harman kardon

Models DVD 25 DVD101

DVD/CD/CD-R/CD-RW/VCD MP3 Player

Service Manual

- Contents -

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PRODUCT SAFETY SERVICING GUIDELINES FOR VIDEO PRODUCTS

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

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

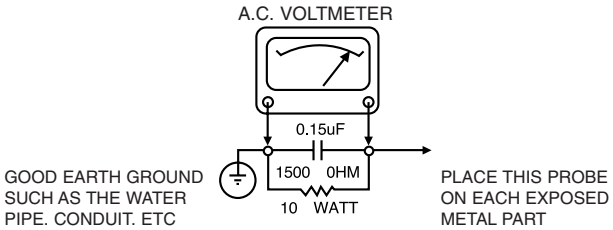
WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINE SHOCK.

SAFETY CHECKS

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

SUBJECT : FIRE & SHOCK HAZARD

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



SUBJECT: GRAPHIC SYMBOLS

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

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

SUBJECT : X-RADIATION

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

SUBJECT: IMPLOSION

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

SUBJECT : TIPS ON PROPER INSTALLATION

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

SERVICING PRECAUTIONS

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

General Servicing Precautions

1. Always unplug the DVD AC power cord from the AC power source before:
   (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
   (2) Disconnection or reconnecting any internal electrical plug or other electrical connection.
   (3) Connecting a test substitute in parallel with an electrolytic capacitor.
   Caution : A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this DVD or any of its assemblies.

3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
   Unless specified otherwise in this service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket B+ voltage interlocks with whitch instruments covered by this service manual might be equipped.

5. Do not apply AC power to this DVD and/or any of its electrical assemblies unless all solid-state device heat sinks are cerrectly installed.

6. Always connect test instrument ground lead to the appropriate ground before connection the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter(500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1M-ohm.
Note 1 : Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

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

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a GROUNDED-tip soldering iron to solder or unsolder ES devices.

4. Use only an anti-static solder removal device. Some solder removal devices not classified a “anti-static” can generate electrical charges sufficient to damage ES devices.

5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protec tive package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).

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

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

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

SHIPPING PRECAUTION:

If power is removed from the unit before the “NO DISC” message, then the carousel has not reached the home position, and movement of the laser assembly during shipping can cause the mechanism to jam.

Before the unit is shipped, the mechanism should be set to its home position performing following steps:
Power on unit. Wait until unit displays “NO DISC”. Power unit off.

Technical Specifications

Applicable Disc:	Disc formats: 5 inch (12 cm) or 3 inch (8 cm) DVD-Movie, Standard conforming DVD-R and DVD-RW, VCD, CD-i, CD, CD-R, MP3 or CD-RW discs, Regio code: DVD Movie disc with Code 2 or 0 only. DVD-Layers: Single Side/Single Layer, Single Side/Dual Layer, Dual Side/Dual Layer, Audio formats: Linear PCM, MPEG, Dolby Digital or DTS Audio Discs
Video Signal System:	PAL/NTSC
Composite Video Output:	1 V p-p/75 Ohms, sync negative polarity
S Video Output:	Y/Luminance: 1 V p-p/75 Ohms, sync negative polarity C/Chrominance: 0.286 V p-p
Component Video Output:	Y: 1Vp-p/75 Ohms, sync negative polarity Cr: 0.7Vp-p/75 Ohms Cb: 0.7Vp-p/75 Ohms
Analog Audio Output:	2 Vrms max
Frequency Response:	DVD (Linear PCM): 2 Hz - 22 kHz +0/-0.5 dB (48 kHz sampling) 2 Hz - 44 kHz +0/-0.5 dB (96 kHz sampling) CD: 2 Hz - 20 kHz +0/-0.5 dB
Signal/Noise Ratio (SNR):	113 dB (A-weighted)
Dynamic Range:	DVD: 100 dB (18 Bit) / 105 dB (20 Bit) CD/DVD: 96 dB (16 Bit)
THD/1kHz:	DVD/CD: 0.0025 %
Wow & Flutter:	Below Measurable Limits
AC Power:	110 - 240 V/ 50 - 60 Hz
Power Consumption:	12 Watts (On)/20 Watts (Max)
Dimensions (WxHxD):	440 x 87 x 305 mm
Weight:	7 Kg

Depth measurement includes knobs and connectors.

Height measurement includes feet and chassis.

All specifications subject to change without notice.

Features

High quality video

- Advanced sophisticated 10-bit MPEG-2 video decoding circuits.
- Direct RGB output via SCART (selectable) for optimum video performance. SCART connector also configurable for Composite Video output.
- Test screen videos available for testing video performance and setup.
- Pure PAL with NTSC disc due to true NTSC/PAL conversion.
- Dual-layer compatibility for extended play DVD.
- Progressive Scan component video ouputs (NTSC only)

High quality digital audio

- By connecting a DTS (Digital Theater Systems) or a Dolby Digital decoder, you can enjoy high quality 5.1 digital surround sound from DTS or Dolby Digital discs.
- With linear PCM audio at 16-24 bits and 44-96 kHz (also on digital output, see table page 14), audio quality exceeding that of CD becomes possible.
- Optical and coaxial digital audio output.

Many convenient features

- On-Screen Menu Icons for disc information or player information and access to many major functions of this unit.
- Subtitles may be displayed in one of numerous languages*.
- The multi-angle function allows you to choose the viewing angle of scenes which were shot from a number of different angles (Limited to DVD's recorded with multiple camera angles.)
- Multiple options for dialog language and soundtrack selection (limited to DVD's recorded with multiple dialog languages or soundtracks).
- Programming of up to 9 scenes in memory (markers).
- Parental lock settings to prevent play of discs unsuitable for some audiences [DVD only].
- Intuitive menu operating system.
- 2x/4x Zoom during play and pause.
- Backlit, ergonomically designed remote control.
- Future software upgrades accessible via Internet.

** The number of languages recorded depends on the software.*

Compatible with CD as well as DVD

- The DVD 25/101 will play any conventional Audio CD or recordable (CD-R) or erasable CD (CD-RW), bearing the logos shown here, MP3 or any VCD or DVD with the region code 0 or 2.

Disc formats supported by this player

The unit can play discs bearing any of the following logos:

DVD
3"(8 cm) disc
5"(12 cm) disc

CD
3"(8 cm) disc
5"(12 cm) disc

CD-RW
5"(12 cm) disc

CD-R
3"(8 cm) disc
5"(12 cm) disc

VCD
5"(12 cm) disc
5"(12 cm) disc

NOTE: Due to differences in the format of certain discs, it is possible that some discs may include a mix of features that are not compatible with the DVD 25/101. Similarly, although it's is capable of a wide range of features, not all discs include every capability of the DVD system. For example, although the DVD 25/101 is compatible with multi-angle discs, that feature is only possible when the disc is specially encoded for multiple-angle play. In addition, the DVD 25/101 is capable of playing back both Dolby Digital and DTS soundtracks, but the number and types of tracks available will vary from disc to disc. To make certain that a specific feature or soundtrack option is available, please check the options noted on the disc jacket.

■ Playback capability for CD-R and CD-RW discs may vary due to variations in the quality of the disc and the recorder used to create the disc.

Upgradeability via Internet

The "firmware" controlling the functionality of the h/k DVD25/101 is fully upgradeable. In the event of future improvements to its operations and features, it will be possible to download firmware upgrades from www.harmankardon.com. All you have to do is create a CD-R with the data and insert it in the DVD for an automatic upgrade.

Packing List

1 h/k DVD25 or DVD101 DVD Player

1 Remote control

2 AA batteries

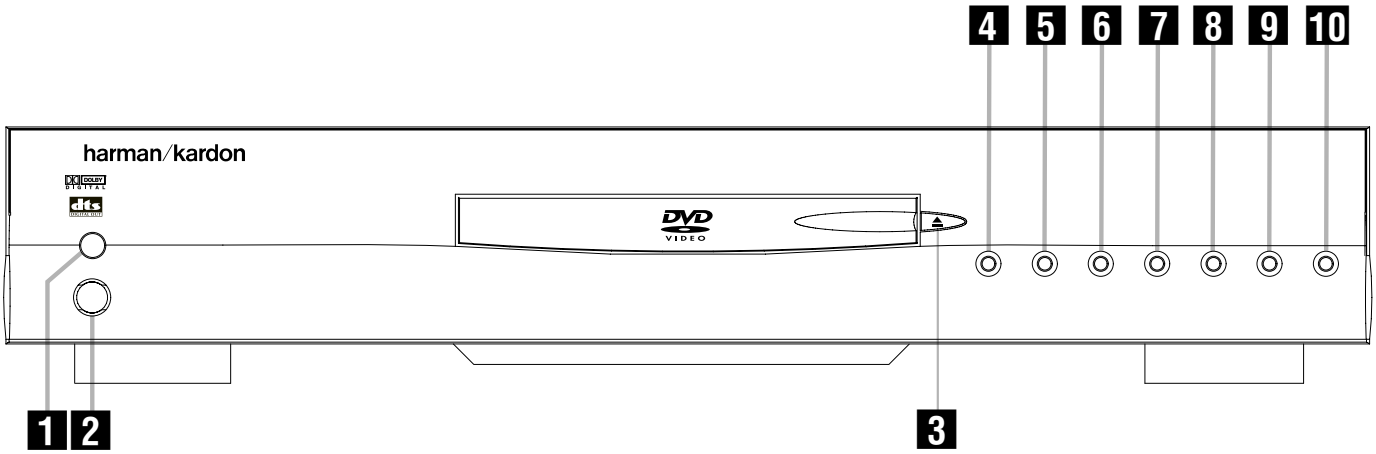
1 A/V cable for stereo analog audio and composite video

1 S-Video cable

1 remote extension cable

1 owner's manual

FRONT-PANEL CONTROLS



1 Main Power On/Off
2 Power On/Off (Standby)
3 Eject
4 Play
5 Pause
6 Stop
7 Skip (Previous)
8 Skip (Next)
9 Dimmer
10 Test

1 Main Power On/Off: Press this switch to apply power to the DVD 25/101. Once the unit has been turned on with this switch, it may be operated from either the front panel or remote control. Press the switch again to turn the unit completely off.

2 Power On/Off (Standby): Press the Button once to turn on DVD 25/101. Press it again to put the unit in the Standby mode. Note that in order for this switch to operate, the Main Power Switch **1** must be pressed in so that it is in the ON position.

3 Eject: Press this Button to open or close the Disc Tray.

4 Play: Press to initiate playback or to resume playback after the Pause Button **5** (13) has been pressed.

5 Pause: Press this Button to momentarily pause playback. To resume playback, press the button again. If a DVD is playing, action will freeze and a still picture will be displayed when the button is pressed.

6 Stop: Press this button once to place the disc in the Resume mode, which means that playback will stop, but as long as the tray is not opened or the disc changed, DVD playback will continue from the same point on the disc when the Play Button **4** (17) is pressed again. Resume will also work if the unit was turned off. To stop a disc and have play start from the beginning, press the button twice.

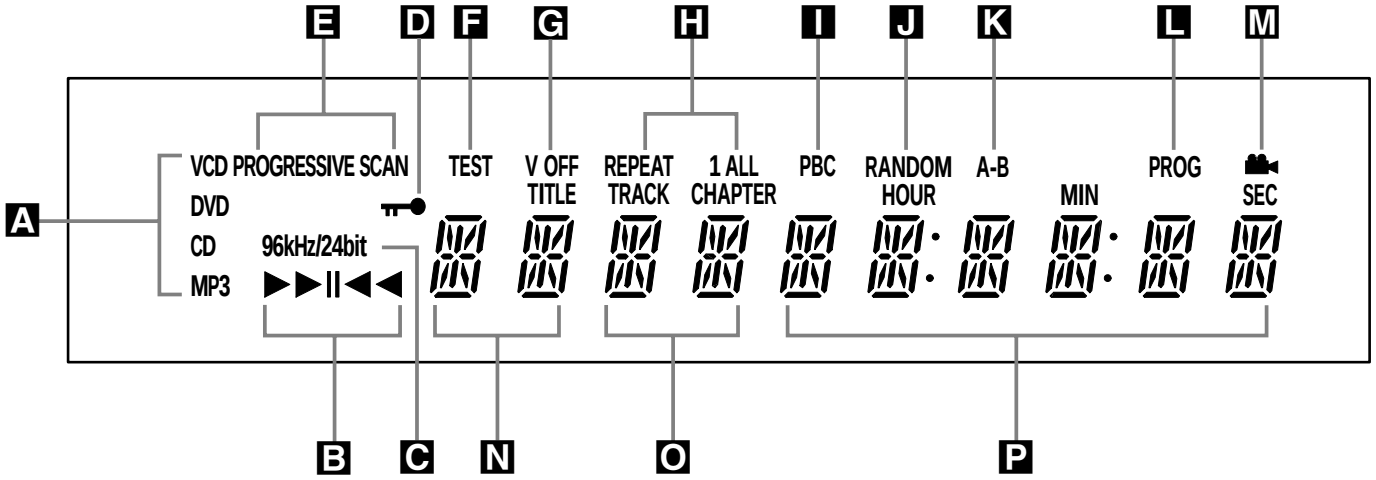
7 Skip (Previous): Press this button to move backward through the music tracks on a CD disc or the chapters on a DVD disc.

8 Skip (Next): Press to move forward through the music tracks on a CD or the chapters on a DVD disc.

9 Dimmer: Press this button to reduce the brightness of the Information Display by 50% or to turn the display off completely in the following order: FULL BRIGHTNESS → HALF BRIGHTNESS → OFF → FULL BRIGHTNESS.

10 Test: Press this button to bring a test picture to the screen, which enables you to optimally adjust all important parameters of color videos, such as brightness, contrast, color intensity and tint.

FRONT-PANEL INFORMATION DISPLAY



A Disc-Type Indicators
B Playback-Mode Indicators
C 96kHz/24-Bit Indicator
D Parental Lock Indicator
E Progressive Scan Indicator
F Test Indicator
G V-OFF Indicator
H Repeat Indicator
I VCD Playback Control Indicator
J Random Indicator
K A-B Repeat Indicator
L Program Indicator
M Angle Indicator
N Title Indicators
O Chapter/Track Number Indicators
P Time Indicators

A Disc-Type Indicators: The DVD, VCD, CD or MP3 indicator will light to show the type of disc currently being played.

B Playback-Mode Indicators: These indicators light to show the current playback mode:

▶ Lights when a disc is playing in the normal mode.

▶▶ Lights when the disc is in the Fast Search Forward mode. The on-screen banner display indicates the selected speed, which may be selected by pressing the Search Forward or Reverse Buttons 18 20.

▶II Lights when the disc is paused.

◀◀ Lights when the disc is in the Fast Search Reverse mode. The on-screen banner display indicates the selected speed, which may be selected by pressing the Search Forward or Reverse Buttons 18 20.

C 96kHz/24-Bit Indicator: The 96kHz indicator will light when a disc recorded with 96kHz content is playing; the 24-Bit indicator will light when a disc recorded with 24-bit content is playing.

D Parental Lock Indicator: This indicator lights when the parental lock system is engaged in order to prevent anyone from changing the rating level without a code.

E Progressive Scan Indicator: Lights when Progressive Scan component video output is selected in the setup menu.

F Test Indicator: This indicator lights when the TV test screen is activated.

G V-OFF Indicator: This indicator lights when the unit's video output has been turned off by pressing the Video Off Button 27 on the remote control.

H Repeat Indicators: These indicators light when any of the Repeat functions are in use.

I VCD Playback Control Indicator: This indicator lights when the playback control function is turned on with VCDs.

J Random Indicator: This indicator lights when the unit is in the Random Play mode.

K A-B Repeat Indicator: This indicator lights when a specific passage for repeat playback has been selected.

L Program Indicator: This indicator lights when the programming functions are in use.

M Angle Indicator: This indicator blinks when alternative viewing angles are available on the DVD currently playing.

N Title Indicators: These two positions in the display will show the current title number when a DVD disc is playing.

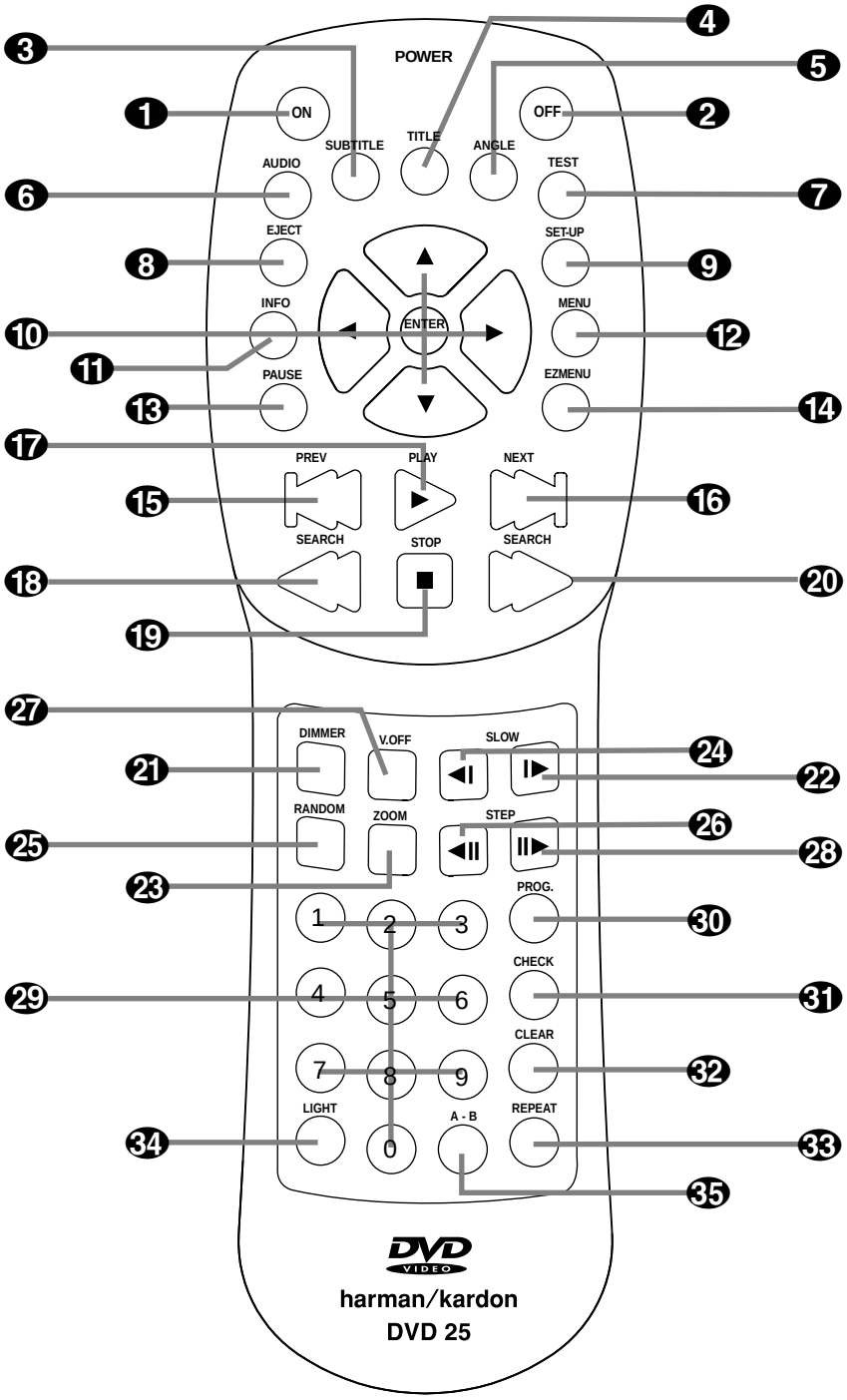
O Chapter/Track Number Indicators: When a DVD disc is playing, these two positions in the display will show the current chapter. When a CD disc is playing they will show the current track number.

