

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.

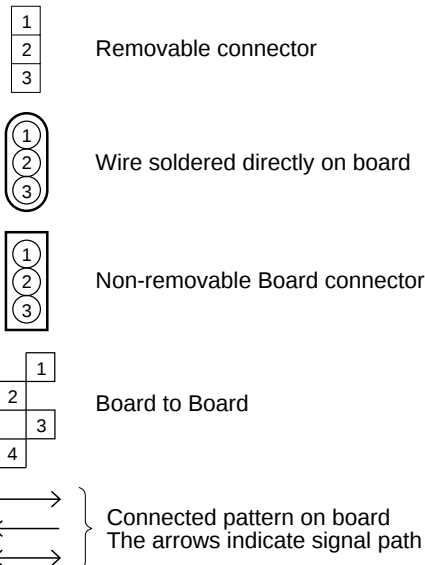
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
Chip resistors are 1/16 W.
K: K Ω (1000 Ω), M: M Ω (1000K Ω)
- 2) All capacitance values are in μ F, (P: PF).
- 3) All inductance values are in μ H, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

3. Interpreting Connector indications

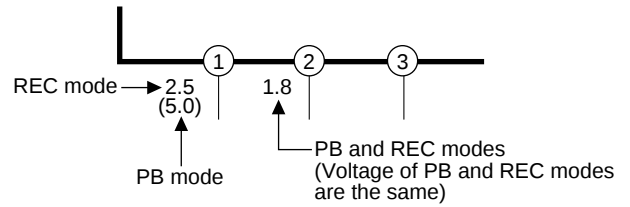


4. Voltage measurement

- 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

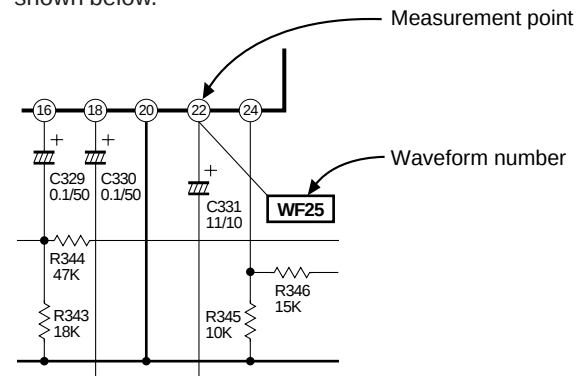
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



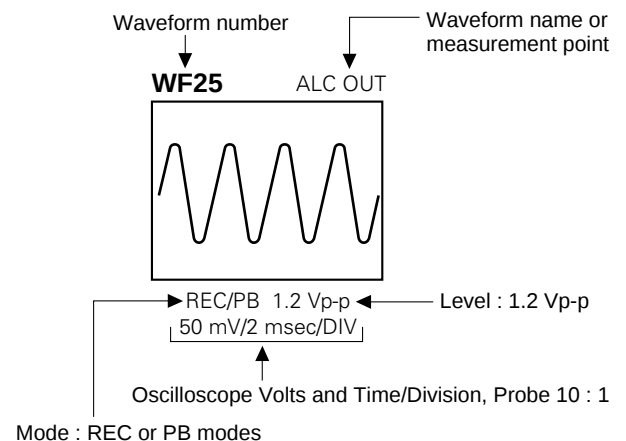
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

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.

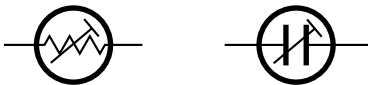
-  Playback signal path
-  Playback and recording signal path
-  Recording signal path (including E-E signal path)
-  Capstan servo path
-  Drum servo path

(Example)

-  R-Y Playback R-Y signal path
-  Y Recording Y signal path

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.



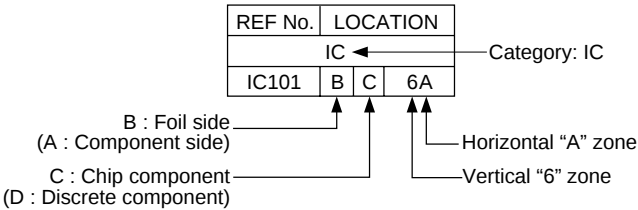
CIRCUIT BOARD NOTES

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.

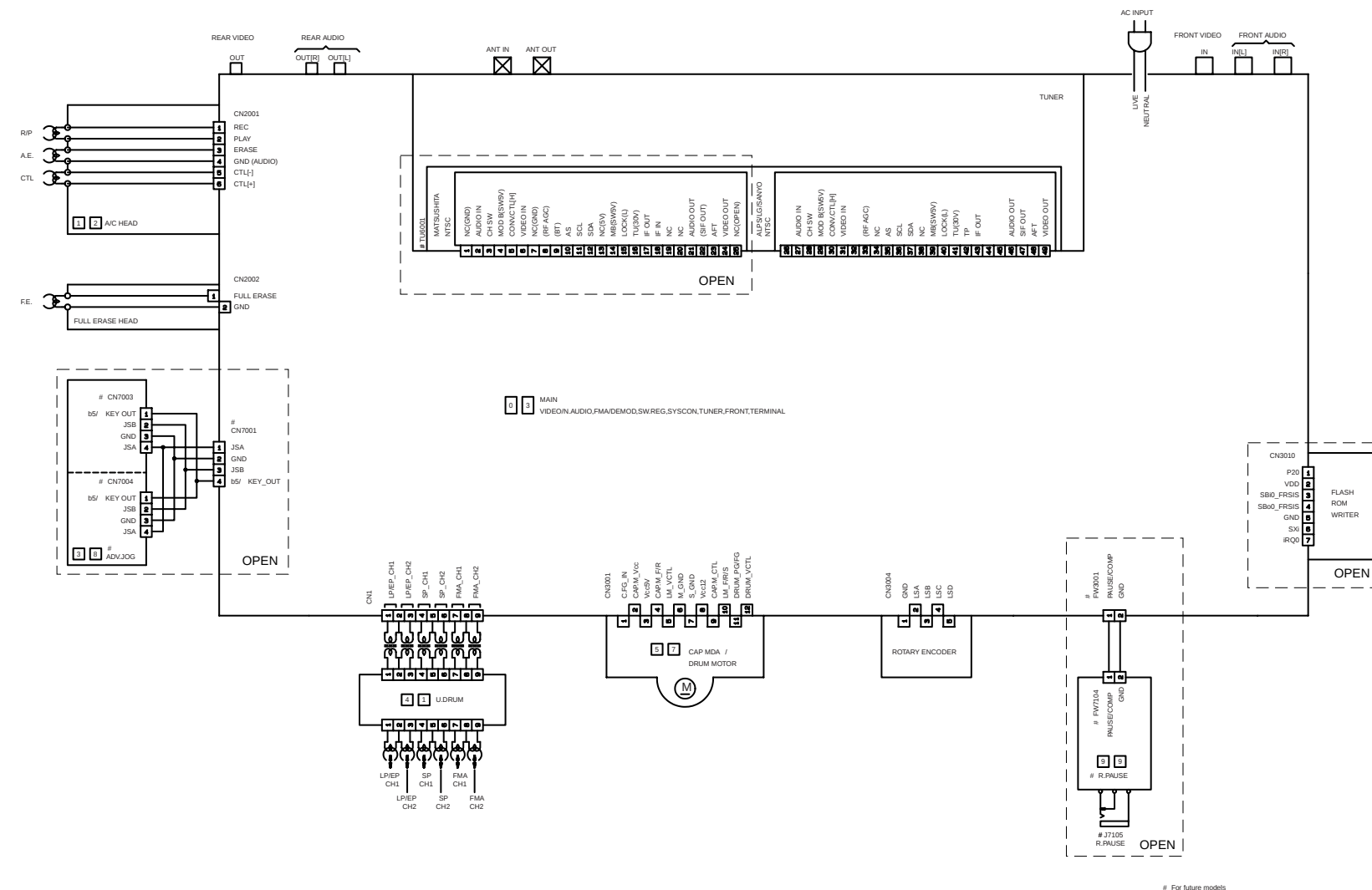


Note:

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

*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.*

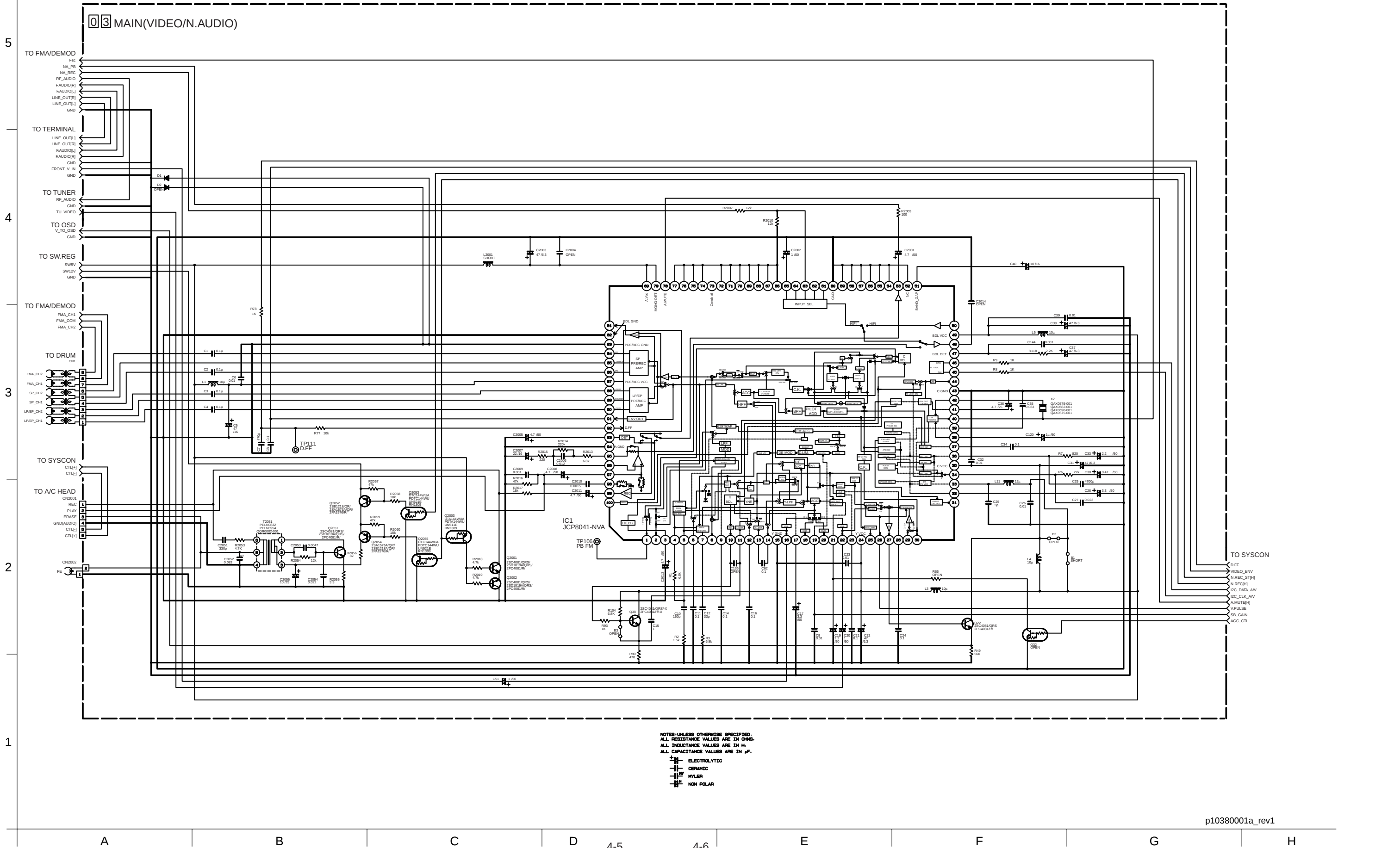


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# For future models
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2	99	R PAUSE
1	57	CAP MGA/DRUM MOTOR
	41	U DRUM
	38	ADV. JOG
	12	A/C HEAD
	3	MAIN
	NO	NAME

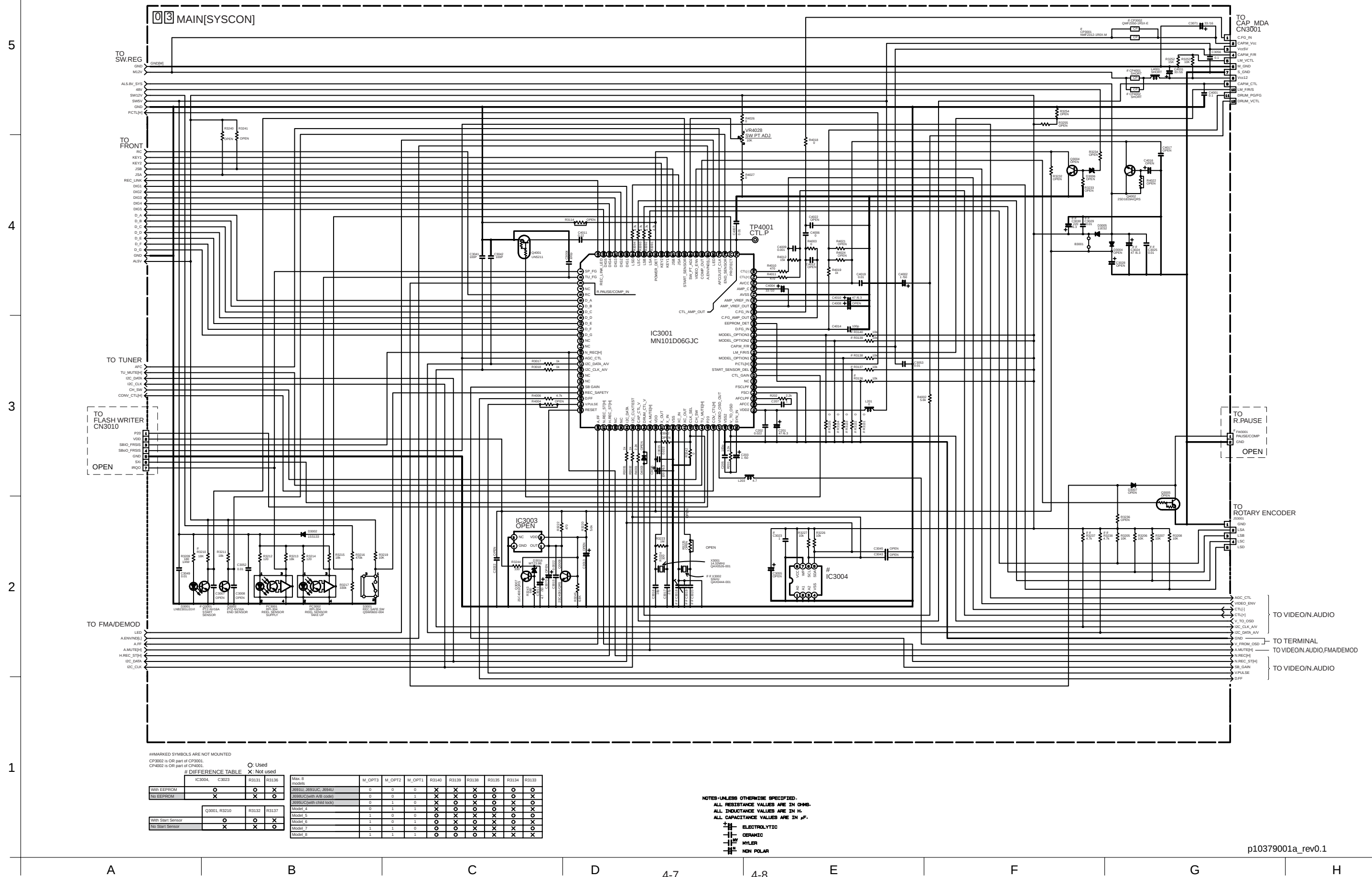
4.2 MAIN (VIDEO/N.AUDIO) SCHEMATIC DIAGRAM

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.



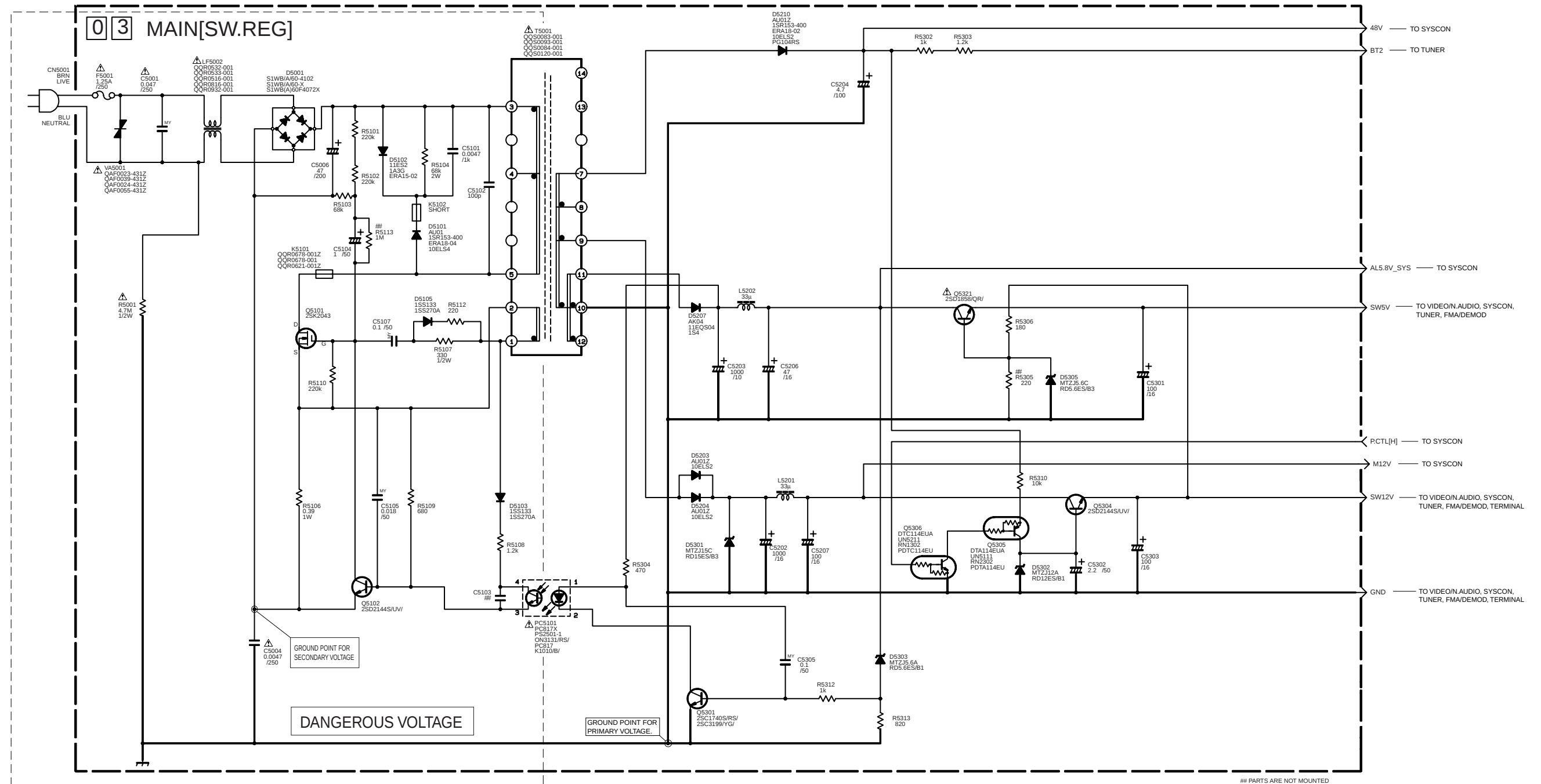
4.3 MAIN (SYSCON) SCHEMATIC DIAGRAM

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.



