

TOSHIBA

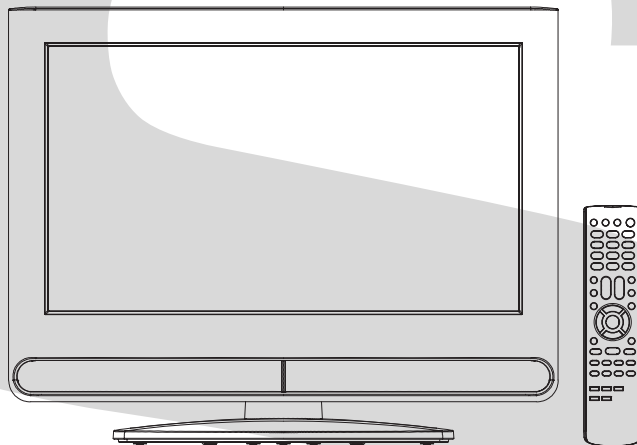
FILE NO. 810-200882GR

SERVICE MANUAL



15-inch Diagonal LCD TV/DVD COMBINATION

15LV505



The above model is classified as a green product (*1), as indicated by the underlined serial number.
This Service Manual describes replacement parts for the green product. When repairing this green product, use the part(s) described in this manual and lead-free solder (*2).

For (*1) and (*2), see the next page.

(*1)

GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

(*2)

LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

WARNING

This product is manufactured using lead free solder.

DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT !

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or PCB being soldered. Great care should be made to ensure high-quality soldering when servicing this product — especially when soldering large components, through-hole pins, and on PCBs — as the level of heat required to melt lead-free solder is high.

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How to Obtain Warranty Services

If, after following all of the operating instructions in this manual and checking the section "Troubleshooting," you find that service is needed:

- (1) For instructions on how to obtain warranty service for your LCD TV/DVD Combination, contact TACP's Consumer Solution Center toll free at 1-800-631-3811.
- (2) You must include a copy or original bill of sale or other proof of purchase along with the entire LCD TV/DVD Combination to the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center. You are responsible for all inbound transportation and insurance charges for the LCD TV/DVD Combination to the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center.

For additional information, visit TACP's website: www.tacp.toshiba.com

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No person, agent, distributor, dealer, or company is authorized to change, modify, or extend the terms of these warranties in any manner whatsoever. The time within which an action must be commenced to enforce any obligation of TACP arising under the warranty or under any statute or law of the United States or any state thereof is hereby limited to ninety (90) days from the date you discover, or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE IN THE U.S.A. SOME STATES OF THE U.S.A. DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, WHEN AN ACTION MAY BE BROUGHT, OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. SO THE ABOVE PROVISIONS MAY NOT APPLY TO YOU UNDER SUCH CIRCUMSTANCES.

TOSHIBA



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15-inch* Diagonal LCD TV/DVD COMBINATION

15LV505

OWNER'S MANUAL



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Before operating the unit, please read this manual thoroughly.
*Screen size is approximate.

Owner's Record
The model number and serial number are on the back of your TV/DVD. Record these numbers in the spaces below. Refer to these numbers whenever you communicate with your Toshiba dealer about this TV/DVD.
Model number: _____
Serial number: _____

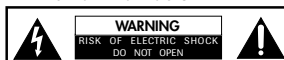
Dear Customer,

Thank you for purchasing this Toshiba LCD TV or TV/DVD Combination television.

This manual will help you use the many exciting features of your new LCD TV. Before operating your LCD TV or TV/DVD Combination, please read this manual completely, and keep it nearby for future reference.

Safety Precautions

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION: To reduce the risk of electric shock, do not use the polarized plug with an extension cord, receptacle, or other outlet unless the blades can be inserted completely to prevent blade exposure.



ENERGY STAR® qualified TV. Products that earn the ENERGY STAR prevent green house gas emissions by meeting strict energy efficiency guidelines set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. ENERGY STAR and the ENERGY STAR mark are registered U.S. marks.

NOTE TO CATV INSTALLERS

This is a reminder to call the CATV system installer's attention to Article 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to grounding system of the building, as close to the point of cable entry as practical. For additional antenna grounding information, see item 26 on page 5.

WARNING: Handling the cord on this product or cords associated with accessories sold with this product will expose you to lead, a chemical known to the State of California to cause birth defects or other reproductive harm. **Wash hands after handling.**

CHILD SAFETY:

It Makes A Difference How and Where You Use Your Flat Panel Display

Congratulations on your purchase! As you enjoy your new product, please keep these safety tips in mind:

The Issue

- The home theater entertainment experience is a growing trend and larger flat panel displays are popular purchases. However, flat panel displays are not always supported on the proper stands or installed according to the manufacturer's recommendations.
- Flat panel displays that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests or carts may fall over and cause injury.
- **TOSHIBA Cares!**
- The consumer electronics industry is committed to making home entertainment enjoyable and safe.

Tune Into Safety

- One size does NOT fit all. Follow the manufacturer's recommendations for the safe installation and use of your flat panel display.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don't allow children to climb on or play with furniture and television sets.
- Don't place flat panel displays on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" flat panel display. Care should be taken to place or install the display where it cannot be pushed, pulled over, or knocked down.
- Cords should be taken to route all cords and cables connected to the flat panel display so that they cannot be pulled or grabbed by curious children.

Wall Mounting: If you decide to wall mount your flat panel display, always:

- Use a mount that has been recommended by the display manufacturer and/or listed by an independent laboratory (such as UL, CSA, ETL).
- Follow all instructions supplied by the display and wall mount manufacturers.
- If you have any doubts about your ability to safely install your flat panel display, contact your retailer about professional installation.
- Make sure that the wall where you are mounting the display is appropriate. Some wall mounts are not designed to be mounted to walls with steel studs or old cinder block construction. If you are unsure, contact a professional installer.
- A minimum of two people are required for installation. Flat panel displays can be heavy.



www.CEA.org/safety

FCC compliance information

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

FCC Declaration of Conformity Statement (Part 15):

This Toshiba 15LV505 LCD TV/DVD Combination complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The party responsible for compliance to these rules is:

Toshiba America Consumer Products, L.L.C.
82 Totowa Rd. Wayne, NJ 07470.
Ph: (800) 631-3811 or visit TACP's website at www.tacp.toshiba.com

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by removing and applying power to the equipment, the user is encouraged to try to correct the interference by one or more of the following measures:

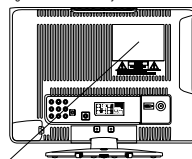
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications to this equipment not expressly approved by Toshiba could void the user's authority to operate this equipment.

CAUTION: THIS DIGITAL VIDEO PLAYER EMPLOYS A LASER SYSTEM. TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS OWNER'S MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION. USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. TO PREVENT DIRECT EXPOSURE TO LASER BEAM, NEVER OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. NEVER STARE INTO BEAM.

Location of the required Marking

The rating sheet and the safety caution are the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

ON DISPOSAL

The lamp(s) inside this product contain mercury. Disposal may be regulated due to environmental considerations. For disposal or recycling information, contact your local authorities or the Electronic Industries Alliance (www.eia.org).

SAFETY INSTRUCTIONS

Important Safety Instructions

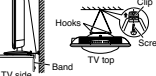
- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
 
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
 
- Only use attachments/accessories specified by the manufacturer.
 
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
 
- Unplug this apparatus during lightning storms or when unused for long periods of time.
 
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
 

Additional Safety Precautions

- 14a) **CAUTION:** If the TV is dropped and the cabinet or enclosure surface has been damaged or the TV does not operate normally, take the following precautions:
- ALWAYS turn off the TV and unplug the power cord to avoid possible electric shock or fire.
 - NEVER allow your body to come in contact with any broken glass or liquid from the damaged television. The LCD panel inside the TV contains glass and a toxic liquid. If the liquid comes in contact with your mouth or eyes, or your skin is cut by broken glass, rinse the affected area thoroughly with water and consult your doctor.
 - ALWAYS contact a service technician to inspect the TV any time it has been damaged or dropped.
- 14b) **WARNING:** To prevent the spread of fire, keep candles or other open flames away from this product at all times.

4

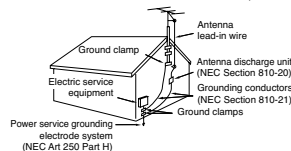
Installation, Care, and Service

- Installation**
Follow these recommendations and precautions and heed all warnings when installing your TV:
- To avoid damage to this product, never place or store the TV in direct sunlight; hot, humid areas; or areas subject to excessive dust or vibration.
 - Never modify this equipment. Changes or modifications may void: a) the warranty, and b) the user's authority to operate this equipment under the rules of the Federal Communications Commission.
 - DANGER: RISK OF SERIOUS PERSONAL INJURY, DEATH, OR EQUIPMENT DAMAGE!** Never place the TV on an unstable cart, stand, or table. The TV may fall, causing serious personal injury, death, or serious damage to the TV.
 
 - Never place items such as vases, aquariums, or candles on top of the TV.
 
 - WARNING:** Always place the TV on the floor or a sturdy, level, stable surface that can support the weight of the unit. To secure the TV, use a sturdy strap from the hooks on the rear of the TV pedestal to a wall stud, pillar or other immovable structure. Make sure the strap is tight, secure, and parallel to the floor.
 
 - Never expose the apparatus to dripping or splashing liquid or place items such as vases, aquariums, or any other item filled with liquid, or candles on top of the TV.
 - Never block or cover the slots or openings in the TV cabinet back, bottom, and sides. Never place the TV:
 - on a bed, sofa, rug, or similar surface;
 - too close to drapes, curtains, or walls; or
 - in a confined space such as a bookcase, built-in cabinet, or any other place with poor ventilation.
- The slots and openings are provided to protect the TV from overheating and to help maintain reliable operation of the TV. Leave a space of at least 4 inches around the TV.
- Always place the back of the television at least four (4) inches away from any vertical surface (such as a wall) to allow proper ventilation.
 - Never allow anything to rest on or roll over the power cord, and never place the TV where the power cord is subject to wear or abuse.
 - Never overload wall outlets and extension cords.
 - Always operate the TV with a 120V AC, 60Hz power source only.
- CAUTION:** To reduce the risk of electric shock, do not use the polarized plug with an extension cord, receptacle, or other outlet unless the blades can be inserted completely with three-wire grounding type to prevent blade exposure.

SAFETY INSTRUCTIONS (Continued)

Installation (cont. from previous page)

- 26) Always make sure the antenna system is properly grounded to provide adequate protection against voltage surges and built-up static charges (see Section 810 of the National Electric Code.)



- 27) **DANGER: RISK OF SERIOUS PERSONAL INJURY OR DEATH!**
• Use extreme care to make sure you are never in a position where your body (or any item you are in contact with, such as a ladder or screwdriver) can accidentally touch overhead power lines. Never locate the antenna near overhead power lines or other electrical circuits.
• Never attempt to install any of the following during lightning activity: a) an antenna system; or b) cables, wires, or any home theater component connected to an antenna or phone system.

Care

For better performance and safer operation of your TOSHIBA TV, follow these recommendations and precautions:

- 28) Always unplug the TV before cleaning.
Wipe the display panel surface gently using only a soft cloth (cotton, flannel, etc.). A hard cloth may damage the surface of the panel. Avoid contact with alcohol, thinner, benzene, acidic or alkaline solvent cleaners, abrasive cleaners, or chemical cloths, which may damage the surface. Never spray volatile compounds such as insecticide on the cabinet. Such products may damage or discolor the cabinet.
- 29) **WARNING: RISK OF ELECTRIC SHOCK!**
Never spill liquids or push objects of any kind into the TV cabinet slots.
- 30) While it is thundering, do not touch the connecting cables or apparatus.
- 31) For added protection of your TV from lightning and power surges, always unplug the power cord and disconnect the antenna from the TV if you leave the TV unattended or unused for long periods of time.

Care (cont. from previous column)

- 32) During normal use, the TV may make occasional snap ping or popping sounds. This is normal, especially when the unit is being turned on or off. If these sounds become frequent or continuous, unplug the power cord and contact a Toshiba Authorized Service Center.
- 33) Keep your fingers well clear of the disc slot as it is closing. Failure to do so may cause serious personal injury.
- 34) When you use headphones, keep the volume at a moderate level. Using headphones continuously at a high volume may cause hearing damage.
- 35) NEVER look directly into the disc slot or ventilation slots at the source of the laser beam. Doing so may cause sight damage.
- 36) NEVER use a cracked, deformed, or repaired disc. Such discs are easily broken and may cause serious personal injury or product damage. SUCH DAMAGE IS NOT COVERED UNDER YOUR WARRANTY.
- 37) **WARNING: RISK OF SERIOUS PERSONAL INJURY OR EQUIPMENT DAMAGE!**
• Never strike the screen with a sharp or heavy object.
• Never touch, press, or place anything on the LCD screen. These actions will damage the LCD screen. If you need to clean the LCD screen, follow the instructions in item 28 on this page.

Service

- 38) **WARNING: RISK OF ELECTRIC SHOCK!**
Never attempt to service the TV yourself.
Opening and removing the covers may expose you to dangerous voltage or other hazards. Failure to follow this WARNING may result in death or serious injury. Refer all servicing to a Toshiba Authorized Service Center.
- 39) If you have the TV serviced:
• Ask the service technician to use only replacement parts specified by the manufacturer.
• Upon completion of service, ask the service technician to perform routine safety checks to determine that the TV is in safe operating condition.
- 40) When the TV reaches the end of its useful life, ask a qualified service technician to properly dispose of the TV.

5

Precautions

Choosing a location for your LCD TV

- To Display your LCD TV on the included Pedestal Stand:
Observe the following safety precautions:

- Place the TV on a sturdy, level surface that can support the weight of the TV.
- Be sure to secure the TV to a wall, pillar, surface, or other immovable structure. To secure the TV in this manner, use the included strap located at the rear of pedestal stand. (see item 19, page 4).

Important notes about your LCD TV

The following symptoms are technical limitations of LCD Display technology and are not an indication of malfunction; therefore, Toshiba is not responsible for perceived defects resulting from these symptoms.

- An after image (ghost) may appear on the screen if a fixed, non-moving image is displayed for a long period of time. The after image is not permanent and will disappear in a short period of time.
- The LCD panel contained in this TV is manufactured using an extremely high level of precision technology; however, there may be an occasional pixel (dot of light) that does not operate properly (does not light, remains constantly lit, etc.). This is a structural property of LCD technology, is not a sign of malfunction, and is not covered under your warranty. Such pixels are not visible when the picture is viewed from a normal viewing distance.

Note: Interactive video games that involve shooting a "gun" type of joystick at an on-screen target may not work on this TV.

Notes on handling

- Do not subject the LCD panel to physical shock, such as dropping it. It may cause unit damage and malfunction.
- When shipping the unit, the original shipping carton and packing materials come in handy. For fully protection, repack the unit as it was originally packed at the factory.
- Do not use volatile liquids, such as insecticide, near the unit.
- Do not leave rubber or plastic products in contact with the unit for prolonged periods of time. Doing so will leave marks on the finish.
- The top and rear panels of the unit may become warm after a long period of use. This is not a malfunction.
- When the unit is not in use, always remove the disc and turn off the power.

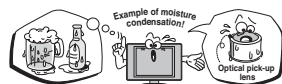
Notes on locating the unit

- When you place this unit near a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. In this case, place the unit away from the TV, radio, or VCR.
- To avoid damage to this product, never place or store the TV/DVD in direct sunlight; hot, humid areas; or areas subject to excessive dust or vibration.

6

Notes on moisture condensation

Moisture condensation damages the unit. Please read the following carefully.
Moisture condensation occurs, for example, when you pour a cold drink into a glass on a warm day and drops of water form on the outside of the glass. In the same way, moisture may condense on this unit's internal optical pick-up lens, one of the most crucial internal parts of the unit.



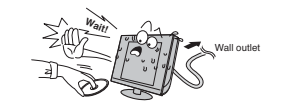
Moisture condensation may occur in the following situations:

- When you move the unit from a cold area to a warm area.
- When you use the unit in a room in which the heat was just turned on.
- When you use the unit in an area where cold air from an air conditioner directly hits the unit.
- When you use the unit in a humid area.



Never use the unit when moisture condensation may occur

Using the unit when moisture condensation exists may damage discs and internal parts. Connect the power cord of the unit to the wall outlet, turn on the unit, remove the disc, and leave it for two or three hours. After two or three hours, the unit will have warmed up and evaporated any moisture. Leaving the TV connected to the wall outlet will help prevent moisture condensation in the TV or DVD Player.

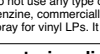


Notes on discs

On handling discs

- Do not touch the playback side of the disc. For example, handle the disc so that it is shown in figure below.
 
- Do not attach paper or tape to discs.
 

On cleaning discs

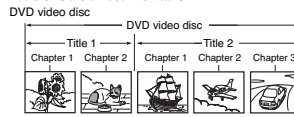
- Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the center outwards with a soft cloth. Always keep the disc clean.
 
- Do not use any type of solvent such as thinner, benzene, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.
 

On storing discs

- Do not store discs in a place subject to direct sunlight or near heat sources.
- Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
- Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

Structure of disc contents

Normally, DVD video discs are divided into titles, and the titles are sub-divided into chapters. Video CDs and Audio CDs are sub-divided into tracks.



Each title, chapter or track is assigned a number, which is called "title number", "chapter number" or "track number" respectively.
There may be discs that do not have these numbers.

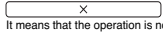
Notes on copyright

The unauthorized recording, use, distribution, or revision of copyrighted materials including, without limitation, television programs, videotapes, and DVDs, is prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.

About this owner's manual

This owner's manual explains the basic instructions of this unit. Some DVD video discs are produced in a manner that allows specific or limited operation during playback. As such, the unit may not respond to all operating commands. This is not a defect in the unit. Refer to instruction notes of discs.

The following symbol may appear on the TV screen during operation.

 It means that the operation is not permitted by the TV/DVD or the disc.
For example, sometimes it is unable to stop the playback of copyright message of the disc when the STOP (■) button is pressed. Alternatively, this symbol may also indicate that the feature is not available for the disc.

Notes on region numbers

The region number of this unit is 1. If region numbers, which stand for their playable area, are printed on your DVD video disc and you do not find (1) or (2), disc playback will not be allowed by the player. (In this case, the unit will display a message on-screen.) Some DVDs that have no region code label may still be subject to area restrictions and therefore not playable.

On Video CDs

This unit supports Video CDs equipped with the PBC (Version 2.0) function. (PBC is the abbreviation of Playback Control.) You can enjoy two playback variations depending on types of discs.
• **Video CD not equipped with PBC function (Version 1.1)**
Sound and movie can be played on this unit in the same way as a DVD.
• **Video CD equipped with PBC function (Version 2.0)**
In addition to operation of a Video CD not equipped with the PBC function, you can enjoy playback of interactive software with search function by using the menu displayed on the TV screen (Menu Playback). Some of the functions described in this owner's manual may not work with some discs.

7

Notes on discs (Continued)

Playable discs

This unit can play the following discs.

	Disc Mark	Contents	Disc Size	Maximum playback time
DVD video discs		Audio + Video (moving pictures)	12 cm	Approx. 4 hours (single sided disc)
			8 cm	Approx. 8 hours (double sided disc)
Video CDs		Audio + Video (moving pictures)	12 cm	Approx. 80 minutes (single sided disc)
			8 cm	Approx. 160 minutes (double sided disc)
Audio CDs		Audio	12 cm	Approx. 74 minutes (single sided disc)
			8 cm	Approx. 20 minutes (single sided disc)

The following discs are also available.

- DVD-R/RW discs of DVD video format
- CD-R/CD-RW discs of CD-DA, Video CD, MP3, WMA or JPEG format
- Kodak Picture CD and FUJICOLOR CD format

Some of these discs may be incompatible.

- You cannot play discs other than those listed above.
- You cannot play discs of DVD-RAM, DVD-ROM, CD-ROM, Photo CD, etc., or non standardized discs even if they may be labeled as above.
- Some CD-R/RWs cannot be played back depending on the recording conditions.
- This unit uses the NTSC color system, and cannot play DVD video discs recorded in any other color system (PAL, SECAM, etc.).
- This unit can play an 8cm disc. Please do not use a disc adapter. It may cause trouble.
- Please do not insert any disc of an irregular shape into the unit, as it may interfere with the function of the unit. You may not be able to remove it.
- Please do not use after market accessories, such as a ring protector, as this may cause trouble with the operation of the unit.

Because of problems and errors that can occur during the creation of DVD and CD Software and/or the manufacture of DVD and CD discs, Toshiba cannot assure that the DVD player contained in this TV will successfully play every disc bearing the DVD and CD logos.

If you happen to experience any difficulty playing a DVD and/or CD disc on the DVD player contained in this TV, please contact Toshiba Customer Service.

DVD is a trademark of DVD Format/Logo Licensing Corporation.

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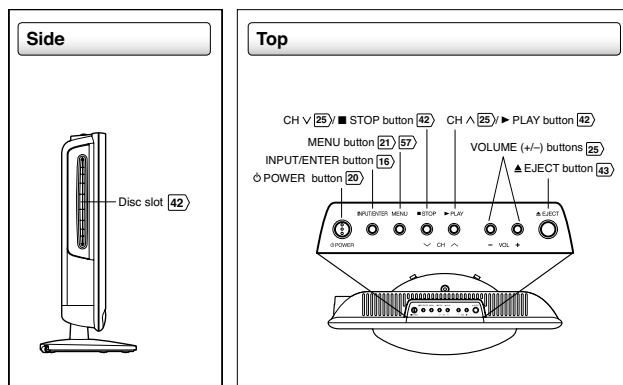
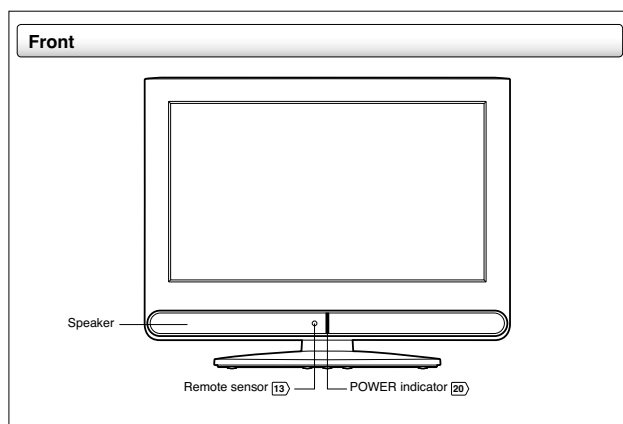
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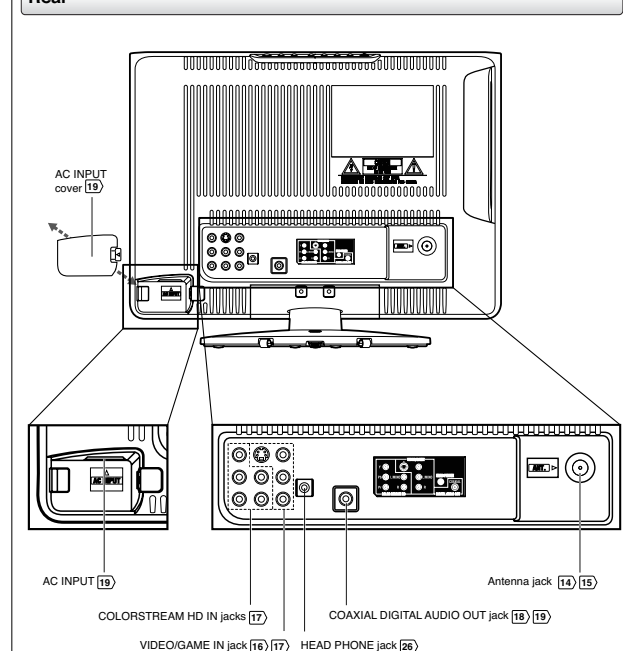
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Identification of controls



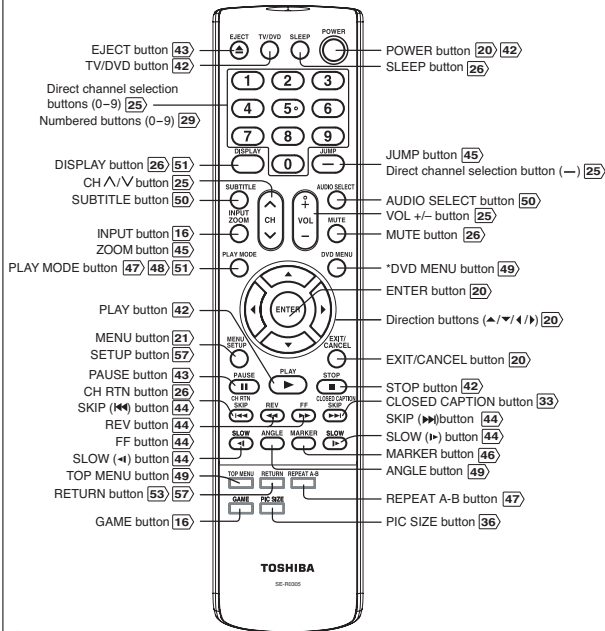
Rear



Identification of controls (Continued)

Remote control

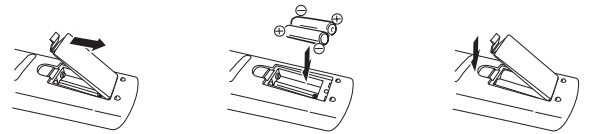
The instructions in this manual describe the function on the remote control. See the page in  for details.



***DVD MENU button**
Use the DVD MENU button to display the menu included on many DVD video discs. To operate a menu, follow the instructions in "DVD menu." **49**

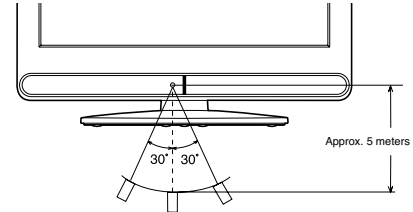
Inserting batteries

- 1 Open the battery compartment cover in the direction of the arrow.
- 2 Install two "R03/AAA" batteries (supplied), paying attention to the polarity indicated in the battery compartment.
- 3 Replace the compartment cover.



Operation

- Aim the remote control at the remote sensor and press control buttons to operate.
- Operate the remote control within 30° angle on either side of the remote sensor, up to a distance of approx. 5 meters.



Caution:
• Never throw batteries into a fire.

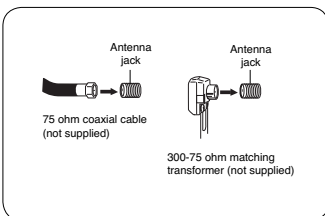
- Note:**
- Be sure to use AAA size batteries.
 - Dispose of batteries in a designated disposal area.
 - Batteries should always be disposed of with the environment in mind. Always dispose of batteries in accordance with applicable laws and regulations.
 - If the remote control does not operate correctly, or if the operating range becomes reduced, replace batteries with new ones.
 - When necessary to replace batteries in the remote control, always replace both batteries with new ones. Never mix battery types or use new and used batteries in combination.
 - Always remove batteries from remote control if they are dead or if the remote control is not to be used for an extended period of time. This will prevent battery acid from leaking into the battery compartment.

Connections

Antenna connections

If you are using an indoor or outdoor antenna, follow the instructions below that correspond to your antenna system. If you are using a cable TV service (CABLE), see **15** for Cable TV connections.

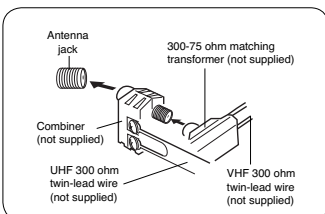
Combination VHF/UHF antenna (Single 75 ohm cable or 300 ohm twin-lead wire)



Connect the 75 ohm cable from the combination VHF/UHF antenna to the antenna jack on the back of the TV/DVD.

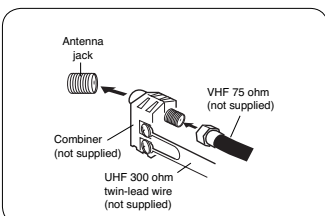
If your combination VHF/UHF antenna has a 300 ohm twin-lead wire, use the 300-75 ohm matching transformer (not supplied).

Combination VHF/UHF antenna (Separate VHF and UHF 300 ohm twin-lead wires)



Connect the UHF 300 ohm twin-lead wire to the combiner (not supplied). Connect the VHF 300 ohm twin-lead wire to the 300-75 ohm matching transformer (not supplied). Attach the transformer to the combiner, then attach the combiner to the antenna jack on the back of the TV/DVD.

Separate VHF/UHF antennas (75 ohm VHF cable and 300 ohm UHF twin-lead wires)

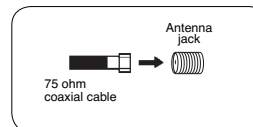


Connect the VHF 75 ohm cable and UHF 300 ohm twin-lead wire to the combiner (not supplied). Attach the combiner to the antenna jack on the back of the TV/DVD.

Cable TV connections

This TV/DVD has an extended tuning range and can tune most cable channels without using a Cable TV converter box. Some cable companies offer "premium pay channels" in which the signal is scrambled. Descrambling these signals for normal viewing requires the use of a descrambler device which is generally provided by the cable company.

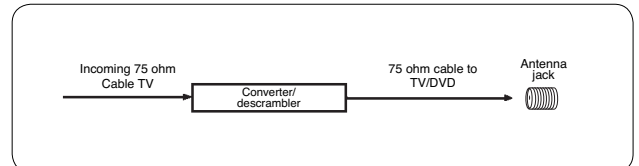
For subscribers to basic cable TV service



For basic cable service not requiring a converter/descrambler box, connect the Cable TV 75 ohm coaxial cable directly to the Antenna jack on the back of the TV/DVD.

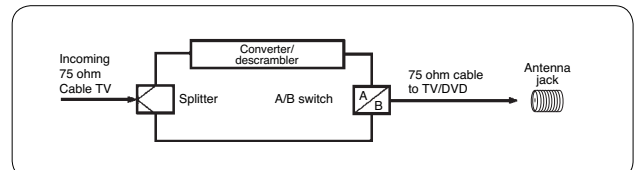
For subscribers to scrambled cable TV service

If you subscribe to a cable TV service which requires the use of a converter/descrambler box, connect the incoming 75 ohm coaxial cable to the converter/descrambler box. Using another 75 ohm coaxial cable, connect the output jack of the converter/descrambler box to the antenna jack on the TV/DVD. Follow the connections shown below. Set the TV/DVD to the output channel of the converter/descrambler box (usually channel 3 or 4) and use the converter/descrambler box to select channels.



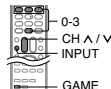
For subscribers to unscrambled basic cable TV service with scrambled premium channels

If you subscribe to a cable TV service in which basic channels are unscrambled and premium channels require the use of a converter/descrambler box, you may wish to use a signal splitter and an A/B Switch box (available from the cable company or an electronics supply store). Follow the connections shown below. With the switch in the "B" position, you can directly tune any nonscrambled channels on your TV/DVD. With the switch in the "A" position, tune your TV/DVD to the output of the converter/descrambler box (usually channel 3 or 4) and use the converter/descrambler box to tune scrambled channels.



Connecting to optional equipment

You can enjoy VCR, camcorder or TV game with connection to external input.



Using the audio/video inputs

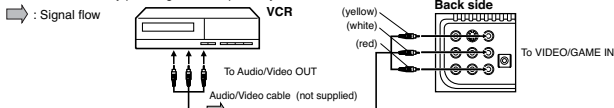
Press **INPUT** to view a signal from another device connected to your TV/DVD, such as a VCR player. You can select TV, Video or ColorStream HD depending on which input jacks you used to connect your devices.

Press **INPUT** on the remote control to display the current signal source. To change the input source, press **INPUT** again or press **0-2**. (3 is for selection DVD mode.)



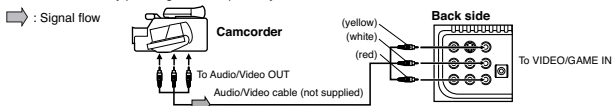
Connecting to a VCR

To playback from the VCR, connect the VCR to the TV/DVD as shown. Select the "Video" by pressing **INPUT** repeatedly.



Connecting to a camcorder

To playback from the camcorder, connect the camcorder to the TV/DVD as shown. Select the "Video" by pressing **INPUT** repeatedly.

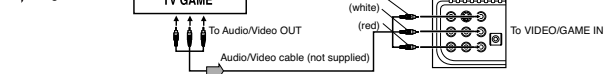


Connecting to a TV Game

You can enjoy playing a TV game on the screen by adjusting to the suitable brightness for your eyes.

1. Connect a TV Game to the TV/DVD.
2. Select the Game mode by pressing **GAME**. The Game mode screen appears.

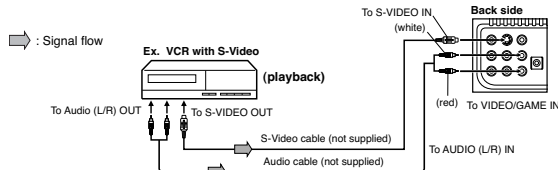
If **GAME** is pressed during standby mode, the unit turns on automatically and the Game mode screen appears on the screen.



- Note:**
- You can also change the TV/DVD screen to the desired mode by pressing the **CH A / V**.
 - The TV/DVD can also be used as a display device for many video games. However, due to the wide variety of different types of signal generated by these devices and subsequent hook-up variations required, they have not all been included in the suggested connection diagrams. You'll need to consult each component's Owner's Manual for additional information.
 - Interactive video games that involve shooting a "gun" type of joystick at on-screen target may not work on this TV/DVD.

Connecting to an optional equipment with S-video output

If you connect a VCR with an S-Video cable to the S-VIDEO IN jack on the left side of the TV/DVD, you must also connect the audio cables to the AUDIO IN jacks as shown below. The S-Video cable only carries the video signal. The audio signal is separated. Select the "Video" by pressing **INPUT** repeatedly.

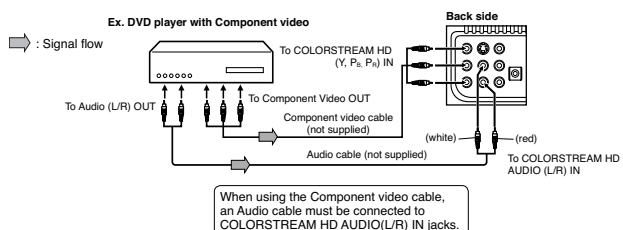


Note:

- When the S-Video cable and the standard video cable are connected at the same time, the S-video cable takes precedence.

Connecting an optional equipment with ColorStream® (Component video) output

Your TV/DVD is capable of using ColorStream® (component video). Connecting your TV/DVD to a component video compatible DVD player, such as a Toshiba DVD player with ColorStream® can greatly enhance picture quality and performance. Select the "ColorStream HD" by pressing **INPUT** repeatedly.

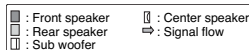


Note:

- The ColorStream® (component video) inputs on this unit are for use with devices that output 480i, 1080i interlaced signals and 480p, 720p progressive signals.
- Refer to the owner's manual of the connected equipment as well.
- When you connect the unit to other equipment, be sure to turn off the power and unplug all of the equipment from the wall outlet before making any connections.
- If you place the unit near a tuner or radio, the radio broadcast sound might be distorted. In this case, place the unit away from the tuner and radio.

Connecting to optional equipment (Continued)

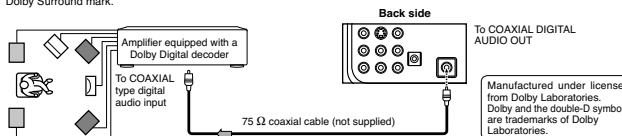
You can enjoy high quality dynamic sounds by connecting the TV/DVD to optional audio equipment.



Connecting to an amplifier equipped with a Dolby® Digital decoder

Dolby Digital

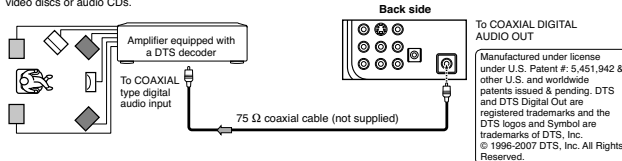
Dolby Digital is the surround sound technology used in theaters showing the latest movies, and is now available to reproduce this realistic effect in the home. You can enjoy motion picture and live concert DVD video discs encoded with the Dolby Digital recording system with this dynamic realistic sound by connecting the TV/DVD to a 6 channel amplifier equipped with a Dolby Digital decoder or Dolby Digital processor. If you have a Dolby Surround Pro Logic decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1-channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark.



Connecting to an amplifier equipped with a DTS® decoder

Digital Theater Systems (DTS)

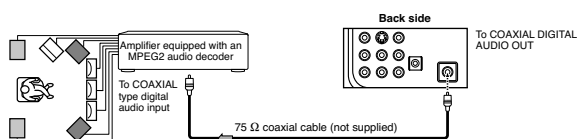
DTS is a high quality surround technology used in theaters and now available for home use, on DVD video discs or audio CDs. If you have a DTS decoder or processor, you can obtain the full benefit of 5.1 channel DTS encoded sound tracks on DVD video discs or audio CDs.



Connecting to an amplifier equipped with an MPEG audio decoder

MPEG2 sound

You can enjoy motion picture and live concert DVD video discs encoded via the MPEG2 recording system with dynamic realistic sound by connecting an amplifier equipped with an MPEG2 audio decoder or MPEG2 audio processor.



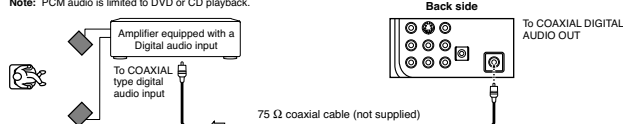
Connecting to optional equipment (Continued)/ Power source

Connecting to an amplifier equipped with a digital audio input

2 channel digital stereo

You can enjoy the dynamic sound of 2 channel digital stereo by connecting an amplifier equipped with a digital audio input and speaker system (right and left front speakers).

Note: PCM audio is limited to DVD or CD playback.



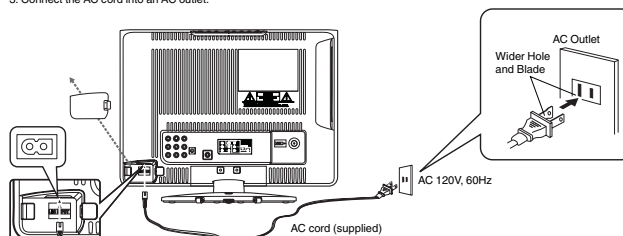
Note:

- DO NOT connect the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD to the AC-3 RF input of a Dolby Digital Receiver. This input on your A/V Receiver is reserved for Laserdisc use only and is incompatible with the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD.
- Connect the COAXIAL DIGITAL AUDIO OUT jack of the TV/DVD to the "COAXIAL" input of a Receiver or Processor.
- Refer to the owner's manual of the connected equipment as well.
- When you connect the TV/DVD to other equipment, be sure to turn off the power and unplug all of the equipment from the wall outlet before making any connections.
- The output sound of the TV/DVD has a wide dynamic range. Be sure to adjust the receiver's volume to a moderate listening level. Otherwise, the speakers or your hearing may be damaged by a sudden high volume sound.
- Turn off the amplifier before you connect or disconnect the TV/DVD's power cord. If you leave the amplifier's power on, the speakers may be damaged.

Power source

To use AC power source

1. Open the AC INPUT cover.
2. Connect the AC cord plug into this TV/DVD's AC INPUT jack, then close the AC INPUT cover.
3. Connect the AC cord into an AC outlet.



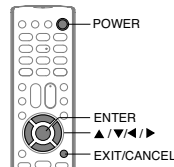
Note:

- Never connect the AC line cord plug to other than the specified voltage (120V 60Hz). Use the attached power cord only.
- If the polarized AC cord does not fit into a non-polarized AC outlet, do not attempt to file or cut the blade. It is the user's responsibility to have an electrician replace the obsolete outlet.
- If you cause a static discharge when touching the unit and the unit fails to function, simply unplug the unit from the AC outlet and plug it back in. The unit should return to normal operation.
- If the AC cord plug is plugged in for the first time, wait for approx. 5 seconds before pressing **POWER**.

Auto Setup

The Auto Setup function helps to install your TV/DVD easily. It leads you the Language selection, Air/Cable selection and Automatic channel search.

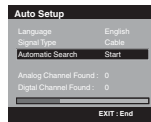
IMPORTANT: Make sure that the antenna or cable TV system connection is made!



Auto Setup

- 1 To turn on the TV/DVD, press **POWER**.
• POWER indicator on the front of the unit changes blue. It may take approx. 10 seconds for a picture to appear on screen.
- 2 Auto Setup menu appears on the screen. Press **▲** or **▼** to select "Language", then press **◀** or **▶** to select your desired language.
- 3 Press **▲** or **▼** to select "Signal Type", then press **◀** or **▶** to select "Air" or "Cable".
- 4 Press **▲** or **▼** to select "Automatic Search", then press **▶** or **ENTER**.

5 Now the "Automatic Search" starts.



- If you press **EXIT/CANCEL**, the Automatic Search stops and changes to the TV screen.
- After the starting setup is completed, the TV channel appears on the screen.

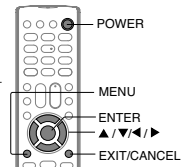
Note:

- The Auto Setup function will work only when you press **POWER** for the first time.
- The process of "Automatic Search" may take 15 to 30 minutes to complete, depending on your regional cable service.

Setting the language

This TV/DVD can display the on screen language in English, French or Spanish.

Select the language you prefer first, then proceed with the other menu options.



Setting the language

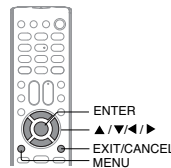
- 1 To turn on the TV/DVD, press **POWER**.
• POWER indicator on the front of the unit changes blue. It may take approx. 10 seconds for a picture to appear on screen.
- 2 Press **MENU**. The TV menu screen will appear. Press **▲** or **▼** to select "Setup", then press **▶** or **ENTER**.
- 3 Press **▲** or **▼** to select "Language".
- 4 Press **◀** or **▶** to select the desired language: English, French (Français) or Spanish (Español).
- 5 Press **EXIT/CANCEL** to return to the normal screen.

Note:

- If the unit does not operate properly, or No key operation (by the unit and/or the remote control): Static electricity, etc., may affect the TV/DVD's operation. In such case, disconnect the AC cord once, then connect it again.
- If no buttons are pressed for more than about 60 seconds, the MENU screen will return to normal operation automatically.
- The TV section has its own menu and the DVD section also has its own menu [57].

To memorize channels

This TV/DVD is equipped with a channel memory feature which allows channels to skip up or down to the next channel set into memory, skipping over unwanted channels. Before selecting channels, they must be programmed into the TV/DVD's memory. To use this TV/DVD with an antenna, set the Signal Type option to the Air mode. When shipped from the factory, this menu option is in the Cable mode.



Air/Cable selection

- 1 Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select "Channel", then press **▶** or **ENTER**.
- 2 Press **▲** or **▼** to select "Auto Ch Memory", then press **▶** or **ENTER**.
- 3 Press **▲** or **▼** to select "Signal Type".
- 4 Press **◀** or **▶** to select "Air" or "Cable".
- 5 Press **EXIT/CANCEL** to return to the normal screen.