P Time Indicators: These positions in the indicator will show the running time of a DVD in play. When a CD is playing, these indicators will show the current track time, time remaining in the current track or the total remaining time on the disc.

NOTE: The indicators **N** **O** **P** will also display text messages about the DVD 25/101's status, including `Reading` when a disc is loading, and `Disc Error` when a disc not compatible with the DVD 25/101 is put into the Play position.

REMOTE CONTROL FUNCTIONS

1. Power On
2. Power Off
3. Subtitle
4. Title
5. Angle
6. Audio
7. Test
8. Eject
9. Setup
10. Navigation Buttons
11. Info
12. Menu
13. Pause
14. EzMenu
15. Skip (Previous)
16. Skip (Next)
17. Play
18. Search Reverse
19. Stop
20. Search Forward
21. Dimmer
22. Slow Forward
23. Zoom
24. Slow Reverse
25. Random
26. Step Forward
27. Video Off
28. Step Reverse
29. Numeric Keys
30. Program
31. Check
32. Clear
33. Repeat
34. Light
35. A-B Repeat



REMOTE CONTROL FUNCTIONS

❶ Power On: Turns on the player when it is in Standby mode (the Harman Kardon logo appears on-screen).

❷ Power Off: Turns off the player to Standby mode.

❸ Subtitle: When a DVD is playing, press to select a subtitle language or to turn subtitles off.

❹ Title: When a disc is playing, press to jump to the subsequent title (with the next title number) on the disc.

❺ Angle: Press to access various camera angles on a DVD (if the DVD contains multiple camera angles).

❻ Audio: Press to access various audio languages on a DVD (if the DVD contains multiple audio streams).

❼ Test: Press for the on-screen test pattern which enables you to optimally adjust brightness, contrast, color intensity, etc., of your display device.

❽ Eject: Press to open or close the disc tray.

❾ Setup: Press to access player setup menu.

❿ Navigation Buttons (◀/▶▲/▼/Enter): Use to select and execute items or settings.

⓫ Info: Press once for detailed information on the disc playing (Video/Audio bit rate, Movie aspect ratio and others). Press again for current player settings. Note that the unit will not react to any transport button as long as the info menu is displayed. Press again to remove information from screen.

⓬ Menu: Displays the DVD disc menu on the TV screen in Play mode.

⓭ Pause: Freezes a picture (with DVD/VCD) and pauses the playback signal (CD) when a disc is playing. Press again for normal playback.

⓮ EzMenu: Press while a disc is playing to view the on-screen status banner display. Use the ◀/▶ Navigation Buttons ❿ to move through the different features in the Banner Display. When a symbol is highlighted, press the Enter Button ❿ on the remote to select it.

⓯ Skip (Previous): Press to go to beginning of current track. Press again quickly to go to beginning of previous track.

⓰ Skip (Next): Press to go to beginning of next track.

⓱ Play: Begins to play disc (closes disc tray first, if it is open).

⓲ Search (Rev): Allows you to search in reverse through a disc while it is in Play mode. Each time you press this button while a DVD is playing, the search speed changes as below:

R. SEARCH 2x ➜ R. SEARCH 4x ➜ R. SEARCH 8x ➜ R. SEARCH 16x ➜ R. SEARCH 2x

When a CD is playing, there are two fast-play speeds:

R. SEARCH 5x ➜ R. SEARCH 15x

⓳ Stop: Stops playing a disc. When a disc is playing, if you press the Stop Button 6 ⓳ and the Play Button 4 ⓱, the disc will resume play; i.e., it will start from the same point on the disc where the unit was stopped. If you press the Stop Button 6 ⓳ twice and the Play Button 4 ⓱, the disc will start play from the beginning.

⓴ Search (Fwd): Allows you to search forward through a disc while it is in Play mode. Each time you press this button while a DVD is playing, the search speed changes as below:

F. SEARCH 2x ➜ F. SEARCH 4x ➜ F. SEARCH 8x ➜ F. SEARCH 16x ➜ F. SEARCH 2x

When a CD is playing, there are two fast-play speeds:

F. SEARCH 5x ➜ F. SEARCH 15x

㉑ Dimmer: Press to change the brightness of the front-panel display or to turn the display off completely in the following order: FULL BRIGHTNESS ➜ HALF BRIGHTNESS ➜ OFF ➜ FULL BRIGHTNESS

㉒ ㉔ Slow: Allows you to play movies in Slow mode. Each time you press this button while a DVD is playing, the slow speed will be changed as below:

F. SLOW 1/2x ➜ F. SLOW 1/4x ➜ F. SLOW 1/8x ➜ F. SLOW 1/16x ➜ F. SLOW 1/2x

R. SLOW 1/2x ➜ R. SLOW 1/4x ➜ R. SLOW 1/8x ➜ R. SLOW 1/16x ➜ R. SLOW 1/2x

Slow-speed playback is not available for CDs.

㉓ Zoom: When a DVD or VCD is playing, press this button to zoom the picture so that it is enlarged. There are four steps to the zoom function, each progressively larger. Press through each of the zoom stages to return to a normal picture.

㉕ Random: Press for Random playback in random order.

㉖ ㉘ Step (Rev/Fwd): Freeze a picture when a disc is playing. Also, the picture advances frame by frame each time this button is pressed.

㉗ Video Off: Press to turn off video output for improved audio performance from CDs. Press again to restore video output (see page 29).

㉙ Numeric Keys: Select numbers by pressing these buttons.

㉚ Prog: When programming playlists and the unit is in the Stop mode, press this button to view the Program Edit display.

㉛ Check: Press during program play (in Resume mode) to check the program status on the front-panel display. Escape from this display by pressing the Play Button 4 ⓱.

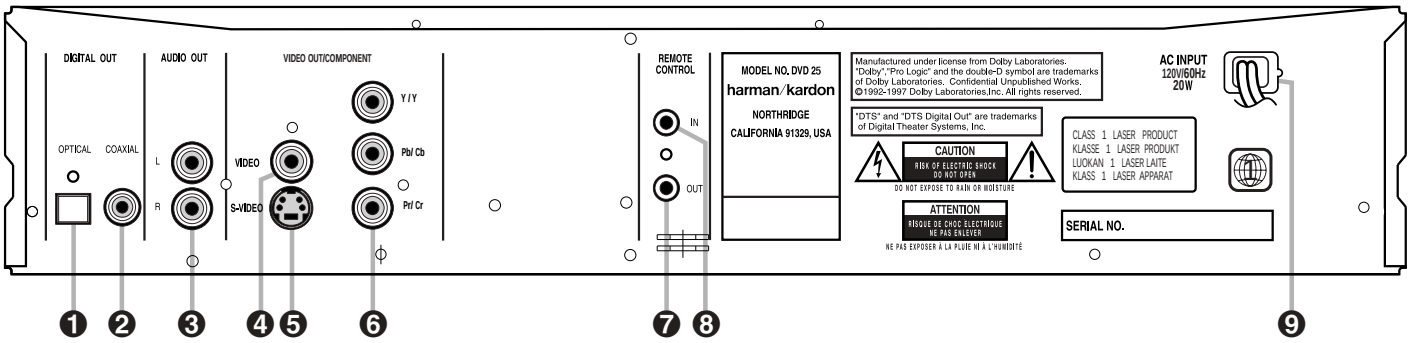
㉜ Clear: Press to remove the On-Screen Banner Display from the screen.

㉝ Repeat: Press to go to the Repeat menu. You can repeat a chapter, track or the entire disc.

㉞ Light: Press to illuminate the remote controller.

㉟ A-B: Press to select section A-B and to play repeatedly.

REAR-PANEL CONNECTIONS



❶ Optical Digital Output
❷ Coaxial Digital Output
❸ Analog Audio Outputs
❹ Composite Video Output
❺ S-Video Output
❻ Component Video Outputs
❼ Remote Control Output
❽ Remote Control Input
❾ AC Power Cord

❶ Optical Digital Output: Connect this jack to the optical digital input of an A/V receiver or surround processor for Dolby Digital, DTS or PCM audio playback.

❷ Coaxial Digital Output: Connect this jack to the coaxial digital input of an A/V receiver or surround processor for Dolby Digital, DTS or PCM audio playback.

NOTE: The coaxial digital output should only be connected to a digital input. Even though it is the same RCA-type connector as standard analog audio connections, DO NOT connect it to a conventional analog input jack.

❸ Analog Audio Outputs: Connect these jacks to an audio input on an A/V receiver or surround processor for analog audio playback.

❹ Composite Video Output: Connect this jack to the video input on a television or video projector, or to a video input on an A/V receiver or processor if you are using that type of device for video input switching.

❺ S-Video Output: Connect this jack to the S-Video input on a television or video projector, or to an S-Video input on an A/V receiver or processor if you are using that type of device for S-Video input switching.

❻ Component Video Outputs: These outputs carry the component video signals for connection to display monitors with component video inputs. For standard analog TVs or projectors with inputs marked Y/Pr/Pb or Y/Cr/Cb, connect these outputs to the corresponding inputs. If you have a high-definition television or projector that is compatible with high-scan-rate progressive video, connect these jacks to the HD component inputs. If you are using a progressive scan display device, PROGRESSIVE must be selected in the Video menu in order to take advantage of the progressive scan circuitry. See "Scan Type" section on page 17 for more information on progressive scan video.

IMPORTANT: These jacks should NOT be connected to standard composite video inputs.

❼ Remote Control Output: Connect this jack to the infrared (IR) input jack of another compatible Harman Kardon remote controlled product to have the built-in Remote Sensor on the DVD 25/101 provide IR signals to other compatible products.

❽ Remote Control Input: Connect the output of a remote infrared sensor, or the remote control output of another compatible Harman Kardon product, to this jack. This will enable the remote control to operate even when the front-panel Remote Sensor on the DVD 25/101 is blocked. This jack may also be used with compatible IR remote control-based automation systems.

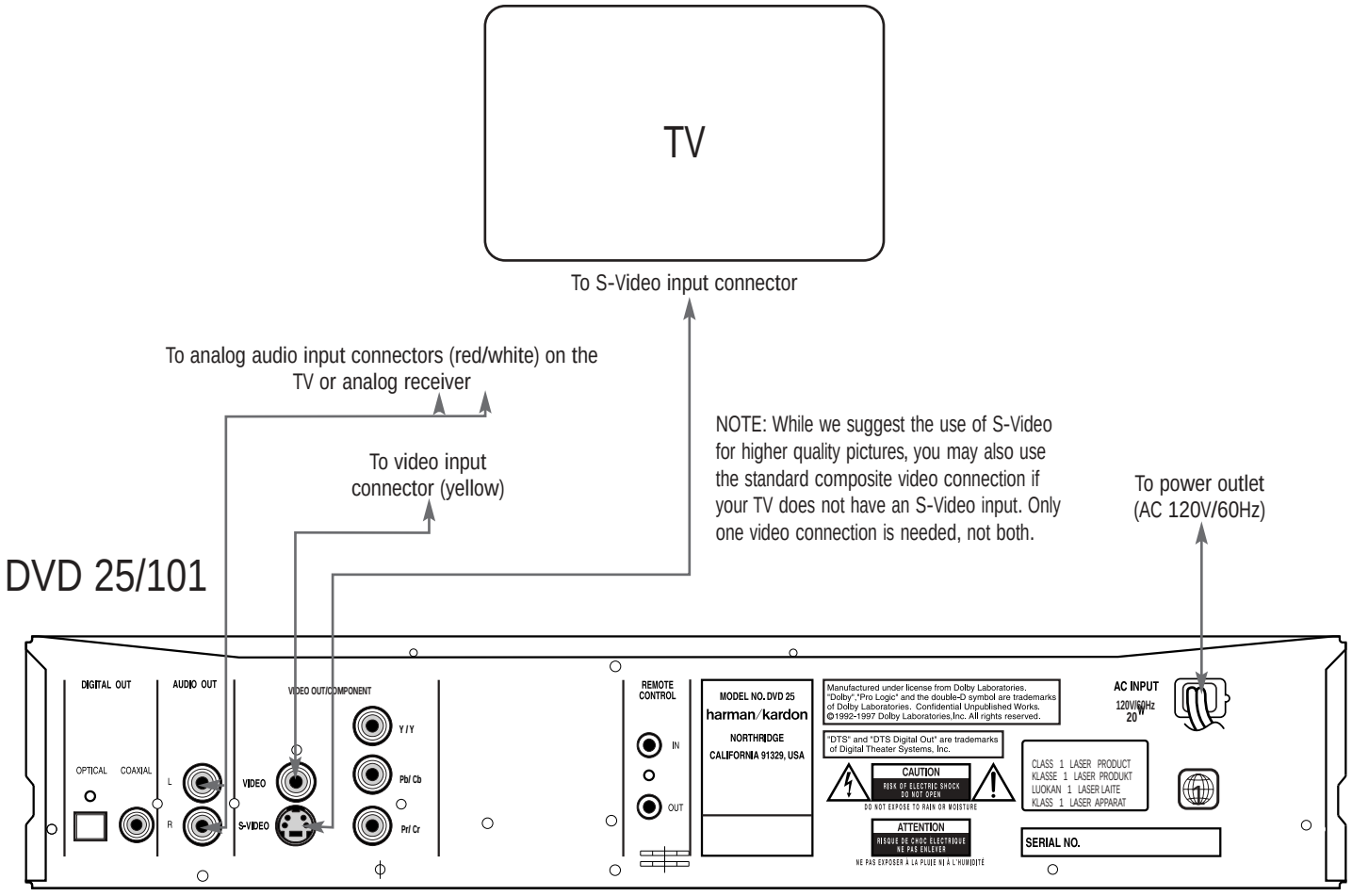
❾ AC Power Cord: Connect this plug to an AC outlet. If the outlet is controlled by a switch, make certain that it is in the ON position.

NOTE: You'll find more details about all audio/video connections under Setup and Connections on the following pages.

SETUP AND CONNECTIONS

- Ensure that the power switch of this unit (and of other equipment to be connected) is set to “Off” before commencing connection.
- Do not block the ventilation holes of any of the equipment and arrange them so that air can circulate freely.
- Read through the instructions before connecting other equipment.
- Ensure that you observe the color-coding when connecting audio and video cables.

Connecting to a TV and Analog Receiver



NOTES:

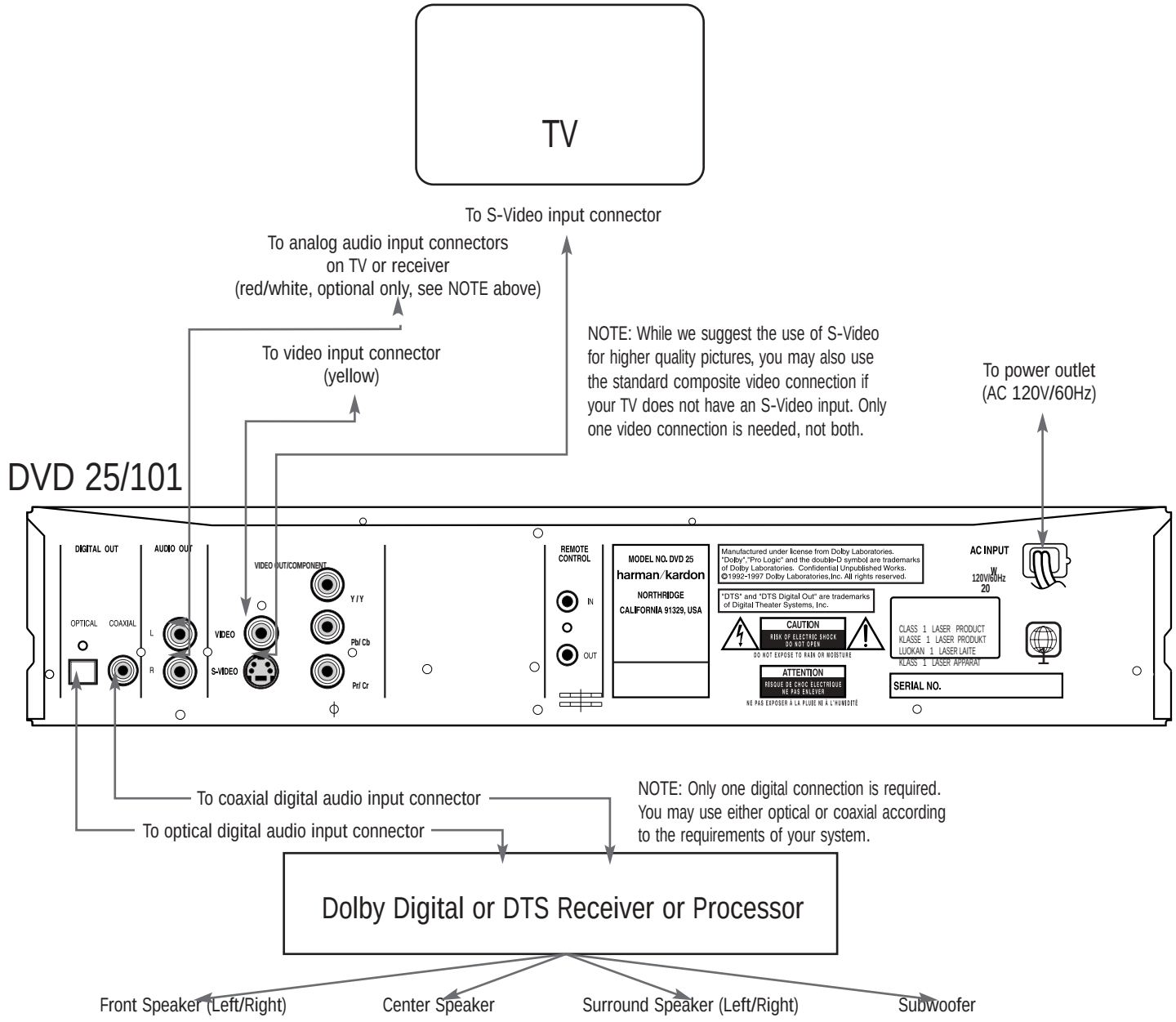
- The video output (yellow) combines the complete video signal (composite) and sends it to the TV (or to the A/V receiver) by one cable only. Use the video output when your TV set is equipped with a video input jack only.
- The S (separate) video output connector separates the color (C) and luminance (Y) signals before transmitting them to the TV set in order to achieve a sharper picture. Use the S-Video cable when connecting the player to a TV equipped with an S-Video input for improved picture clarity. Never connect both outputs, video and S-Video, to your TV or A/V receiver; use only one of them.
- When the audio signal is to be fed to an analog receiver rather than to the TV, connect the audio out jacks to any normal audio input on your amplifier/decoder/receiver. The DVD 25/101 will “downmix” Dolby Digital recordings to Pro Logic®*, available on these connectors; all analog surround or stereo signals will be fed to them directly. You can also select the audio and video signals of all your video devices with your A/V receiver/amplifier. For more information see the “NOTE” on next page.

