

Service Manual

SA1/ F1N, /N1G, /U1G

Super Audio CD Player

SA-1

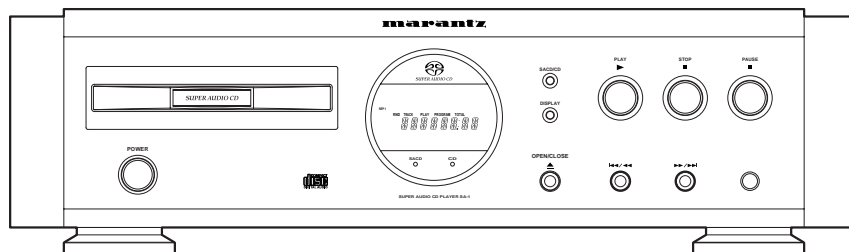


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Please use this service manual with referring to the user guide (D.F.U.) without fail.

修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

SA-1

392K855010 MIT
3120 785 22320
First Issue 2000.12

MARANTZ DESIGN AND SERVICE

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.

ORDERING PARTS :

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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MARANTZ AMERICA, INC.
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PHONE : +60 3 - 2457677
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3GA, HANGANG-RO, YONGSAN-KU, SEOUL
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.

1.1 TECHNICAL SPECIFICATIONS

	Super Audio CD	CD
Audio Characteristics		
Channels	2channels	2channels
Frequency range	2 Hz - 100 kHz	2 Hz - 20 kHz
Frequency characteristics	2 Hz - 50 kHz (-3 dB)	2 Hz - 20 kHz
Dynamic range	109 dB	98 dB
THD (1 kHz)	0.0012 %	0.0015 %
wow & flutter	Precision of quartz	Precision of quartz
Analog output		
output level (unbalanced)	2.2 V	2.4 V
output level (balanced)	4.4 V	4.8 V
Digital output		
output level (cinch JACK)	-	0.5 Vp-p (75 ohm)
output level (optical)	-	-19 dBm
Optical Readout System		
Laser	AlGaAs	AlGaAs
Wave length	650 nm	780 nm
Sampling frequency	2.8224 MHz	44.1 kHz

Power Supply

F version	AC 100 V 50/60 Hz
N version	AC 230 V 50 Hz
U version	AC 120 V 60 Hz
Power Consumption	33 W

Cabinet, etc.

Dimensions (Width x Height x Depth)	458 x133 x 365 mm
Net weight	17.7 kg
Operating temperatures	+5 °C ~ +35 °C
Operating humidity	5 % ~ 90 % (without dew)

Accessories

Remote control unit (RC-1SA)	1
Dimensions (Width x Height x Depth)	44 x 17.5 x 239 mm
Net weight (without Batteries)	175 g
AAA (R03) Batteries	2
Stereo audio cable with cinch pins	1
AC Power Cord	1
User's Guide	1

Specifications subject to change without prior notice.

1.2. TEST MODE

1. How to enter the initial test mode

Turn the power on, press the SACD/CD button and the track down button more than two seconds.

Display: F 0 TEST

2. Version check mode

1 Press the SACD/CD button to enter this mode.

Display: 1 0 9 0 9 2 8

Year/Month/Day

2 Model number (Press the PLAY button in the step 1 .)

Display: 1 0 0 0 0 1 0

Model number

3 Version (Press the PLAY button in the step 2 .)

Display: 1 0 A 0 0 0 1

Version number

4 Then press the PLAY button to return to the initial test mode.

Display: F 0 TEST

3. Laser test mode

1 Press the PAUSE button to enter this mode.

(In case of the no disc mode, eject the tray.)

Display: 3 0 0 0 0 0 0

2 Enter the laser test mode.

Display: 3 1 0 0 0 0 0

3 CD laser lit up (Press the STOP button in the step 2 or 4.)

Display: 3 1 0 0 0 0 0

4 SACD laser lit up (Press the PAUSE button in the step 2 or 3.)

Display: 3 1 0 0 0 0 0

5 Laser test mode completed (Press the PLAY button in the step 2, 3 or 4.)

Display: F 0 TEST

4. FIP test

1 Press the PLAY button to enter this mode

Display: All lamps lit up.

2 Press the PLAY button again to return to the initial test mode

Display: F 0 TEST

5. How to exit the test mode

In case of finish the test mode, press the mains switch (POWER button)

■テストモード

1. テストモードの入り方

電源を入れ、SACD/CDボタンとスキップ戻しボタンを2秒以上押し続ける。

表示…………… F 0 TEST (テストモード初期状態)

2. バージョンチェックモード

テストモード初期状態からSACD/CDボタンを押すことによりこのモードに入る

① プログラム日付

表示…………… 1 0 9 0 9 2 8 :年 月 日

② モデルナンバー (①でPLAYボタンを押す)

表示…………… 1 0 0 0 0 1 0 :モデルナンバー

③ バージョン (②でPLAYボタンを押す)

表示…………… 1 0 A 0 0 0 1 :バージョンナンバー

④ 次にPLAYボタンを押すとテストモードの初期に戻る

表示…………… F 0 TEST

3. レーザテストモード

テストモード初期状態からPAUSEボタンを押すことによりこのモードに入る。

① トレイがイジェクトされた場合、OPEN/CLOSEボタンを押してトレイをクローズさせる。

表示…………… 3 0 0 0 0 0 0

② レーザテストモード (①でSTOPボタンを押す)

表示…………… 3 1 0 0 0 0 0

③ CDレーザー点灯 (②, ④でSTOPボタンを押す)

表示…………… 3 1 0 0 0 0 0

④ SACDレーザー点灯 (②, ③でPAUSEボタンを押す)

表示…………… 3 1 0 0 0 0 0

⑤ レーザーテストモード終了 (PLAYボタンを押す)

表示…………… F 0 TEST

4. FIPテスト表示

テストモード初期状態からPLAYボタンを押すことによりこのモードに入る。

表示…………… 全点灯

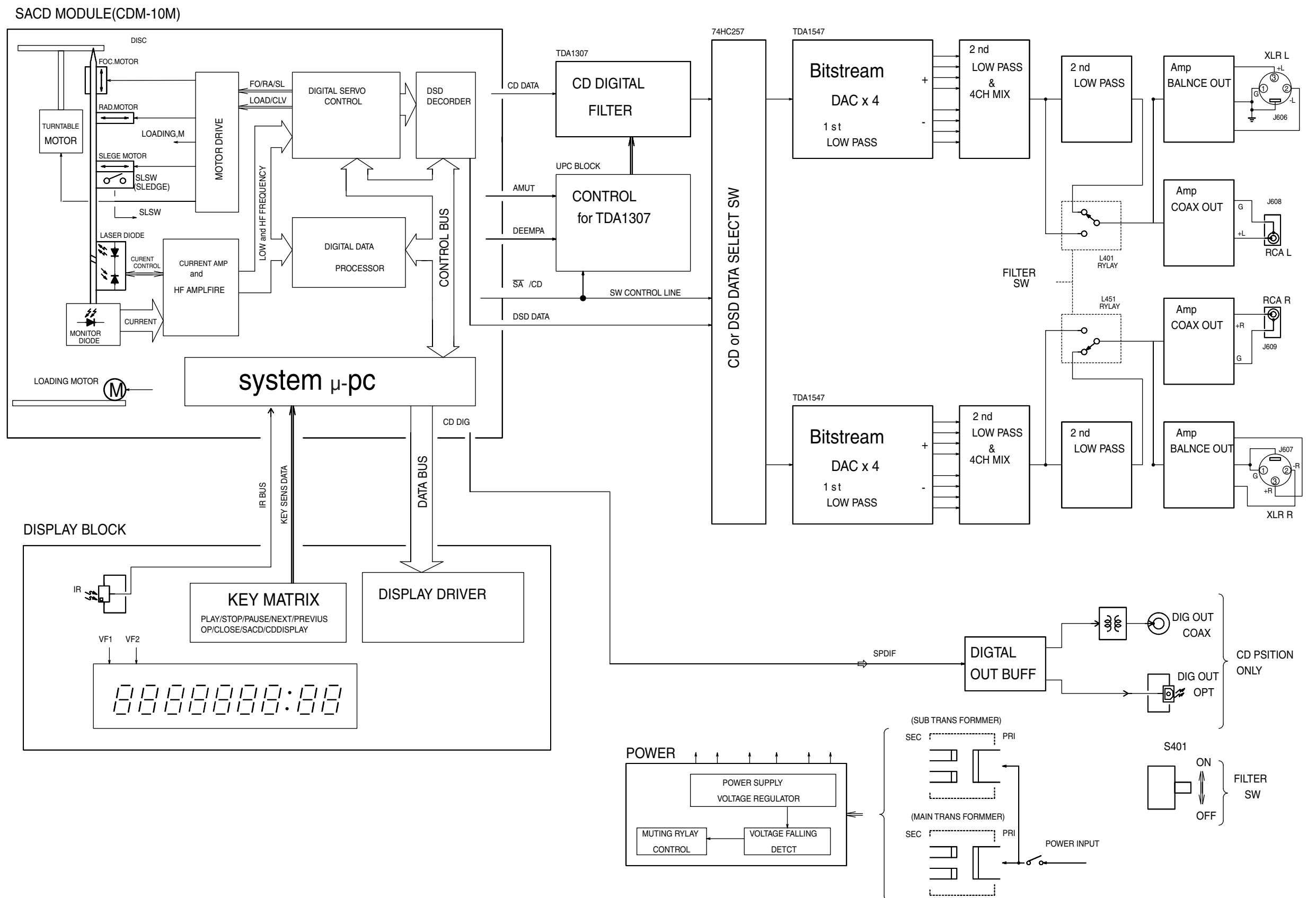
再度PLAYボタンを押すとテストモード初期状態に戻る。

表示…………… F 0 TEST

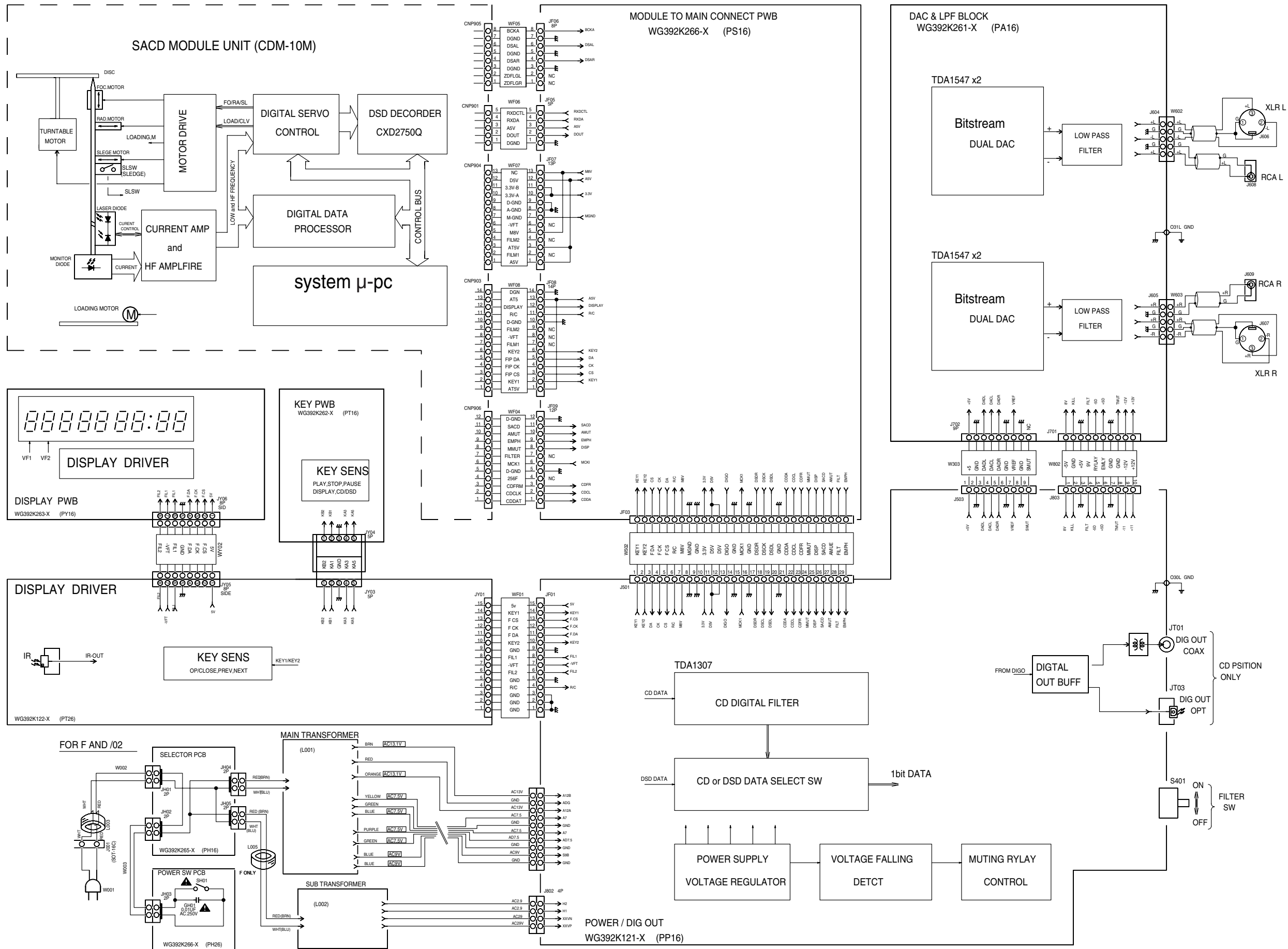
5. テストモード終了

テストモードを終了するには、POWERボタンを押して電源を切る。

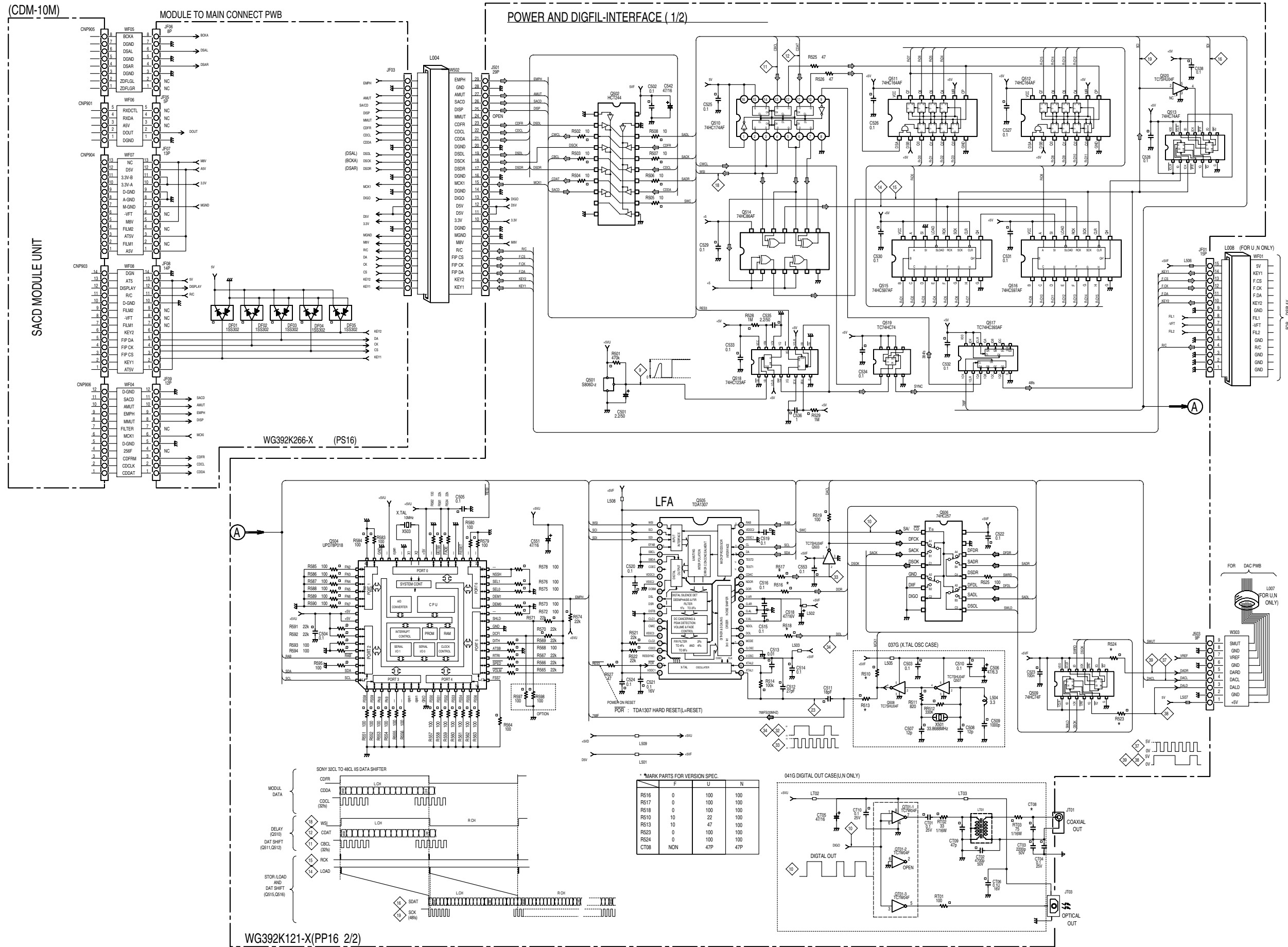
1.3 BLOCK DIAGRAM



1.4 WIRING DIAGRAM



1.5 SCHEMATIC DIAGRAM



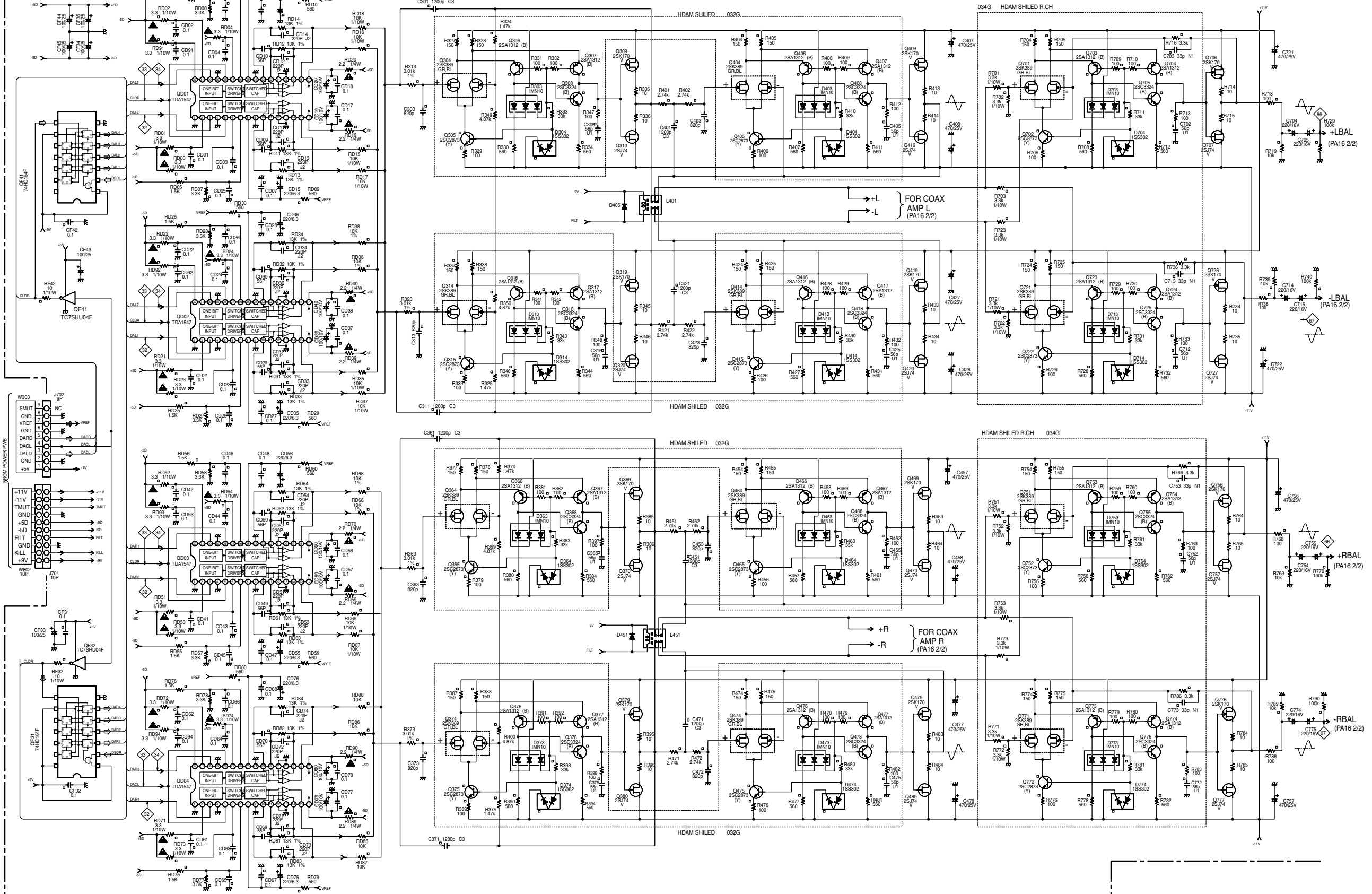
TDA1547 4STAGE FIR

D/A CONVERTOR

DIFFERENTIAL

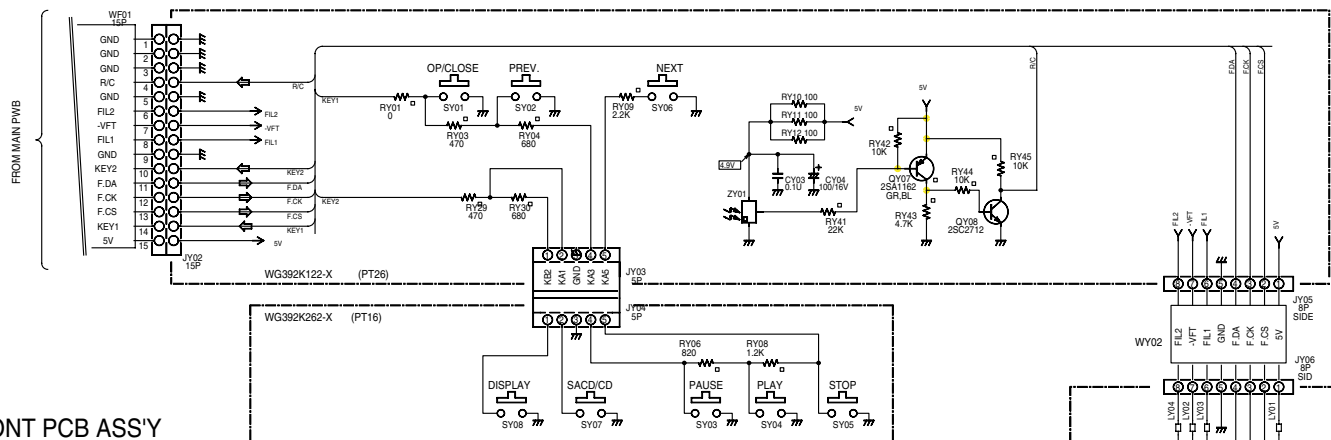
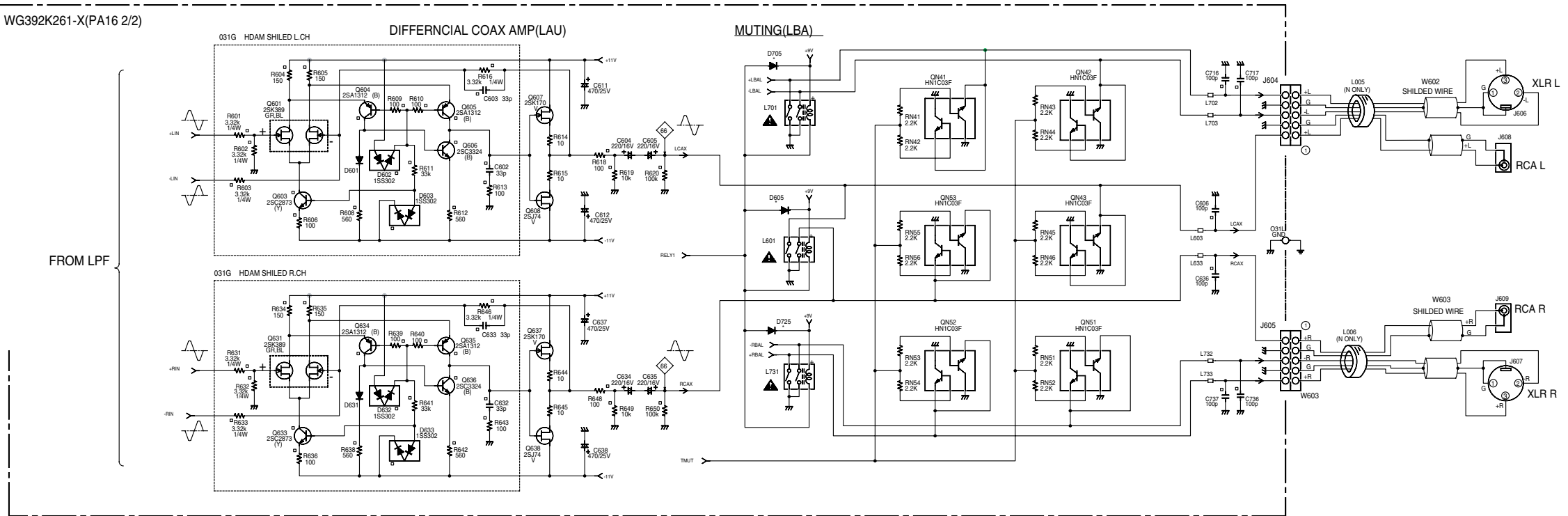
L.P.F (LPF)

