

Service Manual

DV4200 /U1B, /F1N, /N1B, /N1G, /S1G, /A1B

DVD Player

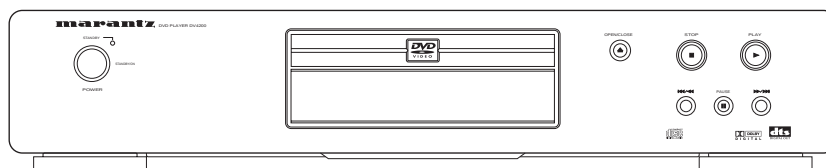


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Please use this service manual with referring to the user guide (D.F.U) without fail.

修理の際は、必ず取り扱い説明書を準備し操作方法を確認の上作業を行ってください。

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DV4200

344W855010 ACT
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First Issue:2002.02

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

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

ORDERING PARTS :

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

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

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

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SHOCK, FIRE HAZARD SERVICE TEST :

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

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

Ref. UL Standard No. 1492.

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

REMARK

This service manual corresponds to service modification code number "MZ01" and later. When exchanging MAIN PCB on the product of the service modification code "MZ00", it is necessary to also exchange the following parts on the I/O PCB simultaneously.

(The service modification code is mentioned in the number label on the rear panel. Ex.MZ01xxxxxxxxxx)

Two kinds of MPEG ICs (IC501) exist in this model. Since the conventional IC (Pantera-2) became a production stop, this was generated. Since power supply voltage is changed, new IC (Pantera-2 LE) has change in a power supply part. In the case of repair, please fix after checking the version of IC.

	Service modification code	
	MZ00	MZ01
Location	<Pantera-2>	<Pantera-2 LE>
D115	1N17	Tin Wire

1. TECHNICAL SPECIFICATIONS

DVD Player

Power supply (S)	AC 220~230V, 50/60 Hz
Power supply (U)	AC 120V, 60 Hz
Power supply (N)	AC 230V, 50 Hz
Power supply (F)	AC 100V, 50/60 Hz
Power supply (A)	AC 110~240V, 50 Hz
Power consumption	16 W
Weight	7.1 lbs. (3.2 kg)
External dimensions (W X H X D)	17.3" X 3.5" X 10.0" (440 x 88 x 254 mm)
Signal system (U, F)	NTSC
Signal system (N, S)	PAL, NTSC
Laser Semiconductor laser, wavelength	650 nm (DVD), 780 nm (CD)
Frequency range (audio)	DVD: fs = 96 kHz 4 Hz - 44 kHz
.....	fs = 48 kHz 4 Hz - 22 kHz
.....	CD: 4 Hz - 20 kHz
Signal-to-noise ratio (audio)	More than 105 dB (EIAJ)
Dynamic range (audio)	More than 100 dB (EIAJ)
Harmonic distortion (audio)	0.003 %
Wow and flutter Below measurable level	(less than + 0.001 % (W.PEAK)) (EIAJ)
Operating conditions	Temperature: 41°F to 95°F (5°C to 35°C), Operation status: Horizontal

Outputs

Video output	1.0 V (p-p), 75 , negativ e sync., RCA jack x 1
S-video output (Y)	1.0 V (p-p), 75 , negativ e sync., Mini DIN 4-pin x 1
(C)	0.286 V (p-p), 75
Component video output (Y) (U, F, S, A)	1.0 V (p-p), 75 , negativ e sync., RCA jack x 1
(CB)/(CR) (U, F, S, A)	0.7 V (p-p), 75
R/G/B output (N)	0.7 Vp-p 21-pin SCART connector
Audio output (digital audio)	0.5 V (p-p), 75 , RCA jac k x 1
Audio output (optical audio) (F, A, S, N)	Optical connector x 1
Audio output (analog audio)	2.0 Vrms (1 kHz, 0 dB), 330 , RCA jac k (L, R) x 2
Supplied Accessories	
Video cable	1
Audio cable	1
System Control cable	1
Remote control	1
Batteries	2

Designs and specifications are subject to change without notice.

2. PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

CAUTION : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY, NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

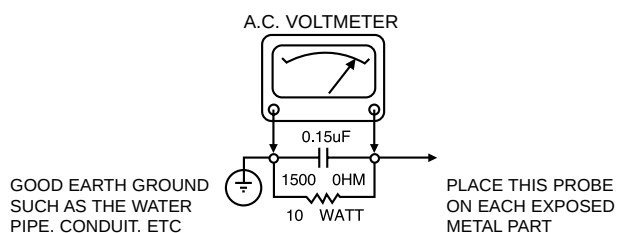
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.
2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.
4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS, FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD), AND REPLACE IF NECESSARY. FOLLOW ORIGINAL LAYOUT, LEAD LENGTH AND DRESS.
5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.
6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES. DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.
7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS, HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



SUBJECT: GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH APROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

SUBJECT : X-RADIATION

1. BE SURE PROCEDURES AND INSTRUCTIONS TO ALL SERVICE PERSONNEL COVER THE SUBJECT OF X-RADIATION. THE ONLY POTENTIAL SOURCE OF X-RAYS IN CURRENT T.V. RECEIVERS IS THE PICTURE TUBE. HOWEVER, THIS TUBE DOES NOT EMIT X-RAYS WHEN THE HIGH VOLTAGE IS AT THE FACTORY SPECIFIED LEVEL. THE PROPER VALUE IS GIVEN IN THE APPLICABLE SCHEMATIC. OPERATION AT HIGHER VOLTAGES MAY CAUSE A FAILURE OF THE PICTURE TUBE OR HIGH VOLTAGE SUPPLY AND, UNDER CERTAIN CIRCUMSTANCES, MAY PRODUCE RADIATION IN EXCESS OF DESIRABLE LEVELS.
2. ONLY FACTORY SPECIFIED C.R.T. ANODE CONNECTORS MUST BE USED. DEGAUSSING SHIELDS ALSO SERVE AS AN X-RAY SHIELD IN COLOR SETS, ALWAYS RE-INSTALL THEM.
3. IT IS ESSENTIAL THAT SERVICE PERSONNEL HAVE AVAILABLE AN ACCURATE AND RELIABLE HIGH VOLTAGE METER. THE CALIBRATION OF THE METER SHOULD BE CHECKED PERIODICALLY AGAINST A REFERENCE STANDARD, SUCH AS THE ONE AVAILABLE AT YOUR DISTRIBUTOR.
4. WHEN THE HIGH VOLTAGE CIRCUITRY IS OPERATING PROPERLY THERE IS NO POSSIBILITY OF AN X-RADIATION PROBLEM. EVERY TIME A COLOR CHASSIS IS SERVICED, THE BRIGHTNESS SHOULD BE RUN UP AND DOWN WHILE MONITORING THE HIGH VOLTAGE WITH A METER TO BE CERTAIN THAT THE HIGH VOLTAGE DOES NOT EXCEED THE SPECIFIED VALUE AND THAT IT IS REGULATING CORRECTLY. WE SUGGEST THAT YOU AND YOUR SERVICE ORGANIZATION REVIEW TEST PROCEDURES SO THAT VOLTAGE REGULATION IS ALWAYS CHECKED AS A STANDARD SERVICING PROCEDURE AND THAT THE HIGH VOLTAGE READING BE RECORDED ON EACH CUSTOMER'S INVOICE.
5. WHEN TROUBLESHOOTING AND MAKING TEST MEASUREMENTS IN A PRODUCT WITH A PROBLEM OF EXCESSIVE HIGH VOLTAGE, AVOID BEING UNNECESSARILY CLOSE TO THE PICTURE TUBE AND THE HIGH VOLTAGE SUPPLY. DO NOT OPERATE THE PRODUCT LONGER THAN IT IS NECESSARY TO LOCATE THE CAUSE OF EXCESSIVE VOLTAGE.
6. REFER TO HV. B+ AND SHUTDOWN ADJUSTMENT PROCEDURES DESCRIBED IN THE APPROPRIATE SCHEMATIC AND DIAGRAMS (WHERE USED).

SUBJECT: IMPLOSION

1. ALL DIRECT VIEWED PICTURE TUBES ARE EQUIPPED WITH AN INTEGRAL IMPLOSION PROTECTION SYSTEM, BUT CARE SHOULD BE TAKEN TO AVOID DAMAGE DURING INSTALLATION, AVOID SCRATCHING THE TUBE. IF SCRATCHED REPLACE IT.
2. USE ONLY RECOMMENDED FACTORY REPLACEMENT TUBES.

SUBJECT : TIPS ON PROPER INSTALLATION

1. NEVER INSTALL ANY PRODUCT IN A CLOSED-IN RECESS, CUBBY-HOLE OR CLOSELY FITTING SHELF SPACE, OVER OR CLOSE TO HEAT DUCT, OR IN THE PATH OF HEATED AIR FLOW.
2. AVOID CONDITIONS OF HIGH HUMIDITY SUCH AS: OUTDOOR PATIO INSTALLATIONS WHERE DEW IS A FACTOR, NEAR STEAM RADIATORS WHERE STEAM LEAKAGE IS A FACTOR, ETC.
3. AVOID PLACEMENT WHERE DRAPERIES MAY OBSTRUCT REAR VENTING. THE CUSTOMER SHOULD ALSO AVOID THE USE OF DECORATIVE SCARVES OR OTHER COVERINGS WHICH MIGHT OBSTRUCT VENTILATION.
4. WALL AND SHELF MOUNTED INSTALLATIONS USING A COMMERCIAL MOUNTING KIT, MUST FOLLOW THE FACTORY APPROVED MOUNTING INSTRUCTIONS. A PRODUCT MOUNTED TO A SHELF OR PLATFORM MUST RETAIN ITS ORIGINAL FEET (OR THE EQUIVALENT THICKNESS IN SPACERS) TO PROVIDE ADEQUATE AIR FLOW ACROSS THE BOTTOM. BOLTS OR SCREWS USED FOR FASTENERS MUST NOT TOUCH ANY PARTS OR WIRING. PERFORM LEAKAGE TEST ON CUSTOMIZED INSTALLATIONS.
5. CAUTION CUSTOMERS AGAINST THE MOUNTING OF A PRODUCT ON SLOPING SHELF OR A TILTED POSITION, UNLESS THE PRODUCT IS PROPERLY SECURED.
6. A PRODUCT ON A ROLL-ABOUT CART SHOULD BE STABLE ON ITS MOUNTING TO THE CART. CAUTION THE CUSTOMER ON THE HAZARDS OF TRYING TO ROLL A CART WITH SMALL CASTERS ACROSS THRESHOLDS OR DEEP PILE CARPETS.
7. CAUTION CUSTOMERS AGAINST THE USE OF A CART OR STAND WHICH HAS NOT BEEN LISTED BY UNDERWRITERS LABORATORIES, INC. FOR USE WITH THEIR SPECIFIC MODEL OF TELEVISION RECEIVER OR GENERICALLY APPROVED FOR USE WITH T.V.'S OF THE SAME OR LARGER SCREEN SIZE.
8. CAUTION CUSTOMERS AGAINST THE USE OF EXTENSION CORDS. EXPLAIN THAT A FOREST OF EXTENSIONS SPROUTING FROM A SINGLE OUTLET CAN LEAD TO DISASTROUS CONSEQUENCES TO HOME AND FAMILY.

3. SERVICING PRECAUTIONS

CAUTION : Before servicing the DVD covered by this service data and its supplements and ADDENDUMS, read and follow the **SAFETY PRECAUTIONS**. **NOTE :** if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publications, always follow the safety precautions.

Remember Safety First:

General Servicing Precautions

1. Always unplug the DVD AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.
Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this DVD or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.

Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

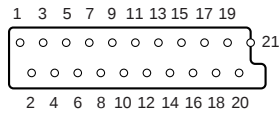
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential 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 a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge 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. (Normally 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.)

4. CONNECTION FACILITIES

4.1 Video performance (N only)



4.1.1 SCART

Pin No. TV (OUT)

Pin 1	Audio R out : 2Vrms
Pin 2	Audio R in : 2Vrms
Pin 3	Audio L out : 2Vrms
Pin 4	GND
Pin 5	GND
Pin 6	Audio L in : 2Vrms
Pin 7	Blue out/C in Blue : 0.7Vpp $\pm 0.1V$ into 75 Ohm *1 C : 300mVpp ± 30 into 75 Ohm *2
Pin 8	function switching out <2V : TV >5/<8 : asp.ratio 16 : 9 DVD/AUX >9.5/<12 : asp.ratio 4 : 3 DVD/AUX
Pin 9	GND
Pin 10	not connected
Pin 11	Green out:0.7Vpp $\pm 0.1V$ into 75 Ohm *1
Pin 12	not connected
Pin 13	GND
Pin 14	GND
Pin 15	Red/C out Red : 0.7Vpp $\pm 0.1V$ into 75 Ohm *1 C : 300mVpp ± 30 into 75 Ohm *2
Pin 16	fast switching out <0.4V into 75 Ohm=CVBS/S-Video 1</>3 into 75 Ohm=RGB
Pin 17	GND
Pin 18	GND
Pin 19	CVBS/Y out : 1Vpp $\pm 0.1V$ *1
Pin 20	CVBS/Y in : 1Vpp $\pm 0.1V$ *1
Pin 21	GND

Pin No. AUX (IN)

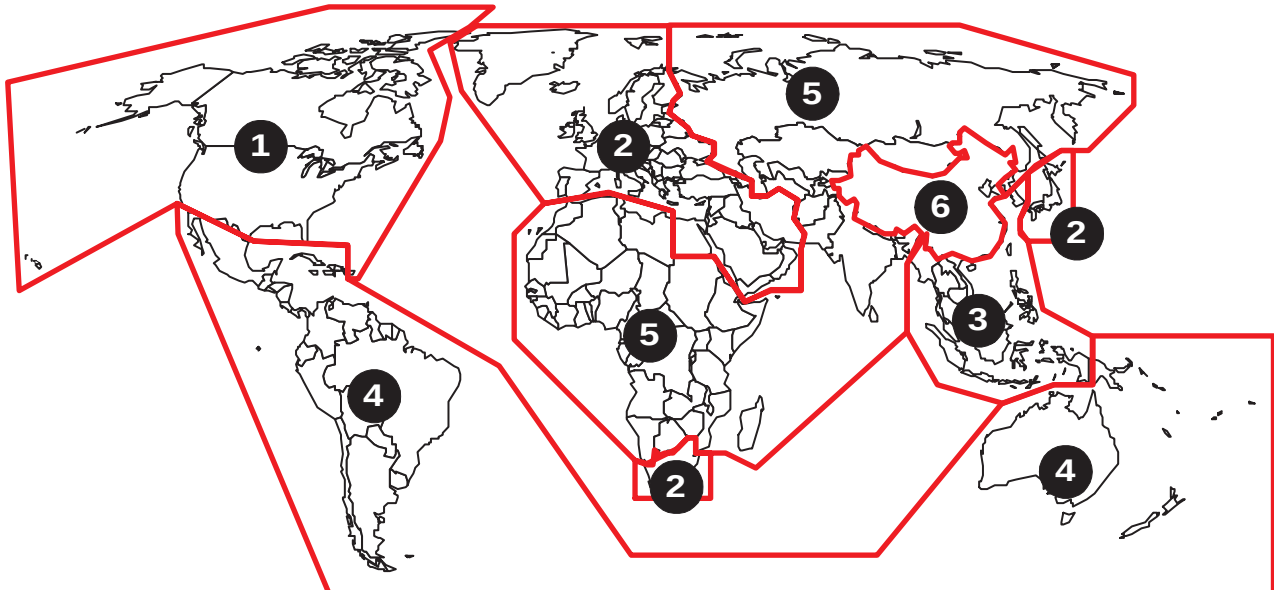
Pin 1	(Audio R out : 2Vrms)
Pin 2	Audio R in : 2Vrms
Pin 3	(Audio L out : 2Vrms)
Pin 4	GND
Pin 5	GND
Pin 6	Audio L in : 2Vrms
Pin 7	(Blue in/C out Blue : 0.7Vpp $\pm 0.1V$ into 75 Ohm *1 C : 300mVpp ± 30 into 75 Ohm *2)
Pin 8	(function switching in<2V : DVD >5/<8 : asp.ratio 16 : 9 AUX >9.5/<12 : asp.ratio 4 : 3 AUX)
Pin 9	GND
Pin 10	not connected
Pin 11	(Green in:0.7Vpp $\pm 0.1V$ into 75 Ohm)
Pin 12	not connected
Pin 13	GND
Pin 14	GND
Pin 15	(Red/C in Red : 0.7Vpp $\pm 0.1V$ into 75 Ohm *1 C : 300mVpp ± 30 into 75 Ohm *2)
Pin 16	(fast switching in <0.4V into 75 Ohm=CVBS/S-Video 1</>3 into 75 Ohm=RGB)
Pin 17	GND
Pin 18	GND
Pin 19	(CVBS/Y out : 1Vpp $\pm 0.1V$ *1)
Pin 20	CVBS/Y in : 1Vpp $\pm 0.1V$ *1
Pin 21	GND

*1 : 100% White *2 : Burst Level *3 : color bar(chroma level : 75%)

What are "regional codes"?

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

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



Map of DVD Regions

5. INFORMATIONS

REGION CODE

VERSION	REGION CODE	COUNTRY
/UXX	1	USA/CANADA
/FXX	2	JAPAN
/NXX	2	EUROPE
/SXX	3	SINGAPORE/HONGKONG
/AXX	4	AUSTRALIA

DVD INFORMATION

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

Title:

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

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

Chapter:

A title may also be separated into chapters.

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

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

Subtitles:

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

Soundtrack language:

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

Multi-angles:

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

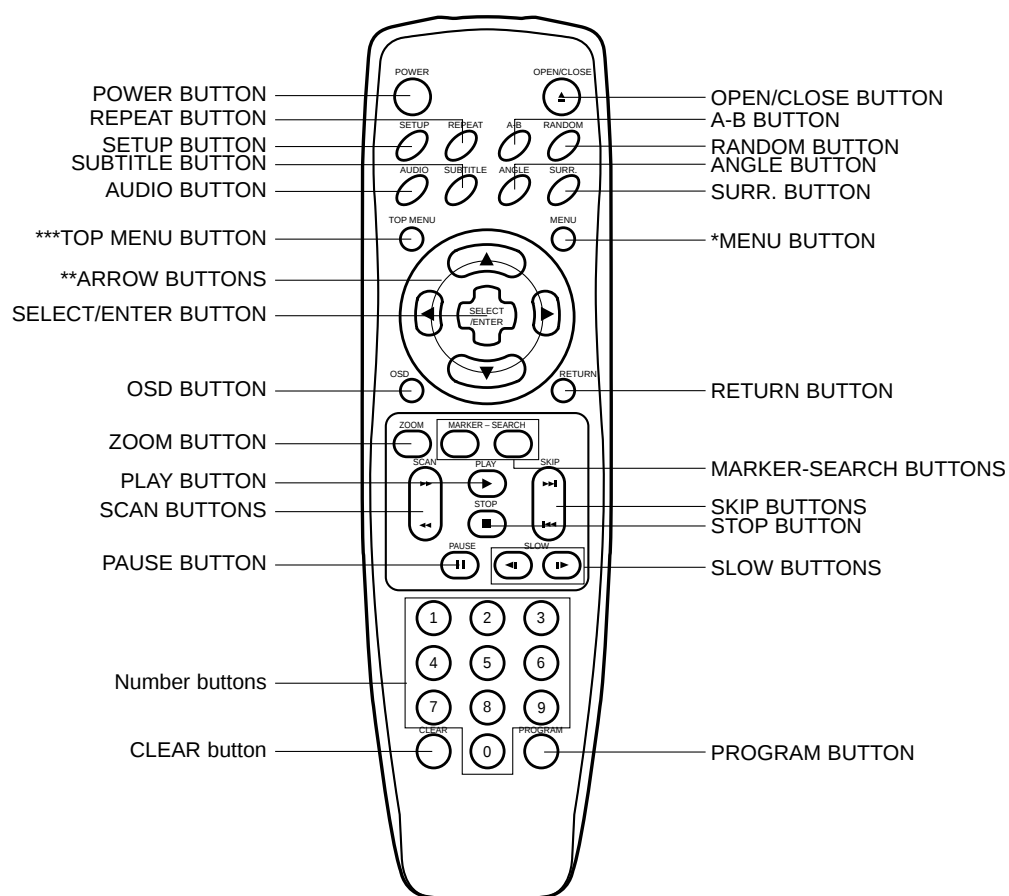
THE DISCS THAT THE DV4200 CAN HANDLE

The following discs can be played back with DV4200.

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

Note: The regional code of the discs must meet to the regional code of the DV4200.

REMOTE CONTROL



*MENU BUTTON

USE THE MENU BUTTON TO DISPLAY THE MENU SCREEN INCLUDED ON SELECTED DVD VIDEO DISCS. TO OPERATE A MENU SCREEN, FOLLOW THE INSTRUCTIONS IN "USING A DVD MENU" .

**DIRECTIONAL ARROW BUTTONS

(UP, DOWN, LEFT, RIGHT) FOR USE IN HIGHLIGHTING A SELECTION ON A GUI MENU SCREEN, TITLE AND MENU SCREEN.

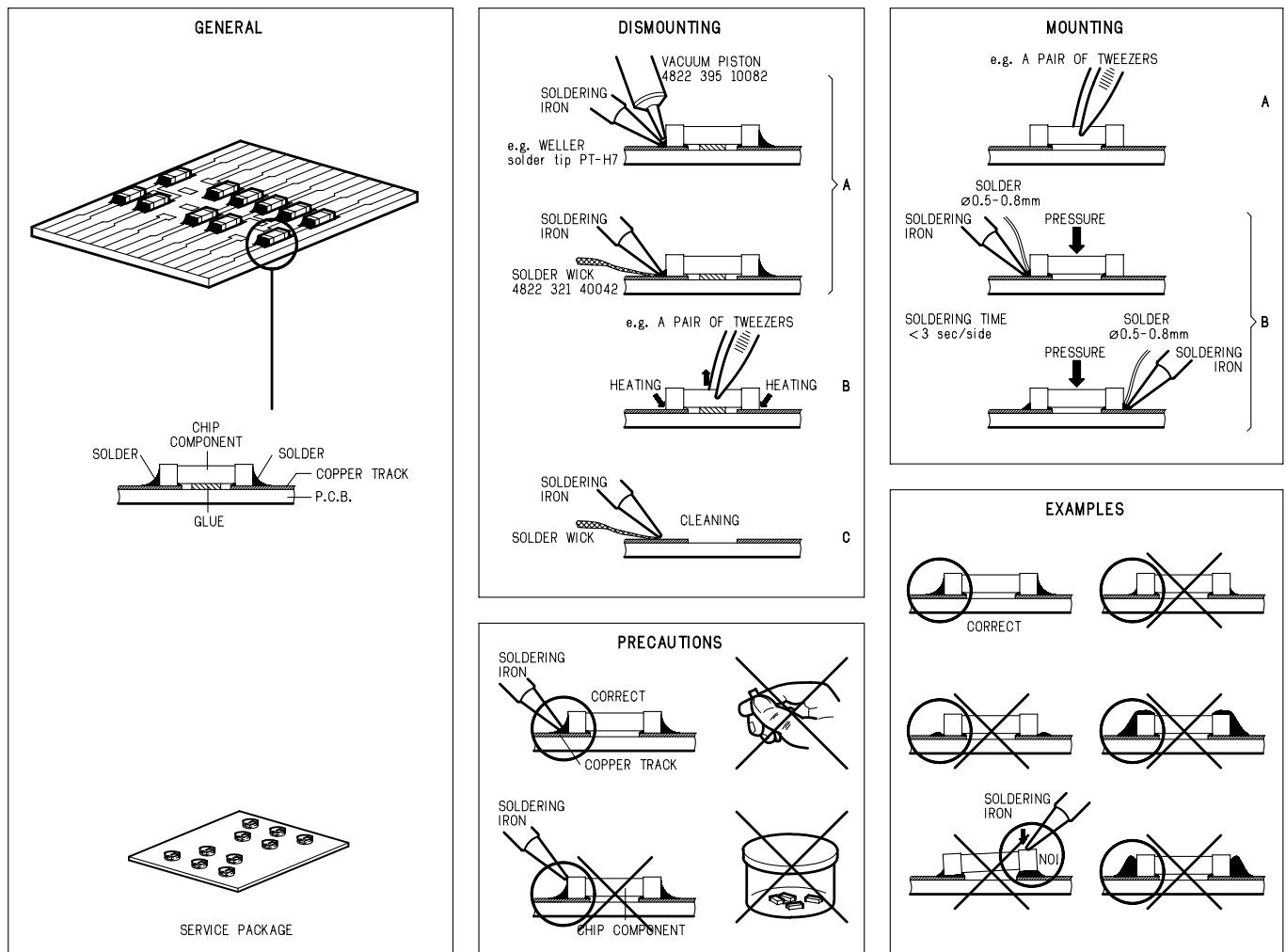
***TOP MENU BUTTON

USE THE TOP MENU BUTTON TO DISPLAY THE TITLE MENU INCLUDED ON SELECTED DVD VIDEO DISCS. TO OPERATE A MENU SCREEN, FOLLOW THE INSTRUCTIONS IN "USING A TITLE MENU" .

- This remote control supports two remote control codes: C1 and C2.
- When the unit is shipped from the factory the remote control is set to C1.
- To set the remote control to C2, hold down both the STOP button and "2" number button on the remote control for at least five seconds. (If the batteries in the remote control are replaced while the remote control is set to C2, the setting will revert C1.)
- To set the remote control back to C1, hold down both the STOP button and "1" number button on the remote control for at least five seconds.
- Also set the remote control codes of the player to the same setting as the remote control. (This setting is set to C1, when the unit is shipped from the factory)

6. SERVICING HINT

SERVICE HINTS



SERVICE TOOLS

Audio signals disc	4822 397 30184
Disc without errors (SBC444)+	
Disc with DO errors, black spots and fingerprints (SBC444A)	4822 397 30245
Disc (65 min 1kHz) without no pause	4822 397 30155
Max. diameter disc (58.0 mm)	4822 397 60141
Torx screwdrivers	
Set (straight)	4822 395 50145
Set (square)	4822 395 50132
13th order filter	4822 395 30204
DVD test disc	4822 397 10131

7. DISASSEMBLY

CAUTION BEFORE STARTING SERVICING

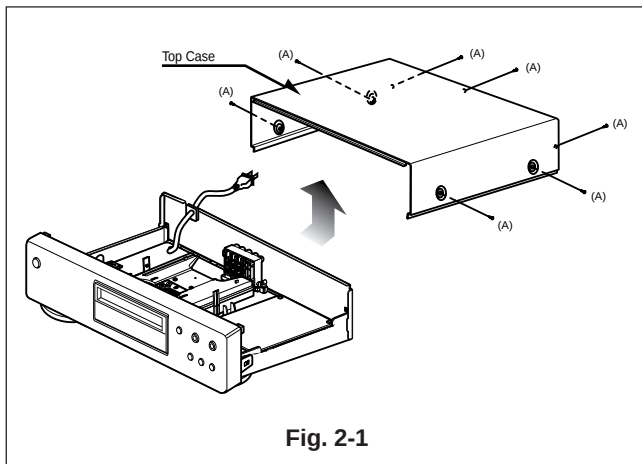
Electronic parts are susceptible to static electricity and may easily be damaged, so do not forget to take a proper grounding treatment as required.

Many screws are used inside the unit. To prevent missing, dropping, etc. of the screws, always use a magnetized screw driver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

7.1 CABINET DISASSEMBLY

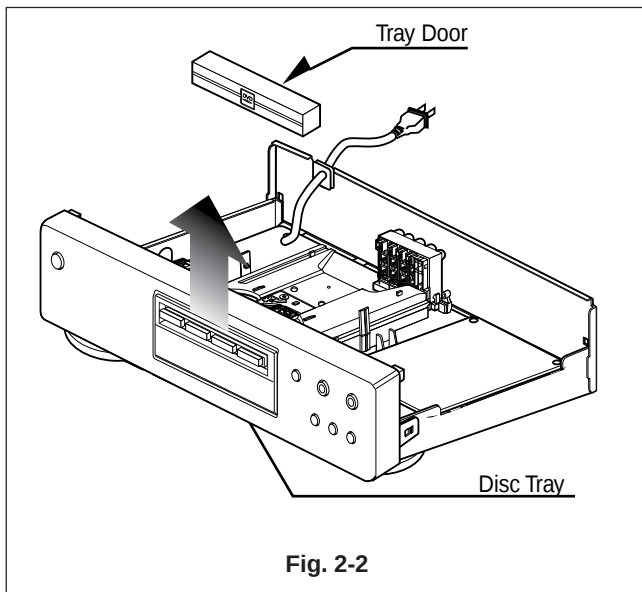
7.1.1 Top Case

1. Release 7 screws (A). (See Fig. 2-1)
2. Lift the top case with holding the back of it, and remove it in the direction of the arrow



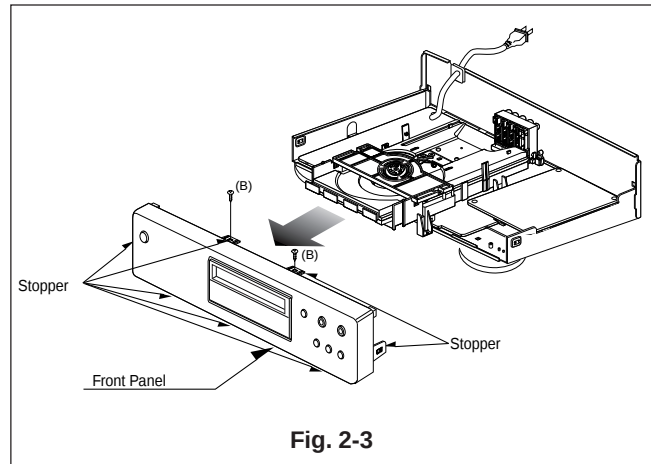
7.1.2 Tray Door

1. Eject the disc tray.
2. Lift up the tray door in the direction of the arrow.

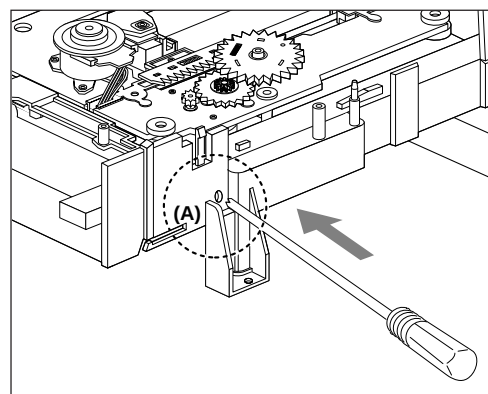


7.1.3 Front Panel

1. Eject the disc tray. (See Fig. 2-2)
2. Remove the tray door. (See Fig. 2-2)
3. Release 2 screws (B).
4. Pull the front panel toward you while pressing 7 stoppers to disengage, and remove the front panel. (See Fig. 2-3)



REMARK: Before disassemble the front panel.