SETUP AND CONNECTIONS

Connecting to a Receiver/Amplifier With Dolby Digital or DTS Decoder

When DVDs encoded in Dolby Digital or DTS are played, the Dolby Digital or DTS bitstream is outputted from the player's optical or coaxial digital audio output. When the player is connected to a Dolby Digital or DTS decoder, you can enjoy theater-quality audio in your home. An optical digital audio cable or coaxial audio cable (both optional) is required for these connections, as shown below. Only one connection is needed, not both at the same time.

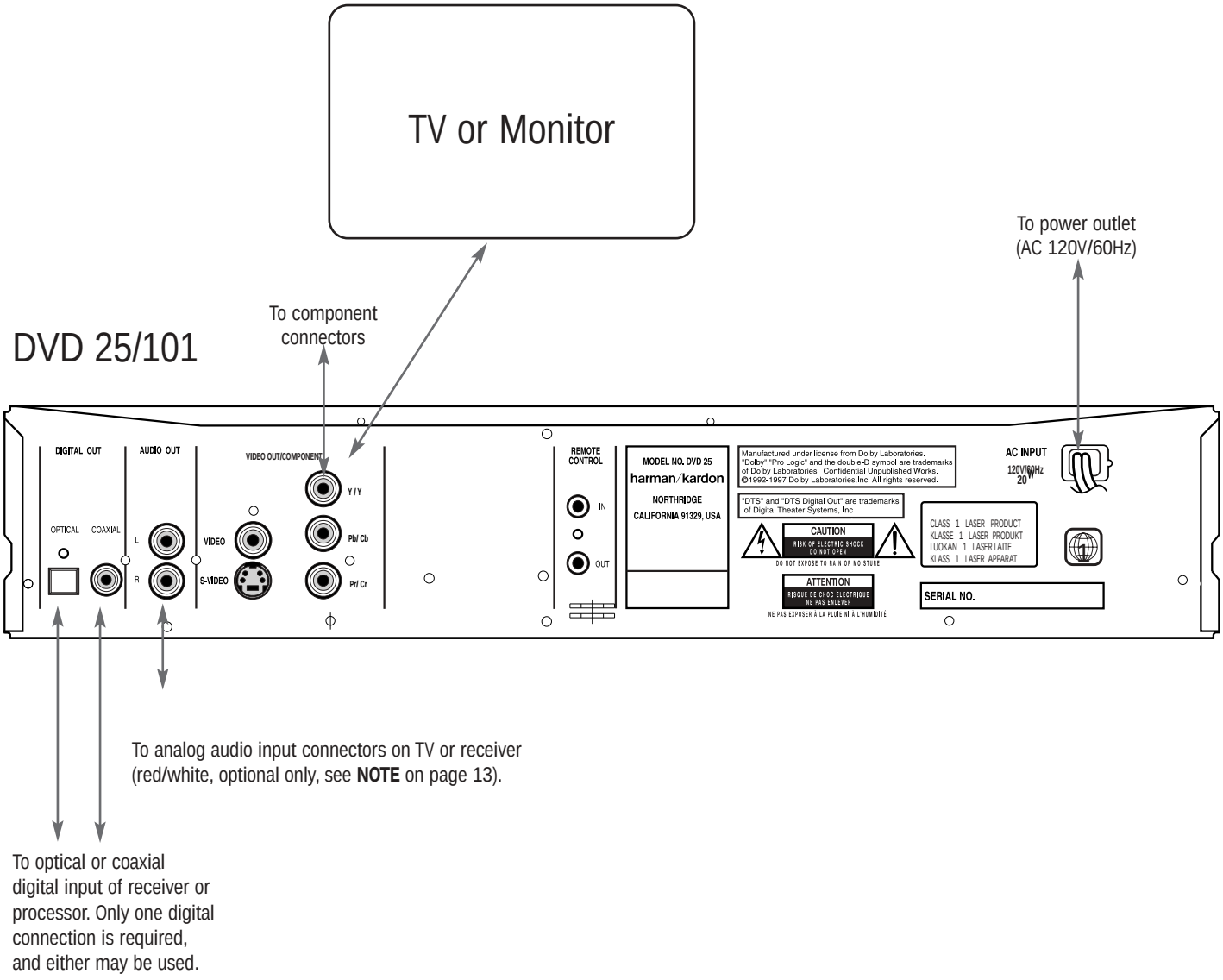
- NOTE: With multiple video sources, your audio/video device can be used for selecting the video signal and routing it to the TV. Connect the video or S-Video output of the DVD 25/101 (whatever is provided with your device) to the video or S-Video input on your device, and the video/S-Video output of this device to your TV. For more details, see the manual of your audio/video amplifier/receiver.
- NOTE FOR ANALOG AUDIO: The connection from Audio Out to the TV is optional. If you plan on using your DVD 25/101 alone, without turning on your complete system, this connection must be made; then you can turn up the TV's volume as needed. The analog audio jacks may also be connected to the standard analog left/right DVD or CD inputs on your receiver to processor if you wish to use the DVD 25/101 as the input for a multiroom system.



SETUP AND CONNECTIONS

Connecting to a TV or Monitor With Component Connectors – Component Video Connection

If the video display has component video inputs, connect the component video outputs on the DVD 25/101 to the corresponding input jacks on your television. If you are using a Progressive Scan television or projector, you must also change the scan type in the DVD player's Video Setup menu from "Interlaced" to "Progressive." See page 17.



To analog audio input connectors on TV or receiver (red/white, optional only, see **NOTE** on page 13).

To optical or coaxial digital input of receiver or processor. Only one digital connection is required, and either may be used.

Digital Audio Connections

Notes when connecting the optical digital audio cable (optional)

- Remove the dust protection cap from the optical digital audio output and connect the cable firmly so that the configurations of both the cable and the connector match.
- Keep the dust protection cap and always reattach the cap when not using the connector.

Audio output from the unit's optical/coaxial digital audio output connector

Disc:	Sound recording format:	Optical/Coaxial digital audio output
DVD	Dolby Digital (AC-3)	Dolby Digital bitstream (2-5.1 ch) or PCM (2 ch, 48 KHz/16bit) *
	Linear PCM (48/96 kHz 16/20/24bit)	Linear PCM (2 ch) (48/96 kHz 16/20/24bit)
	DTS	Bitstream or no output *
CD	Linear PCM	Linear PCM (44.1 kHz sampling)

* Digital Format must be selected as "ORIGINAL" or "PCM" in Audio Set-Up Menu (see page 18).

For your reference:

- Dolby Digital (AC-3) is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation, supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz /24 bit.
- If you have a Dolby Pro Logic Surround decoder connected to the DVD's analog AUDIO OUT connectors, thanks to the "Downmix" function of the DVD 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 encoded with Dolby Surround.
- The DVD 25/101 is designed to digitally output 96kHz-PCM audio with a 96 kHz sampling rate. The 96 kHz indicator will light in the display. However, some 96 kHz DVD's may include copy protection codes that do not permit digital output. For full 96 kHz fidelity from these discs, use the analog outputs of the DVD 25/101.

IMPORTANT: If your surround processor/D/A converter does not support 96 kHz PCM audio, you must use the DVD analog outputs for full 96 kHz fidelity with these discs.

Caution for the optical/coaxial digital audio outputs:

- When connecting an amplifier (with an optical/coaxial digital input) which does not contain a Dolby Digital (AC-3) or DTS decoder, be sure to select "PCM" as initial setting in the "Digital Format" menu (see also page 18). Otherwise, any attempt to play DVD may cause such a high level of noise that it may be harmful to your ears and damage your speakers.
- CD´s can be played as they would normally be played.

Note:

- Some first generation DTS decoders which do not support DVD-DTS interface may not work properly with the DVD/CD player.

Dolby Digital and DTS

Both Dolby Digital and DTS are audio formats used to record 5.1-channel audio signals onto the digital track of film. Both of these formats provide six separate channels: left, right, center, left rear, right rear, and common subwoofer.

Remember, that Dolby Digital or DTS will only play 5.1-channel sound if you've connected the optical or coaxial output of the DVD 25/101 to a DTS or Dolby Digital receiver or decoder (see page 11) and if the disc was recorded in the Dolby Digital or DTS format.

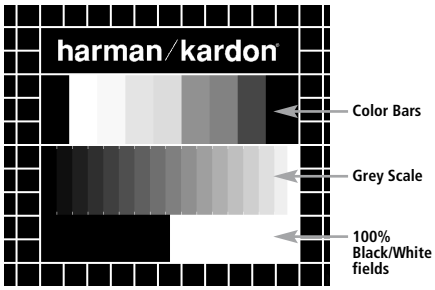
Test Screen

Test Screen

When you press the TEST button on the front panel or on the remote you can activate a still image to test all settings and the video performance of your TV. With the vertical color bars you can test the following:

- proper color intensity setting on your TV,
- the proper color of each bar, showing if the proper video standard is turned on: the colors should be (left to right): black, white, yellow, cyan (turquoise), green, magenta (purple), red, blue, black.
- proper color transition, seen as sharp separation of the bars, S-Video will be better than Video, RGB best of all.
- the performance of the color filter in your TV (with "Video" signals), bar edges should show no vertical crawling dots. Here S-Video and RGB formats usually give no problems.

With the grey scale and the black/white fields below the color bars the brightness and contrast of your screen can be adjusted optimally, see chapter "TV Picture Adjustment" below.



TV Picture Adjustment with Test Screen

These adjustments may be done now, but you can also make them after setup has been finalized. They can also be made at any time when the player is in Stop or Resume mode, simply by pressing TEST on the remote control or on the front panel.

Brightness adjustment:

1. Turn down the color control on your TV until the color bars are visible in black and white.
2. Adjust the contrast to the lowest level where you still can see all bars within the grey scale in the test picture separately and clearly.
3. Adjust the Brightness so that the bars in the grey scale are all visible. The bar furtherst to the left has to be as black as possible rather than grey but the next aside must clearly be differable. All the bars in the grey scale have to be gradually and evenly changing from black to whiter, going from left to right.

Contrast adjustment:

1. Adjust the contrast on your TV until you see a bright white bar in the right low corner of the screen and a deep dark black bar at the left. The optimal contrast setting will depend from your preference and the surrounding light in the TV room.
2. If the brightness of the white bar will no more increase while turning up the contrast or when the borders of the white "harman/kardon" text letters on top will bloom (overlight) into the black areas, what drasticly will decrease the sharpness of the script, then the Contrast has been turned up too much. Reduce the contrast until these effects will disappear and the video still looks realistic.
3. If you are watching TV with a usual surrounding daylight, adjust the Contrast so that a normal video picture has about the same looking as the surroundings in your room. By that way the eye is relazed when watching the TV picture. This contrast setting may be reduced when the surrounding light is dimmed, usually improving the sharpness of a video a lot thereby.
4. The grey scale in the middle line needs to have the same clear difference between each bar as before the contrast adjustment. If not, go back to the brightness adjustment and repeat step 3 and then the contrast adjustments, making only minor adjustments each time for optimisation.

Color adjustment.

1. When the Brightness and the Contrast are set optimally, turn up the color control to the level of your perference. Adjust to the level where the colors look strong but still natural, not overdone. If the color level is too high, depending from the TV used some of the bars will seem wider or the color intensity will not increase while the control is turned up. Then the color control must be reduced again. At the end you should test the color intensity also with a video, e.g. pictures of natural faces, flowers, fruit and vegetables and other well known natural articles of our life most usefull for an optimal setting of the color intensity.
2. If your TV has a Tint option (with most European TVs this is available or effective only with NTSC signals, not with PAL), use the large white bar below the Greyscale to tweak the warmth of the picture. Every viewer has a difference in preference as how the glow of the picture should be. Some prefer a little colder picture, some a warmer glow. The Tint function on your TV and the white bar can be used to control this. Adjust the Tint to the level where you feel the white color has the tone you prefer.

TROUBLESHOOTING GUIDE

TROUBLESHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Unit does not turn on	• Main Power Switch **1** turned off • No AC power	• Press in Main Power Switch **1**. • Check AC power plug and make certain any switched outlet is turned on.
Disc does not play	• Disc loaded improperly • Incorrect disc type • Invalid Region Code • Rating is above parental preset	• Load disc label-side up; align the disc with the guides and place it in its proper position. • Check to see that disc is CD, CD-R, CD-RW, VCD, MP3-CD, DVD-R and DVD-RW (standard conforming) or DVD-Movie; other types will not play. • Use Region 1 disc only. • Enter password to override or change rating settings (see page 19).
No picture	• Intermittent connections • Wrong input • Progressive Scan output selected • Video Off feature active	• Check all video connections. • Check input selection of TV or receiver. • Use Progressive Scan mode only with compatible TV. • Press Video Off Button **27** to reactivate video circuitry (see page 29).
No sound	• Intermittent connections • Incorrect digital audio selection • DVD disc is in fast or slow mode • Surround receiver not compatible with 96kHz PCM audio	• Check all audio connections. • Check digital audio settings. • There is no audio playback on DVD discs during fast or slow modes. • Use analog audio outputs.
Picture is distorted or jumps during fast forward or reverse play	• MPEG-2 decoding	• It is a normal artifact of DVD playback for pictures to jump or show some distortion during rapid play.
Some remote buttons do not operate during DVD play; prohibited symbol ⃠ appears (see below)	• Function not permitted at this time	• With most DVDs, some functions are not permitted at certain times (e.g., Track Skip) or at all (e.g., direct audio track selection).
The OSD menu is in a foreign language	• Incorrect OSD language	• Change OSD language selection (see pages 19).
The ⃠ symbol appears	• Requested function not available at this time	• Certain functions may be disabled by the DVD itself during passages of a disc.
Picture is displayed in the wrong aspect ratio	• Incorrect match of aspect ratio settings to disc	• Change aspect ratio settings (see page 17).
Remote control inoperative	• Weak batteries • Sensor is blocked	• Change both batteries. • Clear path to sensor or use optional outboard remote sensor.
Disc will not copy to VCR	• Macrovision protection	• Many DVDs are encoded with Macrovision to prevent copying to VCR.

If you forget your password, you can reset DVD 25/DVD101 to the factory default password (8888) when the player is in Standby by pressing and holding the Clear Button for six seconds. NOTE: This will restore all menu settings to the factory default settings. Any changes you have made will be lost.

harman/kardon Service Bulletin

Service bulletin # H/K2003-06 Sept. 2003

Warranty labor rate: MINOR repair

To: All harman/kardon Service Centers

Model: DVD25

Subject: Replacement Of Laser Pick-Up Assembly

In the event you receive a DVD25 where a Laser Pick-up Assembly replacement is warranted: The original DVD25 mechanism (KIT500) used in earlier units is no longer available. Follow the instructions below to add a new replacement mechanism (KIT710). For later units already containing KIT710, ordering h/k part# WLD5.018.011XX is all that's needed.

For serial numbers WA-0002-10677 and below:

Instructions for replacing mechanism KIT500 with KIT710

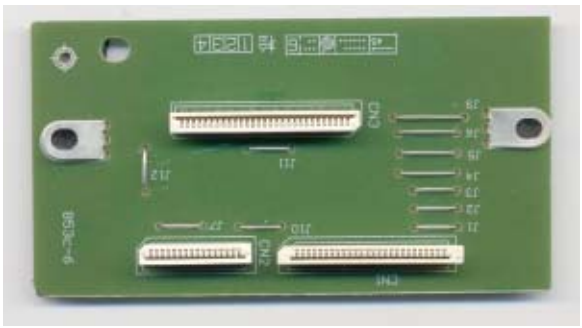
Synopsis:
The new KIT710 mechanism will need to be mechanically and electrically modified. All cables to the mechanism will be changed.
It will need to be elevated, and a new PC board will need to be added to adapt a new 29 pin flat cable.
The 5 volt line on the power cable will need to be re-routed for a change to 3.3 volts.

I) Order the following parts:

h/k part# WLD5.018.011XX (KIT710 Assembly)
h/k part# WLD6.672.710R500 ("kit" of ribbon cables, wires, screws, washers, cushions)
h/k part# WLD6.672.853C-6 (new connector PCB)

Contents of WLD6.672.710R500 "Kit"

WLD6.672.853C-6 (new connector PCB)

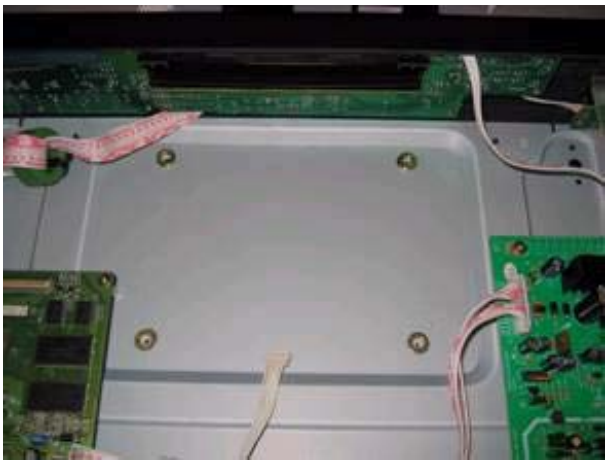


II) Open DVD25 and remove the original KIT500 Mechanism

Remove the top cover (9 Phillips screws).
Remove the original KIT500 Mechanism (4 Phillips screws holding the mechanism to the chassis, and unplug the two flat cables and power supply cable from the Main PCB.)
Remove the colored front faceplate from the mechanism by lifting it up and off front of the tray; save the faceplate and discard the mechanism and cables.

III) Attach single 29 pin flat cable and Power Supply cable to new Mechanism KIT 710.
(Caution – assure the conector-side of the flat cable matches the connector-side of the female receptacle)
Re-attach the front faceplate to the new mechanism.

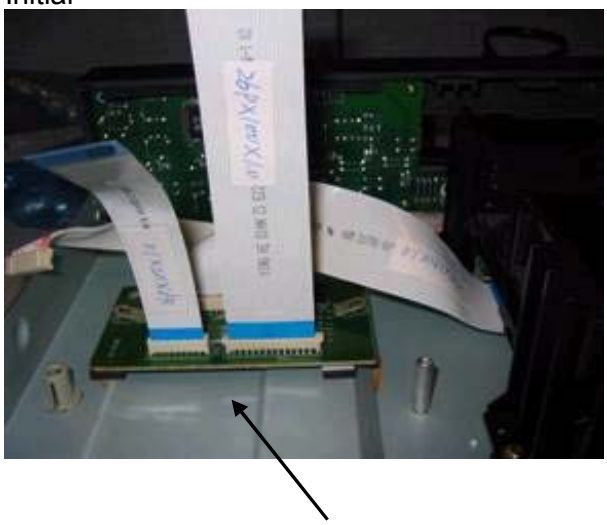
IV) Elevate and mount the new KIT 710 mechanism by using 3 new washers under each foot; then fasten the mechanism with 4 new m3x12 screws. Align KIT710 with the opening in the front panel before tightening screws completely.