BALANCE(LBA)

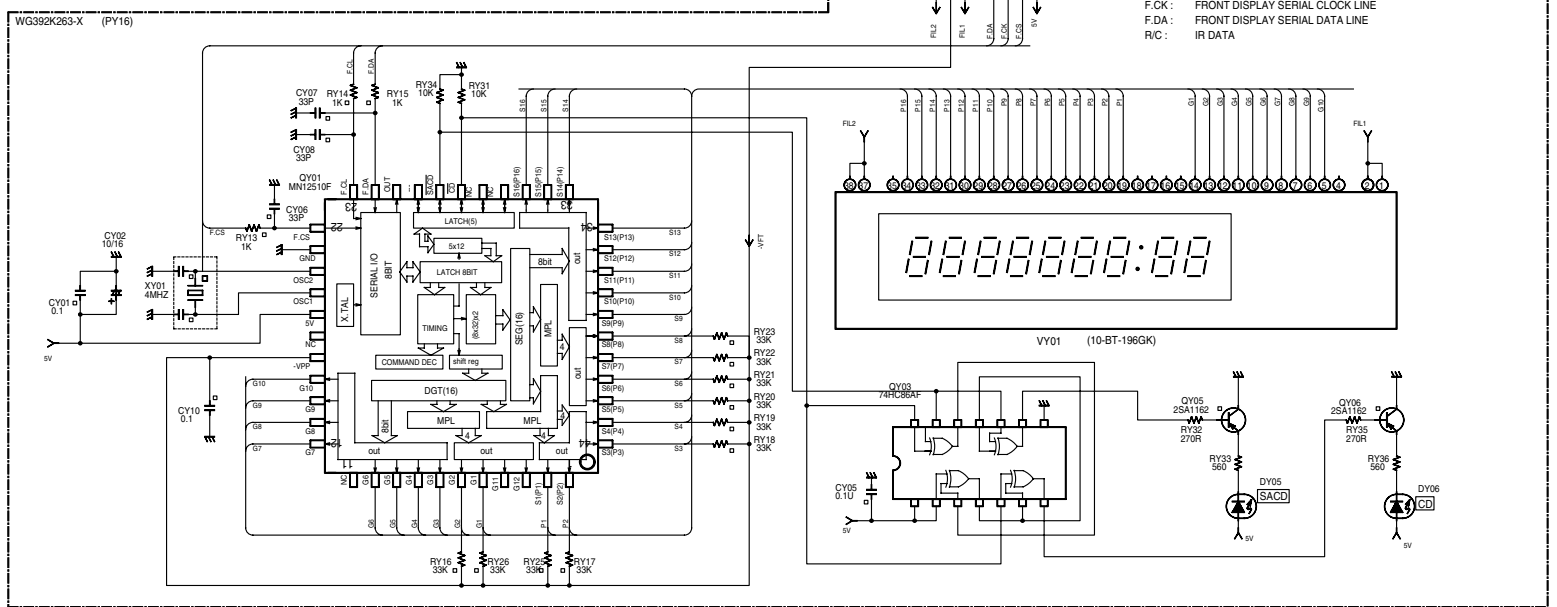


WG392K261-X (PA16 1/2)

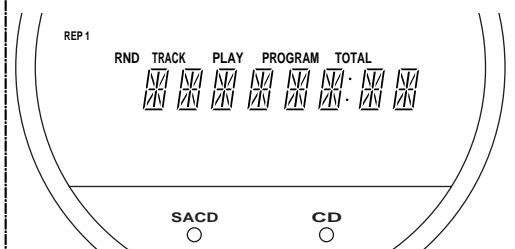
WG392K261-X(PA16 2/2)



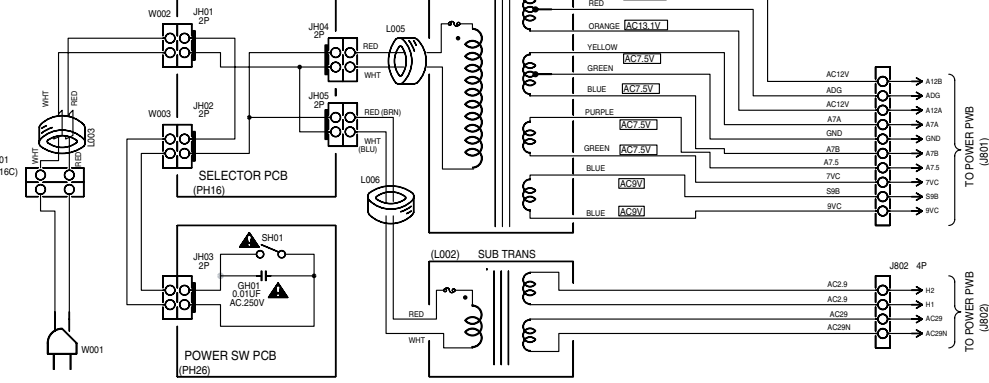
FRONT PCB ASS'Y



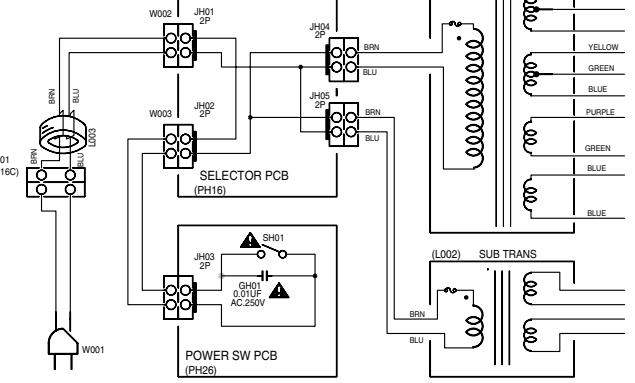
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	EDIT	-	a	a	a	a	a	a	a	a
P2	SLEEP	-	b	b	b	b	b	b	b	b
P3	RND	-	c	c	c	c	c	c	c	c
P4	REP	-	d	d	d	d	d	d	d	d
P5	[]	-	e	e	e	e	e	e	e	e
P6	MHz	-	f	f	f	f	f	f	f	f
P7	KHz	-	g	g	g	g	g	g	g	g
P8	a	a	h	h	h	h	h	h	h	h
P9	b	b	i	i	i	i	i	i	i	i
P10	c	c	k	k	k	k	k	k	k	k
P11	d	d	m	m	m	m	m	m	m	m
P12	e	e	n	n	n	n	n	n	n	n
P13	f	f	p	p	p	p	p	p	p	p
P14	g	g	r	r	r	r	r	r	r	r
P15	PRESET	-	-	PLAY	PROGRAM	-	Dp	TOTAL	[]	[]
P16	TRACK	COL	-	-	-	-	col	[]	[]	[]



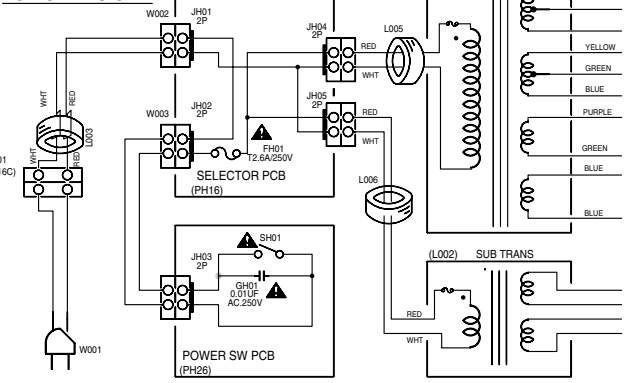
FOR F VERSION



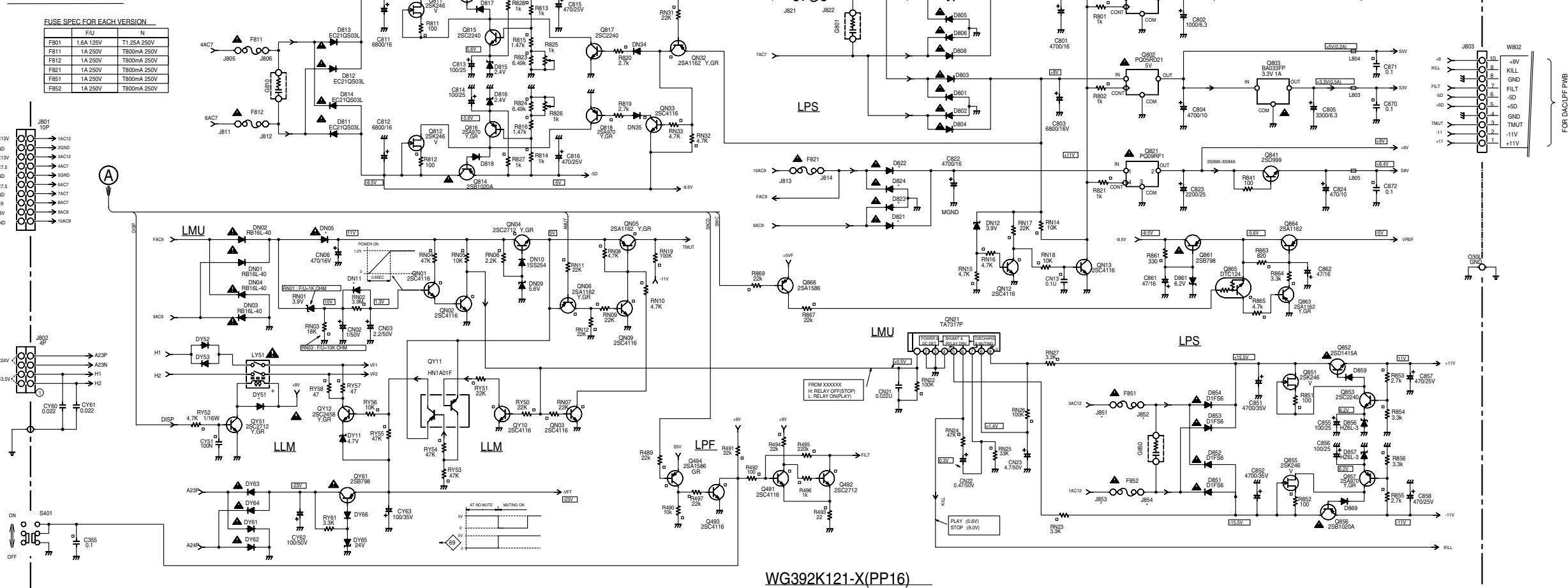
FOR N VERSION



FOR U VERSION



MAIN PWB (1/2)



WG392K121-X(PP16)

1.6 PARTS LOCATION

PA16

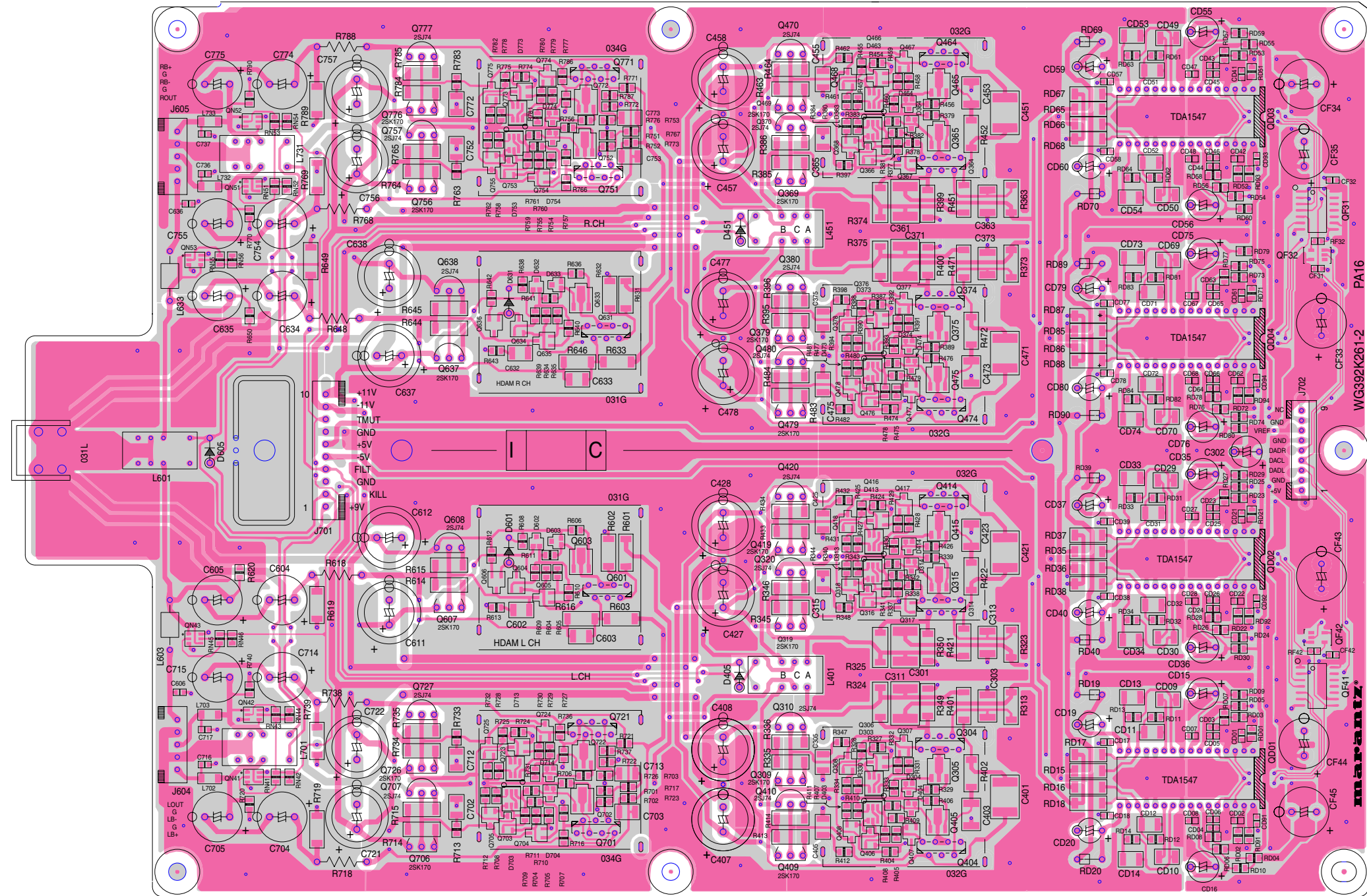
QN52
QN51

Q777 Q776
Q757 Q756
Q638 Q636 - Q633 Q631
Q637

Q470 Q469 Q468 - Q464
Q370 Q369 Q368 - Q364
Q380 Q379 Q378 - Q374
Q480 Q479 Q478 - Q474

QD03
QD04

QF31
QF32



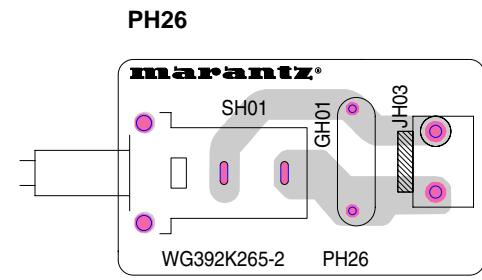
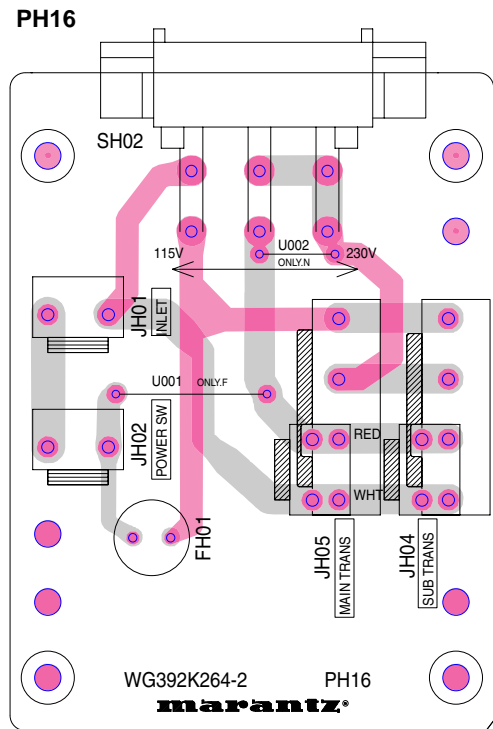
QN42
QN41

Q608 Q607
Q727 Q726
Q707 Q706
Q606 - Q603 Q601
Q725 - Q721
Q705 - Q701

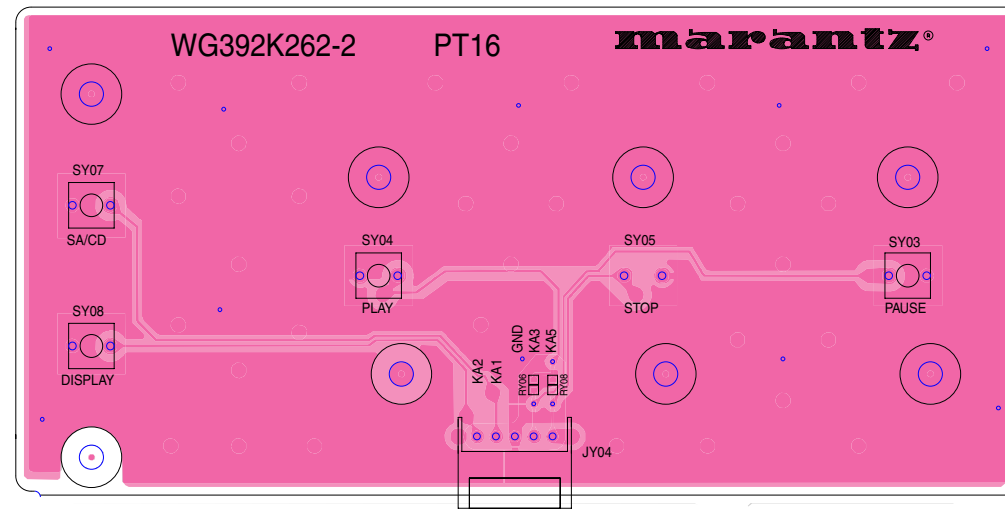
Q420 Q419 Q418 - Q414
Q320 Q319 Q318 - Q314
Q310 Q309 Q308 - Q304
Q410 Q409 Q408 - Q404