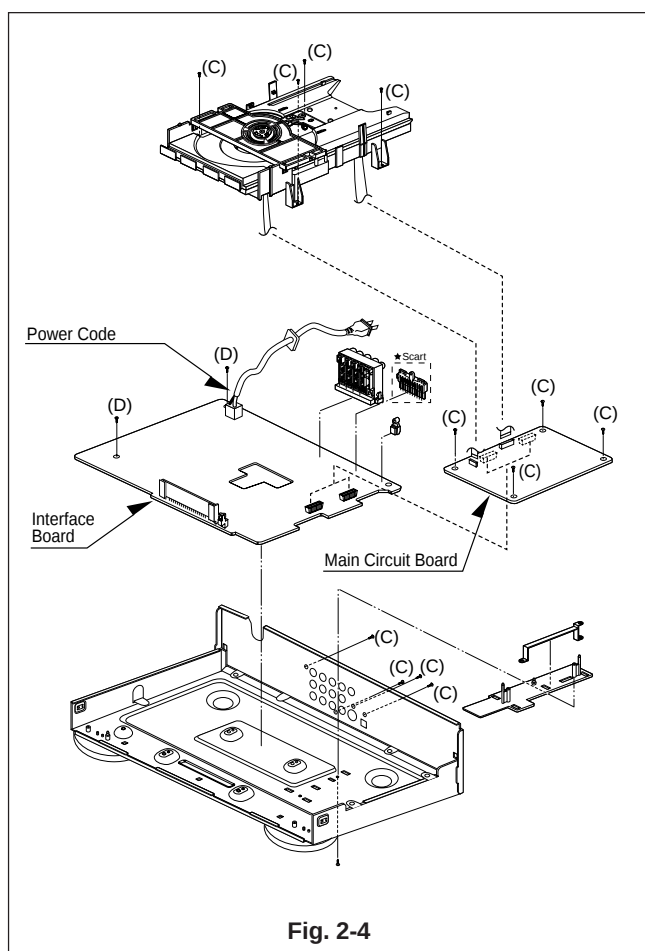
Press open/close button to open the tray. If the tray doesn't work, insert and push a small screwdriver in the emergency eject hole (A) at the right side. Then the tray comes out. After the first centimeter it is possible to pull the tray out by hand. Release the door cover of the tray.

7.2 CIRCUIT BOARD DISASSEMBLY

Note: Before removing the main circuit board, be sure to shortcircuit the laserdiode output land.
After replacing the main circuit board, open the land after inserting the flexible connector.
(Refer to Mechanism Disassembly)

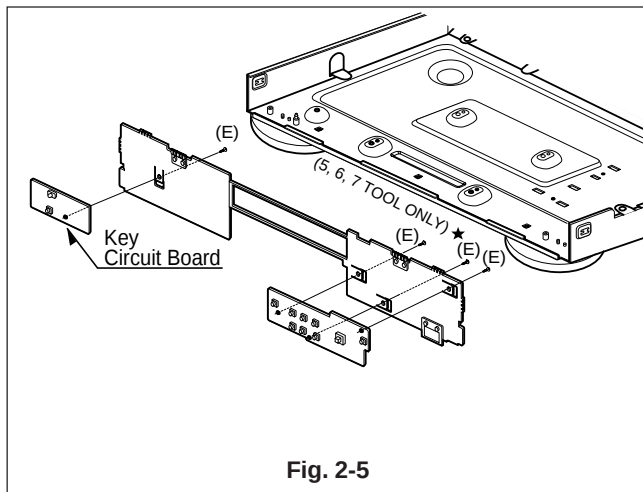
7.2.1 Disassembling of Main Circuit Board and Interface Board

1. Remove the top case.(See Fig. 2-1)
2. Remove 12 screw (C).
3. Remove the deck from Main Circuit Board.
4. Remove Main Circuit Board from Interface Board.
5. Remove 2 screw (D).
6. Remove Interface Board from the chassis.



7.2.2 Key Circuit Board

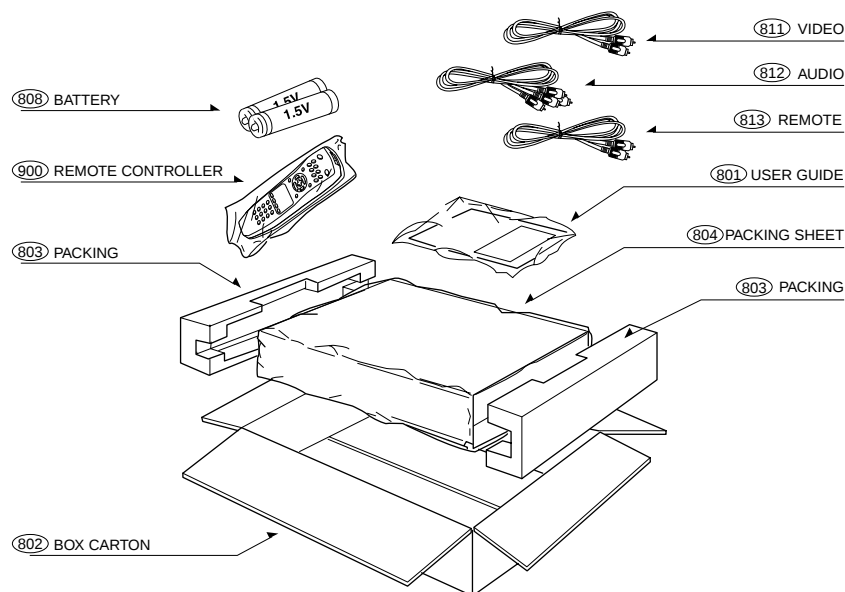
1. Remove the front panel.(See Fig. 2-3)
2. Release 4 screws (E), and remove the Key circuit board.



8.1 Cabinet and Main Frame Section



8.2 Packing Accessory Section



POS. NO.	COLOR	PART NO. (FOR PCS)	DESCRIPTON	PART NO. (MJI)
A00		nsp	DECK ASSY DP-4RM(2LD, CKD)-S	344W304520
A43		nsp	BOARD ASSY FRONT	nsp
A46	N	9965 000 11665	DVD MAIN PCB ASSY (FOR N)	*ZZ001840R
A46	F	nsp	DVD MAIN PCB ASSY (FOR F)	*ZZ001900R
A46	U	nsp	DVD MAIN PCB ASSY (FOR U)	*ZZ001910R
A46	A	nsp	DVD MAIN PCB ASSY (FOR A)	*ZZ001920R
A46	S	nsp	DVD MAIN PCB ASSY (FOR S)	*ZZ001930R
A48		nsp	PWB (PCB) ASSY IO	nsp
250		nsp	TOP COVER	nsp
260		nsp	CHASSIS ASSY	nsp
275		nsp	HOLDER MAIN PCB	nsp
280	U	nsp	PANEL ASSY FRONT	344W248510
280	/N1B	9965 000 11309	PANEL ASSY FRONT	344W248520
280	/N1G	9965 000 11346	PANEL ASSY FRONT	344W248560
280	A	nsp	PANEL ASSY FRONT	344W248540
280	F	nsp	PANEL ASSY FRONT	344W248550
280	S	nsp	PANEL ASSY FRONT	344W248530
283	BLACK	9965 000 11310	DOOR ASSY BLACK	304W063010
283	GOLD	9965 000 11347	DOOR ASSY GOLD	304W063110
285		nsp	PLATE ASSY SHIELD	nsp
▲300	U	nsp	MAINS CORD	*YC000620R
▲300	N, S	9965 000 11311	MAINS CORD	*YC000630R
▲300	F	nsp	MAINS CORD	*YC000640R
▲300	A	nsp	MAINS CORD	*YC000650R
332		nsp	PLATE MAIN GND	nsp
401		nsp	SCREW MACHINE	nsp
452	N, A, S, U	nsp	SCREW SPECIAL	nsp
462		nsp	SCREW DRAWING +3 D4.0 L10.0	nsp
463		nsp	SCREW DRAWING +2 D3.0 L8.0	nsp
465		nsp	SCREW SPECIAL (3X10 BK)	nsp
467		nsp	SCREW SPECIAL (3X8 BK)	nsp

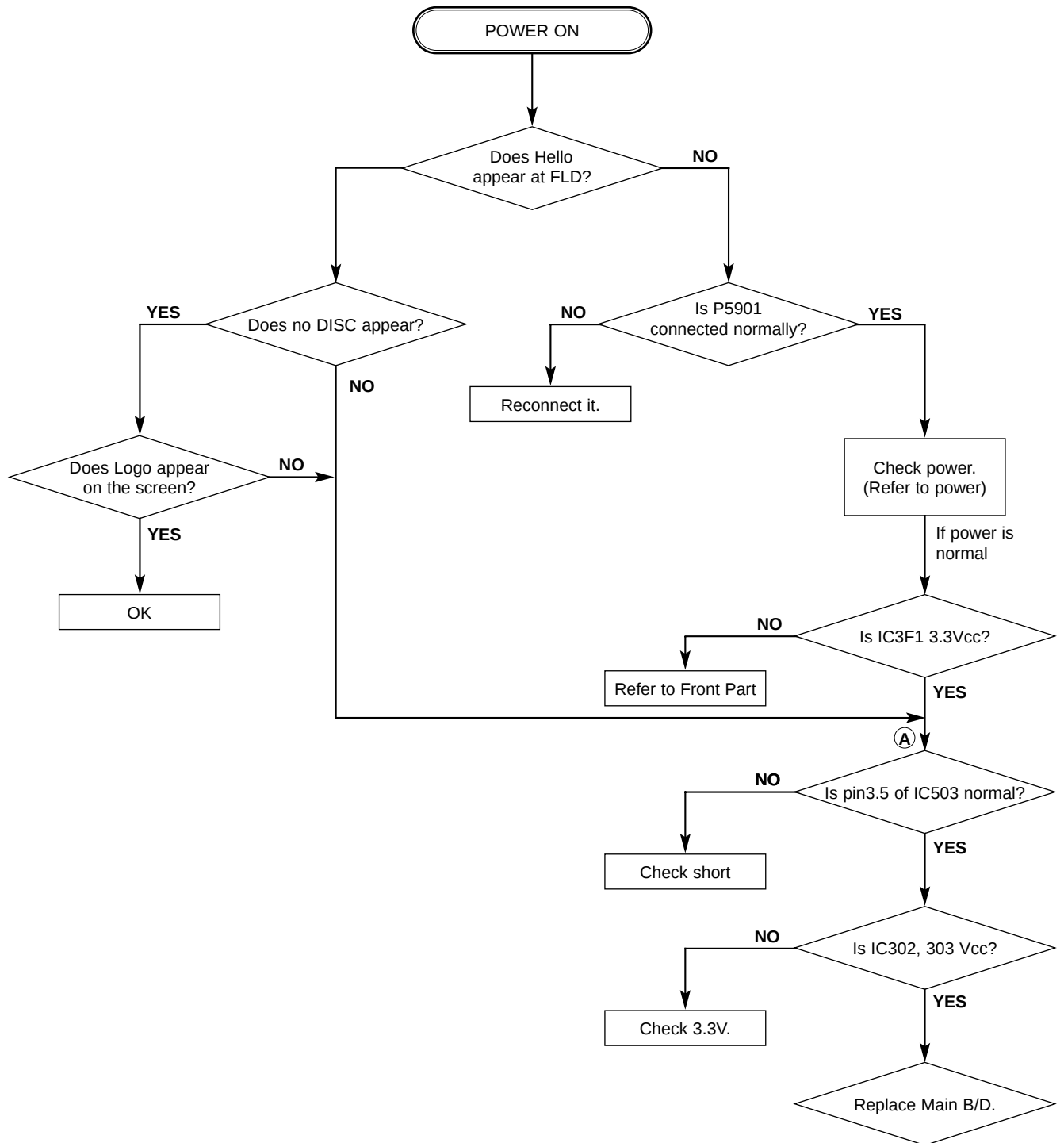
NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

POS. NO.	COLOR	PART NO. (FOR PCS)	DESCRIPTON	PART NO. (MJI)
801	U	nsp	USER GUIDE	344W851250
801	F	nsp	USER GUIDE	344W851110
801	N	9965 000 11312	USER GUIDE	344W851310
801	S	nsp	USER GUIDE	344W851350
801	A	nsp	USER GUIDE	344W851510
802	N, A, S, U	nsp	BOX CARTON	nsp
802	F	nsp	BOX CARTON	nsp
803		nsp	PACKING	nsp
804		nsp	PACKING SHEET	nsp
808		nsp	BATTERY AAA(R03)	nsp
811		nsp	VIDEO CORD (YL)	nsp
812		nsp	AUDIO CORD (RD/WH)	nsp
813		nsp	REMOTE CORD (OR)	nsp
900		9965 000 11313	REMOTE CONTROLLER RC4200	ZK344W0010

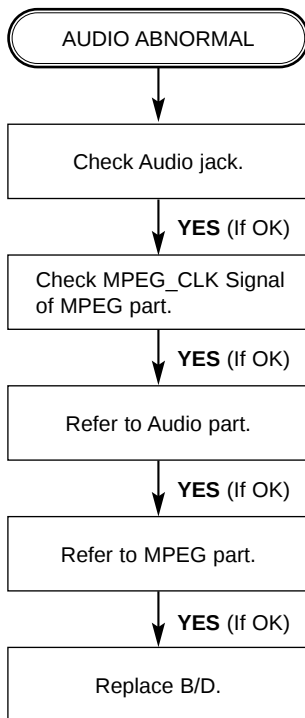
NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

9.2 μ -COM Circuit

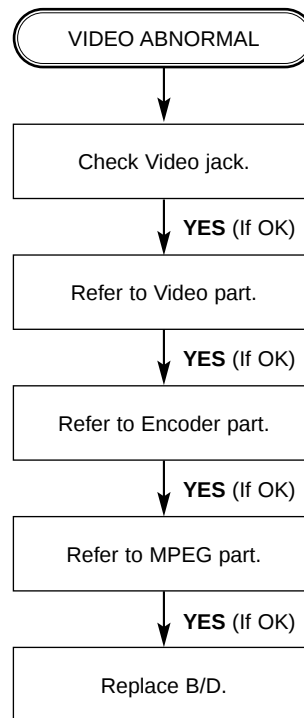
A. No Power



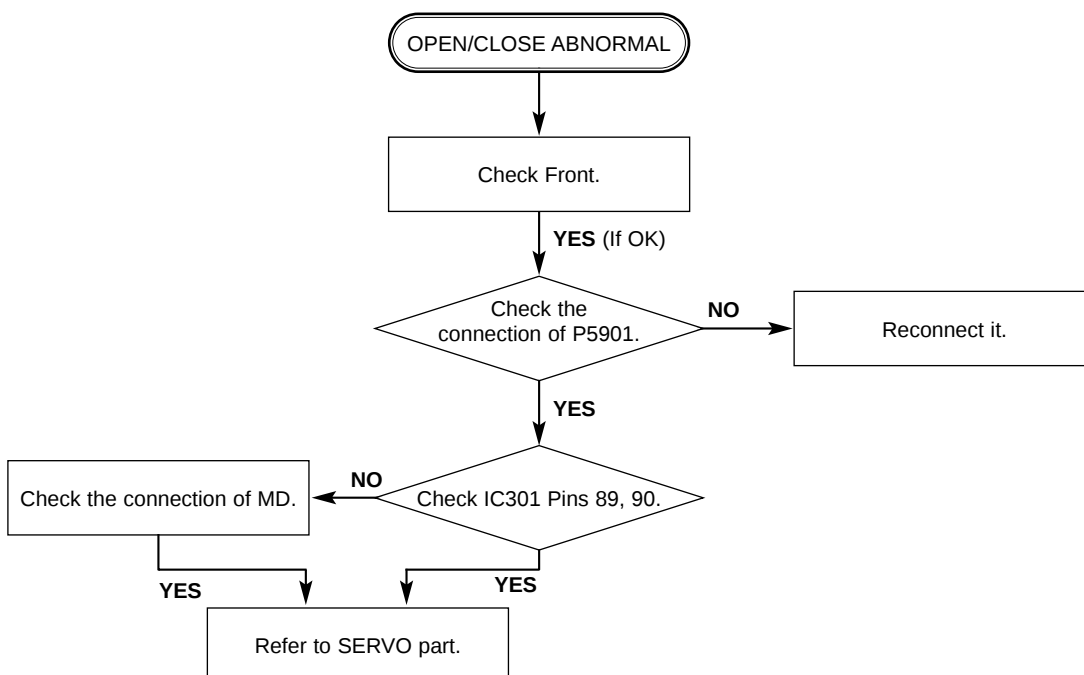
B. Audio abnormal



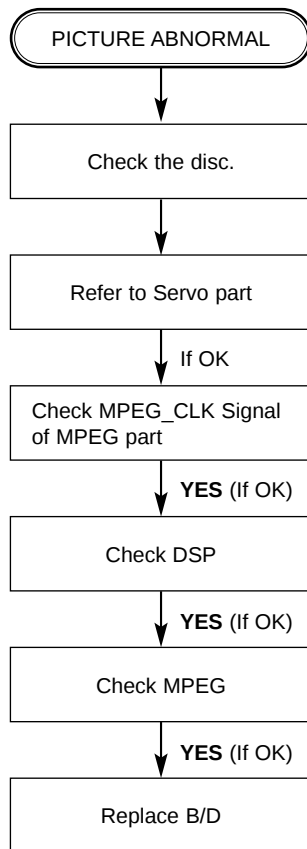
C. Video abnormal



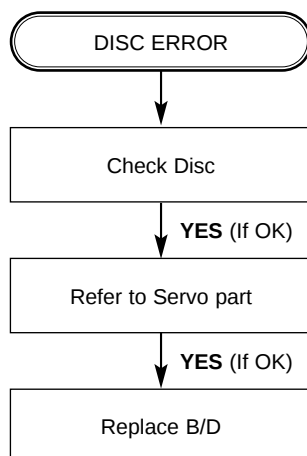
D. Open/Close abnormal



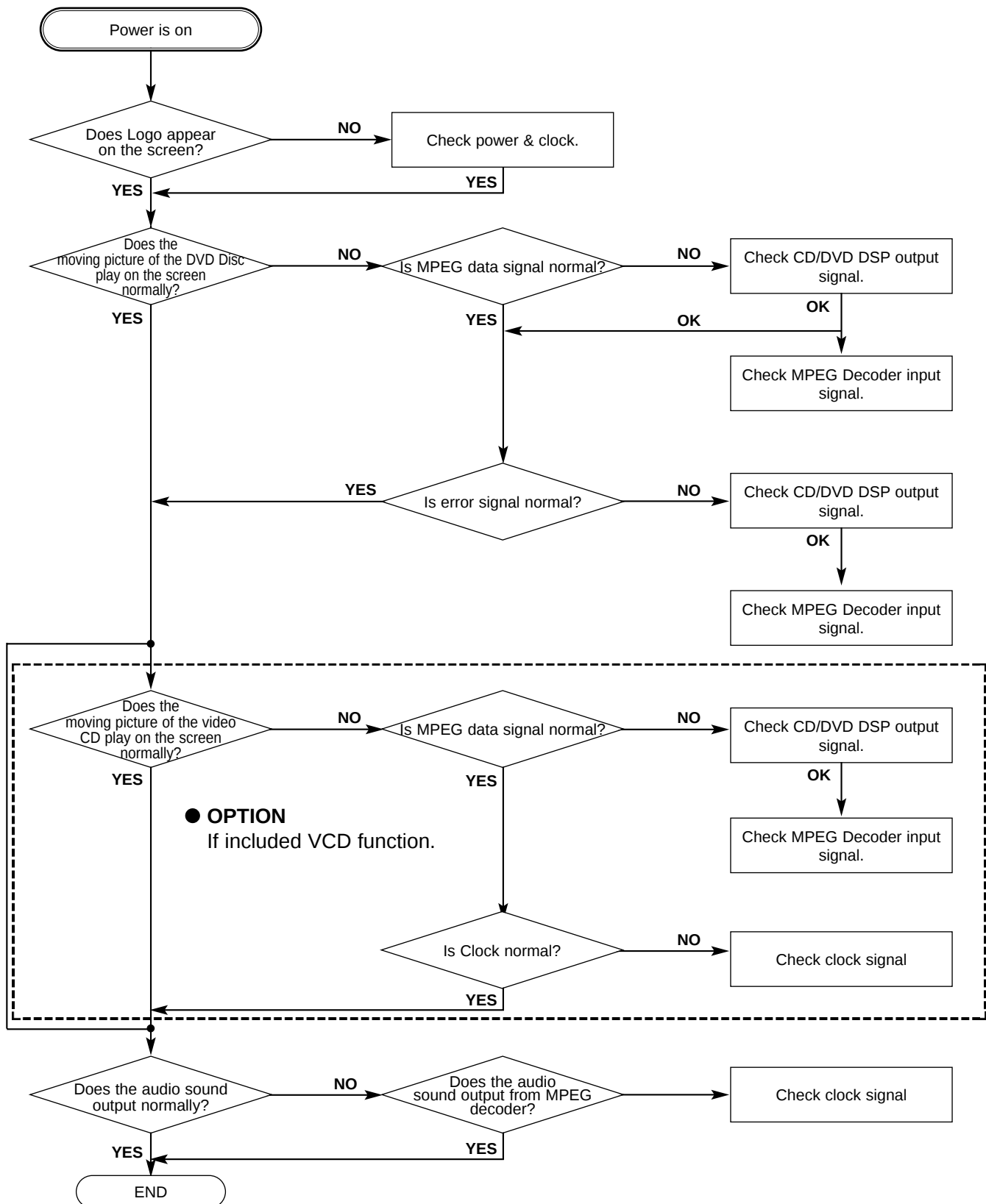
E. Picture abnormal



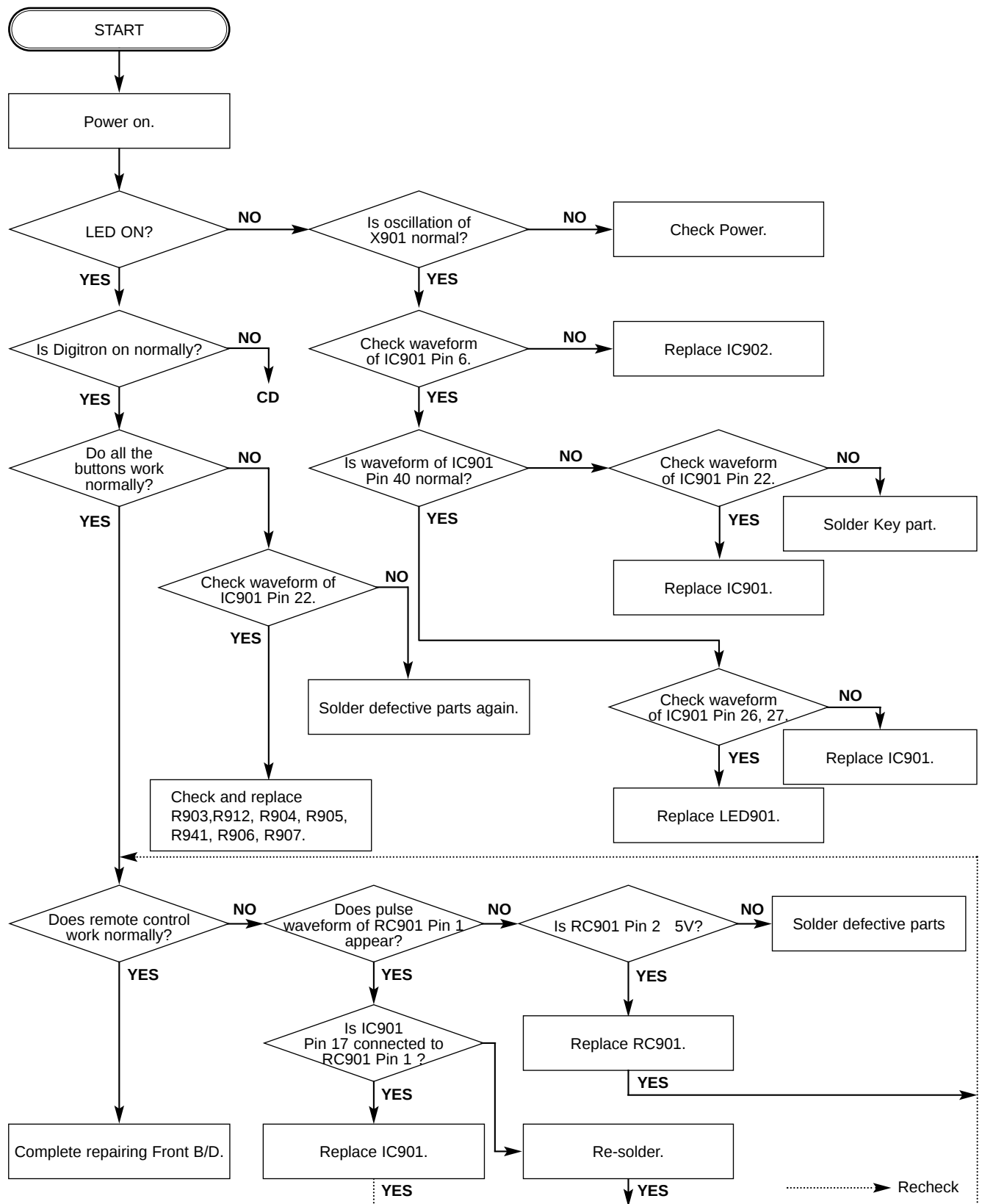
F. Disc Error



9.3 MPEG Circuit

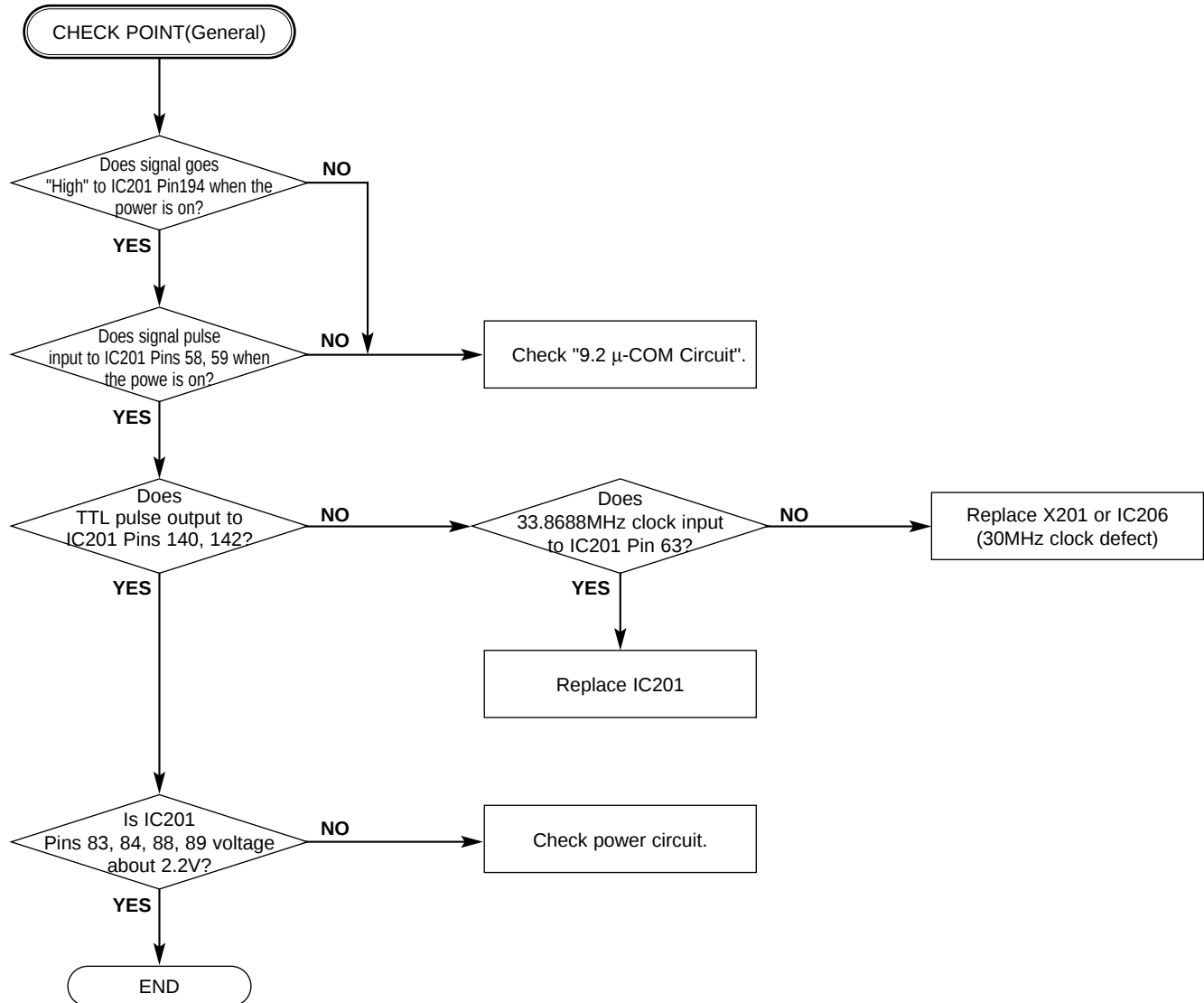


9.4 Front Circuit (Digitron & key)

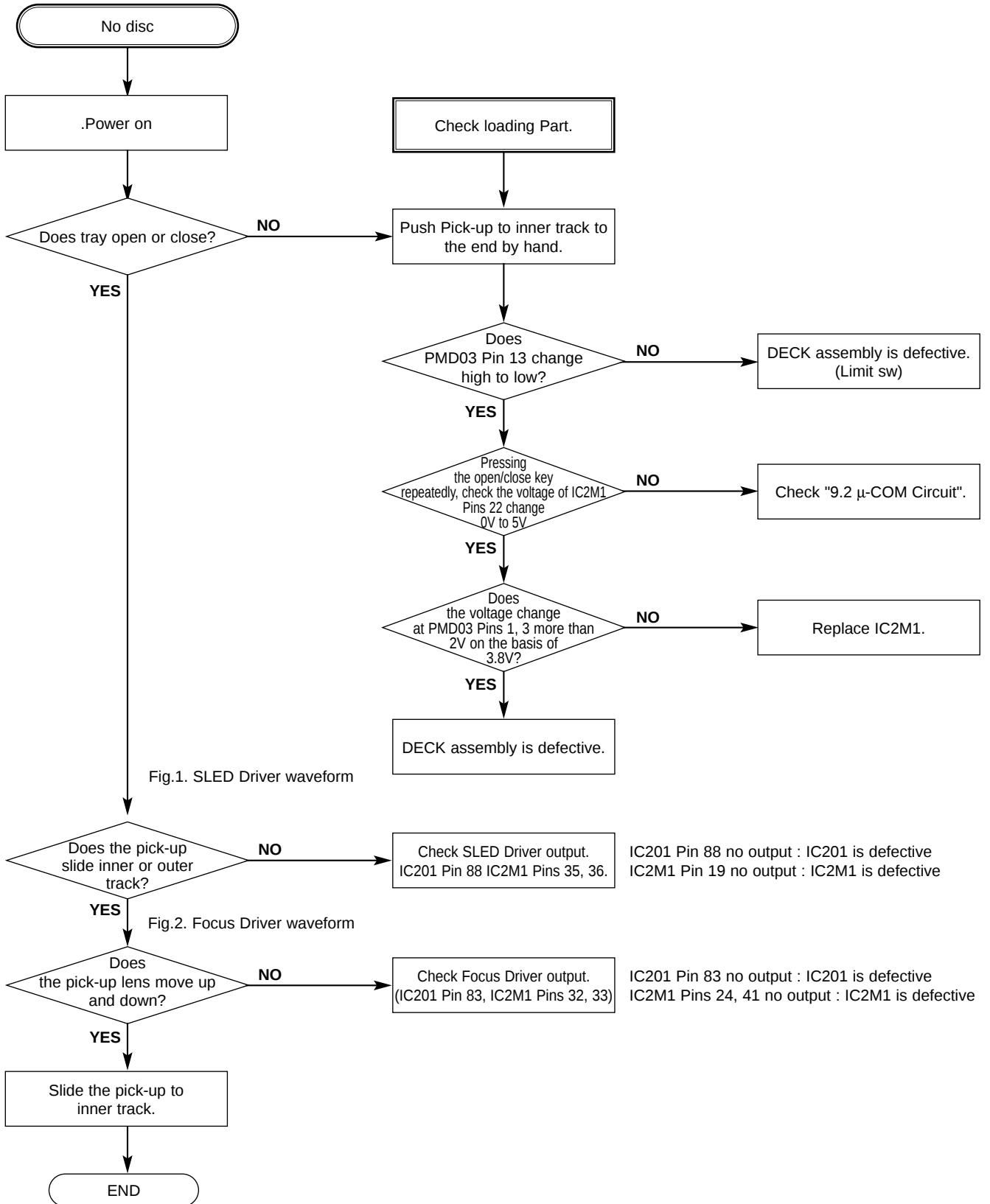


9.5 RF/Servo Circuit

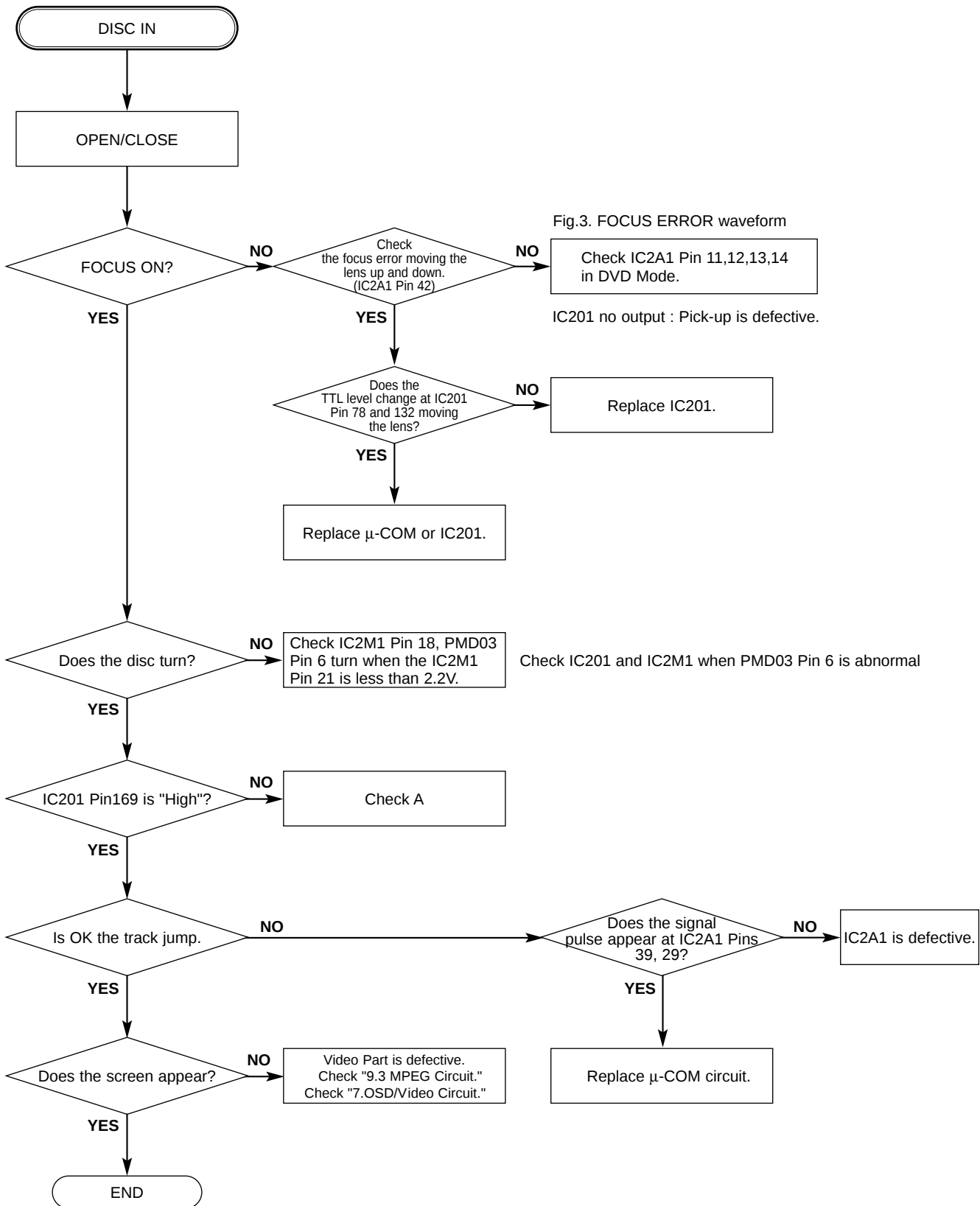
A.