V) Place (4) cushions adhesive-side on the bottom corners of the new PC board, and place it in the recommended position in the chassis. Its position should match the illustration(s).

Plug all three new flat cables into the new PC board (including 29 pin cable from the mechanism).
(Caution – assure the conector-side of the flat cables match the connector-side of the female receptacles)
Plug the Power Supply cable into connector J5 on Main PCB.

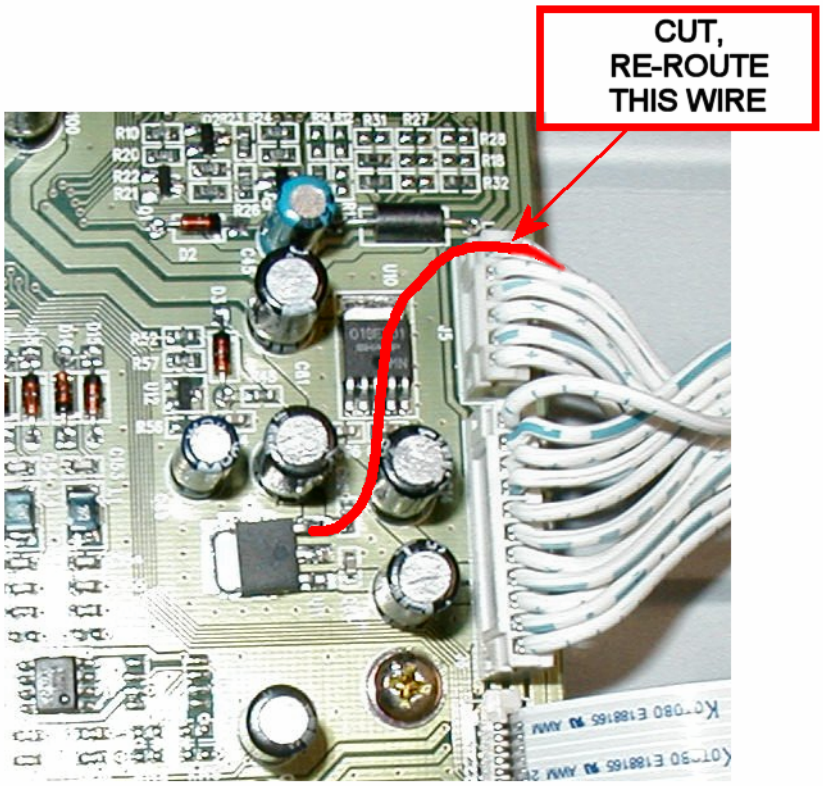
Initial



Final

(Note: Main PCB normally present has been removed for clarity)

VI) On the Power Supply cable, cut the pin 1 harness wire close to the connector on J5. Solder a new jumper wire to extend the connection from harness wire 1 to U11 pin 3 of the 3.3 volt regulator (BA033T). See illustration.



VII) Re-check the mechanism alignment with the front panel by plugging the unit in, turning ON, and opening and closing the tray with the eject button.

Replace top cover.
Test unit for DVD/CD function.

Model	Serial Number (120v)		Status	Action
DVD25	WA-0002-01000 To WA-0002-10677	Label on ass'y reads: DVD-KIT500SE	If Replacement Of Laser Pick-Up Assembly is Needed, Original KIT500 is no longer stocked	Follow full instructions above for replacement
DVD25	WA-0002-10678 And above	Label on ass'y reads: DVD-KIT710SE	If Replacement Of Laser Pick-Up Assembly is Needed, Order Assembly WLD5.018.011XX Only	

harman/kardon TECH TIPS

Troubleshooting tips and solutions to common service problems

For models: DVD25 **TIP# HKTT2004-02**

In these two unusual circumstances:

1) JBL SDP-3 or Lexicon MC-1 remote control affects the DVD25

The remote control for product JBL Synthesis SDP-3 (a processor) and the Lexicon MC-1 may unexpectedly control some of the functions on early DVD25 units when the products are both side-by-side in the same equipment rack. There was a software revision in the DVD25, and this was addressed and corrected.

In the event of this rare occurrence, please arrange to exchange your DVD25 with harman/kardon for a later unit that has the modern softrware. Procedure:

Call harman/kardon @ (516) 255-4545

Press 1 for h/k home

Press 3 for parts/tech support

Press 4 for tech support

When you reach a technician tell them of your problem and the exchange program, and remind them to

"Please pick a unit with a serial # of WA0002-05001 or higher"

2) Certain VCD discs play Black & White only

In the event of a customer complaint of certain VCD titles that play normal color programs in Black & White only, there is a software upgrade to correct this issue. The procedure is to send the unit, with a short note of explanation, to:

HARMAN CONSUMER GROUP

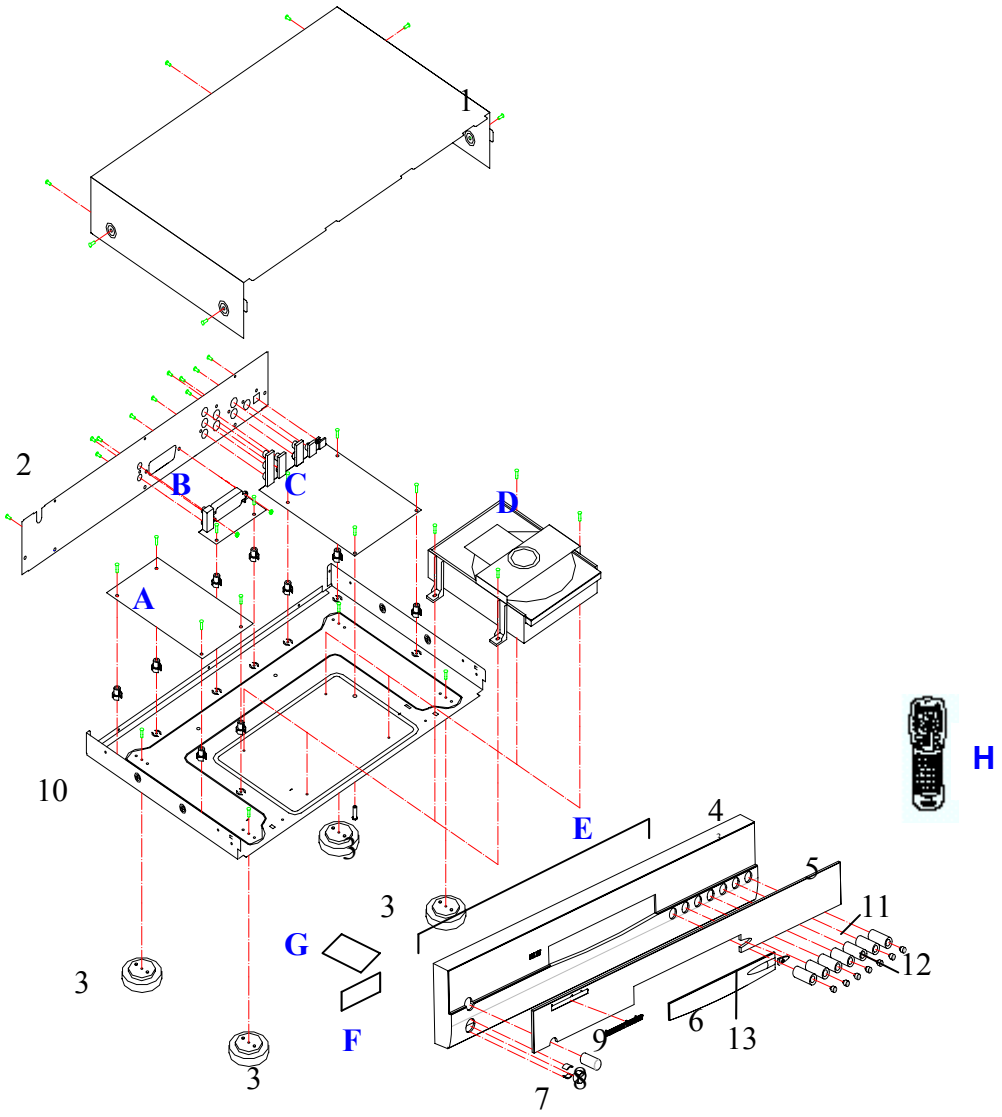
250 CROSSWAYS PARK DRIVE

WOODBURY, NEW YORK 11797

Attention: Andy Andersen

Mr. Andersen will perform the upgrade and send the unit back to the customer.

DVD25/101 Exploded view

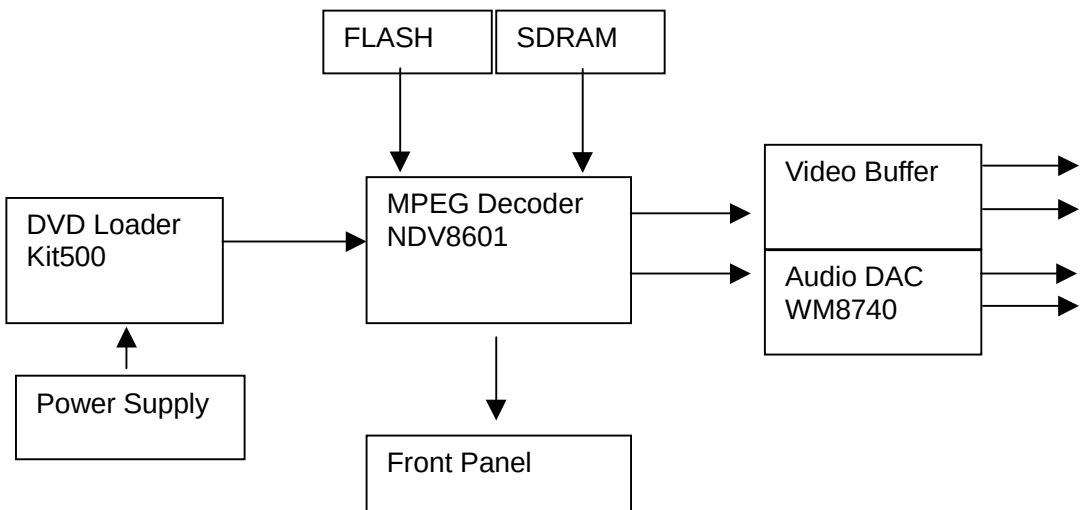


1.	DVD25 Top cover SG012	WLD8.404.014
2.	DVD25 Rear Panel HB028-1	WLD8.610.030-1
	DVD101 Rear Panel HB028-2	WLD8.610.030-2
3.	DVD25 Foot SD005-1	WLD8.085.005-1
	DVD101Foot SD005-1	WLD8.085.005-2
4.	DVD25 Front Panel MB028-1	WLD6.116.033-1
	DVD101 Front Panel MB028-2	WLD6.116.033-2
5.	DVD25 Filter for VDF	WLD7.370.001
6.	DVD25 Door SC010	WLD8.082.021
7.	DVD25 St-by button	
8.	DVD25 Power button SA009	WLD8.337.024
9.	DVD25 Harman/kardon badge	WLD8.809.002
10.	DVD25 Chassis DZ025-1	WLD8.031.027-1
	DVD101 Chassis DZ025-2	WLD8.031.027-2
11.	DVD25/101 Functions button	
12.		
13.	DVD25/101 open/close button	

A.	DVD25/101 Power supply PCB 714C	WLD6.672.223
B.	DVD25/101 Output board 736C scart	WLD6.672.228
C.	DVD25/101 Main board 737C	WLD6.672.227
D.	DVD25 Mechanism DVD25-kit500	WLD5.018.011XX
	DVD101 Mechanism	WLD5.018.024
E.	DVD25/101 Front board 787C	WLD6.672.229
F.	DVD25/101 Front St-by board 787C-1	WLD6.672.229-1
G.	DVD25/101 Front SW board 787C-2	WLD6.672.229-2
H.	DVD25 Remote control	WLD2.018.009
	DVD101 Remote control	WLD2.018.019

For DVD25 Mechanism replacement:
SEE BULLETIN H/K2003-06 ON PAGE 17

DVD 25/101 Block Diagram



Harman/Kardon DVD25 Component List

Position No.	Ref. No.	Description & Model and Basic Data	QTY
Metal Parts			
	WLD8.031.027-1	Chassis DZ025-1	1
	WLD8.404.014	Top Cover SG012	1
	WLD8.610.030-1	Rear Panel HB028-1	1
	WLD8.809.002	“harman/kardon” badge	1
Plastic Parts			
	WLD6.116.033-1	Front Panel MB028-1	1
	WLD8.085.005-1	Foot SD005-1	4
	WLD8.337.024	Power Button SA009	1
	WLD8.082.021	Door SC010	1
	WLD7.370.001	Filter for VFD	1
	WLD8.085.007	Foot Pad SD003	4
	WLD8.634.001	Screw Jacket	4
	WLD7.085.007	Power Button Insulation Strip SJ001	1
	WLD8.088.007	VFD Cushion SD001	1
	WLD8.070.008	Remote Control Sensor Support SZ005	1
	WLD8.661.001	Plastic Clip	2
	WLD8.661.002	□□□	1
	WLD8.661.003	Nylon Tie	2
	WLD8.605.013~014	Remote Control Case	1
	WLD8.605.015	Cover for battery case	1
	WLD7.683.009	Conductive Rubber on Remote Control	1
	WLD8.804.009	Indication Plate on Remote Control	2
	WLD7.370.002.DVD25	Lens	1
	WLD8.849.001	Glue for Lens	1
	WLD8.849.002	Diffusion Sheet	1
	WLD8.849.003	Insulation Paper Thickness 0.2~0.25	1
	WLD8.079.008-1	Plastic Support for PCB	9
Complete Part, Mechanism			
SEE SERVICE BULLETIN HK2003-06 FOR THIS ITEM	WLD5.018.011XX	DVD25 Single Disc Mechanism DVD-KIT710	1
Toroidal magnetic core			
		□31x19x16	1
Packing			
	WLD8.865.066-1	Carton box NB034-1	1
	WLD8.870.029	Polyfoam Pad PM027	2
	WLD8.840.043	Plastic bag for AV cords	1
	WLD8.840.044	Plastic bag for OM	2
	WLD8.840.045	Packing bag for player	1
	WLD8.870.029-1	Poly foam pad PM011003	1

Accessories			
	WLD2.018.009	Remote control dvd25	
	WLD8.810.084	OM SM081	1
		Product Warranty card	1
		Quality Assurance Card	1
		AV cords	3
		S-Video Cord	1
		Batteries 5#	2
		Packing list	1
		RC connection line	1
		Pyrocondensation Tube □6	3
Cable			
Connect between Power PCB and front panel PCB		4 Lines 170 Length Single 2.54 Spacing	1
Connect between Power PCB and Main Board		10 Lines 320 Length Double, One side Spacing 2.0 and the other 2.54	1
Connect between Main Board and mechanism		6 Lines 160 Length Double 2.0 with plug	1
Connect between Main board and Front panel		10 Lines 380 Length Single 2.0 spacing	1
Connect between Main board and output board		22 Lines 60 Length 1.0 Spacing Flat cable	1
Connect between Main board and Servo		16 Lines 151 Length 1.0 Spacing Flat Cable	1
Connect between Main board and Servo		26 Lines 121 Length 1.0 Spacing Flat cable	1
Power Board		End clip length 70mm power cord with plug (Two round pin□	1
Connect between Power switch board and power board		2 lines 330 length double VH-3Y plug	1
Connect between two PCB on front panel		5 lines 60mm length single 2.0 spacing	1
Parts, complete PCB assembly			
	WLD6.672.227	Main board 737C	1
	WLD6.672.228	Output board 736C	1
	WLD6.672.229-2	Switch Power PCB 787C-2	1
	WLD6.672.229	Front PCB assy (Big part) 787C	1
	WLD6.672.229-1	Front PCB assy (Small part) 787C-1	1
	WLD6.672.223	Power supply board PCB 714C	1
	WLD6.672.230	Remote control PCB 738C	1
Blank PCB			
	WLD7.820.737C	Main board 737C	1
	WLD7.820.736C	Output board 736C	1
	WLD7.820.787C-2	Switch power PCB 787C-2	1
	WLD7.820.787C	Front PCB assy (Big part)787C	1
	WLD7.820.787C-1	Front PCB assy (Small part)787C-1	1
	WLD7.820.714C	Power supply board 714C	1
	WLD7.820.738C	Remote control 738C	1
Screws			
Fix PCB to front panel	SJ2818-87	PAHC M2.5×8	10
Fix front panel to basis		PWBTTO M3×8	2

Fix front panel to basis from two sides		KBTTO M3×6	2
Fix main board		PWMTTC M3×19	3
Fix main board		PWMC M3×6	1
Fix power supply board		PWBTTC M3×19	4
Fix mechanism		PWMTTC M3×10	4
Fix IC to heat-sink		RBTTC M3×8	2
Fix optical output jack		PAHO M3×8	1
Fix rear panel to basis		PWMTTO M3×4	3
Fix coaxial jack		PAHO M3×8	5
Fix foot to basis		RTHO M4×8	4
Fix top cover		PWBTTO M3×8	9
Fix power switch board and Front PCB assy (Small part)		PAHC M3×8	4
Fix output assy PCB		PWMTTC M3×19	2
Fix SCART output		PWMO M3×10	2
Fix SCART output	SJ2844-87	Nut M3×3	2

DVD25 Main Board 737C

Resistor			
R1 R3 R17 R32 R33 R54 R59 R134 R154 FB8 FB9 FB12 FB13	WLD7.075.0	0□(SMD0603)	13
L3 L10	WLD7.075.0	0□(SMD1206)	2
R46	WLD7.075.100	10□(SMD0603)	1
R4 R5 R11 R29 R34 R41 R49 R50 R51 R53 R128 R129	WLD7.075.220	22□(SMD0603)	12
R136	WLD7.075.560	56□	1
R19 R36 R43 R44 R45 R114 R117 R118 R123 R131 R132 R142 R143 R149 R150 R151R152 R153	WLD7.075.750	75□(1%,SMD0603)	18
R60	WLD7.075.101	100□(SMD0603)	1
R35 R37	WLD7.075.111	110□(SMD0603)	2
R137	WLD7.075.111	110□1%	1
R70 R75 R80 R85	WLD7.075.151	150□(1%,SMD0603)	4
R98 R99 R106 R113	WLD7.075.331	330□(SMD0603)	4
R67 R68 R72 R73 R77 R78 R82 R83	WLD7.075.431	430□(1%,SMD0603)	8
R48 R52	WLD7.075.471	470□(SMD0603)	2
R115 R116 R119 R120 R121 R122 R139 R140	WLD7.075.511	510□(1%,SMD0603)	8
R95 R97 R105 R112	WLD7.075.681	680□(SMD0603)	4
R42 R62 R86 R87 R89 R90 R91 R92 R93 R94 R100 R101 R102 R103 R107 R108 R109 R110	WLD7.075.102	1K□(1%,SMD0603)	18
R47	WLD7.075.112	1.10K□(1%,SMD0603)	1
R9 R66 R69 R71R74 R76 R79 R81 R84	WLD7.075.152	1.5K□(1%,SMD0603)	9
R15 R127 R130 R155 R156	WLD7.075.332	3.3K□(SMD0603)	5
R64	WLD7.075.622	6.2K□(SMD0603)	1
R6 R7 R8 R61 R65 R88 R96 R104 R111R133 R135	WLD7.075.103	10K□(SMD0603)	11
R63	WLD7.075.823	82K□(SMD0603)	1
R57	WLD7.075.104	100K□(SMD0603)	1

