

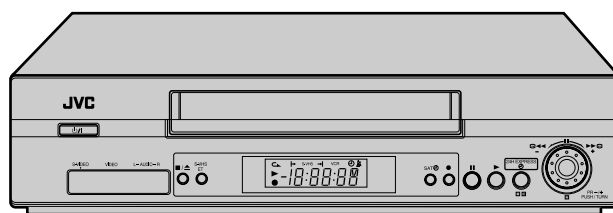
# JVC

## SCHEMATIC DIAGRAMS

### VIDEO CASSETTE RECORDER

# HR-S6950EU, HR-S6955MS, HR-S7950EU, HR-S7955EK, HR-S7955MS

CD-ROM No.SML200207



**SHOWVIEW<sup>®</sup>**  
DELUXE  
**Hi-Fi S VHS**  
625  
**Super VHS ET**

### SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S7950EU.)*

#### GENERAL

Power requirement : AC 220 V – 240 V~, 50 Hz/60 Hz  
Power consumption  
Power on : 18 W  
Power off : 3.6 W  
Temperature  
Operating : 5°C to 40°C  
Storage : -20°C to 60°C  
Operating position : Horizontal only  
Dimensions (WxHxD)  
: 400 mm x 94 mm x 270 mm  
Weight : 3.4 kg  
Format : S-VHS/VHS PAL standard  
Maximum recording time  
(SP) : 240 min. with E-240 video cassette  
(LP) : 480 min. with E-240 video cassette  
(EP) : 720 min. with E-240 video cassette

#### VIDEO/AUDIO

Signal system : PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields  
Recording system : DA4 (Double Azimuth) head helical scan system  
Signal-to-noise ratio: 45 dB  
Horizontal resolution  
(SP/LP) : 250 lines (VHS)  
400 lines (S-VHS)  
(EP) : 220 lines (VHS)  
350 lines (S-VHS)  
Frequency range : 70 Hz to 10,000 Hz (Normal audio)  
20 Hz to 20,000 Hz (Hi-Fi audio)

Input/Output : 21-pin SCART connectors:  
IN/OUT x 1, IN/DECODER x 1  
RCA connectors:  
VIDEO IN x 1, AUDIO IN x 1,  
AUDIO OUT x 1  
S-Video connector:  
IN x 1, OUT x 1

#### TUNER/TIMER

TV channel storage capacity : 99 positions (+AUX position)  
Tuning system : Frequency synthesized tuner  
Channel coverage : VHF 47 MHz – 89 MHz/  
104 MHz – 300 MHz/  
302 MHz – 470 MHz  
UHF 470 MHz – 862 MHz  
Aerial output : UHF channels 22 – 69 (Adjustable)  
Memory backup time : Approx. 10 min.

#### ACCESSORIES

Provided accessories : RF cable,  
Infrared remote control unit,  
"R6" battery x 2


*Specifications shown are for SP mode unless otherwise specified.  
E. & O.E. Design and specifications subject to change without notice.*

V15S1/S2/S15

## 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.

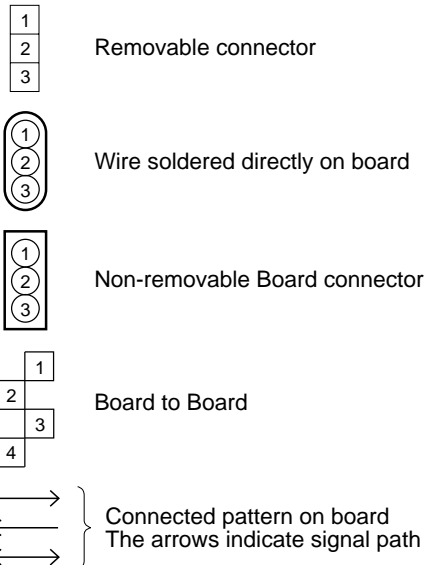
- 1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).  
Chip resistors are 1/16 W.  
K: K $\Omega$  (1000 $\Omega$ ), M: M $\Omega$  (1000K $\Omega$ )
- 2) All capacitance values are in  $\mu$ F, (P: PF).
- 3) All inductance values are in  $\mu$ H, (m: mH).
- 4) All diodes are 1SS133,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

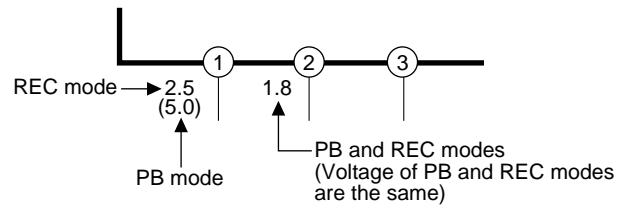


#### 4. Voltage measurement

- 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

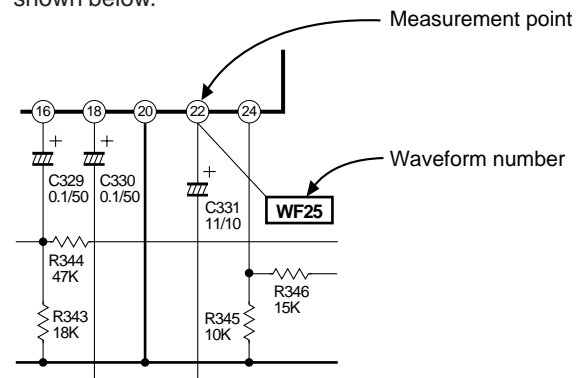
Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



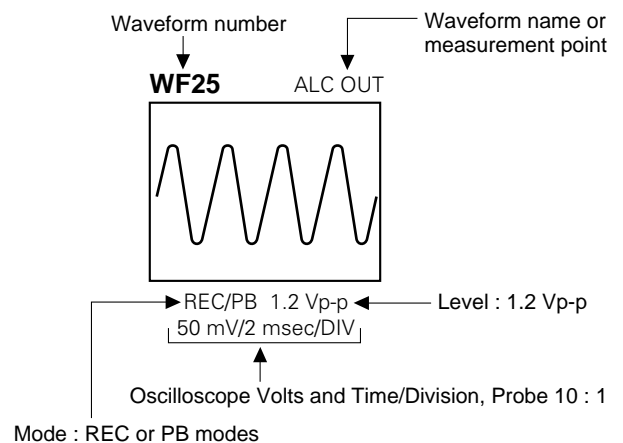
**Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.**

#### 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.

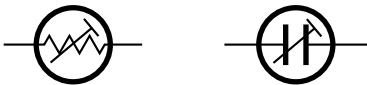
-  Playback signal path
-  Playback and recording signal path
-  Recording signal path (including E-E signal path)
-  Capstan servo path
-  Drum servo path

(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.



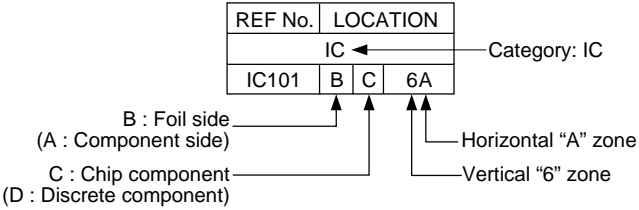
CIRCUIT BOARD NOTES

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:

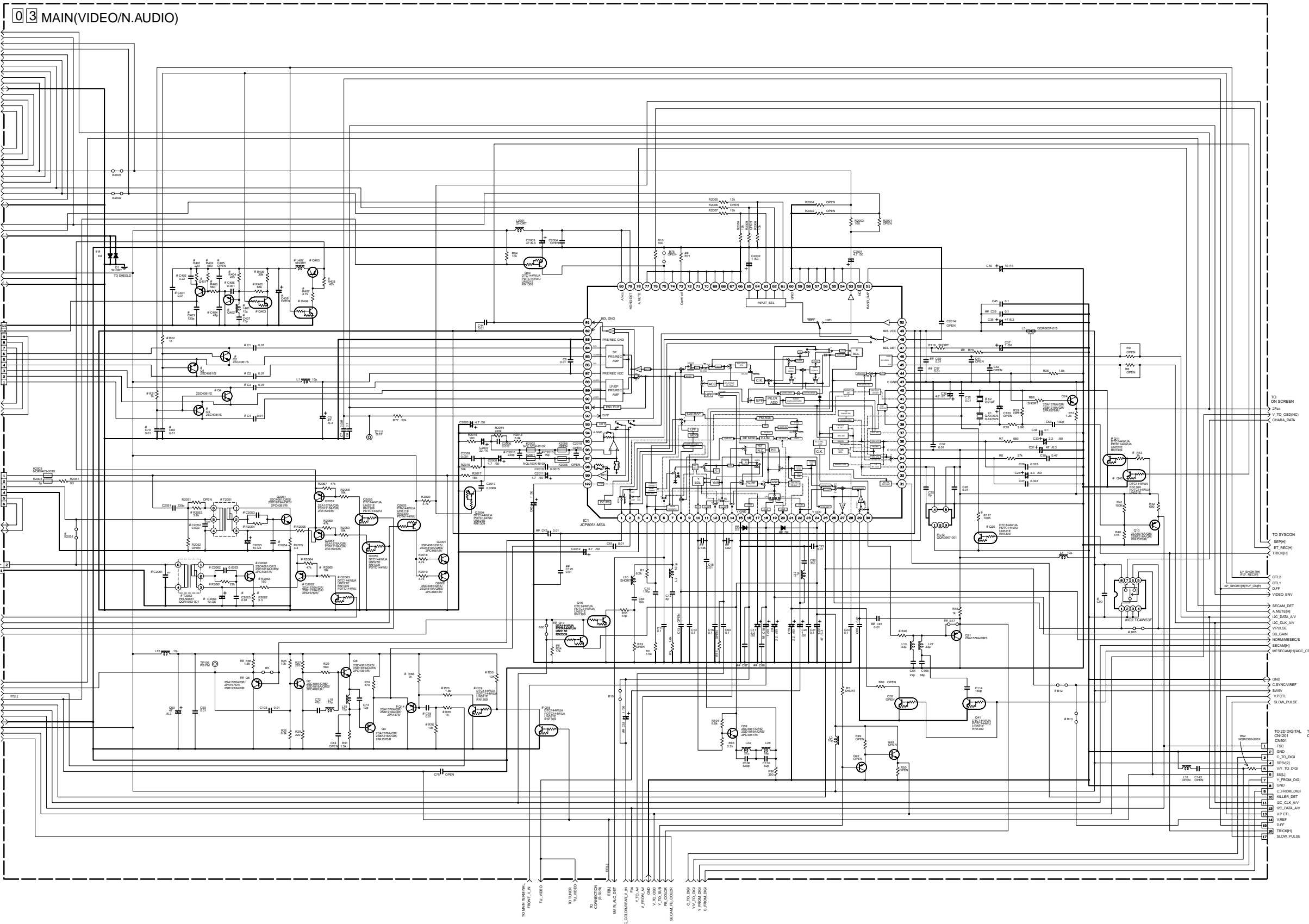
For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

[illegible]

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



#DIFFERENCE TABLE

	CN1	FLY ERASE	H SHORT	PRE IN	PAL EP TRICK	C TRAP	3D	for MS	Function	T2051	R2051	R2053	R2054	R2056	C2063	C2054	C2061	C2061	C2063	C2063
V15 SP LINEUP	R401 R408 C401 C402 C403 C407 C408	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108	C1 C4 C101 C102 C103 C107 C108
SP900EL(S1)	1-9	X	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SP900EL(S2)	1-9	X	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SP900EL(S3)	1-11	O	X	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SP900EL(S4)	1-9	X	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SP900EL(S5)	1-11	O	X	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X

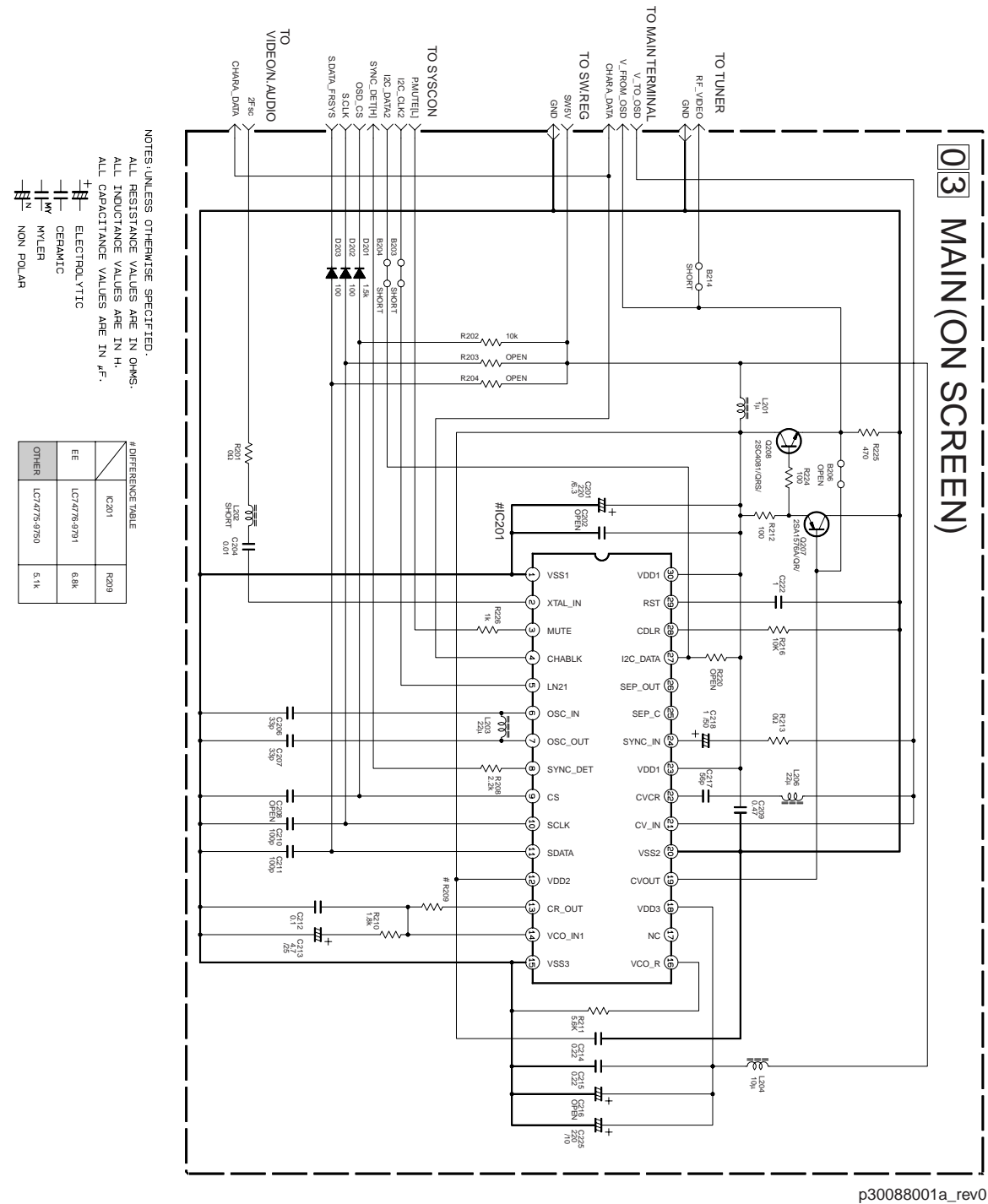
## MARKS ARE NOT MOUNTED ALL MODELS

YES	NO	YES	NO	YES	NO
YES	NO	YES	NO	YES	NO
YES	NO	YES	NO	YES	NO
YES	NO	YES	NO	YES	NO
YES	NO	YES	NO	YES	NO

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  
MYLAR  
NON POLAR  
ALL NPN TYPE TRANSISTORS ARE 2SC4081/ORS/ or 2SD1819A/ORS/ or 2PC4081/R/  
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/ or 2SD1819A/QR/ or 2SA1576B/QR/  
ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC144VUA/ or UN611E/ or RN1309/ or P0T144VU/  
ALL PNP TYPE DIGITAL TRANSISTORS ARE DTC144VUA/ or UN611E/ or RN1309/ or P0T144VU/

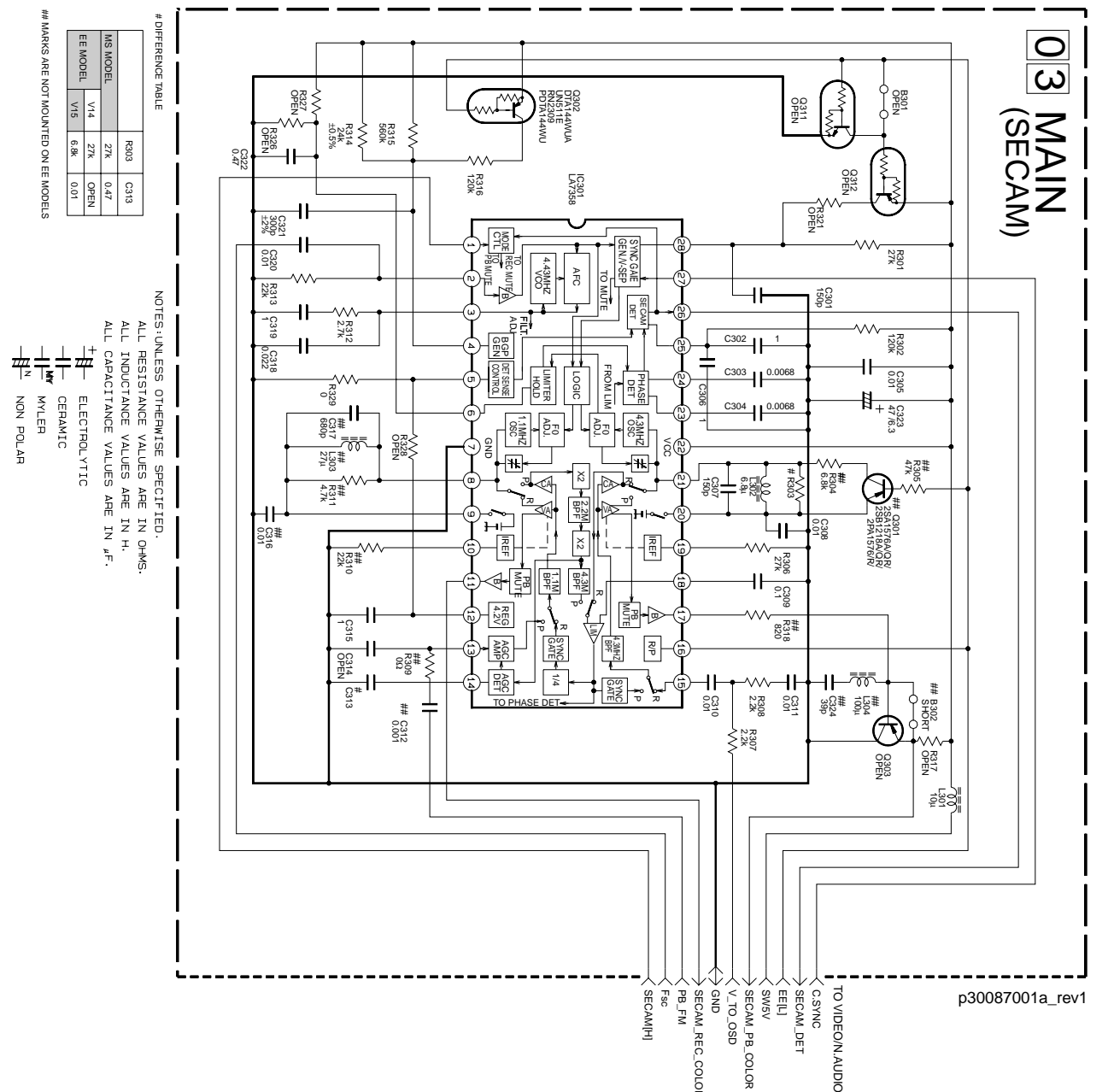
### 4.3 MAIN (ON SCREEN) SCHEMATIC DIAGRAM