Automatic search

- 1 Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select "Channel", then press **▶** or **ENTER**.
- 2 Press **▲** or **▼** to select "Auto Ch Memory", then press **▶** or **ENTER**.
- 3 Press **▲** or **▼** to select "Automatic Search", then press **▶** or **ENTER**.
- 4 The TV/DVD will begin memorizing all the channels available in your area.

Add/Delete channel

You can select the channel that you want to skip.

- 1 Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select "Channel", then press **▶** or **ENTER**.
- 2 Press **▲** or **▼** to select "Add/Delete", then press **▶** or **ENTER**.
- 3 Press **▲** or **▼** to select "Add/Delete", then press **▶** or **ENTER**.
- 4 Press **▲** or **▼** to select the channel that you want to skip.
- 5 Press **◀** or **▶** to select "Add" or "Delete", whichever function you want to perform.
- 6 Repeat steps 4 - 5 for other channels you want to add or delete.
- 7 Press **EXIT/CANCEL** to return to the normal screen.

The diagram shows a circular button with a central circle containing the word "ENTER". Surrounding this central circle are four curved segments, each with a small arrow pointing outwards. To the right of the button is a screenshot of the "Add/Delete" menu. The menu has a title "Add/Delete" at the top. Below it are three options: "Adding Channel" (with a right arrow), "Add/Delete" (with a right arrow), and "Clear All" (with a right arrow). At the bottom of the menu are two more options: "▲▼: Select" and "ENTER-Set".

The diagram shows a circular button with the word "ENTER" in the center. Surrounding the center are four curved arrows pointing outwards, representing the four-way navigation (up, down, left, right). To the right of the button is a screenshot of the "Add/Delete" menu. The menu has a title "Add/Delete" at the top. Below it are three options: "Adding Channel" with a right arrow, "Add/Delete" with a right arrow, and "Clear All" with a right arrow. The "Add/Delete" option is highlighted with a dark background. At the bottom of the menu, there are two more options: "▲▼: Select" and "ENTER: Set".

EXIT/
CANCEL
O

Diagram of the front panel of the remote control with labels:

- SLEEP
- DISPLAY
- VOL +/-
- MUTE
- CH RTN

MUTE

Diagram of the remote control with labels:

- POWER
- 0-9, -
- VOL +/-
- CH ^/v

Air	- VHF/UHF channels
Cable	- Cable TV channels

Air	Cable
VHF 2-13	VHF 2-13
UHF 14-69	STD/HRC/IRC 14-36 (A) (W) 37-59 (AA) (VWV) 60-85 (AAA) (ZZZ) 86-94 (86) (94) 95-99 (A-5) (A-1) 100-125 (100) (125) 01 (5A)

- If a channel with no broadcast is selected, the sound will automatically be muted.
- It may take a few seconds for a digital channel picture to appear on screen after being selected.

Diagram of the remote control showing the following buttons:

- ENTER
- ▲ / ▼ / ◀ / ▶
- EXIT/CAN. MENU

The diagram shows a U-shaped icon with four arrowheads pointing towards the center. To its right is a screenshot of the 'Ch Label' screen. The screen has a dark header with 'Ch Label' in white. Below the header is a table with two columns: 'Channel Number' and '15-1'. The next row shows 'Ch Label' and an empty field. The next row shows 'Label Clear' and '>>'. At the bottom, there are two buttons: 'Select' with a left arrow and 'Adjust' with a right arrow.

→ 0...9 ↔ A...Z ↔ - . , 0 @ / + = -

Repeat this step to enter the rest of the characters.
If you would like a blank space in the label name, you must choose the empty space from the list of characters.

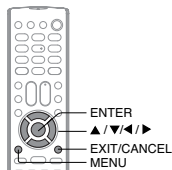
EXIT/
CANCEL

Repeat steps 3-5 for other channel. You can assign a label to each channel.

- The channel labels will be reset after "Automatic Search" [22].

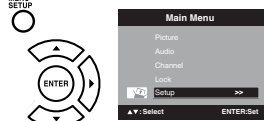
Labeling video inputs

The Video Label feature allows you to label each input source for your TV/DVD.

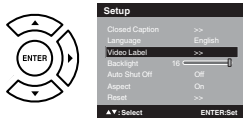


Labeling video inputs

- 1** Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Setup", then press ► or ENTER.



- 2** Press ▲ or ▼ to select "Video Label", then press ► or ENTER.



- 3** Press ▲ or ▼ to select an input which you want to label.



- 4** Press ▲ or ▼ to select the desired label for that input source.



- : Uses the default label name
 VCR : Video cassette recorder
 DVD : DVD video
 DTV : Digital TV set-top box
 SAT : Satellite box
 CBL : Cable box

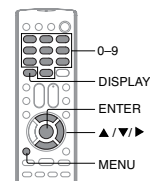
- 5** Press EXIT/CANCEL to return to the normal screen.



Setting the V-Chip

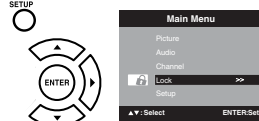
An age limitation can be set to restrict children from viewing or hearing violent scenes or pictures that you may choose to exclude. The restriction applies to "TV Rating" and "Movie Rating" if this data is transmitted. You may set this restriction separately. To use the V-Chip function, you must register a password.

Notes:
If you forget the password, press **DISPLAY** four times within five seconds while the TV is in password entering mode. This allows you to reset your password.

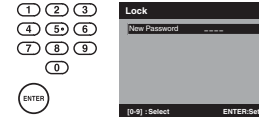


To register a password

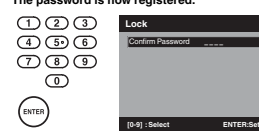
- 1** Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Lock", then press ► or ENTER.



- 2** Select and enter your password (4 digits) using Number buttons (0-9), then press ENTER.



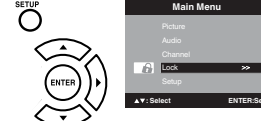
- 3** Enter the same password again to confirm, then press ENTER.



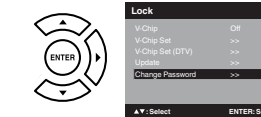
Note:
• The V-Chip feature is available only for the U.S. V-Chip system. The Canadian V-Chip system is not supported.

To change a password

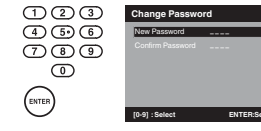
- 1** Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Lock", then press ► or ENTER.



- 2** Press ▲ or ▼ to select "Change Password", then press ► or ENTER. The Change Password screen will appear.

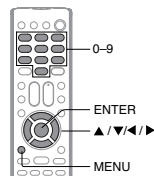


- 3** Enter a new password using Number buttons (0-9), then press ENTER.



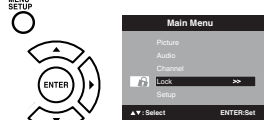
- 4** Enter the same password again to confirm, then press ENTER. The new password is now registered.

Setting the V-Chip (Continued)

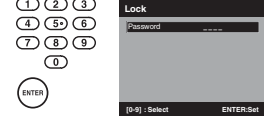


To set the V-Chip

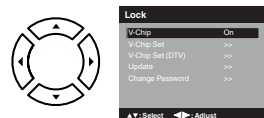
- 1** Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Lock", then press ► or ENTER.



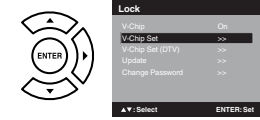
- 2** Use Number buttons (0-9) to enter your password, then press ENTER. Then Lock menu will appear.



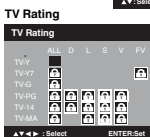
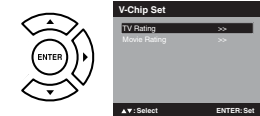
- 3** Press ▲ or ▼ to select "V-Chip", then press ▲ or ▼ to select "On".



- 4** Press ▲ or ▼ to select "V-Chip Set", then press ► or ENTER. The V-Chip Set Menu appears.



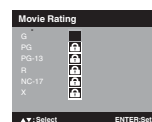
- 5** Press ▲ or ▼ to select which rating will be used, then press ► or ENTER. Each rating below will appear.



You can set the rating using age level and genre.

Age:
 TV-Y : All children
 TV-Y7 : 7 years old and above
 TV-G : General audience
 TV-PG : Parental guidance
 TV-14 : 14 years old and above
 TV-MA : 17 years old and above
Genre:
 ALL : All
 D : Dialogue
 L : Language
 S : Sex
 V : Violence
 FV : Fantasy Violence

Movie Rating



G : All ages
PG : Parental guidance
PG-13 : Parental guidance less than 13 years old
R : Under 17 years old parental guidance suggested
NC-17 : 17 years old and above
X : Adult only

- 6** Press ▲ or ▼ to select the desired rating, then press ENTER.

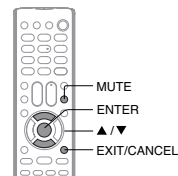


- 7** Press EXIT/CANCEL to return to the normal screen.



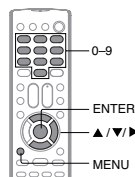
To use the TV/DVD after it is protected.
When a program is received that is blocked by the V-Chip, press **MUTE**, then enter your password. The protection will be temporarily overridden. If the TV/DVD is turned off or the channel is changed, the V-Chip restriction will be reactivated.

Note:
• The V-Chip function is activated only on programs and input sources that include a rating signal.



Setting the V-Chip (Continued)

As a supplement to the standard V-Chip rating system, your television will be able to download an additional rating system, if such a system becomes available in the future.



To download the additional V-Chip rating system (when available)

- Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select **"Lock"**, then press **►** or **ENTER**.
- Use Number buttons (0-9) to enter your password, then press **ENTER**. Then Lock menu will appear.
- Press **▲** or **▼** to select **"V-Chip Set (DTV)"**, then press **►** or **ENTER**.
- If the TV/DVD is not storing the additional rating system, the TV/DVD will begin downloading it, which may take some time to be completed.
- Set your preferred content rating limits for the additional rating system.

- You also need "Update" procedure to update rating information.

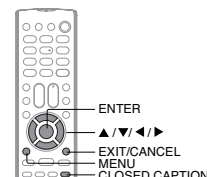
Note:

- You can only download the additional V-Chip rating system when your TV/DVD is receiving a digital signal.
- When you download the additional rating system, it may take some time for the download to occur.
- The V-Chip rating information and system are not determined or controlled by the TV/DVD.
- The standard V-Chip rating system is available whether your TV/DVD is receiving a digital signal or not, and will block both analog and digital programs. To set the restriction level using the standard V-Chip rating system, select "V-Chip Set" in step 3.
- The downloadable V-Chip rating system is an evolving technology, and availability, content, and format may vary.
- You cannot select this feature if the TV/DVD is not receiving a digital signal for the current station.

Setting the closed captions

WHAT IS CLOSED CAPTIONING?

This television has the capability to decode and display closed captioned television programs. Closed captioning will display text on the screen for hearing impaired viewers or it will translate and display text in another language.



Setting the closed captions

- Press **MENU** in the TV mode. Press **▲** or **▼** to select **"Setup"**, then press **►** or **ENTER**.
- Press **▲** or **▼** to select **"Closed Caption"**, then press **►** or **ENTER**. The Closed Caption menu will appear.
- Press **▲** or **▼** to select **"CC Setting"**, then press **◀** or **►** to select **"On"**.
- Press **▲** or **▼** to select **"Analog Caption"** or **"Digital Caption"**, then press **◀** or **►** to select the desired Closed Caption mode.
- Press **▲** or **▼** to select **"CC Priority"**, then press **◀** or **►** to select **"Digital CC"** or **"Analog CC"**.
- Press **EXIT/CANCEL** to return to the normal screen.

Note:

- You can also display the Closed Caption menu screen by pressing **CLOSED CAPTION** on the remote control.
- Digital caption feature is not available for analog channel.

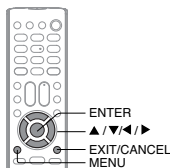
Important Note:

If text is not available in your viewing area, a black rectangle may appear on-screen. If this happens, set "CC Setting" to "Off".

CC advanced

When you have selected Custom as the display method, you can adjust the various setting listed below as follows:

This feature is designed to customize Digital Captions only.



CC advanced

- Press **MENU** in the TV mode. Press **▲** or **▼** to select **"Setup"**, then press **►** or **ENTER**.
- Press **▲** or **▼** to select **"Closed Caption"**, then press **►** or **ENTER**. The Closed Caption menu will appear.
- Press **▲** or **▼** to select **"Digital CC Preset"**, then press **◀** or **►** to select **"Custom"**.
- Press **▲** or **▼** to select **"CC Advanced"**, then press **►** or **ENTER**. The CC Advanced menu will appear.
- Press **▲** or **▼** to select the desired item, then press **◀** or **►** to change the setting.
- Press **EXIT/CANCEL** to return to the normal screen.

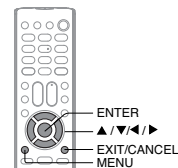
Note:

- You cannot select "CC Advanced" in the menu before set "Digital CC preset" to "Custom".
- You cannot set the Closed Caption "Text Color" and "Background Color" as the same color.

Adjusting the picture preference/ Picture settings

You can select four picture modes—Sports, Standard, Movie and Memory—as described in the following table:

Picture settings are factory preset but you can adjust them individually as follows:



Adjusting the picture preference

- Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select **"Picture"**, then press **►** or **ENTER**.
- Press **▲** or **▼** to select **"Picture Preference"**.
- Press **◀** or **►** to select a mode you want to adjust.
- After your desired setting, press **EXIT/CANCEL** to return to the normal screen.

Mode	Picture Quality
Sports	Bright and dynamic picture (factory-set)
Standard	Standard picture quality (factory-set)
Movie	Movie-like picture setting (factory-set)
Memory	Your personal preferences (set by you; see "Picture settings" at right).

Picture settings

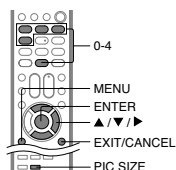
- Press **MENU** in the TV mode. The TV menu screen will appear. Press **▲** or **▼** to select **"Picture"**, then press **►** or **ENTER**.
- Press **▲** or **▼** to select **"Picture Setting"**, then press **►** or **ENTER**. The Picture Setting menu will appear.
- Press **▲** or **▼** to select the item you want to adjust. Press **◀** or **►** to adjust the setting.
- After your desired setting, press **EXIT/CANCEL** to return to the normal screen.

Note:

- The Contrast default setting is set to maximum at the factory.

Viewing the wide-screen picture formats

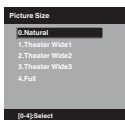
You can view programs in a variety of picture sizes—Natural, Theater Wide1, Theater Wide2, Theater Wide3 and Full.



Viewing the wide-screen picture formats

1 Press MENU. Press ▲ or ▼ to select "Picture", then press ► or ENTER.

2 Press ▲ or ▼ to select "Picture Size", then press ► or ENTER to display Picture Size menu. Press ▲/▼ or corresponding Number button (0-4) to select the desired picture size, as described below.



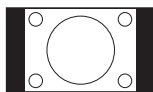
Note:

- Selectable picture sizes may vary depending on the input source or broadcast signal.
- Picture Size menu also can be displayed by pressing **PIC SIZE** on the remote control.

3 Press EXIT/CANCEL to return to the normal screen.

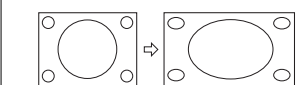
Natural picture size

In some cases, this image will display the size of standard 4:3 with a black side bar.



Theater Wide1 picture size (for 4:3 format programs)

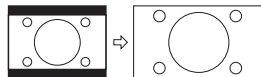
To fill the screen, the right and left edges are extended, however, the center of the picture remains near its former ratio.



Theater Wide2 picture size (for letter box programs)

The entire picture is uniformly enlarged—it is stretched the same amount both wider and taller (retains its original proportion).

The top and bottom edges of the picture may be hidden.



Theater Wide3 picture size (for letter box programs with subtitles)

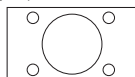
To fill the width of the screen, it is extended horizontally. However, it is only slightly extended at the top and the bottom.

The top and bottom edges of the picture may be hidden.



Full picture size (for 16:9 source programs)

Full will display the picture at the maximum size.



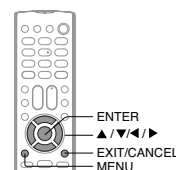
Note:

- Some High Definition and/or Digital broadcasts may not allow you to change the picture size.
- In 720p or 1080i signal, only the Theater Wide2 and Full picture size features are available.

Film Mode/DNR

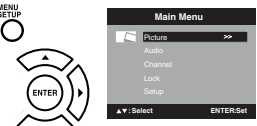
A smoother motion may be obtained by setting the Film Mode to "On" when you view a DVD.

DNR (Digital Noise Reduction) can reduce the roughness of the picture. (This function is available only for analog broadcast.)

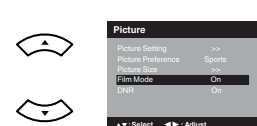


Film Mode

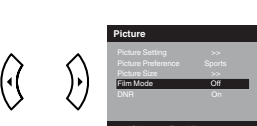
1 Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Picture", then press ► or ENTER.



2 Press ▲ or ▼ to select "Film Mode".



3 Press ◀ or ▶ to select "On" or "Off".



4 Press EXIT/CANCEL to return to the normal screen.

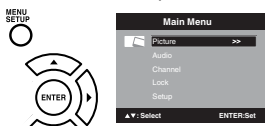


Note:

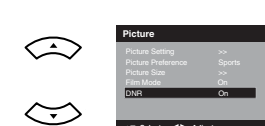
- A smoother motion may be obtained by setting the Film Mode to "On" when you view a DVD from the DVD player connected with ColorStream (component video) inputs.

DNR

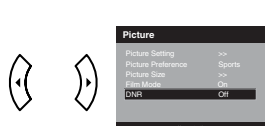
1 Press MENU in the TV mode. Then press ▲ or ▼ to select "Picture", then press ► or ENTER.



2 Press ▲ or ▼ to select "DNR".



3 Press ◀ or ▶ to select "On" or "Off".

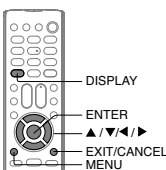


Sound control adjustment/

Selecting Stereo/Second Audio Program (SAP)

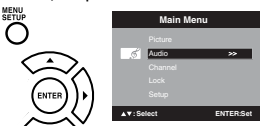
The multi-channel TV sound (MTS) feature provides high-fidelity stereo sound. MTS also can transmit a second audio program (SAP) containing a second language or other audio information.

When the TV/DVD receives a stereo or SAP broadcast, the word "Stereo" or "SAP" displays on-screen every time you press **DISPLAY**.

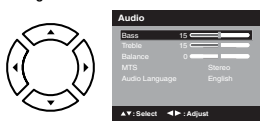


Sound control adjustment

1 Press MENU in the TV mode. The TV menu screen will appear. Press ▲ or ▼ to select "Audio", then press ► or ENTER.



2 Press ▲ or ▼ to select the item you want to adjust. Then press ◀ or ▶ to adjust each setting.



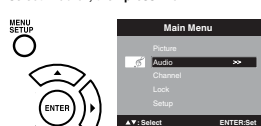
Bass: Press ◀ or ▶ to adjust the bass sound.
Treble: Press ◀ or ▶ to adjust the treble sound.
Balance: Press ◀ or ▶ to obtain an equal sound level from both speakers.

3 After your desired setting, press EXIT/CANCEL to return to the normal screen.

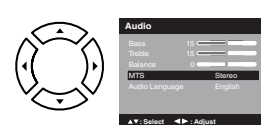


Selecting Stereo/Second Audio Program (SAP)

1 Press MENU in the TV mode. Press ▲ or ▼ to select "Audio", then press ► or ENTER.



2 Press ▲ or ▼ to select "MTS", then press ◀ or ▶ to select "Stereo".



3 Press EXIT/CANCEL to return to the normal screen.



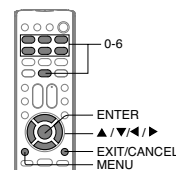
Note:

- Generally you can leave your TV in stereo mode because the TV automatically outputs the type of sound being broadcast (stereo or mono).
- If the stereo sound is noisy, select "Mono" to reduce the noise.

To listen to a second audio program (SAP)
 Press ◀ or ▶ to select "SAP" in step 2 above. The TV speakers will output the second audio program instead of normal audio.

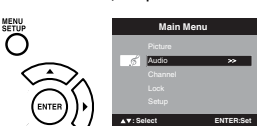
Selecting the audio language

When two or more audio languages are included in a digital signal, you can select one of the audio language. (This function is available only for digital broadcast.)

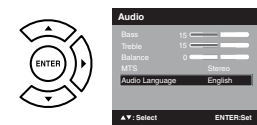


Selecting the audio language

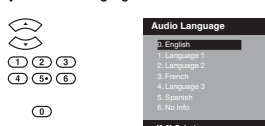
1 Press MENU in the TV mode. Then press ▲ or ▼ to select "Audio", then press ► or ENTER.



2 Press ▲ or ▼ to select "Audio Language", then press ► or ENTER to display the Audio Language menu.



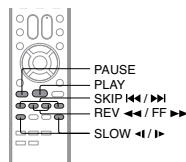
3 Press ▲/▼ or Number buttons (0-6) to select your desired language.



4 After your desired setting, press EXIT/CANCEL to return to the normal screen.



Playing a disc (Continued)



Playing in fast reverse or fast forward directions

Press REV or FF during playback.



REV: Fast reverse playback
FF: Fast forward playback

Each time you press REV or FF button, the playback speed changes.

To resume normal playback

Press PLAY.



Note:

- The TV/DVD mutes sound during reverse and forward scan of DVD/VCD/Audio CD discs.
- The playback speed may differ depending on the disc.

Playing frame by frame

Press PAUSE during still playback.



Each time you press PAUSE, the picture advances one frame.

To resume normal playback

Press PLAY.



Note:

- The sound is muted during frame by frame playback.

Playing in slow-motion

Press SLOW (REVERSE) or (FORWARD) during playback.



Each time you press the button, the slow-motion speed changes.

To resume normal playback

Press PLAY.



Note:

- The sound is muted during slow-motion playback.
- The Video CD cannot play Reverse Slow.

Locating a chapter or track

Press SKIP (REVERSE) or (FORWARD) repeatedly to display the chapter or track number you want.

Playback starts from the selected chapter or track.



To locate succeeding chapters or tracks.



Playback starts from the beginning of the current chapter or track. When you press twice in quick successions, playback starts from the beginning of the preceding chapter or track.

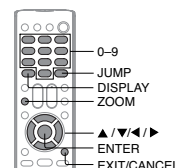
Note:

- A "Prohibition" symbol "X" may appear at the upper right of the screen. This symbol means either the feature you tried is not available on the disc, or the TV/DVD cannot access the feature at this time. This does not indicate a problem with the TV/DVD.

Zooming/Locating desired scene

This unit will allow you to zoom in on the frame image. You can then make selections by switching the position of the frame.

Use the title, chapter and time recorded on the DVD disc to locate the desired point to playback. In the case of VCD/Audio CD discs, time and track are used to locate the desired point to playback. To check the title/track, chapter/track and time, press DISPLAY.



Zooming

1 Press ZOOM during playback.



The center part of the image will be zoomed in. Each press of ZOOM will change the ZOOM (x1.3), (x1.5) and (x2.0).



2 Press (UP/DOWN) to view a different part of the frame.



You may move the frame from the center position to UP, DOWN, LEFT or RIGHT direction.

3 In the zoom mode, press ZOOM repeatedly to return to a 1:1 view (Off).

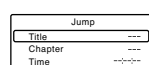


Note:

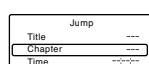
- You can select the Pause, Slow or Search playback in the zoom mode.
- Some discs may not respond to zoom feature.

Locating desired scene

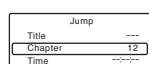
1 Press JUMP during playback or stop mode.



2 Press (UP/DOWN) to select the "Title/Track", "Chapter" or "Time".



3 Press Number buttons (0-9) to input the number.



- If you input a wrong number, press EXIT/CANCEL.
- Refer to the package supplied with the disc to check the numbers.

4 Press ENTER. Playback starts.

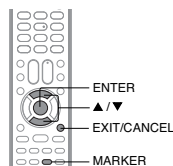


Note:

- In case of the Audio CD and Video-CD, only Track and Time can be selected.
- In case of the Video-CD playback with PBC, the JUMP does not work. To turn off PBC, see page 51.

Marking desired scenes

The unit stores the points that you want to watch again up to 3 points. You can resume playback from each scene.



Marking the scenes

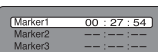
1 Press MARKER during playback.



2 Select the blank Marker using (UP/DOWN). Then press ENTER to mark the desired scene.



- Repeat this procedure to mark the other 2 scenes.



3 Press MARKER to clear the display.

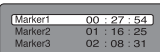


Note:

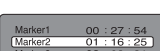
- Some discs may not work with the marking operation.
- The marking is cancelled when you eject the disc or turn the power off.
- Some subtitles recorded around the marker may fail to appear.
- In case of Video CD with PBC, Marker function is prohibited.

Returning to the scenes

1 Press MARKER during playback or stop mode.



2 Press (UP/DOWN) to select the Marker 1-3.



3 Press ENTER.

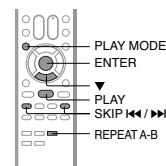


Playback starts from the marked scene.

To cancel the Marker

Follow the above steps 1-2, then press EXIT/CANCEL.

Repeat playback/A-B Repeat playback



Repeat playback

1 Press PLAY MODE during playback or stop mode.



2 [DVD] Press ENTER repeatedly to select "Chapter" or "Title".



The unit automatically starts repeat playback after finishing the current title or chapter.



[Video CD] Press (UP/DOWN) to select "Repeat". Press ENTER repeatedly to select "Track" or "All".



The unit automatically starts repeat playback after finishing the current track.



If you set the repeat mode during stop mode, press PLAY to start Repeat playback.

3 Press PLAY MODE again to clear the screen.



To resume normal playback

Select Repeat : "Off" in step 2.

Note:

- Some discs may not work with the repeat operation.
- In case of Video CD with PBC, Repeat function is prohibited during playback.
- Chapter/Track repeat function is canceled whenever SKIP (REVERSE) or (FORWARD) is pressed.

A-B Repeat playback

A-B Repeat playback allows you to repeat a section between two selected points.

1 Press REPEAT A-B during playback.



The start point is selected.



2 Press REPEAT A-B again.



The end point is selected. Playback starts at the point that you selected. Playback stops at the end point and returns to Point A automatically, then starts again.



To resume normal playback

Press REPEAT A-B again.



"Off" appears on the screen.

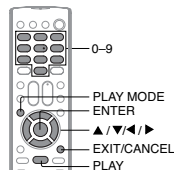
Note:

- In A-B Repeat mode, subtitles near the A or B locations may not be displayed.
- You cannot set the A-B Repeat for the scenes that include multiple angles.
- A-B Repeat playback does not work when Repeat playback is activated.
- You may not be able to set A-B Repeat during certain scenes of the DVD.
- A-B Repeat does not work with an interactive DVD and MP3/WMA/JPEG CD.
- In case of Video CD with PBC, A-B Repeat is prohibited.

Program playback/Random playback

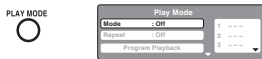
You can arrange the playback order of tracks on the disc. And the unit can also select tracks at random and playback them. These features work for Video CD.

For Audio CD and MP3/WMA CD, please see "Random playback (Audio CD/MP3/WMA/JPEG)" [55](#) and "Program playback (Audio CD/MP3/WMA/JPEG)" [56](#).



Program playback

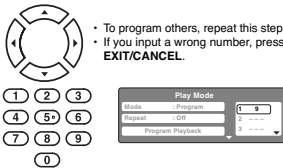
1 Press PLAY MODE in the stop mode.



2 Press ▲ or ▼ to select "Mode", then press ENTER repeatedly to select "Program".



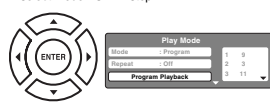
3 Press ◀/▶ to select the programming position. Press ▲/▼ and then use Number buttons (0-9) to input the track.



4 Press ◀/▶ to return to the left column, then press ▲/▼ to select the "Program Playback" and press ENTER.

The programs you selected will start to playback in order.

- To resume normal playback, select Mode: "Off" in step 2.



To change the program

1. Select Mode to "Program" (as step 2), press ▲/▼/▶ to select the track number you want to change, then press EXIT/CANCEL.

2. Press Number buttons (0-9) to input the new track number.

3. To clear the program one by one: Select Mode to "Program", press ▲/▼/▶ to select the track number. Then press EXIT/CANCEL.

4. To clear all the programs: At the left column, press ▲/▼ to select "Clear Program". Then press ENTER.

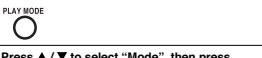
Note:

- In playing back the Video CD with PBC, you cannot set Program playback.

- The program is canceled when you eject the disc or turn the power off.

Random playback

1 Press PLAY MODE during playback or stop mode.



2 Press ▲/▼ to select "Mode", then press ENTER repeatedly to select "Random".



3 Press PLAY.

The Random Playback will start.

- If you set "Random" during playback mode, Random playback will begin after the track that is currently being played has ended.
- To resume normal playback, select Mode: "Off" in step 2.

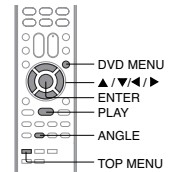
Note:

- In case of Video CD with PBC, you cannot set Random function during playback.

- The random playback is canceled when you eject the disc or turn the power off.

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Changing angles/Title selection/ DVD menu



Changing angles

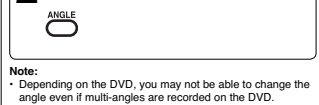
When playing back a disc recorded with multi-angle facility, you can change the angle that you are viewing the scene from.

1 Press ANGLE during playback.

The current angle will appear.



2 Press ANGLE repeatedly until the desired angle is selected.



Note:

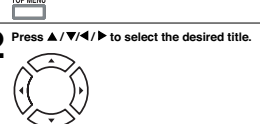
- Depending on the DVD, you may not be able to change the angle even if multi-angles are recorded on the DVD.

Title selection

Two or more titles are recorded on some discs. If the title menu is recorded on the disc, you can select the desired title.

1 Press TOP MENU during playback.

Title menu appears on the screen.



3 Press ENTER or PLAY.

The playback of the selected title will start.

Note:

- Depending on the DVD, you may not be able to select the title.
- Depending on the DVD, a "title menu" may simply be called a "menu" or "title" in the instructions supplied with the disc.

DVD menu

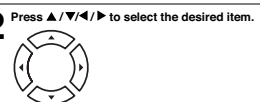
Some DVDs allow you to select the disc contents using the menu.

When you playback these DVDs, you can select the subtitle language, soundtrack language, etc., using the menu.

1 Press DVD MENU during playback.

The DVD menu appears on the TV screen.

- Press DVD MENU again to resume playback at the scene when you pressed DVD MENU.



3 Press ENTER.

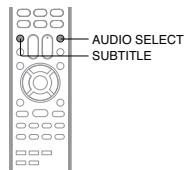
The menu continues to another screen. Repeat steps 2 and 3 to set the item completely.

Note:

- Depending on the DVD, you may not be able to resume playback from the scene point when you press DVD MENU.

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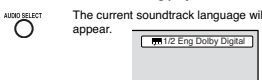
Changing soundtrack language/Subtitles



Changing soundtrack language

You can select the language when you play a multilingual disc.

1 Press AUDIO SELECT during playback.



2 Press AUDIO SELECT repeatedly until the desired language is selected.



- The on screen display will disappear after a few seconds.

In case of Video CD playback

Audio type changes as follows each time you press AUDIO SELECT.



Note:

- If the desired language is not heard after pressing the button several times, the language is not recorded on the disc.

- The selected soundtrack language is cancelled when you eject the disc. The initial default language or available language will be heard if the disc is played back again.

- If you select DTS in playing DTS-encoded disc, no sound will be heard from the TV/DVD's speakers.

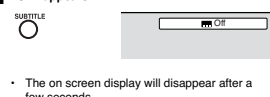
Subtitles

When playing back a disc recorded with subtitles, you can select the subtitle language or turn the subtitle off.

1 Press SUBTITLE repeatedly during playback until the desired language is selected.



2 To turn off the subtitle, press SUBTITLE until "Off" appears.

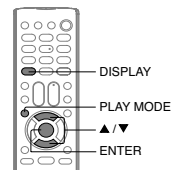


- The on screen display will disappear after a few seconds.

Note:

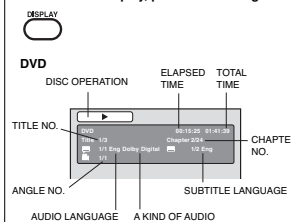
- Depending on the DVD, you may not be able to change subtitles, or to turn subtitles on or off.
- While playing a DVD, the subtitle may change when you loaded or eject the disc.
- In some cases, a selected subtitle language may not be changed immediately.

Disc status/To turn off the PBC

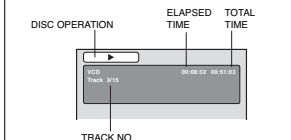


Disc status

With press of DISPLAY, the status of the disc will appear on the screen. To cancel the display, press DISPLAY again.

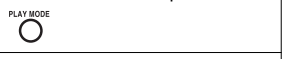


Video CD



To turn off the PBC (see [7](#))

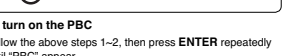
1 Press PLAY MODE in the stop mode.



2 Press ▲/▼ to select "Mode", then press ENTER repeatedly until "Off" appear.



3 Press PLAY MODE again to clear the screen.



To turn on the PBC

Follow the above steps 1-2, then press ENTER repeatedly until "PBC" appear.

Advanced playback

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MP3/WMA/JPEG and Audio CD operation

This unit can playback the MP3/WMA/JPEG-data which has been recorded on CD-R or CD-RW. To produce the MP3/WMA/JPEG-data, you need a Windows-PC with CD-RW drive and a MP3/WMA/JPEG-encoding Software (not supplied). The Apple-HFS-System cannot be played.

This player requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. There are many different types of recordable disc formats (including CD-R containing MP3/WMA files). Not all recordable discs will produce optimal playback quality. The technical criteria set forth in this owner's manual are meant only as a guide. Use of CD-RW for MP3 files is not recommended.

You must obtain any required permission from copyright owners to download or use copyrighted content. Toshiba cannot and does not grant such permission.

Audio CD/MP3/WMA/JPEG CD information

Limitations on MP3/WMA/JPEG CD playback

- MP3/WMA/JPEG CD is the disc that is standardized by ISO9660, its file name must include 3-digits extension letters, ".mp3", ".wma", ".jpg".
- MP3/WMA/JPEG CD must be correspond to the ISO standardized files.
- This unit can read 2000 files per disc. If one disc has more than 2000 files, it reads up to 2000 files, the remaining files will be omitted.
- MP3/WMA/JPEG CDs cannot be used for the purpose of recording.
- If the CD has both audio tracks and MP3/WMA/JPEG files, only audio tracks will be played.
- It may take more than one minute for this unit to read MP3/WMA/JPEG files depending on its structure.
- Music recorded by "Joliet Recording Specification" can be played back, the file name is displayed (within 15 letters) on the screen. Long file names will be condensed.
- The music files recorded by "Hierarchical File System" (HFS) cannot be played.

Limitations on display

- The maximum number for display is 15 letters.
- Available letters for display are the following:
capital or small alphabets of A through Z, numbers of 0 through 9, and _ (under score).
- Other letters than those above are replaced by hyphen.

Notes on MP3/WMA/JPEG files

To playback MP3/WMA/JPEG CD in the recorded order.

- Use MP3/WMA/JPEG software that records data alphabetically or numerically.
- Name each file including two-digit or three-digit number (ex. "01" "02" or "001" "002").
- Refrain from making too many sub-folders.

CAUTION:

- Some MP3/WMA/JPEG CDs cannot be played back depending on the recording conditions.
- The CD-R/RW that has no music data or non MP3/WMA/JPEG files cannot be played back.

Standard, sampling frequency and the bit rate:

MP3 CD

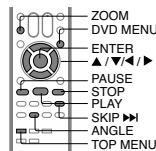
MPEG-1 Audio
32kHz, 44.1kHz, 48kHz
320kbps - 320kbps (constant bit rate or variable bit rate)
The recommend recording setting for a high-quality sound is 44.1kHz of sampling frequency and 128kbps of constant bit rate.

WMA CD

WMA version 7 and 8
32kHz/48kbps, 44.1kHz/48kbps-192kbps, 48kHz/128kbps-192kbps
The file recorded by mono, 48kHz, 48 kbps is not available to this unit.

Microsoft, Windows Media, and Windows Logo are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

MP3/WMA/JPEG and Audio CD operation (Continued)



JPEG playback

1 Load a JPEG disc in the disc slot.

2 A file browser screen will appear on the screen.



3 Press ▲/▼ to select the file.

To display a thumbnail list, press DVD MENU. Press ◀/▶/▲/▼ to select the desired file. (To return to the file browser, press TOP MENU.)



- When PLAY is pressed after the file browser displayed, playback begins automatically starting from the first file. In this case, if the first file is a JPEG file, the first JPEG file is played back. If the first file is an MP3/WMA file, only MP3/WMA files are played back in order. If there is no file at a root directory, playback does not begin automatically.

4 Press ENTER or PLAY. The selected picture appears on the screen.



Rotating an image

You can rotate an image by 90 degrees. Press ANGLE during playback of the image.

Zooming an image
Zoom function also can be used in viewing JPEG files. Press ZOOM (See "Zooming" 45).

5 Press STOP to end playback.



The file browser appears on the screen. If you want to watch the other file, repeat steps 3 - 4.

Slide show playback

The slide show enables you to view pictures (files) one after another automatically.

Preparation:

- Set "JPEG Interval" setting to "5 Seconds", "10 Seconds" or "15 Seconds" (59).

1 Select your desired starting file for the slide show in the step 3 on left.

2 Press ENTER or PLAY to start slide show from the selected file.



- If you press PAUSE during the slide show, the slide show stops temporarily. "II" appears briefly on the TV screen. Press PLAY or SKIP ► again to resume the slide show.
- If the picture appears upside down or sideways, press ANGLE repeatedly until it's right side up.
- When the slide show playback finished, the file list appears. "■" or "■" appears on the TV screen.
- To stop the slide show, press STOP. The file browser appears.

Note:

- During JPEG playback, you cannot use Jump and A-B Repeat functions.
- When an image exceeds 5760 x 3840 pixels, the entire image may not be displayed on a screen, preview window or thumbnail list.
- It may have a longer interval due to the size of data.

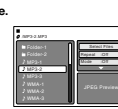
MP3/WMA and Audio CD playback

1 Load an Audio CD or a disc on which MP3 or WMA files have been recorded in the disc slot.

2 A file browser screen will appear on the screen.



3 Press ▲/▼ to select file.



- In case the current directory includes more than 8 files, press ▲ or ▼ to scroll in the file list.
- To see contents in folder, select the folder and then press ENTER. To return to the parent directory, press RETURN or select "Go Up ..." then press ENTER.
- When PLAY is pressed after the file browser displayed, playback begins automatically starting from the first file. In this case, if the first file is an MP3/WMA file, only MP3/WMA files are played back in order. If the first file is a JPEG file, the first JPEG file is played back. If there is no file at a root directory, playback does not begin automatically.

4 Press ENTER.

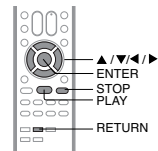
The selected file starts playing back.



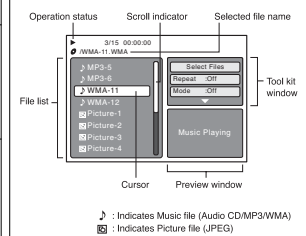
5 Press STOP to end playback.



- The unit records the stopped point. "■" appears on the TV screen. Press PLAY to resume playback (from the scene point).
- If you press STOP again or unload the disc, the unit will clear the stopped point.



About file menu



- In the case of a CD containing a mixture of MP3, WMA and JPEG files, the files are played back by selecting them from the file browser.
- MP3 or WMA file on the Kodak Picture CD is not recognized on this unit.

Note:

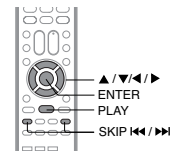
- During MP3/WMA playback, you cannot use Jump and A-B Repeat functions.
- You can use Repeat (Track or All), Random functions and Program playback for Audio CD/MP3/WMA/JPEG playback (55) (56).

Select Files

The file type to make it display in the file browser can be chosen.

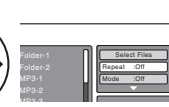
- Press ◀ or ▶ to highlight "Select Files" at right column in the file browser.
- Press ENTER, then press ▲ or ▼ to select file type from the list (Music or Picture).
- Press ENTER to add/remove check mark. Checked file type will be displayed in the file browser.
- Press RETURN to save the setting.

Repeat, random and program playback using file browser



Repeat playback (Audio CD/MP3/WMA/JPEG)

1 In the file browser, press ◀/▶/▲/▼ to select "Repeat" during stop mode.



2 Press ENTER repeatedly to select "Track" or "All".



3 Press PLAY.



The unit automatically starts repeat playback after finishing the current track.

To resume normal playback

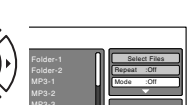
Select Repeat : "Off" in step 2.

Note:

- The repeat function is canceled when you eject the disc or turn the power off.
- Track repeat function is canceled whenever SKIP ◀ or ▶ is pressed.

Random playback (Audio CD/MP3/WMA/JPEG)

1 In the file browser, press ◀/▶/▲/▼ to select "Mode" during stop mode.



2 Press ENTER to select "Random".



3 Press PLAY.



The random playback will start.

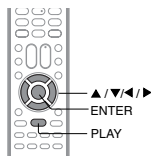
To resume normal playback

Select Mode : "Off" in step 2.

Note:

- The random function is canceled when you eject the disc or turn the power off.

Repeat, random and program playback using file browser (Continued)



Program playback (Audio CD/MP3/WMA/JPEG)

- 1** In the file browser, press $\blacktriangle/\blacktriangleright/\blacktriangleleft/\blacktriangledown$ to select "Edit Mode", then press ENTER.



When "Edit Mode" is black color, you can mark the files which you want to add into Program list.

- 2** Press $\blacktriangle/\blacktriangleright/\blacktriangleleft/\blacktriangledown$ to select file you want to add into the program list.



Press ENTER. Selected file was marked. Repeat this procedure to select the other files.

- 3** Press $\blacktriangle/\blacktriangleright/\blacktriangleleft/\blacktriangledown$ to select "Add To Program". Then press ENTER. All marked files are added into the program list.

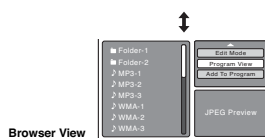


When you finish storing the files which you want into the Program list, select "Edit Mode" and press ENTER to release edit mode.

- 4** Press $\blacktriangle/\blacktriangleright$ to select "Program View", then press ENTER. Program View shows only the programmed files that you have added in step 2.



Program View



Browser View

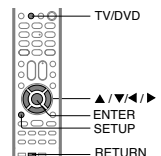
- 5** In the Program View, press PLAY. The files start to playback in programmed order that were added by you.