Capacitors			
C55 C58 C61 C154 C156 C157 C158 C176 C179 C182	WLD7.075.20C	20PF(SMD0603)	10
C72 C73 C102 C117 C118 C119 C120 C130 C133 C134	WLD7.075.22C	22PF(5%,SMD0603)	10
C32 C183	WLD7.075.47C	47PF(SMD0603)	2
C56 C59 C62 C64 C65 C148	WLD7.075.101C	100PF(SMD0603)	6
C54 C57 C60	WLD7.075.151C	150PF(SMD0603)	3
C90 C91 C149 C150 C151 C152 C155	WLD7.075.221C	220PF(SMD0603)	7
C153	WLD7.075.331C	330PF(SMD0603)	1
C190 C191 C192 C193 C194 C195 C196 C197	WLD7.075.122C	122(5%,SMD0805)	8
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C15 C16 C17 C18 C19			
C20 C21C22 C23 C24 C25 C26 C27 C30 C31 C33 C34 C35 C36 C38 C39			
C40 C41 C42 C43 C44 C46 C47 C48 C49 C50 C51 C52 C53 C63 C66 C67			
C68 C69 C70 C71 C74 C80 C83 C84 C86 C88 C92 C94 C96 C98 C101C104	WLD7.075.104C	104(SMD0603)	194
C121 C127 C128 C129 C137 C139 C141 C143 C144 C145 C146 C147 C166			
C167 C168 C169 C171 C172 C174 C175 C178 C185 C186 C187 C188 C189			
C28 C75 C76 C89 C93 C103 C126	WLD7.075.10UF/16V	10UF/16V	7
C107 C108 C109 C110 C122 C125 C131 C135	WLD7.075.47UF/16V	47UF/16V	8
C37 C45 C87 C163 C164 C165 C170 C173	WLD7.075.100UF/10V	100UF/10V	8
C85 C95	WLD7.075.220UF/25V	220UF/25V	2
C14 C81 C82 C97 C99 C100	WLD7.075.470UF/10V	470UF/10V	6
C138 C140 C142 C177	WLD7.075.470UF/16V	470UF/16V	4
Semiconductors			
D1 D3 D4 D5 D6 D7 D8 D9 D10 D11D12 D13 D14 D15	WLD5.409.IN4148	IN4148	14
Q4 Q5 Q8 Q9 Q10 Q11	WLD5.419.DTC343TK	DTC343TK□SMT3□	6
Q6 Q7	WLD5.419.3906	3906□SMD□	2
U2 U3	WLD5.449. 16Mbit	16Mbit SDRAM (-7ns)HY57V161610D TC-7 (4banks×512K×16bit)	2
U4	WLD5.449. 74ACT257	74ACT257	1
U5	WLD5.449. NDV8601	NDV8601VWAT	1
U6 U7	WLD5.449. 74VHCT573A	74VHCT573A	2
U8	WLD5.449.HY29F04U8	HY29F800TG-90	1
U9	WLD5.449.HY29F05U9	HY29F800TG-90	1
U10	WLD5.449. 018EZ01	SHARP 018EZ01	1
U11	WLD5.449. BA033	BA033 (1A,SMDTO-252)	1
U12	WLD5.449. LM809M3	LM809M3-2.63	1
U13	WLD5.449. ATMEL93C46	ATMEL93C46	1
U14	WLD5.449. 74VHCT541AM	74VHCT541AM	1
U15	WLD5.449. XWM8740	XWM8740	1
U17 U18	WLD5.449. LM837M	LM837M	2
U16 U21	WLD5.449. 78L05	78L05(DIP)	2
U22	WLD5.449. 79L05	79L05(DIP)	1
U23 U25	WLD5.449. LMH6655MA	LMH6655MA	2

Oscillator			
Y1	WLD5.557.27	27MHz (basic freq.)	1
Inductor			
L4 L5 L6	WLD5.757.1	1UH(Coiling□SMD1210)	3
L1	WLD5.757.2.2	2.2UH(Coiling□SMD1210)	1
L8	WLD5.757.2.2	2.2UH(SMD1206)	1
L9	WLD5.757.4.7	4.7UH(SMD1206)	1
Bead			
L2 L7	WLD5.777.50	Insert Bead (50□)	2
FB1 FB2 FB3 FB4 FB5 FB6 FB7 FB14 FB15 F16 FB17 FB18 FB19 FB20 FB21	WLD5.777.50	50□□SMD0603□	15
Connector			
J1	WLD6.609.10A	PH-10A	1
J5	WLD6.609.6A	PH-6A	1
J6	WLD6.609.10A	PH-10A	1
J3	WLD6.609.26P	26P 1.0 two lines of socket	1
J2	WLD6.609.16P	16P 1.0 two lines of socket	1
J12	WLD6.609.22P	22P 1.0 two lines of socket	1
J9	WLD6.609. GP1FA550TZ	SHARP GP1FA550TZ	1
J10	WLD6.609.6G	AV1-8.4-6G(Orange)	1
J11	WLD6.609.1G	AV2-8.4-1G(Upper White Lower Red)	1
J8	WLD6.609.13G	AV3-8.4-13G(Green, blue, red)	1
J13	WLD6.609.CS-08	Video & S-Video CS-08 (Yellow)	1
	WLD7.820.737C	PCB 737C	1
DVD25 Output Board 736C			
Resistor			
R9	WLD7.075.151	RT-1/4W-150□	1
FB7 FB8	WLD7.075.0	0□□SMD0603□	1
R14	WLD7.075.271	270□□SMD0603□	1
R13	WLD7.075.391	390□□SMD0603□	1
R3 R6	WLD7.075.102	RT-1/4W-1K	2
R1 R2 R4 R5 R7	WLD7.075.332	3.3K□SMD0603□	5
R12	WLD7.075.472	4.7K□SMD0603□	2
R15	WLD7.075.682	6.8K□SMD0603□	1
R10 R11	WLD7.075.103	10K□SMD0603□	2
Capacitor			
C4 C5 C6 C7 C8 C9	WLD7.075.20C	20PF□SMD0603□	6
C1 C2 C3	WLD7.075.104C	104□SMD0603□	3
C12	WLD7.075.47UF/16V	47UF/16V	1
Diode			
D1	WLD5.409.IN4148	IN4148	1
Triode			

Q1 Q2 Q3	WLD5.419.DTC343TK	DTC343TK□SMT3□	3
Q4	WLD5.419.DTA114YKA	DTA114YKA(SMT3)	1
Bead			
FB1 FB2 FB3 FB4 FB5 FB6	WLD5.777.50	50□□SMD0603□	6
Others			
U1	WLD5.449.PC817	PC817□photoelectric coupler□	1
J1	WLD6.609.22P	22 lines 1.0 two lines of socket	1
J2		SCART socket	1
J3	WLD5.219.001	Remote signal in/out socket SCJ351P00XS0B00	1
	WLD7.820.736C	PCB 736C	1
DVD25 Front PCB assy (Big part) Board 787C			
Resistor			
R35 R36 R37 R38 R39 R40 R41 R42	WLD7.075.151	SMD0805-150□	8
R9 R13	WLD7.075.101	RT-1/6W-100□	2
R7	WLD7.075.201	RT-1/6W-200□	1
R44	WLD7.075.561	RT-1/6W-560□	1
R12 R14 R45 R46	WLD7.075.102	RT-1/6W-1K□	4
R4 R10 R11 R15 R24 R25 R28 R44	WLD7.075.103	RT-1/6W-10K□	8
R16 R17 R18 R19 R20 R21 R22 R26 R27	WLD7.075.330	RT-1/6W-33K□	9
R47	WLD7.075.390	RT-1/6W-39K□	1
R23	WLD7.075.470	RT-1/6W-47K□	1
Capacitor			
C6 C7	WLD5.610.201	CT4-50V-200P	2
C1 C2 C4 C5 C9 C10 C11 C12	WLD5.610.104	CT4-50V-104	8
C3	WLD5.610.100UF/6.3V	CD-6.3V-100UF	1
Diode			
D3 D4 D5 D6 D7 D8 D9 D10	WLD5.610.201	1N4148	8
LD8 LD9 LD10 LD11LD12 LD13 LD14 LD15		LBD □3 (green light)	12
ZD1	WLD5.610.104	Voltage regulator ZD9V1	1
Triode			
Q9 Q10 Q11 Q12	WLD5.419.8050	8050	4
Q5 Q8	WLD5.419.8550	8550	2
Others			
U1	WLD5.449.PT16311	PT16311	1
IR1/IR2		Incept tube HS0038B	1
S2-S9	WLD6.618.001	Touch switch 6×6	9
CN1	WLD6.609.5A	PH-5A	1
VFD	WLD7.350.025	DVD25 VFD	1
DVD25 Front Board (small part) 787C-1			
1		LBD □3 (No color, green or red light)	1

2		Touch switch 6×6	1
3	WLD7.820.787C-1	PCB	1
DVD25 Power switch Board 787C-2			
SW1	WLD6.618. PS4E-A-040	Power Switch (Fixed pitch of holes is 20) PS4E-A-040	1
JP1		Horizontal VH three holes two pins	1
C1	WLD5.619.103	103 250~V	1
787C-2	WLD7.820.787C-2	PCB(One layer)	1
DVD25 Power Supply Board 714C			
Resistor			
R18	WLD5.630.1	RT-1W-1□	1
R11	WLD5.630.100	RT-1/6W-10□	1
R3	WLD5.630.101	RT-1/6W-100□	1
R102	WLD5.630.221	RT-1/6W-220□	1
R2 R6 R14	WLD5.630.331	RT-1/6W-330□	3
R9	WLD5.630.471	RT-1/6W-470□	1
R12	WLD5.630.102	RT-1/6W-1K□	1
R1 R5 R7 R8 R10	WLD5.630.512	RT-1/6W-5.1K□	5
R4	WLD5.630.103	RT-1/6W-10K□	1
R19	WLD5.630.103	RT-1/4W-10K□	1
R16	WLD5.630.683	RT-1W-68K□	1
R17	WLD5.630.683	RT-2W-130K□	1
R15	WLD5.630.364	RT-1W-360K□	1
RV1	WLD5.652. FNR10K471	FNR10K471	1
R101	WLD5.630.0.33	Fuse resistance 1/2W-0.33□	1
L4	WLD5.630.4.7	Fuse resistance 1/4W-4.7□	1
Capacitor			
C35 C36 C37	WLD5.610.471	CT-50V-471	3
C30 C31	WLD5.619.471	High-voltage 471/AC400V	2
C18 C29	WLD5.619.102	High-voltage 102/AC400V	2
C20	WLD5.610.472	CL-100V-472	1
C21 C23	WLD5.610.682	CL-100V-682	2
C22 C24 C27 C28	WLD5.610.103	CL-100V-103	4
C26	WLD5.619.103	High-voltage103/1KV	1
C31 C32 C34 C38 C40 C42	WLD5.610.104	CT4-50V-104	6
C17 C19	WLD5.619.104	High-voltage104/~275V	2
C2 C13	WLD5.613.33UF/50V	CD-50V-33uF	2
C39	WLD5.613.47UF/16V	CD-16V-47uF	1
C14	WLD5.613.47UF/50V	CD-50V-47uF	1
C1	WLD5.613.68UF/450V	CD295-450V-68uF	1

C3 C4 C5 C6 C7 C8	WLD5.613.220UF/16V	CD-16V-220uF	6
C11 C44	WLD5.613.470UF/16V	CD-16V-470uF	2
C12	WLD5.613.1000UF/50V	CD-16V-1000uF 105ºC	1
C9 C10	WLD5.613.2200UF/16V	CD-16V-2200uF 105ºC	2
C25		NC	1
Bead, Inductor			
L3	WLD5.777.0.6	Bead 0.6uH	1
L5	WLD5.757.1.2	Bead 1.2uH	1
L8	WLD5.757.100	L630-100 (10uH)	1
L9 L10	WLD5.757.20	20Uh filter inductor	2
L6 L7	WLD5.757.33	33uH color code inductor	2
L1 L2	WLD5.757.50mH	LCL ET20-010(50mH)	2
Diode, Regulator Tube, Bridge			
D1 D3 D4 D7 D8	WLD5.409.FR107	FR107	5
D6	WLD5.409. FR204	FR204	1
D5	WLD5.409. IN5822	IN5822	1
D9 D10 D11	WLD5.409. IN5392	IN5392(IN5393)	3
D2	WLD5.409. IN4007	IN4007	1
D12	WLD5.409. IN4148	IN4148	1
DF1	WLD5.409. KBP06	Bridge KBP06	1
IC			
IC3	WLD5.449. KA431	KA431	1
IC6	WLD5.449. L7809	L7809	1
IC4	WLD5.449 .L7808	L7808	1
IC5	WLD5.449. L7908	L7908	1
IC2	WLD5.449. PC817	PC817	1
IC1	WLD5.449. UC3842B	UC3842B	1
MOS			
BG1	WLD5.419. SSS5N90A	SSS5N90A	1
Linker			
CN1	WLD6.609.10A	TJC3-10A	1
CN2	WLD6.609.4A	TJC3-4A	1
JP1 JP2		VH three hole two pins□vertical□	2
Others			
F1		Fuse T1A /250V	1
		Fuse Holder	1
TR1	WLD4.704.049	Tansformer XB BCK-ER2803	1
With BG1		Heat sink SR008	1
With IC6		Heat sink SR007	1
		Earthing strip	4
J1-J4 R13		J line	5
714C	WLD7.820.714C	PCB (one layer)	

DVD101 Mechanical/Packing Parts List			
Part Number	Description	Qty	Comment
WLD8.031.027-2	Chassis DZ025-2	1	
WLD8.404.014	Top cover SG012	1	Gray
WLD8.610.030-2	Rear panel HB028-2	1	
WLD8.809.002	“harman/kardon” badge	1	Silver
WLD8.337.024	Power button SA009	1	Antiflaming
WLD8.082.021	Door SC010	1	Antiflaming
WLD7.370.001	Filter for VFD	1	
WLD8.085.007	Foot pad SD003	4	Antiflaming
WLD8.634.001	Screw jacket	4	Antiflaming
WLD7.085.007	Power switch insulation strip	1	Antiflaming
WLD8.088.007	VFD cushion SD001	1	Low cushion Antiflaming
WLD8.070.008	Remote control sensor support	1	7.5mm Antiflaming
WLD8.661.001		2	11.5mm Antiflaming
WLD8.661.002		1	10mm Antiflaming
WLD8.661.003		2	Antiflaming
WLD8.605.013~014	DVD 101 RC case	1	Antiflaming
WLD7.683.009	RC conductive rubber	1	Antiflaming
WLD8.804.009	RC indication plate	2	Antiflaming
WLD7.370.002.DVD01	DVD 101 Lens on front panel	1	
WLD8.849.002	Diffusion paper	1	
WLD8.849.003	Insulation paper	1	110 x 25mm Thickness 0.2~0.25 Antiflaming material
WLD8.079.008-1	Plastic bracket for PCB	9	7x12.8mm Antiflaming material
WLD7.772.001	Φ31x19x16	1	Toroidal magnetic core
Cables			
WLD7.760.004	4-core 170 length single 2.54 spacing	1	Connect between power supply board & big front panel
WLD7.760.005	10-core 320 length double, one side spacing 2.0 and the other 2.54	1	Connect between power supply board & main board
WLD7.760.006	6-core 250 length double 2.0 spacing	1	Connect between mechanism & main board
WLD7.760.007	10-core 380 length single 2.0 spacing	1	Connect between front panel & main board
WLD7.760.008	22-core 60 length 1.0 spacing flat cable	1	Connect between main board & output board
WLD7.760.009	29-core 170 length 1.0 spacing flat cable	1	Connect between main board & servo board
WLD7.760.010	End clip length 70mm power cord with plug (big & small double pins)	1	Power supply board
WLD7.760.011	2-core 330 length double VH-3Y (antiflaming) plugs (double insulated lines). JP1 is orange when matching 714C	1	Connect between switch board & power supply board
WLD7.760.012	5-core 60mm length single 2.0 spacing	1	Connect between big & small front panels

Machine screws			
WLD8.950.001	PAHC M2.5×8	9	Affix PCB to front panel
WLD8.950.002	PWBTTO M3×8	2	Affix front panel to bottom shell
WLD8.903.001	KBTTO M3×6	2	Affix front panel to bottom shell from two sides
WLD8.950.003	PWMTTC M3×18	3	Affix main board
WLD8.950.004	PWMC M3×6	1	Affix main board
WLD8.950.005	PWMTTC M3×18	4	Affix power supply board
WLD8.950.006	PWMTTC M3×8	4	Affix mechanism
WLD8.950.007	RBTTC M3×8	2	Affix IC to radiator
WLD8.950.008	PAHO M3×8	1	Affix optical output jack
WLD8.950.009	PWBTTO M3×6	3	Affix rear panel to bottom shell
WLD8.950.010	PAHO M3×8	5	Affix coaxial jack
WLD8.950.011	RTHO M4×8	4	Affix foot to bottom shell
WLD8.950.012	PWBTTCr M3×8	9	Affix top cover
WLD8.950.013	PAHC M3×8	4	Affix power switch board and small panel
WLD8.950.014	PWMTTC M3×18	2	Affix output board
Packing			
WLD8.865.175	Carton box DVD101-PI001		
WLD8.870.029	Polyfoam pad PM027		
WLD8.870.029-1	Plane polyfoam pad PM011003		302x148x45
WLD8.810.119	Owner's Manual SM118		
WLD8.812.001	Product warranty card		
WLD7.760.013	AV cords	3	
WLD7.760.014	S-Video cord	1	
WLD2.018.019	Complete Remote Control	1	
Mechanism			
WLD5.018.024	Sanyo single disc Mechanism	1	

