

harman/kardon

# AVR8000

## A/V DOLBY DIGITAL RECEIVER

# SERVICE MANUAL



### CONTENTS

ESD WARNING.....	2	DC OFFSET ADJUSTMENT.....	23
LEAKAGE TESTING.....	3	EXPLODED VIEW.....	24
BASIC SPECIFICATIONS.....	4	EXPLODED VIEW PARTS LIST.....	27
FRONT PANEL CONTROLS.....	5	DISASSEMBLY TIPS.....	29
FRONT PANEL DISPLAY.....	7	REPLACING IC701.....	36
REAR PANEL CONNECTIONS.....	8	ELECTRICAL PARTS LIST.....	37
REMOTE CONTROL FUNCTIONS.....	10	BLOCK DIAGRAM.....	120
TROUBLESHOOTING GUIDE.....	14	PCB DRAWINGS.....	121
PROCESSOR RESET.....	14	SEMICONDUCTOR PINOUTS.....	156
BULLETIN HK2002-04.....	15	SCHEMATICS.....	208
BULLETIN HK2004-01.....	17	WIRING DIAGRAM.....	241
TECH TIP HKTT2002-02.....	19	PACKING.....	242
TECH TIP HKTT2003-01.....	22		

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## 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 build-up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical change sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

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

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

## PRODUCT SAFETY NOTICE

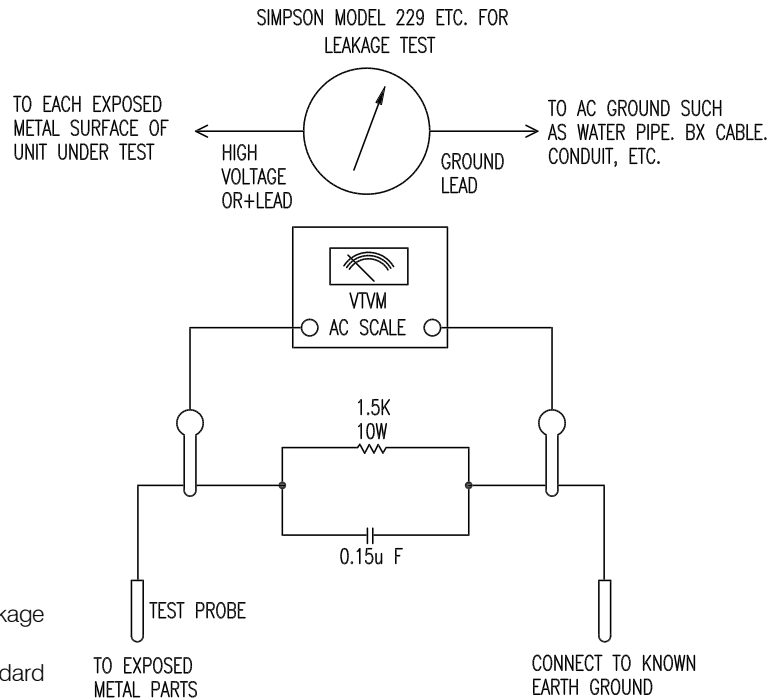
Each precaution in this manual should be followed during servicing.

Components identified with the IEC symbol  in the parts list are special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

## LEAKAGE TEST(FOR SERVICE ENGINEERS IN THE U.S.A)

Before returning the unit to the user, perform the following safety checks :

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the unit.
2. Be sure that any protective devices such as nonmetallic control knobs, insulating fish-papers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc. Which were removed for the servicing are properly re-installed.
3. Be sure that no shock hazard exists ; check for leakage current using Simpson Model 229 Leakage Tester, standard equipment item No. 21641, RCA Model WT540A or use alternate method as follows : Plug the power cord directly into a 120 volt AC receptacle (do not use an Isolation Transformer for this test). Using two clip leads, connect a 1500 ohms, 10watt Resistor paralleled by a 0.15uF capacitor, in series with all exposed metal cabinet parts and a known earth ground, such as a water pipe or conduit. Use a VTVM or VOM with 1000 ohms per volt, or higher sensitivity to measure the AC voltage drop across the resistor. (See diagram) Move the resistor connection to each exposed metal part having a return path to the chassis (antenna, metal, cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor. (This test should be performed with the 0.35 volt RMS or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



## Technical Specifications

### Audio Section

Stereo Mode

Continuous Average Power (FTC)

125 Watts per channel, 20Hz–20kHz,  
@ < 0.07% THD, both channels driven into 8 ohms

Five-Channel Surround Modes

Power Per Individual Channel

Front L&R channels:

110 Watts per channel

@ < 0.07% THD, 20Hz–20kHz into 8 ohms

Center channel:

110 Watts @ < 0.07% THD, 20Hz–20kHz into 8 ohms

Surround channels:

110 Watts per channel

@ < 0.07% THD, 20Hz–20kHz into 8 ohms

Input Sensitivity/Impedance

Linear (High-Level) 200mV/47k ohms

Signal-to-Noise Ratio (IHF-A) 95dB

Surround System Adjacent Channel Separation

Analog Decoding 40dB

(Pro Logic II, etc.)

Dolby Digital (AC-3) 55dB

DTS 55dB

Frequency Response

@ 1W (+0dB, –3dB) 10Hz – 100kHz

High Instantaneous

Current Capability (HCC) ±85 Amps

Transient Intermodulation

Distortion (TIM) Unmeasurable

Slew Rate

40V/μsec

### FM Tuner Section

Frequency Range 87.5–108.0MHz

Usable Sensitivity IHF 1.3 μV/13.2dBf

Signal-to-Noise Ratio Mono/Stereo 70/68dB

Distortion Mono/Stereo 0.2/0.3%

Stereo Separation 40dB @ 1kHz

Selectivity ±400kHz, 70dB

Image Rejection 80dB

IF Rejection 90dB

### AM Tuner Section

Frequency Range 520–1710kHz

Signal-to-Noise Ratio 45dB

Usable Sensitivity Loop 500μV

Distortion 1kHz, 50% Mod 0.8%

Selectivity ±10kHz, 30dB

### Video Section

Television Format NTSC

Input Level/Impedance 1Vp-p/75 ohms

Output Level/Impedance 1Vp-p/75 ohms

Video Frequency Response  
(Composite and S-Video) 10Hz–8MHz (–3dB)

Video Frequency Response  
(Component) 10Hz–30MHz (–3dB)

### General

Power Requirement AC 120V/60Hz

Power Consumption 119W idle, 694W maximum  
(2 channels driven)

Trigger Output 6VDC @ 500ma

Dimensions (Max) Width 17.3 inches (440mm)

Height 7.65 inches (194mm)

Depth 20.5 inches (519mm)

Weight 53 lb (24.1 kg)

Depth measurement includes knobs, buttons and terminal connections.

Height measurement includes feet and chassis.

All features and specifications are subject to change without notice.

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THX and THX Ultra are manufactured under license from Lucasfilm Ltd.  
Lucasfilm, THX and THX Ultra are registered trademarks of Lucasfilm Ltd.

Surround EX is a jointly developed technology of THX and Dolby Laboratories, Inc., and is a trademark of Dolby. Used under authorization.

III<sup>ES</sup>Set™ is a trademark of Harman International Industries, Inc. (Patent No. 5,386,478).

\*Manufactured under license from Dolby Laboratories.

"Dolby," "Pro Logic," "Pro Logic II" and the Double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992–1999 Dolby Laboratories, Inc. All rights reserved.

DTS, DTS Surround, DTS-ES and DTS Neo:6 are registered trademarks of Digital Theater Systems, Inc.

UltraStereo is a trademark of UltraStereo Corp.

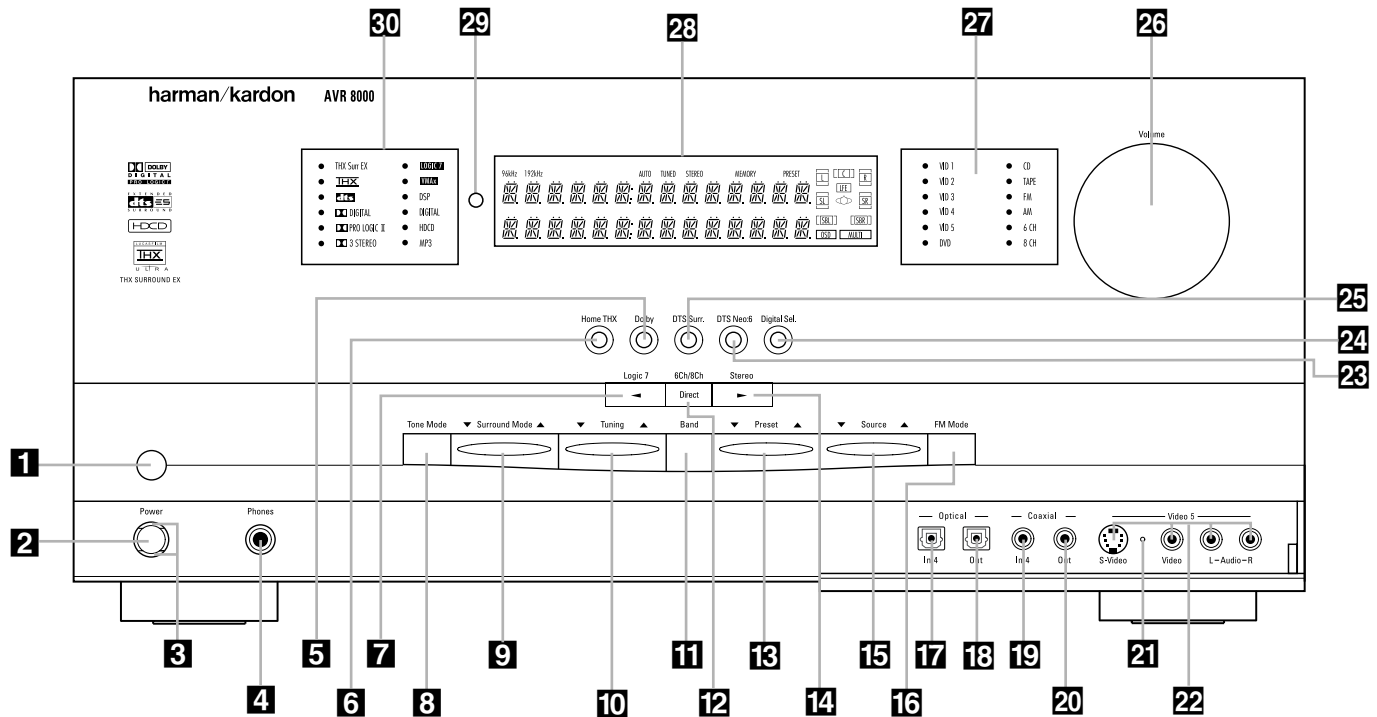
VMAx is a registered trademark of Harman International Industries, Inc., and is an implementation of Cooper Bauck Transaural Stereo under patent license.

Logic 7 is a registered trademark of Lexicon, Inc.

Crystal is a registered trademark of Cirrus Logic Corp.

HDCD system manufactured under license from Pacific Microsonics, Inc. This product is covered by one or more of the following: In the USA: 5,479,168; 5,638,074; 5,640,161; 5,808,574; 5,838,274; 5,854,600; 5,864,311; 5,872,531; and in Australia: 669114. Other patents pending.

## Front Panel Controls



- |   |   |  |
|---|---|--|
| <b>1</b> Main Power Switch              | <b>12</b> 6Ch/8Ch Direct Button         | <b>23</b> DTS Neo:6 Mode Selector            |
| <b>2</b> System Power Control           | <b>13</b> Preset Station Selector       | <b>24</b> Digital Select Button              |
| <b>3</b> Power Indicator                | <b>14</b> Stereo Mode Selector/▶ Button | <b>25</b> DTS Surround Mode Selector         |
| <b>4</b> Headphone Jack                 | <b>15</b> Input Source Selector         | <b>26</b> Volume Control                     |
| <b>5</b> Dolby Mode Selector            | <b>16</b> FM Mode Selector              | <b>27</b> Input Indicators                   |
| <b>6</b> Home THX Mode Selector         | <b>17</b> Optical Digital 4 Input Jack  | <b>28</b> Main Information Display           |
| <b>7</b> Logic 7 Mode Selector/◀ Button | <b>18</b> Optical Digital 4 Output Jack | <b>29</b> Remote Sensor Window               |
| <b>8</b> Tone Mode                      | <b>19</b> Coaxial Digital 4 Input Jack  | <b>30</b> Surround Mode/Bitstream Indicators |
| <b>9</b> DSP Surround Mode Selector     | <b>20</b> Coaxial Digital 4 Output Jack |  |
| <b>10</b> Tuning Selector               | <b>21</b> Input/Output Status Indicator |  |
| <b>11</b> Tuner Band Selector           | <b>22</b> Video 5 Input Jacks           |  |

**1 Main Power Switch:** Press this button to apply power to the AVR 8000. When the switch is pressed in, the unit is placed in a Standby mode, as indicated by the amber **Power Indicator 3** surrounding the **System Power Control 2**. This button MUST be pressed in to operate the unit. To turn the unit off and prevent the use of the remote control, this switch should be pressed until it pops out from the front panel so that the word "OFF" may be read at the top of the switch.

**NOTE:** This switch is normally left in the "ON" position.

**2 System Power Control:** When the **Main Power Switch 1** is "ON," press this button to turn on the AVR 8000; press it again to turn the unit off. Note that the **Power Indicator 3**

surrounding the switch will turn green when the unit is on.

**3 Power Indicator:** This LED will be lit in amber when the unit is in the Standby mode to signal that the unit is ready to be turned on. When the unit is in operation, the indicator will turn green.

**4 Headphone Jack:** This jack may be used to listen to the AVR 8000's output through a pair of headphones. Be certain that the headphones have a standard 1/4" stereo phone plug. Note that the main room speakers will automatically be turned off when the headphone jack is in use.

**5 Dolby Mode Selector:** Pressing this selector button cycles the AVR through the various Dolby surround modes. The first press of the button switches the surround mode to

the last Dolby surround mode that was in use. The choice of modes available will vary based on the type of input source (digital or analog) and the number of speaker channels your system is configured for.

**6 Home THX Mode Selector:** Press this button to select Home THX processing. The choice of THX modes will vary according to the type of input source and program material (Dolby Digital, DTS 5.1, DTS 6.1 or analog), and the number of speakers in your system. In some cases the system will auto-default to the THX Surround EX or THX Cinema mode, while in other cases you will have a choice of modes.

**7 Logic 7 Mode Selector/◀ Button:** This button has two functions: In normal use, press it to select one of the Logic 7 modes. When an adjustment is being made using using the

## Front Panel Controls

**Digital Select Button 24**, this button may be pressed to scroll through the available options.

**8 Tone Mode:** This button controls the tone control settings, enabling adjustment of the bass and treble boost/cut or the removal of the tone controls from the signal path. The first press of the button displays a **TONE IN** message in the **Main Information Display 23**. If you wish to take the tone controls to "flat," without any treble or bass alteration, press the **◀** or **▶** **Selector Buttons 7|14** so that **TONE OUT** appears in the **Lower Display Line 3**. To change the tone settings, press the button until either **TREBLE** or **BASS** appears in the **Lower Display Line 3** as desired, and then press the **◀** or **▶** **Selector Buttons 7|14** to increase or decrease the setting. Note that the Tone settings apply only to the front left and right speakers, and they are not in effect when a THX mode is in use.

**9 DSP Surround Mode Selector:** Press this button to select the following DSP Surround Modes: Hall 1, Hall 2 or Theater. (See page 28 for more information about surround modes.)

**10 Tuning Selector:** Press the left side of the button to tune lower-frequency stations and the right side of the button to tune higher-frequency stations. When a station with a strong signal is reached, the **TUNED Indicator 1** will be lit in the **Main Information Display 23**.

To tune manually, tap the button lightly and note that the tuner will step up one frequency increment per button press. When the button is held for a few seconds you will note that the unit will quickly search the frequency band. Release it once the fast tuning starts; the tuner will automatically scan for the next station with an acceptable signal and then stop.

**11 Tuner Band Selector:** Pressing this button will automatically switch the AVR 8000 to the Tuner mode. Pressing it again will switch between the AM and FM frequency bands. (See page 33 for more information on the tuner.)

**12 6Ch/8Ch Direct Button:** Press this button to select the 6-Channel Direct or 8-Channel Direct inputs as the AVR 8000's source.

**13 Preset Station Selector:** Press this button to scroll up or down through the list or stations that have been entered into the preset memory. (See pages 33 and 34 for more information on tuner programming.)

**14 Stereo Mode Selector/▶ Button:** Pressing this selector button cycles through the

stereo modes, and it is also used to turn off all surround processing and place the unit in a traditional two-channel Stereo mode. The first press selects 5-Channel Stereo, the next press selects 7-Channel Stereo, and the third press selects "SURROUND OFF," which is true Stereo.

**15 Input Source Selector:** Press this button to change the input by scrolling up or down through the list of input sources.

**16 FM Mode Selector:** Press this button to select Auto or Manual tuning. When the button is pressed so that the **AUTO Indicator J** lights, the tuner will search for the next station with an acceptable signal when the **Tuning Selector 10|21 E** is pressed. When the button is pressed so that the **AUTO Indicator J** is not lit, each press of the **Tuning Selector 10|21 E** will increase the frequency. (See page 33 for more information on using the tuner.)

**NOTE:** The front panel digital audio, video and analog audio input and output jacks are normally concealed behind a drop-down door in the lower right corner of the front panel. To access these jacks, open the panel door by gently pulling down the upper right corner of the door as indicated by "PULL/OPEN."

**17 Optical Digital 4 Input Jack:** Connect the optical digital output of an audio or video product to this jack.

**18 Optical Digital 4 Output Jack:** Connect this jack to the optical digital input of a digital recorder to send a feed of the digital output when a PCM digital input source is in use by the AVR 8000.

**19 Coaxial Digital 4 Input Jack:** Connect the output of a digital audio source to this jack.

**20 Coaxial Digital 4 Output Jack:** Connect this jack to the coaxial digital input of a digital recorder to send a feed of the digital output when a PCM digital input source is in use by the AVR 8000.

**21 Input/Output Status Indicator:** This LED indicator will normally light green to show that the front panel **Video 5 Input Jacks 22** are operating as inputs. When these jacks are configured for use as an output, the indicator will turn red to show that the jack may be used for recording. (See page 34 for more information on configuring the front panel jacks as outputs, rather than inputs.)

**22 Video 5 Input Jacks:** These audio/video jacks may be used for temporary connection to

video games or portable audio/video products such as camcorders and portable audio players.

**23 DTS Neo:6 Mode Selector:** Pressing this button selects one of the DTS Neo:6 modes. The first press selects the Neo:6 Movies mode, and a second press will select the Neo:6 Music mode. (See page 28 for more information on the Neo:6 modes.)

**24 Digital Select Button:** When playing a source that has a digital output, press this button to select between the **Optical 17|24** and **Coaxial 19|21 Digital** inputs. (See page 31 for more information on digital audio.)

**25 DTS Surround Mode Selector:** Pressing this selector button cycles the AVR through the DTS surround modes. The choice of available DTS modes will vary according to the type of program source material (DTS 5.1 or DTS 6.1) and whether your system is configured for 5.1 or 6.1/7.1 channel operation.

**26 Volume Control:** Turn this knob clockwise to increase the volume, counterclockwise to decrease the volume. If the AVR 8000 is muted, adjusting volume control will automatically release the unit from the silenced condition.

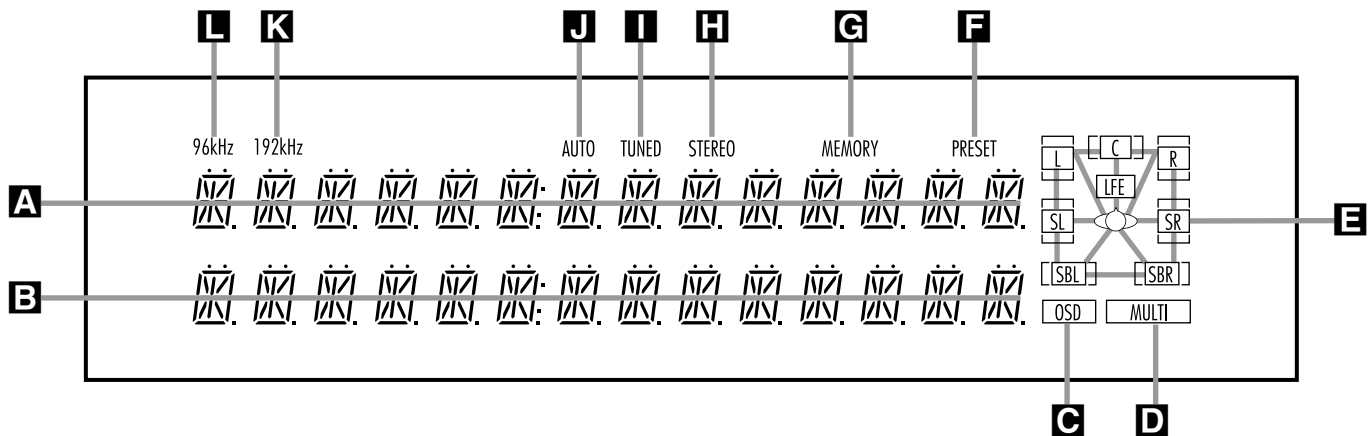
**27 Input Indicators:** A green LED will light to the left of the input that is currently the input source for the AVR 8000.

**28 Main Information Display:** This display delivers messages and status indications to help you operate the receiver. (See page 7 for a complete explanation of the Information Display.)

**29 Remote Sensor Window:** The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it unless an external remote sensor is installed.

**30 Surround Mode/Bitstream Indicators:** These LEDs will light to show the surround mode and digital bitstream in use. Note that depending on the specific combination of input sources and surround mode selected, more than one indicator may light. (See page 32 for more information.)

# Front Panel Information Display



- A** Upper Display Line
- B** Lower Display Line
- C** OSD Indicator
- D** Multiroom Indicator

- E** Speaker/Channel Input Indicators
- F** PRESET Indicator
- G** MEMORY Indicator
- H** STEREO Indicator

- I** TUNED Indicator
- J** AUTO Indicator
- K** 192kHz Indicator
- L** 96kHz Indicator

**A Upper Display Line:** Depending on the unit's status, a variety of messages will appear here. In normal operation, the current input source name will appear on this line.

**B Lower Display Line:** Depending on the unit's status, a variety of messages will appear here. In normal operation, the current surround mode name will appear on this line.

**C OSD Indicator:** When the OSD system is in use, this indicator lights to remind you that the other indicators in this display do not function when the On-Screen Display is being used.

**D Multiroom Indicator:** This indicator lights when the multiroom system is active. Note that it will remain lit when the multiroom system is in use even though the main room system is in the Standby mode and all other indicators are dark. (See page 38 for more information on the Multiroom system.)

**E Speaker/Channel Input Indicators:** These indicators are multipurpose, indicating either the speaker type selected for each channel or the incoming data-signal configuration. The left, center, right, right surround and left surround speaker indicators are composed of three boxes, while the subwoofer is a single box. The center box lights when a "Small" speaker is selected, and the two outer boxes light when "Large" speakers are selected.

When none of the boxes are lit for the center, surround or subwoofer channels, no speaker has been selected for one of those positions. (See page 21 for more information on configuring speakers.) The letters inside each of the center boxes display the active input channels. For standard analog inputs, only the L and R will light, indicating a stereo input. When a digital source is playing, the indicators will light to display the channels being received at the digital input. When the letters flash, the digital input has been interrupted. (See pages 25 & 32 for more information on the Channel Indicators.)

**F PRESET Indicator:** This indicator lights when the tuner is in use to show that the present number for the current station being listened to appears in the Upper Display Line. (See page 34 for more information on tuner presets.)

**G MEMORY Indicator:** This indicator flashes when entering presets and other information into the tuner's memory.

**H STEREO Indicator:** This indicator lights when an FM station is being tuned in stereo.

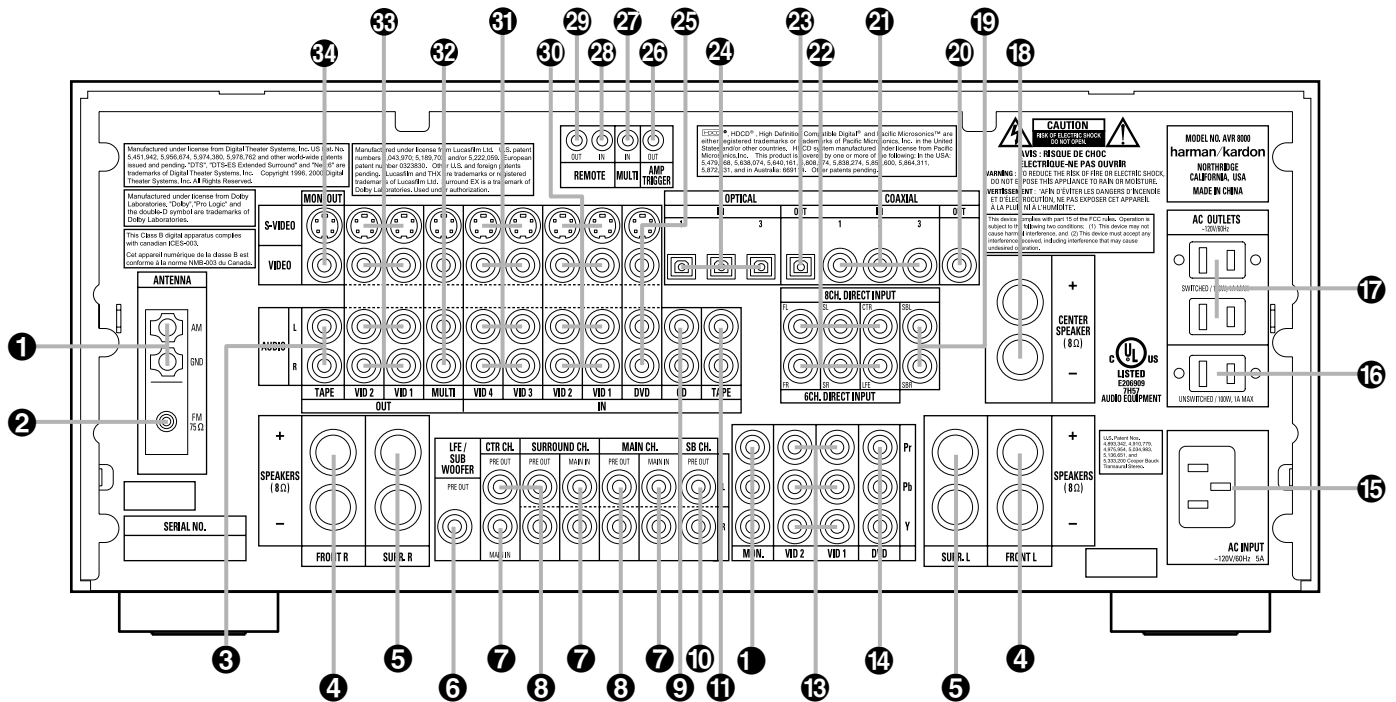
**I TUNED Indicator:** This indicator lights when a station is being received with sufficient signal strength to provide acceptable listening quality.

**J AUTO Indicator:** This indicator lights when the tuner's Auto mode is in use.

**K 192kHz Indicator:** This indicator lights when the input source has a 192kHz bit rate.

**L 96kHz Indicator:** This indicator lights when the input source has a 96kHz bit rate.

# Rear Panel Connections



- 1 AM Antenna
- 2 FM Antenna
- 3 Tape Outputs
- 4 Front Speaker Outputs
- 5 Surround Speaker Outputs
- 6 Subwoofer Output
- 7 Amplifier Inputs
- 8 Main Channel Preamp Outputs
- 9 CD Inputs
- 10 Surround Back Preamp Outputs
- 11 Tape Inputs
- 1 Component Video Outputs
- 13 Video 1/Video 2 Component Video Inputs
- 14 DVD Component Video Inputs
- 15 AC Power Cord Jack
- 16 Unswitched AC Accessory Outlet
- 17 Switched AC Accessory Outlet
- 18 Center Speaker Outputs
- 19 8-Channel Direct Inputs
- 20 Coaxial Digital Audio Output
- 21 Coaxial Digital Inputs
- 22 6-Channel Direct Inputs
- 23 Optical Digital Audio Output
- 24 Optical Digital Inputs
- 25 DVD Inputs
- 26 Amplifier Trigger Jack
- 27 Multizone IR Input
- 28 Remote IR Input
- 29 Remote IR Output
- 30 Video 1/Video 2 Inputs
- 31 Video 3/Video 4 Inputs
- 32 Multizone Outputs
- 33 Video 1/Video 2 Outputs
- 34 Video Monitor Outputs

**1 AM Antenna:** Connect the AM loop antenna supplied with the receiver to these terminals. If an external AM antenna is used, make connections to the **AM** and **GND** terminals in accordance with the instructions supplied with the antenna.

**2 FM Antenna:** Connect the supplied indoor or an optional external FM antenna to this terminal.

**3 Tape Outputs:** Connect these jacks to the **RECORD/INPUT** jacks of an audio recorder.

**4 Front Speaker Outputs:** Connect these outputs to the matching + or – terminals on your left and right speakers. When making speaker connections always make certain to maintain correct polarity by connecting the color-coded (white for front left and red for front right) (+) terminals on the AVR 8000 to

the red (+) terminals on the speakers and the black (–) terminals on the AVR 8000 to the black (–) terminals on the speakers. See page 15 for more information on speaker polarity.

**5 Surround Speaker Outputs:** Connect these outputs to the matching + and – terminals on your surround channel speakers. In conformance with the new CEA color code specification, the Blue terminal is the positive, or “+” terminal that should be connected to the red (+) terminal on the Surround Left speaker with older color coding, while the Gray terminal should be connected to the red (+) terminal on the Surround Right speaker with the older color coding. Connect the black (–) terminal on the AVR to the matching black negative (–) terminals for each surround speaker. (See page 15 for more information on speaker polarity.)

**6 Subwoofer Output:** Connect this jack to the line-level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

**7 Amplifier Inputs:** When the jumper pins that link the **Preamp Outputs** 8 with these inputs are removed, these jacks may be used to connect an external source or the AVR 8000’s multiroom system to the internal amplifiers.

**8 Main Channel Preamp Outputs:** When the jumper pins that link the **Amplifier Inputs** 7 with these outputs are removed, these jacks may be connected to an external power amplifier.

**9 CD Inputs:** Connect these jacks to the output of a compact disc player or CD changer.



## Rear Panel Connections

**10 Surround Back Preamp Outputs:** When the AVR is used in the 6.1 or 7.1 configuration, connect these jacks to an optional, external power amplifier to power the Surround Back Channels.

**11 Tape Inputs:** Connect these jacks to the PLAY/OUT jacks of an audio recorder.

**1 Component Video Outputs:** Connect these outputs to the component video inputs of a video projector or monitor. When a source connected to one of the **Component Video Inputs** 13 14 is selected the signal will be sent to these jacks.

**13 Video 1/Video 2 Component Video Inputs:** Connect the Y/Pr/Pb component video outputs of an HDTV Set-top convertor, satellite receiver, or other video source device with component video outputs to these jacks.

**14 DVD Component Video Inputs:** Connect the Y/Pr/Pb component video outputs of a DVD player to these jacks.

**15 AC Power Cord Jack:** Connect the AC Power cord to this jack when the installation is complete. To ensure safe operation, use only the power cord supplied with the unit. If a replacement is required it must be of same type and capacity.

**16 Unswitched AC Accessory Outlet:** This outlet may be used to power any AC device. The power will remain on at this outlet regardless of whether the AVR 8000 is on or off.

**NOTE:** The total power consumption of all devices connected to the accessory outlets should not exceed 100 watts.

**17 Switched AC Accessory Outlets:** These outlets may be used to power any device you wish to have turned on when the AVR 8000 is turned on with the **System Power Control Button** 2.

**18 Center Speaker Outputs:** Connect these outputs to the matching + and – terminals on your center channel speaker. In conformance with the new CEA color code specification, the Green Terminal is the positive, or “+” terminal that should be connected to the red (+) terminal on speakers with the older color coding. Connect the black (–) terminal on the AVR to the black negative (–) terminal on your speaker. (See page 15 for more information on speaker polarity.)

**19 8-Channel Direct Inputs:** When an optional, external source with discrete 7.1 analog audio output capability such as a DVD-Audio or SACD player is used, connect that unit’s surround back output jacks here.

**20 Coaxial Digital Audio Output:** Connect this jack to the coaxial digital input of a CD-R/RW, MiniDisc or other digital recorder.

**21 Coaxial Digital Inputs:** Connect the coax digital output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing MP3 files or streams, LD player or CD player to these jacks. The signal may be either a Dolby Digital signal, DTS signal or a standard PCM digital source. Do not connect the RF digital output of an LD player to these jacks.

**22 6-Channel Direct Inputs:** When an optional, external source with discrete 5.1 analog audio output capability such as a DVD-Audio or SACD player is used, connect that unit’s output jacks here.

**NOTE:** To assist in making the correct connections for multichannel input output and speaker connections, all connection jacks and terminals have been color coded in conformance with the latest CEA standards as follows:

Front Left: White  
 Front Right: Red  
 Center: Green  
 Surround Left: Blue  
 Surround Right: Gray  
 Surround Back Left: Brown  
 Surround Back Right: Tan  
 Subwoofer: Purple  
 Digital Audio: Orange  
 Composite Video: Yellow  
 Component Video “Y”: Green  
 Component Video “Pr”: Red  
 Component Video “Pb”: Blue

**23 Optical Digital Audio Output:** Connect this jack to the optical digital input connector on a CD-R/RW, MiniDisc or other digital recorder.

**24 Optical Digital Inputs:** Connect the optical digital output from a DVD player, HDTV receiver, the S/P-DIF output of a compatible computer sound card playing MP3 files or streams, LD player or CD player to these jacks. The signal may be either a Dolby Digital signal, a DTS signal or a standard PCM digital source.

**25 DVD Inputs:** Connect the analog left/right audio and composite or S-Video output of a DVD player or other video source to these jacks.

**26 Amplifier Trigger Jack:** Connect this jack to the compatible input trigger jack on a power amplifier or other relay controlled device. The connected product will turn on when the AVR is turned on.

**27 Multizone IR Input:** Connect the output of an IR sensor in a remote room to this jack to operate the AVR 8000’s multizone control system.

**28 Remote IR Input:** If the AVR 8000’s front-panel IR sensor is blocked due to cabinet doors or other obstructions, an external IR sensor may be used. Connect the output of the sensor to this jack.

**29 Remote IR Output:** This connection permits the IR sensor in the receiver to serve other remote controlled devices. Connect this jack to the “IR IN” jack on Harman Kardon (or other compatible) equipment.

**30 Video 1/Video 2 Inputs:** Connect the left/right audio and composite or S-Video PLAY/OUT jacks on a VCR or other video source to these jacks.

**31 Video 3/Video 4 Inputs:** Connect the left/right audio and composite or S-Video outputs of a video source such as a VCR, satellite receiver, hard drive video recorder or other device to these jacks.

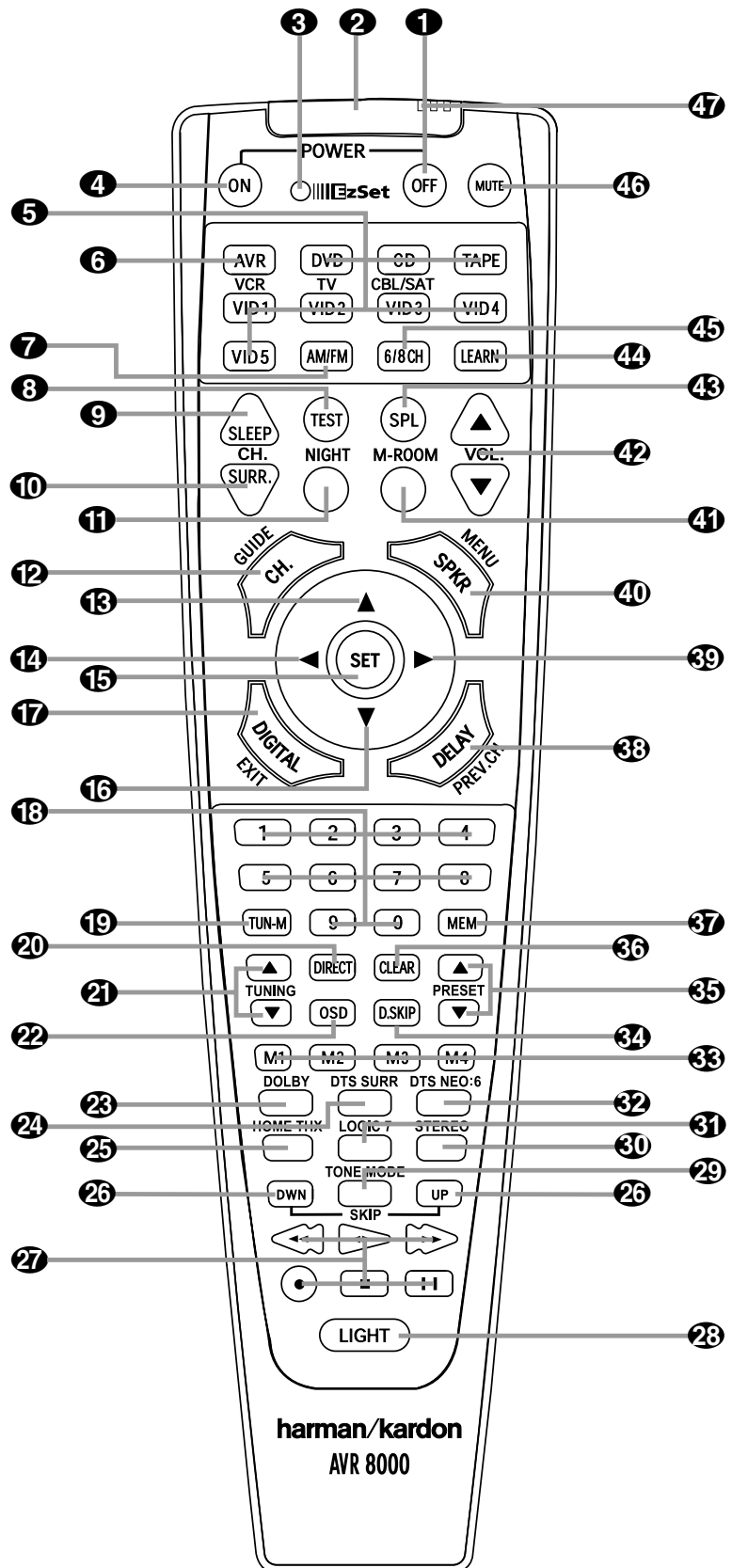
**32 Multizone Outputs:** Connect these jacks to the optional external audio power amplifier and video distribution system that delivers the source selected for multizone distribution.

**33 Video 1/Video 2 Outputs:** Connect the left/right audio and composite or S-Video Record/Input jacks on a VCR or camcorder to these jacks.

**34 Video Monitor Outputs:** Connect these jacks to the composite or S-Video input of a TV monitor or video projector to view the on-screen menus and the output of any standard video source selected by the receiver’s video switcher.

# Main Remote Control Functions

- 1 Power Off Button
- 2 IR Transmitter Window
- 3 Program/SPL Indicator
- 4 Power On Button
- 5 Input Selectors
- 6 AVR Selector
- 7 AM/FM Tuner Select
- 8 Test Button
- 9 Sleep Button
- 10 Surround Mode Selector
- 11 Night Mode
- 12 Channel Select Button
- 13 ▲ Button
- 14 ◀ Button
- 15 Set Button
- 16 ▼ Button
- 17 Digital Select
- 18 Numeric Keys
- 19 Tuner Mode
- 20 Direct Button
- 21 Tuning Up/Down
- 22 OSD Button
- 23 Dolby Mode Select Button
- 24 DTS Digital Mode Selector
- 25 THX Mode Select Button
- 26 Skip Up/Down Buttons
- 27 Transport Controls
- 28 Light Button
- 29 Tone Mode Button
- 30 Stereo Mode Select Button
- 31 Logic 7 Mode Select Button
- 32 DTS Neo:6 Mode Select
- 33 Macro Buttons
- 34 Disc Skip Button
- 35 Preset Up/Down
- 36 Clear Button
- 37 Memory Button
- 38 Delay/Prev. Ch.
- 39 ▶ Button
- 40 Speaker Select
- 41 Multiroom
- 42 Volume Up/Down
- 43 SPL Select
- 44 Learn Button
- 45 6-Channel/8-Channel Direct Input
- 46 Mute
- 47 EzSet Sensor Microphone



NOTE: The function names shown here are each button's feature when used with the AVR 8000. Most buttons have additional functions when used with other devices. See pages 44–45 for a list of these functions.

## Main Remote Control Functions

**IMPORTANT NOTE:** The AVR 8000's remote may be programmed to control up to eight devices, including the AVR 8000. Before using the remote, it is important to remember to press the **Input Selector Button 5** that corresponds to the unit you wish to operate. In addition, the AVR 8000's remote is shipped from the factory programmed to operate the AVR 8000 and most Harman Kardon CD or DVD players and cassette decks. The remote is also capable of operating a wide variety of other products using the control codes that are part of the remote. Before using the remote with other products, follow the instructions on pages 39–43 to program the proper codes for the products in your system.

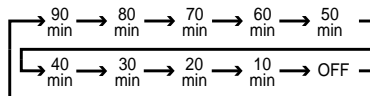
It is also important to remember that many of the buttons on the remote take on different functions, depending on the product selected using the Device Control Selectors. The descriptions shown here primarily detail the functions of the remote when it is used to operate the AVR 8000. (See page 44 for information about alternate functions for the remote's buttons.)

- 1 Power Off Button:** Press this button to place the AVR 8000 or a selected device in the Standby mode. Note that this will turn off the main room functions, but if the Multiroom system is activated, it will continue to function.
- 2 IR Transmitter Window:** Point this window towards the AVR 8000 when pressing buttons on the remote to make certain that infrared commands are properly received.
- 3 Program/SPL Indicator:** This three-color indicator is used to guide you through the process of programming the remote or learning commands from a remote into the AVR 8000's remote code memory and it is also used as a level indicator when using the remote's EzSet capabilities. (See page 24 for more information on setting output levels, and see page 39 for information on programming the remote.)
- 4 Power On Button:** Press this button to turn on the power to a device selected by pressing one of the **Input Selectors 5 6**.
- 5 Input Selectors:** Pressing one of these buttons will perform three actions at the same time. First, if the AVR 8000 is not turned on, this will power up the unit. Next, it will select the source shown on the button as the input to the AVR 8000. Finally, it will change the remote control so that it controls the device selected. After pressing one of these buttons you must press the **AVR Selector Button 6** again to

operate the AVR 8000's functions with the remote.

- 6 AVR Selector:** Pressing this button will switch the remote so that it will operate the AVR 8000's functions. If the AVR 8000 is in the Standby mode, it will also turn the AVR 8000 on.
- 7 AM/FM Tuner Select:** Press this button to select the AVR 8000's tuner as the listening choice. Pressing this button when the tuner is already in use will select between the AM and FM bands.
- 8 Test Button:** Press this button to begin the sequence used to calibrate the AVR 8000's output levels. (See page 24 for more information on calibrating the AVR 8000.)

- 9 Sleep Button:** Press this button to place the unit in the Sleep mode. After the time shown in the display, the AVR 8000 will automatically go into the Standby mode. Each press of the button changes the time until turn-off in the following order:



Once the sleep timer has been activated, note that the **Main Information Display 23** will dim to half brightness. Note that this button is also used to change channels on your TV when the TV is selected.

When the AVR 8000 remote is being programmed with the codes to operate another device, this button is also used in the "Auto Search" process. (See page 39 for more information on programming the remote.)

- 10 Surround Mode Selector:** Press this button to begin the process of changing the surround mode. After the button has been pressed, use the **▲/▼ Buttons 13 16** to select the desired surround mode. (See page 28 for more information.) Note that this button is also used to tune channels when the TV is selected using the device **Input Selector 5**. When the AVR 8000 remote is being programmed with the codes of another device, this button is also used in the "Auto Search" process. (See page 39 for more information on programming the remote.)

- 11 Night Mode:** Press this button to activate the Night mode. This mode is available in specially encoded digital sources, and it preserves dialog (center channel) intelligibility at low volume levels.

- 12 Channel Select Button:** This button is used to start the process of setting the AVR 8000's output levels to an external source. Once this button is pressed, use the **▲/▼ Buttons 13 16** to select the channel being adjusted, then press the **Set Button 15**, followed by the **▲/▼ Buttons 13 16** again, to change the level setting. (See page 34 for more information.)

- 13 ▲ Button:** This multipurpose button is used to change or scroll up through the list of items in the on-screen menus, make configuration settings such as digital inputs or delay timing, or to select surround modes. When changing a setting, first press the button for the function or setting to be changed (e.g., press the **Surround Mode Selector 10** to select a sound field mode or the **Digital Select Button 17** to change a digital input) and then press this button to scroll through the list of options or to increase a setting. The sections in this manual describing the individual features and functions contain specific information on using this button for each application.

- 14 ◀ Button:** This button is used to change the menu selection or setting during some of the setup procedures for the AVR 8000.

- 15 Set Button:** This button is used to enter settings into the AVR 8000's memory. It is also used in the setup procedures for delay time, speaker configuration and channel output level adjustment.

- 16 ▼ Button:** This multipurpose button is used to change or scroll down through the items in the on-screen menus, make configuration settings such as digital inputs or delay timing, or to select surround modes. When changing a setting, first press the button for the function or setting to be changed and then press this button to scroll down through the list of options or to decrease a setting. The sections in this manual describing the individual features and function contain specific information on using this button for each specific application.

- 17 Digital Select:** Press this button to assign one of the digital inputs **17 19 21 24** to a source. (See page 31 for more information on using digital inputs.)

- 18 Numeric Keys:** These buttons serve as a ten-button numeric keypad to enter tuner preset positions. They are also used to select channel numbers when TV, Cable or SAT has been selected on the remote, or to select track numbers on a CD, DVD or LD player, depending on how the remote has been programmed.

## Main Remote Control Functions

**19 Tuner Mode:** Press this button when the tuner is in use to select between automatic tuning and manual tuning. When the button is pressed so that the **AUTO Indicator** **J** goes out, pressing the **Tuning Buttons** **21** **10** **E** will move the frequency up or down in single-step increments. When the FM band is in use, pressing this button when a station's signal is weak will change to monaural reception. (See page 33 for more information.)

**20 Direct Button:** Press this button when the tuner is in use to start the sequence for direct entry of a station's frequency. After pressing the button, simply press the proper **Numeric Keys** **13** to select a station. (See page 33 for more information on the tuner.)

**21 Tuning Up/Down:** When the tuner is in use, these buttons will tune up or down through the selected frequency band. If the **Tuner Mode Button** **19** **16** has been pressed so that the **AUTO Indicator** **J** is illuminated, pressing and holding either of the buttons for three seconds will cause the tuner to seek the next station with acceptable signal strength for quality reception. When the **AUTO Indicator** **J** is NOT illuminated, pressing these buttons will tune stations in single-step increments. (See page 33 for more information.)

**22 OSD Button:** Press this button to activate the On-Screen Display (OSD) system used to set up or adjust the AVR 8000's parameters.

**23 Dolby Mode Selector:** This button is used to select from among the available Dolby Surround processing modes. Each press of this button will select one of the Dolby Pro Logic II modes or Dolby 3 Stereo. When a Dolby Digital encoded source is in use, the Dolby Digital mode may also be selected. (See page 28 for the available Dolby surround mode options.)

**24 DTS Digital Mode Selector:** When a DTS-encoded digital source is selected, each press of this button will scroll through the available DTS modes. The specific choice of modes will vary according to whether or not the source material contains DTS-ES 6.1 Discrete encoding. When a DTS source is not in use, this button has no function. (See page 28 for the available DTS Digital options.)

**25 THX Mode Select Button:** Press this button to select the Home THX mode that is applicable to the input type and speaker configuration in use.

**26 Skip Up/Down Buttons:** These buttons don't have a direct function with the AVR 8000, but when used with a compatibly programmed

CD or DVD changer they will change the disc currently being played in the changer.

**27 Transport Controls:** These buttons do not have any functions for the AVR 8000, but they may be programmed for the forward/reverse play operation of a wide variety of CD or DVD players, and audio or video cassette recorders. (See page 42 for more information.)

**28 Light Button:** Press this button to activate the remote's backlight for ease of use in darkened rooms.

**29 Tone Mode Button:** Press this button to turn the controls off so that the output is "flat," or to boost or lower the tone modification. The first press of this button shows whether the tone controls are active or not. Subsequent presses enable you to select the treble or bass for change by pressing the **▲/▼ Buttons** **13** **16**. Note that the tone controls only change the output for the front left/right speakers and they are not available when a THX mode is in use.

**30 Stereo Mode Select Button:** Press this button to select a stereo listening mode. The first press of the button places the AVR in a true, two-channel, left/right stereo mode with no surround processing. The next press selects either five-channel stereo or seven-channel stereo, depending on the speaker configuration.

**31 Logic 7 Mode Select Button:** Press this button to select a Logic 7 Mode. This Harman proprietary process excels at converting two channel stereo or matrix surround encoded sources into a full five, six or seven channel sound field. (See page 28 for the available Logic 7 options.)

**32 DTS Neo:6 Mode Select:** Press this button to select a DTS Neo:6 Mode. These modes take a two channel stereo or matrix surround encoded source and create a full five-, six- or seven-channel sound field. (See page 28 for the available DTS Neo:6 options.)

**33 Macro Buttons:** Press these buttons to store or recall a "Macro", which is a preprogrammed sequence of commands stored in the remote. (See page 40 for more information on storing and recalling macros.)

**34 Disc Skip Button:** This button has no direct function for the AVR 8000 but is most often used to change to the next disc in a CD or DVD player when the remote is programmed for that type of device. (See page 39 for more information on using the remote with products other than the AVR 8000.)

**35 Preset Up/Down:** When the tuner is in use, press these buttons to scroll through the stations programmed into the AVR 8000's memory. When some source devices, such as CD players, VCRs and cassette decks, are selected using the device **Input Selectors** **5**, these buttons may function as Chapter Step or Track Advance.

**36 Clear Button:** Press this button to clear incorrect entries when using the remote to directly enter a radio station's frequency.

**37 Memory Button:** Press this button to enter a radio station into the AVR 8000's preset memory. Once the **MEMORY Indicator** **G** flashes, you have five seconds to enter a preset memory location using the **Numeric Keys** **18**. (See page 34 for more information.)

**38 Delay/Prev Ch.:** Press this button to begin the process for setting the delay times used by the AVR 8000 when processing surround sound. After pressing this button, the delay times are entered by pressing the **Set Button** **15** and then using the **▲/▼ Buttons** **13** **16** to change the setting. Press the **Set Button** **15** again to complete the process. (See page 24 for more information.)

**39 ► Button:** Press this button to change a setting or selection when configuring many of the AVR 8000's settings.

**40 Speaker Select:** Press this button to begin the process of configuring the AVR 8000's bass management system for use with the type of speakers used in your system. Once the button has been pressed, use the **▲/▼ Buttons** **13** **16** to select the channel you wish to set up. Press the **Set Button** **15** and then select another channel to configure. When all adjustments have been completed, press the **Set Button** **15** twice to exit the settings and return to normal operation. (See page 21 for more information.)

**41 Multiroom:** Press this button to activate the multiroom system or to begin the process of changing the input or volume level for the second zone. (See page 38 for more information on the Multiroom system.)

**42 Volume Up/Down:** Press these buttons to raise or lower the system volume.

**43 SPL Select:** This button activates the AVR 8000's EzSet function to quickly and accurately calibrate the AVR 8000's output levels. Press and hold the button for three seconds and then release it. Note that the test tone will begin circulating, and the

## Main Remote Control Functions

**Program/SPL Indicator ③** will change colors. During this sequence, EzSet will automatically adjust the output levels for all channels until they are equal, as shown by the **Program/SPL Indicator ③** lighting green for each channel. Press this button again when the adjustment is complete to turn off the test tone. (See pages 24 and 25 for more information on EzSet.)

**④ Learn Button:** Press this button to begin the process of “learning” the codes from another product’s remote into the AVR 8000’s remote. (See page 39 for more information on using the remote’s learning function.)

**④⑤ 6-Channel/8-Channel Direct Input:** Press this button to select the device connected to the **6-Channel Direct Inputs ②②** or the **8-Channel Direct Inputs ①⑨**. (See page 35 for more information.)

**④⑥ Mute:** Press this button to momentarily silence the AVR 8000 or TV set being controlled, depending on which device has been selected. When the AVR 8000 remote is being programmed to operate another device, this button is pressed with the **Input Selector Button ⑤** to begin the programming process. (See page 39 for more information on programming the remote.)

**④⑦ EzSet Sensor Microphone:** The sensor microphone for the EzSet microphone is behind these slots. When using the remote to calibrate speaker output levels using EzSet, be sure that you do not hold the remote in a way that covers these slots. (See pages 24 and 25 for more information on using EzSet.)

## Troubleshooting Guide

SYMPTOM	CAUSE	SOLUTION
Unit does not function when Main Power Switch is pushed	<ul style="list-style-type: none"> <li>No AC Power</li> </ul>	<ul style="list-style-type: none"> <li>Make certain AC power cord is plugged into a live outlet</li> <li>Check to see whether outlet is switch-controlled</li> </ul>
Display lights, but no sound or picture	<ul style="list-style-type: none"> <li>Intermittent input connections</li> <li><b>Mute</b> is on</li> <li>Volume control is down</li> </ul>	<ul style="list-style-type: none"> <li>Make certain that all input and speaker connections are secure</li> <li>Press <b>Mute</b> button</li> <li>Turn up volume control</li> </ul>
Unit turns on, but front panel display does not light up	<ul style="list-style-type: none"> <li>Display brightness is turned off</li> </ul>	<ul style="list-style-type: none"> <li>Follow the instructions in the Display Brightness section on page 36 so that the display is set to <b>VFD FULL</b></li> </ul>
No sound from any speaker; light around power switch is red	<ul style="list-style-type: none"> <li>Amplifier is in protection mode due to possible short</li> <li>Amplifier is in protection mode due to internal problems</li> </ul>	<ul style="list-style-type: none"> <li>Check speaker wire connections for shorts at receiver and speaker ends</li> <li>Contact your local Harman Kardon service center</li> </ul>
No sound from surround or center speakers	<ul style="list-style-type: none"> <li>Incorrect surround mode</li> <li>Input is monaural</li> <li>Incorrect configuration</li> <li>Stereo or Mono program material</li> </ul>	<ul style="list-style-type: none"> <li>Select a mode other than Stereo</li> <li>There is no surround information from mono sources</li> <li>Check speaker mode configuration</li> <li>The surround decoder may not create center- or rear-channel information from nonencoded programs</li> </ul>
Unit does not respond to remote commands	<ul style="list-style-type: none"> <li>Weak batteries in remote</li> <li>Wrong device selected</li> <li>Remote sensor is obscured</li> </ul>	<ul style="list-style-type: none"> <li>Change remote batteries</li> <li>Press the AVR selector</li> <li>Make certain front panel sensor is visible to remote or connect remote sensor</li> </ul>
Intermittent buzzing in tuner	<ul style="list-style-type: none"> <li>Local interference</li> </ul>	<ul style="list-style-type: none"> <li>Move unit or antenna away from computers, fluorescent lights, motors or other electrical appliances</li> </ul>
Letters flash in the channel indicator display and digital audio stops	<ul style="list-style-type: none"> <li>Digital audio feed paused</li> </ul>	<ul style="list-style-type: none"> <li>Resume play for DVD</li> <li>Check that Digital Input is selected</li> </ul>

### Processor Reset

In the rare case where the unit's operation or the displays seem abnormal, the cause may involve the erratic operation of the system's memory or microprocessor.

To correct this problem, first unplug the unit from the AC wall outlet and wait at least three minutes. After the pause, reconnect the AC power cord and check the unit's operation. If the system still malfunctions, a system reset may clear the problem.

To clear the AVR 8000's entire system memory including tuner presets, output level settings,

delay times and speaker configuration data, first put the unit in Standby by pressing the **System Power Control Button** **2**. Next, press and hold the **Tone Mode** **3** and the **FM Mode Selector** **16** buttons for three seconds.

The unit will turn on automatically and display the **RESET** message in the **Main Information Display** **28**. Note that once you have cleared the memory in this manner, it is necessary to reestablish all system configuration settings and tuner presets.

**NOTE:** Resetting the processor will erase any configuration settings you have made for

speakers, output levels, surround modes, digital input assignments as well as the tuner presets. After a reset the unit will be returned to the factory presets, and all settings for these items must be reentered.

If the system is still operating incorrectly, there may have been an electronic discharge or severe AC line interference that has corrupted the memory or microprocessor.

If these steps do not solve the problem, consult an authorized Harman Kardon service center.

# harman/kardon

# Service Bulletin

Service bulletin # H/K2002-04 April 2002

Warranty labor rate: MINOR repair

To: All harman/kardon Service Centers

Model: AVR8000

Subject: Idle Current Adjustment Procedure

**In the event you receive an AVR8000 with the complaint “The receiver is overheating, or the protection circuit is engaging, or intermittently shutting down after the unit warms up” the DC idle current should be checked and adjusted as described below.** Top cover may feel abnormally hot to the touch.

Synopsis: Set DC idle current of output devices by adjusting five potentiometers

Specialized equipment/parts needed:

Variable AC transformer (“Variac” type) to adjust and monitor AC line voltage.

Two pin harness plug to connect DMM to idle current test points. Order hk part# 55212910NR.

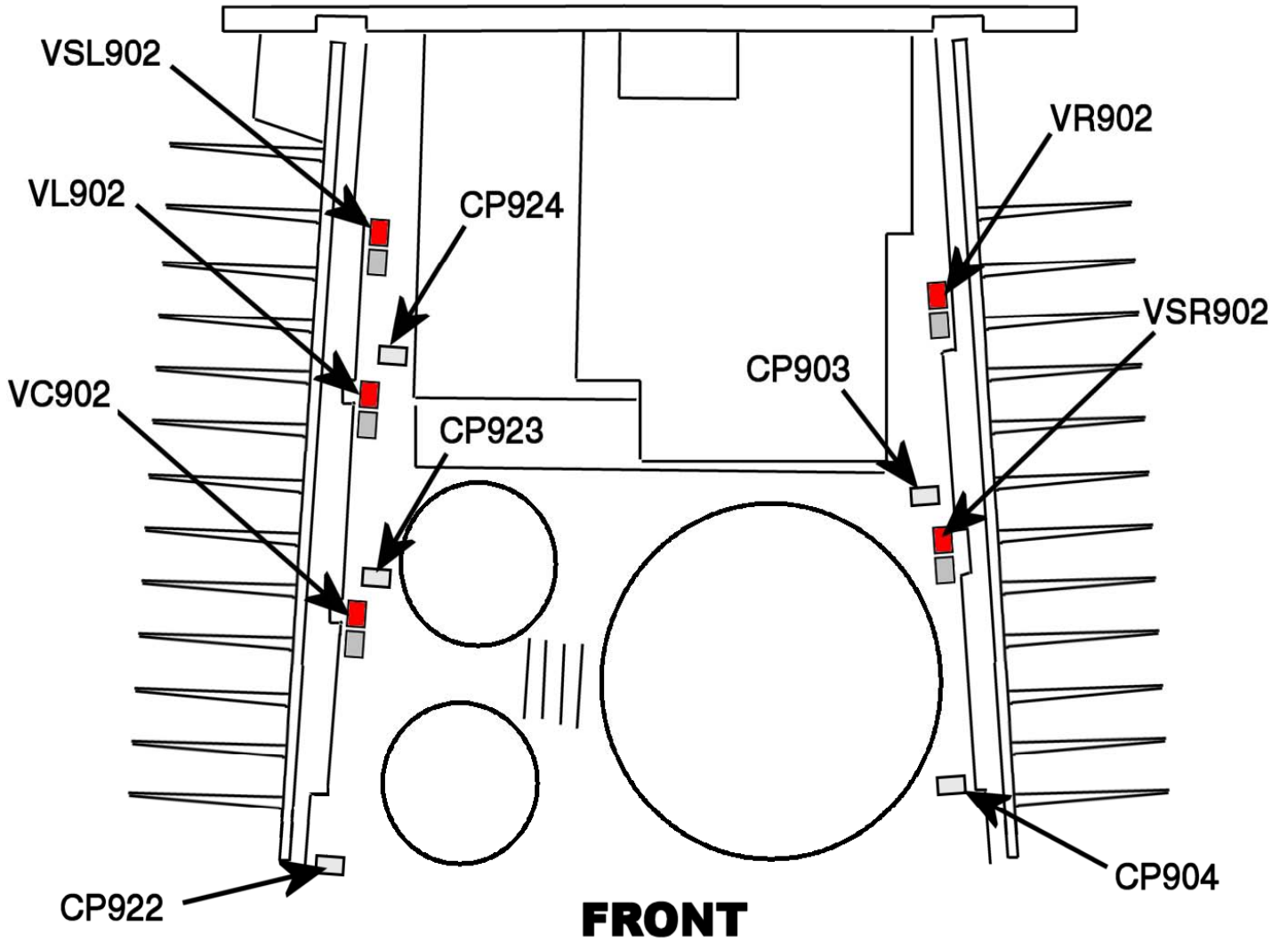
Note: Unit that no longer functions when cool may have damaged components: output transistors, resistors, diodes, etc, in the output stage *which must be replaced* before performing adjustment so protection circuit is not activated.

- 1) Unplug any external connected cables to the AVR8000.
- 2) Remove the top cover, (18) black Phillips screws.
- 3) Locate the five idle current-current adjustment potentiometers (see illustration page 2). Facing the front of the AVR8000, they are located on the left and right sides of the unit along the top of the vertical PCB's. They are also marked on the PCB's “Idle-Adj.”
- 4) The white 2 pin Connectors (test points) and their related adjustment pots are referenced below. First, with the unit turned OFF, adjust with a small screwdriver so that all idle current pots are “centered”.

Test Point (Check with DMM)		Adjust Idle current Pot
CP903	Affected by	VR902
CP904	Affected by	VSR902
CP922	Affected by	VC902
CP923	Affected by	VL902
CP924	Affected by	VSL902

**Do not confuse the idle current adjustments with the DC offset adjustment pots which are located directly adjacent to them !**

- 5) Replace the top cover (no screws); turn unit ON. Unit should be connected to a “Variac” type (variable transformer) adjusted to 120VAC. Let receiver idle with no load, no signal input, and volume control at minimum (full CCW), for five minutes to stabilize the amplifiers.
- 6) Remove cover again. Plug in the two pin harness plug at first test point and connect to DMM set on the mV scale. Check and adjust AC line voltage to 120 volts again if necessary. Using a non-metallic screwdriver, adjust each of the idle current pots, one at a time, in the following manner: The final desired voltage at each test point is **10.5 mV**, but you should arrive at this voltage by reducing a higher amount in 25% increments with each adjustment, with the final adjustment set at 10.5 mV. This adjustment should be made gradually in steps, so the amplifiers will have time to stabilize. Repeat this procedure at least three additional times, each time replacing the top cover (no screws necessary), and letting unit idle turned ON for at least five minutes between each adjustment. Monitor the AC line voltage and adjust to 120 volts when necessary.
- 7) If a wattmeter is available, total wattage drawn from line should be 165 to 170 watts at idle.
- 8) Replace the top cover and screws after the final adjustment.



Model	Serial Number (120v)	Status	Action
AVR8000	TH0036-1001 to TH0036-4101	DC idle current of output devices may need adjustment	Adjust DC idle current
AVR8000	TH0036-4102 and above	Preset at Factory	NONE REQUIRED



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**harman/kardon****Service Bulletin**

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Service bulletin # H/K2004-01 Rev1 March 2004

Warranty labor rate: MINOR repair

To: All harman/kardon Service Centers

Model: AVR8000

Subject: DVD Surround Mode Switches to Stereo

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When DVD software is being mastered, the producer has the option to choose which audio formats are used, and the time intervals when they present themselves. For example, a typical DVD may utilize Dolby Digital 2.0 (2 channel) audio format in the initial screen. A typical first screen may include menu choices such as: *Special Features, Audio Setup, Directors Cuts, and Play Movie*. This remains on-screen until the user makes a selection, and normally would be "Play Movie". At this point, the producer may decide to switch from Dolby Digital 2.0 to Dolby Digital 5.1. If this time interval is too short, as it is on a small number of DVD titles, the surround DSP processor in early AVR8000's may stay in Dolby Digital 2.0 (stereo), rather than switch to Dolby Digital 5.1 when the program begins, even though the front panel indicators on the unit may imply 5.1 is in effect. In this condition, this will not be a true stereo mode and music information will be lost, and *not* added to the stereo loudspeakers.

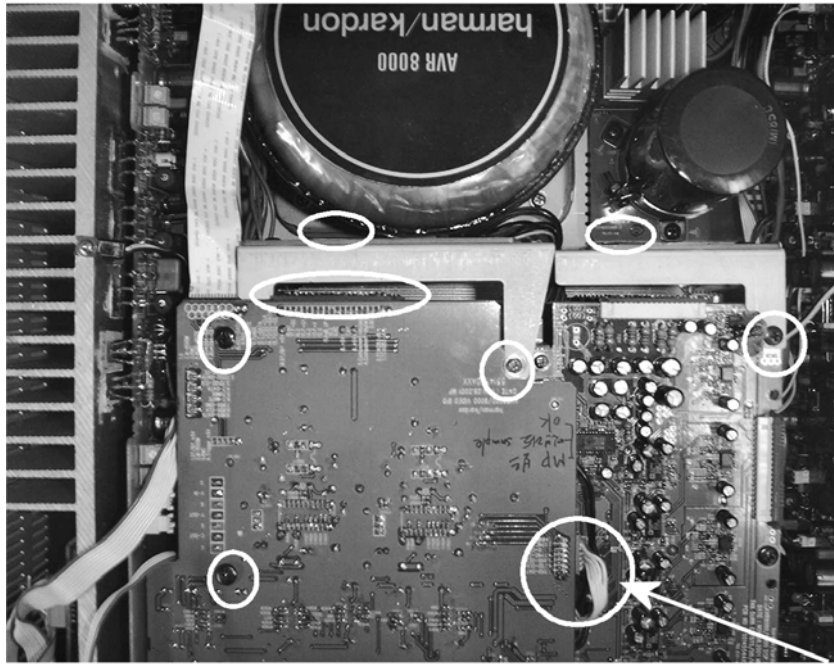
**In the event you receive an AVR8000 AV receiver with the complaint: "When I play a DVD with a player that's connected to the AVR8000 digital inputs, the receiver stays in stereo mode once the DVD starts playing, when it should be playing Dolby Digital 5.1", perform the modification below:**

Synopsis: Change IC100 on the DSP sub-PCB.

**CAUTION: IC100 is an electrostatically sensitive device** and can be damaged by careless handling; follow proper static control procedures to prevent damage to the module.

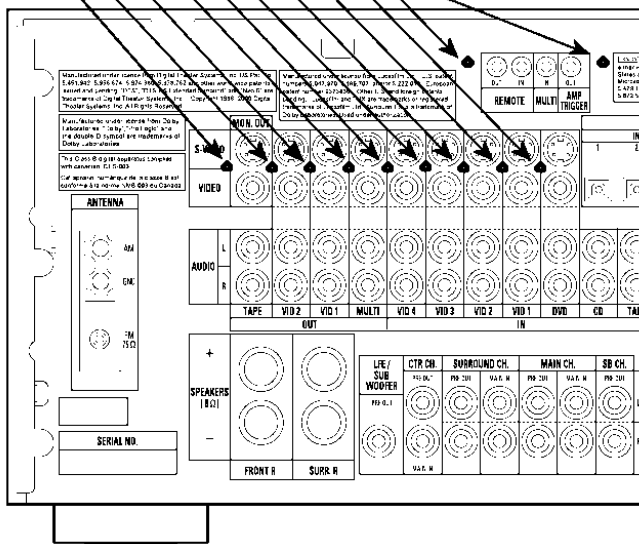
- 1) Unplug any external connected cables to the AVR8000, particularly the POWER cord.
- 2) Remove the top cover, (18) Black Phillips screws.
- 3) Locate and remove the metal shield located between the PCB's and the power transformer (See figure 1); remove the (2) bottom Phillips screws first. A long shaft Phillips screwdriver is required, and magnetic blade preferred. Then remove the (2) Phillips upper screws; remove the shield from the unit.
- 4) At the rear of the AVR8000, remove the (2) black Phillips screws holding the IR Remote PCB to the rear cover; set the PCB aside, with cable still attached; remove the (9) black Phillips screws holding the Video PCB to the rear cover. (See figure 2)
- 5) Remove the 7 conductor amber colored Molex plug (CP602) from the right side of the Video PCB.
- 6) Remove the final top (2) Phillips screws holding the Video PCB on.
- 7) Push the narrow vertical connector PCB away from the rear of the Video PCB, disengaging it from the Video PCB (and the Input PCB).
- 8) Lift the Video PCB, with ribbon cable attached, out of the unit and set it aside.
- 9) Carefully unplug and remove the IC100 module, pulling straight up; the connector and pins are on the left side so more effort is required there.
- 10) Replace IC100 with h/k part# 55229550DPS; CAUTION – after replacement, make sure module is inserted correctly – On PCB the lettering "TOP SIDE UP" should be facing the rear of the unit. Do not force into place or bend pins, and make sure the socket is engaging all pins correctly.
- 11) Reassembly: follow instructions above in reverse order, assuring module, screws, molex connector, vertical PCB, and shield/support is replaced. The metal shield has two "locator pins" at the bottom; make sure they are replaced in the holes designed for them at the bottom of the chassis. Replace IR Remote PCB and all screws at the rear of the unit; replace cover. When replacing the screws, use caution and do not over-torque as you may strip the plastic receptacles.
- 12) Test the AVR8000 by re-connecting to the DVD player and playing the exact DVD disc that the problem had occurred in, and assure the receiver stays in Dolby Digital 5.1 when the program is played.

**FIGURE 1 SCREWS/CONNECTORS TO REMOVE**

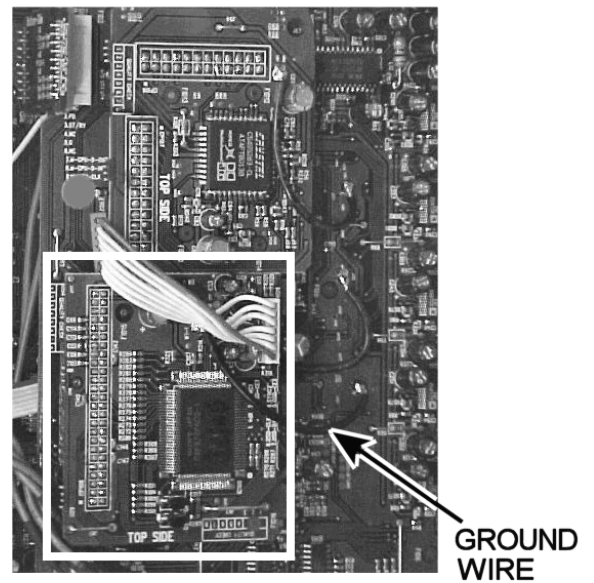


**CP602 MOLEX PLUG**

**REMOVE THESE SCREWS** **FIGURE 2**



**FIGURE 3**



Model	Serial Number (120v)	Status	Action
AVR8000	TH0036-01001 to TH0036-02203	Surround mode switches to stereo when playing certain DVD's	Change IC100 module Change in software from 5.0 to 5.1
AVR8000	TH0036-02204 and above	Modified by Factory	None Required

# harman/kardon

# TECH TIPS

## Troubleshooting tips and solutions to common service problems

For models: AVR8000

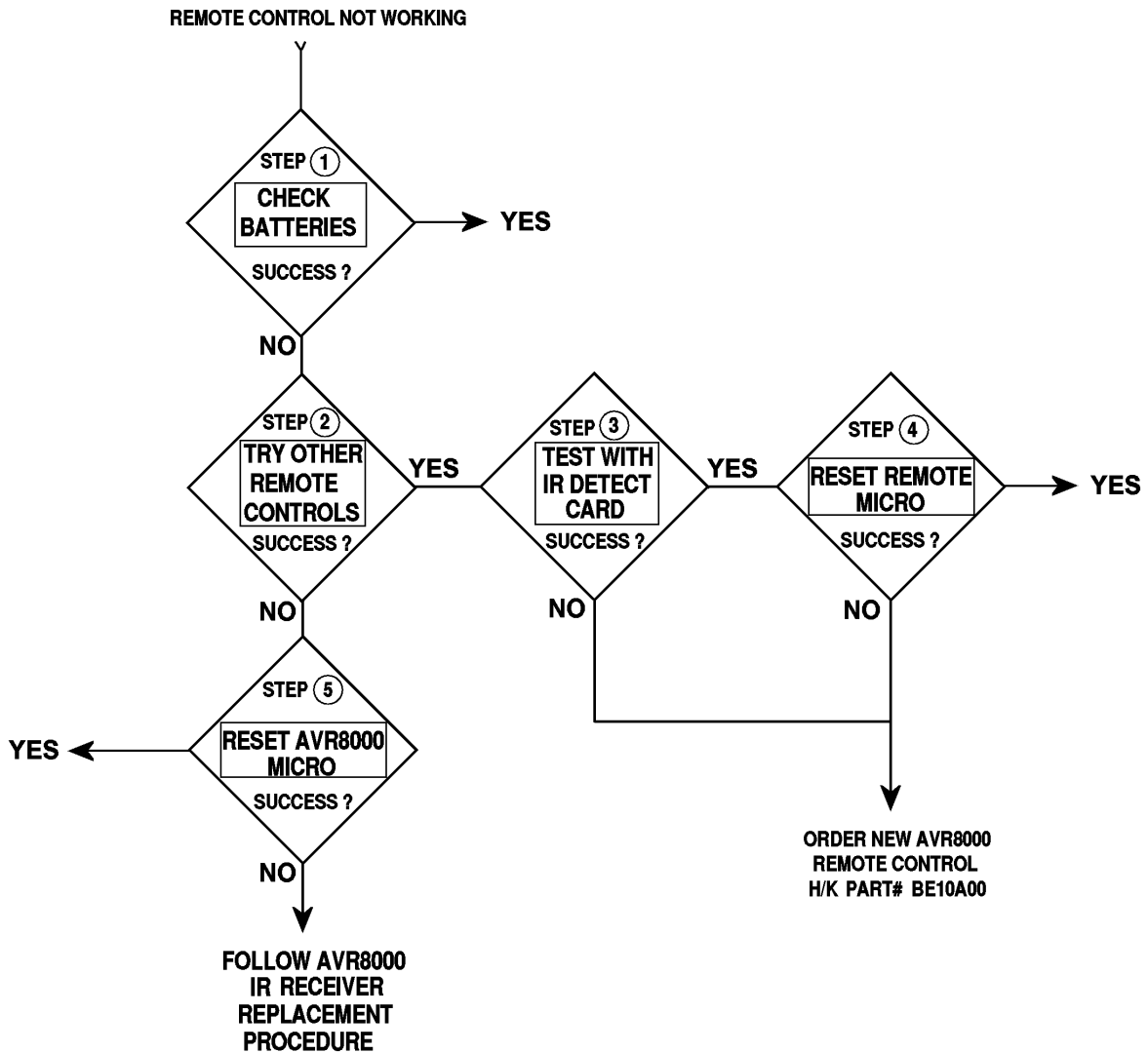
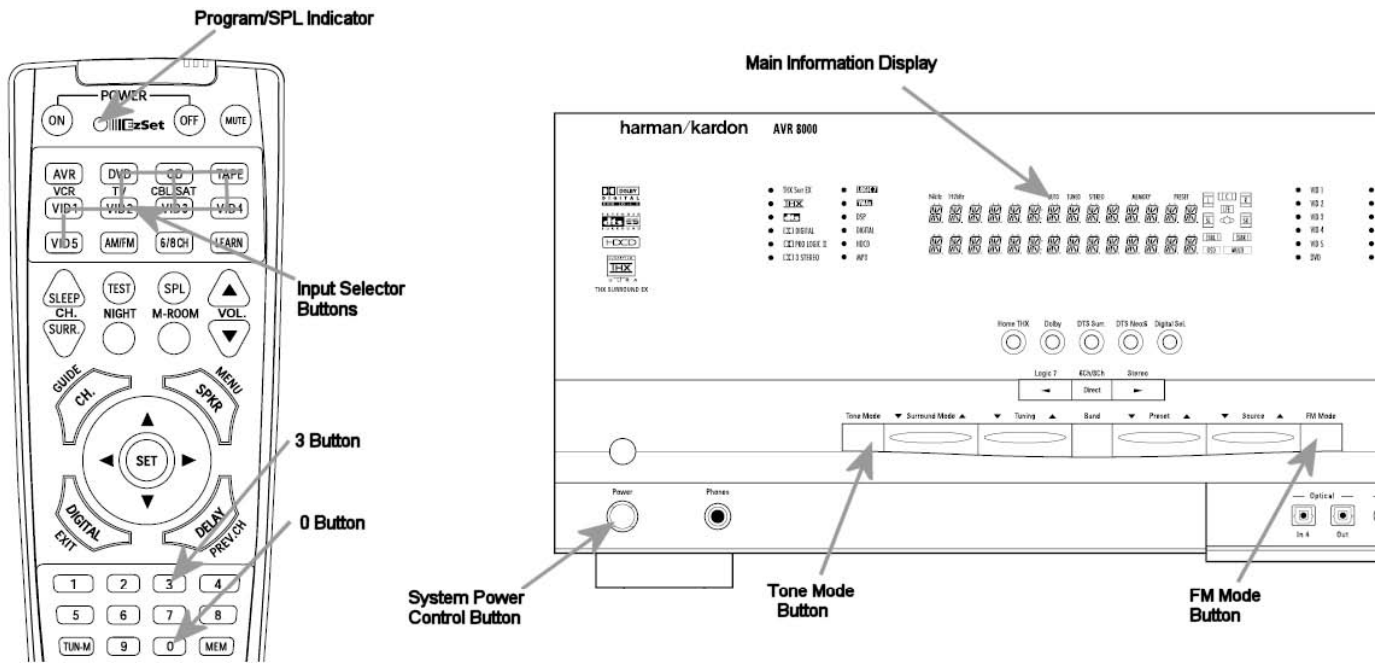
TIP# HKTT2002-02

### Complaint:

Remote control seems to have stopped working

### Solution(s):

- 1) Remove the batteries and confirm they are not weak or defective. If battery voltage in either battery is less than 1.4 volts, replace both batteries in the Remote Control. Assure batteries are inserted correctly.
- 2) If the Remote Control still cannot control the AVR8000: if available, see if the AVR8000 zoneII, or another AVR8000 or AVR7000 remote control will operate the basic functions on the receiver. If the AVR8000 does not respond, skip to step #6 to perform a system reset of the microprocessor.
- 3) Use a InfraRed detector/test card to see if there is an output from the Remote Control. If there is no output, order new remote control, h/k part# BE10A00.
- 4) If an output is detected, but it still will not control the receiver, follow steps a-e to reset the microprocessor in the Remote Control. Note, however, that once it's reset, all special commands or codes that were entered will be erased, and the Remote will be reset to factory default. *You do not have to point the Remote Control at the receiver during this procedure:*
  - a) Press any of the **Input Selector Buttons** and the **0 Button** at the same time until the **Program/SPL Indicator** begins to flash amber.
  - b) Press the **3 Button** three times.
  - c) The red LED under the **Input Selector** will go out; the **Program/SPL Indicator** will stop flashing and turn green.
  - d) The **Program/SPL Indicator** will remain green until the remote is reset. Note that this may take awhile, depending on how many commands are in the memory and need to be erased.
  - e) When the **Program/SPL Indicator** goes out, the remote has been reset to the factory settings.
- 5) If the Remote Control still does not control the receiver, (and other Remote Controls are successful), order new remote control, h/k part# BE10A00.
- 6) If *any* h/k Remote Control mentioned in Step #2 will not control the receiver, follow steps a-c to reset the microprocessor in the AVR8000:
  - a) Unplug the unit from the AC wall outlet and wait at least three minutes. After the pause, reconnect the AC power cord.
  - b) Make sure the unit is in Standby mode by pressing the **System Power Control Button**; the unit is placed in a **Standby** mode, as indicated by the AMBER Indicator.
  - c) Next, press and hold the **Tone Mode** and the **FM Mode Selector** buttons for three seconds. The unit will turn on automatically and display the **RESET** message in the **Main Information Display**. NOTE: Resetting the processor will erase any configuration settings that were made for speakers, output levels, surround modes, digital input assignments, and the tuner presets. All settings for these items must be reentered.
- 7) If the Remote Control still does not control the receiver, follow the instructions on Page 3 to replace the AVR8000 IR Receiver/Sensor. *Optional:* You can check for an output at the IR Output jack at the rear panel of the receiver, when a Remote Control command is attempted. A connection can be made from a "test cable" consisting of a 1/8" mono mini-jack plugged into the REMOTE OUT jack, attached to an oscilloscope at the opposite end.



## AVR8000 IR RECEIVER/SENSOR - REMOVE AND REPLACE

***Caution: Must use ESD procedures (grounding wrist strap) at all times to prevent microprocessor damage!***

- 1) Unplug any external connected cables to the AVR8000.
- 2) Remove the top cover, (18) black Phillips screws.
- 3) Remove all front panel assembly (11) screws.
- 4) Cut plastic wire ties (2) on top left section of front panel assembly.
- 5) At top left corner of chassis, remove the (2) screws holding (2) wires and metal bracket.
- 6) Remove (2) screws holding ground lugs to top left front heat sink.
- 7) Remove (1) plug consisting of red and black wires from AC switch.
- 8) Remove (2) screws holding mounting bracket for Headphone assembly.
- 9) Lay front panel assembly face down on a soft cloth to protect from damage.
- 10) Remove all (14) screws holding display PCB to front panel assembly.
- 11) Remove and replace IR Receiver RM701, h/k part# 55155930NR, located just below the display tube on the left side.
- 12) Follow instructions in reverse order to reassemble. Replace cable ties where necessary.