- To remove file from program list in stop mode**
In the Edit Mode, switch to Program View. Select file you want to remove, then press ENTER. Select "Clear Program" and press ENTER. Marked file is removed from program list.

Note:
• The program function is cancelled when you eject the disc or turn the power off.

Customizing the function settings

You can change the default settings of the DVD mode to customize performance to your preference.
Press TV/DVD on the remote control to select DVD mode.



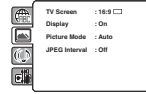
Setting procedure

- 1** Press SETUP during stop mode.

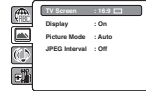
The following on-screen display appears.



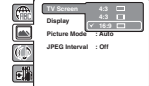
- 2** Press $\blacktriangle$ or $\blacktriangledown$ to select the desired section, then press $\blacktriangleleft$ or $\blacktriangleright$.



- 3** First option will be highlighted. Press $\blacktriangle$ or $\blacktriangledown$ to select the desired option.



- 4** Then press $\blacktriangleright$ or ENTER. The selectable settings will appear.



- 5** Change the selection using $\blacktriangle$ or $\blacktriangledown$, by referring to the corresponding pages (57 ~ 60). Press ENTER to save the setting.



- Repeat steps 3, 4 and 5 to change other option.
- To select another section, go back to step 2 by pressing $\blacktriangleleft$ repeatedly.

- 6** To clear SETUP screen, press SETUP once or press RETURN repeatedly.

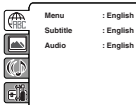


Setting details

Section	Option	Details	Page
	Menu Subtitle	To select the language of "Menu", "Subtitle" and "Audio" if more than one language are available on the disc.	58
	Audio		
	TV Screen	To select a picture size according to the aspect ratio of your TV.	59
	Display	To turn On or Off the operational status display on the TV screen.	
	Picture Mode	To select a preferred picture mode from "Video", "Film" or "Auto".	
	JPEG Interval	To select a preferred setting for the slide show playback.	60
	Night Mode	To select On or Off for Night Mode.	
	Digital Out	To select a digital output sound format corresponding to your system connection.	60
	Parental	To select a preferred parental level for the parental setting.	
	Password	To change the password.	57

Customizing the function settings (Continued)

Setting details



Menu, Subtitle, Audio

You can select the language of "Menu", "Subtitle" and "Audio" if more than one languages are recorded onto the disc.

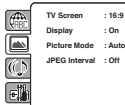
English, Francais, Espanol:
The selected language will be heard or seen.

Other:
Other language can be selected (see "Language code list" (65)).

Original (Audio):
The unit will select the first priority language of each disc.

Off (Subtitle):
Subtitles do not appear.

Note:
• If the selected language is not recorded on the disc, the first-priority language is selected.
• If you want to change the OSD language, you can perform it by "Language" in the TV menu (21).



TV Screen

You have the following screen sizes to choose from:

4:3 (Letter box):
When playing back a wide screen-DVD disc, it displays the wide picture with black bands at the top and bottom of screen.

4:3 (Pan & scan):
It displays the wide picture on the whole screen with left and right edges automatically cut off.

16:9 (Wide):
A wide screen picture is displayed full size.

Note:
• If the DVD disc is not formatted in the Pan & scan style, it will display 4:3 style.

Display

On screen display can be switched on or off when you press any buttons.

Off: On screen displays do not appear when you press any buttons.
On: On screen displays appear when you press the buttons (factory setting).

Picture Mode

There are two types of source content in pictures recorded in DVD video discs: film content (pictures recorded from films at 24 frames per second) and video content (video signals recorded at 30 frames per second). Make this selection according to the type of content being viewed.

Auto: Select this selection normally.

The DVD player automatically detects source content, film or video of playback source, and converts that signal in an appropriate method.

Film: The DVD player converts film content pictures appropriately. Suitable for playback of film content pictures.

Video: The DVD player filters video signal and converts it appropriately. Suitable for playback of video content pictures.

Note:
• Depending on the disc, pictures may be cut off or doubled. In this case, select "Video".

JPEG Interval

You can continuously playback all JPEG files

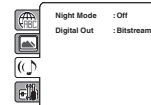
automatically.
After the selection below, the disc will start playback on JPEG files which have been recorded.

Off:
Plays back one file at a time.

5 Seconds:
Plays back images in the form of a slide show at 5 second intervals.

10 Seconds:
Plays back images in the form of a slide show at 10 second intervals.

15 Seconds:
Plays back images in the form of a slide show at 15 second intervals.



Night Mode

Night Mode enables you to control the dynamic range so as to achieve a suitable sound for your equipment.

Off: It plays back at the recording level on the disc.

On: Loud sound such as explosion is toned down slightly when played back. This is suitable when it is connected to a stereo.

Note:
• This function works only when the disc recorded with Dolby Digital is played back.
• The level of Night Mode may differ depending on DVD video disc.

Digital Out

You can select the digital output sound format corresponding to your system connection.

Off:
There is no sound output from DIGITAL AUDIO OUT jack.

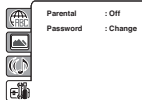
PCM:
Change Dolby Digital to PCM for the output. Select when connected to a 2 channel digital stereo amplifier.

Bitstream:
Disc audio bitstream data will be output.

Note:
• Even if you select "Bitstream", MPEG Audio will be output in PCM format.

Customizing the function settings (Continued)

Setting details (continued)



■ Parental control setting

Some discs are specified as not suitable for children. Such discs can be limited not to playback with the unit.

- Press **▲** or **▼** to select "Parental", then press **ENTER**. "Enter Password" screen will appear.
- Press "0000" using **Number buttons (0-9)**. (Please note, this is pre-setting password of this unit). Then press **ENTER**. The parental level list will appear.

- Level Off:** The parental control setting does not function.
- Level 8:** Virtually all DVD software can be played back.
- Level 1:** DVD software for adults cannot be played back.

- Press **▲** or **▼** to select from the level 1 to level 8. The limitation will be more severe as the level number is lower. Then press **ENTER**.

Note:

- The parental control level is equivalent to the following USA movie ratings.

Level 1: G	Level 5:
Level 2:	Level 6: R
Level 3: PG	Level 7: NC-17
Level 4: PG-13	Level 8:

The parental control levels for other countries/area than U.S. are included for future use. Check the appropriate parental control level when you buy a DVD video disc equipped with the parental control feature in the future.

- Depending on the discs, the unit cannot limit playback.
- Some discs may not be encoded with specific rating level information though its disc jacket says "adult." For those discs, the age restriction will not work.
- The password is required every time when you change the parental level.
- If you input a wrong number, press **EXIT/CANCEL**.

■ Set the new password

- Press **▲** or **▼** to select "Password", then press **ENTER**. "Enter Current Password" screen will appear.
- Press **Number buttons (0-9)** to input the current password (If the password has not been set yet after you purchase this unit, it is "0000").
- Then press **ENTER**. "Enter New Password" screen will appear. Press **Number buttons (0-9)** to input the new password.
- Press **ENTER**. Now your new password has been set. Be sure to remember this number!

If you forget the password

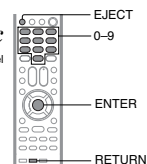
- Press **EJECT** to remove the disc.
- While holding **7** down on the remote control and then press **STOP** on the unit. "Password Clear" appears on the screen. Now the password has been returned to the initial value ("0000").

Note:

- If each setup (pages 58 ~ 60) has completed, the unit can always work under the same condition (especially with DVD discs). Each setup will be retained in the memory even if you turn the power off.

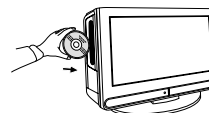
Temporary cancel the rating level by DVD disc

Depending on the DVD disc, the disc may try to temporarily cancel the rating level that you have set. It is up to you to decide whether to cancel the rating level or not.



Temporary cancel the rating level by DVD disc

1 Load a DVD disc.



Note:

- This temporary cancellation of rating level will be kept until the disc is ejected. When the disc is ejected, the original rating level will be set again automatically.

2 If the DVD disc has been designed to temporarily cancel the Rating level, the screen which follows the "Reading" screen will change, depending on which disc is played.

- If you select "YES" with the **ENTER** key, password input screen will then appear.
- If "NO" is selected, press **EJECT** to remove the disc.

3 Enter the password with Number buttons (0-9). Then press ENTER.

To exit from the entry, press **RETURN**.



4 Playback will commence if the entered password is correct.

Understanding the Power Return feature

If the power is cut off while you are viewing the TV/DVD and the power is resupplied, the Power Return feature will turn the TV/DVD on automatically. If the power is going to be off for a long time or you are going to be away from the TV/DVD for a long time, unplug the power cord from the wall outlet to prevent the TV/DVD from turning on in your absence.

Troubleshooting

Use the following check list for troubleshooting when you have problems with your unit. Consult your local dealer or service outlet if problems persist. Be sure all connections are properly made when using with other units.

SYMPTOMS	POSSIBLE SOLUTIONS	PAGE
POWER		
TV/DVD does not operate.	- Make sure the connection of AC cord is secured. - Try another AC outlet. - Unplug unit, then plug it back in.	19
TV BROADCAST RECEPTION		
Poor sound or No sound.	- Station or Cable TV may have problems, try another station. - Check Volume adjustments or mute. - Check for sources of possible interference.	25 25, 26 64
Poor picture or No picture.	- Station or Cable TV may have problems, try another station. - Check antenna or Cable TV connections, reorient antenna. - Check for sources of possible interference. - Check Picture setting.	25 14, 15 64 35
Poor reception on some channels.	- Station or Cable TV may have problems, try another station. - Station signal is weak, reorient antenna to receive weaker station. - Check for sources of possible interference.	25 14 64
Poor color or no color.	- Station or Cable TV may have problems, try another station. - Make sure channels are set into memory. - Check Picture setting. - Check antenna or Cable TV connections, reorient antenna. - Check for sources of possible interference.	25 22 35 14, 15 64
Picture wobbles or drifts.	- Station or Cable TV may have problems, try another station. - Make sure channels are set into memory. - Cable TV company is scrambling signal. - Check antenna or Cable TV connections, reorient antenna.	25 22 - 14, 15
No CATV reception.	- Check all Cable TV connections. - Set Air/Cable selection to the Cable position. - Station or Cable TV system problems, try another station.	15 22 25
Horizontal or diagonal bars on screen.	- Check antenna or Cable TV connections, reorient antenna. - Check for sources of possible interference.	14, 15 64
No reception above channel 13.	- Make sure Air/Cable selection is in the appropriate position. - If antenna is used, check UHF antenna connections.	22 14
TV shuts off.	- Auto shut off feature worked. - Sleep Timer is set. - Power interrupted.	41 26 -
Closed - Caption is not activated.	- TV station experiencing problems or program tuned is not closed captioned. Try another channel. - Check Cable TV connection or VHF/UHF antenna, reposition or rotate antenna. - Set "CC Setting" to "On" to turn on the closed caption decoder.	25 14, 15 33
Display is not shown in your language.	Select proper language in the menu options.	21

SYMPTOMS	POSSIBLE SOLUTIONS	PAGE
DVD		
Playback doesn't start.	- No disc is loaded. - The disc may be dirty. Clean up the disc. - The unit cannot play CD-ROMs, etc.	42 7 8
No picture.	TV/DVD selector is not set correctly.	42
No sound.	- Check the input selector of the amplifier is set properly. - The unit is in the special playback mode. - Select the correct Audio Input/Output position on AV amplifier.	- 44 18, 19
Picture is distorted during fast reverse/forward playback.	The picture will be distorted occasionally.	-
Stopping playback, search, slowmotion play, repeat play, or program play, etc. cannot be performed.	Some discs may not do some of the functions.	-
No on-screen display.	Set Display to On.	58
The unit or remote operation key is not functioning.	Turn off the unit and unplug the AC power cord for several minutes, then replug it.	-
Playback does not start when the title is selected.	Check the Parental setup.	60
Audio soundtrack and/or subtitle language is not changed when you playback a DVD.	Multilingual language is not recorded on the DVD disc.	50
No subtitle.	- Some discs have no subtitles. - Subtitles are cleared. Press SUBTITLE.	50
Angle cannot be changed.	Multi-angles are not recorded on the DVD disc.	49
"X" appears on the screen.	The function is prohibited with the unit or the disc.	44
REMOTE CONTROL		
The remote control does not function.	- Aim the remote control at the remote sensor. - Operate within approx. 5 meters or reduce the light in the room. - Clear the path of the beam. - The batteries are weak. Replace the batteries. - Check the batteries are inserted correctly.	13

Reception disturbances

Most types of television interference can be remedied by adjusting the height and position of the VHF/UHF antenna. Outdoor antennas are recommended for best results. The most common types of television interference are shown below. If one of these symptoms appear when the TV/DVD is connected to a Cable TV system, the disturbance may be caused by the local Cable TV company broadcast.

IGNITION

Black spots or horizontal streaks may appear, the picture may flutter or drift. Usually caused by interference from automobile ignition systems, neon lamps or AC powered tools and appliances such as drills or hair dryers.



GHOSTS

Ghosts are caused by the television signal following two paths. One is the direct path and the other is reflected by tall buildings, hills or other large objects. Changing the direction or position of the antenna may improve the reception.



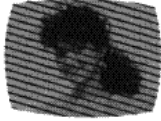
SNOW

If the TV/DVD is located far from the TV station, in a fringe reception area where the signal is weak, small dots may appear in the picture. If the signal is extremely weak, the installation of a larger external antenna may be necessary.



RADIO FREQUENCY INTERFERENCE (RFI)

Caused by two-way radios, this type of interference produces moving ripples or diagonal streaks in the picture. Some cases may cause a loss of contrast in the picture. Changing the direction and position of the antenna or installing an RFI filter may improve the picture.



CARE AND MAINTENANCE

To prevent fire or shock hazard, disconnect the TV/DVD from the power source before cleaning. Use caution when cleaning or wiping the plastic parts.

Language code list

Enter the appropriate code number for the initial settings "Menu", "Subtitle" and/or "Audio" [58].

Language Name	Code	Language Name	Code	Language Name	Code	Language Name	Code
Abkhazian	1112	Fiji	1620	Lingala	2224	Singhalese	2919
Afar	1111	Finnish	1619	Lithuanian	2230	Slovak	2921
Afrikaans	1116	French	1628	Macedonian	2321	Slovenian	2922
Albanian	2927	Frisian	1635	Malagasy	2317	Somali	2925
Amharic	1123	Galician	1722	Malay	2329	Spanish	1529
Arabic	1128	Georgian	2111	Malayalam	2322	Sundanese	2931
Armenian	1835	German	1415	Maltese	2330	Swahili	2933
Assamese	1129	Greek	1522	Maori	2319	Swedish	2932
Aymara	1135	Greenlandic	2122	Marathi	2328	Tagalog	3022
Azerbaijani	1136	Guarani	1724	Moldavian	2325	Tajik	3017
Bashkir	1211	Gujarati	1731	Mongolian	2324	Tamil	3011
Basque	1531	Hausa	1811	Nauru	2411	Tatar	3030
Bengali; Bangla	1224	Hebrew	1933	Nepali	2415	Telugu	3015
Bhutani	1436	Hindi	1819	Norwegian	2425	Thai	3018
Bihari	1218	Hungarian	1831	Oriya	2528	Tibetan	1225
Breton	1228	Icelandic	1929	Panjabi	2611	Tigrinya	3019
Bulgarian	1217	Indonesian	1924	Pashto, Pushto	2629	Tonga	3025
Burmese	2335	Interlingua	1911	Persian	1611	Turkish	3028
Byelorussian	1215	Irish	1711	Polish	2622	Turkmen	3021
Cambodian	2123	Italian	1930	Portuguese	2630	Twi	3033
Catalan	1311	Japanese	2011	Quechua	2731	Ukrainian	3121
Chinese	3618	Javanese	2033	Rhaeto-Romance	2823	Urdu	3128
Corsican	1325	Kannada	2124	Romanian	2825	Uzbek	3136
Croatian	1828	Kashmiri	2129	Russian	2831	Vietnamese	3219
Czech	1329	Kazakh	2121	Samoan	2923	Volapük	3225
Danish	1411	Kirghiz	2135	Sanskrit	2911	Welsh	1335
Dutch	2422	Korean	2125	Scots Gaelic	1714	Wolof	3325
English	1524	Kurdish	2131	Serbian	2928	Xhosa	3418
Esperanto	1525	Laotian	2225	Serbo-Croatian	2918	Yiddish	2019
Estonian	1530	Latin	2211	Shona	2924	Yoruba	3525
Faroese	1625	Latvian, Lettish	2232	Sindhi	2914	Zulu	3631

Specifications

Model	15LV505
General	
Power supply	AC 120V 60Hz
Power consumption	Operation: 35 W, Stand by: 0.8 W
Weight	7.7 lbs (3.5 kg)
Dimensions	Width: 15-13/16 inches (402 mm) Height: 12-5/8 inches (320 mm) Depth: 5-1/2 inches (140.1 mm)
Operating temperature	5°C-40°C (41°F-104°F)
Operating humidity	Less than 80% RH (No condensation)
Television	
LCD panel (Screen size is approximate.)	15-inch diagonal
Display method	Color TFT LCD
Number of pixels	1366 (Horizontal) x 768 (Vertical)
Television system	NTSC standard, ATSC standard (8VSB), QAM
Receiving channels	VHF: 2-13 UHF: 14-69 CATV: 1-125 (4A, A-5-A-1, A-1, J-W, W+1-W+84)
Antenna input	VHF/UHF 75 ohm
Speaker	1-3/16 x 2-13/16 inches (30.5 x 71.1 mm), 8 ohm x 2
Audio output power	1.5W + 1.5W
DVD/CD player	
Signal system	NTSC
Applicable disc	1. DVD (12cm, 8cm) 2. CD (12cm, 8cm)
Pickup	1-Lens, 2-Beams System
Input/Output	
S-Video input	(Y) 1.0 V (p-p), 75 ohm, negative sync., Mini DIN 4-pin x 1 (C) 1.0 V (p-p), 75 ohm
ColorStream video input	(Y) 1.0 V (p-p), 75 ohm, negative sync., pin jack x 1 (PB, PR) 0.7 V (p-p), 75 ohm, pin jack x 2
Video input	1.0 V (p-p), 75 ohm, negative sync., pin jack x 1
Audio input	~8dBm, 50 kohm, negative sync., pin jack (L/R) x 2
Digital audio output (Coaxial)	0.5 V (p-p), 75 ohm, pin jack x 1
Headphone	ø3.5mm stereo mini jack x 1
Accessories	
Remote control (SE-R0305)	1
Batteries (R03/AAA)	2
AC cord	1
Owner's manual (this booklet)	1
Quick setup guide (Spanish)	1

- This model complies with the above specifications.
- Designs and specifications are subject to change without notice.
- This model may not be compatible with features and/or specifications that may be added in the future.

Limited United States Warranty

LCD TV/DVD Combination - Depot Repair Warranty

Toshiba America Consumer Products, L.L.C. ("TACP") makes the following limited warranties to original consumers in the United States. THESE LIMITED WARRANTIES EXTEND TO THE ORIGINAL CONSUMER PURCHASER OR ANY PERSON RECEIVING THIS LCD TV/DVD COMBINATION AS A GIFT FROM THE ORIGINAL CONSUMER PURCHASER AND TO NO OTHER PURCHASER OR TRANSFEREE.

LCD TV/DVD COMBINATIONS PURCHASED IN THE U.S.A. AND USED ANYWHERE OUTSIDE OF THE U.S.A., INCLUDING, WITHOUT LIMITATION, CANADA AND MEXICO, ARE NOT COVERED BY THESE WARRANTIES.

LCD TV/DVD COMBINATIONS PURCHASED ANYWHERE OUTSIDE OF THE U.S.A., INCLUDING, WITHOUT LIMITATION, CANADA AND MEXICO, AND USED IN THE U.S.A., ARE NOT COVERED BY THESE WARRANTIES.

Limited One (1) Year Warranty on Parts and Labor

TACP warrants this LCD TV/DVD Combination and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. DURING THIS PERIOD, TACP WILL, AT TACP'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU.

Rental Units

The warranty for LCD TV/DVD Combination rental units begins on the date of the first rental or thirty (30) days after the date of shipment to the rental firm, whichever comes first.

Commercial Units

LCD TV/DVD Combinations sold and used for commercial purposes have a limited warranty for all parts and labor, which warranty begins on the date of original retail purchase and ends on the date that is ninety (90) days thereafter.

Owner's Manual and Product Registration Card

Read this owner's manual thoroughly before operating this LCD TV/DVD Combination.

Complete and mail the enclosed product registration card or register your LCD TV/DVD Combination online at www.tacp.toshiba.com/service as soon as possible. By registering your LCD TV/DVD Combination you will enable TACP to bring you new products specifically designed to meet your needs and help us to contact you in the unlikely event a safety notification is required under the U.S. Consumer Product Safety Act. Failure to complete and return the product registration card does not diminish your warranty rights.

Your Responsibility

THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

- (1) You must retain your bill of sale or provide other proof of purchase.
- (2) All warranty servicing of this LCD TV/DVD Combination must be made by the Depot Warranty Repair Center specified by the TACP Consumer Solutions Center.
- (3) The warranties from TACP are effective only if the LCD TV/DVD Combination is purchased and operated in the Continental U.S.A. or Puerto Rico.
- (4) Labor service charges for set installation, setup, adjustment of customer controls, and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
- (5) Warranties extend only to defects in materials or workmanship as limited above, and do not extend to any LCD TV/DVD Combination or parts that have been lost or discarded by you or to damage to the LCD TV/DVD Combination or parts caused by fires, misuse, accident, Acts of God (such as lightning or fluctuations in electric power), improper installation, improper maintenance, or use in violation of instructions furnished by TACP; use or malfunction through simultaneous use of this LCD TV/DVD Combination and connected equipment; or to units that have been modified or had the serial number removed, altered, defaced, or rendered illegible.

CAUTION

THIS LCD COLOR TELEVISION EMPLOYS A LASER SYSTEM.

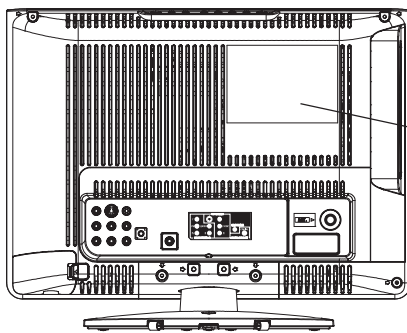
TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS SERVICE MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

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

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking

The rating sheet and the safety caution are on the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA
RADIATION PERFORMANCE STANDARDS,
21 CFR SUBCHAPTER J.

PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity.

Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened.

Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.

Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. BE CAREFUL WITH THE LCD PANEL

Avoid a shock to the panel while servicing. Take enough care to deal with it.

5. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

6. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the external exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Headphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER

The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.

2. PART NO. and DESCRIPTION

You can find it in your SERVICE MANUAL.

IMPORTANT SAFEGUARDS

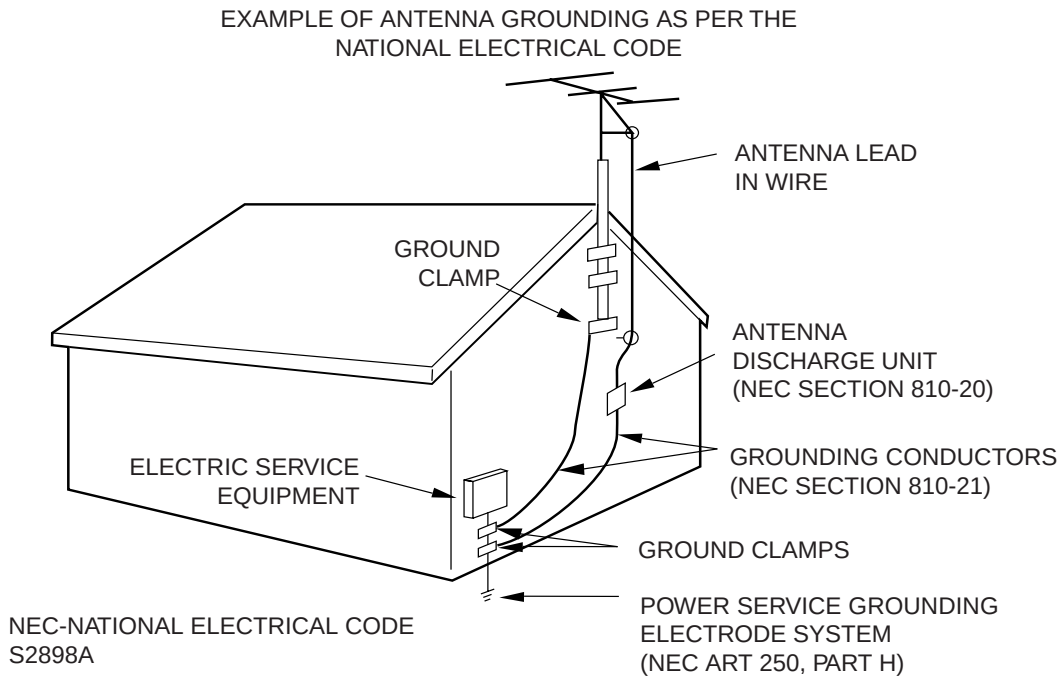
- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 15) Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- 16) An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
- 17) Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.
- 18) Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

PORTABLE CART WARNING
(symbol provided by RETAC)



S3126A

- 19) If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



- 20) When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 21) Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
- 22) Keep your fingers clear of the disc slot as it is closing. It may cause injury.
- 23) When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.
- 24) Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

- 25) Do not allow the product to output distorted sound for an extended period of time. It may cause speaker overheating and fire.
- 26) When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.
- 27) Do not look into the opening of the disc slot or ventilation opening of the product to see the source of the laser beam. It may cause eye damage.
- 28) Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.
- 29) This reminder is provided to call the cable TV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

CONDENSATION

Moisture will form in the operating section of the player if the player is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, player's performance will be impaired.

To prevent this, let the player stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the player is exposed to the breeze from an air conditioner. In such cases, change the location of the player.

HOW TO HANDLE THE LCD PANEL

- Do not press hard or jolt the LCD panel. It may cause the LCD panel glass to break and injury may occur.
- If the LCD panel is broken, make absolutely sure that you do not touch the liquid in the panel. This may cause skin inflammation.

If the liquid gets in your mouth, immediately gargle and consult with your doctor. Also, if the liquid gets in your eyes or touches your skin, consult with your doctor after rinsing for at least 15 minutes or longer in clean water.

WHEN REPLACING DVD DECK

[When removing the DVD Deck]

Before removing Pick Up PCB and DVD MT PCB connector, the short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

[When installing the DVD Deck]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

NOTE

- Before your operation, please read "PREPARATION OF SERVICING".
- Use the Lead Free solder.
- Manual soldering conditions
 - Soldering temperature: $320 \pm 20^{\circ}\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to keep the Flux smoke away from it.

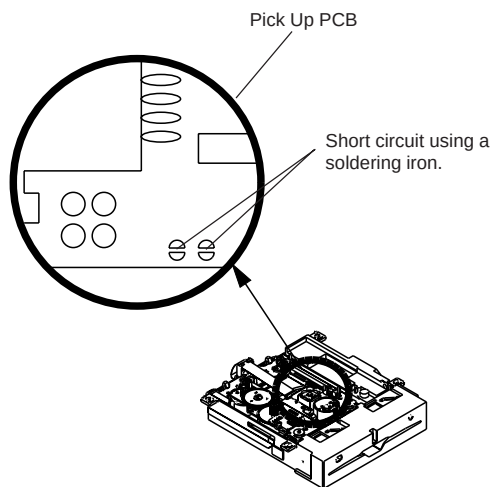


Fig. 1

DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet and Angle Deck. (Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)
2. Slide the Belt Loading toward the arrow direction by hand to release the lock. (Refer to Fig. 1)
3. Take out the Disc from the DVD Deck. Be careful not to scratch on the Disc.

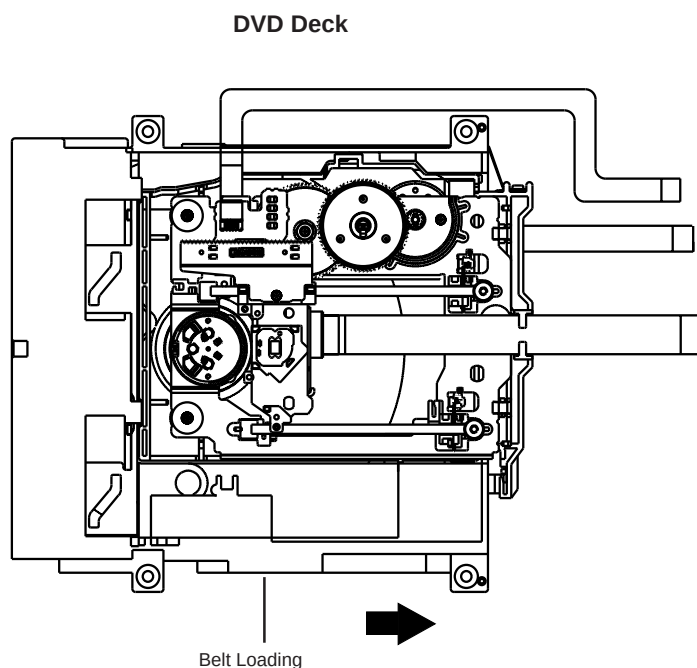


Fig. 1

PARENTAL CONTROL - RATING LEVEL 4 DIGIT PASSWORD CANCELLATION

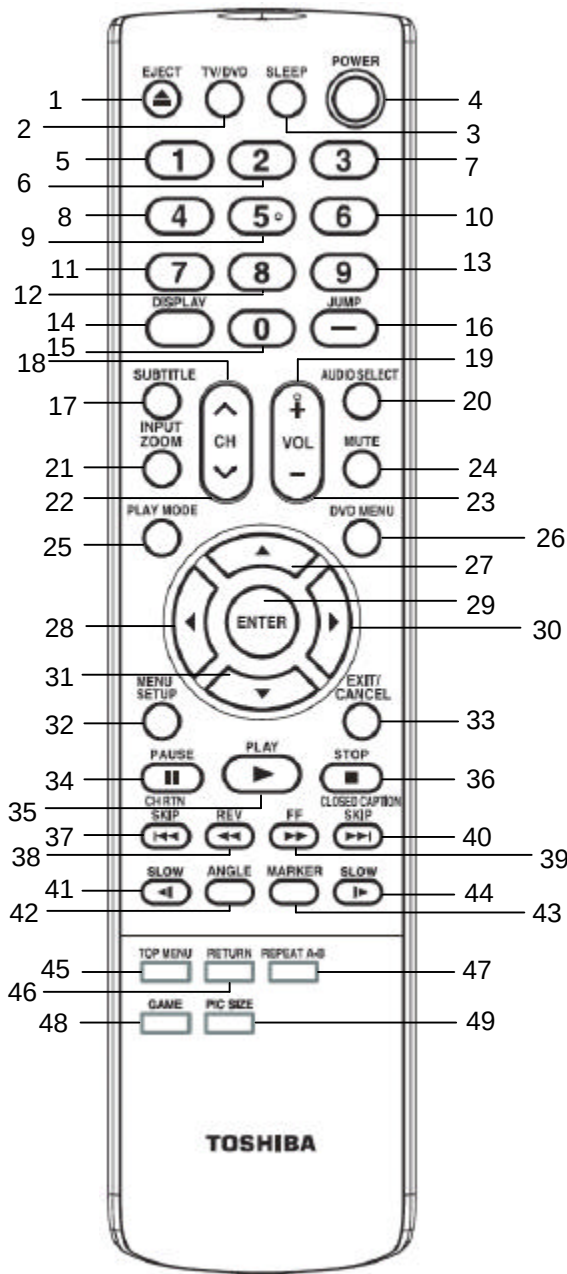
If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Check that "No disc" is displayed on the screen.
4. Press and hold the "STOP" button on the top panel.
5. Simultaneously press and hold the "7" key on the remote control unit.
6. Hold both keys for more than 2 seconds.
7. The On Screen Display message "PASSWORD CLEAR" will appear.
8. The 4 digit password has now been cleared.

REMOTE CONTROL KEY CODE

NEC Format

Custom Code : 40-BF H, 44-BB H, 45-BA H, 45-BC H



No.	Key Name	Custom Code	Key Code
1	EJECT	45 BA	F5
2	TV/DVD	45 BC	B3
3	SLEEP	40 BF	15
4	POWER	40 BF	12
5	1	40 BF	01
6	2	40 BF	02
7	3	40 BF	03
8	4	40 BF	04
9	5	40 BF	05
10	6	40 BF	06
11	7	40 BF	07
12	8	40 BF	08
13	9	40 BF	09
14	DISPLAY	40 BF	1C
15	0	40 BF	00
16	— / JUMP	44 BB	9B
17	SUBTITLE	44 BB	87
18	CH UP	40 BF	1B
19	VOLUME +	40 BF	1A
20	AUDIO SELECT	44 BB	53
21	INPUT/ZOOM	40 BF	0F
22	CH DOWN	40 BF	1F
23	VOLUME -	40 BF	1E
24	MUTE	40 BF	10
25	PLAY MODE	40 BF	1D
26	DVD MENU	40 BF	19
27	UP	44 BB	80
28	LEFT	44 BB	51
29	ENTER	44 BB	4E
30	RIGHT	44 BB	4D
31	DOWN	44 BB	81
32	MENU/SETUP	40 BF	0E
33	EXIT/CANCEL	44 BB	EF
34	PAUSE	44 BB	10
35	PLAY	44 BB	15
36	STOP	44 BB	14
37	CH RTN/ <<SKIP	40 BF	17
38	<<REV	44 BB	19
39	FF>>	44 BB	13
40	CLOSED CAPTION/SKIP>>	40 BF	57
41	< SLOW	45 BA	0E
42	ANGLE	44 BB	96
43	MARKER	45 BA	EC
44	SLOW >	44 BB	0D
45	TOP MENU	44 BB	DF
46	RETURN	44 BB	5D
47	REPEAT A-B	44 BB	5C
48	GAME	40 BF	28
49	PICTURE SIZE	40 BF	59

GENERAL SPECIFICATIONS

G-1	TV System	LCD	LCD Size / Visual Size		15.6 inch / 394.9mmV	
			LCD Type	Color TFT LCD		
			Number of Pixels	1366(H) x 768(V)		
		View Range	Left/Right Up/Down	85/85 degree		
				80/80 degree		
			Bright Dot	n≤0		
			Zero Bright Dot Ratio	---		
	Color System	NTSC				
	Speaker	2 Speaker				
		Position	Front			
		Size	1.2 x 2.8 inch			
		Impedance	8 ohm			
	Sound Output	Max	1.5W + 1.5W			
		10%(Typical)	---			
G-2	DVD System	Color System			NTSC	
		Disc			DVD, CD- DVD-R/RW (Video Format Only)	
		Disc Diameter			120 mm , 80 mm	
		Drive			DSM-2	
		Search speed	Fwd	Actual	4 step	
					2-45 times (DVD) 4-40 times (CD)	
			Rev	Actual	4 step	
					2-45 times (DVD) 4-40 times (CD)	
		Slow speed	Fwd	Actual	1/7 -1/2 times	
					--	
	Rev	Actual	1/7 -1/2 times			
			--			
G-3	Tuning System	Broadcasting System	Analog	US System M		
			Digital	ATSC(8VSB)/QAM		
		Tuner and Receive CH	System	1Tuner		
			Destination	US (W/CABLE)		
		CH Coverage			2-69, 4A, A-5-A-1, A-I, J-W, W+1-W+84	
		Intermediate Digital			44.00MHz	
		Frequency	Analog	Picture(FP)	45.75MHz	
				Sound(FS)	41.25MHz	
				FP-FS	4.50MHz	
	Preset CH			No		
	Stereo/Dual TV Sound			US-Stereo		
	Tuner Sound Muting			Yes		
G-4	Signal	Video Signal	Input Level	1 V p-p/75 ohm		
			Output Level	--		
			S/N Ratio (Weighted)	--		
			Horizontal Resolution at DVD Mode	--		
				--		
		RGB Signal	Output Level	--		
		Audio Signal	Input Level	-8.0dBm/50k ohm		
			Output Level	at DVD	--	
				at TV	--	
					--	
			Digital Output Level	0.5 V p-p/75 ohm		
			S/N Ratio at DVD (Weighted)	--		
			Harmonic Distortion	--		
			Frequency Response :	at DVD	--	
		at Video CD	--			
		at SVCD	--			
		at CD	--			

GENERAL SPECIFICATIONS

G-5	Power	Power Source	AC	120V, 60Hz
			DC	--
		Power Consumption	at AC at DC	35W at 120V 60Hz --
		Stand by (at AC) Energy Star Per Year		0.8W at 120V 60Hz Yes -- kWh/Year
G-6	Regulation	Protector	Power Fuse Safety Circuit IC Protector(Micro Fuse)	Yes Yes Yes
G-7	Temperature	Safety		UL(UL6500_2nd)
		Radiation		FCC
		Laser		DHHS
G-8	Operating Humidity	Operation		+5°C ~ +40°C
		Storage		-20°C ~ +60°C
		Space Around Unit		100 mm(4inch)
G-9	Clock and Timer	Operating Humidity		Less than 80% RH
G-9	Clock and Timer	Clock	(Only Broadcasting data)	No
		Sleep Timer	Max Time	120 Min
		On Timer	Program	No
		Off Timer	Program	No
		Game Timer		No
		Wake Up Timer		No
		Timer Back-up (at Power Off Mode)	more than	-- Min Sec

GENERAL SPECIFICATIONS

G-10	Remote Control	Unit	RC-LT
		Glow in Dark Remocon	Yes
		Remocon Format	TOSHIBA
		Format	TOSHIBA
		Custom Code	40-BF h ,44-BB h ,45-BA h ,45-BC h
		Power Source	3V
		Voltage(D.C)	UM-4 x 2 pcs
		UM size x pcs	
		Total Keys	49 Keys
		Keys	
		Power	Yes
		Eject	Yes
		Sleep	Yes
		TV/DVD	Yes
		1	Yes
		2	Yes
		3	Yes
		4	Yes
		5	Yes
		6	Yes
		7	Yes
		8	Yes
		9	Yes
		0	Yes
		Jump / -	Yes
		Display	Yes
		Subtitle	Yes
		Audio Select	Yes
		Input Select / Zoom	Yes
		Mute	Yes
		CH Up	Yes
		CH Down	Yes
		Vol Up	Yes
		Vol Down	Yes
		Play Mode	Yes
		DVD Menu	Yes
		Up	Yes
		Down	Yes
		Left	Yes
		Right	Yes
		Enter	Yes
		Menu / Setup	Yes
		Exit / Cancel	Yes
		Game	Yes
		Picture Size	Yes
		Pause	Yes
		Play	Yes
		Stop	Yes
		Skip+ / Closed Caption	Yes
		Skip- / CH Return	Yes
		Search+	Yes
		Search-	Yes
		Slow+	Yes
		Slow-	Yes
		Angle	Yes
		Marker	Yes
		Top Menu	Yes
		Return	Yes
		Closed Caption	No
		Repeat A-B	Yes
		Zoom/ Quick View	No
		Freeze frame	No

GENERAL SPECIFICATIONS

G-11	Features	Auto Shut Off	Yes
		Auto Search	No
		Power On Memory	Yes
		Comb Filter	Yes
			3 -D
		Game Position	Yes
		Auto Setup(Language/CH Program)	Yes
		Picture Setting(TV)	Yes
		Picture Preference	Yes
		Brightness , Contrast , Color	Yes
		Tint	Yes
		Sharpness	Yes
		Color Temperature	Yes
		DNR	Yes
		Cable Clear	No
		Picture Setting(PC)	No
		HOR Position , VER Position	No
		Phase, Clock	No
		Red, Green, Blue	No
		Auto Adjust	No
		Backlight	No
		Audio	MTS
			Yes
		Tone Control (Bass/Treble/Balance)	Yes
		Stable Sound	No
		Surround	No
		BBE	No
		SRS WOW (SRS 3D/Focus/Tru Bass)	No
		Variable Audio Out	No
		Tuning	CH Program
			Yes
		Air/Cable	Yes
		ADD/DELETE	Yes
		Label	CH Label
			Yes
		Video Label	Yes
			Yes
		Favorite CH	No
		V-Chip	Yes
		Type	USA Type
		RRT Setup	Yes
		Lock	Hotel Lock
			No
		Channel Lock	No
		Video Lock	No
		Panel Lock	No
		Menu Language	English
			French
			Spanish
		Closed Caption	Yes
		CC Advanced	Yes
		Picture Size	Yes
		HD Zoom	Yes
		Picture Scroll	No
		Film Mode	Yes
		Aspect	Yes
		Backlight	Yes
		PFC(Power Factor circuit)	No
		Freeze frame	No
		PIP/POP	No
		Direct Input Selection	Yes
		Digital Out	Dolby Digital
			Yes
		MPEG	No
		PCM	No
		DTS	No

GENERAL SPECIFICATIONS

	PC Monitor Input		No
		VGA (640x480)	No
		VGA (720x400)	No
		WVGA (848x480)	No
		SVGA (800x600)	No
		XGA (1024x768)	No
		WXGA (1280x768)	No
		WXGA (1280x720)	No
		WXGA (1360x768)	No
		SXGA (1280x1024)	No
	HDMI Input		No
		VGA (640x480)	No
		720x480i (4:3)	No
		720x480i (16:9)	No
		720x480p (4:3)	No
		720x480p (16:9)	No
		720x576i (4:3)	No
		720x576i (16:9)	No
		720x576p (4:3)	No
		720x576p (16:9)	No
		1280x720p	No
		1920x1080i	No
		CEC (ORION Standard)	No
		Deep Color	No
		xvYCC	No
	Component Input		Yes
		720x480i (4:3)	Yes (60Hz)
		720x480i (16:9)	Yes (60Hz)
		720x480p (4:3)	Yes (60Hz)
		720x480p (16:9)	Yes (60Hz)
		720x576i (4:3)	No
		720x576i (16:9)	No
		720x576p (4:3)	No
		720x576p (16:9)	No
		1280x720p	Yes (60Hz)
		1920x1080i	Yes (60Hz)
	Wall Mount	Size W x H(mm)	No
		Screw Size	No
Features (DVD)	Video CD Playback		Yes
		SVCD Playback	No
	MP3 Playback		Yes
		JPEG	Yes
	WMA		Yes
		Divx Playback	No
	DMF Support		No
		DMF Support	No
	Digital Out	(Dolby Digital)	Yes
		(MPEG)	Yes
		(PCM)	Yes
		(DTS)	Yes
	Down Mix Out	(Dolby Digital)	Yes
		(DTS)	No
	Closed Caption		Yes
	Screen Saver		No
	TV Screen	4:3 (Letter Box, Pan Scan)	Yes
		16:9 (Wide)	Yes
	Audio DAC		192kHz / 24bit

GENERAL SPECIFICATIONS

G-12	Accessories	Owner's Manual	Language	English
			w/Guarantee Card	Yes
		Remote Control Unit		Yes
		Rod Antenna		No
			Poles	--
			Terminal	--
		Loop Antenna		No
			Terminal	--
		U/V Mixer		No
		DC Car Cord (Center+)		No
		Guarantee Card		No
		Warning Sheet		No
		Circuit Diagram		No
		Antenna Change Plug		No
		Service Facility List		No
		Important Safeguard		No
		Dew/AHC Caution Sheet		No
		Quick Set-up Sheet(Spanish)		Yes
		Battery		Yes
			UM size x pcs	UM-4 x 2 pcs
			OEM Brand	No
		AC Adapter		No
		AC Cord (for AC Adapter)		No
		AC Cord		Yes
		AV Cord (2Pin-1Pin)		No
		Registration Card (NDL Card)		Yes
		300 to 75ohm Antenna Adapter		No
		Sheet Information (Return)		Yes(USA version)
		Sheet Information (HDMI)		No
		Cleaning Cloth		No

GENERAL SPECIFICATIONS

G-13	Interface	Switch	Top	Power (Tact)	Yes
				Channel Up/Menu Up/Play	Yes
				Channel Down/Menu Down/Stop	Yes
				Volume Up/Menu >	Yes
				Volume Down/Menu <	Yes
				Menu	Yes
				Play	No (CH+ Alternative)
				Eject	Yes
				Skip+, Search+	No
				Skip-, Search-	No
				Still/Pause	No
				Stop	No (CH- Alternative)
				Main Power SW	No
				Input Select/Enter	Yes
				Indicator	Rear
		Power/Stand-By	Yes (Blue / Red)		
		Power Wake Up	No		
		Terminals	Rear	On Timer	No
				Video Input 1 Audio Input 1 S - Input 1 Video Input 2 Audio Input 2 S - Input 2 Video Output Audio Output Component Input 1 Analog Audio Component Input 2 Analog Audio HDMI Input 1 Analog Audio HDMI Input 2 Analog Audio Sub Woofer Out PC Monitor Input Analog Audio Digital Audio Output DC Jack (Center +) VHF/UHF Antenna Input	RCA x 1 RCA x 2(L/MONO, R) Yes No No No No No RCA x 3 RCA x 2(L/MONO, R) No No No No No No No No Coaxial No F Type
					Video Input 3 Audio Input 3 S - Input 3 Other Terminal AC Inlet

G-14	Set Size	Approx. W x D x H (mm)	402.0 x 140.1 x 320.0
	w/o Handle, Stand Approx. W x D x H (mm)	402.0 x 64.0 x 289.0	

G-15	Weight	Net (Approx.)	3.5kg (7.7 lbs)
	Net w/o Handle, Stand (Approx.)	3.3kg (7.3 lbs)	
	Gross (Approx.)	5.0kg (11.0 lbs)	

GENERAL SPECIFICATIONS

G-16	Carton	Master Carton	No
		Content	--- Sets
		Material	--- / ---
		Dimensions W x D x H(mm)	---
		Description of Origin	---
		Gift Box	Double/Full Color
		Material	No
		W/Color Photo Label	Yes
		W/Handle	474 x404 x 210
		Dimensions W x D x H(mm)	Yes
		Description of Origin	Natural Dropping At 2 Corner / 2 Edges / 3 Surfaces
		Drop Test	80
		Height (cm)	1551 Sets/40' container
		Container Stuffing (40' container)	No
		w/Pallet	No
		w/Wrapping	No
G-17	Material	Cabinet	Front
			Rear
			Jack Panel
		PCB	Non-Halogen Demand
			Eyelet Demand
G-18	Environment	Environmental standard requirement	Green procurement of ORION
		Pb-free	Phase3(Phase3A)
		Measures for Whisker	Yes

DISASSEMBLY INSTRUCTIONS

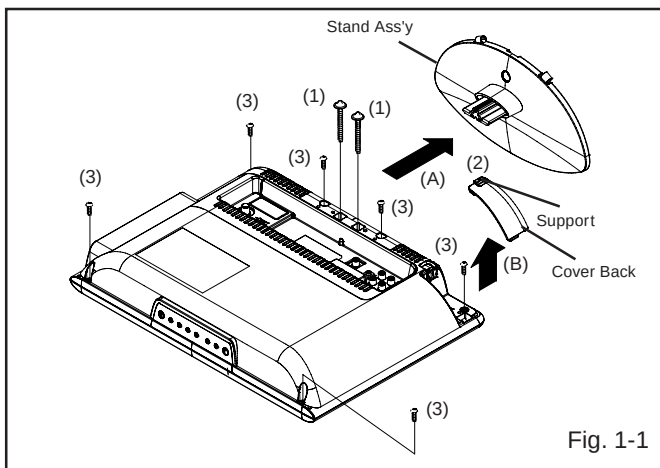
1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

CAUTION

Be careful not to remove the FFC cable forcibly, because the FFC cable may be damaged.

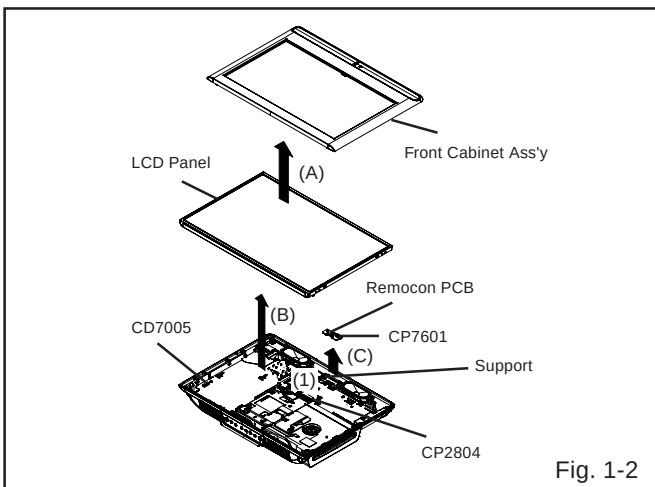
1-1: STAND ASS'Y (Refer to Fig. 1-1)

1. Remove the 2 screws (1).
2. Remove the Stand Ass'y in the direction of arrow (A).
3. Unlock the support (2).
4. Remove the Cover Back in the direction of arrow (B).
5. Remove the 6 screws (3).



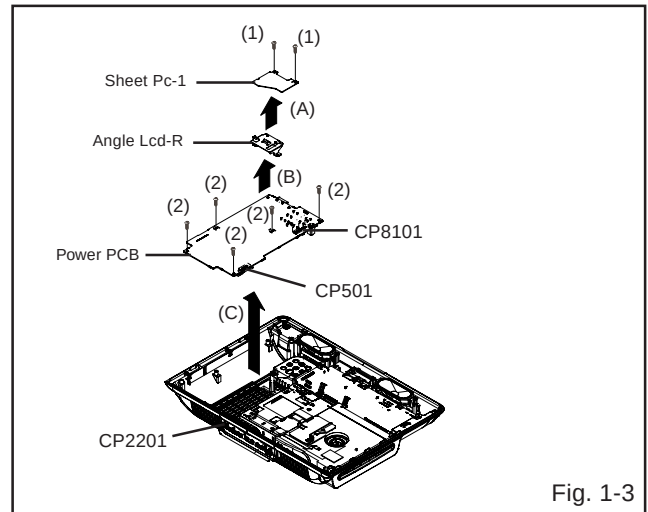
1-2: FRONT CABINET ASS'Y, LCD PANEL AND REMOCON PCB (Refer to Fig. 1-2)

1. Remove the Front Cabinet Ass'y in the direction of arrow (A).
2. Disconnect the following connectors: **(CD7005 and CP2804)**.
3. Remove the LCD PANEL in the direction of arrow (B).
4. Disconnect the following connector: **(CP7601)**.
5. Unlock the support (1).
6. Remove the Remocon PCB in the direction of arrow (C).



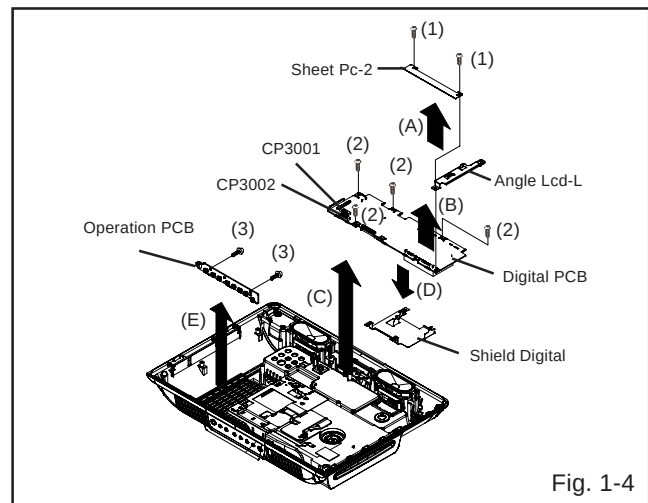
1-3: POWER PCB (Refer to Fig. 1-3)

1. Remove the 2 screws (1).
2. Remove the Sheet Pc-1 in the direction of arrow (A).
3. Remove the Angle Lcd-R in the direction of arrow (B).
4. Disconnect the following connectors: **(CP501, CP2201 and CP8101)**.
5. Remove the 5 screws (2).
6. Remove the Power PCB in the direction of arrow (C).



1-4: DIGITAL PCB AND OPERATION PCB (Refer to Fig. 1-4)

1. Remove the 2 screws (1).
2. Remove the Sheet Pc-2 in the direction of arrow (A).
3. Remove the Angle Lcd-L in the direction of arrow (B).
4. Disconnect the following connectors: **(CP3001 and CP3002)**.
5. Remove the 4 screws (2).
6. Remove the Digital PCB in the direction of arrow (C).
7. Remove the Shield Digital in the direction of arrow (D).
8. Remove the 2 screws (3).
9. Remove the Operation PCB in the direction of arrow (E).



DISASSEMBLY INSTRUCTIONS

1-5: DVD DECK (Refer to Fig. 1-5)

1. Short circuit the position shown in **Fig. 1-5** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Remove the 3 screws (1).
3. Remove the DVD Deck in the direction of arrow (A).
4. Disconnect the following connectors:
(CP2301, CP2302 and CP2303).
5. Remove the support (2).
6. Remove the Cover DVD in the direction of arrow (B).
7. Remove the 2 screws (3).
8. Remove the Angle Mpeg in the direction of arrow (C).
9. Remove the 4 screws (4).
10. Remove the DVD MT PCB in the direction of arrow (D).

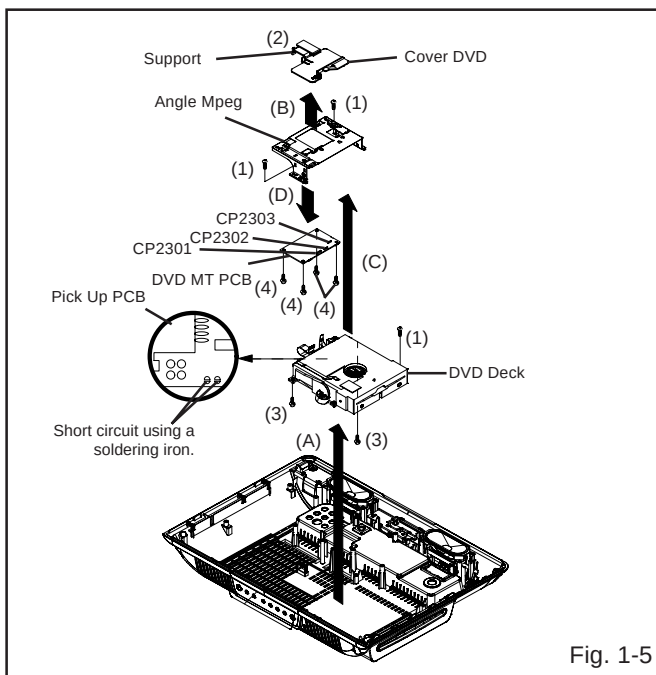


Fig. 1-5

NOTE

1. Before your operation, please read "PREPARATION OF SERVICING"
2. Use the Lead Free solder.
3. Manual soldering conditions
 - Soldering temperature: $320 \pm 20^{\circ}\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD MT PCB connector.

DISASSEMBLY INSTRUCTIONS

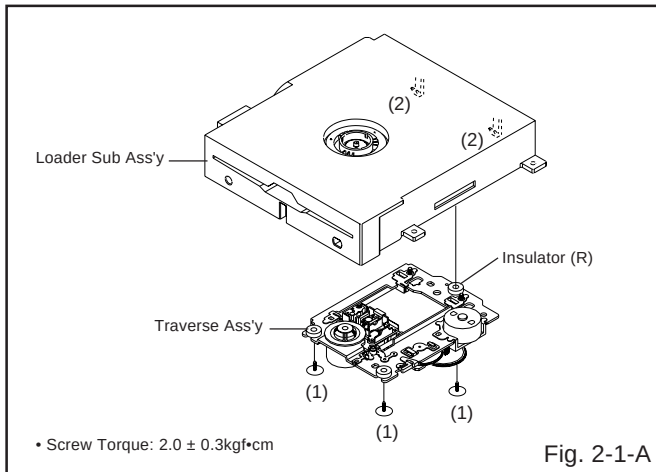
2. REMOVAL OF DVD DECK PARTS

NOTE

1. Disassemble only the DVD DECK PARTS parts listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

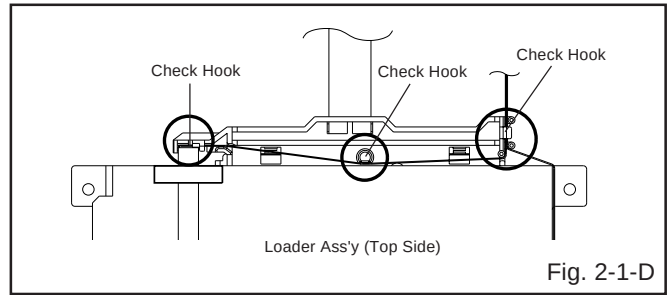
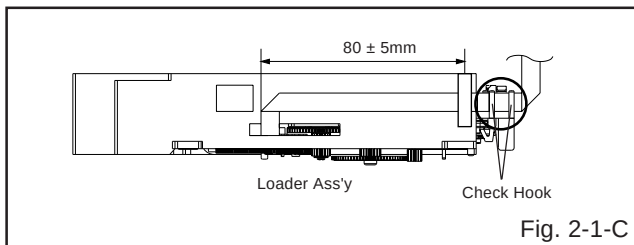
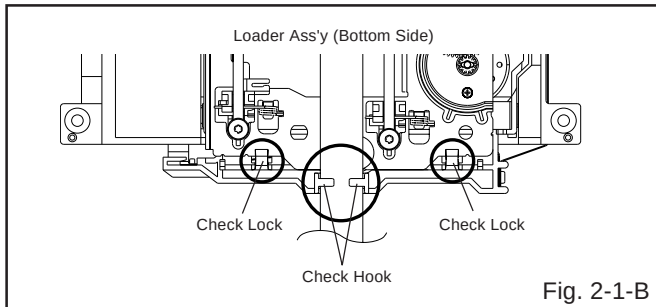
2-1: TRAVERSE ASS'Y (Refer to Fig. 2-1-A)

1. Remove the 3 screws (1).
2. Unlock the 2 supports (2).
3. Remove the Insulator (R) from the Loader Sub Ass'y.
4. Remove the Traverse Ass'y.



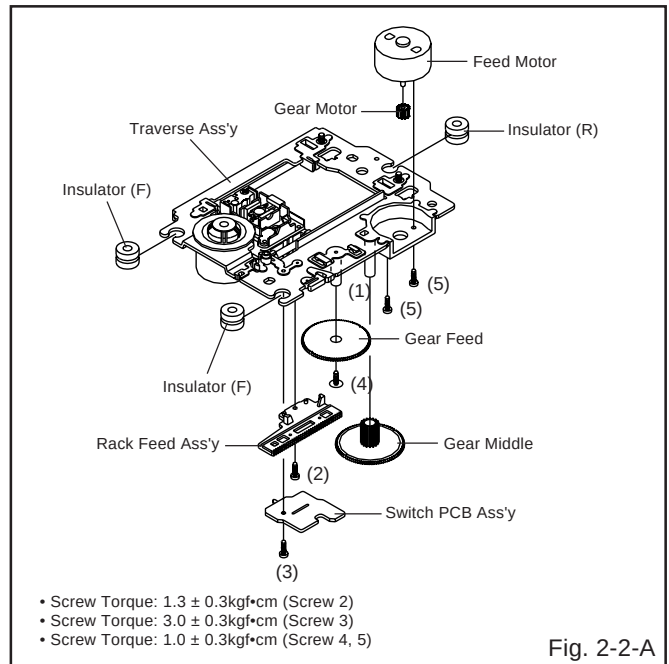
NOTE

1. In case of the Traverse Ass'y installation, hook the wire on the Loader Ass'y as shown Fig. 2-1-B to Fig. 2-1-C.



2-2: SWITCH PCB ASS'Y/GEAR MIDDLE/GEAR FEED/RACK FEED ASS'Y/FEED MOTOR (Refer to Fig. 2-2-A)

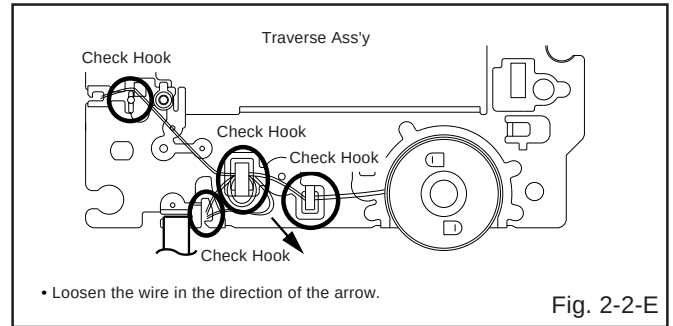
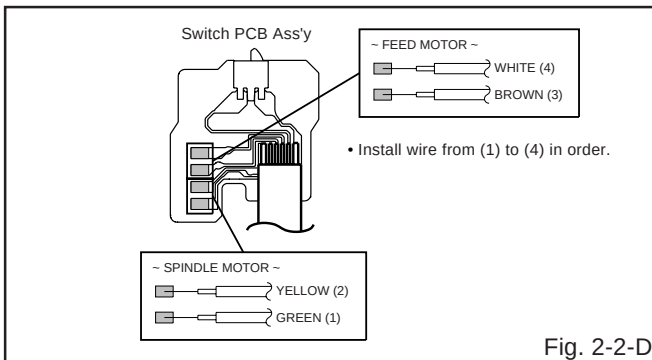
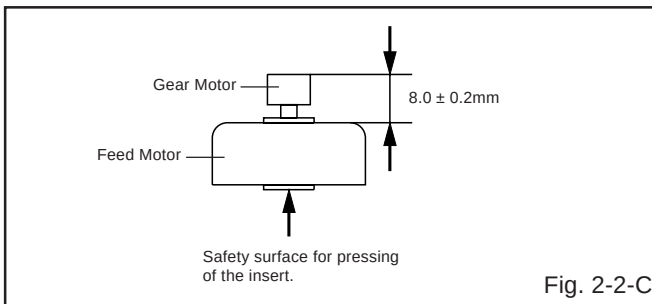
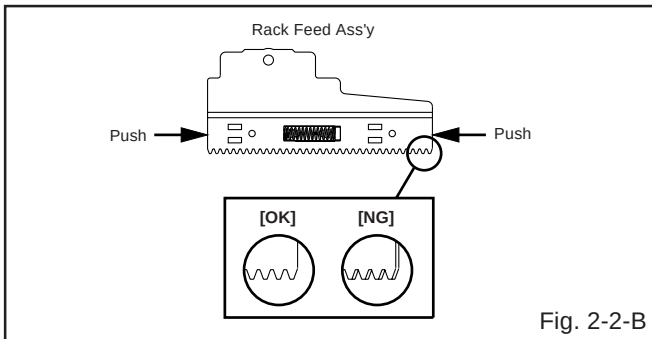
1. Remove the Insulator (F).
2. Remove the Insulator (R).
3. Unlock the support (1).
4. Remove the Gear Middle.
5. Remove the screw (2).
6. Remove the Rack Feed Ass'y.
7. Remove the screw (3).
8. Remove the Switch PCB Ass'y.
9. Remove the screw (4).
10. Remove the Gear Feed.
11. Remove the 2 screws (5).
12. Remove the Feed Motor.
13. Remove the Gear Motor.



DISASSEMBLY INSTRUCTIONS

NOTE

1. When installing the Rack Feed Ass'y, push both ends to align the teeth as shown Fig. 2-2-B. Then install it.
2. In case of the Gear Motor installation, check if the value of the Fig. 2-2-C is correct.
3. When installing the wire of the Switch PCB Ass'y, install it correctly as Fig. 2-2-D.
Manual soldering conditions
 - Soldering temperature: $320 \pm 20^{\circ}\text{C}$
 - Soldering time: Within 3 seconds
 - Soldering combination: Sn-3.0Ag-0.5Cu
4. After the assembly of the Traverse Ass'y, hook the wire on the Traverse Ass'y as shown Fig. 2-2-E.

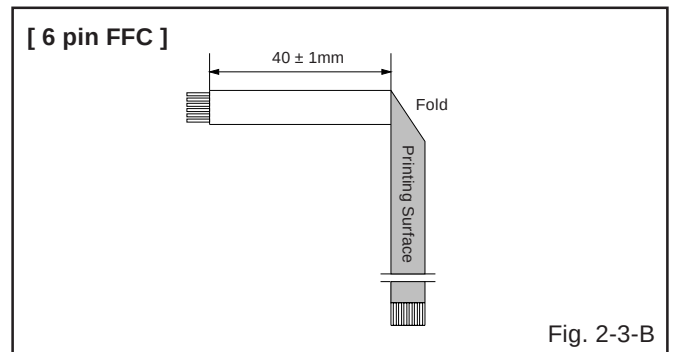
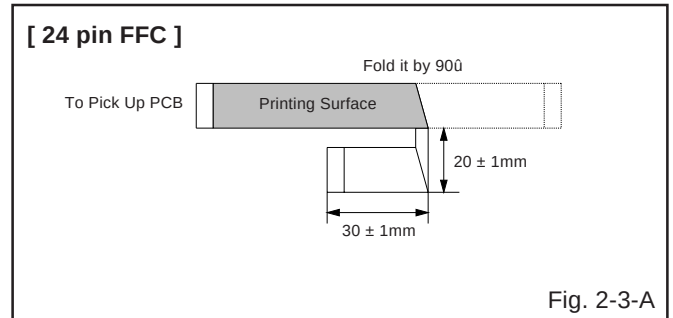


2-3: FFC WIRE HANDLING

1. When installing the FFC, fold it correctly and install it as shown from Fig. 2-3-A to Fig. 2-3-B.

NOTE

1. Do not make the folding lines except the specified positions for the FFC.



DISASSEMBLY INSTRUCTIONS

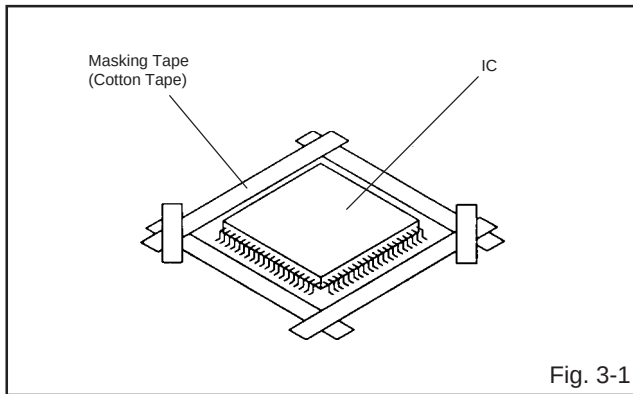
3. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. (Refer to Fig. 3-1.)

NOTE

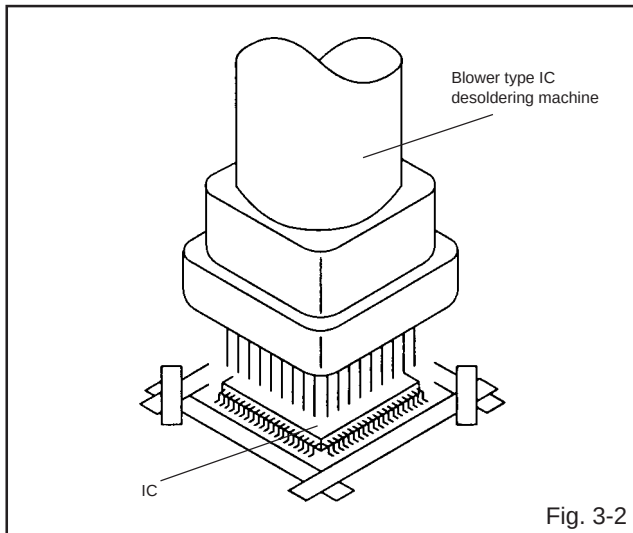
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. (Refer to Fig. 3-2.)

NOTE

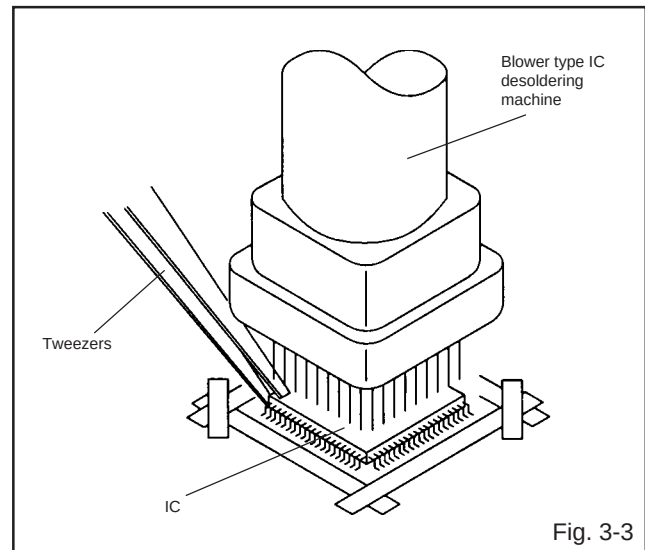
Do not rotate or move the IC back and forth, until IC can move back and forth easily after desoldering the leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 3-3.)

NOTE

Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

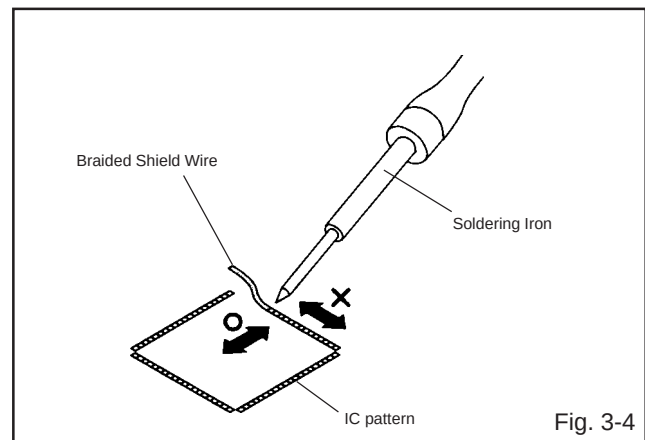


4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. (Refer to Fig. 3-4.)

NOTE

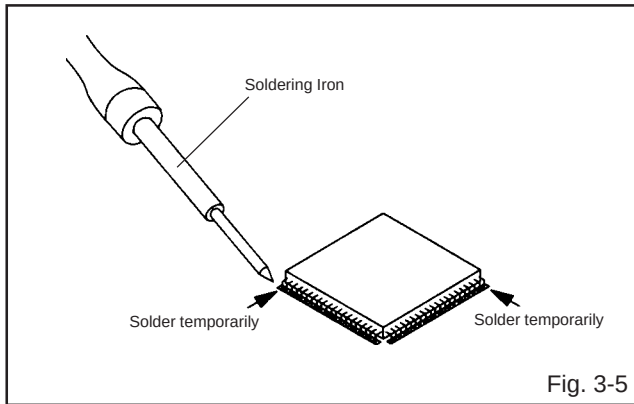
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



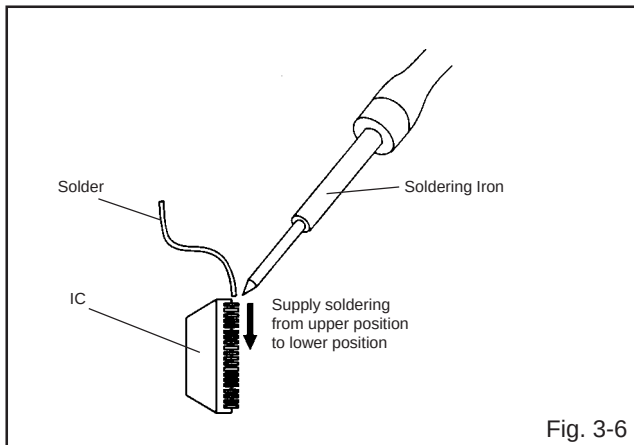
DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. (Refer to Fig. 3-5.)



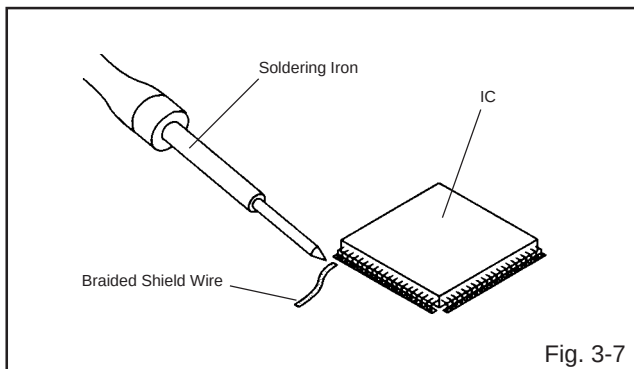
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. (Refer to Fig. 3-6.)



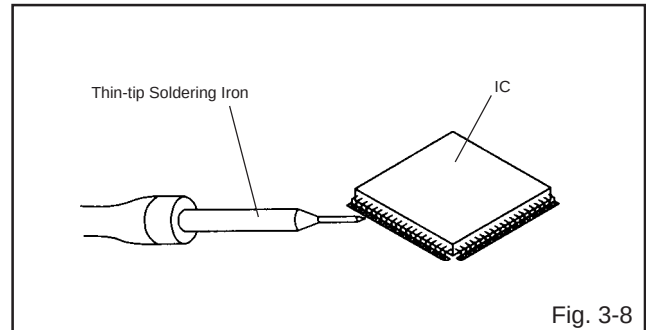
3. Absorb the solder left on the lead using the Braided Shield Wire. (Refer to Fig. 3-7.)

NOTE

Do not absorb the solder to excess.



4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. (Refer to Fig. 3-8.)



5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

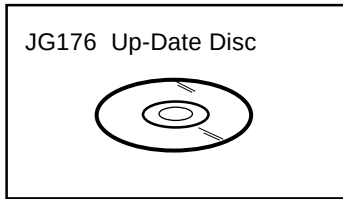
SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.

To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit and on the remote control for more than a the standard time in the appropriate condition. (See below chart.)

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. DOWN (Minimum)	0	2 sec.	Releasing of V-CHIP PASSWORD.
TV mode	VOL. DOWN (Minimum)	1	2 sec.	Initialization of factory TV data. NOTE: If you set factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
DVD mode (No disc)	VOL. DOWN (Minimum)	4	2 sec.	Initialization of factory DVD data.
DVD mode (No disc)	VOL. DOWN (Minimum)	5	2 sec.	DVD Write mode. Refer to the "RE-WRITE FOR DVD FIRMWARE".
ALL mode	VOL. DOWN (Minimum)	6	2 sec.	POWER ON total hours are displayed on the screen. Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	8	2 sec.	Check of the SUM DATA and MICON VERSION on the screen. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. DOWN (Minimum)	9	2 sec.	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	STOP	1	2 sec.	Check of the firmware version. Refer to the "RE-WRITE FOR DVD FIRMWARE".
DVD mode (No disc)	STOP	7	2 sec.	Releasing of PARENTAL LOCK. Refer to the "PARENTAL CONTROL - RATING LEVEL".

SERVICING FIXTURES AND TOOLS



Ref. No.	Part No.	Parts Name	Remarks
JG176	APJG176144	Up-Date Disc	Up-Date of the Firmware

RE-WRITE FOR DVD FIRMWARE

1. Turn on the power, and set the DVD mode.
2. Confirm that the "No Disc" will be appeared on the screen.
3. Press both VOL. DOWN button on the set and Channel button **(5)** on the remote control for more than 2 seconds.
4. Press VOL. UP/DOWN button on the unit to check if all the keys on the unit do not function.
NOTE: To check if DVD Write mode is set.
When inserting Up-Date Disc at Non DVD Write mode, the read error will happen.

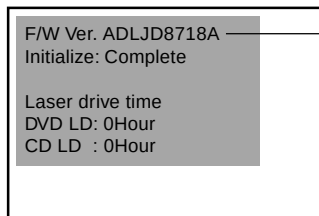
5. Insert the Up-Date Disc. **(Refer to SERVICING FIXTURE AND TOOLS)**
6. Automatic read will start and "Firmware upgrade Please Wait" will be displayed on the screen. At this time, the horizontal noise lines may appear. But no problem.
NOTE: Do not turn off the unit on the way or operate the keys on the unit and remocon.
Up-Date error will happen and can not be done with the Up-Date of Up-Date Disc.
7. After the Up-Date, Logo screen will appear.
8. Unplug the AC cord, then plug it in.

After the write, set to the initializing of shipping.

9. Turn on the power, and set the DVD mode.
10. Press both VOL. DOWN button on the set and Channel button **(4)** on the remote control for more than 2 seconds. The "INITIALIZE 5 ---> COMPLETE" will appear on the screen.
11. Then unplug the AC cord, and plug it in.

CHECK FOR THE FIRMWARE VERSION

12. Turn on the power, and set the DVD mode.
13. Press both Channel button **(1)** on the remote control and the STOP button on the set for more than 2 seconds. Firmware version will be displayed on the top left of the screen.



A D L J D 8 7 1 8 A

Fixed

Released times on the same date
Release date (Example: 2008.07.18)

A = October
B = November
C = December

When the changed version displays, the Re-write will be completed.

14. Turn off the power

WHEN REPLACING EEPROM (MEMORY) IC

CONFIRMATION OF CHECK SUM, POWER ON TOTAL HOURS AND MICON VERSION

Initial total of MEMORY IC, POWER ON total hours and MICON VERSION can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

Please refer to "CONFIRMATION OF INITIAL DATA" when SUM DATA is not corresponding.

1. Turn on the POWER, and set to the ALL mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(8)** on the remote control for more than 2 seconds.
4. After the confirmation of each check sum, turn off the power.

NOTE: The each item value might be different according to each set.

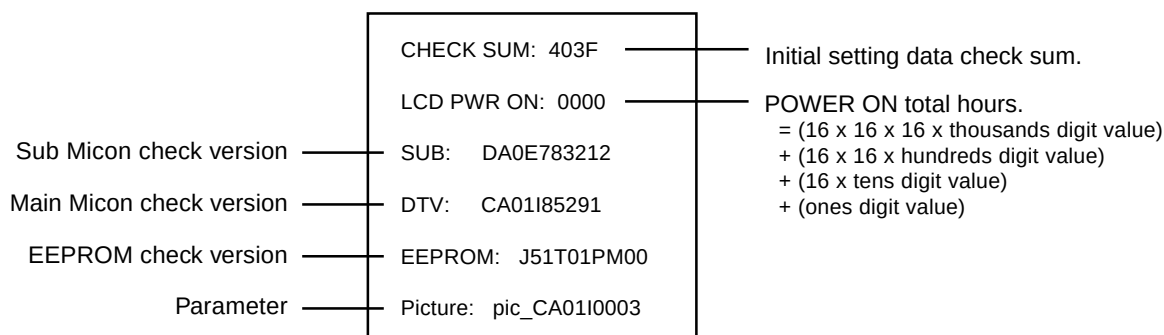


FIG. 1

CONFIRMATION OF INITIAL DATA

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to INITIAL SETTING TABLE (Attached "INITIAL DATA").

1. Turn on the POWER, and set to the ALL mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds.
ADDRESS and DATA should appear as FIG 2.

NOTE: No need to set data other position than 7200~79FF.

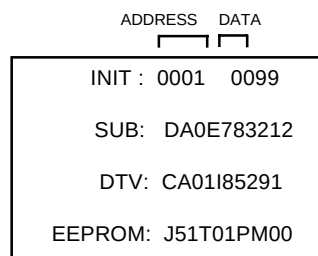


FIG. 2

4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press LEFT/RIGHT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing LEFT/RIGHT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 6 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

10. Turn on the Power.
 11. Set the VOLUME to minimum.
 12. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
 13. After the finishing of the initializing of shipping, the unit will turn off automatically.
- The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

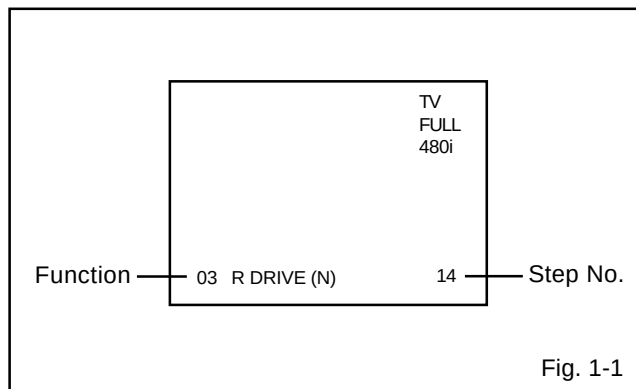
- Use an isolation transformer when performing any service on this chassis.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor with a heat sink, apply silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Pattern Generator

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the channel button **(9)** on the remote control for more than 2 seconds to display adjustment mode on the screen as shown in **Fig. 1-1**.



3. Use the CH. UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the MENU SETUP button on the remote control to end the adjustments.
5. To display the adjustment screen for TV, AV, GAME, COMPONENT and DVD mode, press the INPUT ZOOM button on the remote control.
6. Receive the DIGITAL broadcasting.
7. To display the adjustment screen for DTV mode, select the digital channel.
8. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION
03	R DRIVE(N)	31	BAK LIGHT MIN
04	R CUT OFF(N)	32	BRIGHTNESS CENT
05	G DRIVE(N)	33	BRIGHTNESS MAX
06	G CUT OFF(N)	34	BRIGHTNESS MIN
07	B DRIVE(N)	35	TINT
08	B CUT OFF(N)	36	SHARP H1 MAX
09	R DRIVE(C)	37	SHARP H1 MIN
10	R CUT OFF(C)	38	SHARP H2 MAX
11	G DRIVE(C)	39	SHARP H2 MIN
12	G CUT OFF(C)	40	SHARP V1 MAX
13	B DRIVE(C)	41	SHARP V1 MIN
14	B CUT OFF(C)	42	CONTRAST CENTER
15	R DRIVE(W)	43	CONTRAST MAX
16	R CUT OFF(W)	44	CONTRAST MIN
17	G DRIVE(W)	45	COLOR CENTER
18	G CUT OFF(W)	46	COLOR MAX
19	B DRIVE(W)	47	COLOR MIN
20	B CUT OFF(W)	50	CONTRAST 40
29	BAK LIGHT CENT		
30	BAK LIGHT MAX		

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: WHITE BALANCE

1. Place the set in Aging Test for more than 20 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Press the INPUT ZOOM button on the remote control to set to the AV mode.
4. Using the remote control, set the brightness and contrast to normal position.
5. Activate the adjustment mode display of **Fig. 1-2** and press the channel button **(03)** on the remote control to select "R DRIVE(N)".
6. Press the CH. UP/DOWN button on the remote control to select the "R DRIVE (N)", "R CUT OFF (N)", "B DRIVE (N)", "B CUT OFF (N)", "R DRIVE (C)", "R CUT OFF (C)", "B DRIVE (C)", "B CUT OFF (C)", "R DRIVE (W)", "R CUT OFF (W)", "B DRIVE (W)" or "B CUTOFF(W)".
7. Adjust the LEFT/RIGHT button on the remote control to whiten the R DRIVE (N), R CUT OFF (N), B DRIVE (N), B CUT OFF (N), R DRIVE (C), R CUT OFF (C), B DRIVE (C), B CUT OFF (C), R DRIVE (W), R CUT OFF (W), B DRIVE (W) and B CUTOFF(W) at each step tone sections equally.
8. Perform the above adjustments 6 and 7 until the white color is achieved.

ELECTRICAL ADJUSTMENTS

2-2: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
4. Press the LEFT/RIGHT button on the remote control until the brightness cent step No. becomes "120".
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT ZOOM button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
10. Press the LEFT/RIGHT button on the remote control until the brightness cent step No. becomes "120".
11. Check if the picture is normal.
12. Receive the monoscope pattern. (S-VIDEO Input)
13. Press the INPUT ZOOM button on the remote control to set to the AV(Y/C) mode. Then perform the above adjustments 8~11.
14. Playback the DVD(480i) disc. (COMPONENT Input)
15. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode.
16. Using the remote control, set the brightness and contrast to normal position.
17. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
18. Press the LEFT/RIGHT button on the remote control until the brightness cent step No. becomes "120".
19. Check if the picture is normal.
20. Playback the DVD(720p) disc. (COMPONENT Input)
21. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 16~19.
22. Playback the DVD(1080i) disc. (COMPONENT Input)
23. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 16~19.
24. Playback the DVD disc. (DVD Input)
25. Press the TV/DVD button on the remote control to set to the DVD mode.
26. Using the remote control, set the brightness and contrast to normal position.
27. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(32)** on the remote control to select "BRIGHTNESS CENT".
28. Press the LEFT/RIGHT button on the remote control until the brightness cent step No. becomes "110".
29. Check if the picture is normal.

2-3: CONTRAST MAX

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
4. Press the LEFT/RIGHT button on the remote control until the contrast max step No. becomes "151".
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT ZOOM button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
10. Press the LEFT/RIGHT button on the remote control until the contrast max step No. becomes "149".
11. Check if the picture is normal.
12. Receive the monoscope pattern. (S-VIDEO Input)
13. Press the INPUT ZOOM button on the remote control to set to the AV(Y/C) mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
16. Press the LEFT/RIGHT button on the remote control until the contrast max step No. becomes "156".
17. Check if the picture is normal.
18. Playback the DVD(480i) disc. (COMPONENT Input)
19. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode.
20. Using the remote control, set the brightness and contrast to normal position.
21. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
22. Press the LEFT/RIGHT button on the remote control until the contrast max step No. becomes "126".
23. Check if the picture is normal.
24. Playback the DVD(720p) disc. (COMPONENT Input)
25. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 20~23.
26. Playback the DVD(1080i) disc. (COMPONENT Input)
27. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 20~23.
28. Playback the DVD disc. (DVD Input)
29. Press the TV/DVD button on the remote control to set to the DVD mode.
30. Using the remote control, set the brightness and contrast to normal position.
31. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "CONTRAST MAX".
32. Press the LEFT/RIGHT button on the remote control until the contrast max step No. becomes "113".
33. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-4: CONTRAST CENTER

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(42)** on the remote control to select "CONTRAST CENTER".
4. Press the LEFT/RIGHT button on the remote control until the contrast cent step No. becomes "112".
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT ZOOM button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(42)** on the remote control to select "CONTRAST CENTER".
10. Press the LEFT/RIGHT button on the remote control until the contrast cent step No. becomes "111".
11. Check if the picture is normal.
12. Receive the monoscope pattern. (S-VIDEO Input)
13. Press the INPUT ZOOM button on the remote control to set to the AV(Y/C) mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(42)** on the remote control to select "CONTRAST CENTER".
16. Press the LEFT/RIGHT button on the remote control until the contrast cent step No. becomes "116".
17. Check if the picture is normal.
18. Playback the DVD(480i) disc. (COMPONENT Input)
19. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode.
20. Using the remote control, set the brightness and contrast to normal position.
21. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(42)** on the remote control to select "CONTRAST CENTER".
22. Press the LEFT/RIGHT button on the remote control until the contrast cent step No. becomes "94".
23. Check if the picture is normal.
24. Playback the DVD(720p) disc. (COMPONENT Input)
25. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 19~23.
26. Playback the DVD(1080i) disc. (COMPONENT Input)
27. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 19~23.
28. Playback the DVD disc. (DVD Input)
29. Press the TV/DVD button on the remote control to set to the DVD mode.
30. Using the remote control, set the brightness and contrast to normal position.
31. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(42)** on the remote control to select "CONTRAST CENTER".
32. Press the LEFT/RIGHT button on the remote control until the contrast cent step No. becomes "111".
33. Check if the picture is normal.

2-5: CONTRAST 40

1. Receive the monoscope pattern. (RF Input)
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(50)** on the remote control to select "CONTRAST 40".
4. Press the LEFT/RIGHT button on the remote control until the contrast 40 step No. becomes "142".
5. Check if the picture is normal.
6. Receive the monoscope pattern. (VIDEO Input)
7. Press the INPUT ZOOM button on the remote control to set to the AV mode.
8. Using the remote control, set the brightness and contrast to normal position.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(50)** on the remote control to select "CONTRAST 40".
10. Press the LEFT/RIGHT button on the remote control until the contrast 40 step No. becomes "141".
11. Check if the picture is normal.
12. Receive the monoscope pattern. (S-VIDEO Input)
13. Press the INPUT ZOOM button on the remote control to set to the AV(Y/C) mode.
14. Using the remote control, set the brightness and contrast to normal position.
15. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(50)** on the remote control to select "CONTRAST 40".
16. Press the LEFT/RIGHT button on the remote control until the contrast 40 step No. becomes "148".
17. Check if the picture is normal.
18. Playback the DVD(480i) disc. (COMPONENT Input)
19. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode.
20. Using the remote control, set the brightness and contrast to normal position.
21. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(50)** on the remote control to select "CONTRAST 40".
22. Press the LEFT/RIGHT button on the remote control until the contrast 40 step No. becomes "120".
23. Check if the picture is normal.
24. Playback the DVD(720p) disc. (COMPONENT Input)
25. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 20~23.
26. Playback the DVD(1080i) disc. (COMPONENT Input)
27. Press the INPUT ZOOM button on the remote control to set to the COMPONENT mode. Then perform the above adjustments 20~23.
28. Playback the DVD disc. (DVD Input)
29. Press the TV/DVD button on the remote control to set to the DVD mode.
30. Using the remote control, set the brightness and contrast to normal position.
31. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(50)** on the remote control to select "CONTRAST 40".
32. Press the LEFT/RIGHT button on the remote control until the contrast 40 step No. becomes "155".
33. Check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-6: Confirmation of Fixed Value (Step No.)

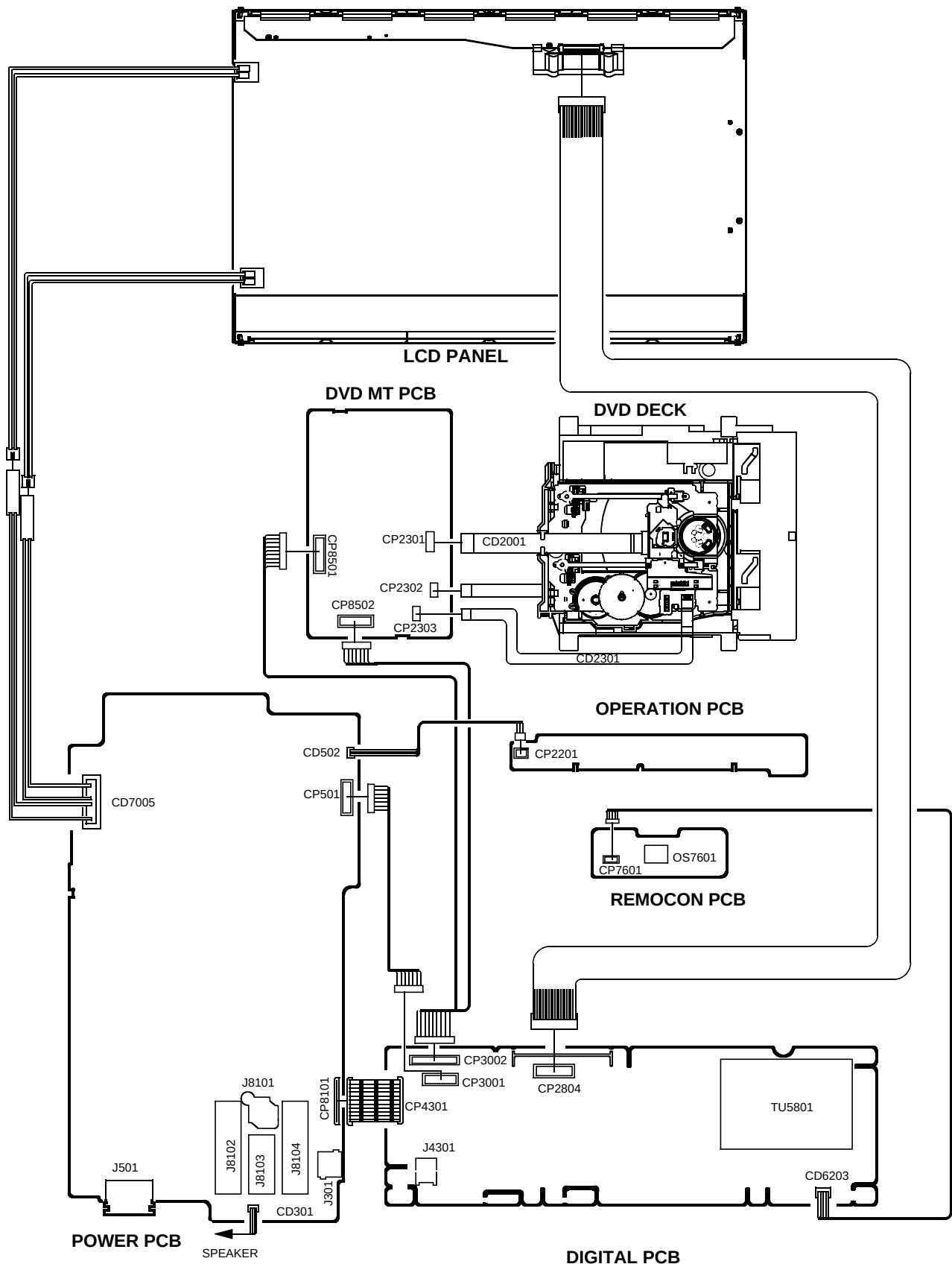
Please check if the fixed values of each of the adjustment item is set correctly referring below. (TV/AV/GAME/COMPONENT/DVD/DTV)

NO.	FUNCTION	TV	AV		GAME	COMPONENT				DVD	DTV			
			CVBS	Y/C		480i	480p	720p	1080i		480i	480p	720p	1080i
		Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.	Step No.
3	R.DRIVE (N)	*	*	*	*	*	*	*	*	*	*	*	*	*
4	R.CUTOFF (N)	*	*	*	*	*	*	*	*	*	*	*	*	*
5	G DRIVE (N)	0	0	0	0	0	0	0	0	0	0	0	0	0
6	G CUTOFF (N)	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B DRIVE (N)	*	*	*	*	*	*	*	*	*	*	*	*	*
8	B CUTOFF (N)	*	*	*	*	*	*	*	*	*	*	*	*	*
9	R.DRIVE (C)	*	*	*	*	*	*	*	*	*	*	*	*	*
10	R CUTOFF (C)	*	*	*	*	*	*	*	*	*	*	*	*	*
11	G DRIVE (C)	0	0	0	0	0	0	0	0	0	0	0	0	0
12	G CUTOFF (C)	0	0	0	0	0	0	0	0	0	0	0	0	0
13	B DRIVE (C)	*	*	*	*	*	*	*	*	*	*	*	*	*
14	B CUTOFF (C)	*	*	*	*	*	*	*	*	*	*	*	*	*
15	R.DRIVE (W)	*	*	*	*	*	*	*	*	*	*	*	*	*
16	R CUTOFF (W)	*	*	*	*	*	*	*	*	*	*	*	*	*
17	G DRIVE (W)	0	0	0	0	0	0	0	0	0	0	0	0	0
18	G CUTOFF (W)	0	0	0	0	0	0	0	0	0	0	0	0	0
19	B DRIVE (W)	*	*	*	*	*	*	*	*	*	*	*	*	*
20	B CUTOFF (W)	*	*	*	*	*	*	*	*	*	*	*	*	*
29	BAK LIGHT CENT	65	65	65	65	65	65	65	65	65	65	65	65	65
30	BAK LIGHT MAX	89	89	89	89	89	89	89	89	89	89	89	89	89
31	BAK LIGHT MIN	30	30	30	30	30	30	30	30	30	30	30	30	30
32	BRIGHT CENT	120	120	120	120	120	120	120	120	110	128	128	128	128
33	BRIGHT MAX	180	180	180	180	180	180	180	180	180	180	180	180	180
34	BRIGHT MIN	50	50	50	50	50	50	50	50	50	50	50	50	50
35	TINT	128	122	122	122	121	122	129	129	122	115	118	115	122
36	SHARP H1 MAX	511	511	511	511	511	511	511	511	511	511	511	511	511
37	SHARP H1 MIN	0	0	0	0	0	0	0	0	0	0	0	0	0
38	SHARP H2 MAX	511	511	511	511	511	511	511	511	511	511	511	511	511
39	SHARP H2 MIN	0	0	0	0	0	0	0	0	0	0	0	0	0
40	SHARP V1 MAX	511	511	511	511	511	511	511	511	511	511	511	511	511
41	SHARP V1 MIN	0	0	0	0	0	0	0	0	0	0	0	0	0
42	CONT CENTER	*	*	*	*	*	*	*	*	*	*	*	*	*
43	CONT MAX	*	*	*	*	*	*	*	*	*	*	*	*	*
44	CONT MIN	50	50	50	50	50	50	50	50	50	50	50	50	50
45	COLOR CENT	130	140	140	140	170	175	186	186	140	140	140	140	140
46	COLOR MAX	255	255	255	255	255	255	255	255	255	255	255	255	255
47	COLOR MIN	0	0	0	0	0	0	0	0	0	0	0	0	0
50	CONT 40	*	*	*	*	*	*	*	*	*	*	*	*	*

NOTE: For the step no. with * mark, please adjust it according to the situation of the set.

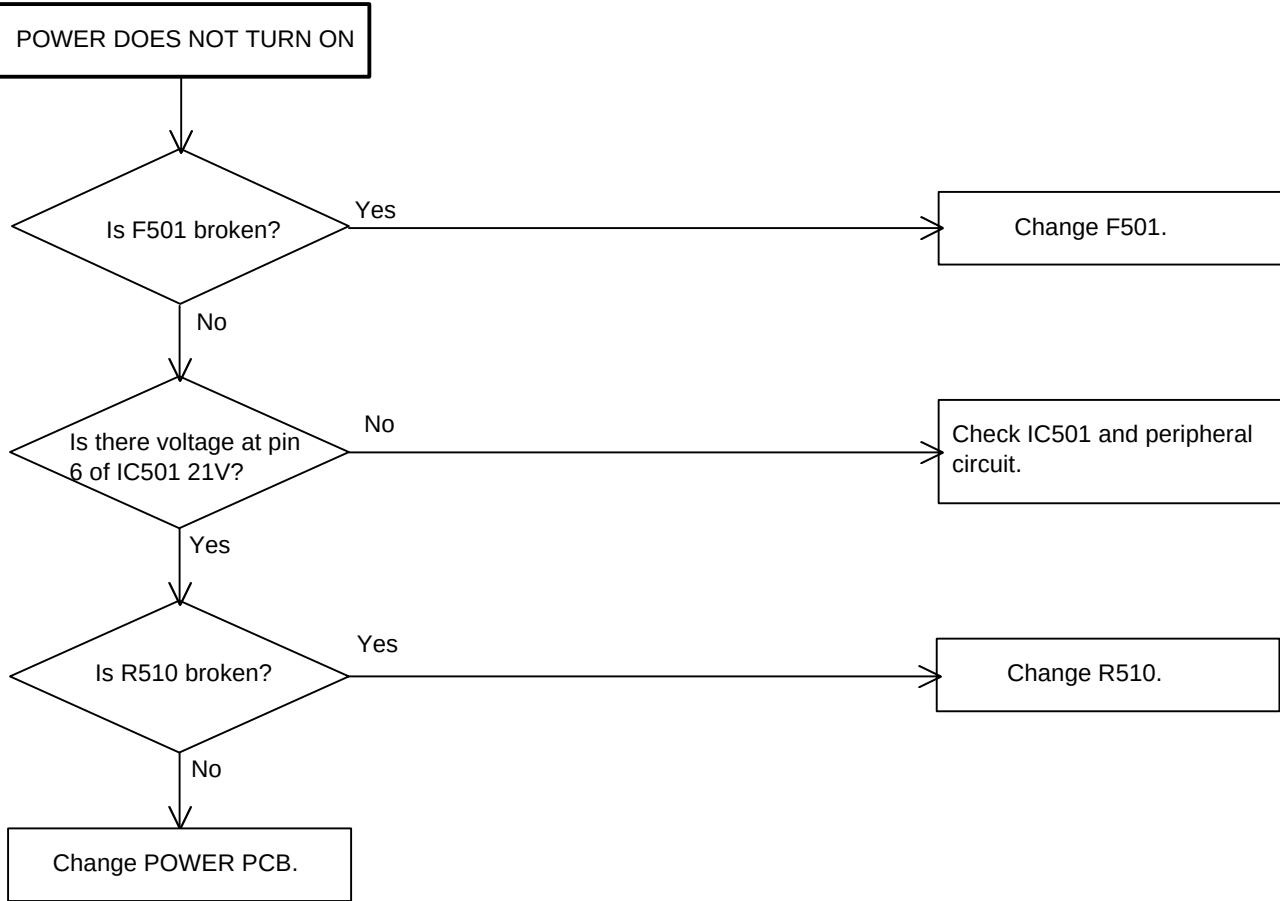
ELECTRICAL ADJUSTMENTS

3. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)

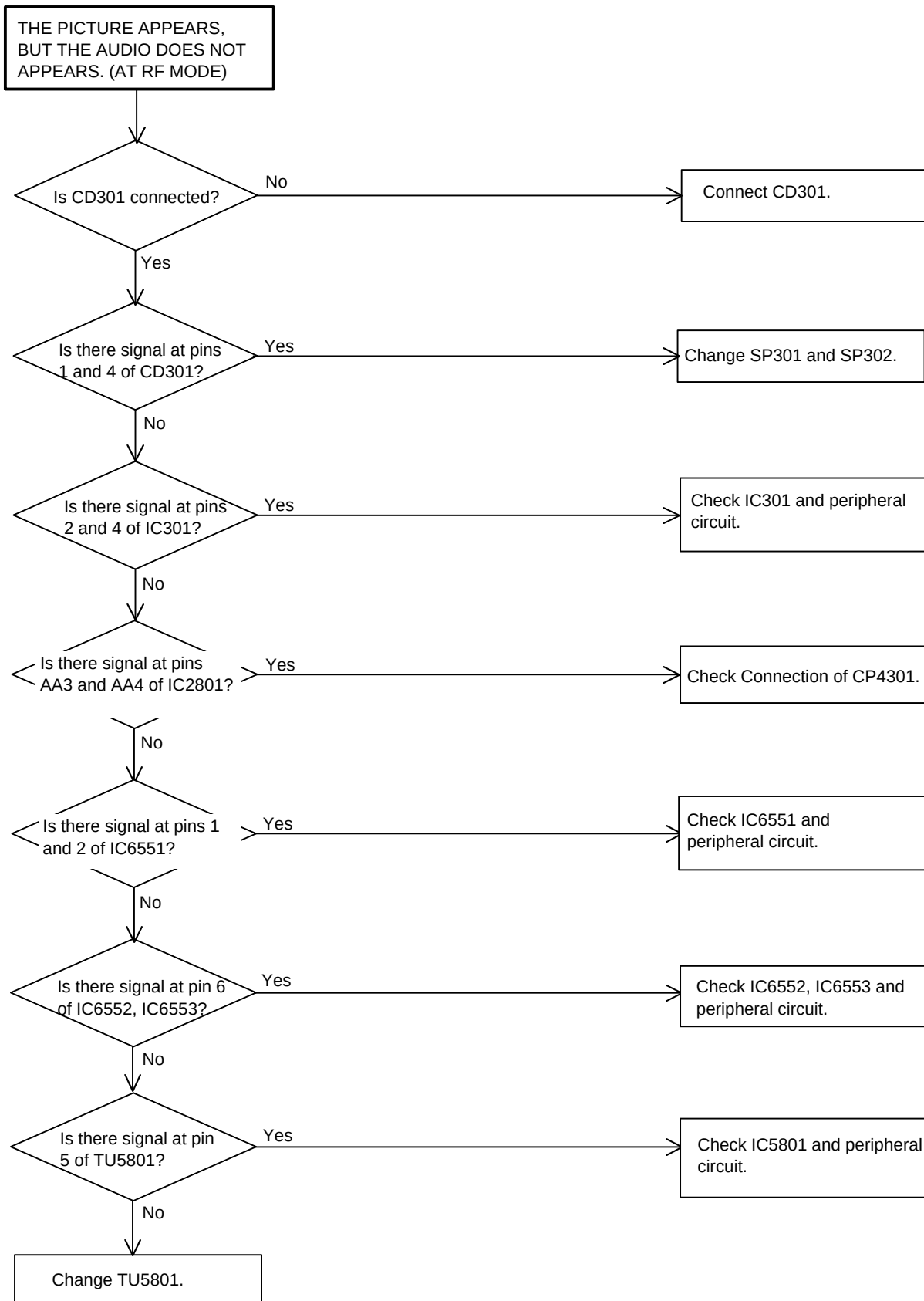


TROUBLESHOOTING GUIDE

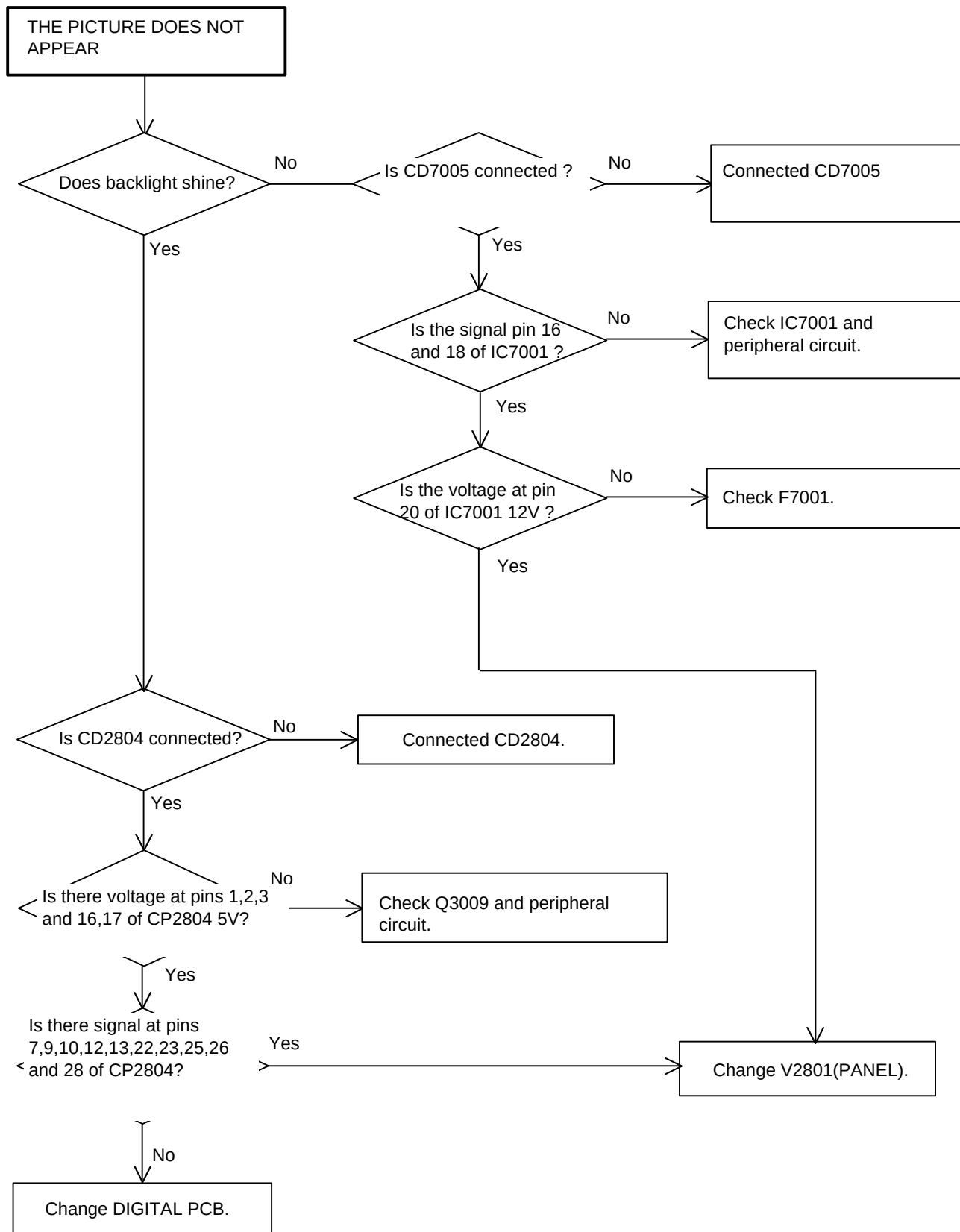
(LCD SECTION)



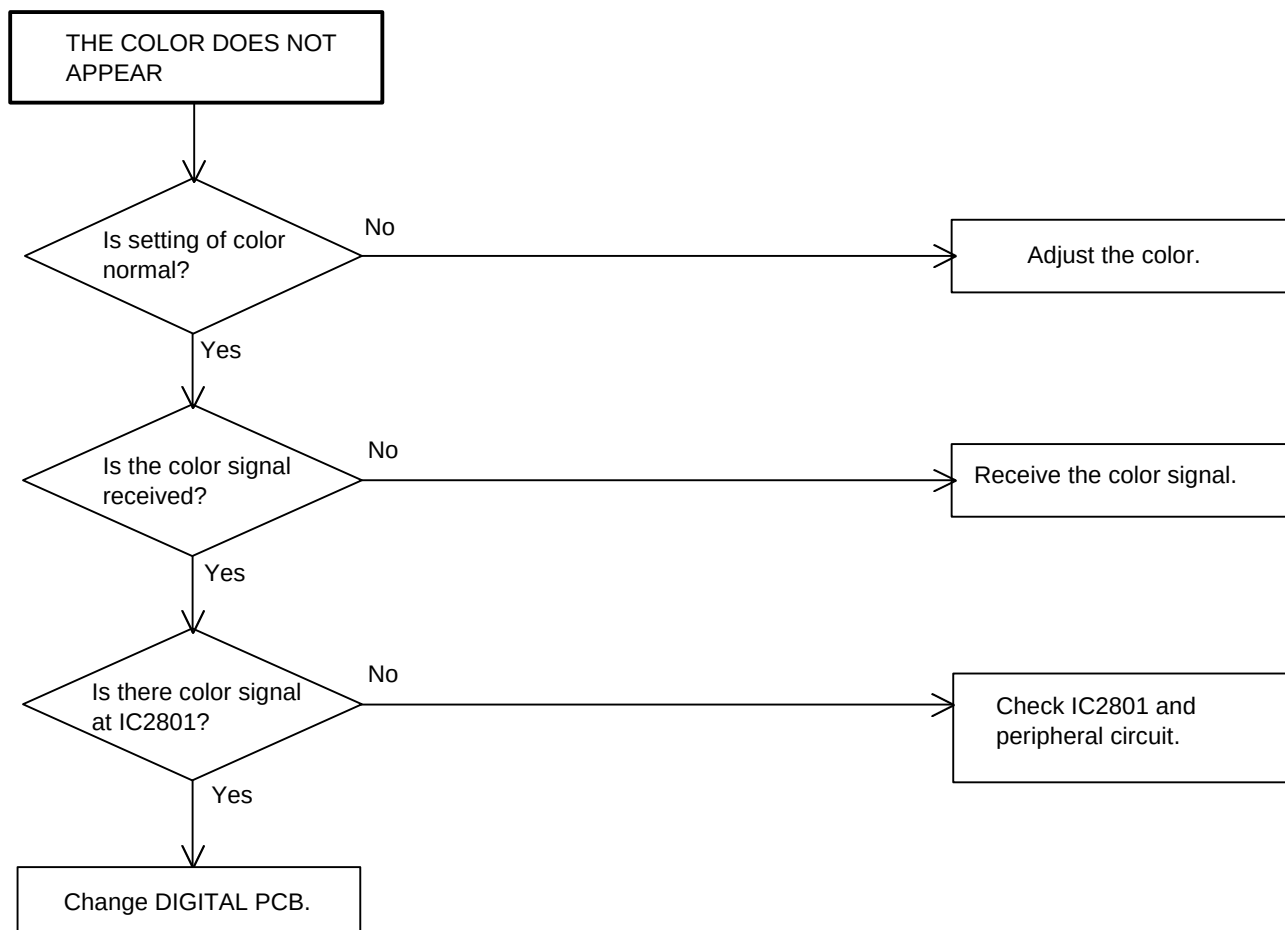
TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE

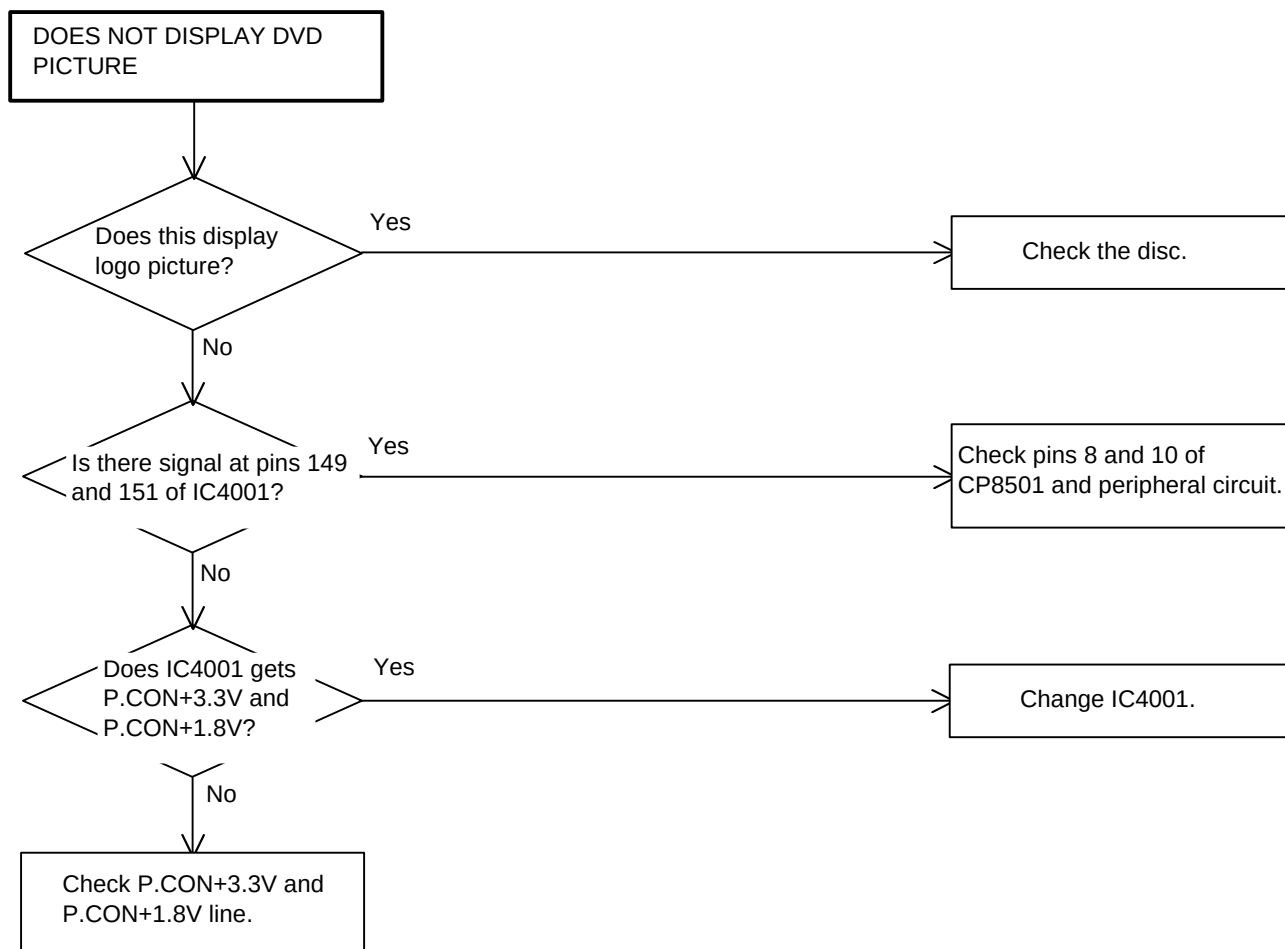


TROUBLESHOOTING GUIDE

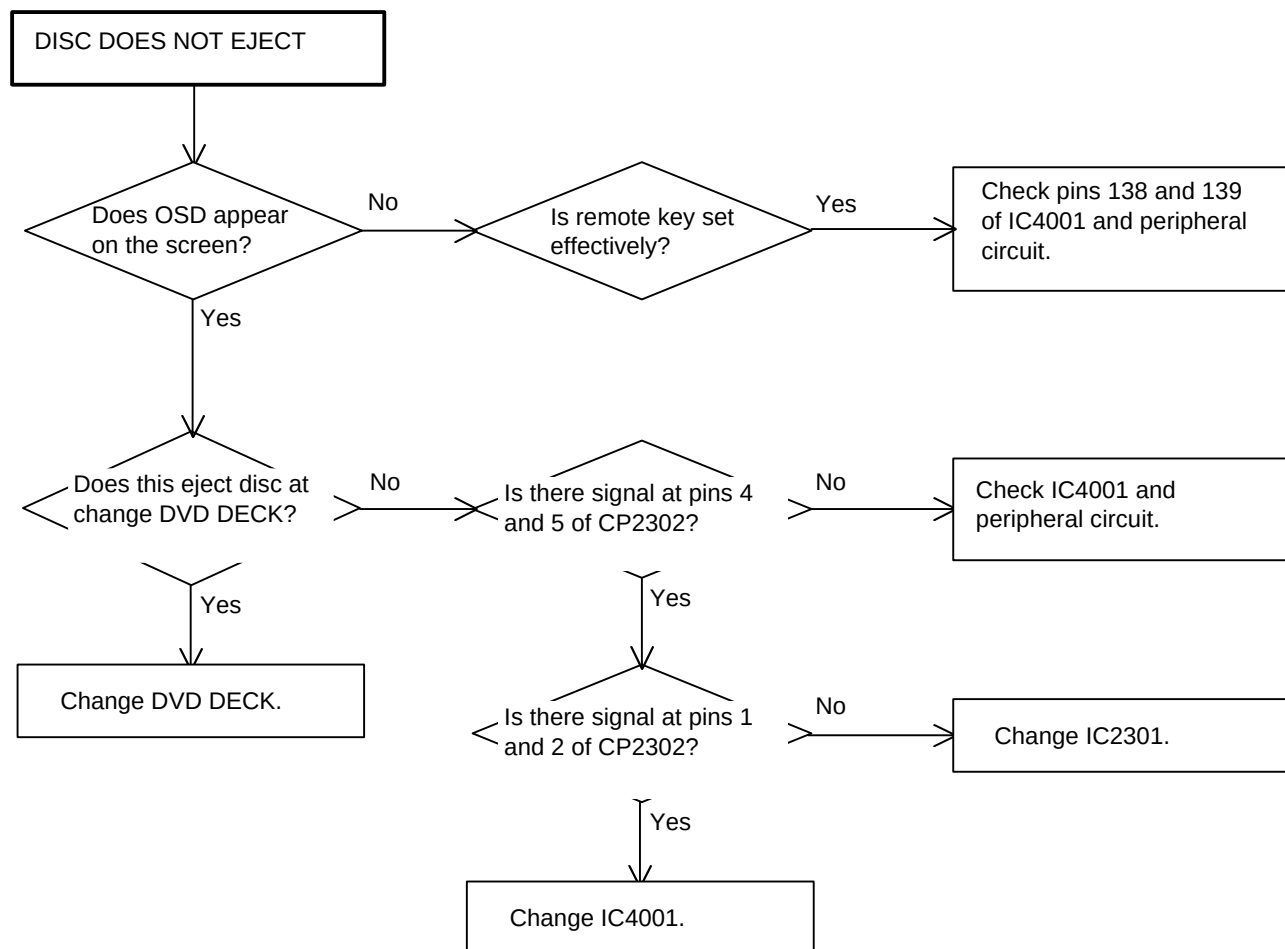


TROUBLESHOOTING GUIDE

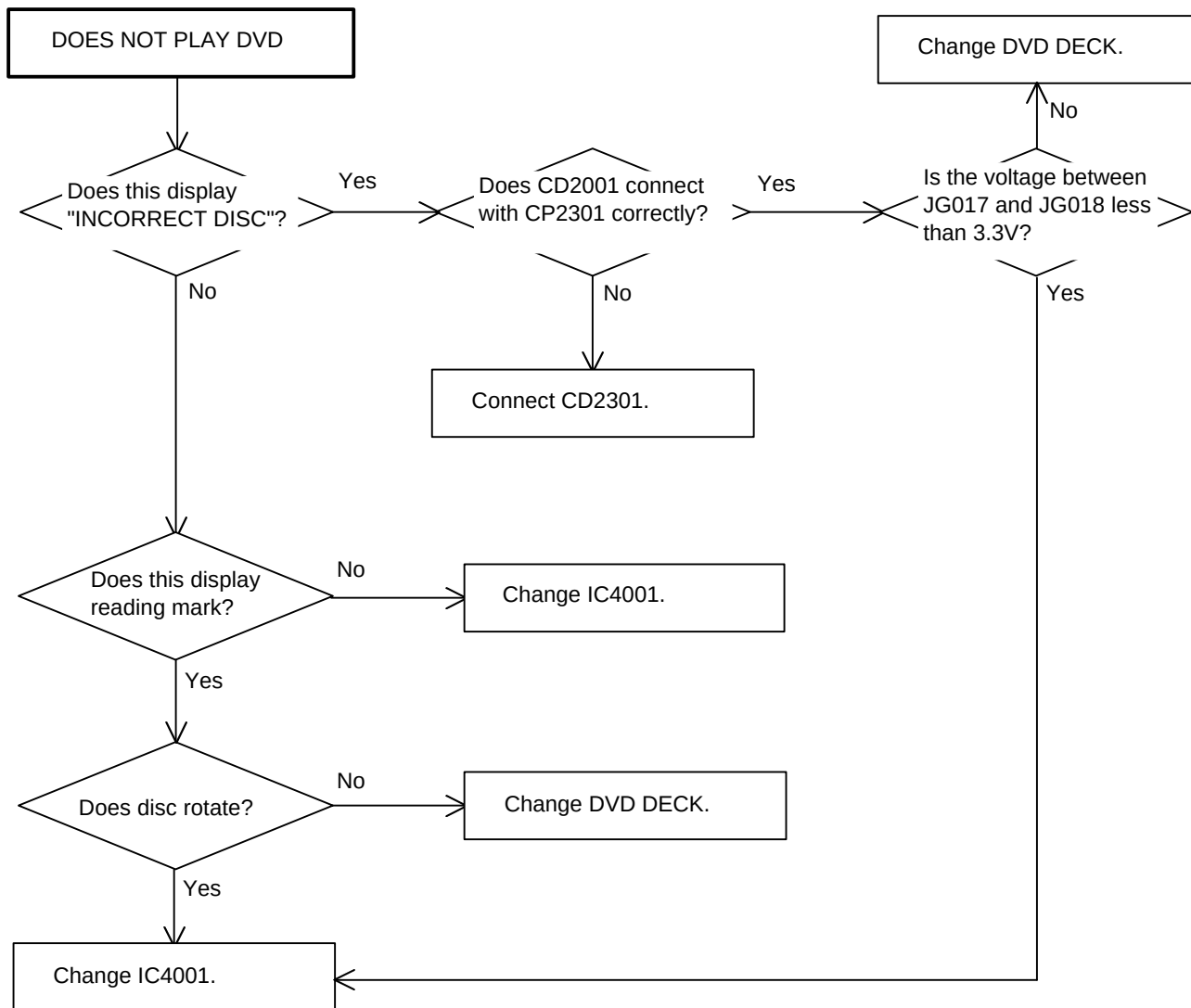
(DVD SECTION)



