

Service Manual

SA17S1 /F1N/L1G/N1G/S1G

Super Audio CD Player

SA-17S1

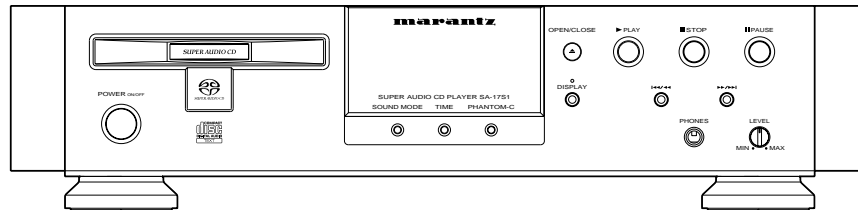


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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

SA-17S1

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The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

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東京都渋谷区恵比寿南1-11-9

KOREA

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ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
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PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

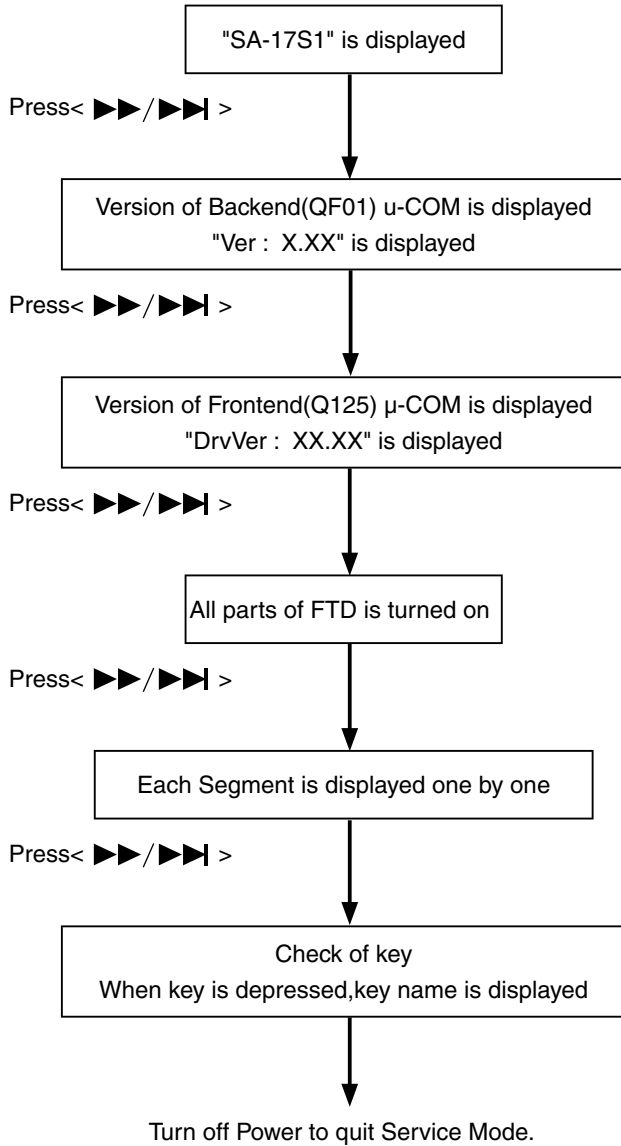
Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

2. SERVICE MODE

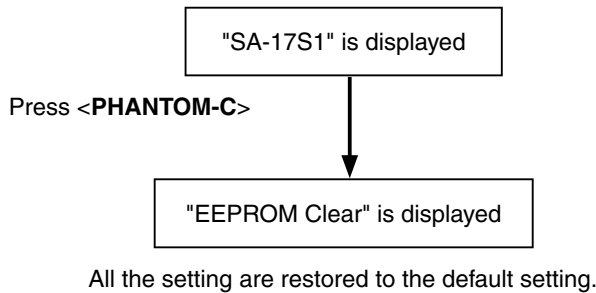
2-1. Factory mode

While pressing <OPEN/CLOSE>and<NEXT>plug in the Mains cord.



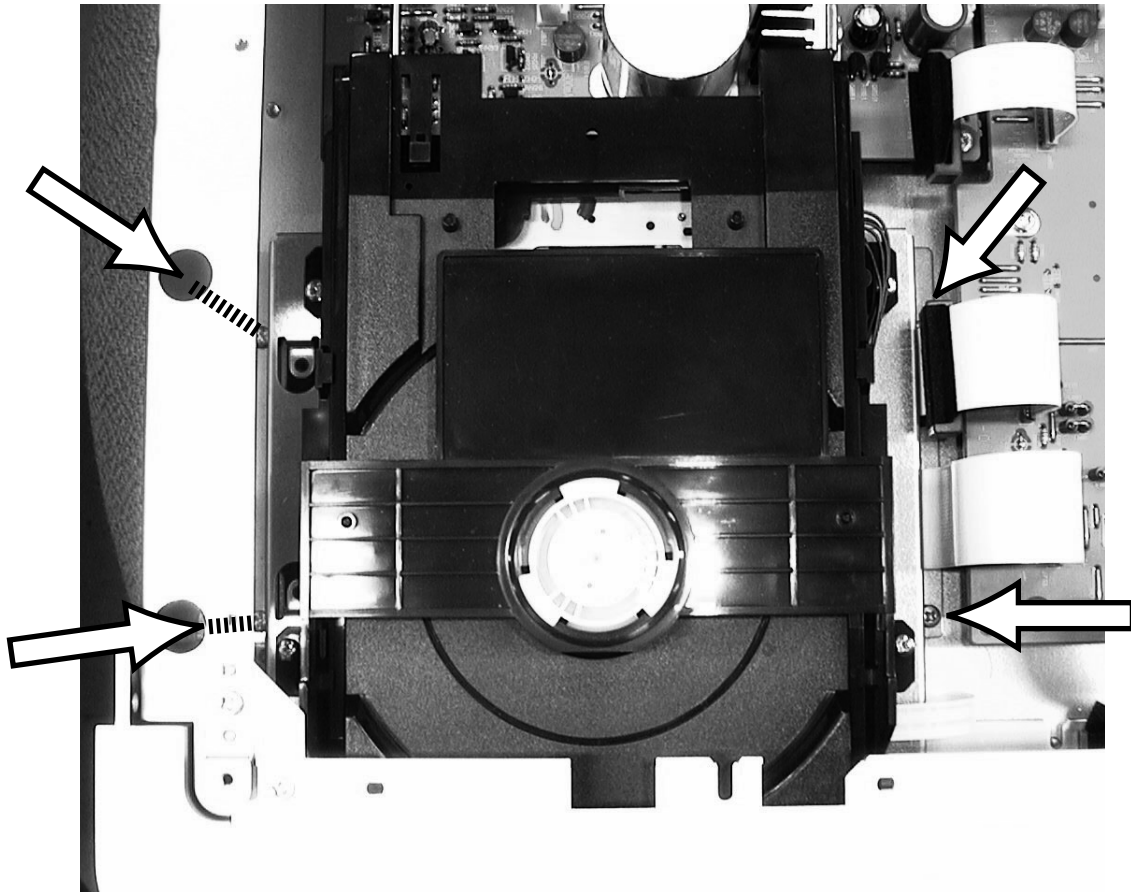
2-2. Reset the unit to the default settings

While pressing <OPEN/CLOSE>and<NEXT>plug in the Mains cord.

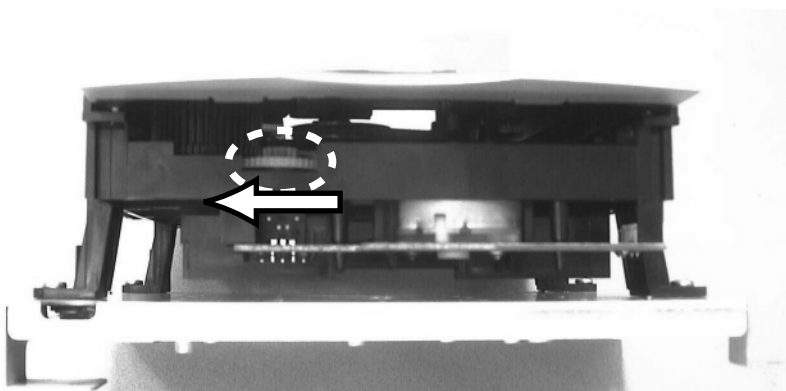


3. TAKING THE DISC OUT OF EMERGENCY

1. Remove 8 screws on the top cover and remove the top cover.
2. Remove 6 screws on the side panel and remove the side panel.
3. Remove Power SW. Link.
4. Remove 4 screws pointed with the arrows.

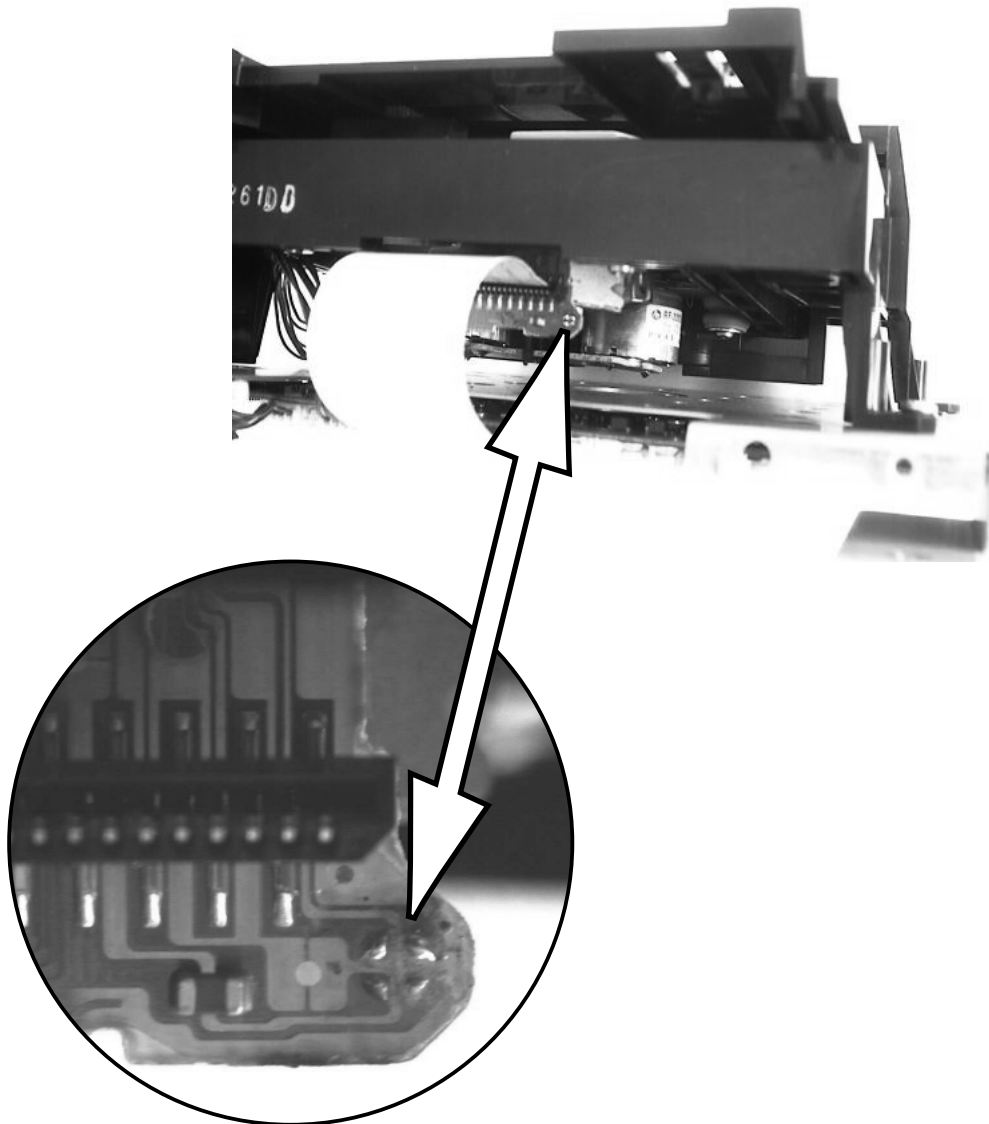


5. Disconnect all the wires at the right.
6. Remove the Mecha. component.
7. Turn the gear to the direction shown with your finger and disc tray will opened.

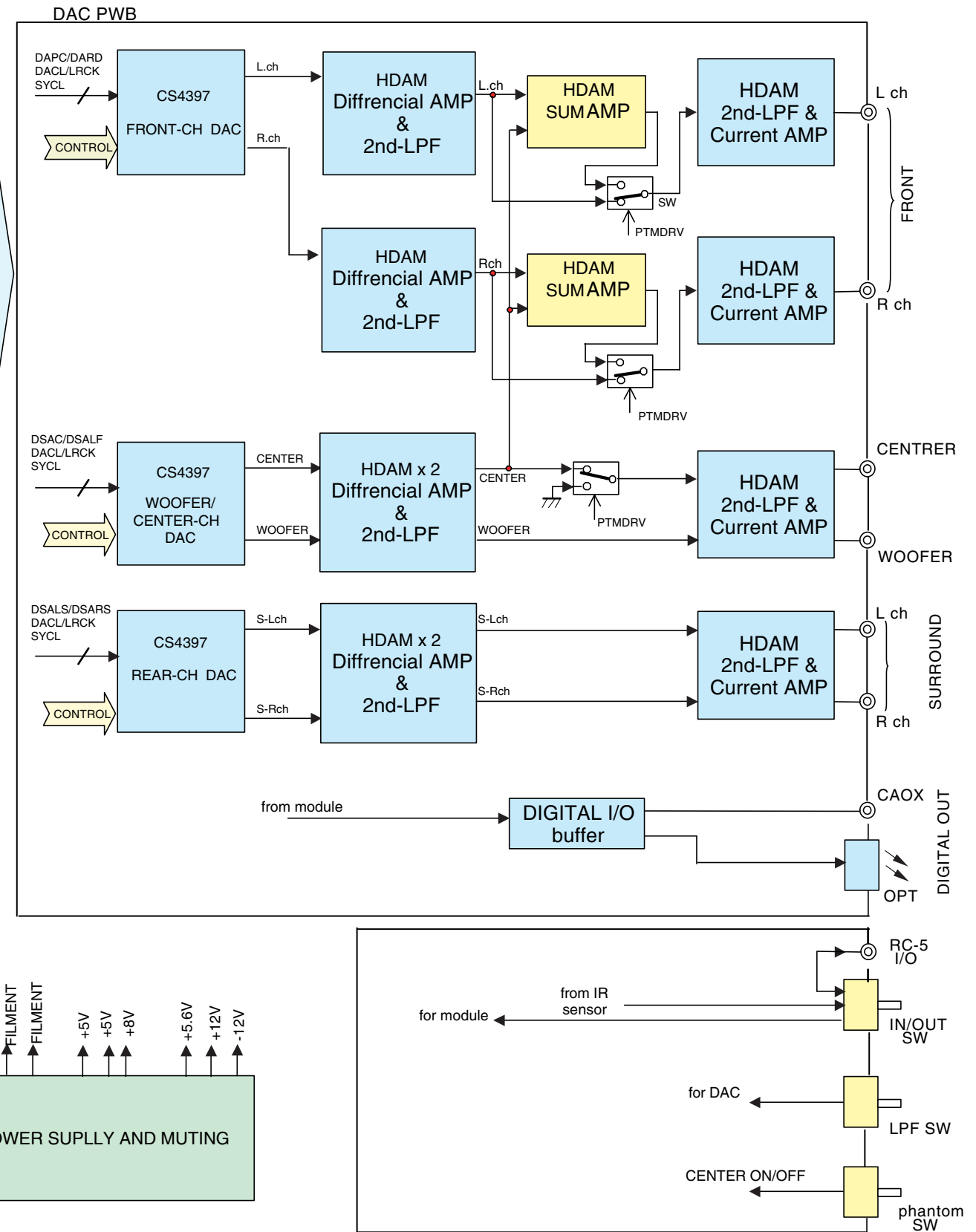
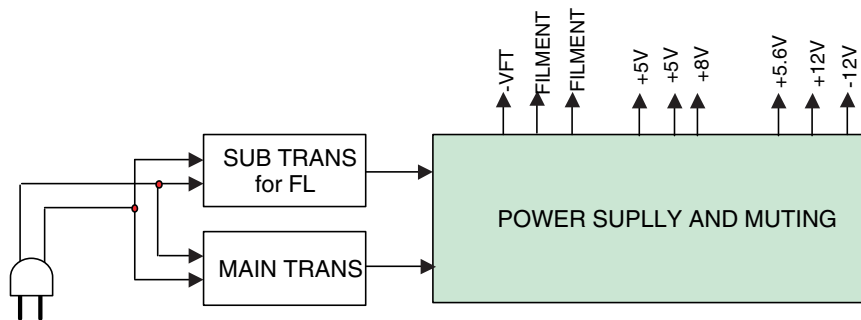
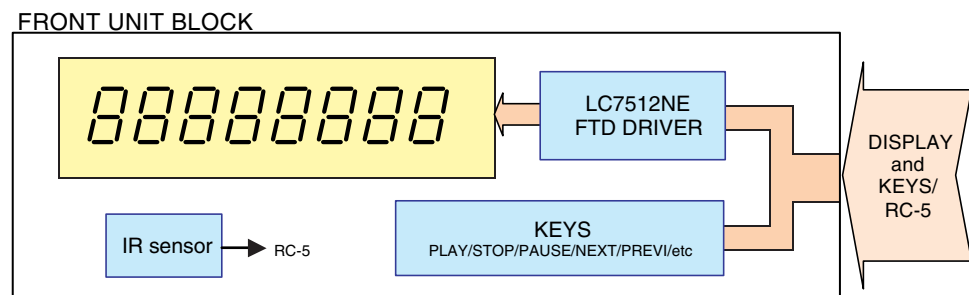
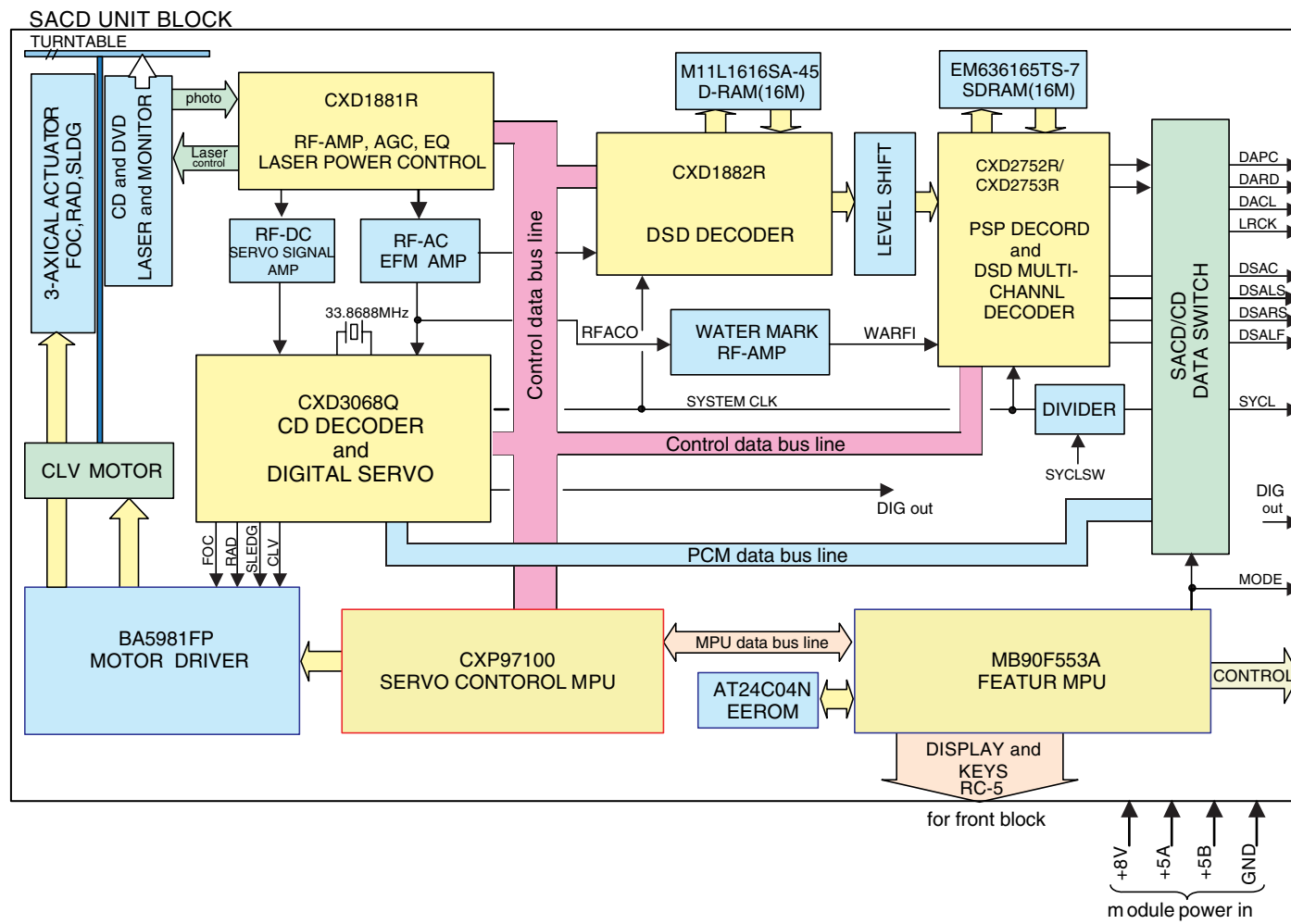


4. CAUTION Optical pick up and Servo Board

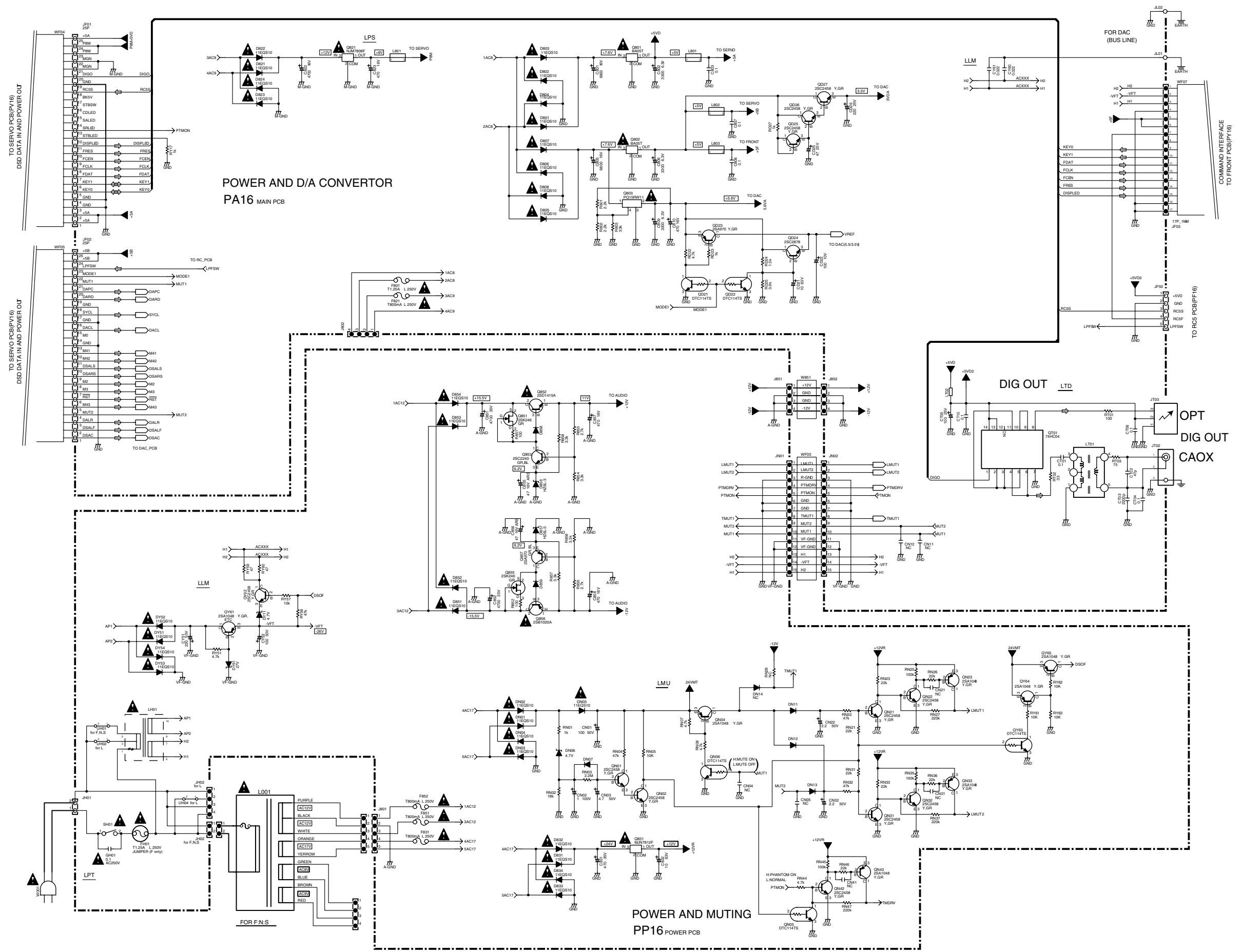
When removing the flat wire between Optical pick up and Servo Board (PV16),
Solder the four lands pointed by arrows to short the circuit.
Otherwise the LASER DIODE may be damaged by static electricity.

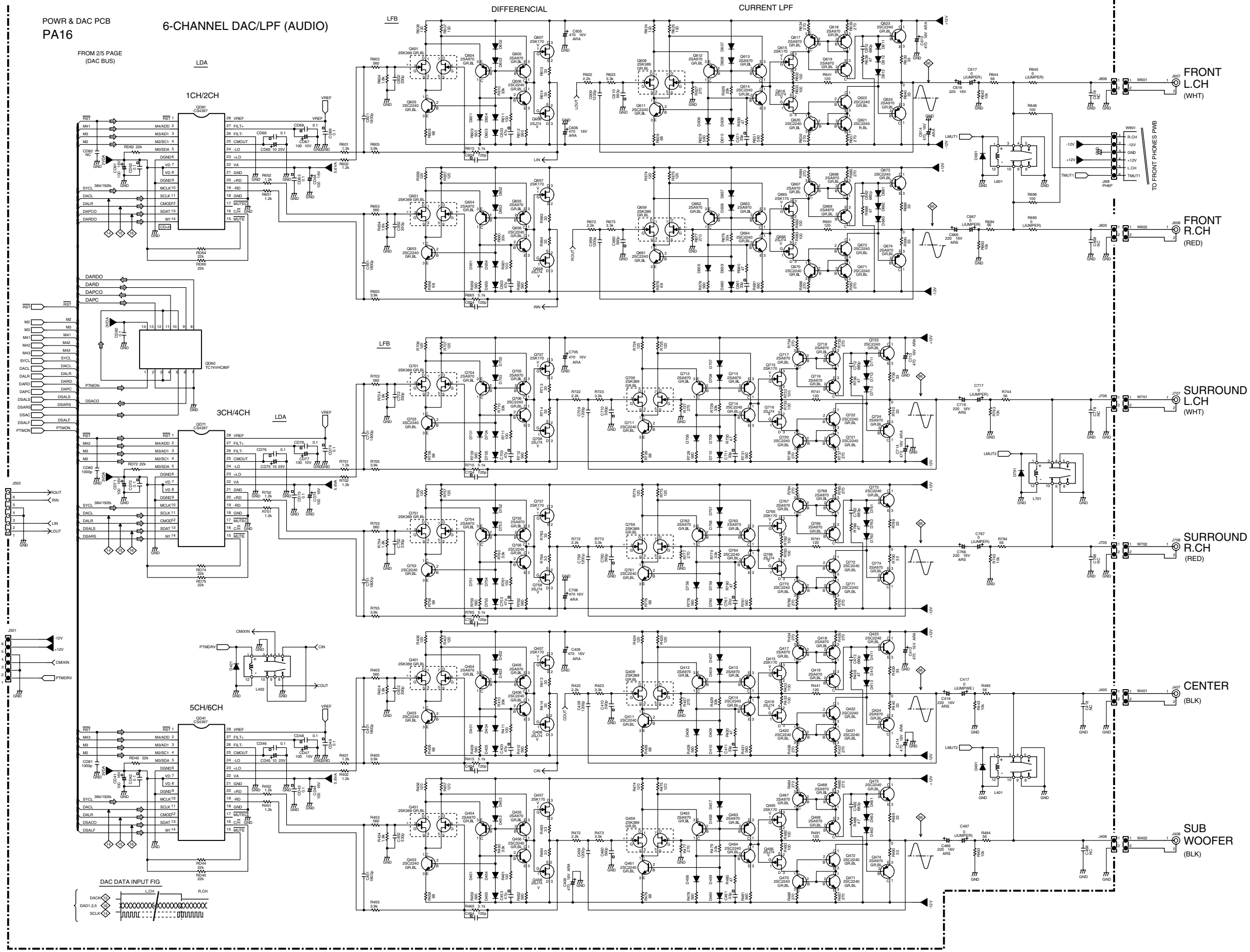


5. BLOCK DIAGRAM



6. SCHEMATIC DIAGRAM





POWR & DAC PCB
PA16

6-CHANNEL DAC/LPF (AUDIO)

FROM 2/5 PAGE
(DAC BUS)

1CH/2CH

LFB

DIFFERENTIAL

CURRENT LPF

FRONT
L.CH
(WHT)

FRONT
R.CH
(RED)

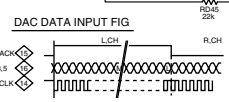
SURROUND
L.CH
(WHT)

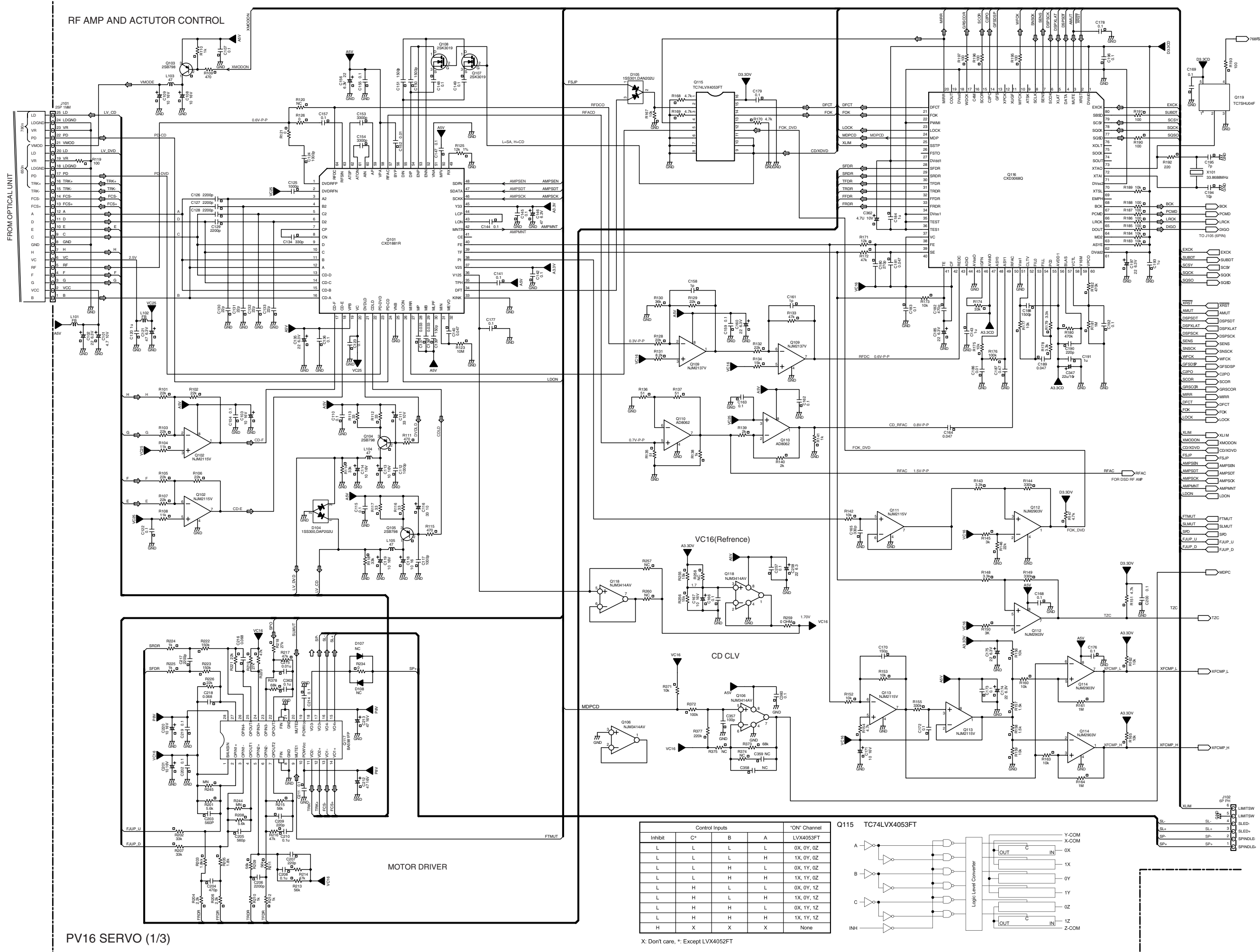
SURROUND
R.CH
(RED)

CENTER
(BLK)

SUB
WOOFER
(BLK)

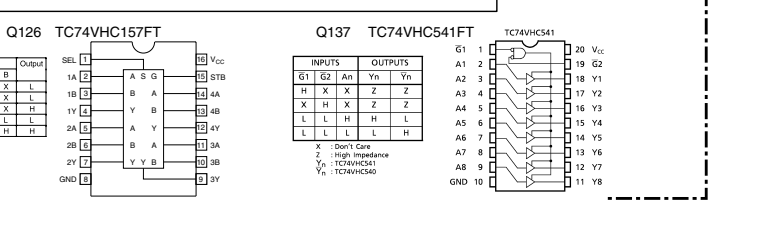
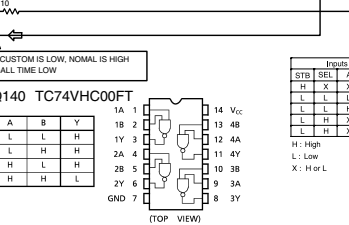
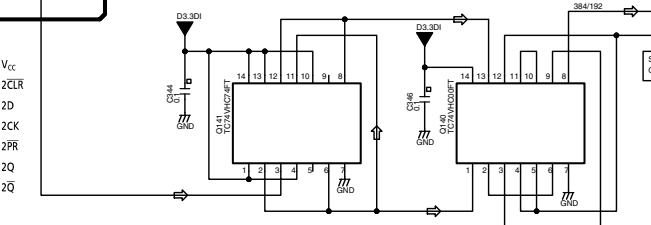
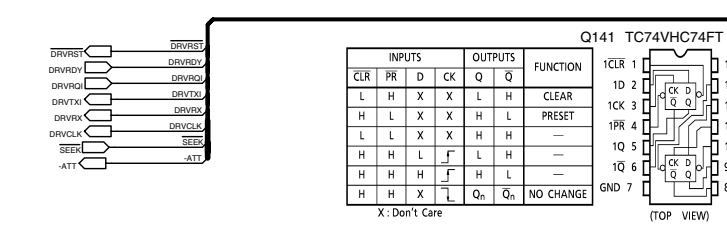
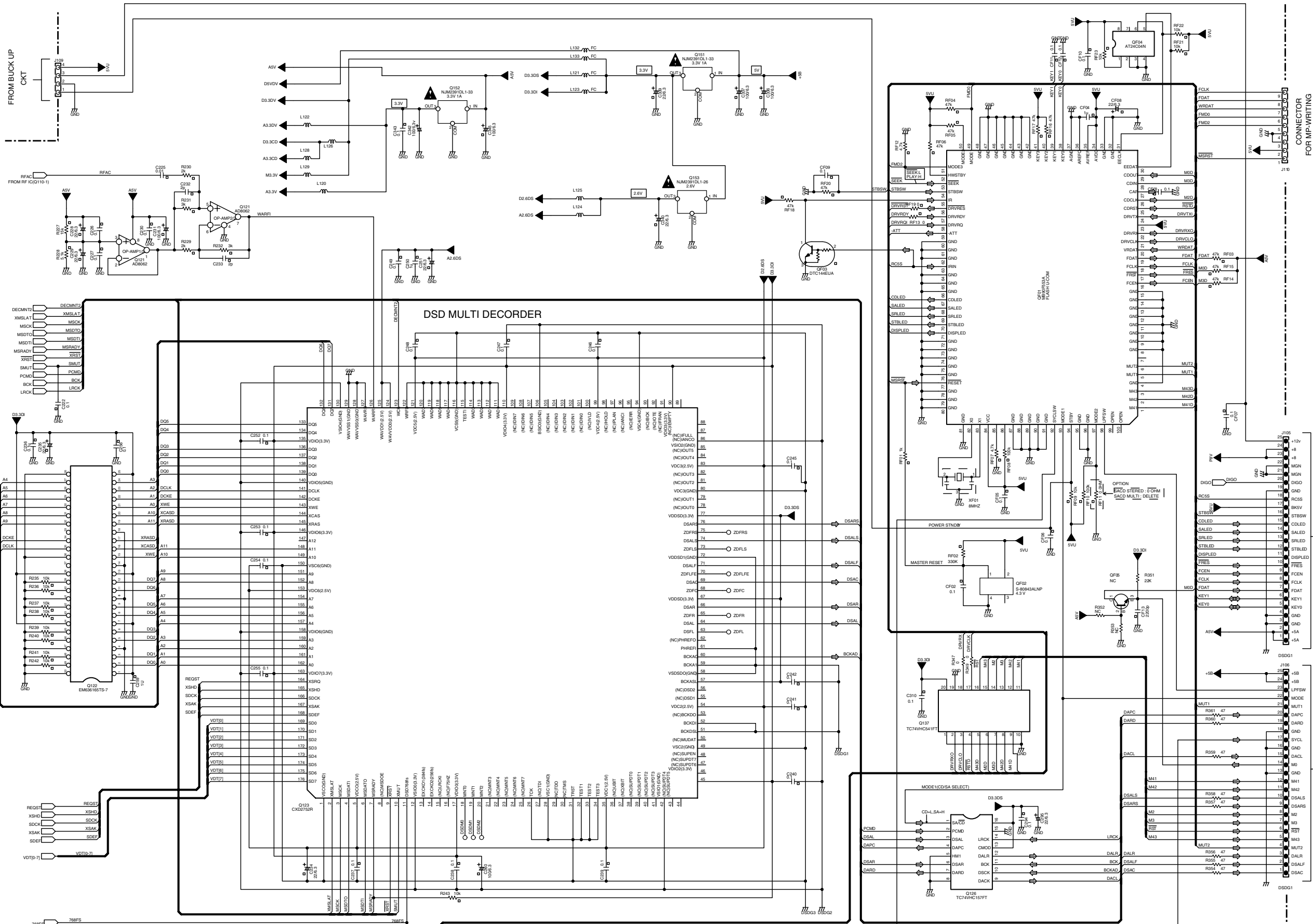
TO FRONT PHONES PWB

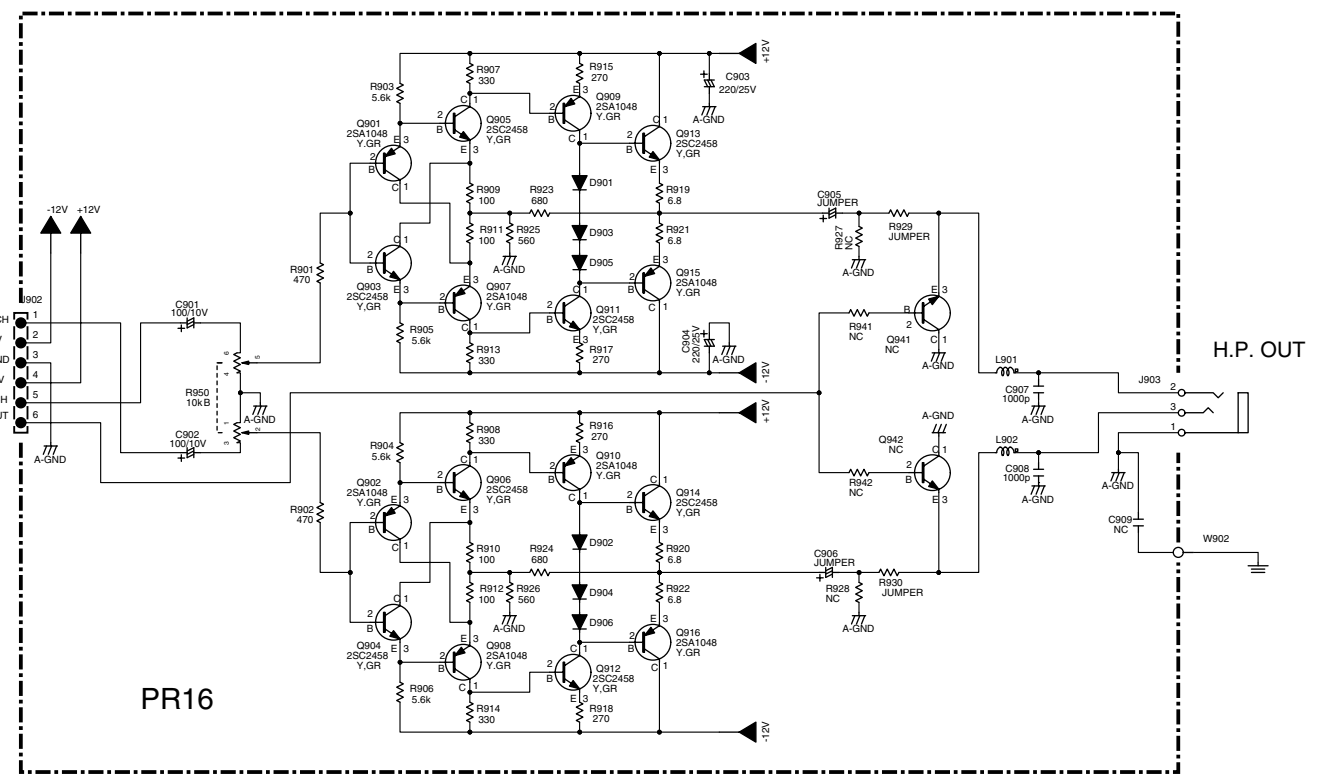
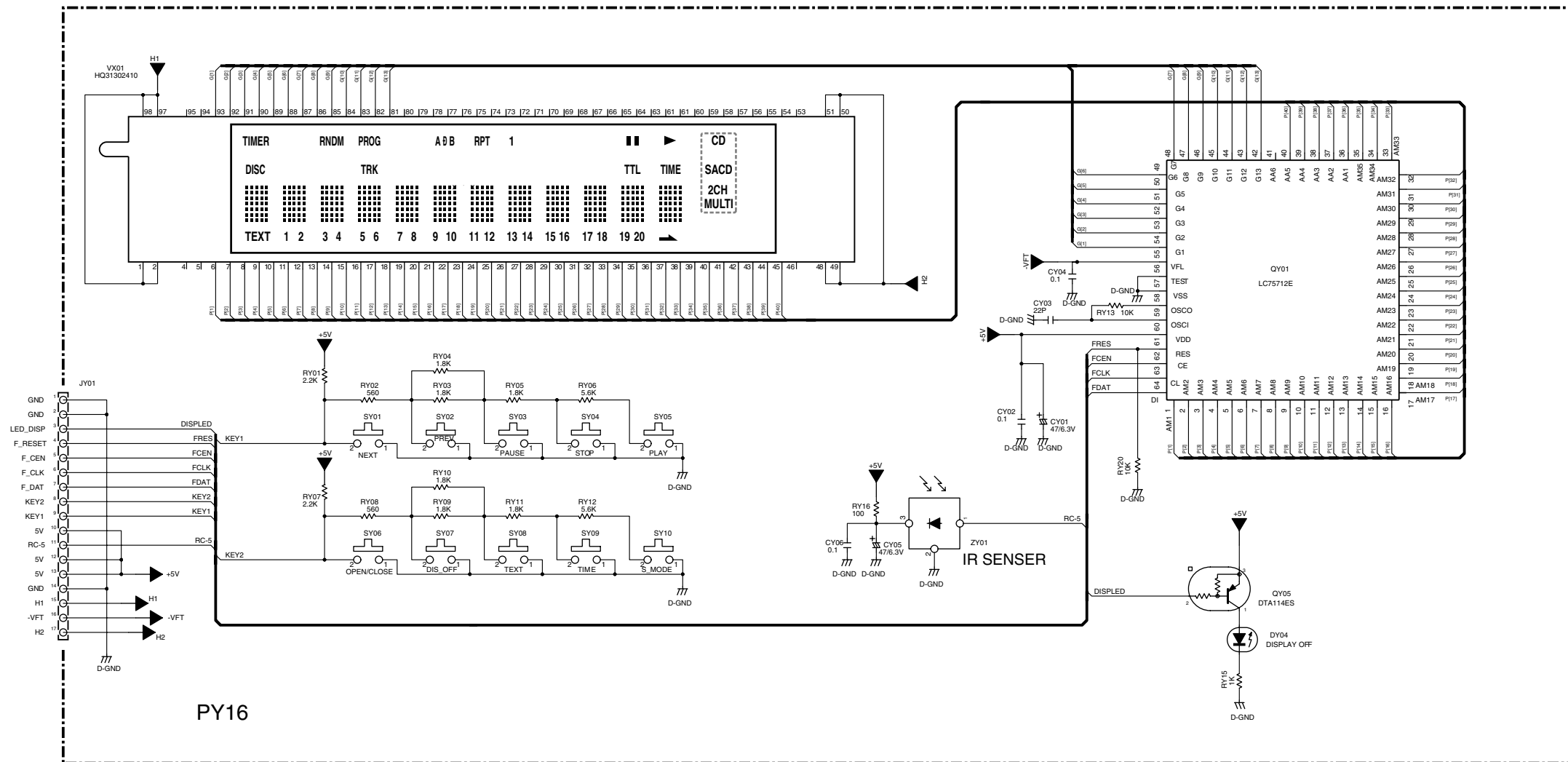


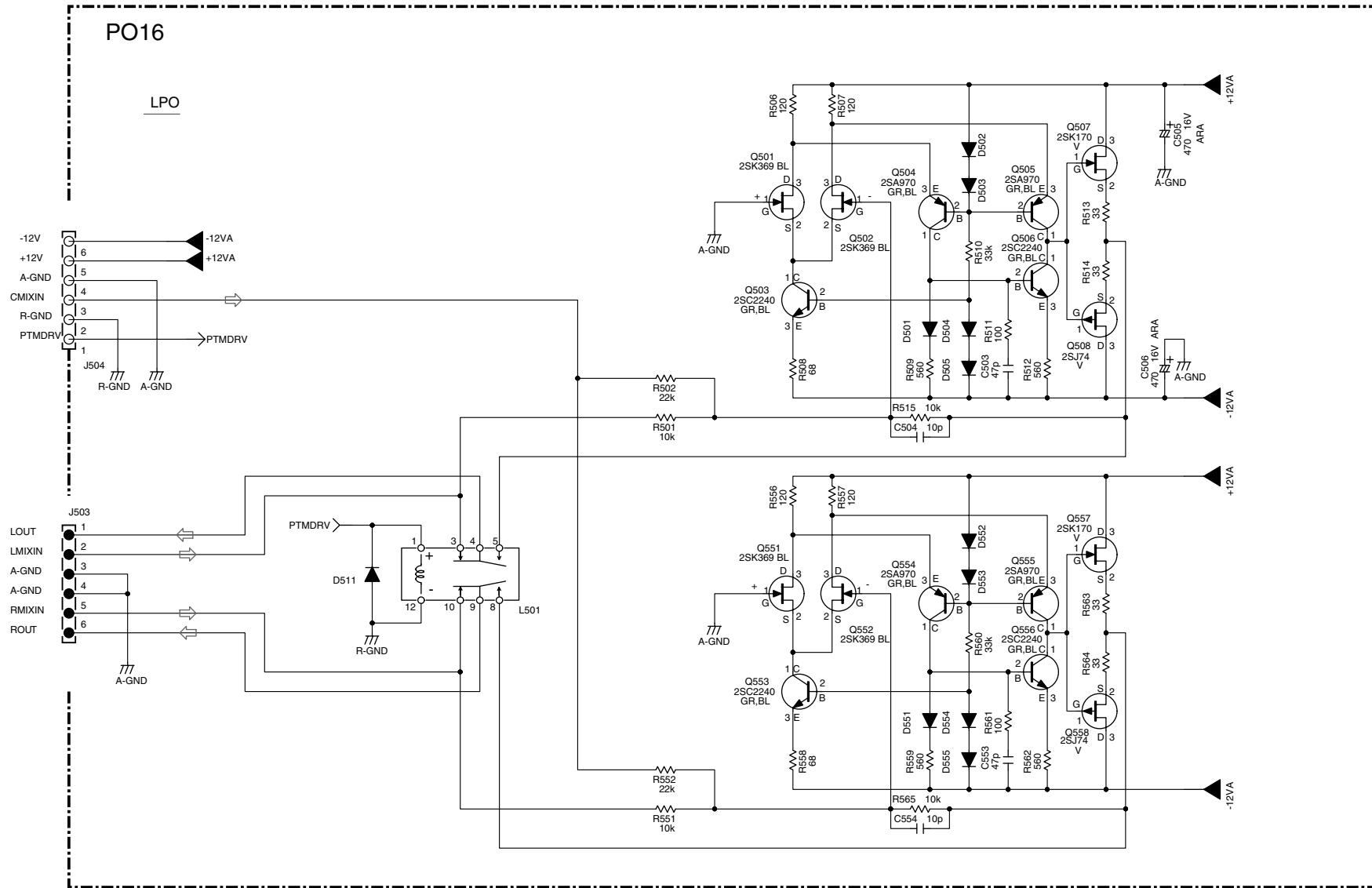


Control Inputs				"ON" Channel
Inhibit	C*	B	A	LVX4053FT
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	X	X	X	None

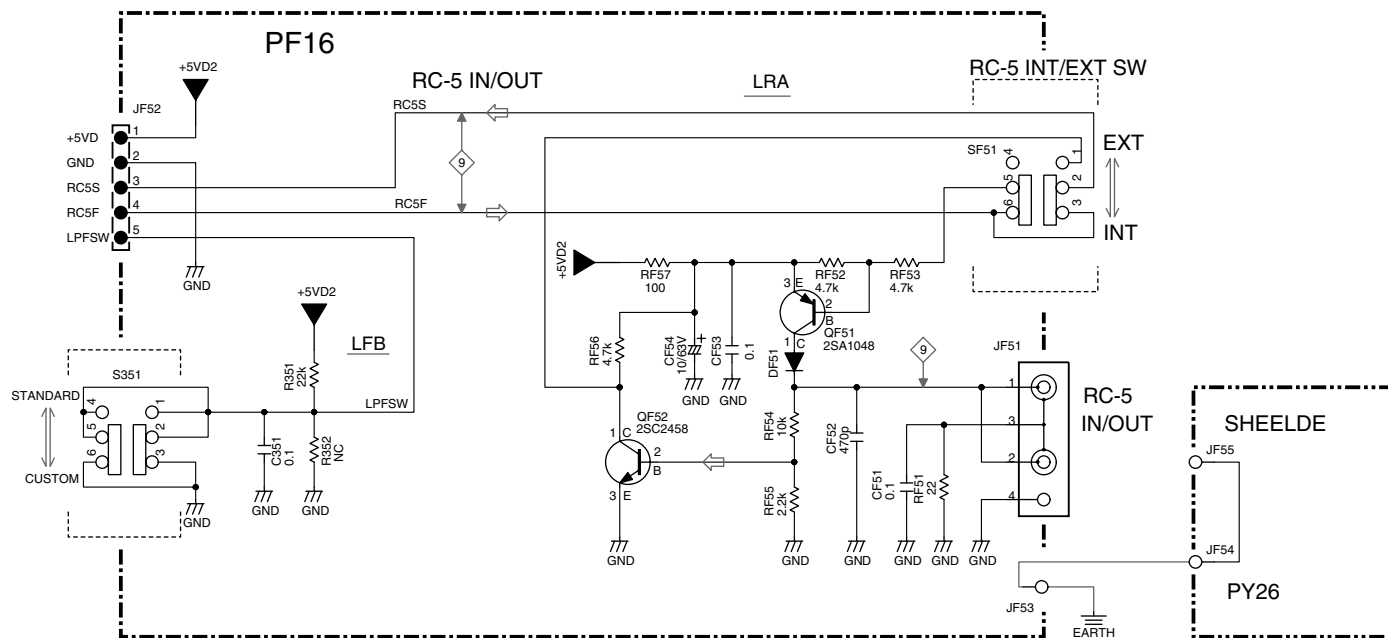
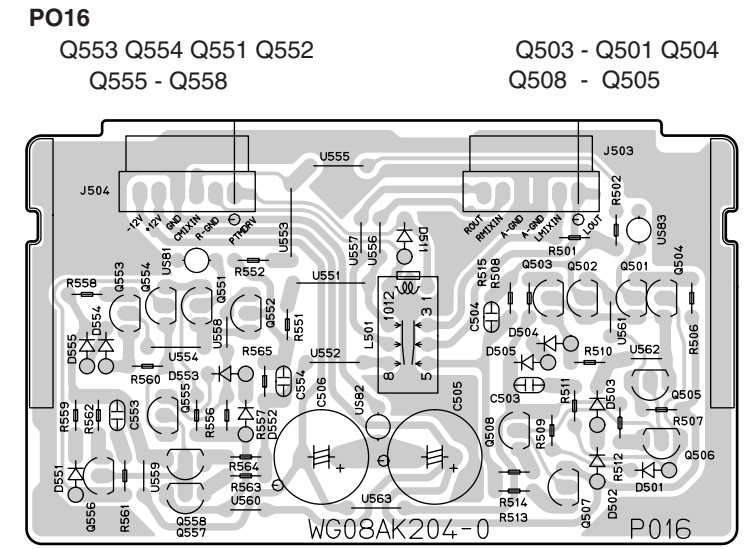
X: Don't care, *: Except LVX4052FT





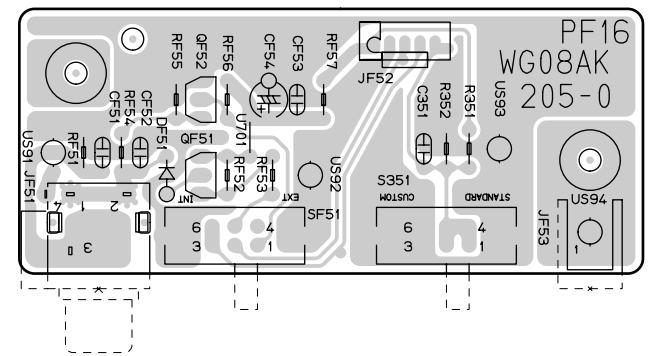


7. PARTS LOCATION

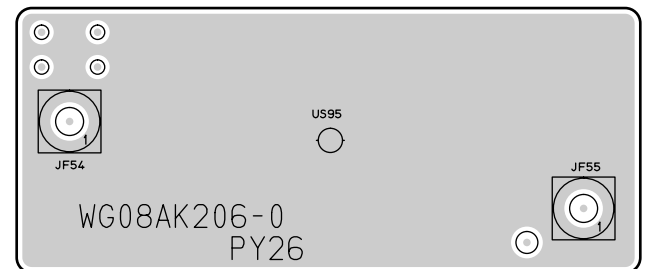


PF16

QF52 QF51



PY26



QD21 - QD27

Q802
Q821
Q801

Q803

QD60

QD61

QD41

QD71

Q601 Q603 - Q608

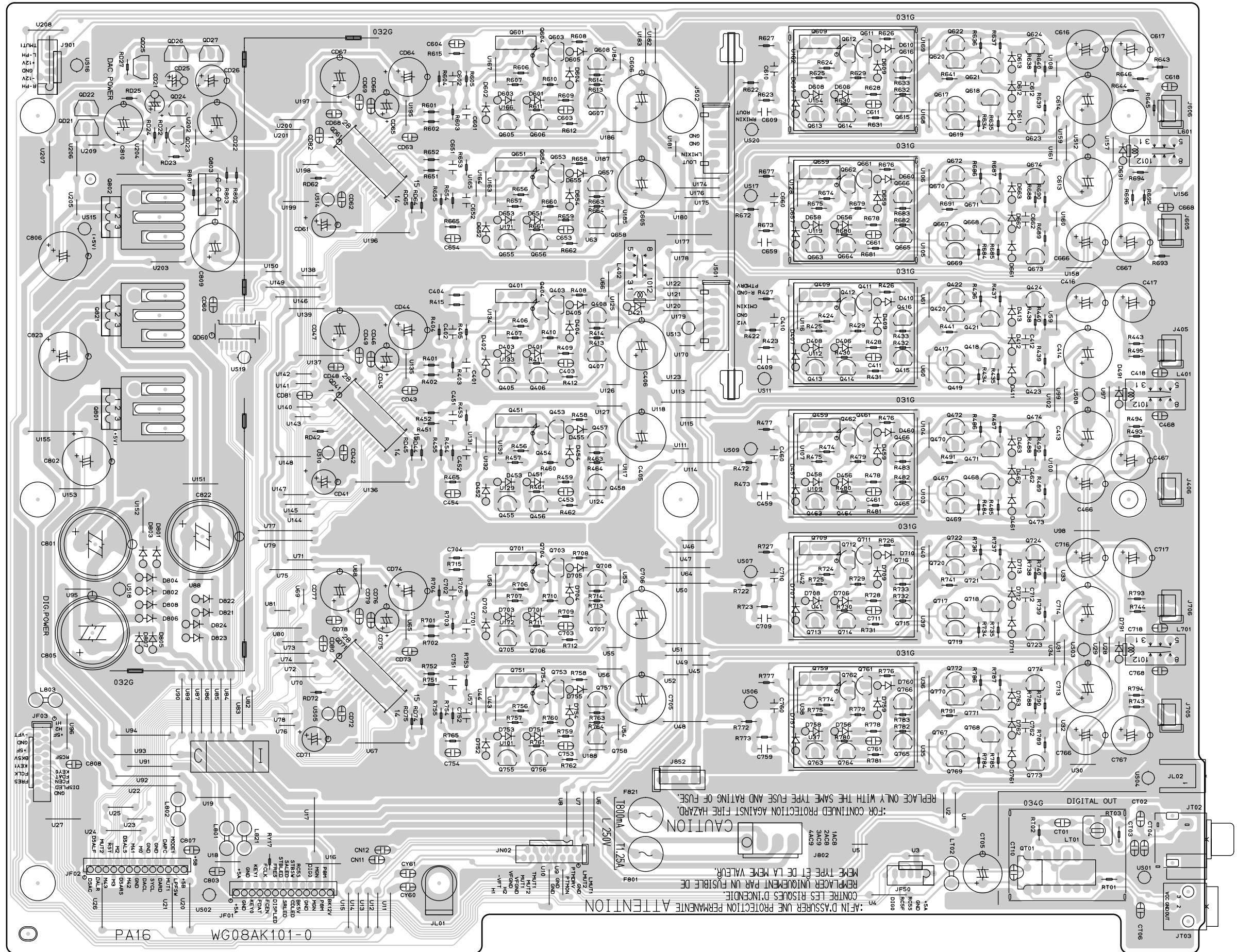
Q651 Q653 - Q658
Q401 Q403 - Q408
Q451 Q453 - Q458
Q701 Q703 - Q708
Q751 Q753 - Q758

Q609 Q611 - Q616

Q659 Q661 - Q666
Q409 Q411 - Q416
Q459 Q461 - Q466
Q709 Q711 - Q716
Q759 Q761 - Q766

Q617 - Q624

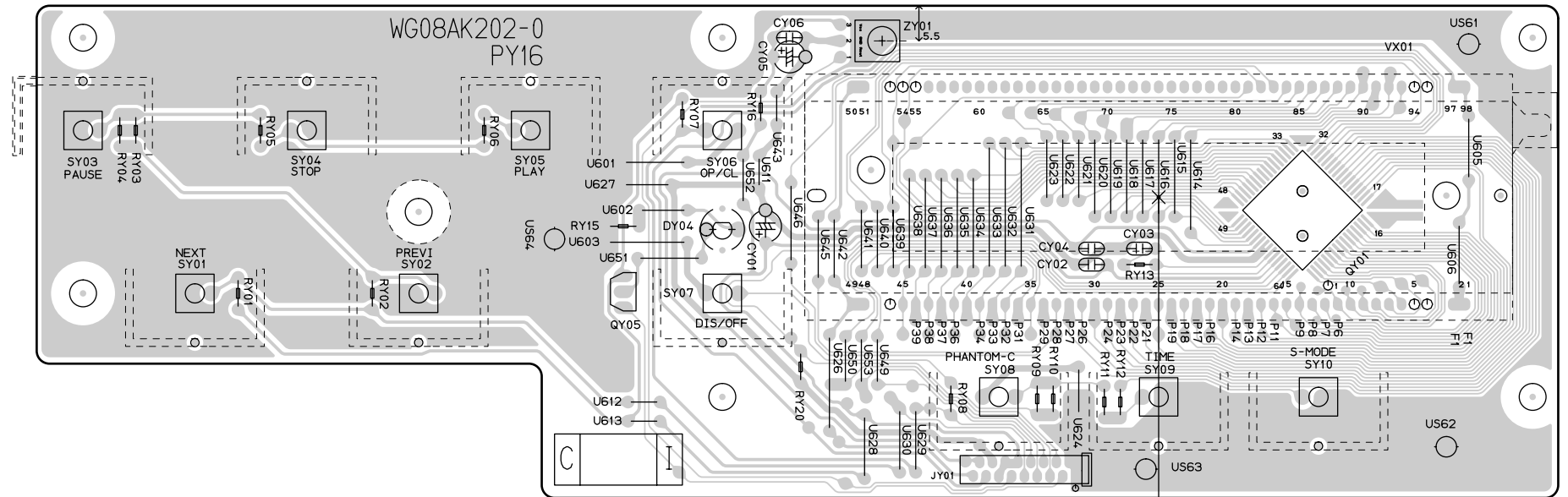
Q667 - Q674
Q417 - Q424
Q467 - Q474
Q717 - Q724
Q747 - Q774 QT01



PY16

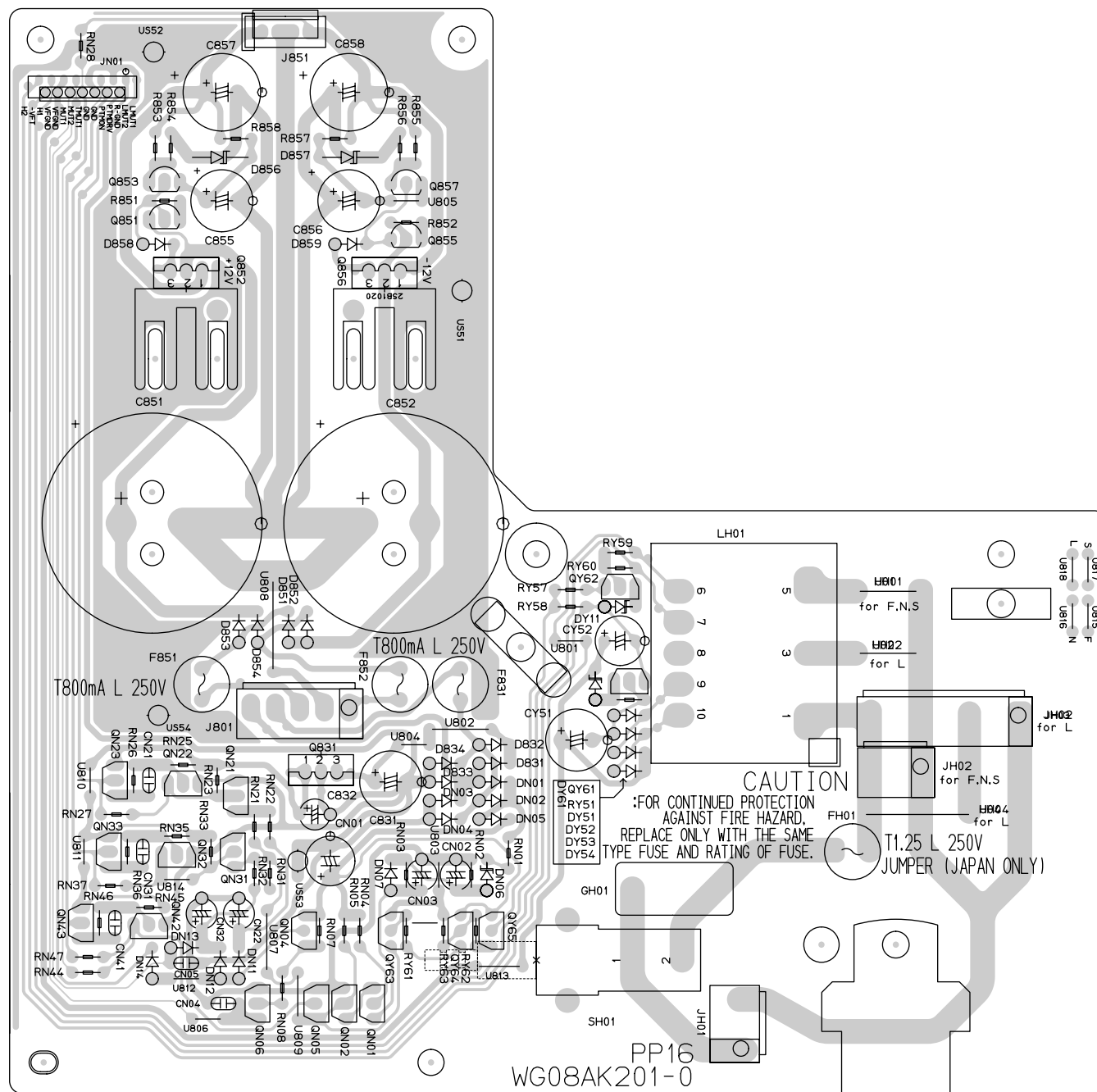
QY05

QY01



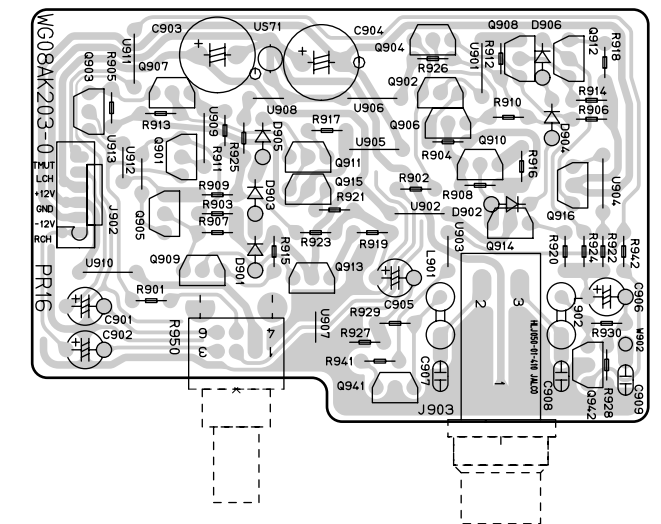
PP16

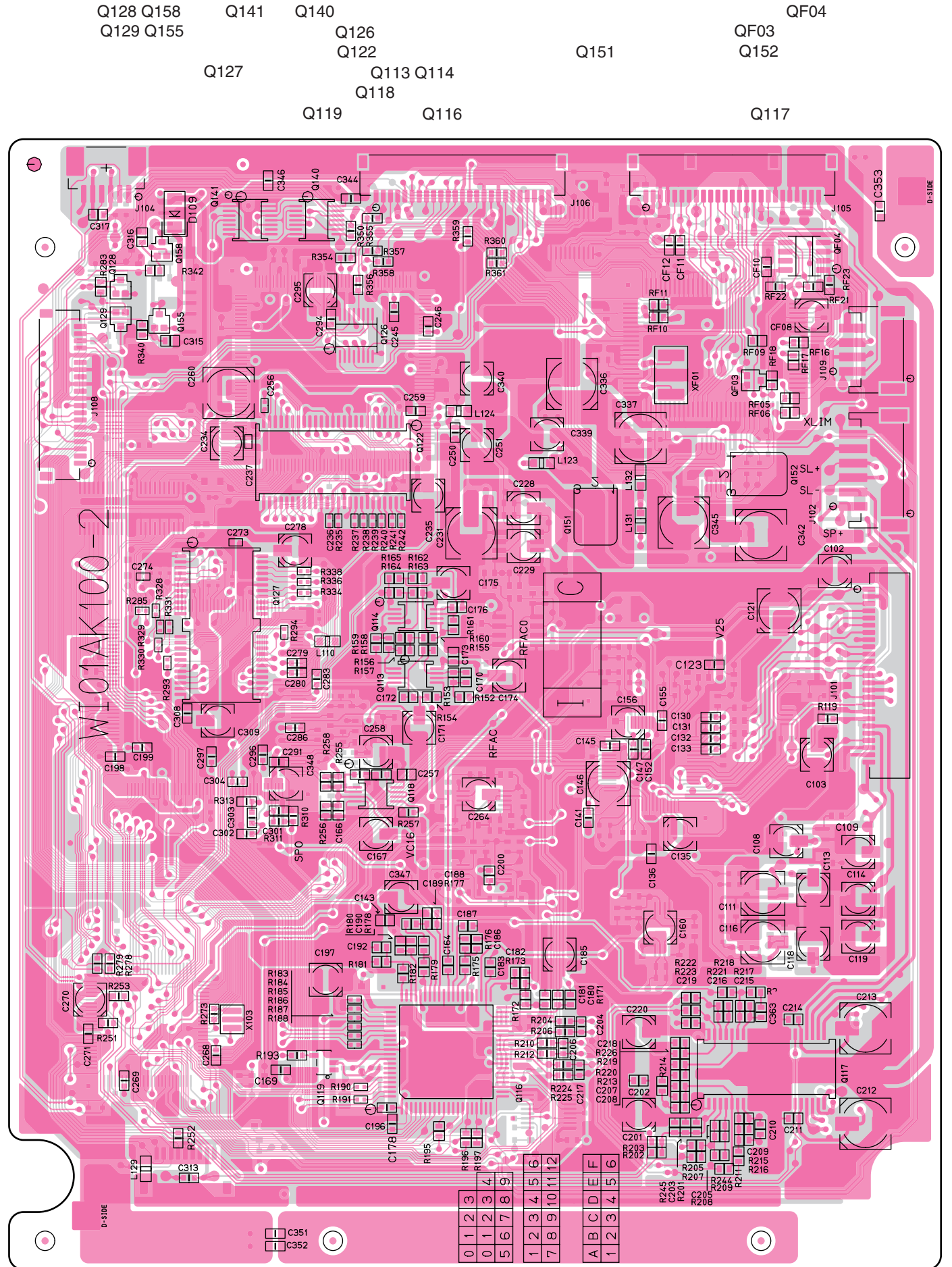
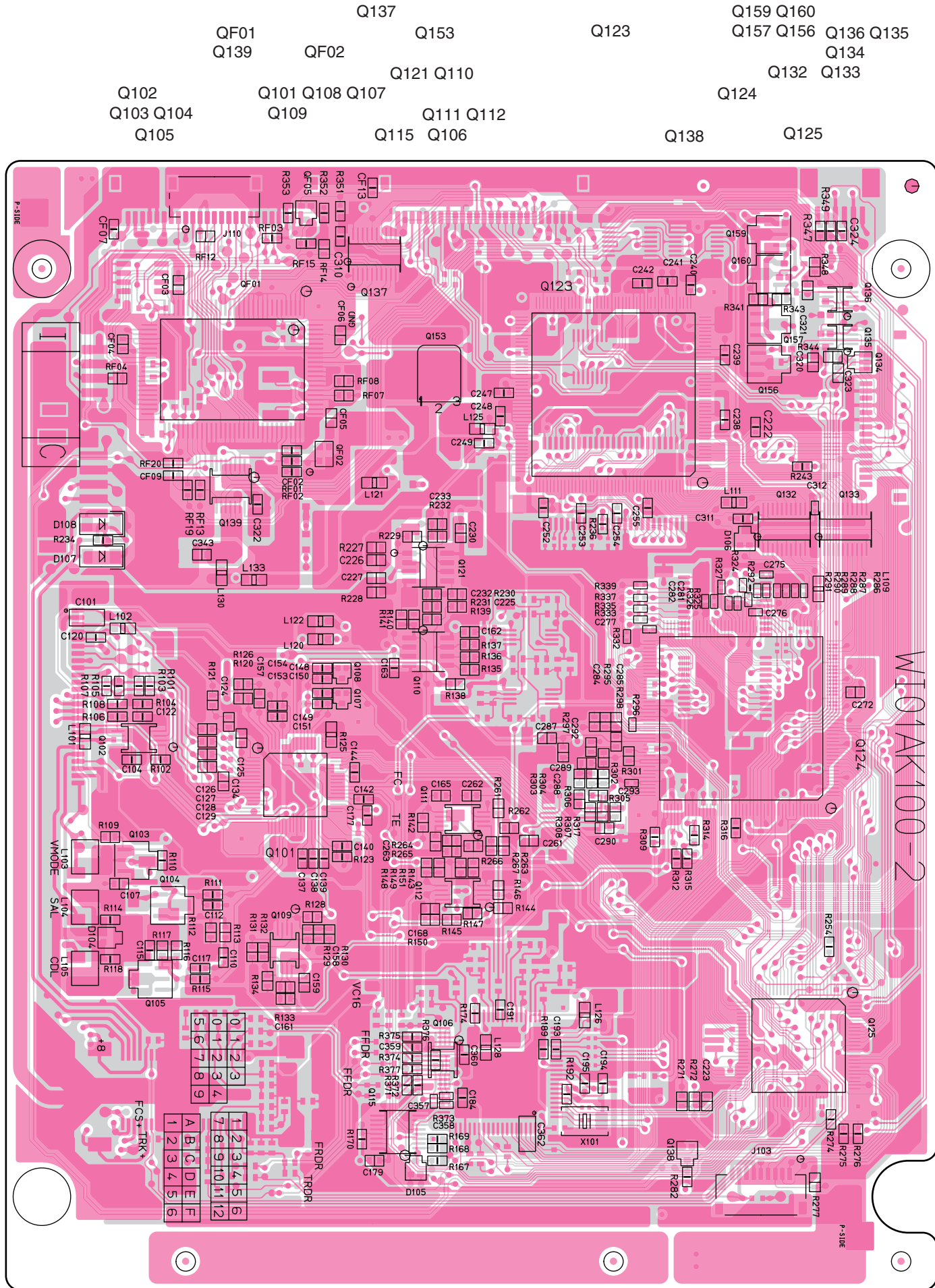
Q853 Q857
 Q851 Q855
 Q852 Q856



PR16

Q904 Q908 Q912
 Q903 Q907 Q902 Q906
 Q905 Q901 Q911 Q915 Q910 Q914 Q916
 Q909 Q913 Q941 Q942





8. MICROPROCESSOR AND IC DATA

Q116 : CXD3068Q

Pin Description

Pin No	Symbol	I/O		Description
1	DVDD0	—		Digital power supply.
2	XRST	I		System reset. Reset when low.
3	MUTE	I		Mute input (low: off, high: on)
4	DATA	I		Serial data input from CPU.
5	XLAT	I		Latch input from CPU. Serial data is latched at the falling edge.
6	CLOK	I		Serial data transfer clock input from CPU.
7	SENS	O	1, 0	SENS output to CPU.
8	SCLK	I		SENS serial data readout clock input.
9	ATSK	I/O	1, 0	Anti-shock input/output.
10	WFCK	O	1, 0	WFCK output.
11	XUGF	O	1, 0	XUGF output. MNT0 or RFCK is output by switching with the command.
12	XPCK	O	1, 0	XPCK output. MNT1 is output by switching with the command.
13	GFS	O	1, 0	GFS output. MNT2 or XROF is output by switching with the command.
14	C2PO	O	1, 0	G2PO output. MNT3 or GTOF is output by switching with the command.
15	SCOR	O	1, 0	Outputs a high signal when either subcode sync S0 or S1 is detected.
16	C4M	O	1, 0	4.2336MHz output. 1/4 frequency division output for V16M in CAV-W mode or variable pitch mode.
17	WDCK	O	1, 0	Word clock output. $f = 2Fs$. GRSCOR is output by the command switching.
18	DVSS0	—	—	Digital GND.
19	COUT	I/O	1, 0	Track count signal I/O.
20	MIRR	I/O	1, 0	Mirror signal I/O.
21	DFCT	I/O	1, 0	Detect signal I/O.
22	FOK	I/O	1, 0	Focus OK signal I/O.
23	PWMI	I		Spindle motor external control input.
24	LOCK	I/O	1, 0	GFS is sampled at 460Hz; when GFS is high, this pin outputs a high signal. If GFS is low eight consecutive samples, this pin outputs low. Input when LKIN = 1.
25	MDP	O	1, Z, 0	Spindle motor servo control output.
26	SSTP	I		Disc innermost track detection signal input.
27	FSTO	O	1, 0	2/3 frequency division output for XTAI pin.
28	DVDD1	—	—	Digital power supply.
29	SFDR	O	1, 0	Sled drive output.
30	SRDR	O	1, 0	Sled drive output.
31	TFDR	O	1, 0	Tracking drive output.
32	TRDR	O	1, 0	Tracking drive output.
33	FFDR	O	1, 0	Focus drive output.
34	FRDR	O	1, 0	Focus drive output.
35	DVSS1	—	—	Digital GND.
36	TEST	I		Test. Normally, GND.
37	TES1	I		Test. Normally, GND.
38	VC	I		Center voltage input.
39	FE	I		Focus error signal input.
40	SE	I		Sled error signal input.
41	TE	I		Tracking error signal input.
42	CE	I		Center servo analog input.
43	RFDC	I		RF signal input.
44	ADIO	O	Analog	Test. No connected.
45	AVSS0	—	—	Analog GND.
46	IGEN	I		Constant current input for operational amplifier.
47	AVDD0	—	—	Analog power supply.
48	ASYO	O	1, 0	EFM full-swing output. (low = Vss, high = VDD)
49	ASYI	I		Asymmetry comparator voltage input.
50	RFAC	I		EFM signal input.
51	AVSS1	—	—	Analog GND.
52	CLTV	I		Multiplier VCO1 control voltage input.

