


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.

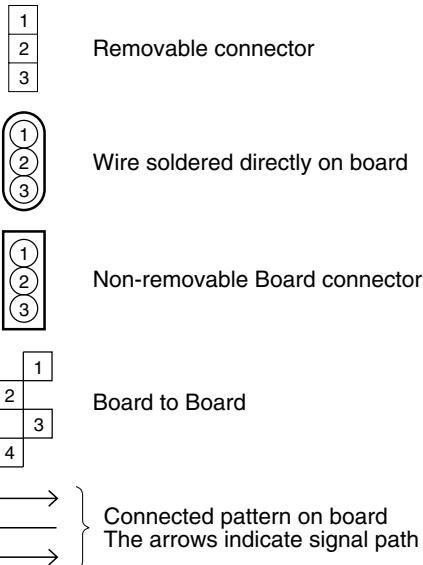
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K or k: kΩ (1000Ω), M: MΩ (1000kΩ)
- 2) All capacitance values are in μF, (P: PF).
- 3) All inductance values are in μH, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

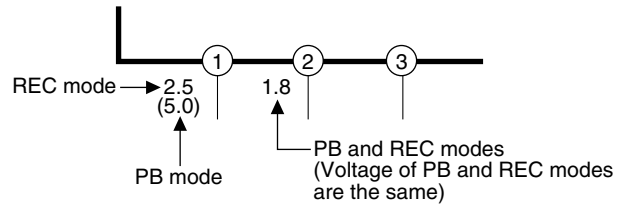
3. Interpreting Connector indications



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

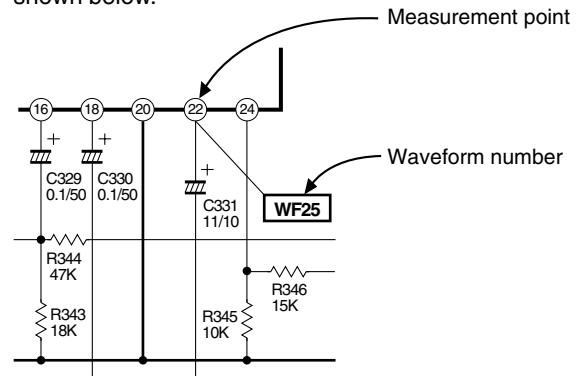
- 4) Indication on schematic diagram
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



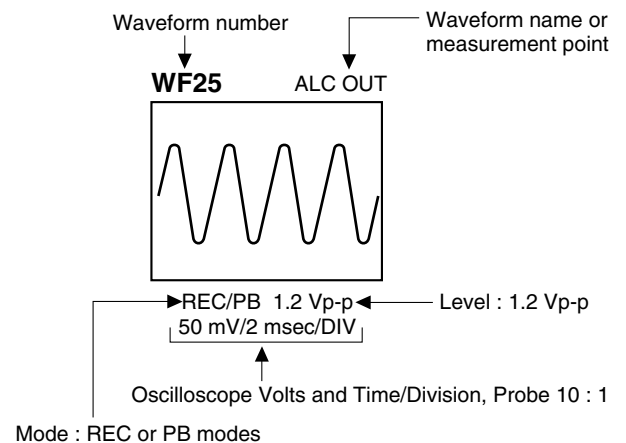
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

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.

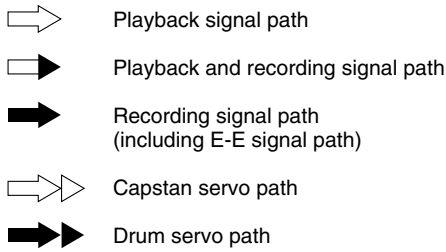


5) Waveform indications

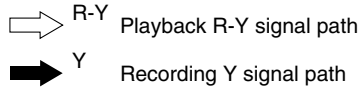


6. Signal path Symbols

The arrows indicate the signal path as follows.

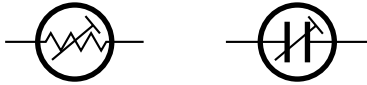


(Example)



