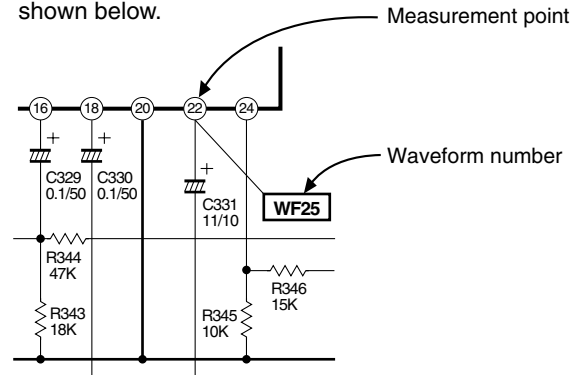
PB : REC then playback it

3) Movie Camera circuits

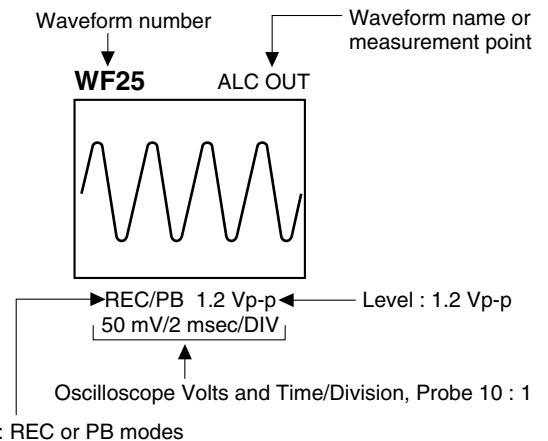
Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode

4) Indication on schematic diagram

Waveform indications on the schematic diagram are as shown below.



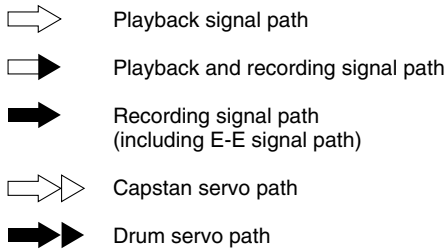
5) Waveform indications



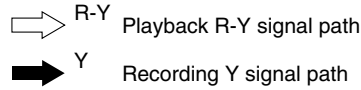
Mode : REC or PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.

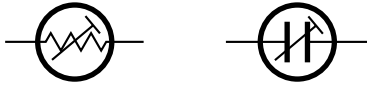


(Example)



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.



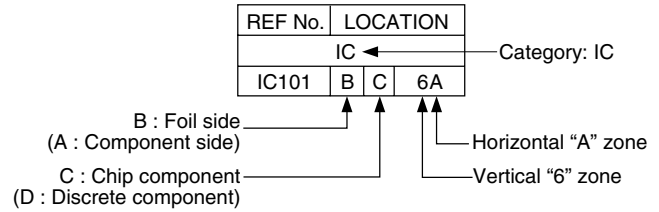
CIRCUIT BOARD NOTES

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

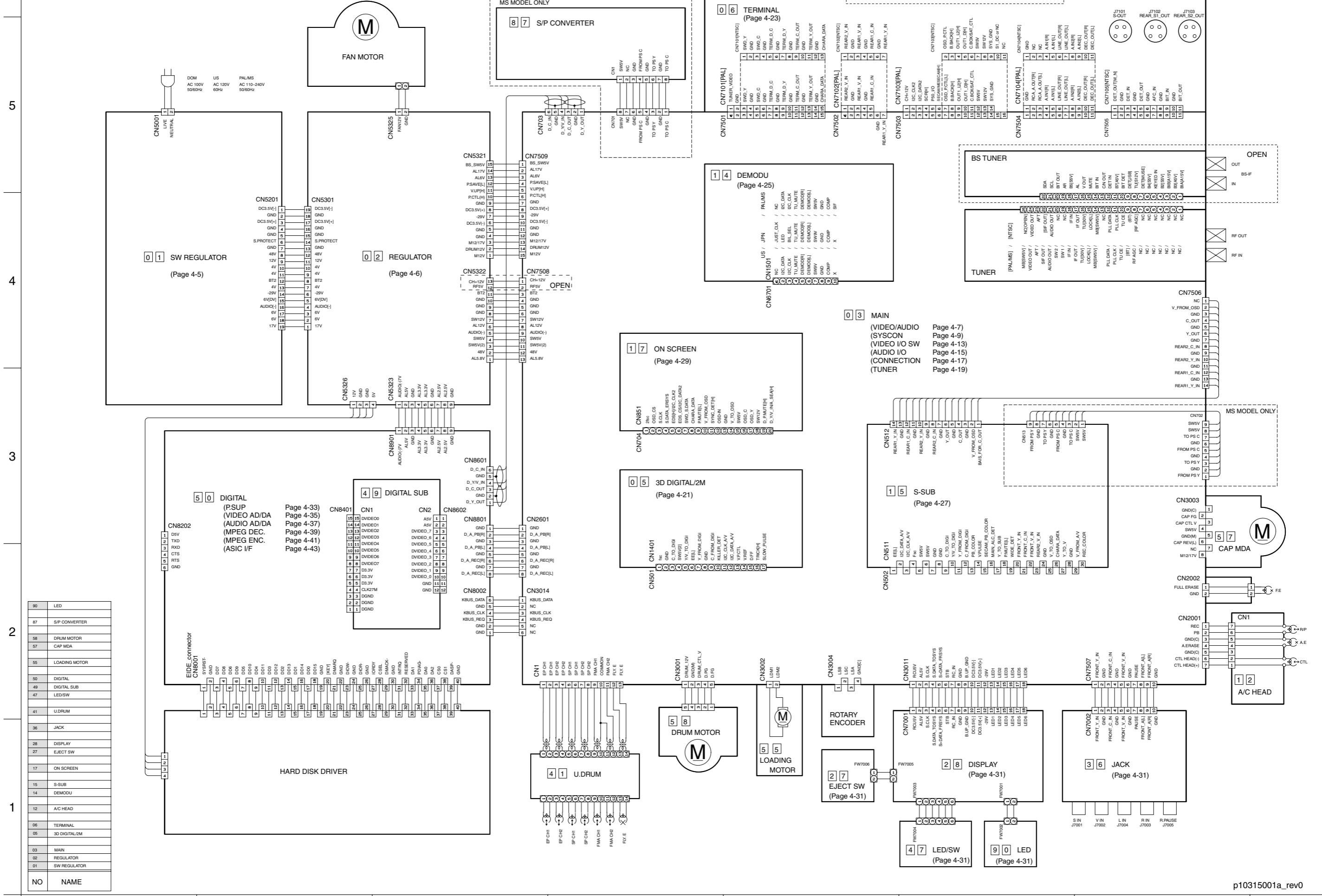
Parts location are indicated by guide scale on the circuit board.



Note:

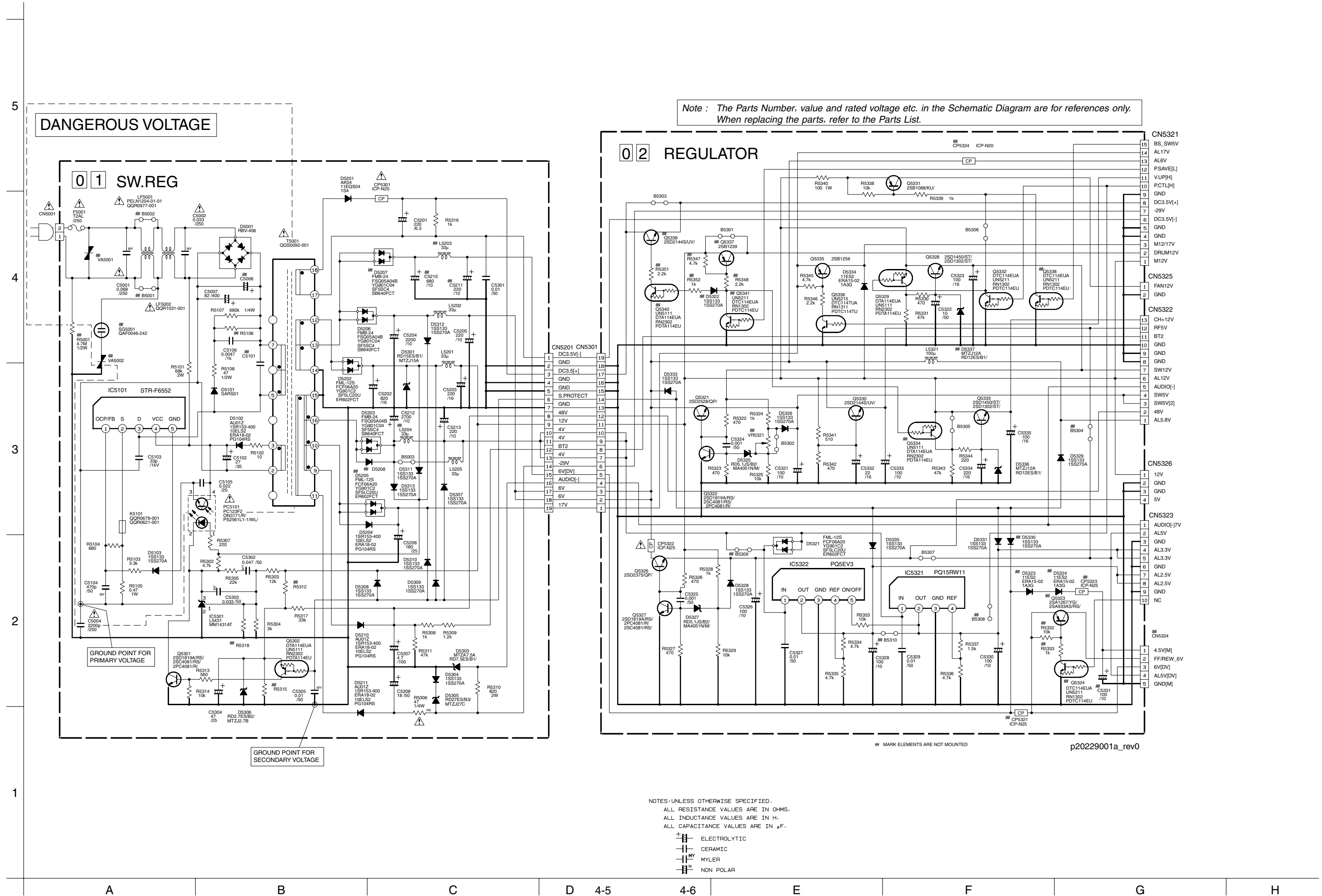
For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS



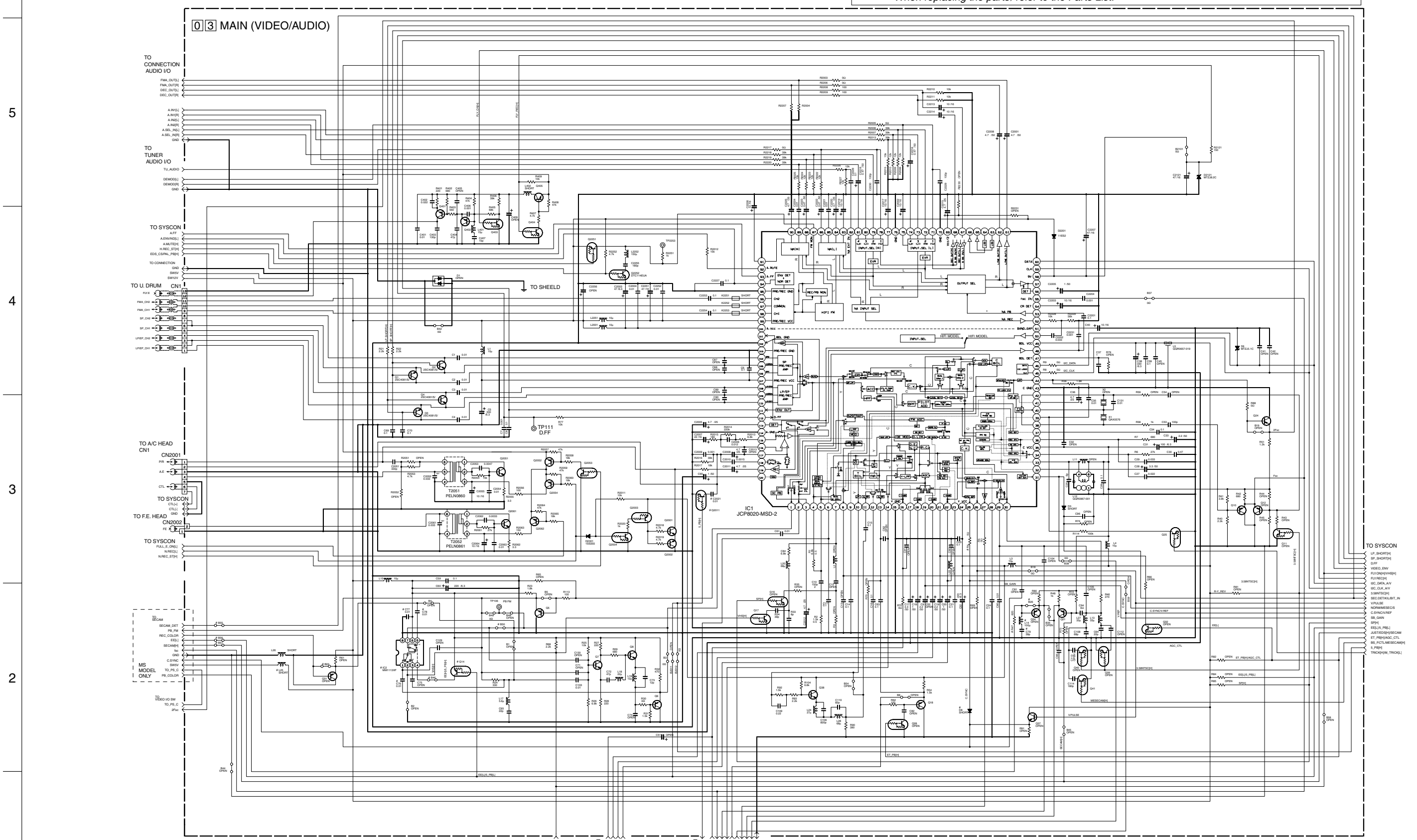
90	LED
87	S/P CONVERTER
58	DRUM MOTOR
57	CAP MDA
55	LOADING MOTOR
50	DIGITAL
49	DIGITAL SUB
47	LED/SW
41	U.DRUM
36	JACK
28	DISPLAY
27	EJECT SW
17	ON SCREEN
15	S-SUB
14	DEMODU
12	A/C HEAD
06	TERMINAL
05	3D DIGITAL/2M
03	MAIN
02	REGULATOR
01	SW REGULATOR
NO	NAME

4.2 SWITCHING REGULATOR AND REGULATOR SCHEMATIC DIAGRAMS



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.



DIFFERENCE TABLE

SYMBOL	IC2 Q14 D8 R4 R47 C78 C79 L14 L25 822 826 846 850 855-857	○ Used X Not used
MODEL		
ELIEX		X
MS		○

NOTES-UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.
 ALL NPN TYPE TRANSISTORS ARE 2SC4081ORS/
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/VS.
 ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC144WUA.
 ALL PNP TYPE DIGITAL TRANSISTORS ARE DTA144WUA.

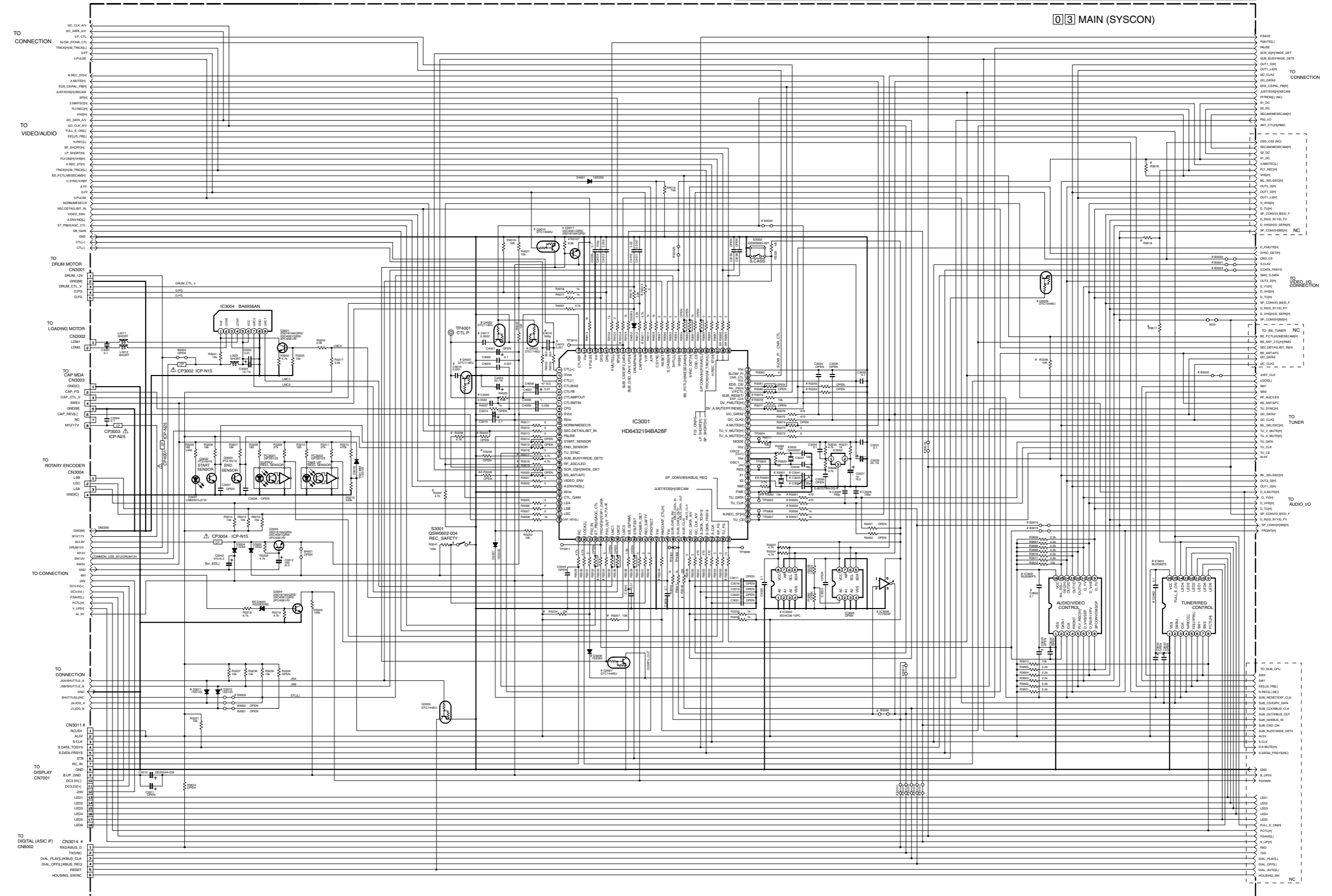
ELECTROLYTIC
 CERAMIC
 MYLAR
 NON POLAR

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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 μ F.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

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

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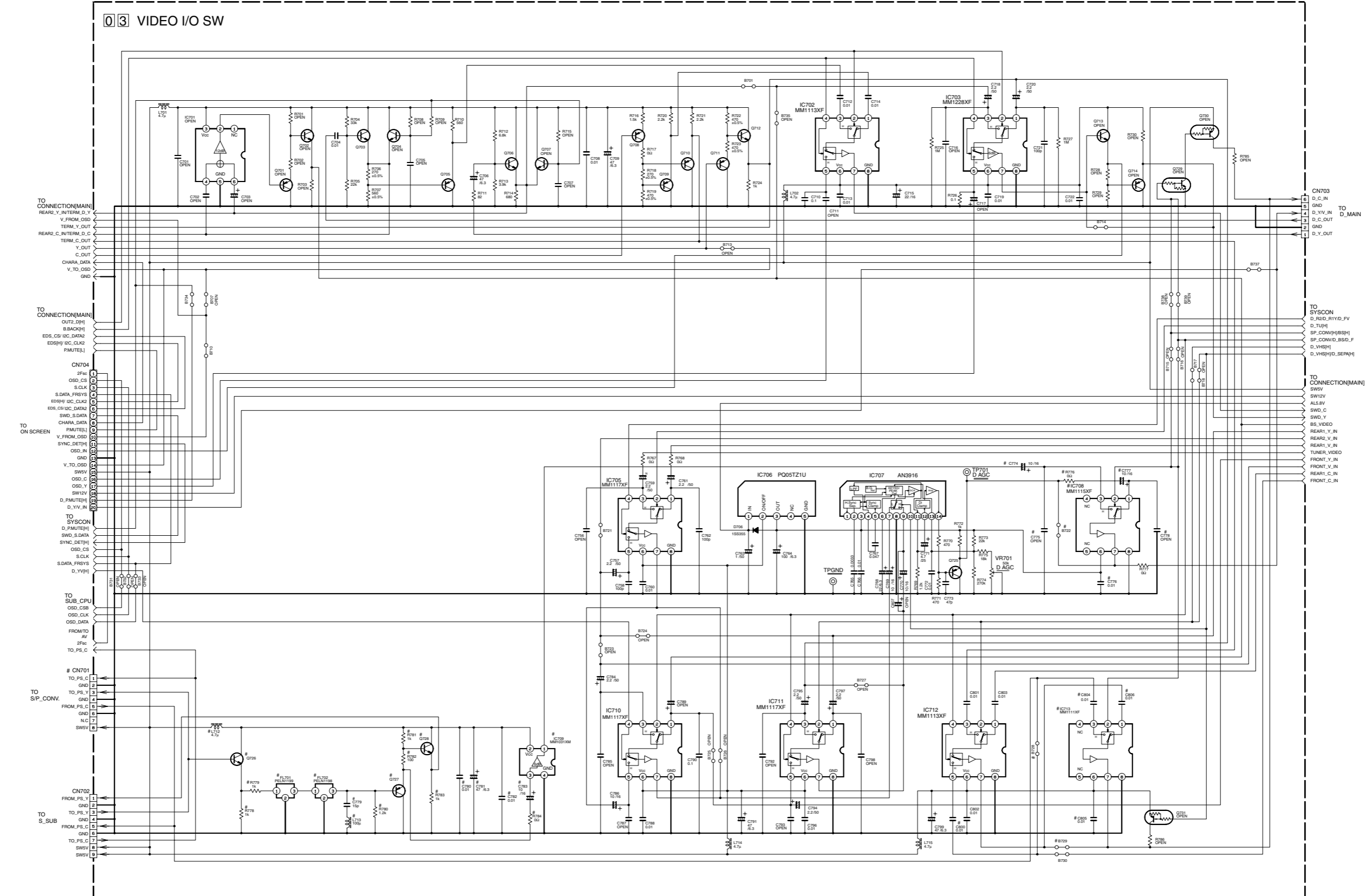
#DIFFERENCE TABLE
 ○ : Used
 X : Not used

ITEM		HR-DVS2 /SR-VS20 EU/EK	MS	US	DOM	HM-HDS1 DOM	EU/EK	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	○
SUB_BUSY/W.DET2	R3245	X	X	X	X	X	X	X	4.7k
	R3017	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k
RF_AGO/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	4.7k
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	0Ω
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 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 C3652 C3653 C3654	X	X	X	X	○	○	○	○
	FRONT[H]/EXP1_DATA	B3015	○	○	○	○	X	X	X
	SP_CONV/BS/KBUS_REQ	B3016	○	○	○	○	X	X	X
	JUST_CLK	B3020	X	X	X	○	○	X	X
	BS_PCTL	R3256	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_P.MUTE	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	○	○	○	X
EDS	Q3009	X	X	○	X	X	X	X	○
OSD	B3021								
	B3022	X	X	X	X	○	○	○	○
	B3023								
JBS/STLB/S1_DC/VHS(H)	B3025	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	R3079	1k	1k	1k	1k	1k	1k	1k	1k
FF/REW	C4015	680p (330p)	680p	0.001	680p	680p	680p	680p	0.001
	Q4002 C4016	○	○	X	○	○	○	○	X
	Q4003 C4017	○	○	○	○	○	○	○	X
	C4005	X	X	X	X	X	X	X	X
SUB_CLK/KBUS_CLK	R3048	220	220	220	220	220	220	220	
S/P_CONV/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	X	X	○	○	○	X	X	○
	R3107								
P50_OUT/M_PULSE	R3034	0Ω	0Ω	4.7k	4.7k	4.7k	0Ω	0Ω	4.7k
V.FF	R4011	4.7k (2.2k)	4.7k	1k	1k	2.7k	2.2k	2.2k	2.7k (1k)
	R4014	0Ω (2.2k)	0Ω	1.8k	1.8k	0Ω	2.2k	2.2k	0Ω (1.8k)
VHS(H)	R3616					X	○	○	○
FLY_REC(H)	R3617					X	X	X	X
	R3618					○	○	○	○

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 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.



DIFFERENCE TABLE

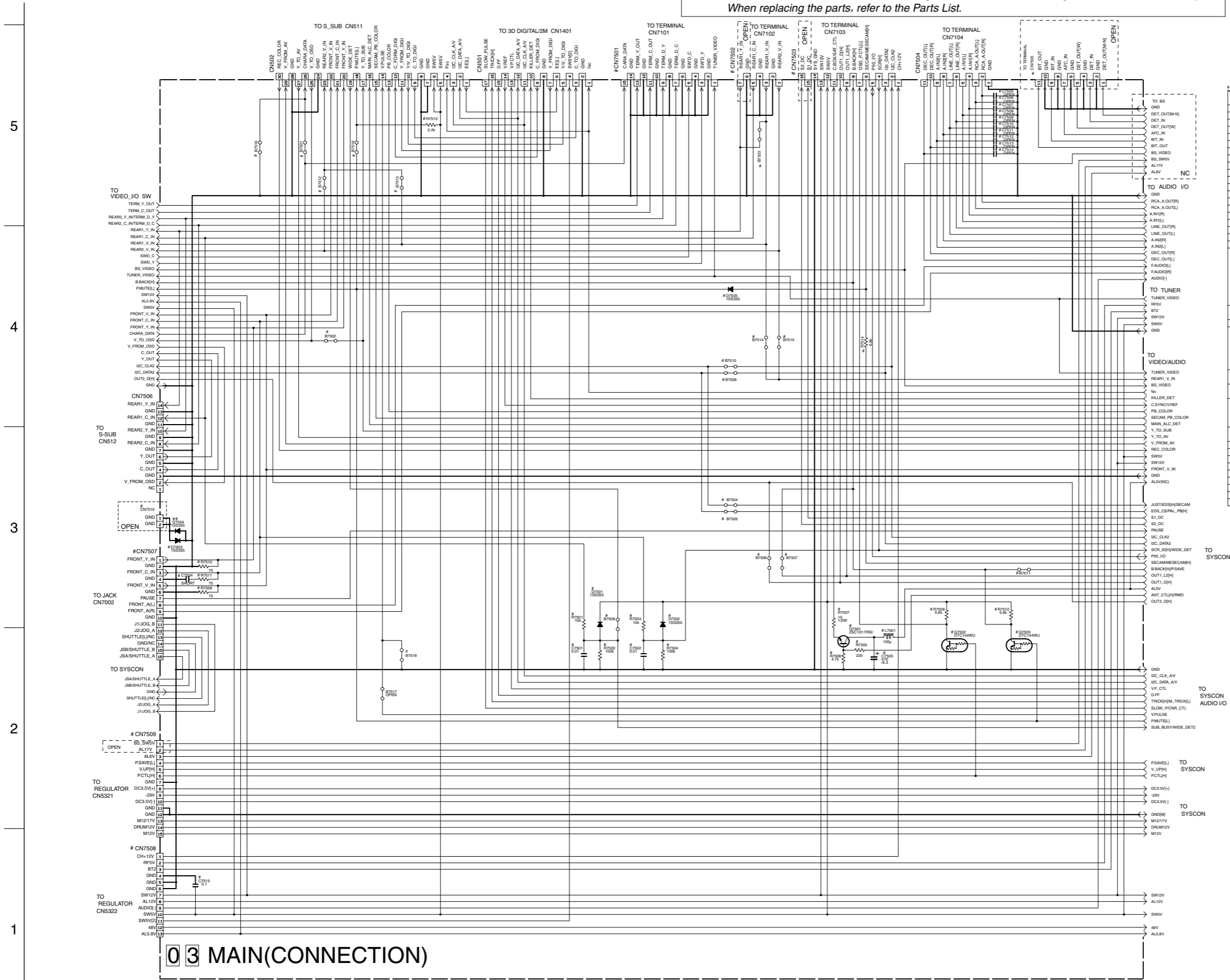
S/NO	IC708, IC709, IC713, Q726 - Q728, R776, R778 - R784, C774 - C778, C779 - C783, C804, C805, C806, L712	B722, B729
MODEL	FL701, FL702, CN701	
MM-HDS1EUEK	NOT USED	USED
MM-HDS1MS	USED	NOT USED

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

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4.7 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

Q Used
X Not used

	CN52V520	EU	EK	MS	DOM	US	HM-HD51	DOM	US	EUEK	MS
B7501	X	X	X	X	X	X	O	O	O	O	O
B7502	X	X	X	X	X	X	X	X	X	X	X
B7503	O	O	O	O	X	X	X	X	X	O	O
B7504	X	X	X	X	X	O	X	O	X	X	X
B7505	X	X	X	X	X	X	X	O	X	X	X
B7506	X	X	X	X	X	X	X	X	X	X	X
B7507	X	X	X	X	X	X	X	X	X	X	X
B7508	X	X	X	X	X	X	X	X	X	X	X
B7509	O	O	O	X	X	X	X	X	O	O	O
B7510	O	O	O	X	X	X	X	X	X	O	O
B7511	O	O	O	O	O	X	X	X	X	X	X
B7512	O	X	X	X	X	X	O	O	X	O	O
B7513	X	X	X	X	O	O	O	O	X	X	X
B7514	O	O	O	X	X	X	X	X	X	O	O
B7515	X	X	X	X	X	O	O	O	X	X	X
B7516	O	O	O	O	X	X	X	X	X	X	X
B7517	X	X	X	X	X	X	X	X	X	X	X
B7518	O	O	O	O	O	O	O	O	O	O	O
B7519	X	X	X	X	X	O	O	O	O	O	O
B7513	O	O	O	X	X	X	X	X	X	X	X
R7501											
R7502											
R7503											
R7504											
C7501	X	X	X	X	X	X	O	X	X	X	X
C7502											
D7501											
D7502											
C7505	X	X	X	X	X	X	X	X	X	X	X
-C7514											
C7515	X	X	X	X	O	O	O	O	O	O	O
Q7501											
R7505											
R7506											
R7507	O	O	O	X	O	X	O	O	O	O	O
L7501											
C7503											
R7508	O	O	O	O	O	X	X	X	X	X	X
Q7502											
R7512	X	X	X	X	X	X	O	O	O	O	O
Q7503											
R7509											
R7510											
R7511	X	X	X	X	X	X	X	X	X	X	X
C7504											
CN7510	X	X	X	X	X	X	X	X	X	X	X
D7503	1-15	1-15	1-15	3-15	3-15	3-8	3-15	1-15	1-15	1-15	1-15
CN7502	1-5	1-5	1-5	1-7	1-7	1-7	1-7	1-5	1-5	1-5	1-5
CN7503	1-14	1-14	1-14	7-16	7-16	8-15	7-16	1-14	1-14	1-14	1-14
CN7505	X	X	X	1-11	1-11	X	1-11	X	X	X	X
CN7507	1-16	1-16	1-16	1-16	1-16	1-10	1-10	1-10	1-10	1-10	1-10
CN7508	1-13	1-13	1-13	3-13	3-13	3-13	3-13	1-13	1-13	1-13	1-13
CN7509	3-15	3-15	3-15	3-15	3-15	1-15	3-15	1-15	1-15	1-15	1-15
D7505	O	O	O	X	X	X	X	X	X	X	X
R7514	O	O	O	X	X	X	X	X	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.

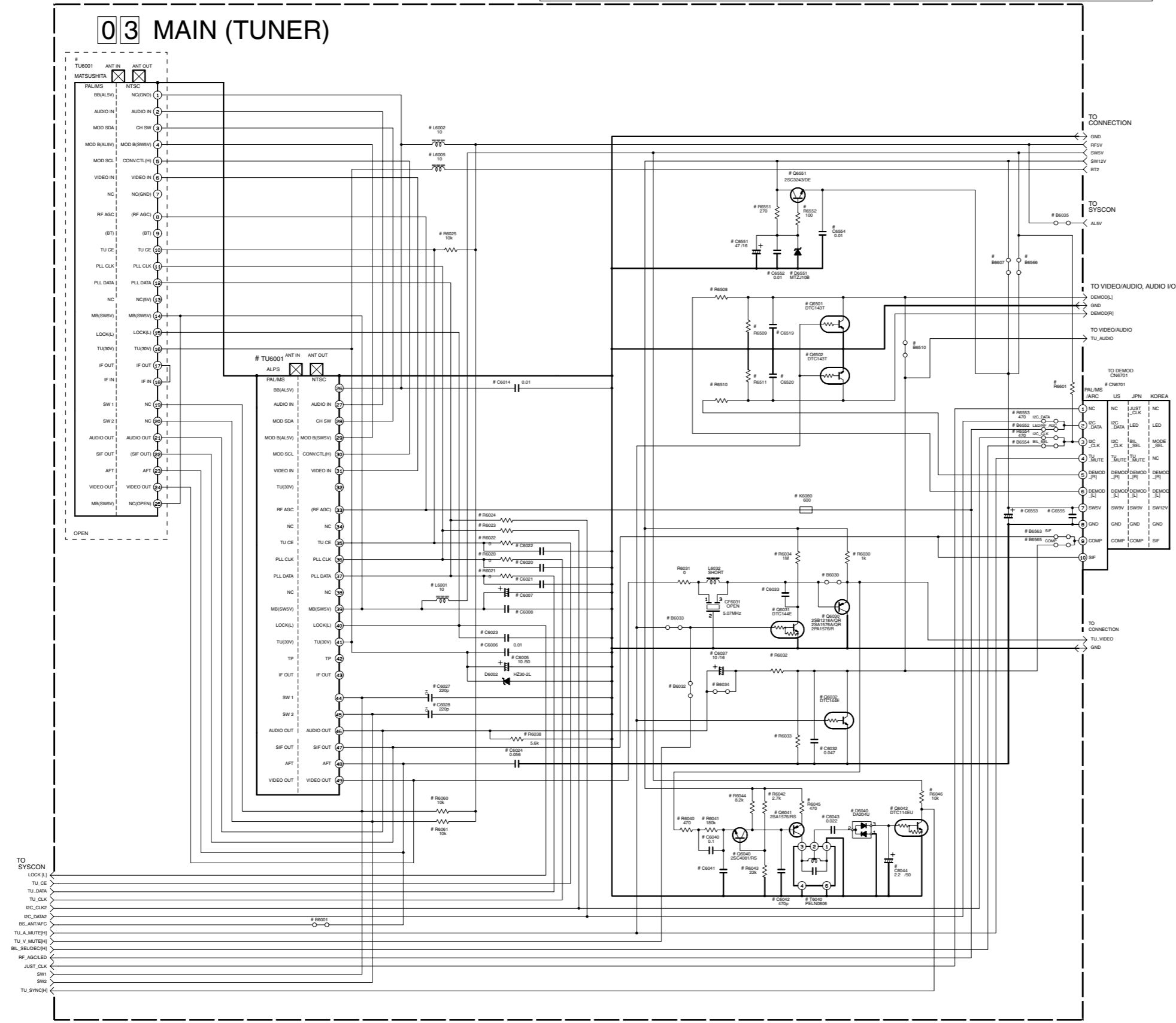
ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

03 MAIN(CONNECTION)

p10308001a_rev.0.1

4.8 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	
				DVS2	HDS1	DVS2/VS20	HDS1
TUNER	TU6001	ALPS	ALPS	MATSUSHITA	MATSUSHITA	ALPS	ALPS
		QAU20151	QAU2152	QAU2198	QAU2198	QAU2163	QAU2163
ATS+	R6025,R6035	X	X	X	X	X	X
VIDEO BUFFER	R6030,C6030	O	O	O	O	X	X
	B6030	X	X	X	X	O	O
TU_V_MUTE	Q6031	O	O	O	X	X	X
	R6034	X	X	O	X	X	X
	C6033	0	0	0.0047	X	X	X
	B6032	O	O	X	X	X	X
TU_A_MUTE	Q6032	O	O	X	X	X	X
	B6033	X	X	O	X	X	X
AUDIO OUT	R6032	3.3k	3.3k	0	0	12k	12k
	R6033	1.8k	1.8k	X	X	X	X
	R6038	X	X	X	X	X	X
	C6032	0.047	X	X	X	X	X
	B6034	X	X	O	O	O	O
	C6037	O	O	X	X	X	X
AFC	B6001	O	O	X	X	O	X
	C6034	X	X	X	X	X	X
CENELEC	C6027,C6028	X	O	X	X	X	X
	C6005	X	X	X	X	X	X
	C6006	X	X	X	X	X	X
TU30V	L6005	10	10	SHORT	SHORT	SHORT	SHORT
MB(SW)SV	C6007	33010	33010	X	X	X	X
	C6008	X	X	X	X	X	X
	L6001	O	O	SHORT	SHORT	SHORT	SHORT
BB(ALSV)	C6014,L6002	O	O	X	X	X	X
PLL CLK	R6020	470	470	1k	1k	1k	1k
	R6023	X	X	X	X	X	X
	C6020	X	X	X	X	X	X
PLL DATA	R6021	470	470	1k	1k	1k	1k
	R6024	X	X	X	X	X	X
	C6021	X	X	X	X	X	X
TU CE	R6022	470	470	1k	1k	1k	1k
	C6022	X	X	X	X	X	X
LOCK	C6023	O	O	X	X	X	X
SYSTEM SW	R6030,R6031	O	O	X	X	X	X
SYNC DET	R6040-R6046, C6040-C6042, D6040,D6042, D6040,D6040	X	X	X	X	O	O

DEMOC	SYMBOL	EU/EK	FRANCE	JAPAN		US	
				DVS2	HDS1	DVS2/VS20	HDS1
DEMOC PWR ASSY	CN6701	LPA10294*	LPA10294*	PB11087*	PB11087*	PB11078*	PB11078*
SV REG	R6551,R6552, C6551,C6551	X	X	O	O	O	O
	C6551,C6552	X	X	X	X	X	X
DEMOC REG	C6553	33/16	33/16	X	X	X	X
PASS CON	C6554	X	X	X	X	X	X
	C6555	0.01	0.01	X	X	X	X
SW12V	B6607	X	X	X	X	X	X
	R6508,R6510	0	0	0	0	0	0
DEMOC OUT	R6509,R6511	X	X	X	X	X	X
	C6519,C6520	X	X	X	X	X	X
MUTE	Q6501,Q6502	X	X	X	X	O	O
TUNER MONO	B6510	X	X	X	X	X	X
	R6553,R6554	0	0	X	X	0	0
	B6552,B6554	X	X	O	O	X	X
	B6563	X	X	X	X	X	X
	B6565	X	X	O	O	O	O
	B6566	O	O	X	X	X	X
	R6501	X	X	X	X	X	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
 MYLAR
 NON POLAR