QD02
QD01

QF42
QF41

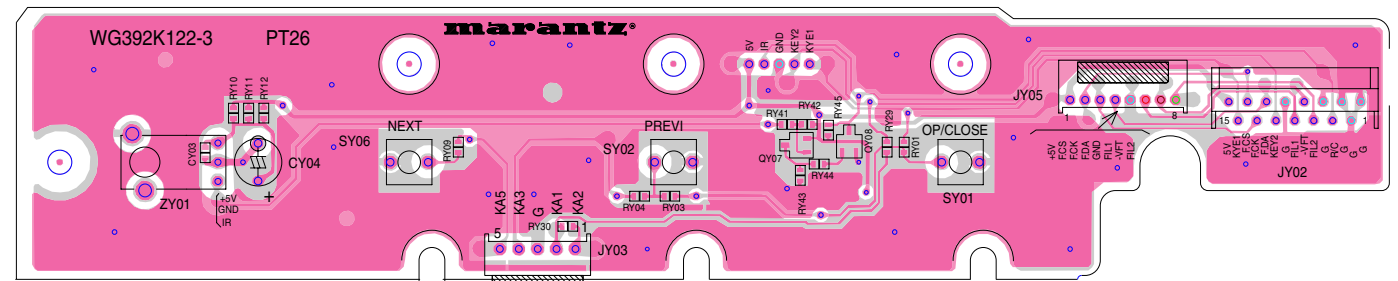


PT16

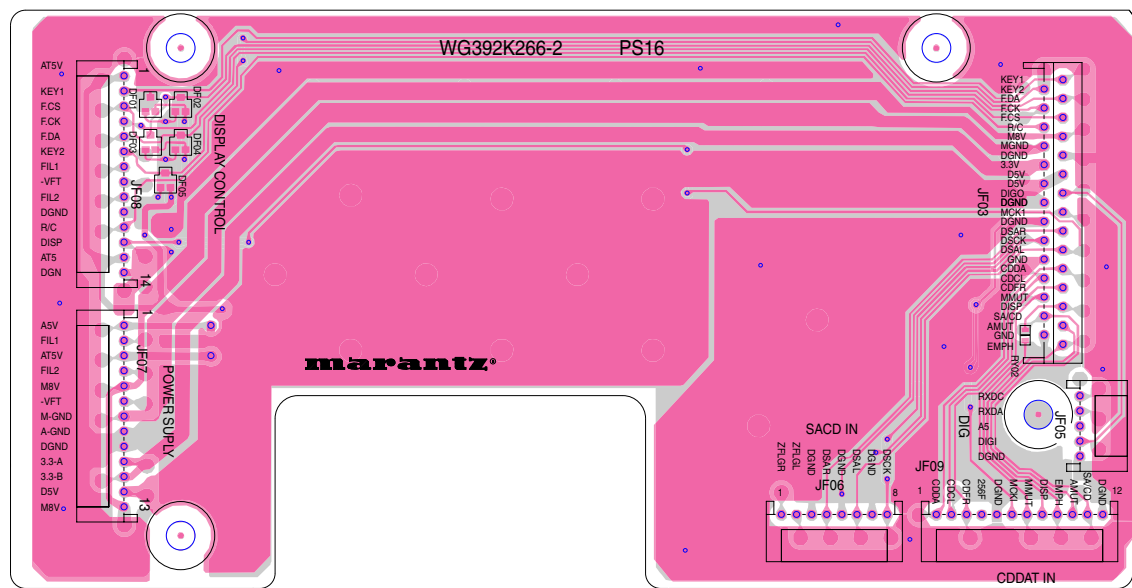


PY26

QY07 QY08

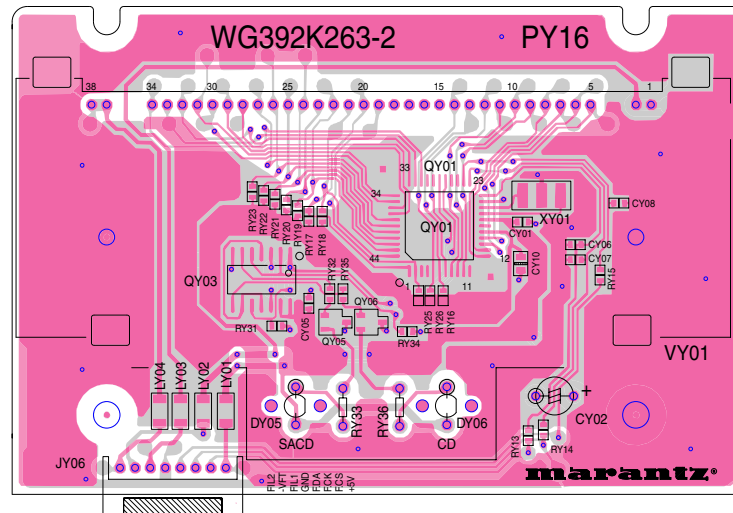


PS16



PY16

QY03 QY05 QY06 QY01



PP16

Q814

Q812

Q861

QN33

Q504

Q501

Q518

Q520

Q863 - Q865

Q511

Q866

Q512

Q816

Q818

Q821

Q514

Q513

Q515

Q516

Q815

Q817

Q801

Q505

QN12

QN32

QN13

Q525

Q519

Q517

QT01

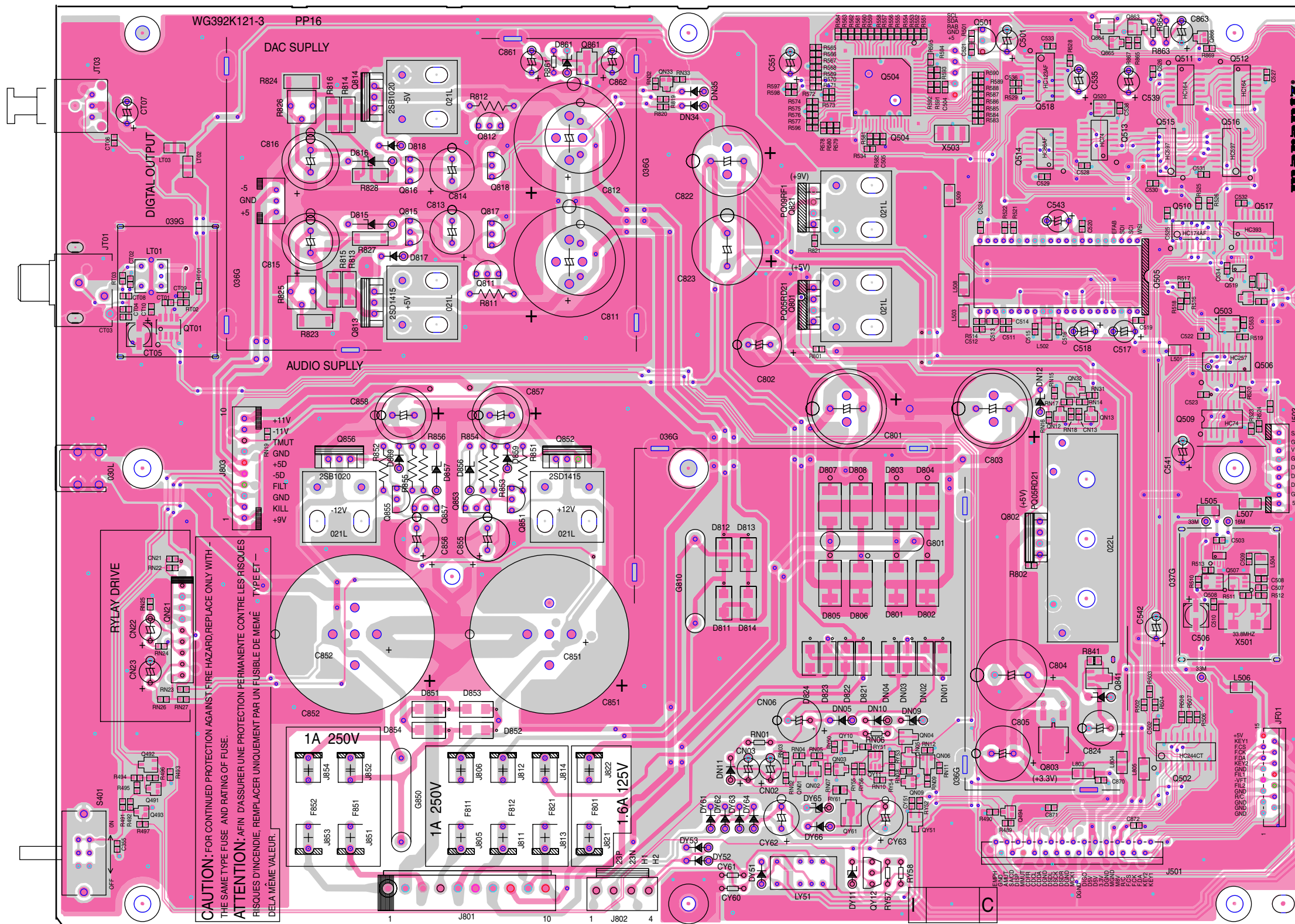
Q813

Q811

Q503

Q506

Q509



Q856 Q855 Q857 Q853 Q851 Q852

Q802

Q508 Q507

QN21
Q491 - Q493

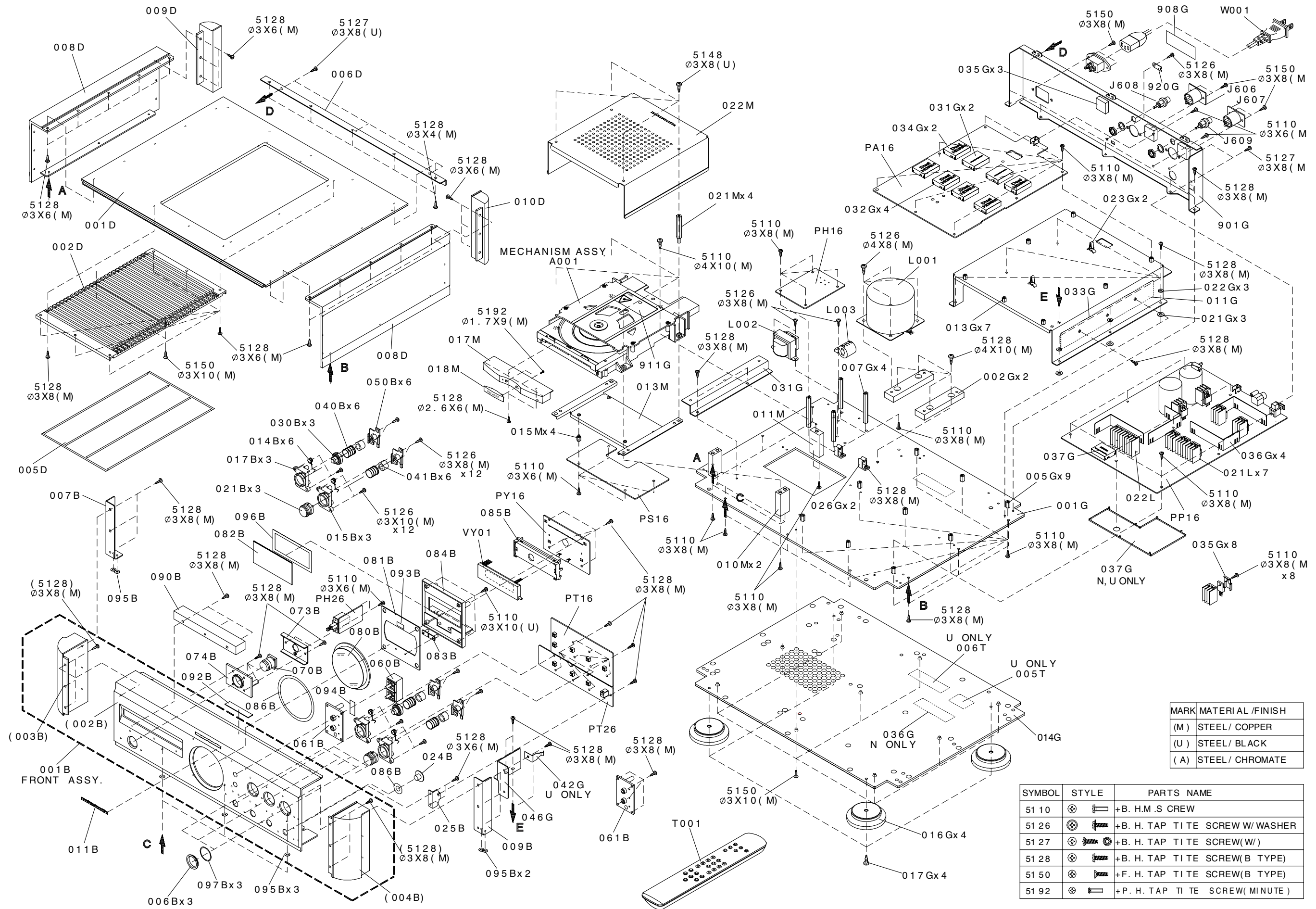
QN01 - QN03 QN04 - QN06
QY61 QY10 QY11 QY51

Q494

Q803 Q841

Q502

1.7 EXPLODED VIEW AND PARTS LIST



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

SYMBOL	STYLE	PARTS NAME
5110		+B. H.M.S CREW
5126		+B. H. TAP TITE SCREW W/WASHER
5127		+B. H. TAP TITE SCREW(W/)
5128		+B. H. TAP TITE SCREW(B TYPE)
5150		+F. H. TAP TITE SCREW(B TYPE)
5192		+P. H. TAP TITE SCREW(MINUTE)

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			FRONT PANEL ASSY	392K248510	W502		9965 000 06832	FFC 19PIN 120MM	YU29120530
002B		9965 000 06839	FRONT PANEL	392K248110				1.25MM PITCH	
003B		9965 000 06840	ESCUTCHEON (L) FRONT	392K063110				PACKING	
004B		9965 000 06841	ESCUTCHEON (R) FRONT	392K063120				USER GUIDE	392K851110
006B		9965 000 06842	RING PLAY.STOP.PAUSE	392K353110	001T	F1N		USER GUIDE	392K851310
011B		9965 000 01554	MARANTZ BADGE GOLD	313J251110	001T	N1G	9965 000 06863	USER GUIDE	392K851250
015B			BUSH FOR PLAY/STOP/PAUSE	355K104020	001T	U1G		USER GUIDE	
017B			BUSH BUTTON	270K104010					
			O/C.NEXT.PREV		T001		9965 000 06838	REMORT CONTROLLER	ZK392K0010
021B		9965 000 06843	BUTTON	392K270120				RC-1SA	
022B			RETAINER	270K104020	▲ W001	F1N		MAINS CORD FOR F OFC 2P	ZC01803130
023B			SHAFT	270K112010	▲ W001	N1G	4822 321 11033	MAINS CORD	ZC01803080
024B		9965 000 06844	LENS IR	392K355010	▲ W001	U1G		10A 250V CLASS2	ZC01803100
030B		9965 000 06845	BUTTON ASSY	392K270530				MAINS CORD	
			O/C.NEXT.PREV					UL/CSA 10A 125V	
050B			BRACKET ASSY FOR 059B	270K160500					
060B		9965 000 06846	BUTTON DISPLAY	392K270140					
061B			BUSH DISPLAY BUTTON	392K259020					
070B		9965 000 06847	BUTTON ASSY POWER	392K270110					
074B		9965 000 06848	BUSH POWER BUTTON	392K259010					
080B		9965 000 06849	WINDOW.GLASS.NATURAL	392K158010					
081B		9965 000 06850	INDICATOR WINDOW	392K265010					
082B		9965 000 06851	MASK WINDOW	392K303010					
083B		9965 000 06852	LENS WINDOW	392K355020					
084B			HOLDER WINDOW	392K271010					
086B			ADHESIVE	392K122010					
			FOR WINDOW. IR LENS						
089B			PROTECTOR	392K269010					
			TRAY ESCUTCHEON						
093B		9965 000 06853	BADGE	392K251010					
			FOR SACD INDICATOR						
096B			ADHESIVE FOR MASK	392K122020					
097B			ADHESIVE FOR RING	392K122030					
001D	F1N		TOP COVER	392K257110					
001D	N1G	9965 000 06854	TOP COVER FOR EMC	392K257120					
001D	U1G	9965 000 06854	TOP COVER FOR UL	392K257120					
002D		9965 000 06855	ESCUTCHEON TOP COVER	231J063120					
008D	F1N		SIDE PANEL LEFR/RIGHT	392K249110					
008D	N1G	9965 000 06856	SIDE PANEL LEFT/RIGHT	392K249120					
	U1G		FOR EMC UL						
009D		9965 000 06857	ESCUTCHEON LEFT REAR	392K063130					
010D		9965 000 06858	ESCUTCHEON RIGHT REAR	392K063140					
014G			BOTTOM LID	392K257020					
016G		9965 000 06859	LEG	392K057010					
017G		9965 000 06860	SCREW FOR LEG	392K010010					
017M		9965 000 06861	ESCUTCHEON CD TRAY	392K063150					
018M		9965 000 06862	ESCUTCHEON CD LOGO	392K063160					
A001			MECHANISM ASSY CDM-10M	392K304500					
▲ J001	F1N		3P MAINS INLET	YJ04002160					
			CTC2103-0203 SMK						
▲ J001	N1G	4822 265 11399	2P MAINS INLET SOT-16C	YJ04002360					
	U1G								
J606		4822 265 20415	PLUG XLR CANON FOR L	YP10002780					
J607		4822 265 20415	PLUG XLM CANON FOR R	YP10002780					
J608		4822 290 81602	RCA JACK 1P GLD	YT02010740					
J609		4822 290 81602	RCA JACK 1P GLD	YT02010740					
▲ L001	F1N		MAINS TRANSF. MAIN 100V	TS46011010				NOT STANDARD SPARE PARTS	
▲ L001	N1G	9965 000 06822	MAINS TRANSF. MAIN 230V	TS46011030	001S			PACKING CASE	392K801010
▲ L001	U1G		MAINS TRANSF. MAIN 120V	TS46011020				MZ PURE HI-FI GL	
▲ L002	F1N		MAINS TRANSF. SUB 100V	TS13521010	002S			CUSHION LEFT	392K809010
▲ L002	N1G	4822 146 11141	MAINS TRANSF. SUB 230V	TS13521020	003S			CUSHION RIGHT	392K809020
▲ L002	U1G		MAINS TRANSF. SUB 120V	TS13521060					
WF01		9965 000 06831	FFC 15PIN 120MM	YU15120500					
			1.25MM PITCH						

1.8 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) EAxxx10, Electrolytic capacitor
 One-way lead type, Tolerance ±20%

⑤ — Working voltage
 ⑥ — Capacity value

Examples ;

⑤ Capacity value

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

⑥ Working voltage

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

6) 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	RF25SxxxΩJ	(±5% 1/4W)
NH05xxx120	RF50SxxxΩJ	(±5% 1/2W)
NH85xxx110	RF73B2AxxxΩJ	(±5% 1/10W)
NH95xxx140	RF73B2ExxxΩJ	(±5% 1/4W)

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

2. Matsushita Electronic Components Co., Ltd

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

* Resistance value * Resistance value

Examples ;

* Resistance value

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

ABBREVIATION AND MARKS

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

NOTE ON SAFETY :

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

安全上の注意 :

\blacktriangle 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-DAC HDAM CIRCUIT BOARD PA16-CAPACITORS						
C301		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510	C705		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C302		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620	C712		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C303		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C713		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C305		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C714		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C311		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510	C715		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C313		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C716		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C315		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C717		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C361		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510	C721	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C363		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C721	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C365		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C722	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C371		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510	C722	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C373		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C736		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C375		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C737		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C401		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510	C752		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C403		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C753		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C405		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C754		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C407	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	C755		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C407	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	C756	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C408	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	C756	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C408	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	C757	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C421		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510	C757	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C423		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	C772		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C425		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	C773		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C427	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	C774		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C427	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	C775		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C428	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD01				
C428	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD01		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C451		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510	CD08				
C453		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	CD09		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C455		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	CD10		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C457	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD11				
C457	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD11		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
C458	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD14				
C458	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD15		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C471		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510	CD16		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C473		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510	CD17		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C475		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	CD18		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C477	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD19		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
C477	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD20		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
C477	U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD21				
C478	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD21		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C478	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD28				
C478	U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD29		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C602		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500	CD30		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C603		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500	CD31				
C604		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640	CD31				
C605		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640	CD34				
C606		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300	CD35		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C611	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD36		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C611	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD37		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
C612	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD38		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C612	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD39		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C632		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500	CD40		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
C633		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500	CD41				
C634		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640	CD48				
C635		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640	CD49				
C636		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300	CD49		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
C637	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD54				
C637	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD55		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C638	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550	CD56		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C638	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	CD57		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C702		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	CD58		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C703		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500	CD59		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
C704		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640	CD60		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
					CD61				
					CD61		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
					CD68				
					CD69		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
CD70		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500	R384		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
CD71					R385			10.0Ω ±1% 1/4W	GM114100G0
CD74		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510	R386			10.0Ω ±1% 1/4W	GM114100G0
CD75		4822 124 41537	ELECT. 220μF M 6.3V RA-2	OA22700620	R387		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
CD76		4822 124 41537	ELECT. 220μF M 6.3V RA-2	OA22700620	R388		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
CD77		4822 126 13837	CHIP CER. 0.1μF ±10% B 10V	DK96104200	R389		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CD78		4822 126 13837	CHIP CER. 0.1μF ±10% B 10V	DK96104200	R390		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
CD79		4822 124 90353	ELECT. 100μF M 10V RA-2	OA10701020	R391		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CD80		4822 124 90353	ELECT. 100μF M 10V RA-2	OA10701020	R392		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CD91					R393		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
CD94		4822 126 13837	CHIP CER. 0.1μF ±10% B 10V	DK96104200	R394		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
CF31		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200	R395			10.0Ω ±1% 1/4W	GM114100G0
CF32		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200	R396			10.0Ω ±1% 1/4W	GM114100G0
CF33	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R397		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CF33	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R398		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CF34	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R399			4.87kΩ ±1% 1/4W	GM11448710
CF34	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R400			4.87kΩ ±1% 1/4W	GM11448710
CF35	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R401			2.74kΩ ±1% 1/4W	GM11427410
CF35	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R402			2.74kΩ ±1% 1/4W	GM11427410
CF42		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200	R404		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
CF43	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R405		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
CF43	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R406		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CF44	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R407		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
CF44	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R408		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CF45	F1, /U1	4822 124 22238	ELECT. 100μF 25V ARA	OA10702550	R409		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
CF45	N1	4822 124 80119	ELECT. 100μF 25V (ARS)	OA10702540	R410		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R313			PA16-RESISTORS		R411		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R323			3.01kΩ ±1% 1/4W	GM11430110	R412		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R324			0.01kΩ ±1% 1/4W	GM11430110	R413			10.0Ω ±1% 1/4W	GM114100G0
R325			1.47kΩ ±1% 1/4W	GM11414710	R414			10.0Ω ±1% 1/4W	GM114100G0
R325			1.47kΩ ±1% 1/4W	GM11414710	R421			2.74kΩ ±1% 1/4W	GM11427410
R327		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R422			2.74kΩ ±1% 1/4W	GM11427410
R328		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R424		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R329		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R425		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R330		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R426		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R331		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R427		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R332		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R428		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R333		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	R429		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R334		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R430		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R335			10.0Ω ±1% 1/4W	GM114100G0	R431		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R336			10.0Ω ±1% 1/4W	GM114100G0	R432		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R337		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R433			10.0Ω ±1% 1/4W	GM114100G0
R338		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R434			10.0Ω ±1% 1/4W	GM114100G0
R339		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R451			2.74kΩ ±1% 1/4W	GM11427410
R340		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R452			2.74kΩ ±1% 1/4W	GM11427410
R341		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R454		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R342		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R455		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R343		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	R456		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R344		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R457		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R345			10.0Ω ±1% 1/4W	GM114100G0	R458		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R346			10.0Ω ±1% 1/4W	GM114100G0	R459		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R347		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R460		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R348		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R461		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R349			4.87kΩ ±1% 1/4W	GM11448710	R462		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R350			4.87kΩ ±1% 1/4W	GM11448710	R463			10.0Ω ±1% 1/4W	GM114100G0
R363			3.01kΩ ±1% 1/4W	GM11430110	R464			10.0Ω ±1% 1/4W	GM114100G0
R373			3.01kΩ ±1% 1/4W	GM11430110	R471			2.74kΩ ±1% 1/4W	GM11427410
R374			1.47kΩ ±1% 1/4W	GM11414710	R472			2.74kΩ ±1% 1/4W	GM11427410
R375			1.47kΩ ±1% 1/4W	GM11414710	R474		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R377		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R475		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R378		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R476		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R379		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R477		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R380		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R478		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R381		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R479		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R382		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R480		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R383		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	R481		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
					R482		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
					R483			10.0Ω ±1% 1/4W	GM114100G0
					R484			10.0Ω ±1% 1/4W	GM114100G0

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R601			3.32kΩ ±1% 1/4W	GM11433210	R738		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R602			3.32kΩ ±1% 1/4W	GM11433210	R739			10kΩ ±1% 1/4W	GM11410020
R603			3.32kΩ ±1% 1/4W	GM11433210	R740		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R604		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R751		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R605		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R752		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R606		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R753		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R608		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R754		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R609		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R755		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R610		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R756		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R611		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	R758		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R612		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R759		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R613		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R760		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R614			10.0Ω ±1% 1/4W	GM114100G0	R761		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R615			10.0Ω ±1% 1/4W	GM114100G0	R762		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R616			3.32kΩ ±1% 1/4W	GM11433210	R763		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R618		5322 116 55549	100.0Ω 1% 1/4W	NR01101140	R764			10.0Ω ±1% 1/4W	GM114100G0
R619			10kΩ ±1% 1/4W	GM11410020	R765			10.0Ω ±1% 1/4W	GM114100G0
R620		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110	R766		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R631			3.32kΩ ±1% 1/4W	GM11433210	R768		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R632			3.32kΩ ±1% 1/4W	GM11433210	R769			10kΩ ±1% 1/4W	GM11410020
R633			3.32kΩ ±1% 1/4W	GM11433210	R770		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R634		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R771		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R635		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	R772		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R636		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R773		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R638		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R774		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R639		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R775		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R640		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R776		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R641		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	R778		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R642		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	R779		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R643		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	R780		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R644			10.0Ω ±1% 1/4W	GM114100G0	R781		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R645			10.0Ω ±1% 1/4W	GM114100G0	R782		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R646			3.32kΩ ±1% 1/4W	GM11433210	R783		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R648		5322 116 55549	100.0Ω 1% 1/4W	NR01101140	R784			10.0Ω ±1% 1/4W	GM114100G0
R649			10kΩ ±1% 1/4W	GM11410020	R785			10.0Ω ±1% 1/4W	GM114100G0
R650		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110	R786		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R701		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	R788		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R702		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	R789			10kΩ ±1% 1/4W	GM11410020
R703		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	R790		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R704		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	▲ RD01		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
R705		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	▲ RD02		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
R706		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	▲ RD03		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
R708		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	▲ RD04		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
R709		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD05		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
R710		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD06		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
R711		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	RD07		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R712		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	RD08		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R713		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD09		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R714			10.0Ω ±1% 1/4W	GM114100G0	RD10		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R715			10.0Ω ±1% 1/4W	GM114100G0	RD11		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
R716		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	RD12		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
R718		5322 116 55549	100.0Ω 1% 1/4W	NR01101140	RD13		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
R719			10kΩ ±1% 1/4W	GM11410020	RD14		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
R720		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110	RD15				
R721		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	RD18			10kΩ ±1% 1/4W	GM11410020
R722		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	RD19		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
R723		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110	▲ RD20		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
R724		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	▲ RD21				
R725		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110	▲ RD21				
R726		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD24		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
R728		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	RD25		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
R729		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD26		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
R730		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD27		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R731		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110	RD28		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R732		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110	RD29		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R733		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110	RD30		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R734			10.0Ω ±1% 1/4W	GM114100G0	RD31				
R735			10.0Ω ±1% 1/4W	GM114100G0	RD32		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
R736		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110					

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)
RD33		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD34				
RD35				
RD38			10kΩ ±1% 1/4W	GM11410020
▲ RD39		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
▲ RD40		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
▲ RD51				
▲ RD54		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
RD55		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD56		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD57		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD58		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD59		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD60		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD61				
RD64		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD65				
RD68			10kΩ ±1% 1/4W	GM11410020
▲ RD69		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
▲ RD70		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
▲ RD71				
▲ RD74		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
RD75		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD76		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD77		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD78		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD79		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD80		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD81				
RD84		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD85				
RD88			10kΩ ±1% 1/4W	GM11410020
▲ RD89		4822 116 60309	FUSIBLE 2.2Ω J 1/4W	NH05022140
▲ RD90		4822 116 60309	FUSIBLE 2.2Ω J 1/4W	NH05022140
▲ RD91				
▲ RD94		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
RF32		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
RF42		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
RN41				
RN46		4822 117 11449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
RN51				
RN56		4822 117 11449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
PA16-SEMICONDUCTORS				
D303		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D304		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D313		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D314		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D363		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D364		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D373		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D374		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D403		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D404		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D405		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D413		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D414		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D451		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJJ)
D463		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D464		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D473		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D474		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D601		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D602		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D603		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D605		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D631		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D632		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D633		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D703		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D704		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D713		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D714		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D753		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D754		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D773		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D774		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
Q304		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q305		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q306		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q307		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q308		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q309		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q310		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q314		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q315		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q316		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q317		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q318		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q319		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q320		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q364		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q365		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q366		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q367		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q368		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q369		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q370		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q374		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q375		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q376		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q377		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q378		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q379		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q380		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q404		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q405		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q406		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q407		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q408		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q409		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q410		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q414		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q415		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q416		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q417		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q418		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q419		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q420		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q464		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q465		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
C813		4822 124 22238	ELECT. 100µF 25V ARA	OA10702550	R514		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610
C814		4822 124 22238	ELECT. 100µF 25V ARA	OA10702550	R516	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
C815	F1, /U1	4822 124 22242	ELECT. 470µF M 25V ARA	OA47702550	R516	N1, /U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
C815	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	R518	N1, /U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
C816	F1, /U1	4822 124 22242	ELECT. 470µF M 25V ARA	OA47702550	R519	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
C816	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640	R519	N1, /U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
C822		4822 124 41458	ELECT. 4700µF 16V ±20% RA-2	OA47801620	R521		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
C823		4822 124 21511	ELECT. 2200µF 25V ±20% RA-2	OA22802520	R522		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
C824		4822 124 90371	ELECT. 470µF 10V ±20% RA-2	OA47701020	R523	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
C851		4822 124 12405	ELECT. 4700µF ±20% 35V	OB47803520	R523	N1, /U1	4822 051 30101	CHIP 0Ω ±5% 1/16W	NN05101610
C852		4822 124 12405	ELECT. 4700µF ±20% 35V	OB47803520	R524	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
C855		4822 124 22238	ELECT. 100µF ±20% 25V (ARA)	OA10702550	R524	N1, /U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
C856		4822 124 22238	ELECT. 100µF ±20% 25V (ARA)	OA10702550	R525		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610
C857		4822 124 22242	ELECT. 470µF M 25V ARA	OA47702550	R526		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610
C858		4822 124 22242	ELECT. 470µF M 25V ARA	OA47702550	R528		4822 051 30105	CHIP 1MΩ ±5% 1/16W	NN05105610
C861		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620	R529		4822 051 30105	CHIP 1MΩ ±5% 1/16W	NN05105610
C862		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620	R534		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
C863		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620	R551				
C870		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200			4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
C871		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R564				
C872		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R565		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
					R566		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CN02		4822 124 41543	ELECT. 1µF 50V RA-2	OA10505020	R567		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CN03		4822 124 40763	ELECT. 2.2µF 50V RA-2	OA22505020	R568		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CN06		4822 124 22277	ELECT. 470µF 16V M RA-2	OA47701620	R569		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CN13		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R570		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CN21		5322 122 32654	CHIP CER. 0.022µF ±10%	DK96223200	R571		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CN22		4822 124 22273	ELECT. 0.47µF M 50V RA-2	OA47405020	R572		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CN23		4822 124 80067	ELECT. 4.7µF M 50V RA-2	OA47505020	R573		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CT01		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R574		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CT02		4822 126 11685	CHIP CER. 4700pF ±10% B 50V	DK96472300	R575				
CT03		4822 126 12339	CHIP CER. 2200pF ()	DK96222300			4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CT04		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200	R580				
CT05		4822 124 11131	TANTL.CAP CHIP 47µF 6.3V	EY47600620	R581		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CT06		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R582				
CT07		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620			4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CT08		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300	R590				
CT09	N1, /U1	4822 122 33777	CHIP CER. 47pF ±5% CG 50V	DD95470300	R591		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CT10		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R592		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
CY51		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200	R593				
CY60			CER. 0.022µF TP050F223Z	DA17223110			4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
CY61			CER. 0.022µF TP050F223Z	DA17223110	R596				
CY62		4822 124 90355	ELECT. 100µF M 50V RA-2	OA10705020					
CY63		4822 124 41536	ELECT. 100µF M 35V RA-2	OA10703520	R801		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
			PP16-RESISTORS		R802		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R489		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	R811		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R490		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610	R812		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R491		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	R813			1 kΩ ±1% 1/4W	GM11410010
R492		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610	R814			1 kΩ ±1% 1/4W	GM11410010
R493		4822 117 12139	CHIP 22Ω ±5% 1/16W	NN05220610	R815			1.62kΩ ±1% 1/6W	GM11416210
R494		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	R816			1.62kΩ ±1% 1/6W	GM11416210
R495		4822 117 12891	CHIP 220kΩ ±5% 1/16W	NN05224610	R819		4822 051 30272	CHIP 2.7kΩ ±5% 1/16W	NN05272610
R496		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610	R820		4822 051 30272	CHIP 2.7kΩ ±5% 1/16W	NN05272610
R497		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	R821		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R501		4822 051 30474	CHIP 470kΩ ±5% 1/16W	NN05474610	R823			6.49kΩ ±1% 1/6W	GM11464910
R502		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R824			6.49kΩ ±1% 1/6W	GM11464910
R503		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R825		9965 000 06836	TRIMMING 1kΩ B 0.3W	RA01021100
R504		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610				RH068 CERMET	
R506		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R826		9965 000 06836	TRIMMING 1kΩ B 0.3W	RA01021100
R507		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610				RH068 CERMET	
R508		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R827			1kΩ ±1% 1/6W	GM11410010
R510	F1	4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R828			1kΩ ±1% 1/6W	GM11410010
R510	N1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610	R841		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R510	U1	4822 117 12139	CHIP 22Ω ±5% 1/16W	NN05220610	R851		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R511		4822 117 12968	CHIP 820Ω ±5% 1/16W	NN05821610	R852		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R512		4822 051 30334	CHIP 330kΩ ±5% 1/16W	NN05334610	R853		9965 000 06837	2.7kΩ ±1% 1/4W ERD	NR01272140
R513	F1	4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610	R854		9965 000 05737	3.3kΩ ±1% 1/4W ERD	NR01332140
R513	N1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610	R855		9965 000 06837	2.7kΩ ±1% 1/4W ERD	NR01272140
R513	U1	4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610	R856		9965 000 05737	3.3kΩ ±1% 1/4W ERD	NR01332140
					R861			330Ω ±5% 1/6W	GD05331160

