


# 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.

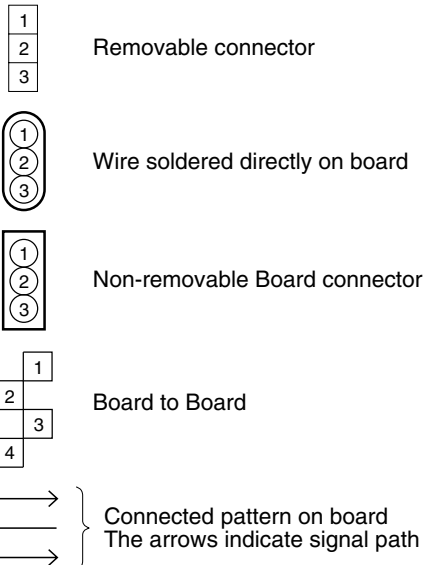
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).  
Chip resistors are 1/16 W.  
K or k: kΩ (1000Ω), M: MΩ (1000kΩ)
- 2) All capacitance values are in μF, (P: PF).
- 3) All inductance values are in μH, (m: mH).
- 4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

### 2. Indications of control voltage

AUX : Active at high

AUX or AUX(L) : Active at low

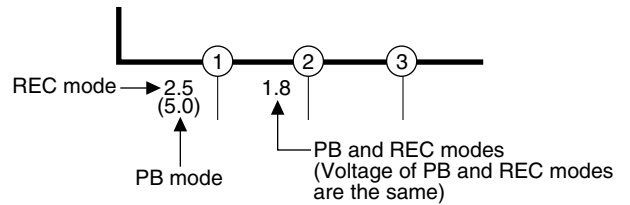
### 3. Interpreting Connector indications



### 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

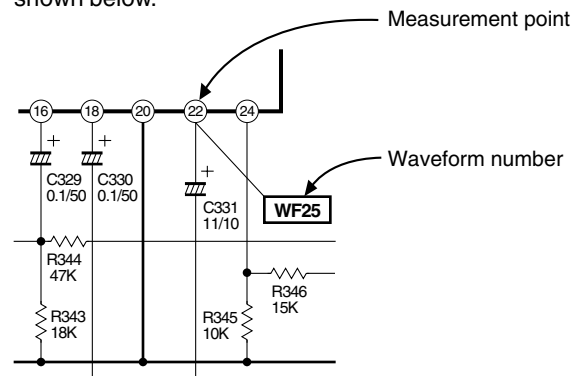
- 4) Indication on schematic diagram  
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



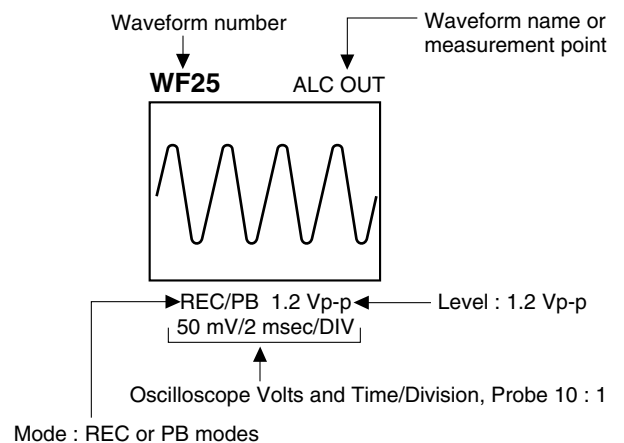
**Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.**

### 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.

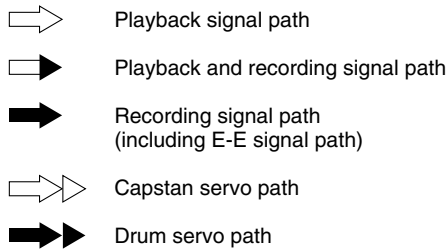


### 5) Waveform indications

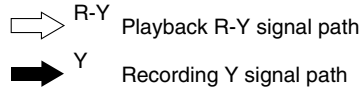


## 6. Signal path Symbols

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.



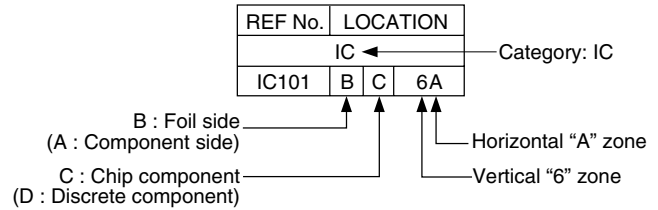
## CIRCUIT BOARD NOTES

### 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

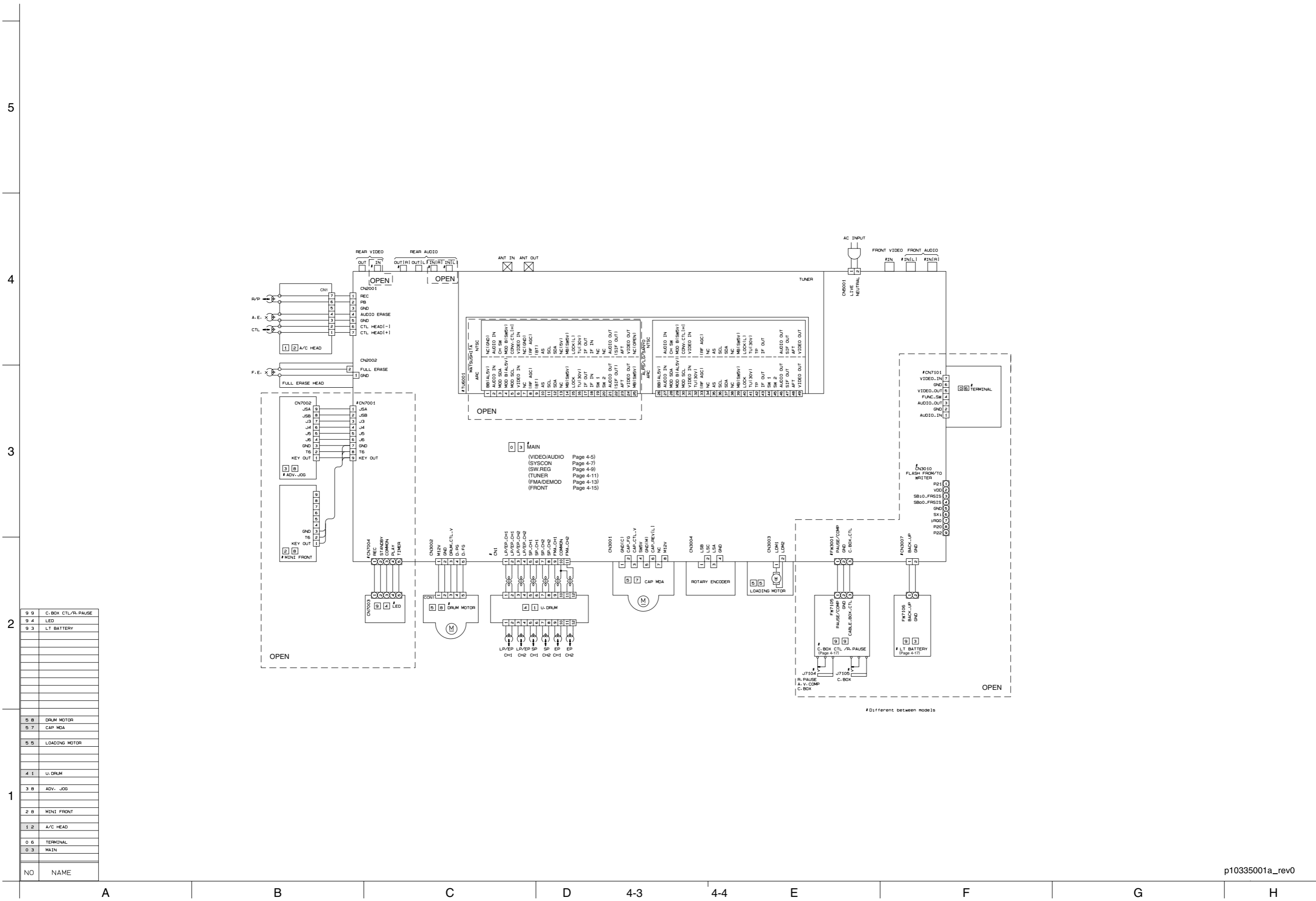
Parts location are indicated by guide scale on the circuit board.



### Note:

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

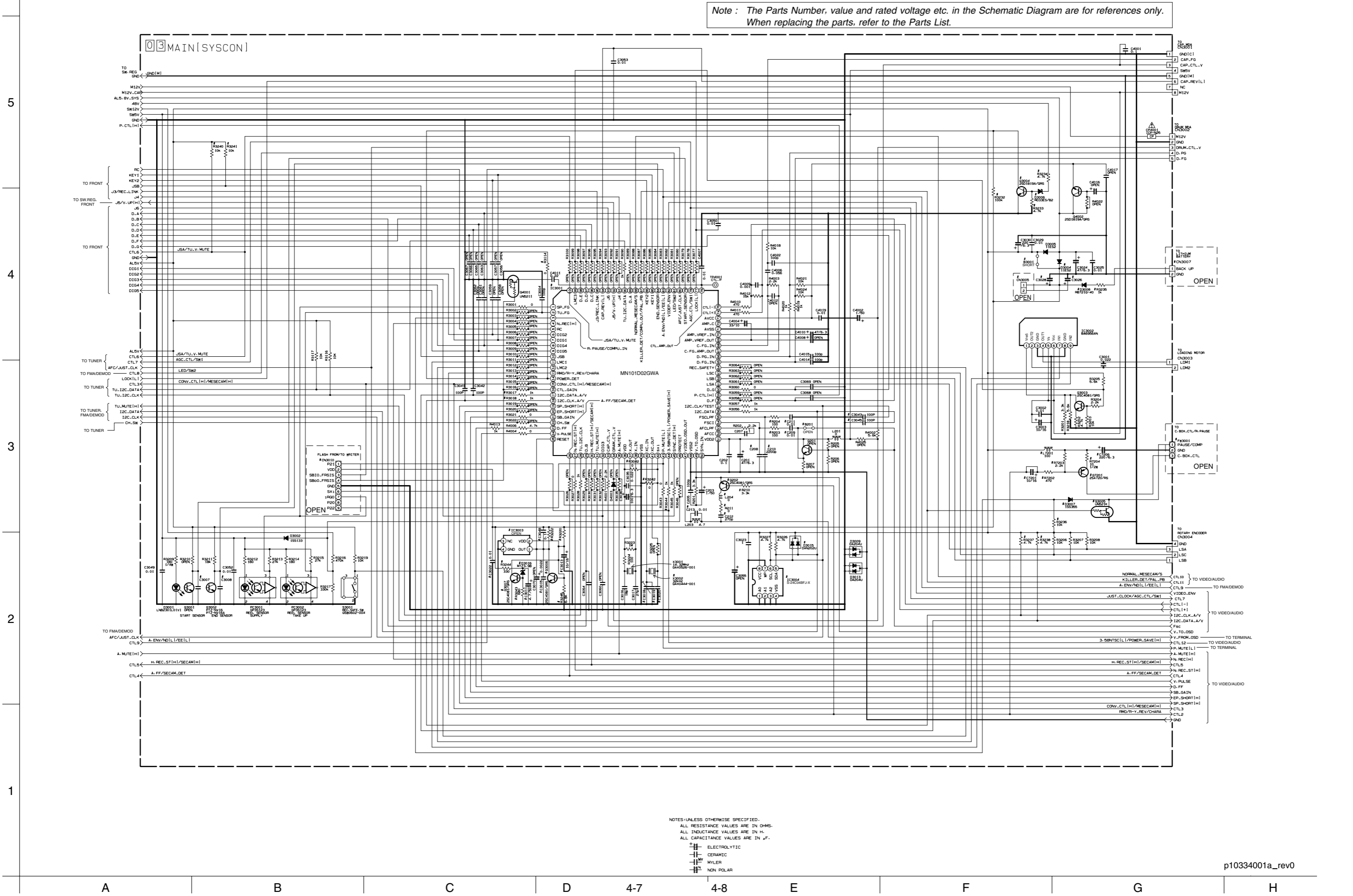
# 4.1 BOARD INTERCONNECTIONS





### 4.3 MAIN(SYSCON) SCHEMATIC DIAGRAM

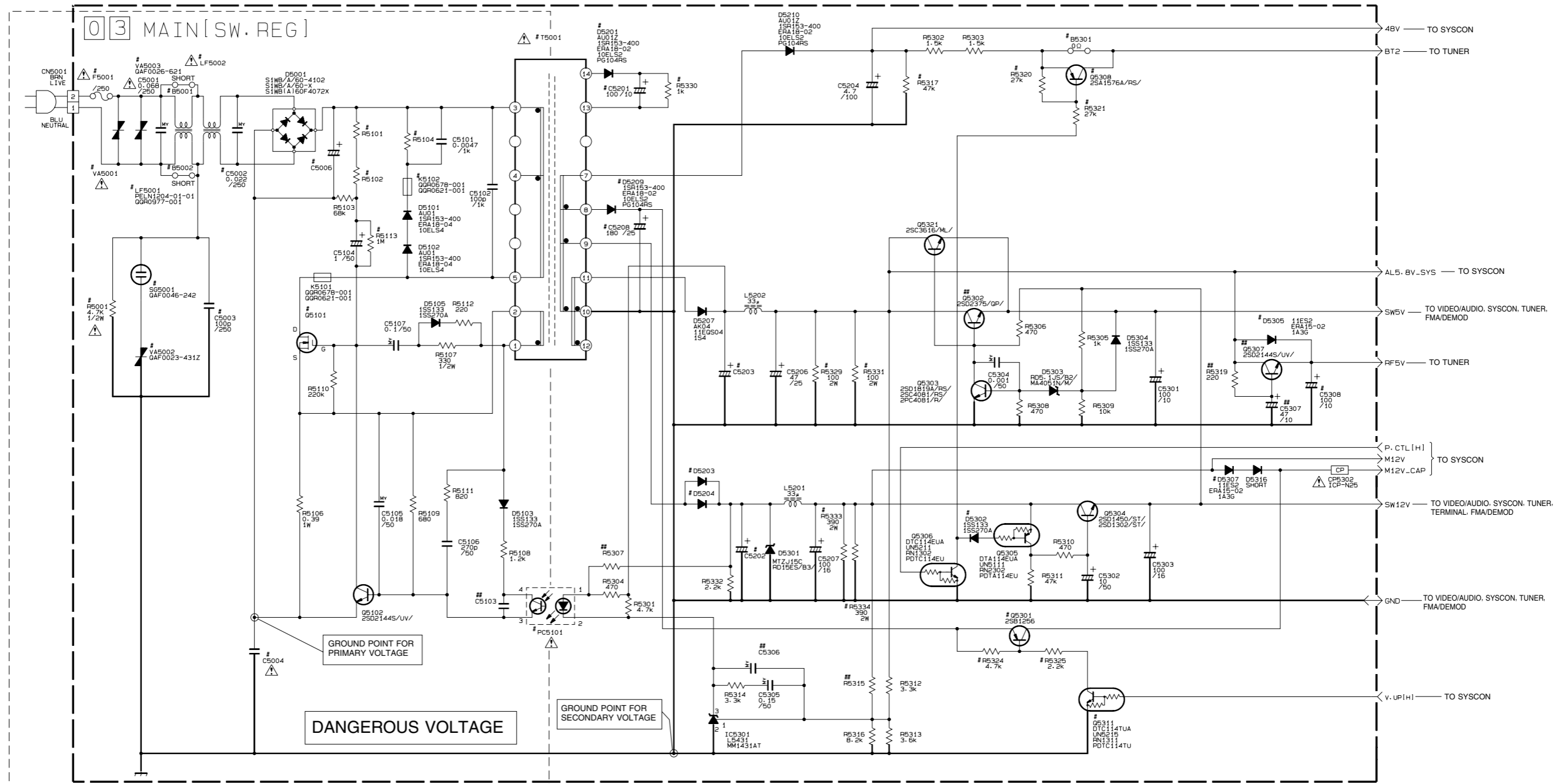
Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



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

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.



#DIFFERENCE TABLE 1

	Q5101	R5001	C5004	C5006	PC5101	F5001
US	25K2043 25K2324	YES	0.0047 /250	47 /200	PS2501-1 ON3131/RS/ PC817X	1.25A
PH /7B	25K3255	NO	0.0022 /250	68 /400	PS2561L1-1/ML/ PC123F2 ON3171R/	2A
OTHER	25K2532 25K2125	NO	0.0022 /250	68 /400	PS2561L1-1/ML/ PC123F2 ON3171R/	2A

#DIFFERENCE TABLE 2

CE	Q5308 R5317	R5320 R5321	B5301	Q5302	R5101 R5102	R5104	C5002	LF5001	LF5002	B5002 B5001
-YES-	YES	NO	YES	330k	150k 2W	YES	YES	YES	NO	NO
-NO-	NO	YES	SHORT	220k	68k 2W	NO	NO	NO	YES	YES

#DIFFERENCE TABLE B

	C5202	C5203
US	1000 /16	1000 /10
OTHER	680 /16	680 /10

#DIFFERENCE TABLE 3

SURGE	SG5001	VA5001	VA5002	R5113	VA5003
US	SHORT	QAF0023-4312 QAF0024-4312 QAF0039-4312	NO	NO	NO
OTHER	NO	NO	NO	NO	NO
US (PHILIPS)	YES	QAF0023-4312	YES	YES	NO
PH AUTO VOLTAGE	NO	NO	NO	NO	YES

#DIFFERENCE TABLE 4

RF5V	D5305
-YES-	YES
-NO-	NO

#DIFFERENCE TABLE 5

ROOM ANT	C5003	K5102
PHILIPS/7B	YES	YES
PHILIPS/75	YES	SHORT
OTHER	NO	SHORT

#DIFFERENCE TABLE 6

AUTO VOLTAGE	RF5V	R5329	R5331	R5333	R5334
-YES-	NO	NO	YES	YES	YES
-NO-	NO	YES	YES	YES	YES
OTHER	NO	NO	NO	NO	NO

#DIFFERENCE TABLE 7

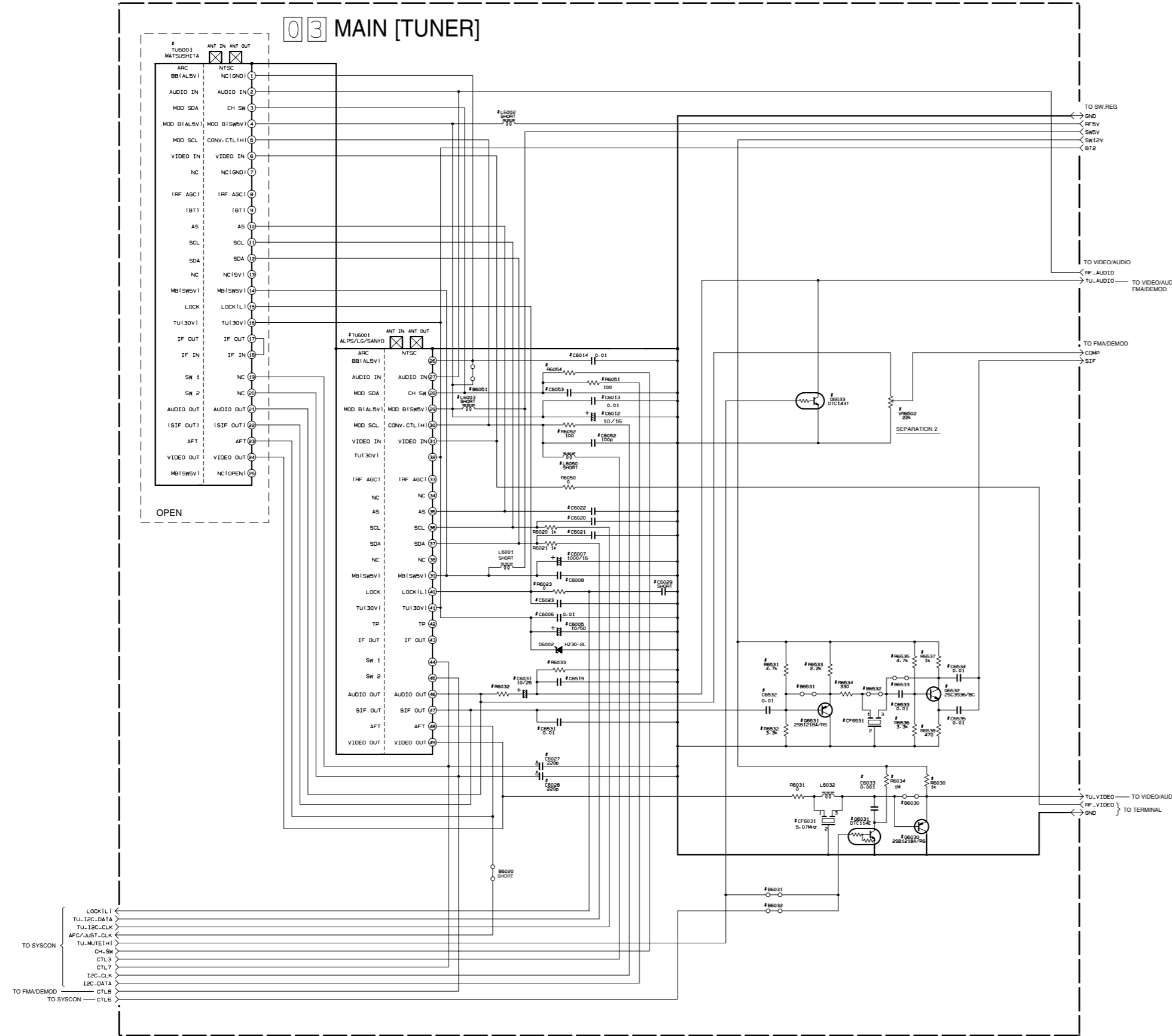
HIGH SPEED FF/REW	T5001	Q5301 Q5311	R5324 R5325	C5208 C5209	D5201 R5330 C5201	D5307	D5203 D5204
-YES-	QGS0030-002 QGS0031-002 QGS0036-001	YES	YES	YES	YES	YES	AU012 10EL52
-NO-	QGS0083-001 QGS0084-001 QGS0085-001	NO	NO	NO	NO	SHORT	AU012 15R153-400 ERA18-02 10EL52 PG104RS

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ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 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.



