

Service Manual

SA8260 /F1N/S1G/U1G
F1B/S1B/U1B

SA8260

Super Audio CD Player

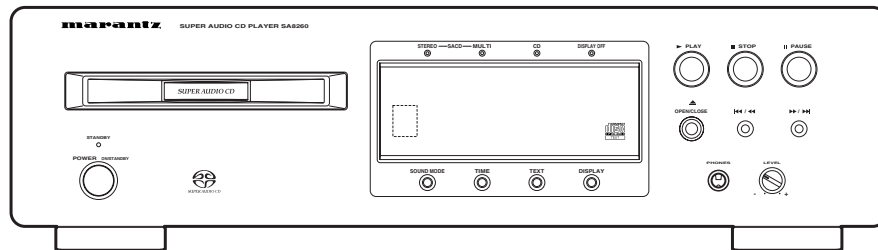


TABLE OF CONTENTS

SECTION	PAGE
1. TECHNICAL SPECIFICATIONS	1
2. SERVICE MODE	2
3. TAKING THE DISC OUT OF EMERGENCY	3
4. CAUTION Optical pick up and Servo Board	4
5. BLOCK DIAGRAM	5
6. SCHEMATIC DIAGRAM	7
7. PARTS LOCATION	20
8. MICROPROCESSOR AND IC DATA	27
9. EXPLODED VIEW AND PARTS LIST	45
10. LOADING MECHANISM ASS'Y	48
11. ELECTRICAL PARTS LIST	49

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。

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SA8260

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Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

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Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

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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KOREA
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.

1. TECHNICAL SPECIFICATIONS

	Super Audio CD	CD
Audio Characteristics		
Analog output		
Channels	6channels (Max.)	2channels
Frequency range	2Hz — 100kHz	2Hz — 20kHz
Frequency characteristics	2Hz — 50kHz (-3dB)	2Hz — 20kHz
Dynamic range	113dB	100dB
THD (1kHz)	0.0015%	0.0020%
wow & flutter	Precision of quartz	Precision of quartz
Output level	2.2V	2.2V
Digital output		
output level (cinch JACK)	—	0.5Vp-p (75Ω)
output level (optical)	—	-19dBm
Headphone output level	50mW / 32Ω (max, Vol.)	50mW / 32Ω (max, Vol.)
Optical Readout System		
Laser	AlGaAs	AlGaAs
Wave length	650nm	780nm
Signal format		
Sampling frequency	1-bit DSD 2.8224MHz	16-bit linear PCM 44.1kHz

Power Supply

Input Voltage, Frequency (/F)..... AC 100V 50/60Hz
 (/S)..... AC 230V 50Hz
 (/U)..... AC 120V 60Hz

Power Consumption..... 28W

Power Consumption (Stand-by) <0.8W

Cabinet, etc.

Dimensions (Width × Height × Depth) .. 417-5/16 × 4-7/8 × 12-1/16 inches (440 × 124 × 307mm)

Net weight..... 17 lbs (7.7kg)

Operating temperatures..... +5°C ~ +35°C

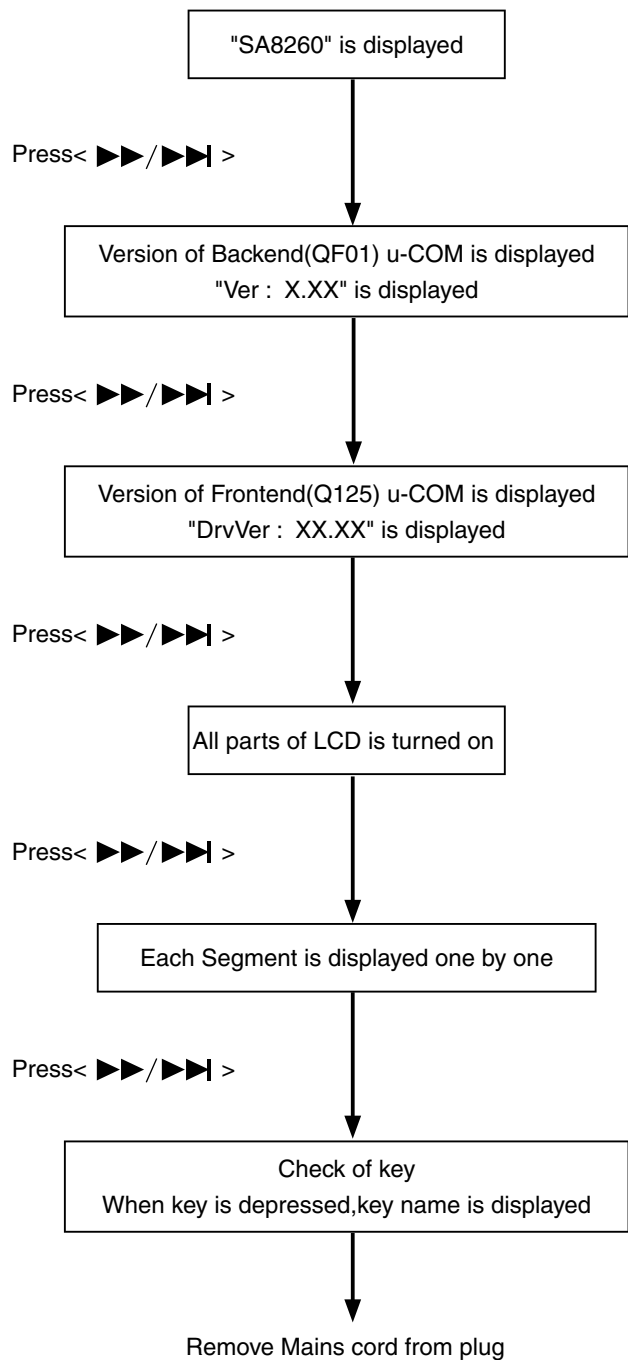
Operating humidity..... 5 ~ 90% (without dew)

Accessories

- Remote control unit (RC8260SA) 1
 Dimensions (Width × Height × Depth)..... 1-15/16 × 7/8 × 6 inches (48.5 × 21.5 × 152.5mm)
 Net weight (without Batteries)0.13 lbs (60g)
- AA (R6) Batteries.....2
- AC Power cord..... 1
- Audio cable 3 pairs
- Remote connection Cable 1
- User's Guide 1
- Warranty Card..... 1 pair

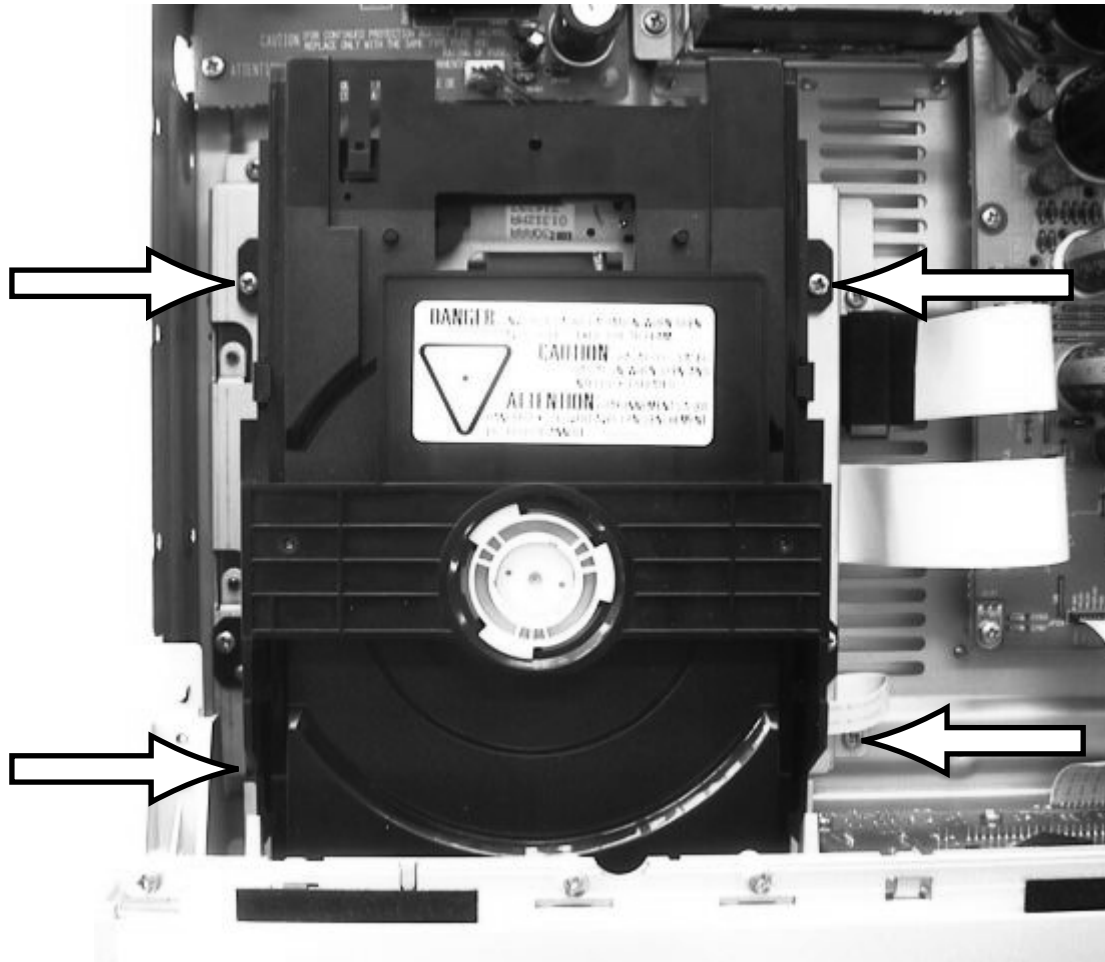
2. SERVICE MODE

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

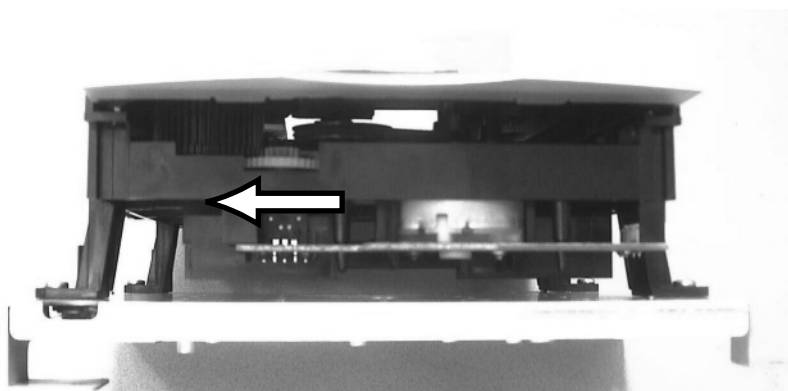


3. TAKING THE DISC OUT OF EMERGENCY

1. Remove 6 screws on the top cover and remove the top cover.
2. Remove 4 screws pointed with the arrows.

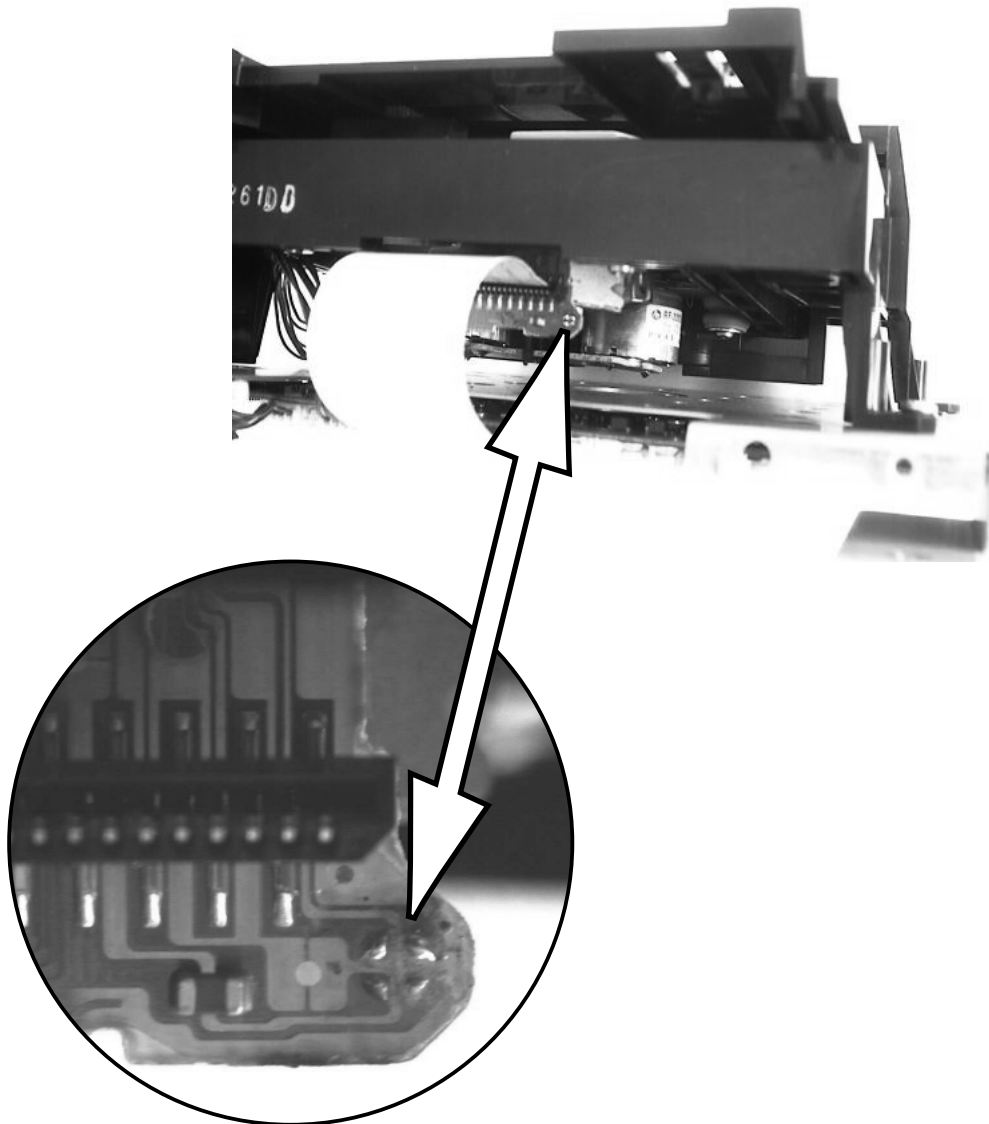


3. Disconnect all the wires at the right and rear side.
4. Remove the Mecha. component.
5. Turn the gear to the direction shown with your finger and disc tray will opened.

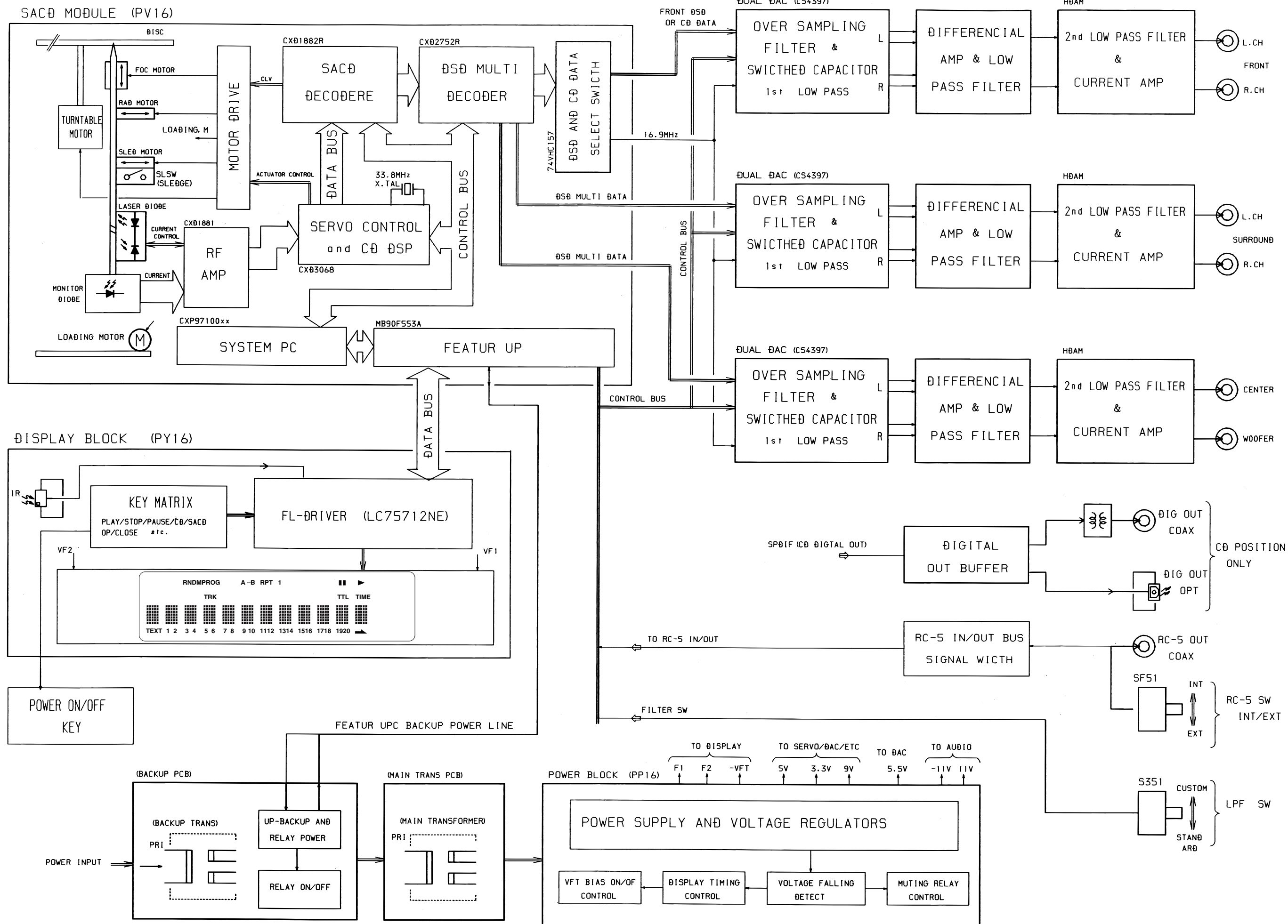


4. CAUTION Optical pick up and Servo Board

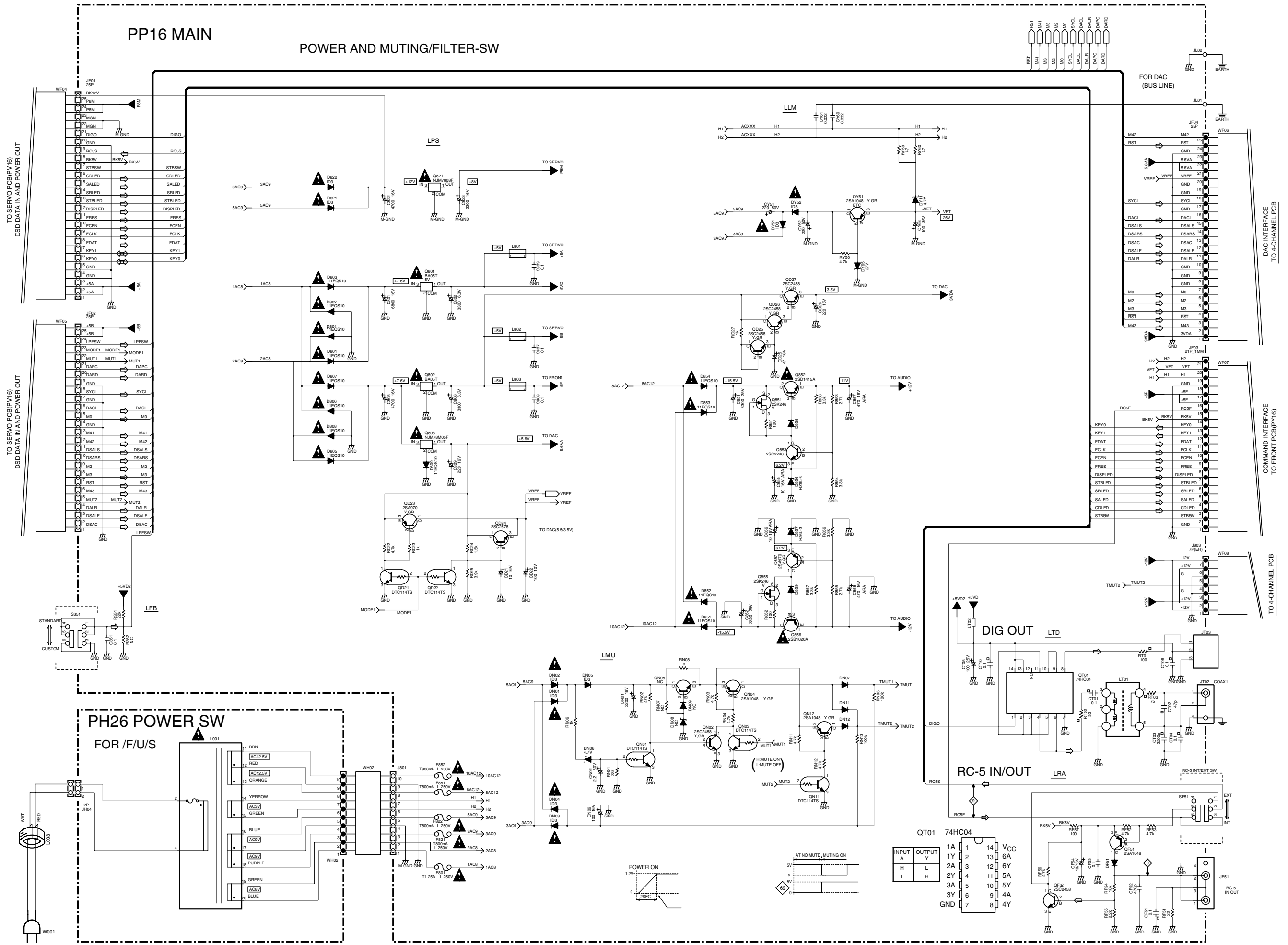
When removing the flat wire between Optical pick up and Servo Board (PV16),
Solder the four lands pointed by arrows to short the circuit.
Otherwise the LASER DIODE may be damaged by static electricity.