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R863			820Ω ±5% 1/6W	GD05821160	▲ D851				
R864			3.3kΩ ±5% 1/6W	GD05332160	}		4822 130 83287	CHIP DIODE D1FS6 POWER	HZ20002290
R865		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	▲ D854				
R867		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	▲ D856		4822 130 32697	ZENER DIODE HZ6L(3) 6.2V	HD30021010
R869		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	▲ D857		4822 130 32697	ZENER DIODE HZ6L(3) 6.2V	HD30021010
RN01	F1, /U1		1kΩ ±5% 1/6W	GD05102160	D859		4822 130 32362	DIODE 1SS176.MA165.1SS254	HD20002000
RN01	N1	4822 130 80132	ZENER DIODE 3.9V	HD30391000				30V 0.1A	
RN02		9965 000 06699	CHIP 3.9MΩ ±5% 1/16W	NN05395610	D861		4822 130 83142	ZENER DIODE 6.2V	HD30621000
RN03	F1, /U1	4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610	D869		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN03	N1	4822 116 83819	CHIP 18kΩ ±5% 1/16W	NN05183610				30V 0.1A	
RN04		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610					
RN05		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610	▲ DN01				
RN06			2.2kΩ ±5% 1/6W	GD05222160	}		4822 130 11513	CHIP DIODE RB161L-40	HZ20057210
RN07		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	▲ DN05				
RN08		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	DN09		4822 130 33948	ZENER DIODE 5.6V	HD30561000
RN09		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	DN10		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN10		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610				30V 0.1A	
RN11		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	DN11		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN12		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610				30V 0.1A	
RN14		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610	DN12		4822 130 80132	ZENER DIODE 3.9V	HD30391000
RN15		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	DN34		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN16		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610				30V 0.1A	
RN17		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	DN35		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN18		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610				30V 0.1A	
RN19		4822 117 13632	CHIP 100kΩ ±5% 1/6W	NN05104610	DY11		4822 130 10667	ZENER DIODE 4.7V	HD30471000
RN22		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610	DY51		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RN23		4822 051 30332	CHIP 3.3kΩ ±5% 1/16W	NN05332610				30V 0.1A	
RN24		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610	▲ DY52		4822 130 80839	DIODE S5688G VRM=400V 1A	HD20029050
RN25		4822 051 30333	CHIP 33kΩ ±5% 1/16W	NN05333610	▲ DY53		4822 130 80839	DIODE S5688G VRM=400V 1A	HD20029050
RN26		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610	▲ DY61				
RN27		4822 051 30332	CHIP 3.3kΩ ±5% 1/16W	NN05332610	}		4822 130 80839	DIODE S5688G VRM=400V	HD20029050
RN31		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	▲ DY64			IO=1A	
RN32		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	DY65		4822 130 80116	ZENER DIODE 24V	HD32401000
RN33		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	DY66		4822 130 32362	DIODE 1SS176 MA165 1SS254	HD20002000
RT01		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610				30V 0.1A	
RT02		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610	Q491		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
RT03		4822 051 30759	CHIP 75Ω 1/16W	NN05750610	Q492		4822 130 61355	CHIP TRS. 2SC2712 0 Y	HX327122A0
RY45		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610	Q493		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
RY50		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610	Q494		4822 130 63598	CHIP TRS. 2SA1586 0 Y	HX115862A0
RY51		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610					
RY52		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610	Q501		4822 209 15921	IC RESET IC S-806D-Z SEIKO	HC10077530
RY53		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610	Q502		9965 000 05912	IC 74HCT244AF	HC724400Q0
RY54		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610	Q503		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
RY55		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610	Q504		9965 000 06826	MICROPROCESSOR	HS392KN00F
RY56		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610				μPD78P018FGC	
RY57			47Ω ±5% 1/6W	GD05470160	Q505		4822 209 15923	IC TDA1307	HC10139490
RY58			47Ω ±5% 1/6W	GD05470160	Q506		4822 209 91176	IC 74HC257AF	HC725705R0
RY61		4822 051 20332	CHIP 3.3kΩ ±5% 1/10W	NI05332110	Q507		4822 209 32984	IC TC7SHU04F	HC10427050
			PP16-SEMICONDUCTORS		Q508		4822 209 32984	IC TC7SHU04F	HC10427050
▲ D801					Q509		4822 209 61494	IC 74HC74 FLAT	HC707400Z0
}		9965 000 06834	CHIP DIODE NSQ03A02L(SBD)	HZ20009100	Q510		9965 000 06827	IC TC74HC174AF	HC717405Z0
▲ D808					Q511		5322 209 17088	IC TC74HC164AF	HC716405Z0
▲ D811					Q512		5322 209 17088	IC TC74HC164AF	HC716405Z0
}		9965 000 06835	CHIP DIODE EC21QS03L	HZ20013100	Q513		4822 209 61494	IC TC74HC74AF	HC707405Z0
▲ D814					Q514		9965 000 06828	IC TC75HC86AF	HC708605Z0
D815		4822 130 31253	ZENER DIODE HZ2CLL 2.4V (±0.2V)	HD30067010	Q515		9965 000 06829	IC TC74HC597AF	HC759705Z0
D816		4822 130 31253	ZENER DIODE HZ2CLL 2.4V (±0.2V)	HD30067010	Q516		9965 000 06829	IC TC74HC597AF	HC759705Z0
D817		4822 130 32362	DIODE 1SS176.MA165.1SS254 30W 0.1A	HD20002000	Q517		4822 209 15997	IC TC74HC393AF	HC739305R0
D818		4822 130 32362	DIODE 1SS176.MA165.1SS254 30W 0.1A	HD20002000	Q518		5322 209 16682	IC TC74HC123AF	HC712300Z0
▲ D821					Q519		4822 209 90909	IC TC7W74FU	HC10400050
}		4822 130 11513	CHIP DIODE RB161L-40	HZ20057210	Q520		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
▲ D824			1A 40V SHOTKEY		▲ Q801		4822 209 17381	IC PQ05RD21 5V 2A	HC31905320
					▲ Q802		4822 209 17381	IC PQ05RD21 5V 2A	HC31905320
					Q803		9965 000 03397	IC BA033FP	HC96J33210
								3.3V 1APD=1W VD=0.3V	
					Q811		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
					Q812		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
					▲ Q813		4822 130 11605	TRS. 2SD1415A	HT41415100

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CY10			CHIP CER. 0.1 μ F \pm 10% B 25V	DK56104200
			PY16-RESISTORS	
RY13		4822 051 30102	CHIP 1k Ω \pm 5% 1/16W	NN05102610
RY14		4822 051 30102	CHIP 1k Ω \pm 5% 1/16W	NN05102610
RY15		4822 051 30102	CHIP 1k Ω \pm 5% 1/16W	NN05102610
RY16				
}		4822 051 30333	CHIP 33k Ω \pm 5% 1/16W	NN05333610
RY23				
RY25		4822 051 30333	CHIP 33k Ω \pm 5% 1/16W	NN05333610
RY26		4822 051 30333	CHIP 33k Ω \pm 5% 1/16W	NN05333610
RY31		4822 051 30103	CHIP 10k Ω \pm 5% 1/16W	NN05103610
RY32		4822 116 83829	CHIP 270 Ω \pm 5% 1/16W	NN05271610
RY33			560 Ω \pm 5% 1/6W	GD05561160
RY34		4822 051 30103	CHIP 10k Ω \pm 5% 1/16W	NN05103610
RY35		4822 116 83829	CHIP 270 Ω \pm 5% 1/16W	NN05271610
RY36			560 Ω \pm 5% 1/6W	GD05561160
			PY16-SEMICONDUCTORS	
DY05		4822 130 80326	L.E.D. LT3D8B RED 30	HI10062320
DY06		4822 130 80326	L.E.D. LT3D8B RED 30	HI10062320
QY01		9965 000 06830	IC MN12510F FTD DRIVER	HC10171020
QY03		9965 000 06828	IC TC75HC86AF	HC708605Z0
QY05		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QY06		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
			PY16-MISCELLANEOUS	
LY01				
}		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
LY04				
VY01		4822 135 00194	DISPLAY UNIT 10-BT-196GK	HQ31004410
XY01		4822 242 81283	SERAMIC VIB. EF0V4004E5	FQ04004070

Service Manual

CDM-10M

SACD Module

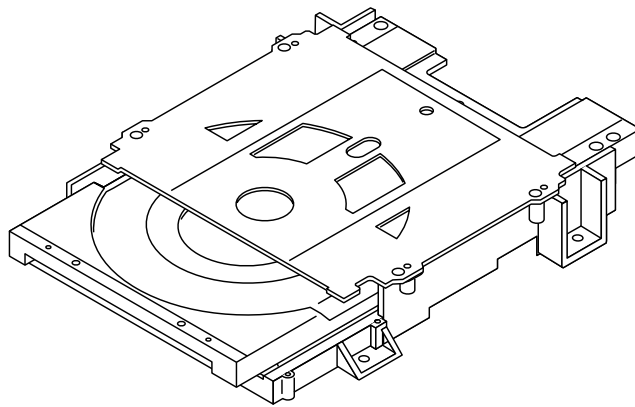


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Please use this service manual with referring to the user guide (D.F.U.) without fail.

修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

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CDM-10M

2.1 REMOVING AND REINSTALLING THE MAIN PARTS

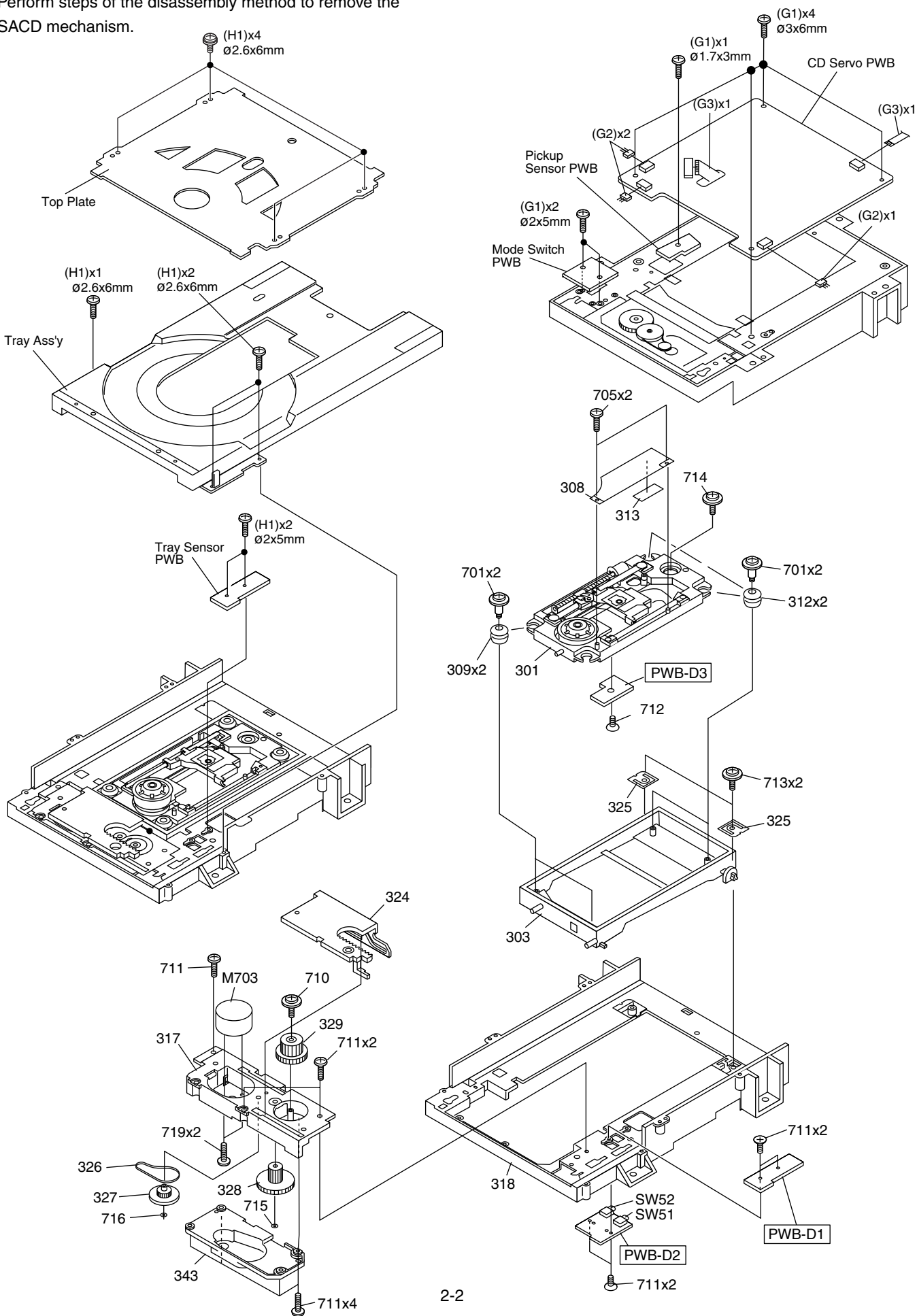
SACD MECHANISM SECTION

Perform steps of the disassembly method to remove the SACD mechanism.

■主要部品の交換方法

SACDメカニズム部

・分解方法に従ってSACDメカニズムを取り外して下さい。



How to remove the loading motor (See Fig. 2-1.)

1. Remove the lift lever.
2. Remove the screws (A1) x 4 pcs., to remove the gear cover.
3. Remove the screws (A2) x 2 pcs., to remove the loading motor.

●ローディングモータの取り外し方法（図2-1参照）

1. リフトレバーを取り外す。
2. ねじ（A1）×4本を取り外しギヤカバーを取り外す。
3. ねじ（A2）×2本を取り外しローディングモータを取り外す。

(Adjusting the SACD mechanism completed products)

It is necessary to position the spindle motor, the sub-shaft (mechanism), and the pickup to play a nonstandardized SACD disc. If the pickup or motor is replaced at the service division, these adjustments cannot be performed because of the facility and measuring equipment matters.

The SACD mechanism completed products are adjusted for the above reasons.

After installing:

After installing the SACD mechanism completed product, remove the two solders shown below.(See Fig. 2-2.)

SACDメカニズムの交換

SACDメカニズム（301）を交換した際には、必ず下図（図2-2）の2ヶ所のハンダ（SACDメカニズム保管時の静電破壊防止）を取り除いてください。

[REMARK]

- The two solders are used to eliminate static electricity before installing the SACD mechanism completed product.

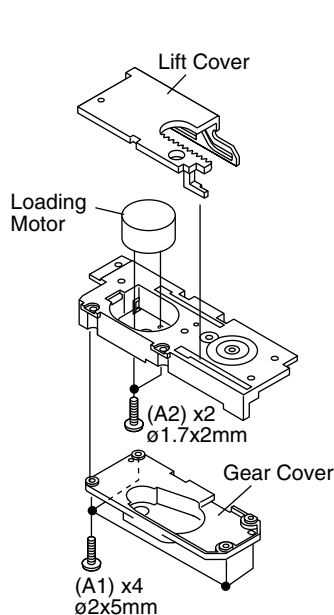


Figure 2-1

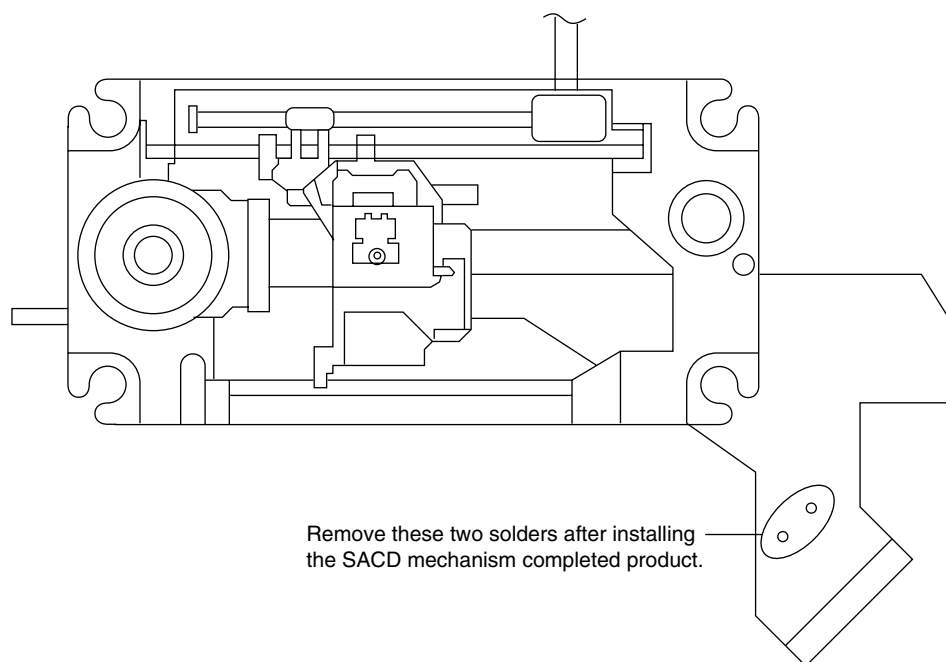


Figure 2-2

Adjusting the tension of the timing belt

Remove the gear unit and connect the ammeter to the DC power as shown in Fig. 2-3.

If measurement of the loading motor current is possible, move the motor in the direction of the arrow so as to obtain 40 - 50 mA, and fix the motor with screws (A1) x 2 pcs. (See Fig. 2-4.)

●タイミングベルトのテンション調整

ギヤユニットを取り外し、図2-3の様に電流計とDC電源を接続する。

ローディングモータの電流測定が出来る様にして40mA～50mAになる様モータを矢印方向に移動させ、ねじ(A1)×2本でモータを固定する。(図2-4参照)