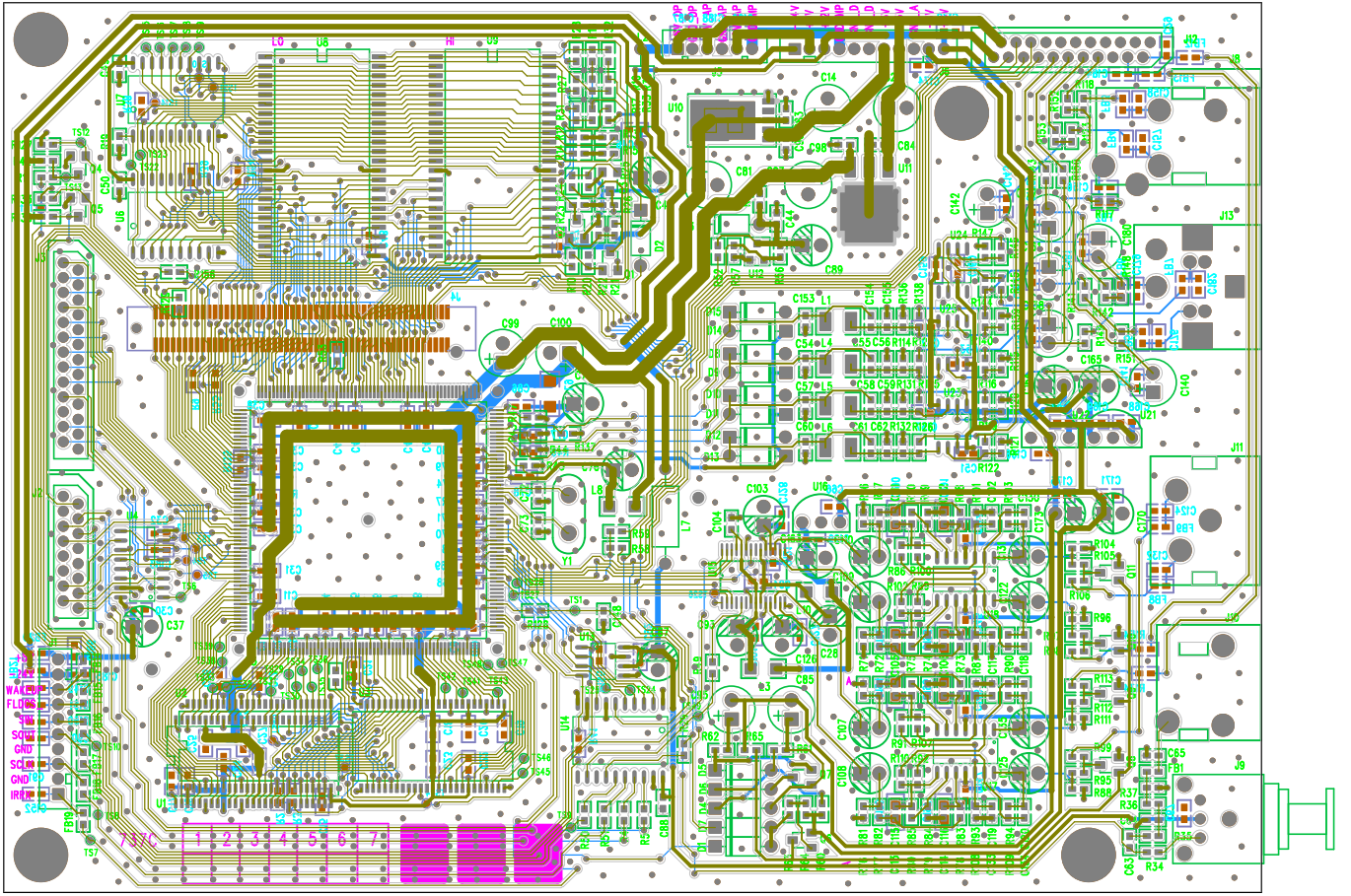
DVD101 Electrical Parts List			
Part Number	Description	Qty	Reference designator
Main PCB			
Resistors			
WLD7.075.0	0Ω(SMD0603)	18	R1 R3 R17 R32 R33 R54 R59 R134 R154 C141 C139 C143 C162 C181 FB8 FB9 FB12 FB13
WLD7.075.0	0Ω(SMD1206)	2	L3 L10
WLD7.075.100	10Ω(SMD0603)	1	R46
WLD7.075.220	22Ω(SMD0603)	12	R4 R5 R11 R29 R34 R41 R49 R50 R51 R53 R128 R129
WLD7.075.560	56Ω1%	1	R136
WLD7.075.680	68Ω(1%, SMD0603)	1	R114
WLD7.075.750	75Ω(1%, SMD0603)	13	R19 R36 R43 R44 R45 R117 R118 R123 R131 R132 R149 R141 R148
WLD7.075.101	100Ω(SMD0603)	1	R60
WLD7.075.111	110Ω(SMD0603)	2	R35 R37
WLD7.075.111	110Ω1%	1	R137
WLD7.075.151	150Ω(1%, SMD0603)	4	R70 R75 R80 R85
WLD7.075.331	330Ω(SMD0603)	4	R98 R99 R106 R113
WLD7.075.431	430Ω(1%, SMD0603)	8	R67 R68 R72 R73 R77 R78 R82 R83
WLD7.075.471	470Ω(SMD0603)	2	R48 R52
WLD7.075.511	510Ω(1%, SMD0603)	12	R115 R116 R119 R120 R121 R122 R139 R140 R144 R145 R146 R147
WLD7.075.681	680Ω(SMD0603)	4	R95 R97 R105 R112
WLD7.075.102	1KΩ(1%, SMD0603)	18	R42 R62 R86 R87 R89 R90 R91 R92 R93 R94 R100 R101 R102 R103 R107 R108 R109 R110
WLD7.075.112	1.10KΩ(1%, SMD0603)	1	R47
WLD7.075.152	1.5KΩ(1%, SMD0603)	9	R9 R66 R69 R71 R74 R76 R79 R81 R84
WLD7.075.332	3.3KΩ(SMD0603)	5	R15 R127 R130 R155 R156
WLD7.075.622	6.2KΩ(SMD0603)	1	R64
WLD7.075.103	10KΩ(SMD0603)	11	R6 R7 R8 R61 R65 R88 R96 R104 R111 R133 R135
WLD7.075.823	82KΩ(SMD0603)	1	R63
WLD7.075.104	100KΩ(SMD0603)	1	R57
Capacitors			
WLD7.075.20C	20PF(SMD0603)	10	C55 C58 C61 C154 C156 C157 C158 C176 C179 C182
WLD7.075.22C	22PF(5%, SMD0603)	10	C72 C73 C102 C117 C118 C119 C120 C130 C133 C134
WLD7.075.47C	47PF(SMD0603)	2	C32 C183
WLD7.075.101C	100PF(SMD0603)	8	C56 C59 C62 C64 C65C148C150 C155
WLD7.075.151C	150PF(SMD0603)	4	C54 C57 C60 C153
WLD7.075.221C	220PF(SMD0603)	5	C90 C91 C149 C151 C152
WLD7.075.122C	122 (5%, SMD0805)	8	C190 C191 C192 C193 C194 C195 C196 C197
WLD7.075.104C	104 (SMD0603)	91	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C15 C16 C17 C18 C19 C20 C21 C22 C23 C24 C25 C26 C27 C30 C31 C33 C34 C35 C36 C38 C39 C40 C41 C42 C43 C44 C46 C47 C48 C49 C50 C51 C52 C53 C63 C66 C67 C68 C69 C70 C71 C74
WLD7.075.104C	104(SMD0603)		C77 C78 C79 C80 C83 C84 C86 C88 C92 C94 C96 C98 C101 C104 C121 C127 C128 C129 C137 C144 C145 C146 C147 C166 C167 C168 C169 C171 C172 C174 C175 C185 C186 C187 C188 C189 C159 C160
WLD7.075.10UF/16V	10UF/16V	7	C28 C75 C76 C89 C93 C103 C126
WLD7.075.47UF/16V	47UF/16V	8	C107 C108 C109 C110 C122 C125 C131 C135
WLD7.075.100UF/10V	100UF/10V	8	C37 C45 C87 C163 C164 C165 C170 C173
WLD7.075.220UF/25V	220UF/25V	2	C85 C95
WLD7.075.470UF/10V	470UF/10V	6	C14 C81 C82 C97 C99 C100

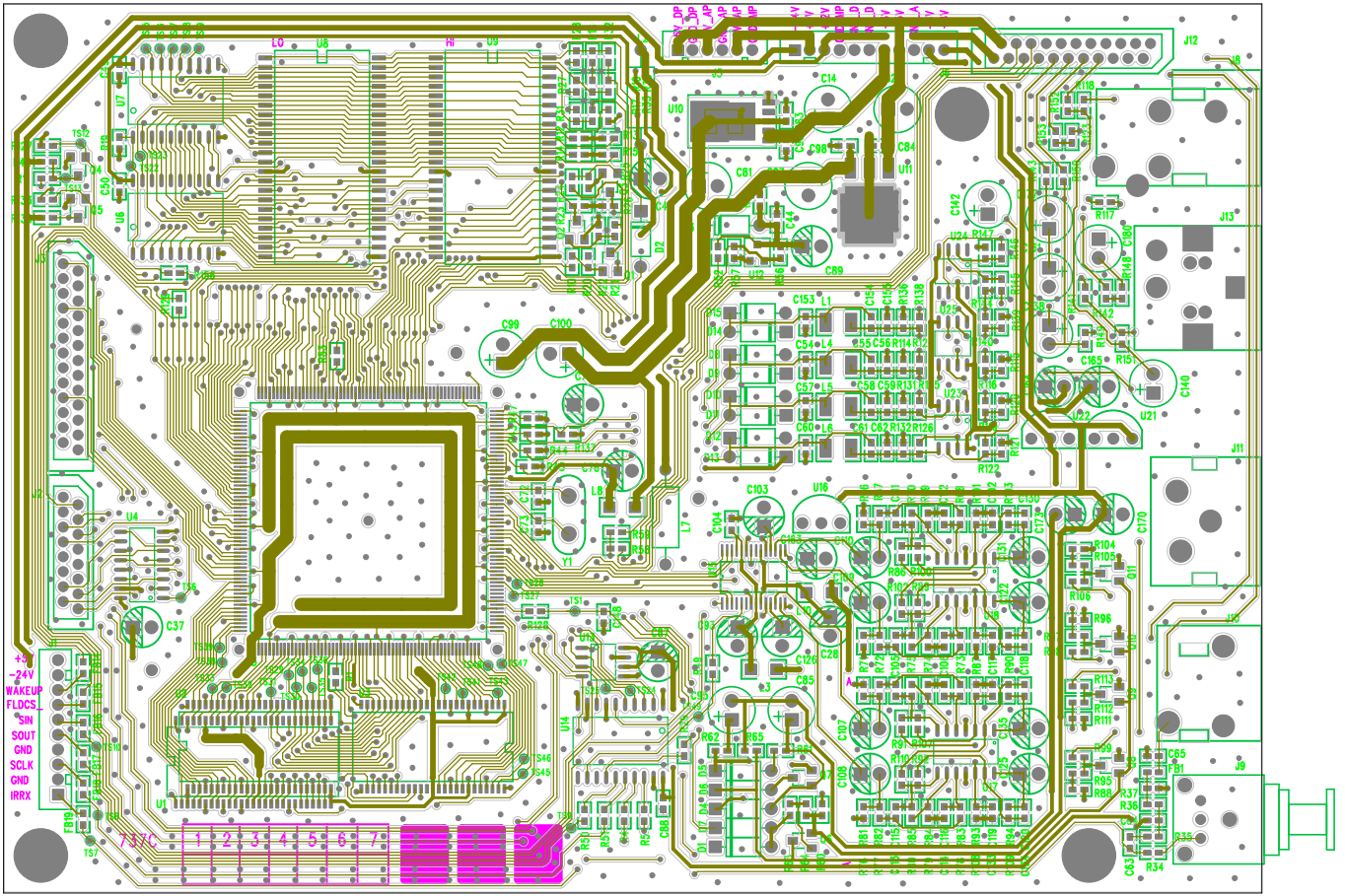
Part Number	Description	Qty	Reference designator
Main PCB			
Semiconductors			
WLD5.409.IN4148	IN4148	14	D1 D3 D4 D5 D6 D7 D8 D9 D10 D11 D12 D13 D14 D15
WLD5.419.DTC343TK	DTC343TK□SMT3□	6	Q4 Q5 Q8 Q9 Q10 Q11
WLD5.419.3906	3906□SMD□	2	Q6 Q7
WLD5.449. 16Mbit	16Mbit SDRAM (-7ns)	2	U2 U3
	(4banks×512K×16bit)		
	HY57V161610D TC-7		
WLD5.449. 74ACT257	74ACT257	1	U4
WLD5.449. NDV8601	NDV8601VWAT	1	U5
WLD5.449. 74VHCT573A	74VHCT573A	2	U6 U7
WLD5.449. HY29F800TG-90	HY29F800TG-90	2	U8 U9
WLD5.449. 018EZ01	SHARP 018EZ01	1	U10
WLD5.449. BA033	BA033 (1A,SMDTO-252)	1	U11
WLD5.449. LM809M3	LM809M3-2.63	1	U12
WLD5.449. ATMEL93C46	ATMEL93C46	1	U13
WLD5.449. 74VHCT541AM	74VHCT541AM	1	U14
WLD5.449. XWM8740	XWM8740	1	U15
WLD5.449. LM837M	LM837M	2	U17 U18
WLD5.449. 78L05	78L05 (DIP)	2	U16 U21
WLD5.449. 79L05	79L05 (DIP)	1	U22
WLD5.449. LMH6655MA	LMH6655MA	2	U23 U25
WLD5.449. LMH6654MA	LMH6654MA	1	U24
Miscellaneous			
WLD5.557.27	27MHz (basic freq.) Oscillator	1	Y1
WLD5.757.1	1UH (Coiling, SMD1210) Ceramics	4	L4 L5 L6 L1
WLD5.757.2.2	2.2UH (SMD1206)	1	L8
WLD5.757.4.7	4.7UH (SMD1206)	1	L9
WLD5.777.50	Insert magnetic bead (50Ω)	2	L2 L7
WLD5.777.50	50Ω□SMD0603□	15	FB1 FB2 FB3 FB4 FB5 FB6 FB7 FB14 FB15 F16 FB17 FB18 FB19 FB20 FB21
WLD6.609.10A	PH-10A	1	J1
WLD6.609.6A	PH-6A	1	J5
WLD6.609.10A	PH-10A	1	J6 (-24V empty)
WLD6.609.29P	29P 1.0 two lines of socket	1	J2
WLD6.609.22P	22P 1.0 two lines of socket	1	J12
WLD6.609. GP1FA550TZ	SHARP GP1FA550TZ	1	J9
WLD6.609.6G	AV1-8.4-6G (Orange)	1	J10
WLD6.609.1G	AV2-8.4-1G (Upper White	1	J11
	Lower Red)		
WLD6.609.13G	AV3-8.4-13G (Green, blue, red)	1	J8
WLD6.609.CS-08	Video & S-Video CS-08 (Yellow)	1	J13
Power Switch Board (787C-2)			
WLD6.618. PS4E-A-040	Power switch PS4E-A-040	1	1SW1
	Horizontal VH three holes two pins	1	1JP1
WLD5.619.103	High voltage 103□250~□	1	C19
Power Supply Board (714C)			
Resistors			
WLD5.630.1	RT-1W-1Ω	1	R18
WLD5.630.100	RT-1/6W-10Ω	1	R11
WLD5.630.101	RT-1/6W-100Ω	1	R3
WLD5.630.221	RT-1/6W-220Ω	1	R102
WLD5.630.331	RT-1/6W-330Ω	3	R2 R6 R14

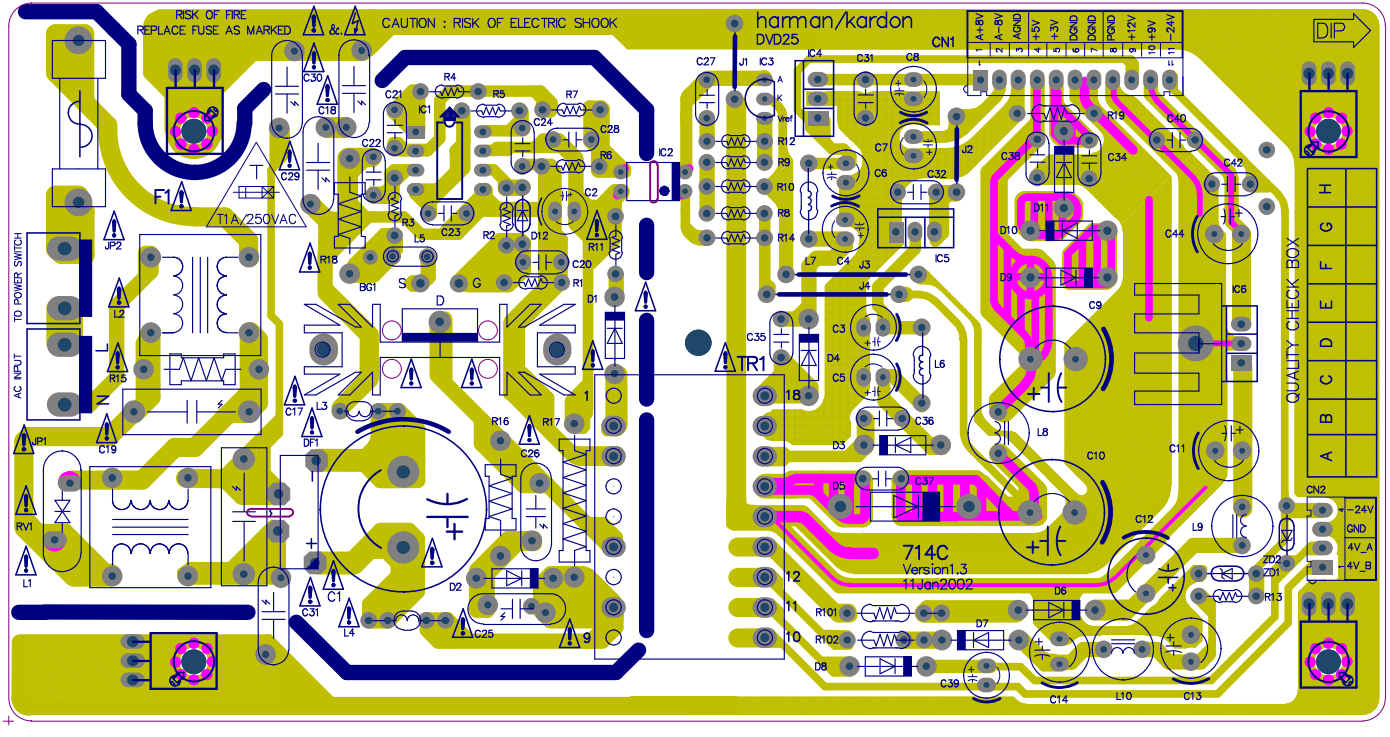
Part Number	Description	Qty	Reference designator
Power Supply Board (714C)			
WLD5.630.471	RT-1/6W-470Ω	1	R9
WLD5.630.102	RT-1/6W-1KΩ	1	R12
WLD5.630.512	RT-1/6W-5.1KΩ	5	R5 R7 R8 R10 R20
WLD5.630.103	RT-1/6W-10KΩ	1	R4
WLD5.630.103	RT-1/4W-10KΩ	1	R19
WLD5.630.683	RT-1W-68KΩ	1	R16
WLD5.630.134	RT-2W-130KΩ	1	R17
WLD5.630.364	RT-1W-360KΩ	1	R1
WLD5.652. FNR10K471	FNR10K471 Varistor	1	RV1
WLD5.630.0.33	Fuse resistor 1/2W-0.33Ω	1	R101
WLD5.630.4.7	Fuse resistor 1/4W-4.7Ω	1	RF1
Capacitors			
WLD5.610.471	CT-50V-471 Monolithic	3	C35 C36 C37
WLD5.619.471	High voltage 471/AC400V Y type	2	C3 C4
WLD5.619.102	High voltage 102/AC400V Y type	2	C5 C7
WLD5.610.472	CL-100V-472 Terylene	1	C20
WLD5.610.682	CL-100V-682 Terylene	2	C21 C23
WLD5.610.103	CL-100V-103	4	C22 C24 C27 C28
WLD5.619.103	High voltage103/1KV	1	C26
WLD5.610.104	CT4-50V-104 Monolithic	6	C31 C32 C34 C38 C40 C42
WLD5.619.104	High voltage104/~275V	2	C1 C2
WLD5.613.33UF/50V	CD-50V-33uF	2	C30 C13
WLD5.613.47UF/16V	CD-16V-47uF	1	C39
WLD5.613.47UF/50V	CD-50V-47uF	1	C14
WLD5.613.68UF/450V	CD295-450V-68uF	1	C6
WLD5.613.220UF/16V	CD-16V-220uF	6	C15 C16 C18 C29 C45 C8
WLD5.613.470UF/16V	CD-16V-470uF	2	C11 C44
WLD5.613.1000UF/50V	CD-16V-1000uF	3	C12 C9 C10
	Not used	1	C25
Semiconductors			
WLD5.409.FR107	FR107	5	D1 D3 D4 D7 D8
WLD5.409. FR204	FR204	1	D6
WLD5.409. IN5822	IN5822	1	D5
WLD5.409. IN5392	IN5392 (IN5393)	3	D9 D10 D11
WLD5.409. IN4007	IN4007	1	D2
WLD5.409. IN4148	IN4148	1	D12
WLD5.409. KBP06	Bridge KBP06	1	DF1
WLD5.449. KA431	KA431	1	IC3
WLD5.449. L7809	L7809	1	IC6
WLD5.449.L7808	L7808	1	IC4
WLD5.449. L7908	L7908	1	IC5
WLD5.449. PC817	PC817	1	IC2
WLD5.449. UC3842B	UC3842B	1	IC1
WLD5.419. SSS5N90A	SSS5N90A or IRFBE30	1	BG1
Miscellaneous			
WLD5.777.0.6	Magnetic bead 0.6uH	1	L3
WLD5.757.1.2	Magnetic bead 1.2uH	1	L5
WLD5.757.100	L630-100 (10uH)	1	L8
WLD5.757.20	20uH filter inductor	2	L9 L11
WLD5.757.33	33uH color code inductor DIP	2	L6 L7
WLD5.757.50mH	LCL ET20-010 (50mH)	2	L1 L10
WLD7.710.001	Fuse T1A /125V	1	F1
WLD7.747.001	Fuse Holder	1	
WLD4.704.049	Transformer XB BCK-ER2803	1	TR1