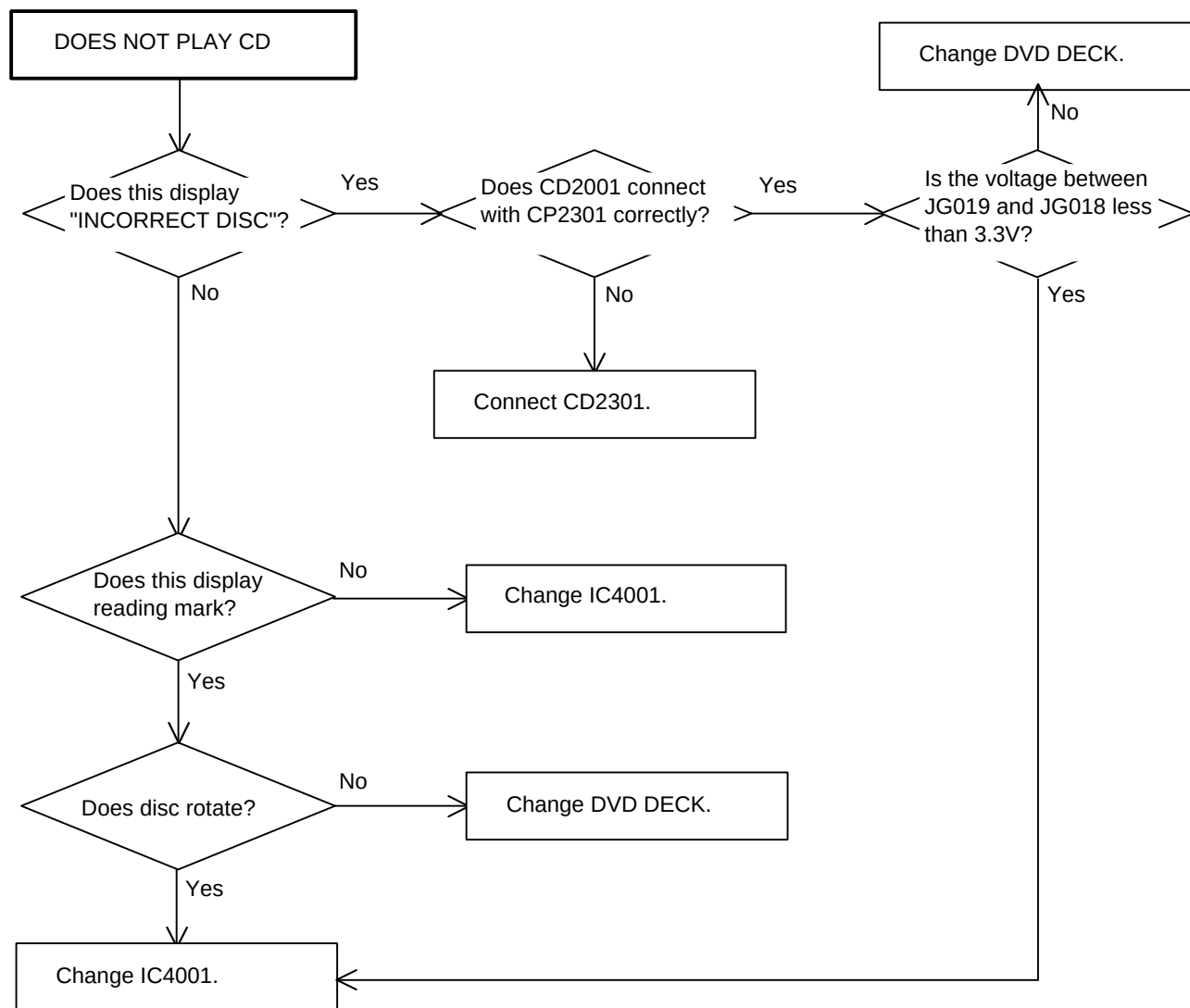
TROUBLESHOOTING GUIDE



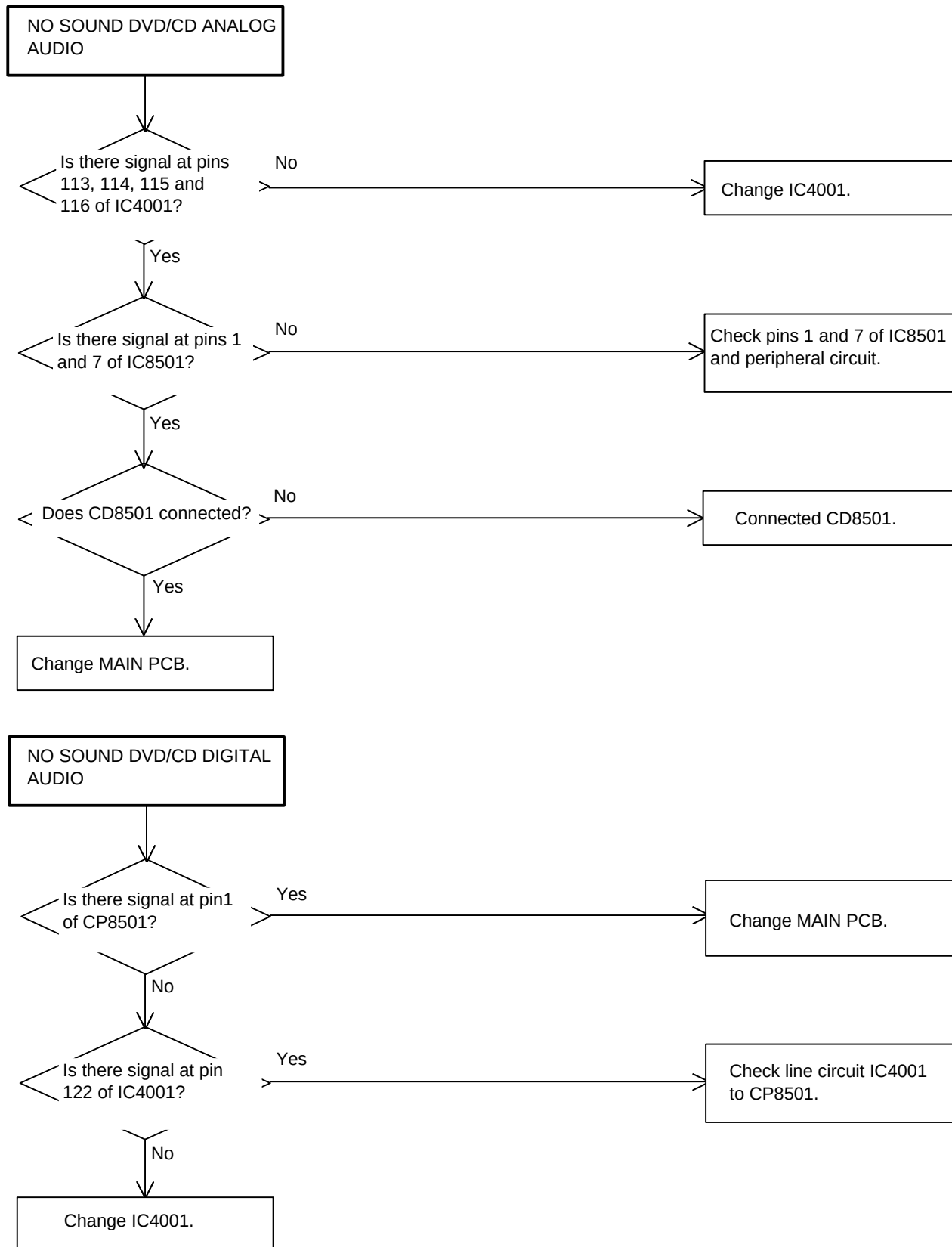
TROUBLESHOOTING GUIDE



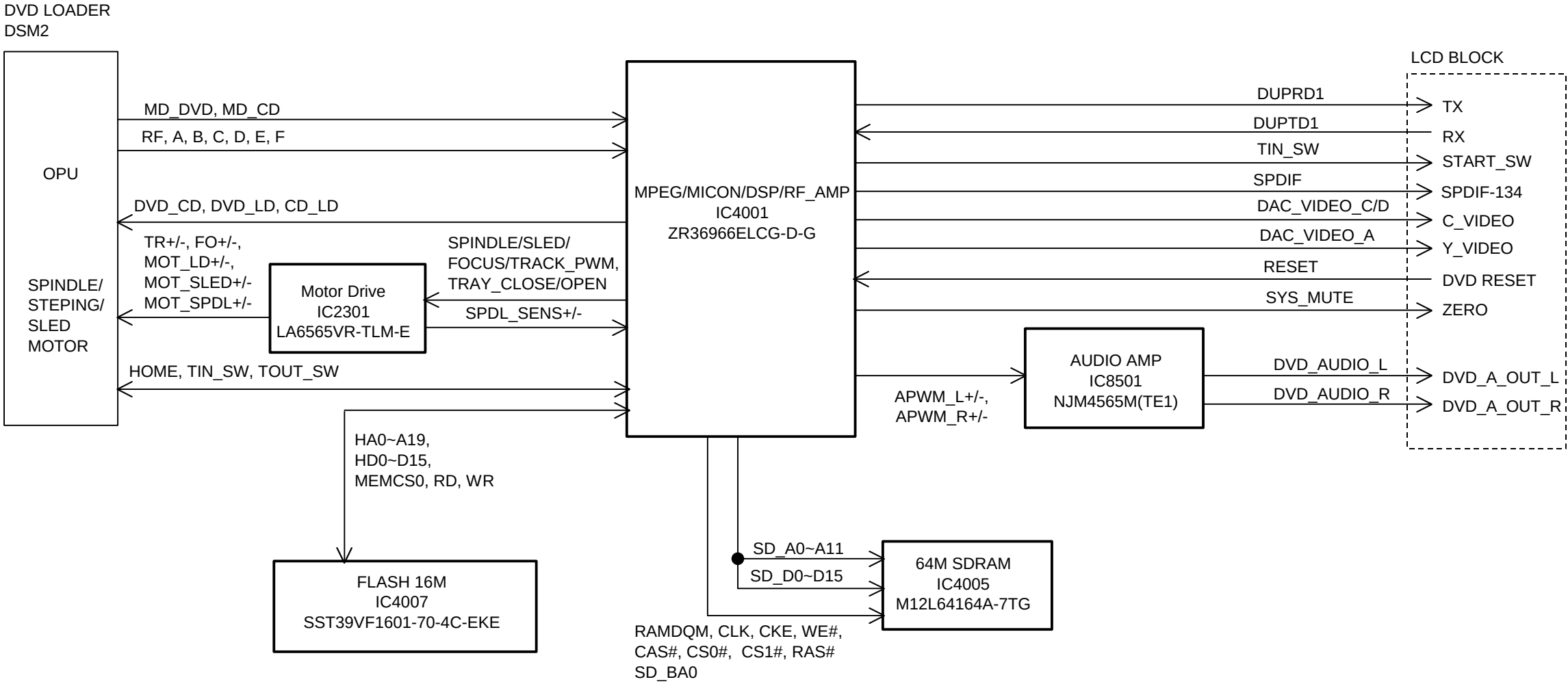
TROUBLESHOOTING GUIDE



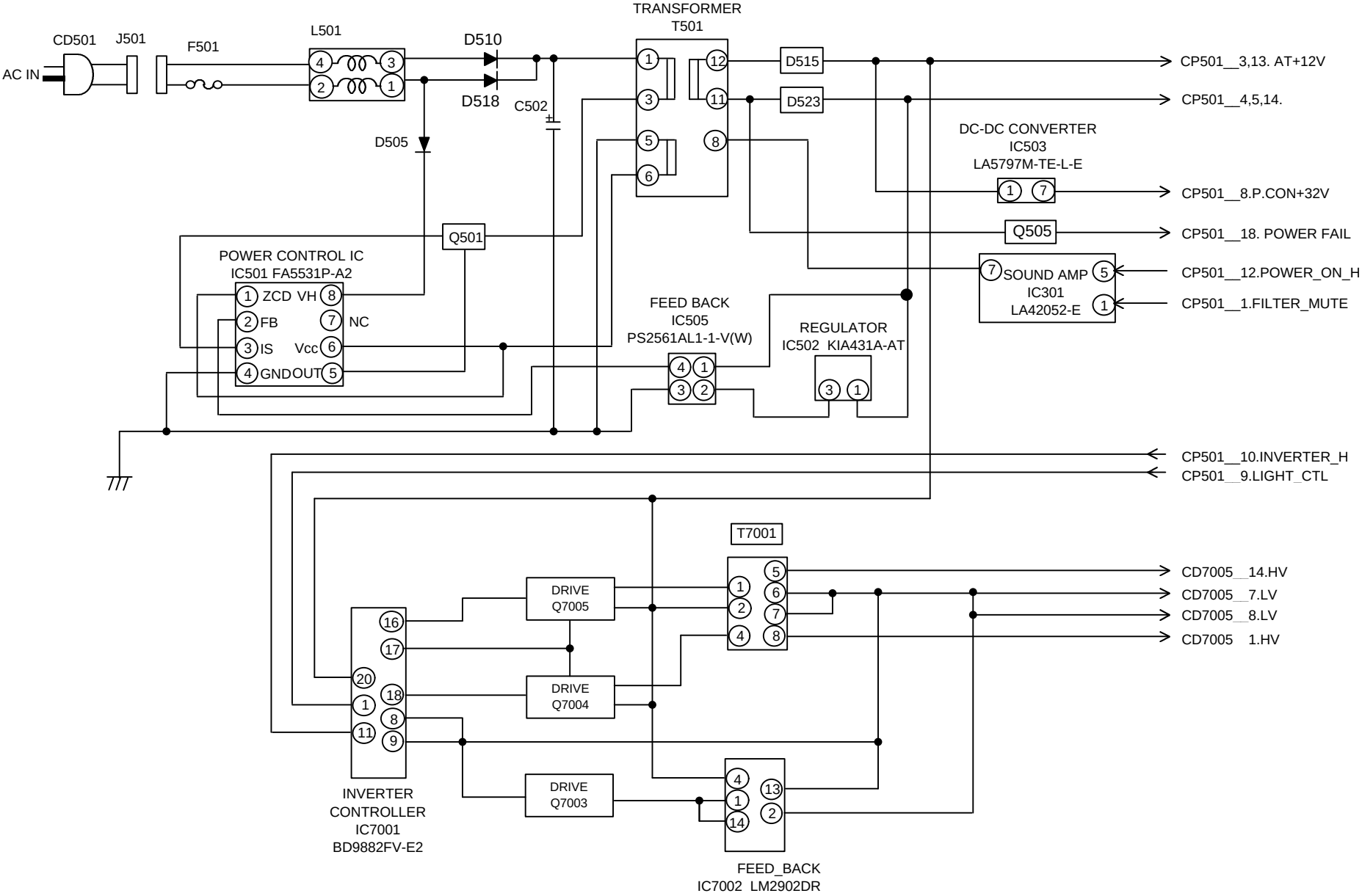
TROUBLESHOOTING GUIDE



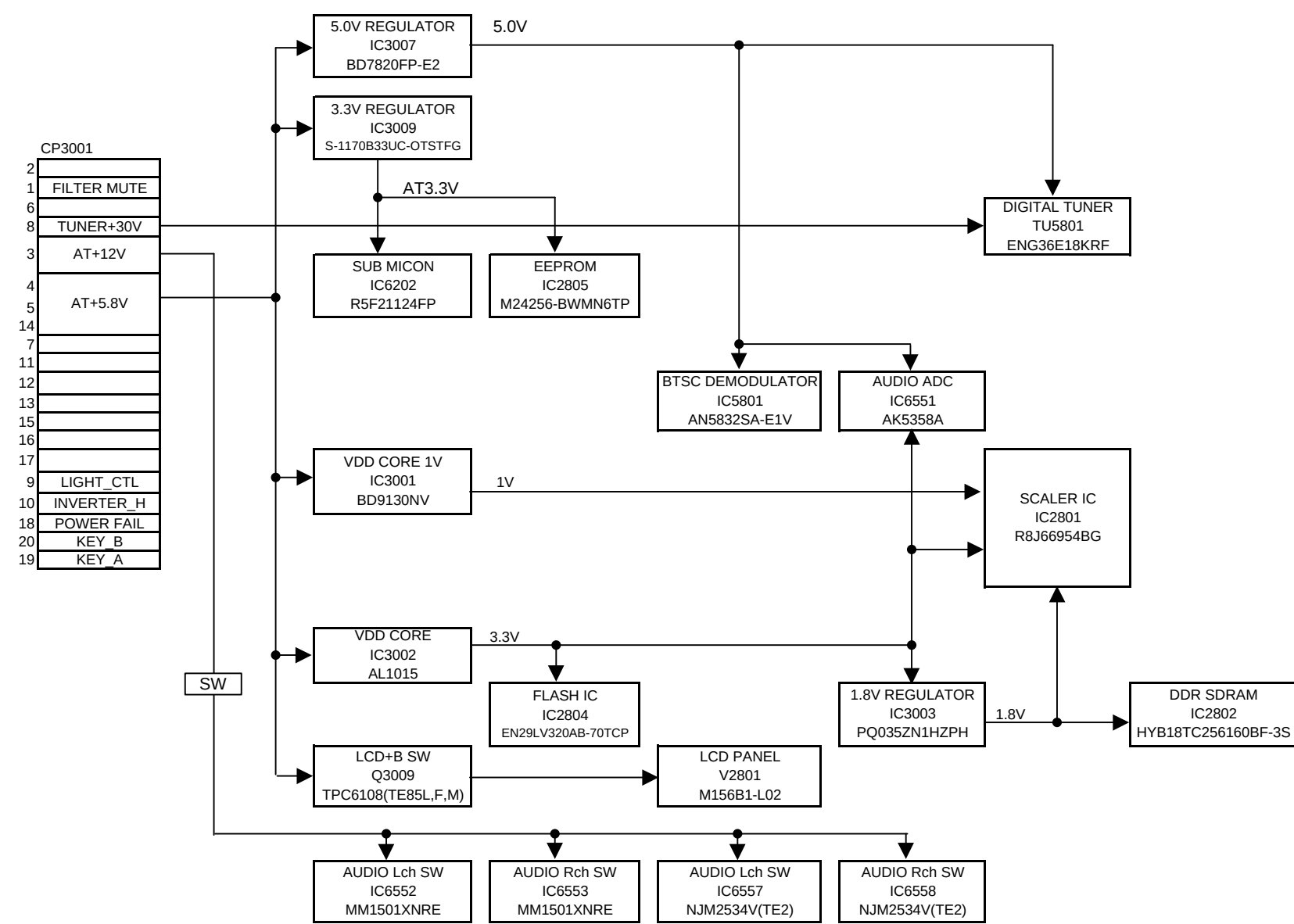
DVD BLOCK DIAGRAM



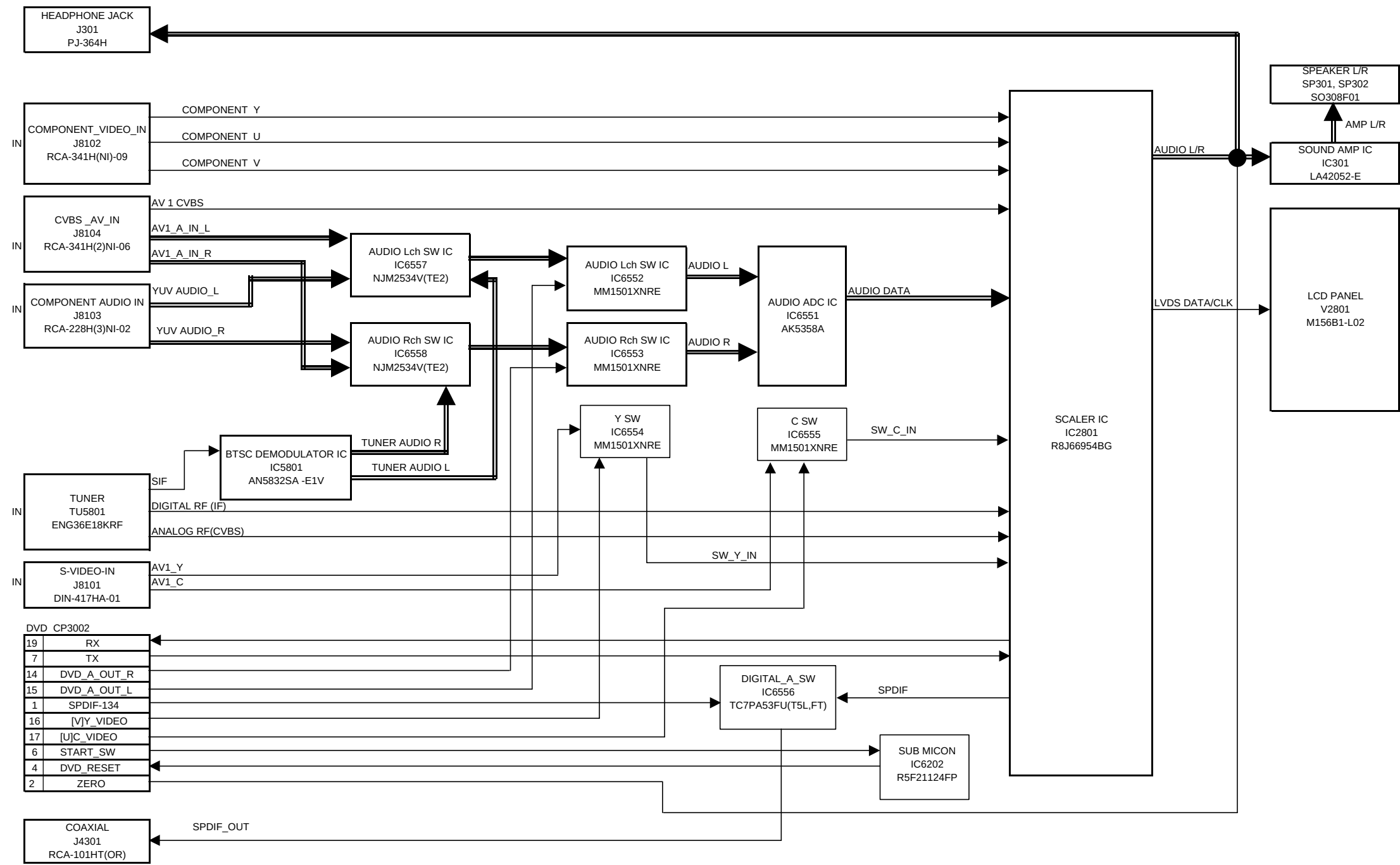
POWER BLOCK DIAGRAM



POWER(DIGITAL PCB) BLOCK DIAGRAM

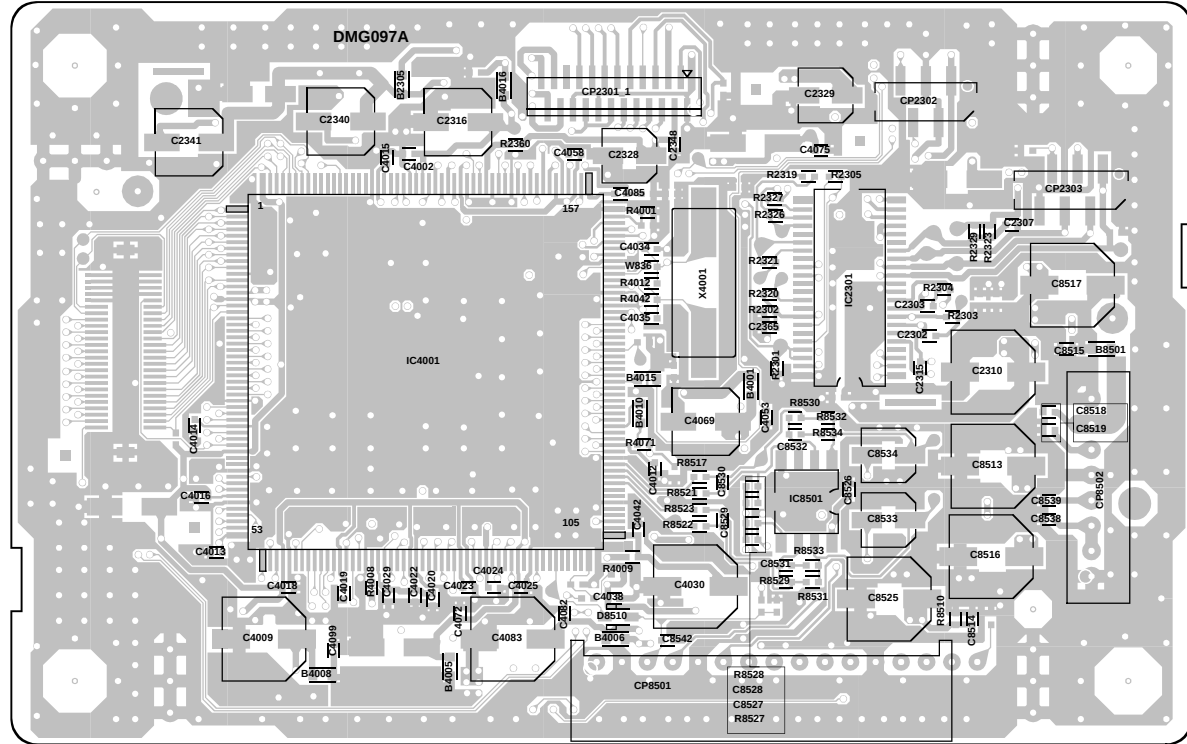


SIGNAL BLOCK DIAGRAM

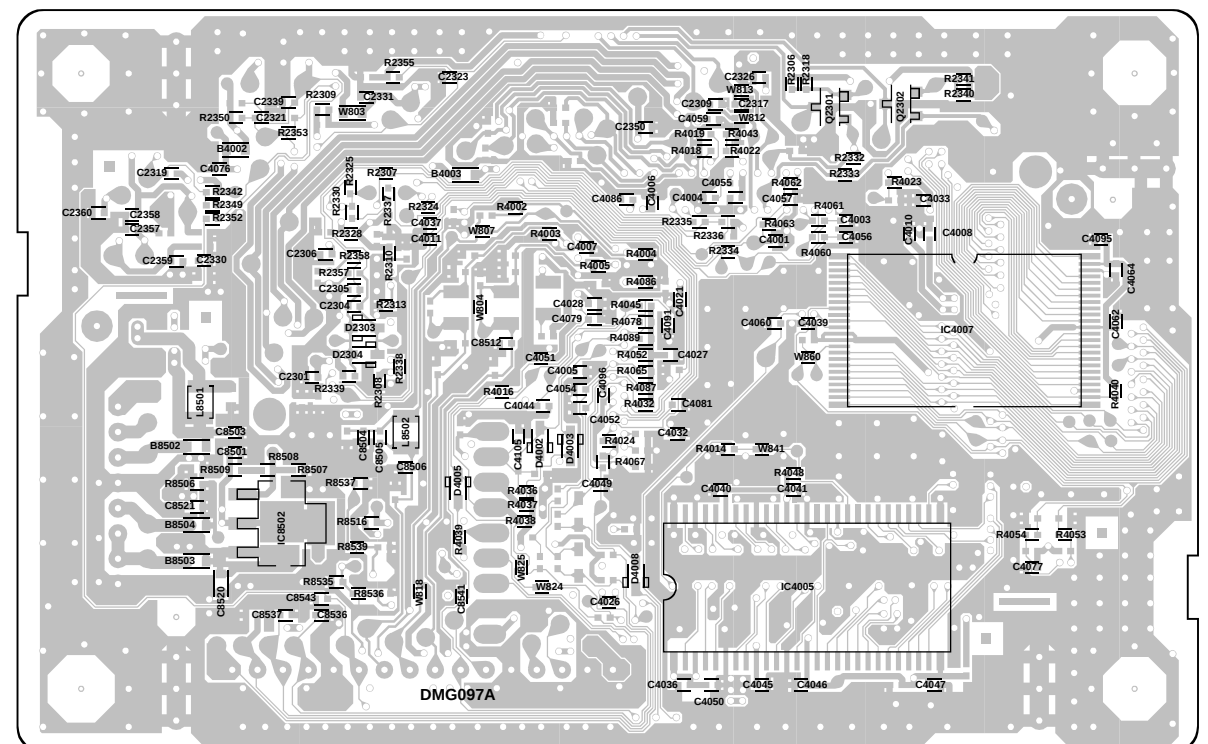


PRINTED CIRCUIT BOARDS

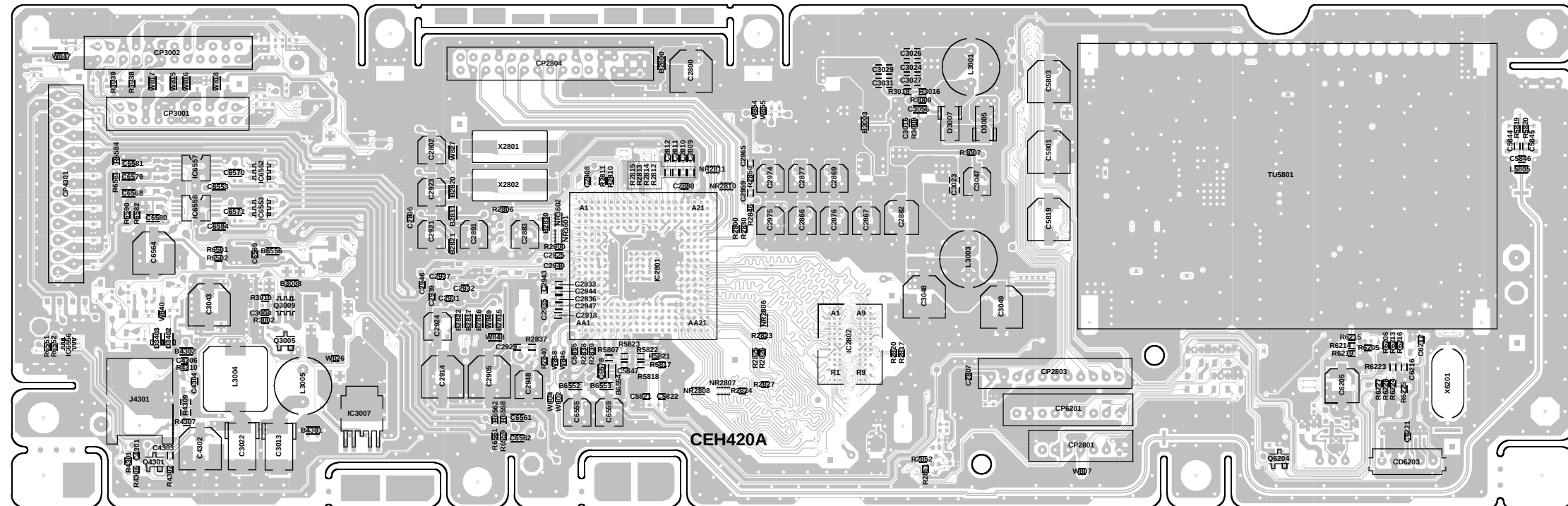
DVD MT (TOP SIDE)



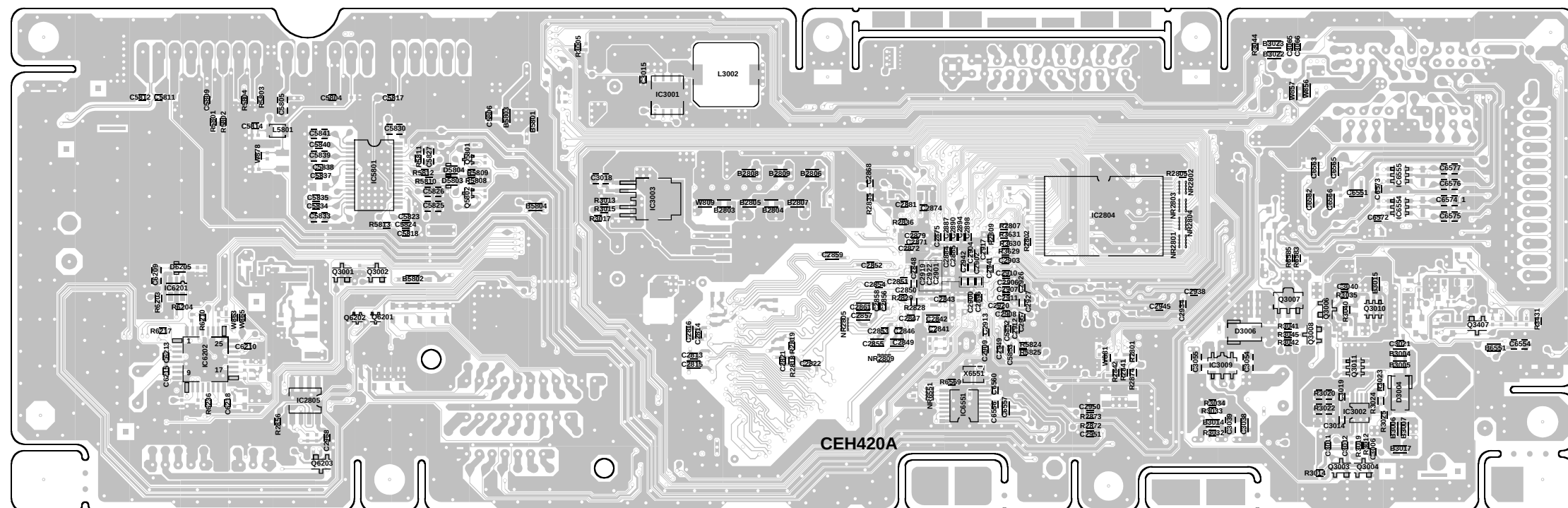
DVD MT (BOTTOM SIDE)



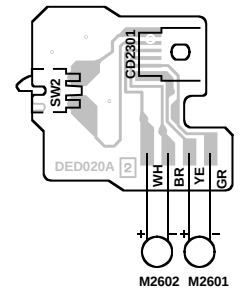
DIGITAL (TOP SIDE)



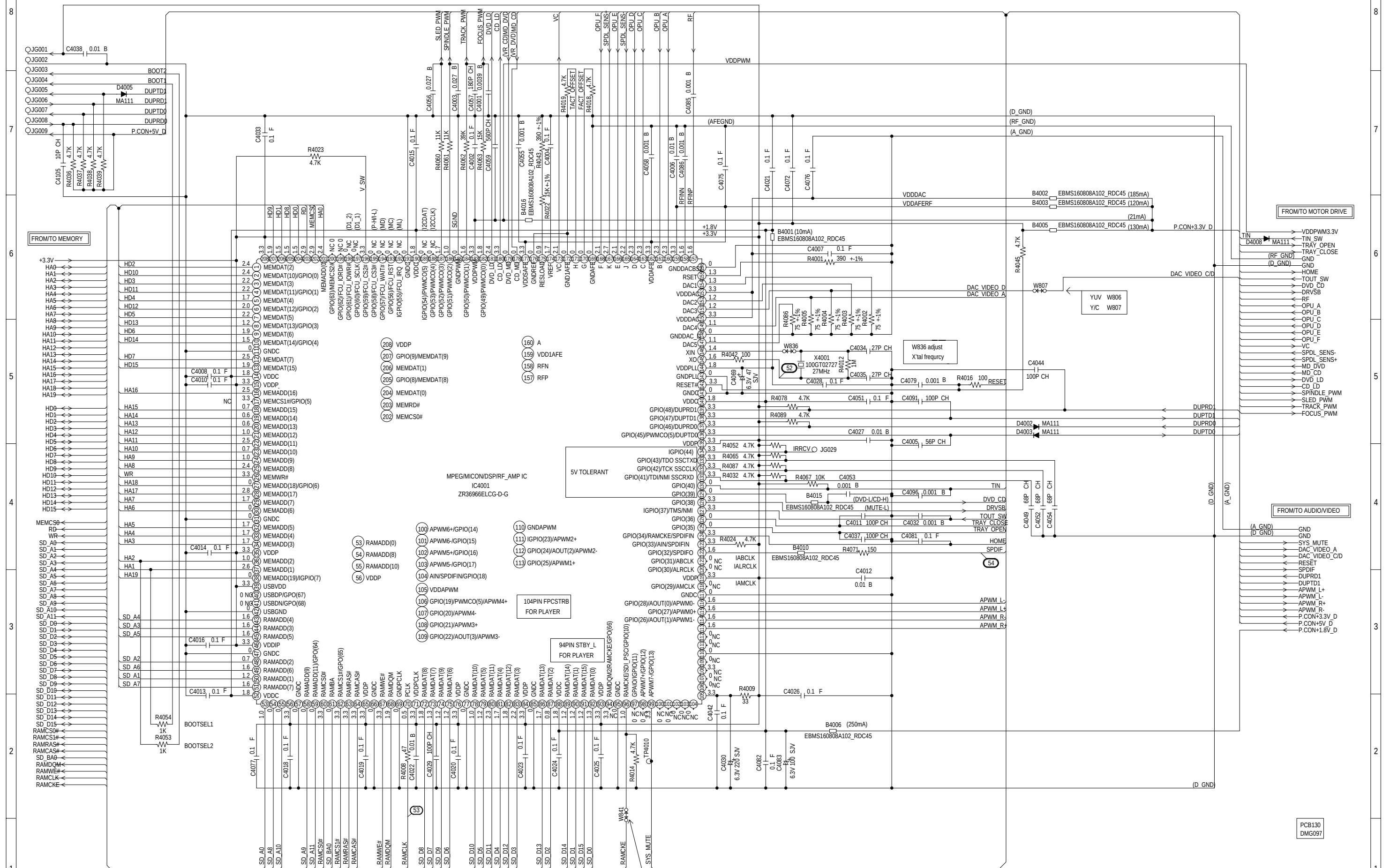
DIGITAL (BOTTOM SIDE)



POWER/OPERATION/REMOCON (INSERTED PARTS)
SOLDER SIDE



MPEG/MICON/DSP/RF AMP SCHEMATIC DIAGRAM (DVD MT PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

DEBUG MODE DEL
RELEASE MODE ADD

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

MEMORY SCHEMATIC DIAGRAM
(DVD MT PCB)

FROM/TO MPEG/MICON/DSP/RF AMP

SD_A0 →
SD_A1 →
SD_A2 →
SD_A3 →
SD_A4 →
SD_A5 →
SD_A6 →
SD_A7 →
SD_A8 →
SD_A9 →
SD_A10 →
SD_A11 →
SD_D0 →
SD_D1 →
SD_D2 →
SD_D3 →
SD_D4 →
SD_D5 →
SD_D6 →
SD_D7 →
SD_D8 →
SD_D9 →
SD_D10 →
SD_D11 →
SD_D12 →
SD_D13 →
SD_D14 →
SD_D15 →
RAMCS0# →
RAMCS1# →
RAMRAS# →
RAMCAS# →
SD_BA0 →
RAMDQM →
RAMWE# →
RAMCLK →
RAMCKE →

HA0 ↔
HA1 ↔
HA2 ↔
HA3 ↔
HA4 ↔
HA5 ↔
HA6 ↔
HA7 ↔
HA8 ↔
HA9 ↔
HA10 ↔
HA11 ↔
HA12 ↔
HA13 ↔
HA14 ↔
HA15 ↔
HA16 ↔
HA17 ↔
HA18 ↔
HA19 ↔
HD0 ↔
HD1 ↔
HD2 ↔
HD3 ↔
HD4 ↔
HD5 ↔
HD6 ↔
HD7 ↔
HD8 ↔
HD9 ↔
HD10 ↔
HD11 ↔
HD12 ↔
HD13 ↔
HD14 ↔
HD15 ↔
MEMCS0 →
RD →
WR →
+3.3V →

FROM/TO AUDIO/VIDEO

RESET →
P.CON+3.3V_D →
GND →

FLASH IC 16M
IC4007 SST39VF1601-70-4C-EKE

HA16 2.5 A16 0.7 HA15
HA14 0.6 HA14
HA13 0.6 HA13
HA12 1.0 HA12
HA11 2.5 HA11
HA10 0.7 HA10
HA9 1.0 HA9
HA8 2.4 HA8
HA19 0 HA19
A20 NC
WE# 3.3 WR
RP# 0
VPP 3.3
WP# 3.3
A19 0 HA19
A18 0 HA18
A17 2.8 HA17
A7 1.7 HA7
A6 0 HA6
A5 1.7 HA5
A4 1.7 HA4
A3 1.7 HA3
A2 1.0 HA2
A1 2.6 HA1

HA15
HA14
HA13
HA12
HA11
HA10
HA9
HA8
HA19
WR
RESET
HA19
HA18
HA17
HA7
HA6
HA5
HA4
HA3
HA2
HA1

64M SDRAM IC
IC4005 M12L64164A-7TG

SD_D15 0 VSS
SD_D14 1.2 DQ15
SD_D13 0 VSSQ
SD_D12 1.2 DQ14
SD_D11 1.7 DQ13
SD_D10 0 VSSQ
SD_D9 1.0 DQ12
SD_D8 1.2 DQ11
SD_D7 0 VSSQ
SD_D6 1.8 DQ10
SD_D5 0 VSSQ
SD_D4 0.01 B VDDQ
SD_D3 0 VSSQ
SD_D2 1.8 DQ9
SD_D1 0 VSSQ
SD_D0 0 VSSQ
RAMDQM 0 NC
RAMCLK 1.8 UDQM
RAMCKE 0.5 CLK
55 R4048 4.7K
SD_A11 0 NC
SD_A9 0 A11
SD_A8 0 A9
SD_A7 1.6 A8
SD_A6 1.6 A7
SD_A5 1.6 A6
SD_A4 1.6 A5
RAMCKE 0 A4
VSS 0 VSS

SD_D15
SD_D14
SD_D13
SD_D12
SD_D11
SD_D10
SD_D9
SD_D8
SD_D7
SD_D6
SD_D5
SD_D4
SD_D3
SD_D2
SD_D1
SD_D0
RAMDQM
RAMWE#
RAMCAS#
RAMRAS#
RAMCS1#
RAMCS0#
SD_BA0
SD_A10
SD_A0
SD_A1
SD_A2
SD_A3

PCB130
DMG097

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMG097

MOTOR DRIVE SCHEMATIC DIAGRAM

(DVD MT PCB)

DSM2(06SD)

FROM/TO LOADER

CP2301_1

LD07T2-24ND-03

1	GND
2	F
3	Vref
4	VCC
5	E
6	D
7	C
8	SW1(DVD/CD)
9	VR(F RF_OUT)
10	B
11	A
12	VR(DVD)
13	VR COM
14	VR(CD)
15	GND
16	LD(CD)
17	PD/GND
18	LD(DVD)
19	GND
20	NC
21	T DRV
22	T RTN
23	F DRV
24	F RTN

FROM/TO MPEG/MICON/DSP/RF_AMP

VC
DVD_CD
DVD_LD
CD_LD
RF
GND
(D_GND)
OPU_A
OPU_B
OPU_C
OPU_D
OPU_E
OPU_F
HOME
TOUT_SW
TIN_SW
MD_DVD
MD_CD
VDDPWM3.3V
DRVS8
SPINDLE_PWM
FOCUS_PWM
TRACK_PWM
TRAY_CLOSE
TRAY_OPEN
SLED_PWM
SPDL_SENS+
SPDL_SENS-

FROM/TO AUDIO/VIDEO

TIN_SW
P.CON+A5V_D
P.CON+3.3V_D
GND
P.CON+6V_D
M_GND

CP2302

04_6232_105_015_800+

5	CLOSE
4	OPEN
3	GND(D)
2	LD-
1	LD+

CP2303

04_6232_106_015_800+

6	SW(GND)
5	LIMIT SW
4	SLD-
3	SLD+
2	SP1-
1	SP1+

CAUTION: SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

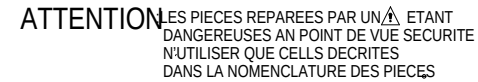
ATTENTION: LES PIECES REPARÉES PAR UN  ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB130
DMG097

(DVD MT PCB)



MICON SCHEMATIC DIAGRAM
(DIGITAL PCB)

8

7

6

5

4

3

2

1

8

7

6

5

4

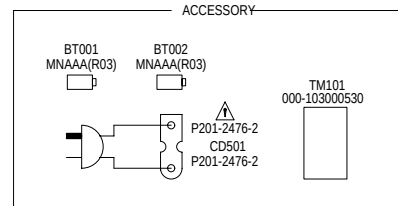
3

2

1

SUB MICON		CP6201	A2001WV2-9P
1	TX	←	TX
2	MODE	←	MODE
3	VCC	←	AT+3.3V
4	CNVSS	←	RX
5	RX	←	RX
6	CNVSS	←	NC
7	RESET	←	RESET
8	GND	←	NC
9	NC	←	NC

FROM/TO REMOCOIN	
CD6303 (CP7601)	E8252002
5	POWER ON LED
4	STANDBY LED
3	AT+3.3V
2	GND
1	REMOCON IN



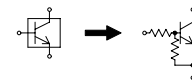
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

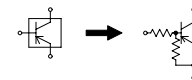
CAUTION: SINCE THESE PARTS MARKED BY ARE
CRITICAL FOR SAFETY,USE ONES
DESCRIBED IN PARTS LIST ONLY .