**harman/kardon****TECH TIPS****Troubleshooting tips and solutions to common service problems**

For models:

TIP# HKTT2003-01 Rev5

AVR7000/7200/7300/8000	AVR10
AVR100/200/300/500	DPR1001
AVR110/210/310/510	DPR1005
AVR120/220/320/520	DPR2005
AVR125/225/325/525	HK3370/3470/3375/3475
AVR130/230/330/430/630	HK3250
AVR135/235/335/435/635	

**Subject:** Backup Memory on AVR/DPR/HK series receivers

**In the event of the complaint: “the receiver is losing its memory (any programmed system settings) when the unit is turned off, or after the unit is unplugged (briefly\*)”:**

Check and replace:

Model	Designator	Location	Description	Part number
AVR10	C712 D709	Front PCB	0.047 Farad 5.5v capacitor and 1N4148 diode	#3439247315 #2058322101
AVR7000	C730	Front PCB	0.047 Farad 5.5v capacitor	# P10790-ND or # J3432147324X
AVR7200	C106	Front PCB	0.047 Farad 5.5v capacitor	# P10790-ND
AVR7300	C657	DSP PCB	0.047 Farad 5.5v capacitor	# H01-CEZXA0479MN-5
AVR8000	C726	Front PCB	0.047 Farad 5.5v capacitor	# 55230310NR or # P10790-ND
AVR100/200	C412	Front PCB	0.047 Farad 5.5v capacitor	# CEGT-B473J-0J0
AVR300	C906	Front PCB	0.1Farad 5.5v capacitor	# J4433210421X or # P10791-ND
AVR500	C906	Front PCB	0.1Farad 5.5v capacitor	# J4433210421X or # P10791-ND
AVR110/210/310/510 AVR120/220/320/520	C216	Front PCB	0.047 Farad 5.5v capacitor	# P10790-ND
AVR125/225	C734,C885	Front PCB	two 0.1F capacitors in parallel	# BCESOHD104
AVR325/525	C106	Front PCB	0.047 Farad 5.5v capacitor	# P10790-ND
AVR130/230/330	BAT1	Front PCB	3.6v Battery	# HABGP40BVH3A3H
AVR135/235/335	BAT1	Front PCB	3.6v Battery	# HGP15BNH3A3H
AVR430/630	C657	DSP PCB	0.047 Farad 5.5v capacitor	# CEZXA0479MN-5
AVR435/635	C557	DSP PCB	0.047 Farad 5.5v capacitor	# H03-CEZXA0479MN-0
DPR1001	BC601	Main PCB	0.1Farad 5.5v capacitor	# CEGT-B104J-0J0
DPR1005/2005	C437	Processor PCB	0.047 Farad 5.5v capacitor	# CEZXA0479MN-5
HK3370/3470	C301	Front PCB	0.1Farad 5.5v capacitor	# CEGT-B104J-0J0
HK3375/3475	C301	Front PCB	0.1Farad 5.5v capacitor	# CEGT-B104J-0J0
HK3250	C712 D709	Front PCB	0.047 Farad 5.5v capacitor and 1N4148 diode	#3439247315 #2058322101

\* After approximately two weeks of being disconnected from AC supply, even a normally functioning receiver may lose any programmed settings and switch to default settings. (Four weeks for the DPR1005 & 2005)

## AVR8000 DC OFFSET ADJUSTMENT

Function : 6CH DIRECT INPUT

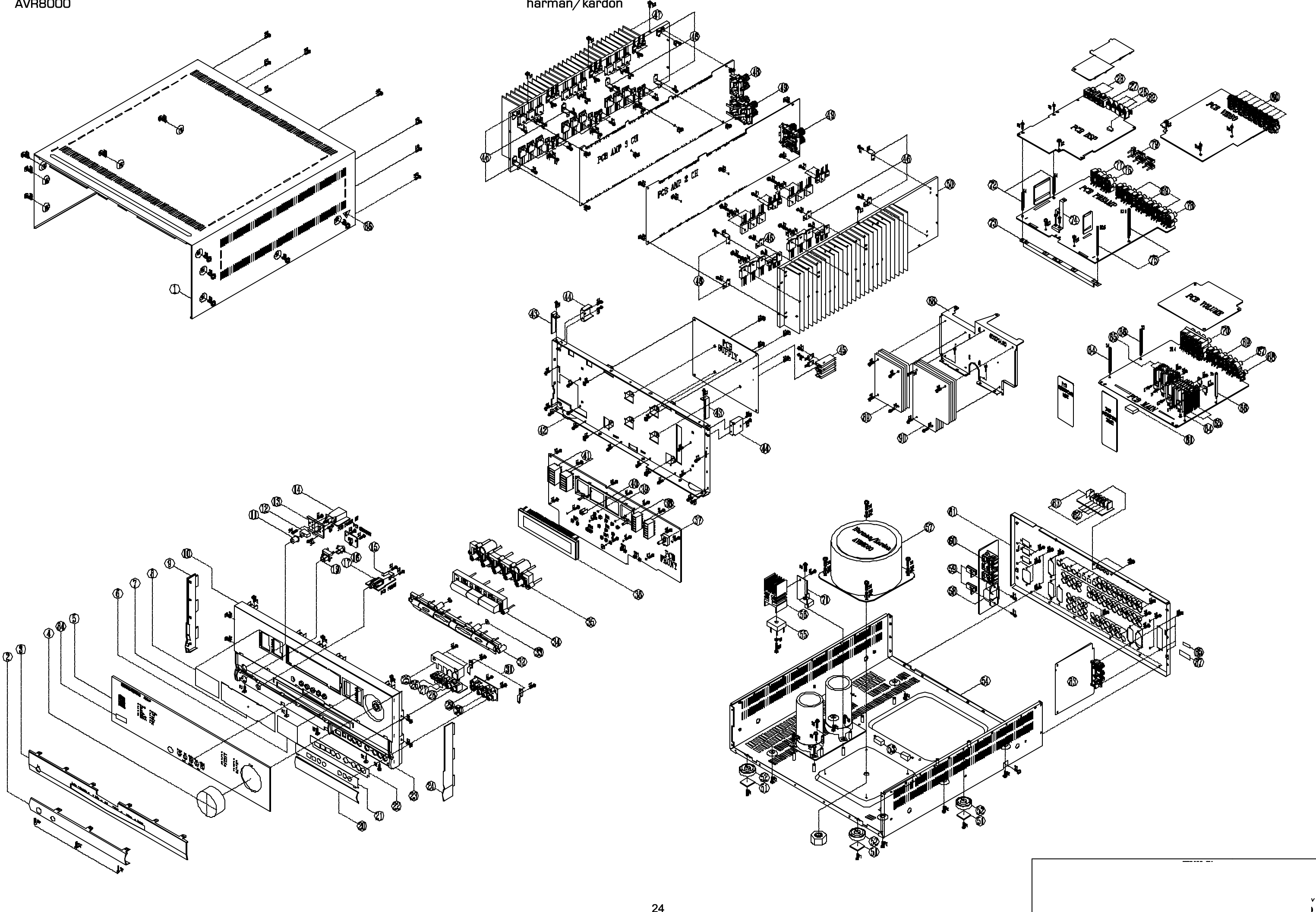
Volume level:minimum

Test position:Speaker out terminal (between "+" and "-") speaker jack  
No load

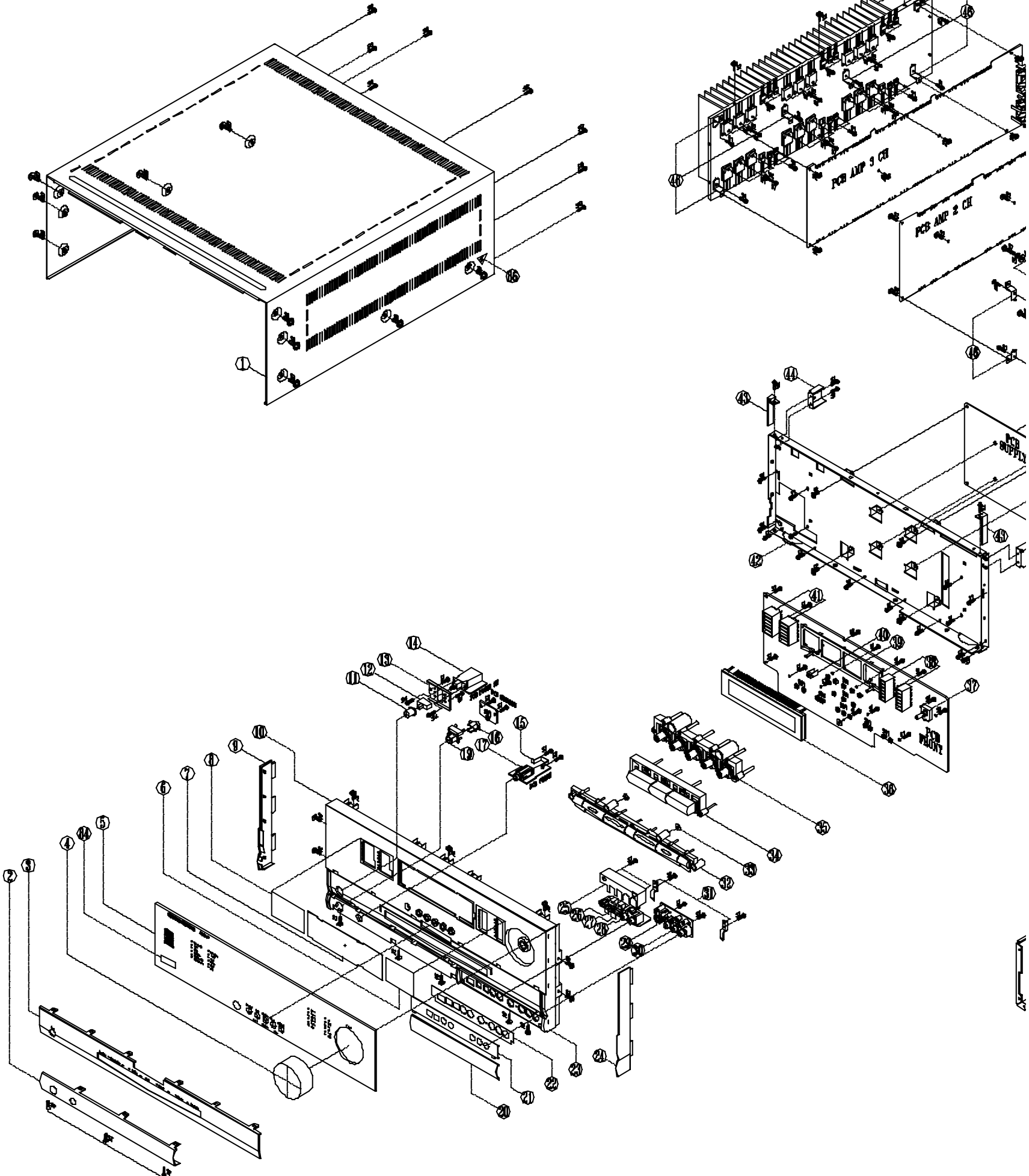
- a. Turn Power ON
- b. Align to  $0\pm 5\text{mV}$

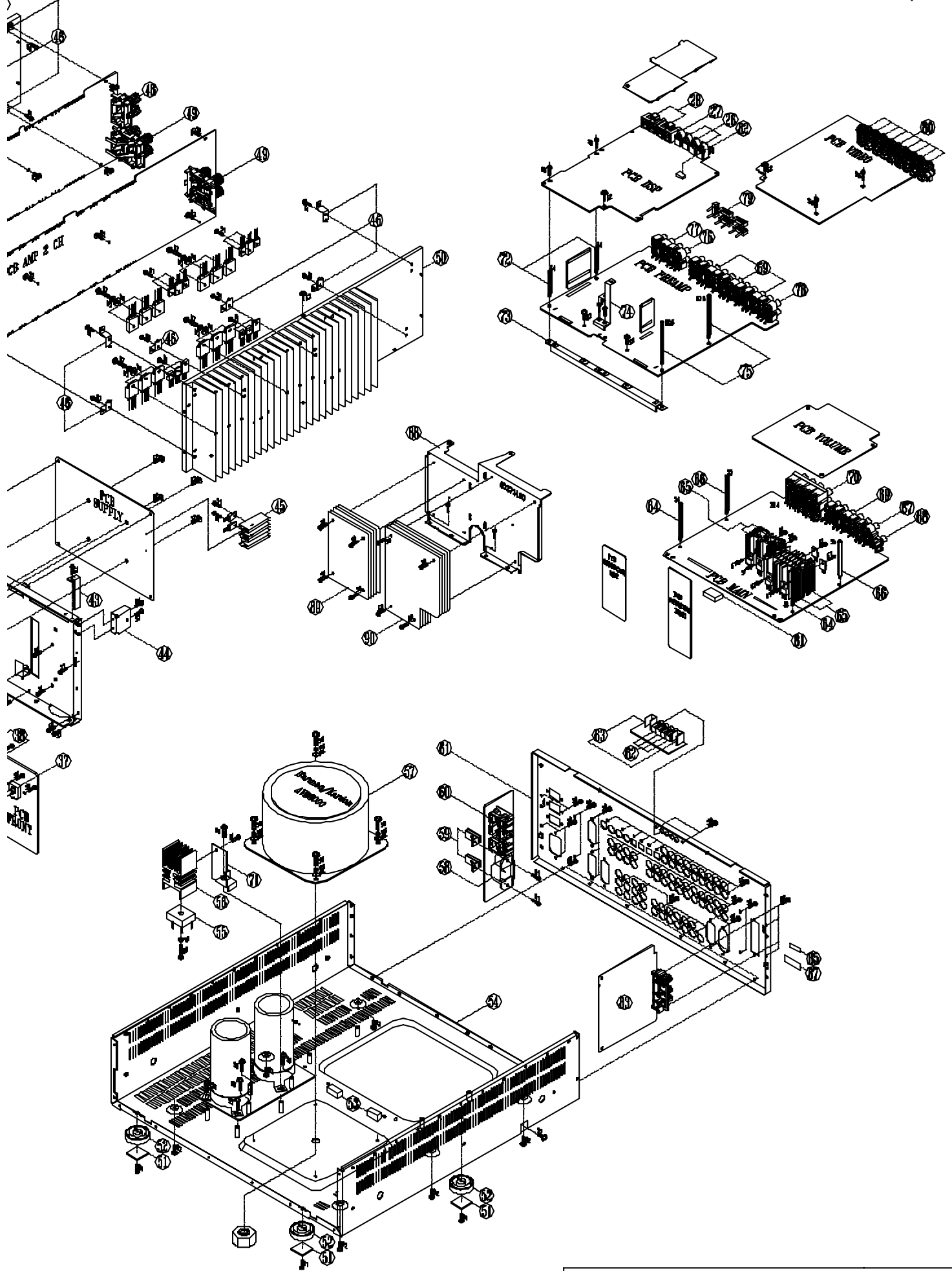
Channel	Check point	Adjustment Location	Adjustment value
CENTER CH	CTR SPEAKER	VC901(3channel AMP)	$0\pm 10\text{mV}$
FRONT L CH	FL SPEAKER	VL901(3channel AMP)	$0\pm 10\text{mV}$
REAR L CH	SL SPEAKER	VSL901(3channel AMP)	$0\pm 10\text{mV}$
FRONT R CH	FR SPEAKER	VF901(2channel AMP)	$0\pm 10\text{mV}$
REAR R CH	SR SPEAKER	VSR901(2channel AMP)	$0\pm 10\text{mV}$

- c. After 5 Min. Repeat at  **$0\pm 20\text{mV}$**









55281740XX

## AVR8000 EXPLODED VIEW PART LIST

NO	Tocom#	Pkg	Qty	SName
1	55230660		1	AC PUN COVER TOP AVR8000
2			1	AC CPL CABINET PANEL BOTTOM AVR8000
3	55230400		1	AC CPL CABINET PANEL TOP AVR8000
4	55230470		1	AC DEC KNOB MAIN HIPS AVR8000
5	55230390		1	AC DEC CRYSTAL WINDOW VFD AVR8000
6	55177990		1	AC NON-METAL DIFFUSER 0.2T 59.6*41 WH
7	55191550		1	AC NON-METAL DIFFUSER PC PLATE 0.2T 65*41 4-R2 WH
8	55177800		1	AC DEC CRYSTAL FILTER DISPLAY
9	55230280		1	AC DEC ENDCAP LEFT HIPS AVR8000
10	55229930MS		1	AC DEC CABINET BODY FRONT HIPS AVR8000
11	55177810		1	AC DEC BUTTON POWER HIPS DVD10
12			1	AC MLD HOLDER GUIDE POWER SW AVR800
13	55230510		1	AC PUN BRACKET SW POWER AVR8000
14	55231290		1	SWIPUSH POWER SWITCH 8.0A 250.0V 100M100HM 1T 2P
15	55124350		1	AC PUN BRACKET HEADPHONE RT2280/RT2250(PAV5007/5005)
16	55178020		1	AC MLD BUTTON INDICATOR STAND-BY AVR520
17	55088400		1	CONN-PHJAC 6.35 ST HORZ EST-J6313 BK 0 0
18				BLANK
19	55177820		1	AC DEC BUTTON STANDBY
20	55230420		1	AC CPL DOOR AL AVR8000
21	55230040MP		1	AC MLD HOLDER DOOR BASE AVR8000
22	55230060		1	AC DEC COVER PLATE FUNCTION AVR8000
23				BLANK
24	55230320		1	AC DEC ENDCAP RIGHT HIPS AVR8000
25			1	AC PUN SHIELD BKT DIGITAL AVR8000
26	55204550NR		4	IC-SPECFUNC TORX179 FIBER OPTIC RECEIVING MODULE
27	55204560NR		2	IC-SPECFUNC TOTX179 FIBER OPTIC TRANSMITTING MODULE
28	55230650		1	CON PHONO SCKT RCA 2P JW1502RSG
29	55191990		1	CON PHONO SCKT S-VIDEO 1P C4016D26AG ALL GOLD
30	55335050		1	CON PHONO SCKT RCA 3P YWR JK030008AG W/GNDCAP ALL GOLD
31			2	AC PLASTIC MLD HINGE DOOR AVR8000
32	55230130		1	AC DEC BUTTON 7 KEY AVR8000
33	20372510		3	WASHER 3.5MM 9.0MM 0.4MM N/A 00 0 0
34	55577360		1	AC DEC BUTTON 3 KEY AVR8000
35	55230200		1	AC DEC BUTTON 5 KEY AVR8000
36	55142780NR		1	DISPLAY HNA-15LL01
37	55233150NR		1	SWIROT EC16B24204 5V 500U0A 10T 3P 0 0
38	55178940		2	AC PLASTIC MOLD REFRACTOR E WH
39	55178440		1	AC MLD HOLDER FL-GUIDE HIPS 94HB AVR520
40	55155930		1	IC-REMOTE RPM6938-RSIP-A3 RECEIVER 38KHZ
41	55191530		2	AC PLASTIC REFRACTOR L AVR8000 WH T
42			1	AC CPL CABINET CHASSIS FRONT AVR8000
43			2	AC PUN BRACKET TOP AVR8000
44			2	AC PUN BRACKET SIDE SECC1.0T AVR8000
45	55176380		1	AC METAL HEATSINK REG
46	55168710		12	AC PUN BRACKET HEATSINK SECIT RT2250(PAV5005)
47	55220790		1	AC METAL HEATSINK(3 CH) AL6063-T5 EXT 6.5T AVR8000
48	55195530		1	CONN-SPE TERMINAL SPKR 2P B30290186G FE 19MM 2 GN 0 0
49	55195520		1	CONN-SPE TERMINAL SPKR 4P B30490196G FE 19MM 4 BU 0 0
50	55231220		1	AC METAL HEATSINK POWER 2CH AVR8000
51	55178110XX		4	AC FOOT ASSY ROUND 12.5MM 50MM NOT DEFINED Y DIA
52	55174760		4	AC FOOT RUBBER ROUND 3.0MM 25.0MM JIS 60 Y DIA
53	55231000		1	AC PAD CUSHION RUBBER AVR8000
54			1	AC CPL CABINET CHASSIS MAIN AVR8000
55			1	D-BRDHC KBPC3504W 400.0V

NO.	Tocom#	Pkg	Qty	SName	Comment
56			1	AC METAL HEATSINK BRIDGE 34.4*28.5*64H AL6063S-T5	
57	55233130		1	TF-LAM POWER-TRANSFORMER 120V	J2822210014X
58	55222010		1	CON MAINS INLET A/C INLET 7014-NGP	J44910000109
59	55222020		2	AC PUN BRACKET AC INLET	J60300070100
60	55231540		1	CONN-SPE -- AC OUTLET UL AVR8000 NA 2	J44900000000
61	55230730		1	AC CPL CABINET PANEL REAR SECC AVR8000	J60110013000
62	55176390		4	CON PHONO SCKT STEREO JACK JW350S	J44333000001
63	55176420		2	AC PUN BRACKET BKT GROUND ET 0.5T AVR520	J60300028000
64	55231280		2	SCREW-SPEC 6MM 54MM	J70800000200
65	55194550		4	AC METAL HEATSINK 60*20*50H AL6063S-T5	-----
66	55231300		2	SCREW-SPEC 6MM 55MM	J70800000300
67	55191490		1	CON PHONO SCKT RCA 6P JW-4105RSDG	-----
68	55197890		1	CON PHONO SCKT RCA 1P JACK W/G CAP GOLD JE010003TG PP	-----
69	55191500		1	CON PHONO SCKT RCA 6P JW-4105RSEG	-----
70	55230590		1	CON PHONO SCKT RCA 12P RX4 BX4 JW4012RSG	J4430A000101
71			1	AC PUN BRACKET HEATSINK BRIDGE	-----
72	55231260		2	SCREW-SPEC 6MM 34MM	J70800000100
73			1	AC PUN BRACKET PREAMP PCB AVR7000	-----
74			1	AC PUN BRACKET SUPPORT SECC AVR8000	J60300013000
75	55231310		2	SCREW-SPEC 6MM 62.6MM -- 53 0 0	J70800000400
76	55191440		1	CON PHONO SCKT RCA 4P JW-4104RSCG	-----
77	55191430		1	CON PHONO SCKT RCA 4P JW-4104RSAG	-----
78	55230680		1	CON PHONO SCKT RCA 4P WWRR	J44304000801
79	55182890		5	CONN-SPE JUMPER PLUG 2PIN ABS-NI MA 14MM 2 BK 0 AO	J94100001000
80	55230740		9	CON PHONO SCKT RCA +5 -VIDEO	J44312000400
81			1	AC BUFFER PCB	J97200501000
82			1	AC BUFFER PCB 20*9*7	J5541003020Y
83	55231340		1	AC MSA ASY TUNER MODULE US AVR8000	J4099100070X
84			1	AC PRI LABEL "PLEASE" AVR520	J90300007000
85			1	AC PRI LABEL DATE	J97100502000
86			1	AC PRI LABEL RISK CDRW1211	J97100503000
87			1	AC PRI LABEL SERIAL AVR8000	J90400041140
88			1	AC PUN BRACKET SHIELD EMI	-----
89			5	AC PUN SHIELD PLATE S	J60600015000
90			5	AC PUN SHIELD PLATE L	J60600016000
SW1	55145270			SWITACT VERTICAL TACTILE F/B 50M0A 12.0V 500M100HM 1T 1P	J46500500501
TIE			16	CABLE-FIX WIRE-TIE MELLERMAI TYPE T18R 0 0	-----
51	55127070		56	SCREW-ST 3MM 10MM	-----
52	55127120		45	SCREW-ST 3MM 8MM	-----
53	55127090		10	SCREW-ST 4MM 8MM	-----
54	55164810		2	SCREW 3MM 6MM	J81000300810
55	55231250		10	SCREW-ST 4MM 8MM	J81000400810
56	55127290		1	SCREW-ST 3MM 18MM	J80600031810
57	55178320		55	SCREW-ST 3MM 12MM	JAVR7000SCRW
58	55127270		4	SCREW-ST 4MM 10MM	-----
59	55127280		8	SCREW-ST 3MM 6MM	-----
SF	55127180		3	SCREW-ST 3MM 8MM	J80200300810
SG	55135460		69	SCREW-SPEC 3MM 10MM	-----
W1	55127310		30	WASHER 3.3MM 8.0MM 0.5MM	-----
W2	55127300		55	WASHER-SPR 3.0MM 5.0MM 1.0MM	-----
W3	55168690		4	AC SPRING WASHER	J5541001030X
W4	55131730		4	WASHER 4.8MM 12MM 1.0MM	J5541001040X

# AVR 8000 DISASSEMBLY TIPS



Figure 1

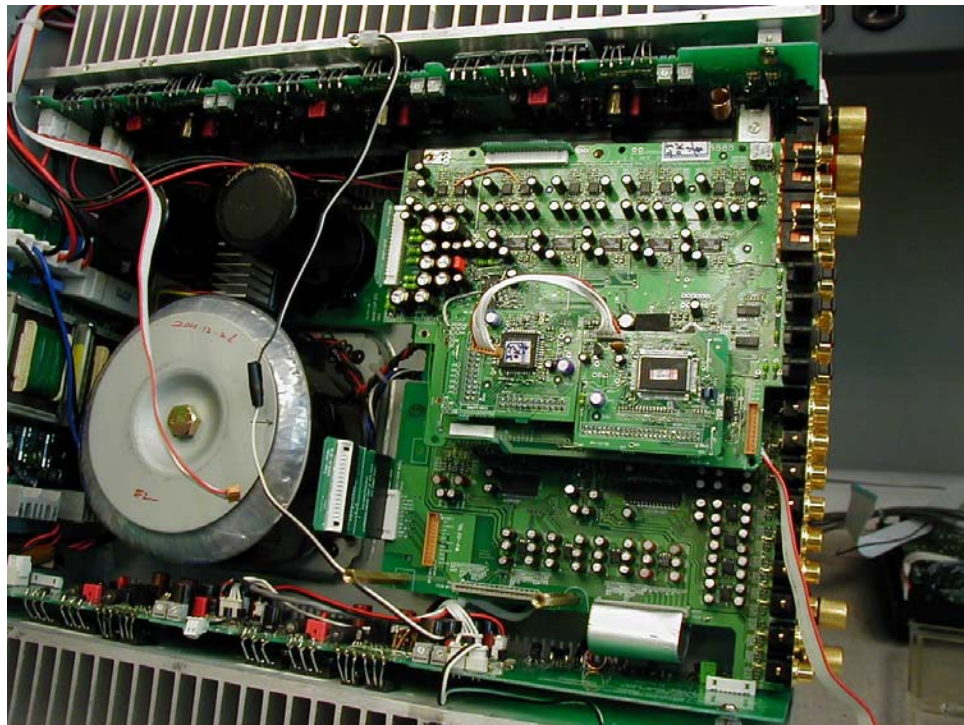
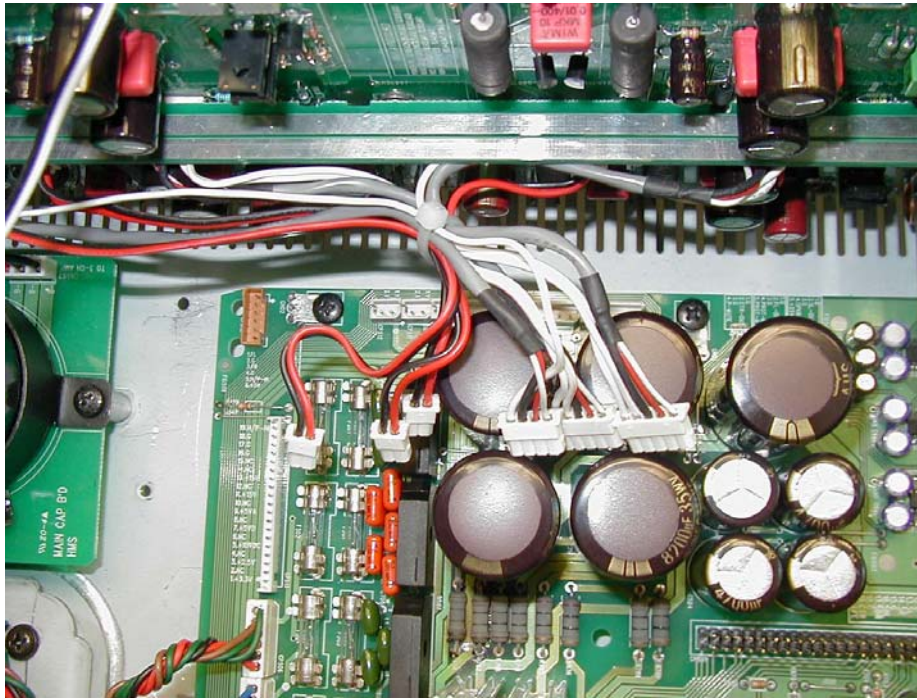


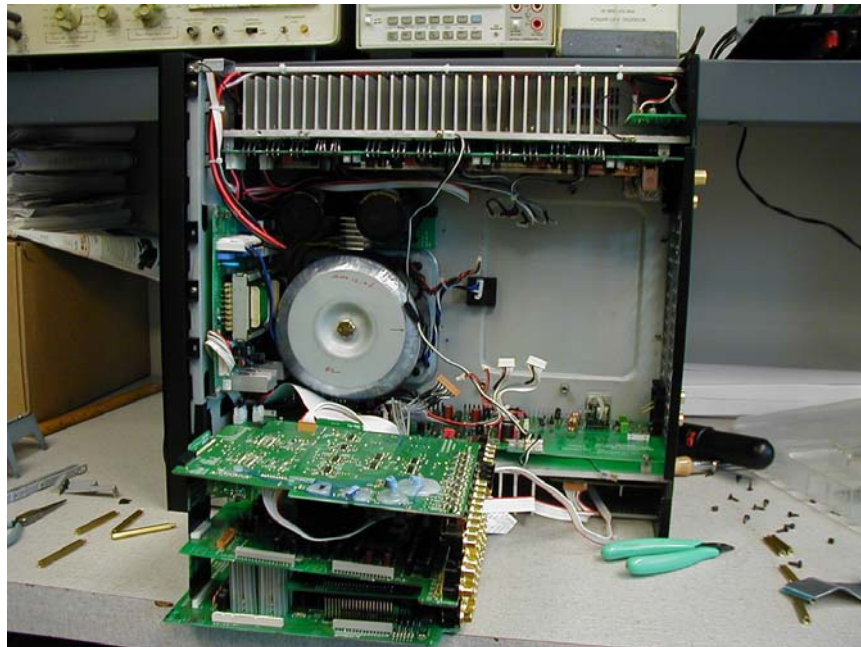
Figure 2

View of the unit with the **Top Cover** and **rear panel** removed.



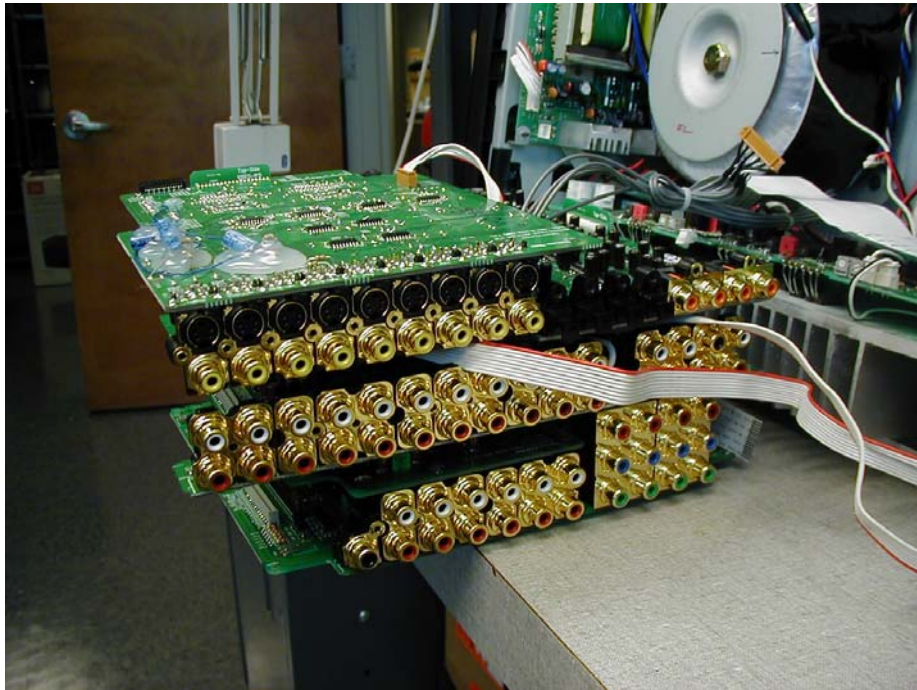
**Figure 3**

This view of the unit shows the connections from the 3-channel amp assembly to the main PC board (See Figure 3). **Note that 3 connections on Main PCB board are the same size, and use the same color wires. These connections CAN BE INTERCHANGED if not careful and serious damage can occur if the technician is not careful.**



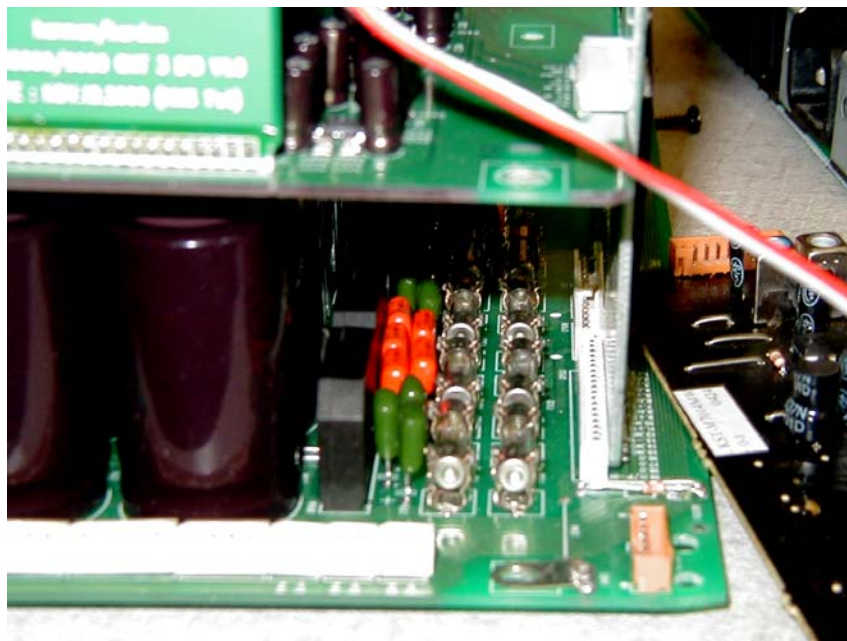
**Figure 4**

Be careful not to break any of the contacts, wires, or sub assemblies. The PC boards shown in the above picture (**Figure 4**) are all interconnected through four separate extender boards. If you look carefully at the stacked PC boards, you will notice that when they are not in the chassis with the rear plate attached, they are NOT supported at one end. This may cause a Short to occur if one PC board touches another while the unit is being serviced.



**Figure 5**

Another view of the sub assemblies (**Figure 5**). There are 2 sets of connecting “fingers” that have NO key way. Some of the PC boards can be interchanged with each other, and if not careful, could be installed wrong. The technician should, with the aid of the wiring diagram, draw a diagram of the connectors, where they connect to each location on each sub-assembly, and if necessary, mark the connectors with a tag so they do not get mixed up.



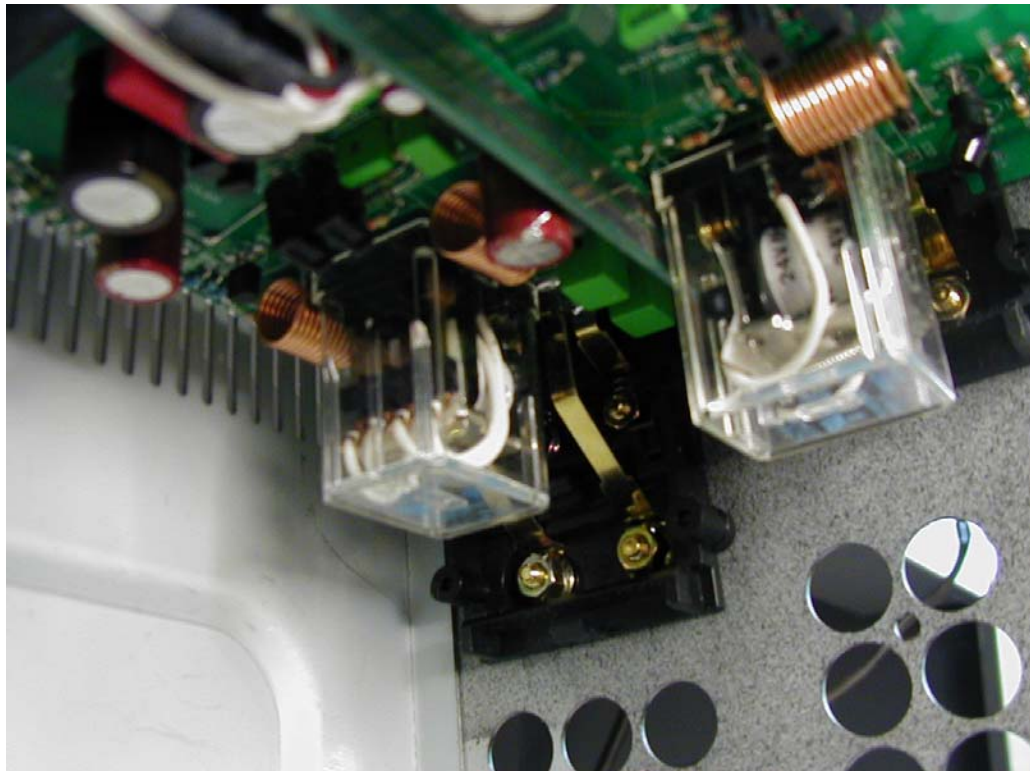
**Figure 6**

The fuses shown in **Figure 6**, are on the bottom PC board in the center stack ( **See Figures 4 & 5**). **To view or access: remove the top cover, rear panel, the center stack of PC boards, and disassemble the stack.** Once this is accomplished, the technician should check the fuses for continuity, troubleshoot the cause of the short, repair the problem, replace the fuse, then reassemble the unit to check and see if it is functional.



**Figure 7**

View of the binding posts (for the speakers) that are attached to the amp board. In order for the amp board to be removed, the **rear panel** has to be removed, along with all the sub assemblies in the center section of this unit.



**Figure 8**

View of the other amp board (**unit is standing on end**). The same procedures apply to this amp assembly as it does to the other amp assembly. The **rear panel**, the **center stack** (See Figures 4 & 5) of PC sub-assemblies, have to be completely removed, and all the connections taken apart.



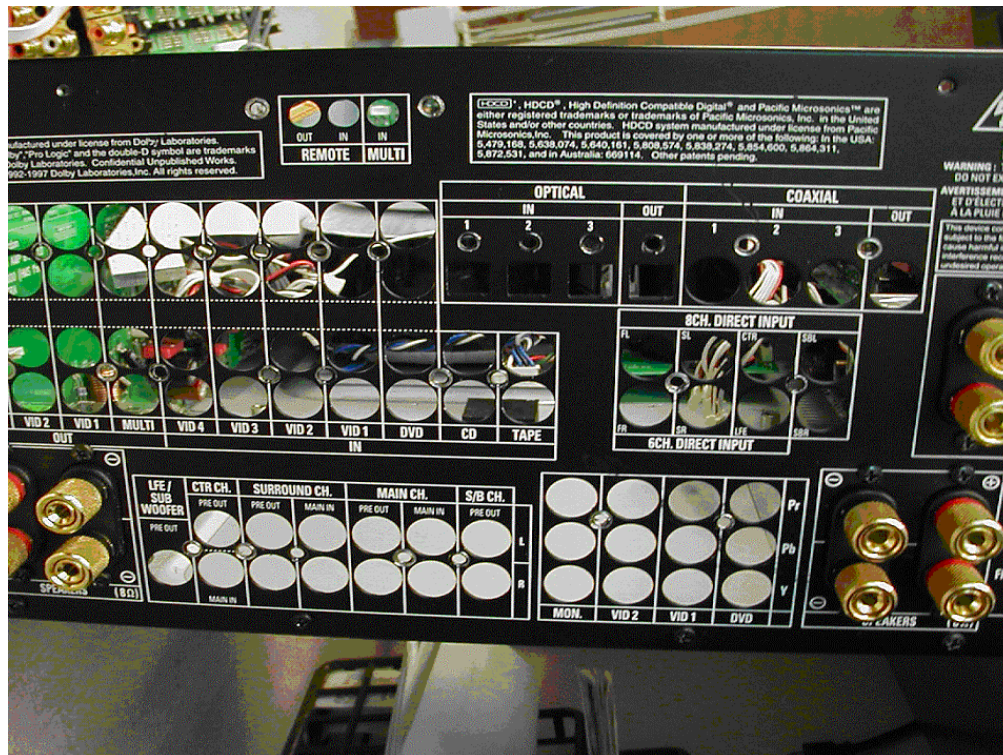


Figure 9

There are 67 Screws that have to be removed to get the rear panel off. There is no way to remove the Amp Boards without removing this panel.

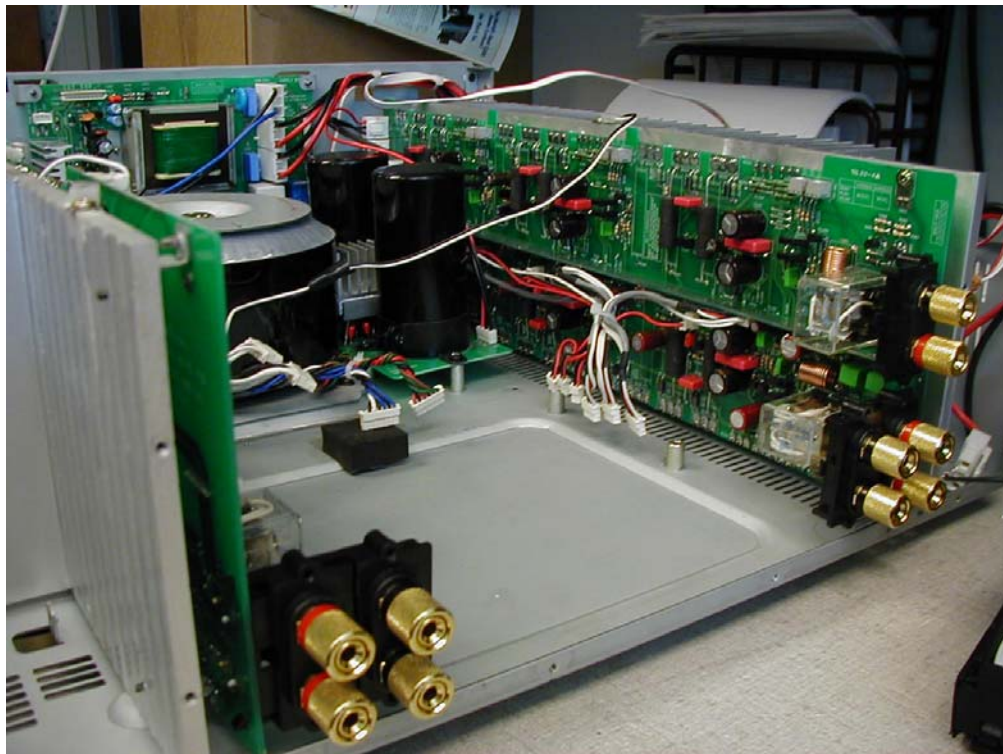
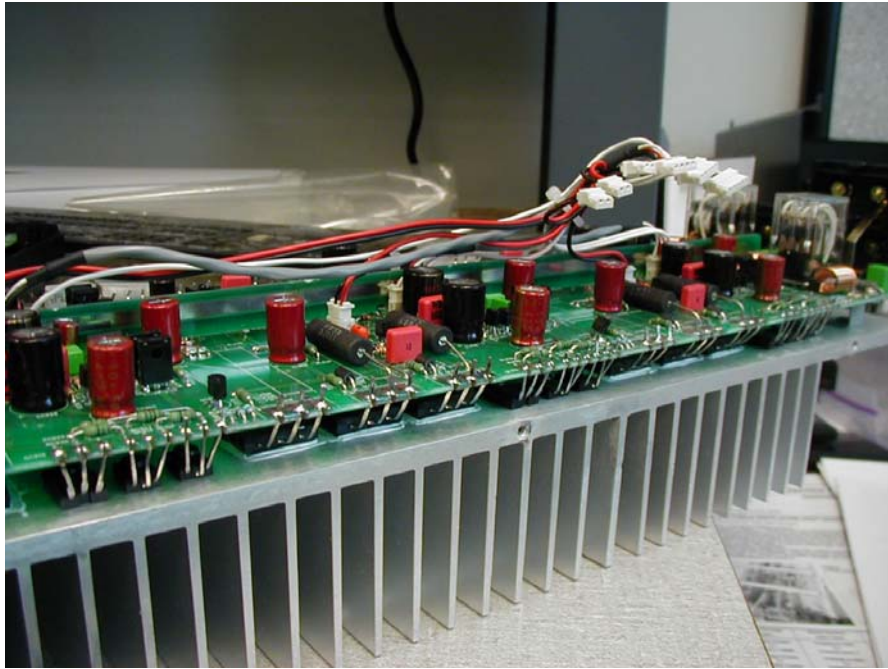


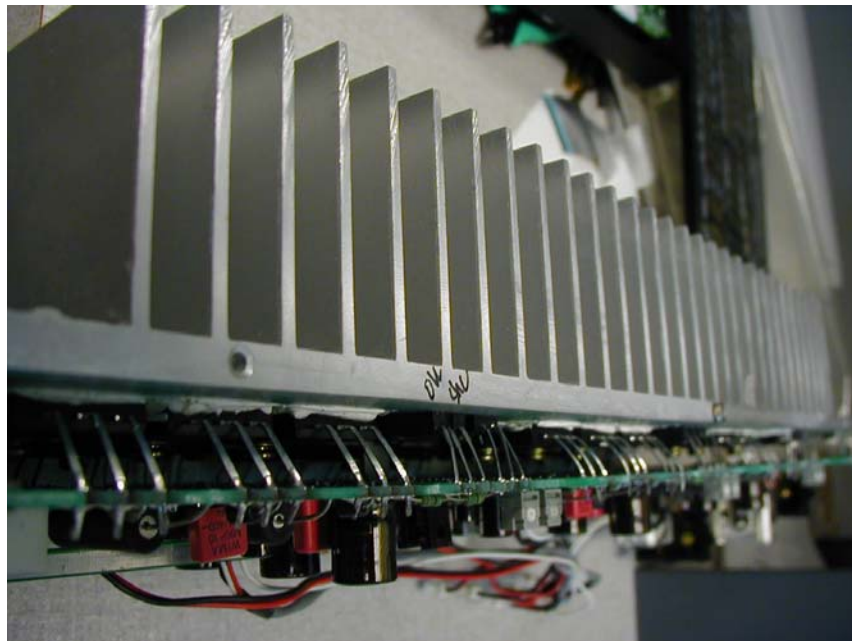
Figure 10

View of the AVR 8000 with the **center sub-assemblies** and the **rear panel** removed.



**Figure 11**

The **3-channel amp** assembly (See **Figure 11**) after it has been removed from the unit. If one or more of these **transistors** are defective, it's necessary to: remove the top cover, the rear panel, the center stack of sub-assemblies, disconnect all the connections from the power supply, front control panel, both amp assemblies, then unscrew the suspected bad amp assembly. At this point the technician should unsolder 99 connections, unscrew the PC board from the heat sink, test the transistors to find the defective one, unscrew it from the heat sink, replace it rear on the heat sink, reattach the PC board to the heat sink, resolder all the transistor legs rear onto the PC board (being careful not to use too much heat), reinstall the amp assembly to the chassis, reinstall the center stack of PC boards rear into the chassis, connect the power supply, front control panel, amp connections to the center stack of sub-assemblies (**being careful not to get the connectors mixed up**), and attach the speakers (or load) to test the unit.



**Figure 12**

Another view of the 3-channel amp assembly.



Figure 13

**Front control panel** (Figure 13). The connecting cables are **short**; take care **not to break** any of the contacts or plastic housing.

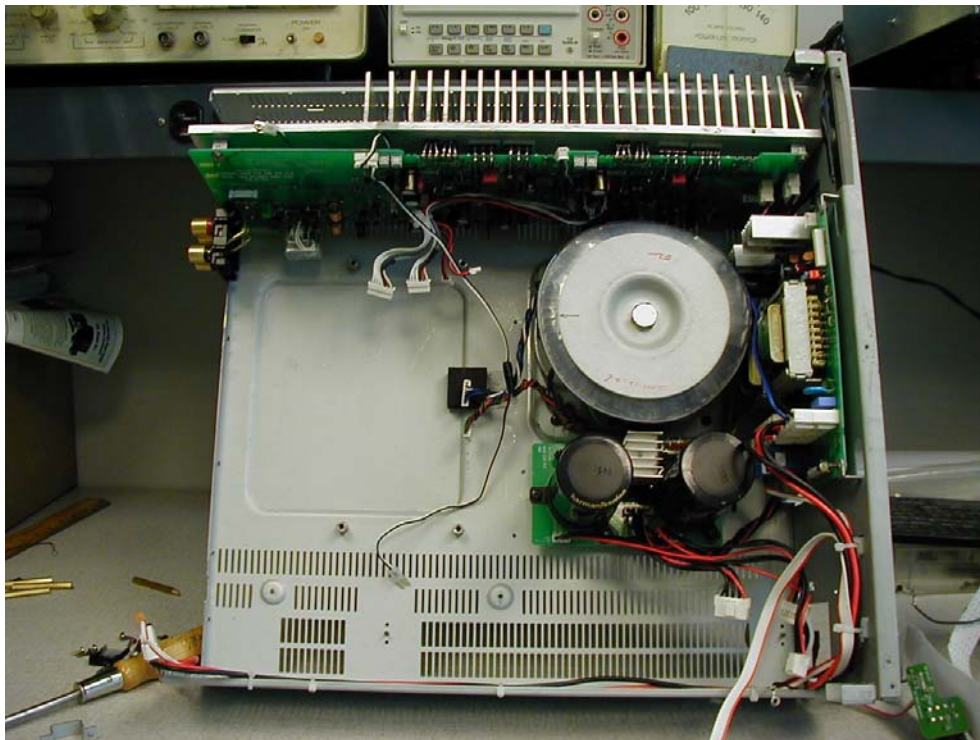


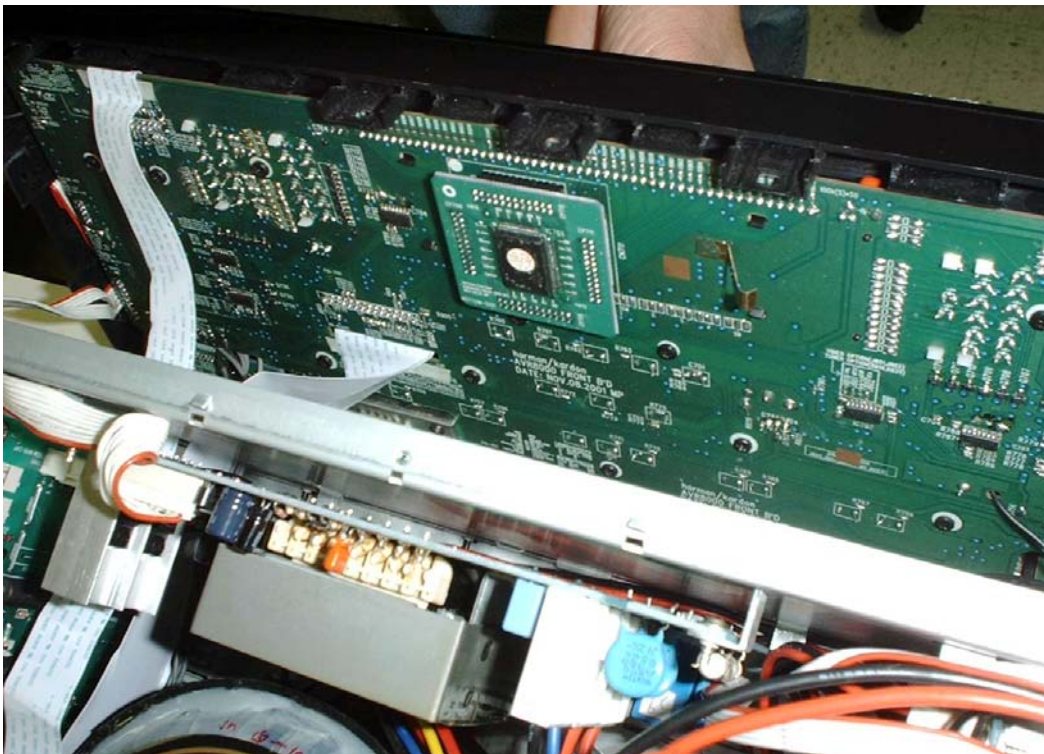
Figure 14

View of the unit with  $\frac{3}{4}$  of the boards, the 3-channel amp assembly, rear panel and front control panel removed. **Figure 14** shows the transformer, filter caps, power supply board, and the 2 channel board still in the chassis.

## REPLACING IC701

**CAUTION: IC701 module is an electrostatically sensitive device** and can be damaged by careless handling; you must follow proper static control procedures to prevent damage to the module.

- 1) Unplug any external connected cables to the AVR8000, particularly the POWER cord.
- 2) Remove the top cover, (18) Black Phillips screws.
- 3) Remove the (12) plated screws holding the front panel on; (5) are on the bottom – temporarily place the receiver on its side to access these bottom screws.
- 4) With the receiver once again flat on the table, cut any plastic cables ties holding wires and ribbon cables at the top front section of the front panel that would impede the front panel removal.
- 5) Remove the dual grounding wire and screw at the top left section of the front panel.
- 6) In a deep cavity on the left side, near the heatsink, remove the large Molex connector at the power switch PCB. This can be accomplished with a long bladed screwdriver, pushing in on the tab at the right side of the connector. Then gently tug on the connecting wires to disengage from the connector.
- 7) Unplug the white (15) conductor ribbon cable on the right side running straight back to the Video PCB at that connector.
- 8) Pull away the front panel from the chassis, starting at the top – there are two small metal “tabs” that need to be disengaged.
- 9) Locate IC701 module (see illustration); unplug from its socket.
- 10) Replace with new module h/k part# 55229760CPU; CAUTION – make sure module is plugged in correctly – Pin 1 should be UP, lettering on the PCB, UP, there is a circle/dot on both the module and front PCB that should line up. Do not force into place or bend pins, make sure socket is engaging all pins correctly.
- 11) Replace front panel, engaging from the bottom section first, and follow instructions above in reverse order.  
Attention:
  - a) Assure the two tabs at the top snap shut.
  - b) Assure the large Molex connector is plugged back in, and “snaps” in place.
  - c) Assure the white (15) conductor ribbon cable on the right side is plugged back into the Video PCB; conductor side is UP.
  - d) Re-attach dual ground wire; replace any tie wraps that were cut during disassembly.



## AVR8000 Electrical Parts List

## Main PCB

Ref. Designator	Part Number	Qty	Description
Semiconductors			
D501	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A
D502	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A
D503	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A
D504	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A
IC522	55142710	1 PC	IC-SWITCH KIC9162AF ANALOG SWITCH
IC524	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC530	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC531	15237240	1 PC	IC-LOGIC TC4052BFN MULTIPLEXER CMOS
IC532	15237240	1 PC	IC-LOGIC TC4052BFN MULTIPLEXER CMOS
IC533	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC523	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC527	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC528	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC529	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
D505	20526960	1 PC	D-ZENER 1N5231B 5.1V 500MI0W
D513	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D514	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
Q501	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q502	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q503	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q504	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q505	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q506	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q507	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q508	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q509	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q510	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q511	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q512	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q513	55133350	1 PC	TR-SLPLF MPSA56 Y P -500MI0A -300V
Q514	55142670	1 PC	TR-SLPLF MPSA06 N 500MI0A
Q515	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q516	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q517	55133350	1 PC	TR-SLPLF MPSA56 Y P -500MI0A -300V
Q518	55142670	1 PC	TR-SLPLF MPSA06 N 500MI0A
Q519	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q520	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q524	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q525	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q529	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q530	55133290	1 PC	TR-SLPLF KTD1302 B N 300MI0A 20V
Q531	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q532	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q533	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q534	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q535	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q536	55133220	1 PC	TR-SLPLF DTA114YSA P 100MI0A
Q537	55133210	1 PC	TR-SLPLF DTC114YSA N 100MI0A

Ref. Designator	Part Number	Qty	Description
D506	55248910	1 PC	D-BRDLC BU4-04F
D507	55248910	1 PC	D-BRDLC BU4-04F
D508	55125540	1 PC	D-BRDLC BU6-04F
D509	20525530	1 PC	D-SR 1N4003 200.0V 1A
D510	20525530	1 PC	D-SR 1N4003 200.0V 1A
D511	20525530	1 PC	D-SR 1N4003 200.0V 1A
D512	20525530	1 PC	D-SR 1N4003 200.0V 1A
IC526	55142730	1 PC	IC-LOWFREQ TC9184AP DIP16 TONE/VOL/BAL/MUTE
IC534	20361320	1 PC	IC-REGPOSFXD KIA7806PI NORMAL
IC535	55124000	1 PC	IC-REGNEGFXD KIA7906PI NORMAL
IC536	55368100	1 PC	IC-REGPOSFXD NJM7805FA NORMAL
IC537	55368090	1 PC	IC-REGPOSFXD NJM7815FA NORMAL
IC538	55368110	1 PC	IC-REGNEGFXD NJM7915FA NORMAL
IC539	55368100	1 PC	IC-REGPOSFXD NJM7805FA NORMAL
IC540	55125450	1 PC	IC-REGPOSFXD BA033T NORMAL
IC541	55125450	1 PC	IC-REGPOSFXD BA033T NORMAL

*Resistors*

R715	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R716	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R717	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R718	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R719	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R722	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R723	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R724	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R725	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R726	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R736	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R740	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R741	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R753	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R757	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R758	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R761	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R762	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R763	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R764	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R765	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R766	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R767	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R768	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R769	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R770	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R771	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R772	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R773	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R774	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R775	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R781	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R782	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R783	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R821	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R824	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R827	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R625	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R627	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R628	10135320	1 PC	RMGCFMIC 82K0 OHM +5% 62MI5W
R629	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R631	10135190	1 PC	RMGCFMIC 39K0 OHM +5% 62MI5W
R632	10135550	1 PC	RMGCFMIC 560K0 OHM +5% 62MI5W
R657	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R658	10135320	1 PC	RMGCFMIC 82K0 OHM +5% 62MI5W
R659	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
R660	10135190	1 PC	RMGCFMIC 39K0 OHM +5% 62MI5W
R661	10135550	1 PC	RMGCFMIC 560K0 OHM +5% 62MI5W
R662	10135150	1 PC	RMGCFMIC 27K0 OHM +5% 62MI5W
R663	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R664	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R665	10135150	1 PC	RMGCFMIC 27K0 OHM +5% 62MI5W
R666	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R667	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R668	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
R671	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R672	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R675	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R676	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R677	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R678	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R679	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R680	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R681	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R682	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R685	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R686	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R687	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R688	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R689	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R690	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R691	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R692	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R695	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R696	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R697	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R698	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R699	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R700	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R701	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R702	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R705	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R706	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R707	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R708	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R709	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R710	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R711	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R712	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R713	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R714	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R720	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R721	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R735	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R737	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R738	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R739	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R752	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R754	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R755	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R756	10134590	1 PC	RMGCFMIC 33R0 OHM +5% 62MI5W
R780	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R802	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
R804	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
R805	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
R806	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
R807	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
R808	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R809	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R810	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R811	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R812	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R813	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R814	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R815	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R816	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R817	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R818	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R819	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R820	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R822	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
R822	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R823	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R825	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
R825	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R826	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R828	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
R828	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R829	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R830	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R831	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
R832	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R833	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
R834	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R835	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
R846	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R847	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R848	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R849	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R850	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R851	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R852	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R853	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W



Ref. Designator	Part Number	Qty	Description
R626	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R630	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R669	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R670	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R673	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R674	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R683	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R684	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R693	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R694	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R703	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
R704	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
R742	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R743	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R779	11059640	1 PC	RCF 1K0 OHM +5% 250MIOW
R792	11067570	1 PC	RCF 1R0 OHM +5% 250MIOW
R793	11067570	1 PC	RCF 1R0 OHM +5% 250MIOW
R794	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R794	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R795	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R795	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R796	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R796	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R797	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R797	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R798	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R798	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R799	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R799	60441580	1 PC	RCF 22K0 OHM +5% 250MIOW
R800	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
R801	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
R803	11059640	1 PC	RCF 1K0 OHM +5% 250MIOW
R837	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R785	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R786	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R787	55228840	1 PC	RW 5R6 OHM +5% 3.0W 100PPM/C -100PPM/C
R788	55228840	1 PC	RW 5R6 OHM +5% 3.0W 100PPM/C -100PPM/C
R789	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R790	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R791	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R836	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W

### Capacitors

C735	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C595	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C596	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C626	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C627	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C629	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C630	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C646	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C647	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C648	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0

Ref. Designator	Part Number	Qty	Description
C649	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C650	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C651	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C652	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C653	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C654	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C655	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C656	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C657	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C658	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C666	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C671	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C676	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C683	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C684	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C687	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C688	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C692	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C693	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C696	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C697	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C698	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C736	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C561	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C561	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C574	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C578	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C581	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C582	20251830	1 PC	CE 1U0F +20% 50.0V 85C
C582	55319730	1 PC	CE 1U0F +20% 50.0V 85C
C590	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C592	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C602	20251830	1 PC	CE 1U0F +20% 50.0V 85C
C602	55319730	1 PC	CE 1U0F +20% 50.0V 85C
C604	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C605	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C606	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C607	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C608	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C609	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C610	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C611	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C612	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C613	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C614	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C615	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C616	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C617	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C618	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C619	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C620	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C621	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C622	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C623	55213590	1 PC	CE 10U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C624	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C625	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C628	20268990	1 PC	CE 1MIOF +20% 6.3V 85C
C628	55319140	1 PC	CE 1MIOF +20% 6.3V 85C
C631	20268990	1 PC	CE 1MIOF +20% 6.3V 85C
C631	55319140	1 PC	CE 1MIOF +20% 6.3V 85C
C632	55230030	1 PC	CE 330U0F +20% 16.0V 85C
C633	55230030	1 PC	CE 330U0F +20% 16.0V 85C
C635	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C636	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C638	55230030	1 PC	CE 330U0F +20% 16.0V 85C
C639	55230030	1 PC	CE 330U0F +20% 16.0V 85C
C641	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C642	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C667	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C668	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C669	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C670	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C672	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C673	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C674	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C675	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C677	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C678	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C679	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C680	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C681	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C681	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C682	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C682	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C685	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C685	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C686	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C686	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C689	55213580	1 PC	CE 100U0F +20% 10.0V 85C
C690	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C690	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C691	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C691	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C694	55213580	1 PC	CE 100U0F +20% 10.0V 85C
C695	55213580	1 PC	CE 100U0F +20% 10.0V 85C
C699	20416690	1 PC	CPM 100N0F +20% 250.0V
C700	20416690	1 PC	CPM 100N0F +20% 250.0V
C701	20416690	1 PC	CPM 100N0F +20% 250.0V
C702	20416690	1 PC	CPM 100N0F +20% 250.0V
C703	20416690	1 PC	CPM 100N0F +20% 250.0V
C706	10364820	1 PC	CPF 47N0F +10% 100.0V
C707	10364820	1 PC	CPF 47N0F +10% 100.0V
C708	10364820	1 PC	CPF 47N0F +10% 100.0V
C713	10364820	1 PC	CPF 47N0F +10% 100.0V
C714	10364820	1 PC	CPF 47N0F +10% 100.0V
C715	10364820	1 PC	CPF 47N0F +10% 100.0V
C716	10364820	1 PC	CPF 47N0F +10% 100.0V
C717	10364820	1 PC	CPF 47N0F +10% 100.0V

Ref. Designator	Part Number	Qty	Description
C718	10364820	1 PC	CPF 47N0F +10% 100.0V
C720	20268990	1 PC	CE 1MI0F +20% 6.3V 85C
C720	55319140	1 PC	CE 1MI0F +20% 6.3V 85C
C721	20268140	1 PC	CE 220U0F +20% 25.0V 85C
C721	55213570	1 PC	CE 220U0F +20% 25.0V 85C
C722	20252680	1 PC	CE 1MI0F +20% 10.0V 85C
C722	55319150	1 PC	CE 1MI0F +20% 10.0V 85C
C723	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C723	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C724	20268140	1 PC	CE 220U0F +20% 25.0V 85C
C724	55213570	1 PC	CE 220U0F +20% 25.0V 85C
C725	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C725	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C726	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C726	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C727	20252680	1 PC	CE 1MI0F +20% 10.0V 85C
C727	55319150	1 PC	CE 1MI0F +20% 10.0V 85C
C728	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C728	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C729	20268990	1 PC	CE 1MI0F +20% 6.3V 85C
C729	55319140	1 PC	CE 1MI0F +20% 6.3V 85C
C730	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C730	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C731	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C731	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C732	20268990	1 PC	CE 1MI0F +20% 6.3V 85C
C732	55319140	1 PC	CE 1MI0F +20% 6.3V 85C
C733	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C733	20293470	1 PC	CC 100N0F +80% -20% 50.0V F
C734	20268990	1 PC	CE 1MI0F +20% 6.3V 85C
C734	55319140	1 PC	CE 1MI0F +20% 6.3V 85C
C740	55230030	1 PC	CE 330U0F +20% 16.0V 85C
C564	55319190	1 PC	CE 4MI7F +20% 16.0V 85C
C572	55191100	1 PC	CPM 33P0F +5% 100.0V
C575	55191050	1 PC	CPM 33N0F +5% 63.0V
C576	55191050	1 PC	CPM 33N0F +5% 63.0V
C577	55191030	1 PC	CPM 15N0F +5% 63.0V
C579	55191080	1 PC	CPM 2N2F +5% 100.0V
C580	55191060	1 PC	CPM 22N0F +5% 100.0V
C584	55319190	1 PC	CE 4MI7F +20% 16.0V 85C
C597	55191080	1 PC	CPM 2N2F +5% 100.0V
C598	55191030	1 PC	CPM 15N0F +5% 63.0V
C599	55191060	1 PC	CPM 22N0F +5% 100.0V
C600	55191050	1 PC	CPM 33N0F +5% 63.0V
C601	55191100	1 PC	CPM 33P0F +5% 100.0V
C603	55191050	1 PC	CPM 33N0F +5% 63.0V
C704	55232360	1 PC	CE 2MI2F +20% 100.0V 85C
C705	55232360	1 PC	CE 2MI2F +20% 100.0V 85C
C709	55232430	1 PC	CE 15MI0F +20% 16.0V 85C
C710	55319190	1 PC	CE 4MI7F +20% 16.0V 85C
C711	55232480	1 PC	CE 8MI2F +50% 35.0V 85C
C712	55232480	1 PC	CE 8MI2F +50% 35.0V 85C
C719	55319190	1 PC	CE 4MI7F +20% 16.0V 85C
CP501	55230910	1 PC	CON 2.54MM PITCH 2X20P 2213S-20G-28

Ref. Designator	Part Number	Qty	Description
CP502	55230480	1 PC	CONN 1.25MM 31 FE ST BK 00-6216-131-821-808 0 0
CP503	55230910	1 PC	CON 2.54MM PITCH 2X20P 2213S-20G-28
CP504	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
CP505	55146620	1 PC	CONN 2.5MM 7 MA ST NAT 0 0
CP506	55146610	1 PC	CONN 2.5MM 6 MA ST NAT 0 0
CP507	55146580	1 PC	CONN 2.5MM 4 MA ST NAT 0 0
CP508	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP509	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP510	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP511	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP512	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP513	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
CP514	55146610	1 PC	CONN 2.5MM 6 MA ST NAT 0 0
CP515	55146610	1 PC	CONN 2.5MM 6 MA ST NAT 0 0
CP516	55146590	1 PC	CONN 2.5MM 5 MA ST NAT 0 0
CP517	55146620	1 PC	CONN 2.5MM 7 MA ST NAT 0 0
CP518	55123330	1 PC	CONN 2.0MM 6 MA ST NAT LW2002P06 0 0
<i>Miscellaneous</i>			
FC501	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC502	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC503	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC504	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC505	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC506	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC507	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC508	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC509	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC510	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC511	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC512	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC513	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC514	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC515	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC516	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
F501	55126870	1 PC	FUSVDETIMELG 1.6 A 250.0 V 5X20
F502	55126870	1 PC	FUSVDETIMELG 1.6 A 250.0 V 5X20
F503	55170790	1 PC	FUSULSLWBL 3.15 A 125.0 V
F504	55170790	1 PC	FUSULSLWBL 3.15 A 125.0 V
F505	55127150	1 PC	FUSULSLWBL 1.25 A 250.0 V
F506	55127150	1 PC	FUSULSLWBL 1.25 A 250.0 V
F507	55170810	1 PC	FUSULSLWBL 3.5 A 125.0 V
F508	55170810	1 PC	FUSULSLWBL 3.5 A 125.0 V
GND1	55135980	1 PC	TERMLUG GND
GND2	55135980	1 PC	TERMLUG GND
GND3	55135980	1 PC	TERMLUG GND
HS501	55194550	1 PC	AC HEATSINK 60*20*50H AL6063S-T5 -- ME
HS502	55194550	1 PC	AC HEATSINK 60*20*50H AL6063S-T5 -- ME
HS503	55194550	1 PC	AC HEATSINK 60*20*50H AL6063S-T5 -- ME
HS504	55194550	1 PC	AC HEATSINK 60*20*50H AL6063S-T5 -- ME
JK501	55191500	1 PC	CON PHONO SCKT RCA 6P JW-4105RSEG
JK502	55191490	1 PC	CON PHONO SCKT RCA 6P JW-4105RSDG
JK503	55197890	1 PC	CON PHONO SCKT RCA 1P JACK W/G CAP GOLD JE010003TG PP

Ref. Designator	Part Number	Qty	Description
JK504	55230590	1 PC	CON PHONO SCKT RCA 12P RX4 BX4 JW4012RSG

## Power Supply PCB

*Semiconductors*

Q451	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q452	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q453	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q454	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q455	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q456	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
Q460	55133350	1 PC	TR-SLPLF MPSA56 Y P -500MIOA -300V
D451	20525530	1 PC	D-SR 1N4003 200.0V 1A
D452	55170630	1 PC	D-BRDHC BP3504WF 35.0A
D453	20525530	1 PC	D-SR 1N4003 200.0V 1A
D454	20525530	1 PC	D-SR 1N4003 200.0V 1A
D455	20525530	1 PC	D-SR 1N4003 200.0V 1A
D456	20525530	1 PC	D-SR 1N4003 200.0V 1A
D457	20525530	1 PC	D-SR 1N4003 200.0V 1A
D458	20525530	1 PC	D-SR 1N4003 200.0V 1A
D467	20525530	1 PC	D-SR 1N4003 200.0V 1A
D468	20525530	1 PC	D-SR 1N4003 200.0V 1A
D469	20525530	1 PC	D-SR 1N4003 200.0V 1A
D470	20525530	1 PC	D-SR 1N4003 200.0V 1A
D472	20525530	1 PC	D-SR 1N4003 200.0V 1A
D473	20525530	1 PC	D-SR 1N4003 200.0V 1A
D474	20525530	1 PC	D-SR 1N4003 200.0V 1A
IC451	55246610	1 PC	IC-REGPOSFXD KIA7806P NORMAL
IC454	55142790	1 PC	IC-REGPOSFXD NJM2395F63 NORMAL
D459	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D460	20526960	1 PC	D-ZENER 1N5231B 5.1V 500MIOW
D475	80442730	1 PC	D-ZENER BZX55B33 33V 500MIOW
D476	20454630	1 PC	D-ZENER 1N5239B 9.1V 500MIOW

*Resistors*

R452	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R454	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
R455	30939360	1 PC	RCF 10R0 OHM +5% 250MIOW
R455	90571060	1 PC	RCF 12R0 OHM +5% 250MIOW
R457	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R458	11059640	1 PC	RCF 1K0 OHM +5% 250MIOW
R461	11059560	1 PC	RCF 33R0 OHM +5% 250MIOW
R462	11059560	1 PC	RCF 33R0 OHM +5% 250MIOW
R463	11059560	1 PC	RCF 33R0 OHM +5% 250MIOW
R464	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R465	30939510	1 PC	RCF 100K0 OHM +5% 250MIOW
R466	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R467	30939510	1 PC	RCF 100K0 OHM +5% 250MIOW
R468	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R469	30939510	1 PC	RCF 100K0 OHM +5% 250MIOW
R470	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
R471	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
R472	20469460	1 PC	RCF 2K2 OHM +5% 250MIOW
R473	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW

Ref. Designator	Part Number	Qty	Description
R474	30939480	1 PC	RCF 10K0 OHM +5% 250MI0W
R475	30939510	1 PC	RCF 100K0 OHM +5% 250MI0W
R476	30939510	1 PC	RCF 100K0 OHM +5% 250MI0W
R477	11059640	1 PC	RCF 1K0 OHM +5% 250MI0W
R450	55180100	1 PC	RA 3M3 OHM +10% 500MI0W
R451	55493990	1 PC	RW 10R0 OHM +5% 30.0W
R453	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
R456	80442780	1 PC	RMOF 4R7 OHM +5% 2.0W
R479	11061670	1 PC	RMOF 12K0 OHM +5% 1.0W
R480	11061670	1 PC	RMOF 12K0 OHM +5% 1.0W

*Capacitors*

C452	20416690	1 PC	CPM 100N0F +20% 250.0V
C453	20416690	1 PC	CPM 100N0F +20% 250.0V
C454	20416690	1 PC	CPM 100N0F +20% 250.0V
C455	20416690	1 PC	CPM 100N0F +20% 250.0V
C456	20416690	1 PC	CPM 100N0F +20% 250.0V
C460	10364820	1 PC	CPF 47N0F +10% 100.0V
C461	10364820	1 PC	CPF 47N0F +10% 100.0V
C462	10364820	1 PC	CPF 47N0F +10% 100.0V
C468	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C471	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C474	55127400	1 PC	CE 560N0F +20% 50.0V 85C
C475	10364820	1 PC	CPF 47N0F +10% 100.0V
C476	10364820	1 PC	CPF 47N0F +10% 100.0V
C477	10364820	1 PC	CPF 47N0F +10% 100.0V
C481	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C482	20246470	1 PC	CC 100N0F +80% -20% 25.0V Z5V
C483	55095410	1 PC	CPM 220N0F +10% 63.0V
C484	13074540	1 PC	CE 100U0F +20% 50.0V 85C
C485	20268880	1 PC	CE 10U0F +20% 50.0V 85C
C490	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C491	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C493	20268840	1 PC	CE 1U0F +20% 50.0V 85C
C450	55095460	1 PC	CPPMX 100N0F +20% -20%
C451	55232850	1 PC	CC 4N7F +20% -50% 400.0V Y5V
C457	55232840	1 PC	CE 27MI0F +20% 80.0V 85C
C458	55232840	1 PC	CE 27MI0F +20% 80.0V 85C
C459	55095460	1 PC	CPPMX 100N0F +20% -20%
C466	20268030	1 PC	CE 1MI0F +20% 25.0V 85C
C480	20268030	1 PC	CE 1MI0F +20% 25.0V 85C
C486	55232850	1 PC	CC 4N7F +20% -50% 400.0V Y5V
C487	55232850	1 PC	CC 4N7F +20% -50% 400.0V Y5V
C488	55232850	1 PC	CC 4N7F +20% -50% 400.0V Y5V
C489	55232850	1 PC	CC 4N7F +20% -50% 400.0V Y5V
C492	20269180	1 PC	CE 1MI0F +20% 6.3V 85C

*Miscellaneous*

FC451	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC452	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC453	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC454	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC455	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC456	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC457	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X

Ref. Designator	Part Number	Qty	Description
FC458	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC459	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
FC460	55170330	1 PC	TERMFUSEHLDR FUSE-HOLDER J4210020001X
	55222020	2 PC	AC PUN BRACKET AC INLET SECC 1.0T
	55127070	1 PC	SCREW-ST 3MM 10MM JIS B 1122 19 0 0
	55127070	2 PC	SCREW-ST 3MM 10MM JIS B 1122 19 0 0
	55176380	1 PC	AC HEATSINK REG 2 RTDVD1 -- ME
	55231630	1 PC	AC HEATSINK REG AVR8000 -- ME
	55127070	2 PC	SCREW-ST 3MM 10MM JIS B 1122 19 0 0
	55127310	2 PC	WASHER 3.3MM 8.0MM 0.5MM Y 53 0 A4
	55127310	1 PC	WASHER 3.3MM 8.0MM 0.5MM Y 53 0 A4
	55127070	2 PC	SCREW-ST 3MM 18MM JIS B 1122 J80600031810 53 0 0
	55127290	1 PC	SCREW-ST 3MM 18MM JIS B 1122 J80600031810 53 0 0
	55127070	2 PC	SCREW-ST 3MM 10MM JIS B 1122 19 0 0
	55176380	1 PC	AC HEATSINK REG 2 RTDVD1 -- ME
	55216340	1 PC	AC HEATSINK BRIDGE 34.4*28.5*64H AL6063S-T5 -- ME
	55304050	1 PC	AC HEATSINK BRIDGE 34.4*28.5*64H -- ME
	55304040	1 PC	AC PUN BRACKET HEATSINK BRIDGE SECC 1.0T
	55127120	1 PC	SCREW-ST 3MM 8MM JIS B 1122 J5636140040X 53 0 0
	55127120	4 PC	SCREW-ST 3MM 8MM JIS B 1122 J5636140040X 53 0 0
CN457	55213270	1 PC	WIRECONASY UNIQUE 3P 800MM UL1007 PVC DISCRETE 24
CN463	55212880	1 PC	WIRECONASY UNIQUE 4P 470MM UL1007 PVC DISCRETE 16
CN464	55212850	1 PC	WIRECONASY UNIQUE 2P 470MM UL1007 PVC DISCRETE 16
CN465	55212890	1 PC	WIRECONASY UNIQUE 5P 140MM UL1007 PVC DISCRETE 16
CN466	55212870	1 PC	WIRECONASY UNIQUE 4P 170MM UL1007 PVC DISCRETE 16
CN467	55212860	1 PC	WIRECONASY UNIQUE 3P 250MM UL1007 PVC DISCRETE 16
CP452	55231360	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP453	55231370	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP454	55231370	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP455	55231370	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP456	55231370	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP458	55150370	1 PC	CONN 2.5MM 9 MA ST NAT 0 0
CP461	55231370	1 PC	CON 11.88MM 6.0MM PITCH ACTUAL
CP462	55090080	1 PC	CONN 2.0MM 3 MA ST NAT LW2002P03 0 0
ET451	55135980	1 PC	TERMLUG GND
F451	55170760	1 PC	FUSULSLWBL 1.5 A 125.0 V
F452	55170830	1 PC	FUSULSLWBL 13.0 A 125.0 V
F453	55521310	1 PC	FUSULSLWBL 500MI0 A 250.0 V
F454	55170760	1 PC	FUSULSLWBL 1.5 A 125.0 V
F455	55170760	1 PC	FUSULSLWBL 1.5 A 125.0 V
IL451	55222010	1 PC	CON MAINS INLET A/C INLET 7014-NGP
OL451	55231540	1 PC	CONN-SPE A206D0054P AC OUTLET US NA 15.25MM 3 BK 0 A0
RY451	55127440	1 PC	RELAYPWR 12.0V 270.0OHM 10.0A
RY452	55231610	1 PC	RELAYPWR 12.0V 270.0OHM 16.0A
RY453	55231610	1 PC	RELAYPWR 12.0V 270.0OHM 16.0A
SW451	55231290	1 PC	SWIPUSH POWER SWITCH J46208000004 8.0A 250.0V 100MI0OHM 1T :
T451	55233110	1 PC	TF-LAM 110V STANDBY 120V
T452	55233120	1 PC	TF-LAM POWER-TRANSFORMER 120V
W451	55230550	1 PC	WIRECONASY 1 120MM UL1007 PVC DISCRETE 22 12

### Preamp PCB

#### Semiconductors

D204	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A
D205	20496510	1 PC	D-SLP 1SS355 35.0V 225MI0A



Ref. Designator	Part Number	Qty	Description
IC203	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC205	55142680	1 PC	IC-SWITCH KIC9163AF ANALOG SWITCH
IC206	55142690	1 PC	IC-SWITCH KIC9164AF ANALOG SWITCH
IC208	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC209	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC210	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC211	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC212	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC213	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC214	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC215	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC216	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC217	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC218	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC219	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC220	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC221	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC222	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC223	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC224	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC225	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC226	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC227	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC228	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC229	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC230	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC231	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC232	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC233	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC234	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC235	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC505	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC507	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
Q219	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q220	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
D203	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
Q201	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q202	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q203	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q204	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q205	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q206	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q207	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q208	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q209	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q210	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q211	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q212	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q213	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q214	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q215	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q216	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q217	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q218	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
D206	20414280	1 PC	D-ZENER 1N5232B 5.6V 500MIOW
Q221	55112030	1 PC	TR-M FET RA/TAD 2SK117Y N 300MIOW 14MIOA
D206	20414280	1 PC	D-ZENER 1N5232B 5.6V 500MIOW

Ref. Designator	Part Number	Qty	Description
IC201	55142740	1 PC	IC-SWITCH TC9273N-004 DIP28 ANALOG SWITCH
IC202	55142740	1 PC	IC-SWITCH TC9273N-004 DIP28 ANALOG SWITCH
IC204	55142750	1 PC	IC-SWITCH TC9273N-007 DIP28 ANALOG SWITCH

*Resistors*

R221	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R221	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R222	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R222	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R223	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R224	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R229	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R229	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R230	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R230	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R231	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R232	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R237	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R237	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R238	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R238	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R239	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R240	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R245	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R246	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R247	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R248	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R257	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R258	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R259	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R260	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R263	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R264	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R267	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R268	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R269	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R270	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R273	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R274	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R277	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R278	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R279	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R280	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R283	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R284	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R287	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R288	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R289	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R290	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R293	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R294	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R297	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R298	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R299	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R300	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R303	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R304	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R307	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R308	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R309	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R310	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R313	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R314	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R317	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R318	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R319	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R320	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R323	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R324	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R327	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R328	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R329	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R330	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R333	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R334	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R337	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R338	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R339	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R340	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R343	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R344	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R347	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R348	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R348	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R349	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R350	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R350	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R353	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R354	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R357	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R358	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R359	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R360	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R363	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R364	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R367	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R368	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R369	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R370	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R371	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R372	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R397	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R398	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R399	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R400	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R401	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R402	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R403	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R404	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R405	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R406	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R407	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R408	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R409	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R410	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R411	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R412	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R413	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R414	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R415	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R416	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R417	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R418	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R419	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R420	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R421	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R422	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R423	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R424	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R425	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R426	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R427	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R428	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R429	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R430	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R431	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R432	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R433	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R434	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R435	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R436	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R437	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R438	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R439	10135170	1 PC	RMGCFMIC 33K0 OHM +5% 62MI5W
R440	10135170	1 PC	RMGCFMIC 33K0 OHM +5% 62MI5W
R441	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R442	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R443	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R444	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R445	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R446	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R451	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R452	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R453	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R454	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R455	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R456	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R457	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R458	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R459	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R460	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R461	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R462	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R463	10135720	1 PC	RMGCFMIC 3M3 OHM +5% 62MI5W
R464	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R465	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R521	10135240	1 PC	RMGCFMIC 56K0 OHM +5% 62MI5W
R523	10135240	1 PC	RMGCFMIC 56K0 OHM +5% 62MI5W
R529	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R529	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R530	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R201	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R201	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R202	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R202	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R203	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R204	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R204	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R205	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R205	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R206	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R207	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R207	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R208	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R208	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R209	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R210	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R210	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R211	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R211	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R212	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R213	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R213	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R214	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R214	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R215	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R216	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R216	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R217	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R217	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R218	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R225	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R226	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R227	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R228	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R233	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R234	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R235	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R236	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R241	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R242	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R243	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R244	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R249	10135990	1 PC	RMGCFMIC 7K5 OHM +5% 62MI5W
R250	10135990	1 PC	RMGCFMIC 7K5 OHM +5% 62MI5W
R251	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R252	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R253	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R254	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R255	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R256	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R261	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R262	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R265	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R266	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R271	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R272	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R275	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R276	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R281	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R282	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R285	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R286	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R291	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R292	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R295	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R296	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R301	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R302	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R305	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R306	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R311	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R312	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R315	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R316	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R321	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R322	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R325	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R326	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R331	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R332	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R335	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R336	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R341	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R342	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R345	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R346	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R351	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R352	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R355	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R356	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R361	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R362	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R365	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R366	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R373	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R374	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R375	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R376	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R377	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R378	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R379	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R380	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R381	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R382	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R383	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R384	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R385	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R386	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R387	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R389	10136010	1 PC	RMGCFMIC 9K1 OHM +5% 62MI5W
R390	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R390	10136010	1 PC	RMGCFMIC 9K1 OHM +5% 62MI5W
R391	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R392	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R393	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R394	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R395	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R447	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R448	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R449	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R450	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R466	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R467	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R468	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R469	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R470	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R471	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R472	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R473	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R474	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R475	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R477	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R478	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R479	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R480	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R481	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R482	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R483	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R484	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R485	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R486	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R487	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R488	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R489	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R490	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R491	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R492	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R493	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R494	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R495	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R496	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R497	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R498	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R499	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R500	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R501	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R502	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R503	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R504	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R505	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R506	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R507	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R508	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R509	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R510	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R511	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R512	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R513	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R514	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R515	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R516	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R517	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R518	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R519	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R520	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R521	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R522	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R525	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R526	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R527	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R528	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R541	20469460	1 PC	RCF 2K2 OHM +5% 250MI0W
R542	20469460	1 PC	RCF 2K2 OHM +5% 250MI0W

### Capacitors

C203	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C204	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C207	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C208	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C213	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C214	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C217	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C218	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C223	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C224	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C227	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C228	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C233	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C234	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C241	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C242	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C251	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C252	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C261	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C262	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C271	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C272	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C281	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C282	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C291	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C292	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C301	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C302	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C311	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C312	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C321	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C322	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C331	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C332	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C341	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C342	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C361	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C362	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C367	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C375	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C376	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V



Ref. Designator	Part Number	Qty	Description
C389	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C390	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C433	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NPO
C437	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NPO
C477	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C478	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C205	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C206	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C209	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C209	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C210	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C210	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C215	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C216	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C219	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C219	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C220	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C220	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C225	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C226	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C229	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C229	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C230	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C230	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C235	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C236	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C237	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C237	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C238	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C238	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C245	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C246	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C247	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C248	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C249	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C249	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C250	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C250	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C255	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C256	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C257	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C258	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C259	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C259	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C260	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C260	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C265	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C266	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C267	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C268	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C269	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C269	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C270	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C270	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C275	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C276	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C277	55213590	1 PC	CE 10U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C278	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C279	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C279	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C280	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C280	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C285	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C286	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C287	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C288	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C289	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C289	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C290	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C290	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C295	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C296	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C297	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C298	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C299	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C299	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C300	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C300	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C305	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C306	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C307	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C308	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C309	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C309	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C310	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C310	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C315	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C316	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C317	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C318	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C319	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C319	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C320	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C320	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C325	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C326	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C327	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C328	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C329	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C329	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C330	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C330	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C335	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C336	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C336	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C337	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C338	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C338	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C339	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C339	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C340	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C340	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C345	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C346	55213590	1 PC	CE 10U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C347	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C348	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C349	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C349	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C350	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C350	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C351	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C352	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C353	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C354	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C355	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C356	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C357	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C357	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C358	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C358	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C359	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C360	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C363	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C363	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C364	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C364	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C365	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C365	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C366	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C366	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C369	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C370	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C373	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C373	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C374	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C374	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C377	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C378	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C379	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C380	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C381	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C381	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C382	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C382	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C383	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C384	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C385	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C386	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C387	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C387	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C388	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C388	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C391	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C392	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C393	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C394	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C395	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C395	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C396	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C396	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C401	55213590	1 PC	CE 10U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C402	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C407	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C408	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C409	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C409	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C410	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C410	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C411	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C411	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C412	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C412	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C417	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C418	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C419	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C420	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C421	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C422	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C422	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C427	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C428	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C428	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C429	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C429	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C430	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C430	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C431	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C431	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C432	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C432	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C435	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C435	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C436	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C436	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C441	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C442	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C445	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C446	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C447	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C447	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C448	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C448	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C449	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C450	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C450	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C453	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C454	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C454	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C455	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C455	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C456	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C456	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C457	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C458	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C461	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C462	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C463	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C463	55213560	1 PC	CE 47U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C464	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C464	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C465	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C466	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C469	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C470	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C471	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C471	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C472	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C472	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C473	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C474	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C475	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C476	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C531	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C531	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C397	55319170	1 PC	CE 3MI3F +20% 16.0V 85C
C398	55319170	1 PC	CE 3MI3F +20% 16.0V 85C
C399	55319170	1 PC	CE 3MI3F +20% 16.0V 85C
C400	55319170	1 PC	CE 3MI3F +20% 16.0V 85C

*Miscellaneous*

CN201	55212800	1 PC	WIRECONASY UNIQUE 7P 450MM UL1007 PVC DISCRETE 26
CP202	55125020	1 PC	CONN 2.0MM 10 MA R NAT MOLEX 35237-1010 0 0
CP203	55174590	1 PC	CONN 2.0MM 9 MA ST NAT MOLEX 35336-0910 0 0
CP204	55230480	1 PC	CONN 1.25MM 31 FE ST BK 00-6216-131-821-808 0 0
CP205	55125030	1 PC	CONN 2.0MM 11 MA R NAT MOLEX 35237-1110 0 0
CP206	55090100	1 PC	CONN 2.0MM 12 MA ST NAT LW2002P12 0 0
CP207	55230480	1 PC	CONN 1.25MM 31 FE ST BK 00-6216-131-821-808 0 0
CP208	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
JK201	55230680	1 PC	CON PHONO SCKT RCA 4P WWRR
JK202	55230700	1 PC	CON PHONO SCKT RCA 6P WWWRRR
JK203	55230700	1 PC	CON PHONO SCKT RCA 6P WWWRRR
JK204	55230700	1 PC	CON PHONO SCKT RCA 6P WWWRRR
JK205	55191440	1 PC	CON PHONO SCKT RCA 4P JW-4104RSCG
JK206	55191430	1 PC	CON PHONO SCKT RCA 4P JW-4104RSAG
W201	55231330	1 PC	WIRECONASY UNIQUE 1 200MM UL1007 PVC DISCRETE 18 12
W202	55231330	1 PC	WIRECONASY UNIQUE 1 200MM UL1007 PVC DISCRETE 18 12
W203	20758390	1 PC	WCL 280-05-05 UL2468 RIBBON 24 280MM RD 5 5 20300440 1.5MM
W203	55319780	1 PC	WCL 280-06-06 UL1007 HOOK-UP 18 280MM BK 6 6 0.0MM
W204	20653660	1 PC	WCL 220-05-05 UL2468 RIBBON 24 220MM RD 5 5 20372660 1.5MM
W204	55319770	1 PC	WCL 220-06-06 UL1007 HOOK-UP 16 220MM BK 6 6 0.0MM

## Front PCB

*Semiconductors*

D756	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D757	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D758	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D759	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D760	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D761	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D763	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D764	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D766	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA

Ref. Designator	Part Number	Qty	Description
D767	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D768	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D769	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
IC702	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC703	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC704	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC705	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC706	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC707	55087180	1 PC	IC-LOGIC BU4051BCF MULTIPLEXER HCT
Q701	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q702	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q703	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q704	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q705	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q706	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q707	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q708	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q709	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q710	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q711	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q712	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q713	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q714	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q715	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q716	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q717	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q718	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q719	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q720	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q721	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q722	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q723	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q724	55133330	1 PC	TR-SSD DTC114TKA N 10K0 OHM
Q731	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q734	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q735	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q736	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q725	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q726	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q727	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q728	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q729	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q730	55142670	1 PC	TR-SLPLF MPSA06 N 500MIOA
D700	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D701	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D702	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D703	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D704	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D705	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D706	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D707	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D708	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D709	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D710	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D711	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D712	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D713	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD

Ref. Designator	Part Number	Qty	Description
D714	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D715	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D716	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D717	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D718	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D719	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D720	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D721	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D722	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D723	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D724	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D725	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D726	55179290	0 PC	D-LEM LTL-1CHGEC P-GN RND CL
D726	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D727	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D728	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D729	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D730	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D731	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D732	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D733	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D734	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D735	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D736	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D737	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D738	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D739	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D740	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D741	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D742	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D743	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D744	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D745	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D746	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D747	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D748	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D749	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D750	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D751	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D752	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D753	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D754	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D755	55199400	1 PC	D-LEM CT-3SGTA GN RND 3.0 CL 60M0CD
D765	55179330	1 PC	D-LEM RED/GREEN 5 RD RND CL

*Resistors*

R756	10135080	1 PC	RMGCFMIC 18K0 OHM +5% 62MI5W
R757	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R758	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R759	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R760	10135880	1 PC	RMGCFMIC 2K7 OHM +5% 62MI5W
R761	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R762	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R763	10135790	1 PC	RMGCFMIC 1K2 OHM +5% 62MI5W
R764	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R765	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R766	10135080	1 PC	RMGCFMIC 18K0 OHM +5% 62MI5W
R767	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R768	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R769	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R770	10135880	1 PC	RMGCFMIC 2K7 OHM +5% 62MI5W
R771	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R772	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R773	10135790	1 PC	RMGCFMIC 1K2 OHM +5% 62MI5W
R774	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R775	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R776	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R777	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R778	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R779	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R780	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R781	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R782	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R783	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R784	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R785	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R786	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R787	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R788	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R789	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R790	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R791	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R792	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R793	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R794	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R795	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R796	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R797	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R798	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R799	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R800	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R801	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R802	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R803	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R804	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R805	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R806	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R807	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R808	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R809	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R810	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R811	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R812	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R813	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R814	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R815	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R816	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R817	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R818	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R821	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R822	10135290	1 PC	RMGCFMIC 68K0 OHM +5% 62MI5W
R823	10135290	1 PC	RMGCFMIC 68K0 OHM +5% 62MI5W
R824	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W