4.4 MAIN (SW.REG) SCHEMATIC DIAGRAM

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

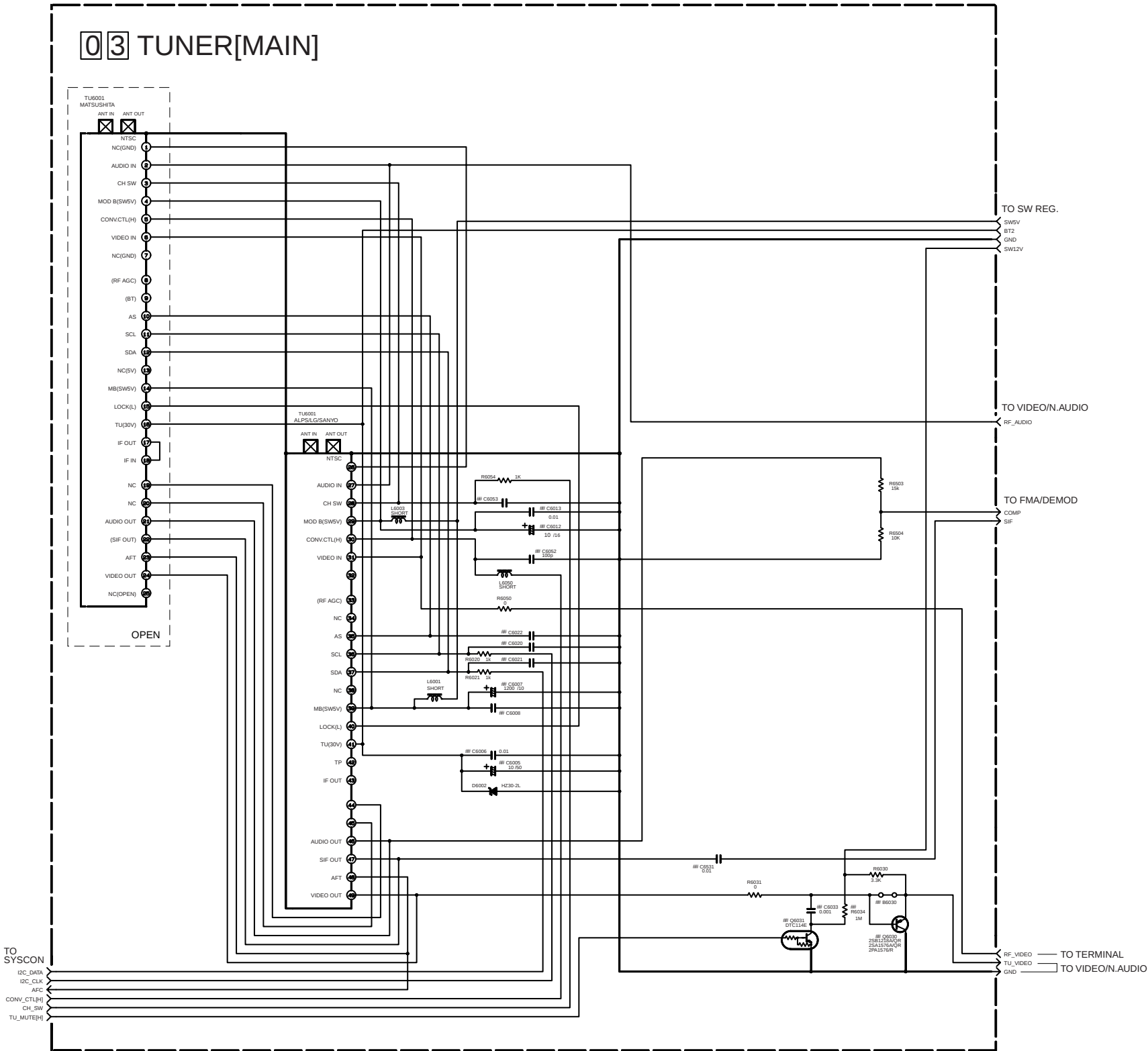


NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

	ELECTROLYTIC
	CERAMIC
	MYLAR
	NON POLAR

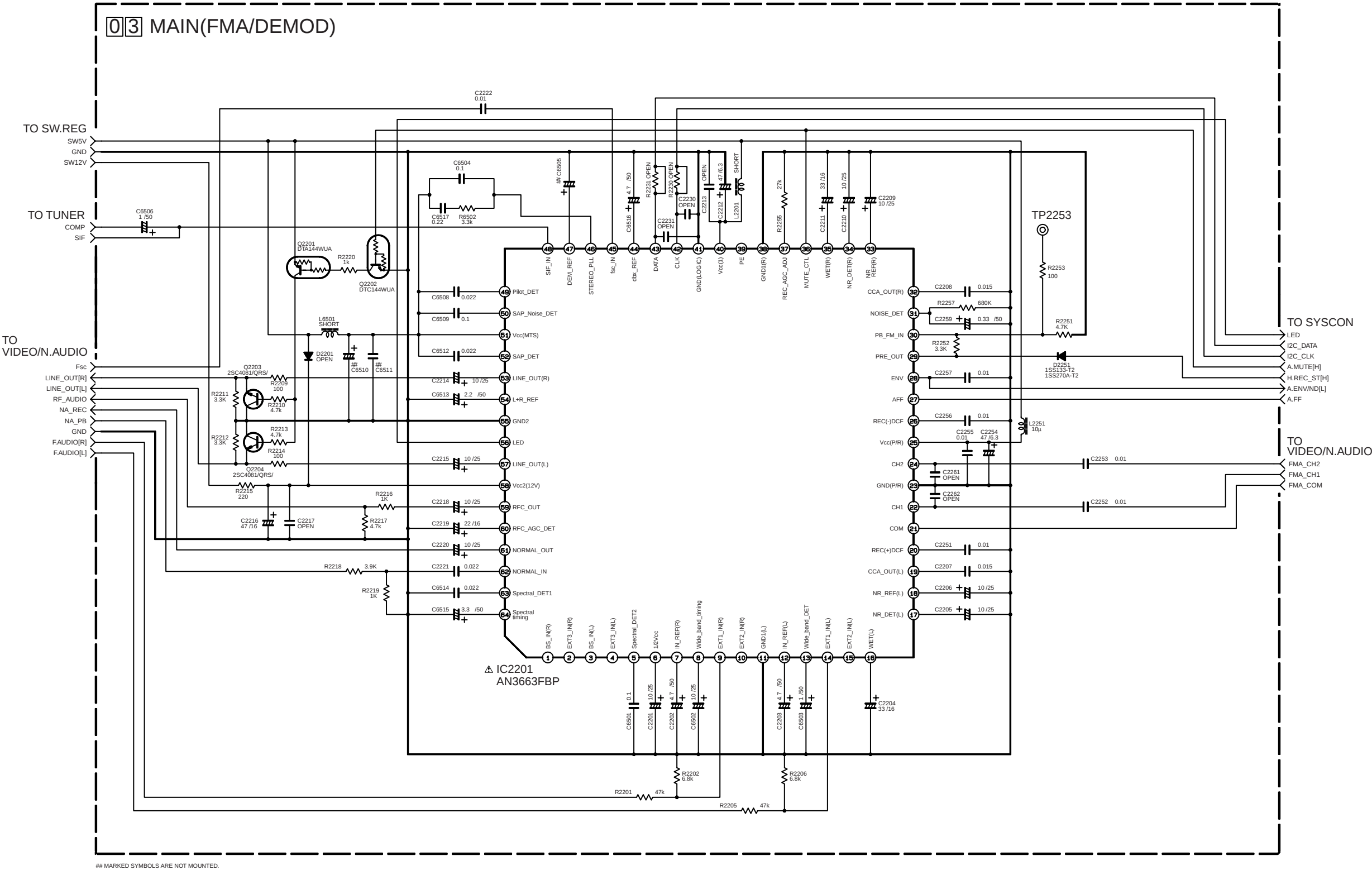
4.5 MAIN (TUNER) SCHEMATIC DIAGRAM

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.



NOTES: UNLESS OTHERWISE SPECIFIED,
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN P.
ELECTROLYTIC
CERAMIC
MYLAR
NON POLAR

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.

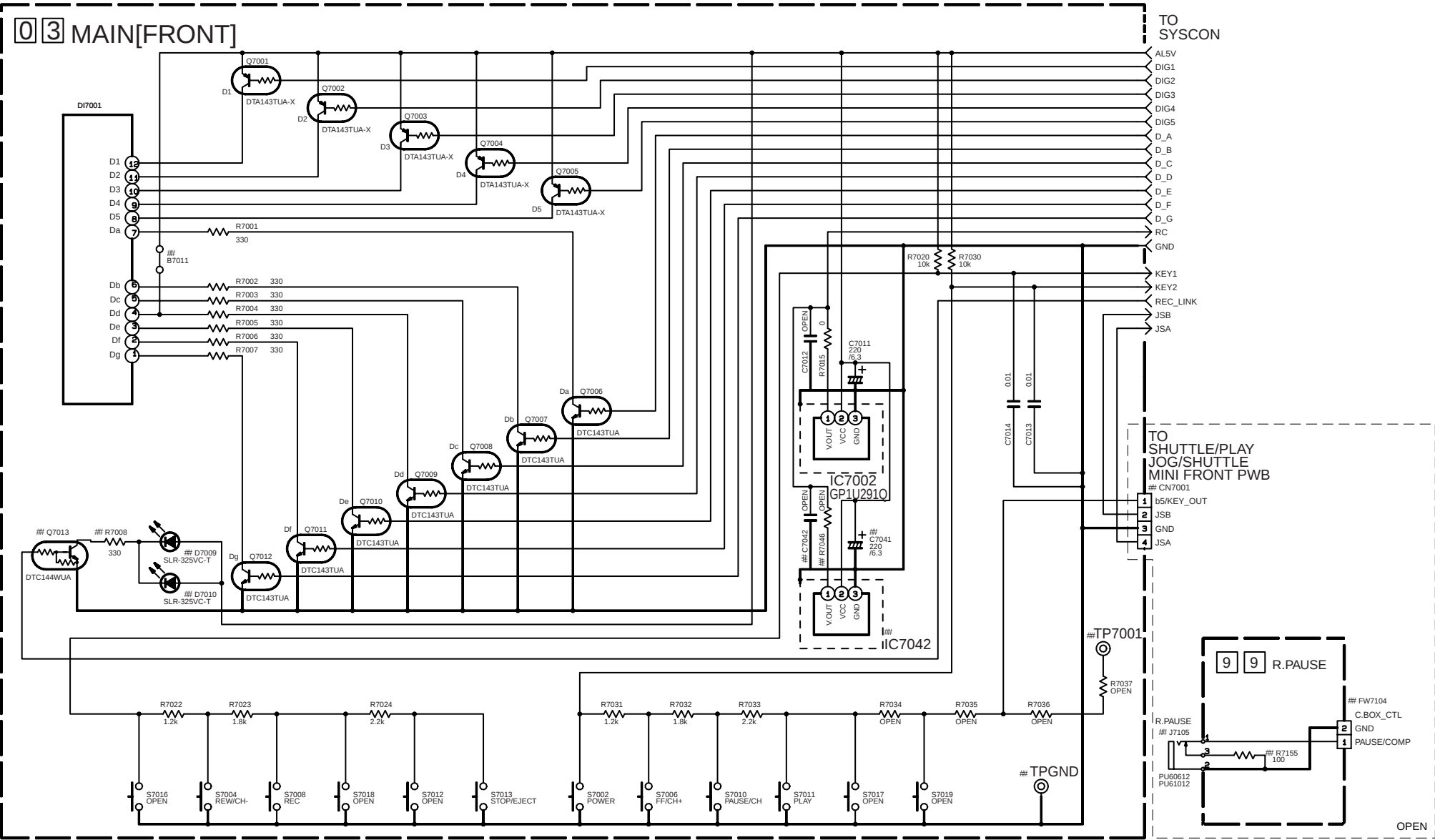


NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.

+ ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

4.7 MAIN (FRONT) 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.

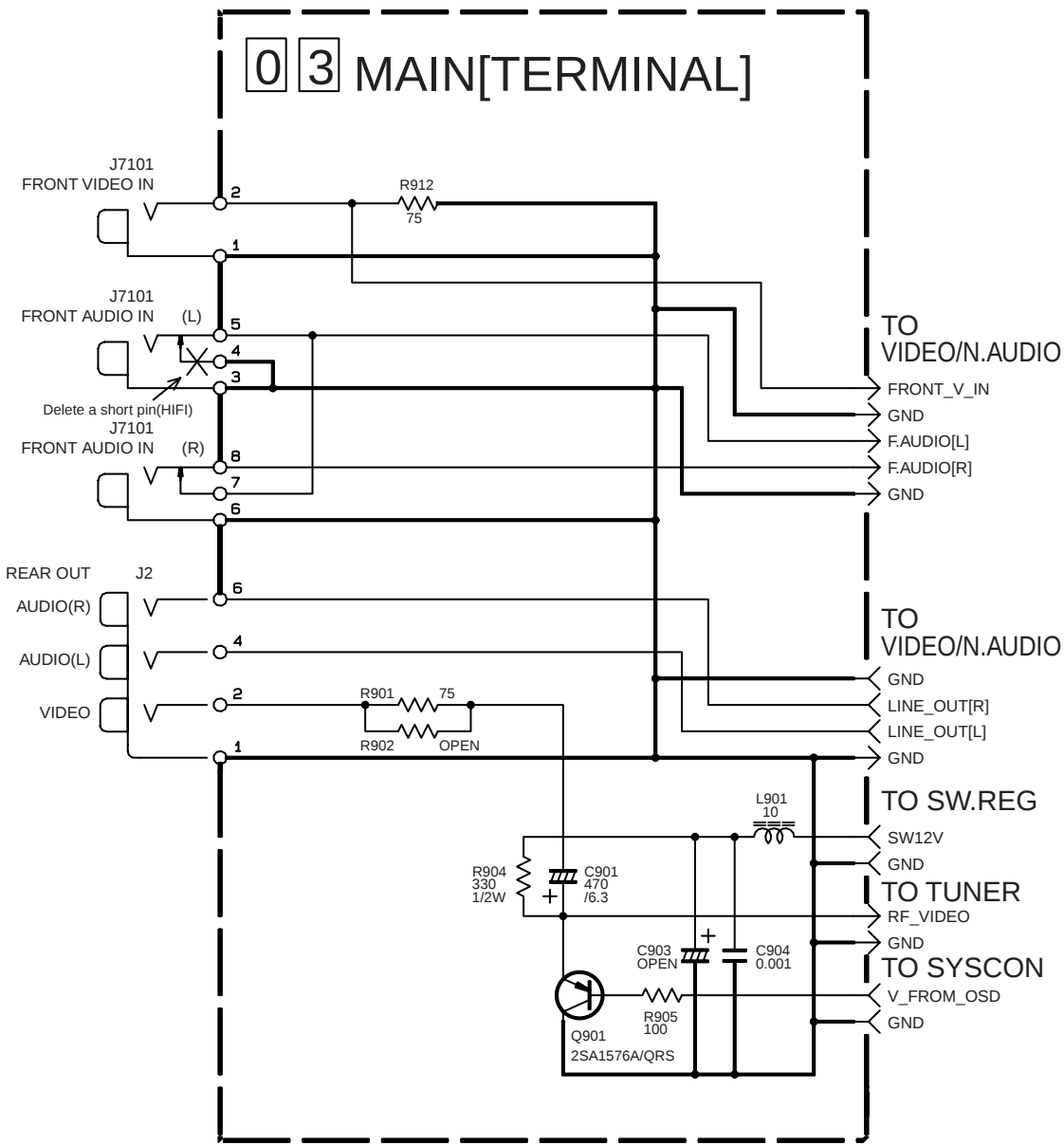


NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μ F.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

MARKED SYMBOLS ARE NOT MOUNTED.