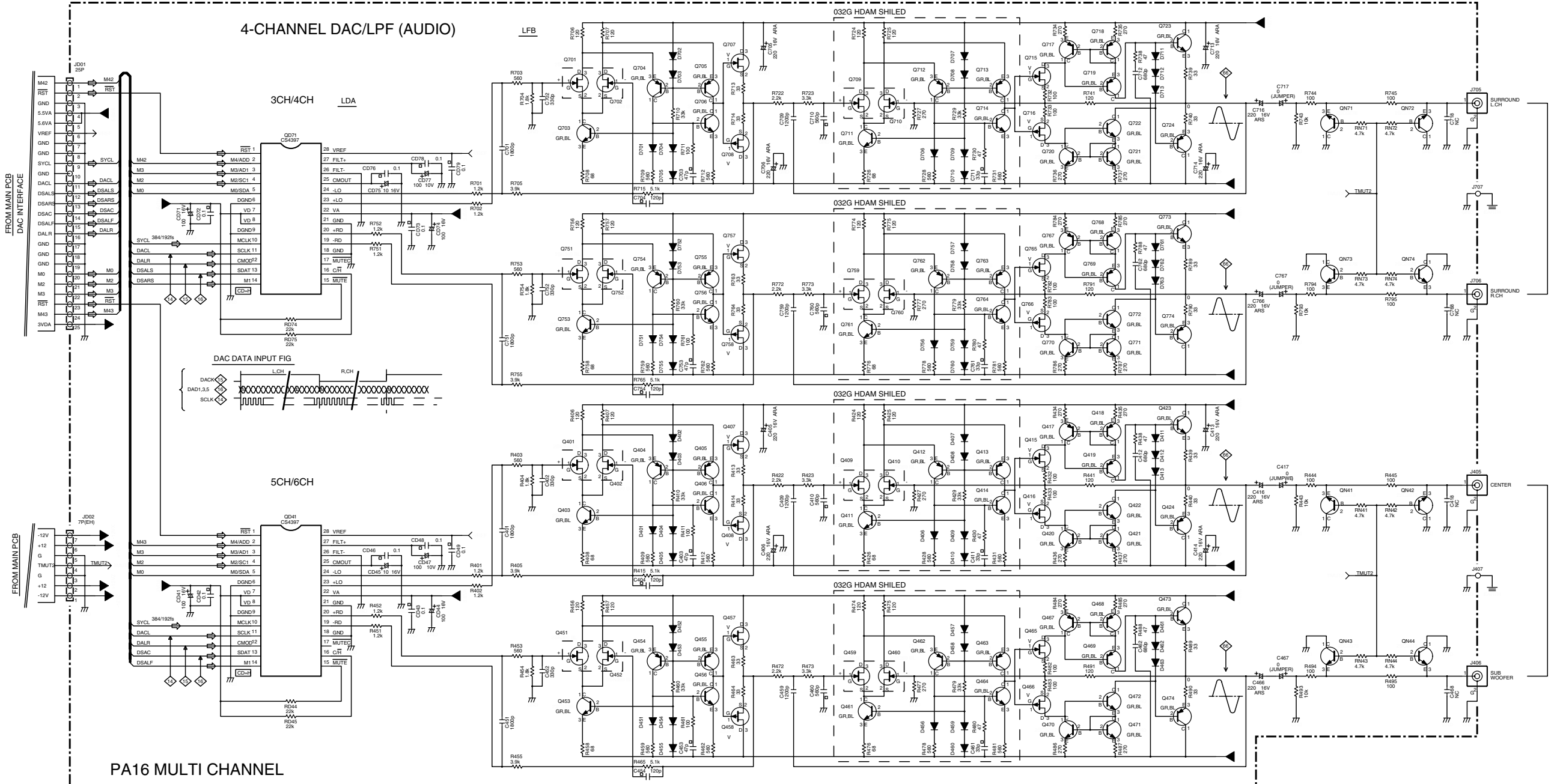
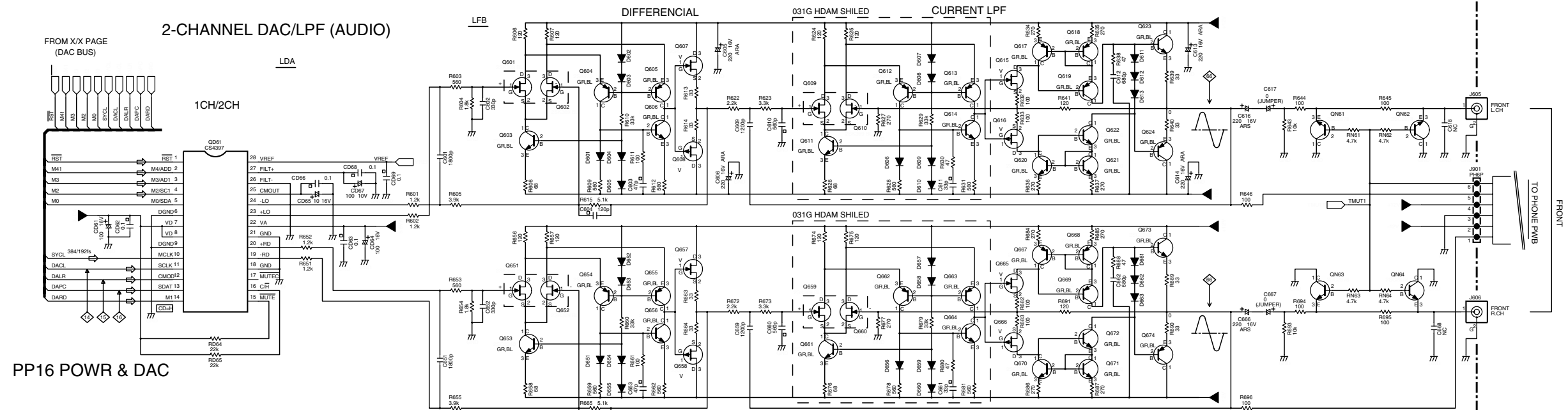


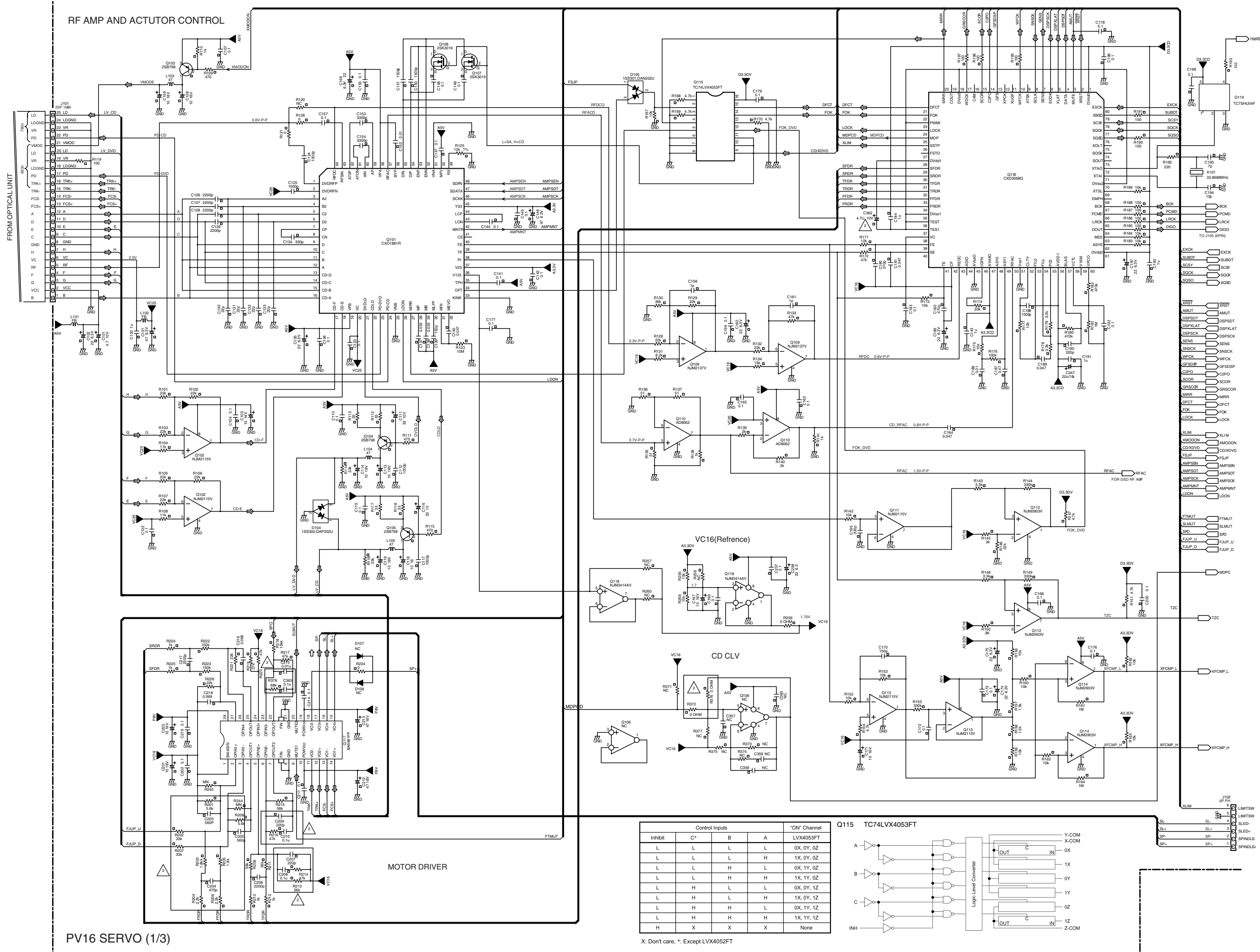
5. BLOCK DIAGRAM



6. SCHEMATIC DIAGRAM

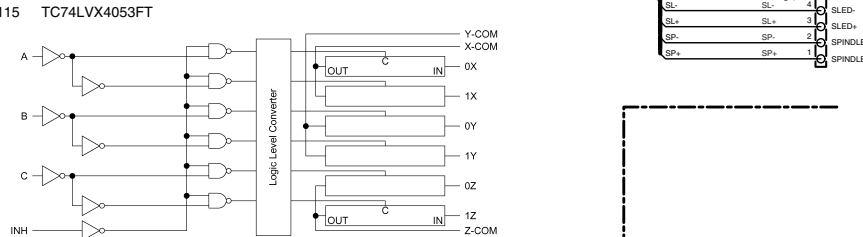




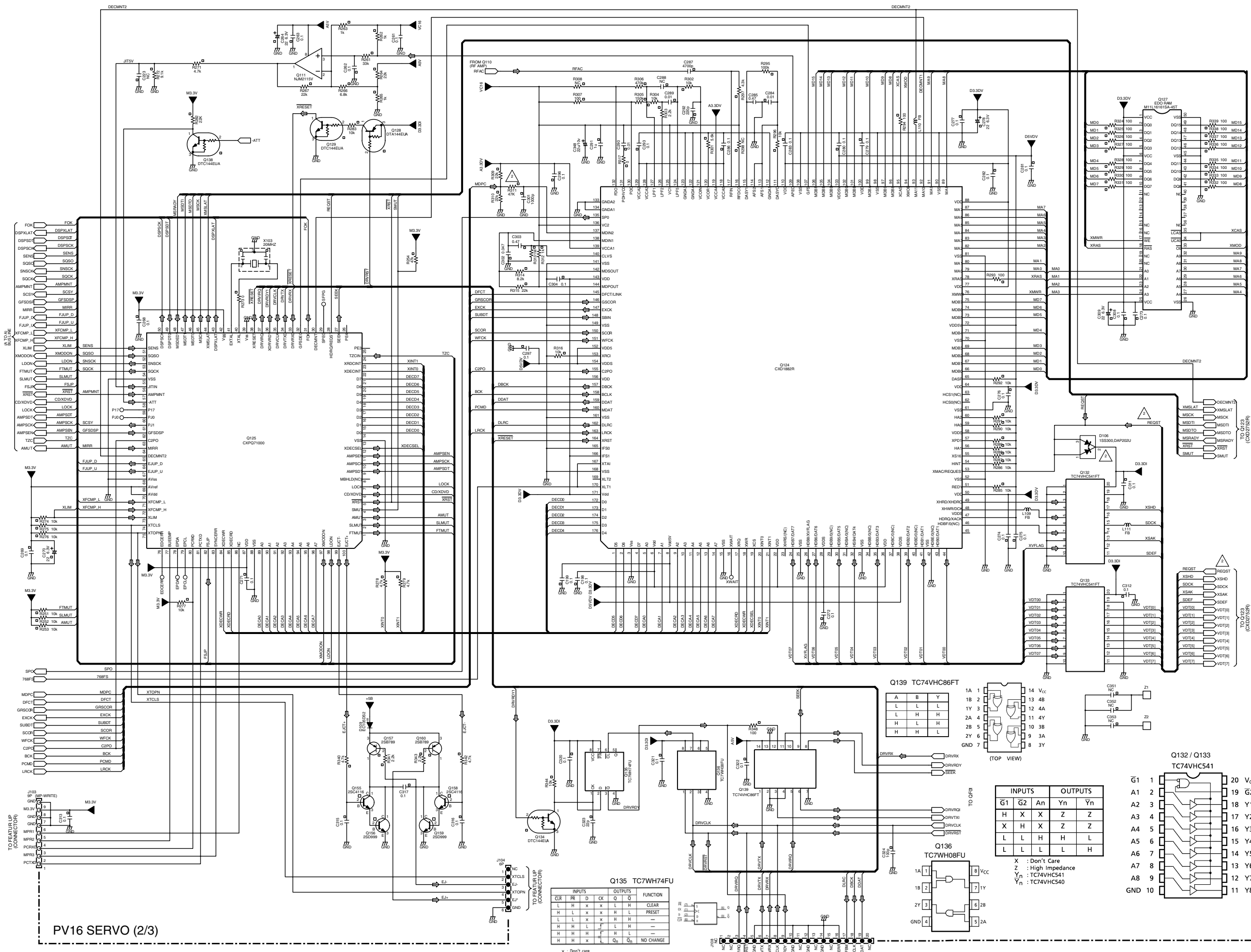


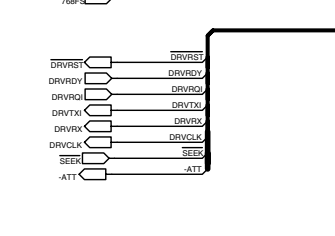
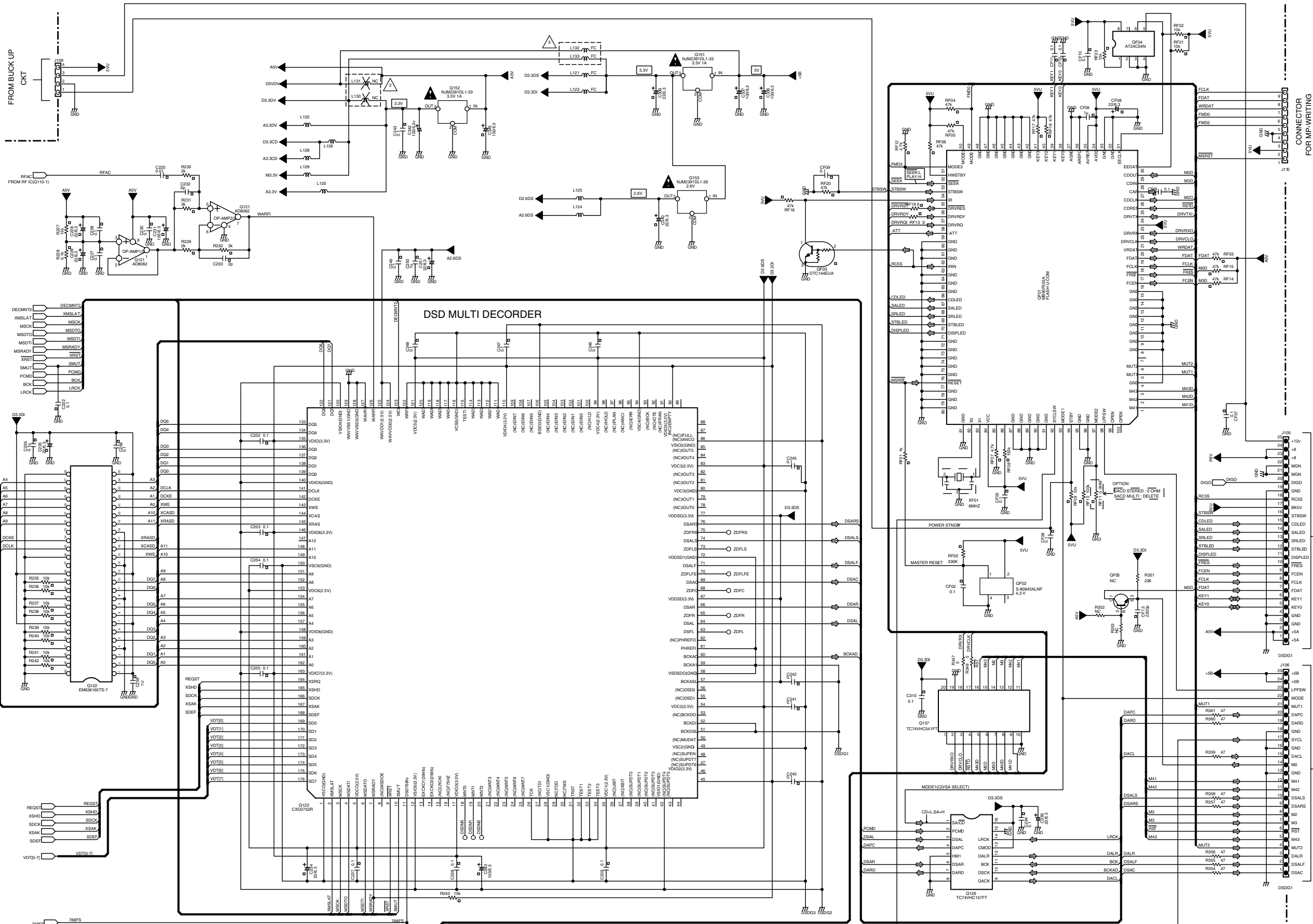
Control Inputs				"ON" Channel
Inhibit	C*	B	A	LVX4053FT
L	L	L	L	0X, 0Y, 0Z
L	L	L	H	1X, 0Y, 0Z
L	L	H	L	0X, 1Y, 0Z
L	L	H	H	1X, 1Y, 0Z
L	H	L	L	0X, 0Y, 1Z
L	H	L	H	1X, 0Y, 1Z
L	H	H	L	0X, 1Y, 1Z
L	H	H	H	1X, 1Y, 1Z
H	X	X	X	None

X: Don't care, *: Except LVX4052FT



DVD DECORD CONTROL MPU

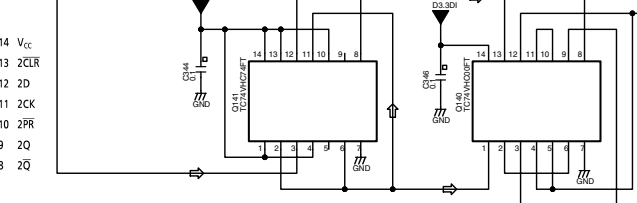




Q141 TC74VHC74FT

INPUTS	OUTPUTS	FUNCTION
CLR	Q	CLEAR
PR	Q	PRESET
D	Q	NO CHANGE
CK	Q	NO CHANGE
Q	Q	NO CHANGE
Q	Q	NO CHANGE

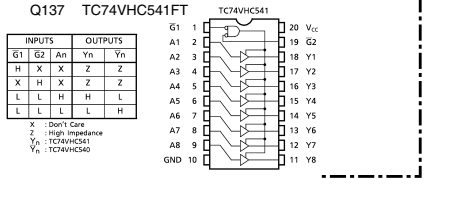
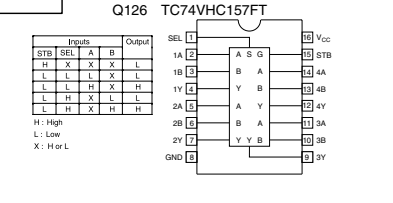
X: Don't Care

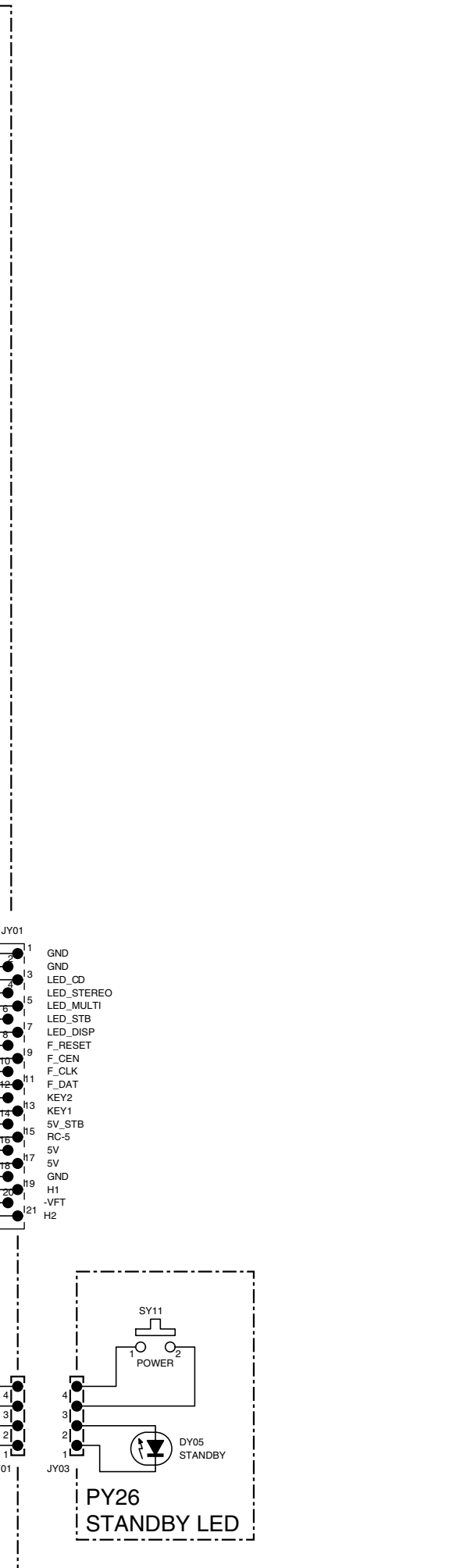
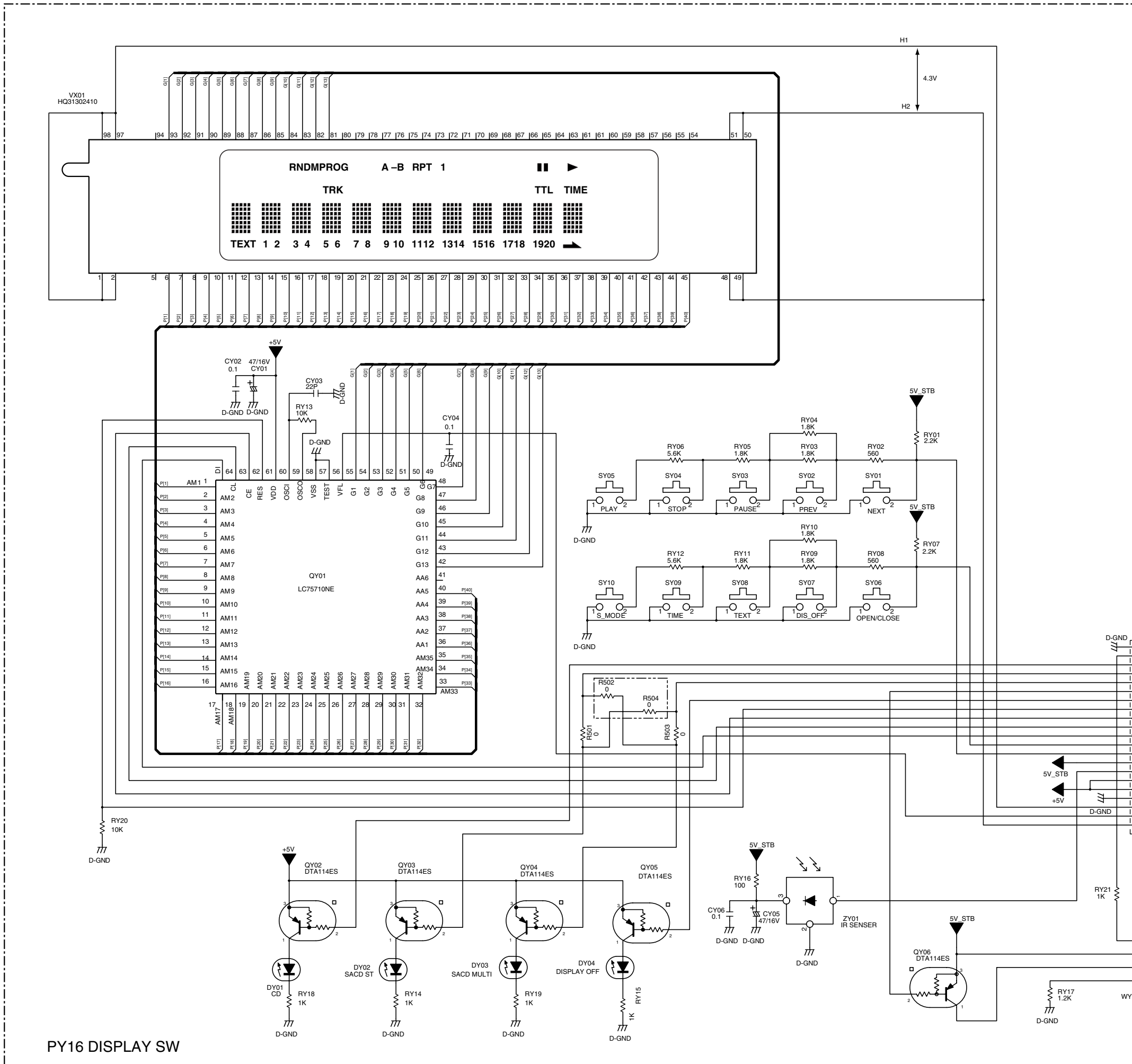


Q140 TC74VHC00FT

INPUTS	OUTPUTS
A	Y
B	Y
C	Y
D	Y
E	Y
F	Y
G	Y
H	Y
I	Y
J	Y
K	Y
L	Y
M	Y
N	Y
O	Y
P	Y
Q	Y
R	Y
S	Y
T	Y
U	Y
V	Y
W	Y
X	Y
Y	Y
Z	Y

H: High
L: Low
X: H or L

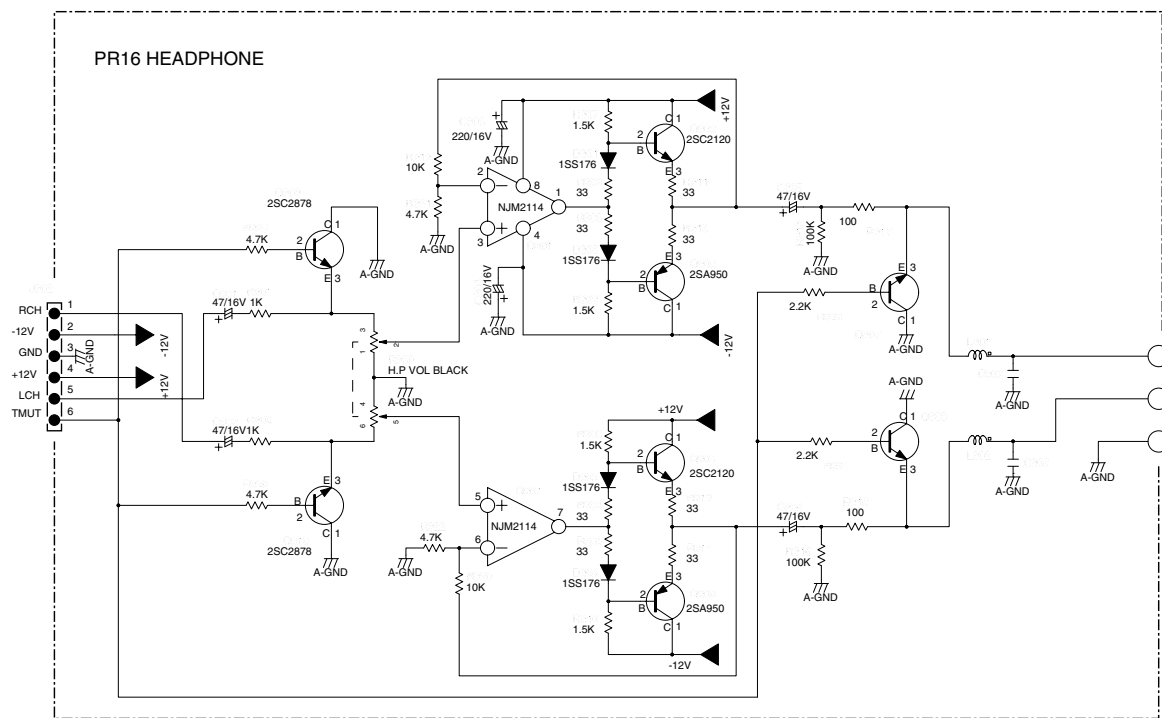




PY16 DISPLAY SW

PY26 STANDBY LED

7. PARTS LOCATION



PA16

QN71 - QN74

Q723 Q724 Q773 Q774

Q721

Q771

Q715

Q765

Q714

Q764

Q709

Q769

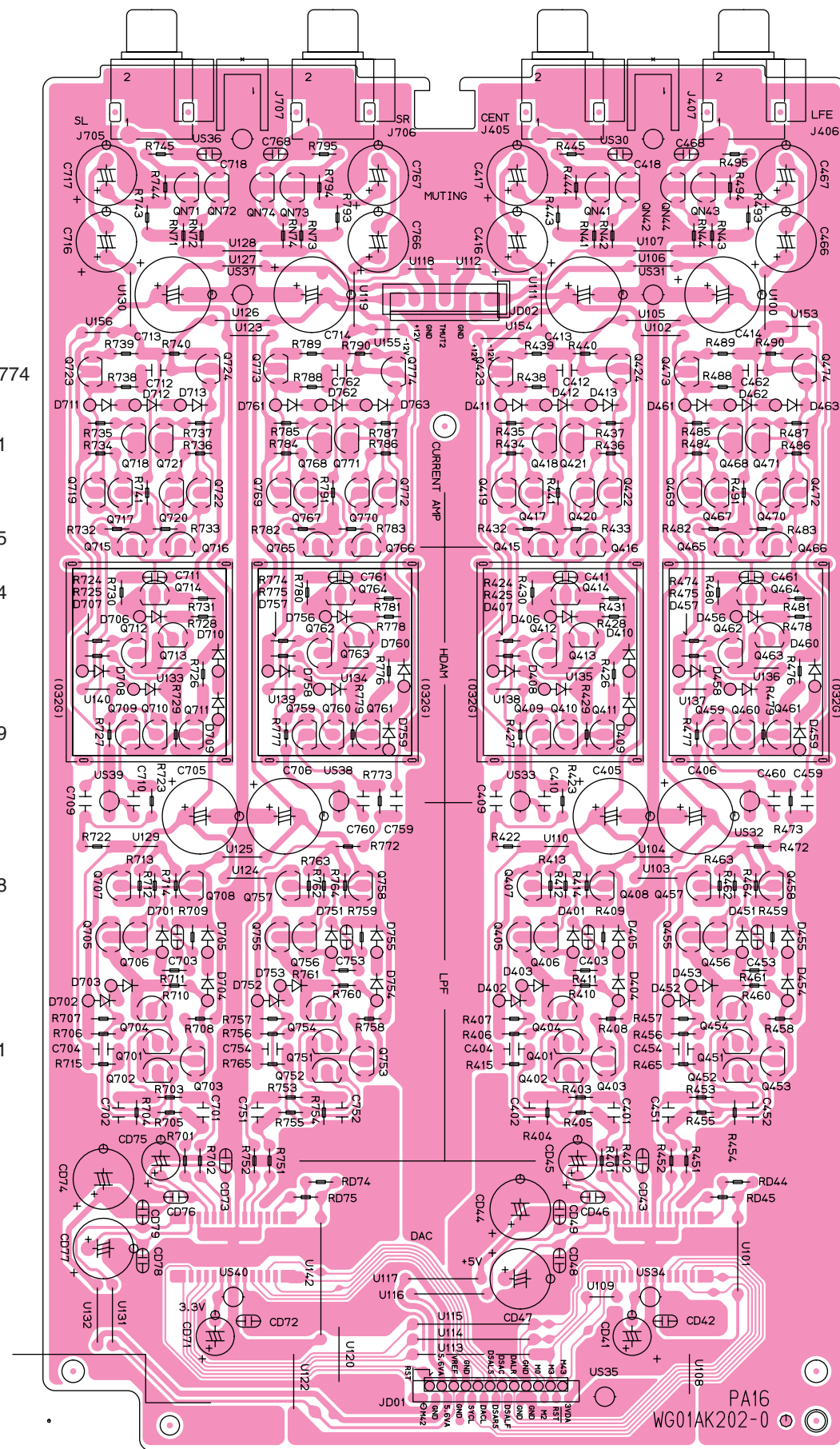
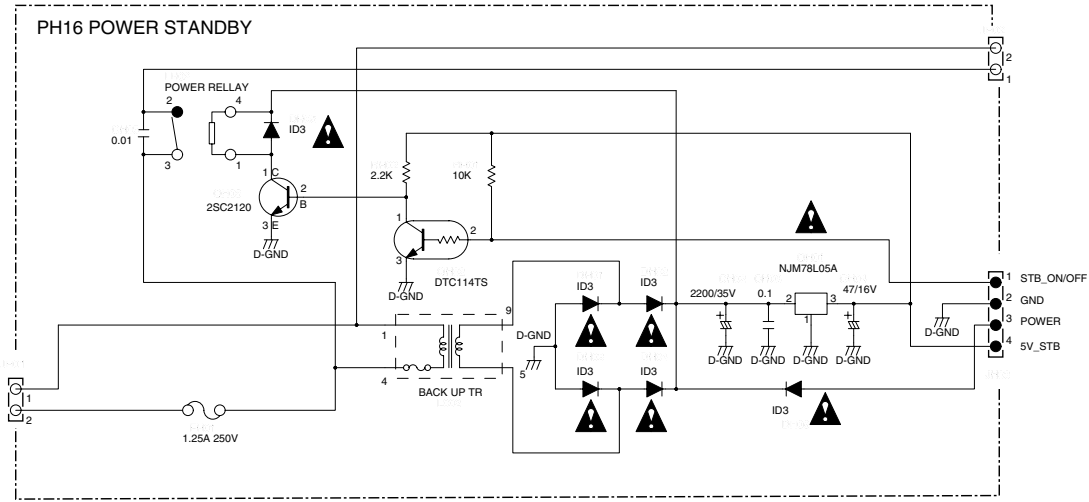
Q708