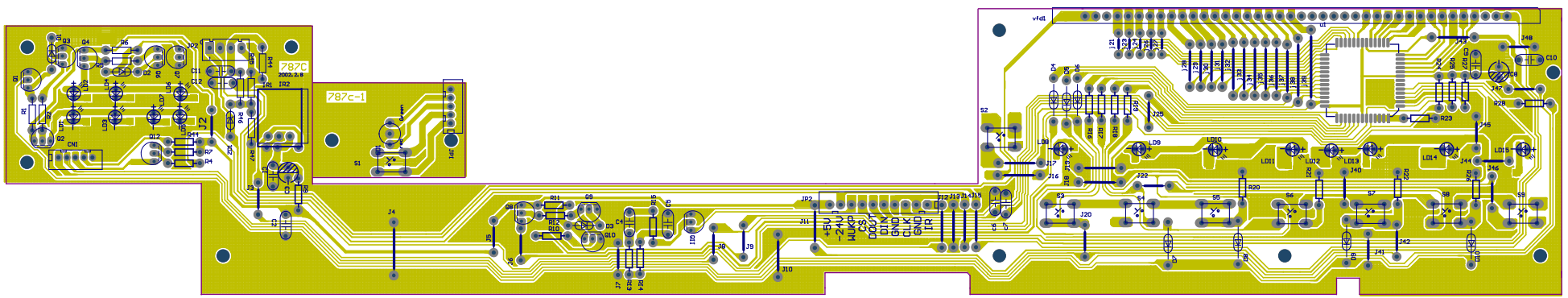
Part Number	Description	Qty	Reference designator
Power Supply Board (714C)			
	Radiator SR008	1	With BG1
	Radiator SR007	1	With IC6
	Earthing strip	4	
WLD7.769.001	J line	5	J1-J4 R13
WLD6.609.10A	TJC3-10A	1	CN1 (-24 empty)
WLD6.609.4A	TJC3-4A	1	CN2
	Vertical VH three holes two pins	2	JP1 Orange
			JP2 White
Standby switch PCB (787C-1)			
WLD5.610.LD1	LED Φ3 (No color, green or red light)	1	LD1
WLD6.618.S1	Touch switch 6×6	1	S1
WLD7.820.787C-1	PCB	1	787C-1
Front PCB (787C)			
Resistor			
WLD7.075.151	SMD0805-150Ω	6	R35 R36 R37 R39 R41 R42
WLD7.075.271	SMD0805-270Ω	2	R38 R40
WLD7.075.101	RT-1/6W-100Ω	2	R9 R13
WLD7.075.221	RT-1/6W-200Ω	1	R7
WLD7.075.561	RT-1/6W-560Ω Near Q12	1	R44
WLD7.075.102	RT-1/6W-1KΩ	4	R12 R14 R45 R46
WLD7.075.103	RT-1/6W-10KΩ	6	R4 R10 R11 R15 R28 R44
WLD7.075.330	RT-1/6W-33KΩ	9	R16 R17 R18 R19 R20 R21 R22 R26 R27
WLD7.075.390	RT-1/6W-39KΩ	1	R47
WLD7.075.470	RT-1/6W-47KΩ	1	R23
WLD5.630.472	RT-1/6W-4.7KΩ	2	R24, R25
Capacitors			
WLD5.610.201	CT4-50V-200P	2	C6 C7
WLD5.610.104	CT4-50V-104	8	C1 C2 C4 C5 C9 C10 C11 C12
WLD5.610.100UF/6.3V	CD-6.3V-100uF	1	C3
Semiconductors			
WLD5.409.IN4148	1N4148	8	D3 D4 D5 D6 D7 D8 D9 D10
WLD5.610.001	LBD Φ3 L7L-1CHGE	8	LD8 LD9 LD10 LD11 LD12 LD13 LD14 LD15
	(Green light)		
WLD5.409.ZD9V1	Voltage regulator diode ZD9V1	1	ZD1
WLD5.419.8050	8050	4	Q9 Q10 Q11 Q12
WLD5.419.8550	8550	2	Q5 Q8
Miscellaneous			
WLD5.449.PT6318	PT6318	1	U1
WLD7.072.001	Incept tube HS0038B	1	IR1/IR2
WLD6.618.001	Touch switch 6×6	9	S2-S9
WLD6.609.5A	PH-5A	1	CN1
WLD7.350.025	DVD 25 VFD	1	VFD
Output Board (736C)			
Resistor			
WLD7.075.271	270Ω□SMD0603□	1	R14
WLD7.075.391	390Ω□SMD0603□	1	R13
WLD7.075.472	4.7K□SMD0603□	2	R12

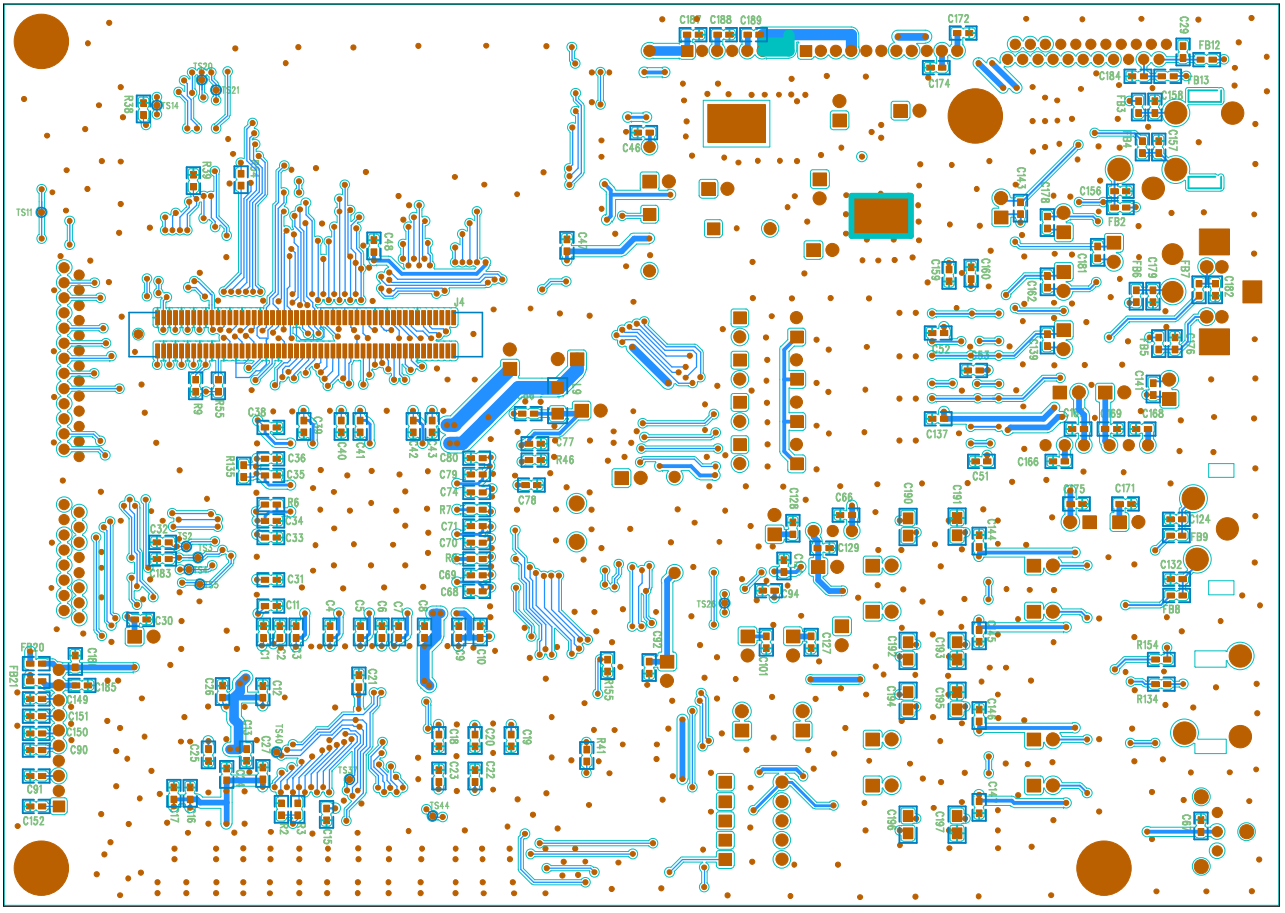
Part Number	Description	Qty	Reference designator
Output Board (736C)			
WLD7.075.103	10K□SMD0603□	2	R10 R11
Capacitor			
WLD5.610.47UF/16V	47UF/16V	1	C12
Semiconductors			
WLD5.409.IN4148	IN4148	1	D1
WLD5.419.DTA114YKA	DTA114YKA (SMT3)	1	Q4
WLD5.449.PC817	PC817 □photoelectric coupler□	1	U1
Miscellaneous			
WLD6.609.22P	22 lines 1.0 two lines of socket	1	J1
WLD5.219.001	Remote signal in/out socket	1	J3
	SCJ351P00XS0B00		

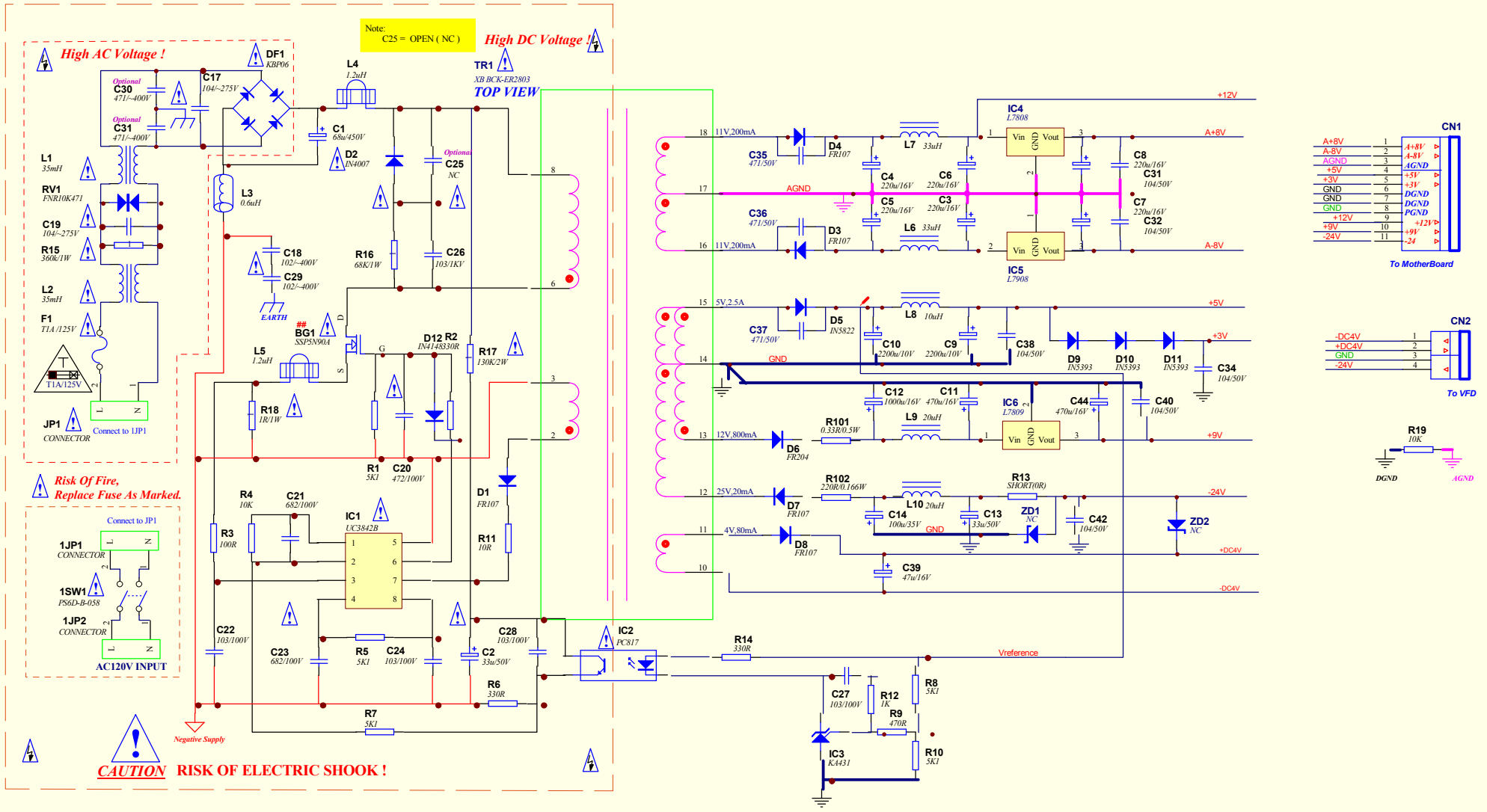



+8
-24V
WAKEUP
FLDCS_
SIN
SOUT
GND
SCLK
GND
IRRX


RISK OF FIRE
REPLACE FUSE AS MARKED
CAUTION : RISK OF ELECTRIC SHOOK
harman/kardon
DVD25
CN1
DIP
F1
T1A/250VAC
TO POWER SWITCH
AC INPUT
TR1
714C
Version1.3
11Jan2002
QUALITY CHECK BOX
CN2
-24V
GND
4V_A
-4V_B

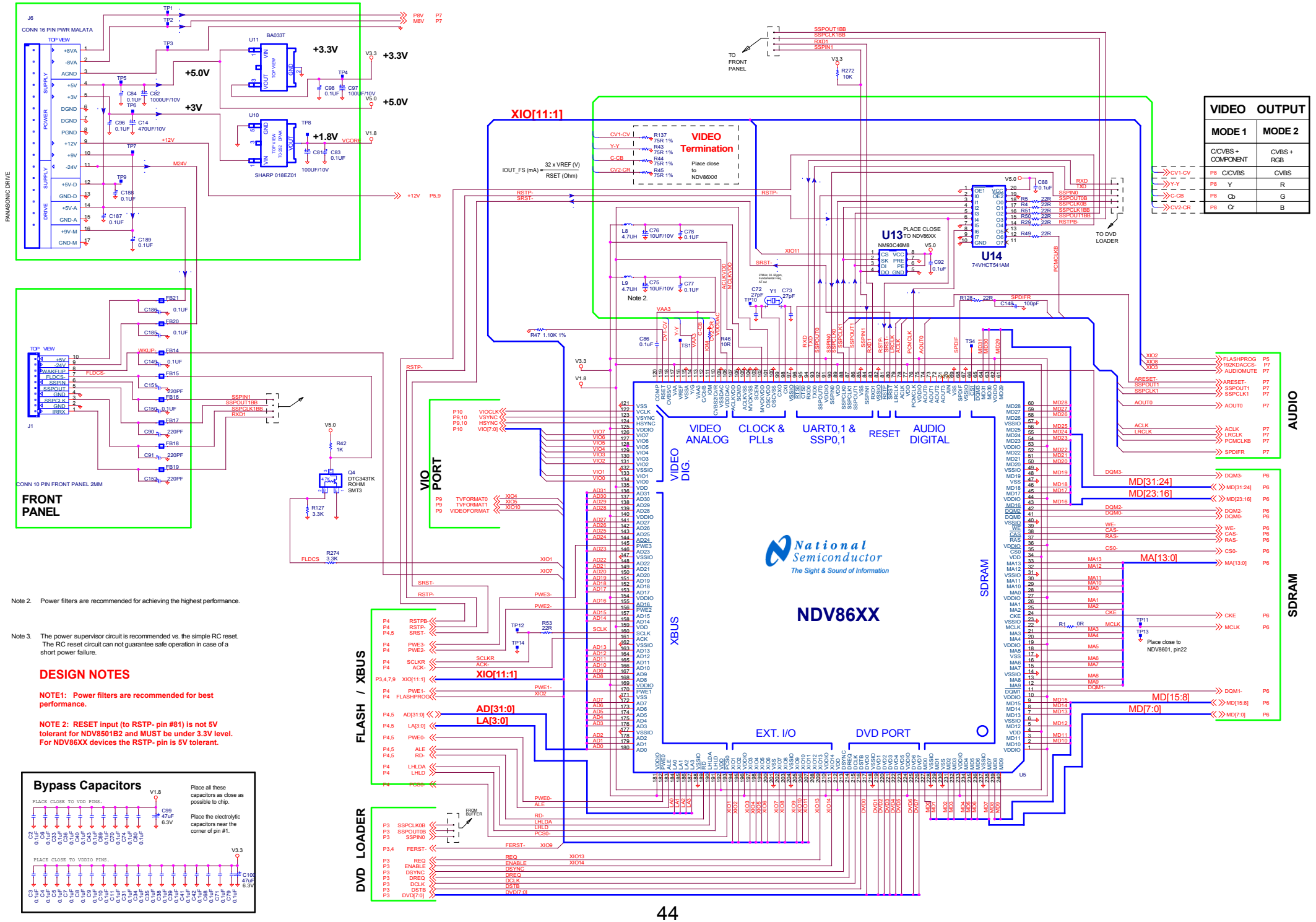

787C
787c-1
+5V
-24V
WAKE
CS
DOUT
DIN
GND
CLK
GND
IR





Description: *The Components Marks With ## Are Need Radiator!*

Power Supply For 714C PCB Version 1.3



VIDEO	OUTPUT
MODE 1	MODE 2
C/CVBS + COMPONENT	CVBS + RGB
P8 C/CVBS	CVBS
P8 Y	R
P8 Cb	G
P8 Cr	B

Note 2. Power filters are recommended for achieving the highest performance.

