Service Manual

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

DVD Player

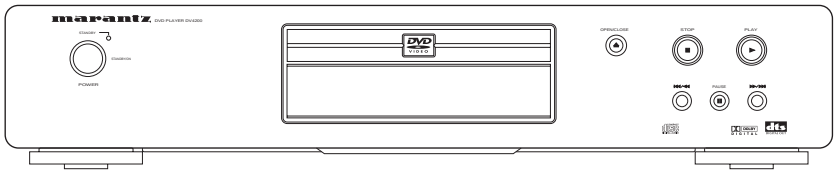


TABLE OF CONTENTS

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。

marantz®

DV4200

344W855010 ACT
3120 785 22760
First Issue:2002.02

MARANTZ DESIGN AND SERVICE

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

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

ORDERING PARTS :

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

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

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

USA

MARANTZ AMERICA, INC.
1100 MAPLEWOOD DRIVE
ITASCA, IL. 60143
USA
PHONE : 630 - 741 - 0300
FAX : 630 - 741 - 0301

EUROPE / TRADING

MARANTZ EUROPE B.V.
P. O. BOX 8744, BUILDING SILVERPOINT
BEEMDSTRAAT 11, 5653 MA EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2507844
FAX : +31 - 40 - 2507860

BRAZIL

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

PROFESSIONAL **AMERICAS**

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

PROFESSIONAL **AUSTRALIA**

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

CANADA

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

AUSTRALIA

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

THAILAND

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

SINGAPORE

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

NEW ZEALAND

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

TAIWAN

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

MALAYSIA

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

JAPAN *Technical*

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

日本マランツ株式会社

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

KOREA

MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

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

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

Ref. UL Standard No. 1492.

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

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.

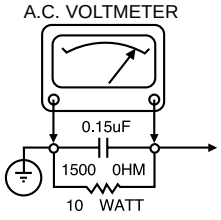
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

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 RECIVING 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 MILLIAMP A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



GOOD EARTH GROUND SUCH AS THE WATER PIPE. CONDUIT. ETC

PLACE THIS PROBE ON EACH EXPOSED METAL PART

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 ESSNTIAL 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, CUBBYHOLE 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 whitch 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 cerrectly 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 protec tive 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).

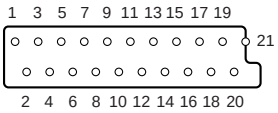
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   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

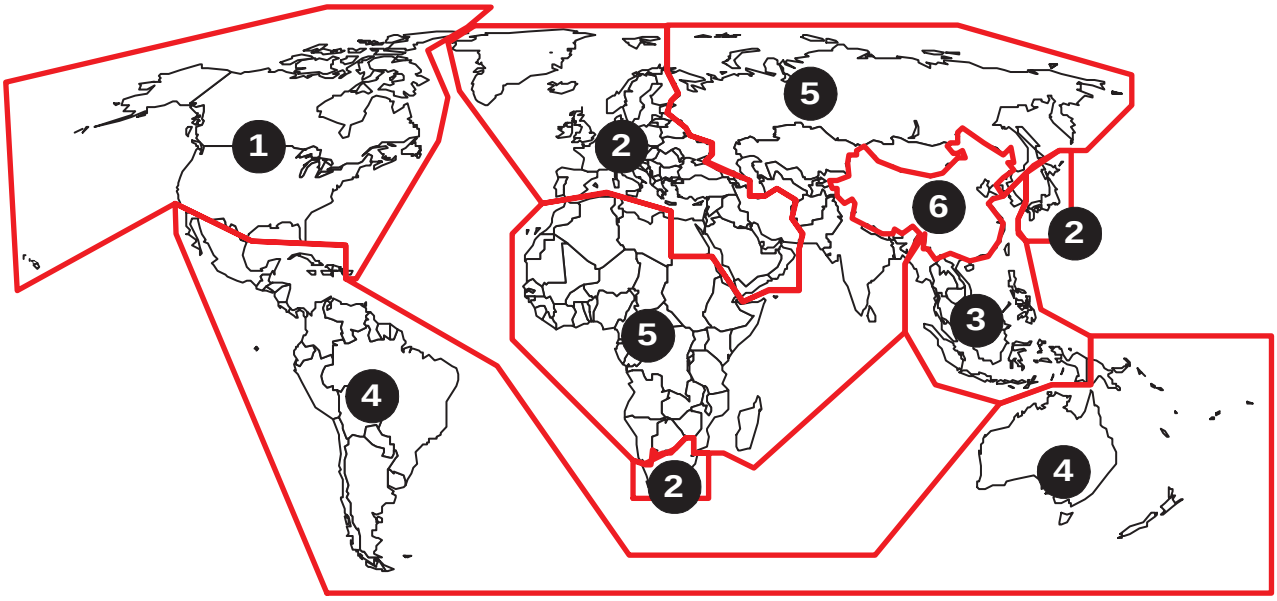
Pin No.	TV (OUT)	Pin No.	AUX (IN)
Pin 1	Audio R out : 2Vrms	Pin 1	(Audio R out : 2Vrms)
Pin 2	Audio R in : 2Vrms	Pin 2	Audio R in : 2Vrms
Pin 3	Audio L out : 2Vrms	Pin 3	(Audio L out : 2Vrms)
Pin 4	GND	Pin 4	GND
Pin 5	GND	Pin 5	GND
Pin 6	Audio L in : 2Vrms	Pin 6	Audio L in : 2Vrms
Pin 7	Blue out/C in Blue : 0.7Vpp ±0.1V into 75 Ohm *1 C : 300mVpp ±30 into 75 Ohm *2	Pin 7	(Blue in/C out Blue : 0.7Vpp ±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 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 9	GND
Pin 10	not connected	Pin 10	not connected
Pin 11	Green out:0.7Vpp ±0.1V into 75 Ohm *1	Pin 11	(Green in:0.7Vpp ±0.1V into 75 Ohm)
Pin 12	not connected	Pin 12	not connected
Pin 13	GND	Pin 13	GND
Pin 14	GND	Pin 14	GND
Pin 15	Red/C out Red : 0.7Vpp ±0.1V into 75 Ohm *1 C : 300mVpp ±30 into 75 Ohm *2	Pin 15	(Red/C in Red : 0.7Vpp ±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 16	(fast switching in <0.4V into 75 Ohm=CVBS/S-Video 1</<3 into 75 Ohm=RGB)
Pin 17	GND	Pin 17	GND
Pin 18	GND	Pin 18	GND
Pin 19	CVBS/Y out : 1Vpp ±0.1V *1	Pin 19	(CVBS/Y out : 1Vpp ±0.1V *1)
Pin 20	CVBS/Y in : 1Vpp ±0.1V *1	Pin 20	CVBS/Y in : 1Vpp ±0.1V *1
Pin 21	GND	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 arenit simultaneous (a movie may come out on DVD in the US when itis 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 regionis 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

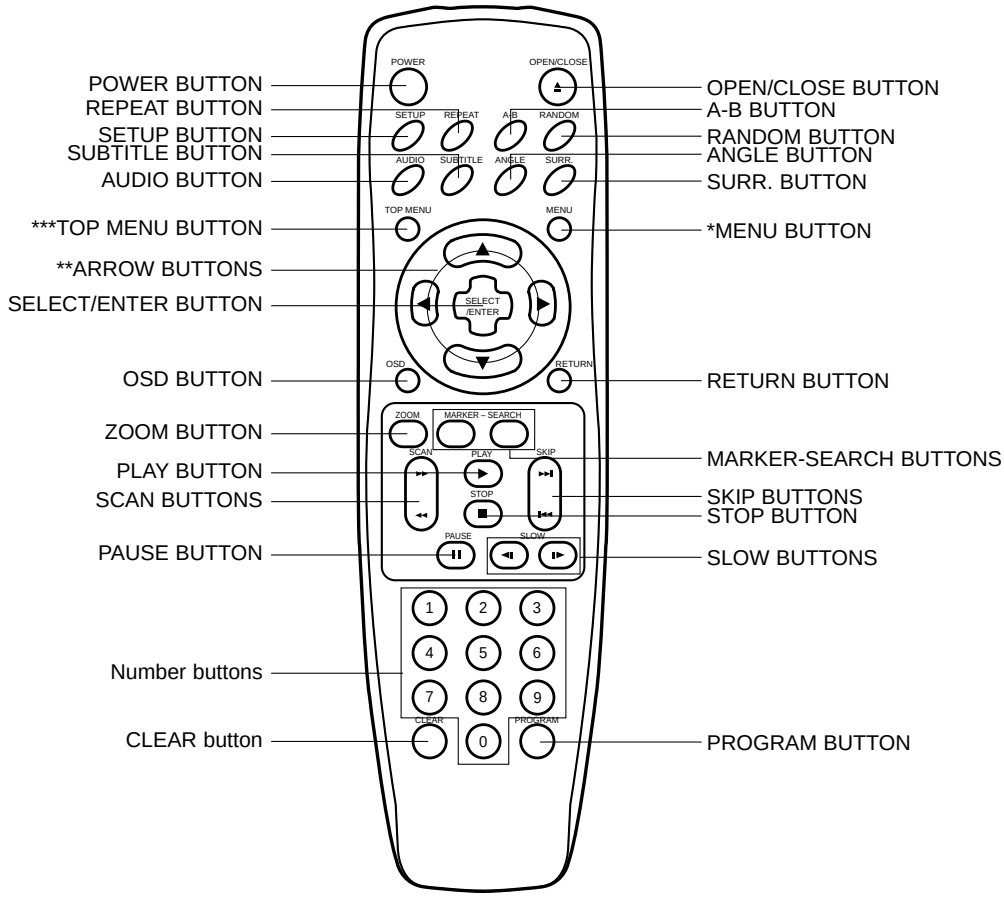
THE DISCS THAT THE DV4200 CAN HANDLE

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 (5in.)/ single-sided	1 layer 2 layer	133 min. 242 min.
	12 cm (5in.)/ double-sided	1 layer 2 layer	266 min. 484 min.
	DVD VIDEO		Digital audio Digital video (MPEG 2)
	8 cm (3 in.)/ single-sided	1 layer 2 layer	41 min. 75 min.
	8 cm (3 in.)/ double-sided	1 layer 2 layer	82 min. 150 min.
VIDEO CD 	VIDEO CD 12 cm (5 in.)/ single-sided		Digital audio Digital video (MPEG 1) Max. 74 minutes
	VIDEO CD single 8 cm (3 in.)/ single-sided		Digital audio Digital video (MPEG 1) Max. 20 minutes
CD 	CD 12 cm (5 in.)/ single-sided		Digital audio Max. 74 minutes
 *	CD single 8 cm (3 in.)/ single-sided		Digital audio Max. 20 minutes
 *			

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.

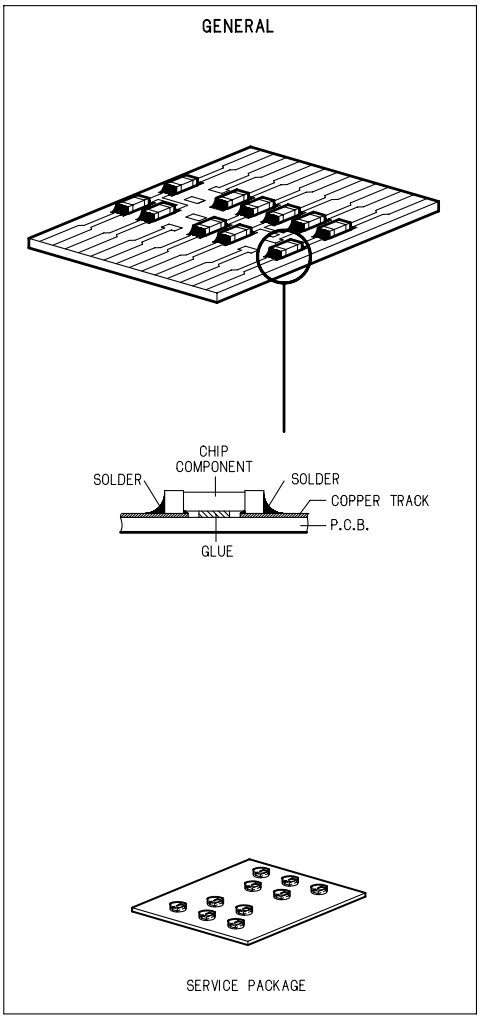
*****TOP MENU BUTTON**

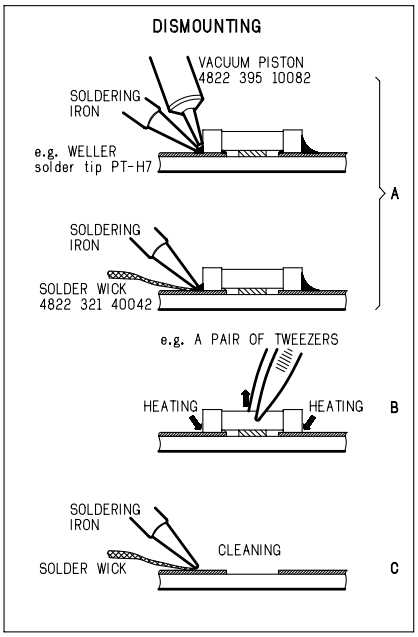
USE THE TOP MENU BUTTON TO DISPLAY THE TITLE MENU INCLUDED ON SELECTED DVD VIDEO DISCS. TO OPERATE A MENU SCREEN, FOLLOW THE INSTRUCTIONS IN “USING A TITLE MENU” .

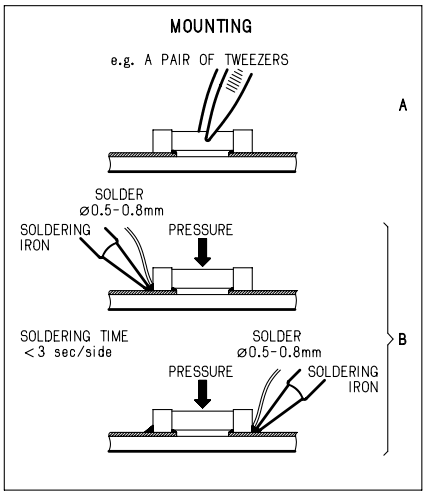
- This remote control supports two remote control codes: C1 and C2.
- When the unit is shipped from the factory the remote control is set to C1.
- To set the remote control to C2, hold down both the STOP button and "2" number button on the remote control for at least five seconds. (If the batteries in 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)

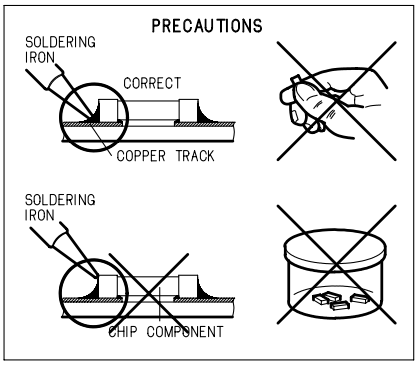
6. SERVICING HINT

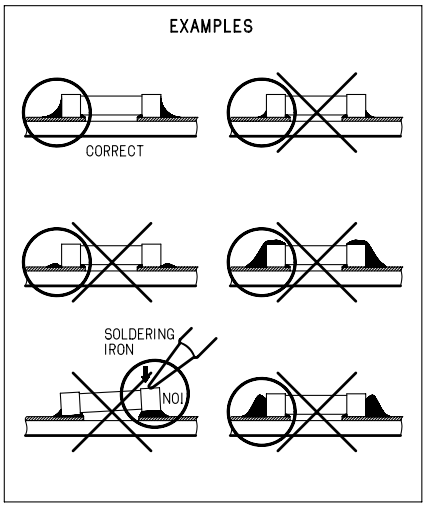
SERVICE HINTS











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 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 patrs 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

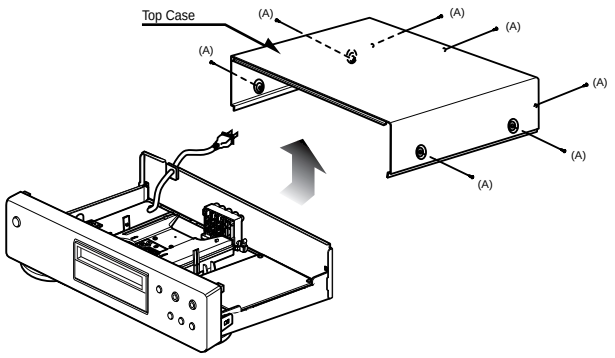


Fig. 2-1

7.1.2 Tray Door

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

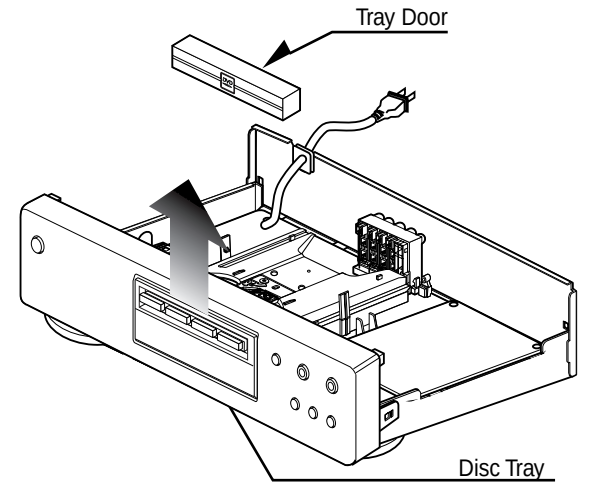


Fig. 2-2

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)

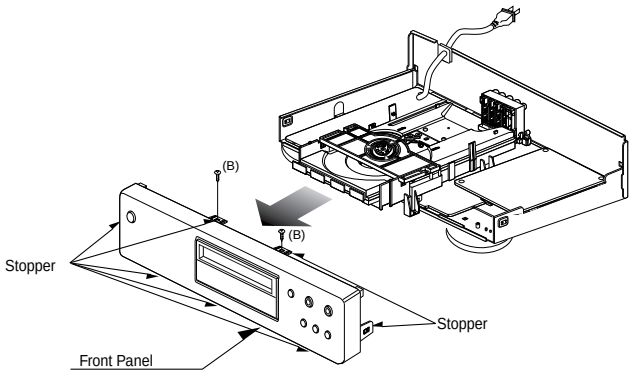
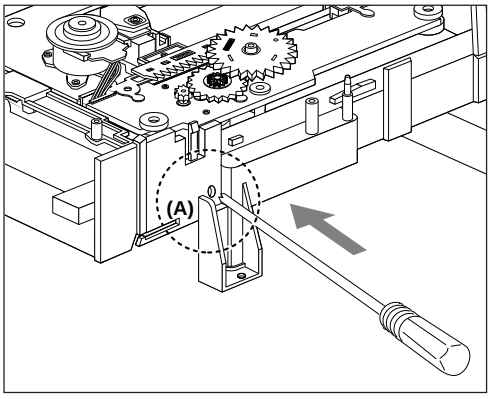


Fig. 2-3

REMARK: <u>Before disassemble the front panel.</u>



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.

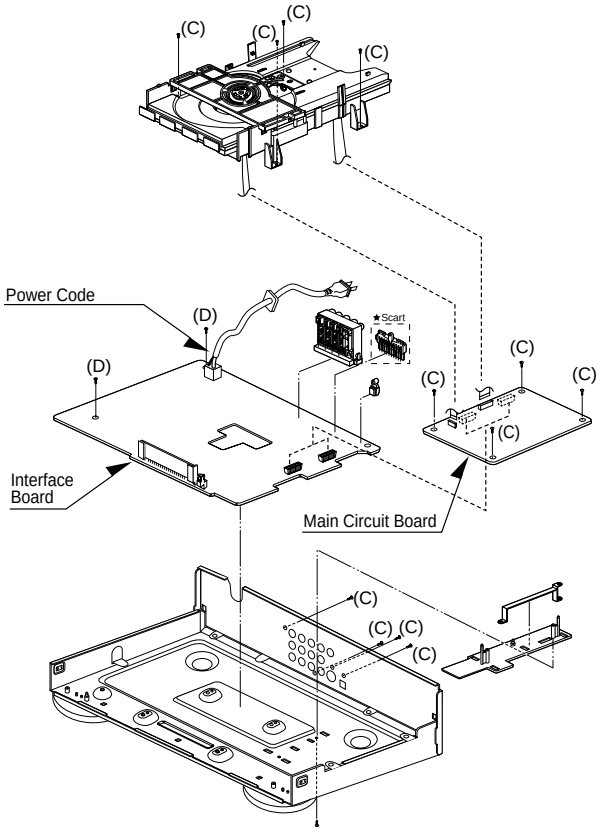


Fig. 2-4

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.

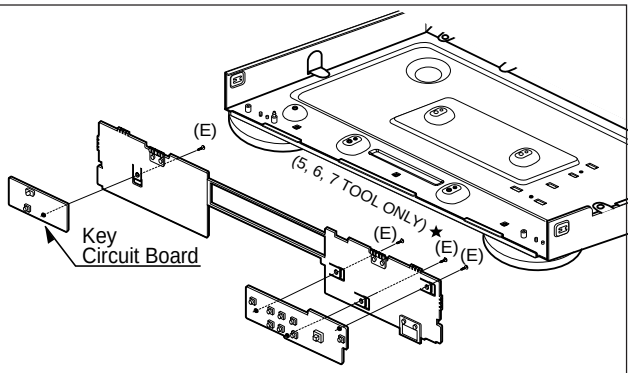
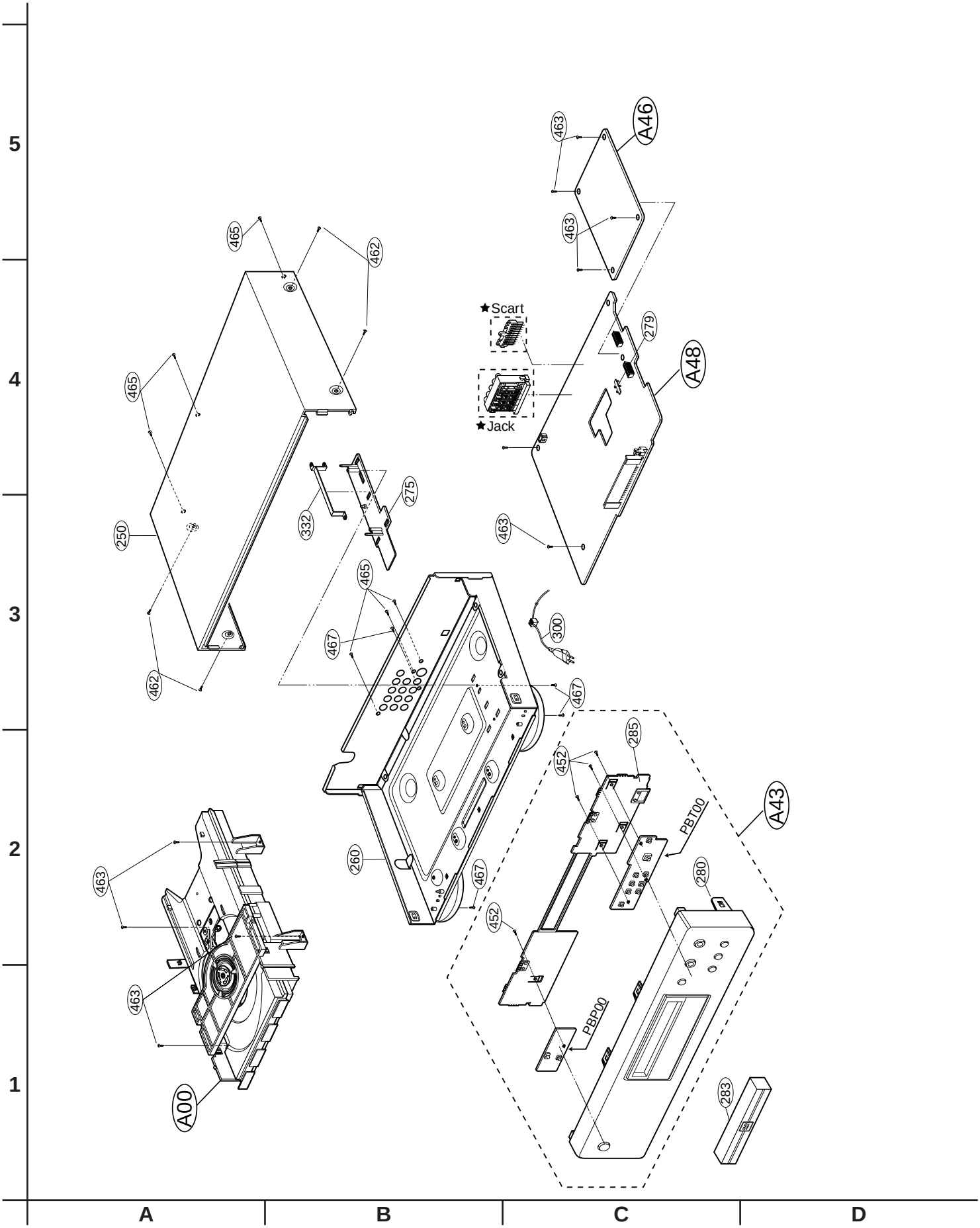


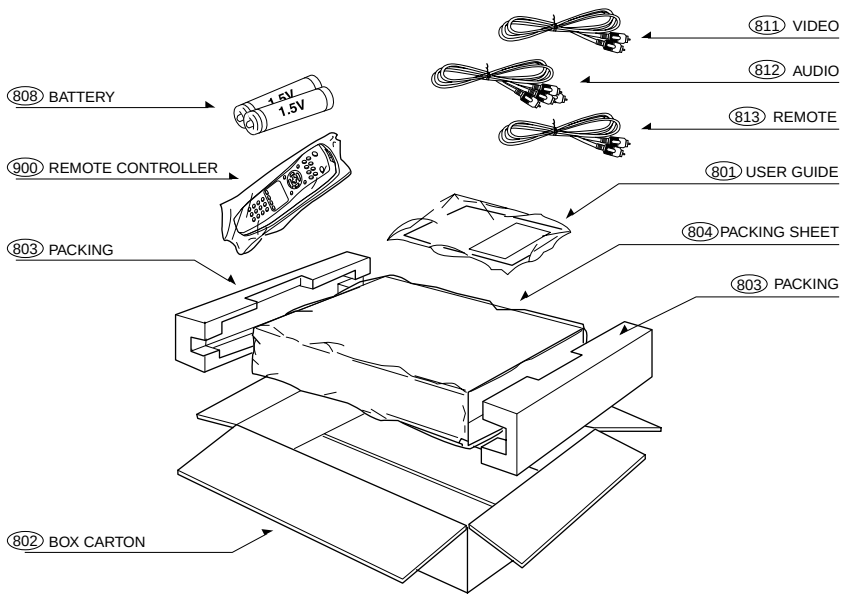
Fig. 2-5

8. EXPLODED VIEWS

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

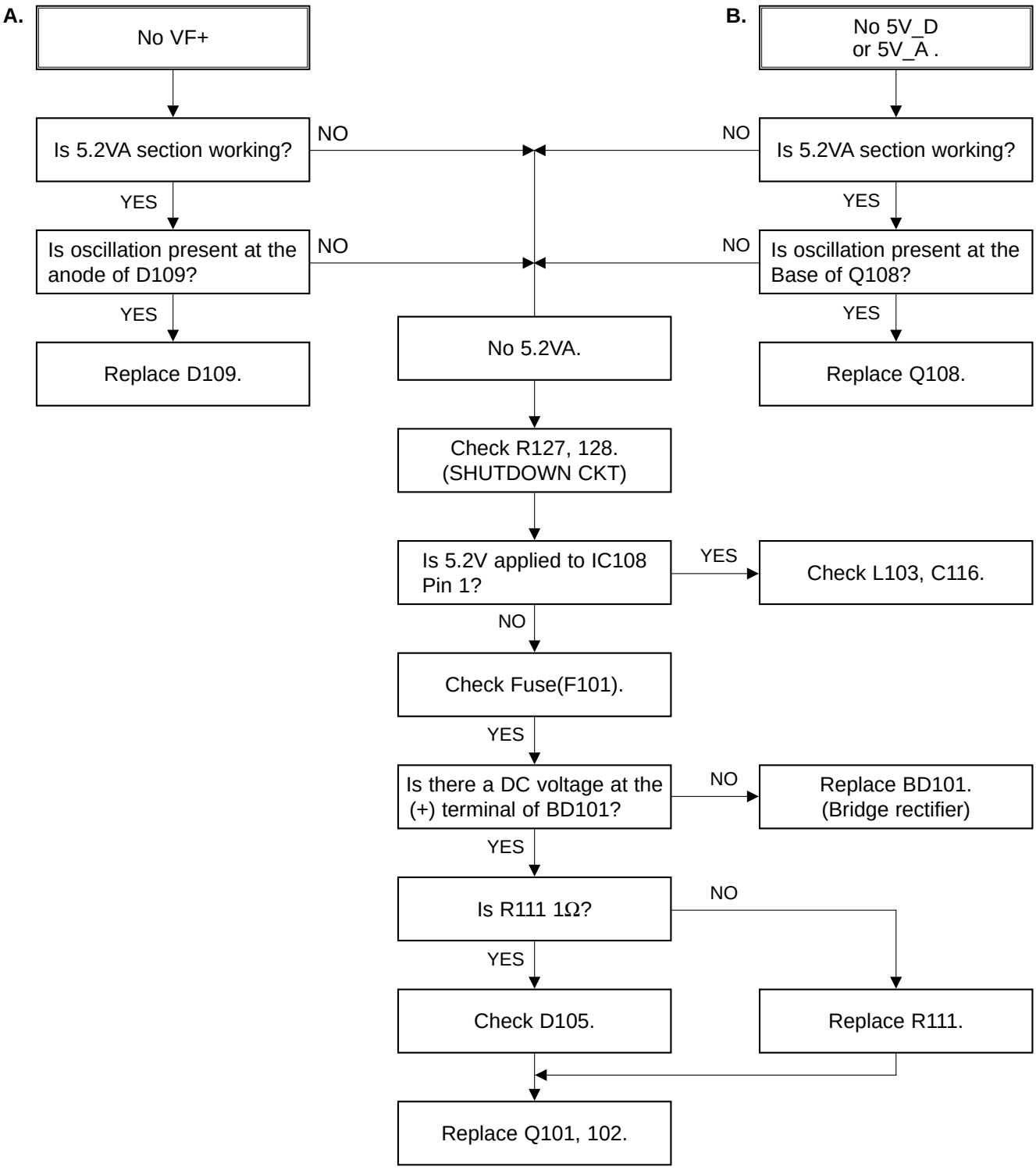
NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

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.

