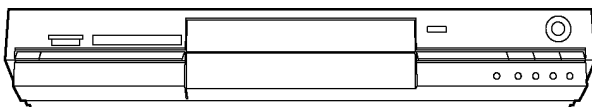


Service Manual

DVD Video Recorder



Notes: The part of DVD Drive (VXY1855) is listed separately.
Please refer ORDER No. RAM0402001C0

DMR-E65EE
DMR-E65GC
DMR-E65GCS
DMR-E65GN

Colour

(S).....Silver Type

Panasonic

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Specifications

Power supply	E65EE,GN		AC220-240 V, 50 Hz	
	E65GCS, GC		AC220-240 V, 50 Hz / 60 Hz	
Power consumption	32 W			
Recording system	DVD video recording format (DVD-RAM), DVD video format (DVD-R)			
Optical pick-up	System with 1 lens, 2 integration units (658 nm wavelength for DVDs, 795 nm wavelength for CDs)			
Recordable discs	• 12 cm 4.7 GB DVD-RAM discs • 12 cm 9.4 GB DVD-RAM discs • 8 cm 2.8 GB DVD-RAM discs • 12 cm 4.7 GB (Ver 2.1/3X-SPEED DVD-RAM Revision 1.0) • 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver 2.0/ 4X-SPEED DVD-R Revision 1.0)			
	Max. 8 hours (using 4.7 GB disc) XP: 60 minutes SP: 120 minutes LP: 240 minutes EP: 360 minutes or 480 minutes			
Region number	E65EE	Region No.5		
	E65GC	Region No.2		
	E65GCS	Region No.3		
	E65GN	Region No.4		
Discs played	• 12 cm 4.7 GB DVD-RAM discs • 12 cm 9.4 GB DVD-RAM discs • 8 cm 2.8 GB DVD-RAM discs • 12 cm 4.7 GB (Ver 2.1/3X-SPEED DVD-RAM Revision 1.0) • 8 cm 1.4 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver. 2.0) • 12 cm 4.7 GB DVD-R discs (for General Ver 2.0/ 4X-SPEED DVD-R Revision 1.0) • DVD-VIDEO discs • DVD-Audio discs • CD-Audio discs (CD-DA) • Video CD discs • CD-R/ CD-RW discs (CD-DA, Video CD, MP3 formatted discs)			
	Video system			
TV system	SECAM(Only Input)/PAL system, 625 lines, 50 fields /NTSC system, 525 lines, 60 fields			
Recording system	MPEG2 (Hybrid VBR)			
Video Input	Video In: (SECAM/PAL /NTSC)	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) 1.0Vp-p ; 75Ω		
	S-Video In: (SECAM/PAL /NTSC)	AV2(21pin), AV3/AV4(S connector x 2) Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω		
	RGB In(PAL):	AV2(21pin) 0.7Vp-p ; 75Ω		
Video Output	Video Out: (PAL/NTSC)	AV1/AV2(21pin x 2), LINE(pin jack x 1) 1.0Vp-p ; 75Ω		
	S-Video Out: (PAL/NTSC)	AV1(21pin), S connector x 1 Y:1.0Vp-p ; 75Ω, C:0.3Vp-p ; 75Ω		
	RGB Out: (PAL)	AV1(21pin), 0.7Vp-p ; 75Ω		
	Component video out: (NTSC 480P/480I) (PAL 576P/576I)	Y: 1.0Vp-p ; 75Ω(pin jack) PB: 0.7Vp-p ; 75Ω(pin jack) PR: 0.7Vp-p ; 75Ω(pin jack)		

Antenna reception system	E65EE	
	OIRT (PAL-DK) (SECAM-DKK1)	VHF: CH R1 - CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
	CCIR (PAL-BGH) (SECAM-BG)	VHF: CH E2-CH E12 UHF: CH 21 - CH 69 CATV: CH S01-S05, M1-M10, U1-U10, S21-S41
	Hong Kong (PAL-I)	UHF: CH 21 - CH 69
	E65GC	
	CCIR	VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, S21-S41
	E65GCS	
	CCIR (PAL-BGH) (SECAM-BG)	VHF: CH E2-CH E12 UHF: CH E21 - CH E69 CATV: CH S01-S05, M1-M10, U1-U10, S21-S41
	OIRT (PAL-DK) (SECAM-DKK1)	VHF: CH R1-CH R12 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
	Hong Kong (PAL-I)	UHF: CH 21 - CH 69
	China (PAL-D)	VHF: CH 1-CH 12 UHF: CH 13 - CH 57 CATV: CH Z1 - Z35
	E65GN	
	Australia	VHF: CH 0-CH 12 UHF: CH 28 - CH 69 CATV: CH 45MHz - 470MHz
	New Zealand	VHF: CH 1-CH 11 UHF: CH 21 - CH 69 CATV: CH 44MHz - 470MHz
DV Input (PAL/NTSC)	IEEE 1394 Standard, 4Pin	
Audio system		
Recording system	Dolby Digital 2ch, Linear PCM (XP mode, 2ch)	
Analog Input	AV1/AV2(21pin x 2), AV3/AV4(pin jack x 2) Standard input: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Input impedance: More than 10KΩ	
Analog Output	AV1/AV2(21pin x 2), LINE(pin jack x 1) Standard output: 0.5 Vrms Full scale: 2.0 Vrms at 1KHz Output impedance: Less than 1.0KΩ	
Number of channels	Recording: 2 channels Playback: 2 channels	
Digital Output	Digital Audio Optical Output Connector (PCM,Dolby Digital,DTS,MPEG)	
SD/PC Card Slot		
Still Picture (JPEG, TIFF)	SD memory card : 1pc. / PC Card Type II : 1pc. • Compatible Media (SD Card Slot) : SD memory card, Multi Media Card • Compatible Media (PC Card Slot): A PC Card adaptor conforming to PC Card Standards, ATA Flash PC Card • PC Card Adaptor (SD memory Card, Multi Media Card, Compact Flash Smart Media, Memory Stick, XD picture card, Micro drive) • Mobile hard disk	
Format	FAT12, FAT16	
Image File Format	• JPEG conforming DCF (Design rule for Camera File system), (subsampling: 4 : 2 : 2 or 4 : 2 : 0) • TIFF (Uncompressed RGB chunky) • DPOF Compatible 34 × 34-6144 × 4096	
Thawing Time	Approx. 7 sec(2Mpixels)	
Dimensions	Approx. 430 (W) x 79 (H) x 274 (D) mm	
Weight	Approx. 3.6 kg	
Operating temperature	5°C - 40°C	
Operating humidity range	10 %-80 % RH (no condensation)	
Clock unit	Quartz-controlled 12-hour digital display	
LASER Specification (Class I LASER Product)		
Wave length	795 nm, 658 nm	
Laser power	No hazardous radiation is emitted with the safety protection.	
Power consumption in standby mode	approx. 3.0 W	

Notes : Mass and dimensions are approximate.
Specifications are subject to change without notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 Safety precautions

1.1. General guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. Leakage current cold check

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between $1M\Omega$ and $5.2M\Omega$.

When the exposed metal does not have a return path to the chassis, the reading must be ∞ .

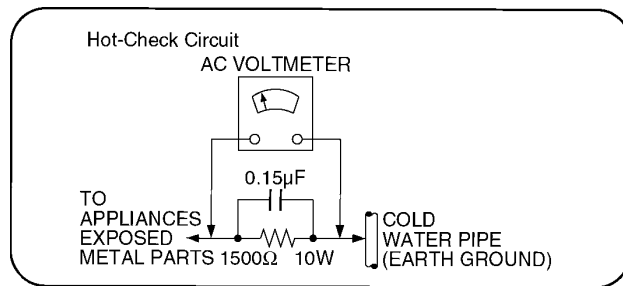


Figure 1

1.1.2. Leakage current hot check (See Figure 1 .)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a $1.5k\Omega$, 10 watts resistor, in parallel with a $0.15\mu F$ capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1 .
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliampere. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

2 Prevention of Electrostatic Discharge (ESD) to Electrostatic Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatic Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistor-semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by Δ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

3 Precaution of Laser Diode

CAUTION:

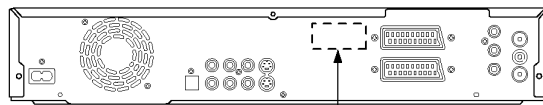
This product utilizes a laser diode with the unit turned “on”, invisible laser radiation is emitted from the pickup lens.

Wave length: 795 nm/658 nm

Maximum output radiation power from pickup: 100 μ W/VDE

Laser radiation from the pickup lens is safety level, but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.



LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

CLASS 1
LASER PRODUCT

ACHTUNG:

Dieses Produkt enthält eine Laserdiode.

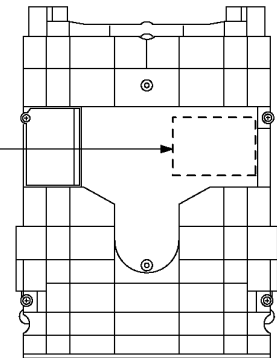
Im eingeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt.

Wellenlänge: 795 nm/658 nm

Maximale Strahlungsleistung der Lasereinheit: 100 μ W/VDE

Die Strahlung der Lasereinheit ungefährlich, wenn folgende Punkte beachtet werden:

1. Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.
2. Den werkseitig justierten Einstellregler der Lasereinheit nicht verstellen.
3. Nicht mit optischen Instrumenten in die Fokussierlines blicken.
4. Nicht über längere Zeit in die Fokussierlines blicken.



DANGER	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC 60825-1)
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSETELSE FOR STRÅLING.
VARO!	- AVATTAESSA OLET ALTTIIN NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	- SYNIG OCH OSYNIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÄR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET, NICHT DEM STRAHL AUSSETZEN.
注意	- 打开时有可见及不可见激光辐射。避免激光束照射。
注意	- ごこを覗くと可視及び不可視のレーザー光が出ます。 ビームを直接見たり、照らすしないでください。 RQLS0233

CAUTION!

THIS PRODUCT UTILIZES A LASER.

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4 Handling the Lead-free Solder

4.1. About lead free solder (PbF)

Distinction of PbF P.C.B.:

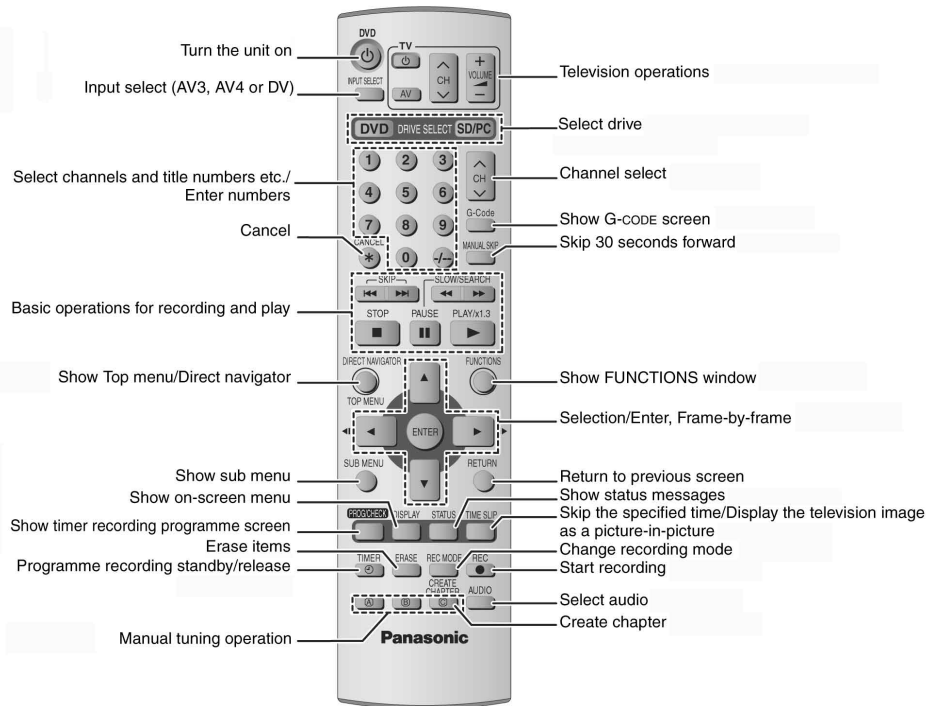
P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C).
- When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.

5 Each Buttons

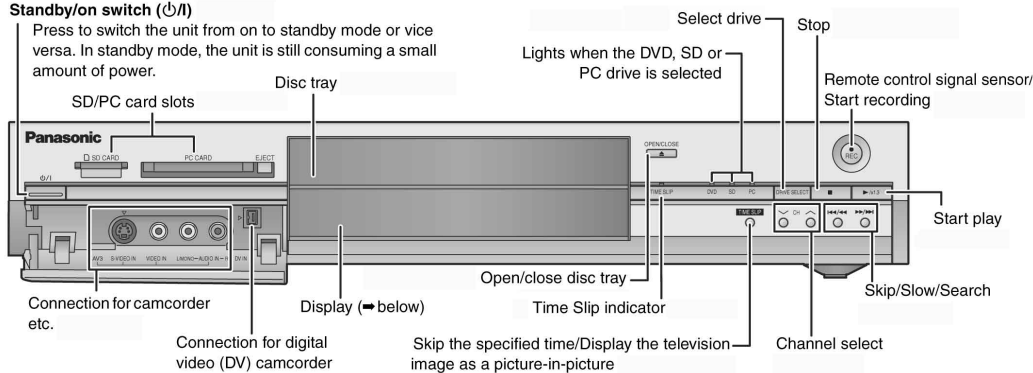
Remote control



Main unit

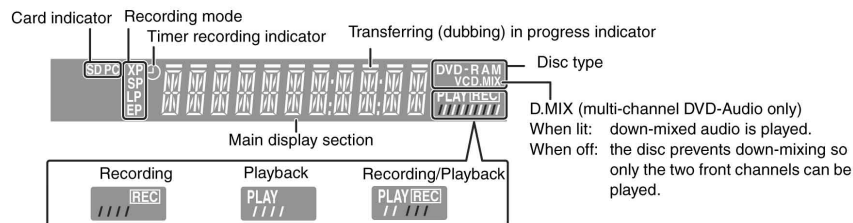
Standby/on switch (⏻/⏻)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.



Rear panel terminals

The unit's display



6 Taking out the Disc from RAM-Drive Unit when the Disc cannot be ejected by OPEN/CLOSE button

6.1. Forcible Disc Eject

6.1.1. When the power can be turned off.

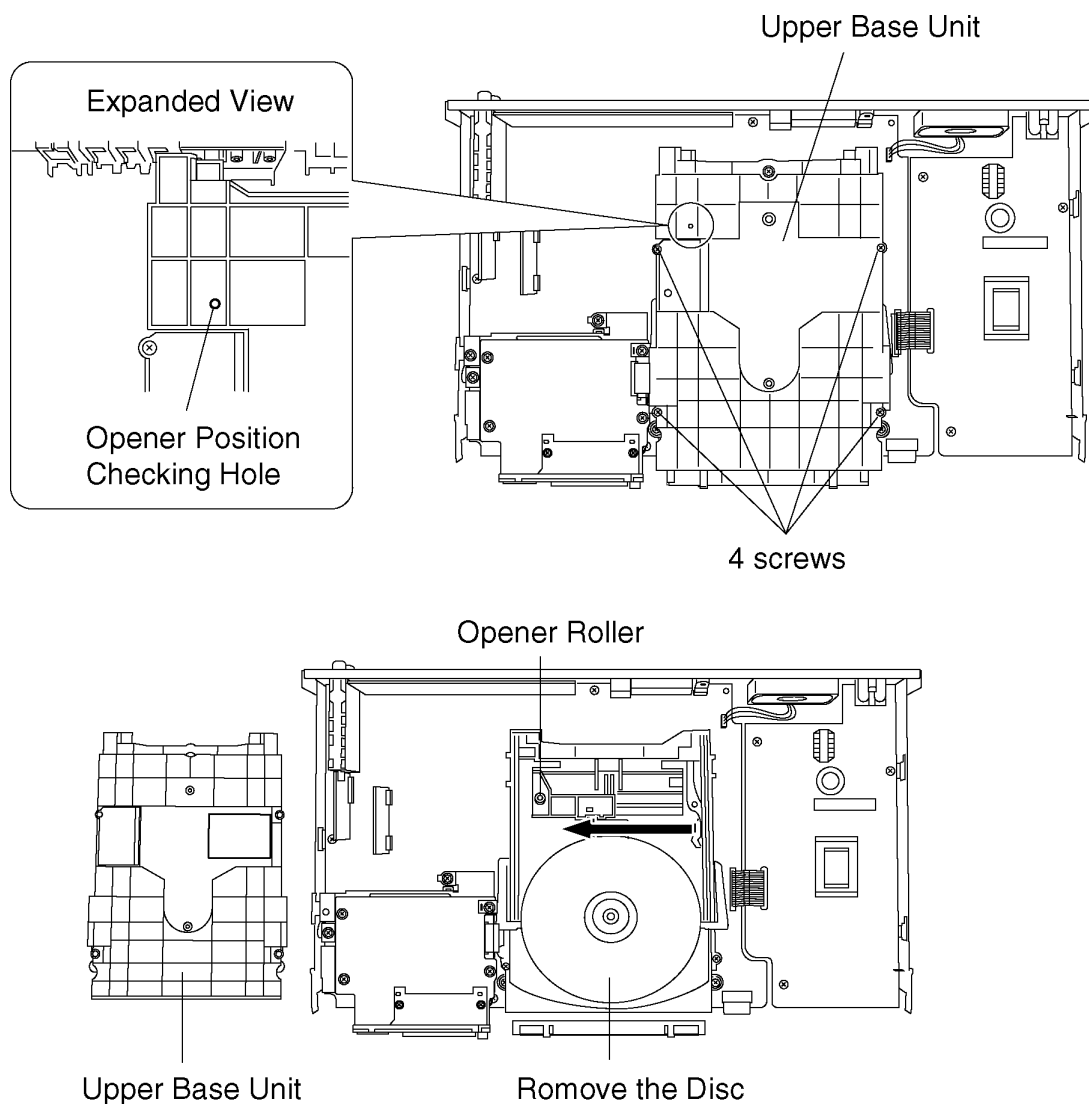
1. Turn off the power and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.1.2. When the power can not be turned off.

1. Press [POWER] key on the front panel for over 10 seconds to turn off the power forcibly, and press [STOP] [CH UP] keys on the front panel simultaneously for 5 seconds.

6.2. When the Forcible Disc Eject can not be done.

1. Turn off the power and pull out AC cord.
2. Remove the Top Case.
3. Remove the Front Panel.
4. Remove 4 screws and Upper Base Unit from DVD-RAM Drive.
5. Take out the disc and put the Opener Roller on fully position for direction of Arrow.
6. Put the Upper Base Unit so that the Opener Roller is inserted into the groove.
7. Check center of Opener Roller is seen through the Opener position Checking Hole, and tighten 4 screws.



7 Service Explorer

Confirm "RAM-Drive Last Error" in Service Mode

Execute Service Mode

1. Press [STOP], [TIME SLIP] and [OPEN/CLOSE] simultaneously for 5 seconds when P-off.

FL Display:

SERVICE MODE

*After finishing display "(7). Factor of Drive Error occurring", press [0] [2] ~[9] [9] keys of the Remote Controller so that 99 memories can be displayed as maximum.

2. Press [4] [2] keys of remote controller.

Example of FL Display:

- (1) Error Number is displayed for 5 seconds.

NO 01

- (2) Time when the error has occurred is displayed for 5 seconds.

40216191526

The error has occurred at 2004(year)/Feb.(month)/16(day)/19(hour):15(minute):26(second)

- (3) Last Drive Error (1/2) is displayed for 5 seconds.

03 1000

Error Sense
Key

{ 00: Bad disc
03: Bad disc
04: Bad disc or RAM-Drive malfunction

When above error codes are displayed, confirm operation with Panasonic RAM disc or Panasonic DVD-R disc.

***If the operation is OK, judge the error is due to media.**

***If the operation is NG and symptom as BLOCK NOISES and so on that are particular symptom of Digital appears, judge the error is due to RAM-Drive or Digital PCB.**

- (4) Last Drive Error (2/2) is displayed for 5 seconds.

00 13 00 00

*This error code is unnecessary for service.

(5) Error occurring Disc type is displayed for 5 seconds.

MEDIA DVDR

Disc type

*The error disc cannot be specified, display as "DVD".

(6) Disc Maker's ID is displayed for 5 seconds.

MXL R 061

Example of Disc Maker's ID:

DVD-R Disc

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	Japan
2	PVC	Pioneer	Japan
3	MCC	Mitsubishi Chemical Corporation	Japan
4	TDK	TDK	Japan
5	MXL	Maxell	Japan
6	MCI	MITUI CHEMICALS	Japan
7	JVC	Victor JVC	Japan
8	TAIYOYUDEN	Taiyo yuden	Japan
	TYG		
9	GSC	Giga Storage	Taiwan
10	PRODISC	Prodisc	Taiwan
11	PRINCO	PRINCO	Taiwan
12	RITEK	RITEK	Taiwan
13	OPTDISC	OPTDISC	Taiwan
14	LEAD DATA	LEAD DATA	Taiwan
15	CMC	CMC	Taiwan
16	AUVISTAR	AUVISTAR	Taiwan
17	ACER	Acer	Taiwan
18	VIVASTAR	VIVASTAR	Switzerland
19	LGE	LG Electronics	Korea

DVD-RAM Disc

No.	FL Display (Disc Maker's ID)	Disc Maker	Country
1	MEI	Panasonic	
2	MATSUSHITA	Panasonic	Japan
3	MXL	Maxell	Japan
4	PRODISC	Prodisc	Taiwan
5	OPTDISC	OPTDISC	Taiwan
6	CMC	CMC	Taiwan

*Since an display is arbitrarily set up by the disk producer side, the above-mentioned display may be changed.

Please make it reference as an example of a display.

(7) Factor of Drive Error occurring is left displayed

INFO A804 40

Error occurring disc state

Error occurring disc type

Error Occurring Disc Type

FL Display	Disc Type
00	DVD-ROM/Video
01	Audio-CD
02	2.6GB DVD-RAM
03	4.7GB DVD-RAM
04	DVD-R

Error Occurring Disc State

FL Displays (Hexadecimal)	Description			
	Disc distinction state	Cartridge disc state	Cartridge disc state	Disc size
00	OK	With cartridge	Has not been opened yet.	12 cm
10	OK	With cartridge	Has not been opened yet.	8 cm
20	OK	With cartridge	Has been opened.	12 cm
30	OK	With cartridge	Has been opened.	8 cm
40	OK	Bare	Has not been opened yet.	12 cm
50	OK	Bare	Has not been opened yet.	8 cm
60	OK	Bare	Has been opened.	12 cm
70	OK	Bare	Has been opened.	8 cm
80	NG	With cartridge	Has not been opened yet.	12 cm
90	NG	With cartridge	Has not been opened yet.	8 cm
A0	NG	With cartridge	Has been opened.	12 cm
B0	NG	With cartridge	Has been opened.	8 cm
C0	NG	Bare	Has not been opened yet.	12 cm
D0	NG	Bare	Has not been opened yet.	8 cm
E0	NG	Bare	Has been opened.	12 cm
F0	NG	Bare	Has been opened.	8 cm

8 Self-Diagnosis and Special Mode Setting

8.1. Self-Diagnosis Functions

Self-Diagnosis Function provides information for errors to service personnel by "Self-Diagnosis Display" when any error has occurred.

U14, H and F** are stored in memory and held.**

Display on FL will be cancelled when the power is turned off or AC input is turned off during self-diagnosis display is ON.

Error Code	Diagnosis contents	Description	Monitor Display	FL display
U12	Remote control code error	Display appears when main unit and remote controller codes are not matched.	No display	REMOTE DVD* ** is remote controller code of the main unit. Display for 5 seconds.
U14	Abnormal inner temperature detected	Display appears when the drive temperature exceeds 70°C. The power is turned off forcibly. For 30 minutes after this, all key entries are disabled. (Fan motor operates at the highest speed for the first 5 minutes. For the remaining 25 minutes, fan motor is also stopped.) The event is saved in memory as well.	No display	U14 "U14" is displayed for 30 minutes.
U99	Hang-up	Displayed when communication error has occurred between Main microprocessor and Timer microprocessor.	No display	U99 Displayed is left until the [POWER] key is pressed.
H01	Inoperative fan motor	Display appears when inoperative fan motor is detected after powered on. The power is turned off when detecting.	No display	H01 Displayed is left.
F00	No error information	Initial setting for error code in memory (Error code Initialization is possible with error code initialization and main unit initialization.)	No display	F00 Displayed is left.
F01	Drive hardware error	Display appears when drive unit error is detected. The event is saved in memory.	No display	F01 Displayed is left.
F12	Initialization error when main microprocessor is started up for program recording	Display appears when initialization error is detected after starting up main microprocessor for program recording. The event is saved in memory. The power is turned off when detecting.	No display	F12 Displayed is left.
UNSUPPORT	Unsupported disc error	*An unsupported format disc was played, although the drive starts normally. *The data format is not supported, although the media type is supported. *Exceptionally incase of the disc is dirty.	"This disc is incompatible."	UNSUPPORT Display for 5 seconds.
NO READ	Disc read error	*A disc is flawed or dirty. *A poor quality failed to start. *The track information could not be read.	"Cannot read. Please check the disc."	NOREAD
HARD ERR	Drive error	The drive detected a hard error.	"DVD drive error."	Display for 5 seconds. HARD ERR
SELF CHECK	Restoration operation	Since the power cord fell out during a power failure or operation, it is under restoration operation. *It will OK, if a display disappears automatically. If a display does not disappear, there is the possibility that defective Digital P.C.B. / RAM drive.	No display	SELF CHECK
Full Program	16 programs are already set.	16 programs are already set.	No display	PROG FULL

8.2. Special Modes Setting

Item		FL display	Key operation
Mode name	Description		Front Key
TEST Mode	*All the main unit's parameters (include tuner) are initialized.	TEST AV1	Press [SKIP (REV)], [TIME SLIP] and [OPEN/CLOSE] keys simultaneously for five seconds when power is off.
Service Mode	Setting every kind of modes for servicing. *Details are described in "8. 3. Service Mode".	SERVICE MODE	When the power is off, press [STOP], [TIME SLIP] and [OPEN/CLOSE] keys simultaneously for 5 seconds.
Rating password	The audiovisual level setting password is initialized to "Level 8".	INIT	Open the tray, and press [SKIP (REV)] and [SKIP (FWD)] simultaneously for five seconds.
Forced disc eject	Removing a disc that cannot be ejected. The tray will open and unit will shift to P-off mode. *When Timer REC is ON or EXT-LINK is ON, execute " Forced disc eject " after releasing TimerREC or EXT-LINK. *This command is not effective during "Child lock" is ON.	The display before execution leaves. *****	When the power is off, press [STOP] and [CH UP] keys simultaneously for five seconds.
Child lock/unlock	Set or release "Child Lock".	X HOLD	Press [ENTER] and [RETURN] by remote controller simultaneously until [X-HOLD] is displayed.
NTSC/PAL system select	To switch PAL/ NTSC alternately.	The display before execution leaves. *****	When the power is on (E-E mode), press [STOP] and [OPEN/CLOSE] simultaneously for five seconds.
Forced power-off	When the power button is not effective while power is ON, turn off the power forcibly.*When Timer REC is ON or EXT-LINK is ON, execute "Forced Power-off" after releasing Timer RECor EXT-LINK. Action: The tray will open, and the power will turn off.	Display in P-off mode.	Press [Power] key over than 10 seconds.
Aging	Perform sequence of modes as * Aging Description shown below continually.	Display following the then mode.	When the power is ON, press [CH DOWN], [TIME SLIP] and [OPEN / CLOSE] simultaneously for over five seconds and less than 10 seconds. *The [REC MODE] should be set to EP or LP. *When the unit has hung-up because of pressing keys for over 10 seconds, once turn off the power, and re-execute this command. *When releasing Aging mode, press [POWER] key.
Demonstration lock/unlock	Ejection of the disc is prohibited. The lock setting is effective until unlocking the tray and not released by "Main unit initialization" of service mode.	*When lock the tray. LOCK "LOCK" is displayed for 3 seconds.	When the power is on, press [STOP] and [POWER] keys simultaneously for five seconds.
		*When unlock the tray. UNLOCK "UNLOCK" is displayed for 3 seconds.	
		*When press OPEN/CLOSE key while the tray being locked. LOCK Display "LOCK" for 3 seconds.	Press [OPEN/CLOSE] key while the tray being locked.

ATP re-execution	Re-execute ATP.	Display at ATP executing. *****	When the power is on (E-E mode), press [CH UP] and [CH DOWN] simultaneously for five seconds.

Item		FL display	Key operation
Mode name	Description		Front Key
Progressive initialization	The progressive setting is initialized to Interlace.	The display before execution leaves. *****	When the power is on (E-E mode), press [STOP] and [TIME SLIP] simultaneously for five seconds.

Aging Contents (Example):

[illegible]

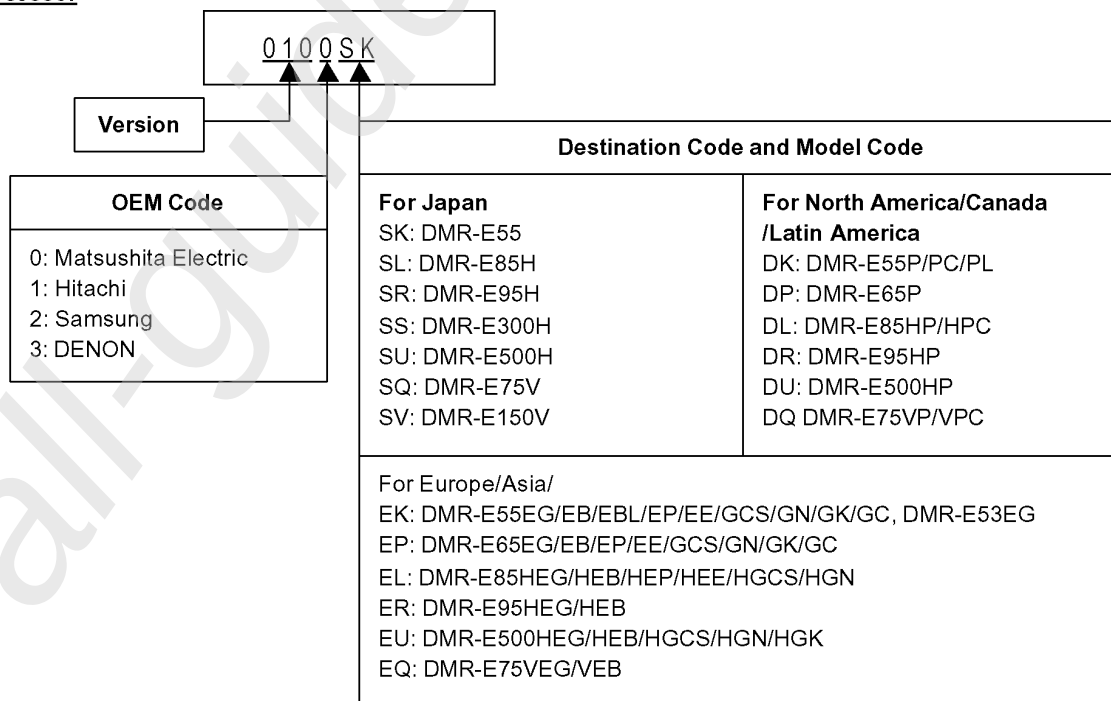
8.3. Service Modes

Service mode setting: While the power is off, press TIME SLIP, STOP and OPEN / CLOSE simultaneously for five seconds.

Mode name	Item Description	FL display	Key operation (Remote controller key)
Release Items	Item of Service Mode executing is cancelled.	SERVICE MODE	Press [0] [0] or [Return] in service mode.
Error Code Display	Last Error Code of U14/H/F held by Timer is displayed on FL. *Details are described in "8. 1. Self-Diagnosis Functions".	 *♣ shows U/H/F. □□ shows number.	Press [0] [1] in service mode
ROM Version Display	Region code, MAIN firm version, TIMER firm version and DRIVE firmware versions are displayed on FL for five seconds per each version in order, but ROM version will be left displayed.	REGION* MAIN ***** TIMER***** DRIVE ***** ROM * *** " *" are version displays.	Press [0] [2] in service mode

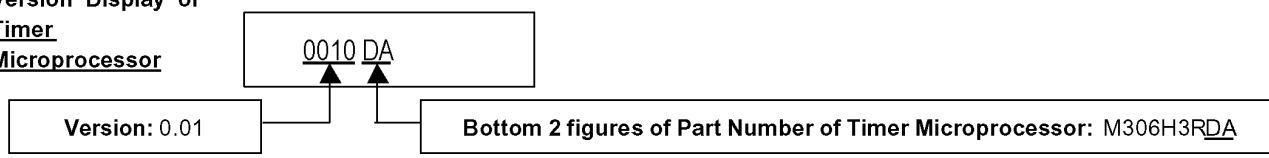
Version Display of Main Microprocessor

Example of FL Display



Version Display of Timer Microprocessor

Example of FL Display



Item		FL display	Key operation
Mode name	Description		(Remote controller key)
White Picture Output	White picture is output as component Output from AV Decoder. *White picture (Saturation rate : 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	*Initial mode is "Interlace". WHIT I	Press [1] [1] in service mode.
		Switch Interlace/Progressive WHIT P	Press [1] [4] in White Picture Output mode. *I/P are switched alternately.
Magenta Picture Output	Magenta picture is output with Component Output from AV Decoder. *Magenta picture (Saturation rate: 100%) *It is enable to switch Interlace/Progressive by "I/Pswitch: [1] [4]"	*Initial mode is "Interlace". MAGE I	Press [1] [2] in service mode.
		Switch Interlace/Progressive MAGE P	Press [1] [4] in Magenta Picture Output mode. *I/P are switched alternately.
RTSC Return in XP (A & V)	AV1 input signal is encoded (XP), decoded (XP) and output decoded signal to external without DISC recording and DISC playback.	Initial mode: EE2/ Interlace/ XP/ Audio 48kHz EE2 I XP 48	Press [1] [3] in service mode.
		Switch Interlace/Progressive EE2 P XP 48	Press [1] [4] in RTSC Return XP mode. *I/P are switched alternately.
		Audio 44.1 kHz/ 48 kHz Switch EE2 P XP 44	Press [2] [4] in RTSC Return XP mode. *48 kHz / 44.1 kHz are switched alternately.
I/P Switch	Switch Interlace and Progressive in EE mode. *Initial setting is "Interlace". *This command is effective during executing "White Picture Output", "MagentaPicture Output" and "RTSC Return in XP (A & V)" modes.	Initial mode is Interlace SERVICE I	Press [1] [4] in I/P Switch mode. *I/P are switched alternately.
		Switch Interlace/Progressive SERVICE P	
Audio Mute (XTMUTE)	Check whether mute is applied normally by the timer microprocessor.	TIMER MUTE	Press [2] [1] in service mode.
Audio Mute (XDMUTE)	Check whether mute is applied normally by the Digital P.C.B. (GLUE IC).	MAIN MUTE	Press [2] [2] in service mode.
Audio Pattern Output	The audio pattern stored in the internal memory is output (Lch: 1kHz/-18dB) (Rch: 400Hz/-18dB) *Audio sound clock switching operation of DAC can beconfirmed by sub command [2] [4].	Initial mode (Audio 48kHz) AUDIO 48	Press [2] [3] in service mode.
		Audio 44.1kHz/48kHz switching AUDIO 44	Press [2] [4] in Audio Pattern Output mode. *48 kHz / 44.1 kHz are switched alternately.
Laser Used Time Indiction	Check laser used time (hours) of drive.	LASER***** I(*****) is the used time display in hour. ILaser used time ofDVD/ CD in Playback/Recording mode is counted.	Press [4] [1] in service mode.
Delete the Laser Used Time	Laser used time stored in the memory of the unit is deleted.	CLR LASER	Press [9] [5] in service mode.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
RAM Drive Last Error	RAM Drive error code display. *For details about the drive error code, refer to the Service Manual for the specific RAM Drive. *Details are described in "7. Service Explorer".	1. Error Number is displayed for 5 seconds. NO ** 2. Time when the error has occurred is displayed for 5 seconds. YMMDDhhmmss Y: Year MM: Month DD: Day hh: Hour mm: Minute ss: Second 3. Last Drive Error (1/2) is displayed for 5 seconds. ***** 4. Last Drive Error (2/2) is displayed for 5 seconds. ***** 5. Error occurring Disc type is displayed for 5 seconds. MEDIA***** 6. Disc Maker ID is displayed for 5 seconds. ***** 7. Factor of Drive Error occurring is left displayed INFO*****	Press [4] [2] in service mode. Then press [0] [1] ~ [9] [9], the past 99 errors are displayed.
Delete the Last Drive Error	Delete the Last Drive Error information stored on the DVD RAM-Drive.	CLR DRIVE	Press [9] [6] in service mode.
Turn on all FL/LEDs	All segments of FL and all LEDs are turned on.	All segments are turned on.	Press [5] [1] in service mode.
PB HIGH Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is High (approx. 11V DC).	PB8 HIGH	Press [5] [2] in service mode.
PB MIDDLE Signal Output	8 pin of AV 1 Jack (PB HIGH terminal) is Middle (approx. 5.5V DC).	PB8 MIDDLE	Press [5] [3] in service mode.
Front connection inspection	Press all front keys and check the connection between Main P.C.B. and Front P.C.B.	0001 (1) ** (2) (1) Each time a key is pressed, segment turned on increases one by one. (2) Total number of keys that have been pressed.	Press [5] [4] in service mode.
Production Date Display	Display the date when the unit was produced.	PD YYYYMMDD YYY: Year MM: Month DD: Day	Press [6] [1] in service mode.

In case that the supplier cannot be identified, display is black out.

Item		FL display	Key operation
Mode name	Description		(Remote controller key)
Display the accumulated working time	Display the accumulated unit's working time.	***** (Indicating unit: Second)	Press [6] [4] in service mode.
Display the Error History	Display the Error History stored on the unit.	Display reason of error for 5 seconds. FTREC*** Display the time when the error has occurred for 5 seconds.. YYMMDDHHMM YY: Year MM: Month DD: Day HH: Hour MM: Minute Display the accumulated working time to occurring of the error for 5 seconds.. ***** (Indicating unit: Second)	Press [6] [5] in service mode. Then press [0] [1] ~ [1] [9], the past 19 error histories are displayed.
Delete the Error History	Delete Error History information stored on the unit.	CLR FTREC	Press [9] [7] in service mode.
PC card WRITE/ READ Check	Check write/read function using the media and PC card adaptor with PC card slot.	It is displayed momentarily. CARD TEST When the WRITE check is OK. PCCD OK When the WRITE check is NG. PCCD NG *Note: The image stored in the media will be erased.	Insert a PC card adaptor with media to PC card slot, and press [7] [1] in service mode. *Insert PC card adaptor with media while the power is off. *Check for "PC" display on the FL display and execute this procedure.
JPEG Decode Check	Check Decode function using the media with image and PC card adaptor with PC card slot.	When the Decode check is OK, the first image stored in the media is displayed on the monitor TV. JPEGTEST When the WRITE check is NG. JPEGTEST NG	Insert a PC card adaptor with media to PC card slot, and press [7] [2] in service mode. *Insert PC card adaptor with media while the power is off. *Check for [PC] display on the FL display and execute this procedure.
SD card WRITE check	Check SD card WRITE function with SD card slot.	When the WRITE check is NG. SDCD OK When the WRITE check is OK. SDCD NG *Note: The image stored in the SD card will be erased.	Insert a SD card to SD card slot, and press [7] [4] in service mode. *Insert SD card while the power is off. *Check for [SD] display on the FL display and go on the procedure.
AV4(V)/AV1(RGB) Setting	I/O Set input to AV4(V) and set output to AV1(RGB) for I/O checking	AV4V-AV1RGB	Press [8] [0] in service mode.
AV2(Y/C)/AV1(V) Setting	I/O Set input to AV2(Y/C) and set output to AV1(V) for I/O checking	AV2YC-AV1V	Press [8] [1] in service mode.

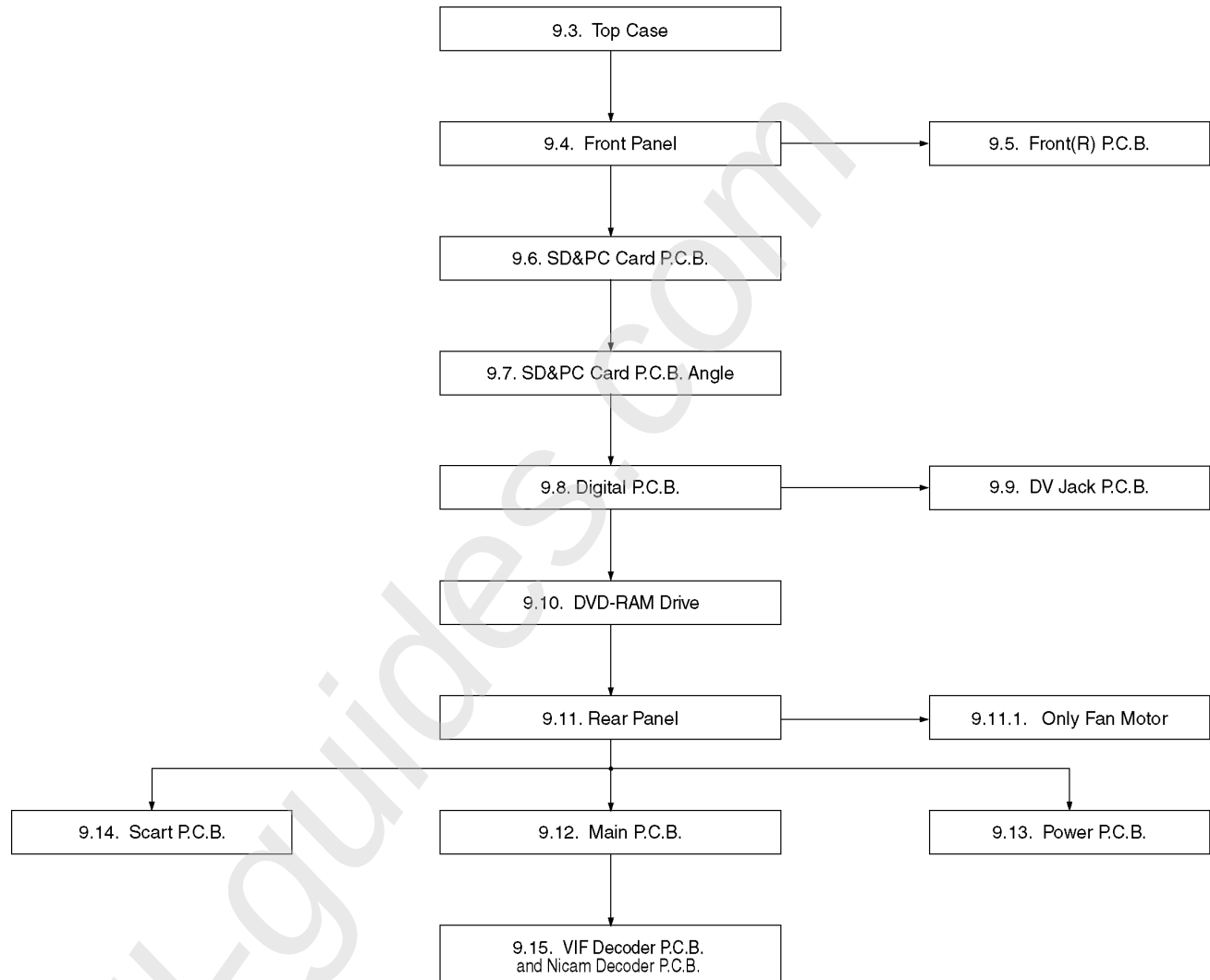
Item		FL display	Key operation
Mode name	Description		(Remote controller key)
AV2(V)/AV1(Y/C) Setting	I/O Set input to AV2(V) and set output to AV1(Y/C) for I/O checking	AV2V-AV1 YC	Press [8] [2] in service mode.
AV2(RGB)/AV1(V) Setting	I/O Set input to AV2(RGB) and set output to AV1(V) for I/O checking	AV2RGB-AV1V	Press [8] [3] in service mode.
P50 (H) Output	Timer Microprocessor IC7501-22 output High signal for AV1-pin 10 passing through inverter (approx. 0V DC at AV1-pin 10).	P50 HIGHOUT	Press [8] [4] in service mode.
		When OK. P50 HIGH OK	
		When NG. P50 HIGH NG	
P50 (L) Output	Timer Microprocessor IC7501-22 output Low signal for AV1-pin 10 passing through inverter (approx. 4.4 V DC at AV1-pin 10).	P50 LOW OUT	Press [8] [5] in service mode.
		When OK. P50 LOW OK	
		When NG. P50 LOW NG	
Tray OPEN/CLOSE Test	The RAM drive tray is opened and closed repeatedly.	NO***** ** is number of open/close cycle times.	Press [9] [1] in service mode *When releasing this mode, press the [POWER] button on Front Panel more than 10 seconds.
Error code initialization	Initialization of the last error code held by timer (Write in F00)	CLR E-CODE	Press [9] [8] in service mode.
Initialize Service	Last Drive Error, Error history and Error Codes stored on the unit are initialized to factory setting.	CLR SERV	Press [9] [9] in service mode.
Finishing service mode	Release Service Mode.	Display in STOP (E-E) mode. *****	Press power button on the front panel in service mode.

9 Assembling and Disassembling

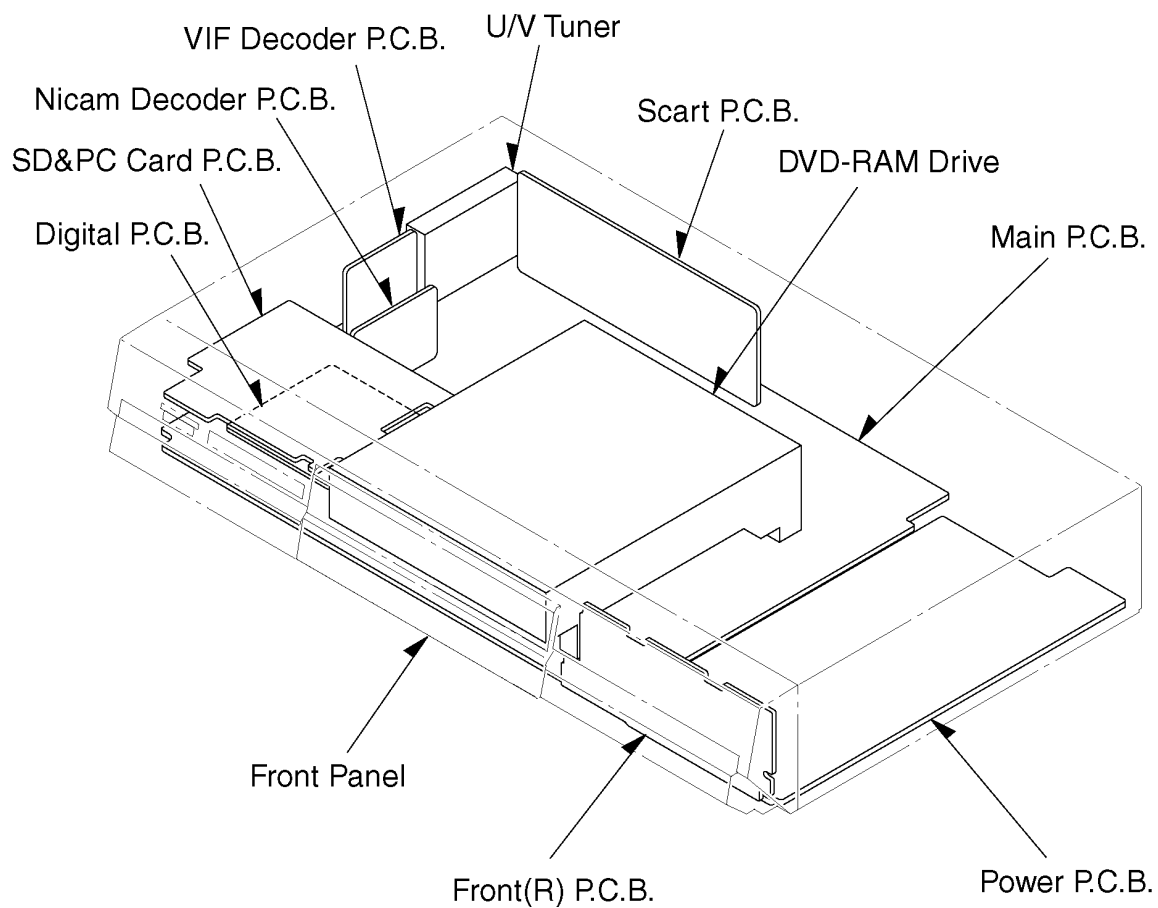
9.1. Disassembly Flow Chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing.

To assemble the unit, reverse the steps shown in the chart below.

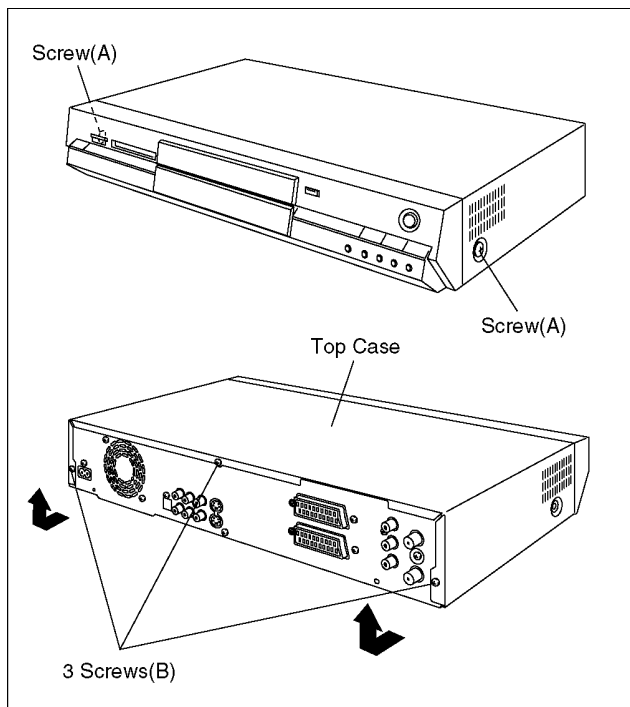


9.2. P.C.B. Positions



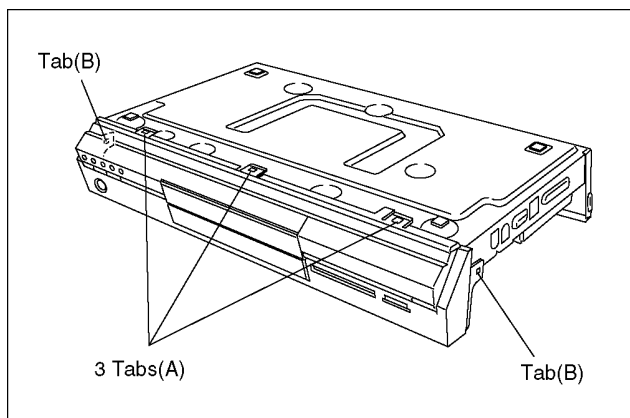
9.3. Top Case

1. Remove the 2 screws (A) and 3 screws (B).
2. Open the both ends at rear side of the Top Case a little and lift the Top Case in the direction of the arrows.

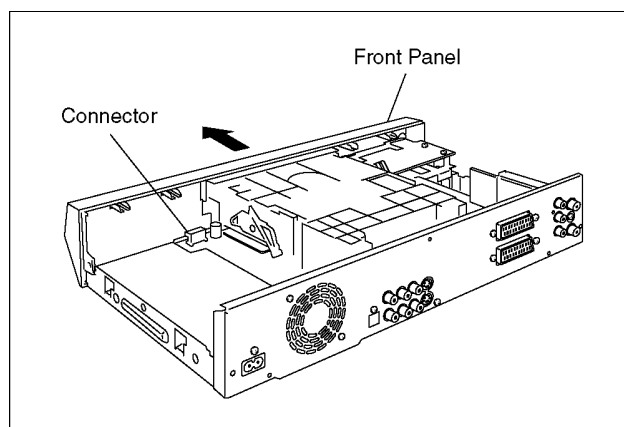


9.4. Front Panel

1. Remove 3 tabs (A) and 2 tabs (B) in this order. (The tab (A) and (B) should be removed at the same time, respectively.)

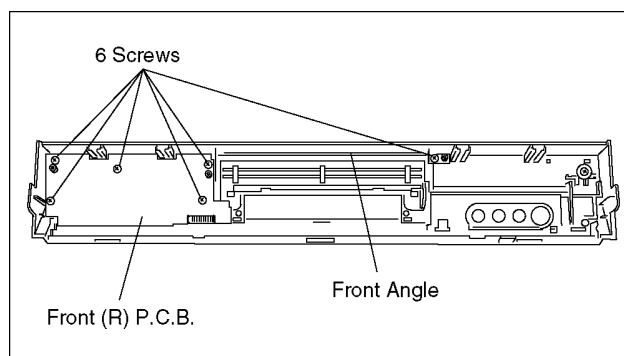


2. Move the front panel to front side straight and slowly so to remove it with Connector.



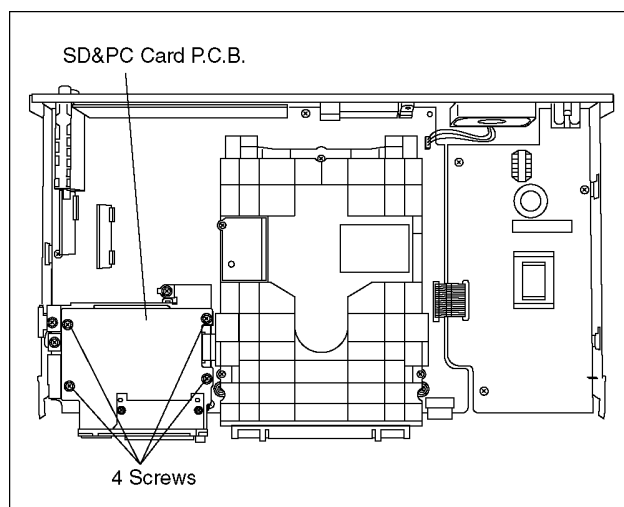
9.5. Front (R) P.C.B.

1. Remove 6 screws and Front Angle.



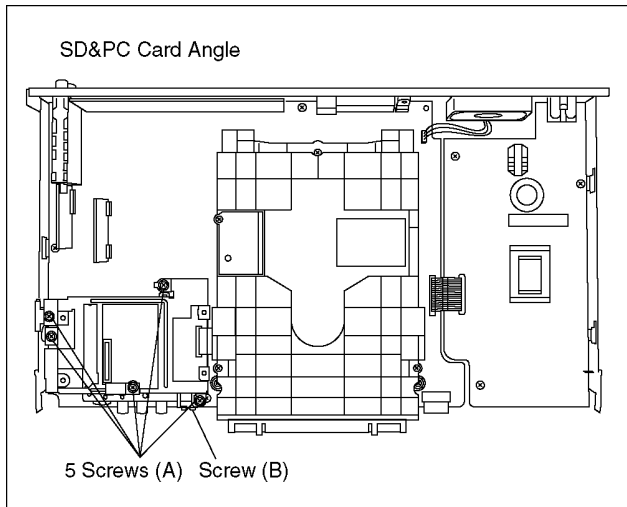
9.6. SD&PC Card P.C.B.

1. Remove 4 screws with Earth Angle and lift up SD&PC Card P.C.B. vertically.



9.7. SD&PC Card P.C.B. Angle

1. Remove 5 Screws (A) and lift up SD&PC Card P.C.B. Angle.
2. Remove one Screw (B) fixing DV Jack section.



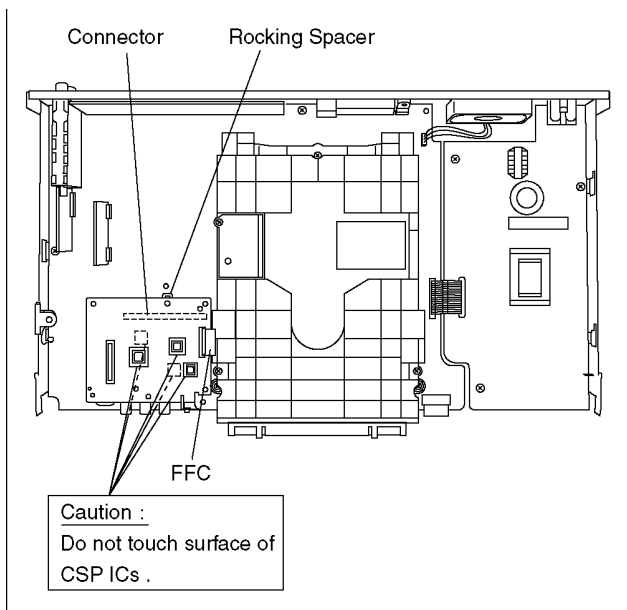
9.8. Digital P.C.B.

1. Remove the FFC.
2. Unlock a Rocking Spacer
3. Lift up Digital P.C.B. slightly so to disconnect Connector to remove Digital P.C.B.

CAUTION 1:

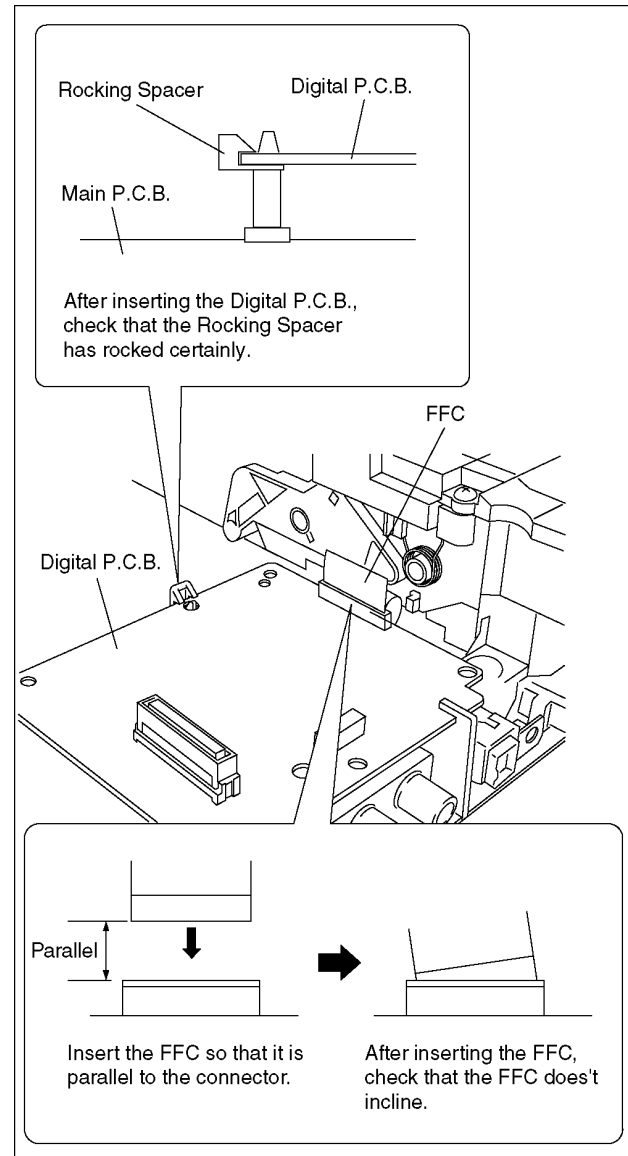
When replacing Digital P.C.B., pay attention to inserting FFC, and be careful to do not touch surface of CSP ICs.

If you have touched surface of CSP IC, clean up with alcohol and so on to prevent oxidation.



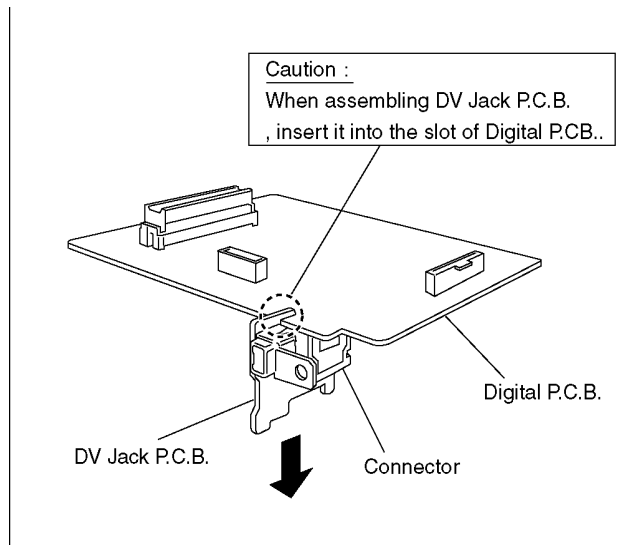
CAUTION 2:

When replacing Digital P.C.B., pay attention as below.



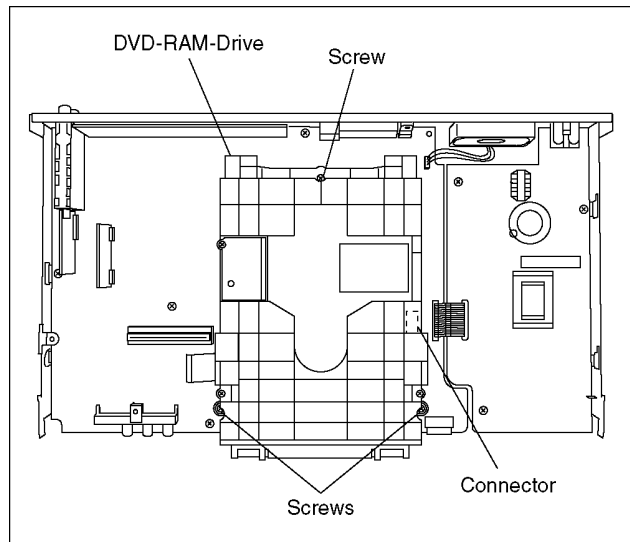
9.9. DV Jack P.C.B.

1. Pull out the DV Jack P.C.B. in the direction of the arrow.



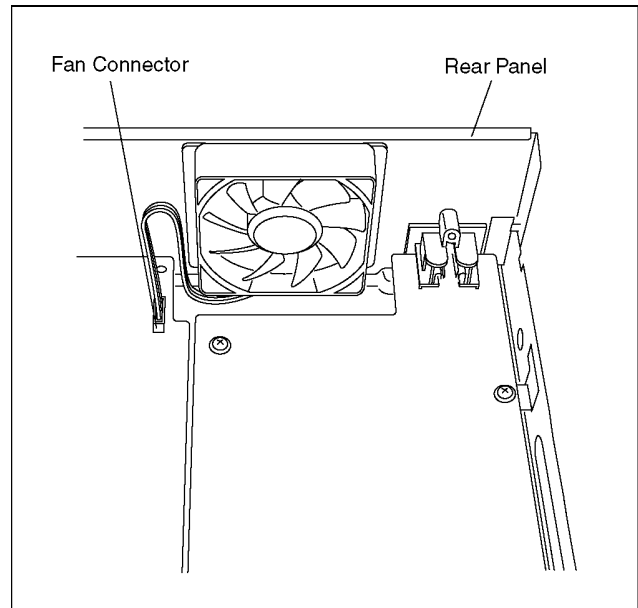
9.10. DVD-RAM Drive

1. Remove 3 Screws.
2. Pull out DVD-RAM Drive vertically so to remove it with Connector.

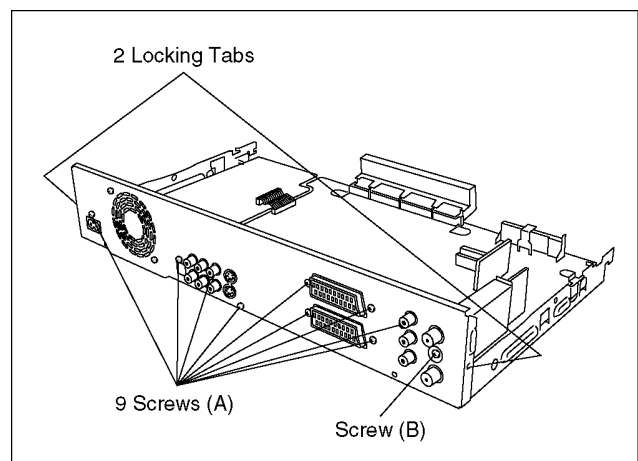


9.11. Rear Panel

1. Remove Fan Connector.

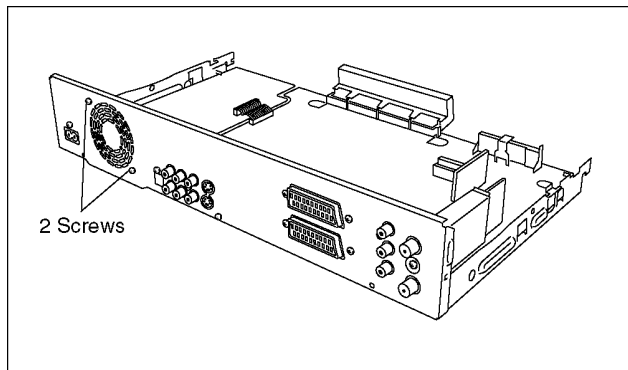


2. Remove the 9 screws (A) and screw (B).
3. Unlock 2 Locking Tabs to remove Rear Panel.

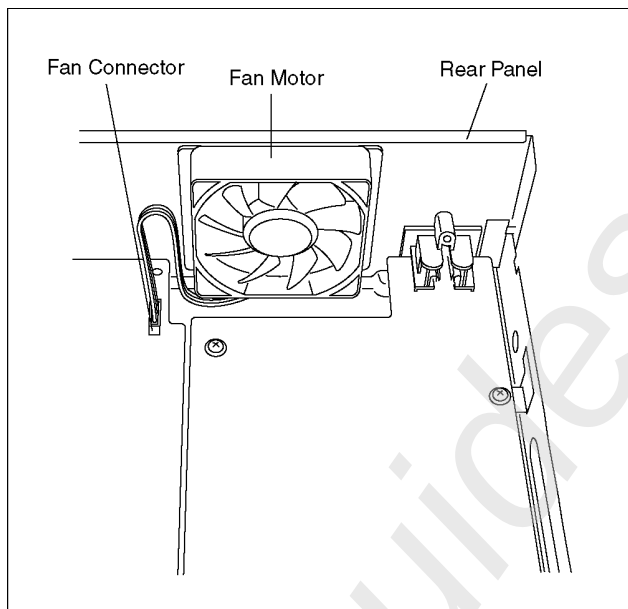


9.11.1. Only Fan Motor

1. Remove the 2 screws.

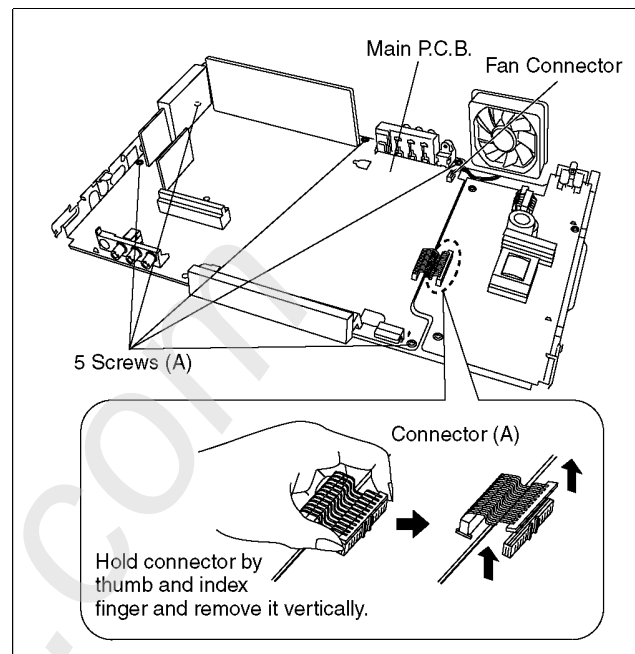


2. Remove Fan Connector to remove Fan Motor.

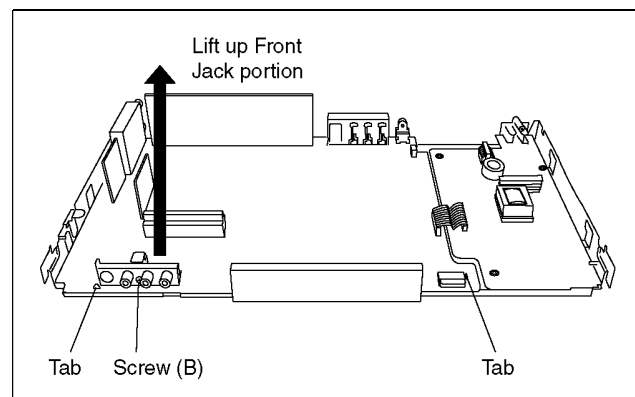


9.12. Main P.C.B.

1. Remove the 5 screws (A), Connector (A) and Fan Connector.

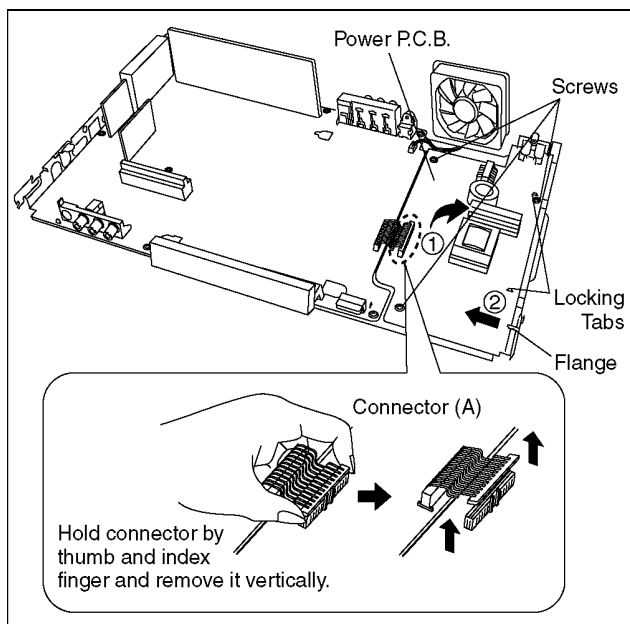


2. Remove a Screw (B) and lift up Front Jack portion of Main P.C.B. slightly so to unlock Tab to remove Main P.C.B..



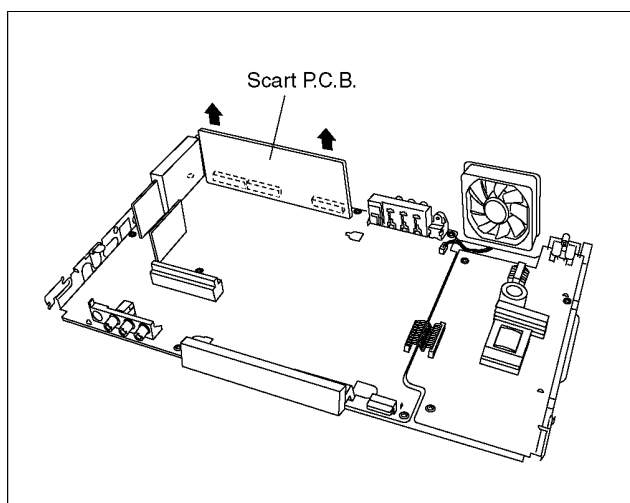
9.13. Power P.C.B.

1. Remove 3 Screws and Connector (A).
2. Lift up Power P.C.B. a little so to unlock 2 Tabs and slide Power P.C.B. so to unlock Flange to remove Power P.C.B.



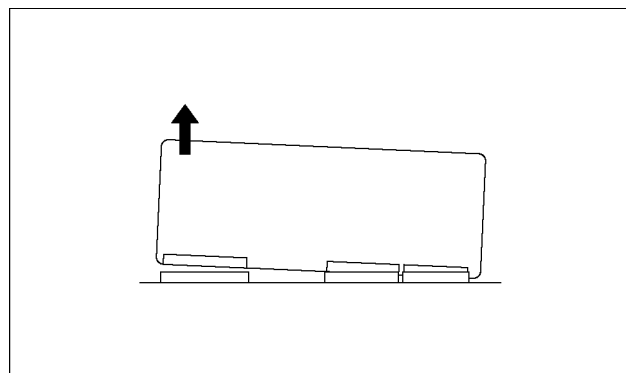
9.14. The Scart P.C.B.

1. Pull out the Scart P.C.B. in the direction of the arrow.



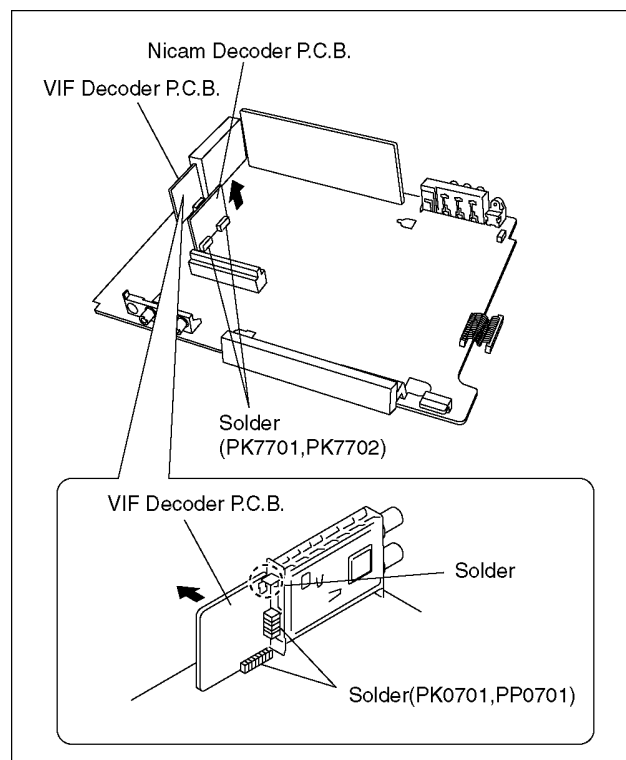
Note:

At first disconnect the connector on one side, and pull out the Scart P.C.B.



9.15. VIF Decoder P.C.B. and Nicam Decoder P.C.B.

1. Remove the solders.
2. Pull out the VIF Decoder P.C.B. and Nicam Decoder P.C.B.



10 Service Fixture and Tools

Part Number	Description	Compatibility
RFKZ0125	Extension FFC (Digital P.C.B. - DVD-RAM Drive / 40 Pin)	Same as E50 series
RFKZ0168	Extension Cable (Main P.C.B. - Fan / 3 Pin)	Same as E50 series
RFKZ0181	Extension Cable (Digital P.C.B. - SD&PC Card P.C.B. / 70 Pin)	Same as E100H Series
RFKZ0197	Extension Cable (Main P.C.B. - DVD-RAM Drive / 8 Pin)	Same as E55 Series
RFKZ0214	Extension Cable (MainP.C.B. - Digital P.C.B. / 88 Pin)	Same as E55 Series
RFKZ0215	Extension Cable (MainP.C.B. - Front (R) P.C.B. / 12 Pin)	Same as E55 Series
RFKZ0216	Extension Cable (MainP.C.B. - Power P.C.B. / 23 Pin)	Same as E55 Series

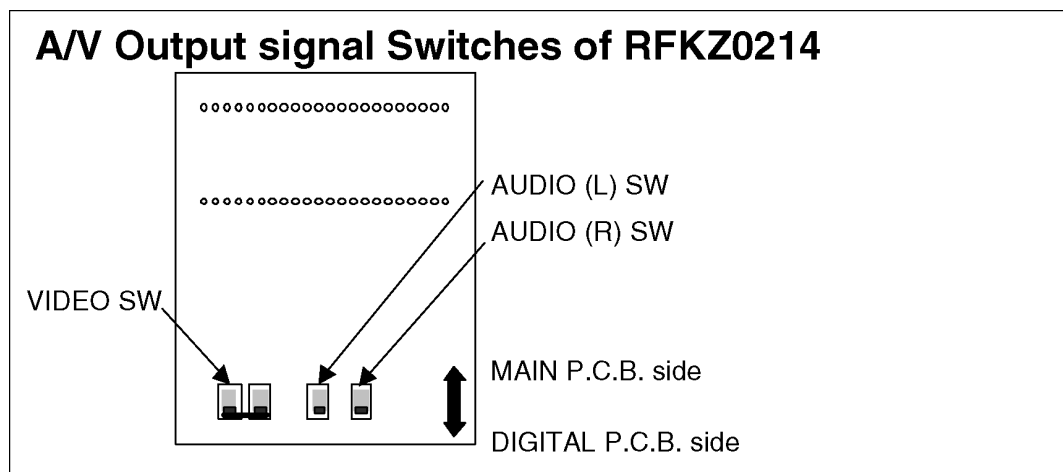
NOTE:

Extension Cable RFKZ0214 has A/V Output Signal switches.

Output signals can be switched from MAIN P.C.B. side or DIGITAL P.C.B. side.

When check MAIN P.C.B., turn switches to MAIN PCB side.

When check DIGITAL P.C.B., turn switches to DIGITAL P.C.B. side.

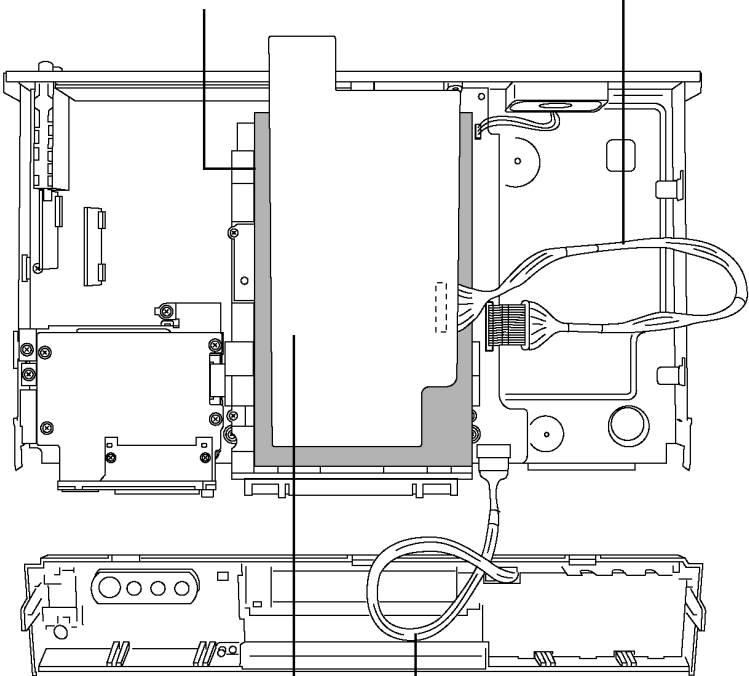


11 Service Positions

Note:

For description of the disassembling procedure, see the section 9.

11.1. Checking and Repairing of Power P.C.B.

1. Top Case Remove 2 Screws (A) on side Remove 3 rear Screws (B) on rear Remove Top Case ↓ 2. Front Panel Unlock 2 Locking Tabs on side Unlock 3 Locking Tabs on bottom Remove Front Panel ↓ 3. Power P.C.B. Remove 1 Screw for AC Inlet fixing Remove 3 Screws fixing Power P.C.B. Remove Connector to Main P.C.B. Unlock 2 Locking Tabs and a Flange Remove Power P.C.B. ↓ Connect Extension Cables between Main P.C.B. and Power P.C.B. (RFKZ0216), and between Main P.C.B. and Front (R) P.C.B. (RFKZ0215) ↓ Put Power P.C.B. on insulation sheet so that it's foil side faces top.	Caution: Red wire in the extension cable should be connected to (1) pin. Insulation sheet  Foil side of Power P.C.B. Extension Cable between Main P.C.B. and Power P.C.B. (RFKZ0216) Extension Cable between Main P.C.B. and Front (R) P.C.B. (RFKZ0215)
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11.2. Checking and Repairing of Main P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side.

Unlock 3 Locking Tabs on bottom

Remove Front Panel

3. Rear Panel

Remove 9 Screws(A) and Screw(B)

Remove Fan Connector

Unlock 2 Locking Tabs on side

Remove Rear Panel with FAN

4. SD & PC Card P.C.B.

Remove the 4 Screws fixing SD & PC Card P.C.B. .

Pull out the SD & PC Card P.C.B. vertically.

5. SD & PC Card P.C.B. angle

Remove one Screw fixing DV Jack section.

Remove the 5 Screws fixing SD & PC Card P.C.B. angle.

Remove the SD & PC Card P.C.B. angle vertically.

6. DVD-RAM Drive

Remove FFC to Digital P.C.B.

Remove 3 Screws fixing RAM-Drive

Lift up DVD-RAM Drive to remove it

7. Main P.C.B. and Power P.C.B.

Remove 5 Screws (A) fixing Main P.C.B.

Remove 3 Screws fixing Power P.C.B.

Unlock 2 Locking Tabs for Power P.C.B.

Remove a Flange for Power P.C.B.

Remove Main P.C.B. and Power P.C.B. from Chassis, and put Main P.C.B. so that its foil side faces top. Put Insulation Sheet on DVD-RAM Drive, then place Power P.C.B. on Insulation Sheet

Connect Extension Cables between Main P.C.B. and Front P.C.B. (RFKZ0215), between Main P.C.B. and Power P.C.B. (RFKZ0216), and between Main P.C.B. and DVD-RAM Drive (RFKZ0197), and between Digital P.C.B. and DVD-RAM Drive (RFKZ0125), and between Main P.C.B. and Fan (RFKZ0168).

Caution:

Red wire in the extension cable should be connected to (1) pin.

Extension Cable between Main P.C.B. and FAN (RFKZ0168)

Foil side of Main P.C.B.

Extension Cable between Main P.C.B. and Front(R) P.C.B. (RFKZ0215)

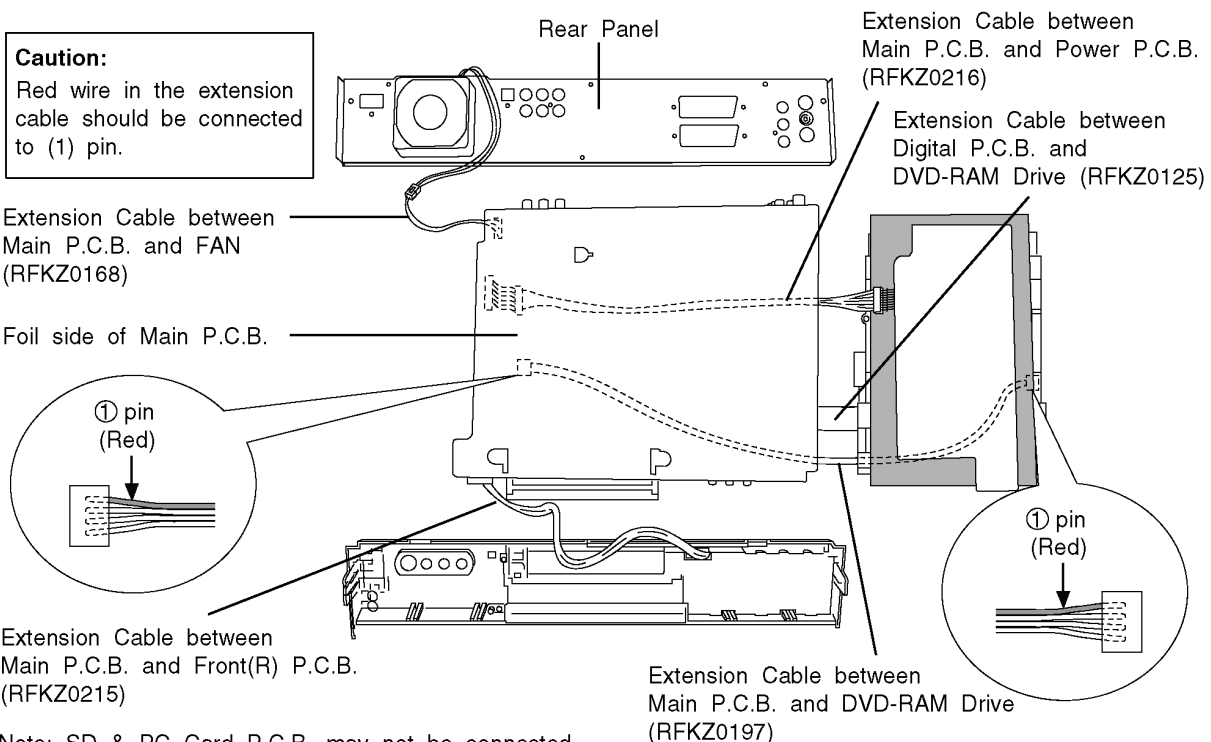
Note: SD & PC Card P.C.B. may not be connected.

Rear Panel

Extension Cable between Main P.C.B. and Power P.C.B. (RFKZ0216)

Extension Cable between Digital P.C.B. and DVD-RAM Drive (RFKZ0125)

Extension Cable between Main P.C.B. and DVD-RAM Drive (RFKZ0197)



11.3. Checking and Repairing of Digital P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side.

Unlock 3 Locking Tabs on bottom.

Remove Front Panel

3. SD & PC Card P.C.B.

Remove the 4 Screws fixing SD & PC Card P.C.B. .

Pull out the SD & PC Card P.C.B. vertically.

4. SD & PC Card P.C.B. angle

Remove one Screw fixing DV Jack section.

Remove the 5 Screws fixing SD & PC Card P.C.B. angle.

Remove the SD & PC Card P.C.B. angle vertically.

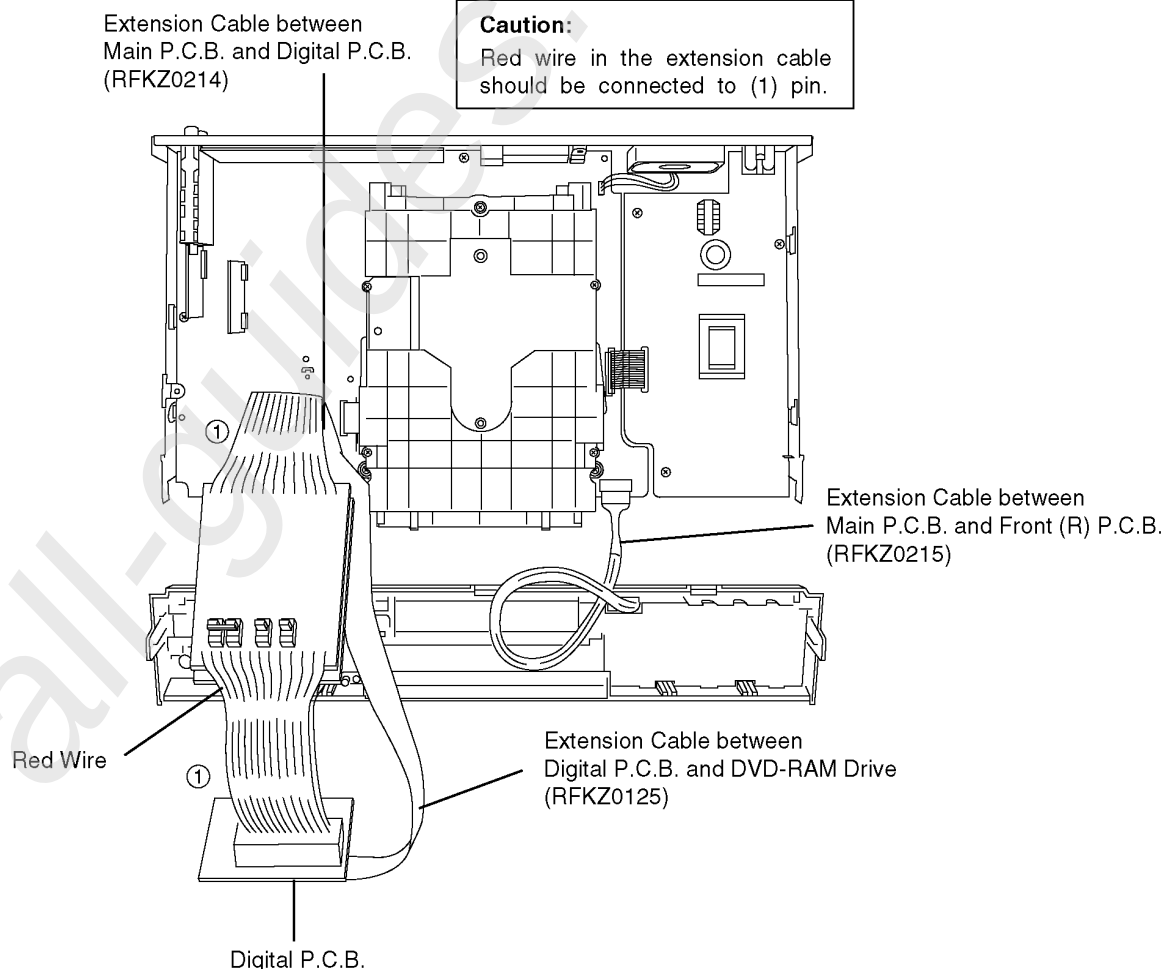
5. Digital P.C.B. with DV Jack P.C.B.

Remove FFC to RAM-Drive

Remove a Rocking spacer.

Lift up Digital P.C.B. to remove it

Connect Extension Cables between Main P.C.B. and Digital P.C.B. (RFKZ0214), and between Digital P.C.B. and DVD-RAM Drive (RFKZ0125), and between Main P.C.B. and Front (R) P.C.B. (RFKZ0215)



Note: SD & PC Card P.C.B. may not be connected.

11.4. Checking and Repairing of DVD-RAM Drive

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B) on rear

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side.

Unlock 2 Locking Tabs on side.

Remove Front Panel

3. SD & PC Card P.C.B.

Remove the 4 Screws fixing SD & PC Card P.C.B. .

Pull out the SD & PC Card P.C.B. vertically.

4. SD & PC Card angle

Remove the 5 Screws fixing SD & PC Card P.C.B. angle.

Remove the SD & PC Card P.C.B. angle vertically

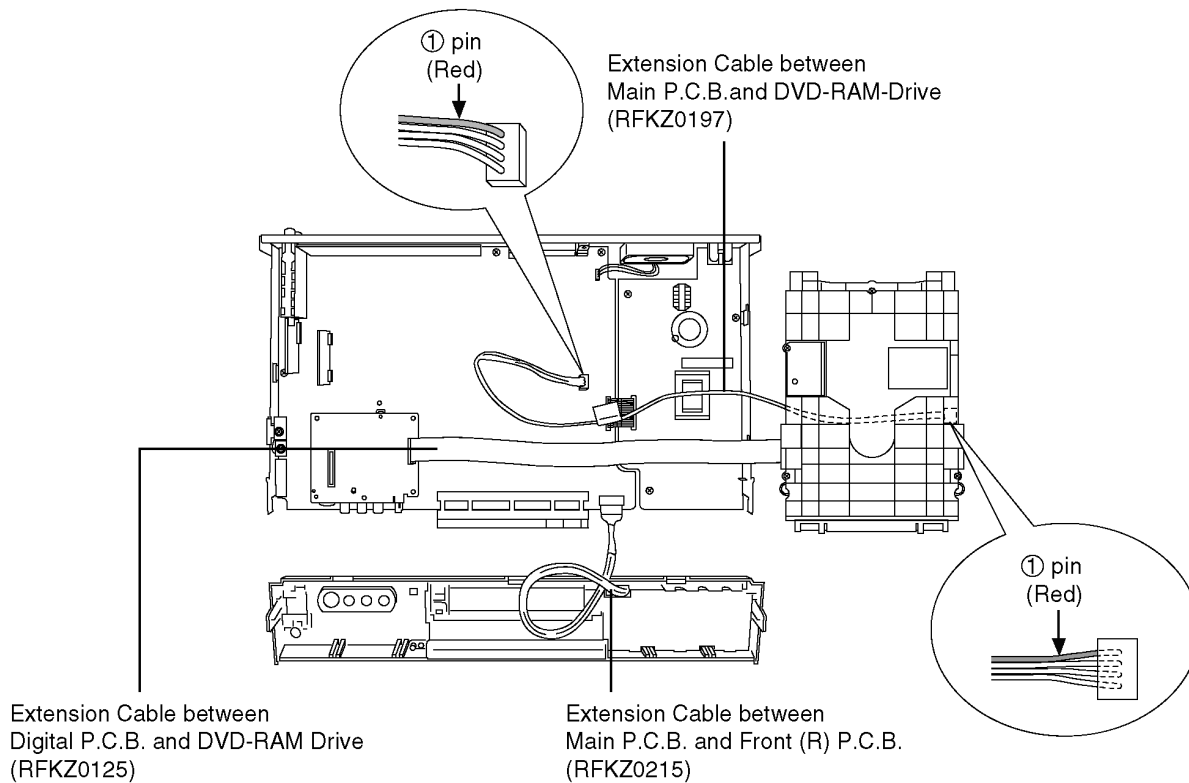
5. DVD-RAM Drive

Remove 3 Screws fixing RAM Drive

Remove FFC to Digital P.C.B.

Lift up DVD-RAM Drive to remove it

Connect Extension Cables between Main P.C.B. and Front (R) P.C.B. (RFKZ0215), and between Digital P.C.B. and DVD-RAM Drive (RFKZ0125), and between Main P.C.B. and DVD-RAM Drive (RFKZ0197).



Note: SD & PC Card P.C.B. may not be connected.

11.5. Checking and Repairing of SD & PC Card P.C.B.

1. Top Case

Remove 2 Screws (A) on side

Remove 3 rear Screws (B)

Remove Top Case

2. Front Panel

Unlock 2 Locking Tabs on side

Unlock 3 Locking Tabs on bottom

Remove Front Panel

3. SD & PC Card P.C.B.

Remove the 4 Screws fixing SD & PC Card P.C.B.

Pull out the SD & PC Card P.C.B. Card vertically.

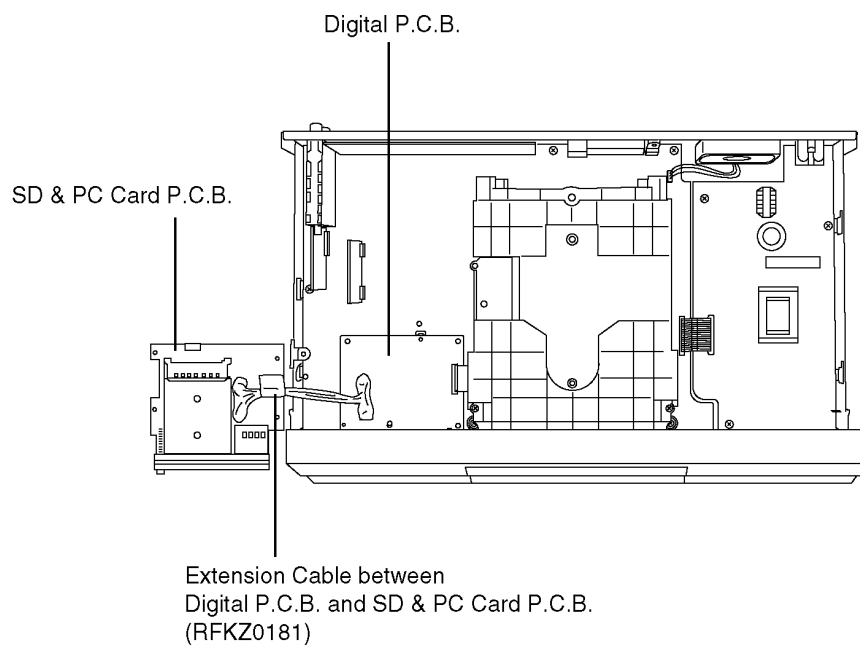
4. SD & PC Card P.C.B. angle

Remove one Screw fixing DV Jack section.

Remove the 5 Screws fixing SD & PC Card P.C.B. angle.

Remove the SD & PC Card P.C.B. angle vertically.

Attach the Front Panel and connect Extension Cable between Digital P.C.B. and SD & PC Card P.C.B. (RFKZ0181).



12 Adjustment Procedures

12.1. After replacing the RAM Drive with new one

After replacing of RAM drive unit, TEST mode is not necessary. Please confirm operation for RAM drive.

12.2. When the unit does not operate normally after replacing the Timer Microprocessor with new one

in order to transmit the

Step	Operation	Descriptions
1	While power is ON, short IC7508-4 pin (RESET) and the GND.	"RESET (L)" is transmitted to the reset terminal of Timer Microprocessor (IC7501-11 pin), then the unit operates normally.

13 Standard Inspection Specifications after Making Repairs

After making repairs, we recommend performing the following inspection, to check normal operation.

No.	Procedure	Item to Check
1	Turn on the power, and confirm items pointed out.	Items pointed out should reappear.
2	Insert RAM disc.	The Panasonic RAM disc should be recognized.
3	Enter the EE (TU IN / AV IN - AV OUT) mode.	No abnormality should be seen in the picture, sound or operation.
4	Perform auto recording and playback for one minute using the RAM disc.	No abnormality should be seen in the picture, sound or operation.
5	If a problem is caused by a VCD, DVD-R, DVD-Video, Audio-CD, or MP3, playback the test disc.	No abnormality should be seen in the picture, sound or operation.
6	After checking and making repairs, upgrade the firmware to the latest version.	Make sure that [FIRM_SUCCESS] appears in the FL displays. * [UNSUPPORT] display means the unit is already updated to newest same version. Then version up is not necessary.
7	Transfer [9][9] in the service mode setting, and initialize the service settings (return various settings and error information to their default values. The laser time is not included in this initialization).	Make sure that [CLR SERV] appears in the FL display. After checking it, turn the power off.
8	When replacing of RAM drive, transfer [9] [5] in the service mode setting to delete Laser used time.	Make sure that [CLR LASER] appears in the FL display. After that, turn power off.
9	In case of that the trouble is caused by SD/PC card and/or DV terminal.	1) SD/PC card: Check to be able to display and copy the picture. 2) DV terminal: Check to be able to record from DVC.

Use the following checklist to establish the judgement criteria for the picture and sound.

Item	Contents	Check	Item	Contents	Check
Picture	Block noise		Sound	Distorted sound	
	Crosscut noise			Noise (static, background noise, etc.)	
	Dot noise			The sound level is too low.	
	Picture disruption			The sound level is too high.	
	Not bright enough			The sound level changes.	
	Too bright				
	Flickering color				
	Color fading				

14 Voltage and Waveform Chart

Note)

- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard.

Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.

14.1. Power P.C.B.

Ref No.	IC001					IC101			IC102												
MODE	1	2	3	4	5		A	K	R		1	2	3	4	5	6	7	8			
REC	240	0.1	0	18.5	0.3		-0.1	4.4	2.4		5.2	1.2	1.2	0	1.2	1.2	5.1	13.7			
PLAY	240	0.1	0	18.5	0.3		-0.1	4.4	2.4		5.2	1.2	1.2	0	1.2	1.2	5.1	13.7			
STOP	240	0.1	0	18.5	0.3		-0.1	4.4	2.4		5.2	1.2	1.2	0	1.2	1.2	5.1	13.7			
Ref No.	IC103					IC106															
MODE	1	2	3	4	5		1	2	3	4	5										
REC	2.4	5.2	0	3.4	1.0		0	5.2	11.9	11.9	13.8	<th></th> <th></th>									
PLAY	2.4	5.2	0	3.4	1.0		0	5.2	11.9	11.9	13.8	<th></th> <th></th>									
STOP	2.4	5.2	0	3.4	1.0		0	5.2	11.9	11.9	13.8	<th></th> <th></th>									
Ref No.	Q101			Q102			Q103			Q104			Q105								
MODE	E	C	B		E	C	B		E	C	B		E	C	B		G	D	S		
REC	7.0	13.7	6.9		7.1	0	6.9		13.7	6.9	13.4		0	6.7	0.2		7.0	3.1	2.2		
PLAY	7.0	13.7	6.9		7.1	0	6.9		13.7	6.9	13.4		0	6.7	0.2		7.0	3.1	2.2		
STOP	7.0	13.7	6.9		7.1	0	6.9		13.7	6.9	13.4		0	6.7	0.2		7.0	3.1	2.2		
Ref No.	Q106			Q107			Q110			Q111			Q113								
MODE	E	C	B		E	C	B		E	C	B		E	C	B		G	D	S		
REC	-0.1	4.4	0		0	0	0.7		13.9	13.9	13.2		0	0	0.6		6.9	7.0	5.2		
PLAY	-0.1	4.4	0		0	0	0.7		13.9	13.9	13.2		0	0	0.6		6.9	7.0	5.2		
STOP	-0.1	4.4	0		0	0	0.7		13.9	13.9	13.2		0	0	0.6		6.9	7.0	5.2		
Ref No.	Q114			Q115			Q116			Q117			Q118								
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
REC	13.8	13.9	13.1		0	2.4	0		0	6.9	0.2		13.9	6.8	13.4		6.9	13.7	6.8		
PLAY	13.8	13.9	13.1		0	2.4	0		0	6.9	0.2		13.9	6.8	13.4		6.9	13.7	6.8		
STOP	13.8	13.9	13.1		0	2.4	0		0	6.9	0.2		13.9	6.8	13.4		6.9	13.7	6.8		
Ref No.	Q119																				
MODE	E	C	B																		
REC	6.9	0	6.7																		
PLAY	6.9	0	6.7																		
STOP	6.9	0	6.7																		

14.2. Main P.C.B.

Ref No.	IC1502					IC1505								IC1506						
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3	4	5
REC	5.6	4.9	5.0	0	0		5.2	0	0	3.3	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
PLAY	5.6	4.9	5.0	0	0		5.2	0	0	3.3	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
STOP	5.6	4.9	5.0	0	0		5.2	0	0	3.3	5.7	0	0	5.7		1.3	0	4.8	5.6	5.0
Ref No.	IC1507								IC1508							IC1509				
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5		1	2	3	4	5
REC	5.0	0	0	3.1	4.8	0	0	5.7		5.7	4.8	3.3	0	0		1.8	3.3	1.2	1.0	0
PLAY	5.0	0	0	3.1	4.8	0	0	5.7		5.7	4.8	3.3	0	0		1.8	3.3	1.2	1.0	0
STOP	5.0	0	0	3.1	4.8	0	0	5.7		5.7	4.8	3.3	0	0		1.8	3.3	1.2	1.0	0
Ref No.	IC1510																			
MODE	1	2	3	4	5	6	7	8												
REC	1.5	0.8	3.3	3.3	0	0	1.8	1.8												
PLAY	1.5	0.8	3.3	3.3	0	0	1.8	1.8												
STOP	1.5	0.8	3.3	3.3	0	0	1.8	1.8												
Ref No.	IC3001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0.1	2.7	0	1.9	4.9
PLAY	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0	2.7	0	1.9	4.9
STOP	1.4	0	1.4	5.0	1.4	4.9	1.4	4.7	0.1	2.7	0	1.9	4.9	1.4	0	0.1	2.7	0	1.9	4.9
Ref No.	IC3001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	1.9	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
PLAY	1.9	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
STOP	1.9	0	0.1	2.7	5.0	0.7	0.7	0.7	0.7	2.2	0	2.2	2.2	2.2	2.2	2.2	2.2	0	1.4	5.0
Ref No.	IC3001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.1	4.5	5.0	0.4
PLAY	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.1	4.5	5.0	0.4
STOP	2.8	0	2.8	5.0	2.8	2.8	2.8	4.7	2.8	0	2.8	5.0	2.8	2.9	1.0	0	4.2	4.5	5.0	0
Ref No.	IC3001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	0	0.8	0.8	5.0	1.3	0	1.8	0	2.0	0	0.8	5.0	0.8	0	2.0	0	0	5.0	0	0
PLAY	0	0.8	0.8	5.0	1.3	0	1.9	0	2.1	0	0.8	5.0	0.8	0	2.0	0	0	5.0	0	0
STOP	0	0.9	0	5.0	0.9	0	0.9	0	2.1	0	0.8	5.0	0.7	0	2.0	0	0	5.0	0	0
Ref No.	IC3002																			
MODE	1	2	3	4	5	6														
REC	0	1.7	5.0	2.5	0	2.4														
PLAY	0	1.7	5.0	2.5	0	2.4														
STOP	0	1.7	5.0	2.5	0	2.4														

Ref No.	IC3003																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
REC	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0	
PLAY	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0	
STOP	2.1	5.0	2.7	0	2.6	5.0	0	2.6	0	2.0	5.0	2.8	0	2.8	5.0	2.2	2.3	0	2.3	0	
Ref No.	IC3003																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32									
REC	2.1	2.1	0	2.1	2.1	0	2.0	0	2.1	2.1	0	2.3									
PLAY	2.1	2.1	0	2.1	2.2	0	2.0	0	2.1	2.1	0	2.3									
STOP	2.1	2.2	0	2.2	2.2	0	2.0	0	2.1	2.1	0	2.3									
Ref No.	IC4001																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
REC	1.8	4.5	4.5	2.1	2.1	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0.1	8.3	0	4.5	
PLAY	1.8	4.5	4.5	2.1	2.1	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0.1	8.3	0	4.5	
STOP	1.8	4.5	4.5	2.1	2.1	4.6	4.6	3.4	4.5	4.5	4.5	4.5	4.5	4.5	0	4.5	0.2	8.3	0	4.5	
Ref No.	IC4001																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32									
REC	4.1	0	4.6	8.2	4.1	4.1	8.2	4.6	4.6	9.2	4.5	4.5									
PLAY	4.1	0	4.6	8.2	4.1	4.1	8.2	4.6	4.6	9.2	4.5	4.5									
STOP	4.2	0	4.6	8.2	4.1	4.1	8.2	4.6	4.6	9.2	4.5	4.5									
Ref No.	IC4005																				
MODE	1	2	3	4	5	6	7	8			1	2	3			1	2	3	4	5	
REC	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.7	0	2.5	5.0	
PLAY	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.7	0	2.5	5.0	
STOP	2.5	5.0	0	0	5.0	0	2.5	5.0			2.5	5.0	0			5.0	1.8	0	2.5	5.0	
Ref No.	IC4009																				
MODE	1	2	3	4	5	6	7	8			1	2	3	4	5		1	2	3	4	5
REC	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			13.5	4.8	12.1	0	0		1.2	0	4.8	5.7	5.0
PLAY	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			13.5	4.8	12.1	0	0		1.2	0	4.8	5.7	5.0
STOP	6.0	6.1	6.1	0	6.1	6.1	6.1	12.1			13.6	4.8	12.1	0	0		1.2	0	4.8	5.7	5.0
Ref No.	IC4012																				
MODE	1	2	3	4	5	6	7	8			1	2	3			1	2	3	4	5	
REC	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			9.2	0	12.1			13.7	3.3	12.1	0	0	
PLAY	6.0	6.0	6.0	0	6.0	6.0	6.0	12.1			9.2	0	12.1			13.7	3.3	12.1	0	0	
STOP	6.1	6.1	6.1	0	6.0	6.1	6.1	12.1			9.2	0	12.1			13.6	3.3	12.1	0	0	
Ref No.	IC7402																				
MODE	1	2	3	4	5	6			1	2	3	4	5								
REC	5.5	0	5.5	1.2	0	5.0			5.5	3.3	5.0	0	0								
PLAY	5.5	0	5.5	1.2	0	5.0			5.5	3.3	5.0	0	0								
STOP	5.6	0	5.6	1.3	0	5.0			5.6	3.3	5.0	0	0								
Ref No.	IC7501																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
REC	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0.3	4.9	
PLAY	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0.3	4.9	
STOP	4.9	4.9	0	4.1	4.1	4.4	0	0	-	-	4.9	-	0	-	4.9	4.9	5.0	4.9	0	4.9	
Ref No.	IC7501																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
REC	0	0	1.8	0	4.9	0	0	4.5	4.1	0	1.8	1.7	2.0	4.9	2.6	0	0.3	0.1	5.0	4.9	
PLAY	0	0	1.8	0	4.9	0	4.9	4.5	4.1	0	1.8	1.7	2.0	4.9	2.6	0	0.3	0.1	5.0	4.9	
STOP	0	0	1.8	0	4.9	0	0	4.5	4.2	0	1.8	1.7	2.0	4.9	2.6	0	0	0.1	5.0	4.9	
Ref No.	IC7501																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
REC	0	0	0	0	0	4.9	0	0	0	0	0	4.9	4.9	0	0	4.9	4.9	0	5.0	0	
PLAY	0	0	0	0	0	4.9	0	0	0	0	0	4.9	4.9	0	0	4.9	4.9	0	5.0	0	
STOP	0	0	0	0	0	4.9	0	0	0	0	0	4.9	4.9	0	0	4.9	4.9	0	5.0	0	
Ref No.	IC7501																				
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
REC	0	4.9	4.9	2.5	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9	
PLAY	0	4.9	4.9	2.5	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9	
STOP	0	4.9	4.9	2.5	4.9	0	0	0	4.9	4.9	0	4.9	0	0	0	4.9	0	0	0	4.9	
Ref No.	IC7501																				
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	
REC	0	4.9	0	4.9	0	4.9	3.0	4.9	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	4.7	0	
PLAY	0	4.9	0	4.9	0	4.9	3.0	4.9	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	4.7	5.0	
STOP	0	4.9	0	4.9	0	4.9	3.0	4.9	4.9	0	0	0	0	4.9	4.9	4.9	4.9	4.9	4.7	0	
Ref No.	IC7501																				
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116					
REC	0.1	0.1	0	4.9	4.9	4.9	4.9	4.9	2.0	1.3	0	4.9	2.0	0	0	4.9					
PLAY	0.3	0.3	0	4.9	4.9	4.9	4.9	4.9	2.0	1.3	0	4.9	2.0	0	0	4.9					
STOP	0.2	0.2	0	4.9	4.9	4.9	4.9	4.9	1.1	1.3	0	4.9	1.1	0	0	4.9					
Ref No.	IC7502																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
REC	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-25.4	-22.3	-22.3	-28.6	4.9	-28.6	-25.4	
PLAY	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-25.5	-22.3	-22.3	-28.6	4.9	-28.6	-28.6	
STOP	4.9	3.0	4.4	4.1	0	2.2	2.2	4.9	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-22.3	-25.5	-28.6	4.9	-25.5	-28.6	
Ref No.	IC7502																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
REC	-28.6	-28.6	-28.6	-22.2	-25.4	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-19.1	-16.0	-25.4	-25.4	-25.4	-22.3	-22.2	-22.3	
PLAY	-25.4	-28.6	-25.4	-22.3	-25.4	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-19.1	-16.0	-25.4	-25.4	-25.5	-22.3	-22.3	-15.9	
STOP	-28.6	-28.6	-28.6	-25.5	-22.3	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6	-18.4	-19.1	-24.8	-21.0	-24.4	-22.3	-17.9	-19.1	
Ref No.	IC7502																				
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	
REC	-15.9	-15.9	-28.6	-28.6	-28.6	-28.6	-22.3	-25.4	-19.2	-16.0	-22.2	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-25.5	-25.5	-25.5	
PLAY	-19.1	-19.1	-28.6	-28.6	-28.6	-25.4	-22.3	-25.5	-19.2	-16.0	-22.3	-28.6	-28.6	-28.6	-28.6	-25.5	-25.5	-25.5	-25.5	-25.5	
STOP	-25.5	-15.9	-28.6	-28.6	-28.6	-28.7	-22.3	-25.5	-22.3	-19.2	-22.3	-28.6	-28.6	-28.6	-28.7	-25.5	-25.5	-25.5	-25.5	-25.5	

Ref No.	IC7502																			
MODE	61	62	63	64																
REC	-25.5	-25.5	-25.5	-28.8																
PLAY	-25.5	-25.5	-25.5	-28.8																
STOP	-25.6	-25.5	-25.6	-28.9																
Ref No.	IC7503					IC7504										IC7505				
MODE	1	2	3	4	5		1	2	3	4	5	6	7	8		1	2	3	4	5
REC	5.0	5.2	0	0	0		0	0	0	0	4.1	4.5	4.9	4.9		2.1	3.3	0	0	0
PLAY	4.9	5.2	0	0	0		0	0	0	0	4.1	4.5	4.9	4.9		2.1	3.3	0	0	0
STOP	4.9	5.2	0	0	0		0	0	0	0	4.2	4.5	4.9	4.9		2.1	3.3	0	0	0
Ref No.	IC7506					IC7508														
MODE	1	2	3	4	5	6	7	8		1	2	3	4	5						
REC	5.8	1.8	1.8	0	1.8	1.8	1.8	13.7		0	0	0	4.9	4.9						
PLAY	5.8	1.8	1.8	0	1.8	1.8	1.8	13.7		0	0	0	4.9	4.9						
STOP	5.8	1.8	1.8	0	1.8	1.8	1.8	13.8		0	0	0	4.9	4.9						
Ref No.	Q3006				Q3007				Q3009				Q3010				Q4004			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	1.8	0	1.2		2.2	0	1.6		1.7	0	1.0		1.7	0	1.0		5.2	-1.5	5.2	
PLAY	1.8	0	1.2		2.2	0	1.6		1.7	0	1.0		1.7	0	1.0		5.2	-0.6	5.2	
STOP	1.8	0	1.2		2.2	0	1.6		1.7	0	1.0		1.7	0	1.0		5.2	-2.2	4.5	
Ref No.	Q4006				Q4007				Q4008				Q4009				Q7401			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	0	-0.2		0	0	-0.1		0	0	-6.6		0	0	-0.2		0	12.1	0	
PLAY	0	0	-0.2		0	0	-0.5		0	0	-5.1		0	0	-3.4		0	12.1	0.1	
STOP	0	0	-1.9		0	0	-0.5		0	0	-1.6		0	0	-4.6		0	12.1	0.1	
Ref No.	Q7402				Q7404				Q7405				Q7406				Q7503			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	3.6	1.3	3.0		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	2.3	-1.0	
PLAY	3.6	1.3	3.0		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	2.3	-1.0	
STOP	3.6	1.3	3.0		1.3	5.0	1.9		1.3	5.0	1.9		1.3	5.0	1.9		0	2.3	-1.0	
Ref No.	Q7505				Q7506				Q7507				Q7508				Q7511			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	2.5	0	1.9		2.0	5.0	1.6		2.5	0	1.9		2.0	5.0	1.6		0	4.9	0	
PLAY	2.5	0	1.9		2.0	5.0	1.6		2.5	0	1.9		2.0	5.0	1.6		0	4.9	0	
STOP	1.6	0	0.9		1.1	5.0	1.6		1.7	0	1.0		1.1	5.0	1.6		0	4.9	0	
Ref No.	Q7512				Q7517				Q7518				QR3002				QR3003			
MODE	1	2	3		E	C	B		E	C	B		E	C	B		E	C	B	
REC	5.7	13.7	5.1		0	0	0.6		0	4.3	0		0	2.8	0		0	2.8	0	
PLAY	5.7	13.5	5.1		0	0	0.6		0	4.3	0		0	2.8	0		0	2.8	0	
STOP	5.7	13.6	5.1		0	0	0.6		0	4.3	0		0	2.8	0		0	2.8	0	
Ref No.	QR4002				QR4003				QR4004				QR4005				QR4012			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	0	4.9		0	0	2.3		0	5.2	0		0	5.2	0		5.2	0	5.1	
PLAY	0	0	4.9		0	0	2.3		0	5.2	0		0	5.2	0		5.2	0	5.1	
STOP	0	0	4.9		0	2.9	2.3		0	0	2.9		0	0	0		5.2	0	5.1	
Ref No.	QR7401				QR7402				QR7403				QR7404				QR7405			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
REC	0	3.3	0		0	4.5	0		0	0	4.5		12.1	-0.1	12.0		0	12.0	0	
PLAY	0	3.3	0		0	4.5	0		0	0.1	4.5		12.1	12.1	0.1		0	0.1	4.9	
STOP	0	3.3	0		0	4.5	0		0	0.1	4.5		12.1	-4.6	12.0		0	12.0	0	
Ref No.	QR7501				QR7502				QR7503											
MODE	E	C	B		E	C	B		E	C	B									
REC	4.9	0	4.9		0	0	2.1		0	-1.0	0									
PLAY	4.9	0	4.9		0	0	2.1		0	-1.0	0									
STOP	4.9	0	4.9		0	0	2.1		0	-1.0	0									

14.3. Nicam Decoder P.C.B.

Ref No.	IC7301																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	2.5	2.5	5.0	0	0	4.9	0	0	0	0.2	0	0.1	0	1.6	1.5	0	0	2.0	0	0
PLAY	2.5	2.5	5.0	0	0	4.9	0	0	0	0.3	0	0.3	0	1.6	1.5	0	0	2.0	0	0
STOP	2.5	2.5	5.0	0	0	4.9	0	0	0	0.3	0	0.2	0	1.6	1.5	0	0	2.0	0	0
Ref No.	IC7301																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	3.3	0	2.0	2.0	2.0	4.9	0	5.0	4.5	4.2	0.3	0.2	0.2	0.2	5.0	0	4.9	2.5	2.5	2.5
PLAY	3.3	0	2.0	2.0	2.0	4.9	0	5.0	4.5	4.2	0.3	0	0.2	0.2	5.0	0	4.9	2.5	2.5	2.5
STOP	3.3	0	2.0	2.0	2.0	4.9	0	5.0	4.5	4.2	0.3	0.3	0.3	0.2	5.0	0	4.9	2.5	2.5	2.5
Ref No.	IC7301																			
MODE	41	42	43	44																
REC	2.5	4.9	2.5	0																
PLAY	2.5	4.9	2.5	0																
STOP	2.5	4.9	2.5	0																
Ref No.	IC7302																			
MODE	1	2	3																	
REC	5.0	0	4.9																	
PLAY	5.0	0	4.9																	
STOP	5.0	0	4.9																	

14.5. SD & PC Card P.C.B.

Ref No.	IC3901																				
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
REC	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	0	
PLAY	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	11.6	
STOP	5.6	5.6	0	0	1.2	0	2.2	0	0	5.6	5.6	5.0	1.8	12.1	5.6	5.6	0	1.8	3.6	0	
Ref No.	IC3901																				
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
REC	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0	5.6	5.6	0	4.9	4.9	
PLAY	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0.2	5.6	5.6	0	4.9	4.9	
STOP	4.2	4.5	1.8	5.0	2.0	2.0	0	1.8	5.0	4.9	4.9	0	5.6	5.6	0	5.6	5.6	0	4.9	4.9	
Ref No.	IC3901																				
MODE	41	42	43	44																	
REC	0	4.9	4.9	0																	
PLAY	0	4.9	4.9	0																	
STOP	0	4.9	4.9	0																	
Ref No.	Q3901				Q3905				Q3906				Q3908				Q3909				
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B		
REC	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.2		
PLAY	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.2		
STOP	2.1	5.0	2.7		0	0	0		5.0	0	5.0		5.0	-0.6	5.0		0	0	-0.3		
Ref No.	Q3910				QR3908				QR3909				QR3913								
MODE	E	C	B		E	C	B		E	C	B		E	C	B						
REC	0	0	0		0	3.6	0		0	5.0	0		0	5.0	0						
PLAY	0	0	0		0	0	3.6		0	5.0	0		0	5.0	0.2						
STOP	0	0	-0.1		0	0	3.6		0	5.0	0		0	5.0	0						

14.5. SD & PC Card P.C.B.

[illegible]

14.6. Front (R) P.C.B.

Ref No.	QR7801			QR7803			QR7804			QR7805		
MODE	E	C	B	E	C	B	E	C	B	E	C	B
REC	0	3.4	0	0	0.1	4.9	0	3.4	0	0	0.1	4.9
PLAY	0	3.4	0	0	0.1	4.9	0	3.4	0	0	0.1	4.9
STOP	0	3.4	0	0	0.1	4.9	0	3.4	0	0	0.1	4.9

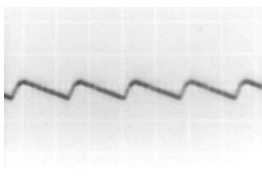
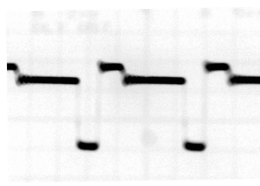
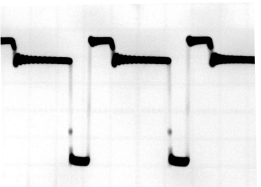
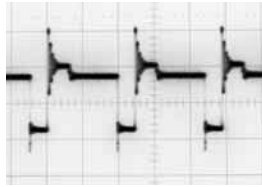
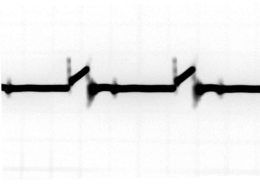
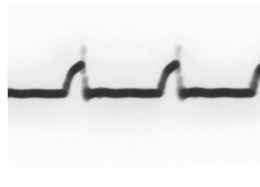
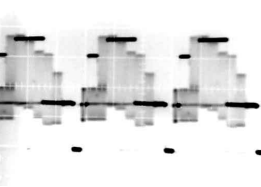
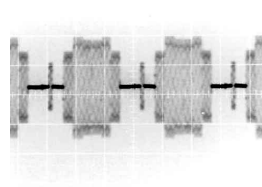
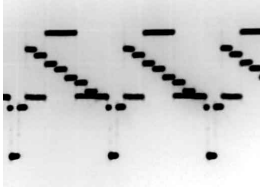
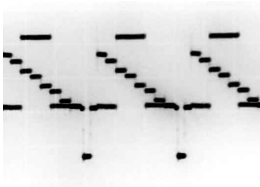
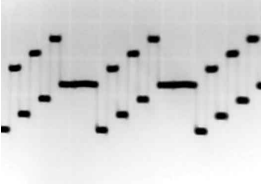
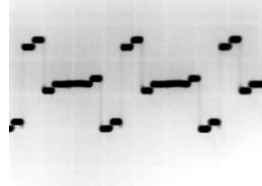
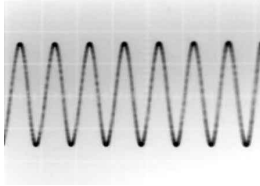
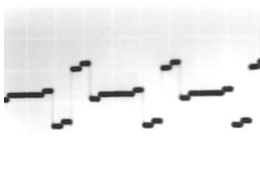
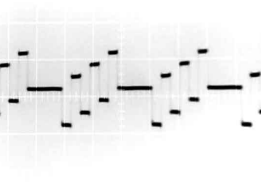
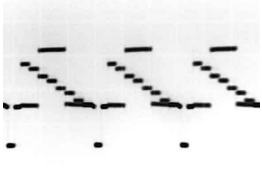
14.7. P9001 Connector

Ref No.	P9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
REC	2.1	1.3	0	0	1.3	2.1	0	0	1.3	3.3	0	0	1.3	0	3.3	0	0	1.5	5.0	0
PLAY	2.1	1.3	0	0	1.3	2.1	0	0	1.3	3.3	0	0	1.3	0	3.3	0	0	1.5	5.0	0
STOP	2.1	0.9	0	0	1.3	2.1	0	0	1.3	3.3	0	0	1.3	0	3.3	0	0	1.5	5.0	0
Ref No.	P9001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
REC	5.0	1.2	3.3	0	3.3	1.2	4.9	0	4.9	1.0	4.9	0	4.9	1.0	5.0	0	4.9	0.3	4.9	0
PLAY	5.0	1.2	3.3	0	3.3	1.2	4.9	0	4.9	1.0	4.9	0	4.9	1.0	5.0	0	4.9	0.3	4.9	0
STOP	5.0	1.2	3.3	0	3.3	1.2	4.9	0	4.9	1.0	4.9	0	4.9	1.0	5.0	0	4.9	0.3	4.9	0
Ref No.	P9001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
REC	0.1	3.2	0	0	3.3	0	6.9	2.5	0	2.5	0	0	0	0	0	0	0	2.5	0	0
PLAY	0.1	3.2	0	0	3.3	0	6.9	2.5	0	2.5	0	0	0	0	0	0	0	2.5	0	0
STOP	0.1	3.2	0	0	3.3	0	6.7	2.5	0	2.5	0	0	0	0	0	0	0	2.5	0	0
Ref No.	P9001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
REC	0	2.5	0	0	0.3	1.1	0	5.0	5.0	2.3	1.0	1.7	1.0	3.3	3.3	3.3	0	1.5	5.0	1.5
PLAY	0	2.5	0	0	0.3	1.1	0	5.0	5.0	2.3	1.0	1.7	1.0	3.3	3.3	3.3	0	1.5	5.0	1.5
STOP	0	2.5	0	0	0.3	1.1	0	5.0	5.0	2.3	1.1	1.7	1.1	3.3	3.3	3.3	0	1.5	5.0	1.5
Ref No.	P9001																			
MODE	81	82	83	84	85	86	87	88												
REC	5.7	1.2	5.0	1.5	5.7	1.2	5.7	1.2												
PLAY	5.7	1.2	5.0	1.5	5.7	1.2	5.7	1.2												
STOP	5.7	1.2	5.0	1.5	5.7	1.2	5.7	1.2												

14.8. Waveform Chart

Note:

The waveforms are measured with PAL colour bar signal.

			
T001-P1 STOP 360Vp-p (5 μ sec.div)	T001-P2 STOP 30Vp-p (5 μ sec.div)	T001-B1 STOP 40Vp-p (5 μ sec.div)	T001-S3 STOP 30Vp-p (5 μ sec.div)
			
T001-S2,S4 STOP 15Vp-p (5 μ sec.div)	IC001-1 STOP 360Vp-p (5 μ sec.div)	IC001-2 STOP 0.5Vp-p (5 μ sec.div)	IC001-5 STOP 0.7Vp-p (5 μ sec.div)
			
P7402-2 REC/PLAY 1.0Vp-p (20 μ sec.div)	P7402-18 REC/PLAY 0.8Vp-p (20 μ sec.div)	P7402-22 REC/PLAY 1.0Vp-p (20 μ sec.div)	P7402-26 REC/PLAY 1.0Vp-p (20 μ sec.div)
			
P7402-30 REC/PLAY 0.6Vp-p (20 μ sec.div)	P7402-34 REC/PLAY 0.6Vp-p (20 μ sec.div)	P7402-48,50 REC/PLAY 1.4Vp-p (1m sec.div)	PP7401-16 REC/PLAY 1.0Vp-p (20 μ sec.div)
			
PP7401-18 REC/PLAY 1.0Vp-p (20 μ sec.div)	PP7401-20 REC/PLAY 2.0Vp-p (20 μ sec.div)		

15 Abbreviations

INITIAL/LOGO	ABBREVIATIONS
A	A0~UP ACLK AD0~UP ADATA ALE AMUTE AREQ ARF ASI ASO ASYNC ADDRESS AUDIO CLOCK ADDRESS BUS AUDIO PES PACKET DATA ADDRESS LATCH ENABLE AUDIO MUTE AUDIO PES PACKET REQUEST AUDIO RF SERVO AMP INVERTED INPUT SERVO AMPOUTPUT AUDIO WORD DISTINCTION SYNC
B	BCK BCKIN BDO BLKCK BOTTOM BYP BYTCK BIT CLOCK (PCM) BIT CLOCK INPUT BLACK DROP OUT SUB CODE BLOCK CLOCK CAP. FOR BOTTOM HOLD BYPATH BYTE CLOCK
C	CAV CBDO CD CDSCK CDSRDATA CDRF CDV CHNDATA CKSL CLV COFTR CPA CPCS CPDT CPUADR CPUADT CPUIRQ CPRD CPWR CS CSYNCCIN CSYNCCOUT CONSTANT ANGULAR VELOCITY CAP. BLACK DROP OUT COMPACT DISC CD SERIAL DATA CLOCK CD SERIAL DATA CD RF (EFM) SIGNAL COMPACT DISC-VIDEO CHANNEL DATA SYSTEM CLOCKSELECT CONSTANT LINEAR VELOCITY CAP. OFF TRACK CPU ADDRESS CPU CHIP SELECT CPU DATA CPU ADDRESS LATCH CPU ADDRESS DATA BUS CPU INTERRUPT REQUEST CPU READ ENABLE CPU WRITE ENABLE CHIPSELECT COMPOSITE SYNC IN COMPOSITE SYNC OUT
D	DACCK DEEMP DEMPH DIG0~UP DIN DMSRCK DMUTE DO DOUT0~UP DRF DRPOUT DREQ DRESP DSC DSLF DVD D/A CONVERTER CLOCK DEEMPHASIS BIT ON/OFF DEEMPHASIS SWITCHING FL DIGIT OUTPUT DATA INPUT DM SERIAL DATA READ CLOCK DIGITAL MUTE CONTROL DROP OUT DATAOUTPUT DATA SLICE RF (BIAS) DROP OUT SIGNAL DATA REQUEST DATA RESPONSE DIGITAL SERVO CONTROLLER DATA SLICE LOOP FILTER DIGITAL VIDEO DISC

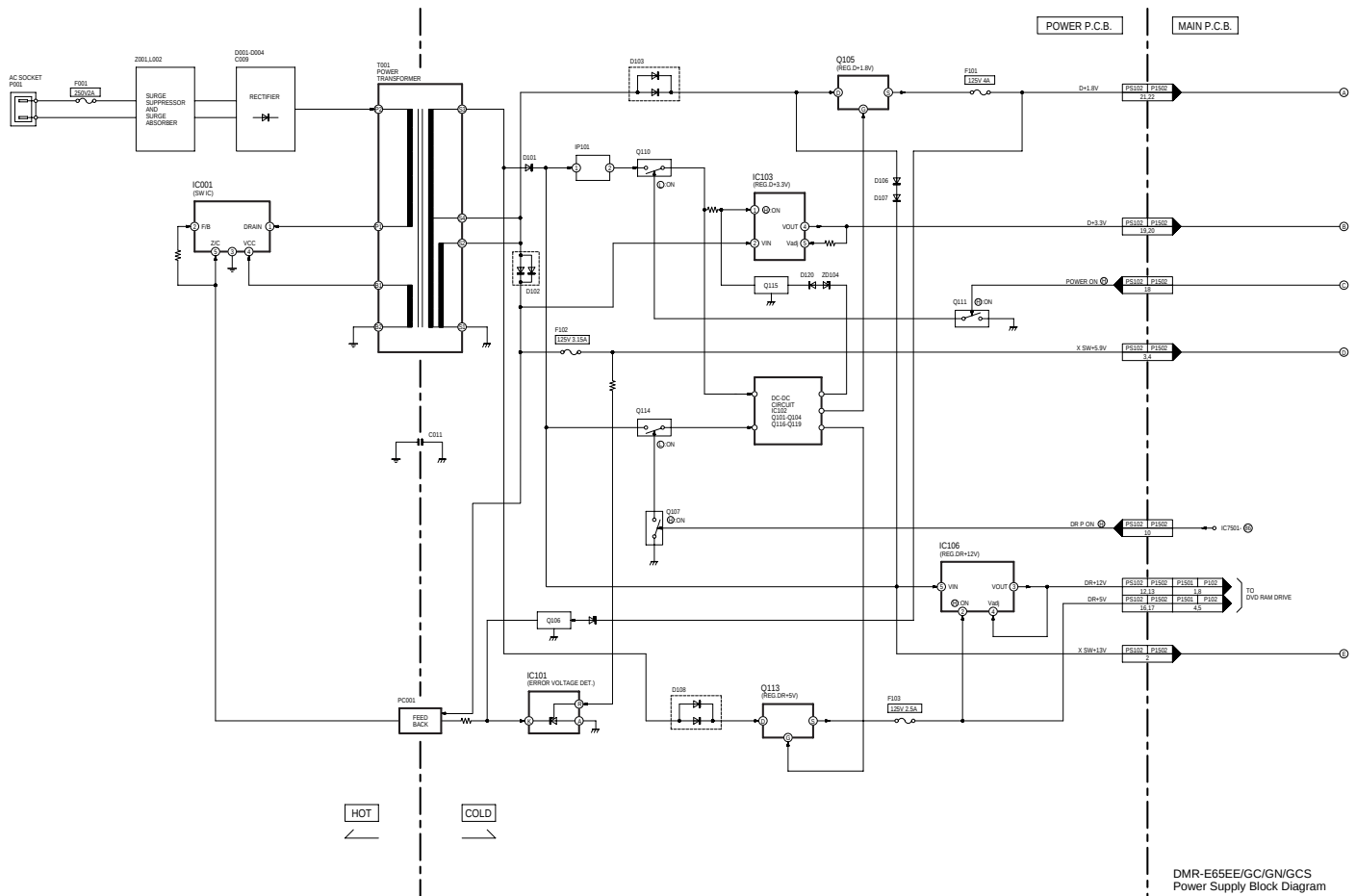
INITIAL/LOGO	ABBREVIATIONS
E	EC ECR ENCSEL ETMCLK ETSCCLK ERROR TORQUE CONTROL ERROR TORQUE CONTROL REFERENCE ENCODER SELECT EXTERNAL M CLOCK (81MHz/40.5MHz) EXTERNAL S CLOCK (54MHz)
F	FBAL FCLK FE FFI FEO FG FSC FSCK FOCUS BALANCE FRAME CLOCK FOCUS ERROR FOCUS ERROR AMP INVERTED INPUT FOCUS ERROR AMP OUTPUT FREQUENCY GENERATOR FREQUENCY SUB CARRIER FS (384 OVER SAMPLING) CLOCK
G	GND COMMON GROUNDING (EARTH)
H	HA0~UP HD0~UP HINT HRXW HOST ADDRESS HOST DATA HOST INTERRUPT HOST READ/WRITE
I	IECOUT IPFRAG IREF ISEL IEC958 FORMAT DATA OUTPUT INTERPOLATION FLAG I (CURRENT) REFERENCE INTERFACE MODE SELECT
L	LDON LPC LRCK LASER DIODE CONTROL LASER POWER CONTROL L CH/R CH DISTINCTION CLOCK
M	MA0~UP MCK MCKI MCLK MDATA MDQ0~UP MDQM MLD MPEG MEMORY ADDRESS MEMORY CLOCK MEMORY CLOCK INPUT MEMORY SERIAL COMMAND CLOCK MEMORY SERIAL COMMAND DATA MEMORY DATA INPUT/OUTPUT MEMORY DATA I/O MASK MEMORYSERIAL COMMAND LOAD MOVING PICTURE EXPERTS GROUP
O	ODC OFTR OSCI OSCO OSD OPTICAL DISC CONTROLLER OFF TRACKING OSCILLATOR INPUT OSCILLATOR OUTPUT ON SCREEN DISPLAY
P	P1~UP PCD PCK PDVD PEAK PLLCLK PLLCK PWMCTL PWMDA PWMOA, B PORT CD TRACKING PHASE DIFFERENCE PLL CLOCK DVD TRACKING PHASE DIFFERENCE CAP. FOR PEAK HOLD CHANNEL PLL CLOCK PLL LOCK PWM OUTPUT CONTROL PULSE WAVE MOTOR DRIVEA PULSE WAVE MOTOR OUT A, B

INITIAL/LOGO		ABBREVIATIONS
R	RE	READ ENABLE
	RFENV	RF ENVELOPE
	RFO	RF PHASE DIFFERENCE OUTPUT
	RS	(CD-ROM) REGISTER SELECT
	RSEL	RF POLARITY SELECT
	RST	RESET
S	RSV	RESERVE
	SBI0, 1	SERIAL DATA INPUT
	SBO0	SERIAL DATA OUTPUT
	SBT0, 1	SERIAL CLOCK
	SCK	SERIAL DATA CLOCK
	SCKR	AUDIO SERIAL CLOCK RECEIVER
S	SCL	SERIAL CLOCK
	SCLK	SERIAL CLOCK
	SDA	SERIAL DATA
	SEG0~UP	FL SEGMENT OUTPUT
	SELCLK	SELECTCLOCK
	SEN	SERIAL PORT ENABLE
	SIN1, 2	SERIAL DATA IN
	SOUT1, 2	SERIAL DATA OUT
	SPDI	SERIAL PORT DATA INPUT
	SPDO	SERIAL PORT DATA OUTPUT
	SPEN	SERIAL PORT R/W ENABLE
	SPRCLK	SERIAL PORT READ CLOCK
	SPWCLK	SERIAL PORT WRITE CLOCK
	SQCK	SUB CODE Q CLOCK
	SQCX	SUBCODE Q DATA READ CLOCK
	SRDATA	SERIAL DATA
	SRMADR	SRAM ADDRESS BUS
	SRMDT0~7	SRAM DATA BUS 0~7
	SS	START/STOP
	STAT	STATUS
	STCLK	STREAM DATA CLOCK
	STD0~UP	STREAM DATA
	STENABLE	STREAM DATA INPUT ENABLE
	STSEL	STREAM DATA POLARITY SELECT
	STVALID	STREAM DATAVALIDITY
	SUBC	SUB CODE SERIAL
	SBCK	SUB CODE CLOCK
	SUBQ	SUB CODE Q DATA
	SYSCLK	SYSTEM CLOCK
T	TE	TRACKING ERROR
	TIBAL	BALANCE CONTROL
	TID	BALANCE OUTPUT 1
	TIN	BALANCE INPUT
	TIP	BALANCE INPUT
	TIS	BALANCE OUTPUT 2
	TPSN	OP AMP INPUT
	TPSO	OP AMP OUTPUT
	TPSP	OP AMP INVERTED INPUT
	TRCRS	TRACK CROSSIGNAL
	TRON	TRACKING ON
	TRSON	TRAVERSE SERVO ON

INITIAL/LOGO		ABBREVIATIONS
V	VBLANK	V BLANKING
	VCC	COLLECTOR POWER SUPPLY VOLTAGE
	VCDCONT	VIDEO CD CONTROL (TRACKING BALANCE)
	VDD	DRAIN POWER SUPPLY VOLTAGE
	VFB	VIDEO FEED BACK
	VREF	VOLTAGE REFERENCE
W	VSS	SOURCE POWER SUPPLYVOLTAGE
	WAIT	BUS CYCLE WAIT
	WDCK	WORD CLOCK
	WEH	WRITE ENABLE HIGH
X	WSR	WORD SELECT RECEIVER
	X	X' TAL
	XALE	X ADDRESS LATCH ENABLE
	XAREQ	X AUDIO DATA REQUEST
	XCDROM	X CD ROM CHIP SELECT
	XCS	X CHIP SELECT
	XCSYNC	X COMPOSITE SYNC
	XDS	X DATA STROBE
	XHSYNCO	X HORIZONTAL SYNC OUTPUT
	XHINT	XH INTERRUPTREQUEST
	XI	X' TAL OSCILLATOR INPUT
	XINT	X INTERRUPT
	XMW	X MEMORY WRITE ENABLE
	XO	X' TAL OSCILLATOR OUTPUT
	XRE	X READ ENABLE
	XSRMCE	X SRAM CHIP ENABLE
	XSRMOE	X SRAM OUTPUT ENABLE
	XSRMWE	X SRAM WRITE ENABLE
	XVCS	X V-DEC CHIPSELECT
	XVDS	X V-DEC CONTROL BUS STROBE
	XVSYNCO	X VERTICAL SYNC OUTPUT

16 Block Diagram

16.1. Power Supply Block Diagram

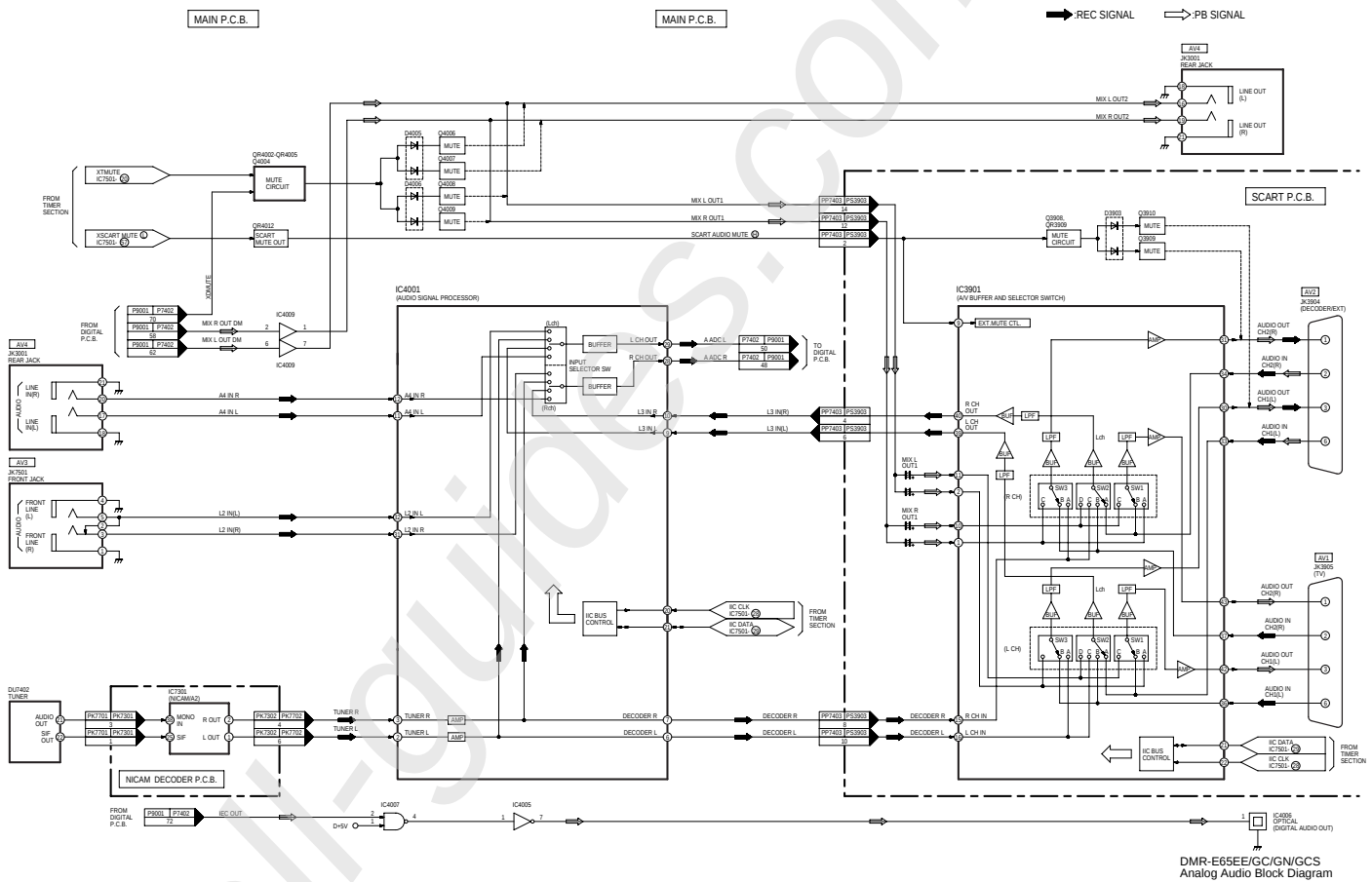




DMR-E65EE/GC/GN/GCS Power Supply Block Diagram

DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

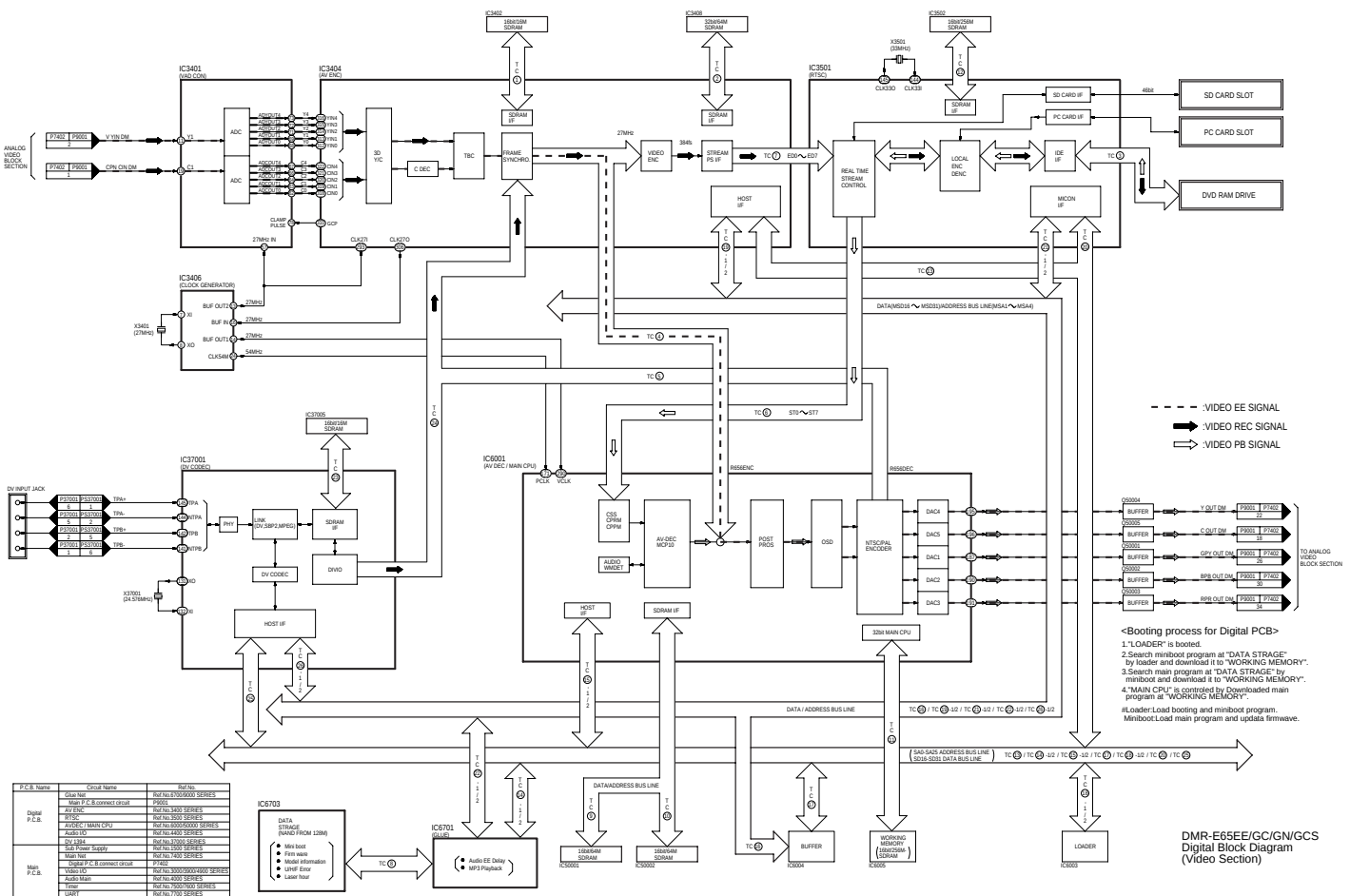
16.3. Analog Audio Block Diagram



[illegible]

DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

16.5. Digital Block Diagram (Video Section)



DMR-E66EE / DMR-E66GC / DMR-E66GS / DMR-E66GN

16.7. Digital Block IC Pin Terminal Chart

IC Pin Terminal Chart (TC 1 - TC 8)

TC	IC3404 / AV ENC	SIGNAL NAME	IC3402 / SDRAM
Port Name	Pin No	Port Name	Pin No
ARD00	334	MADQ80	2
ARD01	335	MADQ81	3
ARD02	336	MADQ82	4
ARD03	2	MADQ83	5
ARD04	4	MADQ84	6
ARD05	5	MADQ85	7
ARD06	7	MADQ86	8
ARD07	9	MADQ87	10
ARD08	16	MADQ88	11
ARD09	17	MADQ89	12
ARDQ10	19	MADQ90	13
ARDQ11	20	MADQ91	14
ARDQ12	22	MADQ92	15
ARDQ13	23	MADQ93	16
ARDQ14	25	MADQ94	17
ARDQ15	26	MADQ95	18
ARA0	28	MAB0	21
ARA1	29	MAB1	22
ARA2	31	MAB2	23
ARA3	32	MAB3	24
ARA4	34	MAB4	27
ARA5	35	MAB5	28
ARA6	37	MAB6	29
ARA7	38	MAB7	30
ARA8	41	MAB8	31
ARA9	42	MAB9	32
ARA10	44	MAB10	20
ARA11	45	BAOS D	19

TC	IC3404 / AV ENC	SIGNAL NAME	IC3408 / SDRAM
Port Name	Pin No	Port Name	Pin No
MDQ0	88	MDQA0	2
MDQ1	89	MDQA1	4
MDQ2	91	MDQA2	5
MDQ3	92	MDQA3	7
MDQ4	93	MDQA4	8
MDQ5	95	MDQA5	10
MDQ6	96	MDQA6	11
MDQ7	97	MDQA7	13
MDQ8	99	MDQA8	14
MDQ9	100	MDQA9	16
MDQ10	101	MDQA10	17
MDQ11	103	MDQA11	19
MDQ12	104	MDQA12	20
MDQ13	105	MDQA13	82
MDQ14	108	MDQA14	83
MDQ15	109	MDQA15	85
MDQ16	115	MDQA16	86
MDQ17	116	MDQA17	33
MDQ18	118	MDQA18	34
MDQ19	119	MDQA19	36
MDQ20	120	MDQA20	37
MDQ21	122	MDQA21	39
MDQ22	123	MDQA22	40
MDQ23	124	MDQA23	42
MDQ24	127	MDQA24	45
MDQ25	128	MDQA25	47
MDQ26	129	MDQA26	48
MDQ27	131	MDQA27	50
MDQ28	132	MDQA28	51
MDQ29	133	MDQA29	53
MDQ30	135	MDQA30	54
MDQ31	136	MDQA31	56
MA0	147	MAA0	25
MA1	148	MAA1	26
MA2	149	MAA2	27
MA3	152	MAA3	30
MA4	153	MAA4	31
MA5	154	MAA5	32
MA6	156	MAA6	33
MA7	157	MAA7	34
MA8	158	MAA8	35
MA9	160	MAA9	36
MA10	161	MAA10	24

TC	IC3501 / RTSC	SIGNAL NAME	IC3501 / RTSC
Port Name	Pin No	Port Name	Pin No
IHD00	251	RAMD0	24
IHD01	250	RAMD1	26
IHD02	249	RAMD2	28
IHD03	248	RAMD3	30
IHD04	246	RAMD4	32
IHD05	245	RAMD5	34
IHD06	244	RAMD6	36
IHD07	243	RAMD7	38
IHD08	238	RAMD8	37
IHD09	238	RAMD9	35
IHD10	237	RAMD10	33
IHD11	236	RAMD11	31
IHD12	235	RAMD12	29
IHD13	233	RAMD13	27
IHD14	232	RAMD14	25
IHD15	231	RAMD15	23

TC	IC3404 / AV ENC	SIGNAL NAME	IC6001 / AV DEC&MAIN CPU
Port Name	Pin No	Port Name	Pin No
R656OUT0	298	R656ENC0	278
R656OUT1	297	R656ENC1	277
R656OUT2	298	R656ENC2	272
R656OUT3	299	R656ENC3	271
R656OUT4	301	R656ENC4	270
R656OUT5	302	R656ENC5	269
R656OUT6	303	R656ENC6	268
R656OUT7	304	R656ENC7	266

TC	IC6001AV DEC&MAIN CPU	SIGNAL NAME	IC3404 / AV ENC
Port Name	Pin No	Port Name	Pin No
VDOU10	289	R656DD0	283
VDOU11	288	R656DD1	284
VDOU12	286	R656DD2	285
VDOU13	285	R656DD3	286
VDOU14	284	R656DD4	288
VDOU15	283	R656DD5	289
VDOU16	282	R656DD6	290
VDOU17	281	R656DD7	291

TC	IC3501 / RTSC	SIGNAL NAME	IC6001AV DEC&MAIN CPU
Port Name	Pin No	Port Name	Pin No
B3DATA0	46	STD0	251
B3DATA1	47	STD1	250
B3DATA2	48	STD2	249
B3DATA3	49	STD3	248
B3DATA4	53	STD4	247
B3DATA5	54	STD5	245
B3DATA6	55	STD6	244
B3DATA7	56	STD7	243

TC	IC3404 / AV ENC	SIGNAL NAME	IC3501 / RTSC
Port Name	Pin No	Port Name	Pin No
CD0	226	ED0	27
CD1	230	ED1	28
CD2	231	ED2	30
CD3	233	ED3	31
CD4	234	ED4	33
CD5	235	ED5	34
CD6	236	ED6	36
CD7	238	ED7	37

TC	IC6701 / GLUE	SIGNAL NAME	IC6703 / DATA STRAGE
Port Name	Pin No	Port Name	Pin No
ECCD0	67	DE0	29
ECCD1	70	DE1	30
ECCD2	69	DE2	31
ECCD3	68	DE3	32
ECCD4	71	DE4	41
ECCD5	74	DE5	42
ECCD6	73	DE6	43
ECCD7	72	DE7	44

IC Pin Terminal Chart (TC9 - TC12)

TC	IC6001 / AV DEC&MAIN CPU	SIGNAL NAME	IC50001 / SDRAM
Port Name	Pin No	Port Name	Pin No
MDQM1	343	DQ0	2
MDQM2	346	DQ1	4
MDQM3	348	DQ2	5
MDQM4	350	DQ3	7
MDQM5	353	DQ4	8
MDQM6	355	DQ5	10
MDQM7	358	DQ6	11
MDQM8	359	DQ7	13
MDQM9	358	DQ8	14
MDQM10	354	DQ9	44
MDQM11	352	DQ10	45
MDQM12	349	DQ11	47
MDQM13	347	DQ12	48
MDQM14	344	DQ13	50
MDQM15	342	DQ14	51
MA0	317	A0	23
MA1	320	A1	24
MA2	322	A2	25
MA3	328	A3	26
MA4	330	A4	29
MA5	332	A5	30
MA6	331	A6	31
MA7	329	A7	32
MA8	323	A8	33
MA9	321	A9	34
MA10	318	A10	22
MA11	316	A11	35

TC	IC6001 / AV DEC&MAIN CPU	SIGNAL NAME	IC50002 / SDRAM
Port Name	Pin No	Port Name	Pin No
MDQM16	292	DQ16	4
MDQM17	295	DQ17	6
MDQM18	297	DQ18	9
MDQM19	299	DQ19	7
MDQM20	302	DQ20	8
MDQM21	304	DQ21	10
MDQM22	308	DQ22	11
MDQM23	310	DQ23	13
MDQM24	309	DQ24	12
MDQM25	305	DQ25	44
MDQM26	303	DQ26	45
MDQM27	301	DQ27	47
MDQM28	298	DQ28	48
MDQM29	296	DQ29	50
MDQM30	293	DQ30	51
MDQM31	291	DQ31	53
MA0	317	A0	23
MA1	320	A1	24
MA2	322	A2	25
MA3	328	A3	26
MA4	330	A4	29
MA5	332	A5	30
MA6	331	A6	31
MA7	329	A7	32
MA8	323	A8	33
MA9	321	A9	34
MA10	318	A10	22
MA11	316	A11	35

TC	IC6001 / AV DEC&MAIN CPU	SIGNAL NAME	IC6005 / W-MEMORY
Port Name	Pin No	Port Name	Pin No
MD1	118	MD0	2
MD2	121	MD1	4
MD3	123	MD2	5
MD4	125	MD3	7
MD5	128	MD4	8
MD6	130	MD5	10
MD7	133	MD6	11
MD8	135	MD7	13
MD9	134	MD8	42
MD10	131	MD9	44
MD11	129	MD10	45
MD12	127	MD11	47
MD13	124	MD12	48
MD14	122	MD13	50
MD15	119	MD14	51
MD16	117	MD15	53
MA0	160	MA0	23
MA1	163	MA1	24
MA2	165	MA2	25
MA3	167	MA3	26
MA4	168	MA4	29
MA5	164	MA5	30
MA6	161	MA6	31
MA7	159	MA7	32
MA8	156	MA8	33
MA9	153	MA9	34
MA10	157	MA10	22
MA11	151	MA11	35
MA12	147	MA12	36
MA13	154	MA13	21
MA14	152	MA14	20

IC	IC3501 / RTSC		SIGNAL NAME	IC3502 / SDRAM	
	Port Name	Pin No		Port Name	Pin No
10	MDQ0	281	TR MADQ80	2	DQ0
	MDQ1	280	TR MADQ81	4	DQ1
	MDQ2	278	TR MADQ82	5	DQ2
	MDQ3	277	TR MADQ83	7	DQ3
	MDQ4	276	TR MADQ84	8	DQ4
	MDQ5	274	TR MADQ85	10	DQ5
	MDQ6	273	TR MADQ86	11	DQ6
	MDQ7	272	TR MADQ87	13	DQ7
	MDQ8	270	TR MADQ88	14	DQ8
	MDQ9	269	TR MADQ89	16	DQ9
	MDQ10	268	TR MADQ90	17	DQ10
	MDQ11	266	TR MADQ91	19	DQ11
	MDQ12	265	TR MADQ92	20	DQ12
	MDQ13	264	TR MADQ93	22	DQ13
	MDQ14	263	TR MADQ94	24	DQ14
12	MDQ15	262	TR MADQ95	26	DQ15
	MADR0	10	TR MAB0	23	A0
	MADR1	8	TR MAB1	24	A1
	MADR2	6	TR MAB2	25	A2
	MADR3	6	TR MAB3	26	A3
	MADR4	5	TR MAB4	29	A4
	MADR5	4	TR MAB5	30	A5
	MADR6	3	TR MAB6	31	A6
	MADR7	2	TR MAB7	32	A7
	MADR8	34B	TR MAB8	33	A8
	MADR9	300	TR MAB9	34	A9
	MADR10	299	TR MAB10	22	A10
	MADR11	297	TR MAB11	35	A11
	MADR12	296	TR MAB12	36	A12

IC Pin Terminal Chart (TC 23,TC24)

IC37001 / DV CODEC		SIGNAL NAME		IC37005 / SDRAM	
Port Name	Pin No	Port Name	Pin No	Port Name	Pin No
M0D10	116	M0D10	2	DQ0	
M0D11	115	M0D11	3	DQ1	
M0D12	114	M0D12	4	DQ2	
M0D13	112	M0D13	5	DQ3	
M0D14	111	M0D14	6	DQ4	
M0D15	110	M0D15	7	DQ5	
M0D16	108	M0D16	11	DQ6	
M0D17	107	M0D17	12	DQ7	
M0D18	106	M0D18	39	DQ8	
M0D19	104	M0D19	40	DQ9	
M0D110	102	M0D110	42	DQ10	
M0D111	101	M0D111	43	DQ11	
M0D112	100	M0D112	45	DQ12	
M0D113	98	M0D113	46	DQ13	
M0D114	97	M0D114	48	DQ14	
M0D115	96	M0D115	49	DQ15	
M0A00	91	M0A00	21	A0	
M0A01	90	M0A01	22	A1	
M0A02	89	M0A02	23	A2	
M0A03	88	M0A03	24	A3	
M0A04	86	M0A04	27	A4	
M0A05	85	M0A05	28	A5	
M0A06	84	M0A06	29	A6	
M0A07	83	M0A07	30	A7	
M0A08	81	M0A08	31	A8	
M0A09	80	M0A09	32	A9	
M0AP	93	M0AP	20	A10	
M0BA	94	M0BA	19	BA	

IC37001 / DV CODEC		SIGNAL NAME		IC3404 / AVENC	
Port Name	Pin No	Port Name	Pin No	Port Name	Pin No
REC656OUT0	33	R656DD0	283	R656IN0	
REC656OUT1	32	R656DD1	284	R656IN1	
REC656OUT2	31	R656DD2	285	R656IN2	
REC656OUT3	30	R656DD3	286	R656IN3	
REC656OUT4	28	R656DD4	288	R656IN4	
REC656OUT5	27	R656DD5	289	R656IN5	
REC656OUT6	26	R656DD6	290	R656IN6	
REC656OUT7	25	R656DD7	291	R656IN7	

MSD16 - MSD31 DATA BUS LINE (TC19-1, TC21-1,TC22-1,TC26-1)

TC		19-1		21-1		22-1		26-1	
SIGNAL NAME		IC3404 / AVENC&RTSC		IC3501 / RTSC		IC6701 / GLUE		IC37001 / DV CODEC	
Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
MSD16	203	HD0	118	HDAT0	12	LDEV0	201	ADDT0	
MSD17	204	HD1	117	HDAT1	13	LDEV1	200	ADDT1	
MSD18	206	HD2	115	HDAT2	11	LDEV2	199	ADDT2	
MSD19	207	HD3	114	HDAT3	10	LDEV3	198	ADDT3	
MSD20	209	HD4	113	HDAT4	7	LDEV4	196	ADDT4	
MSD21	210	HD5	111	HDAT5	8	LDEV5	195	ADDT5	
MSD22	212	HD6	110	HDAT6	9	LDEV6	194	ADDT6	
MSD23	213	HD7	109	HDAT7	14	LDEV7	193	ADDT7	
MSD24	215	HD8	107	HDAT8	2	LDEV8	191	ADDT8	
MSD25	216	HD9	106	HDAT9	4	LDEV9	190	ADDT9	
MSD26	217	HD10	104	HDAT10	3	LDEV10	189	ADDT10	
MSD27	218	HD11	102	HDAT11	208	LDEV11	188	ADDT11	
MSD28	220	HD12	101	HDAT12	207	LDEV12	186	ADDT12	
MSD29	221	HD13	100	HDAT13	6	LDEV13	185	ADDT13	
MSD30	223	HD14	98	HDAT14	205	LDEV14	184	ADDT14	
MSD31	224	HD15	97	HDAT15	203	LDEV15	183	ADDT15	

MSA1 - MSA4 ADDRESS BUS LINE (TC16, TC19-2, TC21-2, TC22-2, TC26-2)

TC		16		19-2		21-2		22-2		26-2	
SIGNAL NAME		IC6004 / BUFFER		IC3404 / AVENC		IC3501 / RTSC		IC6701 / GLUE		IC37001 / DV CODEC	
Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
MSA1	18	1Y1	181	HA0	68	HADR1	167	ADRL1	19	AD1	
MSA2	16	1Y2	182	HA1	69	HADR2	164	ADRL2	18	AD2	
MSA3	14	1Y3	183	HA2	70	HADR3	165	ADRL3	17	AD3	
MSA4	12	1Y4	184	HA3	71	HADR4	166	ADRL4	15	AD4	

DMR-E66EE / DMR-E66GC / DMR-E66GS / DMR-E66GN

SA0 - SA25 ADDRESS BUS LINE (TC13, TC14-1, TC15-1, TC17, TC18-1, TC20, TC25)

TC	13		14-1		15-1		17		18-1		20		25	
SIGNAL NAME	IC3404 / AVENC		IC6701 / GLUE		IC6001 / AVDEC&MAIN CPU		IC6004 / BUFFER		IC6003 / LOADER		IC3501 / RTSC		IC37001 / DV CODEC	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
SA0	-	-	-	-	28	SA0	-	-	-	-	-	-	-	-
SA1	-	-	-	-	27	SA1	2	1A1	25	A0	-	-	-	-
SA2	-	-	-	-	26	SA2	4	1A2	24	A1	-	-	-	-
SA3	-	-	-	-	25	SA3	6	1A3	23	A2	-	-	-	-
SA4	-	-	-	-	24	SA4	8	1A4	22	A3	-	-	-	-
SA5	186	HA4	163	ADRL5	22	SA5	-	-	21	A4	75	HADR5	14	AD5
SA6	187	HA5	170	ADRL6	20	SA6	-	-	20	A5	76	HADR6	13	AD6
SA7	188	HA6	168	ADRL7	19	SA7	-	-	19	A6	77	HADR7	12	AD7
SA8	189	HA7	-	-	18	SA8	-	-	18	A7	78	HADR8	10	AD8
SA9	191	HA8	-	-	17	SA9	-	-	8	A8	79	HADR9	9	AD9
SA10	192	HA9	-	-	16	SA10	-	-	7	A9	80	HADR10	8	AD10
SA11	194	HA10	-	-	15	SA11	-	-	6	A10	81	HADR11	7	AD11
SA12	195	HA11	-	-	14	SA12	-	-	5	A11	82	HADR12	-	-
SA13	-	-	-	-	12	SA13	-	-	4	A12	85	HADR13	-	-
SA14	-	-	-	-	11	SA14	-	-	3	A13	86	HADR14	-	-
SA15	-	-	-	-	10	SA15	-	-	2	A14	87	HADR15	-	-
SA16	-	-	-	-	9	SA16	-	-	1	A15	89	HADR16	-	-
SA17	-	-	-	-	8	SA17	-	-	48	A16	90	HADR17	-	-
SA18	-	-	-	-	7	SA18	-	-	17	A17	92	HADR18	-	-
SA19	-	-	-	-	6	SA19	-	-	16	A18	93	HADR19	-	-
SA20	-	-	-	-	3	SA20	-	-	-	-	94	HADR20	-	-
SA21	-	-	-	-	2	SA21	-	-	-	-	95	HADR21	-	-
SA22	-	-	174	ADR22	1	SA22	-	-	-	-	-	-	-	-
SA23	-	-	171	ADR0	363	SA23	-	-	-	-	-	-	-	-
SA24	-	-	172	ADR1	362	SA24	-	-	-	-	-	-	-	-
SA25	-	-	173	ADR2	361	SA25	-	-	-	-	-	-	-	-

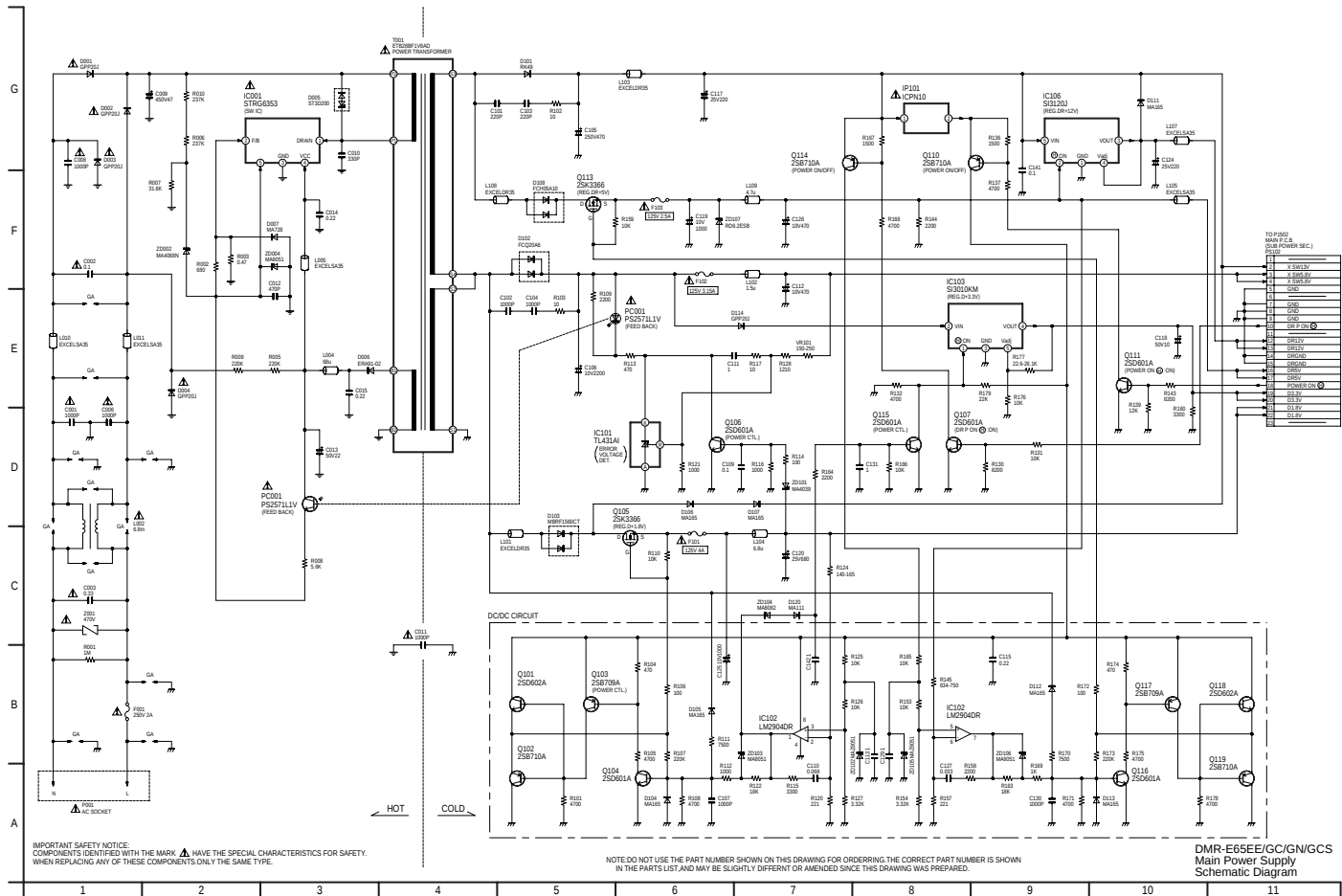
SD16 - SD31 DATA BUS LINE (TC14-2, TC15-2, TC18-2)

TC	14-2		15-2		18-2	
SIGNAL NAME	IC6701 / GLUE		IC6001 / AVDEC&MAIN CPU		IC6003 / LOADER	
	Pin No	Port Name	Pin No	Port Name	Pin No	Port Name
SD16	201	LDT10	67	SD16	29	I/O0
SD17	200	LDT11	66	SD17	31	I/O1
SD18	199	LDT12	65	SD18	33	I/O2
SD19	202	LDT13	64	SD19	35	I/O3
SD20	197	LDT14	63	SD20	38	I/O4
SD21	196	LDT15	62	SD21	40	I/O5
SD22	198	LDT16	61	SD22	42	I/O6
SD23	195	LDT17	59	SD23	44	I/O7
SD24	194	LDT18	58	SD24	30	I/O8
SD25	192	LDT19	57	SD25	32	I/O9
SD26	191	LDT110	56	SD26	34	I/O10
SD27	189	LDT111	55	SD27	36	I/O11
SD28	190	LDT112	54	SD28	39	I/O12
SD29	188	LDT113	53	SD29	41	I/O13
SD30	187	LDT114	51	SD30	43	I/O14
SD31	185	LDT115	50	SD31	45	I/O15

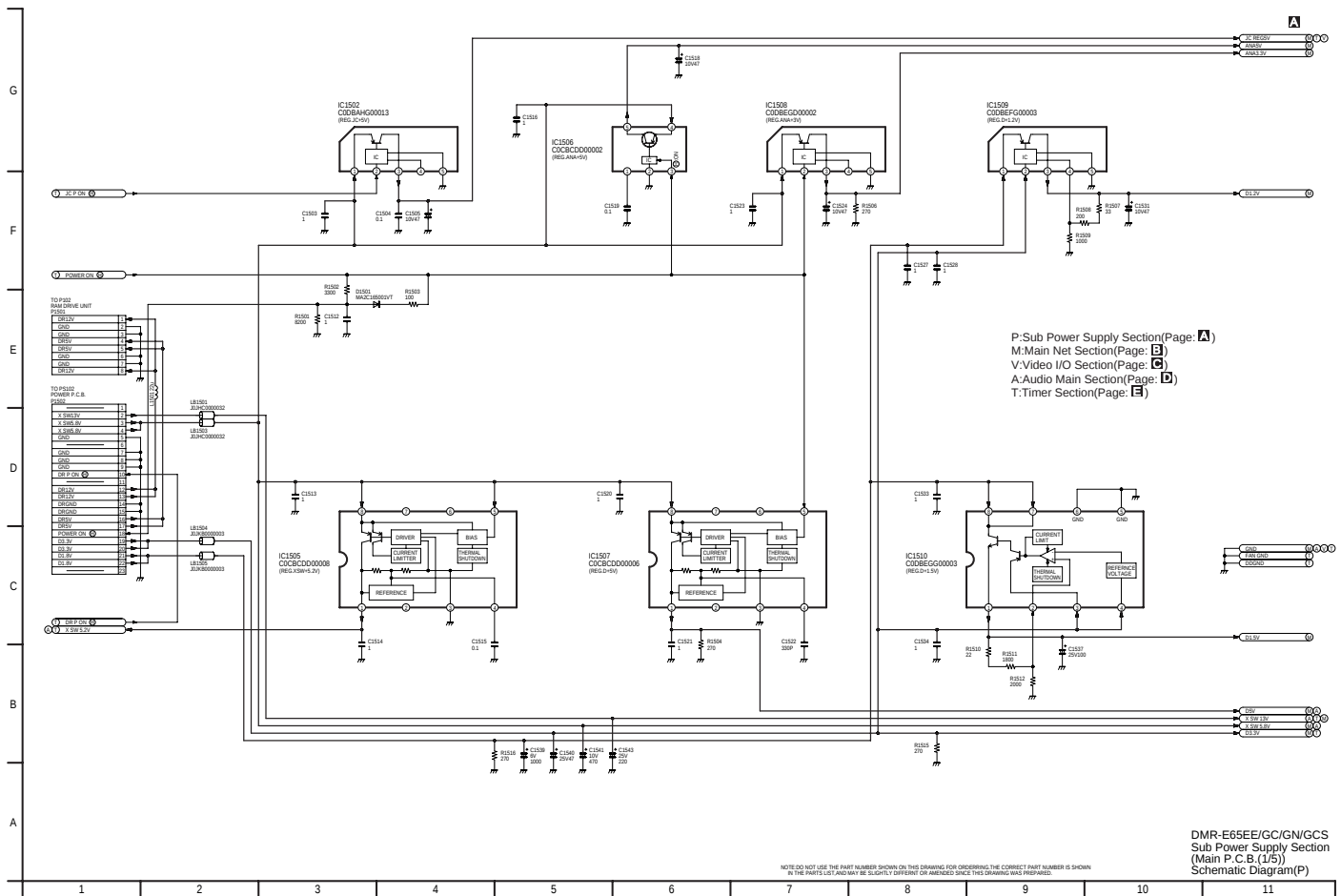
17.1. Interconnection Schematic Diagram

DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

17.2. Main Power Supply Schematic Diagram



17.3. Sub Power Supply Section (Main P.C.B. (1/5)) Schematic Diagram (P)

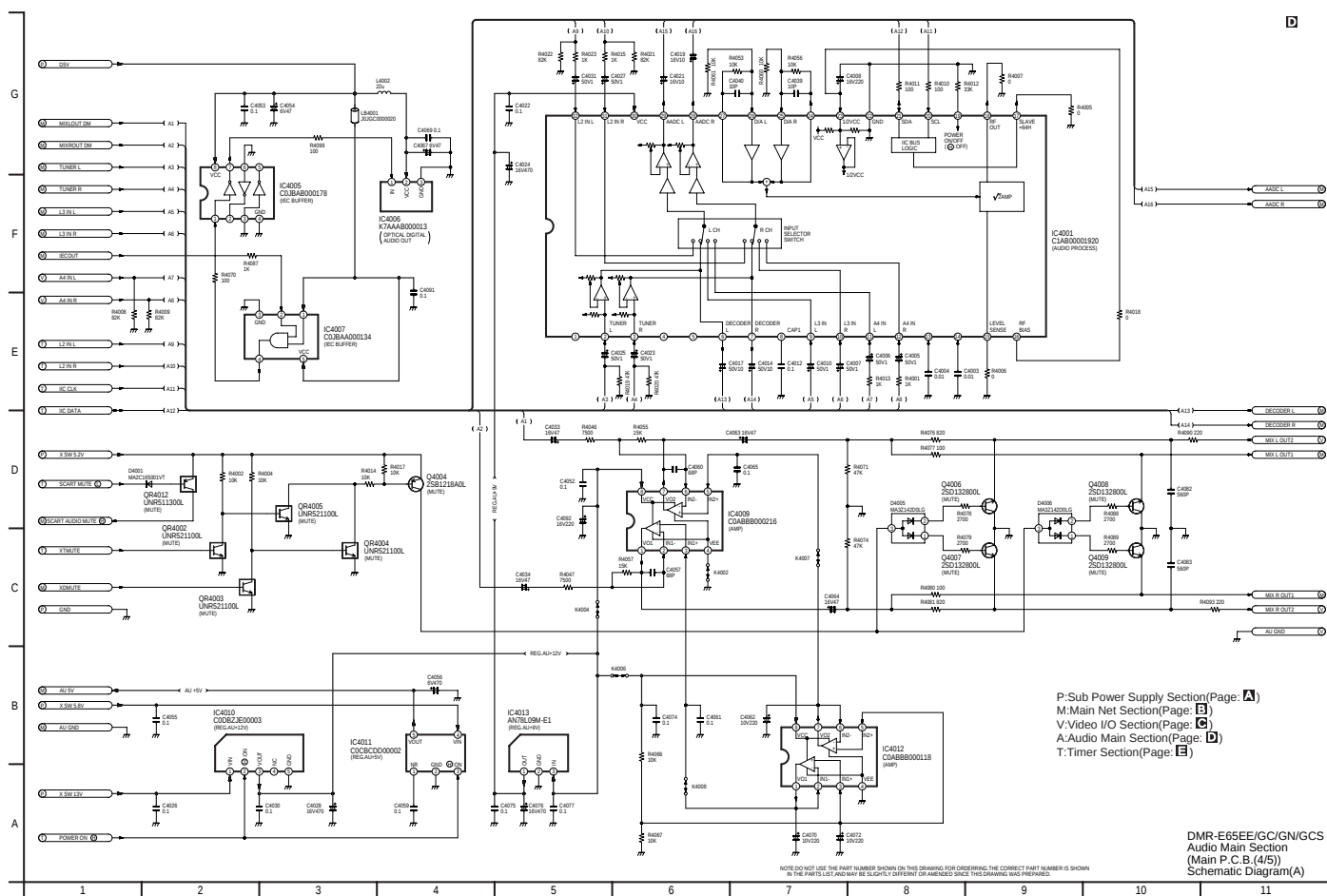


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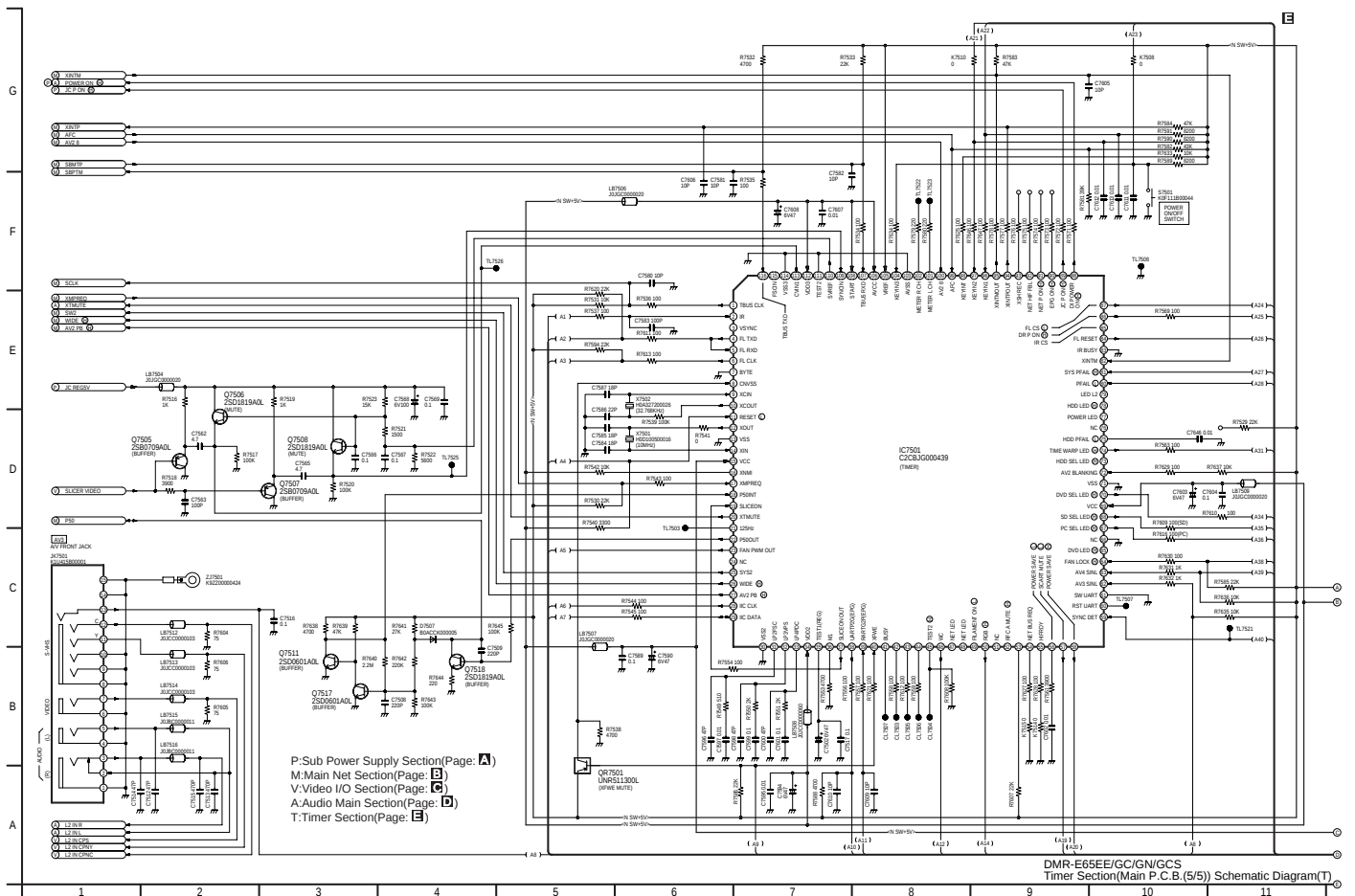


DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

17.6. Audio Main Section (Main P.C.B. (4/5)) Schematic Diagram (A)

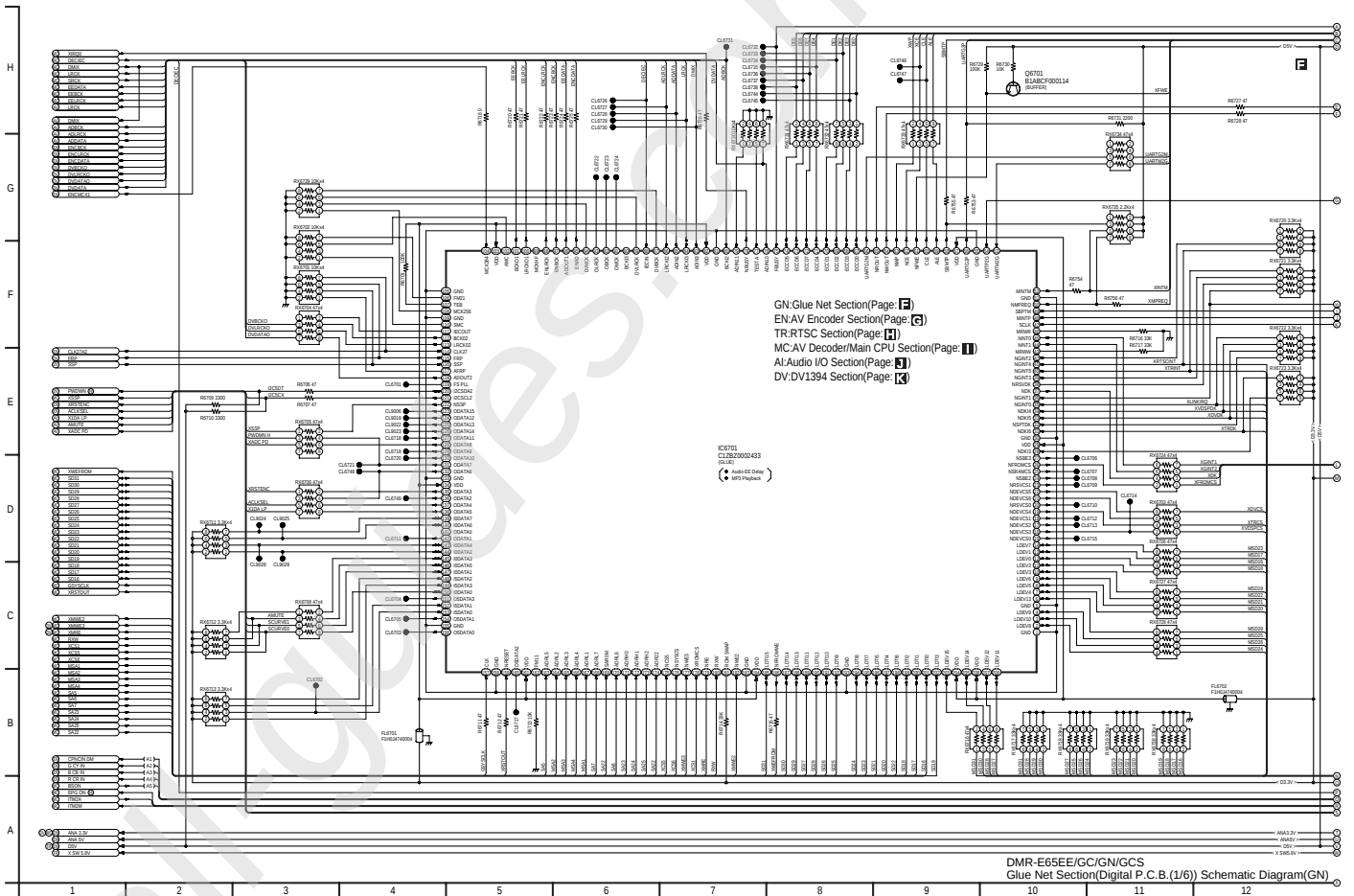


17.7. Timer Section (Main P.C.B. (5/5)) Schematic Diagram (T)

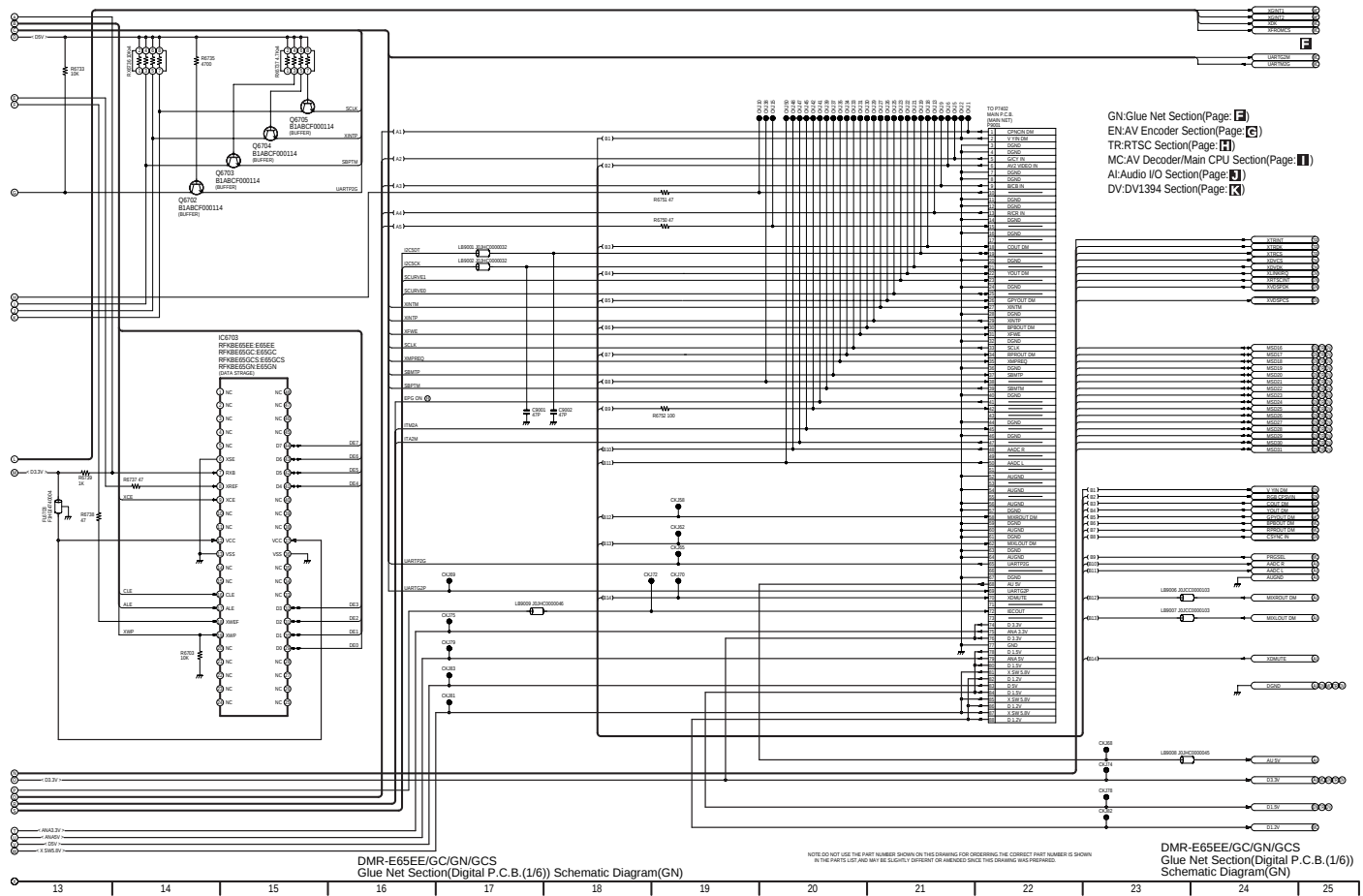




17.8. Glue Net Section (Digital P.C.B. (1/6)) Schematic Diagram (GN)

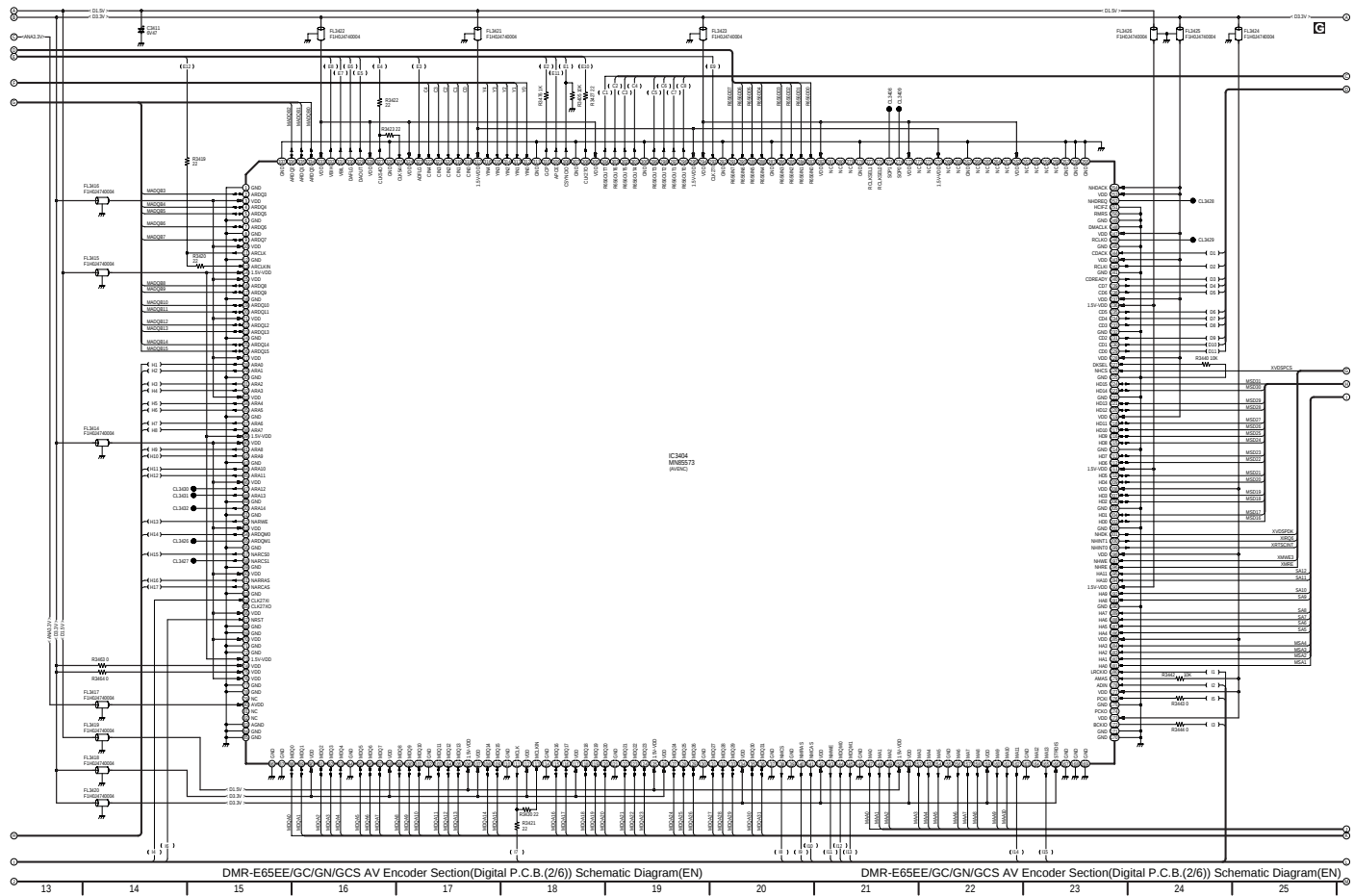


DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

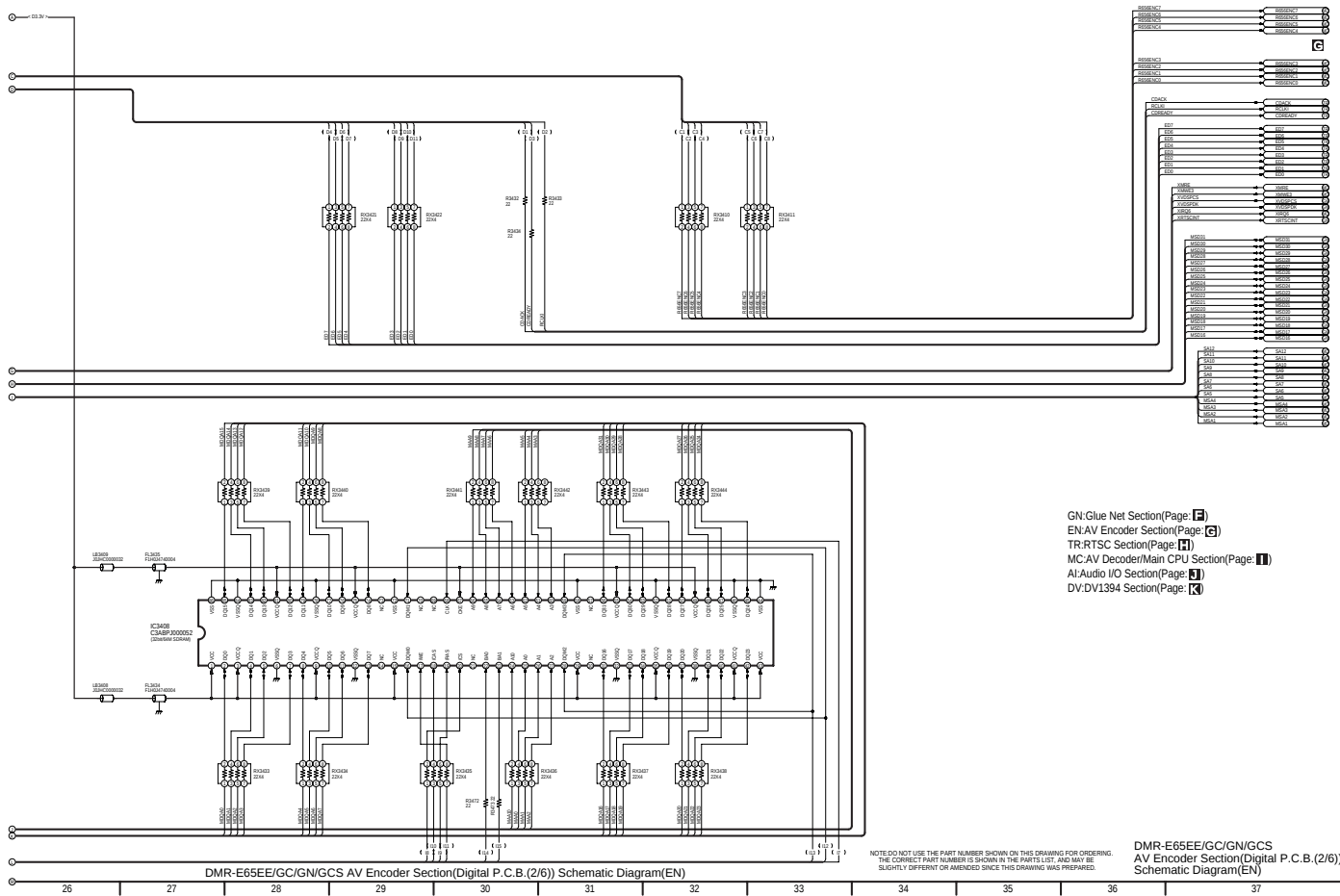


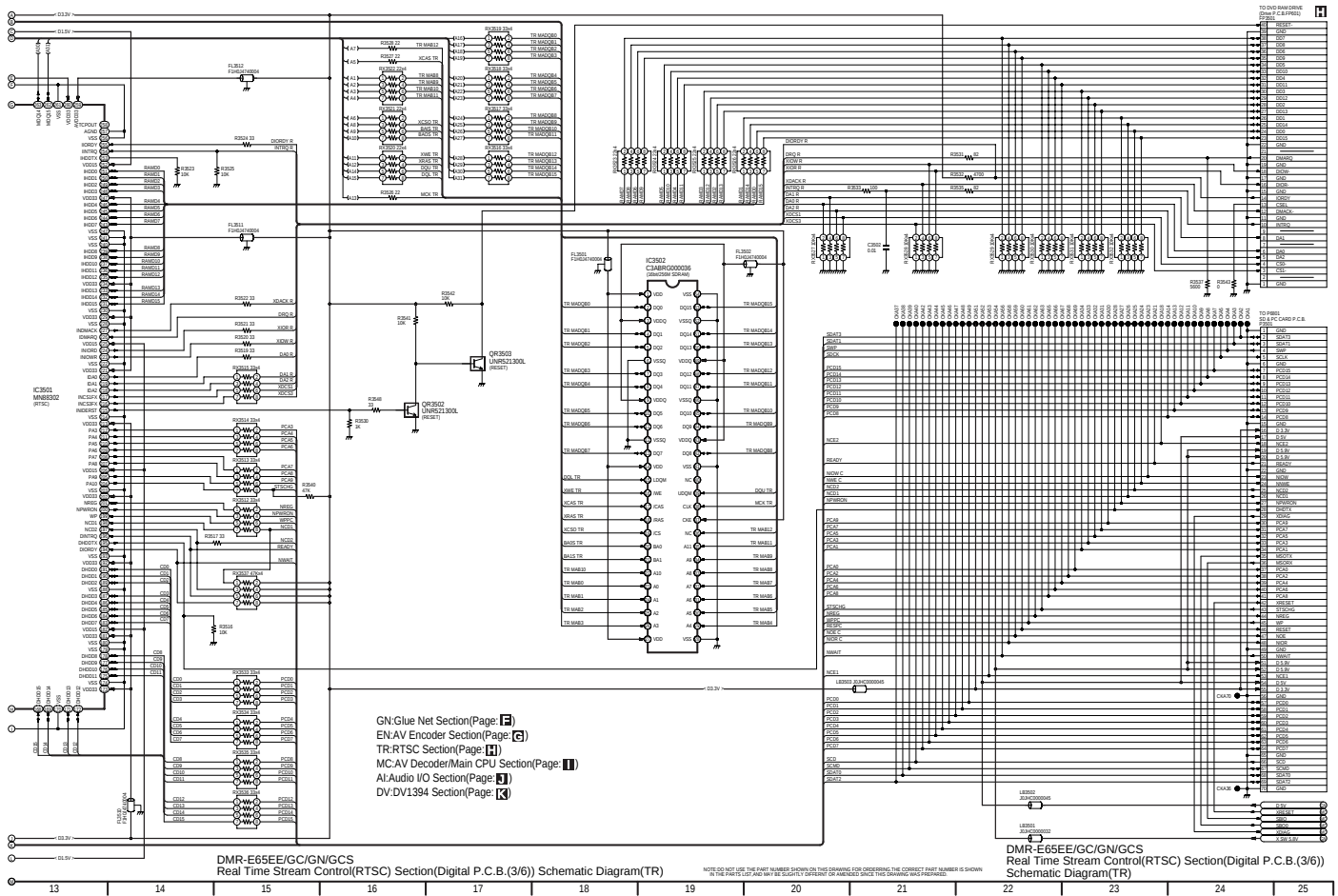
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DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN



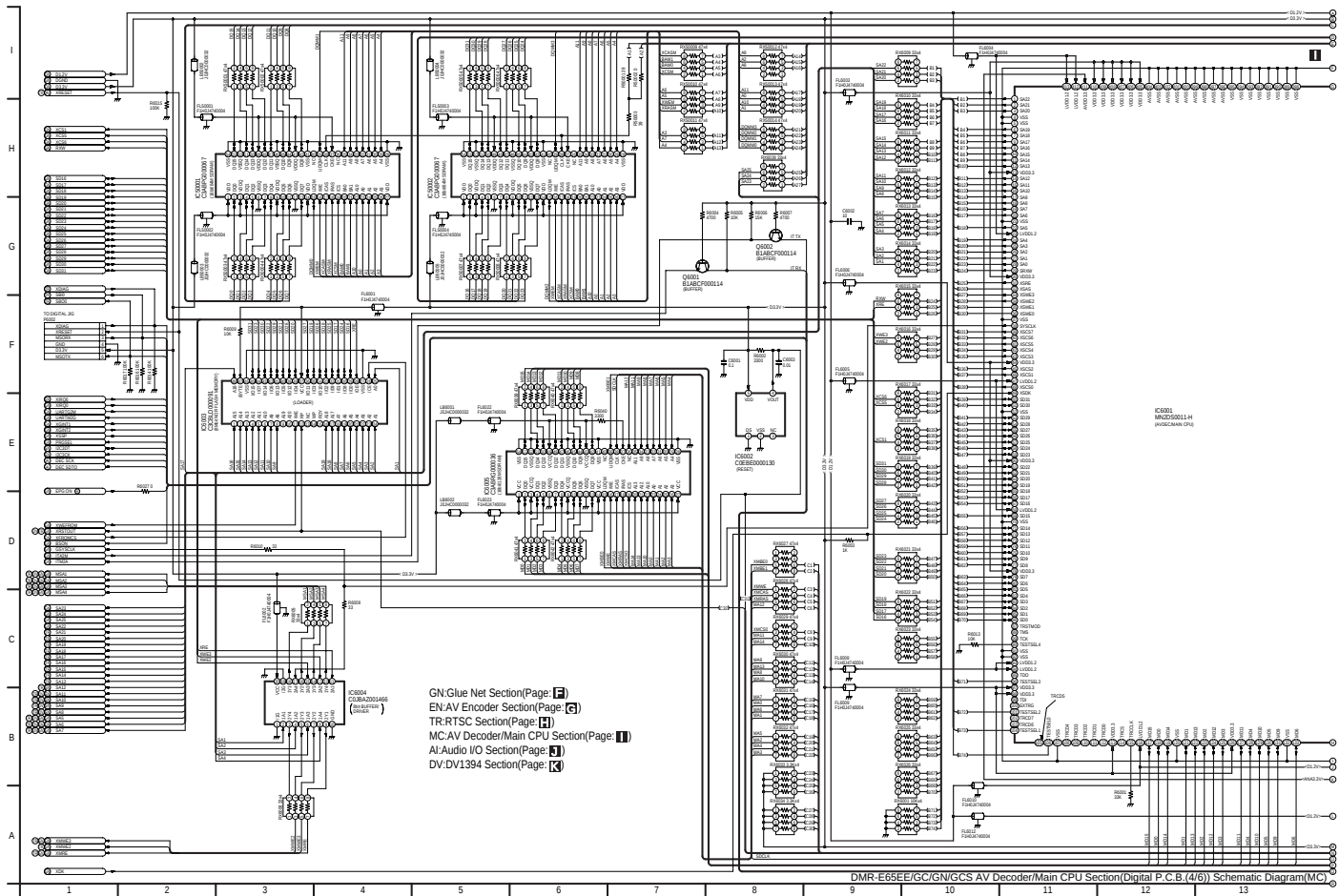
DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN



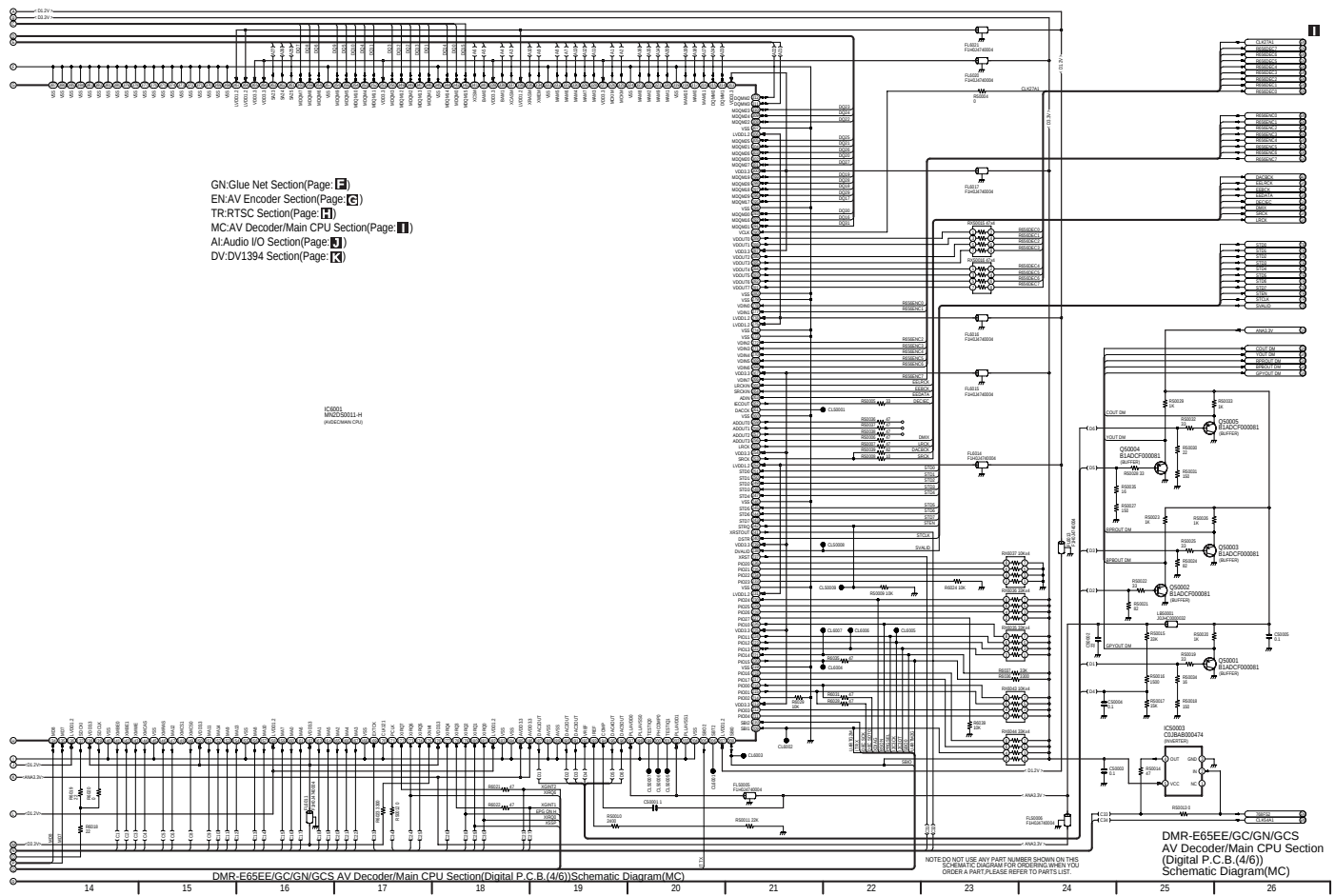


DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

17.11. AV Decoder/Main CPU Section (Digital P.C.B. (4/6)) Schematic Diagram (MC)



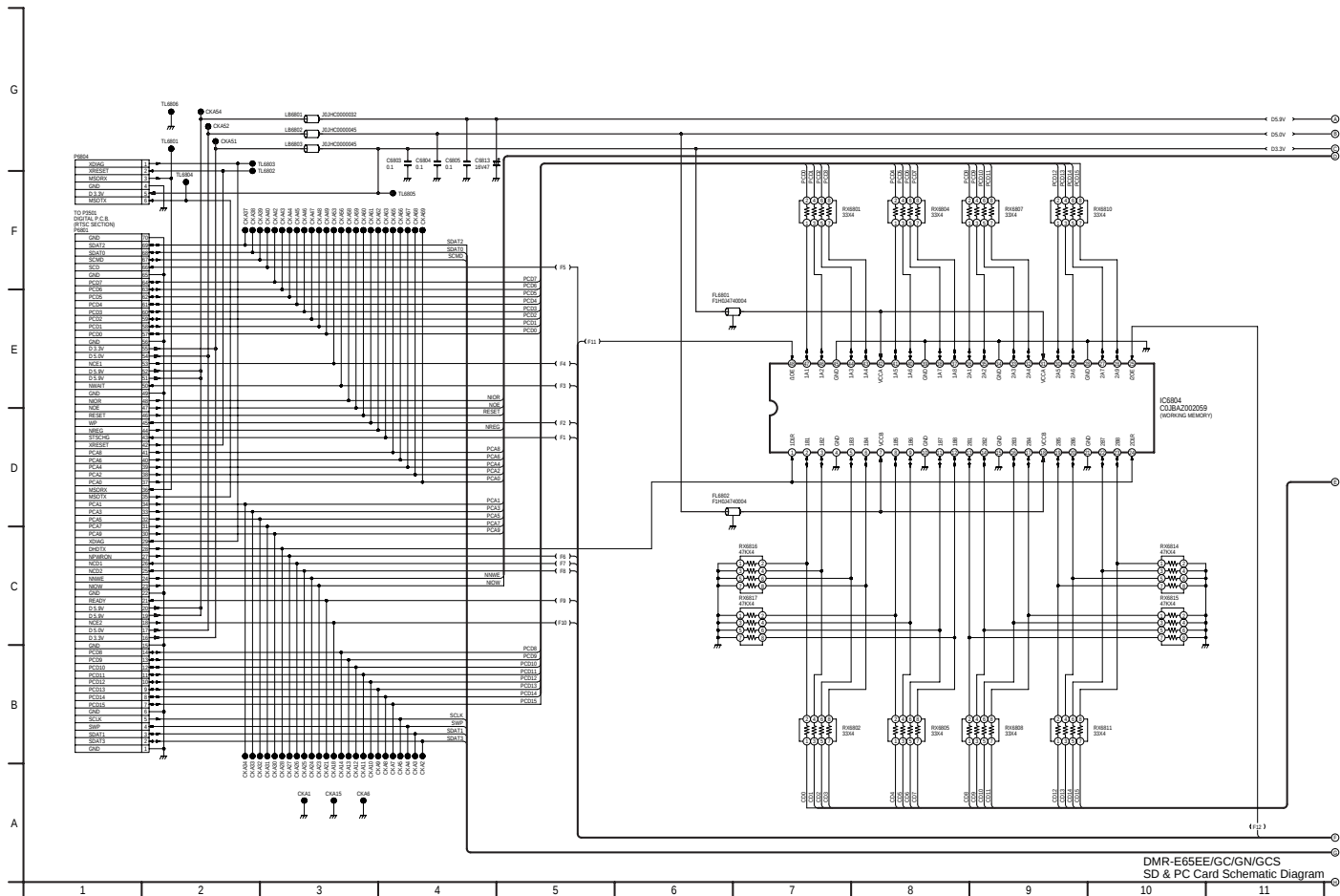
DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN



[illegible]

DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

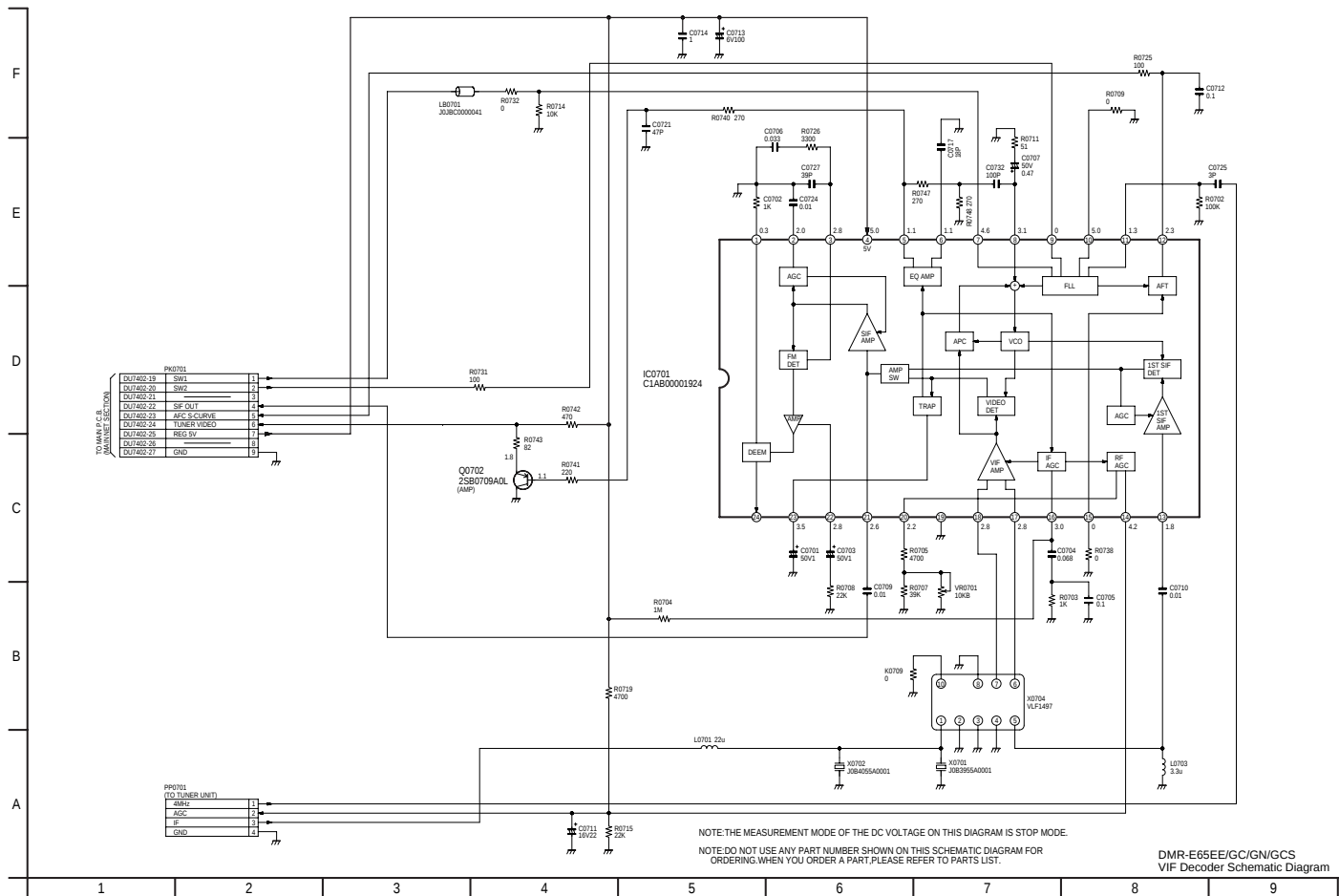
17.14. SD & PC Card Schematic Diagram



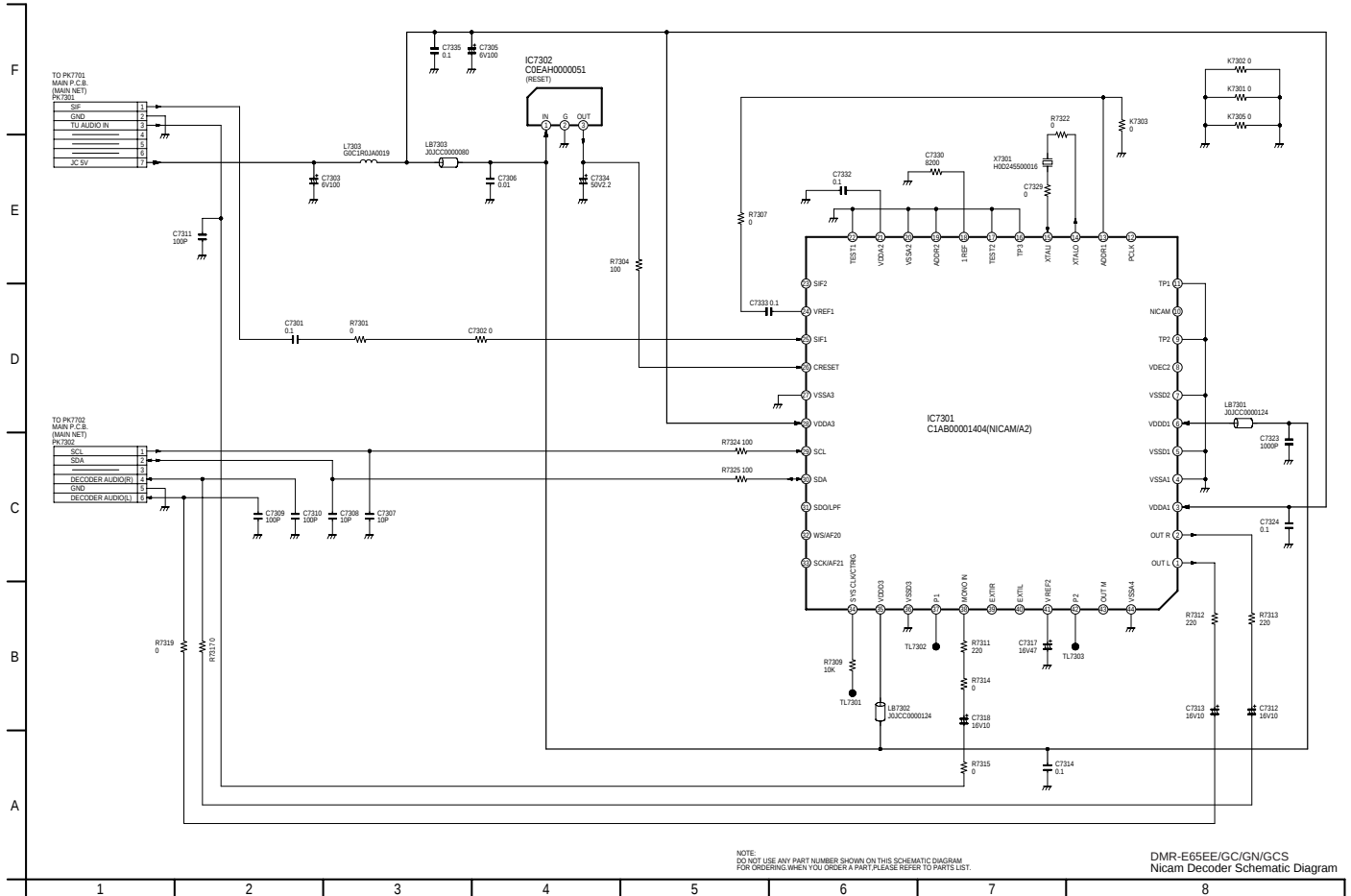


DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

17.15. VIF Decoder Schematic Diagram

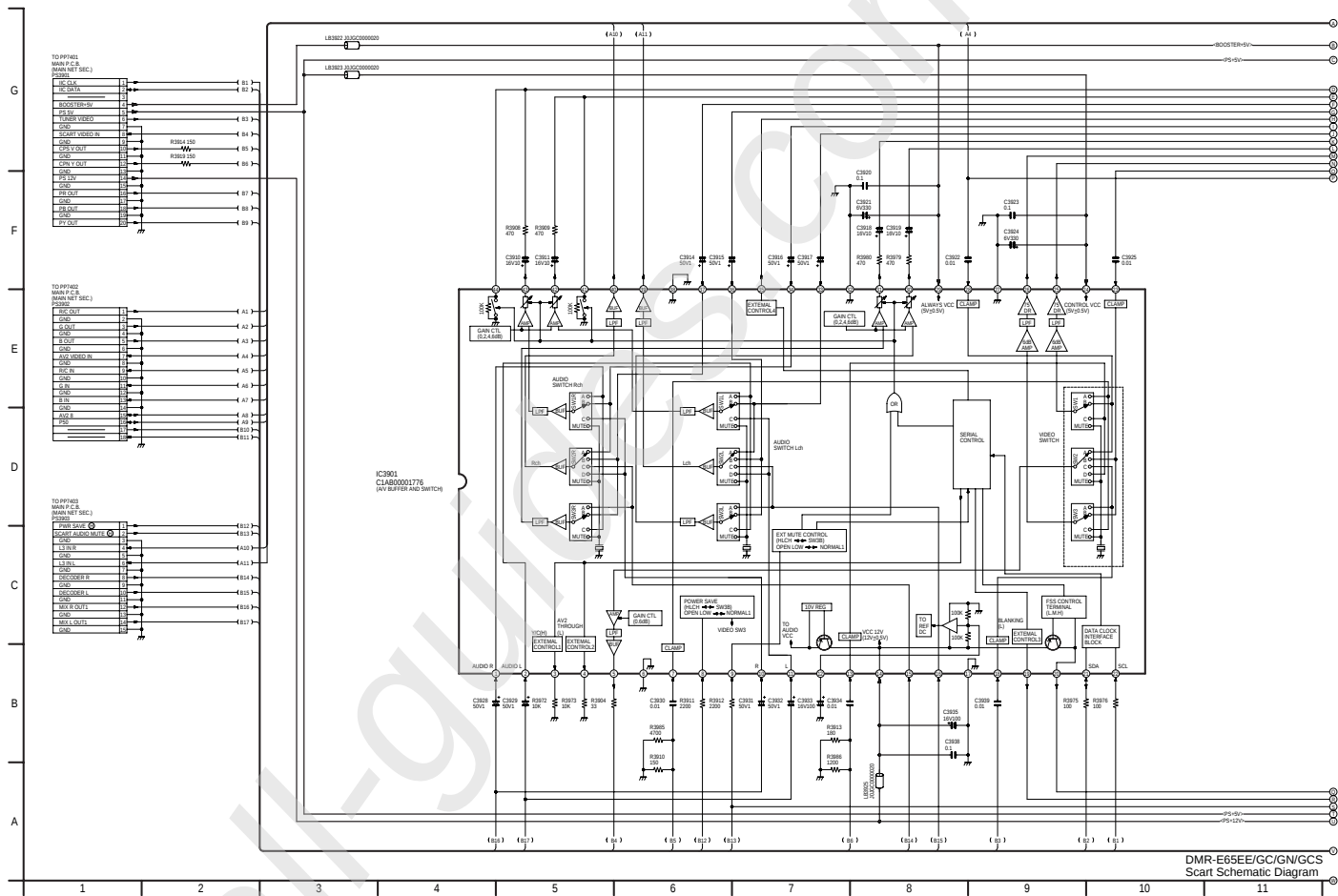


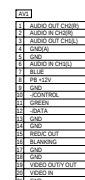
17.16. Nicam Decoder Schematic Diagram



DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

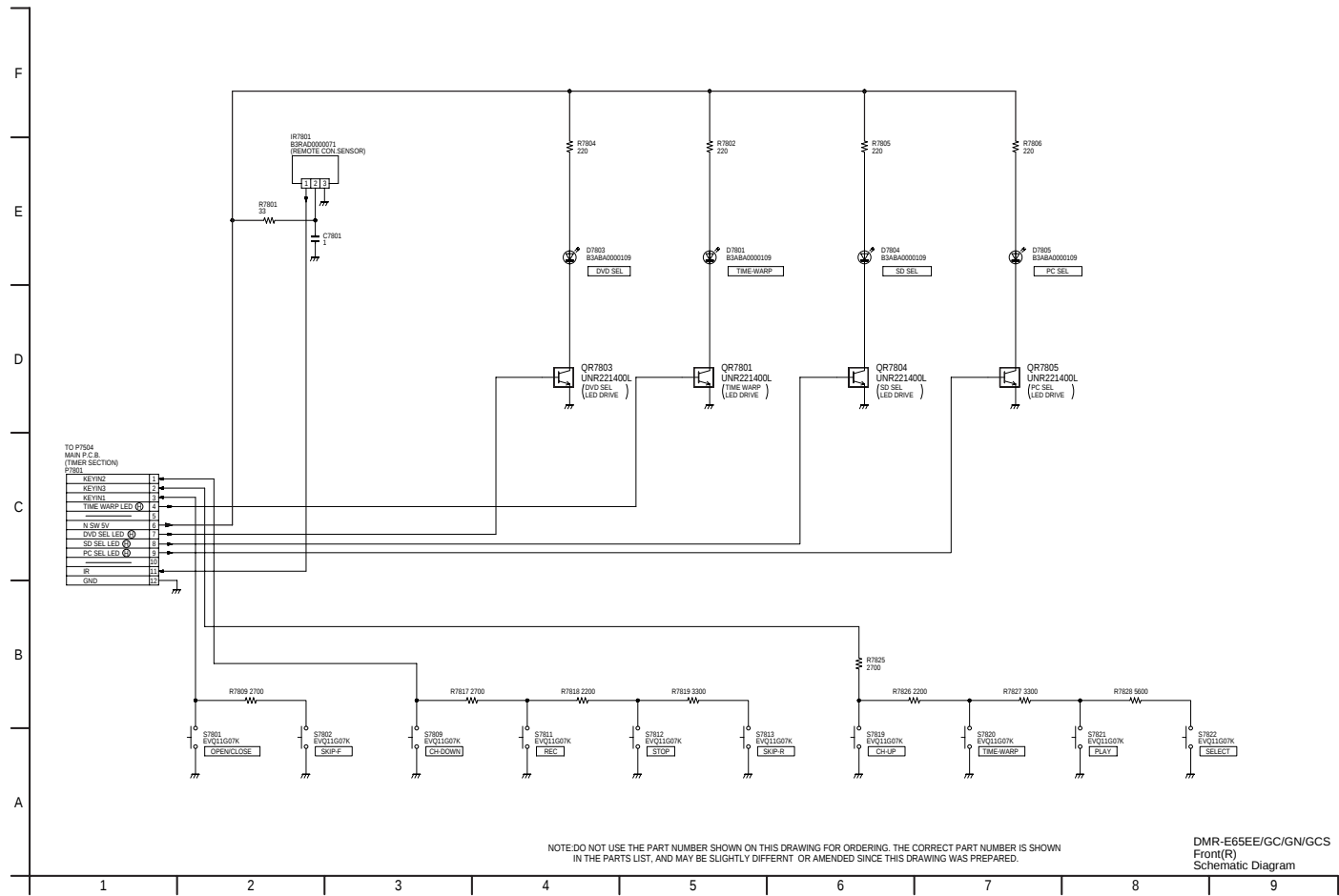
17.17. Scart Schematic Diagram





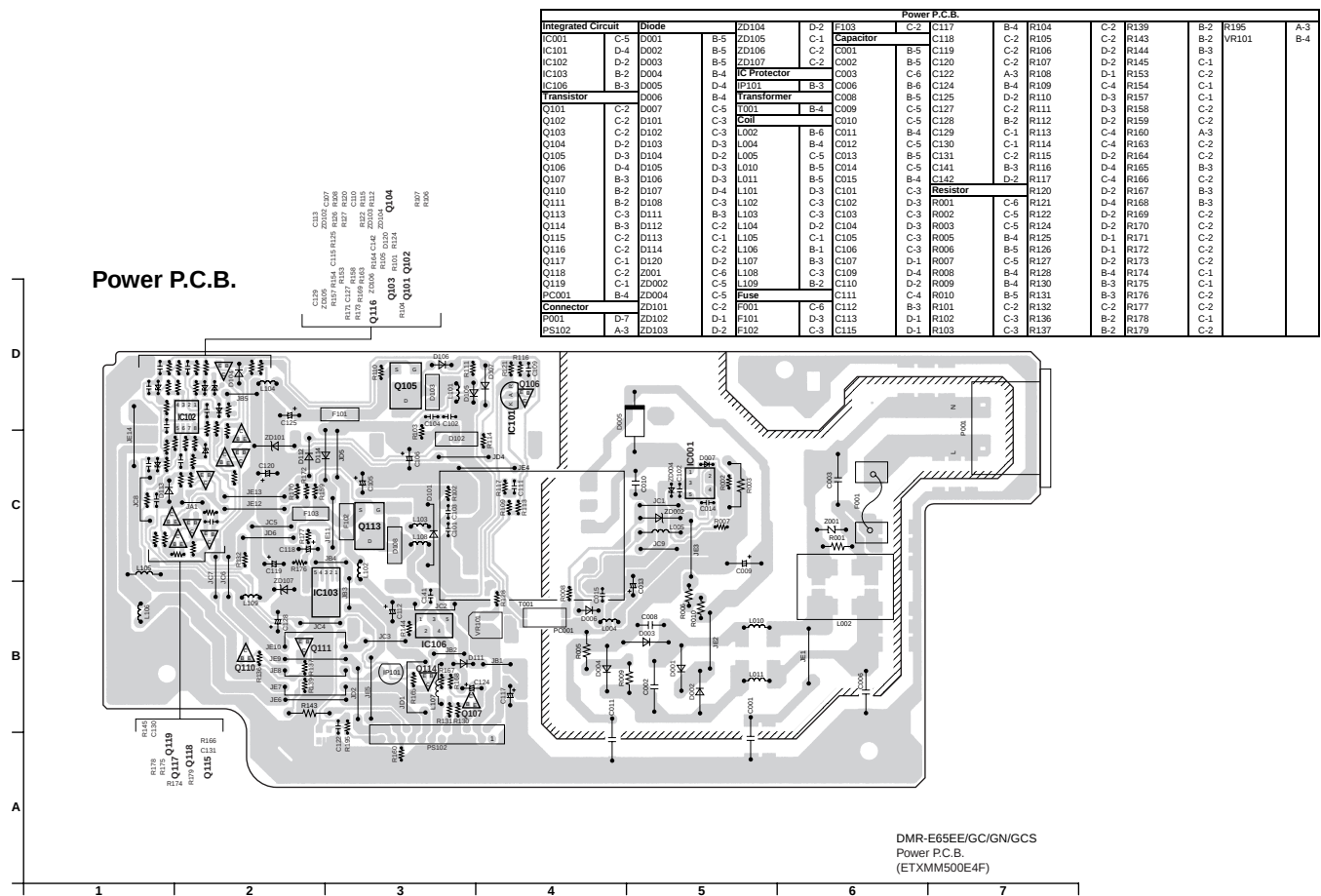
DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

17.18. Front (R) Schematic Diagram



18 Print Circuit Board

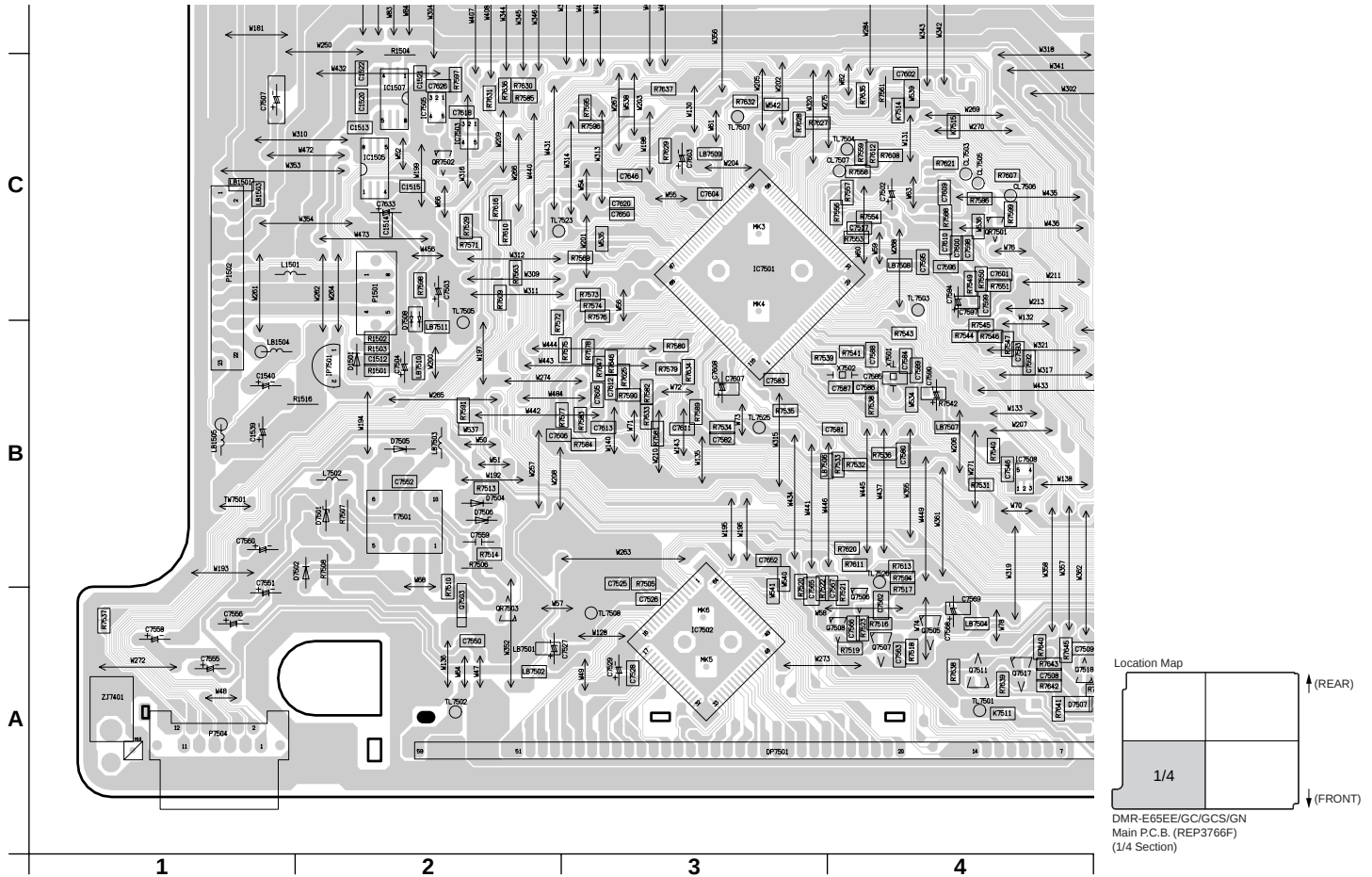
18.1. Power P.C.B.

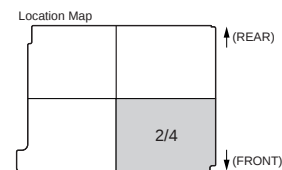


DMR-E66EE / DMR-E66GC / DMR-E66GS / DMR-E66GN

18.2. Main P.C.B.

18.2.1. Main P.C.B. (1/4 Section)



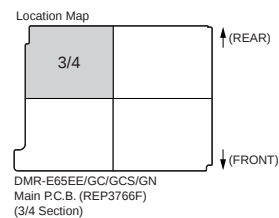
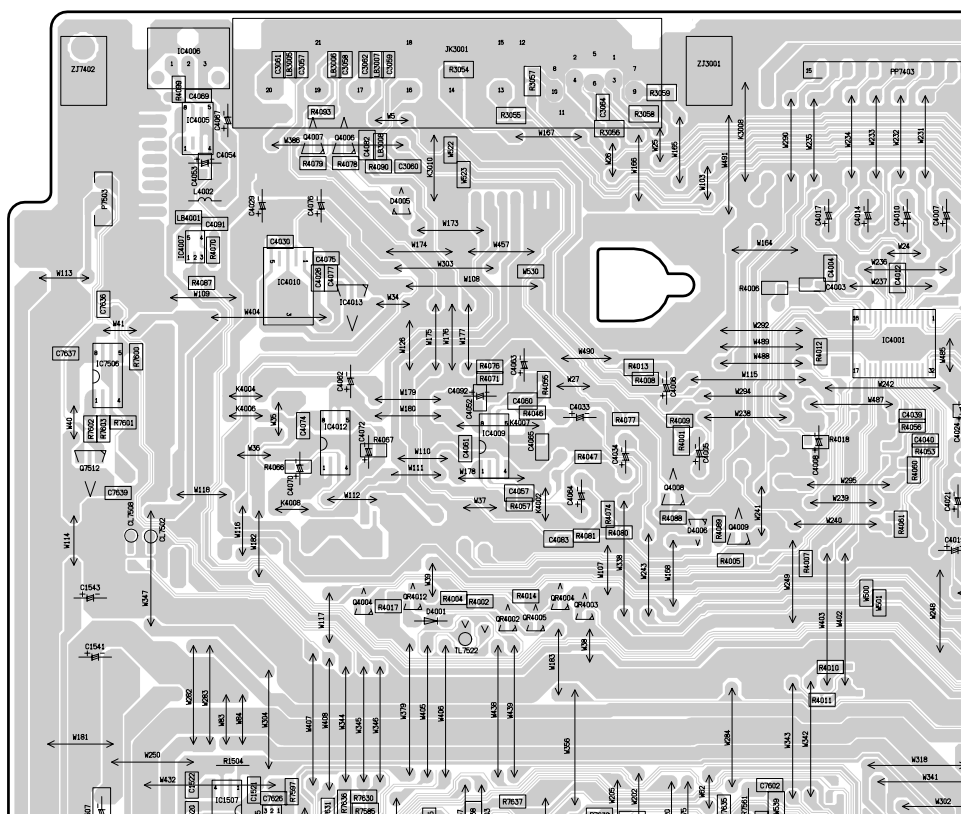


DMR-E65EE/GC/GCS/GN
Main P.C.B. (REP3766F)
(2/4 Section)

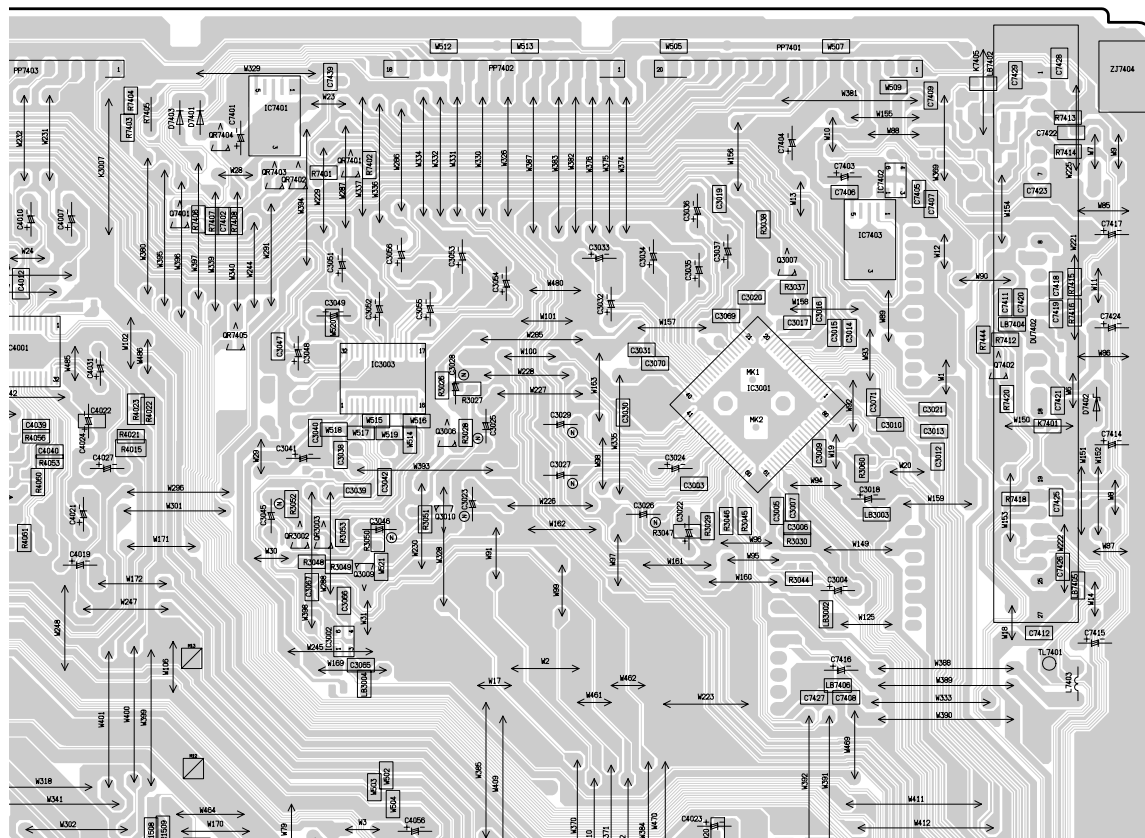
DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

18.2.3. Main P.C.B. (3/4 Section)

Main P.C.B.



18.2.4. Main P.C.B. (4/4 Section)



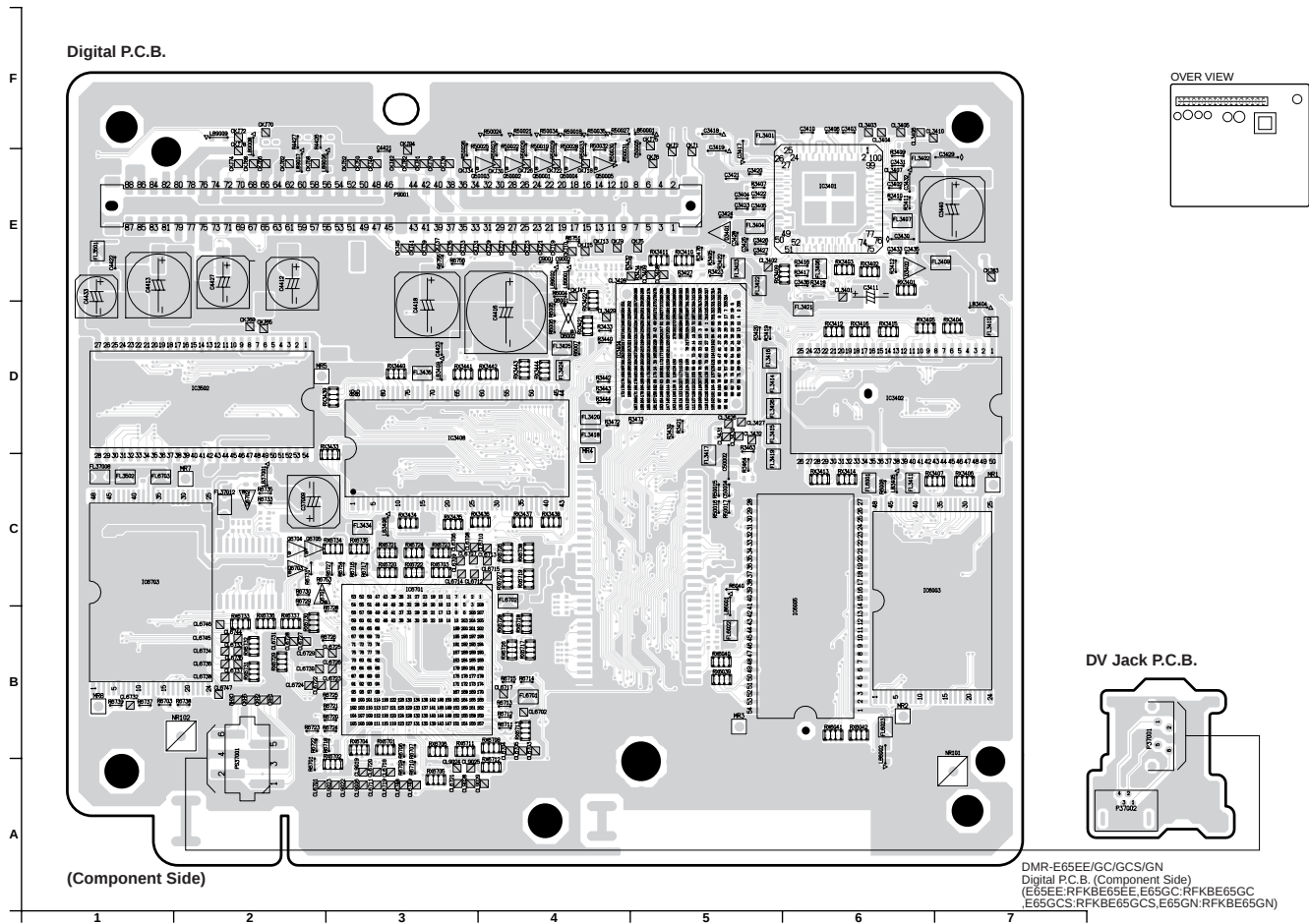
DMR-E66EE / DMR-E66GC / DMR-E66GCS / DMR-E66GN

18.2.5. Main P.C.B. Address Information

Integrated Circuit		Test Point		Main P.C.B.															
IC1502	B-8	CL7407	C-6	LB3005	F-2	C3021	E-7	CA040	E-4	C7516	A-7	R1504	C-2	R4078	F-2	R7540	B-4	R7630	C-2
IC1505	C-2	CL7502	D-2	LB3006	F-2	C3022	D-7	CA052	E-3	C7517	C-4	R1506	B-5	R4079	F-2	R7541	B-4	R7631	C-2
IC1506	B-6	CL7503	D-2	LB3007	F-2	C3023	D-6	CA053	F-2	C7525	B-3	R1507	C-5	R4080	D-3	R7542	B-4	R7632	C-3
IC1507	C-2	CL7505	C-4	LB3008	F-2	C3024	E-6	CA054	F-2	C7526	A-3	R1508	C-5	R4081	D-3	R7543	B-4	R7633	B-3
IC1508	B-5	CL7506	C-4	LB7402	F-8	C3026	D-6	CA056	C-6	C7528	A-3	R1510	C-5	R4088	D-3	R7545	B-4	R7635	C-4
IC1509	C-5	CL7507	C-4	LB7404	E-8	C3027	E-6	CA057	D-3	C7529	A-3	R1511	C-5	R4089	D-4	R7546	B-4	R7636	C-2
IC1510	C-5	CL7508	D-2	LB7405	D-9	C3028	E-6	CA059	C-5	C7546	B-4	R1512	C-5	R4090	F-2	R7547	B-4	R7637	C-3
IC3001	E-7	TL7401	D-9	LB7406	D-7	C3029	E-6	CA060	E-3	C7550	A-2	R1515	C-5	R4093	F-2	R7548	B-6	R7638	A-4
IC3002	D-5	TL7501	A-4	LB7407	B-7	C3030	E-6	CA061	E-3	C7551	A-1	R1516	B-2	R4099	F-2	R7549	C-4	R7639	A-4
IC3003	E-5	TL7502	A-2	LB7408	B-6	C3031	E-6	CA062	E-2	C7552	B-2	R3026	E-6	R7401	F-5	R7550	C-4	R7640	A-4
IC4001	E-4	TL7503	C-4	LB7409	B-5	C3032	E-6	CA063	E-3	C7555	A-1	R3027	E-6	R7402	F-5	R7551	C-4	R7641	A-4
IC4005	F-2	TL7504	C-4	LB7410	B-5	C3033	E-6	CA064	D-3	C7556	A-1	R3028	E-6	R7403	F-5	R7552	B-6	R7642	A-4
IC4006	F-2	TL7505	B-2	LB7501	A-2	C3034	E-6	CA065	E-3	C7558	A-1	R3029	D-7	R7404	F-5	R7553	C-4	R7643	A-4
IC4007	E-2	TL7507	C-3	LB7502	A-2	C3035	E-7	CA067	F-2	C7559	B-2	R3030	D-7	R7405	F-5	R7554	C-4	R7644	A-5
IC4009	E-3	TL7508	A-3	LB7503	B-2	C3036	E-7	CA069	F-2	C7560	B-1	R3037	E-7	R7406	E-5	R7556	C-4	R7645	A-4
IC7401	F-5	TL7522	D-3	LB7509	C-3	C3041	E-5	CA076	E-2	C7567	A-4	R3047	D-7	R7413	F-8	R7563	C-2		
IC4011	C-5	TL7519	B-7	LB7506	B-4	C3038	E-5	CA072	E-2	C7563	A-4	R3044	D-7	R7408	E-5	R7558	C-4		
IC4012	E-2	TL7520	A-7	LB7507	B-4	C3039	E-5	CA074	E-2	C7565	A-3	R3045	D-7	R7411	C-8	R7559	C-4	Transformer	
IC4013	F-2	TL7521	C-7	LB7508	C-4	C3040	E-5	CA075	E-2	C7566	A-4	R3046	D-7	R7412	E-8	R7561	C-4	T7501	B-2
IC7402	F-7	TL7523	C-2	LB7510	B-2	C3042	E-5	CA077	E-2	C7568	A-4	R3048	D-5	R7414	F-8	R7569	C-3		
IC7403	E-7	TL7524	C-7	LB7511	B-2	C3045	D-5	CA082	F-2	C7569	A-4	R3049	D-5	R7415	E-8	R7571	C-2		
IC7501	C-3	TL7525	B-3	LB7512	A-7	C3046	D-5	CA083	D-3	C7580	B-4	R3050	D-5	R7416	E-8	R7572	B-2		
IC7502	A-3	TL7526	B-4	LB7513	A-7	C3047	E-5	CA091	E-2	C7581	B-4	R3051	D-6	R7417	E-8	R7573	C-3		
IC7503	C-2	TW7501	B-1	LB7514	A-7	C3048	E-5	CA092	E-3	C7582	B-3	R3052	D-5	R7418	D-8	R7574	C-3		
IC7504	A-8	Connector		LB7515	A-6	C3049	E-5	C7401	F-5	C7583	B-3	R3053	D-5	R7420	E-8	R7575	B-3		
IC7505	E-2	JK3001	F-3		A-6	C3051	E-5	C7402	E-5	C7584	B-4	R3054	F-3	R7421	C-7	R7576	C-3		
IC7506	C-1	JK7501	A-7	Capacitor		C3052	E-5	C7403	E-5	C7585	B-4	R3055	F-3	R7422	C-7	R7577	B-3		
IC7508	B-4	P1501	C-2	C1503	B-8	C3053	E-6	C7404	F-7	C7586	B-4	R3056	F-3	R7427	B-7	R7578	B-3		
Transistor		P1502	C-1	C1504	B-8	C3054	E-6	C7405	F-7	C7587	B-4	R3057	F-3	R7428	C-7	R7579	B-3		
Q3006	E-6	P7402	B-6	C1505	B-8	C3055	E-6	C7406	F-7	C7588	B-4	R3058	F-3	R7429	C-7	R7580	B-3		
Q3007	E-7	P7503	E-1	C1512	B-2	C3056	E-6	C7407	E-7	C7589	B-4	R3059	F-3	R7430	B-7	R7581	B-3		
Q3009	D-5	P7504	A-1	C1513	C-2	C3057	F-2	C7408	D-7	C7590	B-4	R3060	E-7	R7431	C-7	R7582	B-3		
Q3010	D-6	PP7401	F-7	C1514	C-2	C3058	F-2	C7409	F-7	C7592	B-4	R4001	E-3	R7432	C-7	R7583	B-3		
Q4004	D-2	PP7402	F-6	C1515	C-2	C3059	F-2	C7411	E-8	C7593	B-4	R4002	D-3	R7433	B-7	R7584	B-3		
Q4006	F-2	PP7403	F-4	C1516	B-6	C3060	F-3	C7412	D-8	C7594	C-4	R4004	D-3	R7434	C-7	R7585	C-2		
Q4007	F-2	Diode		C1518	B-6	C3061	F-2	C7414	E-8	C7595	C-4	R4005	D-4	R7435	C-7	R7586	C-4		
Q4008	D-3	D1501	B-2	C1519	B-6	C3062	F-2	C7415	D-8	C7596	C-4	R4006	E-4	R7438	C-6	R7588	C-4		
Q4009	D-4	D4001	D-3	C1520	C-2	C3064	F-3	C7416	D-7	C7597	C-4	R4007	D-4	R7439	C-6	R7589	B-3		
Q7401	E-5	D4005	E-2	C1521	C-2	C3065	D-5	C7417	E-8	C7598	C-4	R4008	E-3	R7440	C-6	R7590	B-3		
Q7402	E-8	D4006	D-4	C1522	C-2	C3066	D-5	C7418	E-8	C7599	C-4	R4009	E-3	R7441	C-6	R7591	B-2		
Q7404	C-7	D7401	F-5	C1523	C-5	C3067	D-5	C7419	E-8	C7600	C-4	R4010	D-4	R7442	C-6	R7594	B-4		
Q7405	B-7	D7402	E-8	C1524	B-5	C3069	E-7	C7420	E-8	C7601	C-4	R4011	D-4	R7444	E-8	R7595	C-3		
Q7406	B-7	D7403	F-5	C1527	C-5	C3070	E-6	C7421	E-8	C7602	C-4	R4012	E-4	R7505	B-3	R7596	C-3		
Q7503	A-2	D7501	B-2	C1528	C-5	C3071	E-7	C7422	F-8	C7603	C-3	R4013	E-3	R7506	B-2	R7597	C-2		
Q7505	A-4	D7502	B-2	C1531	C-5	C4003	E-4	C7423	F-8	C7604	C-3	R4014	D-3	R7507	B-2	R7598	C-2		
Q7506	A-4	D7504	B-2	C1533	C-5	C4004	E-4	C7424	E-8	C7605	B-3	R4015	E-5	R7508	B-2	R7599	C-4		
Q7507	A-4	D7505	B-2	C1534	C-5	C4005	E-4	C7425	D-8	C7606	B-2	R4017	D-2	R7510	B-2	R7600	E-2		
Q7508	A-4	D7506	B-2	C1537	C-5	C4006	E-3	C7426	D-8	C7607	B-3	R4018	E-4	R7513	B-2	R7601	E-2		
Q7511	A-4	D7507	A-4	C1539	B-1	C4007	E-4	C7427	D-7	C7608	B-3	R4019	C-7	R7514	B-2	R7602	E-1		
Q7512	E-1	D7508	C-2	C1540	B-1	C4008	E-4	C7428	F-8	C7609	C-4	R4020	C-7	R7516	A-4	R7603	E-1		
Q7517	A-4	Crystal Oscillator		C1541	D-1	C4010	E-4	C7429	F-8	C7610	C-4	R4021	E-5	R7517	A-4	R7604	A-7		
Q7518	A-4	X7501	B-4	C1543	D-1	C4012	E-4	C7431	C-7	C7611	B-3	R4022	E-5	R7518	A-4	R7605	A-7		
Transistor-resistor		X7502	B-4	C3003	E-7	C4014	E-4	C7432	C-7	C7612	B-3	R4023	E-5	R7519	A-4	R7606	A-7		
QR3002	D-5	IP7501	B-2	C3005	D-7	C4019	D-4	C7439	F-5	C7618	C-2	R4047	E-3	R7521	A-4	R7608	C-4		
QR4002	D-3	Coil		C3006	D-7	C4021	D-4	C7440	B-7	C7620	C-3	R4053	E-4	R7522	A-3	R7609	C-2		
QR4003	D-3	L1501	C-1	C3007	D-7	C4022	E-4	C7441	B-7	C7626	C-2	R4055	E-3	R7523	A-4	R7610	C-2		
QR4004	D-3	L4002	E-2	C3009	E-7	C4023	C-7	C7502	C-4	C7633	C-2	R4056	E-4	R7529	C-2	R7611	B-4		
QR4005	D-3	L7401	C-5	C3010	E-7	C4024	E-4	C7503	C-2	C7636	E-1	R4057	D-3	R7530	B-5	R7612	C-4		
QR4012	D-3	L7403	D-8	C3012	E-7	C4025	C-7	C7504	B-2	C7637	E-1	R4060	E-4	R7531	B-4	R7613	B-4		
QR7401	F-5	L7502	B-2	C3013	E-7	C4026	E-2	C7507	C-1	C7639	D-1	R4061	D-4	R7532	B-4	R7616	C-2		
QR7402	F-5	LB1501	C-1	C3014	E-7	C4027	E-5	C7508	A-4	C7646	C-3	R4066	E-2	R7533	B-4	R7620	B-4		
QR7403	F-5	LB1503	C-1	C3015	E-7	C4029	E-2	C7509	A-4	C7650	C-3	R4067	E-2	R7534	B-3	R7621	C-4		
QR7404	F-5	LB1504	B-1	C3016	E-7	C4030	E-2	C7511	A-8	C7652	B-3	R4070	E-2	R7535	B-3	R7625	B-3		
QR7405	E-5	LB1505	B-1	C3017	E-7	C4031	E-5	C7512	A-6	Resistor		R4071	E-3	R7536	B-4	R7626	A-8		
QR7501	C-4	LB3002	D-7	C3018	D-7	C4033	E-3	C7513	A-6	R1501	B-2	R4074	D-3	R7537	A-1	R7627	C-3		
QR7502	C-2	LB3003	D-7	C3019	E-7	C4034	E-3	C7514	A-6	R1502	B-2	R4076	E-3	R7538	B-4	R7628	C-3		
QR7503	A-2	LB3004	D-5	C3020	E-7	C4039	E-4	C7515	A-6	R1503	B-2	R4077	E-3	R7539	B-3	R7629	C-3		

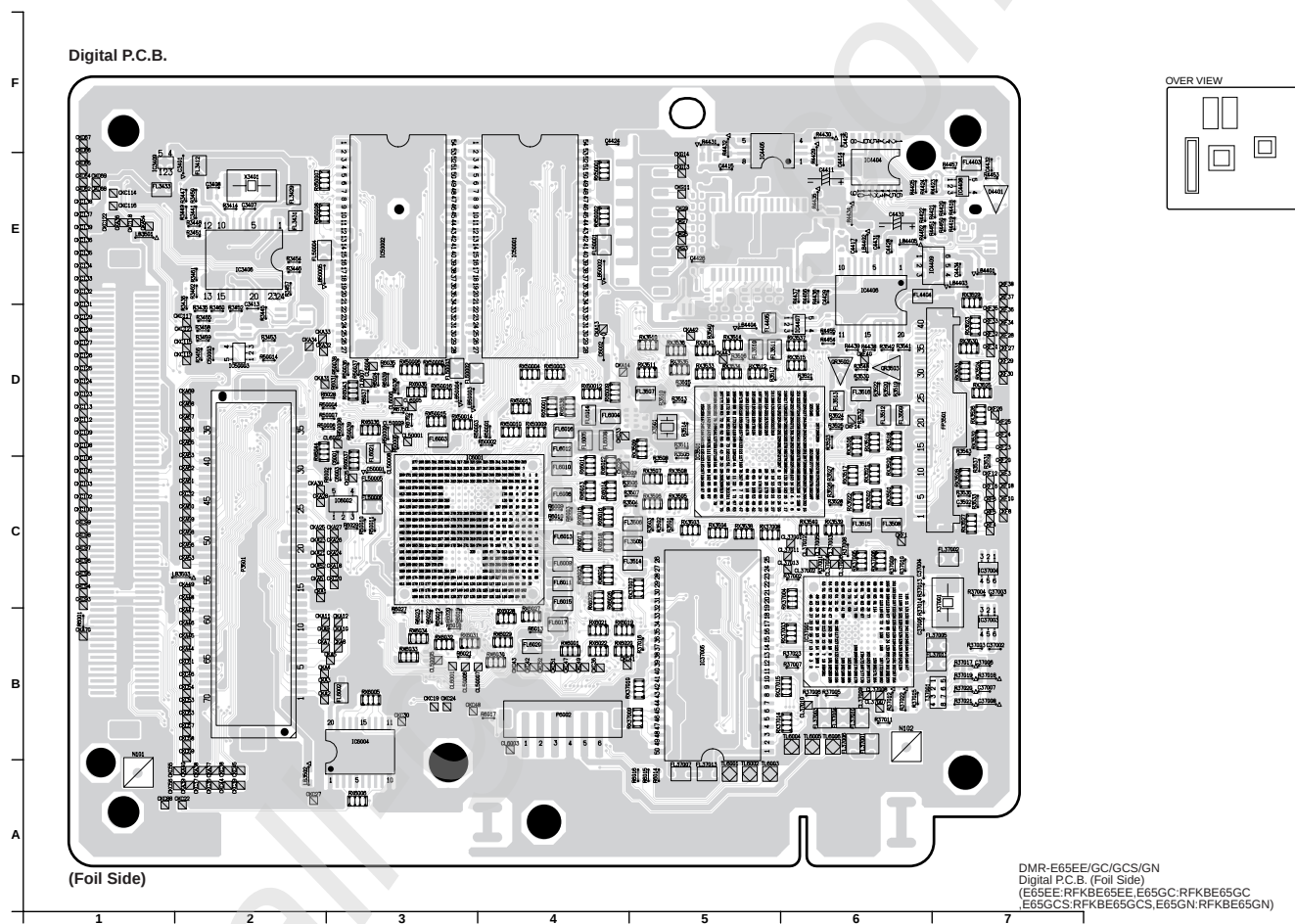
18.3. Digital P.C.B.

18.3.1. Digital P.C.B. (Component Side)



DMR-E65EE / DMR-E65GC / DMR-E65GCS / DMR-E65GN

18.3.2. Digital P.C.B. (Foil Side)



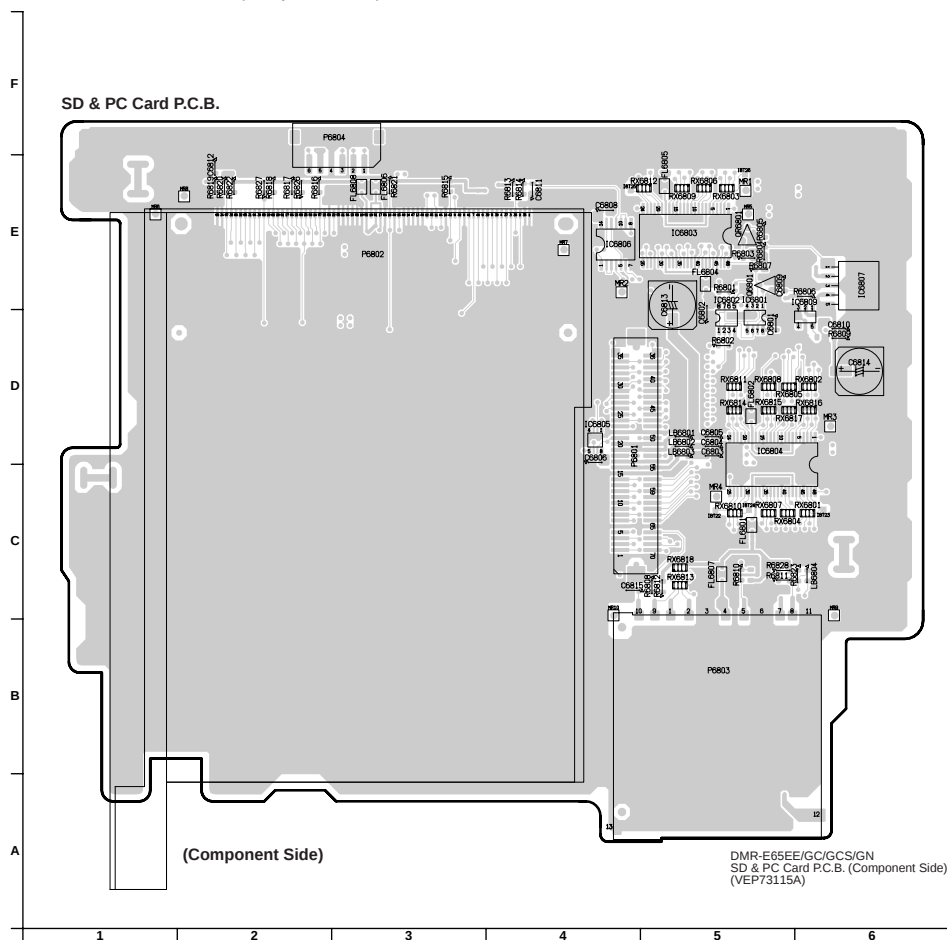
[illegible]

ADDRESS INFORMATION
C.....COMPONENT SIDE
F.....FOIL SIDE

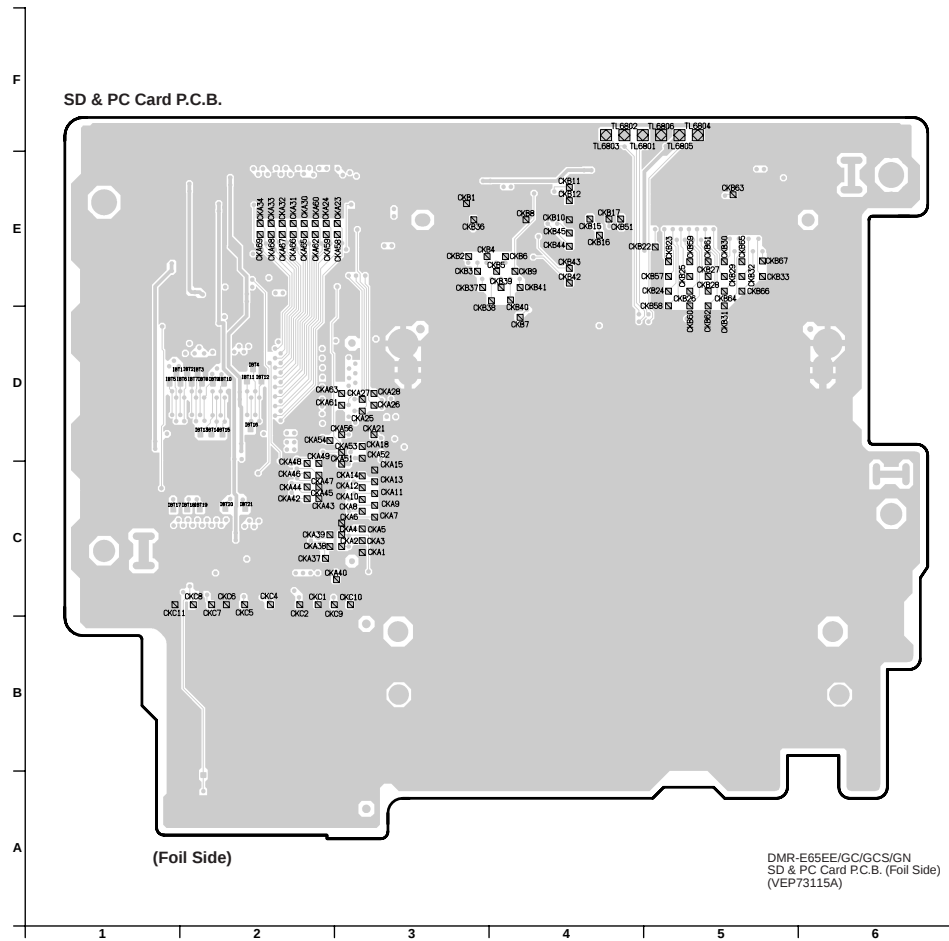
DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

18.4. SD & PC Card P.C.B.

18.4.1. SD & PC Card P.C.B. (Component Side)



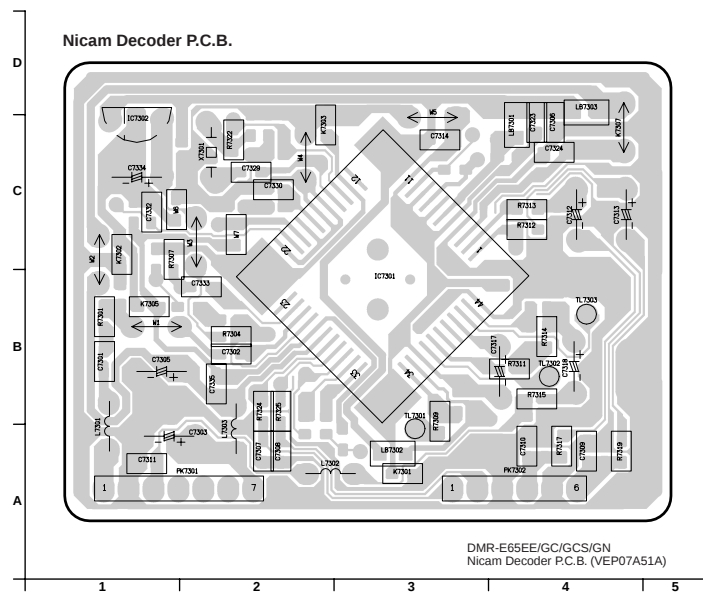
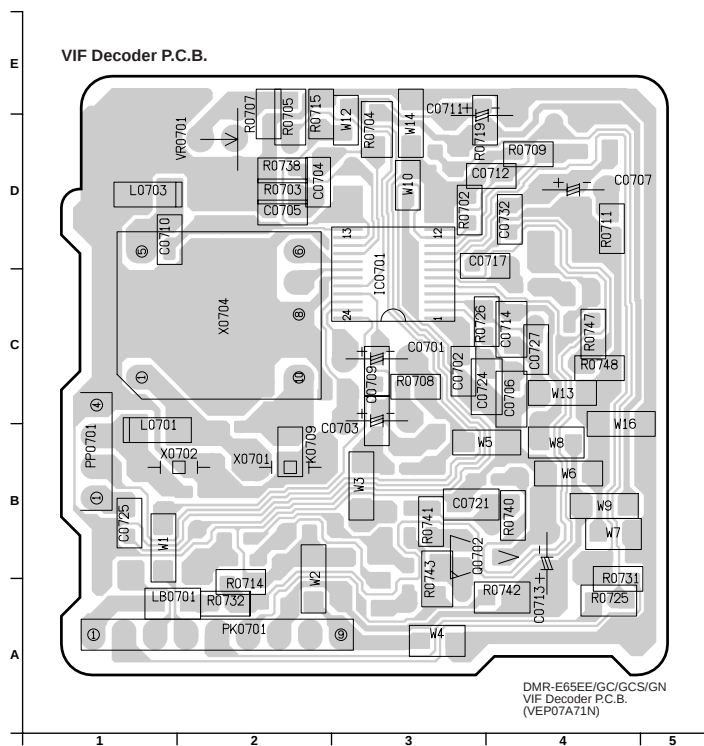
18.4.2. SD & PC Card P.C.B. (Foil Side)



DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

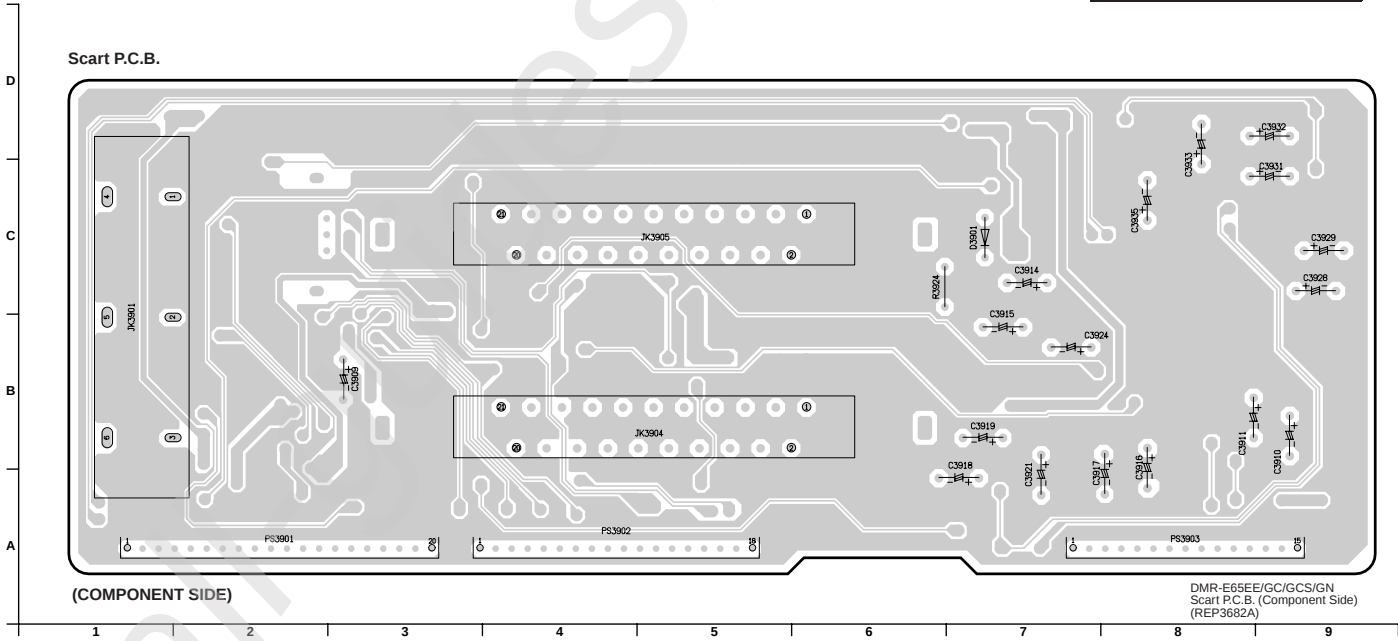
18.5. VIF Decoder P.C.B.

18.6. Nicam Decoder P.C.B.



18.7. Scart P.C.B.
18.7.1. Scart P.C.B. (Component side)

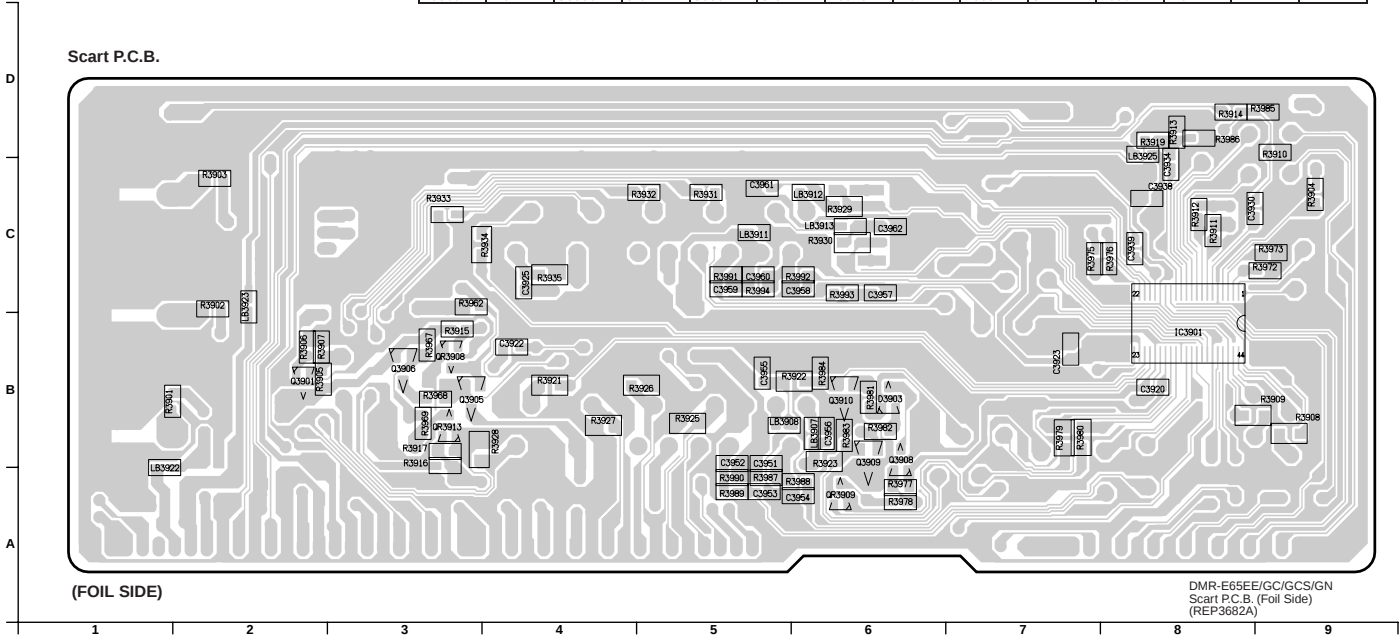
Scart P.C.B.(Component Side)			
Diode		Capacitor	
D3901	C-7	C3916	A-8
Connector		C3917	A-8
JK3901	B-1	C3918	A-7
JK3904	B-5	C3919	B-7
JK3905	C-5	C3921	A-7
PS3901	A-2	C3924	B-7
PS3902	A-4	C3928	C-9
PS3903	A-8	C3929	C-9
Capacitor		C3931	C-9
C3909	B-3	C3932	D-9
C3910	B-9	C3933	D-8
C3911	B-9	C3935	C-8
C3914	C-7	Resistor	
C3915	B-7	R3924	C-7



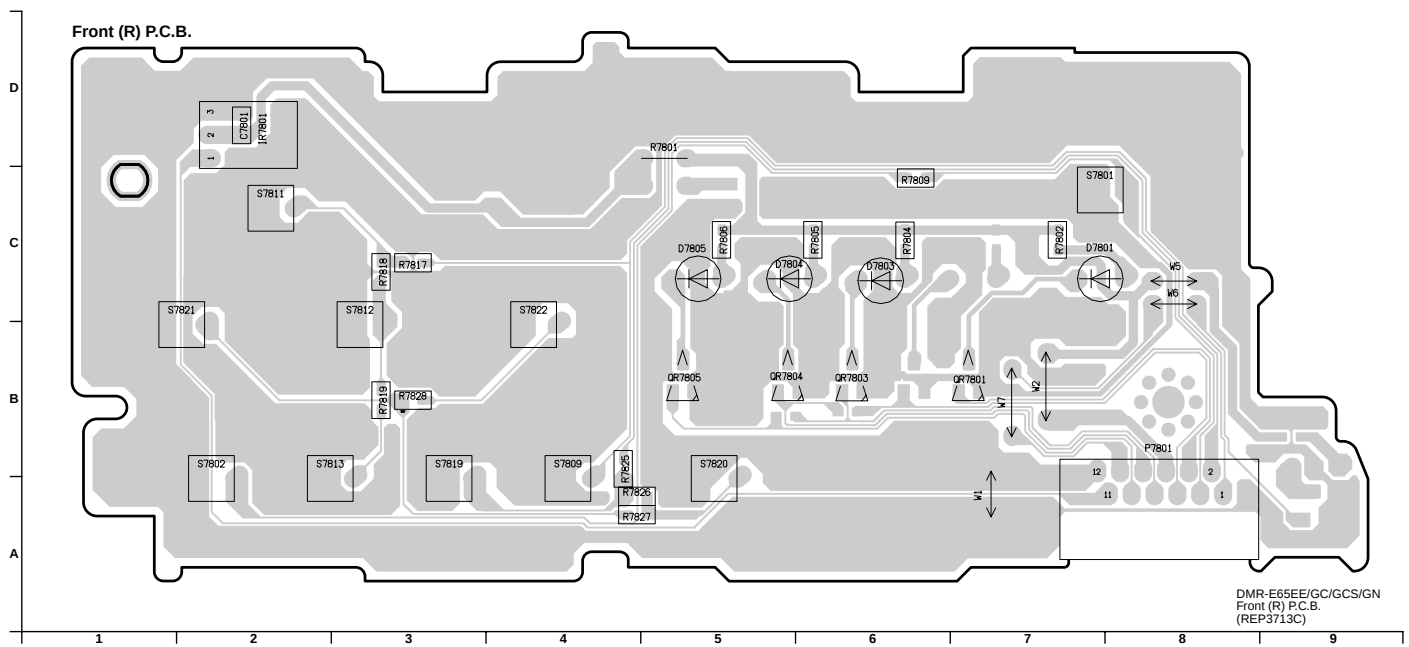
DMR-E65EE / DMR-E65GC / DMR-E65GS / DMR-E65GN

18.7.2. Scart P.C.B. (Foil Side)

Scart P.C.B.(Foil Side)											
Integrated Circuit	Coil				Resistor						
IC3901	B-8	LB3907	B-6	C3934	C-8	R3901	B-1	R3916	B-3	R3935	C-4
		LB3908	B-5	C3938	C-8	R3902	C-2	R3917	B-3	R3962	C-3
Transistor		LB3911	C-5	C3939	C-8	R3903	C-2	R3919	D-8	R3967	B-3
Q3901	B-2	LB3912	C-6	C3951	B-5	R3904	C-9	R3921	B-4	R3968	B-3
Q3905	B-3	LB3913	C-6	C3952	B-5	R3905	B-2	R3922	B-6	R3969	B-3
Q3906	B-3	LB3913	C-6	C3953	A-5	R3906	B-2	R3923	B-6	R3972	C-9
Q3908	B-6	LB3922	B-1	C3954	A-6	R3907	B-2	R3925	B-5	R3973	C-9
Q3909	B-6	LB3923	C-2	C3955	B-5	R3908	B-9	R3926	B-5	R3975	C-7
Q3910	B-6	LB3925	D-8	C3956	B-6	R3909	B-9	R3927	B-4	R3976	C-8
Transistor-resistor	Capacitor					R3910	D-9	R3928	B-3	R3977	A-6
QR3908	B-3	C3920	B-8	C3958	C-6	R3911	C-8	R3929	C-6	R3978	A-6
QR3909	A-6	C3922	B-4	C3959	C-5	R3912	C-8	R3930	C-6	R3979	B-7
QR3913	B-3	C3923	B-7	C3960	C-5	R3914	D-8	R3932	C-5	R3980	B-7
Diode		C3925	C-4	C3961	C-5	R3915	B-3	R3933	C-3	R3981	B-6
D3903	B-6	C3930	C-8	C3962	C-6			R3934	C-4	R3982	B-6



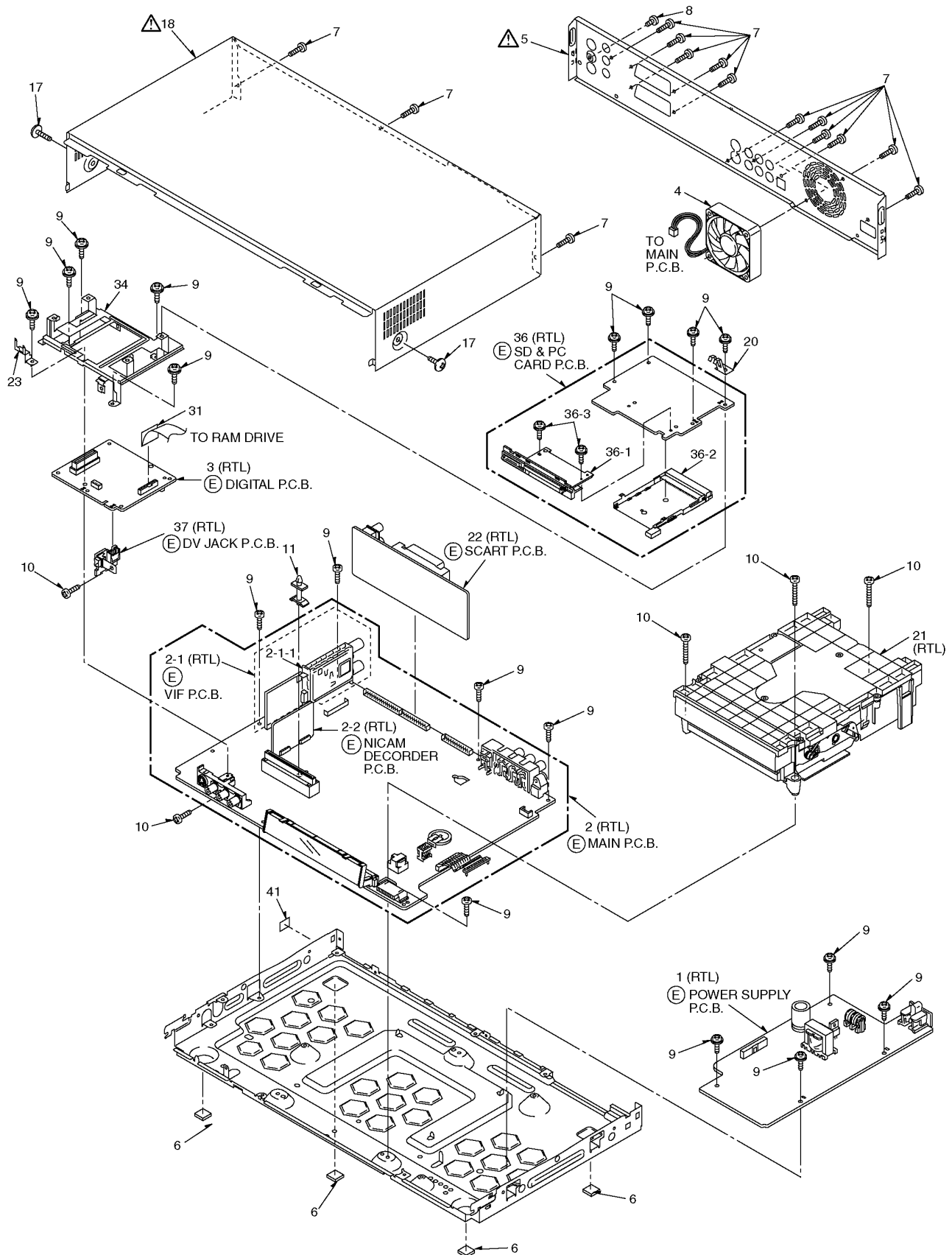
18.8. Front (R) P.C.B.



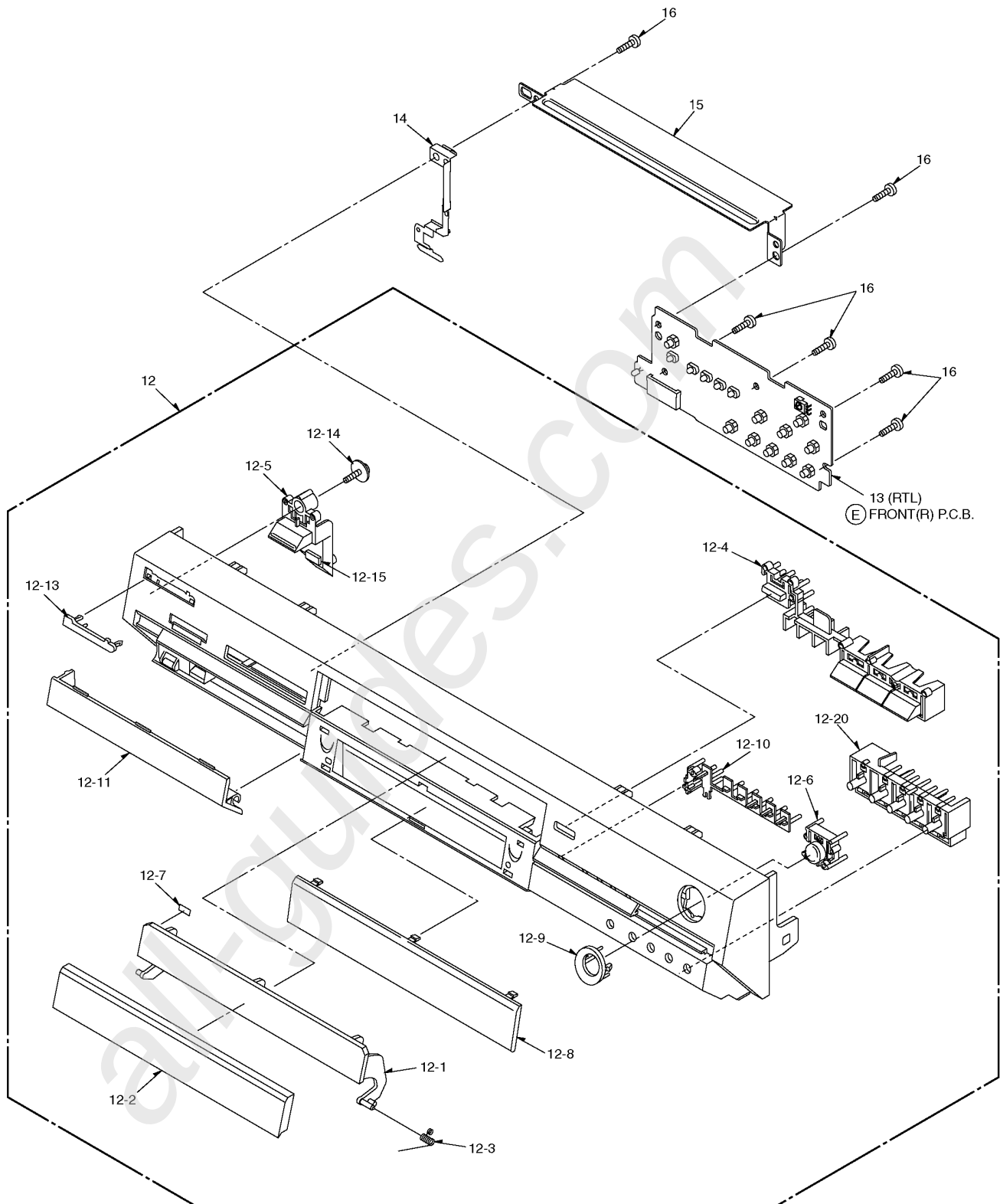
DMR-E69EE / DMR-E69GC / DMR-E69GCS / DMR-E69GN

19 Exploded Views

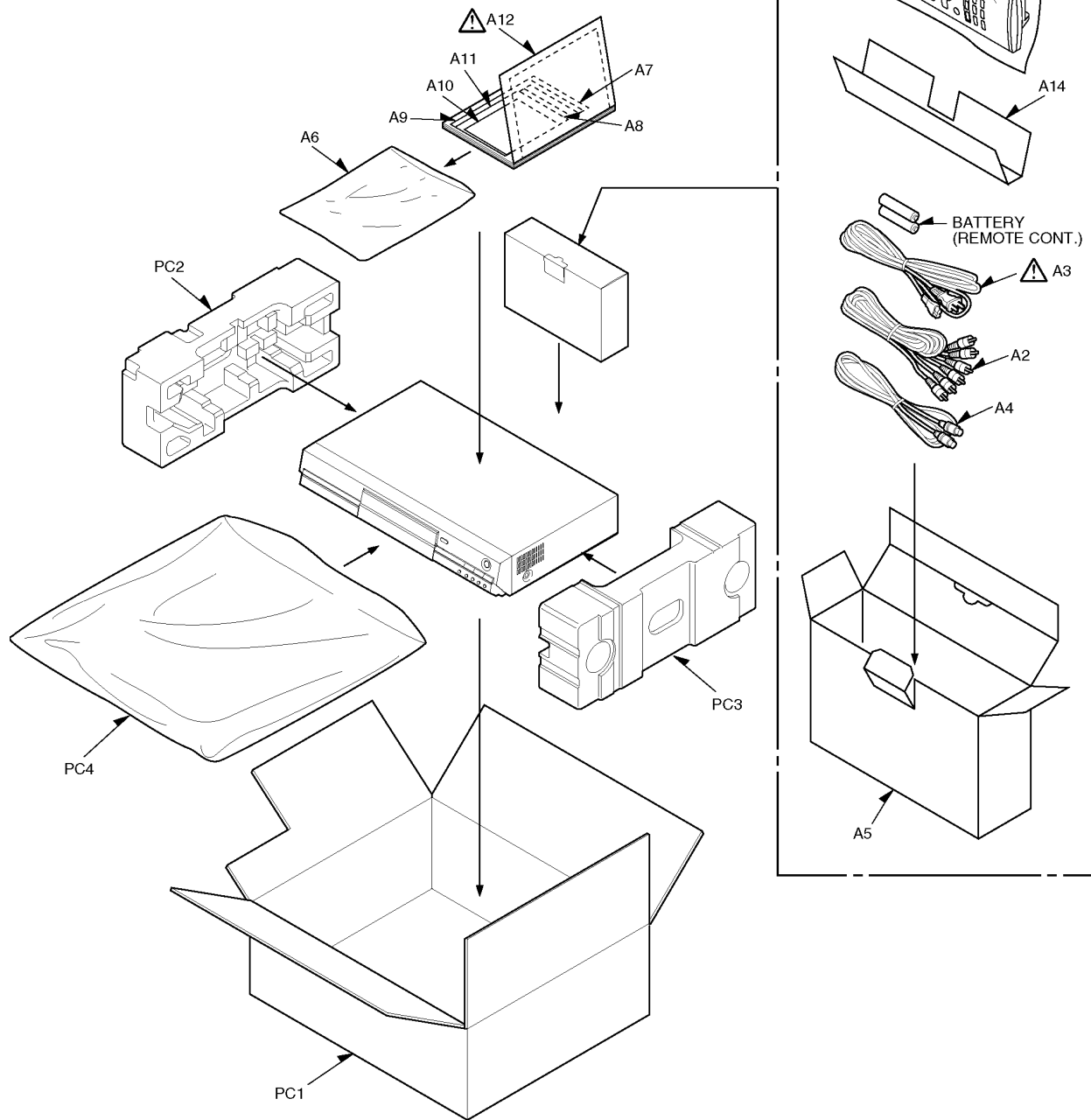
19.1. Casing Parts & Mechanism Section 1



19.2. Casing Parts & Mechanism Section 2



19.3. Packing & Accessories Section



20 Replacement Parts List

Notes:

*Important safety notice:

Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

*Warning: This product uses a laser diode. Refer to caution statements.

*Capacity values are in microfarads (μ F) unless specified otherwise, P=Pico-farads (pF), F=Farads (F).

*Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM).

*The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.

*"<IA>" "<ID>", marks in Remarks indicates languages of instruction manuals. [<IA>: Russian, <IB>: English/Chinese, <IC>:English, <ID>: English/ Arabic] All parts are supplied by S.P.C..

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
n	01	CASING/ACCESSORY/PACKING		
1	ETXMM500E4F	POWER SUPPLY P.C.B.	1	(RTL)
2	REP3766F	MAIN P.C.B.	1	(RTL)
2-1	VEP07A71N	VIF P.C.B.	1	(RTL)
2-1-1	VMP5897	VIF ANGLE	1	
2-2	VEP07A51A	NICAM DECODER P.C.B.	1	(RTL)
3	RFKBE65EE	DIGITAL P.C.B.	1	EE
3	RFKBE65GC	DIGITAL P.C.B.	1	GC
3	RFKBE65GCS	DIGITAL P.C.B.	1	GCS
3	RFKBE65GN	DIGITAL P.C.B.	1	GN
4	L6FAKCC0002	FAN MOTOR	1	
5	RGR0347G-E	REAR PANEL	1	EE Δ
5	RGR0347G-F	REAR PANEL	1	GCS Δ
5	RGR0347G-G	REAR PANEL	1	GN Δ
5	RGR0347G-J	REAR PANEL	1	GC Δ
6	RKA0166-T	LEG RUBBER	4	
7	VHD0690	SCREW	14	
8	XSN3+4FZ	SCREW	1	
9	RHD30111	SCREW	17	
10	RHD30115	SCREW	5	
11	RMX0298	PCB SPACER	1	
12	RYP1248D-S	FRONT PANEL ASS'Y1	1	EE
12	RYP1248E-S	FRONT PANEL ASS'Y1	1	GN, GCS
12	RYP1248G-S	FRONT PANEL ASS'Y1	1	GC
12-1	RKF0690-K	TRAY DOOR	1	
12-2	RGK1777-Q	TRAY ORNAMENT	1	
12-3	VMB3410	TRAY SPRING	1	
12-4	RGU2320-S	OPEN-PLAY BUTTON	1	
12-5	RGU2289-S	POWER BUTTON	1	
12-6	RGU2291A-Q	REC BUTTON	1	
12-7	RMX0302	DOOR DAMPER	1	
12-8	RGK1776-Q	FL ORNAMENT	1	
12-9	RGK1773-S	REC BUTTON RING	1	
12-10	RGL0663A-Q	MEDIA INDICATOR	1	
12-11	RKF0701A-H	PANEL DOOR	1	EE
12-11	RKF0701C-H	PANEL DOOR	1	GN, GCS
12-11	RKF0701D-H	PANEL DOOR	1	GC

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
12-13	VGB0560	PANASONIC BADGE	1	
12-14	RHD26016	SCREW	1	
12-15	RMX0299	DAMPER SHEET	1	
12-20	RGU2321-H	SKIP BUTTON	1	
13	REP3713C	FRONT(R) P.C.B.	1	(RTL)
14	RMC0595	EARTH PLATE	1	
15	RMA1778	FRONT ANGLE	1	
16	XTBS26+10J	SCREW	6	
17	RHD30113	SCREW	2	
18	RKM0508B-S	TOP COVER	1	Δ
20	RMC0607	PC EARTH	1	
21	VXY1855	RAM DRIVE UNIT	1	(RTL)
22	REP3682A	SCART P.C.B.	1	(RTL)
23	RMC0606	PC ANGLE EARTH	1	
31	VWJ1731	FFC(42P)	1	
34	RMA1843	CARD ANGLE	1	
36	VEP73115A	SD CARD P.C.B.	1	(RTL)
36-1	RYQ0520-K	CARD HOLDER ASS'Y	1	
36-2	VXA7883	PC CARD EJECTOR	1	
36-3	XYN2+F6	SCREW	2	
37	VEP73116A	DV JACK P.C.B.	1	(RTL)
41	RGQ0324-K	SHEET	1	
A1	EUR7721KC0	REMOTE CONTROL ASS'Y	1	EE
A1	EUR7721KE0	REMOTE CONTROL ASS'Y	1	GN, GCS
A1	EUR7721KW0	REMOTE CONTROL ASS'Y	1	GC
A1-1	UR77EC2003A	BATTERY COVER	1	
A2	K2KA6CA00001	AV CORD	1	
A3	K2CJ2DA00011	AC CORD	1	GN Δ
A3	RJA0053-3X	AC CORD	1	GC Δ
A3	VJA0664	AC CORD	1	K2CR2DA00004 EE, GC, GCS Δ
A4	VJA1089	RF COAXIAL CABLE	1	K1TWACC00001
A5	RPQF0254	ACCESSORY CASE	1	
A6	RPF0378	POLYETHYLENE BAG(F.B.)	1	
A7	RQCA1004	DISC CAUTION SHEET	1	GN
A7	RQCA1217	DISC CAUTION SHEET	1	EE
A7	RQCA1218	DISC CAUTION SHEET	1	GC, GCS
A7	RQCA1219	DISC CAUTION SHEET	1	EE
A7	RQCA1220	DISC CAUTION SHEET	1	GC, GCS
A8	RQCA1263	PC CARD CAUTION SHEET	1	GN
A9	RQCA1231	PAL PROGRESSIVE SHEET	1	
A10	RQCB1141	CCP CARD	1	GN
A11	RQCC2041	DVD MEDIA SHEET	1	EE
A11	RQCC2042	DVD MEDIA SHEET	1	GC, GN, GCS
A12	RQT7448-R	OPERATING INSTRUCTIONS	1	<IA>EE Δ
A12	RQT7449-G	OPERATING INSTRUCTIONS	1	<IB>GCS Δ
A12	RQT7450-L	OPERATING INSTRUCTIONS	1	<IC>GN Δ
A12	RQT7452-G	OPERATING INSTRUCTIONS	1	<ID>GC Δ
A14	RPQ1594	PAD	1	
PC1	RP67212	PACKING CASE	1	GCS
PC1	RP67213	PACKING CASE	1	EE
PC1	RP67214	PACKING CASE	1	GN
PC1	RP67216	PACKING CASE	1	GC
PC2	RPN1682A-2	CUSHION(A)	1	
PC3	RPN1682B-2	CUSHION(B)	1	
PC4	VPF0505	POLYETHYLENE BAG(UNIT)	1	
n	02	REP3766F		(MAIN P.C.B.)
C1503	ECJ1VB1A105K	10V 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1504	ECJ1XB1C104K	16V 0.1U	1	
C1505	F2A1A470A388	10V 47U	1	
C1512	ECJ1VB0J105K	6.3V 1U	1	
C1513	ECJ1VB1A105K	10V 1U	1	
C1514	ECJ1VB0J105K	6.3V 1U	1	
C1515	ECJ1XB1C104K	16V 0.1U	1	
C1516	ECJ1VB1A105K	10V 1U	1	
C1518	F2A1A470A388	10V 47U	1	
C1519	ECJ1XB1C104K	16V 0.1U	1	
C1520	ECJ1VB1A105K	10V 1U	1	
C1521	ECJ1VB0J105K	6.3V 1U	1	
C1522	ECJ1VC1H331J	50V 330P	1	
C1523	ECJ1VB1A105K	10V 1U	1	
C1524	F2A1A470A388	10V 47U	1	
C1527, 28	ECJ1VB0J105K	6.3V 1U	2	
C1531	F2A1A470A388	10V 47U	1	
C1533, 34	ECJ1VB0J105K	6.3V 1U	2	
C1537	EEUFC1E101S	25V 100U	1	
C1539	F2A0J102A256	6.3V 1000U	1	
C1540	F2A1E4700048	25V 47U	1	
C1541	F2A1A471A211	10V 470U	1	
C1543	F2A1E221A210	25V 220U	1	
C3003	ECJ1VB1H103K	50V 0.01U	1	
C3004	ECEA1AKS221	10V 220U	1	
C3005	ECJ1VB1C333K	16V 0.033U	1	
C3006	ECJ1XB1C104K	16V 0.1U	1	
C3007	ECJ1VB1H103K	50V 0.01U	1	
C3009, 10	ECJ1VB1H103K	50V 0.01U	2	
C3012-17	ECJ1VB1H103K	50V 0.01U	6	
C3018	ECEA0JKS101	6.3V 100U	1	
C3019-21	ECJ1VB1H103K	50V 0.01U	3	
C3022	ECEA0JKS220	6.3V 22U	1	
C3023	ECEA0JKN470	6.3V 47U	1	
C3024	ECEA0JKS220	6.3V 22U	1	
C3025-29	ECEA0JKN470	6.3V 47U	5	
C3030, 31	ECJ1VB1H103K	50V 0.01U	2	
C3032	ECEA0JKS331	6.3V 330U	1	
C3033	ECEA1CKS220	16V 22U	1	
C3034	ECEA0JKS331	6.3V 330U	1	
C3035	ECEA1CKS220	16V 22U	1	
C3036	ECEA0JKS331	6.3V 330U	1	
C3037	ECEA1CKS220	16V 22U	1	
C3038	ECJ1XB1C104K	16V 0.1U	1	
C3039	ECJ1VB0J105K	6.3V 1U	1	
C3040	ECJ1VB1H103K	50V 0.01U	1	
C3041	ECEA1AKS221	10V 220U	1	
C3042	ECJ1VB0J105K	6.3V 1U	1	
C3045, 46	ECEA0JKN470	6.3V 47U	2	
C3047	ECJ1XB1C104K	16V 0.1U	1	
C3048	ECA0JM102	6.3V 1000U	1	
C3049	ECEA0JKS101	6.3V 100U	1	
C3051	ECA0JM102	6.3V 1000U	1	
C3052	ECEA0JKS101	6.3V 100U	1	
C3053	ECA0JM102	6.3V 1000U	1	
C3054	ECEA0JKS101	6.3V 100U	1	
C3055, 56	ECEA0JKS331	6.3V 330U	2	
C3057-60	ECJ1VC1H471J	50V 470P	4	
C3061, 62	ECJ1VC1H470J	50V 47P	2	
C3064	ECJ1XB1C104K	16V 0.1U	1	
C3065	ECJ1VB1H103K	50V 0.01U	1	
C3066, 67	ECJ1VB0J105K	6.3V 1U	2	
C3069-71	ECJ1VB1H103K	50V 0.01U	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4003, 04	ECJ1VB1H103K	50V 0.01U	2	
C4005-07	F2A1H1R0A236	50V 1U	3	
C4008	F2A1C221A019	16V 220U	1	
C4010	F2A1H1R0A236	50V 1U	1	
C4012	ECJ2VB1E104K	25V 0.1U	1	
C4014	F2A1H100A236	50V 10U	1	
C4017	F2A1H100A236	50V 10U	1	
C4019	F2A1C100A019	16V 10U	1	
C4021	F2A1C100A019	16V 10U	1	
C4022	ECJ1XB1C104K	16V 0.1U	1	
C4023	F2A1H1R0A236	50V 1U	1	
C4024	F2A1C471A236	16V 470U	1	
C4025	F2A1H1R0A236	50V 1U	1	
C4026	ECJ1VF1C104Z	16V 0.1U	1	
C4027	F2A1H1R0A236	50V 1U	1	
C4029	F2A1C471A236	16V 470U	1	
C4030	ECJ1VF1C104Z	16V 0.1U	1	
C4031	F2A1H1R0A236	50V 1U	1	
C4033, 34	F2A1C4700011	16V 47U	2	
C4039, 40	ECJ1VC1H100C	50V 10P	2	
C4052	ECJ1VF1C104Z	16V 0.1U	1	
C4053	ECJ1XB1C104K	16V 0.1U	1	
C4054	F2A0J470A179	6.3V 47U	1	
C4055	ECJ1VF1C104Z	16V 0.1U	1	
C4056	F2A0J471A247	6.3V 470U	1	
C4057	ECJ2VC1H680J	50V 68P	1	
C4059	ECQV1H104JL	50V 0.1U	1	
C4060	ECJ2VC1H680J	50V 68P	1	
C4061	ECJ1VF1C104Z	16V 0.1U	1	
C4062	ECA1AM221	10V 220U	1	
C4063, 64	F2A1C4700011	16V 47U	2	
C4065	ECJ1VF1C104Z	16V 0.1U	1	
C4067	F2A0J470A179	6.3V 47U	1	
C4069	ECJ1VF1C104Z	16V 0.1U	1	
C4070	ECA1AM221	10V 220U	1	
C4072	ECA1AM221	10V 220U	1	
C4074, 75	ECJ1VF1C104Z	16V 0.1U	2	
C4076	F2A1C471A236	16V 470U	1	
C4077	ECJ1VF1C104Z	16V 0.1U	1	
C4082, 83	ECJ2VC1H561J	50V 560P	2	
C4091	ECJ1VF1C104Z	16V 0.1U	1	
C4092	F2A1C221A019	16V 220U	1	
C7401	F2A1C471A236	16V 470U	1	
C7402	ECJ1VB1H103K	50V 0.01U	1	
C7403	F2A0J470A179	6.3V 47U	1	
C7404	ECEA0JKS470	6.3V 47U	1	
C7405, 06	ECJ1XB1C104K	16V 0.1U	2	
C7407	ECJ1VB1H103K	50V 0.01U	1	
C7408	ECJ1XB1C104K	16V 0.1U	1	
C7409	ECJ1VB1H103K	50V 0.01U	1	
C7411, 12	ECJ1VB1H103K	50V 0.01U	2	
C7414	ECEA1HKS010	50V 1U	1	
C7415-17	ECEA0JKS470	6.3V 47U	3	
C7418, 19	ECJ1VC1H330J	50V 33P	2	
C7420	ECJ1XB1C104K	16V 0.1U	1	
C7421, 22	ECJ1VB1H103K	50V 0.01U	2	
C7423	ERJ3GEY0R00V	1/10W 0	1	
C7424	ECEA0JKS470	6.3V 47U	1	
C7425	ECJ1VC1H101J	50V 100P	1	
C7426	ECJ1XB1C104K	16V 0.1U	1	
C7427	ECJ1VB1H222K	50V 2200P	1	
C7428	ECJ2VB1H103K	50V 0.01U	1	
C7429	ECJ1XB1C104K	16V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7431-33	ECEA0JKS470	6.3V 47U	3	
C7439	ECJ1XB1C104K	16V 0.1U	1	
C7440	ECEA0JKS470	6.3V 47U	1	
C7441	ECJ1XB1C104K	16V 0.1U	1	
C7502-04	F2A0J470A012	6.3V 47U	3	
C7507	VCE0073-T	CAPACITOR	1	F4D55473A005
C7508, 09	ECJ1VC1H221J	50V 220P	2	
C7511	ECJ1VF1C104Z	16V 0.1U	1	
C7512	ECJ1VC1H470J	50V 47P	1	
C7513	ECJ1VC1H471J	50V 470P	1	
C7514	ECJ1VC1H470J	50V 47P	1	
C7515	ECJ1VC1H471J	50V 470P	1	
C7516, 17	ECJ1XB1C104K	16V 0.1U	2	
C7525	ECJ1VC1H101J	50V 100P	1	
C7526	ECJ1XB1C104K	16V 0.1U	1	
C7527	F2A0J470A012	6.3V 47U	1	
C7528	ECJ1VF1C104Z	16V 0.1U	1	
C7529	F2A0J470A012	6.3V 47U	1	
C7546	ECJ1XB1C104K	16V 0.1U	1	
C7550	ECJ1VB1H103K	50V 0.01U	1	
C7551	ECA1HHG100	50V 10U	1	
C7552	ECJ1VF1H104Z	50V 0.1U	1	
C7555	F2A1E221A210	25V 220U	1	
C7556	ECA1CHG221	16V 220U	1	
C7558	ECA1VHG470	35V 47U	1	
C7559	ECQB1H223KF3	50V 0.022U	1	
C7560	ECA1HHG100	50V 10U	1	
C7562	ECJ2YB0J475K	6.3V 4.7U	1	
C7563	ECJ1VC1H101J	50V 100P	1	
C7565	ECJ2YB0J475K	6.3V 4.7U	1	
C7566, 67	ECJ1XB1C104K	16V 0.1U	2	
C7568	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7569	ECJ1VF1C104Z	16V 0.1U	1	
C7580-82	ECJ1VC1H100C	50V 10P	3	
C7583	ECJ1VC1H101J	50V 100P	1	
C7584, 85	ECJ1VC1H180J	50V 18P	2	
C7586	ECJ1VC1H220J	50V 22P	1	
C7587	ECJ1VC1H180J	50V 18P	1	
C7588	ECJ1VB1H103K	50V 0.01U	1	
C7589	ECJ1VF1C104Z	16V 0.1U	1	
C7590	F2A0J470A012	6.3V 47U	1	
C7592, 93	ECJ1VC1H100C	50V 10P	2	
C7594	F2A0J470A012	6.3V 47U	1	
C7595	ECJ1VB1H103K	50V 0.01U	1	
C7596	ECJ1VC1H470J	50V 47P	1	
C7597	ECJ1VB1H103K	50V 0.01U	1	
C7598	ECJ1VC1H470J	50V 47P	1	
C7599	ECJ1XB1C104K	16V 0.1U	1	
C7600	ECJ1VC1H470J	50V 47P	1	
C7601	ECJ1XB1C104K	16V 0.1U	1	
C7602	ECJ1VB1H103K	50V 0.01U	1	
C7603	F2A0J470A012	6.3V 47U	1	
C7604	ECJ1XB1C104K	16V 0.1U	1	
C7605, 06	ECJ1VC1H100C	50V 10P	2	
C7607	ECJ1VB1H103K	50V 0.01U	1	
C7608	F2A0J470A012	6.3V 47U	1	
C7609, 10	ECJ1VC1H100C	50V 10P	2	
C7611-13	ECJ1VB1H103K	50V 0.01U	3	
C7618	ECJ1XB1C104K	16V 0.1U	1	
C7620	ECJ1VB1H103K	50V 0.01U	1	
C7626	ECJ1VB1H103K	50V 0.01U	1	
C7633	VCEA0JBS101	6.3V 100U	1	F2A0J1010003
C7636	ECJ1VB0J105K	6.3V 1U	1	
C7637	ECJ1VB1H103K	50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7639	ECJ1VF1C104Z	16V 0.1U	1	
C7646	ECJ1VB1H103K	50V 0.01U	1	
C7650	ECJ1VB1H103K	50V 0.01U	1	
C7652	ECJ1XB1C104K	16V 0.1U	1	
D1501	MA165TA5	DIODE	1	MA2C16500E
D4001	MA165TA5	DIODE	1	MA2C16500E
D4005, 06	MA32142D0RG	DIODE	2	
D7401	MA165TA5	DIODE	1	MA2C16500E
D7402	MA4300N-M	DIODE	1	MAZ4300NM
D7403	MA165TA5	DIODE	1	MA2C16500E
D7501	MAZ4240NMF	DIODE	1	
D7502	B0AAGM000003	DIODE	1	B0AAGM000007
D7504, 05	MA2C18500E	DIODE	2	
D7506	MAZ4300NLF	DIODE	1	
D7507	1SS355	DIODE	1	B0ACCK000005
D7508	B0JDCE000002	DIODE	1	
DP7501	A2BD00000074	FL DISPLAY TUBE	1	
DU7402	ENG47329G1Y	TV TUNERS	1	△
IC1502	C0DBAHG00013	IC	1	
IC1505	C0CBCDD00008	IC	1	
IC1506	C0CBCDD00002	IC	1	
IC1507	C0CBCDD00006	IC	1	
IC1508	C0DBEGD00002	IC	1	
IC1509	C0DBEFG00003	IC	1	
IC1510	C0DBEGG00003	IC	1	
IC3001	C1AB00001979	IC	1	
IC3002	C1AB00001486	IC	1	
IC3003	C9ZB00000377	IC	1	
IC4001	C1AB00001920	IC	1	
IC4005	TC7W04FTE12L	IC	1	C0JBAB000178
IC4006	K7AAB0000013	IC	1	
IC4007	TC7SET08F	IC	1	C0JBAA000284
IC4009	C0ABBB000216	IC	1	
IC4010	C0DBZJE00003	IC	1	
IC4011	C0CBCDD00002	IC	1	
IC4012	C0ABBB000118	IC	1	
IC4013	AN78L09M	IC	1	
IC7401	C0DBZJE00003	IC	1	
IC7402	C0DBCHD00002	IC	1	
IC7403	C0DBZHG00016	IC	1	
IC7501	C2CBJG000439	IC	1	
IC7502	C0HBB0000033	IC	1	
IC7503	C0EBJ0000110	IC	1	
IC7504	C3EBJC000038	IC	1	
IC7505	C0EBE0000194	IC	1	
IC7506	NJM2904M	IC	1	C0ABBA000021
IC7508	C0EBE0000218	IC	1	
IP7501	ICP-N10T104	IC PROTECTOR	1	B1ZAZ0000035 △
JK3001	K1U822B00003	JACK, OUT, AV4 IN	1	
JK7501	K1U415B00001	JACK, AV3	1	
K7401	ERJ3GEY0R00V	1/10W 0	1	
K7508	ERJ3GEY0R00V	1/10W 0	1	
K7510, 11	ERJ3GEY0R00V	1/10W 0	2	
K7514, 15	ERJ3GEY0R00V	1/10W 0	2	
L1501	G0A220G00018	COIL 22UH	1	
L4002	ELESE220KA	COIL 22UH	1	
L7401	G0A220G00018	COIL 22UH	1	
L7403	G0C2R2JA0019	COIL 2.2UH	1	
LB1501	J0JHC0000032	COIL	1	
LB1503	J0JHC0000032	COIL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
LB1504, 05	J0JKB0000003	COIL	2	
LB3002-04	J0JHC0000032	COIL	3	
LB3005	J0JBC0000011	COIL	1	
LB3006	J0JGC0000020	COIL	1	
LB3007	J0JBC0000011	COIL	1	
LB3008	J0JGC0000020	COIL	1	
LB4001	J0JGC0000020	COIL	1	
LB7402	J0JHC0000032	COIL	1	
LB7404-10	J0JHC0000032	COIL	7	
LB7501, 02	ERJ3GEY0R00V	1/10W 0	2	
LB7503	J0JKB0000037	COIL	1	
LB7504	J0JGC0000020	COIL	1	
LB7506, 07	J0JGC0000020	COIL	2	
LB7508	VLP0175	COIL	1	J0JCC0000060
LB7509-11	J0JGC0000020	COIL	3	
LB7512-14	J0JCC0000103	COIL	3	
LB7515, 16	J0JBC0000011	COIL	2	
P1501	K1KA08A00427	CONNECTOR(8P)	1	
P1502	K1KA23A00004	CONNECTOR(23P)	1	
P7402	K1KA88A00002	CONNECTOR(88P)	1	
P7503	K1KA03A00173	CONNECTOR(3P)	1	
P7504	K1KB12B00049	CONNECTOR(12P)	1	
PP7401	VJP3042G020W	CONNECTOR(20P)	1	K1KA20A000203
PP7402	VJP3042G018W	CONNECTOR(18P)	1	K1KA18A000041
PP7403	K1KA15A00064	CONNECTOR(15P)	1	
Q3006, 07	2SB1218A	TRANSISTOR	2	
Q3009, 10	2SB1218A	TRANSISTOR	2	
Q4004	2SB1218A	TRANSISTOR	1	
Q4006-09	2SD132800L	TRANSISTOR	4	
Q7401	2SD1819AWL	TRANSISTOR	1	
Q7402	2SB1218A	TRANSISTOR	1	
Q7404-06	2SD0601A	TRANSISTOR	3	
Q7503	2SD1994B	TRANSISTOR	1	
Q7505	2SB0709ARL	TRANSISTOR	1	
Q7506	2SD1819AWL	TRANSISTOR	1	
Q7507	2SB0709ARL	TRANSISTOR	1	
Q7508	2SD1819AWL	TRANSISTOR	1	
Q7511	2SD0601A	TRANSISTOR	1	
Q7512	2SD0874A0L	TRANSISTOR	1	
Q7517	2SD0601A	TRANSISTOR	1	
Q7518	2SD1819AWL	TRANSISTOR	1	
QR3002, 03	UN5212TX	TRANSISTOR	2	UNR521200L
QR4002-05	UN5211	TRANSISTOR	4	UNR5211
QR4012	UN5113TW	TRANSISTOR	1	
QR7401-03	UN5213TX	TRANSISTOR	3	UNR521300L
QR7404	UNR511400L	TRANSISTOR	1	
QR7405	UN5213TX	TRANSISTOR	1	UNR521300L
QR7501	UN5113TW	TRANSISTOR	1	
QR7502	UN5212TX	TRANSISTOR	1	UNR521200L
QR7503	UN5214TX	TRANSISTOR	1	UNR521400L
R1501	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
R1502	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R1503	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R1504	ERDS2FJ271	1/4W 270	1	
R1506	ERDS2FJ271	1/4W 270	1	
R1507	ERJ3RED330	1/16W 33	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R1508	ERJ3RBD201	1/16W 200	1	
R1509	ERJ3RBD102V	1/16W 1K	1	
R1510	ERJ3RED220	1/16W 22	1	
R1511	ERJ3RBD182V	1/16W 1.8K	1	
R1512	ERJ3RBD202	1/16W 2K	1	
R1515, 16	ERDS2FJ271	1/4W 270	2	
R3026	ERJ3RED150V	1/16W 15	1	
R3027, 28	ERJ3RBD471V	1/16W 470	2	
R3029	ERJ3RBD104	1/16W 100K	1	
R3030	ERJ3GEYJ105V	1/10W 1M	1	
R3037	ERJ3GEYJ102V	1/10W 1K	1	
R3038	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R3044	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3045, 46	ERJ3GEYJ221V	1/10W 220	2	
R3047	ERJ3RBD153	1/16W 15K	1	
R3048	ERJ3RBD182V	1/16W 1.8K	1	
R3049	ERJ3RED330	1/16W 33	1	
R3050	ERJ3RBD182V	1/16W 1.8K	1	
R3051	ERJ3RED330	1/16W 33	1	
R3052, 53	ERJ3GEYJ102V	1/10W 1K	2	
R3054-59	ERJ6GEYJ750V	1/8W 75	6	
R3060	ERJ3EKF75R0	1/10W 75	1	
R4001	ERJ6GEYJ102V	1/8W 1K	1	
R4002	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4004	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4005-07	ERJ3GEY0R00V	1/10W 0	3	
R4008, 09	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002
R4010, 11	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R4012	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R4013	ERJ6GEYJ102V	1/8W 1K	1	
R4014	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4015	ERJ6GEYJ102V	1/8W 1K	1	
R4017	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R4018	ERJ3GEY0R00V	1/10W 0	1	
R4019, 20	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R4021, 22	ERJ3GEYJ823V	1/10W 82K	2	D0GB823JA002
R4023	ERJ6GEYJ102V	1/8W 1K	1	
R4046, 47	D0HB752ZA002	1/10W 7.5K	2	
R4053	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4055	D0HB153ZA002	1/10W 15K	1	
R4056	JAR0816P103D	1/16W 10K	1	D0HB103ZA002
R4057	D0HB153ZA002	1/10W 15K	1	
R4060, 61	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R4066, 67	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4070	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4071	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4074	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R4076	ERJ3GEYJ821V	1/10W 820	1	
R4077	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4078, 79	ERJ3GEYJ272V	1/10W 2.7K	2	
R4080	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R4081	ERJ3GEYJ821V	1/10W 820	1	
R4087	ERJ3GEYJ102V	1/10W 1K	1	
R4088, 89	ERJ3GEYJ272V	1/10W 2.7K	2	
R4090	ERJ3GEYJ221V	1/10W 220	1	
R4093	ERJ3GEYJ221V	1/10W 220	1	
R4099	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7401, 02	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7403	ERJ3GEYJ392V	1/10W 3.9K	1	
R7404	ERJ3GEYJ472V	1/10W 4.7K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7405	ERDS2FJ471	1/4W 470	1	
R7406	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7407	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7408	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7411	ERG2SJ471E	2W 470	1	
R7412	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7413, 14	ERJ3GEYJ271V	1/10W 270	2	
R7415, 16	ERJ3GEYJ471V	1/10W 470	2	
R7417	ERG2SJ471E	2W 470	1	
R7418	ERJ3GEYJ221V	1/10W 220	1	
R7420	ERJ3GEYJ102V	1/10W 1K	1	
R7421, 22	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R7427	ERJ3GEYJ102V	1/10W 1K	1	
R7428	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7429	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7430	ERJ3GEYJ102V	1/10W 1K	1	
R7431	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7432	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7433	ERJ3GEYJ102V	1/10W 1K	1	
R7434	ERJ3GEYJ333V	1/10W 33K	1	D0GB333JA002
R7435	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7438-42	ERJ3GEYJ220V	1/10W 22	5	
R7444	ERJ3GEYJ681V	1/10W 680	1	D0GB681JA002
R7505	ERJ3RBD273V	1/16W 27K	1	
R7507	ERDS2FJ331	1/4W 330	1	
R7508	ERDS2FJ5R6	1/4W 5.6	1	
R7510	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7513	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7514	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7516	ERJ3GEYJ102V	1/10W 1K	1	
R7517	ERJ3GEYJ104	1/10W 100K	1	
R7518	ERJ3GEYJ392V	1/10W 3.9K	1	
R7519	ERJ3GEYJ102V	1/10W 1K	1	
R7520	ERJ3GEYJ104	1/10W 100K	1	
R7521	ERJ3GEY6152	1/10W 1.5K	1	
R7522	ERJ3GEY6562V	1/10W 5.6K	1	
R7523	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7529, 30	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002
R7531	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7532	ERJ3GEYJ472V	1/10W 4.7K	1	
R7533	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7534-37	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7538	ERJ3GEYJ472V	1/10W 4.7K	1	
R7539	ERJ3GEYJ104	1/10W 100K	1	
R7540	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R7541	ERJ3GEY0R00V	1/10W 0	1	
R7542	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7543-45	ERJ3GEYJ101	1/10W 100	3	D0GB101JA002
R7546, 47	ERJ3GEYJ472V	1/10W 4.7K	2	
R7548	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7549	ERJ3GEYJ511	1/10W 510	1	
R7550, 51	ERJ3GEYJ202V	1/10W 2K	2	
R7552	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7553	ERJ3GEYJ472V	1/10W 4.7K	1	
R7554	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7556-59	ERJ3GEYJ101	1/10W 100	4	D0GB101JA002
R7561	ERDS2TJ392	1/4W 3.9K	1	
R7563	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7569	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7571-78	ERJ3GEYJ101	1/10W 100	8	D0GB101JA002
R7579, 80	ERJ3GEYJ221V	1/10W 220	2	
R7581	ERJ3GEY6393V	1/10W 39K	1	
R7582	ERJ3GEY6433	1/10W 43K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7583, 84	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7585, 86	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002
R7588	ERJ3GEYJ472V	1/10W 4.7K	1	
R7589-91	ERJ3RBD822	1/10W 8.2K	3	
R7594	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7595, 96	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R7597	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R7598	ERJ3GEYJ181V	1/10W 180	1	
R7599	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7600, 01	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R7602	ERJ3GEYJ821V	1/10W 820	1	
R7603	ERJ3GEYJ183V	1/10W 18K	1	D0GB183JA002
R7604-06	ERJ3EKF75R0	1/10W 75	3	
R7607	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7608	ERJ3GEYJ104	1/10W 100K	1	
R7609-13	ERJ3GEYJ101	1/10W 100	5	D0GB101JA002
R7616	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7620	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R7621	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7625-30	ERJ3GEYJ101	1/10W 100	6	D0GB101JA002
R7631, 32	ERJ3GEYJ102V	1/10W 1K	2	
R7633	ERJ3RBD103V	1/16W 10K	1	
R7634	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7635-37	ERJ3GEYJ103V	1/10W 10K	3	D0GB103JA002
R7638	ERJ3GEYJ472V	1/10W 4.7K	1	
R7639	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R7640	ERJ3GEYJ225V	1/10W 2.2M	1	
R7641	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R7642	ERJ3GEYJ224V	1/10W 220K	1	D0GB224JA002
R7643	ERJ3GEYJ104	1/10W 100K	1	
R7644	ERJ3GEYJ221V	1/10W 220	1	
R7645	ERJ3GEYJ104	1/10W 100K	1	
R7646, 47	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
S7501	K0F111B00044	SWITCH, POWER	1	
T7501	ETS13TB119AP	TRANSFORMER	1	△
W500-05	ERJ3GEY0R00V	1/10W 0	6	
W507-23	ERJ3GEY0R00V	1/10W 0	17	
W529, 30	ERJ3GEY0R00V	1/10W 0	2	
W534-37	ERJ3GEY0R00V	1/10W 0	4	
W538, 39	ERJ66EY0R00V	1/8W 0	2	
W540-42	ERJ3GEY0R00V	1/10W 0	3	
X7501	H0D100500016	CRYSTAL OSCILLATOR	1	
X7502	H0A327200026	OSCILLATOR	1	
ZJ3001	VJR0978	EARTH ANGLE	1	K9ZZ00000424
ZJ7401-04	VJR0978	EARTH ANGLE	4	K9ZZ00000424
ZJ7501	VJR0978	EARTH ANGLE	1	K9ZZ00000424
n	03	VEP07A51A		(NICAM DECODER P.C.B.)
C7301	ECJ1VF1C104Z	16V 0.1U	1	
C7302	ERJ3GEY0R00V	1/10W 0	1	
C7303	ECEA0JKS101	6.3V 100U	1	
C7305	ECEA0JKS101	6.3V 100U	1	
C7306	ECJ1VF1H103Z	50V 0.01U	1	
C7307, 08	ECJ1VC1H100C	50V 10P	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7309-11	ECJ1VC1H101J	50V 100P	3	
C7312, 13	ECEA1CKS100	16V 10U	2	
C7314	ECJ1VF1C104Z	16V 0.1U	1	
C7317	ECEA1CKA470	16V 47U	1	
C7318	ECEA1CKS100	16V 10U	1	
C7323	ECJ1VC1H102J	50V 1000P	1	
C7324	ECJ1VF1C104Z	16V 0.1U	1	
C7329	ERJ3GEY0R00V	1/10W 0	1	
C7330	ERJ3GEYJ822V	1/10W 8.2K	1	D0GB822JA002
C7332	ECJ1VF1C104Z	16V 0.1U	1	
C7333	ECJ1XB1C104K	16V 0.1U	1	
C7334	ECEA1HKS2R2	50V 2.2U	1	
C7335	ECJ1VF1C104Z	16V 0.1U	1	
IC7301	TDA9874AH	IC	1	C1AB00001404
IC7302	PST7043-T	IC	1	C0EAH0000051
K7301-03	ERJ3GEY0R00V	1/10W 0	3	
K7305	ERJ3GEY0R00V	1/10W 0	1	
L7303	G0C1R0JA0019	COIL 1UH	1	
LB7301, 02	J0JCC0000124	COIL	2	
LB7303	J0JCC0000080	COIL	1	
PK7301	VJR0777B007W	CONNECTOR(7P)	1	K1MM07B00002
PK7302	VJR0777B006W	CONNECTOR(6P)	1	K1MM06B00002
R7301	ERJ3GEY0R00V	1/10W 0	1	
R7304	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R7307	ERJ3GEY0R00V	1/10W 0	1	
R7309	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R7311	ERJ3GEYJ221V	1/10W 220	1	
R7312, 13	ERJ3RBD221	1/10W 220	2	
R7314, 15	ERJ3GEY0R00V	1/10W 0	2	
R7317	ERJ3GEY0R00V	1/10W 0	1	
R7319	ERJ3GEY0R00V	1/10W 0	1	
R7322	ERJ3GEY0R00V	1/10W 0	1	
R7324, 25	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
W6, W7	ERJ3GEY0R00V	1/10W 0	2	
X7301	H0D245500016	CRYSTAL OSCILLATOR	1	
n	04	VEP07A71N		(VIF P.C.B.)
C0701	ECEA1HKS010	50V 1U	1	
C0702	ERJ3GEYJ102V	1/10W 1K	1	
C0703	ECEA1HKS010	50V 1U	1	
C0704	ECJ1VB1E683K	25V 0.0683U	1	
C0705	ECJ1VB1E104K	25V 0.1U	1	
C0706	ECJ2XB1H333K	50V 0.033U	1	
C0707	ECEA1HKAR47B	50V 0.47U	1	
C0709, 10	ECJ1VF1H103Z	50V 0.01U	2	
C0711	ECEA1CKS220	16V 22U	1	
C0712	ECJ1VF1C104Z	16V 0.1U	1	
C0713	ECEA0JKS101	6.3V 100U	1	
C0714	ECJ2XF1C105Z	16V 1U	1	
C0717	ECJ1VC1H180J	50V 18P	1	
C0721	ECUV1H470JCG	50V 47P	1	ECJ2VC1H470J
C0724	ECJ2VF1H103Z	50V 0.01U	1	
C0725	ECJ1VC1H030C	50V 3P	1	
C0727	ECJ1VC1H390J	50V 39P	1	
C0732	ECJ1VC1H101J	50V 100P	1	
IC0701	C1AB00001924	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
K0709	ERJ3GEY0R00V	1/10W 0	1	
L0701	ELJNAR22JF	COIL 22UH	1	
L0703	ELJNA3R3JF	COIL 3.3UH	1	
LB0701	J0JBC0000041	COIL	1	
PK0701	VJR0826E009W	CONNECTOR(9P)	1	K1MR09A00028
PP0701	VJP3589E004B	CONNECTOR(4P)	1	K1KA04B00135
Q0702	2SB0709ARL	TRANSISTOR	1	
R0702	ERJ3GEYJ104	1/10W 100K	1	
R0703	ERJ3GEYJ102V	1/10W 1K	1	
R0704	ERJ6GEYJ105	1/8W 1M	1	
R0705	ERJ6GEYJ472V	1/8W 4.7K	1	
R0707	ERJ3GEYJ393V	1/10W 39K	1	D0GB393JA002
R0708	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0709	ERJ3GEY0R00V	1/10W 0	1	
R0711	ERJ3GEYJ510	1/10W 51	1	
R0714	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R0715	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R0719	ERJ3GEYJ472V	1/10W 4.7K	1	
R0725	ERJ6GEYJ101V	1/8W 100	1	
R0726	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R0731	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R0732	ERJ3GEY0R00V	1/10W 0	1	
R0738	ERJ3GEY0R00V	1/10W 0	1	
R0740	ERJ3GEYJ271V	1/10W 270	1	
R0741	ERJ3GEYJ221V	1/10W 220	1	
R0742	ERJ6GEYJ471V	1/8W 470	1	
R0743	ERJ6GEYJ820V	1/8W 82	1	
R0747, 48	ERJ3GEYJ271V	1/10W 270	2	
VR0701	EVNCA003B14	V.R.	1	
W1-W3	ERJ8GEY0R00V	1/4W 0	3	
W4	ERJ6GEY0R00V	1/8W 0	1	
W5, W6	ERJ8GEY0R00V	1/4W 0	2	
W7, W8	ERJ6GEY0R00V	1/8W 0	2	
W9	ERJ8GEY0R00V	1/4W 0	1	
W10	ERJ3GEY0R00V	1/10W 0	1	
W12	ERJ3GEY0R00V	1/10W 0	1	
W13, 14	ERJ8GEY0R00V	1/4W 0	2	
W16	ERJ8GEY0R00V	1/4W 0	1	
X0701	VLF1430	FILTER	1	J0B3955A0001
X0702	VLF1431	FILTER	1	J0B4055A0001
X0704	VLF1497	FILTER	1	
n	05	RFKBE65EE/GC/GCS/GN		(DIGITAL P.C.B.)
C3401	ECJ1VB0J105K	6.3V 1U	1	
C3402	ECJ0EC1H220J	50V 22P	1	
C3403	ECJ0EB1A104K	10V 0.1U	1	
C3404, 05	ECJ0EC1H220J	50V 22P	2	
C3406	ECJ0EB1A104K	10V 0.1U	1	
C3407, 08	ECJ0EC1H100D	50V 10P	2	
C3410	ECJ0EB1C103K	16V 0.01U	1	
C3411	ECST0JX476R	6.3V 47U	1	
C3413	ECJ0EB1A104K	10V 0.1U	1	
C3417-19	ECJ1VB0J105K	6.3V 1U	3	
C3420	ECJ0EB1C103K	16V 0.01U	1	
C3421	ECJ0EB1A104K	10V 0.1U	1	
C3422	ECJ0EB1C103K	16V 0.01U	1	
C3423-28	ECJ0EB1A104K	10V 0.1U	6	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3429, 30	ECJ2FB0J106K	6.3V 10U	2	
C3431	ECJ0EB1A104K	10V 0.1U	1	
C3432	ECJ1VB0J105K	6.3V 1U	1	
C3433	ECJ0EB1A104K	10V 0.1U	1	
C3435, 36	ECJ0EB1A104K	10V 0.1U	2	
C3440	EEH0B0J101P	6.3V 100P	1	
C3441	ECJ0EB1A104K	10V 0.1U	1	
C3502	ECJ0EB1C103K	16V 0.01U	1	
C4411	ECST1AY106R	10V 10U	1	
C4412	EEH0B0J470R	6.3V 47P	1	
C4413	EEH0B0J101P	6.3V 100P	1	
C4414, 15	ECJ0EF1C104Z	16V 0.1U	2	
C4416	F2H0J331A016	6.3V 330U	1	
C4417	ECJ0EF1C104Z	16V 0.1U	1	
C4418	EEH0B0J101P	6.3V 100P	1	
C4421-26	ECJ0EB1E102K	25V 1000P	6	
C4427	EEH0B0J470R	6.3V 47P	1	
C4428	ECJ0EF1C104Z	16V 0.1U	1	
C4429	ECJ0EB1A104K	10V 0.1U	1	
C4430	ECST1AY106R	10V 10U	1	
C4431, 32	ECJ0EF1C104Z	16V 0.1U	2	
C4433	EEH0B1C100R	16V 10P	1	
C4434	ECJ0EF1C104Z	16V 0.1U	1	
C6001	ECJ0EF1C104Z	16V 0.1U	1	
C6002	ECJ2FB0J106K	6.3V 10U	1	
C6003	ECJ0EB1C103K	16V 0.01U	1	
C9001, 02	ECJ0EC1H470J	50V 47P	2	
C37002, 03	ECJ0EF1C104Z	16V 0.1U	2	
C37004, 05	ECUM1H080DCQ	50V 80P	2	
C37006	ECJ0EB1H271K	25V 270P	1	
C37007	ECJ0EB1A104K	10V 0.1U	1	
C37008	ECJ1VB0J105K	6.3V 1U	1	
C37009	EEH0B0J470R	6.3V 47P	1	
C50001	ECJ1VB0J105K	6.3V 1U	1	
C50002	ECJ3YB0J226M	6.3V 22U	1	
C50003	ECJ0EF1C104Z	16V 0.1U	1	
C50004, 05	ECJ0EB1A104K	10V 0.1U	2	
D3401, 02	MA3S132E0L	DIODE	2	
D4401	MA3Z142K0LG	DIODE	1	
FL3401, 02	F1H0J4740004	FILTER	2	
FL3404	F1H0J4740004	FILTER	1	
FL3406, 07	F1H0J4740004	FILTER	2	
FL3409-12	F1H0J4740004	FILTER	4	
FL3414-26	F1H0J4740004	FILTER	13	
FL3429	F1H0J4740004	FILTER	1	
FL3431	F1H0J4740004	FILTER	1	
FL3433-35	F1H0J4740004	FILTER	3	
FL3501, 02	F1H0J4740004	FILTER	2	
FL3505-16	F1H0J4740004	FILTER	12	
FL4403-05	F1H0J4740004	FILTER	3	
FL6001-06	F1H0J4740004	FILTER	6	
FL6008-17	F1H0J4740004	FILTER	10	
FL6020-23	F1H0J4740004	FILTER	4	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
FL6701-03	F1H0J4740004	FILTER	3	
FL37001-08	F1H0J4740004	FILTER	8	
FL37010-13	F1H0J4740004	FILTER	4	
FL50001-06	F1H0J4740004	FILTER	6	
FP3501	K1MN40A00022	CONNECTOR(40P)	1	
IC3401	AN13310BAVB	IC	1	
IC3402	C3ABMG000092	IC	1	
IC3404	MN85573R	IC	1	
IC3406	C1DB00001110	IC	1	
IC3408	C3ABPJ000052	IC	1	
IC3409	C0DBZGC00066	IC	1	
IC3501	MN88302R	IC	1	
IC3502	C3ABRG000036	IC	1	
IC4404	C0FBBK000035	IC	1	
IC4405	C0ABBB000105	IC	1	
IC4406	C0FBAK000008	IC	1	
IC4407	C0JBAA000257	IC	1	
IC4408	C0JBAD000107	IC	1	
IC4409	C0CBCBD00002	IC	1	
IC6001	MN2DS0011-HR	IC	1	
IC6002	C0EBE0000130	IC	1	
IC6003	C3CBLD000091	IC	1	
IC6004	74LVC244APWL	IC	1	C0JBAZ001466
IC6005	C3ABRG000036	IC	1	
IC6701	C1ZBZ0002433	IC	1	
IC6703	RFKBE65EE	DIGITAL P.C.B.	1	EE
IC6703	RFKBE65GC	DIGITAL P.C.B.	1	GC
IC6703	RFKBE65GCS	DIGITAL P.C.B.	1	GCS
IC6703	RFKBE65GN	DIGITAL P.C.B.	1	GN
IC37001	MN673748YD	IC	1	
IC37003, 04	C0JBAR000332	IC	2	
IC37005	C3ABMG000193	IC	1	
IC50001, 02	C3ABPG000067	IC	2	
IC50003	C0JBAB000474	IC	1	
LB3404, 05	J0JHC0000032	COIL	2	
LB3408, 09	J0JHC0000032	COIL	2	
LB3501	J0JHC0000032	COIL	1	
LB3502, 03	J0JHC0000045	COIL	2	
LB4401-04	J0JGC0000020	COIL	4	
LB4405	J0JHC0000032	COIL	1	
LB6001, 02	J0JHC0000032	COIL	2	
LB9001, 02	J0JHC0000032	COIL	2	
LB9006, 07	J0JCC0000103	COIL	2	
LB9008	J0JHC0000045	COIL	1	
LB9009	J0JHC0000046	COIL	1	
LB37001	J0JHC0000032	COIL	1	
LB50001-05	J0JHC0000032	COIL	5	
P3501	K1KA70A00039	CONNECTOR(70P)	1	
P6002	K1KA06A00394	CONNECTOR(6P)	1	
P9001	K1KB88A00002	CONNECTOR(88P)	1	
PS37001	K1KB06A00090	CONNECTOR(6P)	1	
Q6001, 02	B1ABCF000114	TRANSISTOR	2	
Q6701-05	B1ABCF000114	TRANSISTOR	5	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q50001-05	B1ADCF000081	TRANSISTOR	5	
QR3502, 03	UN5213TX	TRANSISTOR	2	UNR521300L
R3405	ERJ2GEJ103	1/16W 10K	1	
R3407	ERJ2GE0R00X	1/16W 0	1	
R3409	ERJ2GE0R00X	1/16W 0	1	
R3410, 11	ERJ2GEJ101	1/16W 100	2	
R3412	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3414	ERJ2GEJ330X	1/16W 33	1	
R3416	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3417, 18	ERJ2GEJ103	1/16W 10K	2	
R3419-23	ERJ2GEJ220X	1/16W 22	5	ERJ2RMJ220X
R3427	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3430	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3432-34	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3435, 36	ERJ2GEJ470	1/16W 47	2	
R3438	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3440	ERJ2GEJ103	1/16W 10K	1	
R3442	ERJ2GEJ103	1/16W 10K	1	
R3443-45	ERJ2GE0R00X	1/16W 0	3	
R3446	ERJ2GEJ181	1/16W 180	1	
R3447	ERJ2RHD682	1/16W 6.8K	1	
R3448	ERJ2GEJ562X	1/16W 5.6K	1	
R3449	ERJ2RHD682	1/16W 6.8K	1	
R3450	ERJ2GEJ104	1/16W 100K	1	
R3451	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3452	ERJ2GE0R00X	1/16W 0	1	
R3453	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R3454	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R3455	ERJ2GEJ151	1/16W 150	1	
R3456	ERJ2GEJ680X	1/16W 68	1	ERJ2RMJ680X
R3457	ERJ2GE0R00X	1/16W 0	1	
R3458, 59	ERJ2GEJ181	1/16W 180	2	
R3460-62	ERJ2GEJ470	1/16W 47	3	
R3463, 64	ERJ2GE0R00X	1/16W 0	2	
R3472, 73	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R3476	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3501-03	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3504	ERJ2GEJ473X	1/16W 47K	1	ERJ2RMJ473X
R3505-09	ERJ2GEJ330X	1/16W 33	5	
R3510, 11	ERJ2GEJ103	1/16W 10K	2	
R3513	ERJ2GEJ330X	1/16W 33	1	
R3514	ERJ2GEJ105	1/16W 1M	1	
R3515	ERJ2GEJ330X	1/16W 33	1	
R3516	ERJ2GEJ103	1/16W 10K	1	
R3517	ERJ2GEJ330X	1/16W 33	1	
R3519-22	ERJ2GEJ330X	1/16W 33	4	
R3523	ERJ2GEJ103	1/16W 10K	1	
R3524	ERJ2GEJ330X	1/16W 33	1	
R3525	ERJ2GEJ103	1/16W 10K	1	
R3526-28	ERJ2GEJ220X	1/16W 22	3	ERJ2RMJ220X
R3530	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R3531	ERJ2GEJ820X	1/16W 82	1	
R3532	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R3533	ERJ2GEJ101	1/16W 100	1	
R3535	ERJ2GEJ820X	1/16W 82	1	
R3537	ERJ2GEJ562X	1/16W 5.6K	1	
R3540	ERJ2GEJ473X	1/16W 47K	1	ERJ2RMJ473X

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3541, 42	ERJ2GEJ103	1/16W 10K	2	
R3543	ERJ2GE0R00X	1/16W 0	1	
R3548	ERJ2GEJ330X	1/16W 33	1	
R4418-27	ERJ2GE0R00X	1/16W 0	10	
R4429	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4430, 31	JAR0816P103D	1/16W 10K	2	D0HB103ZA002
R4432	JAR0816P562D	1/16W 5.6K	1	D0HB562ZA002
R4434, 35	ERJ3GEY0R00V	1/10W 0	2	
R4436	ERJ2GEJ221	1/16W 220	1	
R4437	ERJ2GE0R00X	1/16W 0	1	
R4438	ERJ2GEJ470	1/16W 47	1	
R4439	ERJ2GE0R00X	1/16W 0	1	
R4450-52	ERJ2GE0R00X	1/16W 0	3	
R4453	ERJ2GEJ562X	1/16W 5.6K	1	
R4454-57	ERJ2GE0R00X	1/16W 0	4	
R6001	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6002	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6003	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6004	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6005	ERJ2GEJ103	1/16W 10K	1	
R6006	ERJ2GEJ153	1/16W 15K	1	
R6007	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6008	ERJ2GEJ103	1/16W 10K	1	
R6009, 10	ERJ2GEJ330X	1/16W 33	2	
R6013	ERJ2GEJ103	1/16W 10K	1	
R6014-17	ERJ2GEJ104	1/16W 100K	4	
R6018, 19	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R6020	ERJ2GE0R00X	1/16W 0	1	
R6021, 22	ERJ2GEJ470	1/16W 47	2	
R6023	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6024	ERJ2GEJ103	1/16W 10K	1	
R6027	ERJ2GE0R00X	1/16W 0	1	
R6028	ERJ2GEJ470	1/16W 47	1	
R6029	ERJ2GEJ103	1/16W 10K	1	
R6031	ERJ2GEJ470	1/16W 47	1	
R6035	ERJ2GEJ470	1/16W 47	1	
R6036	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6037	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6039	ERJ2GEJ103	1/16W 10K	1	
R6040	ERJ2GEJ332X	1/16W 3.3K	1	ERJ2RMJ332X
R6701	ERJ2GEJ104	1/16W 100K	1	
R6703	ERJ2GEJ103	1/16W 10K	1	
R6706, 07	ERJ2GEJ470	1/16W 47	2	
R6709, 10	ERJ2GEJ332X	1/16W 3.3K	2	ERJ2RMJ332X
R6711, 12	ERJ2GEJ470	1/16W 47	2	
R6713	ERJ2GEJ103	1/16W 10K	1	
R6714	ERJ2GEJ333X	1/16W 33K	1	ERJ2RMJ333X
R6715	ERJ2GEJ470	1/16W 47	1	
R6716, 17	ERJ2GEJ333X	1/16W 33K	2	ERJ2RMJ333X
R6718	ERJ2GE0R00X	1/16W 0	1	
R6720-28	ERJ2GEJ470	1/16W 47	9	
R6729	ERJ2GEJ104	1/16W 100K	1	
R6730	ERJ2GEJ103	1/16W 10K	1	
R6731	ERJ2GEJ222X	1/16W 22K	1	ERJ2RMJ222X
R6733	ERJ2GEJ103	1/16W 10K	1	
R6735	ERJ2GEJ472X	1/16W 4.7K	1	ERJ2RMJ472X
R6737, 38	ERJ2GEJ470	1/16W 47	2	
R6739	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R6750, 51	ERJ2GEJ470	1/16W 47	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6752	ERJ2GEJ101	1/16W 100	1	
R6753-56	ERJ2GEJ470	1/16W 47	4	
R37001, 02	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R37003-07	ERJ2GE0R00X	1/16W 0	5	
R37008	ERJ2GEJ103	1/16W 10K	1	
R37009, 10	ERJ2GEJ220X	1/16W 22	2	ERJ2RMJ220X
R37011	ERJ2GE0R00X	1/16W 0	1	
R37012	D0HB113ZA002	1/10W 11K	1	
R37013	ERJ2GE0R00X	1/16W 0	1	
R37014	ERJ2GEJ105	1/16W 1M	1	
R37015	ERJ2GE0R00X	1/16W 0	1	
R37016	ERJ2GEJ220X	1/16W 22	1	ERJ2RMJ220X
R37017	ERJ3RED560V	1/16W 56	1	
R37018	ERJ3RBD512	1/16W 5.1K	1	
R37019-21	ERJ3RED560V	1/16W 56	3	
R37022	D0HB301ZA002	1/10W 300	1	
R37023	ERJ2GE0R00X	1/16W 0	1	
R50001	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R50002	ERJ2GE0R00X	1/16W 0	1	
R50003	ERJ2GEJ390X	1/16W 39	1	ERJ2RMJ390X
R50004	ERJ2GE0R00X	1/16W 0	1	
R50005	ERJ2GEJ330X	1/16W 33	1	
R50006, 07	ERJ2GEJ470	1/16W 47	2	
R50008	ERJ2GEJ100	1/16W 10	1	
R50009	ERJ2GEJ103	1/16W 10K	1	
R50010	ERJ2RHD242	1/16W 2.4K	1	
R50011	ERJ2RHD223X	1/16W 22K	1	
R50012	ERJ2GE0R00X	1/16W 0	1	
R50014	ERJ2GEJ470	1/16W 47	1	
R50015	ERJ2RHD333	1/16W 33K	1	
R50016	ERJ2RHD152	1/16W 1.5K	1	
R50017	ERJ2RHD153	1/16W 15K	1	
R50018	ERJ3RBD151	1/16W 150	1	
R50019	ERJ2GEJ330X	1/16W 33	1	
R50020	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50021	ERJ3RED820	1/16W 82	1	
R50022	ERJ2GEJ330X	1/16W 33	1	
R50023	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50024	ERJ3RED820	1/16W 82	1	
R50025	ERJ2GEJ330X	1/16W 33	1	
R50026	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50027	ERJ3RBD151	1/16W 150	1	
R50028	ERJ2GEJ330X	1/16W 33	1	
R50029	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50030	ERJ3RED220	1/16W 22	1	
R50031	ERJ3RBD151	1/16W 150	1	
R50032	ERJ2GEJ330X	1/16W 33	1	
R50033	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R50034, 35	ERJ3RED160V	1/16W 16	2	
R50036-38	ERJ2GEJ470	1/16W 47	3	
R50039	ERJ2GEJ820X	1/16W 82	1	
RX3401-07	D1H82204A024	RESISTOR-RESISTOR	7	
RX3409-16	D1H82204A024	RESISTOR-RESISTOR	8	
RX3421, 22	D1H82204A024	RESISTOR-RESISTOR	2	
RX3433-44	D1H82204A024	RESISTOR-RESISTOR	12	
RX3501-04	D1H82204A024	RESISTOR-RESISTOR	4	
RX3505-19	D1H83304A024	RESISTOR-RESISTOR	15	
RX3520-26	D1H82204A024	RESISTOR-RESISTOR	7	
RX3527-32	D1H81034A024	RESISTOR-RESISTOR	6	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
RX3533-36	D1H83304A024	RESISTOR-RESISTOR	4	
RX3537-40	D1H84734A024	RESISTOR-RESISTOR	4	
RX6001	D1H81034A024	RESISTOR-RESISTOR	1	
RX6005, 06	D1H83304A024	RESISTOR-RESISTOR	2	
RX6009-26	D1H83304A024	RESISTOR-RESISTOR	18	
RX6027-32	D1H84704A024	RESISTOR-RESISTOR	6	
RX6033, 34	D1H83324A013	RESISTOR-RESISTOR	2	
RX6035, 36	D1H83334A024	RESISTOR-RESISTOR	2	
RX6037	D1H81034A024	RESISTOR-RESISTOR	1	
RX6038	D1H83304A024	RESISTOR-RESISTOR	1	
RX6039-42	D1H84704A024	RESISTOR-RESISTOR	4	
RX6043	D1H81034A024	RESISTOR-RESISTOR	1	
RX6044	D1H83334A024	RESISTOR-RESISTOR	1	
RX6701, 02	D1H81034A024	RESISTOR-RESISTOR	2	
RX6703-06	D1H84704A024	RESISTOR-RESISTOR	4	
RX6708	D1H84704A024	RESISTOR-RESISTOR	1	
RX6711-13	D1H83324A013	RESISTOR-RESISTOR	3	
RX6716	D1H84704A024	RESISTOR-RESISTOR	1	
RX6717-19	D1H83334A024	RESISTOR-RESISTOR	3	
RX6720-23	D1H83324A013	RESISTOR-RESISTOR	4	
RX6724	D1H84704A024	RESISTOR-RESISTOR	1	
RX6726-28	D1H84704A024	RESISTOR-RESISTOR	3	
RX6729, 30	D1H81034A024	RESISTOR-RESISTOR	2	
RX6731-34	D1H84704A024	RESISTOR-RESISTOR	4	
RX6735	D1H82224A024	RESISTOR-RESISTOR	1	
RX6736	D1H81034A024	RESISTOR-RESISTOR	1	
RX6737	D1H84724A024	RESISTOR-RESISTOR	1	
RX6738	D1H83334A024	RESISTOR-RESISTOR	1	
RX37003-10	D1H82204A024	RESISTOR-RESISTOR	8	
RX37014, 15	D1H82204A024	RESISTOR-RESISTOR	2	
RX50001-16	D1H84704A024	RESISTOR-RESISTOR	16	
T37001	J0JBD0000043	TRANSFORMER	1	△
X3401	H0J270500069	CRYSTAL OSCILLATOR	1	
X3501	H2D330500001	CRYSTAL OSCILLATOR	1	
X37001	H0J245500054	CRYSTAL OSCILLATOR	1	
n	06	REP3713C	1	(FRONT(R) P.C.B.)
C7801	ECJ1VF1A105Z	10V 1U	1	
D7801	SLR-325MG	LED	1	B3ABA0000109
D7803-05	SLR-325MG	LED	3	B3ABA0000109
IR7801	B3RAD0000071	REMOTE SENSOR	1	
P7801	K1KA12B00136	CONNECTOR(12P)	1	
QR7801	UN2214	TRANSISTOR	1	UNR2214
QR7803-05	UN2214	TRANSISTOR	3	UNR2214
R7801	ERDS2FJ330	1/4W 33	1	
R7802	ERJ3GEYJ221V	1/10W 220	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7804-06	ERJ3GEYJ221V	1/10W 220	3	
R7809	ERJ3RBD272	1/16W 2.7K	1	
R7817	ERJ3RBD272	1/16W 2.7K	1	
R7818	ERJ3RBD222V	1/16W 2.2K	1	
R7819	ERA3YED332	1/16W 3.3K	1	
R7825	ERJ3RBD272	1/16W 2.7K	1	
R7826	ERJ3RBD222V	1/16W 2.2K	1	
R7827	ERA3YED332	1/16W 3.3K	1	
R7828	ERJ3RBD562V	1/16W 5.6K	1	
S7801	EVQ11G07K	SWITCH, OPEN/CLOSE	1	
S7802	EVQ11G07K	SWITCH, SKIP-F	1	
S7809	EVQ11G07K	SWITCH, CH-DOWN	1	
S7811	EVQ11G07K	SWITCH, REC	1	
S7812	EVQ11G07K	SWITCH, STOP	1	
S7813	EVQ11G07K	SWITCH, SKIP-R	1	
S7819	EVQ11G07K	SWITCH, CH-UP	1	
S7820	EVQ11G07K	SWITCH, TIME WARP	1	
S7821	EVQ11G07K	SWITCH, PLAY	1	
S7822	EVQ11G07K	SWITCH, SELECT	1	
n	07	VEP73115A		(SD CARD P.C.B.)
C6801-06	ECJ1XB1C104K	16V 0.1U	6	
C6808-10	ECJ1XB1C104K	16V 0.1U	3	
C6811, 12	ECJ1VB1H103K	50V 0.01U	2	
C6813	EEH8B1C470P	16V 47P	1	
C6814	EEH8B0J101P	6.3V 100P	1	
C6815	ECJ1VB1H103K	50V 0.01U	1	
FL6801, 02	F1H0J4740004	FILTER	2	
FL6804-08	F1H0J4740004	FILTER	5	
IC6801	C0JBAE000098	IC	1	
IC6802	C0JBAZ002138	IC	1	
IC6803	C0JBAZ002103	IC	1	
IC6804	C0JBAZ002059	IC	1	
IC6805	C0JBAZ002139	IC	1	
IC6806	C0JBAZ000608	IC	1	
IC6807	C0BCDG000004	IC	1	
IC6809	C0EBJ0000153	IC	1	
LB6801	J0JHC0000032	COIL	1	
LB6802-04	J0JHC0000045	COIL	3	
P6801	K1KB70A00038	CONNECTOR(70P)	1	
P6802	K1NA68E00076	CONNECTOR(68P)	1	
P6803	K1NA09E00051	CONNECTOR(9P)	1	
P6804	K1KA06B00177	CONNECTOR(6P)	1	
Q6801	UN5213TX	TRANSISTOR	1	UNR521300L
QR6801	UN5211	TRANSISTOR	1	UNR5211
R6801, 02	ERJ3GEYJ330V	1/10W 33	2	D0GB330JA002
R6803	ERJ3GEYJ222V	1/10W 2.2K	1	D0GB222JA002
R6804, 05	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R6806	ERJ3GEYJ104	1/10W 100K	1	
R6807	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R6808	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R6809	ERJ3GEYJ222V	1/10W 2.2K	1	D0GB222JA002
R6810, 11	ERJ3GEYJ220V	1/10W 22	2	
R6812, 13	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R6814	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R6815-18	ERJ3GEYJ223V	1/10W 22K	4	D0GB223JA002
R6819	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R6820-23	ERJ3GEYJ223V	1/10W 22K	4	D0GB223JA002
R6826, 27	ERJ3GEYJ223V	1/10W 22K	2	D0GB223JA002
R6828	ERJ3GEYJ123V	1/10W 12K	1	
RX6801-12	D1H83304A024	RESISTOR-RESISTOR	12	
RX6813	D1H82204A024	RESISTOR-RESISTOR	1	
RX6814-17	D1H84734A024	RESISTOR-RESISTOR	4	
RX6818	D1H81234A024	RESISTOR-RESISTOR	1	
n	08	REP3682A		(SCART P.C.B.)
C3909	ECEA0JKS470	6.3V 47U	1	
C3910, 11	ECA1CAK100XB	16V 10U	2	
C3914-17	ECA1HAK010XI	50V 1U	4	
C3918, 19	ECA1CAK100XB	16V 10U	2	
C3920	ECJ1XB1C104K	16V 0.1U	1	
C3921	ECA0JAK331X	6.3V 330U	1	
C3922	ECJ1VB1H103K	50V 0.01U	1	
C3923	ECJ1XB1C104K	16V 0.1U	1	
C3924	ECA0JAK331X	6.3V 330U	1	
C3925	ECJ1VB1H103K	50V 0.01U	1	
C3928, 29	ECA1HAK010XI	50V 1U	2	
C3930	ECJ1VB1H103K	50V 0.01U	1	
C3931, 32	ECA1HAK010XI	50V 1U	2	
C3933	ECA1CAK101XB	16V 100U	1	
C3934	ECJ1VB1H103K	50V 0.01U	1	
C3935	ECA1CAK101XB	16V 100U	1	
C3938	ECJ1VF1C104Z	16V 0.1U	1	
C3939	ECJ1VB1H103K	50V 0.01U	1	
C3951, 52	ECJ1VC1H470J	50V 47P	2	
C3953, 54	ECJ1VC1H471J	50V 470P	2	
C3955, 56	ECJ1VC1H101J	50V 100P	2	
C3957, 58	ECJ1VC1H471J	50V 470P	2	
C3959, 60	ECJ1VC1H470J	50V 47P	2	
C3961, 62	ECJ1VC1H101J	50V 100P	2	
D3901	MA165TA5	DIODE	1	MA2C16500E
D3903	MA3Z142D0RG	DIODE	1	
IC3901	C1AB00001776	IC	1	
JK3901	K2HA306A0025	JACK, COMPONENT VIDEO OUT	1	
JK3904	K1FB121A0003	JACK, AV2	1	
JK3905	K1FB121A0003	JACK, AV1	1	
LB3907, 08	J0JGC0000020	COIL	2	
LB3911-13	J0JGC0000020	COIL	3	
LB3922, 23	J0JGC0000020	COIL	2	
LB3925	J0JGC0000020	COIL	1	
PS3901	VJS3042F020W	CONNECTOR(20P)	1	K1KB20B00027
PS3902	VJS3042F018W	CONNECTOR(18P)	1	K1KB18B00012
PS3903	K1KB15B00013	CONNECTOR(15P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q3901	2SD1819AWL	TRANSISTOR	1	
Q3905	2SD132800L	TRANSISTOR	1	
Q3906	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q3908	2SB1218A	TRANSISTOR	1	
Q3909, 10	2SD132800L	TRANSISTOR	2	
QR3908	UN5212TX	TRANSISTOR	1	UNR521200L
QR3909	UN5211	TRANSISTOR	1	UNR5211
QR3913	UN5212TX	TRANSISTOR	1	UNR521200L
R3901-03	ERJ3RED750V	1/16W 75	3	
R3904	ERJ3GEYJ330V	1/10W 33	1	D0GB330JA002
R3905	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3906	ERJ3GEYJ102V	1/10W 1K	1	
R3907	ERJ3GEYJ273V	1/10W 27K	1	D0GB273JA002
R3908, 09	ERJ6GEYJ471V	1/8W 470	2	
R3910	ERJ3RBD151	1/16W 150	1	
R3911, 12	ERJ3GEYJ222V	1/10W 2.2K	2	D0GB222JA002
R3913	ERJ3EKF1800	1/16W 180	1	
R3914	ERJ3RBD151	1/16W 150	1	
R3915	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3916	ERJ3GEYD153V	1/10W 15K	1	D0HB153ZA002
R3917	ERJ3GEYJ223V	1/10W 22K	1	D0GB223JA002
R3919	ERJ3RBD151	1/16W 150	1	
R3921	ERJ6ENF75R0	1/8W 75	1	
R3922, 23	ERJ6GEYJ471V	1/8W 470	2	
R3924	ERDS2FJ471	1/4W 470	1	
R3925-28	ERJ6ENF75R0	1/8W 75	4	
R3929, 30	ERJ6GEYJ471V	1/8W 470	2	
R3931-33	ERJ3RED750V	1/16W 75	3	
R3934, 35	ERJ6ENF75R0	1/8W 75	2	
R3962	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R3967	ERJ3GEYJ152V	1/10W 1.5K	1	
R3968	ERJ3GEYJ680	1/10W 68	1	ERJ3GEYJ680V
R3969	ERJ3GEYJ332V	1/10W 3.3K	1	D0GB332JA002
R3972, 73	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3975, 76	ERJ3GEYJ101	1/10W 100	2	D0GB101JA002
R3977, 78	ERJ3GEYJ103V	1/10W 10K	2	D0GB103JA002
R3979, 80	ERJ6GEYJ471V	1/8W 470	2	
R3981, 82	ERJ3GEYJ821V	1/10W 820	2	
R3983, 84	ERJ3GEYJ104	1/10W 100K	2	
R3985	ERJ3RBD472V	1/16W 4.7K	1	
R3986	ERJ3RBD122V	1/16W 1.2K	1	
R3987	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R3988, 89	ERJ3GEYJ102V	1/10W 1K	2	
R3990, 91	ERJ3GEYJ473V	1/10W 47K	2	D0GB473JA002
R3992, 93	ERJ3GEYJ102V	1/10W 1K	2	
R3994	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
ZA3901-04	VMC1450	EARTH PLATE	4	
n	09	VEP73116A		(DV JACK P.C.B.)
P37001	K1KA06B00181	CONNECTOR(6P)	1	
P37002	K2HZ104B0012	CONNECTOR(104P)	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
n	10	ETXMM500E4F		(POWER SUPPLY P.C.B.)
C001	ECKENA102MER	1000P	1	△
C002	ECQU2A104ML	0.1U	1	△
C003	ECQU2A334ML	0.33U	1	△
C006	ECKENA102MER	1000P	1	△
C008	CS102MY	1000P	1	△
C009	KMM2W470JZ	450V 47U	1	
C010	RR3DD331K	2KV 330P	1	
C011	ECKENA102MER	1000P	1	△
C012	MBC471J5	50V 470P	1	
C013	KY1H220	50V 22U	1	
C014	MBB224K2	25V 0.22U	1	
C015	TBB224K5	50V 0.22U	1	
C101	KBR221K2E	250V 220P	1	
C102	ECJ2XB1H102K	50V 1000P	1	
C103	KBR221K2E	250V 220P	1	
C104	ECJ2XB1H102K	50V 1000P	1	ECJ2VB1H102K
C105	KY1E471	25V 470U	1	
C106	KY1A222	10V 2200U	1	
C107	ECJ2VC1H102J	50V 1000P	1	
C109	MBB104K2	25V 0.1U	1	
C110	MBB683K5	55V 0.068U	1	
C111	MBB105K1	16V 1U	1	
C112	KY1A471	10V 470U	1	
C113	MBB105K1	16V 1U	1	
C115	TBB224K5	50V 0.22U	1	
C117	KY1E221	25V 220U	1	
C118	KMG1H100	50V 10U	1	
C119	ECA1AHG102	10V 1000U	1	
C120	KY1E681L	25V 680U	1	
C124	KY1E221	25V 220U	1	
C125	ECA1AHG102	10V 1000U	1	
C127	ECJ2XB1H333K	50V 0.033U	1	
C128	KY1A471	10V 470U	1	
C129	MBB105K1	16V 1U	1	
C130	ECJ2VC1H102J	50V 1000P	1	
C131	MBB105K1	16V 1U	1	
C141	MBB104K2	25V 0.1U	1	
C142	MBB105K1	16V 1U	1	
D001-04	GPP20J	DIODE	4	△
D005	ST3D200	CLAMPER	1	
D006	ERA91-02	DIODE	1	B0AAGM000001
D007	MA2J72800L	DIODE	1	
D101	RK49	DIODE	1	B0JAPK000005
D102	FCQ20A6	DIODE	1	
D103	BRF1560	DIODE	1	
D104-07	MA165TA5	DIODE	4	MA2C16500E
D108	FCH05A10	DIODE	1	
D111-13	MA165TA5	DIODE	3	MA2C16500E
D114	GPP20J	DIODE	1	
D120	MA2J11100L	DIODE	1	
F001	19181-2A	FUSE	1	△
F101	SBM40	FUSE	1	△
F102	SBM32	FUSE	1	△
F103	SBM25	FUSE	1	△
IC001	STRG6353	IC	1	△
IC101	TL431AI	IC	1	
IC102	LM2904DR	IC	1	
IC103	SI3010KM	IC	1	
IC106	SI3120J	IC	1	
IP101	ICPN10	IC PROTECTOR	1	△
L002	ELF15N005A	COIL	1	△
L004	ELESN150KA	COIL	1	
L005	EXCELSA35	COIL	1	
L010, 11	EXCELSA35	COIL	2	
L101	EXCELD35	COIL	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L102	LHLZ1R5M	COIL	1	
L103	EXCELD35	COIL	1	
L104	LHLZ6R8M	COIL	1	
L105	EXCELSA35	COIL	1	
L107	EXCELSA35	COIL	1	
L108	EXCELD35	COIL	1	
L109	LHLZ4R7M	COIL	1	
P001	K2AA2H000007	AC INLET	1	△
PC001	PS2571L1V	PHOTO COUPLER	1	△
Q101	2SD602A-R	TRANSISTOR	1	2SD0602AR
Q102	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q103	2SB0709ARL	TRANSISTOR	1	
Q104	2SD601A-R	TRANSISTOR	1	2SD0601AR
Q105	2SK3366	TRANSISTOR	1	
Q106, 07	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q110	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q111	2SD601A-R	TRANSISTOR	1	2SD0601AR
Q113	2SK3366	TRANSISTOR	1	
Q114	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
Q115, 16	2SD601A-R	TRANSISTOR	2	2SD0601AR
Q117	2SB0709ARL	TRANSISTOR	1	
Q118	2SD602A-R	TRANSISTOR	1	2SD0602AR
Q119	2SB710AQRSTX	TRANSISTOR	1	2SB0710AWL
R001	ERDS1FJ105	0.5W 1M	1	
R002	CR10J681	0.1W 680	1	
R003	EX1SZGR47	1W 0.47	1	
R005	ERDS2FJ224	1/4W 220K	1	
R006	ER0S2TKF2373	0.25W 237K	1	
R007	CR10F1272	0.1W 12.7K	1	
R008	CR10J562	0.1W 5.6K	1	
R009	ERDS2FJ224	1/4W 220K	1	
R010	ER0S2TKF2373	0.25W 237K	1	
R101	CR10J472	0.1W 4.7K	1	
R102, 03	CR10J100	0.1W 10	2	
R104	CR10J471	0.1W 470	1	
R105	CR10J472	0.1W 4.7K	1	
R106	ERJ6GEYJ101V	1/8W 100	1	
R107	CR10J224	0.1W 220K	1	
R108	CR10J472	0.1W 4.7K	1	
R109	CR10J222	0.1W 2.2K	1	
R110	CR10J103	0.1W 10K	1	
R111	CR10J752	0.1W 7.5K	1	
R112	CR10J102	0.1W 1K	1	
R113	CR10J471	0.1W 470	1	
R114	ERJ6GEYJ101V	1/8W 100	1	
R115	CR10J332	0.1W 3.3K	1	
R116	CR10J102	0.1W 1K	1	
R117	ERJ6GEYJ101V	1/8W 100	1	
R120	CR10F2210	0.1W 221	1	
R121	CR10F1001	0.1W 1K	1	
R122	CR10J183	0.1W 18K	1	
R124	CR10F1470	0.1W 147	1	
R125	CR10J103	0.1W 10K	1	
R126	CR10F1002	0.1W 10K	1	
R127	CR10F3321	0.1W 3.32K	1	
R128	CR10F1211	0.1W 1.21K	1	
R130	CR10J822	0.1W 8.2K	1	
R131	CR10J103	0.1W 10K	1	
R132	CR10J472	0.1W 4.7K	1	
R136	CR10J152	0.1W 1.5K	1	
R137	CR10J472	0.1W 4.7K	1	
R139	CR10J123	0.1W 12K	1	
R143	ERDS2FJ822	1/4W 8.2K	1	
R144	CR10J222	0.1W 2.2K	1	
R145	CR10F6810	0.1W 681	1	
R153	CR10F1002	0.1W 10K	1	
R154	CR10F3321	0.1W 3.32K	1	
R157	CR10F2210	0.1W 221	1	
R158	CR10J682	0.1W 6.8K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R159	CR10J103	0.1W 10K	1	
R160	CR10J332	0.1W 3.3K	1	
R163	CR10J183	0.1W 18K	1	
R164	CR10J222	0.1W 2.2K	1	
R165, 66	CR10J103	0.1W 10K	2	
R167	CR10J152	0.1W 1.5K	1	
R168	CR10J472	0.1W 4.7K	1	
R169	CR10J102	0.1W 1K	1	
R170	CR10J752	0.1W 7.5K	1	
R171	CR10J472	0.1W 4.7K	1	
R172	ERJ6GEYJ101V	1/8W 100	1	
R173	CR10J224	0.1W 220K	1	
R174	CR10J471	0.1W 470	1	
R175	CR10J472	0.1W 4.7K	1	
R176	CR10F1002	0.1W 10K	1	
R177	CR10F2432	0.1W 24.3K	1	
R178	CR10J472	0.1W 4.7K	1	
R179	CR10J223	0.1W 22K	1	
T001	ETB28BF1U6AD	TRANSFORMER	1	△
VR101	ER0S2TKF1580	0.25W 158	1	
Z001	ERZVGAD471	VARISTOR	1	△
ZD002	MA4068N	DIODE	1	
ZD004	MA8051	DIODE	1	
ZD101	MA4039M	DIODE	1	MAZ40390M
ZD102	MAZ8051	DIODE	1	
ZD103	MA8051	DIODE	1	
ZD104	MA8082	DIODE	1	
ZD105	MAZ8051	DIODE	1	
ZD106	MA8051	DIODE	1	
ZD107	RD6.2ESB	DIODE	1	