53	FILO	O	Analog	Master PLL filter output (slave = digital PLL).
54	FILI	I		Master PLL filter input.
55	PCO	O	1, Z, 0	Master PLL charge pump output.
56	AVDD1	—	—	Analog power supply.
57	BIAS	I		Asymmetry circuit constant current input.
58	VCTL	I		Wide-band EFM PLL VCO2 control voltage input. Wide-band EFM PLL VCO2 oscillation output. Serves as wide-band EFM
59	V16M	I/O	1, 0	PLL clock input by switching with the command.
60	VPCO	O	1, Z, 0	Wide-band EFM PLL charge pump output.
61	DVDD2	—	—	Digital power supply.
62	ASYE	I		Asymmetry circuit on/off (low = off, high = on).
63	MD2	I		Digital Out on/off control (low = off, high = on).
64	DOUT	O	1, 0	Digital Out output.
65	LRCK	O	1, 0	D/A interface. LR clock output. $f = Fs$
66	PCMD	O	1, 0	D/A interface. Serial data output (two's complement, MSB first).
67	BCK	O	1, 0	D/A interface. Bit clock output. Outputs a high signal when the playback disc has emphasis, and a low
68	EMPH	O	1, 0	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.
69	XTSL	I		Crystal selection input. Low when the crystal is 16.9344MHz; high when it is 33.8688MHz.
70	DVSS2	—	—	Digital GND.
71	XTAI	I		Crystal oscillation circuit input. When the master clock is input externally, input it from this pin.
72	XTAO	O		Crystal oscillation circuit output.
73	SOUT	O	1, 0	Serial data output in servo block.
74	SOCK	O	1, 0	Serial data readout clock output in servo block.
75	XOLT	O	1, 0	Serial data latch output in servo block.
76	SQSO	O	1, 0	Sub-Q 80-bit, PCM peak or level data outputs. CD TEXT data output.
77	SQCK	I		SQSO readout clock input.
78	SCSY	I		GRSCOR resynchronization input.
79	SBSO	O	1, 0	Sub-Q P to W serial output.
80	EXCK	I		SBSO readout clock input.

Notes)

PCMD is a MSB first, two's complement output.

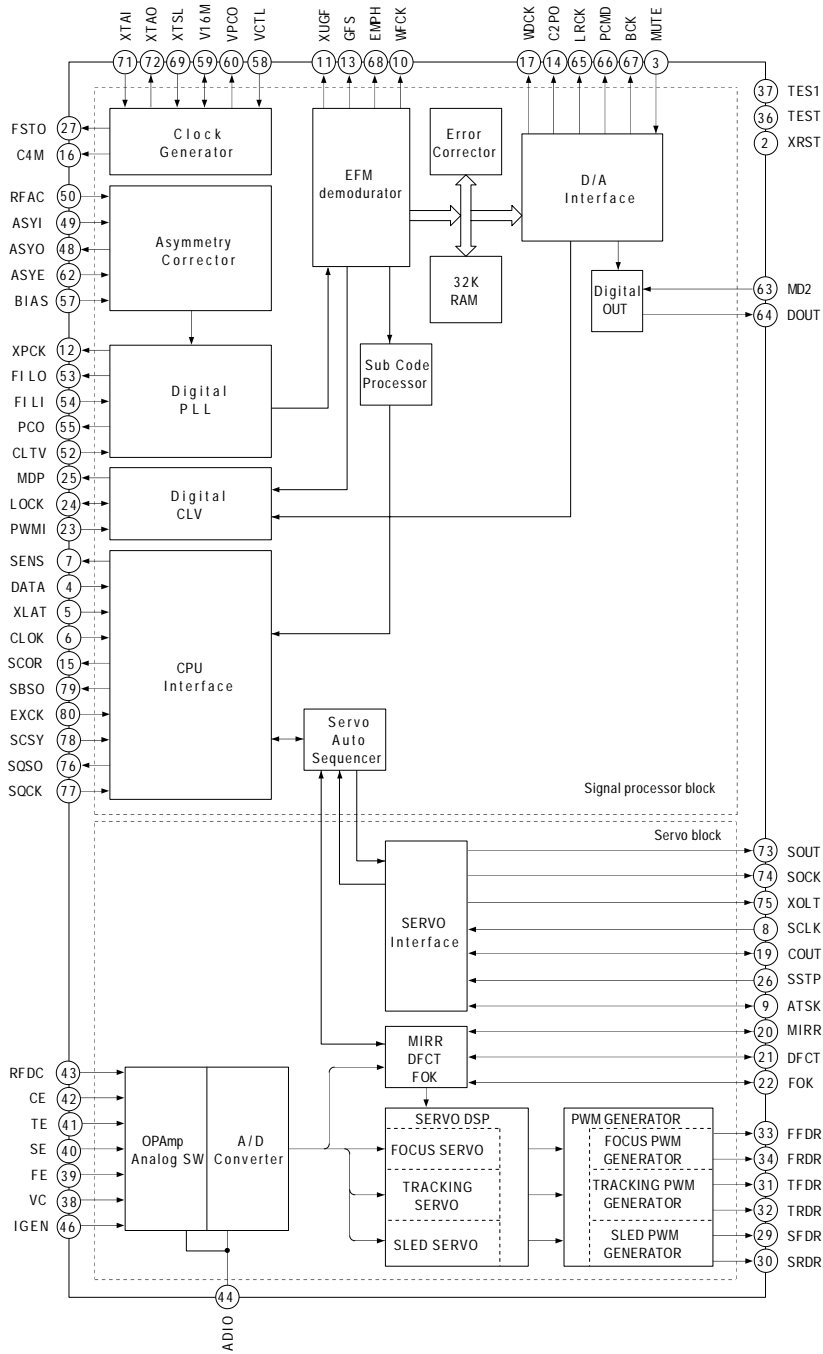
XUGF is the frame sync obtained from the EFM signal, and is negative pulse. It is the signal before sync protection.

XPCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.

The GFS signal goes high when the frame sync and the insertion protection timing match.

C2PO represents the data error status.

Q116 : CXD3068Q



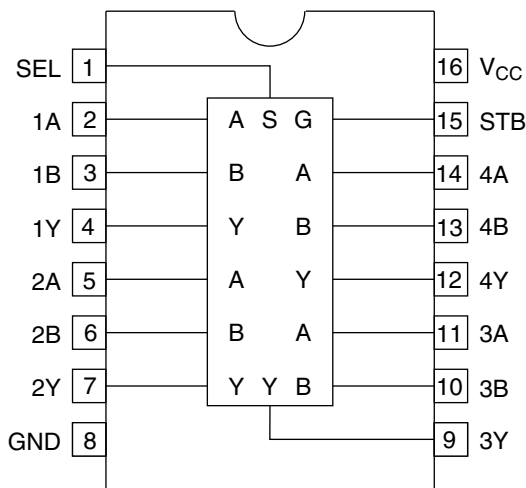
Q126 : TC74VHC157

Inputs				Output
STB	SEL	A	B	
H	X	X	X	L
L	L	L	X	L
L	L	H	X	H
L	H	X	L	L
L	H	X	H	H

H : High

L : Low

X :



Q101 : CXD1881R

Pin Description

Power Supply Pins

Name	Type	Description
VPA	—	Power supply pin for the RF block and serial port
VPB	—	Power supply pin for the servo block
VNA	—	Ground pin for the RF block and serial port
VNB	—	Ground pin for the servo block
V33	—	Power supply pin for the output buffers
V25	—	Reference power supply for the servo output

Input Pins

Name	Type	Description
DVDRFP, DVDRFN	I	RF SIGNAL INPUTS: Differential RF signal attenuator input pins.
RFSIN	I	RF SIGNAL INPUT: Single-ended RF signal attenuator input pin.
AIP, AIN	I	AGC AMPLIFIER INPUTS: Differential AGC amplifier input pins.
DIP, DIN	I	ANALOG INPUTS FOR RF SINGLE BUFFER: Differential analog inputs to the RF single-end output buffer and full wave rectifier.
A, B, C, D	I	PHOTO DETECTOR INTERFACE INPUTS: Inputs from the main beam photo detector matrix outputs.
A2, B2, C2, D2	I	PHOTO DETECTOR INTERFACE INPUTS: AC coupled inputs for the DPD from the main beam photo detector matrix outputs.
CD_A, B, C, D	I	CD PHOTO DETECTOR INTERFACE INPUTS: CD_A, B, C, D come from the CD main beam photo detector matrix outputs.
CD_E, F	I	CD PHOTO DETECTOR INTERFACE INPUTS: CD side beam photo detector outputs and used for the CD tracking detection.
MIN	I	RF SIGNAL INPUT FOR MIRROR: AC coupled inputs for the mirror detection circuit from MEVO.
DVDPD	I	APC INPUT: DVD APC input pin from the monitor photo diode.
CDPD	I	APC INPUT: CD APC input pin from the monitor photo diode.
LDON	I	APC OUTPUT ON/OFF: APC output control pin. A high level activates LD output. (open low)
LINK	I	LINKING SIGNAL INPUT PIN: In the linking area, this pin goes high and the Mirror and TE outputs are disabled, when the link signal is enabled. (open low)

Output Pins

Name	Type	Description
ATOP, ATON	O	DIFFERENTIAL ATTENUATOR OUTPUTS: Attenuator outputs.
FNP, FNN	O	DIFFERENTIAL NORMAL OUTPUTS: Filter normal outputs.
RFAC	O	SINGLE-ENDED NORMAL OUTPUT: Single-ended RF output.
RFDC	O	RF SIGNAL OUTPUT: Single-ended RF summing output reference to VPB-2.4 (V).
FE	O	FOCUSING ERROR SIGNAL OUTPUT: Focus error output reference to V125.
TE	O	TRACKING ERROR SIGNAL OUTPUT: Tracking error output reference to V125.
CE	O	CENTER ERROR SIGNAL OUTPUT: Center error output reference to V125.
MEVO	O	RFDDC BOTTOM ENVELOPE OUTPUT: Bottom envelope, PI or bottom clamped RF envelope signal output for mirror detection.
DFT	O	DEFECT OUTPUT: CMOS output (V33 or VPB). When the PI signal level is below the detection level or when the RF signal level is below the detection level, the DFT output goes high. This output is selected by serial port.
MIRR	O	MIRROR DETECT OUTPUT: Mirror detect comparator output. CMOS output (V33 or VPB).
PI	O	PULL-IN SIGNAL OUTPUT: The summing signal output of A, B, C, D, or CD_A, B, C, D. Reference to V25/3.
DVDLD	O	APC OUTPUT: DVD APC output pin to control the laser power.
CDLD	O	APC OUTPUT: CD APC output pin to control the laser power.
MNTR	O	MONITOR OUTPUT: Monitor output signal is selected by PIOR bit7-5.

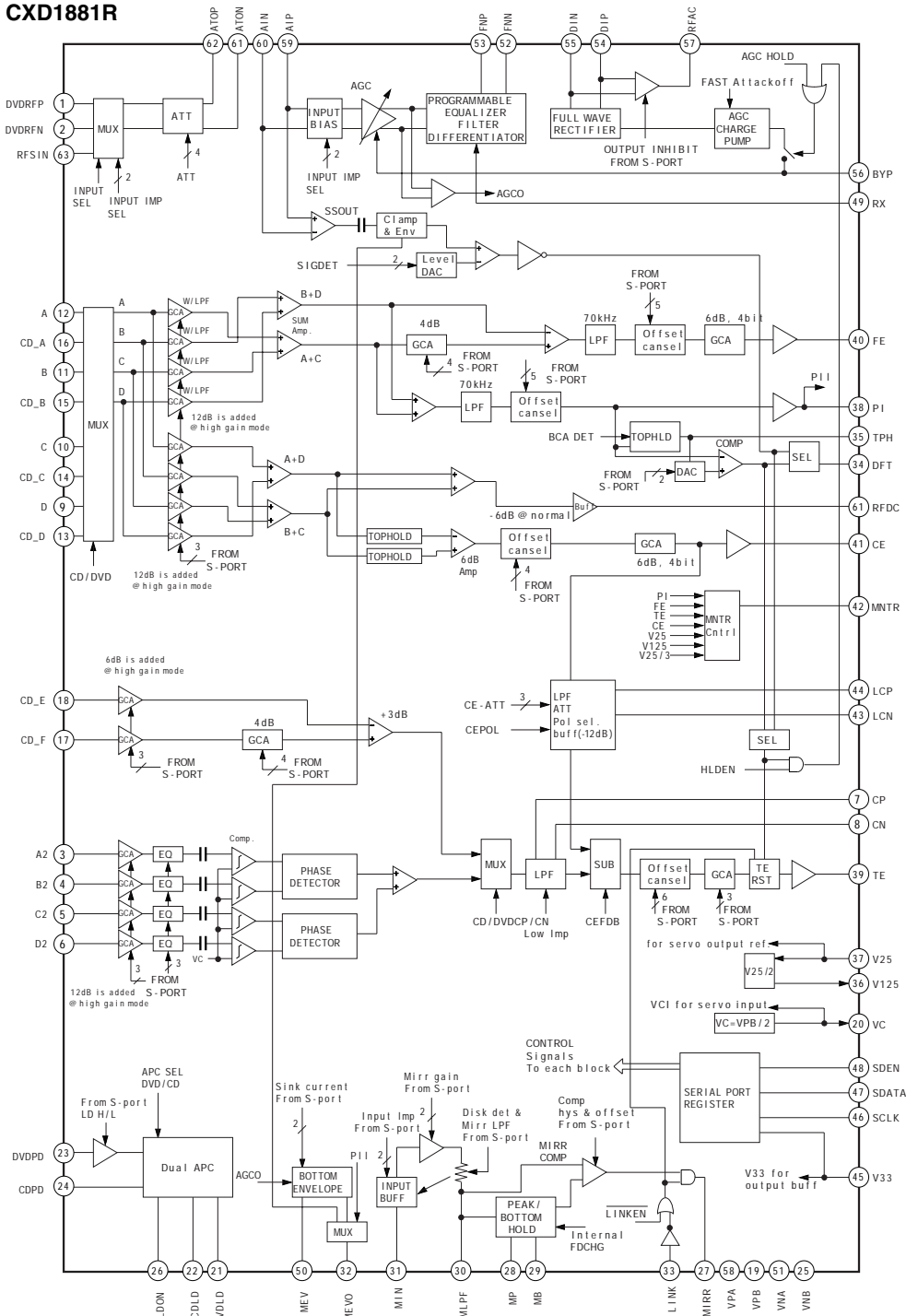
Serial Port Pins

Name	Type	Description
SDEN	I	SERIAL DATA ENABLE: Serial enable CMOS input. A high level input enables the serial port. (not to be left open)
SDATA	I/O	SERIAL DATA: Serial data bidirectional CMOS pin(V33 or VPA). NRZ programming data for the internal registers is applied to this input. (not to be left open)
SCLK	I	SERIAL CLOCK: Serial clock CMOS input. The clock applied to this pin is synchronized with the data applied to SDATA. (not to be left open)

Analog Pins

Name	Type	Description
BYP	—	The RF AGC integration capacitor CBYP, is connected between BYP and VPA.
CP	—	DIFFERENTIAL PHASE TRACKING LPF PIN: The external capacitance is connected between CN.
CN	—	DIFFERENTIAL PHASE TRACKING LPF PIN: The external capacitance is connected between CP.
LCP	—	LENS SHIFT OFFSET CANCEL LPF PIN: The external capacitance is connected between LCN.
LCN	—	LENS SHIFT OFFSET CANCEL LPF PIN: The external capacitance is connected between LCP.
MP	—	MIRR TOP HOLD PIN: The external capacitance is connected to VPB.
MB	—	MIRR BOTTOM HOLD PIN: The external capacitance is connected to VPB.
MEV	—	RFDC BOTTOM ENVELOPE PIN: The external capacitance is connected to VPA.
MLPF	—	MIRROR LPF PIN: An external capacitance is connected to VPB.
TPH	—	PI TOP HOLD PIN: An external capacitance is connected to VPB.
VC	—	REFERENCE VOLTAGE OUTPUT: This pin provides the DC bias reference voltage (VPB/2). Output impedance is less than 50 Ω.
V125	—	REFERENCE VOLTAGE OUTPUT: DC bias voltage output and it is also used for servo output reference. (V25/2)
RX	—	REFERENCE RESISTOR INPUT: An external 12.0 kΩ, 1 % resistor is connected from this pin to ground to establish a precise PTAT (proportional to absolute temperature) reference current for the filter.

Q101 : CXD1881R



Q123 : CXD2752R

Pin	Symbol	I/O	Description No.
1	VSC	—	Core GND.
2	XMSLAT	I	Latch input for microcomputer serial communication. The address and data are latched at the fall of this pin.
3	MSCK	I	Shift clock input for microcomputer serial communication. The serial input data is loaded and shifted at the rise of the clock input to this pin. During readout, the readout data changes at the fall of the clock input to this pin.
4	MSDATI	I	Data input for microcomputer serial communication. The data and address are serially input from the microcomputer.
5	VDC	—	Core power supply. Supply +2.5V.
6	MSDATO	O	Data output for microcomputer serial communication. Hi-Z other than during output.
7	MSREADY	O	Output ready flag for microcomputer serial communication. Low output when ready. Open drain.
8	XMSDOE	O	Output enable for microcomputer serial communication. When an external tri-state buffer is used, the buffer is activated by this pin. Low during MSDATO output.
9	XRST	I	Reset. The entire IC is reset when low. However, the clock output from the EXCKO1, EXCKO2 and LRCK output pins does not stop even when reset.
10	SMUTE	I	Soft mute. Audio output is soft muted when high; mute off when low.
11	MCKI	I	Master clock input. Input a 768Fs (33.8688MHz) clock.
12	VSIO	—	I/O GND.
13	EXCKO1	O	External output clock 1. 768Fs/512Fs/256Fs/128Fs is output according to the setting.
14	EXCKO2	O	External output clock 2. 768Fs/512Fs/256Fs/128Fs is output according to the setting.
15	LRCK	O	1Fs (44.1kHz) clock output.
16	FRAME	O	Frame signal output.
17	VDIO	—	I/O power supply. Supply +3.3V.
18	MNT0	O	Monitor output. Outputs a part of internal operation according to the microcomputer setting.
19	MNT1	O	Monitor output. Outputs a part of internal operation according to the microcomputer setting.
20	MNT2	O	Monitor output. Outputs a part of internal operation according to the microcomputer setting.
21	MNT3	O	Monitor output. Outputs a part of internal operation according to the microcomputer setting.
22	TESTO	O	Test output. Leave open.
23	TESTO	O	Test output. Leave open.
24	TESTO	O	Test output. Leave open.
25	TESTO	O	Test output. Leave open.
26	TCK	I	Test clock input. Fix to low.
27	TDI	Ipu	Test input (pulled up). Leave open.
28	VSC	—	Core GND.
29	TDO	O	Test output. Leave open.
30	TMS	Ipu	Test input (pulled up). Leave open.
31	TRST	Ipu	Test reset (pulled up). Input the power-on reset signal or fix to low.
32	TEST1	I	Test input. Fix to low.
33	TEST2	I	Test input. Fix to low.
34	TEST3	I	Test input. Fix to low.
35	VDC	—	Core power supply. Supply +2.5V.
36	TESTO	O	Test output. Leave open.
37	XBIT	O	DST related monitor. No connected. For detailed information, see the DST_X_Bit item in Part 3 of the SACD Format Book.
38	SUPDT0	O	Supplementary data output. (LSB)
39	SUPDT1	O	Supplementary data output.
40	SUPDT2	O	Supplementary data output.
41	SUPDT3	O	Supplementary data output.
42	VSIO	—	I/O GND.
43	SUPDT4	O	Supplementary data output.
44	SUPDT5	O	Supplementary data output.
45	VDIO	—	I/O power supply. Supply +3.3V.
46	SUPDT6	O	Supplementary data output.
47	SUPDT7	O	Supplementary data output. (MSB)
48	XSUPAK	O	Supplementary data acknowledge output.
49	VSC	—	Core GND.
50	TESTO	O	Test output. Leave open.
51	TESTI	I	Test input. Fix to low.
52	TESTI	I	Test input. Fix to low.
53	TESTO	O	Test output. Leave open.
54	VDC	—	Core power supply. Supply +2.5V.
55	TESTO	O	Test output. Leave open.
56	TESTO	O	Test output. Leave open.
57	BCKASL	I	Bit clock input/output selection for DSD data output. Low = input (slave), high = output (master).
58	VSDSD	—	DSD data output GND.
59	BCKAI	I	Bit clock input for DSD data output. Input the bit clock to this pin when BCKASL = low.
60	BCKAO	O	Bit clock output for DSD data output. The bit clock is output from this pin when BCKASL = high.

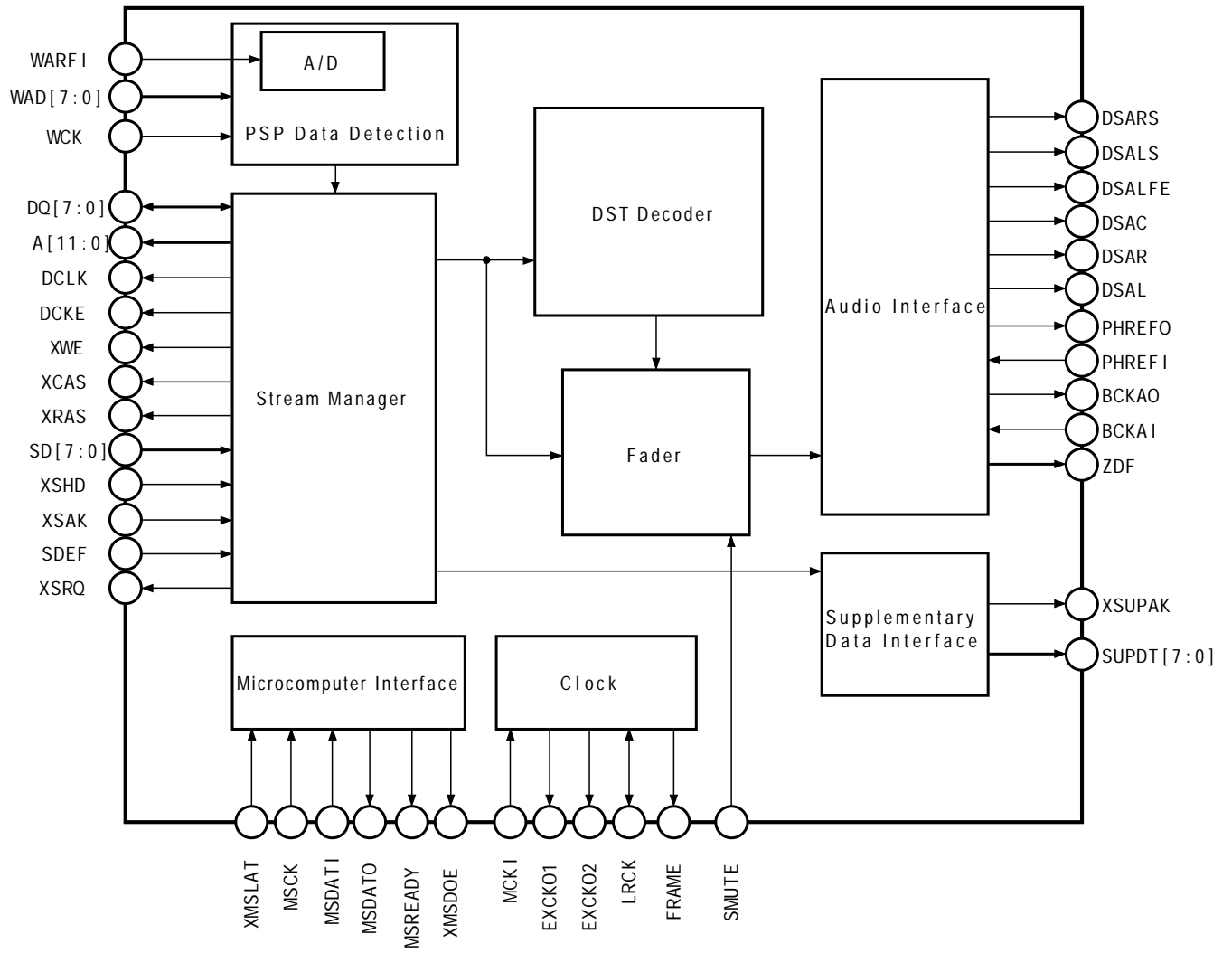
61	PHREFI	I	Phase reference signal input for DSD output phase modulation.
62	PHREFO	O	Phase reference signal output for DSD output phase modulation.
63	ZDFL	O	Lch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
64	DSAL	O	Lch DSD data output.
65	ZDFR	O	Rch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
66	DSAR	O	Rch DSD data output.
67	VDDSD	—	Power supply for DSD data output. Supply +3.3V separated from other digital power supplies.
68	ZDFC	O	Cch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
69	DSAC	O	Cch DSD data output.
70	ZDFLFE	O	LFEch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
71	DSALFE	O	LFEch DSD data output.
72	VSDSD	—	GND for DSD data output.
73	ZDFLS	O	LSch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
74	DSALS	O	LSch DSD data output.
75	ZDFRS	O	RSch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
76	DSARS	O	RSch DSD data output.
77	VDDSD	—	Power supply for DSD data output. Supply +3.3V separated from other digital power supplies.
78	TESTO	O	Test output. Leave open.
79	TESTO	O	Test output. Leave open.
80	VSC	—	Core GND.
81	TESTO	O	Test output. Leave open.
82	TESTO	O	Test output. Leave open.
83	VDC	—	Core power supply. Supply +2.5V.
84	TESTO	O	Test output. Leave open.
85	TESTO	O	Test output. Leave open.
86	VSIO	—	I/O GND.
87	TESTO	O	Test output. Leave open.
88	TESTI	I	Test input. Fix to low.
89	TESTI	I	Test input. Fix to low.
90	VDIO	—	I/O power supply. Supply +3.3V.
91	TESTO	O	Test output. Leave open.
92	TESTO	O	Test output. Leave open.
93	TESTO	O	Test output. Leave open.
94	VSC	—	Core GND.
95	TESTI	I	Test input. Fix to high.
96	TESTI	I	Test input. Fix to low.
97	TESTI	Ipu	Test input. Fix to high.
98	TESTO	O	Test output. Leave open.
99	VDC	—	Core power supply. Supply +2.5V.
100	TESTI	I	Test input. Fix to low.
101	TESTI	I	Test input. Fix to low.
102	TESTI	I	Test input. Fix to low.
103	TESTI	I	Test input. Fix to low.
104	TESTI	I	Test input. Fix to low.
105	TESTI	I	Test input. Fix to low.
106	VSIO	—	I/O GND.
107	TESTI	I	Test input. Fix to low.
108	TESTI	I	Test input. Fix to low.
109	TESTI	I	Test input. Fix to low.
110	VDIO	—	I/O power supply. Supply +3.3V.
111	WAD0	I	External A/D data input for PSP physical disc mark detection. (LSB) This is used only when not using the internal A/D converter and connecting an external A/D converter.
112	WAD1	I	External A/D data input for PSP physical disc mark detection.
113	WAD2	I	External A/D data input for PSP physical disc mark detection.
114	WAD3	I	External A/D data input for PSP physical disc mark detection.
115	VSIO	—	I/O GND.
116	VSC	—	Core GND.
117	WAD4	I	External A/D data input for PSP physical disc mark detection.
118	WAD5	I	External A/D data input for PSP physical disc mark detection.
119	WAD6	I	External A/D data input for PSP physical disc mark detection.
120	WAD7	I	External A/D data input for PSP physical disc mark detection. (MSB)
121	VDC	—	Core power supply. Supply +2.5V.
122	TESTI	I	Test input. Fix to low.
123	WCK	I	Operating clock for PSP physical disc mark detection. Input the PLL clock corresponding to 1T of RF.
124	WAVDD	—	A/D power supply for PSP physical disc mark detection. Input +2.5V separated from the digital block.
125	WAVDD	—	A/D power supply for PSP physical disc mark detection. Input +2.5V separated from the digital block.

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126	WARFI	Ai	Analog RF signal input for PSP physical disc mark detection. The full scale is 0.0 to 2.5V. (typ.)
127	WAVRB	Ai	A/D bottom reference for PSP physical disc mark detection. The voltage input to this pin is set to bottom level of the A/D converter.
128	WAVSS	—	A/D GND for PSP physical disc mark detection.
129	WAVSS	—	A/D GND for PSP physical disc mark detection.
130	VSIO	—	I/O GND.
131	DQ7	I/O	SDRAM data I/O. (MSB)
132	DQ6	I/O	SDRAM data I/O.
133	DQ5	I/O	SDRAM data I/O.
134	DQ4	I/O	SDRAM data I/O.
135	VDIO	—	I/O power supply. Supply +3.3V.
136	DQ3	I/O	SDRAM data I/O.
137	DQ2	I/O	SDRAM data I/O.
138	DQ1	I/O	SDRAM data I/O.
139	DQ0	I/O	SDRAM data I/O. (LSB)
140	VSIO	—	I/O GND.
141	DCLK	O	SDRAM clock output.
142	DCKE	O	SDRAM clock enable output.
143	XWE	O	SDRAM write enable output. Connect to the XWE pin of the SDRAM.
144	XCAS	O	SDRAM column address strobe output. Connect to the CAS pin of the SDRAM.
145	XRAS	O	SDRAM row address strobe output. Connect to the RAS pin of the SDRAM.
146	VDIO	—	I/O power supply. Supply +3.3V.
147	TESTO	O	Test output. Leave open.
148	A11	O	SDRAM address output. (MSB)
149	A10	O	SDRAM address output.
150	VSC	—	Core GND.
151	A9	O	SDRAM address output.
152	A8	O	SDRAM address output.
153	VDC	—	Core power supply. Supply +2.5V.
154	A7	O	SDRAM address output.
155	A6	O	SDRAM address output.
156	A5	O	SDRAM address output.
157	A4	O	SDRAM address output.
158	VSIO	—	I/O GND.
159	A3	O	SDRAM address output.
160	A2	O	SDRAM address output.
161	A1	O	SDRAM address output.
162	A0	O	SDRAM address output. (LSB)
163	VDIO	—	I/O power supply. Supply +3.3V.
164	XSRQ	O	Output for data request to front-end processor.
165	XSHD	I	Input for header flag output from front-end processor.
166	SDCK	I	Input for data transfer clock output from front-end processor.
167	XSAK	I	Input for data valid flag output from front-end processor.
168	SDEF	I	Input for error flag output from front-end processor.
169	SD0	I	Input for stream data from front-end processor. (LSB)
170	SD1	I	Input for stream data from front-end processor.
171	SD2	I	Input for stream data from front-end processor.
172	SD3	I	Input for stream data from front-end processor.
173	SD4	I	Input for stream data from front-end processor.
174	SD5	I	Input for stream data from front-end processor.
175	SD6	I	Input for stream data from front-end processor.
176	SD7	I	Input for stream data from front-end processor. (MSB)

Ipu: pulled-up input, Ipd: pulled-down input, Ai: analog input

Q123 : CXD2752R



Q124 : CXD1882R

Pin Description

The pin descriptions by function are given below.

1. Read Channel Block (22 pins)

1-1. PLL (8 pins)

- (1) PDHVCC (VC input for PD Hi-Z output)
Midpoint potential input for RFPLL. If the HPDVC bit (bit 6) of the RFPLL1 register (E0h) is set to "1", the voltage input to this pin is output from the PDO pin when the PDO pin output is other than VCC or GND. This pin sharpens the PDO pin output waveform in order to reduce phase deviation.
- (2) PDO (phase detector output: output)
Phase comparator charge pump output.
- (3) FDO (frequency detector output: output)
Frequency comparator charge pump output.
- (4) LPF1 (PLL LPF1: input)
Inverted input of the operational amplifier of the PLL loop filter.
- (5) LPF2 (PLL LPF2: input)
When the LPFTGN bit (bit 0) of the LOOPFCTL register (EAh) is set to "1", this pin is connected to the inverted input of the operational amplifier of the PLL loop filter. It is used to switch the PLL loop gain.
- (6) LPF5 (PLL LPF5: output)
Output of the operational amplifier of the PLL loop filter.
- (7) VCOIN (VCO input: input)
VCO input. When using the built-in operational amplifier, the output of the second operational amplifier of the loop filter is connected to this pin.
- (8) VCOR1 (VCO resistor: input)
Connects the VCO oscillation range setting resistor. The setting resistor is connected between this pin and GND. When R2 is increased, the minimum oscillation frequency is reduced.

1-2. RF binary setting (6 pins)

- (1) RFDCC (RF DC cut control: input)
Input for adjusting the RF signal DC cut HPF. A resistor is connected between this pin and the midpoint potential in order to raise the HPF cut-off frequency in areas other than the linking section.
- (2) ASF[2:1] (asymmetry compensation filter: output)
Connects the filter for switching the asymmetry compensation time constant in the linking section.
- (3) DASYO (data output of asymmetry compensation circuitry: output)
RF binary signal output.
- (4) DASYI (data input of asymmetry compensation circuitry: input)
Input for the analog signal obtained by integrating the RF binary signal.
- (5) RFIN (RF input: input)
RF signal input.

1-3. CLV (6 pins)

- (1) MDSOUT (MDS output: output)
Built-in CLV circuit frequency error output.
- (2) MDPOUT (MDP output: output)
Built-in CLV circuit phase error output.
- (3) MDPIN[2:1] (MDP input: input)
MDP inputs. The input from these two pins is switched by the MDPSL bit (bit 0) of the SPDLCTL register (E8h). MDSOUT and MDPOUT are synthesized as analog values and input to one of these pins. A spindle control signal generated by an external spindle control circuit is input to the other pin.
- (4) SPO (spindle control output: output)
Spindle control output. It attenuates and outputs the signal input from MDPIN.
- (5) CLVS (CLVS control output: output)
Control output for switching the spindle control filter constant in CLVS mode.

1-4. Other pins (2 pins)

- (1) LINK/DEFECT (LINK monitor/DEFECT: input/output)
LINK signal monitor output or DEFECT input signal. The signal is switched by the LNDFT bit (bit 7) of the MNTRPIN register (\$Efh). For LINK output, this pin is set high in the linking section

processing mode for DVD + RW discs. For DEFECT input, an external high signal is input during the DEFECT period.

- (2) APEO (absolute phase error: output)
Absolute phase error signal. It is integrated and used to evaluate the quality of the read channel.

2. CD-ROM Interface (12 pins)

Interface between this IC and a Sony CD signal processing IC such as the CXD3011R.

- (1) MDAT (medium data: input)
Serial data stream from the CD signal processing IC (hereafter referred to as "CD DSP").
- (2) BCLK (bit clock: input)
Bit clock input signal from the CD DSP. It strobes the MDAT signal.
- (3) LRCK (LR clock: input)
LR clock input signal from the CD DSP. It indicates MDAT signal left channel and right channel.
- (4) C2PO (C2 pointer: input)
C2 pointer input signal from the CD DSP. It indicates that the MDAT signal contains an error.
- (5) WFCK (write frame clock: input)
Write frame clock input signal from the CD DSP.
- (6) SCOR (subcode sync OR: input)
Subcode sync input signal from the CD DSP.
- (7) SBIN (subcode serial input: input)
Subcode serial input signal from the CD DSP.
- (8) EXCK (external clock: output)
Clock output for reading the SBIN signal which is sent to the CD DSP.
- (9) GRSOR (guard SCOR: input)
Guarded SCOR input signal from the CD DSP.
- (10) XRCI (RAM overflow input: input)
CD DSP RAM overflow input signal.

3. Buffer Memory Interface (32 pins)

This interface can be connected with a 4M-bit or 16M-bit EDO DRAM. Note that the bus width is 16 bits.

- (1) XMWR (DRAM write enable: output)
DRAM write enable negative logic output signal.
- (2) XCAS (column address strobe: output)
Column address strobe negative logic output signal.
- (3) XRAS (row address strobe: output)
Row address strobe negative logic output signal.
- (4) XMOE (memory output enable: output)
DRAM output enable negative logic output signal.
- (5) MA[11:0] (DRAM address: output)
DRAM address outputs. When connected to a 4M-bit DRAM, the MA[11:9] pins can be used as monitor pins.
- (6) MDB[F:0] (DRAM data bus: input/output)
DRAM data bus.

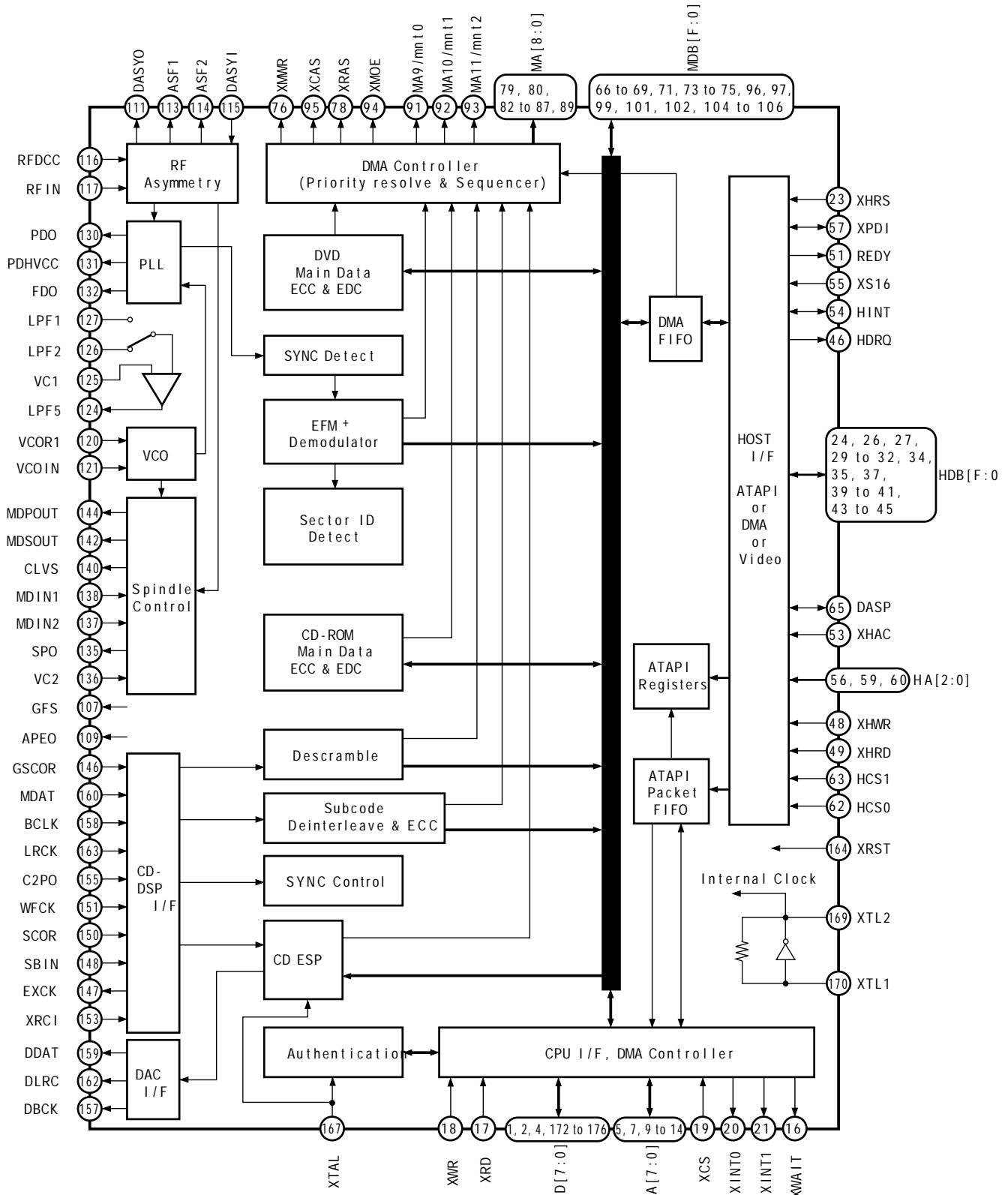
4. Sub CPU Interface (22 pins)

- (1) XWR (sub CPU write: input)
Strobe negative logic input signal for writing internal registers.
- (2) XRD (sub CPU read: input)
Strobe negative logic input signal for reading internal register status.
- (3) D[7:0] (sub CPU data bus: input/output)
8-bit data bus.
- (4) A[7:0] (sub CPU address: input)
Address input signals for selecting internal registers from the sub CPU.
- (5) XINT0, 1 (sub CPU interrupt: output)
Interrupt request negative logic output signals for the sub CPU. Interrupt requests from the decoder block and authentication block are output from the XINT0 pin. Interrupt requests from the read channel block are output from the XINT1 pin. These are open drain outputs.
- (6) XCS (chip select: input)
Chip select negative logic signal from the sub CPU.
- (7) XWAT (wait: output)
Negative logic output wait signal used by the sub CPU to access the buffer memory.

5. Host Interface (31 pins)

Pin symbols are listed in the order of ATAPI mode, DMA mode and AV mode. Pull up means that the pin should be pulled up by a resistor, "0" means low level output, and nc means No Connect.

- (1) HCS0 (HOST chip select: input)/nc/nc
This pin is pulled up by a resistor.
ATAPI: Chip select negative logic input signal from the host.
This is connected with the CS1FX pin of the ATAPI interface.
DMA/AV: This pin is not used.
- (2) HCS1 (HOST chip select: input)/nc/nc
This pin is pulled up by a resistor.
ATAPI: Chip select negative logic input signal from the host.
This is connected with the CS3FX pin of the ATAPI interface.
DMA/AV: This pin is not used.
- (3) HA[2:0] (HOST address: input)/pull up/pull up
ATAPI: Address input signal for selecting internal registers from the host.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (4) XHRD (HOST read: input)/XHRD (HOST read: output)/XSHDR0 (sector header 0: output)
ATAPI: Strobe negative logic input signal for reading data from the host.
DMA: Strobe negative logic input signal for reading data to the host.
AV: Negative logic output signal indicating the lead byte of the sector.
- (5) XHWR (HOST write: input)/XHWR (HOST write: output)/DCK (data clock: output)
ATAPI: Strobe negative logic input signal for writing data from the host.
DMA: Strobe negative logic output signal for writing data to the host.
AV: Clock output for data transfer.
- (6) XHAC (HOST DMA acknowledge: input)/HDRQ (HOST DMA request: input)/REQUEST (request:input)
This pin is pulled up by a resistor.
ATAPI: DMA acknowledge negative logic input signal from the host.
DMA: DMA request input signal from the host.
AV: Data transfer request input signal.
- (7) DASP (drive active/slave present: input/output)/pull up/pull up
ATAPI: Negative logic signal indicating that a slave drive is present or a drive is active; open drain signal.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (8) HDB[F:0] (HOST data bus: input/output)/HDB[F:0] (HOST data bus: input/output)/7 "0", XVFLAG, DATA[7:0] ("0", video error flag, data: output)
ATAPI/DMA: 16-bit host data bus.
AV: Low level is output from the upper 7 bits. The 8th bit from the upper side is an error flag output signal corresponding to the lower 8 bits. The lower 8 bits are video data output signals.
- (9) HDRQ (HOST DMA request: output)/XHAC (HOST DMA acknowledge: output)/XACK (acknowledge:output)
ATAPI: DMA data request positive logic output signal to the host; tri-state signal.
DMA: DMA acknowledge negative logic output signal to the host.
AV: Data transfer acknowledge negative logic output signal.
- (10) HINT (HOST interrupt: output)/pull up/pull up
ATAPI: Interrupt request positive logic output signal to the host; tri-state signal.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (11) XS16 (16-bit data transfer: output)/pull up/pull up
ATAPI: Negative logic signal indicating that a 16-bit data port has been selected; open drain signal. This is connected with the IOCS16 pin of the ATAPI interface.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (12) REDY (I/O channel ready: output)/pull up/pull up
ATAPI: Positive logic signal which is negated when a drive is not ready to respond to a data transfer request; open drain signal. This is connected with the IORDY pin of the ATAPI interface.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (13) XPDI (passed diagnostics: input/output)/pull up/pull up
ATAPI: Negative logic signal indicating that diagnostics of the slave drive have been completed; open drain signal. This is connected with the PDIAG pin of the ATAPI interface.
DMA/AV: This pin is not used, and should be pulled up by a resistor.
- (14) XHRS (HOST reset: input)/nc/nc
ATAPI: Reset negative logic signal from the host; pulled up by a resistor.
DMA/AV: This pin is not used



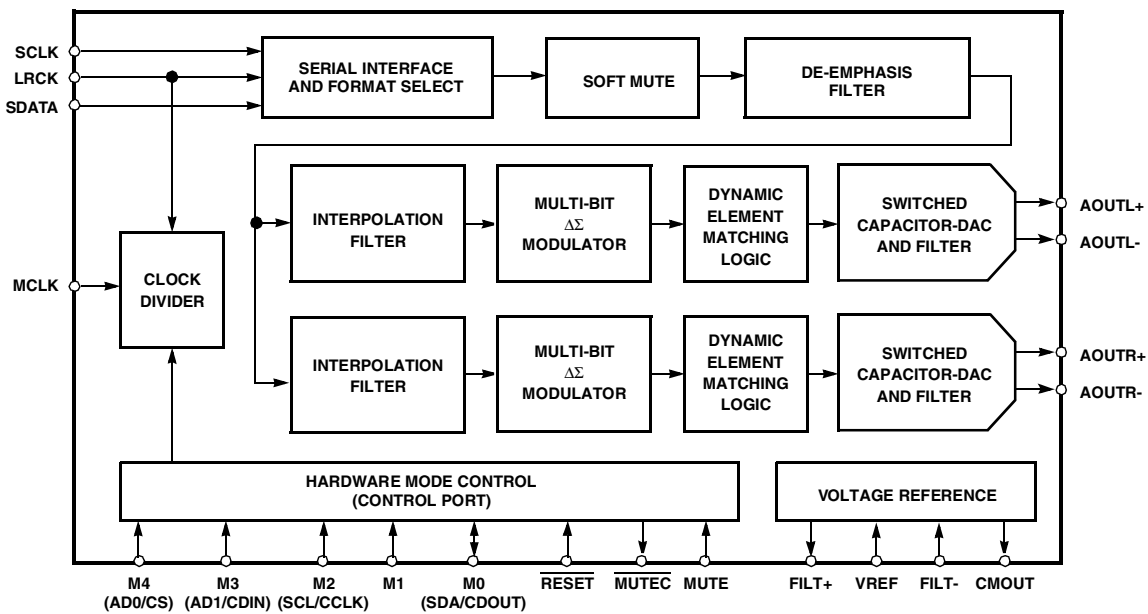
Q125 : GXPQ7100(MASK)

Pin No.	Pin Name	I/O	Description
1	FTMUT	O	Actuator driver mute signal for foc/track
2	SLMUT	O	Actuator driver mute signal for spin/sledg
3	AMUT	O	Muting on/off "L" : muting on for CXD3068Q
4	SMUT	O	Muting on/off signal output to the DSD decoder "H" : muting on
5	XRST	O	System reset signal output (L= reset)
6	CD/XDVD	O	CD/DVD(SACD) mode selection signal output (L=CD, H=SACD)
7	LOCK	I	GFS is sampled by 460 Hz "H" input when GFS is. "H"
8	MBHLD	-	NC
9	AMPSDT	I/O	Serial data transfer DATA signal input,output
10	AMPSCK	O	Serial data transfer clock signal output
11	AMPSEN	O	Serial data transfer enable signal (H=enable)
12	XDECSEL	O	OPU block on/off for modulation circuit (L=on)
13	VSS	O	Ground terminal (digital system)
14	D0	I/O	Two-way data bus
15	D1	I/O	Two-way data bus
16	D2	I/O	Two-way data bus
17	D3	I/O	Two-way data bus
18	D4	I/O	Two-way data bus
19	D5	I/O	Two-way data bus
20	D6	I/O	Two-way data bus
21	D7	I/O	Two-way data bus
22	XDECINT0	I	Interrupt signal input from CXD1881R
23	XDECINT1	I	Interrupt signal input from CXD1881R
24	TZC	I	Track signal, OPU in case by traversal the disc track line
25	PE3	-	NC
26	PE3	-	NC
27	SEEK	O	Display data ready signal output to the feature MPU ("H" : read)
28	REQST	O	Request signal CXD1882R
29	NC	-	Not used (open)
30	DECMNT1	I	RF signal monitor input from CXD1882R
31	FOK	I	Focus on signal
32	GFSDEC	I	Guard frame sync signal input
33	DRVRXD	I	Input signal data from the feature MPU
34	DRVTXD	O	Output signal data for the featur MPU
35	DRVCLK	I	Input signal clock from the featur MPU
36	XDRVRDY	O	Output data signal ready for the featur MPU
37	DRVIRQ	O	lutput data signal ready from the featur MPU
38	XRESET	I	Power on reset signal input (L=reset)
39	VSS		Ground terminal (digital system)
40	XTAL	I	System clock input terminal (20 MHz)
41	EXTAL	O	System clock output terminal (20 MHz)
42	VDD		Power supply terminal (+3.3V) (digital system)
43	DSPXLAT	O	Serial data latch pulse signal output to the CXD3068Q
44	XMSLAT	O	Serial data latch pulse signal output to the CXD2752R
45	MSCK	O	Serial data transfer clock signal output to CXD2752R
46	MSDTO	O	Serial data output to the DSD CXD2752R
47	MSDTI	I	Serial data input from the CXD2752R
48	MSREADY	I	Ready signal input from the CXD2752R "L" : ready
49	DSPDPO	O	Serial data output to the CXD3068Q
50	DSPSCK	O	Serial data clock input from the CXD3068Q
51	SENS	I	Internal status (SENSE) signal input from CXD3068Q
52	SQSO	I	Subcode Q data input
53	SNSCK	O	Serial status data clock output to the CXD3068Q
54	SQCK	O	Subcode Q data reading clock signal output
55	VSS		Ground terminal (digital system)
56	JITIN	I	Jitter signal input terminal
57	AMPMNT	I	Monitor signal from the CXD1881R
58	-ATT	I	-12dB atteneation request signal input "L" : attenuation on
59	P17	-	NC
60	PJ0	-	NC
61	SCSY	O	GRSCOR data sync request signal for CXD3068Q
62	GFSDSP	I	Frequency generator signal input
63	C2PO	I	C2 pointer signal input from the CXD3068Q
64	MIRR	I	Mirror signal input from CXD3068Q
65	DECMNT2	I	Monitor signal from the CXD1882R

Q125 : GXPQ7100(MASK)

66	FJUP_D	O	Focus jump DOWN signal output
67	FJUP_U	O	Focus jump UP signal output
68	AVSS	0	Ground terminal (for A/D converter)
69	AVREF	I	Reference voltage input terminal (for A/D converter)
70	AVDD	I	power supply terminal (+3.3V) (for A/D converter)
71	XFCMP_L	I	Layer switching monitor signal at the down from refrenc level
72	XFCMP_H	I	Layer switching monitor signal at the up from refrenc level
73	XLIM	I	Sledge position dedector sw (L=inner)
74	XTCLS	I	Tray loading inner switch input from the toray loader (L=inner)
75	XTOPN	I	Tray loading inner switch input from the toray loader (L=open)
76	EDCERR	-	Not used (open)
77	BUEEMP	I	MPR2="L", input case of install data for the MPU(FLASH ROM version)
78	EPDA	-	Not used (open)
79	EPCL	-	Not used (open)
80	PCRXD	I	Install data input for MPU chip (internal FLASH ROM TYPE)
81	PCTXD	O	Install data output for MPU chip (internal FLASH ROM TYPE)
82	FSJP	O	Start of Layer change signal
83	SYNCERR	I	MPR3="H", input case of install data for the MPU (FLASH ROM version)
84	XDECWR	O	write strobe signal output for CXD1882R
85	XDECRD	O	Read strobe signal output for CXD1882R
86	MPR1	I	MPR1="H", input case of install data for the MPU (FLASH ROM version)
87	VDD		Power supply terminal (+3.3V) (digital system)
88	VSS		Ground termina1(digital system)
89	A0	O	Address signal output
90	A1	O	Address signal output
91	A2	O	Address signal output
92	A3	O	Address signal output
93	A4	O	Address signal output
94	A5	O	Address signal output
95	A6	O	Address signal output
96	A7	O	Address signal output
97	XMODEON	O	CD/DVD(SACD) RF-bypass/DFT selection signal output (H=CD, L=SACD)
98	LDON	O	Laser diode on/off control signal output "L" : laser diode off, "H" : laser diode on
99	EJECT-	O	Tray loader pull-in signal
100	EJECT+	O	Tray loader push-out signal

QD41/QD61/QD71 : CS4397



QD41/QD61/QD71 : CS4397

Reset - RST

Pin 1, Input

Function:

The device enters a low power mode and all internal state machines registers are reset when low. When high, the device will be in a normal operation mode .

RST	DESCRIPTION
0	Enabled
1	Normal operation mode

Digital Ground - DGND

Pins 6 and 9, Inputs

Function:

Digital ground reference.

Digital Power - VD

Pins 7 and 8, Input

Function:

Digital power supply. Typically 5.0 to 3.0 VDC.

Master Clock - MCLK

Pin 10, Input

Function:

The master clock frequency must be either 256x, 384x, 512x or 768x the input sample rate in Single Speed Mode; either 128x, 192x 256x or 384x the input sample rate in Double Speed Mode; or 64x, 96x 128x or 192x the input sample rate in Quad Speed Mode. Tables 4-6 illustrate the standard audio sample rates and the required master clock frequencies.

Sample Rate (kHz)	MCLK (MHz)			
	256x	384x	512x	768x
32	8.1920	12.2880	16.3840	24.5760
44.1	11.2896	16.9344	22.5792	33.8688
48	12.2880	18.4320	24.5760	36.8640

Table 4. Single Speed (16 to 50 kHz sample rates) Common Clock Frequencies

Sample Rate (kHz)	MCLK (MHz)			
	128x	192x	256x	384x
64	8.1920	12.2880	16.3840	24.5760
88.2	11.2896	16.9344	22.5792	33.8688
96	12.2880	18.4320	24.5760	36.8640

Table 5. Double Speed (50 to 100 kHz sample rates) Common Clock Frequencies

Sample Rate (kHz)	MCLK (MHz)			
	64x	96x	128x	192x
176.4	11.2896	16.9344	22.5792	33.8688
192	12.2880	18.4320	24.5760	36.8640

Table 6. Quad Speed (100 to 200 kHz sample rates) Common Clock Frequencies

Serial Clock - SCLK

Pin 11, Input

Function:

Clocks individual bits of serial data into the SDATA pin. The required relationship between the Left/Right clock, serial clock and serial data is defined by either the Mode Control Byte in Control Port Mode or the M0 - M4 pins in Hardware Mode. The options are detailed in Figures 29-33

Left/Right Clock - LRCK

Pin 12, Input

Function:

The Left/Right clock determines which channel is currently being input on the serial audio data input, SDATA. The frequency of the Left/Right clock must be at the input sample rate. Audio samples in Left/Right sample pairs will be simultaneously output from the digital-to-analog converter whereas Right/Left pairs will exhibit a one sample period difference. The required relationship between the Left/Right clock, serial clock and serial data is defined by the Mode Control Byte and the options are detailed in Figures 29-33

Serial Audio Data - SDATA

Pin 13, Input

Function:

Serial audio data is input on this pin. The selection of the Digital Interface Format is determined by settings of the Mode select as detailed in Figures 29-33. The data is clocked into SDATA via the serial clock and the channel is determined by the Left/Right clock. The required relationship between the Left/Right clock, serial clock and serial data is defined by the Mode Control Byte and the options are detailed in Figures 29-33

Soft Mute - MUTE

Pin 15, Input

Function:

The analog outputs will ramp to a muted state when enabled. The ramp requires 1152 left/right clock cycles in Single Speed, 2304 cycles in Double Speed and 4608 cycles in Quad Speed mode. The bias voltage on the outputs will be retained and MUTE will go active at the completion of the ramp period.

The analog outputs will ramp to a normal state when this function transitions from the enabled to disabled state. The ramp requires 1152 left/right clock cycles in Single Speed, 2304 cycles in Double Speed and 4608 cycles in Quad Speed mode. The MUTE will release immediately on setting MUTE = 1.

The converter analog outputs will mute when enabled. The bias voltage on the outputs will be retained and MUTE will go active during the mute period.

Mute	DESCRIPTION
0	Enabled
1	Normal operation mode

Control Port / Hardware Mode Select - C/H

Pin 16, Input

Function:

Determines if the device will operate in either the Hardware Mode or Control Port Mode.

C/H	DESCRIPTION
0	Hardware Mode Enabled
1	Control Port Mode Enabled

Mute Control - MUTE C

Pin 17, Output

Function:

The Mute Control pin goes low during power-up initialization, reset, muting, master clock to left/right clock frequency ratio is incorrect or power-down. This pin is intended to be used as a control for an external mute circuit to prevent the clicks and pops that can occur in any single supply system. Use of Mute Control is not mandatory but recommended for designs requiring the absolute minimum in extraneous clicks and pops.

Analog Ground - AGND

Pins 18 and 21, Inputs

Function:

Analog ground reference.

Differential Analog Output - AO_{TR-}, AO_{TR+} and AO_{TL-}, AO_{TL+}

Pins 19, 20, 23 and 24, Outputs

Function:

The full scale differential analog output level is specified in the Analog Characteristics specifications table.

Analog Power - VA

Pin 22, Input

Function:

Power for the analog and reference circuits. Typically 5VDC.

Common Mode Voltage - CMOUT

Pin 25, Output Function:

Filter connection for internal bias voltage, typically 50% of VREF. Capacitors must be connected from CMOUT to analog ground, as shown in Figure 6. CMOUT has a typical source impedance of 25 k Ω and any current drawn from this pin will alter device performance

Reference Ground - FILT-

Pin 26, Input Function:

Ground reference for the internal sampling circuits. Must be connected to analog ground.

Reference Filter - FILT+

Pin 27, Output Function:

Positive reference for internal sampling circuits. External capacitors are required from FILT+ to analog ground, as shown in Figure 6. FILT+ is not intended to supply external current.

Voltage Reference Input- VREF

Pin 28, Input Function:

Analog voltage reference. Typically 5VDC.

HARDWARE MODE

Mode Select - M0, M1, M2, M3, M4

Pins 2, 3, 4, 5 and 14, Inputs Function:

The Mode Select pins determine the operational mode of the device as detailed in Tables 9-14. The options include; Selection of the Digital Interface Format which determines the

required relationship between the Left/Right clock, serial clock and serial data as detailed in Figures 29-33 Selection of the standard 15 μ s/50 μ s digital de-emphasis filter response, Figure 28, which requires re-configuration of the digital filter to maintain the proper filter response for 32, 44.1 or 48 kHz sample rates. Selection of the appropriate clocking mode to match the input sample rates. Access to the Direct Stream Digital Mode Access to the 8x Interpolation Input Mode

CONTROL PORT MODE

Address Bit 0 / Chip Select - AD0 / CS

Pin 2, Input Function:

In I²C mode, AD0 is a chip address bit. CS is used to enable the control port interface in SPI mode. The device will enter the SPI mode at anytime a high to low transition is detected on this pin. Once the device has entered the SPI mode, it will remain until either the part is reset or undergoes a power-down cycle.

Address Bit 1 / Control Data Input - AD1/CDIN

Pin 3, Input Function:

In I²C mode, AD1 is a chip address bit. CDIN is the control data input line for the control port interface in SPI mode.

Serial Control Interface Clock - SCL/CCLK

Pin 4, Input Function:

In I²C mode, SCL clocks the serial control data into or from SDA/CDO_{UT}.

In SPI mode, CCLK clocks the serial data into AD1/CDIN and out of SDA/CDO_{UT}.

Serial Control Data I/O - SDA/CDO_{UT}

Pin 5, Input/Output Function:

In I²C mode, SDA is a data input/output. CDO_{UT} is the control data output for the control port interface in SPI mode.

M1 - Mode Select

Pin 14, Input Function:

This pin is not used in Control Port Mode and must be terminated to ground.

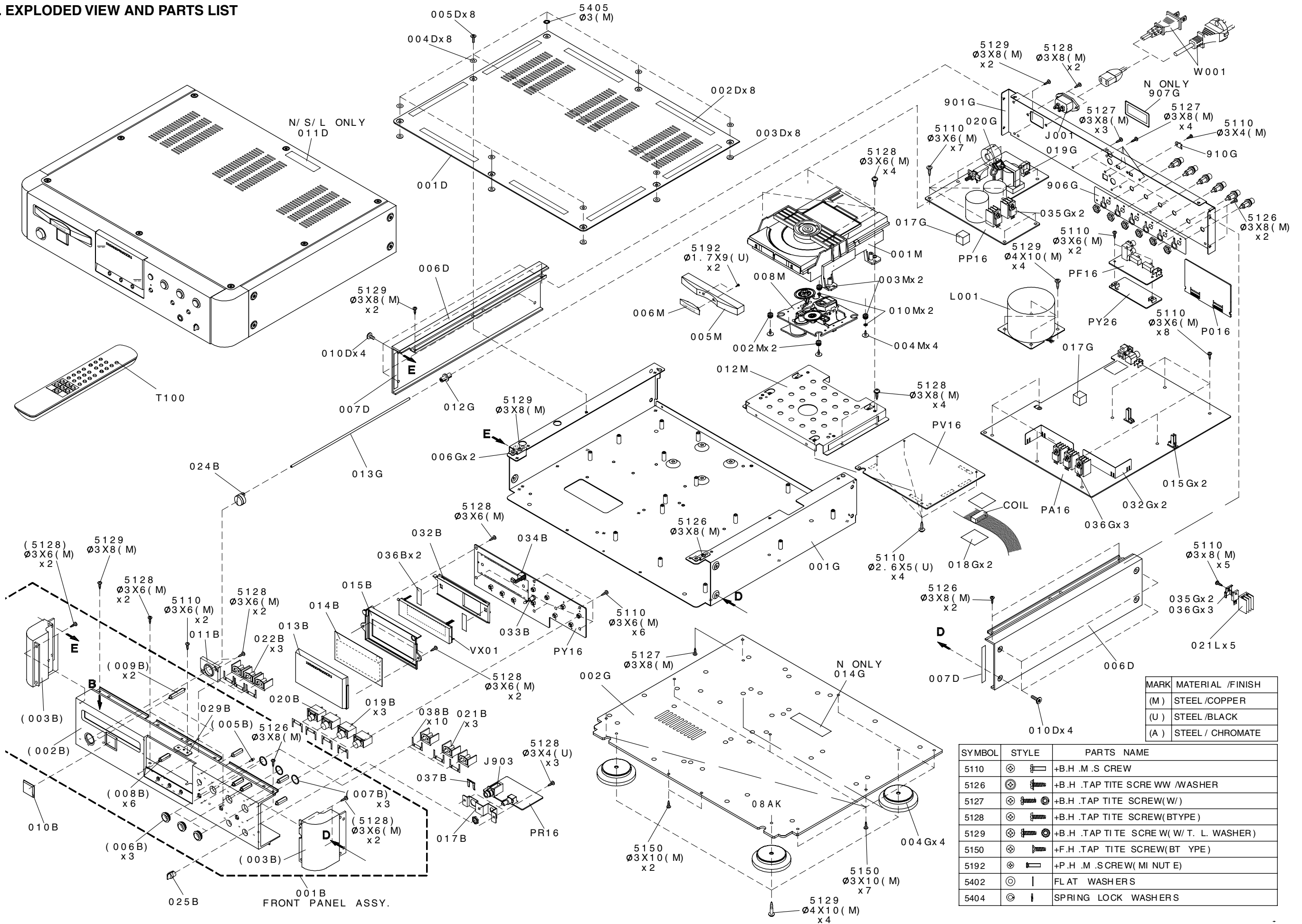
QF01 : MB90F553A

Pin	Port	Signal	I/O	Function Description	Active
1	P20/A16	M41	O	DAC select Front L/R	Active H
2	P21/A17	M42	O	DAC select Surround L/R	Active H
3	P22/A18	M43	O	DAC select center,LFE	Active H
4	P23/A19				
5	P24/A20	MUTE1	O	MUTE Front L/R	Active H
6	P25/A21	MUTE2	O	MUTE Surr.L/R, Center, LFE	Active H
7	P26/A22				
8	P27/A23				
9	P30/ALE				
10	P31/RD				
11	Vss	Vss		GND	
12	P32/WRL				
13	P33/WRH				
14	P34/WRQ				
15	P35/HAK				
16	P36/RDY	FCEN	O	Display driver select	Adrs= L : inst=H
17	P37/CLK	FRES	O	Display driver reset	Active L
18	P40/SCK	FCLK	O	Display driver clock	Active L
19	P41/SOT	FDAT	O	Display driver data	Pulse
20	P42/SIN				
21	P43/SCK1	DRVCLK	O	Front end clock	Active L
22	P44/SOT1	DRVRX	O	Front end data output	
23	Vcc	VDD		5V	
24	P45/SIN1	DRVTX	I	Front end data input	
25	P46/ADTG	CDRST	O	DAC reset	Active L
26	P47/SCK0	CDCLK	O	DAC clock	Active L
27	C	Cap.		0.1μF	
28	P50/SDA0/SOT0	CDIN	O	DAC data output	Pulse
29	P51/SCL0/SIN0	CDOUT	I	DAC data input	Pulse
30	P52/SDA1				
31	P53/SCL1				
32	P54/SDA2				
33	P55/SCL2				
34	Avcc	AVDD		5V	
35	AVRH	AVRef		5V	
36	AVRL	GND		GND	
37	Avss	AGND		GND	
38	P60/AN0	ADkey0	I	Key input	A/D
39	P61/AN1	ADkey1	I	Key input	A/D
40	P62/AN2	ADkey2	I	Key input	A/D
41	P63/AN3	ADkey3	I	Key input	A/D
42	Vss	Vss		GND	
43	P64/AN4	EEDAT	O	EEROM data	
44	P65/AN5	EECLK	O	EEROM clock	
45	P66/AN6				
46	P67/AN7				
47	P70/IRQ0				
48	P71/IRQ1				
49	MD0	MODE1	I	Mode select	Normal H
50	MD1	MODE2		Mode select	Normal H

Pin	Port	Signal	I/O	Function Description	Active
51	MD2	MODE3		Mode select	Normal L
52	HST	HWSTBY		Hardware standby	Normal H
53	P72/IRQ2	SEEK	I	Search signal	PLAY=L : SEEK or STOP=H
54	P73/IRQ3	STBSW	I	Standby on/off key input	Active H
55	P74/IRQ4	IR	I	Standby on/off remote input	Active H
56	P75/IRQ5	DRV RES	O	Front end reset	Active L
57	P76/IRQ6	DRV RDY	I	Front end ready	Active L
58	P77/IRQ7	DRV RQ	I	Front end request	active L
59	P80/TIN0				
60	P81/TIN1				
61	P82/TOT0				
62	P83/TOT1				
63	P84/IN0	RC-5		RC-5 input	Active L
64	P85/IN1				
65	P86/IN2				
66	P86/IN3				
67	P90/OUT0	CD	I/O	LED CD	Active L (Setup of in putfor SA17-S1)
68	P91/OUT1	2ch	I/O	LED 2ch	Active L (Setup of in putfor SA17-S1)
69	P92/PPG0	MultiPTMON	OO	LED Multi(SA8260)PTMON(SA-17S1)	Active L(LED Multi) : Active H(PTMON)
70	P93/PPG1	STBY	I/O	LED standby	Active L (LED output) : H=LED input (SA8260) : L=LED input (SA-17S1)
71	P94/PPG2	DISP	O	LED display off	Active L
72	P95/PPG3				
73	P96/PPG4				
74	P97/PPG5				
75	PA0/OUT2				
76	PA1/OUT3				
77	RST	Reset		Reset	Active L
78	PA2				
79	PA3				
80	PA4/CKOT				
81	Vss	GND		-	
82	X0	X'tal		8MHz	
83	X1	X'tal		8MHz	
84	Vcc	VDD		5V	
85	P00/AD00				
86	P01/AD01				
87	P02/AD02				
88	P03/AD03				
89	P04/AD04				
90	P05/AD05				
91	P06/AD06				
92	P07/AD07	MCKSEL	O	Audio Clock control	HIGH=128k : LOW= 64k
93	P10/AD08	MODE1	O	Mode select	SACD=H : CD=L
94	P11/AD09	STBY	O	Standby control	Active L
95	P12/AD10				
96	P13/AD11				
97	P14/AD12	Multi/2ch	I	Multi 2ch select	Multi=H : 2ch=L
98	P15/AD13	X128 SAMPLE	I	PU	HIGH=128k : LOW=64k
99	P16/AD14				
100	P17/AD15				

This is the same as the part of SA8260.

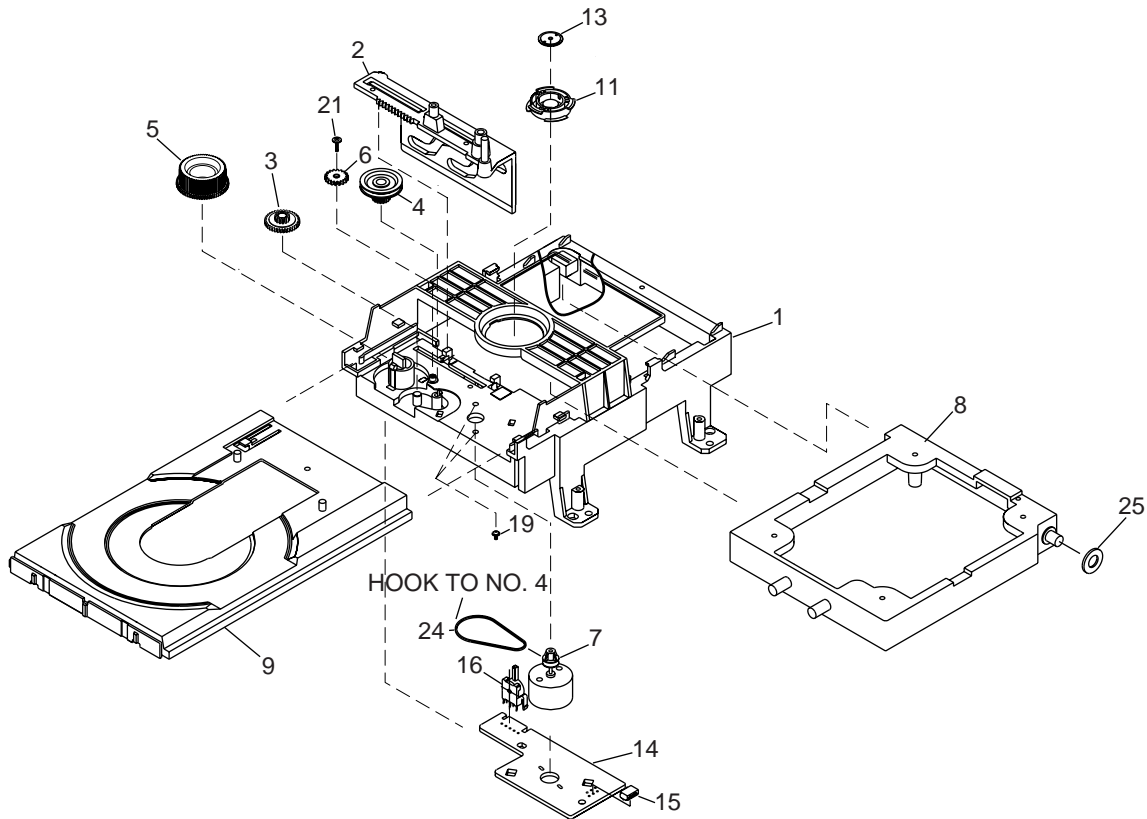
9. EXPLODED VIEW AND PARTS LIST



POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)
001B	/F		FRONT PANEL ASSY GOLD HAIR	08AK248520				PACKING	
001B	/L/N/S	08AK248510	FRONT PANEL ASSY GOLD BLAST	08AK248510	001T	/F		USER GUIDE SA-17S1 F	08AK851110
002B	/F		FRONT PANEL GOLD HAIR LINE	08AK248120	001T	/L		USER GUIDE SA-17S1 K	08AK851310
002B	/L/N/S	08AK248110	FRONT PANEL GOLD BLAST	08AK248110	001T	/N/S	08AK851350	USER GUIDE SA-17S1 N	08AK851350
003B		269J063110	ESCUTCHEON GOLD	269J063110					
005B		269J355010	LENS FOR DISPLAY	269J355010					
006B		08AK353110	RING GOLD NO.2 PLAY/STOP/PAUSE	08AK353110	T100		ZK08AK0010	REMOTE CONTROLLER RC-17SAS1	ZK08AK0010
010B		08AK251010	BADGE SACD	08AK251010	▲ W001	/F		MAINS CORD 3P MITY FOR F OFC	ZC01802080
013B		08AK158010	WINDOW	08AK158010	▲ W001	/L		MAINS CORD UL/CSA 10A 125V	ZC01803100
019B		08AK270120	BUTTON FOR PLAY/STOP/PAUSE	08AK270120	▲ W001	/N	ZC01803080	MAINS CORD 2P 10A 250V CLASS2	ZC01803080
020B		08AK270130	BUTTON FOR OPEN/CLOSE	08AK270130	▲ W001	/S		MAINS CORD 250V 10A FOR UK	ZC01804100
021B		08AK270140	BUTTON FOR DISPLAY	08AK270140					
022B		08AK270150	BUTTON FOR S.MODE/TIME/PHAN-C	08AK270150					
024B		08AK270110	BUTTON FOR POWER SWITCH	08AK270110					
025B		284T154240	KNOB FOR PHONES VOLUME	284T154240					
001D		411K257110	TOP LID GOLD	411K257110					
005D		323S010020	SCREW FOR TOP LID GOLD	323S010020					
006D		269J249110	SIDE PANEL GOLD	269J249110					
010D		323S010020	SCREW FOR SIDE PANEL GOLD	323S010020					
004G		291K057010	LEG GOLD BLAST	291K057010					
012G		08AK121010	LINK FOR POWER SWITCHE	08AK121010					
001M		01AK304010	MECHA LOADER ASSY	01AK304010					
002M		01AK130030	DUMPER FRONT	01AK130030					
003M		01AK130040	DUMPER REAR	01AK130040					
004M		01AK010010	SCREW DUMPER + LOADER	01AK010010					
005M		01AK063120	ESCUTCHEON FOR CD TRAY MZ378	01AK063120					
006M		392K063160	ESCUTCHEON SCD LOGO	392K063160					
008M		01AK304020	MECHA TRAVERSE UNIT	01AK304020					
▲ J001		YJ04002550	JACK AC INLET HF-301	YJ04002550					
J407		YT02011300	TERMINAL EW-2560T-LH-B FOR CENTER	YT02011300					
J408		YT02011300	TERMINAL EW-2560T-LH-B FOR WOOFER	YT02011300					
J607		YT02011290	TERMINAL EW-2560T-LH-W SL-CH	YT02011290					
J608		YT02011280	TERMINAL EW-2560T-LH-R SR-CH	YT02011280					
J707		YT02011290	TERMINAL EW-2560T-LH-W CENTER-CH	YT02011290					
J708		YT02011280	TERMINAL EW-2560T-LH-R LFE-CH	YT02011280					
▲ L001	/F		MAINS TRANSF. 100V 50/60HZ	TS46010060					
▲ L001	/L		MAINS TRANSF. 110/220V	TS46010090					
▲ L001	/N/S	TS46010070	MAINS TRANSF. 230V 50/60HZ	TS46010070					
L003		FC50230010	FERRITE CORE TFCK-23-11-14	FC50230010					
L011		FC50270040	FERRITE CORE USB-4 FOR W901	FC50270040					
L012		FC90280010	FERRITE CORE HF70SH28X2X10 FOR WF04	FC90280010					
L013		FC90280010	FERRITE CORE HF70SH28X2X10 FOR WF03	FC90280010					
L014		FC90280010	FERRITE CORE HF70SH28X2X10 FOR WF07	FC90280010					
L015		FC50270040	FERRITE CORE USB-4 FOR L001	FC50270040					
L016		FC50270040	FERRITE CORE USB-4 FOR WF02	FC50270040					
W101		nsp	JUMPER LEAD J101-OPT_UNIT FFC 1MM 25P	YU25080550					
WF03		nsp	JUMPER LEAD SMCD-15X80-BDX6-P1.0-S4-M	YU15080520					
WF04		nsp	JUMPER LEAD JF01-J105 FFC 1MM-PITCH 25P	YU25100550					
WF05		nsp	JUMPER LEAD JF02-J106 FFC 1MM-PITCH 25P	YU25100550					
WF07		nsp	JUMPER LEAD JF03-JY01 FFC 1MM-PITCH 17P	YU17120520	001S		nsp	PACKING CASE	08AK801010
WF08		nsp	JUMPER LEAD J104-TRAY FFC 1.25MM-PITCH 6P	YU06060520	002S		nsp	CUSHION FOR SET LEFT	410K809010
					003S		nsp	CUSHION FOR SET RIGHT	410K809020
					009S		nsp	CUSHION FOR SET	08AK809030

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

10. MECHA LOADER ASS'Y



NO	VERS. COLOR	PART NO.	DESCRIPTION	
1		nsp	CHASSIS-MAIN	62-210-1015
2		01AK054010	CAM SLIDER	62-239-2017
3		01AK058010	GEAR LOAD A	62-222-4003
4		01AK058020	PULLEY GEAR	62-223-4004
5		01AK058030	GEAR LOAD TRY	62-222-3005
6		01AK058040	GEAR B	62-222-4006
7		KM01AK13J3	ASS'Y MOTOR	62-093-4023
8		01AK401010	CHASSIS SUB	62-211-2007
9		01AK163010	TRAY	62-218-1016
10		nsp		
11		01AK004010	CLAMPER-2	62-223-3041
12		nsp		
13		nsp	YOKE	56-119-4030
14		nsp	PWB	62-070-3018
15		nsp	CONNECTOR	6FESTVKN
16		*SM000380R	LEVER SWITCH	F501-0012
17		nsp		
18		nsp		
19		nsp	SCREW	GSP14A25027
20		nsp		
21		nsp	SCREW	03-300-4525
22		nsp		
23		nsp		
24		01AK264010	BELT LOADING	02-084228
25		nsp	WASHER	GWP52X100025
26		nsp		
27		nsp		
28		nsp		
29		nsp		
30		nsp		
31		nsp		

NOTE : *nsp* PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

11. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R***: 1) GD05 × × × 140, Carbon film fixed resistor, ±5% 1/4W

R***: 2) GD05 × × × 160, Carbon film fixed resistor, ±5% 1/6W

① — Resistance value

Examples ;

① Resistance value

0.1 Ω 001 10 Ω 100 1 kΩ 102 100 kΩ 104
 0.5 Ω 005 18 Ω 180 2.7 kΩ 272 680 kΩ 684
 1 Ω 010 100 Ω 101 10 kΩ 103 1 MΩ 105
 6.8 Ω 068 390 Ω 391 22 kΩ 223 4.7 MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C***: CERAMIC CAP.

3) DD1 × × × × 370, Ceramic capacitor
 Disc type
 Temp.coeff.P350 ~ N1000, 50V
 ② — Capacity value
 ③ — Tolerance

Examples ;

② Tolerance (Capacity deviation)

±0.25 pF 0
 ±0.5 pF 1
 ±5% 5

* Tolerance of COMMON PARTS handled here are as follows :

0.5 pF ~ 5 pF ±0.25 pF
 6 pF ~ 10 pF ±0.5 pF
 12 pF ~ 560 pF ±5%

③ Capacity value

0.5 pF 005 3 pF 030 100 pF 101
 1 pF 010 10 pF 100 220 pF 221
 1.5 pF 015 47 pF 470 560 pF 561

C*** : CERAMIC CAP.

4) DK16 × × × 300, High dielectric constant ceramic capacitor
 Disc type
 Temp.chara. 2B4, 50V
 ④ — Capacity value

Examples ;

④ Capacity value

100 pF 101 1000 pF 102 10000 pF 103
 470 pF 471 2200 pF 222

C*** : 5) ELECTROLY CAP. ($\frac{\square}{\square}$), 6) FILM CAP. ($\frac{\square}{\square}$)

5) EA × × × × × 10, Electrolytic capacitor
 One-way lead type, Tolerance ±20%
 ⑤ — Working voltage
 ⑥ — Capacity value

Examples ;

⑤ Capacity value

0.1 μF 104 4.7 μF 475 100 μF 107
 0.33 μF 334 10 μF 106 330 μF 337
 1 μF 105 22 μF 226 1100 μF 118
 2200 μF 228

⑥ Working voltage

6.3V 006 25V 025
 10V 010 35V 035
 16V 016 50V 050

6) DF15 × × × 350 — Plastic film capacitor
 DF15 × × × 310 — One-way type, Mylar ±5% 50V
 DF16 × × × 310 — Plastic film capacitor
 One-way type, Mylar ±10% 50V
 ⑦ — Capacity value

Examples ;

⑦ Capacity value

0.001 μF (1000 pF) 102 0.1 μF 104
 0.0018 μF 182 0.56 μF 564
 0.01 μF 103 1 μF 105
 0.015 μF 153

NOTE : 1) The above CODES (R***, R***, C***, C*** and C***) are omitted on the schematic diagram in some case.

2) On the occasion, be confirmed the common parts on the parts list.

3) Refer to "Common Parts List" for the other common parts (RI05, DD4, DK4).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)	Type No. (KOA)	Description
NH05 × × × 140	RF25S × × × × ΩJ	(±5% 1/4W)
NH05 × × × 120	RF50S × × × × ΩJ	(±5% 1/2W)
NH85 × × × 110	RF73B2A × × × × ΩJ	(±5% 1/10W)
NH95 × × × 140	RF73B2E × × × × ΩJ	(±5% 1/4W)

* Resistance value Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05 × × × 140	ERD-2FCJ × × ×	(±5% 1/4W)
RF05 × × × 140		
NF02 × × × 140	ERD-2FCG × × ×	(±2% 1/4W)
RF02 × × × 140		

* Resistance value * Resistance value

Examples ;

* Resistance value

0.1 Ω 001 10 Ω 100 1 kΩ 102 100 kΩ 104
 0.5 Ω 005 18 Ω 180 2.7 kΩ 272 680 kΩ 684
 1 Ω 010 100 Ω 101 10 kΩ 103 1 MΩ 105
 6.8 Ω 068 390 Ω 391 22 kΩ 223 4.7 MΩ 475



ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ-PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL


NOTE ON FUSE :

Regarding to all parts of parts code **FS20xxx2xx**, replace only with Wickmann-Werke GmbH, Type 372 non glass type fuse.

NOTE ON SAFETY :

Symbol  Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

 がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
			PA16-POWER AUDIO CIRCUIT BOARD						
			PA16-CAPACITORS						
C401	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540	C704	/N	OF55121550	FILM 120pF 100V	OF55121550
C401	/N	OF55182550	FILM 1800pF 100V	OF55182550	C705		nsp	ELECT. 470µF M 16V ARA	OA47701650
C402	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540	C706		nsp	ELECT. 470µF M 16V ARA	OA47701650
C402	/N	OF55331550	FILM 330pF 100V	OF55331550	C709	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540
C404	/F/L/S		FILM 120pF J 100V APSV	OF15121540	C709	/N	OF55122550	FILM 1200pF 100V	OF55122550
C404	/N	OF55121550	FILM 120pF 100V	OF55121550	C710	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540
C405		nsp	ELECT. 470µF M 16V ARA	OA47701650	C710	/N	OF55561550	FILM 560pF 100V	OF55561550
C406		nsp	ELECT. 470µF M 16V ARA	OA47701650	C712	/F/L/S		FILM 680pF 100V DTG	OF55681570
C409	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540	C712	/N	OF55681550	FILM 680pF 100V	OF55681550
C409	/N	OF55122550	FILM 1200pF 100V	OF55122550	C713		nsp	ELECT. 470µF M 16V ARA	OA47701650
C410	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540	C714		nsp	ELECT. 470µF M 16V ARA	OA47701650
C410	/N	OF55561550	FILM 560pF 100V	OF55561550	C716		nsp	ELECT. 100µF 25V ARS	OA10702540
C412	/F/L/S		FILM 680pF 100V DTG	OF55681570	C751	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540
C412	/N	OF55681550	FILM 680pF 100V	OF55681550	C751	/N	OF55182550	FILM 1800pF 100V	OF55182550
C413		nsp	ELECT. 470µF M 16V ARA	OA47701650	C752	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540
C414		nsp	ELECT. 470µF M 16V ARA	OA47701650	C752	/N	OF55331550	FILM 330pF 100V	OF55331550
C416		nsp	ELECT. 100µF 25V ARS	OA10702540	C754	/F/L/S		FILM 120pF J 100V APSV	OF15121540
C451	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540	C754	/N	OF55121550	FILM 120pF 100V	OF55121550
C451	/N	OF55182550	FILM 1800pF 100V	OF55182550	C759	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540
C452	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540	C759	/N	OF55122550	FILM 1200pF 100V	OF55122550
C452	/N	OF55331550	FILM 330pF 100V	OF55331550	C760	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540
C454	/F/L/S		FILM 120pF J 100V APSV	OF15121540	C760	/N	OF55561550	FILM 560pF 100V	OF55561550
C454	/N	OF55121550	FILM 120pF 100V	OF55121550	C762	/F/L/S		FILM 680pF 100V DTG	OF55681570
C459	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540	C762	/N	OF55681550	FILM 680pF 100V	OF55681550
C459	/N	OF55122550	FILM 1200pF 100V	OF55122550	C766		nsp	ELECT. 100µF 25V ARS	OA10702540
C460	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540	C801		nsp	ELECT. 6800µF 16V ±20% RA-2	OA68801620
C460	/N	OF55561550	FILM 560pF 100V	OF55561550	C802		nsp	ELECT. 3300µF M 6.3V RA-2	OA33800620
C462	/F/L/S		FILM 680pF 100V DTG	OF55681570	C805		nsp	ELECT. 6800µF 16V	OA68801620
C462	/N	OF55681550	FILM 680pF 100V	OF55681550	C806		nsp	ELECT. 3300µF M 6.3V RA-2	OA33800620
C466		nsp	ELECT. 100µF 25V ARS	OA10702540	C809		nsp	ELECT. 3300µF M 6.3V RA-2	OA33800620
C601	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540	C810		OC47701620	ELECT. 470µF 16V 10X12.5 ARE2	OC47701620
C601	/N	OF55182550	FILM 1800pF 100V	OF55182550	C822		nsp	ELECT. 4700µF 25V RA-2	OA47802520
C602	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540	C823		nsp	ELECT. 470µF 16V M RA-2	OA47701620
C602	/N	OF55331550	FILM 330pF 100V	OF55331550	CD21		nsp	ELECT. 10µF 63V RA-2	OA10606320
C604	/F/L/S		FILM 120pF J 100V APSV	OF15121540	CD22		nsp	ELECT. 100µF M 10V RA-2	OA10701020
C604	/N	OF55121550	FILM 120pF 100V	OF55121550	CD25		nsp	ELECT. 47µF M 25V RA-2	OA47602520
C605		nsp	ELECT. 470µF M 16V ARA	OA47701650	CD26		nsp	ELECT. 220µF M 25V RA-2	OA22702520
C606		nsp	ELECT. 470µF M 16V ARA	OA47701650	CD41		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C609	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540	CD44		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C609	/N	OF55122550	FILM 1200pF 100V	OF55122550	CD45		nsp	ELECT. 10µF 25V ARA	OA10602550
C610	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540	CD47		nsp	ELECT. 100µF 10V ARA	OA10701050
C610	/N	OF55561550	FILM 560pF 100V	OF55561550	CD61		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C612	/F/L/S		FILM 680pF 100V DTG	OF55681570	CD64		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C612	/N	OF55681550	FILM 680pF 100V	OF55681550	CD65		nsp	ELECT. 10µF 25V ARA	OA10602550
C613		nsp	ELECT. 470µF M 16V ARA	OA47701650	CD67		nsp	ELECT. 100µF 10V ARA	OA10701050
C614		nsp	ELECT. 470µF M 16V ARA	OA47701650	CD71		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C616		nsp	ELECT. 100µF 25V ARS	OA10702540	CD74		nsp	ELECT. 100µF M 16V RA-2	OA10701620
C651	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540	CD75		nsp	ELECT. 10µF 25V ARA	OA10602550
C651	/N	OF55182550	FILM 1800pF 100V	OF55182550	CD77		nsp	ELECT. 100µF 10V ARA	OA10701050
C652	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540	CT05		nsp	ELECT. 100µF 25V ARS	OA10702540
C652	/N	OF55331550	FILM 330pF 100V	OF55331550	R415		nsp	PA16-RESISTORS 5.1kΩ ±5% 1/6W	GD05512160
C654	/F/L/S		FILM 120pF J 100V APSV	OF15121540	R465		nsp	5.1kΩ ±5% 1/6W	GD05512160
C654	/N	OF55121550	FILM 120pF 100V	OF55121550	R615		nsp	5.1kΩ ±5% 1/6W	GD05512160
C659	/F/L/S		FILM 1200pF TP 100V PP APSV	OF15122540	R665		nsp	5.1kΩ ±5% 1/6W	GD05512160
C659	/N	OF55122550	FILM 1200pF 100V	OF55122550	R715		nsp	5.1kΩ ±5% 1/6W	GD05512160
C660	/F/L/S		FILM 560pF TP 100V PP APSV	OF15561540	R765		nsp	5.1kΩ ±5% 1/6W	GD05512160
C660	/N	OF55561550	FILM 560pF 100V	OF55561550	RT03		nsp	75Ω ±5% 1/6W	GD05750160
C662	/F/L/S		FILM 680pF 100V DTG	OF55681570				PA16-RESISTORS (COMMON)	
C662	/N	OF55681550	FILM 680pF 100V	OF55681550				CARBON FILM FIXED RES.	
C666		nsp	ELECT. 100µF 25V ARS	OA10702540				±5% 1/6W : R401-R414 R422-R441 R443 R451-R464 R472-R495 R601-R614 R622-R646 R651-R664 R672-R691 R693 R694 R696 R701-R714 R722-R741 R743 R744 R751-R764 R772-R791 R793 R794 R801-R803 RD22-RD25 RD27	
C701	/F/L/S		FILM 1800pF TP 100V PP APSV	OF15182540					
C701	/N	OF55182550	FILM 1800pF 100V	OF55182550					
C702	/F/L/S		FILM 330pF TP 100V PP APSV	OF15331540					
C702	/N	OF55331550	FILM 330pF 100V	OF55331550					
C704	/F/L/S		FILM 120pF J 100V APSV	OF15121540					

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
			RD42 RD45 RD65 RD64 RD65 RD72 RD74 RD75 RT01 RT02 RY17						
			PA16-SEMICONDUCTORS						
D401 }		nsp	DIODE	HD20002000	Q465		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
D413			1SS176 MA165 1SS254 30V 0.1A		Q466		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
D421		nsp	DIODE	HD20002000	Q467		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
			1SS176 MA165 1SS254 30V 0.1A		Q468		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
D451 }		nsp	DIODE	HD20002000	Q469		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
D463			1SS176 MA165 1SS254 30V 0.1A		Q470				
D491		nsp	DIODE	HD20002000	Q471		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
			1SS176 MA165 1SS254 30V 0.1A		Q473				
D601 }		nsp	DIODE	HD20002000	Q474		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
D613			1SS176 MA165 1SS254 30V 0.1A		Q601		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
D651 }		nsp	DIODE	HD20002000	Q603		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
D663			1SS176 MA165 1SS254 30V 0.1A		Q604		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
D691		nsp	DIODE	HD20002000	Q605		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
			1SS176 MA165 1SS254 30V 0.1A		Q606		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
D701 }		nsp	DIODE	HD20002000	Q607		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
D713			1SS176 MA165 1SS254 30V 0.1A		Q608		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
D751 }		nsp	DIODE	HD20002000	Q609		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
D763			1SS176 MA165 1SS254 30V 0.1A		Q611		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
D791		nsp	DIODE	HD20002000	Q612		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
			1SS176 MA165 1SS254 30V 0.1A		Q613		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
▲ D801 }		HD20055100	DIODE	HD20055100	Q614		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
▲ D808			SHOTTKY 11EQS10 1A 100V		Q615		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
▲ D821 }		HD20055100	DIODE	HD20055100	Q616		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
▲ D824			SHOTTKY 11EQS10 1A 100V		Q617		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q401		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0	Q618		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q403		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q619		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q404		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q620				
Q405		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q621		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q406		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q623				
Q407		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0	Q624		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q408		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0	Q651		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
Q409		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0	Q653		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q411		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q654		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q412		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q655		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q413		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q656		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q414		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q657		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q415		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0	Q658		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
Q416		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0	Q659		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
Q417		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q661		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q418		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q662		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q419		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q663		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q420 }		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q664		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q423					Q665		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q424		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q666		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
Q451		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0	Q667		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q453		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q668		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q454		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q669		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q455		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q670				
Q456		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q671		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q457		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0	Q673				
Q458		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0	Q674		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q459		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0	Q701		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
Q461		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q703		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q462		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q704		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q463		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	Q705		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q464		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0	Q706		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
					Q707		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
					Q708		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
					Q709		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
					Q711		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
					Q712		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
					Q713		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
					Q714		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
					Q715		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
					Q716		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
					Q717		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
					Q718		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
Q719		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q720		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q723		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q724		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q751		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
Q753		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q754		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q755		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q756		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q757		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q758		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
Q759		HF203892A0	F.E.T. 2SK389 GR OR BL	HF203892A0
Q761		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q762		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q763		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q764		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q765		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q766		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
Q767		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q768		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q769		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q770				
Q773		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q774		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
▲ Q801		HC3690521F	IC BA05T 5V/1A TO220	HC3690521F
▲ Q802		HC3690521F	IC BA05T 5V/1A TO220	HC3690521F
▲ Q803		HC3891532F	IC PQ15RW11 3.0 15 VARI REG.	HC3891532F
▲ Q821		HC3890809F	IC NJM7808FA +8V 1A REG	HC3890809F
QD21		BA20004000	DIG.TRS. DTC114TS UN4215 10k	BA20004000
QD22		BA20004000	DIG.TRS. DTC114TS UN4215 10k	BA20004000
QD23		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
QD24		HT328782A0	TRS. 2SC2878 A OR BRANK	HT328782A0
QD25		HT324582B0	TRS. 2SC2458 Y OR GR	HT324582B0
QD26		HT324582B0	TRS. 2SC2458 Y OR GR	HT324582B0
QD27		HT324582B0	TRS. 2SC2458 Y OR GR	HT324582B0
QD41		HC10008880	IC CS4397 DSD/PCD DAC 24BIT 192K	HC10008880
QD60		HC010605K0	IC TC74VHC86F SOP	HC010605K0
QD61		HC10008880	IC CS4397 DSD/PCD DAC 24BIT 192K	HC10008880
QD71		HC10008880	IC CS4397 DSD/PCD DAC 24BIT 192K	HC10008880
QT01		HC700400D0	IC 74HC04 HI-SPEED C-MOS	HC700400D0
			PA16-MISCELLANEOUS	
▲ F801		FS20125200	FUSE T1.25A 250V VDE SEMKO	FS20125200
▲ F821		FS20080200	FUSE T800mA 250V VDE SEMKO	FS20080200
JT02		YT02010790	TERMINAL 14X14 RA 1L1P BLK AU FLM-GND	YT02010790
JT03		YJ15000220	OPT. CONNECTOR TOTX179L TOSLINK TRANSCEIVER	YJ15000220
L401		LY20120620	RELAY ED2-12NU NEC 12V	LY20120620
L402		LY20120620	RELAY ED2-12NU NEC 12V	LY20120620
L601		LY20120620	RELAY ED2-12NU NEC 12V	LY20120620
L701		LY20120620	RELAY ED2-12NU NEC 12V	LY20120620
L801		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
L802		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
L803		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
L821		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
LT01		TP41042030	PULSE TRANSF. TPS247MN-0386AN	TP41042030
LT02		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
CF54		nsp	PF16-RC-5 FILTER SW CIRCUIT BOARD ELECT. 10µF 63V RA-2	OA10606320
			PF16-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W : ALL	
			R****	
DF51		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
JF51		YT02020890	TERMINAL 2P CINCH PIN JACK	YT02020890
QF51		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000
QF52		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000
S351		SS02021150	SLIDE SWITCH FILTER SWITCH STANDARD/CUSTOM	SS02021150
SF51		SS02021150	SLIDE SWITCH SLIDE SWITCH RC-5 INT/EXT	SS02021150
			PO16-PHANTOM AMP CIRCUIT BOARD	
			PO16-CAPACITORS	
C505		nsp	ELECT. 470µF M 16V ARA	OA47701650
C506		nsp	ELECT. 470µF M 16V ARA	OA47701650
			PO16-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W : ALL	
			PO16-SEMICONDUCTORS	
D501		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D505		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D511		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D551		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D555		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
Q501		HF203691B0	F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
Q502		HF203691B0	F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
Q503		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q504		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q505		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q506		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q507		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q508		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
Q551		HF203691B0	F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
Q552		HF203691B0	F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
Q553		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q554		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q555		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0
Q556		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0
Q557		HF201701H0	F.E.T. 2SK170 V RANK	HF201701H0
Q558		HF100741H0	F.E.T. 2SJ74 V RANK	HF100741H0
			PO16-MISCELLANEOU RELAY ED2-12NU NEC 12V	LY20120620
L501		LY20120620	RELAY ED2-12NU NEC 12V	LY20120620
			PP16-POWER IN/MUTE±12V CIRCUIT BOARD	
			PP16-CAPACITORS	
C831		nsp	ELECT. 470µF M 35V RA-2	OA47703520
C832		nsp	ELECT. 10µF 63V RA-2	OA10606320
C851		OB47803520	ELECT. CAP 4700µF M 35V FOR HIFI	OB47803520

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)
C852		OB47803520	ELECT. CAP 4700µF M 35V FOR HIFI	OB47803520	QY62		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000
C855		nsp	ELECT. 47µF M 16V ARS	OA47601640	QY63		BA20004000	DIG.TRS. DTC114TS UN4215 10k	BA20004000
C856		nsp	ELECT. 47µF M 16V ARS	OA47601640	QY64		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000
C857	/F/L/S		ELECT. 470µF 16V M ARA	OA47701650	QY65		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000
C857	/N	nsp	ELECT. 470µF 16V ARS	OA47701640					
C858	/F/L/S		ELECT. 470µF 16V M ARA	OA47701650					
C858	/N	nsp	ELECT. 470µF 16V ARS	OA47701640	▲ F831		FS20080200	PP16-MISCELLANEOUS FUSE T800mA 250V VDE SEMKO	FS20080200
CN01		nsp	ELECT. 100µF M 50V RA-2	OA10705020	▲ F851		FS20080200	FUSE T800mA 250V VDE SEMKO	FS20080200
CN02		nsp	ELECT. 1µF100V RA-2	OA10510020	▲ F852		FS20080200	FUSE T800mA 250V VDE SEMKO	FS20080200
CN03		nsp	ELECT. 4.7µF M 50V RA-2	OA47505020	▲ FH01	/L/N/S	FS20125200	FUSE T1.25A 250V VDE SEMKO	FS20125200
CN22		nsp	ELECT. 2.2µF M 50V RA-2	OA22505020	▲ LH01	/F		MAINS TRANSF. 100V EI	TS13517050
CN32		nsp	ELECT. 2.2µF M 50V RA-2	OA22505020	▲ LH01	/L/N/S	TS13517060	MAINS TRANSF. 115/230V EI	TS13517060
CY51		nsp	ELECT. 220µF M 50V RA-2	OA22705020	▲ SH01		SP01011990	PUSH SWITCH SDDL1 POWER TV-3	SP01011990
CY52		nsp	ELECT. 100µF M 50V RA-2	OA10705020					
			PP16-RESISTORS (COMMON) CARBON FILM FIXED RES. ±5% 1/6W : ALL						
			PP16-SEMICONDUCTORS						
▲ D831					C901		nsp	ELECT. 100µF M 10V RA-2	OA10701020
▲ D834					C902		nsp	ELECT. 100µF M 10V RA-2	OA10701020
▲ D851					C903		nsp	ELECT. 220µF M 25V RA-2	OA22702520
▲ D854					C904		nsp	ELECT. 220µF M 25V RA-2	OA22702520
D856		HD20055100	DIODE SHOTTKY 11EQS10 1A 100V	HD20055100					
D857		HD30021010	ZENER DIODE HZ6L 3 6.2V	HD30021010	R950		RM01031220	PR16-RESISTOR VAR. RK09L12B0 10K B D-CUT NORMAL	RM01031220
D858		HD30021010	ZENER DIODE HZ6L 3 6.2V	HD30021010					
D858		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000					
D859		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000					
▲ DN01					D901		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
▲ DN05					D906				
DN06		HD20055100	DIODE SHOTTKY 11EQS10 1A 100V	HD20055100	Q901		HT110482B0	TRS. 2SA1048 Y OR GR	HT110482B0
DN07		HD30471000	ZENER DIODE 4.7V	HD30471000	Q902		HT110482B0	TRS. 2SA1048 Y OR GR	HT110482B0
DN11		nsp	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000	Q903		HT324582B0	TRS. 2SC2458 Y OR GR	HT324582B0
DN13					Q906				
DY11		HD30471000	ZENER DIODE 4.7V	HD30471000	Q907				
▲ DY51					Q907		HT110482B0	TRS. 2SA1048 Y OR GR	HT110482B0
▲ DY54					Q910				
DY61		HD20055100	DIODE SHOTTKY 11EQS10 1A 100V	HD20055100	Q911		HT324582B0	TRS. 2SC2458 Y OR GR	HT324582B0
Q831		HC3891209F	AVR NJM7812FA +12V	HC3891209F	Q914				
Q851		HF202461C0	F.E.T. 2SK246 GR	HF202461C0	Q915		HT110482B0	TRS. 2SA1048 Y OR GR	HT110482B0
▲ Q852		HT41415100	TRS. 2SD1415A	HT41415100	Q916		HT110482B0	TRS. 2SA1048 Y OR GR	HT110482B0
Q853		HT322402A0	TRS. 2SC2240 GR OR BL	HT322402A0					
Q855		HF202461C0	F.E.T. 2SK246 GR	HF202461C0	J903		YJ01003880	H.P JACK HLJ0540-01-430 GRY	YJ01003880
▲ Q856		HT21020100	TRS. 2SB1020A	HT21020100	L901		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
Q857		HT109702A0	TRS. 2SA970 GR OR BL	HT109702A0	L902		FC90050130	FERRITE BEAD BL02RN2-R62T2	FC90050130
QN01		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000					
QN02		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000					
QN04		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000					
QN05		BA20004000	DIG.TRS. DTC114TS UN4215 10k	BA20004000	C101		EY47501050	TANTL. CHIP 4.7µF 10V	EY47501050
QN06		BA20004000	DIG.TRS. DTC114TS UN4215 10k	BA20004000	C102		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
QN21		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000	C103		EY10601620	TANTL. CHIP 10µF 16V	EY10601620
QN22		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000	C104		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
QN23		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000	C107		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
QN31		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000	C108		EY10601620	TANTL. CHIP 10µF 16V	EY10601620
QN32		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000	C109		EY10601620	TANTL. CHIP 10µF 16V	EY10601620
QN33		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000	C110		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
QN42		HT30001000	TRS. C2458 C1740S C3199 ETC.	HT30001000	C111		EY33601020	TANTL. CHIP 33µF 10V	EY33601020
QN43		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000	C112		nsp	CER. CHIP 1000pF ±10% B 50V	DK96102300
QY61		HT10001000	TRS. A1048 A933S A1267 ETC.	HT10001000	C113		EY10601620	TANTL. CHIP 10µF 16V	EY10601620

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POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
C114		EY10601620	TANTL. CHIP 10µF 16V	EY10601620	C185		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C115		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C186		nsp	CER. CHIP 0.01µF ±10% 50V	DK96103300
C116		EY33601020	TANTL. CHIP 33µF 10V	EY33601020	C187		nsp	C1608JB1H103K	
C117		nsp	CER. CHIP 1000pF ±10% B 50V	DK96102300	C188		nsp	CER. CHIP 0.47µF 10V B BJ ±10%	DK96474200
C118		EY10601620	TANTL. CHIP 10µF 16V	EY10601620	C189		nsp	CER. CHIP 1500pF GR39	DK96152300
C119		EY10601620	TANTL. CHIP 10µF 16V	EY10601620	C190		nsp	CER. CHIP 0.047µF ±10% X7R 16V	DK96473200
C120		nsp	CER. CHIP 1µF 10V F	DK98105200	C191		nsp	CER. CHIP 220pF GR39	DK96221300
C121		EY47600620	TANTL. CHIP 47µF 6.3V	EY47600620	C192		nsp	CER. CHIP 1µF 10V F	DK98105200
C122		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C193		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200
C123		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C194		nsp	CER. CHIP 1µF 10V F	DK98105200
C124		nsp	CER. CHIP 1000pF ±10% B 50V	DK96102300	C195		nsp	CER. CHIP 10pF ±0.5pF CH 50V	DD91100300
C125		nsp	CER. CHIP 1000pF ±10% B 50V	DK96102300	C196		nsp	CER. CHIP 7pF ±0.5pF CH 50V	DD91070300
C126		nsp			C197		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C129		nsp	CER. CHIP 2200pF GR39	DK96222300	C198		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C130		nsp			C199		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C133		nsp	CER. CHIP 22pF ±5% CG 50V GR39	DD95220300	C200		nsp	CER. CHIP 0.1µF 16V	DK98104200
C134		nsp	CER. CHIP 330pF GR39	DK96331300	C201		EY10601620	TANTL. CHIP 10µF 16V	EY10601620
C135		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	C202		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C136		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C203		nsp	CER. CHIP 560pF	DK96561300
C137		nsp	CER. CHIP 0.033µF ±10%	DK96333200	C204		nsp	CER. CHIP 470pF GR39	DK96471300
C138		nsp	CER. CHIP 0.033µF ±10%	DK96333200	C205		nsp	CER. CHIP 560pF	DK96561300
C139		nsp	CER. CHIP 150pF ±5% CG 50V	DD95151300	C206		nsp	CER. CHIP 2200pF GR39	DK96222300
C140		nsp	CER. CHIP 0.047µF ±10% X7R 16V	DK96473200	C207		nsp	CER. CHIP 220pF GR39	DK96221300
C141		nsp	CER. CHIP 0.1µF ±10% B 10V	DK98104200	C208		nsp	CER. CHIP 0.1µF 16V	DK96104200
C142		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C209		nsp	CER. CHIP 220pF GR39	DK96221300
C143		nsp	CER. CHIP 1µF 10V F	DK98105200	C210		nsp	CER. CHIP 0.1µF 16V	DK96104200
C144		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C211		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C145		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C212		EY47601620	TANTL. CHIP 47µF 16V	EY47601620
C146		EY47600620	TANTL. CHIP 47µF 6.3V	EY47600620	C213		EY47601620	TANTL. CHIP 47µF 16V	EY47601620
C147		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C214		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C148		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C215		nsp	CER. CHIP 0.01µF 16V	DK96103300
C149		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C216		nsp	CER. CHIP 0.068µF ±10%	DK96683200
C150		nsp	CER. CHIP 1500pF GR39	DK96152300	C217		nsp	CER. CHIP 2200pF GR39	DK96222300
C151		nsp	CER. CHIP 1500pF GR39	DK96152300	C218		nsp	CER. CHIP 0.068µF ±10%	DK96683200
C152		nsp	CER. CHIP 0.01µF ±10% B 25V	DK96103200	C219		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C153		nsp	CER. CHIP 3300pF GR39	DK96332300	C220		EY10601620	TANTL. CHIP 10µF 16V	EY10601620
C154		nsp	CER. CHIP 3300pF GR39	DK96332300	C222		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C155		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C225		nsp	CER. CHIP 0.01µF ±10% 50V	DK96103300
C156		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	C226		nsp	C1608JB1H103K	
C157		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C227		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C158		nsp	CER. CHIP 1pF ±0.25pF CK 50V	DD90010300	C228		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C159		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C229		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C160		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	C230		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C161		nsp	CER. CHIP 1pF ±0.25pF CK 50V	DD90010300	C231		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620
C162		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C232		nsp	CER. CHIP 2pF ±0.25pF CK 50V	DD90020300
C163		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C233		nsp	CER. CHIP 2pF ±0.25pF CK 50V	DD90020300
C164		nsp	CER. CHIP 0.047µF ±10% X7R 16V	DK96473200	C234		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C165		nsp	CER. CHIP 330pF GR39	DK96331300	C235		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C166		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C236		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200
C167		EY10601620	TANTL. CHIP 10µF 16V	EY10601620	C237		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200
C168		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C238				
C169		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200			nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C170		nsp	CER. CHIP 150pF ±5% CG 50V	DD95151300	C242				
C171		EY10601620	TANTL. CHIP 10µF 16V	EY10601620	C245		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C172		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	C249				
C173		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C250		nsp	CER. CHIP 1µF 10V F	DK98105200
C174		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	C251		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C175		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	C252				
C176		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200			nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C179		nsp			C255				
C180		nsp	CER. CHIP 270pF ±5%	DD95271300	C256		DK06104200	CER. CHIP 0.1µF ±10% B 10V	DK06104200
C181		nsp	CER. CHIP 0.047µF ±10% X7R 16V	DK96473200	C257		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C182		nsp	CER. CHIP 470pF GR39	DK96471300	C258		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620
C183		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	C259		nsp	CER. CHIP 1µF 10V F	DK98105200
C184		nsp	CER. CHIP 1µF 10V F	DK98105200					

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
C260		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	CF02		nsp	CER. CHIP 0.1µF 16V	DK98104200
C261		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF03		nsp	CER. CHIP 0.1µF 16V	DK98104200
C262		nsp	CER. CHIP 0.1µF ±10% B 10V	DK96104200	CF04		nsp	CER. CHIP 1µF 10V F	DK98105200
C263		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF05		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C264		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	CF06		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C268		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF07		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C269		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF08	EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	
C270		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	CF09		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200
C271		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF12		nsp	CER. CHIP 2200pF GR39	DK96222300
C272		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	CF13		nsp		
C273		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200					
C277		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620					
C278		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R101		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C279		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R102		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C280		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R103		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C281		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200	R104		nsp	CHIP 11kΩ ±5% 1/16W	NN05113610
C282		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200	R105		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C283		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R106		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C284		nsp	CER. CHIP 0.01µF ±10% 50V C1608JB1H103K	DK96103300	R107		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C285		nsp	CER. CHIP 0.47µF 10V B BJ ±10%	DK96474200	R108		nsp	CHIP 11kΩ ±5% 1/16W	NN05113610
C286		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R109		nsp	CHIP 470Ω ±5% 1/16W	NN05471610
C287		nsp	CER. CHIP 4700pF ±10% B 50V	DK96472300	R110		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
C289		nsp	CER. CHIP 0.01µF ±10% 50V C1608JB1H103K	DK96103300	R111		nsp	CHIP 470Ω ±5% 1/16W	NN05471610
C290		nsp	CER. CHIP 0.01µF ±10% 50V C1608JB1H103K	DK96103300	R112		nsp	CHIP 33Ω ±5% 1/16W	NN05330610
C291		nsp	CER. CHIP 1µF 10V F	DK98105200	R113		nsp	CHIP 33Ω ±5% 1/16W	NN05330610
C292		nsp	CER. CHIP 220pF GR39	DK96221300	R114		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610
C293		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200	R115		nsp	CHIP 470Ω ±5% 1/16W	NN05471610
C294		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R116		nsp	CHIP 33Ω ±5% 1/16W	NN05330610
C295		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	R117		nsp	CHIP 33Ω ±5% 1/16W	NN05330610
C296		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R118		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610
C297		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R119		nsp	CHIP 100Ω ±5% 1/16W	NN05101610
C301		nsp	CER. CHIP 1000pF ±10% B 50V	DK96102300	R121		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
C302		nsp	CER. CHIP 0.047µF ±10% X7R 16V	DK96473200	R122		nsp	CHIP 10MΩ ±5% 1/16W	NN05106610
C303		nsp	CER. CHIP 0.47µF 10V B BJ ±10%	DK96474200	R125	NI01123110	CHIP 12kΩ ±1% 1/10W	NI01123110	
C304		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R126		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
C308		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R128		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C309		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	R129		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C310		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R130		nsp	CHIP MCR03EZHUJ363 2120 108 92212	NN05363610
C311		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R131		nsp	CHIP 8.2kΩ ±5% 1/16W	NN05822610
C312		DK06104200	CER. 0.1µF ±10% B 10V	DK06104200	R132		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C313		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R133		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610
C315		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R134		nsp	CHIP 15kΩ ±5% 1/16W	NN05153610
C316		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R135		nsp	CHIP 51Ω ±5% 1/16W	NN05510610
C317		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R136		nsp	CHIP 51Ω ±5% 1/16W	NN05510610
C320		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R137		nsp	CHIP 51Ω ±5% 1/16W	NN05510610
C321		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R138		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
C322		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R139		nsp	CHIP MCR03EZHUJ202 2120 108 92178	NN05202610
C323		nsp	CER. CHIP 22pF ±5% CG 50V	DD95220300	R140		nsp	CHIP MCR03EZHUJ202 2120 108 92178	NN05202610
C324		nsp	CER. CHIP 100pF ±5% CG 50V	DD95101300	R141		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
C336		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	R142		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
C337		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	R143		nsp	CHIP 3.3kΩ ±5% 1/16W	NN05332610
C339		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	R144		nsp	CHIP 330kΩ ±5% 1/16W	NN05334610
C340		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	R145		nsp	CHIP 3kΩ ±5% 1/16W	NN05302610
C342		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	R146		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
C343		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R147		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
C344		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R148		nsp	CHIP 3.3kΩ ±5% 1/16W	NN05332610
C345		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	R149		nsp	CHIP 330kΩ ±5% 1/16W	NN05334610
C346		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R150		nsp	CHIP 3kΩ ±5% 1/16W	NN05302610
C347		EY10700620	TANTL. CHIP 100µF 6.3V	EY10700620	R151		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
C348		EY22600620	TANTL. CHIP 22µF 6.3V	EY22600620	R152		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
C357		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R153		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
C360		nsp	CER. CHIP 0.1µF GRM39F104Z16	DK98104200	R154		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
C362		EY47501050	TANTL. CHIP 4.7µF 10V	EY47501050	R155		nsp	CHIP 330kΩ ±5% 1/16W	NN05334610
C363		nsp	CER. CHIP 0.1µF 16V	DK96104200	R156		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
					R157		nsp	CHIP 1.5kΩ ±5% 1/16W	NN05152610

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POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJJ)
R158		nsp	CHIP 1.5kΩ ±5% 1/16W	NN05152610	R230		nsp	CHIP MCR03EZHUJ202 2120 108 92178	NN05202610
R159		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R231		nsp	CHIP 3kΩ ±5% 1/16W	NN05302610
R160		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R232		nsp	CHIP 3kΩ ±5% 1/16W	NN05302610
R161		nsp	CHIP 1MΩ ±5% 1/16W	NN05105610	R234		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
R162		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R235		NP05103610	CHIP 10kΩ ±5% 1/16W	NP05103610
R163		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R236		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R164		nsp	CHIP 1MΩ ±5% 1/16W	NN05105610	R237		NP05103610	CHIP 10kΩ ±5% 1/16W	NP05103610
R165		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R242		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R167		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R243		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R168		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610	R251		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R169		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610	R252		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R170		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610	R253		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R171		nsp	CHIP 12kΩ ±5% 1/16W	NN05123610	R254		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610
R172		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	R255		NM11502020	CHIP 15kΩ ±1% 1/16W	NM11502020
R173		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R256		NM11502020	CHIP 15kΩ ±1% 1/16W	NM11502020
R174		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610	R259		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
R175		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R261		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610
R176		nsp	CHIP 100kΩ ±5% 1/16W	NN05104610	R262		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
R177		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R263		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
R178		nsp	CHIP 3.3kΩ ±5% 1/16W	NN05332610	R264		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R179		nsp	CHIP 3.3kΩ ±5% 1/16W	NN05332610	R265		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
R180		nsp	CHIP 470kΩ ±5% 1/16W	NN05474610	R266		nsp	CHIP 6.8kΩ ±5% 1/16W	NN05682610
R181		nsp	CHIP 1MΩ ±5% 1/16W	NN05105610	R267		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R182		nsp	CHIP 470kΩ ±5% 1/16W	NN05474610	R271		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R183		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R272		nsp	CHIP 9.1kΩ ±5% 1/16W	NN05912610
R186		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R273		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
R187		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R274		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R188		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R275		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R189		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	R276		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R190		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R277		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R191		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610	R278		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R192		nsp	CHIP 220Ω ±5% 1/16W	NN05221610	R279		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R193		nsp	CHIP 10Ω ±5% 1/16W	NN05100610	R282		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R195		nsp	CHIP 100Ω ±5% 1/16W	NN05101610	R283		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R196		nsp	CHIP 100Ω ±5% 1/16W	NN05101610	R285		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610
R197		nsp	CHIP 100Ω ±5% 1/16W	NN05101610	R294		nsp	CHIP 100kΩ ±5% 1/16W	NN05104610
R201		nsp	CHIP 5.6kΩ ±5% 1/16W	NN05562610	R295		NP05103610	CHIP 10kΩ ±5% 1/16W	NP05103610
R202		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610	R296		nsp	CHIP 4.3kΩ ±5% 1/16W	NN05432610
R203		nsp	CHIP 1.8kΩ ±5% 1/16W	NN05182610	R297		nsp		
R204		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610	R301		nsp	CHIP 5.6kΩ ±5% 1/16W	NN05562610
R205		nsp	CHIP 1.8kΩ ±5% 1/16W	NN05182610	R302		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R206		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610	R303		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610
R207		nsp	CHIP 33kΩ ±5% 1/16W	NN05333610	R304		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R208		nsp	CHIP 5.6kΩ ±5% 1/16W	NN05562610	R305		nsp	CHIP 150kΩ ±5% 1/16W	NN05154610
R209		nsp	CHIP 56kΩ ±5% 1/16W	NN05563610	R306		nsp	CHIP 470kΩ ±5% 1/16W	NN05474610
R210		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610	R307		nsp	CHIP 100Ω ±5% 1/16W	NN05101610
R211		nsp	CHIP 56kΩ ±5% 1/16W	NN05563610	R309		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R212		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610	R310		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R213		nsp	CHIP 56kΩ ±5% 1/16W	NN05563610	R311		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610
R214		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	R312		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610
R215		nsp	CHIP 56kΩ ±5% 1/16W	NN05563610	R313		nsp	CHIP 1MΩ ±5% 1/16W	NN05105610
R216		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	R314		nsp	CHIP 8.2kΩ ±5% 1/16W	NN05822610
R217		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	R315		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610
R218		nsp	CHIP 27kΩ ±5% 1/16W	NN05273610	R316		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R219		nsp	CHIP 27kΩ ±5% 1/16W	NN05273610	R317		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
R220		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	R324		NP05101610	CHIP 100Ω ±5% 1/16W	NP05101610
R221		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610	R339		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R222		nsp	CHIP 150kΩ ±5% 1/16W	NN05154610	R340		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610
R223		nsp	CHIP 150kΩ ±5% 1/16W	NN05154610	R341		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R224		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610	R342		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610
R225		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610	R343		nsp	CHIP 2.2kΩ ±5% 1/16W	NN05222610
R226		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610	R344		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610
R227		nsp	CHIP 15kΩ ±5% 1/16W	NN05153610	R347		nsp	CHIP 0Ω ±5% 1/16W	NN05000610
R228		nsp	CHIP 5.1kΩ ±5% 1/16W	NN0512610					
R229		nsp	CHIP MCR03EZHUJ202 2120 108 92178	NN05202610					

NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)
R348		nsp	CHIP 100Ω ±5% 1/16W	NN05101610	Q127		HC10210990	IC M11L16161SA-45T	HC10210990
R349		nsp	CHIP 0Ω ±5% 1/16W	NN05000610				EDO-DRAM 16M	
R350		nsp	CHIP 10Ω ±5% 1/16W	NN05100610	Q128		BA10014210	DIG.TR.S. DTA144EU	BA10014210
R351		nsp	CHIP 22kΩ ±5% 1/16W	NN05223610	Q129		BA20021210	DIG.TR.S. DTC144EC	BA20021210
R354					Q132		HC006105K0	IC TC74VHC541FT	HC006105K0
∫		nsp	CHIP 47Ω ±5% 1/16W	NN05470610	Q133		HC006105K0	IC TC74VHC541FT	HC006105K0
R361					Q134		BA20021210	DIG.TR.S. DTC144EC	BA20021210
R371		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	Q135		HC007905K0	IC TC7WH74FU D-TYPE FLIP FLOP	HC007905K0
R372		nsp	CHIP 100kΩ ±5% 1/16W	NN05104610	Q136		HC010005K0	IC TC7WH08FU	HC010005K0
R373		nsp	CHIP 68kΩ ±5% 1/16W	NN05683610				2-INPUT AND GATE	
R377		NP05224610	CHIP 220kΩ ±5% 1/16W	NP05224610	Q137		HC006105K0	IC TC74VHC541FT	HC006105K0
R378		nsp	CHIP 68kΩ ±5% 1/16W	NN05683610	Q138		BA20021210	DIG.TR.S. DTC144EC	BA20021210
RF01		nsp	CHIP 1kΩ ±5% 1/16W	NN05102610	Q139		HC008405K0	IC TC74VHC86FT	HC008405K0
RF02		nsp	CHIP 330kΩ ±5% 1/16W	NN05334610	Q140		HC009305K0	IC TC74VHC00FT	HC009305K0
RF03					Q141		HC005605K0	IC TC74VHC74FT D-FF	HC005605K0
∫		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	Q151		HC98A33090	IC NJM2391DL1-33 1A 3.3V	HC98A33090
RF06					Q152		HC98A33090	IC NJM2391DL1-33 1A 3.3V	HC98A33090
RF07		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610	Q153		HC98A26090	IC NJM2391DL1-26 1A 2.6V	HC98A26090
RF08		nsp	CHIP 100kΩ ±5% 1/16W	NN05104610	Q155		HX341161C0	CHIP TRS 2SC4116GR	HX341161C0
RF09		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	Q156		HX409992A0	CHIP TRS. 2SD999 CM CL 250 1A	HX409992A0
RF10		nsp	CHIP 100kΩ ±5% 1/16W	NN05104610	Q157		HX207982A0	CHIP TRS 2SB798 DL DK	HX207982A0
RF12		nsp	CHIP 4.7kΩ ±5% 1/16W	NN05472610	Q158		HX341161C0	CHIP TRS 2SC4116GR	HX341161C0
RF13		nsp	CHIP 0Ω ±5% 1/16W	NN05000610	Q159		HX409992A0	CHIP TRS. 2SD999 CM CL 250 1A	HX409992A0
RF14					Q160		HX207982A0	CHIP TRS 2SB798 DL DK	HX207982A0
∫		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	QF01		HU01AKF00F	MICROPROCESSOR MB90F553A	HU01AKF00F
RF18					QF02		HC10098530	IC S-80843ALNP-EA7-T2 4.3V SC82	HC10098530
RF19		nsp	CHIP 0Ω ±5% 1/16W	NN05000610	QF03		BA20021210	DIG.TR.S. DTC144EC	BA20021210
RF20		nsp	CHIP 47kΩ ±5% 1/16W	NN05473610	QF04		HC10033990	IC AT24C04N-10SI-2.5	HC10033990
RF21		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610				PV16-MISCELLANEOUS	
RF22		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	L101		FC90020100	FERRITE CORE FB M J2125HM330-T	FC90020100
RF23		nsp	CHIP 10kΩ ±5% 1/16W	NN05103610	L102		FC90020100	FERRITE CORE FB M J2125HM330-T	FC90020100
			PV16-SEMICONDUCTORS		L103		LU12473010	CHIP INDUCTER 47μH	LU12473010
D104					L104		LU12473010	CHIP INDUCTER 47μH	LU12473010
∫		HZ21005000	CHIP DIODE	HZ21005000	L105		LU12473010	CHIP INDUCTER 47μH	LU12473010
D106			1SS301 DAN202U UMT		L109			FERRITE CORE	
D109		HZ20003100	CHIP DIODE DIODE EC105DS2TE12L	HZ20003100	∫		FC90020100	FERRITE CORE	FC90020100
					L111		FC90020100	FB M J2125HM330-T	FC90020100
Q101		HC10077250	IC CXD1881R RF AMP	HC10077250					
Q102		HC10147090	IC NJM2115V OP-AMP	HC10147090	L120		FC90020100	FERRITE CORE	FC90020100
Q103		HX207982A0	CHIP TRS 2SB798 DL DK	HX207982A0	∫		FC90020100	FERRITE CORE	FC90020100
Q104		HX207982A0	CHIP TRS 2SB798 DL DK	HX207982A0	L126		FC90020100	FB M J2125HM330-T	FC90020100
Q105		HX207982A0	CHIP TRS 2SB798 DL DK	HX207982A0	L128		FC90020100	FERRITE CORE	FC90020100
Q106		HC12239090	IC NJM3414AV OP-AMP SSOP8P	HC12239090				FB M J2125HM330-T	
Q107		HF230192A0	F.E.T. 2SK3019 FET SWICTHING	HF230192A0	L129		FC90020100	FERRITE CORE	FC90020100
Q108		HF230192A0	F.E.T. 2SK3019 FET SWICTHING	HF230192A0				FB M J2125HM330-T	
Q109		HC12237090	IC NJM2137V OP-AMP	HC12237090	L132		FC90020100	FERRITE CORE	FC90020100
Q110		HC10209990	IC AD8062 HI-SPEED OP-AMP	HC10209990				FB M J2125HM330-T	
Q111		HC10147090	IC NJM2115V OP-AMP	HC10147090	L133		FC90020100	FERRITE CORE	FC90020100
Q112		HC12238090	IC NJM2903V COMPARATOR	HC12238090				FB M J2125HM330-T	
Q113		HC10147090	IC NJM2115V OP-AMP	HC10147090	X101		JX33001470	CRYSTAL XTAL 33.8688MHZ	JX33001470
Q114		HC12238090	IC NJM2903V COMPARATOR	HC12238090	X103		FQ02005060	SERAMIC VIB. CSTCW-X SMD 20.0MHz	FQ02005060
Q115		HC010105K0	IC TC74LVX4053FT ANALOG SW	HC010105K0				SERAMIC VIB. CSTCC8.00MG-TC 8.000MHZ	
Q116		HC10080250	IC CXD3068Q CD DECODER	HC10080250	XF01		FQ08004070	SERAMIC VIB. CSTCC8.00MG-TC 8.000MHZ	FQ08004070
Q117		HC10222210	IC BA5981FP MOTOR DRIVER-4CH	HC10222210					
Q118		HC12239090	IC NJM3414AV	HC12239090					
			DUAL OP-AMP SSOP8P						
Q119		HC10427050	IC TC7SHU04F TOSHIBA	HC10427050				PY16-FRONT CIRCUIT BOARD	
Q121		HC10209990	IC AD8062 HI-SPEED OP-AMP	HC10209990					
Q122		HC10156990	IC EM636165TS-7	HC10156990				PY16-RESISTORS (COMMON)	
			S-DRAM 2B 16MBYT					CARBON FILM FIXED RES. ±5% 1/6W : ALL	
Q123		HC10079250	IC CXD2752R SACD DECODER	HC10079250	R***				
Q124		HC10078250	IC CXD1882R DVD DECORDER	HC10078250					
Q125		HU01AKY10F	MICROPROCESSOR CXPQ71000 CONTROL-UPC	HU01AKY10F	DY04		HI10062320	L.E.D. LT3D8B RED 30	HI10062320
					QY01		HC10416030	IC FL DRIVER LC75712E	HC10416030
Q126		HC005805K0	IC TC74VHC157FT	HC005805K0					

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POS. NO	VERS. COLOR	PART NO. (FOR EUR)	DESCRIPTION	PART NO. (MJI)
QY05		BA10001000	DIG.TRS. DTA114ES UN4111 10k 10k	BA10001000
			PY16-MISCELLANEOUS	
SY01 }		SP01012030	PUSH SWITCH	SP01012030
SY10			SKHVBF 260GF RED	
VX01		HQ31301920	DISPLAY UNIT FTD CM2059C	HQ31301920
ZY01		HW10004210	PHOTO UNIT RPM6936-V4 IR SENSOR	HW10004210

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