Note 3. The power supervisor circuit is recommended vs. the simple RC reset. The RC reset circuit can not guarantee safe operation in case of a short power failure.

DESIGN NOTES

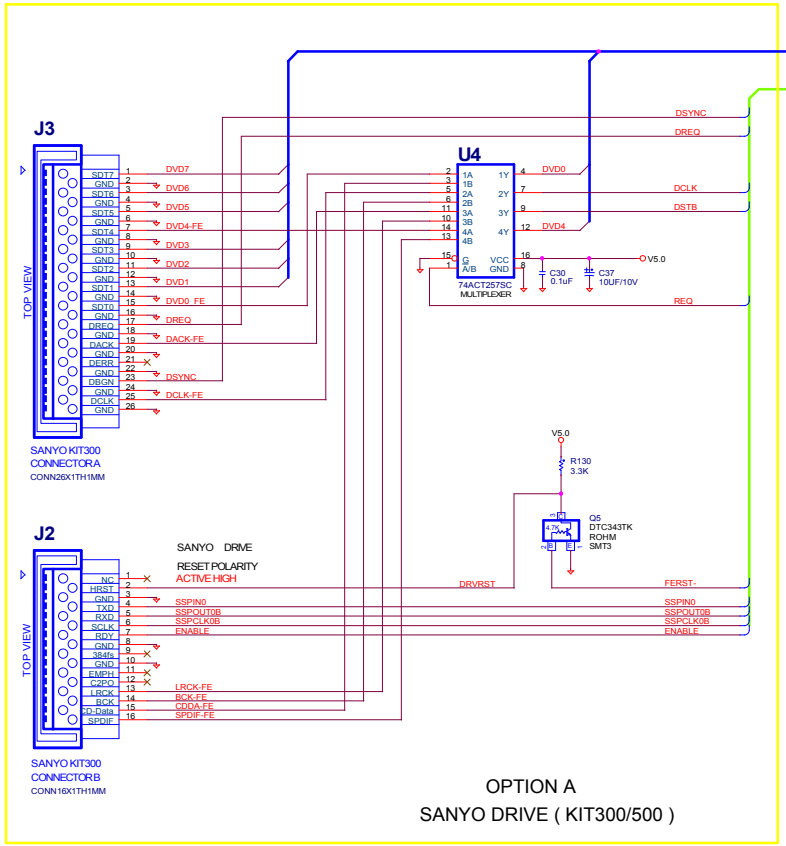
NOTE1: Power filters are recommended for best performance.

NOTE 2: RESET input (to RSTP- pin #81) is not 5V tolerant for NDV8501B2 and MUST be under 3.3V level. For NDV86XX devices the RSTP- pin is 5V tolerant.

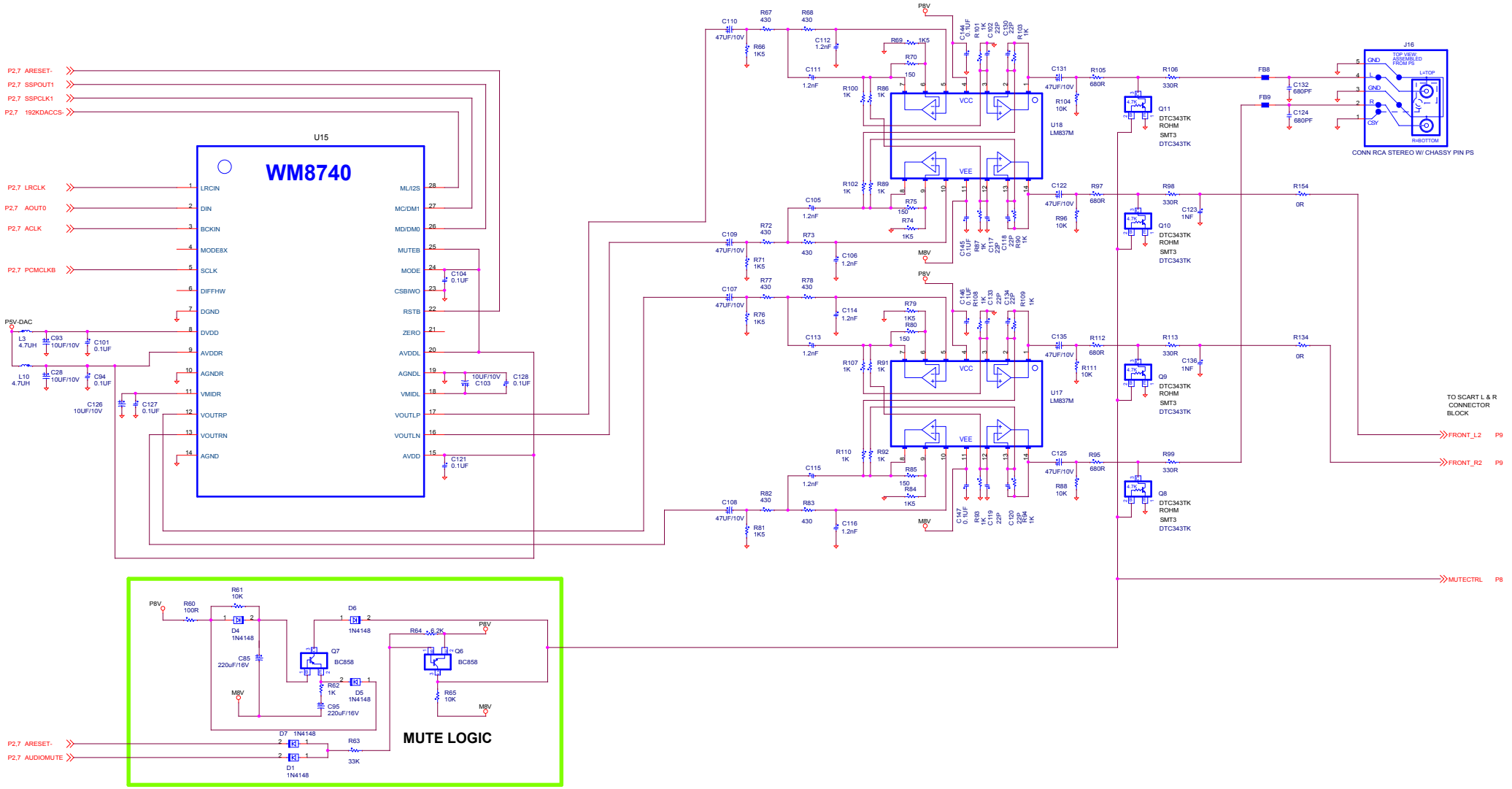
Bypass Capacitors

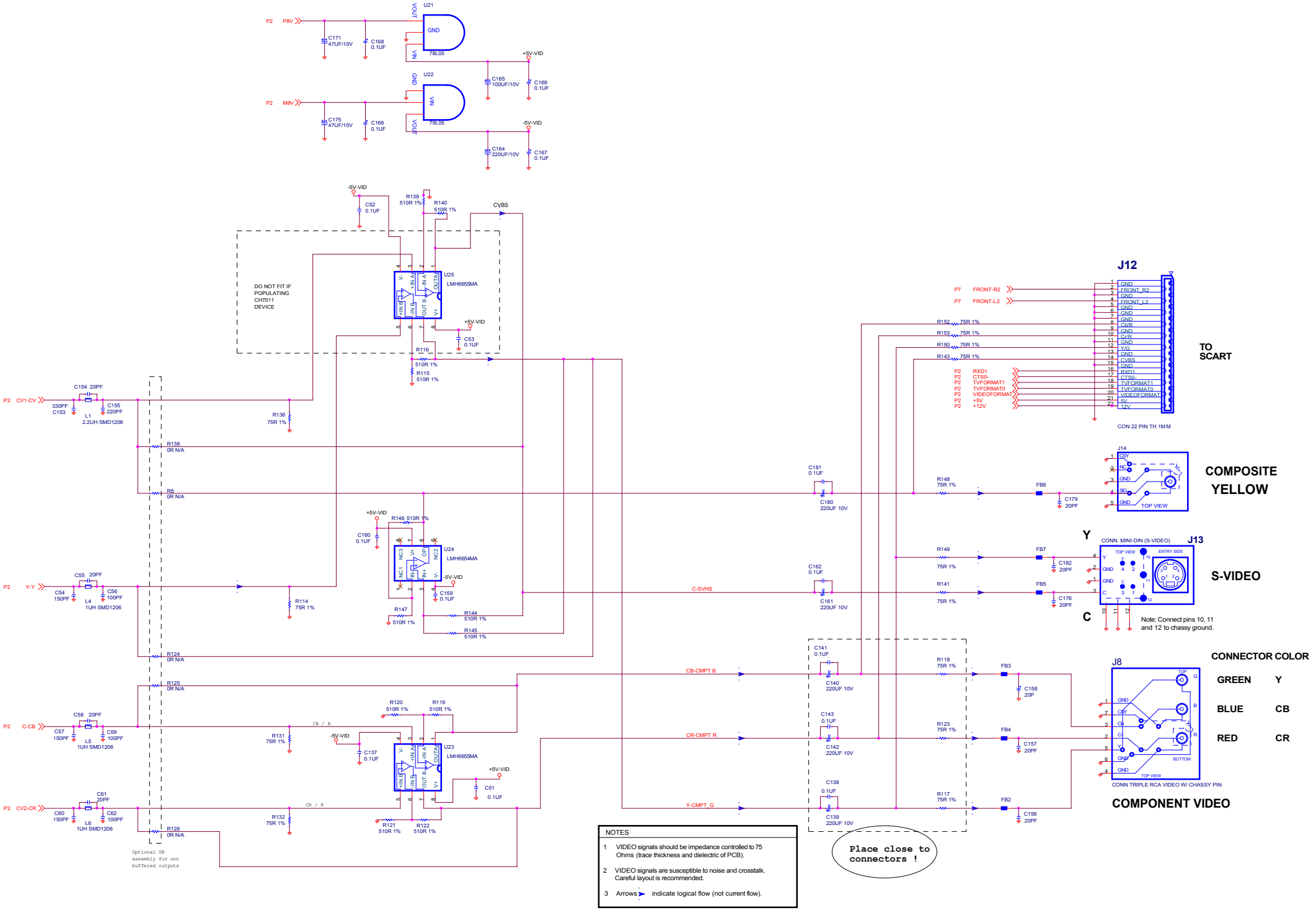
Place all these capacitors as close as possible to chip.

Place the electrolytic capacitors near the corner of pin #1.



OPTION A
SANYO DRIVE (KIT300/500)


U15
WM8740
LRCIN
DIN
BCKIN
MODE8X
SCLK
DIFFHW
DGND
DVDD
AVDDR
AGNDR
VMIDR
VOUTRP
VOUTRN
AGND
ML/I2S
MC/DM1
MD/DM0
MUTEB
MODE
CSBIWO
RSTB
ZERO
AVDDL
AGNDL
VMIDL
VOUTLP
VOUTLN
AVDD
P2,7 ARESET-
P2,7 SSPOUT1
P2,7 SSPCLK1
P2,7 192KDACCS-
P2,7 LRCLK
P2,7 AOUT0
P2,7 ACLK
P2,7 PCMCLKB
P5V-DAC
U18 LM837M
U17 LM837M
Q11 DTC343TK ROHM SMT3 DTC343TK
Q10 DTC343TK ROHM SMT3 DTC343TK
Q9 DTC343TK ROHM SMT3 DTC343TK
Q8 DTC343TK ROHM SMT3 DTC343TK
J16
CONN RCA STEREO W/ CHASSY PIN PS
TO SCART L & R CONNECTOR BLOCK
FRONT_L2 P9
FRONT_R2 P9
MUTECTRL P8
MUTE LOGIC
P2,7 ARESET-
P2,7 AUDIOMUTE
U16
78L05
P2,9,10 P8V
P5V-DAC
SPDIF Interface
SPDIF COAX
J9
SPDIF OPTICAL
U19
SPDIF IR TX SHARP GP1F31T
P2 SPDIFR

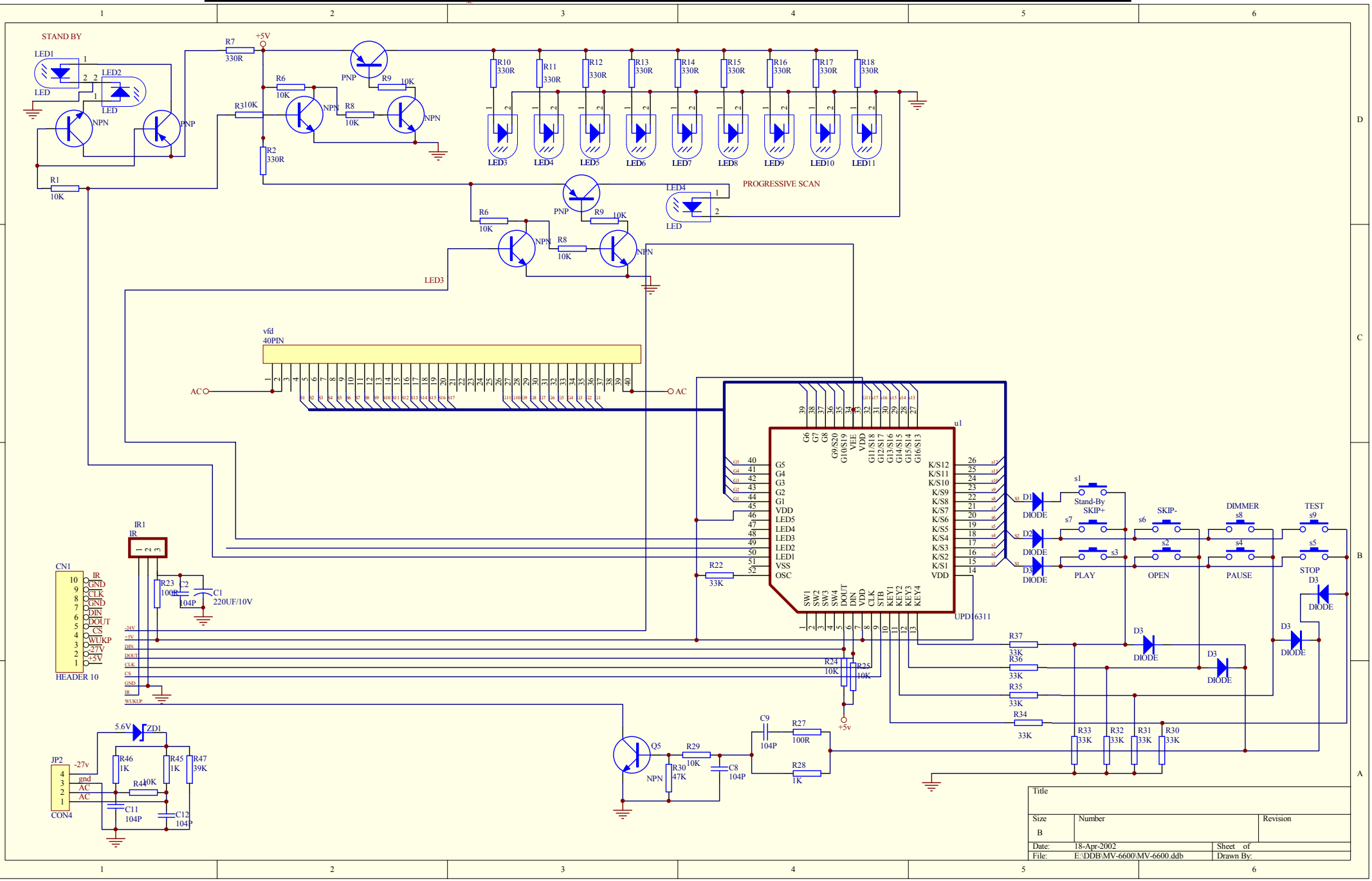


NOTES

1 VIDEO signals should be impedance controlled to 75 Ohms (trace thickness and dielectric of PCB).

2 VIDEO signals are susceptible to noise and crosstalk. Careful layout is recommended.

3 Arrows ➤ indicate logical flow (not current flow).


STAND BY
LED1
LED2
LED
NPN
PNP
R7
330R
+5V
R6
10K
R9
10K
R8
R3 10K
R2
330R
R1
10K
R10 330R
R11 330R
R12 330R
R13 330R
R14 330R
R15 330R
R16 330R
R17 330R
R18 330R
LED3
LED4
LED5
LED6
LED7
LED8
LED9
LED10
LED11
PROGRESSIVE SCAN
vfd
40PIN
AC
u1
UPD16311
G5
G4
G3
G2
G1
VDD
LED5
LED4
LED3
LED2
LED1
VSS
OSC
R22
33K
K/S12
K/S11
K/S10
K/S9
K/S8
K/S7
K/S6
K/S5
K/S4
K/S3
K/S2
K/S1
SW1
SW2
SW3
SW4
DOUT
DIN
CLK
STB
KEY1
KEY2
KEY3
KEY4
D1
D2
D3
DIODE
s1
Stand-By
SKIP+
SKIP-
DIMMER
TEST
PLAY
OPEN
PAUSE
STOP
IR1
CN1
HEADER 10
R23
100R
C2
104P
C1
220UF/10V
R24
10K
R25
10K
R37
33K
R36
33K
R35
33K
R34
33K
R33
33K
R32
33K
R31
33K
R30
33K
Q5
R29
10K
R30
47K
C8
104P
C9
104P
R27
100R
R28
1K
ZD1
5.6V
JP2
CON4
-27v
gnd
R46
1K
R45
1K
R47
39K
R44
10K
C11
104P
C12
104P
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Number
Revision
Date:
18-Apr-2002
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Drawn By: