

Service Manual

DV7100 /U1B

DVD Player

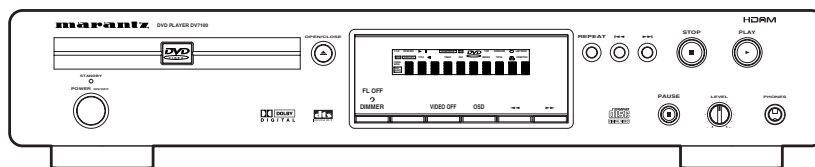


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2. DB-VLD210 (DVD Loader for MARANTZ)	
3. DB-VPB210 / 211 / 212 / 213 / 214 / 215 (DVD PCB Module for MARANTZ)	

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

marantz®

DV7100

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.

USA

MARANTZ AMERICA, INC.
440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172
USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

EUROPE / TRADING

MARANTZ EUROPE B.V.
P.O.BOX 80002, BUILDING SFF2
5600 JB EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2732241
FAX : +31 - 40 - 2735578

BRAZIL

PHILIPS DA AMAZONIA IND. ELET. ITDA
CENTRO DE INFORMACOES AO
CEP 04698-970
SAO PAULO, SP, BRAZIL
PHONE : 0800 - 123123(Discagem Direta Gratuita)
FAX : +55 11 534. 8988

PROFESSIONAL AMERICAS

SUPERSCOPE TECHNOLOGIES, INC.
MARANTZ PROFESSIONAL PRODUCTS
2640 WHITE OAK CIRCLE, SUITE A
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

PROFESSIONAL AUSTRALIA

TECHNICAL AUDIO GROUP PTY, LTD
558 DARLING STREET,
BALMAIN, NSW 2041,
AUSTRALIA
PHONE : 61 - 2 - 9810 - 5300
FAX : 61 - 2 - 9810 - 5355

CANADA

LENBROOK INDUSTRIES LIMITED
633 GRANITE COURT,
PICKERING, ONTARIO L1W 3K1
CANADA
PHONE : 905 - 831 - 6333
FAX : 905 - 831 - 6936

AUSTRALIA

QualiFi Pty Ltd,
24 LIONEL ROAD,
MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - (0)3 - 9543 - 1522
FAX : +61 - (0)3 - 9543 - 3677

THAILAND

MRZ STANDARD CO.,LTD
746 - 754 MAHACHAI ROAD.,
WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
PHONE : +66 - 2 - 222 9181
FAX : +66 - 2 - 224 6795

SINGAPORE

WO KEE HONG DISTRIBUTION PTE LTD
130 JOO SENG ROAD
#03-02 OLIVINE BUILDING
SINGAPORE 368357
PHONE : +65 858 5535 / +65 381 8621
FAX : +65 858 6078

NEW ZEALAND

WILDASH AUDIO SYSTEMS NZ
14 MALVERN ROAD MT ALBERT
AUCKLAND NEW ZEALAND
PHONE : +64 - 9 - 8451958
FAX : +64 - 9 - 8463554

TAIWAN

PAI- YUING CO., LTD.
6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 - 2 - 25221304
FAX : +886 - 2 - 25630415

MALAYSIA

WO KEE HONG ELECTRONICS SDN. BHD.
SUITE 8.1, LEVEL 8, MENARA GENESIS,
NO. 33, JALAN SULTAN ISMAIL,
50250 KUALA LUMPUR, MALAYSIA
PHONE : +60 3 - 2457677
FAX : +60 3 - 2458180

JAPAN Technical

MARANTZ JAPAN, INC.
35- 1, 7- CHOME, SAGAMIONO
SAGAMIHARA - SHI, KANAGAWA
JAPAN 228-8505
PHONE : +81 42 748 1013
FAX : +81 42 741 9190

日本マランツ株式会社

本 社 〒228-8505
神奈川県相模原市相模大野7-35-1
営業本部 〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
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

General

System	DVD system and Compact Disc digital audio system
Power requirements	
USA model	AC 120 V, 60 Hz
Australia model	AC 240 V, 50Hz
Power consumption	
USA model	14 W
Australia model	14 W
Weight	8.38 lbs (3.8 kg)
Dimensions	440 (W) x 304 (D) x 87 (H) mm (17 ⁵ / ₁₆ (W) x 12 (D) x 3 ⁷ / ₁₆ (H) in.) (Not including protruding cables, etc.)
Operating temperature	+5°C to +35°C (+36°F to 96°F)
Operating humidity	5% to 85% (no condensation)

S-Video output

Y (luminance) - Output level	1 Vp-p (75 Ω)
C (color) - Output level	286 mVp-p (75 Ω)
Jacks	S-VIDEO jack

Video output

Output level	1 Vp-p (75 Ω)
Jacks	RCA jack

Component video output

(Y, C _B , C _R)	
Output level	Y: 1.0 Vp-p (75 Ω) C _B , C _R : 0.7 Vp-p (75 Ω)
Jacks	RCA jacks

Audio output

Output level	
During audio output	200 mVrms (1 kHz, -20 dB)
Number of channels	2
Jacks	RCA jacks

Digital audio characteristics

Frequency response	4 Hz to 44kHz (DVD fs: 96 kHz)
S/N ratio	More than 115dB
Dynamic range	More than 102dB
Total harmonic distortion	0.002%
Wow and flutter	Limit of measurement (-0.001% W. PEAK) or lower

Digital output

Optical digital output	Optical digital jack
Coaxial digital output	RCA jack

Accessories

Remote control unit	1
AA (R6P) dry cell batteries	2
Audio/Video Cable	1
Remote Control Cable	1
Operating Instructions	1

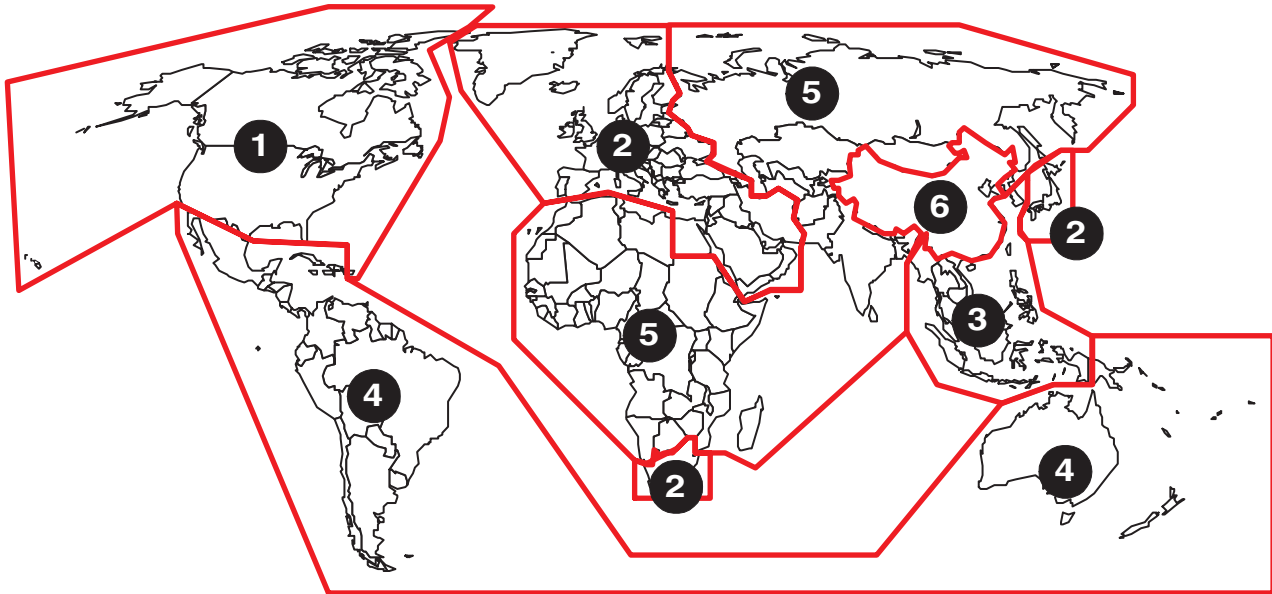
•The specifications and design of this product are subject to change without notice, due to improment.

1.2 REGIONAL CODES

What are "regional codes"?

Motion picture studios want to control the home release of movies in different countries because theater releases aren't simultaneous (a movie may come out on DVD in the US when it's just hitting screens in Europe). Therefore they have required that the DVD standard include codes which can be used to lock out the playback of certain discs in certain geo-graphical regions. Players sold in each region will have that region's code built into the player. The player will refuse to play these "region coded" discs which are not allowed in the region. However, regional codes are entirely optional. Discs without codes will play on any player in any country. Some studios have already announced that only their new releases will have regional codes. There are six regions:

- | | |
|------------------------------------|------------------------------|
| 1. United States and Canada | 2. Europe and Japan |
| 3. Far East (except Japan & China) | 4. South America and Oceania |
| 5. Africa and the Middle East | 6. China (except Hong Kong) |



Map of DVD Regions

1.3 INFORMATIONS

REGION CODE

VERSION	REGION CODE	COUNTRY
/UXX	1	USA/CANADA
/FXX	2	JAPAN
/NXX	2	EUROPE
/CXX	3	KOREA
/LXX	3	TAIWAN
/SXX	3	SINGAPORE/HONGKONG
/AXX	4	AUSTRALIA
/KXX	6	CHINA

DVD INFORMATION

Below is a glossary of the new terms related to DVD.

Title:

A disc may have more than one story/movie on it, so each story/movie is called a "title".

For example, if there are 2 movies on the disc, they are separated into Title 1 and Title 2.

Chapter:

A title may also be separated into chapters.

For example, a movie (title) may be separated into 3 scenes (chapters).

Title 1			Title 2		
Chapter 1	Chapter 2	Chapter 3	Chapter 1	Chapter 2	Chapter 3

Subtitles:

DVDs are recorded with up to 32 different subtitle languages. If a disc has more than one subtitle language, you can select the subtitle language that you want to read.

Soundtrack language:

DVDs are recorded with up to 8 different soundtrack languages. If a disc has more than one language, you can select the soundtrack language that you want to listen to.

Multi-angles:

On some DVDs, scenes have been filmed from different angles (up to a maximum of 9). On these discs, you can select the angle that you want to watch. Please refer to the DVD's manual to see which scenes have multi-angles.

Resetting the Player to System Settings:

To reset the player, press and hold [STOP] button on the front panel when pressing **Power switch** to turn the power on.

All program memory, saved settings from functions such as Last Memory and Condition Memory are cleared, and all Setup screen menus are returned to factory settings.

THE DISCS THAT THE DV7100 CAN HANDLE

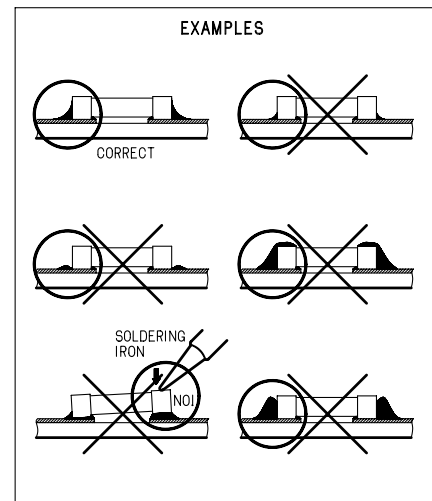
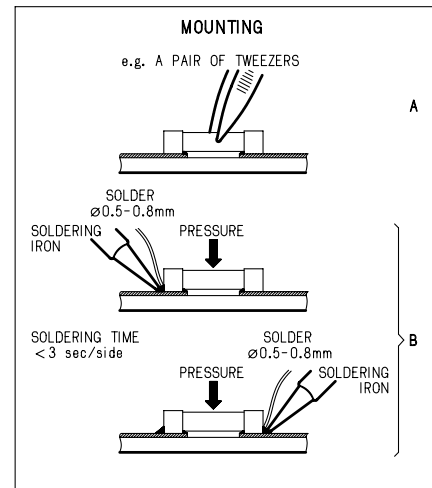
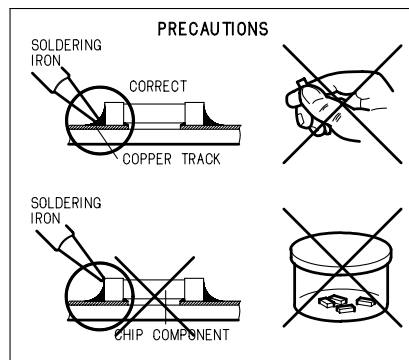
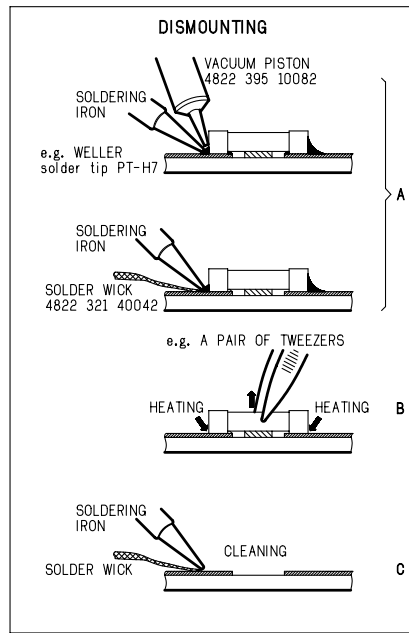
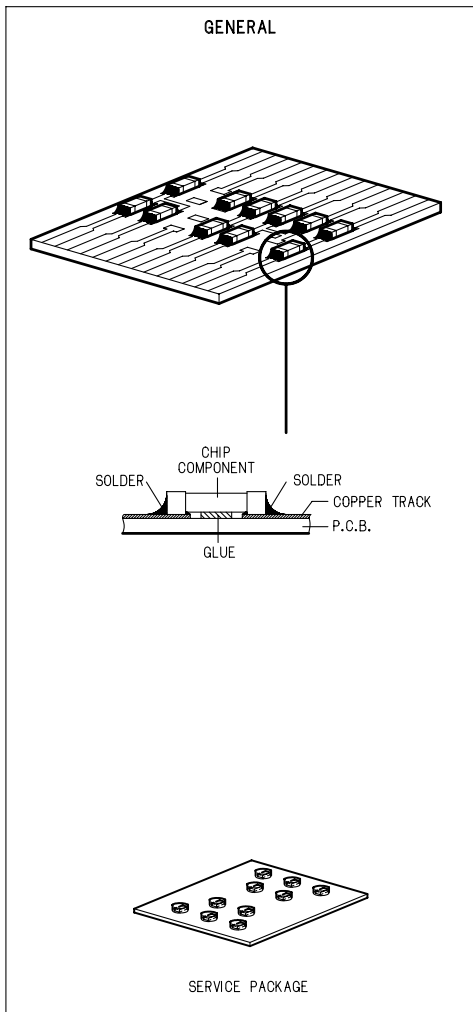
The following discs can be played back with a DV7100.

Types of playable discs and their marks	Diameter/ Playable sides	Playback time
	DVD VIDEO	Digital audio Digital video (MPEG 2)
	12 cm (5 in.)/ single-sided	1 layer 2 layer 133 min. 242 min.
	12 cm (5 in.)/ double-sided	1 layer 2 layer 266 min. 484 min.
	DVD VIDEO	Digital audio Digital video (MPEG 2)
	8 cm (3 in.)/ single-sided	1 layer 2 layer 41 min. 75 min.
	8 cm (3 in.)/ double-sided	1 layer 2 layer 82 min. 150 min.
	S VIDEO CD	Digital audio (MPEG 1) Digital video (MPEG 2) 40 min.
	S VIDEO CD single	Digital audio (MPEG 1) Digital video (MPEG 2) 10 min.
	VIDEO CD	Digital audio Digital video (MPEG 1) Max. 74 minutes
	12 cm (5 in.)/ single-sided	
	VIDEO CD single	Digital audio Digital video (MPEG 1) Max. 20 minutes
	8 cm (3 in.)/ single-sided	
	CD	Digital audio Max. 74 minutes
	12 cm (5 in.)/ single-sided	
	CD single	Digital audio Max. 20 minutes
	8 cm (3 in.)/ single-sided	

Note: The regional code of the discs must meet to the regional code of the DV7100.

1.4 SERVICING HINT

SERVICE HINTS



SERVICE TOOLS

Audio signals disc	4822 397 30184
Disc without errors (SBC444)+	
Disc with DO errors, black spots and fingerprints (SBC444A)	4822 397 30245
Disc (65 min 1kHz) without no pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
DVD test disc (NTSC) ALMEDIO	TDV-540

1.5 DISASSEMBLY

Taking the disc out for EMERGENCY (For example: when It is not possible to turn on the product. The disc cannot be taken out from the loader.)

1. Remove the top cover (001D).
2. Remove the A screw from the bridge on the loader base. (see fig. 1)
3. Remove the two C hooks of the bridge from the loader base. (see fig. 1)
4. Remove the bridge with clumper (see fig. 2). Then, It is possible to take the disc out from the loader.

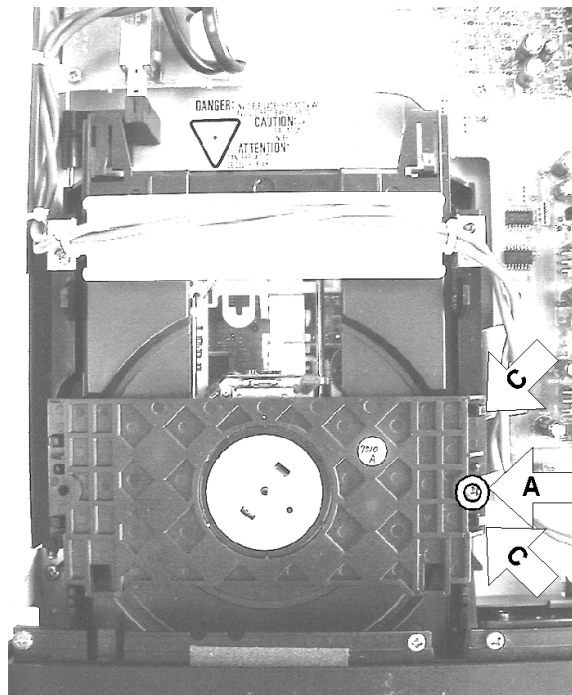


Fig. 1

Removal of the DVD module

1. Remove the top cover (001D).
2. Turn on the product and press the OPEN/CLOSE button. Then the tray is opened. (If the product shuts down the power completely, see below "REMARK".)
REMARK : Insert a screwdriver (minus) into the hole at the left side of chassis. (see fig. 4)
Turn the gear with the screwdriver. (see fig. 5)
Then the tray is moved a little. Pull the tray with your hand at this time.
3. Remove the escutcheon on the tray.
4. Press the OPEN/CLOSE. (or Push the tray with your hand.) Then the tray is closed.
5. Disconnect the two flat cables (WV01 and WP02) from the connectors on the main PCB. (see fig. 3)
6. Remove the A screw from the bridge on the loader base. (see fig. 3)
7. Cut and remove the two D cable ties from the cables and chassis. (see fig. 3)
8. Remove the DVD module from the chassis, while sliding it in the direction of the rear panel.

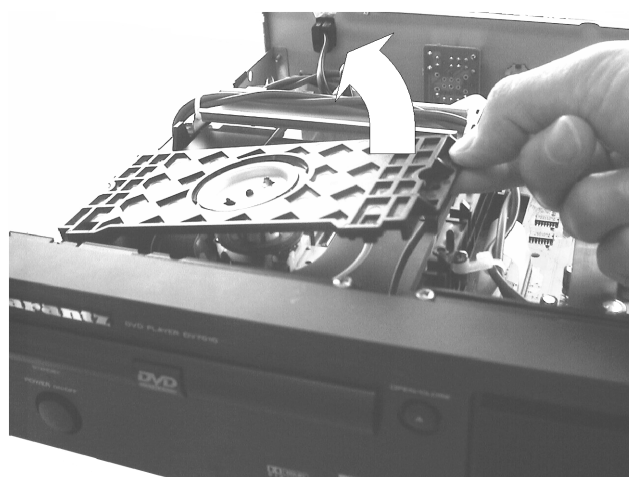


Fig. 2

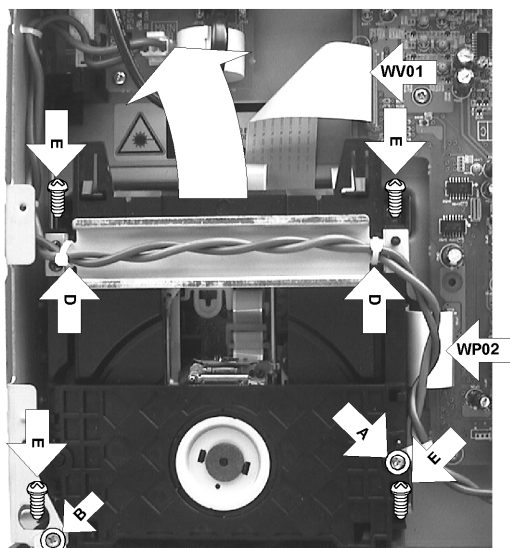


Fig. 3

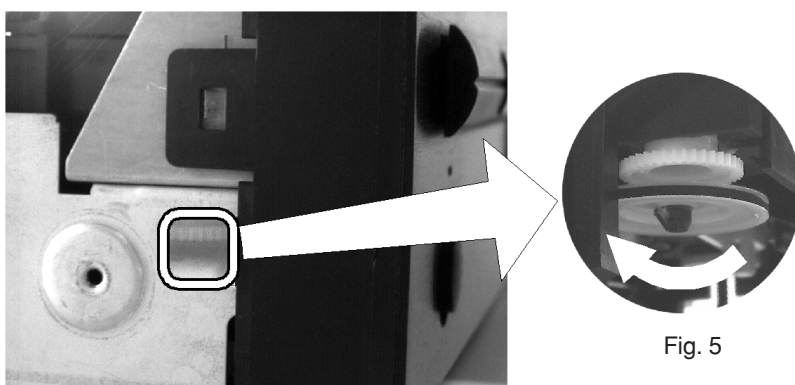
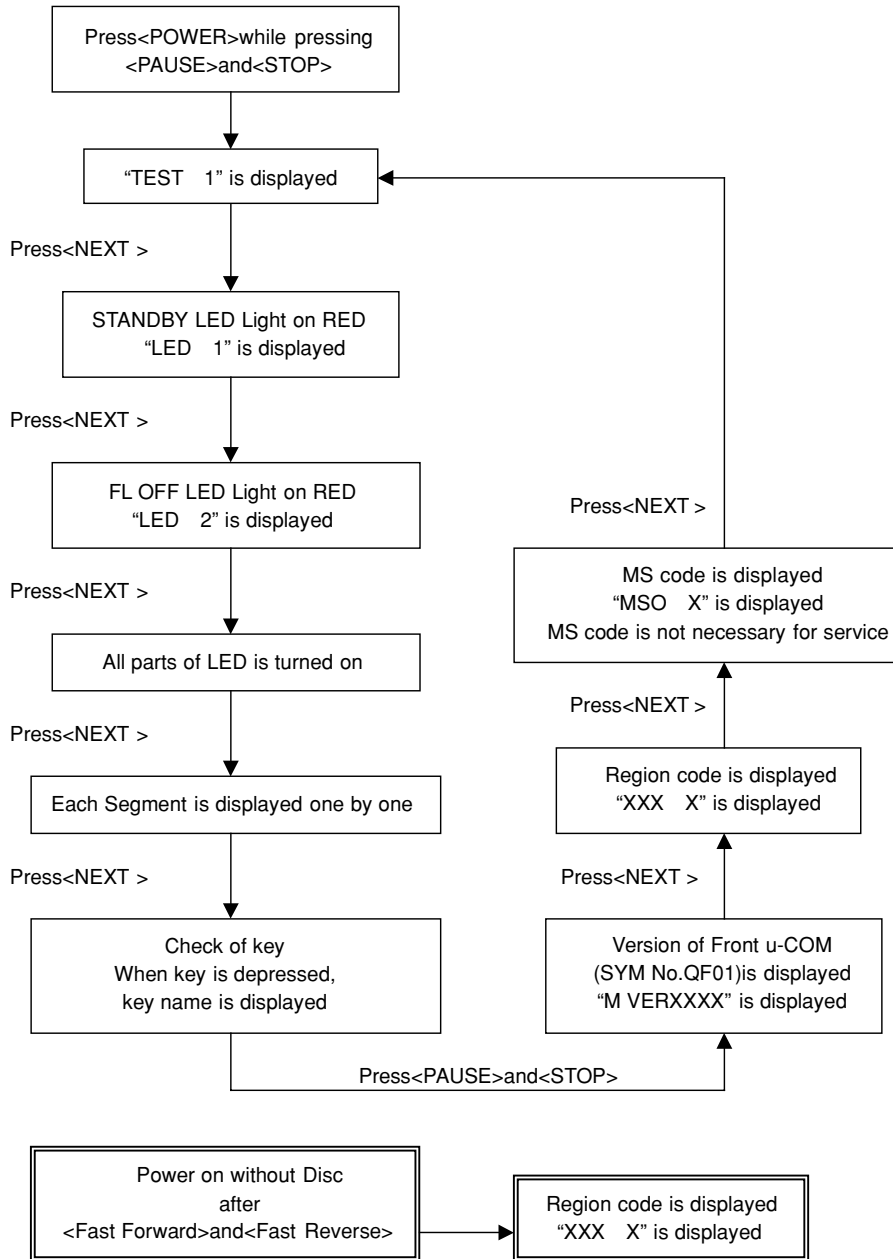


Fig. 4

Fig. 5

1.6 SERVICE MODE

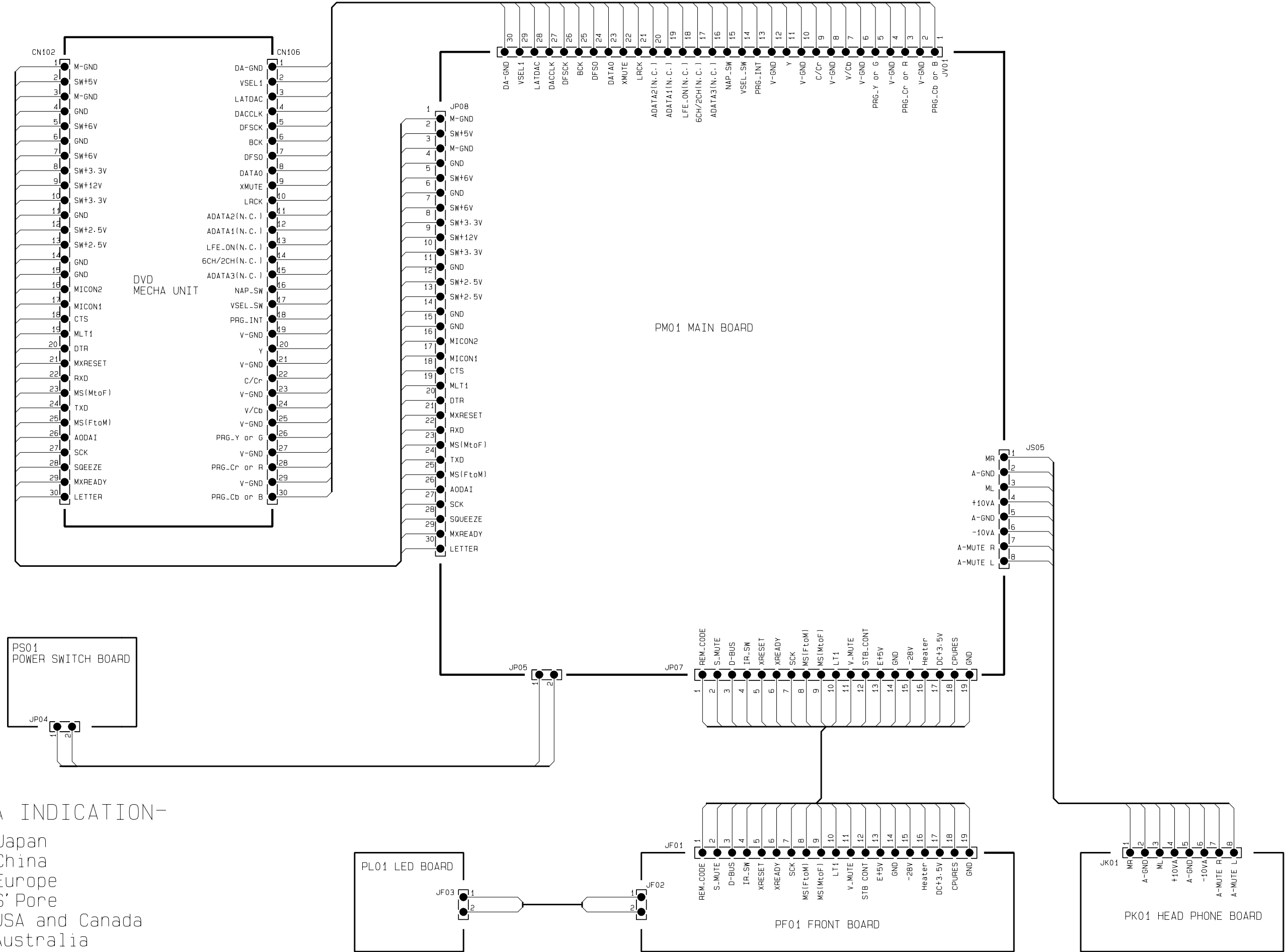


ERROR CODE

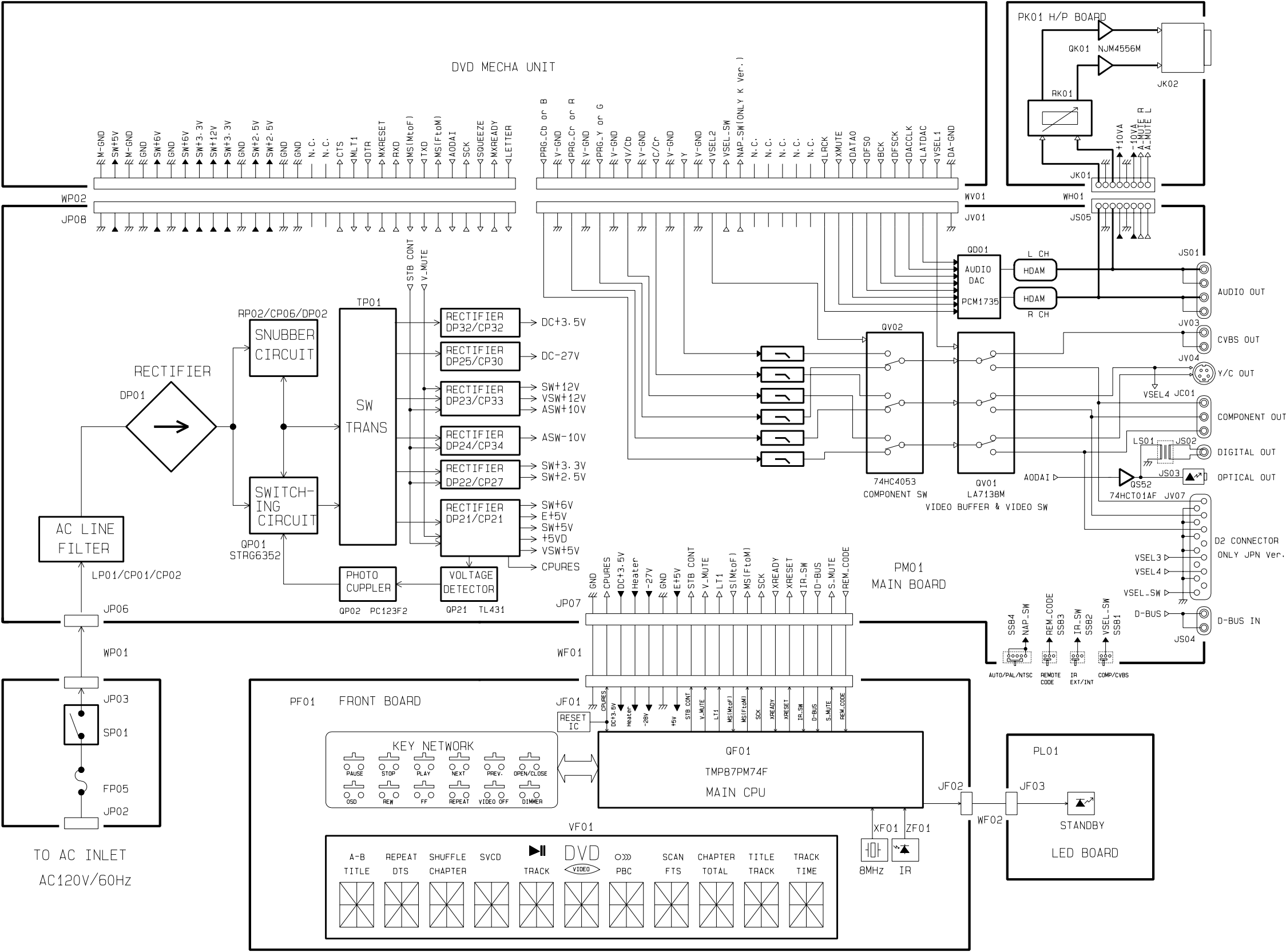
Error codes are displayed on the FL display.

FL Display	Possible causes	Operation of the unit
AV1 VER	AV-1 chip is not a match with program of system controller.	The sound may not out with the specific audio.
CPU AERR	CPU address error. (Hardware is unusual.)	No operation.
DMA AERR	DMA address error. (Hardware is unusual.)	No operation.
FLASH ID	Difference in versions of the internal ROM of the system controller and of the flash ROM, or bus line failure or reverse installation.	No operation.
FLASH WRP	Write protect error of the flash ROM.	No operation.
FLASH SIG	Difference in part number of the flash ROM. (When the ROM which couldn't be used was used.)	No operation.
FLASH SUM	Check sum error of the flash ROM (It exceeds the regular size.) or reverse installation. (Hardware is unusual.)	No operation.
FLASH SIZE	Size error of the flash ROM. (Use 4 or 8 M-bit.)	No operation.
ILLGAL	The system controller fetched a code other than an operation code. (Hardware is unusual.)	No operation.
RESERVE	Undefined interrupt. (Hardware is unusual.)	No operation.
SLOT	Inappropriate slot command issued. (Hardware is unusual.)	No operation.

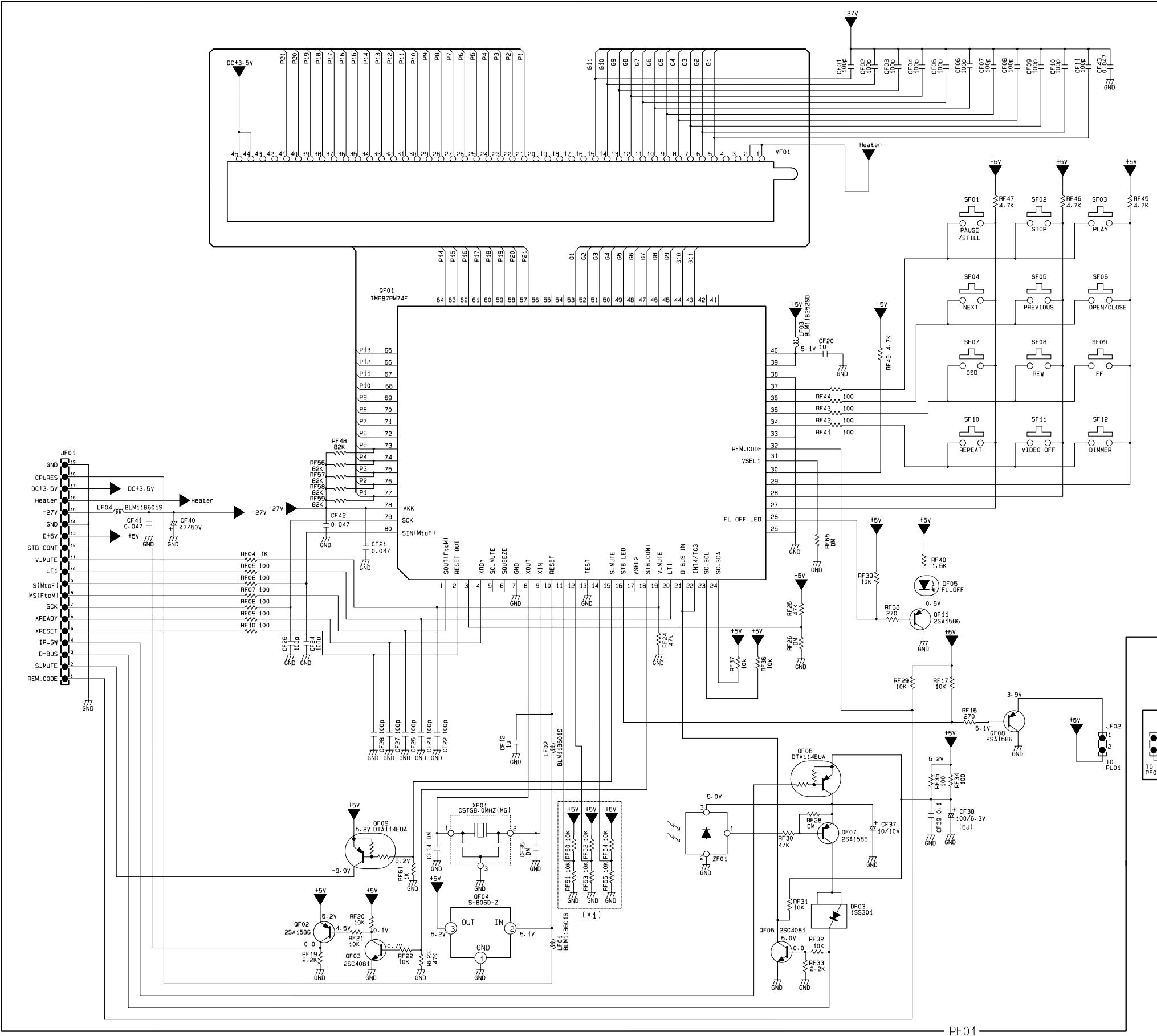
1.7 WIRING DIAGRAM



1.8 BLOCK DIAGRAM



1.9 SCHEMATIC DIAGRAM AND PARTS LOCATION



(*1)
QF01 Pin No. 11, 12, 14 SETTING

Region	Distination	Pin No. MS1	11	12	14
2	JAPAN	0	L	L	L
1	USA	1	H	L	L
4	AUS	2	L	H	L
(2)	--	3	H	H	L
2	EURO	4	L	L	H
(2)	--	5	H	L	H
3	ASIA	6	L	H	H
6	CHINA	6	H	H	H

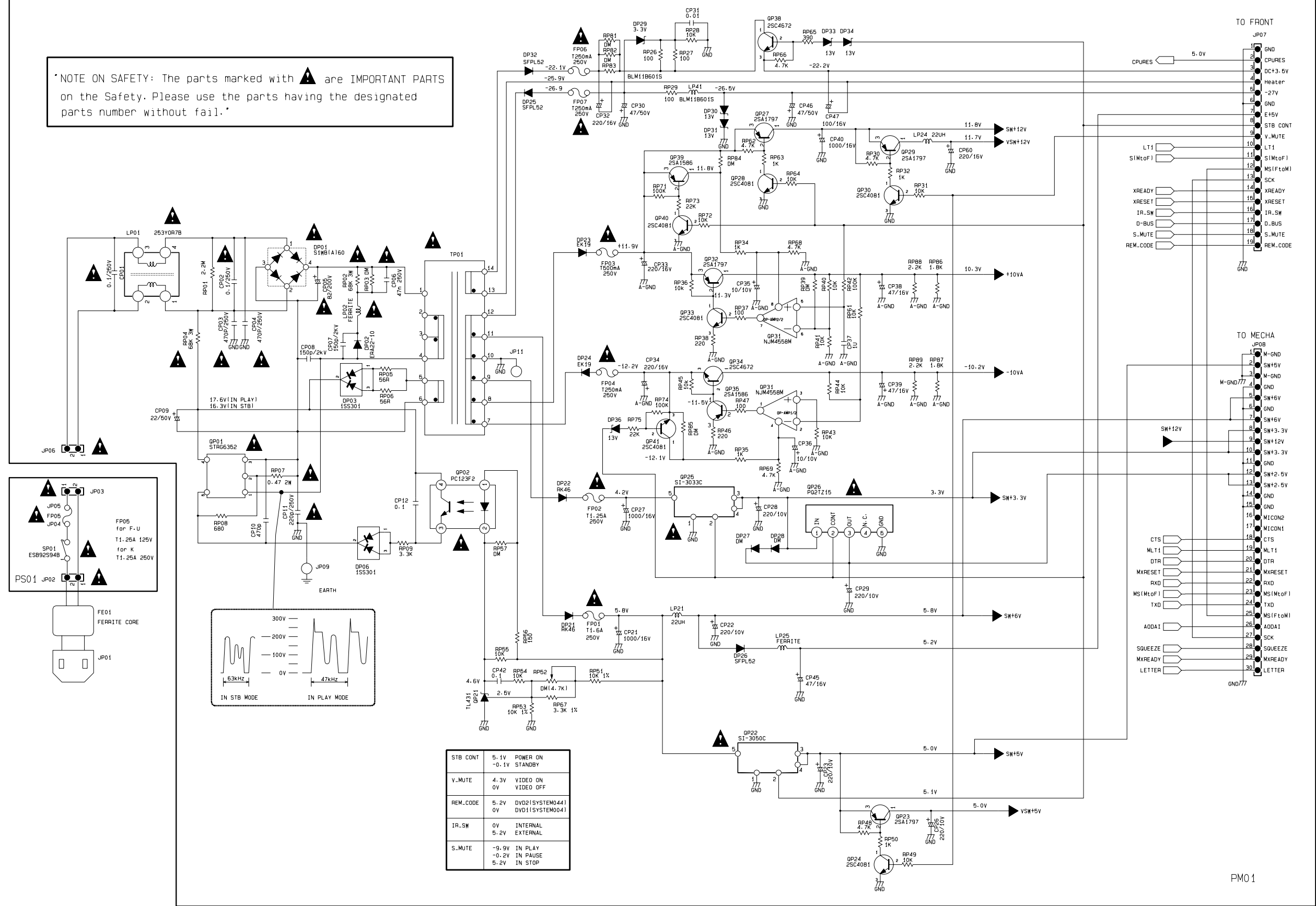
(*2)
QF01 Pin No. 32
REMOTE CONTROL CODE SETTING

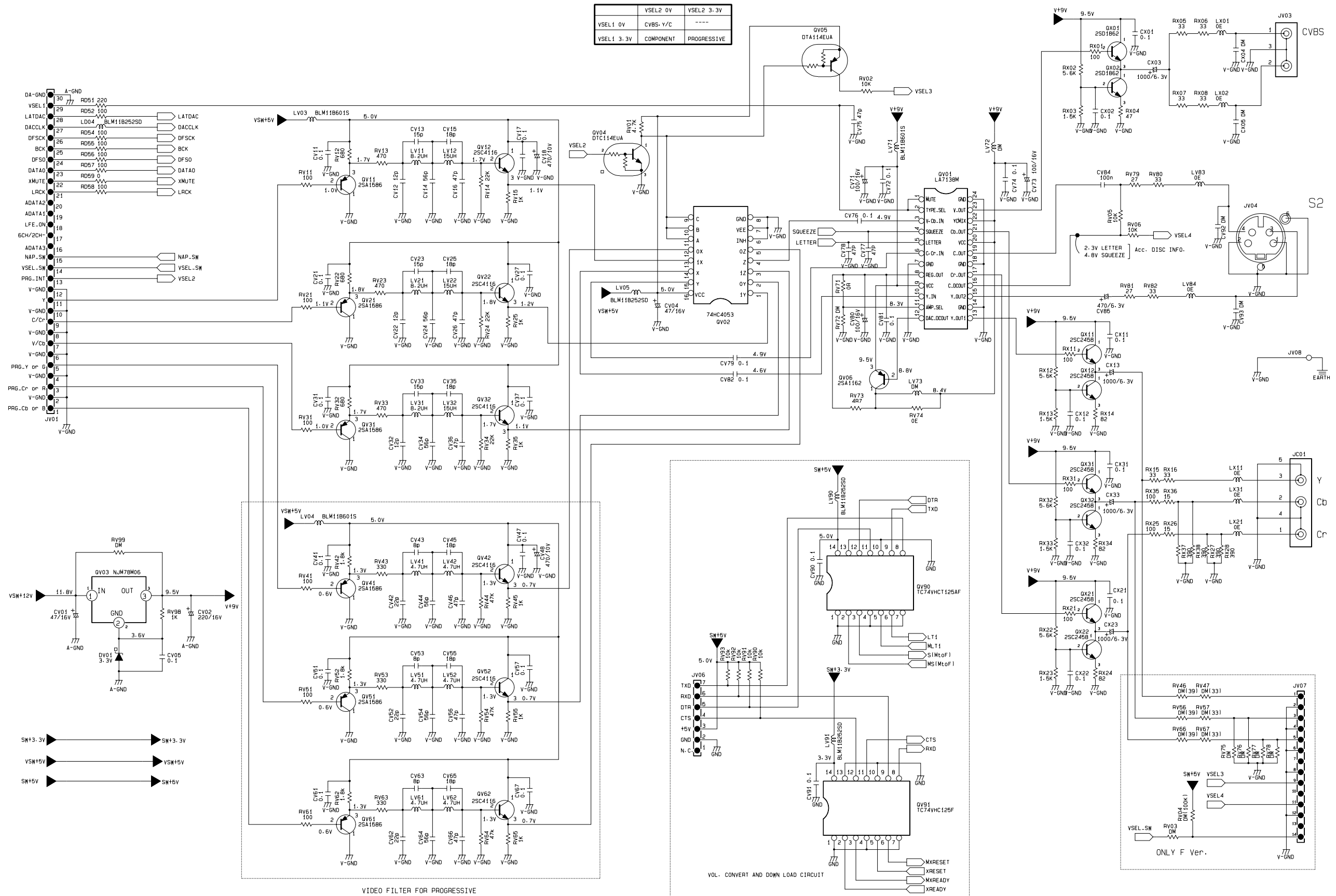
DVD2	RC6 044	H
DVD1	RC6 004	L

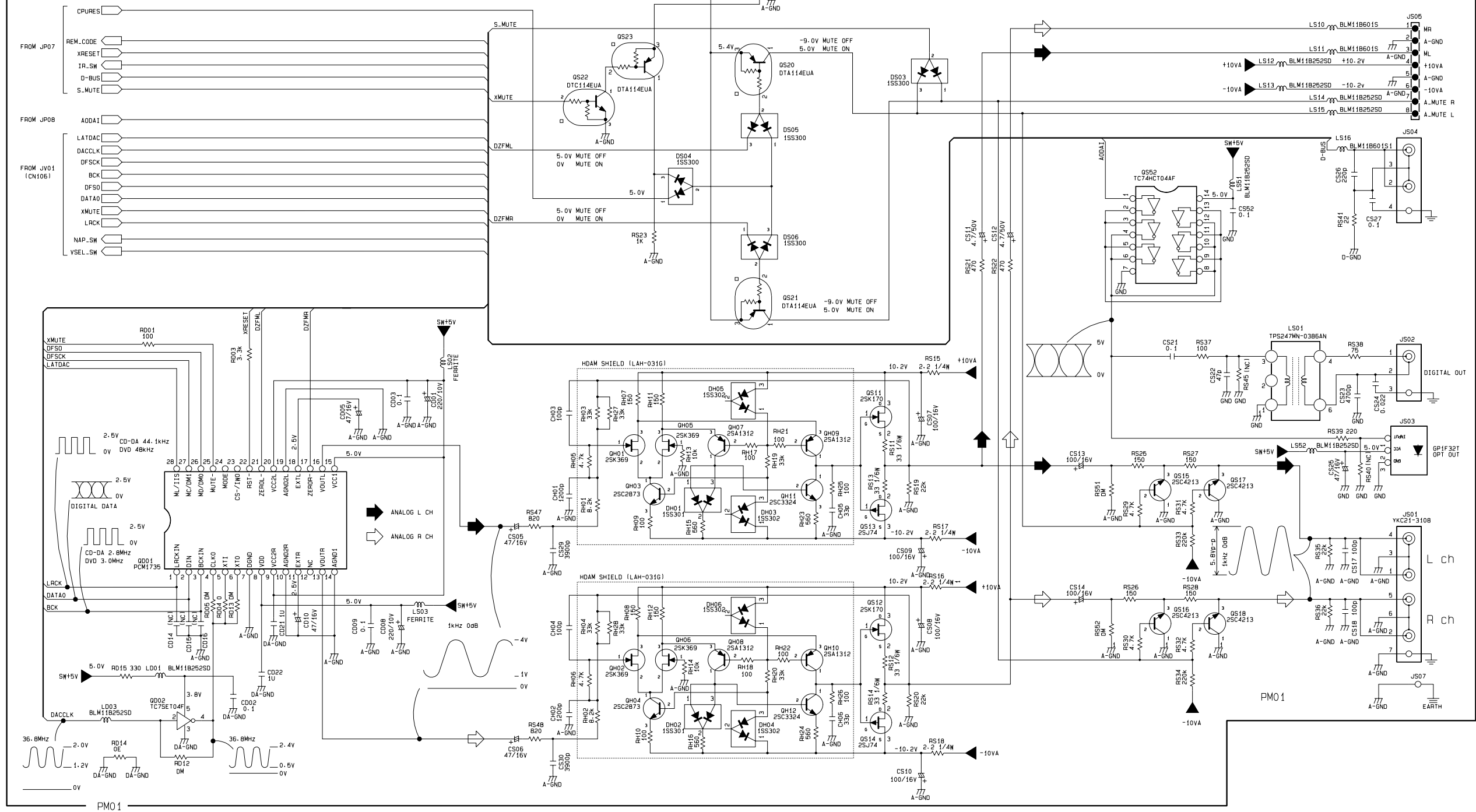
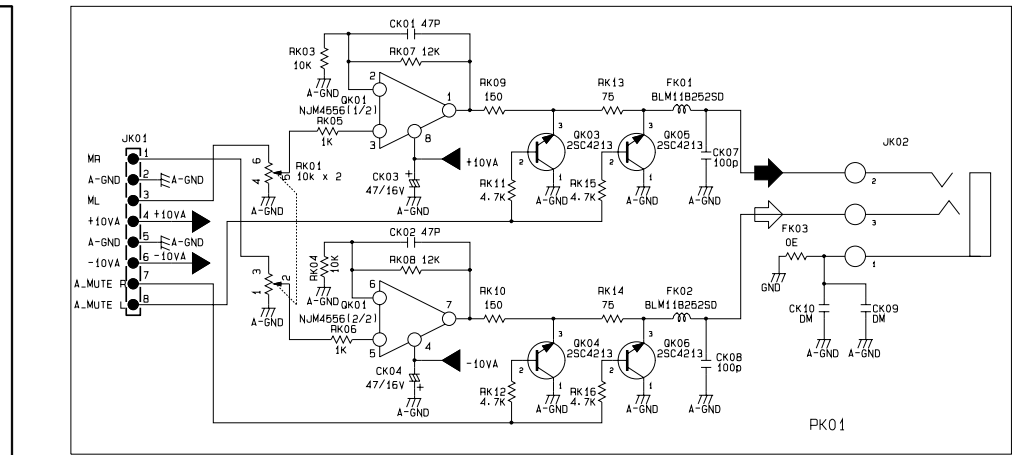
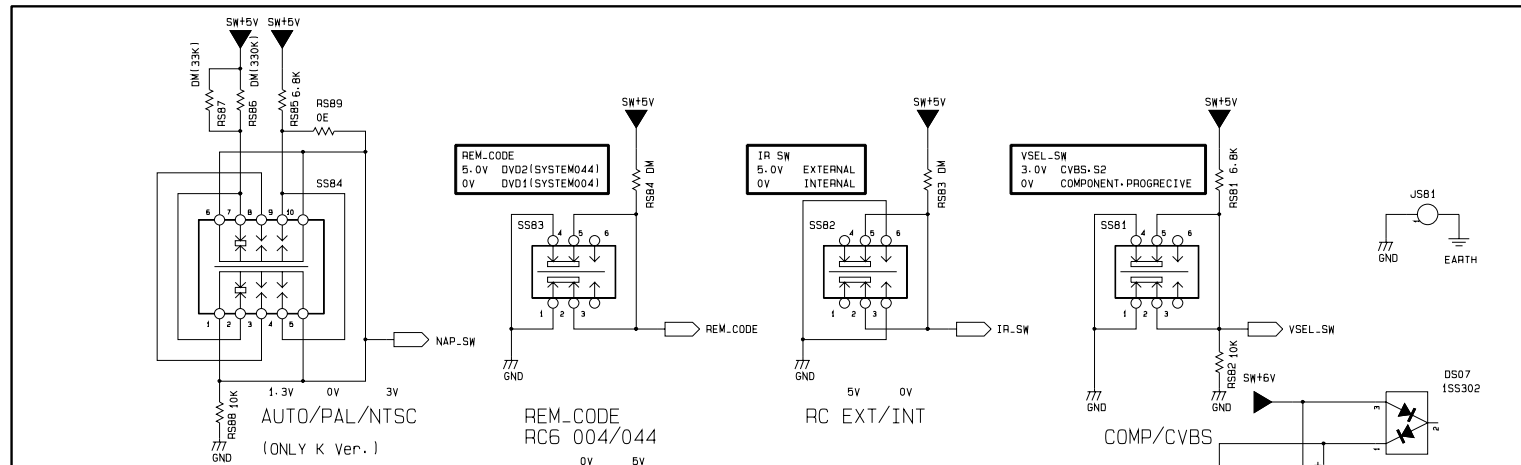
-AREA INDICATION-

F:Japan
K:China
N:Europe
S:S' Pore
U:USA and Canada

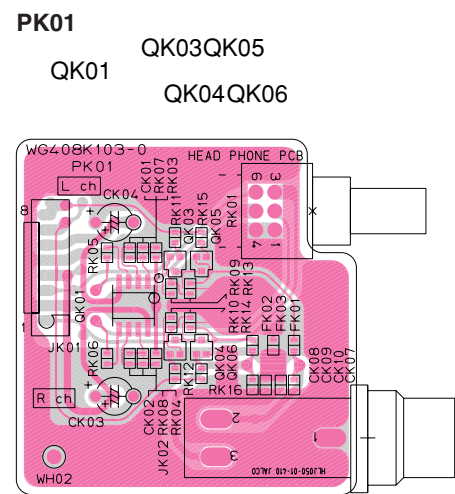
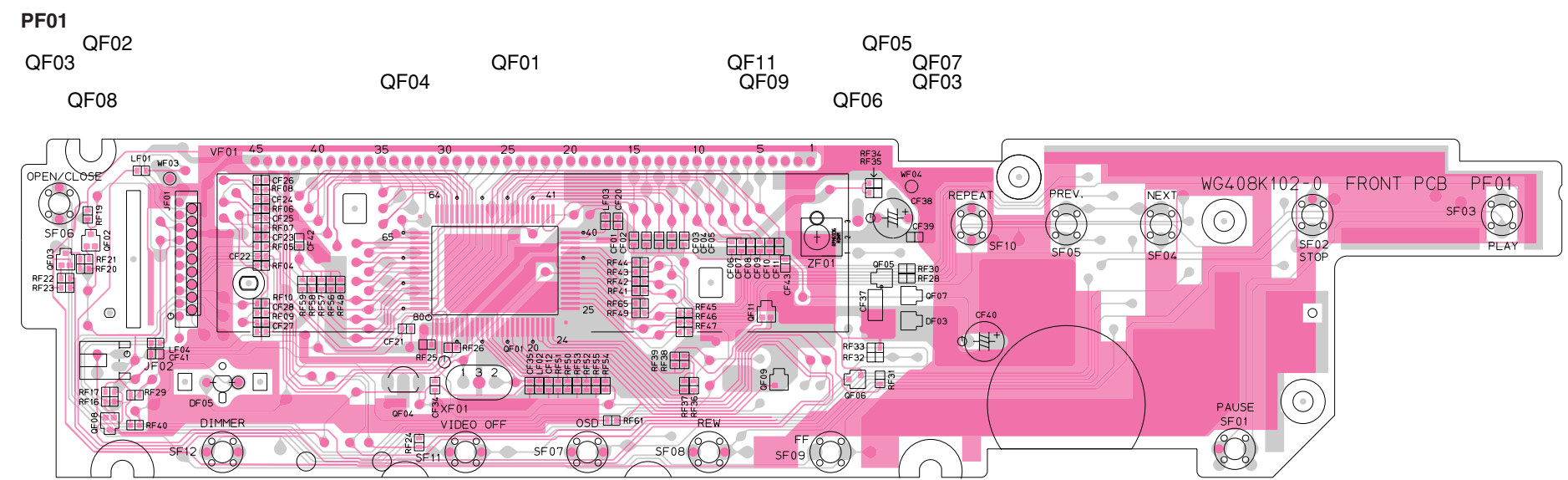
NOTE ON SAFETY: The parts marked with  are IMPORTANT PARTS on the Safety. Please use the parts having the designated parts number without fail.



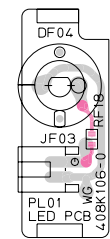




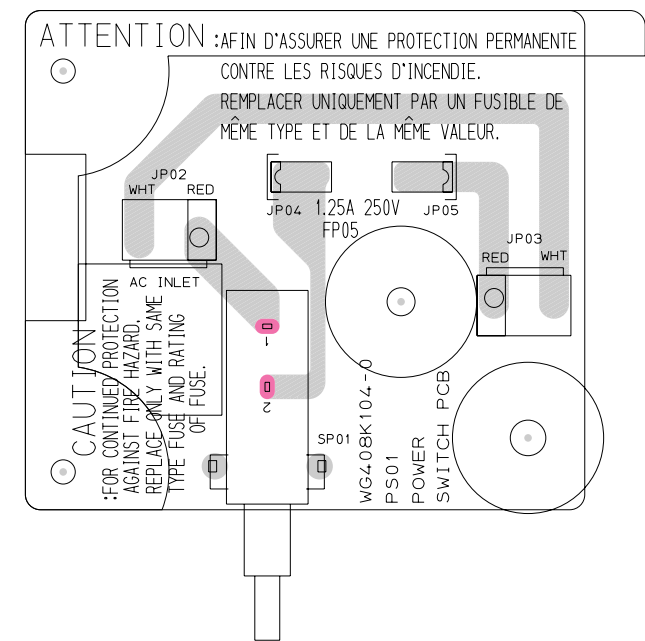
1.10 PARTS LOCATION



PL01



PS01



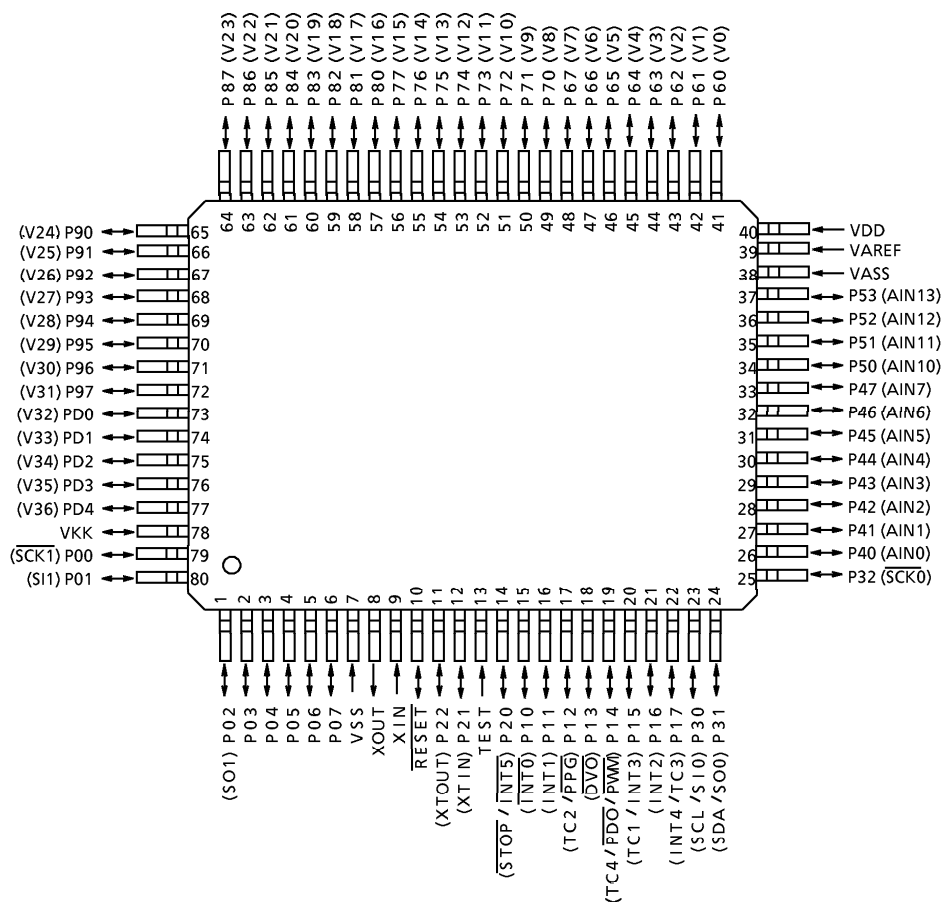
1.11 MICROPROCESSOR AND IC DATA

TMP87CH74

Pin No.	Port Name	I/O	FUNCTION
1	S OUT(F to M)	O	Serial data out put for Mecha unit
2	RESET_OUT	O	Reset signal for Mecha unit L:Reset
3	MODEL	I	GND
4	XRDY	O	Communication handshake line for Mecha unit d
5	SC_MUTE	O	Audio mute control for Scart L:Mute
6	SQUEEZE	I	16:9 squeeze signal from Mecha unit L:16:9, H:4:3
7	VSS		GND
8	XOUT	O	8MHz Osillater connecting
9	XIN	I	8MHz Osillater connecting
10	RESET	I	Reset signal input L:Reset
11	VERSION1	I	Destination setting
12	VERSION2	I	Destination setting
13	TEST		
14	VERSION3	I	Destination setting
15	S_MUTE	O	Audio mute control L:Mute
16	STB_LED	O	Standby LED control L:Standby
17	VSEL2	I	Video switching signal for Scart
18	STB_CONT	O	Standby control signal for Mecha unit L:Standby
19	V_MUTE	O	Video mute signal L:Mute
20	LT1	I	Communication response signal input from Mecha unit L:Busy, H:Ready
21	D_BUS_IN	I	Remote signal input
22	INT4/TC3	I	Remote signal input
23	SC_SCL	O	Serial clock output (I2C)
24	SC_SDA	I/O	Serial data input/output (I2C)
25	GND		
26	FL_OFF_LED	O	FL OFF LED control L:Standby
27	KEY IN0	I	Key scan input
28	KEY IN1	I	Key scan input
29	KEY IN2	I	Key scan input
30	Reserve	I	Reserve (5V)
31	VSEL1	I	Video switching signal for Scart
32	REM_CODE	I	Remote code setting
33	GND		GND
34	KEY OUT0	O	Key scan output
35	KEY OUT1	O	Key scan output
36	KEY OUT2	O	Key scan output
37	KEY OUT3	O	Key scan output
38	GND		GND
39	+5V	I	A/D Reference voltage
40	+5V		Power supply
41	NC		
42	NC		
43	G11	O	VFT Grid output
44	G10	O	VFT Grid output
45	G9	O	VFT Grid output
46	G8	O	VFT Grid output
47	G7	O	VFT Grid output
48	G6	O	VFT Grid output
49	G5	O	VFT Grid output
50	G4	O	VFT Grid output
51	G3	O	VFT Grid output
52	G2	O	VFT Grid output
53	G1	O	VFT Grid output
54	NC		
55	NC		
56	NC		
57	P21	O	VFT Segment output
58	P20	O	VFT Segment output

Pin No.	Port Name	I/O	FUNCTION
59	P19	O	VFT Segment output
60	P18	O	VFT Segment output
61	P17	O	VFT Segment output
62	P16	O	VFT Segment output
63	P15	O	VFT Segment output
64	P14	O	VFT Segment output
65	P13	O	VFT Segment output
66	P12	O	VFT Segment output
67	P11	O	VFT Segment output
68	P10	O	VFT Segment output
69	P9	O	VFT Segment output
70	P8	O	VFT Segment output
71	P7	O	VFT Segment output
72	P6	O	VFT Segment output
73	P5	O	VFT Segment output
74	P4	O	VFT Segment output
75	P3	O	VFT Segment output
76	P2	O	VFT Segment output
77	P1	O	VFT Segment output
78	VKK		VFT Powewr supply
79	SCK	O	Serial clock output for Mecha unit
80	SIN(M to F)	I	Serial data input from Mecha unit

TMP87CH74



PCM1735

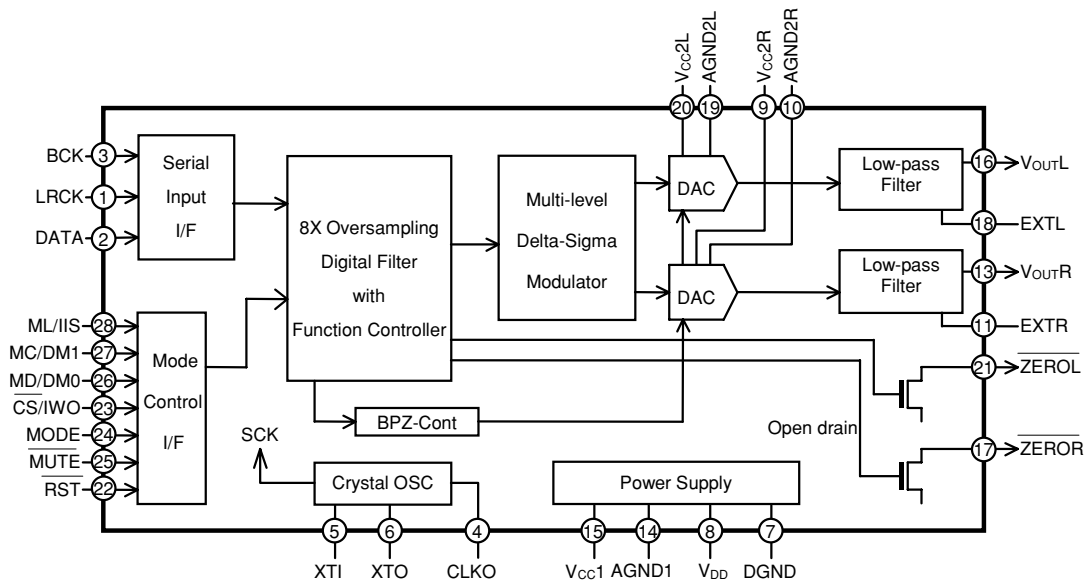
Pin No.	Port Name	I/O	FUNCTION
1	LRCK	I	LRCK Clock Input (fs). (1)
2	DATA	I	Serial Audio Data Input. (1)
3	BCK	I	Bit Clock Input for Serial Audio Data. (1)
4	CLKO	O	Buffered Output of System Clock.
5	XTI	I	Oscillator Input / External Clock Input.
6	XTO	O	Oscillator Output.
7	DGND	-	Digital Ground.
8	V _{DD}	-	Digital Power. + 5 V
9	V _{CC2R}	-	Analog Power. + 5V
10	AGND2R	-	Analog Ground.
11	EXTR	O	Rch, Common Pin of Analog Output Amp.
12	NC	-	Non Connection.
13	V _{OUTR}	O	Rch, Analog Voltage Output of Audio signal.
14	AGND1	-	Analog Ground.
15	V _{CC1}	-	Analog Power. + 5 V
16	V _{OUTL}	O	Lch, Analog Voltage Output of Audio signal.
17	ZEROR	O	Rch Zero Data Flag (Open Drain)
18	EXTL	O	Lch, Common Pin of Analog Output Amp
19	AGND2L	-	Analog Ground.
20	V _{CC2L}	-	Analog Power. + 5 V
21	ZEROL	O	Lch Zero Data Flag (Open Drain)
22	RST	I	Reset. When this pin is LOW, the DF & modulators are held in reset. (2)
23	CS / IWO	I	Chip Select / Input format selection. (3)
24	MODE	I	Mode Control Select. (H: Software, L: Hard ware) (2)
25	MUTE	I	Mute Control. (2)
26	MD / DM0	I	Mode Control, Data / De-emphasis selection 1. (2)
27	MC / DM1	I	Mode Control, BCK / De-emphasis selection 2. (2)
28	ML / IIS	I	Mode Control, WDCK / Input format selection. (2)

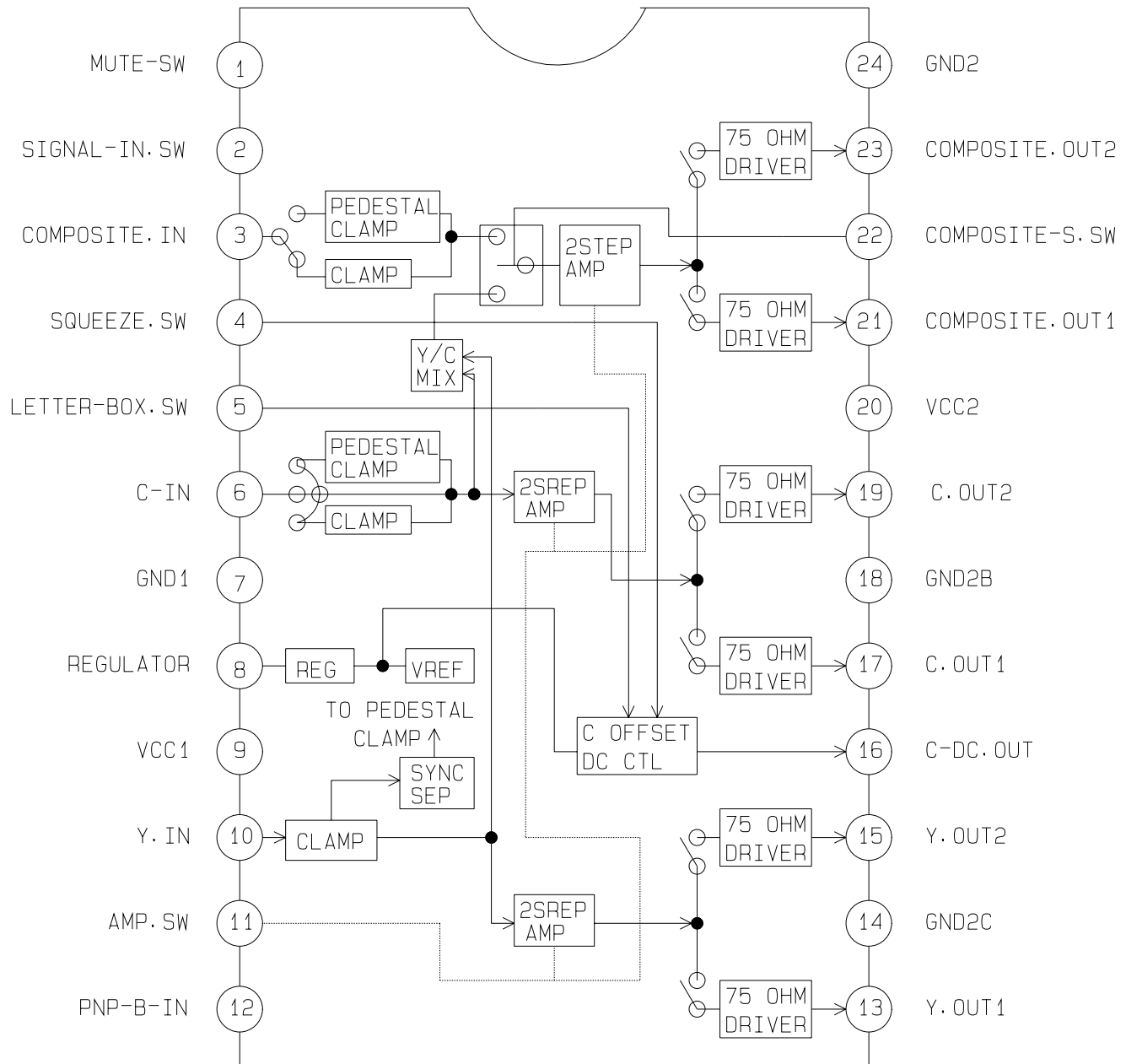
(1) Pins 1, 2, 3: Schmitt-trigger input.

(2) Pins 22, 24, 25, 26, 27, 28: Schmitt-trigger input with internal pull-up.

(3) Pin 23: Schmitt-trigger input with internal pull-down.

PCM1735





POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJl)
001B 002B 003B 005B 006B 007B 008B 009B 010B 020B 021B 045B 050B		9965 000 05016 9965 000 05020 9965 000 05022 9965 000 05025 4822 459 11172 9965 000 01393 4822 411 20336	FRONT CHASSIS PL(L)BLK FRONT CHASSIS PL(R)BLK FRONT PANEL AL DV7100 BL BUTTON FUNCTION BLK BUTTON OPEN/CLOSE BLK WINDOW DV7010 BUTTON SUB FUNCTION MARANTZ BADGE (BL) LENS STANDBY KNOB PHONE BLACK BRACKET PHONE JACK BUTTON POWER BLACK ESCUTCHEON TRAY FRONT BLK DVD BADGE BLK	403K105020 383K105020 403K248020 383K270010 383K270020 383K158030 386K270090 185J251010 312J355010 284T154310 383K160030 403K270010 403K063010
051B		9965 000 05028		386K251030
007G 009G		9965 000 05030	BUFFER FOR LEG LEG/PORON	286K056010 383K057010
010G		9965 000 05031	(GOLD HOT STAMP) F LEG/PORON (GOLD HOT STAMP) R	383K057110
025G 026G			LINK POWER SW. SHAFT POWER SW.	403K121010 403K112010
▲JP01		4822 265 11399	JACK 2P AC INLET SOT-16C	YJ04002360
▲W001			MAINS CORD UL/CSA 10A 125V	ZC01803100
001T			PACKING USER GUIDE DV7100(U)	408K851250
001Z			REMOTE CONTROLLER (RC7010DV)	ZK403K0010
001S 002S 003S			NOT STANDARD SPARE PARTS PACKING CASE DV7100 CUSHION(R) CUSHION(L)	408K801020 408K809020 408K809120

1.13 ELECTRICAL PARTS LIST
ASSIGNMENT OF COMMON PARTS CODES.
RESISTORS

R * * * : 1) GD05 x x x 140, Carbon film fixed resistor,±5% 1/4W
R * * * : 2) GD05 x x x 160, Carbon film fixed resistor,±5% 1/6W

Examples
① Resistance value
0.1Ω 001 10 Ω 100 1kΩ 102 100kΩ..... 104
0.5Ω 005 18 Ω 180 2.7kΩ 272 680kΩ..... 684
1 Ω 010 100Ω 101 10kΩ 103 1MΩ..... 105
6.8 Ω 068 390Ω 391 22kΩ 223 4.7MΩ..... 475
Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C * * * : CERAMIC CAP.
3) DD1 x x x x 370, Ceramic capacitor
Disc type
Temp.coeff. P350~N1000, 50V
③ Capacity value
② Tolerance

Examples
② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5 % 5
Tolerance of COMMON PARTS handled here are as follows :
0.5 pF - 5 pF ± 0.25 pF
6 pF - 10 pF ± 0.5 pF
12 pF - 560 pF ... ± 5 %
③ Capacity value
0.5 pF 005 3 pF 030 100 pF 101
1 pF 010 10 pF 100 220 pF 221
1.5 pF 015 47 pF 470 560 pF 561

C * * * : CERAMIC CAP.
4) DK16 x x x 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ Capacity value

Examples
④ Capacity value
100 pF 101 1000 pF 102 10000 pF 103
470 pF 471 2200 pF 222

C * * * : 5) ELECTROLY CAP.(, 6)FILM CAP ()
5) EA x x x x x 10, Electrolytic capacitor
One-way lead type,Tolerance±20%
⑥ Working voltage
⑤ Capacity value

Examples
⑤ Capacity value
0.1 μ F 104 4.7 μ F 475 100 μ F 107
0.33 μ F 334 10 μ F 106 330 μ F 337
1 μ F 105 22 μ F 226 1100 μ F 118
2200 μ F 228
⑥ Working voltage
6.3 V 006 25 V 025
10 V 010 35 V 035
16 V 016 50 V 050

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

Examples
⑦ Capacity value
0.001 μ F (1000 pF) 102 0.1 μ F 104
0.0018 μ F 182 0.56 μ F 564
0.01 μ F 103 1 μ F 105
0.015 μ F 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 RESIST OR :

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

1 . KOA Corporation
Part No.(MJl) Type No.(KOA) Description
NH05 x x x 140 RF25S x x x x Ω J ±5% (1/4W)
NH05 x x x 120 RF50S x x x x Ω J ±5% (1/2W)
NH85 x x x 110 RF73B2A x x x x Ω J ±5% (1/10W)
NH95 x x x 140 RF73B2E x x x x Ω J ±5% (1/4W)
* Resistance value Resistance value(0.1Ω - 10k Ω)

2. Matsushita Electronic Components Co., Ltd
Part No.(MJl) Type No.(MEC) Description
NF05 x x x 140  ERD-2FCJ x x x (±5% 1/4W)
RF05 x x x 140  ERD-2FCG x x x (±2% 1/4W)
NF02 x x x 140  ERD-2FCG x x x (±2% 1/4W)
RF02 x x x 140  ERD-2FCG x x x (±2% 1/4W)
* Resistance value

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

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

NOTE ON SAFETY:

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

安全上の注意 :

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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
CF01 } CF11 CF12 CF20 CF21 CF22 } CF28 CF37 CF38 CF39 CF40 CF41 CF42 CF43		4822 126 11759	PF01-FRONT CIRCUIT BOARD PF01-CAPACITORS		QF02		4822 130 10698	CHIP TRS. 2SA1586(Y GR) 2SA1576A(Q R)	HX100012A0
			CER. 100pF J 50V	DD95101300	QF03		CHIP TRS.2SC4081(Q R) 2SC4116(Y GR)	HX300012A0	
			CER. 1μF 10V F	DK98105200	QF04		4822 209 15921	IC RESET IC S-806D-Z SEIKO	HC10077530
			CER. 1μF 10V F	DK98105200	QF05			SEMICON.COMP DTA114EUA	BA10026210
			CER. 0.047μF Z	DK98473300	QF06			CHIP TRS. 2SC4081(Q R) 2SC4116(Y GR)	HX300012A0
			CER. 100pF J 50V	DD95101300	QF07			CHIP TRS. 2SA1586(Y GR) 2SA1576A(Q R)	HX100012A0
			TANTL. CHIP 10μF 10V	EY10601070	QF08		4822 130 10698	CHIP TRS. 2SA1586(Y GR) 2SA1576A(Q R)	HX100012A0
			ELECT 100μF M 16V	OA10701620	QF09			SEMICON.COMP DTA114EUA	BA10026210
			CER. 0.1μF Z 25V	DK98104200	QF11			CHIP TRS. 2SA1586(Y GR) 2SA1576A(Q R)	HX100012A0
			ELECT 47μF M 50V	OA47605020	PF01-MISCELLANEOUS				
			CER. 0.047μF Z	DK98473300	LF01		4822 157 11808	FERRITE CORE BLM11B601S CHIP	FC90020110
			CER. 0.047μF Z	DK98473300	LF02			4822 157 11808	FERRITE CORE BLM11B601S CHIP
PF01-RESISTORS CHIP		LF03	BLM11B252SD	FN31000020					
1k Ω ±5% 1/16W	NN05102610	LF04	FERRITE CORE BLM11B601S CHIP	FC90020110					
100 Ω ±5% 1/16W	NN05101610	SF01 } SF12	4822 276 14009	PUSH SWITCH SKQNAE H/SMM 160GF	SP01013310				
270 Ω ±5% 1/16W	NN05271610	VF01		DISPLAY UNIT 11-BT-183 GNKA	HQ31111410				
10k Ω ±5% 1/16W	NN05103610	WF03		CONNECTIVE CORD SRA 1PIN WIRE UL1007 AWG24	YB00091540				
2.2k Ω ±5% 1/16W	NN05222610	WF04		CONNECTIVE CORD SRA 1PIN WIRE UL1007 AWG24	YB00091540				
2.2k Ω ±5% 1/16W	NN05222610	XF01	9965 000 04977 4822 130 11494	SERAMIC VIB. CSTS MG 8MHz	FQ08004060				
10k Ω ±5% 1/16W	NN05103610	ZF01		PHOTO UNIT IR-SENSOR RPM6936-V4	HW10004210				
10k Ω ±5% 1/16W	NN05103610	CK01 CK02 CK03 CK04 CK07 CK08 RK01 RK03 RK04 RK05 RK06 RK07 RK08 RK09 RK10 RK11 RK12 RK13 RK14 RK15 RK16		PK01-HEADPHONE CIRCUIT BOARD PK01-CAPACITORS					
100 Ω ±5% 1/16W	NN05101610			4822 122 33777	CER. 47pF ±5% 50V	DD95470300			
100 Ω ±5% 1/16W	NN05101610		4822 122 33777	CER. 47pF ±5% 50V	DD95470300				
10k Ω ±5% 1/16W	NN05103610		4822 124 41539	ELECT 47μF M 16V	OA47601620				
10k Ω ±5% 1/16W	NN05103610		4822 124 41539	ELECT 47μF M 16V	OA47601620				
47k Ω ±5% 1/16W	NN05473610		4822 126 11759	CER. 100pF ±5% 50V	DD95101300				
47k Ω ±5% 1/16W	NN05473610		4822 126 11759	CER. 100pF ±5% 50V	DD95101300				
10k Ω ±5% 1/16W	NN05103610		PK01-RESISTORS						
270 Ω ±5% 1/16W	NN05271610		9965 000 00602	VAR. 10k Ω B	RM01031170				
10k Ω ±5% 1/16W	NN05103610		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610				
1.5k Ω ±5% 1/16W	NN05152610		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610				
100 Ω ±5% 1/16W	NN05101610		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610				
4.7k Ω ±5% 1/16W	NN05472610	4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610					
4.7k Ω ±5% 1/16W	NN05472610	4822 116 83208	CHIP 12k Ω ±5% 1/16W	NN05123610					
82k Ω ±5% 1/16W	NN05823610	4822 116 83208	CHIP 12k Ω ±5% 1/16W	NN05123610					
4.7k Ω ±5% 1/16W	NN05472610	4822 051 30151	CHIP 150 Ω ±5% 1/16W	NN05151610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30151	CHIP 150 Ω ±5% 1/16W	NN05151610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30759	CHIP 75 Ω ±5% 1/16W	NN05750610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30759	CHIP 75 Ω ±5% 1/16W	NN05750610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610					
10k Ω ±5% 1/16W	NN05103610	4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610					
		PF01-SEMICONDUCTORS							
DF03		4822 130 83715	CHIP DIODE 1SS301	HZ21005000					
DF05		9965 000 04972	DAN202U UMT	HI10036080					
		L.E.D. SEL4117R TP2 LED RED							
		MICROPROCESSOR							
QF01			TMP87CM74AF 8 BIT μ-COM	HU403KT000					

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
QK01 QK03 } QK06		4822 209 31378	PK01-SEMICONDUCTORS IC NJM4556	HC10045090
		4822 130 63601	CHIP TRS. 2SC4213	HX342132A0
			PK01-MISCELLANEOUS BLM11B252SD BLM11B252SD CHIP RES. 0 Ω $\pm$ 5% 1/16W	FN31000020 FN31000020 NN05000610
FK01 FK02 FK03		4822 116 82487	H.P JACK HLJ0540-01-410 BLK	YJ01003870
JK02		9965 000 01662	PL01-LED CIRCUIT BOARD L.E.D. HLMF-K200 STRAIGHT RED 3MM	HI10005340
DF04			PM01-MAIN CIRCUIT BOARD PM01-CAPACITORS	
CD01		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CD02		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CD03		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CD05		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CD08		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CD09		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CD10		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CD21		4822 126 13303	CER. 1 μ F F 10V	DK98105200
CD22		4822 126 13303	CER. 1 μ F F 10V	DK98105200
CH03		9965 000 01344	FILM 100pF J	OF15101540
CH04		9965 000 01344	FILM 100pF J	OF15101540
CH05		4822 126 11671	CER. 33pF $\pm$ 5% 50V	DD95330300
CH06		4822 126 11671	CER. 33pF $\pm$ 5% 50V	DD95330300
▲ CP01		9965 000 04979	FILM. 0.1 μ F 250V	DF17104630
▲ CP02		9965 000 04979	FILM. 0.1 μ F 250V	DF17104630
▲ CP03		9965 000 04980	CER. 470pF M 250V	DK17471520
▲ CP04		9965 000 04980	CER. 470pF M 250V	DK17471520
▲ CP05			ELECT 82 μ F 200V RE-3	EA82620070
▲ CP06		4822 126 13091	FILM. 47NF 250V	DF16473640
▲ CP07		9965 000 04982	CER. 150pF K 2KV	DK16151910
▲ CP08		9965 000 04982	CER. 150pF K 2KV	DK16151910
CP09		4822 124 90362	ELECT 22 μ F M 50V	OA22605020
CP10		4822 126 11568	CER. 470pF K	DK96471300
▲ CP11			CER. 220pF M 250V	DK17221520
CP21		4822 124 22722	ELECT 1000 μ F M 16V	OA10801620
CP22		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CP23		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CP26		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CP27		4822 124 22722	ELECT 1000 μ F M 16V	OA10801620
CP28		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CP29		9965 000 01318	ELECT 220 μ F M 10V	OA22701020
CP30		4822 124 22276	ELECT 47 μ F M 50V	OA47605020
CP31		4822 126 11703	CER. 0.01 μ F Z	DK98103300
CP32		4822 124 90364	ELECT 220 μ F M 16V	OA22701620
CP33		4822 124 90364	ELECT 220 μ F M 16V	OA22701620
CP34		4822 124 90364	ELECT 220 μ F M 16V	OA22701620
CP35			TANTL. CHIP 10 μ F 10V	EY10601070
CP36			TANTL. CHIP 10 μ F 10V	EY10601070
CP37		4822 126 13303	CER. 1 μ F 10V F	DK98105200
CP38		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CP39		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CP40		4822 124 22722	ELECT 1000 μ F M 16V	OA10801620
CP42		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CP45		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CP46		4822 124 22276	ELECT 47 μ F M 50V	OA47605020
CP47		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CP60		4822 124 90364	ELECT 220 μ F M 16V	OA22701620

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
CS01		4822 124 22722	ELECT 1000 μ F M 16V	OA10801620
CS05		4822 124 41539	ELECT 47 μ F 16V	OA47601620
CS06		4822 124 41539	ELECT 47 μ F 16V	OA47601620
CS07		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS08		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS09		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS10		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS11		4822 124 22274	ELECT 4.7 μ F M 50V	OA47505020
CS12		4822 124 22274	ELECT 4.7 μ F M 50V	OA47505020
CS13		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS14		4822 124 90354	ELECT 100 μ F M 16V	OA10701620
CS17		4822 126 11759	CER. 100pF $\pm$ 5% 50V	DD95101300
CS18		4822 126 11759	CER. 100pF $\pm$ 5% 50V	DD95101300
CS21		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CS22		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CS23		4822 126 11685	CER. 4700pF $\pm$ 10% B 50V	DK96472300
CS24		4822 126 11704	CER. 0.022 μ F Z	DK98223300
CS25		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CS26		4822 126 13883	CER. 220pF $\pm$ 5% 50V	DD95221300
CS27		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CS52		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV01		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CV02		4822 124 90364	ELECT 220 μ F M 16V	OA22701620
CV04		4822 124 41539	ELECT 47 μ F M 16V	OA47601620
CV05		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV11		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV12		4822 126 11663	CER. 12pF $\pm$ 5% 50V	DD95120300
CV13		4822 122 33752	CER. 15pF $\pm$ 5% 50V	DD95150300
CV14		4822 122 33782	CER. 56pF J	DD95560300
CV15		4822 122 33757	CER. 18pF J	DD95180300
CV16		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CV17		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV18		4822 124 90371	ELECT 470 μ F M 10V	OA47701020
CV21		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV22		4822 126 11663	CER. 12pF $\pm$ 5% 50V	DD95120300
CV23		4822 122 33752	CER. 15pF $\pm$ 5% 50V	DD95150300
CV24		4822 122 33782	CER. 56pF J	DD95560300
CV25		4822 122 33757	CER. 18pF J	DD95180300
CV26		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CV27		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV31		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV32		4822 126 11663	CER. 12pF $\pm$ 5% 50V	DD95120300
CV33		4822 122 33752	CER. 15pF $\pm$ 5% 50V	DD95150300
CV34		4822 122 33782	CER. 56pF J	DD95560300
CV35		4822 122 33757	CER. 18pF J	DD95180300
CV36		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CV37		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV41		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV42		4822 122 33761	CER. 22pF $\pm$ 5% 50V	DD95220300
CV43		4822 126 14529	CER. 8pF D	DD91080300
CV44		4822 122 33782	CER. 56pF J	DD95560300
CV45		4822 122 33757	CER. 18pF J	DD95180300
CV46		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CV47		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV48		4822 124 90371	ELECT 470 μ F M 10V	OA47701020
CV51		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV52		4822 122 33761	CER. 22pF $\pm$ 5% 50V	DD95220300
CV53		4822 126 14529	CER. 8pF D	DD91080300
CV54		4822 122 33782	CER. 56pF J	DD95560300
CV55		4822 122 33757	CER. 18pF J	DD95180300
CV56		4822 122 33777	CER. 47pF $\pm$ 5% 50V	DD95470300
CV57		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV61		4822 126 11687	CER. 0.1 μ F Z	DK98104200
CV62		4822 122 33761	CER. 22pF $\pm$ 5% 50V	DD95220300
CV63		4822 126 14529	CER. 8pF D	DD91080300
CV64		4822 122 33782	CER. 56pF J	DD95560300

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
CV65		4822 122 33757	CER. 18pF J	DD95180300	RH19		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610
CV66		4822 122 33777	CER. 47pF $\pm 5\%$ 50V	DD95470300	RH20		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610
CV67		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RH21		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CV71		4822 124 90354	ELECT 100 μ F M 16V	OA10701620	RH22		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CV72		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RH23		4822 051 30561	CHIP 560 Ω $\pm 5\%$ 1/16W	NN05561610
CV73		4822 124 90354	ELECT 100 μ F M 16V	OA10701620	RH24		4822 051 30561	CHIP 560 Ω $\pm 5\%$ 1/16W	NN05561610
CV74		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RH25		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CV75		4822 122 33777	CER. 47pF $\pm 5\%$ 50V	DD95470300	RH26		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CV76		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RH27		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610
CV77		4822 122 33777	CER. 47pF $\pm 5\%$ 50V	DD95470300	RH28		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610
CV78		4822 122 33777	CER. 47pF $\pm 5\%$ 50V	DD95470300					
CV79		4822 126 11687	CER. 0.1 μ F Z	DK98104200	▲ RP01			2.2M Ω $\pm 10\%$ 1/2W	RC10225820
CV80		4822 124 90354	ELECT 100 μ F M 16V	OA10701620	▲ RP02		4822 116 82107	METAL 68k Ω $\pm 5\%$ 3W	NK05683030
CV81		4822 126 11687	CER. 0.1 μ F Z	DK98104200	▲ RP04		4822 116 82107	METAL 68k Ω $\pm 5\%$ 3W	NK05683030
CV82		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP05		9965 000 03187	CHIP 56 Ω $\pm 5\%$ 1/16W	NN05560610
CV84		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP06		9965 000 03187	CHIP 56 Ω $\pm 5\%$ 1/16W	NN05560610
CV85		9965 000 01040	ELECT 470 μ F M 6.3V	OA47700620	▲ RP07		9965 000 00402	METAL 0.47 Ω $\pm 5\%$ 2W	NL05472020
CV90		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP08		4822 051 30681	CHIP 680 Ω $\pm 5\%$ 1/16W	NN05681610
CV91		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP09		4822 051 30332	CHIP 3.3k Ω $\pm 5\%$ 1/16W	NN05332610
					RP26		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CX01		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP27		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CX02		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP28		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
CX03		4822 124 22694	ELECT 1000 μ F 6.3V M	OA10800620	RP29		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CX11		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP30		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
CX12		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP31		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
CX13		4822 124 22694	ELECT 1000 μ F 6.3V M	OA10800620	RP32		4822 051 30102	CHIP 1k Ω $\pm 5\%$ 1/16W	NN05102610
CX21		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP34		4822 051 30102	CHIP 1k Ω $\pm 5\%$ 1/16W	NN05102610
CX22		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP35		4822 051 30102	CHIP 1k Ω $\pm 5\%$ 1/16W	NN05102610
CX23		4822 124 22694	ELECT 1000 μ F 6.3V M	OA10800620	RP36		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
CX31		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP37		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
CX32		4822 126 11687	CER. 0.1 μ F Z	DK98104200	RP38		4822 051 30221	CHIP 220 Ω $\pm 5\%$ 1/16W	NN05221610
CX33		4822 124 22694	ELECT 1000 μ F 6.3V M	OA10800620	RP40		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
			PM01-CAPACITORS (COMMON)		RP41		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
C***			PLASTIC FILM CAPACITOR $\pm 5\%$ 50V: CH01 CH02 CP12 CS29 CS30		RP42		4822 051 30104	CHIP 100k Ω $\pm 5\%$ 1/16W	NN05104610
			PM01-RESISTORS		RP43		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RD01		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP44		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RD03		4822 051 30332	CHIP 3.3k Ω $\pm 5\%$ 1/16W	NN05332610	RP45		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RD04		4822 116 82487	CHIP 0 Ω $\pm 5\%$ 1/16W	NN05000610	RP46		4822 051 30221	CHIP 220 Ω $\pm 5\%$ 1/16W	NN05221610
RD14		4822 116 82487	CHIP 0 Ω $\pm 5\%$ 1/16W	NN05000610	RP47		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610
RD15		4822 051 30331	CHIP 330 Ω $\pm 5\%$ 1/16W	NN05331610	RP48		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
RD51		4822 051 30221	CHIP 220 Ω $\pm 5\%$ 1/16W	NN05221610	RP49		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RD52		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP50		4822 051 30102	CHIP 1k Ω $\pm 5\%$ 1/16W	NN05102610
RD54					RP51		4822 111 90883	CHIP 10k Ω $\pm 1\%$ 1/10W	NI01103110
RD58		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP53		4822 111 90883	CHIP 10k Ω $\pm 1\%$ 1/10W	NI01103110
RD59		4822 116 82487	CHIP 0 Ω $\pm 5\%$ 1/16W	NN05000610	RP54		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
					RP55		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RH01		4822 051 30822	CHIP 8.2k Ω $\pm 5\%$ 1/16W	NN05822610	RP56		4822 051 30151	CHIP 150 Ω $\pm 5\%$ 1/16W	NN05151610
RH02		4822 051 30822	CHIP 8.2k Ω $\pm 5\%$ 1/16W	NN05822610	RP61		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RH03		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610	RP62		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
RH04		4822 051 30333	CHIP 33k Ω $\pm 5\%$ 1/16W	NN05333610	RP63		4822 051 30102	CHIP 1k Ω $\pm 5\%$ 1/16W	NN05102610
RH05		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610	RP64		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RH06		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610	RP65		4822 051 30391	CHIP 390 Ω $\pm 5\%$ 1/16W	NN05391610
RH07		4822 051 30151	CHIP 150 Ω $\pm 5\%$ 1/16W	NN05151610	RP66		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
RH08		4822 051 30151	CHIP 150 Ω $\pm 5\%$ 1/16W	NN05151610	RP67		4822 116 83255	CHIP 3.3k Ω $\pm 1\%$ 1/10W	NI01332110
RH09		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP68		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
RH10		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP69		4822 051 30472	CHIP 4.7k Ω $\pm 5\%$ 1/16W	NN05472610
RH11		4822 051 30151	CHIP 150 Ω $\pm 5\%$ 1/16W	NN05151610	RP71		4822 051 30104	CHIP 100k Ω $\pm 5\%$ 1/16W	NN05104610
RH12		4822 051 30151	CHIP 150 Ω $\pm 5\%$ 1/16W	NN05151610	RP72		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610
RH13		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610	RP73		4822 051 30223	CHIP 22k Ω $\pm 5\%$ 1/16W	NN05223610
RH14		4822 051 30103	CHIP 10k Ω $\pm 5\%$ 1/16W	NN05103610	RP74		4822 051 30104	CHIP 100k Ω $\pm 5\%$ 1/16W	NN05104610
RH15		4822 051 30561	CHIP 560 Ω $\pm 5\%$ 1/16W	NN05561610	RP75		4822 051 30223	CHIP 22k Ω $\pm 5\%$ 1/16W	NN05223610
RH16		4822 051 30561	CHIP 560 Ω $\pm 5\%$ 1/16W	NN05561610	RP83		4822 157 11808	FERRITE CORE	FC90020110
RH17		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP86		4822 116 83211	BLM11B601S CHIP	NN05182610
RH18		4822 051 30101	CHIP 100 Ω $\pm 5\%$ 1/16W	NN05101610	RP87		4822 116 83211	CHIP 1.8k Ω $\pm 5\%$ 1/16W	NN05182610
					RP88		4822 051 30222	CHIP 2.2k Ω $\pm 5\%$ 1/16W	NN05222610
					RP89		4822 051 30222	CHIP 2.2k Ω $\pm 5\%$ 1/16W	NN05222610

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
RS11 }		9965 000 05003	33 Ω ±5% 1/6W	GG05330160	RV73		4822 051 30478	CHIP 4.7 Ω ±5% 1/16W	NN05047610
RS14					RV74		4822 116 82487	CHIP 0 Ω ±5% 1/16W	NN05000610
▲ RS15 }		4822 116 60309	FUSIBLE 2.2 ±5% 1/4W	NH05022140	RV79		4822 051 30279	CHIP 27 Ω ±5% 1/16W	NN05270610
▲ RS18			RADUAL T		RV80		4822 051 30339	CHIP 33 Ω ±5% 1/16W	NN05330610
RS19		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	RV81		4822 051 30279	CHIP 27 Ω ±5% 1/16W	NN05270610
RS20		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	RV82		4822 051 30339	CHIP 33 Ω ±5% 1/16W	NN05330610
RS21		4822 051 30471	CHIP 470 Ω ±5% 1/16W	NN05471610	RV90				
RS22		4822 051 30471	CHIP 470 Ω ±5% 1/16W	NN05471610	}		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610
RS23		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	RV93				
RS25					RV98		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610
}		4822 051 30151	CHIP 150 Ω ±5% 1/16W	NN05151610	RX01		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RS28					RX02		4822 116 83215	CHIP 5.6k Ω ±5% 1/16W	NN05562610
RS29					RX03		4822 051 30152	CHIP 1.5k Ω ±5% 1/16W	NN05152610
}		4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610	RX04		4822 051 30479	CHIP 47 Ω ±5% 1/16W	NN05470610
RS32					RX05				
RS33		4822 051 30224	CHIP 220k Ω ±5% 1/16W	NN05224610	}		4822 051 30339	CHIP 33 Ω ±5% 1/16W	NN05330610
RS34		4822 051 30224	CHIP 220k Ω ±5% 1/16W	NN05224610	RX08				
RS35		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	RX11		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RS36		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	RX12		4822 116 83215	CHIP 5.6k Ω ±5% 1/16W	NN05562610
RS37		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610	RX13		4822 051 30152	CHIP 1.5k Ω ±5% 1/16W	NN05152610
RS38		4822 051 30759	CHIP 75 Ω ±5% 1/16W	NN05750610	RX14		4822 051 30829	CHIP 82 Ω ±5% 1/16W	NN05820610
RS39		4822 051 30221	CHIP 220 Ω ±5% 1/16W	NN05221610	RX15		4822 051 30339	CHIP 33 Ω ±5% 1/16W	NN05330610
RS41		4822 117 12139	CHIP 22 Ω ±5% 1/16W	NN05220610	RX16		4822 051 30339	CHIP 33 Ω ±5% 1/16W	NN05330610
RS47		4822 117 12968	CHIP 820 Ω ±5% 1/16W	NN05821610	RX21		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RS48		4822 117 12968	CHIP 820 Ω ±5% 1/16W	NN05821610	RX22		4822 116 83215	CHIP 5.6k Ω ±5% 1/16W	NN05562610
RS81		4822 051 30682	CHIP 6.8k Ω ±5% 1/16W	NN05682610	RX23		4822 051 30152	CHIP 1.5k Ω ±5% 1/16W	NN05152610
RS82		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610	RX24		4822 051 30829	CHIP 82 Ω ±5% 1/16W	NN05820610
RS85		4822 051 30682	CHIP 6.8k Ω ±5% 1/16W	NN05682610	RX25		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RS88		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610	RX26		4822 051 30159	CHIP 15 Ω ±5% 1/16W	NN05150610
RS89		4822 116 82487	CHIP 0 Ω ±5% 1/16W	NN05000610	RX27		4822 051 30391	CHIP 390 Ω ±5% 1/16W	NN05391610
					RX28		4822 051 30391	CHIP 390 Ω ±5% 1/16W	NN05391610
RV01		4822 051 30472	CHIP 4.7k Ω ±5% 1/16W	NN05472610	RX31		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RV02		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610	RX32		4822 116 83215	CHIP 5.6k Ω ±5% 1/16W	NN05562610
RV05		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610	RX33		4822 051 30152	CHIP 1.5k Ω ±5% 1/16W	NN05152610
RV06		4822 051 30103	CHIP 10k Ω ±5% 1/16W	NN05103610	RX34		4822 051 30829	CHIP 82 Ω ±5% 1/16W	NN05820610
RV11		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610	RX35		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610
RV12		4822 051 30681	CHIP 680 Ω ±5% 1/16W	NN05681610	RX36		4822 051 30159	CHIP 15 Ω ±5% 1/16W	NN05150610
RV13		4822 051 30471	CHIP 470 Ω ±5% 1/16W	NN05471610	RX37		4822 051 30391	CHIP 390 Ω ±5% 1/16W	NN05391610
RV14		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	RX38		4822 051 30391	CHIP 390 Ω ±5% 1/16W	NN05391610
RV15		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610				PM01-SEMICONDUCTORS	
RV21		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610	DH01		4822 130 83715	CHIP DIODE 1SS301	HZ21005000
RV22		4822 051 30681	CHIP 680 Ω ±5% 1/16W	NN05681610				DAN202U UMT	
RV23		4822 051 30471	CHIP 470 Ω ±5% 1/16W	NN05471610	DH02		4822 130 83715	CHIP DIODE 1SS301	HZ21005000
RV24		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610				DAN202U UMT	
RV25		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	DH03				
RV31		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610	}		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
RV32		4822 051 30681	CHIP 680 Ω ±5% 1/16W	NN05681610	DH06				
RV33		4822 051 30471	CHIP 470 Ω ±5% 1/16W	NN05471610					
RV34		4822 051 30223	CHIP 22k Ω ±5% 1/16W	NN05223610	▲ DP01		4822 130 32748	DIODE S1WB(A)60 30A 600V	HD20031290
RV35		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	▲ DP02		4822 130 81244	DIODE ERA22-10	HD20008130
					DP03		4822 130 83715	CHIP DIODE 1SS301	HZ21005000
RV41		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610				DAN202U UMT	
RV42		4822 116 83211	CHIP 1.8k Ω ±5% 1/16W	NN05182610	DP06		4822 130 83715	CHIP DIODE 1SS301	HZ21005000
RV43		4822 051 30331	CHIP 330 Ω ±5% 1/16W	NN05331610				DAN202U UMT	
RV44		4822 051 30473	CHIP 47k Ω ±5% 1/16W	NN05473610	▲ DP21			DIODE RK46(SBD)60V 3.5A	HD20050080
RV45		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	▲ DP22			DIODE RK46(SBD)60V 3.5A	HD20050080
RV51		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610	▲ DP23			DIODE EK19 90V 1.5A	HD20053080
RV52		4822 116 83211	CHIP 1.8k Ω ±5% 1/16W	NN05182610	▲ DP24			DIODE EK19 90V 1.5A	HD20053080
RV53		4822 051 30331	CHIP 330 Ω ±5% 1/16W	NN05331610	▲ DP25			CHIP DIODE SFPL-52	HZ20002080
RV54		4822 051 30473	CHIP 47k Ω ±5% 1/16W	NN05473610				200V/0.9A	
RV55		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	▲ DP26			CHIP DIODE SFPL-52	HZ20002080
RV61		4822 051 30101	CHIP 100 Ω ±5% 1/16W	NN05101610				200V/0.9A	
RV62		4822 116 83211	CHIP 1.8k Ω ±5% 1/16W	NN05182610	DP29		9965 000 03119	CHIP DIODE MA8033H	HZ30012020
RV63		4822 051 30331	CHIP 330 Ω ±5% 1/16W	NN05331610	DP30		4822 130 83404	CHIP DIODE MA8130-M 13.0V	HZ31301000
RV64		4822 051 30473	CHIP 47k Ω ±5% 1/16W	NN05473610	DP31		4822 130 83404	CHIP DIODE MA8130-M 13.0V	HZ31301000
RV65		4822 051 30102	CHIP 1k Ω ±5% 1/16W	NN05102610	▲ DP32			CHIP DIODE SFPL-52	HZ20002080
RV71		4822 116 82487	CHIP 0 Ω ±5% 1/16W	NN05000610				200V/0.9A	

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
DP33		4822 130 83404	CHIP DIODE MA8130-M 13.0V	HZ31301000	QS15				
DP34		4822 130 83404	CHIP DIODE MA8130-M 13.0V	HZ31301000	}		4822 130 63601	CHIP TRS. 2SC4213	HX342132A0
DP36		4822 130 83404	CHIP DIODE MA8130-M 13.0V	HZ31301000	QS18				
DS03					QS20			SEMICON.COMP DTA114EUA	BA10026210
}		4822 130 80522	CHIP DIODE 1SS300	HZ21006000	QS21			SEMICON.COMP DTA114EUA	BA10026210
DS06			DAP202U UMT		QS22			SEMICON.COMP DTC114EUA	BA20035210
DS07		4822 130 81324	CHIP DIODE 1SS302 (J)	HZ20018050	QS23			SEMICON.COMP DTA114EUA	BA10026210
					QS52		4822 209 91012	IC TC74HCT04AF	HC700405Q0
DV01		9965 000 03119	CHIP DIODE MA8033H(MATSUSHITA)	HZ30012020					
					QV01			IC LA7138M VIDEO AMP FOR DVD	HC10406030
QD01			IC PCM1735	HC10014610			4822 209 62503	IC 74HC4053	HC705300Z0
QD02		9965 000 01338	IC TC7SET04F	HC007205K0	▲ QV03		4822 209 62423	IC NJM78M06FA	HC38506090
			LMOSLOGIC(INV)		QV04			SEMICON.COMP DTC114EUA	BA20035210
QH01		4822 130 42839	F.E.T. 2SK369 BL	HF203691B0	QV05			SEMICON.COMP DTA114EUA	BA10026210
			VDGS-40V PDO.4W		QV06		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QH02		4822 130 42839	F.E.T. 2SK369 BL	HF203691B0	QV11		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
			VDGS-40V PDO.4W					2SA1576A (Q R)	
QH03		4822 130 61425	CHIP TRS. 2SC2873 (Y)	HX328731B0	QV12			CHIP TRS. 2SC4081 (Q R)	HX300012A0
QH04		4822 130 61425	CHIP TRS. 2SC2873 (Y)	HX328731B0				2SC4116 (Y GR)	
QH05		4822 130 42839	F.E.T. 2SK369 BL	HF203691B0	QV21		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
			VDGS-40V PDO.4W					2SA1576A (Q R)	
QH06		4822 130 42839	F.E.T. 2SK369 BL	HF203691B0	QV22			CHIP TRS. 2SC4081 (Q R)	HX300012A0
			VDGS-40V PDO.4W					2SC4116 (Y GR)	
QH07					QV31		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
}		4822 130 63928	CHIP TRS. 2SA1312 (B)	HX113121B0				2SA1576A (Q R)	
QH10					QV32			CHIP TRS. 2SC4081 (Q R)	HX300012A0
QH11		4822 130 63929	CHIP TRS. 2SC3324 (B)	HX333241B0				2SC4116 (Y GR)	
QH12		4822 130 63929	CHIP TRS. 2SC3324 (B)	HX333241B0	QV41		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
								2SA1576A (Q R)	
▲ QP01			IC STR-G6352 SWITCHING REGULATOR	HC10009080	QV42			CHIP TRS. 2SC4081 (Q R)	HX300012A0
▲ QP02			PHOTO UNIT PC-123F2	HW10032320				2SC4116 (Y GR)	
			CUPLER		QV51		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
▲ QP21			IC TL431CZ PROG.VOLTAGE REFERENCE	HC33036590				2SA1576A (Q R)	
▲ QP22		9965 000 04991	IC VOLTAGE REGULATOR SI-3050C	HC10006080	QV52			CHIP TRS. 2SC4081 (Q R)	HX300012A0
QP23		9965 000 01921	CHIP TRS. 2SA1797	HX117971A0				2SC4116 (Y GR)	
QP24			CHIP TRS. 2SC4081 (Q R)	HX300012A0	QV61		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0
			2SC4116 (Y GR)		QV62			2SA1576A (Q R)	
▲ QP25			IC SI-3033C +3.3V 1.5A WITH SW	HC36903080	QV90			CHIP TRS. 2SC4081 (Q R)	HX300012A0
					QV91			2SC4116 (Y GR)	
▲ QP26			IC PQ2TZ15U	HC98903320				IC TC74VHCT125AF	HC712505Q0
QP27		9965 000 01921	CHIP TRS. 2SA1797	HX117971A0				IC TC74VHC125F	HC007605K0
QP28			CHIP TRS. 2SC4081 (Q R)	HX300012A0	QX01		4822 130 61441	TRS. 2SD1862 TV-2 NPN Q R	HT418622A0
			2SC4116 (Y GR)		QX02		4822 130 61441	TRS. 2SD1862 TV-2 NPN Q R	HT418622A0
QP29		9965 000 01921	CHIP TRS. 2SA1797	HX117971A0	QX11		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
QP30			CHIP TRS. 2SC4081 (Q R)	HX300012A0				2SC3199 ETC.	
			2SC4116 (Y GR)		QX12		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
QP31		4822 209 71451	IC NJM4558M(Y)	HC10011090				2SC3199 ETC.	
QP32		9965 000 01921	CHIP TRS. 2SA1797	HX117971A0	QX21		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
QP33			CHIP TRS. 2SC4081 (Q R)	HX300012A0				2SC3199 ETC.	
			2SC4116 (Y GR)		QX22		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
QP34		9965 000 01920	CHIP TRS. 2SC4672 Q	HX346721A0				2SC3199 ETC.	
QP35		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0	QX31		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
			2SA1576A (Q R)					2SC3199 ETC.	
QP38		9965 000 01920	CHIP TRS. 2SC4672 Q	HX346721A0	QX32		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
QP39		4822 130 10698	CHIP TRS. 2SA1586 (Y GR)	HX100012A0				2SC3199 ETC.	
			2SA1576A (Q R)						
QP40			CHIP TRS. 2SC4081 (Q R)	HX300012A0	▲ FP01			PM01-MISCELLANEOUS	
			2SC4116 (Y GR)		▲ FP02			FUSE T1.6A 250V VDE	FS20160200
QP41			CHIP TRS. 2SC4081 (Q R)	HX300012A0	▲ FP03			FUSE T1.25A 250V VDE	FS20125200
			2SC4116 (Y GR)		▲ FP04			FUSE T500MA 250V VDE	FS20050200
								FUSE T250MA/250V TR5	FS20025200
								NO 19372(TP)	
QS11		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0	▲ FP06			FUSE T250MA/250V TR5	FS20025200
QS12		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0				NO 19372(TP)	
QS13		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0	▲ FP07			FUSE T250MA/250V TR5	FS20025200
QS14		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0				NO 19372(TP)	

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
JC01			TERMINAL 3P RCA PIN JACK YKC21-4010	YT02030580
JS01		4822 290 81723	TERMINAL RCA 4P WHITE/RED AU YKC21-3108	YT02041070
JS02		4822 290 81638	TERMINAL 14X14 RA 1L1P BLK AU FLM-GND	YT02010790
JS03			OPT. CONNECTOR GP1FA550TZ OUTPUT	YJ15000190
JS04		4822 267 41009	TERMINAL 2P RCA PIN JACK	YT02020890
JV03		9965 000 05008	TERMINAL 2P RCA JACK YKC21-3926	YT02021590
JV04		4822 265 10678	TERMINAL YKF51-5506	YT02011010
LD01			BLM11B252SD	FN31000020
LD03			BLM11B252SD	FN31000020
LD04			BLM11B252SD	FN31000020
▲ LP01		4822 157 70398	CHOKE COIL 22MH X2 LINEFILTER	LC22260130
LP02			FERRITE CORE	FC90050130
LP21			BL02RN2-R62T2 BEAD	
			CHOKE COIL RCH-895 22μH 1.7A	LC22230060
LP24			CHOKE COIL RCH-895 22μH 1.7A	LC22230060
LP25			FERRITE CORE	FC90050130
LP41		4822 157 11808	BL02RN2-R62T2 BEAD FERRITE CORE	FC90020110
			BLM11B601S CHIP	
LS01		4822 142 60422	PULSE TRNSF. (TPS247MN-0386AN)	TP41042030
LS02			FERRITE CORE	FC90050130
LS03			BL02RN2-R62T2 BEAD FERRITE CORE	FC90050130
LS10		4822 157 11808	BL02RN2-R62T2 BEAD FERRITE CORE	FC90020110
LS11		4822 157 11808	BLM11B601S CHIP FERRITE CORE	FC90020110
LS12			BLM11B601S CHIP	
LS15			BLM11B252SD	FN31000020
LS16		4822 157 11808	FERRITE CORE	FC90020110
			BLM11B601S CHIP	
LS51			BLM11B252SD	FN31000020
LS52			BLM11B252SD	FN31000020
LV03		4822 157 11808	FERRITE CORE	FC90020110
LV04		4822 157 11808	BLM11B601S CHIP FERRITE CORE	FC90020110
LV05			BLM11B601S CHIP	
LV11		9965 000 00458	BLM11B252SD	FN31000020
LV12		4822 157 60445	CHOKE COIL 8.2UH EL0405	LC18223900
			CHOKE COIL SUBSTITUTE 15μH J%	LC11533900
LV21		9965 000 00458	CHOKE COIL 8.2UH EL0405	LC18223900
LV22		4822 157 60445	CHOKE COIL SUBSTITUTE 15μH J%	LC11533900
LV31		9965 000 00458	CHOKE COIL 8.2UH EL0405	LC18223900
LV32		4822 157 60445	CHOKE COIL SUBSTITUTE 15μH J%	LC11533900
LV41			CHOKE COIL 4.7μH EL0405	LC14723900
LV42			CHOKE COIL 4.7μH EL0405	LC14723900
LV51			CHOKE COIL 4.7μH EL0405	LC14723900
LV52			CHOKE COIL 4.7μH EL0405	LC14723900
LV61			CHOKE COIL 4.7μH EL0405	LC14723900
LV62			CHOKE COIL 4.7μH EL0405	LC14723900

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
LV71		4822 157 11808	FERRITE CORE	FC90020110
			BLM11B601S CHIP	
LV83		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LV84		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LV90			BLM11B252SD	FN31000020
LV91			BLM11B252SD	FN31000020
LX01		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LX02		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LX11		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LX21		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
LX31		4822 116 82487	CHIP RES. 0 Ω ±5% 1/16W	NN05000610
SS81			SLIDE SW ESD177210	SS02022050
SS82			SLIDE SW ESD177210	SS02022050
SS83			SLIDE SW ESD177210	SS02022050
▲ TP01			POWER TRANSF. ER28S SW	TS12900030
			PS01-POWER SWITCH	
			CIRCUIT BOARD	
FE01		4822 526 10696	FERRITE CORE	FC50150010
▲ FP05			TFC-23-11-14 + TFP2014-V KIT	
			FUSE 1.25A 125V UL CSA MITI	FS10125350
▲ SP01			PUSH SWITCH	
			ESB92S94B TV-5	SP01012480

Service Manual

DB-VLD210

DVD Loader for MARANTZ

DVD Player : DV7010

DV7100

DV-18mkII

DV-17

EC1000

ER3000

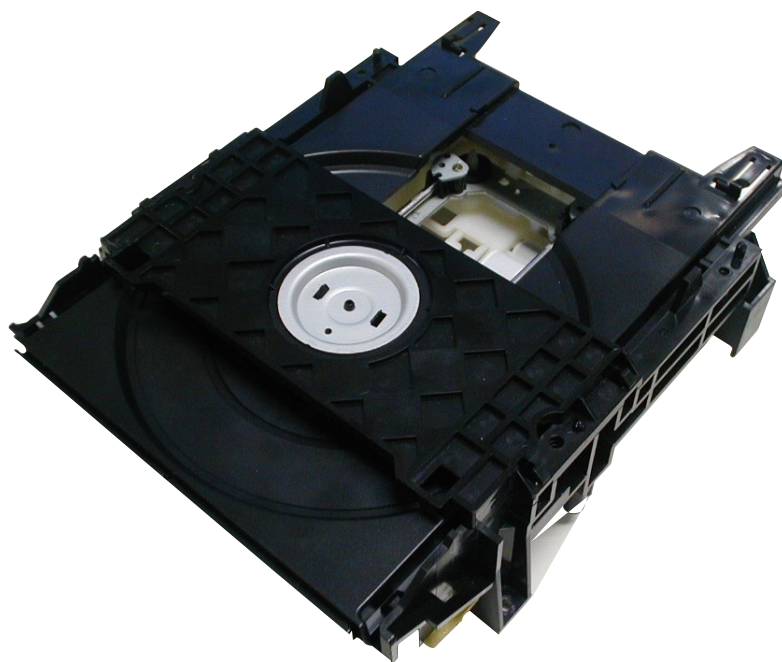


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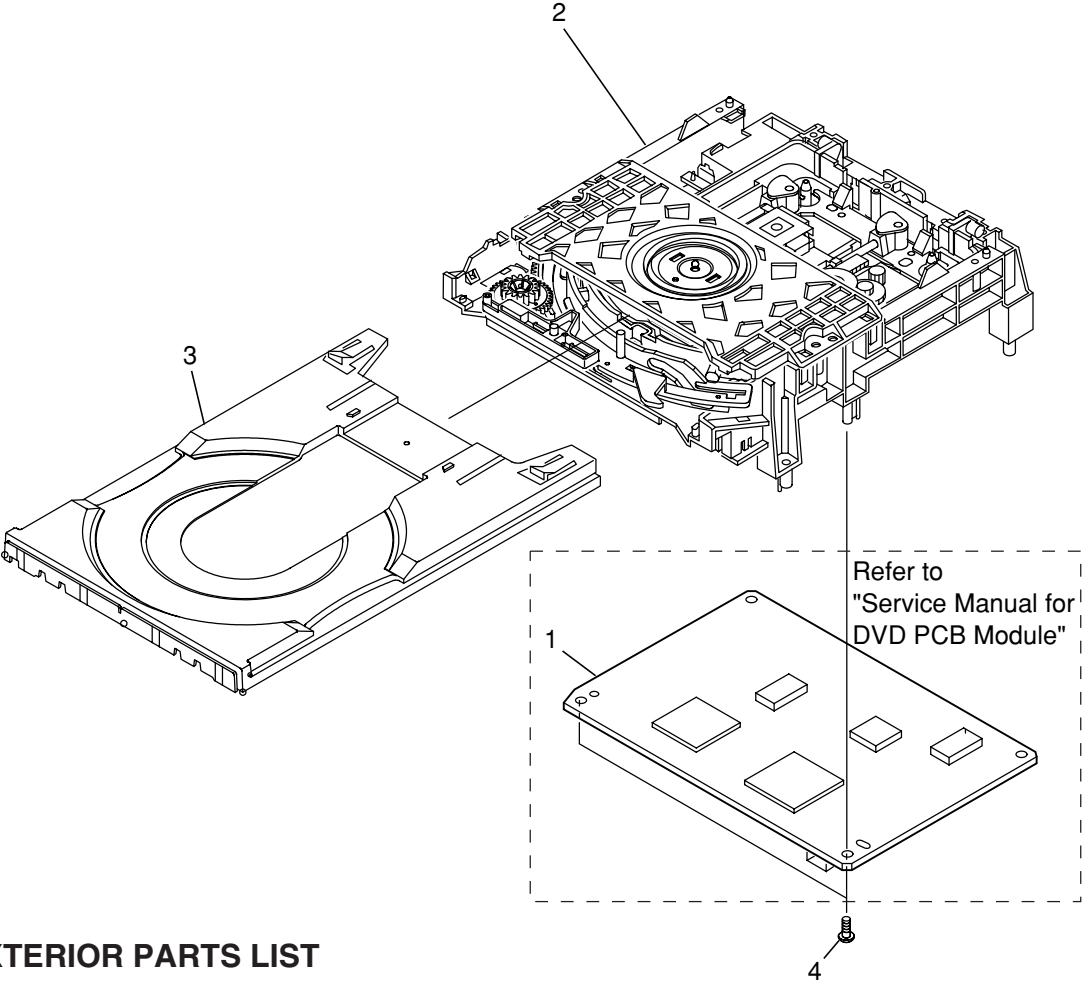
SECTION	PAGE
2.DB-VLD 210 (DVD Loader for MARANTZ)	
2.1 EXTERIOR	2-1
2.2 LOADING MECHANISM ASSY	2-2
2.3 TRAVERSE MECHANISM ASSYS	2-3

Please use this service manual with referring to the user guide (D.F.U) without fail.
修理の際は、必ず取り扱い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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DB-VLD210

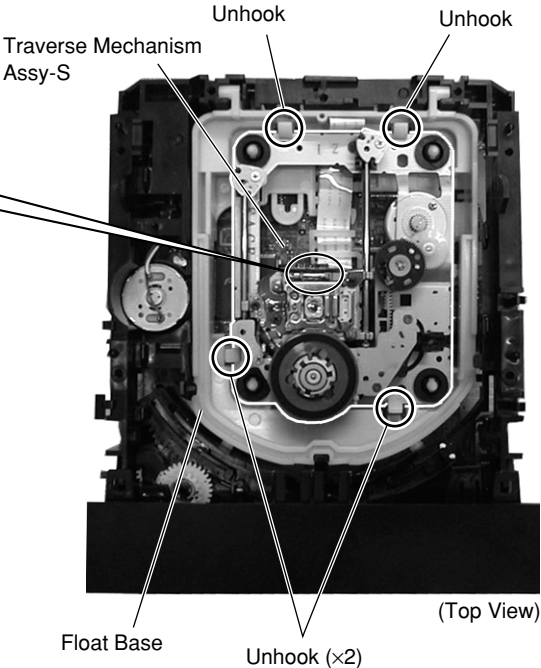
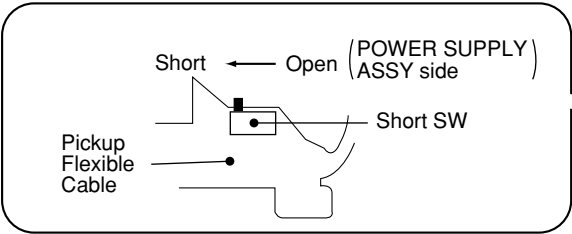
2.1 EXTERIOR



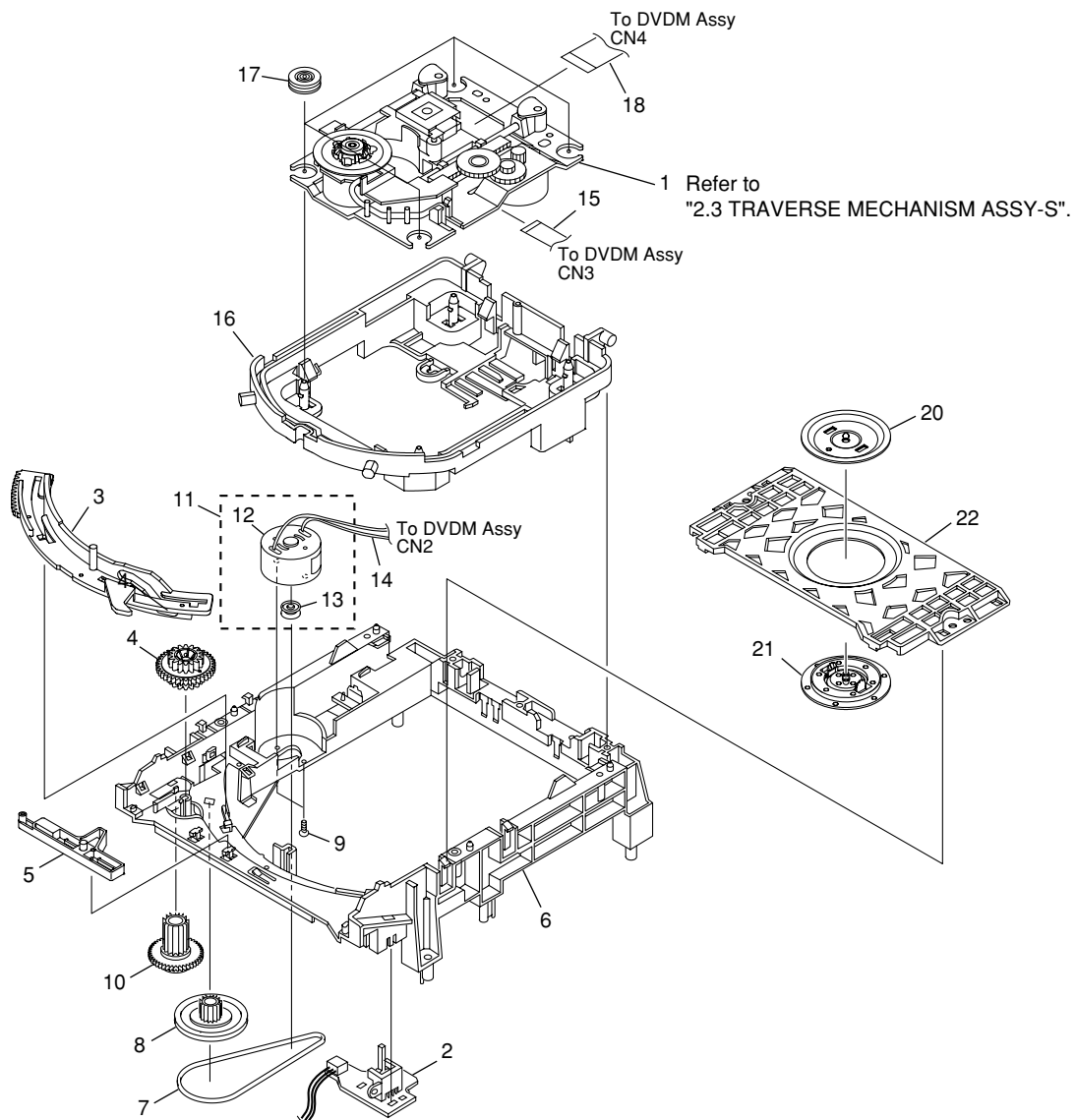
(1) EXTERIOR PARTS LIST

Mark	No.	Part No. (for PCS)	Description	Part No. (for MJ)
NSP	1	—	VWS1446, DVDM Assy DB-VPB210	ZK402K0210
	1	—	VWS1449, DVDM Assy DB-VPB211	ZK324J0210
	1	9965 000 07628	VWS1447, DVDM Assy DB-VPB212	ZK402K0230
	1	—	VWS1448, DVDM Assy DB-VPB213	ZK402K0220
	1	—	VWS1450, DVDM Assy DB-VPB214	ZK324J0220
	1	—	VWS1451, DVDM Assy DB-VPB215	ZK408K0210
	2	—	VWT1174, Loader Assy	—
	3	9965 000 07934	VNL1858, Tray	402K163210
NSP	4	—	PPZ30P080FMC, Screw	—

● DISASSEMBLY OF TRAVERSE MECHANISM ASSY



2.2 LOADING MECHANISM ASSY



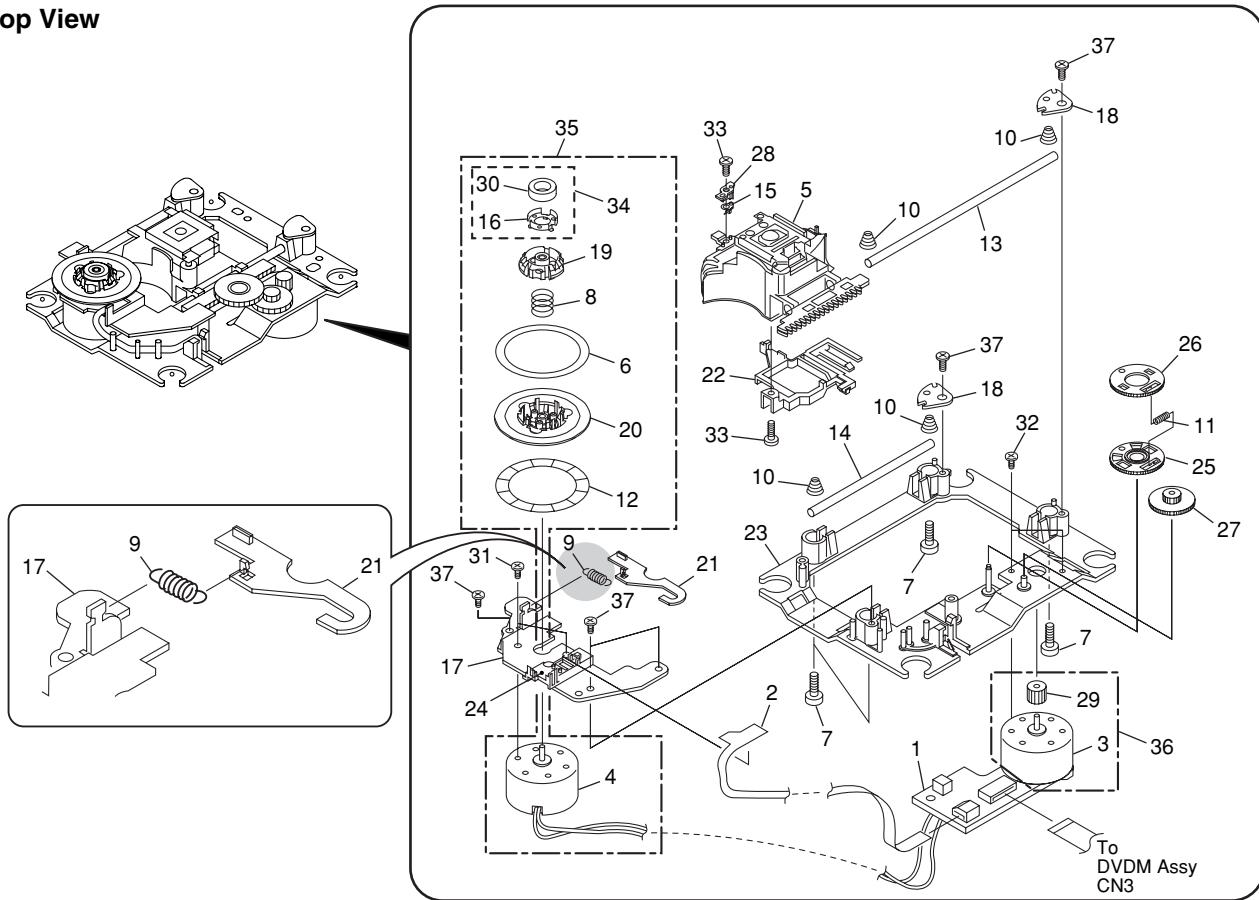
● LOADING MECHANISM ASSY PARTS LIST

Mark	No.	Part No. (for PCS)	Description	Part No. (for MJ)
NSP	1	9965 000 07935	VXX2653, Traverse Mechanism Assy-S	*ZK000310R
	2	—	VWG2171, LOAB Assy	—
	3	9965 000 07936	VNL1862, Drive Cam	402K054210
	4	9965 000 07937	VNL1861, Drive Gear	402K058210
NSP	5	9965 000 07938	VNL1820, Lock Plate	402K104210
	6	—	PNW2968, Loading Bases	—
	7	9965 000 07939	VEB1315, Belt	402K264210
NSP	8	9965 000 07940	VNL1866, Gear Pulley	402K262210
	9	—	JGZ17P028FMC, Screw	—
	10	9965 000 07941	VNL1860, Loading Gear	402K058220
	11	9965 000 07942	VXX2505, Loading Motor Assy	*ZZ001600R

Mark	No.	Part No. (for PCS)	Description	Part No. (for MJ)
NSP	12	—	PXM1027, DC Motor / 0.3W (LOADING)	—
NSP	13	—	PNW1634, Motor Pulley	296W262010
	14	—	VKP2253, Connector Assy	—
	15	9965 000 07943	VDA1842, Flexible Cable (08P)	*YU000790R
	16	9965 000 07944	VNL1865, Float Base	402K105210
	17	9965 000 07945	VEB1286, Floating Rubber	402K056210
	18	9965 000 07946	VDA1843, Flexible Cable (24P)	*YU000800R
	20	9965 000 07947	VNE2162, Clamper Plate	402K104220
	21	9965 000 07948	VNL1738, Clamper	402K005210
	22	9965 000 07949	VNL1859, Bridge	402K104230

2.3 TRAVERSE MECHANISM ASSY-S

• Top View



• TRAVERSE MECHANISM ASSY-S PARTS LIST

Mark	No.	Part No. (for PCS)	Description	Part No. (for MJ)
NSP	1	—	VWG2048, SMEB Assy	—
NSP	2	—	VWG2009, FGSB Assy	—
NSP	3	—	VXM1079, Motor	—
NSP	4	—	VXM1084, Motor	—
△NSP	5	—	VWY1055, Pickup Assy	—
NSP	6	—	DEC2040, Table Sheet	—
NSP	7	—	VBA1058, Screw	—
NSP	8	—	VBH1278, Centering Spring	—
	9	9965 000 07950	VBH1317, Hook Spring	296W115050
	10	9965 000 07951	VBH1303, Skew Spring	296W115060
	11	9965 000 07952	VBH1308, Gear Spring	296W115070
NSP	12	—	VEC1959, Reflected Sheet	—
NSP	13	—	VLL1504, Guide Bar	—
NSP	14	—	VLL1505, Sub-guide Bar	—
	15	9965 000 07953	VNC1017, Hold Spring	296W115080
NSP	16	—	VNE2070, Magnet Holder	—
NSP	17	—	VNE2154, Motor Base	—
NSP	18	—	VNE2155, Cover	—
NSP	19	—	VNL1746, Centering Ring	—

Mark	No.	Part No. (for PCS)	Description	Part No. (for MJ)
NSP	20	—	VNL1747, Disc Table	—
	21	9965 000 07954	VNL1770, Hook	296W258010
NSP	22	—	VNL1802, FFC Holder	—
NSP	23	—	VNL1806, Mechanism Base	—
NSP	24	—	VNL1807, FG Holder	—
	25	9965 000 07955	VNL1808, Gear A	296W058090
	26	9965 000 07956	VNL1809, Gear B	296W058100
	27	9965 000 07957	VNL1810, Gear C	296W058110
	28	9965 000 07958	VNL1811, Slider	296W125010
NSP	29	—	VNL1814, Gear D	—
NSP	30	—	VYM1024, Magnet	—
NSP	31	—	JFZ17P025FZK, Screw	—
NSP	32	—	JGZ17P028FMC, Screw	—
NSP	33	—	VBA1051, Screw	—
NSP	34	—	VXX2507, Magnet Holder Assy	—
	35	9965 000 07959	VXX2649, Spindle Motor Assy	*ZK000290R
	36	9965 000 07960	VXX2650, Carriage Motor Assy	*ZK000300R
NSP	37	—	PBA1069, Screw	—

Service Manual

DB-VPB210, DB-VPB211, DB-VPB212, DB-VPB213, DB-VPB214, DB-VPB215 DVD PCB Module for MARANTZ

DVD Player : DV7010

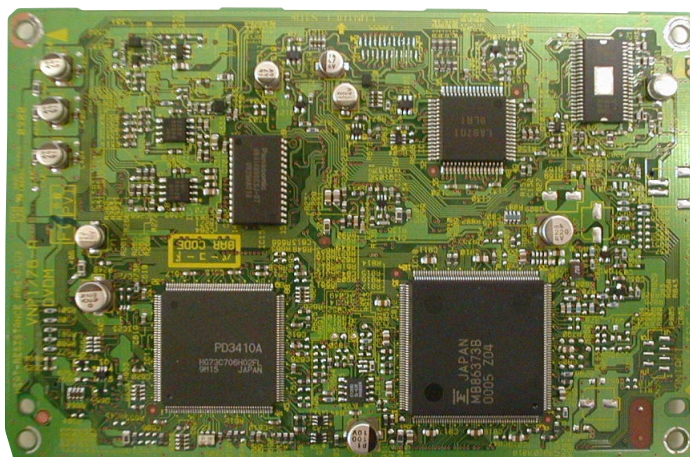
DV7100

DV-18mkII

DV-17

EC1000

ER3000



The DVD module is different with each product and version.
Refer to the following table.

Model	Vers.		
	/U, /F, /A	/K, /L, /S, /C	/N
DV7010	DB-VPB210	DB-VPB213	DB-VPB212
DV-18mkII	DB-VPB210	DB-VPB213	
DV-17	DB-VPB210	DB-VPB213	DB-VPB212
DV7100	DB-VPB215		

Model	Vers.		
	/F, /A, /S, /C	/K, /L	/N
EC1000	DB-VPB211	DB-VPB214	
ER3000	DB-VPB211	DB-VPB214	(DB-VPB217)

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3. DB-VPB210 / 211 / 212 / 213 / 214 / 215 (DVD PCB Module for MARANTZ)	
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3.2 PCB CONNECTION DIAGRAM	3-10
3.3 PCB PARTS LIST	3-24

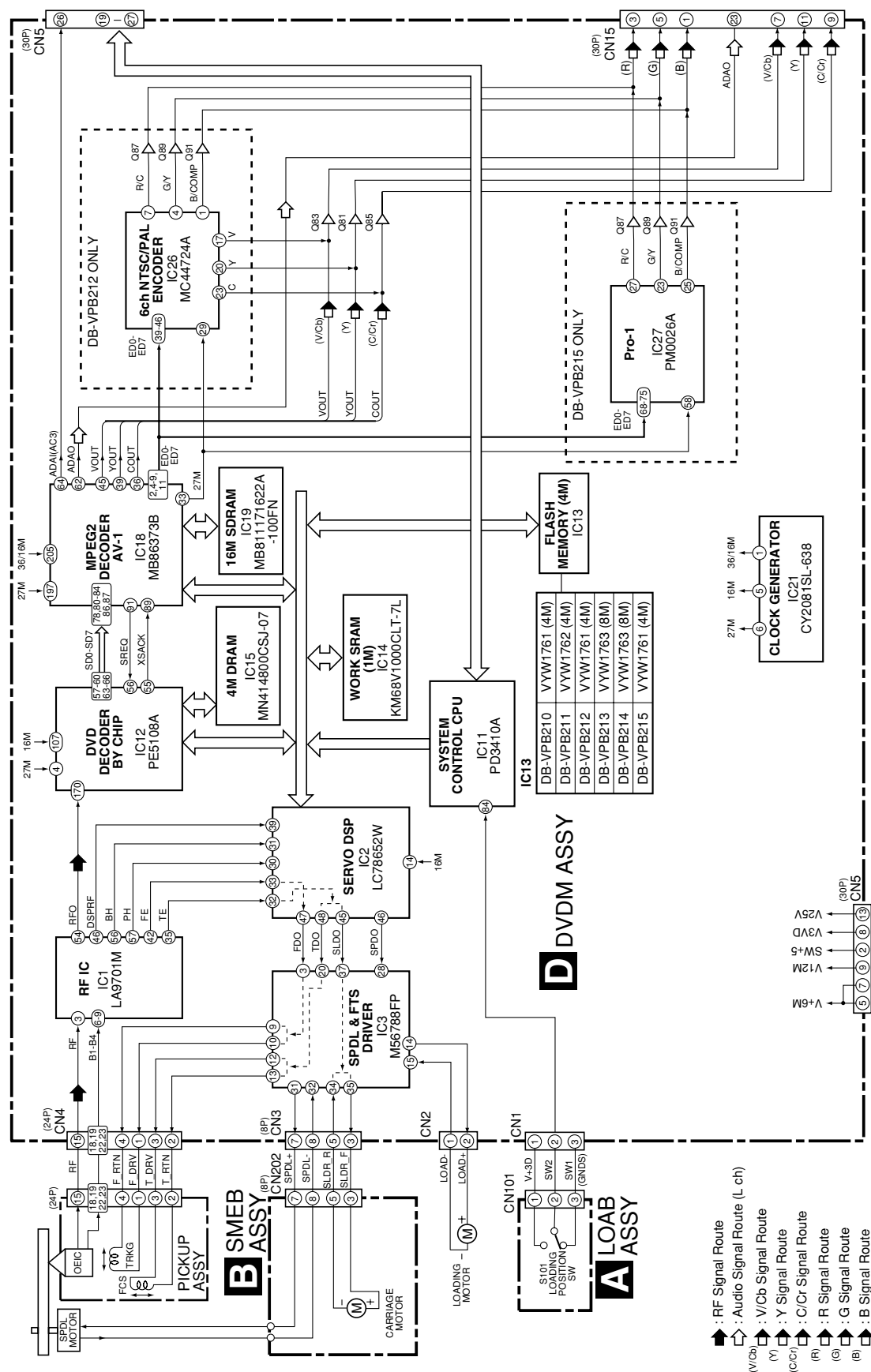
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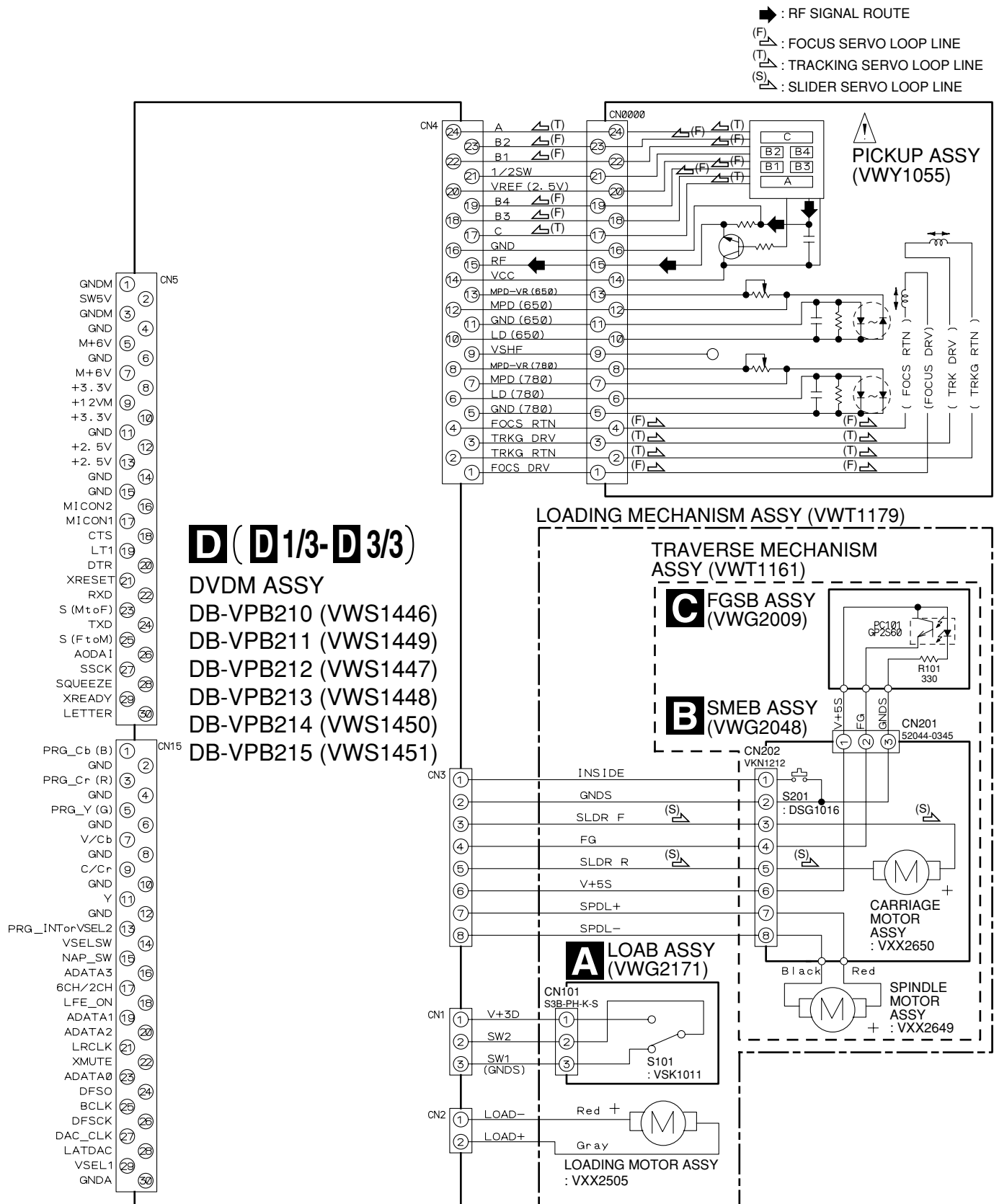
DB-VPB210/211/212/213/214/215

3.1 BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1.1 BLOCK DIAGRAM



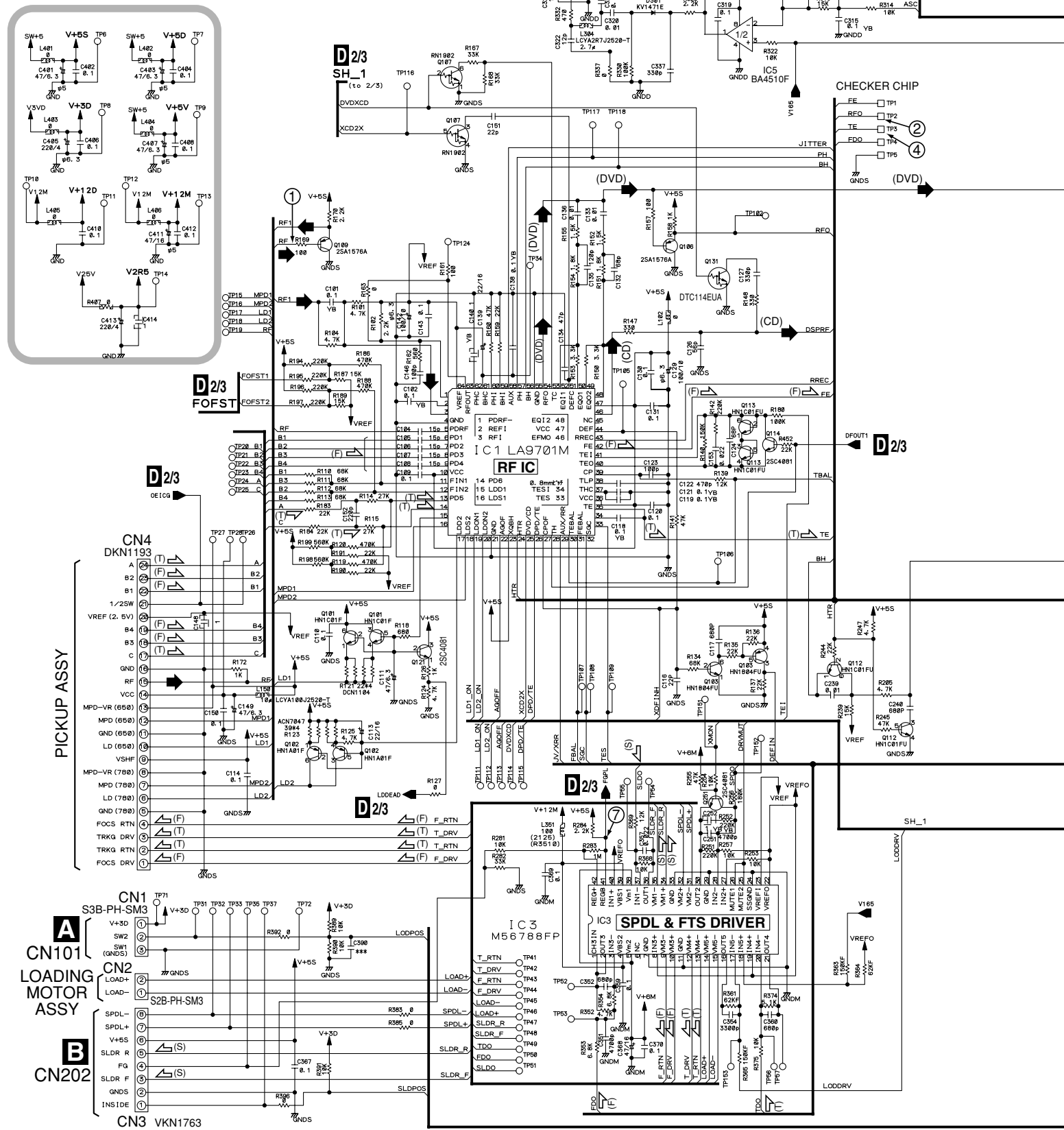
3.1.2 LOAB, SMEB, FGSB ASSYS and OVERALL WIRING DIAGRAM



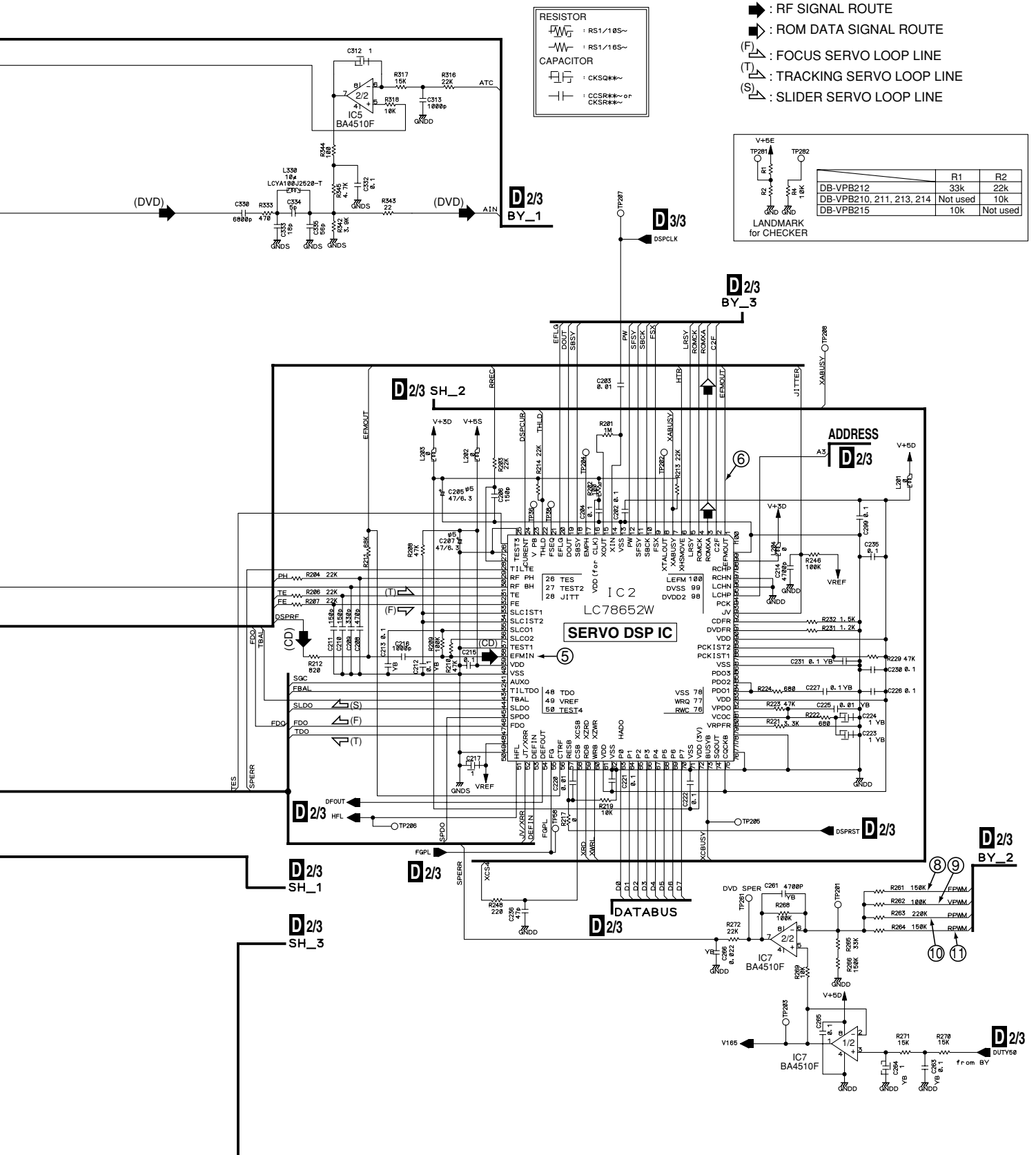
3.1.3 DVDM ASSY (1/3)

D 1/3 DVDM ASSY

(VWS1446, VWS1449, VWS1447,
VWS1448, VWS1450, VWS1451)

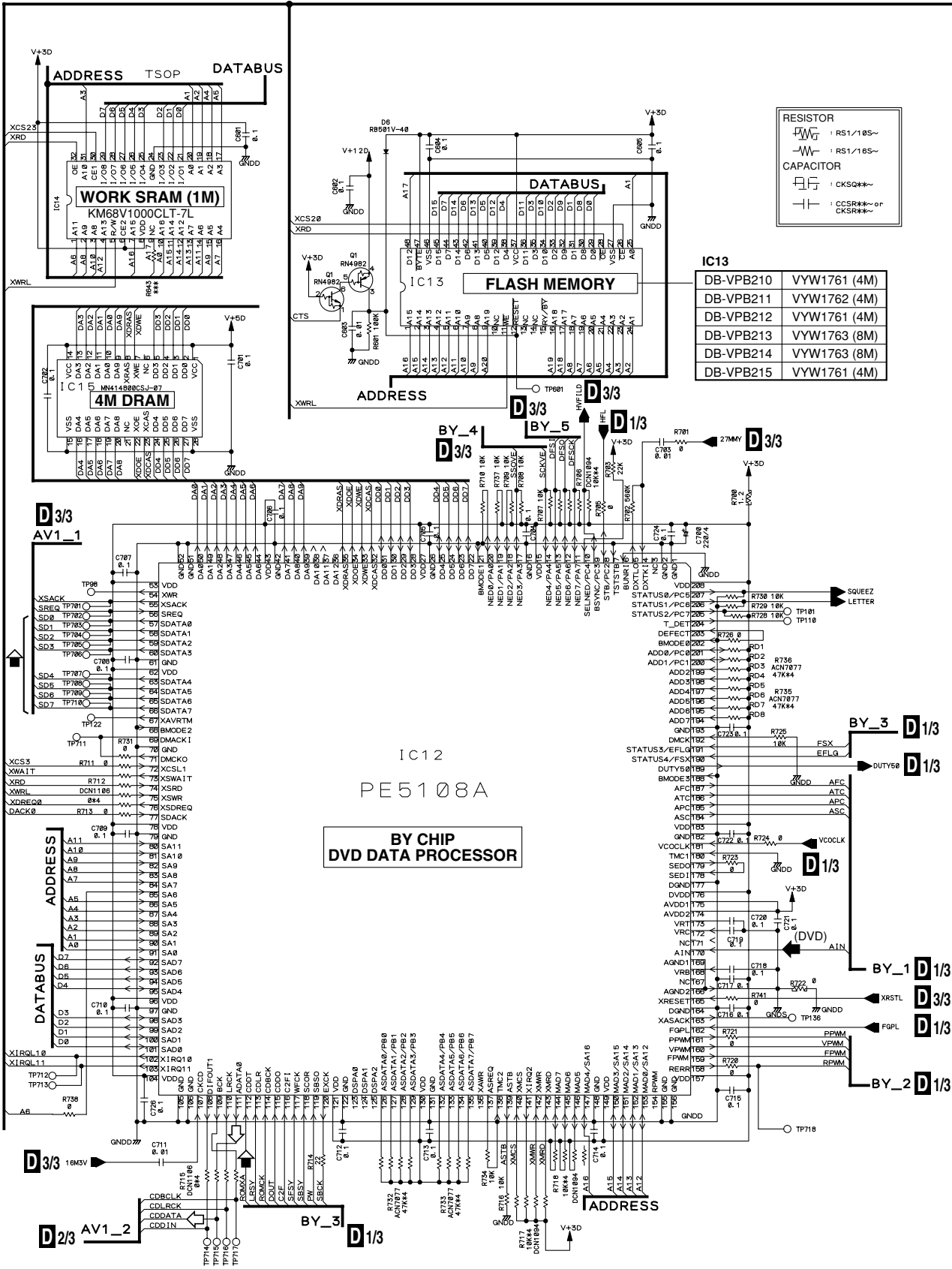


 : The power supply is shown with the marked box.



3.1.4 DVDM ASSY (2/3)

D2/3 DVDM ASSY (VWS1446, VWS1449, VWS1447, VWS1448, VWS1450, VWS1451)



 : The power supply is shown with the marked box.

◆ : RF SIGNAL ROUTE

◆ : ROM DATA SIGNAL ROUTE

◻ : AUDIO SIGNAL ROUTE

D 1/3, 3/3

D 1/3, 3/3

D 1/3
SH_4

D 3/3
SH_5

IC11
PD3410A

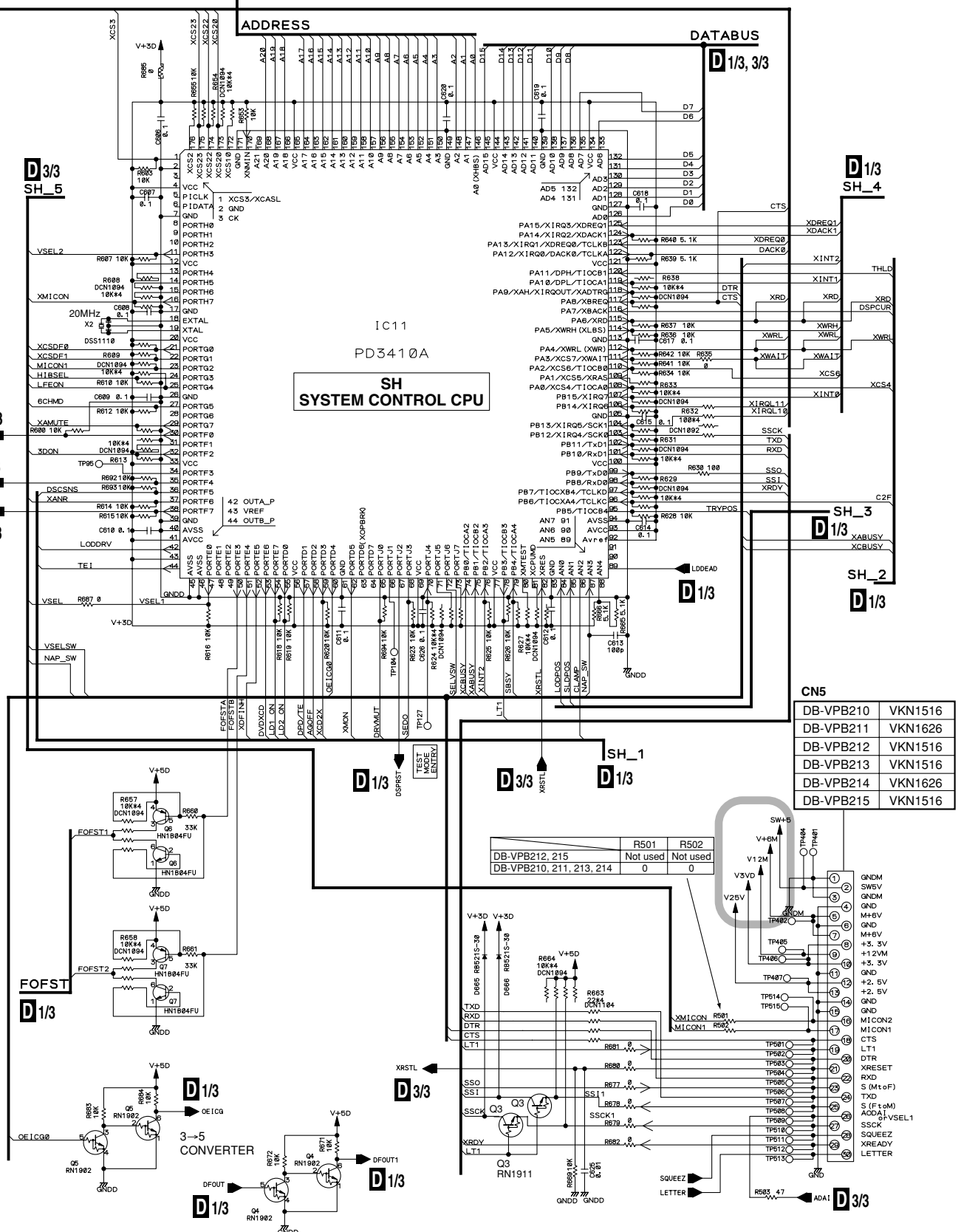
SH
SYSTEM CONTROL CPU

SH_3
D 1/3

SH_2
D 1/3

DB-VPB210	VKN1516
DB-VPB211	VKN1626
DB-VPB212	VKN1516
DB-VPB213	VKN1516
DB-VPB214	VKN1626
DB-VPB215	VKN1516

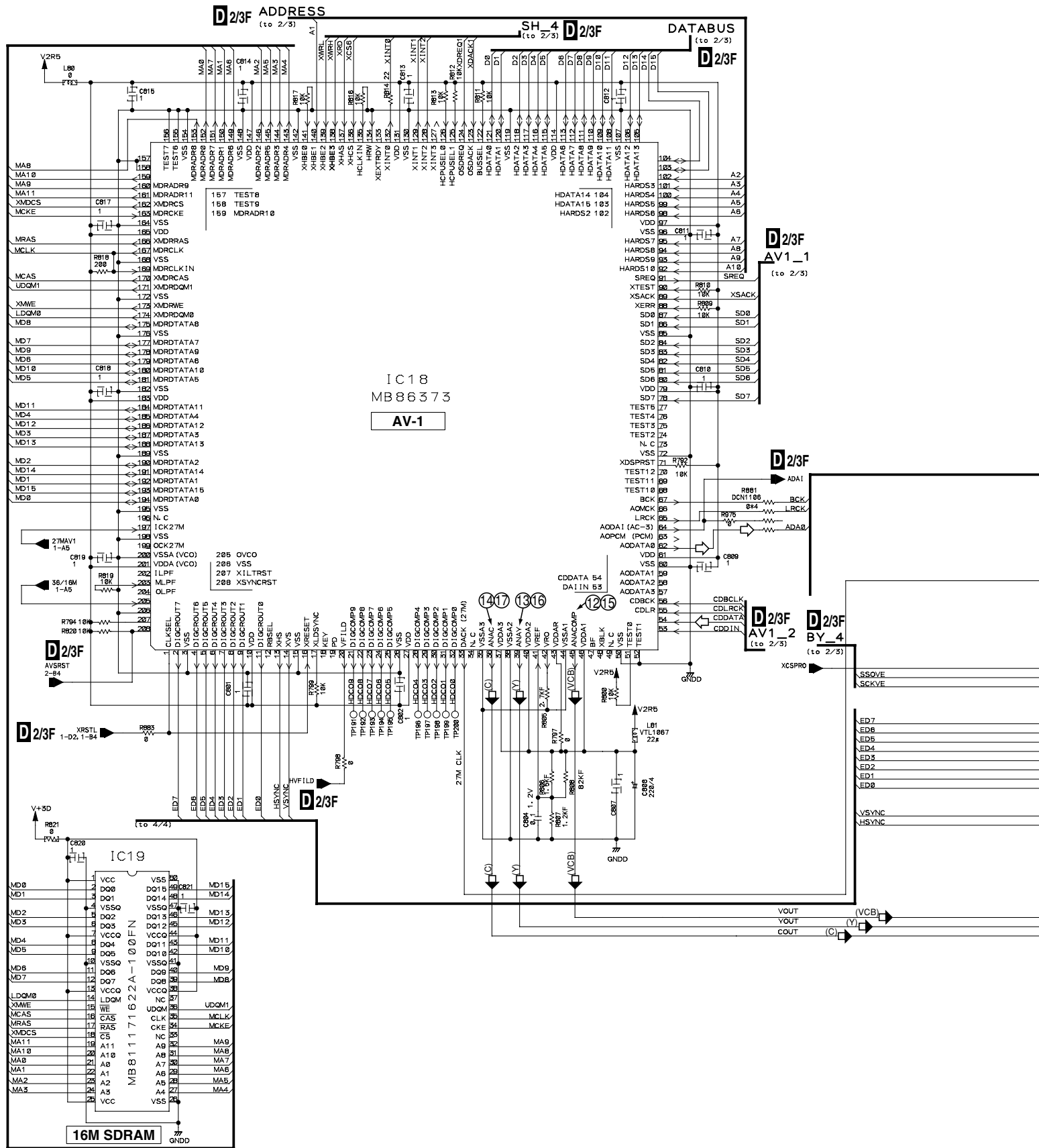
DB-VPB212, 215	R501	R502
DB-VPB210, 211, 213, 214	Not used	Not used
	0	0



D 3/3 DVDM ASSY (VWS1446,VWS1449, VMS1447, VWS1448,VWS1450)
DB-VPB210 / 211 / 212 / 213 / 214 ONLY



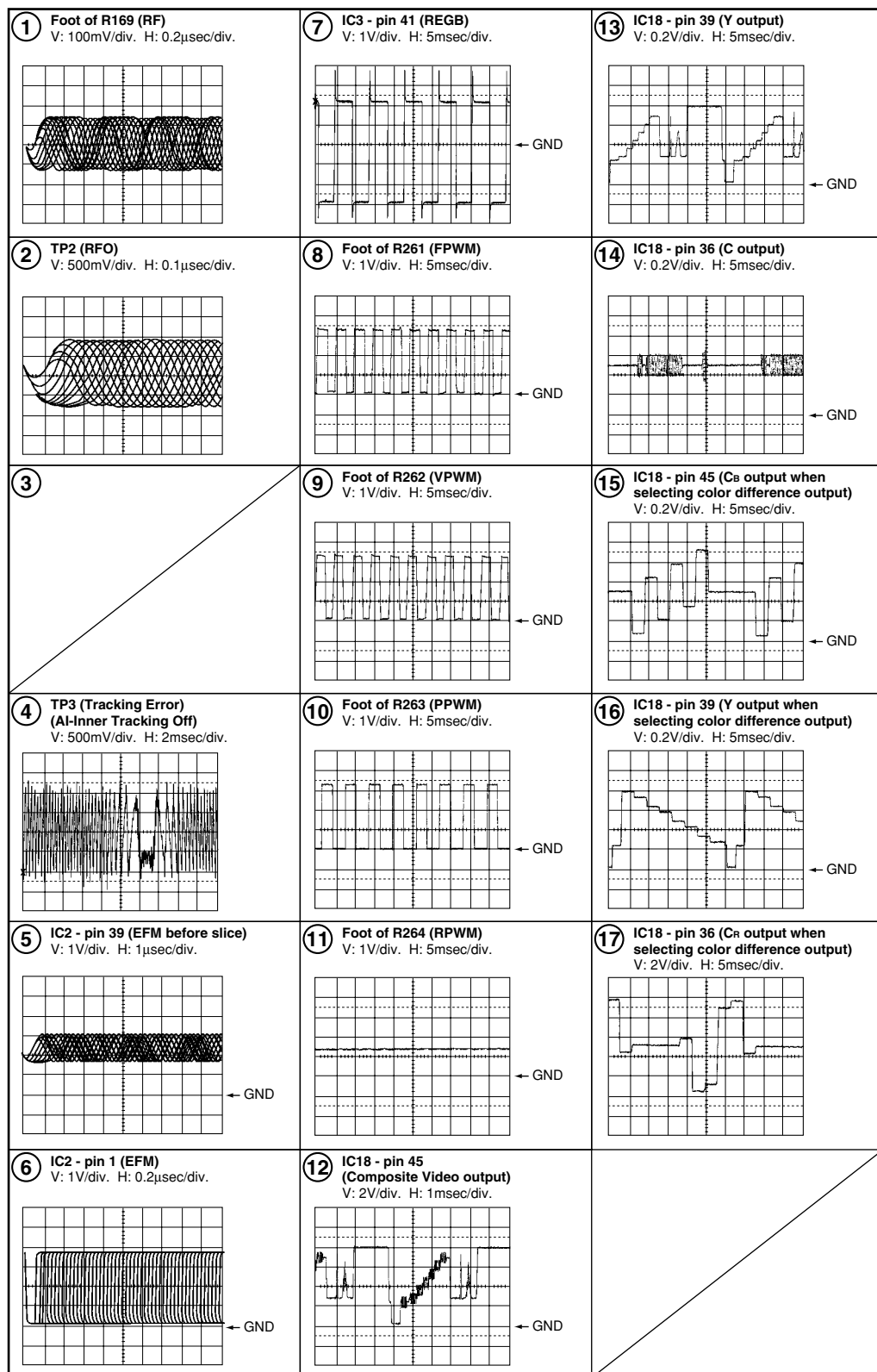
D3/3F DVDM ASSY (VWS1451) DB-VPB215 ONLY



WAVEFORMS

Note : The encircled numbers denote measuring point in the schematic diagram.

Measurement condition : No. 1 to 4 and 6 to 11 : MJK1, Title 1-chp 1 or TDV-540, Title 2-chp1
 No. 5 : CD, ABEX-784 Track 1 or PHILIPS SBC 429 Track1
 No. 12 to 14 : MJK1, Title 1-chp 4 or TDV-540, Title 2-chp1
 No. 15 to 17 : MJK1, Title 1-chp 5 or TDV-540, Title 2-chp1



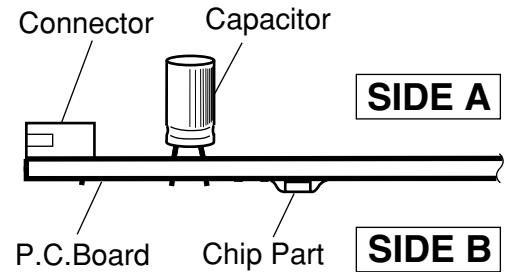
3.2 PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

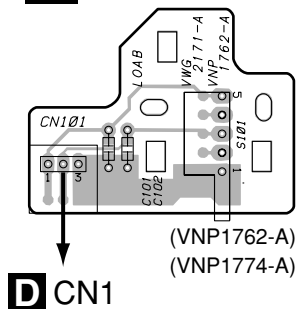
Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.

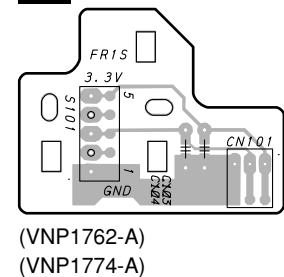


3.2.1 LOAB and SMEB ASSYS

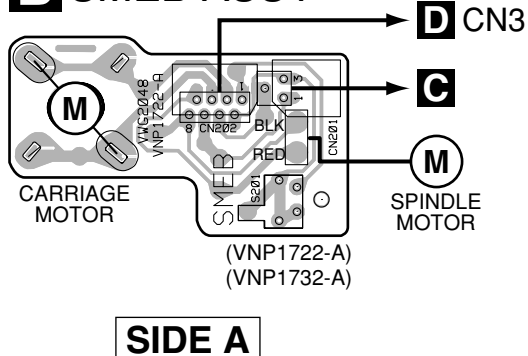
A LOAB ASSY



A LOAB ASSY



B SMEB ASSY



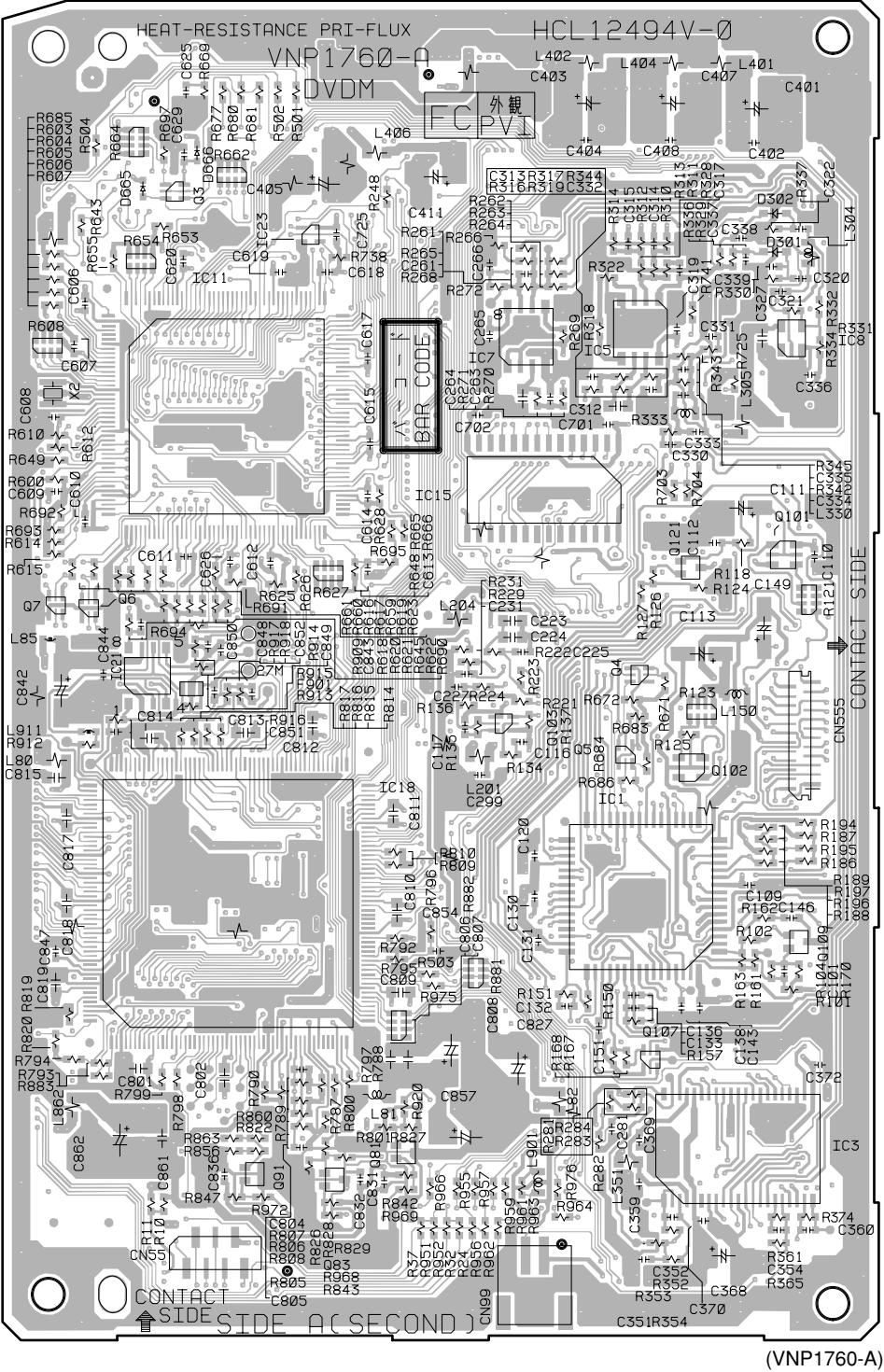
B SMEB ASSY



3.2.2 DVDM ASSY

D DVDM ASSY

• This PCB is a four-layered board.

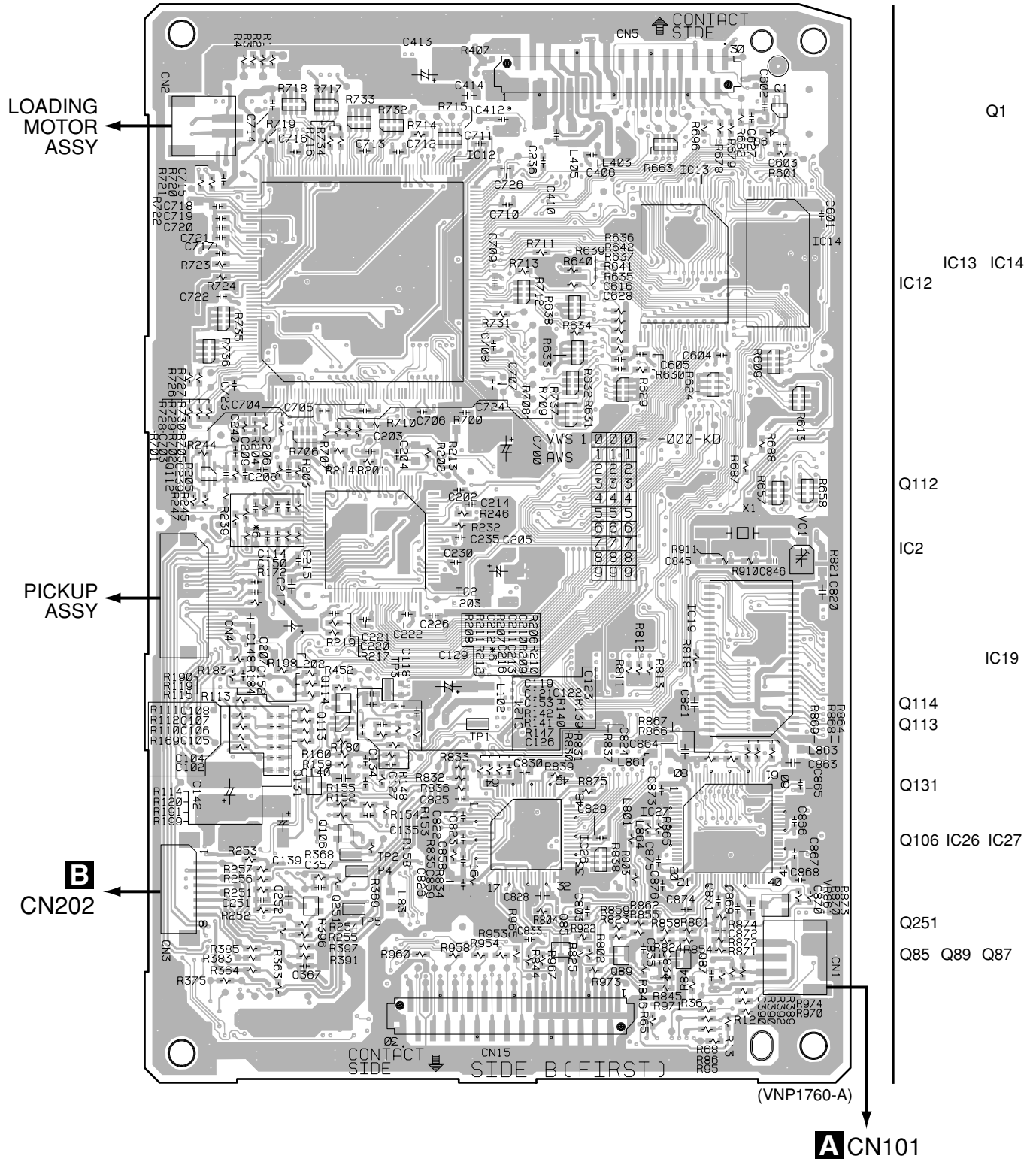


- Q3
- IC7 IC5 IC8
- IC11
- IC15
- Q121 Q101
- Q7 Q6
- IC21 Q4
- Q103
- Q5 Q102
- IC18 IC1
- Q109
- Q107
- Q81 IC3
- Q91 Q83

SIDE A

D DVDM ASSY

• This PCB is a four-layered board.



SIDE B

3.2.3 IC

• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

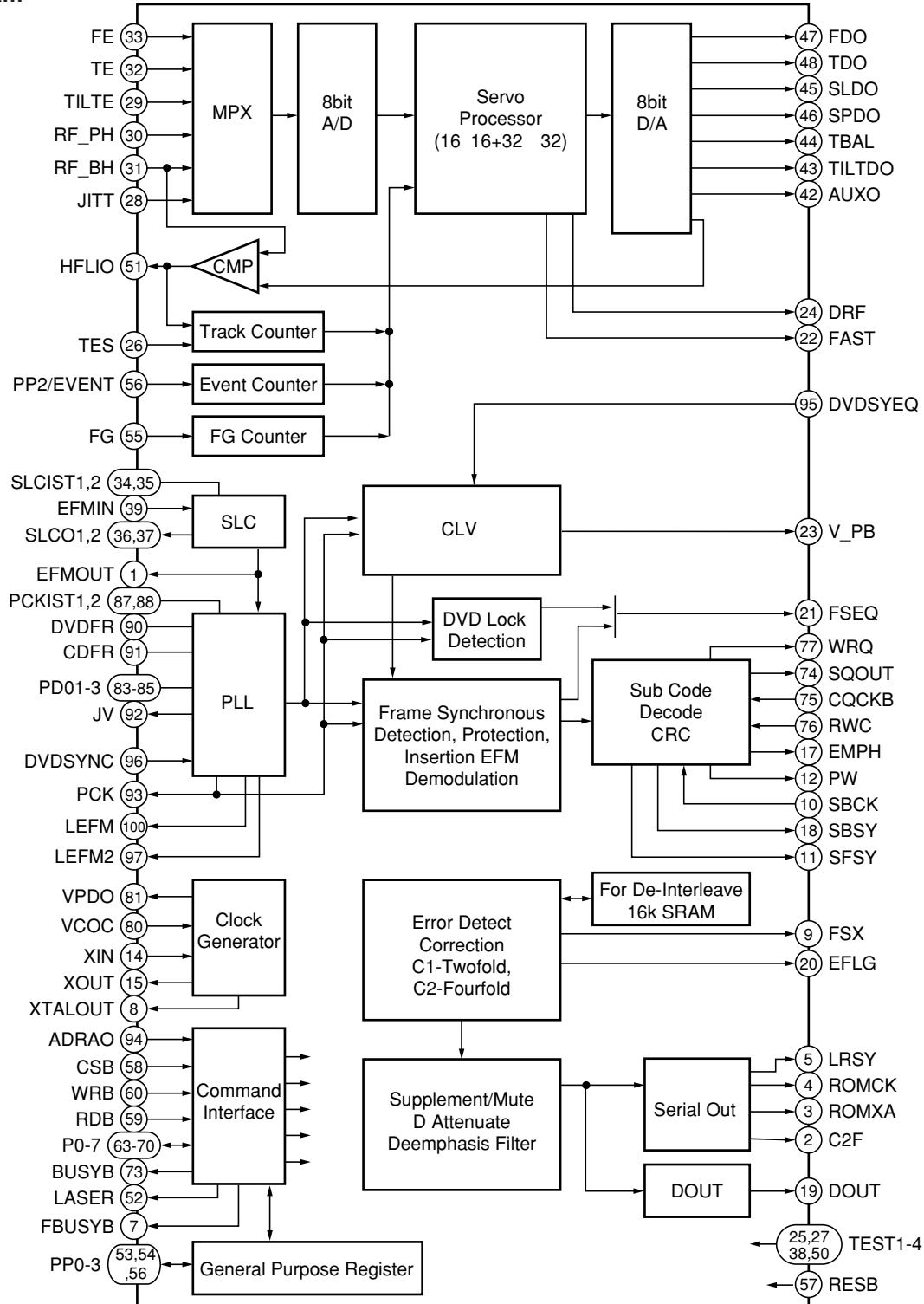
• List of IC

LC78652W, PD3410A, MB86373B

■ LC78652W (DVD M ASSY : IC2)

• DSP IC

Block Diagram



●Pin Function

No.	Pin Name	I/O	Function
1	EFMOUT	O	Output the state that was binary-stated value EFM
2	C2F	O	C2 flag output
3	ROMXA	O	CD-ROM data output
4	ROMCK	O	Shift clock output for CD-ROM data output
5	LRSY	O	L/R clock output for CD-ROM data output
6	PP3	I/O	General-purpose port input/output / DVD sync. signal input N ch-OD output
7	FBUSYB	O	Busy signal output of DSP process operation N ch-OD output
8	XTALOUT	O	External system clock output
9	FSX	O	CD 1 frame sync. signal output
10	SBCK	I	Subcode reading out clock input
11	SFSY	O	Frame sync. signal output of subcode
12	PW	O	Subcode P, Q, R, S, T, U, V and W output
13	VSS	–	GND pin
14	XIN	I	Connect a crystal resonator (16.9344MHz)
15	XOUT	O	Connect a crystal resonator
16	DVDD1	–	3.3V power supply of the oscillation circuit
17	EMPH	O	Monitor pin of the deemphasis
18	SBSY	O	Sync. signal output of the subcode block
19	DOUT	O	Audio EIAJ data output
20	EFLG	O	Error correction state monitor of the error correction C1 and C2
21	FSEQ	O	Detection monitor of the CD/DVD frame sync. signal
22	FAST	O	Playback speed monitor N ch-OD output
23	V_PB	O	Monitor output of the rough servo/CLV control
24	DRF	O	In focus monitor
25	TEST3	I	Test input 3
26	TES	I	Tracking error signal input
27	TEST2	I	Test input 2
28	JITT	I	Jitter quantity detecting signal input of EFM PLL
29	TILTE	I	Tilt error signal input
30	RF_PH	I	RF peak hold signal input
31	RF_BH	I	RF bottom hold signal input
32	TE	I	Tracking error signal input
33	FE	I	Focus error signal input
34	SLCIST1	–	Current setting pin 1 of the constant current charge pump for SLC
35	SLCIST2	–	Current setting pin 2 of the constant current charge pump for SLC
36	SLCO1	O	Control output 1 for SLC
37	SLCO2	O	Control output 2 for SLC
38	TEST1	I	Test input 1
39	EFMIN	I	EFM/EFM + input
40	AVDD	–	5V power supply of A/D and D/A for servo
41	AVSS	–	GND of A/D and D/A for servo
42	AUXO	O	DA auxiliary output
43	TILTDO	O	Tilt control signal output
44	TBAL	O	Tracking balance control signal output
45	SLDO	O	Sled control signal output
46	SPDO	O	Spindle control signal output
47	FDO	O	Focus control signal output
48	TDO	O	Tracking control signal output
49	VREF	–	Reference level of D/A for servo
50	TEST4	I	Test input 4

No.	Pin Name	I/O	Pin Function
51	HFLIO	I/O	Mirror detection signal input/output
52	LASER	O	Output pin for laser ON/OFF control
53	PP0/DVD_CDB	I/O	General-purpose port input/output / Disc discrimination signal output
54	PP1/CRCERRB	I/O	General-purpose port input/output / Subcode CRC result signal output
55	FG	I	FG counter input
56	PP2/EVENT	I/O	General-purpose port input/output / Event counter input
57	RESB	I	Reset input
58	CSB	I	Chip select input
59	RDB	I	Internal state reading signal input
60	WRB	I	Command / data writing signal input
61	DVDD2	–	5V power supply
62	VSS	–	GND
63	P0	I/O	Command / data input/output
64	P1		
65	P2		
66	P3		
67	P4		
68	P5		
69	P6		
70	P7		
71	VSS	–	GND
72	DVDD1	–	3.3V power supply for internal
73	BUSYB	O	Busy signal output of command process
74	SQOUT	O	Serial output of subcode Q
75	CQCKB	I	Shift clock input for subcode Q data output
76	RWC	I	Update permission input of subcode Q
77	WRQ	O	Read out ready monitor of subcode Q
78	AVSS	–	PLL GND for internal system clock
79	VRPFR	–	VCO oscillation range setting of PLL for system clock
80	VCOC	I	Connect a PLL filter for system clock
81	VPDO	O	
82	AVDD	–	PLL 5V power supply for system clock
83	PDO1	I/O	PLL filter connection pin 1 for EFM playback
84	PDO2	I/O	PLL filter connection pin 2 for EFM playback
85	PDO3	I/O	PLL filter connection pin 3 for EFM playback
86	AVSS	–	PLL GND for EFM playback
87	PCKIST1	–	Current setting 1 of PLL constant current charge pump for EFM playback
88	PCKIST2	–	Current setting 2 of PLL constant current charge pump for EFM playback
89	AVDD	–	PLL 5V power supply for EFM playback
90	DVDFR	–	VCO oscillation range setting of PLL for EFM playback 1
91	CDFR	–	VCO oscillation range setting of PLL for EFM playback 2
92	JV	O	Jitter output of PLL clock for EFM playback
93	PCK	O	Bit clock output for EFM playback
94	ADRAO	I	Address input
95	DVDSYEQ	I	DVD synchronize pulse input
96	DVDSYNC	I	DVD synchronous signal input
97	LEFM2	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 2
98	DVDD1	–	3.3V power supply for I/O
99	VSS	–	GND
100	LEFM	O	Output the state that cut and out a signal which was binary-stated value EFM with PCK 1

■ PD3410A (DVDM ASSY : IC11)

• System Control IC

● Pin Function

No.	Mark	Pin Name	I/O	Function
1	XCS3/XCASL	XCS3	O	PD4995A (MY CHIP) chip select signal output
2	GND	GND	–	GND
3	CK	HCPUCK	O	N.C.
4	VCC	V+3D	–	V+3D
5	PICLK	–	I/O	N.C.
6	PIDATA	–	I/O	N.C.
7	GND	GND	–	GND
8	PORTH0	–	O	N.C.
9	PORTH1	–	O	N.C.
10	PORTH2	36MVH	O	BU2158F (Clock generator)
11	PORTH3	V_SEI2	O	Composite/S switching signal output of the skirt terminal [WY model]
12	VCC	V+3D	–	V+3D
13	PORTH4	–	O	N.C.
14	PORTH5	–	O	N.C.
15	PORTH6	–	O	N.C.
16	PORTH7	–	O	N.C.
17	GND	GND	–	GND
18	EXTAL	EXTAL	I	Connect a ceramic resonator
19	XTAL	XTAL	O	
20	VCC	V+3D	–	V+3D
21	PORTG0	XCSDFO	O	DAC chip select signal output (←XLAT3)
22	PORTG1	–	O	N.C.
23	PORTG2	–	O	N.C.
24	PORTG3	–	O	N.C.
25	PORTG4	–	O	N.C.
26	GND	GND	–	GND
27	PORTG5	–	O	N.C.
28	PORTG6	–	O	N.C.
29	PORTG7	XAMUTE	O	Last stage mute signal output of the audio
30	PORTF0	44X48	O	DAC 44/48 FS switching signal output
31	PORTF1	–	I	N.C.
32	PORTF2	3DON	O	3D audio ON/bypass switching signal output
33	VCC	V+3D	–	V+3D
34	PORTF3	–	O	N.C.
35	PORTF4	XAVSRST	O	Sync. reset port
36	PORTF5	–	O	N.C.

No.	Mark	Pin Name	I/O	Function
37	PORTF6	–	O	N.C.
38	PORTF7	XCSVE	O	Serial communication enable signal output of the video encoder [WY model]
39	GND	GND	–	GND
40	AVSS	GND	–	GND
41	AVCC	V+3D	–	V+3D
42	OUTA_P	LODRV	O	Loading drive output
43	VREF	V+3D	–	V+3D
44	OUTB_P	TEI	O	Tracking offset signal output
45	AVSS	GND	–	GND
46	AVSS	GND	–	GND
47	PORTE0	V_SEL	O	Component/composite switching signal output
48	PORTE1	–	I	N.C.
49	PORTE2	–	I	N.C.
50	PORTE3	FOFST1	I/O	Focus offset adjustment output 1
51	PORTE4	FOFST2	I/O	Focus offset adjustment output 2
52	PORTE5	XDFINH	I/O	Defect shunt signal output
53	PORTE6	DVD/XC	O	DVD/CD switching signal output
54	PORTE7	LD1_ON	O	650 nm laser diode ON signal output
55	PORTD0	LD2_ON	O	780 nm laser diode ON signal output
56	VCC	V+3D	–	V+3D
57	PORTD1	DPD/TE	O	1 beam/3 beams switching signal output
58	PORTD2	AGOFF	O	AGC ON/OFF switching signal output of RF IC
59	PORTD3	XCD2X	O	Signal output for switching the double speed playback (VCD)
60	PORTD4	OEICG	O	OEIC gain switching signal output
61	GND	GND	–	GND
62	PORTD5	XMON	O	ON/OFF switching signal output of the spindle motor control output
63	PORTD6	–	O	N.C.
64	PORTD7	–	I	N.C.
65	PORTJ0	XDRVMUT	O	Driver mute output
66	PORTJ1	–	O	N.C.
67	PORTJ2	XDSPRST	O	Servo DSP reset
68	PORTJ3	–	I	N.C.
69	VCC	V+3D	–	V+3D
70	PORTJ4	TM_ENT	I	Test mode entry
71	PORTJ5	–	O	N.C.
72	PORTJ6	VSEL_SW	I	Component/composite SW input
73	PORTJ7	–	I	N.C.
74	PB0/TIOCA2	XCBUSY	I	Command busy input
75	PB1/TIOCB2	XABUSY	I	Auto-sequence busy input
76	PB2/TIOCA3	XINT2	I	Interrupt input 2 (AV-1)
77	VCC	V+3D	–	V+3D
78	PB3/TIOCB3	LT1	O	Communication response signal output to the FL controller
79	PB4/TIOCA4	SBSY	I	Subcode block sync. input
80	XMTEST	–	I	Test terminal (V+3D)
81	XCPUMD	–	I	Test terminal (V+3D)
82	XRES	XRESET	I	Reset input

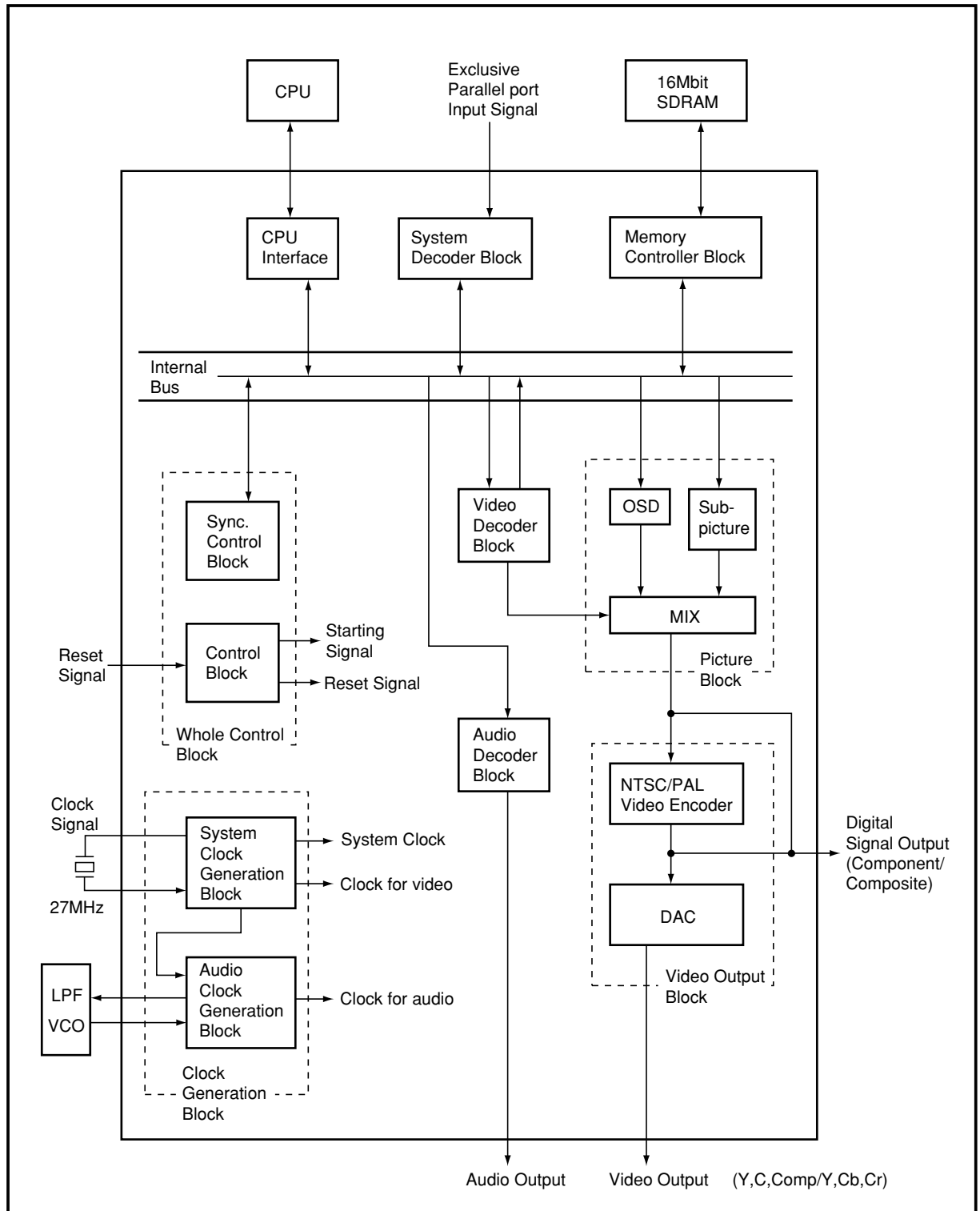
No.	Mark	Pin Name	I/O	Function
83	GND	GND	–	GND
84	AN0	LODPOS	I	Loading position input
85	AN1	SLDPOS	I	Slider position input
86	AN2	–	I	N.C.
87	AN3	NAP_SW	I	NTSC/AUTO/PAL SW input
88	AN4	XOEM	I	Input terminal of OEM model protection
89	AN5	LDDEAD		Input for LD current value display
90	AN6	–	I	N.C.
91	AN7	–	I	N.C.
92	Avref	V+3D	–	V+3D
93	AVCC	V+3D	–	V+3D
94	AVSS	GND	–	GND
95	PB5/TIOCB4	–	I	N.C.
96	PB6/TIOCA4/TCLKC	C2F	I	C2 error input
97	PB7/TIOCB4/TCLKD	XRDF	I	Communication request input from the FL controller
98	PB8/RxD0	SSI	I	Serial data input (FL controller)
99	PB9/TxD0	SSO	O	Serial data output (FL controller)
100	VCC	V+3D	–	V+3D
101	PB10/RxD1	RXD	I	Data input of the RS-232C
102	PB11/TxD1	TXD	O	Data output of the RS-232C
103	PB12/XIRQ4/SCK0	SSCK	I/O	Serial clock output (FL controller)
104	PB13/XIRQ5/SCK1	XIRQL10	I	Interrupt input #0 (MY CHIP)
105	GND	GND	–	GND
106	PB14/XIRQ6	XIRQL11	I	Interrupt input #1 (MY CHIP)
107	PB15/XIRQ7	XINT0	I	Interrupt input #0 (AV-1)
108	PA0/XCS4/TIOCA0	XCS4	O	Servo DSP chip select signal output
109	PA1/XCS5/XRAS	–	O	N.C.
110	PA2/XCS6/TIOCB0	XCS6	O	AV-1 chip select signal output
111	XWAIT	XWAIT	I	Wait signal input
112	XWRL	XWRL	O	Write pulse output L
113	GND	GND	–	GND
114	XWRH	XWRH	O	Write pulse output H
115	XRD	XRD	O	Read pulse output
116	PA7/XBACK	XCURDET	I	Over-current detection signal input
117	PA8/XBREQ	CTS	I	RS-232C transfer permit input
118	PA9/XAH/XIRQOUT/ XADTRG	DTR	O	RS-232C transfer permit output
119	PA10/DPL/TIOCA1	XINT1	I	Interrupt input 1 (AV-1)
120	PA11/DPH/TIOCB1	THLD	I	Tracking hold signal input
121	VCC	V+3D	–	V+3D
122	PA12/XIRQ0/DACK0/ TCLKA	DACK0	O	DMA response output (MY CHIP)
123	PA13/XIRQ1/ XDREQ0/TCLKB	XDREQ0	I	DMA request input (MY CHIP)
124	PA14/XIRQ2/XDACK1	XDACK1	O	DMA response output (AV-1)
125	PA15/XIRQ3/XDREQ1	XDREQ1	I	DMA request input (AV-1)
126	AD0	D0	I/O	Data bus 0

No.	Mark	Pin Name	I/O	Function
127	GND	GND	–	GND
128	AD1	D1	I/O	Data bus 1
129	AD2	D2	I/O	Data bus 2
130	AD3	D3	I/O	Data bus 3
131	AD4	D4	I/O	Data bus 4
132	AD5	D5	I/O	Data bus 5
133	AD6	D6	I/O	Data bus 6
134	VCC	V+3D	–	V+3D
135	AD7	D7	I/O	Data bus 7
136	AD8	D8	I/O	Data bus 8
137	AD9	D9	I/O	Data bus 9
138	AD10	D10	I/O	Data bus 10
139	GND	GND	–	GND
140	AD11	D11	I/O	Data bus 11
141	AD12	D12	I/O	Data bus 12
142	AD13	D13	I/O	Data bus 13
143	AD1	D14	I/O	Data bus 14
144	VCC	V+3D	–	V+3D
145	AD15	D15	I/O	Data bus 15
146	A0 (XHBS)	A0	O	Address bus 0
147	A1	A1	O	Address bus 1
148	A2	A2	O	Address bus 2
149	GND	GND	–	GND
150	A3	A3	O	Address bus 3
151	A4	A4	O	Address bus 4
152	A5	A5	O	Address bus 5
153	A6	A6	O	Address bus 6
154	A7	A7	O	Address bus 7
155	A8	A8	O	Address bus 8
156	A9	A9	O	Address bus 9
157	A10	A10	O	Address bus 10
158	A11	A11	O	Address bus 11
159	A12	A12	O	Address bus 12
160	A13	A13	O	Address bus 13
161	A14	A14	O	Address bus 14
162	A15	A15	O	Address bus 15
163	A16	A16	O	Address bus 16
164	A17	A17	O	Address bus 17
165	VCC	V+3D	–	V+3D
166	A18	A18	O	Address bus 18
167	A19	A19	O	Address bus 19
168	A20	A20	O	Address bus 20 [RAM model]
169	A21	A21	O	N.C.
170	XNMI	XNMI	I	V+3D
171	GND	GND	–	GND
172	XCS10	–	O	N.C.
173	XCS20	XCS20	O	Chip select signal output of the flash ROM
174	XCS22	–	O	Chip select signal output of the GUI ROM [OEM model]
175	XCS23	XCS23	O	Chip select signal output of the SRAM
176	XCS2	–	O	N.C.

■ MB86373B (DVDM ASSY : IC18)

• MPEG2 Decoder IC

• Block Diagram



● Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	CLKSEL	I	ON/OFF signal of PLL ("H" : ON, "L" : OFF)	27	VDD	–	2.5V power supply
2	DIGCPN7	O	Digital component signal output (MSB) Digital Y signal output (9-bit) (MSB)	28	DIGCOMP4	O	Digital composite signal output Digital C signal output
3	VSS	–	GND	29	DIGCOMP3		
4	DIGCPN6	O	Digital component signal output Digital Y signal output (9-bit)	30	DIGCOMP2		
5	DIGCPN5			31	DIGCOMP1		
6	DIGCPN4			32	DIGCOMP0		Digital composite signal output (LSB) Digital C signal output (LSB)
7	DIGCPN3			33	DACK	O	27 MHz clock output
8	DIGCPN2			34	N.C.	–	Non connection
9	DIGCPN1			35	VSSA3	–	GND (D/A converter)
10	VDD	–	2.5V power supply	36	ANAC	O	Analog color (C) output signal
11	DIGCPN0	O	Digital component signal output (LSB) Digital Y signal output (9-bit) (LSB)	37	VDDA3	–	2.5V power supply (for built-in D/A converter only)
12	RBSEL	O	Cb and Cr discrimination signal at the digital component signal output. LSB at the digital Y signal output.	38	VSSA2	–	GND (D/A converter)
13	XHS	O	Horizontal sync. output signal	39	ANAY	O	Analog luminance (Y) output signal
14	XVS	O	Vertical sync. output signal	40	VDDA2	–	2.5V power supply (for built-in D/A converter only)
15	VSS	–	GND	41	VREF	I	Reference voltage for D/A converter
16	XRESET	I	LSI reset signal	42	VRO	O	Internal current setting pin of D/A converter
17	XLDCSYNC	I	External sync. signal input (LD mode)	43	VDDA4	–	2.5V power supply (for built-in D/A converter only)
18	KEY	O	KEY signal for LD and OSD overlay (LD mode)	44	VSSA1	–	GND (D/A converter)
19	PD	O	Phase comparison result output signal of horizontal sync. (LD mode)	45	ANACOMP	O	Analog composite output signal
20	VFLD	O	Field discrimination signal at the digital signal output H : even field L : odd field	46	VDDA1	–	2.5V power supply (for built-in D/A converter only)
21	DIGCOMP9	O	Digital composite signal output (MSB) Digital C signal output (MSB)	47	BF	O	Burst flag signal
22	DIGCOMP8		Digital composite signal output Digital C signal output	48	XBLK	O	H/V composite blanking signal
23	DIGCOMP7			49	TEST4	O	Normally, set to "open".
24	DIGCOMP6			50	VSS	–	GND
25	DIGCOMP5			51	TEST0	I	Normally, set to "open".
26	VSS	–	GND	52	TEST1	I	"L" status normally

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function		
53	DAIIN	I	Digital data input of external input (SPDIF)	92	HADRS10	I	CPU address bus signal (MSB)		
54	CDDATA	I	Audio data input of external input (correspond to CD)	93	HADRS9	I	CPU address bus signal		
55	CDLR	I	Data channel clock input of external input (correspond to CD)	94	HADRS8				
56	CDBCK	I	Data clock input of external input (correspond to CD)	95	HADRS7				
57	AODATA3	O	Audio decode data	96	VSS	–	GND		
58	AODATA2			97	VDD	–	2.5V power supply		
59	AODATA1			98	HADRS6	I	CPU address bus signal		
60	VSS	–	GND	99	HADRS5				
61	VDD	–	2.5V power supply	100	HADRS4				
62	AODATA0	O	Audio decode data	101	HADRS3				
63	AOPCM	O	Digital audio interface output (compression data)	102	HADRS2		CPU address bus signal (LSB)		
64	AODAI	O	Digital audio interface output (decode data)	103	HDATA15	I/O	CPU data bus signal (MSB)		
65	LRCK	O	Data channel clock for D/A and digital filter	104	HDATA14		CPU data bus signal		
66	AOMCK	O	Master clock for D/A and digital filter	105	HDATA13				
67	BCK	O	Bit clock for D/A and digital filter	106	HDATA12				
68	TEST2	I	Normally, set to "open"	107	VSS	–		GND	
69	TEST3			108	HDATA11	I/O	CPU data bus sigrla		
70	NC	–	Non connection	109	HDATA10				
71	XDSPRST	I	Normally, set to "open".	110	HDATA9				
72	VSS	–	GND	111	HDATA8				
73	TEST5	O	Normally, set to "open".	112	HDATA7				
74	NC	–	Normally, set to "open".	113	HDATA6	I/O	CPU data bus sigrla		
75	NC			114	VDD			–	2.5V power supply
76	NC			115	HDATA5			I/O	CPU data bus sigrla
77	NC			116	HDATA4				
78	SD7	I	Parallel data input	117	HDATA3				
79	VDD	–	2.5V power supply	118	HDATA2				
80	SD6	I	Parallel data input	119	VSS	–	GND		
81	SD5			120	HDATA1	I/O	CPU data bus signal		
82	SD4			121	HDATA0		CPU data bus signal (LSB)		
83	SD3			122	BUSSEL	I	Bus width selection signal (0 : 8-bit bus, 1 : 16-bit bus)		
84	SD2			123	XOSDACK	I	OSD data acknowledge signal		
85	VSS	–	GND	124	XOSDREQ	O	OSD data request signal		
86	SD1	I	Parallel data input	125	HCPUSEL1	I	CPU selection signal (00 :SPARC, 01 :86 system, 10 :68 system, 11 :Reserve)		
87	SD0			126	HCPUSEL0				
88	XERR	I	Error input signal	127	XINT3	O	Interrupt request signal to the CPU		
89	XSACK	I	Acknowledge signal	128	XINT2				
90	XTEST	I	Set to "H" at normal use	129	XINT1				
91	SREQ	O	Data request signal	130	VSS	–	GND		

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
131	VDD	–	2.5V power supply	170	XMDRCAS	O	CAS signal for SDRAM
132	XINT0	O	Interrupt request signal to CPU	171	XMDRDQM1	O	Input mask / output enable signal for SDRAM
133	XEXTRDY	O	SPARC, 68 system : Ready signal to CPU 86 system : Acknowledge (ACK) signal to CPU	172	VSS	–	GND
134	HRW	I	CPU read / write signal	173	XMDRWE	O	Write enable signal for SDRAM
135	HCLKIN	I	Host clock input	174	XMDRDQM0	O	Input mask / output enable signal for SDRAM
136	XHCS	I	LSI chip select signal	175	MDRDAT8	I/O	Data bus signal for SDRAM
137	XHAS	I	SPARC, 68 system : CPU address strobe 86 system : CPU address status	176	VSS	–	GND
138	XHBE3	I	CPU byte enable signal	177	MDRDAT7	I/O	Data bus signal for SDRAM
139	XHBE2			178	MDRDAT9		
140	XHBE1			179	MDRDAT6		
141	XHBE0			180	MDRDAT10		
142	VSS	–	GND	181	MDRDAT5		
143	MDRADR4	O	Address signal for SDRAM	182	VSS	–	GND
144	MDRADR3			183	VDD	–	2.5V power supply
145	MDRADR5			184	MDRDAT11	I/O	Data bus signal for SDRAM
146	MDRADR2			185	MDRDAT14		
147	VDD	–	2.5V power supply	186	MDRDAT12		
148	VSS	–	GND	187	MDRDAT3		
149	MDRADR6	O	Address signal for SDRAM	188	MDRDAT13		
150	MDRADR1			189	VSS	–	GND
151	MDRADR7			190	MDRDAT2	I/O	Data bus signal for SDRAM
152	MDRADR0			191	MDRDAT14		
153	MDRADR8		Address signal for SDRAM (LSB)	192	MDRDAT1		
154	VSS	–	GND	193	MDRDAT15		Data bus signal for SDRAM (MSB)
155	TEST6	I	"L" status normally	194	MDRDAT0	I/O	Data bus signal for SDRAM (LSB)
156	TEST7			195	VSS	–	GND
157	TEST8			196	N.C.	–	Non connection
158	TEST9			197	ICK27M	I	System clock input
159	MDRADR10	O	Address signal for SDRAM	198	VSS	–	GND
160	MDRADR9			199	OCK27M	O	System clock output
161	MDRADR11		Address signal for SDRAM (MSB)	200	VSSA(VCO)	–	GND (for VCO only)
162	XMDRCS	O	Chip select signal for SDRAM	201	VDDA(VCO)	–	2.5V power supply (for VCO only)
163	MDRCKE	O	Clock enable signal for SDRAM	202	ILPF	O	PLL block inverter output for audio
164	VSS	–	GND	203	MLPF	I	PLL block inverter input for audio
165	VDD	–	2.5V power supply	204	OLPF	O	Phase detector output for audio
166	XMDRRAS	O	RAS signal for SDRAM	205	OVCO	I	VCO input for audio clock
167	MDRCLK	O	Clock output signal for SDRAM	206	VSS	–	GND
168	VSS	–	GND	207	XPLL RST	I	PLL section reset signal
169	MDRCLKIN	I	Clock input signal for SDRAM	208	XSYNCRST	I	SYNC reset signal

3.3 PCB PARTS LIST

- NOTES:
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
 - The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - When ordering resistors, first convert resistance values into code form as shown in the following examples.
 Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).
 $560\ \Omega \rightarrow 56 \times 10^1 \rightarrow 561 \dots\dots\dots RD1/4PU \boxed{5} \boxed{6} \boxed{1} J$
 $47k\ \Omega \rightarrow 47 \times 10^3 \rightarrow 473 \dots\dots\dots RD1/4PU \boxed{4} \boxed{7} \boxed{3} J$
 $0.5\ \Omega \rightarrow R50 \dots\dots\dots RN2H \boxed{R} \boxed{5} \boxed{0} K$
 $1\ \Omega \rightarrow 1R0 \dots\dots\dots RS1P \boxed{1} \boxed{R} \boxed{0} K$
 Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
 $5.62k\ \Omega \rightarrow 562 \times 10^1 \rightarrow 5621 \dots\dots\dots RN1/4PC \boxed{5} \boxed{6} \boxed{2} \boxed{1} F$

A LOAB ASSY

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJL)
NSP NSP		SWITCH S101	9965 000 07961	VSK1011	*SM000340R
		OTHERS CN101	—	S3B-PH-K-S, KR CONNECTOR	—
		—	—	VNP1762, PC BOARD LOAB	—

B SMEB ASSY

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJL)
NSP NSP NSP NSP	210,211,213,214,215 212	SWITCH S201	9965 000 07962	DSG1016	*SP001020R
		OTHERS CN201	—	52044-0345, 3P FFC CONNECTOR	—
		CN202	—	VKN1212, 8P FFC CONNECTOR	—
		—	—	VNP1695, PC BOARD SMEB	—
		—	—	VNP1722, PC BOARD SMEB	—

C FGSB ASSY

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJL)
NSP		SEMICONDUCTOR PC101	9965 000 07963	GP2S60	*HW100500R
		RESISTOR R101	—	RS1/10S331J	—

D DVDM ASSY

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJL)
		SEMICONDUCTORS			
		IC21	9965 000 07964	CY2081SL-638	*HC106340R
		IC14	9965 000 07965	KM68V1000CLT-7L	*HC106350R
		IC1	9965 000 07966	LA9701M	*HC105850R
		IC2	9965 000 07967	LC78652W	*HC105860R
		IC3	9965 000 07968	M56788FP	*HC105870R
		IC19	9965 000 07969	MB811171622A-100FN	*HC106040R
		IC18	9965 000 07970	MB86373B	*HC106360R
		IC26	9965 000 07971	MC44724A	*HC106640R
		IC15	9965 000 07972	MN414800CSJ-07	*HC105900R
		IC5,IC7	4822 209 30455	NJM2100M (or BA4510F)	HC10085090
		IC11	9965 000 07973	PD3410A	*HU100400R
		IC27	—	PM0026A	*HC106770R
	212				
	215				

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJL)	
	210,212,215 211 213,214 212,215	IC12	9965 000 07974	PE5108A	*HC106370R	
		IC8	4822 209 17539	TC7SHU04F	*HC105940R	
		IC13	9965 000 07975	VYW1761 (4M)	*HC106750R	
		IC13	—	VYW1762 (4M)	*HC106760R	
		IC13	—	VYW1763 (8M)	*HC106380R	
		Q106,Q109,Q81,Q83,Q85	4822 130 10698	2SA1576A	HX100012A0	
		Q87,Q89,Q91	4822 130 10698	2SA1576A	HX100012A0	
		Q114,Q121,Q251	4822 130 60669	2SC4081	HX300012A0	
		Q131	9965 000 07976	DTC114EUA	*BA000910R	
		Q102	4822 130 63838	HN1A01F	BA10011050	
		Q103,Q6,Q7	9965 000 07977	HN1B04FU	*BA000920R	
		Q101	4822 130 63843	HN1C01F	*BA000930R	
		Q112,Q113	9965 000 07978	HN1C01FU	*BA000940R	
		Q107,Q4,Q5	9965 000 07979	RN1902	*BA001020R	
		Q3	9965 000 07980	RN1911	*BA000960R	
		Q1	9965 000 07981	RN4982	*BA001030R	
		D301	9965 000 07982	KV1471E	*HZ400020R	
		D6	9322 154 46685	RB501V-40	*HZ200100R	
		D665,D666	9965 000 06882	RB521S-30	*HZ200110R	
		NSP NSP NSP		COILS		
	L150,L330			—	LCYA100J2520	—
	L304			—	LCYA2R7J2520	—
	L81			—	VTL1067, CHIP COIL	—
			L85,L911	9965 000 07983	VTL1084, CHIP BEADS	*FC900240R
		212	CAPACITORS			
			C123,C146,C613,C843	—	CCSRCH101J50	—
			C322	—	CCSRCH120J50	—
			C135	—	CCSRCH121J50	—
			C104-C108	—	CCSRCH150J50	—
			C206,C210,C211	—	CCSRCH151J50	—
C333			—	CCSRCH180J50	—	
C116,C151,C314			—	CCSRCH220J50	—	
C152			—	CCSRCH221J50	—	
C127,C209,C337			—	CCSRCH331J50	—	
C134,C236			—	CCSRCH470J50	—	
C122,C208			—	CCSRCH471J50	—	
C126,C335			—	CCSRCH560J50	—	
C334			—	CCSRCH5R0C50	—	
C124,C132			—	CCSRCH680J50	—	
C117,C240,C352,C360			—	CCSRCH681J25	—	
C845,C846			—	CCSRCK2R0C50	—	
C129,C142,C842			—	CEV101M10	—	
C827			—	CEV101M10	—	
212			C113,C139	—	CEV220M16	—
		C405,C413,C700,C808	—	CEV221M4	—	
		C111,C149,C205,C207,C401	—	CEV470M6R3	—	
		C403,C407	—	CEV470M6R3	—	
		C140,C223,C224,C252,C264	—	CKSQYB105K10	—	
		C312	—	CKSQYB105K10	—	
		C148,C217,C327,C414	—	CKSQYF105Z16	—	
		C801,C802,C807,C809-C815	—	CKSQYF105Z16	—	
		C817-C821	—	CKSQYF105Z16	—	
		C826,C828	—	CKSQYF105Z16	—	
		C216,C313	—	CKSRYB102K50	—	
	C133,C136,C203,C220,C225	—	CKSRYB103K50	—		
	C239,C320,C321,C603,C625	—	CKSRYB103K50	—		
	C703,C711	—	CKSRYB103K50	—		
	C101,C102,C114,C118,C119	—	CKSRYB104K16	—		
	C121,C138,C204,C212,C213	—	CKSRYB104K16	—		
	C227,C231,C263,C315,C317	—	CKSRYB104K16	—		
	C332,C804	—	CKSRYB104K16	—		
	C153,C266	—	CKSRYB223K25	—		
	C357	—	CKSRYB223K50	—		
C354	—	CKSRYB332K50	—			
C214,C251,C261,C351	—	CKSRYB472K50	—			
C330	—	CKSRYB682K50	—			
C109,C110,C120,C130,C131	—	CKSRYF104Z16	—			
C143,C150,C202,C215	—	CKSRYF104Z16	—			
C221,C222,C226,C230,C235	—	CKSRYF104Z16	—			

Mark	Ver. (DB-VPBxxx)	No.	Part No. (for PCS)	Description	Part No. (for MJI)
NSP		C265,C299,C319,C359,C367	—	CKSRYF104Z16	—
NSP		C369,C370,C402,C404,C406	—	CKSRYF104Z16	—
NSP		C408,C410,C412,C601,C602	—	CKSRYF104Z16	—
NSP		C604-C612,C614,C615	—	CKSRYF104Z16	—
NSP		C617-C620,C626,C701,C702	—	CKSRYF104Z16	—
NSP		C704-C710,C712-C724,C726	—	CKSRYF104Z16	—
NSP		C831-C833,C844	—	CKSRYF104Z16	—
NSP	212	C822-C825,C829,C830	—	CKSRYF104Z16	—
NSP	212	C834-C836,C858,C859	—	CKSRYF104Z16	—
NSP	215	C834-C836,C865-C869,C871-C876	—	CKSRYF104Z16	—
NSP	215	C861-C864	—	CKSRYF105Z16	—
NSP	215	C870	—	CKSQYB104Z25	—
NSP		C368,C411 (47mF/16V)	—	VCH1166	—
RESISTORS					
NSP		R123 (39 OHM)	—	ACN7047	—
NSP		R732,R733,R735,R736 (47k OHM)	—	ACN7077	—
NSP		R632 (100OHM)	—	DCN1092	—
NSP		R608,R609,R613,R624,R627 (10k OHM)	—	DCN1094	—
NSP		R629,R631,R633,R638,R654 (10k OHM)	—	DCN1094	—
NSP		R657,R658,R664,R706 (10kOHM)	—	DCN1094	—
NSP		R717,R718 (10k OHM)	—	DCN1094	—
NSP		R121,R663 (10k OHM)	—	DCN1104	—
NSP		R712,R715,R881 (0 OHM)	—	DCN1106	—
NSP	212	R838 (0 OHM)	—	DCN1106	—
NSP		R1020,R2010,R2020,R2030,R2040	—	RS1/10S0R0J	—
NSP		R3050,R4010,R4020,R4030,R4040	—	RS1/10S0R0J	—
NSP		R4050,R4060,R407,R685,R722	—	RS1/10S0R0J	—
NSP		R8000,R821	—	RS1/10S0R0J	—
NSP	210,211,213,214	R501,R502,R801,R802,R828	—	RS1/10S0R0J	—
NSP	212	R803,R304,R829,R854 -R856,R858-R860	—	RS1/10S0R0J	—
NSP	212	R875,R920,R922,R970 -R973,R8010	—	RS1/10S0R0J	—
NSP	212	R8200	—	RS1/10S0R0J	—
NSP		R202,R3510	—	RS1/10S101J	—
NSP	212	R839	—	RS1/16S103J	—
NSP	210,211,213,214	R2	—	RS1/16S103J	—
NSP	212	R2	—	RS1/16S223J	—
NSP	212	R1	—	RS1/16S333J	—
NSP	215	R1	—	RS1/16S103J	—
NSP		R700	—	RS1/10S1R2J	—
NSP	212	R836,R837	—	RS1/16S1001F	—
NSP		R807	—	RS1/16S1201F	—
NSP	212	R831,R832	—	RS1/16S1201F	—
NSP		R806	—	RS1/16S1501F	—
NSP		R363,R365	—	RS1/16S1503F	—
NSP	212	R825	—	RS1/16S1800F	—
NSP	212	R834,R385	—	RS1/16S1801F	—
NSP	210,211,213,214,215	R825	—	RS1/16S2000F	—
NSP	212	R822-R824	—	RS1/16S2000F	—
NSP		R826,R827	—	RS1/16S2000F	—
NSP	212	R830	—	RS1/16S2002F	—
NSP		R805	—	RS1/16S2701F	—
NSP	212	R833	—	RS1/16S3902F	—
NSP		R361,R364	—	RS1/16S6202F	—
NSP	215	R866	—	RS1/16S103J	—
NSP	215	R808	—	RS1/16S8202F	—
NSP	215	R822-R824	—	RS1/16S1200F	—
NSP	215	R845-R847	—	RS1/16S182J	—
NSP	215	R854,R856	—	RS1/16S4R7J	—
NSP	215	R855,R861-R865,R868-R871	—	RS1/16S0R0J	—
NSP	215	R971-R974,R8640	—	RS1/16S0R0J	—
NSP	215	R872	—	RS1/16S3001F	—
NSP	215	R873	—	RS1/16S6800F	—
NSP	215	R874	—	RS1/16S1201F	—
NSP	215	R8610,R8620,R8630	—	RS1/10S0R0J	—
NSP		Other Resistors	—	RS1/16SxxxJ	—