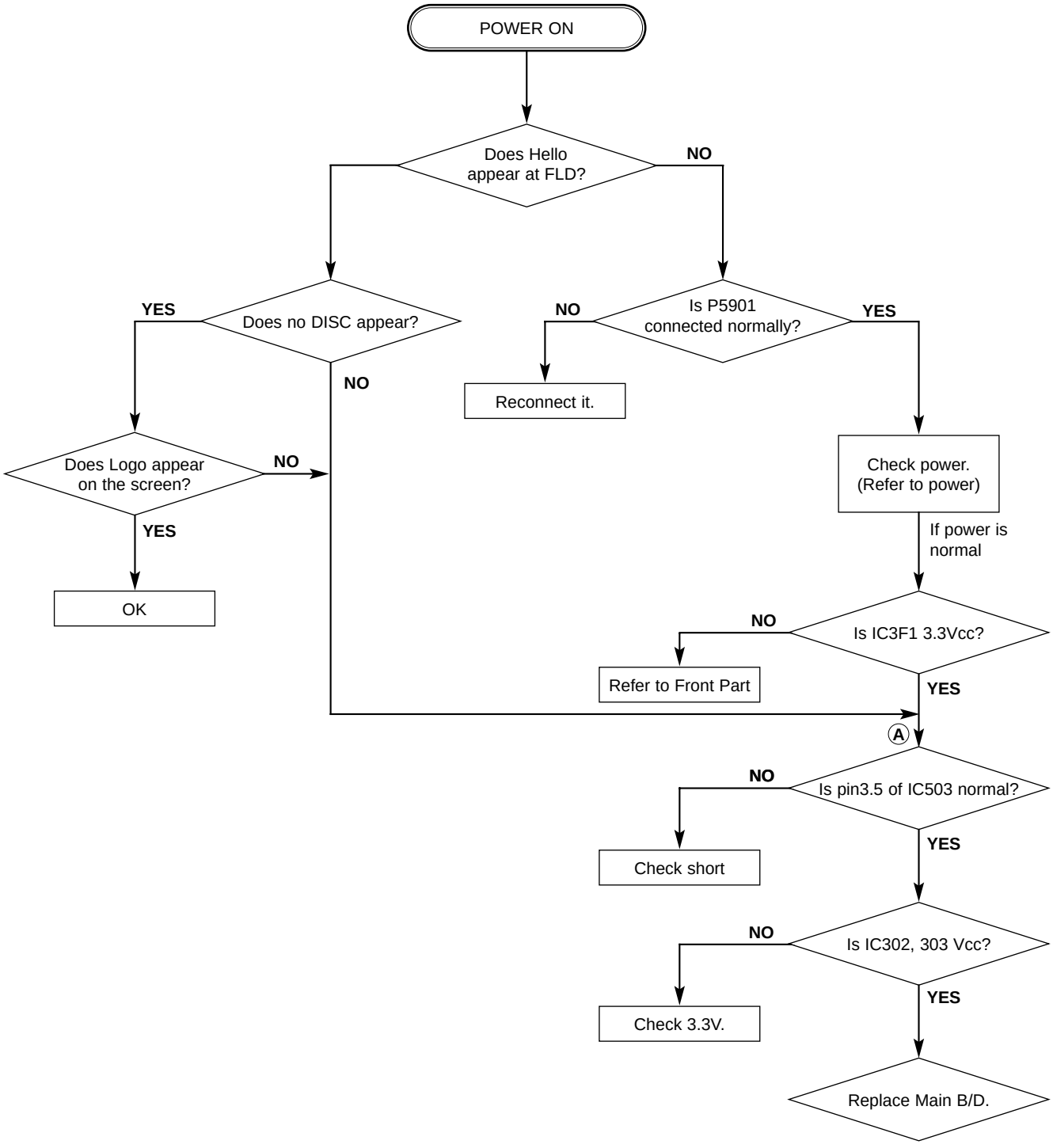
9. ELECTRICAL TROUBLESHOOTING GUIDE

9.1 Power (SMPS) Circuit

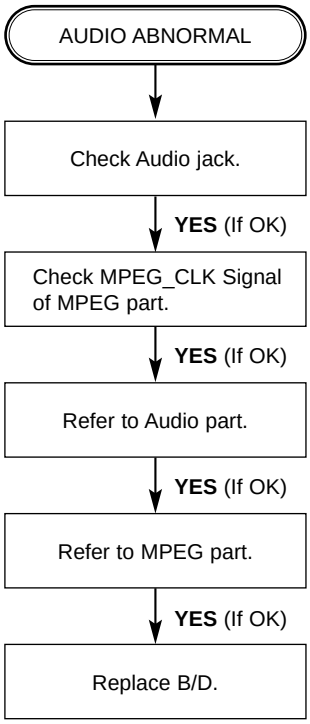


9.2 µ-COM Circuit

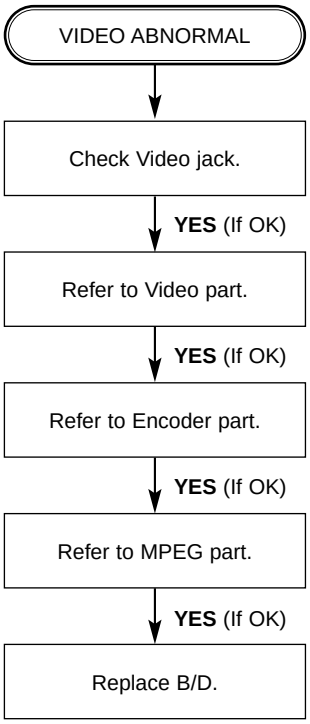
A. No Power



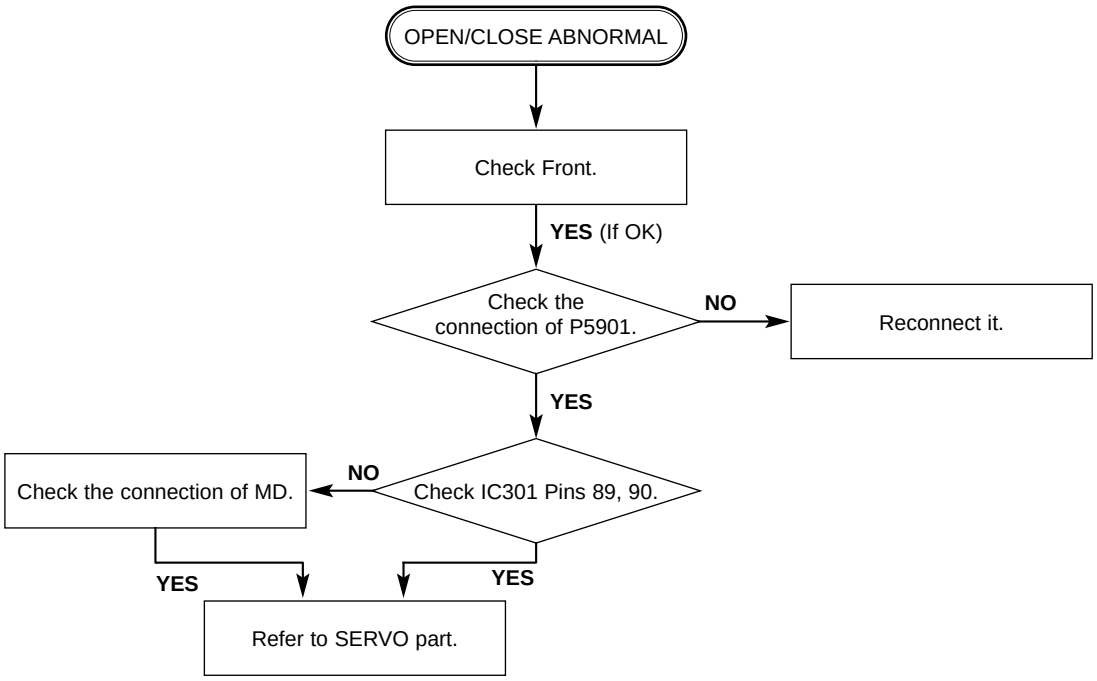
B. Audio abnormal



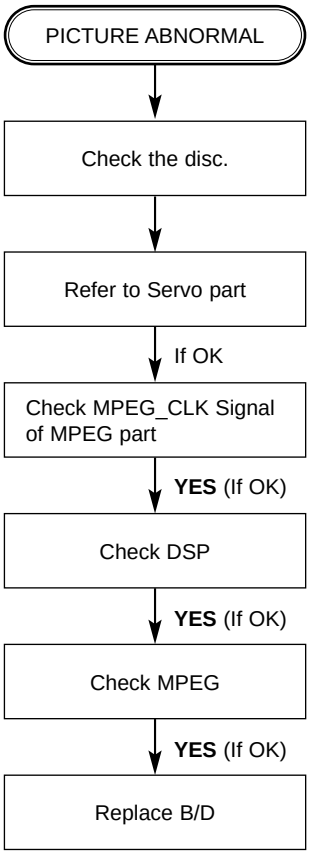
C. Video abnormal



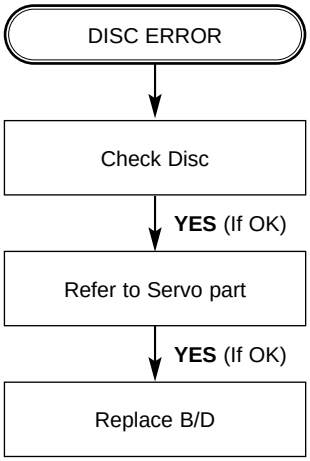
D. Open/Close abnormal



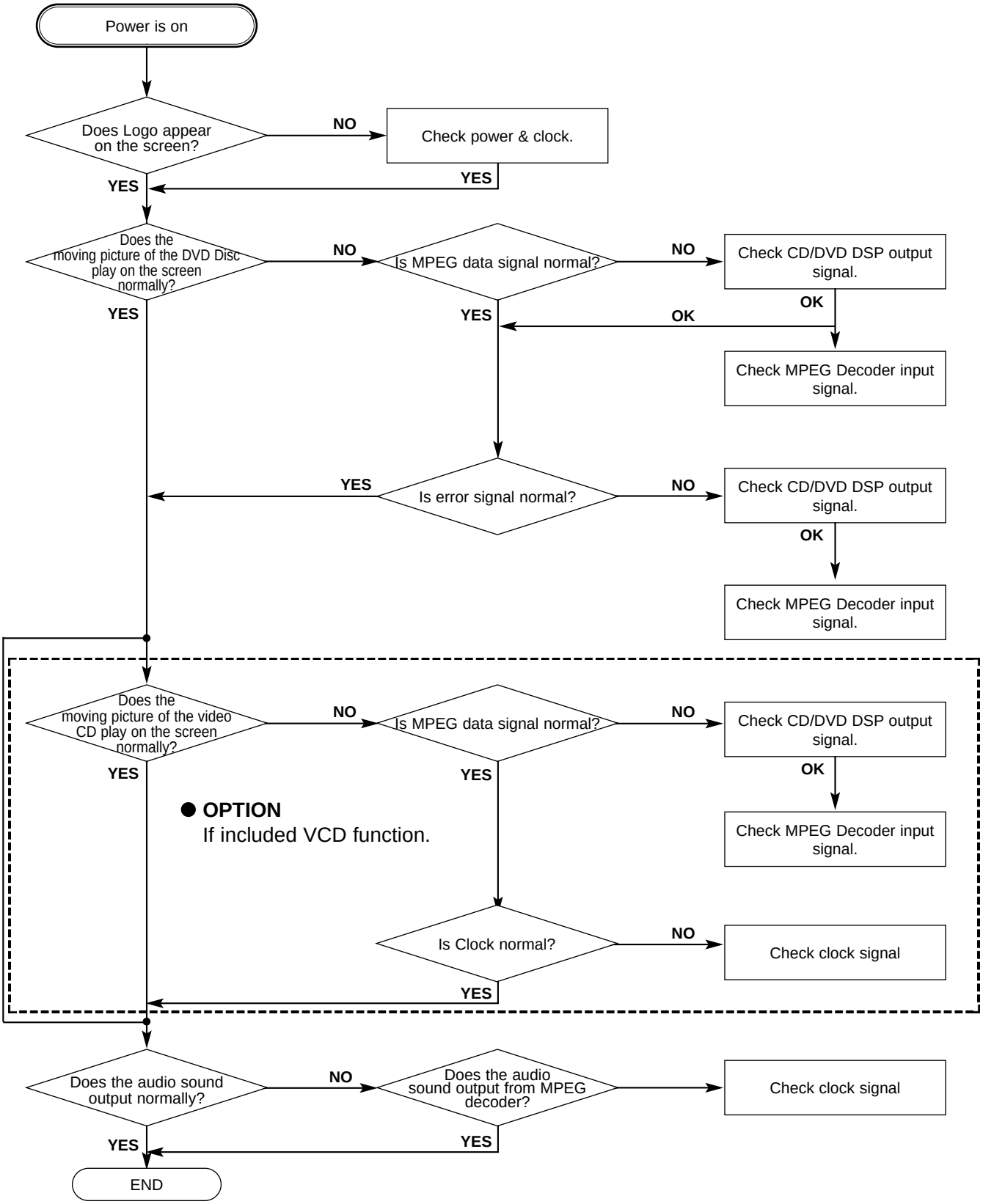
E. Picture abnormal



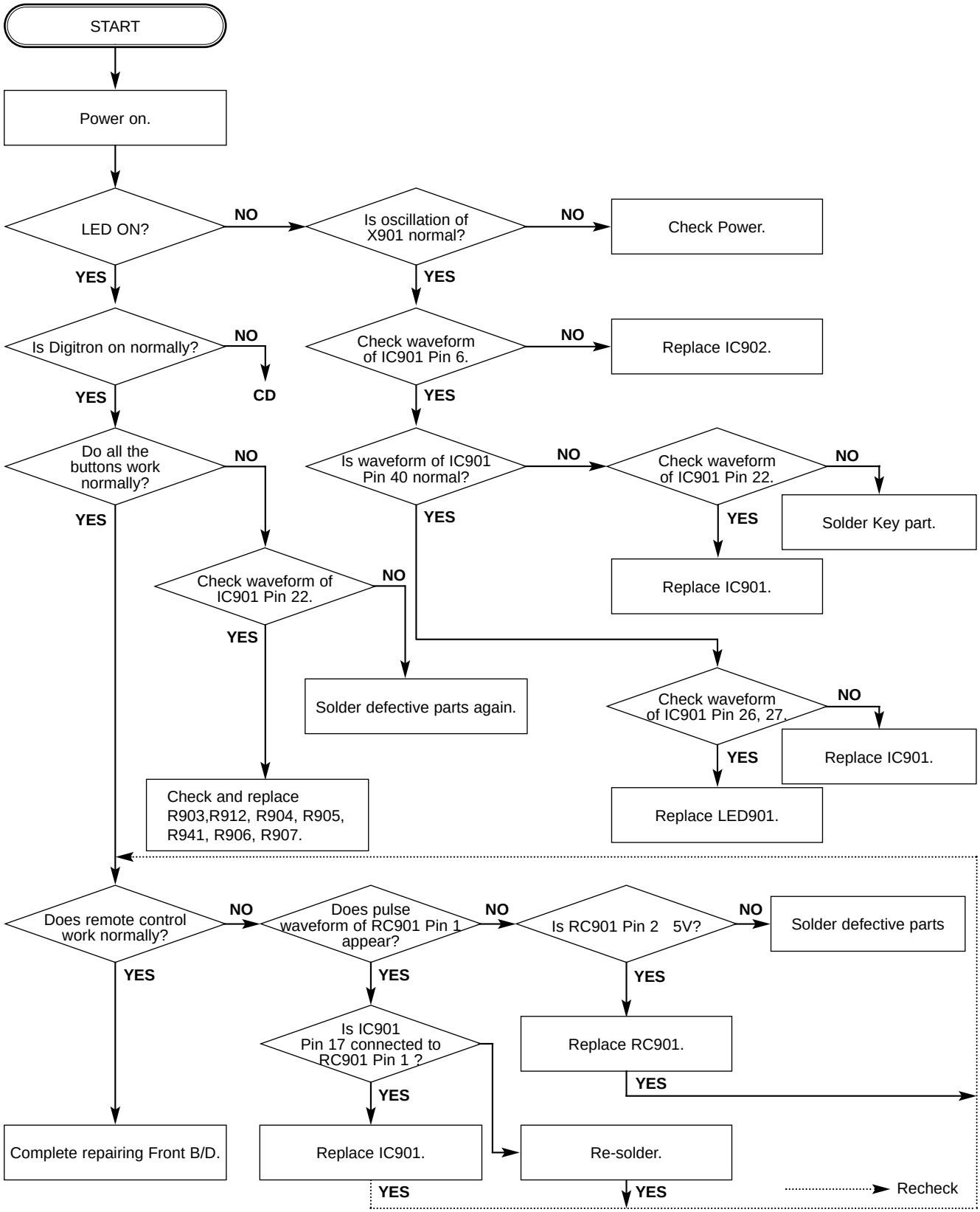
F. Disc Error



9.3 MPEG Circuit

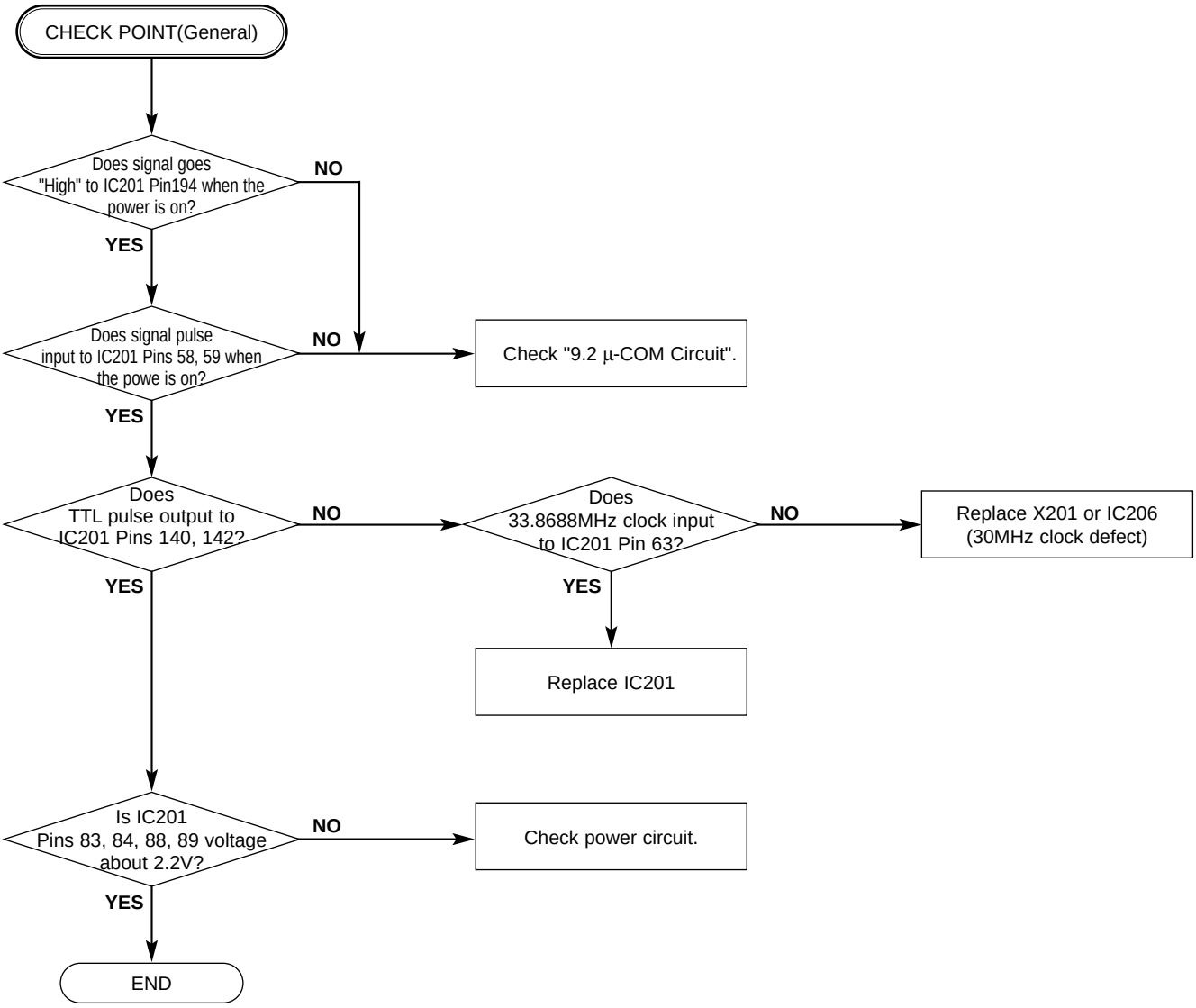


9.4 Front Circuit (Digitron & key)



9.5 RF/Servo Circuit

A.



B.

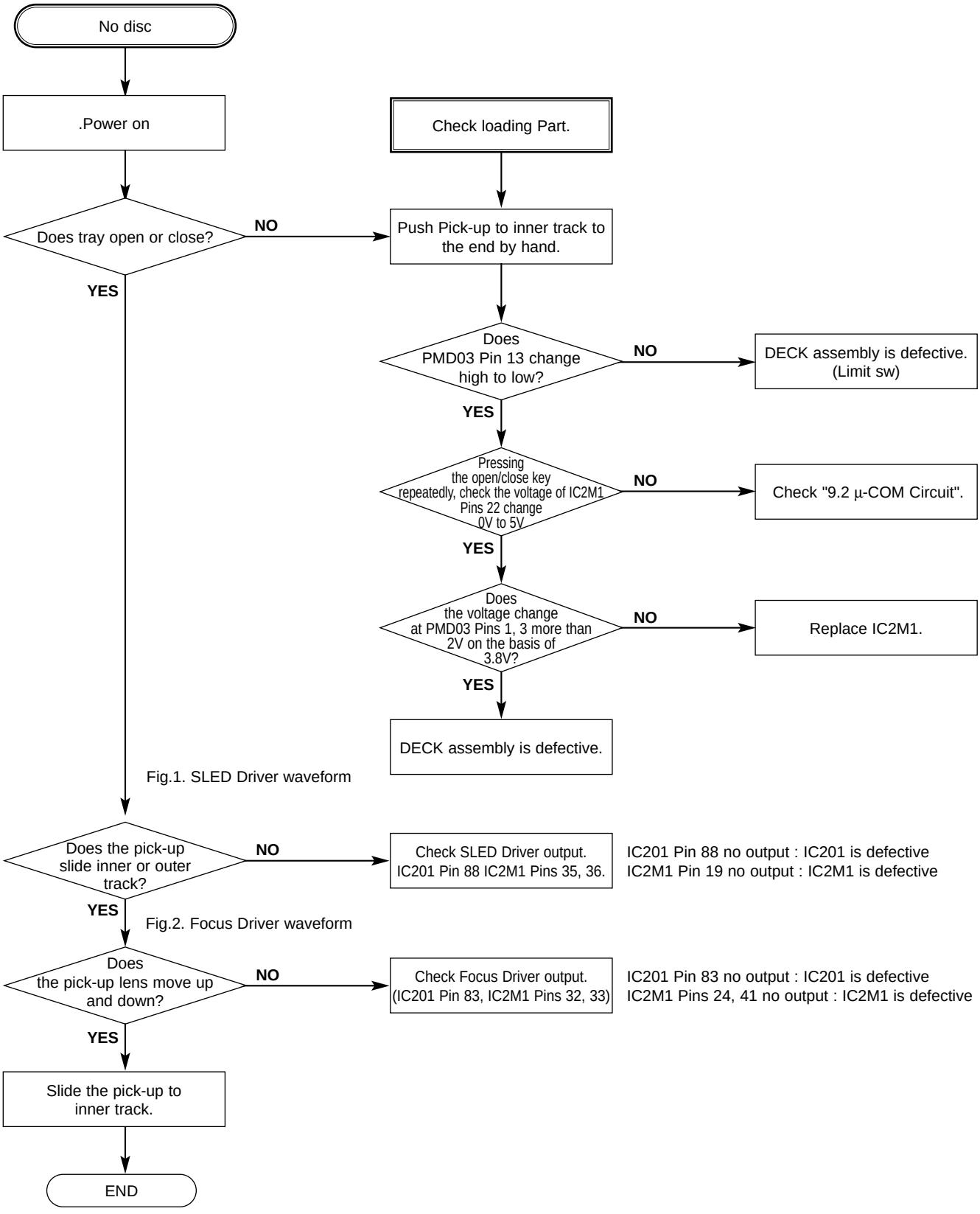


Fig.1. SLED Driver waveform

Fig.2. Focus Driver waveform

C.

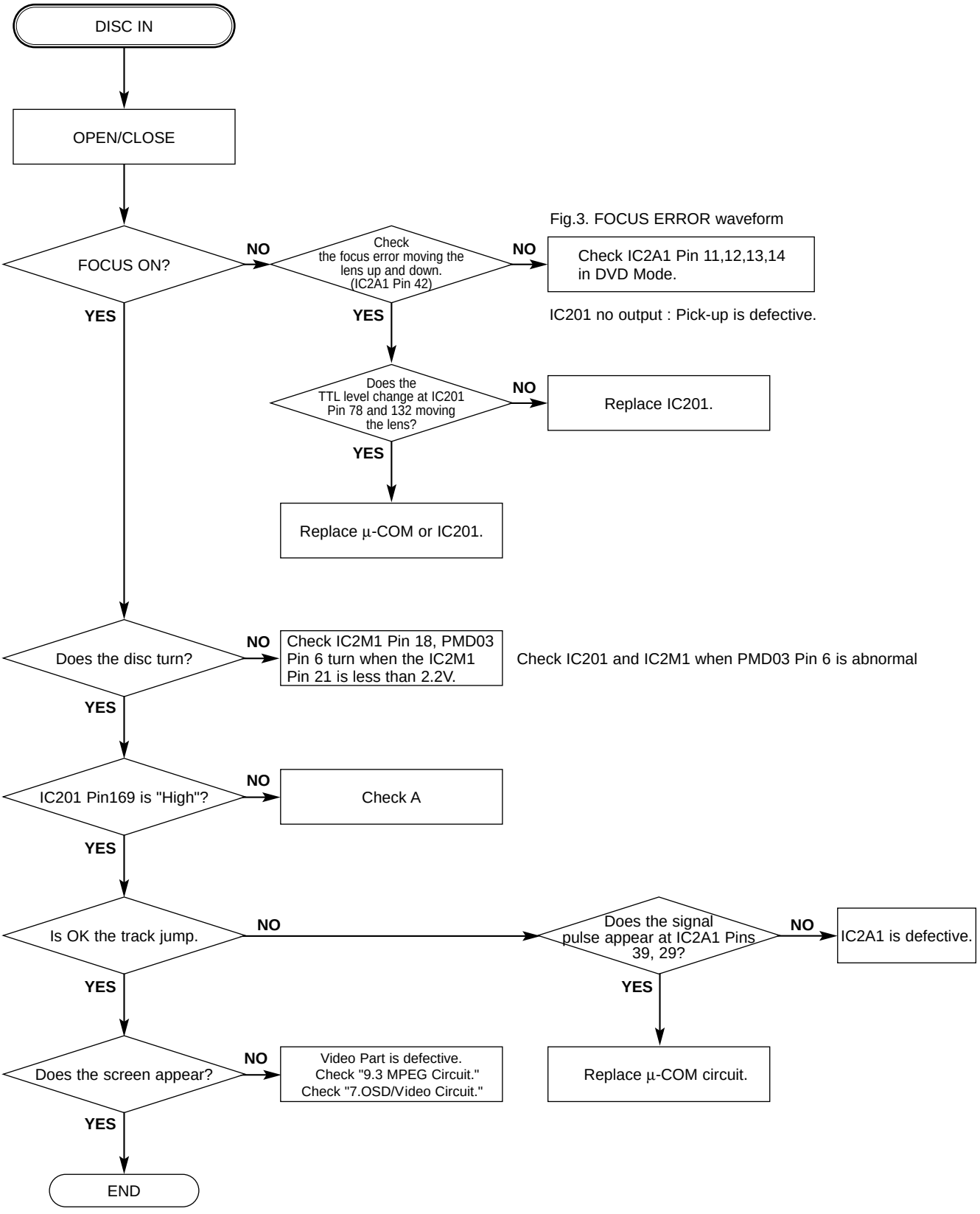
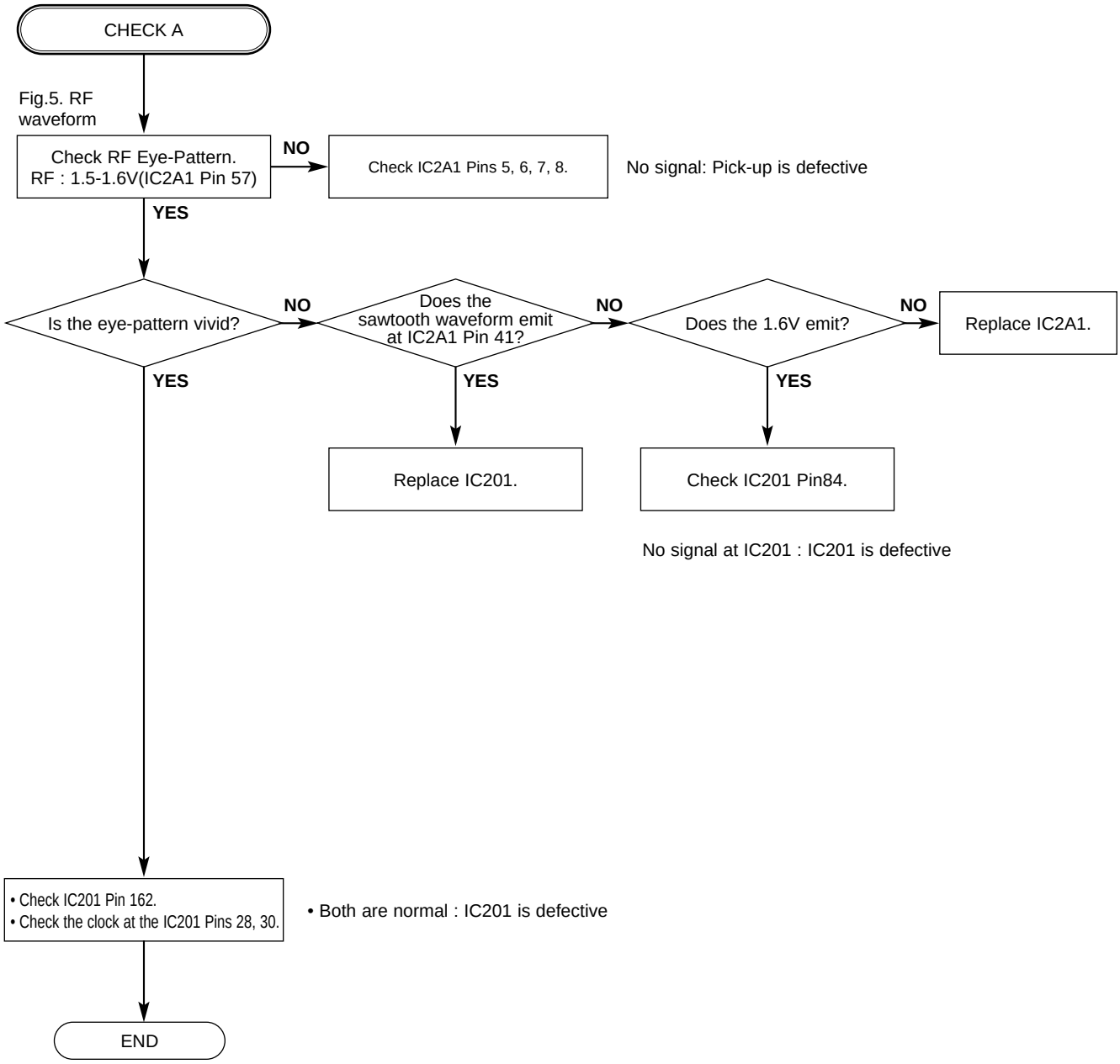


Fig.3. FOCUS ERROR waveform

IC201 no output : Pick-up is defective.

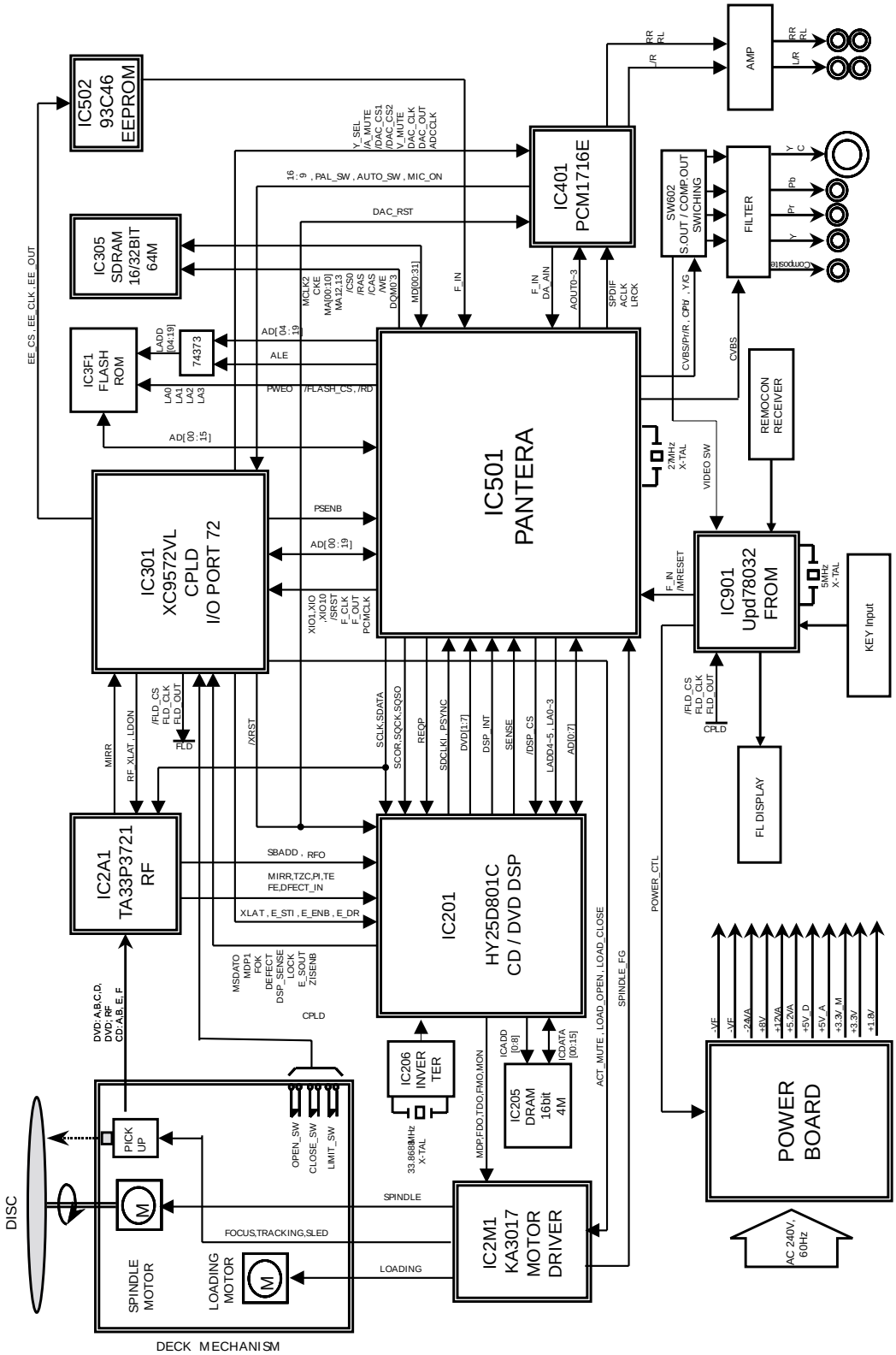
Check IC201 and IC2M1 when PMD03 Pin 6 is abnormal

D.

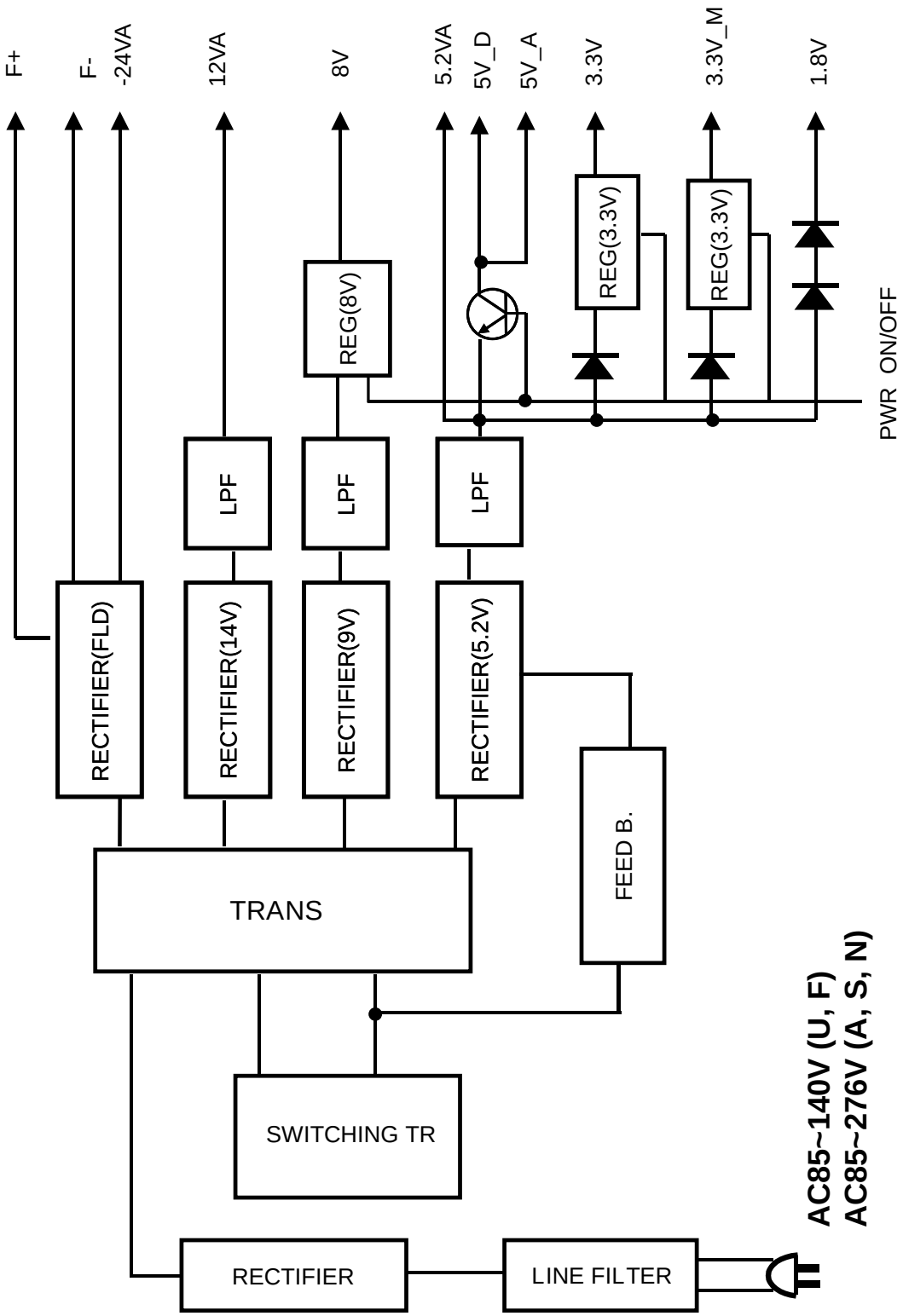

CHECK A
Fig.5. RF waveform
Check RF Eye-Pattern.
RF : 1.5-1.6V(IC2A1 Pin 57)
NO
Check IC2A1 Pins 5, 6, 7, 8.
No signal: Pick-up is defective
YES
Is the eye-pattern vivid?
NO
Does the sawtooth waveform emit at IC2A1 Pin 41?
NO
Does the 1.6V emit?
NO
Replace IC2A1.
YES
YES
YES
Replace IC201.
Check IC201 Pin84.
No signal at IC201 : IC201 is defective
• Check IC201 Pin 162.
• Check the clock at the IC201 Pins 28, 30.
• Both are normal : IC201 is defective
END

10. BLOCK DIAGRAMS

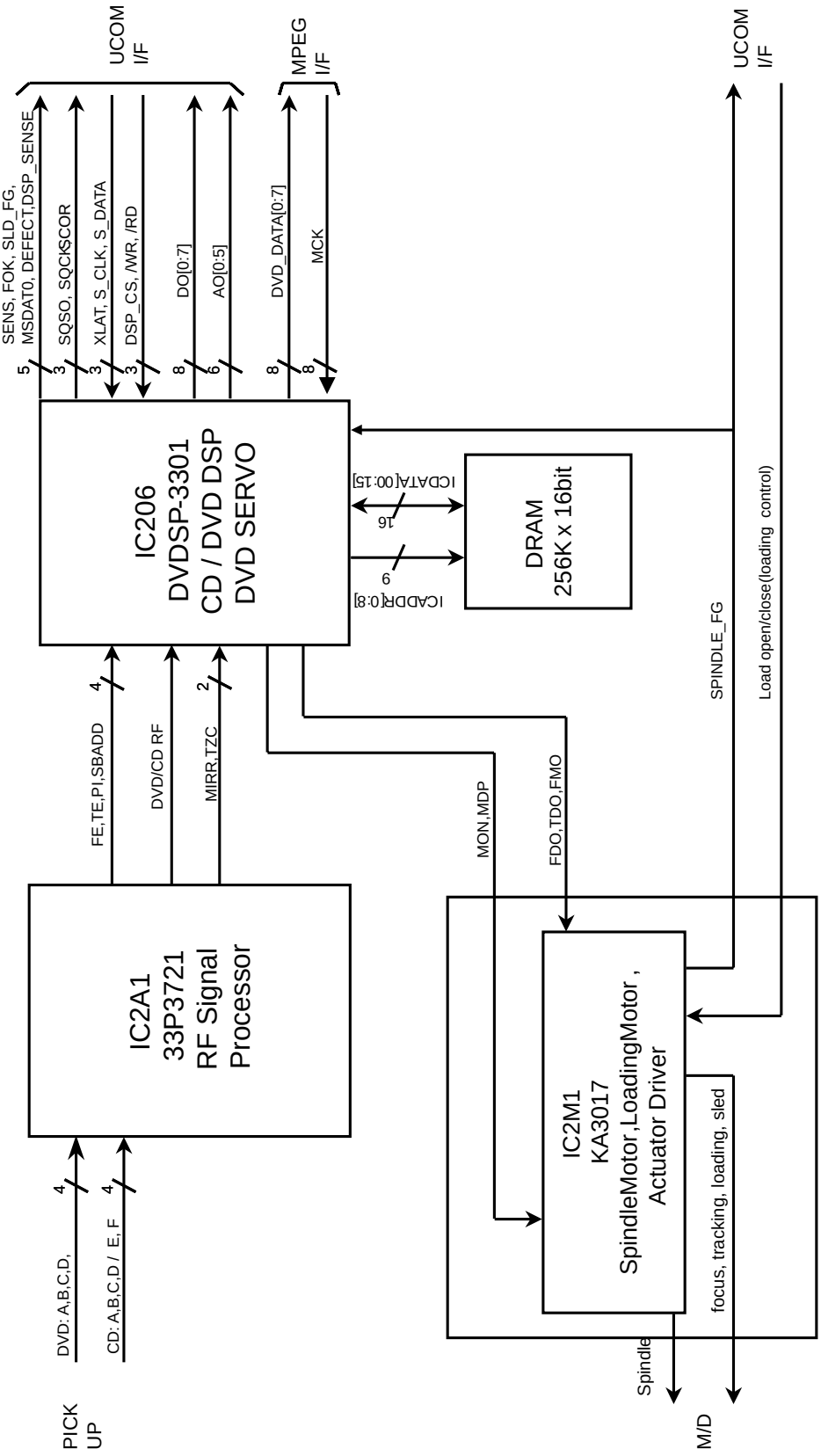
10.1 Overall Block Diagram



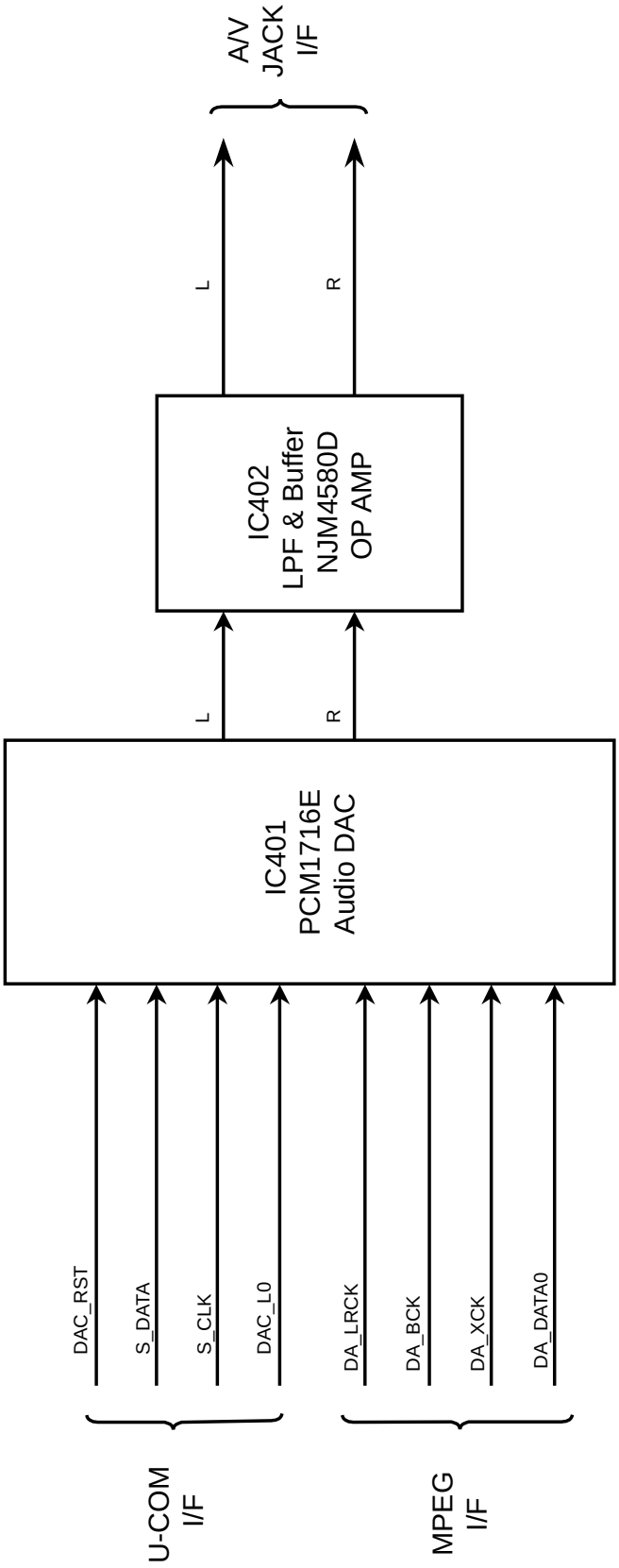
10.2 Power (SMPS) Block Diagram



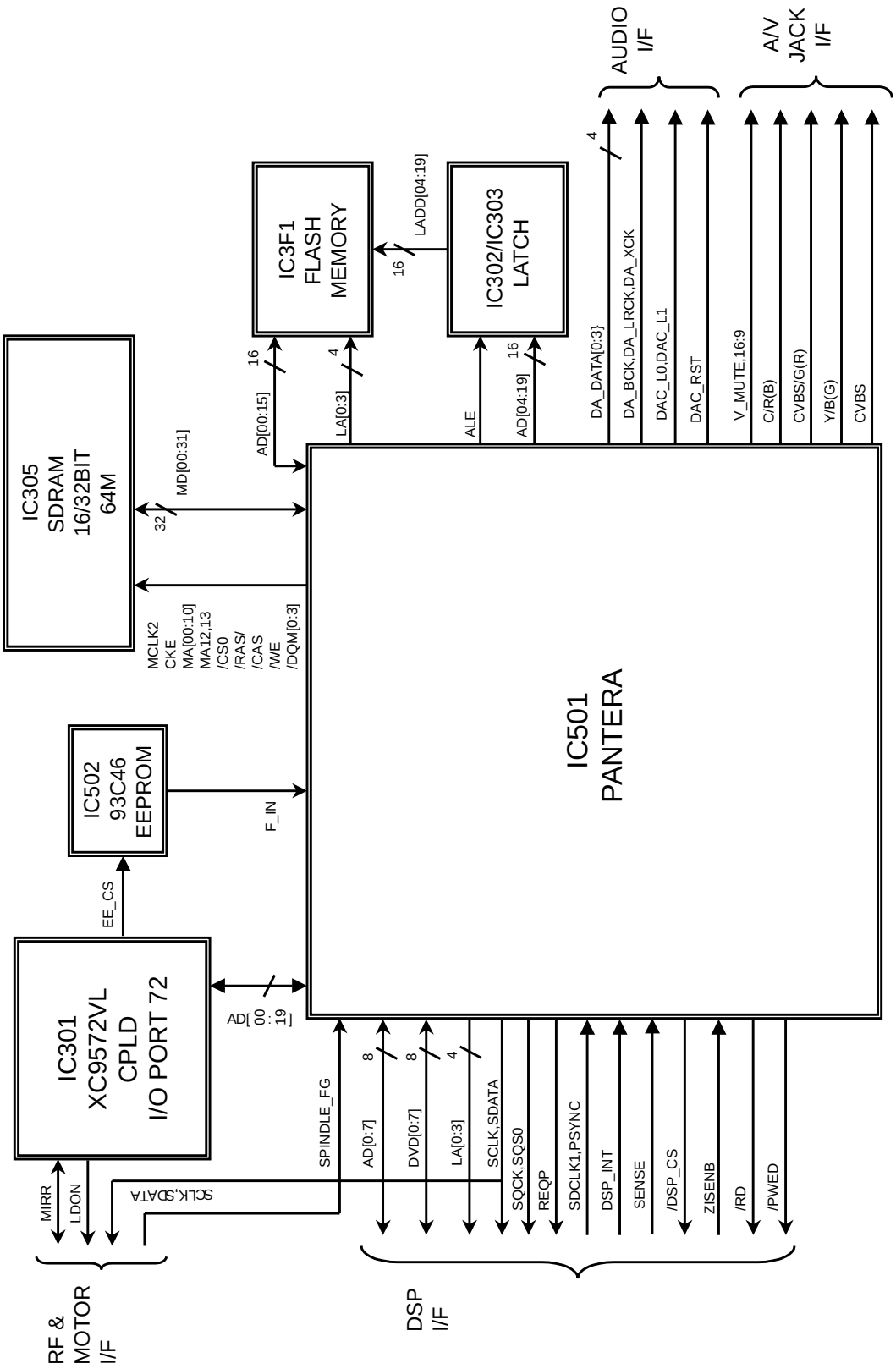
10.3 RF/CD DSP/DVD DSP/DVD SERVO Block Diagram



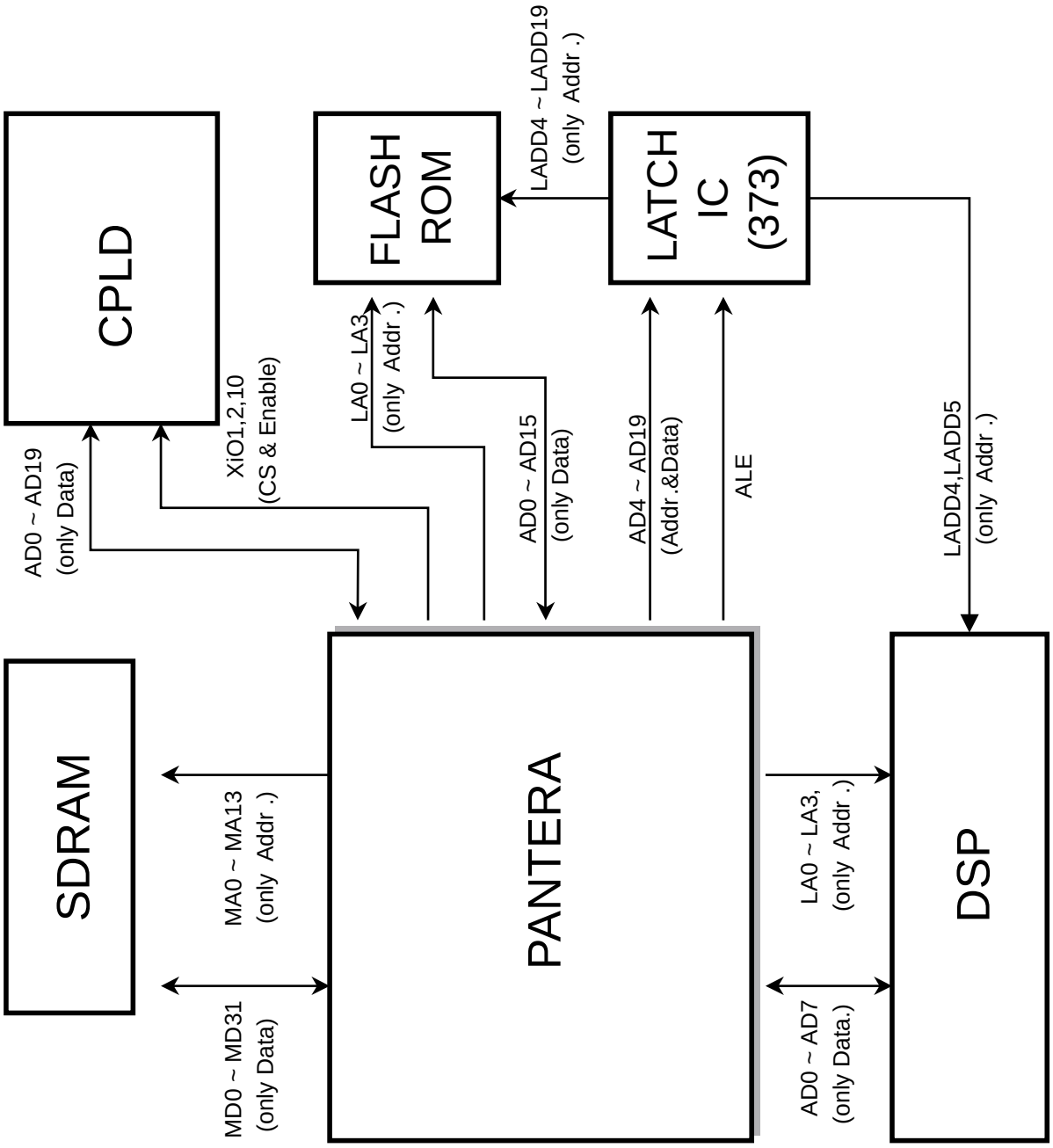
10.4 Audio Block Diagram



10.5 MPEG & MEMORY Block Diagram



10.6 MPEG & MEMORY µ-COM Block Diagram



11. CIRCUIT DIAGRAMS

11.1 POWER (SMPS) CIRCUIT DIAGRAM

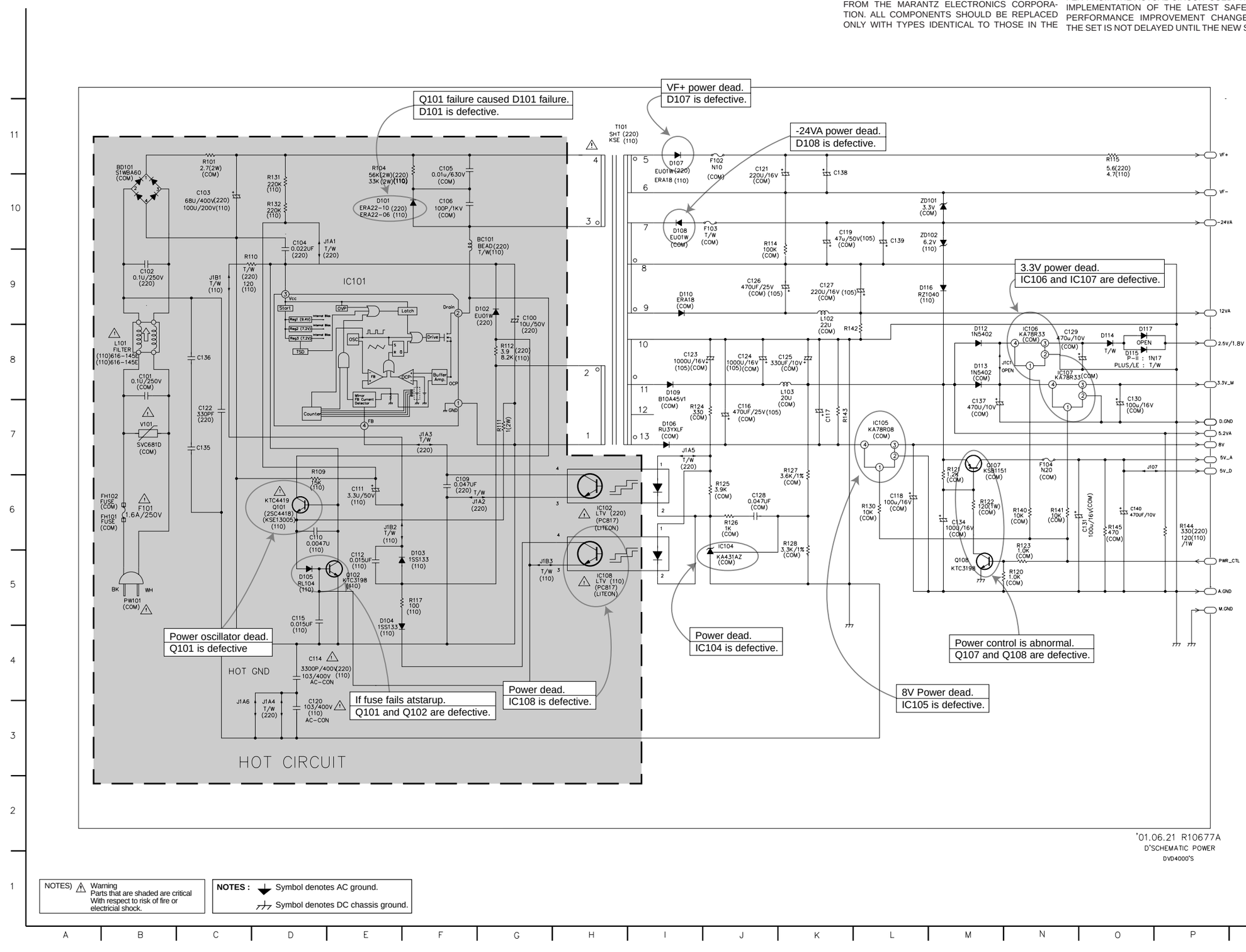
IMPORTANT SAFETY NOTICE

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

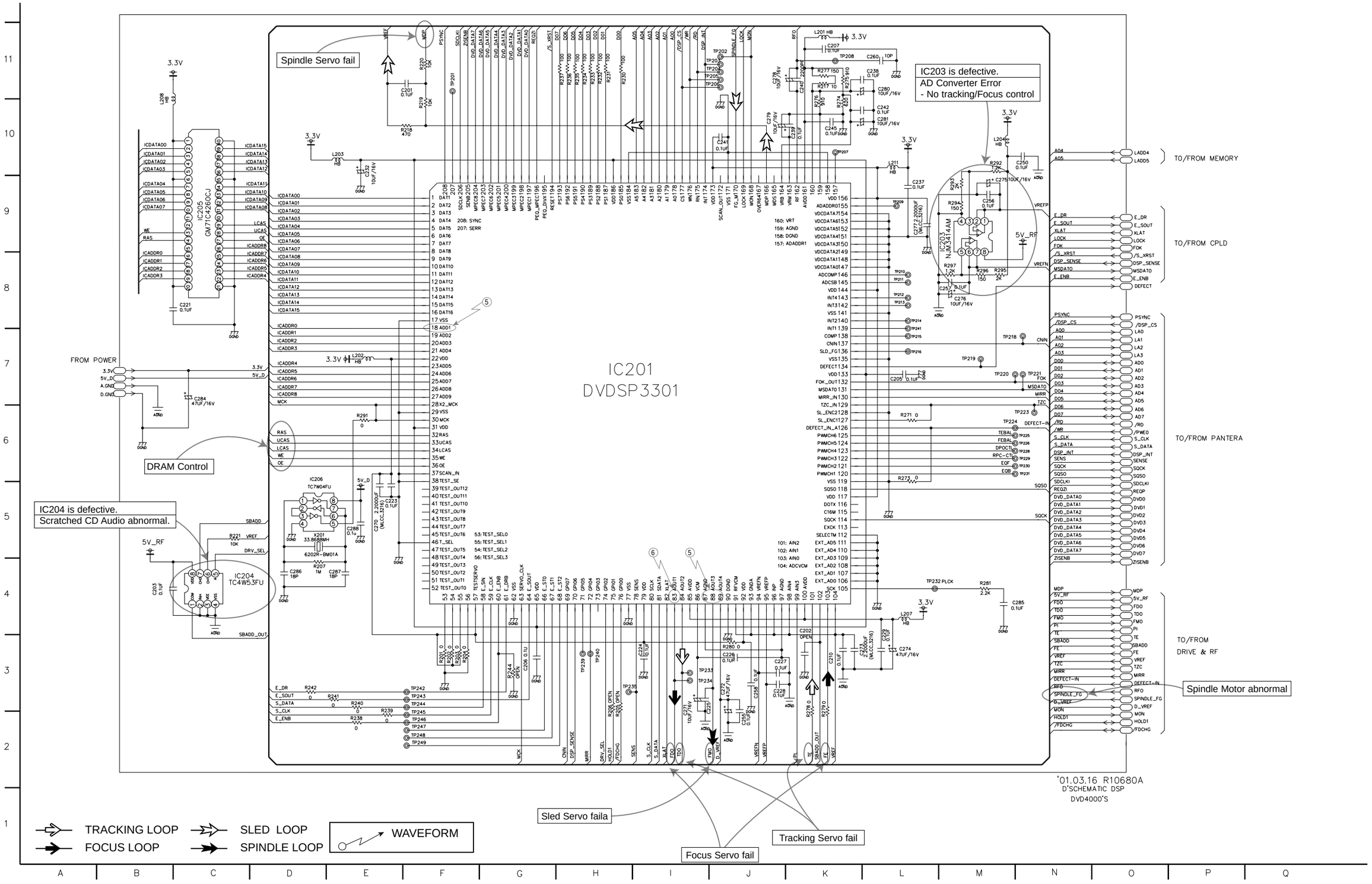
BC101	G10	R131	D10
BD101	B11	R132	D10
C100	G9	R140	N6
C101	B8	R141	N6
C102	B9	R142	K8
C103	C10	R143	K7
C104	D10	R144	P6
C105	F11	R145	O6
C106	F10	T101	H11
C109	F6	V101	B7
C110	D6	ZD101	L10
C111	E6	ZD102	L10
C112	E5		
C114	D4		
C115	D5		
C116	J7		
C117	K7		
C118	L6		
C119	K10		
C120	D3		
C121	J11		
C122	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		
D.GND	P7		
D101	E10		
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	C5		
J1C1	M8		
L101	B8		
L102	K9		
L103	K8		
M.GND	P5		
PW101	B5		
PWR_CTL	P5		
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

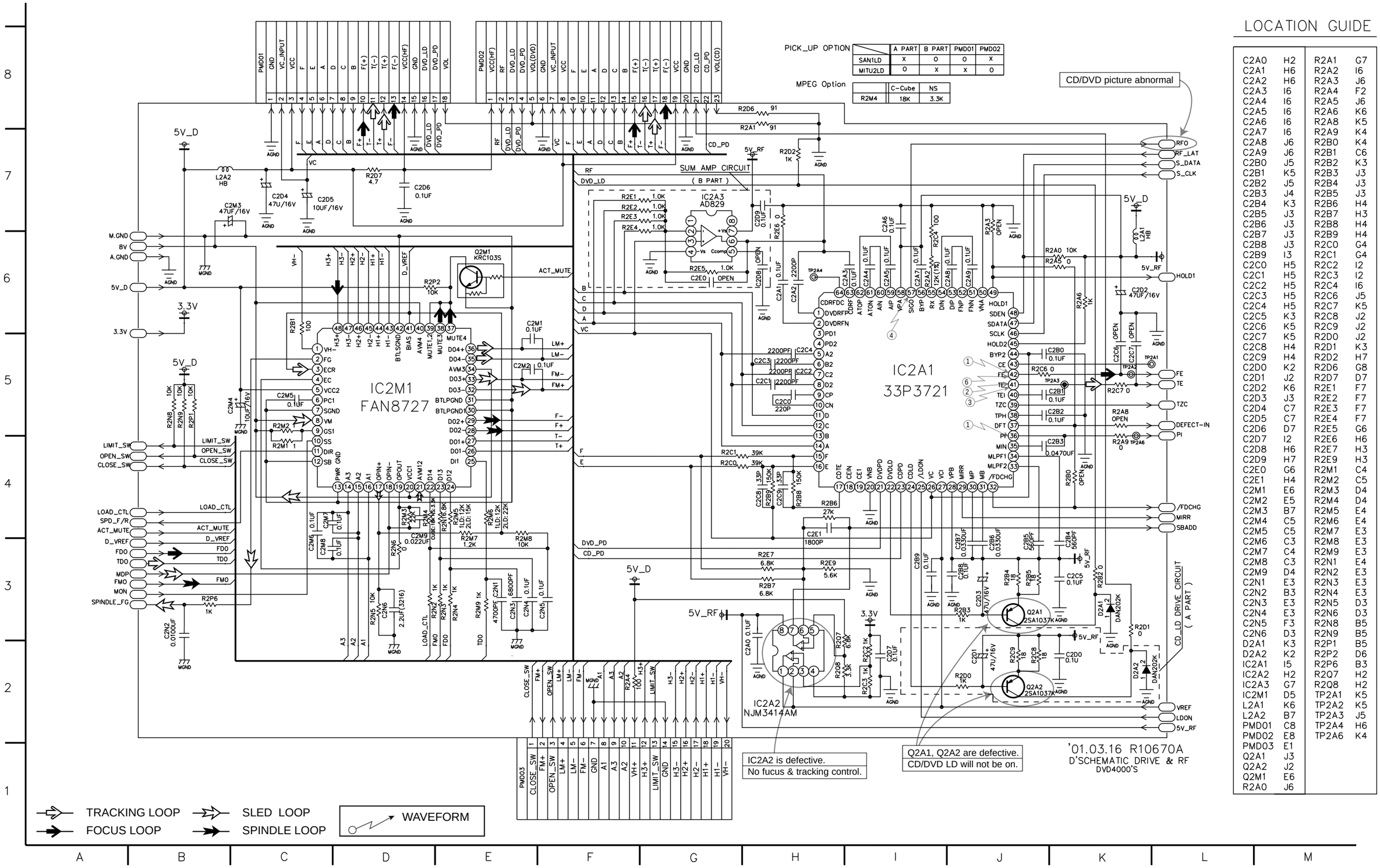
NOTES) ⚠ Warning
Parts that are shaded are critical With respect to risk of fire or electricial shock.

NOTES : ⏚ Symbol denotes AC ground.
⏚ Symbol denotes DC chassis ground.

11.2 DVD DSP CIRCUIT DIAGRAM



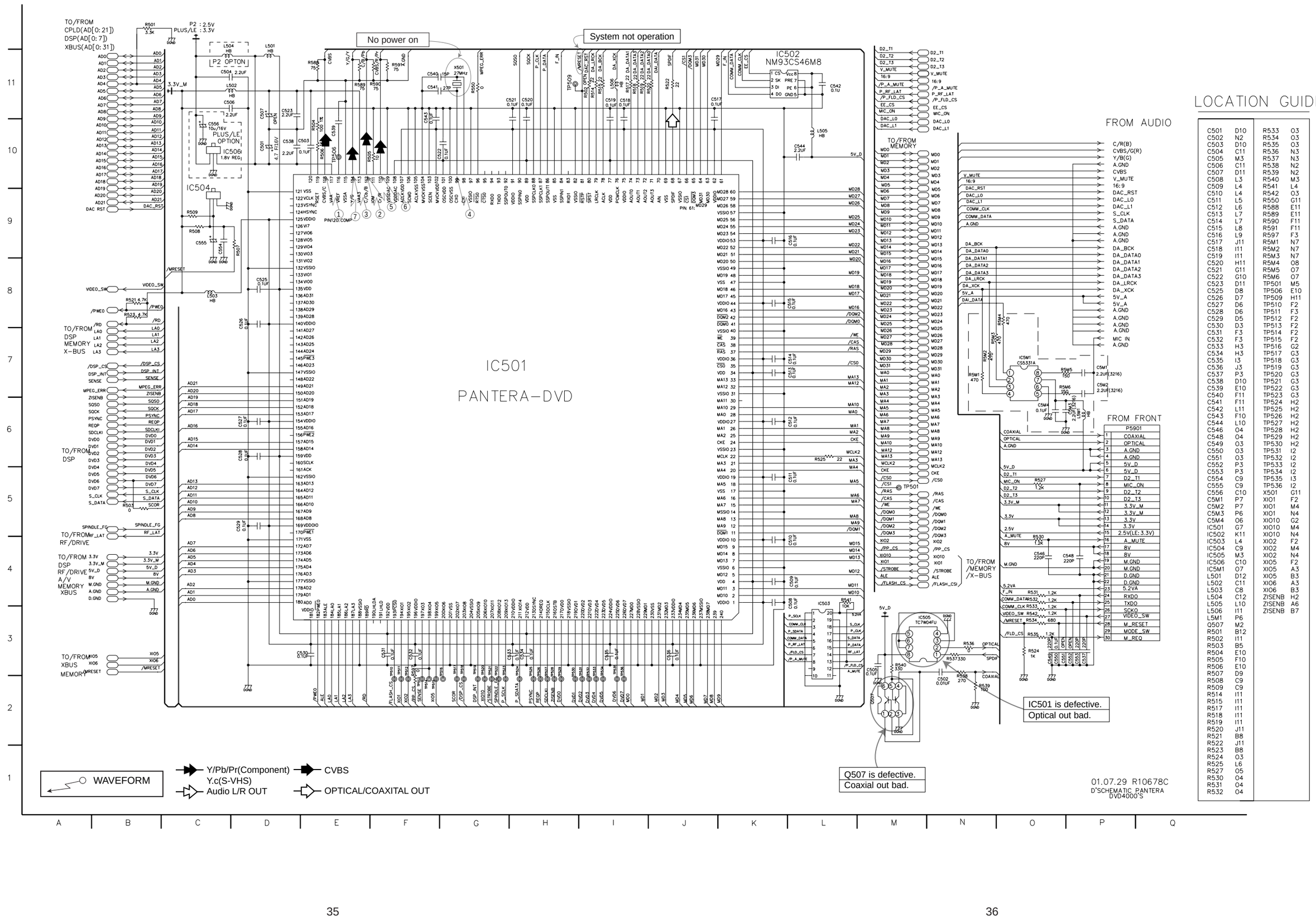
11.3 DRIVE & RF CIRCUIT DIAGRAM



LOCATION GUIDE

C2A0	H2	R2A1	G7
C2A1	H6	R2A2	I6
C2A2	H6	R2A3	J6
C2A3	I6	R2A4	F2
C2A4	I6	R2A5	J6
C2A5	I6	R2A6	K6
C2A6	I6	R2A8	K5
C2A7	I6	R2A9	K4
C2A8	J6	R2B0	K4
C2A9	J6	R2B1	C6
C2B0	J5	R2B2	K3
C2B1	K5	R2B3	J3
C2B2	J5	R2B4	J3
C2B3	J4	R2B5	J3
C2B4	K3	R2B6	H4
C2B5	J3	R2B7	H3
C2B6	J3	R2B8	H4
C2B7	J3	R2B9	H4
C2B8	J3	R2C0	G4
C2B9	I3	R2C1	G4
C2C0	H5	R2C2	I2
C2C1	H5	R2C3	I2
C2C2	H5	R2C4	I6
C2C3	H5	R2C6	J5
C2C4	H5	R2C7	K5
C2C5	K3	R2C8	J2
C2C6	K5	R2C9	J2
C2C7	K5	R2D0	J2
C2C8	H4	R2D1	K3
C2C9	H4	R2D2	H7
C2D0	K2	R2D6	G8
C2D1	J2	R2D7	D7
C2D2	K6	R2E1	F7
C2D3	J3	R2E2	F7
C2D4	C7	R2E3	F7
C2D5	C7	R2E4	F7
C2D6	D7	R2E5	G6
C2D7	I2	R2E6	H6
C2D8	H6	R2E7	H3
C2D9	H7	R2E9	H3
C2E0	G6	R2M1	C4
C2E1	H4	R2M2	C5
C2M1	E6	R2M3	D4
C2M2	E5	R2M4	D4
C2M3	B7	R2M5	E4
C2M4	C5	R2M6	E4
C2M5	C5	R2M7	E3
C2M6	C3	R2M8	E3
C2M7	C4	R2M9	E3
C2M8	C3	R2N1	E4
C2M9	D4	R2N2	E3
C2N1	E3	R2N3	E3
C2N2	B3	R2N4	E3
C2N3	E3	R2N5	D3
C2N4	E3	R2N6	D3
C2N5	F3	R2N8	B5
C2N6	D3	R2N9	B5
D2A1	K3	R2P1	B5
D2A2	K2	R2P2	D6
IC2A1	I5	R2P6	B3
IC2A2	H2	R2Q7	H2
IC2A3	G7	R2Q8	H2
IC2M1	D5	TP2A1	K5
L2A1	K6	TP2A2	K5
L2A2	B7	TP2A3	J5
PMD01	C8	TP2A4	H6
PMD02	E8	TP2A6	K4
PMD03	E1		
Q2A1	J3		
Q2A2	J2		
Q2M1	E6		
R2A0	J6		

11.4 MPEG CIRCUIT DIAGRAM

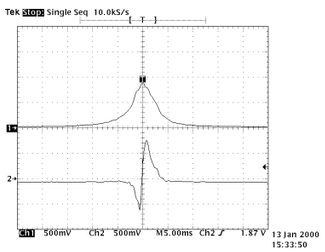


LOCATION GUIDE

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	XI01	F2
C5M2	P7	XI01	M4
C5M3	P6	XI01	N4
C5M4	O6	XI010	G2
IC501	G7	XI010	M4
IC502	K11	XI010	N4
IC503	L4	XI02	F2
IC504	C9	XI02	M4
IC505	M3	XI02	N4
IC506	C10	XI05	F2
IC5M1	O7	XI05	A3
L501	D12	XI05	B3
L502	C11	XI06	A3
L503	C8	XI06	B3
L504	C12	ZISENB	H2
L505	L10	ZISENB	A6
L506	I11	ZISENB	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		
R527	O5		
R530	O4		
R531	O4		
R532	O4		

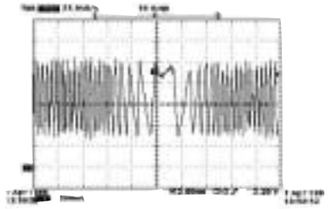
• WAVEFORMS

①



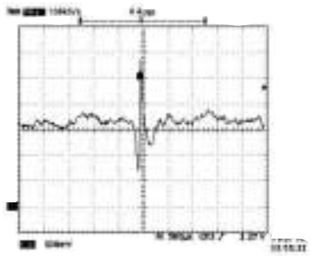
IC2A1 Pin 36, Pi
IC2A1 Pin 42, Focus Error

②



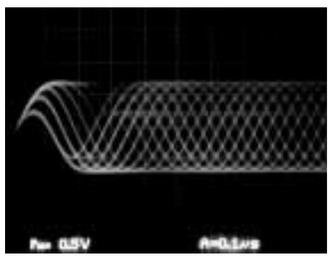
IC2A1 Pin 41
Tracking Error

③



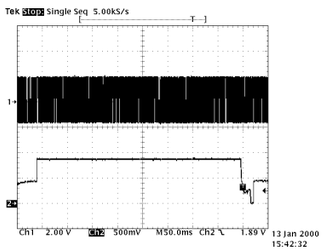
IC2A1 Pin 41
VBR TRACKING Error

④



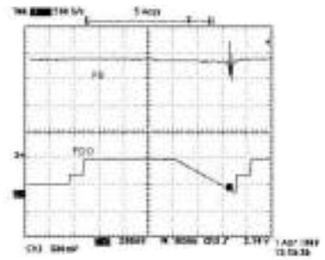
IC2A1 Pin 57,
RF

⑤



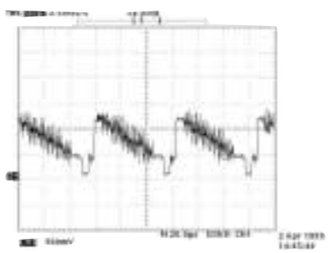
IC201 Pin 18, SLED FG
IC201 Pin 88, SLED Drive(FMO)

⑥



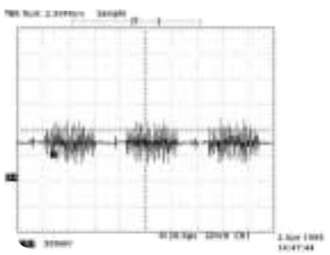
IC2A1 Pin42, Focus Error(in Focus Search)
IC201 Pin 83, Focus Drive(FDO)

①



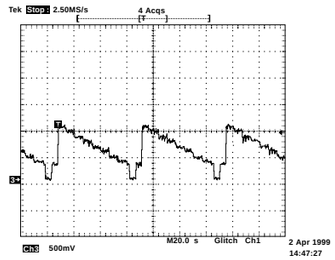
IC501 Pin 118, Composite

②



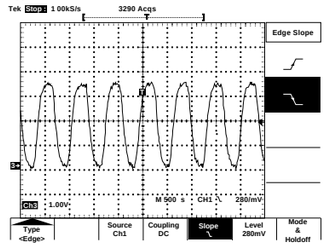
IC501 Pin 112, Chrominance
(Super video out Mode)

③



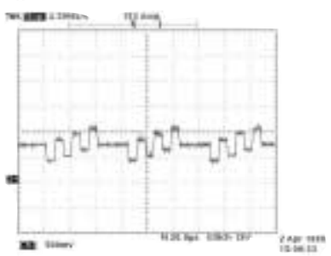
IC501 Pin 114, Luminance
(Super video out Mode)

④



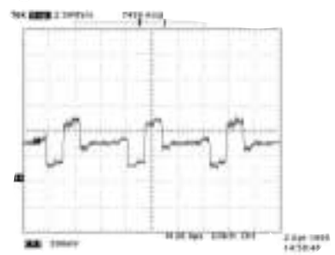
IC501 Pin 99,
MPEG Clock(27MHz)

⑤



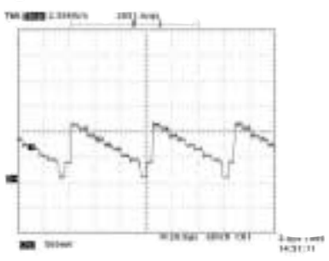
IC501 Pin 112
Component Pb

⑥



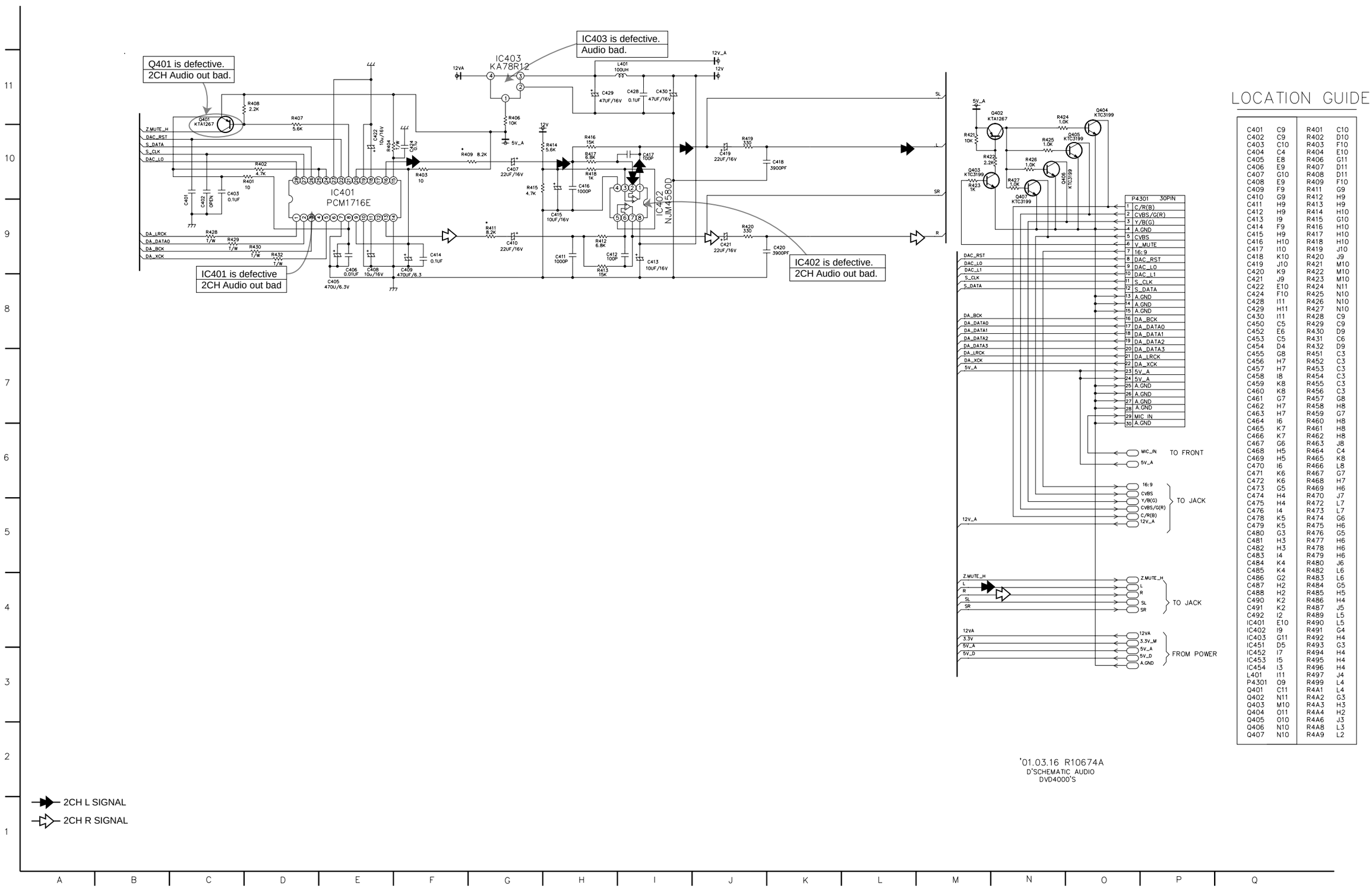
IC501 Pin 110
Component Pr

⑦



IC501 Pin 114
Component Y

11.5 AUDIO DM CIRCUIT DIAGRAM

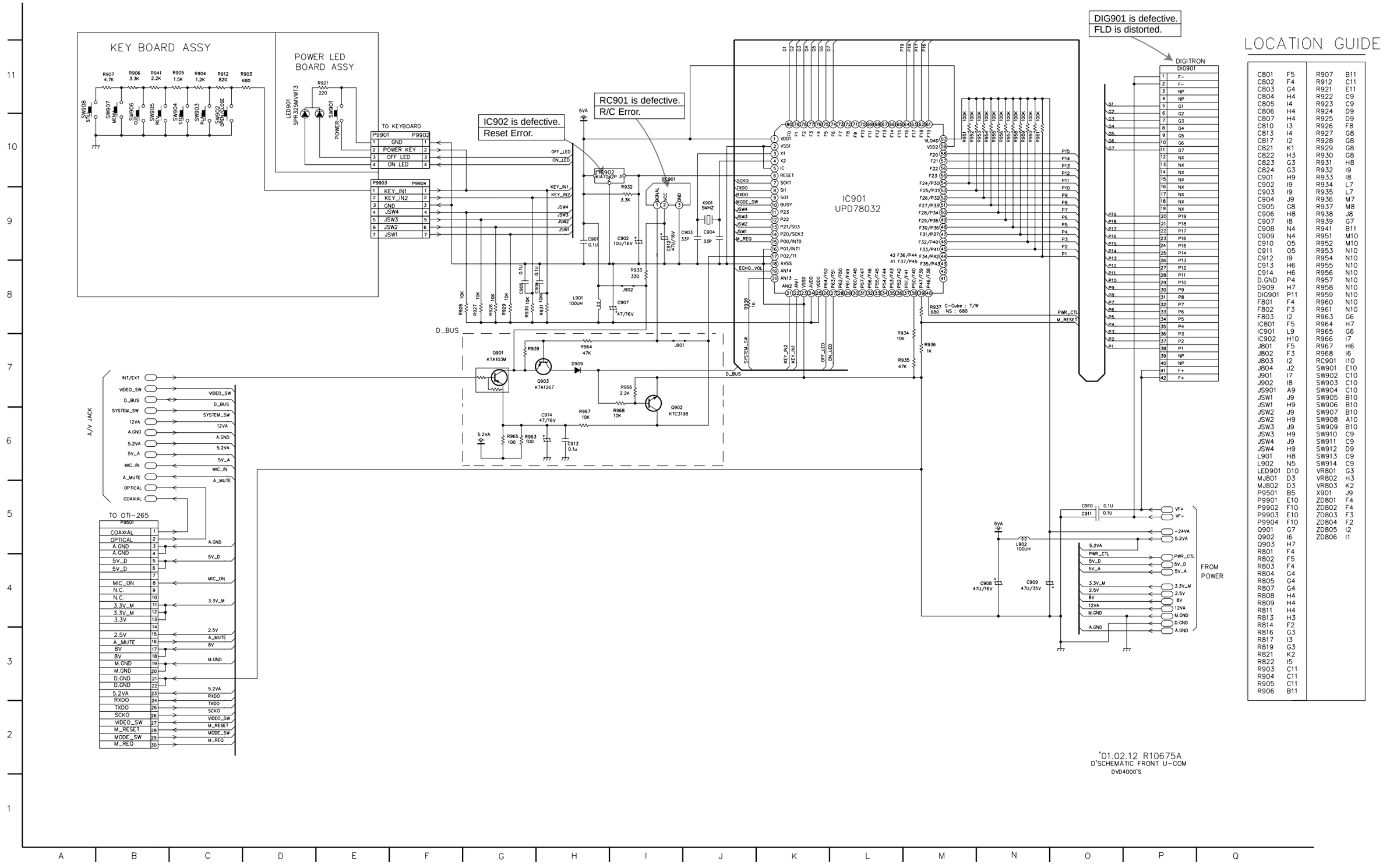


LOCATION GUIDE

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
C424	F10	R425	N10
C428	I11	R426	N10
C429	H11	R427	N10
C430	I11	R428	C9
C450	C5	R429	C9
C452	E6	R430	D9
C453	C5	R431	C6
C454	D4	R432	D9
C455	G8	R451	C3
C456	H7	R452	C3
C457	H7	R453	C3
C458	I8	R454	C3
C459	K8	R455	C3
C460	K8	R456	C3
C461	G7	R457	G8
C462	H7	R458	H8
C463	H7	R459	G7
C464	I6	R460	H8
C465	K7	R461	H8
C466	K7	R462	H8
C467	G6	R463	J8
C468	H5	R464	C4
C469	H5	R465	K8
C470	I6	R466	L8
C471	K6	R467	G7
C472	K6	R468	H7
C473	G5	R469	H6
C474	H4	R470	J7
C475	H4	R472	L7
C476	I4	R473	L7
C478	K5	R474	G6
C479	K5	R475	H6
C480	G3	R476	G5
C481	H3	R477	H6
C482	H3	R478	H6
C483	I4	R479	H6
C484	K4	R480	J6
C485	K4	R482	L6
C486	G2	R483	L6
C487	H2	R484	G5
C488	H2	R485	H5
C490	K2	R486	H4
C491	K2	R487	J5
C492	I2	R489	L5
IC401	E10	R490	L5
IC402	I9	R491	G4
IC403	G11	R492	H4
IC451	D5	R493	G3
IC452	I7	R494	H4
IC453	I5	R495	H4
IC454	I3	R496	H4
L401	I11	R497	J4
P4301	O9	R499	L4
Q401	C11	R4A1	L4
Q402	N11	R4A2	G3
Q403	M10	R4A3	H3
Q404	O11	R4A4	H2
Q405	O10	R4A6	J3
Q406	N10	R4A8	L3
Q407	N10	R4A9	L2

'01.03.16 R10674A
D'SCHEMATIC AUDIO
DVD4000'S

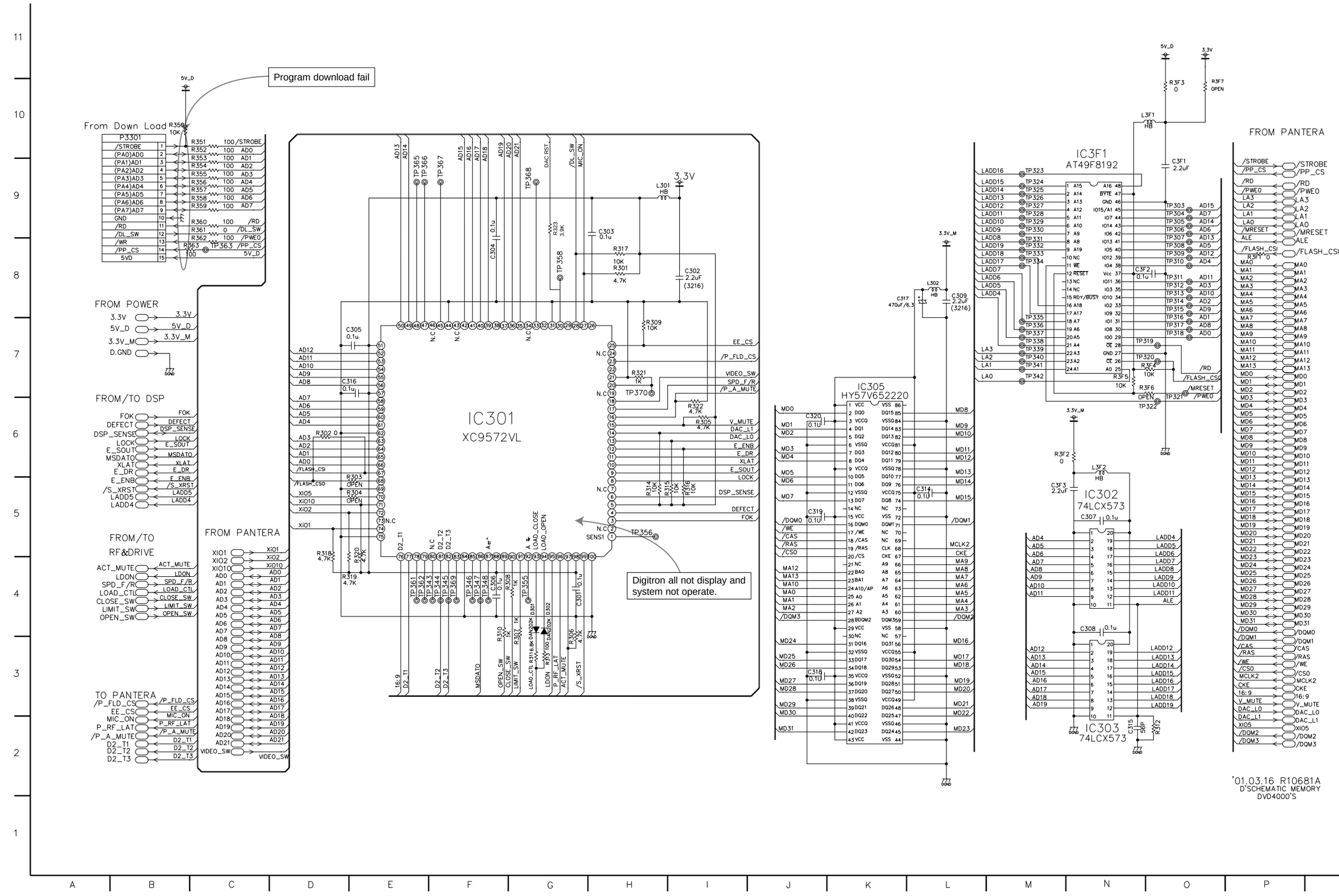
11.6 FRONT MICOM CIRCUIT DIAGRAM



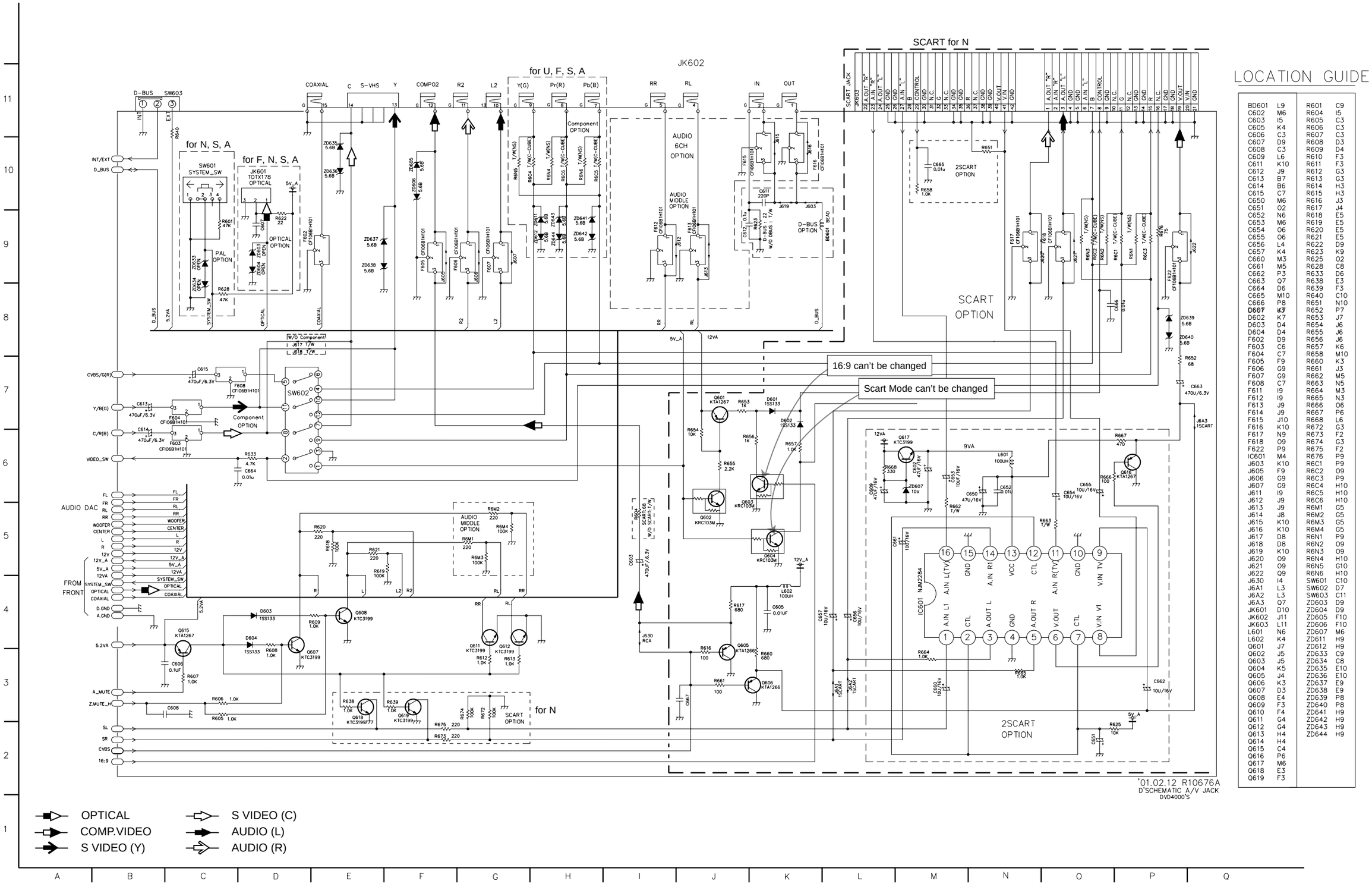
LOCATION GUIDE

C801	F5	R907	B11
C802	F4	R912	C11
C803	G4	R921	E11
C804	H4	R922	C9
C805	I4	R923	C9
C806	H4	R924	D9
C807	H4	R925	D9
C810	I3	R926	F8
C813	I4	R927	G8
C817	I2	R928	G8
C821	K1	R929	G8
C822	H3	R930	G8
C823	G3	R931	H8
C824	G3	R932	I9
C901	H9	R933	I8
C902	I9	R934	L7
C903	I9	R935	L7
C904	J9	R936	M7
C905	G8	R937	M8
C906	H8	R938	J8
C907	I8	R939	C7
C908	N4	R941	B11
C909	N4	R951	M10
C910	O5	R952	M10
C911	O5	R953	N10
C912	I9	R954	N10
C913	H6	R955	N10
C914	H6	R956	N10
D.GND	P4	R957	N10
D909	H7	R958	N10
DIG901	P11	R959	N10
F801	F4	R960	N10
F802	F3	R961	N10
F803	I2	R963	G6
IC801	F5	R964	H7
IC901	L9	R965	G6
IC902	H10	R966	I7
J801	F5	R967	H6
J802	F3	R968	I6
J803	I2	RC901	I10
J804	J2	SW901	E10
J901	I7	SW902	C10
J902	I8	SW903	C10
JS901	A9	SW904	C10
JSW1	J9	SW905	B10
JSW1	H9	SW906	B10
JSW2	J9	SW907	B10
JSW2	H9	SW908	A10
JSW3	J9	SW909	B10
JSW3	H9	SW910	C9
JSW4	J9	SW911	C9
JSW4	H9	SW912	D9
L901	H8	SW913	C9
L902	N5	SW914	C9
LED901	D10	VR801	G3
MJ801	D3	VR802	H3
MJ802	D3	VR803	K2
P9501	B5	X901	J9
P9901	E10	ZD801	F4
P9902	F10	ZD802	F4
P9903	E10	ZD803	F3
P9904	F10	ZD804	F2
Q901	G7	ZD805	I2
Q902	I6	ZD806	I1
Q903	H7		
R801	F4		
R802	F5		
R803	F4		
R804	G4		
R805	G4		
R807	G4		
R808	H4		
R809	H4		
R811	H4		
R813	H3		
R814	F2		
R816	G3		
R817	I3		
R819	G3		
R821	K2		
R822	I5		
R903	C11		
R904	C11		
R905	C11		
R906	B11		

11.7 MEMORY CIRCUIT DIAGRAM



11.8 JACK CIRCUIT DIAGRAM



LOCATION GUIDE

BD601	L9	R601	C9
C602	M6	R604	I5
C603	I5	R605	C3
C605	K4	R606	C3
C606	C3	R607	C3
C607	D9	R608	D3
C608	C3	R609	D4
C609	L6	R610	F3
C611	K10	R611	F3
C612	J9	R612	G3
C613	B7	R613	G3
C614	B6	R614	H3
C615	C7	R615	H3
C650	M6	R616	J3
C651	O2	R617	J4
C652	N6	R618	E5
C653	M6	R619	E5
C654	O6	R620	E5
C655	O6	R621	E5
C656	L4	R622	D9
C657	K4	R623	K9
C660	M3	R625	O2
C661	M5	R628	C8
C662	P3	R633	D6
C663	Q7	R638	E3
C664	D6	R639	F3
C665	M10	R640	C10
C666	P8	R651	N10
D607	K7	R652	P7
D602	K7	R653	J7
D603	D4	R654	J6
D604	D4	R655	J6
F602	D9	R656	J6
F603	C6	R657	K6
F604	C7	R658	M10
F605	F9	R660	K3
F606	G9	R661	J3
F607	G9	R662	M5
F608	C7	R663	N5
F611	I9	R664	M3
F612	I9	R665	N3
F613	J9	R666	O6
F614	J9	R667	P6
F615	J10	R668	L6
F616	K10	R672	G3
F617	N9	R673	F2
F618	O9	R674	G3
F622	P9	R675	F2
IC601	M4	R676	P9
J603	K10	R6C1	P9
J605	F9	R6C2	O9
J606	G9	R6C3	P9
J607	G9	R6C4	H10
J611	I9	R6C5	H10
J612	J9	R6C6	H10
J613	J9	R6M1	G5
J614	J8	R6M2	G5
J615	K10	R6M3	G5
J616	K10	R6M4	G5
J617	D8	R6N1	P9
J618	D8	R6N2	O9
J619	K10	R6N3	O9
J620	O9	R6N4	H10
J621	O9	R6N5	G10
J622	Q9	R6N6	H10
J630	I4	SW601	C10
J6A1	L3	SW602	D7
J6A2	L3	SW603	C11
J6A3	Q7	ZD603	D9
JK601	D10	ZD604	D9
JK602	J11	ZD605	F10
JK603	L11	ZD606	F10
L601	N6	ZD607	M6
L602	K4	ZD611	H9
Q601	J7	ZD612	H9
Q602	J5	ZD633	C9
Q603	J5	ZD634	C8
Q604	K5	ZD635	E10
Q605	J4	ZD636	E10
Q606	K3	ZD637	E9
Q607	D3	ZD638	E9
Q608	E4	ZD639	P8
Q609	F3	ZD640	P8
Q610	F4	ZD641	H9
Q611	G4	ZD642	H9
Q612	G4	ZD643	H9
Q613	H4	ZD644	H9
Q614	H4		
Q615	C4		
Q616	P6		
Q617	M6		
Q618	E3		
Q619	F3		

• 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
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
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
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
9	2.02	2.07
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	2.00	2.00
2	2.00	2.00
3	2.00	2.00
4	0.00	0.00
5	1.10	1.10
6	1.10	1.10
7	1.10	1.10
8	5.00	5.00
S E R V O		
IC2M1 FAN8727		
1	5.02	0.80
2	5.01	2.48
3	2.08	2.07
4	2.12	1.95
5	5.01	4.98
6	0.20	0.60
7	0.00	0.00
8	7.92	7.89
9	7.92	7.87
10	0.00	3.07
11	3.87	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	5.34
15	0.00	5.33
16	0.00	5.34
17	1.84	1.84
18	1.84	1.84
19	2.12	1.95
20	7.92	7.88
21	7.92	7.88
22	2.07	2.05
23	2.07	2.05
24	2.07	2.05
25	2.06	2.05
26	4.04	4.01
27	4.04	4.01
28	4.04	4.04
29	4.04	3.98
30	0.00	0.00
31	0.00	0.00
32	4.03	4.10
33	4.01	3.90
34	7.93	7.88
35	4.02	4.01
36	4.02	4.01
37	0.00	0.00
38	0.00	0.00
39	0.00	0.00
40	7.92	7.90
41	2.07	2.06
42	0.00	0.00
43	5.01	2.90
44	5.01	2.90
45	5.01	2.90
46	5.01	2.90
47	5.01	2.90
48	5.01	2.90
IC2A1 33P3721		
1	3.44	3.38
2	3.12	3.40
3	2.50	2.50
4	2.51	2.53
5	3.50	3.44
6	3.46	3.44
7	3.47	3.45
8	3.47	3.44
9	3.48	3.44
10	3.43	3.41
11	2.52	2.70
12	2.52	2.70
13	2.52	2.60
14	2.52	2.60
15	2.56	2.70
16	2.48	2.50
17	2.98	3.30
18	0.00	0.00
19	4.50	4.58
20	0.00	0.00
21	0.00	0.20
22	4.96	3.85
23	0.00	0.00
24	4.95	4.92
25	5.00	0.00
26	2.52	2.50
27	1.55	1.55
28	4.97	4.93
29	0.00	0.40
30	2.55	2.63
31	2.51	2.56
32	4.90	4.65
33	0.00	0.20
34	0.00	2.60
35	0.00	2.50
36	1.56	2.15
37	3.58	0.00
38	2.62	3.20
39	0.00	2.60
40	2.50	2.60
41	1.55	1.60
42	1.46	1.65
43	1.58	1.64
44	2.52	2.50
45	4.92	4.97
46	4.99	5.00
47	0.00	0.00
48	0.00	0.00
49	3.59	0.00
50	0.00	0.00
51	2.35	0.00
52	2.37	2.30
53	3.51	3.47
54	3.51	3.46
55	0.61	0.00
56	1.67	2.42
57	2.95	2.88
58	4.98	4.93
59	3.48	3.40
60	3.48	3.40
61	3.71	3.70
62	3.75	3.70
63	0.27	0.36
64	2.40	0.90
IC2A2 NJM3414		
1	1.57	1.54
2	1.57	1.54
3	1.57	1.54
4	0.00	0.00
5	1.63	1.64
6	1.64	1.64
7	2.62	2.42
8	4.97	4.93
IC2A3 AD829		
1	0.00	0.00
2	2.40	2.50
3	2.40	2.40
4	0.00	0.00
5	0.00	0.00
6	2.00	2.00
7	5.20	5.20
8	0.00	0.00
M P E G		
IC301		
1	0.00	3.01
2	0.22	0.00
3	0.03	3.01
4	0.00	0.00
5	3.00	3.02
6	0.00	0.00
7	0.00	0.00
8	0.00	3.03
9	0.00	0.00
10	3.00	3.00
11	0.00	3.00
12	3.00	3.00
13	3.00	3.00
14	3.00	3.00
15	0.01	0.01
16	0.00	2.96
17	3.82	0.00
18	4.61	4.53
19	0.00	0.00
20	0.00	0.00
21	0.00	0.00
22	2.98	0.00
23	3.00	2.75
24	3.00	0.01
25	0.00	0.10
26	3.01	3.00
27	3.01	3.01
28	3.01	3.00
29	0.00	3.00
30	0.00	0.00
31	0.00	2.98
32	0.00	3.00
33	3.01	0.01
34	0.20	0.01
35	3.05	3.02
36	3.04	3.03
37	3.04	3.04
38	3.03	3.01
39	3.05	3.02
40	3.05	3.02
41	3.05	3.02
42	3.05	3.02
43	0.01	0.00
44	0.00	0.00
45	3.01	3.00
46	0.00	0.01
47	3.01	3.00
48	3.01	2.41
49	3.05	3.02
50	3.05	3.02
51	3.01	3.02
52	3.04	3.02
53	3.05	3.02
54	3.05	3.02
55	3.05	3.02
56	3.05	3.02
57	3.03	3.01
58	3.05	3.01
59	3.05	3.01
60	3.05	3.02
61	0.40	0.39
62	0.00	0.00
63	3.05	3.00
64	3.05	2.99
65	3.05	2.93
66	3.05	2.93
67	3.07	2.96
68	3.03	2.95
69	0.02	0.00
70	0.00	2.93
71	3.07	2.94
72	0.03	0.02
73	0.00	0.02
74	3.07	2.95
75	0.00	0.00
76	3.03	2.91
77	0.00	0.00
78	3.03	2.89
79	0.00	2.84
80	0.00	0.00
81	3.03	2.99
82	3.03	2.99
83	0.27	2.83
84	0.00	0.00
85	0.00	2.86
86	3.03	0.05
87	3.00	0.02
88	3.03	3.00
89	4.40	4.35
90	0.00	0.00
91	0.00	4.35
92	3.00	0.02
93	3.03	3.00
94	0.00	0.00
95	3.03	0.00
96	0.00	0.00
97	3.01	2.98
98	3.03	3.00
99	3.03	3.00
100	0.08	0.00
IC305		
1	3.05	3.07
2	2.32	2.56
3	3.05	3.06
4	2.30	2.65
5	2.36	2.59
6	0.00	0.00
7	2.57	2.60
8	2.57	2.78
9	3.06	3.06
10	2.40	2.81
11	2.87	2.37
12	0.00	0.00
13	2.23	2.69
14	0.00	0.00
15	3.06	3.06
16	0.00	0.00
17	3.02	3.03
18	2.70	2.76
19	2.97	2.98
20	2.62	2.68
21	0.00	0.00
22	0.04	0.03
23	2.16	0.85
24	0.09	0.08
25	1.26	1.23
26	0.94	0.84
27	2.17	0.84
28	0.00	0.00
29	3.06	3.06
30	0.00	0.00
31	2.57	2.60
32	0.00	0.00
33	2.55	2.28
34	2.56	2.37
35	3.06	3.06
36	2.57	1.73

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

MODE / PIN NO.	EE	PLAY
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	4.94	4.85
8	0.00	2.92
9	5.11	4.84
10	0.00	0.00
11	0.18	0.61
12	0.04	5.07
13	2.94	2.79
14	0.00	0.00
15	0.00	0.00
16	0.00	0.01
17	3.05	2.98
18	5.11	5.02
19	0.00	0.00
20	5.11	5.06
IC502		
1	0.00	0.00
2	5.09	5.08
3	0.00	0.00
4	3.72	3.72
5	0.00	0.00
6	5.06	5.01
7	0.00	0.00
8	5.06	5.02
IC505		
1	1.52	1.51
2	2.46	2.43
3	2.55	2.55
4	0.00	0.00
5	2.45	2.44
6	2.45	2.55
7	2.55	2.55
8	5.03	5.00
F R O N T		
IC901 78032		
1	5.00	5.01
2	0.00	0.00
3	2.77	2.52
4	2.86	2.86
5	0.70	0.00
6	5.00	5.00
7	4.98	4.96
8	4.93	4.92
9	4.94	4.95
10	4.97	2.89
11	4.97	4.97
12	4.97	3.00
13	4.97	4.96
14	4.97	3.30
15	4.86	4.90
16	0.00	0.00
17	4.80	4.81
18	0.00	4.31

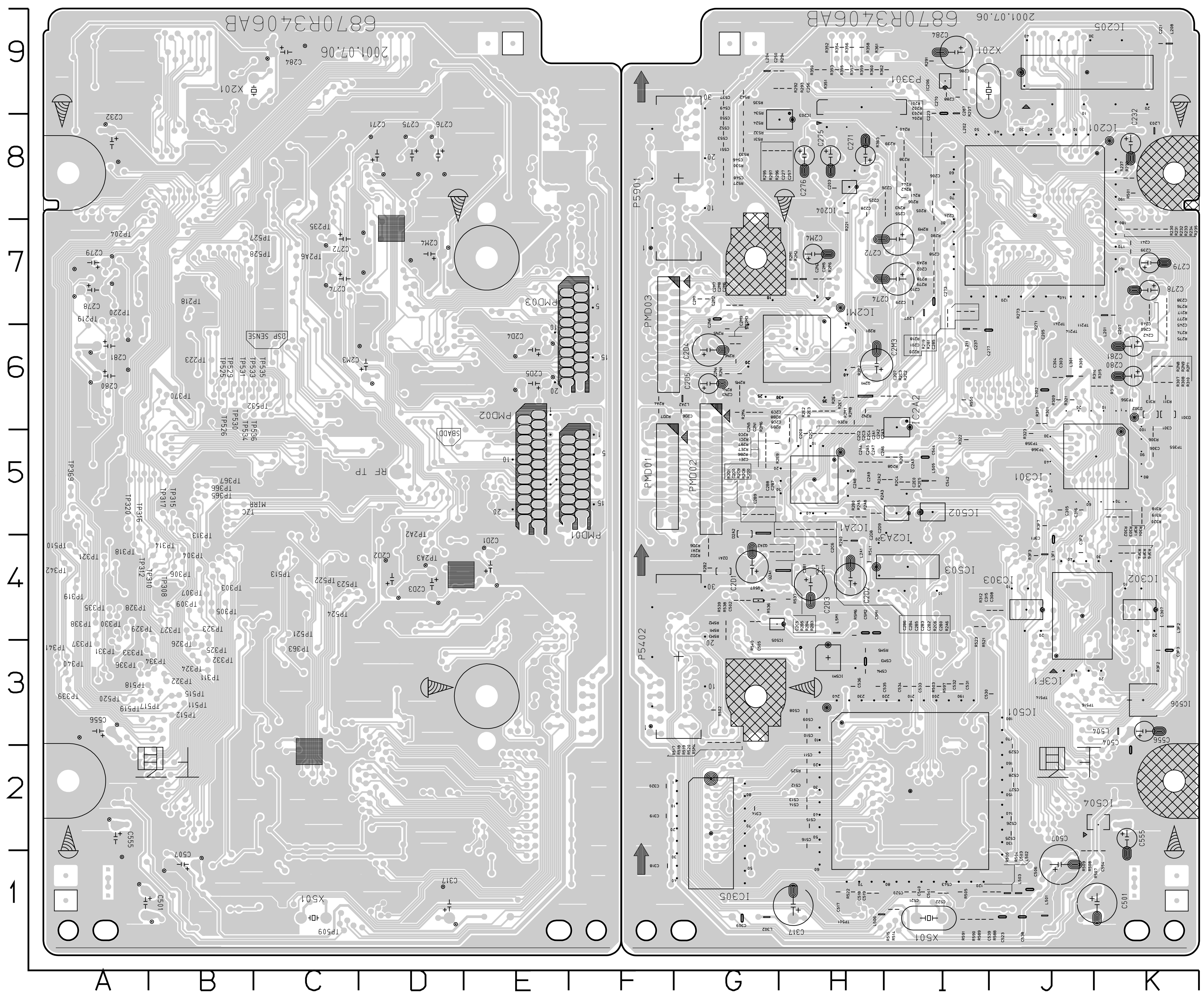
MODE / PIN NO.	EE	PLAY
19	4.78	4.76
20	0.00	0.00
21	4.96	4.98
22	4.97	4.98
23	0.00	0.00
24	4.99	5.00
25	5.00	5.00
26	1.18	1.14
27	4.11	4.12
28	4.96	4.96
29	4.96	4.97
30	4.97	4.96
31	4.96	4.97
32	4.97	4.97
33	4.96	4.96
34	4.96	4.97
35	4.96	4.97
36	4.97	4.97
37	4.97	4.96
38	4.96	4.96
39	4.77	4.97
40	4.80	4.80
41	-21.60	-22.00
42	-22.90	-21.60
43	-22.30	-21.30
44	-17.80	-16.80
45	-12.40	-12.30
46	-9.30	-18.00
47	-18.90	-16.70
48	-15.60	-15.00
49	-17.00	-17.50
50	-16.90	-16.00
51	-18.60	-18.10
52	-18.00	-18.30
53	-18.40	-20.00
54	-20.20	-24.80
55	-18.60	-23.70
56	-16.90	-23.60
57	-18.50	-23.50
58	-18.50	-24.40
59	5.00	5.02
60	-25.00	-27.00
61	-20.40	-20.00
62	-16.90	-16.90
63	-18.00	-18.40
64	-17.80	18.30
65	-17.60	-18.70
66	-17.70	-18.00
67	-17.70	-18.20
68	-17.50	-18.70
69	-17.50	-18.70
70	-17.70	-18.80
71	-17.30	-19.40
72	-17.30	-19.50
73	-17.20	-21.80

MODE / PIN NO.	EE	PLAY
74	-17.20	-21.80
75	-17.20	-21.90
76	-17.10	-21.80
77	-17.50	-21.80
78	-17.30	-21.80
79	-17.30	-21.80
80	-16.80	-21.80
IC902 7042P		
1	5.09	5.00
2	0.00	0.00
3	5.07	5.00
J A C K		
1	4.55	4.54
2	2.24	2.24
3	3.82	3.82
4	0.00	0.00
5	3.82	3.82
6	2.95	2.63
7	2.24	2.24
8	2.74	2.73
9	3.66	3.17
10	0.00	0.00
11	4.58	4.57
12	2.24	2.24
13	1.94	8.93
14	4.54	4.53
15	0.00	0.00
16	4.57	4.57

	Emitter		Base		Collector	
	EE	PLAY	EE	PLAY	EE	PLAY
S E R V O						
Q2M1	0.00	0.00	4.98	4.98	0.00	0.00
Q2A1	4.67	4.69	4.97	4.01	0.96	2.20
Q2A2	4.97	4.93	4.96	4.93	0.00	0.50
A U D I O						
Q401	5.04	5.33	4.32	5.03	4.08	0.00
Q402	5.04	5.03	5.03	4.99	0.00	0.00
Q403	0.00	0.00	0.00	0.00	5.03	5.02
Q404	0.00	0.00	-0.30	-0.30	0.98	0.98
Q405	0.00	0.00	0.00	0.00	1.05	0.72
Q406	0.00	0.00	0.00	0.00	1.30	0.89
Q407	0.00	0.00	-0.49	-0.35	1.31	0.88
J A C K						
Q607	0.00	0.00	0.78	0.00	0.00	0.00
Q608	0.00	0.00	0.77	-0.70	0.00	0.00
Q609	0.00	0.00	0.76	-0.60	0.00	0.00
Q610	0.00	0.00	0.76	0.00	0.00	0.00
Q611	0.00	0.00	0.75	-0.70	0.00	0.00
Q612	0.00	0.00	0.76	-0.90	0.00	0.00
Q613	0.00	0.00	0.76	-0.50	0.00	0.00
Q614	0.00	0.00	0.76	-0.50	0.00	0.00
Q615	5.09	5.09	4.29	4.92	4.96	-1.00

12. PRINTED CIRCUIT DIAGRAMS

12.1 MAIN P.C.BOARD



(Solder Side)

LOCATION GUIDE

TP204	A7
TP218	B7
TP219	A7
TP220	A7
TP223	B6
TP235	C7
TP2A2	D4
TP2A3	D4
TP2A6	C7
TP303	B4
TP304	B4
TP305	B4
TP306	B4
TP307	B4
TP308	B4
TP309	B4
TP310	B4
TP311	B3
TP312	B4
TP313	B4
TP314	B4
TP315	B5
TP316	A5
TP317	B5
TP318	A4
TP319	A4
TP320	A5
TP321	A4
TP322	B3
TP323	B4
TP324	B3
TP325	B3
TP326	B4
TP327	B4
TP328	A4
TP329	A4
TP330	A4
TP331	A3
TP332	B3
TP333	A3
TP334	B3

TP335	A4
TP336	A3
TP337	A3
TP338	A4
TP339	A3
TP340	A3
TP341	A3
TP342	A4
TP363	C3
TP365	B5
TP366	B5
TP367	B5
TP369	A5
TP370	B6
TP509	C1
TP510	A4
TP511	B3
TP512	B3
TP513	C4
TP515	B3
TP517	B3
TP518	A3
TP519	A3
TP520	A3
TP521	C4
TP522	C4
TP523	C4
TP524	C4
TP525	B6
TP526	B6
TP527	B7
TP528	B7
TP529	B6
TP530	B6
TP531	B6
TP532	B6
TP533	B6
TP534	B6
TP535	C6
TP536	C6

C201	I7
C202	I7
C203	H8
C205	J7
C206	I8
C207	K7
C210	I7
C221	K9
C223	I9
C224	I8
C225	I8
C226	I8
C227	H8
C228	H8
C229	I7
C232	K8
C237	I6
C238	K7
C239	K7
C240	K7
C241	K7
C242	K7
C245	K6
C250	G9
C255	I8
C256	H9
C257	H8
C258	I7
C260	K7
C270	I9
C271	H8
C272	I7
C273	I7
C274	I7
C275	H8
C276	H8
C277	I6
C278	K7
C279	K7
C280	K6
C281	K6
C284	I9
C285	I7
C286	I9
C287	I9
C288	I9
C2A0	I5
C2A1	H5
C2A2	H5
C2A3	H5
C2A4	H5
C2A5	H5
C2A6	H5
C2A7	H5
C2A8	H5
C2A9	H5
C2B0	H5
C2B1	H4
C2B2	H5
C2B3	H5

C2B4	H5
C2B5	H5
C2B6	G5
C2B7	G5
C2B8	G5
C2B9	G5
C2C0	H5
C2C1	H5
C2C2	H5
C2C3	H5
C2C4	H5
C2C5	G4
C2C6	H4
C2C7	H4
C2C8	H5
C2C9	H6
C2D0	G5
C2D1	G4
C2D2	H4
C2D3	H4
C2D4	G6
C2D5	G6
C2D6	G6
C2D7	H6
C2D8	H5
C2D9	H5
C2E0	I5
C2E1	G5
C2M1	G7
C2M2	G7
C2M3	H6
C2M4	H7
C2M5	H7
C2M6	G7
C2M7	G7
C2M8	G7
C2M9	G6
C2N1	G6
C2N2	H7
C2N3	G6
C2N4	G6
C2N5	G6
C2N6	G7
C301	K6
C302	J6
C303	J6
C304	J6
C305	J5
C306	K5
C307	K4
C308	J4
C309	G1
C314	G2
C315	J4
C316	J5
C317	H1
C318	F1
C319	F2
C320	F2
C3F1	J4

C3F2	J4
C3F3	K3
C501	K1
C502	G4
C503	J1
C504	J1
C505	G4
C506	J1
C507	J1
C508	H3
C509	H3
C510	H3
C511	H2
C512	H2
C513	H2
C514	H2
C515	H2
C516	H2
C517	H1
C518	H1
C519	H1
C520	I1
C521	I1
C522	I1
C523	J1
C525	J2
C526	J2
C527	J2
C528	J2
C529	J2
C530	J3
C531	I3
C532	I3
C533	I3
C534	I3
C535	H3
C536	H3
C537	G9
C538	J1
C539	I1
C540	I1
C541	I1
C542	I5
C543	I1
C544	I5
C546	G8
C548	G8
C549	G9
C550	G9
C551	G8
C552	G8
C553	G8
C5M1	H4
C5M2	H4
C5M3	H3
C5M4	H3
D2A1	G4
D2A2	G5
D301	K6
D302	K6

IC201	J8
IC203	H8
IC204	H8
IC205	J9
IC206	I9
IC2A1	H5
IC2A2	I6
IC2A3	I5
IC2M1	H6
IC301	K5
IC302	K4
IC303	J4
IC305	G2
IC3F1	J4
IC501	I2
IC502	I5
IC503	I4
IC505	G4
IC5M1	H3
L201	K7
L202	I9
L203	K8
L204	G9
L207	I7
L208	K9
L211	I6
L2A1	H4
L2A2	G6
L301	J6
L302	G1
L3F1	J4
L3F2	K4
L501	J1
L502	J1
L503	J1
L504	J1
L505	I5
L506	H1
L5M1	H4
P3301	H9
P5402	G3
P5901	G8
PMD01	F5
PMD02	G6
PMD03	F7
Q2A1	H4
Q2A2	G5
Q2M1	H6
Q507	G4
R201	I8
R202	I8
R203	I8
R204	I8
R205	I8
R206	I8
R207	I9
R217	K7
R218	I7
R219	I7
R220	I6

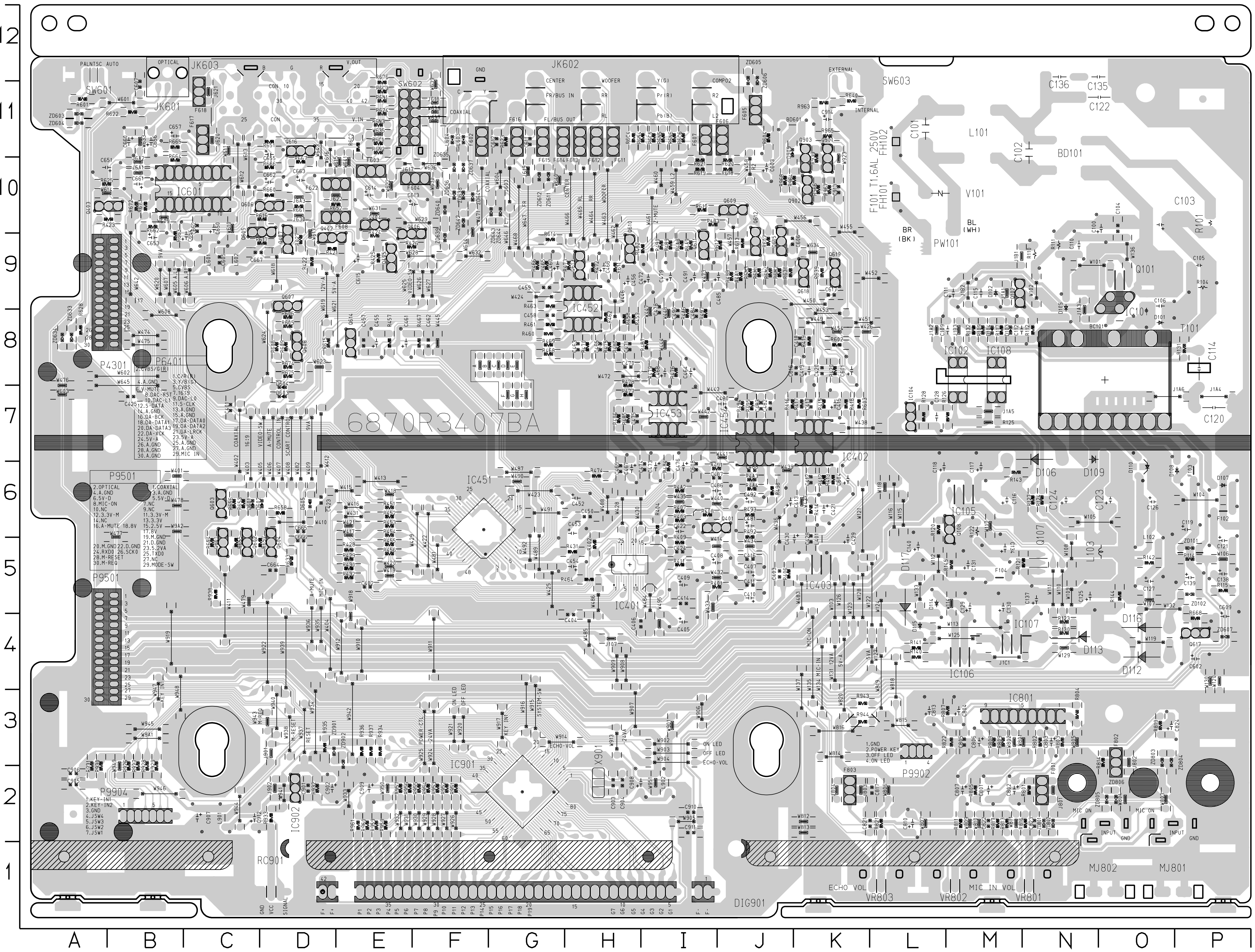
R221	H8
R230	K7
R231	K7
R232	K7
R233	K7
R234	K7
R235	K7
R236	K8
R237	K8
R238	I8
R239	I8
R240	I8
R241	I8
R242	I8
R244	I8
R271	J7
R273	J7
R274	K6
R275	K6
R276	K7
R277	K7
R278	I7
R279	I7
R280	I7
R281	I7
R291	I9
R292	G9
R293	H9
R294	H9
R295	G8
R296	G8
R297	G8
R2A0	H4
R2A1	G4
R2A2	I5
R2A3	H5
R2A4	F6
R2A5	H5
R2A6	H5
R2A8	H5
R2A9	I7
R2B0	H5
R2B1	H6
R2B2	G4
R2B3	H4
R2B4	H4
R2B5	G4
R2B6	G5
R2B7	G5
R2B8	H6
R2B9	H5
R2C0	G5
R2C1	G5
R2C2	I6
R2C3	I6
R2C4	I5
R2C6	H5
R2C7	H4
R2C8	G5
R2C9	G5

R2D0	G5
R2D1	G5
R2D2	G4
R2D6	G4
R2D7	F6
R2E1	H6
R2E2	H6
R2E3	H6
R2E4	H6
R2E5	I5
R2E6	H6
R2E7	G5
R2E9	G5
R2M1	H7
R2M2	H7
R2M3	G6
R2M4	G6
R2M5	G6
R2M6	G6
R2M7	H6
R2M8	H6
R2M9	I7
R2N1	G6
R2N2	H6
R2N3	I8
R2N4	G6
R2N5	G6
R2N6	G6
R2N8	K6
R2N9	K6
R2P1	K6
R2P2	H6
R2P6	H7
R2Q7	I5
R2Q8	I5
R301	J6
R302	K5
R303	K5
R304	K5
R305	J6
R306	K5
R307	K6
R308	K6
R309	J6
R310	K6
R311	K6
R312	I4
R313	K6
R314	J6
R315	K6
R316	K6
R317	J6
R318	K5
R319	K5
R320	K5
R321	J6
R322	I5
R323	J5
R350	H9
R351	H9

R352	H9
R353	H9
R354	H9
R355	H9
R356	H9
R357	H9
R358	H9
R359	H9
R360	H9
R361	H9
R362	I9
R363	H8
R3F1	K5
R3F2	K3
R3F3	J4
R3F4	K4
R3F5	K4
R3F6	K4
R3F7	J5
R501	K8
R502	G3
R503	I3
R504	J1
R505	I1
R506	I1
R514	I1
R515	I1
R517	G3
R518	G3
R519	G3
R520	G3
R521	I4
R522	H1
R523	I4
R524	G8
R525	H2
R527	G8
R530	G8
R531	G8
R532	G8
R533	G8
R534	G9
R535	G9
R536	G4
R537	H4
R538	G4
R539	G4
R540	G4
R541	H4
R542	G9
R588	J1
R589	I1
R590	I1
R591	I1
R597	I3
R5M1	G4
R5M2	G4
R5M3	G4
R5M4	G3
R5M5	H3

R5M6	H4
TP201	K8
TP202	K7
TP203	K7
TP205	I9
TP206	K7
TP207	K7
TP208	K7
TP209	K7
TP210	J7
TP211	J7
TP212	J7
TP213	J7
TP214	J6
TP215	J7
TP216	J7
TP221	J7
TP224	J7
TP225	J6
TP226	J6
TP228	J7
TP229	J7
TP230	J7
TP231	J7
TP232	I7
TP233	I7
TP234	H8
TP239	I8
TP240	I8
TP241	J7
TP242	I8
TP243	I8
TP244	I8
TP245	I8
TP246	I8
TP247	I8
TP248	I8
TP249	I8
TP2A1	H5
TP2A4	H5
TP343	K5
TP344	K5
TP345	K5
TP346	K5
TP347	K5
TP348	K5
TP355	K5
TP356	K6
TP358	J5
TP361	K5
TP362	K5
TP368	J5
TP501	H1
TP506	I1
TP514	J3
TP516	J3
X201	I9
X501	I1

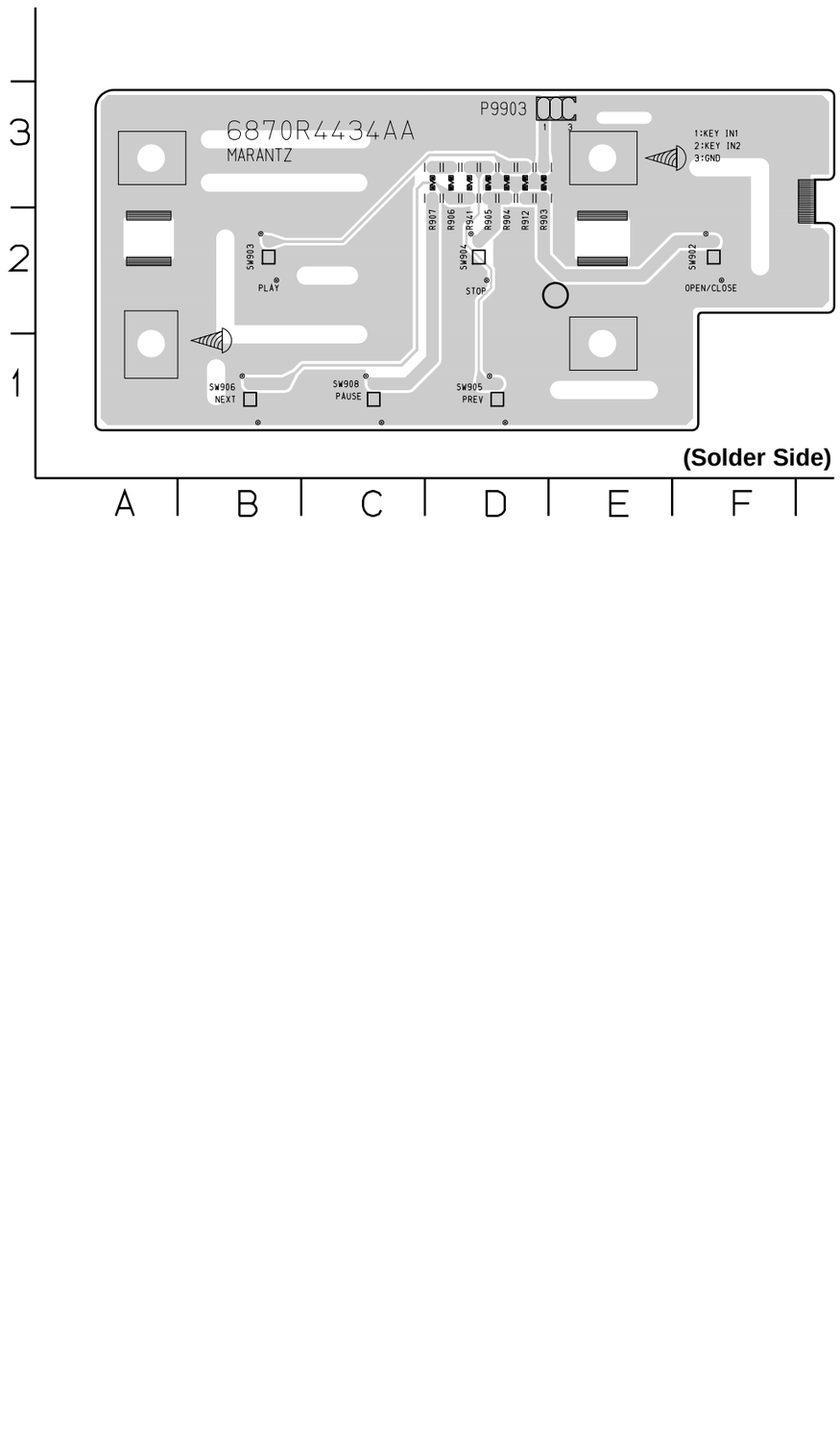
12.2 I/O P.C.BOARD



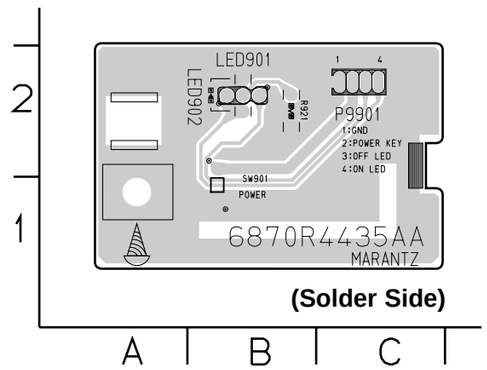
LOCATION GUIDE

Part	Location
BC101	O8
BD101	N11
BD601	J11
C100	O10
C101	L11
C102	N11
C103	O10
C104	O10
C105	P9
C106	O9
C109	M8
C110	N9
C111	M9
C112	M8
C114	P8
C115	M9
C116	M6
C117	M6
C118	L6
C119	P6
C120	P7
C121	P5
C122	O11
C123	O6
C124	N6
C125	N5
C126	O6
C127	O5
C128	L7
C129	M5
C130	M5
C131	M5
C134	M5
C135	O12
C136	N12
C137	N5
C138	P5
C139	P5
C140	L5
C401	C7
C402	E5
C403	J5
C404	H4
C405	I4
C406	I4
C407	J5
C408	I5
C409	I5
C410	J5
C411	J5
C412	K6
C413	J6
C414	I5
C415	K7
C416	J5
C417	K7
C418	K8
C419	K8
C420	K8
C421	K6
C422	I6
C423	D6
C424	I5
C425	B7
C428	K5
C429	K5
C430	K5
C450	H6
C452	H6
C453	H6
C454	H5
C455	E8
C456	H9
C457	E8
C458	G8
C459	G9
C460	G9
C461	E8
C462	F8
C463	H8
C464	I8
C465	H8
C466	H9
C467	H6
C468	I8
C469	H6
C470	H8
C471	H8
C472	I9
C473	I6
C474	I6
C475	H7
C476	I6
C478	I8
C479	I9
C480	J7
C481	J6
C482	J7
C483	J7
C484	I8
C485	J9
C486	I6
C487	I6
C488	J6
C490	I8
C491	I9
C492	J6
C601	K8
C602	P4
C603	J10
C604	K6
C605	C9
C606	J9
C607	B11
C608	I6
C609	P4
C611	G11
C612	G11
C613	F10
C614	E10
C615	E9
C616	K8
C617	K9
C650	C10
C651	A10
C652	C10
C653	B9
C654	C9
C655	D11
C656	B11
C657	B11
C660	B11
C661	B10
C662	D10
C663	D10
C664	D5
C665	D6
C666	D5
C667	C9
C801	M2
C802	M2
C803	N3
C804	M3
C805	M3
C806	M3
C807	M2
C810	L2
C813	L3
C817	L2
C821	L2
C822	M2
C823	N2
C824	O3
C901	D2
C902	D2
C903	H2
C904	H2
C905	A2
C906	A2
C907	C2
C908	I2
C909	E2
C910	I2
C911	I2
C912	C2
C913	K10
C914	K11
D101	O8
D102	M9
D103	M8
D104	M8
D105	N9
D106	N7
D107	P6
D108	P6
D109	N7
D110	O6
D112	O4
D113	N4
D114	L5
D115	L4
D116	O4
D117	L5
D601	C6
D602	D6
D603	D7
D604	D7
D605	D6
D909	J11
DIG901	I1
F102	P6
F103	P6
F104	M5
F602	F11
F603	E10
F604	F10
F605	J11
F606	J11
F607	I11
F608	E10
F611	H11
F612	H11
F613	H11
F614	G11
F615	G11
F616	G11
F617	C11
F618	C11
F622	E10
F801	N2
F802	O3
F803	K2
FH101	L10
FH102	L11
IC101	O9
IC102	M7
IC104	L7
IC105	M6
IC106	M4
IC107	M4
IC108	M7
IC402	K7
IC403	K5
IC452	H9
IC453	I7
IC454	J7
IC601	B10
IC801	N3
IC901	G2
IC902	D2
J107	H4
J1A1	M9
J1A2	L8
J1A3	N8
J1A4	P7
J1A5	M7
J1A6	O7
J1B1	M9
J1B2	M9
J1B3	M8
J1C1	M4
J603	G10
J617	F10
J618	F11
J619	G10
J620	C11
J621	C11
J622	E10
J630	D10
J6A1	B10
J6A2	B10
J6A3	D10
J801	N2
J802	O3
J803	K2
J804	K2
J901	D3
J902	D2
JK601	B11
JK602	H12
JK603	C12
L101	M11
L102	O5
L103	O5
L401	K5
L601	C9
L602	C9
L603	F11
L604	F11
L901	C2
L902	I2
MJ801	O1
MJ802	O1
P4301	A9
P9501	A4
P9902	L3
P9904	B2
PW101	L10
Q101	O9
Q102	M9
Q107	N5
Q108	M6
Q401	I6
Q402	D9
Q403	B10
Q404	E10
Q405	E9
Q406	E9
Q407	D9
Q601	C5
Q602	C5
Q603	C6
Q604	D5
Q605	D10
Q606	D10
Q607	D9
Q608	D8
Q609	J10
Q610	H9
Q611	I9
Q612	J9
Q613	H9
Q614	E8
Q615	J9
Q616	D11
Q617	P4
Q618	K9
Q619	K9
Q901	K10
Q902	K10
Q903	K10
R101	P10
R104	P9
R109	M8
R110	N9
R111	N9
R112	N8
R114	P5
R115	P5
R117	M8
R120	L6
R121	N5
R122	M6
R123	N4
R124	N6
R125	M7
R126	M7
R127	N6
R128	L7
R130	N4
R131	P8
R132	M8
R140	L4
R141	L4
R142	O5
R143	M6
R144	O5
R145	M5
R401	I5
R402	H5
R403	I6
R404	I6
R406	J5
R407	I6
R408	I6
R409	I5
R411	I5
R412	K6
R413	K6
R414	K6
R415	K7
R416	J7
R417	K7
R418	K7
R419	K8
R420	K8
R421	D9
R422	D9
R423	B10
R424	E9
R425	E9
R426	E9
R427	D9
R428	E5
R429	E5
R430	E5
R431	H5
R432	E5
R451	E6
R452	E6
R453	E6
R454	E6
R455	E5
R456	E5
R457	E8
R458	H8
R459	H8
R460	G8
R461	G8
R462	H8
R463	G9
R464	H5
R465	G9
R466	G9
R467	F8
R468	G8
R469	G8
R470	H8
R472	H9
R473	H9
R474	H6
R475	H8
R476	I8
R477	H7
R478	H7
R479	I8
R480	H8
R482	I9
R483	I10
R484	I6
R485	H7
R486	H7
R487	I8
R489	I9
R490	I9
R491	I6
R492	J6
R493	J6
R494	J7
R495	J7
R496	J6
R497	I8
R499	J9
R4A1	J9
R4A2	I6
R4A3	J6
R4A4	J6
R4A6	I8
R4A8	I9
R4A9	I9
R601	A11
R602	K8
R603	K7
R604	J11
R605	D8
R606	D8
R607	J9
R608	D8
R609	D8
R610	I10
R611	H9
R612	J9
R613	J9
R614	G9
R615	D8
R616	D10
R617	D9
R618	J10
R619	I10
R620	J10
R621	I10
R622	B11
R623	G11
R624	E11
R625	A10
R628	A8
R633	D5
R638	J9
R639	K9
R640	K11
R651	D11
R652	E10
R653	C6
R654	C5
R655	C5
R656	C6
R657	D5
R658	D6
R660	D10
R661	D10
R662	B10
R663	B9
R664	B10
R665	B11
R666	D10
R667	D10
R668	P4
R672	B10
R673	B10
R674	D8
R675	D8
R676	E11
R6C1	E11
R6C2	E11
R6C3	E11
R6C4	H11
R6C5	I11
R6C6	I11
R6M1	J9
R6M2	J9
R6M3	J9
R6M4	J9
R6N1	E11
R6N2	E11
R6N3	E11
R6N4	I11
R6N5	I11
R6N6	I11
R801	N2
R802	N3
R803	N3
R804	N3
R805	M2
R807	M3
R808	M3
R809	M3
R811	M2
R813	M2
R814	O3
R816	N2
R817	M2
R819	O3
R821	L2
R822	M3
R926	B2
R927	B2
R928	B2
R929	B2
R930	A2
R931	A2
R932	D2
R933	D2
R934	E3
R935	D3
R936	E3
R937	E3
R938	C5
R939	K10
R943	K3
R944	K3
R951	F2
R952	F2
R953	F2
R954	F2
R955	F2
R956	E2
R957	E2
R958	E2
R959	E2
R960	E2
R961	E2
R963	K11
R964	K10
R965	K11
R966	K10
R967	K10
R968	J10
RC901	D1
SW601	A12
SW602	E11
SW603	K11
T101	O8
V101	L10
VR801	N1
VR802	M1
VR803	L1
X901	H2
ZD101	P5
ZD102	P5
ZD603	A11
ZD604	A11
ZD605	J12
ZD606	J12
ZD607	P4
ZD611	G10
ZD612	G10
ZD633	A8
ZD634	A8
ZD635	F10
ZD636	F10
ZD637	F10
ZD638	F10
ZD639	F9
ZD640	F10
ZD641	F10
ZD642	F10
ZD643	G10
ZD644	G10
ZD801	N2
ZD802	N2
ZD803	O3
ZD804	O3
ZD805	O2
ZD806	O2
ZD901	D3
ZD902	E3

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 Tolerance
③ Capacity value

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 Capacity value
⑥ Working voltage

Examples ;
⑤ Capacity value

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

⑥ Working voltage

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

6) 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 (**RI05**, **DD4**, **DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

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

1. KOA Corporation

Part No. (MJI)		Type No. (KOA)	Description
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 RF05 ××× 140	→	ERD-2FCJ ×××	(±5% 1/4W)
NF02 ××× 140 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 **FS20**xxx**2**xx, 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)
			CAPACITORS	
C100	N, A, S	nsp	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 ～ C229		nsp	CHIP CER.0.1μF 50V Z	nsp
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 ～ C258		nsp	CHIP CER.0.1μF 50V Z	nsp
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 ～ C281		nsp	ELECT 10μF 16V M	nsp

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 ～ C2A9		nsp	CHIP CER.0.1μF 50V Z	nsp
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 ～ C2C4		nsp	CHIP CER.2200pF 50V K	nsp
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 ～ C2D4		nsp	ELECT 47μF 16V M	nsp
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 ～ C2M8		nsp	CHIP CER. 0.1μF 50V Z	nsp
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 ～ C308		nsp	CHIP CER. 0.1μF 50V Z	nsp
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)
C403		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C405		nsp	ELECT 470µF 6.3V M	nsp
C406		nsp	TUBULAR 0.01µF 16V M	nsp
C407		nsp	ELECT 22µF 16V M	nsp
C408		nsp	ELECT 10µF 16V M	nsp
C409		nsp	ELECT 470µF 6.3V M	nsp
C410		nsp	ELECT 22µF 16V M	nsp
C411		nsp	TUBULAR 1000pF 50V K	nsp
C412		nsp	TUBULAR 100pF 50V J	nsp
C413		nsp	ELECT 10µF 16V M	nsp
C414		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C415		nsp	ELECT 10µF 16V M	nsp
C416		nsp	TUBULAR 1000pF 50V K	nsp
C417		nsp	TUBULAR 100pF 50V J	nsp
C418		nsp	TUBULAR 3900pF 16V M	nsp
C419		nsp	ELECT 22µF 16V M	nsp
C420		nsp	TUBULAR 3900pF 16V M	nsp
C421		nsp	ELECT 22µF 16V M	nsp
C422		nsp	ELECT 10µF 16V M	nsp
C424		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C425		nsp	TUBULAR 0.01µF 16V M	nsp
C428		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C429		nsp	ELECT 47µF 16V M	nsp
C430		nsp	ELECT 47µF 16V M	nsp
C502		nsp	CER. 0.01µF 50V K	nsp
C503		nsp	CHIP CER. 0.1µF 50V Z	nsp
C504		nsp	CER. 2.2µF 16V +80% -20%	nsp
C505		nsp	CHIP CER. 0.1µF 50V Z	nsp
C506		nsp	CER. 2.2µF 16V +80% -20%	nsp
C508 ∫ C522		nsp	CHIP CER.0.1µF 50V Z	nsp
C523		nsp	CER. 2.2µF 16V +80% -20%	nsp
C525 ∫ C536		nsp	CHIP CER. 0.1µF 50V Z	nsp
C537		nsp	CHIP CER. 220pF 50V J	nsp
C538		nsp	CER. 2.2µF 16V +80% -20%	nsp
C540		nsp	CHIP CER. 15pF 50V J	nsp
C541		nsp	CHIP CER. 27pF 50V J	nsp
C542		nsp	CHIP CER. 0.1µF 50V Z	nsp
C543		nsp	CHIP CER. 0.1µF 50V Z	nsp
C544		nsp	CER. 2.2µF 16V +80% -20%	nsp
C546		nsp	CHIP CER. 220pF 50V J	nsp
C548		nsp	CHIP CER.220pF 50V J	nsp
C549		nsp	CHIP CER. 220pF 50V J	nsp
C550		nsp	CHIP CER. 0.1µF 50V Z	nsp
C553		nsp	CHIP CER. 220pF 50V J	nsp
C556		nsp	ELECT 10µF 16V M	nsp
C601	N	nsp	ELECT 22µF 16V M	nsp
C602	N	nsp	ELECT 47µF 16V M	nsp
C603		nsp	ELECT 470µF 6.3V M	nsp
C604	N	nsp	ELECT 22µF 16V M	nsp
C605	N	nsp	TUBULAR 0.01µF 16V M	nsp
C606		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C609	N	nsp	ELECT 47µF 16V M	nsp
C611		nsp	TUBULAR 220pF 50V K	nsp
C612		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C613		nsp	ELECT 470µF 6.3V M	nsp
C614		nsp	ELECT 470µF 6.3V M	nsp
C615		nsp	ELECT 470µF 6.3V M	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
C616	N	nsp	TUBULAR 3900pF 16V M	nsp
C617	N	nsp	TUBULAR 3900pF 16V M	nsp
C650	N	nsp	ELECT 47µF 16V M	nsp
C652	N	nsp	TUBULAR 0.01µF 16V M	nsp
C653 ∫ C657	N	nsp	ELECT 10µF 16V M	nsp
C660	N	nsp	ELECT 10µF 16V M	nsp
C661	N	nsp	ELECT 10µF 16V M	nsp
C662	N	nsp	ELECT 10µF 16V M	nsp
C663	N	nsp	ELECT 470µF 6.3V M	nsp
C901		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C902		nsp	ELECT 10µF 16V M	nsp
C905		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C906		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C907		nsp	ELECT 47µF 16V M	nsp
C908		nsp	ELECT 47µF 16V M	nsp
C909		nsp	.ELECT 47µF 35V M	nsp
C910		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C911		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C912		nsp	ELECT 47µF 16V M	nsp
C913		nsp	TUBULAR 0.1µF 50V +80% -20%	nsp
C914		nsp	ELECT 47µF 16V M	nsp
			DIODES	
BD101		4822 130 81248	S1WBA60(1A 600V)	*HD201400R
D101	F, U	nsp	SUF4005 R	*HD201610R
D101	N, A, S	9965 000 11316	10SP07U(SUF4007SP)	*HD201620R
D102	N, A, S	9965 000 06965	EU01W(R-FORM)	*HD201390R
D103	F, U	4822 130 32778	1SS133 DETECT SW	HD20015210
D104	F, U	4822 130 32778	1SS133 DETECT SW	HD20015210
D105	F, U	nsp	RL104 R	*HD201430R
D106		9965 000 11317	HER202 BK NON 100V 2A	*HD201630R
D107	N, A, S	9965 000 06965	EU01W(R-FORM)	*HD201390R
D107	F, U	9965 000 06971	ERA18-02KFRB DO204AL 2	*HD201460R
D108		9965 000 06965	EU01W(R-FORM)	*HD201390R
D109		9965 000 06968	B10A45V1 BK KEC TO220 45V 10A	*HD201440R
D110		9965 000 06971	ERA18-02KFRB DO204AL 2	*HD201460R
D112		4822 130 33765	1N5402 BK	*HD201450R
D113		4822 130 33765	1N5402 BK	*HD201450R
D115	(P-2)	9965 000 11318	1N17 NON 20V 1A 20	*HD201600R
D115	(P2 LE)	nsp	WIRE D=0.6 ROLL	nsp
D116	F, U	nsp	RZ1040 BK DO41 40V 30A	*HD201420R
D2A1		4822 130 33944	DAN202K SOT23 80	HZ20002210
D2A2		4822 130 33944	DAN202K SOT23 80	HZ20002210
D301		4822 130 33944	DAN202K SOT23 80	HZ20002210
D302		4822 130 33944	DAN202K SOT23 80	HZ20002210
D601	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
D602	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
D603		4822 130 32778	1SS133 DETECT, SW	HD20015210
D604		4822 130 32778	1SS133 DETECT, SW	HD20015210
D605	N	4822 130 32778	1SS133 DETECT, SW	HD20015210
D909		4822 130 32778	1SS133 DETECT, SW	HD20015210
DIG901		9965 000 11319	DIGION VFD20-0703FNA ZEC SEG VFD	*HQ300530R
LED01		9965 000 11335	LED LTL-1CHEES-UA RED =0	*HI100990R
LED02		9965 000 11336	LED LTL-1CHKES-UA GREEN	*HI101000R
LED03		9965 000 11335	LED LTL-1CHEES-UA RED =0	*HI100990R
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
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	*HC107480R
IC502P	N	nsp	PROGRAM ADVD3520NC.1UM1	nsp
IC502P	A, S	nsp	PROGRAM ADVD3500EC.3GM1	nsp
IC502P	U	nsp	PROGRAM DV4200(DVM4511N)	nsp
IC502P	F	nsp	PROGRAM DVM4511N	nsp
IC503		9965 000 11329	IC MM74HCT244SJ 20P SOIC 3-STA	*HC700430R
IC505		4822 209 33521	IC TC7W04FU	HC10382050
IC506		9965 000 11664	IC BA18BC0FP-E2 RW 3P TO252-3 R	*HC107570R
IC601	N	9965 000 11330	IC NJM2284 JRC 16PIN DIP ST SCART	*HC107530R
IC901		9965 000 11331	IC UPD780232GC-043-8BT 80 QFP	*HC107500R
IC902		9965 000 06999	IC KIA7042P 3P 4.2V RESET	*HC105670R
			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				
⟆		4822 130 10923	KTC3199-BL MINI	*HT300730R
Q407				
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

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)
R121		nsp	FILM 1.2k Ω 1/6 W J	nsp
R122		4822 053 10121	METAL 120 Ω 1 W J	GA05121010
R123		nsp	FILM 1k Ω 1/6 W J	nsp
R124		nsp	FILM 330 Ω 1/6 W J	nsp
R125		nsp	FILM 3.9k Ω 1/6 W J	nsp
R126		nsp	FILM 1k Ω 1/6 W J	nsp
R127		nsp	METAL 3.6k Ω 1/8 W F	nsp
R128		nsp	METAL 3.3k Ω 1/6 W F	nsp
R130		nsp	FILM 10k Ω 1/6 W J	nsp
R131		nsp	FILM 220k Ω 1/6 W J	nsp
R132		nsp	FILM 220k Ω 1/6 W J	nsp
R140		nsp	FILM 10k Ω 1/6 W J	nsp
R141		nsp	FILM 10k Ω 1/6 W J	nsp
R144	N, A, S	nsp	FILM 330 Ω 1/6 W J	nsp
R144	F, U	4822 053 10121	METAL 120 Ω 1 W J	GA05121010
R145		nsp	FILM 470 Ω 1/6 W J	nsp
R201				
∫		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R204				
R207		nsp	METAL CHIP 1M Ω 1 / 16 W J	nsp
R217		nsp	METAL CHIP 10 Ω 1 / 16 W J	nsp
R218		nsp	METAL CHIP 470 Ω 1 / 16 W J	nsp
R219		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R220		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R221		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R230				
∫		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R237				
R238				
∫		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R242				
R271		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R273		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R274		nsp	METAL CHIP 620 Ω 1 / 16 W J	nsp
R275		nsp	METAL CHIP 910 Ω 1 / 16 W J	nsp
R276		nsp	METAL CHIP 910 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
R279		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R280		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R281		nsp	METAL CHIP 2.2k Ω 1 / 16 W J	nsp
R291		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R292		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R293		nsp	METAL CHIP 2k Ω 1 / 16 W J	nsp
R294		nsp	METAL CHIP 150 Ω 1 / 16 W J	nsp
R295		nsp	METAL CHIP 2k Ω 1 / 16 W J	nsp
R296		nsp	METAL CHIP 150 Ω 1 / 16 W J	nsp
R297		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R2A0		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2A1		nsp	METAL CHIP 91 Ω 1 / 16 W J	nsp
R2A2		nsp	METAL CHIP 12k Ω 1 / 16 W F	nsp
R2A4		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2A5		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2A6		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2A9		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2B1		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2B2		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2B3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2B4		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R2B5		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R2B6		nsp	METAL CHIP 27k Ω 1 / 16 W J	nsp
R2B7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2B8		nsp	METAL CHIP 150k Ω 1 / 16 W J	nsp
R2B9		nsp	METAL CHIP 150k Ω 1 / 16 W J	nsp
R2C0		nsp	METAL CHIP 39k Ω 1 / 16 W J	nsp
R2C1		nsp	METAL CHIP 39k Ω 1 / 16 W J	nsp
R2C2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2C3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R2C4		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R2C6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C7		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2C8		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R2C9		nsp	METAL CHIP 18 Ω 1 / 16 W J	nsp
R2D0		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2D1		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2D2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2D6		nsp	METAL CHIP 91 Ω 1 / 16 W J	nsp
R2D7		nsp	METAL CHIP 4.7 Ω 1 / 16 W J	nsp
R2E6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2E7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2E9		nsp	METAL CHIP 5.6k Ω 1 / 16 W J	nsp
R2M1		nsp	METAL CHIP 1 Ω 1 / 10 W J	nsp
R2M2		nsp	METAL CHIP 1 Ω 1 / 10 W J	nsp
R2M3		nsp	METAL CHIP 22k Ω 1 / 16 W J	nsp
R2M4		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp
R2M5		nsp	METAL CHIP 15k Ω 1 / 16 W J	nsp
R2M6		nsp	METAL CHIP 22k Ω 1 / 16 W J	nsp
R2M7		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R2M8		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2M9		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N1		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2N2		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N3		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N4		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2N5		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2N6		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R2N8		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2N9		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P1		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P2		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R2P6		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R2Q7		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R2Q8		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp
R301		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R303		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R305		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R306		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R307		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R308		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R309		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R310		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R311		nsp	METAL CHIP 6.8k Ω 1 / 16 W J	nsp
R313		nsp	METAL CHIP 100 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
R316		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R317		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R318		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R319		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R320		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R321		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R322		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R323		nsp	METAL CHIP 3.9k Ω 1 / 16 W J	nsp
R350		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R351				
∫		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R360				
R361		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R362		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R363		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R3F1		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R3F2		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R3F4		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R3F5		nsp	METAL CHIP 10k 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)
R401		nsp	FILM 10 Ω 1/6 W J	nsp
R402		nsp	FILM 4.7k Ω 1/6 W J	nsp
R403		nsp	FILM 10 Ω 1/6 W J	nsp
R406		nsp	FILM 10k Ω 1/6 W J	nsp
R407		nsp	FILM 5.6k Ω 1/6 W J	nsp
R408		nsp	FILM 2.2k Ω 1/6 W J	nsp
R409		nsp	FILM 7.5k Ω 1/6 W J	nsp
R411		nsp	FILM 7.5k Ω 1/6 W J	nsp
R412		nsp	FILM 6.8k Ω 1/6 W J	nsp
R413		nsp	FILM 15k Ω 1/6 W J	nsp
R414		nsp	FILM 5.6k Ω 1/6 W J	nsp
R415		nsp	FILM 4.7k Ω 1/6 W J	nsp
R416		nsp	FILM 15k Ω 1/6 W J	nsp
R417		nsp	FILM 6.8k Ω 1/6 W J	nsp
R418		nsp	FILM 1k Ω 1/6 W J	nsp
R419		nsp	FILM 330 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
R422		nsp	FILM 2.2k Ω 1/6 W J	nsp
R423				
∫		nsp	FILM 1k Ω 1/6 W J	nsp
R427				
R432		nsp	FILM 100 Ω 1/6 W J	nsp
R501		nsp	METAL CHIP 3.3k Ω 1 / 16 W J	nsp
R503		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R504		nsp	METAL CHIP 100 Ω 1 / 16 W F	nsp
R505		nsp	METAL CHIP 10 Ω 1 / 16 W J	nsp
R506		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R514		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp
R515		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp
R517				
∫		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp
R520				
R521		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R522		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp
R523		nsp	METAL CHIP 4.7k Ω 1 / 16 W J	nsp
R524		nsp	METAL CHIP 1k Ω 1 / 16 W J	nsp
R525		nsp	METAL CHIP 22 Ω 1 / 16 W J	nsp
R527		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R530				
∫		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R533				
R534		nsp	METAL CHIP 680 Ω 1 / 16 W J	nsp
R535		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R536		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R537		nsp	METAL CHIP 330 Ω 1 / 16 W J	nsp
R538		nsp	METAL CHIP 270 Ω 1 / 16 W J	nsp
R539		nsp	METAL CHIP 100 Ω 1 / 16 W J	nsp
R540		nsp	METAL CHIP 330 Ω 1 / 16 W J	nsp
R541		nsp	METAL CHIP 10k Ω 1 / 16 W J	nsp
R542		nsp	METAL CHIP 1.2k Ω 1 / 16 W J	nsp
R588				
∫		nsp	METAL CHIP 75 Ω 1 / 16 W J	nsp
R591				
R597		nsp	METAL CHIP 0 Ω 1 / 16 W J	nsp
R601	N, A, S	nsp	FILM 47k Ω 1/6 W J	nsp
R602	N	nsp	FILM 100 Ω 1/6 W J	nsp
R603	N	nsp	FILM 100 Ω 1/6 W J	nsp
R604	N	nsp	FILM 68 Ω 1/6 W J	nsp
R605				
∫		nsp	FILM 1k Ω 1/6 W J	nsp
R609				
R616	N	nsp	FILM 100 Ω 1/6 W J	nsp
R617	N	nsp	FILM 680 Ω 1/6 W J	nsp
R618		nsp	FILM 100k Ω 1/6 W J	nsp
R619		nsp	FILM 100k Ω 1/6 W J	nsp
R620		nsp	FILM 220 Ω 1/6 W J	nsp
R621		nsp	FILM 220 Ω 1/6 W J	nsp
R622		nsp	FILM 22 Ω 1/6 W J	nsp

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
R623		nsp	FILM 22 Ω 1/6 W J	nsp
R624		nsp	FILM 1k Ω 1/6 W J	nsp
R625	N	nsp	FILM 10k Ω 1/6 W J	nsp
R628		nsp	FILM 47k Ω 1/6 W J	nsp
R633		nsp	FILM 4.7k Ω 1/6 W J	nsp
R638	N	nsp	FILM 1k Ω 1/6 W J	nsp
R639	N	nsp	FILM 1k Ω 1/6 W J	nsp
R640		nsp	FILM 4.7k Ω 1/6 W J	nsp
R652	N	nsp	FILM 68 Ω 1/6 W J	nsp
R653	N	nsp	FILM 1k Ω 1/6 W J	nsp
R654	N	nsp	FILM 10k Ω 1/6 W J	nsp
R655	N	nsp	FILM 2.2k Ω 1/6 W J	nsp
R656	N	nsp	FILM 1k Ω 1/6 W J	nsp
R657	N	nsp	FILM 1k Ω 1/6 W J	nsp
R658	N	nsp	FILM 1k Ω 1/6 W J	nsp
R660	N	nsp	FILM 680 Ω 1/6 W J	nsp
R661	N	nsp	FILM 100 Ω 1/6 W J	nsp
R664	N	nsp	FILM 1k Ω 1/6 W J	nsp
R665	N	nsp	FILM 1k Ω 1/6 W J	nsp
R666	N	nsp	FILM 100 Ω 1/6 W J	nsp
R667	N	nsp	FILM 470 Ω 1/6 W J	nsp
R668	N	nsp	FILM 330 Ω 1/6 W J	nsp
R672	N	nsp	FILM 100k Ω 1/6 W J	nsp
R673	N	nsp	FILM 100 Ω 1/6 W J	nsp
R674	N	nsp	FILM 100k Ω 1/6 W J	nsp
R675	N	nsp	FILM 100 Ω 1/6 W J	nsp
R676	N	nsp	FILM 75 Ω 1/6 W J	nsp
R6M1	F, A, S, U	nsp	FILM 220 Ω 1/6 W J	nsp
R6M2	F, A, S, U	nsp	FILM 220 Ω 1/6 W J	nsp
R6M3	F, A, S, U	nsp	FILM 100k Ω 1/6 W J	nsp
R6M4	F, A, S, U	nsp	FILM 100k Ω 1/6 W J	nsp
R903		nsp	FILM 680 Ω 1/6 W J	nsp
R904		nsp	FILM 1.2k Ω 1/6 W J	nsp
R905		nsp	FILM 1.5k Ω 1/6 W J	nsp
R906		nsp	FILM 3.3k Ω 1/6 W J	nsp
R907		nsp	FILM 4.7k Ω 1/6 W J	nsp
R912		nsp	FILM 820 Ω 1/6 W J	nsp
R921		nsp	FILM 100 Ω 1/6 W J	nsp
R930		nsp	FILM 10k Ω 1/6 W J	nsp
R931		nsp	FILM 10k Ω 1/6 W J	nsp
R932		nsp	FILM 3.3k Ω 1/6 W J	nsp
R933		nsp	FILM 330 Ω 1/6 W J	nsp
R934		nsp	FILM 10k Ω 1/6 W J	nsp
R935		nsp	FILM 47k Ω 1/6 W J	nsp
R938		nsp	FILM 1k Ω 1/6 W J	nsp
R941		nsp	FILM 2.2k Ω 1/6 W J	nsp
R943		nsp	FILM 100 Ω 1/6 W J	nsp
R944		nsp	FILM 100 Ω 1/6 W J	nsp
R951				
∫		nsp	FILM 100k Ω 1/6 W J	nsp
R961				
R963		nsp	FILM 100 Ω 1/6 W J	nsp
R964		nsp	FILM 47k Ω 1/6 W J	nsp
R965		nsp	FILM 100 Ω 1/6 W J	nsp
R966		nsp	FILM 2.2k Ω 1/6 W J	nsp
R967		nsp	FILM 10k Ω 1/6 W J	nsp
R968		nsp	FILM 10k Ω 1/6 W J	nsp
			MISCELLANEOUS	
BC101		9965 000 06959	COIL,BEAD CORE BFS3550R2FD8, R T/P	*FC900210R
⚠ F101	F, U	nsp	FUSE SLOW BLOW 1600MA 250V 5.2X20	*FS000730R
⚠ F101	N, A, S	4822 070 31602	FUSE SLOW BLOW 1600MA 250V 5.2X20	*FS000740R

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)
F602				
⟆		nsp	FILTER CFI06B1H101MF	nsp
F608			2.5K/T	
F612	F, A, S, U	nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F613	F, A, S, U	nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F615		nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F616		nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F617	N	nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F618	N	nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
F622	N	nsp	FILTER CFI06B1H101MF	nsp
			2.5K/T	
FH101		nsp	HOLDER FUSE CLIP	nsp
FH102		nsp	HOLDER FUSE CLIP	nsp
JK601	F, N, A, S	9322 155 28667	JACK FIBER OPTIC	*YJ002520R
			GP1FA550TZ	
JK602	F, A, S, U	nsp	JACK RCA DIN	*YT002680R
JK602	N	9965 000 11332	JACK RCA/DIN-17G	*YT002690R
JK603	N	9965 000 11333	JACK SCART 2F-21P 3.81	*YT002700R
			BAEUN	
⚠ L101	F, U	nsp	FILTER LS-AI99F-009	*FN000130R
⚠ 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

POS. NO	VERS. COLOR	PART NO. (PCS)	DESCRIPTION	PART NO. (MJI)
PMD02		nsp	CONN.	nsp
			00-6232-023-006-800 23P	
PMD03		nsp	CONN.	nsp
			00-6232-020-006-800 20 P	
⚠ PW101		nsp	CONN. GP390 LGC 3P	nsp
RC901		9965 000 07015	IR RECEIVER	*HW100550R
			TSOP2836WE1 36.7KHz	
SW601	N, A, S	9965 000 11337	SWITCH SLIDE	*SS000620R
			SKQ-23D15-G5-NA	
SW602		9965 000 11338	SWITCH TACT CSS-4206	*SS000730R
SW603		9965 000 11339	SWITCH SLIDE	*SS000740R
			SKQ-22H06-G5-NA	
SW901				
⟆		9965 000 07017	SWITCH TACT THVV502GAA	*SP001000R
SW906				
SW908		9965 000 07017	SWITCH TACT THVV502GAA	*SP001000R
⚠ T101	F, U	nsp	MAINS TRANSF.	*TS001600R
			KSE-021K/LSE-021K	
⚠ T101	N, A, S	9965 000 07018	MAINS TRANSF.	*TS001170R
			SHT-023T/KSE-023T	
⚠ V101		nsp	VARISTOR SVC681D-10A	nsp
			4.O CUT	
X201		9965 000 11340	CRYSTAL HC-49/S	*JX000870R
			AXIAL 33.8688MHz	
X501		9965 000 11341	CRYSTAL HC-49/S	*JX000880R
			AXIAL 27MHz 20P	
X901		9965 000 11342	RESONATOR	*FQ000540R
			CSTLS5M00G53-A0	
PBJIG		nsp	PWB ASSY TOTAL DVD-3000'S	*DV3100JIG
			JIG ASSY	

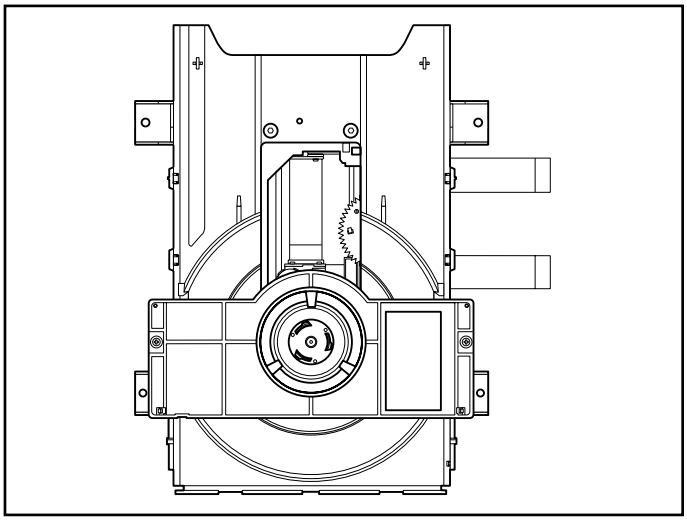
NOTE : "nsp" PART IS LISTED FOR REFERENCE ONLY, MARANTZ WILL NOT SUPPLY THESE PARTS.

14. MECHANISM SECTION

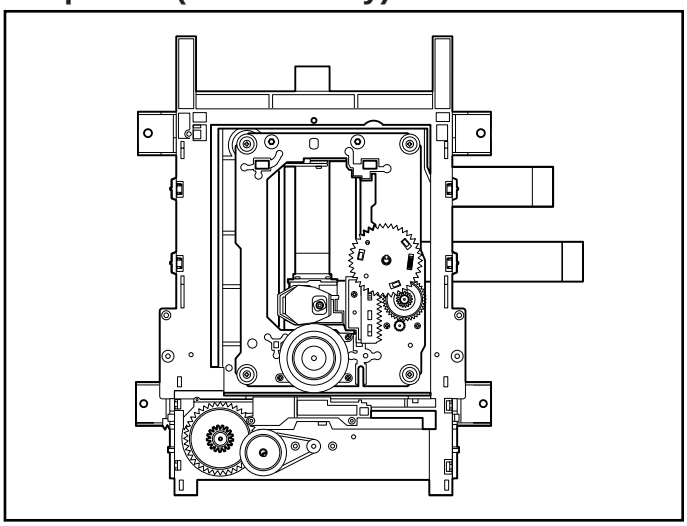
CONTENTS

DECK MECHANISM PARTS LOCATION

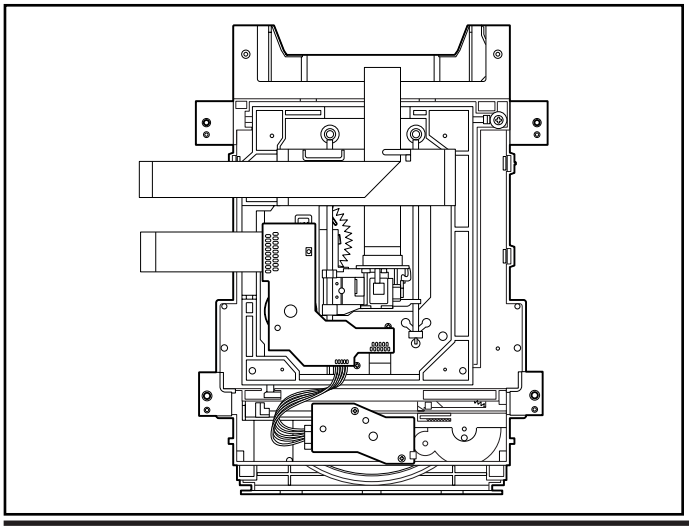
• Top View (With Tray)



• Top View (Without Tray)



• Bottom View



Procedure Starting No.		Parts	Fixing Type	Disassembly	Figure
	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

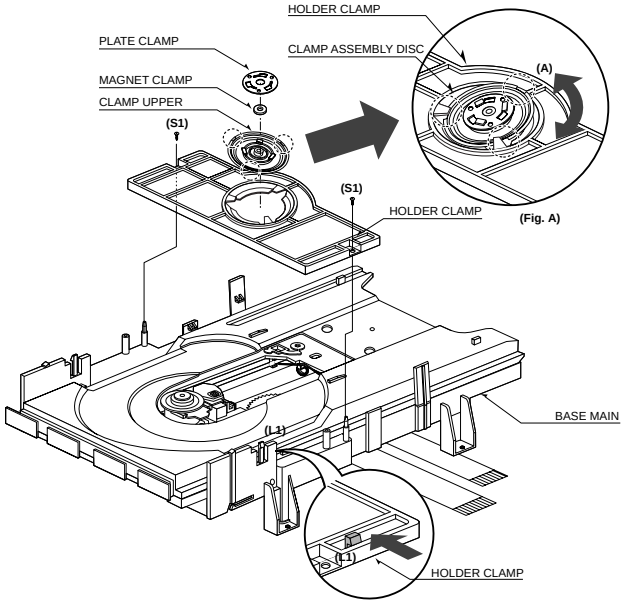


Fig. 4-1

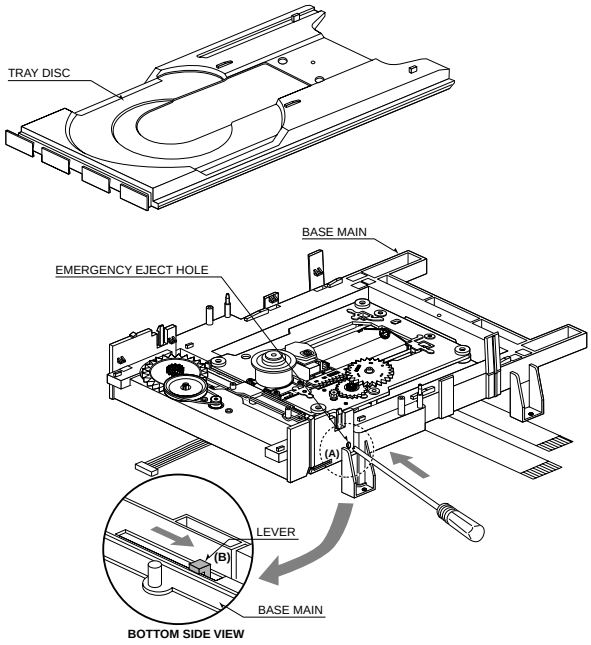


Fig. 4-2

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

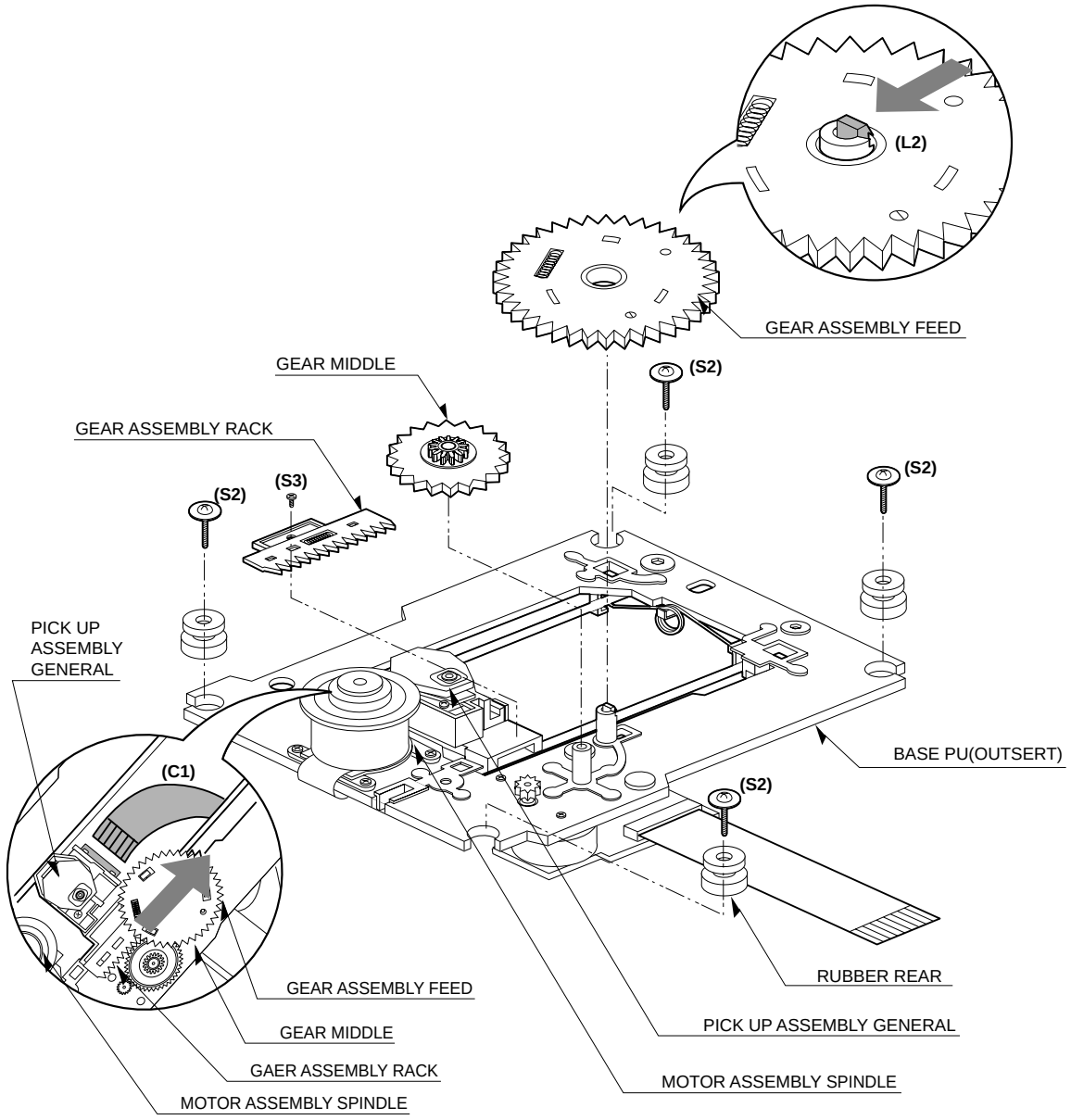


Fig. 4-3

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

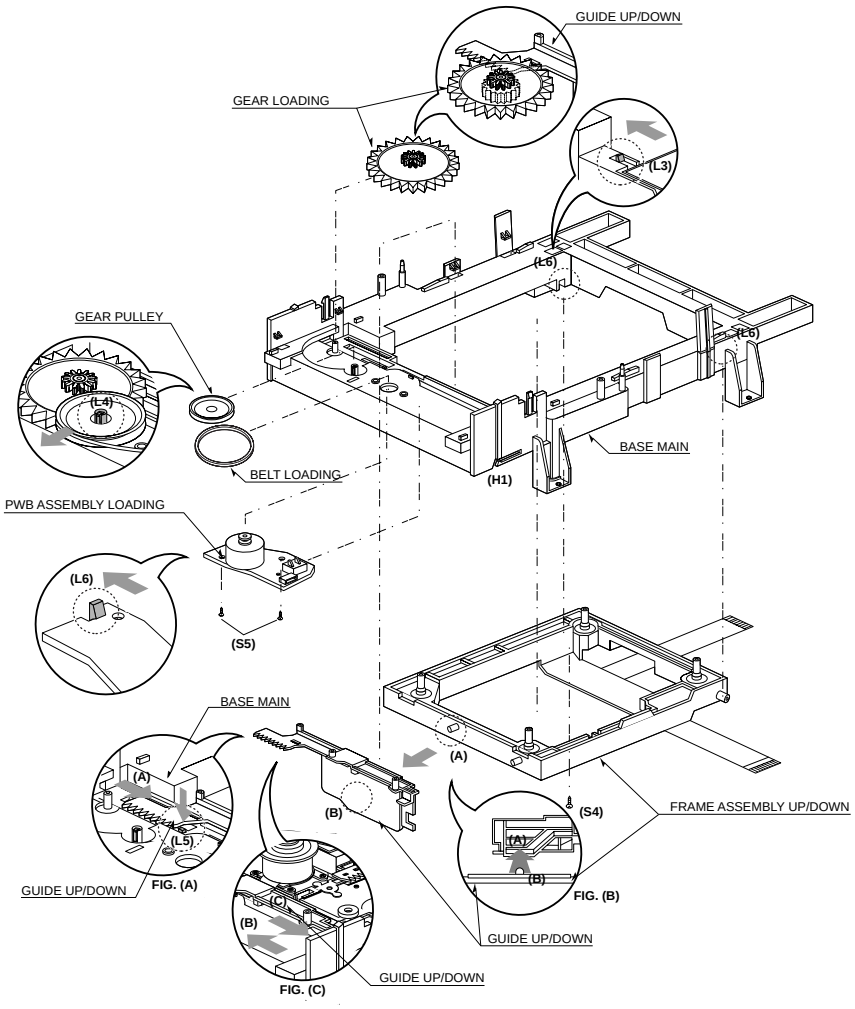


Fig. 4-4

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)

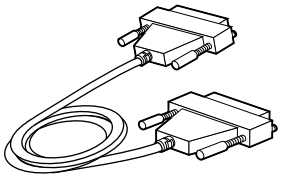
1) Release 2 Screws(S5)
2) Unkool the Loading Motor Connector (C2) from the Hook (H1) on the Base Main.
3) Unlock 2 Locking Tabs(L6) and separate the PWB Assembly Loading from the Base Main.

11. Base Main(Fig. 4-4)

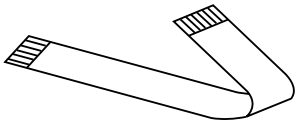
DECK MECHANISM ADJUSTMENT

1. Tools and Fixtures for SVC

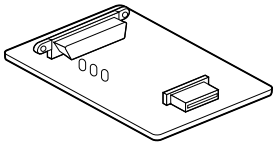
• For SVC Program Down-Load



Not spare parts
Fig.1. Printer Cable



Included in <Jig board>
Fig.2. FFC Cable (15 pin)



PART NO.*DV3100JIG
Fig.3. Jig Board

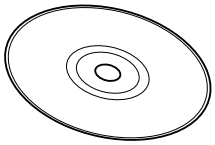
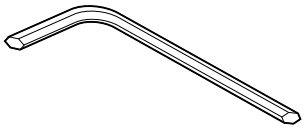
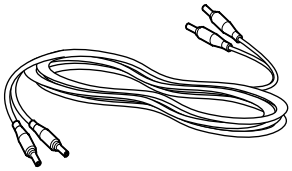


Fig.4. Deviation Disc (0.8mm)

• For T-Skew and R-Skew Adjustment



Not spare parts
Fig.5. L-Wrench(3mm)



Not spare parts
Fig.6. RCA Jack

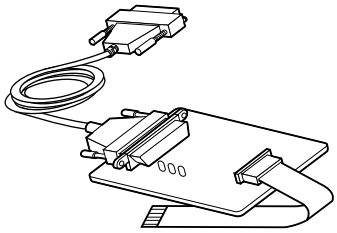


Fig.7. Connecting Method

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.

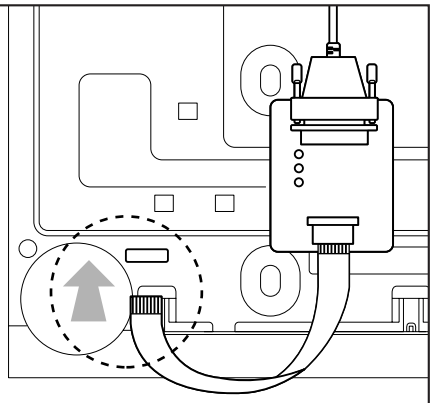


Fig.8. FFC Cable Connecting

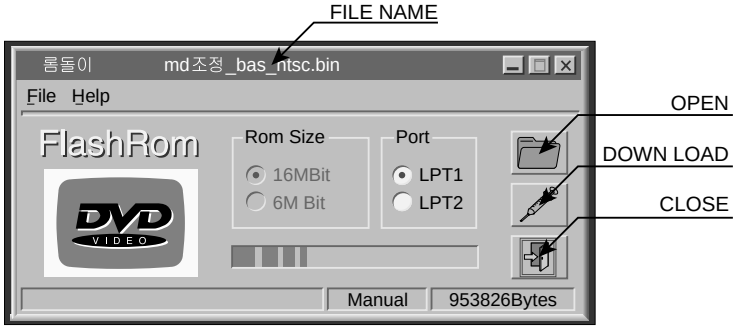


Fig.10. Adjusting Program File Open

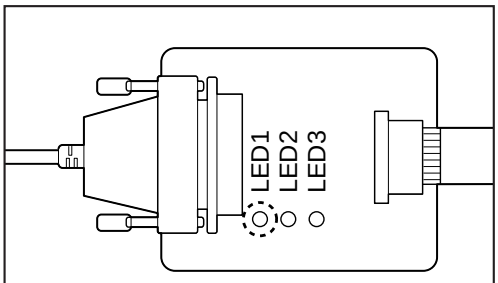


Fig.9. Jig Board LED Condition

DECK MECHANISM ADJUSTMENT

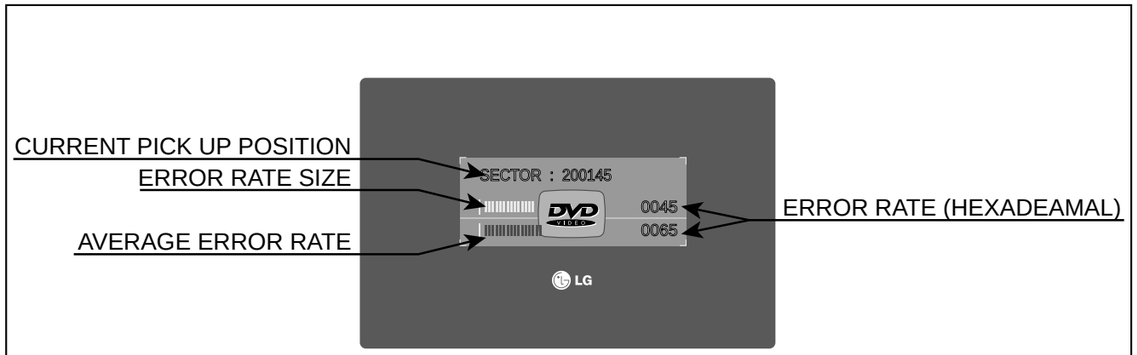


Fig.11. Adjusting Screen Display

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.

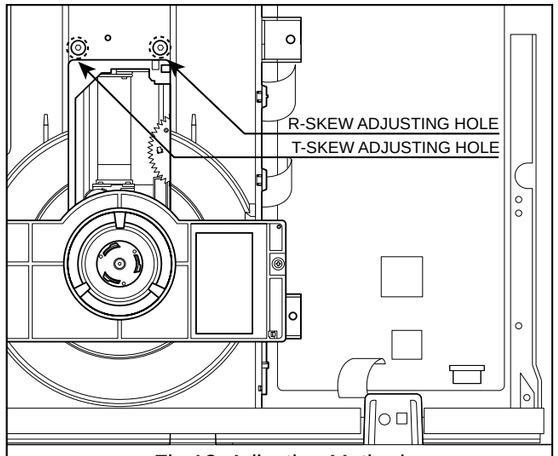


Fig.12. Adjusting Method

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

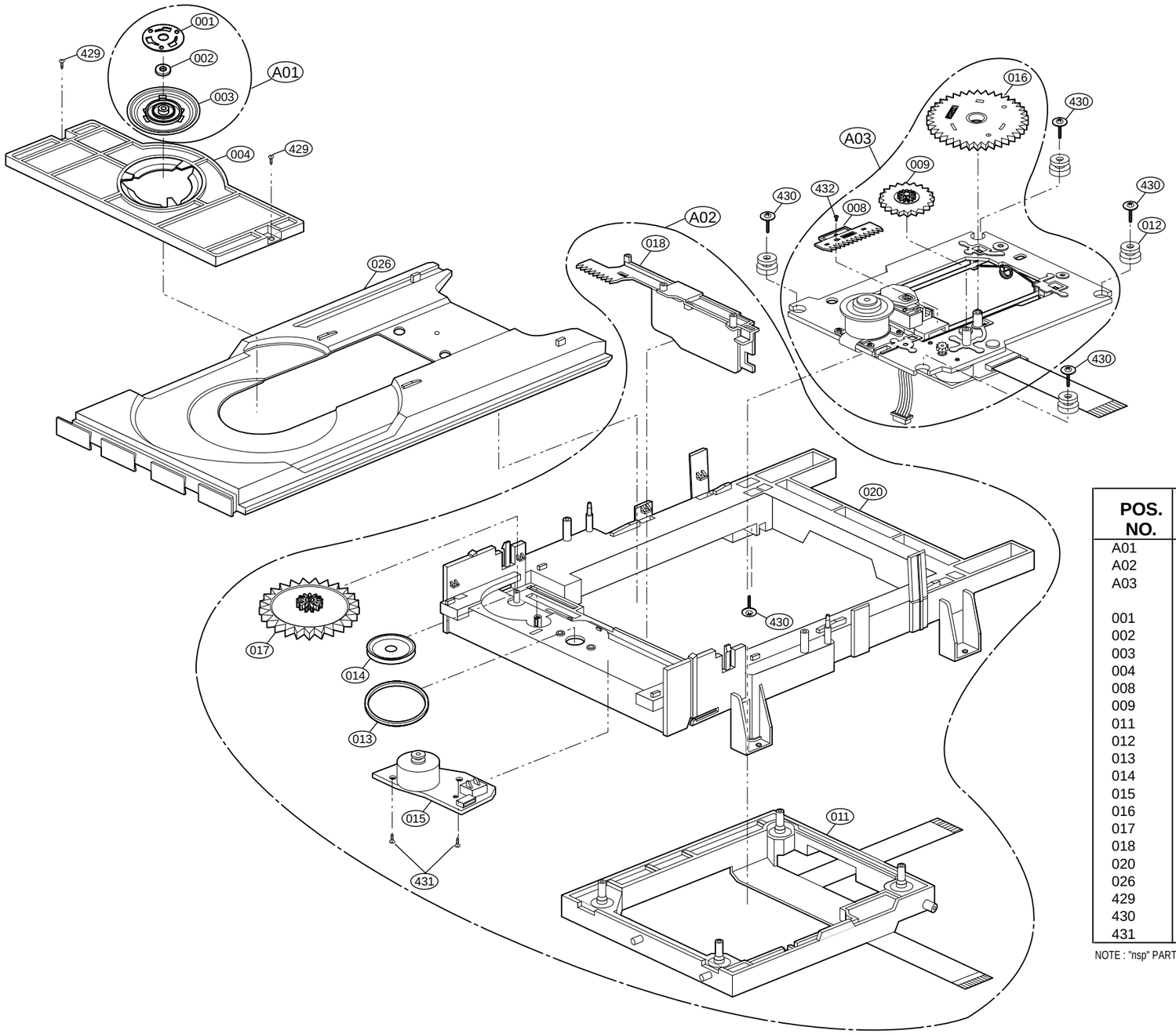
During reading the upgrade disc, error messages are as follows

[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.