Ref. Designator	Part Number	Qty	Description
R825	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R826	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R827	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R828	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R829	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R830	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R833	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R834	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R835	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R836	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R837	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R838	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R839	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R840	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R841	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R842	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R843	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R844	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R845	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R846	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R847	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R848	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R849	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R850	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R851	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R852	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R853	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R854	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R855	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R856	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R857	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R858	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R859	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R860	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R861	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R862	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R863	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R864	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R865	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R866	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R867	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R868	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R869	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R870	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R871	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R872	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R873	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R874	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R875	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R879	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R880	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R881	10134810	1 PC	RMGCFMIC 180R0 OHM +5% 62MI5W
R882	10134810	1 PC	RMGCFMIC 180R0 OHM +5% 62MI5W
R883	20740280	1 PC	RMGCFMIC 3R3 OHM +5% 62MI5W
R884	20740280	1 PC	RMGCFMIC 3R3 OHM +5% 62MI5W
R887	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R888	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R889	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R907	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R908	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R909	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R700	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R701	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R702	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R703	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R704	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R705	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R706	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R707	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R708	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R709	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R710	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R711	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R712	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R713	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R714	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R715	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R716	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R717	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R718	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R719	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R720	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R721	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R722	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R723	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R724	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R725	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R726	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R727	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R728	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R729	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R730	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R731	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R732	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R733	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R734	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R735	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R736	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R737	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R738	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R739	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R740	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R741	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R742	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R743	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R744	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R745	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R746	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R747	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R748	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R749	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R750	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R751	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R752	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W

Ref. Designator	Part Number	Qty	Description
R753	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
R754	50882960	1 PC	RCF 150R0 OHM +5% 250MI0W
<i>Capacitors</i>			
C701	10138790	1 PC	CCCFMIC 22N0F +80% -20% 50.0V Y5V
C702	10138790	1 PC	CCCFMIC 22N0F +80% -20% 50.0V Y5V
C704	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C709	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C710	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C712	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C713	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C714	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C715	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C721	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C722	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C723	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C724	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C727	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C730	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C732	10138420	1 PC	CCCFMIC 820P0F +10% -10% 50.0V X7R
C733	10138420	1 PC	CCCFMIC 820P0F +10% -10% 50.0V X7R
C734	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C737	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C738	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C740	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C741	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C742	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C743	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C746	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C747	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C703	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C705	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C707	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C708	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C711	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C725	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C728	20268950	1 PC	CE 100N0F +20% 50.0V 85C
C729	20268880	1 PC	CE 10U0F +20% 50.0V 85C
C731	20269010	1 PC	CE 47U0F +20% 50.0V 85C
C735	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C736	20268880	1 PC	CE 10U0F +20% 50.0V 85C
C739	20269010	1 PC	CE 47U0F +20% 50.0V 85C
C744	10364820	1 PC	CPF 47N0F +10% 100.0V
C745	10364820	1 PC	CPF 47N0F +10% 100.0V
C748	20268880	1 PC	CE 10U0F +20% 50.0V 85C
C706	20267830	1 PC	CE 47U0F +20% 16.0V 85C
C726	55230310	1 PC	CM 47MI0F +80% -20% 5.5V 70C
C748	20268880	1 PC	CE 10U0F +20% 50.0V 85C
<i>Miscellaneous</i>			
J801	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J802	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J806	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
S701	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S702	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P

Ref. Designator	Part Number	Qty	Description
S703	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S704	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S705	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S706	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S707	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S708	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S709	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S710	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S711	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S712	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S713	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S714	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S715	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S716	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S717	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S718	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S719	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
S720	55145270	1 PC	SWITACT VERTICAL TACTILE F/B 50MI0A 12.0V 500MI0OHM 1T 1P
CN704	55212770	1 PC	WIRECONASY UNIQUE 5P 200MM UL1007 PVC DISCRETE 26
CN705	55212810	1 PC	WIRECONASY UNIQUE 9P 300MM UL1007 PVC DISCRETE 24
CN706	55213230	1 PC	WIRECONASY UNIQUE 4P 100MM UL1007 PVC DISCRETE 26
CN707	55212790	1 PC	WIRECONASY UNIQUE 6P 600MM UL1007 PVC DISCRETE 26
CN708	55231120	1 PC	CONN 2.0MM 2X12 MA R NAT 2208S-12G-78 0 0
CN709	55231120	1 PC	CONN 2.0MM 2X12 MA R NAT 2208S-12G-78 0 0
CN710	55231120	1 PC	CONN 2.0MM 2X12 MA R NAT 2208S-12G-78 0 0
CN711	55231120	1 PC	CONN 2.0MM 2X12 MA R NAT 2208S-12G-78 0 0
CP701	55230490	1 PC	CONN 1.25MM 31 FE R BK 00-6216-031-120-808 0 0
CP702	55124740	1 PC	CONN 1.25MM 15 FE R BK 00-8370-157-000-800 2794 A6
CP703	55123310	1 PC	CONN 2.0MM 4 MA ST NAT LW2002P04 0 0
FL701	55142780	1 PC	DISPLAY HNA-15LL01
HP701	55088400	1 PC	CONN-PHJAC 6.35 ST HORZ EST-J6313 BK 0 0
L701	55179380	1 PC	LF 4U7H +10% 1.7 OHM 190.0A
L702	55179380	1 PC	LF 4U7H +10% 1.7 OHM 190.0A
RM701	55155930	1 PC	IC-REMOTE RPM6938-RSIP-A3 RECEIVER 38KHZ
VR701	55233150	1 PC	SWIROT EC16B24204 5V 500U0A 10T 3P 0 0
W701	55213350	1 PC	WIRECONASY UNIQUE 1P 200MM UL1007 PVC DISCRETE 22 1
W702	55213350	1 PC	WIRECONASY UNIQUE 1P 200MM UL1007 PVC DISCRETE 22 1
W703	55213350	1 PC	WIRECONASY UNIQUE 1P 200MM UL1007 PVC DISCRETE 22 1
W704	55213360	1 PC	WIRECONASY UNIQUE 1P 300MM UL1007 PVC DISCRETE 22 1
W705	55213360	1 PC	WIRECONASY UNIQUE 1P 300MM UL1007 PVC DISCRETE 22 1
X701	55126140	1 PC	CRESONATOR 10M0 HZ 25.0 OHM 0F

## CPU PCB

IC701	55229760CPU	1 PC	IC-MICROCONT CXP828P60Q-1 OTP QFP100
CP708	55231060	1 PC	CONN 2.0MM 2X12 FE R NAT 2007S-12G-46 0 0
CP709	55231060	1 PC	CONN 2.0MM 2X12 FE R NAT 2007S-12G-46 0 0
CP710	55231060	1 PC	CONN 2.0MM 2X12 FE R NAT 2007S-12G-46 0 0
CP711	55231060	1 PC	CONN 2.0MM 2X12 FE R NAT 2007S-12G-46 0 0

## DSP PCB

## Semiconductors

D003	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D005	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D008	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA

Ref. Designator	Part Number	Qty	Description
D009	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D010	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D011	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D012	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D013	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
IC100	55229550DPS	1 PC	IC-MICROCONT CXP828P60Q-1 OTP QFP100
IC101	55125380	1 PC	IC-LOWFREQ CS493263-CL DSP
IC101	5512538A	1 PC	IC-LOWFREQ CS493263-CL G VERSION DSP
IC102	55125380	1 PC	IC-LOWFREQ CS493263-CL DSP
IC102	5512538A	1 PC	IC-LOWFREQ CS493263-CL G VERSION DSP
IC103	55172540AVR8000	1 PC	IC-EPROM AT27LV040A-90JC
IC106	55232880	1 PC	IC-SPECFUNC LC89055W-RA8
IC107	55232860	1 PC	IC-CONV ADC AK5392 A/D
IC108	55232870	1 PC	IC-CONV DAC AD1852 D/A
IC109	55232870	1 PC	IC-CONV DAC AD1852 D/A
IC110	55232870	1 PC	IC-CONV DAC AD1852 D/A
IC111	55232870	1 PC	IC-CONV DAC AD1852 D/A
IC112	55232870	1 PC	IC-CONV DAC AD1852 D/A
IC115	55229970	1 PC	IC-LOGIC MM74HC151M SOIC16 MULTIPLEXER CMOS
IC116	55229970	1 PC	IC-LOGIC MM74HC151M SOIC16 MULTIPLEXER CMOS
IC117	55434570	1 PC	IC-LOGIC 74VHC541MX M20B BUFFER HCT
IC118	55434570	1 PC	IC-LOGIC 74VHC541MX M20B BUFFER HCT
IC126	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC127	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC128	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC129	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC130	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC131	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC132	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC133	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC134	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC135	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC136	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC137	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC138	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC139	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC140	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC141	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC153	55206390	1 PC	IC-LOGIC NC7S04 INVERTER CMOS
IC104	55170220	1 PC	IC-LOGIC F/F 74VHC574MX FLIP/FLOP HCMOS
IC105	55170220	1 PC	IC-LOGIC F/F 74VHC574MX FLIP/FLOP HCMOS
IC113	55133310	1 PC	IC-LOGIC M74HCU04M1R INVERTER HCT
IC114	55133310	1 PC	IC-LOGIC M74HCU04M1R INVERTER HCT
IC119	55179270	1 PC	IC-LOGIC QUAD 2-INPUT MP 74VHC157MX SOL16 FLIP/FLOP HCMOS
IC119	55242890	1 PC	IC-LOGIC QUAD 2-INPUT 74VHC157M SOIC16 MULTIPLEXER HCMOS
IC120	55179270	1 PC	IC-LOGIC QUAD 2-INPUT MP 74VHC157MX SOL16 FLIP/FLOP HCMOS
IC120	55242890	1 PC	IC-LOGIC QUAD 2-INPUT 74VHC157M SOIC16 MULTIPLEXER HCMOS
IC121	55179270	1 PC	IC-LOGIC QUAD 2-INPUT MP 74VHC157MX SOL16 FLIP/FLOP HCMOS
IC121	55242890	1 PC	IC-LOGIC QUAD 2-INPUT 74VHC157M SOIC16 MULTIPLEXER HCMOS
IC122	55179270	1 PC	IC-LOGIC QUAD 2-INPUT MP 74VHC157MX SOL16 FLIP/FLOP HCMOS
IC122	55242890	1 PC	IC-LOGIC QUAD 2-INPUT 74VHC157M SOIC16 MULTIPLEXER HCMOS
IC123	55232910	1 PC	IC-LOGIC 74VHC14M INVERTER SCHMITT TRIGGER CMOS
IC124	55232910	1 PC	IC-LOGIC 74VHC14M INVERTER SCHMITT TRIGGER CMOS
IC125	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC129	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC132	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC135	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP

Ref. Designator	Part Number	Qty	Description
IC138	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC141	55142610	1 PC	IC-OPERAMP NJM2068M DUAL OP
IC152	55179270	1 PC	IC-LOGIC QUAD 2-INPUT MP 74VHC157MX SOL16 FLIP/FLOP HCMOS
IC152	55242890	1 PC	IC-LOGIC QUAD 2-INPUT 74VHC157M SOIC16 MULTIPLEXER HCMOS
Q001	55179230	1 PC	TR-SLPSWA KRC107M N
Q002	55179220	1 PC	TR-SLPSWA KRA107M P
Q003	55179220	1 PC	TR-SLPSWA KRA107M P
Q004	55142670	1 PC	TR-SLPLF MPSA06 N 500MI0A
Q005	55179230	1 PC	TR-SLPSWA KRC107M N
Q006	55179230	1 PC	TR-SLPSWA KRC107M N
D004	55129160	1 PC	D-LEM LTL-1CHPE B-RD RND 3.0 DIFU 5.6CD
IC100	55130710	1 PC	IC-MICROCONT CXP828P60Q-1 OTP QFP100
IC101	55125380	1 PC	IC-LOWFREQ CS493263-CL DSP
IC102	55125380	1 PC	IC-LOWFREQ CS493263-CL DSP
IC103	55157760	1 PC	IC-EPROM AT27LV040A-90JC
IC150	55207930	1 PC	PHOTCOUP PC-17T1
IC151	55207930	1 PC	PHOTCOUP PC-17T1

*Resistors*

R011	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R015	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R028	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R030	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R031	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R032	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R033	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R034	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R035	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R036	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R037	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R038	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R039	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R039	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R040	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R040	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R041	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R042	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R042	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R043	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R043	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R044	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R045	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R046	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R047	10135170	1 PC	RMGCFMIC 33K0 OHM +5% 62MI5W
R048	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R049	10134410	1 PC	RMGCFMIC 10R0 OHM +5% 62MI5W
R051	10135240	1 PC	RMGCFMIC 56K0 OHM +5% 62MI5W
R052	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R053	10135950	1 PC	RMGCFMIC 5K1 OHM +5% 62MI5W
R054	10135950	1 PC	RMGCFMIC 5K1 OHM +5% 62MI5W
R055	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R055	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R056	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R057	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R058	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R059	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R060	10135170	1 PC	RMGCFMIC 33K0 OHM +5% 62MI5W
R061	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R062	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R066	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R067	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R071	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R071	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
R072	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R073	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R074	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R077	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R078	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R081	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R082	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R083	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R084	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R085	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R085	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R086	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R086	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R087	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R087	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R088	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R088	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R089	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R089	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R090	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R091	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R092	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R095	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R096	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R096	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R097	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R097	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R098	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R099	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R099	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R101	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R102	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R103	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R104	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R104	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R105	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R105	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R106	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R107	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R109	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R110	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R113	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R113	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R114	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R114	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R115	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R115	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R116	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R117	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R118	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R119	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R120	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R121	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R122	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R122	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R123	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R123	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R124	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R125	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R125	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R126	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R127	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R128	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R131	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R132	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R132	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R133	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R133	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R134	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R134	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R135	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R135	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R136	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R137	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R138	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R139	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R140	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R140	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R141	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R141	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R142	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R143	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R145	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R146	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R149	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R150	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R150	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R151	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R151	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R152	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R153	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R154	10135240	1 PC	RMGCFMIC 56K0 OHM +5% 62MI5W
R155	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R156	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R157	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R158	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R158	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R159	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R159	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R160	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R161	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R163	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R164	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R167	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R168	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R168	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R169	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W



Ref. Designator	Part Number	Qty	Description
R169	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R170	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R171	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R173	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R174	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R175	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R176	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R176	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R177	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R177	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R178	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R179	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R181	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R182	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R185	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R186	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R186	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R187	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R187	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R188	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R189	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R191	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R192	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R193	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R194	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R194	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R195	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R195	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R196	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R197	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R199	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R200	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R203	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R204	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R204	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R205	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R205	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R206	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R207	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R209	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R210	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R211	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R212	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R212	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R213	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R213	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R214	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R215	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R217	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R218	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R221	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R222	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R222	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R223	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R223	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R224	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R225	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R227	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R228	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R229	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R230	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R231	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R232	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R233	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R234	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R234	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R235	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R235	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R236	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R237	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R239	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R240	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R243	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R244	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R244	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R245	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R245	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R246	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R247	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R249	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R250	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R251	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R252	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R252	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R253	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R253	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R254	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R255	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R257	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R258	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R261	10135090	1 PC	RMGCFMIC 20K0 OHM +5% 62MI5W
R262	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R262	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R263	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R263	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R264	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R265	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R267	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R268	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R269	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R270	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R271	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R272	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R273	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R274	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R275	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R276	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R277	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R278	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R279	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R280	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R281	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R282	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R283	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R284	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R285	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R286	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R287	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R288	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R290	10135920	1 PC	RMGCFMIC 3K9 OHM +5% 62MI5W
R293	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R295	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R296	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R299	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R300	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R301	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R302	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R303	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
R303	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R305	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R306	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R307	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R308	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R309	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R310	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R311	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R312	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R313	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R314	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R315	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R316	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R317	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R318	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R319	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R320	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R321	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R322	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R331	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R333	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R333	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R001	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R002	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R003	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R004	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R005	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R006	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R007	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R008	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R009	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R010	10134950	1 PC	RMGCFMIC 680R0 OHM +5% 62MI5W
R012	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R013	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R014	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R016	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R017	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R018	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R019	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R020	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R021	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R022	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R023	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R024	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R025	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R026	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R027	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R029	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R064	10135050	1 PC	RMGCFMIC 15K0 OHM +5% 62MI5W
R064	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
R065	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R069	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R070	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R075	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R076	10135940	1 PC	RMGCFMIC 4K7 OHM +5% 62MI5W
R079	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R080	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R091	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R092	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R093	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R094	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R094	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R095	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R098	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R100	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R101	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R102	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R103	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R106	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R107	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R109	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R110	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R111	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R112	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R112	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R116	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R117	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R119	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R120	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R121	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R124	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R127	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R128	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R129	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R130	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R130	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R131	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R137	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R138	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R139	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W
R142	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R144	10134760	1 PC	RMGCFMIC 120R0 OHM +5% 62MI5W
R145	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R146	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R147	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R148	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R148	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R149	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R152	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R153	10134830	1 PC	RMGCFMIC 220R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R155	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R156	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R163	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R164	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R165	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R166	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R166	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R173	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R174	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R181	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R182	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R183	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R184	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R184	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R191	10134980	1 PC	RMGCFMIC 820R0 OHM +5% 62MI5W
R192	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R199	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R200	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R201	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R202	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R202	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R209	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R210	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R217	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R218	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R219	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R220	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R220	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R227	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R228	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R239	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R240	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R241	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R242	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R242	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R249	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R250	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R257	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R258	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R259	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R260	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
R260	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R267	10134960	1 PC	RMGCFMIC 750R0 OHM +5% 62MI5W
R268	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R289	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R291	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R292	10134850	1 PC	RMGCFMIC 270R0 OHM +5% 62MI5W
R294	10135220	1 PC	RMGCFMIC 47K0 OHM +5% 62MI5W
R297	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R298	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R323	10135820	1 PC	RMGCFMIC 1K5 OHM +5% 62MI5W
R324	10135960	1 PC	RMGCFMIC 5K6 OHM +5% 62MI5W
R330	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R332	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R332	10135850	1 PC	RMGCFMIC 2K0 OHM +5% 62MI5W
R050	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R063	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W

Ref. Designator	Part Number	Qty	Description
R068	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R108	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
<i>Capacitors</i>			
C008	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C013	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C014	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C015	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C019	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C020	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C023	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C024	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C025	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C026	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C027	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C029	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C030	20678050	1 PC	CCCFMIC 15P0F +5% -5% 50.0V NP0
C031	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C032	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C034	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C036	20506680	1 PC	CCCFMIC 470P0F +5% -5% 50.0V NP0
C037	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C064	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C065	20506540	1 PC	CCCFMIC 10P0F +0P5F -0P5F 50.0V NP0
C066	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C067	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C070	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C070	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C071	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C075	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C076	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C077	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C078	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C079	20678050	1 PC	CCCFMIC 15P0F +5% -5% 50.0V NP0
C080	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C082	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C084	20506680	1 PC	CCCFMIC 470P0F +5% -5% 50.0V NP0
C085	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C087	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C088	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C088	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C091	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C092	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C093	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C095	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C096	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C097	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C098	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C099	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C100	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C101	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C102	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C103	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C105	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C106	20288060	1 PC	CCCFMIC 220N0F +80% -20% 16.0V Y5V
C107	20288060	1 PC	CCCFMIC 220N0F +80% -20% 16.0V Y5V

Ref. Designator	Part Number	Qty	Description
C108	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C110	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C112	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C113	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C114	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C115	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C122	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C123	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C124	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C126	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C132	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C133	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C136	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C138	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C139	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C140	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C141	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C141	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C141	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C142	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C142	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C143	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C146	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C146	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C147	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C148	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C148	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C148	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C149	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C150	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C150	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C151	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C152	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C154	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C154	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C154	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C155	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C156	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C159	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C161	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C161	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C161	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C162	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C163	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C164	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C165	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C167	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C167	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C167	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C168	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C169	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C172	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C174	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C174	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C174	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C175	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C176	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V

Ref. Designator	Part Number	Qty	Description
C177	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C178	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C180	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C180	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C180	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C181	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C182	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C185	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C187	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C187	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C187	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C188	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C189	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C190	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C191	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C193	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C193	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C193	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C194	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C195	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C198	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C200	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C200	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C200	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C201	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C202	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C203	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C204	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C206	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C206	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C206	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C207	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C208	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C211	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C213	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C213	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C213	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C214	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C215	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C216	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C217	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C219	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C219	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C219	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C220	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C221	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C224	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C226	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C226	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C226	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C227	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C228	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C229	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C230	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C232	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C232	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C232	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P



Ref. Designator	Part Number	Qty	Description
C233	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C234	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C237	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C239	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C239	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C239	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C240	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C241	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C242	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C243	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C246	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C248	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C249	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C252	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C254	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C255	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C258	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C260	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C261	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C262	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C264	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C264	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C264	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C265	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C266	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C269	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C271	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C271	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C271	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C272	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C273	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C274	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C275	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C277	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C277	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C277	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C278	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C279	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C282	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C284	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C284	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C284	80434800	1 PC	CC 1N0F +10% -10% 50.0V Y5P
C285	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C286	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C287	20506640	1 PC	CCCFMIC 220P0F +5% -5% 50.0V NP0
C288	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C291	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C292	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C293	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C294	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C300	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C307	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C001	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C002	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C003	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C004	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C005	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R

Ref. Designator	Part Number	Qty	Description
C006	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C007	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C009	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C010	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C011	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C012	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C016	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C017	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C018	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C021	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C022	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C028	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C038	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C040	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C041	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C042	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C043	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C044	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C046	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C047	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C048	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C049	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C050	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C052	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C053	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C054	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C055	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C056	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C058	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C059	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C060	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C061	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C068	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C069	20506640	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C072	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C086	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C116	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C119	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C120	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C121	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C131	10138710	1 PC	CCCFMIC 4N7F +10% -10% 50.0V X7R
C143	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C145	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C149	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C151	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C152	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C153	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C156	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C158	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C164	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C165	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C169	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C171	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C177	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C178	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C182	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C184	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R

Ref. Designator	Part Number	Qty	Description
C190	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C191	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C195	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C197	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C203	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C204	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C208	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C210	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C216	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C217	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C221	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C223	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C229	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C230	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C234	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C236	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C242	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C243	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C266	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C268	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C274	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C275	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C279	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C281	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
C287	10138630	1 PC	CCCFMIC 2N7F +10% -10% 50.0V X7R
C288	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C296	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C297	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C311	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C312	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C331	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C033	20252670	1 PC	CE 470U0F +20% 10.0V 85C
C033	55319180	1 PC	CE 470U0F +20% 10.0V 85C
C035	20268850	1 PC	CE 2U2F +20% 50.0V 85C
C035	55246590	1 PC	CE 2U2F +20% 50.0V 85C
C039	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C045	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C051	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C057	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C062	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C063	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C073	15002130	1 PC	CE 10U0F +20% 16.0V 85C
C073	55246550	1 PC	CE 10U0F +20% 16.0V 85C
C074	20268140	1 PC	CE 220U0F +20% 25.0V 85C
C074	55213570	1 PC	CE 220U0F +20% 25.0V 85C
C083	20268850	1 PC	CE 2U2F +20% 50.0V 85C
C083	55246590	1 PC	CE 2U2F +20% 50.0V 85C
C090	20268140	1 PC	CE 220U0F +20% 25.0V 85C
C090	55213570	1 PC	CE 220U0F +20% 25.0V 85C
C094	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C094	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C104	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C104	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C109	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C109	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C111	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C111	55213560	1 PC	CE 47U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C117	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C118	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C127	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C128	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C129	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C130	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C134	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C135	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C140	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C144	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C147	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C153	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C157	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C160	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C166	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C170	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C173	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C179	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C183	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C186	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C192	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C196	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C199	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C205	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C209	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C209	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C212	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C218	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C222	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C225	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C231	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C235	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C238	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C244	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C245	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C247	20268950	1 PC	CE 100N0F +20% 50.0V 85C
C247	55246580	1 PC	CE 100N0F +20% 50.0V 85C
C250	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C251	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C256	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C257	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C263	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C267	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C270	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C276	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C280	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C283	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C289	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C290	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C302	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C302	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C303	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C303	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C304	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C304	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C305	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C305	55213560	1 PC	CE 47U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C306	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C306	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C330	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C355	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C356	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C081	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C089	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C301	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C333	20252050	1 PC	CE 100U0F +20% 6.3V 85C
C334	20252050	1 PC	CE 100U0F +20% 6.3V 85C

### Miscellaneous

BD03	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD03	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD06	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD06	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD07	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD07	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD08	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD08	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD09	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD09	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD17	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD17	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD18	55126520	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD U
BD18	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD19	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD19	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD20	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD20	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD21	55126520	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD U
BD21	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD23	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD23	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD24	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD24	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD25	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD25	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD26	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD26	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD27	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD27	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD28	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD28	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD29	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD30	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD30	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD38	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD38	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD39	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD39	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD40	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD40	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD43	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD43	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD44	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U

Ref. Designator	Part Number	Qty	Description
BD44	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD45	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD45	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD46	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD46	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD47	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD47	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD48	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD48	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD50	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD50	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD51	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD51	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD53	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD53	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD53	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD54	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD54	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD55	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD55	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD56	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD56	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD67	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD67	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD69	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD69	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD70	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD70	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD71	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD71	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD74	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD74	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD75	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD75	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD76	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD76	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD77	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD77	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD78	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD78	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD79	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD79	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD80	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD80	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD81	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD81	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD82	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD82	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD87	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD87	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD88	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD88	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD89	55126520	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD U
BD89	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD92	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD92	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD93	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U

Ref. Designator	Part Number	Qty	Description
BD93	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD94	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD94	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD95	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD95	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD98	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD98	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
J001	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J002	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J038	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J043	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
J043	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J049	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J057	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J058	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J065	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J066	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J067	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
BD01	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD01	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD02	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD02	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD04	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD04	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD05	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD05	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD10	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD10	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD100	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD100	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD101	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD101	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD11	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD11	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD12	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD12	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD13	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD13	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD14	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD14	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD15	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD15	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD16	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD16	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD20	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
BD20	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD22	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD22	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD31	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD31	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD32	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD32	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD33	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD33	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD34	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD34	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD35	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U

Ref. Designator	Part Number	Qty	Description
BD35	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD36	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD36	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD37	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD37	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD41	55126590	1 PC	FBEAD SURFACE MT 120OHM CHIP FERRITE BEAD
BD41	55126710	1 PC	FBEAD SURFACE MT 120OHM FCM2012C-121T06
BD42	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD42	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD49	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD49	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD52	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD52	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD59	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD59	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD60	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD60	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD61	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD61	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD62	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD62	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD63	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD63	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD65	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD65	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD66	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD66	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD68	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD68	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD72	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD72	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD73	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD73	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD83	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD83	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD84	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD84	55126720	1 PC	FBEAD SURFACE MT 300OHM FCM2012C-301T04
BD85	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD85	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD96	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
BD96	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
BD97	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
BD99	55126530	1 PC	FBEAD SURFACE MT 300OHM CHIP FERRITE BEAD U
J002	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J008	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J010	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J011	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J012	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J013	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J014	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J015	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J016	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J029	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J030	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J031	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J032	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J033	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W



Ref. Designator	Part Number	Qty	Description
J034	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J035	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J036	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J046	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J047	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J055	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J063	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
J064	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
L001	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L001	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
L002	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L002	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
L003	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L003	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
L004	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L004	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
L011	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L011	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
L013	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L013	55230450	1 PC	LF 47U0H +10% 5.8 OHM 70MI0A
CN106	55230940	1 PC	CON 2.54MM PITCH 2X12P 2213S-12G-1154
CN107	55230940	1 PC	CON 2.54MM PITCH 2X12P 2213S-12G-1154
CN108	55231080	1 PC	CONN 2.0MM 2X25 FE R NAT 2208S-25G-133 0 0
CN109	55212780	1 PC	WIRECONASY UNIQUE 7P 60MM UL1007 PVC DISCRETE 26
CP100	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
CP101	55174640	1 PC	CONN 2.0MM 9 MA R NAT SOCKET MOLEX 35237-0910 0 0
CP102	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
CP103	55090050	1 PC	CONN 2.0MM 10 MA ST NAT LW2002P10 0 0
CP105	55123310	1 PC	CONN 2.0MM 4 MA ST NAT LW2002P04 0 0
CP106	55230970	1 PC	CON 2.54MM PITCH 2X12 PIN SOCKET 22145-12G-85
CP107	55230970	1 PC	CON 2.54MM PITCH 2X12 PIN SOCKET 22145-12G-85
CP108	55231110	1 PC	CONN 2.0MM 2X25 FE R NAT 2007S-25G-46 0 0
FN401	55176420	1 PC	AC PUN BRACKET BKT GROUND ET 0.5T AVR520 --
FN402	55176420	1 PC	AC PUN BRACKET BKT GROUND ET 0.5T AVR520 --
GND1	55135980	1 PC	TERMLUG GND
JAC1	55204550	1 PC	D-LEM TORX179 RD RND CL
JAC10	55176390	1 PC	CON PHONO SCKT STEREO JACK JW350S
JAC2	55204550	1 PC	D-LEM TORX179 RD RND CL
JAC3	55204550	1 PC	D-LEM TORX179 RD RND CL
JAC4	55204560	1 PC	D-LEM TOTX179 RD RND CL
JAC5	55230650	1 PC	CON PHONO SCKT RCA 2P JW1502RSG
JAC6	55230650	1 PC	CON PHONO SCKT RCA 2P JW1502RSG
JAC7	55176390	1 PC	CON PHONO SCKT STEREO JACK JW350S
JAC8	55176390	1 PC	CON PHONO SCKT STEREO JACK JW350S
JAC9	55176390	1 PC	CON PHONO SCKT STEREO JACK JW350S
L005	55231620	1 PC	LF 47U0H +10% 1.22 OHM 340MIOA
L006	55231620	1 PC	LF 47U0H +10% 1.22 OHM 340MIOA
L007	55301030	1 PC	LF 10U0H +10% 580MIO OHM 500MIOA
L008	55301030	1 PC	LF 10U0H +10% 580MIO OHM 500MIOA
L009	55231620	1 PC	LF 47U0H +10% 1.22 OHM 340MIOA
L010	55231620	1 PC	LF 47U0H +10% 1.22 OHM 340MIOA
L012	55301030	1 PC	LF 10U0H +10% 580MIO OHM 500MIOA
T001	55176540	1 PC	TFPULSE TRANSFORMER 110UH FP-110 FERRIT MAGNET
W100	20847300	1 PC	WCL 070-05-05 UL2468 RIBBON 24 70MM RD 5 5 20372660 1.5MM
W100	55319750	1 PC	WCL 70-06-06 UL1007 HOOK-UP 18 70MM BK 6 6 0.0MM
W101	20847300	1 PC	WCL 070-05-05 UL2468 RIBBON 24 70MM RD 5 5 20372660 1.5MM
W101	55319750	1 PC	WCL 70-06-06 UL1007 HOOK-UP 18 70MM BK 6 6 0.0MM

Ref. Designator	Part Number	Qty	Description
W102	20847300	1 PC	WCL 070-05-05 UL2468 RIBBON 24 70MM RD 5 5 20372660 1.5MM
W102	55319750	1 PC	WCL 70-06-06 UL1007 HOOK-UP 18 70MM BK 6 6 0.0MM
X002	55126130	1 PC	VCXO 12M288 HZ +50 PPM -50 PPM 0 OHM
X003	55126140	1 PC	CRESONATOR 10M0 HZ 25.0 OHM 0F

## Video PCB

*Semiconductors*

DV602	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
DY601	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
IC601	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC602	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC603	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC604	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC605	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC606	55233040	1 PC	IC-LOGIC TC4051BFN SOL16 MULTIPLEXER CMOS
IC607	55179600	1 PC	IC-LOGIC TC4053BFN SOL16 MULTIPLEXER CMOS
IC607	55275840	0 PC	IC-LOGIC TC4053BF SOP16 MULTIPLEXER CMOS
IC608	55179600	1 PC	IC-LOGIC TC4053BFN SOL16 MULTIPLEXER CMOS
IC608	55275840	0 PC	IC-LOGIC TC4053BF SOP16 MULTIPLEXER CMOS
IC609	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC610	20718660	1 PC	IC-LOGIC BU4094BF SHIFT REGISTER CMOS
IC611	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC612	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC613	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC614	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC615	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC616	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC617	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC622	55175530	1 PC	IC-VIDEOPROC TSH95D VIDEO AMPLIFIER
IC623	55206390	1 PC	IC-LOGIC NC7S04 INVERTER CMOS
Q683	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q684	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q685	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q686	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
D682	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D683	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D684	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D685	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D686	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
D687	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
D687	20496510	1 PC	D-SLP 1SS355 35.0V 225MIOA
Q681	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q682	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
IC618	55179610	1 PC	IC-SPECFUNC M35013 OSD
IC619	40440440	1 PC	IC-LIN BA7046 2856 A0 00
IC620	55179610	1 PC	IC-SPECFUNC M35013 OSD
IC621	40440440	1 PC	IC-LIN BA7046 2856 A0 00
QV601	55133250	1 PC	TR-SLPLF 2SC1740S R N 150MIOA 50V
D681	55179310	1 PC	D-LEM RED/GREEN 3PIE RD RND CL

*Resistors*

R660	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R661	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R662	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R663	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R664	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R665	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R666	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R667	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R668	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R669	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R670	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R671	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R672	10135030	1 PC	RMGCFMIC 12K0 OHM +5% 62MI5W
R673	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R674	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
R681	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R682	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
R683	10134890	1 PC	RMGCFMIC 390R0 OHM +5% 62MI5W
R684	10134890	1 PC	RMGCFMIC 390R0 OHM +5% 62MI5W
R698	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC606	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC607	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RC608	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC609	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RC610	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC611	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RC612	20538950	1 PC	RMGCFMIC 5R6 OHM +5% 62MI5W
RC612	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
RC614	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC615	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RC623	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RC623	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RC627	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RC627	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RC640	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RV600	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV601	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV602	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV603	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV604	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV606	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV607	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RV608	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV609	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RV610	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV611	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RV612	20538950	1 PC	RMGCFMIC 5R6 OHM +5% 62MI5W
RV614	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RV615	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RV623	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RV623	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RV627	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RV627	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RV642	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
RV643	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RV644	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RV645	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RV646	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
RV648	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
RV649	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
RV650	10135290	1 PC	RMGCFMIC 68K0 OHM +5% 62MI5W
RV653	10135380	1 PC	RMGCFMIC 150K0 OHM +5% 62MI5W
RV654	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
RV655	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV656	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
RV658	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
RV659	10135380	1 PC	RMGCFMIC 150K0 OHM +5% 62MI5W
RV660	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV661	10135900	1 PC	RMGCFMIC 3K3 OHM +5% 62MI5W
RV661	21061700	1 PC	RMGCFMIC 3K4 OHM +1% 62MI5W
RV662	10135790	1 PC	RMGCFMIC 1K2 OHM +5% 62MI5W
RV662	21083800	1 PC	RMGCFMIC 1K15 OHM +1% 62MI5W
RY606	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY607	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RY608	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY609	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RY610	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY611	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RY612	20538670	1 PC	RMGCFMIC 2R2 OHM +5% 62MI5W
RY612	20538950	1 PC	RMGCFMIC 5R6 OHM +5% 62MI5W
RY614	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY615	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RY623	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RY623	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RY627	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
RY627	20723340	1 PC	RMGCFMIC 536R0 OHM +1% 62MI5W
RY642	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
RY643	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RY644	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RY645	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RY646	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
RY648	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
RY649	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY650	10135290	1 PC	RMGCFMIC 68K0 OHM +5% 62MI5W
RY653	10135380	1 PC	RMGCFMIC 150K0 OHM +5% 62MI5W
RY654	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
RY655	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY656	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
RY658	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
RY659	10135380	1 PC	RMGCFMIC 150K0 OHM +5% 62MI5W
RY662	10134930	1 PC	RMGCFMIC 560R0 OHM +5% 62MI5W
R685	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R686	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R687	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R688	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
R688	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
R689	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R690	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R691	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R692	20589100	1 PC	RMGCFMIC 1R0 OHM +5% 62MI5W
R693	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
R694	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R695	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R696	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R697	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
RC600	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC601	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
RC602	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC603	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC604	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RC605	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
RC613	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RC622	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC624	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RC626	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC628	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RC630	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC632	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC634	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC636	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC639	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RC641	10134870	1 PC	RMGCFMIC 330R0 OHM +5% 62MI5W
RC642	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RL680	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
RR680	10134910	1 PC	RMGCFMIC 470R0 OHM +5% 62MI5W
RV605	10134540	1 PC	RMGCFMIC 22R0 OHM +5% 62MI5W
RV605	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
RV613	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RV622	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV624	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RV626	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV628	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RV630	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV632	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV634	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV636	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV639	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV641	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RV647	10135980	1 PC	RMGCFMIC 6K8 OHM +5% 62MI5W
RV651	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
RV652	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
RV657	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
RY600	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY601	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY602	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY603	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY604	10134710	1 PC	RMGCFMIC 75R0 OHM +5% 62MI5W
RY605	10134780	1 PC	RMGCFMIC 150R0 OHM +5% 62MI5W
RY613	10135120	1 PC	RMGCFMIC 22K0 OHM +5% 62MI5W
RY622	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY624	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RY626	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY628	10134920	1 PC	RMGCFMIC 510R0 OHM +5% 62MI5W
RY630	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY632	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY634	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY636	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY639	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY641	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY647	10135980	1 PC	RMGCFMIC 6K8 OHM +5% 62MI5W
RY651	10134740	1 PC	RMGCFMIC 100R0 OHM +5% 62MI5W
RY652	10135620	1 PC	RMGCFMIC 1M0 OHM +10% 62MI5W
RY657	10135530	1 PC	RMGCFMIC 470K0 OHM +5% 62MI5W
RY660	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
RY661	10135010	1 PC	RMGCFMIC 10K0 OHM +5% 62MI5W
RY663	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W

*Capacitors*

CV630	55213550	1 PC	CE 47U0F +20% 16.0V 85C
CV637	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV641	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
CV643	10138620	1 PC	CCCFMIC 2N2F +10% -10% 50.0V X7R
CY630	55213550	1 PC	CE 47U0F +20% 16.0V 85C
CY637	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY641	10138550	1 PC	CCCFMIC 1N0F +10% -10% 50.0V X7R
CY643	10138620	1 PC	CCCFMIC 2N2F +10% -10% 50.0V X7R
C637	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C638	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C650	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C651	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C652	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C653	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C653	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
C654	20506570	1 PC	CCCFMIC 47P0F +5% -5% 50.0V NP0
C655	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C656	20506520	1 PC	CCCFMIC 22P0F +5% -5% 50.0V NP0
C657	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C658	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C661	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C663	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C665	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C667	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C669	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C671	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C673	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C675	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C677	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C679	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C681	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C683	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C685	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C687	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C688	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C689	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C692	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C693	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C694	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C695	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C696	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C697	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C698	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C699	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C700	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CC610	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CC611	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CC612	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CC613	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CC615	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CC645	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CC647	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V

Ref. Designator	Part Number	Qty	Description
CC649	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CC651	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CL652	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CL653	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CR652	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CR653	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV610	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV611	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV612	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV613	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV615	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV623	10375090	1 PC	CCCFMIC 20P0F +5% -5% 50.0V NP0
CV623	20548340	1 PC	CCCFMIC 18P0F +5% -5% 50.0V NP0
CV624	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
CV624	20719460	1 PC	CCCFMIC 39P0F +5% -5% 50.0V NP0
CV625	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV626	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV627	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CV628	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CV633	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
CV636	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CV645	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CV647	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CV649	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CV651	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY610	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY611	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY612	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY613	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY615	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY623	10375090	1 PC	CCCFMIC 20P0F +5% -5% 50.0V NP0
CY623	20548340	1 PC	CCCFMIC 18P0F +5% -5% 50.0V NP0
CY624	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
CY624	20719460	1 PC	CCCFMIC 39P0F +5% -5% 50.0V NP0
CY625	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY626	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY627	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
CY628	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY633	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
CY636	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY645	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY647	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY649	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
CY651	20288040	1 PC	CCCFMIC 100N0F +80% -20% 16.0V Y5V
C631	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C631	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C632	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C632	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C633	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C633	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C634	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C634	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C635	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C635	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C636	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C636	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C660	20267820	1 PC	CE 47U0F +20% 6.3V 85C

Ref. Designator	Part Number	Qty	Description
C660	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C662	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C662	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C664	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C664	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C666	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C666	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C668	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C668	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C670	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C670	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C672	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C672	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C674	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C674	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C676	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C676	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C678	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C678	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C680	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C680	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C682	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C682	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C684	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C684	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C686	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C686	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
C690	20267820	1 PC	CE 47U0F +20% 6.3V 85C
C690	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CC614	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CC617	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CC618	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CC620	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CC622	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CC644	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CC644	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CC646	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CC646	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CC648	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CC648	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CC650	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CC650	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV614	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV617	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV618	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV620	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV622	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV629	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CV630	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CV630	55213560	1 PC	CE 47U0F +20% 16.0V 85C
CV630	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CV630	55213590	1 PC	CE 10U0F +20% 16.0V 85C
CV631	80434590	1 PC	CC 22P0F +5% -5% 50.0V NP0
CV632	80434590	1 PC	CC 22P0F +5% -5% 50.0V NP0
CV634	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV634	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV635	20267820	1 PC	CE 47U0F +20% 6.3V 85C



Ref. Designator	Part Number	Qty	Description
CV635	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV638	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CV639	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV639	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV640	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CV642	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CV644	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV644	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV646	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV646	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV648	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV648	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CV650	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CV650	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY614	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY617	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY618	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY620	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY622	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY629	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CY630	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CY630	55213560	1 PC	CE 47U0F +20% 16.0V 85C
CY630	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY630	55213590	1 PC	CE 10U0F +20% 16.0V 85C
CY631	80434590	1 PC	CC 22P0F +5% -5% 50.0V NP0
CY632	80434590	1 PC	CC 22P0F +5% -5% 50.0V NP0
CY634	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY634	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY635	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY635	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY638	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CY639	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY639	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY640	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CY642	55232740	1 PC	CEOSCON 1U0F +20% -20% 16.0V
CY644	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY644	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY646	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY646	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY648	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY648	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY650	20267820	1 PC	CE 47U0F +20% 6.3V 85C
CY650	55321730	1 PC	CEOSCON 47U0F +20% -20% 6.3V
CY652	55213580	1 PC	CE 100U0F +20% 10.0V 85C
CY653	55213580	1 PC	CE 100U0F +20% 10.0V 85C

*Miscellaneous*

B681	55126570	1 PC	FBEAD SURFACE MT 2500OHM CHIP FERRITE BEAD U
B681	55126690	1 PC	FBEAD SURFACE MT 2500OHM FCM2012H-252T02
L681	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
L682	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LV601	55179350	1 PC	LF 22U0H +10% 3.4 OHM 130.0A
LV601	70438510	1 PC	LF 22U0H +10% 3.4 OHM 130E-3A
LV602	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LV603	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LV604	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A

Ref. Designator	Part Number	Qty	Description
LV605	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LV606	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LY601	55179350	1 PC	LF 22U0H +10% 3.4 OHM 130.0A
LY601	70438510	1 PC	LF 22U0H +10% 3.4 OHM 130E-3A
LY602	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LY603	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LY604	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LY605	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
LY606	20475510	1 PC	LF 47U0H +10% 4.9 OHM 110E-3A
	50		
	55231640	1 PC	AC PUN SHIELD BKT DIGITAL AVR8000
BE601	55179500	1 PC	LFBEAD 80.582OHM 100M0HZ FB-30 HC-3580
BE602	55179500	1 PC	LFBEAD 80.582OHM 100M0HZ FB-30 HC-3580
BE603	55179500	1 PC	LFBEAD 80.582OHM 100M0HZ FB-30 HC-3580
BE604	55179500	1 PC	LFBEAD 80.582OHM 100M0HZ FB-30 HC-3580
CN100	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
CN101	55174590	1 PC	CONN 2.0MM 9 MA ST NAT MOLEX 35336-0910 0 0
CN102	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
CN202	55124950	1 PC	CONN 2.0MM 10 MA ST NAT MOLEX 35336-1010 0 0
CN205	55124960	1 PC	CONN 2.0MM 11 MA ST NAT MOLEX 35336-1110 0 0
CN601	55174630	1 PC	CONN 2.0MM 19 MA ST NAT MOLEX 35336-1910 0 0
CN603	55294090	1 PC	WIRECONASY UNIQUE 4P 320MM UL1007 PVC DISCRETE 26
CN605	55212820	1 PC	WIRECONASY UNIQUE 9P 300MM UL1007 PVC DISCRETE 26
CN606	55212840	1 PC	WIRECONASY UNIQUE 12P 400MM UL1533 SHIELD 26
CN608	55212830	1 PC	WIRECONASY UNIQUE 10P 550MM UL1533 SHIELD 26
CP203	55174640	1 PC	CONN 2.0MM 9 MA R NAT SOCKET MOLEX 35237-0910 0 0
CP208	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
CP601	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
CP602	55078500	1 PC	CONN 2.0MM 7 MA R NAT LW2003P07 0 0
CP604	55124740	1 PC	CONN 1.25MM 15 FE R BK 00-8370-157-000-800 2794 A6
CP607	55123320	1 PC	CONN 2.0MM 5 MA ST NAT LW2002P05 0 0
CP651	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
CP652	55174670	1 PC	CONN 2.0MM 19 MA R NAT SOCKET MOLEX 35237-1910 0 0
FL600	55157020	1 PC	AC MSA ASY COMPOSITE FILTER CPF7-01
JA601	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA602	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA603	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA604	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA605	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA606	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA607	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA608	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA609	55230740	1 PC	CON PHONO SCKT RCA +S -VIDEO
JA610	55335050	1 PC	CON PHONO SCKT RCA 3P YWR JK030008EG W/GNDCAP ALL GOLD
JA611	55191990	1 PC	CON PHONO SCKT S-VIDEO 1P C4016026AG ALL GOLD
JA612	55230650	1 PC	CON PHONO SCKT RCA 2P JW1502RSG
JA613	55311430	1 PC	IC-SPECFUNC TOTX179 FIBER OPTIC TRANS SHUTTER TYPE
JA614	55311530	1 PC	IC-REMOTE TORX179 FIBER OPTIC RECEIVER
T600	55176540	1 PC	TFPULSE TRANSFORMER 110UH FP-110 FERRIT MAGNET
XV602	55179470	1 PC	FILQZ 14M31818 HZ +30 PPM 30K0 OHM PARALLEL 22P0 F
XY601	55179470	1 PC	FILQZ 14M31818 HZ +30 PPM 30K0 OHM PARALLEL 22P0 F

## 3 Channel PCB

D983	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D984	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D985	20525530	1 PC	D-SR 1N4003 200.0V 1A
D986	20525530	1 PC	D-SR 1N4003 200.0V 1A

Ref. Designator	Part Number	Qty	Description
DC901	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DC902	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DC903	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DC904	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DC905	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DC906	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DL901	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DL902	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DL903	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DL904	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DL905	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DL906	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSL901	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSL902	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSL903	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DSL904	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DSL905	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSL906	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
Q983	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q984	55133260	1 PC	TR-SLPLF KTA1024 Y P 50MIOA -150V
Q985	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
Q986	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QC901	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC902	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC903	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC904	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QC905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QC906	20647850	1 PC	TR-SHPLF KTA1268BL P 100MIOA 120V
QC909	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC913	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC924	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL901	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL902	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL903	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL904	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QL905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QL906	20647850	1 PC	TR-SHPLF KTA1268BL P 100MIOA 120V
QL909	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL913	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QL924	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL901	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL902	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL903	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL904	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QSL905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QSL906	20647850	1 PC	TR-SHPLF KTA1268BL P 100MIOA 120V
QSL909	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL913	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSL924	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QC905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QC907	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QC908	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QC910	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QC911	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QC912	55133270	1 PC	TR-SHPLF 2SC4137 N 100MIOA 20V
QC914	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QC915	55179190	1 PC	TR-SHPLF 2SA1859A P -2.0A

Ref. Designator	Part Number	Qty	Description
QC916	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QC917	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QC918	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QC919	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QC920	55179200	1 PC	TR-SHPLF 2SC4883A N 2.0A
QC921	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QC922	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QC923	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QL905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MI0A -150V
QL907	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QL908	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QL910	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QL911	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QL912	55133270	1 PC	TR-SHPLF 2SC4137 N 100MI0A 20V
QL914	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QL915	55179190	1 PC	TR-SHPLF 2SA1859A P -2.0A
QL916	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QL917	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QL918	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QL919	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QL920	55179200	1 PC	TR-SHPLF 2SC4883A N 2.0A
QL921	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QL922	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QL923	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSL905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MI0A -150V
QSL907	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QSL908	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QSL910	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QSL911	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QSL912	55133270	1 PC	TR-SHPLF 2SC4137 N 100MI0A 20V
QSL914	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MI0A 150V
QSL915	55179190	1 PC	TR-SHPLF 2SA1859A P -2.0A
QSL916	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSL917	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSL918	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSL919	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MI0A -150V
QSL920	55179200	1 PC	TR-SHPLF 2SC4883A N 2.0A
QSL921	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSL922	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSL923	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
D985	20525530	1 PC	D-SR 1N4003 200.0V 1A
D986	20525530	1 PC	D-SR 1N4003 200.0V 1A

*Resistors*

R984	40435670	1 PC	RCF 47K0 OHM +5% 250MI0W
R985	60441540	1 PC	RCF 180R0 OHM +5% 250MI0W
R986	50883000	1 PC	RCF 3K3 OHM +5% 250MI0W
R987	40435670	1 PC	RCF 47K0 OHM +5% 250MI0W
R988	50883000	1 PC	RCF 3K3 OHM +5% 250MI0W
R989	40435670	1 PC	RCF 47K0 OHM +5% 250MI0W
RC901	55231570	1 PC	RMF 1K0 OHM +1% 125MI0W +100PPM/C
RC902	55231530	1 PC	RMF 33K0 OHM +1% 125MI0W +100PPM/C
RC903	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
RC904	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
RC905	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
RC906	20469450	1 PC	RCF 220R0 OHM +5% 250MI0W

Ref. Designator	Part Number	Qty	Description
RC907	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
RC908	50882970	1 PC	RCF 470R0 OHM +5% 250MIOW
RC909	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RC910	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RC911	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC912	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC913	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC914	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RC915	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RC916	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RC917	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC918	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC919	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RC920	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RC921	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RC922	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RC923	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RC924	55231580	1 PC	RMF 4K7 OHM +1% 125MIOW +100PPM/C
RC925	55231560	1 PC	RMF 5K6 OHM +1% 125MIOW +100PPM/C
RC926	55231590	1 PC	RMF 560R0 OHM +1% 125MIOW +100PPM/C
RC927	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RC928	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RC930	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RC931	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC932	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC933	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC934	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RC935	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RC937	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RC938	55232800	1 PC	RMF 82R0 OHM +5% 500MIOW
RC939	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC940	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC941	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RC950	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RC951	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RC952	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RC953	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RC954	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RC955	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RC956	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RC957	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RC959	20469490	1 PC	RCF 6K8 OHM +5% 250MIOW
RC960	30939490	1 PC	RCF 33K0 OHM +5% 250MIOW
RL901	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RL902	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RL903	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RL904	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RL905	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RL906	20469450	1 PC	RCF 220R0 OHM +5% 250MIOW
RL907	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
RL908	50882970	1 PC	RCF 470R0 OHM +5% 250MIOW
RL909	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RL910	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RL911	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL912	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL913	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL914	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW

Ref. Designator	Part Number	Qty	Description
RL915	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RL916	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RL917	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL918	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL919	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RL920	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RL921	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RL922	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RL923	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RL924	55231580	1 PC	RMF 4K7 OHM +1% 125MIOW +100PPM/C
RL925	55231560	1 PC	RMF 5K6 OHM +1% 125MIOW +100PPM/C
RL926	55231590	1 PC	RMF 560R0 OHM +1% 125MIOW +100PPM/C
RL927	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RL928	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RL930	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RL931	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL932	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL933	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL934	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RL935	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RL937	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RL938	55232800	1 PC	RMF 82R0 OHM +5% 500MIOW
RL939	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL940	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL941	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RL950	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RL951	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RL952	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RL953	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RL954	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RL955	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RL956	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RL957	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RL959	20469490	1 PC	RCF 6K8 OHM +5% 250MIOW
RL960	30939490	1 PC	RCF 33K0 OHM +5% 250MIOW
RSL901	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RSL902	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RSL903	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSL904	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSL905	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSL906	20469450	1 PC	RCF 220R0 OHM +5% 250MIOW
RSL907	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
RSL908	50882970	1 PC	RCF 470R0 OHM +5% 250MIOW
RSL909	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RSL910	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RSL911	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL912	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL913	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL914	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSL915	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RSL916	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSL917	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL918	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL919	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSL920	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSL921	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RSL922	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW

Ref. Designator	Part Number	Qty	Description
RSL923	55231570	1 PC	RMF 1K0 OHM +1% 125MI0W +100PPM/C
RSL924	55231580	1 PC	RMF 4K7 OHM +1% 125MI0W +100PPM/C
RSL925	55231560	1 PC	RMF 5K6 OHM +1% 125MI0W +100PPM/C
RSL926	55231590	1 PC	RMF 56R0 OHM +1% 125MI0W +100PPM/C
RSL927	55232770	1 PC	RMF 2R2 OHM +5% 500MI0W
RSL928	55232780	1 PC	RMF 100R0 OHM +5% 500MI0W
RSL930	55232790	1 PC	RMF 15R0 OHM +5% 500MI0W
RSL931	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL932	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL933	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL934	55232770	1 PC	RMF 2R2 OHM +5% 500MI0W
RSL935	55232780	1 PC	RMF 100R0 OHM +5% 500MI0W
RSL937	55232790	1 PC	RMF 15R0 OHM +5% 500MI0W
RSL938	55232800	1 PC	RMF 82R0 OHM +5% 500MI0W
RSL939	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL940	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL941	55232810	1 PC	RMF 10R0 OHM +5% 500MI0W
RSL950	55231530	1 PC	RMF 33K0 OHM +1% 125MI0W +100PPM/C
RSL951	55213600	1 PC	RMF 2K2 OHM +1% 125MI0W +50PPM/C
RSL952	55213600	1 PC	RMF 2K2 OHM +1% 125MI0W +50PPM/C
RSL953	80437000	1 PC	RCF 1K2 OHM +5% 250MI0W
RSL954	80437000	1 PC	RCF 1K2 OHM +5% 250MI0W
RSL955	50883010	1 PC	RCF 15K0 OHM +5% 250MI0W
RSL956	30939380	1 PC	RCF 22R0 OHM +5% 250MI0W
RSL957	30939380	1 PC	RCF 22R0 OHM +5% 250MI0W
RSL959	20469490	1 PC	RCF 6K8 OHM +5% 250MI0W
RSL960	30939490	1 PC	RCF 33K0 OHM +5% 250MI0W
RC929	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RC936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RC942	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC943	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC944	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC945	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC946	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC947	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RC948	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RC949	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RC958	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
RL929	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RL936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RL936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RL942	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL943	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL944	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL945	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL946	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL947	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RL948	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RL949	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RL958	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
RSL929	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RSL936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RSL942	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RSL943	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RSL944	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RSL945	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C
RSL946	55233170	1 PC	RW 220MI0 OHM +5% 5.0W 600PPM/C -600PPM/C

Ref. Designator	Part Number	Qty	Description
RSL947	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSL948	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RSL949	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RSL958	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
VC901	55250310	1 PC	PR 50R0 OHM +20% 500MI0W
VC902	55250320	1 PC	PR 200R0 OHM +20% 500MI0W
VL901	55250310	1 PC	PR 50R0 OHM +20% 500MI0W
VL902	55250320	1 PC	PR 200R0 OHM +20% 500MI0W
VSL901	55250310	1 PC	PR 50R0 OHM +20% 500MI0W
VSL902	55250320	1 PC	PR 200R0 OHM +20% 500MI0W

*Capacitors*

C982	20268840	1 PC	CE 1U0F +20% 50.0V 85C
CC901	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CC903	20269070	1 PC	CE 100U0F +20% 25.0V 85C
CC903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CC905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CC906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CC914	30936070	1 PC	CC 12P0F +5% -5% 50.0V NP0
CC915	20252660	1 PC	CE 470U0F +20% 6.3V 85C
CC915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CC916	55179400	1 PC	CPM 68N0F +5% 63.0V
CL901	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CL903	20269070	1 PC	CE 100U0F +20% 25.0V 85C
CL903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CL905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CL906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CL914	30936070	1 PC	CC 12P0F +5% -5% 50.0V NP0
CL915	20252660	1 PC	CE 470U0F +20% 6.3V 85C
CL915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CL916	55179400	1 PC	CPM 68N0F +5% 63.0V
CSL901	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CSL903	20269070	1 PC	CE 100U0F +20% 25.0V 85C
CSL903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CSL905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSL906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSL914	30936070	1 PC	CC 12P0F +5% -5% 50.0V NP0
CSL915	20252660	1 PC	CE 470U0F +20% 6.3V 85C
CSL915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CSL916	55179400	1 PC	CPM 68N0F +5% 63.0V
C983	20252670	1 PC	CE 470U0F +20% 10.0V 85C
C984	55191160	1 PC	CPM 100N0F +10% 250.0V
C985	55191160	1 PC	CPM 100N0F +10% 250.0V
CC902	55191070	1 PC	CPM 100P0F +5% 100.0V
CC904	55191130	1 PC	CPM 680P0F +5% 100.0V
CC905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CC906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CC907	55191140	1 PC	CPM 10N0F +10% 400.0V
CC908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CC909	55191160	1 PC	CPM 100N0F +10% 250.0V
CC910	55191140	1 PC	CPM 10N0F +10% 400.0V
CC911	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CC912	55191160	1 PC	CPM 100N0F +10% 250.0V
CC913	55191070	1 PC	CPM 100P0F +5% 100.0V
CC915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CC919	55191050	1 PC	CPM 33N0F +5% 63.0V



Ref. Designator	Part Number	Qty	Description
CC920	55191110	1 PC	CPM 4N7F +10% 100.0V
CC921	55191110	1 PC	CPM 4N7F +10% 100.0V
CC928	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CC929	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CC930	55272630	1 PC	CPM 220P0F +5% 100.0V
CL902	55191070	1 PC	CPM 100P0F +5% 100.0V
CL904	55191130	1 PC	CPM 680P0F +5% 100.0V
CL905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CL906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CL907	55191140	1 PC	CPM 10N0F +10% 400.0V
CL908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CL908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CL909	55191160	1 PC	CPM 100N0F +10% 250.0V
CL910	55191140	1 PC	CPM 10N0F +10% 400.0V
CL911	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CL912	55191160	1 PC	CPM 100N0F +10% 250.0V
CL913	55191070	1 PC	CPM 100P0F +5% 100.0V
CL915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CL919	55191050	1 PC	CPM 33N0F +5% 63.0V
CL920	55191110	1 PC	CPM 4N7F +10% 100.0V
CL921	55191110	1 PC	CPM 4N7F +10% 100.0V
CL928	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CL929	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CL930	55272630	1 PC	CPM 220P0F +5% 100.0V
CSL902	55191070	1 PC	CPM 100P0F +5% 100.0V
CSL904	55191130	1 PC	CPM 680P0F +5% 100.0V
CSL905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSL906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSL907	55191140	1 PC	CPM 10N0F +10% 400.0V
CSL908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSL909	55191160	1 PC	CPM 100N0F +10% 250.0V
CSL910	55191140	1 PC	CPM 10N0F +10% 400.0V
CSL911	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSL912	55191160	1 PC	CPM 100N0F +10% 250.0V
CSL913	55191070	1 PC	CPM 100P0F +5% 100.0V
CSL915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CSL919	55191050	1 PC	CPM 33N0F +5% 63.0V
CSL920	55191110	1 PC	CPM 4N7F +10% 100.0V
CSL921	55191110	1 PC	CPM 4N7F +10% 100.0V
CSL928	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSL929	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSL930	55272630	1 PC	CPM 220P0F +5% 100.0V

*Miscellaneous*

BC901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550

Ref. Designator	Part Number	Qty	Description
BSL901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BC906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BL906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSL906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
GND1	55135980	1 PC	TERMLUG GND
GND2	55135980	1 PC	TERMLUG GND
GND3	55135980	1 PC	TERMLUG GND
GND4	55135980	1 PC	TERMLUG GND
GND5	55135980	1 PC	TERMLUG GND
LC901	55179560	1 PC	LFA 1MM 10MM 5 LEFT
LL901	55179560	1 PC	LFA 1MM 10MM 5 LEFT
LSL901	55179560	1 PC	LFA 1MM 10MM 5 LEFT
LSR901	55233160	1 PC	LF 700N0H +0%
CN914	55213110	1 PC	WIRECONASY UNIQUE 2P 150MM UL1007 PVC DISCRETE 22
CN915	55213120	1 PC	WIRECONASY UNIQUE 2P 300MM UL1007 PVC DISCRETE 22
CN916	55213090	1 PC	WIRECONASY UNIQUE 2P 80MM UL1007 PVC DISCRETE 22
CN917	55213290	1 PC	WIRECONASY UNIQUE 5P 120MM UL2547 24
CN918	55213280	1 PC	WIRECONASY UNIQUE 4P 250MM UL2547 24
CN919	55213300	1 PC	WIRECONASY UNIQUE 6P 150MM UL2547 24
CP911	55175430	1 PC	CON 3.96MM PITCH MOREX 35313-0410
CP912	55171550	1 PC	CON 3.96MM PITCH MOLEX 35313-0310
CP913	55183330	1 PC	CON 3.96MM PITCH MOLEX 35313-0510
CP922	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP923	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP924	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
RLY902	55233190	1 PC	RELAYPWR 24.0V 650.0OHM 5.0A
RLY903	55233180	1 PC	RELAYPWR 24.0V 650.0OHM 7.0A
SP902	55195520	1 PC	CONN-SPE TERMINAL SPKR 4P B30490196G FE 19MM 4 BU 0 0
SP903	55195530	1 PC	CONN-SPE TERMINAL SPKR 2P B30290186G FE 19MM 2 GN 0 0

## 2 Channel PCB

D980	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D981	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
D982	20525530	1 PC	D-SR 1N4003 200.0V 1A
DR901	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DR902	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A

Ref. Designator	Part Number	Qty	Description
DR903	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DR904	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DR905	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DR906	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DR907	20454630	1 PC	D-ZENER 1N5239B 9.1V 500MIOW
DR908	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DR909	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DR910	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSR901	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSR902	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSR903	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DSR904	55231400	1 PC	D-SLP 1SS244 220.0V 200MIOA
DSR905	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
DSR906	70436540	1 PC	D-SLP 1N4148 100.0V 150E-3A
Q980	55133210	1 PC	TR-SLPLF DTC114YSA N 100MIOA
Q981	55133260	1 PC	TR-SLPLF KTA1024 Y P 50MIOA -150V
Q982	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QR901	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR902	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR903	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR904	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QR905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QR906	20647850	1 PC	TR-SHPLF KTA1268BL P 100MIOA 120V
QR909	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR913	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR924	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR925	20508210	1 PC	TR-SLPLF KTA1266 Y P 150MIOA
QR926	55133250	1 PC	TR-SLPLF 2SC1740S R N 150MIOA 50V
QR927	55133250	1 PC	TR-SLPLF 2SC1740S R N 150MIOA 50V
QR928	55133250	1 PC	TR-SLPLF 2SC1740S R N 150MIOA 50V
QSR901	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSR902	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSR903	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSR904	20508080	1 PC	TR-SLPLF KTC3198BL N 150MIOA
QSR905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QSR906	20647850	1 PC	TR-SHPLF KTA1268BL P 100MIOA 120V
QSR909	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSR913	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QSR924	20556600	1 PC	TR-SHPLF KTC3200BL N 100MIOA 120V
QR905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QR907	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QR908	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QR910	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QR911	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QR912	55133270	1 PC	TR-SHPLF 2SC4137 N 100MIOA 20V
QR914	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QR915	55179190	1 PC	TR-SHPLF 2SA1859A P -2.0A
QR916	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QR917	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QR918	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QR919	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QR920	55179200	1 PC	TR-SHPLF 2SC4883A N 2.0A
QR921	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QR922	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QR923	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSR905	55233090	1 PC	TR-SLPLF 2SA1145Y TO-92MOD P -50MIOA -150V
QSR907	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V

Ref. Designator	Part Number	Qty	Description
QSR908	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QSR910	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QSR911	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QSR912	55133270	1 PC	TR-SHPLF 2SC4137 N 100MIOA 20V
QSR914	55231350	1 PC	TR-SLPLF 2SC3423Y N 50MIOA 150V
QSR915	55179190	1 PC	TR-SHPLF 2SA1859A P -2.0A
QSR916	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSR917	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSR918	55183790	1 PC	TR-SHPLF C5200-O(AC) N 15.0A
QSR919	55231240	1 PC	TR-SLPLF 2SA1360Y P -50MIOA -150V
QSR920	55179200	1 PC	TR-SHPLF 2SC4883A N 2.0A
QSR921	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSR922	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
QSR923	55183930	1 PC	TR-SHPLF A1943-O(AC) P -15.0A
D982	20525530	1 PC	D-SR 1N4003 200.0V 1A

*Resistors*

R969	50883000	1 PC	RCF 3K3 OHM +5% 250MIOW
R980	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
R981	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
R982	50883000	1 PC	RCF 3K3 OHM +5% 250MIOW
R983	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
R984	50883000	1 PC	RCF 3K3 OHM +5% 250MIOW
RR901	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RR902	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RR903	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RR904	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RR905	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RR906	20469450	1 PC	RCF 220R0 OHM +5% 250MIOW
RR907	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
RR908	50882970	1 PC	RCF 470R0 OHM +5% 250MIOW
RR909	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RR910	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RR911	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR912	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR913	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR914	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RR915	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RR916	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RR917	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR918	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR919	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RR920	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RR921	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RR922	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RR923	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RR924	55231580	1 PC	RMF 4K7 OHM +1% 125MIOW +100PPM/C
RR925	55231560	1 PC	RMF 5K6 OHM +1% 125MIOW +100PPM/C
RR926	55231590	1 PC	RMF 560R0 OHM +1% 125MIOW +100PPM/C
RR927	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RR928	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RR930	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RR931	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR932	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR933	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR934	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW

Ref. Designator	Part Number	Qty	Description
RR935	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RR937	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RR938	55232800	1 PC	RMF 82R0 OHM +5% 500MIOW
RR939	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR940	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR941	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RR950	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RR951	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RR952	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RR953	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RR954	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RR955	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RR956	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RR957	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RR959	20469490	1 PC	RCF 6K8 OHM +5% 250MIOW
RR960	30939490	1 PC	RCF 33K0 OHM +5% 250MIOW
RR961	30939510	1 PC	RCF 100K0 OHM +5% 250MIOW
RR962	60441600	1 PC	RCF 68K0 OHM +5% 250MIOW
RR963	30939480	1 PC	RCF 10K0 OHM +5% 250MIOW
RR964	70430560	1 PC	RCF 5K6 OHM +5% 250MIOW
RR965	11059640	1 PC	RCF 1K0 OHM +5% 250MIOW
RR966	30939510	1 PC	RCF 100K0 OHM +5% 250MIOW
RR967	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
RR967	70430570	1 PC	RCF 8K2 OHM +5% 250MIOW
RR968	40435640	1 PC	RCF 4K7 OHM +5% 250MIOW
RR968	70430570	1 PC	RCF 8K2 OHM +5% 250MIOW
RSR901	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RSR902	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RSR903	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSR904	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSR905	50882950	1 PC	RCF 100R0 OHM +5% 250MIOW
RSR906	20469450	1 PC	RCF 220R0 OHM +5% 250MIOW
RSR907	40435670	1 PC	RCF 47K0 OHM +5% 250MIOW
RSR908	50882970	1 PC	RCF 470R0 OHM +5% 250MIOW
RSR909	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RSR910	40435630	1 PC	RCF 1K5 OHM +5% 250MIOW
RSR911	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR912	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR913	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR914	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSR915	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RSR916	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSR917	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR918	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR919	60441560	1 PC	RCF 560R0 OHM +5% 250MIOW
RSR920	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSR921	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RSR922	11059610	1 PC	RCF 270R0 OHM +5% 250MIOW
RSR923	55231570	1 PC	RMF 1K0 OHM +1% 125MIOW +100PPM/C
RSR924	55231580	1 PC	RMF 4K7 OHM +1% 125MIOW +100PPM/C
RSR925	55231560	1 PC	RMF 5K6 OHM +1% 125MIOW +100PPM/C
RSR926	55231590	1 PC	RMF 560R0 OHM +1% 125MIOW +100PPM/C
RSR927	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RSR928	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RSR930	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RSR931	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RSR932	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW

Ref. Designator	Part Number	Qty	Description
RSR933	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RSR934	55232770	1 PC	RMF 2R2 OHM +5% 500MIOW
RSR935	55232780	1 PC	RMF 100R0 OHM +5% 500MIOW
RSR937	55232790	1 PC	RMF 15R0 OHM +5% 500MIOW
RSR938	55232800	1 PC	RMF 82R0 OHM +5% 500MIOW
RSR939	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RSR940	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RSR941	55232810	1 PC	RMF 10R0 OHM +5% 500MIOW
RSR950	55231530	1 PC	RMF 33K0 OHM +1% 125MIOW +100PPM/C
RSR951	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RSR952	55213600	1 PC	RMF 2K2 OHM +1% 125MIOW +50PPM/C
RSR953	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RSR954	80437000	1 PC	RCF 1K2 OHM +5% 250MIOW
RSR955	50883010	1 PC	RCF 15K0 OHM +5% 250MIOW
RSR956	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RSR957	30939380	1 PC	RCF 22R0 OHM +5% 250MIOW
RSR959	20469490	1 PC	RCF 6K8 OHM +5% 250MIOW
RSR960	30939490	1 PC	RCF 33K0 OHM +5% 250MIOW
RR929	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RR936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RR942	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR943	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR944	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR945	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR946	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR947	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RR948	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RR949	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RR958	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
RSR929	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RSR936	55232750	1 PC	RMF 2R2 OHM +5% 1.0W
RSR942	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR943	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR944	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR945	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR946	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR947	55233170	1 PC	RW 220MIO OHM +5% 5.0W 600PPM/C -600PPM/C
RSR948	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RSR949	55232760	1 PC	RMF 56R0 OHM +5% 1.0W
RSR958	15022710	1 PC	RMOF 10R0 OHM +5% 2.0W
VR901	55250310	1 PC	PR 50R0 OHM +20% 500MIOW
VR902	55250320	1 PC	PR 200R0 OHM +20% 500MIOW
VSR901	55250310	1 PC	PR 50R0 OHM +20% 500MIOW
VSR902	55250320	1 PC	PR 200R0 OHM +20% 500MIOW

*Capacitors*

C980	20268840	1 PC	CE 1U0F +20% 50.0V 85C
CR901	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CR903	20269070	1 PC	CE 100U0F +20% 25.0V 85C
CR903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CR905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CR906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CR914	30936070	1 PC	CC 12P0F +5% -5% 50.0V NP0
CR915	20252660	1 PC	CE 470U0F +20% 6.3V 85C
CR915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CR916	55179400	1 PC	CPM 68N0F +5% 63.0V

Ref. Designator	Part Number	Qty	Description
CR917	20268980	1 PC	CE 22U0F +20% 50.0V 85C
CR918	20252670	1 PC	CE 470U0F +20% 10.0V 85C
CSR901	55213540	1 PC	CE 10U0F +20% 16.0V 85C
CSR903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CSR905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSR906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSR914	30936070	1 PC	CC 12P0F +5% -5% 50.0V NP0
CSR915	20252660	1 PC	CE 470U0F +20% 6.3V 85C
CSR915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CSR916	55179400	1 PC	CPM 68N0F +5% 63.0V
C981	20252670	1 PC	CE 470U0F +20% 10.0V 85C
CR902	55191070	1 PC	CPM 100P0F +5% 100.0V
CR904	55191130	1 PC	CPM 680P0F +5% 100.0V
CR905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CR906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CR907	55191140	1 PC	CPM 10N0F +10% 400.0V
CR908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CR909	55191160	1 PC	CPM 100N0F +10% 250.0V
CR910	55191140	1 PC	CPM 10N0F +10% 400.0V
CR911	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CR912	55191160	1 PC	CPM 100N0F +10% 250.0V
CR913	55191070	1 PC	CPM 100P0F +5% 100.0V
CR915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CR919	55191050	1 PC	CPM 33N0F +5% 63.0V
CR920	55191110	1 PC	CPM 4N7F +10% 100.0V
CR921	55191110	1 PC	CPM 4N7F +10% 100.0V
CR928	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CR929	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CR930	55272630	1 PC	CPM 220P0F +5% 100.0V
CSR902	55191070	1 PC	CPM 100P0F +5% 100.0V
CSR903	20269070	1 PC	CE 100U0F +20% 25.0V 85C
CSR903	55246290	1 PC	CE 100U0F +20% 25.0V 85C
CSR904	55191130	1 PC	CPM 680P0F +5% 100.0V
CSR905	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSR906	55233320	1 PC	CE 47U0F +20% 50.0V 85C
CSR907	55191140	1 PC	CPM 10N0F +10% 400.0V
CSR908	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSR909	55191160	1 PC	CPM 100N0F +10% 250.0V
CSR910	55191140	1 PC	CPM 10N0F +10% 400.0V
CSR911	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSR912	55191160	1 PC	CPM 100N0F +10% 250.0V
CSR913	55191070	1 PC	CPM 100P0F +5% 100.0V
CSR915	55319740	1 PC	CE 470U0F +20% 6.3V 85C
CSR919	55191050	1 PC	CPM 33N0F +5% 63.0V
CSR920	55191110	1 PC	CPM 4N7F +10% 100.0V
CSR921	55191110	1 PC	CPM 4N7F +10% 100.0V
CSR928	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSR929	55232730	1 PC	CE 120U0F +20% 100.0V 85C
CSR930	55272630	1 PC	CPM 220P0F +5% 100.0V

*Miscellaneous*

CP901	55175430	1 PC	CON 3.96MM PITCH MOREX 35313-0410
CP902	55169140	1 PC	CON 3.96MM PITCH MOREX 35313-0210
CP903	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP904	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CP905	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0

Ref. Designator	Part Number	Qty	Description
CP906	55146560	1 PC	CONN 2.5MM 2 MA ST NAT 0 0
CN903	55212900	1 PC	WIRECONASY UNIQUE 2P 100MM UL1007 PVC DISCRETE 22
CN904	55212910	1 PC	WIRECONASY UNIQUE 2P 200MM UL1007 PVC DISCRETE 22
CN905	55233220	1 PC	POS 100R0 OHM 16.0V
CN906	55231600	1 PC	POS 100R0 OHM 16.0V
CN907	55213340	1 PC	WIRECONASY UNIQUE 7P 100MM UL2547 24
CN908	55213310	1 PC	WIRECONASY UNIQUE 6P 200MM UL2547 24
GND10	55135980	1 PC	TERMLUG GND
GND6	55135980	1 PC	TERMLUG GND
GND7	55135980	1 PC	TERMLUG GND
GND8	55135980	1 PC	TERMLUG GND
GND9	55135980	1 PC	TERMLUG GND
LR901	55179560	1 PC	LFA 1MM 10MM 5 LEFT
LSR901	55179560	1 PC	LFA 1MM 10MM 5 LEFT
RLY901	55233190	1 PC	RELAYPWR 24.0V 650.0OHM 5.0A
W904	55254510	1 PC	WIRESSTRINS 3.5 CU WIRE 370MM BK 80C Y
W905	55254510	1 PC	WIRESSTRINS 3.5 CU WIRE 370MM BK 80C Y
BR901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BR906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR901	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR902	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR903	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR904	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR905	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
BSR906	55179510	1 PC	LFBEAD 44.1653OHM 100M0HZ FB-30 HC-3550
SP901	55195510	1 PC	CONN-SPE TERMINAL SPKR 4P B30490197G FE 19MM 4 BK 0 0

## Volume PCB

IC505	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC507	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
Q501	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q502	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q503	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q504	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q505	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q506	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q507	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q508	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q509	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A
Q510	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MI0A



Ref. Designator	Part Number	Qty	Description
Q511	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q512	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q513	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q517	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q518	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q519	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q520	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
IC501	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC502	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC503	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC504	55142580	1 PC	IC-OPERAMP OPA2604AU DUAL OP
IC505	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC506	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC507	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC508	55142580	1 PC	IC-OPERAMP OPA2604AU DUAL OP
IC509	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC510	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC511	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC512	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC513	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC514	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC515	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC516	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC517	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC518	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC519	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC520	55142720	1 PC	IC-LOWFREQ KIC9459F SOP24 TONE/VOL/BAL/MUTE
IC521	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC524	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
IC525	55142590	1 PC	IC-OPERAMP NJM5532M DUAL OP
Q501	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q502	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q503	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q504	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q505	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q506	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q507	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q508	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q509	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q510	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q511	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q512	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q513	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q514	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q515	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
Q517	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q518	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q519	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q520	55138710	1 PC	TR-SLPSWA KTD1304 N 20V 300MIOA
Q521	55133190	1 PC	TR-SSD DTA114YKA P 10K0 OHM 47K0 OHM
Q522	55133180	1 PC	TR-SSD DTC114YKA N 10K0 OHM 47K0 OHM
IC505	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP
IC507	55142620	1 PC	IC-OPERAMP OP275GS DUAL OP

*Resistors*

R501	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
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Ref. Designator	Part Number	Qty	Description
R503	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R507	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R527	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R529	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R533	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R605	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R606	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R607	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R608	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R609	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R610	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R612	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R613	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R621	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R623	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R633	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R634	10136000	1 PC	RMGCFMIC 8K2 OHM +5% 62MI5W
R634	21048720	1 PC	RMGCFMIC 14K3 OHM +1% 62MI5W
R661	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R662	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R663	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R664	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R665	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R666	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R667	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R668	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R669	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R670	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R671	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R672	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R673	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R675	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R676	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R677	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R678	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R679	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R680	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R681	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R682	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R683	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R684	20675100	1 PC	RMGCFMIC 1K82 OHM +1% 62MI5W
R685	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R686	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R687	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R687	10135870	1 PC	RMGCFMIC 2K4 OHM +5% 62MI5W
R691	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R692	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R693	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R694	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R695	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R696	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R697	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R698	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R699	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R700	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R701	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R702	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R703	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R704	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R705	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R706	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R707	10328750	1 PC	RMGCFMIC 0 OHM +0% 62MI5W
R711	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R712	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R713	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R714	20675090	1 PC	RMGCFMIC 1K5 OHM +1% 62MI5W
R715	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R716	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R717	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R718	10135860	1 PC	RMGCFMIC 2K2 OHM +5% 62MI5W
R776	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R777	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R778	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R784	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R504	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R504	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R505	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R509	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R509	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R510	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R511	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R512	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R513	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R514	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R515	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R516	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R517	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R518	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R521	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R522	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R523	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R524	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R530	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R530	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R531	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R535	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R535	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R536	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R537	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R538	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R539	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R540	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R541	20864010	1 PC	RMGCFMIC 4K53 OHM +1% 62MI5W
R542	20864010	1 PC	RMGCFMIC 4K53 OHM +1% 62MI5W
R543	20675110	1 PC	RMGCFMIC 2K21 OHM +1% 62MI5W
R544	20675110	1 PC	RMGCFMIC 2K21 OHM +1% 62MI5W
R547	20675110	1 PC	RMGCFMIC 2K21 OHM +1% 62MI5W
R548	20675110	1 PC	RMGCFMIC 2K21 OHM +1% 62MI5W
R549	20864010	1 PC	RMGCFMIC 4K53 OHM +1% 62MI5W
R550	20864010	1 PC	RMGCFMIC 4K53 OHM +1% 62MI5W
R553	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R555	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R556	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R556	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W

Ref. Designator	Part Number	Qty	Description
R557	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R559	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R561	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R561	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R562	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R563	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R564	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R565	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R566	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R569	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R571	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R572	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R572	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R573	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R575	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R577	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R577	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R578	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R579	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R580	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R581	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R582	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R585	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R587	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R588	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R588	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R589	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R591	55232820	1 PC	RMGCFMIC 1K8 OHM +1% 62MI5W
R593	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R593	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R594	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R595	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R596	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R597	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R598	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R601	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R601	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R602	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R603	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R603	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R604	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R611	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R614	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R617	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R617	10135840	1 PC	RMGCFMIC 1K8 OHM +5% 62MI5W
R618	10135340	1 PC	RMGCFMIC 100K0 OHM +5% 62MI5W
R619	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R620	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R622	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R624	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R635	10134650	1 PC	RMGCFMIC 47R0 OHM +5% 62MI5W
R636	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R637	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R638	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R641	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R644	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R645	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W

Ref. Designator	Part Number	Qty	Description
R646	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R647	20506770	1 PC	RMGCFMIC 3K32 OHM +1% 62MI5W
R648	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R649	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R650	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R651	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R654	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R655	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R656	10135770	1 PC	RMGCFMIC 1K0 OHM +5% 62MI5W
R691	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R692	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R693	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R694	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R695	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R696	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R697	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R698	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R699	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R700	20675080	1 PC	RMGCFMIC 1K0 OHM +1% 62MI5W
R519	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R520	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R525	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R526	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R545	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R546	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R551	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R552	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R567	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R568	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R583	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R584	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R599	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R600	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R615	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R616	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R639	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R640	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R642	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R643	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R643	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R652	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W
R653	50882950	1 PC	RCF 100R0 OHM +5% 250MI0W

### Capacitors

C559	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C560	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C562	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C563	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C571	10138960	1 PC	CCCFMIC 10N0F +10% -10% 50.0V X7R
C571	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C583	10138620	1 PC	CCCFMIC 2N2F +10% -10% 50.0V X7R
C583	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NP0
C603	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C604	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C660	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C531	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0
C538	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NP0

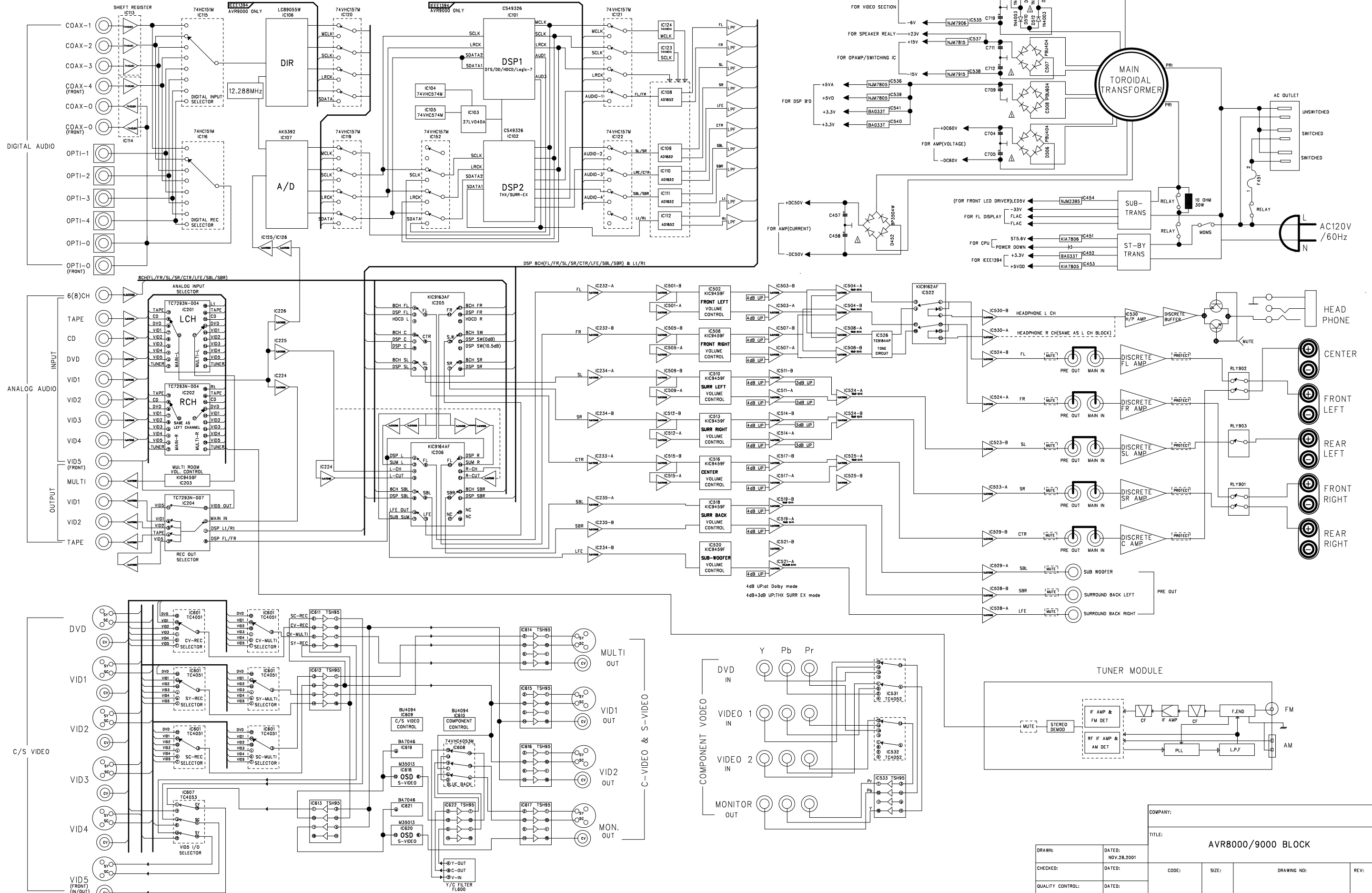
Ref. Designator	Part Number	Qty	Description
C566	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NPO
C570	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NPO
C585	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NPO
C586	20506560	1 PC	CCCFMIC 33P0F +5% -5% 50.0V NPO
C603	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NPO
C604	20506590	1 PC	CCCFMIC 100P0F +5% -5% 50.0V NPO
C502	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C504	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C505	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C506	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C507	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C508	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C513	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C514	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C516	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C518	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C519	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C520	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C521	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C521	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C522	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C527	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C528	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C529	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C530	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C532	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C534	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C535	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C535	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C536	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C536	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C537	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C540	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C541	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C542	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C543	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C543	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C544	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C544	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C545	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C545	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C548	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C549	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C550	55213540	1 PC	CE 10U0F +20% 16.0V 85C
C551	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C552	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C553	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C554	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C555	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C555	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C556	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C556	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C557	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C558	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C565	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C567	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C567	55213560	1 PC	CE 47U0F +20% 16.0V 85C