*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.*



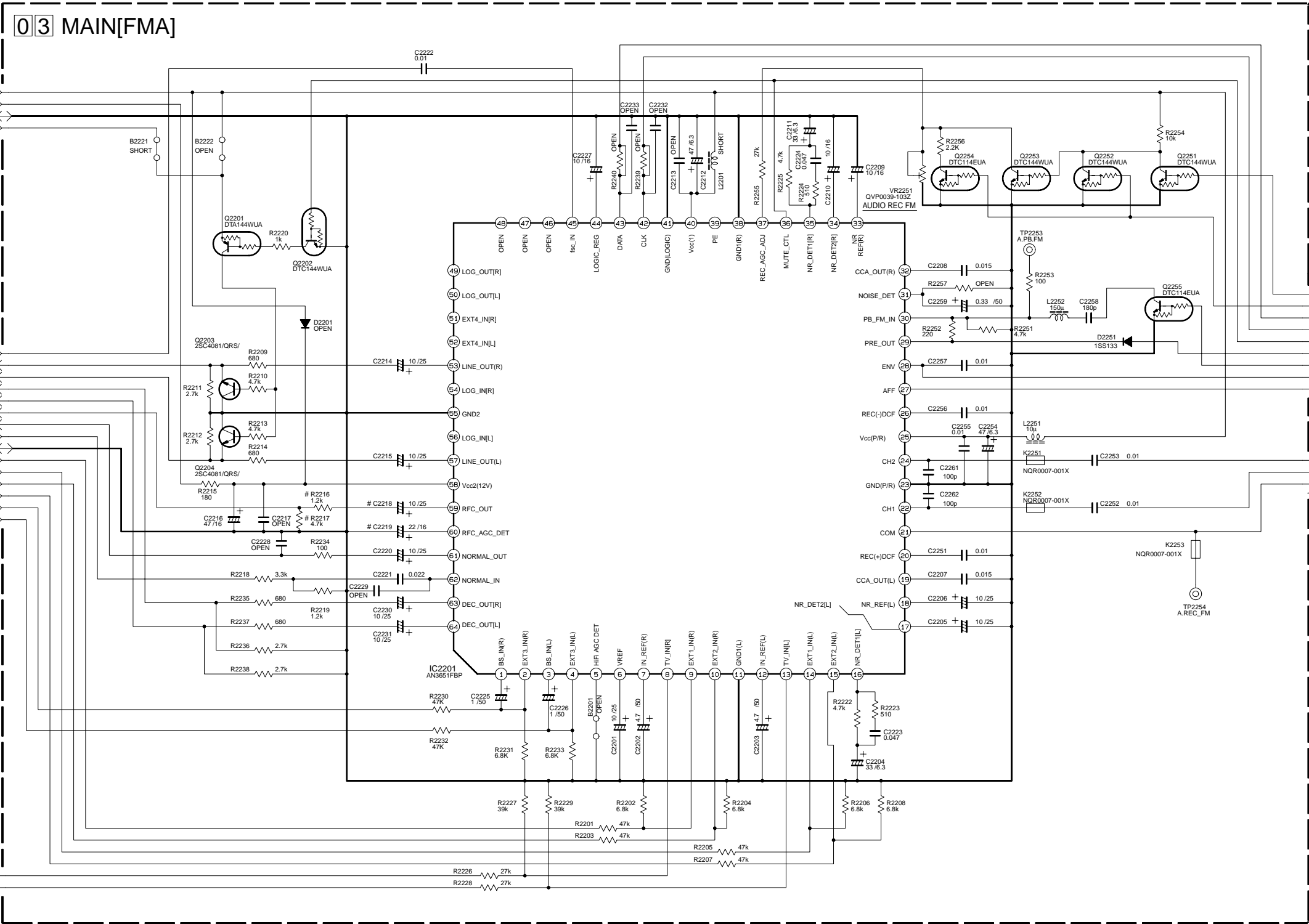
#### 4.4 MAIN (SECAM) SCHEMATIC DIAGRAM [HR-S6955MS/S7955MS]

*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 MAIN (FMA) 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.



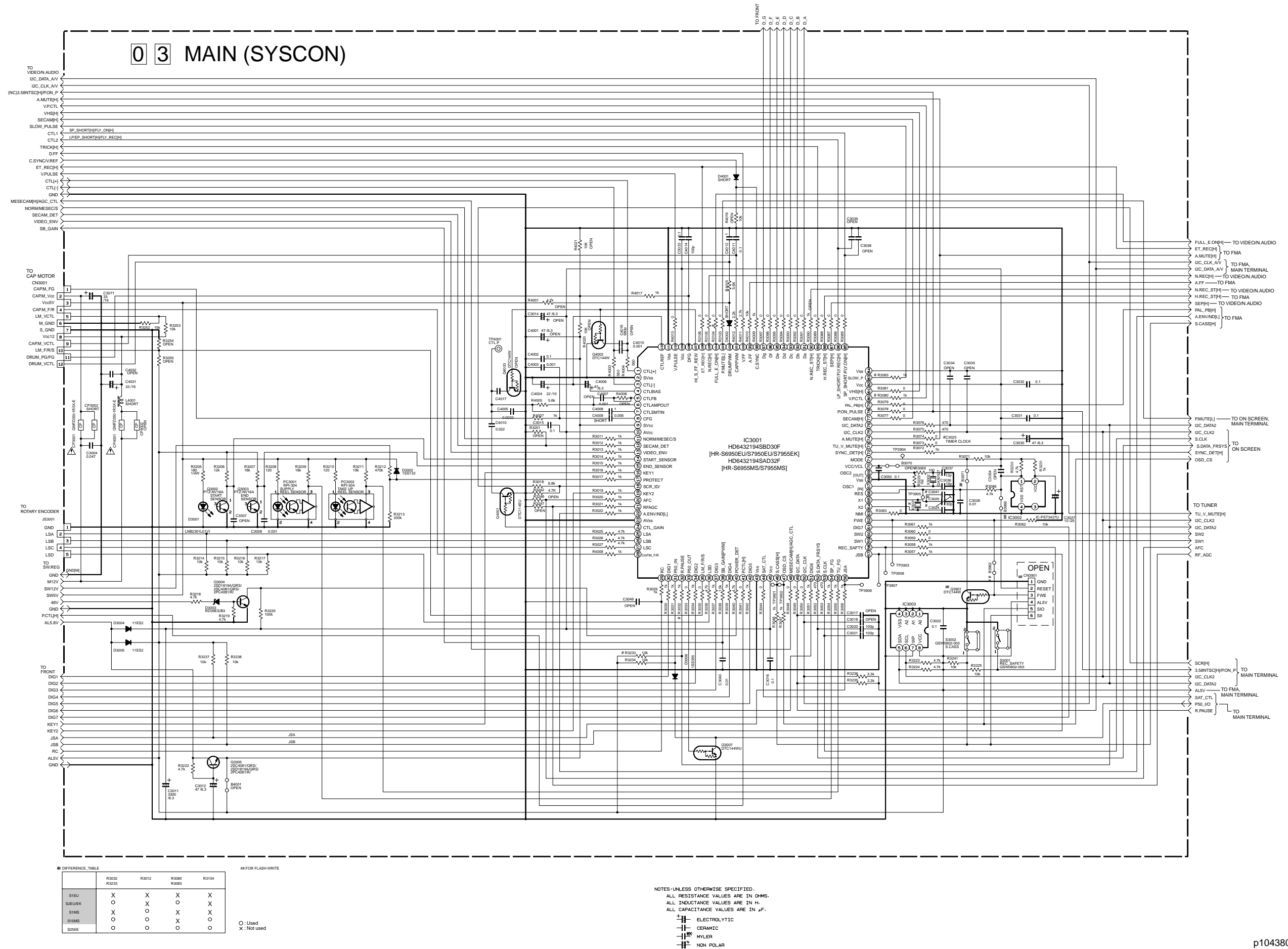
#DIFFERENCE TABLE			
		1	○ : Used X : Not used
RF OUT	C2218	C2219	R2216 R2217
YES			○
NO			X

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

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

#### 4.6 MAIN (SYSICON) 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



3

2

1

	ELECTROLYTIC
	CERAMIC
	MYLER
	NON POLAR

A	B	C	D	E	F	G	H
			4-13	4-14			

## 5

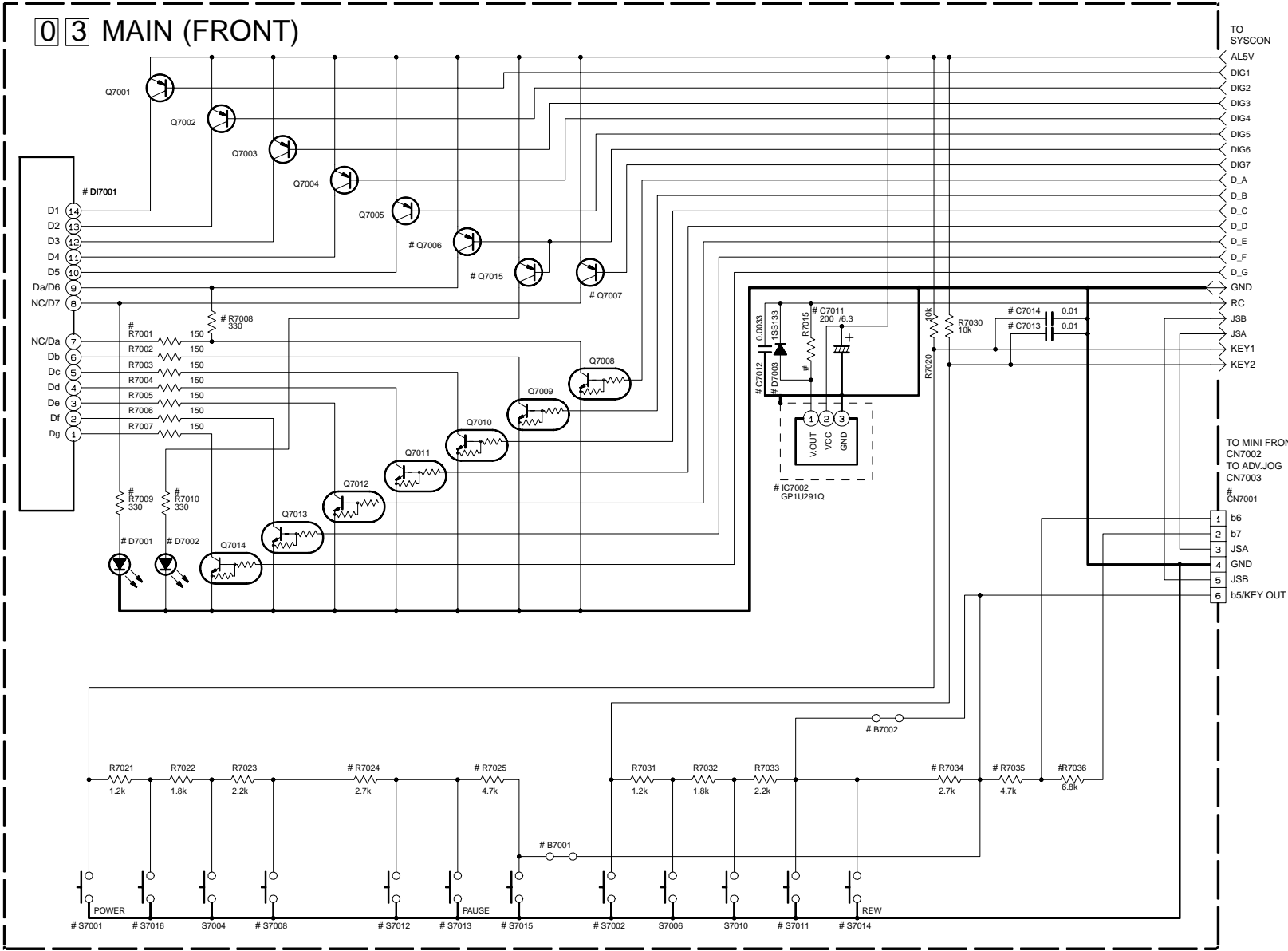
4



1

4.9 MAIN (FRONT), MINI FRONT, S-JACK AND ADV.JOG 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.



LED (ONLY USED BY V14TYPE 7segLED)

	D7001	R7001 Q7006 Q7007	R7008
V14TYPE	NC	NC	Da
V15NEW	Da	D7	D6

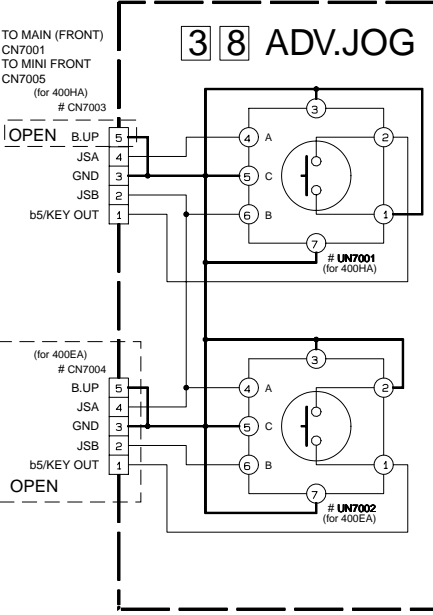
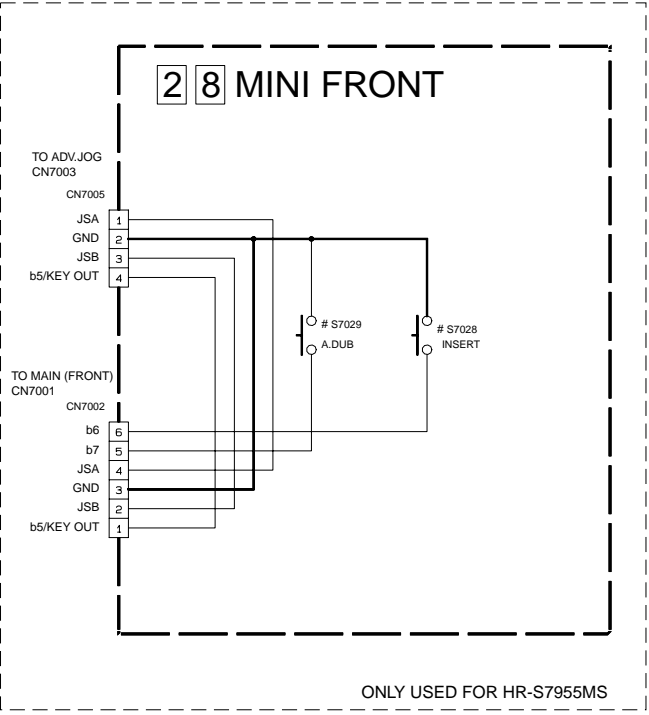
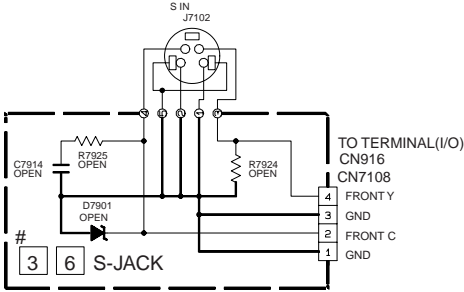
	R7009	R7010	Q7007	Q7015
D7001	USED	○	-	○
	NOT USED	×	-	×
D7002	USED	-	○	○
	NOT USED	-	×	×

○ : Used  
× : Not used

TOOL	CN7001
400HA2	1-6
OTHERS	3-6

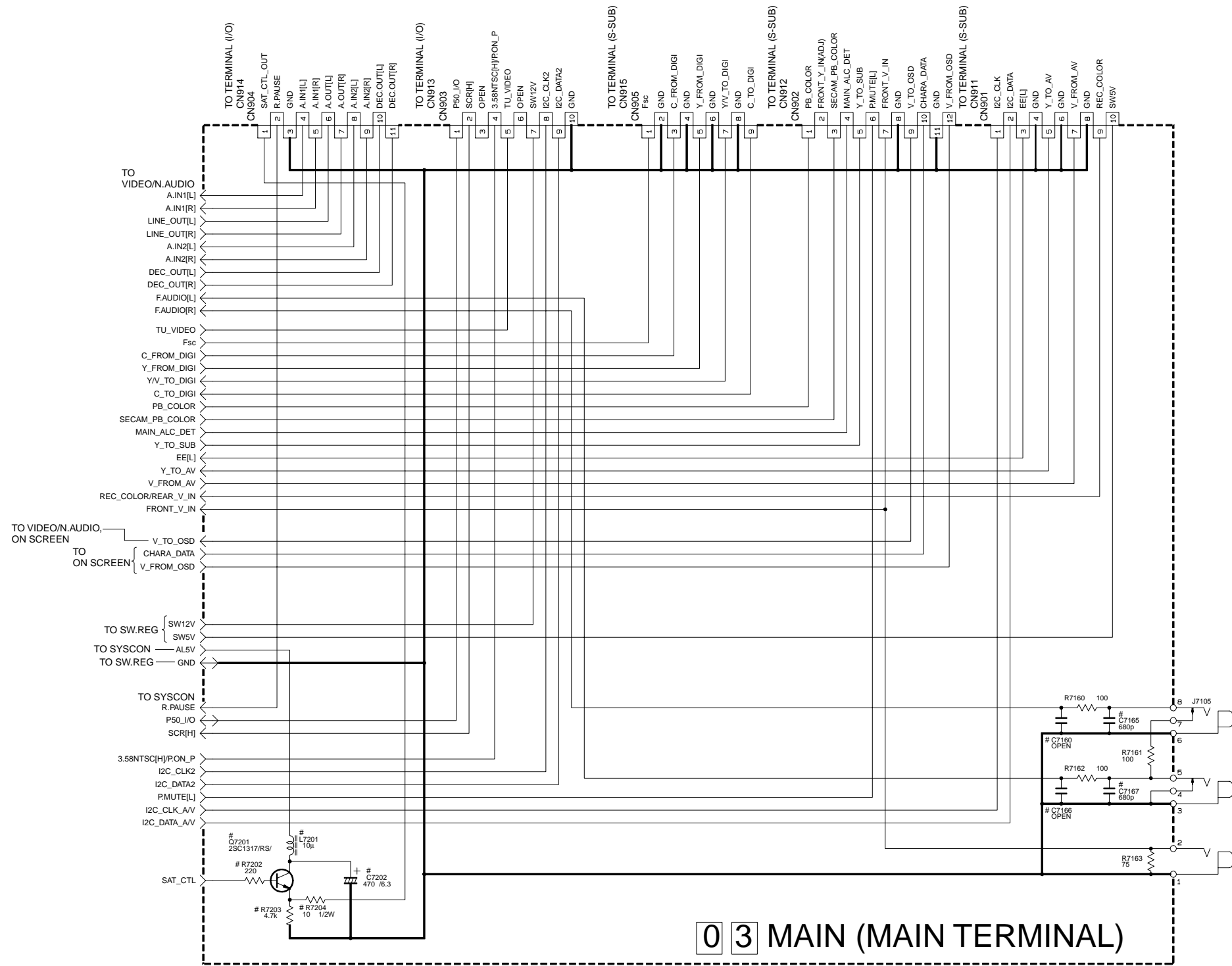
NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN μF.