ATTENTION: LES PIECES REPARÉES PAR UN ETANT
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES

CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



FROM/TO SCALER VIDEO/AUDIO

← MCU_SCITXD

← MCU_SCIRXD

← I2C_DATA

← I2C_CLK

TO AV SWITCH

→ RESET_N

TO JACK

→ AUDIO_MUTE

FROM/TO FLASH

→ RESET_N

← IIC_OFF

← ASEMDO

FROM/TO REGULATOR

→ DVD_RESET

→ 3.3V_POWER_H

← KEY_A

← KEY_B

← AT+5.8V

← POWER_FAIL

← SYS_POWER_H

← START_SW

← LV_CTL

← AT+3.3V

← GND

← D5.0V

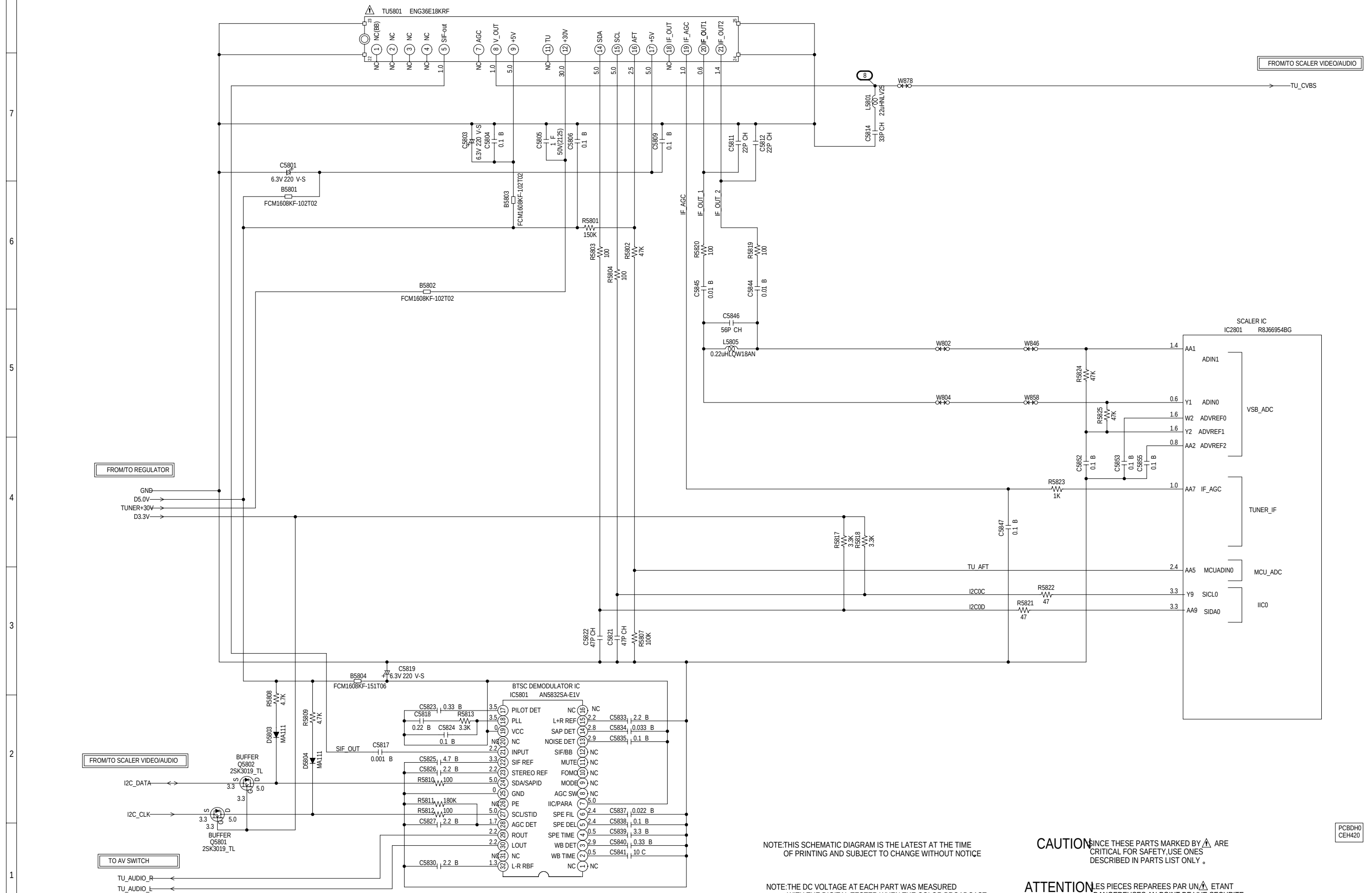
PCBDH0
CEH420

(DIGITAL PCB)



NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

TUNER SCHEMATIC DIAGRAM (DIGITAL PCB)



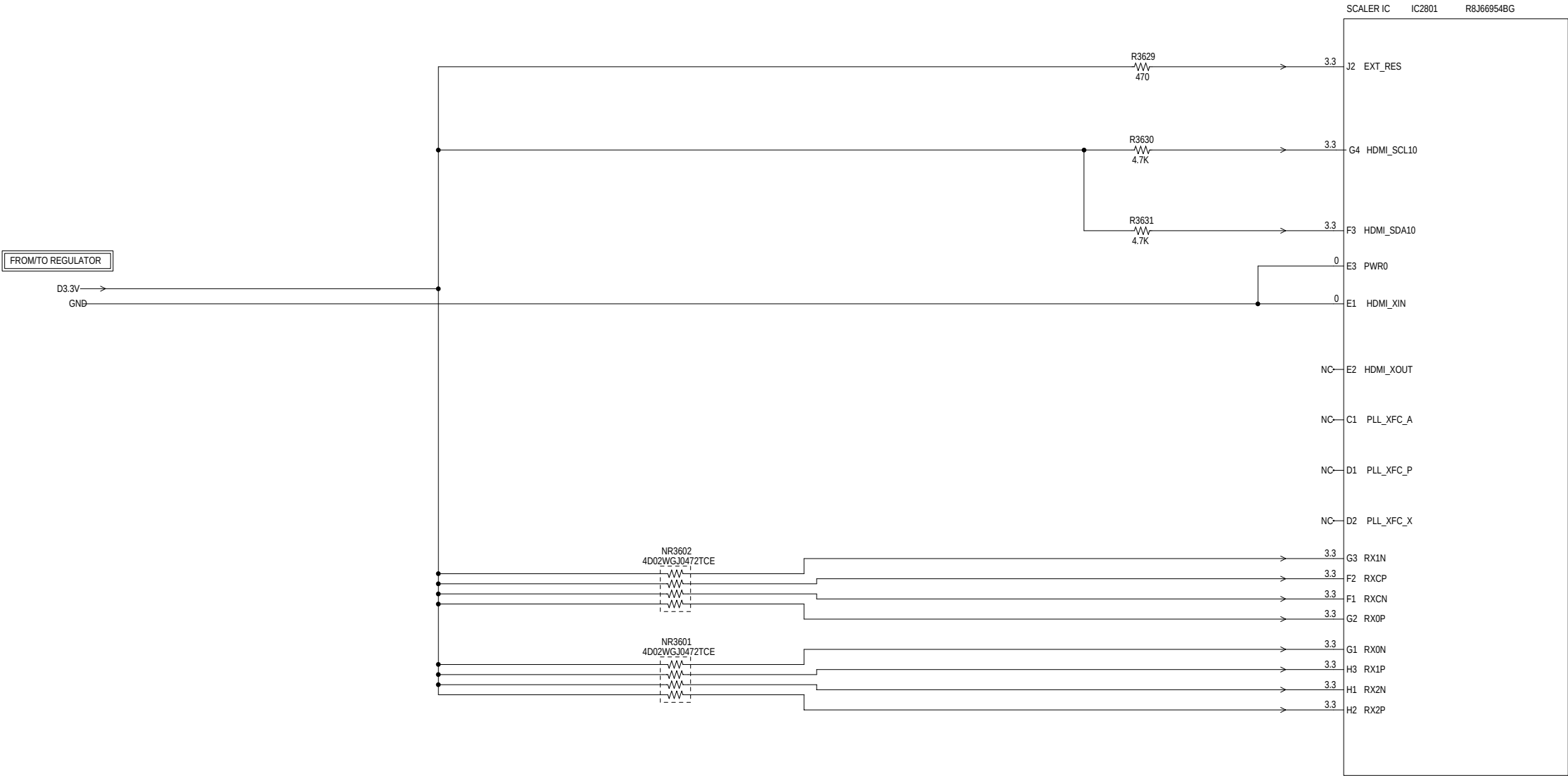
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES

HDMI SCHEMATIC DIAGRAM
(DIGITAL PCB)



NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0
CEH420

LVDS SCHEMATIC DIAGRAM (DIGITAL PCB)

SCALER IC IC2801 R8J66954BG

FROM/TO REGULATOR

FROM/TO PANEL

CP2804 A2006WV0-2X15P

V2801 M156B1-L02 LCD PANEL

CD2804 CHR1803

PCBDH0 CEH420

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

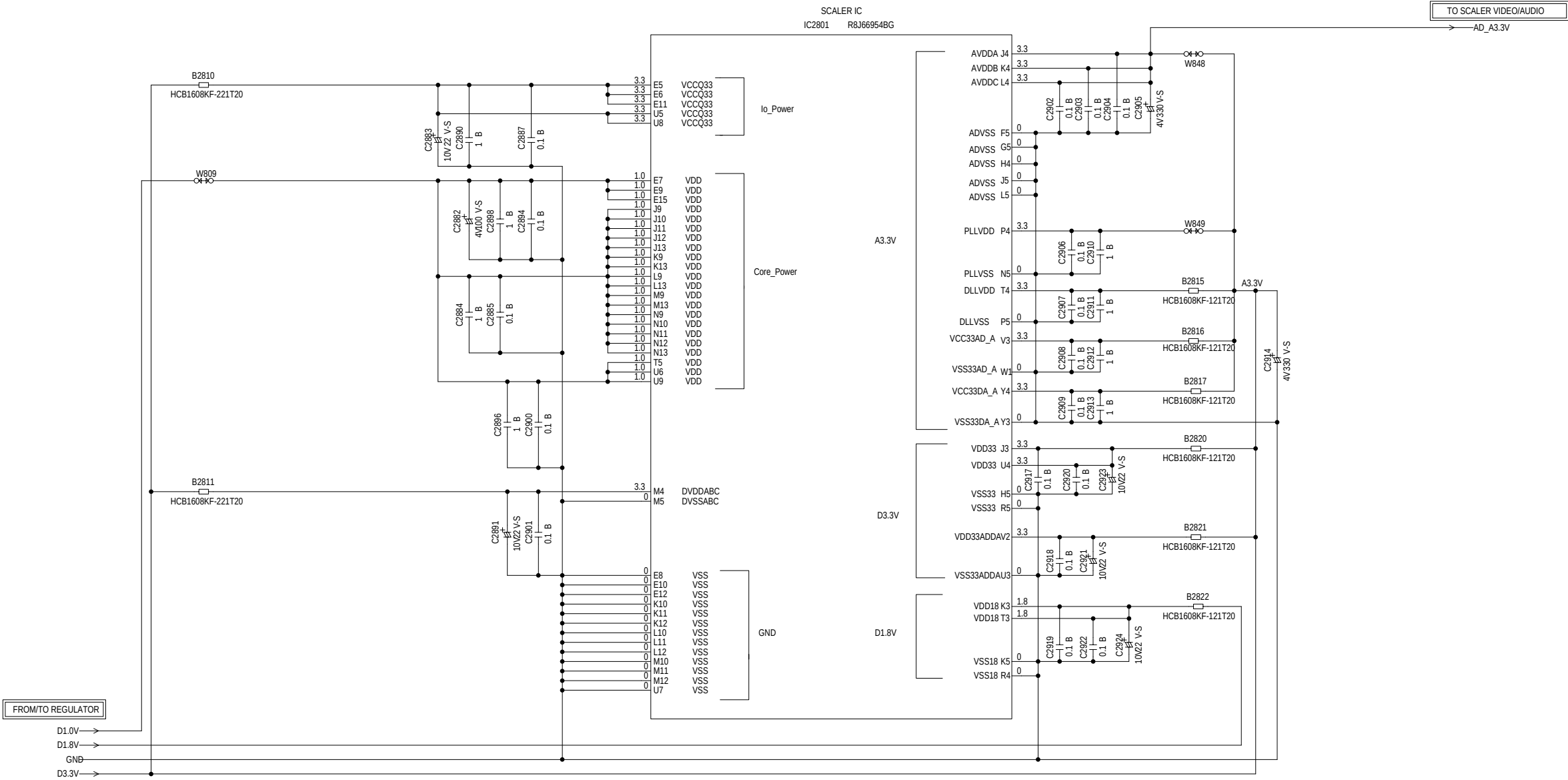
CAUTION: SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

ATTENTION: LES PIECES REPARÉES PAR UN ÉTANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

ATTENTION LES PIECES REPARÉES PAR UN  ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

PCBDH0
CEH420

(DIGITAL PCB)

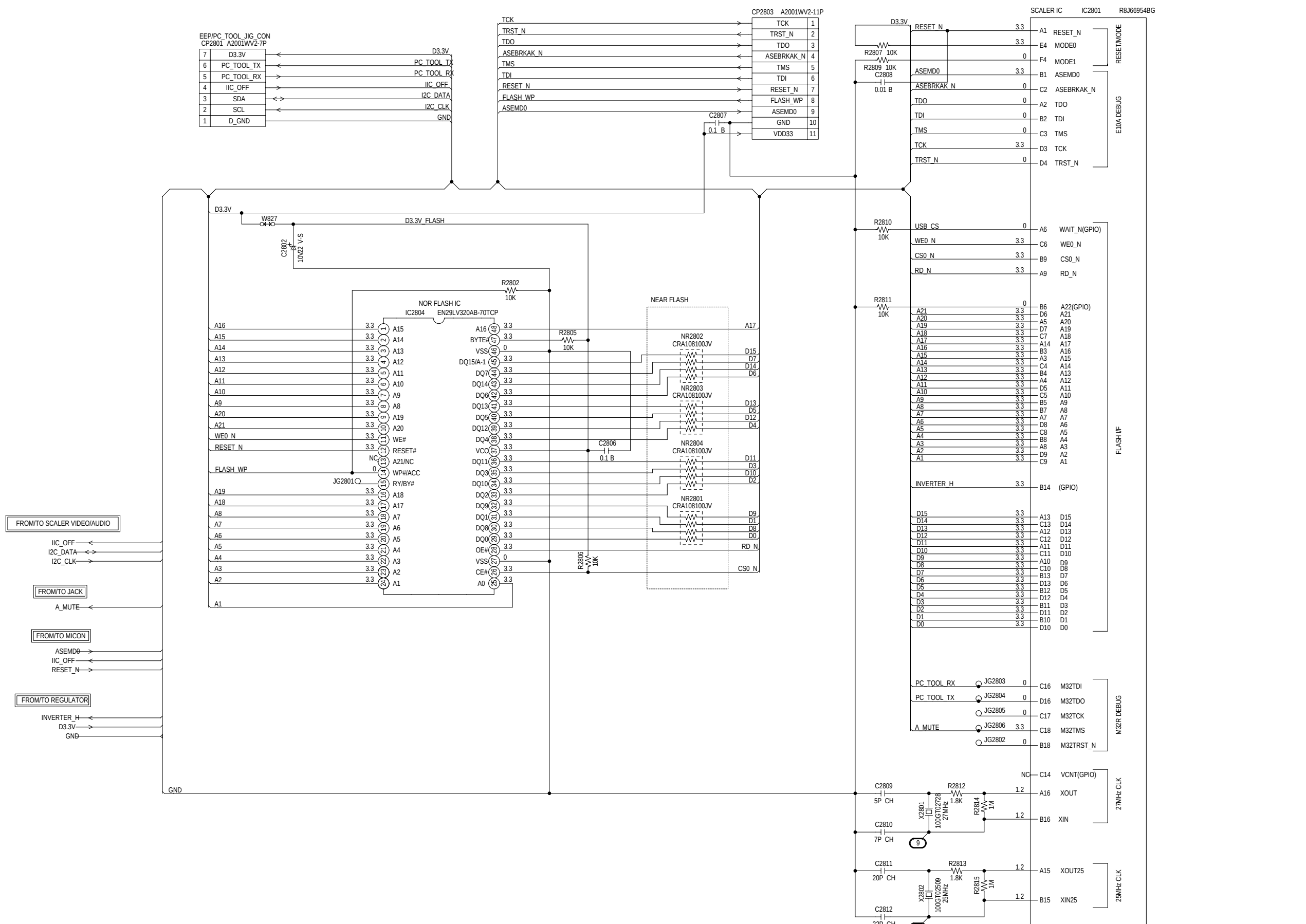


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCBDH0
CEH420

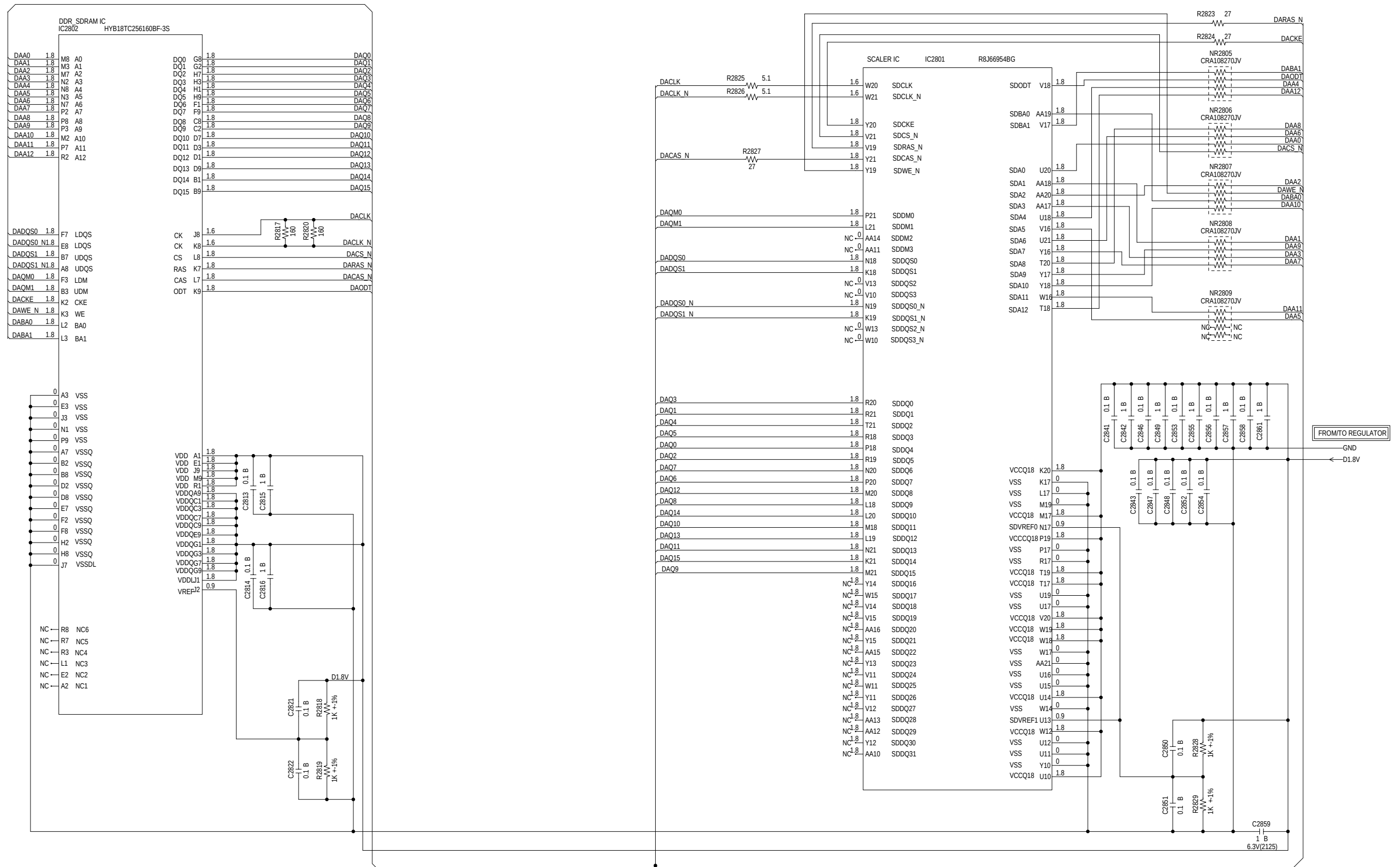
FLASH SCHEMATIC DIAGRAM
(DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

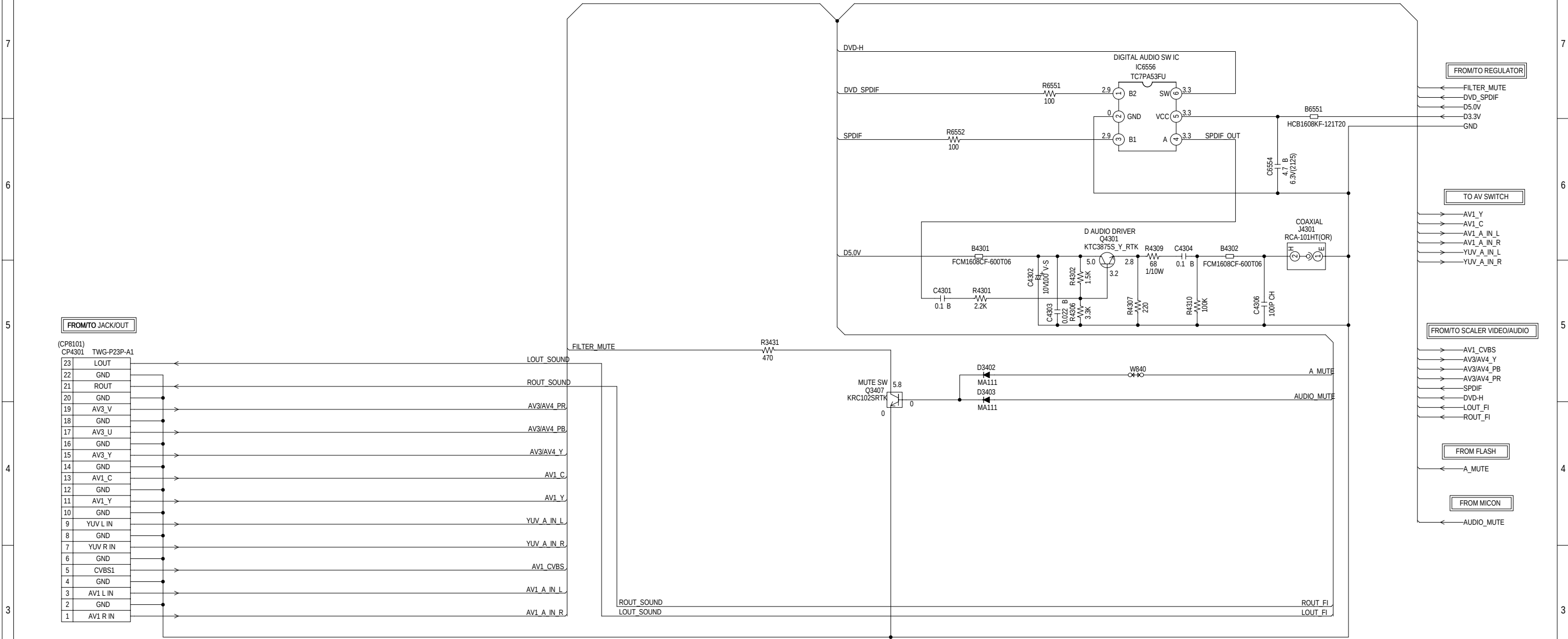
DDR SCHEMATIC DIAGRAM (DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

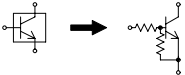
JACK SCHEMATIC DIAGRAM
(DIGITAL PCB)



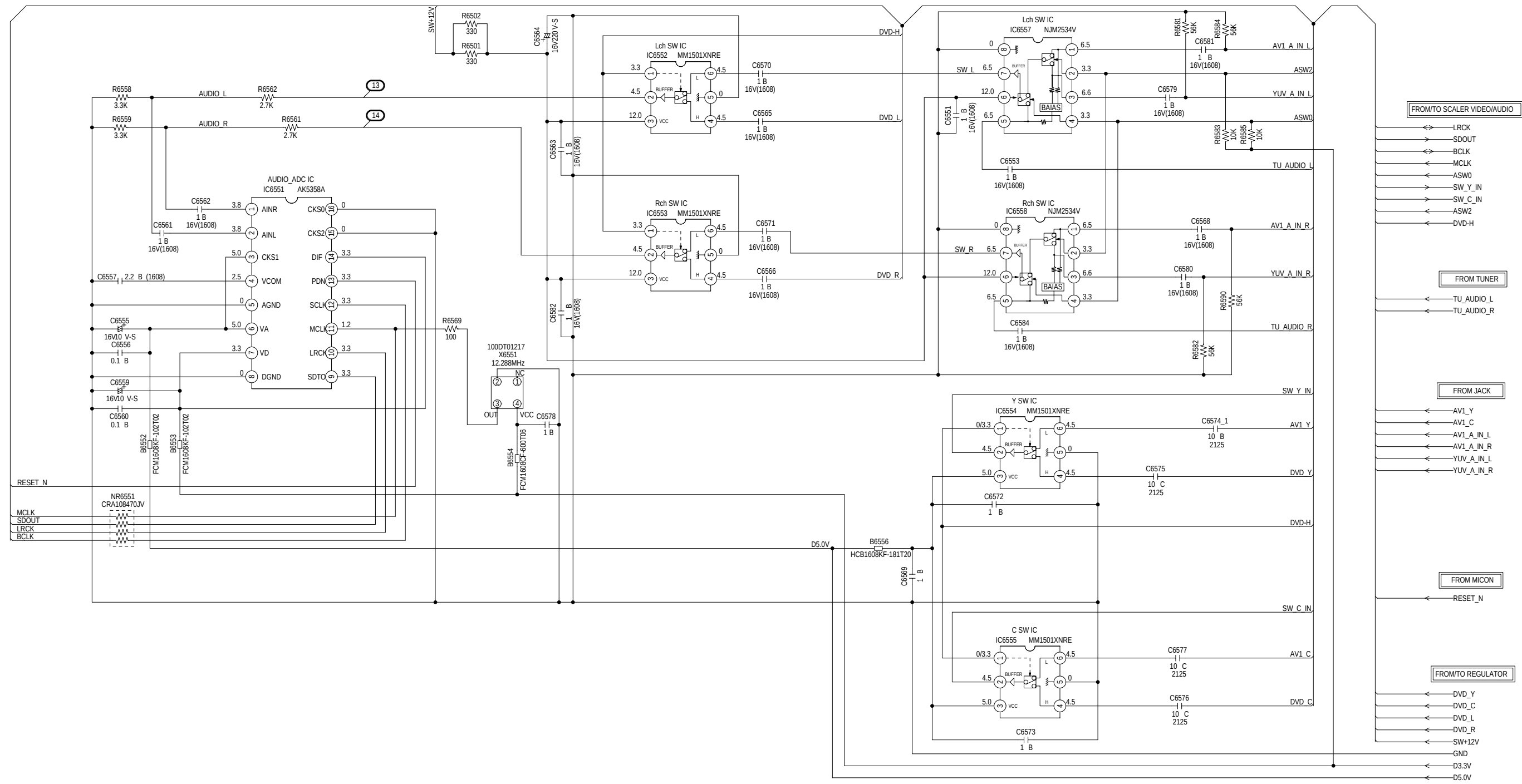
NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTIÇE

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR



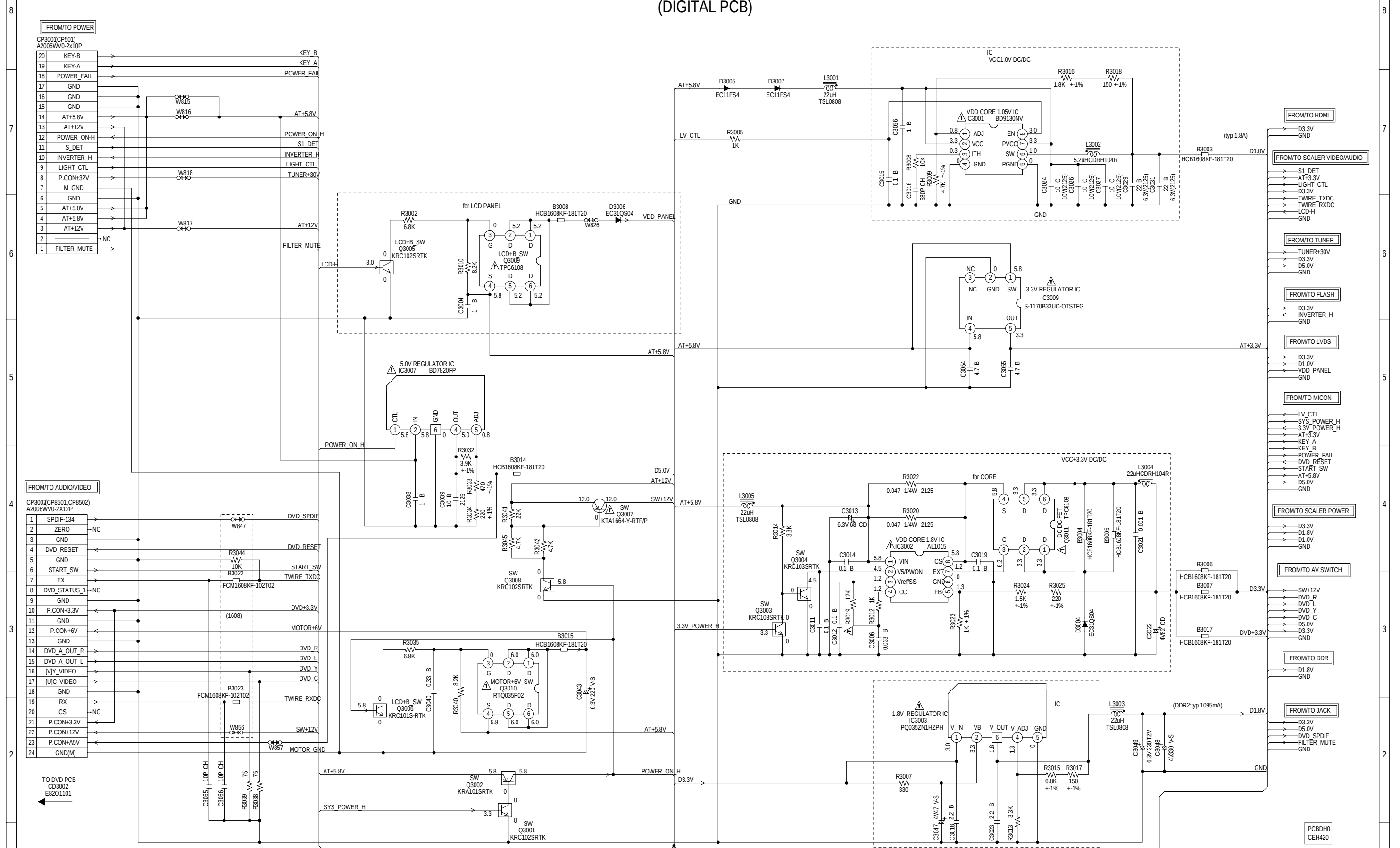
AV SWITCH SCHEMATIC DIAGRAM
(DIGITAL PCB)



NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

REGULATOR SCHEMATIC DIAGRAM (DIGITAL PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES

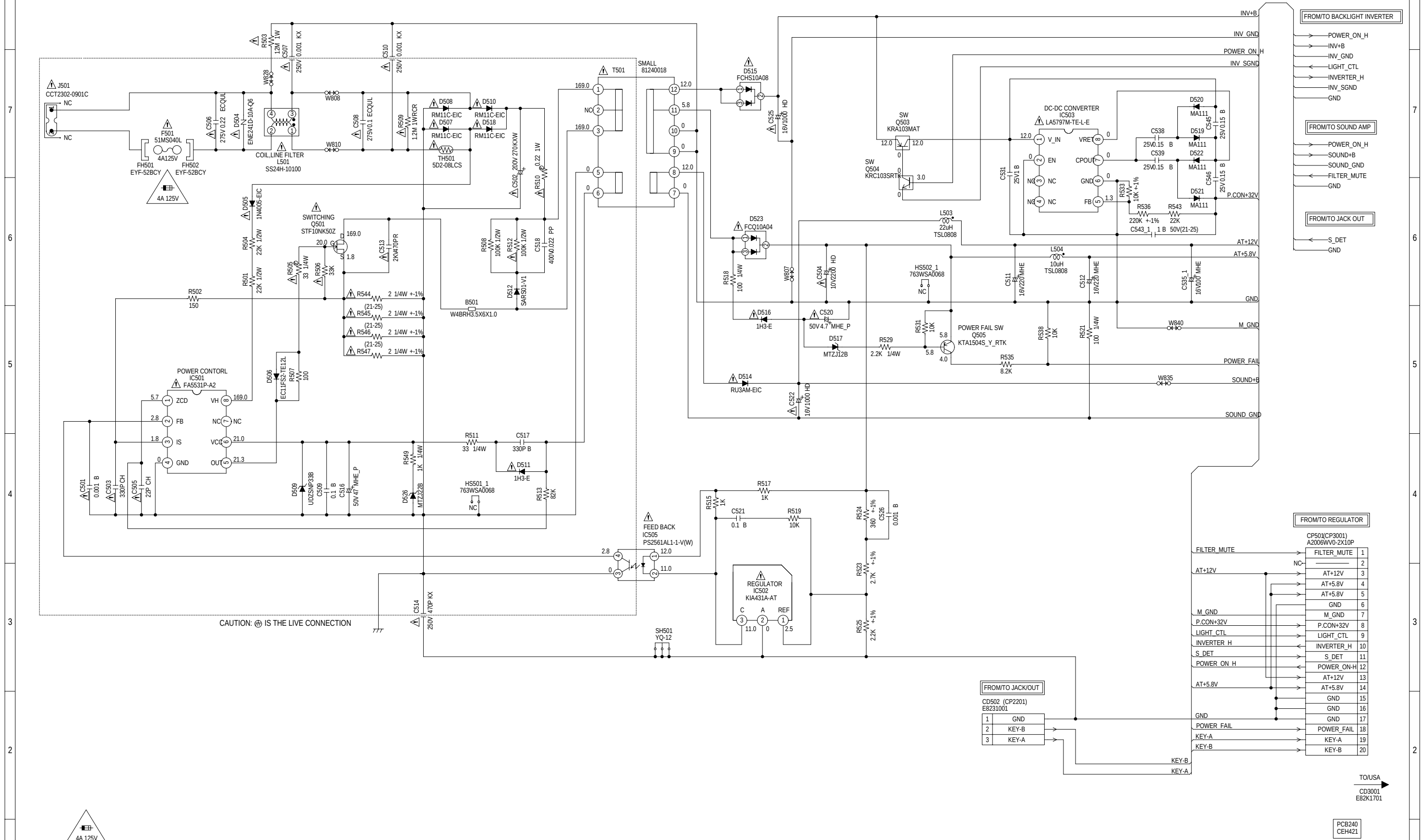
CAUTION SINCE THESE PARTS MARKED BY ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CAUTION: DIGITAL TRANSISTOR

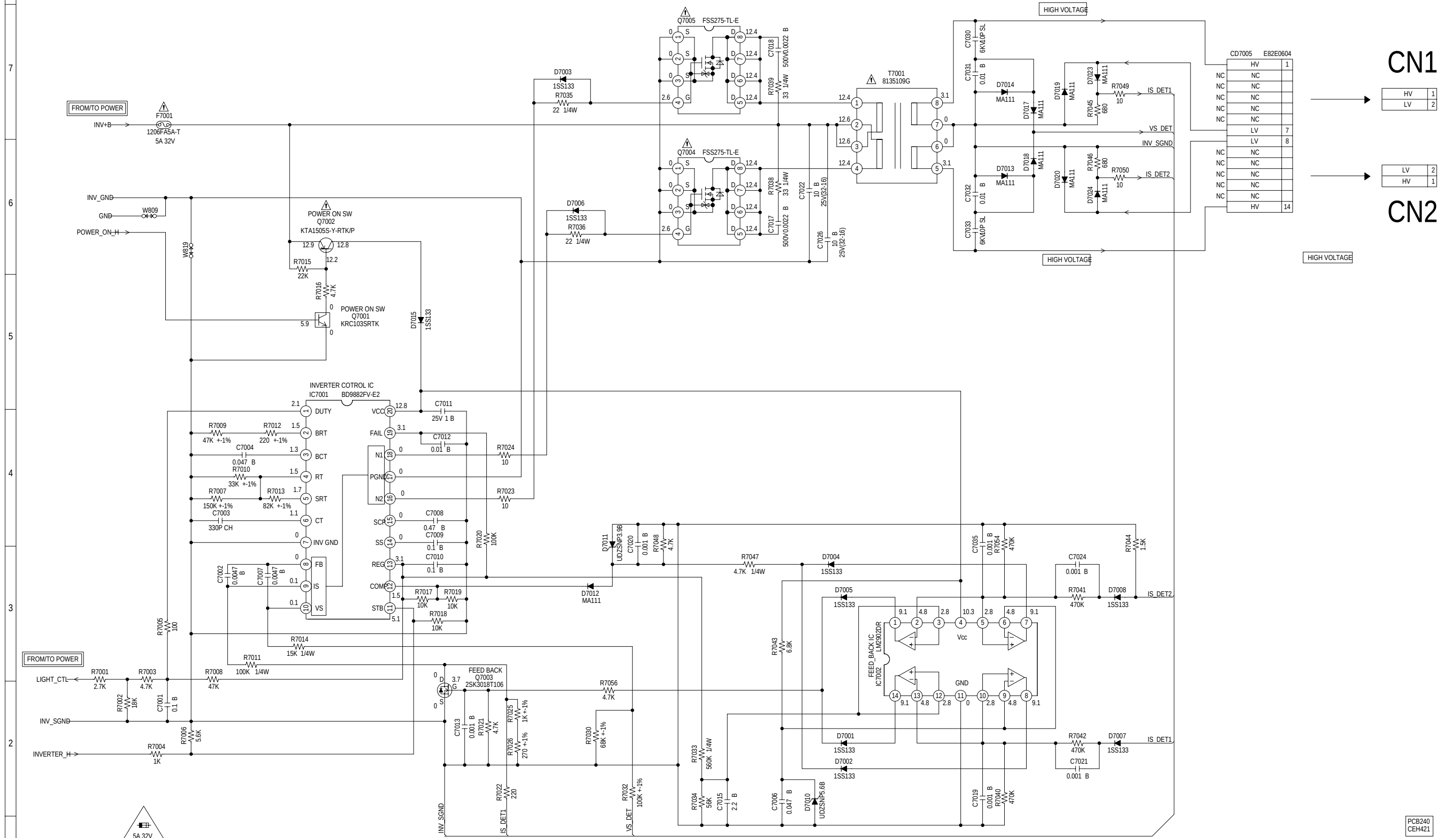
CAUTION: DIGITAL TRANSISTOR



POWER SCHEMATIC DIAGRAM
(POWER PCB)



BACKLIGHT INVERTER SCHEMATIC DIAGRAM (POWER PCB)



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE FUSE 5A 32V(F7001)

ATTENTION:POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE
N'UTILISER QUE DES FUSIBLE DE MEME TYPE 5A 32V(F7001)

CAUTIONF7001 IS MANUFACTURED BY SKYGATE CO.,LTD., TYPE 20N.

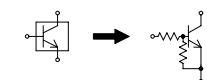
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

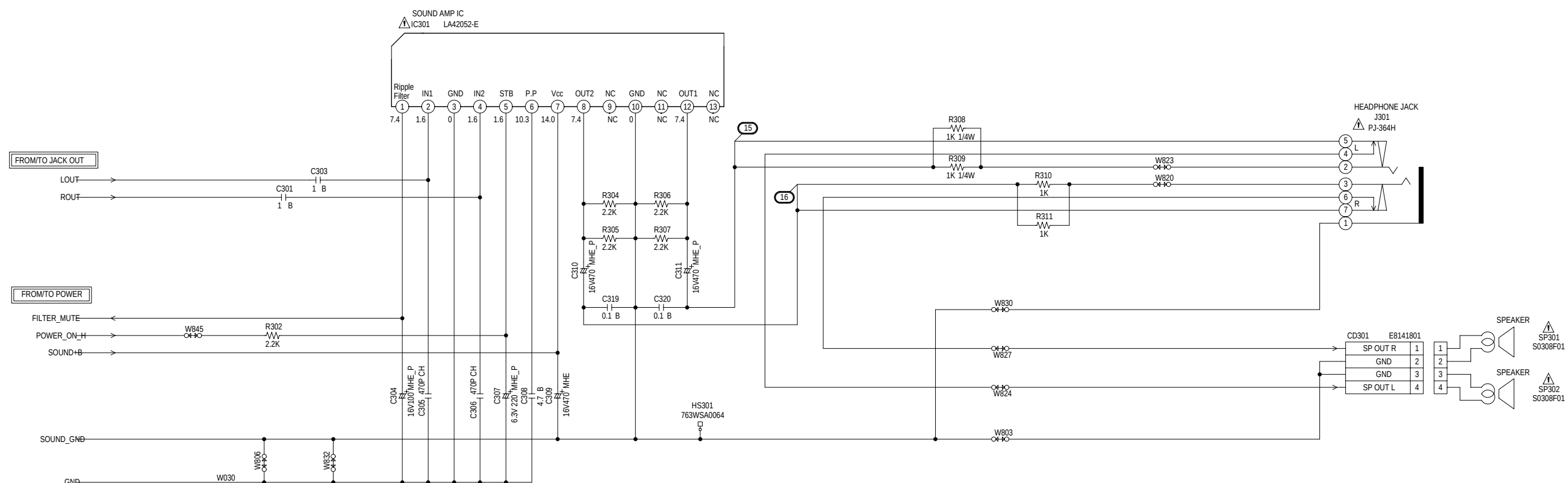
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

ATTENTION LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES

CAUTION: DIGITAL TRANSISTOR



SOUND AMP SCHEMATIC DIAGRAM (POWER PCB)



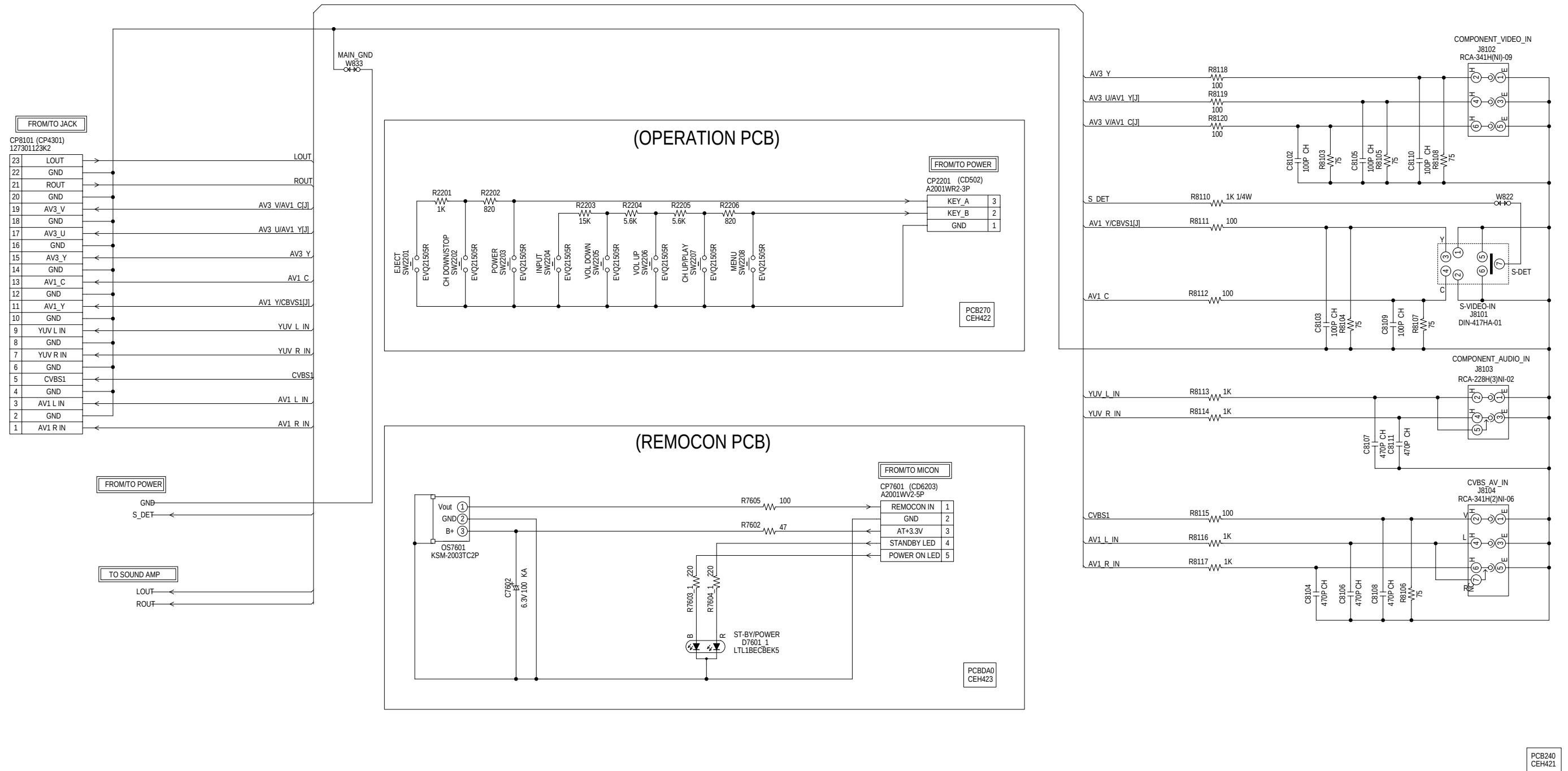
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED
WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST
WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION SINCE THESE PARTS MARKED BY ARE
CRITICAL FOR SAFETY, USE ONES
DESCRIBED IN PARTS LIST ONLY.

ATTENTION LES PIECES REPARÉES PAR UN ETANT
DANGEREUSES AN POINT DE VUE SECURITE
N'UTILISER QUE CELLS DECRITES
DANS LA NOMENCLATURE DES PIECES

JACK OUT SCHEMATIC DIAGRAM (POWER PCB)

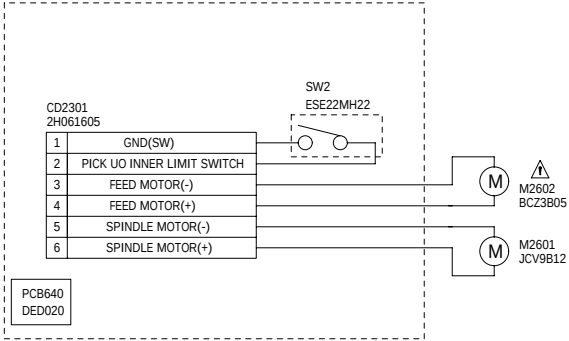


NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

SW SCHEMATIC DIAGRAM

(SW PCB)

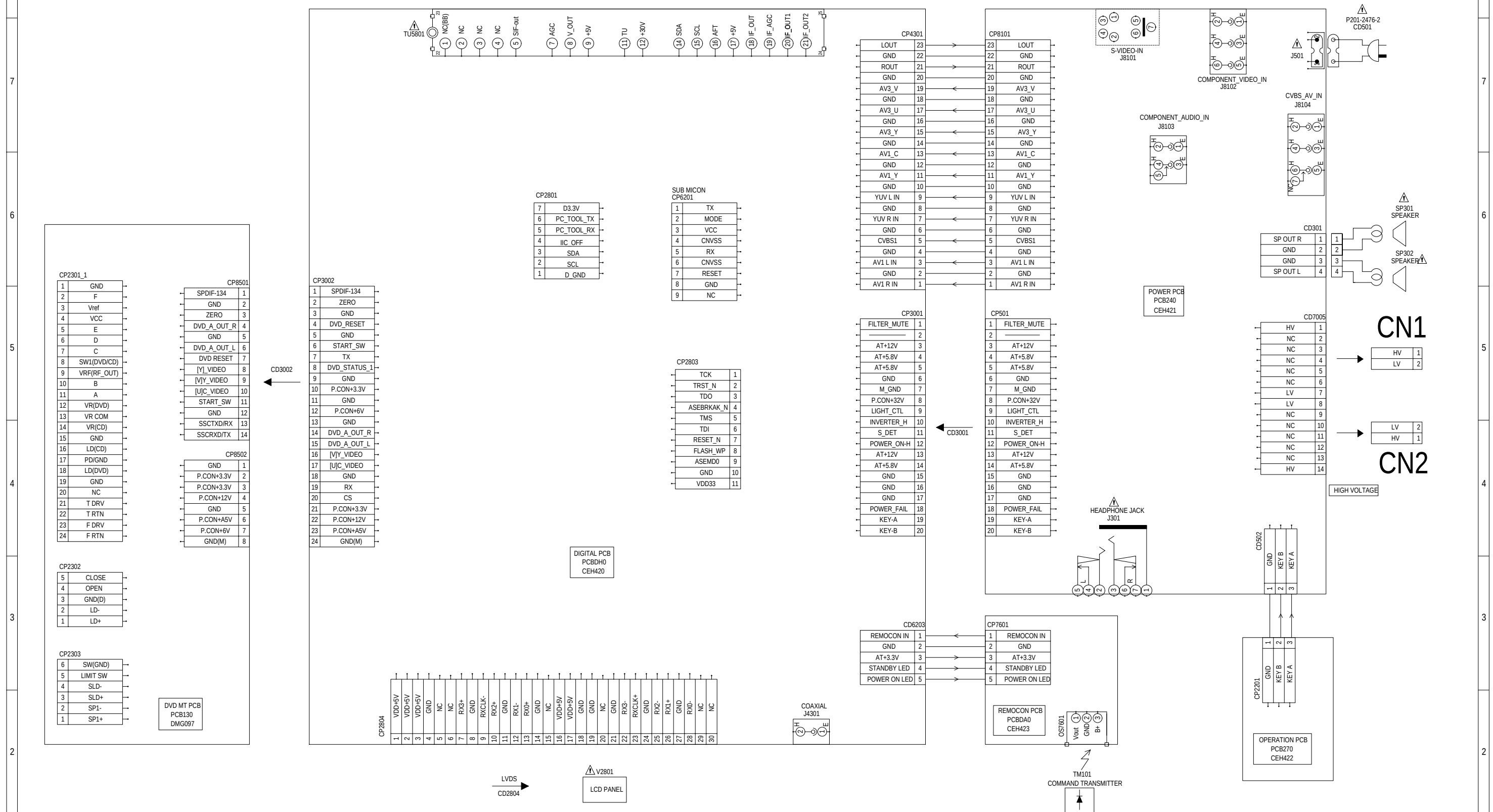


CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY

ATTENTION LES PIECES REPARÉES PAR UN  ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE .

INTERCONNECTION DIAGRAM



NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE

CAUTION SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

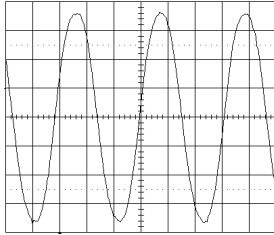
ATTENTION LES PIÈCES RÉPARÉES PAR UN  ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ, N'UTILISER QUE DES PIÈCES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

WAVEFORMS

MICON

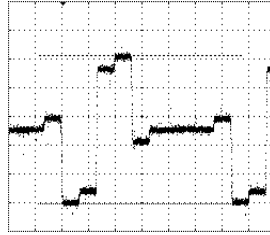
20ns
200mV

1



10us
100mV

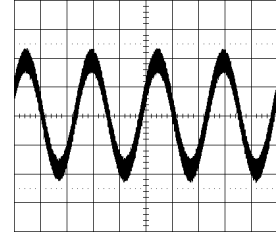
7



SOUND AMP

1ms
200mV

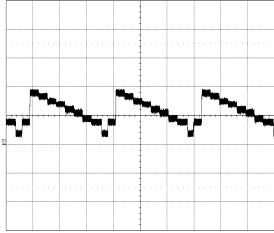
15



SCALER VIDEO/AUDIO

20us
500mV

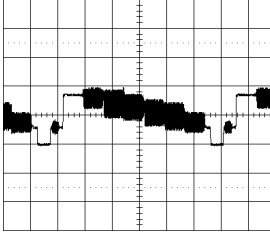
2



TUNER

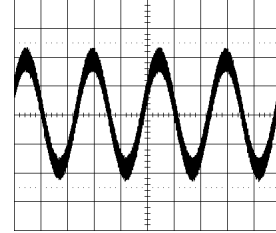
10us
0.5V

8



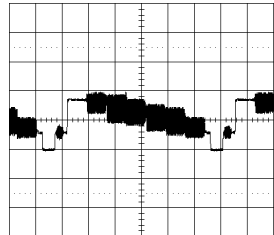
1ms
200mV

16



10us
0.5V

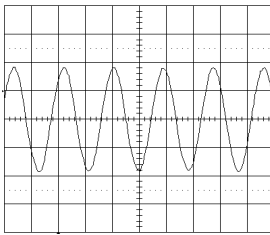
3



FLASH

20ns
200mV

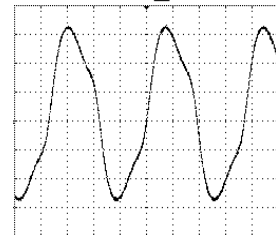
9



MPEG/MICON/DSP/RF_AMP

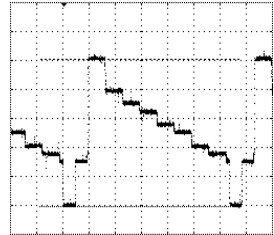
10ns
500mV

52



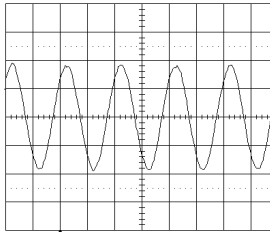
10us
200mV

4



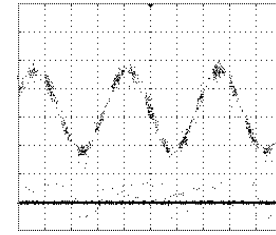
20ns
200mV

10



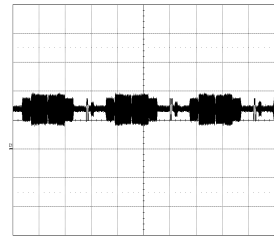
100us
500mV

53



20us
500mV

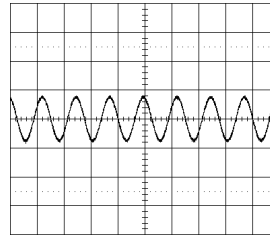
5



AV SWITCH

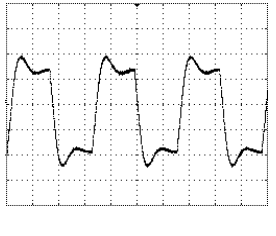
2ms
100mV

13



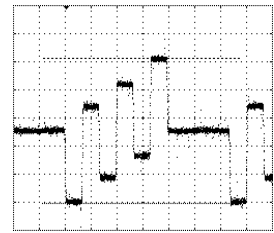
200ns
1.0V

54



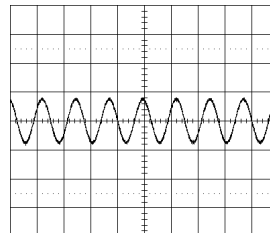
10us
100mV

6



2ms
100mV

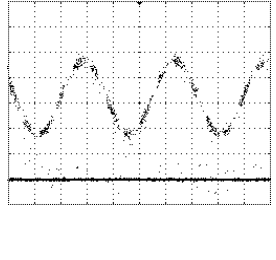
14



MEMORY

100us
500mV

55



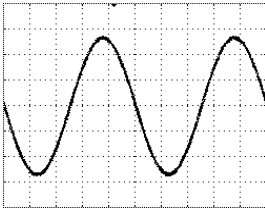
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

AUDIO/VIDEO

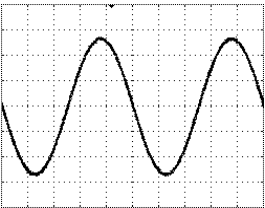
200μs
1.0V

56



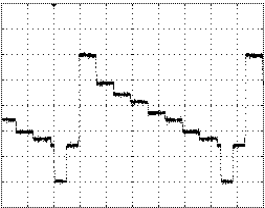
200μs
1.0V

57



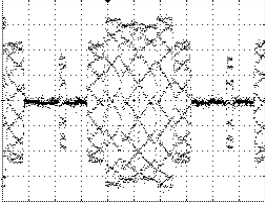
10μs
200mV

58



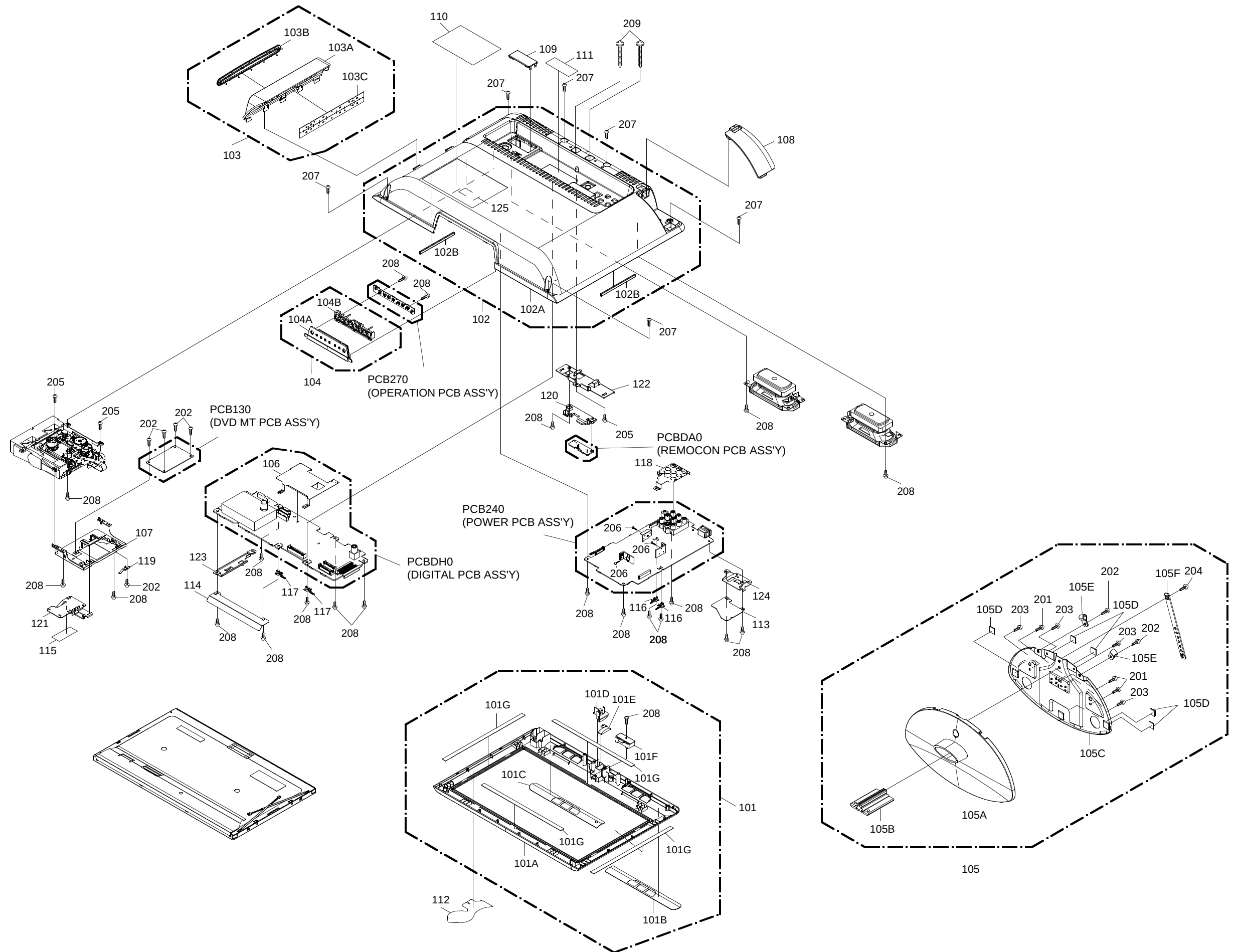
10μs
100mV

59



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW



**MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)**

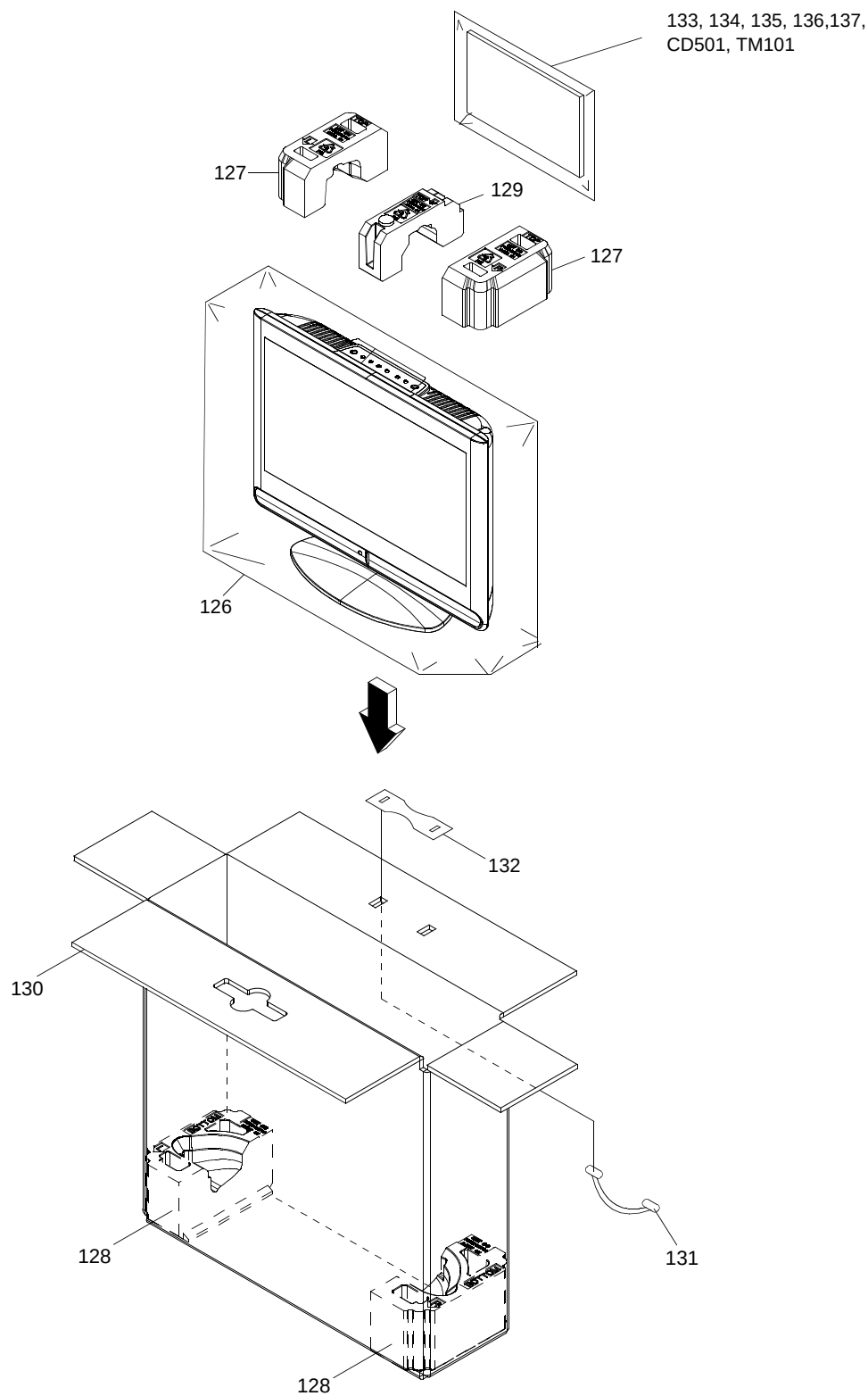


Diagram illustrating the assembly of the DVD MECHA ASS'Y. The main components shown are:

- 600**: DVD MECHA ASS'Y (Main Assembly)
- 601**: DVD MECHA ASS'Y (Main Assembly)
- 608**: DVD MECHA ASS'Y (Main Assembly)
- CD2001**: DVD MECHA ASS'Y (Main Assembly)
- M2602**: DVD MECHA ASS'Y (Main Assembly)
- 603**: DVD MECHA ASS'Y (Main Assembly)
- 606**: DVD MECHA ASS'Y (Main Assembly)
- 703**: DVD MECHA ASS'Y (Main Assembly)
- 605**: DVD MECHA ASS'Y (Main Assembly)
- 702**: DVD MECHA ASS'Y (Main Assembly)
- 607**: DVD MECHA ASS'Y (Main Assembly)
- 701**: DVD MECHA ASS'Y (Main Assembly)
- 604**: DVD MECHA ASS'Y (Main Assembly)
- 602**: DVD MECHA ASS'Y (Main Assembly)
- SW2**: DVD MECHA ASS'Y (Main Assembly)
- 704**: DVD MECHA ASS'Y (Main Assembly)
- PCB640 (SW PCB ASS'Y)**: DVD MECHA ASS'Y (Main Assembly)
- 705**: DVD MECHA ASS'Y (Main Assembly)
- CD2301**: DVD MECHA ASS'Y (Main Assembly)

Do not replace the parts. Because, minute adjustments are needed if this condition is disassembled further more. If the repair is needed, replace the DVD MECHA ASS'Y.

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	AE009877	7A7080011A	FRONT CABI ASS'Y
101A	AE009878	708WPD0010	CABINET FRONT
101B	AE009879	702WNA0010	SHEET SPEAKER-R
101C	AE009880	702WNA0009	SHEET SPEAKER-L
101D	AE009881	713WPA0426	GLASS LED
101E	AE009882	713WPA0431	GLASS LED-2
101F	AE009883	761WPA0533	HOLDER PANEL
101G	AE003760	800WQ0A046	FELT SHEET
102	AE009884	7A7020296A	BACK CABI ASS'Y
102A	AE009885	702WPA1420	CABINET BACK
102B	AE009955	800WQ00122	FELT SHEET
103	AE009887	7A7110048A	PANEL SIDE ASS'Y
103A	AE009888	711WPD0768	PANEL SIDE
103B	AE009581	711WPEA001	SLOT DVD
103C	AE008459	800WQ00105	FELT SHEET
104	AE009889	7A7110049A	PLATE BUTTON ASS'Y
104A	AE009890	711WPD0769	PLATE BUTTON
104B	AE009582	735WPAB101	BUTTON FRAME
105	AE009891	7A7040071A	STAND ASS'Y
105A	AE009892	704WPA0117	STAND
105B	AE009893	761WEA0039	FRAME STAND
105C	AE009894	761WSB0072	ANGLE STAND
105D	AE009624	800SRA0002	CUSHION LEG VEB1349-A
105E	AE008947	899NAGCL14	CABLE CLAMP
105F	AE007710	89900FB118	BAND
106	AE009895	752WSA0728	SHIELD DIGITAL
107	AE009790	761WSA0679	ANGLE MPEG
108	AE009896	702WPA1421	COVER BACK
109	75006982	706WPAA007	COVER CONNECTOR
110	AE009897	7225490281	SHEET RATING
111	AE009898	7230008445	SHEET JACK
112	AE009899	7235490100	POP LABEL
113	AE009900	724WND0001	SHEET PC-1
114	AE009901	724WND0002	SHEET PC-2
115	AE005122	726000A073	SHEET CAUTION
116	AE009597	744WUA0029	SPRING EARTH-2
117	AE009784	744WUA0038	SPRING EARTH-3
118	AE009902	752WSA0727	SHIELD JACK
119	AE009816	753WUAA017	SPRING EARTH
120	AE009904	761WPA0532	HOLDER REMOCON
121	AE009905	761WPA0534	COVER DVD
122	AE009906	761WSA0686	ANGLE HINGE
123	AE009907	761WSA0687	ANGLE LCD-L
124	AE009908	761WSA0688	ANGLE LCD-R
125	72782476	800WQ0A100	FELT SHEET
126	AE009909	791WHA0171	LAMIFILM BAG 650*700*0.5MM
127	AE009910	792WHA0759	PACKAGE TOP
128	AE009911	792WHA0760	PACKAGE BOTTOM
129	AE009912	792WHA0766	PACKAGE TOP CENTER
130	AE009913	793WCD1868	GIFT BOX
131	AE009603	794WHA0003	HANDLE
132	AE009604	794WHA0004	HANDLE STOPPER
133	AE009914	J51T0101A	INSTRUCTION BOOK(TOSHIBA)
134	AE009609	JB5ND000	POLYBAG,INSTRUCTION(RED CAUTION)
135	AE007451	J3N51617A	REGISTRATION CARD
136	AE007627	J5S10229A	INFORMATION SHEET(RETURN)USA
137	AE009915	J51T0107A	QUICK SET-UP SHEET(SPANISH)
201	72784217	810B140A0U	SCREW SEMS(B) 4*10 CH
202	AE005675	810923060U	SCREW TAP TITE(B) BIND 3*6 CH
203	AE009612	8110K3080U	SCREW TAP TITE(P) LAMI HEAD 3*8 CH
204	AE007747	814623080U	SCREW TAP TITE(B) BIND 3*5.7+4*2.3 CH
205	AE003526	810923080U	SCREW TAP TITE(B) BIND 3*8 CH
206	AE003524	8109I30A0U	SCREW TAP TITE(B) WH7 3*10 CH
207	AE009613	8109230A0S	SCREW TAP TITE(B) BIND 3*10 BK
208	AE004849	8109230A0U	SCREW TAP TITE(B) BIND 3*10 CH
209	AE009916	8117540C0S	SCREW TAPPING(B0) TRUSS 4*30 BK

DVD DECK REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
△600	AE009615	A50N01P650	DVD MECHA ASS'Y A50N01P650
601	AE008499	92SBB0033A	LOADER SUB ASS'Y DLM1D29-31
602	AE005815	92AAA0017A	FEED RACK ASS'Y
603	AE003551	92P100088A	GEAR,MOTOR
604	AE005805	92P100117A	GEAR,MIDDLE
605	AE008500	92P200017A	INSULATOR, F
606	AE008501	92P200018A	INSULATOR, R
607	AE005816	92P100116A	GEAR,FEED
608	BZ710149	800WFAA008	CUSHION C
701	AE005817	92P700007A	SCREW,GEAR FEED
702	AE003554	814011723U	SCREW,PAN M1.7*2.3 P3 CH
703	AE003555	816112080U	SEMS.TAP TITE(P) PAN W10 2*8 CH
704	AE005006	813381750U	SCREW,T-TITE(B)CAMERA PAN M1.7*5.0 P3 CH
705	AE003557	811022080U	SCREW,TAP TITE(P) BIND 2*8 CH
CD2001	AE009434	12C14O1602	CORD JUMPER FFC05241600408T1-A04
CD2301	AE003558	122H062102	CORD JUMPER 2H062102
M2602	AE009616	1515T98006	MOTOR WRF-300CA-10460A
PCB640	AE008503	A5X002C640	SW PCB ASS'Y DED020A
SW2	AE001158	0500101036	PUSH SWITCH ESE22MH22

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
RESISTORS				
△R503	75006901	RC31X1126J	RC	12M OHM 1W
△R505	AE009485	R63884330J	R,FUSE	33 OHM 1/4W
△R506	AE002150	R803R9333J	RC	33K OHM 1/16W
△R509	AE009486	RC31X1125J	RC	1.2M OHM 1W
△R510	AE005735	R63881R22J	R,FUSE	0.22 OHM 1W
△R512	AD301018	R002T2104J	RC	100K OHM 1/2W
△R544	AE009808	R861R42R0F	RC	2 OHM 1/4W
△R545	AE009808	R861R42R0F	RC	2 OHM 1/4W
△R546	AE009808	R861R42R0F	RC	2 OHM 1/4W
△R547	AE009808	R861R42R0F	RC	2 OHM 1/4W
△R3019	AE009917	R808R9123J	RC	12K OHM 1/16W
CAPACITORS				
△C501	AE001725	CS0PB0413K	CC	0.001 UF 50V B
△C502	AE009490	E8E52C271D	CE	270 UF 200V
△C503	79091384	CS0PCH4L2J	CC	330 PF 50V CH
△C504	AE009918	E83YF1222D	CE	2200 UF 10V
△C505	AE001732	CS0PCH4H1J	CC	22 PF 50V CH
△C506	BZ110025	P2122B224M	CMP	0.22 UF 275V ECQUL
△C507	AD301026	CD39E0M13M	CC	0.001 UF 250V
△C508	BZ110035	P2122B104M	CMP	0.1 UF 275V ECQUL
△C510	AD301026	CD39E0M13M	CC	0.001 UF 250V
△C513	BZ110176	C03L0R7Q2K	CC	470 PF 2KV R
△C514	AE000308	CD39B0MQ2K	CC	470 PF 250V
C518	AE009492	P332E4223J	CPP	0.022 UF 400V
△C520	AE009919	E7ESU54R7M	CE	4.7 UF 50V
△C522	AE009920	E83YF2102D	CE	1000 UF 16V
△C525	AE009920	E83YF2102D	CE	1000 UF 16V
C7030	AE009700	C234SLB11J	CC	10 PF 6KV SL
C7033	AE009700	C234SLB11J	CC	10 PF 6KV SL
DIODES				
△D504	BZ410031	D6CE24110A	DIODE VARISTA	ENE241D-10A-Q6
△D505	BZ410085	D2WXN40050	DIODE SILICON	1N4005-EIC
D506	AE008906	D28R11FS20	DIODE	EC11FS2-TE12L
△D507	BZ410062	D2WTRM11C0	DIODE SILICON	RM11C-EIC
△D508	BZ410062	D2WTRM11C0	DIODE SILICON	RM11C-EIC
D509	AE009494	DE7RB3302B	DIODE ZENER	UDZSNP33B TE-17
△D510	BZ410062	D2WTRM11C0	DIODE SILICON	RM11C-EIC
△D511	AE008319	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D512	AE002133	D2BXARS010	DIODE SILICON	SARS01-V1
△D514	BZ410126	D2WXRU3AM0	DIODE SILICON	RU3AM-EIC
△D515	AE009803	D28A10A080	DIODE SCHOTTKY BARRIER	FCHS10A08
△D516	AE008319	D4AT01H3E0	DIODE RECTIFIER	1H3-E
D517	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
△D518	BZ410062	D2WTRM11C0	DIODE SILICON	RM11C-EIC
D519	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D520	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D521	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D522	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
△D523	AE009829	D28A10A040	DIODE SCHOTTKY BARRIER	FCQ10A04
D526	BZ410113	D97U02201B	DIODE ZENER	MTZJ22B T-77
D2303	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D2304	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D3004	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3005	AE009496	D28R11FS40	DIODE SCHOTTKY	EC11FS4-TE12L
D3006	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3007	AE009496	D28R11FS40	DIODE SCHOTTKY	EC11FS4-TE12L
D3402	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D3403	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D4002	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D4003	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D4005	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D4008	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D5803	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D5804	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D6205	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7001	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7002	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7003	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7004	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7005	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7006	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7007	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7008	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7010	AE004795	DE7RB5R62B	DIODE ZENER	UDZSNP5.6B TE-17
D7011	AE009922	DE7RB3R92B	DIODE ZENER	UDZSNP3.9B TE-17
DIODES				
D7012	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7013	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7014	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7015	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D7017	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7018	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7019	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7020	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
DIODES				
D7023	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7024	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
D7601	AE009923	0021E91030	LED	LTL1BECBEK5
D8510	AE009006	DGERMA1110	DIODE SILICON	MA111-(TX)
ICS				
△IC301	AE008430	I03SP20520	SOUND AMP 5W 2CH	LA42052-E
△IC501	AE009499	ICAD055310	LOW STANDBY POWER IC CONTROL	FA5531P-A2
△IC502	AD302211	I1KJ9A431A	VARIABLE SHUNT REGULATOR TAPE	KIA431A-AT
△IC503	AE009500	I03F9797M0	CHARGE POMP CONTROL	LA5797M-TE-L-E
△IC505	AE002809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
△IC2301	AE008194	I03FV65650	5CH MOTOR DRIVER IC	LA6565VR-TLM-E
IC2801	AE009656	I56M069540	SCALER	R8J66954BG
IC2802	AE009502	IGGM061600	DDR2-667 256M CL=5	HYB18TC256160BF-3S
IC2804	AE009924	S51T01PF01	MEMORY DATA NOR FLASH 32M BOOT	EN29LV320AB-70TCP
IC2805	AE009925	S51T01PE01	MEMORY DATA EEPROM 256K 12C	M24256-BWMN6TP
△IC3001	AE009505	I07F091300	1CH DC-DC CONVERTER	BD9130NV
△IC3002	AE008435	I1LF010150	DC-DC CONVERTER CONTROLLER	AL1015
△IC3003	AE008916	I0GF95ZN10	VO=0.8-3.5V I=1.5A TAPING	PQ035ZN1HZPH
△IC3007	AE008431	I07F078200	VARIABLE REG LOW INPUT IO=1A	BD7820FP-E2
△IC3009	AE009506	I5HJ0170B0	REGULATOR VO=3.3V IO=800MA	S-1170B33UC-OTSTFG
IC4001	AE009720	ICQK06966A	VADDIS9 MPEG/MICON/DSP/RF-AMP	ZR36966ELCG-D-G
IC4005	AE008324	IF9J0164AG	1M*16*4BANK(64M) 143MHZ SDRAM	M12L64164A-7TG
IC4007	AE009926	S51T01PF02	MEMORY DATA NOR FLASH 16M B00T	SST39VF1601-70-4C-EKE
IC5801	AE004647	I01FF58320	USA STEREO	AN5832SA-E1V
IC6201	79097849	I9UF032290	RESET IC 2.9V TYPE	PS73229NR
IC6202	AE009927	S34L01PM02	MEMORY DATA FLASH MICOM ROM16K 2KX2 RAM1	R5F21124FP
IC6551	AE009511	IC1J053580	A/D CONVERTER	AK5358A
IC6552	AD301988	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6553	AD301988	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6554	AD301988	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6555	AD301988	I0UF015010	A/V SW 2INPUT 1OUTPUT	MM1501XNRE
IC6556	AE009928	I55F0A53FU	A/V SW 2IN 1OUT	TC7PA53FU(T5L,F,T)
IC6557	BZ611139	I0QF02534V	A/V SW 3INPUT 1OUTPUT	NJM2534V(Te2)
IC6558	BZ611139	I0QF02534V	A/V SW 3INPUT 1OUTPUT	NJM2534V(Te2)
IC7001	AE009512	I07F098820	19WLCD INVERTER IC	BD9882FV-E2
IC7002	AE009513	I0CF0902D0	QUAND OPERATIONNAL AMPLIFILE	LM2902DR
IC8501	AE009365	I0QF045650	DUAL OPEAMP	NJM4565M(Te1)
△IC8502	AE009805	I1YF9117A0	VO=ADJ IO=1A TAPING	LD1117AL-ADJ-AA3-A-R
TRANSISTORS				
△Q501	72783392	TJXG10NK50	FET	STF10NK50Z
Q503	79097796	TPATC03002	COMPOUND TRANSISTOR	KRA103MAT
Q504	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q505	BZ510108	TAAA1504SY	TRANSISTOR SILICON	KTA1504S_Y_RTK
Q2301	AE008330	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q2302	AE008330	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q3001	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3002	BZ510107	TPAAA05001	COMPOUND TRANSISTOR	KRA101SRTK
Q3003	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3004	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q3005	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3006	AE005049	TNAAA05001	COMPOUND TRANSISTOR	KRC101S-RTK
△Q3007	AE008441	TAAA01664Y	TRANSISTOR SILICON	KTA1664-Y-RTF/P
Q3008	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
△Q3009	AE008933	TJ5MC61080	FET	TPC6108
△Q3010	AE009514	TJ7T35P020	FET	RTQ035P02-TR
△Q3011	AE008933	TJ5MC61080	FET	TPC6108
Q3407	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q4301	BZ510109	TCAA3875SY	TRANSISTOR SILICON	KTC3875S_Y_RTK
Q5801	AE009515	T27T030190	FET	2SK3019_TL
Q5802	AE009515	T27T030190	FET	2SK3019_TL
Q6201	AE009515	T27T030190	FET	2SK3019_TL
Q6202	AE009515	T27T030190	FET	2SK3019_TL
Q6203	BZ510072	TPAAC05002	COMPOUND TRANSISTOR	KRA103SRTK
Q6204	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q7001	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
△Q7002	AE008330	TAAA1505SY	TRANSISTOR SILICON	KTA1505S-Y-RTK/P
Q7003	BZ510113	T27T030180	FET	2SK3018T106
△Q7004	AE009929	TJ3MSS2750	FET	FSS275-TL-E
△Q7005	AE009929	TJ3MSS2750	FET	FSS275-TL-E
COILS & TRANSFORMERS				
△L501	AE005143	029X000416	COIL,LINE FILTER	SS24H-10100
L503	BZ310150	02167E220K	COIL	22 UH
L504	AD301785	02167E100K	COIL	10 UH
L3001	BZ310150	02167E220K	COIL	22 UH
L3002	AE009517	0218MG5R2P	COIL	5.2 UH
L3003	BZ310150	02167E220K	COIL	22 UH
L3004	AE009518	0218MG220P	COIL	22 UH
L3005	BZ310150	02167E220K	COIL	22 UH
L5801	72784092	0216SD220J	COIL	22 UH
L5805	AE009260	021AS9224J	COIL	0.22 UH
L8501	AE008874	0216SD2R2J	COIL	2.2 UH
L8502	AE006570	0216SD1R0J	COIL	1 UH
△T501	AE009520	0481240018	TRANSFORMER,SWITCHING	81240018

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
COILS & TRANSFORMERS				
△T7001	AE009521	048135109G	TRANSFORMER, SWITCHING	8135109G
JACKS				
△J301	AE009522	060R131024	HEADPHONE JACK	PJ-364H
△J501	AE009523	064Q1A0010	JACK, AC	CCT2302-0901C
J4301	AE009524	060R401140	RCA JACK	RCA-101HT(OR)
J8101	AE009526	062R750007	PLUG	DIN-417HA-01
J8102	AE009527	060R411058	RCA JACK	RCA-341H(NI)-09
J8103	AE009528	060R431039	RCA JACK	RCA-228H(3)NI-02
J8104	AE009529	060R431040	RCA JACK	RCA-341H(2)NI-06
SWITCHES				
SW2201	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2202	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2203	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2204	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2205	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2206	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2207	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
SW2208	BZ612010	0504101T34	SWITCH, TACT	EVQ21505R
P.C. BOARD ASSEMBLIES				
PCB130	AE009931	A51T01P130	DVD MT PCB ASS'Y	DMG097A
PCB240	AE009932	A51T01P240	POWER PCB ASS'Y	CEH421A
PCB270	AE009933	A51T01P270	OPERATION PCB ASS'Y	CEH422A
PCBDA0	AE009934	A51T01PDA0	REMOCON PCB ASS'Y	CEH423A
PCBDH0	AE009935	A51T01PDH0	DIGITAL PCB ASS'Y	CEH420A
MISCELLANEOUS				
B501	BZ310129	024HT03564	CORE, BEADS	W4BRH3.5X6X1.0
B2305	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B2800	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B2803	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2804	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2805	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2806	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2807	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2808	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2809	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2810	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2811	AE009536	024HC52216	CORE, BEADS	HCB1608KF-221T20
B2815	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B2816	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B2817	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B2820	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B2821	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B2822	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B3003	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3004	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3005	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3006	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3007	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3008	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3014	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3015	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3017	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B3022	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B3023	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B4001	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4002	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4003	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4005	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4006	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4008	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4010	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4015	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4016	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B4301	AE008395	024HC56005	CORE, BEADS	FCM1608CF-600T06
B4302	AE008395	024HC56005	CORE, BEADS	FCM1608CF-600T06
B5801	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B5802	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B5803	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B5804	AE008610	024HC51513	CORE, BEADS	FCM1608KF-151T06
B6551	AE009374	024HC51216	CORE, BEADS	HCB1608KF-121T20
B6552	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B6553	AE008609	024HC51023	CORE, BEADS	FCM1608KF-102T02
B6554	AE008395	024HC56005	CORE, BEADS	FCM1608CF-600T06
B6556	AE008878	024HC51816	CORE, BEADS	HCB1608KF-181T20
B8501	AE008394	024BC5121J	CORE, BEADS	BLM18PG121SN1D
B8502	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
B8503	AE008394	024BC5121J	CORE, BEADS	BLM18PG121SN1D
B8504	AE008552	024NC51021	CORE, BEADS	EBMS160808A102_RDC45
BT001	AE008217	141U004016	BATTERY, MANGAN	MNAAA(R03)
BT002	AE008217	141U004016	BATTERY, MANGAN	MNAAA(R03)
CD301	AE009733	06E8141801	CORD CONNECTOR	E8141801
△CD501	AE009538	120Q119905	CORD SET AC	P201-2476-2
CD502	AE009936	06E8231001	CORD CONNECTOR	E8231001

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
MISCELLANEOUS				
CP501	AE009937	069S2K0739	CONNECTOR PCB SIDE	A2006WV0-2X10P
CD2804	AE009938	06CHRU1803	CORD CONNECTOR	CHRU1803
CD3001	AE009939	06E82K1701	CORD CONNECTOR	E82K1701
CD3002	AE009940	06E82O1101	CORD CONNECTOR	E82O1101
CD6203	AE009941	06E8252002	CORD CONNECTOR	E8252002
CD7005	AE009942	06E82E0604	CORD CONNECTOR	E82E0604
CP2201	AD301795	069S230639	CONNECTOR PCB SIDE	A2001WR2-3P
CP2301	AE008156	069KYOT159	CONNECTOR PCB SIDE	LD07T2-24ND-03
CP2302	AE009544	069EV5T060	CONNECTOR PCB SIDE	04_6232_105_015_800+
CP2303	AE009545	069EV6T060	CONNECTOR PCB SIDE	04_6232_106_015_800+
CP2801	BZ614485	069S270629	CONNECTOR PCB SIDE	A2001WV2-7P
CP2803	BZ614214	069S2B0629	CONNECTOR PCB SIDE	A2001WV2-11P
CP2804	AE009548	069S2U0739	CONNECTOR PCB SIDE	A2006WV0-2X15P
CP3001	AE009937	069S2K0739	CONNECTOR PCB SIDE	A2006WV0-2X10P
CP3002	AE009944	069S2O0739	CONNECTOR PCB SIDE	A2006WV0-2X12P
CP4301	AE008886	06CK7N0301	CORD CONNECTOR	TWG-P23P-A1
CP6201	BZ614458	069S290629	CONNECTOR PCB SIDE	A2001WV2-9P
CP7601	AD300752	069S250629	CONNECTOR PCB SIDE	A2001WV2-5P
CP8101	AE008882	06977NM020	CONNECTOR PCB SIDE	127301123K2
CP8501	AE009553	06GG2E0019	CONNECTOR PCB SIDE	A2001WR-14A
CP8502	AD301796	069S280629	CONNECTOR PCB SIDE	A2001WV2-8P
CUS151	BZ710279	800WFAA006	CUSHION A	
EL2401	BZ614043	124116281A	EYE LET	XRY16X28BD
△F501	79101691	081PC04005	FUSE	51MS040L
△F7001	AE004626	083LA05007	FUSE	1206FA5A-T
FH501	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
FH502	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
NR2801	AE009554	11074100M7	R.NETWORK	CRA108100JV
NR2802	AE009554	11074100M7	R.NETWORK	CRA108100JV
NR2803	AE009554	11074100M7	R.NETWORK	CRA108100JV
NR2804	AE009554	11074100M7	R.NETWORK	CRA108100JV
NR2805	AE009555	11074270M7	R.NETWORK	CRA108270JV
NR2806	AE009555	11074270M7	R.NETWORK	CRA108270JV
NR2807	AE009555	11074270M7	R.NETWORK	CRA108270JV
NR2808	AE009555	11074270M7	R.NETWORK	CRA108270JV
NR2809	AE009555	11074270M7	R.NETWORK	CRA108270JV
NR2810	AE009556	11074220M7	R.NETWORK	CRA108220JV
NR2811	AE009556	11074220M7	R.NETWORK	CRA108220JV
NR3601	AE009945	110P4472M5	R.NETWORK	4D02WVGJ0472TCE
NR3602	AE009945	110P4472M5	R.NETWORK	4D02WVGJ0472TCE
NR6551	AE009557	11074470M7	R.NETWORK	CRA108470JV
OS7601	AE009947	077Q038007	REMOTE RECEIVER	KSM-2003TC2P
SH501	AE009776	126D000045	TERMINAL PIN	YQ-12
△SP301	AE009558	070Y433004	SPEAKER	S0308F01
△SP302	AE009558	070Y433004	SPEAKER	S0308F01
△TH501	AE009559	DSQDNE5R0L	THERMISTOR	5D2-08LCS
TM101	AE009560	076D0LT030	TRANSMITTER	000-103000530
△TU5801	AE009623	0164100027	DIGITAL TUNER	ENG36E18KRF
△V2801	AE009948	09EV115008	LCD	M156B1-L02
X2801	AE009563	100GT02728	CRYSTAL	SMD-49 C27000B030
X2802	AE009564	100GT02509	CRYSTAL	SMD-49 C25000H025
X4001	AE009566	100GT02727	CRYSTAL	SMD-49 C27000J029
X6201	75006971	100GT01615	CRYSTAL	B16000E007
X6551	AE009567	100DT01217	CRYSTAL	DS0321SRAB

RESISTOR

RC..... CARBON RESISTOR

CAPACITORS

CC..... CERAMIC CAPACITOR
 CE..... ALUMI ELECTROLYTIC CAPACITOR
 CP..... POLYESTER CAPACITOR
 CPP..... POLYPROPYLENE CAPACITOR
 CPL..... PLASTIC CAPACITOR
 CMP..... METAL POLYESTER CAPACITOR
 CMPL..... METAL PLASTIC CAPACITOR
 CMPP..... METAL POLYPROPYLENE CAPACITOR

TOSHIBA CORPORATION

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