Ref. Designator	Part Number	Qty	Description
C568	20342060	1 PC	CE 47U0F +20% 16.0V 85C
C568	55213560	1 PC	CE 47U0F +20% 16.0V 85C
C569	55213590	1 PC	CE 10U0F +20% 16.0V 85C
C587	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C588	55230020	1 PC	CE 47U0F +20% 16.0V 85C
C593	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C594	55213550	1 PC	CE 47U0F +20% 16.0V 85C
C503	55191070	1 PC	CPM 100P0F +5% 100.0V
C509	55191100	1 PC	CPM 33P0F +5% 100.0V
C510	55191100	1 PC	CPM 33P0F +5% 100.0V
C511	55191100	1 PC	CPM 33P0F +5% 100.0V
C512	55191100	1 PC	CPM 33P0F +5% 100.0V
C517	55191070	1 PC	CPM 100P0F +5% 100.0V
C523	55191100	1 PC	CPM 33P0F +5% 100.0V
C524	55191100	1 PC	CPM 33P0F +5% 100.0V
C525	55191100	1 PC	CPM 33P0F +5% 100.0V
C526	55191100	1 PC	CPM 33P0F +5% 100.0V
C546	55191070	1 PC	CPM 100P0F +5% 100.0V
C589	55191100	1 PC	CPM 33P0F +5% 100.0V
C591	55191100	1 PC	CPM 33P0F +5% 100.0V
C601	55191070	1 PC	CPM 100P0F +5% 100.0V
C602	55191070	1 PC	CPM 100P0F +5% 100.0V
C605	55191070	1 PC	CPM 100P0F +5% 100.0V

*Miscellaneous*

CN501	55230980	1 PC	CON 2.54MM PITCH PIN SOCKET 2214S-20G-85
CN502	55230980	1 PC	CON 2.54MM PITCH PIN SOCKET 2214S-20G-85

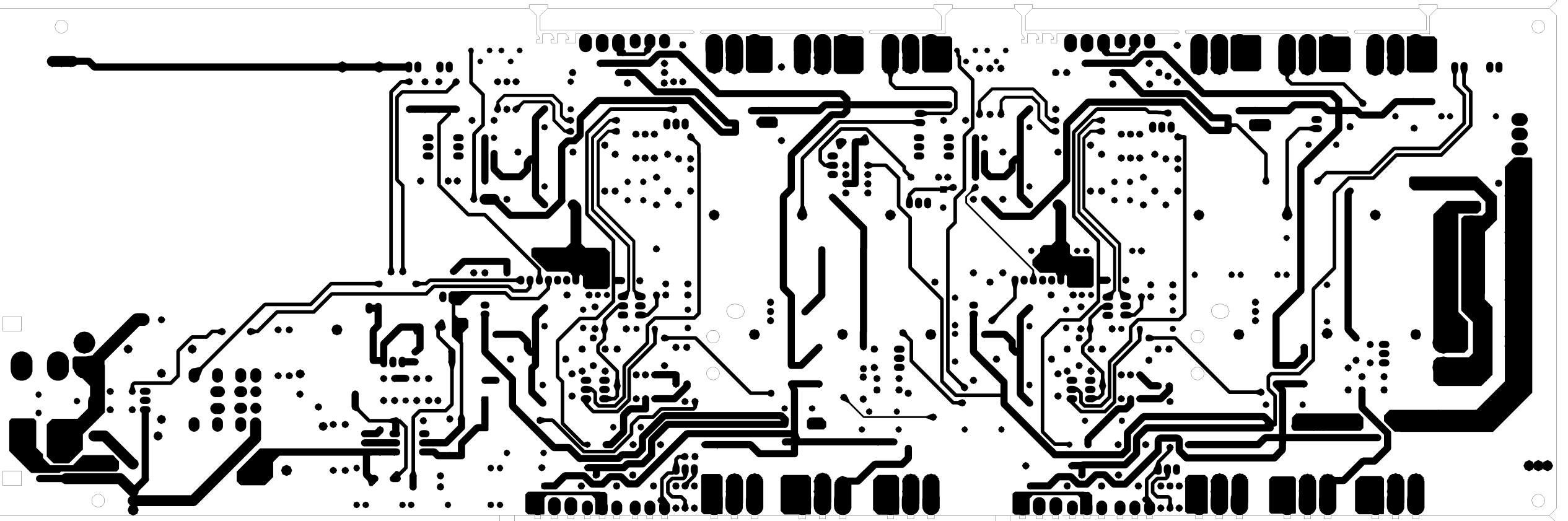
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

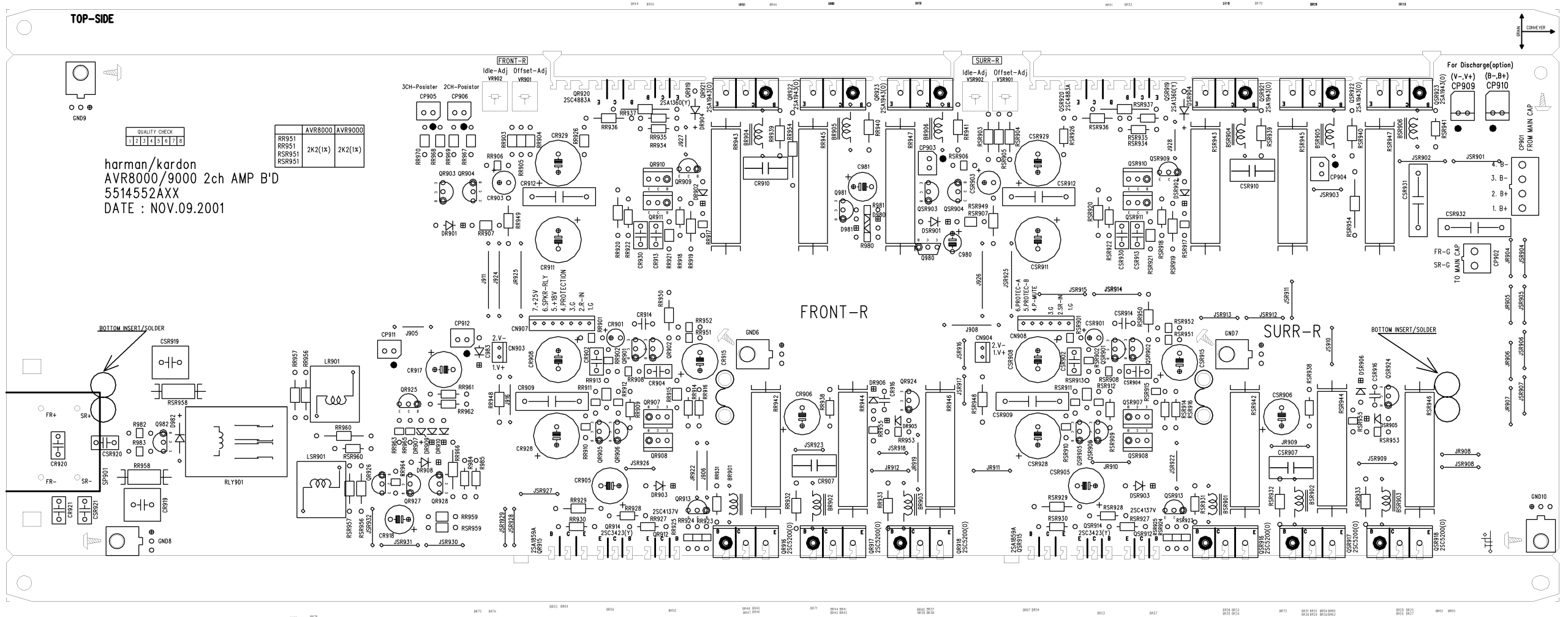


DRAWN: NOV.28.2001		COMPANY:	
CHECKED:		TITLE: AVR8000/9000 BLOCK	
QUALITY CONTROL:		CODE:	SIZE:
RELEASED:		DRAWING NO:	
		REV:	
		STAGE: MP	
		SHEET: 1 OF 1	



TOP-SIDE





TOP-SIDE

QUALITY CHECK

1	2	3	4	5	6
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	AVR8000	AVR9000
RR951	2K2(1x)	2K2(1x)
RR951		
RSR951		
RSR951		

harman/kardon  
AVR8000/9000 2ch AMP B'D  
5514552AXX  
DATE : NOV.09.2001

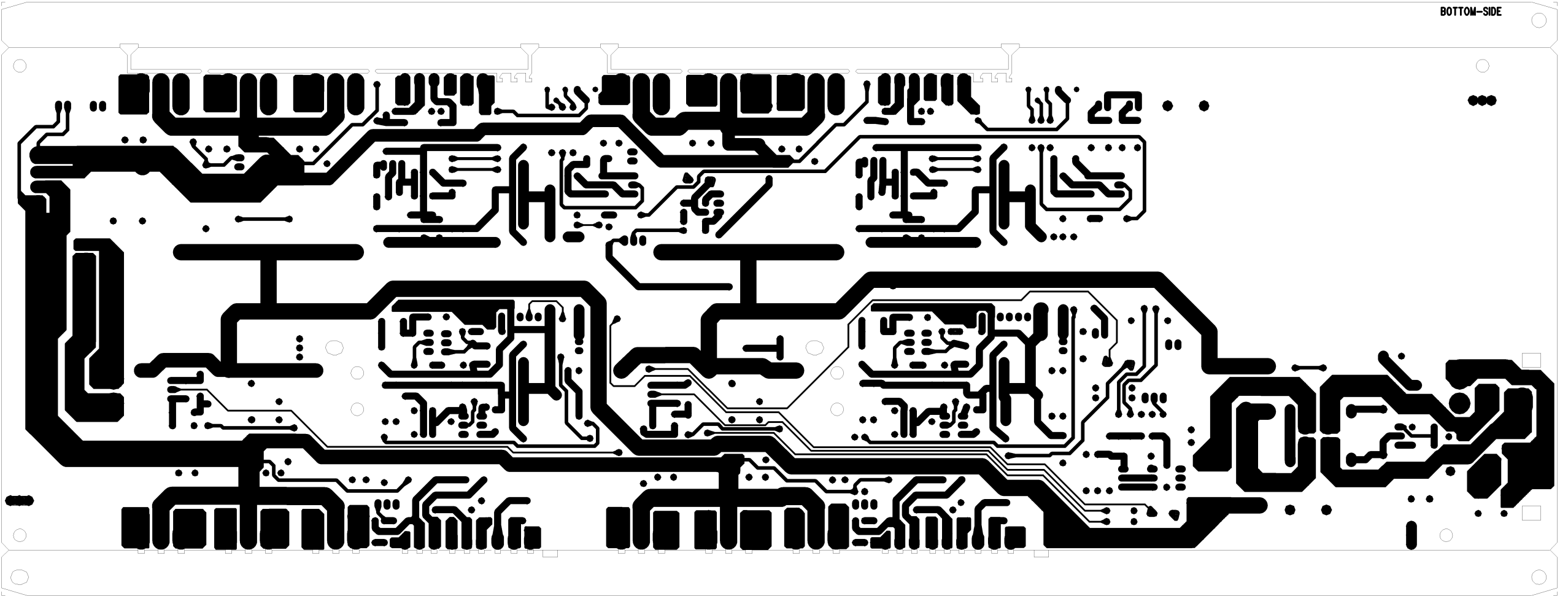
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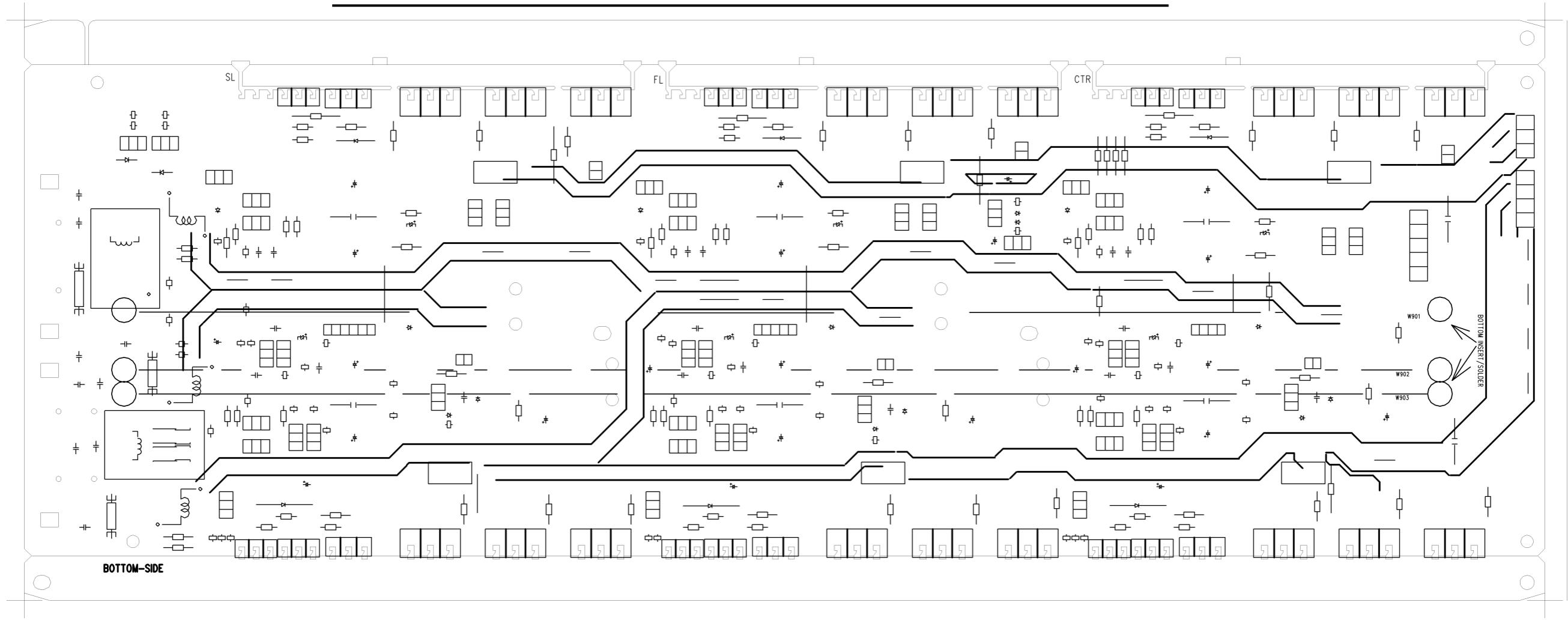
BOTTOM INSERT/SOLDER

FRONT-TO MAIN CAP

CONVEYER

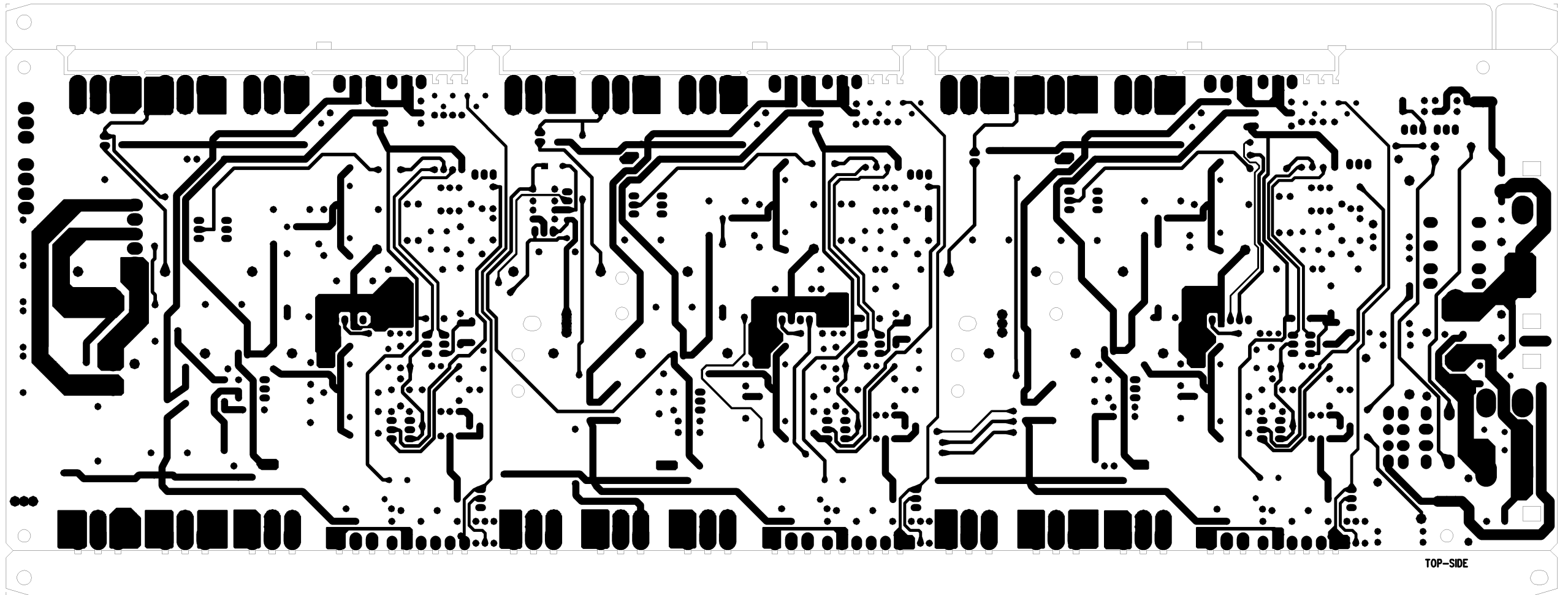
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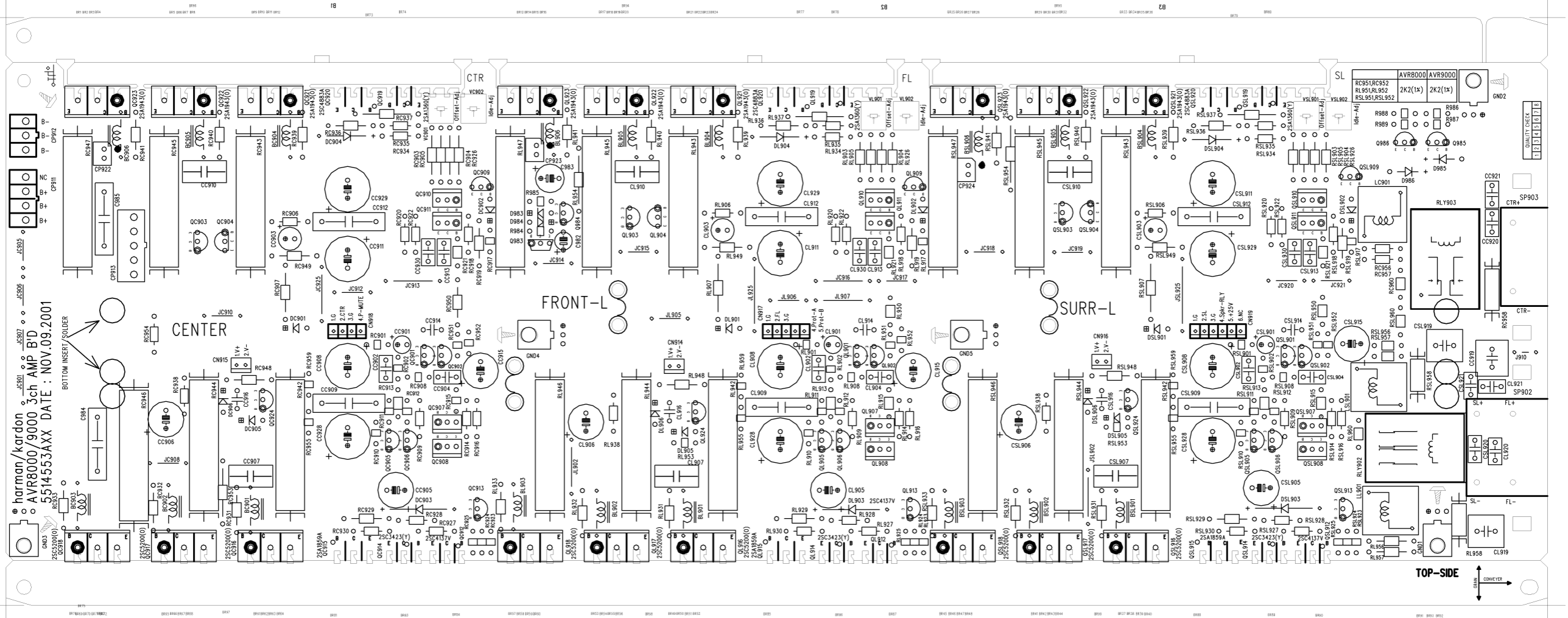


452.9 mm

mm 501



TOP-SIDE



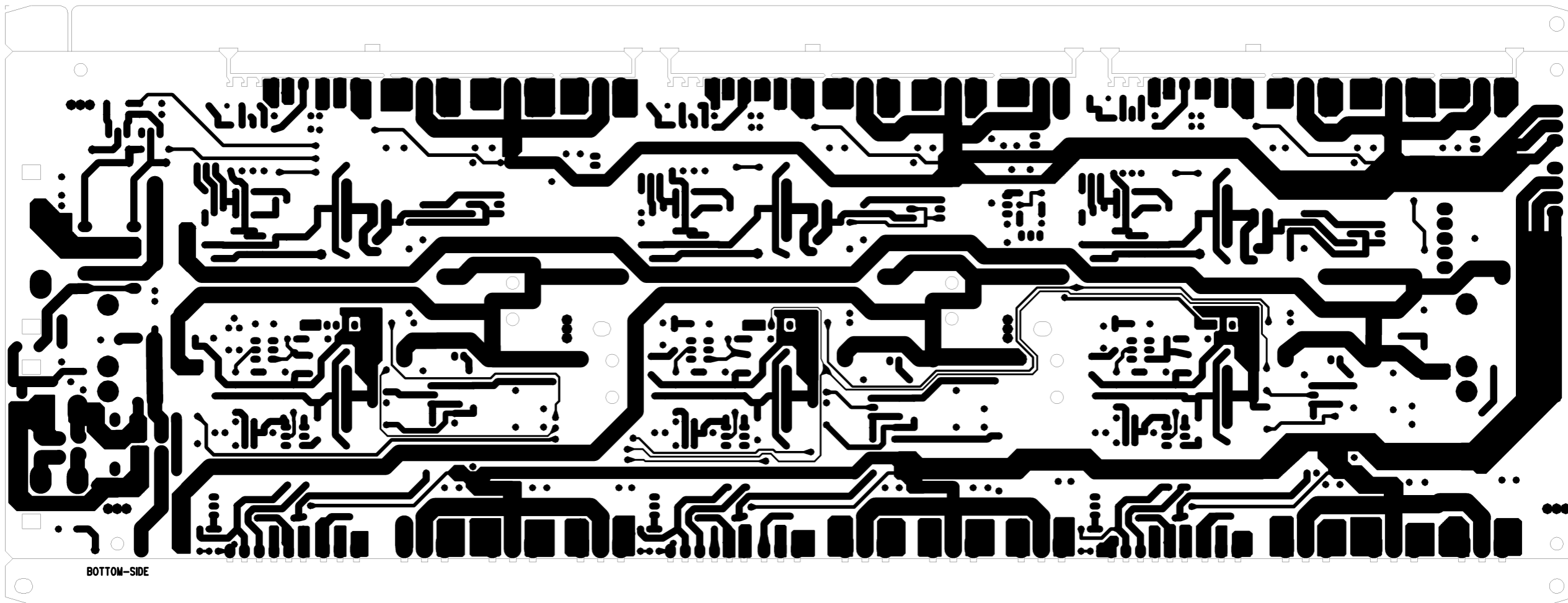
harman/kardon  
 AVR8000/9000 3ch AMP B/D  
 5514553AXX DATE : NOV.09.2001

BOTTOM INSERT SOLDER

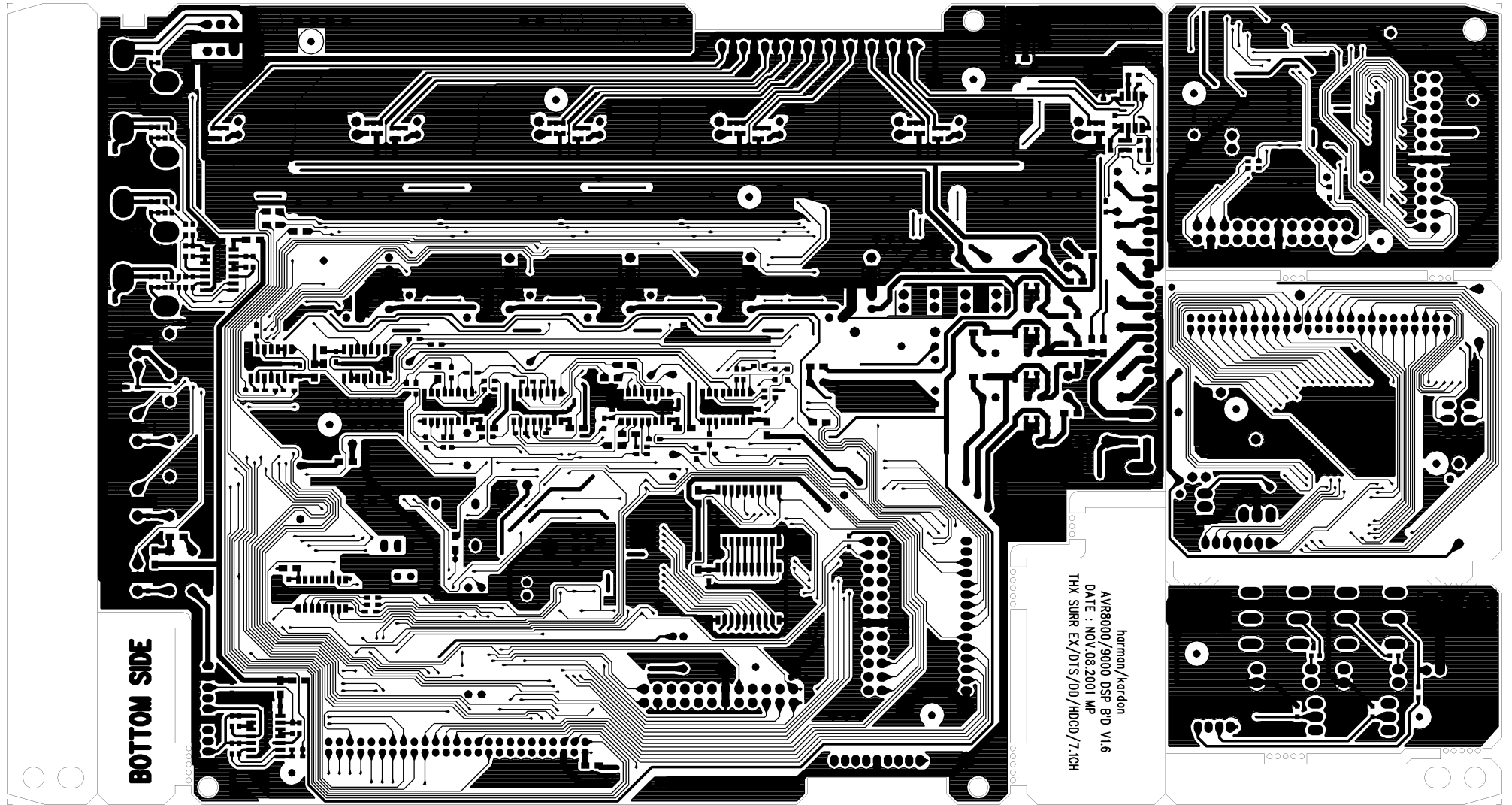
TOP-SIDE  
 → DIMS

QUALITY CHECK

1	2	3	4	5	6	7	8
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BOTTOM-SIDE

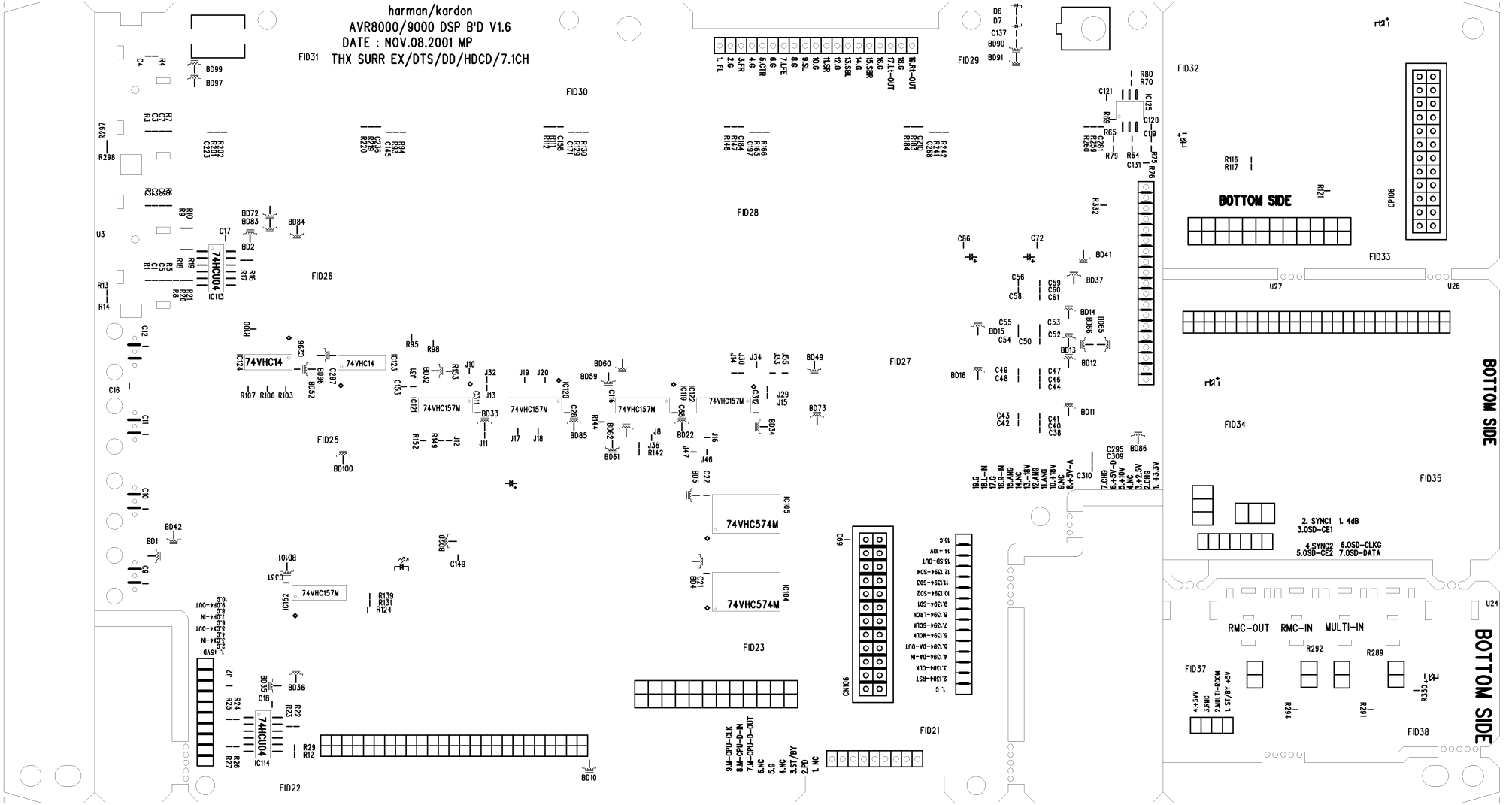


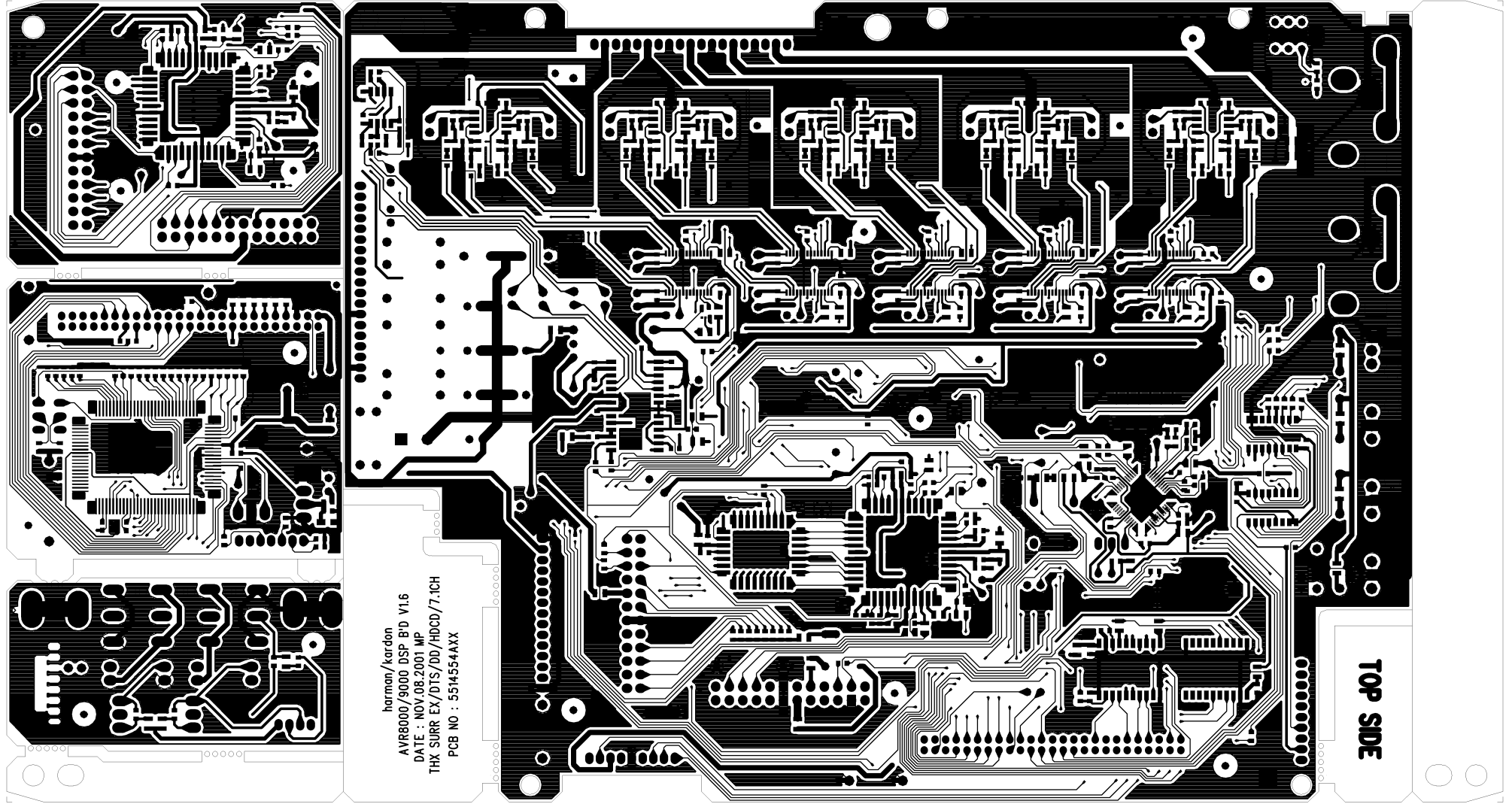
**BOTTOM SIDE**

harman/kardon  
AVR8000/9000 DSP B0 V1.6  
DATE : NOV 08,2001 MP  
THX SURR EX/DTS/DD/HDCD/7.1CH



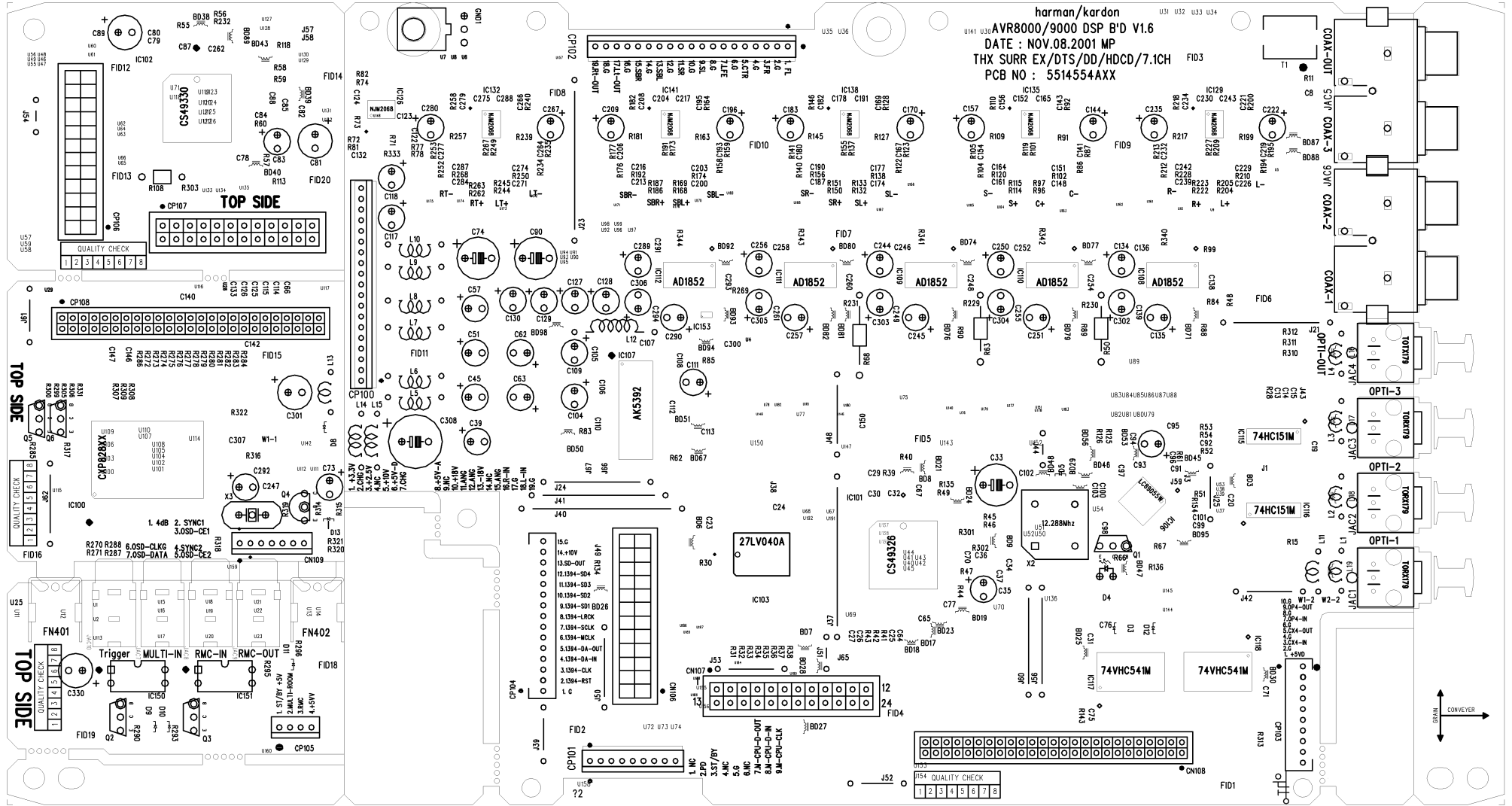
harman/kardon  
 AVR8000/9000 DSP B'D V1.6  
 DATE : NOV.08.2001 MP  
 THX SURR EX/DTS/DD/HDCD/7.1CH

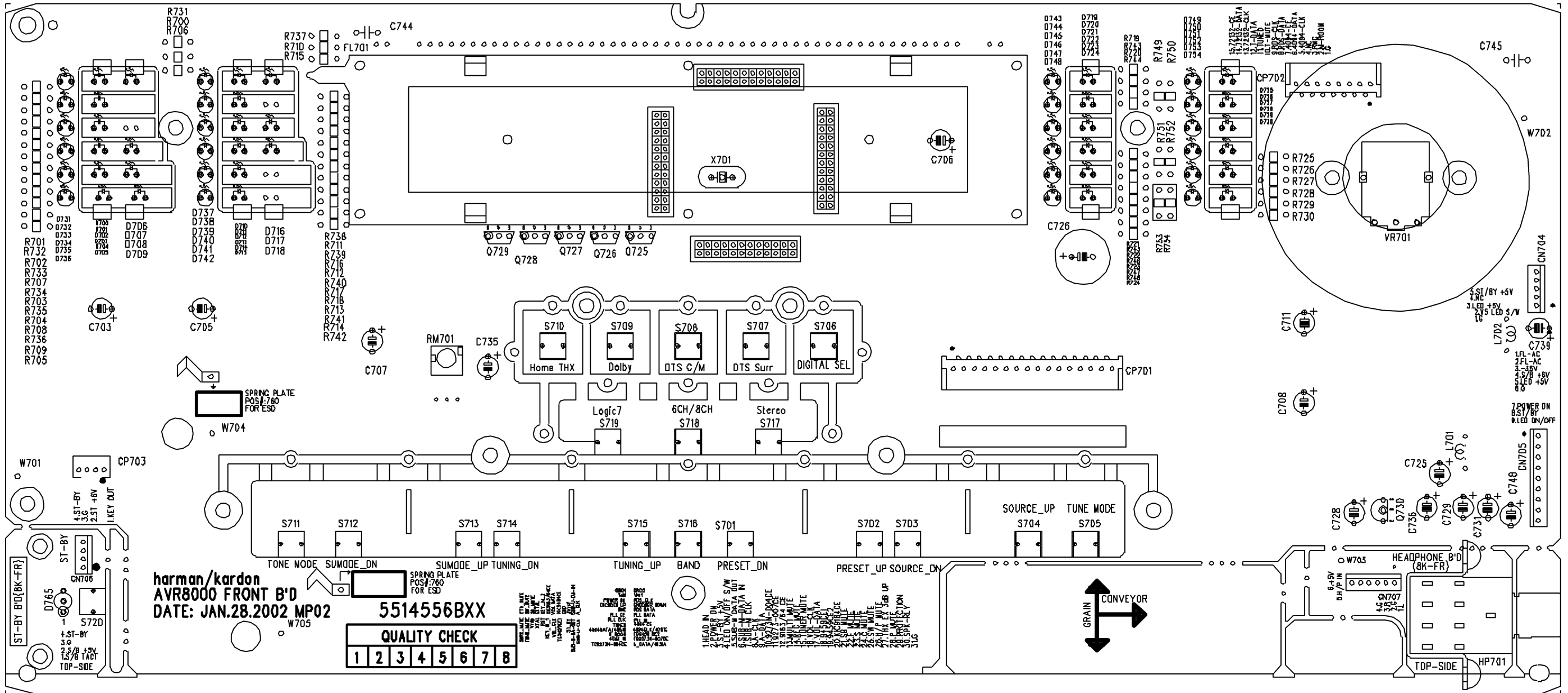




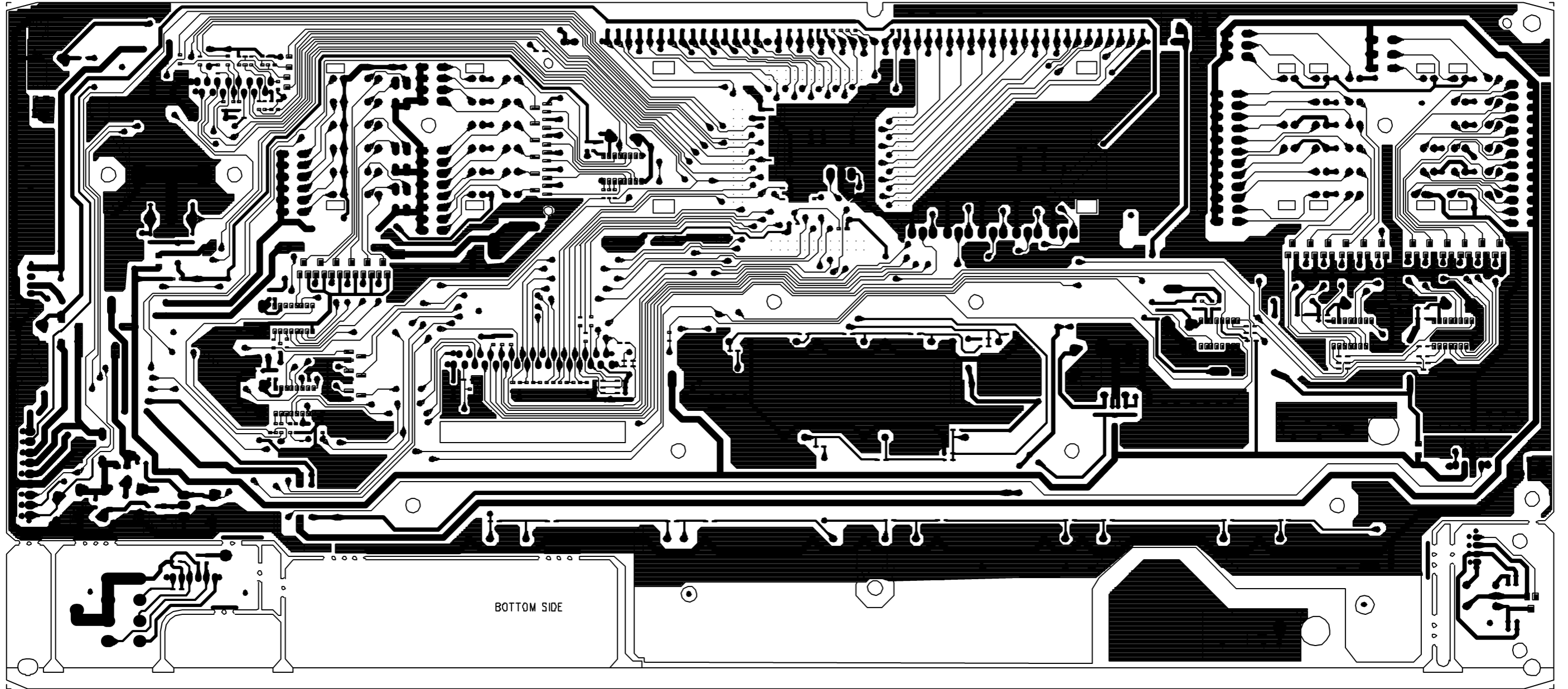
harman/kardon  
AVR8000/9000 DSP BD V1.6  
DATE : NOV.08.2001 MP  
THX SURR EX/DIS/DD/HDCD/7.1CH  
PCB NO : 55145544XX

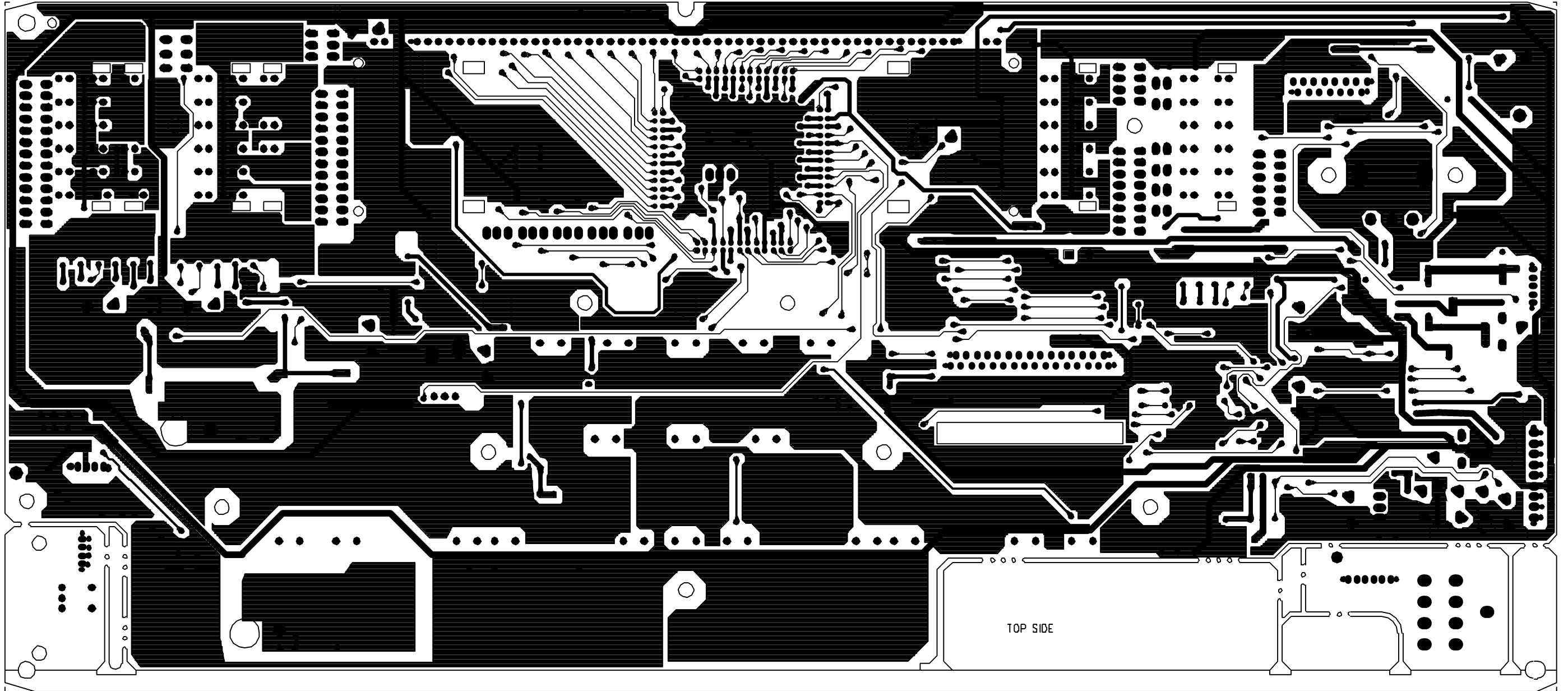
TOP SIDE

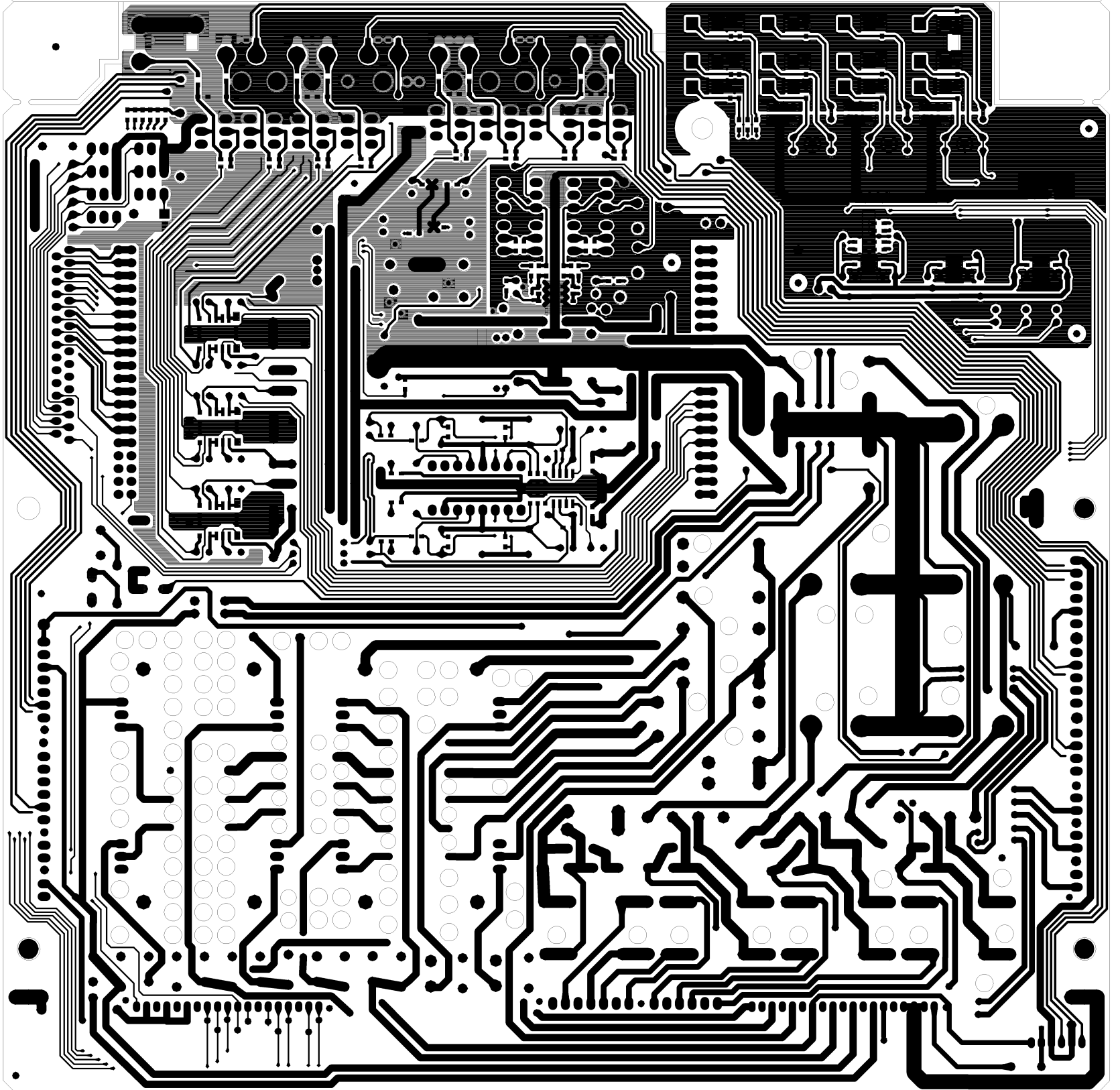






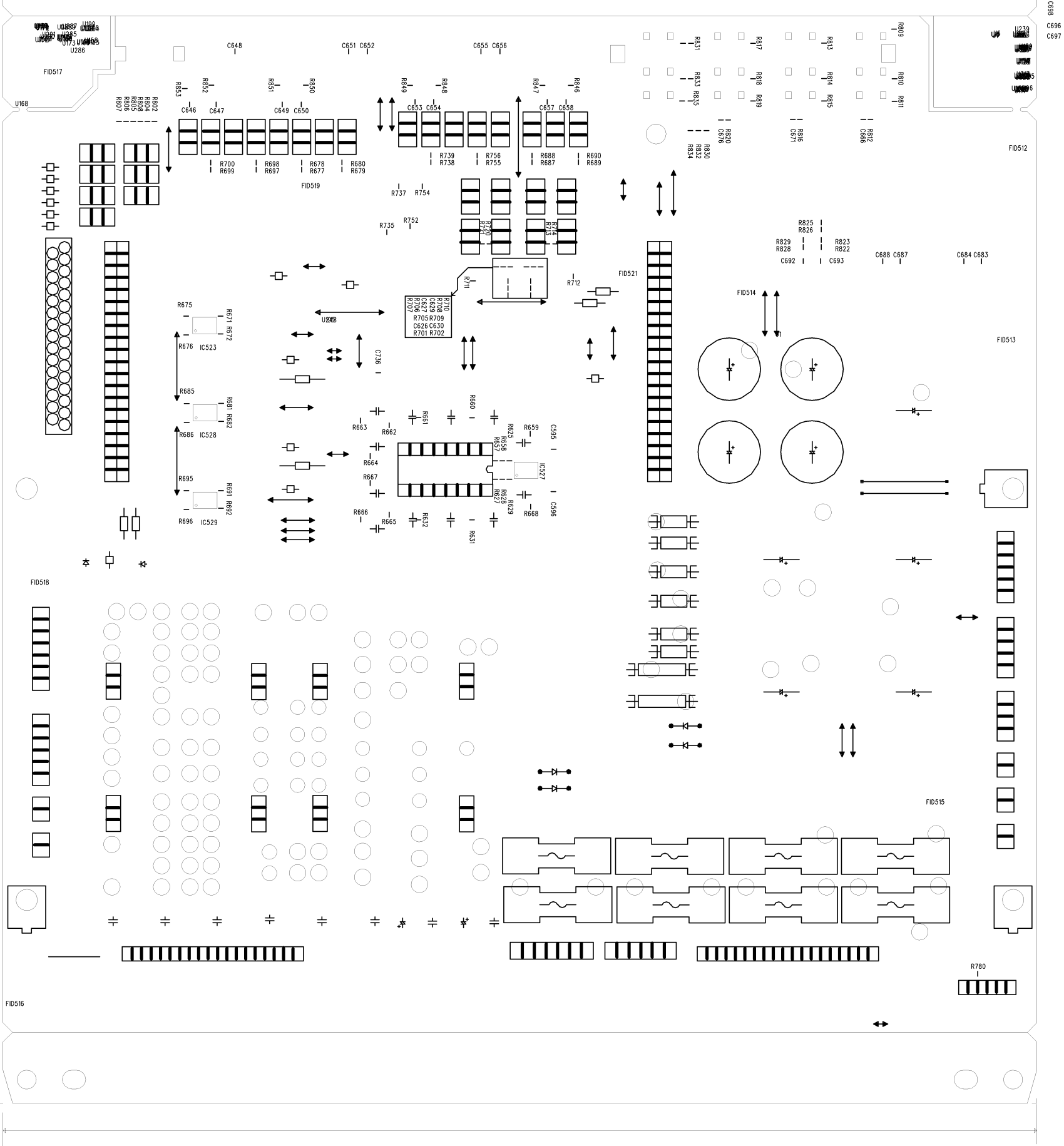


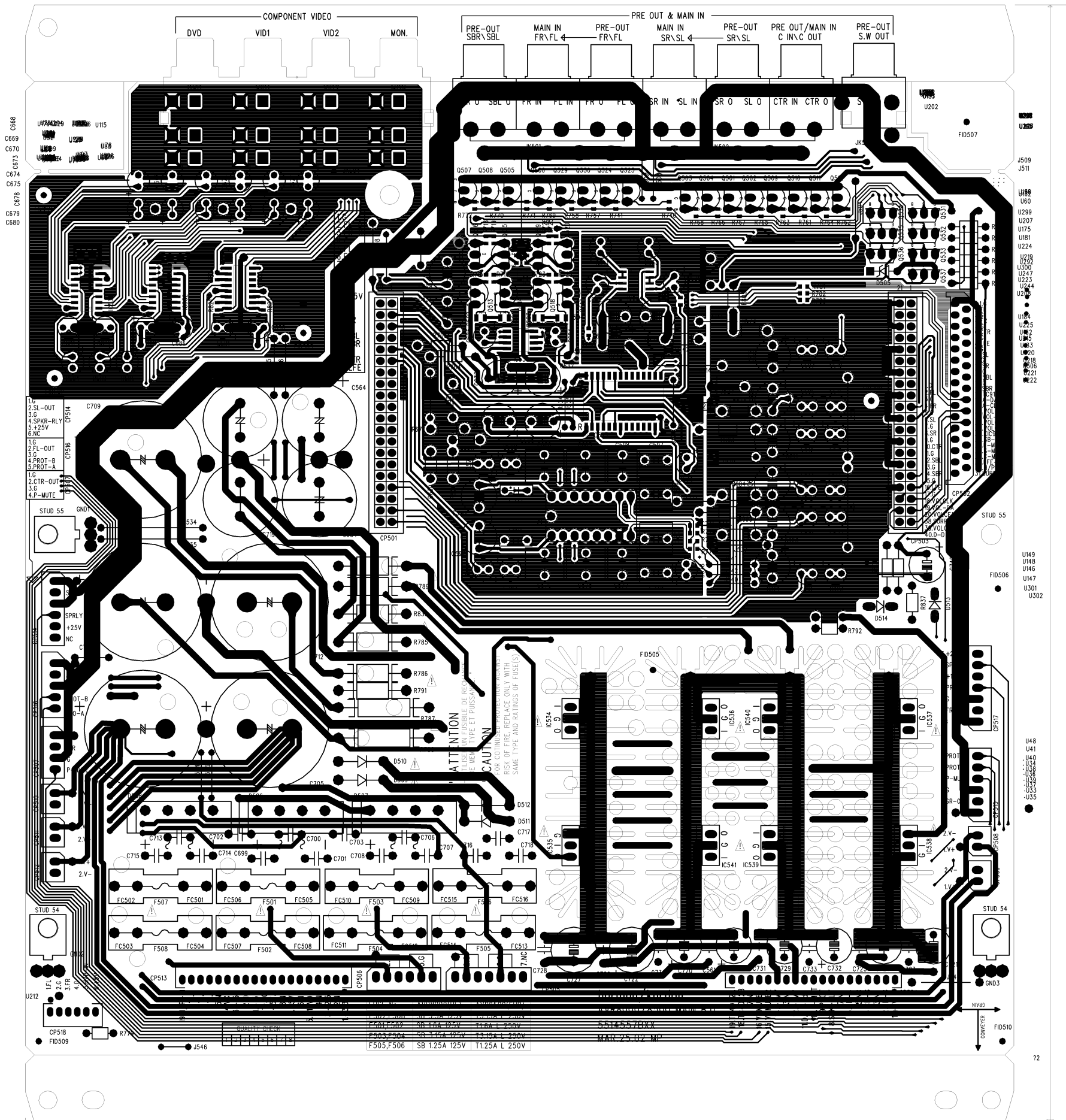


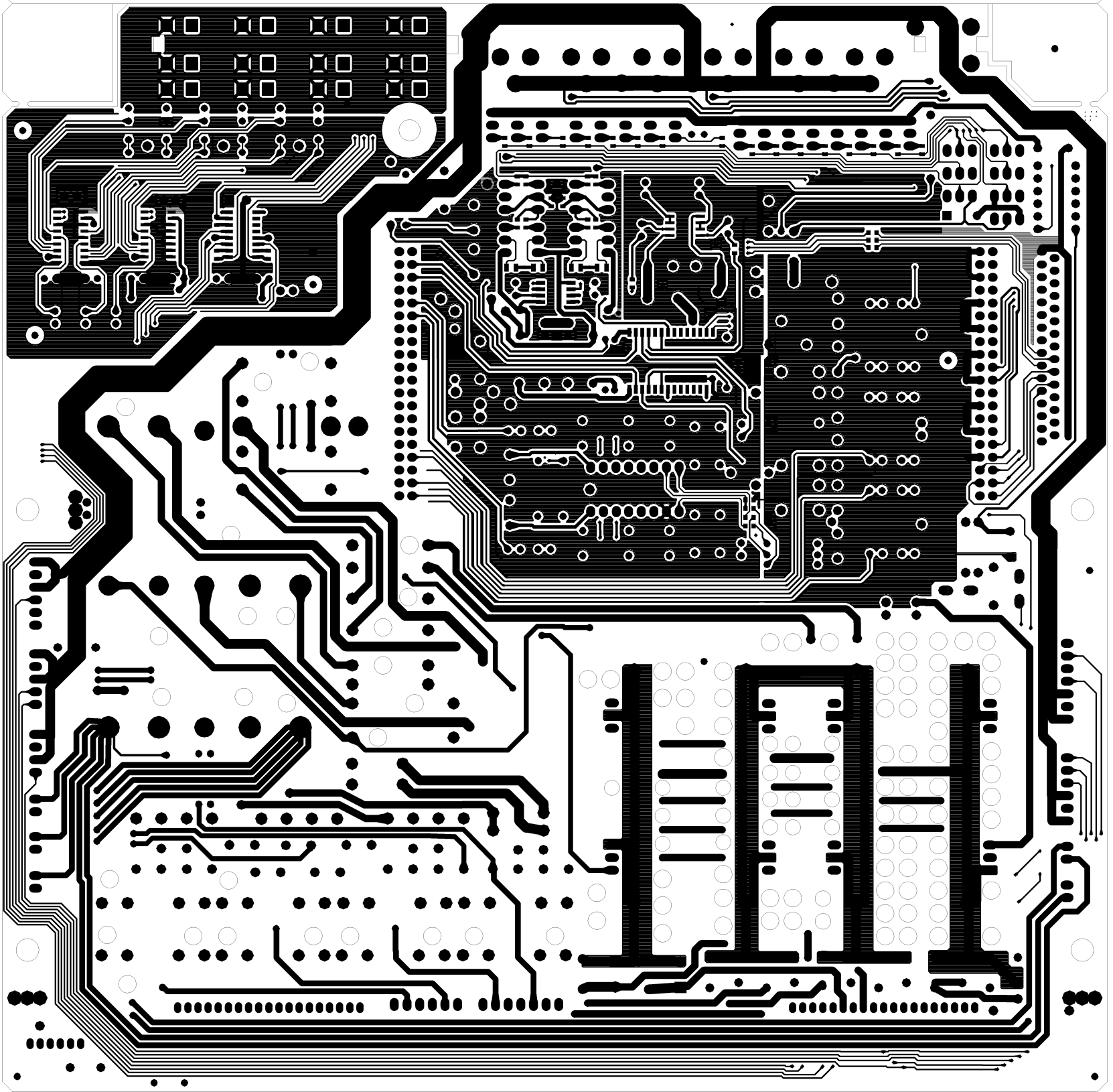


BOTTOM SIDE



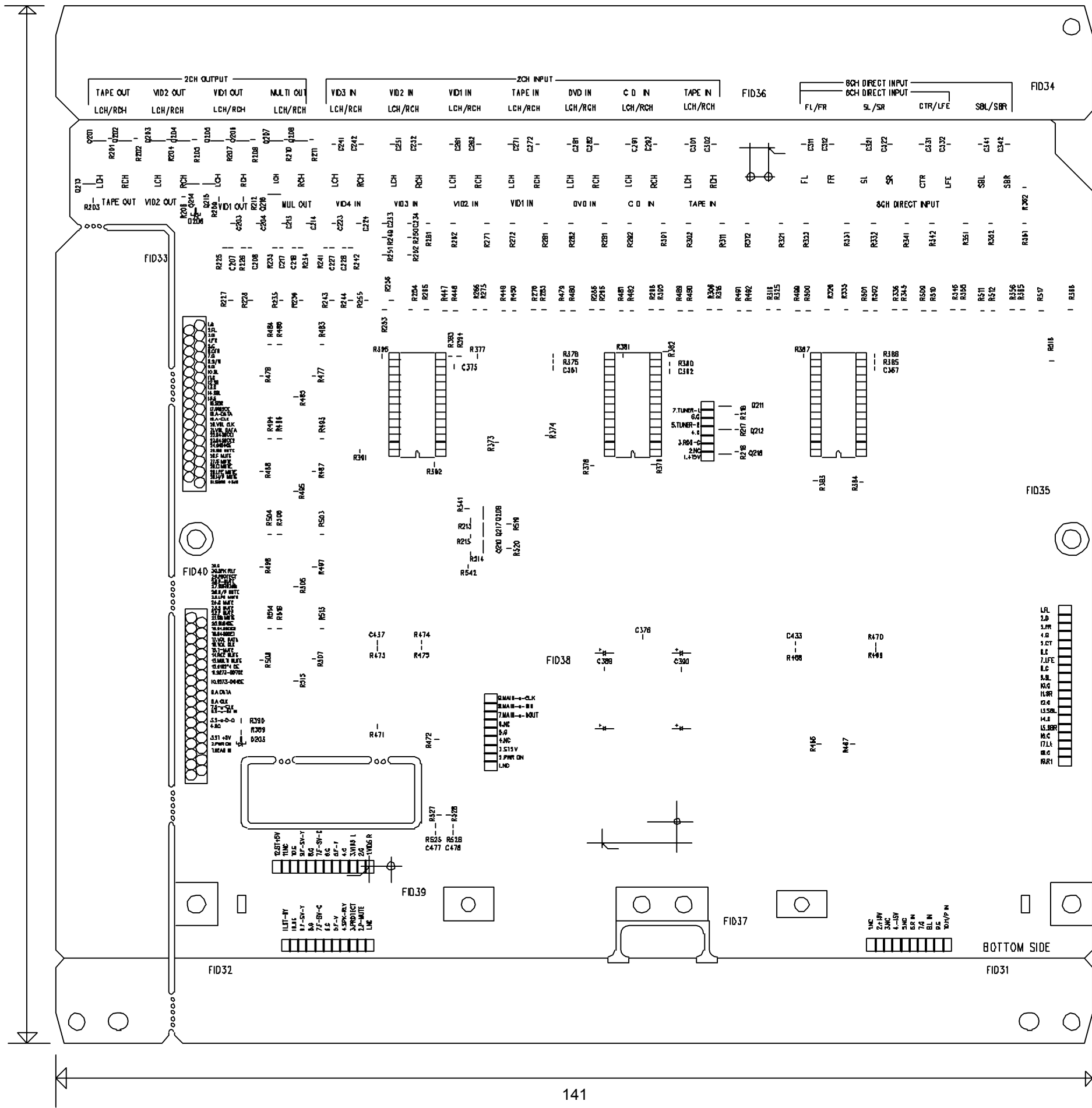






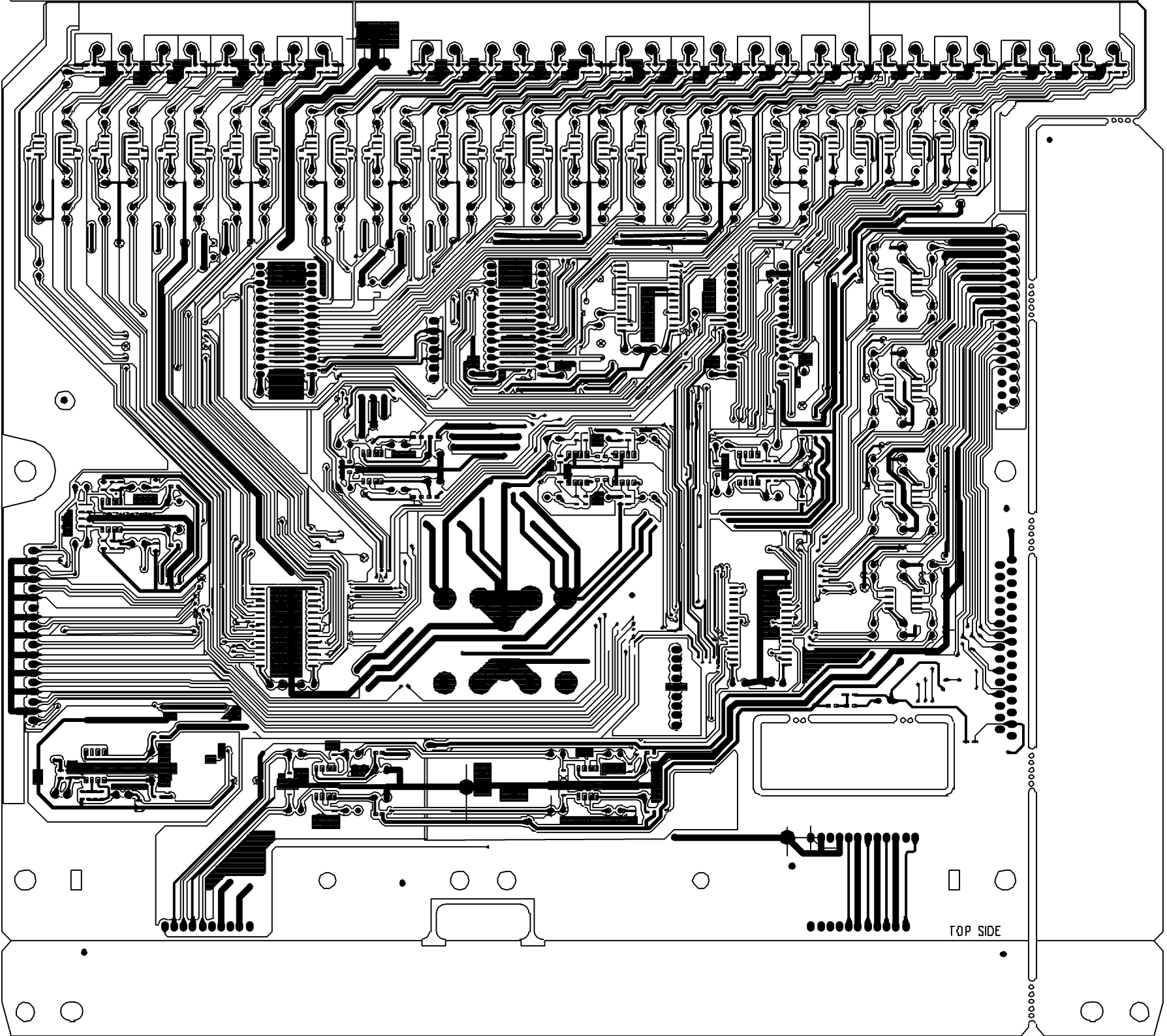
TOP SIDE



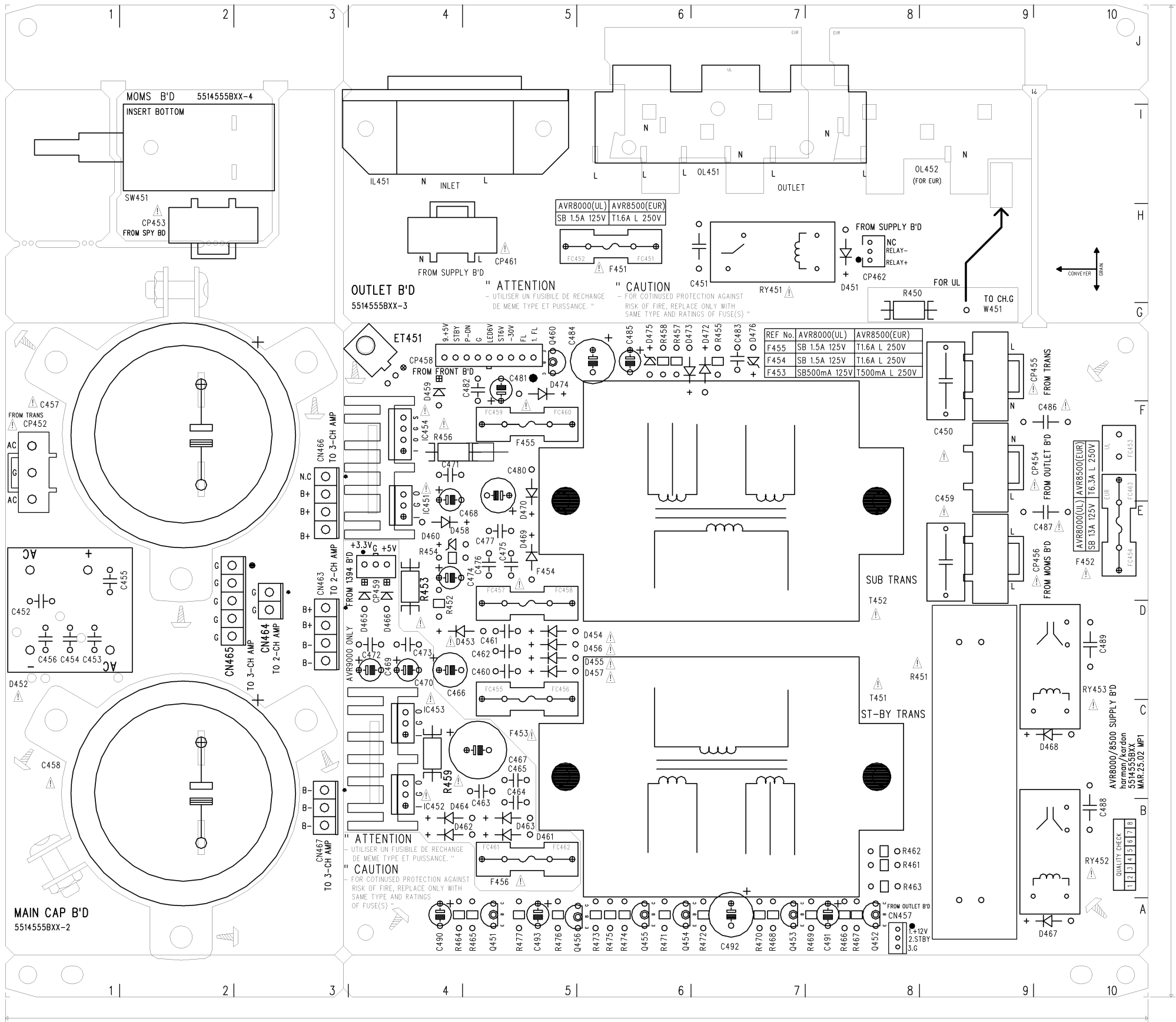


AVR8000

harman/kardon







REF No.	AVR8000(UL)	AVR8500(EUR)
F455	SB 1.5A 125V	T1.6A L 250V
F454	SB 1.5A 125V	T1.6A L 250V
F453	SB500mA 125V	T500mA L 250V

REF No.	AVR8000(UL)	AVR8500(EUR)
F455	SB 1.5A 125V	T1.6A L 250V
F454	SB 1.5A 125V	T1.6A L 250V
F453	SB500mA 125V	T500mA L 250V

**ATTENTION**  
- UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE ET PUISSANCE. "

**CAUTION**  
- FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE(S) "

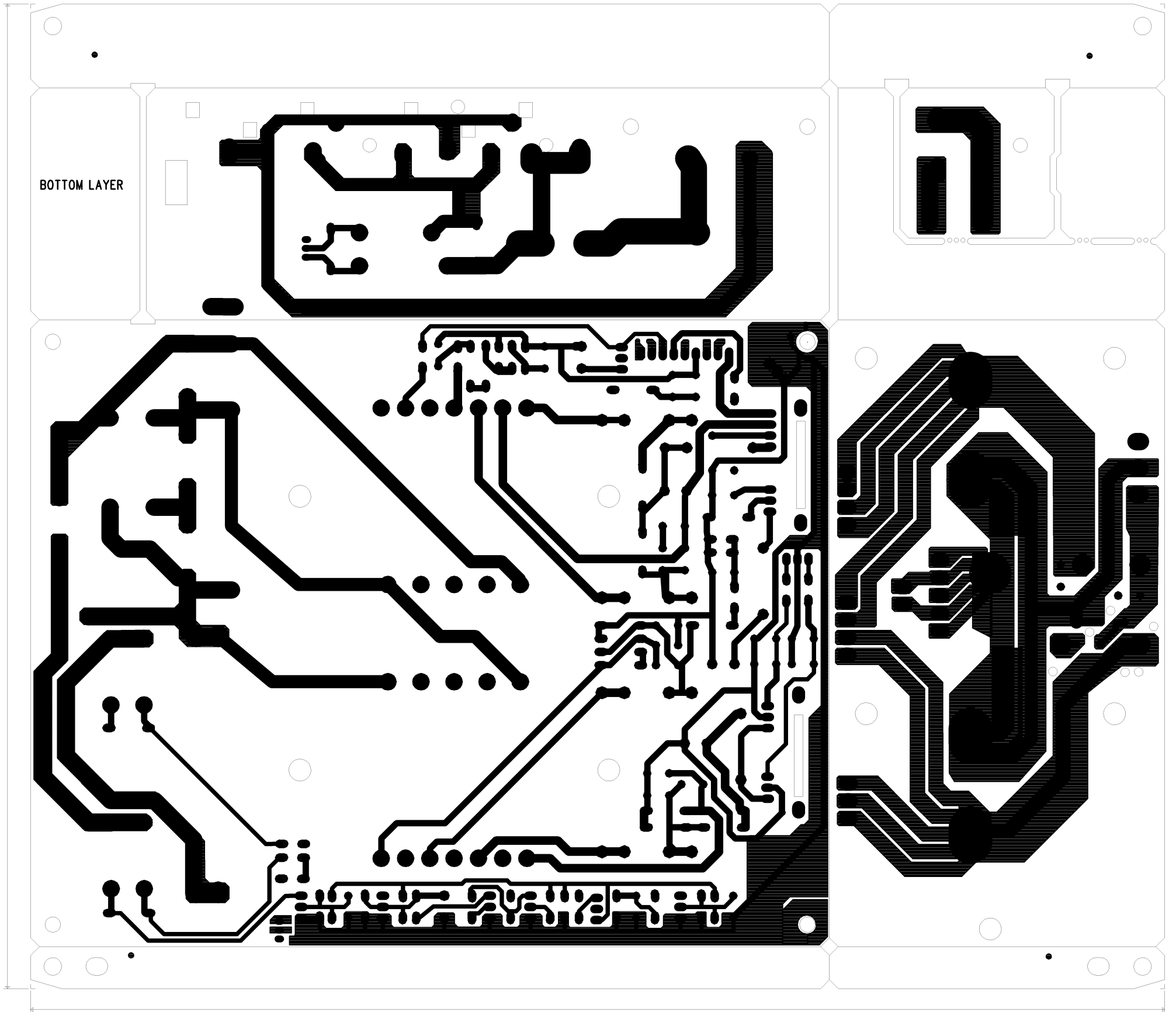
**ATTENTION**  
- UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE ET PUISSANCE. "

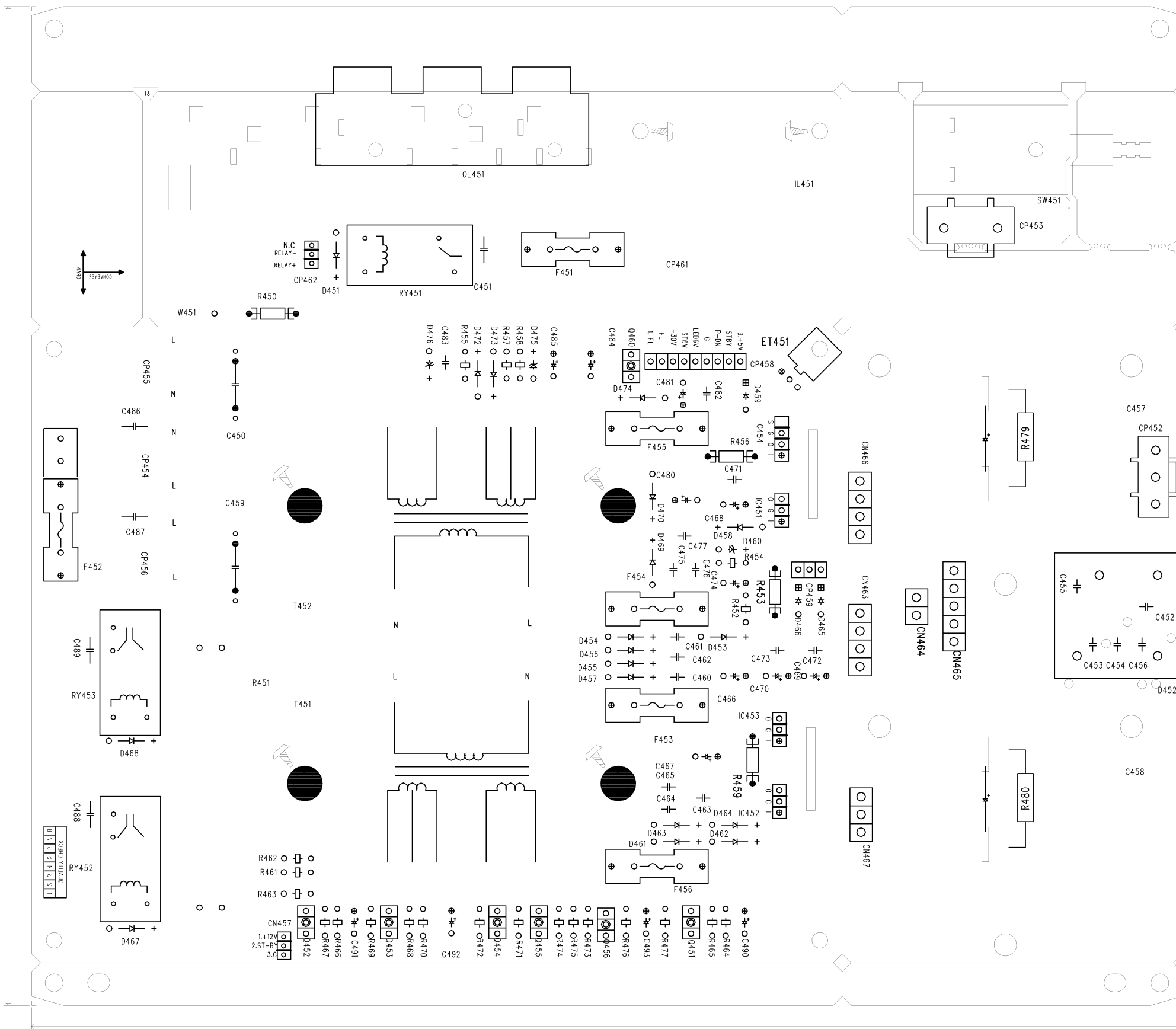
**CAUTION**  
- FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS OF FUSE(S) "

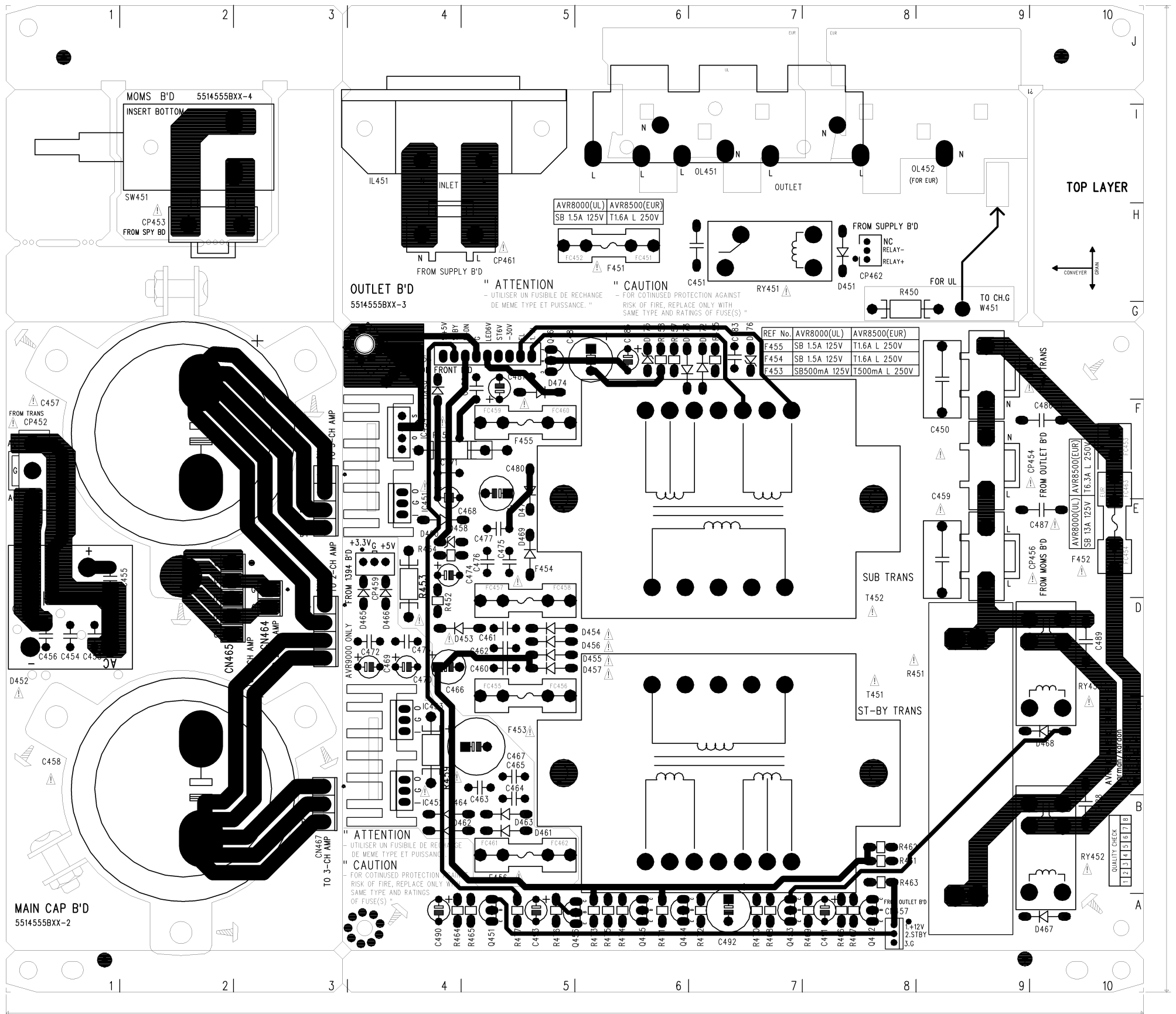
AVR8000/8500 SUPPLY B'D  
harman/kardon  
551455BXX  
MAR.25.02 MIP1