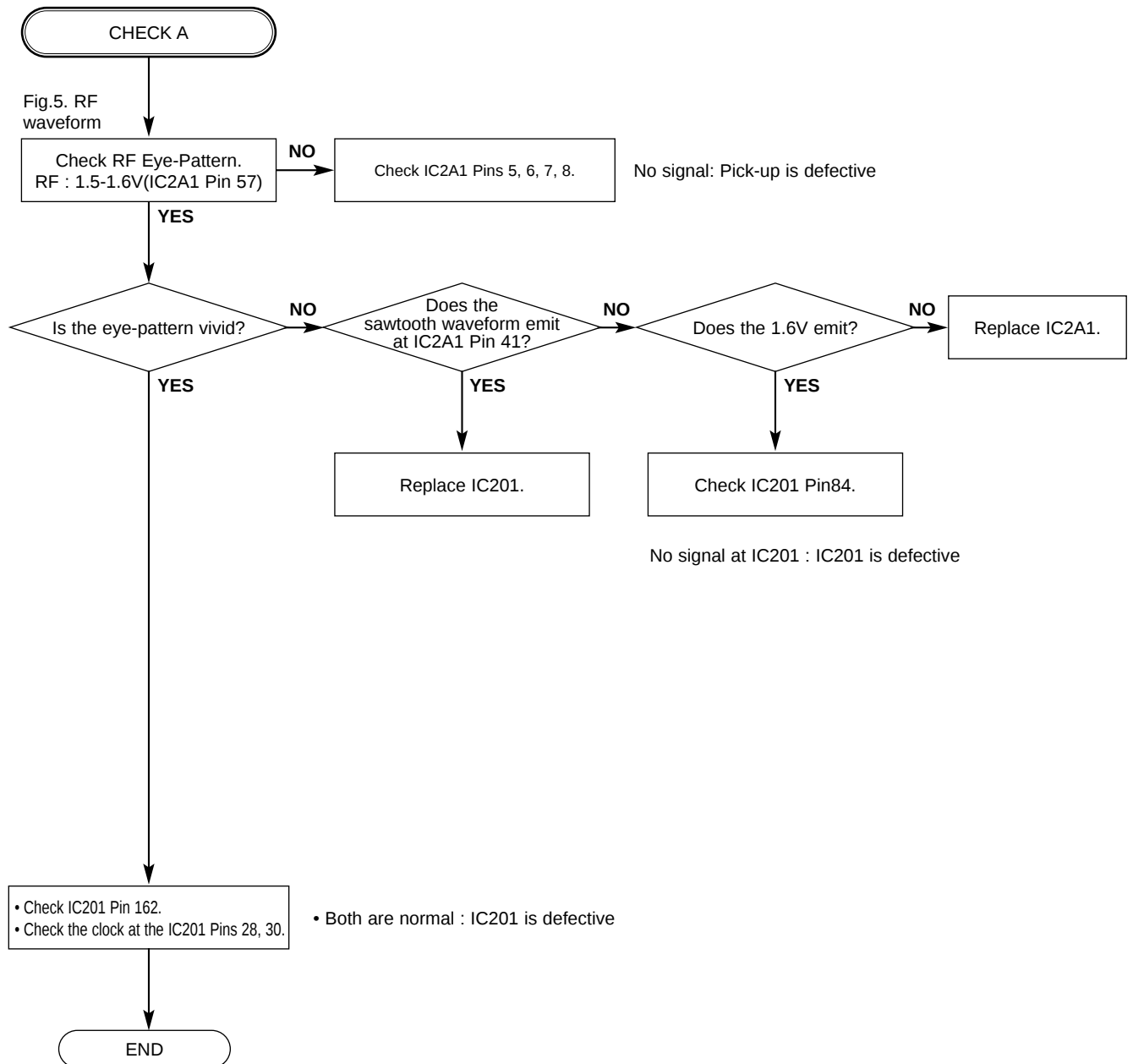
B.



C.

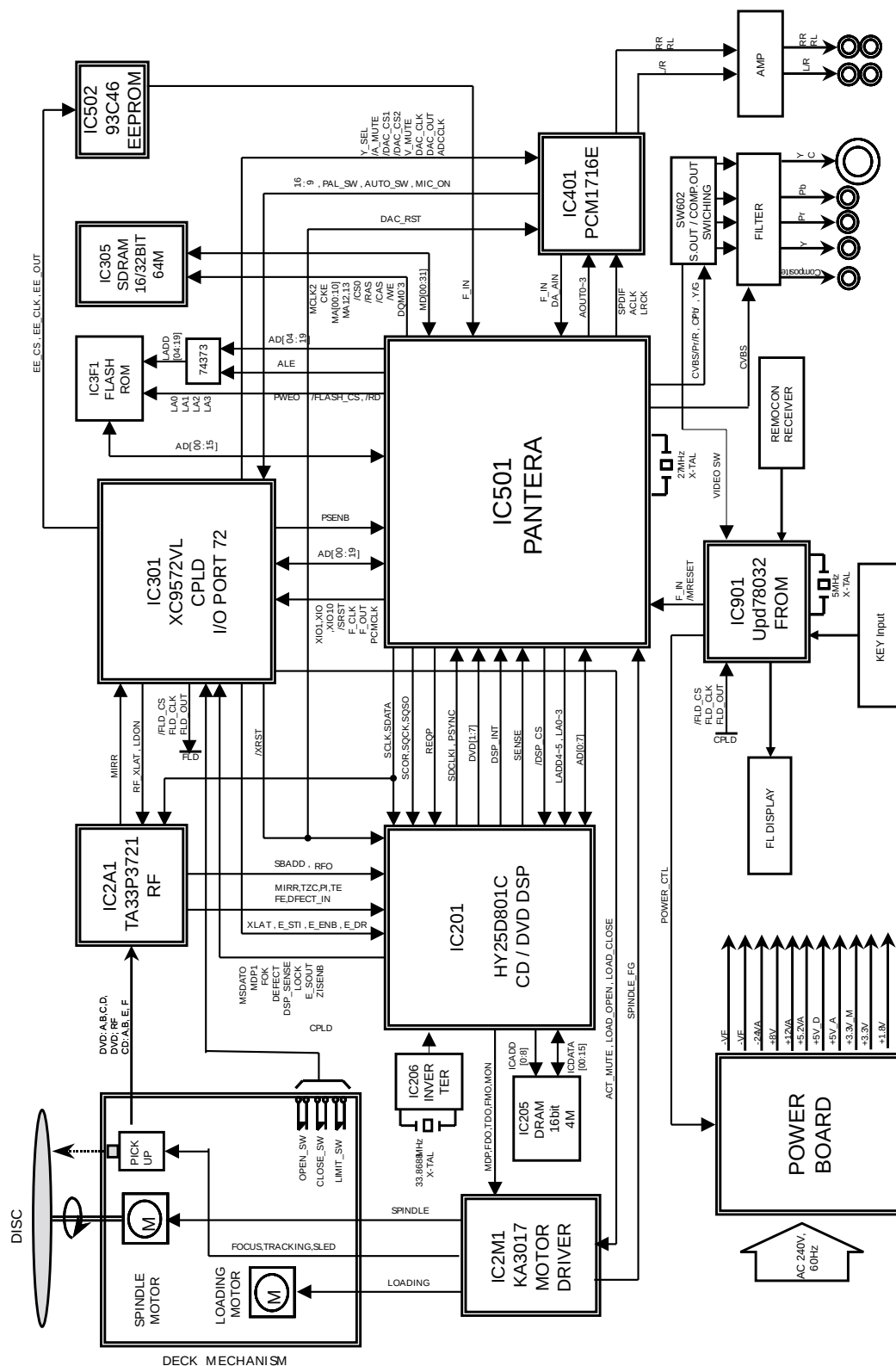


D.

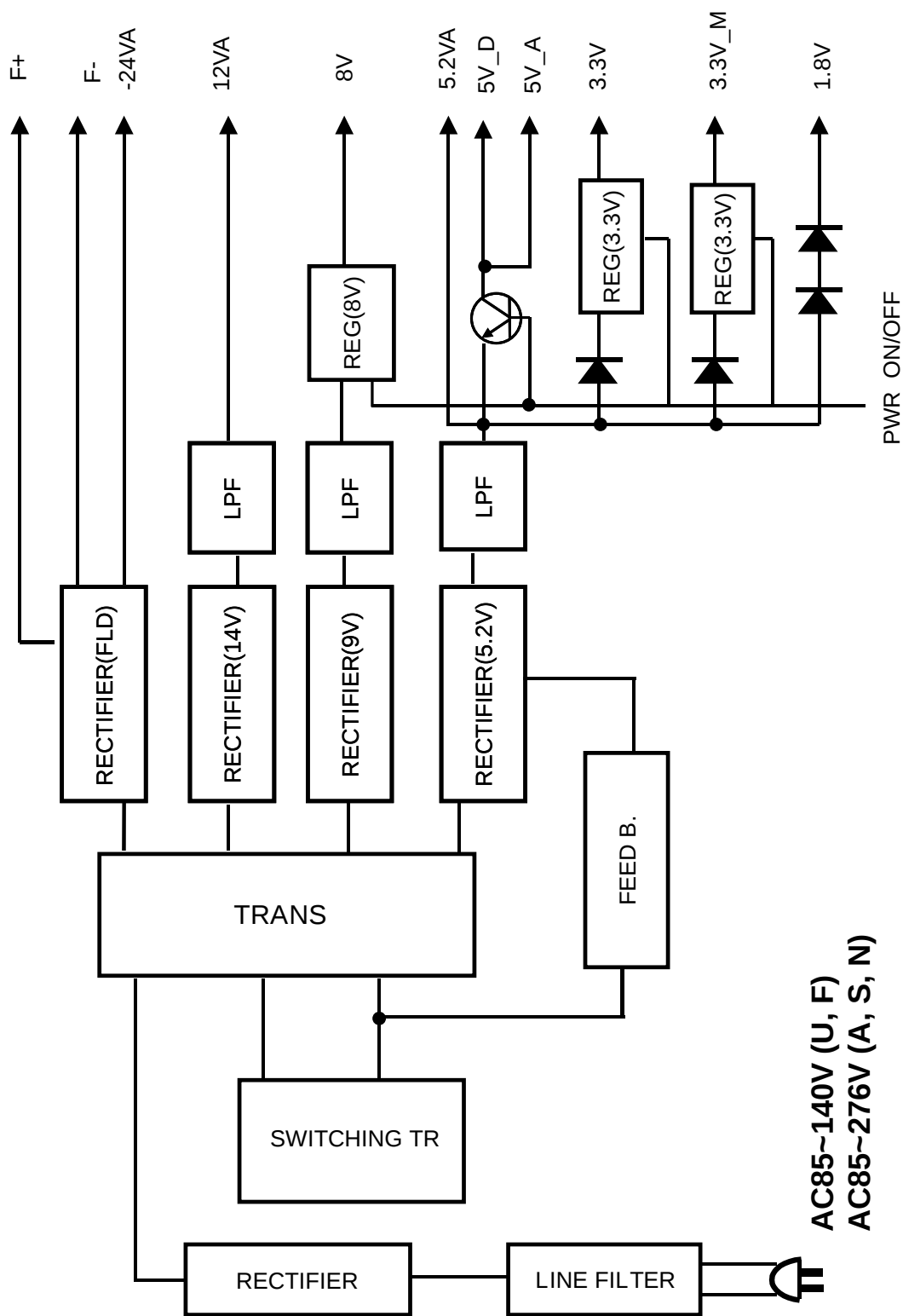


10. BLOCK DIAGRAMS

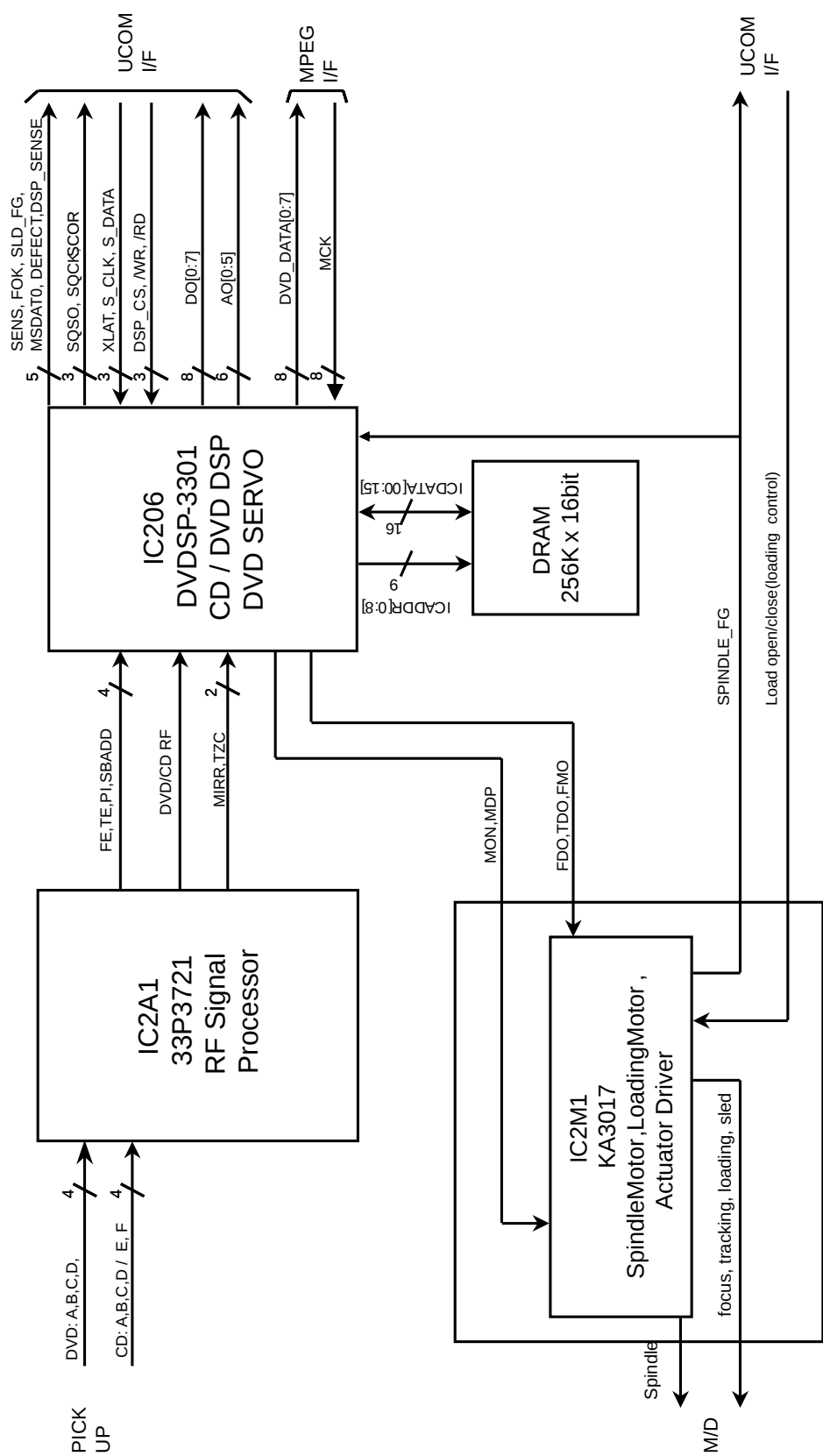
10.1 Overall Block Diagram



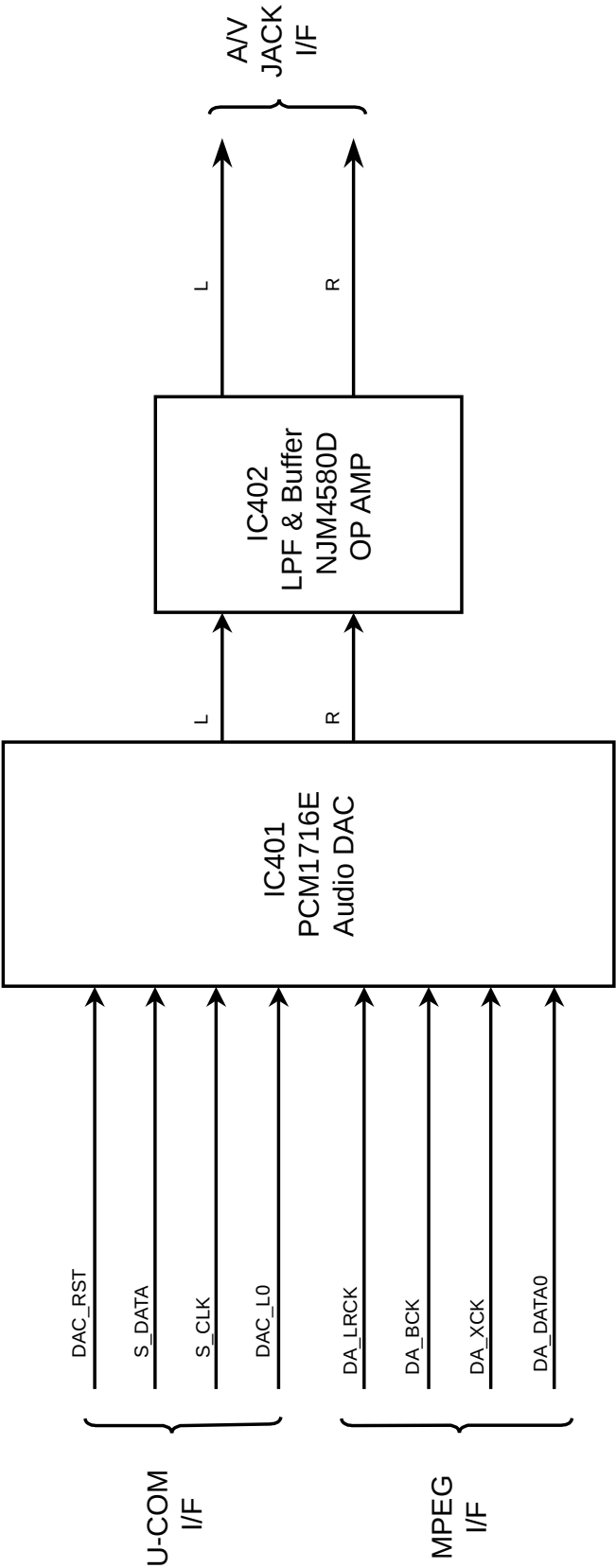
10.2 Power (SMPS) Block Diagram



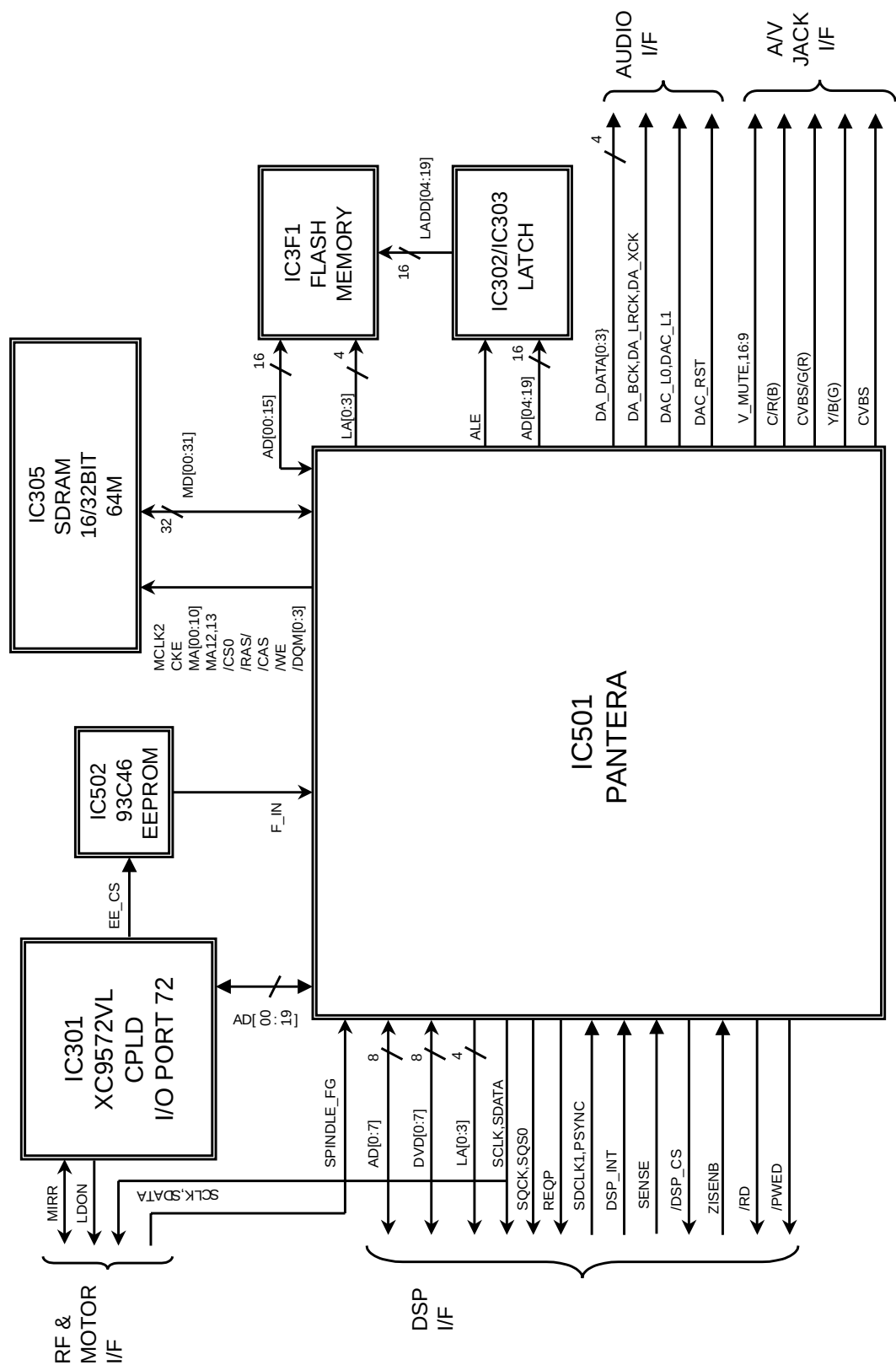
10.3 RF/CD DSP/DVD DSP/DVD SERVO Block Diagram



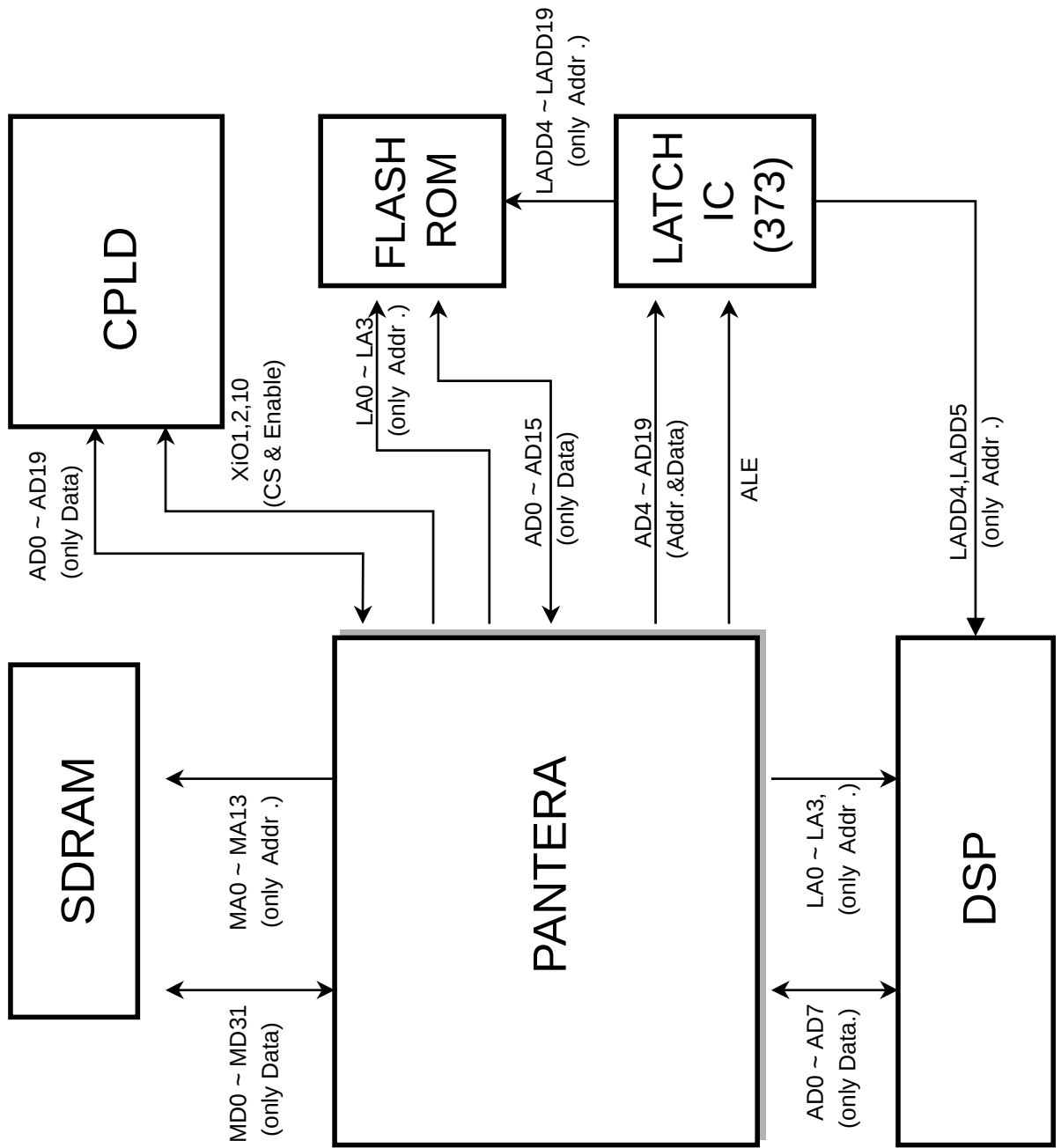
10.4 Audio Block Diagram



10.5 MPEG & MEMORY Block Diagram



10.6 MPEG & MEMORY μ -COM Block Diagram



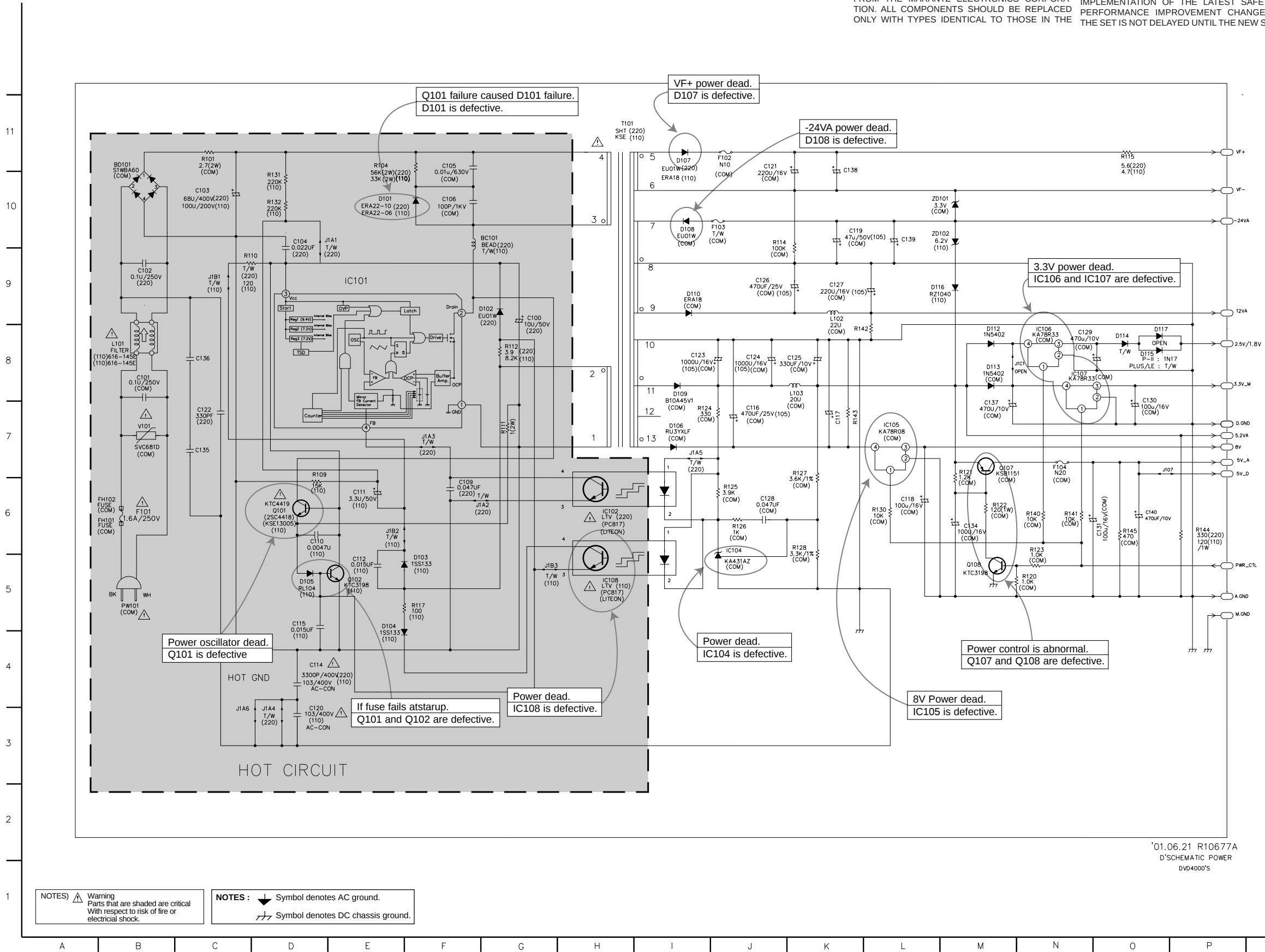
11. CIRCUIT DIAGRAMS
11.1 POWER (SMPS) CIRCUIT DIAGRAM

IMPORTANT SAFETY NOTICE
WHEN SERVICING THIS CHASSIS, UNDER NO CIRCUMSTANCES SHOULD THE ORIGINAL DESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE MARANTZ ELECTRONICS CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION. THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIFFER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTIL THE NEW SERVICE LITERATURE IS PRINTED.

NOTE :
1. Shaded(■) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.

LOCATION GUIDE

BC101	G10	R131	D10
BD101	B11	R140	D10
C101	B8	R141	N6
C102	B9	R142	K8
C103	C10	R143	K7
C104	D10	R144	P6
C105	F11	R145	O6
C106	F10	T101	H11
C109	F6	V101	B7
C110	D6	ZD101	L10
C111	E6	ZD102	L10
C112	E5		
C114	D4		
C115	D5		
C116	J7		
C117	K7		
C118	L6		
C119	K10		
C120	D3		
C121	J11		
C122	C7		
C123	I8		
C124	J8		
C125	K8		
C126	J9		
C127	K9		
C128	J6		
C129	N8		
C130	O7		
C131	O6		
C134	M6		
C135	C7		
C136	C8		
C137	M7		
C138	K10		
C139	L10		
C140	O6		
D101	P7		
D102	F9		
D103	F5		
D104	E5		
D105	D5		
D106	I7		
D107	I11		
D108	I10		
D109	I8		
D110	I9		
D112	M8		
D113	M8		
D114	O8		
D115	O8		
D116	L9		
D117	O8		
F102	J11		
F103	J10		
F104	N7		
FH101	B6		
FH102	B6		
IC101	E9		
IC102	H6		
IC104	J6		
IC105	L7		
IC106	N8		
IC107	N8		
IC108	H5		
J107	O7		
J1A1	D10		
J1A2	F6		
J1A3	F7		
J1A4	D3		
J1A5	I7		
J1A6	C3		
J1B1	C9		
J1B2	E6		
J1B3	G5		
J1C1	M8		
L101	B8		
L102	K9		
L103	K8		
M.GND	P5		
PWR_CTLP5	B5		
Q101	D6		
Q102	E5		
Q107	M7		
Q108	M5		
R101	C11		
R104	E11		
R109	D7		
R110	C9		
R111	G7		
R112	G8		
R114	J10		
R115	O11		
R117	F5		
R120	N5		
R121	M7		
R122	M6		
R123	N6		
R124	I7		
R125	J6		
R126	J6		
R127	K7		
R128	K6		
R130	L6		

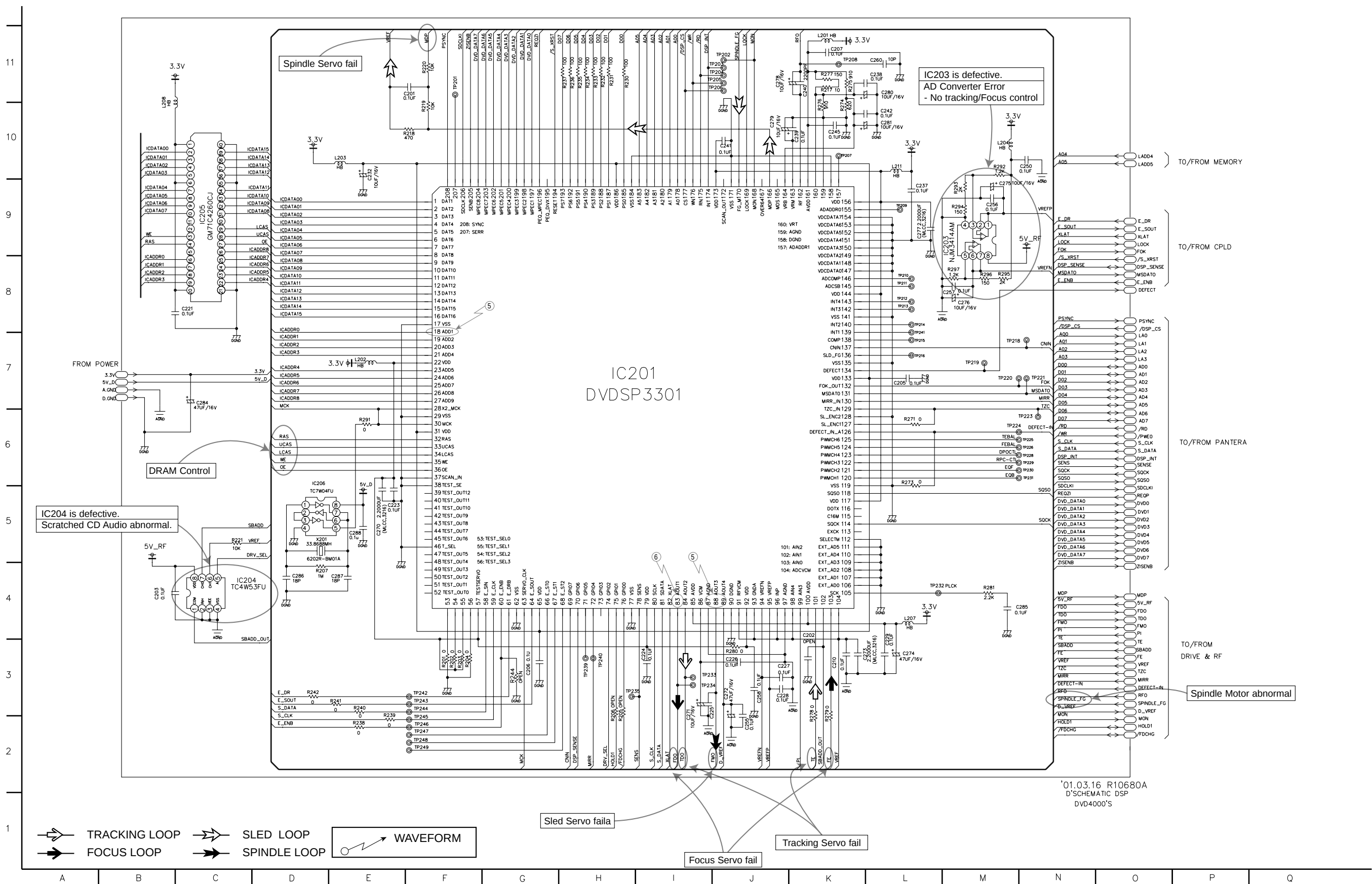


'01.06.21 R10677A
D'SCHEMATIC POWER
DVD4000'S

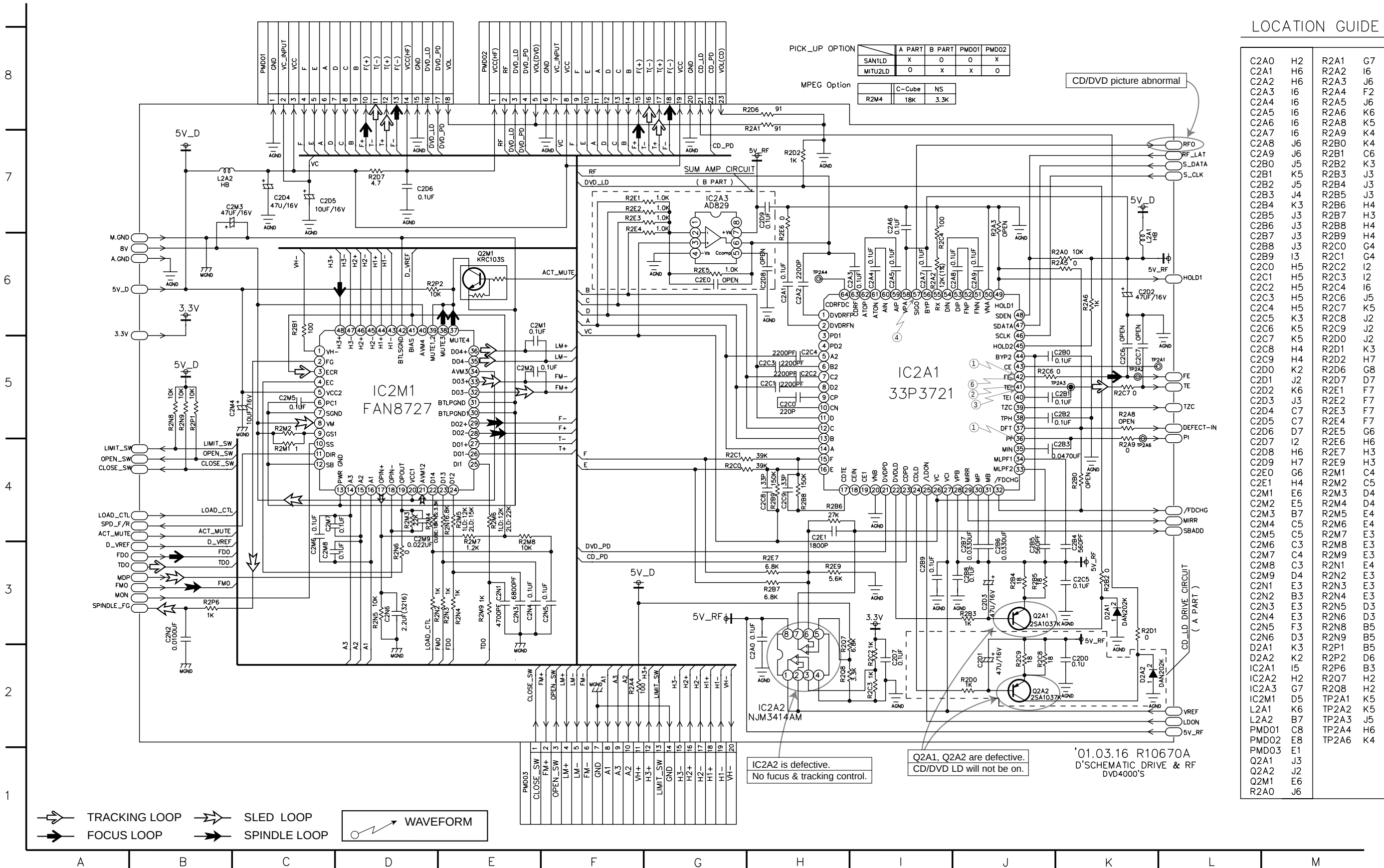
NOTES) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electrical shock.

NOTES : ⚡ Symbol denotes AC ground.
⏏ Symbol denotes DC chassis ground.

11.2 DVD DSP CIRCUIT DIAGRAM



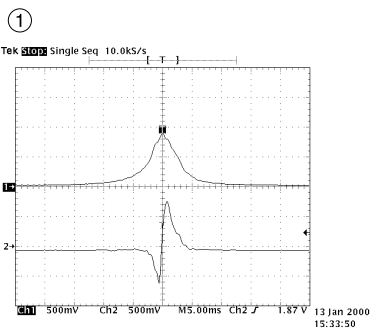
11.3 DRIVE & RF CIRCUIT DIAGRAM



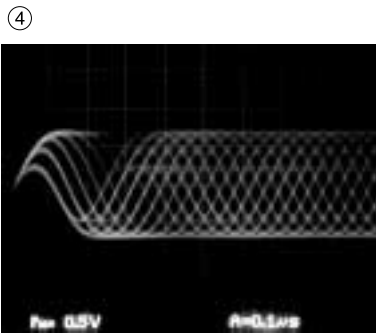
[illegible]

C501	D10	R533	O3
C502	N2	R534	O3
C503	D10	R535	O3
C504	C11	R536	N3
C505	M3	R537	N3
C506	C11	R538	N2
C507	D11	R539	N2
C508	L3	R540	M3
C509	L4	R541	L4
C510	L4	R542	O3
C511	L5	R550	G11
C512	L6	R588	E11
C513	L7	R589	E11
C514	L7	R590	F11
C515	L8	R591	F11
C516	L9	R597	F3
C517	J11	R5M1	N7
C518	I11	R5M2	N7
C519	I11	R5M3	N7
C520	H11	R5M4	O8
C521	G11	R5M5	O7
C522	G10	R5M6	O7
C523	D11	TP501	M5
C525	D8	TP506	E10
C526	D7	TP509	H11
C527	D6	TP510	F2
C528	D6	TP511	F3
C529	D5	TP512	F2
C530	D3	TP513	F2
C531	F3	TP514	F2
C532	F3	TP515	F2
C533	H3	TP516	G2
C534	H3	TP517	G3
C535	I3	TP518	G3
C536	J3	TP519	G3
C537	P3	TP520	G3
C538	D10	TP521	G3
C539	E10	TP522	G3
C540	F11	TP523	G3
C541	F11	TP524	H2
C542	L11	TP525	H2
C543	F10	TP526	H2
C544	L10	TP527	H2
C546	O4	TP528	H2
C548	O4	TP529	H2
C549	O3	TP530	H2
C550	O3	TP531	I2
C551	O3	TP532	I2
C552	P3	TP533	I2
C553	P3	TP534	I2
C554	C9	TP535	I3
C555	C9	TP536	I2
C556	C10	X501	G11
C5M1	P7	X101	F2
C5M2	P7	X101	M4
C5M3	P6	X101	N4
C5M4	O6	X1010	G2
IC501	G7	X1010	M4
IC502	K11	X1010	N4
IC503	L4	X102	F2
IC504	C9	X102	M4
IC505	M3	X102	N4
IC506	C10	X105	F2
IC5M1	O7	X105	A3
L501	D12	X105	B3
L502	G11	X106	A3
L503	C8	X106	B3
L504	C12	Z15NB	H2
L505	L10	Z15NB	A6
L506	I11	Z15NB	B7
L5M1	P6		
Q507	M2		
R501	B12		
R502	I11		
R503	B5		
R504	E10		
R505	F10		
R506	E10		
R507	D9		
R508	C9		
R509	C9		
R514	I11		
R515	I11		
R517	I11		
R518	I11		
R519	I11		
R520	J11		
R521	B8		
R522	J11		
R523	B8		
R524	O3		
R525	L6		
R526	O5		
R530	O4		
R531	O4		
R532	O4		

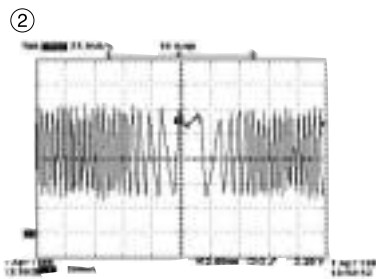
• WAVEFORMS



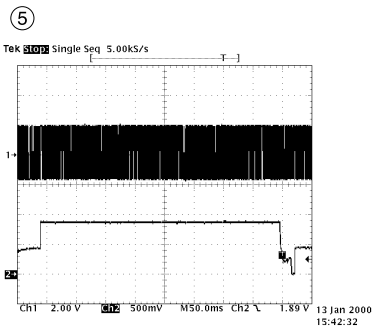
IC2A1 Pin 36, Pi
IC2A1 Pin 42, Focus Error



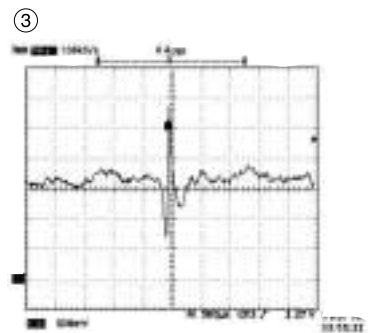
IC2A1 Pin 57, RF



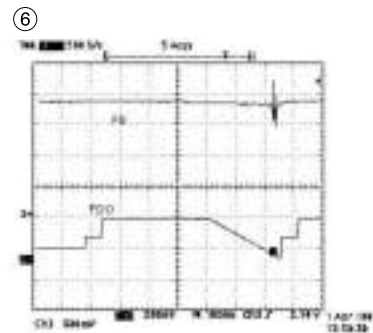
IC2A1 Pin 41
Tracking Error



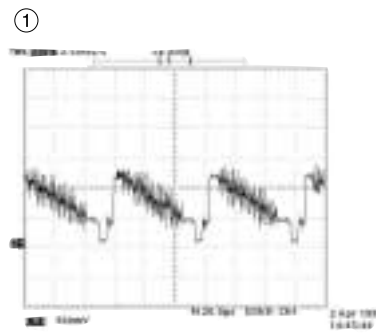
IC201 Pin 18, SLED FG
IC201 Pin 88, SLED Drive(FMO)



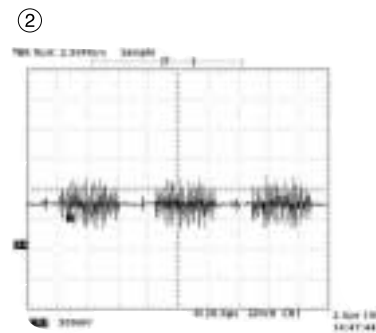
IC2A1 Pin 41
VBR TRACKING Error



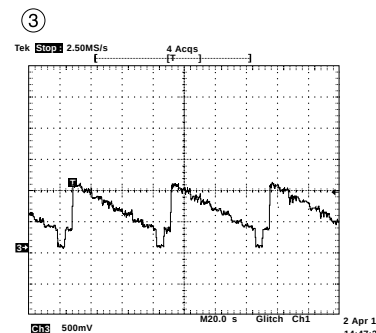
IC2A1 Pin42, Focus Error(in Focus Search)
IC201 Pin 83, Focus Drive(FDO)



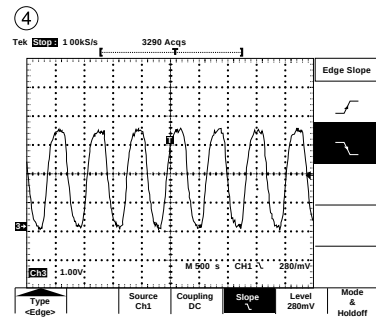
IC501 Pin 118, Composite



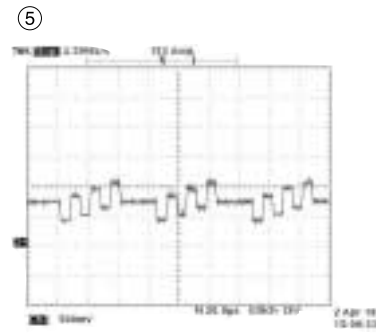
IC501 Pin 112, Chrominance
(Super video out Mode)



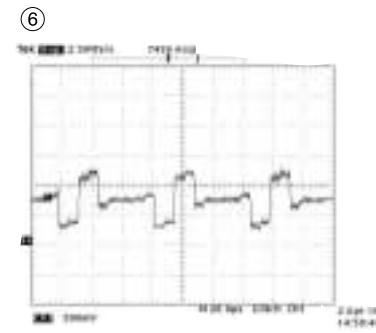
IC501 Pin 114, Luminance
(Super video out Mode)



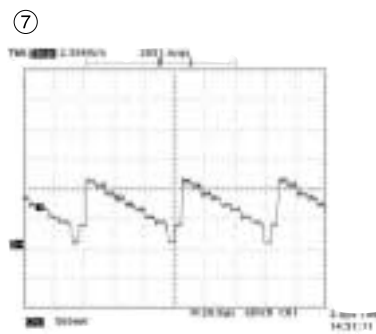
IC501 Pin 99, MPEG Clock(27MHz)



IC501 Pin 112
Component Pb

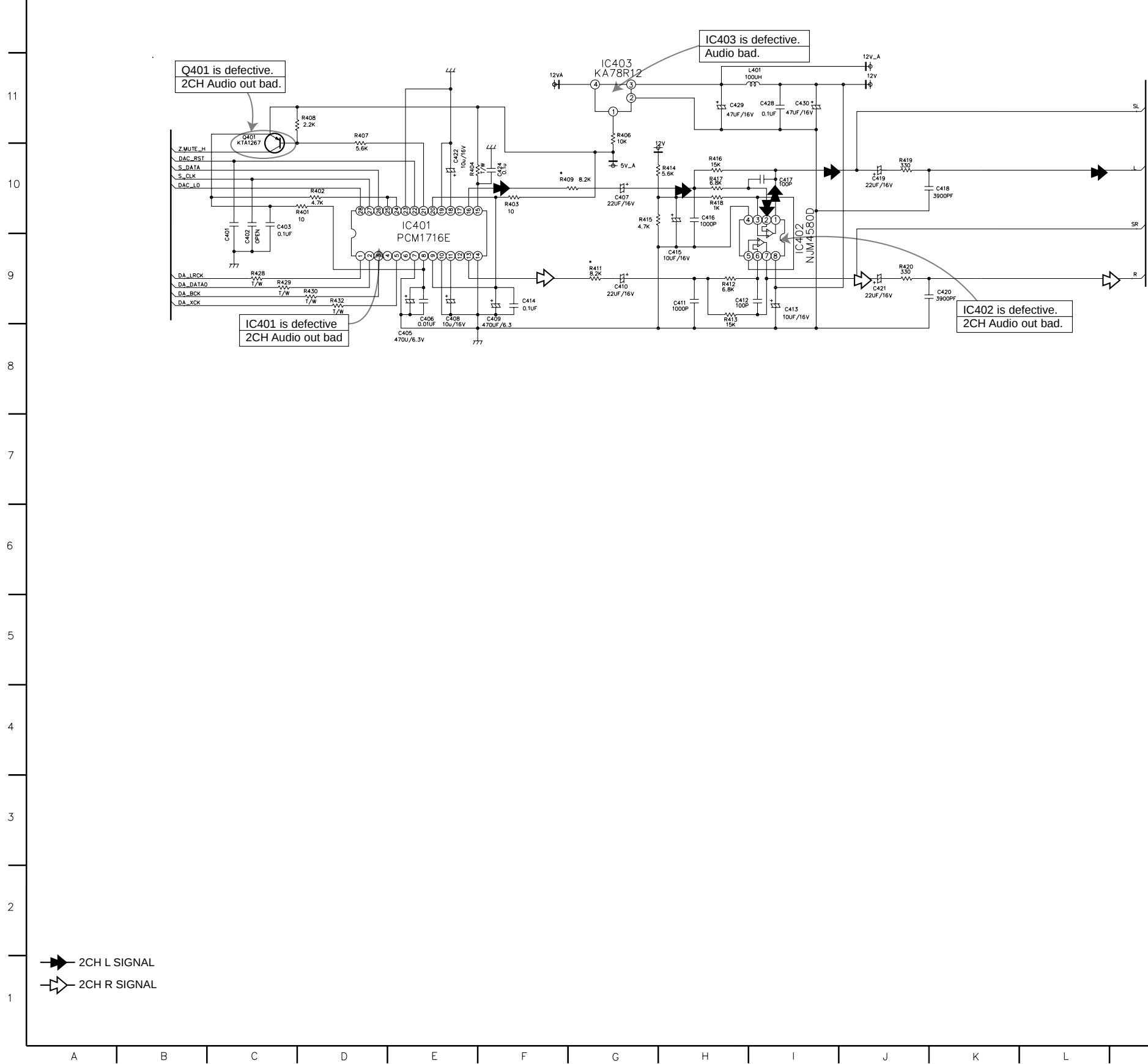


IC501 Pin 110
Component Pr



IC501 Pin 114
Component Y

11.5 AUDIO DM CIRCUIT DIAGRAM

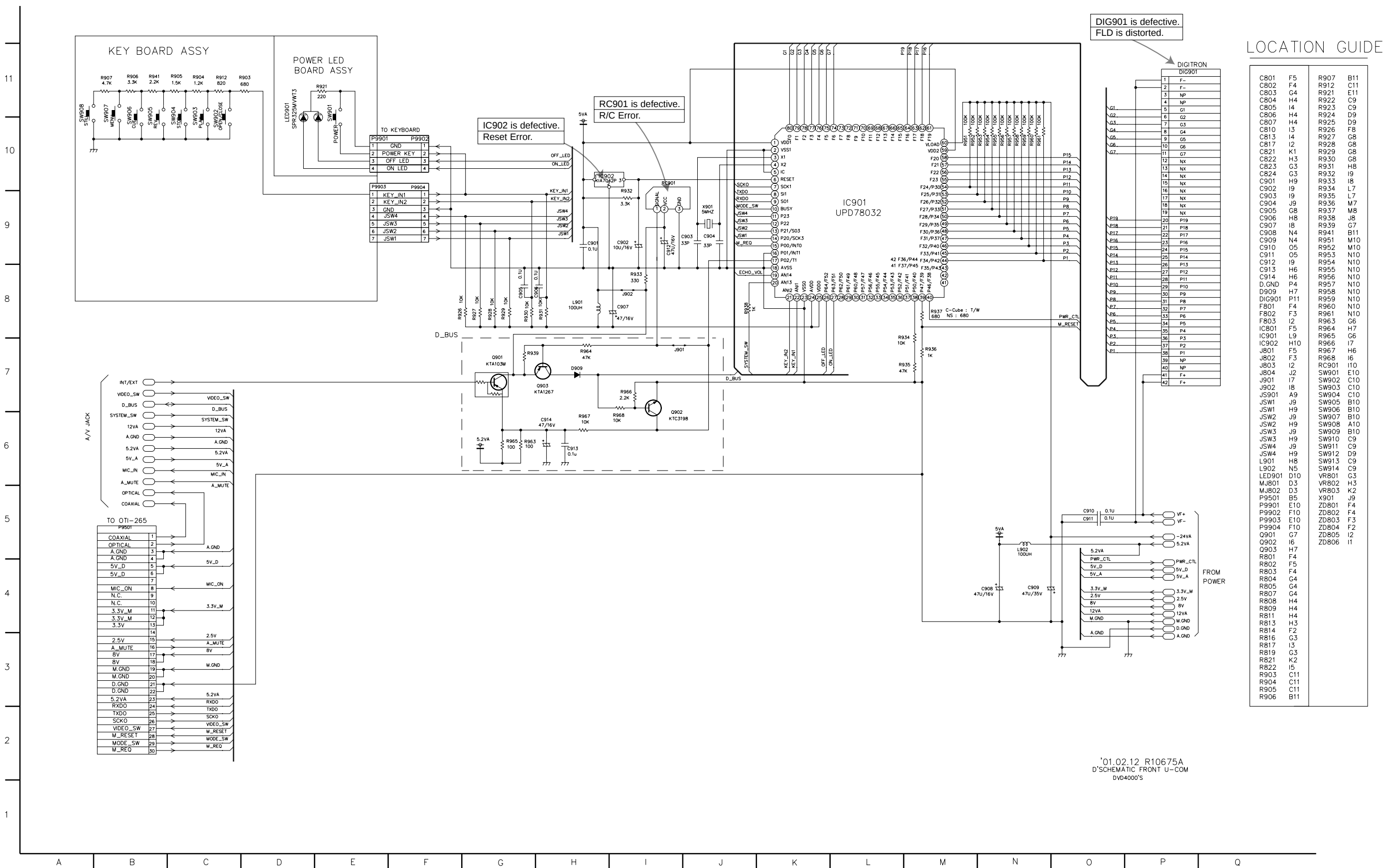


LOCATION GUIDE

C401	C9	R401	C10
C402	C9	R402	D10
C403	C10	R403	F10
C404	C4	R404	E10
C405	E8	R406	G11
C406	E9	R407	D11
C407	G10	R408	D11
C408	E9	R409	F10
C409	F9	R411	G9
C410	G9	R412	H9
C411	H9	R413	H9
C412	H9	R414	H10
C413	I9	R415	G10
C414	F9	R416	H10
C415	H9	R417	H10
C416	H10	R418	H10
C417	I10	R419	J10
C418	K10	R420	J9
C419	J10	R421	M10
C420	K9	R422	M10
C421	J9	R423	M10
C422	E10	R424	N11
C423	F10	R425	N10
C424	F10	R426	N10
C425	H11	R427	N10
C426	H11	R428	C9
C427	I11	R429	C5
C428	C5	R430	D9
C429	C5	R431	C6
C430	E6	R432	D9
C431	D4	R433	C3
C432	G8	R434	C3
C433	H7	R435	C3
C434	H7	R436	C3
C435	H7	R437	C3
C436	H7	R438	C3
C437	H7	R439	C3
C438	H7	R440	C3
C439	H7	R441	C3
C440	H7	R442	C3
C441	H7	R443	C3
C442	H7	R444	C3
C443	H7	R445	C3
C444	H7	R446	C3
C445	H7	R447	C3
C446	H7	R448	C3
C447	H7	R449	C3
C448	H7	R450	C3
C449	H7	R451	C3
C450	H7	R452	C3
C451	H7	R453	C3
C452	H7	R454	C3
C453	H7	R455	C3
C454	H7	R456	C3
C455	H7	R457	C3
C456	H7	R458	C3
C457	H7	R459	C3
C458	H7	R460	C3
C459	H7	R461	C3
C460	H7	R462	C3
C461	H7	R463	C3
C462	H7	R464	C3
C463	H7	R465	C3
C464	H7	R466	C3
C465	H7	R467	C3
C466	H7	R468	C3
C467	H7	R469	C3
C468	H7	R470	C3
C469	H7	R471	C3
C470	H7	R472	C3
C471	H7	R473	C3
C472	H7	R474	C3
C473	H7	R475	C3
C474	H7	R476	C3
C475	H7	R477	C3
C476	H7	R478	C3
C477	H7	R479	C3
C478	H7	R480	C3
C479	H7	R481	C3
C480	H7	R482	C3
C481	H7	R483	C3
C482	H7	R484	C3
C483	H7	R485	C3
C484	H7	R486	C3
C485	H7	R487	C3
C486	H7	R488	C3
C487	H7	R489	C3
C488	H7	R490	C3
C489	H7	R491	C3
C490	H7	R492	C3
C491	H7	R493	C3
C492	H7	R494	C3
C493	H7	R495	C3
C494	H7	R496	C3
C495	H7	R497	C3
C496	H7	R498	C3
C497	H7	R499	C3
C498	H7	R500	C3
C499	H7	R501	C3
C500	H7	R502	C3

'01.03.16 R10674A
D'SCHEMATIC AUDIO
DVD4000'S

11.6 FRONT MICOM CIRCUIT DIAGRAM

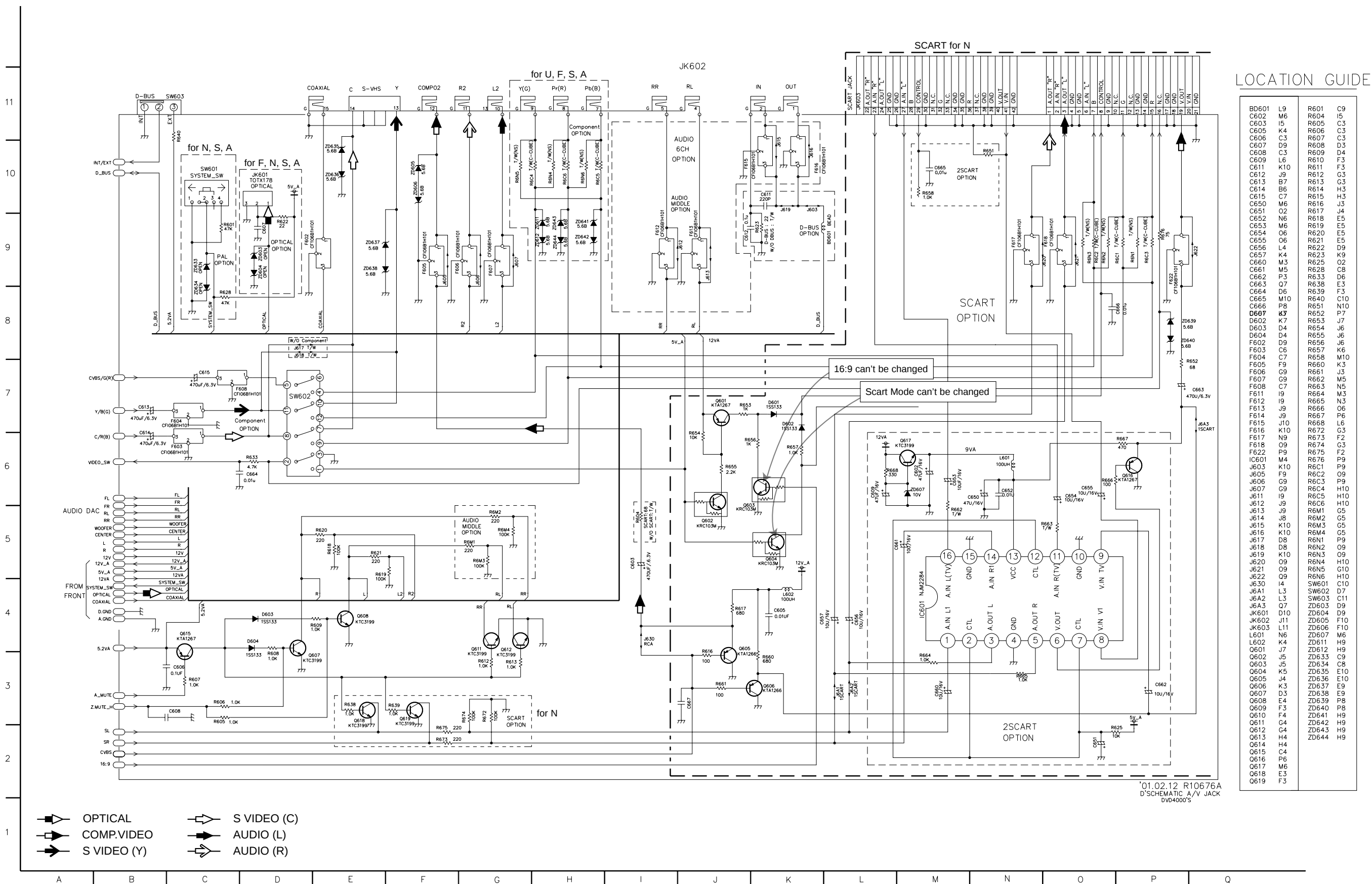


'01.02.12 R10675A
D'SCHEMATIC FRONT U-COM
DVD4000'S

The schematic diagram illustrates the memory system of the R10681A DVD4000S. The central component is IC301 (XC9572VL), which is connected to various input/output blocks and memory chips. The connections are as follows:

- IC301 (XC9572VL) Connections:**
 - AD0-AD15:** Connected to IC302 (74LCX573) and IC303 (74LCX573).
 - AD16-AD21:** Connected to IC304 (74LCX573) and IC305 (HY57V652220).
 - AD22-AD27:** Connected to IC306 (74LCX573).
 - AD28-AD31:** Connected to IC307 (74LCX573).
 - AD32-AD37:** Connected to IC308 (74LCX573).
 - AD38-AD43:** Connected to IC309 (74LCX573).
 - AD44-AD49:** Connected to IC310 (74LCX573).
 - AD50-AD55:** Connected to IC311 (74LCX573).
 - AD56-AD61:** Connected to IC312 (74LCX573).
 - AD62-AD67:** Connected to IC313 (74LCX573).
 - AD68-AD73:** Connected to IC314 (74LCX573).
 - AD74-AD79:** Connected to IC315 (74LCX573).
 - AD80-AD85:** Connected to IC316 (74LCX573).
 - AD86-AD91:** Connected to IC317 (74LCX573).
 - AD92-AD97:** Connected to IC318 (74LCX573).
 - AD98-AD103:** Connected to IC319 (74LCX573).
 - AD104-AD109:** Connected to IC320 (74LCX573).
 - AD110-AD115:** Connected to IC321 (74LCX573).
 - AD116-AD121:** Connected to IC322 (74LCX573).
 - AD122-AD127:** Connected to IC323 (74LCX573).
 - AD128-AD133:** Connected to IC324 (74LCX573).
 - AD134-AD139:** Connected to IC325 (74LCX573).
 - AD140-AD145:** Connected to IC326 (74LCX573).
 - AD146-AD151:** Connected to IC327 (74LCX573).
 - AD152-AD157:** Connected to IC328 (74LCX573).
 - AD158-AD163:** Connected to IC329 (74LCX573).
 - AD164-AD169:** Connected to IC330 (74LCX573).
 - AD170-AD175:** Connected to IC331 (74LCX573).
 - AD176-AD181:** Connected to IC332 (74LCX573).
 - AD182-AD187:** Connected to IC333 (74LCX573).
 - AD188-AD193:** Connected to IC334 (74LCX573).
 - AD194-AD199:** Connected to IC335 (74LCX573).
 - AD200-AD205:** Connected to IC336 (74LCX573).
 - AD206-AD211:** Connected to IC337 (74LCX573).
 - AD212-AD217:** Connected to IC338 (74LCX573).
 - AD218-AD223:** Connected to IC339 (74LCX573).
 - AD224-AD229:** Connected to IC340 (74LCX573).
 - AD230-AD235:** Connected to IC341 (74LCX573).
 - AD236-AD241:** Connected to IC342 (74LCX573).
 - AD242-AD247:** Connected to IC343 (74LCX573).
 - AD248-AD253:** Connected to IC344 (74LCX573).
 - AD254-AD259:** Connected to IC345 (74LCX573).
 - AD260-AD265:** Connected to IC346 (74LCX573).
 - AD266-AD271:** Connected to IC347 (74LCX573).
 - AD272-AD277:** Connected to IC348 (74LCX573).
 - AD278-AD283:** Connected to IC349 (74LCX573).
 - AD284-AD289:** Connected to IC350 (74LCX573).
 - AD290-AD295:** Connected to IC351 (74LCX573).
 - AD296-AD301:** Connected to IC352 (74LCX573).
 - AD302-AD307:** Connected to IC353 (74LCX573).
 - AD308-AD313:** Connected to IC354 (74LCX573).
 - AD314-AD319:** Connected to IC355 (74LCX573).
 - AD320-AD325:** Connected to IC356 (74LCX573).
 - AD326-AD331:** Connected to IC357 (74LCX573).
 - AD332-AD337:** Connected to IC358 (74LCX573).
 - AD338-AD343:** Connected to IC359 (74LCX573).
 - AD344-AD349:** Connected to IC360 (74LCX573).
 - AD350-AD355:** Connected to IC361 (74LCX573).
 - AD356-AD361:** Connected to IC362 (74LCX573).
 - AD362-AD367:** Connected to IC363 (74LCX573).
 - AD368-AD373:** Connected to IC364 (74LCX573).
 - AD374-AD379:** Connected to IC365 (74LCX573).
 - AD380-AD385:** Connected to IC366 (74LCX573).
 - AD386-AD391:** Connected to IC367 (74LCX573).
 - AD392-AD397:** Connected to IC368 (74LCX573).
 - AD398-AD403:** Connected to IC369 (74LCX573).
 - AD404-AD409:** Connected to IC370 (74LCX573).
 - AD410-AD415:** Connected to IC371 (74LCX573).
 - AD416-AD421:** Connected to IC372 (74LCX573).
 - AD422-AD427:** Connected to IC373 (74LCX573).
 - AD428-AD433:** Connected to IC374 (74LCX573).
 - AD434-AD439:** Connected to IC375 (74LCX573).
 - AD440-AD445:** Connected to IC376 (74LCX573).
 - AD446-AD451:** Connected to IC377 (74LCX573).
 - AD452-AD457:** Connected to IC378 (74LCX573).
 - AD458-AD463:** Connected to IC379 (74LCX573).
 - AD464-AD469:** Connected to IC380 (74LCX573).
 - AD470-AD475:** Connected to IC381 (74LCX573).
 - AD476-AD481:** Connected to IC382 (74LCX573).
 - AD482-AD487:** Connected to IC383 (74LCX573).
 - AD488-AD493:** Connected to IC384 (74LCX573).
 - AD494-AD499:** Connected to IC385 (74LCX573).
 - AD500-AD505:** Connected to IC386 (74LCX573).
 - AD506-AD511:** Connected to IC387 (74LCX573).
 - AD512-AD517:** Connected to IC388 (74LCX573).
 - AD518-AD523:** Connected to IC389 (74LCX573).
 - AD524-AD529:** Connected to IC390 (74LCX573).
 - AD530-AD535:** Connected to IC391 (74LCX573).
 - AD536-AD541:** Connected to IC392 (74LCX573).
 - AD542-AD547:** Connected to IC393 (74LCX573).
 - AD548-AD553:** Connected to IC394 (74LCX573).
 - AD554-AD559:** Connected to IC395 (74LCX573).
 - AD560-AD565:** Connected to IC396 (74LCX573).
 - AD566-AD571:** Connected to IC397 (74LCX573).
 - AD572-AD577:** Connected to IC398 (74LCX573).
 - AD578-AD583:** Connected to IC399 (74LCX573).
 - AD584-AD589:** Connected to IC400 (74LCX573).
 - AD590-AD595:** Connected to IC401 (74LCX573).
 - AD596-AD601:** Connected to IC402 (74LCX573).
 - AD602-AD607:** Connected to IC403 (74LCX573).
 - AD608-AD613:** Connected to IC404 (74LCX573).
 - AD614-AD619:** Connected to IC405 (74LCX573).
 - AD620-AD625:** Connected to IC406 (74LCX573).
 - AD626-AD631:** Connected to IC407 (74LCX573).
 - AD632-AD637:** Connected to IC408 (74LCX573).
 - AD638-AD643:** Connected to IC409 (74LCX573).
 - AD644-AD649:** Connected to IC410 (74LCX573).
 - AD650-AD655:** Connected to IC411 (74LCX573).
 - AD656-AD661:** Connected to IC412 (74LCX573).
 - AD662-AD667:** Connected to IC413 (74LCX573).
 - AD668-AD673:** Connected to IC414 (74LCX573).
 - AD674-AD679:** Connected to IC415 (74LCX573).
 - AD680-AD685:** Connected to IC416 (74LCX573).
 - AD686-AD6**

11.8 JACK CIRCUIT DIAGRAM



• CIRCUIT VOLTAGE CHART

MODE PIN NO.	EE	PLAY
D S P		
IC201 SP3301		
1	2.00	1.30
2	2.00	1.30
3	2.00	1.30
4	2.00	1.30
5	2.00	1.30
6	2.00	1.30
7	2.00	1.30
8	2.00	1.30
9	2.00	1.30
10	2.00	1.30
11	2.00	1.30
12	2.00	1.30
13	2.00	1.30
14	2.00	1.30
15	2.00	1.30
16	2.00	1.30
17	0.00	0.00
18	0.00	1.50
19	0.00	1.50
20	0.00	1.50
21	0.00	1.50
22	3.10	3.00
23	0.00	1.50
24	0.00	1.50
25	0.00	1.50
26	0.00	1.50
27	0.00	1.50
28	2.10	1.50
29	0.00	0.00
30	2.10	2.00
31	3.10	3.00
32	3.10	1.50
33	3.10	2.50
34	3.10	2.50
35	2.10	1.30
36	1.10	1.80
37	0.00	0.00
38	0.00	0.00
39	0.00	0.00
40	3.10	3.00
41	0.00	0.00
42	3.10	3.00
43	0.00	0.00
44	0.00	0.00
45	3.10	3.00
46	0.00	0.00
47	0.00	0.00
48	0.00	0.00
49	0.00	3.00
50	0.00	0.00
51	0.00	0.00
52	3.10	1.80
53	0.00	0.00

MODE PIN NO.	EE	PLAY
54	3.10	3.00
55	3.10	3.00
56	0.00	0.00
57	0.00	3.13
58	5.00	4.98
59	0.00	0.00
60	0.00	0.00
61	5.00	4.98
62	0.00	0.00
63	2.10	2.10
64	0.00	0.00
65	3.10	3.00
66	0.00	0.00
67	3.10	3.12
68	0.00	0.00
69	0.00	0.20
70	0.00	0.00
71	3.10	3.10
72	0.00	0.20
73	0.00	0.00
74	3.10	3.10
75	0.00	0.00
76	0.00	0.00
77	0.00	0.00
78	0.00	2.30
79	3.10	3.10
80	5.00	5.00
81	0.00	0.00
82	5.00	5.00
83	2.10	2.00
84	2.10	2.10
85	3.10	3.10
86	1.40	1.40
87	0.00	0.00
88	2.10	2.00
89	2.10	2.00
90	0.00	0.00
91	1.50	1.55
92	3.10	3.12
93	1.60	1.55
94	1.10	1.11
95	2.00	2.00
96	1.55	1.55
97	0.00	0.00
98	1.55	1.55
99	1.56	2.15
100	3.10	3.10
101	1.55	1.58
102	1.55	1.55
103	1.62	1.64
104	1.55	1.55
105	1.50	1.50
106	0.00	0.00
107	0.00	0.00
108	0.00	0.00

MODE PIN NO.	EE	PLAY
109	0.00	0.00
110	0.00	0.00
111	0.00	0.00
112	0.00	0.00
113	3.40	4.70
114	5.00	5.00
115	1.50	1.50
116	1.50	1.53
117	3.10	3.10
118	0.00	0.00
119	0.00	0.00
120	3.50	4.20
121	3.25	4.20
122	3.45	4.30
123	3.50	4.30
124	3.50	4.30
125	3.50	4.50
126	0.00	0.00
127	3.60	2.60
128	0.00	0.00
129	3.60	2.60
130	0.00	0.20
131	0.00	0.00
132	0.00	3.10
133	3.10	3.10
134	0.00	0.00
135	0.00	0.00
136	3.10	2.20
137	0.00	0.00
138	0.00	0.00
139	3.10	3.10
140	3.00	3.10
141	0.00	0.00
142	3.00	3.00
143	3.10	3.10
144	3.10	3.10
145	3.10	0.90
146	3.50	4.50
147	0.00	0.00
148	0.00	0.00
149	0.00	0.00
150	0.00	0.00
151	0.00	0.00
152	0.00	0.00
153	0.00	0.00
154	0.00	0.00
155	1.55	1.55
156	3.10	3.10
157	1.50	1.50
158	0.00	0.00
159	0.00	0.00
160	2.60	2.60
161	3.10	3.10
162	2.00	2.00
163	2.00	2.00

MODE PIN NO.	EE	PLAY
164	1.40	1.40
165	3.20	0.00
166	1.60	1.75
167	0.00	0.00
168	0.00	3.10
169	0.00	3.10
170	5.00	2.50
171	0.00	2.50
172	3.10	0.00
173	3.10	3.10
174	3.10	3.10
175	3.10	3.10
176	2.53	1.30
177	4.24	4.97
178	5.00	5.00
179	2.70	0.20
180	3.26	2.30
181	3.10	2.50
182	2.40	2.50
183	3.66	2.80
184	2.40	2.50
185	0.00	0.00
186	2.26	2.00
187	3.10	3.10
188	2.20	2.40
189	1.75	1.90
190	2.20	1.80
191	1.80	1.80
192	2.20	2.20
193	1.25	1.30
194	1.00	1.10
195	5.00	5.00
196	0.00	2.25
197	0.00	1.60
198	0.00	1.50
199	0.00	1.50
200	0.00	1.50
201	0.00	1.50
202	0.00	1.50
203	0.00	1.50
204	0.00	1.50
205	3.10	2.60
206	1.50	1.50
207	3.10	3.10
208	3.10	3.10
IC205 GM71C4260CJ		
1	3.16	3.18
2	2.01	2.07
3	2.01	2.07
4	2.02	2.07
5	2.02	2.07
6	3.16	3.18
7	2.02	2.08
8	2.02	2.07
IC203 NJM3414AM		
1	2.00	2.00
2	2.00	2.00
3	2.00	2.00
4	0.00	0.00
5	1.10	1.10

MODE PIN NO.	EE	PLAY
10	2.02	2.07
11	0.10	0.00
12	0.26	0.00
13	2.08	2.09
14	3.16	3.17
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00
19	0.00	0.00
20	3.15	3.18
21	0.00	0.00
22	0.00	0.00
23	0.00	0.00
24	0.00	0.00
25	0.00	0.00
26	0.00	0.00
27	1.06	1.07
28	3.14	3.17
29	3.14	3.16
30	0.00	0.00
31	2.01	2.08
32	2.02	2.08
33	2.02	2.08
34	2.02	2.08
35	0.00	0.00
36	2.02	2.08
37	2.02	2.08
38	2.02	2.08
39	2.02	2.08
40	0.00	0.00
IC204 4W53FU		
1	1.50	1.50
2	0.00	0.00
3	0.00	0.00
4	0.00	0.00
5	3.10	3.10
6	1.50	1.50
7	2.72	2.60
8	5.00	5.00
IC206 7W04FU		
1	2.60	2.60
2	2.80	2.70
3	2.80	2.70
4	0.00	0.00
5	2.10	2.10
6	2.20	2.20
7	2.20	2.20
8	5.00	5.00
IC203 NJM3414AM		
1</		

MODE PIN NO.	EE	PLAY
37	2.56	1.84
38	0.00	0.00
39	2.40	2.76
40	2.87	2.72
41	3.06	3.06
42	2.24	2.37
43	3.06	3.06
44	0.00	0.00
45	0.00	2.42
46	0.00	0.00
47	2.86	2.73
48	2.41	2.78
49	30.60	3.08
50	2.56	2.69
51	2.55	2.67
52	0.00	0.00
53	2.53	2.68
54	2.52	2.66
55	30.60	3.07
56	2.52	2.28
57	0.00	0.00
58	0.00	0.00
59	0.00	0.00
60	1.10	1.50
61	2.17	1.54
62	2.07	1.54
63	2.08	1.78
64	2.14	1.66
65	0.06	0.15
66	0.06	0.25
67	3.05	3.04
68	1.64	1.61
69	0.00	0.09
70	0.00	0.08
71	0.00	0.00
72	0.00	0.00
73	0.00	0.00
74	2.23	0.00
75	3.06	3.03
76	2.86	1.70
77	2.40	1.76
78	0.00	0.00
79	2.55	1.86
80	2.57	1.92
81	3.06	3.06
82	2.54	1.84
83	2.54	1.66
84	0.00	0.00
85	0.00	1.77
86	0.00	0.03
IC3F1		
1	0.00	0.00
2	0.02	0.00
3	0.00	0.00
4	0.02	0.00

MODE PIN NO.	EE	PLAY
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	2.40	2.75
10	0.18	0.20
11	3.07	3.05
12	3.05	2.99
13	1.19	1.36
14	0.00	0.02
15	1.20	1.55
16	3.10	0.73
17	0.00	0.00
18	0.00	0.00
19	0.00	0.00
20	0.00	0.00
21	0.00	2.23
22	0.00	2.13
23	0.00	2.22
24	0.00	0.15
25	3.04	0.74
26	3.04	3.05
27	0.00	0.00
28	3.04	3.05
29	3.03	3.00
30	3.03	3.00
31	3.03	3.00
32	3.03	3.00
33	3.03	2.99
34	3.04	2.99
35	3.04	3.00
36	3.04	3.00
37	3.04	3.00
38	3.03	0.40
39	3.03	3.00
40	3.03	3.00
41	3.03	3.00
42	3.02	2.99
43	3.02	3.00
44	3.03	3.00
45	3.02	3.00
46	0.00	0.00
47	3.03	3.03
48	0.00	0.00
IC302		
1	0.00	0.00
2	0.40	0.39
3	2.93	2.99
4	2.92	2.97
5	2.90	2.98
6	2.99	2.98
7	3.00	2.97
8	2.99	2.95
9	2.96	2.95
10	0.02	0.00

MODE PIN NO.	EE	PLAY
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00
19	0.00	2.30
20	3.01	3.06
IC303		
1	0.00	0.00
2	3.02	2.99
3	3.02	2.99
4	2.97	2.99
5	2.94	3.00
6	2.95	3.00
7	2.97	2.99
8	2.95	2.98
9	2.94	3.00
10	0.00	0.00
11	0.00	0.00
12	2.89	2.70
13	3.04	0.70
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00
19	0.00	0.00
20	3.03	3.04
IC505 7W04FU		
1	1.56	1.56
2	2.48	2.46
3	2.56	2.55
4	0.00	0.00
5	2.47	2.46
6	2.56	2.55
7	2.56	2.55
8	5.00	4.99
A U D I O		
IC401 PCM1716E		
1	1.57	1.57
2	0.00	1.56
3	1.57	1.57
4	2.22	1.22
5	1.57	1.57
6	3.05	3.82
7	3.73	4.01
8	4.99	4.89
9	5.03	5.02
10	0.00	2.44
11	3.50	2.47
12	3.20	2.40
13	1.47	2.47

MODE PIN NO.	EE	PLAY
14	0.00	2.09
15	4.91	4.92
16	2.00	2.48
17	2.00	4.49
18	1.49	4.96
19	0.00	0.00
20	5.02	5.02
21	0.00	5.02
22	5.00	5.53
23	0.00	0.00
24	4.90	4.89
25	1.24	5.27
26	0.00	0.00
27	4.98	3.00
28	4.99	4.08
IC403		
1	5.03	5.03
2	0.00	0.00
3	11.84	11.85
4	12.78	12.69
IC402 NJM4580		
1	5.36	5.37
2	5.37	5.35
3	5.37	5.35
4	0.00	0.00
5	5.36	5.37
6	5.37	5.37
7	5.37	5.35
8	11.80	11.78
S Y S T E M		
IC501		
1	3.08	3.06
2	2.33	1.30
3	2.38	1.40
4	2.16	2.20
5	2.33	1.50
6	0.00	0.00
7	2.17	1.50
8	2.62	1.40
9	2.09	1.60
10	3.08	3.06
11	0.00	0.70
12	0.21	0.15
13	0.00	0.15
14	0.00	0.00
15	3.12	0.00
16	3.12	1.70
17	0.00	0.00
18	0.00	0.00
19	3.12	3.06
20	0.00	1.60
21	0.00	0.00
22	1.64	1.60
23	0.00	0.00
24	3.12	3.10

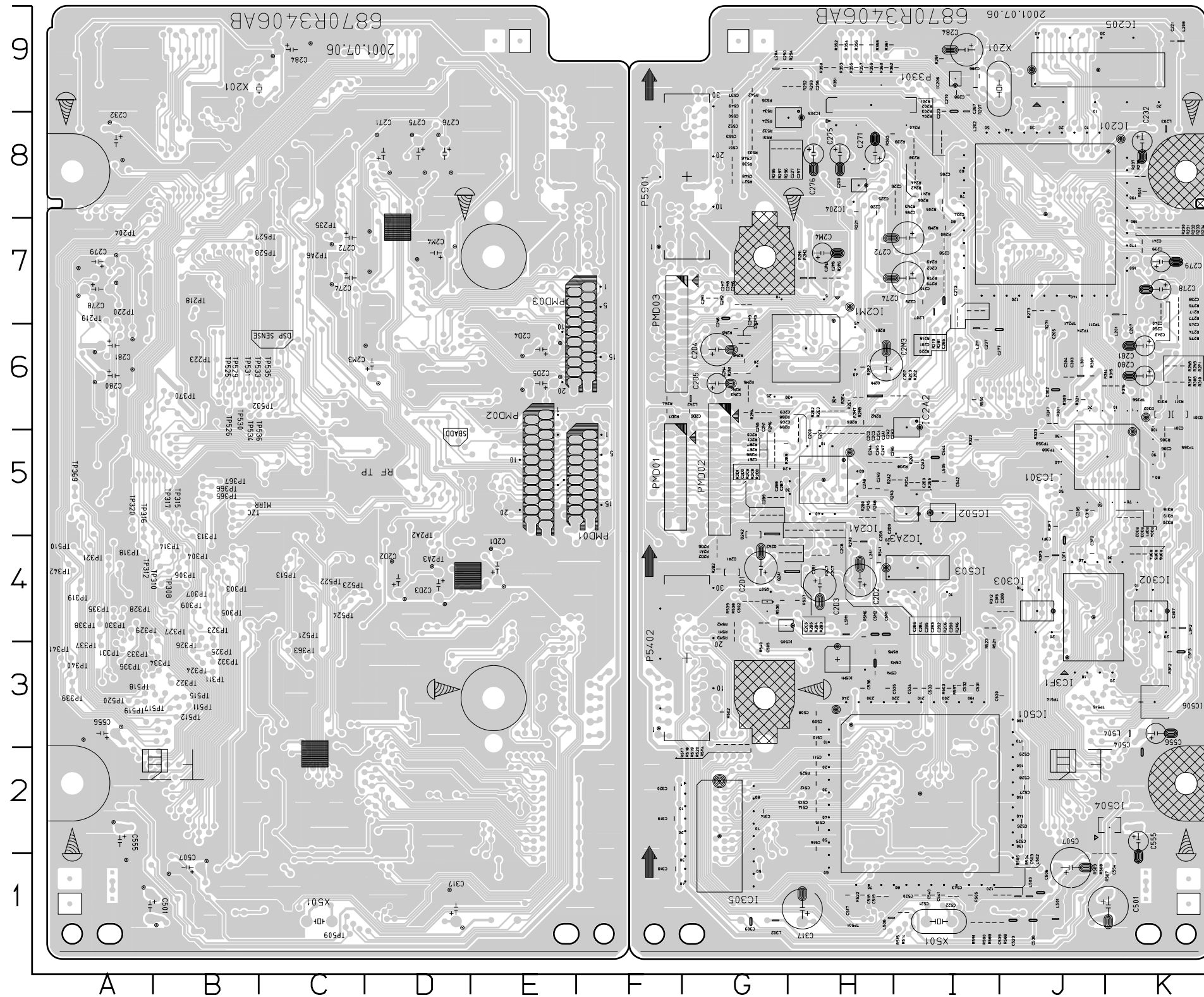
MODE PIN NO.	EE	PLAY
25	0.00	1.70
26	0.00	1.40
27	3.12	3.06
28	0.00	1.50
29	0.00	0.15
30	0.00	0.00
31	0.00	0.00
32	0.00	0.70
33	3.12	1.50
34	2.31	2.20
35	3.12	2.00
36	3.12	3.06
37	3.12	2.90
38	3.12	2.20
39	3.12	2.90
40	0.00	0.00
41	0.00	0.00
42	0.00	0.00
43	2.80	1.60
44	3.12	3.06
45	0.37	1.60
46	0.86	1.50
47	0.00	0.00
48	2.34	1.40
49	0.00	0.00
50	2.32	1.20
51	2.20	1.70
52	2.60	1.20
53	3.05	3.06
54	2.04	1.60
55	2.33	1.4
56	2.30	1.50
57	0.00	0.00
58	2.37	1.60
59	2.60	1.40
60	3.13	1.50
61	3.13	1.40
62	3.13	3.06
63	3.13	1.00
64	3.13	1.50
65	0.00	0.00
66	0.18	0.50
67	0.00	0.00
68	1.56	1.58
69	0.00	0.00
70	0.00	3.10
71	0.00	1.20
72	0.00	1.20
73	0.00	1.20
74	0.00	1.20
75	3.10	3.06
76	1.58	1.65
77	2.76	2.20
78	1.54	1.50
79	1.57	1.50

MODE PIN NO.	EE	PLAY
80	3.14	3.10
81	2.95	3.10
82	0.00	0.00
83	3.13	3.10
84	0.00	3.70
85	0.00	0.00
86	0.00	0.10
87	3.13	3.10
88	3.14	3.10
89	2.77	2.20
90	0.00	3.10
91	3.14	3.06
92	0.00	0.00
93	3.06	3.05
94	3.06	3.04
95	0.00	0.00
96	3.06	0.00
97	0.00	0.00
98	0.95	0.95
99	0.85	0.85
100	0.00	0.00
101	2.09	2.20
102	3.08	3.06
103	0.00	0.00
104	0.00	0.00
105	0.00	0.00
106	0.00	0.00
107	0.00	2.10
108	2.14	2.10
109	0.00	0.00
110	0.98	0.80
111	0.76	0.90
112	1.19	1.30
113	3.03	3.05
114	0.88	0.78
115	0.00	0.00
116	1.13	1.26
117	2.29	2.33
118	0.86	0.08
119	1.13	1.20
120	1.90	2.00
121	0.00	0.00
122	3.06	3.10
123	3.07	3.10
124	3.07	3.10
125	3.07	3.06
126	3.07	3.06
127	3.07	3.06
128	3.07	3.06
129	3.07	3.05
130	3.07	3.05
131	3.07	3.06
132	0.00	0.00
133	3.06	3.06
134	3.06	3.06

MODE PIN NO.	EE	PLAY
135	2.22	2.20
136	3.07	3.05
137	3.07	3.10
138	3.06	3.10
139	3.06	3.10
140	3.07	3.06
141	3.06	3.10
142	3.06	3.10
143	3.06	3.10
144	3.06	3.10
145	3.06	3.10
146	3.06	3.10
147	0.00	0.00
148	3.06	3.10
149	3.04	3.10
150	3.04	3.10
151	3.03	3.10
152	3.04	3.10
153	3.03	3.10
154	3.06	3.06
155	3.05	3.10
156	3.07	3.10
157	3.05	3.10
158	3.05	3.10
159	2.16	2.20
160	1.54	1.50
161	3.07	3.10
162	0.00	0.00
163	3.06	0.00
164	3.05	3.10
165	3.05	3.10
166	3.05	3.10
167	3.05	3.10
168	3.05	3.10
169	3.08	3.06
170	3.08	3.10
171	0.00	0.00
172	3.05	3.10
173	3.05	3.10
174	3.05	3.10
175	0.40	1.50
176	3.05	3.10
177	0.00	0.00
178	3.05	3.10
179	3.05	3.10
180	3.05	3.10
181	3.06	3.06
182	3.06	3.18
183	0.00	0.09
184	3.07	3.00
185	0.00	2.40
186	0.00	2.30
187	0.00	0.00
188	0.00	0.00
189	3.08	3.10

MODE PIN NO.	EE	PLAY
190	0.00	0.00
191	0.00	0.02
192	2.15	2.20
193	3.07	3.10
194	3.07	3.10
195	0.03	0.00
196	3.07	3.06
197	0.00	1.30
198	3.07	3.10
199	3.07	3.10
200	3.07	3.10
201	0.00	0.00
202	0.00	2.30
203	3.07	3.10
204	0.00	0.00
205	3.03	3.10
206	3.06	3.10
207	3.58	3.10
208	4.78	1.50
209	3.06	3.10
210	3.06	3.06
211	0.00	0.02
212	2.13	2.20
213	3.03	3.19
214	0.00	2.69
215	1.50	1.50
216	3.02	2.90
217	0.00	2.59
218	0.00	0.00
219	0.00	2.29
220	0.00	2.08
221	0.00	2.30
222	0.00	2.30
223	0.00	2.49
224	3.05	3.06
225	0.00	3.10
226	0.00	2.40
227	3.00	2.40
228	0.00	0.00
229	2.50	1.52
230	0.00	0.00
231	2.51	1.60
232	2.53	1.60
233	3.04	3.06
234	2.55	1.60
235	2.37	1.60
236	2.87	1.60
237	0.00	0.00
238	2.22	1.60
239	2.55	1.40
240	2.53	1.50
IC503		
1	0.00	0.00
2	3.08	2.93
3	0.00	4.97

12.1 MAIN P.C.BOARD



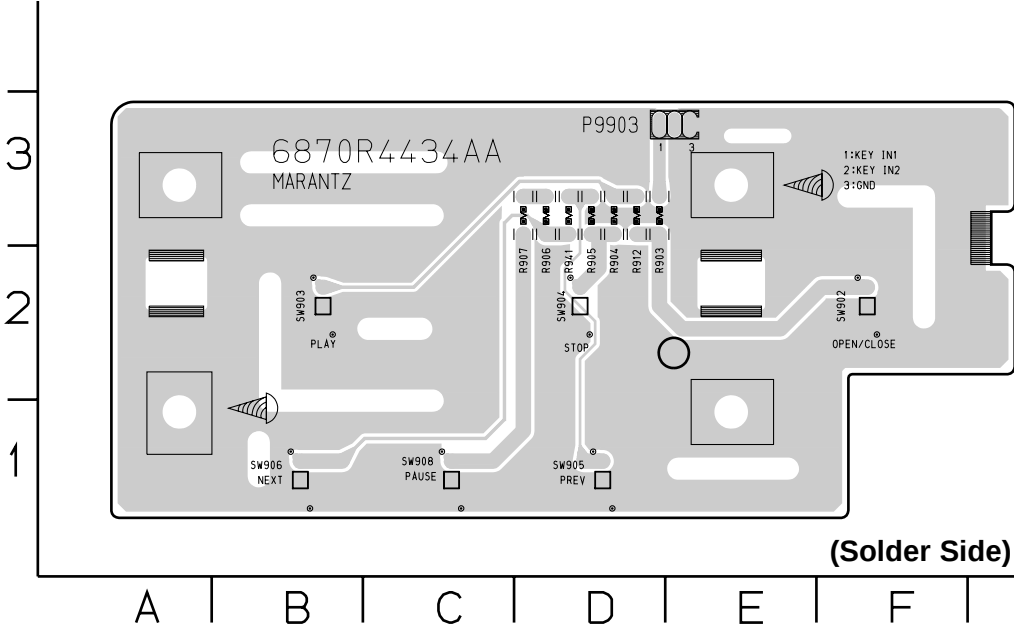
LOCATION GUIDE

T2204	A7	T2335	A4	C201	17	C284	H5	C3F2	J4	I2C01	H8	R221	H8	R200	G5	R352	H9	R5M6	H4	
T2218	B7	T2336	A3	C202	17	C285	H5	C3F3	K3	J2C03	H8	R230	K7	R201	G5	R353	H9	T2P01	K8	
T219	A7	T2337	A3	C203	H8	C286	G5	C501	K1	I2C04	H8	R231	K7	R202	G4	R354	H9	T2P02	K7	
T2220	A7	T2338	A4	C205	J7	C287	G5	C502	G4	J2C05	J9	R232	K7	R206	G4	R355	H9	T2P03	K7	
T2223	B6	T2339	A3	C206	H8	C288	G5	C503	J1	I2C06	J9	R233	K7	R207	F6	R356	H9	T2P05	J9	
T2235	C7	T2340	A3	C207	K7	C289	G5	C504	J1	I2C21	H5	R234	K7	R2E1	H6	R357	H9	T2P06	K7	
T2242	D4	T2341	A3	C210	H7	C290	H5	C505	G4	I2C22	H5	R235	K8	R2E2	H6	R358	H9	T2P07	K7	
T2243	D4	T2342	A4	C211	H9	C291	H5	C506	G4	I2C23	H5	R236	K8	R2E3	H6	R359	H9	T2P08	K7	
T2246	C7	T2363	C3	C223	J9	C2C2	H5	C507	J1	I2C24	H6	R237	K8	R2E4	H6	R360	H9	T2P09	K7	
T2303	B4	T2365	B5	C224	18	C2C3	H5	C508	H3	I3C01	K5	R238	18	R2E5	15	R361	H9	T2P10	J7	
T2304	B4	T2366	B5	C225	18	C2C4	H5	C509	H3	I3C02	K4	R239	18	R2E6	H6	R362	J9	T2P11	J7	
T2305	B4	T2367	B5	C226	18	C2C5	G4	C510	H3	I3C03	J4	R240	18	R2E7	G5	R363	H8	T2P12	J7	
T2306	B4	T2369	A5	C227	H8	C2C6	H4	C511	H2	I3C05	G2	R241	18	R2E9	G5	R3F1	K5	T2P13	J7	
T2307	B4	T2370	B6	C228	H8	C2C7	H4	C512	H2	I3C3F1	J4	R242	18	R2M1	H7	R3F2	K3	T2P14	J6	
T2308	B4	T2309	C1	H21	H9	C2C8	H3	C513	H2	I2C01	J2	R243	18	R2M2	H7	R3F3	K3	T2P15	J6	
T2309	B4	T2310	A4	C232	K8	C2C9	H6	C514	H2	I5C02	15	R271	J7	R2M3	G6	R3F4	K4	T2P16	J7	
T2310	B4	T2311	B3	C237	16	C2D0	G5	C515	H2	I5C03	14	R273	J7	R2M4	G6	R3F5	K4	T2P21	J7	
T2311	B3	T2312	B3	C238	K7	C2D1	G4	C516	H2	I5C05	G4	R274	K6	R2M5	G6	R3F6	K4	T2P24	J7	
T2312	B4	T2313	C4	C239	K7	C2D2	H4	C517	H1	I5C01	H3	R275	K6	R2M6	G6	R3F7	J5	T2P25	J6	
T2313	B4	T2315	B3	C240	K7	C2D3	H4	C518	H1	I201	K7	R276	K7	R2M7	H6	R501	K8	T2P26	J6	
T2314	B4	T2316	B3	C241	K7	C2D4	G6	C519	H1	I202	J9	R277	K7	R2M8	H6	R502	G3	T2P27	J6	
T2315	B5	T2318	C3	C242	G6	C2D5	H3	C520	J1	I203	K8	R278	18	R2M9	G6	R503	G3	T2P28	J6	
T2316	A5	T2319	A3	C245	K6	C2D6	G6	C521	11	I204	G9	R279	17	R2N1	G6	R504	11	T2P30	J7	
T2317	B5	T2320	A3	C250	G9	C2D7	H6	C522	11	I207	17	R280	17	R2N2	H6	R505	11	T2P31	J7	
T2318	A4	T2321	C4	C255	18	C2D8	H5	C523	J1	I208	K9	R281	17	R2N3	18	R506	11	T2P32	17	
T2319	A4	T2322	C4	C256	H9	C2D9	H5	C525	J2	I211	16	R291	19	R2N4	G6	R514	11	T2P33	17	
T2320	A5	T2323	C4	C257	H8	C2E0	15	C526	J2	I241	H4	R292	G9	R2N5	G6	R515	11	T2P34	H8	
T2321	B3	T2324	C4	C258	1	C2E1	G5	C527	J2	I242	G6	R293	H9	R2N6	G6	R517	G3	T2P39	18	
T2322	B3	T2325	B6	C259	1	C2E2	G6	C528	J2	I243	G6	R294	H9	R2N7	G6	R518	G3	T2P40	18	
T2323	B4	T2326	B6	C260	19	C2M2	G7	C529	12	L302	G1	R295	G8	R2N9	K6	R519	G3	T2P41	J7	
T2324	B3	T2327	C7	H21	H8	C2M3	H6	C530	J3	L3F1	J4	R296	G8	R2P1	K6	R520	G3	T2P42	18	
T2325	B3	T2328	B7	C272	17	C2M4	H7	C531	13	L3F2	K4	R297	G8	R2P2	H6	R521	14	T2P43	18	
T2326	B4	T2329	B6	C273	17	C2M5	H7	C532	13	L501	J1	R240	H4	R2P6	H7	R522	H1	T2P44	18	
T2327	B4	T2330	B6	C274	17	C2M6	G7	C533	13	L502	J1	R241	G4	R207	15	R523	14	T2P45	18	
T2328	A4	T2331	B6	C275	H8	C2M7	G7	C534	15	L503	11	R242	15	R208	15	R524	G8	T2P46	18	
T2329	A4	T2332	B6	C276	H8	C2M8	H6	C535	13	L504	11	R243	15	R209	15	R525	G8	T2P47	18	
T2330	A4	T2333	B6	C277	16	C2M9	G6	C536	H3	L505	15	R244	F6	R202	K5	R526	G7	T2P48	18	
T2331	A3	T2334	B6	C278	K7	C2N1	G6	C537	G9	L506	H1	R245	H5	R303	K5	R530	G8	T2P49	18	
T2332	B3	T2335	C6	C279	K7	C2N2	H7	C538	J1	L5M1	H4	R246	H5	R304	K5	R531	G8	T2P41	H5	
T2333	A3	T2336	C6	C280	K6	C2N3	G6	C539	11	P3301	H9	R248	H5	R305	J6	R532	G8	T2P43	H5	
T2334	B3			C281	K6	C2N4	G6	C540	11	P5402	G3	R249	17	R306	K5	R533	G8	T2P44	H5	
				C282	19	C2N5	G6	11	P5501	G8	R280	H5	R307	K6	R534	G9	R534	G9	T2P45	H5
				C283	19	C2N6	G6	C541	11	P5601	G8	R281	K6	R535	G9	R535	G9	T2P46	H5	
				C284	19	C2N7	K6	C542	11	P5702	G6	R282	G4	R309	K6	R536	G4	T2P47	H5	
				C287	19	C302	J6	C544	15	PM003	F7	R283	H4	R310	K6	R537	H4	T2P47	K5	
				C288	19	C303	J6	C545	G8	G241	H4	R284	H4	R311	K6	R538	G4	T2P48	K5	
				C240	15	C304	J6	C548	G8	G242	G5	R285	G4	R312	14	R539	G4	T2P49	K5	
				C241	H5	C305	J5	C549	G9	G2M1	H6	R286	G5	R313	K6	R540	G4	T2P56	K6	
				C242	H5	C306	K5	C550	G9	G507	G4	R287	G5	R314	J6	R541	H4	T2P58	J5	
				C243	H5	C307	K4	C551	G8	R201	18	R288	H8	R315	K6	R542	H5	T2P59	K5	
				C244	H5	C308	K4	C552	G8	R202	18	R289	H5	R316	K6	R543	H4	T2P60	K5	
				C245	H5	C309	G1	C553	G8	R203	18	R2C0	G5	R317	J6	R589	11	T2P68	J5	
				C246	H5	C314	G2	C5M1	H4	R204	18	R2C1	G5	R318	K5	R590	11	T2P01	H1	
				C247	H5	C315	J4	C5M2	H4	R205	18	R2C2	16	R319	K5	R591	11	T2P06	11	
				C248	H5	C316	J5	C5M3	H3	R206	18	R2C3	16	R320	K5	R597	13	T2P14	J3	
				C249	H5	C317	H1	C5M4	H3	R207	19	R2C4	15	R321	J6	R5M1	G4	T2P16	J3	
				C280	H3	C318	F1	D241	G4	R217	K7	R2C6	H5	R322	15	R5M2	G4	X201	19	
				C281	H3	C319	G2	D242	G5	R2C7	K7	R2C1	H3	R323	15	R5M3	G4	X201	11	
				C282	H5	C320	F2	D301	K6	R219	17	R2C8	G5	R350	H9	R5M4	G3			
				C283	H5	C3F1	J4	D302	K6	R220	16	R2C9	G5	R351	H9	R5M5	H3			

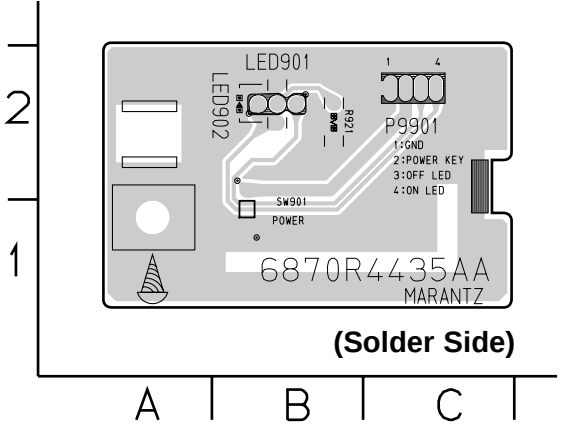
(Solder Side)

C101	08	C456	H8	C806	M3	C104	L7	C407	D9	R425	E9	R613	J9	R926	B2
B101	N11	C457	E8	C807	M2	C105	M6	Q601	E5	R426	E9	R614	G9	R927	B2
C102	N11	C458	H8	C810	L2	C106	M4	Q602	E5	R427	D9	R615	H8	R928	B2
B050	J11	C459	H8	C811	L2	C107	M4	Q603	E5	R428	D9	R616	H8	R929	B2
C101	L11	C460	G9	C817	L2	C108	M7	Q604	E5	R429	E5	R617	D9	R930	A2
C102	N11	C461	E8	C821	L2	C109	M7	Q605	D10	R430	E5	R618	J10	R931	A2
C103	O10	C462	H8	C822	N2	C110	M7	Q606	D10	R431	E5	R619	J10	R932	O2
C104	O10	C463	H8	C823	N2	C111	M7	Q607	D10	R432	E5	R620	J10	R933	O2
C105	P9	C464	H8	C824	O3	C112	M7	Q608	D8	R451	E6	R621	J10	R934	E3
C106	P9	C465	H8	C902	O2	C113	M7	Q609	J10	R452	E6	R622	H11	R935	O3
C107	P9	C466	H8	C903	O2	C114	M7	Q610	J10	R453	E6	R623	H11	R936	O3
C110	N9	C467	H8	C904	H2	C1801	N3	Q611	J9	R454	E6	R624	E11	R937	E3
C111	N9	C468	H8	C903	H2	C1801	N3	Q612	J9	R455	E5	R625	A10	R938	E3
C112	N9	C469	H8	C904	H2	C1801	N3	Q613	J9	R456	E5	R626	A10	R939	E3
C114	P8	C470	H8	C906	A2	J107	M4	Q614	E8	R587	E3	R633	D5	R943	K3
C115	M9	C471	H8	C907	C2	J111	M9	Q615	E9	R458	H8	R638	J9	R944	K3
C116	M9	C472	H8	C908	C2	J112	M9	Q616	E9	R459	H8	R639	J9	R945	K3
C117	M6	C473	L6	C909	E2	J113	N8	Q617	P4	R460	H8	R640	K11	R952	F2
C118	L6	C474	L6	C910	I2	J114	P7	Q618	G9	R461	G8	R651	D11	R953	F2
C119	M6	C475	P4	C915	O2	J115	P7	Q619	G9	R462	G8	R652	D11	R954	F2
C120	P7	C476	L6	C912	C2	J116	O7	Q901	L10	R463	G9	R653	E6	R955	F2
C121	P5	C478	J18	C913	K10	J117	M9	Q902	L10	R464	H5	R654	E5	R956	E2
C122	P5	C479	J18	C914	K10	J118	M9	Q903	L10	R465	H5	R655	E5	R957	E2
C123	O6	C480	J7	D102	H8	J183	M4	R101	P10	R466	G9	R656	E6	R958	E2
C124	N6	C481	J6	D101	M9	J131	M4	R104	P9	R467	F8	R657	E5	R959	E2
C125	N6	C482	J7	D103	M8	J603	O10	R105	P9	R468	F8	R658	E5	R960	E2
C126	N6	C483	J7	D104	M8	J604	O10	R110	N9	R469	F8	R659	E5	R961	E2
C127	O5	C484	L8	D105	N9	J116	F11	R111	N9	R470	H8	R661	D10	R963	K11
C128	M7	C485	J9	D106	P7	J619	O10	R112	N8	R472	H9	R662	D10	R964	K10
C129	M7	C486	J9	D107	P7	J620	O10	R113	N8	R473	H9	R663	D10	R965	K10
C130	M5	C487	D10	D108	P6	J521	C11	R115	P5	R474	H6	R664	D10	R966	K10
C131	M5	C488	J6	D109	N7	J622	E10	R117	M8	R475	H6	R665	B11	R967	K10
C132	M5	C489	J6	D110	N7	J623	E10	R118	M8	R476	H6	R666	B11	R968	K10
C133	O12	C490	J9	D112	O4	J541	B10	R121	N5	R477	H7	R667	D10	R969	K11
C136	N12	C492	J6</												

12.3 KEY P.C.BOARD



12.4 LED P.C.BOARD



13. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

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

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

① Resistance value

Examples ;

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

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

CAPACITORS

C***: CERAMIC CAP.

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

Examples ;

② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5% 5
* Tolerance of COMMON PARTS handled here are as follows :
0.5 pF ~ 5 pF ±0.25 pF
6 pF ~ 10 pF ±0.5 pF
12 pF ~ 560 pF ±5%

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

C*** : CERAMIC CAP.

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

Examples ;

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

C*** : 5) ELECTROLY CAP. (, 6) FILM CAP. ()

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

Examples ;

⑤ Capacity value
0.1 μF 104 4.7 μF 475 100 μF 107
0.33 μF 334 10 μF 106 330 μF 337
1 μF 105 22 μF 226 1100 μF 118
2200 μF 228

⑥ Working voltage
6.3V 006 25V 025
10V 010 35V 035
16V 016 50V 050

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

Examples ;

⑦ Capacity value
0.001 μF (1000 pF) 102 0.1 μF 104
0.0018 μF 182 0.56 μF 564
0.01 μF 103 1 μF 105
0.015 μF 153

NOTE : 1) The above CODES (R***, R***, C***, C*** and C***) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts (R105, DD4, DK4).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

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

1. KOA Corporation
Part No. (MJI) Type No. (KOA) Description
NH05×××140 → RF25S××××ΩJ (±5% 1/4W)
NH05×××120 → RF50S××××ΩJ (±5% 1/2W)
NH85×××110 → RF73B2A××××ΩJ (±5% 1/10W)
NH95×××140 → RF73B2E××××ΩJ (±5% 1/4W)
* Resistance value Resistance value
(0.1 Ω – 10 kΩ)

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

Examples ;

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

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

NOTE ON FUSE :

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

NOTE ON SAFETY :

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

安全上の注意 :

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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C100	N, A, S	nsp	CAPACITORS ELECT 10μF 50V M	nsp
C101		nsp	DRAWING MPX104K 275VAC	nsp
C102	N, A, S	nsp	DRAWING MPX104K 275VAC	nsp
C103	F, U	nsp	ELECT 100μF 200V M	*EA000970R
C103	N, A, S	9965 000 07003	ELECT 68μF 400V M	*EA000980R
C104	N, A, S	nsp	TUBULAR0.022μF 50V Z	nsp
C105		nsp	MYLAR 0.01μF 630V K	nsp
C106		nsp	HIGH-VOL 100P/1KV SMPS	nsp
C109	N, A, S	nsp	MYLAR 0.047μF S 50V J PE	nsp
C110	F, U	nsp	MYLAR0.0047μF S 50V J TS	nsp
C111	F, U	nsp	ELECT 3.3μF 50V M	nsp
C112	F, U	nsp	MYLAR 0.015μF 50V J	nsp
C114	N, A, S	nsp	CER. 3300pF 400V	nsp
▲C114	F, U	nsp	AC-CON 103/400V SMPS	nsp
C115	F, U	nsp	MYLAR 0.015μF 50V J	nsp
C116		9965 000 11314	ELECT 470μF 25V M	*EA001120R
C118		nsp	ELECT 100μF 16V M	nsp
C119		9965 000 00393	ELECT 47μF 50V SMPS	EA47605020
▲C120	F, U	nsp	AC-CON 103/400V SMPS	nsp
C121		nsp	ELECT 220μF 16V M	nsp
C123		9965 000 11315	ELECT 1000μF 16V M	*EA001130R
C124		9965 000 11315	ELECT 1000μF 16V M	*EA001130R
C125		nsp	ELECT 330μF 10V M	nsp
C126		9965 000 11314	ELECT 470μF 25V M	*EA001120R
C127		nsp	ELECT 220μF 25V M	nsp
C128		nsp	MYLAR 0.047μF 50V J	nsp
C130		nsp	ELECT 100μF 16V M	nsp
C131		nsp	ELECT 100μF 16V M	nsp
C134		nsp	ELECT 100μF 16V M	nsp
C137		nsp	ELECT 470μF 10V M	nsp
C140		nsp	ELECT 470μF 11V M	nsp
C201		nsp	CHIP CER.0.1μF 50V Z	nsp
C203		nsp	CHIP CER.0.1μF 50V Z	nsp
C205		nsp	CHIP CER.0.1μF 50V Z	nsp
C206		nsp	CHIP CER.0.1μF 50V Z	nsp
C207		nsp	CHIP CER.0.1μF 50V Z	nsp
C210		nsp	CHIP CER.0.1μF 50V Z	nsp
C221		nsp	CHIP CER.0.1μF 50V Z	nsp
C223		nsp	CHIP CER.0.1μF 50V Z	nsp
C224		nsp	CHIP CER.0.1μF 50V Z	nsp
C226				
}		nsp	CHIP CER.0.1μF 50V Z	nsp
C229				
C232		nsp	ELECT 10μF 16V M	nsp
C237		nsp	CHIP CER.0.1μF 50V Z	nsp
C238		nsp	CHIP CER.0.1μF 50V Z	nsp
C239		nsp	CHIP CER.0.1μF 50V Z	nsp
C240		nsp	CHIP CER.2200pF 50V K	nsp
C241		nsp	CHIP CER.0.1μF 50V Z	nsp
C242		nsp	CHIP CER.0.1μF 50V Z	nsp
C245		nsp	CHIP CER.0.1μF 50V Z	nsp
C250		nsp	CHIP CER.0.1μF 50V Z	nsp
C255				
}		nsp	CHIP CER.0.1μF 50V Z	nsp
C258				
C260		nsp	CHIP CER. 10pF 50V D	nsp
C270		nsp	CER. 2.2μF 16V +80% -20%	nsp
C271		nsp	ELECT 10μF 16V M	nsp
C272		nsp	ELECT 47μF 16V M	nsp
C273		nsp	CER. 2.2μF 16V +80% -20%	nsp
C274		nsp	ELECT 10μF 16V M	nsp
C275		nsp	ELECT 47μF 16V M	nsp
C276		nsp	ELECT 10μF 16V M	nsp
C277		nsp	CER. 2.2μF 16V +80% -20%	nsp
C278				
}		nsp	ELECT 10μF 16V M	nsp
C281				

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C284		nsp	ELECT 47μF 16V M	nsp
C285		nsp	CHIP CER.0.1μF 50V Z	nsp
C286		nsp	CHIP CER. 18pF 50V J	nsp
C287		nsp	CHIP CER. 18pF 50V J	nsp
C288		nsp	CHIP CER.0.1μF 50V Z	nsp
C2A0		nsp	CHIP CER.0.1μF 50V Z	nsp
C2A1		nsp	CHIP CER.0.1μF 50V Z	nsp
C2A2		nsp	CHIP CER.2200pF 50V K	nsp
C2A3				
}		nsp	CHIP CER.0.1μF 50V Z	nsp
C2A9				
C2B0		nsp	CHIP CER.0.1μF 50V Z	nsp
C2B1		nsp	CHIP CER.0.1μF 50V Z	nsp
C2B2		nsp	CHIP CER.0.1μF 50V Z	nsp
C2B3		nsp	CHIP CER.0.0470μF25V Z	nsp
C2B4		nsp	CHIP CER.560pF 50V K	nsp
C2B5		nsp	CHIP CER.560pF 500V K	nsp
C2B6		nsp	CHIP CER.0.033μF 50V	nsp
C2B7		nsp	CHIP CER.0.033μF 50V	nsp
C2B8		nsp	CHIP CER.0.1μF 50V Z	nsp
C2B9		nsp	CHIP CER.0.1μF 50V Z	nsp
C2C0		nsp	CHIP CER.220pF 50V J	nsp
C2C1				
}		nsp	CHIP CER.2200pF 50V K	nsp
C2C4				
C2C5		nsp	CHIP CER.0.1μF 50V Z	nsp
C2C8		nsp	CHIP CER. 33pF 50V J	nsp
C2C9		nsp	CHIP CER. 33pF 50V J	nsp
C2D0		nsp	CHIP CER.0.1μF 50V Z	nsp
C2D1				
}		nsp	ELECT 47μF 16V M	nsp
C2D4				
C2D5		nsp	ELECT 10μF 16V M	nsp
C2D6		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2D7		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2E1		nsp	CHIP CER. 1800pF 50V K	nsp
C2M1		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2M2		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2M3		nsp	ELECT 47μF 16V M	nsp
C2M4		nsp	ELECT 10μF 16V M	nsp
C2M5				
}		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2M8				
C2M9		nsp	CHIP CER. 0.022μF 50V Z	nsp
C2N1		nsp	CHIP CER. 4700pF 50V K	nsp
C2N2		nsp	CER. 0.01μF 50V K	nsp
C2N3		nsp	CHIP CER. 6800pF 50V K	nsp
C2N4		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2N5		nsp	CHIP CER. 0.1μF 50V Z	nsp
C2N6		nsp	CER. 2.2μF 16V +80% -20%	nsp
C301		nsp	CHIP CER. 0.1μF 50V Z	nsp
C302		nsp	CER. 2.2μF 16V +80% -20%	nsp
C303				
}		nsp	CHIP CER. 0.1μF 50V Z	nsp
C308				
C309		nsp	CER. 2.2μF 16V +80% -20%	nsp
C314		nsp	CHIP CER. 0.1μF 50V Z	nsp
C315		nsp	CHIP CER. 56pF 50V J	nsp
C316		nsp	CHIP CER. 0.1μF 50V Z	nsp
C317		nsp	ELECT 10μF 16V M	nsp
C318		nsp	CHIP CER. 0.1μF 50V Z	nsp
C319		nsp	CHIP CER. 0.1μF 50V Z	nsp
C320		nsp	CHIP CER. 0.1μF 50V Z	nsp
C3F1		nsp	CER. 2.2μF 16V +80% -20%	nsp
C3F2		nsp	CHIP CER. 0.1μF 50V Z	nsp
C3F3		nsp	CER. 2.2μF 16V +80% -20%	nsp

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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C403		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	C616	N	nsp	TUBULAR 3900pF 16V M	nsp
C405		nsp	ELECT 470μF 6.3V M	nsp	C617	N	nsp	TUBULAR 3900pF 16V M	nsp
C406		nsp	TUBULAR 0.01μF 16V M	nsp	C650	N	nsp	ELECT 47μF 16V M	nsp
C407		nsp	ELECT 22μF 16V M	nsp	C652	N	nsp	TUBULAR 0.01μF 16V M	nsp
C408		nsp	ELECT 10μF 16V M	nsp	C653				
C409		nsp	ELECT 470μF 6.3V M	nsp	}	N	nsp	ELECT 10μF 16V M	nsp
C410		nsp	ELECT 22μF 16V M	nsp	C657				
C411		nsp	TUBULAR 1000pF 50V K	nsp	C660	N	nsp	ELECT 10μF 16V M	nsp
C412		nsp	TUBULAR 100pF 50V J	nsp	C661	N	nsp	ELECT 10μF 16V M	nsp
C413		nsp	ELECT 10μF 16V M	nsp	C662	N	nsp	ELECT 10μF 16V M	nsp
C414		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	C663	N	nsp	ELECT 470μF 6.3V M	nsp
C415		nsp	ELECT 10μF 16V M	nsp	C901		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C416		nsp	TUBULAR 1000pF 50V K	nsp	C902		nsp	ELECT 10μF 16V M	nsp
C417		nsp	TUBULAR 100pF 50V J	nsp	C905		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C418		nsp	TUBULAR 3900pF 16V M	nsp	C906		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C419		nsp	ELECT 22μF 16V M	nsp	C907		nsp	ELECT 47μF 16V M	nsp
C420		nsp	TUBULAR 3900pF 16V M	nsp	C908		nsp	ELECT 47μF 16V M	nsp
C421		nsp	ELECT 22μF 16V M	nsp	C909		nsp	ELECT 47μF 35V M	nsp
C422		nsp	ELECT 10μF 16V M	nsp	C910		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C424		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	C911		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C425		nsp	TUBULAR 0.01μF 16V M	nsp	C912		nsp	ELECT 47μF 16V M	nsp
C428		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	C913		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp
C429		nsp	ELECT 47μF 16V M	nsp	C914		nsp	ELECT 47μF 16V M	nsp
C430		nsp	ELECT 47μF 16V M	nsp					
C502		nsp	CER. 0.01μF 50V K	nsp				DIODES	
C503		nsp	CHIP CER. 0.1μF 50V Z	nsp	BD101		4822 130 81248	S1WBA60(1A 600V)	*HD201400R
C504		nsp	CER. 2.2μF 16V +80% -20%	nsp	D101	F, U	nsp	SUF4005 R	*HD201610R
C505		nsp	CHIP CER. 0.1μF 50V Z	nsp	D101	N, A, S	9965 000 11316	10SP07U(SUF4007SP)	*HD201620R
C506		nsp	CER. 2.2μF 16V +80% -20%	nsp	D102	N, A, S	9965 000 06965	EU01W(R-FORM)	*HD201390R
C508					D103	F, U	4822 130 32778	1SS133 DETECT SW	HD20015210
}		nsp	CHIP CER.0.1μF 50V Z	nsp	D104	F, U	4822 130 32778	1SS133 DETECT SW	HD20015210
C522					D105	F, U	nsp	RL104 R	*HD201430R
C523		nsp	CER. 2.2μF 16V +80% -20%	nsp	D106		9965 000 11317	HER202 BK NON 100V 2A	*HD201630R
C525					D107	N, A, S	9965 000 06965	EU01W(R-FORM)	*HD201390R
}		nsp	CHIP CER. 0.1μF 50V Z	nsp	D107	F, U	9965 000 06971	ERA18-02KFRB DO204AL 2	*HD201460R
C536					D108		9965 000 06965	EU01W(R-FORM)	*HD201390R
C537		nsp	CHIP CER. 220pF 50V J	nsp	D109		9965 000 06968	B10A45V1 BK KEC TO220 45V 10A	*HD201440R
C538		nsp	CER. 2.2μF 16V +80% -20%	nsp					
C540		nsp	CHIP CER. 15pF 50V J	nsp	D110		9965 000 06971	ERA18-02KFRB DO204AL 2	*HD201460R
C541		nsp	CHIP CER. 27pF 50V J	nsp	D112		4822 130 33765	1N5402 BK	*HD201450R
C542		nsp	CHIP CER. 0.1μF 50V Z	nsp	D113		4822 130 33765	1N5402 BK	*HD201450R
C543		nsp	CHIP CER. 0.1μF 50V Z	nsp	D115	(P-2)	9965 000 11318	1N17 NON 20V 1A 20	*HD201600R
C544		nsp	CER. 2.2μF 16V +80% -20%	nsp	D115	(P2 LE)	nsp	WIRE D=0.6 ROLL	nsp
C546		nsp	CHIP CER. 220pF 50V J	nsp	D116	F, U	nsp	RZ1040 BK DO41 40V 30A	*HD201420R
C548		nsp	CHIP CER.220pF 50V J	nsp					
C549		nsp	CHIP CER. 220pF 50V J	nsp	D2A1		4822 130 33944	DAN202K SOT23 80	HZ20002210
C550		nsp	CHIP CER. 0.1μF 50V Z	nsp	D2A2		4822 130 33944	DAN202K SOT23 80	HZ20002210
C553		nsp	CHIP CER. 220pF 50V J	nsp	D301		4822 130 33944	DAN202K SOT23 80	HZ20002210
C556		nsp	ELECT 10μF 16V M	nsp	D302		4822 130 33944	DAN202K SOT23 80	HZ20002210
C601	N	nsp	ELECT 22μF 16V M	nsp	D601	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
C602	N	nsp	ELECT 47μF 16V M	nsp	D602	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
C603		nsp	ELECT 470μF 6.3V M	nsp	D603		4822 130 32778	1SS133 DETECT, SW	HD20015210
C604	N	nsp	ELECT 22μF 16V M	nsp	D604		4822 130 32778	1SS133 DETECT, SW	HD20015210
C605	N	nsp	TUBULAR 0.01μF 16V M	nsp	D605	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
C606		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	D909		4822 130 32778	1SS133 DETECT, SW	HD20015210
C609	N	nsp	ELECT 47μF 16V M	nsp	DIG901		9965 000 11319	DIGION VFD20-0703FNA ZEC SEG VFD	*HQ300530R
C611		nsp	TUBULAR 220pF 50V K	nsp					
C612		nsp	TUBULAR 0.1μF 50V +80% -20%	nsp	LED01		9965 000 11335	LED LTL-1CHEES-UA RED =0	*HI100990R
C613		nsp	ELECT 470μF 6.3V M	nsp	LED02		9965 000 11336	LED LTL-1CHKES-UA GREEN	*HI101000R
C614		nsp	ELECT 470μF 6.3V M	nsp	LED03		9965 000 11335	LED LTL-1CHEES-UA RED =0	*HI100990R
C615		nsp	ELECT 470μF 6.3V M	nsp	LED901		9965 000 04671	LE SPR325MVWT31 GREEN/RED	*HI100860R

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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
ZD101	F, U	9965 000 11344	ZENER GDZJ3.3B DO34 0.5W	*HD302010R
ZD101	N, A, S	5322 130 31504	ZENER UZ-3.3BSB 26MM	*HD302020R
ZD102	F, U	nsp	ZENER GDZJ6.2B 26MM DO34	*HD302030R
ZD605		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD606		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD607	N	9965 000 11343	ZENER GDZJ10B 26MM DO34	*HD302040R
ZD611	F, A, S, U	9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD612	F, A, S, U	9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD635	N	9965 000 11344	ZENER GDZJ3.3B DO34 0.5W 3	*HD302010R
ZD635	F, A, S, U	5322 130 31504	ZENER UZ-3.3BSB 26MM	*HD302020R
ZD636	N	9965 000 11344	ZENER GDZJ3.3B DO34 0.5W 3	*HD302010R
ZD636	F, A, S, U	5322 130 31504	ZENER UZ-3.3BSB 26MM	*HD302020R
ZD637	N	9965 000 11344	ZENER GDZJ3.3B DO34 0.5W 3	*HD302010R
ZD637	F, A, S, U	5322 130 31504	ZENER UZ-3.3BSB 26MM	*HD302020R
ZD638	N	9965 000 11344	ZENER GDZJ3.3B DO34 0.5W 3	*HD302010R
ZD638	F, A, S, U	5322 130 31504	ZENER UZ-3.3BSB 26MM	*HD302020R
ZD639	N	9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD640	N	9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD641	F, A, S, U	9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD642		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD643		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD644		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD901		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
ZD902		9965 000 07022	ZENER GDZJ5.6B 26MM DO34	*HD301840R
INTEGRATED CIRCUITS				
F102		4822 252 51025	IC ICP-N10 T104 IC DETACT	FU40115020
F104		4822 252 51083	IC ICP-N20 T104 IC DETACT	FU80115020
▲ IC101	N, A, S	9965 000 11320	IC KA5M0365R-YDTU	*HC107420R
▲ IC102	N, A, S	9965 000 11321	SENSOR PHOTO KP1010 COSMO =PC817	*HC200150R
IC104		4822 209 81397	IC KA431AZ (LM431AZ)	*HC105750R
IC105		9965 000 06979	IC KA78R08 4P TO-220F BK LOW DROP	*HC300250R
IC106		9965 000 11322	IC KA78R33TU TO220-4L BK 3.3V L/D	*HC300260R
IC107		9965 000 11322	IC KA78R33TU TO220-4L BK 3.3V L/D	*HC300260R
▲ IC108	F, U	9965 000 11321	SENSOR PHOTO KP1010 COSMO =PC817	*HC200150R
IC201		9965 000 11323	IC GDC25D801D 208 QFP BK DSP+SERV	*HC107430R
IC203		4822 209 90472	IC NJM3414AM-TE1	HC10179090
IC204		9965 000 11324	IC KIC7W53FU KEC 8PIN SM8	*HC107440R
IC205		9965 000 06985	IC GLT440L16-40J4 40P SOJ 4M	*HC106620R
IC206		4822 209 33521	IC TC7W04FU	HC10382050
IC2A1		9965 000 06986	IC SSI33P3721(VER.2) 64 TQFP BK R	*HC105760R
IC2A2		4822 209 90472	IC NJM3414AM-TE1	HC10179090
IC2M1		9965 000 11325	IC FAN8727 48PIN QFP	*HC107510R
IC301		9965 000 11326	IC XC9572XL-10TQ100C 100 QFP AY	*HC107460R
IC302		9965 000 11327	IC 74LCX573MTCX 20P TSS	*HC700420R
IC303		9965 000 11327	IC 74LCX573MTCX 20P TSS	*HC700420R
IC305		9965 000 11328	IC HY57V653220CTC-7 86P TSOP BK S	*HC107470R
IC3F1		nsp	IC AT49BV1614-11TC 48PIN TS	*HC107490R
IC401		8203 303 11278	IC PCM1716E 28P SSOP DAC 2K/R	*HC105580R
IC402		4822 209 73953	IC NJM4580D JRC 8 DIP ST SWITCHIN	HC10070090

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
IC403		4822 209 16953	IC KA78R12 TO-220 LD 1A REGL	*HC107520R
IC501		nsp	IC NDV8501VWB 240 VQFP AY MICOM	nsp
IC502		nsp	IC CAT93C56S-TE13 PROGRAM	*HC107480R
IC502P	N	nsp	ADV3520NC.1UM1 PROGRAM	nsp
IC502P	A, S	nsp	ADV3500EC.3GM1 PROGRAM	nsp
IC502P	U	nsp	DV4200(DVM4511N) PROGRAM DVM4511N	nsp
IC502P	F	nsp	IC MM74HCT244SJ 20P SOIC 3-STA	*HC700430R
IC503		9965 000 11329	IC TC7W04FU	HC10382050
IC505		4822 209 33521	IC BA18BC0FP-E2 RW 3P TO252-3 R	*HC107570R
IC506		9965 000 11664	IC NJM2284 JRC 16PIN DIP ST SCART	*HC107530R
IC601	N	9965 000 11330	IC UPD780232GC-043-8BT 80 QFP	*HC107500R
IC901		9965 000 11331	IC KIA7042P 3P 4.2V RESET	*HC105670R
IC902		9965 000 06999	TRANSISTORS	
▲ Q101	F, U	nsp	KSE13005F BK TO220F	*HT300910R
▲ Q102	F, U	nsp	KTC3198-BL (KTC1815)	*HT300720R
Q107		9965 000 07007	KSB1151-Y BK TO-126	*HT200390R
Q108		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q2A1		9965 000 04336	CHIP 2SA1037K-Q	HX110371A0
Q2A2		9965 000 04336	CHIP 2SA1037K-Q	HX110371A0
Q2M1		4822 130 60729	DTC124EK SOT23	*BA001080R
Q401		4822 130 10462	KTA1267-GR MINI	*HT100490R
Q402		4822 130 10462	KTA1267-GR MINI	*HT100490R
Q403				
Q407		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q507		9965 000 07008	UMZ1N TL UM6 3K	BA30002210
Q601	N	4822 130 10462	KTA1267-GR MINI	*HT100490R
Q602	N	4822 130 10098	KRC103M- (KRC1203)	*HT300790R
Q603	N	4822 130 10098	KRC103M- (KRC1203)	*HT300790R
Q604	N	4822 130 10098	KRC103M- (KRC1203)	*HT300790R
Q605	N	4822 130 10462	KTA1267-GR MINI	*HT100490R
Q606	N	4822 130 10462	KTA1267-GR MINI	*HT100490R
Q607		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q608		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q615		4822 130 10462	KTA1267-GR MINI	*HT100490R
Q616	N	4822 130 10462	KTA1267-GR MINI	*HT100490R
Q617	N	4822 130 10923	KTC3199-BL MINI	*HT300730R
Q618	N	4822 130 10923	KTC3199-BL MINI	*HT300730R
Q619	N	4822 130 10923	KTC3199-BL MINI	*HT300730R
Q901		4822 130 10145	KRA103M- (KRA2203)	*HT100630R
Q902		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q903		4822 130 10462	KTA1267-GR MINI	*HT100490R
RESISTORS				
R101		nsp	CEMENT 2.7 Ω 2W	nsp
R104	F, U	nsp	METAL 33k Ω 2 W J	GA05332020
R104	N, A, S	9965 000 07013	METAL 56k Ω 2 W J	GA05563020
R109	F, U	nsp	FILM 15k Ω 1/6 W J	nsp
R110	F, U	4822 053 10121	METAL 120 Ω 1 W J	GA05121010
R111	F, U	nsp	METAL 1 Ω 2 W J	GA05010020
R112	N, A, S	nsp	FILM 3.9 Ω 1/6 W J	nsp
R112	F, U	nsp	FILM 8.2k Ω 1/6 W J	nsp
R114		nsp	FILM 100k Ω 1/6 W J	nsp
R115	F, U	nsp	FILM 4.7 Ω 1/6 W J	nsp
R115	N, A, S	nsp	FILM 5.6 Ω 1/6 W J	nsp
R117	F, U	nsp	FILM 100 Ω 1/6 W J	nsp
R120		nsp	FILM 1k Ω 1/6 W J	nsp

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POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R121	N, A, S F, U	nsp	FILM 1.2k Ω 1/6 W J	nsp	R2C4		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R122		4822 053 10121	METAL 120 Ω 1 W J	GA05121010	R2C6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R123		nsp	FILM 1k Ω 1/6 W J	nsp	R2C7		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R124		nsp	FILM 330 Ω 1/6 W J	nsp	R2C8		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R125		nsp	FILM 3.9k Ω 1/6 W J	nsp	R2C9		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R126		nsp	FILM 1k Ω 1/6 W J	nsp	R2D0		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R127		nsp	METAL 3.6k Ω 1/8 W F	nsp	R2D1		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R128		nsp	METAL 3.3k Ω 1/6 W F	nsp	R2D2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R130		nsp	FILM 10k Ω 1/6 W J	nsp	R2D6		nsp	METAL CHIP 91 Ω 1 / 16 W J	nsp
R131		nsp	FILM 220k Ω 1/6 W J	nsp	R2D7		nsp	METAL CHIP 4.7 Ω 1 / 16 W J	nsp
R132		nsp	FILM 220k Ω 1/6 W J	nsp	R2E6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R140		nsp	FILM 10k Ω 1/6 W J	nsp	R2E7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R141		nsp	FILM 10k Ω 1/6 W J	nsp	R2E9		nsp	METAL CHIP 5.6k Ω 1 / 16 W J	nsp
R144		nsp	FILM 330 Ω 1/6 W J	nsp					
R144		4822 053 10121	METAL 120 Ω 1 W J	GA05121010	R2M1		nsp	METAL CHIP 1 Ω 1 / 10 W J	nsp
R145		nsp	FILM 470 Ω 1/6 W J	nsp	R2M2		nsp	METAL CHIP 1 Ω 1 / 10 W J	nsp
R201					R2M3		nsp	METAL CHIP 22k Ω 1 / 16 W J	nsp
}		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R2M4		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp
R204					R2M5		nsp	METAL CHIP 15k Ω 1 / 16 W J	nsp
R207		nsp	METAL CHIP 1M Ω 1 / 16 W J	nsp	R2M6		nsp	METAL CHIP 22k Ω 1 / 16 W J	nsp
R217		nsp	METAL CHIP 10 Ω 1 / 16 W J	nsp	R2M7		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R218		nsp	METAL CHIP 470 Ω 1 / 16 W J	nsp	R2M8		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R219		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp	R2M9		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R220		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp	R2N1		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R221		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp	R2N2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R230					R2N3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
}		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp	R2N4		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R237					R2N5		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R238					R2N6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
}		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R2N8		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R242					R2N9		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R271		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R2P1		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R273		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R2P2		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R274		nsp	METAL CHIP 620 Ω 1 / 16 W J	nsp	R2P6		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R275		nsp	METAL CHIP 910 Ω 1 / 16 W J	nsp	R2Q7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R276		nsp	METAL CHIP 910 Ω 1 / 16 W J	nsp	R2Q8		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp
R277		nsp	METAL CHIP 150 Ω 1 / 16 W J	nsp					
R278		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R301		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R279		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R303		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R280		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R305		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R281		nsp	METAL CHIP 2.2k Ω 1 / 16 W J	nsp	R306		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R291		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R307		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R292		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R308		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R293		nsp	METAL CHIP 2k Ω 1 / 16 W J	nsp	R309		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R294		nsp	METAL CHIP 150 Ω 1 / 16 W J	nsp	R310		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R295		nsp	METAL CHIP 2k Ω 1 / 16 W J	nsp	R311		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R296		nsp	METAL CHIP 150 Ω 1 / 16 W J	nsp	R313		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R297		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R314		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
					R315		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2A0		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp	R316		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2A1		nsp	METAL CHIP 91 Ω 1 / 16 W J	nsp	R317		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2A2		nsp	METAL CHIP 12k Ω 1 / 16 W F	nsp	R318		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R2A4		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp	R319		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R2A5		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R320		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R2A6		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R321		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2A9		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R322		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R2B1		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp	R323		nsp	METAL CHIP 3.9k Ω 1 / 16 W J	nsp
R2B2		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R350		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2B3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R351				
R2B4		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp	}		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2B5		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp	R360				
R2B6		nsp	METAL CHIP 27k Ω 1 / 16 W J	nsp	R361		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2B7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp	R362		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2B8		nsp	METAL CHIP 150k Ω 1 / 16 W J	nsp	R363		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2B9		nsp	METAL CHIP 150k Ω 1 / 16 W J	nsp	R3F1		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C0		nsp	METAL CHIP 39k Ω 1 / 16 W J	nsp	R3F2		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C1		nsp	METAL CHIP 39k Ω 1 / 16 W J	nsp	R3F4		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2C2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R3F5		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2C3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R3F7		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp

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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R401		nsp	FILM 10 Ω 1/6 W J	nsp	R623		nsp	FILM 22 Ω 1/6 W J	nsp
R402		nsp	FILM 4.7k Ω 1/6 W J	nsp	R624		nsp	FILM 1k Ω 1/6 W J	nsp
R403		nsp	FILM 10 Ω 1/6 W J	nsp	R625	N	nsp	FILM 10k Ω 1/6 W J	nsp
R406		nsp	FILM 10k Ω 1/6 W J	nsp	R628		nsp	FILM 47k Ω 1/6 W J	nsp
R407		nsp	FILM 5.6k Ω 1/6 W J	nsp	R633		nsp	FILM 4.7k Ω 1/6 W J	nsp
R408		nsp	FILM 2.2k Ω 1/6 W J	nsp	R638	N	nsp	FILM 1k Ω 1/6 W J	nsp
R409		nsp	FILM 7.5k Ω 1/6 W J	nsp	R639	N	nsp	FILM 1k Ω 1/6 W J	nsp
R411		nsp	FILM 7.5k Ω 1/6 W J	nsp	R640		nsp	FILM 4.7k Ω 1/6 W J	nsp
R412		nsp	FILM 6.8k Ω 1/6 W J	nsp	R652	N	nsp	FILM 68 Ω 1/6 W J	nsp
R413		nsp	FILM 15k Ω 1/6 W J	nsp	R653	N	nsp	FILM 1k Ω 1/6 W J	nsp
R414		nsp	FILM 5.6k Ω 1/6 W J	nsp	R654	N	nsp	FILM 10k Ω 1/6 W J	nsp
R415		nsp	FILM 4.7k Ω 1/6 W J	nsp	R655	N	nsp	FILM 2.2k Ω 1/6 W J	nsp
R416		nsp	FILM 15k Ω 1/6 W J	nsp	R656	N	nsp	FILM 1k Ω 1/6 W J	nsp
R417		nsp	FILM 6.8k Ω 1/6 W J	nsp	R657	N	nsp	FILM 1k Ω 1/6 W J	nsp
R418		nsp	FILM 1k Ω 1/6 W J	nsp	R658	N	nsp	FILM 1k Ω 1/6 W J	nsp
R419		nsp	FILM 330 Ω 1/6 W J	nsp	R660	N	nsp	FILM 680 Ω 1/6 W J	nsp
R420		nsp	FILM 330 Ω 1/6 W J	nsp					
R421		nsp	FILM 10k Ω 1/6 W J	nsp	R661	N	nsp	FILM 100 Ω 1/6 W J	nsp
R422		nsp	FILM 2.2k Ω 1/6 W J	nsp	R664	N	nsp	FILM 1k Ω 1/6 W J	nsp
R423					R665	N	nsp	FILM 1k Ω 1/6 W J	nsp
}		nsp	FILM 1k Ω 1/6 W J	nsp	R666	N	nsp	FILM 100 Ω 1/6 W J	nsp
R427					R667	N	nsp	FILM 470 Ω 1/6 W J	nsp
R432		nsp	FILM 100 Ω 1/6 W J	nsp	R668	N	nsp	FILM 330 Ω 1/6 W J	nsp
R501		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp	R672	N	nsp	FILM 100k Ω 1/6 W J	nsp
R503		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R673	N	nsp	FILM 100 Ω 1/6 W J	nsp
R504		nsp	METAL CHIP 100 Ω 1 / 16 W F	nsp	R674	N	nsp	FILM 100k Ω 1/6 W J	nsp
R505		nsp	METAL CHIP 10 Ω 1 / 16 W J	nsp	R675	N	nsp	FILM 100 Ω 1/6 W J	nsp
R506		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R676	N	nsp	FILM 75 Ω 1/6 W J	nsp
R514		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp	R6M1	F, A, S, U	nsp	FILM 220 Ω 1/6 W J	nsp
R515		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp	R6M2	F, A, S, U	nsp	FILM 220 Ω 1/6 W J	nsp
R517					R6M3	F, A, S, U	nsp	FILM 100k Ω 1/6 W J	nsp
}		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp	R6M4	F, A, S, U	nsp	FILM 100k Ω 1/6 W J	nsp
R520									
R521		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp	R903		nsp	FILM 680 Ω 1/6 W J	nsp
R522		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp	R904		nsp	FILM 1.2k Ω 1/6 W J	nsp
R523		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp	R905		nsp	FILM 1.5k Ω 1/6 W J	nsp
R524		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp	R906		nsp	FILM 3.3k Ω 1/6 W J	nsp
R525		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp	R907		nsp	FILM 4.7k Ω 1/6 W J	nsp
R527		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R912		nsp	FILM 820 Ω 1/6 W J	nsp
R530					R921		nsp	FILM 100 Ω 1/6 W J	nsp
}		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R930		nsp	FILM 10k Ω 1/6 W J	nsp
R533					R931		nsp	FILM 10k Ω 1/6 W J	nsp
R534		nsp	METAL CHIP 680 Ω 1 / 16 W J	nsp	R932		nsp	FILM 3.3k Ω 1/6 W J	nsp
R535		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R933		nsp	FILM 330 Ω 1/6 W J	nsp
R536		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R934		nsp	FILM 10k Ω 1/6 W J	nsp
R537		nsp	METAL CHIP 330 Ω 1 / 16 W J	nsp	R935		nsp	FILM 47k Ω 1/6 W J	nsp
R538		nsp	METAL CHIP 270 Ω 1 / 16 W J	nsp	R938		nsp	FILM 1k Ω 1/6 W J	nsp
R539		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp	R941		nsp	FILM 2.2k Ω 1/6 W J	nsp
R540		nsp	METAL CHIP 330 Ω 1 / 16 W J	nsp	R943		nsp	FILM 100 Ω 1/6 W J	nsp
R541		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp	R944		nsp	FILM 100 Ω 1/6 W J	nsp
R542		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp	R951				
R588					}		nsp	FILM 100k Ω 1/6 W J	nsp
}		nsp	METAL CHIP 75 Ω 1 / 16 W J	nsp	R961				
R591					R963		nsp	FILM 100 Ω 1/6 W J	nsp
R597		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp	R964		nsp	FILM 47k Ω 1/6 W J	nsp
R601	N, A, S	nsp	FILM 47k Ω 1/6 W J	nsp	R965		nsp	FILM 100 Ω 1/6 W J	nsp
R602	N	nsp	FILM 100 Ω 1/6 W J	nsp	R966		nsp	FILM 2.2k Ω 1/6 W J	nsp
R603	N	nsp	FILM 100 Ω 1/6 W J	nsp	R967		nsp	FILM 10k Ω 1/6 W J	nsp
R604	N	nsp	FILM 68 Ω 1/6 W J	nsp	R968		nsp	FILM 10k Ω 1/6 W J	nsp
R605									
}		nsp	FILM 1k Ω 1/6 W J	nsp					
R609					BC101		9965 000 06959	MISCELLANEOUS COIL,BEAD CORE	*FC900210R
R616	N	nsp	FILM 100 Ω 1/6 W J	nsp	▲ F101	F, U	nsp	BFS3550R2FD8, R T/P	
R617	N	nsp	FILM 680 Ω 1/6 W J	nsp				FUSE SLOW BLOW 1600MA	*FS000730R
R618		nsp	FILM 100k Ω 1/6 W J	nsp	▲ F101	N, A, S	4822 070 31602	250V 5.2X20	
R619		nsp	FILM 100k Ω 1/6 W J	nsp				FUSE SLOW BLOW 1600MA	*FS000740R
R620		nsp	FILM 220 Ω 1/6 W J	nsp				250V 5.2X20	
R621		nsp	FILM 220 Ω 1/6 W J	nsp					
R622		nsp	FILM 22 Ω 1/6 W J	nsp					

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POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
F602 }		nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	PMD02		nsp	CONN. 00-6232-023-006-800 23P	nsp
F608					PMD03		nsp	CONN. 00-6232-020-006-800 20 P	nsp
F612	F, A, S, U	nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	▲ PW101		nsp	CONN. GP390 LGC 3P	nsp
F613	F, A, S, U	nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	RC901		9965 000 07015	IR RECEIVER TSOP2836WE1 36.7KHz	*HW100550R
F615		nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	SW601	N, A, S	9965 000 11337	SWITCH SLIDE SKQ-23D15-G5-NA	*SS000620R
F616		nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	SW602		9965 000 11338	SWITCH TACT CSS-4206	*SS000730R
F617	N	nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	SW603		9965 000 11339	SWITCH SLIDE SKQ-22H06-G5-NA	*SS000740R
F618	N	nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	SW901		9965 000 07017	SWITCH TACT THVV502GAA	*SP001000R
F622	N	nsp	FILTER CFI06B1H101MF 2.5K/T	nsp	SW906 SW908		9965 000 07017	SWITCH TACT THVV502GAA	*SP001000R
FH101		nsp	HOLDER FUSE CLIP	nsp	▲ T101	F, U	nsp	MAINS TRANSF. KSE-021K/LSE-021K	*TS001600R
FH102		nsp	HOLDER FUSE CLIP	nsp	▲ T101	N, A, S	9965 000 07018	MAINS TRANSF. SHT-023T/KSE-023T	*TS001170R
JK601	F, N, A, S	9322 155 28667	JACK FIBER OPTIC GP1FA550TZ	*YJ002520R	▲ V101		nsp	VARISTOR SVC681D-10A 4.O CUT	nsp
JK602	F, A, S, U	nsp	JACK RCA DIN	*YT002680R	X201		9965 000 11340	CRYSTAL HC-49/S AXIAL 33.8688MHz	*JX000870R
JK602	N	9965 000 11332	JACK RCA/DIN-17G	*YT002690R	X501		9965 000 11341	CRYSTAL HC-49/S AXIAL 27MHz 20P	*JX000880R
JK603	N	9965 000 11333	JACK SCART 2F-21P 3.81 BAEUN	*YT002700R	X901		9965 000 11342	RESONATOR CSTLS5M00G53-A0	*FQ000540R
▲ L101	F, U	nsp	FILTER LS-AI99F-009	*FN000130R	PBJIG		nsp	PWB ASSY TOTAL DVD-3000'S JIG ASSY	*DV3100JIG
▲ L101	N, A, S	9965 000 11334	FILTER V-04350 LS BULK	*FN000140R					
L102		nsp	COIL CHOKE 22mH	nsp					
L103		nsp	COIL CHOKE 20μH	nsp					
L201									
}		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L204									
L207		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L208		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L211		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L2A1		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L2A2		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L301		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L302		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L3F1		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L3F2		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L401		nsp	INDUCTOR 100M K 6X6 L5	nsp					
L501									
}		nsp	FILTER HB-1M2012-102JT 3K	nsp					
L506									
L601	N	nsp	INDUCTOR 100M K 6X6 L5	nsp					
L602	N	nsp	INDUCTOR 100M K 6X6 L5	nsp					
L603		nsp	INDUCTOR 1.0M K 2.3X3.4 L5	nsp					
L604		nsp	INDUCTOR 1.0M K 2.3X3.4 L5	nsp					
L901		nsp	INDUCTOR 100M K 6X6 L5	nsp					
L902		nsp	INDUCTOR 100M K 6X6 L5	nsp					
P3301		nsp	CONN. 04-6232-115-008-800	nsp					
P4301		nsp	CONN. 2254-30P-T	nsp					
P5402		nsp	CONN. 2254-30S-T	nsp					
P5901		nsp	CONN. 2254-30S-T	nsp					
P9501		nsp	CONN. 2254-30P-T	nsp					
P9901		nsp	CONN. GIL-S/9073AN 4	nsp					
P9902		nsp	CONN. GIL-S-04P-S2T2-EF 4P	nsp					
P9903		nsp	CONN. GIL-S/9073AN 3P	nsp					
P9904		nsp	CONN. GIL-S-03P-S2T2-EF	nsp					
PBP00		nsp	PWB ASSY DVM4000S LED	nsp					
PBT00		nsp	PWB ASSY DVM4000S KEY	nsp					

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

14. MECHANISM SECTION

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HOW TO UPGRADE BY UPGRADE DISC

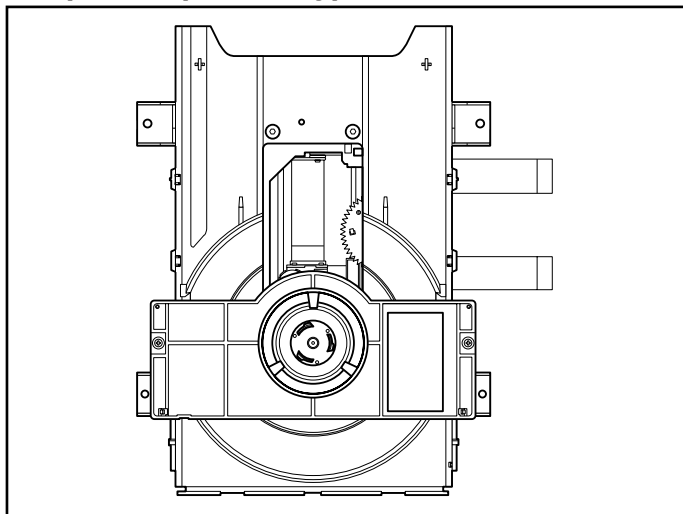
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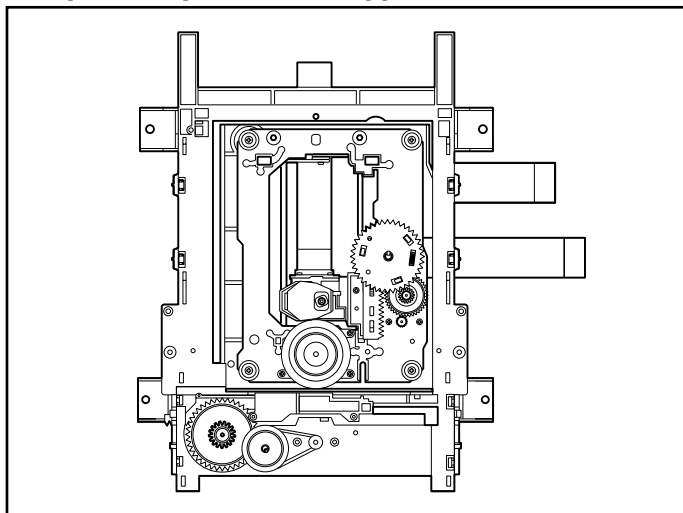
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DECK MECHANISM PARTS LOCATION

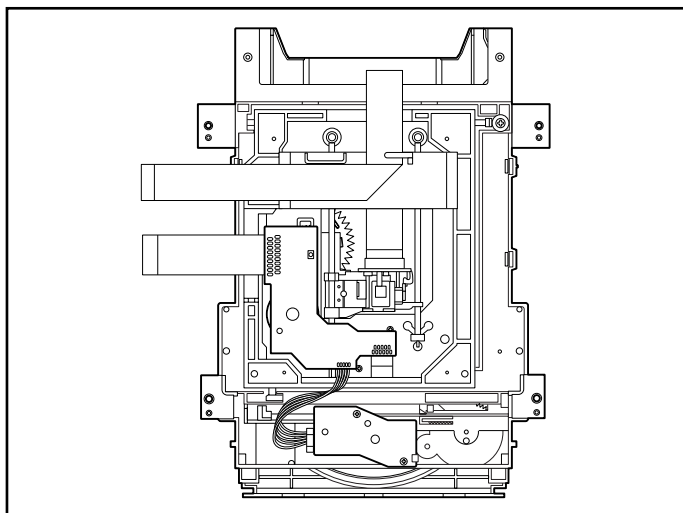
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



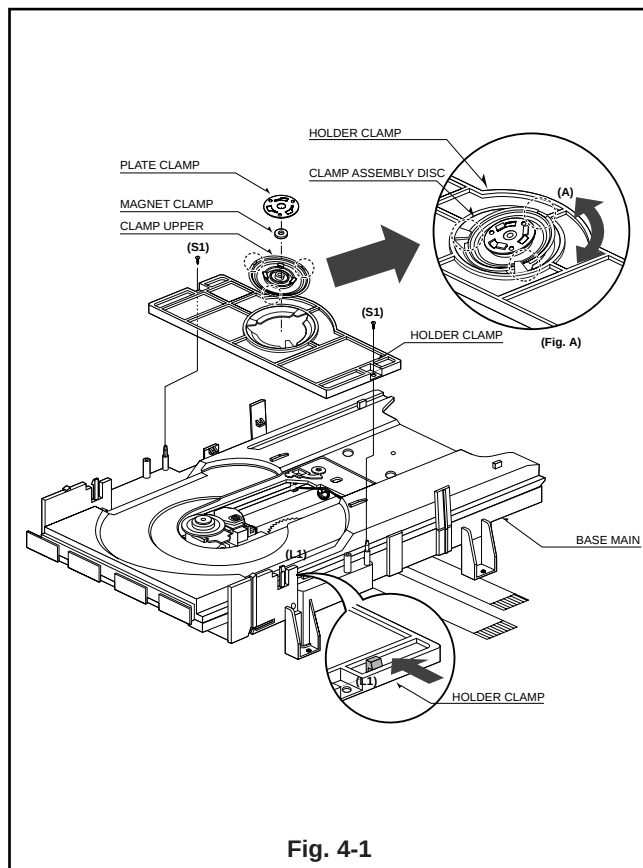
Procedure		Parts	Fixing Type	Disassembly	Figure
Starting No.					
	1	Holder Clamp	2 Screws, 2 Locking Tabs		4-1
1	2	Clamp Assembly Disc			4-1
1, 2	3	Plate Clamp			4-1
1, 2, 3	4	Magnet Clamp			4-1
1, 2, 3, 4	5	Clamp Upper			4-1
1	6	Tray Disc			4-2
1, 6	7	Base Assembly Sled			4-3
1, 2, 6	8	Gear Assembly Feed	4 Screws, 1 Connector 1 Locking Tabs		4-3
1, 2, 6, 8	9	Gear Middle			4-3
1, 2, 6, 8, 9	10	Gear Assembly Rack	1 Screw		4-3
1, 2, 7	11	Rubber Rear			4-3
1, 2, 7	12	Frame Assembly Up/Down	1 Screw	Bottom	4-4
1, 2	13	Belt Loading	1 Locking Tab		4-4
1, 2, 13	14	Gear Pulley			4-4
1, 2, 13, 14	15	Gear Loading	1 Locking Tab		4-4
1, 2, 7, 12, 13, 14	16	Guide Up/Down			4-4
1, 2, 13	17	PWB Assembly Loading	1 Locking Tab 1 Hook 2Screw	Bottom	4-4
1, 2, 7, 12, 13, 14, 15, 16, 17	18	Base Main	2 Locking Tabs		4-4

Note

When reassembling, perform the procedure in reverse order.

The "Bottom" on Disassembly column of above Table indicates the part should be disassembled at the Bottom side.

DECK MECHANISM DISASSEMBLY



1. Holder Clamp (Fig. 4-1)

- 1) Release 2 Screws(S1).
- 2) Unhook 2 Locking Tabs(L1).
- 3) Lift up the Holder Clamp and then separate it from the Base Main.

1-1. Clamp Assembly Disc

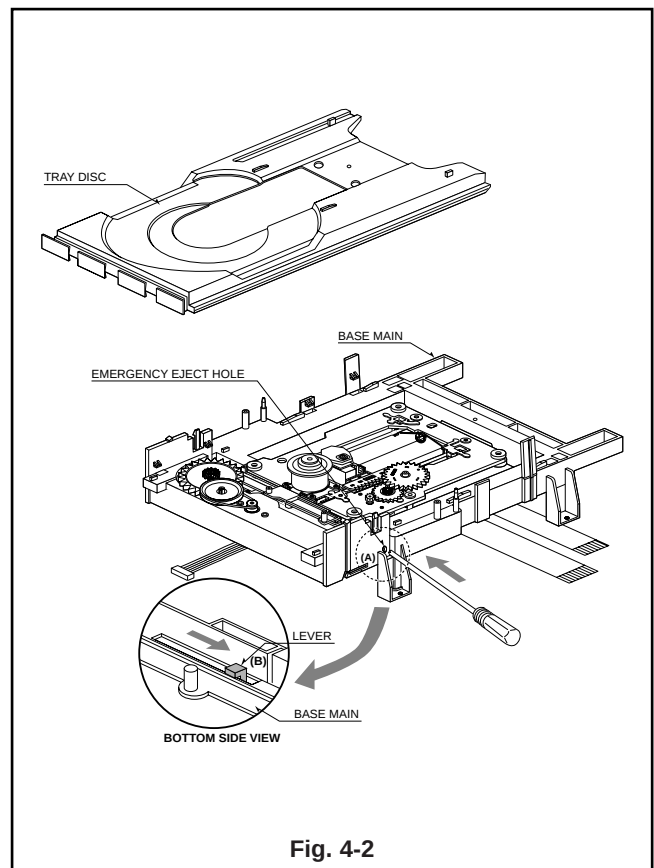
- 1) Place the Clamp Assembly Disc as Fig. (A)
- 2) Lift up the Clamp Assembly Disc in direction of arrow(A).
- 3) Separate the Clamp Assembly Disc from the Holder Clamp.

1-1-1. Plate Clamp

- 1) Turn the Plate Clamp to counterclockwise direction and then lift up the Plate Clamp.

1-1-2. Magnet Clamp

1-1-3. Clamp Upper



2. Tray Disc (Fig. 4-2)

- 1) Insert and push a Driver in the emergency eject hole(A) at the right side, or put the Driver on the Lever(B) of the Gear Emergency and pull the Lever(B) in direction of arrow so that the Tray Disc is ejected about 15~20mm.
- 2) Pull the Tray Disc until it is separated from the Base Main completely.

DECK MECHANISM DISASSEMBLY

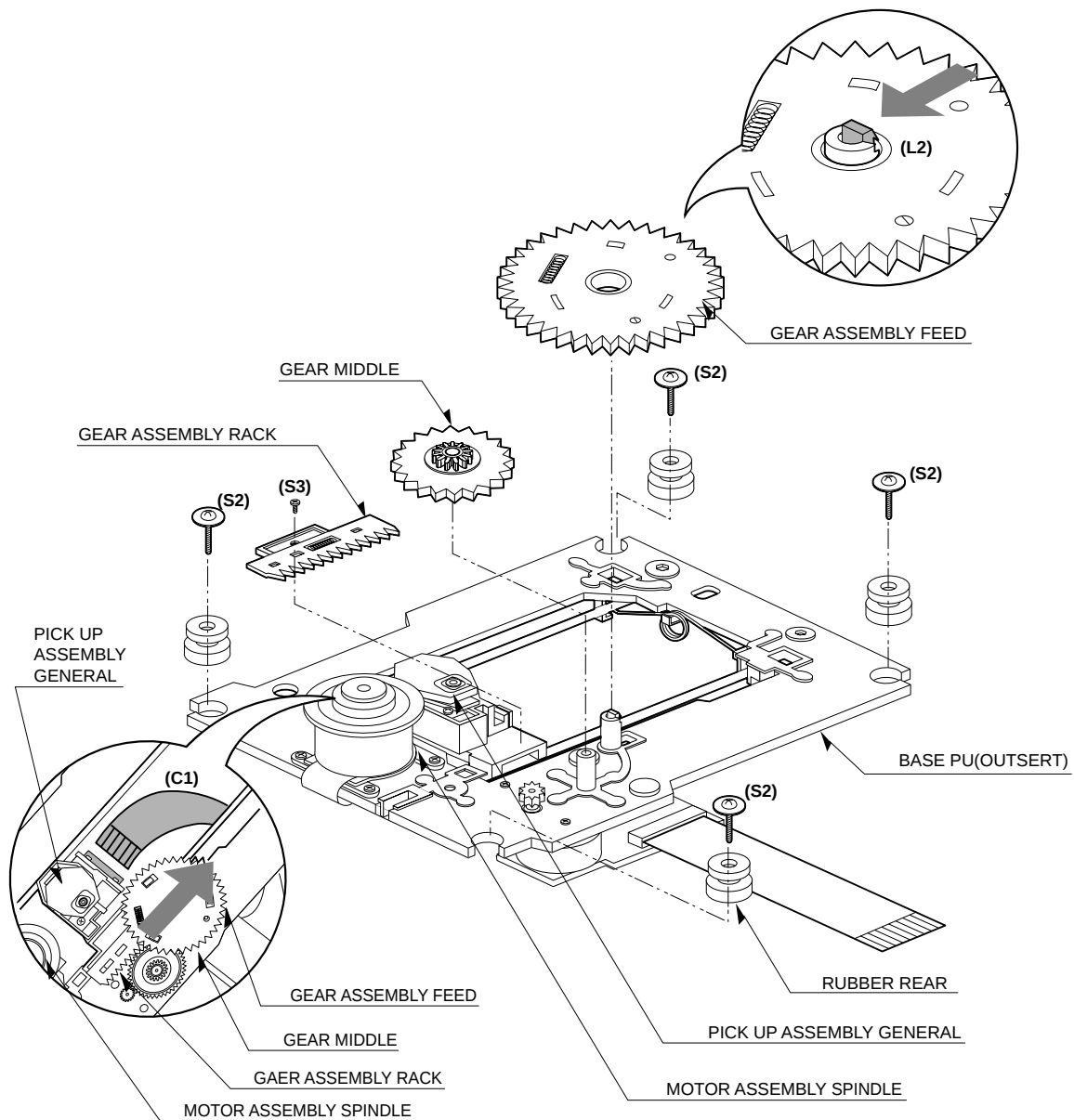


Fig. 4-3

3. Base Assembly Sled (Fig. 4-3)

- 1) Release 4 Screw(S2).
- 2) Disconnect the FFC Connector(C1)

3-1. Gear Assembly Feed

- 1) Unhook the Locking Tab(L2) in direction of arrow.

3-2. Gear Middle

3-3. Gear Assembly Rack

- 1) Release the Scerw(S3)

4. Rubber Rear (Fig. 4-3)

DECK MECHANISM DISASSEMBLY

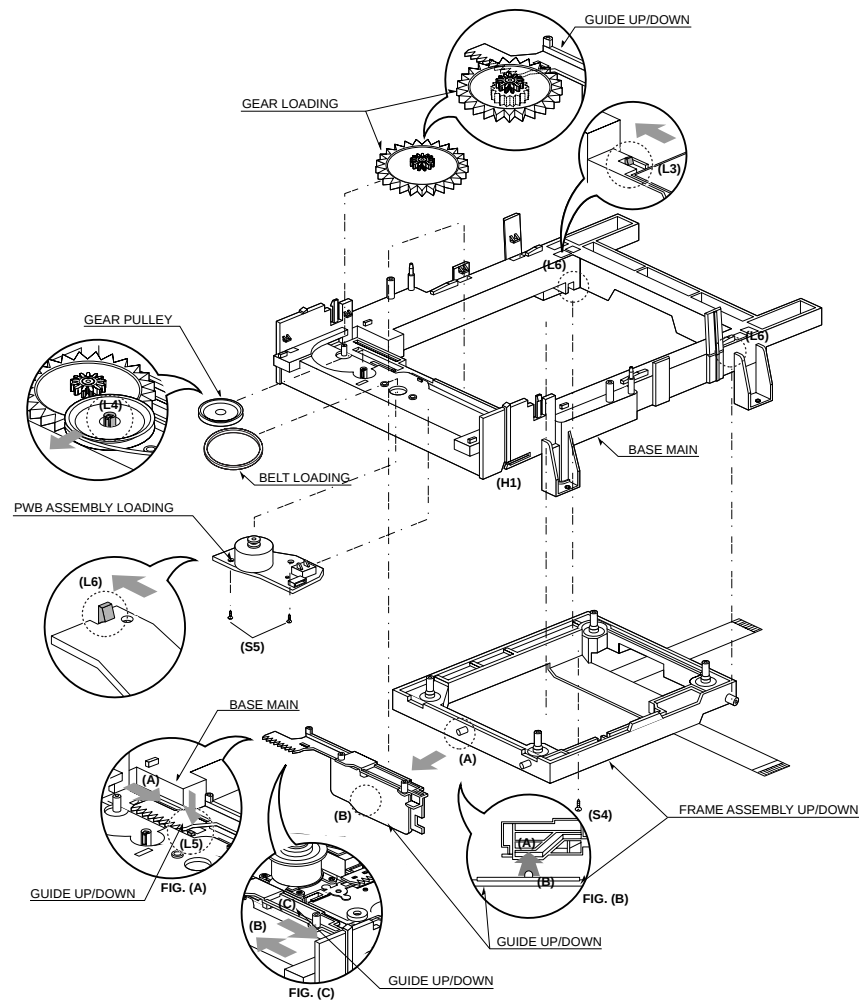


Fig. 4-4

5. Frame Assembly Up/Down

Note

Put the Base Main face down(Bottom Side)

- 1) Release the Screw(S4)
- 2) Unlock the Locking Tab(L3) in direction of arrow and then lift up the Frame Assembly Up/Down to separate it from the Base Main.

Note

- When reassembling move the Guide Up/Down in direction of arrow(C) until it is positioned as Fig.(C).
- When reassembling insert (A) portion of the Frame Assembly Up/Down in the (B) portion of the Guide Up/Down as Fig.(B)

6. Belt Loading(Fig. 4-4)

Note

Put the Base Assembly Main on original position(Top Side)

7. Gear pulley (Fig. 4-4)

- 1) Unlock the Locking Tab(L4) in direction of arrow(B) and then separate the Gear Pulley from the Base Main.

8. Gear Loading (Fig. 4-4)

9. Guide Up/Down (Fig. 4-4)

- 1) Move the Guide Up/Down in direction of arrow(A) as Fig.(A)
- 2) Push the Locking Tab(L5) down and then lift up the Guide Up/Down to separate it from the Base Main.

Note

When reassembling place the Guide Up/Down as Fig.(C) and move it in direction arrow(B) until it is locked by the Locking Tab(L5). And confirm the Guide Up/Down as Fig.(A)

10. PWB Assembly Loading

Note

Put the Base Main face down(Bottom Side)

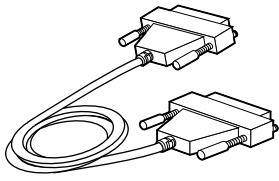
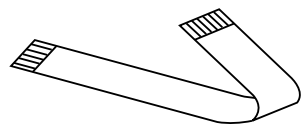
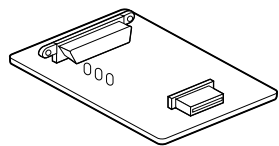
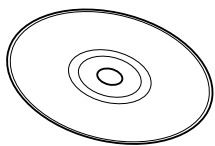
- 1) Release 2 Screws(S5)
- 2) Unhook the Loading Motor Connector (C2) from the Hook (H1) on the Base Main.
- 3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 4-4)

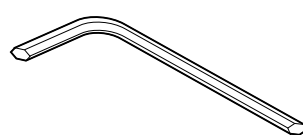
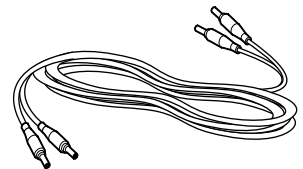
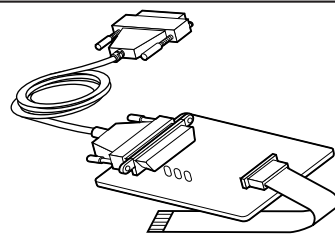
DECK MECHANISM ADJUSTMENT

1. Tools and Fixtures for SVC

- For SVC Program Down-Load

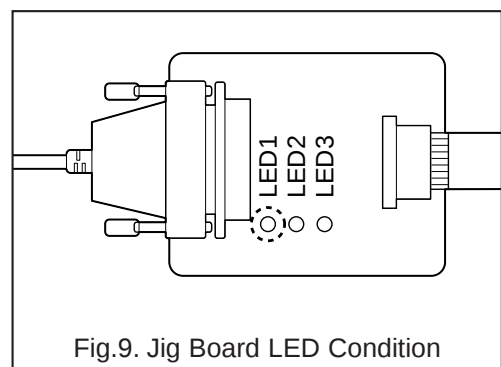
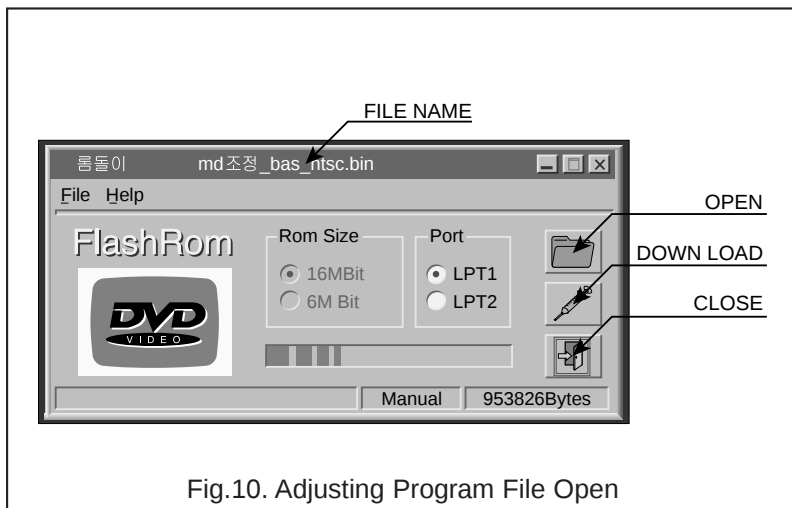
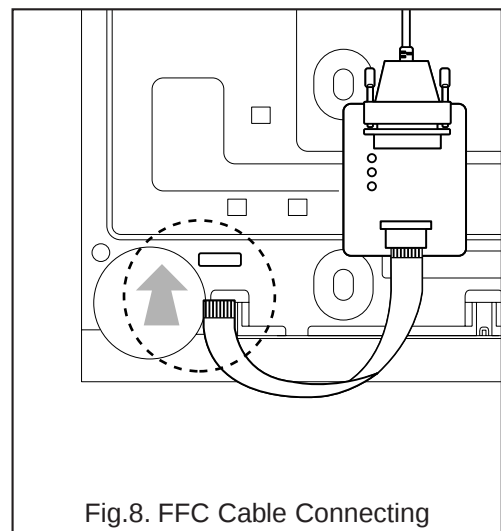
 Not spare parts Fig.1. Printer Cable	 Included in <Jig board> Fig.2. FFC Cable (15 pin)	 PART NO.*DV3100JIG Fig.3. Jig Board	 Fig.4. Deviation Disc (0.8mm)
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- For T-Skew and R-Skew Adjustment

 Not spare parts Fig.5. L-Wrench(3mm)	 Not spare parts Fig.6. RCA Jack	 Fig.7. Connecting Method
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2. Install Process

1. Connect Fig. 1, 2, 3 as Fig. 7.
2. Plug out the Power cord of DVD set.
3. Connect FFC Cable(Fig.2) to the Connector on DVD Set(Fig.8)
4. Connect Printer Cable(Fig.1) to the P.C.Printer Port (LPT1).
5. Plug in the DVD Power cord.
6. Press the Menu key on Remocon.
7. Confirm No.1 LED(RED Color) of Jig board is ON. (Fig.9)
8. Perform The S/W for Down-load at P.C.
9. Open the Program File for Adjusting(Fig.10)
10. Click the Down-load Icon and perform Program Down-load.
11. Displayed remaining time.
12. Confirm LED No.1(RED) and No.2(RED) is ON.
13. Plug out the DVD Set Power cord.
14. Disconnect the FFC Cable.



DECK MECHANISM ADJUSTMENT

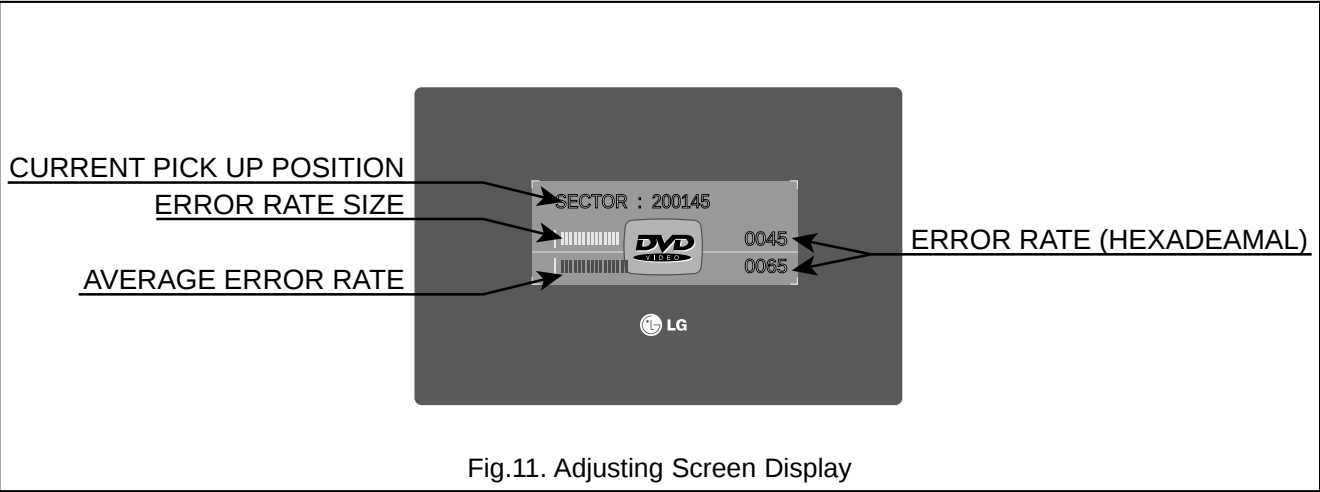


Fig.11. Adjusting Screen Display

3. Adjustment Procedure

- 1. Insert Disc(Only Open/Close Key Pressing)
 - 2. Wait Until the Sector Display is about 200,000 (Fig.11)
 - 3. Adjust R-Skew adjusting Point until the Error rate has Minimum rate with L-wrench (3mm).
 - 4. Adjust T-Skew Adjusting Point until the Error rate has Minimum rate.
 - 5. Repeat No. 3, 4 adjusting procedure until the Error rate have Minimum rate.
 - 6. Error rate; SVC-3561 (ABEX) Disc=below 30 and TDV-533 (ABEX) Disc=below 100. If not, Please confirm Play ability on screen.
- # You can watch the screen when pressing the Stop key after the Adjusting is finished, Then perform Play and Scan/Skip operation at Chapter1 and Chapter16 and confirm screen condition, normal or abnormal.

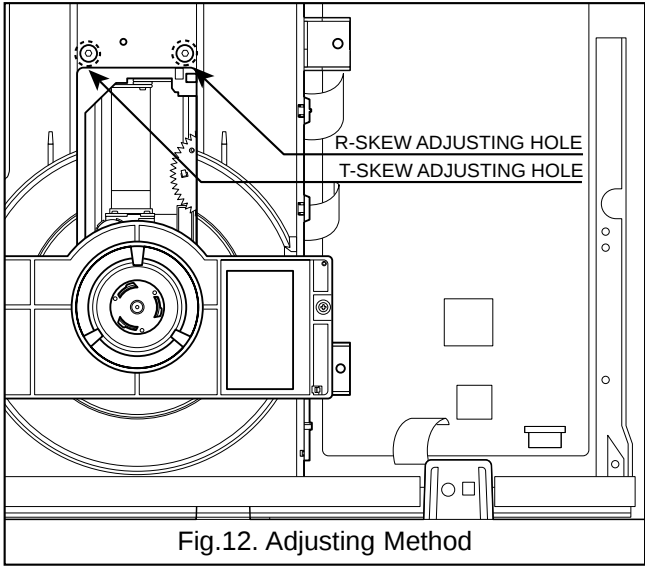


Fig.12. Adjusting Method

How to upgrade by upgrade DISC. (*DV4200UPD)

Connect the DVD Player to [TV] and Operate by using [Remote Controller]

1. Reading upgrade disc

- 1.1) Connect AC plug to mains power outlet.
- 1.2) Push **OPEN/CLOSE** button , then open the disc tray. (Turned Power ON automatically)
- 1.3) Place the upgrade Disc on the disc tray and close the tray.
- 1.4) FTD indicates **[Press Up]** when Disc is acknowledged.
- 1.5) Push **ARROW (up)** button of Remote Controller .
- 1.6) FTD indicates **[READ 0]**
If FTD indicated **[READ 1]** or other number, please refer to 3. Error message.
- 1.7) FTD indicates **[UPGRADE 0]** and begin to writing.
(Software writing into Flash ROM)
- 1.8) After few minutes, FTD indicate **[FINISHED]** and write completed.
(Software finished write into Flash ROM)
- 1.9) When upgrade is finished, open the tray automatically.
- 1.10) Remove the disc.
- 1.11) Push **POWER** button and turn off the power.

2. Reset and MICOM version check

When upgrade is finished, the unit is should be resetting in order to finalize Upgrade.
The reset procedures are followings.

- 2.1) Push **POWER** button.
- 2.2) Push **SETUP** button.
- 2.3) Select **"TV aspect"**
- 2.4) Push **ARROW(right)** button"
- 2.5) Push **ARROW (up)** button or **ARROW (down)** button and choose **"16:9 wide"**.
Attention : Do not push select/enter button (Keep green triangle(>)mark)
If check mark is appeared, push arrow-right button and change to green triangle mark
- 2.6) Push **"Numeric button"** in the following turn.
1 → **3** → **9** → **7** → **1** → **3** → **9**
- 2.7) Push **SELECT/ENTER** button.
The connected TV indicates **"SYSTEM INFORMATION"**
Please check **"MICOM version"**.
If other number indicate, need to retry this procedure again.
- 2.8) Push **POWER** button and turn off the power.
Upgrade and Reset are success.

Example indicated

SYSTEM INFORMATION
MODEL : DV4200/F1N
REGION-NO :2
CHIP-ID :PANTERA II
SERVO-VER :b003
MICOM-VER :V2.02 MP
PROM OPTION :XX XX XX XX XX XX

Factory Reset Done

3. Error messege

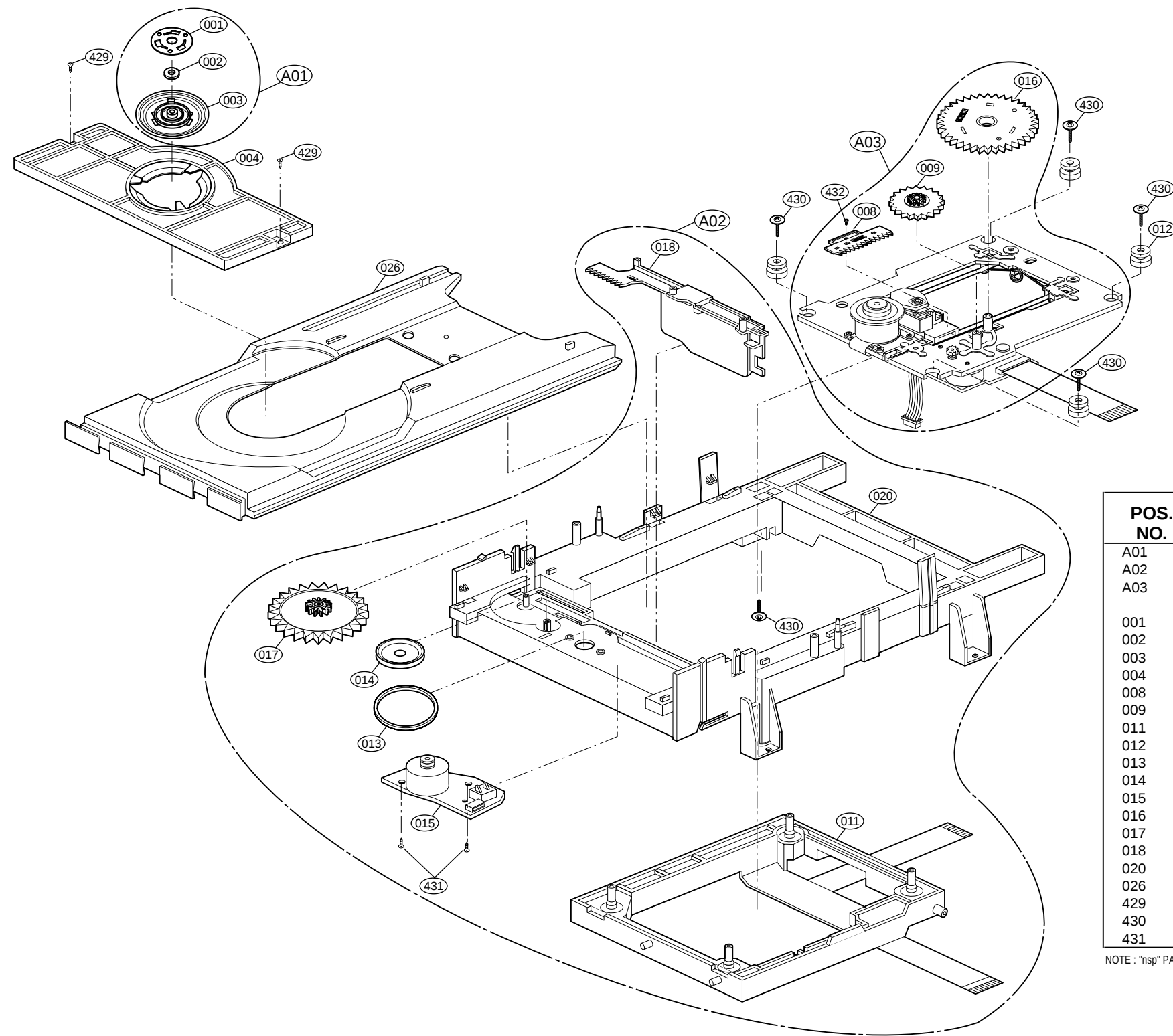
During reading the upgrade disc, error messages are as follows

[Error Num] = 1 ~ 3
You can retry to upgrade by disc.
Because, flash ROM is not erased data yet.

[Error Num] = 4 ~
It is very worst case. The flash ROM is broken during erasing or programming.
You need to rewrite from hardware (PC) for using another jig.

EXPLODED VIEW

1. Deck Mechanism Exploded View and Parts list



POS. NO.	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
A01		9965 000 11304	CLAMP ASSY DISC (DP4)	344W005510
A02		9965 000 11305	BASE ASSY MAIN(DP-4RM,BLDC)-SH	344W401510
A03		9965 000 11306	BASE ASSY SLED(DP-4RM,BLDC)-SH	344W304510
001		nsp	PLATE CLAMP	nsp
002		nsp	MAGNET CLAMP	nsp
003		nsp	CLAMP UPPER	nsp
004		9965 000 06937	HOLDER CLAMP	304W271010
008		9965 000 06938	GEAR ASSY RACK	304W058010
009		9965 000 06939	GEAR MIDDLE	304W058020
011		nsp	FRAME ASSY UP/DOWN(DP2,RW)-SH	nsp
012		9965 000 11307	DAMPER RUBBER	344W259010
013		9965 000 06944	BELT LOADING	304W264010
014		9965 000 06945	GEAR PULLEY	304W262010
015		9965 000 11308	PWB(PCB) ASSY DP-4 LOADING -SH	*ZZ001830R
016		9965 000 06947	GEAR ASSY FEED	304W058030
017		9965 000 06948	GEAR LOADING	304W058040
018		9965 000 06949	GUIDE UP/DOWN	304W127010
020		nsp	BASE MAIN	nsp
026		9965 000 06950	TRAY DISC	304W163010
429		nsp	SCREW, B-TITE	nsp
430		nsp	SCREW, + D2.0 6MM /NIY 4.5MM	nsp
431		nsp	SCREW, + D2.0 6MM /ZNBK 4MM 1	nsp

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