O : Used  
X : Not used

# DIFFERENCE TABLE (US-PAL-M/N)

		H1F1	MONO
TU6001	ALPS SANYO	GAU0207 GAU0206	GAU0207 GAU0206
VIDEO BUFFER	R6030-R6030 R6030	O X	O X
VIDEO MUTE	R6031-R6034 C6033-R6031	X X	X X
LOCK	R6023-C6023 C6029	X O	X O
MONO	R6032 R6033 C6019 C6031	X X X X	1.8k 10k 0.012 O
H1F1	VR602	O	X
MOD B1SWV1	L6003	O	O
CONV CTL	L6050	O	O
CONV SW	R6054	O	O
	C6005-C6008 C6012-C6014 C6020-C6022 C6052-C6053 C6051-C6052 C6031-C6033 CF6031-CF6033 R6031-R6033 R6031-R6036 C6031-C6035	X	X
PAL	R6032-R6051 L6002 R6051-R6052 C6027-C6028	X	X

# DIFFERENCE TABLE (EUROPE-ASIA - PAL/MS)

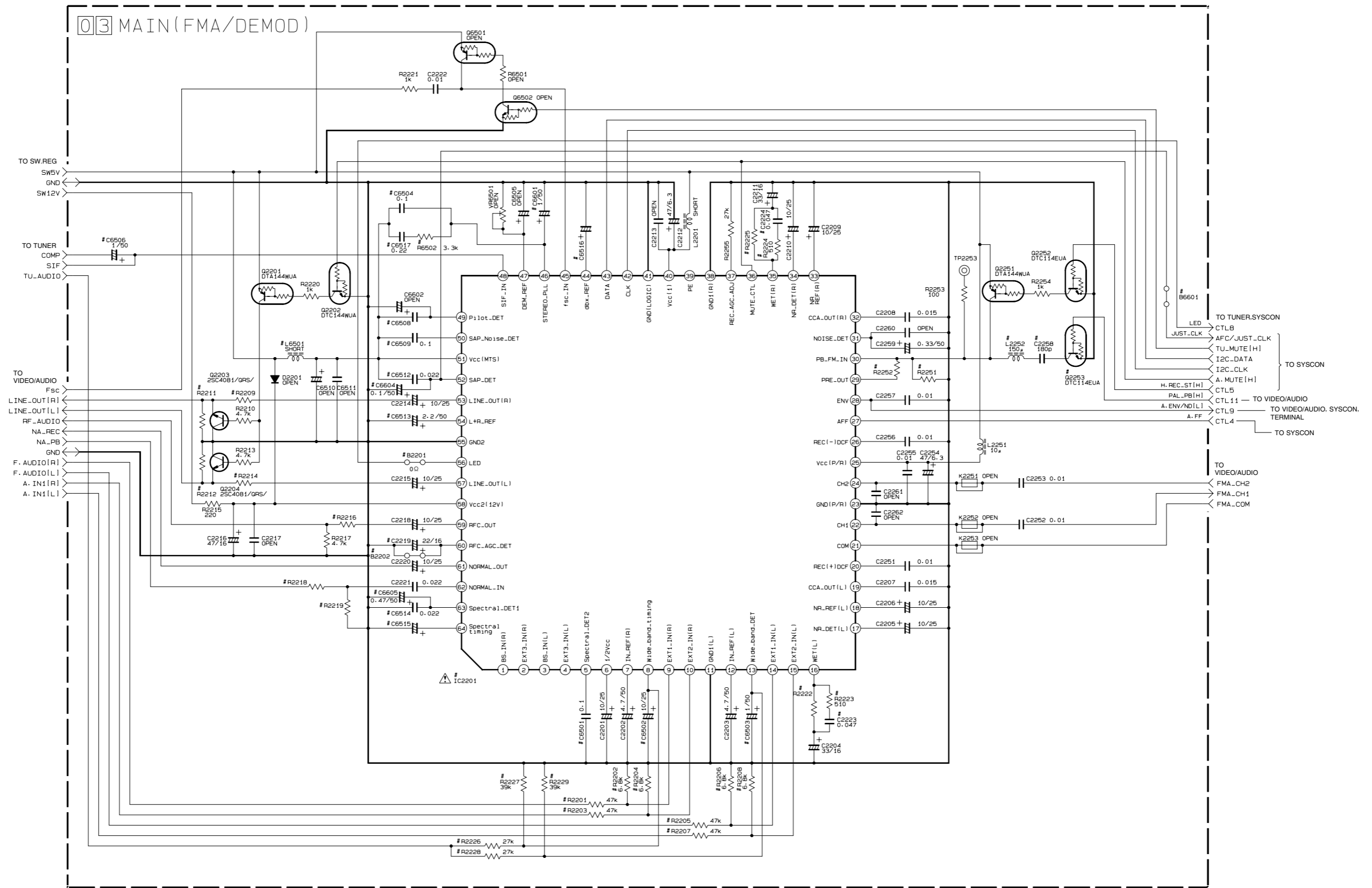
TUNER UNIT	TU6001	EU/EK		FRANCE MS		ASIA 3SYSTEM		ASIA 4SYSTEM	
		MITSUBISHI	ALPS	ALPS	LG	MITSUBISHI	ALPS	MITSUBISHI	MITSUBISHI
		GAU0208	GAU0209	GAU0210	GAU0211	GAU0208	GAU0209	GAU0212	
VIDEO BUFFER	R6030-R6030 R6030	O X	O X	O X	O X	O X	O X	O X	O X
VIDEO MUTE	R6031-R6034 R6033 R6031	O O X	O O X	O O X	O O X	X X X	X X X	X X X	X X X
AUDIO MUTE	R6033	O	O	O	O	X	X	X	X
TU 12C	C6020 C6021 C6022	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X
LOCK	R6023-C6023 C6029 R6032	X O 3-3k	X O 3-3k	X O 3-9k	X O 3-9k	X O 3-3k	X O 3-3k	X O 04	X O 04
MONO	R6033 C6031 C6019	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047	1.8k O 0.047
US MPX	VR602	X	X	X	X	X	X	X	X
AL5V	L6002-R6051 C6012 C6013 C6014	O X X O	O X X O	O X X O	O X X O	O X X O	O X X O	O X X O	O X X O
MOD SDA/SCL	R6051-R6052 R6054-L6050 C6052-C6053	O X X	O X X	O X X	O X X	O X X	O X X	O X X	O X X
SW5V	L6003 C6007 C6008	X X X	X X X	X X X	X X X	X X X	X X X	X X X	X X X
TU130V1	C6005 C6006	X X	X X	X X	X X	X X	X X	X X	X X
SIF OUT	C6031-C6036 R6031-R6036 R6031-R6033 CF6031	X X X X	X X X X	X X X X	X X X X	X X X X	X X X X	X X X X	X X X X
CENELEC S2	C6027 C6028	X X	X X	O X	X X	X X	X X	X X	X X

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MYLER  
NON POLAR

CTL3	CONV-CTL(HI/MESECAM)H
CTL6	J1(USA)/TU.V-MUTE(H)
CTL7	AGC-CTL/SW1
CTL8	LED/SW2

4.6 MAIN(FMA/DEMOD) 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 (FMA)

INPUT	FRONT	REAR
SYMBOL	R2201 R2202 R2203 R2204 R2205 R2206	R2203 R2204 R2207 R2208
YES	○	○
NO	×	×

#DIFFERENCE TABLE (FMA/DEMOD)

SYMBOL	R6502-C6504	B6501-C6504	C6508	C6515	C6516	C6501	C6506	IC2201	R2226-R2229	R2222	R2201	R2216	R2218	R2219	R2209	R2211	R2212	R2251	R2252	Q2251-Q2253
US/PAL-M/PAL-N	○	×	0.022	3.3/50	4.7/50	○	○	AN3663FBP	×	SHORT	○	1k	3.9k	1k	100	3.3k	2.2k	1.5k	×	
JPN	×	○	1	1/50	10/25	○	○	AN3672FBP	×	SHORT	○	1k	3.9k	1k	100	3.3k	2.2k	1.5k	×	
ARC	×	×	×	×	10/25	SHORT	×	AN3651FBP	○	4.7k	×	1.2k	3.3k	1.2k	680	2.7k	4.7k	220	○	

○ : Used  
× : Not used

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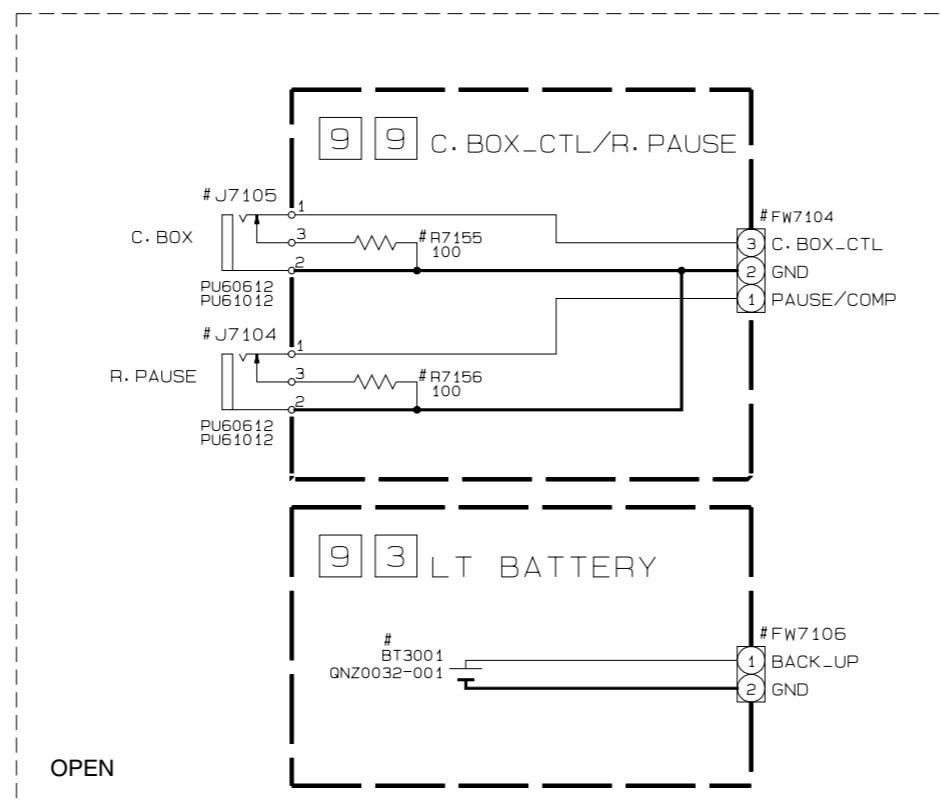
- ⊕ ELECTROLYTIC
- ⊖ CERAMIC
- ⊖ MYLER
- ⊖ NON POLAR





4.8 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.



JVC MODELS

				HR-VP793U HR-VP790U	HR-VP59U HR-A57U	HR-VP693U HR-VP690U 30370	HR-VP49U 30260 HR-J300BUM HR-A37U	HR-J600BUM HR-J700BUM HR-J400BUM	HR-J693M HR-J696M HR-J496M	HR-J696EN HR-J496EN	HR-J281MS HR-J287MS HR-J481MS HR-J481MS/S HR-J281MS/EA	HR-J387EM HR-J381EM	HR-J485EA HR-J285EA	HR-J278EU	HR-J485EE HR-J285EE
CABLE BOX CTL	J7105	R7155			X	X	X	X	X	X	X	X	X	X	X
R. PAUSE/AV_COMPU	J7104	R7156			X	X	X	X	X	X	X	X	X	X	X
	FW7104				X	X	X	X	X	X	X	X	X	X	X
LITHIUM BATTERY	BT3001	FW7106	X	X	X	X	X	O	O	O	O	O	O	X	O

PCEC/PHILIPS MODELS

			VR602/50 VR402/50 VR420/50	VR620/50	VR420/61	VR607/78 VR602/78 VR402/78	VR625/77 VR620/77	VR420/77	VR120/55 VR220/55 VR420/55 VR602/55	VR120/75 VR602/75 VR420/75 VR220/75
CABLE BOX CTL	J7105	R7155	X	X	X	X	X	X	X	X
R. PAUSE/AV_COMPU	J7104	R7156	X	X	X	X	X	X	X	X
	FW7104		X	X	X	X	X	X	X	X
LITHIUM BATTERY	BT3001	FW7106	X	O	O	X	O	X	X	X

AUDINAC MODELS

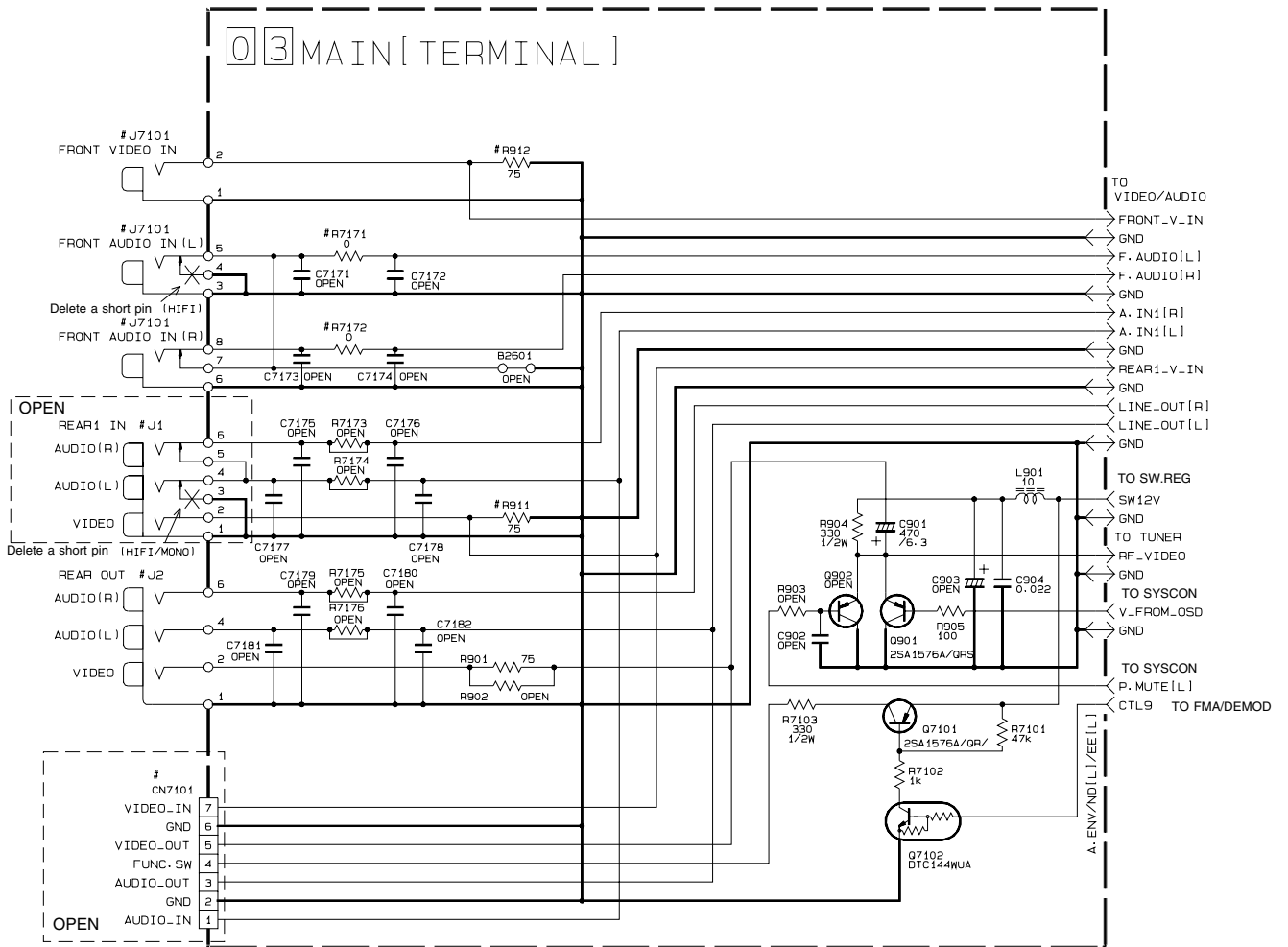
			AR-626 AR-424
CABLE BOX CTL	J7105	R7155	X
R. PAUSE/AV_COMPU	J7104	R7156	X
	FW7104		X
LITHIUM BATTERY	BT3001	FW7106	O

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- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

# 4.9 MAIN(TERMINAL) SCHEMATIC DIAGRAM

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



#DIFFERENCE TABLE 1

OUTPUT	J2
HiFi	3P
MONO	2P

#DIFFERENCE TABLE 2

	INPUT	J1	J7101	R911	R912	R7171	R7172	CN7101
HiFi	FRONT	X	3P	X	O	O	O	X
	REAR	3P	X	O	X	X	X	X
	FRONT/REAR	3P	3P	O	O	O	O	X
MONO	FRONT	X	2P	X	O	X	O	X
	REAR	2P	X	O	X	X	X	X
	FRONT/REAR	2P	2P	O	O	X	O	X
	PERI CONNECTOR	X	X	X	X	X	X	O

O : Used  
X : Not used

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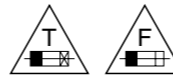
COMPONENT PARTS LOCATION GUIDE < MAIN >

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	
<b>CAPACITOR</b>																		
C1	B	C	C2001	A	D	12L	C4012	B	C	9F	CN3002	A	D	70				
C2	B	C	C2002	A	D	14L	C4014	B	C	10F	CN3003	A	D	7N				
C3	B	C	C2003	A	D	13M	C4015	B	C	10F	CN3004	A	D	9F				
C4	B	C	C2004	A	D	13M	C4016	B	C	10F	CN3005	A	D	20G				
C5	B	C	C2005	A	D	13O	C4017	B	C	7D	CN3007	A	D	20F				
C6	B	C	C2006	A	D	13O	C4019	B	C	10E	CN3010	A	D	20F				
C7	B	C	C2007	A	D	13O	C4022	B	C	8F	CN5001	A	D	20F				
C8	B	C	C2008	A	D	12O	C5001	A	D	1M	CN7001	A	D	20				
C9	B	C	C2009	A	D	12O	C5002	A	D	2M	CN7002	A	D	4P				
C10	B	C	C2010	A	D	12O	C5003	A	D	4M	CN7003	A	D	12P				
C11	B	C	C2011	A	D	12O	C5004	A	D	1J	CN7004	A	D	13A				
C12	B	C	C2012	A	D	12O	C5006	A	D	2K	CN7101	A	D	20M				
C13	A	D	C2013	B	C	12K	C5101	A	D	1J								
C14	B	C	C2014	A	D	12K	C5102	A	D	1J								
C15	B	C	C2015	A	D	8N	C5103	A	D	3K								
C16	B	C	C2016	A	D	19K	C5104	A	D	4L								
C17	A	D	C2017	B	C	8M	C5105	A	D	3K								
C18	A	D	C2018	B	C	7M	C5106	A	D	3J								
C19	A	D	C2019	B	C	7M	C5107	A	D	3J								
C20	A	D	C2020	B	C	18N	C5201	A	D	1G								
C21	A	D	C2021	B	C	18N	C5202	A	D	3F								
C22	A	D	C2022	B	C	18N	C5203	A	D	1F								
C23	A	D	C2023	B	C	16N	C5204	A	D	4G								
C24	A	D	C2024	B	C	16O	C5206	A	D	2F								
C25	A	D	C2025	B	C	16O	C5207	A	D	2F								
C26	A	D	C2026	B	C	15O	C5208	A	D	3G								
C27	A	D	C2027	B	C	15N	C5301	A	D	2D								
C28	A	D	C2028	B	C	15M	C5302	A	D	4E								
C29	A	D	C2029	B	C	15M	C5303	A	D	4E								
C30	A	D	C2030	B	C	15L	C5304	A	D	1E								
C31	A	D	C2031	B	C	14L	C5305	A	D	4G								
C32	A	D	C2032	B	C	15M	C5306	A	D	4F								
C33	A	D	C2033	B	C	15M	C5307	A	D	22D								
C34	A	D	C2034	B	C	17L	C5308	A	D	22E								
C35	A	D	C2035	B	C	17M	C6005	A	D	21K								
C36	A	D	C2036	B	C	17M	C6006	A	D	22L								
C37	A	D	C2037	B	C	17M	C6007	A	D	21J								
C38	A	D	C2038	B	C	18M	C6008	A	D	22L								
C39	A	D	C2039	B	C	18M	C6012	A	D	21M								
C40	A	D	C2040	B	C	17M	C6013	A	D	22N								
C41	A	D	C2041	B	C	17M	C6014	A	D	22O								
C42	A	D	C2042	B	C	15L	C6020	A	D	22M								
C43	A	D	C2043	B	C	16O	C6021	A	D	22L								
C44	A	D	C2044	B	C	15L	C6022	A	D	22M								
C45	A	D	C2045	B	C	15O	C6023	A	D	22L								
C46	A	D	C2046	B	C	15O	C6027	A	D	22K								
C47	A	D	C2047	B	C	14O	C6028	A	D	22K								
C48	A	D	C2048	B	C	15N	C6029	A	D	21K								
C49	A	D	C2049	B	C	15N	C6031	A	D	21J								
C50	A	D	C2050	B	C	15N	C6033	A	D	21G								
C51	A	D	C2051	B	C	15N	C6052	A	D	22N								
C52	A	D	C2052	B	C	14M	C6053	A	D	21O								
C53	A	D	C2053	B	C	15M	C6501	A	D	17N								
C54	A	D	C2054	B	C	15M	C6502	A	D	18N								
C55	A	D	C2055	B	C	15N	C6503	A	D	17N								
C56	A	D	C2056	B	C	15N	C6504	A	D	16L								
C57	A	D	C2057	B	C	7N	C6505	A	D	16L								
C58	A	D	C2058	B	C	6M	C6506	A	D	20K								
C59	A	D	C2059	B	C	14N	C3003	A	D	16L								
C60	A	D	C2060	B	C	11C	C6509	A	D	16L								
C61	A	D	C2061	B	C	4I	C6510	A	D	17L								
C62	A	D	C2062	B	C	19J	C6511	A	D	16L								
C63	A	D	C2063	B	C	14D	C6512	B	C	16L								
C64	A	D	C2064	B	C	14E	C6513	A	D	17L								
C65	A	D	C2065	B	C	13E	C6514	A	D	17M								
C66	A	D	C2066	B	C	13F	C6515	A	D	18M								
C67	A	D	C2067	B	C	10L	C6516	A	D	16L								
C68	A	D	C2068	B	C	13F	C6517	A	D	16L								
C69	A	D	C2069	B	C	12F	C6519	B	C	21J								
C70	A	D	C2070	B	C	12F	C6531	B	C	22J								
C71	A	D	C2071	B	C	14E	C6532	B	C	22I								
C72	A	D	C2072	B	C	20E	C6533	B	C	21H								
C73	A	D	C2073	B	C	10K	C6534	A	D	21G								
C74	A	D	C2074	B	C	5C	C6535	B	C	21H								
C75	A	D	C2075	B	C	21E	C6601	A	D	16L								
C76	A	D	C2076	B	C	21F	C6602	A	D	16L								
C77	A	D	C2077	B	C	6C	C6604	A	D	17L								
C78	A	D	C2078	B	C	6B	C6605	A	D	17M								
C79	A	D	C2079	B	C	12F	C7011	A	D	9A								
C80	A	D	C2080	B	C	11F	C7012	A	D	9A								
C81	A	D	C2081	B	C	14D	C7013	B	C	18A								
C82	A	D	C2082	B	C	14D	C7014	B	C	17A								
C83	A	D	C2083	B	C	10G	C7041	A	D	14A								
C84	A	D	C2084	B	C	10G	C7042	A	D	15A								
C85	A	D	C2085	B	C	13D	C7171	B	C	20A								
C86	A	D	C2086	B	C	11H	C7172	B	C	19A								
C87	A	D	C2087	B	C	8E	C7173	B	C	18B								
C88	A	D	C2088	B	C	16E	C7174	B	C	18B								
C89	A	D	C2089	B	C	10C	C7175	B	C	19N								
C90	A	D	C2090	B	C	20E	C7176	B	C	19N								
C91	A	D	C2091	B	C	9C	C7177	B	C	19N								
C92	A	D	C2092	B	C	9C	C7178	B	C	19N								
C93	A	D	C2093	B	C	12D	C7179	B	C	21N								
C94	A	D	C2094	B	C	12C	C7180	B	C	21N								
C95	A	D	C2095	B	C	14F	C7181	B	C	21O								
C96	A	D	C2096	B	C	12D	C7182	B	C	20N								
C97	A	D	C2097	B	C	12C	C7201	A	D	16D								
C98	A	D	C2098	B	C	9C	C7206	A	D	16D								
C99	A	D	C2099	B	C	14F	CF8031	A	D	22S								
C100	A	D	C2100	B	C	8J	CF8531	A	D	22H								
<b>CONNECTOR</b>																		
C101	A	D	C2101	B	C	11C	CN1	A	D	14P								
C102	A	D	C2102	B	C	9G	CN1	A	D	14P								
C103	A	D	C2103	B	C	9G	CN1	A	D	7P								
C104	A	D	C2104	B	C	13E	CN2	A	D	14P								
C105	A	D	C2105	B	C	7M	CN2	A	D	14P								
C106	A	D	C2106	B	C	6K	CN2	A	D	7P								
C107	A	D	C2107	B	C	6J	CN3	A	D	15P								
C108	A	D	C2108	B	C	7K	CN3	A	D	8P								
C109	A	D	C2109	B	C	10E	CN4	A	D	14Q								
C110	A	D	C2110	B	C	9E	CN4	A	D	7P								
C111	A	D	C2111	B	C	7F	CN2001	A	D	9O								
C112	A	D	C2112	B	C	8F	CN2002	A	D	18L								
C113	A	D	C2113	B	C	16D	CN3001	A	D	7L								
<b>TRANSISTOR</b>																		
R44	B	C	R2222	B	C	11J	R2222	B	C	16O	R3236	B	C	15C	R7035	B	C	3B
R45	B	C	R2223	B	C	11K	R2223	B	C	16N	R3237	B	C	15C	R7036	B	C	3B
R46	B	C	R2224	B	C	9L	R2224	B	C	15L	R3238	B	C	15C	R7037	B	C	2B
R47	B	C	R2225	B	C	10K	R2225	B	C	15L	R3240	A	D	5B	R7043	B	C	3P
R48	B	C	R2226	B	C	9K	R2226	B	C	18N	R3241	A	D	5B	R7044	B	C	4P
R49	B	C	R2227	B	C	10J	R2227											

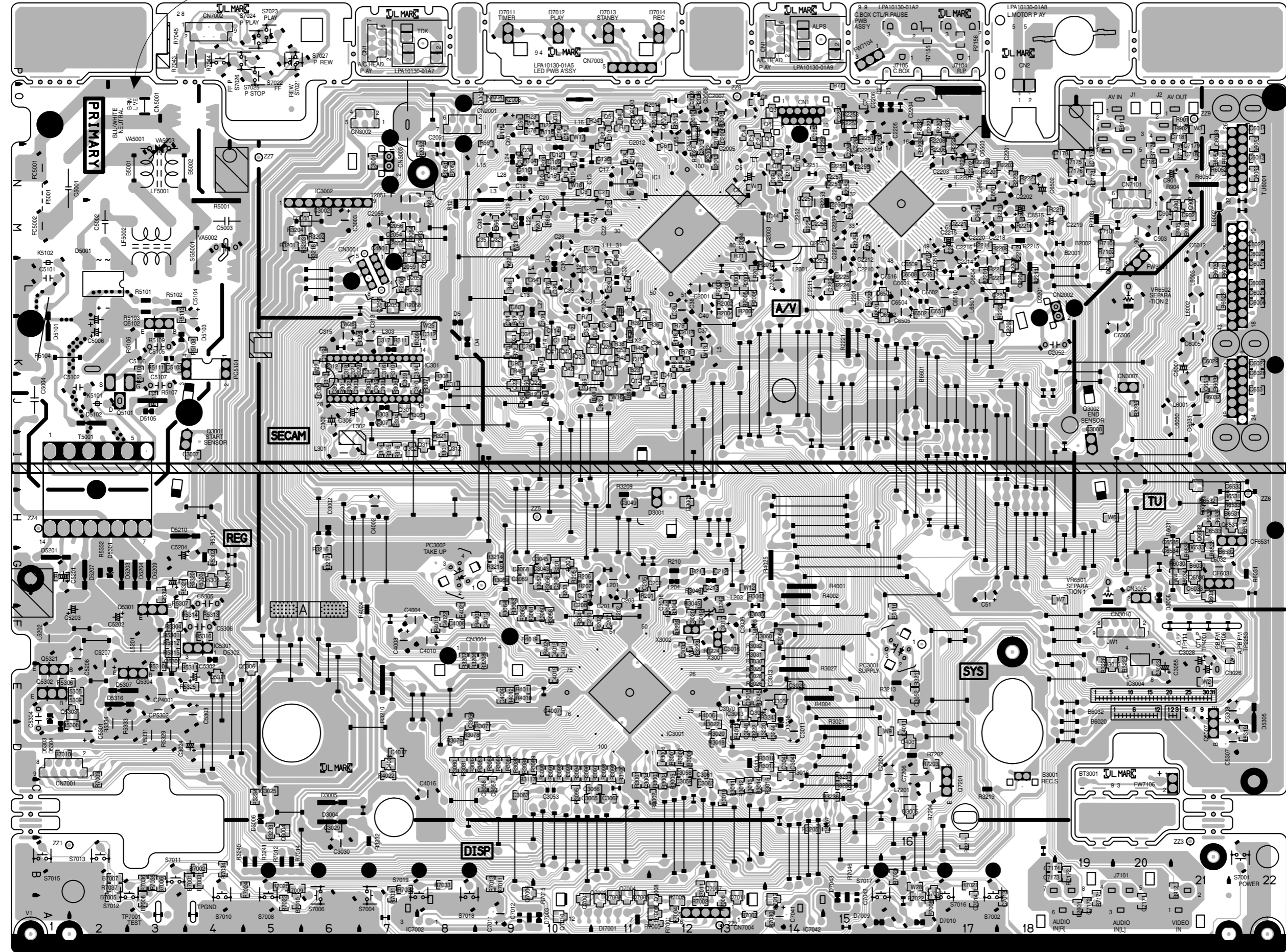
4.10 MAIN CIRCUIT BOARD

<03>MAIN  
LPB10130-001B

**DANGEROUS VOLTAGE**

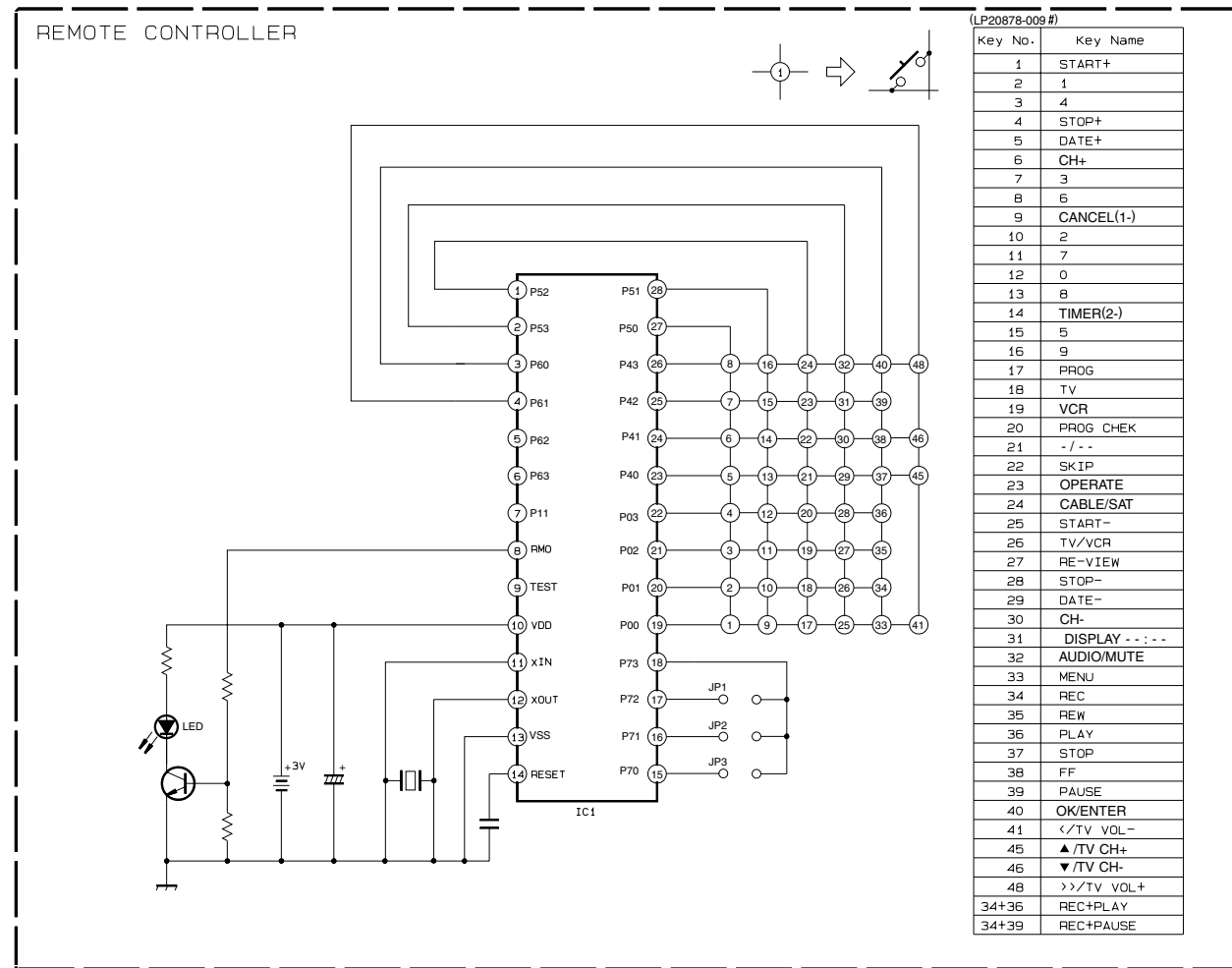


CAUTION :  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).  
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD. REPLACE ONLY WITH SAME TYPE CP(S) MANUFACTURED BY ROHM.  
ATTENTION :  
REPLACER PAR DES FUSIBLE DE MEME TYPE.



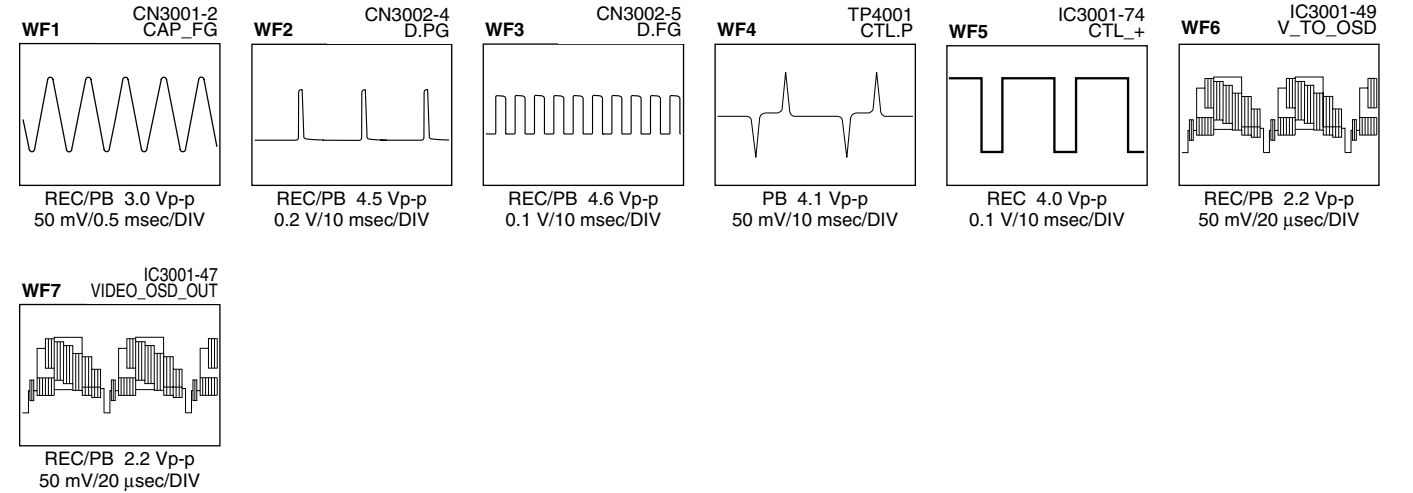
### 4.11 REMOTE CONTROLLER SCHEMATIC DIAGRAM

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

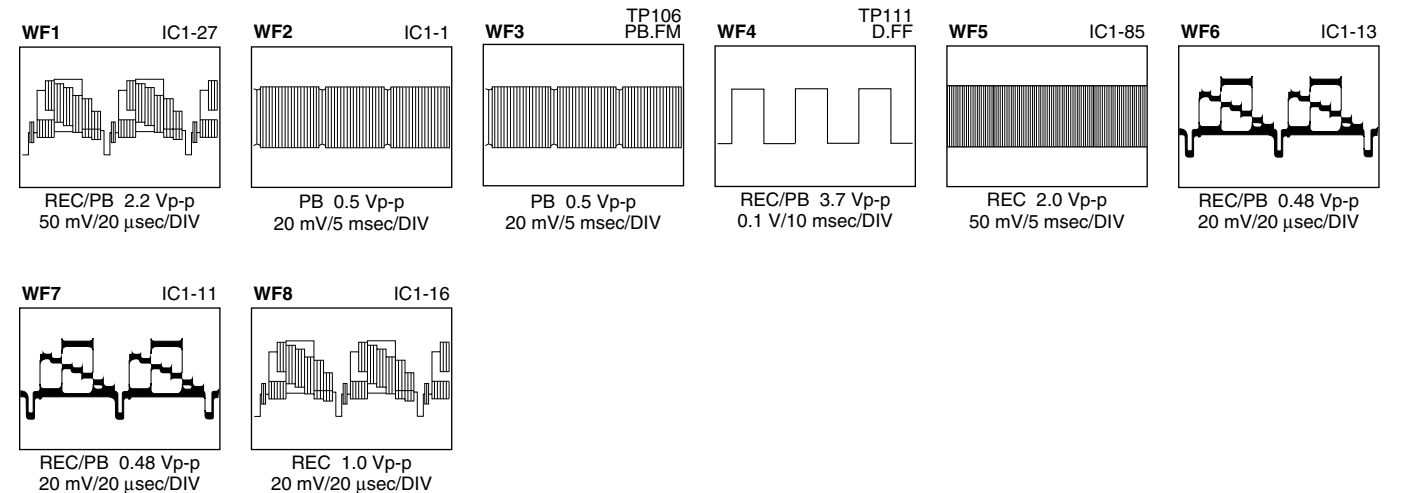


### 4.12 WAVEFORMS

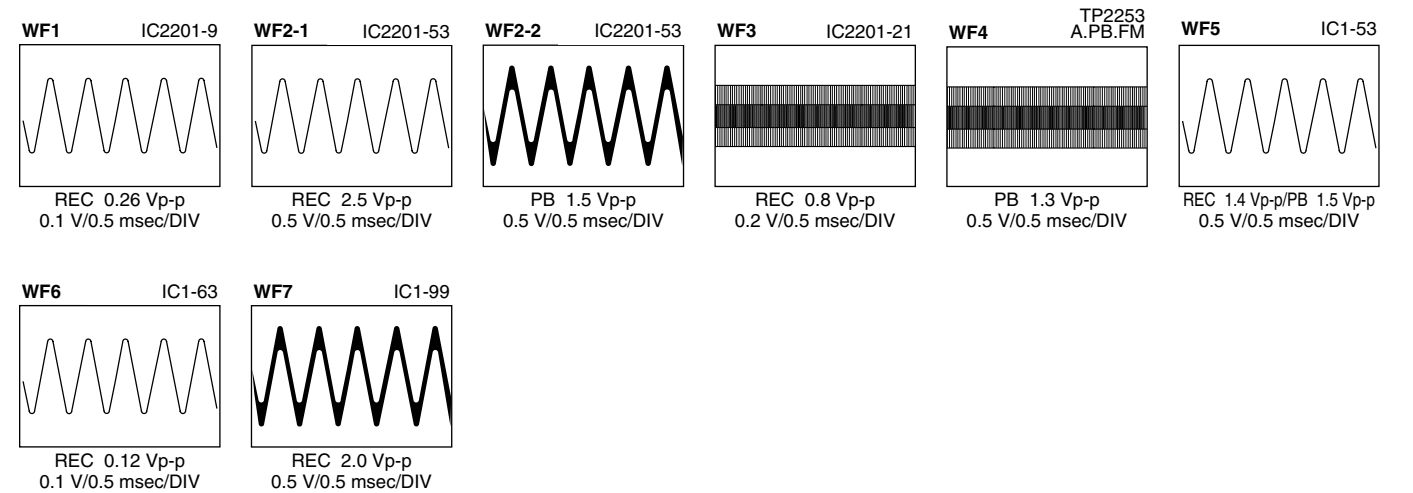
#### < SYSCON >



#### < VIDEO >



#### < AUDIO >



### 4.13 VOLTAGE CHARTS

<MAIN>

MODE PIN NO.	REC	PLAY	MODE PIN NO.	REC	PLAY	MODE PIN NO.	REC	PLAY	MODE PIN NO.	REC	PLAY
IC1			IC2201			36	5.0	5.0	9	2.0	0
1	1.5	2.3	1	2.4	2.4	37	-	-	10	2.0	0
2	2.8	2.8	2	0	0	38	-	-	11	1.9	0
3	2.6	2.6	3	2.4	2.4	39	0	0	CN2001		
4	1.9	1.5	4	0	0	40	-	-	1	0	0
5	1.9	1.5	5	2.3	2.3	41	-	-	2	0	0
6	2.4	2.1	6	2.5	2.5	42	0	0	3	0	0
7	1.4	0.8	7	2.0	2.0	43	5.0	5.0	4	0	0
8	0	0	8	0.4	0.4	44	0	0	5	0	0
9	2.6	3.1	9	0	0	45	5.0	5.0	6	2.4	2.4
10	2.3	2.3	10	0	0	46	4.6	4.6	7	2.7	2.7
11	3.1	3.1	11	0	0	47	1.6	1.6	CN2002		
12	2.8	2.8	12	2.0	2.0	48	0	0	1	0	0
13	3.1	3.1	13	2.2	2.2	49	1.6	1.6	2	0	0
14	2.3	2.3	14	0	0	50	2.4	2.4	CN3001		
15	0	0	15	0	0	51	5.0	5.0	1	0	5.0
16	2.8	2.8	16	2.5	2.5	52	2.5	2.5	2	2.5	2.5
17	1.4	1.4	17	0.7	0.7	53	2.5	2.5	3	5.0	0
18	2.8	2.8	18	2.4	2.4	54	0	0	4	5.0	0
19	2.8	2.8	19	2.5	0	55	0	0	5	0	0
20	2.8	2.8	20	2.0	0	56	4.5	4.9	6	5.0	5.0
21	2.0	2.0	21	1.9	0	57	4.8	4.8	7	0	0
22	2.8	2.8	22	2.0	0.7	58	2.0	0	8	11.9	11.9
23	2.8	2.8	23	0	0	59	5.0	0	CN3002		
24	5.0	5.0	24	2.0	0.7	60	1.9	3.9	1	11.9	11.9
25	0.4	0.4	25	5.0	5.0	61	0	0	2	0	0
26	0	0	26	2.0	0	62	5.1	5.1	3	1.3	1.3
27	2.3	2.3	27	0	0	63	5.1	5.1	4	0.4	0.4
28	2.3	2.3	28	4.3	2.2	64	5.1	5.1	5	2.8	2.8
29	1.9	1.9	29	4.4	1.9	65	2.8	2.8	CN3003		
30	2.1	2.1	30	4.9	1.0	66	0	0.4	1	1.0	1.0
31	0	0	31	1.1	1.9	67	2.5	2.5	2	1.0	1.0
32	2.5	2.5	32	2.5	2.5	68	2.5	2.5	CN3004		
33	5.0	5.0	33	2.5	2.5	69	2.5	2.5	1	5.1	5.1
34	2.7	2.3	34	0.7	0.7	70	2.5	2.5	2	5.1	5.1
35	5.0	5.0	35	2.6	2.6	71	0	0	3	0	0
36	2.5	0	36	0	0	72	2.4	2.4	4	0	0
37	2.3	2.3	37	1.6	1.6	73	5.0	5.0			
38	-	-	38	0	0	74	3.0	2.5			
39	1.2	1.2	39	0	0	75	0	2.5			
40	-	-	40	5.0	5.0	76	2.5	2.5			
41	2.5	2.5	41	0	0	77	0	0			
42	-	-	42	5.0	5.0	78	0	0			
43	0	0	43	4.9	4.9	79	0	0			
44	2.2	2.2	44	2.3	2.3	80	1.1	1.1			
45	4.6	4.6	45	0	0	81	0	0			
46	4.9	4.6	46	3.6	3.6	82	0	3.6			
47	2.9	2.9	47	1.5	1.5	83	0	1.9			
48	2.6	2.6	48	2.2	2.2	84	4.9	4.9			
49	5.0	5.0	49	3.5	3.5	85	5.1	5.1			
50	2.5	2.5	50	3.5	0	86	0	5.1			
51	2.8	2.8	51	0	5.0	87	0	0			
52	0	0	52	3.5	0	88	0	0			
53	2.6	2.6	53	4.4	0	89	1.0	0			
54	0	0	54	2.4	0	90	5.1	5.1			
55	0	0	55	0	0	91	0	0			
56	0	0	56	0	0	92	0	0			
57	0	0	57	4.4	0	93	0	0			
58	0	0	58	9.3	9.3	94	5.0	5.0			
59	0	0	59	4.4	4.4	95	0	0			
60	0	0	60	0	0	96	1.0	0			
61	0	0	61	2.5	2.5	97	0	0			
62	0	0	62	2.4	0	98	1.9	0			
63	0	0	63	2.4	2.4	99	0	0			
64	0	0	64	0.5	0.8	100	0	0			
65	2.0	2.0	IC3001			IC3002					
66	0	0	1	-	-	1	7.5	7.5			
67	0	0	2	-	-	2	0.5	0.5			
68	0	0	3	0	0	3	0	0			
69	0	0	4	5.0	0	4	0.5	0.5			
70	0	0	5	5.1	5.0	5	11.9	11.9			
71	0	0	6	4.0	4.0	6	11.9	11.9			
72	0	0	7	4.0	4.0	7	0	0			
73	3.1	3.1	8	4.1	4.1	8	0	0			
74	0	0	9	4.0	4.0	9	0	0			
75	0	0	10	0	0	IC3004					
76	0	0	11	0	0	1	0	0			
77	0	0	12	0	0	2	0	0			
78	0	0	13	0	0	3	0	0			
79	5.0	5.0	14	0	0	4	0	0			
80	5.0	5.0	15	5.0	5.0	5	4.8	4.8			
81	0	0	16	4.9	4.9	6	4.9	4.9			
82	0	0	17	4.9	4.9	7	0	0			
83	0	0	18	4.5	4.5	8	5.1	5.1			
84	2.2	2.2	19	0	0	IC5301					
85	2.4	2.4	20	0	0	1	2.5	2.5			
86	2.2	2.2	21	2.8	2.8	2	0	0			
87	5.0	5.0	22	4.3	4.3	3	4.5	4.5			
88	0	0	23	2.5	2.5	IC7042					
89	0	0	24	0	0	1		5.1			
90	0	0	25	-	-	2		5.0			
91	0	4.0	26	0	2.5	3		0			
92	2.6	2.6	27	5.0	0	CN1					
93	0.8	0.5	28	5.1	5.0	1	0	0			
94	0	0	29	1.0	1.0	2	0	0			
95	2.5	2.5	30	4.9	0	3	0	0			
96	2.5	2.5	31	5.0	5.0	4	0	0			
97	2.5	2.5	32	4.1	4.1	5	2.3	2.3			
98	0	0	33	2.5	2.5	6	2.4	2.2			
99	2.5	2.5	34	1.5	1.5	7	2.4	2.4			
100	0	0	35	0	0	8	2.4	2.4			

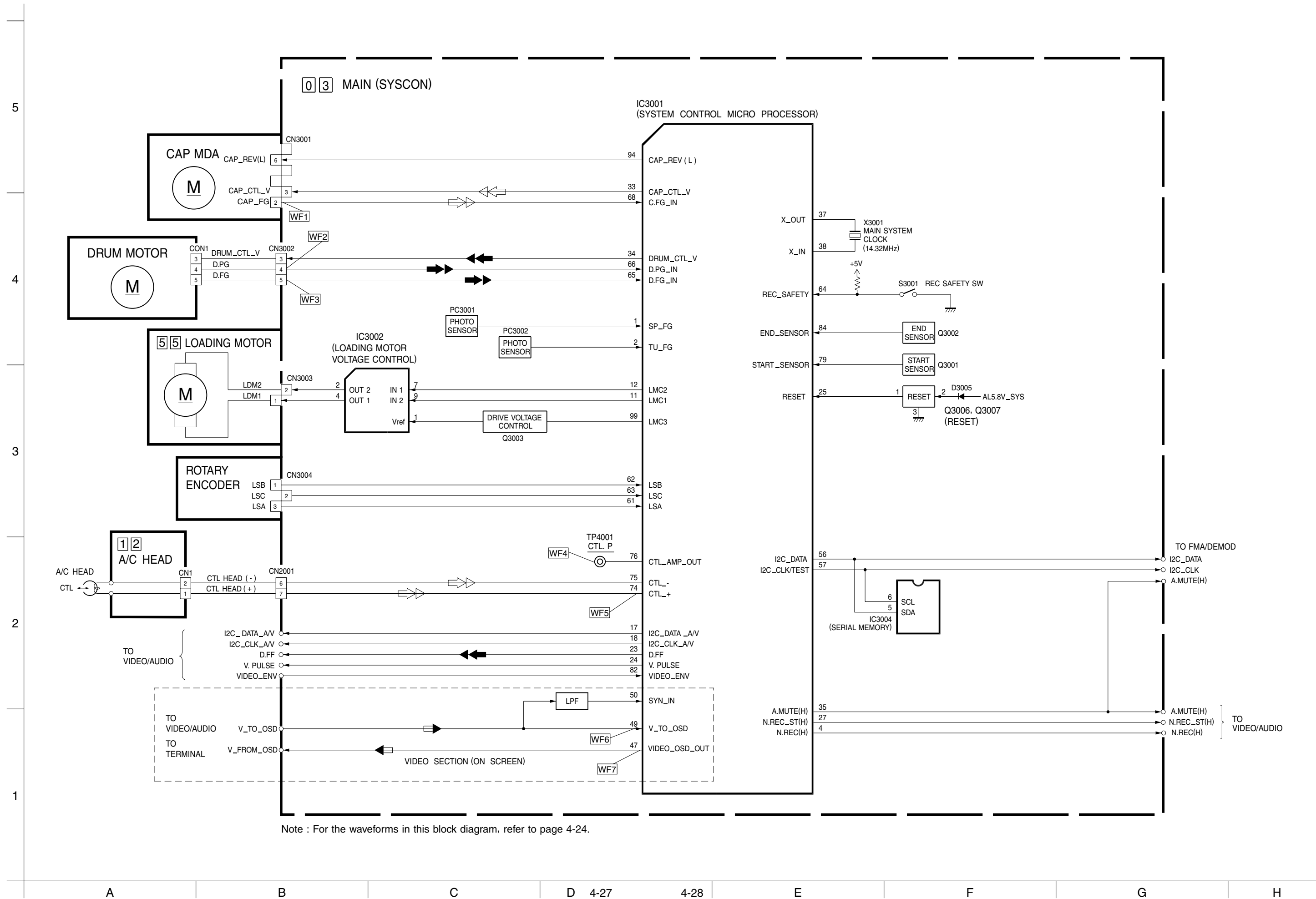
### 4.14 CPU PIN FUNCTION

<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/COMPU_IN	-	NC
4	N.REC(H)	OUT	NORMAL AUDIO REC MODE CONTROL (REC:H)
5	RC	IN	REMOTE CONTROL DATA INPUT
6	DIG2	OUT	LED DRIVE
7	DIG1	OUT	LED DRIVE
8	DIG4	OUT	LED DRIVE
9	DIG5	OUT	LED DRIVE
10	JSB	-	NC
11	LMC1	OUT	LOADING MOTOR DRIVE(1)
12	LMC2	OUT	LOADING MOTOR DRIVE(2)
13	RMO/R-Y_REV/CHARA	-	NC/NC/NC
14	POWER_DET	-	NC
15	CONV_CTL(H)/MESECAM(H)	OUT	R/F CONVERTER ON/OFF (ON:H, OFF:L)/NC
16	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
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	SP_SHORT(H)	-	NC
20	EP_SHORT(H)	-	NC
21	SB_GAIN	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
22	CH_SW	IN	RF CHANNEL SWITCHING
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/SECAM_DET	OUT	AUDIO FF OUTPUT/NC
27	N.REC_ST(H)	OUT	NORMAL AUDIO SOUND RECORDING START
28	TU_I2C_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR THE TUNER UNIT
29	D_B	OUT	LED DRIVE
30	H.REC_ST(H)/SECAM(H)	OUT	Hi-Fi AUDIO SOUND RECORDING START
31	TU_MUTE(H)	-	NC
32	DIG3	OUT	LED DRIVE
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	-	NC
41	XC_OUT	-	NC
42	Sxi	-	NC
43	P.MUTE(L)	-	NC
44	3.58NTSC(L)/POWER_SAVE(H)	-	NC
45	SYNC_DET	-	NC
46	PROTECT	IN	DETECTION SIGNAL FOR SWITCHING POWER SUPPLY
47	VIDEO OSD_OUT	OUT	COMPOSITE VIDEO SIGNAL OUTPUT
48	VSS2	-	GND
49	V_TO OSD	IN	COMPOSITE VIDEO SIGNAL INPUT
50	SYN_IN	IN	COMPOSITE SYNCHRONIZING SIGNAL FOR SERVO, VERTICAL SYNCHRONIZING SIGNAL FOR OSD