⎓ ELECTROLYTIC  
⎓ CERAMIC  
⎓ MYLER  
⎓ NON POLAR



4.10 MAIN (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.



0 3 MAIN (MAIN TERMINAL)

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

ELECTROLYTIC  
 CERAMIC  
 MYLER  
 NON POLAR

# DIFFERENCE TABLE

	Q7201 R7202 R7203 R7204 C7202 L7201
SAT CTL	
YES	○
NO	×

○ : Used  
× : Not used

	C7160 C7165 C7166 C7167
CE	
YES	○
NO	×

## 5

4



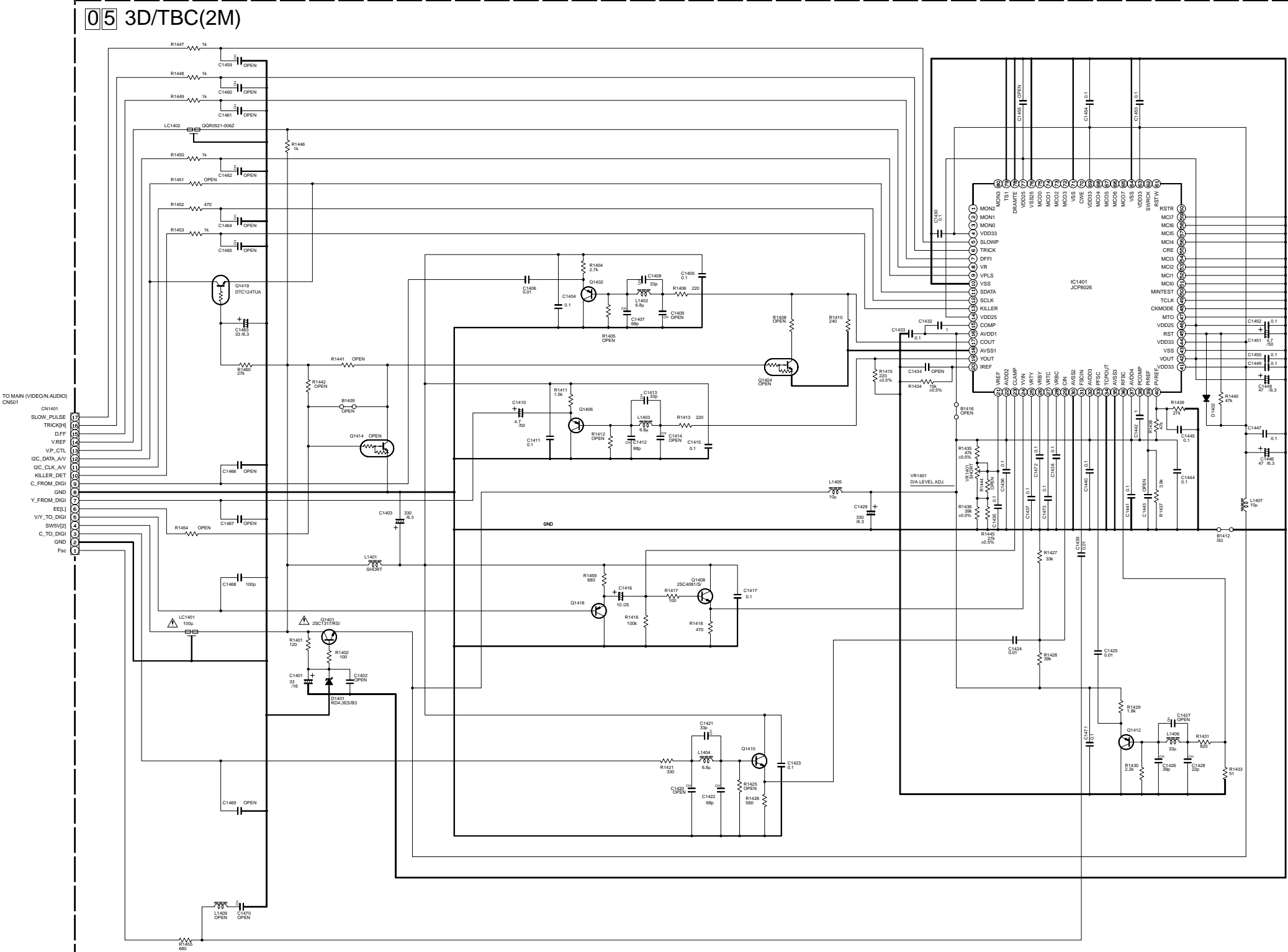
2

1

A	B	C	D	4-21	4-22	E	F	G	H
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4.12 3D/TBC (2M) SCHEMATIC DIAGRAM [HR-S7950EU/S7955EK]

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.



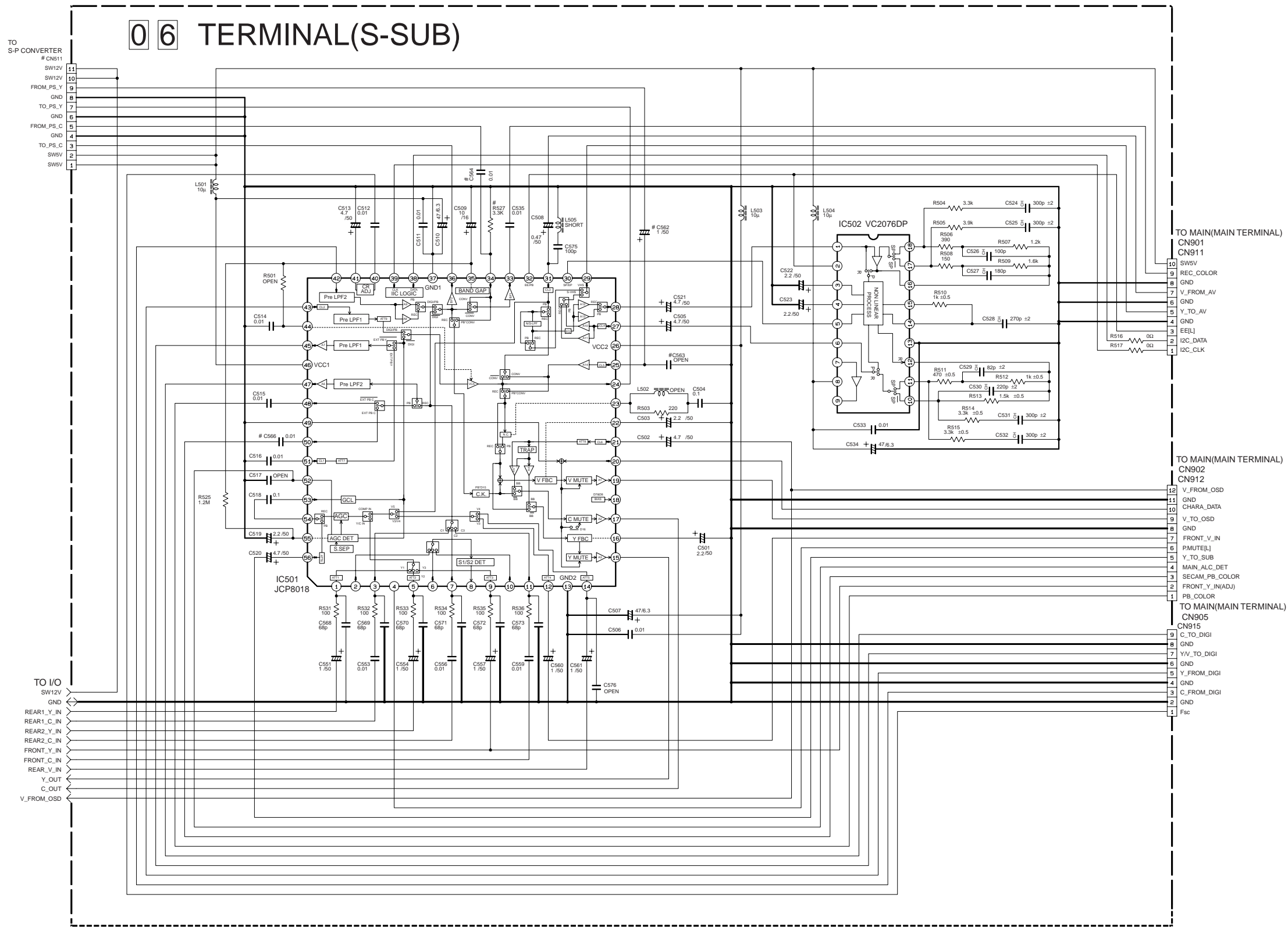
NOTES: UNLESS OTHERWISE SPECIFIED,  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

ALL DIODES ARE 1SS133 OR 1N4148.  
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/Q/R/ OR 2PA1576R/.  
ALL NPN TYPE TRANSISTORS ARE 2SC4081Q/R/S/ OR 2PC4081R/.

— ELECTROLYTIC  
— CERAMIC  
— MYLER  
— NON POLAR

4.13 TERMINAL (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.



# DIFFERENCE TABLE

	CN511 C562 C564 C566	C563 R527
MS	○	×
OTHERS	×	○

○ : Used  
× : Not used

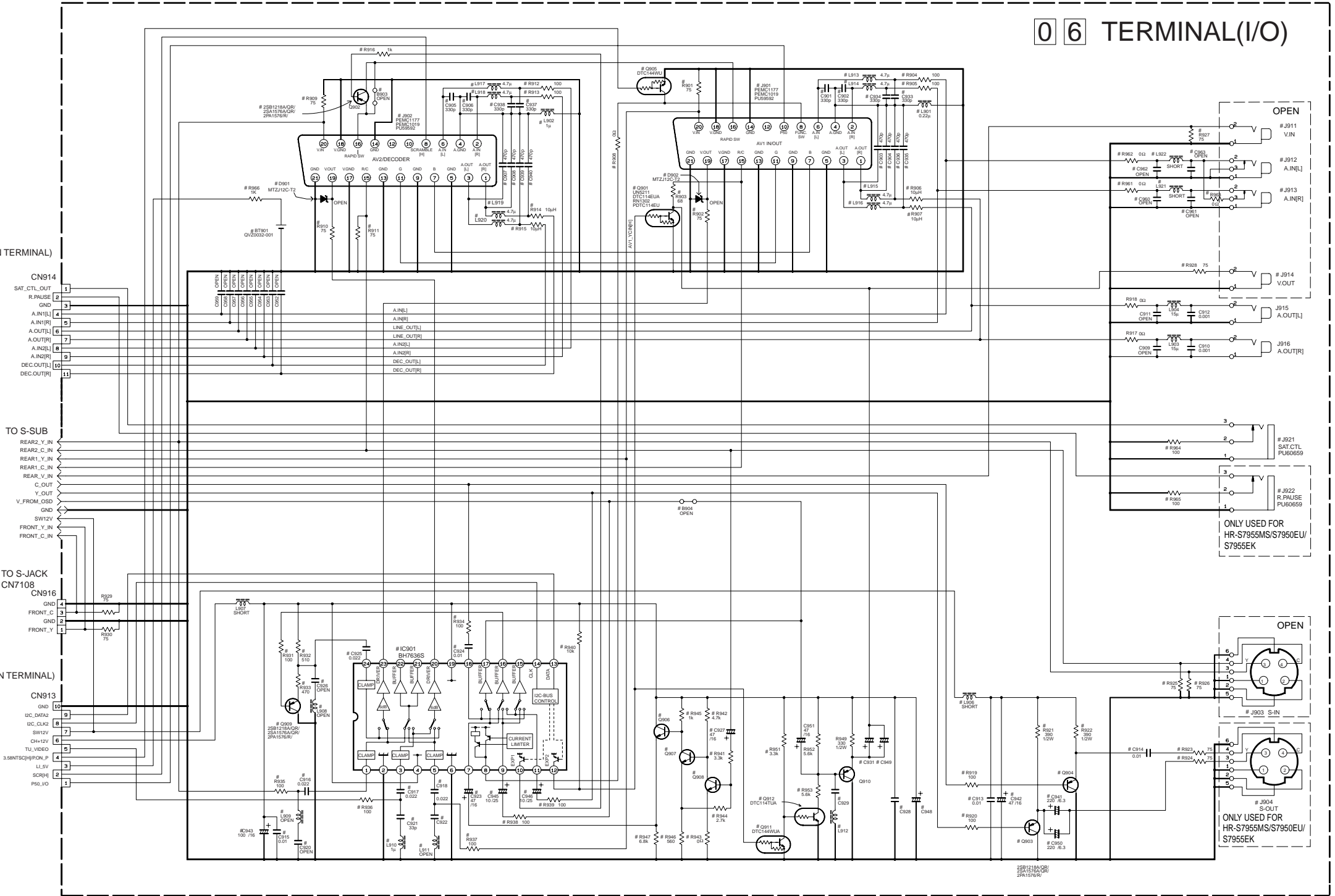
NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN μF.

⊢ ELECTROLYTIC  
⊢ CERAMIC  
⊢ MYLER  
⊢ NON POLAR

4.14 TERMINAL (I/O) SCHEMATIC DIAGRAM

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

06 TERMINAL(I/O)



# DIFFERENCE TABLE

	CH+	REAR S-OUT	S-IN	REAR IN/OUT	SAT CTL	R.PAUSE	SW12VDECU	CE/V-OUT DRIVER	BACK UP
	R901-R908, R909-R916, R931-R947, R951-R963, L901-L902, L908-L911, L913-L916, L917-L920, IC901, B903-B904, D901-D902, J901-J902	C901-C904, C905-C908, C916-C918, C920-C927, C933-C936, C937-C940, C945-C946, Q902, Q901-Q905, Q906-Q909, Q911-Q912	J903 R925,R926	J911-J914, R927-R928, R961-R963, L921-L922, C960-C963	J921 R964	J922 R965	C915 C943 C928 C948	C929 L912 C931 C949	R966 BT901
EURO MODELS	WITHOUT REAR S-OUT	○	×	×	×	○	×	0.01 100/16 0.01 OPEN OPEN OPEN 10/25 OPEN	×
EURO MODELS	WITH REAR S-OUT	○	○	×	×	○	○	0.01 100/16 0.01 OPEN OPEN OPEN 10/25 OPEN	×
ARC MODELS		×	○	○	×	×	×	OPEN OPEN 0.01 47/16 5.6k SHORT 220/6.3 220/6.3	○

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

⎓ ELECTROLYTIC  
⎓ CERAMIC  
⎓ MYL  
⎓ NON POLAR

ALL NPN TYPE TRANSISTORS ARE 2SC4081/QR/ or 2SD1819A/QR/ or 2PC4081/R/.  
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/ or 2SB1218A/QR/ or 2PA1576/R/.



4.15 DEMODULATOR SCHEMATIC DIAGRAM

5

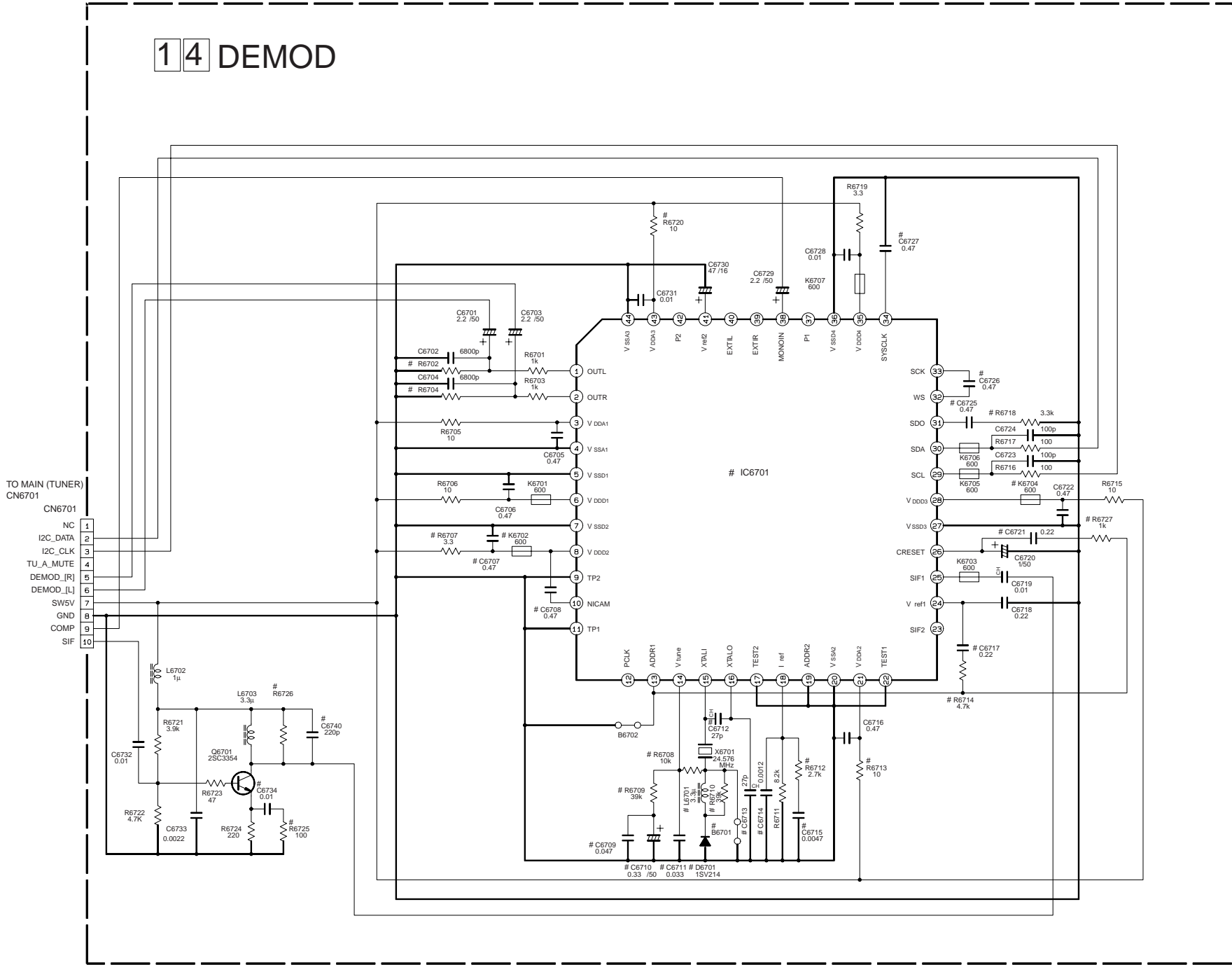
4

3

2

1

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.