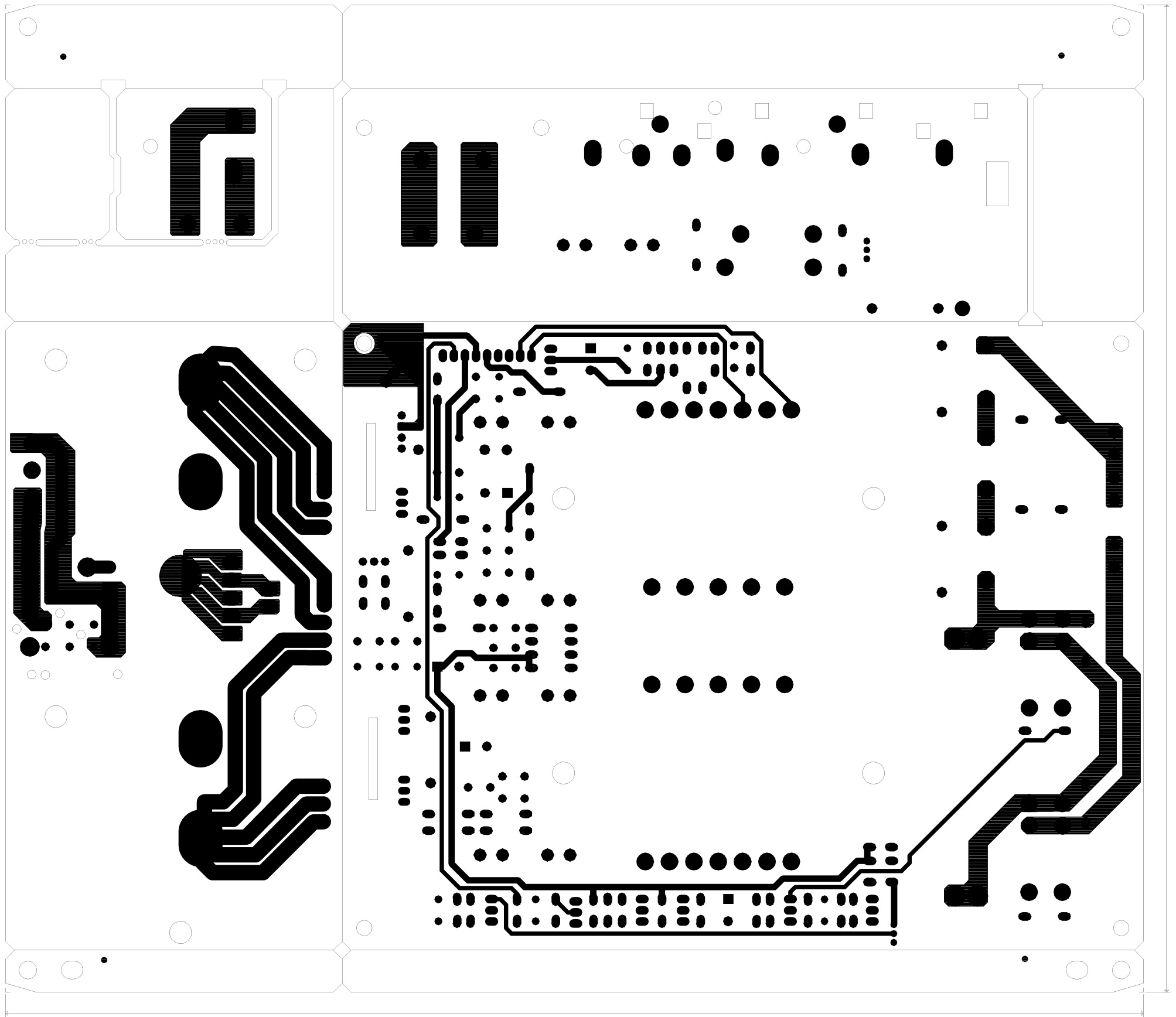
QUALITY CHECK  
1 2 3 4 5 6 7 8



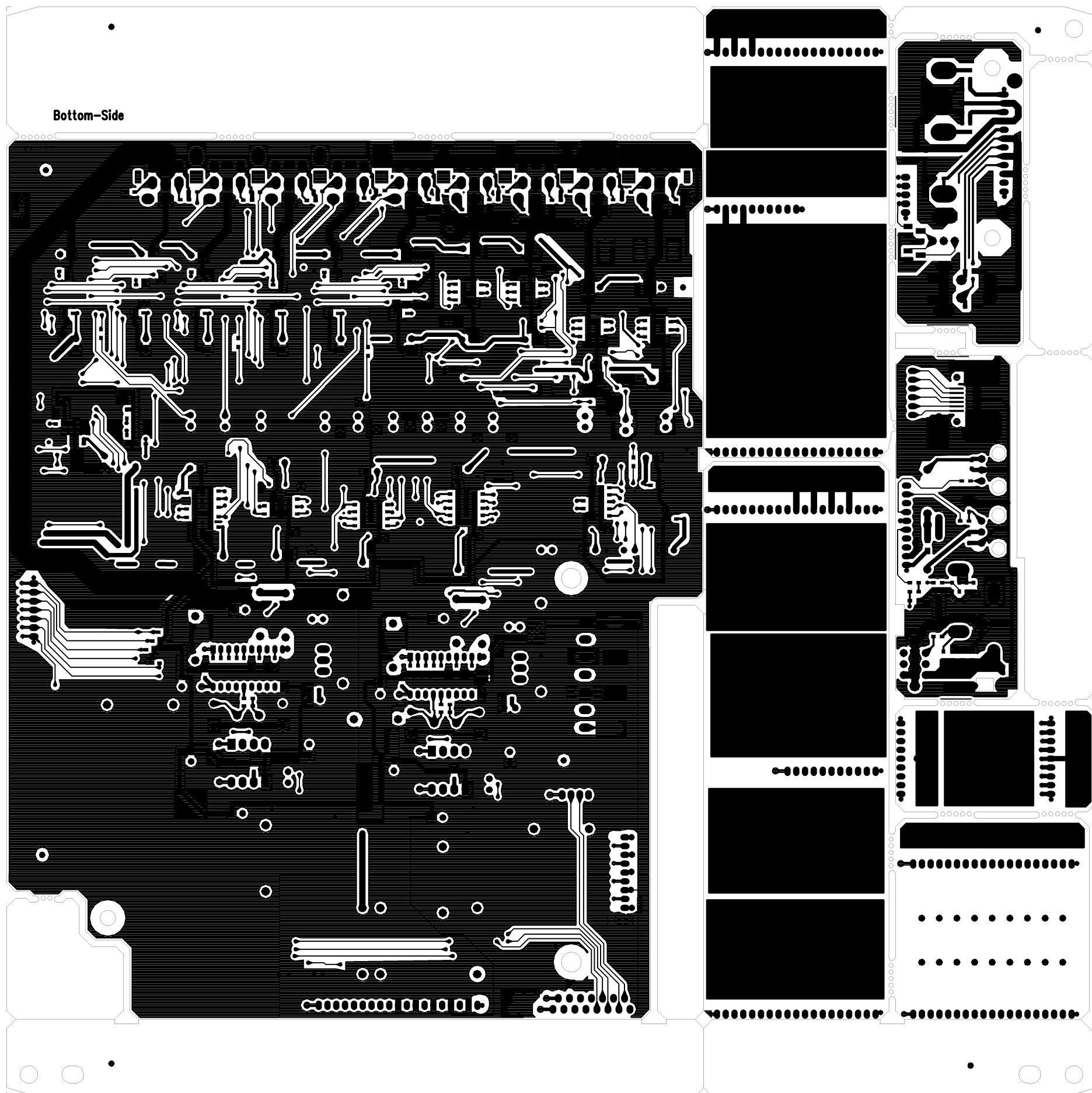




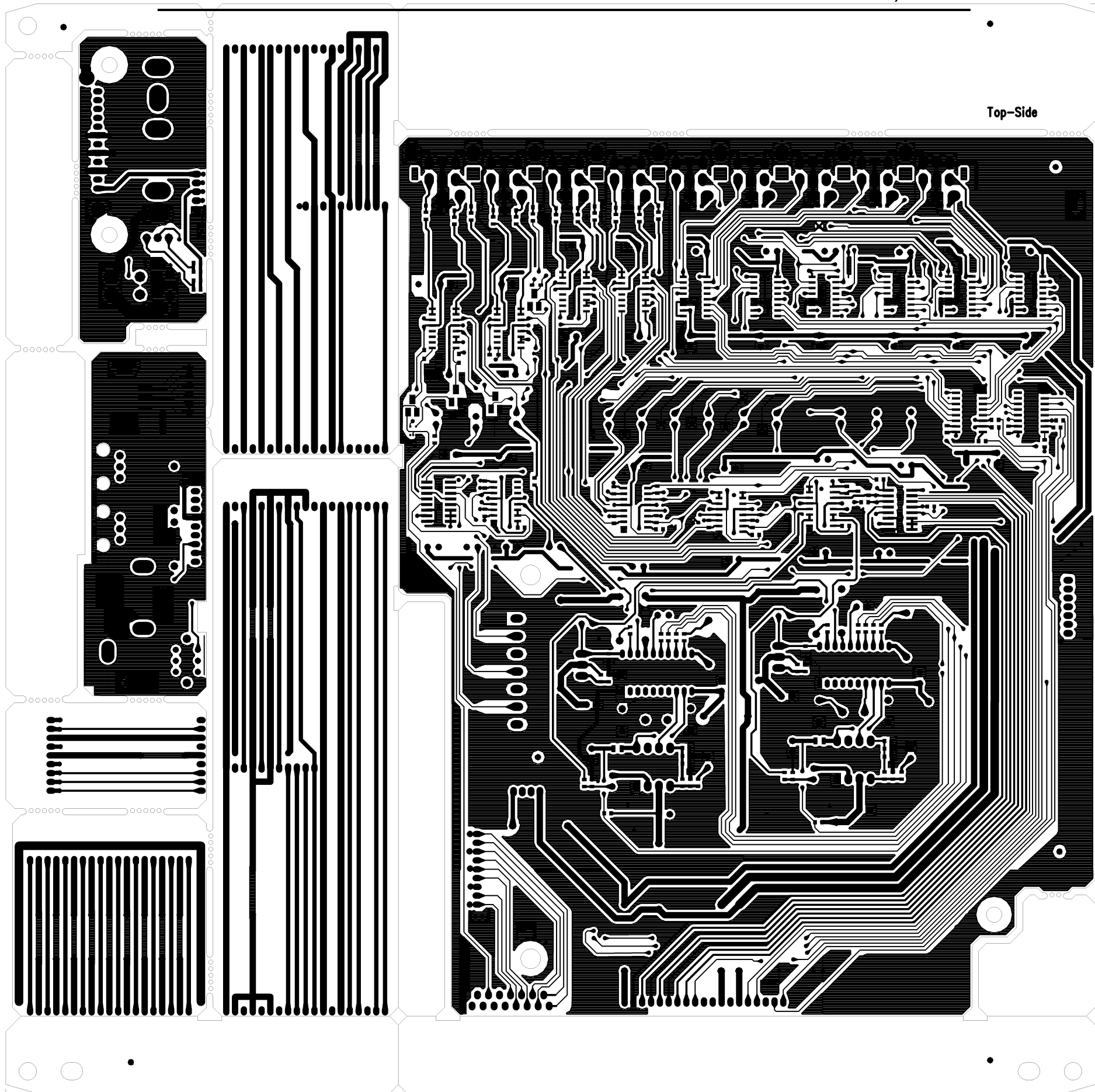






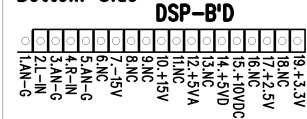


Top-Side

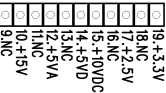


harman/kardon  
AVR8000/9000 VIDEO B'D  
DATE : NOV.08.2001 MP  
5514560AXX

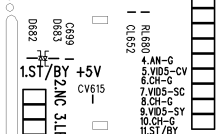
Bottom-Side



DSP-B'D



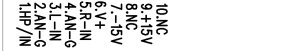
Bottom-Side



VID5 B'D



PRE-B'D



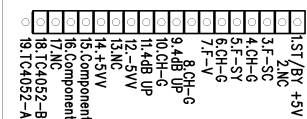
harman/kardon  
AVR8000/9000 CNT 1 B'D  
DATE : NOV.08.2001 MP

MAIN-B'D



Bottom-Side

VIDEO-B'D

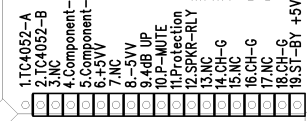


harman/kardon  
AVR8000/9000 CNT 2 B'D  
DATE : NOV.08.2001 MP

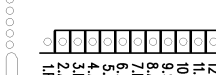
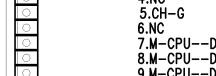
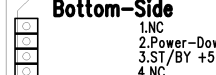
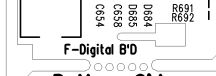
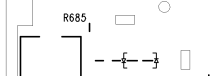
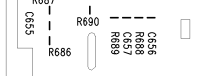
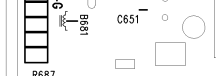
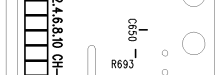
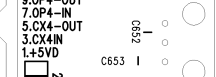
PRE-B'D



MAIN-B'D



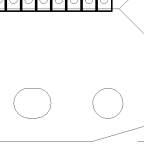
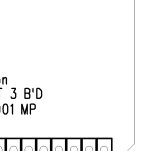
Bottom-Side



harman/kardon  
AVR8K/9K CNT 4 B'D  
DATE : NOV.08.2001 MP

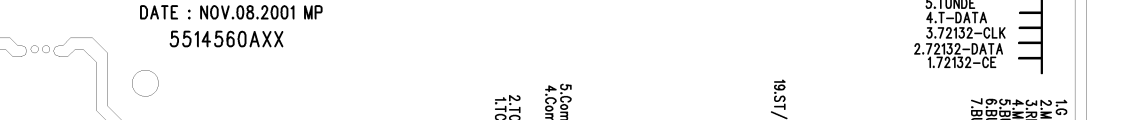
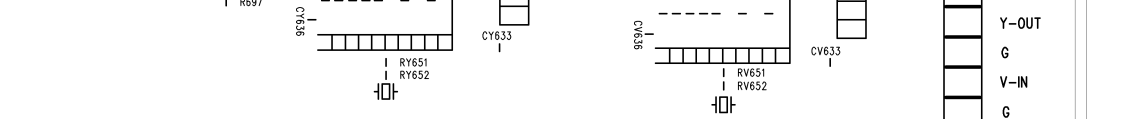
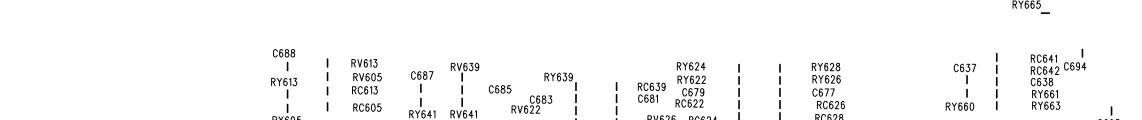
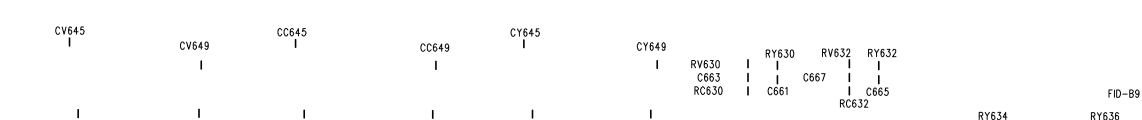
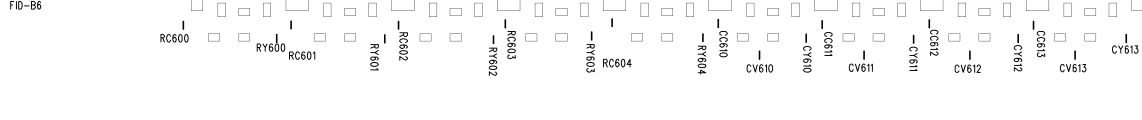


harman/kardon  
AVR8000/9000 CNT 3 B'D  
DATE : NOV.08.2001 MP

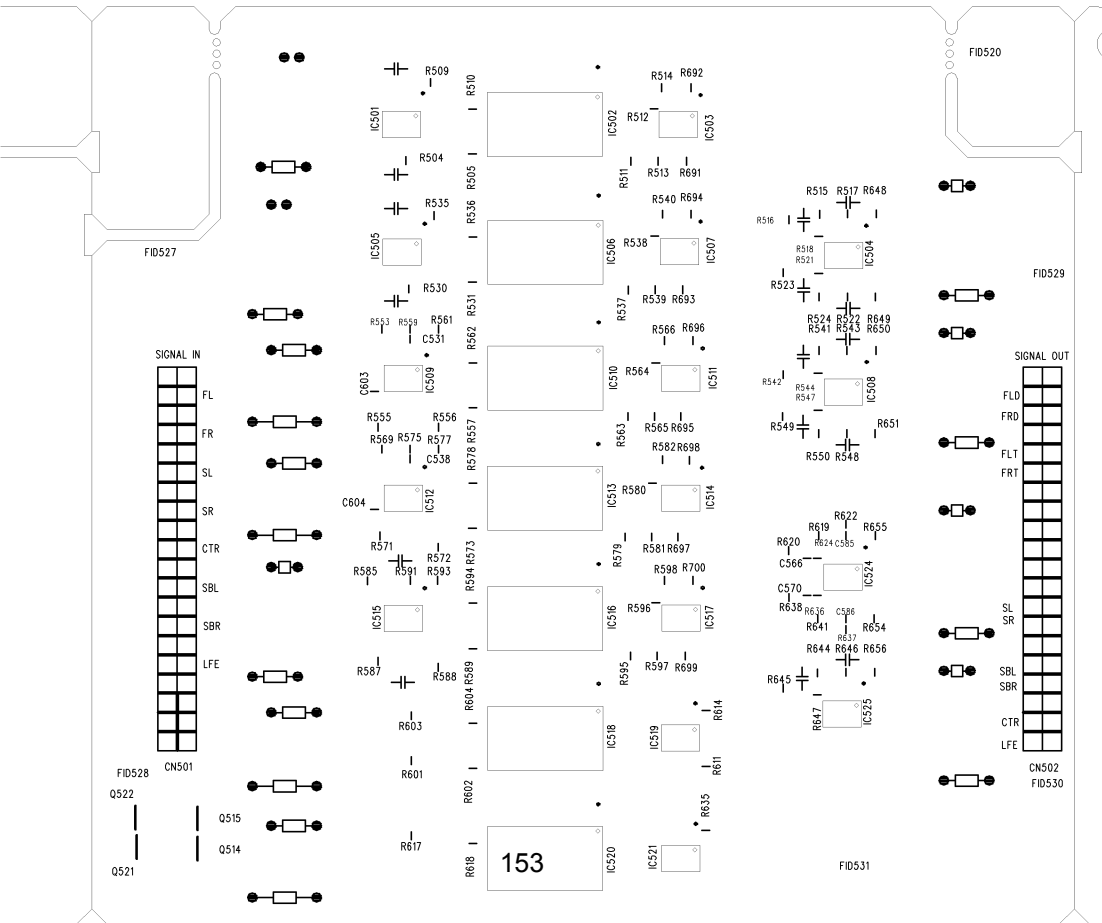
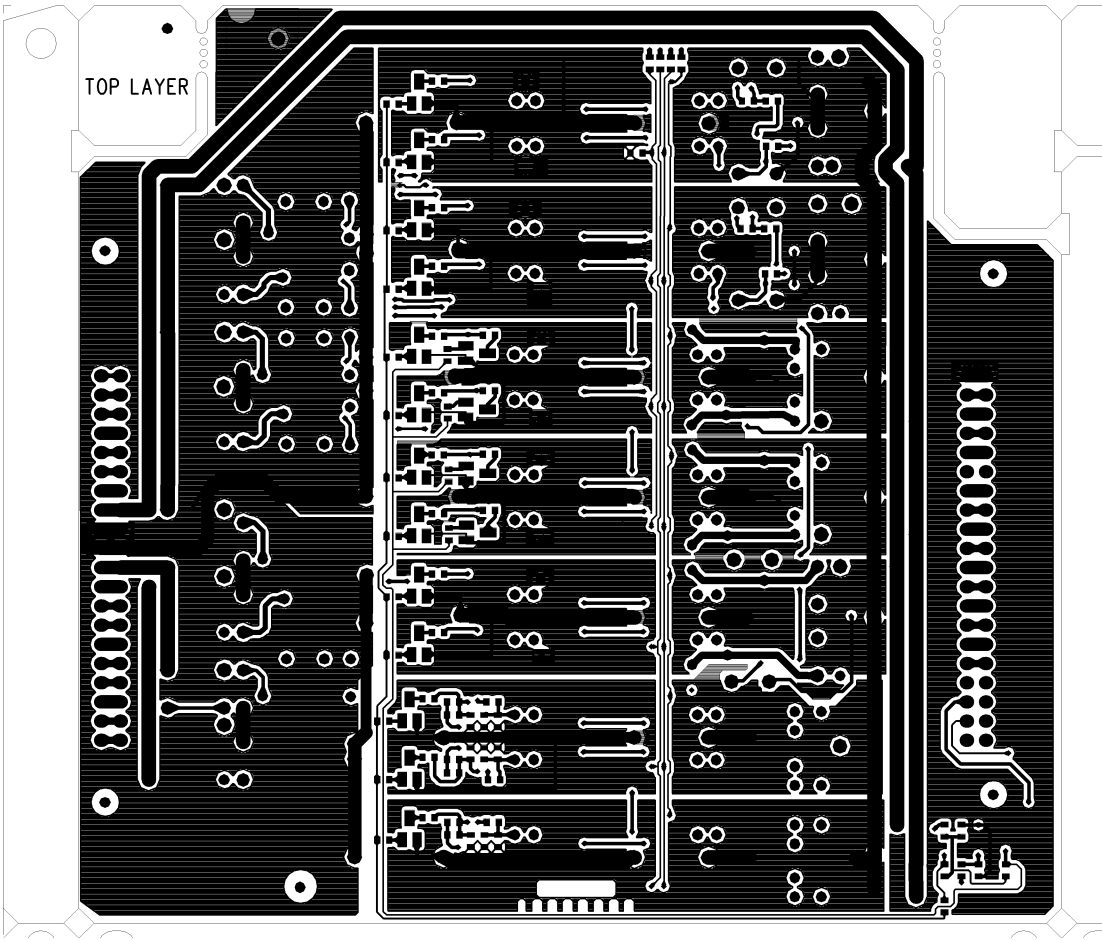


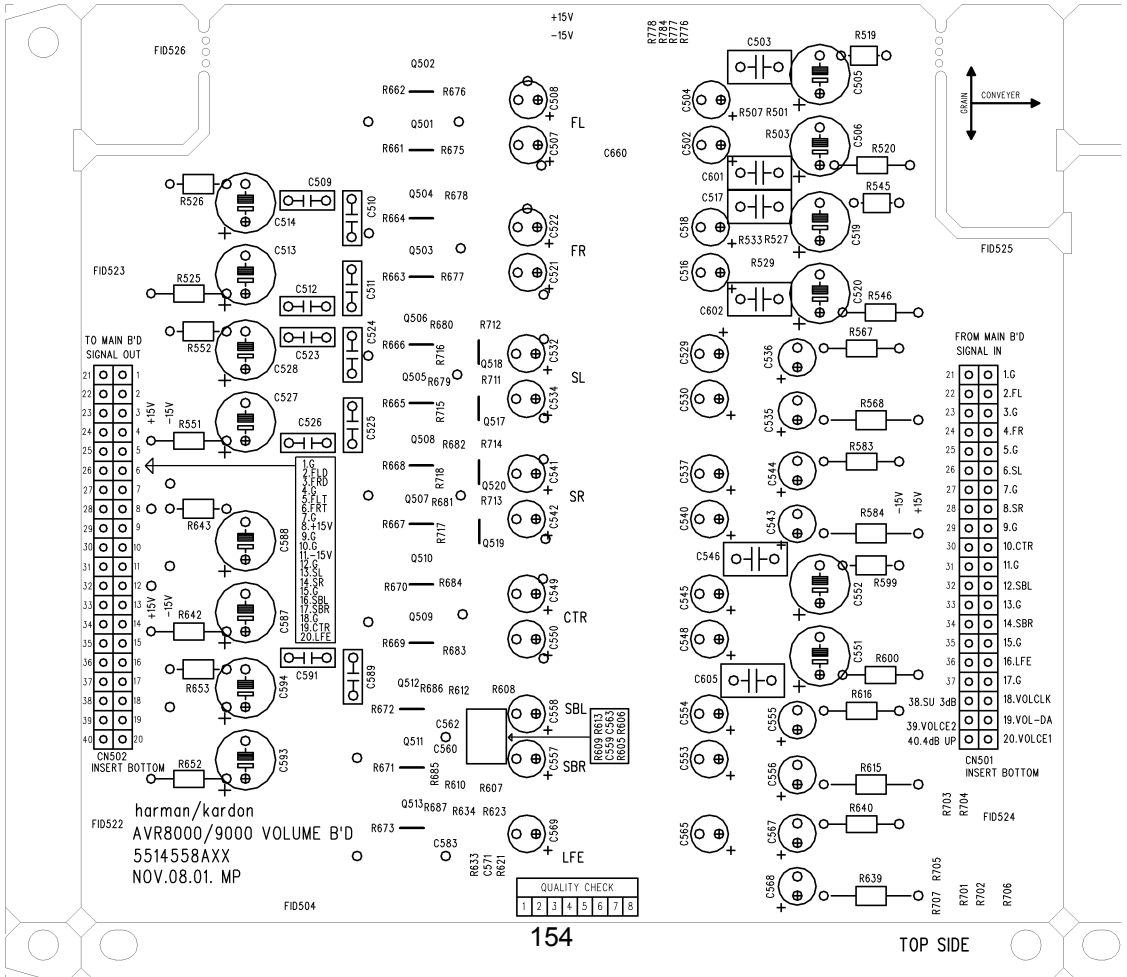
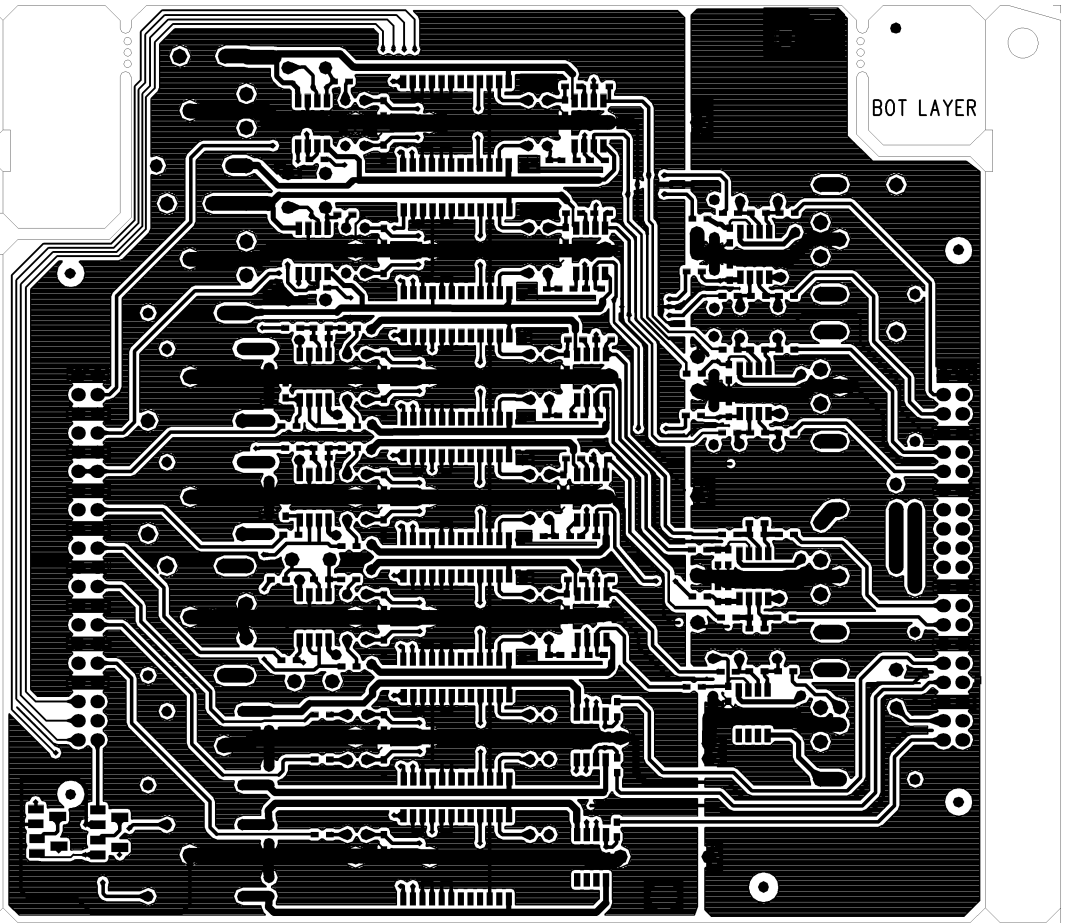
harman/kardon  
AVR8000/9000 VIDEO B'D  
DATE : NOV.08.2001 MP  
5514560AXX

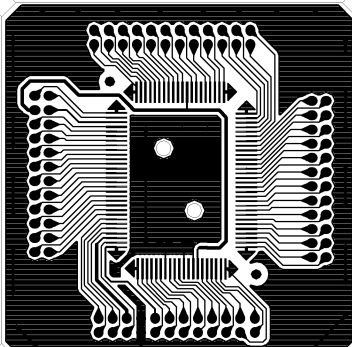
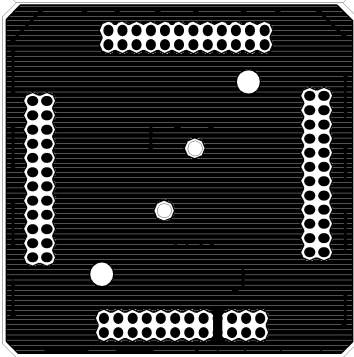
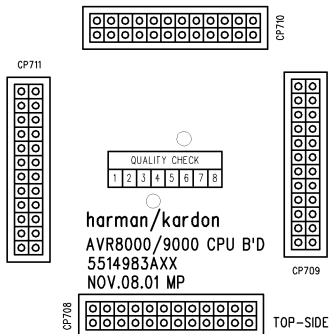
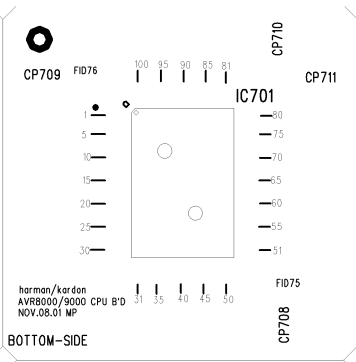
Bottom-Side











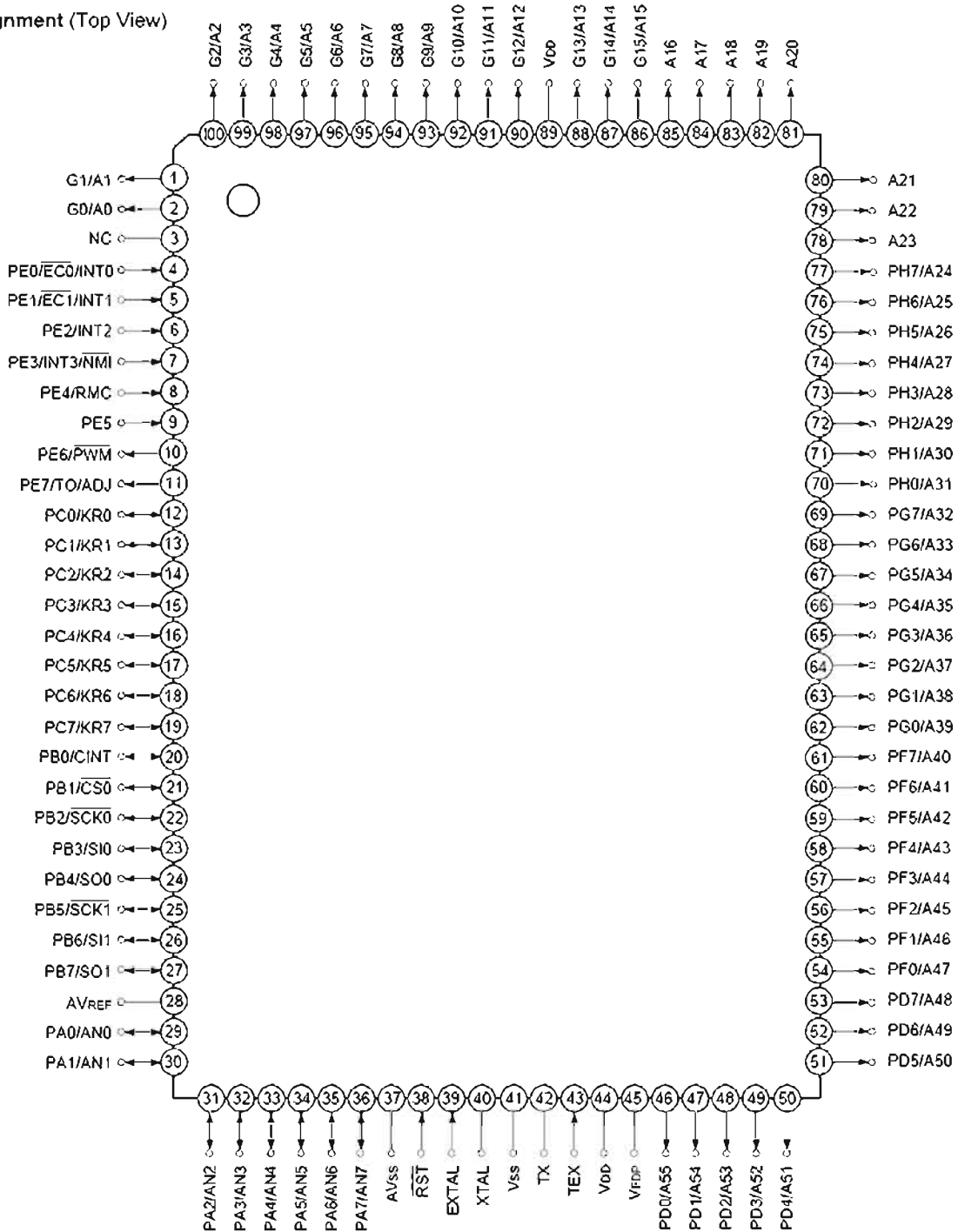
# CMOS 8-Bit Single Chip Microcomputer IC

# CXP82860

SONY

CXP82832/82840/82852/82860

Pin Assignment (Top View)



- Note)** 1. NC (Pin 3) must be connected to VDD.  
 2. VDD (Pins 44 and 89) must be connected to VDD.

Pin code	I/O	Functions		
PA0/AN0 to PA7/AN7	I/O/ Analog input	(Port A) 8-bit I/O port. I/O can be set in a unit of single bits. Incorporation of the pull-up resistor can be set through the software in a unit of 4 bits. (8pins)	Analog inputs to A/D converter. (8 pins)	
PB0/CINT	I/O/Input	(Port B) 8-bit I/O port. I/O can be set in a unit of single bits. Incorporation of the pull-up resistor can be set through the software in a unit of 4 bits. (8 pins)	Capture input to 16-bit timer/counter.	
PB1/ $\overline{CS0}$	I/O/Input		Chip select input for serial interface (CH0).	
PB2/ $\overline{SCK0}$	I/O/I/O		Serial clock I/O (CH0).	
PB3/SI0	I/O/Input		Serial data input (CH0).	
PB4/SO0	I/O/Output		Serial data output (CH0).	
PB5/ $\overline{SCK1}$	I/O/I/O		Serial clock I/O (CH1).	
PB6/SI1	I/O/Input		Serial data input (CH1).	
PB7/SO1	I/O/Output		Serial data output (CH1).	
PC0/KR0 to PC7/KR7	I/O/Input	(Port C) 8-bit I/O port. I/O can be set in a unit of single bits. Can drive 12mA sync current. Incorporation of the pull-up resistor can be set through the software in a unit of 4 bits. (8 pins)	Serves as key return inputs when operating key scan with fluorescent display panel (FDP) segment signal. (8 pins)	
PD0/A55 to PD7/A48	Output/Output	(Port D) 8-bit output port. (8 pins)	FDP segment signal (anode connection) outputs.	
PE0/INT0/ $\overline{EC0}$	Input/Input/Input	(Port E) 8-bit port. Lower 6 bits are for inputs; upper 2 bits are for outputs. (8 pins)	Inputs for external interruption request. (4 pins)	External event inputs for timer/counter. (2 pins)
PE1/INT1/ $\overline{EC1}$	Input/Input/Input			
PE2/INT2	Input/Input		Non-maskable interruption request input.	
PE3/INT3/ NMI	Input/Input/Input			
PE4/RMC	Input/Input		Remote control reception circuit input.	
PE5	Input			
PE6/ $\overline{PWM}$	Output/Output		14-bit PWM output.	
PE7/TO/ADJ	Output/Output/ Output		Output for the 16-bit timer/counter rectangular waves, and 32kHz oscillation frequency division.	
PF0/A47 to PF7/A40	Output/Output	(Port F) 8-bit output port. (8pins)	FDP segment signal (anode connection) outputs.	

Pin code	I/O	Functions	
PG0/A39 to PG7/A32	Output/Output	(Port G) 8-bit output port. (8 pins)	FDP segment signal (anode connection) outputs. (8 pins)
PH0/A31 to PH7/A24	Output/Output	(Port H) 8-bit output port. (8 pins)	FDP segment signal (anode connection) outputs. (8 pins)
A16 to A23	Output	FDP segment signal (anode connection) outputs. (8 pins)	
G0/A0 to G15/A15	Output/Output	Outputs for FDP timing signals (grid connection)/segment signals (anode connection). (16 pins)	
V <sub>FDP</sub>		FDP voltage supply when incorporated pull-down (PD) resistor is set by mask option.	
EXTAL	Input	Crystal connectors for system clock oscillation. When the clock is supplied externally, input to EXTAL; opposite phase clock should be input to XTAL.	
XTAL	Output		
TEX	Input	Crystal connectors for 32kHz timer/counter clock oscillation. For usage as event input, input to TEX, and open TX.	
TX	Output		
$\overline{\text{RST}}$	Input	Low-level active, system reset	
NC		NC. Under normal operation, connect to V <sub>DD</sub> .	
AV <sub>REF</sub>	Input	Reference voltage input for A/D converter.	
AV <sub>SS</sub>		A/D converter GND.	
V <sub>DD</sub>		V <sub>CC</sub> supply.	
V <sub>SS</sub>		GND.	

# 74VHC574

## OCTAL D-TYPE FLIP FLOP WITH 3 STATE OUTPUTS NON INVERTING

- HIGH SPEED:
- $f_{MAX} = 180 \text{ MHz (TYP.) at } V_{CC} = 5\text{V}$
- LOW POWER DISSIPATION:  
 $I_{CC} = 4 \mu\text{A (MAX.) at } T_A = 25^\circ\text{C}$
- HIGH NOISE IMMUNITY:  
 $V_{NIH} = V_{NIL} = 28\% V_{CC} \text{ (MIN.)}$
- POWER DOWN PROTECTION ON INPUTS
- SYMMETRICAL OUTPUT IMPEDANCE:  
 $|I_{OH}| = I_{OL} = 8 \text{ mA (MIN)}$
- BALANCED PROPAGATION DELAYS:  
 $t_{PLH} \approx t_{PHL}$
- OPERATING VOLTAGE RANGE:  
 $V_{CC}(\text{OPR}) = 2\text{V to } 5.5\text{V}$
- PIN AND FUNCTION COMPATIBLE WITH 74 SERIES 574
- IMPROVED LATCH-UP IMMUNITY
- LOW NOISE:  $V_{OLP} = 0.9\text{V (MAX.)}$

### DESCRIPTION

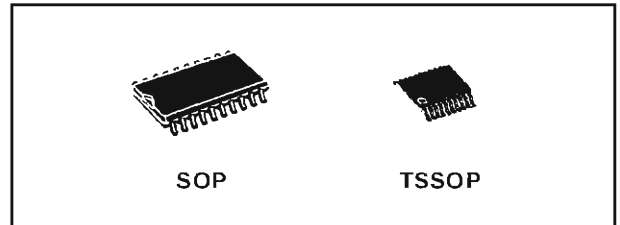
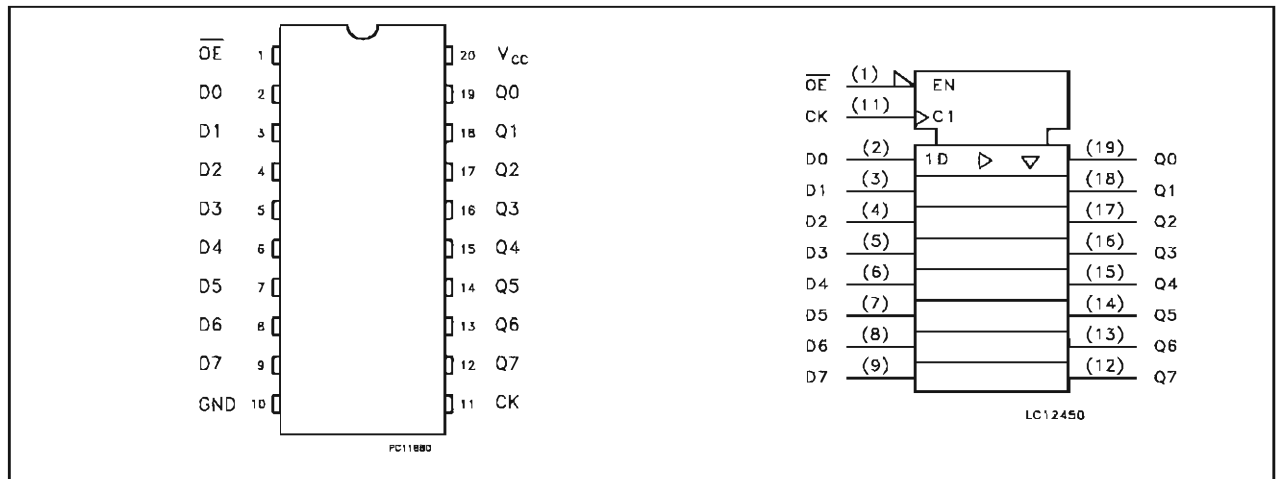
The 74VHC574 is an advanced high-speed CMOS OCTAL D-TYPE FLIP FLOP with 3 STATE OUTPUTS NON INVERTING fabricated with sub-micron silicon gate and double-layer metal wiring C<sup>2</sup>MOS technology.

These 8 bit D-Type flip-flop is controlled by a clock input (CK) and an output enable input ( $\overline{OE}$ ).

On the positive transition of the clock, the Q outputs will be set to the logic states that were setup at the D inputs.

While the ( $\overline{OE}$ ) input is low, the 8 outputs will be in a normal logic state (high or low logic level) and

### PIN CONNECTION AND IEC LOGIC SYMBOLS



### ORDER CODES

PACKAGE	TUBE	T & R
SOP	74VHC574M	74VHC574MTR
TSSOP		74VHC574TTR

while high level the outputs will be in a high impedance state.

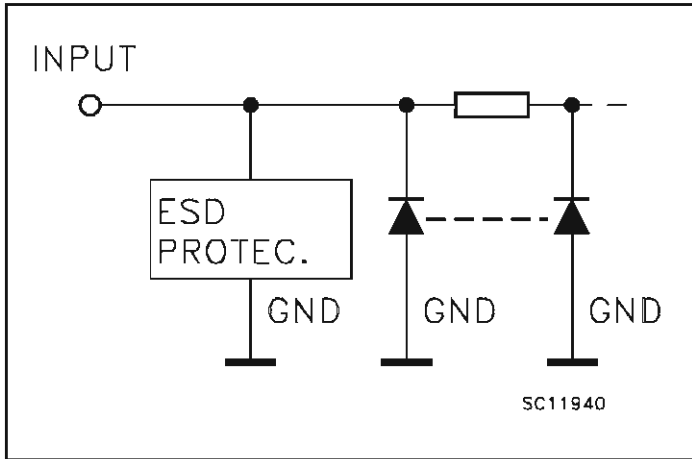
The Output control does not affect the internal operation of flip flop; that is, the old data can be retained or the new data can be entered even while the outputs are off.

Power down protection is provided on all inputs and 0 to 7V can be accepted on inputs with no regard to the supply voltage. This device can be used to interface 5V to 3V.

All inputs and outputs are equipped with protection circuits against static discharge, giving them 2KV ESD immunity and transient excess voltage.

# 74VHC574

## INPUT EQUIVALENT CIRCUIT



## PIN DESCRIPTION

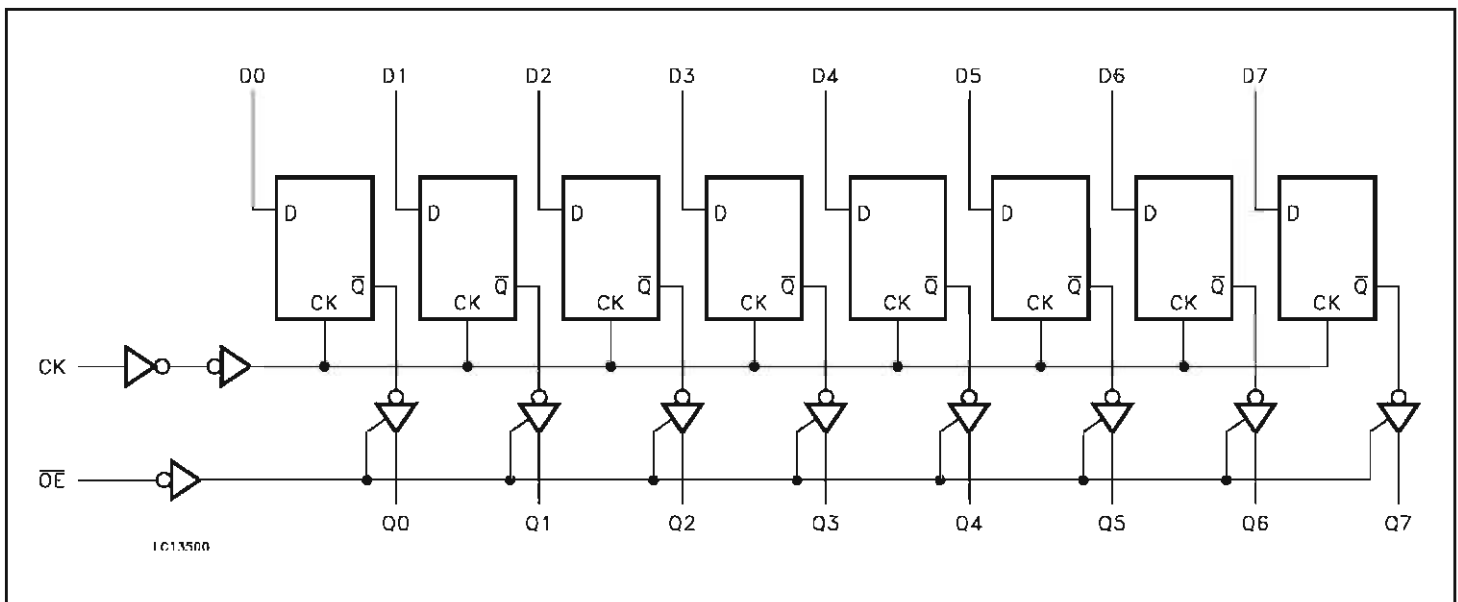
PIN No	SYMBOL	NAME AND FUNCTION
1	$\overline{OE}$	3-State Output Enable Input (Active LOW)
2, 3, 4, 5, 6, 7, 8, 9	D0 to D7	Data Inputs
12, 13, 14, 15, 16, 17, 18, 19	Q0 to Q7	3-State Outputs
11	CK	Clock Input (LOW-to-HIGH Edge Triggered)
10	GND	Ground (0V)
20	V <sub>CC</sub>	Positive Supply Voltage

## TRUTH TABLE

INPUTS			OUTPUT
$\overline{OE}$	CK	D	Q
H	X	X	Z
L		X	NO CHANGE
L		L	L
L		H	H

X : Don't Care  
Z : High Impedance

## LOGIC DIAGRAM



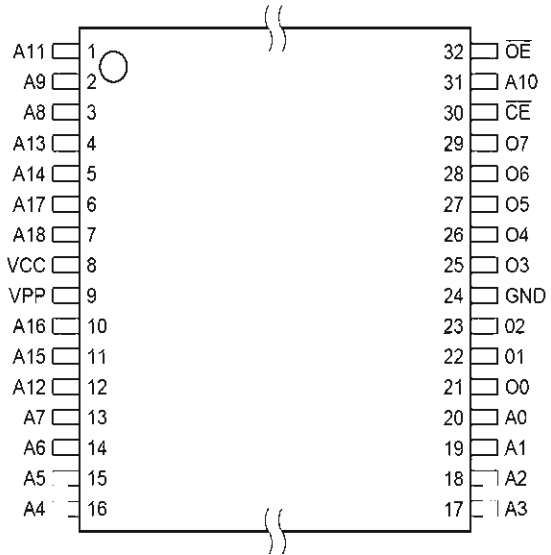
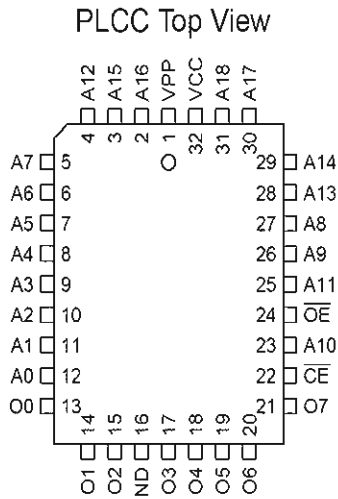
This logic diagram has not be used to estimate propagation delays



# 4Megabit Low Voltage OPT EPROM

# AT27LV040A

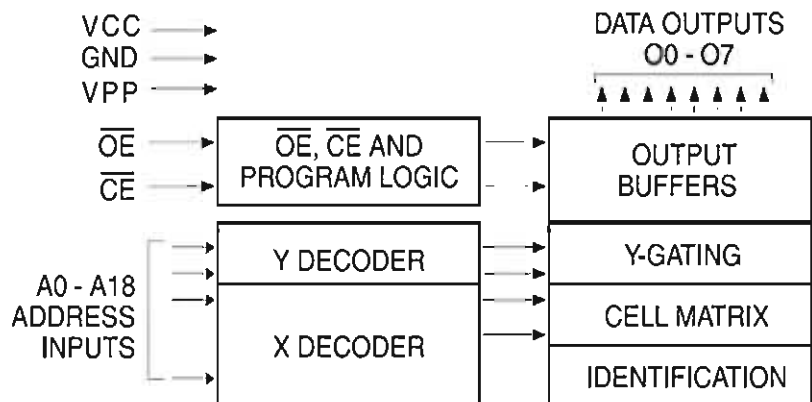
TSOP, VSOP Top View  
Type 1



## Pin Configuration

Pin Name	Function
A0 - A18	Addresses
O0 - O7	Outputs
$\overline{CE}$	Chip Enable
$\overline{OE}$	Output Enable

## Block Diagram



**SANYO**

**Technical Document**  
**Digital Audio Interface Receiver**  
**LC89055W-RA8**

**SANYO Electric Co., Ltd. Semiconductor Company**  
**MOS-LSI Division, ASIC Department**

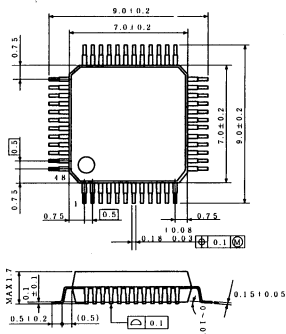
**Ver. 1.00-1999, April**

**This document includes specifications that have not been finalized. Therefore, contents herein are subject to change without notice.**

**In referring to the contents of this document, please be aware that they are still under preparation and have not undergone final checking.**

## LC89055W-RA8

## 3. Package Dimensions



Unit: mm

Figure 3.1. SQFP-48 Package Drawings

## 4. Pin Assignment

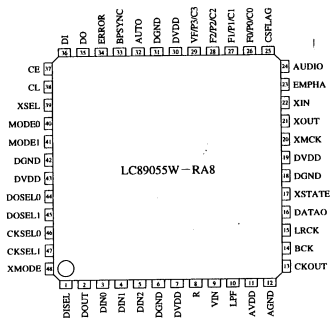


Figure 4.1. LC89055W-RA8 Pin Assignment

## LC89055W-RA8

## 5. Pin Functions

Table 5.1. Pin Functions

No.	Pin name	I/O	Function
1	DISEL	I	Data input pin (DIN0, DIN1) selection input pin
2	DOUT	O	Input bi-phase data through output pin
3	DIN0	I	Digital data input pin (CMOS level, with pull-down resistance when no selected)
4	DIN1	I	Digital data input pin (CMOS level, with pull-down resistance when no selected)
5	DIN2	I	Digital data input pin (TTL level)
6	DGND		Digital GND
7	DVDD		Digital power supply
8	R	I	VCO gain control input pin
9	VIN	I	VCO free-running frequency setting input pin
10	LPF	O	PLL loop filter setting pin
11	AVDD		Analog power supply
12	AGND		Analog GND
13	CKOUT	O	Clock output pin (256 fs, 384 fs, 512 fs, crystal oscillation, VCO free-running oscillation)
14	BCK	O	64 fs clock output pin
15	LRCK	O	fs clock output pin (L = R-ch, H = L-ch, $\bar{S}$ = inverted)
16	DATAO	O	Data output pin
17	XSTATE	O	Source clock switch monitor output pin
18	DGND		Digital GND
19	DVDD		Digital power supply
20	XMCK	O	Crystal oscillation clock output pin (24.576 MHz or 12.288 MHz)
21	XOUT	O	Crystal oscillator connection output pin
22	XIN	I	Crystal oscillator connection input pin, external signal input supported (24.576 MHz or 12.288 MHz)
23	EMPHA	O	Channel status emphasis information output pin
24	AUDIO	O	Channel status bit 1 (non-PCM data detection bit) output pin
25	CSFLAG	O	First 40 channel status bits update flag output pin
26	F0/P0/C0	O	Input fs calculation signal output/Pc data type output/input word length information output pin
27	F1/P1/C1	O	Input fs calculation signal output/Pc data type output/input word length information output pin
28	F2/P2/C2	O	Input fs calculation signal output/Pc data type output/input word length information output pin
29	VF/P3/C3	O	Validity flag output/Pc data type output/input word length information output pin
30	DVDD		Digital GND
31	DGND		Digital power supply
32	AUTO	O	Non-PCM burst data transfer detection signal (Pa, Pb detection) output pin
33	BPSYNC	O	Non-PCM burst preamble Pa, Pb, Pc, Pd sync signal output pin
34	ERROR	O	PLL lock error or data error flag output pin
35	DO	O	Microcontroller I/F/read data output pin
36	DI	I	Microcontroller I/F/write data input pin
37	CE	I	Microcontroller I/F/Chip enable input pin
38	CL	I	Microcontroller I/F/clock input pin
39	XSEL	I	[XIN] crystal oscillation selection input pin (24.576 MHz or 12.288 MHz)
40	MODE0	I	Mode setting input pin
41	MODE1	I	Mode setting input pin
42	DGND		Digital GND
43	DVDD		Digital power supply
44	DOSEL0	I	Output data format selection input pin
45	DOSEL1	I	Output data format selection input pin
46	CKSEL0	I	Output clock selection input pin
47	CKSEL1	I	Output clock selection input pin
48	XMODE	I	System reset input pin

Note: \*Perform digital power supply (DVDD) and analog power supply (AVDD) ON/OFF with the same potential and the same timing as a latch-up countermeasure.

LC89055W-RA8

## 6. Block Diagram

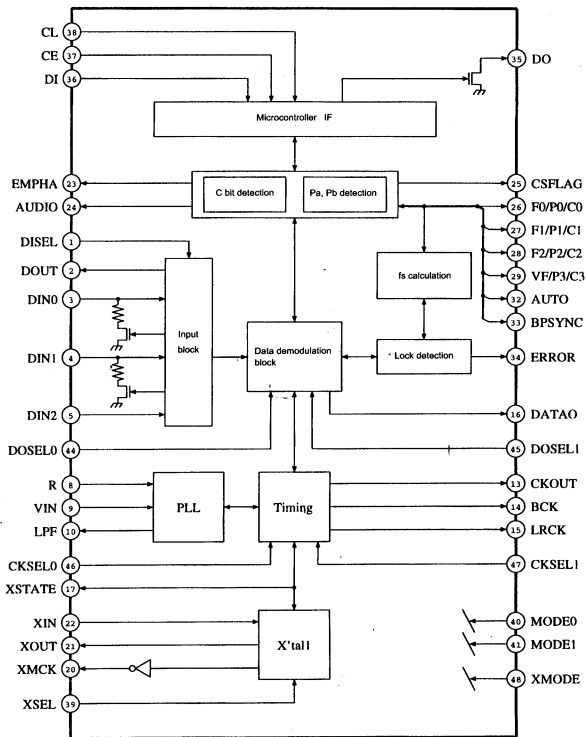
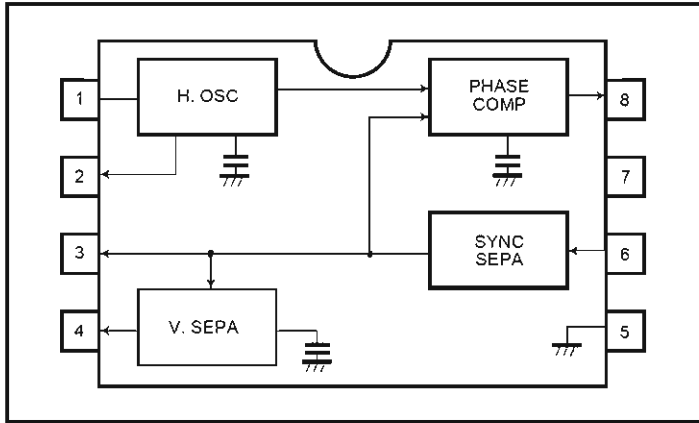


Figure 6.1. LC89055W-RA8 Block Diagram

# BA7046/BA7046F

## SYNC Separator IC with AFC

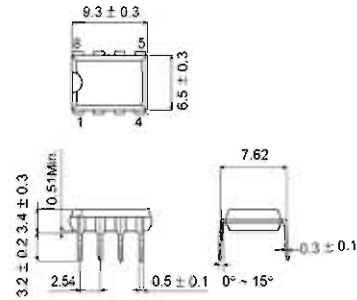
● Block diagrams



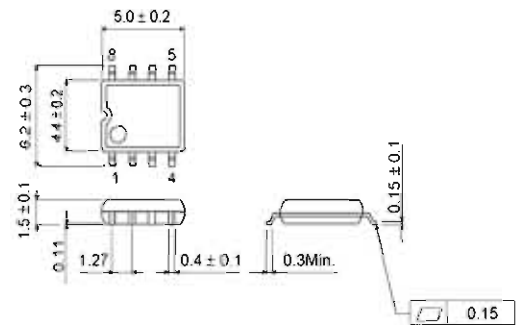
● Pin descriptions

Pin No.	Function
1	Horizontal oscillator resistor
2	H <sub>b</sub> output
3	SYNC output (open collector)
4	V <sub>D</sub> output
5	GND
6	Video input
7	Power supply
8	Phase comparator output

BA7046



BA7046F



● Input / output circuits

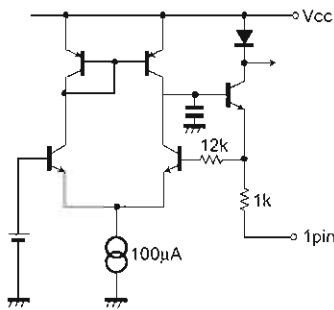


Fig. 1

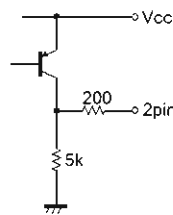


Fig. 2

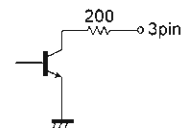


Fig. 3

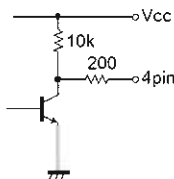


Fig. 4

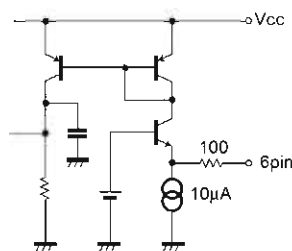


Fig. 5

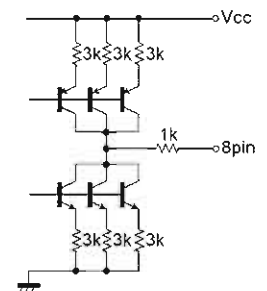


Fig. 6

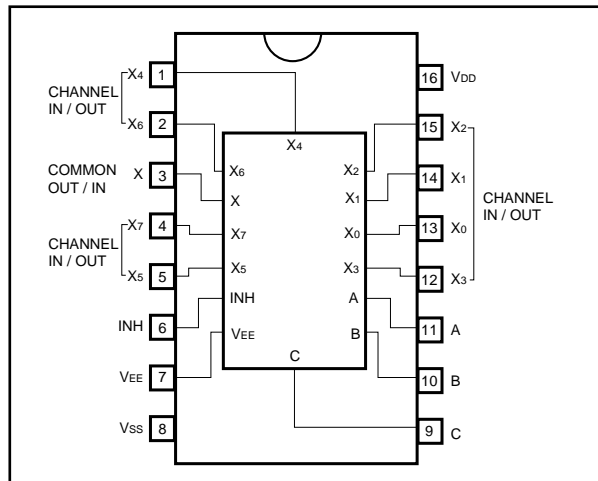
# 8-channel analog multiplexer / demultiplexer

## BU4051BC / BU4051BCF / BU4051BCFV

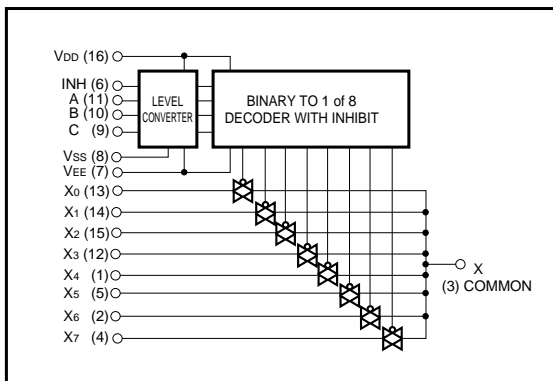
The BU4051BC, BU4051BCF and BU4051BCFV are analog multiplexers / demultiplexers which use three-input digital signals for control via an 8-channel analog switch.

These products feature high on / off output voltage ratio and low crosstalk between analog switches.

### ●Block diagram



### ●Logic circuit diagram



### ●Truth table

INH	A	B	C	ON SWITCH
L	L	L	L	X <sub>0</sub>
L	H	L	L	X <sub>1</sub>
L	L	H	L	X <sub>2</sub>
L	H	H	L	X <sub>3</sub>
L	L	L	H	X <sub>4</sub>
L	H	L	H	X <sub>5</sub>
L	L	H	H	X <sub>6</sub>
L	H	H	H	X <sub>7</sub>
H	X	X	X	NONE

X: Irrelevant

# 8-bit compatible shift / store register BU4094BC / BU4094BCF / BU4094BCFV

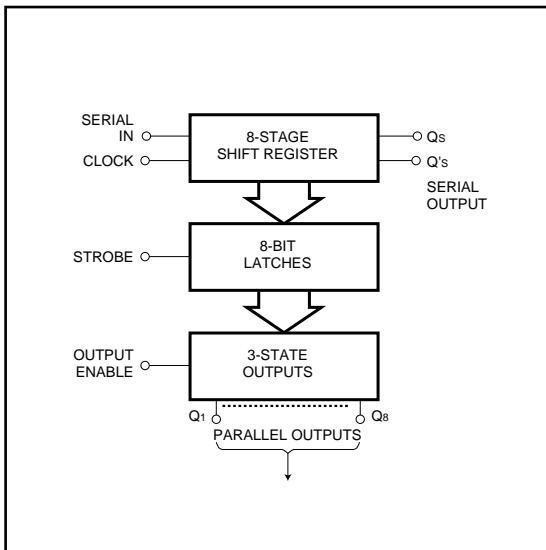
The BU4094BC, BU4094BCF, and BU4094BCFV are shift / store registers, each consisting of an 8-bit register and an 8-bit latch.

As the data in the shift register can be latched by an asynchronous strobe input, it is possible to hold the output in the data transfer mode.

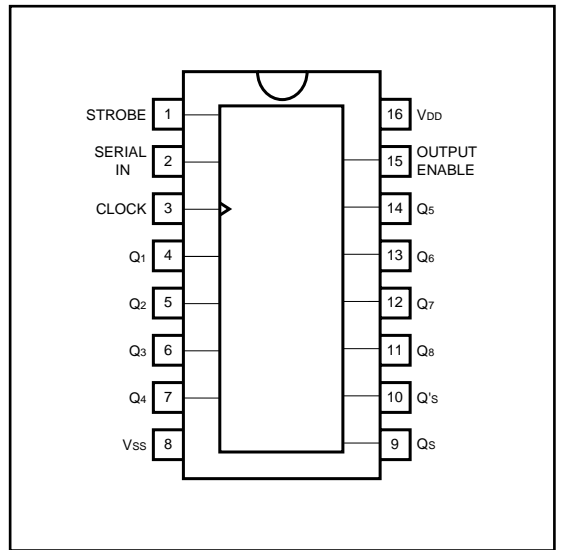
The tri-state parallel output can be connected directly with an 8-bit bus line.

These registers are suitable for in-line / parallel data conversion, data receivers and other similar applications.

●Logic circuit diagram



●Block diagram



●Truth table

CLOCK	OUTPUT ENABLE	STROBE	SERIAL IN	Parallel output		Serial output	
				Q <sub>1</sub>	Q <sub>n</sub>	Q <sub>s</sub>	Q' <sub>s</sub>
$\downarrow$	H	H	L	L	Q <sub>n-1</sub>	Q <sub>7</sub>	NC
$\downarrow$	H	H	H	H	Q <sub>n-1</sub>	Q <sub>7</sub>	NC
$\downarrow$	H	L	X	NC	NC	Q <sub>7</sub>	NC
$\downarrow$	L	X	X	Z	Z	Q <sub>7</sub>	NC
$\uparrow$	H	X	X	NC	NC	NC	Q <sub>s</sub>
$\uparrow$	L	X	X	Z	Z	NC	Q <sub>s</sub>

NC: No Change Z: High Impedance X: Irrelevant





# NJM2395/2396

## LOW DROPOUT VOLTAGE REGULATOR WITH ON/OFF CONTROL

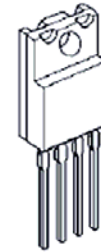
### ■ GENERAL DESCRIPTION

The NJM2396 is low dropout voltage regulator with ON/OFF control.

The output current is up to 1.5A and dropout voltage is 0.2V/typ. at  $I_o=0.5A$ .

The NJM2396 is suitable for power module, TV, Display, car stereo and low power applications.

### ■ PACKAGE OUTLINE

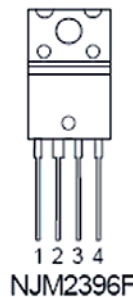


NJM2396F

### ■ FEATURE

- Low Dropout Voltage  $\Delta V_{I-O}=0.2V$  typ. at  $I_o=0.5A$
- Output Current  $I_o(\text{max.})=1.5A$
- ON/OFF Control
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-220F-4

### ■ PIN CONFIGURATION



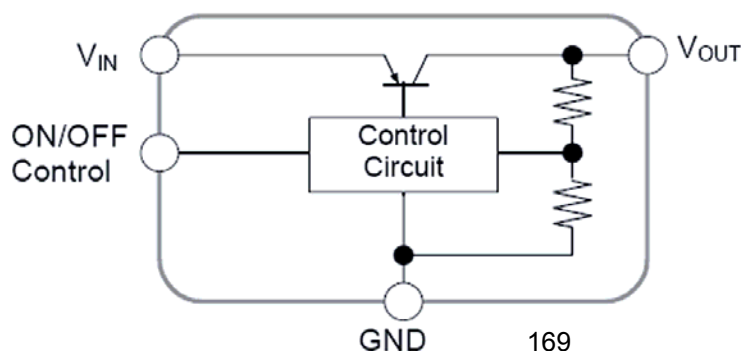
#### PIN FUNCTION

1.  $V_{IN}$
2.  $V_{OUT}$
3. GND
4. ON/OFF CONTROL

### ■ OUTPUT VOLTAGE RANK LIST

Device Name	$V_{OUT}$
NJM2396F33	3.3V
NJM2396F05	5.0V
NJM2396F63	6.3V
NJM2396F08	8.0V
NJM2396F83	8.3V
NJM2396F09	9.0V
NJM2396F12	12.0V

### ■ EQUIVALENT CIRCUIT



# MITSUBISHI MICROCOMPUTERS M35012-XXXSP, M35013-XXXSP

## SCREEN CHARACTER and PATTERN DISPLAY CONTROLLERS

### DESCRIPTION

The M35012-XXXSP and M35013-XXXSP are TV screen display control IC which can be used to display information such as program schedules, the date and messages on the TV screen.

The differences among M35012-XXXSP and M35013-XXXSP are noted below.

The descriptions that follow describe the M35013-XXXSP unless otherwise noted.

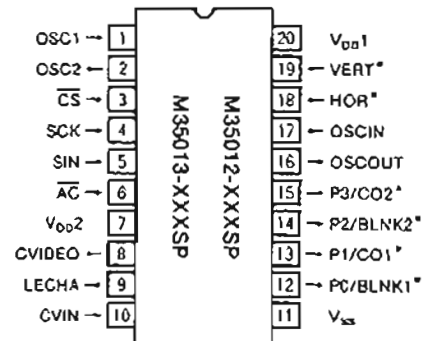
Type name	M35012-XXXSP	M35013-XXXSP
Characters available	256	128
Data input	16 bits serial input	8 bits serial input
Exclusion function	Exclusion 1 and 2 function	Exclusion 1 function
CONT7F function	Normal/7F <sub>16</sub> writing mode	Normal/7F <sub>16</sub> writing mode

For M35013-001SP and M35012-001SP that are standard ROM version of M35013-XXXSP and M35012-XXXSP respectively, the I/O polarity of pin and the character pattern are also mentioned.

### FEATURES

- Screen composition..... 24 columns X 10 lines
- Number of characters displayed..... 240 (Max.)
- Character composition ..... 12 X 18 dot matrix
- Characters available
  - M35013-XXXSP..... 128 characters
  - M35012-XXXSP..... 256 characters
- Character sizes available ... 4 (horizontal) X 4 (vertical)
- Display locations available
  - Horizontal direction ..... 62 locations
  - Vertical direction..... 64 locations
- Blinking ..... Character units
  - Cycle : approximately 1 second, or approximately 0.5 seconds
  - Duty : 25%, 50%, or 75%
- Data Input
  - M35013-XXXSP..... By the 8-bit serial input function
  - M35012-XXXSP..... By the 16-bit serial input function
- Coloring
  - Background coloring (composite video signal)
- Blanking
  - Total blanking (14 X 18 dots)
  - Border size blanking
  - Character size blanking
- Synchronization signal
  - Composite synchronization signal generation (PAL, NTSC, M-PAL)
- Synchronized separation circuit..... Built-in
- 4 output ports (2 digital lines)
- Oscillation stop function
  - Be possible to stop the oscillation for display and for synchronized signal generation

### PIN CONFIGURATION (TOP VIEW)



Outline 20P4B

Note : The pins remarked "\*" are selectable the input or output polarity when the character ROM masked.

- Exclusion function
  - M35013-XXXSP..... 1
  - M35012-XXXSP..... 2
- Reversed character display function

### APPLICATION

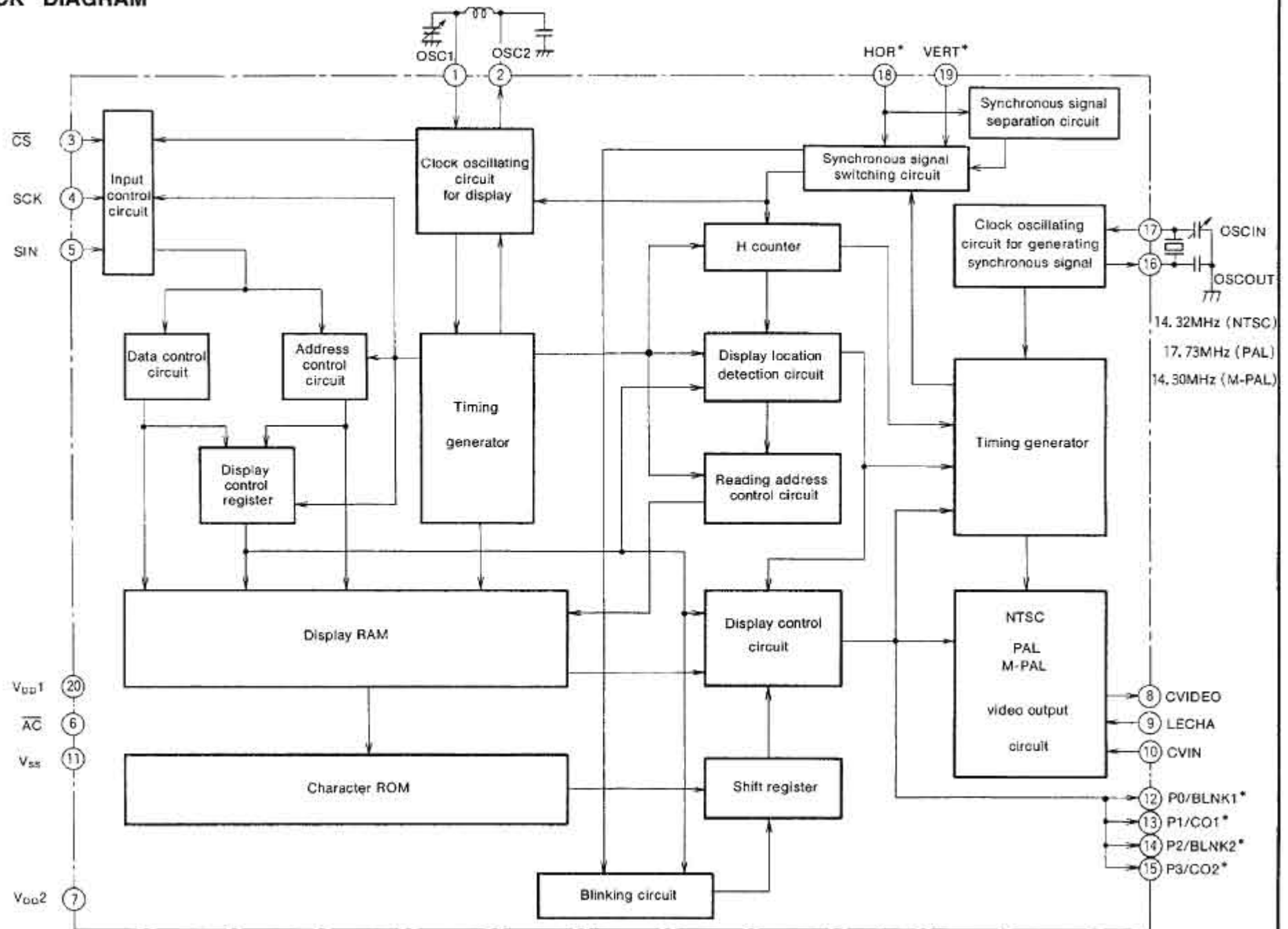
TV, VCR, Camcorder

MITSUBISHI MICROCOMPUTERS

M35012-XXXSP, M35013-XXXSP

SCREEN CHARACTER and PATTERN DISPLAY CONTROLLERS

BLOCK DIAGRAM



Note: The pins remarked "\*" are selectable the input or output polarity when the character ROM masked.

## MITSUBISHI MICROCOMPUTERS M35012-XXXSP, M35013-XXXSP

### SCREEN CHARACTER and PATTERN DISPLAY CONTROLLERS

#### PIN DESCRIPTION

Pin Number	Symbol	Pin name	Input /Output	Function
1	OSC1	Pins for attachment of external oscillator circuit	Input	There are the pins for attaching an external display oscillator circuit. The standard oscillation frequency is approximately 7MHz. This oscillation frequency determines the horizontal position of the display on the TV screen and the width of the characters.
2	OSC2		Output	
3	$\overline{CS}$	Chip select input	Input	This is the chip select pin, and when serial data transmission is being carried out, it goes to "L". Hysteresis input. Includes built-in pull-up resistor.
4	SCK	Serial clock input	Input	When $\overline{CS}$ pin is "L", SIN serial data is taken in when SCK rises. Hysteresis input. Built-in pull-up resistor is included.
5	SIN	Serial data input	Input	This is the pin for serial input of data and addresses for the display control register and the display data memory. Hysteresis input. Includes built-in pull-up resistor.
6	$\overline{AC}$	Auto-clear input	Input	When "L", this pin resets the internal IC circuit. Hysteresis input. Includes built-in pull-up resistor.
7	V <sub>DD2</sub>	Power pin	—	Please connect to +5V with the analog circuit power pin.
8	CVIDEO	Composite video signal output	Output	This is the output pin for composite video signals. It outputs 2V <sub>pp</sub> composite video signals. In superimpose mode, character output etc. is superimposed on the external composite video signals from CVIN.
9	LECHA	Character level input	Input	This is the input pin which determines the "white" character color level in the composite video signal.
10	CVIN	Composite video signal input	Input	This is the input pin for external composite video signals. In superimpose mode, character output etc. is superimposed on these external composite video signals.
11	V <sub>SS</sub>	Earthing pin	—	Please connect to GND using circuit earthing pin.
12	P0	Port P0 output	Output	This pin can be toggled between port pin output and BLNK1* (character background) signal output. Polarity can be selected when the character ROM is masked.
13	P1	Port P1 output	Output	This pin can be toggled between port pin output and CO1* (character) signal output. Polarity can be selected when the character ROM is masked.
14	P2	Port P2 output	Output	This pin can be toggled between port pin output and BLNK2* (character background) signal output. Polarity can be selected when the character ROM is masked.
15	P3	Port P3 output	Output	This pin can be toggled between port pin output and CO2* (character) signal output. Polarity can be selected when the character ROM is masked.
16	OSCOU	Pins for attachment of external oscillator circuit for synchronization signal generation	Output	These are the pins for attaching an external oscillator circuit for generating the synchronization signal. An oscillation of 14.32MHz is needed for NTSC, 17.73MHz is needed for PAL and 14.30MHz is needed for M-PAL.
17	OSCIN		Input	
18	HOR*	Horizontal synchronization signal input	Input	This pin inputs the horizontal synchronization signal. Hysteresis input. Polarity can be selected when the character ROM is masked.
19	VERT*	Vertical synchronization signal input	Input	This pin inputs the vertical synchronization signal. Hysteresis input. Polarity can be selected when the character ROM is masked.
20	V <sub>DD1</sub>	Power pin	—	Please connect to +5V with the digital circuit power pin.

Note : The pins remarked "\*" are selectable the input or output polarity when the character ROM masked.

# NJM2068

## LOW-NOISE DUAL OPERATIONAL AMPLIFIER

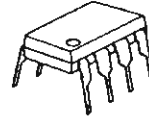
### ■ GENERAL DESCRIPTION

The NJM2068 is a high performance, low noise dual operational amplifier. This amplifier features popular pin-out, superior noise performance, and superior total harmonic distortion. This amplifier also features guaranteed noise performance with substantially higher gain-bandwidth product and slew rate, which far exceeds that of the 4558 type amplifier. The specially designed low noise input transistors allow the NJM2068 to be used in very low noise signal processing applications such as audio preamplifiers and servo error amplifier.

### ■ FEATURES

- Operating Voltage (  $\pm 4V \sim \pm 18V$  )
- Low Total Harmonic Distortion ( 0.001% typ. )
- Low Noise Voltage ( FLAT+JISA,  $0.56\mu V$  typ. )
- High Slew Rate (  $6V/\mu s$  typ. )
- Unity Gain Bandwidth ( 27MHz @  $f=10kHz$  )
- Package Outline DIP8, DMP8, SIP8, SSOP8
- Bipolar Technology

### ■ PACKAGE OUTLINE



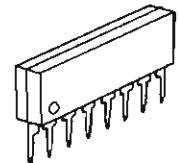
NJM2068D



NJM2068M

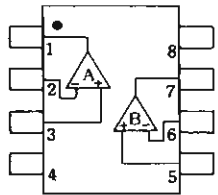


NJM2068V

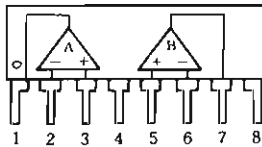


NJM2068L

### ■ PIN CONFIGURATION



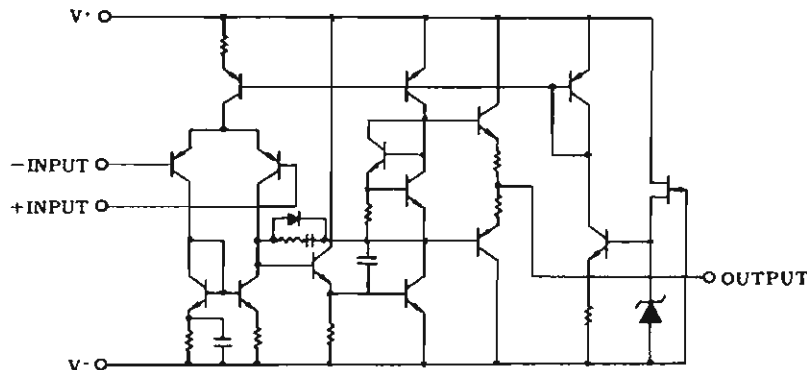
NJM2068D  
NJM2068M  
NJM2068V



NJM2068L

- PIN FUNCTION**
- 1.A OUTPUT
  - 2.A -INPUT
  - 3.A +INPUT
  - 4.V<sup>-</sup>
  - 5.B +INPUT
  - 6.B -INPUT
  - 7.B OUTPUT
  - 8.V<sup>+</sup>

### ■ EQUIVALENT CIRCUIT ( 1/2 Shown )





# Dual Bipolar/JFET, Audio Operational Amplifier

## OP275\*

### FEATURES

Excellent Sonic Characteristics

Low Noise:  $6 \text{ nV}/\sqrt{\text{Hz}}$

Low Distortion: 0.0006%

High Slew Rate:  $22 \text{ V}/\mu\text{s}$

Wide Bandwidth: 9 MHz

Low Supply Current: 5 mA

Low Offset Voltage: 1 mV

Low Offset Current: 2 nA

Unity Gain Stable

SOIC-8 Package

### APPLICATIONS

High Performance Audio

Active Filters

Fast Amplifiers

Integrators

### GENERAL DESCRIPTION

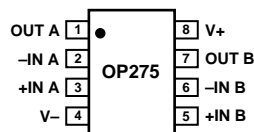
The OP275 is the first amplifier to feature the Butler Amplifier front-end. This new front-end design combines both bipolar and JFET transistors to attain amplifiers with the accuracy and low noise performance of bipolar transistors, and the speed and sound quality of JFETs. Total Harmonic Distortion plus Noise equals that of previous audio amplifiers, but at much lower supply currents.

A very low  $1/f$  corner of below 6 Hz maintains a flat noise density response. Whether noise is measured at either 30 Hz or 1 kHz, it is only  $6 \text{ nV}/\sqrt{\text{Hz}}$ . The JFET portion of the input stage gives the OP275 its high slew rates to keep distortion low, even when large output swings are required, and the  $22 \text{ V}/\mu\text{s}$  slew rate of the OP275 is the fastest of any standard audio amplifier. Best of all, this low noise and high speed are accomplished using less than 5 mA of supply current, lower than any standard audio amplifier.

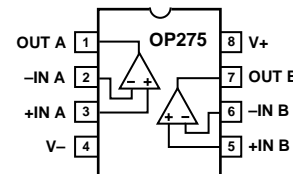
\*Protected by U.S. Patent No. 5,101,126.

### PIN CONNECTIONS

8-Lead Narrow-Body SO  
(S Suffix)



8-Lead Epoxy DIP  
(P Suffix)



Improved dc performance is also provided with bias and offset currents greatly reduced over purely bipolar designs. Input offset voltage is guaranteed at 1 mV and is typically less than  $200 \mu\text{V}$ . This allows the OP275 to be used in many dc coupled or summing applications without the need for special selections or the added noise of additional offset adjustment circuitry.

The output is capable of driving  $600 \Omega$  loads to 10 V rms while maintaining low distortion. THD + Noise at 3 V rms is a low 0.0006%.

The OP275 is specified over the extended industrial ( $-40^\circ\text{C}$  to  $+85^\circ\text{C}$ ) temperature range. OP275s are available in both plastic DIP and SOIC-8 packages. SOIC-8 packages are available in 2500 piece reels. Many audio amplifiers are not offered in SOIC-8 surface mount packages for a variety of reasons; however, the OP275 was designed so that it would offer full performance in surface mount packaging.

### REV. A

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Tel: 617/329-4700 Fax: 617/326-8703



# NJM5532

## LOW-NOISE DUAL OPERATIONAL AMPLIFIER

### ■ GENERAL DESCRIPTION

The NJM5532 is a high performance dual low noise operational amplifier. Compared to the standard dual operational amplifiers, such as the NJM1458, it shows better noise performance, improved output drive capability, and considerably higher small-signal and power bandwidths.

This makes the device especially suitable for application in high quality and professional audio equipment, instrumentation, control circuits, and telephone channel amplifiers. The op amp is internally compensated for gains equal to one if very low noise is of prime importance, version be used which has guaranteed NJM5532DD it is recommended that the noise specifications.