7. Indication of the parts for adjustments

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



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

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



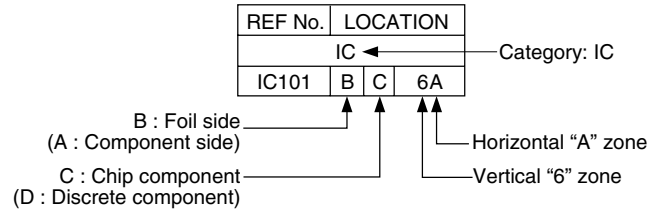
CIRCUIT BOARD NOTES

1. Foil and Component sides

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

2. Parts location guides

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

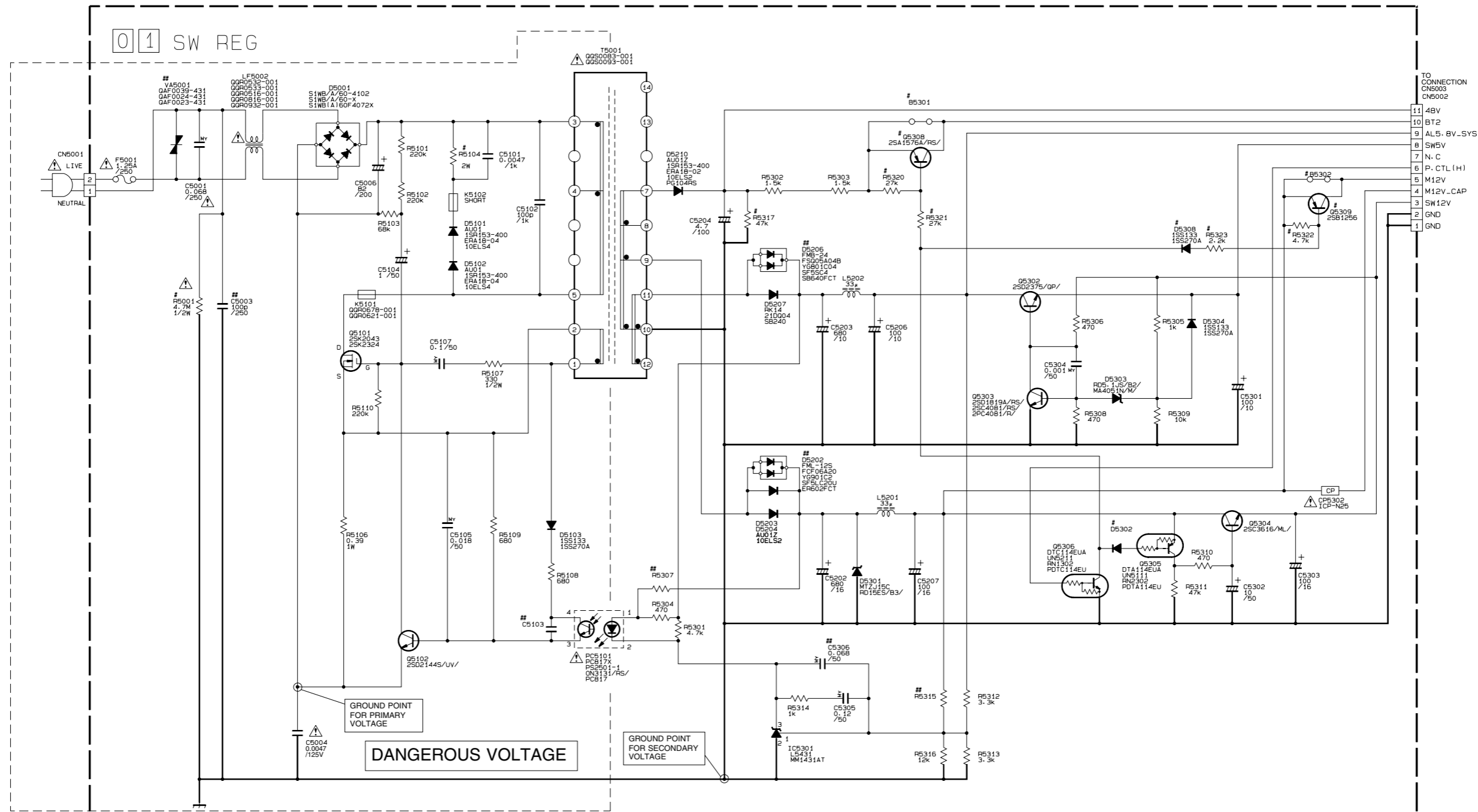


Note:

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

4.2 SW REG SCHEMATIC DIAGRAM

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



##MARK ELEMENTS ARE NOT MOUNTED

p20198001a_rev2

#DIFFERENCE TABLE 1

	R5001	R5104	D5302	Q5308	Q5319	R5320	R5322	R5301
D	NO	150k	1SS133 1SS270A		YES			NO
US	YES	68k	SHORT		NO			YES

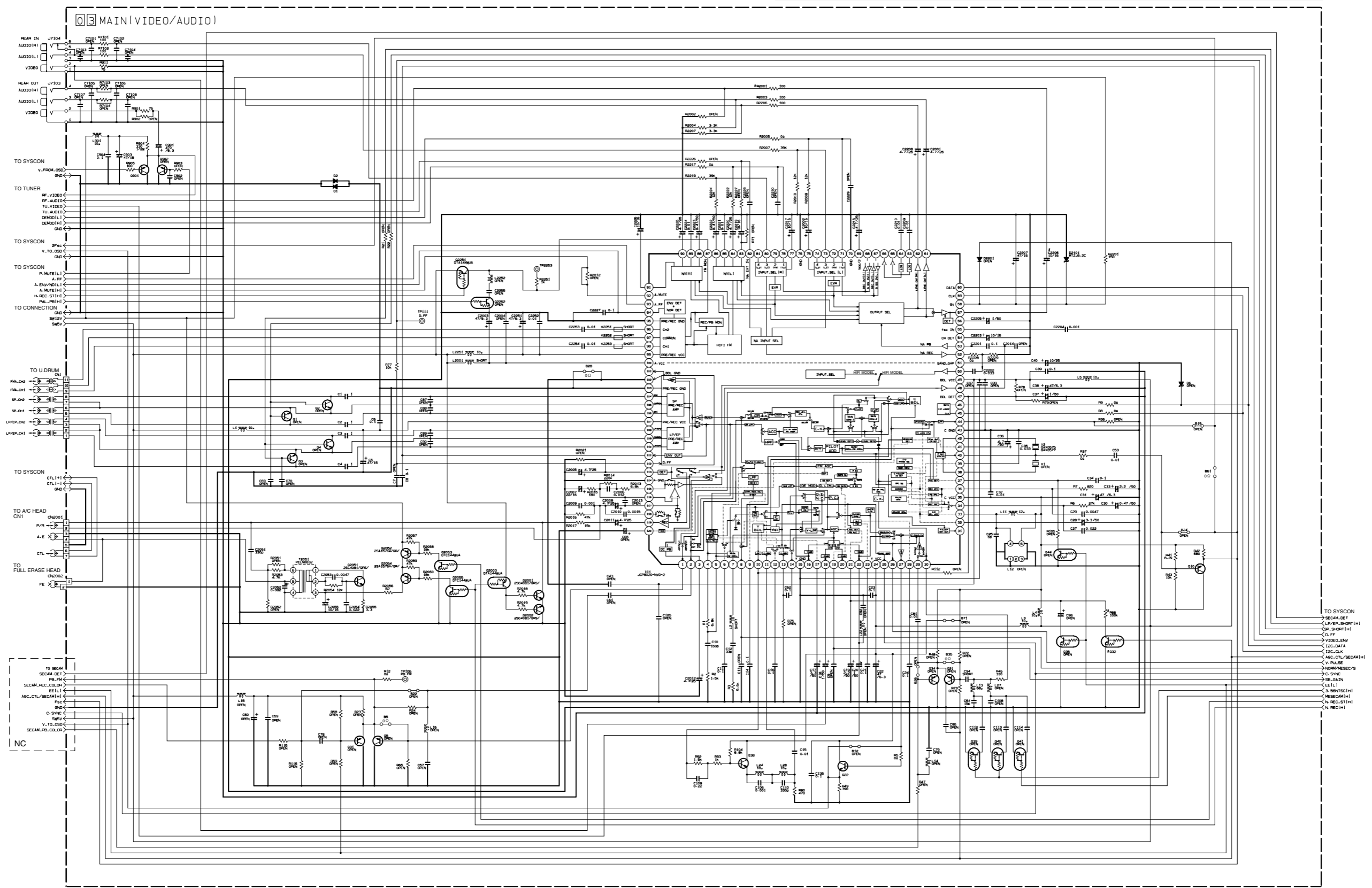
NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

4.3 MAIN (VIDEO/AUDIO) SCHEMATIC DIAGRAM

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

5
4
3
2
1



TO BEAM
SECAM_DET
PB.PK
SECAM_REC.COLOR
EUTL1
AGC.CTL/SECAM(H)
FAD
GND
C.SINC
V.TO.OSD
SECAM_PB.COLOR
NC

TO SYSCON
SECAM_DET
UPPER.SHORT(H)
SP.SHORT(H)
V.ISOL.LEN
I2C.DAT4
I2C.CLK
AGC.CTL/SECAM(H)
V.PULSE
NORM/SECOP/S
YC.SINC
SB.GAIN
EUTL1
3.DANTSIC(H)
RESECAM(H)
N.REC.ST(H)
N.REC(H)

DIFFERENCE TABLE

SYMBOL	Q32 R66	C2206 R001
JAPAN	NO	NO
US	YES	YES

NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL NPN TRANSISTOR ARE 2SC4081/GR/ or 2SD1819A/GR/ or 2PC4081/RL/
 ALL PNP TRANSISTOR ARE 2SA1576A/GR/ or 2SB1218A/GR/ or 2PA1576/RL/
 ALL NPN DIGITAL TRANSISTOR ARE DTC144WA or UN621E or PDC144WA or RN1309.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.

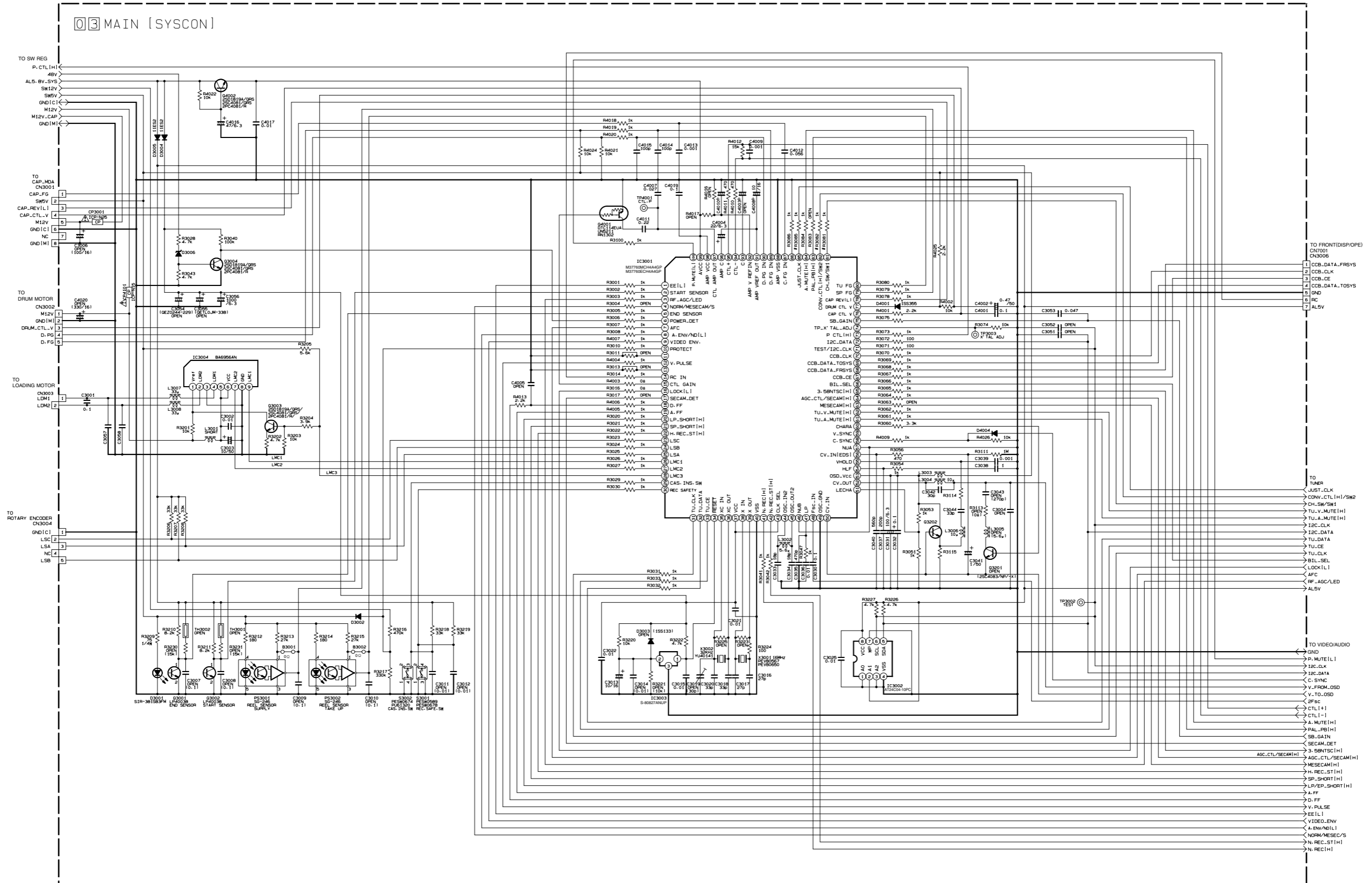
ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

p10338001a_rev0

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

4.4 MAIN (SYSCON) 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.



○ : Used
 ✕ : Not used

	R3001	R3002	R3003
LN	✕	✕	○
LS	○	○	✕

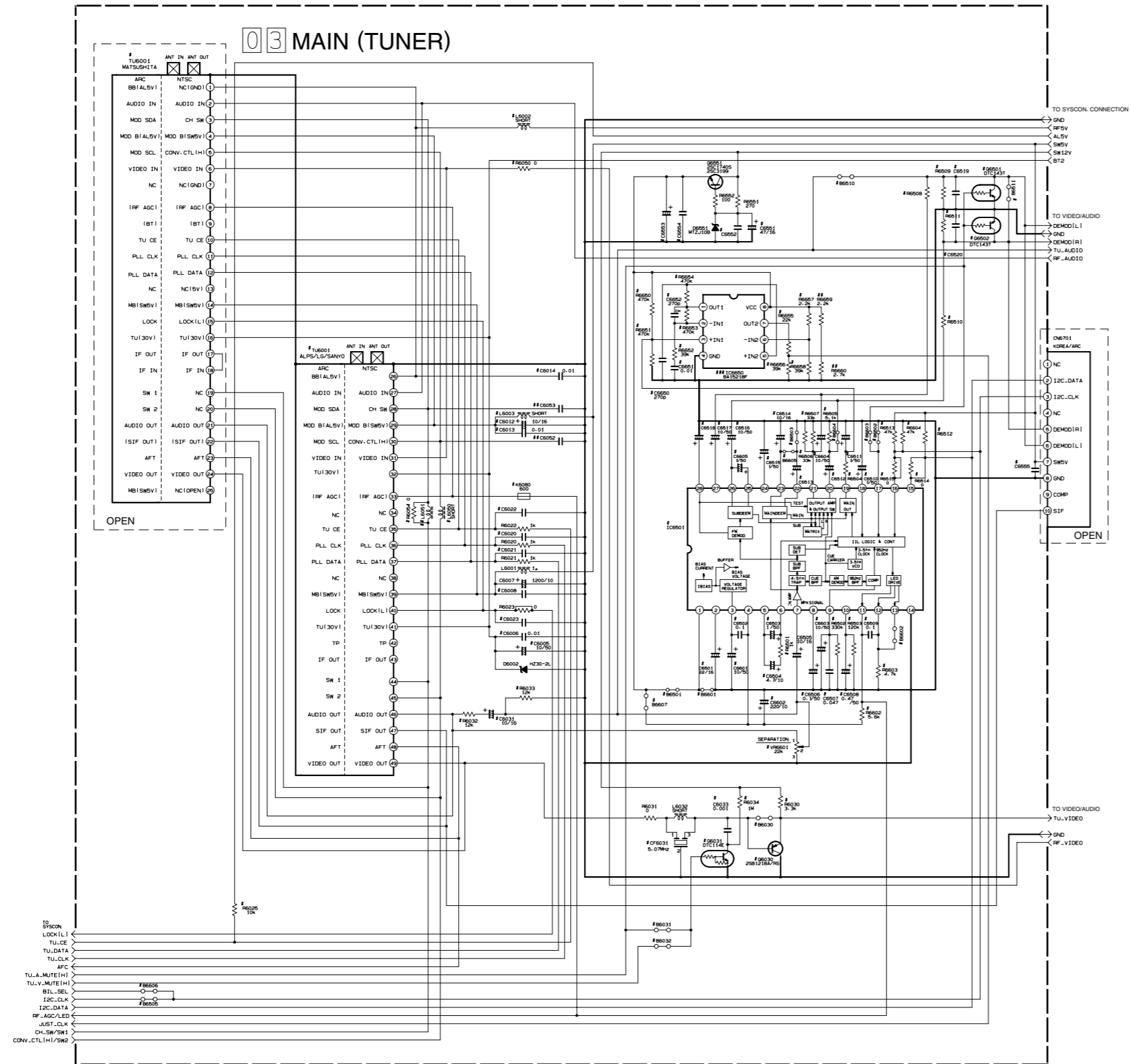
NOTES: UNLESS OTHERWISE SPECIFIED:
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μF.
 ALL DIODES ARE 1N4148M OR 1SS133.

± ELECTROLYTIC
 CERAMIC
 MYLER
 NON POLAR

p10330001a_rev0

4.5 MAIN (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 1

	JPN	US
TUNER UNIT	GAU019B	GAU0163
VIDEO BUFFER	C6023	X
	R6030-R6030	X
	B6030	O
MUTE	G6031-R6034-C6033-B6031	X
AUDIO OUT	R6030-R6033-C6031	O
DIGITAL TRAP	CF6031	X
RF CONV	L6003-L6050-R6050-R6054	X
	L6002-K6080-B6032-R6025-C6005-C6006-C6008-C6012-C6014-C6020-C6022	X
IC6001	CA2020M-X	PC18AAGT-X
OUT PUT	R6008-R6010	1.2k
	R6009-R6011	3.3k
	C6019-C6020	1.2k
US DEMOD	B6501-B6503-B6505-R6501-R6503-R6505-R6507-C6501-C6504-C6506-C6508-C6510-C6511-C6514-C6517	X
JPN DEMOD	VR6601-B6601-B6607-R6602-R6604-R6605-R6606-C6601-C6603-C6605-C6650-C6652	O
	R6504	0.01μF
	R6513	47k
	C6509	2.2k
	C6512-C6518	10μ
	C6513	1μ
	G6501-G6502-B6510-B6511-R6512-R6514-R6515-C6551-C6555-C6602	X

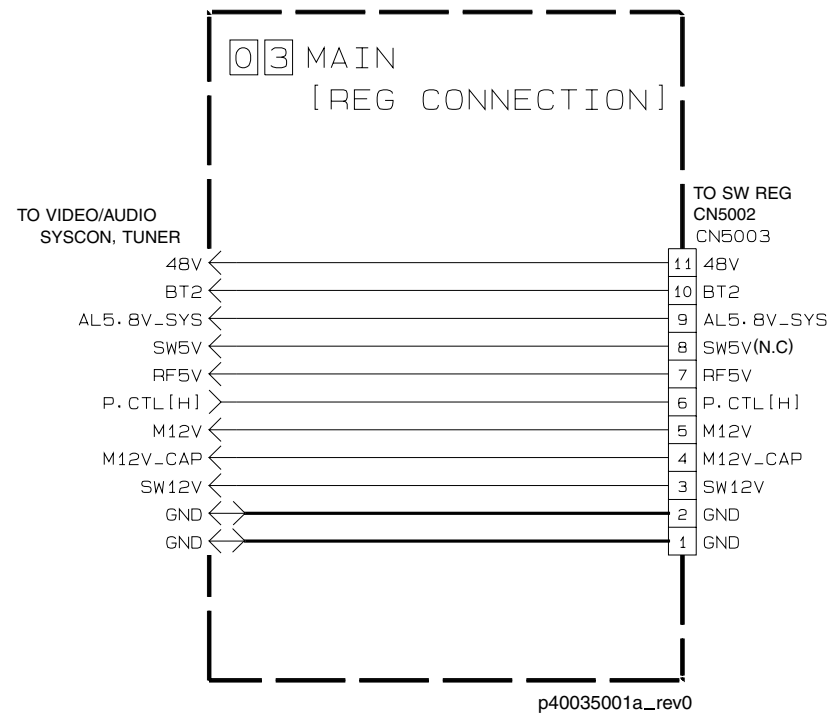
O : Used
X : Not used

MARK ELEMENTS ARE NOT MOUNTED.
Marked elements may differ depending on the model.
Be sure to check the Parts List.

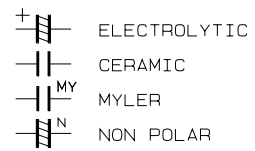
NOTES: UNLESS OTHERWISE SPECIFIED,
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN μH.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

p10324001a_rev0

4.6 MAIN (REG CONNECTION) SCHEMATIC DIAGRAM

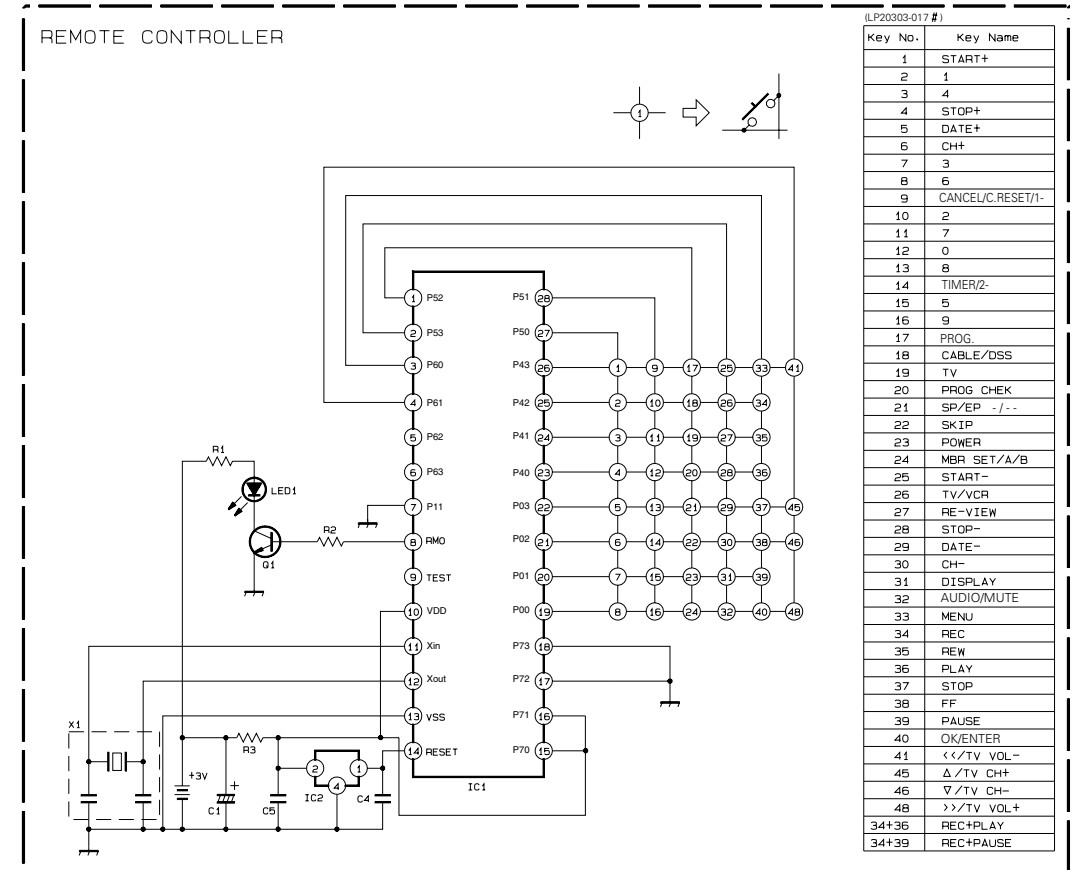


NOTES: UNLESS OTHERWISE SPECIFIED.
 ALL RESISTANCE VALUES ARE IN OHMS.
 ALL INDUCTANCE VALUES ARE IN H.
 ALL CAPACITANCE VALUES ARE IN μ F.



4.7 REMOTE CONTROLLER SCHEMATIC DIAGRAM

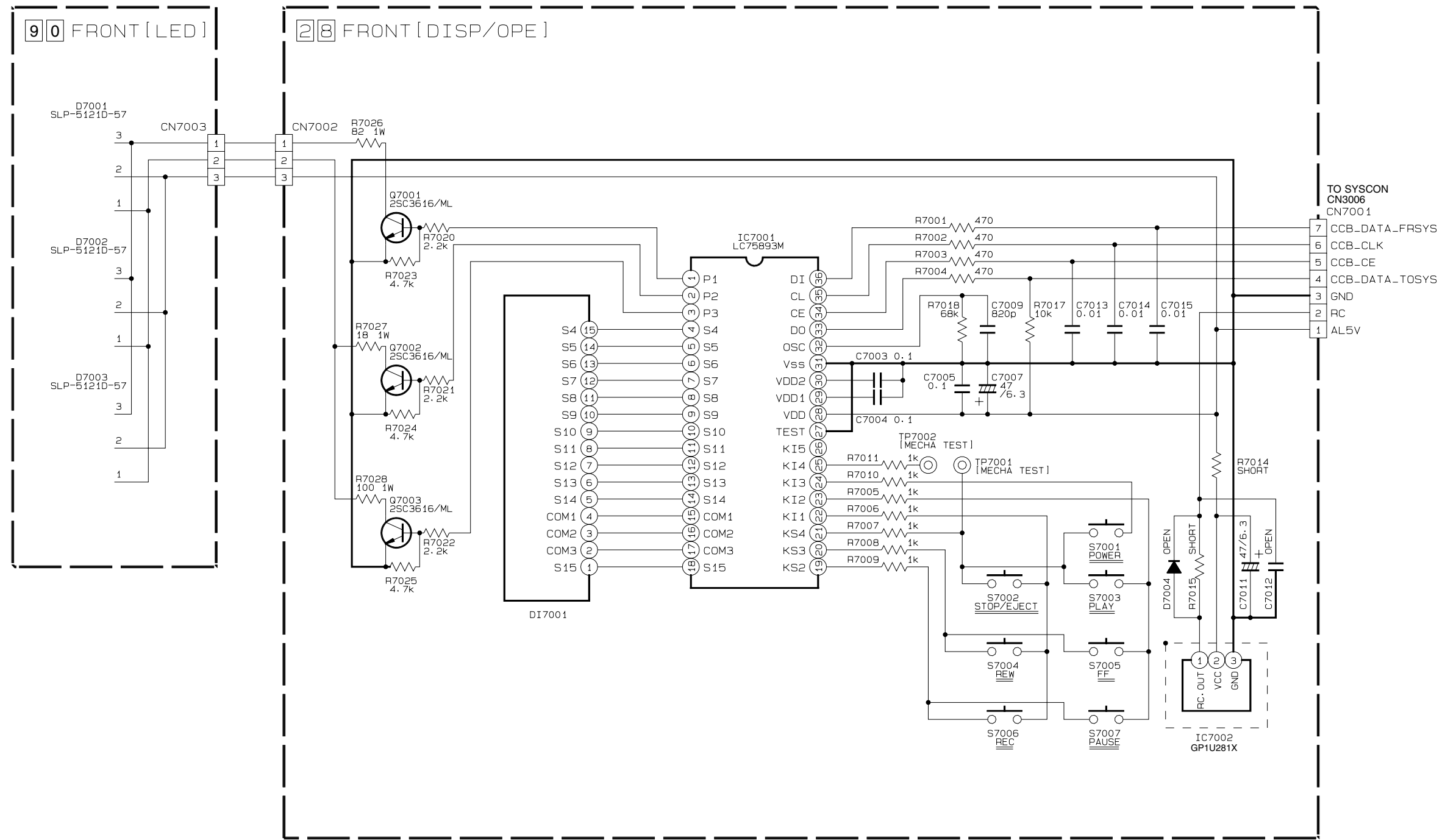
NOTES:
 1. All parts shown in this schematic are critical for safety.
 2. This schematic is only for reference.
 Avoid replacing individual parts.
 Replace the entire unit only.



(LP20303-017 #1)

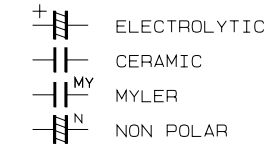
Key No.	Key Name
1	START+
2	1
3	4
4	STOP+
5	DATE+
6	CH+
7	3
8	6
9	CANCEL/C.RESET/1-
10	2
11	7
12	0
13	8
14	TIMER/2-
15	5
16	9
17	PROG.
18	CABLE/DSS
19	TV
20	PROG.CHEK
21	SP/EP -/..
22	SKIP
23	POWER
24	MBR.SET/A/B
25	START-
26	TV/VCR
27	RE-VIEW
28	STOP-
29	DATE-
30	CH-
31	DISPLAY
32	AUDIO/MUTE
33	MENU
34	REC
35	REW
36	PLAY
37	STOP
38	FF
39	PAUSE
40	OK/ENTER
41	<</TV VOL-
45	Δ /TV CH+
46	∇ /TV CH-
48	>>/TV VOL+
34+36	REC+PLAY
34+39	REC+PAUSE

4.8 FRONT (DISP/OPE) AND FRONT (LED) SCHEMATIC DIAGRAMS



p30083001a_rev0

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

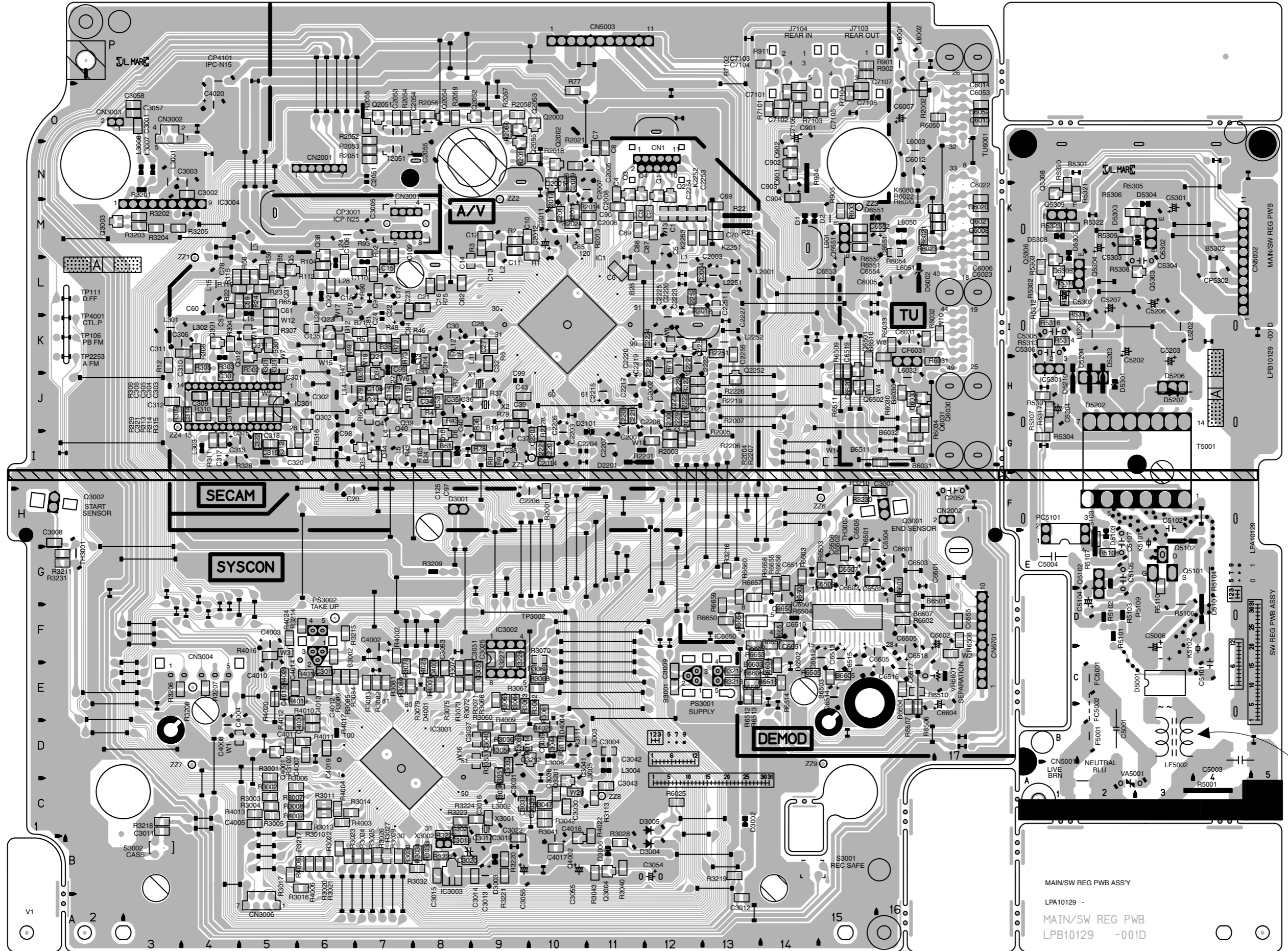


4.9 SW REG AND MAIN CIRCUIT BOARDS

<01>REG, <03>MAIN
LPB10129-001D



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



MAIN/SW REG PWB ASSY
LPA10129 -
MAIN/SW REG PWB
LPB10129 -001D

DANGEROUS VOLTAGE

COMPONENT PARTS LOCATION GUIDE <SW REG >

Table with 18 columns: REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION. It lists various components like CAPACITOR, DIODE, TRANSISTOR, RESISTOR, COIL, and OTHER with their respective locations.

4.10 DISP/OPE AND LED CIRCUIT BOARDS

<28> DISP/OPE, <90>LED
LPB10132-001A

COMPONENT PARTS LOCATION GUIDE
<DISP/OPE > <LED >

Table with 3 columns: REF.NO., LOCATION, REF.NO., LOCATION. It lists components like CAPACITOR, TESTPOINT, OTHER, CONNECTOR, DIODE, IC, TRANSISTOR, SWITCH, TESTPOINT, RESISTOR, and SWITCH with their locations.

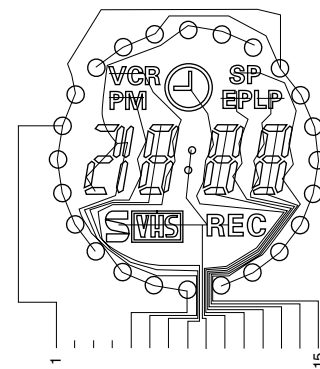
COMPONENT PARTS LOCATION GUIDE <MAIN >

Table with 18 columns: REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION, REF.NO., LOCATION. It lists various components like CAPACITOR, DIODE, TRANSISTOR, RESISTOR, COIL, JACK, COIL, and RESISTOR with their respective locations.

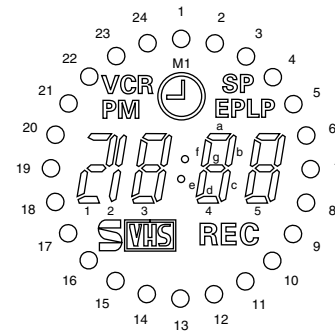
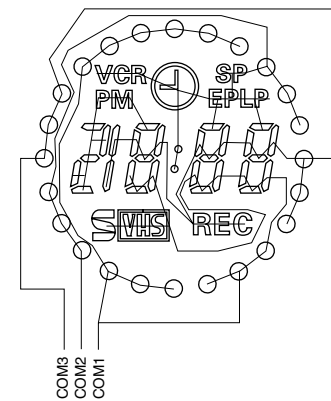
4.11 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT

SEGMENT



COMMON

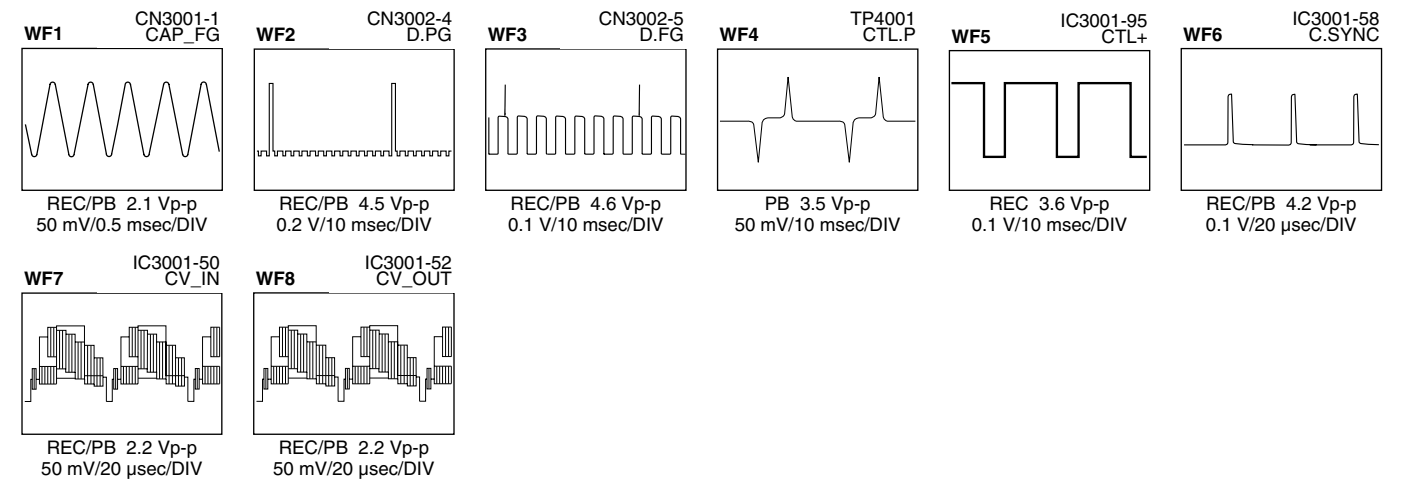


ANODE CONNECTION

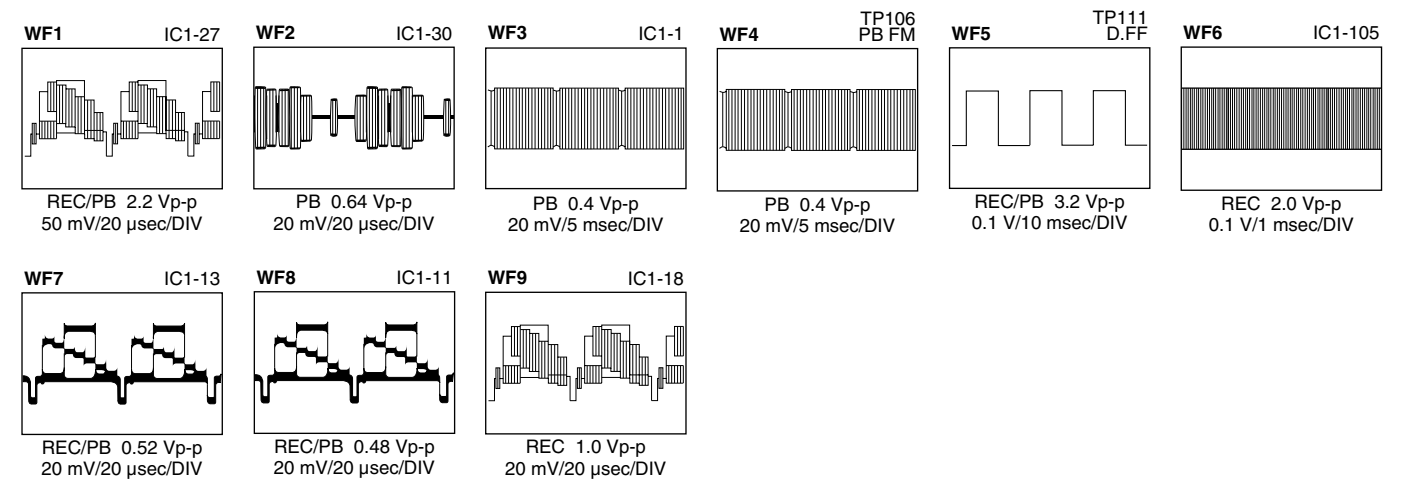
	COM1	COM2	COM3
1	○10, 11, 12, 22, 23, 24	○4, 5, 6, 16, 17, 18	○7, 8, 9, 19, 20, 21
2	—	—	COM3
3	—	COM2	—
4	COM1	—	—
5	○1, 2, 3, 13, 14, 15	1-a, b, d, e, g	2-b, c
6	3-e	PM	3-f
7	3-d	3-a	3-g
8	3-c	VCR	3-b
9	SVHS	:	REC
10	4-e	M1	4-f
11	4-d	4-a	4-g
12	4-c	EP	4-b
13	5-e	LP	5-f
14	5-d	5-a	5-g
15	5-c	SP	5-b

4.12 WAVEFORMS

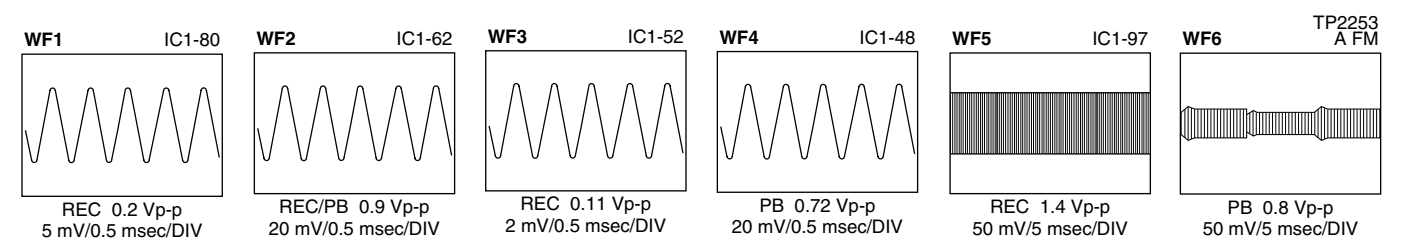
< SYSCON >



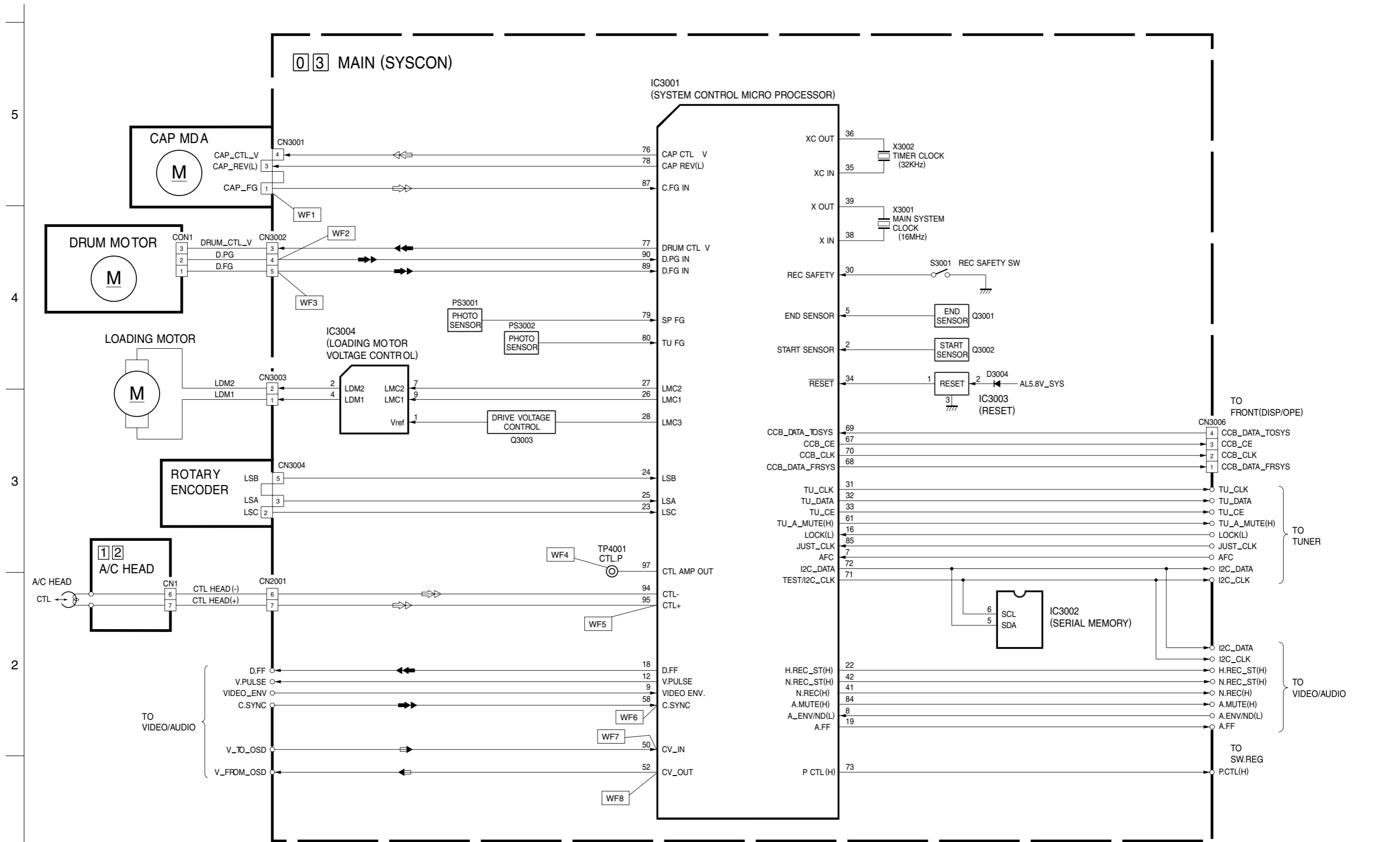
< VIDEO >



< AUDIO >



4.15 SYSTEM CONTROL BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-22.

4.17 AUDIO BLOCK DIAGRAM