Q758

Q701

Q751

QD41



QN41 - QN44

Q423 Q424 Q473 Q474

Q421

Q471

Q415

Q465

Q414

Q464

Q409

Q469

Q408

Q458

Q401

Q451

QD71

PP16

QN71 - QN74

Q723 Q724 Q773 Q774

Q721 Q771

Q715 Q765

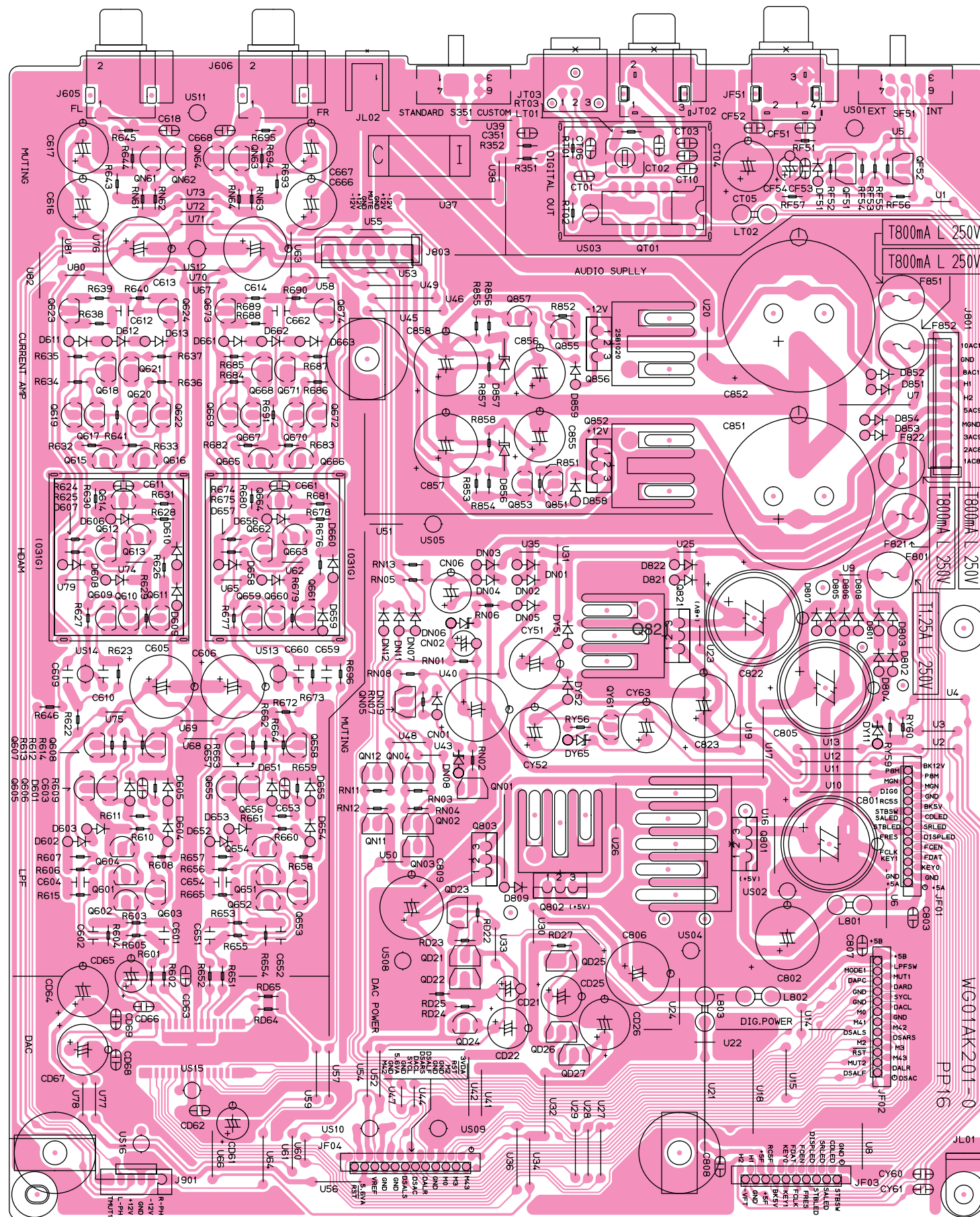
Q714 Q764

Q709 Q769

Q708 Q758

Q701 Q751

QD41



QF51
QF52
QT01

Q857
Q855
Q856

Q852
Q851
Q853

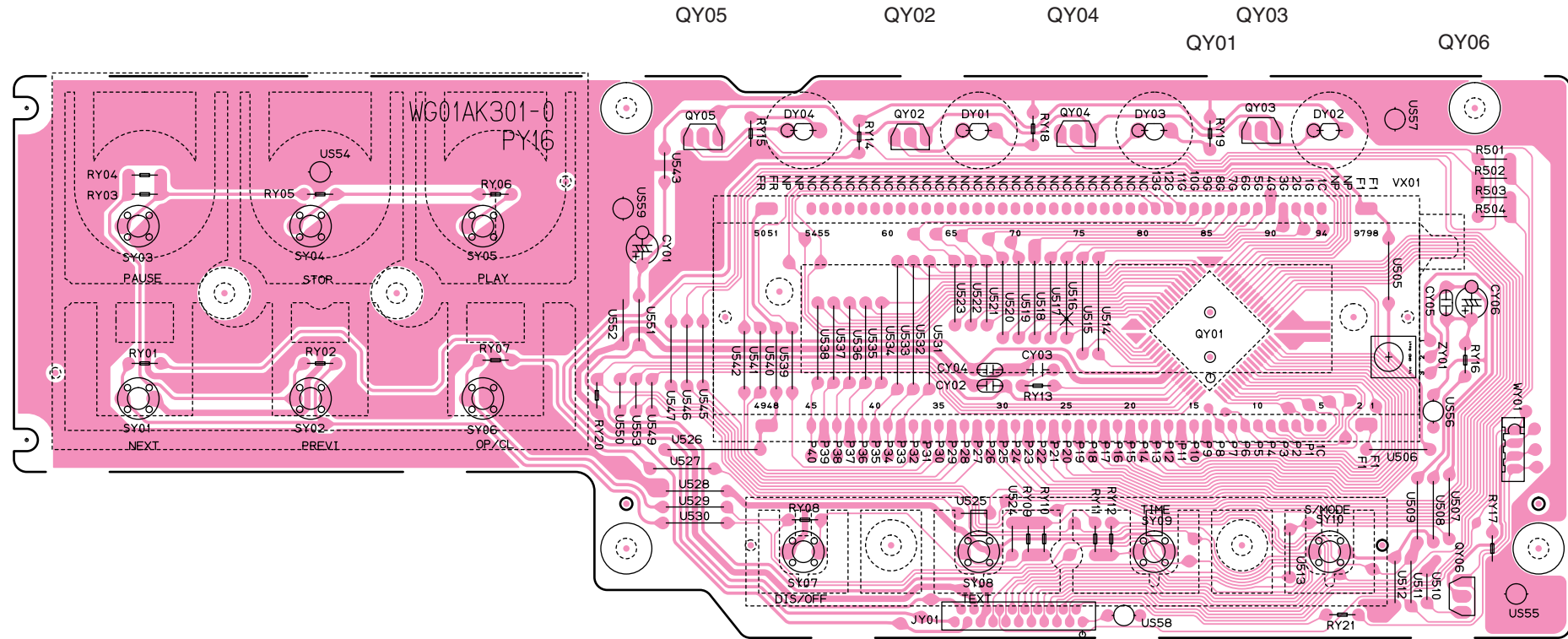
QY05
QY61

QN12
QN04
QN01
QN11
QN02
QN03
Q801
Q802
QD23

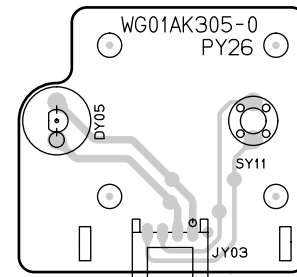
QD21
QD25
QD22

QD24
QD26
QD27

PY16

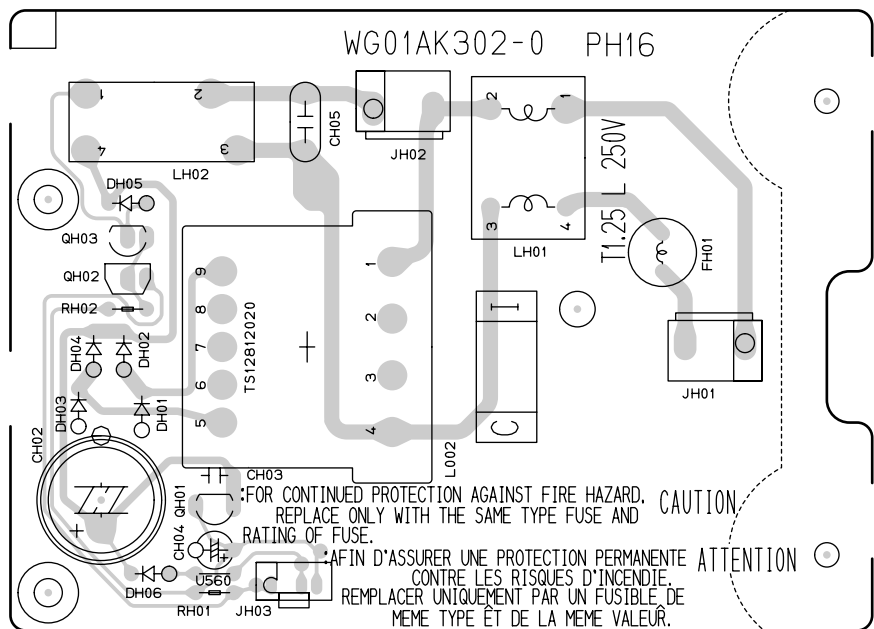


PY26

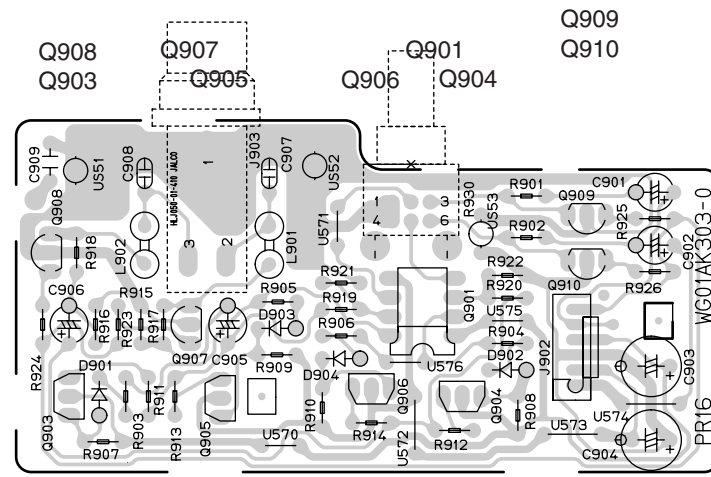


PH16

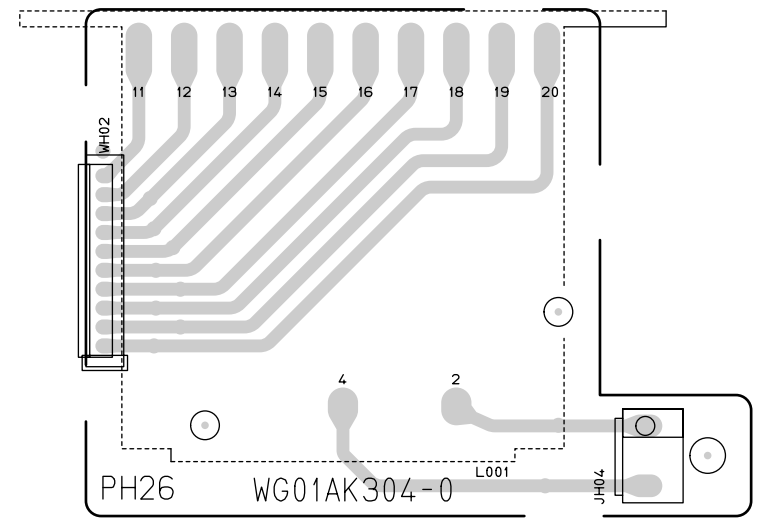
QH03
QH02 QH01



PR16



PH26



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.

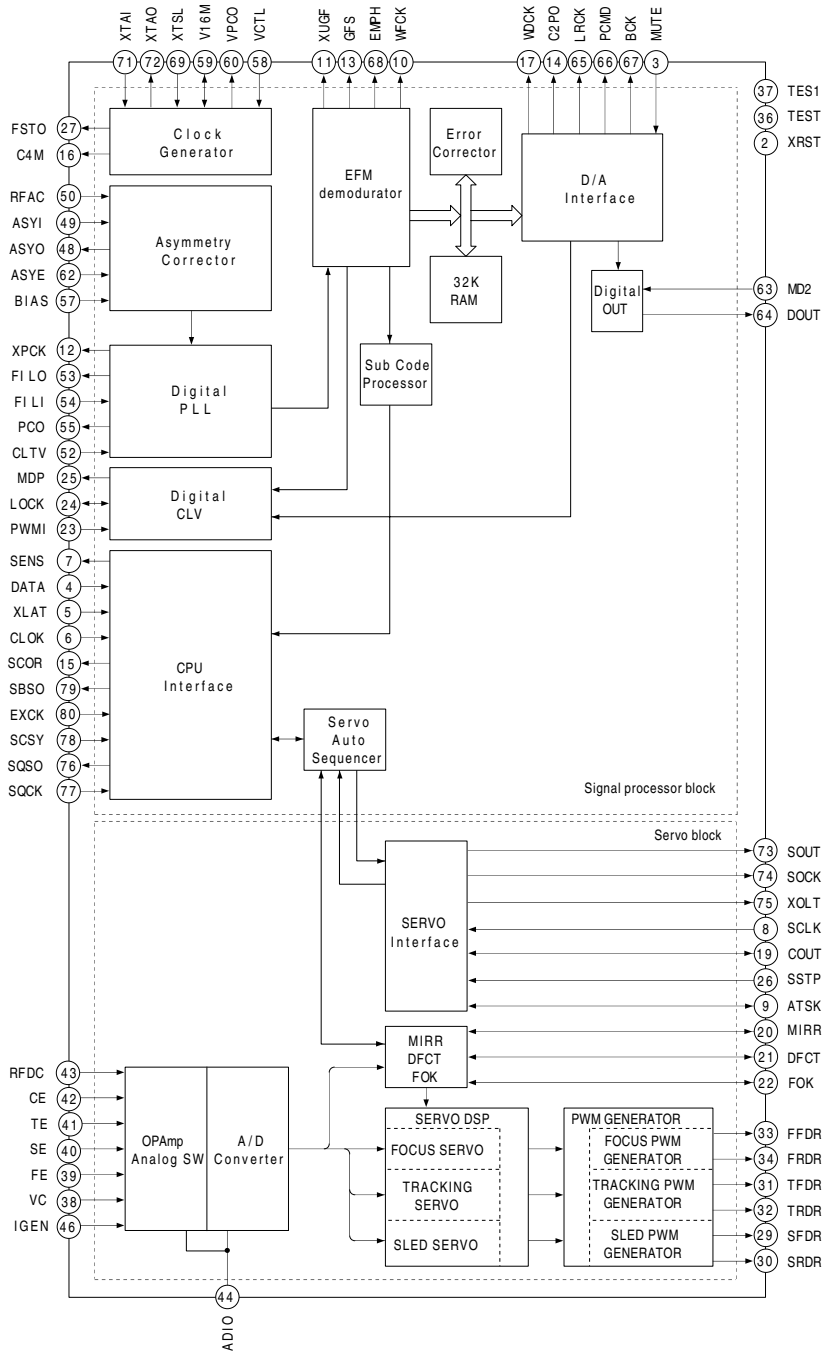
XUGF is the frame sync obtained from the EFM signal, and is negative pulse. It is the signal before sync protection.

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



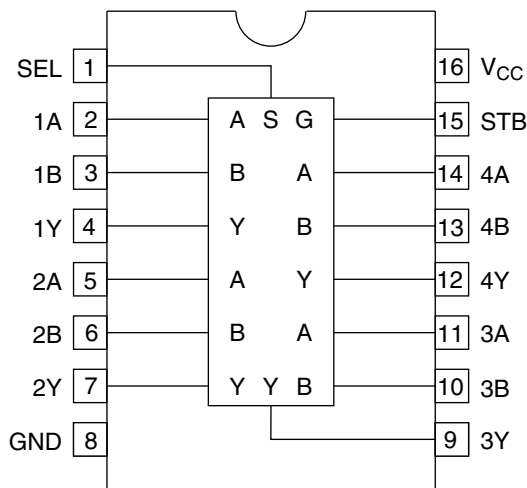
HD74LV157A

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.

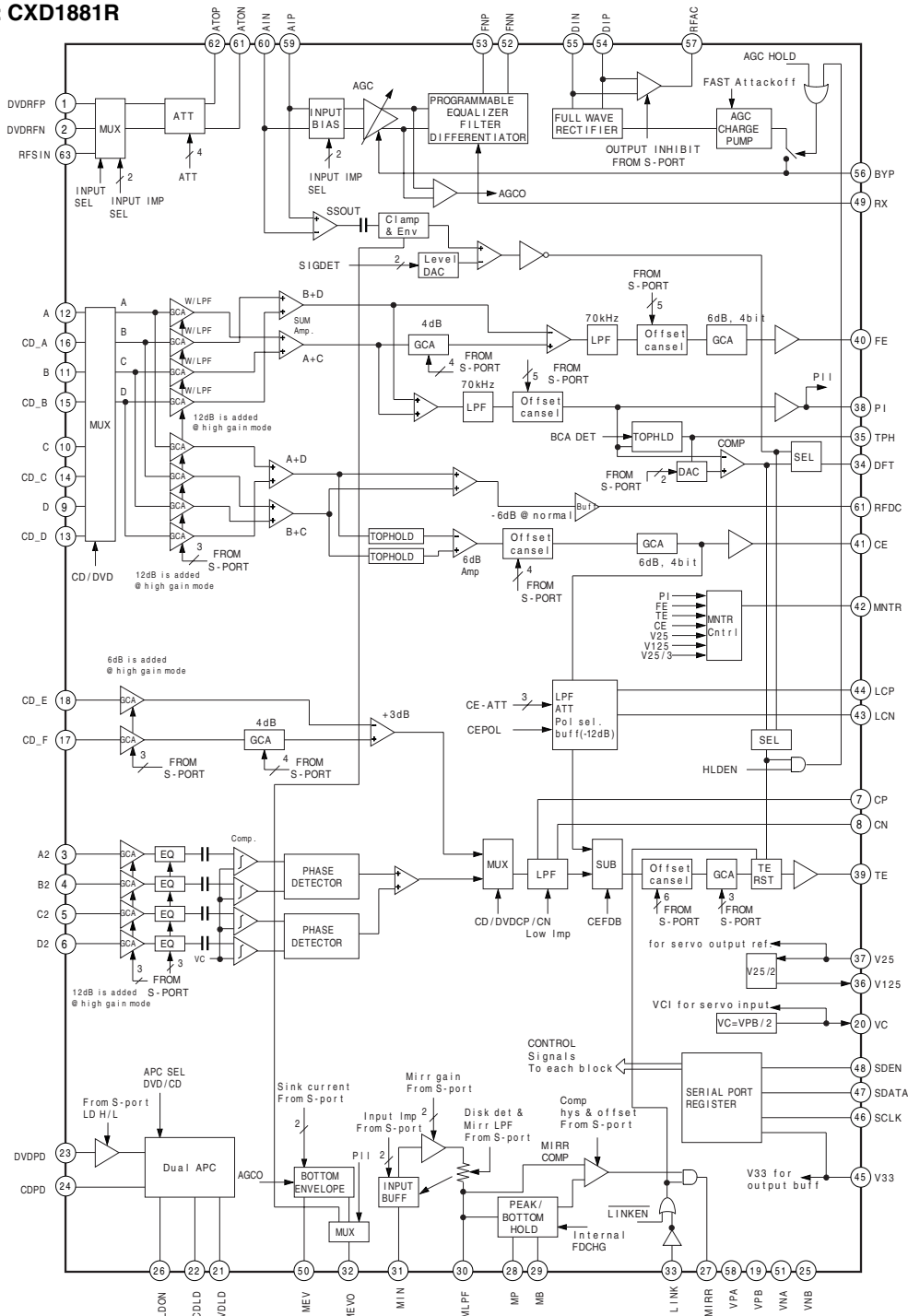
Serial Port Pins

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.

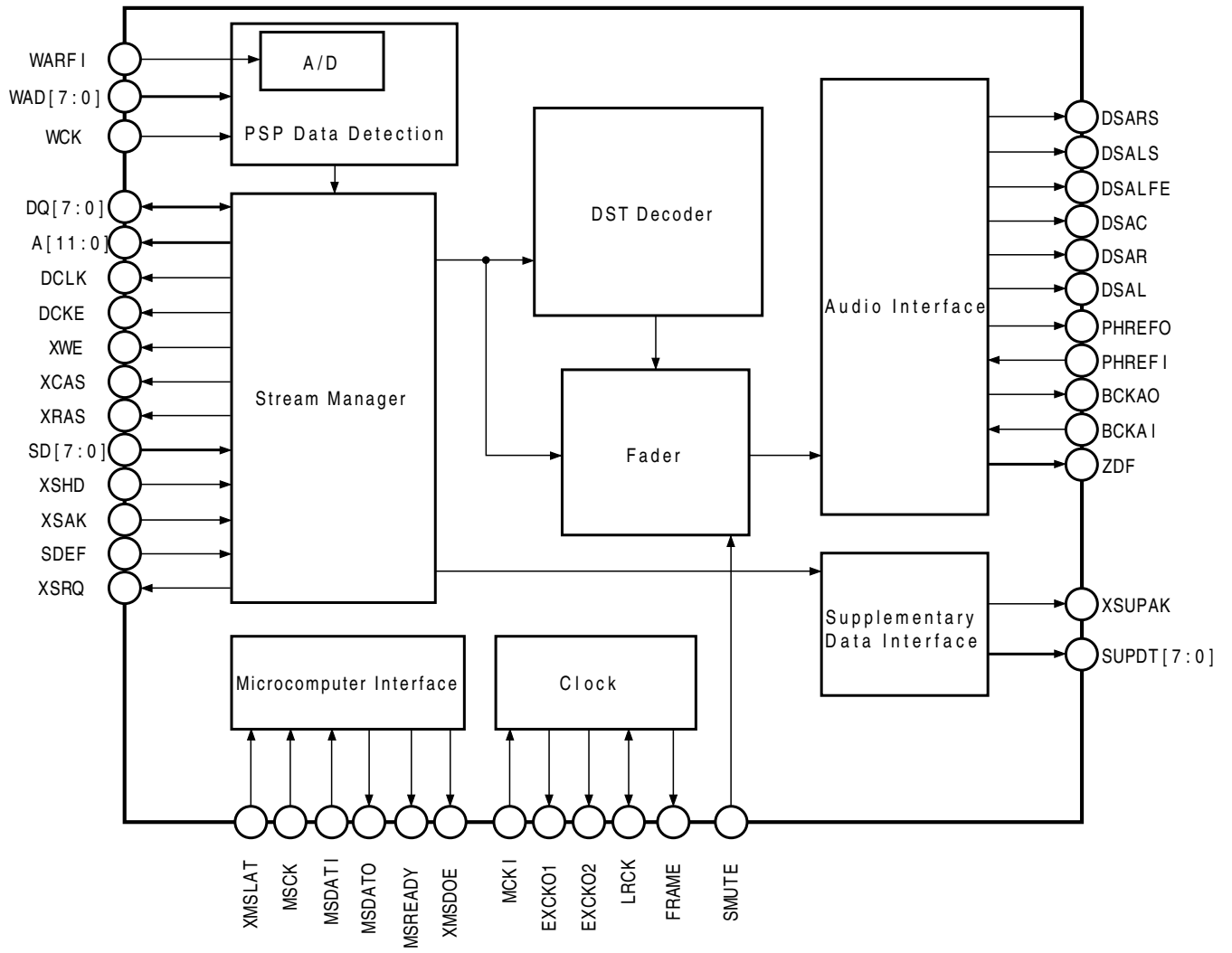
61	PHREFI	I	Phase reference signal input for DSD output phase modulation.
62	PHREFO	O	Phase reference signal output for DSD output phase modulation.
63	ZDFL	O	Lch zero data detection flag (when set by the microcomputer). Goes high when silent data continues for 300ms.
64	DSAL	O	Lch DSD data output.
65	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.

Q123 : CXD2752R

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.

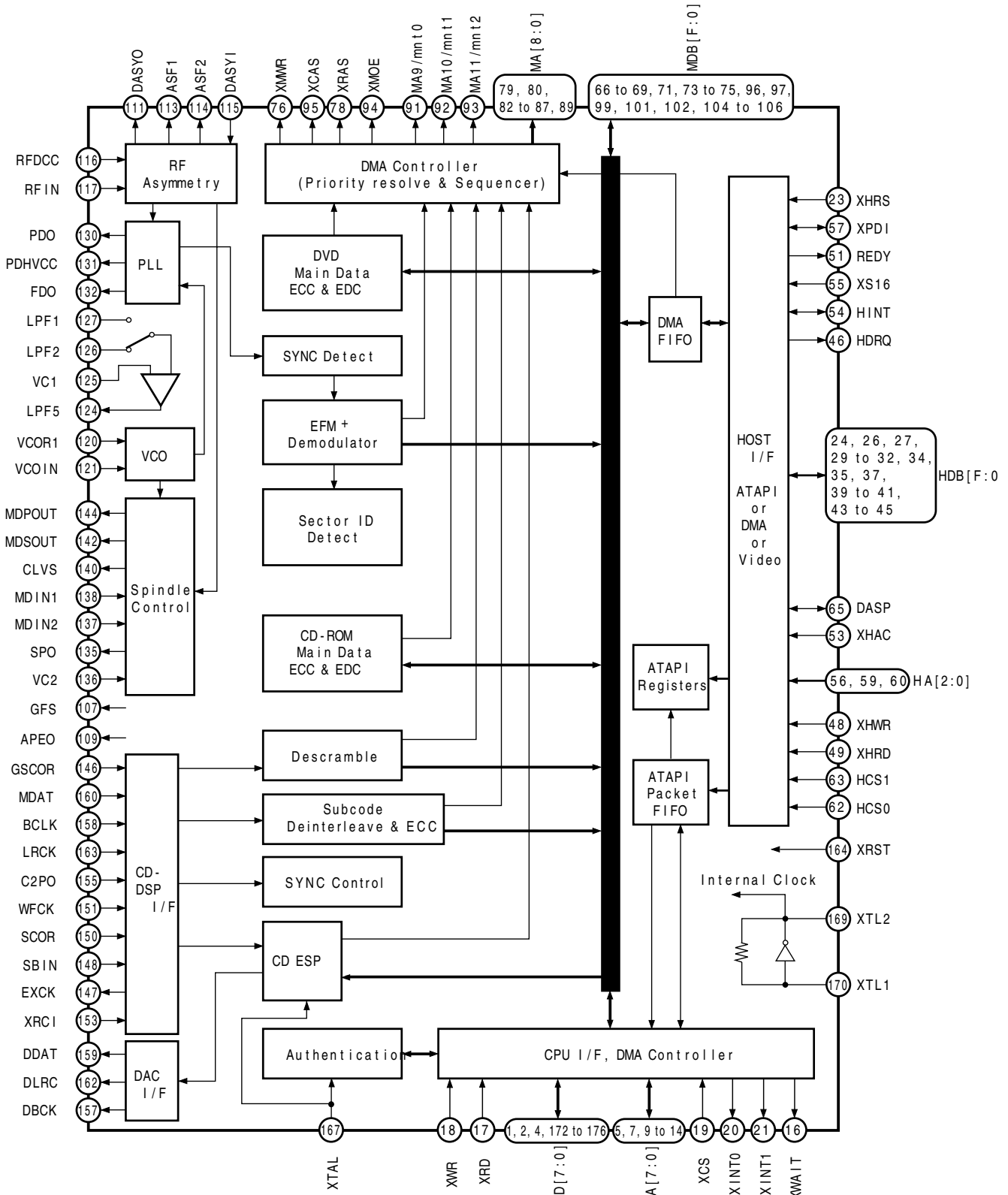
4. Sub CPU Interface (22 pins)

- (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



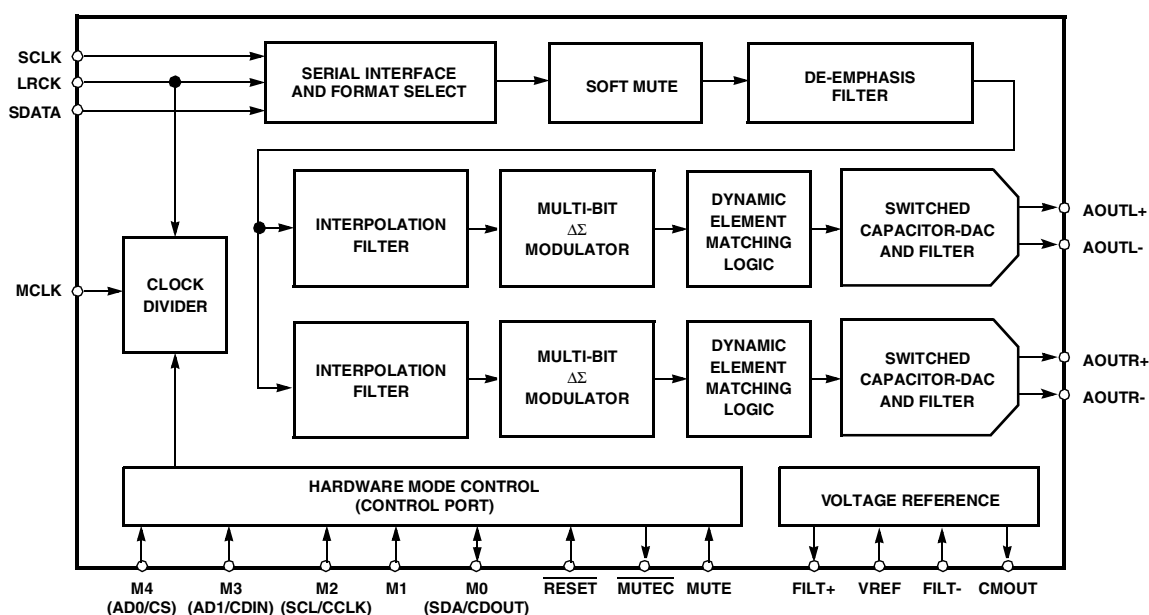
Q125 : CXP973064R-1(FLASH) / GXPQ7100(MASK)

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	Input 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 : CXP973064R-1(FLASH) / 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 : CS4397



QD41/QD61 : 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 kΩ 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 μs/50 μs 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:

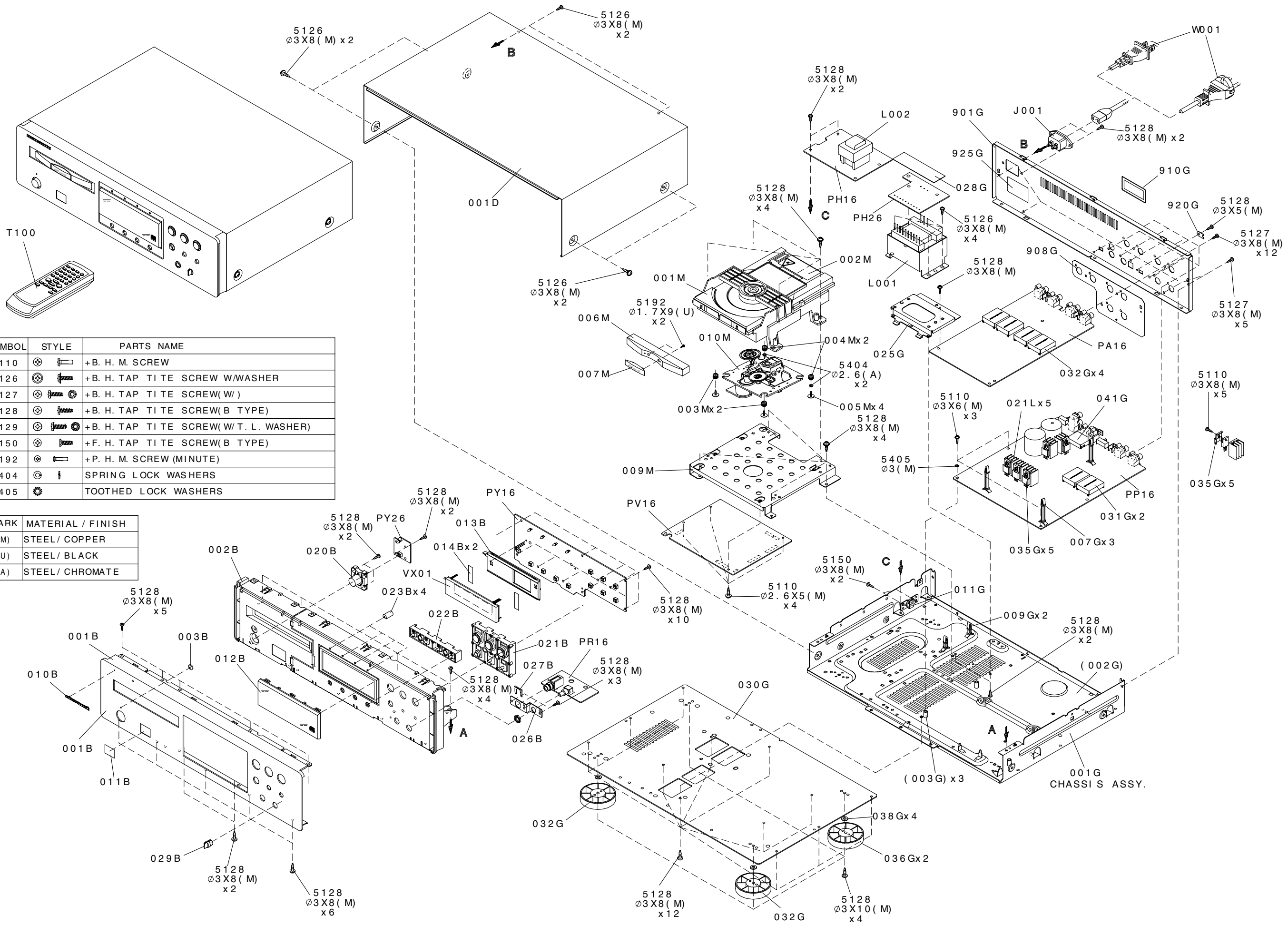
This pin is not used in Control Port Mode and must be terminated to ground.

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	MUT1	O	MUTE Front L/R	active H
6	P25/A21	MUT2	O	MUTE Surr.L/R, Center, LFE	active H
7	P26/A22				active H
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.		0.1uF	
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
51	MD2	MODE3		Mode select	Normal=L
52	HST	HWSTBY		Hardware standby	Normal=H
53	P72/IRQ2	SEEK		Search signal	Search=L
54	P73/IRQ3	STBSW		Standby on/off key input	active H
55	P74/IRQ4	IR		Standby on/off remote input	
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	O	LED CD	active L
68	P91/OUT1	2ch	O	LED 2ch	active L
69	P92/PPG0	Multi	O	LED Multi	active L
70	P93/PPG1	STBY	O	LED standby	active L
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	SYCLSW	O	Filter control	Custom=L
93	P10/AD08	MODE1	O	Mode select	SACD=H;CD=L
94	P11/AD09	STBY	O	standby control	Standby=L
95	P12/AD10				
96	P13/AD11				
97	P14/AD12	Multi/2ch	I	Multi, 2ch select	Multi=H; 2ch=L
98	P15/AD13				
99	P16/AD14				
100	P17/AD15				

9. EXPLODED VIEW AND PARTS LIST



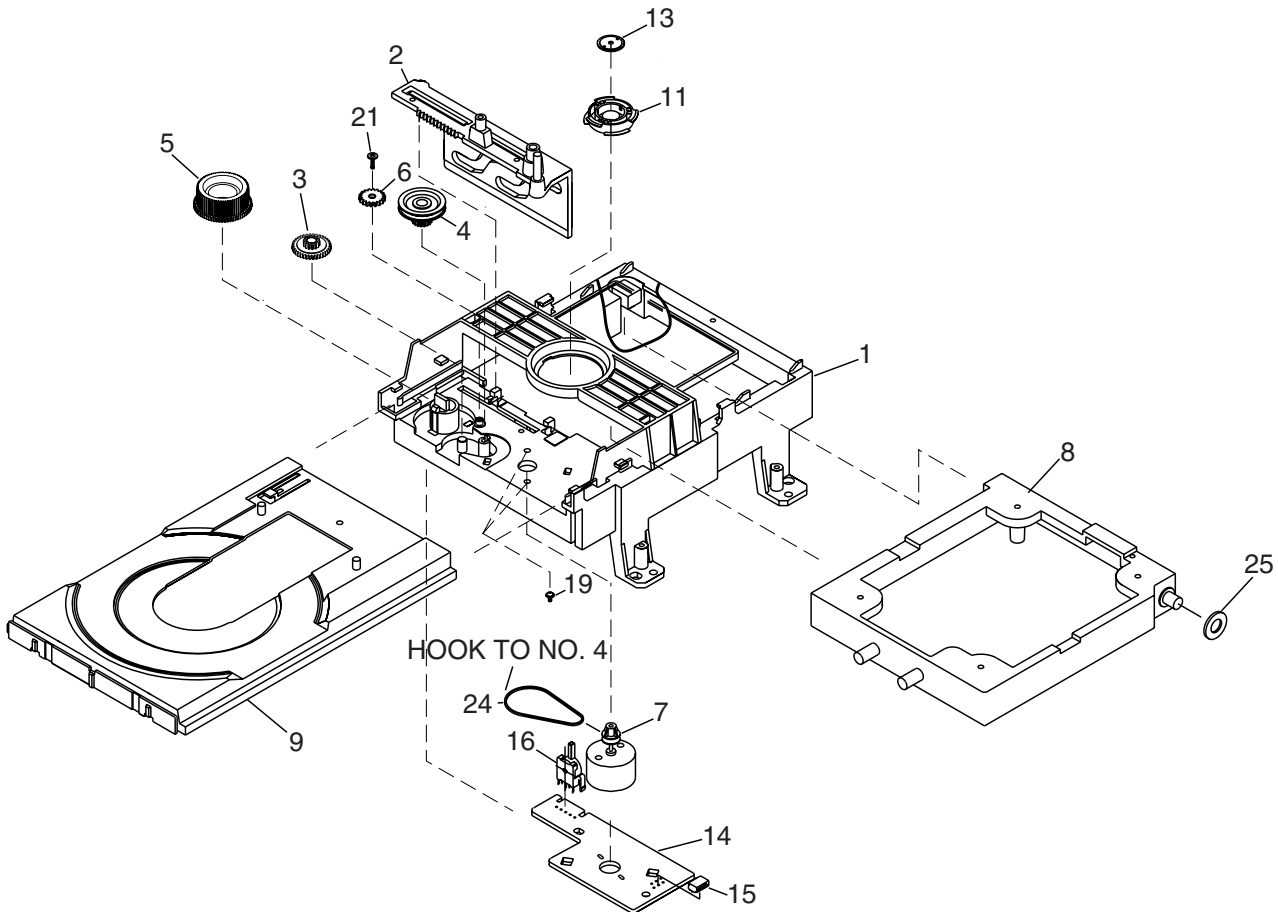
SYMBOL	STYLE	PARTS NAME
5110		+B. H. M. SCREW
5126		+B. H. TAP TITE SCREW W/WASHER
5127		+B. H. TAP TITE SCREW(W/)
5128		+B. H. TAP TITE SCREW(B TYPE)
5129		+B. H. TAP TITE SCREW(W/ T. L. WASHER)
5150		+F. H. TAP TITE SCREW(B TYPE)
5192		+P. H. M. SCREW (MINUTE)
5404		SPRING LOCK WASHERS
5405		TOOTHED LOCK WASHERS

MARK	MATERIAL / FINISH
(M)	STEEL/ COPPER
(U)	STEEL/ BLACK
(A)	STEEL/ CHROMATE

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
001B	BLACK		FRONT AL PANEL BLACK	01AK248010				PACKING USER GUIDE USER GUIDE USER GUIDE REMOTE CONTROLLER COMANDER RC8260SA	
001B	GOLD		FRONT AL PANEL GOLD	01AK248110	001T	/F1			01AK851110
002B	BLACK		CHASSIS FRONT MOULD PANEL BLACK	01AK105020	001T	/S1			01AK851350
002B	GOLD		CHASSIS FRONT MOULD PANEL GOLD	01AK105120	001T	/U1			01AK851250
003B			LENS STANDBY	312J355010	T100				ZK01AK0010
010B			BADGE MARANTZ	185J251010					
011B			BADGE S C D	01AK251010					
012B			WINDOW	01AK158010					
013B			HOLDER FL	255W271010					
020B	BLACK		BUTTON POWER BLACK	320J270040					
020B	GOLD		BUTTON POWER GOLD	320J270240					
021B	BLACK		BUTTON 6 BLACK	01AK270010					
021B	GOLD		BUTTON 6 GOLD	01AK270110					
022B	BLACK		BUTTON 4 BLACK	01AK270020					
022B	GOLD		BUTTON 4 GOLD	01AK270120					
023B			LENS FUNCTION	01AK355010					
026B			BRACKET HEAD PHONE	01AK160030					
027B			CLAMPER STOPPER FOR H/P JACK + BRACKET	214K005010					
029B	BLACK		KNOB PHONE VOLUME BLACK	284T154310					
029B	GOLD		KNOB PHONE VOLUME GOLD	284T154250					
032G			LEG FRONT	183J057010					
036G			LEG REAR	183J057110					
001M			MECHANISM LOADER	01AK304010					
003M			DUMPER FRONT GREEN	01AK130030					
004M			DUMPER REAR GRAY 01A	K130040					
005M			SCREW DUMPER + LOADER	01AK010010					
006M	BLACK		ESCUTCHEON FOR CD TRAY BLACK	01AK063010					
006M	GOLD		ESCUTCHEON FOR CD TRAY BLACK	01AK063110					
007M			ESCUTCHEON SCD LOGO	392K063160					
010M			MECHANISM PICK UP UNIT	01AK304020					
▲ J001			JACK AC INLET TYPE HF-301	YJ04002550					
L003			FERRITE CORE TFCK-23-11-14	FC50230010					
L011			FERRITE CORE USB-4 FOR W901	FC50270040					
L012			FERRITE CORE HF70SH28X2X10 FOR WF04	FC90280010					
PV16			PV16 PCB ASSY	ZZ01AK1000					
WF04			FFC 1MM-PITCH 25P JF01-J105	YU25100550	001D	BLACK	NOT STANDARD SPEAR PARTS LID TOP COVER BLACK	319J257020	
WF05			FFC 1MM-PITCH 25PJF02-J106	YU25100550	001D	GOLD	LID TOP COVER BLACK	319J257120	
WF06			FFC 1MM-PITCH 25P JF04-JD01	YU25080520	001S		PACKING CASE	01AK801010	
WF07			FFC 1MM-PITCH 21P JF03-JY01	YU21130510	002S		CUSHION L/R	319J809010	
WF08			FFC 1.25MM-PITCH 6P J104-TRAY	YU06060520	007T	/F1	USER GUIDE FLY SHEET	01AK851010	
▲ W001	/F1		MAINS CORD 3P MITY FOR F OFC	ZC01802080	007T	/S1	USER GUIDE FLY SHEET	01AK851010	
▲ W001	/S1		MAINS CORD FOR UK AC 250V 10A	ZC01804100	J051		CONNECTIVE CORD	ZD00900100	
▲ W001	/U1		MAINS CORD UL/CSA 10A 125V	ZC01803100	J082		CINCH RC-5 CORD 0.9M	ZD01000550	
W101			FFC J101-OPT_UNIT 1MM 25P	YU25080550			CONNECTIVE CORD CINCH ST.CORD 1M GOLD		

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

10. LOADING MECHANISM 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) GD05xxx140, Carbon film fixed resistor, ±5% 1/4W
 R***: 2) GD05xxx160, 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) DD1xxx370, 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) DK16xxx300, 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. (⏏), 6) FILM CAP. (⏏)

5) EAxxx, Electrolytic capacitor
 One-way lead type, Tolerance ±20%
 ⑤ Capacity value
 ⑥ Working voltage

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) DF15xxx350 Plastic film capacitor
 DF15xxx310 One-way type, Mylar ±5% 50V
 DF16xxx310 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
NH05xxx140	RF25S xxxxxΩJ	(±5% 1/4W)
NH05xxx120	RF50S xxxxxΩJ	(±5% 1/2W)
NH85xxx110	RF73B2A xxxxxΩJ	(±5% 1/10W)
NH95xxx140	RF73B2E xxxxxΩJ	(±5% 1/4W)

* Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)	Type No. (MEC)	Description
NF05xxx140	ERD-2FCJ xxx	(±5% 1/4W)
RF05xxx140		
NF02xxx140	ERD-2FCG xxx	(±2% 1/4W)
RF02xxx140		

* 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 PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			PA16-AUDIO LS RS C LFE CIRCUIT BOARD						
			PA16-CAPACITORS						
CD41			ELECT. 100µF M 16V RA-2	OA10701620	C761		CER. 33pF	DA15330110	
CD42			CER. 0.1µF Z 50V	DA17104110	C762		FILM 680pF J	OF15681540	
CD43			CER. 0.1µF Z 50V	DA17104110	C766		ELECT. 220µF 16V ARS	OA22701640	
CD44			ELECT. 100µF M 16V RA-2	OA10701620	C767		JUMPER		
CD45			ELECT. 10µF 16V ARA	OA10601650			PA16-RESISTORS		
CD46			CER. 0.1µF Z 50V	DA17104110	R415		5.1kΩ ±5% 1/6W	GD05512160	
CD47			ELECT. 100µF 10V ARA	OA10701050	R465		5.1kΩ ±5% 1/6W	GD05512160	
CD48			CER. 0.1µF Z 50V	DA17104110	R715		5.1kΩ ±5% 1/6W	GD05512160	
CD49			CER. 0.1µF Z 50V	DA17104110	R765		5.1kΩ ±5% 1/6W	GD05512160	
							PA16-RESISTORS (COMMON)		
CD71			ELECT. 100µF M 16V RA-2	OA10701620	R***		CARBON FILM FIXED RES.		
CD72			CER. 0.1µF Z 50V	DA17104110			±5% 1/6W :		
CD73			CER. 0.1µF Z 50V	DA17104110			R401-R414 R422-R445		
CD74			ELECT. 100µF M 16V RA-2	OA10701620			R451-R464 R472-R495		
CD75			ELECT. 10µF 16V ARA	OA10601650			R701-R714 R722-R745		
CD76			CER. 0.1µF Z 50V	DA17104110			R751-R764 R772-R795		
CD77			ELECT. 100µF 10V ARA	OA10701050			RD44 RD45 RD75 RN41-RN44		
CD78			CER. 0.1µF Z 50V	DA17104110			RN71-RN74		
CD79			CER. 0.1µF Z 50V	DA17104110			PA16-SEMICONDUCTORS		
C401			FILM 1800pF TP 100V PP	OF15182540	D401		DIODE 1SS176 MA165 1SS254	HD20002000	
C402			FILM 330pF TP 100V PP	OF15331540	}		30V 0.1A		
C403			CER. 47pF	DA15470110	D413				
C404			FILM 120pF J 100V APSV	OF15121540	D451		DIODE 1SS176 MA165 1SS254	HD20002000	
C405			ELECT. 220µF 16V CERAFINE	OA22701650	}		30V 0.1A		
C406			ELECT. 220µF 16V CERAFINE	OA22701650	D463				
C409			FILM 1200pF TP 100V PP	OF15122540	D701		DIODE 1SS176 MA165 1SS254	HD20002000	
C410			FILM 560pF TP 100V PP	OF15561540	}		30V 0.1A		
C411			CER. 33pF	DA15330110	D713				
C412			FILM 680pF J	OF15681540	D751		DIODE 1SS176 MA165 1SS254	HD20002000	
C413			ELECT. 220µF 16V CERAFINE	OA22701650	}		30V 0.1A		
C414			ELECT. 220µF 16V CERAFINE	OA22701650	D763				
C416			ELECT. 220µF 16V ARS	OA22701640			IC CS4397	HC10008880	
C417			JUMPER		QD41		DSD/PCD DAC 24BIT 192K		
C451			FILM 1800pF TP 100V PP	OF15182540	QD71		IC CS4397	HC10008880	
C452			FILM 330pF TP 100V PP	OF15331540			DSD/PCD DAC 24BIT 192K		
C453			CER. 47pF	DA15470110	QN41				
C454			FILM 120pF J 100V APSV	OF15121540	}		TRS. 2SC2878 A OR BRANK	HT328782A0	
C459			FILM 1200pF TP 100V PP	OF15122540	QN44				
C460			FILM 560pF TP 100V PP	OF15561540	QN71				
C461			CER. 33pF	DA15330110	}		TRS. 2SC2878 A OR BRANK	HT328782A0	
C462			FILM 680pF J	OF15681540	QN74				
C466			ELECT. 220µF 16V ARS	OA22701640					
C467			JUMPER		Q401		F.E.T. 2SK369 BL	HF203691B0	
C701			FILM 1800pF TP 100V PP	OF15182540	Q402		VGDS-40V PD0.4W	HF203691B0	
C702			FILM 330pF TP 100V PP	OF15331540			F.E.T. 2SK369 BL		
C703			CER. 47pF	DA15470110	Q403		VGDS-40V PD0.4W		
C704			FILM 120pF J 100V APSV	OF15121540	Q404		TRS. 2SC2240 GR OR BL	HT322402A0	
C705			ELECT. 220µF 16V CERAFINE	OA22701650	Q405		TRS. 2SA970 GR OR BL	HT109702A0	
C706			ELECT. 220µF 16V CERAFINE	OA22701650	Q406		TRS. 2SA970 GR OR BL	HT109702A0	
C709			FILM 1200pF TP 100V PP	OF15122540	Q407		TRS. 2SC2240 GR OR BL	HT322402A0	
C710			FILM 560pF TP 100V PP	OF15561540	Q408		F.E.T. 2SK170 V LANK	HF201701H0	
C711			CER. 33pF	DA15330110	Q408		F.E.T. 2SJ74 V LANK	HF100741H0	
C712			FILM 680pF J	OF15681540	Q409		F.E.T. 2SK369 BL	HF203691B0	
C713			ELECT. 220µF 16V CERAFINE	OA22701650			VGDS-40V PD0.4W		
C714			ELECT. 220µF 16V CERAFINE	OA22701650	Q410		F.E.T. 2SK369 BL	HF203691B0	
C716			ELECT. 220µF 16V ARS	OA22701640			VGDS-40V PD0.4W		
C717			JUMPER		Q411		TRS. 2SC2240 GR OR BL	HT322402A0	
C751			FILM 1800pF TP 100V PP	OF15182540	Q412		TRS. 2SA970 GR OR BL	HT109702A0	
C752			FILM 330pF TP 100V PP	OF15331540	Q413		TRS. 2SA970 GR OR BL	HT109702A0	
C753			CER. 47pF	DA15470110	Q414		TRS. 2SC2240 GR OR BL	HT322402A0	
C754			FILM 120pF J 100V APSV	OF15121540	Q415		F.E.T. 2SK170 V LANK	HF201701H0	
C759			FILM 1200pF TP 100V PP	OF15122540	Q416		F.E.T. 2SJ74 V LANK	HF100741H0	
C760			FILM 560pF TP 100V PP	OF15561540	Q417		TRS. 2SA970 GR OR BL	HT109702A0	
					Q418		TRS. 2SA970 GR OR BL	HT109702A0	
					Q419		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 PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
Q420			TRS. 2SC2240 GR OR BL	HT322402A0	Q759		F.E.T. 2SK369 BL	HF203691B0	
Q423					Q760		VGDS-40V PD0.4W	HF203691B0	
Q424			TRS. 2SA970 GR OR BL	HT109702A0	Q761		F.E.T. 2SK369 BL	HF203691B0	
Q451			F.E.T. 2SK369 BL	HF203691B0	Q762		VGDS-40V PD0.4W	HT322402A0	
Q452			VGDS-40V PD0.4W	HT322402A0	Q763		TRS. 2SC2240 GR OR BL	HT109702A0	
Q453			TRS. 2SC2240 GR OR BL	HT322402A0	Q764		TRS. 2SA970 GR OR BL	HT322402A0	
Q454			TRS. 2SA970 GR OR BL	HT109702A0	Q765		TRS. 2SC2240 GR OR BL	HT322402A0	
Q455			TRS. 2SA970 GR OR BL	HT109702A0	Q766		F.E.T. 2SK170 V LANK	HF201701H0	
Q456			TRS. 2SC2240 GR OR BL	HT322402A0	Q767		F.E.T. 2SJ74 V LANK	HF100741H0	
Q457			F.E.T. 2SK170 V LANK	HF201701H0	Q768		TRS. 2SA970 GR OR BL	HT109702A0	
Q458			F.E.T. 2SJ74 V LANK	HF100741H0	Q769		TRS. 2SA970 GR OR BL	HT109702A0	
Q459			F.E.T. 2SK369 BL	HF203691B0	Q770				
Q460			VGDS-40V PD0.4W	HF203691B0	Q773		TRS. 2SC2240 GR OR BL	HT322402A0	
Q461			F.E.T. 2SK369 BL	HF203691B0	Q774		TRS. 2SA970 GR OR BL	HT109702A0	
Q462			VGDS-40V PD0.4W	HT322402A0	JD01		PA16-MISCELLANEOUS		
Q463			TRS. 2SC2240 GR OR BL	HT109702A0	J405		JACK 25P	YJ07019490	
Q464			TRS. 2SA970 GR OR BL	HT109702A0	J406		FMN-BTRK 1MM-PITCH TOP		
Q465			TRS. 2SC2240 GR OR BL	HT322402A0	J705		TERMINAL 1P CINCH	YT02011030	
Q466			F.E.T. 2SK170 V LANK	HF201701H0	J706		YKC21-3707 BLACK CENTER		
Q467			F.E.T. 2SJ74 V LANK	HF100741H0			TERMINAL 1P CINCH	YT02011030	
Q468			TRS. 2SA970 GR OR BL	HT109702A0			YKC21-3707 BLACK LFE		
Q469			TRS. 2SA970 GR OR BL	HT109702A0			TERMINAL 1P CINCH	YT02011240	
Q470							YKC21-3725 WHITE LS-CH		
Q473			TRS. 2SC2240 GR OR BL	HT322402A0			TERMINAL 1P CINCH	YT02011230	
Q474			TRS. 2SA970 GR OR BL	HT109702A0			YKC21-3724 RED LR-CH		
Q701			F.E.T. 2SK369 BL	HF203691B0	CH02		PH16-POWER STANDBY		
Q702			VGDS-40V PD0.4W	HF203691B0	CH03		CIRCUIT BOARD		
Q703			F.E.T. 2SK369 BL	HF203691B0	CH04		PH16-CAPACITORS		
Q704			VGDS-40V PD0.4W	HT322402A0	CH05		ELECT. 2200µF M 35V RA-2	OA22803520	
Q705			TRS. 2SC2240 GR OR BL	HT109702A0			CER. 0.1µF Z 50V	DA17104110	
Q706			TRS. 2SA970 GR OR BL	HT109702A0			ELECT. 47µF M 16V RA-2	OA47601620	
Q707			TRS. 2SC2240 GR OR BL	HT322402A0			FILM 0.01µF M 250V AC	DF77103500	
Q708			F.E.T. 2SK170 V LANK	HF201701H0			PH16-RESISTORS (COMMON)		
Q709			F.E.T. 2SJ74 V LANK	HF100741H0			CARBON FILM FIXED RES.		
Q710			F.E.T. 2SK369 BL	HF203691B0			±5% 1/6W : RH01 RH02		
Q711			VGDS-40V PD0.4W	HF203691B0			PH16-SEMICONDUCTORS		
Q712			TRS. 2SC2240 GR OR BL	HT322402A0	DH01		DIODE 1D3 1A/200V	HD20002710	
Q713			TRS. 2SA970 GR OR BL	HT109702A0	DH02		DIODE 1D3 1A/200V	HD20002710	
Q714			TRS. 2SC2240 GR OR BL	HT322402A0	DH03		DIODE 1D3 1A/200V	HD20002710	
Q715			F.E.T. 2SK170 V LANK	HF201701H0	DH04		DIODE 1D3 1A/200V	HD20002710	
Q716			F.E.T. 2SJ74 V LANK	HF100741H0	DH05		DIODE 1D3 1A/200V	HD20002710	
Q717			TRS. 2SA970 GR OR BL	HT109702A0	DH06		DIODE 1D3 1A/200V	HD20002710	
Q718			TRS. 2SA970 GR OR BL	HT109702A0	QH01		IC NJM78L05A	HC38105090	
Q719			TRS. 2SA970 GR OR BL	HT109702A0	QH02		DIG.TRS.	BA20004000	
Q720					QH03		DTC114TS/UN4215 10K		
Q723			TRS. 2SC2240 GR OR BL	HT322402A0			TRS. 2SC2120 Y	HT321201B0	
Q724			TRS. 2SA970 GR OR BL	HT109702A0			PH16-MISCELLANEOUS		
Q751			F.E.T. 2SK369 BL	HF203691B0	FH01	/F1B	JUMPER		
Q752			VGDS-40V PD0.4W	HF203691B0	FH01	/S1B	FUSE	FS20125200	
Q753			F.E.T. 2SK369 BL	HF203691B0	FH01	/U1B	T1.25A 250V VDE SWMKO		
Q754			VGDS-40V PD0.4W	HT322402A0	LH02		FUSE	FS20125200	
Q755			TRS. 2SC2240 GR OR BL	HT322402A0	L002	/F1B	T1.25A 250V VDE SEMCO	LY10120400	
Q756			TRS. 2SA970 GR OR BL	HT109702A0	L002	/S1B	RELAY POWER G5PA-1 5A	LY10120400	
Q757			TRS. 2SA970 GR OR BL	HT109702A0	L002	/U1B	MAINS TRANSF. 120V 60HZ	TS12812010	
Q758			TRS. 2SC2240 GR OR BL	HT322402A0			MAINS TRANSF. 230V 50HZ	TS12812020	
			F.E.T. 2SK170 V LANK	HF201701H0			MAINS TRANSF. 120V 60HZ	TS12812010	
			F.E.T. 2SJ74 V LANK	HF100741H0					

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

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
			PH26-TRANSFORMER CIRCUIT BOARD						
▲ L001	/F1B		MAINS TRANS FOR F 100V	TS16677010	C802			ELECT. 3300µF M 6.3V RA-2	OA33800620
▲ L001	/S1B		MAINS TRANS FOR N 230V	TS16677030	C803			CER. 0.1µF Z 50V	DA17104110
▲ L001	/U1B		MAINS TRANS FOR U 120V	TS16677020	C805			ELECT. 4700µF 16V	OA47801620
			PP16-POWER/AUDIO L R CIRCUIT BOARD		C806			ELECT. 3300µF M 6.3V RA-2	OA33800620
			PP16-CAPACITORS		C807			CER. 0.1µF Z 50V	DA17104110
CD21			ELECT. 10µF M 16V RA-2	OA10601620	C808			CER. 0.1µF Z 50V	DA17104110
CD22			ELECT. 100µF M 10V RA-2	OA10701020	C809			ELECT. 220µF 16V	OA22701620
CD25			ELECT. 47µF M 16V RA-2	OA47601620	C822			ELECT. 4700µF 16V RA-2	OA47801620
CD26			ELECT. 220µF M 16V RA-2	OA22701620	C823			ELECT. 2200µF 16V	OA22801620
CD61			ELECT. 100µF M 16V RA-2	OA10701620	C851			ELECT. 3300µF 25V FOR HIFI	OB33802510
CD62			CER. 0.1µF Z 50V	DA17104110	C852			ELECT. 3300µF 25V FOR HIFI	OB33802510
CD63			CER. 0.1µF Z 50V	DA17104110	C855			ELECT. 10µF 16V ARA	OA10601650
CD64			ELECT. 100µF M 16V RA-2	OA10701620	C856			ELECT. 10µF 16V ARA	OA10601650
CD65			ELECT. 10µF 16V ARA	OA10601650	C857			ELECT. 470µF M 16V ARA	OA47701650
CD66			CER. 0.1µF Z 50V	DA17104110	C858			ELECT. 470µF M 16V ARA	OA47701650
CD67			ELECT. 100µF 10V ARA	OA10701050				PP16-RESISTORS	
CD68			CER. 0.1µF Z 50V	DA17104110				JUMPER	
CD69			CER. 0.1µF Z 50V	DA17104110	RN08			75Ω ±5% 1/6W	GD05750160
CF51			CER. 0.1µF Z 50V	DA17104110	RT03			5.1kΩ ±5% 1/6W	GD05512160
CF52			CER. 470pF 50V	DA16471110	R615			5.1kΩ ±5% 1/6W	GD05512160
CF53			CER. 0.1µF Z 50V	DA17104110	R665				
CF54			ELECT. 10µF M 16V RA-2	OA10601620				PP16-RESISTORS (COMMON)	
CN01			ELECT. 2200µF 16V	OA22801620	R***			CARBON FILM FIXED RES.	
CN02			ELECT. 2.2µF M 50V RA-2	OA22505020				±5% 1/6W :	
CN06			ELECT. 100µF M 16V RA-2	OA10701620				R351 R601-R614 R622-R646	
CT01			CER. 0.1µF Z 50V	DA17104110				R651-R664 R672-R696	
CT02			CER. 47pF	DA15470110				R851-R858 RD22-RD27 RD64	
CT03			CER. 2200pF	DA17222110				RD65 RF51-RF57 RN01-RN06	
CT04			CER. 0.1µF Z 50V	DA17104110				RN11-RN13 RN61-RN64 RT01	
CT05			ELECT. 100µF M 25V RA-2	OA10702520	DF51			RT02 RY56 RY59 RY60	
CT06			CER. 0.1µF Z 50V	DA17104110				PP16-SEMICONDUCTORS	
CT10			CER. 0.1µF Z 50V	DA17104110				DIODE 1SS176 MA165 1SS254	HD20002000
CY51			ELECT. 220µF M 50V RA-2	OA22705020	▲ DN01			30V 0.1A	
CY52			ELECT. 220µF M 50V RA-2	OA22705020	▲ DN02			DIODE 1D3 1A 200V	HD20002710
CY60			CER. 0.022µF TP050F223Z	DA17223110	▲ DN03			DIODE 1D3 1A 200V	HD20002710
CY61			CER. 0.022µF TP050F223Z	DA17223110	▲ DN04			DIODE 1D3 1A 200V	HD20002710
CY63			ELECT. 100µF M 35V RA-2	OA10703520	DN05			DIODE 1D3 1A 200V	HD20002710
C351			CER. 0.1µF Z 50V	DA17104110	DN06			ZENER DIODE 4.7V	HD30471000
C601			FILM 1800pF TP 100V PP	OF15182540	DN07			DIODE 1SS176 MA165 1SS254	HD20002000
C602			FILM 330pF TP 100V PP	OF15331540				30V 0.1A	
C603			CER. 47pF	DA15470110	DN11			DIODE 1SS176 MA165 1SS254	HD20002000
C604			FILM 120pF J 100V APSV	OF15121540	DN12			30V 0.1A	
C605			ELECT. 220µF 16V CERAFINE	OA22701650	DY11			ZENER DIODE 4.7V	HD30471000
C606			ELECT. 220µF 16V CERAFINE	OA22701650	▲ DY51			DIODE 1D3 1A/200V	HD20002710
C609			FILM 1200pF TP 100V PP	OF15122540	▲ DY52			DIODE 1D3 1A/200V	HD20002710
C610			FILM 560pF TP 100V PP	OF15561540	DY65			ZENER DIODE 27V	HD32701000
C611			CER. 33pF	DA15330110					
C612			FILM 680pF J	OF15681540	D601				
C613			ELECT. 220µF 16V CERAFINE	OA22701650	∫			DIODE 1SS176 MA165 1SS254	HD20002000
C614			ELECT. 220µF 16V CERAFINE	OA22701650	D613			30V 0.1A	
C616			ELECT. 220µF 16V ARS	OA22701640	D651			DIODE 1SS176 MA165 1SS254	HD20002000
C617			JUMPER		∫			30V 0.1A	
C651			FILM 1800pF TP 100V PP	OF15182540	D663				
C652			FILM 330pF TP 100V PP	OF15331540	▲ D801			DIODE SHOTTKY 11EQS10	HD20055100
C653			CER. 47pF	DA15470110	∫			1A 100V	
C654			FILM 120pF J 100V APSV	OF15121540	D809			DIODE 1D3 1A 200V	HD20002710
C659			FILM 1200pF TP 100V PP	OF15122540	▲ D821			DIODE 1D3 1A 200V	HD20002710
C660			FILM 560pF TP 100V PP	OF15561540	▲ D822				
C661			CER. 33pF	DA15330110	▲ D851			DIODE SHOTTKY 11EQS1	HD20055100
C662			FILM 680pF J	OF15681540	∫			1A 100V	
C666			ELECT. 220µF 16V ARS	OA22701640	▲ D854			ZENER DIODE HZ6L 3 6.2V	HD30021010
C667			JUMPER		D856			ZENER DIODE HZ6L 3 6.2V	HD30021010
C801			ELECT. 6800µF 16V RA-2	OA68801620	D857			DIODE 1SS176 MA165 1SS254	HD20002000
					D858			30V 0.1A	

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POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
D859			DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000	Q652			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
QD21			DIG.TRS. DTC114TS/UN4215 10K	BA20004000	Q653			TRS. 2SC2240 GR OR BL	HT322402A0
QD22			DIG.TRS. DTC114TS/UN4215 10K	BA20004000	Q654			TRS. 2SA970 GR OR BL	HT109702A0
QD23			TRS. 2SA970 GR OR BL	HT109702A0	Q655			TRS. 2SA970 GR OR BL	HT109702A0
QD24			TRS. 2SC2878 A OR BRANK	HT328782A0	Q656			TRS. 2SC2240 GR OR BL	HT322402A0
QD25			TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000	Q657			F.E.T. 2SK170 V LANK	HF201701H0
QD26			TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000	Q658			F.E.T. 2SJ74 V LANK	HF100741H0
QD27			TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000	Q659			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
QD61			IC CS4397 DSD/PCD DAC 24BIT 192K	HC10008880	Q660			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0
QF51			TRS. 2SA1048 2SA933S 2SA1267 ETC.	HT10001000	Q661			TRS. 2SC2240 GR OR BL	HT322402A0
QF52			TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000	Q662			TRS. 2SA970 GR OR BL	HT109702A0
QN01			DIG.TRS. DTC114TS/UN4215 10K	BA20004000	Q663			TRS. 2SA970 GR OR BL	HT109702A0
QN02			TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000	Q664			TRS. 2SC2240 GR OR BL	HT322402A0
QN03			DIG.TRS. DTC114TS/UN4215 10K	BA20004000	Q665			F.E.T. 2SK170 V LANK	HF201701H0
QN04			TRS. 2SA1048 2SA933S 2SA1267 ETC.	HT10001000	Q666			F.E.T. 2SJ74 V LANK	HF100741H0
QN11			DIG.TRS. DTC114TS/UN4215 10K	BA20004000	Q667			TRS. 2SA970 GR OR BL	HT109702A0
QN12			TRS. 2SA1048 2SA933S 2SA1267 ETC.	HT10001000	Q668			TRS. 2SA970 GR OR BL	HT109702A0
QN61			TRS. 2SC2878 A OR BRANK	HT328782A0	Q669			TRS. 2SA970 GR OR BL	HT109702A0
QN64					Q670			TRS. 2SC2240 GR OR BL	HT322402A0
QT01			IC 74HC04 HI-SPEED C-MOS	HC700400D0	Q673				
QY61			TRS. 2SA1048 2SA933S 2SA1267 ETC.	HT10001000	Q674			TRS. 2SA970 GR OR BL	HT109702A0
Q601			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0	▲ Q801			IC BA05T 5V/1A TO220	HC36905210
Q602			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0	▲ Q802			IC BA05T 5V/1A TO220	HC36905210
Q603			TRS. 2SC2240 GR OR BL	HT322402A0	▲ Q803			IC NJM78M05F	HC38505090
Q604			TRS. 2SA970 GR OR BL	HT109702A0	▲ Q821			IC NJM7808F	HC38908090
Q605			TRS. 2SA970 GR OR BL	HT109702A0	Q851			F.E.T. 2SK246 GR	HF202461C0
Q606			TRS. 2SC2240 GR OR BL	HT322402A0	▲ Q852			TRS. 2SD1415A	HT41415100
Q607			F.E.T. 2SK170 V LANK	HF201701H0	Q853			TRS. 2SC2240 GR OR BL	HT322402A0
Q608			F.E.T. 2SJ74 V LANK	HF100741H0	Q855			F.E.T. 2SK246 GR	HF202461C0
Q609			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0	▲ Q856			TRS. 2SB1020A	HT21020100
Q610			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0	Q857			TRS. 2SA970 GR OR BL	HT109702A0
Q611			TRS. 2SC2240 GR OR BL	HT322402A0	▲ F801			PP16-MISCELLANEOUS FUSE	FS20125200
Q612			TRS. 2SA970 GR OR BL	HT109702A0	▲ F821			T1.25A 250V VDE SEMKO	FS20080200
Q613			TRS. 2SA970 GR OR BL	HT109702A0	▲ F822			FUSE	FS20080200
Q614			TRS. 2SC2240 GR OR BL	HT322402A0	▲ F822			T800MA 250V VDE SEMCO	FS20080200
Q615			F.E.T. 2SK170 V LANK	HF201701H0	▲ F851			FUSE	FS20080200
Q616			F.E.T. 2SJ74 V LANK	HF100741H0	▲ F852			T800MA 250V VDE SEMCO	FS20080200
Q617			TRS. 2SA970 GR OR BL	HT109702A0	▲ F852			FUSE	FS20080200
Q618			TRS. 2SA970 GR OR BL	HT109702A0	JF01			T800MA 250V VDE SEMCO	FS20080200
Q619			TRS. 2SA970 GR OR BL	HT109702A0	JF02			JACK 25	YJ07019490
Q620			TRS. 2SC2240 GR OR BL	HT322402A0	JF03			FMN-BTRK 1MM-PITCH TOP	YJ07019490
Q623					JF04			JACK 25	YJ07019490
Q624			TRS. 2SA970 GR OR BL	HT109702A0	JF51			FMN-BTRK 1MM-PITCH TOP	YJ07019490
Q651			F.E.T. 2SK369 BL VGDS-40V PD0.4W	HF203691B0	JT02			TERMINAL	YT02020890
					JT03			2P CINCH PIN JACK	YT02010790
					J605			TERMINAL 14X14 RA 1L1P	YT02010790
					J606			BLK AU FLM-GND	YJ15000210
					LT01			OPT. CONNECTOR	YJ15000210
					LT02			JFJ300 OPT OUTPUT	YT02011240
								TERMINAL 1P CINCH	YT02011230
								YKC21-3725 WHITE L-CH	YT02011230
								TERMINAL 1P CINCH	YT02011230
								YKC21-3724 RED R-CH	TP41042030
								PULSE TRANSF.	TP41042030
								TPS247MN-0386AN	FC90050130
								FERRITE BEAD	FC90050130
								BL02RN2-R62T2	FC90050130

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L801			FERRITE BEAD BL02RN2-R62T2	FC90050130	C107			CER. 0.1µF GRM39F104Z16	DK98104200
L802			FERRITE BEAD BL02RN2-R62T2	FC90050130	C108			TANTL CHIP 10µF 16V	EY10601620
L803			FERRITE BEAD BL02RN2-R62T2	FC90050130	C109			TANTL CHIP 10µF 16V	EY10601620
SF51			SLIDE SWITCH RC-5 INT/EXT	SS02021150	C110			CER. 0.1µF GRM39F104Z16	DK98104200
S351			SLIDE SWITCH	SS02021150	C111			TANTL CHIP 33µF 10V	EY33601020
			FILTER STANDARD/CUSTOM		C112			CER. 1000pF ±10% B 50V	DK96102300
			PR16-HEADPHONE CIRCUIT BOARD		C113			TANTL CHIP 10µF 16V	EY10601620
			PR16-CAPACITORS		C114			TANTL CHIP 10µF 16V	EY10601620
C901			ELECT. 47µF M 16V RA-2	OA47601620	C115			CER. 0.1µF GRM39F104Z16	DK98104200
C902			ELECT. 47µF M 16V RA-2	OA47601620	C116			TANTL CHIP 33µF 10V	EY33601020
C903			ELECT. 220µF M 16V RA-2	OA22701620	C117			CER. 1000pF ±10% B 50V	DK96102300
C904			ELECT. 220µF M 16V RA-2	OA22701620	C118			TANTL CHIP 10µF 16V	EY10601620
C905			ELECT. 47µF M 16V RA-2	OA47601620	C119			TANTL CHIP 10µF 16V	EY10601620
C906			ELECT. 47µF M 16V RA-2	OA47601620	C120			CER. 1µF 10V F	DK98105200
C907			CER. 1000pF UP050B102K-A	DA16102110	C121			TANTL CHIP 47µF 6.3V	EY47600620
C908			CER. 1000pF UP050B102K-A	DA16102110	C122			CER. 0.1µF GRM39F104Z16	DK98104200
			PR16-RESISTOR		C123			CER. 0.1µF GRM39F104Z16	DK98104200
R930			VAR. 10Ω RK09L12B0 B D-CUT NORMAL	RM01031220	C124			CER. 1000pF ±10% B 50V	DK96102300
			PV04-RESISTORS (COMMON)		C125			CER. 1000pF ±10% B 50V	DK96102300
R***			CARBON FILM FIXED RES. ±5% 1/6W : R901-R926 RY01-RY21		C126			CER. 2200pF GR39	DK96222300
			PR16-SEMICONDUCTORS		C129			CER. 22pF ±5% CG 50V GR39	DD95220300
D901			DIODE 1SS176 MA165 1SS254	HD20002000	C130			CER. 330pF GR39	DK96331300
D904			30V 0.1A		C133			TANTL CHIP 22µF 6.3V	EY22600620
Q901			IC DUAL LOW NOISE OP-AMP NJM2114D	HC10111090	C134			CER. 0.1µF GRM39F104Z16	DK98104200
Q903			TRS. 2SC2120 Y	HT321201B0	C135			CER. 0.033µF ± 10%	DK96333200
Q904			TRS. 2SC2120 Y	HT321201B0	C136			CER. 0.033µF ± 10%	DK96333200
Q905			TRS. 2SA950 GR R	HT109501A0	C137			CER. 150pF ±5% CG 50V GR39	DD95151300
Q906			TRS. 2SA950 GR R	HT109501A0	C138			CER. 0.047µF ±10% X7R 16V	DK96473200
Q907					C141			CER. 0.1µF ±10% B 10V	DK96104200
Q910			TRS. 2SC2878 A OR BRANK	HT328782A0	C142			CER. 0.1µF GRM39F104Z16	DK98104200
			PR16-MISCELLANEOUS		C143			CER. 1µF 10V F	DK98105200
J903			H.P JACK HLJ0540-01-410 BLK	YJ01003870	C144			CER. 0.1µF ±10% B 10V	DK96104200
L901			FERRITE BEAD BL02RN2-R62T2	FC90050130	C145			CER. 0.1µF GRM39F104Z16	DK98104200
L902			FERRITE BEAD BL02RN2-R62T2	FC90050130	C146			TANTL CHIP 47µF 6.3V	EY47600620
			PV16-SERVO PWB PV16-CAPACITORS		C147			CER. 0.1µF ±10% B 10V	DK96104200
CF02			CER. 0.1µF 16V	DK98104200	C148			CER. 0.1µF ±10% B 10V	DK96104200
CF03			CER. 0.1µF 16V	DK98104200	C149			CER. 0.1µF ±10% B 10V	DK96104200
CF04			CER. 1µF 10V F	DK98105200	C150			CER. 1500pF GR39	DK96152300
CF05			CER. 0.1µF GRM39F104Z16	DK98104200	C151			CER. 1500pF GR39	DK96152300
CF06			CER. 0.1µF GRM39F104Z16	DK98104200	C152			CER. 0.01µF ±10% B 25V	DK96103200
CF07			CER. 0.1µF GRM39F104Z16	DK98104200	C153			CER. 3300pF GR39	DK96332300
CF08			TANTL CHIP 22µF 6.3V	EY22600620	C154			CER. 3300pF GR39	DK96332300
CF09					C155			CER. 0.1µF GRM39F104Z16	DK98104200
CF12			CER. 0.1µF GRM39F104Z16	DK98104200	C156			TANTL CHIP 22µF 6.3V	EY22600620
CF13			CER. 2200pF GR39	DK96222300	C157			CER. 0.1µF ±10% B 10V	DK96104200
C101			TANTL CHIP 4.7µF 10V	EY47501050	C158			CER. 1pF ±0.25pF CK 50V	DD90010300
C102			TANTL CHIP 22µF 6.3V	EY22600620	C159			CER. 0.1µF GRM39F104Z16	DK98104200
C103			TANTL CHIP 10µF 16V	EY10601620	C160			TANTL CHIP 22µF 6.3V	EY22600620
C104			CER. 0.1µF GRM39F104Z16	DK98104200	C161			CER. 1pF ±0.25pF CK 50V	DD90010300
					C162			CER. 0.1µF GRM39F104Z16	DK98104200
					C163			CER. 0.1µF GRM39F104Z16	DK98104200
					C164			CER. 0.047µF ±10% X7R 16V	DK96473200
					C165			CER. 330pF GR39	DK96331300
					C166			CER. 0.1µF GRM39F104Z16	DK98104200
					C167			TANTL CHIP 10µF 16V	EY10601620
					C168			CER. 0.1µF GRM39F104Z16	DK98104200
					C169			CER. 0.1µF GRM39F104Z16	DK98104200
					C170			CER. 150pF ±5% CG 50V GR39	DD95151300
					C171			TANTL CHIP 10µF 16V	EY10601620
					C172			CER. 0.1µF ±10% B 10V	DK96104200
					C173			CER. 0.1µF GRM39F104Z16	DK98104200
					C174			TANTL CHIP 22µF 6.3V	EY22600620
					C175			TANTL CHIP 22µF 6.3V	EY22600620

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C176 }		4822 126 11687	CER. 0.1μF GRM39F104Z16	DK98104200	C252 }		4822 126 11687	CER. 0.1μF GRM39F104Z16	DK98104200
C179					C255				
C180			CER. 270pF ± 5%	DD95271300	C256			CER. 0.1μF ±10% B 10V	DK06104200
C181	4822 126 13396		CER. 0.047μF ±10% X7R 16V	DK96473200	C257	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C182	4822 126 11568		CER. 470pF GR39	DK96471300	C258	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C183	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C259	4822 126 13303		CER. 1μF 10V F	DK98105200
C184	4822 126 13303		CER. 1μF 10V F	DK98105200	C260	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620
C185	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C261	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C186	4822 126 14417		CER. 0.01μF ±10% 50V	DK96103300	C262	4822 126 13837		CER. 0.1μF ±10% B 10V	DK96104200
C187			CER. 0.47μF 10V B BJ ±10%	DK96474200	C263	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C188	4822 126 12495		CER. 1500pF GR39	DK96152300	C264	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C189	4822 126 13396		CER. 0.047μF ±10% X7R 16V	DK96473200	C268	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C190	4822 126 11687		CER. 220pF GR39	DK96221300	C269	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C191	4822 126 13303		CER. 1μF 10V F	DK98105200	C270	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C192	4822 126 13837		CER. 0.1μF ±10% B 10V	DK96104200	C271	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C193	4822 126 13303		CER. 1μF 10V F	DK98105200	C272	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C194	4822 122 33741		CER. 10pF ±0.5pF CH 50V	DD91100300	C273				
C195	4822 126 12497		CER. 7pF ±0.5pF CH 50V GR39	DD91070300	C277			CER. 0.1μF ±10% B 10V	DK06104200
C196	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C278	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C197	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C279	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C198	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C280	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C199	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C281			CER. 0.1μF ±10% B 10V	DK06104200
C200	4822 126 11687		CER. 0.1μF 16V	DK98104200	C282			CER. 0.1μF ±10% B 10V	DK06104200
C201	4822 124 11074		TANTL CHIP 10μF 16V	EY10601620	C283	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C202	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C284	4822 126 14417		CER. 0.01μF ±10% 50V	DK96103300
C203	4822 126 14249		CER. 560pF	DK96561300	C285			CER. 0.47μF 10V B BJ ±10%	DK96474200
C204	4822 126 12339		CER. 2200pF GR39	DK96222300	C286	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C205	4822 126 14249		CER. 560pF	DK96561300	C287	4822 126 11685		CER. 4700pF ±10% B 50V	DK96472300
C206	4822 126 12339		CER. 2200pF GR39	DK96222300	C289	4822 126 14417		CER. 0.01μF ±10% 50V	DK96103300
C207	4822 126 11682		CER. 220pF GR39	DK96221300	C290	4822 126 14417		CER. 0.01μF ±10% 50V	DK96103300
C208	4822 126 13837		CER. 0.1μF 16V	DK96104200	C291	4822 126 13303		CER. 1μF 10V F	DK98105200
C209	4822 126 11682		CER. 220pF GR39	DK96221300	C292	4822 126 11682		CER. 220pF GR39	DK96221300
C210	4822 126 13837		CER. 0.1μF 16V	DK96104200	C293			CER. 0.1μF ±10% B 10V	DK06104200
C211	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C294	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C212	4822 124 41842		TANTL CHIP 47μF 16V	EY47601620	C295	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C213	4822 124 41842		TANTL CHIP 47μF 16V	EY47601620	C296	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C214	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C297	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C215	4822 126 14417		CER. 0.01μF 16V	DK96103300	C301	5322 126 11578		CER. 1000pF ±10% B 50V	DK96102300
C216	9965 000 03102		CER. 0.068μF ± 10%	DK96683200	C302	4822 126 13396		CER. 0.047μF ±10% X7R 16V	DK96473200
C217	4822 126 12339		CER. 2200pF GR39	DK96222300	C303			CER. 0.47μF 10V B BJ ±10%	DK96474200
C218	9965 000 03102		CER. 0.068μF ± 10%	DK96683200	C304	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C219	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C308	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C220	4822 124 11074		TANTL CHIP 10μF 16V	EY10601620	C309	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C222	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C310	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C225	4822 126 14417		CER. 0.01μF ±10% 50V	DK96103300	C311	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C226	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C312			CER. 0.1μF ±10% B 10V	DK06104200
C227	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C313	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C228	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C315	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C229	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C316	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C230	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C317	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C231	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620	C320	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C232			CER. 2pF ±0.25pF CK 50V	DD90020300	C321	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C233			CER. 2pF ±0.25pF CK 50V	DD90020300	C322	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C234	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C323	4822 122 33761		CER. 22pF ±5% CG 50V GR39	DD95220300
C235	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C324	4822 126 11759		CER. 100pF ±5% CG 50V GR39	DD95101300
C236			CER. 0.1μF ±10% B 10V	DK06104200	C336	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620
C237			CER. 0.1μF ±10% B 10V	DK06104200	C337	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620
C238 }					C339	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C241					C340	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620
C242 }					C342	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620
C249	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200	C343	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C250	4822 126 13303		CER. 1μF 10V F	DK98105200	C344	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200
C251	4822 124 11226		TANTL CHIP 22μF 6.3V	EY22600620	C345	4822 124 10772		TANTL CHIP 100μF 6.3V	EY10700620
					C346	4822 126 11687		CER. 0.1μF GRM39F104Z16	DK98104200

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

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MUJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MUJ)
C347			TANTL CHIP 100µF 6.3V	EY10700620	R144			CHIP 330kΩ ±5% 1/16W	NN05334610
C348			TANTL CHIP 22µF 6.3V	EY22600620	R145			CHIP 3kΩ ±5% 1/16W	NN05302610
C362			TANTL CHIP 4.7µF 10V	EY47501050	R146			CHIP 22kΩ ±5% 1/16W	NN05223610
C363			CER. 0.1µF 16V	DK96104200	R147			CHIP 4.7kΩ ±5% 1/16W	NN05472610
			PV16-RESISTORS		R148			CHIP 3.3kΩ ±5% 1/16W	NN05332610
RF01			CHIP 1kΩ ±5% 1/16W	NN05102610	R149			CHIP 330kΩ ±5% 1/16W	NN05334610
RF02			CHIP 330kΩ ±5% 1/16W	NN05334610	R150			CHIP 3kΩ ±5% 1/16W	NN05302610
RF03			CHIP 47kΩ ±5% 1/16W	NN05473610	R151			CHIP 4.7kΩ ±5% 1/16W	NN05472610
RF04			CHIP 47kΩ ±5% 1/16W	NN05473610	R152			CHIP 10kΩ ±5% 1/16W	NN05103610
RF05			CHIP 47kΩ ±5% 1/16W	NN05473610	R153			CHIP 10kΩ ±5% 1/16W	NN05103610
RF06			CHIP 47kΩ ±5% 1/16W	NN05473610	R154			CHIP 4.7kΩ ±5% 1/16W	NN05472610
RF07			CHIP 4.7kΩ ±5% 1/16W	NN05472610	R155			CHIP 330kΩ ±5% 1/16W	NN05334610
RF08			CHIP 100kΩ ±5% 1/16W	NN05104610	R156			CHIP 10kΩ ±5% 1/16W	NN05103610
RF09			CHIP 10kΩ ±5% 1/16W	NN05103610	R157			CHIP 1.5kΩ ±5% 1/16W	NN05152610
RF10			CHIP 100kΩ ±5% 1/16W	NN05104610	R158			CHIP 1.5kΩ ±5% 1/16W	NN05152610
RF12			CHIP 4.7kΩ ±5% 1/16W	NN05472610	R159			CHIP 10kΩ ±5% 1/16W	NN05103610
RF13			CHIP 0Ω ±5% 1/16W	NN05000610	R160			CHIP 10kΩ ±5% 1/16W	NN05103610
RF14					R161			CHIP 1MΩ ±5% 1/16W	NN05105610
RF18			CHIP 47kΩ ±5% 1/16W	NN05473610	R162			CHIP 10kΩ ±5% 1/16W	NN05103610
RF19			CHIP 0Ω ±5% 1/16W	NN05000610	R163			CHIP 10kΩ ±5% 1/16W	NN05103610
RF20			CHIP 47kΩ ±5% 1/16W	NN05473610	R164			CHIP 1MΩ ±5% 1/16W	NN05105610
RF21			CHIP 10kΩ ±5% 1/16W	NN05103610	R165			CHIP 10kΩ ±5% 1/16W	NN05103610
RF22			CHIP 10kΩ ±5% 1/16W	NN05103610	R166			CHIP 10kΩ ±5% 1/16W	NN05103610
RF23			CHIP 10kΩ ±5% 1/16W	NN05103610	R167			CHIP 10kΩ ±5% 1/16W	NN05103610
R101			CHIP 22kΩ ±5% 1/16W	NN05223610	R168			CHIP 4.7kΩ ±5% 1/16W	NN05472610
R102			CHIP 22kΩ ±5% 1/16W	NN05223610	R169			CHIP 4.7kΩ ±5% 1/16W	NN05472610
R103			CHIP 22kΩ ±5% 1/16W	NN05223610	R170			CHIP 4.7kΩ ±5% 1/16W	NN05472610
R104			CHIP 11kΩ ±5% 1/16W	NN05113610	R171			CHIP 12kΩ ±5% 1/16W	NN05123610
R105			CHIP 22kΩ ±5% 1/16W	NN05223610	R172			CHIP 47kΩ ±5% 1/16W	NN05473610
R106			CHIP 22kΩ ±5% 1/16W	NN05223610	R173			CHIP 10kΩ ±5% 1/16W	NN05103610
R107			CHIP 22kΩ ±5% 1/16W	NN05223610	R174			CHIP 33kΩ ±5% 1/16W	NN05333610
R108			CHIP 11kΩ ±5% 1/16W	NN05113610	R175			CHIP 10kΩ ±5% 1/16W	NN05103610
R109			CHIP 470Ω ±5% 1/16W	NN05471610	R176			CHIP 100kΩ ±5% 1/16W	NN05104610
R110			CHIP 1kΩ ±5% 1/16W	NN05102610	R177			CHIP 10kΩ ±5% 1/16W	NN05103610
R111			CHIP 470Ω ±5% 1/16W	NN05471610	R178			CHIP 3.3kΩ ±5% 1/16W	NN05332610
R112			CHIP 33Ω ±5% 1/16W	NN05330610	R179			CHIP 3.3kΩ ±5% 1/16W	NN05332610
R113			CHIP 33Ω ±5% 1/16W	NN05330610	R180			CHIP 470kΩ ±5% 1/16W	NN05474610
R114			CHIP 33kΩ ±5% 1/16W	NN05333610	R181			CHIP 1MΩ ±5% 1/16W	NN05105610
R115			CHIP 470Ω ±5% 1/16W	NN05471610	R182			CHIP 470kΩ ±5% 1/16W	NN05474610
R116			CHIP 33Ω ±5% 1/16W	NN05330610	R183				
R117			CHIP 33Ω ±5% 1/16W	NN05330610	R185			CHIP 100Ω ±5% 1/16W	NP05101610
R118			CHIP 33kΩ ±5% 1/16W	NN05333610	R186				
R119			CHIP 100Ω ±5% 1/16W	NN05101610	R187			CHIP 100Ω ±5% 1/16W	NP05101610
R121			CHIP 0Ω ±5% 1/16W	NN05000610	R188			CHIP 100Ω ±5% 1/16W	NP05101610
R123			CHIP 10MΩ ±5% 1/16W	NN05106610	R189			CHIP 10kΩ ±5% 1/16W	NN05103610
R125			CHIP 12kΩ ±1% 1/10W	NI01123110	R190			CHIP 100Ω ±5% 1/16W	NP05101610
R126			CHIP 0Ω ±5% 1/16W	NN05000610	R191			CHIP 100Ω ±5% 1/16W	NP05101610
R128			CHIP 22kΩ ±5% 1/16W	NN05223610	R192			CHIP 220Ω ±5% 1/16W	NN05221610
R129			CHIP 22kΩ ±5% 1/16W	NN05223610	R193			CHIP 10Ω ±5% 1/16W	NN05100610
R130			CHIP MCR03EZHUJ363 2120 108 92212	NN05363610	R195			CHIP 100Ω ±5% 1/16W	NN05101610
R131			CHIP 8.2kΩ ±5% 1/16W	NN05822610	R196			CHIP 100Ω ±5% 1/16W	NN05101610
R132			CHIP 22kΩ ±5% 1/16W	NN05223610	R197			CHIP 100Ω ±5% 1/16W	NN05101610
R133			CHIP 47kΩ ±5% 1/16W	NN05473610	R201			CHIP 5.6kΩ ±5% 1/16W	NN05562610
R134			CHIP 15kΩ ±5% 1/16W	NN05153610	R202			CHIP 33kΩ ±5% 1/16W	NN05333610
R135			CHIP 51Ω ±5% 1/16W	NN05510610	R203			CHIP 1.8kΩ ±5% 1/16W	NN05182610
R136			CHIP 51Ω ±5% 1/16W	NN05510610	R204			CHIP 2.2kΩ ±5% 1/16W	NN05222610
R137			CHIP 51Ω ±5% 1/16W	NN05510610	R205			CHIP 1.8kΩ ±5% 1/16W	NN05182610
R138			CHIP 1kΩ ±5% 1/16W	NN05102610	R206			CHIP 2.2kΩ ±5% 1/16W	NN05222610
R139			CHIP MCR03EZHUJ202 2120 108 92178	NN05202610	R207			CHIP 33kΩ ±5% 1/16W	NN05333610
R140			CHIP MCR03EZHUJ202 2120 108 92178	NN05202610	R208			CHIP 5.6kΩ ±5% 1/16W	NN05562610
R141			CHIP 1kΩ ±5% 1/16W	NN05102610	R209			CHIP 56kΩ ±5% 1/16W	NN05563610
R142			CHIP 10kΩ ±5% 1/16W	NN05103610	R210			CHIP 1kΩ ±5% 1/16W	NN05102610
R143			CHIP 3.3kΩ ±5% 1/16W	NN05332610	R211			CHIP 56kΩ ±5% 1/16W	NN05563610
					R212			CHIP 1kΩ ±5% 1/16W	NN05102610
					R213			CHIP 56kΩ ±5% 1/16W	NN05563610
					R214			CHIP 47kΩ ±5% 1/16W	NN05473610
					R215			CHIP 56kΩ ±5% 1/16W	NN05563610
					R216			CHIP 47kΩ ±5% 1/16W	NN05473610

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

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R217			CHIP 47k ±5% 1/16W	NN05473610	R313			CHIP 1M ±5% 1/16W	NN05105610
R218			CHIP 27k ±5% 1/16W	NN05273610	R314			CHIP 8.2k ±5% 1/16W	NN05822610
R219			CHIP 27k ±5% 1/16W	NN05273610	R315			CHIP 22k ±5% 1/16W	NN05223610
R220			CHIP 47k ±5% 1/16W	NN05473610	R316			CHIP 10k ±5% 1/16W	NN05103610
R221			CHIP 22k ±5% 1/16W	NN05223610	R317			CHIP 0 ±5% 1/16W	NN05000610
R222			CHIP 150k ±5% 1/16W	NN05154610	R324			CHIP 100 ±5% 1/16W	NP05101610
R223			CHIP 150k ±5% 1/16W	NN05154610	∫				
R224			CHIP 1k ±5% 1/16W	NN05102610	R339				
R225			CHIP 1k ±5% 1/16W	NN05102610	R340			CHIP 4.7k ±5% 1/16W	NN05472610
R226			CHIP 22k ±5% 1/16W	NN05223610	R341			CHIP 2.2k ±5% 1/16W	NN05222610
R227			CHIP 15k ±5% 1/16W	NN05153610	R342			CHIP 4.7k ±5% 1/16W	NN05472610
R228			CHIP 5.1k ±5% 1/16W	NN0551261R	R343			CHIP 2.2k ±5% 1/16W	NN05222610
R229			CHIP MCR03EZHUJ202	NN05202610	R344			CHIP 10k ±5% 1/16W	NN05103610
			2120 108 92178		R347			CHIP 0 ±5% 1/16W	NN05000610
R230			CHIP MCR03EZHUJ202	NN05202610	R348			CHIP 100 ±5% 1/16W	NN05101610
			2120 108 92178		R349			CHIP 0 ±5% 1/16W	NN05000610
R231			CHIP 3k ±5% 1/16W	NN05302610	R350			CHIP 10 ±5% 1/16W	NN05100610
R232			CHIP 3k ±5% 1/16W	NN05302610	R351			CHIP 22k ±5% 1/16W	NN05223610
R234			CHIP 0 ±5% 1/16W	NN05000610	R354			CHIP 47 ±5% 1/16W	NN05470610
R235			CHIP 10k ±5% 1/16W	NP05103610	∫				
R236			CHIP 10k ±5% 1/16W	NN05103610	R360				
R237			CHIP 10k ±5% 1/16W	NP05103610	R361			CHIP 47 ±5% 1/16W	NN05470610
∫							R372		
R242					R376			CHIP 0 ±5% 1/16W	NN05000610
R243			CHIP 10k ±5% 1/16W	NN05103610	R378			CHIP 68k ±5% 1/16W	NN05683610
R251			CHIP 10k ±5% 1/16W	NN05103610				PV16-SEMICONDUCTORS	
R252			CHIP 10k ±5% 1/16W	NN05103610	D104			CHIP DIODE 1SS300 DAP202U	HZ21006000
R253			CHIP 10k ±5% 1/16W	NN05103610	D105			CHIP DIODE 1SS301 DAN202U	HZ21005000
R254			CHIP 47k ±5% 1/16W	NN05473610	D106			CHIP DIODE 1SS301 DAN202U	HZ21005000
R255			CHIP 15k ±1% 1/16W	NM11502020	D109			CHIP DIODE EC105DS2TE12L	HZ20003100
R256			CHIP 15k ±1% 1/16W	NM11502020					
R259			CHIP 0 ±5% 1/16W	NN05000610	QF01			MICROPROCESSOR	HU01AKF00F
								MB90553A	
R261			CHIP 33k ±5% 1/16W	NN05333610	QF02			IC S-80843ALNP-EA7-T2	HC10098530
R262			CHIP 1k ±5% 1/16W	NN05102610				4.3V SC82	
R263			CHIP 1k ±5% 1/16W	NN05102610	QF03			DIG.TR.S. DTC144EC	BA20021210
R264			CHIP 22k ±5% 1/16W	NN05223610	QF04			IC AT24C04N-10SI-2.5	HC10033990
R265			CHIP 1k ±5% 1/16W	NN05102610	Q101			IC CXD1881R RF AMP	HC10077250
R266			CHIP 6.8k ±5% 1/16W	NN05682610	Q102			IC NJM2115V OP-AMP	HC10147090
R267			CHIP 22k ±5% 1/16W	NN05223610	Q103			TRS. CHIP 2SB798 DL DK	HX207982A0
R271			CHIP 4.7k ±5% 1/16W	NN05472610	Q104			TRS. CHIP 2SB798 DL DK	HX207982A0
R272			CHIP 9.1k ±5% 1/16W	NN05912610	Q105			TRS. CHIP 2SB798 DL DK	HX207982A0
R273			CHIP 0 ±5% 1/16W	NN05000610	Q107			F.E.T. 2SK3019 SWITCHING	HF230192A0
R274			CHIP 10k ±5% 1/16W	NN05103610	Q108			F.E.T. 2SK3019 SWITCHING	HF230192A0
R275			CHIP 10k ±5% 1/16W	NN05103610	Q109			IC NJM2137V OP-AMP	HC12237090
R276			CHIP 10k ±5% 1/16W	NN05103610	Q110			IC AD8062	HC10209990
R277			CHIP 10k ±5% 1/16W	NN05103610				HI-SPEED OP-AMP	
R278			CHIP 4.7k ±5% 1/16W	NN05472610	Q111			IC NJM2115V OP-AMP	HC10147090
R279			CHIP 4.7k ±5% 1/16W	NN05472610	Q112			IC NJM2903V COMPARATOR	HC12238090
R282			CHIP 22k ±5% 1/16W	NN05223610	Q113			IC NJM2115V OP-AMP	HC10147090
R283			CHIP 10k ±5% 1/16W	NN05103610	Q114			IC NJM2903V COMPARATOR	HC12238090
R285			CHIP 100 ±5% 1/16W	NP05101610	Q115			IC TC74LVX4053FT	HC010105K0
∫									ANALOG SW
R294					Q116			IC CXD3068Q CD DECODER	HC10080250
R295			CHIP 100k ±5% 1/16W	NN05104610	Q117			IC BA5981FP	HC10222210
R296			CHIP 10k ±5% 1/16W	NP05103610				MOTOR DRIVER-4CH	
R297			CHIP 4.3k ±5% 1/16W	NN05432610	Q118			IC NJM3414AV	HC12239090
								DUAL OP-AMP SSOP8P	
R301			CHIP 5.6k ±5% 1/16W	NN05562610	Q119			IC TC7SHU04F	HC10427050
R302			CHIP 10k ±5% 1/16W	NN05103610	Q121			IC AD8062	HC10209990
R303			CHIP 2.2k ±5% 1/16W	NN05222610				HI-SPEED OP-AMP	
R304			CHIP 10k ±5% 1/16W	NN05103610	Q122			IC EM636165TS-7	HC10156990
R305			CHIP 150k ±5% 1/16W	NN05154610				S-DRAM 2B 16MBYT	
R306			CHIP 470k ±5% 1/16W	NN05474610	Q123			IC CXD2752R SACD DECODER	HC10079250
R307			CHIP 100 ±5% 1/16W	NN05101610	Q124			IC CXD1882R	HC10078250
R309			CHIP 22k ±5% 1/16W	NN05223610				DVD DECODER	
R310			CHIP 22k ±5% 1/16W	NN05223610	Q125			MICROPROCESSOR	HU01AKY100
R311			CHIP 47k ±5% 1/16W	NN05473610				CXPQ71000 CONTROL-UPC	
R312			CHIP 1k ±5% 1/16W	NN05102610					

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POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
Q126			IC TC74VHC157FT	HC005805K0				PY16-DISPLAY SW	
Q127			IC M11L16161SA-45T	HC10210990				CIRCUIT BOARD	
			EDO-DRAM 16M					PY16-CAPACITORS	
Q128			DIG.TRS. DTA144EU RΩ	BA10014210	CY01		ELECT. 47μF 6.3V	EJ47600610	
Q129			DIG.TRS. DTC144EC	BA20021210	CY02		CER. 0.1μF Z 50V	DA17104110	
Q132			IC TC74VHC541FT	HC006105K0	CY03		CER. 22pF	DA15220110	
Q133			IC TC74VHC541FT	HC006105K0	CY04		CER. 0.1μF Z 50V	DA17104110	
Q134			DIG.TRS. DTC144EC	BA20021210	CY05		CER. 0.1μF Z 50V	DA17104110	
Q135			IC TC7WH74FU	HC007905K0	CY06		ELECT. 47μF 6.3V	EJ47600610	
			D-TYPE FLIP FLOP						
Q136			IC TC7WH08FU	HC010005K0					
			2-INPUT AND GATE		R501			PY16-RESISTORS	
Q137			IC TC74VHC541FT	HC006105K0	R503			JUMPER	
Q138			DIG.TRS. DTC144EC	BA20021210				JUMPER	
Q139			IC TC74VHC86FT	HC008405K0					
Q140			IC TC74VHC00FT	HC009305K0	DY01			PY16-SEMICONDUCTORS	
Q141			IC TC74VHC74FT D-FF	HC005605K0	}			L.E.D. LT3D8B RED 30	HI10062320
Q151			IC NJM2391DL1-33 1A 3.3V	HC98A33090	DY04				
Q152			IC NJM2391DL1-33 1A 3.3V	HC98A33090	QY01			IC FL DRIVER LC75712NE	HC10416030
Q153			IC NJM2391DL1-26 1A 2.6V	HC98A26090	QY02				
Q155			TRS. CHIP 2SC4116	HX341162B0	}			DIG.TRS.	BA10001000
Q156			TRS. CHIP 2SD999 DL DK	HX409992A0	QY06			DTA114ES/UN4111 10K 10K	
Q157			TRS. CHIP 2SB798 DL DK	HX207982A0					
Q158			TRS. CHIP 2SC4116	HX341162B0					
Q159			TRS. CHIP 2SD999 DL DK	HX409992A0	JY01			PY16-MISCELLANEOUS	
Q160			TRS. CHIP 2SB798 DL DK	HX207982A0				JACK 21FMN-BTRK	YJ07019450
								21P 1MM FFC	
			PV16-MISCELLANEOUS		SY01				
J101			JACK 9610S-25D	YJ07060150	}			PUSH SWITCH	SP01013310
			25PIN 1MM CONNECTOR		SY10			SKQNAE H/5MM 160GF	
J102			JACK S6B-PH-SM3-TB	YJ07018560	VX01			DISPLAY UNIT	HQ31302410
			6P PH SIDE					FTD 13-ST-35G FUTABA	
J103			JACK 9610S-09D	YJ07060140					
			9PIN 1MM CONNECTOR		ZY01			PHOTO UNIT	HW10004210
J104			JACK 06FFS-SP-TF	YJ07060130				RPM6936-V4 IR SENSOR	
			6PIN 1.25MM						
J105			JACK 9610S-25D	YJ07060150				PY26-STANDBY LED	
			25PIN 1MM CONNECTOR		DY05			CIRCUIT BOARD	
J106			JACK 9610S-25D	YJ07060150	SY11			L.E.D. LT3D8B RED 30	HI10062320
			25PIN 1MM CONNECTOR					PUSH SWITCH	SP01013310
J109			JACK S4B-PH-SM3-TB PH	YJ07018540				SKQNAE H/5MM 160GF	
			4P SMD						
J110			JACK 9610S-09D	YJ07060140					
			9PIN 1MM CONNECTOR						
L101			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L102			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L103			CHIP INDUCTER 47UH	LU12473010					
L104			CHIP INDUCTER 47UH	LU12473010					
L105			CHIP INDUCTER 47UH	LU12473010					
L109			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L110			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L111			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L120			FERRITE CORE	FC90020100					
}									
L129			FB M J2125HM330-T						
L132			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
L133			FERRITE CORE	FC90020100					
			FB M J2125HM330-T						
XF01			CERAMIC VIB.	FQ08004070					
			CSTCC8.00MG-TC 8.000MHz						
X101			CRYSTAL XTAL 33.8688MHz	JX33001470					
X103			CERAMIC VIB.	FQ02005060					
			CSTCW-X SMD TYPE 20.0MHz						

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