4.8 MAIN (TERMINAL) SCHEMATIC DIAGRAM

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



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

COMPONENTPARTSLOCATIONGUIDE<MAIN> LPB10159-001D

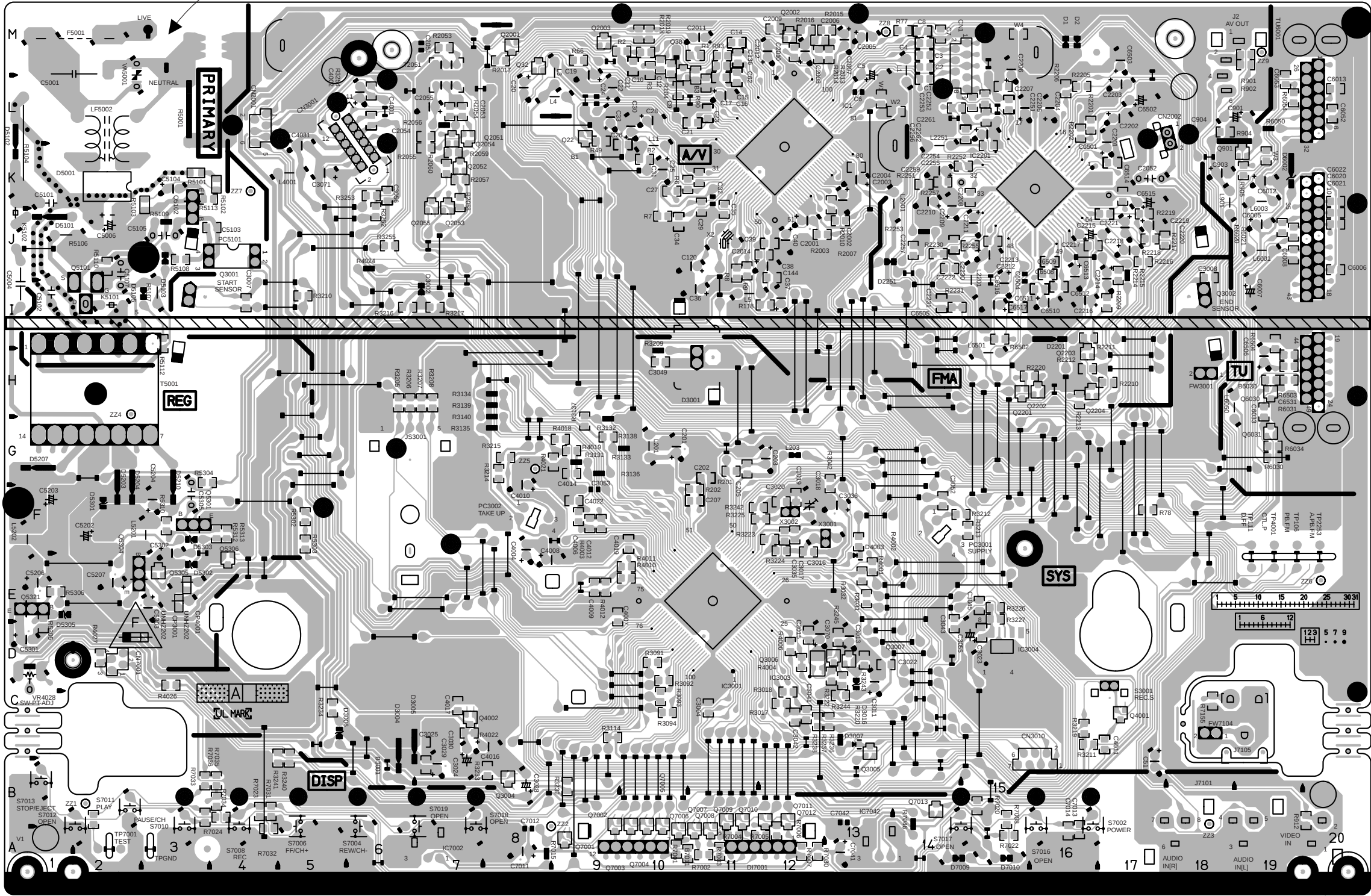
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
CAPASITOR	C3025	B C 7C	D5302	A D 3E	R2017	B C 8M	R5302	B C 5F	
C1	B C 14L	C3028	A D 8B	D5303	A D 3F	R2018	B C 10M	R5303	B C 5F
C2	B C 14M	C3029	B C 7B	D5305	A D 2E	R2019	B C 10M	R5304	B C 3G
C3	B C 14M	C3030	A D 7B	D6002	A D 19K	R2053	B C 7M	R5305	B C 1D
C4	B C 14M	C3035	B C 12F	D7009	A D 14A	R2054	B C 7L	R5306	B C 1E
C5	A D 13M	C3036	A D 13F	D7010	A D 15A	R2055	B C 7K	R5310	B C 3F
C6	A D 13L	C3041	B C 12C	D7001	A D 11A	R2056	A D 7L	R5312	B C 4F
C7	B C 14M	C3042	B C 12C			R2057	B C 7K	R5313	B C 4F
C8	B C 14M	C3043	B C 14D	FUSE		R2058	B C 7K	R6020	B C 19J
C9	B C 10L	C3045	B C 15E	F5001	A D 2M	R2059	B C 7K	R6021	B C 19J
C10	B C 10M	C3049	B C 10H			R2060	B C 7K	R6030	B C 19G
C11	B C 10M	C3052	B C 14F	IC		R2201	B C 16L	R6031	B C 19H
C12	B C 10M	C3053	A D 9F	IC1	B C 12K	R2202	B C 16L	R6034	B C 19G
C14	B C 11M	C3055	A D 15D	IC2201	B C 16K	R2205	B C 16L	R6050	A D 19L
C15	B C 11M	C3056	B C 6K	IC3001	B C 11E	R2206	B C 16L	R6054	B C 19L
C16	B C 11L	C3070	A D 12D	IC3003	B C 12D	R2209	B C 17I	R6502	B C 15I
C17	A D 11L	C3071	A D 5K	IC3004	B C 15D	R2210	B C 17H	R6503	B C 19H
C19	A D 9M	C4001	B C 6L	IC7002	A D 7A	R2211	B C 16I	R6504	B C 19I
C20	A D 8L	C4002	A D 6L	IC7042	A D 13A	R2212	B C 16H	R7001	B C 10A
C21	B C 11L	C4004	A D 8E			R2213	B C 16H	R7002	B C 11A
C22	A D 9L	C4006	B C 9F	COIL		R2214	B C 17J	R7003	B C 11A
C23	B C 11L	C4007	B C 9E	L1	A D 14L	R2215	A D 17I	R7004	B C 11A
C24	A D 9L	C4008	A D 8E	L3	A D 9M	R2216	B C 17J	R7005	B C 12A
C25	B C 11K	C4009	B C 9E	L4	A D 9L	R2217	B C 17J	R7006	B C 12A
C26	B C 10K	C4010	A D 8G	L5	A D 12I	R2218	B C 17J	R7007	B C 12A
C27	B C 10K	C4011	B C 17C	L11	A D 10K	R2219	B C 17J	R7008	B C 15B
C28	A D 10L	C4012	B C 9F	L201	A D 10G	R2220	B C 16H	R7015	A D 8A
C29	B C 11K	C4014	B C 9G	L203	A D 12G	R2230	B C 14J	R7020	B C 15B
C30	A D 10L	C4016	A D 8C	L901	A D 18K	R2231	B C 14I	R7022	B C 15A
C31	A D 10K	C4017	B C 7C	L2001	A D 14J	R2251	B C 14K	R7023	B C 4B
C32	A D 11K	C4019	B C 10F	L2201	A D 15J	R2252	B C 15K	R7024	B C 4B
C33	A D 9L	C4022	B C 9F	L2251	A D 14K	R2253	A D 14J	R7030	B C 12A
C34	B C 10J	C4031	A D 5K	L4001	A D 5K	R2255	B C 15J	R7031	B C 4B
C35	B C 11K	C5001	A D 1M	L5201	A D 3F	R2257	B C 14K	R7032	B C 4A
C36	A D 11I	C5004	A D 1J	L5202	A D 1F	R3017	B C 12C	R7033	B C 3B
C37	A D 12I	C5006	A D 2J	L6001	A D 19J	R3018	B C 12C	R7034	B C 4B
C38	A D 12J	C5101	A D 1K	L6003	A D 19K	R3031	B C 13E	R7035	B C 4B
C39	B C 12J	C5102	A D 1I	L6050	A D 19H	R3032	B C 13E	R7036	B C 3B
C40	A D 12J	C5103	B C 4J	L6501	A D 15H	R3042	B C 13G	R7037	B C 2B
C51	A D 17C	C5104	A D 3K			R3091	B C 10D	R7046	A D 14A
C62	B C 11L	C5105	A D 3J	TRANSISTOR		R3092	B C 10D	R7155	B C 18C
C120	A D 11J	C5107	A D 2I	Q22	B C 9L	R3093	B C 10C		
C136	B C 11M	C5202	A D 2F	Q32	B C 8M	R3094	B C 10C	SWITCH	
C144	B C 12J	C5203	A D 1F	Q38	B C 10M	R3114	B C 9C	S3001	A D 17C
C201	A D 10G	C5204	A D 3F	Q901	B C 19K	R3131	A D 9G	S7002	A D 16B
C202	B C 11G	C5206	A D 1E	Q2001	B C 8M	R3132	A D 10G	S7004	A D 6B
C203	A D 12G	C5207	A D 2E	Q2002	B C 12M	R3133	A D 10G	S7006	A D 5B
C205	B C 11G	C5301	A D 1D	Q2003	B C 9M	R3134	A D 8H	S7008	A D 4B
C207	B C 11F	C5302	A D 3F	Q2051	B C 7L	R3135	A D 8G	S7010	A D 3B
C901	A D 19L	C5303	A D 3E	Q2052	B C 7K	R3136	A D 9G	S7011	A D 2B
C903	A D 18K	C5305	A D 3G	Q2053	B C 7K	R3137	B C 9G	S7012	A D 2B
C904	B C 18L	C6005	A D 19J	Q2054	B C 7L	R3138	B C 9G	S7013	A D 1B
C2001	A D 12J	C6006	B C 20J	Q2055	B C 7K	R3139	A D 8H	S7016	A D 15B
C2002	A D 13K	C6007	A D 19J	Q2201	B C 15H	R3140	A D 8H	S7017	A D 15B
C2003	A D 13K	C6008	B C 19J	Q2202	B C 16H	R3205	B C 6H	S7018	A D 7B
C2004	B C 13K	C6012	A D 19K	Q2203	B C 16H	R3206	B C 6H	S7019	A D 7B
C2005	A D 13M	C6013	B C 20L	Q2204	B C 16H	R3207	B C 7H		
C2006	B C 12M	C6020	B C 20J	Q3001	A D 3I	R3208	B C 7H	TESTPOINT	
C2007	A D 13M	C6021	B C 20J	Q3002	A D 18I	R3209	A D 10H	TP106	A D 19F
C2008	A D 12M	C6022	B C 20K	Q3004	B C 8B	R3210	B C 5I	TP111	A D 19F
C2009	B C 12M	C6033	B C 19H	Q3005	B C 13C	R3211	B C 16C	TP2253	A D 20F
C2010	B C 12M	C6052	B C 20L	Q3006	B C 13D	R3212	B C 15F	TP4001	A D 19F
C2011	A D 11M	C6053	B C 19L	Q3007	B C 13D	R3213	B C 15F	TP7001	A D 2A
C2012	A D 12M	C6501	B C 17K	Q4001	B C 17C	R3214	B C 8G	TPGND	A D 3A
C2014	B C 12J	C6502	A D 17L	Q4002	B C 7C	R3215	B C 8G		
C2051	A D 7M	C6503	A D 17M	Q5101	A D 2I	R3216	B C 6I	OTHER	
C2052	A D 17K	C6504	A D 15I	Q5102	A D 3K	R3217	B C 7I	CP3001	B C 3E
C2053	B C 7L	C6505	A D 15I	Q5301	A D 3F	R3219	B C 16C	CP3002	A D 3E
C2054	B C 7L	C6506	A D 19H	Q5304	A D 2E	R3220	B C 13D	CP4001	B C 3E
C2055	A D 7L	C6508	B C 16J	Q5305	B C 3E	R3222	B C 13D	CP4002	A D 3E
C2201	A D 17K	C6509	B C 16J	Q5306	B C 4E	R3223	B C 12F	FC5001	A D 2M
C2202	A D 17L	C6510	A D 16I	Q5321	A D 1E	R3224	B C 12F	FC5002	A D 1M
C2203	A D 17L	C6511	B C 16I	Q6030	B C 19H	R3225	B C 12F	FW3001	A D 18H
C2204	A D 16L	C6512	B C 16I	Q6031	B C 19G	R3226	B C 15E	FW7104	A D 18C
C2205	A D 15L	C6513	A D 16J	Q7001	B C 9A	R3227	B C 15E	J2	A D 19M
C2206	A D 15M	C6514	B C 17K	Q7002	B C 9B	R3232	B C 9B	J7101	A D 19A
C2207	B C 15L	C6515	A D 17K	Q7003	B C 10B	R3233	B C 8B	J7105	A D 19C
C2208	B C 15K	C6516	A D 15J	Q7004	B C 10B	R3234	B C 5C	JS3001	A D 6G
C2209	A D 14K	C6517	B C 15I	Q7005	B C 10B	R3236	A D 13C	LF5002	A D 2L
C2210	A D 14K	C6531	B C 19H	Q7006	B C 10A	R3237	B C 13C	PC0324	A D 11J
C2211	A D 15J	C7011	A D 8A	Q7007	B C 11A	R3238	B C 12C	PC3001	A D 14F
C2212	A D 15J	C7012	A D 8A	Q7008	B C 11A	R3240	B C 5C	PC3002	A D 8F
C2213	B C 15J	C7013	B C 16A	Q7009	B C 11B	R3241	B C 5C	PC5101	A D 4J
C2214	A D 17J	C7014	B C 16A	Q7010	B C 11B	R3242	B C 12F	T2051	A D 7L
C2215	A D 16J	C7041	A D 13A	Q7011	B C 12B	R3243	B C 13D	T5001	A D 1I
C2216	A D 16I	C7042	A D 13B	Q7012	B C 12B	R3244	B C 13C	TU6001	A D 20M
C2217	B C 16J			Q7013	B C 14B	R3245	B C 13D	VA5001	A D 2M
C2218	A D 17J	CONNECTOR				R3252	B C 6K	VR4028	A D 1D
C2219	A D 17J	CN1	A D 15M	RESISTOR		R3253	B C 6K	X2	A D 11J
C2220	A D 17J	CN2001	A D 4L	R1	B C 11M	R3254	B C 6L	X3001	A D 12F
C2221	B C 17J	CN2002	A D 17L	R2	B C 10M	R3255	B C 6J	X3002	A D 12F
C2222	B C 14J	CN3001	A D 6L	R3	B C 10M	R4001	B C 13E		
C2230	B C 14J	CN3010	A D 16B	R6	B C 11K	R4002	B C 13F		
C2231	B C 14I	CN7001	A D 2D	R7	B C 10J	R4003	B C 9F		
C2251	B C 15L			R8	B C 11J	R4004	B C 12D		
C2252	B C 15L			R9	B C 11J	R4006	B C 12D		
C2253	B C 15L	DIODE		D1	A D 16M	R4010	B C 10E		
C2254	A D 15L	D2	A D 16M	R66	B C 9M	R4011	B C 10E		
C2255	B C 15K	D2201	A D 15I	R77	B C 14M	R4012	B C 9E		
C2256	B C 15L	D2251	A D 13J	R78	B C 17F	R4018	B C 9G		
C2257	B C 14J	D3001	A D 11H	R90	B C 11L	R4019	B C 9G		
C2259	A D 14K	D3002	A D 7I	R93	B C 11M	R4021	B C 9G		
C2261	B C 14L	D3004	A D 6C	R104	B C 10M	R4022	B C 7C		
C2262	B C 15L	D3005	A D 7C	R118	B C 12I	R4024	A D 6J		
C3004	B C 11C	D3006	A D 5C	R201	B C 11G	R4026	B C 3D		
C3007	B C 4I	D3007	B C 13C	R202	B C 11F	R4027	B C 2D		
C3008	B C 18J	D3016	A D 13D	R901	B C 19M	R5001	A D 3L		
C3011	A D 13D	D4003	B C 13E	R902	B C 19M	R5101	B C 3K		
C3013	A D 13D	D5001	B C 2K	R904	A D 18L	R5102	B C 4K		
C3015	B C 12D	D5101	A D 1J	R905	B C 19K	R5103	B C 3K		
C3016	B C 12F	D5102	A D 1L	R912	B C 20B	R5104	A D 1J		
C3017	B C 12F	D5103	A D 3J	R2003	B C 12J	R5106	A D 1J		
C3018	A D 12F	D5105	A D 3I	R2007	B C 13J	R5107	A D 3I		
C3019	B C 12F	D5203	A D 2G	R2010	B C 13K	R5108	B C 3J		
C3020	B C 12F	D5204	A D 2G	R2013	B C 13M	R5109	A D 3J		
C3022	B C 13D	D5207	A D 1G	R2014	B C 12M	R5110	B C 2J		
C3023	B C 15D	D5210	A D 3G	R2015	B C 13M	R5112	B C 3I		
C3024	A D 7C	D5301	A D 2F	R2016	B C 12M	R5113	B C 3K		

<03> MAIN
LPB10159-001D

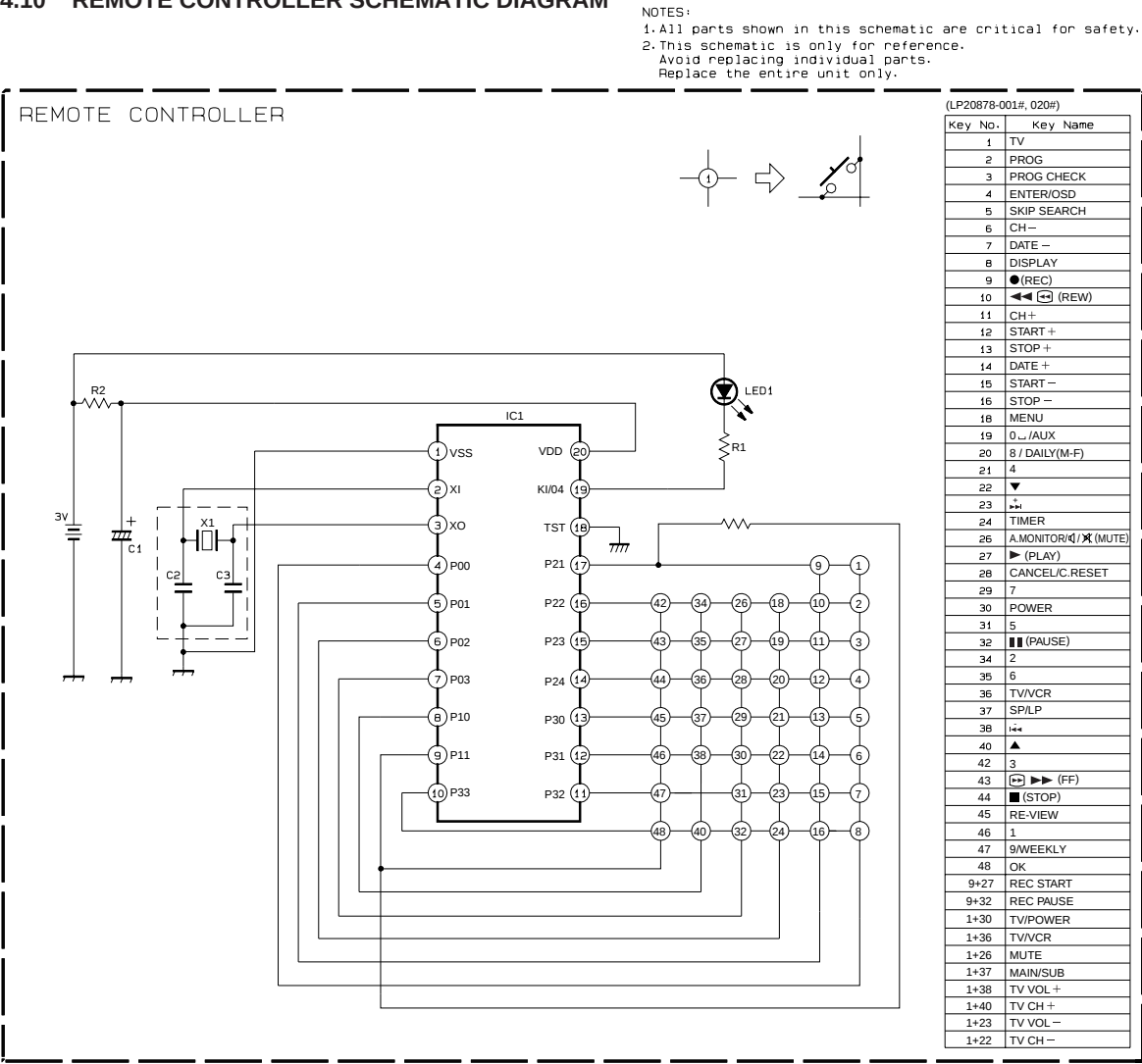
DANGEROUS VOLTAGE



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

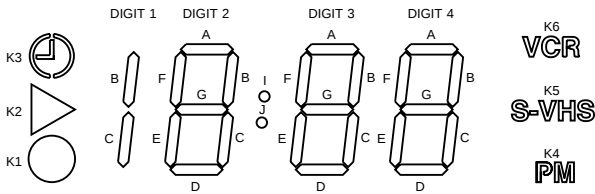


4.10 REMOTE CONTROLLER SCHEMATIC DIAGRAM



4.11 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT

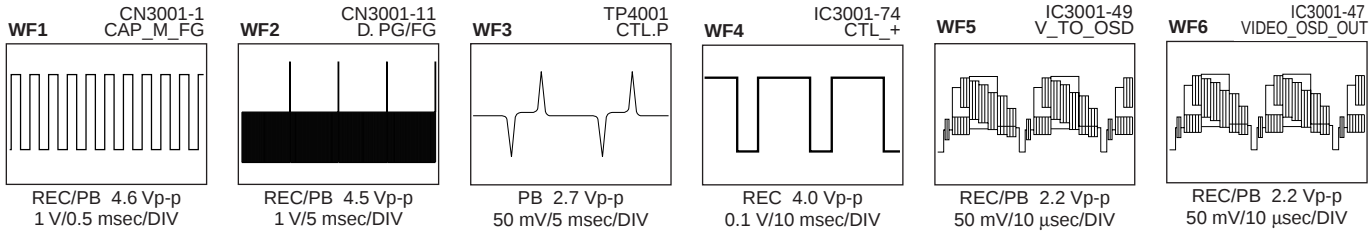


ANODE CONNECTION

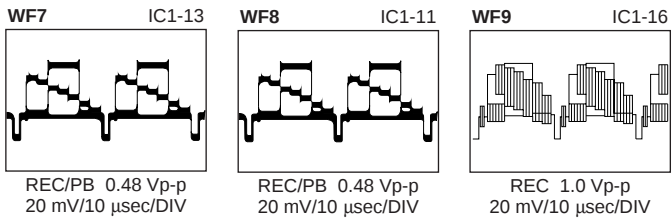
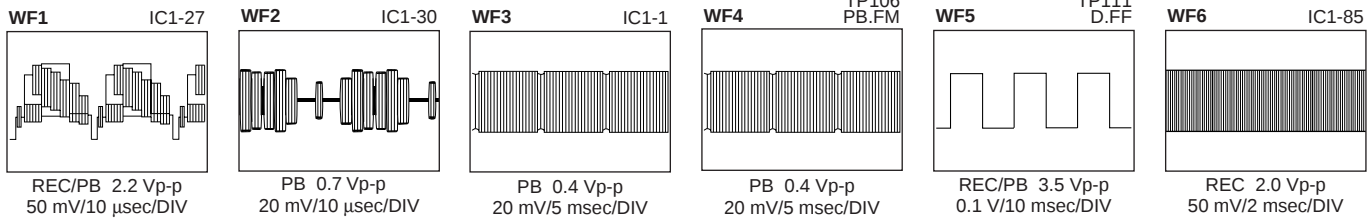
No.	CONNECTION
1	CATHODE 2G, 3G, 4G, I, J
2	CATHODE 2F, 3F, 4F, K6
3	CATHODE 2E, 3E, 4E, K1
4	CATHODE 2D, 3D, 4D, K4
5	CATHODE 1C, 2C, 3C, 4C, K5
6	CATHODE 1B, 2B, 3B, 4B, K2
7	CATHODE 2A, 3A, 4A, K3
8	COMMON ANODE K3, K2, K5, K4, K1, K6, I, J
9	COMMON ANODE DIGIT4
10	COMMON ANODE DIGIT3
11	COMMON ANODE DIGIT2
12	COMMON ANODE DIGIT1

4.12 WAVEFORMS

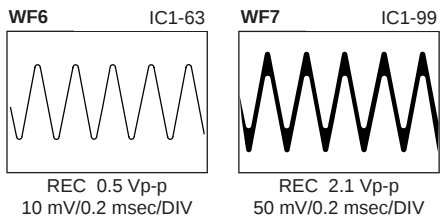
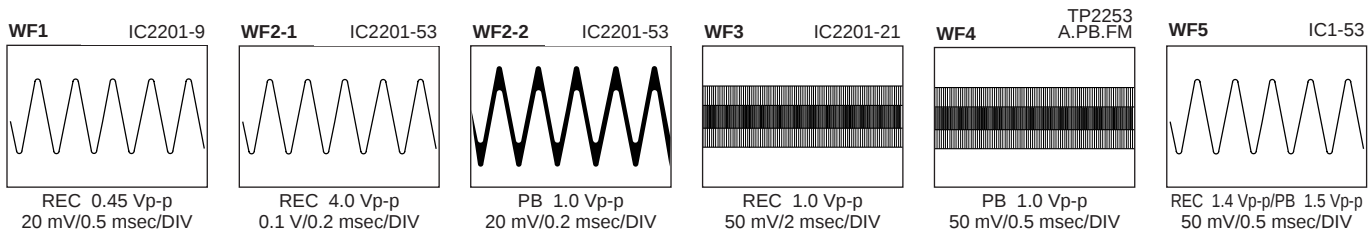
< SYSCON >



< VIDEO >



< AUDIO >



4.13 VOLTAGE CHARTS

<MAIN>

MODE PIN NO.	REC	PLAY
IC1		
1	2.1	2.1
2	2.8	2.8
3	2.5	2.5
4	1.9	1.4
5	0	0
6	2.4	2.4
7	0	0.7
8	0	0
9	0	0
10	2.4	2.4
11	3.1	3.1
12	2.7	2.7
13	3.1	3.1
14	2.3	2.3
15	0	0
16	2.8	2.8
17	1.4	1.4
18	2.8	2.8
19	2.7	2.8
20	0	2.8
21	2.0	1.9
22	0	2.8
23	2.8	2.8
24	5.0	5.0
25	0.3	0.3
26	0	0
27	2.3	2.3
28	0	0
29	1.8	0
30	2.1	2.1
31	0	0
32	2.5	2.5
33	5.0	5.0
34	2.7	1.0
35	5.0	5.0
36	2.5	0
37	2.3	2.2
38	2.8	2.8
39	1.5	1.2
40	1.6	1.6
41	2.4	2.4
42	0	2.1
43	0	0
44	2.2	2.2
45	4.3	4.3
46	4.6	4.3
47	2.8	2.8
48	2.5	2.6
49	5.0	5.0
50	2.5	2.5
51	2.8	0
52	0	0
53	2.5	2.6
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	2.0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	3.0	3.0
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	5.0	5.0
80	5.0	5.0
81	0	0
82	0	0
83	0	0
84	2.2	2.2
85	0	2.2
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0
92	2.5	0
93	0	0.4
94	0	0
95	2.5	2.5
96	2.5	0
97	2.5	0
98	0	0
99	0	0
100	0	0

MODE PIN NO.	REC	PLAY
IC2201		
1	2.4	2.4
2	0	0
3	2.4	2.4
4	0	0
5	2.3	2.3
6	2.5	2.5
7	2.0	2.0
8	0.4	0.4
9	0	0
10	0	0
11	0	0
12	2.0	2.0
13	2.2	2.2
14	0	0
15	0	0
16	2.5	2.5
17	0.7	0.7
18	2.4	2.4
19	2.5	0
20	2.0	0
21	1.9	0
22	2.0	0.7
23	0	0
24	2.0	0.7
25	5.0	5.0
26	2.0	0
27	0	0
28	4.3	2.2
29	4.4	1.9
30	4.9	1.0
31	1.1	1.9
32	2.5	2.5
33	2.5	2.5
34	0.7	0.7
35	2.6	2.6
36	0	0
37	1.6	1.6
38	0	0
39	0	0
40	5.0	5.0
41	0	0
42	5.0	5.0
43	4.9	4.9
44	2.3	2.3
45	0	0
46	3.6	3.6
47	1.5	1.5
48	2.2	2.2
49	3.5	3.5
50	3.5	0
51	0	5.0
52	3.5	0
53	4.4	0
54	2.4	0
55	0	0
56	0	0
57	4.4	0
58	9.3	9.3
59	4.4	4.4
60	0	0
61	2.5	2.5
62	2.4	0
63	2.4	2.4
64	0.5	0.8
IC3001		
1	2.5	2.5
2	2.5	2.5
3	4.7	4.7
4	-	-
5	4.7	4.7
6	1.9	2.5
7	3.2	3.2
8	3.2	3.8
9	2.5	1.9
10	2.5	2.5
11	1.2	3.2
12	1.2	1.9
13	-	-
14	-	-
15	4.8	0
16	0	0
17	4.6	4.4
18	4.3	4.3
19	-	-
20	-	-
21	2.7	2.8
22	4.8	4.8
23	2.4	2.3
24	0	0
25	4.8	4.8
26	0	2.4
27	4.8	0
28	4.5	0
29	-	-
30	-	-
31	4.5	4.6
32	4.6	4.6
33	2.6	2.6
34	2.5	2.6
35	0	0

MODE PIN NO.	REC	PLAY
36	4.8	4.8
37	2.3	2.3
38	2.2	2.2
39	0	0
40	1.7	1.7
41	2.4	2.4
42	4.8	4.8
43	0	0
44	4.8	4.8
45	0	0
46	0	0
47	1.6	1.6
48	0	0
49	1.6	1.6
50	2.4	2.4
51	5.0	5.0
52	2.5	2.5
53	0	2.5
54	0	0
55	0	0
56	-	-
57	4.7	4.7
58	0	0
59	4.7	4.8
60	0	0
61	2.5	2.5
62	0	0
63	4.8	4.8
64	0	0
65	1.3	1.3
66	0	0
67	2.4	2.4
68	2.4	2.4
69	2.4	2.4
70	0	2.4
71	0	0
72	2.4	2.4
73	4.8	4.9
74	2.2	2.4
75	1.9	2.4
76	2.4	2.4
77	4.4	4.4
78	4.7	4.7
79	4.7	4.8
80	0	0
81	4.2	0.1
82	0	0
83	0	5.1
84	0	0
85	4.7	4.7
86	4.7	4.8
87	4.7	4.8
88	4.7	4.8
89	4.7	4.8
90	0	0
91	0	0
92	4.7	4.8
93	0	0
94	4.7	4.8
95	4.2	4.2
96	4.2	4.2
97	4.2	4.2
98	4.2	4.2
99	4.2	4.2
100	4.2	4.2
IC7002		
1	0	5.1
2	0	5.0
3	0	0
CN1		
1	0	0
2	0	0
3	0	0
4	2.3	2.2
5	2.3	2.2
6	2.3	2.2
7	2.5	0
8	2.5	0
9	2.5	0
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.2	2.4
6	2.4	2.4
CN2002		
1	0	0
2	0	0
CN3001		
1	2.4	2.4
2	18.6	18.5
3	5.0	5.0
4	0	0
5	7.1	7.2
6	0	0
7	0	0
8	11.8	11.9
9	2.6	2.6
10	2.5	2.5
11	1.3	1.3

MODE PIN NO.	REC	PLAY
12	2.5	2.6

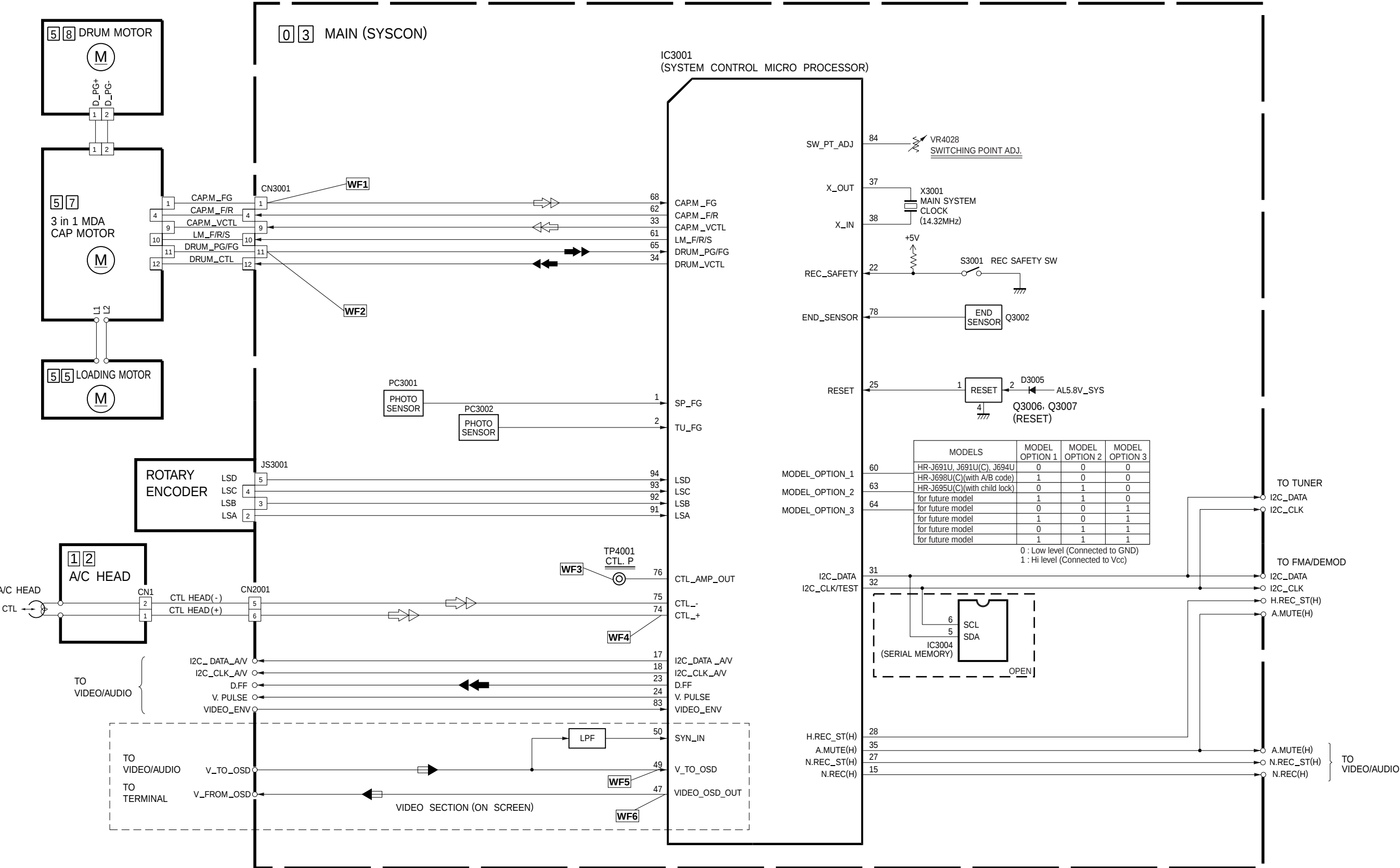
4.14 CPU PIN FUNCTION

<SYSCON IC3001>

PIN NO.	LABEL	IN/OUT	FUNCTION
1	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
2	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
3	R.PAUSE/COMP_IN	IN	REMOTE PAUSE CONTROL/A/V COMPULINK INPUT
4	NC	-	NC
5	RC	IN	REMOTE CONTROL DATA INPUT
6	D_A	OUT	LED DRIVE
7	D_B	OUT	LED DRIVE
8	D_C	OUT	LED DRIVE
9	D_D	OUT	LED DRIVE
10	D_E	OUT	LED DRIVE
11	D_F	OUT	LED DRIVE
12	D_G	OUT	LED DRIVE
13	NC	-	NC
14	NC	-	NC
15	N_REC[H]	OUT	NORMAL AUDIO REC MODE(REC:H)
16	AGC_CTL	IN	DETECTION SIGNAL FOR AGC
17	I2C_DATA_AV	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO/AUDIO IC
18	I2C_CLK_AV	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO/AUDIO IC
19	NC	-	NC
20	NC	-	NC
21	SB_GAIN	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
22	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
23	D_FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
24	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
25	RESET	-	RESET TERMINAL
26	A_FF	OUT	AUDIO FF OUTPUT
27	N_REC_ST(H)	OUT	NORMAL AUDIO REC START:H
28	H_REC_ST(H)	OUT	HIFI AUDIO REC START:H
29	NC	-	NC
30	NC	-	NC
31	I2C_DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
32	I2C_CLK/TEST	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC/MECHANISM TEST SIGNAL
33	CAP_CTL_V	OUT	CAPSTAN MOTOR CONTROL
34	DRUM_CTL_V	OUT	DRUM MOTOR CONTROL
35	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE ON:H)
36	VDD	-	SYSTEM POWER
37	X_OUT	-	MAIN SYSTEM CLOCK (14.32MHz)
38	X_IN	-	MAIN SYSTEM CLOCK (14.32MHz)
39	VSS	-	GND
40	XC_IN	-	TIMER CLOCK(32.768MHz)
41	XC_OUT	-	TIMER CLOCK(32.768MHz)
42	CLK_SEL	IN	SELECT FOR BACKUP METHOD(LITHIUM OR E.CAPACITOR):H
43	CH_SW	OUT	RF CHANNEL SWITCHING
44	TU_MUTE[H]	OUT	TUNER AUDIO MUTE CONTROL (MUTE:H)
45	P20	-	NC
46	CONV_CTL[H]	IN	R/F CONVERTER ON/OFF CONTROL
47	VIDEO_OSD_OUT	OUT	COMPOSITE VIDEO SIGNAL OUTPUT
48	VSS2	-	GND
49	V_TO_OSD	IN	COMPOSITE VIDEO SIGNAL INPUT
50	SYS_IN	IN	COMPOSITE SYNCHRONIZING SIGNAL FOR SERVO, VERTICAL SYNCHRONIZING SIGNAL FOR OSD

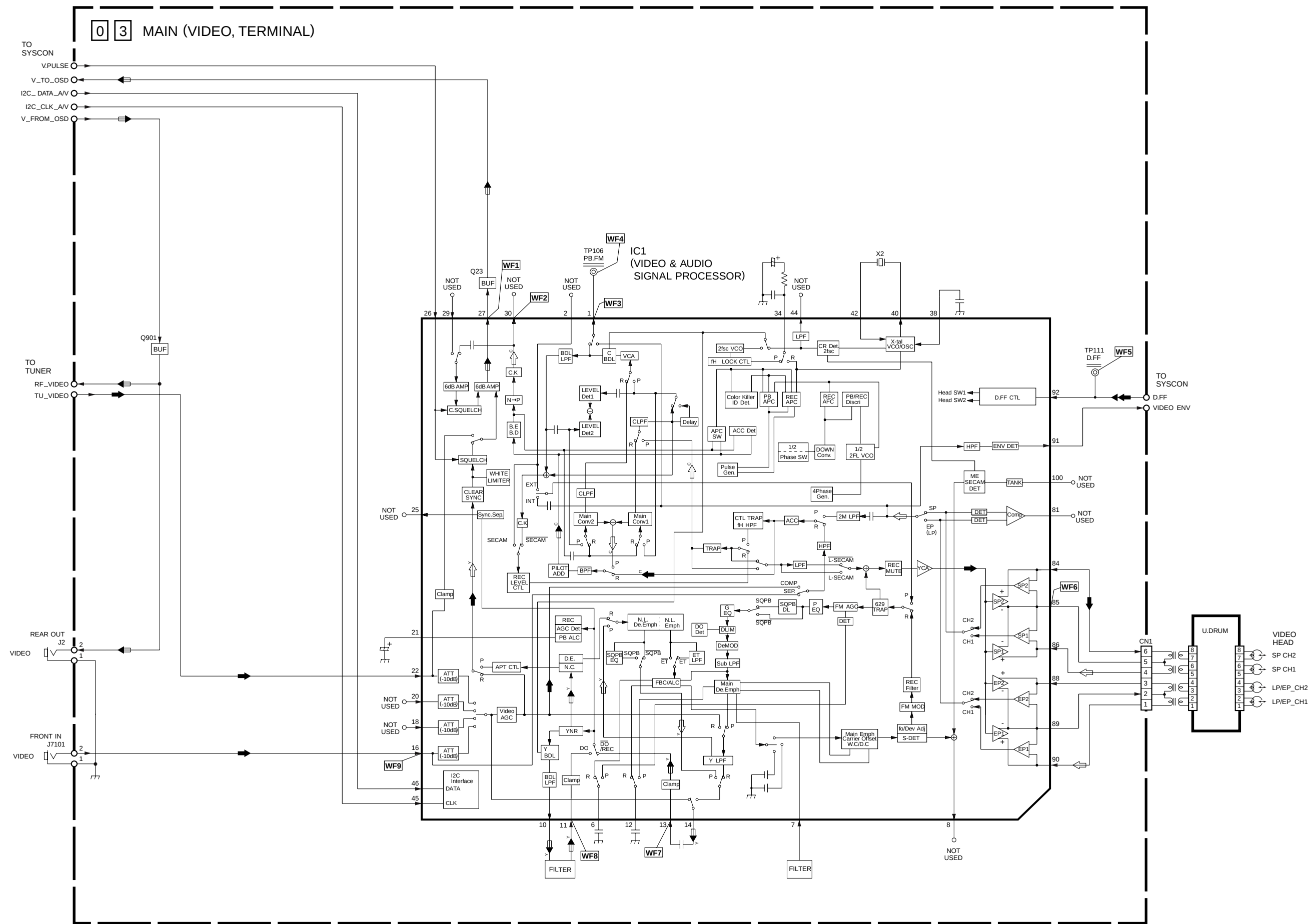
PIN NO.	LABEL	IN/OUT	FUNCTION
51	VDD2	-	SYSTEM POWER
52	AFCC	IN	FILTER INPUT FOR HORIZONTAL SYNCHRONIZING OF OSD CHARACTER
53	AFCLPF	OUT	FILTER OUTPUT FOR HORIZONTAL SYNCHRONIZING OF OSD CHARACTER
54	FSCI	IN	FSC INPUT FOR OSD
55	FSCLPF	OUT	FSC OUTPUT FOR OSD
56	NC	-	NC
57	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
58	START_SENSOR_DEL	-	SETTING OF START SENSOR (ENABLE:L, DISABLE:H)
59	P.CTL [H]	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
60	MODEL_OPTION1	-	MODEL SWITCH 1
61	LM_F/R/S	OUT	LOADING MOTOR DRIVE
62	CAP_M_F/R	OUT	CAPSTAN MOTOR DRIVE
63	MODEL_OPTION2	-	MODEL SWITCH 2
64	MODEL_OPTION3	-	MODEL SWITCH 3
65	D.FG_IN	IN	DRUM FG PULSE INPUT
66	EEPROM_DET	-	SETTING OF EEPROM (ENABLE:L, DISABLE:H)
67	C_FG_AMP_OUT	OUT	SET-UP OUTPUT FOR CAPSTAN FG AMPLIFICATION FACTOR
68	C.FG_IN	IN	CAPSTAN FG PULSE INPUT
69	AMP_VREF_OUT	OUT	AMP CIRCUIT REFERENCE VOLTAGE OUTPUT
70	AMP_VREF_IN	IN	AMP CIRCUIT REFERENCE VOLTAGE INPUT
71	AVSS	-	GND FOR ANALOG CIRCUIT
72	AMP_C	IN	CAPACITOR CONNECT TERMINAL FOR CTL AMP CIRCUIT
73	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
74	CTL(+)	IN/OUT	CONTROL SIGNAL(+)
75	CTL(-)	IN/OUT	CONTORL SIGNAL(-)
76	CTL_AMP_OUT	OUT	CTL PULSE OUTPUT
77	PROTECT	IN	DETECTION SIGNAL FOR SWITCHING POWER SUPPLY
78	END_SENSOR	IN	END SENSOR
79	AFC/JUST_CLK	IN	TUNING CHECK/JUST CLK INPUT
80	LED	IN	SAP DETECT
81	A_ENV/ND [L]	IN	AUDIO PB FM ENV. INPUT/NON HIFI MODEL:L
82	COMP_OUT	OUT	A/V COMPULINK OUTPUT
83	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
84	SW_PT_ADJ	IN	INPUT FOR VALUE OF SWITCHING POINT ADJUSTMENT
85	START_SENSOR	IN	START SENSOR
86	JSA	IN	INPUT FOR THE JOG SHUTTLE
87	JSB	IN	INPUT FOR THE JOG SHUTTLE
88	KEY1	IN	OPERATION CONTROL SIGNAL
89	KEY2	IN	OPERATION CONTROL SIGNAL
90	POWER_DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
91	LSA	IN	MECHANISM MODE DETECT(A)
92	LSB	IN	MECHANISM MODE DETECT(B)
93	LSC	IN	MECHANISM MODE DETECT(C)
94	LSD	IN	MECHANISM MODE DETECT(D)
95	DIG1	OUT	LED DRIVE
96	DIG2	OUT	LED DRIVE
97	DIG3	OUT	LED DRIVE
98	DIG4	OUT	LED DRIVE
99	DIG5	OUT	LED DRIVE
100	REC_LINK_LED	-	NC

4.15 SYSTEM CONTROL BLOCK DIAGRAM



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

4.16 VIDEO BLOCK DIAGRAM



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

4.17 AUDIO BLOCK DIAGRAM