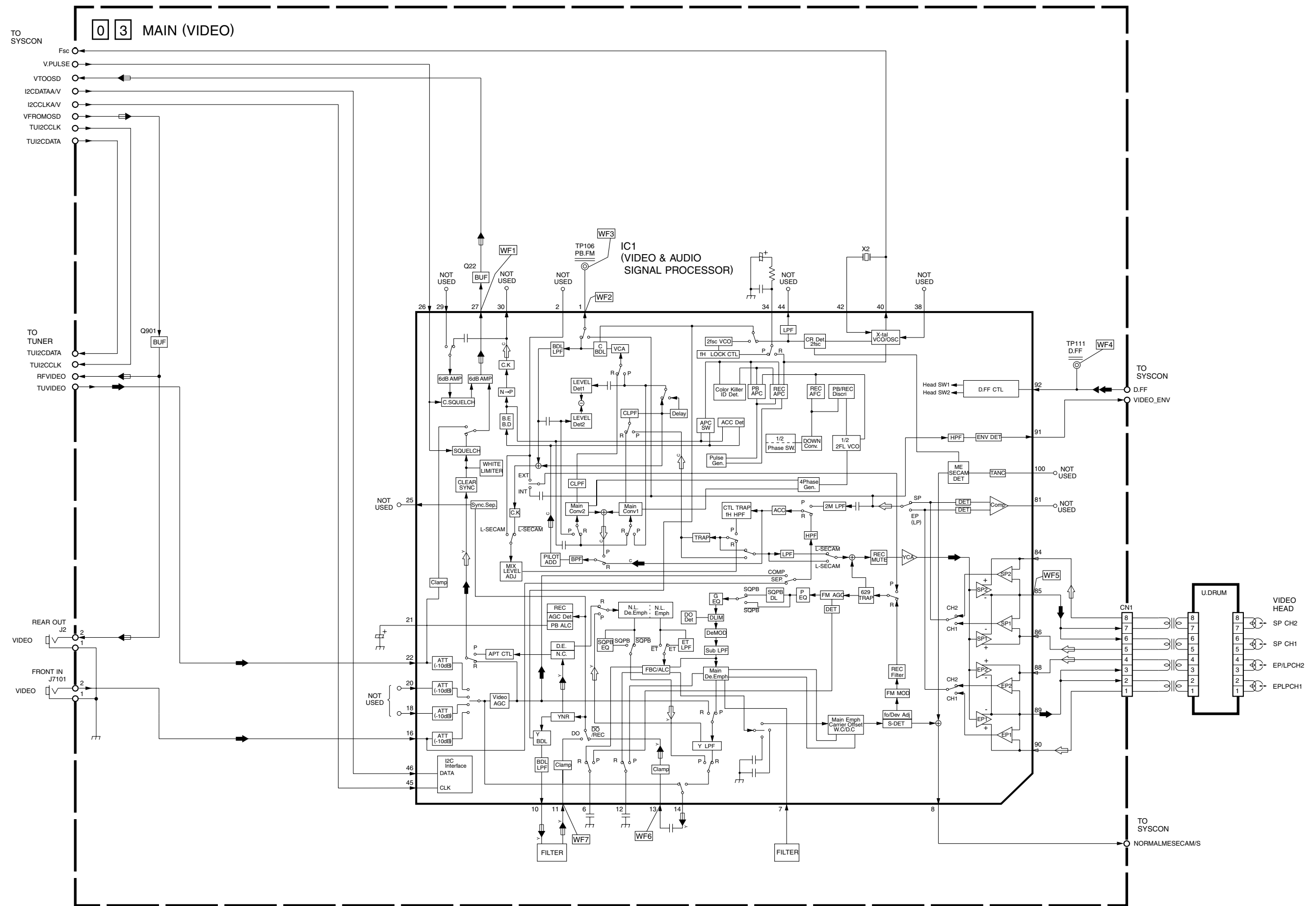
PIN NO.	LABEL	IN/OUT	FUNCTION
51	VDD2	-	SYSTEM POWER
52	AFCC	IN	FILTER INPUT FOR HORIZONTAL SYNCHRONIZING OF OSD CHARACTER
53	AFCLPF	OUT	FILTER OUTPUT FOR HORIZONTAL SYNCHRONIZING OF OSD CHARACTER
54	FSCI	IN	FSC INPUT FOR OSD
55	FSCLPF	OUT	FSC OUTPUT FOR OSD
56	I2C_DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
57	I2C_CLK/TEST	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC/MECHANISM TEST SIGNAL
58	D_F	OUT	LED DRIVE
59	P.CTL(H)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
60	D_G	OUT	LED DRIVE
61	LSA	IN	MECHANISM MODE DETECT(A)
62	LSB	IN	MECHANISM MODE DETECT(B)
63	LSC	IN	MECHANISM MODE DETECT(C)
64	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
65	D.FG_IN	IN	DRUM FG PULSE INPUT
66	D.PG_IN	IN	DRUM PICKUP PULSE INPUT (SWITCHING PULSE)
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	CTL(+) SIGNAL
75	CTL(-)	IN/OUT	CTL(-) SIGNAL
76	CTL AMP_OUT	OUT	CTL PULSE OUTPUT
77	LOCK(L)	-	NC
78	AGC_CTL/SW1	OUT	DETECTION SIGNAL FOR AGC/NC
79	START_SENSOR	IN	START SENSOR
80	AFC/JUST_CLK	IN	TUNING CHECK/NC
81	LED/SW2	IN	SAP DETECT/NC
82	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
83	A.ENV/ND(L)/EE(L)	IN	AUDIO PB FM ENV. INPUT/NON HI-FI MODEL:L/NC
84	END_SENSOR	IN	END SENSOR
85	KEY1	-	NC
86	KEY2	-	NC
87	KILLER_DET/COMPU_OUT/PAL_PB	-	NC/NC/NC
88	NORMAL_MESECAM/S	IN	NC/SQPB DETECT
89	D_A	OUT	LED DRIVE
90	TU_I2C_DATA	IN/OUT	I/O DATA FOR THE TUNER UNIT
91	J4	-	NC
92	J5/V.UP(H)	-	NC/NC
93	J6	-	NC
94	CAP_REV(L)	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD:H/REV:L)
95	J3/REC_LINK	-	NC/NC
96	D_C	OUT	LED DRIVE
97	D_D	OUT	LED DRIVE
98	D_E	OUT	LED DRIVE
99	LMC3	OUT	LOADING MOTOR DRIVE(3)
100	JSA/TU_V.MUTE	-	NC/NC

4.15 SYSTEM CONTROL BLOCK DIAGRAM



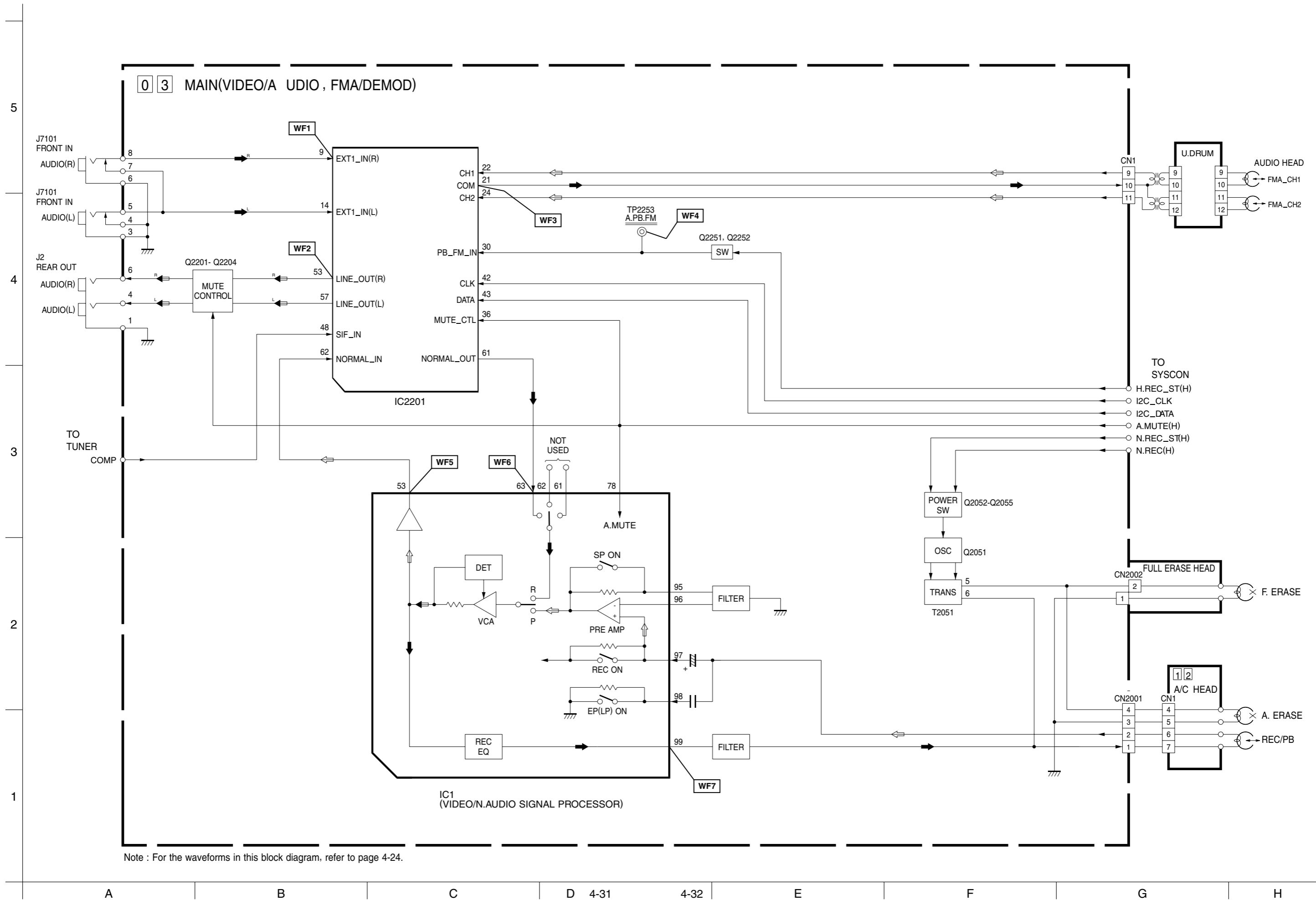


4.16 VIDEO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-24.

4.17 AUDIO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-24.