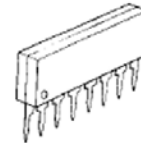
### ■ PACKAGE OUTLINE



NJM5532D



NJM5532M

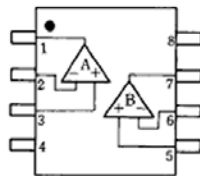


NJM5532L

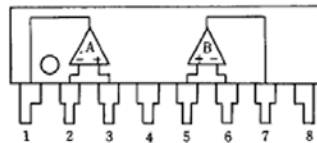
### ■ FEATURES

- Operating Voltage (  $\pm 3V \sim \pm 20V$  )
- Small Signal Bandwidth ( 10MHz typ. )
- Output Drive Capability (  $600\Omega, 10V_{rms}$  typ. )
- Input Noise Voltage (  $5nV/\sqrt{Hz}$  typ. )
- Power Bandwidth ( 140kHz typ. )
- Slew Rate (  $8V/\mu s$  typ. )
- Package Outline DIP8, DMP8, SIP8
- Bipolar Technology

### ■ PIN CONFIGURATION



NJM5532D  
NJM5532M



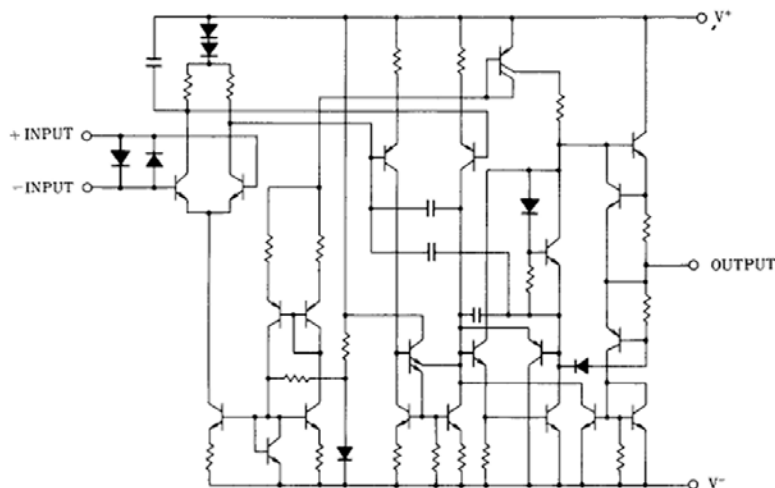
NJM5532L

#### PIN FUNCTION

- 1.A OUTPUT
- 2.A -INPUT
- 3.A +INPUT
- 4.V<sup>-</sup>
- 5.B +INPUT
- 6.B -INPUT
- 7.B OUTPUT
- 8.V<sup>+</sup>

### ■ EQUIVALENT CIRCUIT

( 1/2 Shown )

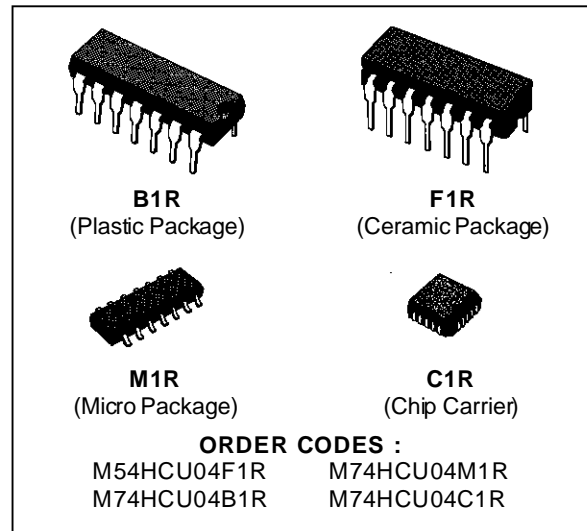




**M54HCU04**  
**M74HCU04**

**HEX INVERTER (SINGLE STAGE)**

- HIGH SPEED  
 $t_{PD} = 5 \text{ ns (TYP.) AT } V_{CC} = 5 \text{ V}$
- LOW POWER DISSIPATION  
 $I_{CC} = 1 \mu\text{A (MAX.) AT } T_A = 25 \text{ }^\circ\text{C}$
- HIGH NOISE IMMUNITY  
 $V_{NIH} = V_{NIL} = 10 \% V_{CC} \text{ (MIN.)}$
- OUTPUT DRIVE CAPABILITY  
 10 LSTTL LOADS
- SYMMETRICAL OUTPUT IMPEDANCE  
 $|I_{OH}| = I_{OL} = 4 \text{ mA (MIN.)}$
- BALANCED PROPAGATION DELAYS  
 $t_{PLH} = t_{PHL}$
- WIDE OPERATING VOLTAGE RANGE  
 $V_{CC} \text{ (OPR)} = 2 \text{ V TO } 6 \text{ V}$
- PIN AND FUNCTION COMPATIBLE WITH  
 54/74LS04



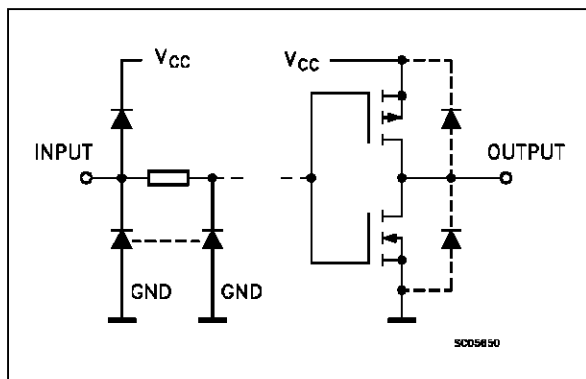
**DESCRIPTION**

The M54/74HCU04 is a high speed CMOS HEX INVERTER (SINGLE STAGE) fabricated in silicon gate C<sup>2</sup>MOS technology. It has the same high speed performance of LSTTL combined with true CMOS low power consumption.

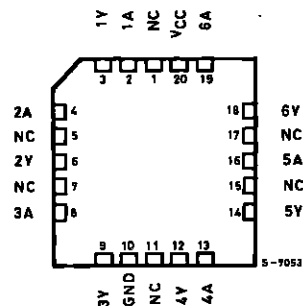
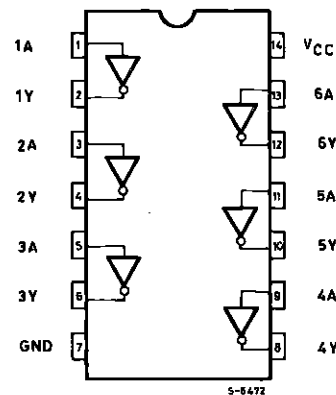
As the intrnal circuit is composed of a single stage inverter, it can be used in crystal oscillator.

All inputs are equipped with circuits against static discharge and transient excess voltage.

**INPUT AND OUTPUT EQUIVALENT CIRCUIT**



**PIN CONNECTIONS (top view)**



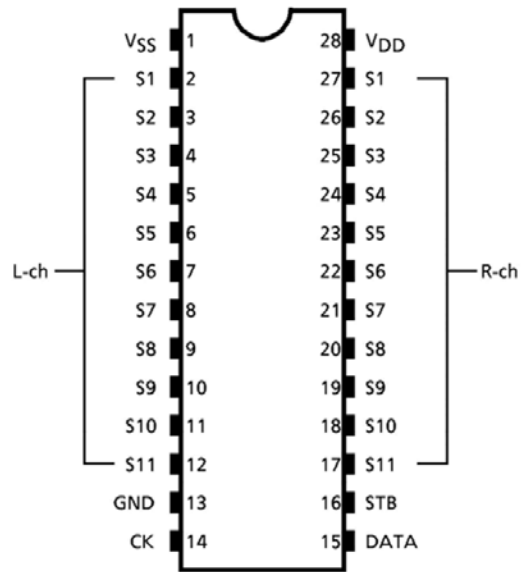
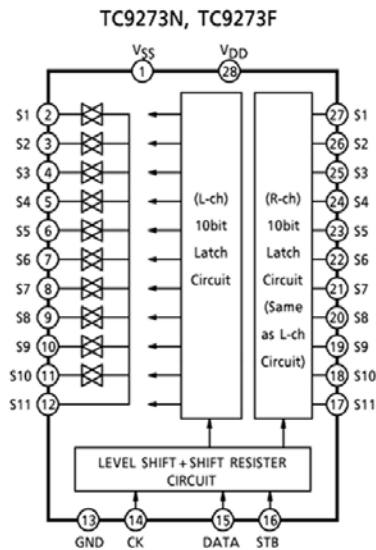
NC =  
No Internal  
Connection



# TC9273N

## CMOS Digital IC

### BLOCK DIAGRAM



### PIN FUNCTION (Left channel / right channel)

PIN No.			SYMBOL	PIN NAME	FUNCTION AND OPERATION	NOTE
TC9273N / F	TC9274N	TC9274F				
1	1	40	V <sub>SS</sub>	Negative power supply pin	Dual power supply $V_{DD} = 8.0 \sim 17V$ $GND = 0V$ $V_{SS} = -8.0 \sim -17V$	—
13	20	16	GND	Digital ground pin		
28	42	38	V <sub>DD</sub>	Positive power supply pin		
2 / 27	2 / 41	41 / 37	S1	Input / output pins	Analog switch input pins.  × : Aluminum mask switch. ● : Open or closed can be specified. Connection for right and left channels can be different.	—
3 / 26	3 / 40	42 / 36	S2			
4 / 25	4 / 39	43 / 35	S3			
5 / 24	5 / 38	44 / 34	S4			
6 / 23	6 / 37	1 / 33	S5			
7 / 22	7 / 36	2 / 32	S6			
8 / 21	8 / 35	3 / 31	S7			
9 / 20	9 / 34	4 / 30	S8			
10 / 19	10 / 33	5 / 29	S9			
11 / 18	11 / 32	6 / 28	S10			
—	13 / 30	8 / 26	S12			
—	14 / 29	9 / 25	S13			
—	15 / 28	10 / 24	S14			
—	16 / 27	11 / 23	S15			
—	17 / 26	12 / 22	S16			
—	18 / 25	13 / 21	S17			
—	19 / 24	14 / 20	S18			
—	—	17 / 39	NC			
14	21	16	CK	Clock input pin	Clock input for data transfer	Low threshold value input pins
15	22	18	DATA	Data input pin	Serial data input for setting switches	
16	23	19	STB	Strobe input pin	Strobe input for data writing	

**TOSHIBA****TC9459N/F**

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

# TC9459N, TC9459F

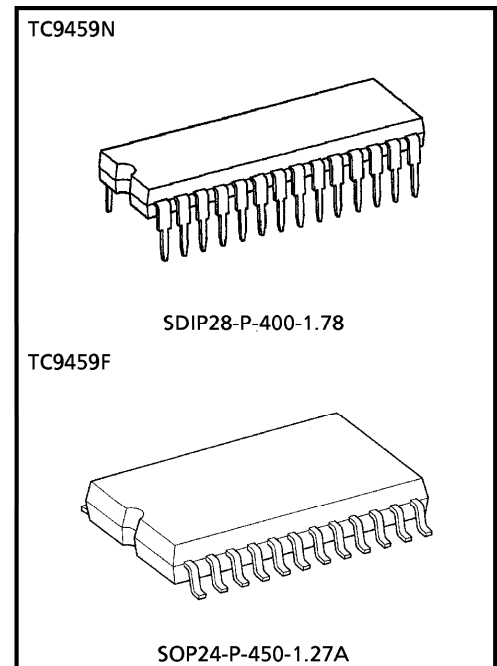
## ELECTRONIC VOLUME CONTROL

The TC9459N, TC9459F are electronic volume control ICs developed for use in home stereos and other audio equipment.

Using serial data input from external sources, it controls the sound volume, balance and loudness circuits.

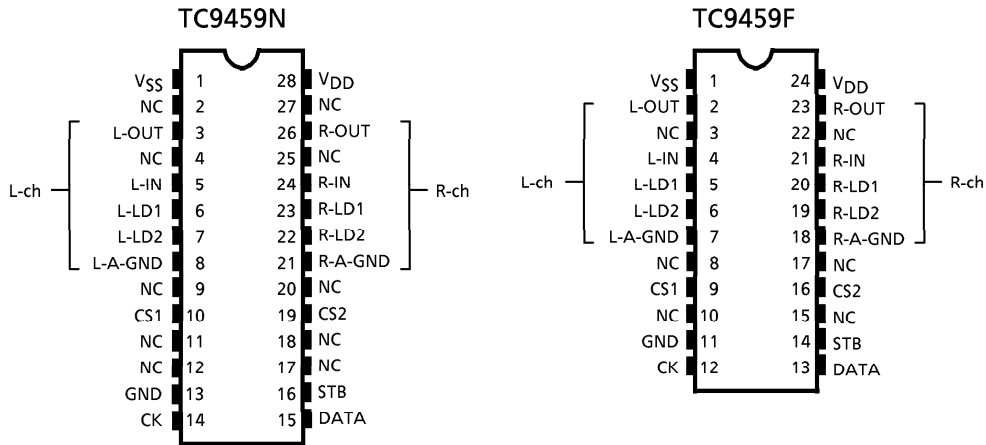
### FEATURES

- Sound volume can be controlled in 91 steps from 0 to -89dB or up to an infinite level in 1dB increments.
- Incorporating two channels of volume control circuits, the device allows independent volume control : therefore, it also provides the balancing function.
- A loudness circuit (20dB tap) is built in.
- Can operate with a single or dual power supplies.
- Can control up to 4 chips on the same bus by using chip select input.
- Thanks to its polysilicon resistor, the device allows you to configure a low-distortion, high-performance volume control system.

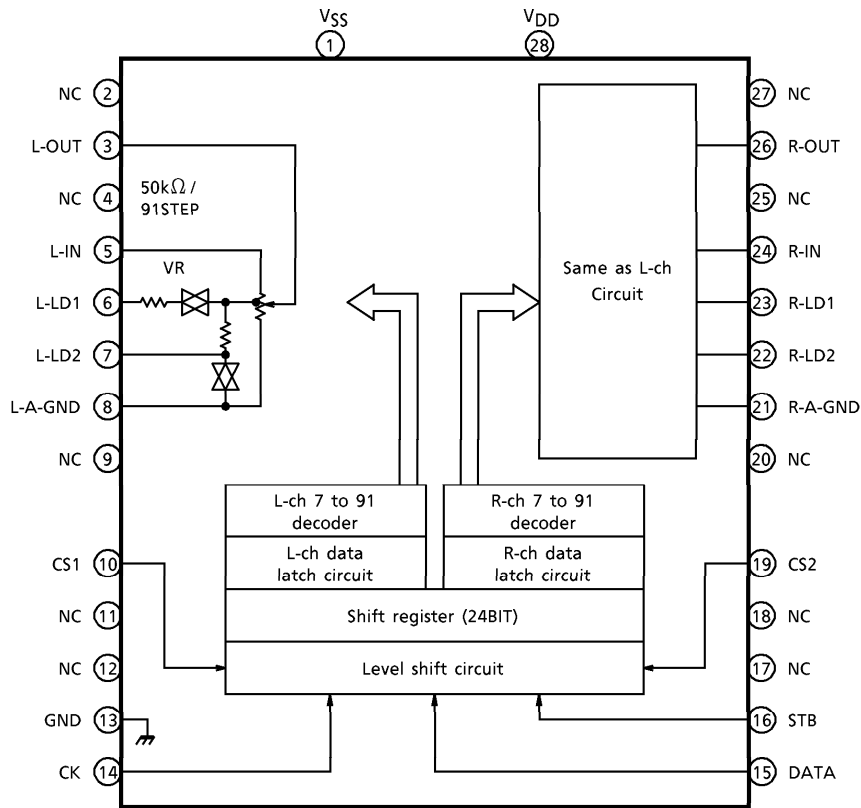


Weight  
 SDIP28-P-400-1.78 : 2.2g (Typ.)  
 SOP24-P-450-1.27A : 0.44g (Typ.)

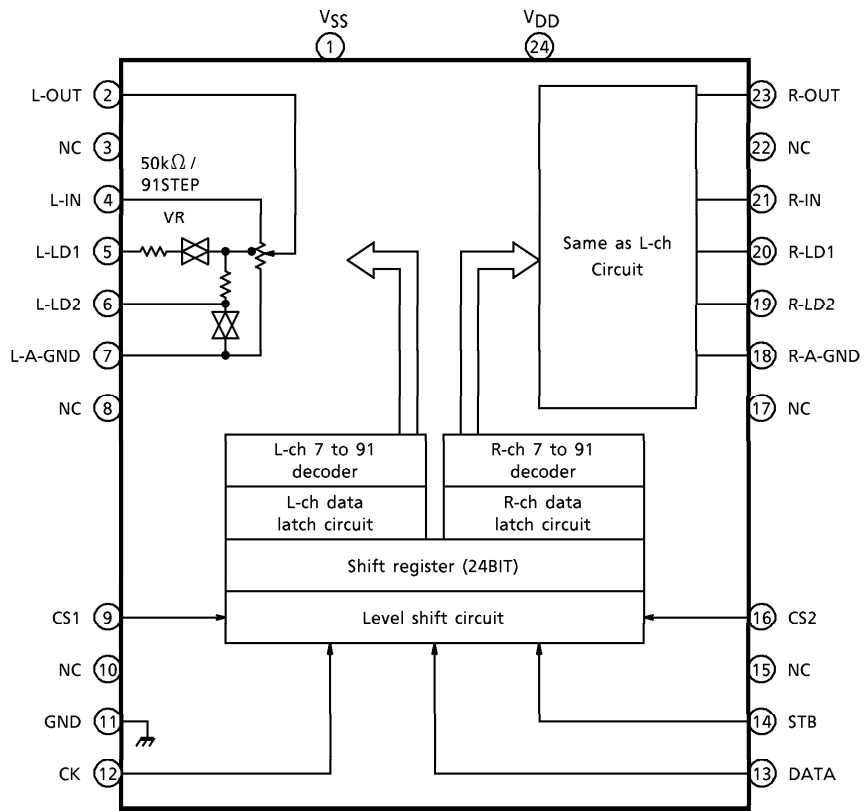
**PIN CONNECTIONS**



**BLOCK DIAGRAM (TC9459N)**



**BLOCK DIAGRAM (TC9459F)**



**PIN DESCRIPTION**

Numeral in ( ) means the pin No. of TC9459F.

PIN No.	SYMBOL	PIN NAME	FUNCTION	REMARK										
1 (1)	V <sub>SS</sub>	Negative power supply pin	When using dual power supplies $V_{DD} = 6.0 \sim 17V$ $GND = 0V$ $V_{SS} = -6.0 \sim -17V$ When using a single power supply $V_{DD} = 6.0 \sim 18V$ $GND = V_{SS} = 0V$	—										
28 (24)	V <sub>DD</sub>	Positive power supply pin												
13 (11)	GND	Digital GND pin												
3 (2)	L-OUT	Volume output pin	• Volume circuit 	—										
26 (23)	R-OUT													
5 (4)	L-IN	Volume input pin												
24 (21)	R-IN													
6 (5)	L-LD1	Loudness tap output pin			<table border="1"> <tr> <td></td> <td>LA1</td> <td>LA2</td> </tr> <tr> <td>LOUDNESS "ON"</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>LOUDNESS "OFF"</td> <td>OFF</td> <td>ON</td> </tr> </table>		LA1	LA2	LOUDNESS "ON"	ON	OFF	LOUDNESS "OFF"	OFF	ON
	LA1					LA2								
LOUDNESS "ON"	ON					OFF								
LOUDNESS "OFF"	OFF					ON								
23 (20)	R-LD1													
7 (6)	L-LD2													
22 (19)	R-LD2													
8 (7)	L-A-GND	Analog GND pin												
21 (18)	R-A-GND													
10 (9)	CS1	Chip select input pin	Up to 4 chips on the same bus can be used by switching over chip select code.	—										
19 (16)	CS2													
14 (12)	CK	Clock input pin	Data transfer clock input	Low threshold value input pin										
15 (13)	DATA	Data input pin	Volume setup serial data input											
16 (14)	STB	Strobe input pin	Data write strobe input											
2 (3)	NC	No connection	—	—										
27 (22)														
4														
25														
9 (8)														
20 (17)														
11														
18														
12 (10)														
17 (15)														

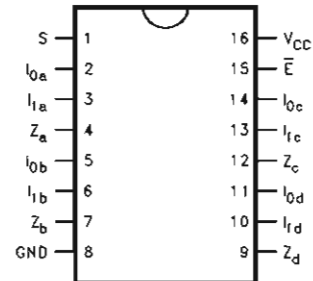
# 74VHC157MX

## Quad 2-Input Multiplexer

### Pin Configuration

Pin Names	Description
$I_{0a}$ – $I_{0d}$	Source 0 Data Inputs
$I_{1a}$ – $I_{1d}$	Source 1 Data Inputs
$\bar{E}$	Enable Input
S	Select Input
$Z_a$ – $Z_d$	Outputs

### Connection Diagram



### Truth Table

Inputs				Outputs
$\bar{E}$	S	$I_0$	$I_1$	Z
H	X	X	X	L
L	H	X	L	L
L	H	X	H	H
L	L	L	X	L
L	L	H	X	H

H = HIGH Voltage Level  
L = LOW Voltage Level  
X = Immaterial

### Functional Description

The VHC157 is a quad 2-input multiplexer. It selects four bits of data from two sources under the control of a common Select input (S). The Enable input ( $\bar{E}$ ) is active-LOW. When  $\bar{E}$  is HIGH, all of the outputs (Z) are forced LOW regardless of all other inputs. The VHC157 is the logic implementation of a 4-pole, 2-position switch where the position of the switch is determined by the logic levels supplied to the Select input. The logic equations for the outputs are shown below:

$$Z_a = \bar{E} \cdot (I_{1a} \cdot S + I_{0a} \cdot \bar{S})$$

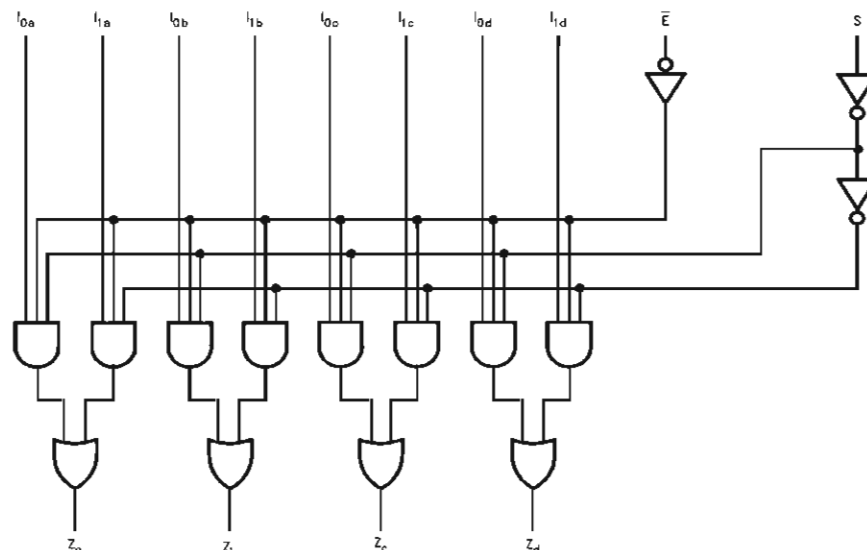
$$Z_b = \bar{E} \cdot (I_{1b} \cdot S + I_{0b} \cdot \bar{S})$$

$$Z_c = \bar{E} \cdot (I_{1c} \cdot S + I_{0c} \cdot \bar{S})$$

$$Z_d = \bar{E} \cdot (I_{1d} \cdot S + I_{0d} \cdot \bar{S})$$

A common use of the VHC157 is the moving of data from two groups of registers to four common output busses. The particular register from which the data comes is determined by the state of the Select input. A less obvious use is as a function generator. The VHC157 can generate any four of the sixteen different functions of two variables with one variable common. This is useful for implementing gating functions.

### Logic Diagram



Please note that this diagram is provided only for the understanding of logic operations and should not be used to estimate propagation delays.

**TOSHIBA****TC9162~64AN/AF**

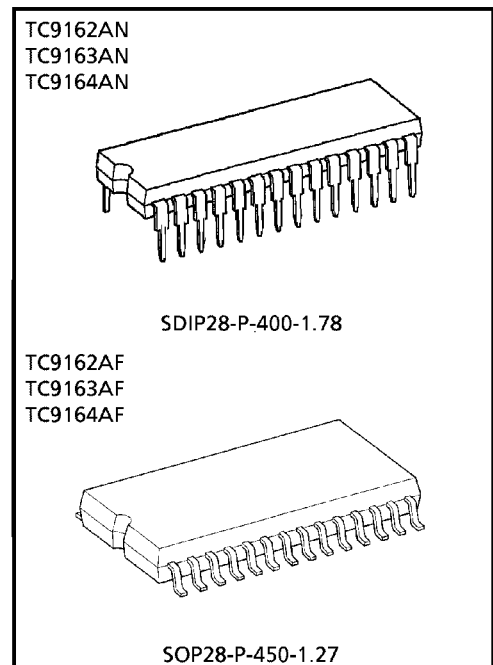
TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

**TC9162AN, TC9163AN, TC9164AN**  
**TC9162AF, TC9163AF, TC9164AF****HIGH VOLTAGE ANALOG FUNCTION SWITCH ARRAY**

TC9162AN/AF, TC9163AN/AF and TC9164AN/AF are analog switch arrays for high voltage application. By inputting the specified serial data, the analog switches are controlled. As each analog switch is independently controllable, switch of wide use is available.

**FEATURES**

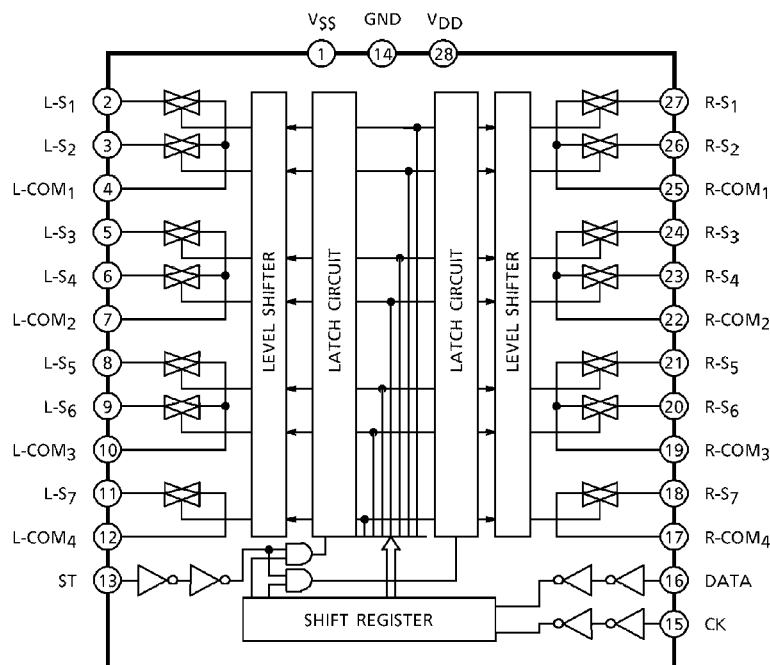
- Analog switches of 16 circuits are built in, allowing to provide three types according to internal connections.
- Dual power supply of (+) and (-) can be used. In this case the switch select data is operated in a single power supply by the built-in level shifter. As the threshold level of the input inverter is designed low, interface with CMOS microcomputer is easily available.
- As the analog switches are high-voltage (30V) use and have superior linearity of on-resistance, extra low distortion and wide dynamic range can be realized.
- Owing to CMOS structure current consumption is low.
- Package is shrunk DIP 28 PIN.



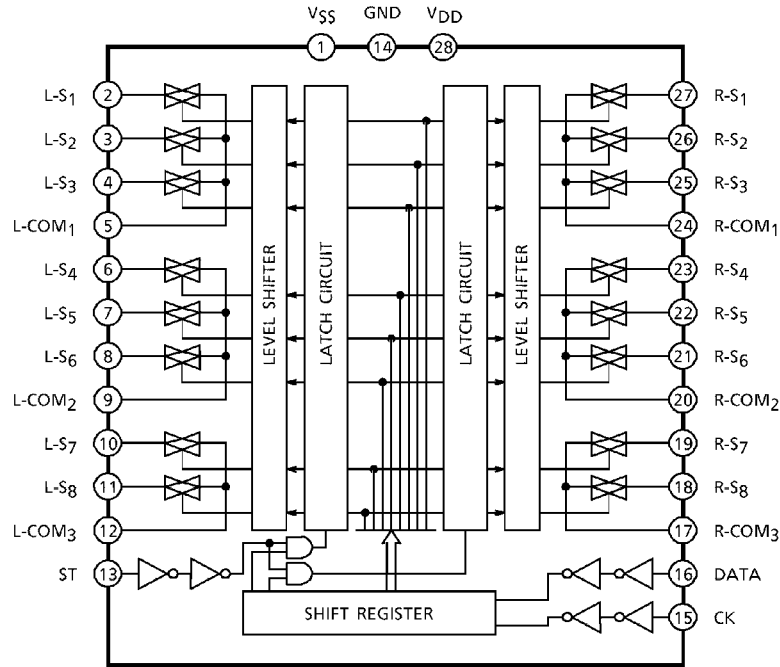
Weight  
SDIP28-P-400-1.78 : 2.2g (Typ.)  
SOP28-P-450-1.27 : 0.8g (Typ.)

**BLOCK DIAGRAM**

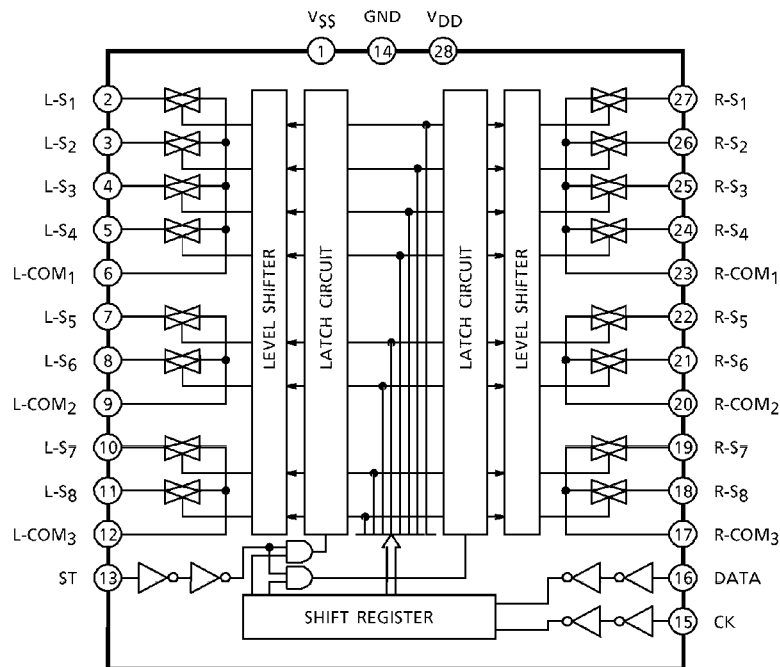
TC9162AN/AF



TC9163AN / AF



TC9164AN / AF



**PIN CONNECTION (TOP VIEW)**

TC9162AN / AF

VSS	1	28	VDD
L-S1	2	27	R-S1
L-S2	3	26	R-S2
L-COM1	4	25	R-COM1
L-S3	5	24	R-S3
L-S4	6	23	R-S4
L-COM2	7	22	R-COM2
L-S5	8	21	R-S5
L-S6	9	20	R-S6
L-COM3	10	19	R-COM3
L-S7	11	18	R-S7
L-COM4	12	17	R-COM4
ST	13	16	DATA
GND	14	15	CK

TC9163AN / AF

VSS	1	28	VDD
L-S1	2	27	R-S1
L-S2	3	26	R-S2
L-S3	4	25	R-S3
L-COM1	5	24	R-COM1
L-S4	6	23	R-S4
L-S5	7	22	R-S5
L-S6	8	21	R-S6
L-COM2	9	20	R-COM2
L-S7	10	19	R-S7
L-S8	11	18	R-S8
L-COM3	12	17	R-COM3
ST	13	16	DATA
GND	14	15	CK

TC9164AN / AF

VSS	1	28	VDD
L-S1	2	27	R-S1
L-S2	3	26	R-S2
L-S3	4	25	R-S3
L-S4	5	24	R-S4
L-COM1	6	23	R-COM1
L-S5	7	22	R-S5
L-S6	8	21	R-S6
L-COM2	9	20	R-COM2
L-S7	10	19	R-S7
L-S8	11	18	R-S8
L-COM3	12	17	R-COM3
ST	13	16	DATA
GND	14	15	CK



# TOSHIBA

## TC4051BP/BF/BFN/BFT, TC4052BP/BF/BFN/BFT, TC4053BP/BF/BFN/BFT

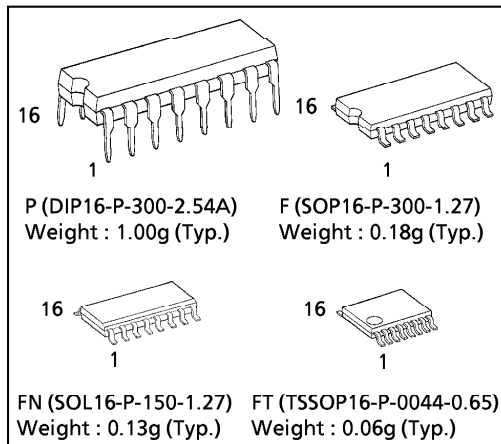
TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

**TC4051BP, TC4051BF, TC4051BFN, TC4051BFT**  
**TC4052BP, TC4052BF, TC4052BFN, TC4052BFT**  
**TC4053BP, TC4053BF, TC4053BFN, TC4053BFT**

**TC4051B SINGLE 8-CHANNEL MULTIPLEXER / DEMULTIPLEXER**  
**TC4052B DIFFERENTIAL 4-CHANNEL MULTIPLEXER / DEMULTIPLEXER**  
**TC4053B TRIPLE 2-CHANNEL MULTIPLEXER / DEMULTIPLEXER**

(Note) The JEDEC SOP (FN) is not available in Japan.

TC4051B, TC4052B and TC4053B are multiplexers with capabilities of selection and mixture of analog signal and digital signal. TC4051B has 8 channels configuration. TC4052B has 4 channel×2 configuration and TC4053B has 2 channel×3 configuration. The digital signal to the control terminal turns "ON" the corresponding switch of each channel, with large amplitude ( $V_{DD}-V_{EE}$ ) can be switched by the control signal with small logical amplitude ( $V_{DD}-V_{SS}$ ). For example, in the case of  $V_{DD}=5V$ ,  $V_{SS}=0V$  and  $V_{EE}=-5V$ , signals between  $-5V$  and  $+5V$  can be switched from the logical circuit with single power supply of 5 volts. As the ON-resistance of each switch is low, these can be connected to the circuits with low input impedance.



### MAXIMUM RATINGS

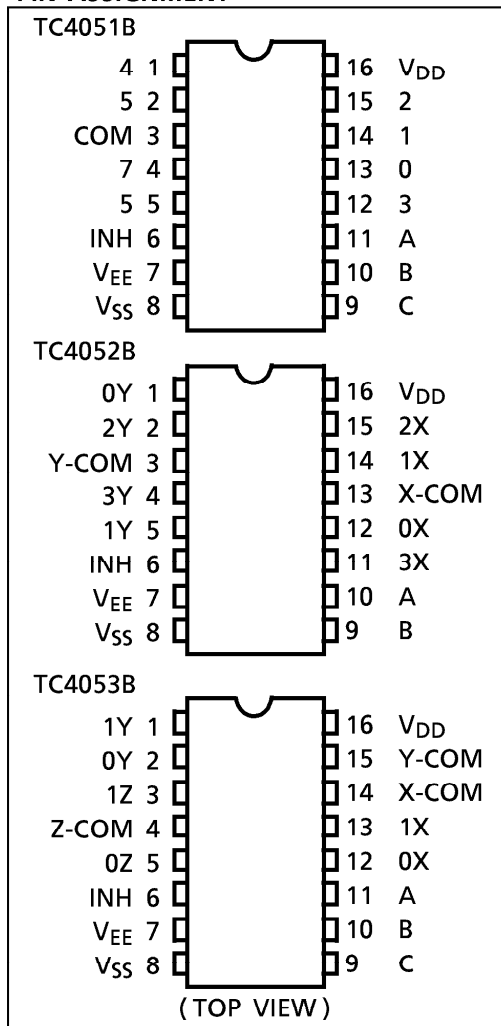
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Supply Voltage	$V_{DD} - V_{SS}$	-0.5~20	V
DC Supply Voltage	$V_{DD} - V_{EE}$	-0.5~20	V
Control Input Voltage	$V_{CIN}$	$V_{SS} - 0.5 \sim V_{DD} + 0.5$	V
Switch I/O Voltage	$V_I / V_O$	$V_{EE} - 0.5 \sim V_{DD} + 0.5$	V
Control Input Current	$I_{CIN}$	± 10	mA
Potential difference across I/O during ON	$V_I - V_O$	-0.5~0.5	V
Power Dissipation	$P_D$	300 (DIP) / 180 (SOIC)	mW
Operating Temperature Range	$T_{opr}$	-40~85	°C
Storage Temperature Range	$T_{stg}$	-65~150	°C

### TRUTH TABLE

CONTROL INPUTS				"ON" CHANNEL		
INHIBIT	C△	B	A	TC4051B	TC4052B	TC4053B
L	L	L	L	0	0X, 0Y	0X, 0Y, 0Z
L	L	L	H	1	1X, 1Y	1X, 0Y, 0Z
L	L	H	L	2	2X, 2Y	0X, 1Y, 0Z
L	L	H	H	3	3X, 3Y	1X, 1Y, 0Z
L	H	L	L	4	—	0X, 0Y, 1Z
L	H	L	H	5	—	1X, 0Y, 1Z
L	H	H	L	6	—	0X, 1Y, 1Z
L	H	H	H	7	—	1X, 1Y, 1Z
H	*	*	*	NONE	NONE	NONE

\* : Don't Care    △ Except TC4052B

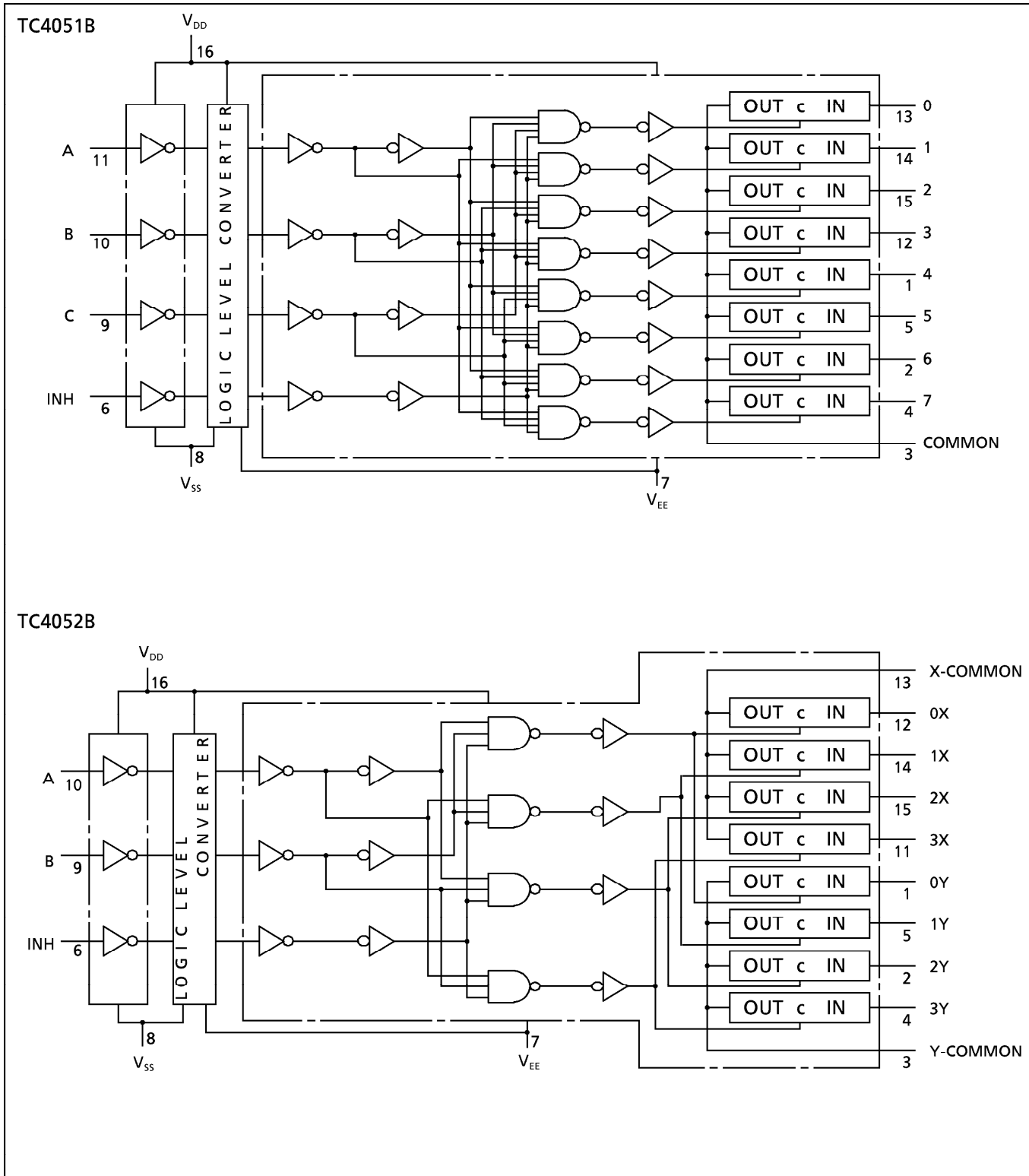
### PIN ASSIGNMENT



**TOSHIBA**

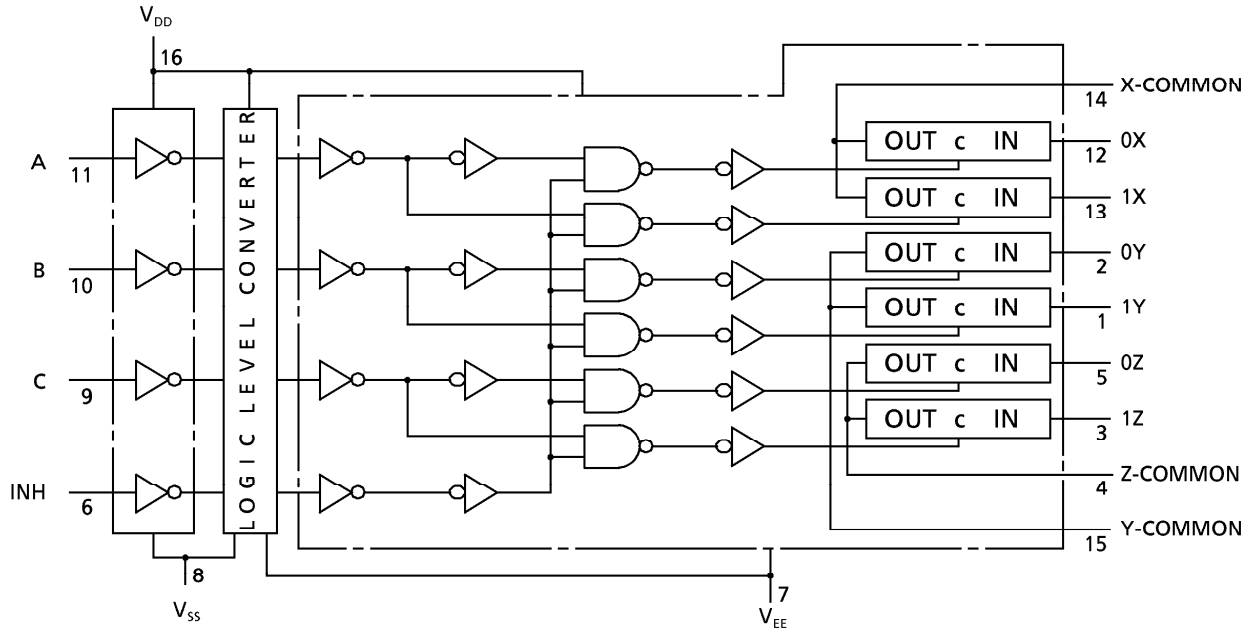
TC4051BP/BF/BFN/BFT, TC4052BP/BF/BFN/BFT, TC4053BP/BF/BFN/BFT

**LOGIC DIAGRAM**



**LOGIC DIAGRAM**

TC4053B



**TRUTH TABLE**

CONTROL C	Impedance Between IN-OUT*
H	$0.5 \sim 5 \times 10^2 \Omega$
L	$> 10^9 \Omega$

\* See Electrical Characteristics

# TSH95

## HIGH SPEED LOW POWER QUAD OPERATIONAL AMPLIFIER WITH DUAL **STANDBY** POSITION

- **2 SEPARATE STANDBY** : REDUCED CONSUMPTION AND HIGH IMPEDANCE OUTPUTS
- LOW SUPPLY CURRENT : 4.5mA
- HIGH SPEED : 150MHz - 110V/ $\mu$ s
- UNITY GAIN STABILITY
- LOW OFFSET VOLTAGE : 4mV
- LOW NOISE 4.2 nV/ $\sqrt$ Hz
- LOW COST
- SPECIFIED FOR **600 $\Omega$**  AND **150 $\Omega$**  LOADS
- HIGH VIDEO PERFORMANCES :  
Differential Gain : 0.03%  
Differential Phase : 0.07°  
Gain Flatness : 6MHz, 0.1dB max. @ 10dB gain
- HIGH AUDIO PERFORMANCES
- ESD TOLERANCE : 2kV

### DESCRIPTION

The TSH95 is a quad low power high frequency op-amp, designated for high quality video processing. The device offers an excellent speed consumption ratio with 4.5mA per amplifier for 150MHz bandwidth.

High slew rate and low noise make it also suitable for high quality audio applications.

The TSH95 offers 2 separate complementary **STANDBY** pins :

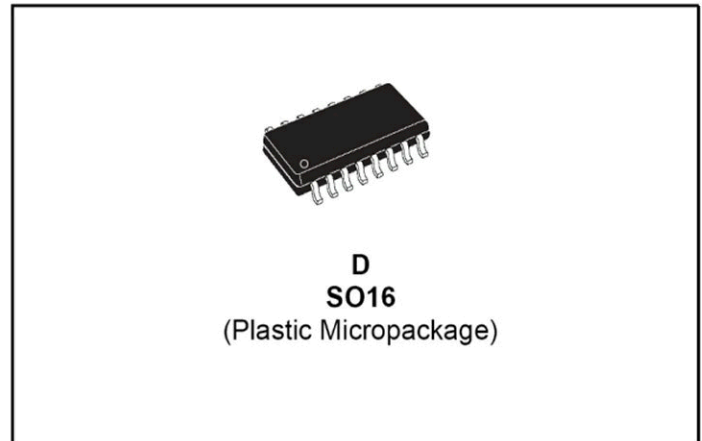
- STANDBY 1 acting on both n° 1 & 2 operators
- STANDBY 2 acting on both n° 3 & 4 operators

They reduce the consumption of the corresponding operators and put the output in a high impedance state.

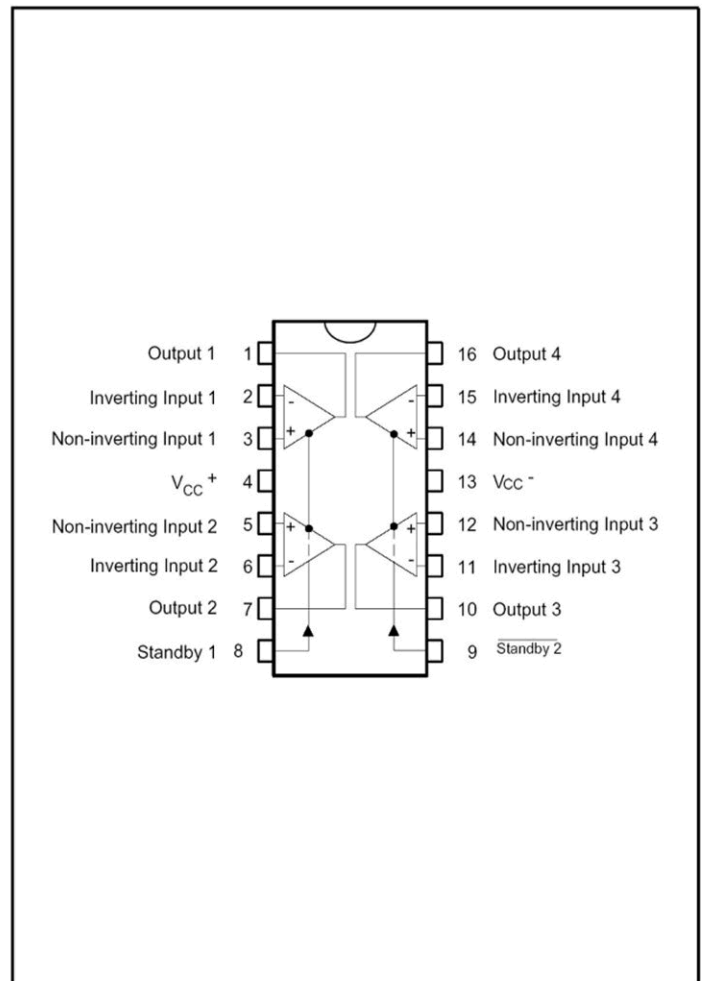
### ORDER CODE

Part Number	Temperature Range	Package
		D
TSH95I	-40°C, +125°C	•

D = Small Outline Package (SO) - also available in Tape & Reel (DT)

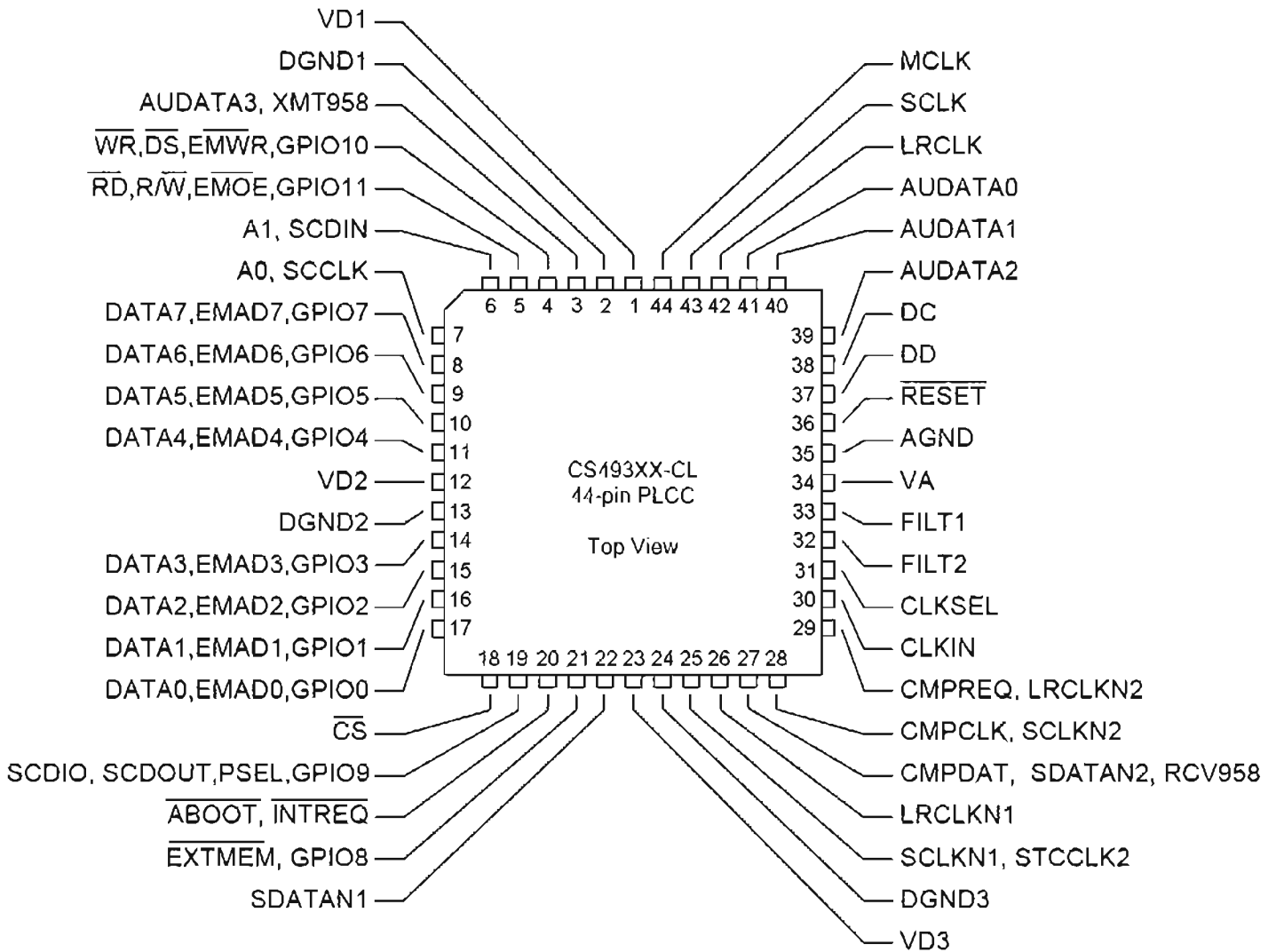


### PIN CONNECTIONS (top view)



24-Bit Multi Standard  
Audio DSP Decoder

# CS493263





## 74VHC14

### HEX SCHMITT INVERTER

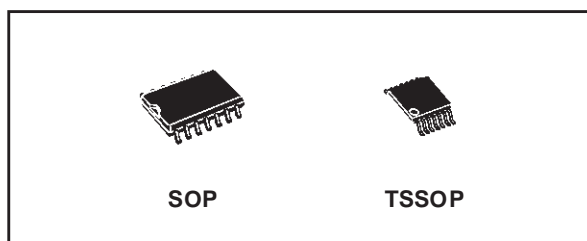
- HIGH SPEED:  $t_{PD} = 5.5\text{ns}$  (TYP.) at  $V_{CC} = 5\text{V}$
- LOW POWER DISSIPATION:  
 $I_{CC} = 2\ \mu\text{A}$  (MAX.) at  $T_A = 25^\circ\text{C}$
- TYPICAL HYSTERESIS:  $V_h = 1\text{V}$   
at  $V_{CC} = 4.5\text{V}$
- POWER DOWN PROTECTION ON INPUTS
- SYMMETRICAL OUTPUT IMPEDANCE:  
 $|I_{OH}| = I_{OL} = 8\ \text{mA}$  (MIN)
- BALANCED PROPAGATION DELAYS:  
 $t_{PLH} \approx t_{PHL}$
- OPERATING VOLTAGE RANGE:  
 $V_{CC}(\text{OPR}) = 2\text{V to } 5.5\text{V}$
- PIN AND FUNCTION COMPATIBLE WITH  
74 SERIES 14
- IMPROVED LATCH-UP IMMUNITY
- LOW NOISE:  $V_{OLP} = 0.8\text{V}$  (MAX.)

#### DESCRIPTION

The 74VHC14 is an advanced high-speed CMOS HEX SCHMITT INVERTER fabricated with sub-micron silicon gate and double-layer metal wiring C<sup>2</sup>MOS technology.

The internal circuit is composed of 3 stages including buffer output, which enables high noise immunity and stable output.

Power down protection is provided on all inputs and 0 to 7V can be accepted on inputs with no



#### ORDER CODES

PACKAGE	TUBE	T & R
SOP	74VHC14M	74VHC14MTR
TSSOP		74VHC14TTR

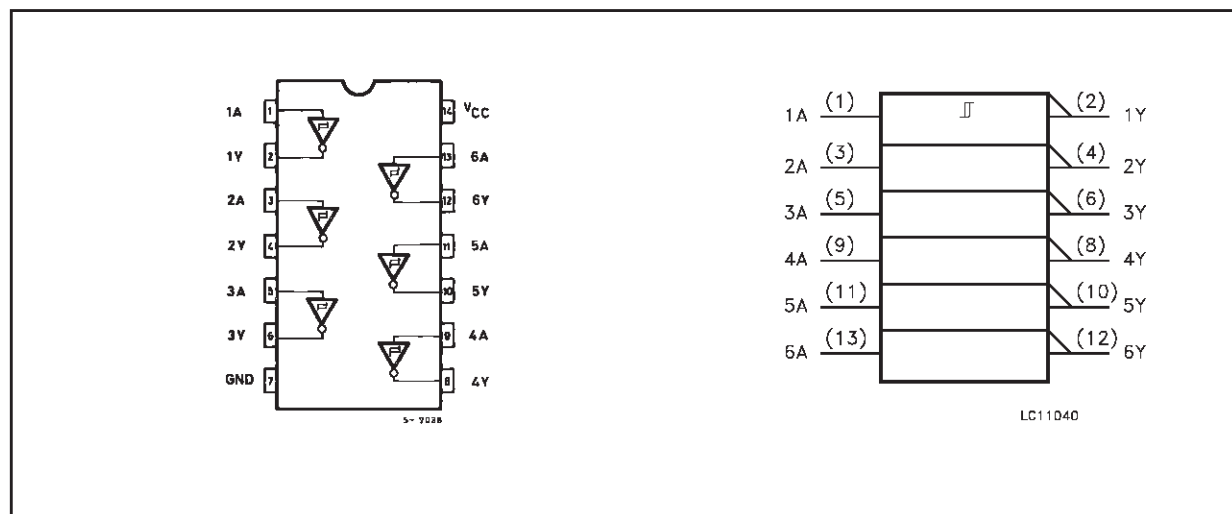
regard to the supply voltage. This device can be used to interface 5V to 3V.

Pin configuration and function are the same as those of the 74VHC04 but the 74VHC14 has hysteresis.

This together with its schmitt trigger function allows it to be used on line receivers with slow rise/fall input signals.

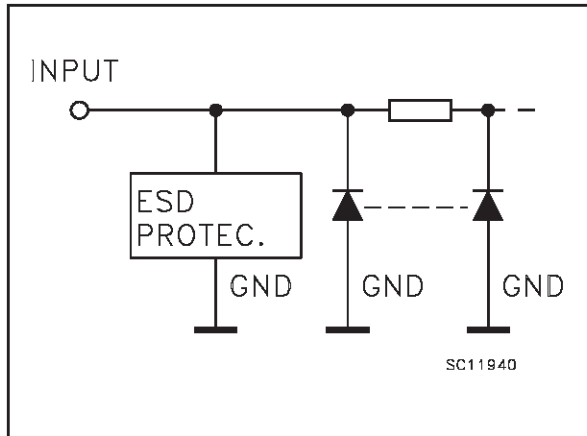
All inputs and outputs are equipped with protection circuits against static discharge, giving them 2KV ESD immunity and transient excess voltage.

#### PIN CONNECTION AND IEC LOGIC SYMBOLS



## 74VHC14

## INPUT EQUIVALENT CIRCUIT



## PIN DESCRIPTION

PIN No	SYMBOL	NAME AND FUNCTION
1, 3, 5, 9, 11, 13	1A to 6A	Data Inputs
2, 4, 6, 8, 10, 12	1Y to 6Y	Data Outputs
7	GND	Ground (0V)
14	V <sub>CC</sub>	Positive Supply Voltage

## TRUTH TABLE

A	Y
L	H
H	L

## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	-0.5 to +7.0	V
V <sub>I</sub>	DC Input Voltage	-0.5 to +7.0	V
V <sub>O</sub>	DC Output Voltage	-0.5 to V <sub>CC</sub> + 0.5	V
I <sub>IK</sub>	DC Input Diode Current	- 20	mA
I <sub>OK</sub>	DC Output Diode Current	± 20	mA
I <sub>O</sub>	DC Output Current	± 25	mA
I <sub>CC</sub> or I <sub>GND</sub>	DC V <sub>CC</sub> or Ground Current	± 50	mA
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C
T <sub>L</sub>	Lead Temperature (10 sec)	300	°C

Absolute Maximum Ratings are those values beyond which damage to the device may occur. Functional operation under these conditions is not implied.

## RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	2 to 5.5	V
V <sub>I</sub>	Input Voltage	0 to 5.5	V
V <sub>O</sub>	Output Voltage	0 to V <sub>CC</sub>	V
T <sub>op</sub>	Operating Temperature	-55 to 125	°C



## 74VHC541

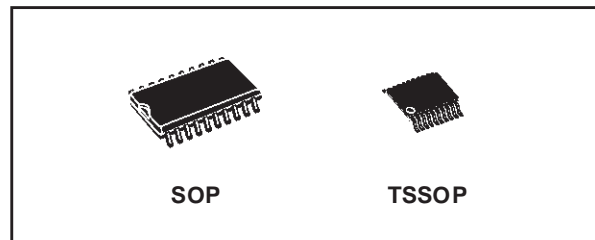
### OCTAL BUS BUFFER WITH 3 STATE OUTPUTS (NON INVERTED)

- HIGH SPEED:  $t_{PD} = 3.5 \text{ ns}$  (TYP.) at  $V_{CC} = 5V$
- LOW POWER DISSIPATION:  
 $I_{CC} = 4 \mu\text{A}$  (MAX.) at  $T_A = 25^\circ\text{C}$
- HIGH NOISE IMMUNITY:  
 $V_{NIH} = V_{NIL} = 28\% V_{CC}$  (MIN.)
- POWER DOWN PROTECTION ON INPUTS
- SYMMETRICAL OUTPUT IMPEDANCE:  
 $|I_{OH}| = I_{OL} = 8 \text{ mA}$  (MIN)
- BALANCED PROPAGATION DELAYS:  
 $t_{PLH} \approx t_{PHL}$
- OPERATING VOLTAGE RANGE:  
 $V_{CC}(\text{OPR}) = 2V \text{ to } 5.5V$
- PIN AND FUNCTION COMPATIBLE WITH 74 SERIES 541
- IMPROVED LATCH-UP IMMUNITY
- LOW NOISE:  $V_{OLP} = 0.9V$  (MAX.)

#### DESCRIPTION

The 74VHC541 is an advanced high-speed CMOS OCTAL BUS BUFFER (3-STATE) fabricated with sub-micron silicon gate and double-layer metal wiring C<sup>2</sup>MOS technology.

The 3 STATE control gate operates as two input AND such that if either G1 or G2 are high, all eight outputs are in the high impedance state.



#### ORDER CODES

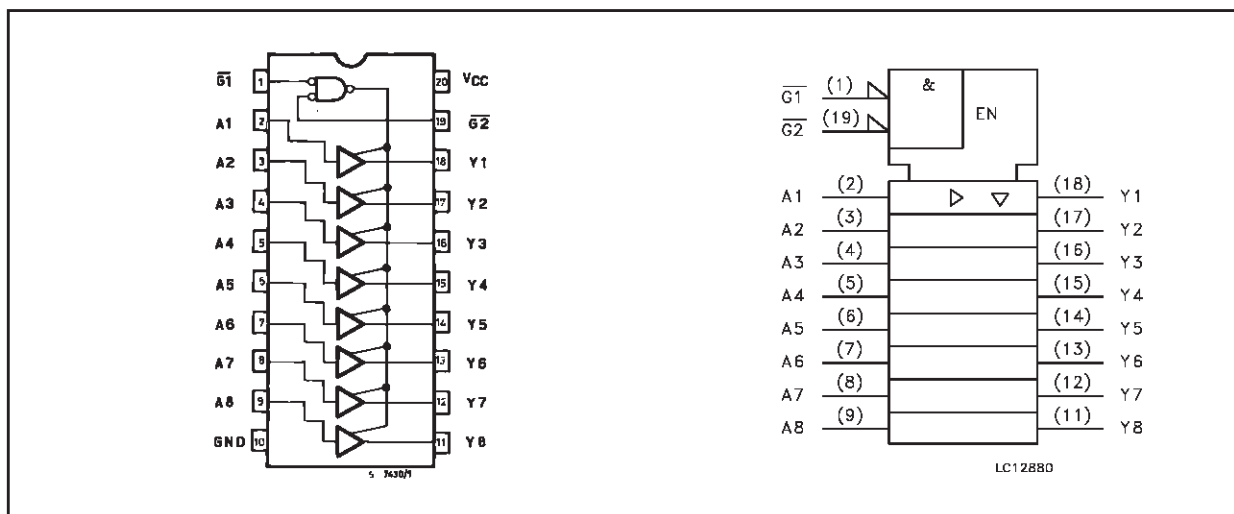
PACKAGE	TUBE	T & R
SOP	74VHC541M	74VHC541MTR
TSSOP		74VHC541TTR

In order to enhance PC board layout, the 74VHC541 offers a pinout having inputs and outputs on opposite sides of the package.

Power down protection is provided on all inputs and 0 to 7V can be accepted on inputs with no regard to the supply voltage. This device can be used to interface 5V to 3V.

All inputs and outputs are equipped with protection circuits against static discharge, giving them 2KV ESD immunity and transient excess voltage.

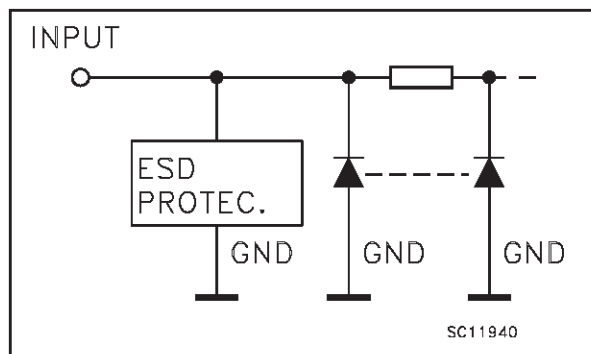
#### PIN CONNECTION AND IEC LOGIC SYMBOLS





## 74VHC541

## INPUT EQUIVALENT CIRCUIT



## PIN DESCRIPTION

PIN No	SYMBOL	NAME AND FUNCTION
1, 19	G1, G2	Output Enable Inputs
2, 3, 4, 5, 6, 7, 8, 9	A1 to A8	Data Inputs
18, 17, 16, 15, 14, 13, 12, 11	Y1 to Y8	Data Outputs
10	GND	Ground (0V)
20	V <sub>CC</sub>	Positive Supply Voltage

## TRUTH TABLE

INPUT			OUTPUT
$\overline{G1}$	$\overline{G2}$	A <sub>n</sub>	Y <sub>n</sub>
H	X	X	Z
X	H	X	Z
L	L	H	H
L	L	L	L

X : Don't care  
Z : High impedance

## ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	-0.5 to +7.0	V
V <sub>I</sub>	DC Input Voltage	-0.5 to +7.0	V
V <sub>O</sub>	DC Output Voltage	-0.5 to V <sub>CC</sub> + 0.5	V
I <sub>IK</sub>	DC Input Diode Current	- 20	mA
I <sub>OK</sub>	DC Output Diode Current	± 20	mA
I <sub>O</sub>	DC Output Current	± 25	mA
I <sub>CC</sub> or I <sub>GND</sub>	DC V <sub>CC</sub> or Ground Current	± 75	mA
T <sub>stg</sub>	Storage Temperature	-65 to +150	°C
T <sub>L</sub>	Lead Temperature (10 sec)	300	°C

Absolute Maximum Ratings are those values beyond which damage to the device may occur. Functional operation under these conditions is not implied

## RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Value	Unit
V <sub>CC</sub>	Supply Voltage	2 to 5.5	V
V <sub>I</sub>	Input Voltage	0 to 5.5	V
V <sub>O</sub>	Output Voltage	0 to V <sub>CC</sub>	V
T <sub>op</sub>	Operating Temperature	-55 to 125	°C
dt/dv	Input Rise and Fall Time (note 1) (V <sub>CC</sub> = 3.3 ± 0.3V) (V <sub>CC</sub> = 5.0 ± 0.5V)	0 to 100 0 to 20	ns/V

1) V<sub>IN</sub> from 30% to 70% of V<sub>CC</sub>



# AK5392

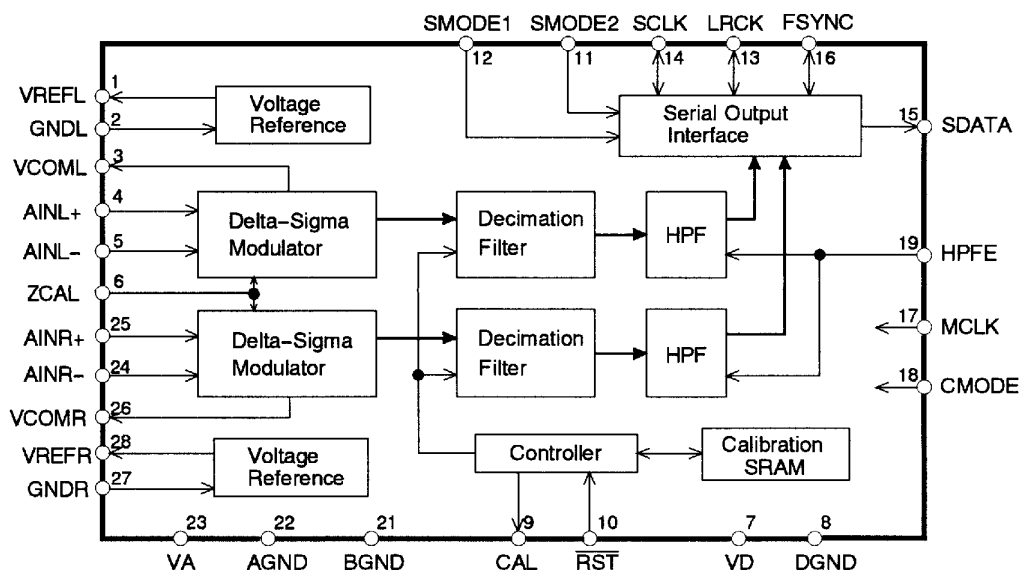
## Enhanced Dual Bit $\Delta\Sigma$ 24Bit ADC

### General Description

The AK5392 is a 24bit, 128x oversampling 2ch A/D Converter for professional digital audio systems. The modulator in the AK5392 uses the new developed Enhanced Dual Bit architecture. This new architecture achieves the wider dynamic range, while keeping much the same superior distortion characteristics as conventional Single Bit way. The AK5392 performs 116dB dynamic range, so the device is suitable for professional studio equipments such as digital mixer, digital VTR etc.

### Features

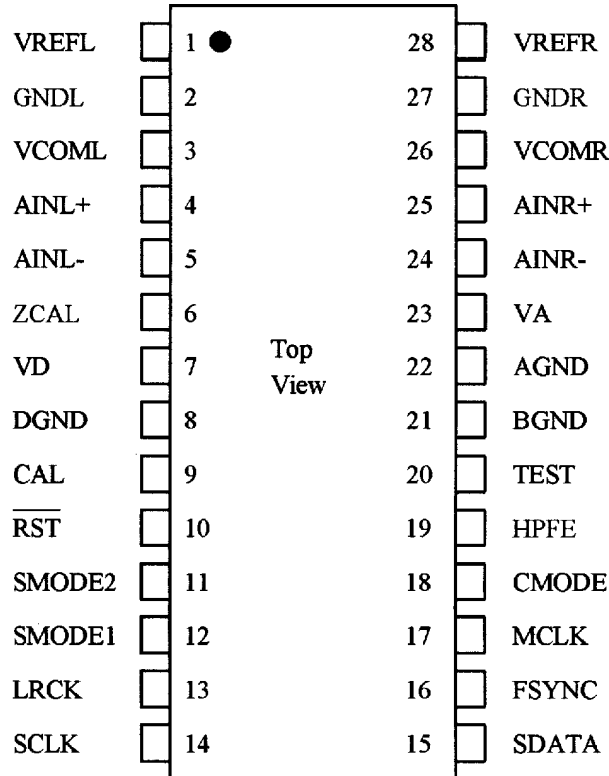
- Enhanced Dual Bit ADC
- Sampling Rate: 1kHz~54kHz
- Full Differential Inputs
- S/(N+D): 105dB
- DR: 116dB
- S/N: 116dB
- High Performance Linear Phase Digital Anti-Alias filter
  - Passband: 0~21.768kHz (@fs=48kHz)
  - Ripple: 0.001dB
  - Stopband: 110dB
- Digital HPF & Offset Calibration for Offset Cancel
- Master Clock: 256/384fs
- Power Supply: 5V $\pm$ 5%(Analog), 3~5.25V(Digital)
- Power Dissipation: 470mW
- Package: 28pin SOP



■ Ordering Guide

AK5392-VS      -10~+70°C      28pin SOP  
 AKD5392      AK5392 Evaluation Board

■ Pin Layout



■ Compatibility with AK5391

1. Changed Specs

Parameter	AK5391	AK5392
HPF	No	Yes
Output Resolution	20/24bit	24bit
DR	113dB	116dB
Input Offset	Required	Not required

2. Pin Compatibility

The following pin functions are changed from AK5391. AK5392 supports 24bit only.

Pin No.	AK5391	AK5392
2	VREFL-	GNDL
19	SEL24	HPFE
27	VREFR-	GNDR

PIN/FUNCTION																							
No.	Pin Name	I/O	Function																				
1	VREFL	O	Lch Reference Voltage Pin, 3.75V Normally connected to GNDL with a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor																				
2	GNDL	-	Lch Reference Ground Pin, 0V																				
3	VCOML	O	Lch Common Voltage Pin, 2.5V																				
4	AINL+	I	Lch Analog positive input Pin																				
5	AINL-	I	Lch Analog negative input Pin																				
6	ZCAL	I	Zero Calibration Control Pin This pin controls the calibration reference signal. "L":VCOML and VCOMR "H":Analog Input Pins(AINL±,AINR±)																				
7	VD	-	Digital Power Supply Pin, 3.3V																				
8	DGND	-	Digital Ground Pin, 0V																				
9	CAL	O	Calibration Active Signal Pin "H" means the offset calibration cycle is in progress. Offset calibration starts when $\overline{RST}$ goes "H". CAL goes "L" after 8704 LRCK cycles.																				
10	$\overline{RST}$	I	Reset Pin When "L", Digital section is powered-down. Upon returning "H", an offset calibration cycle is started. An offset calibration cycle should always be initiated after power-up.																				
11 12	SMODE2 SMODE1	I I	Serial Interface Mode Select Pin MSB first, 2's compliment. <table border="0" style="margin-left: 20px;"> <tr> <td>SMODE2</td> <td>SMODE1</td> <td>MODE</td> <td>LRCK</td> </tr> <tr> <td>L</td> <td>L</td> <td>Slave mode : MSB justified</td> <td>: H/L</td> </tr> <tr> <td>L</td> <td>H</td> <td>Master mode : Similar to I2S</td> <td>: H/L</td> </tr> <tr> <td>H</td> <td>L</td> <td>Slave mode : I2S</td> <td>: L/H</td> </tr> <tr> <td>H</td> <td>H</td> <td>Master mode : I2S</td> <td>: L/H</td> </tr> </table>	SMODE2	SMODE1	MODE	LRCK	L	L	Slave mode : MSB justified	: H/L	L	H	Master mode : Similar to I2S	: H/L	H	L	Slave mode : I2S	: L/H	H	H	Master mode : I2S	: L/H
SMODE2	SMODE1	MODE	LRCK																				
L	L	Slave mode : MSB justified	: H/L																				
L	H	Master mode : Similar to I2S	: H/L																				
H	L	Slave mode : I2S	: L/H																				
H	H	Master mode : I2S	: L/H																				
13	LRCK	I/O	Left/Right Channel Select Clock Pin LRCK goes "H" at SMODE2="L" and "L" at SMODE2="H" during reset when SMODE1 "H".																				

14	SCLK	I/O	Serial Data Clock Pin Data is clocked out on the falling edge of SCLK. Slave mode: SCLK requires more than 48fs clock. Master mode: SCLK outputs a 128fs clock. SCLK stays "L" during reset.
15	SDATA	O	Serial Data Output Pin MSB first, 2's complement. SDATA stays "L" during reset.
16	FSYNC	I/O	Frame Synchronization Signal Pin Slave mode: When "H", the data bits are clocked out on SDATA. Master mode: FSYNC outputs 2fs clock. FSYNC stays "L" during reset.
17	CLK	I	Master Clock Input Pin CMODE="H":384fs CMODE="L":256fs
18	CMODE	I	Master Clock Select Pin "L": CLK=256fs (12.288MHz @fs=48kHz) "H": CLK=384fs (18.432MHz @fs=48kHz)
19	HPFE	I	High Pass Filter Enable Pin "L": Disable "H": Enable
20	TEST	I	Test Pin Should be connected DGND.
21	BGND	-	Substrate Ground Pin, 0V
22	AGND	-	Analog Ground Pin, 0V
23	VA	-	Analog Supply Pin, 5V
24	AINR-	I	Rch Analog negative input Pin
25	AINR+	I	Rch Analog positive input Pin
26	VCOMR	O	Rch Common Voltage Pin, 2.5V
27	GNDR	-	Rch Reference Ground Pin, 0V
28	VREFR	O	Rch Reference Voltage Pin, 3.75V Normally connected to GNDR with a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor



# Stereo, 24-Bit, 192 kHz Multibit $\Sigma\Delta$ DAC

## AD1852\*

### FEATURES

5 V Stereo Audio DAC System  
 Accepts 16-Bit/18-Bit/20-Bit/24-Bit Data  
 Supports 24 Bits, 192 kHz Sample Rate  
 Accepts a Wide Range of Sample Rates Including:  
 32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, and  
 192 kHz  
 Multibit Sigma-Delta Modulator with "Perfect  
 Differential Linearity Restoration" for Reduced Idle  
 Tones and Noise Floor  
 Data-Directed Scrambling DAC—Least Sensitive to  
 Jitter  
 Differential Output for Optimum Performance  
 117 dB Signal-to-Noise (Not Muted) at 48 kHz Sample  
 Rate (A-Weighted Mono)  
 114 dB Signal-to-Noise (Not Muted) at 48 kHz Sample  
 Rate (A-Weighted Stereo)  
 117 dB Dynamic Range (Not Muted) at 48 kHz Sample  
 Rate (A-Weighted Mono)  
 114 dB Dynamic Range (Not Muted) at 48 kHz Sample  
 Rate (A-Weighted Stereo)  
 -105 dB THD+N (Mono Application Circuit)  
 -102 dB THD+N (Stereo)  
 115 dB Stopband Attenuation  
 On-Chip Clickless Volume Control  
 Hardware and Software Controllable Clickless Mute  
 Serial (SPI) Control for: Serial Mode, Number of Bits,  
 Sample Rate, Volume, Mute, De-Emp  
 Digital De-Emphasis Processing for 32 kHz, 44.1 kHz,  
 48 kHz Sample Rates  
 Clock Autodivide Circuit Supports Five Master-Clock  
 Frequencies

Flexible Serial Data Port with Right-Justified, Left-  
 Justified, I<sup>2</sup>S-Compatible and DSP Serial Port Modes  
 28-Lead SSOP Plastic Package

### APPLICATIONS

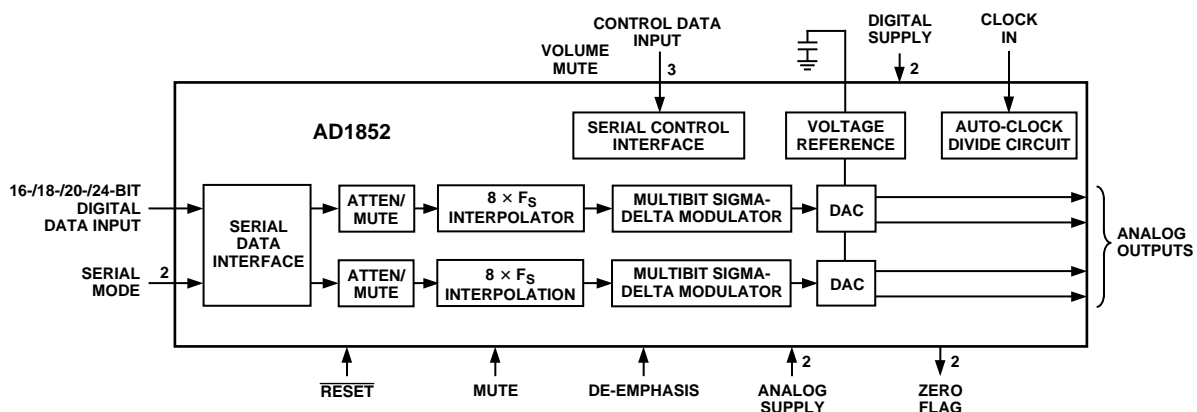
Hi End: DVD, CD, Home Theater Systems, Automotive  
 Audio Systems, Sampling Musical Keyboards, Digital  
 Mixing Consoles, Digital Audio Effects Processors

### PRODUCT OVERVIEW

The AD1852 is a complete high performance single-chip stereo digital audio playback system. It is comprised of a multibit sigma-delta modulator, digital interpolation filters, and analog output drive circuitry. Other features include an on-chip stereo attenuator and mute, programmed through an SPI-compatible serial control port. The AD1852 is fully compatible with all known DVD formats including 192 kHz as well as 96 kHz sample frequencies and 24 bits. It also is backwards compatible by supporting 50  $\mu$ s/15  $\mu$ s digital de-emphasis intended for "Redbook" compact discs, as well as de-emphasis at 32 kHz and 48 kHz sample rate.

The AD1852 has a very simple but very flexible serial data input port that allows for glueless interconnection to a variety of ADCs, DSP chips, AES/EBU receivers and sample rate converters. The AD1852 can be configured in left-justified, I<sup>2</sup>S, right-justified, or DSP serial port compatible modes. It can support 16, 18, 20, and 24 bits in all modes. The AD1852 accepts serial audio data in MSB first, twos-complement format. The AD1852 operates from a single 5 V power supply. It is fabricated on a single monolithic integrated circuit and is housed in a 28-lead SSOP package for operation over the temperature range 0°C to 70°C.

### FUNCTIONAL BLOCK DIAGRAM



\*Patents Pending

### REV. 0

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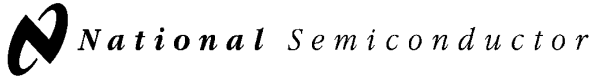
One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.  
 Tel: 781/329-4700 World Wide Web Site: <http://www.analog.com>  
 Fax: 781/326-8703 © Analog Devices, Inc., 2000

## PIN FUNCTION DESCRIPTIONS

Pin	Input/Output	Pin Name	Description
1	I	DGND	Digital Ground.
2	I	MCLK	Master Clock Input. Connect to an external clock source at either 256 F <sub>S</sub> , 384 F <sub>S</sub> , 512 F <sub>S</sub> , 768 F <sub>S</sub> , or 1024 F <sub>S</sub> .
3	I	CLATCH	Latch Input for Control Data. This input is rising-edge sensitive.
4	I	CCLK	Control Clock Input for Control Data. Control input data must be valid on the rising edge of CCLK. CCLK may be continuous or gated.
5	I	CDATA	Serial Control Input, MSB first, containing 16 bits of unsigned data per channel. Used for specifying channel-specific attenuation and mute.
6		NC	No Connect.
7	I	192/48	Selects 48 kHz (LO) or 192 kHz Sample Frequency.
8	O	ZEROR	Right Channel Zero Flag Output. This pin goes HI when Right Channel has no signal input for more than 1024 LR Clock Cycles.
9	I	DEEMP	De-Emphasis. Digital de-emphasis is enabled when this input signal is HI. This is used to impose a 50 μs/15 μs response characteristic on the output audio spectrum at an assumed 44.1 kHz sample rate. Curves for 32 kHz and 48 kHz sample rates may be selected via SPI control register.
10	I	96/48	Selects 48 kHz (LO) or 96 kHz Sample Frequency.
11, 15	I	AGND	Analog Ground.
12	O	OUTR+	Right Channel Positive Line Level Analog Output.
13	O	OUTR-	Right Channel Negative Line Level Analog Output.
14	O	FILTR	Voltage Reference Filter Capacitor Connection. Bypass and decouple the voltage reference with parallel 10 μF and 0.1 μF capacitors to the AGND.
16	O	OUTL-	Left Channel Negative Line Level Analog Output.
17	O	OUTL+	Left Channel Positive Line Level Analog Output.
18	I	AVDD	Analog Power Supply. Connect to Analog 5 V Supply.
19		FILTB	Filter Capacitor Connection. Connect 10 μF capacitor to AGND (Pin 15).
20	I	IDPM1	Input Serial Data Port Mode Control One. With IDPM0, defines 1 of 4 serial modes.
21	I	IDPM0	Input Serial Data Port Mode Control Zero. With IDPM1, defines 1 of 4 serial modes.
22	O	ZEROL	Left Channel Zero Flag Output. This pin goes HI when Left Channel has no signal input for more than 1024 LR Clock Cycles.
23	I	MUTE	Mute. Assert HI to mute both stereo analog outputs. Deassert LO for normal operation.
24	I	RESET	Reset. The AD1852 is reset on the rising edge of this signal. The serial control port registers are reset to the default values. Connect HI for normal operation.
25	I	L/RCLK	Left/Right Clock Input for Input Data. Must run continuously.
26	I	BCLK	Bit Clock Input for Input Data. Need not run continuously; may be gated or used in a burst fashion.
27	I	SDATA	Serial Input, MSB first, containing two channels of 16, 18, 20, and 24 bits of twos complement data per channel.
28	I	DVDD	Digital Power Supply Connect to digital 5 V supply.

Table I. Serial Data Input Mode

IDPM1 (Pin 20)	IDPM0 (Pin 21)	Serial Data Input Format
0	0	Right-Justified
0	1	I <sup>2</sup> S-Compatible
1	0	Left-Justified
1	1	DSP



November 1995

# MM54HC151/MM74HC151 8-Channel Digital Multiplexer

## General Description

This high speed Digital multiplexer utilizes advanced silicon-gate CMOS technology. Along with the high noise immunity and low power dissipation of standard CMOS integrated circuits, it possesses the ability to drive 10 LS-TTL loads. The MM54HC151/MM74HC151 selects one of the 8 data sources, depending on the address presented on the A, B, and C inputs. It features both true (Y) and complement (W) outputs. The STROBE input must be at a low logic level to enable this multiplexer. A high logic level at the STROBE forces the W output high and the Y output low.

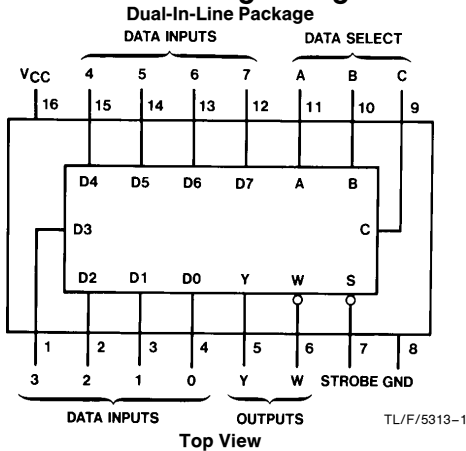
The 54HC/74HC logic family is functionally as well as pin-out compatible with the standard 54LS/74LS logic family.

All inputs are protected from damage due to static discharge by internal diode clamps to V<sub>CC</sub> and ground.

### Features

- Typical propagation delay data select to output Y: 26 ns
- Wide operating supply voltage range: 2–6V
- Low input current: 1 μA maximum
- Low quiescent supply current: 80 μA maximum (74HC)
- High output drive current: 4 mA minimum

### Connection and Logic Diagrams

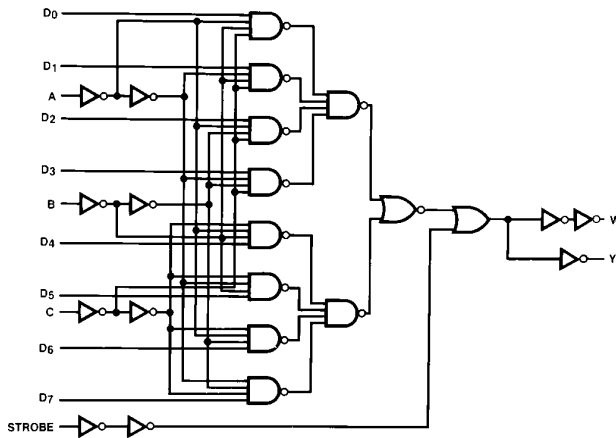


### Truth Table

Inputs				Outputs	
Select			Strobe S	Y	W
C	B	A			
X	X	X	H	L	H
L	L	L	L	D0	$\overline{D0}$
L	L	H	L	D1	$\overline{D1}$
L	H	L	L	D2	$\overline{D2}$
L	H	H	L	D3	$\overline{D3}$
H	L	L	L	D4	$\overline{D4}$
H	L	H	L	D5	$\overline{D5}$
H	H	L	L	D6	$\overline{D6}$
H	H	H	L	D7	$\overline{D7}$

H = High Level, L = Low Level, X = Don't Care  
 D0, D1...D7 = the level of the respective D input

Order Number MM54HC151 or MM74HC151



MM54HC151/MM74HC151 8-Channel Digital Multiplexer





June 1996  
Revised March 2002

NC7S04 TinyLogic™ HS Inverter

## NC7S04 TinyLogic™ HS Inverter

### General Description

The NC7S04 is a single high performance CMOS Inverter. Advanced Silicon Gate CMOS fabrication assures high speed and low power circuit operation over a broad  $V_{CC}$  range. ESD protection diodes inherently guard both input and output with respect to the  $V_{CC}$  and GND rails. Three stages of gain between input and output assures high noise immunity and reduced sensitivity to input edge rate.

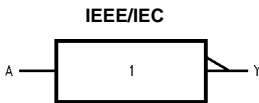
### Features

- Space saving SOT23 or SC70 5-lead package
- Ultra small MicroPak™ leadless package
- High Speed:  $t_{PD} = 3$  ns typ
- Low Quiescent Power:  $I_{CC} < 1 \mu A$
- Balanced Output Drive: 2 mA  $I_{OL}$ , -2 mA  $I_{OH}$
- Broad  $V_{CC}$  Operating Range: 2V – 6V
- Balanced Propagation Delays
- Specified for 3V operation

### Ordering Code:

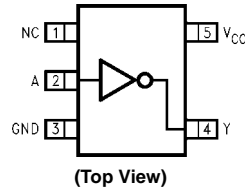
Order Number	Package Number	Product Code Top Mark	Package Description	Supplied As
NC7S04M5X	MA05B	7S04	5-Lead SOT23, JEDEC MO-178, 1.6mm	3k Units on Tape and Reel
NC7S04P5X	MAA05A	S04	5-Lead SC70, EIAJ SC-88a, 1.25mm Wide	3k Units on Tape and Reel
NC7S04L6X	MAC06A	AA	6-Lead MicroPak, 1.0mm Wide	5k Units on Tape and Reel

### Logic Symbol



### Connection Diagrams

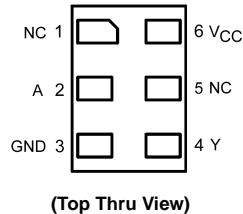
#### Pin Assignments for SC70 and SOT23



### Pin Descriptions

Pin Names	Description
A	Input
Y	Output
NC	No Connect

#### Pad Assignments for MicroPak



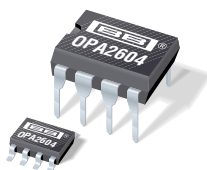
### Function Table

$$Y = \bar{A}$$

Input	Output
A	Y
L	H
H	L

H = HIGH Logic Level  
L = LOW Logic Level

TinyLogic™ and MicroPak™ are trademarks of Fairchild Semiconductor Corporation.



# OPA2604

## Dual FET-Input, Low Distortion OPERATIONAL AMPLIFIER

### FEATURES

- **LOW DISTORTION:** 0.0003% at 1kHz
- **LOW NOISE:**  $10\text{nV}/\sqrt{\text{Hz}}$
- **HIGH SLEW RATE:**  $25\text{V}/\mu\text{s}$
- **WIDE GAIN-BANDWIDTH:** 20MHz
- **UNITY-GAIN STABLE**
- **WIDE SUPPLY RANGE:**  $V_s = \pm 4.5$  to  $\pm 24\text{V}$
- **DRIVES  $600\Omega$  LOADS**

### APPLICATIONS

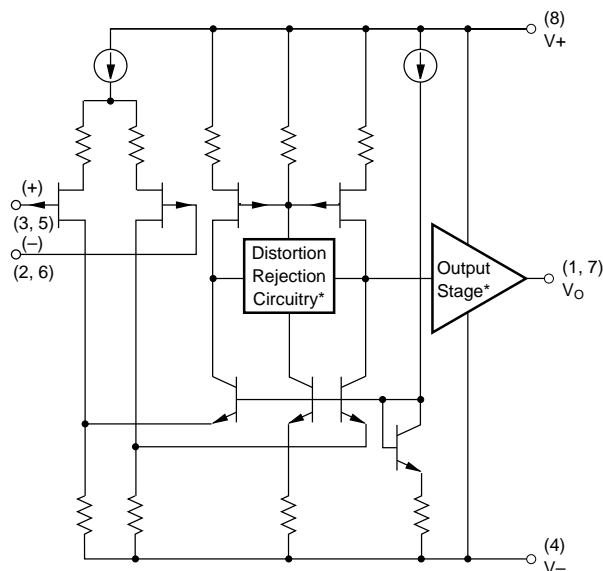
- PROFESSIONAL AUDIO EQUIPMENT
- PCM DAC I/V CONVERTER
- SPECTRAL ANALYSIS EQUIPMENT
- ACTIVE FILTERS
- TRANSDUCER AMPLIFIER
- DATA ACQUISITION

### DESCRIPTION

The OPA2604 is a dual, FET-input operational amplifier designed for enhanced AC performance. Very low distortion, low noise and wide bandwidth provide superior performance in high quality audio and other applications requiring excellent dynamic performance.

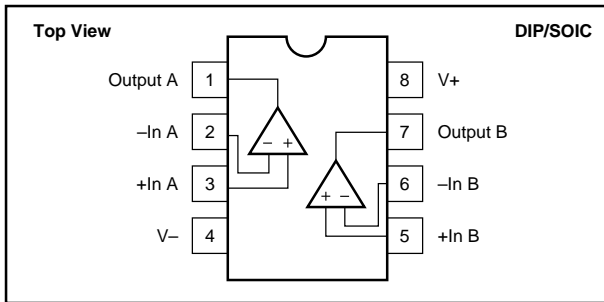
New circuit techniques and special laser trimming of dynamic circuit performance yield very low harmonic distortion. The result is an op amp with exceptional sound quality. The low-noise FET input of the OPA2604 provides wide dynamic range, even with high source impedance. Offset voltage is laser-trimmed to minimize the need for interstage coupling capacitors.

The OPA2604 is available in 8-pin plastic mini-DIP and SO-8 surface-mount packages, specified for the  $-25^\circ\text{C}$  to  $+85^\circ\text{C}$  temperature range.



\* Patents Granted:  
#5053718, 5019789

**PIN CONFIGURATION**



**ELECTROSTATIC DISCHARGE SENSITIVITY**

Any integrated circuit can be damaged by ESD. Burr-Brown recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedures can cause damage.

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet published specifications.

**ABSOLUTE MAXIMUM RATINGS<sup>(1)</sup>**

Power Supply Voltage .....	±25V
Input Voltage .....	(V-) -1V to (V+) +1V
Output Short Circuit to Ground .....	Continuous
Operating Temperature .....	-40°C to +100°C
Storage Temperature .....	-40°C to +125°C
Junction Temperature .....	+150°C
Lead Temperature (soldering, 10s) AP .....	+300°C
Lead Temperature (soldering, 3s) AU .....	+260°C

NOTE: (1) Stresses above these ratings may cause permanent damage.

**ORDERING INFORMATION**

PRODUCT	PACKAGE	TEMP. RANGE
OPA2604AP	8-Pin Plastic DIP	-25°C to +85°C
OPA2604AU	SO-8 Surface-Mount	-25°C to +85°C

**PACKAGING INFORMATION**

PRODUCT	PACKAGE	PACKAGE DRAWING NUMBER <sup>(1)</sup>
OPA2604AP	8-Pin Plastic DIP	006
OPA2604AU	SO-8 Surface-Mount	182

NOTE: (1) For detailed drawing and dimension table, please see end of data sheet, or Appendix C of Burr-Brown IC Data Book.

**TOSHIBA****TC9184AP**

TOSHIBA CMOS DIGITAL INTEGRATED CIRCUIT SILICON MONOLITHIC

# TC9184AP

## HIGH PERFORMANCE ELECTRONIC TONE CONTROL

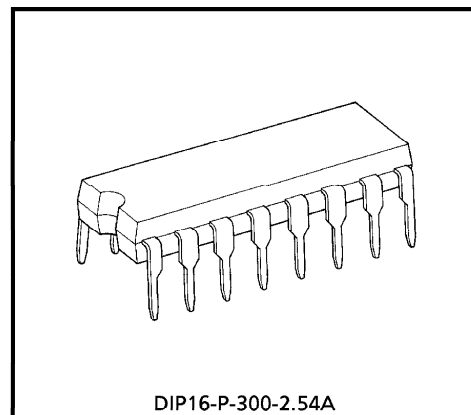
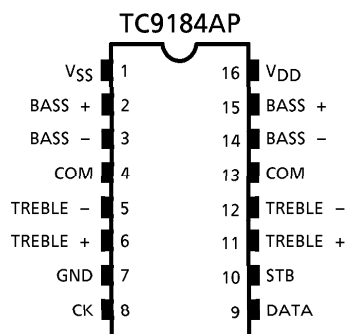
TC9184AP is electronic tone control ICs developed for audio equipment. These ICs can control bass and treble with serial data externally.

### FEATURES

- Allows 13-step variable control 12~0~-12dB by 2dB step.
- Bass and treble of 2 channels are built in.
- Being in CMOS structure, wide dynamic ranges and low distortion rate are obtained.
- A dual power supply of (+) and (-) is applicable, and then the serial input data operates in a logic level of 0 to 5V, so the interface with a micro computer is easily available.
- Package type.

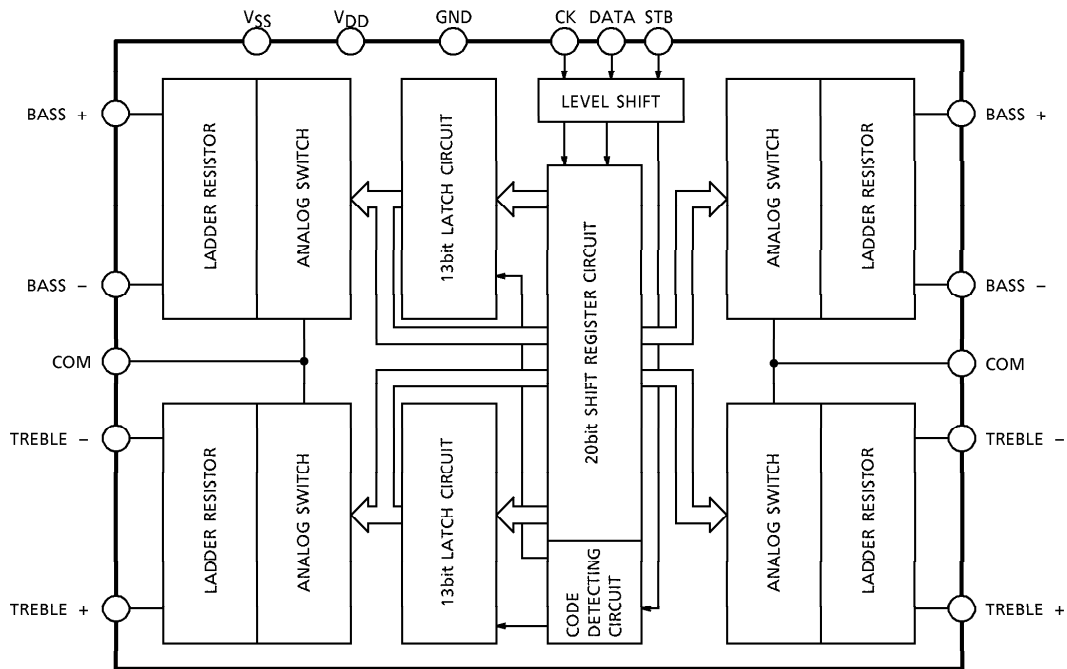
TC9184AP DIP-16pin

### PIN CONNECTION



DIP16-P-300-2.54A

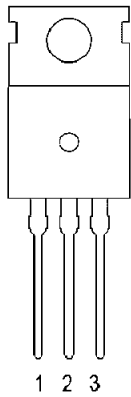
Weight : 1.00g (Typ.)

**TOSHIBA****TC9184AP****BLOCK DIAGRAM**  
TC9184AP**PIN FUNCTION**

PIN No.	SYMBOL	FUNCTION DESCRIPTION	REMARKS
1	V <sub>SS</sub>	Power supply voltage terminals (Analog section)	—
16	V <sub>DD</sub>		
2 / 15	BASS +	Volume terminal 	—
3 / 14	BASS -		
5 / 12	TREBLE -		
6 / 11	TREBLE +		
4 / 13 (—)	COM		
7	GND	GND terminal (Digital section)	—
8	CK	Clock input terminal. Clock input for receiving data from DATA terminal.	<ul style="list-style-type: none"> <li>● CMOS input</li> <li>● Level shift circuit is built in.</li> </ul>
9	DATA	Data input terminal. Input 20bit tone control data by synchronizing to the rise of CK signals.	
10	STB	Strobe input terminal. The tone control data received from DATA and CK terminals are transferred into IC by turning this terminal to "H" level. Previous data are kept stored so long as "H" level is not applied to this terminal.	

3-Terminal 1.5A Negative Adjustment Regulator IC

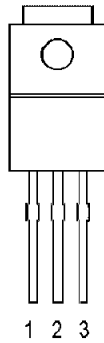
KA337



- 1) Adjustment
- 2) Input
- 3) Output

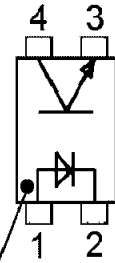
Low Saturation Voltage Type 3-Pin Regulator IC

BA033T



- 1 Vcc
- 2 Ground
- 3 Out

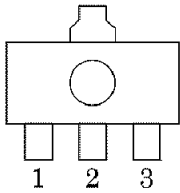
Photocoupler IC  
PC-17T1



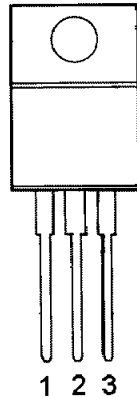
Anode Mark

**POSITIVE REGULATORS VARIOUS STYLES 7805, 7806, 7812, 7815, 7824**

SOT-89

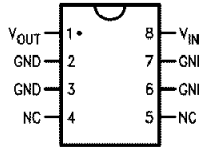


- 1. OUT
- 2. GND
- 3. IN



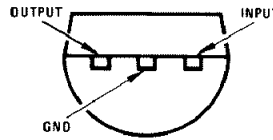
- 1. IN
- 2. GROUND
- 3. OUT

SO-8 Plastic (M)  
(Narrow Body)



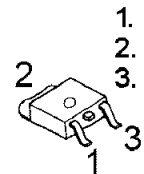
Top View

(TO-92)  
Plastic Package (Z)



Bottom View

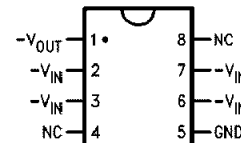
TO-252



- 1. IN
- 2. GRD
- 3. OUT

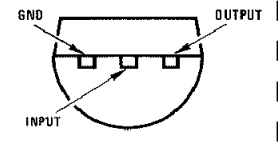
**NEGATIVE REGULATORS VARIOUS STYLES 7905, 7915**

SO-8 Plastic (Narrow Body)

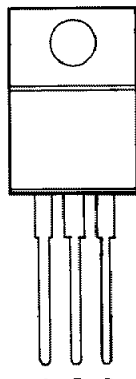


Top View

TO-92 Plastic Package (Z)



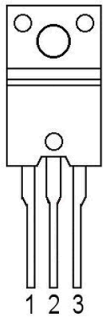
Bottom View



- 1. GROUND
- 2. IN
- 3. OUT

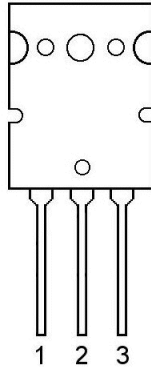
Silicon Transistor

2SA1859 PNP  
2SC4883 NPN



1 Base  
2 Collector  
3 Emitter

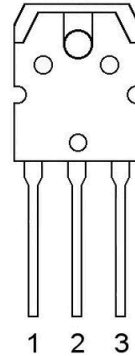
2SA1943  
2SC5200



1 Base  
2 Collector (Heat Sink)  
3 Emitter

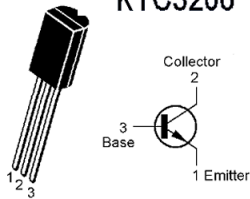
Silicon Transistor

2SA1986, 2SA1941, 2SB1560 PNP  
2SC5198, 2SC5358, 2SD2390 NPN

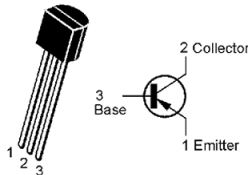


1 Base  
2 Collector (Heat Sink)  
3 Emitter

KTC1027  
KTC3206

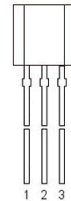


KRC107  
KTA1268  
KTA1266  
KTA1023  
KTA1024



EPITAXIAL PLANAR TRANSISTOR

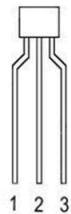
KTC3200  
KTC2874  
KTC3198  
KRA107M PNP  
2SA1145 PNP



1 Emitter  
2 Collector  
3 Base

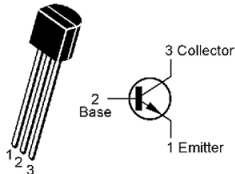
Silicon Transistor

2SA1740S  
2SC1740S  
DTA114TSA  
2SA933AS

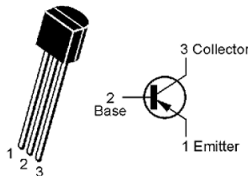


1 Emitter  
2 Collector  
3 Base

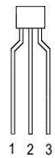
MPSA06



MPSA56

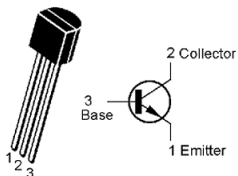


DTA114YSA  
DTC114YSA NPN

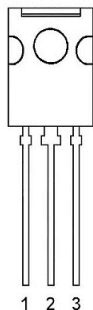


1) Ground  
2) In  
3) Out

KTD1302

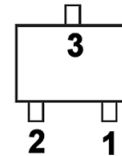


2SA1360  
2SC3423



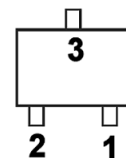
1. EMITTER  
2. COLLECTOR  
3. BASE

KRA107S PNP  
KTD1304 NPN  
KRC110S NPN  
KRC111S NPN  
DTC114TKA NPN  
DTC114YKA NPN



1) Emitter  
2) Base  
3) Collector

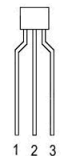
DTA114YKA



1) Ground  
2) In  
3) Out

Silicon NPN Transistor

DTC114TSA



1 Emitter  
2 Collector  
3 Base

2SC4137

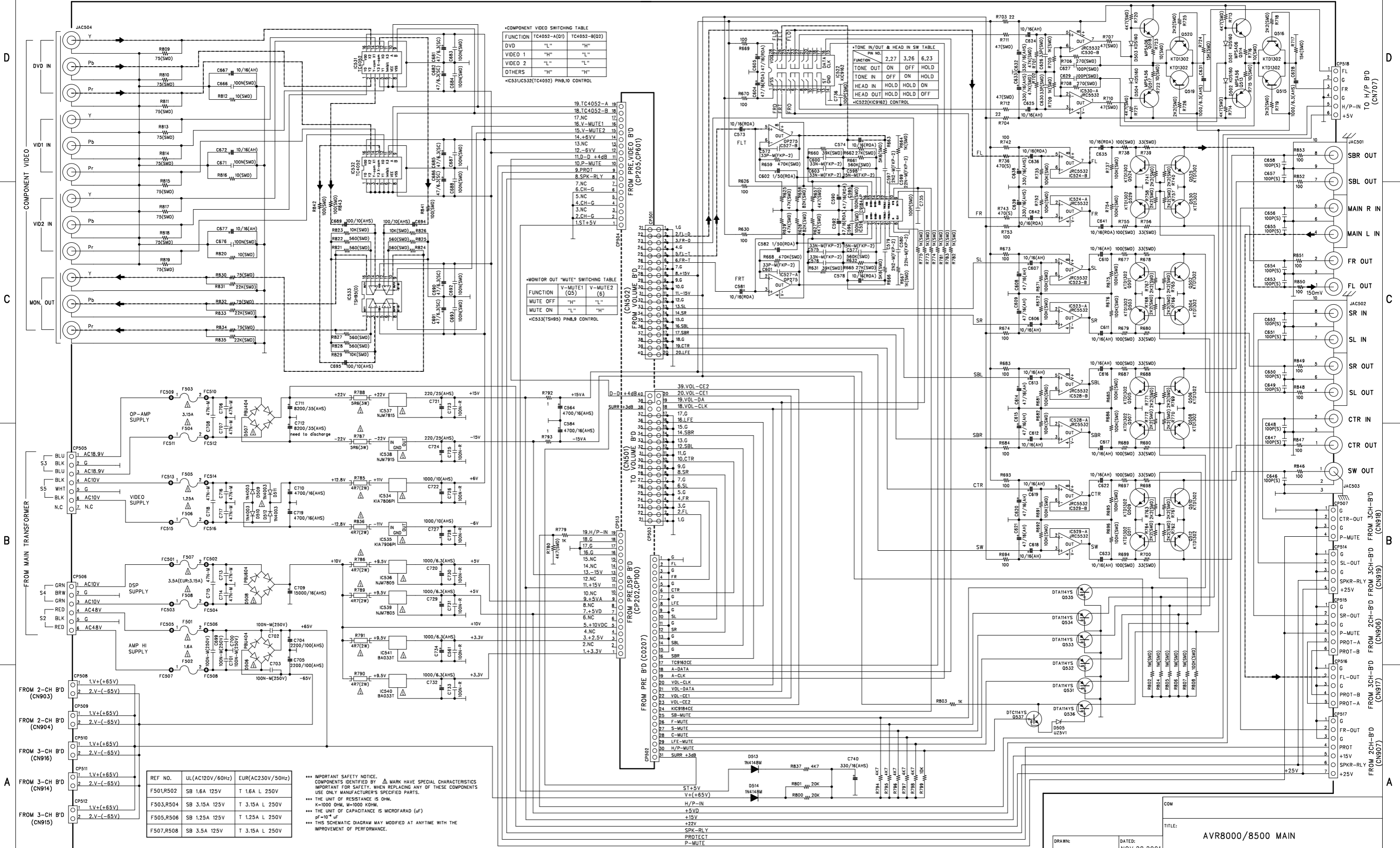


1. Emitter  
2. Collector  
3. Base

# SCHEMATIC DIAGRAM

## harman/kardon AVR8000/8500 MAIN

REVISION RECORD			
LTR	ECD NO:	APPROVED:	DATE:



REF NO.	UL(AC120V/60Hz)	EUR(AC230V/50Hz)
F501,R502	SB 1.6A 125V	T 1.6A L 250V
F503,R504	SB 3.15A 125V	T 3.15A L 250V
F505,R506	SB 1.25A 125V	T 1.25A L 250V
F507,R508	SB 3.5A 125V	T 3.15A L 250V

\*\*\* IMPORTANT SAFETY NOTICE: COMPONENTS IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

\*\*\* THE UNIT OF RESISTANCE IS OHM.

K=1000 OHM, M=1000 KOHM.

\*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD ( $\mu$ F)

pF=10<sup>-12</sup> F

\*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE IMPROVEMENT OF PERFORMANCE.

COMPONENT VIDEO SWITCHING TABLE

FUNCTION	TC4052-A(Q1)	TC4052-B(Q2)
DVD	"L"	"H"
VIDEO 1	"H"	"L"
VIDEO 2	"L"	"L"
OTHERS	"H"	"H"

\*IC531,IC532(TC4052) PIN10,9 CONTROL

MONITOR OUT "MUTE" SWITCHING TABLE

FUNCTION	V-MUTE1 (Q5)	V-MUTE2 (Q6)
MUTE OFF	"H"	"L"
MUTE ON	"L"	"H"

\*IC533(T5H85) PIN8,9 CONTROL

IC522(KIC9162) CONTROL

FUNCTION	2,27	3,26	6,23
TO NE IN/OUT & HEAD IN SW TABLE	ON	OFF	HOLD
TO NE IN	OFF	ON	HOLD
TO NE OUT	ON	OFF	HOLD
TO HEAD IN	HOLD	HOLD	ON
TO HEAD OUT	HOLD	HOLD	OFF

TO VOLUME B'D (CN501)

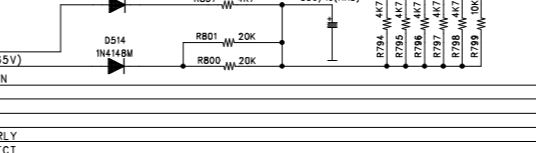
FROM PRE-DSP B'D (CP202,CP100)	TO VOLUME B'D (CN501)
19. H/P-IN	19. 39.VOL-CE2
20. H/P-IN	20. 20.VOL-CE1
21. H/P-IN	21. 19.VOL-DA
22. H/P-IN	22. 18.VOL-CLK
23. H/P-IN	23. 17.G
24. H/P-IN	24. 16.LFE
25. H/P-IN	25. 15.G
26. H/P-IN	26. 14.SBR
27. H/P-IN	27. 13.G
28. H/P-IN	28. 12.SBL
29. H/P-IN	29. 11.G
30. H/P-IN	30. 10.CTR
31. H/P-IN	31. 9.G
32. H/P-IN	32. 8.SR
33. H/P-IN	33. 7.G
34. H/P-IN	34. 6.SL
35. H/P-IN	35. 5.G
36. H/P-IN	36. 4.FR
37. H/P-IN	37. 3.G
38. H/P-IN	38. 2.FL
39. H/P-IN	39. 1.G

FROM PRE-DSP B'D (CP202,CP100)

FROM PRE-DSP B'D (CP202,CP100)	TO VOLUME B'D (CN501)
19. H/P-IN	19. 39.VOL-CE2
20. H/P-IN	20. 20.VOL-CE1
21. H/P-IN	21. 19.VOL-DA
22. H/P-IN	22. 18.VOL-CLK
23. H/P-IN	23. 17.G
24. H/P-IN	24. 16.LFE
25. H/P-IN	25. 15.G
26. H/P-IN	26. 14.SBR
27. H/P-IN	27. 13.G
28. H/P-IN	28. 12.SBL
29. H/P-IN	29. 11.G
30. H/P-IN	30. 10.CTR
31. H/P-IN	31. 9.G
32. H/P-IN	32. 8.SR
33. H/P-IN	33. 7.G
34. H/P-IN	34. 6.SL
35. H/P-IN	35. 5.G
36. H/P-IN	36. 4.FR
37. H/P-IN	37. 3.G
38. H/P-IN	38. 2.FL
39. H/P-IN	39. 1.G

FROM PRE B'D (C0207)

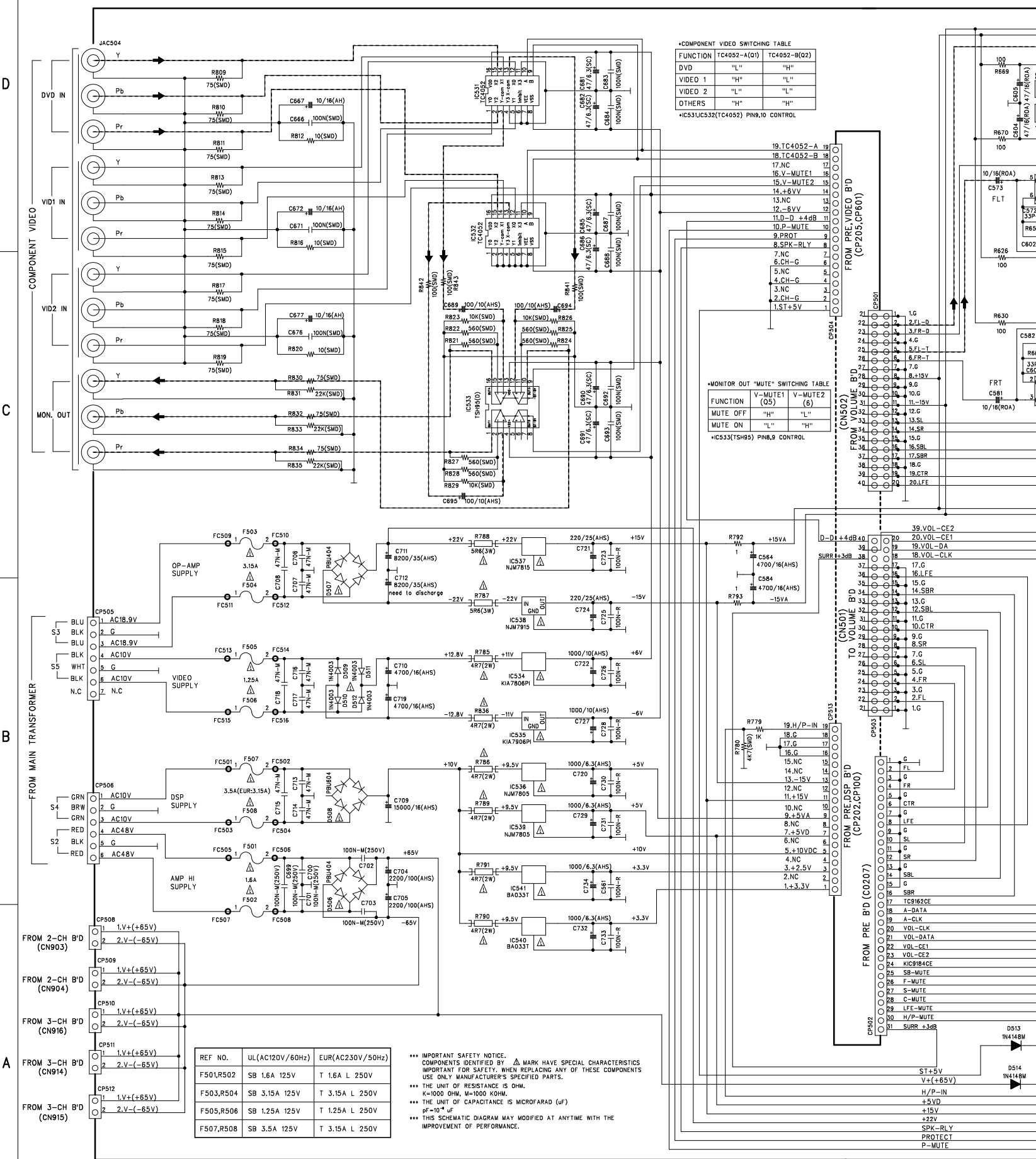
FROM PRE B'D (C0207)	TO VOLUME B'D (CN501)
1. G	1. G
2. FL	2. FL
3. FR	3. FR
4. CTR	4. CTR
5. LFE	5. LFE
6. SBR	6. SBR
7. SBL	7. SBL
8. SR	8. SR
9. SL	9. SL
10. SBL	10. SBL
11. G	11. G
12. SBR	12. SBR
13. A-DATA	13. A-DATA
14. A-CLK	14. A-CLK
15. VOL-CLK	15. VOL-CLK
16. VOL-DATA	16. VOL-DATA
17. VOL-CE1	17. VOL-CE1
18. VOL-CE2	18. VOL-CE2
19. KIC9162CE	19. KIC9162CE
20. SB-MUTE	20. SB-MUTE
21. F-MUTE	21. F-MUTE
22. S-MUTE	22. S-MUTE
23. C-MUTE	23. C-MUTE
24. LFE-MUTE	24. LFE-MUTE
25. H/P-MUTE	25. H/P-MUTE
26. SURR +3dB	26. SURR +3dB



REVISION RECORD:  
R846/R853:ADDED NEW(for EMC)--MAR.20.02

DRAWN:		DATED: NOV.28.2001		TITLE: AVR8000/8500 MAIN	
CHECKED:		DATED: MAR.08.2002		CODE:	SIZE:
QUALITY CONTROL:		DATED:		DRAWING NO: 55145660XX	
RELEASED:		DATED: MAR.20.2002		STAGE: MP	REV: A
				TOTAL SHEET: 5 OF 11	





•COMPONENT VIDEO SWITCHING TABLE

FUNCTION	TC4052-A(O1)	TC4052-B(O2)
DVD	"L"	"H"
VIDEO 1	"H"	"L"
VIDEO 2	"L"	"L"
OTHERS	"H"	"H"

•IC531,IC532(TC4052) PIN9,10 CONTROL

•MONITOR OUT "MUTE" SWITCHING TABLE

FUNCTION	V-MUTE1 (O5)	V-MUTE2 (O6)
MUTE OFF	"H"	"L"
MUTE ON	"L"	"H"

•IC533(T5H95) PIN8,9 CONTROL

REF. NO.	UL(AC120V/60Hz)	EUR(AC230V/50Hz)
F501,R502	SB 1.6A 125V	T 1.6A L 250V
F503,R504	SB 3.15A 125V	T 3.15A L 250V
F505,R506	SB 1.25A 125V	T 1.25A L 250V
F507,R508	SB 3.5A 125V	T 3.15A L 250V

\*\*\* IMPORTANT SAFETY NOTICE. COMPONENTS IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

\*\*\* THE UNIT OF RESISTANCE IS OHM. K=1000 OHM, M=1000 KOHM.

\*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD ( $\mu$ F)

\*\*\*  $\mu$ F=10<sup>-6</sup> F

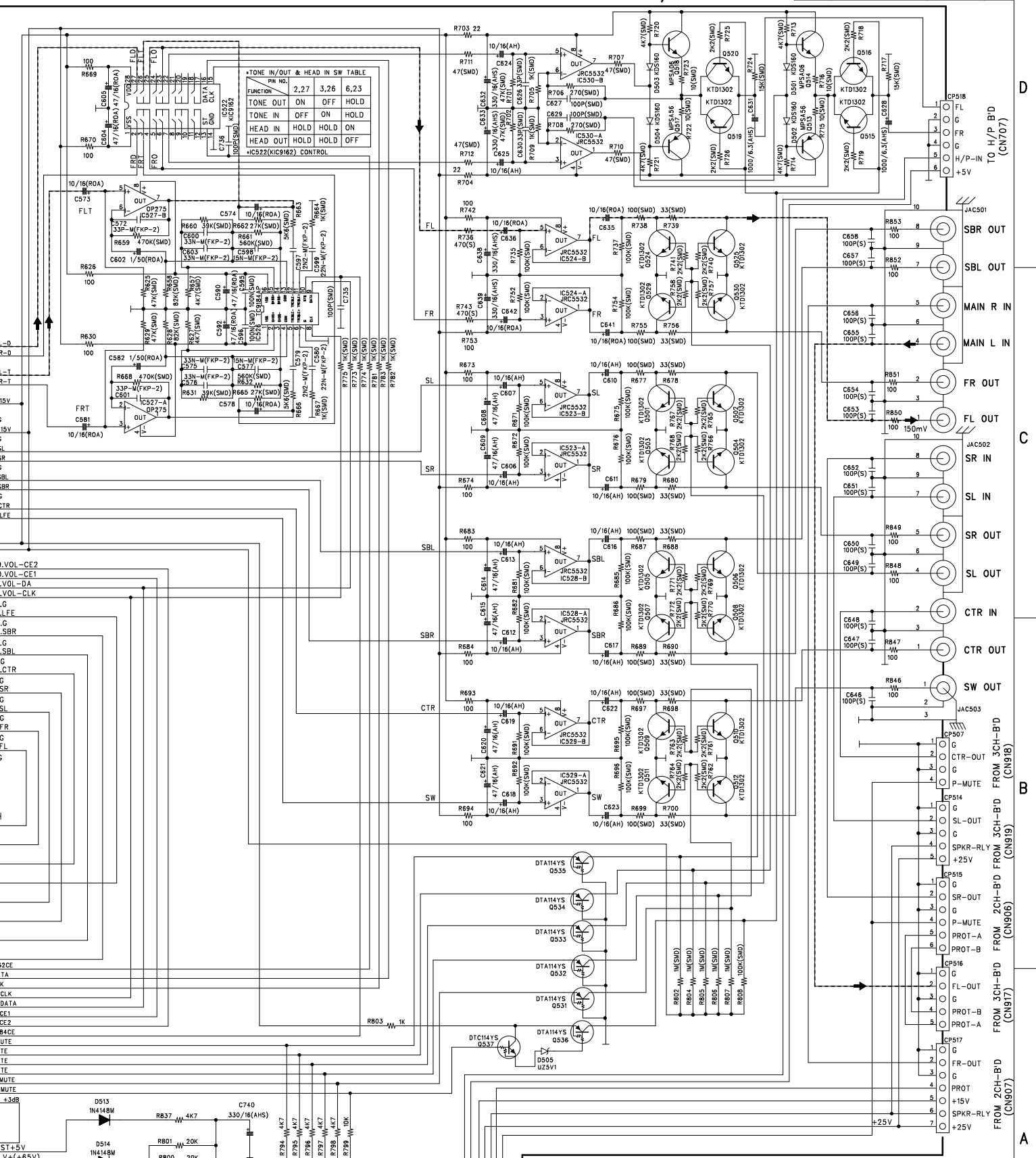
\*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE IMPROVEMENT OF PERFORMANCE.

REVISION RECORD:  
R846~R853:ADDED NEW(for EMC)--MAR.20.02

# IC DIAGRAM

## harman/kardon AVR8000/8500 MAIN

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



TONE IN/OUT & HEAD IN SW TABLE	FNK NO.	2, 27	3, 26	6, 23
FUNCTION				
TONE OUT		ON	OFF	HOLD
TONE IN		OFF	ON	HOLD
HEAD IN		HOLD	HOLD	ON
HEAD OUT		HOLD	HOLD	OFF

IC522(KIC9162) CONTROL

- VOL-CE2
- VOL-CE1
- VOL-DA
- VOL-CLK
- LEE
- SBR
- SBL
- CTR
- SR
- SL
- SW
- DTA114YS 0535
- DTA114YS 0534
- DTA114YS 0533
- DTA114YS 0532
- DTA114YS 0531
- DTC114YS 0537
- D505 UZSV1
- D513 IN4148M
- D514 IN4148M
- R837 4K7
- C740 330/16(AHS)
- R801 20K
- R800 20K
- R794 4K7
- R795 4K7
- R796 4K7
- R797 4K7
- R798 4K7
- R799 10K

- JAC501
- SBR OUT
- SBL OUT
- MAIN R IN
- MAIN L IN
- FR OUT
- FL OUT
- SR IN
- SL IN
- SR OUT
- SL OUT
- CTR IN
- CTR OUT
- SW OUT
- JAC502
- JAC503
- CP507
- CTR-OUT
- P-MUTE
- CP514
- SL-OUT
- SPKR-RLY
- CP515
- SR-OUT
- P-MUTE
- PROT-A
- PROT-B
- CP516
- FL-OUT
- PROT-A
- PROT-B
- CP517
- FR-OUT
- PROT
- PROT
- SPKR-RLY

COMPANY: harman/kardon

TITLE: AVR8000/8500 MAIN

DRAWN: [ ] DATED: NOV.28.2001

CHECKED: [ ] DATED: MAR.08.2002

QUALITY CONTROL: [ ] DATED: [ ]

RELEASED: [ ] DATED: MAR.20.2002

CODE: [ ] SIZE: [ ] DRAWING NO: 55145660XX

REV: A

STAGE: MP

TOTAL SHEET: 5 OF 11

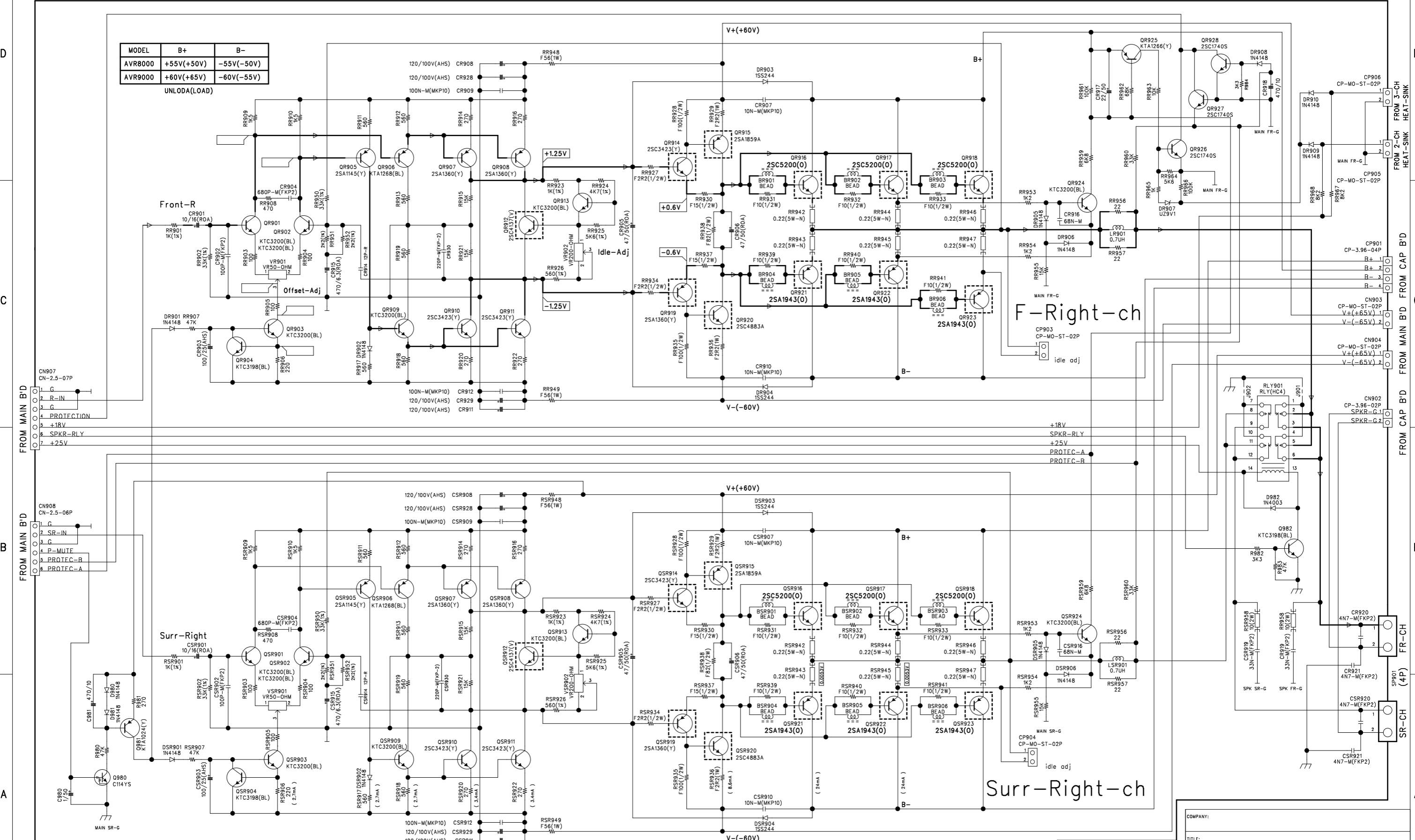
# SCHEMATIC DIAGRAM

harman/kardon  
AVR8000/9000 2CHAMP

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

MODEL	B+	B-
AVR8000	+55V(+50V)	-55V(-50V)
AVR9000	+60V(+65V)	-60V(-55V)

UNLODA(LOAD)



MODEL	RR951/RSR951
AVR9000	1K(1x)
AVR9000	1K2(1x)

COMPANY:			
TITLE: AVR8000/9000 2CH AMP			
DRAWN: KIM YANG GYOO	DATED: NOV.28.2001	CODE:	SIZE:
CHECKED:	DATED:	DRAWING NO: 55145610XX	REV: A
QUALITY CONTROL:	DATED:	STAGE: MP	TOTAL SHEET: 9 OF 11
RELEASED:	DATED:		

MODEL	B+	B-
AVR8000	+55V(+50V)	-55V(-50V)
AVR9000	+60V(+65V)	-60V(-55V)

UNLODA(LOAD)

D

C

B

A

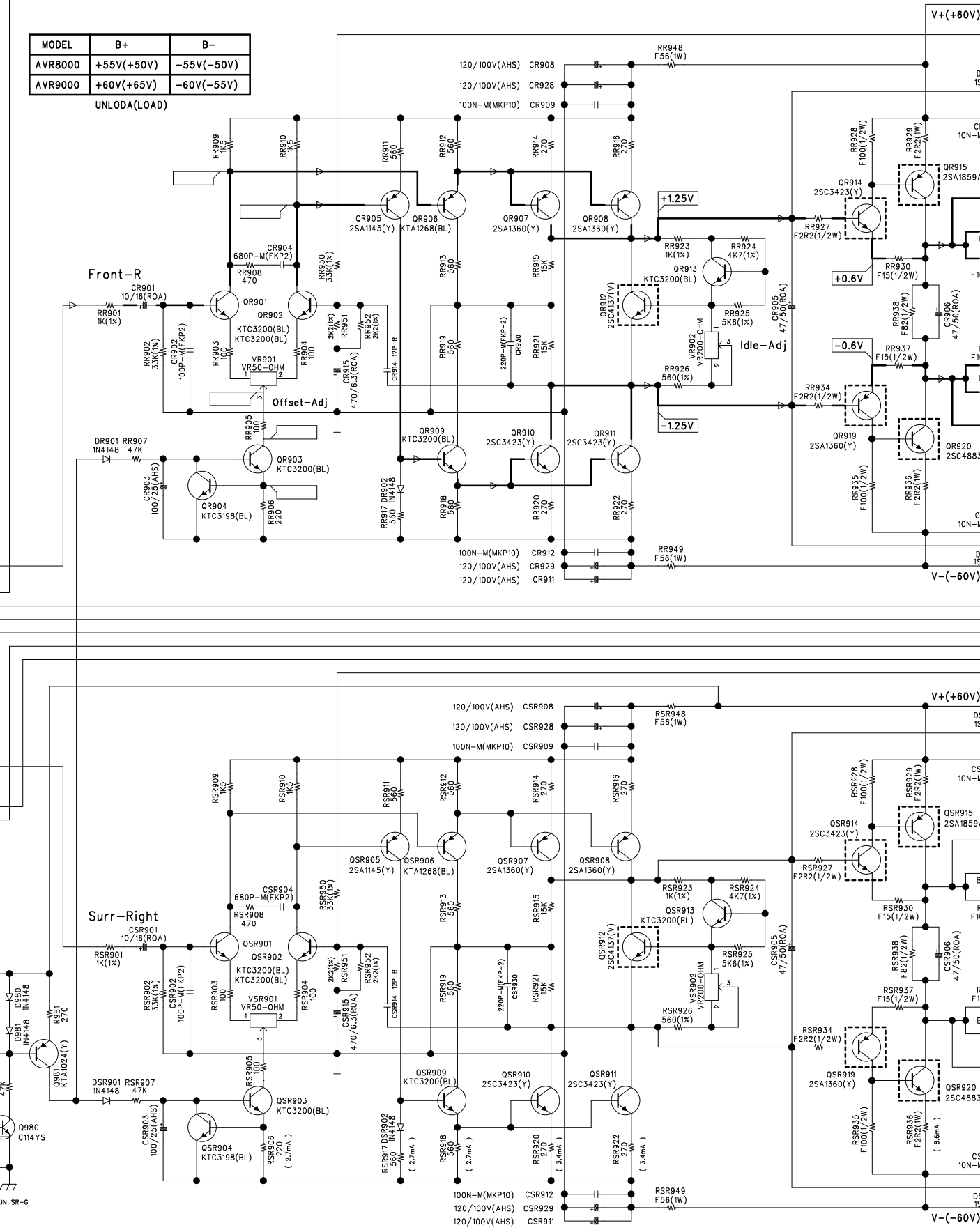
- FROM MAIN B'D
- 1 G
  - 2 R-IN
  - 3 G
  - 4 PROTECTION
  - 5 +18V
  - 6 SPKR-RLY
  - 7 +25V

- FROM MAIN B'D
- 1 G
  - 2 SR-IN
  - 3 G
  - 4 P-MUTE
  - 5 PROTEC-B
  - 6 PROTEC-A

MAIN SR-C

C980 1/50  
C981 470/10  
C982 10K  
C983 10K  
C984 10K  
C985 10K  
C986 10K  
C987 10K  
C988 10K  
C989 10K  
C990 10K  
C991 10K  
C992 10K  
C993 10K  
C994 10K  
C995 10K  
C996 10K  
C997 10K  
C998 10K  
C999 10K  
C1000 10K

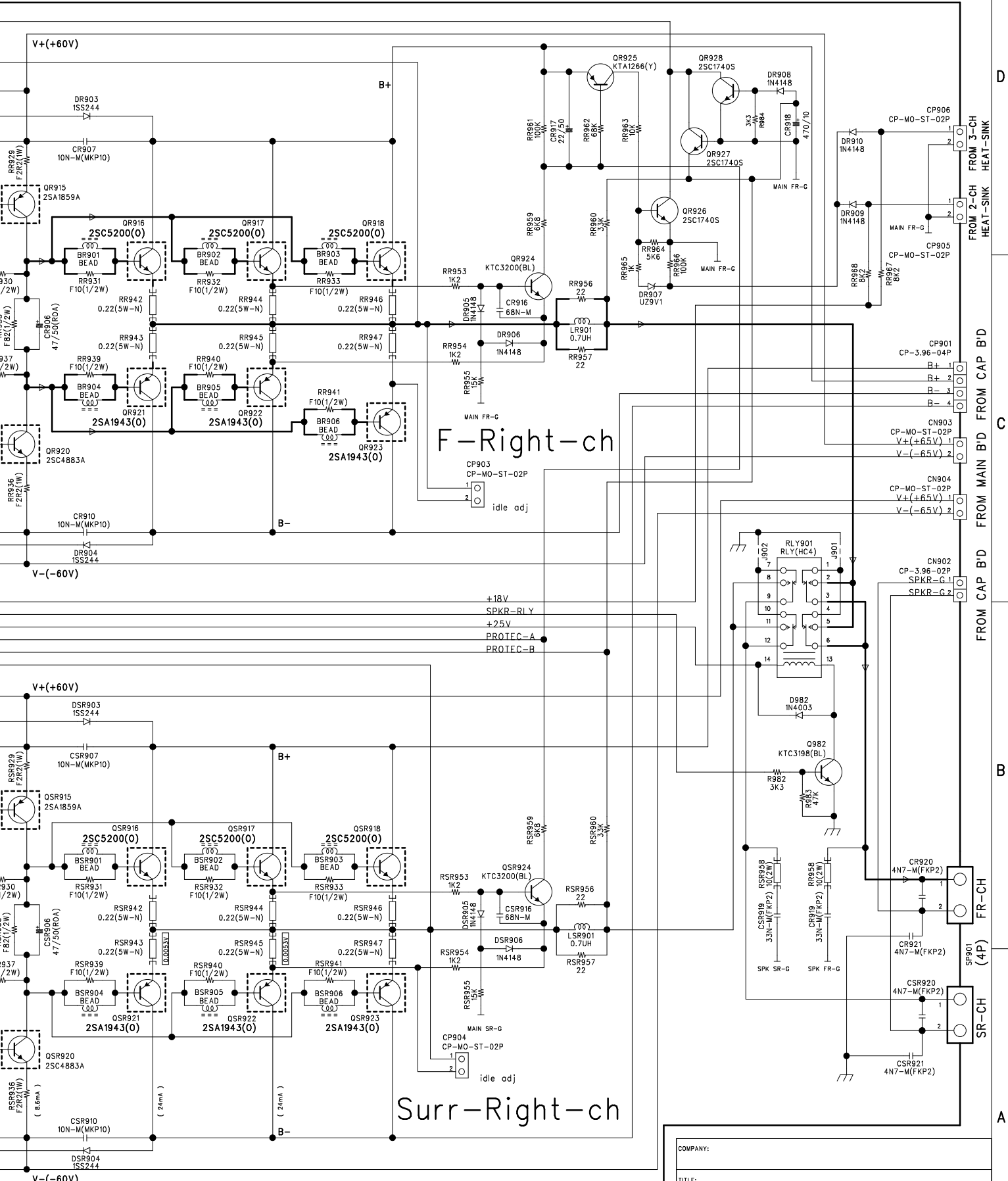
MODEL	RR951/RSR951
AVR9000	1K(1x)
AVR9000	1K2(1x)



# GRAM

## harman/kardon AVR8000/9000 2CHAMP

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY:			
TITLE: <b>AVR8000/9000 2CH AMP</b>			
DRAWN: <b>KIM YANG GYOO</b>	DATED: <b>NOV.28.2001</b>	CODE:	REV: <b>A</b>
CHECKED:	DATED:	SIZE:	DRAWING NO: <b>55145610XX</b>
QUALITY CONTROL:	DATED:	STAGE: MP	TOTAL SHEET: 9 OF 11
RELEASED:	DATED:		

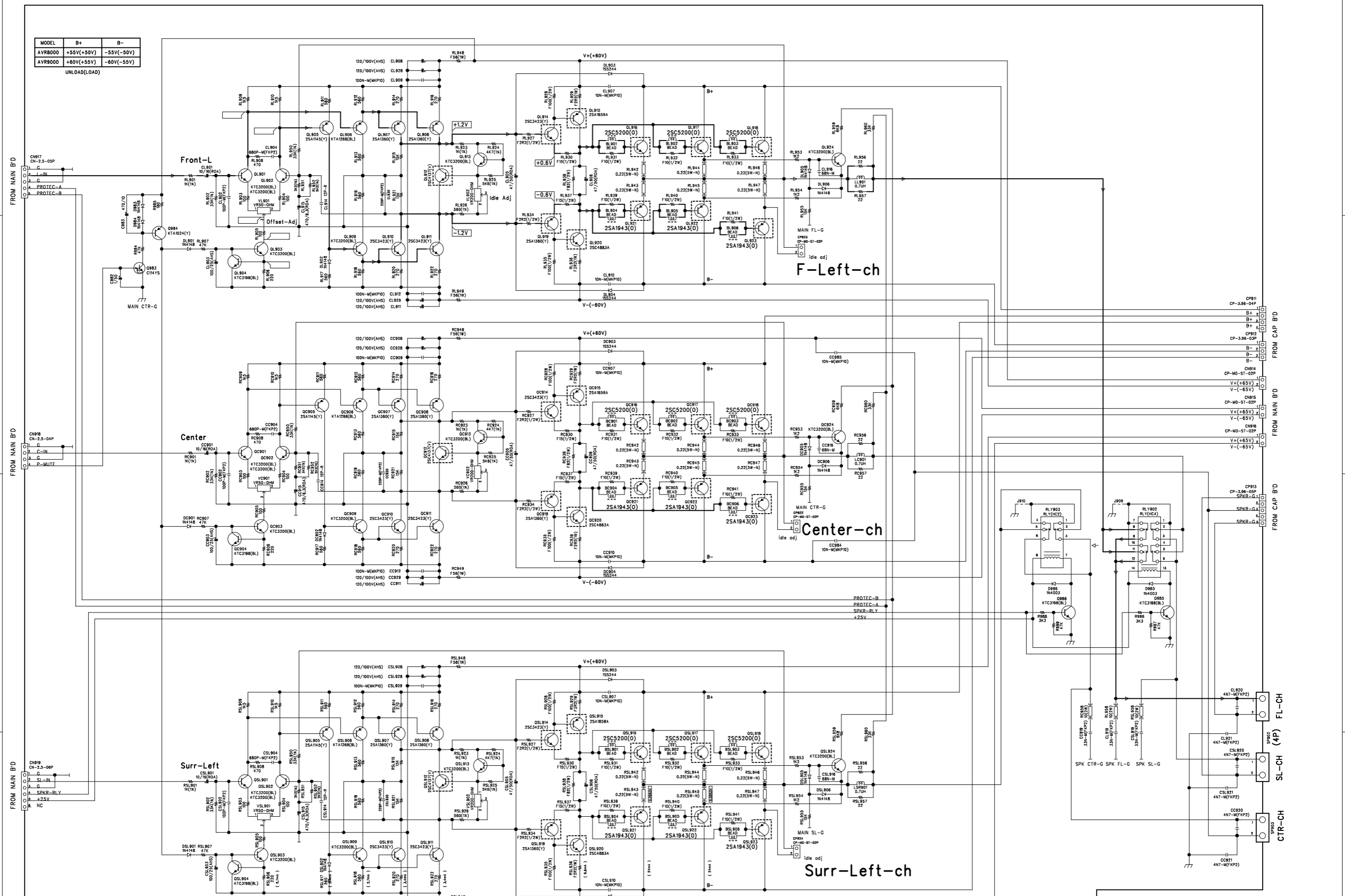
REVISION RECORD			
TR	ECO NO.	APPROVED	DATE

harman/kardon  
AVR8000/9000 3CH AMP

# SCHEMATIC DIAGRAM

MODEL	B+	B-
AVR8000	+55V(+50V)	-55V(-50V)
AVR9000	+60V(+55V)	-60V(-55V)

UNLOAD(LOAD)



FROM MAIN BD  
FROM MAIN BD  
FROM MAIN BD  
FROM MAIN BD  
FROM MAIN BD

CP911 CP-3.96-04P  
CP912 CP-3.96-03P  
CP913 CP-3.96-06P  
CP914 CP-MO-ST-02P  
CP915 CP-MO-ST-02P  
CP916 CP-MO-ST-02P  
CP917 CP-3.96-04P  
CP918 CP-3.96-03P  
CP919 CP-3.96-06P  
CP920 CP-3.96-04P  
CP921 CP-3.96-03P  
CP922 CP-3.96-06P  
CP923 CP-3.96-04P  
CP924 CP-3.96-03P  
CP925 CP-3.96-06P  
CP926 CP-3.96-04P  
CP927 CP-3.96-03P  
CP928 CP-3.96-06P  
CP929 CP-3.96-04P  
CP930 CP-3.96-03P  
CP931 CP-3.96-06P  
CP932 CP-3.96-04P  
CP933 CP-3.96-03P  
CP934 CP-3.96-06P  
CP935 CP-3.96-04P  
CP936 CP-3.96-03P  
CP937 CP-3.96-06P  
CP938 CP-3.96-04P  
CP939 CP-3.96-03P  
CP940 CP-3.96-06P  
CP941 CP-3.96-04P  
CP942 CP-3.96-03P  
CP943 CP-3.96-06P  
CP944 CP-3.96-04P  
CP945 CP-3.96-03P  
CP946 CP-3.96-06P  
CP947 CP-3.96-04P  
CP948 CP-3.96-03P  
CP949 CP-3.96-06P  
CP950 CP-3.96-04P  
CP951 CP-3.96-03P  
CP952 CP-3.96-06P  
CP953 CP-3.96-04P  
CP954 CP-3.96-03P  
CP955 CP-3.96-06P  
CP956 CP-3.96-04P  
CP957 CP-3.96-03P  
CP958 CP-3.96-06P  
CP959 CP-3.96-04P  
CP960 CP-3.96-03P  
CP961 CP-3.96-06P  
CP962 CP-3.96-04P  
CP963 CP-3.96-03P  
CP964 CP-3.96-06P  
CP965 CP-3.96-04P  
CP966 CP-3.96-03P  
CP967 CP-3.96-06P  
CP968 CP-3.96-04P  
CP969 CP-3.96-03P  
CP970 CP-3.96-06P  
CP971 CP-3.96-04P  
CP972 CP-3.96-03P  
CP973 CP-3.96-06P  
CP974 CP-3.96-04P  
CP975 CP-3.96-03P  
CP976 CP-3.96-06P  
CP977 CP-3.96-04P  
CP978 CP-3.96-03P  
CP979 CP-3.96-06P  
CP980 CP-3.96-04P  
CP981 CP-3.96-03P  
CP982 CP-3.96-06P  
CP983 CP-3.96-04P  
CP984 CP-3.96-03P  
CP985 CP-3.96-06P  
CP986 CP-3.96-04P  
CP987 CP-3.96-03P  
CP988 CP-3.96-06P  
CP989 CP-3.96-04P  
CP990 CP-3.96-03P  
CP991 CP-3.96-06P  
CP992 CP-3.96-04P  
CP993 CP-3.96-03P  
CP994 CP-3.96-06P  
CP995 CP-3.96-04P  
CP996 CP-3.96-03P  
CP997 CP-3.96-06P  
CP998 CP-3.96-04P  
CP999 CP-3.96-03P  
CP1000 CP-3.96-06P

MODEL	RL951/RC951/RSL951
AVR8000	K1(1x)
AVR9000	K2(1x)

COMPANY:		TITLE: AVR800/9000 3CH AMP	
DRAWN: KIM YANG GYOO	DATE: NOV.28.2001	CODE:	SIZE:
CHECKED:	DATE:	DRAWING NO: 55145620X	REV: A
QUALITY CONTROL:	DATE:	STAGE: MP	TOTAL SHEET: 10 OF 11
RELEASED:	DATE:		

MODEL	B+	B-
AVR8000	+55V(+50V)	-55V(-50V)
AVR9000	+60V(+55V)	-60V(-55V)

UNLOAD(LOAD)

FROM MAIN BD

FROM MAIN BD

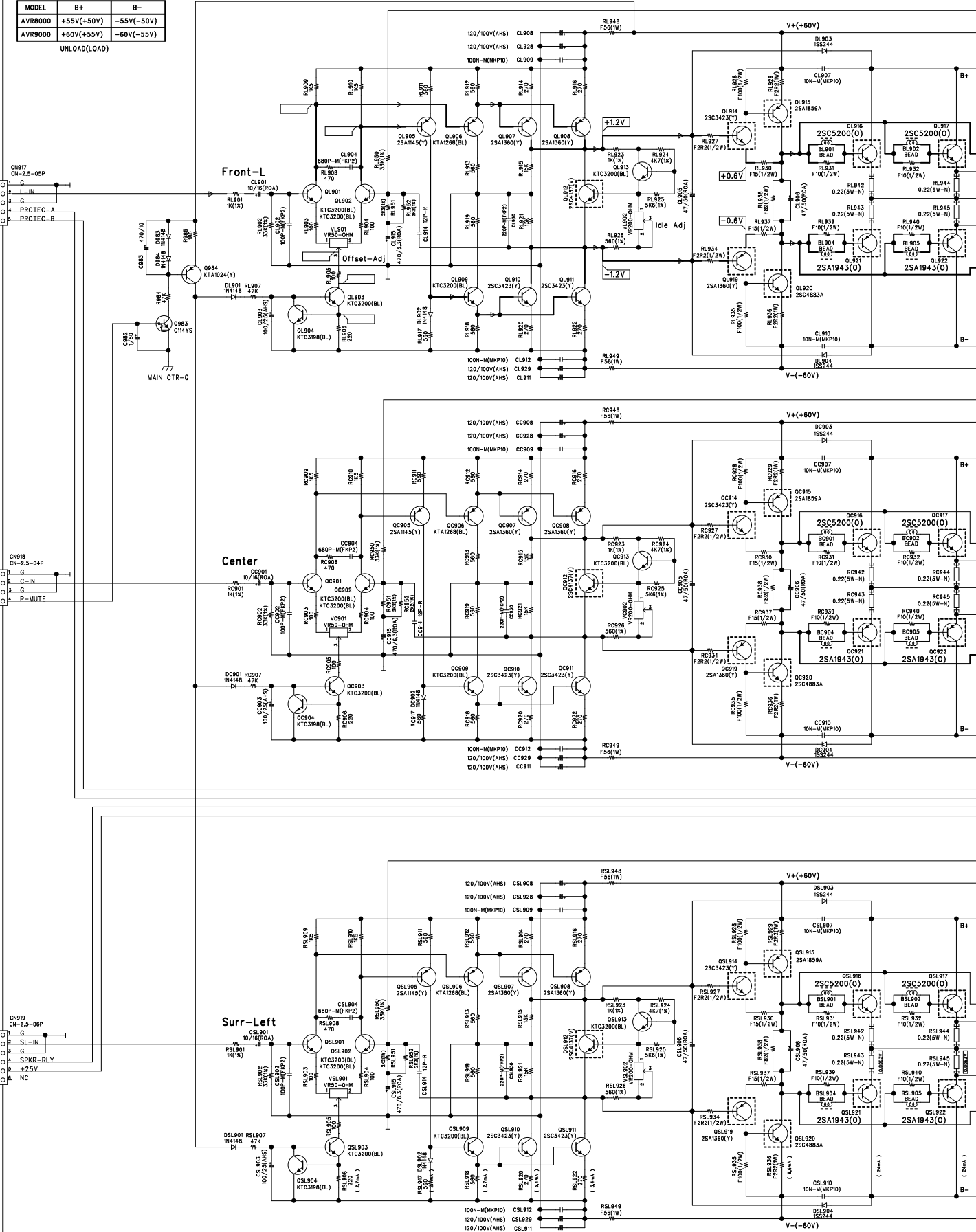
FROM MAIN BD

Front-L

Center

Surr-Left

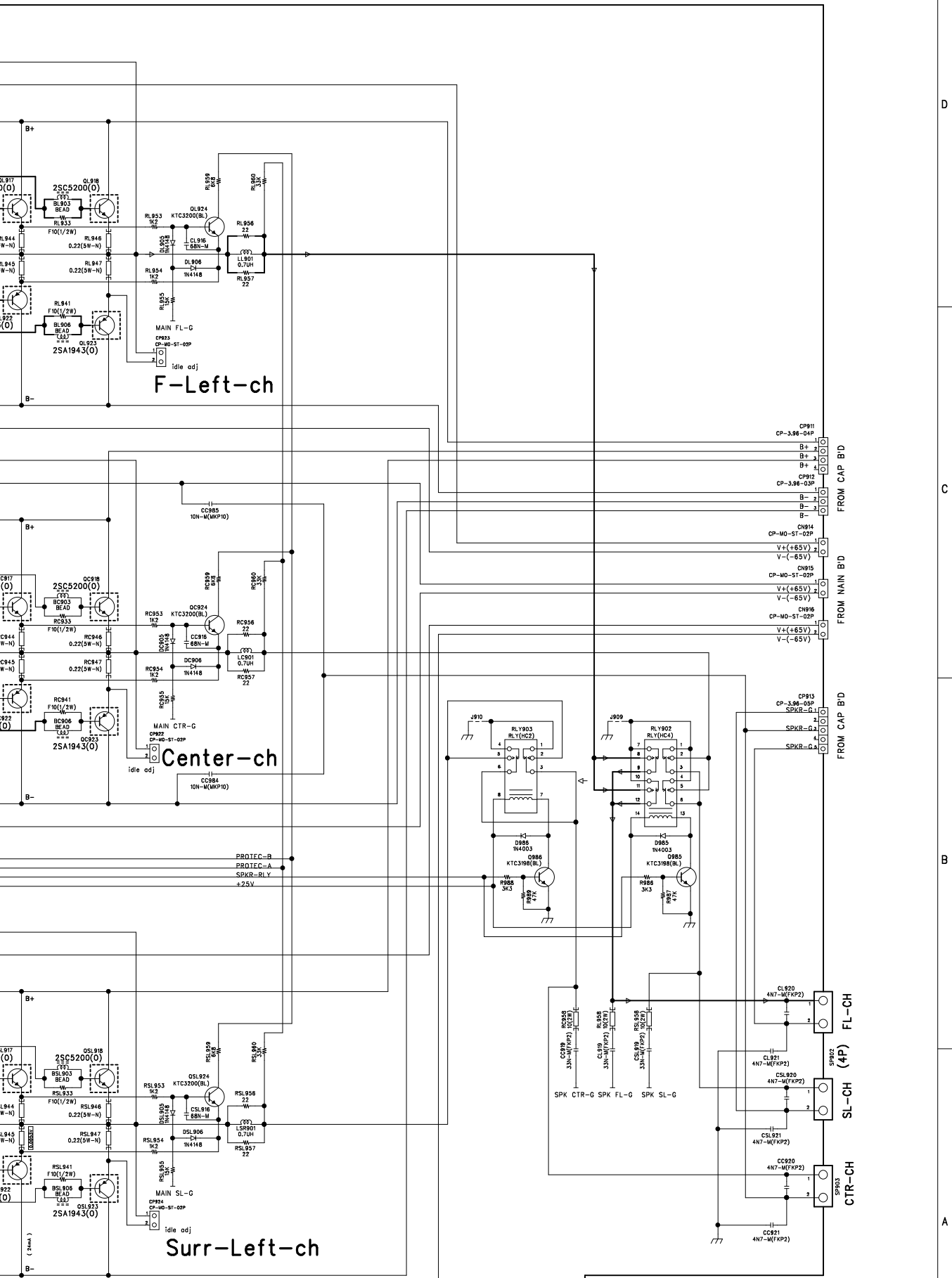
MODEL	RL951/RC951/RSL951
AVR8000	1K(1K)
AVR9000	1K2(1K)



# harman/kardon AVR8000/9000 3CH AMP

REVISION RECORD			
LT#	ECC NO.	APPROVED:	DATE:

AM



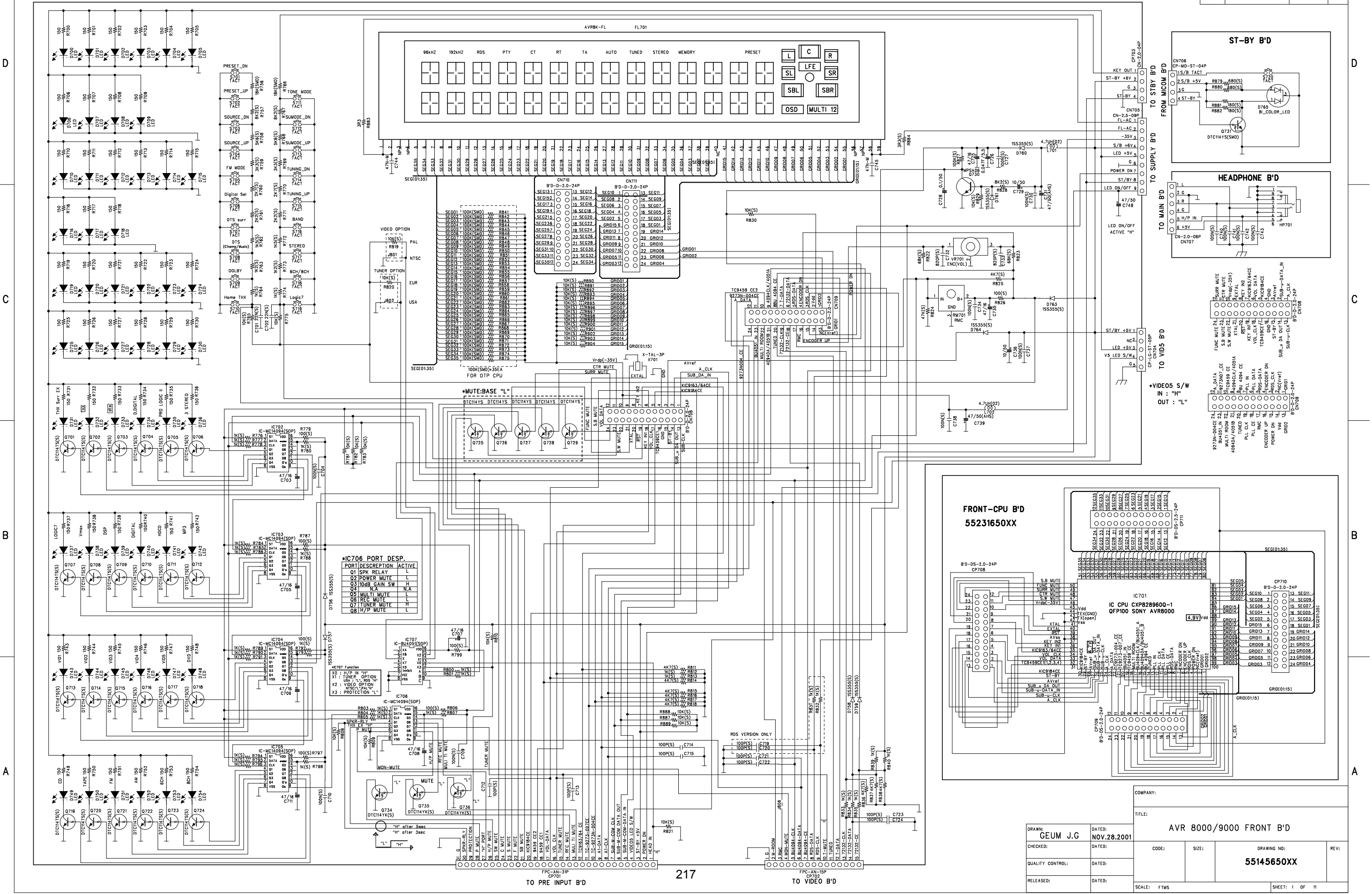
DRAWN:		DATED: NOV.28.2001		COMPANY:		TITLE:	
CHECKED:		DATED:		AVR800/9000 3CH AMP			
QUALITY CONTROL:		DATED:		CODE:	SIZE:	DRAWING NO:	REV:
RELEASED:		DATED:				55145620X	A
STAGE: NP				TOTAL SHEET: 10 OF 11			



# SCHEMATIC DIAGRAM

harman/kardon  
AVR8000/9000 FRONT

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



**\*IC706 PORT DESP.**

PORT DESCRIPTION	ACTIVE
Q1 SPK RELAY	L
Q2 POWER MUTE	L
Q3 10dB GAIN SW	H
Q4 MULTI MUTE	N.A.
Q5 REC MUTE	L
Q6 TUNER MUTE	H
Q7 TUNER MUTE	H
Q8 H/P MUTE	L

**\*IC707 Function**

X0	X1	X2	X3
H/P IN	TUNER OPTION	RDS	VIDEO OPTION
NTSC	PAL	NTSC	PAL
PROTECTION			

DRAWN: GEUM J.G	DATED: NOV.28.2001
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED:

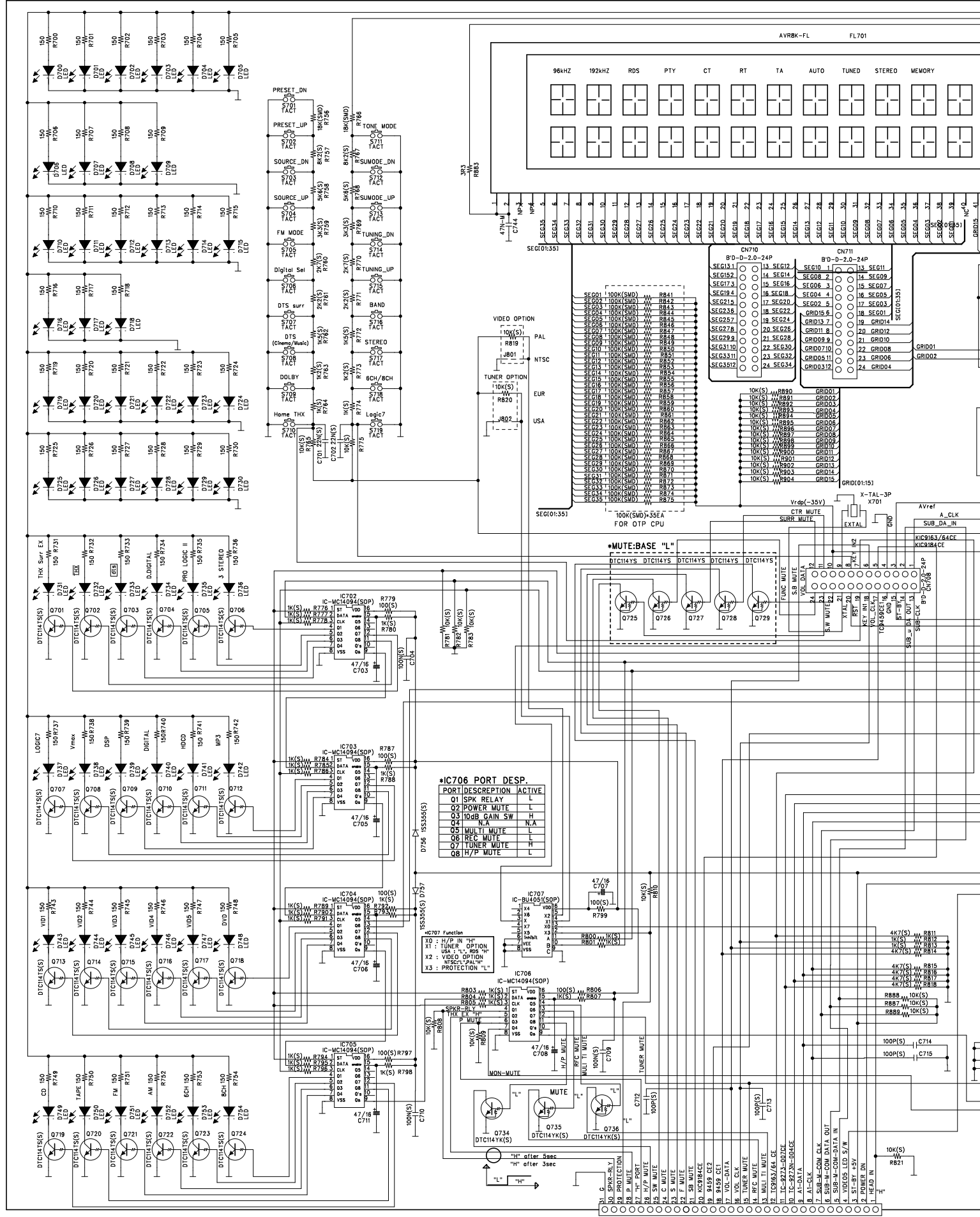
COMPANY: AVR 8000/9000 FRONT B'D		DRAWING NO: 55145650XX	
TITLE:	CODE:	SIZE:	REV:
SCALE: FTMS			
SHEET: 1 OF 11			

D

C

B

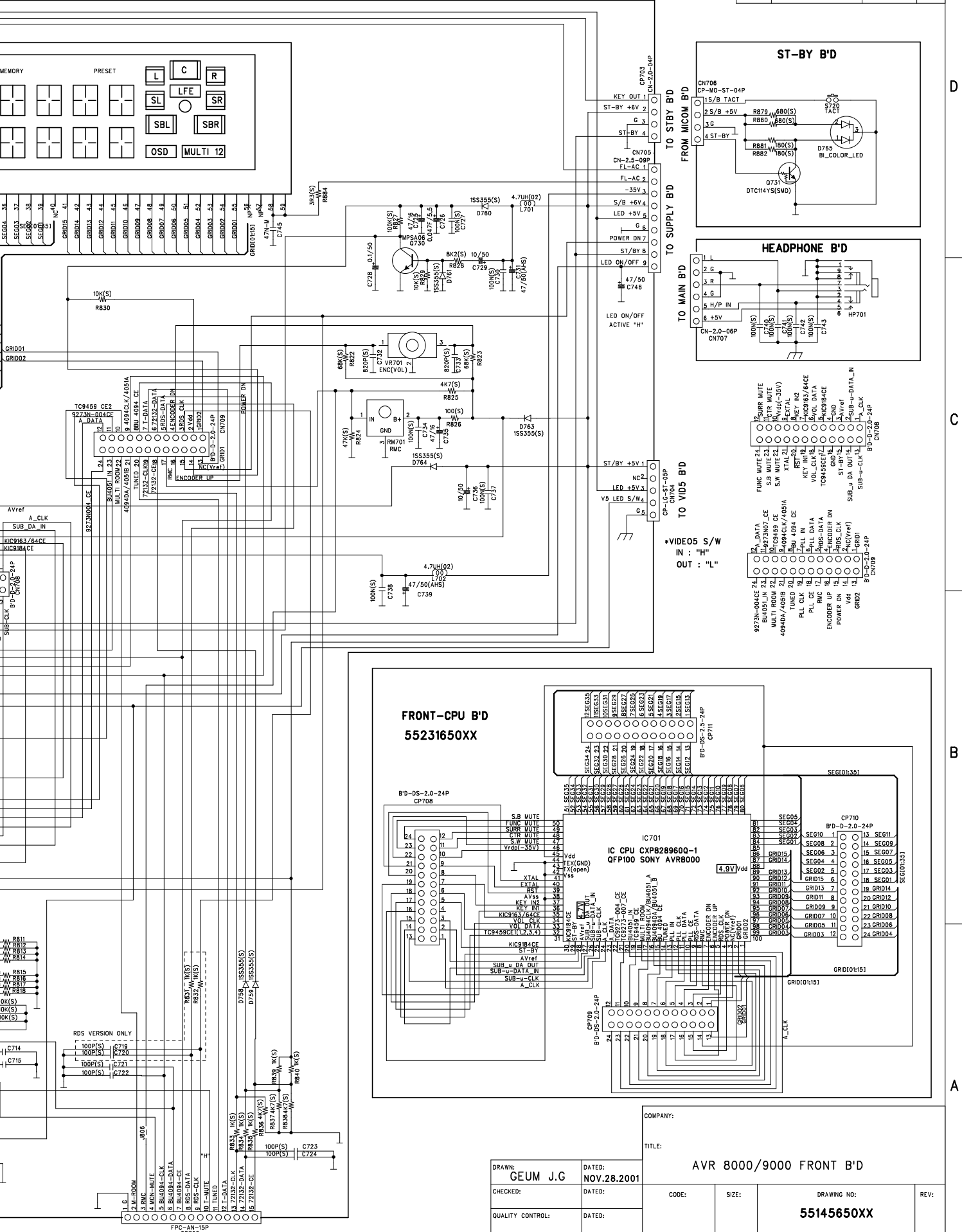
A



# DIAGRAM

harman/kardon  
AVR8000/9000 FRONT

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



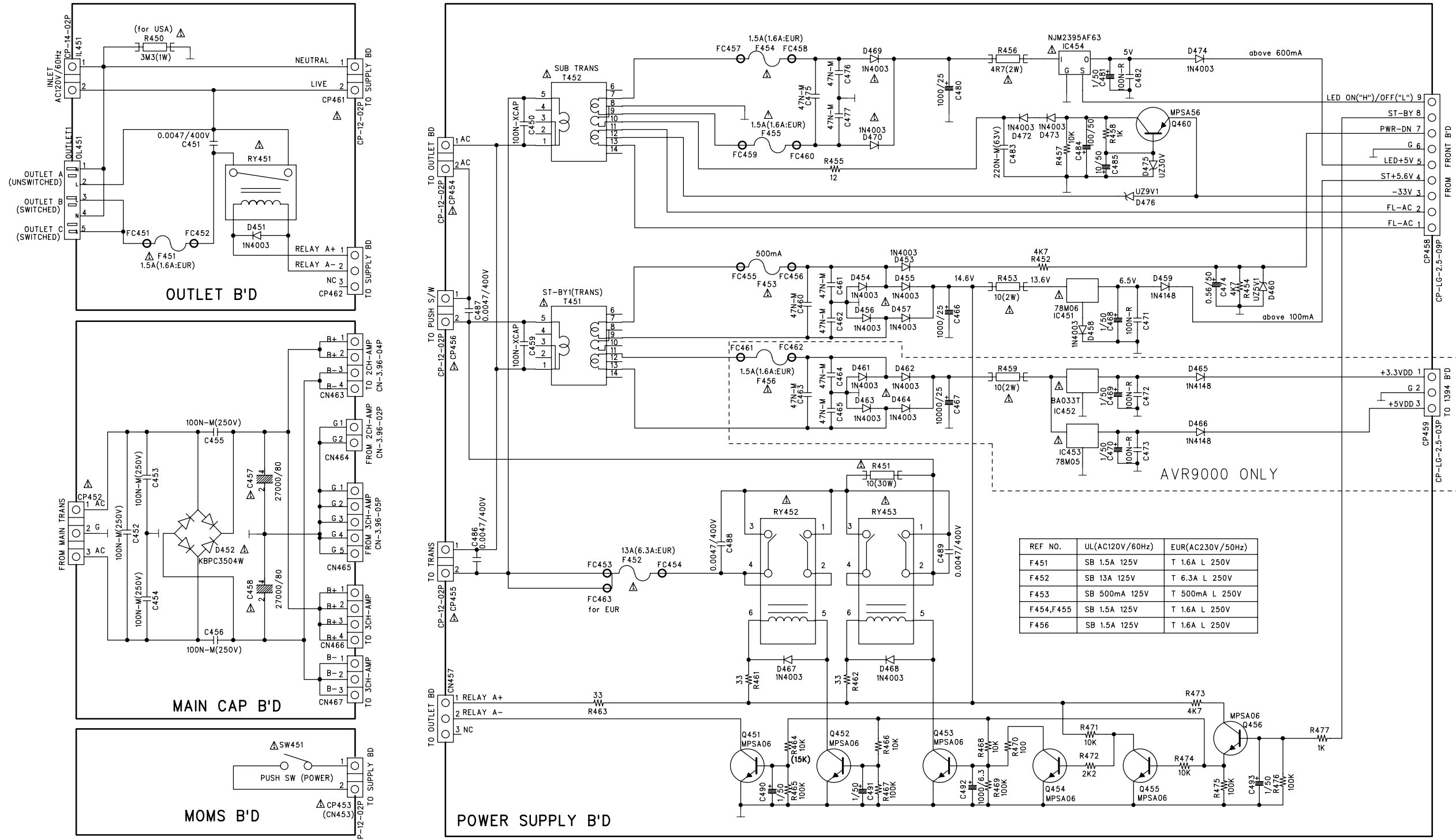
DRAWN: <b>GEUM J.G</b>		DATED: <b>NOV.28.2001</b>	
CHECKED:		DATED:	
QUALITY CONTROL:		DATED:	
RELEASED:		DATED:	

COMPANY:			
TITLE: <b>AVR 8000/9000 FRONT B'D</b>			
CODE:	SIZE:	DRAWING NO:	REV:
		<b>55145650XX</b>	
SCALE: FTMS		SHEET: 1 OF 11	

# SCHEMATIC DIAGRAM

harman/kardon  
AVR8000/8500 SUPPLY

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



REF NO.	UL(AC120V/60Hz)	EUR(AC230V/50Hz)
F451	SB 1.5A 125V	T 1.6A L 250V
F452	SB 13A 125V	T 6.3A L 250V
F453	SB 500mA 125V	T 500mA L 250V
F454,F455	SB 1.5A 125V	T 1.6A L 250V
F456	SB 1.5A 125V	T 1.6A L 250V

\*\*\* IMPORTANT SAFETY NOTICE.  
COMPONENTS IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS  
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS  
USE ONLY MANUFACTURER'S SPECIFIED PARTS.

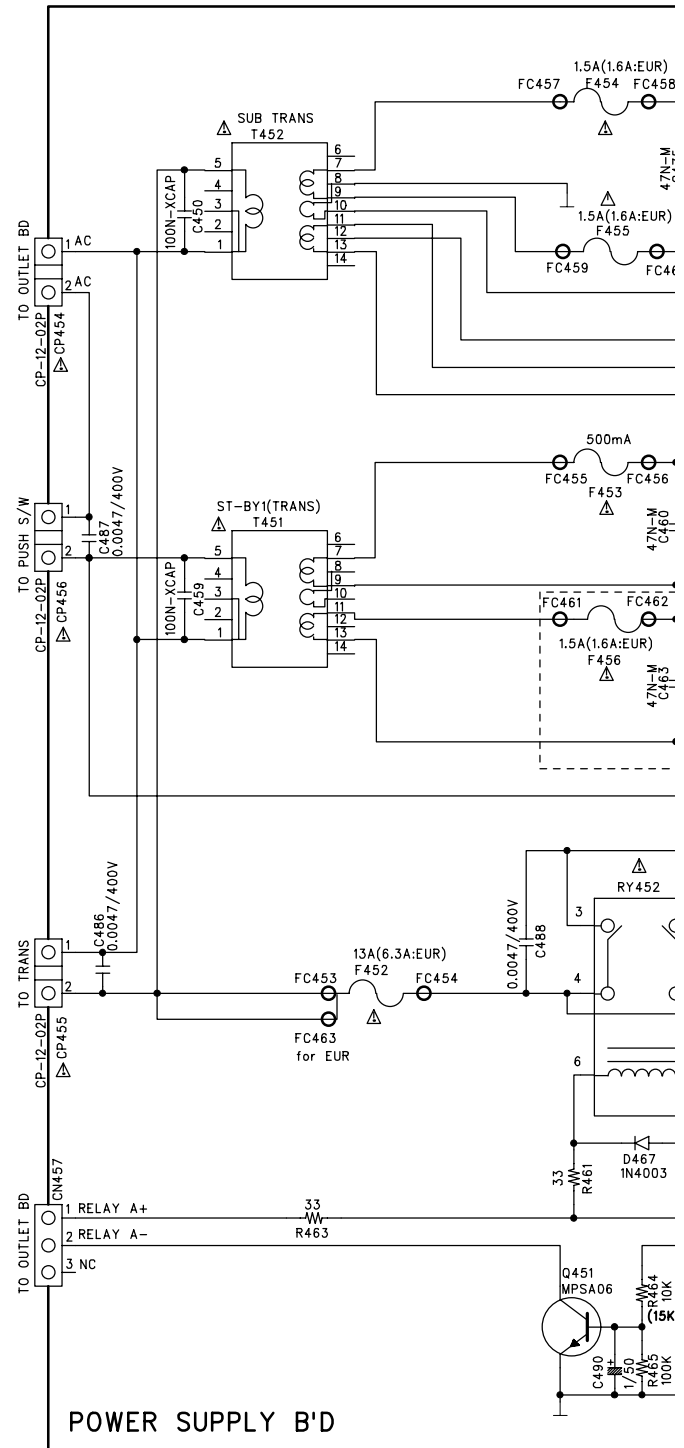
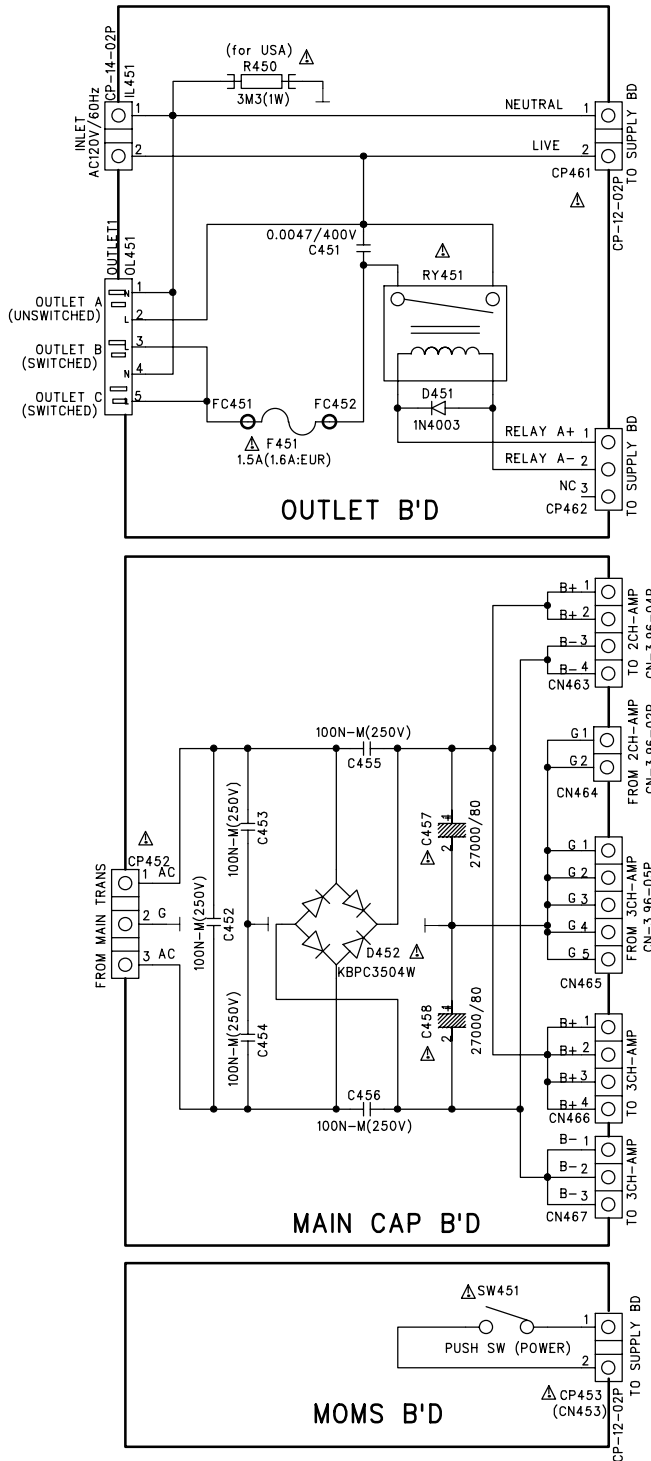
\*\*\* THE UNIT OF RESISTANCE IS OHM.  
K=1000 OHM, M=1000 KOHM.

\*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD ( $\mu$ F)  
pF=10<sup>-6</sup>  $\mu$ F

\*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE  
IMPROVEMENT OF PERFORMANCE.

COMPANY:			
TITLE: AVR8000/8500 SUPPLY			
DRAWN: <b>J. G. EOM</b>	DATED: <b>NOV.28.2001</b>	CODE:	SIZE:
CHECKED:	DATED: <b>MAR.08.2002</b>	DRAWING NO: <b>55145640XX</b>	REV:
QUALITY CONTROL:	DATED:	STAGE: MP	
RELEASED:	DATED:	TOTAL SHEET: 2 OF 10	

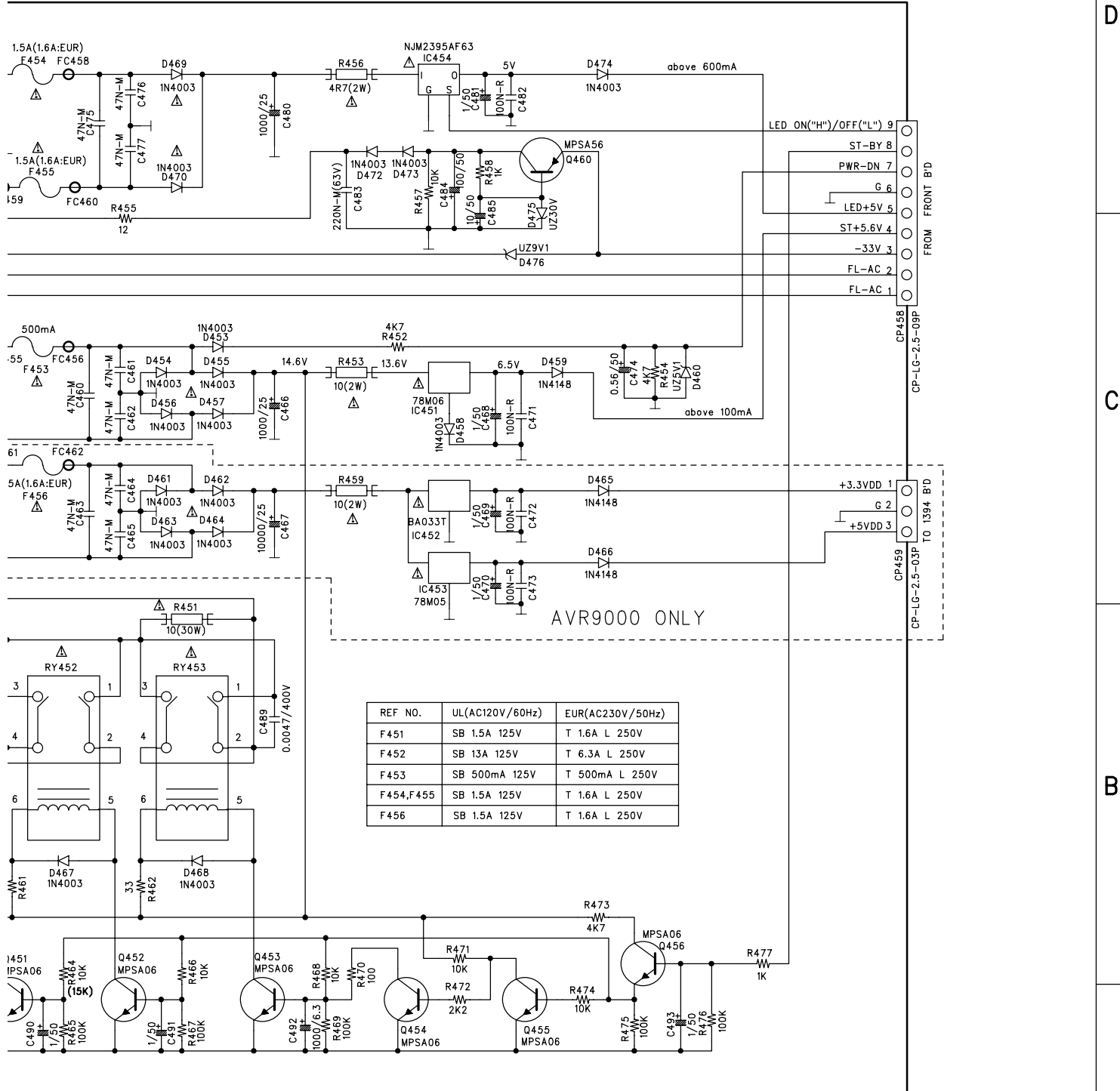
# SCHEMATIC DIAGRAM



- \*\*\* IMPORTANT SAFETY NOTICE. COMPONENTS IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.
- \*\*\* THE UNIT OF RESISTANCE IS OHM. K=1000 OHM, M=1000 KOHM.
- \*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD ( $\mu$ F)  $\mu$ F=10<sup>-6</sup> uF
- \*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE IMPROVEMENT OF PERFORMANCE.

# harman/kardon AVR8000/8500 SUPPLY

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



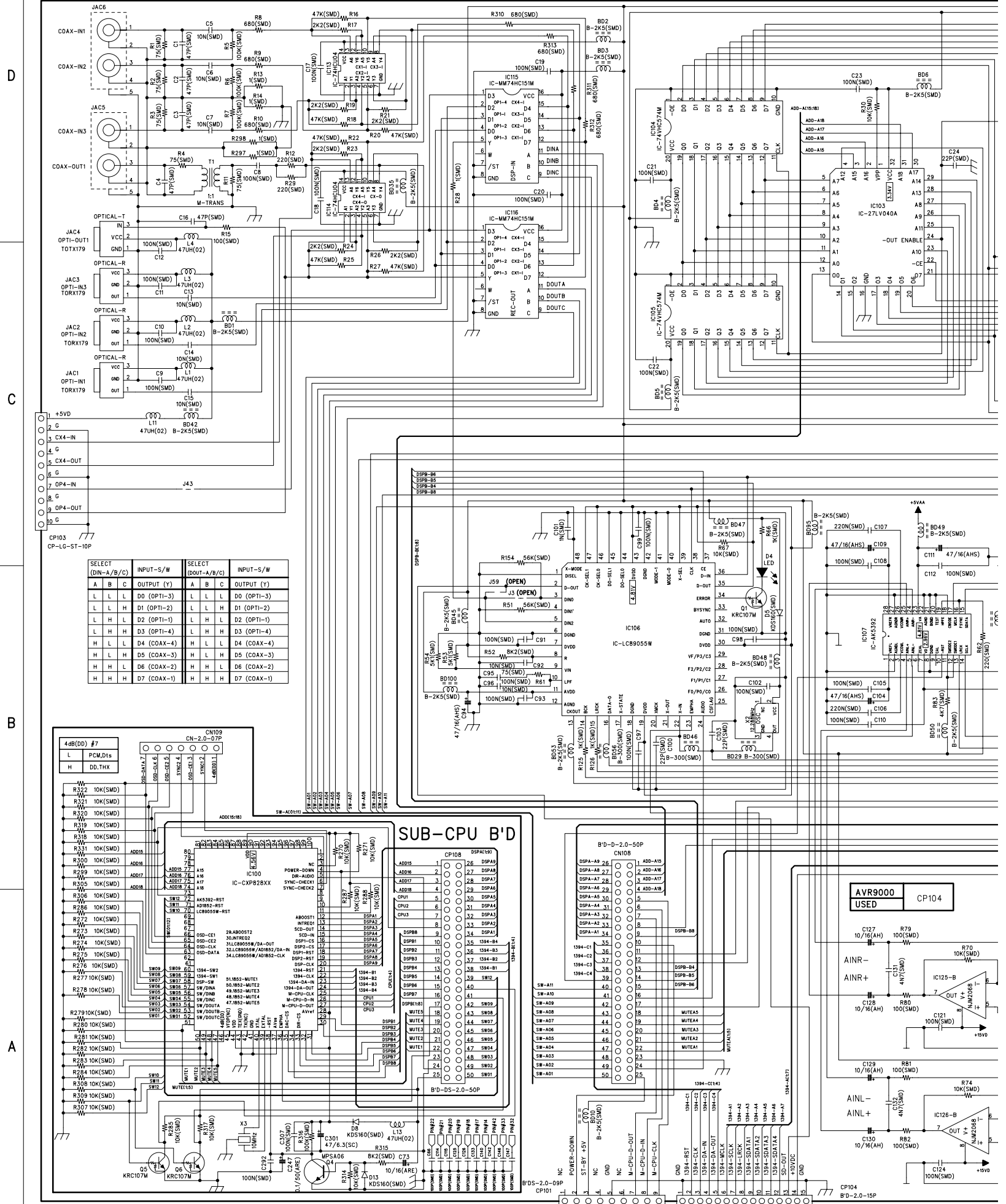
REF NO.	UL(AC120V/60Hz)	EUR(AC230V/50Hz)
F 451	SB 1.5A 125V	T 1.6A L 250V
F 452	SB 13A 125V	T 6.3A L 250V
F 453	SB 500mA 125V	T 500mA L 250V
F 454, F 455	SB 1.5A 125V	T 1.6A L 250V
F 456	SB 1.5A 125V	T 1.6A L 250V

COMPANY:

TITLE: AVR8000/8500 SUPPLY

DRAWN: <b>J. G. EOM</b>	DATED: <b>NOV.28.2001</b>	CODE:	SIZE:	DRAWING NO: <b>55145640XX</b>	REV:
CHECKED:	DATED: <b>MAR.08.2002</b>	<b>222</b>			<b>STAGE: MP</b>
QUALITY CONTROL:	DATED:				
RELEASED:	DATED:	<b>TOTAL SHEET: 2 OF 10</b>			





SELECT (DIN-A/B/C)	INPUT-S/W	SELECT (DOUT-A/B/C)	INPUT-S/W
A B C	OUTPUT (Y)	A B C	OUTPUT (Y)
L L L	DD (OPTI-3)	L L L	DD (OPTI-3)
L L H	D1 (OPTI-2)	L L H	D1 (OPTI-2)
L H L	D2 (OPTI-1)	L H L	D2 (OPTI-1)
L H H	D3 (OPTI-4)	L H H	D3 (OPTI-4)
H L L	D4 (COAX-4)	H L L	D4 (COAX-4)
H L H	D5 (COAX-3)	H L H	D5 (COAX-3)
H H L	D6 (COAX-2)	H H L	D6 (COAX-2)
H H H	D7 (COAX-1)	H H H	D7 (COAX-1)

**SUB-CPU B'D**

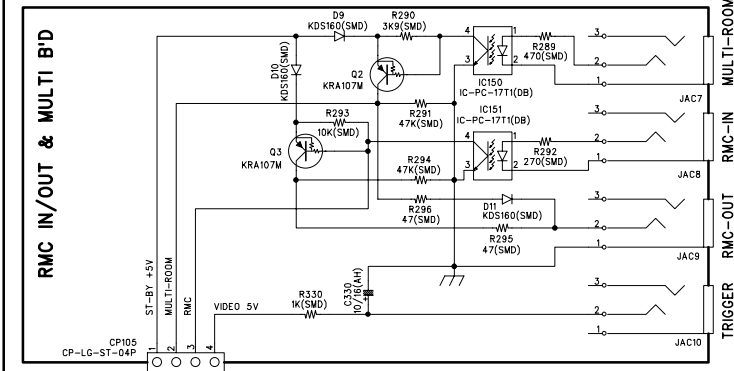
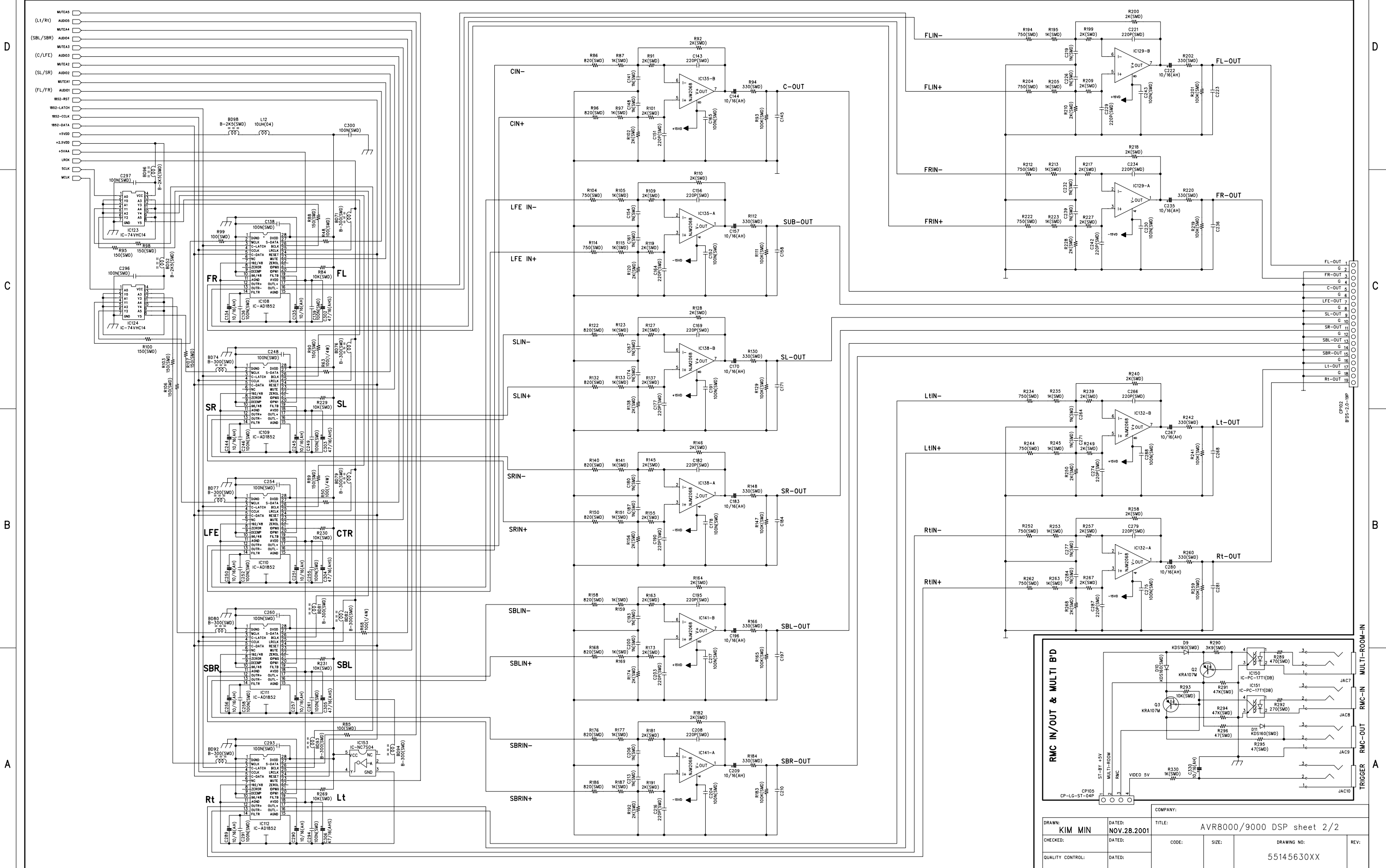
**AVR9000 USED**





# SCHEMATIC DIAGRAM

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



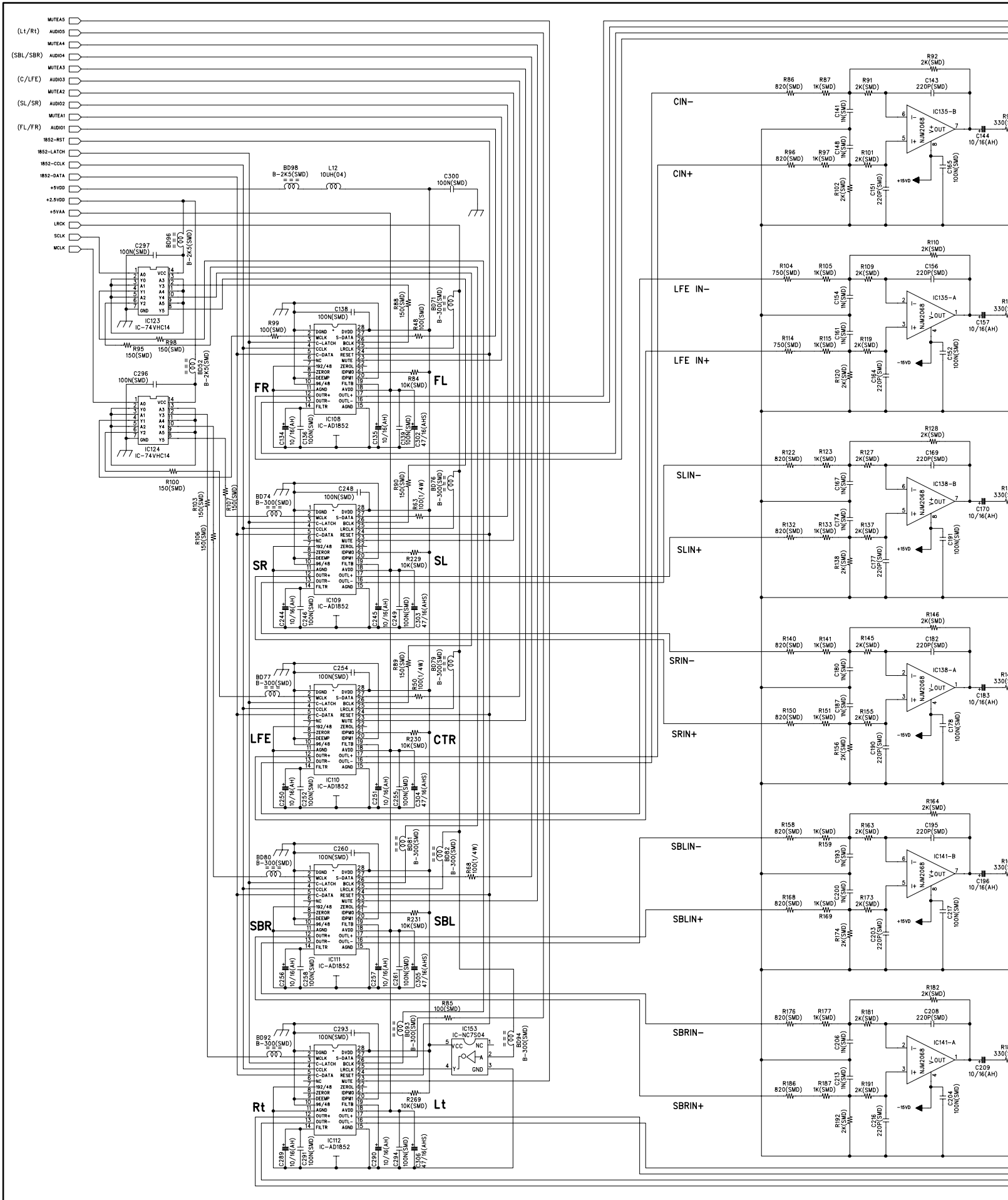
DRAWN: KIM MIN	DATED: NOV.28.2001	TITLE: AVR8000/9000 DSP sheet 2/2
CHECKED:	DATED:	CODE: SIZE: DRAWING NO: REV:
QUALITY CONTROL:	DATED:	5145630XX
RELEASED:	DATED:	TOTAL SHEET: 8 OF 11

D

C

B

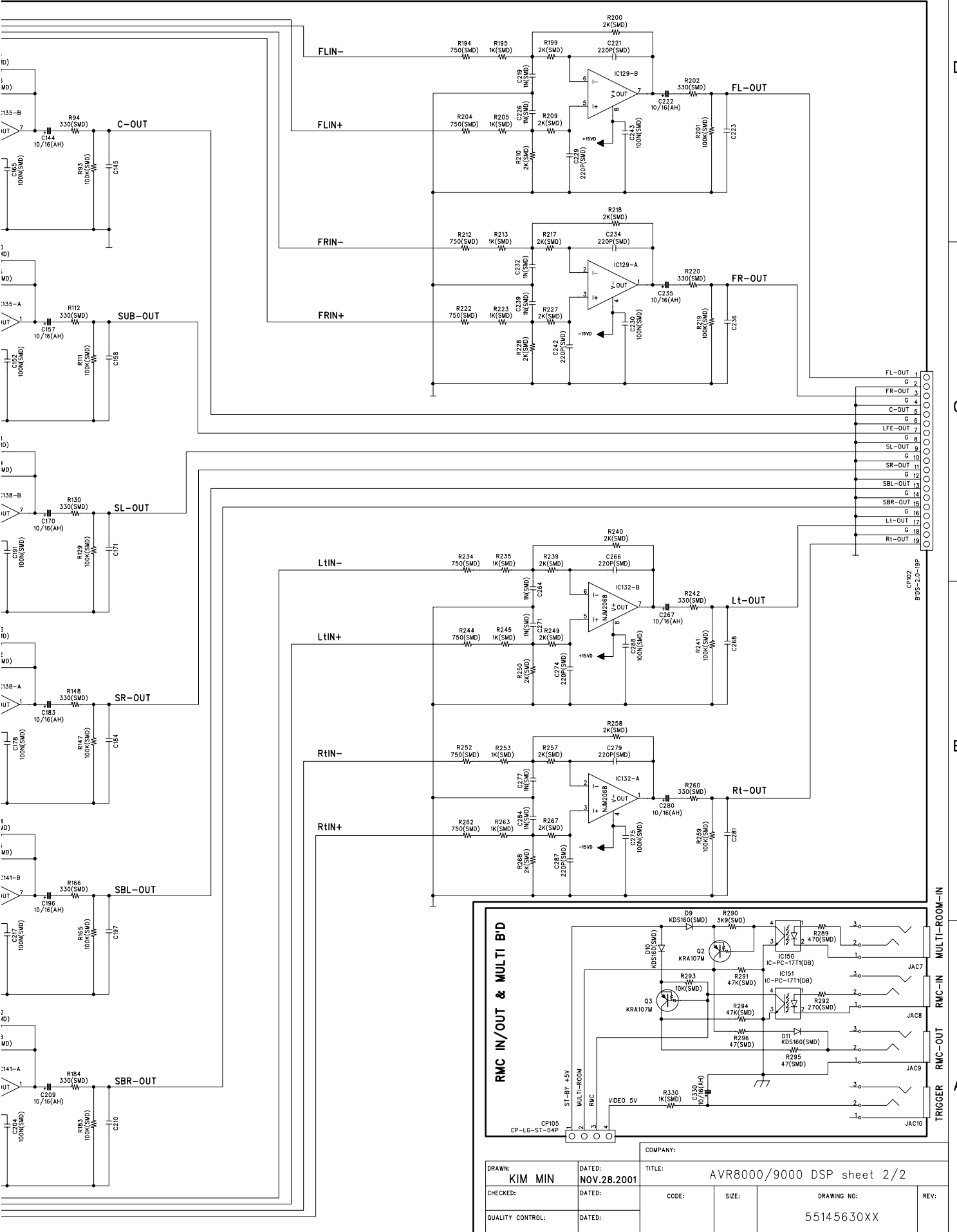
A



# IAGRAM

## harman/kardon AVR8000/9000

REVISION RECORD			
LTR	ECCO NO:	APPROVED:	DATE:

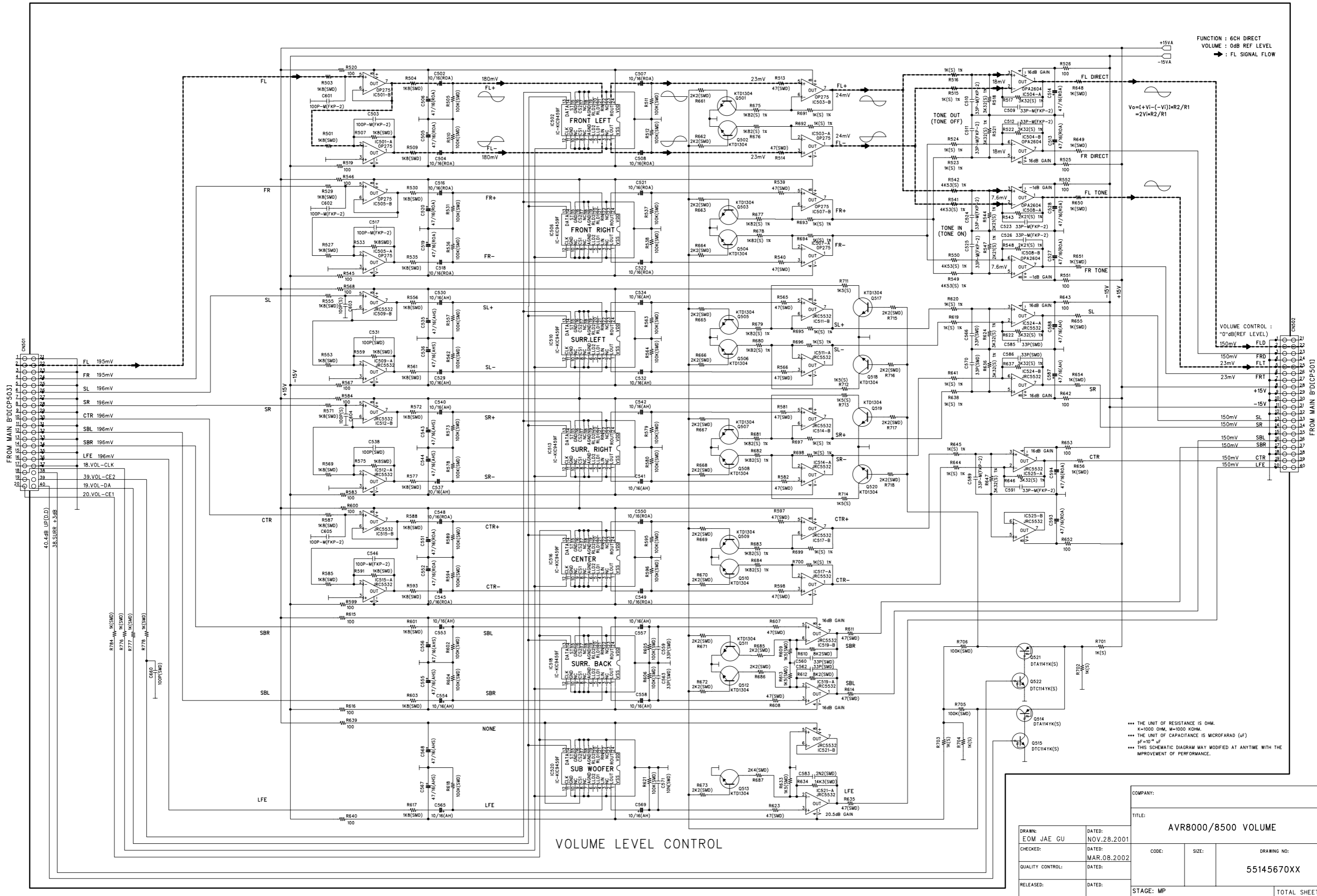


D  
C  
B  
A

DRAWN: <b>KIM MIN</b>		DATED: <b>NOV.28.2001</b>		TITLE: <b>AVR8000/9000 DSP sheet 2/2</b>	
CHECKED:	DATED:	CODE:	SIZE:	DRAWING NO: <b>55145630XX</b>	REV:
QUALITY CONTROL:	DATED:	TOTAL SHEET: 8 OF 11			
RELEASED:	DATED:	STAGE:MP			

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

# SCHEMATIC DIAGRAM



FUNCTION : 6CH DIRECT  
VOLUME : 0dB REF LEVEL  
→ : FL SIGNAL FLOW

VOLUME CONTROL :  
"0"dB(REF LEVEL)  
150mV → FLD  
150mV → FLT  
23mV → FRT  
+15V →  
-15V →

\*\*\* THE UNIT OF RESISTANCE IS OHM.  
K=1000 OHM, M=1000 KOHM.  
\*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (uF)  
pF=10<sup>-12</sup> uF  
\*\*\* THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANYTIME WITH THE IMPROVEMENT OF PERFORMANCE.

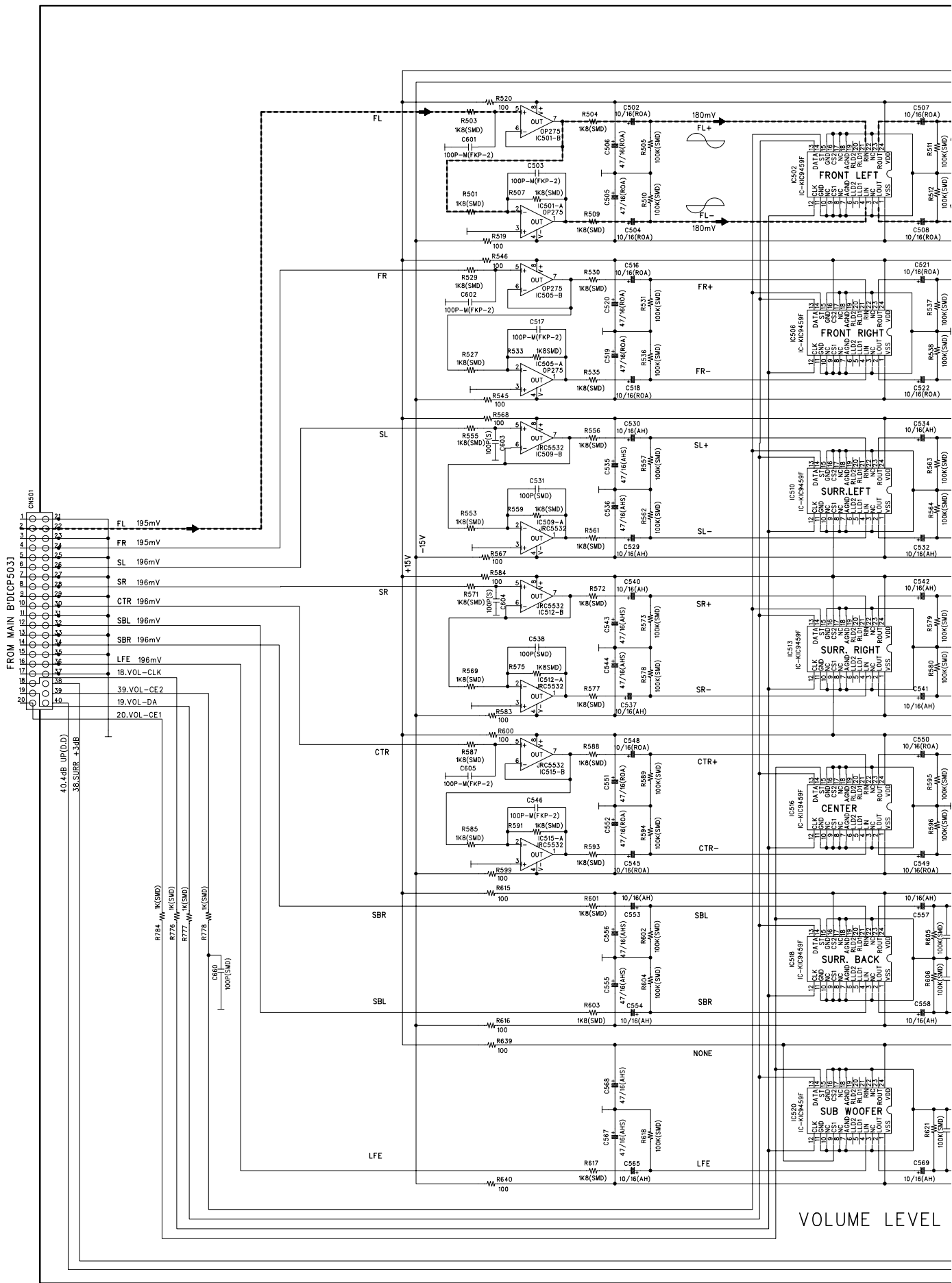
COMPANY:		AVR8000/8500 VOLUME	
TITLE:		AVR8000/8500 VOLUME	
DRAWN: EOM JAE GU	DATED: NOV.28.2001	CODE:	SIZE:
CHECKED:	DATED: MAR.08.2002	DRAWING NO:	REV:
QUALITY CONTROL:	DATED:	55145670XX	
RELEASED:	DATED:	STAGE: MP	TOTAL SHEET: 4 OF 11

D

C

B

A



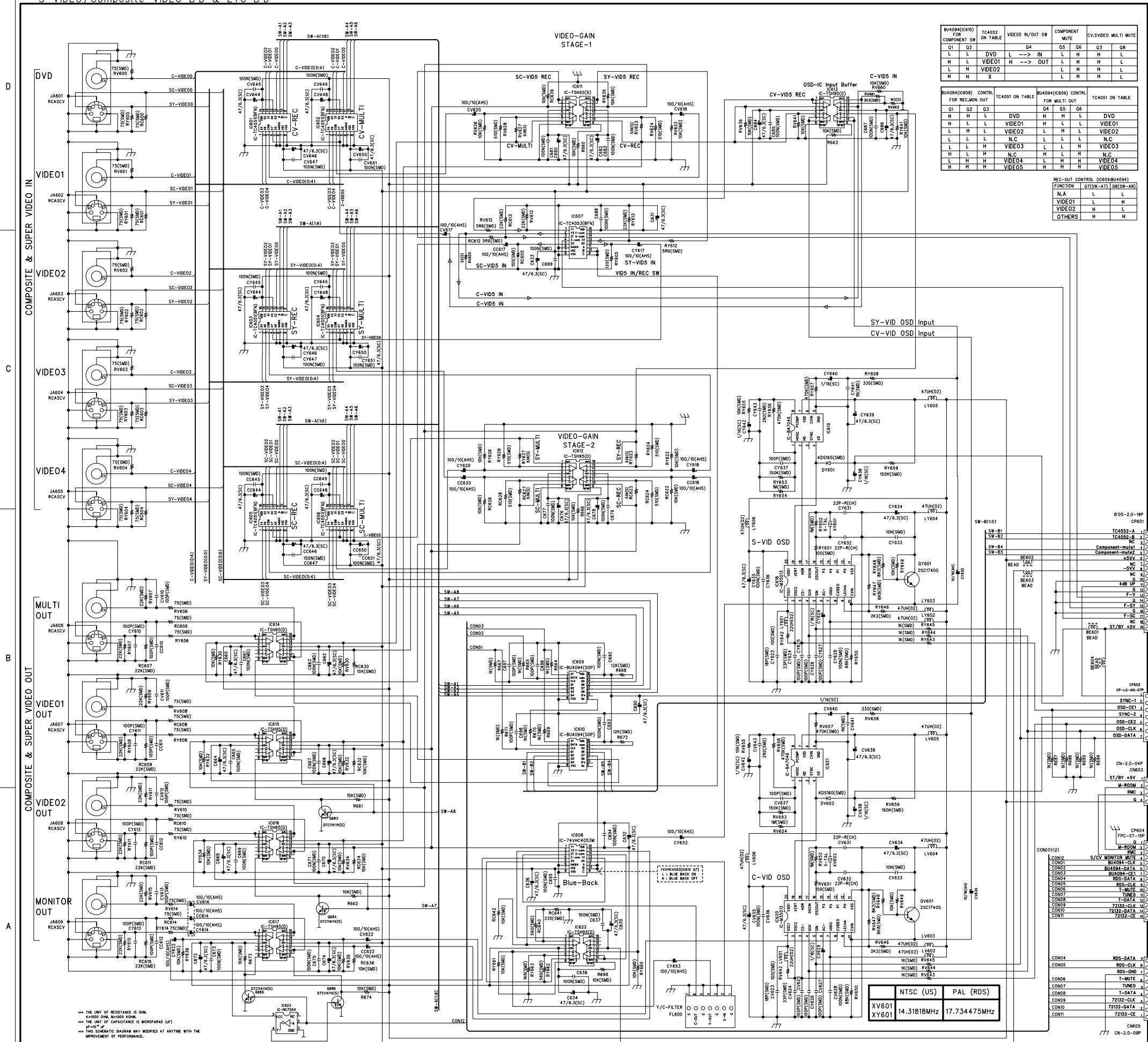
VOLUME LEVEL



SCHEMATIC DIAGRAM

REVISION RECORD			
LT#	ECO NO.	APPROVED	DATE

S-VIDEO/Composite-VIDEO B'D & ETC B'D

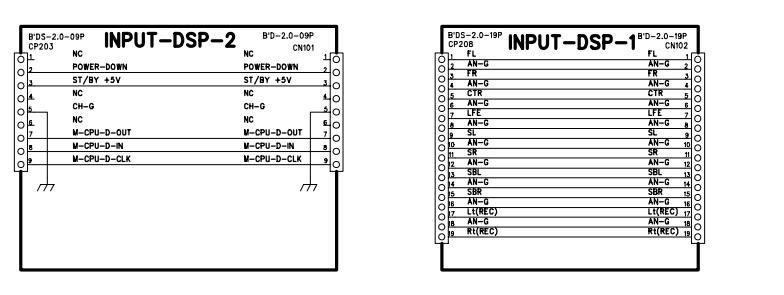
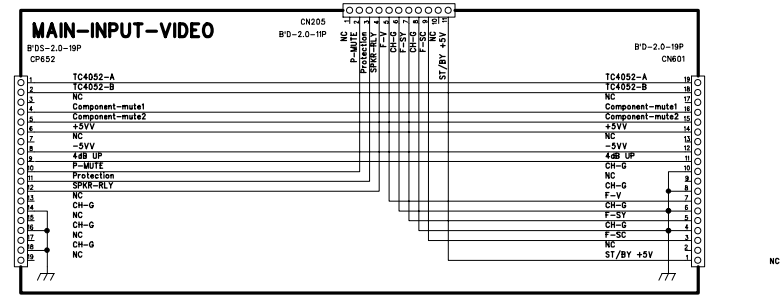
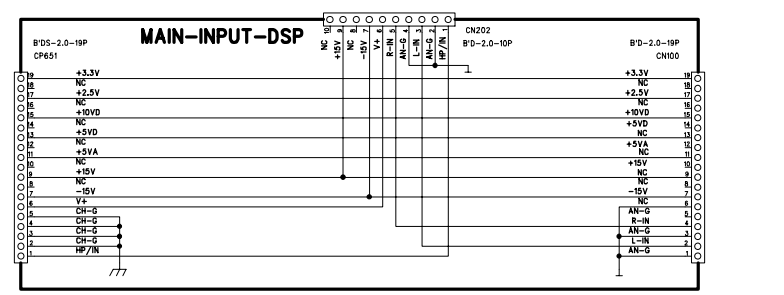
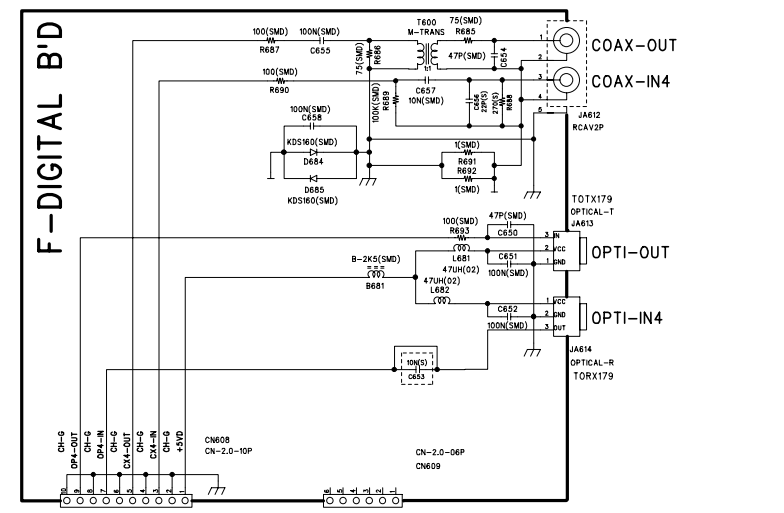
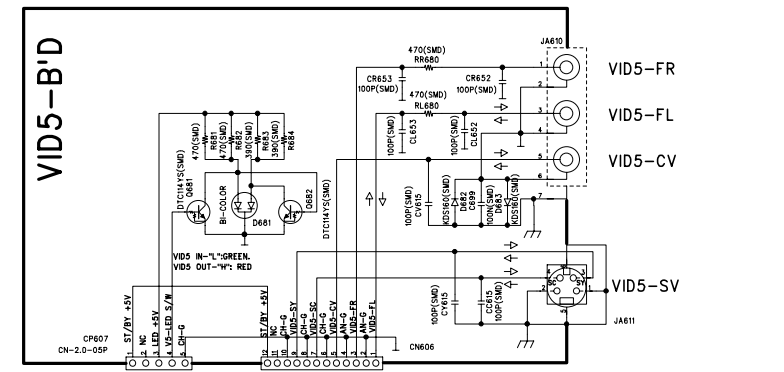


BU4094(IC610) FOR COMPONENT SW							
Q1	Q2	TC4052 ON TABLE	VIDEOS IN/OUT SW	COMPONENT MUTE	CV.SVIDEO MULTI MUTE	Q3	Q8
H	L	DVD	L -> IN	L	H	H	L
H	L	VIDEO1	H -> OUT	L	H	H	L
L	H	VIDEO2	H	L	H	H	L
H	H	X		L	H	H	L

BU4094(IC609) CONTRL FOR REC/MON OUT							
Q1	Q2	Q3	DVD	Q4	Q5	Q6	DVD
H	L	L	VIDEO1	H	L	L	VIDEO1
L	H	L	VIDEO2	L	H	L	VIDEO2
L	L	L	N.C	L	L	L	N.C
L	L	H	VIDEO3	L	L	H	VIDEO3
H	L	H	N.C	H	L	H	N.C
L	H	H	VIDEO4	L	H	H	VIDEO4
H	H	H	VIDEO5	H	H	H	VIDEO5

REC-OUT CONTROL (IC609-BU4094)			
FUNCTION	Q7(SW-A7)	Q8(SW-A8)	
N.A	L	L	L
VIDEO1	L	L	H
VIDEO2	H	L	L
OTHERS	H	H	H

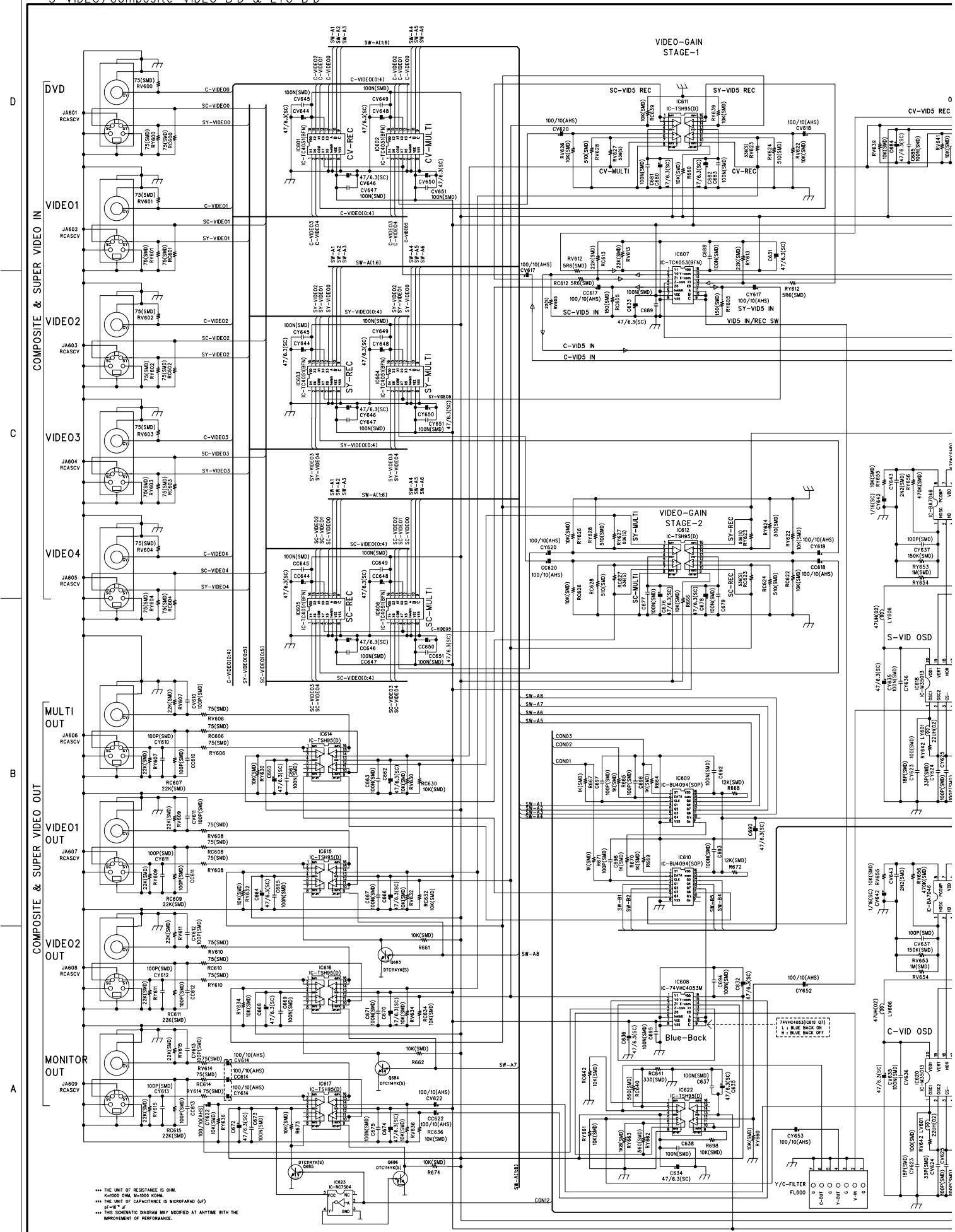
NTSC (US)	14.31818MHz
PAL (RDS)	17.734475MHz



\*\*\* THE UNIT OF RESISTANCE IS OHM.  
K=1000 OHM, M=10000 OHM.  
\*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (UF)  
P=10^-12 F



S-VIDEO/Composite-VIDEO B'D & ETC B'D

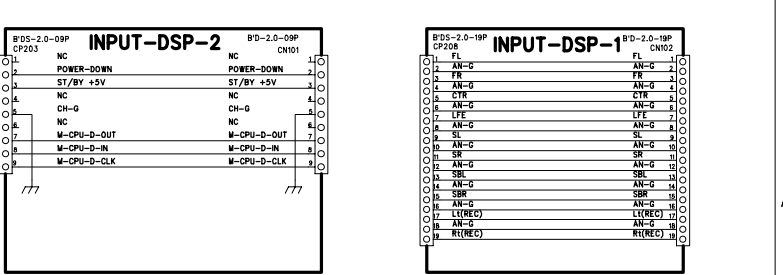
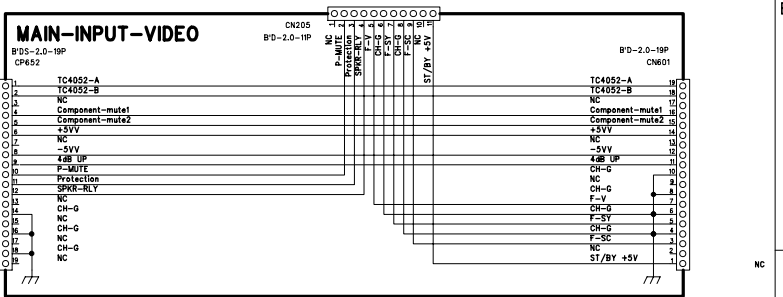
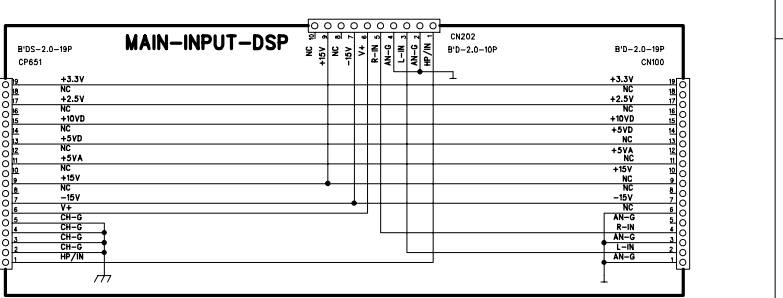
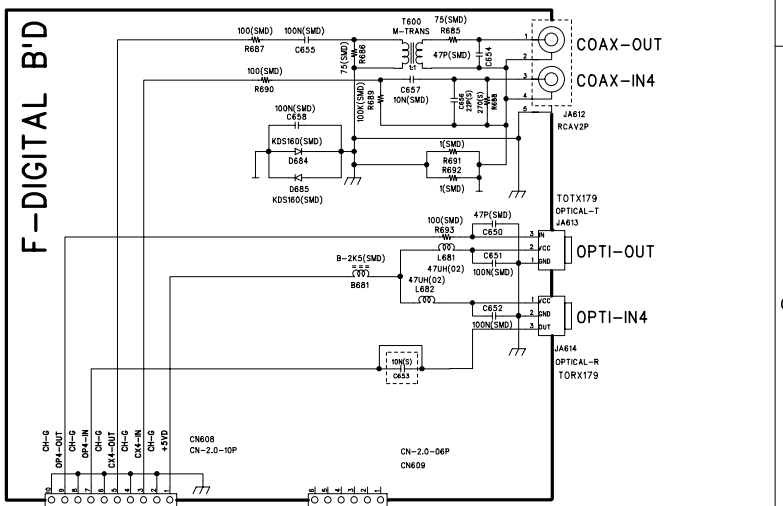
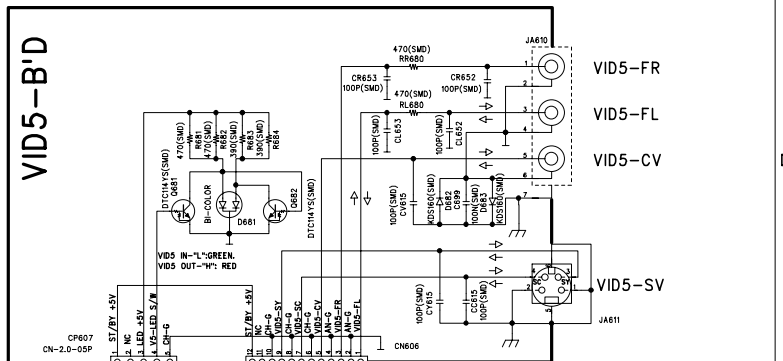
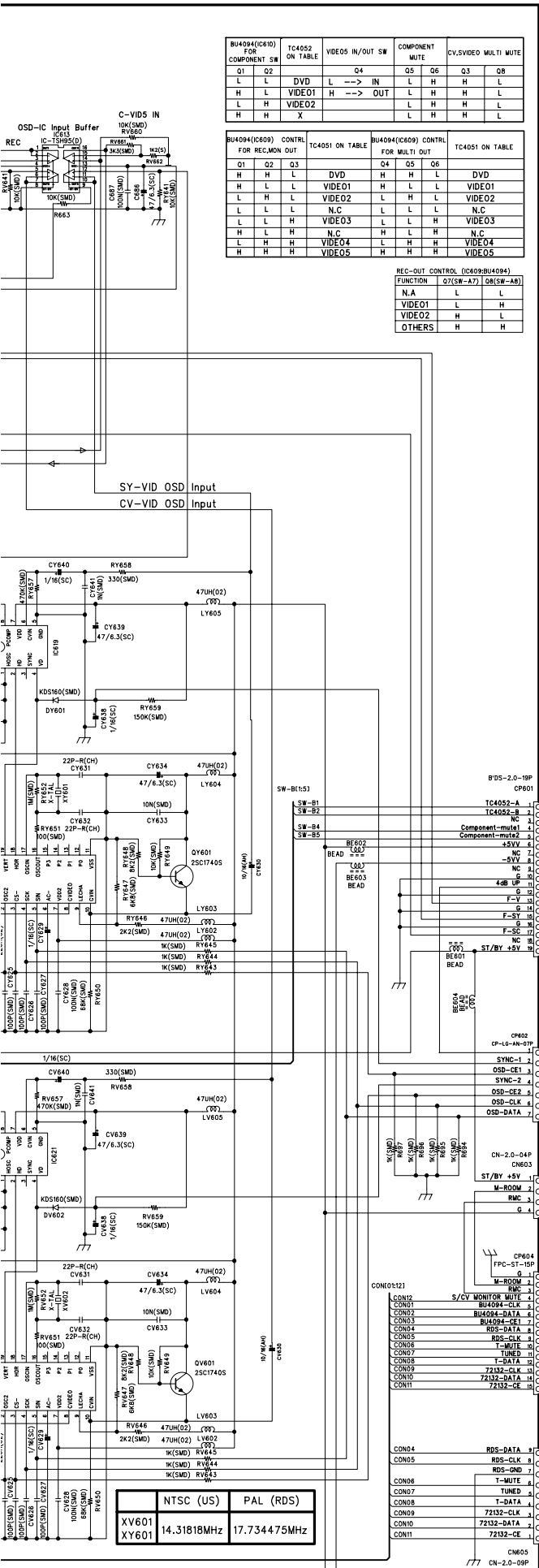


\*\*\* THE UNIT OF RESISTANCE IS OHM.  
 K=1000 OHM M=1000 OHM  
 \*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (UF)  
 P=PARTIAL  
 \*\*\* THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANYTIME WITH THE  
 IMPROVEMENT OF PERFORMANCE.

# DIAGRAM

# harman/kardon AVR8000/8500 VIDEO

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:



COMPANY: CEUM J. G.  
TITLE: AVR8000/8500 VIDEO

DATE: NOV.28.2001  
DATE: MAR.08.2002

CODE: SIZE: DRAWING NO: 55145690XX  
REV: A

QUALITY CONTROL: DATE: RELEASED: DATE: STAGE: MP SHEET: 6 OF 11

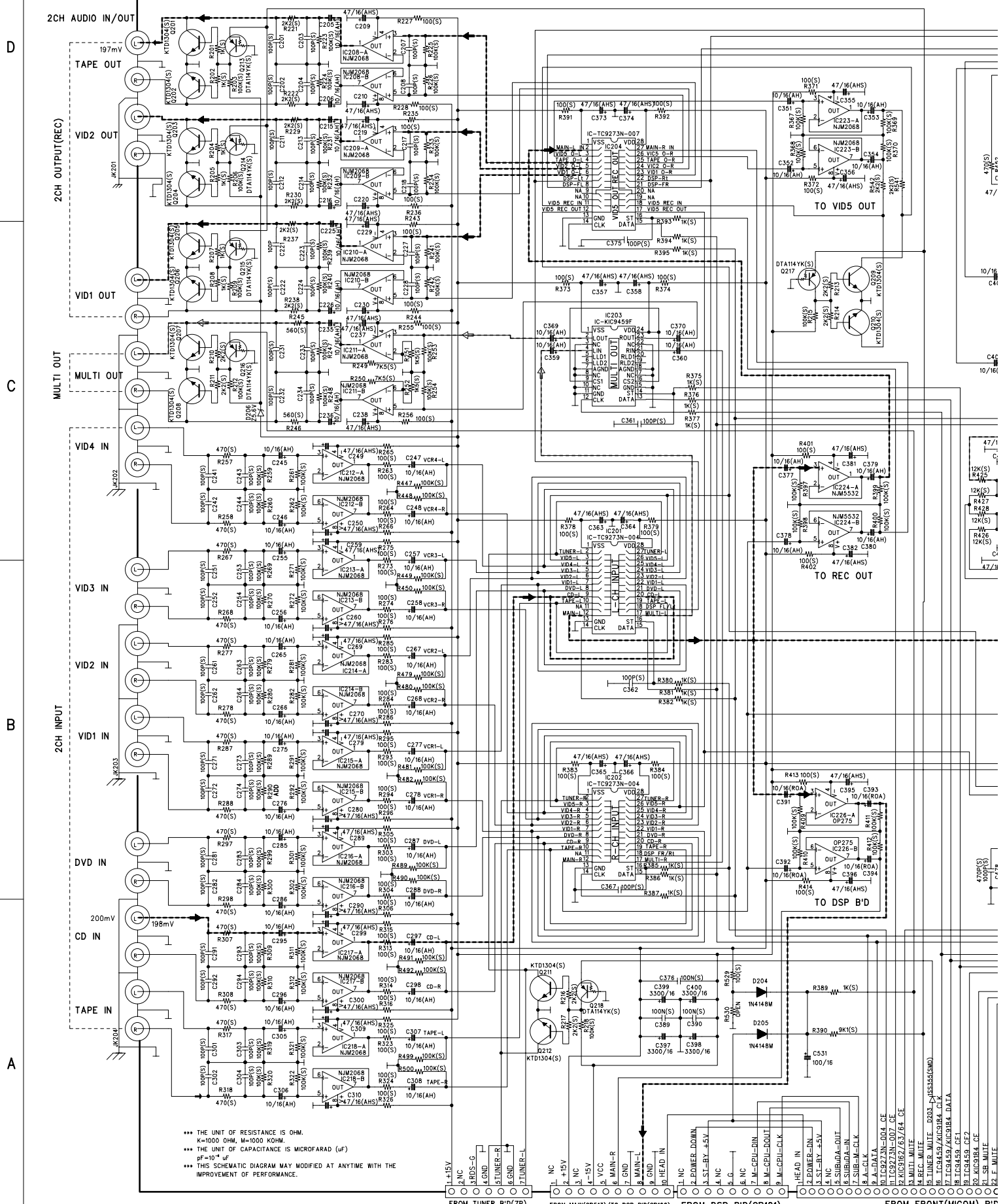


# AVR8000

harman/kardon

# SCHEMATIC

Remark: deleted section  
 LFE +15dB GAIN section &  
 FRONT STEREO SMALL section  
 (OCT.26.01)



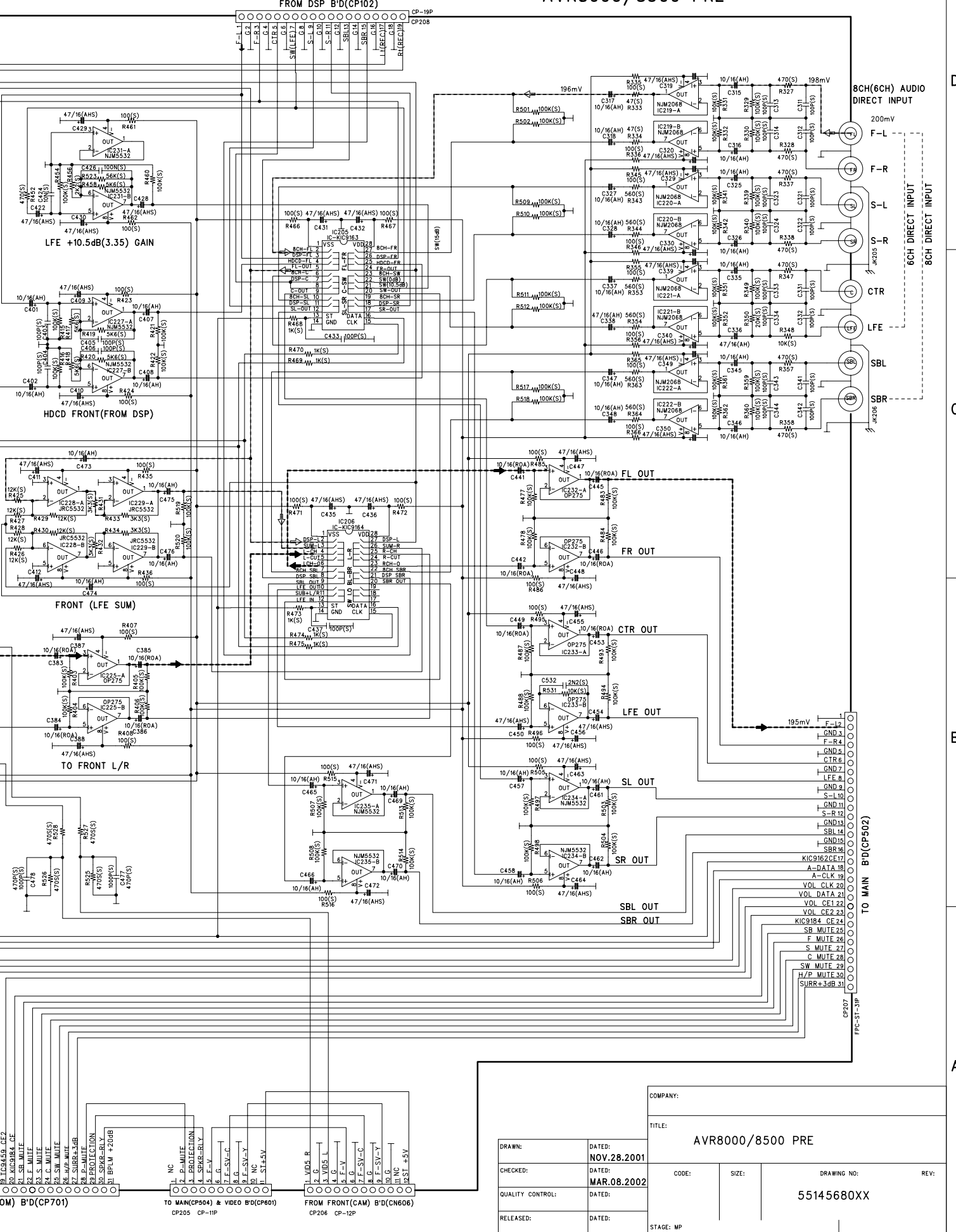
\*\*\* THE UNIT OF RESISTANCE IS OHM.  
 K=1000 OHM, M=1000 KOHM.  
 \*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (uF)  
 uF=10<sup>-6</sup> F.  
 \*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE  
 IMPROVEMENT OF PERFORMANCE.

- FROM TUNER B'D(7P) C201 CP-LG-ST-07P
- FROM MAIN(CP513) TO DSP B'D(CP100) C202 CP-LG-ST-10P
- FROM DSP B'D(CP101) C203 CP-LG-ST-09P
- FROM FRONT(WICOM) B'D C204 FPC-ST-31P

# DIAGRAM

## harman/kardon AVR8000/8500 PRE

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



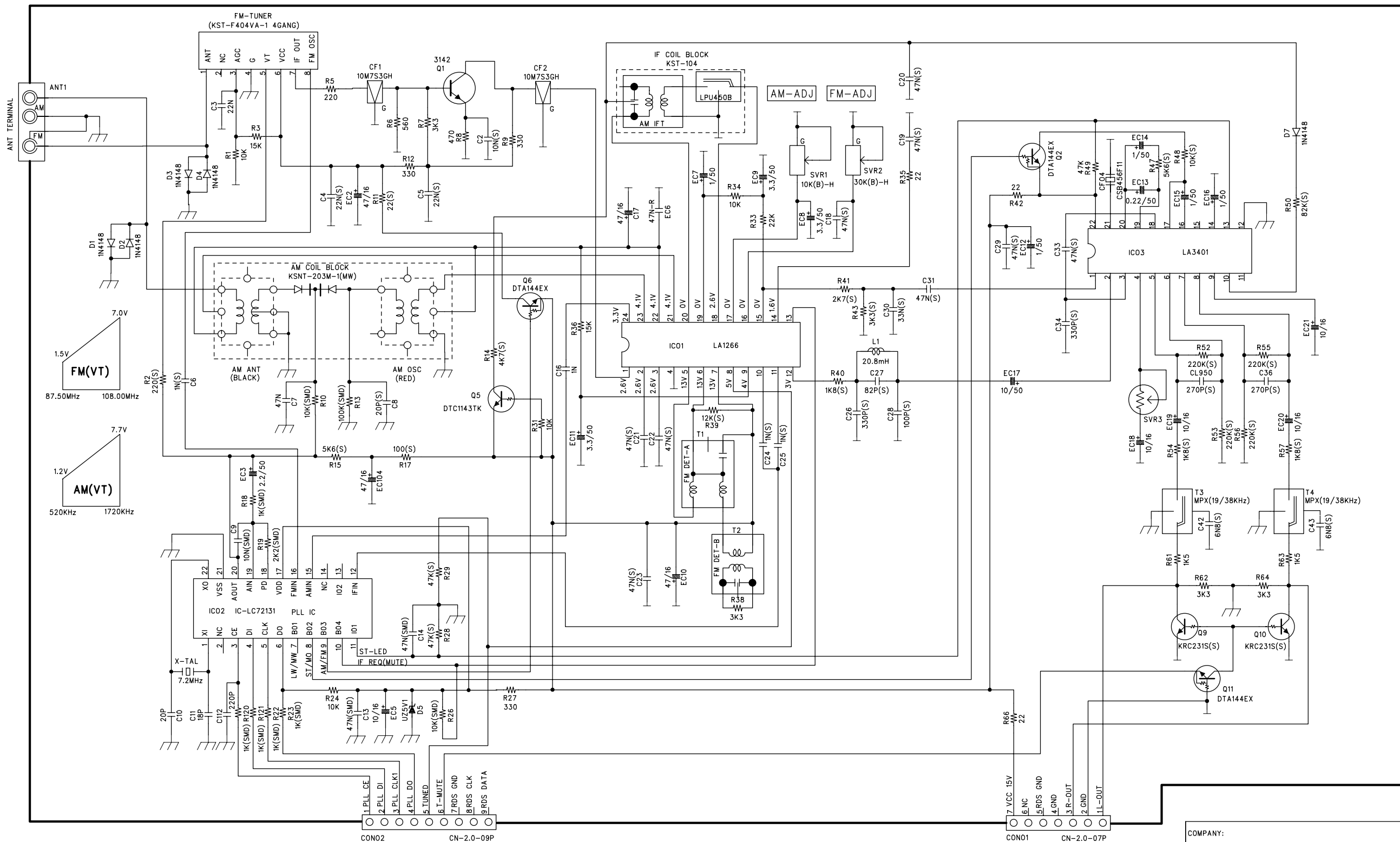
1. IC13459-CE2	1. NC	1. VIDS-R
2. IC13459-CE	2. P-MUTE	2. VIDS-L
3. IC13459-CE	3. PROTECTION	3. VIDS
4. IC13459-CE	4. SE-KB-RLY	4. F-V
5. IC13459-CE	5. F-V	5. F-V
6. IC13459-CE	6. F-SV-C	6. F-SV-C
7. IC13459-CE	7. F-SV-Y	7. F-SV-Y
8. IC13459-CE	8. NC	8. F-SV-Y
9. IC13459-CE	9. ST+5V	9. ST+5V
10. IC13459-CE	10. ST+5V	10. ST+5V
11. IC13459-CE	11. VIDS-R	11. VIDS-R
12. IC13459-CE	12. VIDS-L	12. VIDS-L
13. IC13459-CE	13. VIDS	13. VIDS
14. IC13459-CE	14. F-V	14. F-V
15. IC13459-CE	15. F-V	15. F-V
16. IC13459-CE	16. F-SV-C	16. F-SV-C
17. IC13459-CE	17. F-SV-Y	17. F-SV-Y
18. IC13459-CE	18. NC	18. F-SV-Y
19. IC13459-CE	19. ST+5V	19. ST+5V
20. IC13459-CE	20. ST+5V	20. ST+5V

COMPANY:		AVR8000/8500 PRE	
TITLE:		55145680XX	
DRAWN:	DATED: NOV.28.2001	CODE:	SIZE:
CHECKED:	DATED: MAR.08.2002	DRAWING NO:	REV:
QUALITY CONTROL:	DATED:	STAGE: MP	
RELEASED:	DATED:		

# SCHEMATIC DIAGRAM

harman/kardon  
AVR8000/9000 TUNER

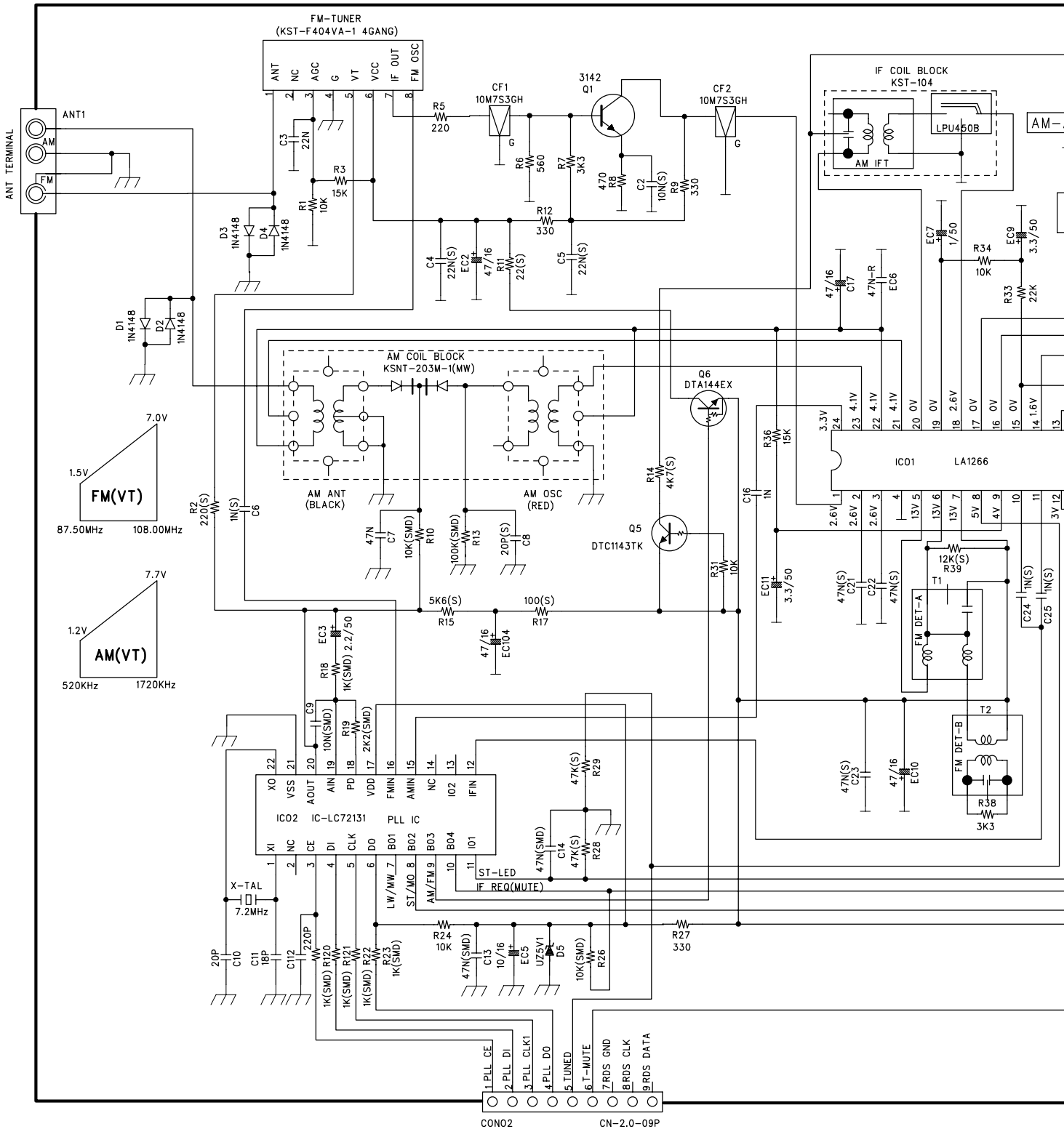
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



- \*\*\* THE UNIT OF RESISTANCE IS OHM.  
K=1000 OHM, M=1000 KOHM.
- \*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (uF)  
pF=10<sup>-3</sup> uF
- \*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE IMPROVEMENT OF PERFORMANCE.

COMPANY:			
TITLE: AVR8000/9000 TUNER			
DRAWN:	DATED: NOV.28.2001	CODE:	SIZE:
CHECKED:	DATED:	DRAWING NO:	REV:
QUALITY CONTROL:	DATED:	55231340XX	
RELEASED:	DATED:	STAGE:MP	TOTAL SHEET: 11 OF 11

# SCHEMATIC DIAGRAM



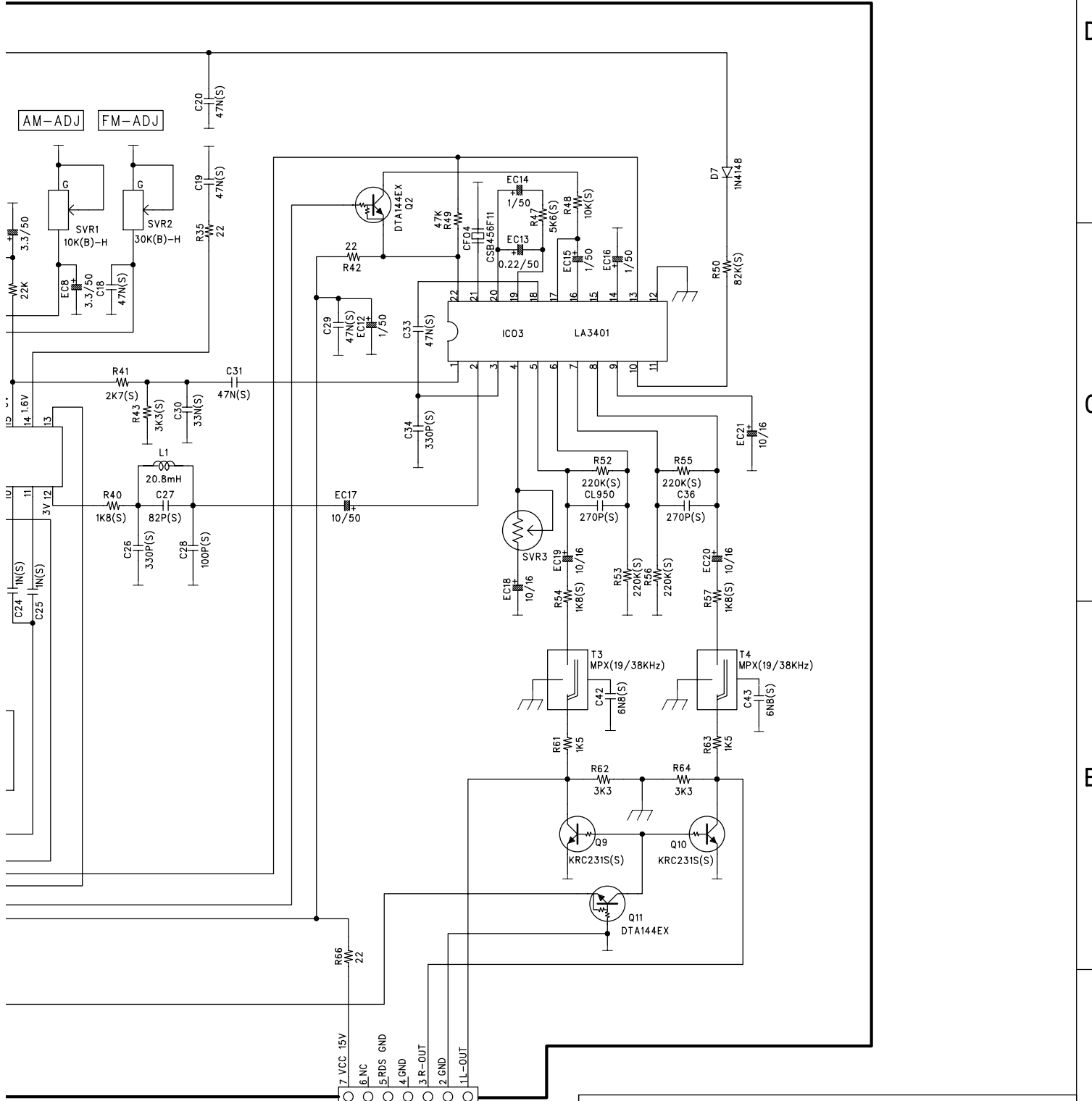
- \*\*\* THE UNIT OF RESISTANCE IS OHM.  
K=1000 OHM, M=1000 KOHM.
- \*\*\* THE UNIT OF CAPACITANCE IS MICROFARAD (uF)  
pF=10<sup>-4</sup> uF
- \*\*\* THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANYTIME WITH THE  
IMPROVEMENT OF PERFORMANCE.

REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:

# AGRAM

## harman/kardon AVR8000/9000 TUNER



COMPANY:

TITLE:  
**AVR8000/9000 TUNER**

DRAWN:	DATED: NOV.28.2001
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED: <b>240</b>

CODE:	SIZE:	DRAWING NO: <b>55231340XX</b>	REV:
STAGE:MP		TOTAL SHEET: 11 OF 11	



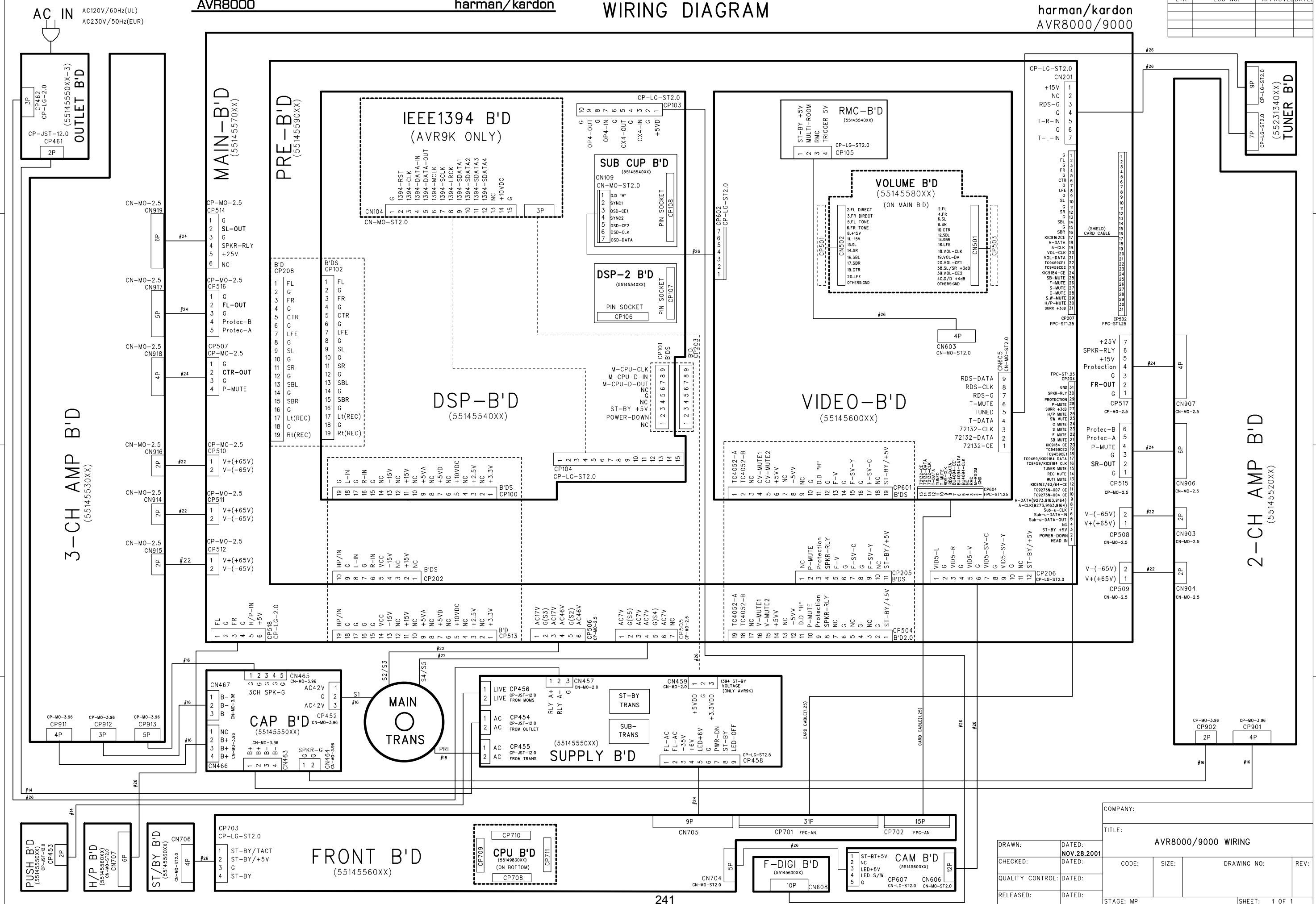
AVR8000

harman/kardon

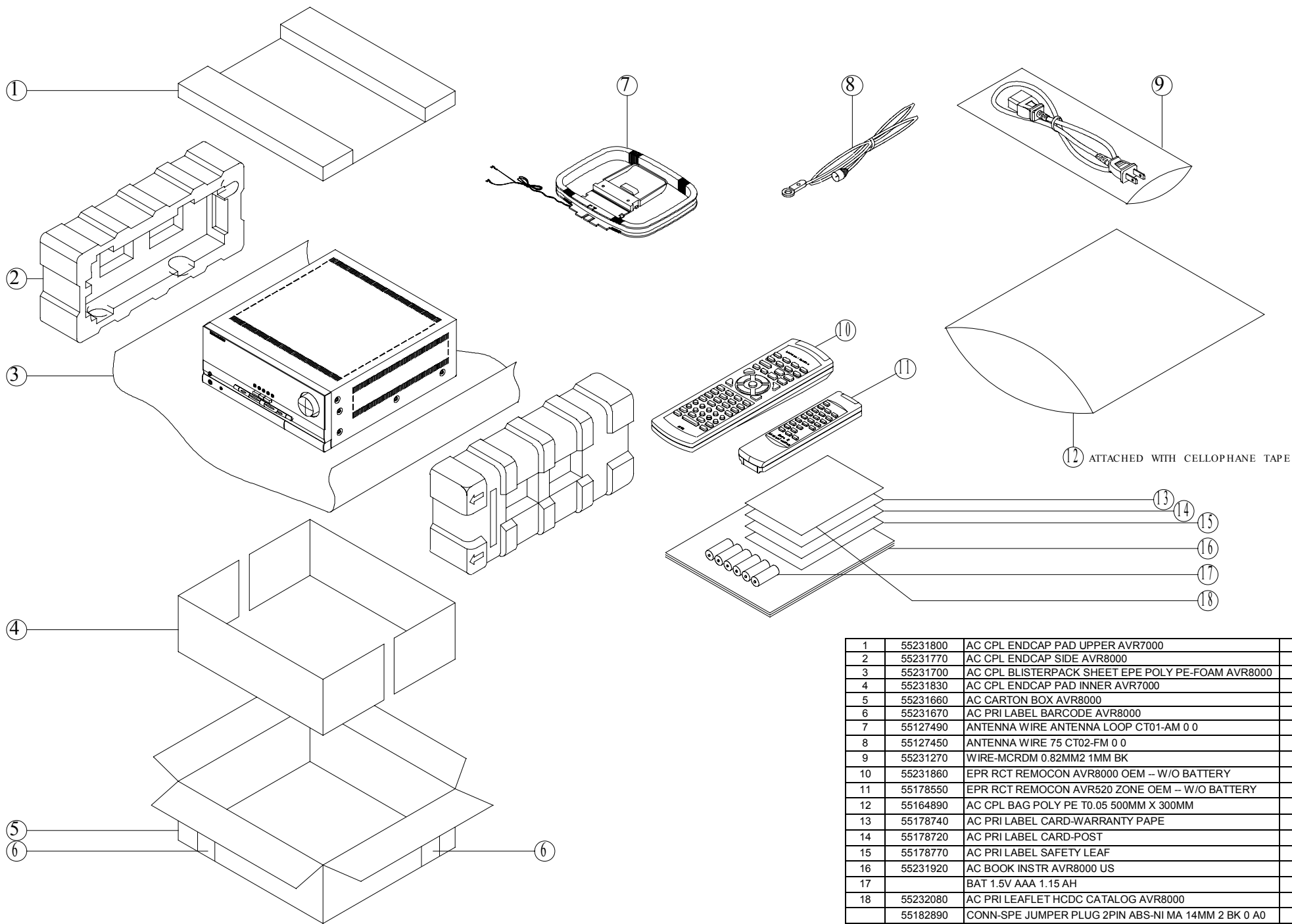
# WIRING DIAGRAM

harman/kardon  
AVR8000/9000

REVISION RECORD		
LTR	ECO NO:	APPROVED/DATE:



DRAWN:		DATED: NOV.28.2001	
CHECKED:		DATED:	
QUALITY CONTROL:		DATED:	
RELEASED:		DATED:	
COMPANY:		TITLE: AVR8000/9000 WIRING	
CODE:	SIZE:	DRAWING NO:	REV:
STAGE: MP	SHEET: 1 OF 1		



1	55231800	AC CPL ENDCAP PAD UPPER AVR7000	1 PC
2	55231770	AC CPL ENDCAP SIDE AVR8000	2 PC
3	55231700	AC CPL BLISTERPACK SHEET EPE POLY PE-FOAM AVR8000	1 PC
4	55231830	AC CPL ENDCAP PAD INNER AVR7000	2 PC
5	55231660	AC CARTON BOX AVR8000	1 PC
6	55231670	AC PRI LABEL BARCODE AVR8000	3 PC
7	55127490	ANTENNA WIRE ANTENNA LOOP CT01-AM 0 0	1 PC
8	55127450	ANTENNA WIRE 75 CT02-FM 0 0	1 PC
9	55231270	WIRE-MCRDM 0.82MM2 1MM BK	1 PC
10	55231860	EPR RCT REMOCON AVR8000 OEM -- W/O BATTERY	1 PC
11	55178550	EPR RCT REMOCON AVR520 ZONE OEM -- W/O BATTERY	1 PC
12	55164890	AC CPL BAG POLY PE T0.05 500MM X 300MM	1 PC
13	55178740	AC PRI LABEL CARD-WARRANTY PAPE	1 PC
14	55178720	AC PRI LABEL CARD-POST	1 PC
15	55178770	AC PRI LABEL SAFETY LEAF	1 PC
16	55231920	AC BOOK INSTR AVR8000 US	1 PC
17		BAT 1.5V AAA 1.15 AH	5 PC
18	55232080	AC PRI LEAFLET HCDC CATALOG AVR8000	
	55182890	CONN-SPE JUMPER PLUG 2PIN ABS-NI MA 14MM 2 BK 0 A0	5 PC