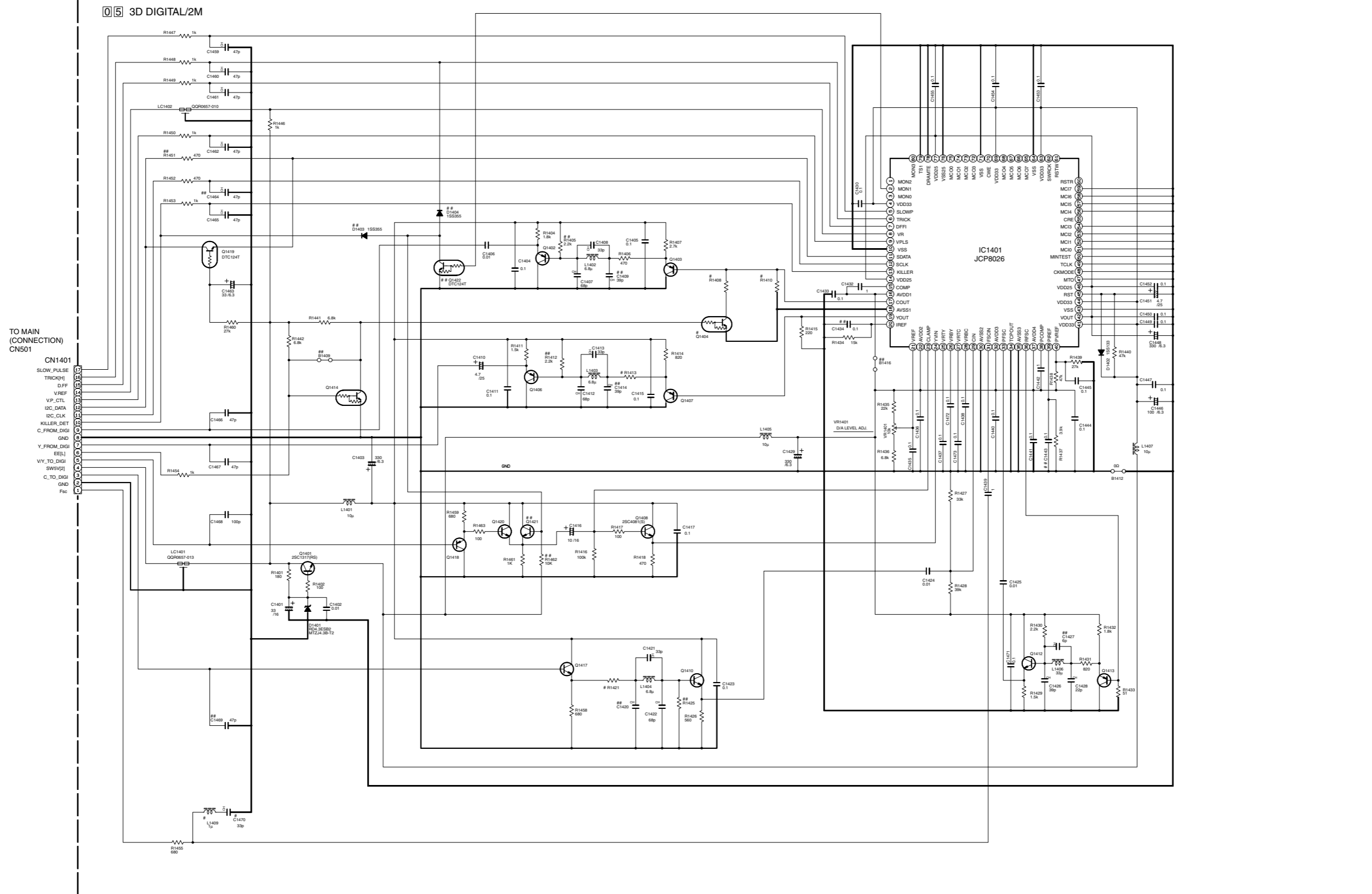
p10306001a_rev0

5
4
3
2
1

A B C D 4-19 4-20 E F G H

4.9 3D DIGITAL/2M 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 MAIN
(CONNECTION)
CN501

CN1401
SLOW_PULSE
TRICK(H)
D.F.F
V.REF
I2C_DATA
I2C_CLK
KILLER_DET
C_FROM_DIGI
GND
Y_FROM_DIGI
EEL1
VY_TO_DIGI
SWIV21
C_TO_DIGI
GND
Fnc

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

RESISTOR SYMBOLS:
+ CERAMIC
- MYLER
NON POLAR

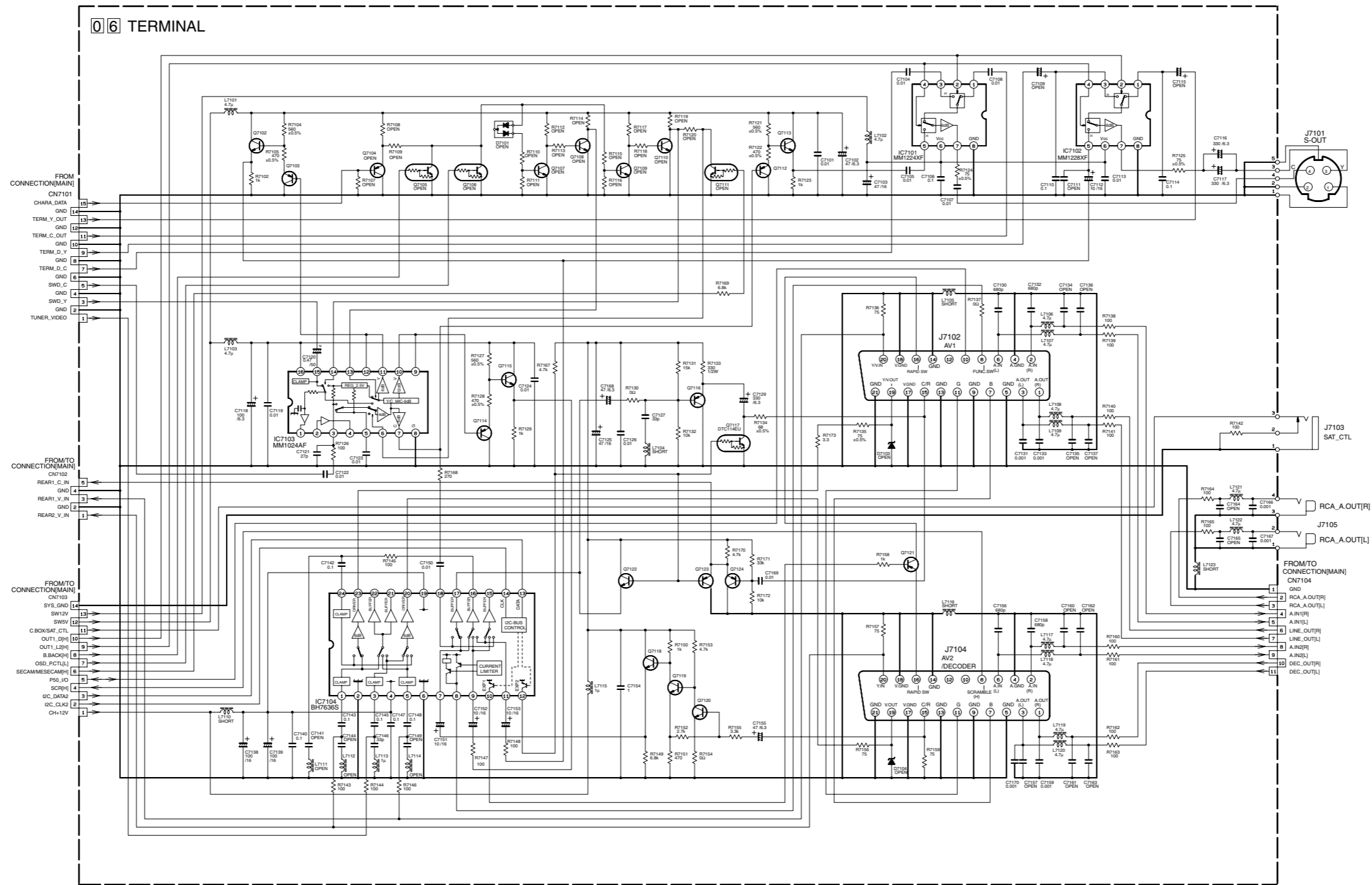
TRANSISTOR SYMBOLS:
MARK ELEMENTS ARE NOT MOUNTED.
ALL SINGLE DIODE: 1S5133 OR 1N4148.
ALL PNP TRANSISTOR: 2SA1578A(QR) OR 2SB1218A(QR) OR 2PA1578(R)
ALL NPN TRANSISTOR: 2SC4081(QRS) OR 2SD1819A(QRS) OR 2PC4081(R)
ALL NPN DIGITAL TRANSISTOR: DTC144WUA OR UN921E OR RN1309

DIFFERENCE TABLE

	Q1404	R1408	R1410	R1413	R1421	C1470	L1409
PALMS	○	1.2k	390	330	390	33p	Iu
NTSC	×	OPEN	240	470	330	OPEN	OPEN

4.10 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.



p10372001a_rev0

NOTES-UNLESS OTHERWISE SPECIFIED.
 ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS).
 ALL PNP TYPE TRANSISTORS ARE 2SA1516(AQR).
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN pF.
 ± ELECTROLYTIC
 — CERAMIC
 — MYLER
 — NON POLAR

LAST NO	VACANT NO
W	7101
R	7173 7101, 7103, 7106, 7166
C	7170 7128
L	7123
D	7104 7102
Q	7124 7101
IC	7104
J	7105

A

B

C

D

4-23

4-24

E

F

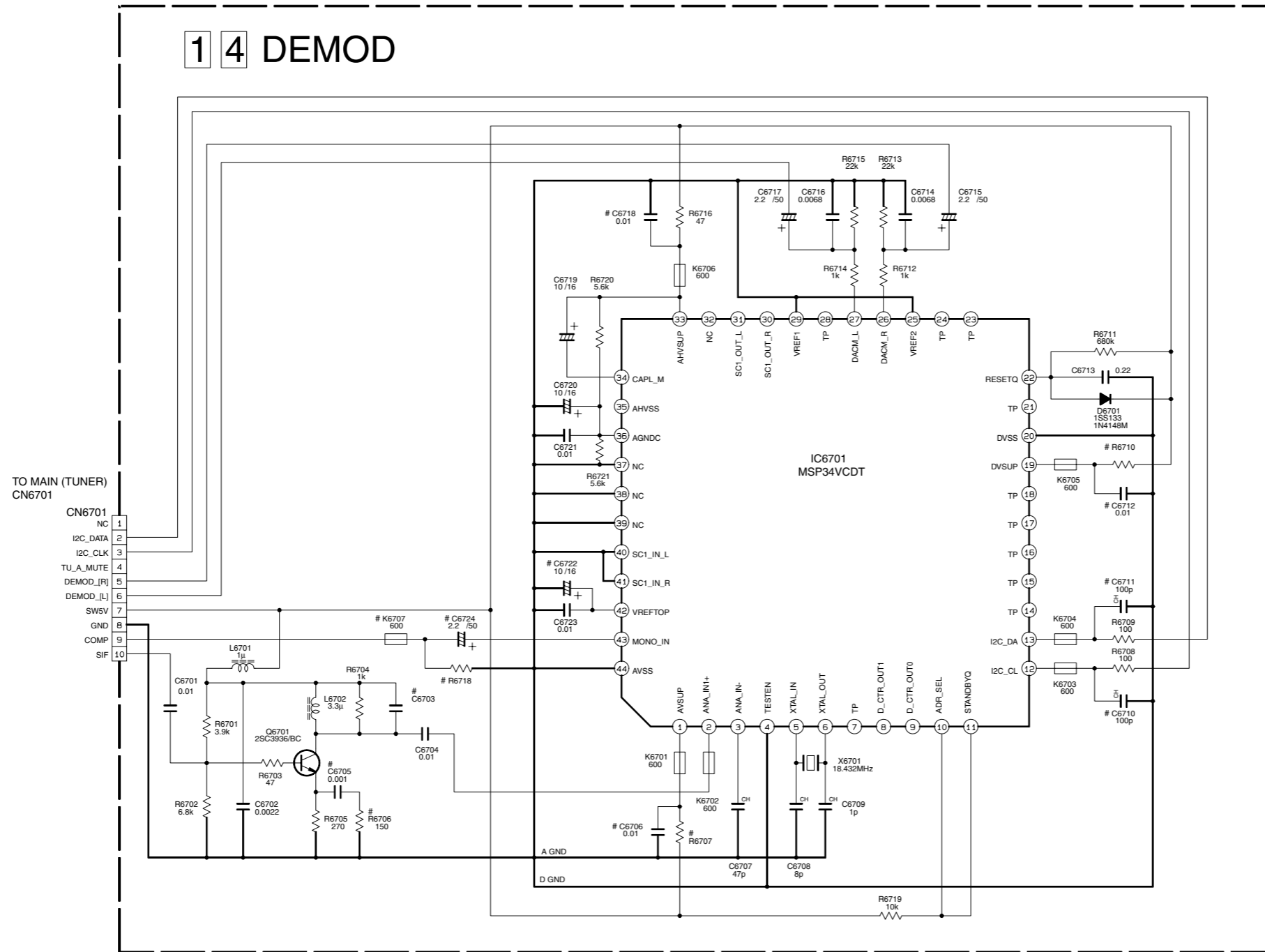
G

H

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.

1 4 DEMOD



DIFFERENCE TABLE

○ Used
× Not used

SYMBOL	FRANCE MS		ARC	
	STEP UP EU/EK	BASIC EU/EK	3SYSTEM	4SYSTEM
PRE AMP				
R6706	○	○	×	×
C6705				
C6703	×	×	180p	220p
MONO IN				
C6724	○	×	×	×
K6707				
R6718	×	×	×	×
ANALOG Vcc				
R6707	22	47	47	47
C6706	×	×	×	×
I2C_bus				
C6710	×	×	×	×
C6711				
DIGITAL Vcc				
R6710	10	12	12	12
C6712	×	×	×	×
DAC Vcc				
C6718	×	×	×	×
C6722	×	×	×	×

p20162001a_rev2

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

- ⊕ — ELECTROLYTIC
- — CERAMIC
- MY — MYLER
- N — NON POLAR

A

B

C

D 4-25

4-26

E

F

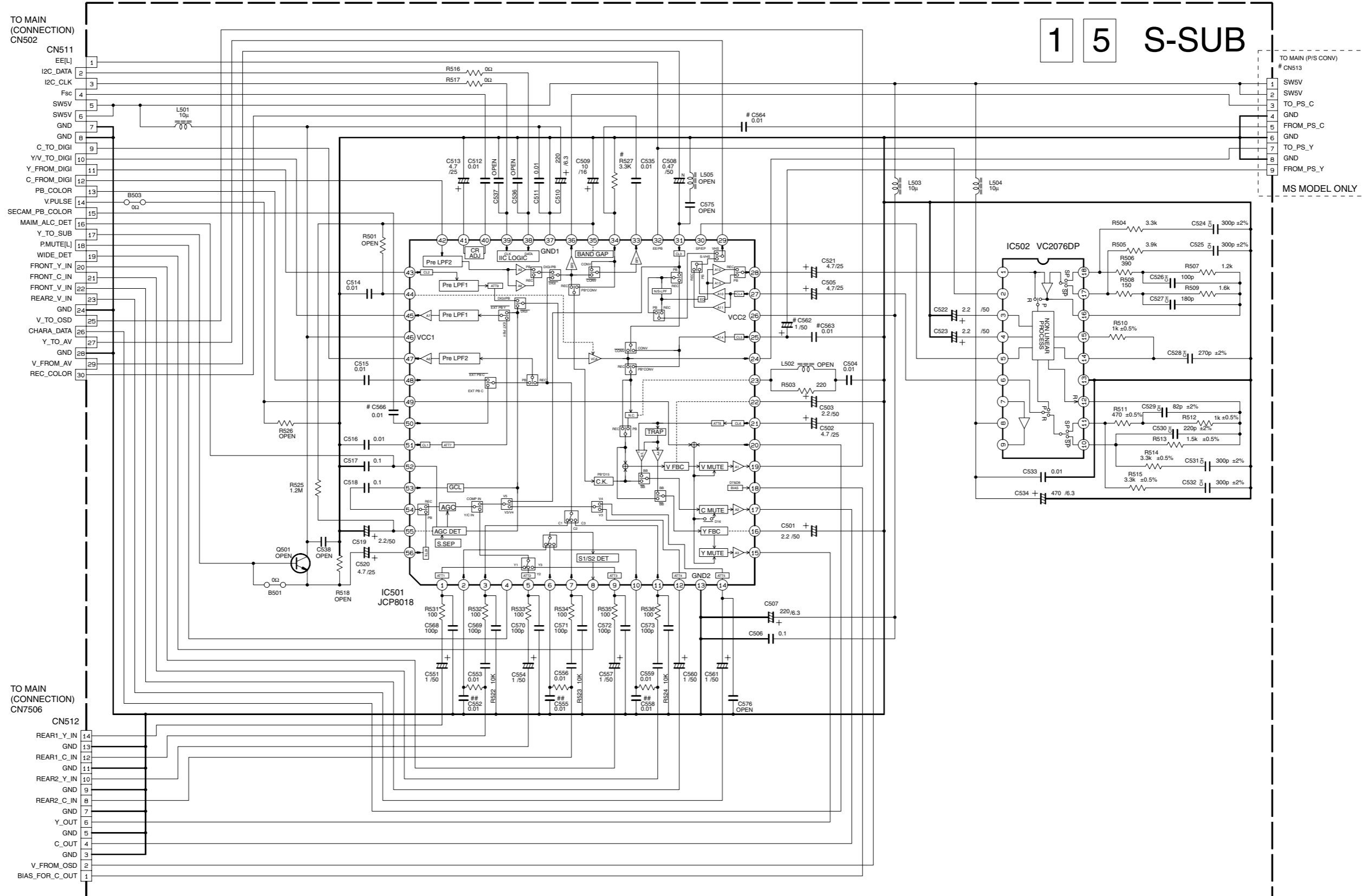
G

H

4.12 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



TO MAIN (CONNECTION) CN7506
 CN512
 REAR1_Y_IN 14
 GND 13
 REAR1_C_IN 12
 GND 11
 REAR2_Y_IN 10
 GND 9
 REAR2_C_IN 8
 GND 7
 Y_OUT 6
 GND 5
 C_OUT 4
 GND 3
 V_FROM_OSD 2
 BIAS_FOR_C_OUT 1

TO MAIN (P/S CONV) #CN513
 1 SW5V
 2 SW5V
 3 TO_PS_C
 4 GND
 5 FROM_PS_C
 6 GND
 7 TO_PS_Y
 8 GND
 9 FROM_PS_Y
 MS MODEL ONLY

DIFFERENCE TABLE

	Used	Not used
MS	○	×
OTHERS	×	○

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

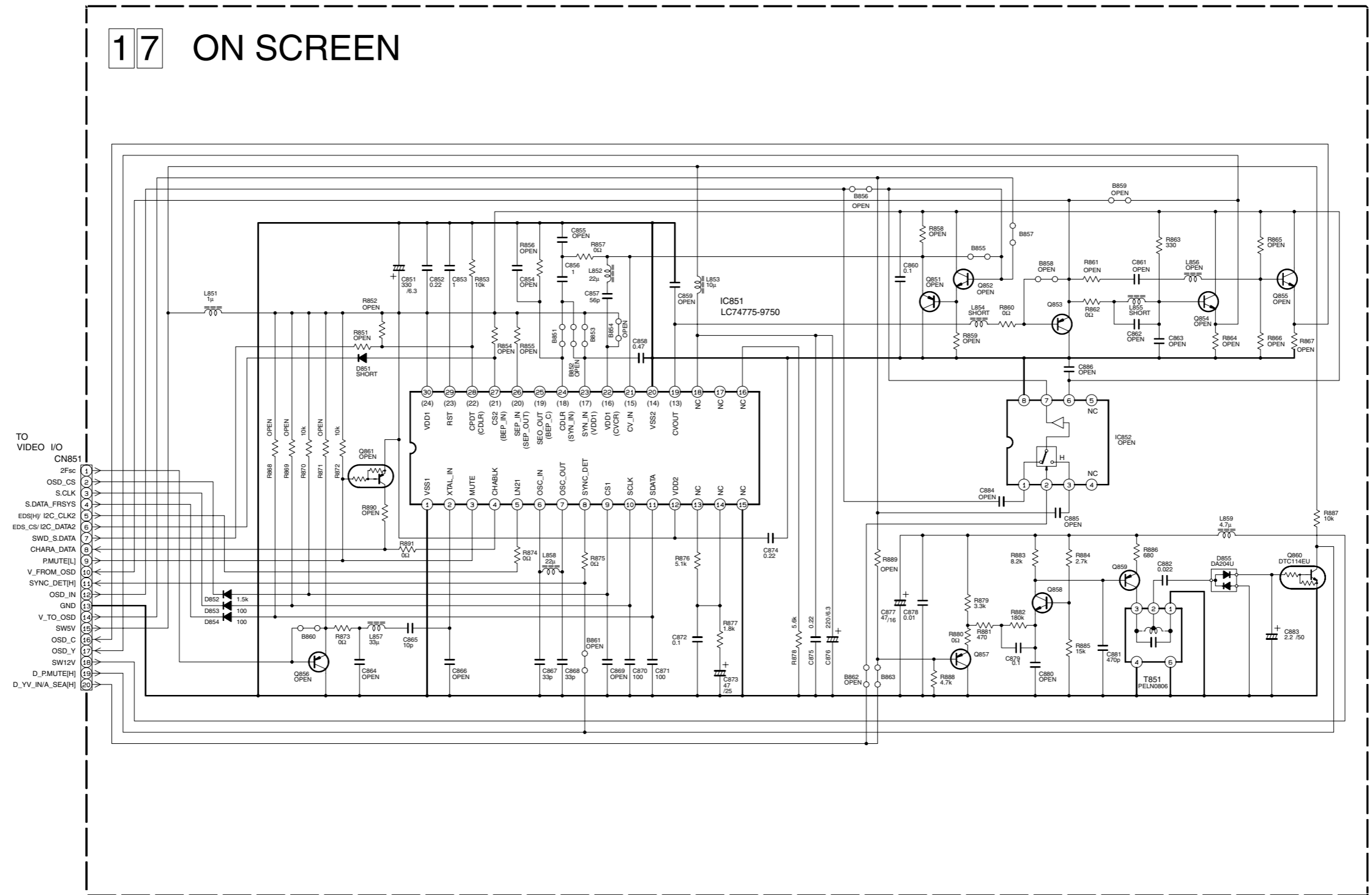
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

p20168001a_rev0

4.13 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.



p20228001a_rev0

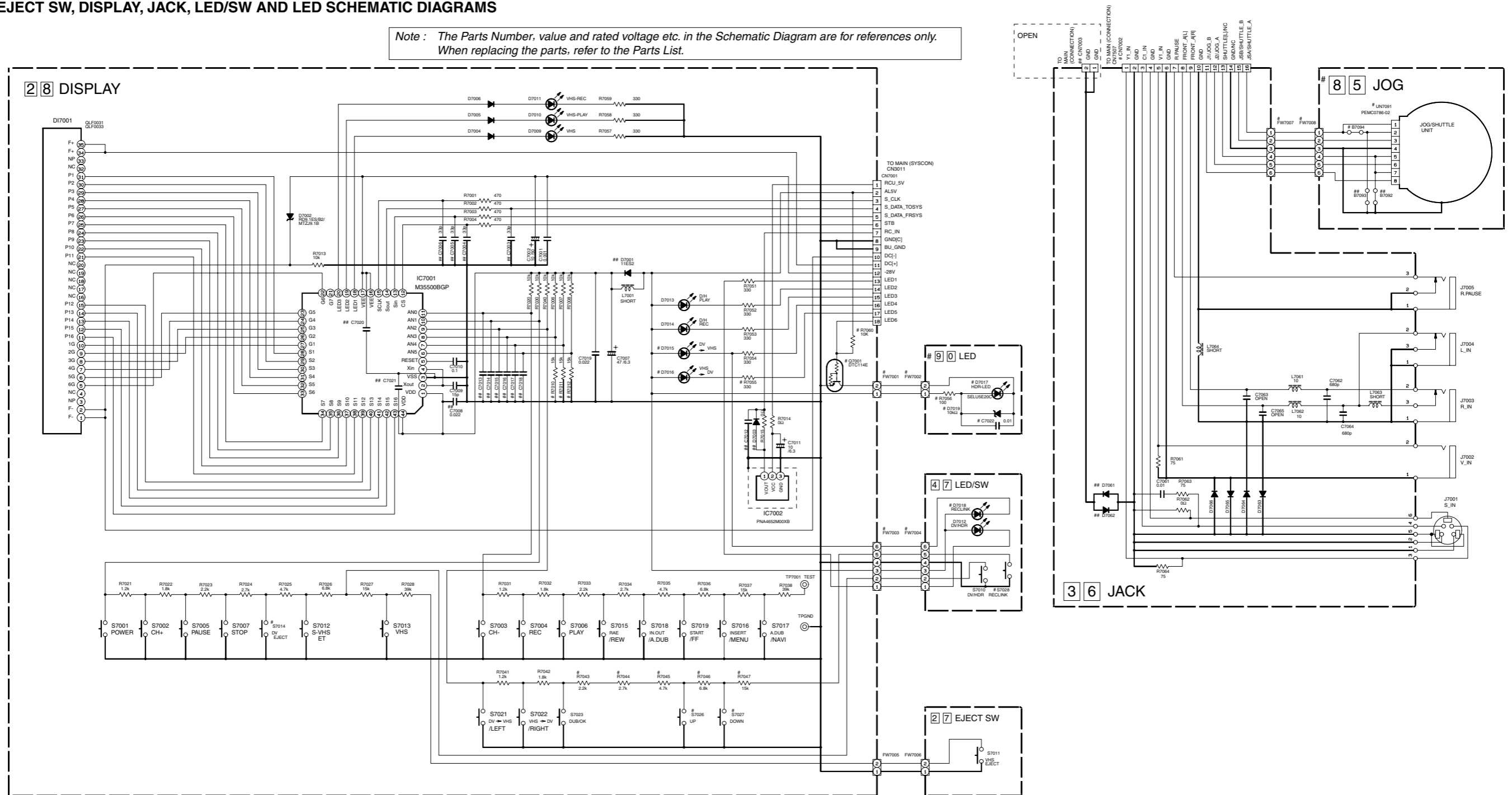
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR/.
 ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

4.14 EJECT SW, DISPLAY, JACK, LED/SW AND LED 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.



p10309001a_rev1

DIFFERENCE TABLE

	UN7091 S7004 FW7007 FW7008	CN7002	D7017 FW7001 S7027 R7069 Q7001	D7018 S7026 R7044 R7045 R7046 R7047	S7014 D7015 D7016 R7055	FW7003 FW7004
DVS2 V/S20	○	1-16	X	○	○	1-4
HDS1	X	1-10	○	X	X	1-6

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
 - - MYLER
 - - NON POLAR
 ##NOT USED

5

4

3

2

1

A

B

C

D

4-31

4-32

E

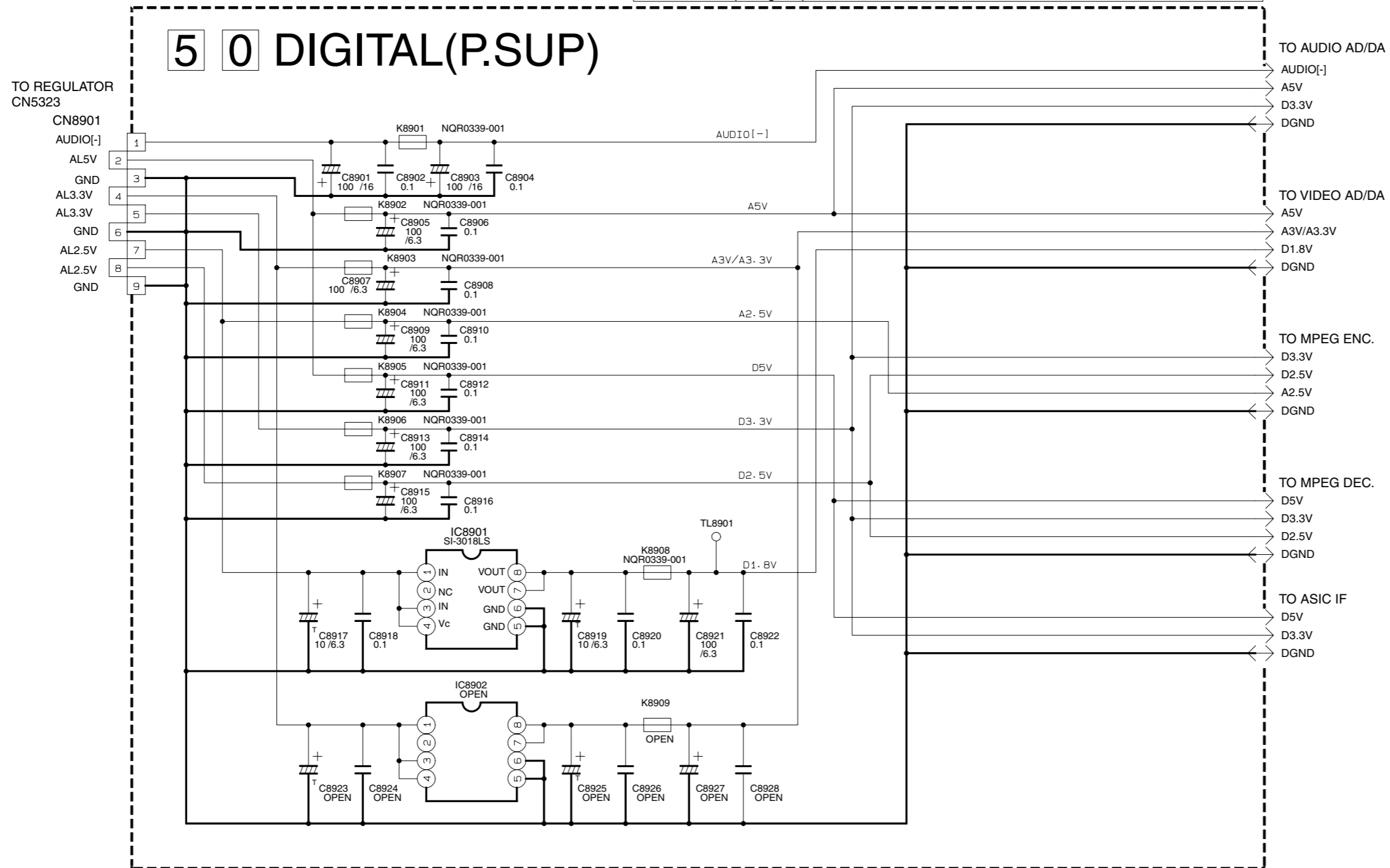
F

G

H

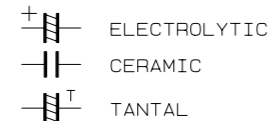
4.15 DIGITAL P.SUP SCHEMATIC DIAGRAM

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.



p30080001a_rev2

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

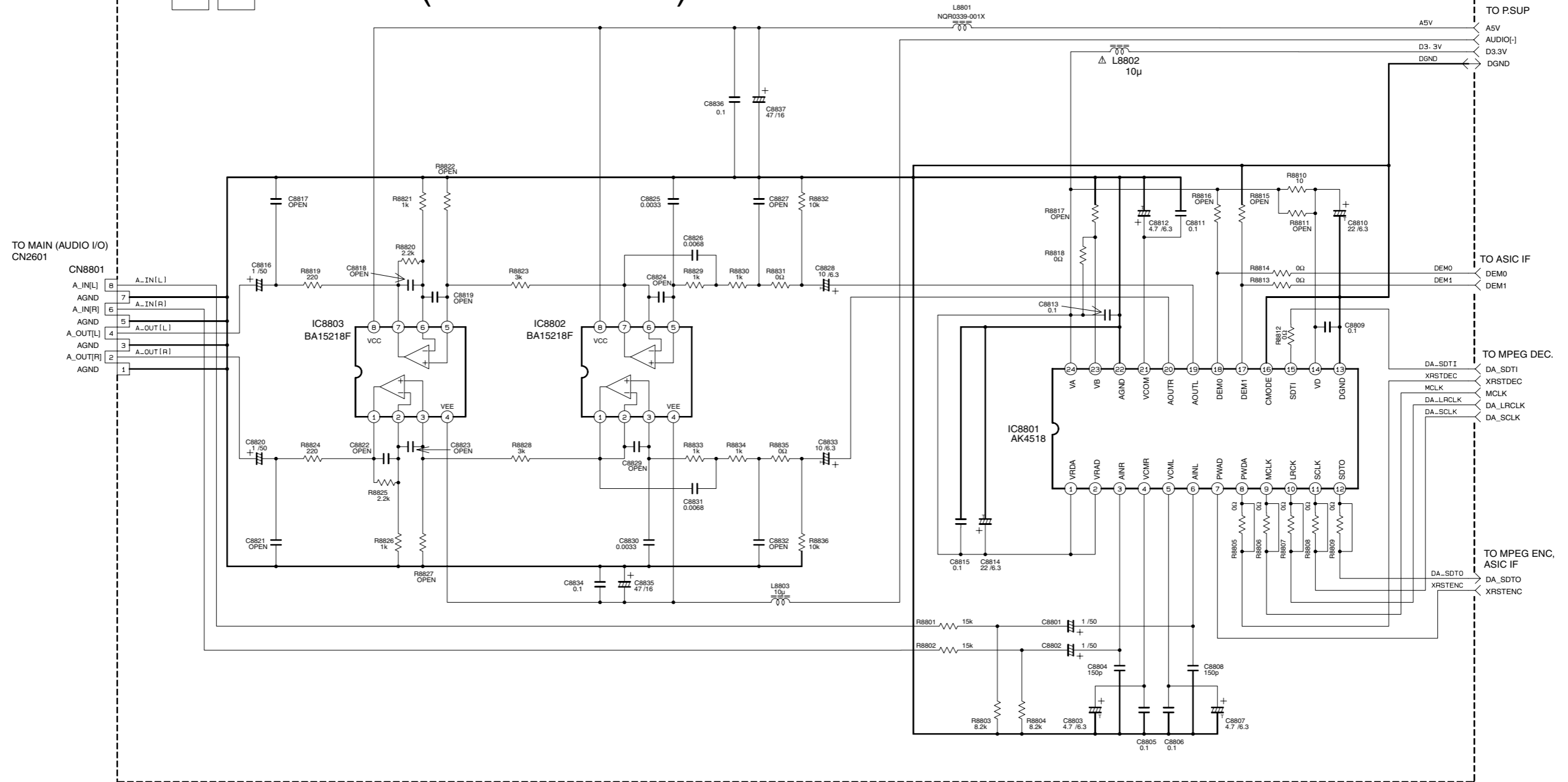


LAST NO		VACANT NO
C	8928	1-8900
K	8909	1-8900

4.17 DIGITAL 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.

5 0 DIGITAL(AUDIO AD/DA)



p20193001a_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
- TANTALUM

LAST NO	VACANT NO
R 8836	1-8800
C 8837	1-8800
L 8803	1-8800

5
4
3
2
1

A B C D 4-37 4-38 E F G H

4.18 DIGITAL MPEG DEC 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.

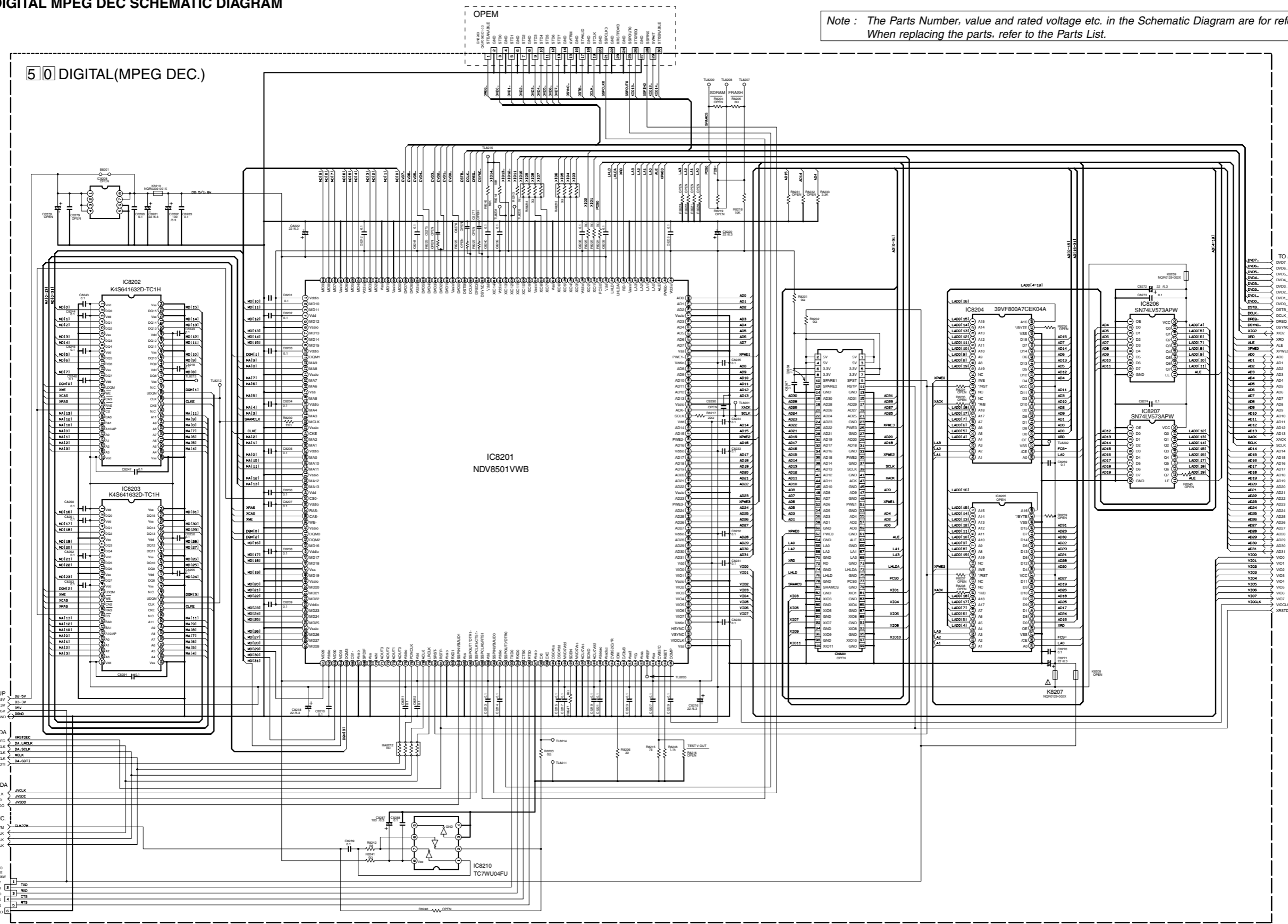
5

4

3

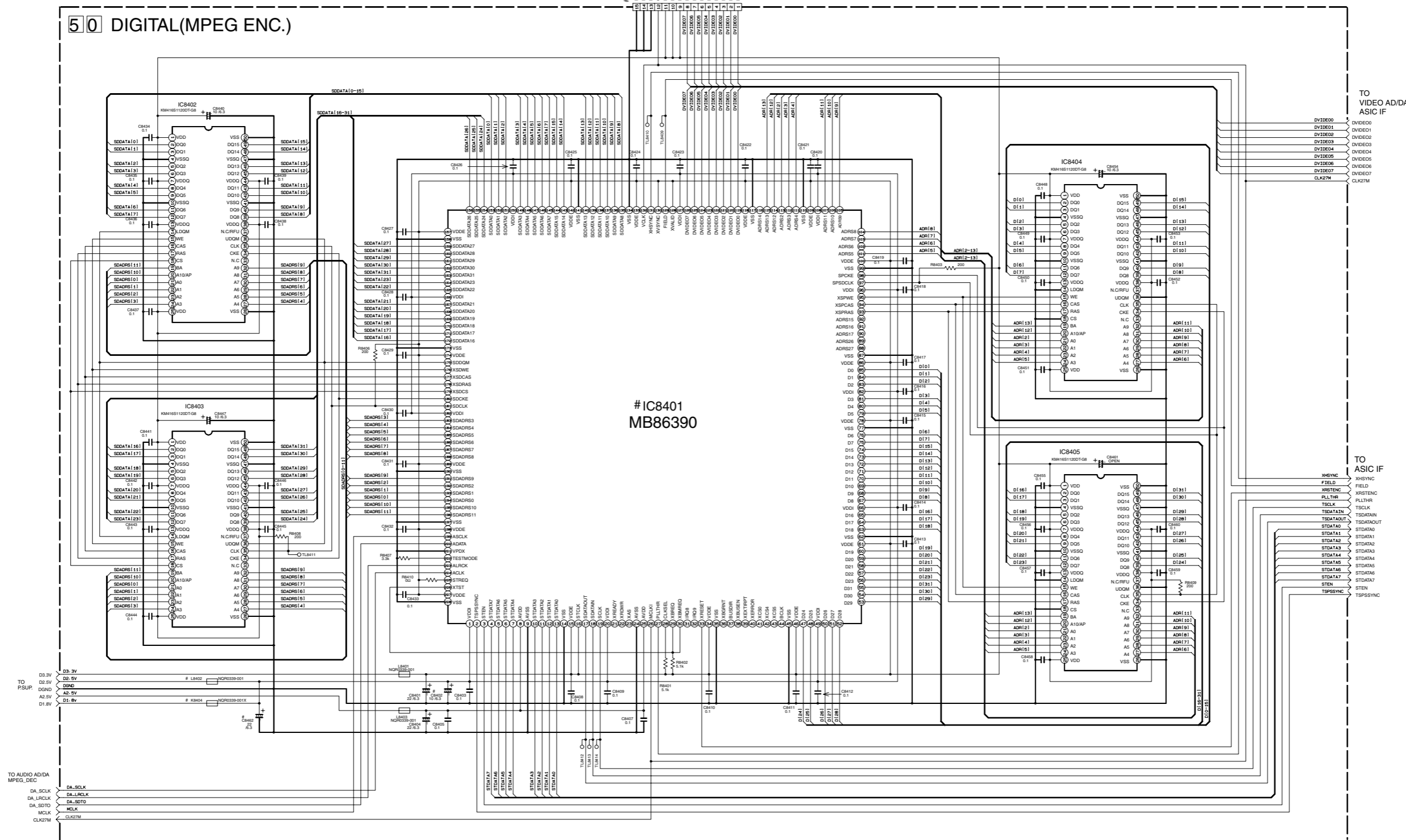
2

1



4.19 DIGITAL MPEG ENC 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

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

DIFFERENT TABLE

IC8401	LB402	KB404	
MB86390	USED	NOT USED	
MB86391	NOT USED	USED	

	CB401
DOM	NOT USED
US	NOT USED
EUEKMS	USED

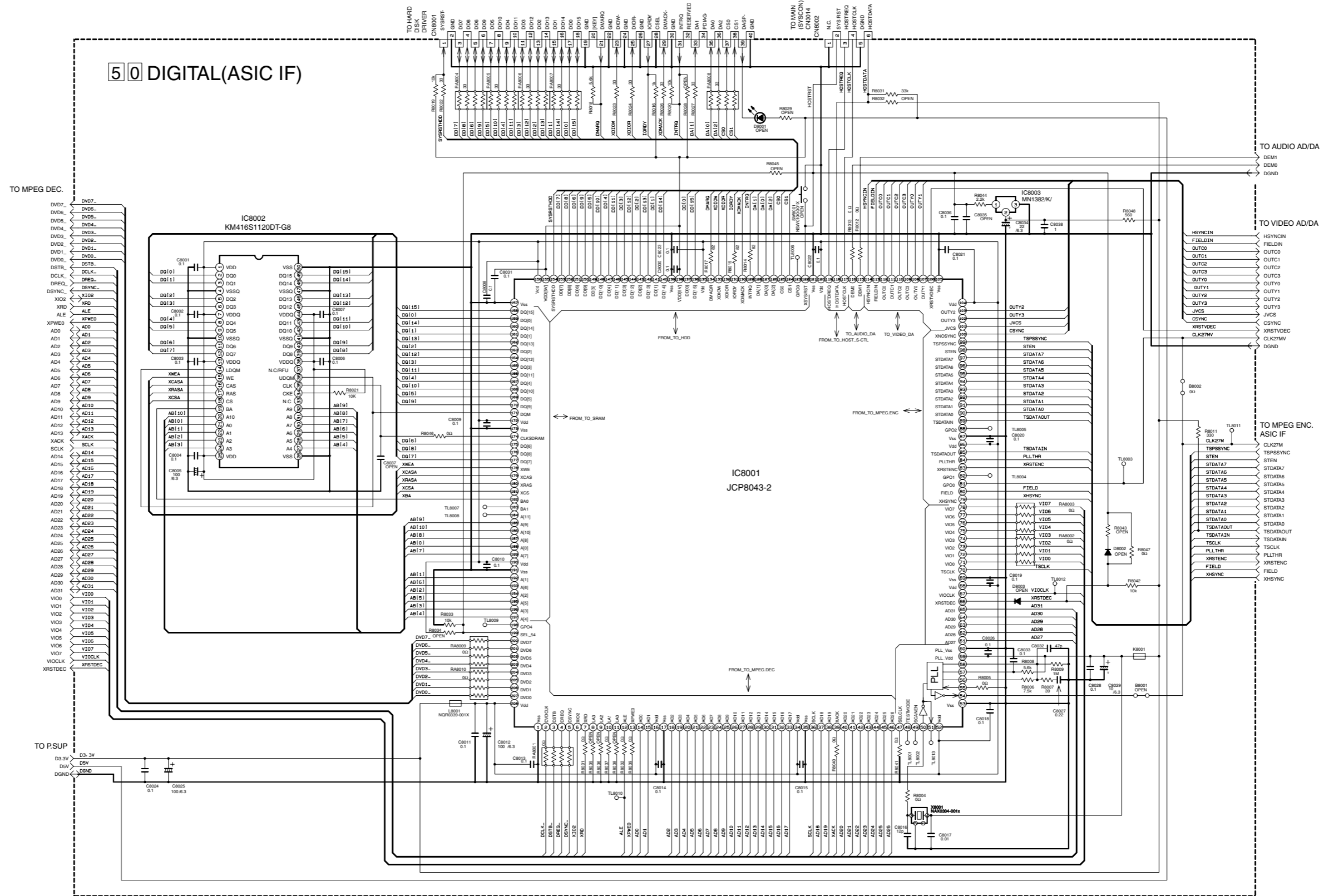
NOTES-UNLESS OTHERWISE SPECIFIED:
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN P.F.
ELECTROLYTIC
CERAMIC
TANTAL

LAST NO.	1-8400	VACANT NO.
R 8410	1-8400	8404,8405
C 8462	1-8400	8406
L 8403	1-8400	
IC 8405	1-8400	
TL 8414	1-8400	

p10312001a_rev2

4.20 DIGITAL ASIC IF 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.



p10310001a_rev3.1

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

ELECTROLYTIC
 CERAMIC
 TANTAL

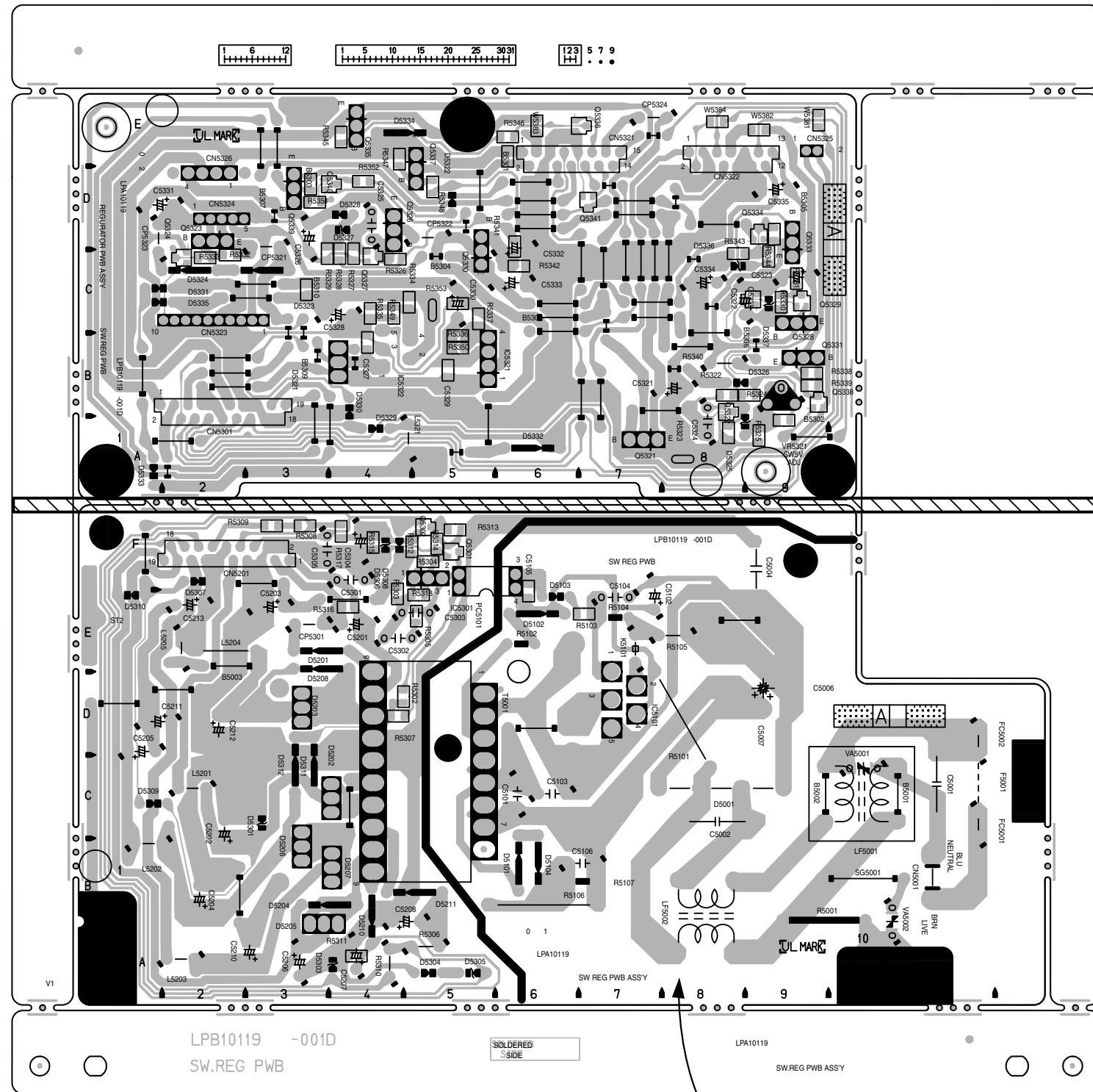
LAST NO	VACANT NO
R 8047	1-8000, 8003, 8010, 8025, 8030
C 8027	1-8000
D 8003	1-8000
RA 8010	1-8000
TL 8013	1-8000

5
4
3
2
1

A B C D 4-43 4-44 E F G H

4.21 SWITCHING REGULATOR AND REGULATOR CIRCUIT BOARDS

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



COMPONENT PARTS LOCATION GUIDE <SWITCHING REGULATOR>

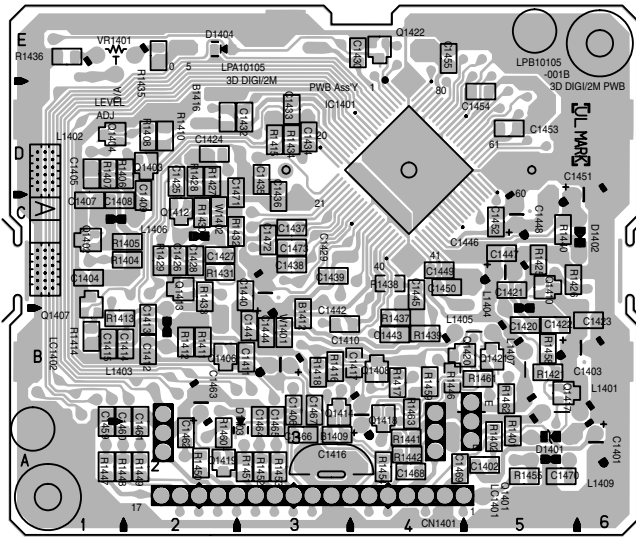
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		CONNECTOR		D5311	A D 3C	R5306	A D 5A
C5001	A D 11D	CN5001	A D 11B	D5312	A D 3C	R5307	B C 4D
C5002	A D 8C	CN5201	A D 3F	IC			
C5004	A D 9E	DIODE				IC5101	A D 7E
C5006	A D 8D	D5001	A D 7C	IC5301	A D 5F	R5309	B C 3F
C5007	A D 9D	D5101	A D 6B	COIL			
C5101	A D 6C	D5102	A D 6E	L5201	A D 2C	R5310	A D 4A
C5102	A D 7E	D5103	A D 6E	L5202	A D 2B	R5311	B C 4A
C5103	A D 6C	D5104	A D 6C	L5203	A D 2A	R5312	B C 5F
C5104	A D 7E	D5201	A D 4E	L5204	A D 3E	R5313	B C 5F
C5105	B C 6E	D5202	A D 4C	L5205	A D 2E	R5314	B C 5F
C5106	A D 6B	D5203	A D 3D	TRANSISTOR			
C5201	A D 4E	D5204	A D 4B	Q5301	B C 5F	R5315	B C 4F
C5202	A D 2B	D5205	A D 3A	Q5302	B C 5F	R5316	B C 4E
C5203	A D 3E	D5206	A D 3B	RESISTOR			
C5204	A D 2B	D5207	A D 4B	R5001	A D 9B	R5317	B C 4F
C5205	A D 1D	D5208	A D 4E	R5101	A D 8C	R5318	B C 5E
C5206	A D 3A	D5210	A D 4B	R5102	A D 6E	CP5301	A D 3E
C5207	A D 4A	D5211	A D 5B	R5103	B C 7E	F5001	A D 11C
C5208	A D 4B	D5301	A D 3C	R5104	A D 7E	FC5002	A D 11D
C5210	A D 3A	D5303	A D 4A	R5105	A D 7E	K5101	A D 7E
C5211	A D 2D	D5304	A D 5A	R5106	A D 7E	LF5001	A D 10C
C5212	A D 2D	D5305	A D 5A	R5107	A D 7B	LF5002	A D 8B
C5213	A D 2E	D5306	A D 4F	R5302	B C 4D	PC5101	A D 5F
C5301	A D 4F	D5307	A D 2F	R5303	B C 4E	SG5001	A D 9B
C5302	A D 5E	D5308	A D 4F	R5304	B C 5F	T5001	A D 5D
C5303	A D 5E	D5309	A D 1C	R5305	B C 5E	VA5001	A D 10C
C5304	A D 4F	D5310	A D 1E	R5306	B C 5E	VA5002	A D 10A
C5305	A D 3F						

COMPONENT PARTS LOCATION GUIDE <REGULATOR>

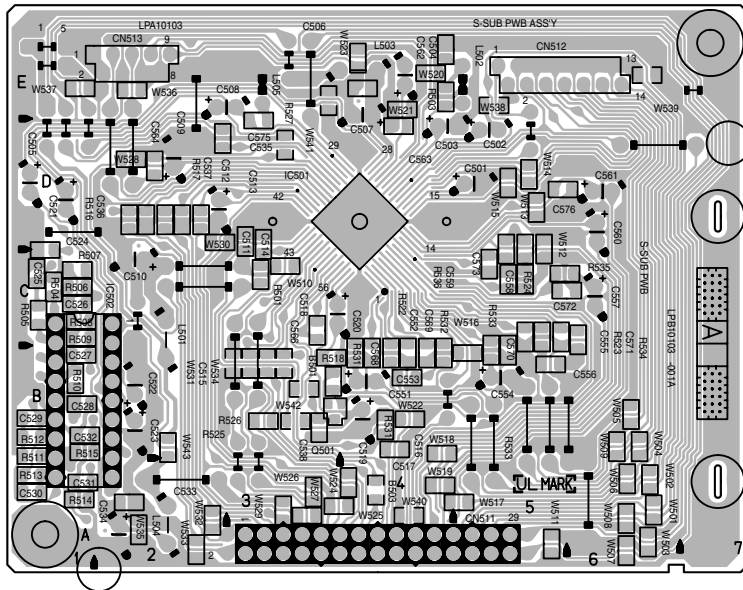
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR		D5323	A D 3C	Q5328	A D 9C	R5335	B C 4C
C5321	A D 7B	D5324	A D 2C	Q5329	B C 9C	R5336	B C 5B
C5322	A D 9C	D5325	A D 9B	Q5330	A D 5C	R5337	B C 5C
C5323	A D 9C	D5326	A D 9B	Q5331	A D 9B	R5338	B C 9B
C5324	A D 8A	D5327	A D 4D	Q5332	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	B C 7E	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	R5327	B C 4C
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	Q5325	A D 4D	R5331	B C 9C	CP5324	A D 8E
D5322	A D 5D	Q5326	A D 4D	R5332	B C 2C		
		Q5327	B C 4C	R5333	B C 2C		
				R5334	B C 4C		

4.22 3D DIGITAL/2M AND S-SUB CIRCUIT BOARDS

<05> 3D DIGITAL/2M LPB10105-001B



<15> S-SUB LPB10103-001A



COMPONENT PARTS LOCATION GUIDE <3D DIGITAL/2M>

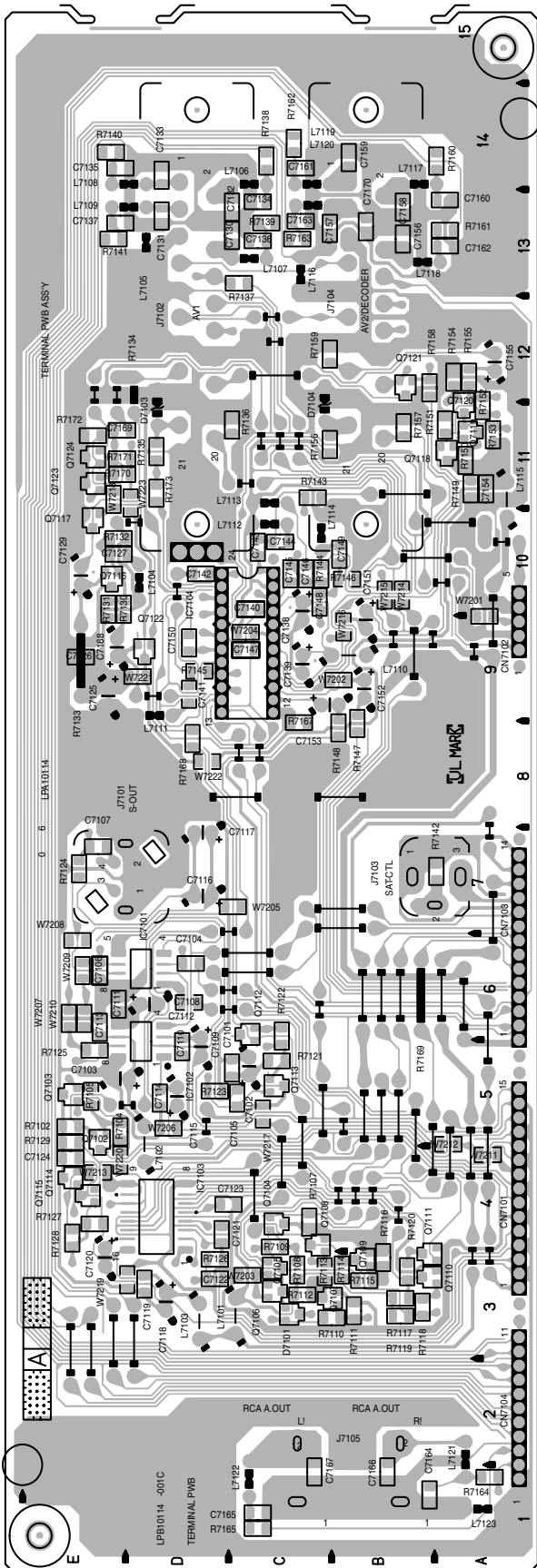
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR					
C1401	A D	C1465	A C	R1414	A C
C1402	B C	C1466	A C	R1415	B C
C1403	A C	C1467	B C	R1416	B C
C1404	A C	C1468	B C	R1417	B C
C1405	B C	C1469	B C	R1418	A C
C1406	B C	C1470	B C	R1419	A C
C1407	B C	C1471	B C	R1420	A C
C1408	B C	C1472	A C	R1421	A C
C1409	B C	C1473	A C	R1422	A C
C1410	A C	CONNECTOR			
C1411	A C	CN1401	A D	R1423	A C
C1412	B C	DIODE			
C1413	A C	D1401	A D	R1424	A C
C1414	A C	D1402	A D	R1425	A C
C1415	B C	D1403	A C	R1426	B C
C1416	A D	IC			
C1417	A C	IC1401	B C	R1427	A C
C1418	A C	IC1402	C D	R1428	A C
C1419	A C	COIL			
C1420	A C	L1401	A D	R1429	A C
C1421	A C	L1402	A D	R1430	A C
C1422	A C	L1403	A D	R1431	A C
C1423	B C	L1404	A D	R1432	A C
C1424	A C	L1405	A D	R1433	A C
C1425	A C	L1406	A D	R1434	B C
C1426	B C	L1407	A D	R1435	B C
C1427	B C	L1408	A D	R1436	B C
C1428	A C	L1409	A D	R1437	A C
C1429	A D	TRANSISTOR			
C1430	A C	Q1401	A D	R1438	A C
C1431	A C	Q1402	B C	R1439	A C
C1432	B C	Q1403	A C	R1440	B C
C1433	A C	Q1404	A C	R1441	A C
C1434	B C	Q1405	A C	R1442	A C
C1435	B C	Q1406	A C	R1443	A C
C1436	B C	Q1407	A C	R1444	A C
C1437	A C	Q1408	A C	R1445	A C
C1438	A C	Q1409	A C	R1446	A C
C1439	A C	Q1410	A C	R1447	A C
C1440	A C	Q1411	A C	R1448	B C
C1441	A C	Q1412	A C	R1449	A C
C1442	B C	Q1413	A C	R1450	A C
C1443	B C	Q1414	A C	R1451	B C
C1444	A C	Q1415	A C	R1452	B C
C1445	A C	Q1416	A C	R1453	B C
C1446	A D	Q1417	A C	R1454	B C
C1447	B C	Q1418	B C	R1455	A C
C1448	A D	Q1419	A C	R1456	B C
C1449	A C	Q1420	A C	R1457	A C
C1450	A C	Q1421	A C	R1458	A C
C1451	A D	Q1422	A C	R1459	A C
C1452	A C	RESISTOR			
C1453	A C	R1401	B C	R1460	A C
C1454	A C	R1402	B C	R1461	A C
C1455	B C	R1403	B C	R1462	A C
C1456	B C	R1404	B C	R1463	A C
C1457	A C	R1405	B C	VR1401	A D
C1458	A C	R1406	B C	OTHER	
C1459	A C	R1407	A C	LC1401	A D
C1460	A C	R1408	A C	LC1402	D 2A
C1461	A C	R1409	A C		
C1462	A C	R1410	A C		
C1463	A D	R1411	A C		
C1464	A C	R1412	A C		
		R1413	A C		

COMPONENT PARTS LOCATION GUIDE <S-SUB>

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPACITOR					
C501	A D	C555	B C	R508	B C
C502	A D	C556	B C	R509	B C
C503	A D	C557	A D	R510	B C
C504	B C	C558	B C	R511	B C
C505	A D	C559	B C	R512	B C
C506	B C	C560	A D	R513	B C
C507	A D	C561	A D	R514	B C
C508	A D	C562	A D	R515	B C
C509	A D	C563	B C	R516	B C
C510	A D	C564	B C	R517	B C
C511	B C	C565	B C	R518	B C
C512	B C	C566	B C	R519	B C
C513	A D	C567	B C	R520	B C
C514	B C	C568	B C	R521	B C
C515	B C	C569	B C	R522	B C
C516	B C	C570	B C	R523	B C
C517	B C	C571	B C	R524	B C
C518	B C	C572	B C	R525	B C
C519	A D	C573	B C	R526	B C
C520	A D	C574	B C	R527	B C
C521	A D	C575	B C	R528	B C
C522	A D	C576	B C	R529	B C
C523	A D	CONNECTOR			
C524	B C	CN511	A D	R530	B C
C525	B C	CN512	A D	R531	B C
C526	B C	CN513	A D	R532	B C
C527	B C	IC			
C528	B C	IC501	A C	R533	B C
C529	B C	IC502	A D	R534	B C
C530	B C	COIL			
C531	B C	L501	A D	R535	B C
C532	B C	L502	A D	R536	B C
C533	B C	L503	A D		
C534	A D	L504	A D		
C535	B C	L505	A D		
C536	B C	TRANSISTOR			
C537	B C	Q501	B C		
C538	B C	RESISTOR			
C539	B C	R501	B C		
C540	B C	R502	B C		
C541	A D	R503	B C		
C542	B C	R504	B C		
C543	B C	R505	B C		
C544	A D	R506	B C		
		R507	B C		

4.23 TERMINAL CIRCUIT BOARD

<06> TERMINAL LPB10114-001C



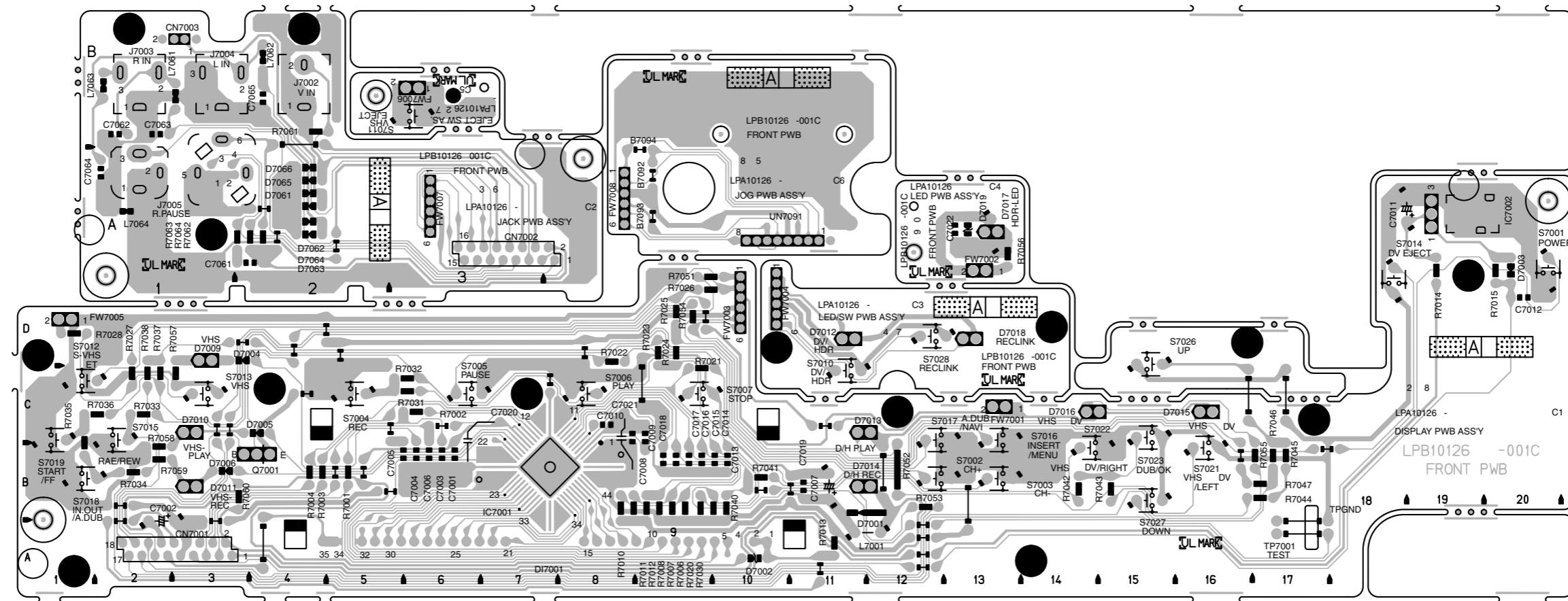
COMPONENT PARTS LOCATION GUIDE

<TERMINAL>

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	R7150	B C 9A	R7150	B C 9A
C7134	A D 4D	Q7101	B C 5D	R7151	B C 9A
C7135	A D 6D	Q7102	B C 5E	R7154	B C 13D
C7136	A D 5C	Q7103	B C 6E	R7155	B C 12E
C7137	B C 4A	Q7104	B C 6E	R7156	B C 12C
C7138	B C 4A	Q7105	B C 6A	R7157	B C 12B
C7139	B C 4A	Q7106	B C 6B	R7158	B C 8B
C7141	A D 5B	Q7107	B C 7B	R7159	B C 2C
C7142	A D 5B	Q7108	B C 7B	R7160	B C 1C
C7145	A D 4B	Q7109	B C 7A	R7161	B C 2B
C7146	B C 4A	Q7110	B C 7A	R7162	B C 1B
C7147	A D 4A	Q7111	B C 6A	R7163	B C 2E
C7149	B C 2C	Q7112	B C 6A	R7164	B C 2E
C7150	B C 1D	Q7114	B C 4C	R7166	B C 12E
C7151	B C 2C	Q7115	B C 4C	R7167	B C 11E
C7152	B C 2C	Q7116	B C 5A	R7170	B C 7C
C7153	B C 2B	Q7117	B C 5A	R7171	B C 7D
C7154	B C 1B	Q7118	B C 9B	R7172	B C 7D
C7155	B C 2B	Q7119	B C 10A	R7173	B C 6D
C7156	B C 1B	Q7120	B C 9A	R7174	B C 6D
C7157	B C 9C	Q7121	B C 9A	R7175	B C 5D
C7158	B C 9B	Q7122	B C 8C	R7176	B C 6D
C7159	B C 2D	RESISTOR		R7177	B C 5D
C7160	B C 2E	R7101	B C 10D	R7178	B C 6C
C7161	B C 2D	R7102	B C 10E	R7179	B C 6C
C7162	B C 2E	R7103	B C 8E	R7180	B C 8D
C7163	B C 12E	R7104	B C 8E	R7181	A D 9E
C7164	B C 12D	R7105	B C 7D	R7182	B C 7C
C7165	B C 11E	R7106	B C 7E		
C7166	B C 11D	R7107	B C 3D		
C7167	B C 9C	R7108	B C 2D		
C7168	A D 4C	R7109	B C 4C		
C7169	A D 5C	R7110	B C 3B		

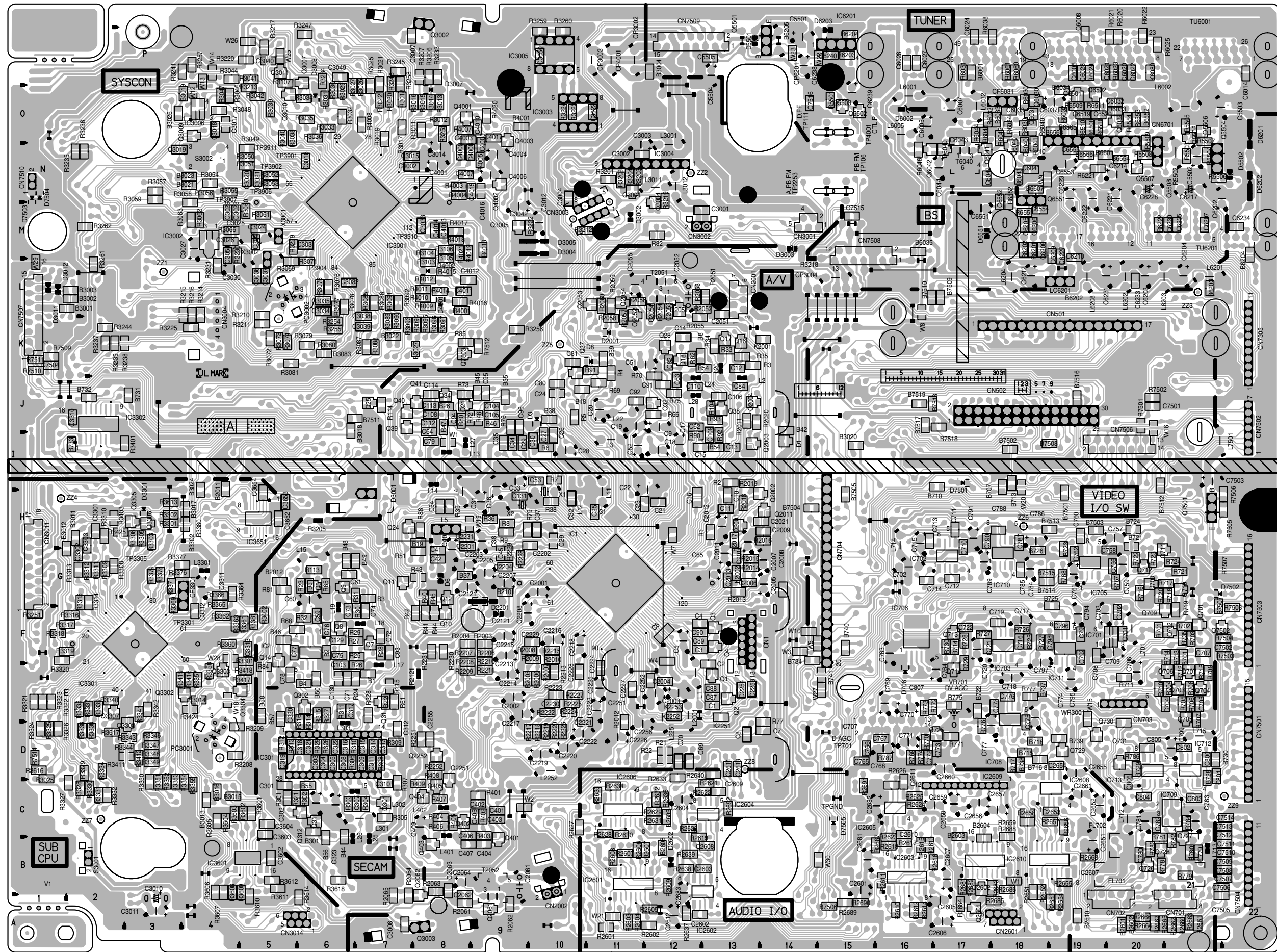
4.24 EJECT SW, DISPLAY, JACK, LED/SW AND LED CIRCUIT BOARDS

<27> EJECT SW, <28> DISPLAY, <36> JACK, <47> LED/SW, <90> LED
LPB10126-001C



4.25 MAIN CIRCUIT BOARD

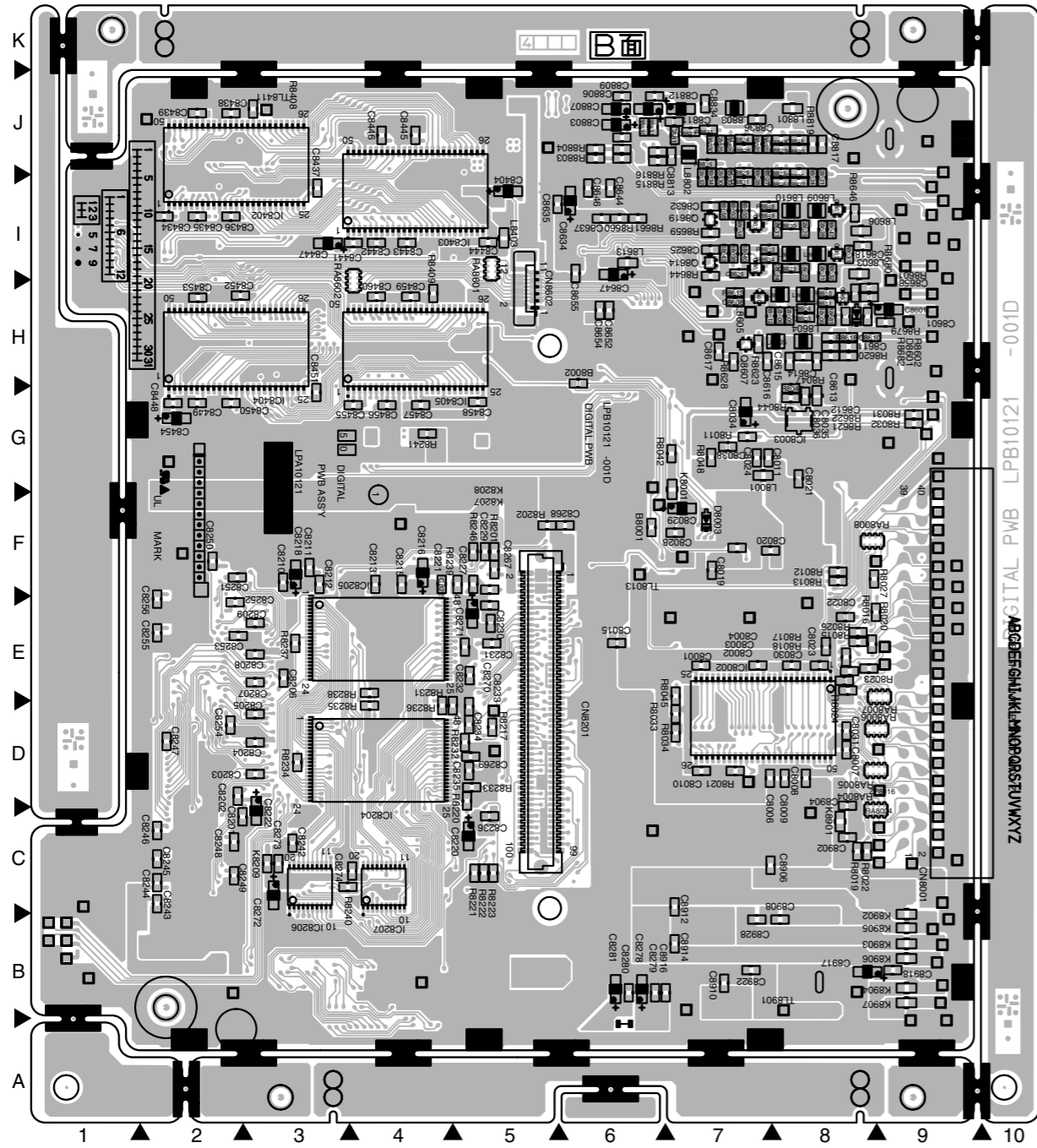
<03> MAIN
LPB10113-001D



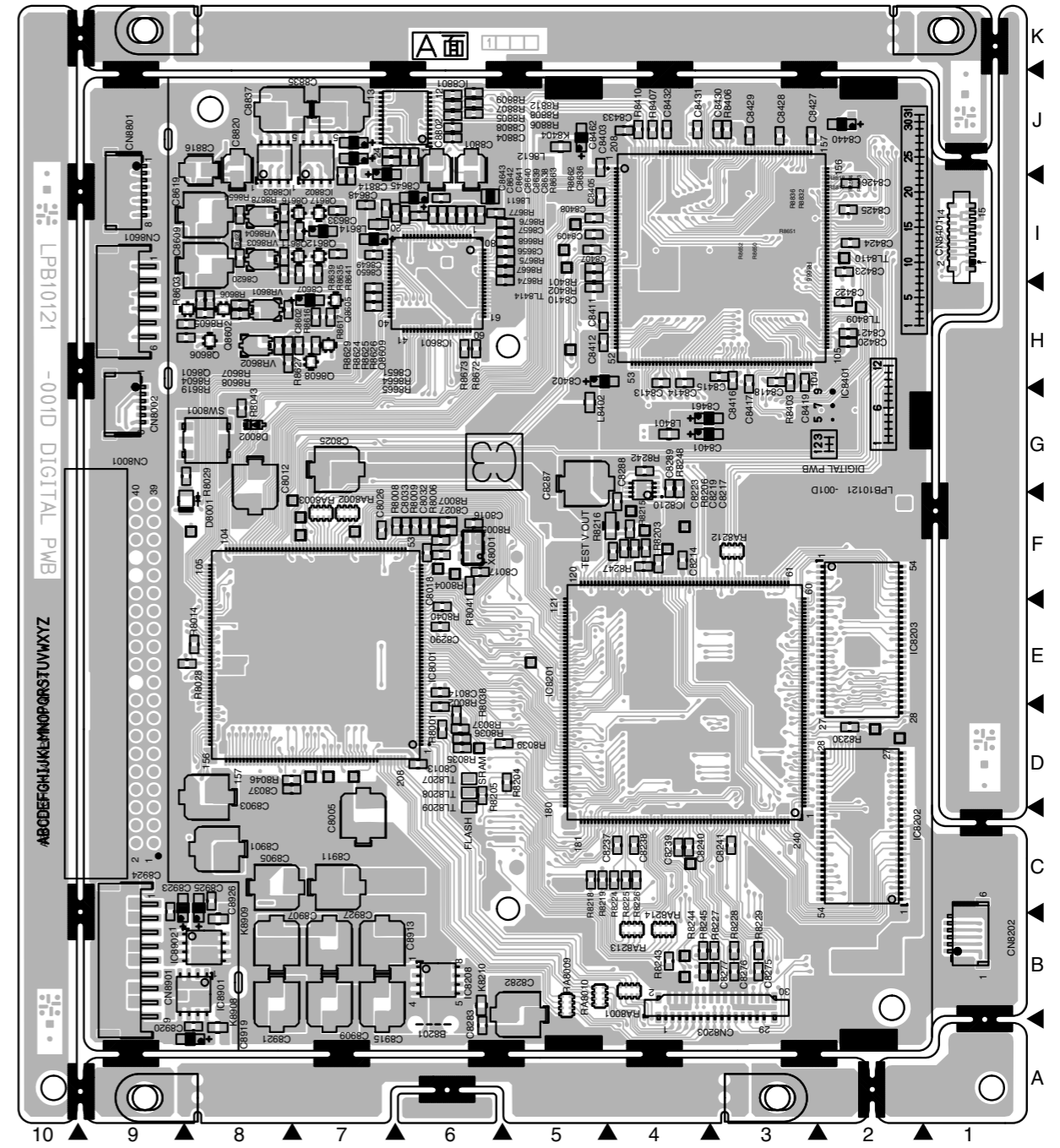
4.27 DIGITAL CIRCUIT BOARD

<50> DIGITAL
LPB10121-001D

— FOIL SIDE(B) —



— COMPONENT SIDE(A) —

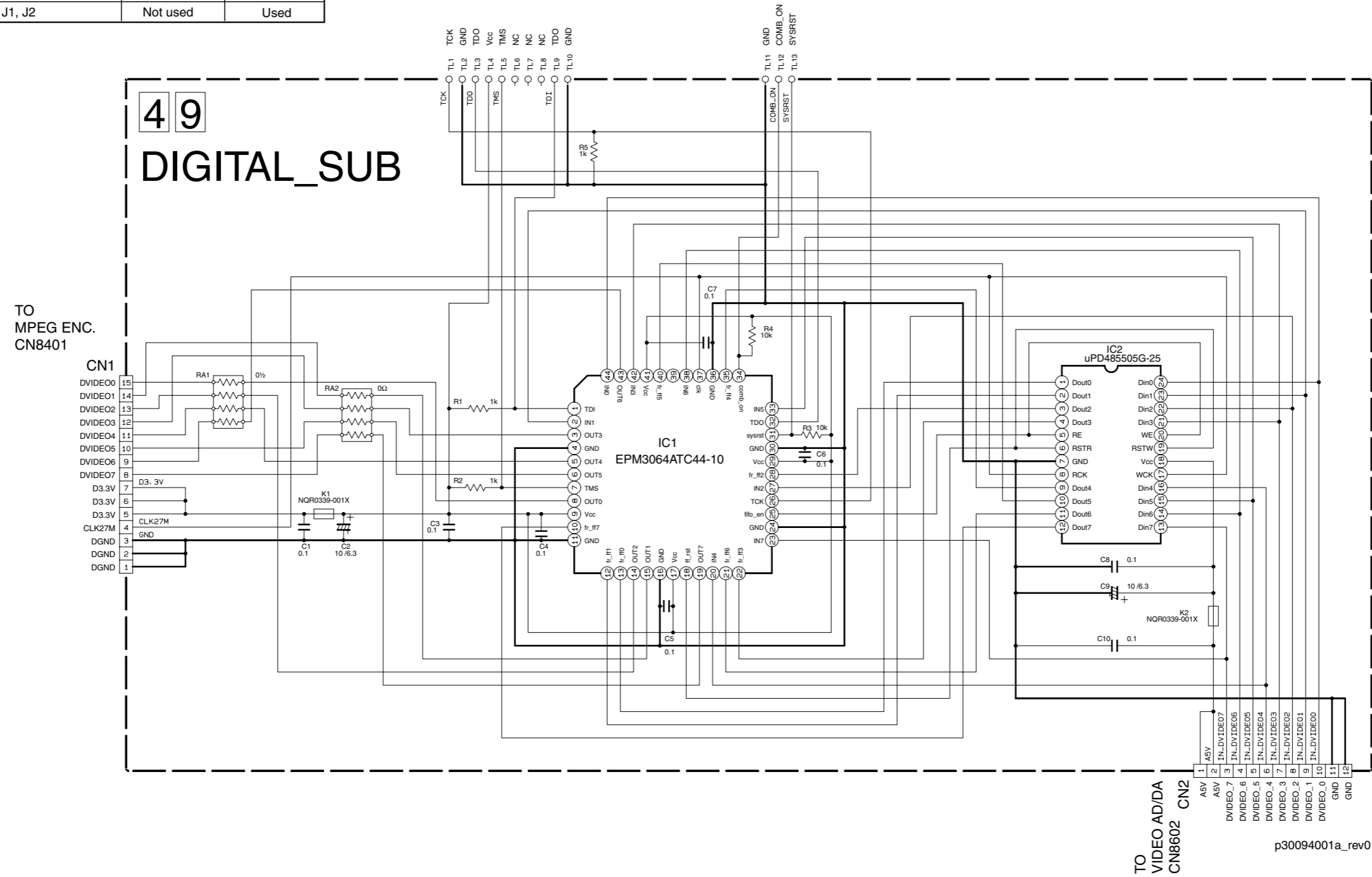


4.29 DIGITAL SUB SCHEMATIC DIAGRAM

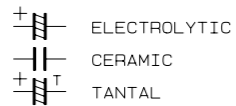
There are currently two types of Digital board assemblies in used, these are the LPA10121-04B and the LPA10121-04C. These two boards have different Schematic Diagrams and Parts Lists. Be sure to check the board number.

	LPA10121-04B	LPA10121-04C
Digital sub board assembly<49>	Not used	Used
RA8601, RA8602	Used	Not used
K8701, OT1, J1, J2	Not used	Used

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.



LAST NO	VACANT NO
R	5
C	10
IC	2
K	2
RA	2

p30094001a_rev0

4.30 DIGITAL SUB CIRCUIT BOARD

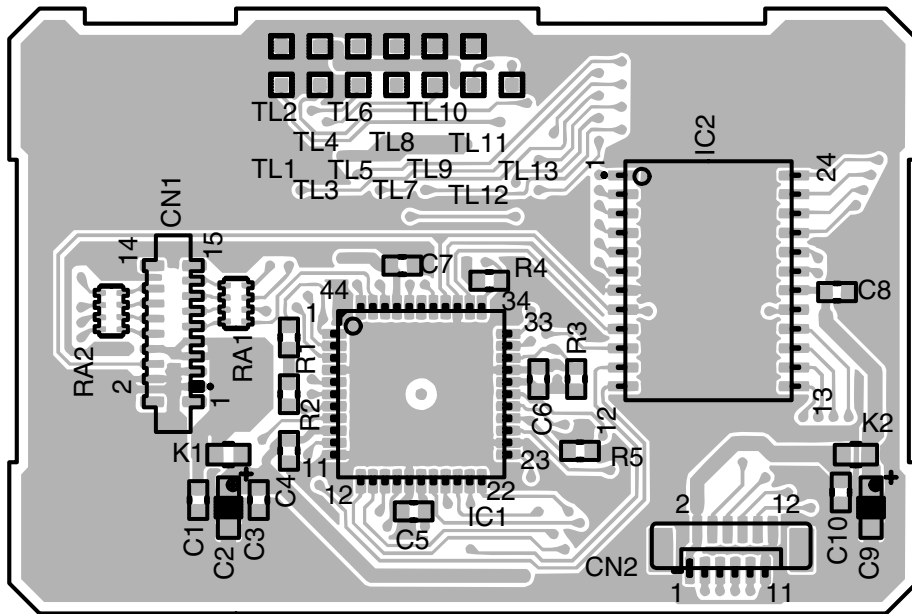
There are currently two types of Digital board assemblies in used, these are the LPA10121-04B and the LPA10121-04C.

These two boards have different Schematic Diagrams and Parts Lists. Be sure to check the board number.

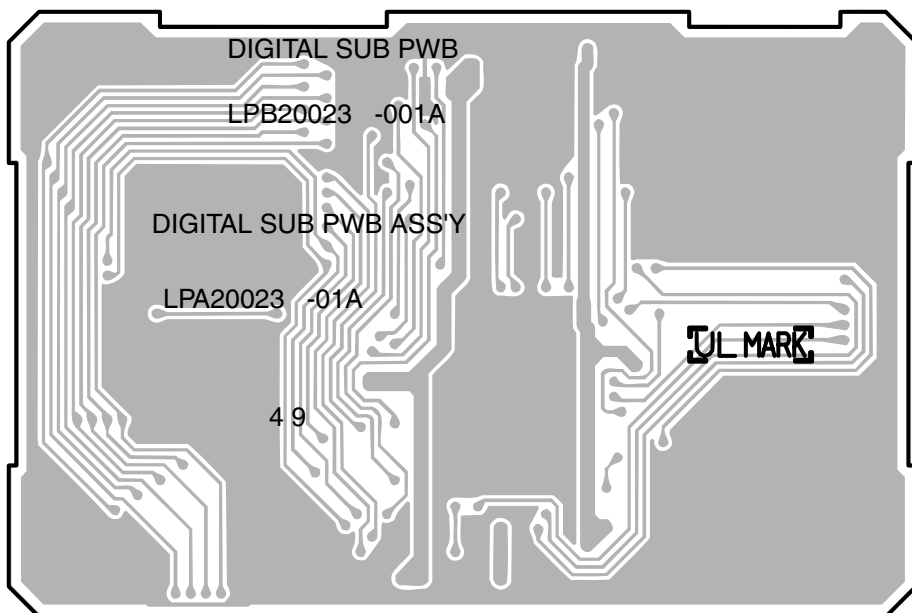
	LPA10121-04B	LPA10121-04C
Digital sub board assembly<49>	Not used	Used
RA8601, RA8602	Used	Not used
K8701, OT1, J1, J2	Not used	Used

<49> DIGITAL SUB LPB20023-001A

— FOIL SIDE(B) —



— COMPONENT SIDE(A) —

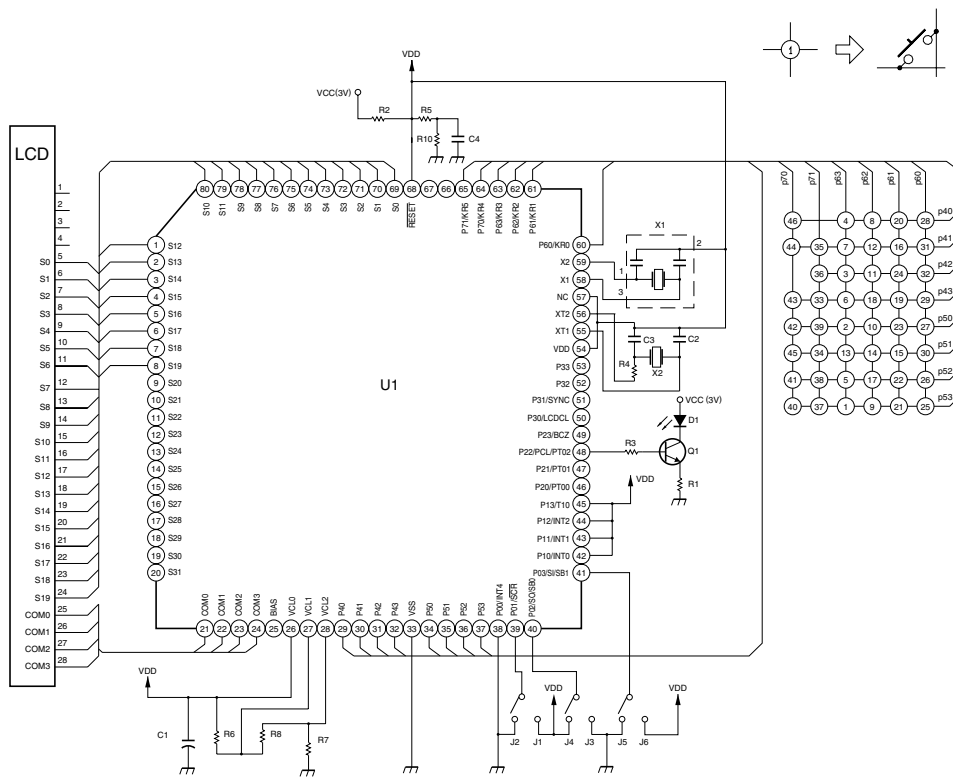


4.31 REMOTE CONTROL SCHEMATIC DIAGRAM

- 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.

REMOTE CONTROLLER

(LP20873-009#)



KEY No.	KEY NAME
1	TV/CABLE/SAT
2	HDD
3	SVHS
4	⊙ / (POWER)
5	LCD PROG
6	AUDIO/ Ⓚ / ❌
7	- - - -
8	TV/VCR
9	1
10	2
11	3
12	NAVIGATION
13	4
14	5
15	6
16	Ⓜ (TRANS)
17	7/VPS/PDC
18	8/DAILY
19	9/WEEKLY
20	⌚ (TIMER)
21	X/0000 (CANCEL)
22	0/AUX
23	⏏ (SP/LP/EP)
24	MENU
25	PROG
26	⊕ ?(PROG CHECK)
27	MEMO
28	OK
29	START +
30	STOP +
31	DATE +
32	PR +
33	START -
34	STOP -
35	DATE -
36	PR -
37	◀ (REW)
38	▶ (PLAY)
39	▶▶ (FF)
40	● (REC)
41	■ (STOP)
42	⏸ (PAUSE)
43	▲ /TV PROG +
44	◀ - /TV -
45	▶▶ + /TV +
46	▼ /TV PROG -
DOUBLE KEYS	
40 + 38	REC START
40 + 42	REC PAUSE

5

4

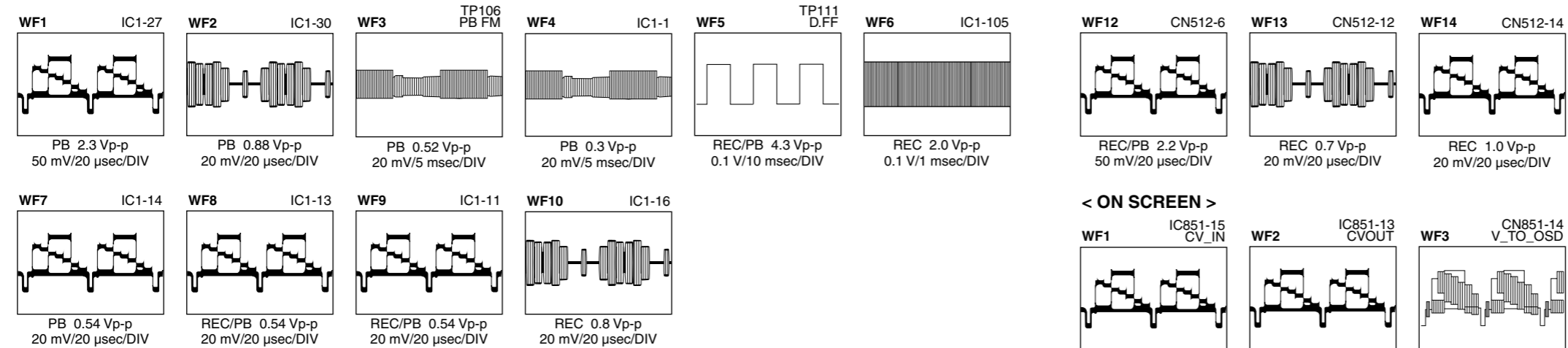
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2

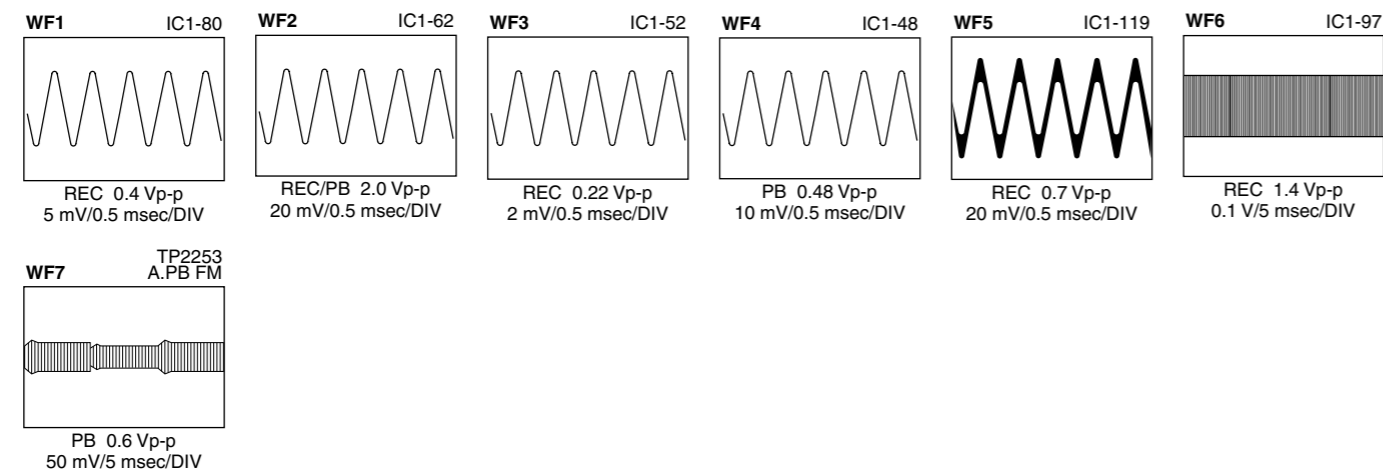
1

4.32 WAVEFORMS

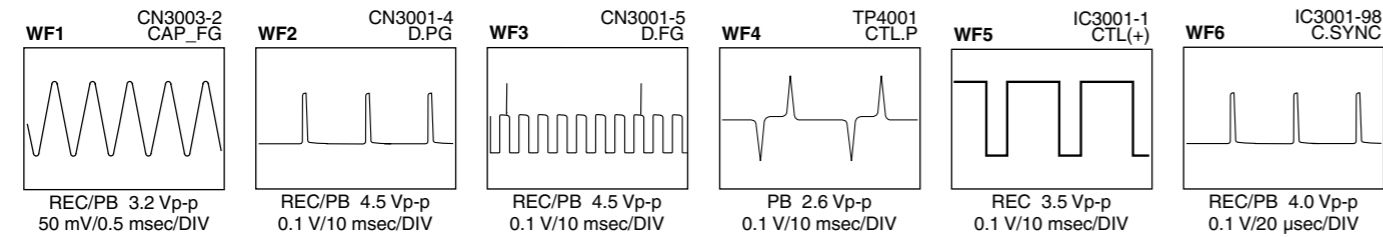
< VIDEO >



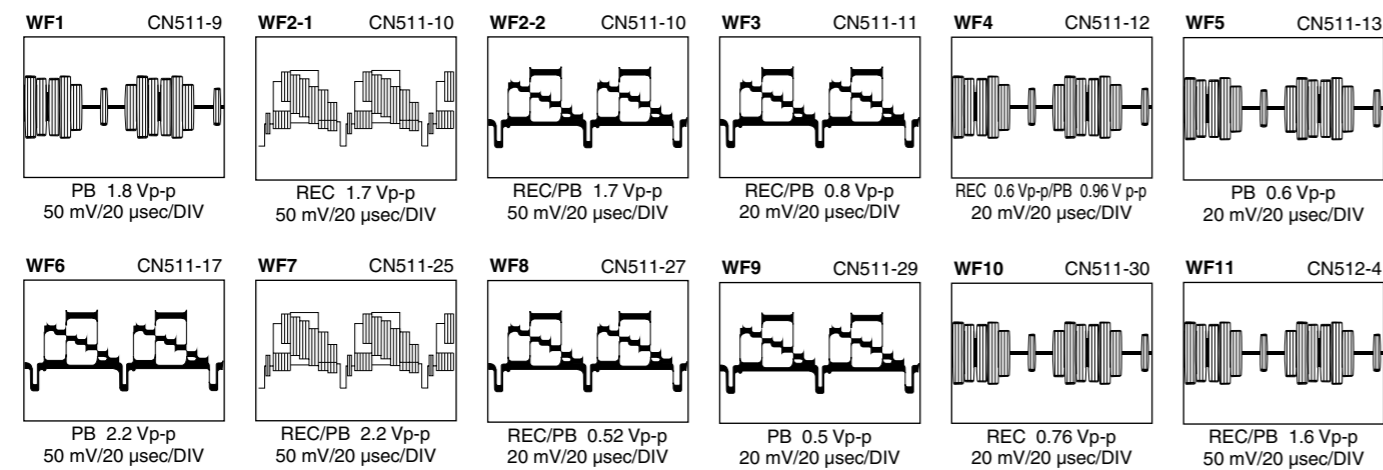
< AUDIO >



< SYSCON >



< S-SUB >



4.33 VOLTAGE CHARTS

<SW REGULATOR>

MODE PIN NO.	REC	PLAY
IC5101		
1	0.3	0.3
2	0	0
3	302.2	302.2
4	14.6	14.6
5	0	0
IC5301		
1	2.4	2.4
2	0	0
3	10.6	10.6
CN5201		
1	-19.3	-19.3
2	0	0
3	-15.6	-15.6
4	0	0
5	0	0
6	2.2	2.2
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	21.4	21.4

<REGULATOR>

MODE PIN NO.	REC	PLAY
IC5321		
1	4.3	4.3
2	3.2	3.2
3	0	0
4	2.6	2.6
IC5322		
1	3.4	3.4
2	2.4	2.4
3	0	0
4	1.2	1.2
5	3.4	3.4
CN5301		
1	19.1	19.1
2	6.4	6.4
3	6.4	6.4
4	-7.2	-7.2
5	7.2	7.2
6	-28.3	-28.3
7	4.3	4.3
8	31.7	31.7
9	4.3	4.3
10	4.3	4.3
11	12.3	12.3
12	43.3	43.3
13	0	0
14	2.2	2.2
15	0	0
16	0	0
17	-15.6	-15.6
18	0	0
19	-19.3	-19.3
CN5321		
1	12.2	12.2
2	11.6	11.6
3	11.5	11.5
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	2.7	2.7
11	0	0
12	4.8	4.8
13	6.2	6.2
14	19.0	19.0
15	5.0	5.0
CN5322		
1	5.6	5.6
2	43.3	43.3
3	5.0	5.0
4	4.9	4.9
5	-7.3	-7.3
6	12.2	12.2
7	11.4	11.4
8	0	0
9	0	0
10	0	0
11	31.9	31.9
12	5.2	5.2
13	10.9	10.9
CN5323		
1	-7.2	-7.2
2	5.0	5.0
3	0	0
4	3.3	3.3
5	3.3	3.3
6	0	0
7	2.4	2.4
8	2.4	2.4
9	0	0

MODE PIN NO.	REC	PLAY
CN5325		
1	11.2	11.2
2	0	0
CN5326		
1	12.2	12.2
2	0	0
3	0	0
4	5.0	5.0

<VIDEO/AUDIO>

MODE PIN NO.	REC	PLAY
IC1		
1	4.2	2.1
2	2.8	2.8
3	2.6	2.6
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	2.9	4.7
20	0	2.8
21	0	1.9
22	2.8	2.8
23	0	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	0	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	0.5	0.5
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	1.7
66	2.8	3.2
67	4.2	4.2
68	4.2	4.2
69	2.3	2.3
70	0	0
71	0.3	0.3
72	0.2	0.2
73	0.2	0.2
74	2.2	2.2
75	2.4	2.4
76	0	0
77	2.5	2.5
78	0.3	0.3
79	0.2	0.2
80	0.2	0.2
81	2.2	2.2
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
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

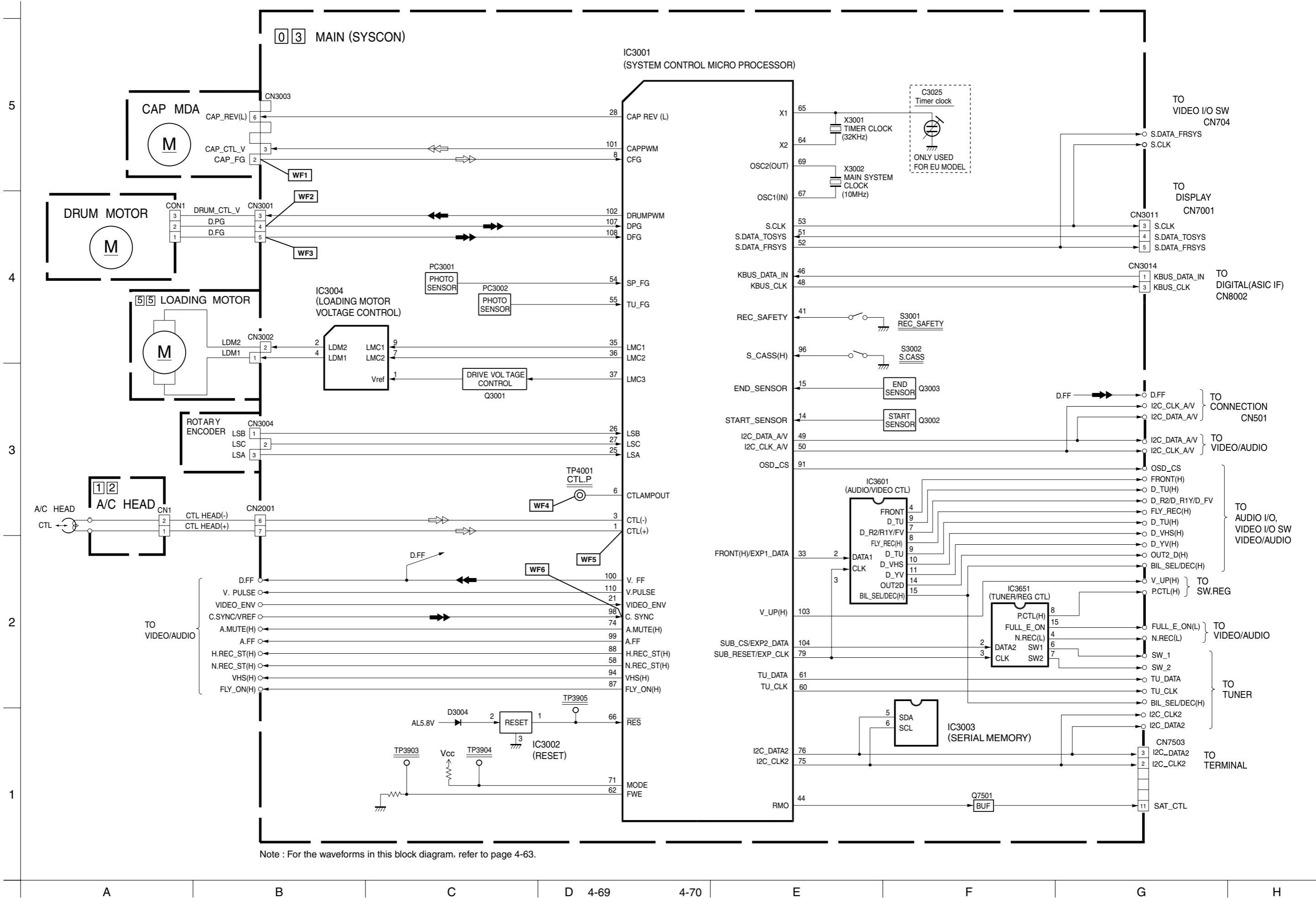
MODE PIN NO.	REC	PLAY
94	0	1.4
95	0	0
96	2.4	2.4
97	2.7	2.3
98	2.4	2.4
99	4.9	4.9
100	4.9	4.9
101	0	0
102	0	0
103	0	0
104	2.4	2.4
105	2.3	2.3
106	2.3	2.3
107	4.9	4.9
108	0	0
109	0	0
110	0	0
111	0	2.5
112	2.6	2.6
113	0.5	0.5
114	0	0
115	2.5	2.5
116	2.5	2.5
117	2.5	2.5
118	0	0
119	2.4	2.4
120	4.6	4.6
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.3	2.3
6	2.3	2.3
7	2.3	2.3
8	2.3	2.3
9	2.7	2.3
10	2.7	2.3
11	2.7	2.3
12	2.7	2.3
13	0	0
14	0	0
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	2.9	4.7
20	0	2.8
21	0	1.9
22	2.8	2.8
23	0	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	0	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	0.5	0.5
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	1.7
66	2.8	3.2
67	4.2	4.2
68	4.2	4.2
69	2.3	2.3
70	0	0
71	0.3	0.3
72	0.2	0.2
73	0.2	0.2
74	2.2	2.2
75	2.4	2.4
76	0	0
77	2.5	2.5
78	0.3	0.3
79	0.2	0.2
80	0.2	0.2
81	2.2	2.2
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
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

<SYSCON>

MODE PIN NO.	REC	PLAY
IC3001		
1	2.7	2.7
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	0	0
18	5.0	5.0
19	0	0
20	0	0
21	0	2.5
22	0	1.4
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	4.8	4.8
31	4.8	4.8
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	0	4.8
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	4.5	4.5
48	4.8	4.8
49	4.2	4.2
50	4.8	4.8
51	4.7	4.7
52	4.5	4.5
53	0	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	4.5	4.5
60	4.8	4.8
61	4.7	4.7
62	4.5	4.5
63	0	0
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	0	0
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	0	0
82	0	0
83	0	0
84	0	0
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

MODE PIN NO.	REC	PLAY
50	4.6	4.6
51	4.8	4.8
52	4.4	3.8
53	4.3	4.3
54	-	-
55	-	-
56	4.9	4.9
57	0	0
58	4.8	4.8
59	4.8	4.8
60	0	0
61	0	0
62	0	0
63	0	0
64	-	-
65	-	-
66	-	-
67	-	-
68	0	0

4.35 SYSTEM CONTROL BLOCK DIAGRAM (VHS)



Note : For the waveforms in this block diagram, refer to page 4-63.

A

B

C

D 4-69

4-70

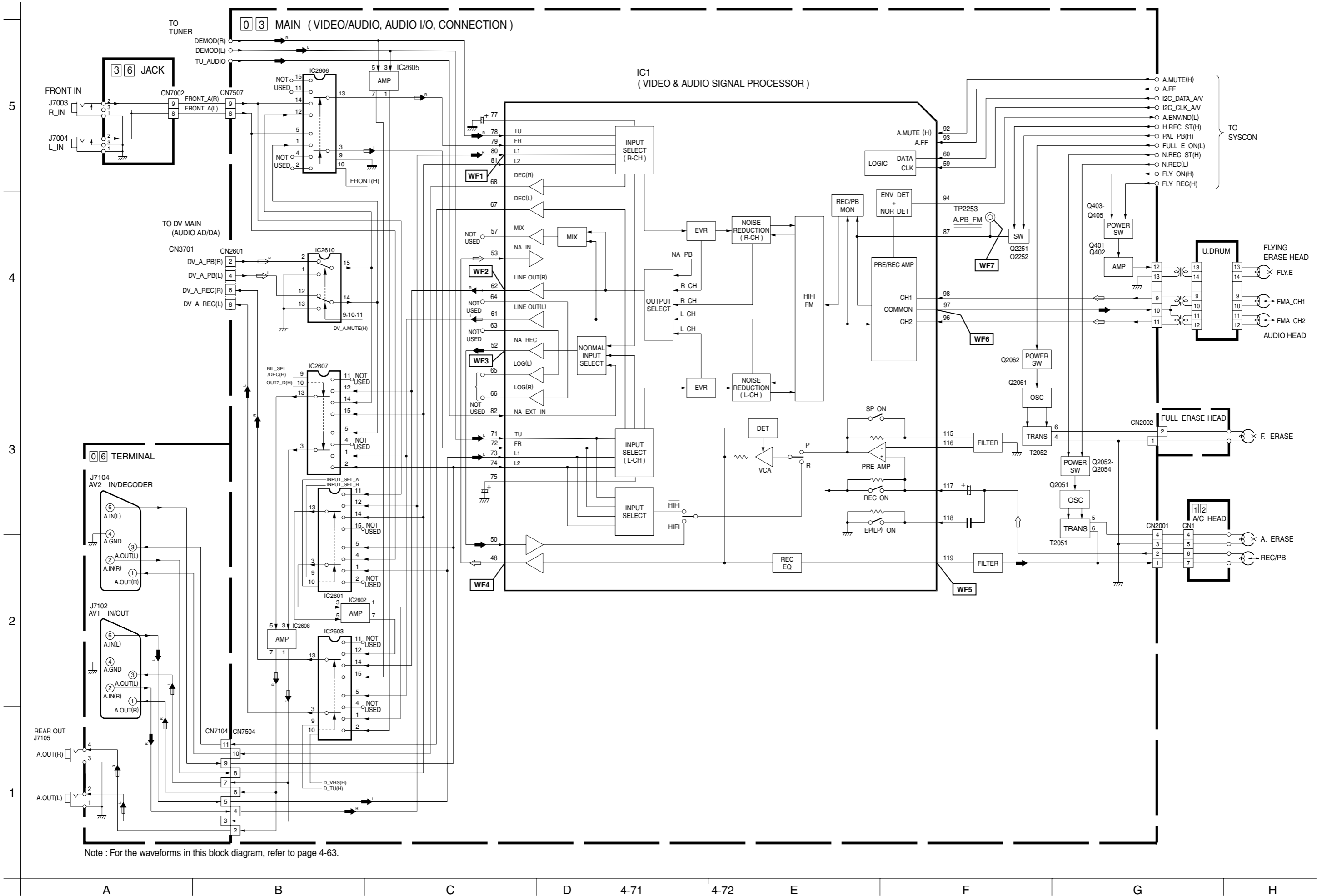
E

F

G

H

4.36 AUDIO BLOCK DIAGRAM (VHS)



Note : For the waveforms in this block diagram, refer to page 4-63.

4.37 VIDEO BLOCK DIAGRAM (VHS)

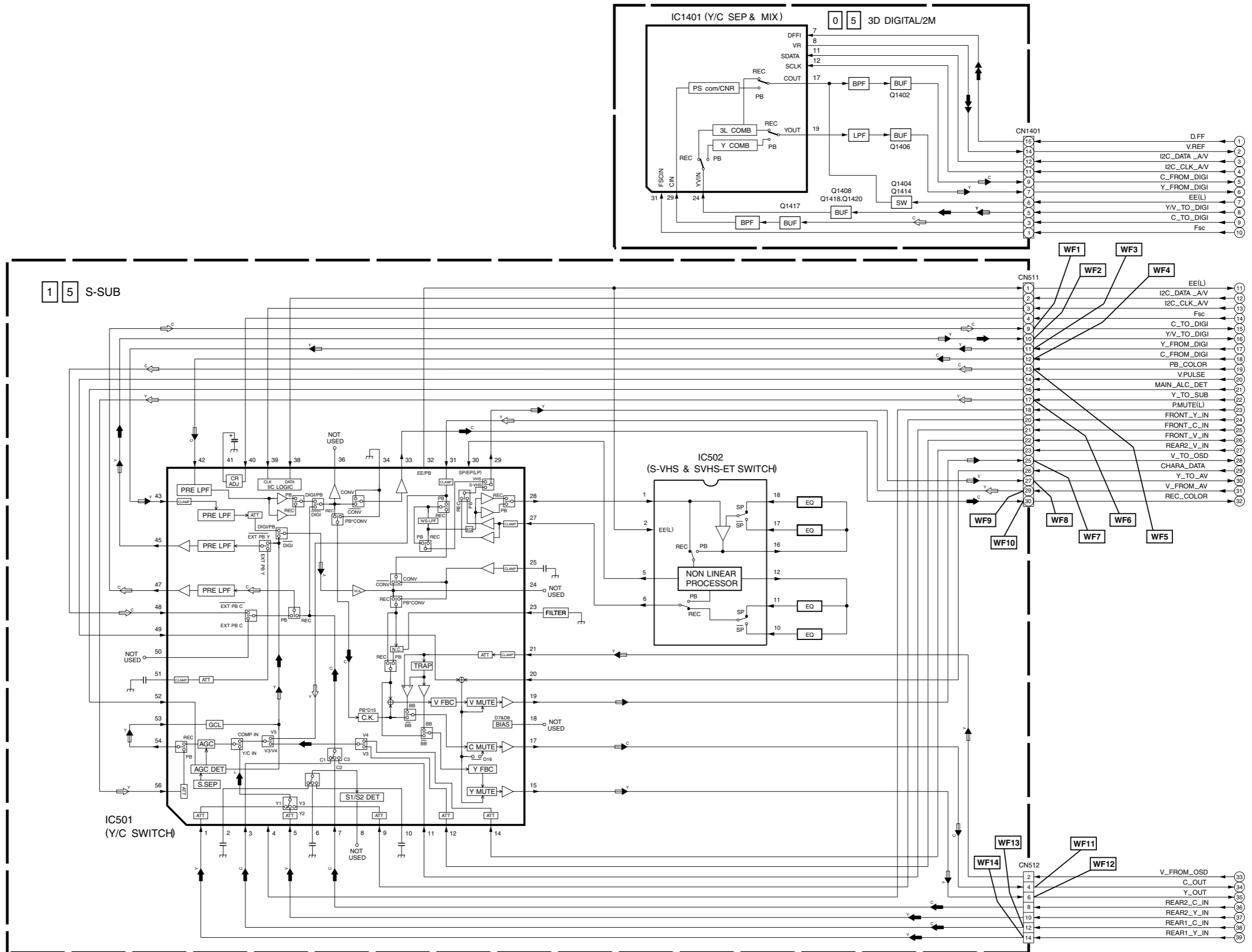
5

4

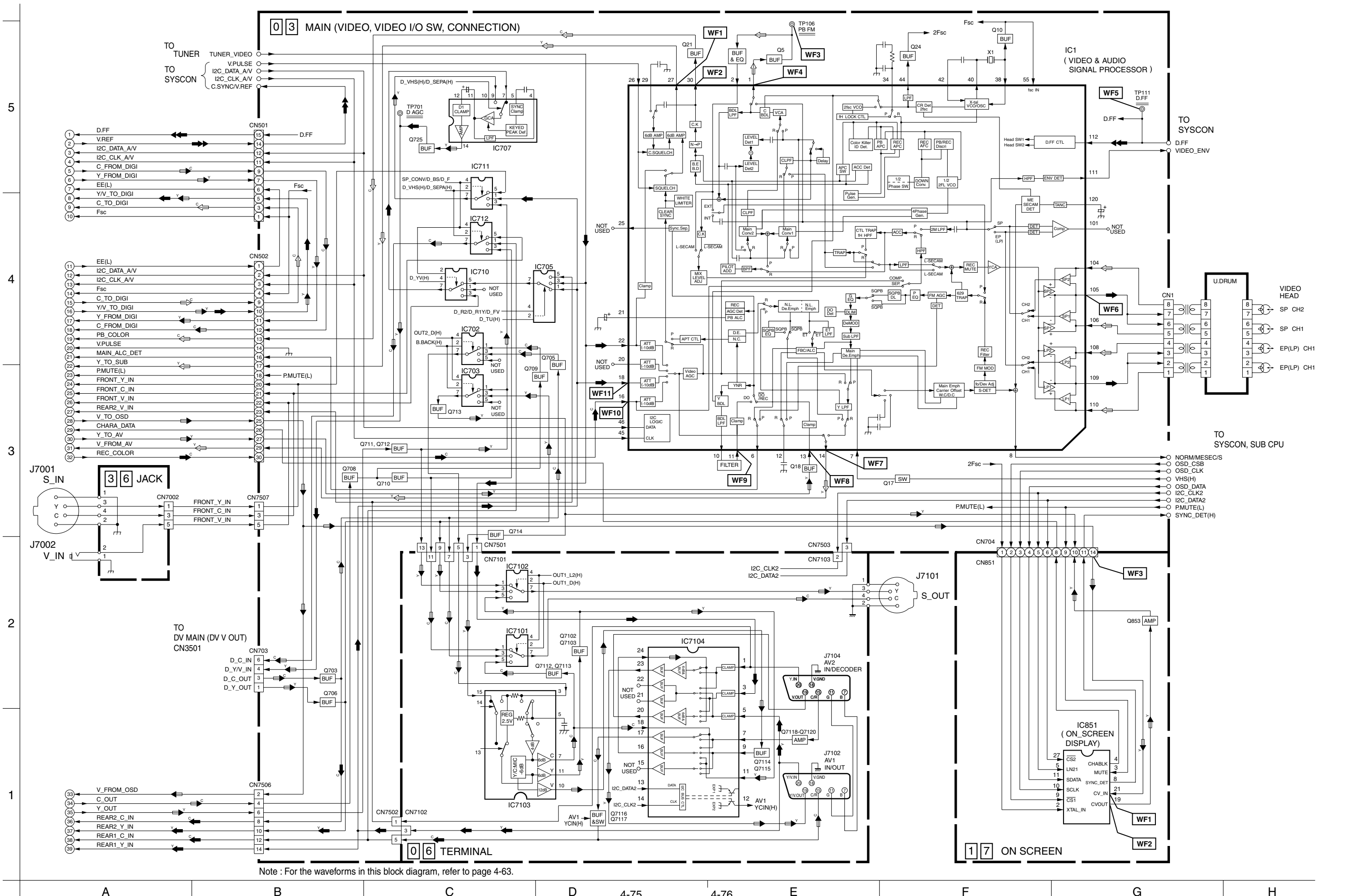
3

2

1



Note : For the waveforms in this block diagram, refer to page 4-63.



0 3 MAIN (VIDEO, VIDEO I/O SW, CONNECTION)

IC1 (VIDEO & AUDIO SIGNAL PROCESSOR)

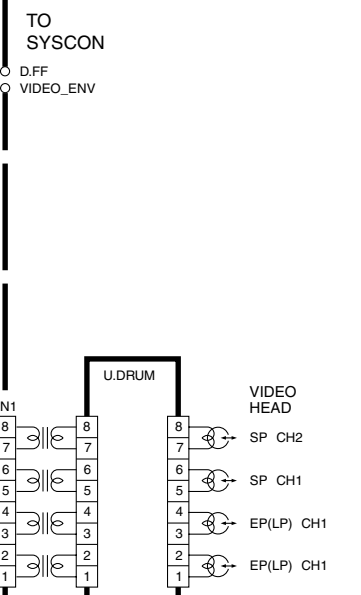
0 6 TERMINAL

1 7 ON SCREEN

Note : For the waveforms in this block diagram, refer to page 4-63.

5
4
3
2
1

- TO TUNER TUNER_VIDEO
TO SYSCON V.PULSE
I2C_DATA_A/V
I2C_CLK_A/V
C_FROM_DIGI
Y_FROM_DIGI
EE(L)
Y/V_TO_DIGI
C_TO_DIGI
Fsc
- 1 D.F.F
2 V.REF
3 I2C_DATA_A/V
4 I2C_CLK_A/V
5 C_FROM_DIGI
6 Y_FROM_DIGI
7 EE(L)
8 Y/V_TO_DIGI
9 C_TO_DIGI
10 Fsc
- 11 EE(L)
12 I2C_DATA_A/V
13 I2C_CLK_A/V
14 Fsc
15 C_TO_DIGI
16 Y/V_TO_DIGI
17 Y_FROM_DIGI
18 C_FROM_DIGI
19 PB_COLOR
20 V.PULSE
21 MAIN_ALC_DET
22 Y_TO_SUB
23 P.MUTE(L)
24 FRONT_Y_IN
25 FRONT_C_IN
26 FRONT_V_IN
27 REAR2_V_IN
28 V_TO_OSD
29 CHARA_DATA
30 Y_TO_AV
31 V_FROM_AV
32 REC_COLOR
- J7001 S_IN
1 Y
2 C
3 S
4 C
5 S
- J7002 V_IN
1 V
2 S
3 C
4 S
- TO DV MAIN (DV V OUT) CN3501
CN703
D_C_IN
D_YV_IN
D_C_OUT
D_Y_OUT
- 33 V_FROM_OSD
34 C_OUT
35 Y_OUT
36 REAR2_C_IN
37 REAR2_Y_IN
38 REAR1_C_IN
39 REAR1_Y_IN



4.38 VIDEO/AUDIO BLOCK DIAGRAM (HDD)