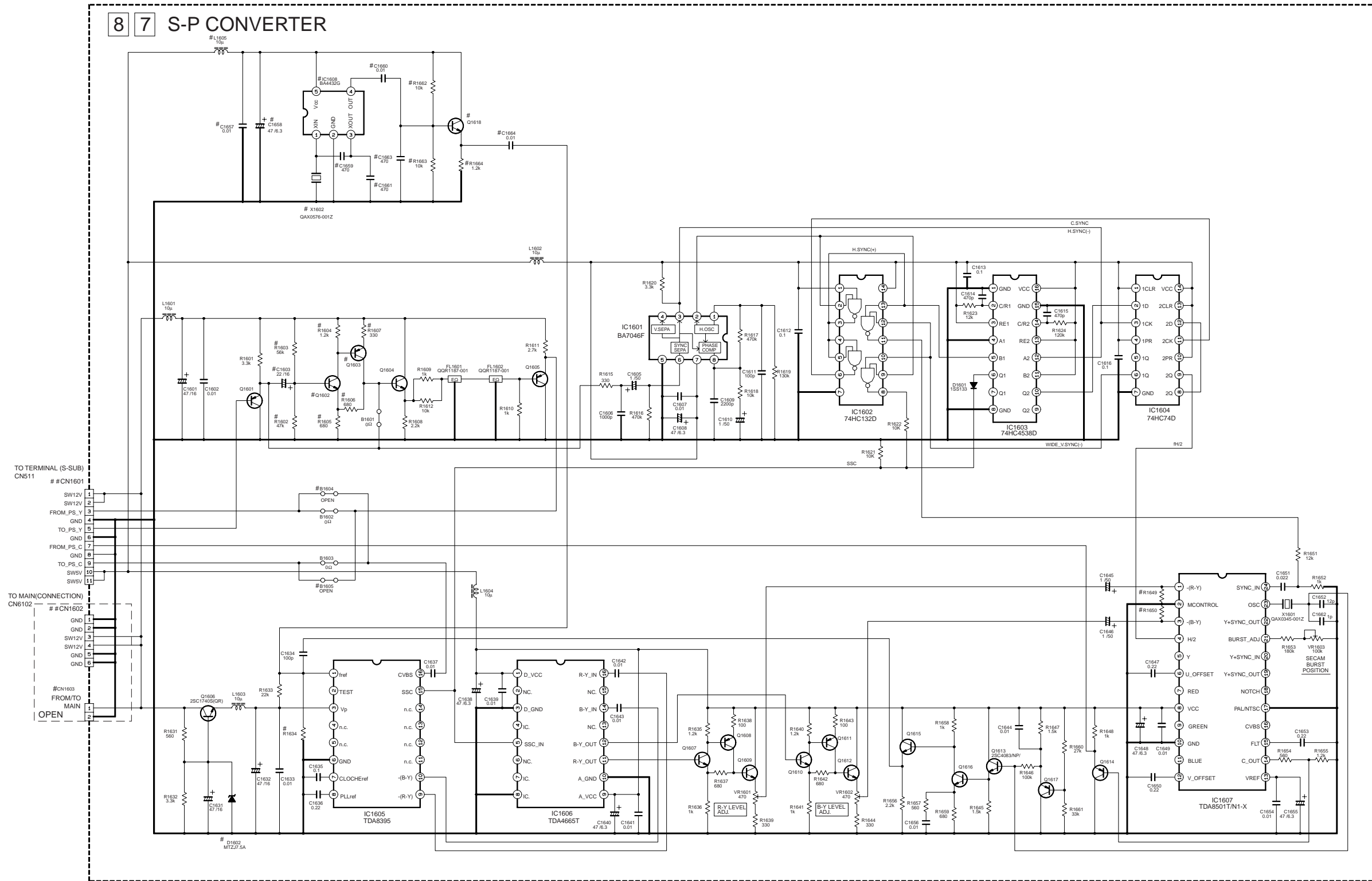


# DIFFERENCE TABLE			
	V12 EK/ARC	V12 EU/MS	V13/V14
IC6701	TDA9874H	←	TDA9874AH
R6707	10	←	NOT USED
R6708	10k	←	0Ω
R6709	39k	←	NOT USED
R6710	39k	←	NOT USED
R6713	10	←	NOT USED
R6720	10	←	NOT USED
R6725	100	NOT USED	100
R6726	1k	2.2k	1k
C6707	0.47	←	NOT USED
C6710	0.33/50	←	NOT USED
C6711	0.033	←	NOT USED
C6712	27p	←	NOT USED
C6713	27p	←	0Ω
C6714	0.0012	←	NOT USED
C6734	0.01	NOT USED	0.01
C6740	NOT USED	220p	NOT USED
L6701	3.3μ	←	NOT USED
D6701	1SV214	←	NOT USED
K6702	600	←	NOT USED
R6702,R6704, R6712,R6714, R6717,R6718, C6708,C6709, C6715,C6717, C6721,C6725, C6726,C6727, B6701	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  
- MYL  
- NON POLAR

4.16 S-P CONVERTER SCHEMATIC DIAGRAM [HR-S6955MS/S7955MS]

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.



# MARKED ELEMENTS ARE NOT MOUNTED.

ABOUT ## MARKED ELEMENTS

ELEMENTS	CN1601	CN1602
MODELS		
HR-S6955MS	1pin-11pin	NOT USED
HR-S7955MS		
VR1200/39	3pin-11pin	3pin-6pin

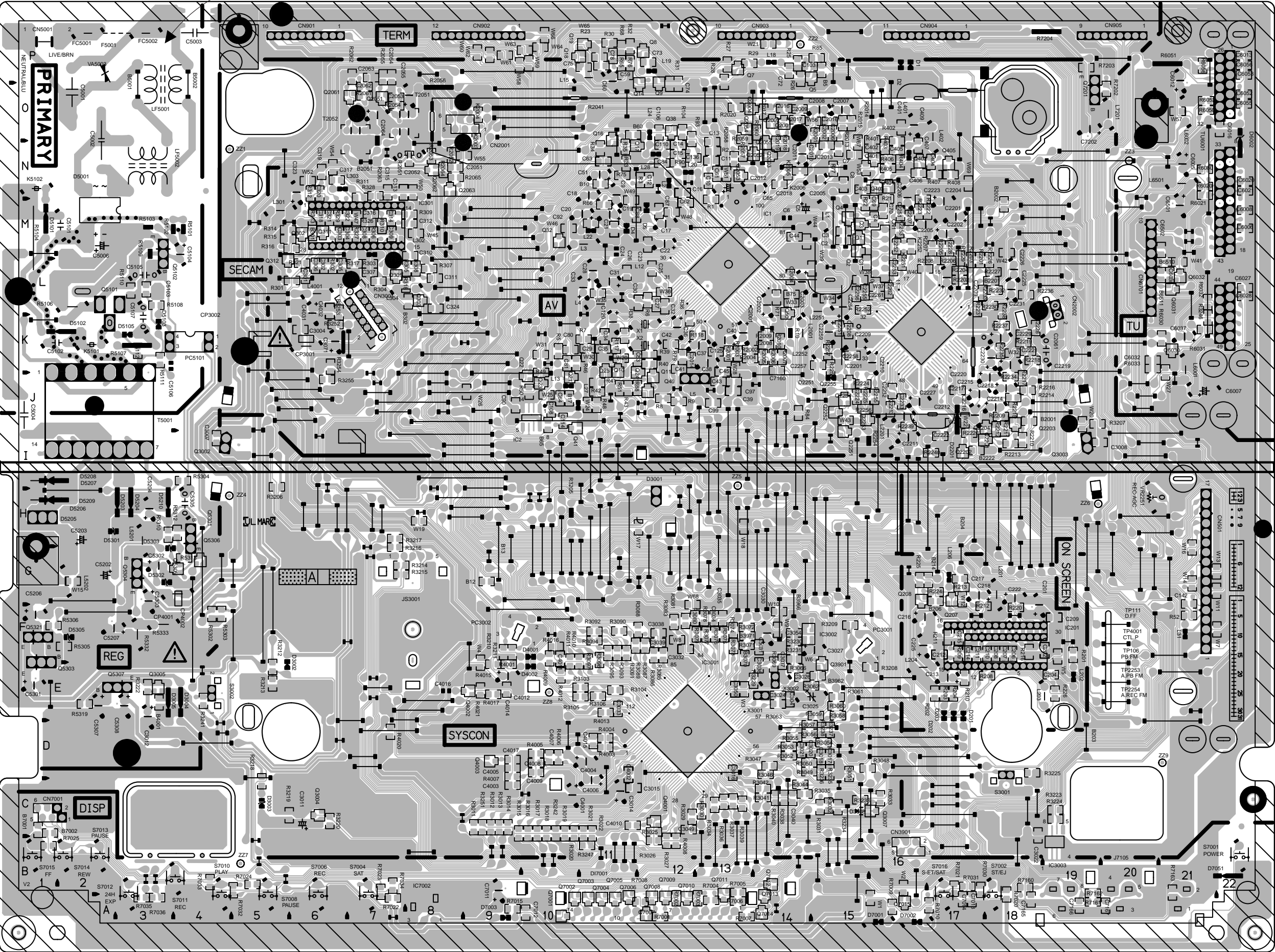
NOTES: UNLESS OTHERWISE SPECIFIED.  
ALL RESISTANCE VALUES ARE IN OHMS.  
ALL INDUCTANCE VALUES ARE IN H.  
ALL CAPACITANCE VALUES ARE IN  $\mu$ F.

- + ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

4.17 MAIN CIRCUIT BOARD

<03> MAIN  
LPB10170-001C

DANGEROUS VOLTAGE



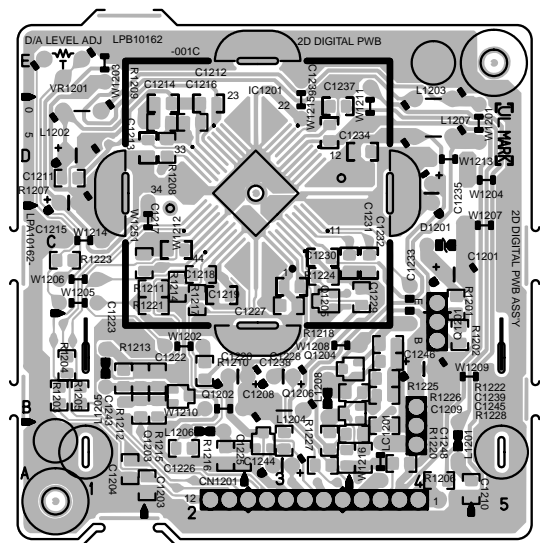
# COMPONENT PARTS LOCATION GUIDE <MAIN> LPB10170-001C

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	
CAPACITOR																		
C1	B C 15L	C309	B C 7M	C3022	B C 18C	CN7001	A D 2C	Q14	B C 120	R32	B C 11P	R2059	B C 130	R3074	B C 13F	R6031	B C 21K	
C2	B C 15M	C310	B C 8M	C3024	B C 14E	DIODE	Q16	B C 110	R33	B C 11N	R2060	B C 140	R3075	B C 13F	R6032	B C 21L		
C3	B C 15M	C311	B C 8L	C3025	A D 15E		Q17	B C 12N	R34	B C 11N	R2061	B C 70	R3076	B C 13F	R6033	B C 20K		
C4	B C 16M	C312	B C 8M	C3026	B C 14E		Q18	B C 10P	R35	B C 11N	R2062	B C 7P	R3077	B C 13F	R6050	B C 210		
C5	A D 14M	C313	B C 7N	C3027	A D 14F		Q19	B C 11P	R36	B C 12K	R2063	A D 70	R3078	B C 13F	R6051	A D 21P		
C6	A D 14M	C314	B C 7M	C3030	A D 14F		Q21	B C 10J	R38	B C 11K	R2064	B C 8N	R3079	B C 13F	R6052	B C 210		
C7	B C 15N	C315	B C 7N	C3031	B C 14F		Q22	B C 10J	R39	B C 12K	R2065	B C 8N	R3080	B C 13F	R6056	B C 21P		
C8	B C 15N	C316	B C 7M	C3032	B C 12F		Q23	B C 10J	R40	B C 12K	R2201	B C 17L	R3081	B C 12F	R6080	B C 21N		
C9	A D 11M	C317	B C 6N	C3033	B C 11E		Q24	B C 12K	R41	B C 11J	R2202	B C 17L	R3083	B C 12F	R7001	B C 12A		
C10	B C 13N	C318	B C 6M	C3034	B C 13F		Q25	B C 11K	R42	B C 11J	R2203	B C 17L	R3085	B C 12F	R7002	B C 12A		
C11	B C 13N	C319	B C 6N	C3035	B C 13F		Q32	B C 10M	R43	B C 11J	R2204	B C 17L	R3086	B C 12F	R7003	B C 13A		
C12	B C 13N	C320	B C 6N	C3036	B C 14E	Q38	B C 120	R46	B C 10K	R2205	B C 17M	R3087	B C 12F	R7004	B C 13A			
C13	B C 13N	C321	B C 6M	C3037	B C 14F	Q40	B C 12J	R48	B C 11J	R2206	B C 17L	R3088	B C 12F	R7005	B C 13B			
C14	B C 13N	C322	B C 7M	C3038	B C 12F	Q41	B C 10J	R49	B C 10K	R2207	B C 17M	R3089	B C 11F	R7006	B C 13A			
C15	B C 12N	C323	A D 6N	C3039	B C 12F	Q50	B C 14L	R50	B C 10J	R2208	B C 17L	R3090	B C 11F	R7007	B C 13A			
C16	B C 12N	C324	B C 8L	C3040	B C 14C	Q207	B C 17G	R51	B C 11J	R2209	B C 18J	R3091	B C 11F	R7008	B C 12A			
C17	B C 12N	C401	B C 160	C3041	B C 14E	Q208	B C 16G	R52	B C 21G	R2210	B C 18J	R3092	B C 11F	R7009	B C 16A			
C18	A D 12M	C402	B C 16N	C3049	B C 12C	Q301	B C 7L	R65	B C 11P	R2211	B C 18J	R3093	B C 11F	R7010	B C 17A			
C19	A D 11M	C403	B C 15N	C3050	B C 13E	Q302	B C 6M	R66	B C 11M	R2212	B C 18J	R3094	B C 11F	R7015	B C 9A			
C20	A D 11M	C404	B C 17N	C3054	B C 14F	Q303	B C 8L	R68	B C 11P	R2213	B C 18J	R3095	B C 11F	R7020	B C 18A			
C21	B C 11M	C405	B C 16N	C3071	A D 6K	Q311	B C 6M	R71	B C 14L	R2214	B C 18J	R3096	B C 11F	R7021	B C 17B			
C22	A D 12M	C406	B C 16N	C4001	A D 10C	D5101	A D 1M	Q312	B C 5L	R75	B C 11N	R2215	B C 18J	R3097	B C 11F	R7022	B C 7A	
C23	B C 12M	C407	B C 16N	C4002	B C 11D	D5102	A D 2K	Q401	B C 16N	R76	B C 11P	R2216	B C 18J	R3103	B C 11E	R7023	B C 7B	
C24	A D 11L	C2001	A D 13K	C4004	A D 11D	D5103	A D 3K	Q402	B C 16N	R77	B C 15N	R2217	B C 18J	R3104	B C 11E	R7024	B C 5B	
C25	B C 12L	C2002	A D 14L	C4005	B C 9D	D5105	A D 3K	Q403	B C 16N	R79	B C 12K	R2218	B C 18K	R3105	B C 11E	R7025	B C 1B	
C26	B C 11L	C2003	A D 14L	C4006	A D 11C	D5203	A D 3I	Q404	B C 16N	R84	B C 14J	R2219	B C 18K	R3106	B C 11E	R7030	B C 17B	
C27	B C 12L	C2004	B C 14L	C4007	B C 10D	D5204	A D 3I	Q405	B C 17N	R85	B C 15P	R2220	B C 17I	R3205	A D 10H	R7031	B C 17B	
C28	A D 11L	C2005	A D 15N	C4008	B C 10D	D5205	A D 1H	Q2001	B C 140	R88	B C 12J	R2222	B C 17M	R3206	B C 5I	R7032	B C 5B	
C29	B C 11K	C2006	B C 150	C4009	B C 10D	D5206	A D 2H	Q2002	B C 140	R90	B C 12N	R2223	B C 16M	R3207	B C 19J	R7033	B C 4B	
C30	B C 12L	C2007	A D 150	C4010	B C 11C	D5207	A D 2I	Q2003	B C 14N	R93	B C 120	R2224	B C 15J	R3208	B C 16E	R7034	B C 7B	
C31	A D 11L	C2008	A D 150	C4011	B C 10F	D5208	A D 2I	Q2004	B C 130	R104	B C 120	R2225	B C 15J	R3209	B C 15F	R7035	B C 3A	
C32	B C 12L	C2009	B C 140	C4012	A D 9E	D5209	A D 2H	Q2051	B C 70	R117	B C 11K	R2226	B C 18L	R3210	B C 9F	R7036	B C 3A	
C33	A D 11L	C2010	B C 15N	C4014	B C 9E	D5210	A D 3I	Q2052	B C 14N	R118	B C 13K	R2227	B C 18L	R3211	B C 9F	R7160	B C 18B	
C34	B C 11K	C2011	A D 14N	C4015	B C 11D	D5301	A D 2H	Q2053	B C 13N	R201	B C 19F	R2228	B C 17M	R3212	B C 5E	R7161	B C 19A	
C35	B C 11K	C2012	A D 13N	C4016	A D 8E	D5302	A D 4G	Q2054	B C 130	R202	B C 17E	R2229	B C 17L	R3213	B C 5E	R7162	B C 19B	
C36	A D 12K	C2013	B C 15N	C4017	B C 9D	D5303	A D 4G	Q2055	B C 14N	R203	B C 17E	R2230	B C 18L	R3214	B C 7G	R7163	B C 21B	
C37	A D 12K	C2014	B C 12K	C4031	A D 6L	D5305	A D 2F	Q2061	B C 70	R204	B C 17E	R2231	B C 17L	R3215	B C 7G	R7202	B C 200	
C38	A D 13K	C2016	B C 150	C4032	B C 6L	D7001	A D 16A	Q2062	B C 8N	R208	B C 18E	R2232	B C 18L	R3216	B C 7G	R7203	B C 19P	
C39	B C 13J	C2017	B C 140	C5001	A D 2P	D7002	A D 16A	Q2201	B C 18I	R210	B C 17E	R2234	B C 18J	R3218	B C 5C	SWITCH		
C40	A D 13K	C2018	B C 14N	C5002	A D 2N	D7051	A D 22B	Q2202	B C 17I	R211	B C 17F	R2235	B C 18K	R3219	B C 6C		S3001	A D 18C
C41	B C 12K	C2051	B C 8N	C5003	A D 4P	IC	Q2203	B C 18J	R212	B C 17F	R2236	B C 18L	R3220	B C 6C	S3002		A D 4E	
C42	B C 12K	C2052	A D 7N	C5004	A D 1J		Q2204	B C 18J	R213	B C 17G	R2237	B C 18K	R3222	B C 3E	S7001		A D 22B	
C43	B C 13J	C2053	B C 70	C5006	A D 2M		Q2251	B C 15I	R216	B C 18F	R2238	B C 18L	R3223	B C 19C	S7002		A D 18B	
C44	B C 14M	C2054	B C 7P	C5101	A D 2M		Q2252	B C 15J	R220	B C 18F	R2239	B C 16J	R3224	B C 19C	S7004		A D 7B	
C45	B C 13K	C2055	A D 80	C5102	A D 1K		Q2253	B C 15J	R224	B C 17G	R2240	B C 17I	R3225	B C 18D	S7006		A D 6B	
C51	A D 11N	C2061	A D 19K	C5103	B C 3L		Q2254	B C 15J	R225	B C 16G	R2251	B C 15K	R3229	B C 14E	S7008		A D 5B	
C53	B C 12K	C2062	B C 70	C5104	A D 4M		Q2255	B C 15J	R226	B C 19E	R2252	B C 15L	R3230	B C 14F	S7010		A D 4B	
C59	B C 11P	C2063	B C 7P	C5105	A D 3L		Q3001	A D 5I	R301	B C 6L	R2253	B C 15K	R3231	B C 14F	S7011		A D 4B	
C60	A D 11P	C2064	A D 70	C5106	A D 3J		Q3002	A D 19I	R302	B C 6L	R2254	A D 16I	R3233	B C 15C	S7012	A D 3B		
C61	B C 13N	C2201	A D 17M	C5107	A D 3L		Q3003	A D 6C	R303	B C 7L	R2255	B C 16J	R3234	B C 15C	S7013	A D 2B		
C62	B C 12M	C2202	A D 17M	C5202	A D 2G	Q3004	B C 3E	R304	B C 7L	R2256	B C 15J	R3235	B C 15D	S7014	A D 2B			
C63	B C 11N	C2203	A D 17L	C5203	A D 2H	Q3005	B C 16C	R305	B C 8L	R2257	B C 15K	R3236	B C 15D	S7015	A D 1B			
C64	B C 10J	C2204	A D 17M	C5204	A D 3H	Q3901	B C 15E	R306	B C 7M	R3011	B C 9C	R3237	B C 15D	S7016	A D 17B			
C65	A D 14N	C2205	A D 16M	C5206	A D 1F	Q4001	B C 12C	R307	B C 8L	R3012	B C 9C	R3238	B C 15D	TESTPOINT				
C69	B C 16M	C2206	A D 16M	C5207	A D 3F	Q4002	B C 9E	R308	B C 8L	R3013	B C 9C	R3241	B C 4E		TP106	A D 19E		
C70	B C 16M	C2207	B C 16M	C5301	A D 1E	Q4003	B C 9D	R309	B C 8M	R3014	B C 9C	R3242	B C 10C		TP111	A D 19F		
C72	B C 14P	C2208	B C 15K	C5302	A D 3G	L1	A D 15M	Q5101	A D 2L	R310	B C 7M	R3015	B C 9C		TP2253	A D 19E		
C73	B C 12P	C2209	A D 15K	C5303	A D 3G	L2	A D 10M	Q5102	A D 3M	R311	B C 7N	R3016	B C 10C		TP2254	A D 19E		
C74	B C 120	C2210	A D 16K	C5305	A D 4H	L3	A D 11L	Q5301	A D 4G	R312	B C 6N	R3017	B C 10C		TP3901	B C 14D		
C75	B C 11P	C2211	A D 16I	C5307	A D 2E	L4	A D 13J	Q5303	A D 1F	R313	B C 6M	R3018	B C 10C		TP3902	B C 13D		
C78	B C 11P	C2212	A D 16J	C5308	A D 3E	L12	A D 12L	Q5304	A D 3G	R314	B C 5M	R3019	B C 10C		TP3903	B C 15E		
C80	B C 10K	C2213	B C 16J	C6005	A D 21N	L13	A D 10J	Q5305	B C 4G	R315	B C 5M	R3020	B C 10C		TP3904	B C 13E		
C81	B C 10K	C2214	A D 18J	C6006	B C 22M	L15	A D 11P	Q5306	B C 4G	R316	B C 6M	R3021	B C 11C		TP3905	B C 14E		
C84	B C 12N	C2215	A D 17J	C6007	A D 21J	L18	A D 14P	Q5307	A D 3E	R317	B C 7L	R3022	B C 11C	TP3906	B C 14D			
C87	B C 12M	C2216	A D 17J	C6008	B C 22M	L19	A D 12P	Q5321	A D 1F	R318	B C 8L	R3025	B C 12C	TP3907	B C 15E			
C88	B C 11M	C2217	B C 17J	C6012	A D 210	L20	A D 12N	Q6030	B C 21K	R321	B C 6L	R3026	B C 12B	TP4001	A D 20F			
C90	B C 9J	C2218	A D 18J	C6013	B C 22P	L22	A D 11M	Q6031	B C 21L	R326	B C 7M	R3027	B C 12B	OTHER				
C92	B C 11M	C2219	A D															



## 4.18 2D DIGITAL AND 3D DIGITAL/2M CIRCUIT BOARDS

### <05> 2D DIGITAL LPB10162-001C

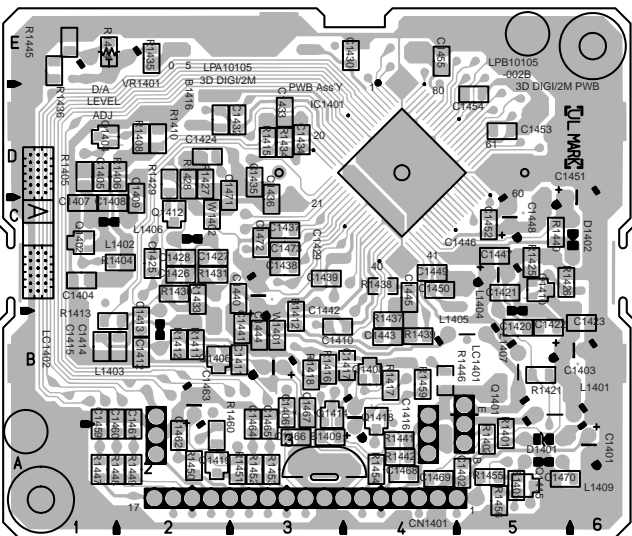


### COMPONENT PARTS LOCATION GUIDE <2D DIGITAL> LPB10162-001C

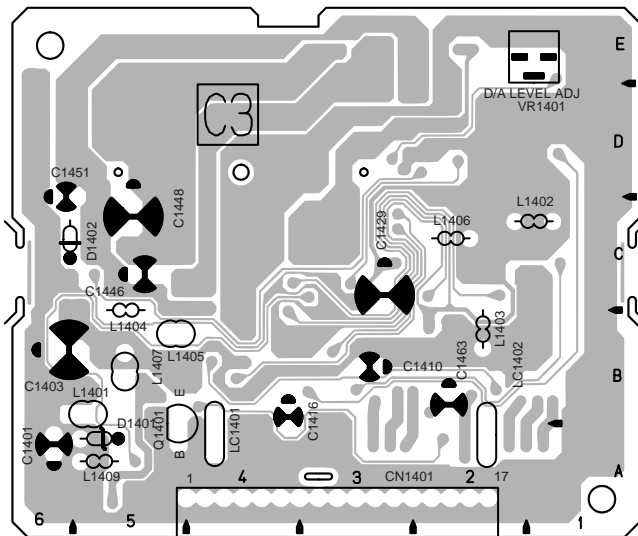
REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
<b>CAPACITOR</b>				<b>TRANSISTOR</b>			
C1201	A D 4C	C1231	B C 3C	L1203	A D 4D	R1211	B C 2C
C1203	B C 2A	C1232	B C 4C	L1204	A D 3B	R1212	B C 2B
C1204	B C 1A	C1233	A D 4C	L1205	A D 1B	R1213	B C 2B
C1208	B C 3A	C1234	B C 4D	L1206	A D 2A	R1214	B C 2C
C1209	B C 4A	C1235	A D 4D	L1207	A D 4D	R1215	B C 3A
C1210	B C 5A	C1236	B C 3D	L1208	A D 3B	R1216	B C 2A
C1211	A D 1D	C1237	B C 3D	<b>RESISTOR</b>			
C1212	B C 2D	C1238	B C 3B	Q1201	A D 4C	R1217	B C 2C
C1213	B C 2D	C1239	B C 4B	Q1202	B C 2B	R1218	B C 3C
C1214	B C 2D	C1240	B C 2B	Q1203	B C 3A	R1219	B C 2C
C1215	A D 1C	C1241	A D 3A	Q1204	B C 3B	R1220	B C 3A
C1216	B C 2D	C1242	B C 4B	Q1205	B C 3C	R1221	B C 2C
C1217	B C 2C	C1243	A D 4B	Q1206	B C 3B	R1222	B C 4B
C1218	B C 2C	C1244	B C 4A	<b>RESISTOR</b>			
C1219	B C 2C	<b>CONNECTOR</b>				R1223	B C 1C
C1220	A D 3B	CN1201	A D 4A	R1201	B C 4C	R1224	B C 3C
C1221	B C 2D	<b>DIODE</b>		R1202	B C 4B	R1225	B C 3A
C1222	B C 1B	D1201	A D 4C	R1203	B C 1B	R1226	B C 4B
C1223	B C 2A	<b>IC</b>		R1204	B C 1B	<b>OTHER</b>	
C1224	B C 2A	IC1201	B C 3D	R1205	B C 1B	LC1201	A D 4A
C1225	B C 3C	<b>COIL</b>		R1206	B C 4A	VR1201	A D 1E
C1226	B C 2A	L1201	A D 4B	R1207	B C 1D		
C1227	B C 3C	L1202	A D 1D	R1208	B C 2D		
C1228	A D 3B			R1209	B C 2D		
C1229	B C 4C			R1210	B C 2B		
C1230	B C 3C						

### <05> 3D DIGITAL/2M LPB10105-002B

- FOIL SIDE (B) -



- COMPONENT SIDE (A) -

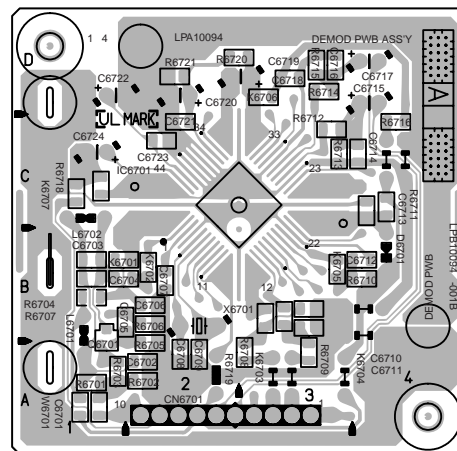


### COMPONENT PARTS LOCATION GUIDE <3D DIGITAL/2M> LPB10105-002B

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<b>CAPACITOR</b>				<b>IC</b>				<b>RESISTOR</b>				<b>OTHER</b>	
C1401	A D 6A	C1427	B C 2C	C1453	B C 5D	IC1401	B C 4D	Q1418	B C 4B	R1431	B C 2C	R1460	B C 2A
C1402	B C 5A	C1428	B C 2C	C1454	B C 5D			Q1419	B C 2A	R1433	B C 2C		
C1403	A D 6B	C1429	A D 3C	C1455	B C 4E	<b>COIL</b>				R1434	B C 3D	<b>OTHER</b>	
C1404	B C 1C	C1430	B C 4E	C1456	B C 1B	L1401	A D 5B	R1401	B C 5A	R1435	B C 2E	VR1401	A D 2E
C1405	B C 1D	C1431	B C 3D	C1457	B C 2B	L1402	A D 2C	R1402	B C 5A	R1436	B C 1E		
C1406	B C 3B	C1432	B C 3D	C1458	B C 2B	L1403	A D 2B	R1403	B C 2C	R1437	B C 4B		
C1407	B C 1C	C1433	B C 3D	C1459	A D 2B	L1404	A D 5C	R1404	B C 1D	R1438	B C 4C		
C1408	B C 2C	C1434	B C 3D	C1460	B C 3B	L1405	A D 4B	R1405	B C 2D	R1439	B C 4B		
C1409	B C 2C	C1435	B C 3D	C1461	B C 3B	L1406	A D 2C	R1406	B C 2D	R1440	B C 5C		
C1410	A D 3B	C1436	B C 3C	C1462	B C 3A	L1407	A D 5B	R1407	B C 2D	R1441	B C 4A		
C1411	B C 3B	C1437	B C 3C	C1463	B C 3B	L1408	A D 5A	R1408	B C 2D	R1442	B C 4A		
C1412	B C 2B	C1438	B C 3C	C1464	B C 3A	L1409	A D 5A	R1409	B C 2D	R1443	B C 4A		
C1413	B C 2B	C1439	B C 3C	C1465	B C 3B	LC1401	A D 4A	R1410	B C 2D	R1444	B C 2E		
C1414	B C 2B	C1440	B C 3C	C1466	B C 3A	LC1402	A D 2A	R1411	B C 2B	R1445	B C 1E		
C1415	B C 1B	C1441	B C 3B	C1467	B C 3B			R1412	B C 2B	R1446	B C 4B		
C1416	A D 4A	C1442	B C 4B	C1468	B C 4A			R1413	B C 2B	R1447	B C 1A		
C1417	B C 4B	C1443	B C 4B	C1469	B C 4A			R1414	B C 3D	R1448	B C 2A		
C1418	A D 4A	C1444	B C 3B	C1470	B C 6A			R1415	B C 3D	R1449	B C 2A		
C1419	B C 4B	C1445	B C 4C	C1471	B C 3D			R1416	B C 3B	R1450	B C 2A		
C1420	B C 5B	C1446	A D 5C	C1472	B C 3C			R1417	B C 4B	R1451	B C 3A		
C1421	B C 5C	C1447	B C 5C	C1473	B C 3C			R1418	B C 3B	R1452	B C 3A		
C1422	B C 5B	C1448	A D 5C	<b>CONNECTOR</b>				R1419	B C 5B	R1453	B C 3A		
C1423	B C 6B	C1449	B C 4C	CN1401	A D 5A			R1420	B C 5B	R1454	B C 4A		
C1424	B C 2D	C1450	B C 4C	<b>DIODE</b>				R1421	B C 5B	R1455	B C 5A		
C1425	B C 2C	C1451	A D 6D	D1401	A D 6A			R1422	B C 5B	R1456	B C 5A		
C1426	B C 2C	C1452	B C 5C	D1402	A D 6C			R1423	B C 5B	R1457	B C 4B		

#### 4.19 DEMODULATOR CIRCUIT BOARD

**<14> DEMODULATOR**  
**LPB10094-001C**



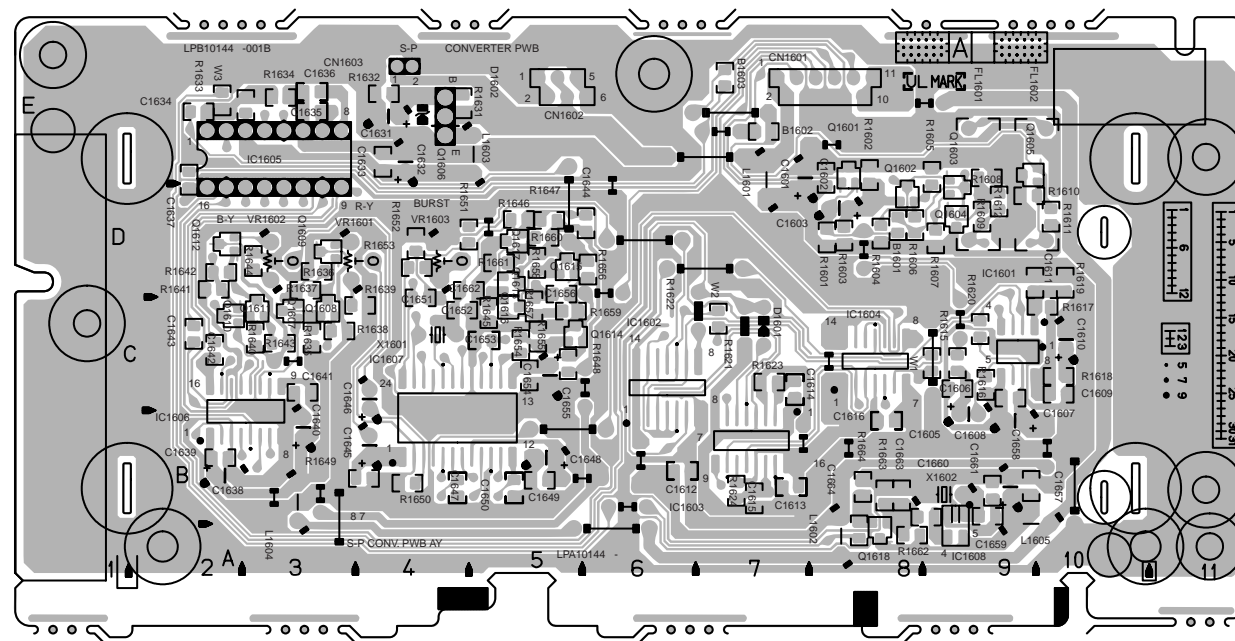
## COMPONENT PARTS LOCATION GUIDE

### <DEMOMULATOR> LPB10094-001C

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<b>CAPACITOR</b>		C1520	A D 3A	R1509	A D 3B
C1501	A D 4C	C1521	A D 2C	R1510	A D 4B
C1502	A D 3D	<b>CONNECTOR</b>		R1511	A D 3A
C1503	A D 4D	CN1501	A D 3A	R1514	A D 2B
C1504	A D 4C	<b>IC</b>		R1515	A D 2C
C1505	A D 3D	IC1501	B C 2C	R1517	A D 2C
C1506	A D 3C	<b>TRANSISTOR</b>			
C1507	A D 2C	Q1501	A D 3B		
C1508	A D 1D	Q1502	A D 3B		
C1509	A D 2C	<b>RESISTOR</b>			
C1510	A D 1B	R1501	A D 4C		
C1511	A D 1A	R1502	A D 2C		
C1512	A D 2A	R1503	A D 2C		
C1513	A D 2B	R1504	A D 2B		
C1514	A D 2A	R1505	A D 2B		
C1515	A D 3B	R1506	A D 2B		
C1516	A D 3C	R1507	A D 2B		
C1517	A D 3B	R1508	A D 3B		
C1518	A D 3A				
C1519	A D 3B				

## 4.20 S-P CONVERTER CIRCUIT BOARD [HR-S6955MS/S7955MS]

**<87> S-P CONVERTER**  
**LPB10144-001B**

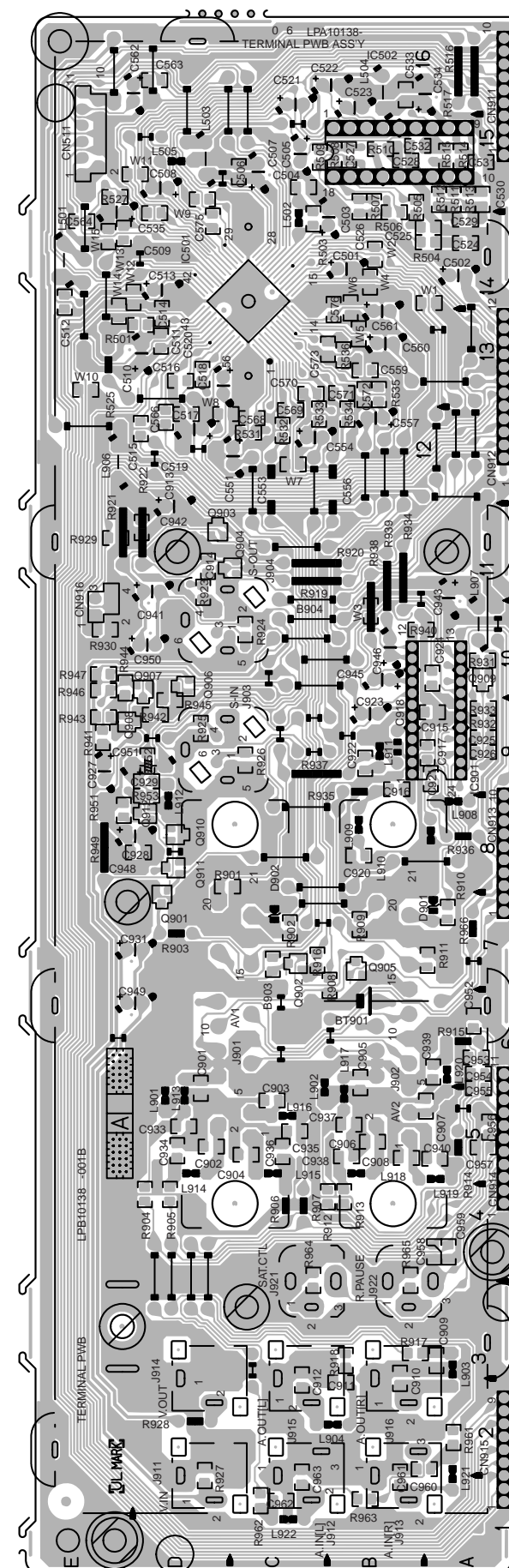


## COMPONENT PARTS LOCATION GUIDE <S-P CONVERTER> LPB10144-001B

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<b>CAPACITOR</b>		C1635	B C 3E	C1655	A D 5C	IC1602	B C 6C	Q1606	A D 4E	R1607	B C 9D	R1635	B C 3C	R1655	B C 5C				
C1601	A D 7E	C1636	B C 3E	C1656	B C 5D	IC1603	B C 7B	Q1607	B C 3C	R1608	B C 9E	R1636	B C 3D	R1656	B C 6D				
C1602	B C 8E	C1637	B C 2E	C1657	B C 9B	IC1604	B C 8C	Q1608	B C 3C	R1609	B C 9D	R1637	B C 3D	R1657	B C 5C				
C1603	A D 8D	C1638	A D 2B	C1658	A D 9B	IC1605	A D 2E	Q1609	B C 3D	R1610	B C 9D	R1638	B C 3C	R1658	B C 5D				
C1605	A D 9C	C1639	B C 2B	C1659	B C 9B	IC1606	B C 3C	Q1610	B C 2C	R1611	B C 10D	R1639	B C 4C	R1659	B C 5C				
C1606	B C 9C	C1640	A D 3B	C1660	B C 9B	IC1607	B C 4C	Q1611	B C 3C	R1612	B C 9D	R1640	B C 3C	R1660	B C 5D				
C1607	B C 9C	C1641	B C 3C	C1661	B C 9B	IC1608	B C 9B	Q1612	B C 2D	R1613	B C 9C	R1641	B C 2D	R1661	B C 5D				
C1608	A D 9B	C1642	B C 2C	C1662	B C 5D	<b>COIL</b>				Q1613	B C 5D	R1616	B C 9C	R1642	B C 2D	R1662	B C 8A		
C1609	B C 10C	C1643	B C 2C	C1663	B C 8B	L1601	A D 7E	Q1614	B C 5C	R1617	B C 10C	R1643	B C 3C	R1663	B C 8B				
C1610	A D 10C	C1644	B C 6D	C1664	B C 8B	L1602	A D 8A	Q1615	B C 5D	R1618	B C 10C	R1644	B C 3D	R1664	B C 8B				
C1611	B C 9D	C1645	A D 4B	<b>CONNECTOR</b>				Q1616	B C 5C	R1619	B C 10D	R1645	B C 5C	VR1601	A D 3C				
C1612	B C 6B	C1646	A D 4C	CN1601	A D 7F	L1603	A D 5E	Q1617	B C 5D	R1620	B C 9C	R1646	B C 5D	VR1602	A D 3D				
C1613	B C 7B	C1647	B C 4B	CN1602	A D 5F	L1604	A D 3B	Q1618	B C 5D	R1621	A D 7C	R1647	B C 5D	VR1603	A D 4D				
C1614	B C 7C	C1648	A D 5B	CN1603	A D 4F	L1605	A D 10B	<b>RESISTOR</b>				R1622	A D 7C	R1648	B C 5C	<b>OTHER</b>			
C1615	B C 7B	C1649	B C 5B	<b>TRANSISTOR</b>				R1623	B C 7C	R1649	B C 4B			FL1601	A D 9C				
C1616	B C 8B	C1650	B C 5B	<b>DIODE</b>				Q1601	B C 8E	R1624	B C 7B	R1650	B C 4B	FL1602	A D 10E				
C1631	A D 4E	C1651	B C 4D	D1601	A D 7C	Q1602	B C 8D	R1603	B C 8D	R1631	B C 4E	R1651	B C 5D	X1601	A D 4C				
C1632	A D 4E	C1652	B C 4C	D1602	A D 4E	Q1603	B C 9E	R1604	B C 8D	R1632	B C 4E	R1652	B C 4D	X1602	A D 9E				
C1633	B C 4E	C1653	B C 5C	<b>IC</b>				Q1604	B C 9D	R1605	B C 9E	R1633	B C 3E	R1653	B C 4D				
C1634	B C 2E	C1654	B C 5C	IC1601	B C 9C	Q1605	B C 9E	R1606	B C 8D	R1634	B C 3E	R1654	B C 5C						

#### 4.21 TERMINAL CIRCUIT BOARD

**<06> TERMINAL**  
**LPB10138-001B**



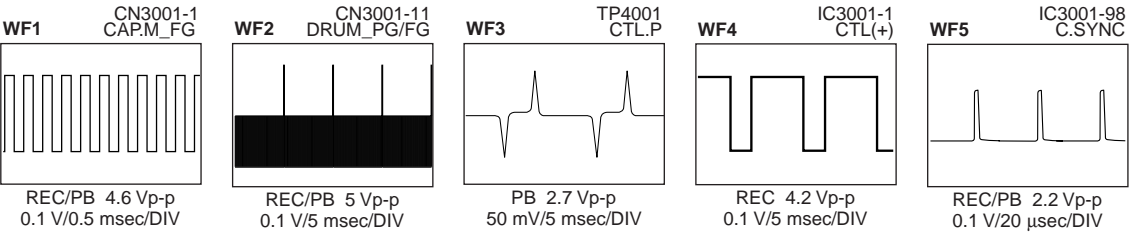
## COMPONENT PARTS LOCATION GUIDE

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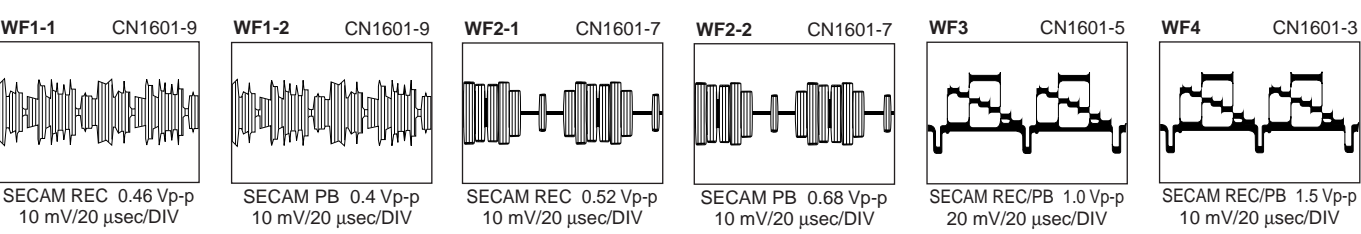
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CAPACITOR		C954	B C 6A	R535	B C 13B
C501	A D 14B	C955	B C 5A	R536	B C 13B
C502	A D 14A	C956	B C 5A	R901	B C 8D
C503	A D 14B	C957	B C 5A	R902	B C 7C
C504	B C 15C	C958	B C 4A	R903	A D 7D
C505	A D 15C	C959	B C 4A	R904	B C 4D
C506	B C 15C	C960	B C 2B	R905	B C 4D
C507	A D 15C	C961	B C 1B	R906	A D 4C
C508	A D 15D	C962	B C 1C	R907	A D 4C
C509	A D 14E	C963	B C 1C	R908	B C 7B
C510	A D 13D	CONNECTOR		R909	B C 7B
C511	B C 13D	CN511	A D 15E	R910	B C 7A
C512	B C 14E	CN911	A D 15A	R911	B C 7A
C513	A D 14D	CN912	A D 12A	R912	B C 4B
C514	B C 13D	CN913	A D 7A	R913	B C 4B
C515	B C 12D	CN914	A D 4A	R914	A D 5A
C516	B C 13D	CN915	A D 1A	R915	A D 6A
C517	B C 12D	CN916	A D 10E	R916	B C 7C
C518	B C 13D	DIODE		R917	B C 3B
C519	A D 12D	D901	A D 8A	R918	B C 3B
C520	A D 13D	D902	A D 7C	R919	A D 11B
C521	A D 16C	IC		R920	A D 11B
C522	A D 16C	IC501	B C 14C	R921	A D 11E
C523	A D 16B	IC502	A D 15B	R922	A D 11D
C524	B C 14A	IC901	A D 9B	R923	B C 11D
C525	B C 14A	JACK		R924	B C 10C
C526	B C 15B	J901	A D 6C	R925	B C 9D
C527	B C 15B	J902	A D 6B	R926	B C 9C
C528	B C 15B	J903	A D 9D	R927	B C 2D
C529	B C 14A	J904	A D 10D	R928	A D 2D
C530	B C 15A	J911	A D 2C	R929	B C 11E
C531	B C 15A	J912	A D 2C	R930	B C 10A
C532	B C 15B	J913	A D 2B	R931	B C 9A
C533	B C 16B	J914	A D 3D	R932	B C 9A
C534	A D 16A	J915	A D 3C	R933	B C 9A
C535	B C 14D	J916	A D 3C	R934	A D 11B
C551	A D 12C	J921	A D 4B	R935	A D 9B
C553	A D 12C	J922	A D 4B	R936	A D 8A
C554	A D 12C	COIL		R937	A D 9B
C555	A D 12B	L501	A D 14E	R938	A D 11B
C556	A D 12B	L502	A D 14C	R939	A D 11B
C557	A D 12B	L503	A D 15D	R940	B C 10B
C559	B C 13B	L504	A D 16B	R941	B C 9E
C560	A D 13B	L505	A D 15D	R942	B C 9D
C561	A D 13B	L901	A D 5D	R943	B C 9E
C562	A D 16D	L902	A D 5C	R944	B C 10E
C563	B C 16D	L903	A D 3A	R945	B C 9D
C564	B C 14E	L904	A D 2B	R946	B C 10E
C566	B C 12D	L906	A D 2E	R947	B C 10E
C568	B C 12C	L907	A D 10A	R949	A D 8E
C569	B C 12C	L908	A D 8A	R951	B C 8E
C570	B C 13C	L909	A D 8B	R952	B C 9D
C571	B C 13B	L910	A D 8A	R953	B C 8D
C572	B C 13B	L911	A D 8B	R961	B C 2A
C573	B C 13B	L912	A D 8D	R962	B C 1C
C575	B C 14D	L913	A D 6D	R963	B C 1B
C576	B C 13B	L914	A D 5D	R964	B C 4C
C901	B C 5D	L915	A D 5C	R965	B C 4B
C902	B C 5D	L916	A D 5C	R966	A D 7A
C903	B C 5C	L917	A D 5C	OTHER	
C904	B C 5C	L918	A D 5B	BT901	A D 6B
C905	B C 6B	L919	A D 5B		
C906	B C 5B	L920	A D 5A		
C907	B C 5A	L921	A D 2A		
C908	B C 5B	L922	A D 1C		
C909	B C 3A	TRANSISTOR			
C910	B C 3B	Q901	B C 7D		
C911	B C 2B	Q902	B C 7C		
C912	B C 2C	Q903	B C 11D		
C913	B C 11D	Q904	B C 11D		
C914	B C 11D	Q905	B C 7B		
C915	B C 9A	Q906	B C 10D		
C916	B C 9B	Q907	B C 10D		
C917	B C 9A	Q908	B C 9E		
C918	A D 9B	Q909	B C 10A		
C920	B C 8B	Q910	B C 8D		
C921	B C 9A	Q911	B C 8D		
C922	B C 9B	Q912	B C 8D		
C923	A D 9B	RESISTOR			
C924	B C 10A	R501	B C 13D		
C925	B C 9A	R503	B C 14C		
C926	B C 9A	R504	B C 14A		
C927	A D 9E	R505	B C 15B		
C928	B C 8D	R506	B C 14B		
C929	B C 9D	R507	B C 15B		
C931	A D 7E	R508	B C 15B		
C933	B C 5D	R509	B C 15C		
C934	B C 5D	R510	B C 15B		
C935	B C 5C	R511	B C 15A		
C936	B C 5C	R512	B C 15A		
C937	B C 5B	R513	B C 15A		
C938	B C 5B	R514	B C 15A		
C939	B C 6A	R515	B C 15A		
C940	B C 5A	R516	A D 16A		
C941	A D 11D	R517	A D 16A		
C942	A D 11D	R525	A D 13E		
C943	A D 11A	R527	B C 15E		
C945	A D 10B	R531	B C 12C		
C946	A D 10B	R532	B C 12C		
C948	A D 8E	R533	B C 12B		
C949	A D 6E	R534	B C 12C		
C950	A D 10D				
C951	A D 9E				
C952	B C 6A				
C953	B C 6A				

4.22 WAVEFORMS

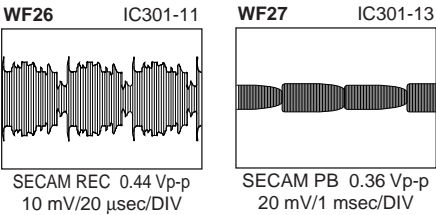
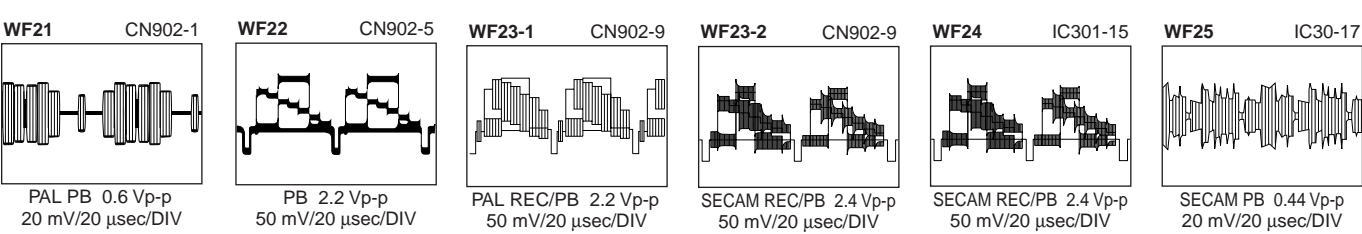
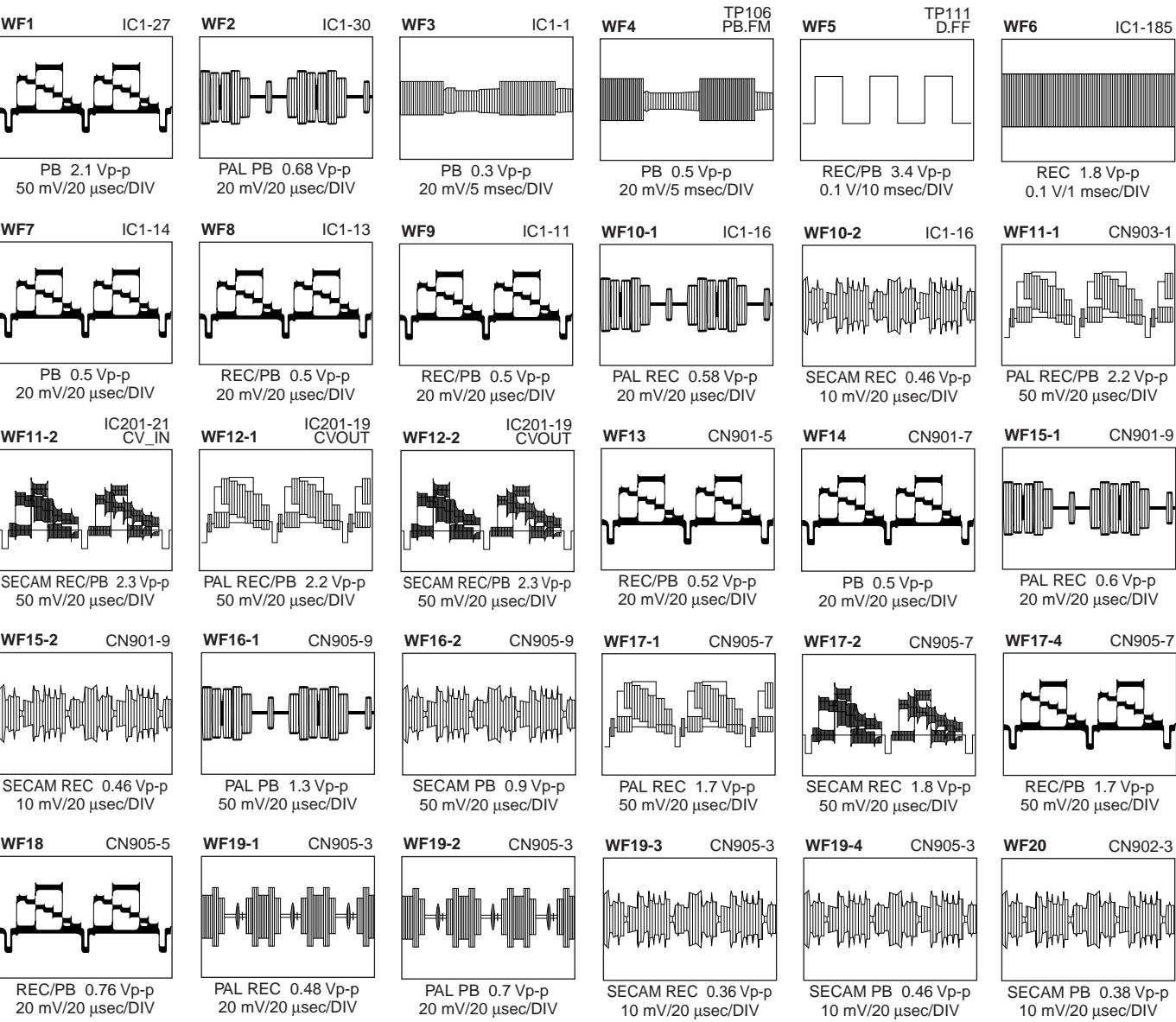
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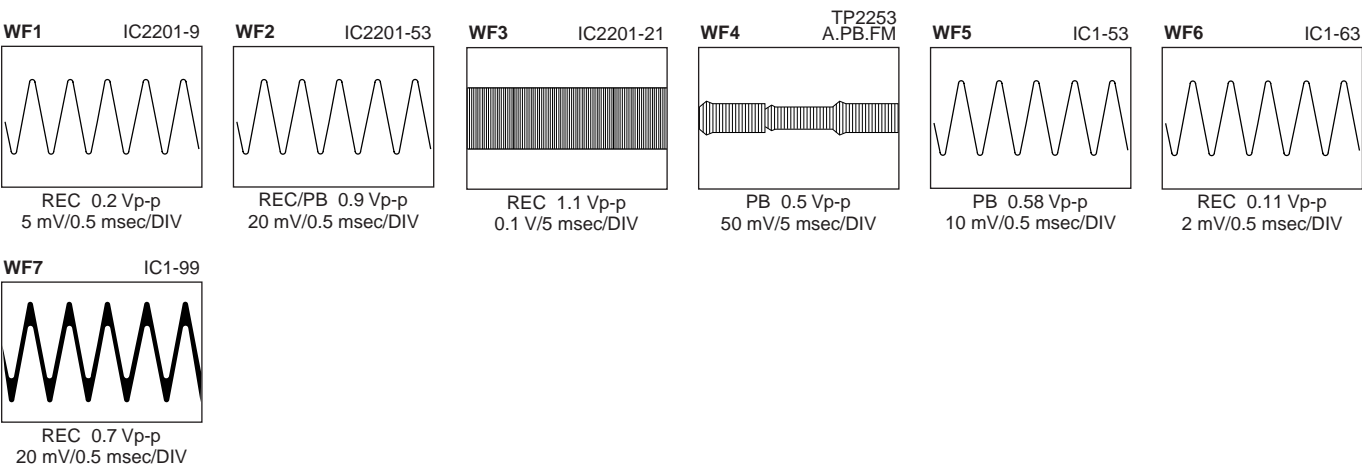
< S-P CONVERTER >



< VIDEO >



< AUDIO >





4.23 VOLTAGE CHARTS

MODE PIN NO.	REC	PLAY
IC1		
1	1.5	2.3
2	2.8	2.8
3	2.6	2.6
4	1.9	1.5
5	1.9	1.5
6	2.4	2.1
7	1.4	0.8
8	0	0
9	2.6	3.1
10	2.3	2.3
11	3.1	3.1
12	2.8	2.8
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	2.8	2.8
20	2.8	2.8
21	2.0	2.0
22	2.8	2.8
23	2.8	2.8
24	5.0	5.0
25	0.4	0.4
26	0	0
27	2.3	2.3
28	2.3	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.5	2.5
33	5.0	5.0
34	2.7	2.3
35	5.0	5.0
36	2.5	0
37	2.3	2.3
38	-	-
39	1.2	1.2
40	-	-
41	2.5	2.5
42	-	-
43	0	0
44	2.2	2.2
45	4.6	4.6
46	4.9	4.6
47	2.9	2.9
48	2.6	2.6
49	5.0	5.0
50	2.5	2.5
51	2.8	2.8
52	0	0
53	2.6	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	2	2
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	3.1	3.1
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	2.4	2.4
86	2.2	2.2
87	5.0	5.0
88	0	0
89	0	0

MODE PIN NO.	REC	PLAY
90	0	0
91	0	4.0
92	2.6	2.6
93	0.8	0.5
94	0	0
95	2.5	2.5
96	2.5	2.5
97	2.5	2.5
98	0	0
99	2.5	2.5
100	0	0
IC201		
1	0	0
2	2.5	2.5
3	4.9	4.9
4	0	0
5	4.4	4.4
6	2.4	2.4
7	2.4	2.4
8	4.9	4.9
9	3.3	3.3
10	4.2	4.2
11	1.6	1.6
12	4.9	4.9
13	2.7	2.7
14	2.7	2.7
15	0	0
16	1.2	1.2
17	0	0
18	4.9	4.9
19	2.3	2.3
20	0	0
21	2.3	2.3
22	0.5	0.5
23	4.9	4.9
24	2.9	2.9
25	2.5	2.5
26	4.9	4.9
27	4.6	4.6
28	3.5	3.5
29	4.9	4.9
30	4.9	4.9
IC301[HR-S6955MS/S7955MS]		
1	0.2	0.2
2	1.9	1.9
3	3.8	3.8
4	0.4	0.4
5	0	0
6	3.1	3.1
7	0	0
8	2.4	2.4
9	2.4	2.4
10	2.2	2.2
11	2.4	0
12	4.4	4.4
13	2.4	2.4
14	3	1.9
15	2.7	2.7
16	0.3	4.9
17	0.2	2.5
18	2.2	2.2
19	2.3	2.3
20	2.4	2.4
21	2.4	2.4
22	4.8	4.8
23	3.1	3.1
24	3.1	3.1
25	2.7	2.7
26	0	0
27	0.4	0.4
28	0.3	0.3
IC2201		
1	2.3	2.3
2	0	0
3	2.3	2.3
4	0	0
5	0	0
6	2.4	2.4
7	2.0	2.0
8	0	0
9	0	0
10	0	0
11	0	0
12	2.0	2.0
13	0	0
14	0	0
15	0	0
16	2.4	2.4
17	0.5	0.5
18	2.4	2.4

MODE PIN NO.	REC	PLAY
19	2.4	2.4
20	2.4	2.4
21	2.4	0
22	2.5	0.7
23	0	0
24	2.5	0.7
25	4.8	4.8
26	2.5	0
27	0	-
28	4.1	2.8
29	4.3	1.7
30	4.4	1.6
31	1.1	1.8
32	2.4	2.4
33	2.4	2.4
34	0.8	0.8
35	2.4	2.4
36	0	0.2
37	1.6	1.6
38	0	0
39	0	0
40	4.8	4.8
41	0	0
42	4.8	0
43	4.7	4.7
44	3.3	3.3
45	0	0
46	4.7	4.7
47	2.4	2.4
48	2.4	2.4
49	0.4	0.4
50	0.2	0.2
51	0	0
52	0	0
53	4.3	4.3
54	0	0
55	0	0
56	0	0
57	4.4	4.4
58	9.6	9.6
59	4.4	0
60	0.8	0.8
61	2.4	2.4
62	2.4	2.4
63	4.2	4.2
64	4.3	4.3
IC3001		
1	2.5	2.5
2	0	0
3	2.5	2.5
4	2.4	2.4
5	0	1.5
6	2.4	2.6
7	2.4	2.4
8	2.4	2.4
9	4.8	4.8
10	4.8	4.8
11	0	0
12	0	0.2
13	0	2.0
14	4.4	4.6
15	4.9	4.6
16	0.6	0.6
17	4.0	4.0
18	0	0
19	3.1	3.1
20	4.5	4.5
21	3.8	3.8
22	0.2	1.9
23	0	0
24	4.8	4.8
25	0	0
26	4.9	4.9
27	4.9	4.9
28	4.9	4.9
29	4.9	4.9
30	0	0
31	4.9	4.9
32	4.9	4.9
33	0	0
34	4.9	4.9
35	0	0
36	0	0
37	0	0
38	0	4.9
39	4.0	4.0
40	0	0
41	4.8	4.8
42	4.8	4.8
43	0	0

MODE PIN NO.	REC	PLAY
44	0	0
45	4.9	4.9
46	0	0
47	2.8	2.8
48	0	0
49	4.1	4.1
50	4.6	4.6
51	1.3	1.3
52	1.3	1.3
53	4.2	4.2
54	5.0	5.0
55	5.0	5.0
56	4.9	4.9
57	0	0
58	4.9	4.9
59	0	0
60	4.9	4.9
61	4.9	4.9
62	0	0
63	0	0
64	-	-
65	-	-
66	-	-
67	-	-
68	0	0
69	-	-
70	3.3	3.3
71	4.9	4.9
72	4.9	4.9
73	4.9	4.9
74	0	0
75	4.4	4.4
76	4.4	4.4
77	4.9	0
78	0	0
79	0	0
80	0	0
81	4.9	4.9
82	4.9	4.9
83	2.4	2.4
84	0	0
85	0	0
86	4.9	4.9
87	4.9	0
88	4.9	4.9
89	0	0
90	0	0
91	0	0
92	4.9	4.9
93	0	0
94	0	0
95	4.9	4.9
96	0	0
97	4.9	0
98	0.8	0.8
99	0	2.2
100	2.4	2.4
101	2.4	2.4
102	1.4	1.4
103	4.9	4.9
104	4.9	0
105	4.9	0
106	0	0
107	0	0
108	1.2	1.2
109	4.9	4.9
110	0	0
111	0	0
112	2.4	2.4
IC3002		
1	4.9	4.9
2	4.9	4.9
3	0	0
4	0	0
IC3003		
1	0	0
2	0	0
3	0	0
4	0	0
5	4.5	4.5
6	4.5	4.5
7	0	0
8	4.9	4.9
IC7002		
1	4.9	4.9
2	4.9	4.9
3	0	0

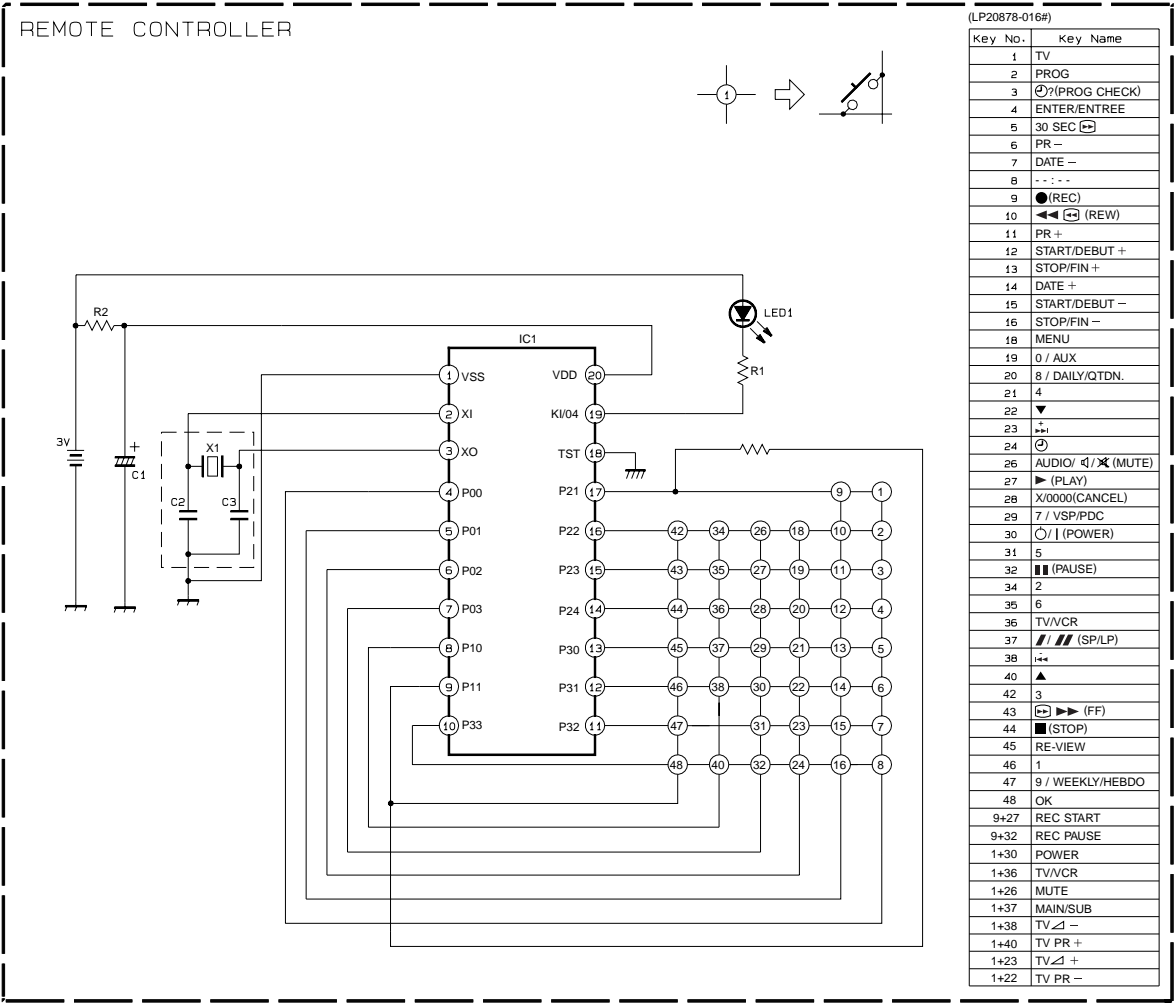
MODE PIN NO.	REC	PLAY
CN1 [Except HR-S7955MS]		
1	0	0
2	0	0
3	0	0
4	2.3	2.3
5	2.3	2.3
6	2.3	2.3
7	2.6	2.3
8	2.6	2.3
9	2.6	2.3
CN1 [HR-S7955MS]		
1	0	0
2	0	0
3	0	0
4	2.3	2.3
5	2.3	2.3
6	2.3	2.3
7	2.6	2.3
8	2.6	2.3
9	2.6	2.3
10	0	0
11	0	0
CN501		
1	2.4	2.4
2	0	0
3	2.3	2.3
4	4.9	4.9
5	2.1	2.1
6	0.3	4.5
7	3.3	3.3
8	0	0
9	2.8	2.8
10	0	0
11	4.6	4.6
12	4.1	4.1
3	2.3	0.3
4	0	0
5	2.5	2.3
6	0	0
7	3.5	2.4
8	0	0
9	2.8	2.8
10	4.9	4.9
CN902		
1	2.8	2.8
2	0	0
3	0	0
4	2.4	2.1
5	1.3	2.3
6	4.9	4.9
7	0	0
8	0	0
9	2.3	2.3
10	0	0
11	0	0
12	2.4	2.1
CN903		
1	4.7	4.7
2	0	0
3	0	0
4	0	0
5	0.8	0.8
6	10.1	10.1
7	10.1	10.1
8	4.5	4.5
9	4.5	4.5
10	0	0
CN904		
1	0	0
2	4.9	4.9
3	0	0
4	0	0
5	4.5	4.5
6	4.5	4.5
7	0	0
8	4.9	4.9
IC7002		
1	4.9	4.9
2	4.9	4.9
3	0	0

MODE PIN NO.	REC	PLAY
3	2.8	2.8
4	0	0
5	3.3	3.3
6	0	0
7	2.1	2.1
8	0	0
9	2.3	2.3
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.3	2.3
6	2.2	2.2
CN2002		
1	0	0
2	0	0
CN3001		
1	2.6	2.7
2	13.5	13.5
3	6.0	6.0
4	0	0
5	0	8.0
6	0	0
7	0	0
8	13.3	13.3
9	3.0	3.1
10	3.0	3.0
11	1.5	1.5
12	3.0	3.1
CN6701		
1	0	0
2	4.6	4.6
3	4.5	4.5
4	4.8	4.8
5	0.3	0.3
6	0.3	0.3
7	5.0	5.0
8	0	0
9	0	0
10	0.1	0
CN7001		
1	-	-
2	-	-
3	5.6	5.6
4	0	0
5	5.8	0
6	5.8	5.8



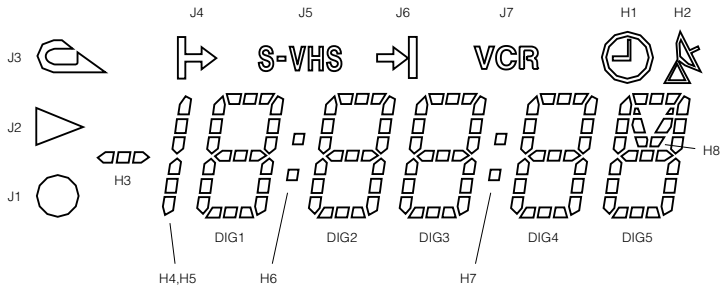
4.24 REMOTE CONTROLLER SCHEMATIC DIAGRAM

- 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.