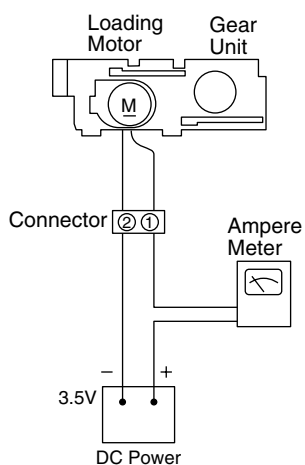


Figure 2-3

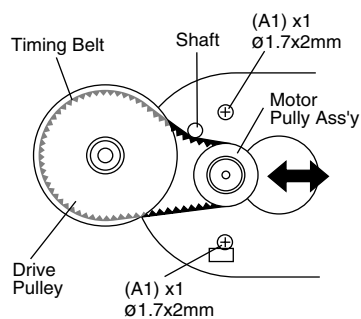
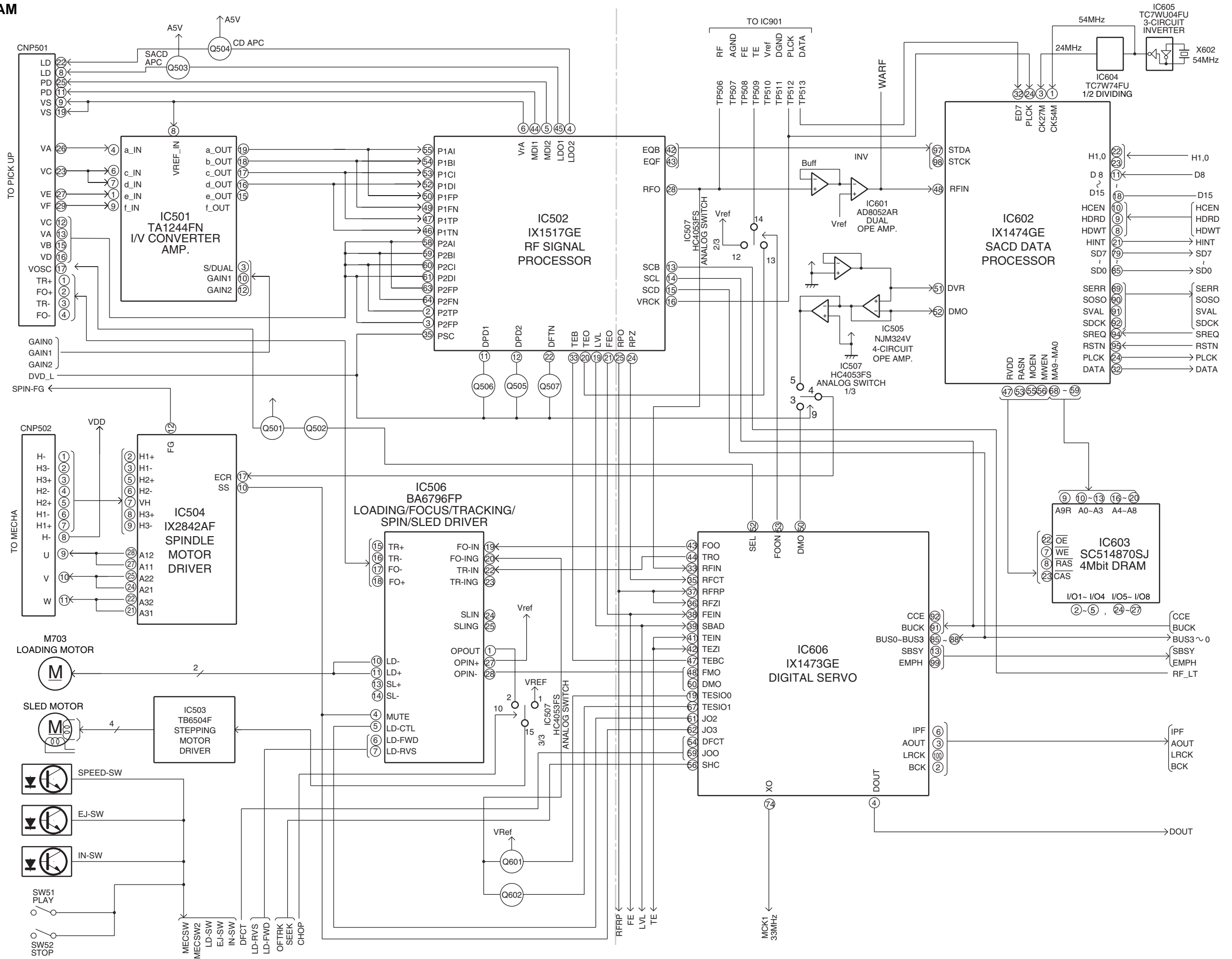
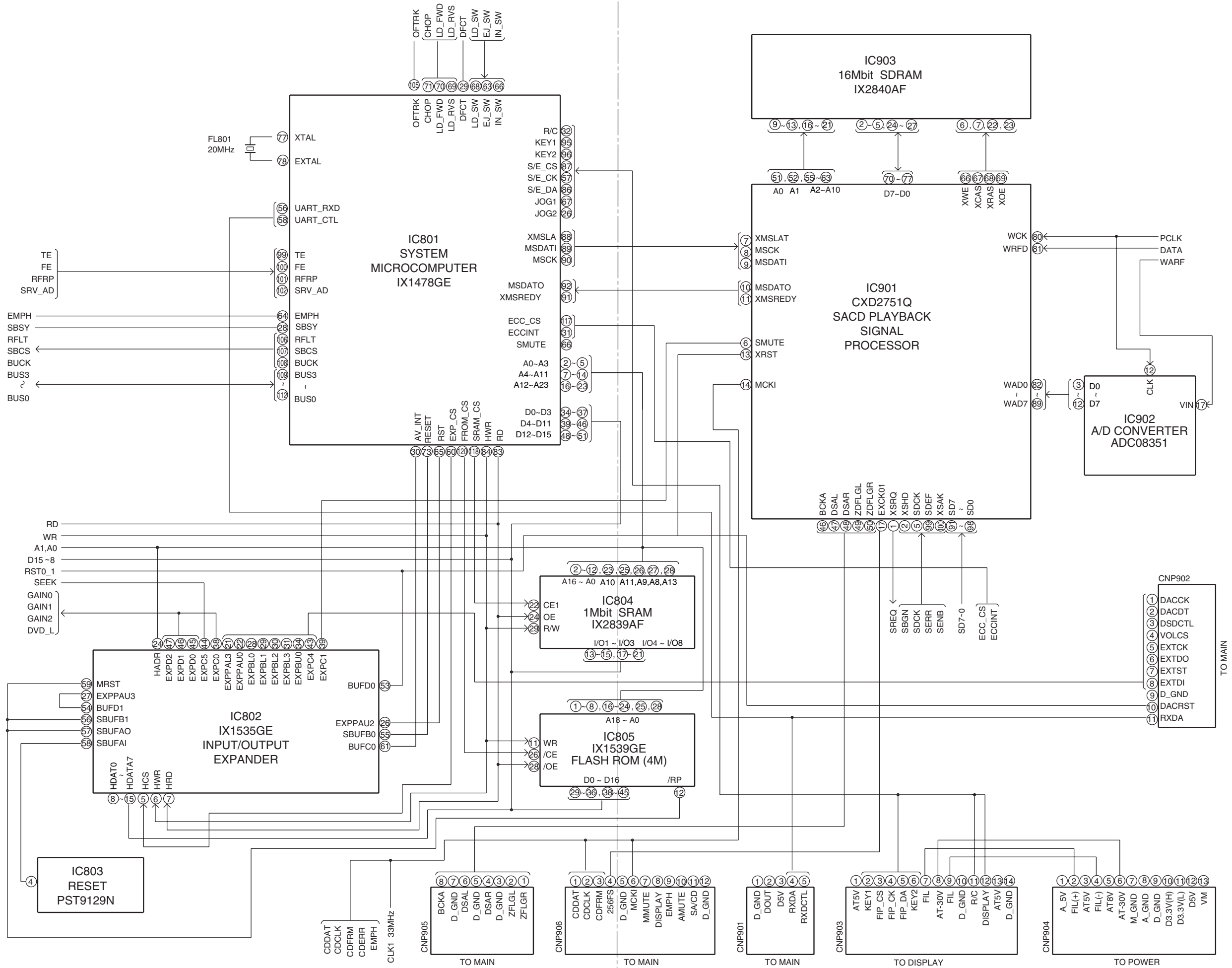


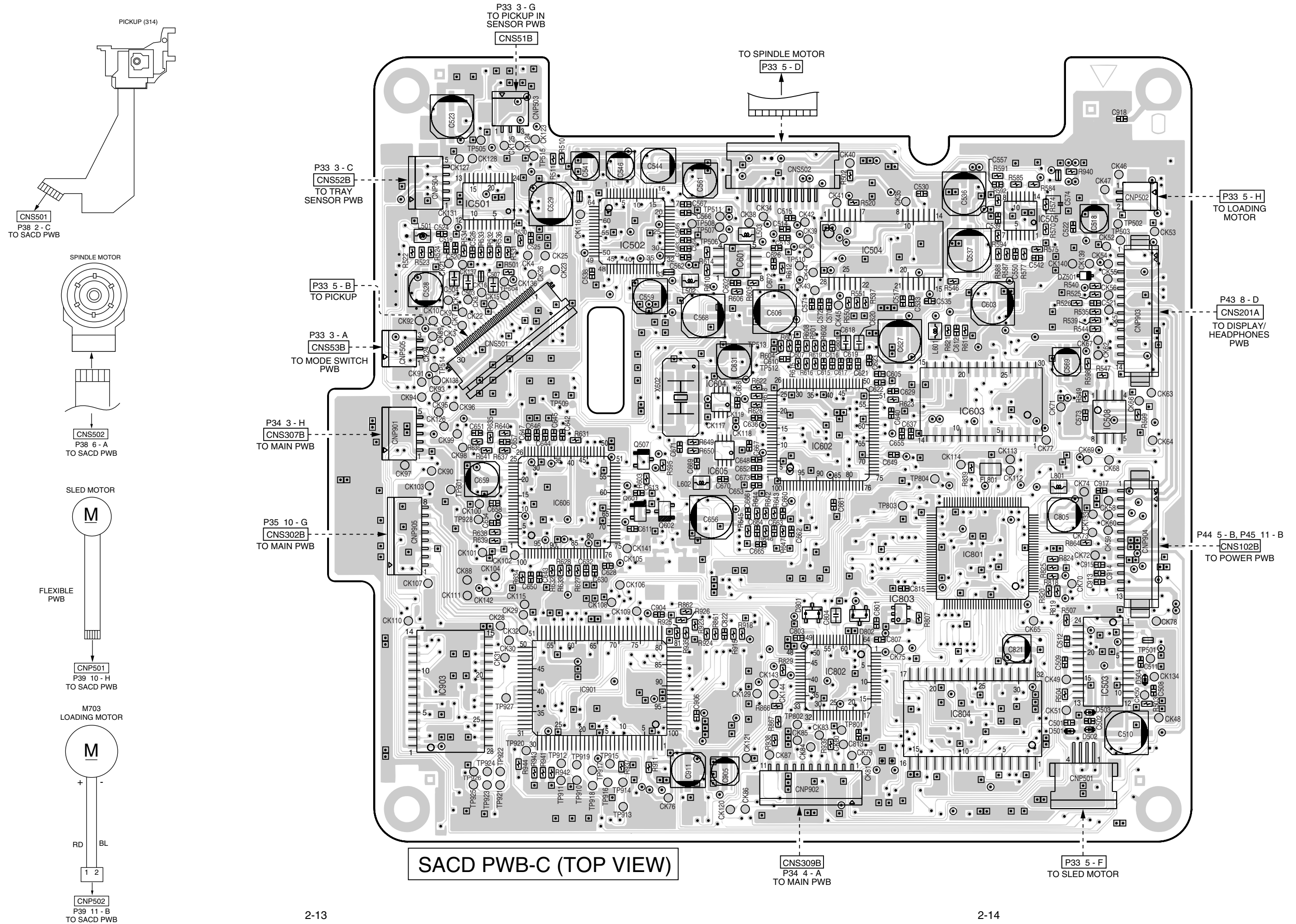
Figure 2-4

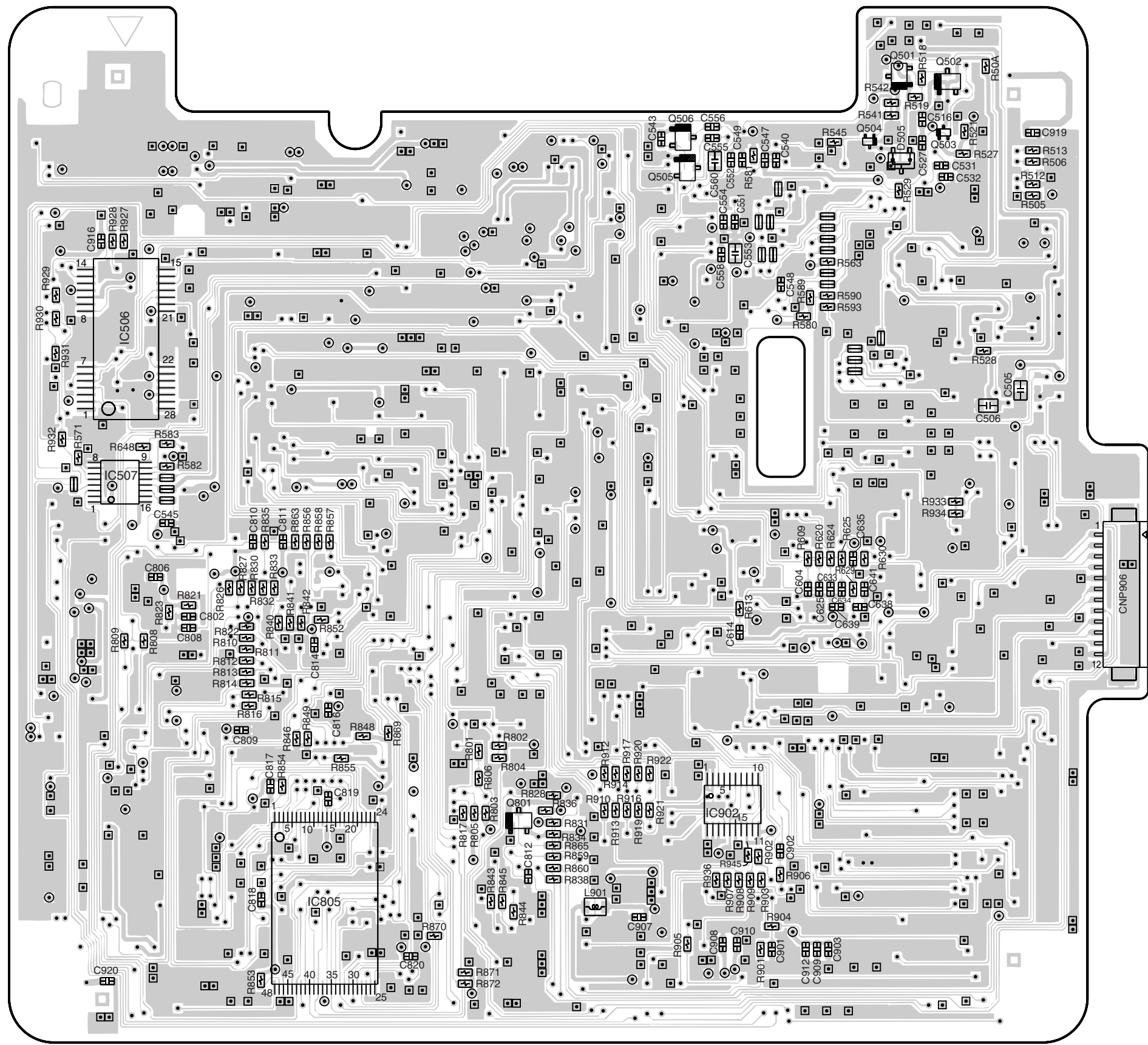
2.2 BLOCK DIAGRAM



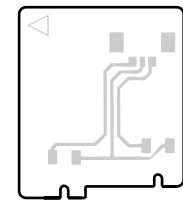


2.4 PARTS LOCATION

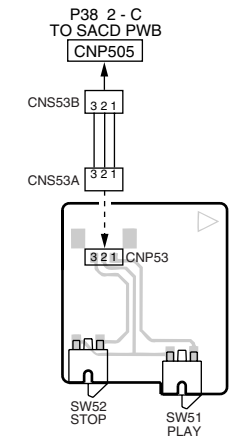




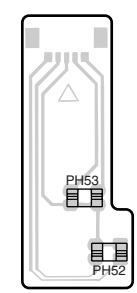
SACD PWB-C(BOTTOM VIEW)



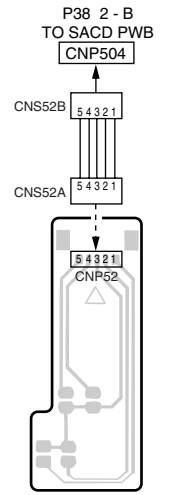
MODE SWITCH PWB-D2 (TOP VIEW)



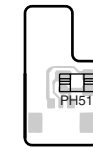
MODE SWITCH PWB-D2 (BOTTOM VIEW)



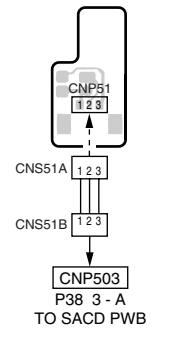
TRAY SENSOR PWB-D1 (TOP VIEW)



TRAY SENSOR PWB-D1 (BOTTOM VIEW)



PICKUP IN SENSOR PWB-D3 (TOP VIEW)



PICKUP IN SENSOR PWB-D3 (BOTTOM VIEW)

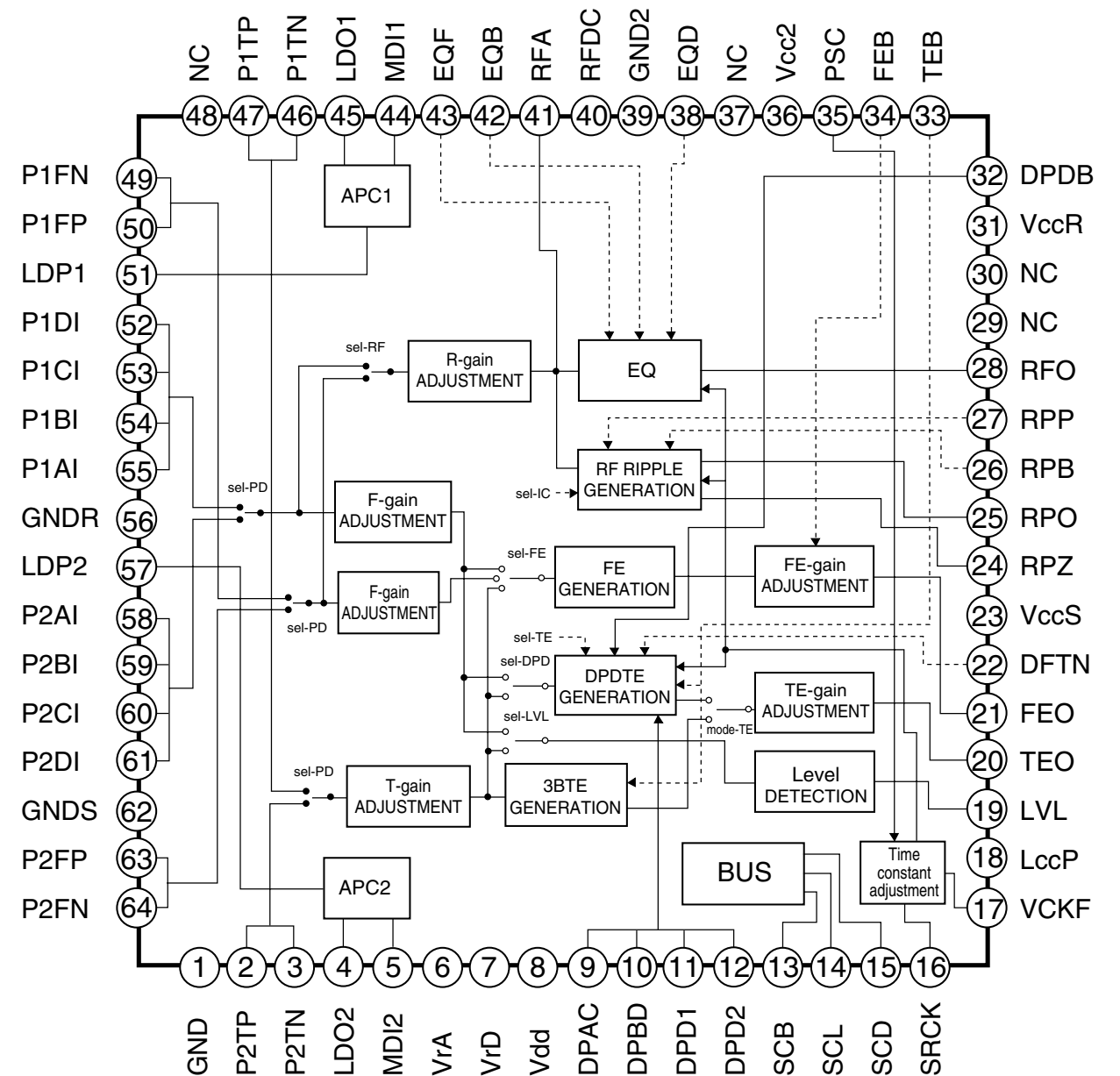
2.5 IC DATA

IC502 RH-iX1517GEZZ: RF Signal Processor (IX1517GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function	Terminal DC Voltage (TYP.)	Remarks
1	GND	Ñ	GND terminal	-	
2	P2TP	Input	TE+ input (CD)	VrA	
3	P2TN	Input	TE- input (CD)	VrA	
4	LDO2	Output	Drive output	-	
5	MDI2	Input	Monitor output	-	
6	VrA	Output	Analog VREF	2.1 [V]	
7	VrD	Output	Digital VREF	-	1/2 of Vdd (2.1V)
8	VDD	Input	Power terminal		Approx. 4.2V
9	DPAC	-	DPD AC coupling capacity 1	-	
10	DPBD	-	DPD AC coupling capacity 2	--	
11	DPD1	-	DPD integration capacity 1	--	
12	DPD2	-	DPD integration capacity 2	-	
13	SCB	Input	Control line (Bit clock)	2.2 [V]	
14	SCL	Input	Control line (Latch signal)	2.2 [V]	
15	SCD	Input	Control line (Serial data)	2.2 [V]	
16	VRCK	Input	Reference clock input	2.3 [V]	Frequency increase results in shift to higher filter frequency except for servo LPF.
17	VCKF	-	Time constant adjustment capacity	-	
18	VCCP	-	Power terminal	-	
19	LVL	Output	Servo addition output	VrD x (1/2)	
20	TEO	Output	TE output	VrD	
21	FEO	Output	FE output	VrD	
22	DFTN	Input	DPD defect	-	DPD output at Low: Mute
23	VCCS	-	Power terminal (Servo)	-	
24	RPZ	Output	RF ripple center voltage	VrD	
25	RPO	Output	RF ripple output	VrD	
26	RPB	Output	RF ripple bottom	-	
27	RPP	Output	RF ripple peak	-	
28	RFO	Output	Equalizing RF output	2.3 [V]	
29,30	NC	-	NC terminal	-	Used by connecting to GND.
31	VCCR	-	Power terminal (RF)	-	
32	DPDB	Input	Pit depth adjustment	VrD	DPDB increase brings delay capacity increase on sides A and B.
33	TEB	Input	TE balance	VrD	TEB increase brings increase in gain on TP side and in delay capacity on sides A and C.
34	FEB	Input	FE balance	VrD	FEB increase brings increase in gain on sides A and C (FP).
35	PSC	Input	VRCK frequency division ON/OFF	-	Frequency division OFF at High
36	VCC2	-	Power terminal	-	
37	NC	-	NC terminal	VrD	Connected to GND via C.
38	EQD	Input	Group delay correction	VrD	Group delay by raising EQD: rise rightward
39	GND2	-	GND terminal	-	
40	RFDC	-	DC feedback capacity	-	
41*	RFA	Output	RF total adding output	2.2 [V]	
42	EQB	Input	Boost adjustment	VrD	Boost quantity up by raising EQB.
43	EQF	Input	Frequency adjustment	VrD	Shift to higher frequency by raising EQF.
44	MDI1	Input	Monitor input	-	
45	LDO1	Output	Drive output	-	
46	P1TN	Input	TE- input (DVD)	VrA	
47	P1TP	Input	TE+ input (DVD)	VrA	
48	NC	-	NC terminal	-	Used by connecting to GND.
49	P1FN	Input	FE- input (DVD)	VrA	

IC502 RH-iX1517GEZZ: RF Signal Processor (IX1517GE) (2/2)

Pin No.	Terminal Name	Input/Output	Function	Terminal DC Voltage (TYP.)	Remarks
50	P1FP	Input	FE+ input	VrA	
51	LDP1	Input	APC polarity 1	-	Positive polarity when connecting to Vcc
52	P1DI	Input	D input (DVD)	VrA	
53	P1CI	Input	C input (DVD)	VrA	
54	P1BI	Input	B input (DVD)	VrA	
55	P1AI	Input	A input (DVD)	VrA	
56	GNDR	-	GND terminal (RF)	-	
57	LDP2	Input	APC polarity 2	-	Positive polarity when connecting to Vcc
58	P2AI	Input	A input (CD)	VrA	
59	P2BI	Input	B input (CD)	VrA	
60	P2CI	Input	C input (CD)	VrA	
61	P2DI	Input	D input (CD)	VrA	
62	GNDS	-	GND terminal (Servo)	-	
63	P2FP	Input	FE+ input	VrA	
64	P2FN	Input	FE- input	VrA	

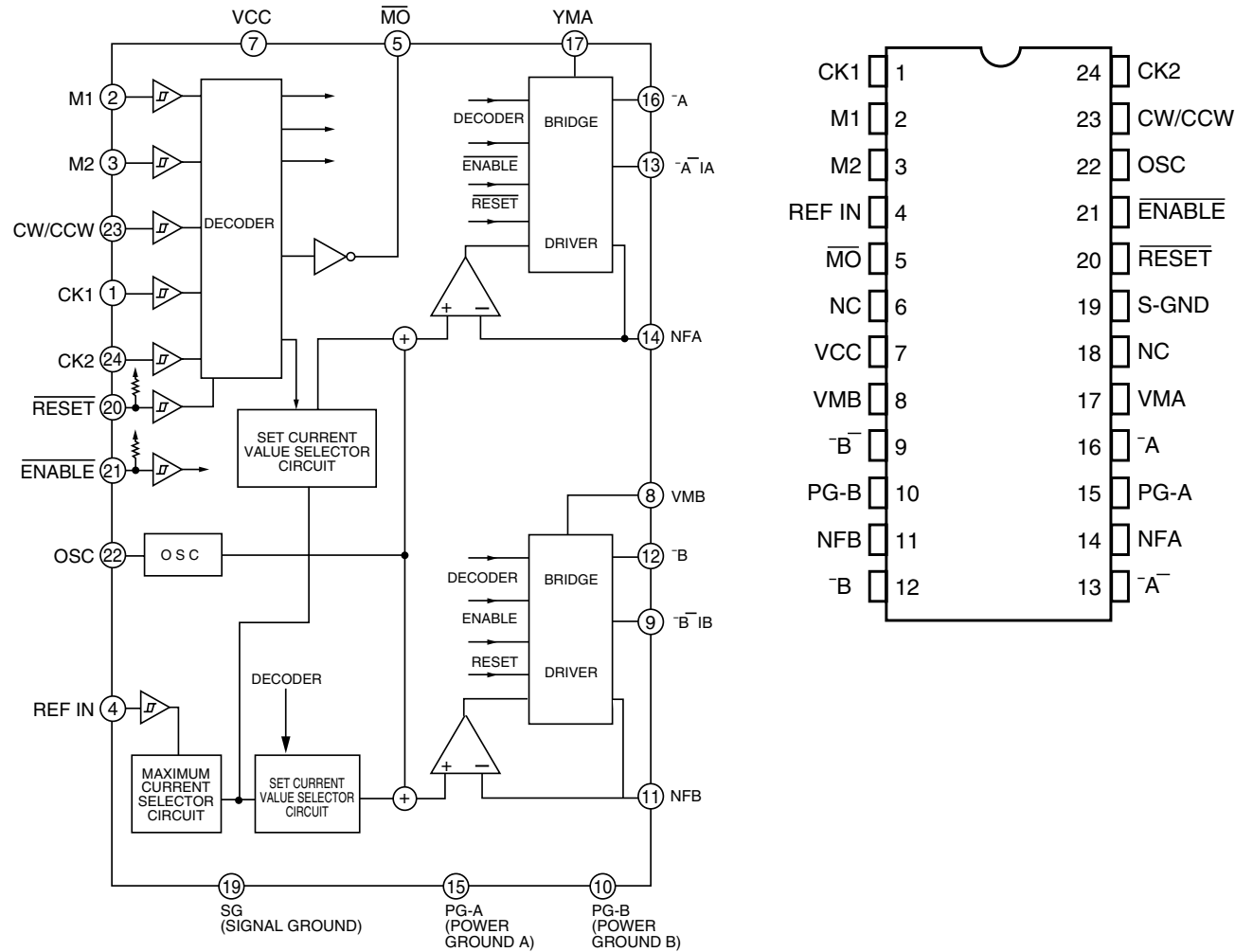


In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC503 VHiTB6504F+-1: Stepping Motor Driver (TB6504F)

Pin No.	Terminal Name	Function
1	CK1	Clock signal input
2, 3	M1, M2	Excitation mode set terminal
4	REF IN	Output reference value (VNF) set terminal H: VNF=0.5V, L: VNF=0.25V
5*	$\overline{M\bar{O}}$	Monitor output L: Initial condition
6*	NC	Not used
7	VCC	Logic side power terminal
8	VMB	Output side power terminal
9	$\phi\bar{B}$	\bar{B} output
10	PG-B	Power ground
11	NFB	B channel current detection terminal
12	ϕB	B output
13	$\phi\bar{A}$	\bar{A} output
14*	NFA	A channel current detection terminal
15	PG-A	Power ground
16	ϕA	A output
17	VMA	Output side power terminal
18*	NC	Not used
19	S-GND	Signal ground
20	RESET	Reset signal input
21	$\overline{ENAB\bar{L}}$	Enable signal input
22	OSC	Internal oscillation frequency set terminal. Capacitor is externally mounted.
23	CW/CCW	Clockwise/counterclockwise input
24	CK2	Clock signal input

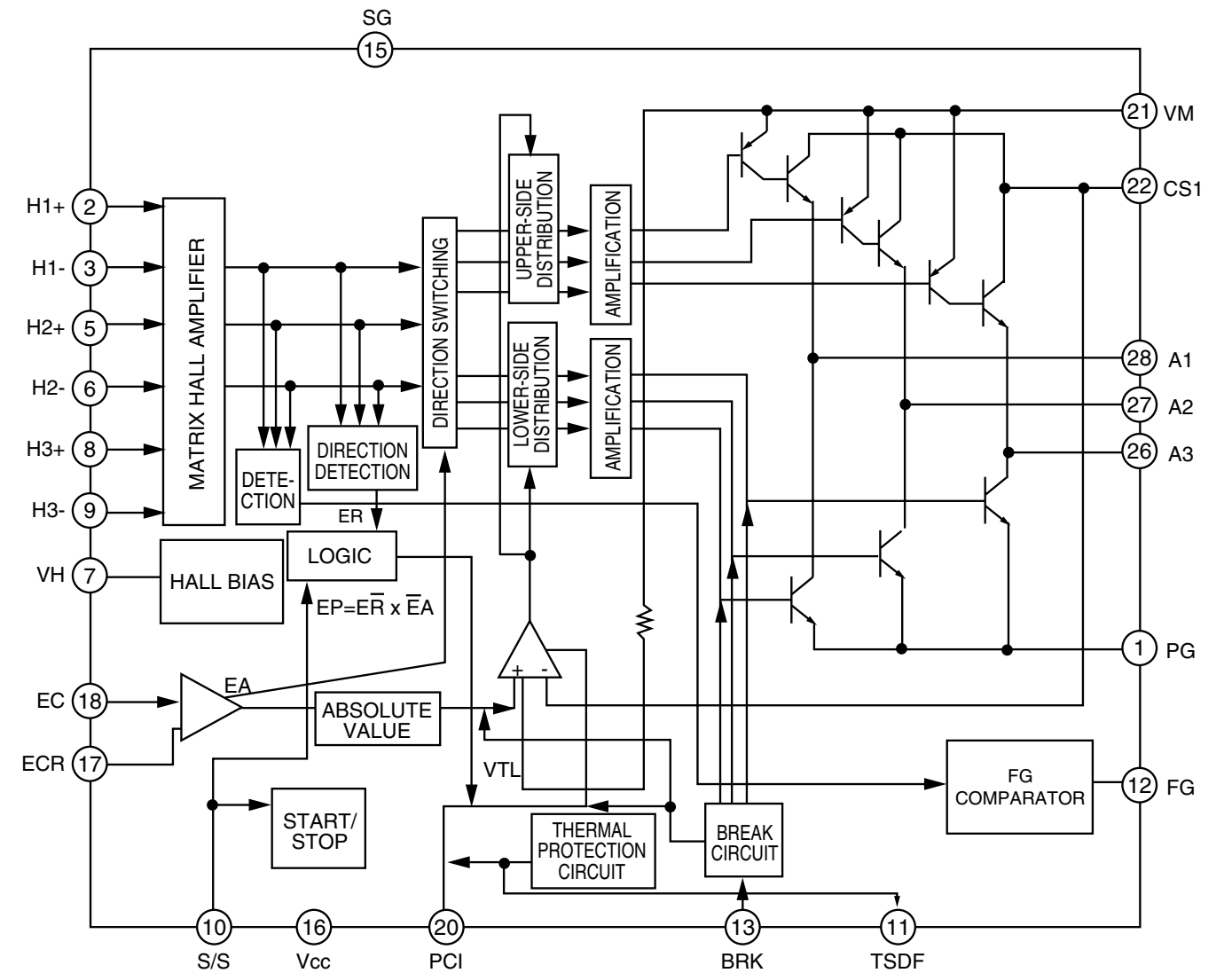
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC504 RH-iX2842AFZZ: Spindle Motor Driver (IX2842AF)

Pin No.	Terminal Name	Function	Pin No.	Terminal Name	Function
1	PG	Power GND terminal	15	SG	Signal GND terminal
2	H1+	Hall element 1 positive input terminal	16	VCC	Power terminal
3	H1-	Hall element 1 negative input terminal	17	ECR	Torque instruction reference input terminal
4*	NC	Not used	18	EC	Torque instruction input terminal
5	H2+	Hall element 2 positive input terminal	19*	NC	Not used
6	H2-	Hall element 2 negative input terminal	20	PCI	Current feedback phase compensating terminal
7	VH	Hall bias terminal	21	VM	Motor power terminal
8	H3+	Hall element 3 positive input terminal	22	CS1	Current detection terminal 1
9	H3-	Hall element 3 negative input terminal	23*	NC	Not used
10	SS	Start/Stop switching terminal	24*	NC	Not used
11*	TFLG	Thermal protection monitor terminal	25*	NC	Not used
12	FG	FG signal output terminal	26	A3	Drive output 3
13	BRK	Break mode set terminal	27	A2	Drive output 2
14*	NC	Not used	28	A1	Drive output 1

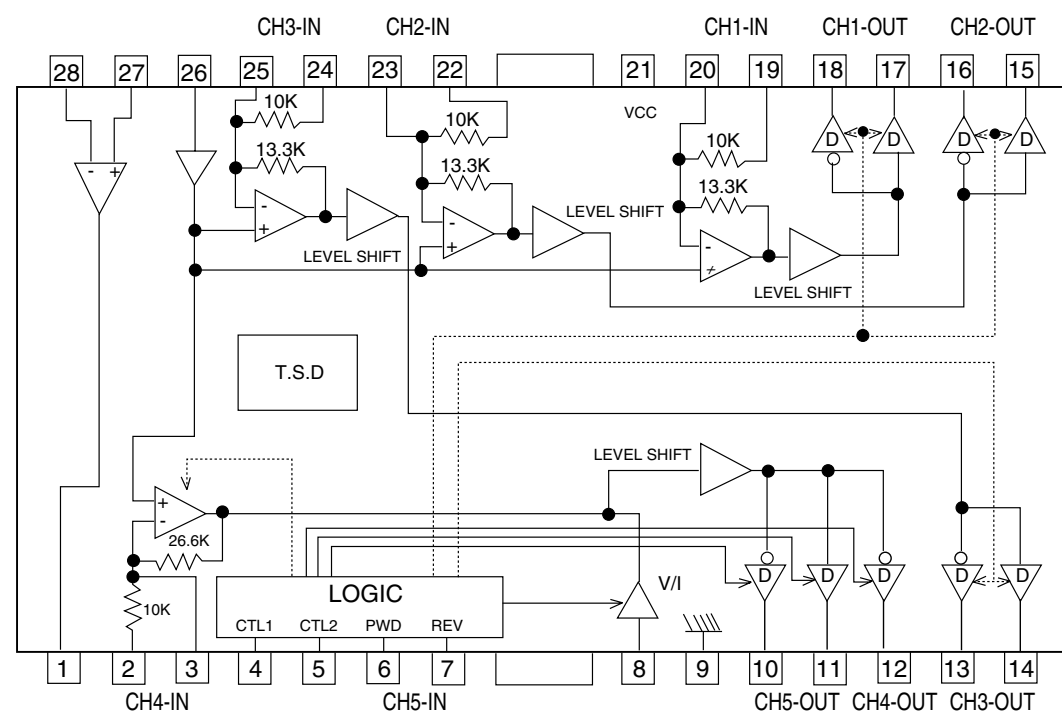
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC506 VHiBA6796FP-1: Loading/Focus/Tracking/Spin/Sled Driver (BA6796FP)

Pin No.	Terminal Name	Function	Pin No.	Terminal Name	Function
1*	OPOUT	Operational amplifier output terminal	15	CH2-OUT-	CH2 negative output terminal
2	CH4-IN	CH4 input terminal	16	CH2-OUT+	CH2 positive output terminal
3*	CH4-IN'	CH4 gain adjustment input terminal	17	CH1-OUT-	CH1 negative output terminal
4	CTL1	Control 1 input terminal	18	CH1-OUT+	CH1 positive output terminal
5	CTL2	Control 2 input terminal	19	CH1-IN	CH1 input terminal
6	FWD	Tray forward input terminal	20	CH1-IN'	CH1 gain adjustment input terminal
7	REV	Tray reverse input terminal	21	VCC	VCC
8	TRAY-IN	Tray input terminal	22	CH2-IN	CH2 input terminal
9	GND	Substrate GND	23*	CH2-IN'	CH2 gain adjustment input terminal
10	CH5-OUT-	Tray negative output terminal	24*	CH3-IN	CH3 input terminal
11	COM-OUT	Tray positive terminal/CH4 negative output terminal	25*	CH3-IN'	CH3 gain adjustment input terminal
12*	CH4-OUT+	CH4 positive output terminal	26	VREF-IN	Bias amplifier input terminal
13*	CH3-OUT+	CH3 positive output terminal	27*	OPIN+	Operational amplifier non-inversion input terminal
14*	CH3-OUT-	CH3 negative output terminal	28*	OPIN-	Operational amplifier inversion input terminal

Note 1: Positive output/negative output means polarity toward input. (Ex. 18 pin output 'H' in case of 19 pin input 'H')
 Note 2: Tray positive output/tray negative output means polarity toward mode. (Ex. 11 pin output 'H' in case of the forward mode)
 In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



Mode Switching Table

For CTL1 and CTL2

CTL1	CTL2	CH1	CH2	CH3	CH4	CH5
L	L	OFF				ON
L	H	OFF				ON
H	L	ON				OFF
H	H	OFF	ON	OFF	ON	ON

Note: Output: high impedance in case of OFF.

For F and R (CH5 control is effective only in case of ON)

F	R	Output Mode
L	L	High impedance
L	H	Reverse
H	L	Forward
H	H	Break

IC602 RH-iX1474GEZZ: SACD Data Processor (IX1474GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function	Remarks
1	DPCKI	Input	Signal processing reference clock input	0.5 - 3.3Vpp, feedback resistor built in.
2	DVDD3	-	Digital power supply (3.3V)	For logic cell
3	SVCKI	Input	Servo reference clock input (Oscillation circuit input terminal)	3.3V-I/F feedback resistor built in
4*	SVCKO	Output	Servo reference clock input (Oscillation circuit input terminal)	
5	DVSS	-	Digital power supply (0V)	For logic cell
6	DVDD3	-	Digital power supply (3.3V)	For logic cell
7*	NC	-	The use forbidden	Open
8	HDWT	Input	MPU write signal	Level TTL
9	HDRD	Input	MPU read signal	Level TTL
10	HCEN	Input	MPU chip select	Level TTL
11-18	HD0-HD7	Input/Output	MPU data bus	Level TTL
19	DVSS	-	Digital power supply (0V)	For I/O cell
20	DVDD5	-	Digital power supply (5V)	For I/O cell
21	HINT	Output	MPU interrupt signal (Occurrence of interruption = "L")	OPEN DRAIN
22,23	HA0, HA1	Input	MPU address bus	Level TTL
24	PLCK	Output	Read channel clock output terminal	
25*-31*	ED0-ED6	-	For default adjustment; use by user is forbidden. (NC)	Open
32	ED7	Output	SACD 2 binary data	
33	TEST	Input	For default adjustment	Set to "L".
34	PDON	Output	PLL phase error signal output (Polarity: -)	
35	PDOP	Output	PLL phase error signal output (Polarity: +)	
36	RLLD	Output	PLL detection result output	
37	LPFN	Input	Inversion input of amplifier for PLL loop filter	
38	LPFO	Output	Output of amplifier for PLL loop filter	
39	VCOF	Output	VCO filter terminal	
40	SCLO	Output	Reference voltage output terminal of built-in comparator	
41	AVSS	-	Analog power supply (0V)	
42	AVR	Output	Non-PLL analog reference potential (1.65V)	
43	VRC	-	Resistance dividing point potential (For generating analog reference potential: 1.65)	
44	PVR	Output	PLL analog reference potential (1.65V)	
45	AVDD	-	Analog power supply (3.3V)	
46	RVR2	-	Secondary reference voltage (For connecting capacitor)	
47	RVDD	-	Dedicated power terminal (3.3V)	
48	RFIN	Input	RF signal input	
49	RVSS	-	Dedicated power terminal (0V)	
50	RVR1	-	The first reference voltage (For connecting capacitor)	
51	DVR	Input	DMO reference potential (1.65V recommended)	
52	DMO	Output	DVD disc equalizer output (Ternary PWM + Hiz)	
53	RASN	Output	External RAM column address select (Negative logic)	
54	CASN	Output	External RAM row address select (Negative logic)	
55	MOEN	Output	External RAM output enable signal	
56	MWEN	Output	External RAM read/ write select	
57	DVSS	-	Digital power supply (0V)	For logic cell
58	DVDD3	--	Digital power supply (3.3V)	For logic cell
59-68	MA9-MA0	Output	External RAM address bus	
69	DVSS	-	Digital power supply (0V)	For I/O cell
70	DVDD5	-	Digital power supply (5V)	For I/O cell
71-78	MD7-MD0	Input/Output	External RAM data bus	Level TTL
79-82	SD7-SD4	Output	MPEG data output	
83	DVSS	-	Digital power supply (0V)	For logic cell

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

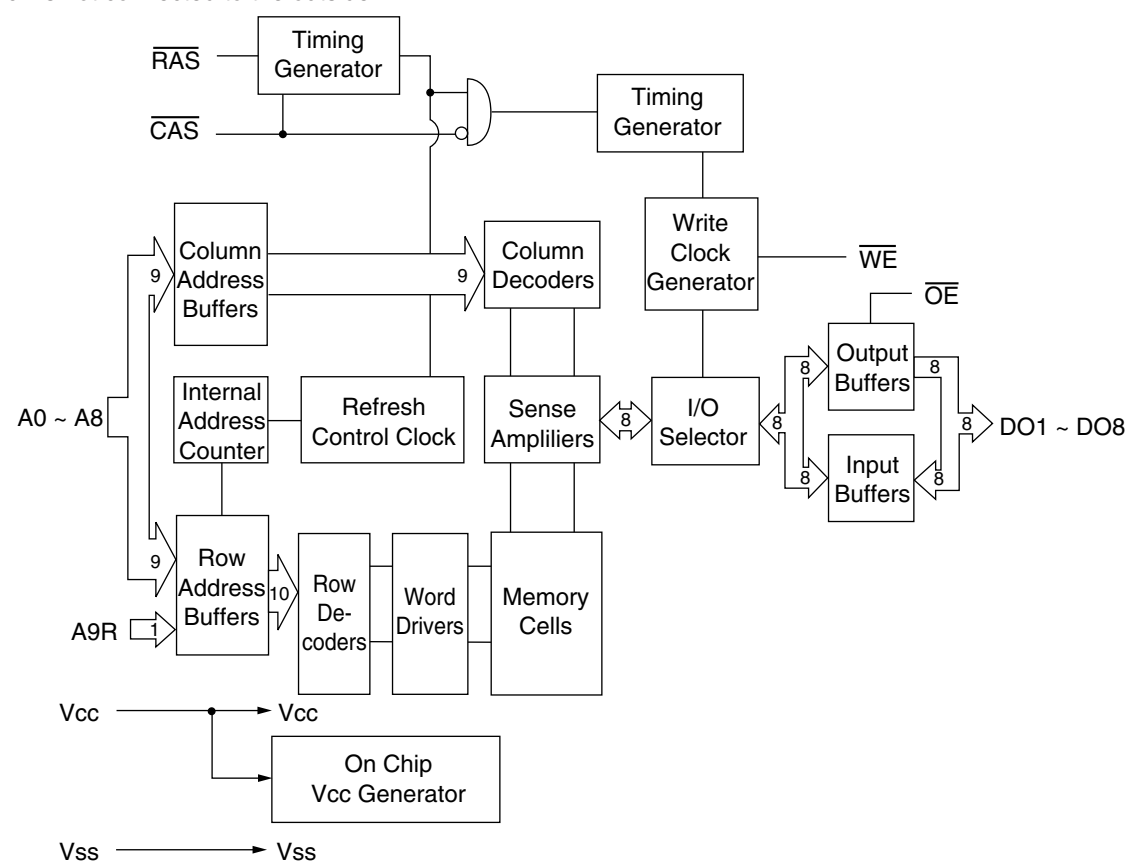
IC602 RH-iX1474GEZZ: SACD Data Processor (IX1474GE) (2/2)

Pin No.	Terminal Name	Input/Output	Function	Remarks
84	DVDD3	-	Digital power supply (3.3V)	For logic cell
85-88	SD3-SD0	Output	MPEG data output	
89	SERR	Output	MPEG data reliability flag (Data error = "L")	
90	SBGN	Output	MPEG output sector synchronous signal (Sector head = "L")	
91	SENB	Output	MPEG data effective flag (Effective = "L")	
92	SDCK	Output	MPEG data transfer clock	
93	DVSS	-	Digital power supply (0V)	For logic cell
94	SREQ	Input	MPEG data request flag (In case of request = "L")	Level TTL
95	RSTN	Input	Hard reset input (In case of reset = "L")	
96	DVDD3	-	Digital power supply (3.3V)	For logic cell
97	STDA	Output	Status data output	
98	STCK	Output	Status clock output	
99	UPWM	Output	Universal PWM output	
100	DVSS	-	Digital power supply (0V)	For logic cell

IC603 VHiSC514870SJ: 4Mbit DRAM (SC514870SJ)

Pin No.	Terminal Name	Function
10-13, 16-20, 9	A0-A8, A9R	Address input
8	RAS	Row address strobe
23	CAS	Column address strobe
2-5, 24-27	DQ1-DQ8	Data input/Data output
22	OE	Output enable
7	WE	Write enable
1	VCC	Power supply (5V)
15, 28	VSS	Ground (0V)
6*, 21*	NC	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (1/3)

Pin No.	Terminal Name	Input/Output	Function	Remarks							
1	VSS	-	Digital ground terminal								
2	BCK	Output	Bit clock (1.4122 MHz) output terminal								
3	AOUT	Output	Audio data output terminal								
4	DOUT	Output	Digital-out output terminal								
5*	MBOV	Output	When buffer memory over signal output terminal is over: "H"								
6	IPF	Output	When AOUT output of correction flag output terminal shows the correction impossible symbol: "H"								
7*	SBOK	Output	When CRCC judgment result output terminal of sub-code Q data shows OK: "H"								
8*	CLCK	Input/Output	Can be selected by using the clock output/input terminal command bit for reading sub-code P-W data.								
9	VDD	-	Digital + power terminal								
10	VSS	-	Digital ground terminal								
11*	DATA	Output	Sub-code P-W data output terminal								
12*	SFSY	Output	Reproductive frame sync signal output terminal								
13	SBSY	Output	When sub-code sync of sub-code block sync output terminal is detected: "H" at the position of SI								
14*	SPCK	Output	Output terminal of the clock (176.4 kHz) for reading processor status signals								
15*	SPDA	Output	Processor status signal output terminal								
16*	COFS	Output	Correction frame clock (7.35 kHz) output terminal								
17*	MDNIT	Output	Can monitor DSP internal flag and PLL clock by using microcomputer commands of LSI internal signal monitor terminal								
18	VDD	-	Digital + power terminal								
19	TESIO0	Input	Test input/output terminal. Normally fixed at "L".								
20	P2VREF	-	PLL special 2VREF terminal								
21*	SPDO	Output	VCO center frequency shift terminal								
22*	PDOS	Output	Phase error (between EFM and PLCK) signal output terminal (to be used in case of 8-time speed operation)								
23	PDO	Output	Output terminal for phase error signal between EFM signal and PLCK signal								
24*	TMAXS	Output	TMAX detection result output terminal. Selected by command bit TMPS.								
25	TMAX	Output	<table border="1"> <thead> <tr> <th>TMAX Detection result</th> <th>TMAX Output</th> </tr> </thead> <tbody> <tr> <td>Longer than the specified frequency</td> <td>"P2VEFF"</td> </tr> <tr> <td>Shorter than the specified frequency</td> <td>"VSS"</td> </tr> <tr> <td>Within the specified frequency</td> <td>"HiZ"</td> </tr> </tbody> </table>	TMAX Detection result	TMAX Output	Longer than the specified frequency	"P2VEFF"	Shorter than the specified frequency	"VSS"	Within the specified frequency	"HiZ"
TMAX Detection result	TMAX Output										
Longer than the specified frequency	"P2VEFF"										
Shorter than the specified frequency	"VSS"										
Within the specified frequency	"HiZ"										
26	LPFN	Input	Inversion input terminal of amplifier for low-pass filter								
27	LPFO	Output	Output terminal of amplifier for low-pass filter								
28	PVREF	-	VREF terminal for PLL system								
29	VCOREF	Input	VCO center frequency reference level terminal. Normally fixed at "PVREF".								
30	VCOF	Output	Filter terminal for VCO								
31	AVSS	-	Analog system ground terminal								
32	SLCO	Output	Output terminal of DAC for generating data slice level								
33	RFI	Input	RF signal input terminal								
34	AVDD	-	Analog power terminal								
35	RFCT	Input	RFRP signal center level input terminal								
36	REZI	Input	Input terminal for RFRP zero-cross								
37	RFRP	Input	RF ripple signal input terminal								
38	FEI	Input	Focus error signal input terminal								
39	SBAD	Input	Sub-beam adding signal input terminal								
40	TSIN	Input	Test input terminal. Normally fixed at "Vref".								
41	TEI	Input	Tracking error signal input terminal (Input when tracking servo is ON.)								
42	TEZI	Input	Input terminal for tracking error zero cross								
43	FOO	Output	Focus equalizer output terminal								

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (2/3)

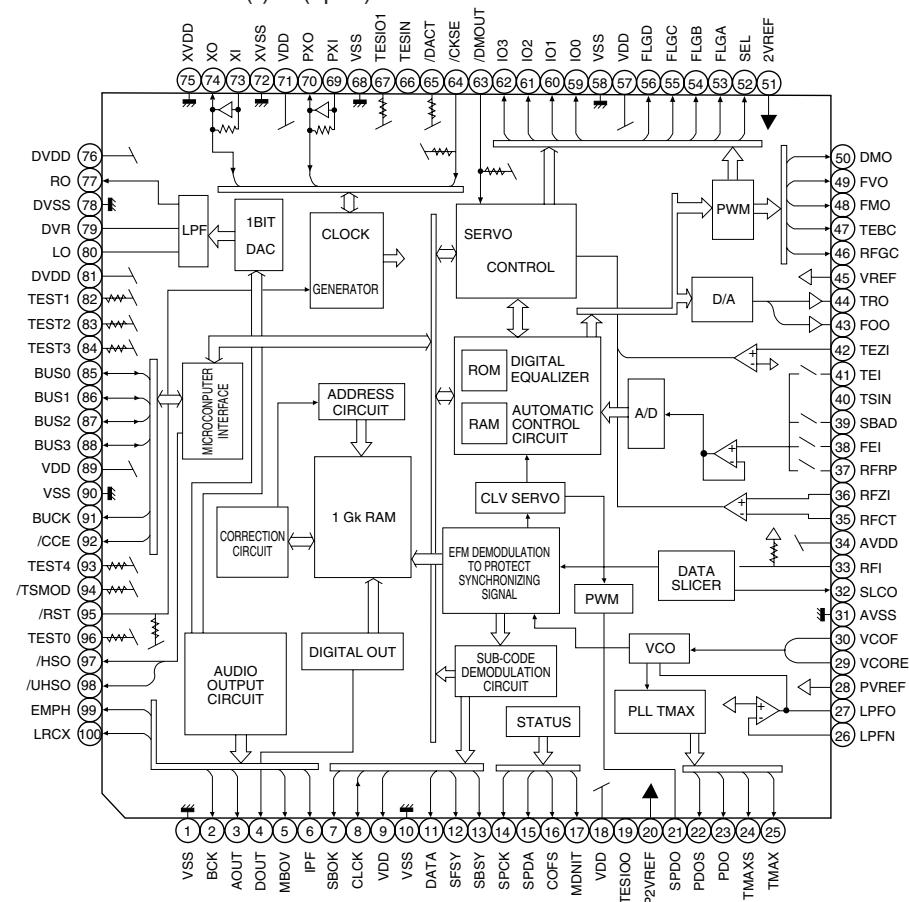
Pin No.	Terminal Name	Input/Output	Function	Remarks
44	TRO	Output	Tracking equalizer output terminal	
45	VREF	-	Analog reference power terminal	
46*	RFGC	Output	Outputs 3-pole PWM signal of RF amplitude adjusting signal output terminal. (PWM carrier = 88.2 kHz)	
47	TEBC	Output	Outputs 3-pole PWM signal of tracking balance control signal output terminal. (PWM carrier = 88.2 kHz)	
48	FMO	Output	Outputs 3-pole PWM signal of feed equalizer output terminal. (PWM carrier = 88.2 kHz)	
49*	FVO	Output	Outputs speed error signal or 3-pole PWM signal of feed search EQ output terminal. (PWM carrier = 88.2 kHz)	
50	DMO	Output	To output PWM signals of 3 poles of disc equalizer output terminal. (PWM carrier = DPS 88.2 kHz, synchronizing with PXO)	
51	2VREF	-	Reference power terminal	
52	SEL	Output	Laser diode control signal	
53	FLGA	Output	FLG-A output terminal	
54	FLGB	Output	FLG-B output terminal	
55*	FLGC	Output	FLG-C output terminal	
56	FLGD	Output	FLG-D output terminal	
57	VDD	-	Power terminal	
58	VSS	-	Connected to GND.	
59-62 (60*)	IO0-IO3	Input/Output	General-purpose I/O port Can be switched to input/output port possible according to commands. In case of input port: can read terminal condition (H/L) by read commands possible. In case of output port: can control terminal condition (H/L/HiZ) by commands possible.	
63	/DMOUT	Input	Terminal for setting the mode outputting feed equalizer binary PWM from IO0 and 1 terminals and disc equalizer binary PWM from IO2 and 3 terminals. "L": active.	
64	/CKSE	-	X'tal select terminal. In case of 16.9344MHz: "H"; in case of 33.8688 MHz: "L"	
65*	/DACT	-	Test terminal	
66	TESIN	Input	Test input terminal	
67	TESIO1	Input/Output	Test input/output terminal	
68	VSS	-	Digital ground terminal	
69	PXI	Input	DSP system clock oscillation circuit input terminal	
70	PXO	Output	DSP system clock oscillation circuit output terminal	
71	VDD	-	Digital + power terminal	
72	XVSS	-	Ground terminal for system clock oscillation circuit	
73	XI	Input	System clock oscillation circuit input terminal	
74*	XO	Output	System clock oscillation circuit output terminal	
75	XVDD	-	+ power terminal for system clock oscillation circuit	
76	DVDD	-	D/A conversion section power terminal	
77*	RO	Output	Channel R data normal rotation output terminal	
78	DVSS	-	D/A conversion section analog ground terminal	
79	DVR	-	D/A conversion section reference voltage terminal	
80*	LO	Output	Channel L data normal rotation output terminal	
81	DVDD	-	D/A conversion section power terminal	
82	TEST1	Input	Test terminal Normally open	Pull-up resistor built in
83	TEST2	Input	Test terminal Normally open	Pull-up resistor built in
84	TEST3	Input	Test terminal Normally open	Pull-up resistor built in
85	BUS0	Input/Output	Data input/output terminal for microcomputer interface	Schmitt input
86	BUS1	Input/Output		CMOS port
87	BUS2	Input/Output		
88	BUS3	Input/Output		

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

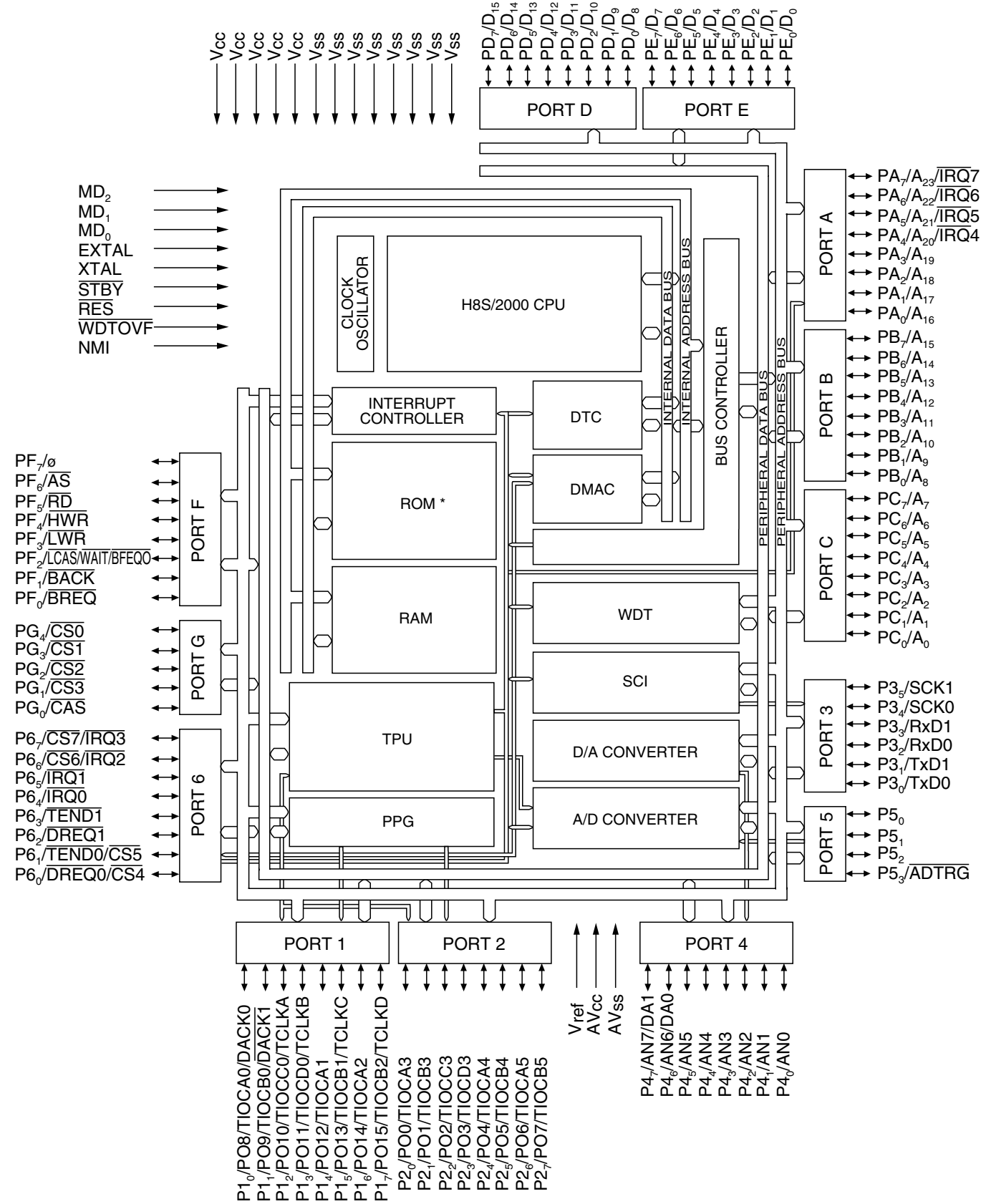
IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (3/3)

Pin No.	Terminal Name	Input/Output	Function	Remarks															
89	VDD	-	Digital + power terminal																
90	VSS	-	Digital ground terminal																
91	BUCK	Input	Clock input terminal for microcomputer interface	Schmitt input															
92	/CCE	Input	Chip enable signal input terminal for microcomputer interface "L": BUS0 to 3 are active.	Schmitt input															
93	TEST4	Input	Test terminal Normally open	Pull-up resistor built in															
94	/TSMOD	Input	Local test mode select terminal	Pull-up resistor built in															
95	/RST	Input	Reset signal input terminal "L" in case of reset	Pull-up resistor built in Pull-up resistor															
96	TEST0	Input	Test terminal Normally open	Pull-up resistor built in Pull-up resistor															
97*	/HSO	Output	Playback speed mode flag output terminal																
98*	/UHSO	Output	<table border="1"> <thead> <tr> <th>/UHSO</th> <th>/HSO</th> <th>Playback speed</th> </tr> </thead> <tbody> <tr><td>H</td><td>H</td><td>Normal speed playback</td></tr> <tr><td>H</td><td>L</td><td>Double speed playback</td></tr> <tr><td>L</td><td>H</td><td>4-time speed playback</td></tr> <tr><td>L</td><td>L</td><td>8-time speed playback</td></tr> </tbody> </table>	/UHSO	/HSO	Playback speed	H	H	Normal speed playback	H	L	Double speed playback	L	H	4-time speed playback	L	L	8-time speed playback	
/UHSO	/HSO	Playback speed																	
H	H	Normal speed playback																	
H	L	Double speed playback																	
L	H	4-time speed playback																	
L	L	8-time speed playback																	
99	EMPH	Output	Emphasis flag output terminal for sub-code Q data H: emphasis ON, L: emphasis OFF Output polarity can be inverted according to commands																
100	LRCK	Output	Channel clock (44.1 kHz) output terminal L channel: L, R channel: H Output polarity can be inverted according to commands																

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC801 RH-iX1478GEZZ: System Microcomputer (IX1478GE)



IC802 RH-iX1535GEZZ: Input/Output Expander (IX1535GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1	VDD	-	Power supply +3.3V
2-4	HADR0-HADR2	Input	CPU address bus
5	HCS	Input	CPU chip select
6	HWR	Input	CPU write signal
7	HRD	Input	CPU read signal
8-15	HDATA0-HDATA7	Input/Output	CPU data bus
16	VSS	-	Digital GND
17	VDD	-	Power supply +3.3V
18	EXPPAL0, SLDCK 1	Output	Driving clock output for stepping motor driver
19	EXPPAL1, SLDCK 2	Output	Mode control output for stepping motor driver
20	EXPPAL2, CW/CCW	Output	Rotating direction control output for stepping motor driver
21	EXPPAL3, DACCK	Output	Clock signal for electronic capacity IC
22	EXPPAU0, DACDT	Output	Data signal for electronic capacity IC
23*	EXPPAU1	Input/Output	General input/output terminal Gr.A
24	VSS	-	Digital GND
25	VDD	-	Power supply +3.3V
26	EXPPAU2	Input	General input/output terminal Gr.A
27	EXPPAU3	Output	General input/output terminal Gr.A
28	EXPBL0, EXTCK	Output	Control clock output to 1-bit amplifier
29	EXPBL1, EXTDO	Output	Control data output to 1-bit amplifier
30	EXPBL2, EXTST	Output	Control strobe output to 1-bit amplifier
31	EXPBL3, VOLCS	Output	Chip select signal for electronic capacity IC
32	VSS	-	Digital GND
33	VDD	-	Power supply +3.3V
34	EXPBU0, EXTDI	Input	Control data input from 1-bit amplifier
35	EXPBU1, MECSW1	Input	Tray position detection input
36	EXPBU2, MECSW2	Input	Mechanism stop mode detection input
37	EXPBU3, SMODE	Input	Operating mode set input. Opened (S-MODE)
38	EXPC0, DVD_L	Output	SACD disc inserted/CD stopped: L
39	EXPC1, SMUTE	Output	Soft mute signal for SACD decoder
40	EXPC2, AMUTE	Output	Audio mute. In case of playback/manual search
41	VSS	-	Digital GND
42	EXPC3	Input/Output	General input/output terminal Gr.C
43	EXPC4, DSDCTL	Output	Output control signal for DSD 1-bit signal
44	EXPC5, SEEK	Output	General input/output terminal Gr.C
45	EXPD0, GAIN0	Output	Gain control signal for RF pre-amplifier
46	EXPD1, GAIN1	Output	Gain control signal for RF pre-amplifier
47	EXPD2, GAIN2	Output	Gain control signal for RF pre-amplifier
48	VSS	-	Digital GND
49	VDD	-	Power supply +3.3V
50	EXPD3, MMUTE	Output	Main relay control signal. After reading disc TOC: "H"
51	EXPD4	Input/Output	General input/output terminal Gr.D
52	EXPD5, EMPH	Output	De-emphasis signal output
53	BUFDO, RST_01	Output	Buffer output D/Reset signal output for peripheral IC
54	BUFDI	Input	Buffer input D
55	SBUFBO	Output	Schmitt buffer output B
56	SBUFB I	Input	Schmitt buffer input B
57	SBUFAO	Output	Schmitt buffer output A
58	SBUFA I	Input	Schmitt buffer input A
59	MRST	Input	Reset terminal

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

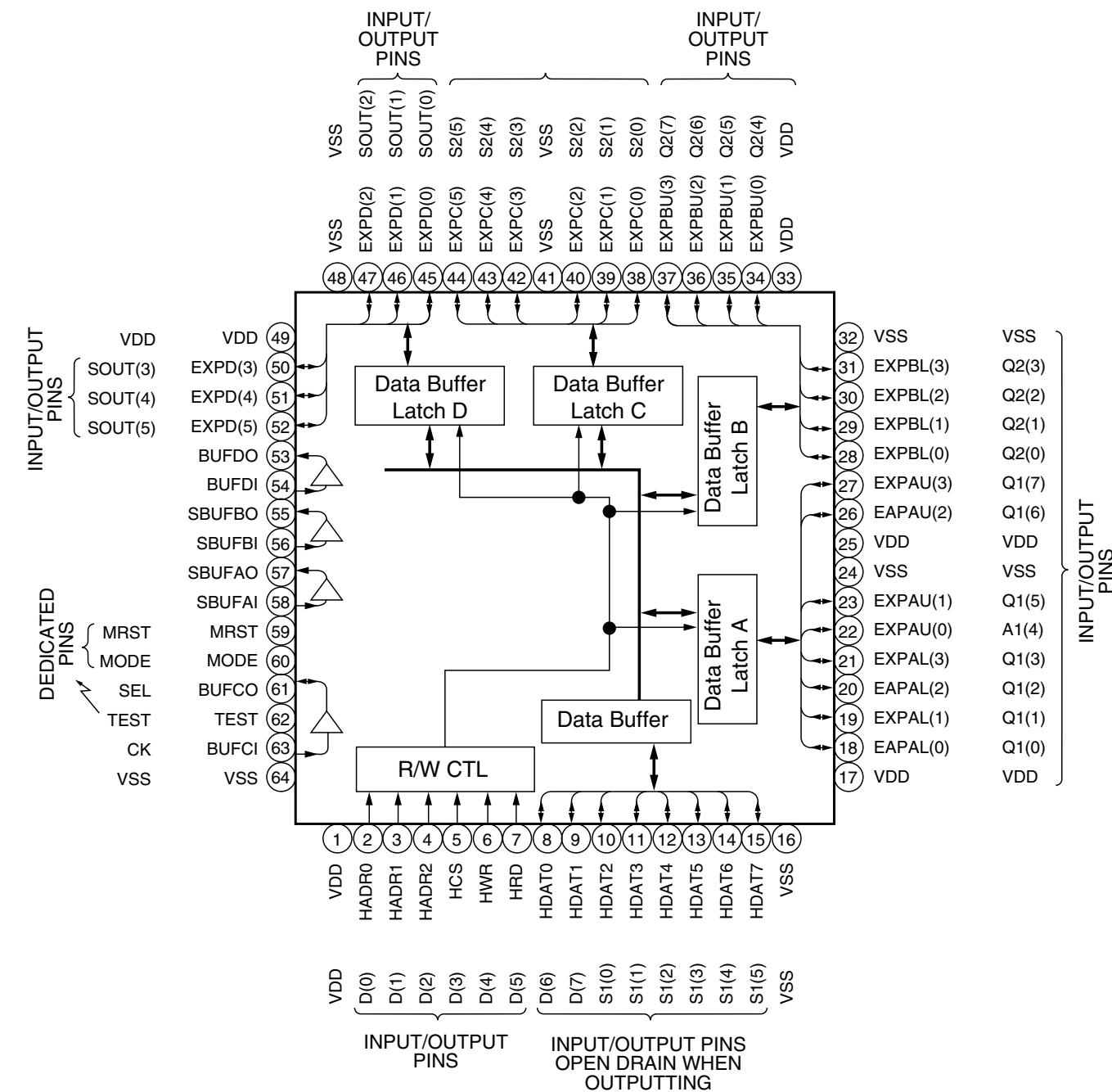
IC802 RH-iX1535GEZZ: Input/Output Expander (IX1535GE) (2/2)

Pin No.	Terminal Name	Input/Output	Function
60	MODE	Input	Mode switching terminal. Fix at "L".
61	BUFCO	Input/Output	Buffer output C
62	TEST	Input	Test terminal. Fixed at "L".
63	BUFCI	Input	Buffer input C. Not used.
64	VSS	-	Digital GND

Pins 1 to 15: Simultaneous changes possible. Operating frequency: approx. 10MHz

Pins 18 to 47: Simultaneous changes possible. (Static signal) Operating frequency: approx. 1kHz

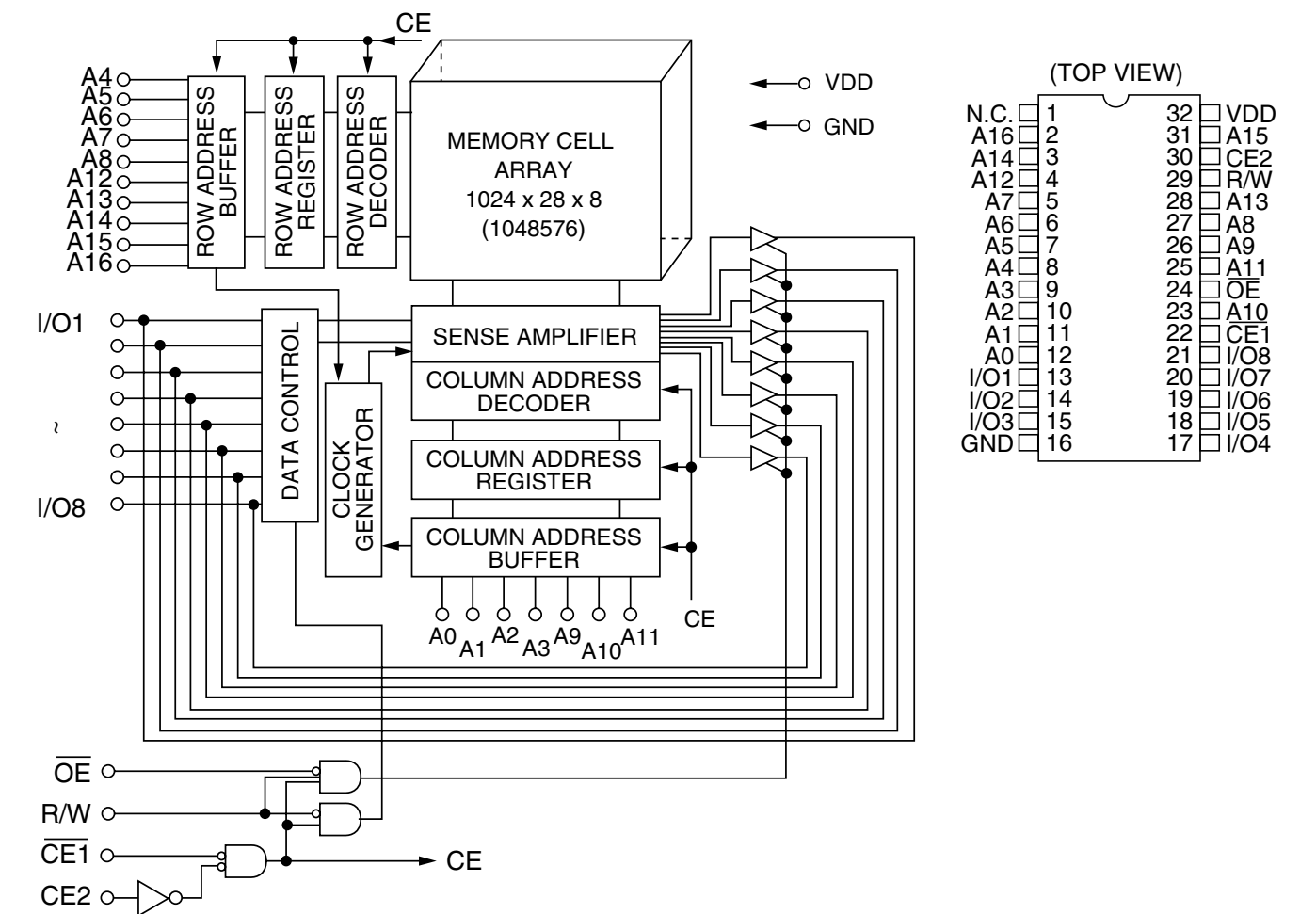
Pins 50 to 57: Simultaneous changes almost impossible. Operating frequency: approx. 1kHz



IC804 RH-iX2839AFZZ: 1Mbit SRAM (IX2839AF)

Pin No.	Terminal Name	Function
1*	NC	Not used
2	A16	Address input
3	A14	Address input
4	A12	Address input
5-12	A7-A0	Address input
13-15	I/O1-I/O3	Data input/output
16	GND	Ground
17-21	I/O4-I/O8	Data input/output
22	CE1	Chip enable input
23	A10	Address input
24	OE	Output enable input
25	A11	Address input
26, 27	A9, A8	Address input
28	A13	Address input
29	R/W	Read/Write input
30	CE2	Chip enable input
31	A15	Address input
32	VDD	Power terminal (+5V)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC805 RH-iX1539GEZZ: Flash ROM (IX1539GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1-3	A15-A13	Input	Block select addresses: Select 1/32 erase block. These addresses are latched during data entry, erase and lock block.
4-8	A12-A8	Input	Word select addresses: Select one word in 1.6k byte block. These addresses are latched during data entry.
9*, 10*	NC	-	Not used
11	WR	Input	Write enable: Controls access to command user interface, to data cue register and to address cue latch. At Low, WR is active to input address and data at leading edge.
12	/RP	Input	Reset/power-down: By setting /RP at Low, control circuit is initialized when supplying power. When supplying/breaking power, /RP pin is maintained at Low to protect data. If /RP is at Low, device is in condition of deep power down. To return from the deep power down, 480ns is required. When pin /RP is at Low, all chip operation is interrupted and reset. After return, device reads array.
13	VPP	-	Device power supply: 5.0 V
14	/WP	-	Write/Erase power supply: 5.0±0.5V is applied during the writing/erasing operation.
15	RY/BY	Output	Ready/Busy: Outputs the condition of the internal write state machine. "Low" shows the write state machine is in operation. When the machine is waiting for the next instruction to operate, interrupting erasing, or in deep power-down condition, RY/BY pin is in the float condition.
16,17	A18, A17	Input	Block select addresses: Select 1/32 erase block. These addresses are latched during data entry, erase and lock block.
18-25	A7-A0	Input	Word select addresses: Select one word in 1.6k byte block. These addresses are latched during data entry.
26	/CE	Input	Chip enable: Makes control logic, input buffer, decoder, and sense amplifier of the device active. Only when /CE is Low, chip becomes active.
27	GND	-	Ground
28	/OE	Input	Output enable: By setting /OE at Low, data are output from pin DQ. If /OE is set at High, pin DP becomes in the float condition.
29	DQ0	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
30	DQ8	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
31	DQ1	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
32	DQ9	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
33	DQ2	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
34	DQ10	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
35	DQ3	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
36	DQ11	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
37	VCC	-	Device power supply: 5.0±0.5V
38	DQ4	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
39	DQ12	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
40	DQ5	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
41	DQ13	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC901 VHiCXD2751Q-1: SACD Playback Signal Processor (CXD2751Q) (1/2)

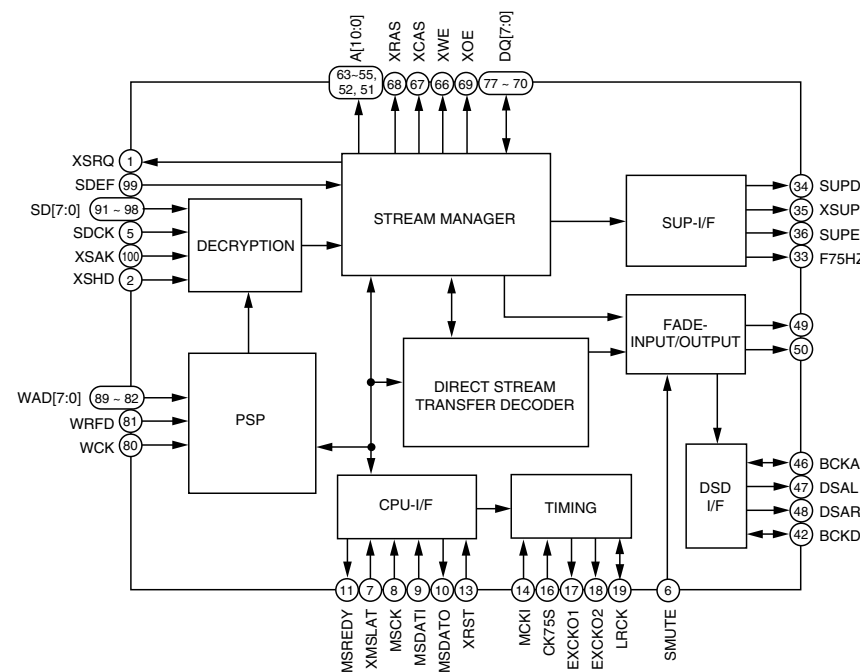
Pin No.	Terminal Name	Input/Output	Function
1	XSRQ	Output	Output terminal for data request to be input in the front end processor.
2	XSHD	Input	Input terminal for header flag to be output from the front end processor.
3	VDD	-	Power supply terminal, +3.3V
4	VSS	-	Ground terminal
5	SDCK	Input	Input terminal for data transmitting clock to be output from the front end processor
6	SMUTE	Input	Soft mute terminal H: Soft mute of audio output, L: Released
7	XMSLAT	Input	Latch input terminal for microcomputer serial communication Latches addresses and data when this terminal rises.
8	MSCK	Input	Shift clock input terminal for microcomputer serial communication Inputs and shifts the serial input data when the clock to be input in this terminal rises. Read-out data change when the clock to be input in this terminal falls.
9	MSDATI	Input	Data input terminal for microcomputer serial communication (Microcomputer -> CXD2751Q) Inputs serial data and addresses for communication.
10	MSDATO	Output	Data input terminal for microcomputer serial communication (CXD2751Q -> Microcomputer) High impedance except during output
11	MSREDY	Output	Ready-to-output flag for microcomputer serial communication. Outputs "L", if complete. Open drain.
12*	XMSDOE	Output	Data enable terminal for microcomputer serial communication Makes this terminal active when using the try state buffer outside.
13	XRST	Input	Resets entire IC when reset terminal is "L". Clock which is output from output terminals EXCKO1, EXCKO2, and LRCK does not stop during reset.
14	MCKI	Input	Master clock input terminal Inputs clock of 512Fs (22.579 MHz) or 768Fs (33.869 MHz).
15	VSS	-	Ground terminal
16	CK75S	Input	Master clock select terminal. Selects "H" in case of 768Fs and "L" in case of 512Fs.
17	EXCKO1	Output	External output clock terminal 1. Outputs 768Fs/512Fs/256Fs/128Fs according to setting.
18*	EXCKO2	Output	External output clock terminal 2. Outputs 768Fs/512Fs/256Fs/128Fs according to setting.
19*	LRCK	Input/Output	IFs (44.1kHz) clock input/output terminal. Selects master/slave according to setting.
20*	NC	-	Not used
21*	MNT2	Output	Monitor output terminal. Outputs partial internal operation according to setting.
22	TRST	Input	Reset terminal for test. Inputs power-on reset signal or fixed at "L".
23	TCK	Input	Test clock input terminal. Fixed at "L".
24*	TDI	Input	Test input terminal. Open
25*	TENA1	Input	Test input terminal. Open
26*	TDO	Output	Test input terminal. Open
27	VST	-	Test ground terminal. Connected to ground
28	VDD	-	Power supply terminal, +3.3V
29	VSS	-	Ground terminal
30*, 31*	MNT1, MNT0	Output	Monitor output terminal. Outputs partial internal operation according to setting.
32*	XBIT	Output	DST related monitor terminal. Not connected.
33*	F75HZ	Output	75Hz clock output terminal
34*	SUPDAT	Output	Supplementary data serial output terminal
35*	XSUPAK	Output	Supplementary data effective flag terminal Outputs "L" when supplementary data are effective.
36*	SUPEN	Output	Supplementary data byte-unit enable output terminal Changes to "H" at the break of 1 byte (8 bits) of serial data.
37	TEST1	Input	Test input terminal. Fixed at "L".
38	VSS	-	Ground terminal
39	TEST2	Input	Test input terminal. Fixed at "L".
40, 41	VSS	-	Ground terminal
42*	BCKD	Input/Output	Phase reference signal input/output terminal for DSD data phase modulation output Input/output according to setting
43*-45*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC901 VHiCXD2751Q-1: SACD Playback Signal Processor (CXD2751Q) (2/2)

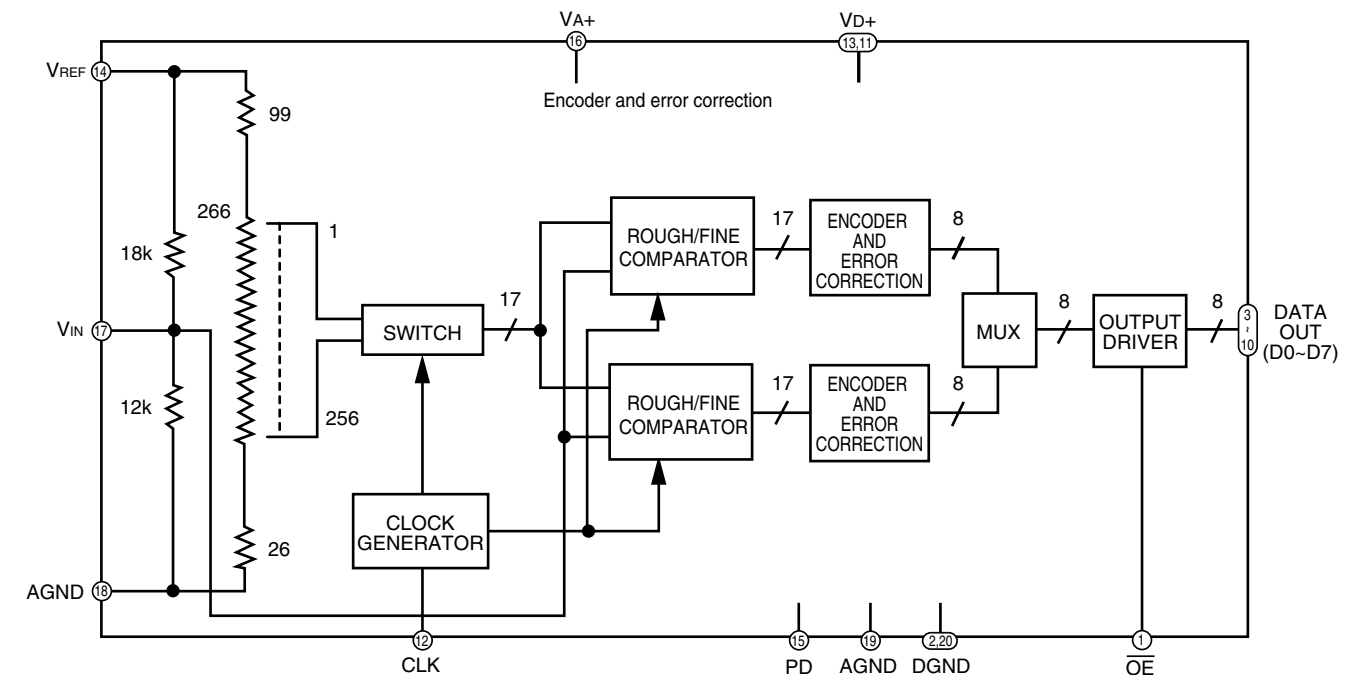
Pin No.	Terminal Name	Input/Output	Function
46	BCKA	Input/Output	Shift clock input/output terminal for DSD data output. Input/output according to setting.
47	DSAL	Output	Lch-DSD data output terminal. Phase modulation output according to setting.
48	DSAR	Output	Rch-DSD data output terminal. Phase modulation output according to setting.
49	ZDFLGL	Output	Lch zero data detection flag. "H": when silent data continue for 300msec.
50	ZDFLGR	Output	Rch zero data detection flag. "H": when silent data continue for 300msec.
51	A0	Output	DRAM address output terminal (LSB)
52	A1	Output	DRAM address output terminal
53	VDD	-	Power supply terminal, +3.3V
54	VSS	-	Ground terminal
55-62	A2-A9	Output	DRAM address output terminal
63	A10	Output	DRAM address output terminal (MSB)
64*	NC	-	Not used
65	VSS	-	Ground terminal
66	XWE	Output	DRAM write enable output terminal. Connected to WE terminal of DRAM.
67	XCAS	Output	DRAM column address strobe output terminal. Connected to CAS terminal of DRAM.
68	XRAS	Output	DRAM row address strobe output terminal. Connected RAS terminal of DRAM.
69	XOE	Output	DRAM read enable output terminal. Connected OE terminal of DRAM.
70-77	DQ0-DQ7	Input/Output	DRAM data input/output terminal
78	VDD	-	Power supply terminal, +3.3V
79	VSS	-	Ground terminal
80	WCK	Input	Operation clock for detecting PSP physical disc mark. Inputs 27.00MHz.
81	WRFD	Input	RF data input terminal for detecting PSP physical disc mark Inputs RF data made binary by slicer.
82	WAD0	Input	A/D data input/output terminal for detecting PSP physical disc mark (LSB)
83-88	WAD1-WAD6	Input	A/D data input/output terminal for detecting PSP physical disc mark
89	WAD7	Input	A/D data input/output terminal for detecting PSP physical disc mark (MSB)
90	VSS	-	Ground terminal
91	SD7	Input	Input terminal for stream data to be output from the front end processor (MSB)
92-97	SD6-SD1	Input	Input terminal for stream data to be output from the front end processor
98	SD0	Input	Input terminal for stream data to be output from the front end processor (LSB)
99	SDEF	Input	Input terminal for error flag to be output from the front end processor
100	XSAK	Input	Input terminal for data effective flag to be output from the front end processor

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC902 VHiADC08351-1: A/D Converter (ADC08351)

Pin No.	Terminal Name	Function
1	OE	CMOS/TTL compatible digital input terminal. When this terminal is set to Low, digital output of ADC08351 becomes enable. When this terminal is set to High, digital output changes to the high-impedance condition.
2	DGND	Ground return circuit terminal for digital power supply.
3-10	D0-D7	Conversion data output terminal. C0 shows LSB, and D7 shows MBS. Effective data are output on data bus immediately after CLK input rising edge. When OE terminal is set to Low, these terminals become enable.
11	VD	Positive digital power voltage terminal. Connected to +3V power supply. VA and VD are supplied from the common power supply.
12	CLK	CMOS/TTL compatible clock input terminal. VIN is sampled at CLK input trailing edge.
13	VD	Positive digital power voltage terminal. Connected to +3V voltage power.
14	VREF	Positive reference voltage input terminal. Voltage of this terminal ranges from 0.75V to VA.
15	PD	CMOS/TTL compatible digital input terminal. When this terminal is set to High, ADC08351 enters the power down mode, minimizing power consumption. When this is set to Low, the device enters the normal operation mode.
16	VA	Positive analog power voltage terminal: To connect +3V voltage power.
17	VIN	Analog signal input. Convertible input ranges from 0.5Vp-p to 0.68Va.
18, 19	AGND	Ground return circuit terminal for analog power supply.
20	DGND	Ground return circuit terminal for digital power supply.

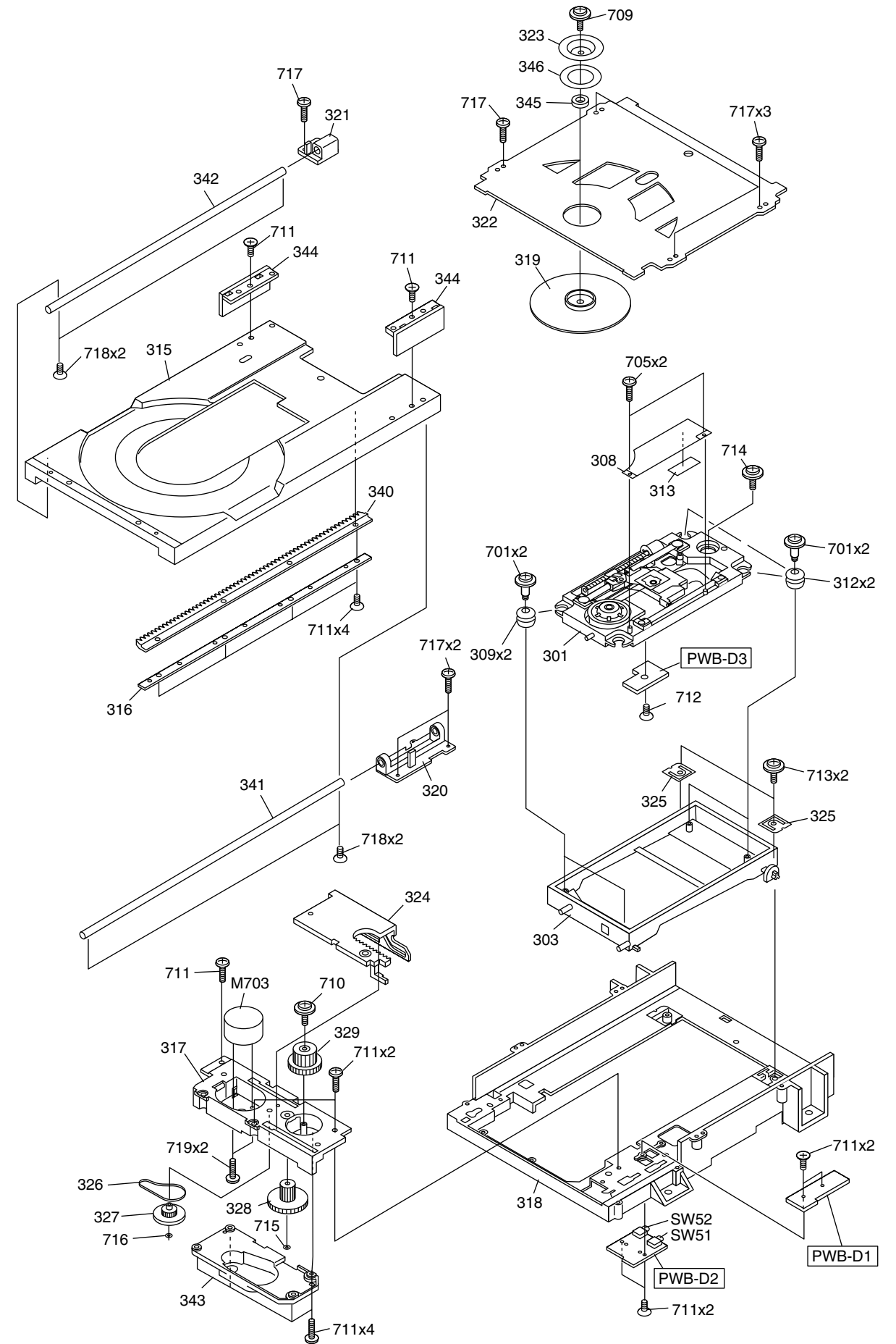
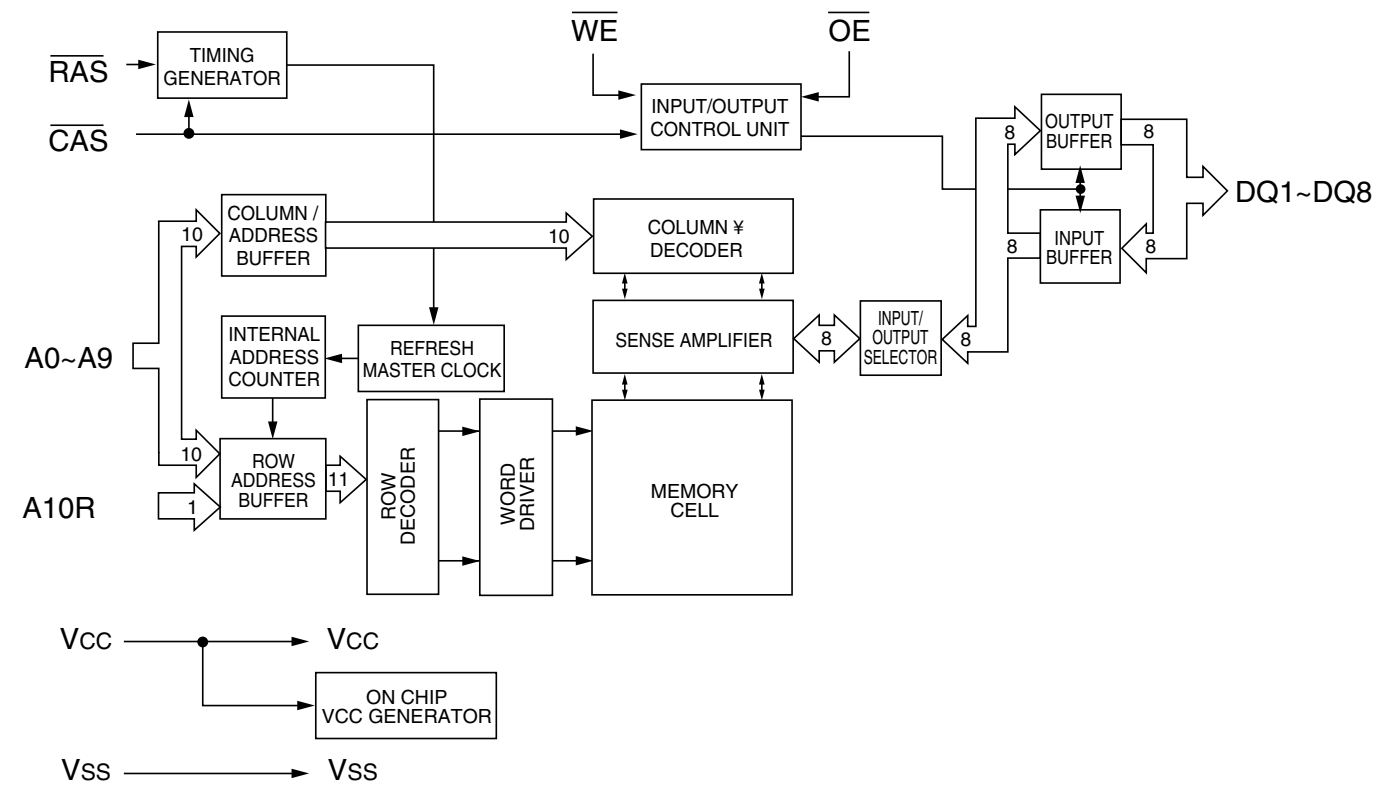
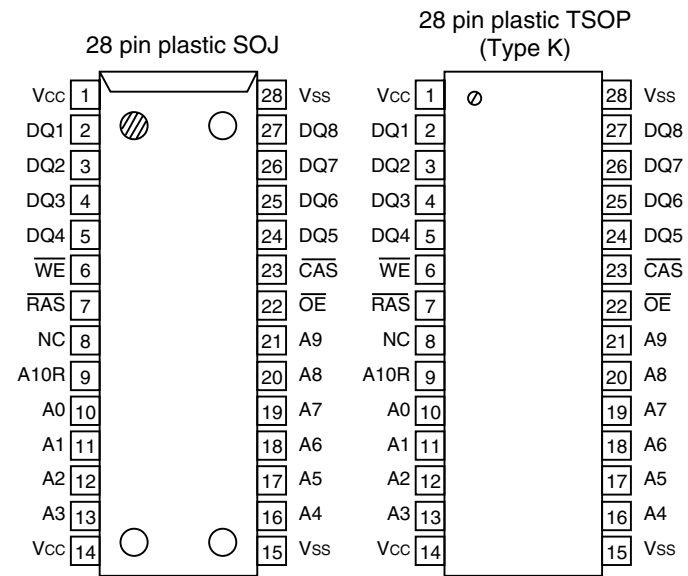


2.6 EXPLODED VIEW AND PARTS LIST

IC903 RH-iX2840AFZZ: 16Mbit SDRAM (IX2840AF)

Pin No.	Terminal Name	Function
1	VCC	Power supply (3.3V)
2-5	DQ1-DQ4	Data input/output
6	\overline{WE}	Write enable
7	\overline{RAS}	Row address strobe
8*	NC	Not used
9	A10R	Address input
10-13	A0-A3	Address input
14	VCC	Power supply (3.3V)
15	VSS	Ground (0V)
16-21	A4-A9	Address input
22	\overline{OE}	Output enable
23	\overline{CAS}	Column address strobe
24-27	DQ5-Q8	Data input/output
28	VSS	Ground (0V)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



2.7 ELECTRICAL PARTS LIST

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
301		9965 000 06889	SACD MECHANISM ASSY MOTOR DC <=37.5W	*ZZ001620R
303		9965 000 06890	HOLDER, STEEL MECHANISM	392K271200
309		9965 000 06891	SHOCK ABSORBER FLOAT RUBBER	392K130200
312		9965 000 06892	SHOCK ABSORBER FLOAT RUBBER	392K130210
315		9965 000 06893	TRAY, STEEL TRAY	392K163200
319		9965 000 06894	DISC, STEEL STABILIZER	392K104200
320		9965 000 06895	HOLDER, STEEL SHAFT A	392K106200
321		9965 000 06896	HOLDER, STEEL SHAFT B	392K106210
323		9965 000 06897	PLATE, STEEL YOKE	392K104210
324		9965 000 06898	LEVER, STEEL LIFT	392K354200
325		9965 000 06899	SPRING HOLD	392K116200
326		9965 000 06900	BELT, DRIVING TIMING	392K264200
327		9965 000 06901	PULLEY, STEEL	392K262200
328		9965 000 06902	TOOTHED WHEEL GEAR	392K058200
329		9965 000 06903	TOOTHED WHEEL TRAY GEAR	392K058210
340		9965 000 06904	GEAR TRAY RACK GEAR	392K058220
345		9965 000 06905	MAGNET	392K305200
346		9965 000 06906	DISC, PLASTIC HIMELON SHEET	392K107200
709		9965 000 06907	SCREW, STEEL	392K010200
M703		9965 000 06908	LOADING MOTOR ASSY MOTOR DC <=37.5W	*ZZ001630R
PWB-D1-D3		9965 000 06909	PR.CIRCUIT, COMPACT DISC TRAY SENSOR/SWITCH/ PICKUP IN S	*ZZ001650R

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
CNP 501		9965 000 06886	CONNECTOR, PLUG 4P	*YP200040R
CNS 501		9965 000 06887	CONNECTOR, SOCKET 30P	*YJ002240R
CNS 502		9965 000 06888	CONNECTOR, SOCKET 11P	*YJ002250R
D0501		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0502		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0503		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0504		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0505		9965 000 06882	DIODE, DAP202U POWER RECTIFIER	HZ20001210
D0801		9965 000 06882	DIODE, DAN202K POWER RECTIFIER	HZ20002210
D0802		9965 000 06882	DIODE, DAP202U POWER RECTIFIER	HZ20001210
DZ501		9340 548 52115	DIODE, PDZ5.1B REFERENCE	*HZ300050R
FL801		9965 000 06884	FILTER, CERAMIC 20MHz	*FQ000510R
IC501		9965 000 06864	IC TA1244FN I/V CONVERTER	*HC106400R
IC502		9965 000 06865	PROCESSOR IX1517GE RF SIGNAL	*HC106410R
IC503		9965 000 06866	IC IX2842AF STEPPING MOTOR DRIVER	*HC106430R
IC504		9965 000 06867	IC NJM234V SPINDLE MOTOR DRIVER	*HC106440R
IC506		9965 000 06868	IC BA6796FP LOADING/FOCUS/TRACKING/ SPIN/SLED DRIVER	*HC106450R
IC507		9965 000 06869	IC NJM2904M ANA SWITCH	*HC106470R
IC601		9965 000 06870	IC AD8052AR ANA AMPLIFIER	*HC106480R
IC602		9965 000 06871	PROCESSOR IX1474GE SACD DATA	*HC106490R
IC603		9965 000 06872	IC SC514870SJ 4M DRAM	*HC106500R
IC606		9965 000 06873	IC IX1473GE DIGITAL SERVO	*HC106510R
IC801		9965 000 06874	IC IX1478GE SYSTEM MICROCOMPUTER	*HC106520R
IC802		9965 000 06875	IC IX1535GE INPUT/OUTPUT EXPANDER	*HC106530R
IC803		4822 209 13204	IC PST9129N RESET	*HC106540R
IC804		9965 000 06876	IC IX2839AF 1M SRAM	*HC106550R
IC805		9965 000 06877	IC IX1539GE FLASH ROM	*HC106560R
IC901		9965 000 06878	PROCESSOR CXD2751Q SACD PLAYBACK SIGNAL	*HC106570R
IC902		9965 000 06879	IC ADC08351 A/D CONVERTER	*HC106580R
IC903		9965 000 06880	IC IX2840AF SDRAM	*HC106590R
PH051		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
PH052		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
PH053		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
Q0501		4822 130 60729	DIG.TR.S, <1W DTC124EK	*BA001040R
Q0502		4822 130 60729	DIG.TR.S, <1W DTC124EK	*BA001040R
Q0503		4822 130 60729	DIG.TR.S, <1W DTC124EK	*BA001040R
Q0504		9965 000 06881	DIG.TR.S, <1W 2SA1955A	*HX100080R
Q0505		9965 000 06881	DIG.TR.S, <1W 2SA1955A	*HX100080R
Q0601		4822 130 60729	DIG.TR.S, <1W DTC124EK	*BA001040R
Q0602		4822 130 60326	DIG.TR.S, <1W DTA144EK	*BA001050R
Q0801		4822 130 60729	DIG.TR.S, <1W DTC124EK	*BA001040R
X0601		9965 000 06885	CRYSTAL 5400MHz	*JX000710R