4.25 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



ANODE CONNECTION

No.	CONNECTION
1	CATHODE G, J7, H8
2	CATHODE F, J6, H7
3	CATHODE E, J5, H6
4	CATHODE D, J4, H4, H5
5	CATHODE C, J3, H3
6	CATHODE B, J2, H2
7	CATHODE A, J1, H1
8	COMMON ANODE H1-H8
9	COMMON ANODE J1-J7
10	COMMON ANODE (DIGIT 5)
11	COMMON ANODE (DIGIT 4)
12	COMMON ANODE (DIGIT 3)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)

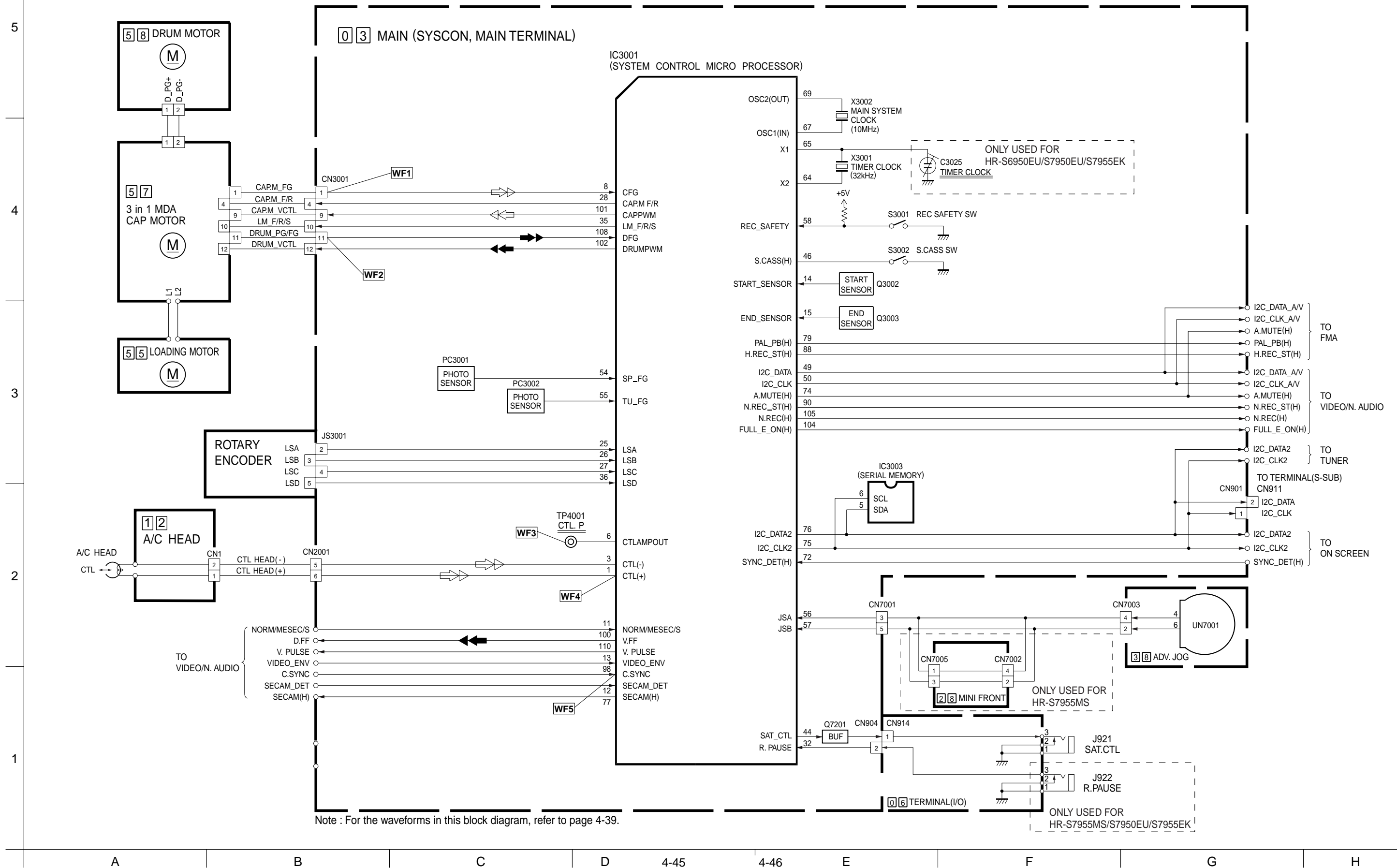
4.26 CPU PIN FUNCTION

<SYSCON IC3001>

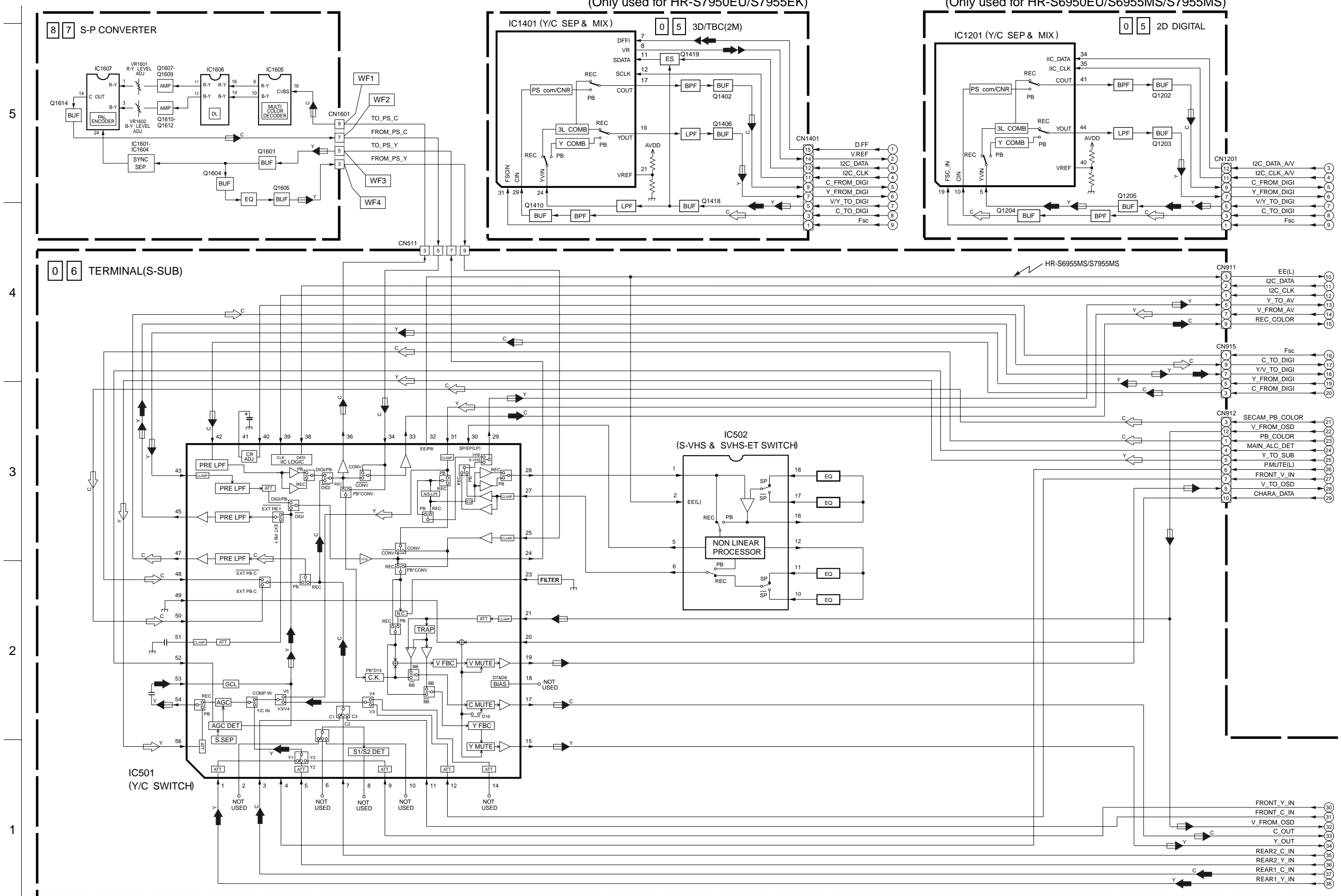
PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBias	-	CTL BIAS VOLTAGE
5	CTLFB	IN	CTL PULSE FEEDBACK
6	CTLAMPout	OUT	CTL PULSE OUTPUT
7	CTLSMTin	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	(NORM MODE: L/MESECAM MODE: M/SVHS MODE:H)
12	SECAM_DET	IN	SECAM COLOR DETECT (SECAM:H)
13	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
14	START_SENSOR	IN	START SENSOR
15	END_SENSOR	IN	END SENSOR
16	KEY1	IN	OPERATION CONTROL SIGNAL
17	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
18	SCR_ID/	IN	SCRAMBLE CONTROL INPUT (SCRAMBLE:H)
19	KEY2	IN	OPERATION CONTROL SIGNAL
20	AFC	IN	TUNING CHECK
21	RF AGC	IN	CHANGES IN AT&HIC OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT.
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV/INPUT/NON HIFI MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP.M F/R	OUT	CAPSTAN MOTOR FORWARD/REVERSE CONTROL
29	RC	IN	REMOTE CONTROL DATA INPUT
30	DIG1	OUT	LED DRIVE
31	P50_IN	IN	CONTROL SIGNAL FOR TV LINK
32	R.PAUSE	IN	REMOTE PAUSE CONTROL
33	P50_OUT	OUT	CONTROL SIGNAL FOR TV LINK
34	DIG2	OUT	LED DRIVE
35	LM_F/R/S	OUT	LOADING MOTOR DRIVE
36	LSD	OUT	MECHANISM MODE DETECT (D)
37	DIG3	OUT	LED DRIVE
38	SB_GAIN(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	DIG4	OUT	LED DRIVE
40	POWER_DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	PCTL(H)	OUT	CONTROL SIGNAL FOR SWITCHING POWER SUPPLY
42	DIG5	OUT	LED DRIVE
43	VSS	-	GND
44	SAT_CTL	OUT	CONTROL SIGNAL FOR SATELLITE RECEIVER
45	VCC	-	SYSTEM POWER
46	S.CASS(H)	IN	DETECTION SIGNAL FOR SVHS CASSETTE (SVHS:H)
47	OSD_CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
48	MESECAM(H)/AGC_CTL	OUT	MESECAM: H/AGC CONTROL INPUT
49	I2C_DATA	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO/AUDIO IC
50	I2C_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO/AUDIO IC
51	DIG6	OUT	LED DRIVE
52	S.DATA_FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	JSA	IN	INPUT FOR THE JOG SHUTTLE

PIN NO.	LABEL	IN/OUT	FUNCTION
57	JSB	IN	INPUT FOR THE JOG SHUTTLE
58	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
59	SW1	OUT	TUNER SYSTEM MODE:H
60	SW2	OUT	TUNER SYSTEM MODE:L
61	DIG7	OUT	LED DRIVE
62	FWE	OUT	FLASH WRITE ENABLE
63	NMI(L)	-	CONNECT TO GND
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES	-	RESET TERMINAL (RESET ON:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC/VCL	-	SYSTEM POWER
71	MODE	IN	FWE MODE
72	SYNC DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL(DETECTED:H)
73	TU_V_MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C_CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C_DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	SECAM(H)	OUT	SECAM MODE:H
78	PON_PULSE	OUT	PON_PULSE(H)
79	PAL PB(H)	OUT	PAL FM(PB ON:H)
80	V.PCTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	VHS(H)	OUT	VHS MODE(H)
82	VCC	-	SYSTEM POWER
83	SLOW_P	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE
84	VSS	-	GND
85	SP_SHORT(H)/FLY.ON(H)	OUT	MODE SELECT/FLYING ERASE ON:H
86	LP_SHORT(H)/FLY.REC(H)	OUT	MODE SELECT/FLY REC START:H
87	SEP(H)	OUT	SEP PB:H
88	H.REC_ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	TRICK(H)	OUT	SPECIAL PLAYBACK:H
90	N.REC_ST(H)	OUT	NORMAL AUDIO SOUND RECORDING START
91	Da	OUT	LED DRIVE
92	Db	OUT	LED DRIVE
93	Dc	OUT	LED DRIVE
94	Dd	OUT	LED DRIVE
95	De	OUT	LED DRIVE
96	Df	OUT	LED DRIVE
97	Dg	OUT	LED DRIVE
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	PMUTE(L)	OUT	PICTURE MUTE CONTROL(MUTE:L)
104	FULL_E_ON(H)	OUT	FULL ERASE ON:H
105	N.REC(H)	OUT	NORMAL AUDIO REC MODE CONTROL SIGNAL (REC:H)
106	ET_REC(H)	OUT	ET REC MODE:H
107	HI_S_FF_REW	OUT	HIGH SPEED FF/REW CONTROL
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

#### 4.27 SYSTEM CONTROL BLOCK DIAGRAM



## 4.28 VIDEO BLOCK DIAGRAM



Note : For the waveforms in this block diagram, refer to page 4-39.

A

B

C

D 4-47

4-48

E

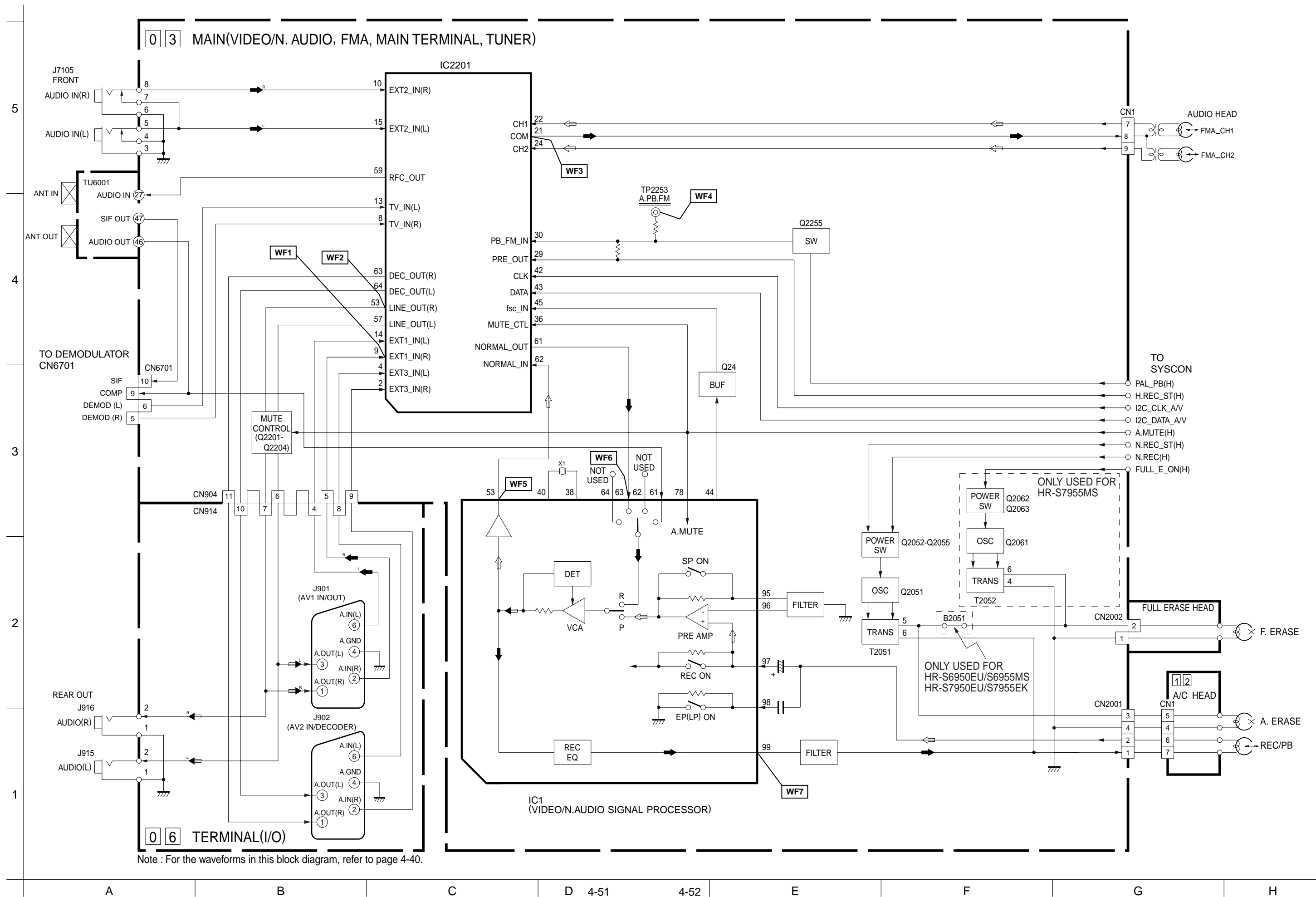
F

G

H



#### 4.29 AUDIO BLOCK DIAGRAM





VICTOR COMPANY OF JAPAN, LIMITED  
VIDEO DIVISION

S40894